Wednesday, June 24, 2009

REQUEST NUMBER: 09-2453

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2453

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6005	R	6/22/2009	
		1	CAMO-09-6028	R	6/22/2009	
		1	CAMO-09-6029	R	6/22/2009	
		1	CAMO-09-6030	R	6/22/2009	
		1	CAMO-09-6031	R	6/22/2009	
		1	CAMO-09-6032	R	6/22/2009	
		1	CAMO-09-6033	R	6/22/2009	
		1	CAMO-09-6036	R	6/22/2009	
		1	CAMO-09-6037	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2453

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6047	R	6/22/2009	
		1	CAMO-09-6048	R	6/22/2009	
	EPA:906.0	1	CAMO-09-6005	R	6/22/2009	
		1	CAMO-09-6028	R	6/22/2009	
		1	CAMO-09-6029	R	6/22/2009	
		1	CAMO-09-6030	R	6/22/2009	
		1	CAMO-09-6031	R	6/22/2009	
		1	CAMO-09-6032	R	6/22/2009	
		1	CAMO-09-6033	R	6/22/2009	
		1	CAMO-09-6036	R	6/22/2009	
		1	CAMO-09-6037	R	6/22/2009	
		1	CAMO-09-6047	R	6/22/2009	
		1	CAMO-09-6048	R	6/22/2009	
	HASL-300:ISOU	1	CAMO-09-6005	R	6/22/2009	
		1	CAMO-09-6028	R	6/22/2009	
		1	CAMO-09-6029	R	6/22/2009	
		1	CAMO-09-6030	R	6/22/2009	
		1	CAMO-09-6031	R	6/22/2009	
		1	CAMO-09-6032	R	6/22/2009	
		1	CAMO-09-6033	R	6/22/2009	
		1	CAMO-09-6036	R	6/22/2009	
		1	CAMO-09-6037	R	6/22/2009	
		1	CAMO-09-6047	R	6/22/2009	
		1	CAMO-09-6048	R	6/22/2009	

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Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2453

REQUEST NUMBER: 09-2453

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
~~CAMO-09-6005~~	~~1~~	~~POLY~~	~~GAMMA SPEC+ISOU~~	~~None~~	~~R~~
CAMO-09-6005	1	POLY	H3	Ice	R
CAMO-09-6029	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6029	1	POLY	H3	Ice	R
CAMO-09-6037	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6037	1	POLY	H3	Ice	R
CAMO-09-6033	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6033	1	POLY	H3	Ice	R
CAMO-09-6030	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6030	1	POLY	H3	Ice	R
CAMO-09-6031	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6031	1	POLY	H3	Ice	R
CAMO-09-6032	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6032	1	POLY	H3	Ice	R
CAMO-09-6036	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6036	1	POLY	H3	Ice	R
CAMO-09-6028	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6028	1	POLY	H3	Ice	R
CAMO-09-6047	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6047	1	POLY	H3	Ice	R
CAMO-09-6048	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6048	1	POLY	H3	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[illegible]	6/24/09	1400			
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By:	Date	Time	Remarks:

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6005

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06.22.2009	MEDIA:	QBT4	qbt3
TIME COLLECTED (HH:MM)		1010	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604949	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	2.5	SCREEN/PORT DESC:	ok	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day ~~Reg.~~ 06/22/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: weathered tuff, brown/gray/purple

SAMPLE COMMENTS: Interface @ 1.5' bgs ~~Second~~ First depth camo-09-6047 06/22/09

LOCATION DESC: 03-049(a)-01 ~~03~~

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 20 dpm

β/γ ≤ 0 dpm

PID Ambient Readings = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) Jacinto Cordova **REVIEWED BY (PRINT)** Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Esteban Lujan	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) [signature]	4:20

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6028

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	Alln
TIME COLLECTED (HH:MM)		1040	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	AG 6.22.09 ok 03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MQ-604978		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		~~8260B~~	~~125 ML SEPTUM AMBER GLASS~~	~~Ice~~ AG 6.22.09	N	
1	15-DAY 6.26/2009	8270C	250 ML AMBER GLASS	Ice	Y	
		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Moist brown soil, tuff material & some roots

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) 02

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

β/γ ≤ 0 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.22.09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) Sherri Sherwood	4:20
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6029

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	OBT4	OK
TIME COLLECTED (HH:MM)		1051	SUB-MEDIA:	UA	
PRS ID:	03-045(h)-00	AG 6.22.09 ~~OK~~ 03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604978		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day ~~Reg~~ JJ.8 6/23/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown/tan indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a) 02

FIELD SCREENING/MEASUREMENT RESULTS:

α: 8 dpm

β/γ: 7 dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Estevan Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.22.09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) [signature]	4:20
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6030

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	Air
TIME COLLECTED (HH:MM)		1300	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	03-045(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604979	OK	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ ~~9~~ 6/22/09	N	
1	15-Day Regulatory 6/23/09	8270C	250 ML AMBER GLASS	Ice	Y	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown moist soil with some organic matter

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) 03

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 26$ dpm

$\beta\gamma \leq 0$ dpm

PID ambient Reading = 0.0 / 2.2 ppm

COLLECTED BY (PRINT) Jacinto Garduno

REVIEWED BY (PRINT) Estevan Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Estevan Lujan	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) Sherri Sherwood	4:20
RELINQUISHED BY ~~Estevan~~ 06/22/09	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6031

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	OK
TIME COLLECTED (HH:MM)		1320	SUB-MEDIA:	UA	
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604979	OK	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0	1.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	2.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day ~~Regular~~ J.B 6/23/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	✓	
1		8270C	250 ML AMBER GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: ~~Bitfacey~~ indurated tuff; pink/grey JB 6/22/09

SAMPLE COMMENTS: ~~[illegible]~~ JB 6/22/09 soil Tuff interface @ 1.0' bgs

LOCATION DESC: 03-049(a) 03

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 3$ dpm

$\beta \leq 0$ dpm

PID Ambient Reading = 0.0 / 2.1 ppm

COLLECTED BY (PRINT) Jacinto Gardea

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Esteban Lujan	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) [signature]	4:20
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6032

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	~~AHH~~ SED
TIME COLLECTED (HH:MM)		1405	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604980	OK	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ 6/22/09	N	
1	15-Day Regular 6/22/09	8270C	250 ML AMBER GLASS	Ice	Y	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: moist dark brown sediment

SAMPLE COMMENTS: NA

LOCATION DESC: 03-049(a) 05

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 0$ dpm

$\beta\gamma \leq 0$ dpm

PID Ambient Reading = 0.0 / 1.7 ppm

COLLECTED BY (PRINT) Jacinto Gurulé

REVIEWED BY (PRINT) Estevan Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Estevan Lujan	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature)	1605	(Signature) Sherri Sherwood	4:20
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6033

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	OBT4	OK
TIME COLLECTED (HH:MM)		1430	SUB-MEDIA:	UA	
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604980	OK	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	J.8612/09 Regular 15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Indurated tuff ~~pink~~ pink / grey FR: CAMO-09-6053

SAMPLE COMMENTS: Interface @ 0.5 bgs

LOCATION DESC: 03-049(a) 05

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq$ 14 dpm

$\beta\gamma \leq$ 0 dpm

PID Ambient Reading = 0.0 / 2.1 ppm

COLLECTED BY (PRINT) J. Branch **REVIEWED BY (PRINT)** Estevan Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Estevan Lujan	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) Sherri Sherwood	1620
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6036

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	Alln
TIME COLLECTED (HH:MM)		1105	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	ok
LOCATION ID:	MO-604982	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	AG 6.22.09 ~~B~~ S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	~~Ice~~ AG 6.22.09	N	
1	~~Reg~~ 15-Day J.B. 6/23/09	8270C	250 ML AMBER GLASS	Ice	Y	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown, moist soil with cobbles, fragments of tuff & some root material

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) OB, outside of drainage

FIELD SCREENING/MEASUREMENT RESULTS:

α = ~~0~~ 8 dpm
β/γ = ee 6/22/09 dpm
0

PID Ambient / Reading = 0.0 / 5.1 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.22.09 1605	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/22/09 4:20
RELINQUISHED BY Esteban Lujan	Date/Time 6-22-09	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6037

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		1115	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604982	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	1.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	2.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Rec 15~~ 30 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Indurated tan/pink tuff

ID: CAMO-09-6048

SAMPLE COMMENTS: Interface @ 1.0' bgs

LOCATION DESC: 03-049(a) 08, outside of drainay

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

β/γ ≤ 0 dpm

PID Ambient / Reading = 0.0 / 2.3 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.22.09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) [signature]	4:20
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6047

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	Alth
TIME COLLECTED (HH:MM)		1000	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	↓
LOCATION ID:	UNK	MO-604949	FIELD QC TYPE:	FD	NA
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	OK
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	INV
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.22.09	N	
1	~~Rush~~ 15-Day 7/6/2009	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: ~~QC Sample of~~ AG 6.22.09
Moist brown soil w/ some roots, tuff fragments

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) - 01

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 26 dpm

β/γ ≤ 0 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Gournas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Esteban Lujan	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) [signature]	4:20

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6048

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		1115	SUB-MEDIA:	UA	↓
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	↓
LOCATION ID:	UNK	mo-604982	FIELD QC TYPE:	FD	↓
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	1.0	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	2.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Res~~ J.B 6/22/09 15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C+~~8082~~ J.B 6/22/09	250 ML AMBER GLASS	Ice	Y	
~~2~~		8290	~~125 ML GLASS~~	~~Ice~~ 99 6.22.09	N	
1	~~Res~~ J.B 6/22/09 15-Day	GAMMA SPEC+ISOU	500 ML POLY	None	Y	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: QC Sample of (Amo-09-6037 Indurated, tan / Pink tuff.

SAMPLE COMMENTS: Interface @ 1.0' bgs

LOCATION DESC: 03-049(a)-08, outside of drainage

FIELD SCREENING/MEASUREMENT RESULTS:

K ≤ 26 dpm

β/γ ≤ 48 dpm

PID Ambient Reading = 0.0 / 2.3 ppm

COLLECTED BY (PRINT) A. Gonmas

REVIEWED BY (PRINT) Estevan Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonmas	6.22.09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) [signature]	4:20

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6053

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	OK	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604980	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:		
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~7196A~~	~~250 ML POLY~~	~~Ice~~ AG 3/31/09	NA	
~~2~~		~~8290~~	~~1 LITER AMBER GLASS~~	~~Ice~~ AG 3/31/09	N	
1	45-Day J. Branch	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-6033

SAMPLE COMMENTS: None

LOCATION DESC: 03-047(a)-05

FIELD SCREENING/MEASUREMENT RESULTS:

AG 6.27.09 NA

COLLECTED BY (PRINT) A. Goumas **REVIEWED BY (PRINT)** J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch (Signature)	6/22/09 1605	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/22/09 4:20
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-10479→10480
-10460 → 10462
-10467
-6028
-6029
-6030
-6047
-6005
-6031 → 6033
-6036 → 6037
-6048

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10470
" " -6053

Reason: QC of Samples

Print Last Name Branch Signature [signature] Date 6/22/09

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-6005	ARS Sample ID:	ARS2-09-00073-001
Sample Collection Date:	06/22/09 10:10	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	0.57	51.57	133.66	51.57	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	42.22	16.16	19.98	16.96		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.06	0.12	0.10	0.12	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	34.56	9.52	1.53	9.57		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	10.01	0.10	10.01	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.04	0.09	0.07	0.09	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	13.10	0.06	13.10	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	10.41	0.12	10.41	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	0.99	0.48	0.19	0.48		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-228	2.14	0.85	0.27	0.85		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	1.27	0.66	0.26	0.66		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	2.34	2.44	1.11	2.50		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.13	0.20	0.09	0.20		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.92

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-6028	ARS Sample ID:	ARS2-09-00073-002
Sample Collection Date:	06/22/09 10:40	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	QUAL	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	58.01	78.76	127.83	79.08	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	21.41	14.44	20.61	14.67		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.07	0.14	0.11	0.14	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	27.03	9.17	1.78	9.20		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO 60	0.00	11.66	0.12	11.66	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.20	0.12	0.09	0.12	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.08	0.13	0.07	0.13		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.89	0.69	0.14	0.69	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.22	0.50	0.16	0.51		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA 228	1.50	0.78	0.31	0.78		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	0.23	0.37	0.33	0.37	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	5.88	3.60	1.38	3.84		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	-0.01	32.30	0.07	32.30	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.74

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00073
Client Sample ID: CAMO-09-6029
Sample Collection Date: 06/22/09 10:51
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00073-003
Date Received: 06/23/09 00:00
Report Date: 06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	33.73	57.44	128.32	67.57	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	38.04	16.84	21.30	17.48		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	30.19	9.46	1.71	9.50		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	11.20	0.11	11.20	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.00	0.00	0.08	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.01	0.03	0.07	0.03	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	11.64	0.13	11.64	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.01	0.46	0.16	0.46		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	1.90	0.98	0.30	0.98		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	0.07	0.16	0.28	0.16	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	1.39	2.29	1.21	2.31		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.32	0.38	0.15	0.38		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.65

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00073
Client Sample ID: CAMO-09-6030
Sample Collection Date: 06/22/09 13:00
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00073-004
Date Received: 06/23/09 00:00
Report Date: 06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	26.66	67.08	133.72	67.16	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	45.07	16.84	20.15	17.72		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.00	0.16	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	30.73	11.66	2.50	11.69		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	16.30	0.17	16.30	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.68	0.42	0.10	0.42		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	1.37	0.80	0.19	0.80	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.27	0.57	0.16	0.57		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	0.77	0.63	0.44	0.63		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	1.59	1.01	0.25	1.01		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	2.52	3.67	1.89	3.71		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	-0.01	54.28	0.12	54.28	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 2.60

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-6031	ARS Sample ID:	ARS2-09-00073-005
Sample Collection Date:	06/22/09 13:20	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	YPV	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	18.28	62.45	133.66	62.49	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	65.25	18.67	19.98	20.31		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.60	0.11	0.90	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	0.36	11.09	5.19	11.09	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	11.66	0.12	11.66	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.24	0.18	0.09	0.18	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	15.25	0.07	15.25	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.24	0.33	0.14	0.33	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.68	0.69	0.20	0.70		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-228	1.90	0.86	0.21	0.87		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	0.64	0.70	0.27	0.70		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	4.87	4.37	1.84	4.41		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.01	0.07	0.06	0.07	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.68

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-6032	ARS Sample ID:	ARS2-09-00073-006
Sample Collection Date:	06/22/09 14:05	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-12.99	37.06	127.53	37.10	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	42.96	16.42	20.61	17.25		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	27.50	10.08	2.10	10.11		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.18	0.14	0.14	0.14		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.06	0.12	0.10	0.12	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.94	0.45	0.09	0.45		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.65	0.55	0.16	0.55	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.53	0.55	0.12	0.55		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	1.34	0.93	0.37	0.94		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	1.32	1.09	0.34	1.09		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	4.18	4.08	1.74	4.19		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.24	0.25	0.10	0.25		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.86

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # EB7558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-6033	ARS Sample ID:	ARS2-09-00073-007
Sample Collection Date:	06/22/09 14:30	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	92.40	94.64	128.32	98.31	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	30.55	16.50	21.30	16.91		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.22	0.25	0.12	0.25	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	21.61	8.51	1.88	8.53		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.06	0.10	0.15	0.10	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.08	0.10	0.09	0.10	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.00	-0.03	0.08	-0.03	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	1.01	0.77	0.14	0.77	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.33	0.89	0.22	0.89		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-228	3.89	1.17	0.88	1.17		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	0.73	0.63	0.29	0.63		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	2.89	4.36	1.92	4.41		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.48	0.54	0.19	0.54		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.03

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-6036	ARS Sample ID:	ARS2-09-00073-008
Sample Collection Date:	06/22/09 11:05	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	9.94	6.52	133.72	58.53	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	41.70	16.34	20.15	17.12		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.07	0.14	0.12	0.14	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	14.41	7.01	1.86	7.03		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.06	0.10	0.12	0.10	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.20	0.16	0.09	0.16	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.02	0.11	0.10	0.11	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.07	0.12	0.14	0.12	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.07	0.49	0.17	0.49		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	1.44	0.77	0.22	0.70		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	-0.02	-0.21	0.20	-0.21	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	2.24	3.45	1.64	3.48		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.03	0.18	0.11	0.18	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 2.05

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-6037	ARS Sample ID:	ARS2-09-00073-009
Sample Collection Date:	06/22/09 11:15	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/22/09 16:03

Analyte Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-17.42	37.92	133.66	37.98	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	56.96	17.61	19.98	18.94		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	28.12	9.06	1.86	9.09		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.07	0.15	0.12	0.15	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.00	39.89	0.09	39.89	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.04	0.09	0.08	0.09	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	12.64	0.14	12.64	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.92	0.63	0.18	0.63		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-220	2.24	0.96	0.32	0.96		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	2.60	1.13	0.38	1.13		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	0.73	2.83	1.50	2.84	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.21	0.30	0.13	0.30		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 0.98

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-6047	ARS Sample ID:	ARS2-09-00073-010
Sample Collection Date:	06/22/09 10:00	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-12.95	37.03	127.33	37.06	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	29.58	14.85	20.61	15.29		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	23.93	8.92	1.88	8.95		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	12.33	0.13	12.33	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.11	0.16	0.09	0.16	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.09	0.13	0.06	0.13		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	12.82	0.14	12.82	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	0.98	0.48	0.18	0.48		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	0.92	0.51	0.33	0.51		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	0.33	0.61	0.21	0.61		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	5.99	3.85	1.40	4.08		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	-0.01	12.48	0.05	12.48	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 2.20

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-6048	ARS Sample ID:	ARS2-09-00073-011
Sample Collection Date:	06/22/09 11:15	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/22/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	33.73	67.44	128.32	67.57	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	41.16	17.21	21.30	17.93		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	30.05	9.78	1.83	9.82		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	11.98	0.18	11.90	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.23	0.14	0.09	0.14	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	15.68	0.08	15.68	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.79	0.51	0.14	0.51	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.44	0.63	0.25	0.64		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	1.95	0.89	0.32	0.89		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	-0.07	106.87	0.24	106.87	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	3.81	3.85	1.59	3.84		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.06	0.21	0.11	0.21	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 0.99

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2453 VALIDATION DATE: 7/22/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☒ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The gamma spec results that were rejected by the laboratory due to high peak width, interference or low abundance were qualified R,R5a. In the QC samples, several results were also rejected by the laboratory. No sample data were qualified as a result.
2. The reported results that were ≤ the MDCs were qualified U,R5.
3. The gamma spec results for Th-234 in samples CAMO-09-6033, -6030 and -6036 were > the MDCs but ≤3X the 1-sigma TPUs and, thus, was qualified U,R11.
4. It should be noted than an MS was not analyzed for tritium. However, an LCS was analyzed and met acceptance criteria. Therefore, no sample data were qualified.
5. It should be noted that the matrix QC parent samples for all analyses were from other LANL RNs. No sample data

DATA VALIDATION COVER SHEET

5119-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/22/09

VALIDATOR'S SIGNATURE: Chandra Lewis DATE: 7/22/09

Form 5119-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☒	☐	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☐	☒	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6005	Project:	LANL01004
Sample ID:	232358001	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	17.6%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.834		0.171	+/-0.0827	0.100	pCi/g		AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0419	U,R5	0.0785	+/-0.0157	0.100	pCi/g						
Uranium-238		0.787		0.0667	+/-0.0789	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.092	U,R5	0.310	+/-0.0902	0.200	pCi/g		MXR1	07/06/09	1114	880723	2
Bismuth-211	UI	4.16	R,R5a	0.262	+/-0.251		pCi/g						
Bismuth-214		1.27		0.0998	+/-0.0879	0.200	pCi/g						
Cadmium-109	UI	3.90	R,R5a	1.28	+/-0.535		pCi/g						
Cerium-139	U	0.0273	U,R5	0.0473	+/-0.0131	0.050	pCi/g						
Cesium-134	U	0.0781		0.0827	+/-0.0311	0.100	pCi/g						
Cesium-137	U	-0.0161		0.0511	+/-0.0156	0.100	pCi/g						
Cobalt-60	U	0.00262		0.0586	+/-0.0178	0.100	pCi/g						
Europium-152	U	-0.0407		0.130	+/-0.0509	0.200	pCi/g						
Lanthanum-140	U	-0.0803		0.0963	+/-0.0337		pCi/g						
Lead-212		2.01		0.0811	+/-0.0903	0.100	pCi/g						
Lead-214		1.45		0.0913	+/-0.0952	0.100	pCi/g						
Mercury-203	U	0.0345	U,R5	0.0629	+/-0.0181	0.100	pCi/g						
Potassium-40		35.5		0.482	+/-1.56	1.00	pCi/g						
Radium-223	U	-0.153	U,R5	1.01	+/-0.358		pCi/g						
Radium-224	UI	5.39	R,R5a	0.922	+/-0.713		pCi/g						
Radium-226		1.27		0.0998	+/-0.0879		pCi/g						
Radium-228		2.13		0.173	+/-0.192	0.500	pCi/g						
Ruthenium-106	U	0.0453	U,R5	0.451	+/-0.137	0.800	pCi/g						
Sodium-22	U	-0.0123	U,R5	0.0631	+/-0.0196	0.080	pCi/g						
Strontium-85	UI	0.110	R,R5a	0.0628	+/-0.0184		pCi/g						
Thallium-208		0.590		0.0519	+/-0.0408	0.080	pCi/g						
Thorium-227	U	0.0253	U,R5	0.556	+/-0.165		pCi/g						
Thorium-231	U	-0.153		1.01	+/-0.358		pCi/g						
Thorium-234	U	1.37		2.73	+/-0.779	2.00	pCi/g						
Tin-113	U	-0.00501		0.0623	+/-0.0184	0.100	pCi/g						
Uranium-235	U	0.0482		0.341	+/-0.104	0.500	pCi/g						
Yttrium-88	U	0.0279		0.0448	+/-0.0116	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6005
Sample ID: 232358001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	66.0	U,R5	186	+/-56.1	250	pCi/L		KXK2	07/09/09	2241	881715	3

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	92.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6029	Project:	LANL01004
Sample ID:	232358002	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	15.9%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.751		0.161	+/-0.0744	0.100	pCi/g		AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0437	U,R5	0.0737	+/-0.0188	0.100	pCi/g						
Uranium-238		0.803		0.0626	+/-0.0773	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.00825	U,R5	0.353	+/-0.0995	0.200	pCi/g		MXR1	07/06/09	1115	880723	2
Bismuth-211	UI	3.91	R,R5a	0.369	+/-0.274		pCi/g						
Bismuth-214		1.17		0.126	+/-0.0897	0.200	pCi/g						
Cadmium-109	UI	3.87	R,R5a	1.54	+/-0.506		pCi/g						
Cerium-139	U	-0.0258	U,R5	0.0559	+/-0.017	0.050	pCi/g						
Cesium-134	U	0.104	U,R5	0.110	+/-0.0288	0.100	pCi/g						
Cesium-137	UI	0.0929	R,R5a	0.0903	+/-0.0243	0.100	pCi/g						
Cobalt-60	U	0.0221	U,R5	0.0751	+/-0.0216	0.100	pCi/g						
Europium-152	U	-0.0566		0.177	+/-0.0654	0.200	pCi/g						
Lanthanum-140	U	-0.0406		0.153	+/-0.0487		pCi/g						
Lead-212		1.54		0.110	+/-0.0825	0.100	pCi/g						
Lead-214		1.36		0.132	+/-0.102	0.100	pCi/g						
Mercury-203	U	0.0564	U,R5	0.0859	+/-0.0235	0.100	pCi/g						
Potassium-40		32.5		0.525	+/-1.49	1.00	pCi/g						
Radium-223	U	-0.128	U,R5	1.34	+/-0.452		pCi/g						
Radium-224	UI	4.07	R,R5a	1.25	+/-0.715		pCi/g						
Radium-226		1.17		0.126	+/-0.0897		pCi/g						
Radium-228		1.57		0.255	+/-0.171	0.500	pCi/g						
Ruthenium-106	U	-0.0243	U,R5	0.614	+/-0.187	0.800	pCi/g						
Sodium-22	U	-0.00959	U,R5	0.0829	+/-0.0258	0.080	pCi/g						
Strontium-85	UI	0.0917	R,R5a	0.0832	+/-0.0249		pCi/g						
Thallium-208		0.537		0.0699	+/-0.0464	0.080	pCi/g						
Thorium-227	U	0.108	U,R5	0.742	+/-0.222		pCi/g						
Thorium-231	U	-0.128		1.34	+/-0.452		pCi/g						
Thorium-234	U	0.0438		2.86	+/-0.808	2.00	pCi/g						
Tin-113	U	0.0318		0.0905	+/-0.0256	0.100	pCi/g						
Uranium-235	U	0.0693		0.428	+/-0.126	0.500	pCi/g						
Yttrium-88	U	0.00846		0.0465	+/-0.013	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	103		186	+/-57.1	250	pCi/L		KXK2	07/10/09	0025	881715	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6037	Project:	LANL01004
Sample ID:	232358003	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	8.45%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.818		0.171	+/-0.0814	0.100	pCi/g		AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0326	U,R5	0.0785	+/-0.0125	0.100	pCi/g						
Uranium-238		0.776		0.0666	+/-0.0775	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.00864	U,R5	0.114	+/-0.0368	0.200	pCi/g		MXR1	07/06/09	1115	880723	2
Bismuth-211	UI	4.39	R,R5a	0.393	+/-0.308		pCi/g						
Bismuth-214		1.35		0.156	+/-0.114	0.200	pCi/g						
Cadmium-109	UI	2.93	R,R5a	1.10	+/-0.442		pCi/g						
Cerium-139	U	0.0232	U,R5	0.0564	+/-0.0155	0.050	pCi/g						
Cesium-134	UI	0.136	R,R5a	0.129	+/-0.0335	0.100	pCi/g						
Cesium-137	U	0.064	U,R5	0.0904	+/-0.0242	0.100	pCi/g						
Cobalt-60	U	-0.023		0.0978	+/-0.0313	0.100	pCi/g						
Europium-152	U	0.0423		0.202	+/-0.0843	0.200	pCi/g						
Lanthanum-140	U	-0.0382		0.186	+/-0.0583		pCi/g						
Lead-212		1.86		0.102	+/-0.0937	0.100	pCi/g						
Lead-214		1.53		0.137	+/-0.114	0.100	pCi/g						
Mercury-203	U	0.0463	U,R5	0.0844	+/-0.0234	0.100	pCi/g						
Potassium-40		36.3		0.606	+/-1.67	1.00	pCi/g						
Radium-223	U	-0.886	U,R5	1.36	+/-0.424		pCi/g						
Radium-224	UI	4.81	R,R5a	1.17	+/-0.738		pCi/g						
Radium-226		1.35		0.156	+/-0.114		pCi/g						
Radium-228		2.26		0.289	+/-0.240	0.500	pCi/g						
Ruthenium-106	U	0.219	U,R5	0.684	+/-0.205	0.800	pCi/g						
Sodium-22	U	0.0188	U,R5	0.108	+/-0.032	0.080	pCi/g						
Strontium-85	UI	0.120	R,R5a	0.0902	+/-0.0262		pCi/g						
Thallium-208		0.653		0.0773	+/-0.0603	0.080	pCi/g						
Thorium-227	U	0.229	U,R5	0.789	+/-0.223		pCi/g						
Thorium-231	U	-0.886	U,R5	1.36	+/-0.424		pCi/g						
Thorium-234		1.59		1.13	+/-0.454	2.00	pCi/g						
Tin-113	U	-0.00614	U,R5	0.0939	+/-0.0278	0.100	pCi/g						
Uranium-235	U	0.0721		0.387	+/-0.114	0.500	pCi/g						
Yttrium-88	U	-0.0145		0.0591	+/-0.0197	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	-1.81		198	+/-57.8	250	pCi/L		KXK2	07/10/09	0549	881715	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6033
Sample ID: 232358004
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 11.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.772		0.166	+/-0.0771	0.100	pCi/g		AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0271	U,R5	0.0762	+/-0.0158	0.100	pCi/g						
Uranium-238		0.950		0.0647	+/-0.089	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.154	U,R5	0.219	+/-0.0694	0.200	pCi/g		MXR1	07/06/09	1116	880723	2
Bismuth-211	UI	4.27	R,R5a	0.268	+/-0.228		pCi/g						
Bismuth-214		1.22		0.0952	+/-0.0889	0.200	pCi/g						
Cadmium-109	UI	2.97	R,R5a	1.45	+/-0.477		pCi/g						
Cerium-139	U	-0.00418	U,R5	0.0466	+/-0.0138	0.050	pCi/g						
Cesium-134	UI	0.124	R,R5a	0.0772	+/-0.032	0.100	pCi/g						
Cesium-137	UI	0.0704	R,R5a	0.0543	+/-0.028	0.100	pCi/g						
Cobalt-60	U	0.0338	U,R5	0.0562	+/-0.0156	0.100	pCi/g						
Europium-152	U	0.0345		0.138	+/-0.0488	0.200	pCi/g						
Lanthanum-140	U	-0.103		0.102	+/-0.0366		pCi/g						
Lead-212		1.93		0.0816	+/-0.0854	0.100	pCi/g						
Lead-214		1.48		0.0954	+/-0.0881	0.100	pCi/g						
Mercury-203	U	0.0337	U,R5	0.0625	+/-0.0176	0.100	pCi/g						
Potassium-40		35.5		0.454	+/-1.45	1.00	pCi/g						
Radium-223	U	0.376	U,R5	0.949	+/-0.312		pCi/g						
Radium-224	UI	4.41	R,R5a	0.927	+/-0.530		pCi/g						
Radium-226		1.22		0.0952	+/-0.0889		pCi/g						
Radium-228		1.79		0.187	+/-0.179	0.500	pCi/g						
Ruthenium-106	U	-0.0497	U,R5	0.435	+/-0.131	0.800	pCi/g						
Sodium-22	U	-0.015	U,R5	0.0632	+/-0.0194	0.080	pCi/g						
Strontium-85	UI	0.185	R,R5a	0.0712	+/-0.0202		pCi/g						
Thallium-208		0.599		0.0479	+/-0.040	0.080	pCi/g						
Thorium-227	U	-0.0681	U,R5	0.553	+/-0.161		pCi/g						
Thorium-231	U	0.376	U,R5	0.949	+/-0.312		pCi/g						
Thorium-234		1.87	U,R11	1.82	+/-0.817	2.00	pCi/g						
Tin-113	U	-0.0164	U,R5	0.0631	+/-0.0193	0.100	pCi/g						
Uranium-235	U	-0.0343		0.337	+/-0.0999	0.500	pCi/g						
Yttrium-88	U	0.0125		0.0441	+/-0.0125	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	0.00		235	+/-68.0	250	pCi/L		KXK2	07/13/09	1300	881715	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6030	Project:	LANL01004
Sample ID:	232358005	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	24.2%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.59		0.269	+/-0.153	0.100	pCi/g		AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0585	U,R5	0.123	+/-0.0211	0.100	pCi/g						
Uranium-238		1.79		0.105	+/-0.167	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0376	U,R5	0.260	+/-0.0818	0.200	pCi/g		MXR1	07/06/09	1117	880723	2
Bismuth-211	UI	3.53	R,R5a	0.312	+/-0.266		pCi/g						
Bismuth-214		1.02		0.120	+/-0.0881	0.200	pCi/g						
Cadmium-109	UI	2.64	R,R5a	1.20	+/-0.496		pCi/g						
Cerium-139	U	0.00512	U,R5	0.0471	+/-0.0137	0.050	pCi/g						
Cesium-134	U	0.0945	U,R5	0.111	+/-0.0307	0.100	pCi/g						
Cesium-137		0.675		0.0611	+/-0.0565	0.100	pCi/g						
Cobalt-60	U	0.0114	U,R5	0.0745	+/-0.0216	0.100	pCi/g						
Europium-152	U	0.0699		0.157	+/-0.0493	0.200	pCi/g						
Lanthanum-140	U	-0.162		0.108	+/-0.048		pCi/g						
Lead-212		1.52		0.0861	+/-0.0775	0.100	pCi/g						
Lead-214		1.23		0.109	+/-0.098	0.100	pCi/g						
Mercury-203	U	-0.013	U,R5	0.0682	+/-0.020	0.100	pCi/g						
Potassium-40		30.7		0.537	+/-1.53	1.00	pCi/g						
Radium-223	U	-0.652	U,R5	1.10	+/-0.345		pCi/g						
Radium-224	UI	4.28	R,R5a	0.981	+/-0.588		pCi/g						
Radium-226		1.02		0.120	+/-0.0881		pCi/g						
Radium-228		1.86		0.223	+/-0.204	0.500	pCi/g						
Ruthenium-106	U	-0.0615	U,R5	0.571	+/-0.173	0.800	pCi/g						
Sodium-22	U	0.000903	U,R5	0.0846	+/-0.0262	0.080	pCi/g						
Strontium-85	UI	0.0973	R,R5a	0.0713	+/-0.0201		pCi/g						
Thallium-208		0.492		0.0577	+/-0.0491	0.080	pCi/g						
Thorium-227	U	-0.296	U,R5	0.571	+/-0.187		pCi/g						
Thorium-231	U	-0.652	U,R5	1.10	+/-0.345		pCi/g						
Thorium-234		2.91	U,R11	1.96	+/-1.38	2.00	pCi/g						
Tin-113	U	0.0603	U,R5	0.0862	+/-0.0239	0.100	pCi/g						
Uranium-235	U	-0.0285		0.324	+/-0.0951	0.500	pCi/g						
Yttrium-88	U	0.0122		0.0589	+/-0.0164	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	27.4		239	+/-69.3	250	pCi/L		KXK2	07/10/09	1301	881715	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6031	Project:	LANL01004
Sample ID:	232358006	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	13.7%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.839		0.166	+/-0.082	0.100	pCi/g		AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0588	U,R5	0.0763	+/-0.018	0.100	pCi/g						
Uranium-238		0.820		0.0648	+/-0.0801	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.0983	U,R5	0.274	+/-0.0848	0.200	pCi/g		MXR1	07/06/09	1213	880723	2
Bismuth-211	UI	3.93	R,R5a	0.313	+/-0.254		pCi/g						
Bismuth-214		1.29		0.0938	+/-0.101	0.200	pCi/g						
Cadmium-109	UI	3.64	R,R5a	1.26	+/-0.600		pCi/g						
Cerium-139	U	-0.00453	U,R5	0.0464	+/-0.0135	0.050	pCi/g						
Cesium-134	UI	0.0919	R,R5a	0.0881	+/-0.0387	0.100	pCi/g						
Cesium-137	U	0.0255	U,R5	0.0598	+/-0.0171	0.100	pCi/g						
Cobalt-60	U	-0.0483		0.0547	+/-0.0201	0.100	pCi/g						
Europium-152	U	-0.0667		0.143	+/-0.0443	0.200	pCi/g						
Lanthanum-140	U	-0.112		0.0844	+/-0.0356		pCi/g						
Lead-212		1.82		0.0852	+/-0.0866	0.100	pCi/g						
Lead-214		1.37		0.110	+/-0.0952	0.100	pCi/g						
Mercury-203	U	-0.00417	U,R5	0.0611	+/-0.0186	0.100	pCi/g						
Potassium-40		38.1		0.414	+/-1.73	1.00	pCi/g						
Radium-223	U	0.0344	U,R5	1.01	+/-0.346		pCi/g						
Radium-224	UI	4.15	R,R5a	0.969	+/-0.539		pCi/g						
Radium-226		1.29		0.0938	+/-0.101		pCi/g						
Radium-228		1.81		0.212	+/-0.177	0.500	pCi/g						
Ruthenium-106	U	0.051	U,R5	0.518	+/-0.154	0.800	pCi/g						
Sodium-22	U	0.0122		0.0764	+/-0.0228	0.080	pCi/g						
Strontium-85	U	0.0394		0.0652	+/-0.0204		pCi/g						
Thallium-208		0.561		0.0552	+/-0.0447	0.080	pCi/g						
Thorium-227	U	-0.424	U,R5	0.548	+/-0.180		pCi/g						
Thorium-231	U	0.0344		1.01	+/-0.346		pCi/g						
Thorium-234	U	1.30		2.52	+/-0.738	2.00	pCi/g						
Tin-113	U	0.00222		0.0726	+/-0.0209	0.100	pCi/g						
Uranium-235	U	0.0145		0.346	+/-0.101	0.500	pCi/g						
Yttrium-88	U	-0.00306		0.043	+/-0.0135	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	-124		239	+/-64.0	250	pCi/L		KXK2	07/10/09	1343	881715	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6032	Project:	LANL01004
Sample ID:	232358007	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	18.7%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		3.84		0.197	+/-0.301	0.100	pCi/g		AXD2	07/10/09	2119	881676	1
Uranium-235/236		0.182		0.0902	+/-0.0354	0.100	pCi/g						
Uranium-238		4.78		0.0766	+/-0.367	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.209	U,R5	0.448	+/-0.139	0.200	pCi/g		MXR1	07/06/09	1213	880723	2
Bismuth-211	UI	3.97	R,R5a	0.372	+/-0.305		pCi/g						
Bismuth-214		1.22		0.128	+/-0.105	0.200	pCi/g						
Cadmium-109	UI	3.42	R,R5a	1.49	+/-0.663		pCi/g						
Cerium-139	U	-0.0437	U,R5	0.0534	+/-0.0179	0.050	pCi/g						
Cesium-134	U	0.0682	U,R5	0.100	+/-0.0279	0.100	pCi/g						
Cesium-137		0.908		0.0722	+/-0.0598	0.100	pCi/g						
Cobalt-60	U	0.0312	U,R5	0.0831	+/-0.0234	0.100	pCi/g						
Europium-152	U	0.0815		0.190	+/-0.0624	0.200	pCi/g						
Lanthanum-140	U	0.0457		0.150	+/-0.0477		pCi/g						
Lead-212		1.70		0.110	+/-0.0916	0.100	pCi/g						
Lead-214		1.38		0.134	+/-0.112	0.100	pCi/g						
Mercury-203	UI	0.094	R,R5a	0.0844	+/-0.0236	0.100	pCi/g						
Potassium-40		30.0		0.599	+/-1.66	1.00	pCi/g						
Radium-223	UI	1.41	R,R5a	1.33	+/-0.417		pCi/g						
Radium-224	UI	4.43	R,R5a	1.25	+/-0.640		pCi/g						
Radium-226		1.22		0.128	+/-0.105		pCi/g						
Radium-228		1.63		0.232	+/-0.190	0.500	pCi/g						
Ruthenium-106	U	-0.0199	U,R5	0.630	+/-0.190	0.800	pCi/g						
Sodium-22	U	-0.0523	U,R5	0.0767	+/-0.0264	0.080	pCi/g						
Strontium-85	UI	0.0844	R,R5a	0.0841	+/-0.0264		pCi/g						
Thallium-208		0.492		0.0668	+/-0.0598	0.080	pCi/g						
Thorium-227	U	0.102	U,R5	0.701	+/-0.207		pCi/g						
Thorium-231	UI	1.41	R,R5a	1.33	+/-0.417		pCi/g						
Thorium-234	U	1.34	U,R5	3.72	+/-1.11	2.00	pCi/g						
Tin-113	U	-0.0146		0.0845	+/-0.0264	0.100	pCi/g						
Uranium-235	U	0.307		0.431	+/-0.132	0.500	pCi/g						
Yttrium-88	U	0.00521		0.0619	+/-0.0187	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	-58		236	+/-65.8	250	pCi/L		KXK2	07/10/09	1425	881715	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6036	Project:	LANL01004
Sample ID:	232358008	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	18.9%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.855		0.176	+/-0.0848	0.100	pCi/g		AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0525	U,R5	0.0805	+/-0.0163	0.100	pCi/g						
Uranium-238		1.02		0.0684	+/-0.0959	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0314	U,R5	0.220	+/-0.0709	0.200	pCi/g		MXR1	07/06/09	1214	880723	2
Bismuth-211	UI	3.84	R,R5a	0.313	+/-0.275		pCi/g						
Bismuth-214		1.12		0.113	+/-0.0933	0.200	pCi/g						
Cadmium-109	UI	3.69	R,R5a	1.20	+/-0.439		pCi/g						
Cerium-139	U	-0.00184	U,R5	0.0508	+/-0.0153	0.050	pCi/g						
Cesium-134	UI	0.0958	R,R5a	0.0951	+/-0.0348	0.100	pCi/g						
Cesium-137		0.221		0.0638	+/-0.0337	0.100	pCi/g						
Cobalt-60	U	0.0418	U,R5	0.0743	+/-0.0206	0.100	pCi/g						
Europium-152	U	0.0589		0.165	+/-0.0607	0.200	pCi/g						
Lanthanum-140	U	0.00626		0.136	+/-0.0404		pCi/g						
Lead-212		1.63		0.0931	+/-0.0847	0.100	pCi/g						
Lead-214		1.34		0.109	+/-0.102	0.100	pCi/g						
Mercury-203	U	0.00809	U,R5	0.0689	+/-0.0231	0.100	pCi/g						
Potassium-40		32.0		0.483	+/-1.40	1.00	pCi/g						
Radium-223	U	-0.453	U,R5	1.03	+/-0.368		pCi/g						
Radium-224	UI	4.37	R,R5a	1.06	+/-0.631		pCi/g						
Radium-226		1.12		0.113	+/-0.0933		pCi/g						
Radium-228		1.63		0.221	+/-0.159	0.500	pCi/g						
Ruthenium-106	U	-0.0278	U,R5	0.531	+/-0.163	0.800	pCi/g						
Sodium-22	U	-0.0153		0.070	+/-0.0223	0.080	pCi/g						
Strontium-85	U	0.049		0.0671	+/-0.0212		pCi/g						
Thallium-208		0.600		0.0615	+/-0.0479	0.080	pCi/g						
Thorium-227	U	0.248	U,R5	0.678	+/-0.203		pCi/g						
Thorium-231	U	-0.453	U,R5	1.03	+/-0.368		pCi/g						
Thorium-234		2.20	U,R11	1.85	+/-0.752	2.00	pCi/g						
Tin-113	U	0.00871	U,R5	0.0758	+/-0.0222	0.100	pCi/g						
Uranium-235	U	0.089		0.361	+/-0.107	0.500	pCi/g						
Yttrium-88	U	0.0102		0.0512	+/-0.0145	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	90.4		236	+/-70.8	250	pCi/L		KXK2	07/10/09	1507	881715	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6028	Project:	LANL01004
Sample ID:	232358009	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	15.7%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.732		0.203	+/-0.0785	0.100	pCi/g		AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0442	U,R5	0.093	+/-0.0159	0.100	pCi/g						
Uranium-238		0.630		0.079	+/-0.0699	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0466	U,R5	0.250	+/-0.0762	0.200	pCi/g		MXR1	07/06/09	1215	880723	2
Bismuth-211	UI	3.51	R,R5a	0.316	+/-0.213		pCi/g						
Bismuth-214		1.19		0.116	+/-0.0919	0.200	pCi/g						
Cadmium-109	UI	2.88	R,R5a	0.997	+/-0.577		pCi/g						
Cerium-139	U	0.00788	U,R5	0.0467	+/-0.0138	0.050	pCi/g						
Cesium-134	U	0.0539		0.0904	+/-0.0319	0.100	pCi/g						
Cesium-137	U	0.0509		0.0692	+/-0.0234	0.100	pCi/g						
Cobalt-60	U	-0.0187		0.0563	+/-0.0184	0.100	pCi/g						
Europium-152	U	-0.056		0.150	+/-0.0459	0.200	pCi/g						
Lanthanum-140	U	0.0202		0.127	+/-0.0421		pCi/g						
Lead-212		1.69		0.0843	+/-0.0813	0.100	pCi/g						
Lead-214		1.22		0.115	+/-0.0807	0.100	pCi/g						
Mercury-203	U	-0.00142	U,R5	0.0633	+/-0.0187	0.100	pCi/g						
Potassium-40		33.3		0.481	+/-1.51	1.00	pCi/g						
Radium-223	U	0.524	U,R5	1.10	+/-0.348		pCi/g						
Radium-224	UI	4.81	R,R5a	0.959	+/-0.595		pCi/g						
Radium-226		1.19		0.116	+/-0.0919		pCi/g						
Radium-228		1.72		0.210	+/-0.181	0.500	pCi/g						
Ruthenium-106	U	-0.325	U,R5	0.452	+/-0.147	0.800	pCi/g						
Sodium-22	U	0.042	U,R5	0.0799	+/-0.0222	0.080	pCi/g						
Strontium-85	UI	0.0744	R,R5a	0.0694	+/-0.0189		pCi/g						
Thallium-208		0.600		0.0518	+/-0.0447	0.080	pCi/g						
Thorium-227	U	-0.133	U,R5	0.591	+/-0.174		pCi/g						
Thorium-231	U	0.524		1.10	+/-0.348		pCi/g						
Thorium-234	U	0.732		2.10	+/-0.922	2.00	pCi/g						
Tin-113	U	0.0179		0.0707	+/-0.0205	0.100	pCi/g						
Uranium-235	U	0.0404		0.331	+/-0.0982	0.500	pCi/g						
Yttrium-88	U	0.0101		0.047	+/-0.0131	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	88.7		241	+/-72.2	250	pCi/L		KXK2	07/10/09	1550	881715	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6047
Sample ID: 232358010
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 19.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.530		0.180	+/-0.0589	0.100	pCi/g		AXD2	07/10/09	2120	881676	1
Uranium-235/236	U	0.0342	U,R5	0.0823	+/-0.0131	0.100	pCi/g						
Uranium-238		0.624		0.0699	+/-0.0663	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0349	U,R5	0.267	+/-0.0845	0.200	pCi/g		MXR1	07/06/09	1215	880723	2
Bismuth-211	UI	2.98	R,R5a	0.292	+/-0.208		pCi/g						
Bismuth-214		0.835		0.103	+/-0.0764	0.200	pCi/g						
Cadmium-109	UI	3.05	R,R5a	1.22	+/-0.466		pCi/g						
Cerium-139	U	-0.00372	U,R5	0.0465	+/-0.0138	0.050	pCi/g						
Cesium-134	UI	0.0851	R,R5a	0.0847	+/-0.0321	0.100	pCi/g						
Cesium-137	U	0.045	U,R5	0.0713	+/-0.0202	0.100	pCi/g						
Cobalt-60	U	0.0107		0.069	+/-0.0206	0.100	pCi/g						
Europium-152	U	-0.0502		0.144	+/-0.0477	0.200	pCi/g						
Lanthanum-140	U	-0.0863		0.107	+/-0.0384		pCi/g						
Lead-212		1.41		0.0833	+/-0.0682	0.100	pCi/g						
Lead-214		1.04		0.105	+/-0.0772	0.100	pCi/g						
Mercury-203	U	0.0172	U,R5	0.0642	+/-0.0184	0.100	pCi/g						
Potassium-40		33.5		0.428	+/-1.67	1.00	pCi/g						
Radium-223	U	-0.0757	U,R5	1.06	+/-0.355		pCi/g						
Radium-224	UI	3.84	R,R5a	0.947	+/-0.538		pCi/g						
Radium-226		0.835		0.103	+/-0.0764		pCi/g						
Radium-228		1.27		0.214	+/-0.154	0.500	pCi/g						
Ruthenium-106	U	0.246	U,R5	0.513	+/-0.146	0.800	pCi/g						
Sodium-22	U	0.00289	U,R5	0.0702	+/-0.0213	0.080	pCi/g						
Strontium-85	UI	0.0879	R,R5a	0.0675	+/-0.0198		pCi/g						
Thallium-208		0.383		0.0526	+/-0.0373	0.080	pCi/g						
Thorium-227	U	-0.262	U,R5	0.577	+/-0.183		pCi/g						
Thorium-231	U	-0.0757		1.06	+/-0.355		pCi/g						
Thorium-234	U	0.675		2.15	+/-0.872	2.00	pCi/g						
Tin-113	U	-0.00882		0.0686	+/-0.0204	0.100	pCi/g						
Uranium-235	U	0.178		0.340	+/-0.108	0.500	pCi/g						
Yttrium-88	U	-0.0147		0.0513	+/-0.0172	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	129		240	+/-73.4	250	pCi/L		KXK2	07/10/09	1632	881715	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6048	Project:	LANL01004
Sample ID:	232358011	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	8.9%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.860		0.170	+/-0.0829	0.100	pCi/g		AXD2	07/10/09	2120	881676	1
Uranium-235/236	U	0.0462	U,R5	0.0778	+/-0.015	0.100	pCi/g						
Uranium-238		0.889		0.0661	+/-0.0851	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.107	U,R5	0.142	+/-0.0433	0.200	pCi/g		MXR1	07/06/09	1325	880723	2
Bismuth-211	UI	4.40	R,R5a	0.418	+/-0.325		pCi/g						
Bismuth-214		1.43		0.151	+/-0.111	0.200	pCi/g						
Cadmium-109	UI	4.52	R,R5a	1.27	+/-0.489		pCi/g						
Cerium-139	U	0.0218	U,R5	0.0597	+/-0.017	0.050	pCi/g						
Cesium-134	U	0.0867		0.117	+/-0.0312	0.100	pCi/g						
Cesium-137	U	-0.0306		0.0869	+/-0.0275	0.100	pCi/g						
Cobalt-60	U	0.061		0.0997	+/-0.0271	0.100	pCi/g						
Europium-152	U	0.0208		0.207	+/-0.0681	0.200	pCi/g						
Lanthanum-140	U	-0.0247		0.170	+/-0.0549		pCi/g						
Lead-212		1.92		0.104	+/-0.104	0.100	pCi/g						
Lead-214		1.53		0.137	+/-0.120	0.100	pCi/g						
Mercury-203	U	0.0605	U,R5	0.0869	+/-0.0236	0.100	pCi/g						
Potassium-40		33.1		0.645	+/-1.52	1.00	pCi/g						
Radium-223	U	-0.588	U,R5	1.29	+/-0.451		pCi/g						
Radium-224	UI	5.99	R,R5a	1.18	+/-0.787		pCi/g						
Radium-226		1.43		0.151	+/-0.111		pCi/g						
Radium-228		1.88		0.316	+/-0.229	0.500	pCi/g						
Ruthenium-106	U	-0.135	U,R5	0.662	+/-0.205	0.800	pCi/g						
Sodium-22	U	-0.0176	U,R5	0.0957	+/-0.0301	0.080	pCi/g						
Strontium-85	UI	0.110	R,R5a	0.0897	+/-0.0261		pCi/g						
Thallium-208		0.685		0.0731	+/-0.0572	0.080	pCi/g						
Thorium-227	U	-0.0949	U,R5	0.771	+/-0.234		pCi/g						
Thorium-231	U	-0.588	U,R5	1.29	+/-0.451		pCi/g						
Thorium-234		2.03		1.34	+/-0.523	2.00	pCi/g						
Tin-113	U	-0.00333	U,R5	0.0922	+/-0.027	0.100	pCi/g						
Uranium-235	U	0.315		0.448	+/-0.129	0.500	pCi/g						
Yttrium-88	U	-0.0336		0.0604	+/-0.022	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	106		243	+/-73.5	250	pCi/L		KXK2	07/10/09	1714	881715	3

CLL
7/22/09

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2453

REQUEST NUMBER: 09-2453

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232358%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6005	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6005	1	POLY	H3	Ice	R
CAMO-09-6029	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6029	1	POLY	H3	Ice	R
CAMO-09-6037	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6037	1	POLY	H3	Ice	R
CAMO-09-6033	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6033	1	POLY	H3	Ice	R
CAMO-09-6030	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6030	1	POLY	H3	Ice	R
CAMO-09-6031	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6031	1	POLY	H3	Ice	R
CAMO-09-6032	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6032	1	POLY	H3	Ice	R
CAMO-09-6036	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6036	1	POLY	H3	Ice	R
CAMO-09-6028	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6028	1	POLY	H3	Ice	R
CAMO-09-6047	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6047	1	POLY	H3	Ice	R
CAMO-09-6048	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6048	1	POLY	H3	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
Printed Name / Signature	6/24/09	1400	Patricia Dent P. Dent	6/25/09	08:45
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2453

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2453
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009
TURNAROUND/REPORT DUE: 7/9/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6005	R	6/22/2009	
		1	CAMO-09-6028	R	6/22/2009	
		1	CAMO-09-6029	R	6/22/2009	
		1	CAMO-09-6030	R	6/22/2009	
		1	CAMO-09-6031	R	6/22/2009	
		1	CAMO-09-6032	R	6/22/2009	
		1	CAMO-09-6033	R	6/22/2009	
		1	CAMO-09-6036	R	6/22/2009	
		1	CAMO-09-6037	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2453

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6047	R	6/22/2009	
		1	CAMO-09-6048	R	6/22/2009	
	EPA:906.0	1	CAMO-09-6005	R	6/22/2009	
		1	CAMO-09-6028	R	6/22/2009	
		1	CAMO-09-6029	R	6/22/2009	
		1	CAMO-09-6030	R	6/22/2009	
		1	CAMO-09-6031	R	6/22/2009	
		1	CAMO-09-6032	R	6/22/2009	
		1	CAMO-09-6033	R	6/22/2009	
		1	CAMO-09-6036	R	6/22/2009	
		1	CAMO-09-6037	R	6/22/2009	
		1	CAMO-09-6047	R	6/22/2009	
		1	CAMO-09-6048	R	6/22/2009	
	HASL-300:ISOU	1	CAMO-09-6005	R	6/22/2009	
		1	CAMO-09-6028	R	6/22/2009	
		1	CAMO-09-6029	R	6/22/2009	
		1	CAMO-09-6030	R	6/22/2009	
		1	CAMO-09-6031	R	6/22/2009	
		1	CAMO-09-6032	R	6/22/2009	
		1	CAMO-09-6033	R	6/22/2009	
		1	CAMO-09-6036	R	6/22/2009	
		1	CAMO-09-6037	R	6/22/2009	
		1	CAMO-09-6047	R	6/22/2009	
		1	CAMO-09-6048	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2453

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

June 26, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232358
SDG: 09-2453

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 25, 2009, and analyzed for Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2453
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232358
SDG: 09-2453

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- Quality Control Data.....49
- Raw Data..... 56
- Background and Efficiency Data.....791
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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232358
SDG # : 09-2453

June 26, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 25, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232358001	CAMO-09-6005
232358002	CAMO-09-6029
232358003	CAMO-09-6037
232358004	CAMO-09-6033
232358005	CAMO-09-6030
232358006	CAMO-09-6031
232358007	CAMO-09-6032
232358008	CAMO-09-6036
232358009	CAMO-09-6028
232358010	CAMO-09-6047
232358011	CAMO-09-6048

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for

Valerie Davis

Project Manager

List of current GEL Certifications as of 26 June 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2453

REQUEST NUMBER: 09-2453

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232358 °/.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6005	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6005	1	POLY	H3	Ice	R
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CAMO-09-6037	1	POLY	H3	Ice	R
CAMO-09-6033	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6033	1	POLY	H3	Ice	R
CAMO-09-6030	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6030	1	POLY	H3	Ice	R
CAMO-09-6031	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6031	1	POLY	H3	Ice	R
CAMO-09-6032	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6032	1	POLY	H3	Ice	R
CAMO-09-6036	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6036	1	POLY	H3	Ice	R
CAMO-09-6028	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6028	1	POLY	H3	Ice	R
CAMO-09-6047	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6047	1	POLY	H3	Ice	R
CAMO-09-6048	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6048	1	POLY	H3	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[illegible]	6/24/09	1400	Patricia Dent	6/25/09	08:45
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2453

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2453

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6005	R	6/22/2009	
		1	CAMO-09-6028	R	6/22/2009	
		1	CAMO-09-6029	R	6/22/2009	
		1	CAMO-09-6030	R	6/22/2009	
		1	CAMO-09-6031	R	6/22/2009	
		1	CAMO-09-6032	R	6/22/2009	
		1	CAMO-09-6033	R	6/22/2009	
		1	CAMO-09-6036	R	6/22/2009	
		1	CAMO-09-6037	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2453

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6047	R	6/22/2009	
		1	CAMO-09-6048	R	6/22/2009	
	EPA:906.0	1	CAMO-09-6005	R	6/22/2009	
		1	CAMO-09-6028	R	6/22/2009	
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		1	CAMO-09-6032	R	6/22/2009	
		1	CAMO-09-6033	R	6/22/2009	
		1	CAMO-09-6036	R	6/22/2009	
		1	CAMO-09-6037	R	6/22/2009	
		1	CAMO-09-6047	R	6/22/2009	
		1	CAMO-09-6048	R	6/22/2009	
	HASL-300:ISOU	1	CAMO-09-6005	R	6/22/2009	
		1	CAMO-09-6028	R	6/22/2009	
		1	CAMO-09-6029	R	6/22/2009	
		1	CAMO-09-6030	R	6/22/2009	
		1	CAMO-09-6031	R	6/22/2009	
		1	CAMO-09-6032	R	6/22/2009	
		1	CAMO-09-6033	R	6/22/2009	
		1	CAMO-09-6036	R	6/22/2009	
		1	CAMO-09-6037	R	6/22/2009	
		1	CAMO-09-6047	R	6/22/2009	
		1	CAMO-09-6048	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2453

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	SDG/ARCOC/Work Order:09-2453
Received By: Patricia Dent	Date Received: JUNE 25, 2009

Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: 40 C.P.M.
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) 2-5,23
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5528 4C
7209 7847 5491 2C
7209 7847 5469 3C
7209 7847 5470 4C
7209 7847 5506 5C
7209 7847 5458 23C

PM (or PMA) review: Initials DCL Date 6-26-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 51.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

4°C

Ref: 6b010amr1a01202xae

Delivery Address Barcode

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5528 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part# 156148-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 53.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr1a015aguke

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5491 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part# 156148-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 52.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5468 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 51.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 8b010amr2a0512bgdo

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5470 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 52.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018amr1a015aguko

Delivery Address Barcode

5°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5506 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NPRI V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 63.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018amr2a0512bgdo

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5458 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NPRI V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

RADIOLOGICAL ANALYSIS

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300. U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881676
Prep Batch Number:	880618

Sample ID	Client ID
232358001	CAMO-09-6005
232358002	CAMO-09-6029
232358003	CAMO-09-6037
232358004	CAMO-09-6033
232358005	CAMO-09-6030
232358006	CAMO-09-6031
232358007	CAMO-09-6032
232358008	CAMO-09-6036
232358009	CAMO-09-6028
232358010	CAMO-09-6047
232358011	CAMO-09-6048
1201872427	Method Blank (MB)
1201872428	232347001(CAMO-09-10462) Sample Duplicate (DUP)
1201872429	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201872427 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232347001 (CAMO-09-10462). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	880723
Prep Batch Number:	880618

Sample ID	Client ID
232358001	CAMO-09-6005
232358002	CAMO-09-6029
232358003	CAMO-09-6037
232358004	CAMO-09-6033
232358005	CAMO-09-6030
232358006	CAMO-09-6031
232358007	CAMO-09-6032
232358008	CAMO-09-6036
232358009	CAMO-09-6028
232358010	CAMO-09-6047
232358011	CAMO-09-6048
1201870087	Method Blank (MB)
1201870088	232347001(CAMO-09-10462) Sample Duplicate (DUP)
1201870089	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, November 2008, January 2009, February 2009, March 2009. April 2009 and June 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232347001 (CAMO-09-10462). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The method blank 1201870087 (MB) result is greater than 1.65 times the CSU but less than the MDC for Hg-203.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to high peak-width.	Cesium-137	232358004	CAMO-09-6033
UI	Data rejected due to interference.	Bismuth-211	232358001	CAMO-09-6005

	232358002	CAMO-09-6029
	232358003	CAMO-09-6037
	232358004	CAMO-09-6033
	232358005	CAMO-09-6030
	232358006	CAMO-09-6031
	232358007	CAMO-09-6032
	232358008	CAMO-09-6036
	232358009	CAMO-09-6028
	232358010	CAMO-09-6047
	232358011	CAMO-09-6048
	1201870088	CAMO-09-10462(232347001DUP)
Cadmium-109	232358001	CAMO-09-6005
	232358002	CAMO-09-6029
	232358003	CAMO-09-6037
	232358004	CAMO-09-6033
	232358005	CAMO-09-6030
	232358006	CAMO-09-6031
	232358007	CAMO-09-6032
	232358008	CAMO-09-6036
	232358009	CAMO-09-6028
	232358010	CAMO-09-6047
	232358011	CAMO-09-6048
	1201870088	CAMO-09-10462(232347001DUP)
Radium-224	232358001	CAMO-09-6005
	232358002	CAMO-09-6029
	232358003	CAMO-09-6037
	232358004	CAMO-09-6033
	232358005	CAMO-09-6030
	232358006	CAMO-09-6031
	232358007	CAMO-09-6032

			232358008	CAMO-09-6036
			232358009	CAMO-09-6028
			232358010	CAMO-09-6047
			232358011	CAMO-09-6048
			1201870088	CAMO-09-10462(232347001DUP)
UI	Data rejected due to low abundance.	Cesium-134	232358003	CAMO-09-6037
			232358004	CAMO-09-6033
			232358006	CAMO-09-6031
			232358008	CAMO-09-6036
			232358010	CAMO-09-6047
		Cesium-137	232358002	CAMO-09-6029
		Mercury-203	232358007	CAMO-09-6032
		Radium-223	232358007	CAMO-09-6032
		Strontium-85	232358001	CAMO-09-6005
			232358002	CAMO-09-6029
			232358003	CAMO-09-6037
			232358004	CAMO-09-6033
			232358005	CAMO-09-6030
			232358007	CAMO-09-6032
			232358009	CAMO-09-6028
			232358010	CAMO-09-6047
			232358011	CAMO-09-6048
		Thorium-231	232358007	CAMO-09-6032

Method/Analysis Information

Product:	H3
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	881715

Sample ID	Client ID
232358001	CAMO-09-6005
232358002	CAMO-09-6029
232358003	CAMO-09-6037
232358004	CAMO-09-6033
232358005	CAMO-09-6030
232358006	CAMO-09-6031
232358007	CAMO-09-6032
232358008	CAMO-09-6036
232358009	CAMO-09-6028
232358010	CAMO-09-6047
232358011	CAMO-09-6048
1201872558	Method Blank (MB)
1201872559	232037001(CAMO-09-6157) Sample Duplicate (DUP)
1201872560	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 232037001 (CAMO-09-6157). The QC was from LANL work order 232037.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: Pamela Walk 7/15/09

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2453 GEL Work Order: 232358

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6005
Sample ID: 232358001
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 17.6%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.834	0.171	+/-0.0827	0.100	pCi/g	AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0419	0.0785	+/-0.0157	0.100	pCi/g					
Uranium-238		0.787	0.0667	+/-0.0789	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.092	0.310	+/-0.0902	0.200	pCi/g	MXR1	07/06/09	1114	880723	2
Bismuth-211	UI	4.16	0.262	+/-0.251		pCi/g					
Bismuth-214		1.27	0.0998	+/-0.0879	0.200	pCi/g					
Cadmium-109	UI	3.90	1.28	+/-0.535		pCi/g					
Cerium-139	U	0.0273	0.0473	+/-0.0131	0.050	pCi/g					
Cesium-134	U	0.0781	0.0827	+/-0.0311	0.100	pCi/g					
Cesium-137	U	-0.0161	0.0511	+/-0.0156	0.100	pCi/g					
Cobalt-60	U	0.00262	0.0586	+/-0.0178	0.100	pCi/g					
Europium-152	U	-0.0407	0.130	+/-0.0509	0.200	pCi/g					
Lanthanum-140	U	-0.0803	0.0963	+/-0.0337		pCi/g					
Lead-212		2.01	0.0811	+/-0.0903	0.100	pCi/g					
Lead-214		1.45	0.0913	+/-0.0952	0.100	pCi/g					
Mercury-203	U	0.0345	0.0629	+/-0.0181	0.100	pCi/g					
Potassium-40		35.5	0.482	+/-1.56	1.00	pCi/g					
Radium-223	U	-0.153	1.01	+/-0.358		pCi/g					
Radium-224	UI	5.39	0.922	+/-0.713		pCi/g					
Radium-226		1.27	0.0998	+/-0.0879		pCi/g					
Radium-228		2.13	0.173	+/-0.192	0.500	pCi/g					
Ruthenium-106	U	0.0453	0.451	+/-0.137	0.800	pCi/g					
Sodium-22	U	-0.0123	0.0631	+/-0.0196	0.080	pCi/g					
Strontium-85	UI	0.110	0.0628	+/-0.0184		pCi/g					
Thallium-208		0.590	0.0519	+/-0.0408	0.080	pCi/g					
Thorium-227	U	0.0253	0.556	+/-0.165		pCi/g					
Thorium-231	U	-0.153	1.01	+/-0.358		pCi/g					
Thorium-234	U	1.37	2.73	+/-0.779	2.00	pCi/g					
Tin-113	U	-0.00501	0.0623	+/-0.0184	0.100	pCi/g					
Uranium-235	U	0.0482	0.341	+/-0.104	0.500	pCi/g					
Yttrium-88	U	0.0279	0.0448	+/-0.0116	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA 03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6005
Sample ID: 232358001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	66.0	186	+/-56.1	250	pCi/L		KXK2	07/09/09	2241	881715	3

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	92.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6005
Sample ID: 232358001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6029	Project:	LANL01004
Sample ID:	232358002	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	15.9%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.751	0.161	+/-0.0744	0.100	pCi/g	AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0437	0.0737	+/-0.0188	0.100	pCi/g					
Uranium-238		0.803	0.0626	+/-0.0773	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.00825	0.353	+/ 0.0995	0.200	pCi/g	MXR1	07/06/09	1115	880723	2
Bismuth-211	UI	3.91	0.369	+/-0.274		pCi/g					
Bismuth-214		1.17	0.126	+/-0.0897	0.200	pCi/g					
Cadmium-109	UI	3.87	1.54	+/-0.506		pCi/g					
Cerium-139	U	-0.0258	0.0559	+/-0.017	0.050	pCi/g					
Cesium-134	U	0.104	0.110	+/-0.0288	0.100	pCi/g					
Cesium-137	UI	0.0929	0.0903	+/-0.0243	0.100	pCi/g					
Cobalt-60	U	0.0221	0.0751	+/-0.0216	0.100	pCi/g					
Europium-152	U	-0.0566	0.177	+/-0.0654	0.200	pCi/g					
Lanthanum-140	U	-0.0406	0.153	+/-0.0487		pCi/g					
Lead-212		1.54	0.110	+/-0.0825	0.100	pCi/g					
Lead-214		1.36	0.132	+/-0.102	0.100	pCi/g					
Mercury-203	U	0.0564	0.0859	+/-0.0235	0.100	pCi/g					
Potassium-40		32.5	0.525	+/-1.49	1.00	pCi/g					
Radium-223	U	-0.128	1.34	+/-0.452		pCi/g					
Radium-224	UI	4.07	1.25	+/-0.715		pCi/g					
Radium-226		1.17	0.126	+/-0.0897		pCi/g					
Radium-228		1.57	0.255	+/-0.171	0.500	pCi/g					
Ruthenium-106	U	-0.0243	0.614	+/-0.187	0.800	pCi/g					
Sodium-22	U	-0.00959	0.0829	+/-0.0258	0.080	pCi/g					
Strontium-85	UI	0.0917	0.0832	+/-0.0249		pCi/g					
Thallium-208		0.537	0.0699	+/-0.0464	0.080	pCi/g					
Thorium-227	U	0.108	0.742	+/-0.222		pCi/g					
Thorium-231	U	0.128	1.34	+/-0.452		pCi/g					
Thorium-234	U	0.0438	2.86	+/-0.808	2.00	pCi/g					
Tin-113	U	0.0318	0.0905	+/-0.0256	0.100	pCi/g					
Uranium-235	U	0.0693	0.428	+/-0.126	0.500	pCi/g					
Yttrium-88	U	0.00846	0.0465	+/-0.013	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	103	186	+/-57.1	250	pCi/L	KXK2	07/10/09	0025	881715	3

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6029
Sample ID: 232358002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.2	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6037
Sample ID: 232358003
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 8.45%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium 233/234		0.818	0.171	+/-0.0814	0.100	pCi/g	AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0326	0.0785	+/-0.0125	0.100	pCi/g					
Uranium-238		0.776	0.0666	+/-0.0775	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.00864	0.114	+/-0.0368	0.200	pCi/g	MXR1	07/06/09	1115	880723	2
Bismuth-211	UI	4.39	0.393	+/-0.308		pCi/g					
Bismuth-214		1.35	0.156	+/-0.114	0.200	pCi/g					
Cadmium-109	UI	2.93	1.10	+/-0.442		pCi/g					
Cerium-139	U	0.0232	0.0564	+/-0.0155	0.050	pCi/g					
Cesium-134	UI	0.136	0.129	+/-0.0335	0.100	pCi/g					
Cesium-137	U	0.064	0.0904	+/-0.0242	0.100	pCi/g					
Cobalt-60	U	-0.023	0.0978	+/-0.0313	0.100	pCi/g					
Europium-152	U	0.0423	0.202	+/-0.0843	0.200	pCi/g					
Lanthanum-140	U	-0.0382	0.186	+/-0.0583		pCi/g					
Lead-212		1.86	0.102	+/-0.0937	0.100	pCi/g					
Lead-214		1.53	0.137	+/-0.114	0.100	pCi/g					
Mercury-203	U	0.0463	0.0844	+/-0.0234	0.100	pCi/g					
Potassium-40		36.3	0.606	+/-1.67	1.00	pCi/g					
Radium-223	U	-0.886	1.36	+/-0.424		pCi/g					
Radium-224	UI	4.81	1.17	+/-0.738		pCi/g					
Radium-226		1.35	0.156	+/-0.114		pCi/g					
Radium-228		2.26	0.289	+/-0.240	0.500	pCi/g					
Ruthenium-106	U	0.219	0.684	+/-0.205	0.800	pCi/g					
Sodium-22	U	0.0188	0.108	+/-0.032	0.080	pCi/g					
Strontium-85	UI	0.120	0.0902	+/-0.0262		pCi/g					
Thallium-208		0.653	0.0773	+/-0.0603	0.080	pCi/g					
Thorium-227	U	0.229	0.789	+/-0.223		pCi/g					
Thorium-231	U	-0.886	1.36	+/-0.424		pCi/g					
Thorium-234		1.59	1.13	+/-0.454	2.00	pCi/g					
Tin-113	U	-0.00614	0.0939	+/-0.0278	0.100	pCi/g					
Uranium-235	U	0.0721	0.387	+/-0.114	0.500	pCi/g					
Yttrium-88	U	-0.0145	0.0591	+/-0.0197	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	-1.81	198	+/-57.8	250	pCi/L	KXK2	07/10/09	0549	881715	3

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6037
Sample ID: 232358003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL 300, U-02 RC Modified
2	EML HASL 300, 4.5.2.3
3	GL RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	90.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6033
Sample ID: 232358004
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 11.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.772	0.166	+/-0.0771	0.100	pCi/g	AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0271	0.0762	+/-0.0158	0.100	pCi/g					
Uranium-238		0.950	0.0647	+/-0.089	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.154	0.219	+/-0.0694	0.200	pCi/g	MXR1	07/06/09	1116	880723	2
Bismuth-211	UI	4.27	0.268	+/-0.228		pCi/g					
Bismuth-214		1.22	0.0952	+/-0.0889	0.200	pCi/g					
Cadmium-109	UI	2.97	1.45	+/-0.477		pCi/g					
Cerium-139	U	-0.00418	0.0466	+/-0.0138	0.050	pCi/g					
Cesium-134	UI	0.124	0.0772	+/-0.032	0.100	pCi/g					
Cesium-137	UI	0.0704	0.0543	+/-0.028	0.100	pCi/g					
Cobalt-60	U	0.0338	0.0562	+/-0.0156	0.100	pCi/g					
Europium-152	U	0.0345	0.138	+/-0.0488	0.200	pCi/g					
Lanthanum-140	U	-0.103	0.102	+/-0.0366		pCi/g					
Lead-212		1.93	0.0816	+/-0.0854	0.100	pCi/g					
Lead-214		1.48	0.0954	+/-0.0881	0.100	pCi/g					
Mercury-203	U	0.0337	0.0625	+/-0.0176	0.100	pCi/g					
Potassium-40		35.5	0.454	+/-1.45	1.00	pCi/g					
Radium-223	U	0.376	0.949	+/-0.312		pCi/g					
Radium-224	UI	4.41	0.927	+/-0.530		pCi/g					
Radium-226		1.22	0.0952	+/-0.0889		pCi/g					
Radium-228		1.79	0.187	+/-0.179	0.500	pCi/g					
Ruthenium-106	U	-0.0497	0.435	+/-0.131	0.800	pCi/g					
Sodium-22	U	-0.015	0.0632	+/-0.0194	0.080	pCi/g					
Strontium-85	UI	0.185	0.0712	+/-0.0202		pCi/g					
Thallium-208		0.599	0.0479	+/-0.040	0.080	pCi/g					
Thorium-227	U	-0.0681	0.553	+/-0.161		pCi/g					
Thorium-231	U	0.376	0.949	+/-0.312		pCi/g					
Thorium-234		1.87	1.82	+/-0.817	2.00	pCi/g					
Tin-113	U	-0.0164	0.0631	+/-0.0193	0.100	pCi/g					
Uranium-235	U	-0.0343	0.337	+/-0.0999	0.500	pCi/g					
Yttrium-88	U	0.0125	0.0441	+/-0.0125	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	0.00	235	+/-68.0	250	pCi/L	KXK2	07/13/09	1300	881715	3

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6033
Sample ID: 232358004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	91.3	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
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A The TIC is a suspected aldol-condensation product
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BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6030	Project:	LANL01004
Sample ID:	232358005	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	24.2%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		1.59	0.269	+/-0.153	0.100	pCi/g	AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0585	0.123	+/-0.0211	0.100	pCi/g					
Uranium-238		1.79	0.105	+/-0.167	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0376	0.260	+/-0.0818	0.200	pCi/g	MXR1	07/06/09	1117	880723	2
Bismuth-211	UI	3.53	0.312	+/-0.266		pCi/g					
Bismuth-214		1.02	0.120	+/-0.0881	0.200	pCi/g					
Cadmium-109	UI	2.64	1.20	+/-0.496		pCi/g					
Cerium-139	U	0.00512	0.0471	+/-0.0137	0.050	pCi/g					
Cesium-134	U	0.0945	0.111	+/-0.0307	0.100	pCi/g					
Cesium-137		0.675	0.0611	+/-0.0565	0.100	pCi/g					
Cobalt-60	U	0.0114	0.0745	+/-0.0216	0.100	pCi/g					
Europium-152	U	0.0699	0.157	+/-0.0493	0.200	pCi/g					
Lanthanum-140	U	-0.162	0.108	+/-0.048		pCi/g					
Lead-212		1.52	0.0861	+/-0.0775	0.100	pCi/g					
Lead-214		1.23	0.109	+/-0.098	0.100	pCi/g					
Mercury-203	U	-0.013	0.0682	+/-0.020	0.100	pCi/g					
Potassium-40		30.7	0.537	+/-1.53	1.00	pCi/g					
Radium-223	U	-0.652	1.10	+/-0.345		pCi/g					
Radium-224	UI	4.28	0.981	+/-0.588		pCi/g					
Radium-226		1.02	0.120	+/-0.0881		pCi/g					
Radium-228		1.86	0.223	+/-0.204	0.500	pCi/g					
Ruthenium-106	U	-0.0615	0.571	+/-0.173	0.800	pCi/g					
Sodium-22	U	0.000903	0.0846	+/-0.0262	0.080	pCi/g					
Strontium-85	UI	0.0973	0.0713	+/-0.0201		pCi/g					
Thallium-208		0.492	0.0577	+/-0.0491	0.080	pCi/g					
Thorium-227	U	-0.296	0.571	+/-0.187		pCi/g					
Thorium-231	U	-0.652	1.10	+/-0.345		pCi/g					
Thorium-234		2.91	1.96	+/-1.38	2.00	pCi/g					
Tin-113	U	0.0603	0.0862	+/-0.0239	0.100	pCi/g					
Uranium-235	U	-0.0285	0.324	+/-0.0951	0.500	pCi/g					
Yttrium-88	U	0.0122	0.0589	+/-0.0164	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	27.4	239	+/-69.3	250	pCi/L	KXK2	07/10/09	1301	881715	3

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6030
Sample ID: 232358005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	61.1	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative. Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6031
Sample ID: 232358006
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 13.7%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.839	0.166	+/-0.082	0.100	pCi/g	AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0588	0.0763	+/-0.018	0.100	pCi/g					
Uranium-238		0.820	0.0648	+/-0.0801	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.0983	0.274	+/-0.0848	0.200	pCi/g	MXR1	07/06/09	1213	880723	2
Bismuth-211	UI	3.93	0.313	+/-0.254		pCi/g					
Bismuth-214		1.29	0.0938	+/-0.101	0.200	pCi/g					
Cadmium-109	UI	3.64	1.26	+/-0.600		pCi/g					
Cerium-139	U	-0.00453	0.0464	+/-0.0135	0.050	pCi/g					
Cesium-134	UI	0.0919	0.0881	+/-0.0387	0.100	pCi/g					
Cesium-137	U	0.0255	0.0598	+/-0.0171	0.100	pCi/g					
Cobalt-60	U	-0.0483	0.0547	+/-0.0201	0.100	pCi/g					
Europium-152	U	-0.0667	0.143	+/-0.0443	0.200	pCi/g					
Lanthanum-140	U	-0.112	0.0844	+/-0.0356		pCi/g					
Lead-212		1.82	0.0852	+/-0.0866	0.100	pCi/g					
Lead-214		1.37	0.110	+/-0.0952	0.100	pCi/g					
Mercury-203	U	-0.00417	0.0611	+/-0.0186	0.100	pCi/g					
Potassium-40		38.1	0.414	+/-1.73	1.00	pCi/g					
Radium-223	U	0.0344	1.01	+/-0.346		pCi/g					
Radium-224	UI	4.15	0.969	+/-0.539		pCi/g					
Radium-226		1.29	0.0938	+/-0.101		pCi/g					
Radium-228		1.81	0.212	+/-0.177	0.500	pCi/g					
Ruthenium-106	U	0.051	0.518	+/-0.154	0.800	pCi/g					
Sodium-22	U	0.0122	0.0764	+/-0.0228	0.080	pCi/g					
Strontium-85	U	0.0394	0.0652	+/-0.0204		pCi/g					
Thallium-208		0.561	0.0552	+/-0.0447	0.080	pCi/g					
Thorium-227	U	-0.424	0.548	+/-0.180		pCi/g					
Thorium-231	U	0.0344	1.01	+/-0.346		pCi/g					
Thorium-234	U	1.30	2.52	+/-0.738	2.00	pCi/g					
Tin-113	U	0.00222	0.0726	+/-0.0209	0.100	pCi/g					
Uranium-235	U	0.0145	0.346	+/-0.101	0.500	pCi/g					
Yttrium-88	U	-0.00306	0.043	+/-0.0135	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	-124	239	+/-64.0	250	pCi/L	KXK2	07/10/09	1343	881715	3

Certificate of Analysis

Company : Los Alamos National Laboratory
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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6031
Sample ID: 232358006

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6032
Sample ID: 232358007
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 18.7%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		3.84	0.197	+/-0.301	0.100	pCi/g	AXD2	07/10/09	2119	881676	1
Uranium-235/236		0.182	0.0902	+/-0.0354	0.100	pCi/g					
Uranium 238		4.78	0.0766	+/-0.367	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.209	0.448	+/-0.139	0.200	pCi/g	MXR1	07/06/09	1213	880723	2
Bismuth-211	UI	3.97	0.372	+/-0.305		pCi/g					
Bismuth-214		1.22	0.128	+/-0.105	0.200	pCi/g					
Cadmium-109	UI	3.42	1.49	+/-0.663		pCi/g					
Cerium-139	U	-0.0437	0.0534	+/-0.0179	0.050	pCi/g					
Cesium-134	U	0.0682	0.100	+/-0.0279	0.100	pCi/g					
Cesium-137		0.908	0.0722	+/-0.0598	0.100	pCi/g					
Cobalt-60	U	0.0312	0.0831	+/-0.0234	0.100	pCi/g					
Europium-152	U	0.0815	0.190	+/-0.0624	0.200	pCi/g					
Lanthanum-140	U	0.0457	0.150	+/-0.0477		pCi/g					
Lead-212		1.70	0.110	+/-0.0916	0.100	pCi/g					
Lead-214		1.38	0.134	+/-0.112	0.100	pCi/g					
Mercury-203	UI	0.094	0.0844	+/-0.0236	0.100	pCi/g					
Potassium-40		30.0	0.599	+/-1.66	1.00	pCi/g					
Radium-223	UI	1.41	1.33	+/-0.417		pCi/g					
Radium-224	UI	4.43	1.25	+/-0.640		pCi/g					
Radium-226		1.22	0.128	+/-0.105		pCi/g					
Radium-228		1.63	0.232	+/-0.190	0.500	pCi/g					
Ruthenium-106	U	-0.0199	0.630	+/-0.190	0.800	pCi/g					
Sodium-22	U	-0.0523	0.0767	+/-0.0264	0.080	pCi/g					
Strontium-85	UI	0.0844	0.0841	+/-0.0264		pCi/g					
Thallium-208		0.492	0.0668	+/-0.0598	0.080	pCi/g					
Thorium-227	U	0.102	0.701	+/-0.207		pCi/g					
Thorium-231	UI	1.41	1.33	+/-0.417		pCi/g					
Thorium-234	U	1.34	3.72	+/-1.11	2.00	pCi/g					
Tin-113	U	-0.0146	0.0845	+/-0.0264	0.100	pCi/g					
Uranium-235	U	0.307	0.431	+/-0.132	0.500	pCi/g					
Yttrium-88	U	0.00521	0.0619	+/-0.0187	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	-58	236	+/-65.8	250	pCi/L	KXK2	07/10/09	1425	881715	3

Certificate of Analysis

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Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6032
Sample ID: 232358007

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	81.9	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6036
Sample ID: 232358008
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 18.9%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.855	0.176	+/-0.0848	0.100	pCi/g	AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0525	0.0805	+/-0.0163	0.100	pCi/g					
Uranium-238		1.02	0.0684	+/-0.0959	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0314	0.220	+/-0.0709	0.200	pCi/g	MXR1	07/06/09	1214	880723	2
Bismuth-211	UI	3.84	0.313	+/-0.275		pCi/g					
Bismuth-214		1.12	0.113	+/-0.0933	0.200	pCi/g					
Cadmium-109	UI	3.69	1.20	+/-0.439		pCi/g					
Cerium-139	U	-0.00184	0.0508	+/-0.0153	0.050	pCi/g					
Cesium-134	UI	0.0958	0.0951	+/-0.0348	0.100	pCi/g					
Cesium-137		0.221	0.0638	+/-0.0337	0.100	pCi/g					
Cobalt-60	U	0.0418	0.0743	+/-0.0206	0.100	pCi/g					
Europium-152	U	0.0589	0.165	+/-0.0607	0.200	pCi/g					
Lanthanum-140	U	0.00626	0.136	+/-0.0404		pCi/g					
Lead-212		1.63	0.0931	+/-0.0847	0.100	pCi/g					
Lead-214		1.34	0.109	+/-0.102	0.100	pCi/g					
Mercury-203	U	0.00809	0.0689	+/-0.0231	0.100	pCi/g					
Potassium-40		32.0	0.483	+/-1.40	1.00	pCi/g					
Radium-223	U	-0.453	1.03	+/-0.368		pCi/g					
Radium-224	UI	4.37	1.06	+/-0.631		pCi/g					
Radium-226		1.12	0.113	+/-0.0933		pCi/g					
Radium-228		1.63	0.221	+/-0.159	0.500	pCi/g					
Ruthenium-106	U	-0.0278	0.531	+/-0.163	0.800	pCi/g					
Sodium-22	U	-0.0153	0.070	+/-0.0223	0.080	pCi/g					
Strontium-85	U	0.049	0.0671	+/-0.0212		pCi/g					
Thallium-208		0.600	0.0615	+/-0.0479	0.080	pCi/g					
Thorium-227	U	0.248	0.678	+/-0.203		pCi/g					
Thorium-231	U	-0.453	1.03	+/-0.368		pCi/g					
Thorium-234		2.20	1.85	+/-0.752	2.00	pCi/g					
Tin-113	U	0.00871	0.0758	+/-0.0222	0.100	pCi/g					
Uranium-235	U	0.089	0.361	+/-0.107	0.500	pCi/g					
Yttrium-88	U	0.0102	0.0512	+/-0.0145	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	90.4	236	+/-70.8	250	pCi/L	KXK2	07/10/09	1507	881715	3

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Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6036
Sample ID: 232358008

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	92.1	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
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A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6028
Sample ID: 232358009
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 15.7%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.732	0.203	+/-0.0785	0.100	pCi/g	AXD2	07/10/09	2119	881676	1
Uranium-235/236	U	0.0442	0.093	+/-0.0159	0.100	pCi/g					
Uranium-238		0.630	0.079	+/-0.0699	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0466	0.250	+/-0.0762	0.200	pCi/g	MXR1	07/06/09	1215	880723	2
Bismuth-211	UI	3.51	0.316	+/-0.213		pCi/g					
Bismuth-214		1.19	0.116	+/-0.0919	0.200	pCi/g					
Cadmium-109	UI	2.88	0.997	+/-0.577		pCi/g					
Cerium-139	U	0.00788	0.0467	+/-0.0138	0.050	pCi/g					
Cesium-134	U	0.0539	0.0904	+/-0.0319	0.100	pCi/g					
Cesium-137	U	0.0509	0.0692	+/-0.0234	0.100	pCi/g					
Cobalt-60	U	-0.0187	0.0563	+/-0.0184	0.100	pCi/g					
Europium-152	U	-0.056	0.150	+/-0.0459	0.200	pCi/g					
Lanthanum-140	U	0.0202	0.127	+/-0.0421		pCi/g					
Lead-212		1.69	0.0843	+/-0.0813	0.100	pCi/g					
Lead-214		1.22	0.115	+/-0.0807	0.100	pCi/g					
Mercury-203	U	-0.00142	0.0633	+/-0.0187	0.100	pCi/g					
Potassium-40		33.3	0.481	+/-1.51	1.00	pCi/g					
Radium-223	U	0.524	1.10	+/-0.348		pCi/g					
Radium-224	UI	4.81	0.959	+/-0.595		pCi/g					
Radium-226		1.19	0.116	+/-0.0919		pCi/g					
Radium-228		1.72	0.210	+/-0.181	0.500	pCi/g					
Ruthenium-106	U	-0.325	0.452	+/-0.147	0.800	pCi/g					
Sodium-22	U	0.042	0.0799	+/-0.0222	0.080	pCi/g					
Strontium-85	UI	0.0744	0.0694	+/-0.0189		pCi/g					
Thallium-208		0.600	0.0518	+/-0.0447	0.080	pCi/g					
Thorium-227	U	-0.133	0.591	+/-0.174		pCi/g					
Thorium-231	U	0.524	1.10	+/-0.348		pCi/g					
Thorium-234	U	0.732	2.10	+/-0.922	2.00	pCi/g					
Tin-113	U	0.0179	0.0707	+/-0.0205	0.100	pCi/g					
Uranium-235	U	0.0404	0.331	+/-0.0982	0.500	pCi/g					
Yttrium-88	U	0.0101	0.047	+/-0.0131	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	88.7	241	+/-72.2	250	pCi/L	KXK2	07/10/09	1550	881715	3

Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6028
Sample ID: 232358009

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	78.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6047
Sample ID: 232358010
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 19.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time Batch	Mtd.
Rad Alpha Spec Analysis										
ISOU "Dry Weight Corrected"										
Uranium-233/234		0.530	0.180	+/-0.0589	0.100	pCi/g	AXD2	07/10/09	2120 881676	1
Uranium-235/236	U	0.0342	0.0823	+/-0.0131	0.100	pCi/g				
Uranium-238		0.624	0.0699	+/-0.0663	0.100	pCi/g				
Rad Gamma Spec Analysis										
GAMMA SPEC "Dry Weight Corrected"										
Americium-241	U	0.0349	0.267	+/-0.0845	0.200	pCi/g	MXR1	07/06/09	1215 880723	2
Bismuth-211	UI	2.98	0.292	+/-0.208		pCi/g				
Bismuth-214		0.835	0.103	+/-0.0764	0.200	pCi/g				
Cadmium-109	UI	3.05	1.22	+/-0.466		pCi/g				
Cerium-139	U	-0.00372	0.0465	+/-0.0138	0.050	pCi/g				
Cesium-134	UI	0.0851	0.0847	+/-0.0321	0.100	pCi/g				
Cesium-137	U	0.045	0.0713	+/-0.0202	0.100	pCi/g				
Cobalt-60	U	0.0107	0.069	+/-0.0206	0.100	pCi/g				
Europium-152	U	-0.0502	0.144	+/-0.0477	0.200	pCi/g				
Lanthanum-140	U	-0.0863	0.107	+/-0.0384		pCi/g				
Lead-212		1.41	0.0833	+/-0.0682	0.100	pCi/g				
Lead-214		1.04	0.105	+/-0.0772	0.100	pCi/g				
Mercury-203	U	0.0172	0.0642	+/-0.0184	0.100	pCi/g				
Potassium-40		33.5	0.428	+/-1.67	1.00	pCi/g				
Radium-223	U	-0.0757	1.06	+/-0.355		pCi/g				
Radium-224	UI	3.84	0.947	+/-0.538		pCi/g				
Radium-226		0.835	0.103	+/-0.0764		pCi/g				
Radium-228		1.27	0.214	+/-0.154	0.500	pCi/g				
Ruthenium-106	U	0.246	0.513	+/-0.146	0.800	pCi/g				
Sodium-22	U	0.00289	0.0702	+/-0.0213	0.080	pCi/g				
Strontium-85	UI	0.0879	0.0675	+/-0.0198		pCi/g				
Thallium-208		0.383	0.0526	+/-0.0373	0.080	pCi/g				
Thorium-227	U	-0.262	0.577	+/-0.183		pCi/g				
Thorium 231	U	-0.0757	1.06	+/-0.355		pCi/g				
Thorium-234	U	0.675	2.15	+/-0.872	2.00	pCi/g				
Tin-113	U	-0.00882	0.0686	+/-0.0204	0.100	pCi/g				
Uranium-235	U	0.178	0.340	+/-0.108	0.500	pCi/g				
Yttrium-88	U	-0.0147	0.0513	+/-0.0172	0.100	pCi/g				
Rad Liquid Scintillation Analysis										
H3 "As Received"										
Tritium	U	129	240	+/-73.4	250	pCi/L	KXK2	07/10/09	1632 881715	3

Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-6047
Sample ID: 232358010

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	91.1	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
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> Result is greater than value reported
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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

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Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-6048	Project:	LANL01004
Sample ID:	232358011	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	8.9%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.860	0.170	+/ 0.0829	0.100	pCi/g	AXD2	07/10/09	2120	881676	1
Uranium-235/236	U	0.0462	0.0778	+/-0.015	0.100	pCi/g					
Uranium-238		0.889	0.0661	+/-0.0851	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.107	0.142	+/-0.0433	0.200	pCi/g	MXR1	07/06/09	1325	880723	2
Bismuth-211	UI	4.40	0.418	+/-0.325		pCi/g					
Bismuth-214		1.43	0.151	+/-0.111	0.200	pCi/g					
Cadmium-109	UI	4.52	1.27	+/-0.489		pCi/g					
Cerium-139	U	0.0218	0.0597	+/-0.017	0.050	pCi/g					
Cesium-134	U	0.0867	0.117	+/-0.0312	0.100	pCi/g					
Cesium-137	U	-0.0306	0.0869	+/-0.0275	0.100	pCi/g					
Cobalt-60	U	0.061	0.0997	+/-0.0271	0.100	pCi/g					
Europium-152	U	0.0208	0.207	+/-0.0681	0.200	pCi/g					
Lanthanum-140	U	-0.0247	0.170	+/-0.0549		pCi/g					
Lead-212		1.92	0.104	+/-0.104	0.100	pCi/g					
Lead-214		1.53	0.137	+/-0.120	0.100	pCi/g					
Mercury-203	U	0.0605	0.0869	+/-0.0236	0.100	pCi/g					
Potassium-40		33.1	0.645	+/-1.52	1.00	pCi/g					
Radium-223	U	-0.588	1.29	+/-0.451		pCi/g					
Radium-224	UI	5.99	1.18	+/-0.787		pCi/g					
Radium-226		1.43	0.151	+/-0.111		pCi/g					
Radium-228		1.88	0.316	+/-0.229	0.500	pCi/g					
Ruthenium-106	U	-0.135	0.662	+/-0.205	0.800	pCi/g					
Sodium-22	U	-0.0176	0.0957	+/-0.0301	0.080	pCi/g					
Strontium-85	UI	0.110	0.0897	+/-0.0261		pCi/g					
Thallium-208		0.685	0.0731	+/-0.0572	0.080	pCi/g					
Thorium-227	U	-0.0949	0.771	+/-0.234		pCi/g					
Thorium-231	U	-0.588	1.29	+/-0.451		pCi/g					
Thorium-234		2.03	1.34	+/-0.523	2.00	pCi/g					
Tin-113	U	-0.00333	0.0922	+/-0.027	0.100	pCi/g					
Uranium-235	U	0.315	0.448	+/-0.129	0.500	pCi/g					
Yttrium-88	U	-0.0336	0.0604	+/-0.022	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	106	243	+/-73.5	250	pCi/L	KXK2	07/10/09	1714	881715	3

Certificate of Analysis

Company : Los Alamos National Laboratory
Address . PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date. July 15, 2009

Client Sample ID: CAMO-09-6048
Sample ID: 232358011

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	96.3	(50% 105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

QC Summary

Report Date: July 15, 2009

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico
Contact: Ms. Joylene Valdez

Workorder: 232358

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 881676										
QC1201872428 232347001 DUP										
Uranium-233/234		0.400		0.438	pCi/g	0.185		(0-1)	AXD2	07/10/0921:20
	TPU:	+/-0.0502		+/-0.0525						
	Yield:	88.7		96.5						
Uranium-235/236	U	0.0205	U	0.0373	pCi/g	0.354		(0-1)		
	TPU:	+/-0.0103		+/-0.0134						
	Yield:	88.7		96.5						
Uranium-238		0.389		0.426	pCi/g	0.187		(0-1)		
	TPU:	+/-0.049		+/-0.0501						
	Yield:	88.7		96.5						
QC1201872429 LCS										
Uranium-233/234				6.29	pCi/g			(75%-125%)		07/10/0921:20
	TPU:			+/-0.579						
	Yield:			95.1						
Uranium-235/236			U	0.193	pCi/g			(75%-125%)		
	TPU:			+/-0.0659						
	Yield:			95.1						
Uranium-238	5.75			5.46	pCi/g		95	(75%-125%)		
	TPU:			+/-0.515						
	Yield:			95.1						
QC1201872427 MB										
Uranium-233/234			U	0.00117	pCi/g					07/10/0921:20
	TPU:			+/-0.00535						
	Yield:			88.4						
Uranium-235/236			U	0.00258	pCi/g					
	TPU:			+/-0.00448						
	Yield:			88.4						
Uranium-238			U	-0.00418	pCi/g					
	TPU:			+/-0.00362						
	Yield:			88.4						
Rad Gamma Spec										
Batch 880723										
QC1201870088 232347001 DUP										
Americium-241	U	0.0377	U	-0.014	pCi/g	0.392		(0-1)	MXR1	07/06/0913:26
	TPU:	+/-0.0335		+/-0.0325						
Bismuth-211	UI	3.40	UI	3.35	pCi/g	0.0451		(0-1)		
	TPU:	+/-0.275		+/-0.235						
Bismuth-214		0.809		1.11	pCi/g	0.688		(0-1)		
	TPU:	+/-0.109		+/-0.106						
Cadmium-109	UI	3.43	UI	1.78	pCi/g	0.953		(0-1)		
	TPU:	+/-0.391		+/-0.478						
Cerium-139	U	0.00322	U	0.00273	pCi/g	0.00819		(0-1)		
	TPU:	+/-0.0153		+/-0.0143						
Cesium-134	UI	0.123	U	0.0702	pCi/g	0.414		(0-1)		

QC Summary

Workorder: 232358

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
	TPU:	+/-0.0303		+/-0.0329						
Cesium-137	U	-0.0461	U	0.00686	pCi/g	0.537		(0-1)		
	TPU:	+/-0.024		+/-0.0253						
Cobalt-60	U	0.0206	U	0.0483	pCi/g	0.268		(0-1)		
	TPU:	+/-0.0208		+/-0.0308						
Europium-152	U	0.0854	U	-0.00341	pCi/g	0.350		(0-1)		
	TPU:	+/-0.0714		+/-0.0553						
Lanthanum-140	U	0.136	U	0.00972	pCi/g	0.602		(0-1)		
	TPU:	+/-0.0438		+/-0.0613						
Lead-212		1.57		1.24	pCi/g	0.894		(0-1)		
	TPU:	+/-0.103		+/-0.0826						
Lead-214		1.18		1.17	pCi/g	0.0426		(0-1)		
	TPU:	+/-0.101		+/-0.0871						
Mercury-203	U	0.0427	U	0.0497	pCi/g	0.0729		(0-1)		
	TPU:	+/-0.0246		+/-0.023						
Potassium-40		34.1		37.0	pCi/g	0.450		(0-1)		
	TPU:	+/-1.47		+/-1.73						
Radium-223	U	0.686	U	-0.935	pCi/g	1.05		(0-1)		
	TPU:	+/-0.373		+/-0.398						
Radium-224	UI	4.11	UI	1.87	pCi/g	0.813		(0-1)		
	TPU:	+/-0.855		+/-0.526						
Radium-226		0.809		1.11	pCi/g	0.688		(0-1)		
	TPU:	+/-0.109		+/-0.106						
Radium-228		1.54		1.85	pCi/g	0.389		(0-1)		
	TPU:	+/-0.204		+/-0.196						
Ruthenium-106	U	-0.131	U	0.249	pCi/g	0.443		(0-1)		
	TPU:	+/-0.199		+/-0.229						
Sodium-22	U	-0.0127	U	0.0656	pCi/g	0.594		(0-1)		
	TPU:	+/-0.0293		+/-0.0366						
Strontium-85	U	-0.16	U	0.0891	pCi/g	2.20		(0-1)		
	TPU:	+/-0.0277		+/-0.0287						
Thallium-208	UI	0.514		0.553	pCi/g	0.195		(0-1)		
	TPU:	+/-0.0464		+/-0.0545						
Thorium-227	U	0.380	U	0.285	pCi/g	0.113		(0-1)		
	TPU:	+/-0.210		+/-0.206						
Thorium-231	U	0.686	U	-0.935	pCi/g	1.05		(0-1)		
	TPU:	+/-0.373		+/-0.398						
Thorium-234	UI	1.04	U	0.234	pCi/g	0.522		(0-1)		
	TPU:	+/-0.450		+/-0.324						
Tin-113	U	0.0149	U	0.0637	pCi/g	0.472		(0-1)		
	TPU:	+/-0.0248		+/-0.0271						
Uranium-235	U	0.046	U	0.144	pCi/g	0.219		(0-1)		
	TPU:	+/-0.112		+/-0.112						
Yttrium-88	U	-0.00755	U	0.0495	pCi/g	0.642		(0-1)		
	TPU:	+/-0.0169		+/-0.0276						
QC1201870089 LCS										
Americium-241	15.9			13.9	pCi/g		87	(75%-125%)		07/06/0913:26
	TPU:			+/-0.762						
Bismuth-211				2.35	pCi/g					
	TPU:			+/-0.313						
Bismuth-214				0.749	pCi/g					

QC Summary

Workorder: 232358

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
		TPU:		+/-0.126						
Cadmium-109				41.7	pCi/g					
		TPU:		+/-2.53						
Cerium-139			U	0.0265	pCi/g					
		TPU:		+/-0.0204						
Cesium-134			U	0.0915	pCi/g					
		TPU:		+/-0.0501						
Cesium-137	5.64			5.69	pCi/g		101	(75%-125%)		
		TPU:		+/-0.206						
Cobalt-60	6.93			7.00	pCi/g		101	(75%-125%)		
		TPU:		+/-0.317						
Europium-152			U	-0.0931	pCi/g					
		TPU:		+/-0.096						
Lanthanum-140			U	-0.00788	pCi/g					
		TPU:		+/-0.0399						
Lead-212				0.791	pCi/g					
		TPU:		+/-0.0858						
Lead-214				0.817	pCi/g					
		TPU:		+/-0.111						
Mercury-203			U	0.0068	pCi/g					
		TPU:		+/-0.0287						
Potassium-40			U	0.882	pCi/g					
		TPU:		+/-0.296						
Radium-223			U	-0.144	pCi/g					
		TPU:		+/-0.563						
Radium-224			U	0.731	pCi/g					
		TPU:		+/-1.21						
Radium-226				0.749	pCi/g					
		TPU:		+/-0.126						
Radium-228				0.901	pCi/g					
		TPU:		+/-0.322						
Ruthenium-106			U	-0.0538	pCi/g					
		TPU:		+/-0.319						
Sodium-22			U	0.00409	pCi/g					
		TPU:		+/-0.0308						
Strontium-85			U	0.0975	pCi/g					
		TPU:		+/-0.0349						
Thallium-208				0.389	pCi/g					
		TPU:		+/-0.0586						
Thorium-227			U	0.562	pCi/g					
		TPU:		+/-0.336						
Thorium-231			U	-0.144	pCi/g					
		TPU:		+/-0.563						
Thorium-234			U	-0.50	pCi/g					
		TPU:		+/-1.05						
Tin-113			U	0.0455	pCi/g					
		TPU:		+/-0.0403						
Uranium-235			U	0.115	pCi/g					
		TPU:		+/-0.142						
Yttrium-88			U	0.0327	pCi/g					
		TPU:		+/-0.0281						

QC Summary

Workorder: 232358

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
QC1201870087 MB										
Americium-241			U	0.0262	pCi/g					07/06/0913:25
	TPU:			+/-0.0393						
Bismuth-211			U	0.0284	pCi/g					
	TPU:			+/-0.060						
Bismuth-214			U	-0.00377	pCi/g					
	TPU:			+/-0.021						
Cadmium-109			U	0.0317	pCi/g					
	TPU:			+/-0.153						
Cerium-139			U	-0.00888	pCi/g					
	TPU:			+/-0.00557						
Cesium-134			U	0.000343	pCi/g					
	TPU:			+/-0.00823						
Cesium-137			U	0.00112	pCi/g					
	TPU:			+/-0.00737						
Cobalt-60			U	-0.00518	pCi/g					
	TPU:			+/-0.00691						
Europium-152			U	-0.0246	pCi/g					
	TPU:			+/-0.0215						
Lanthanum-140			U	-0.00511	pCi/g					
	TPU:			+/-0.0125						
Lead-212			U	0.012	pCi/g					
	TPU:			+/-0.0134						
Lead-214			U	0.0244	pCi/g					
	TPU:			+/-0.0274						
Mercury-203			U	0.0126	pCi/g					
	TPU:			+/-0.00733						
Potassium-40			U	0.0477	pCi/g					
	TPU:			+/-0.0998						
Radium-223			U	-0.0804	pCi/g					
	TPU:			+/-0.135						
Radium-224			U	-0.0288	pCi/g					
	TPU:			+/-0.142						
Radium-226			U	-0.00377	pCi/g					
	TPU:			+/-0.021						
Radium-228			U	0.0383	pCi/g					
	TPU:			+/-0.0336						
Ruthenium-106			U	-0.00429	pCi/g					
	TPU:			+/-0.0683						
Sodium-22			U	0.00479	pCi/g					
	TPU:			+/-0.00703						
Strontium-85			U	-0.0205	pCi/g					
	TPU:			+/-0.0121						
Thallium-208			U	-0.00328	pCi/g					
	TPU:			+/-0.00912						
Thorium-227			U	-0.00817	pCi/g					
	TPU:			+/-0.0774						
Thorium-231			U	-0.0804	pCi/g					
	TPU:			+/-0.135						
Thorium-234			U	-0.424	pCi/g					
	TPU:			+/-0.357						

QC Summary

Workorder: 232358

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
Tin-113			U	0.0126	pCi/g					
	TPU:			+/-0.00807						
Uranium-235			U	-0.0746	pCi/g					
	TPU:			+/-0.0499						
Yttrium-88			U	-0.00169	pCi/g					
	TPU:			+/-0.00982						
Rad Liquid Scintillation										
Batch 881715										
QC1201872559 232037001 DUP										
Tritium	U	55.6	U	-27.6	pCi/L	0.335		(0-1)	KXK2	07/10/0918:39
	TPU:	+/-56.5		+/-67.9						
QC1201872560 LCS										
Tritium	5740			5600	pCi/L		97.7	(75%-125%)		07/10/0919:21
	TPU:			+/-427						
QC1201872558 MB										
Tritium			U	0.00	pCi/L					07/10/0917:56
	TPU:			+/-69.0						

Notes:
The Qualifiers in this report are defined as follows:

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

QC Summary

Workorder: 232358

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 881676 Product: U Date: 7/15/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [illegible] 7/15/09

Secondary Review Performed By: [illegible] 7/15/09

7/6 7/17

Uranium Que Sheet

01-JUL-09

Batch #: 881676 Analyst: AXD2 First Client Due Date: 17-JUL-09 Internal Due Date: 06-JUL-09

Tracer Isotope: U-232/U-236 Tracer Code: 1283-B Expiration Date: 12/16/09 Vol: 0.1

LCS Isotope: U-238 LCS Code: ~~H63-G~~ Expiration Date: ~~4/16/10~~ Vol: ~~0.1~~ 7/2/09

Spike Isotope: U-238 Spike Code: Expiration Date: Vol:

Prep Date: 7/02/09 Initials: Pipet ID: 2971058 Balance ID: 5041027 2 Witness: 7/2/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet Dry Aliquot (g / l / f)	U Det #
232347001-1	CAMO-09-10462	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	1	1	0.500	133
232347002-1	CAMO-09-10460	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	2	2	0.524	134
232347003-1	CAMO-09-10461	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	3	3	0.515	135
232347004-1	CAMO-09-10467	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	4	4	0.565	~~136~~ 165
232357001-1	CAMO-09-10480	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	5	5	0.508	137
232357002-1	CAMO-09-10479	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	6	6	0.522	~~138~~ 166
232358001-1	CAMO-09-6005	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	7	7	0.518	139
232358002-1	CAMO-09-6029	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	8	8	0.527	140
232358003-1	CAMO-09-6037	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	9	9	0.514	141
232358004-1	CAMO-09-6033	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	10	10	0.517	142
232358005-1	CAMO-09-6030	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	11	11	0.503	144
232358006-1	CAMO-09-6031	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	12	12	0.525	145
232358007-1	CAMO-09-6032	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	13	13	0.508	146
232358008-1	CAMO-09-6036	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	14	14	0.513	147
232358009-1	CAMO-09-6028	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	15	15	0.515	148
232358010-1	CAMO-09-6047	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	16	16	0.503	149
232358011-1	CAMO-09-6048	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	17	17	0.507	150
1201872427-1	MB for batch 881676	MB		.1 pCi/g	SOIL	QC ACCOUNT		18	18	~~0.525~~	151
1201872428-1	CAMO-09-10462(232347001DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	22-JUN-09	19	19	0.502	152
1201872429-1	LCS for batch 881676	LCS		.1 pCi/g	SOIL	QC ACCOUNT		20	20	0.109	153

*SRM 0244-A exp. 10/31/20

Choose SOP used: GL-RAD-A-011
GL-RAD-A-038
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: 7/15/09

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 881676

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201872428	DUP	Uranium-233/234	0.502 g	0.438	0.0525	0.171	.002330677	pCi/g	NO
		Uranium-235/236	0.502 g	0.0373	0.0134	0.0785	.005139442	pCi/g	NO
		Uranium-238	0.502 g	0.426	0.0501	0.0667	-.00832669	pCi/g	NO
1201872429	LCS	Uranium-233/234	0.109 g	6.29	0.579	0.788	.010733945	pCi/g	NO
		Uranium-235/236	0.109 g	0.193	0.0659	0.361	.023669725	pCi/g	NO
		Uranium-238	0.109 g	5.46	0.515	0.307	-.03834862	pCi/g	NO
1201872427	MB	Uranium-233/234	1.00 g	0.00117	0.00535	0.095	.00117	pCi/g	YES
		Uranium-235/236	1.00 g	0.00258	0.00448	0.0436	.00258	pCi/g	YES
		Uranium-238	1.00 g	-0.00418	0.00362	0.037	-.00418	pCi/g	NO
232347001	CAMO-09-10462	Uranium-233/234	0.500 g	0.400	0.0502	0.188	.00234	pCi/g	NO
		Uranium-235/236	0.500 g	0.0205	0.0103	0.0863	.00516	pCi/g	YES
		Uranium-238	0.500 g	0.389	0.049	0.0733	-.00836	pCi/g	NO
232347002	CAMO-09-10460	Uranium-233/234	0.524 g	0.376	0.0478	0.167	.002232824	pCi/g	NO
		Uranium-235/236	0.524 g	0.00	0.0144	0.0765	.004923664	pCi/g	YES
		Uranium-238	0.524 g	0.353	0.0445	0.065	-.00797710	pCi/g	NO
232347003	CAMO-09-10461	Uranium-233/234	0.515 g	0.325	0.041	0.161	.002271845	pCi/g	NO
		Uranium-235/236	0.515 g	0.00872	0.00875	0.0735	.005009709	pCi/g	YES
		Uranium-238	0.515 g	0.300	0.039	0.0625	-.00811650	pCi/g	NO
232347004	CAMO-09-10467	Uranium-233/234	0.565 g	0.425	0.0414	0.093	.002070796	pCi/g	NO
		Uranium-235/236	0.565 g	0.0354	0.011	0.0426	.004566372	pCi/g	NO
		Uranium-238	0.565 g	0.341	0.0355	0.0362	-.00739823	pCi/g	NO
232357001	CAMO-09-10480	Uranium-233/234	0.508 g	0.457	0.0524	0.165	.002303150	pCi/g	NO
		Uranium-235/236	0.508 g	0.0134	0.0101	0.0755	.005078740	pCi/g	YES
		Uranium-238	0.508 g	0.388	0.0462	0.0641	-.00822835	pCi/g	NO
232357002	CAMO-09-10479	Uranium-233/234	0.522 g	0.327	0.0358	0.101	.002241379	pCi/g	NO
		Uranium-235/236	0.522 g	0.0138	0.00734	0.0464	.004942529	pCi/g	YES
		Uranium-238	0.522 g	0.345	0.0364	0.0394	-.00800766	pCi/g	NO
232358001	CAMO-09-6005	Uranium-233/234	0.518 g	0.834	0.0827	0.171	.002258687	pCi/g	NO
		Uranium-235/236	0.518 g	0.0419	0.0157	0.0785	.004980695	pCi/g	NO
		Uranium-238	0.518 g	0.787	0.0789	0.0667	-.00806950	pCi/g	NO
232358002	CAMO-09-6029	Uranium-233/234	0.527 g	0.751	0.0744	0.161	.002220114	pCi/g	NO
		Uranium-235/236	0.527 g	0.0437	0.0188	0.0737	.004895636	pCi/g	NO
		Uranium-238	0.527 g	0.803	0.0773	0.0626	-.00793169	pCi/g	NO
232358003	CAMO-09-6037	Uranium-233/234	0.514 g	0.818	0.0814	0.171	.002276265	pCi/g	NO
		Uranium-235/236	0.514 g	0.0326	0.0125	0.0785	.005019455	pCi/g	NO
		Uranium-238	0.514 g	0.776	0.0775	0.0666	-.00813230	pCi/g	NO
232358004	CAMO-09-6033	Uranium-233/234	0.517 g	0.772	0.0771	0.166	.002263056	pCi/g	NO
		Uranium-235/236	0.517 g	0.0271	0.0158	0.0762	.004990329	pCi/g	NO
		Uranium-238	0.517 g	0.950	0.089	0.0647	-.00808511	pCi/g	NO
232358005	CAMO-09-6030	Uranium-233/234	0.503 g	1.59	0.153	0.269	.002326044	pCi/g	NO
		Uranium-235/236	0.503 g	0.0585	0.0211	0.123	.005129225	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232358005	CAMO-09-6030	Uranium-238	0.503 g	1.79	0.167	0.105	-.00831014	pCi/g	NO
232358006	CAMO-09-6031	Uranium-233/234	0.525 g	0.839	0.082	0.166	.002228571	pCi/g	NO
		Uranium-235/236	0.525 g	0.0588	0.018	0.0763	.004914286	pCi/g	NO
		Uranium-238	0.525 g	0.820	0.0801	0.0648	-.00796190	pCi/g	NO
232358007	CAMO-09-6032	Uranium-233/234	0.508 g	3.84	0.301	0.197	.002303150	pCi/g	NO
		Uranium-235/236	0.508 g	0.182	0.0354	0.0902	.005078740	pCi/g	NO
		Uranium-238	0.508 g	4.78	0.367	0.0766	-.00822835	pCi/g	NO
232358008	CAMO-09-6036	Uranium-233/234	0.513 g	0.855	0.0848	0.176	.002280702	pCi/g	NO
		Uranium-235/236	0.513 g	0.0525	0.0163	0.0805	.005029240	pCi/g	NO
		Uranium-238	0.513 g	1.02	0.0959	0.0684	-.00814815	pCi/g	NO
232358009	CAMO-09-6028	Uranium-233/234	0.515 g	0.732	0.0785	0.203	.002271845	pCi/g	NO
		Uranium-235/236	0.515 g	0.0442	0.0159	0.093	.005009709	pCi/g	NO
		Uranium-238	0.515 g	0.630	0.0699	0.079	-.00811650	pCi/g	NO
232358010	CAMO-09-6047	Uranium-233/234	0.503 g	0.530	0.0589	0.180	.002326044	pCi/g	NO
		Uranium-235/236	0.503 g	0.0342	0.0131	0.0823	.005129225	pCi/g	NO
		Uranium-238	0.503 g	0.624	0.0663	0.0699	-.00831014	pCi/g	NO
232358011	CAMO-09-6048	Uranium-233/234	0.507 g	0.860	0.0829	0.170	.002307692	pCi/g	NO
		Uranium-235/236	0.507 g	0.0462	0.015	0.0778	.005088757	pCi/g	NO
		Uranium-238	0.507 g	0.889	0.0851	0.0661	-.00824458	pCi/g	NO

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232347001_UU
SAMPLE QTY: 0.500 G

DETECTOR NUMBER :76229
AVERAGE %EFFICIENCY :24.5240
% YIELD : 88.659

COUNT DATE:10-JUL-2009 21:19:23
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B133.CNF;361
PCI/G : 2.352E+01	PCI/G : 2.352E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.69574 dpm	EFF FILE : W133.CNF;107
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	102.000	96.527	2.000	9.1924	100.0000	4.00E-01	5.02E-02	8.86E-02	1.88E-01	4.15E-02
U232	5302.100	1156.000	1151.000	5.000	2.2361	100.0000	4.77E+00	3.64E-01	2.16E-02	5.43E-02	1.41E-01
U-235	4391.000	4.000	4.000	0.000	3.0409	80.90000	2.05E-02	1.03E-02	3.62E-02	8.63E-02	1.02E-02
U-238	4184.730	95.000	94.000	1.000	3.2215	100.0000	3.89E-01	4.90E-02	3.11E-02	7.33E-02	4.06E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

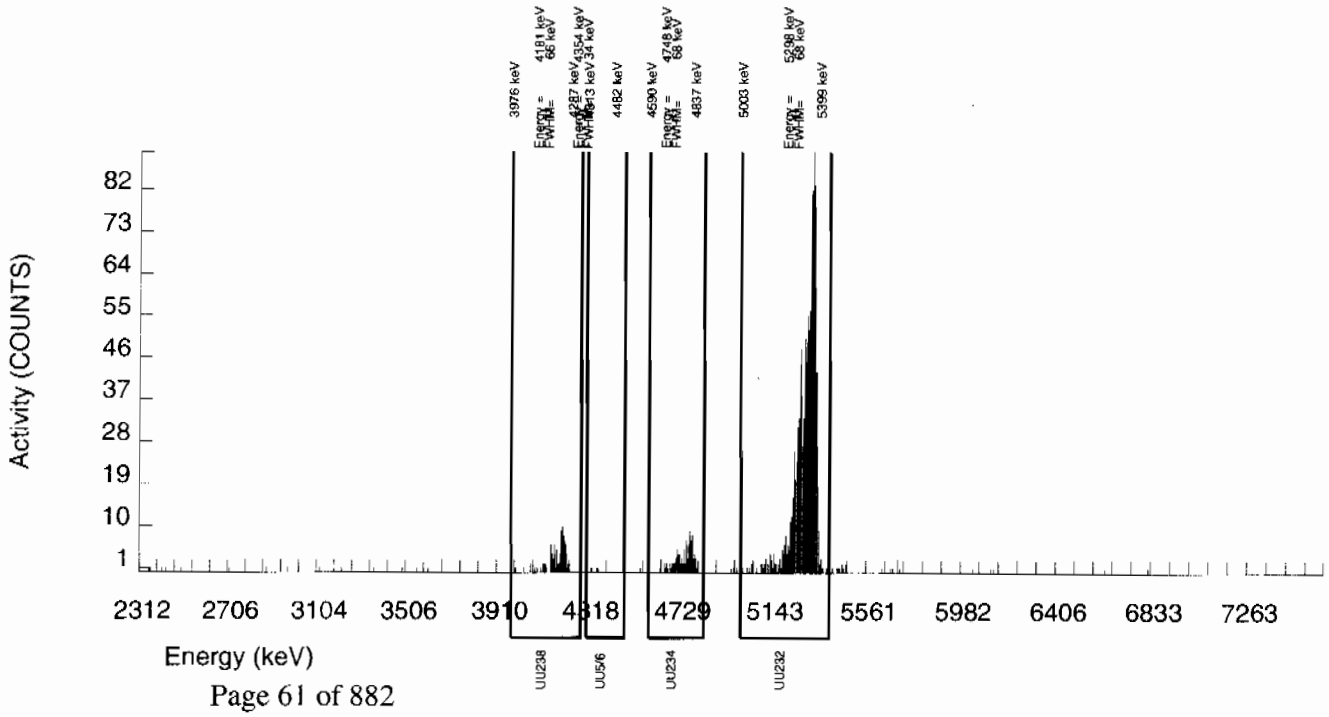

Alpha Spectroscopy Software Version 2.1
effective date: Feb 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358001_UU
SAMPLE QTY: 0.518 G

DETECTOR NUMBER :76231
AVERAGE %EFFICIENCY :24.8825
% YIELD : 92.771

COUNT DATE:10-JUL-2009 21:19.38
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B139.CNF;328
PCI/G : 2.270E+01	PCI/G : 2.270E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.91357 dpm	EFF FILE : W139.CNF;88
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	231.000	221.313	6.000	9.1924	100.0000	8.34E-01	8.27E-02	8.06E-02	1.71E-01	5.75E-02
U232	5302.100	1225.000	1222.000	3.000	1.7321	100.0000	4.61E+00	3.54E-01	1.52E-02	4.06E-02	1.32E-01
U-235	4391.000	10.000	9.000	1.000	3.0409	80.90000	4.19E-02	1.57E-02	3.29E-02	7.85E-02	1.54E-02
U-238	4184.730	213.000	209.000	4.000	3.2215	100.0000	7.87E-01	7.89E-02	2.82E-02	6.67E-02	5.55E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

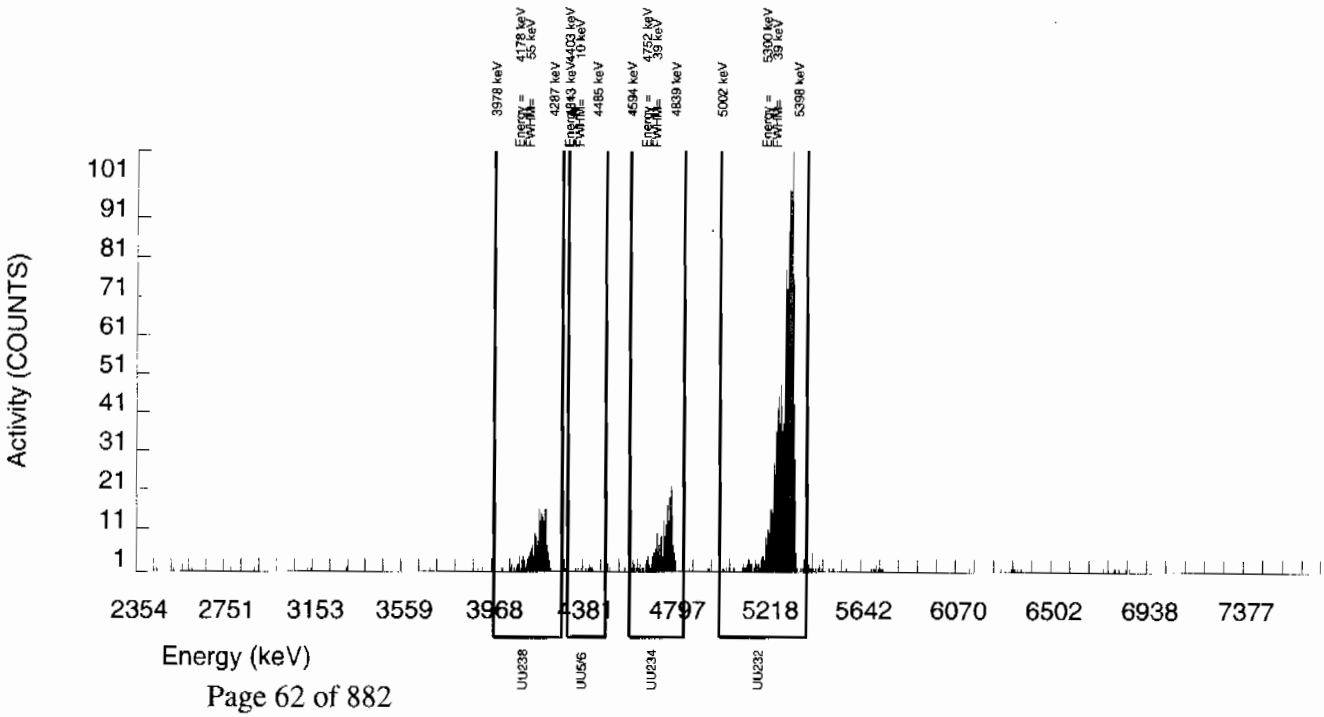

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358002 UU
SAMPLE QTY: 0.527 G

DETECTOR NUMBER :78771
AVERAGE %EFFICIENCY :25.6478
% YIELD : 94.202

COUNT DATE:10-JUL-2009 21:19:41
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B140.CNF;328
PCI/G : 2.231E+01	PCI/G : 2.231E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.98931 dpm	EFF FILE : W140.CNF;93
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	222.000	212.141	6.000	9.1924	100.0000	7.51E-01	7.44E-02	7.57E-02	1.61E-01	5.30E-02
U232	5302.100	1282.000	1279.000	3.000	1.7321	100.0000	4.53E+00	3.40E-01	1.43E-02	3.81E-02	1.27E-01
U-235	4391.000	14.000	10.000	4.000	3.0409	80.90000	4.37E-02	1.88E-02	3.09E-02	7.37E-02	1.86E-02
U-238	4184.730	227.000	227.000	0.000	3.2215	100.0000	8.03E-01	7.73E-02	2.65E-02	6.26E-02	5.33E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

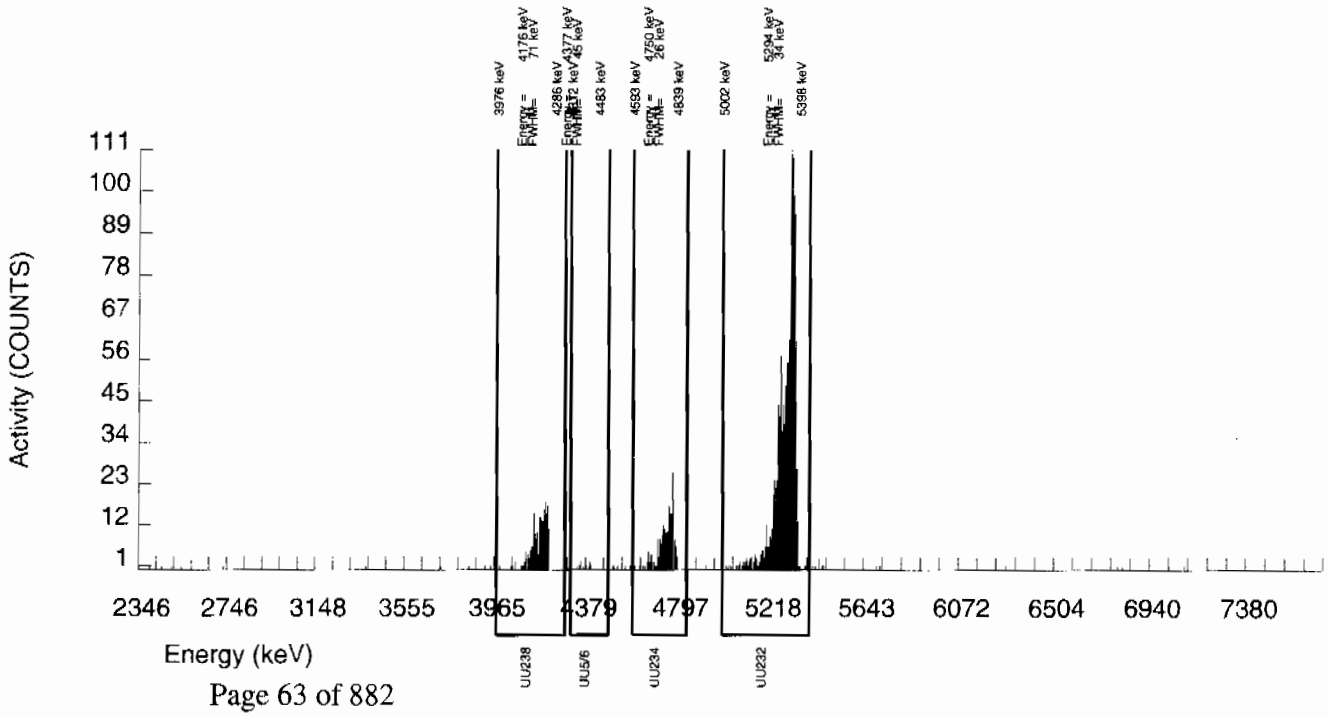

Alpha Spectroscopy for Waste version 3.0
Engine date 06-Mar-97

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358003_UU
SAMPLE QTY: 0.514 G

DETECTOR NUMBER :76232
AVERAGE %EFFICIENCY :25.6623
% YIELD : 90.689

COUNT DATE:10-JUL-2009 21:19:43
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B141.CNF;331
PCI/G : 2.288E+01	PCI/G : 2.288E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.80325 dpm	EFF FILE : W141.CNF;91
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	226.000	217.283	5.000	9.1924	100.0000	8.18E-01	8.14E-02	8.05E-02	1.71E-01	5.68E-02
U232	5302.100	1239.000	1232.000	7.000	2.6458	100.0000	4.64E+00	3.57E-01	2.32E-02	5.66E-02	1.33E-01
U-235	4391.000	7.000	7.000	0.000	3.0409	80.90000	3.26E-02	1.25E-02	3.29E-02	7.85E-02	1.23E-02
U-238	4184.730	207.000	206.000	1.000	3.2215	100.0000	7.76E-01	7.75E-02	2.82E-02	6.66E-02	5.43E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

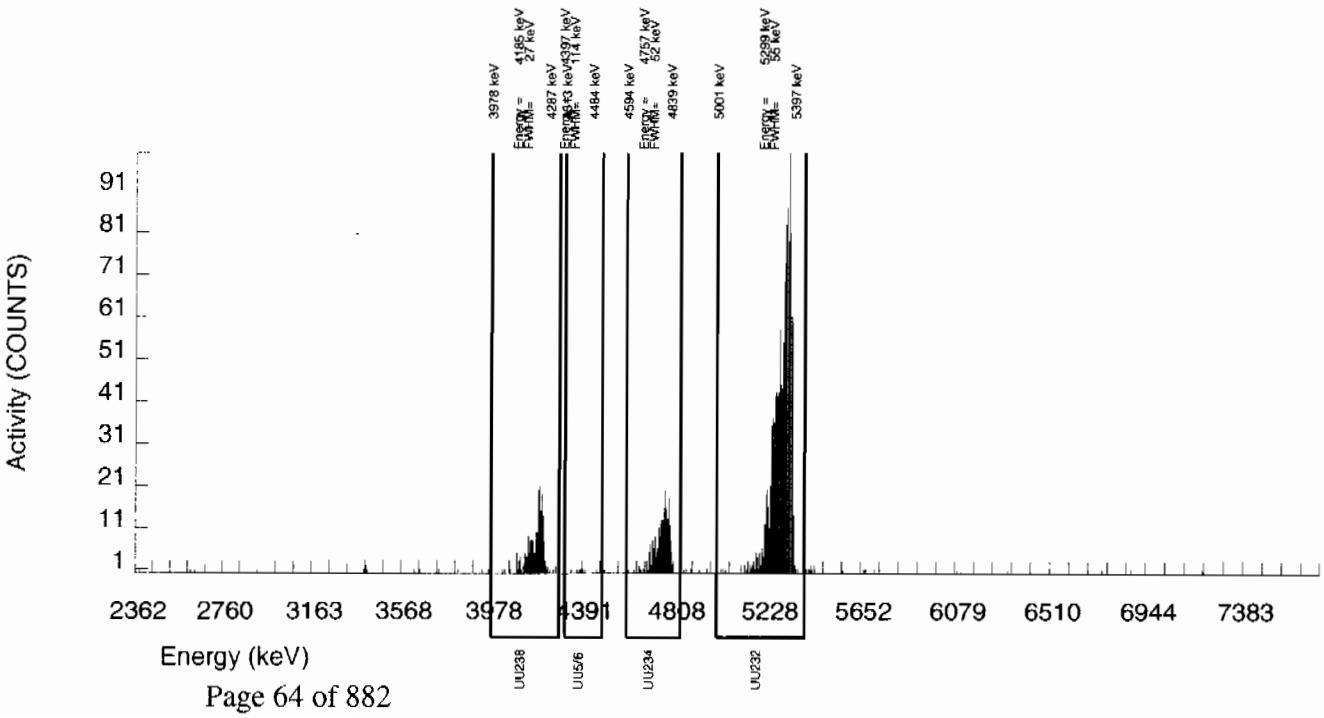

Alpha Spectroscopy Software Version 2.6
effective date 06-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358004_UU
SAMPLE QTY: 0.517 G

DETECTOR NUMBER :64261
AVERAGE %EFFICIENCY :26.1225
% YIELD : 91.260

COUNT DATE:10-JUL-2009 21:19:46
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B142.CNF;325
PCI/G : 2.275E+01	PCI/G : 2.275E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.83353 dpm	EFF FILE : W142.CNF;95
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	223.000	211.193	8.000	9.1924	100.0000	7.72E-01	7.71E-02	7.82E-02	1.66E-01	5.51E-02
U232	5302.100	1273.000	1262.000	11.000	3.3166	100.0000	4.61E+00	3.48E-01	2.82E-02	6.63E-02	1.31E-01
U-235	4391.000	9.000	6.000	3.000	3.0409	80.90000	2.71E-02	1.58E-02	3.20E-02	7.62E-02	1.56E-02
U-238	4184.730	262.000	260.000	2.000	3.2215	100.0000	9.50E-01	8.90E-02	2.74E-02	6.47E-02	5.94E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

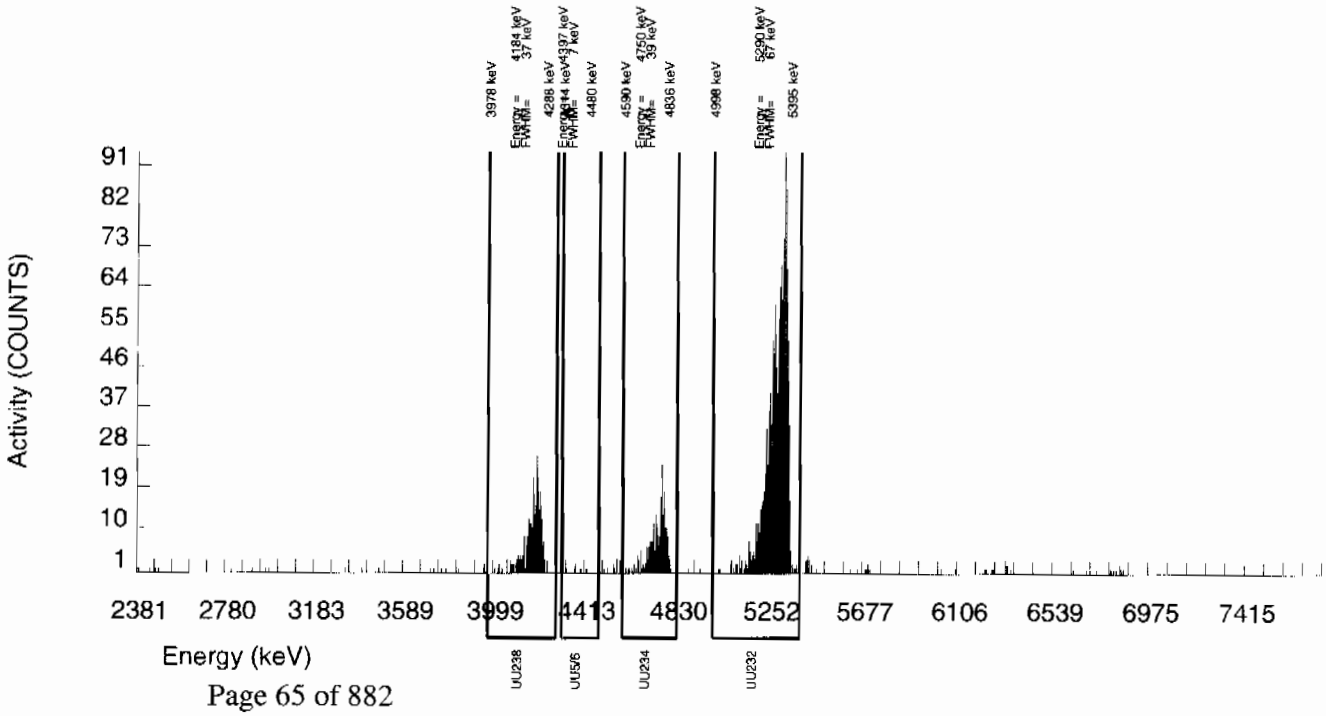

Alpha Spectroscopy Software version 7.5
effective date 03-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358005_UU
SAMPLE QTY: 0.503 G

DETECTOR NUMBER :75551
AVERAGE %EFFICIENCY :24.7777
% YIELD : 61.144

COUNT DATE:10-JUL-2009 21:19:48
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B144.CNF;327
PCI/G : 2.338E+01	PCI/G : 2.338E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.23842 dpm	EFF FILE : W144.CNF;92
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	277.000	269.580	5.000	9.1924	100.0000	1.59E+00	1.53E-01	1.26E-01	2.69E-01	9.88E-02
U232	5302.100	817.000	802.000	15.000	3.8730	100.0000	4.74E+00	3.87E-01	5.33E-02	1.23E-01	1.71E-01
U-235	4391.000	8.000	8.000	0.000	3.0409	80.90000	5.85E-02	2.11E-02	5.17E-02	1.23E-01	2.07E-02
U-238	4184.730	305.000	302.000	3.000	3.2215	100.0000	1.79E+00	1.67E-01	4.43E-02	1.05E-01	1.04E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

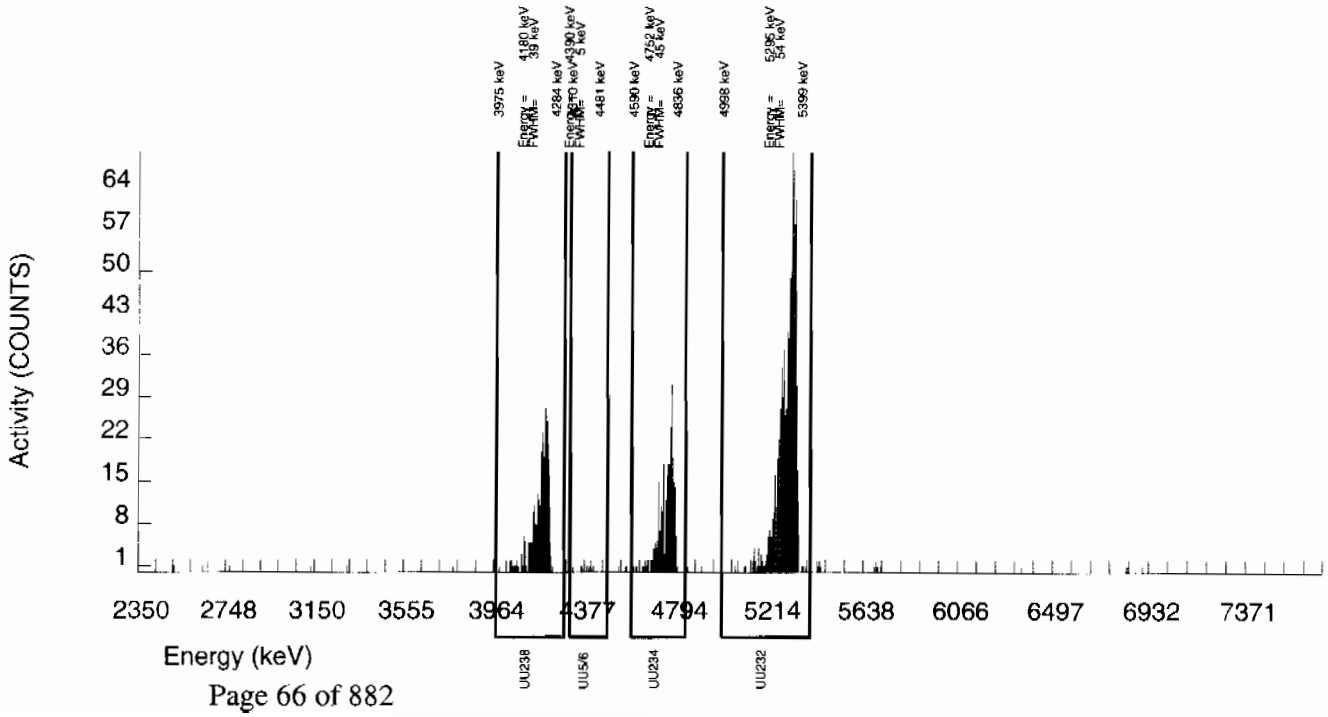

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358006_UU
SAMPLE QTY: 0.525 G

DETECTOR NUMBER :72526
AVERAGE %EFFICIENCY :24.8445
% YIELD : 94.358

COUNT DATE:10-JUL-2009 21:19:50
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B145.CNF;325
PCI/G : 2.240E+01	PCI/G : 2.240E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.99760 dpm	EFF FILE : W145.CNF;97
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	236.000	229.256	3.000	9.1924	100.0000	8.39E-01	8.20E-02	7.83E-02	1.66E-01	5.61E-02
U232	5302.100	1246.000	1241.000	5.000	2.2361	100.0000	4.54E+00	3.49E-01	1.90E-02	4.80E-02	1.30E-01
U-235	4391.000	14.000	13.000	1.000	3.0409	80.90000	5.88E-02	1.80E-02	3.20E-02	7.63E-02	1.75E-02
U-238	4184.730	224.000	224.000	0.000	3.2215	100.0000	8.20E-01	8.01E-02	2.74E-02	6.48E-02	5.48E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

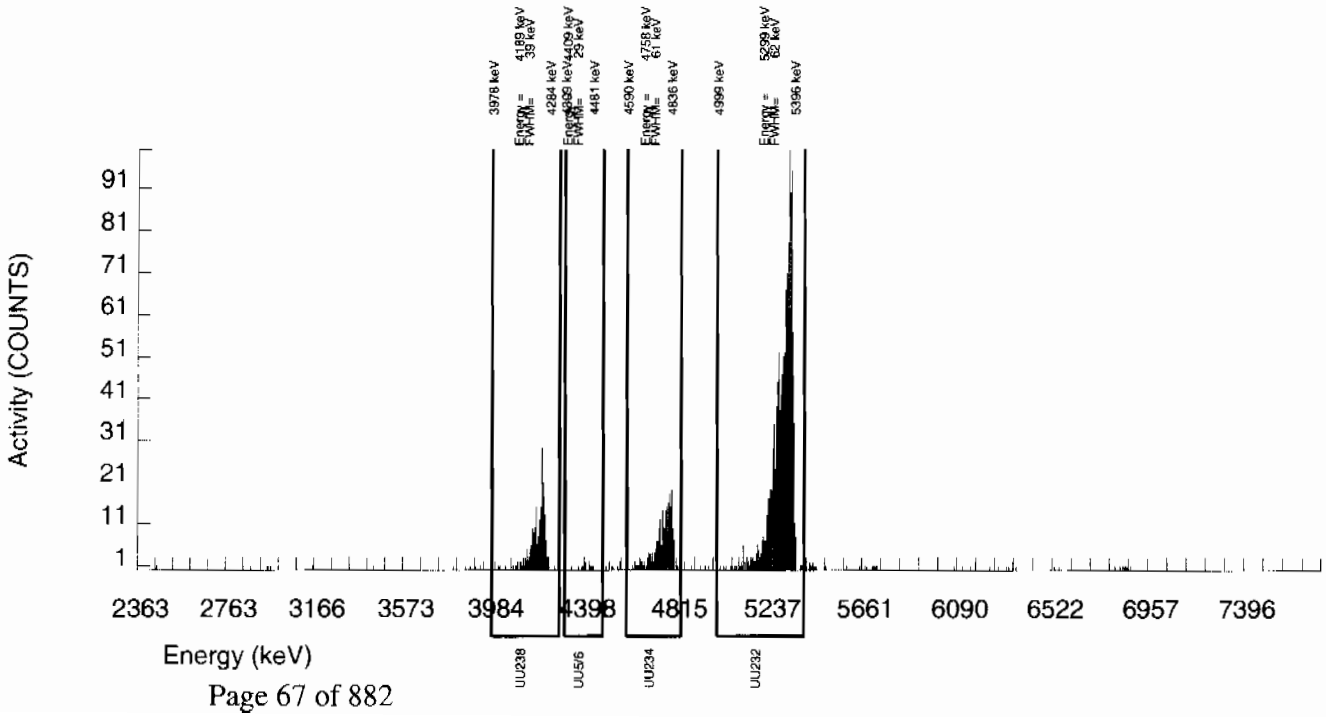

Alpha Spectroscopy Software Version 1.0
effective date: 09-Mar-192

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358007_UU
SAMPLE QTY: 0.508 G

DETECTOR NUMBER :72527
AVERAGE %EFFICIENCY :24.9899
% YIELD : 81.941

COUNT DATE:10-JUL-2009 21:19:53
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B146.CNF;330
PCI/G : 2.315E+01	PCI/G : 2.315E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.33995 dpm	EFF FILE : W146.CNF;99
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	894.000	887.730	3.000	9.1924	100.0000	3.84E+00	3.01E-01	9.26E-02	1.97E-01	1.29E-01
U232	5302.100	1089.000	1084.000	5.000	2.2361	100.0000	4.70E+00	3.62E-01	2.25E-02	5.68E-02	1.43E-01
U-235	4391.000	36.000	34.000	2.000	3.0409	80.90000	1.82E-01	3.54E-02	3.79E-02	9.02E-02	3.30E-02
U-238	4184.730	1105.000	1104.000	1.000	3.2215	100.0000	4.78E+00	3.67E-01	3.25E-02	7.66E-02	1.44E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

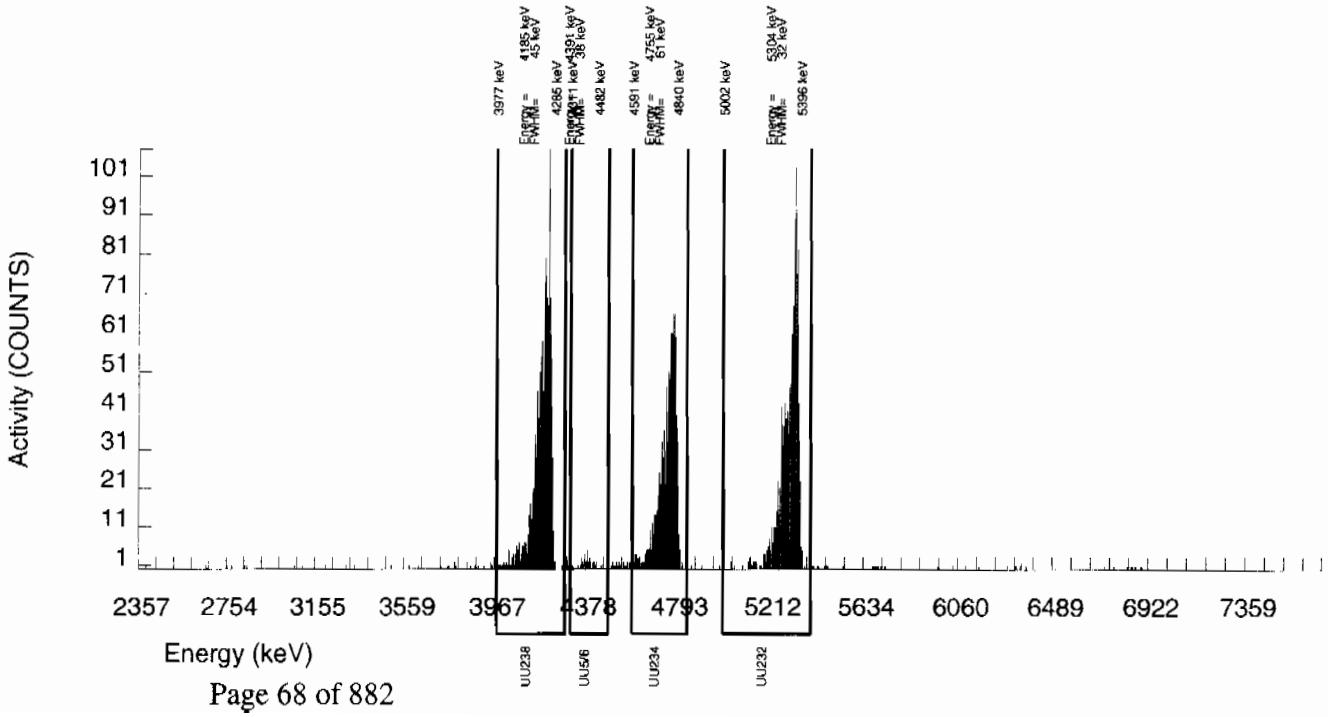

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358008_UU
SAMPLE QTY: 0.513 G

DETECTOR NUMBER :75550
AVERAGE %EFFICIENCY :24.6626
% YIELD : 92.143

COUNT DATE:10-JUL-2009 21:19:55
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B147.CNF;330
PCI/G : 2.292E+01	PCI/G : 2.292E+01	NOMINAL : 5.29643 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.88030 dpm	EFF FILE : W147.CNF;98
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	230.000	221.371	5.000	9.1924	100.0000	8.55E-01	8.48E-02	8.26E-02	1.76E-01	5.88E-02
U232	5302.100	1208.000	1203.000	5.000	2.2361	100.0000	4.65E+00	3.58E-01	2.01E-02	5.07E-02	1.35E-01
U-235	4391.000	11.000	11.000	0.000	3.0409	80.90000	5.25E-02	1.63E-02	3.38E-02	8.05E-02	1.58E-02
U-238	4184.730	263.000	263.000	0.000	3.2215	100.0000	1.02E+00	9.59E-02	2.90E-02	6.84E-02	6.27E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

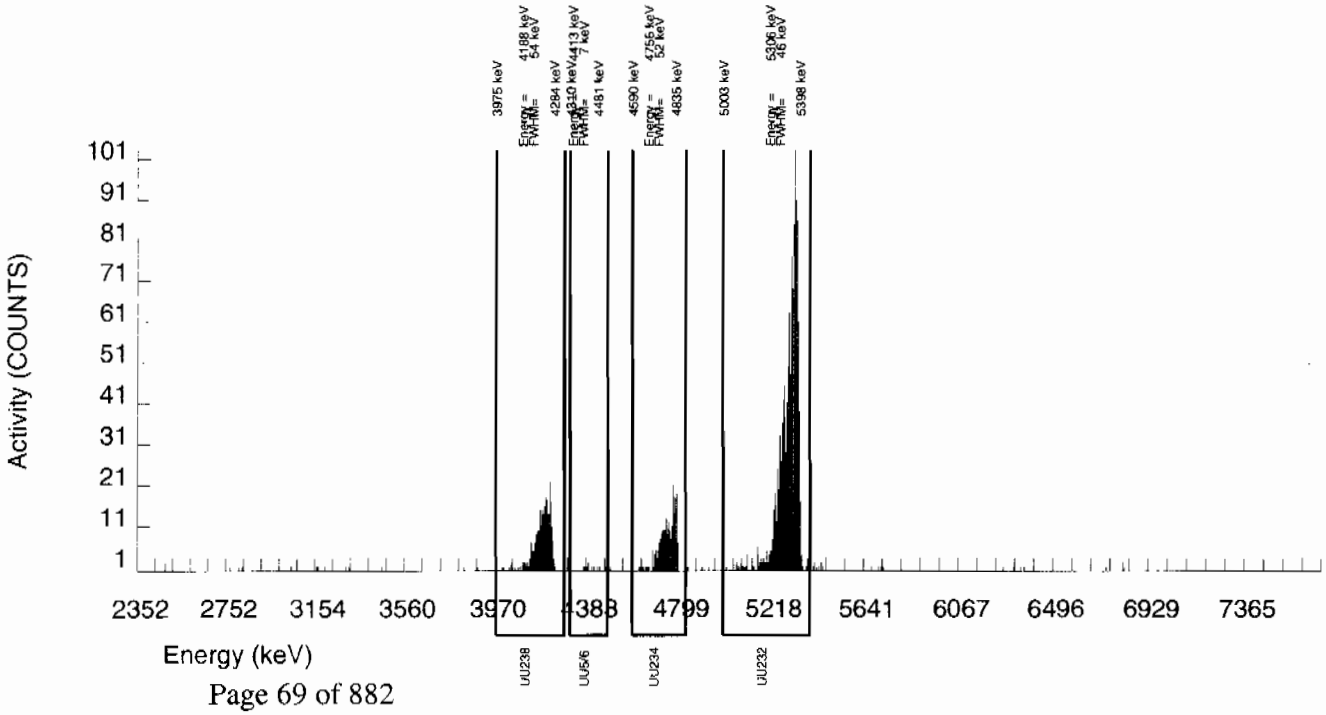

Alpha Spectroscopy Software Version 2.2
Effective Date: 16-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358009_UU
SAMPLE QTY: 0.515 G

DETECTOR NUMBER :74429
AVERAGE %EFFICIENCY :24.8716
% YIELD : 78.761

COUNT DATE:10-JUL-2009 21:19:58
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B148.CNF;329
PCI/G : 2.283E+01	PCI/G : 2.283E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.17152 dpm	EFF FILE : W148.CNF;113
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	172.000	163.871	5.000	9.1924	100.0000	7.32E-01	7.85E-02	9.55E-02	2.03E-01	5.89E-02
U232	5302.100	1038.000	1037.000	1.000	1.0000	100.0000	4.63E+00	3.59E-01	1.04E-02	3.29E-02	1.44E-01
U-235	4391.000	8.000	8.000	0.000	3.0409	80.90000	4.42E-02	1.59E-02	3.90E-02	9.30E-02	1.56E-02
U-238	4184.730	143.000	141.000	2.000	3.2215	100.0000	6.30E-01	6.99E-02	3.35E-02	7.90E-02	5.38E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

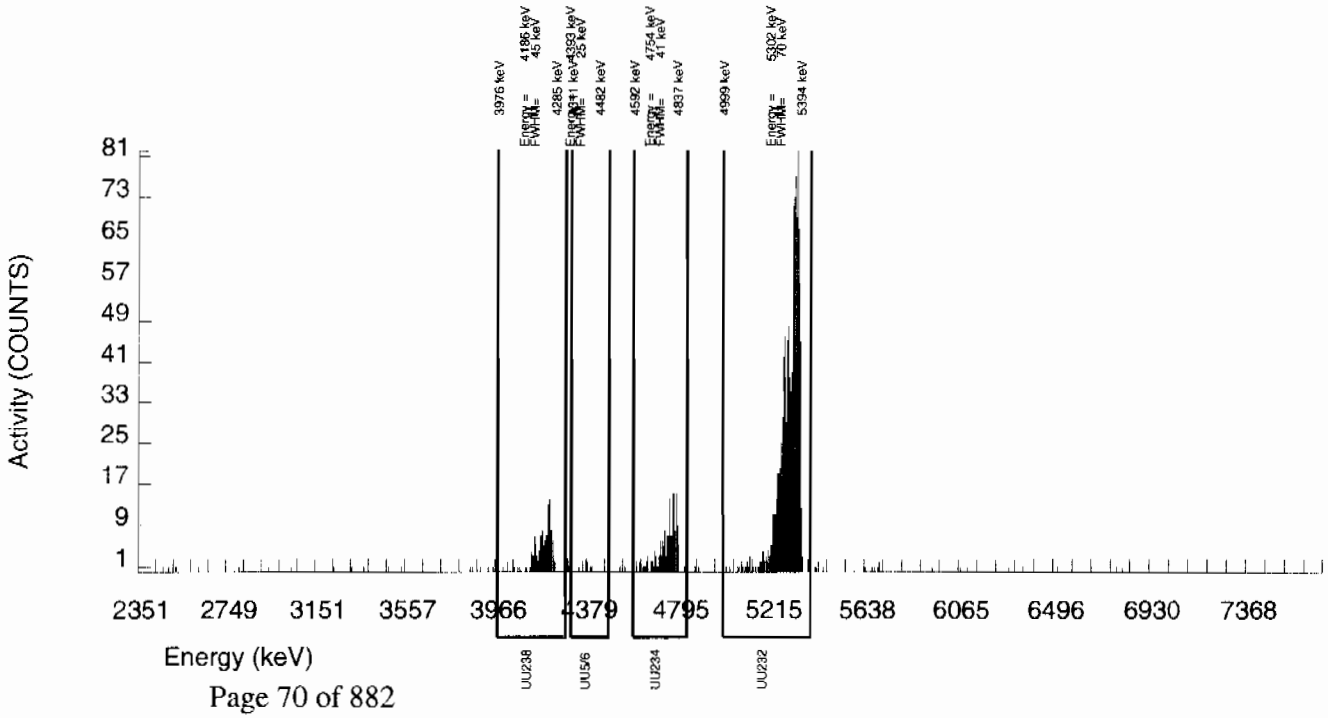

Alpha Spectroscopy Software Version
Detector date 04/02/1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358010_UU
SAMPLE QTY: 0.503 G

DETECTOR NUMBER :33449
AVERAGE %EFFICIENCY :24.9030
% YIELD : 91.102

COUNT DATE:10-JUL-2009 21:20:00
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B149.CNF;333
PCI/G : 2.338E+01	PCI/G : 2.338E+01	NOMINAL : 5.29643 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.82516 dpm	EFF FILE : W149.CNF;98
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	138.000	134.377	0.000	9.1924	100.0000	5.30E-01	5.89E-02	8.44E-02	1.80E-01	4.58E-02
U232	5302.100	1206.000	1201.000	5.000	2.2361	100.0000	4.74E+00	3.60E-01	2.05E-02	5.18E-02	1.37E-01
U-235	4391.000	7.000	7.000	0.000	3.0409	80.90000	3.42E-02	1.31E-02	3.45E-02	8.23E-02	1.29E-02
U-238	4184.730	159.000	158.000	1.000	3.2215	100.0000	6.24E-01	6.63E-02	2.96E-02	6.99E-02	4.99E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

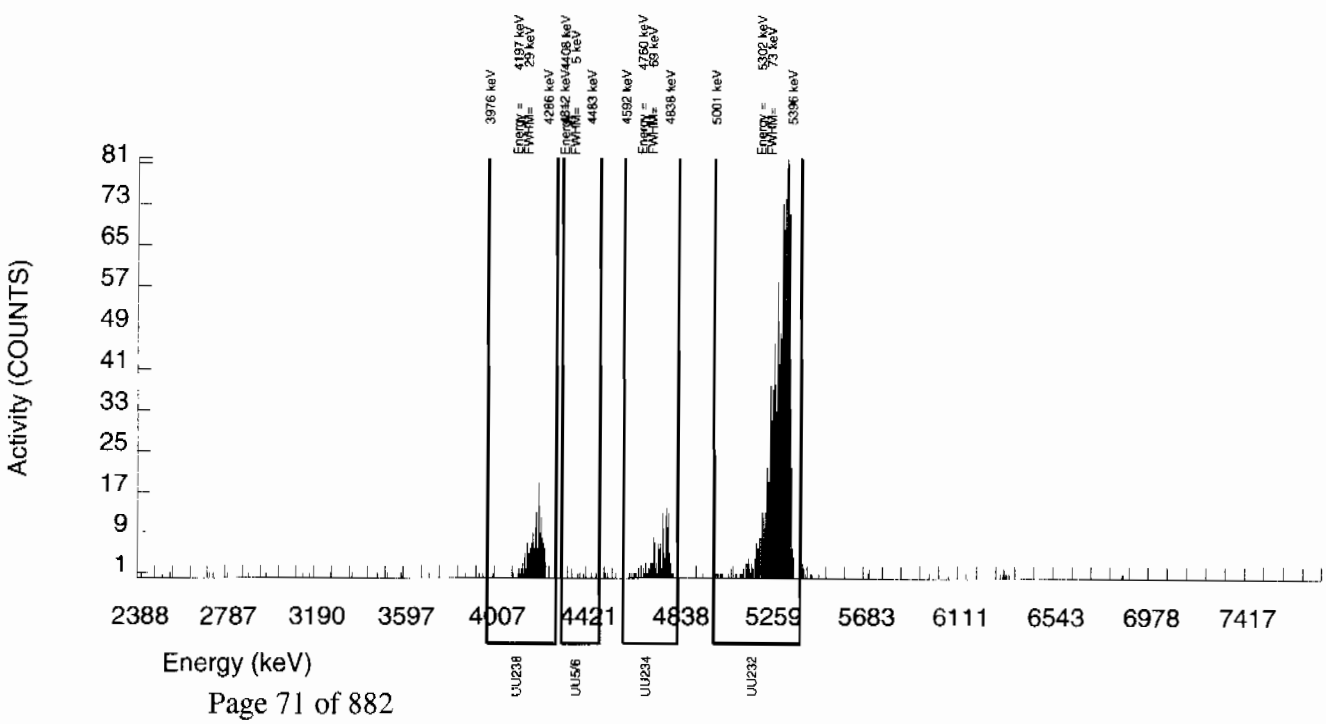

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232358011_UU
SAMPLE QTY: 0.507 G

DETECTOR NUMBER :75552
AVERAGE %EFFICIENCY :24.7088
% YIELD : 96.252

COUNT DATE:10-JUL-2009 21:20:03
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B150.CNF;334
PCI/G : 2.319E+01	PCI/G : 2.319E+01	NOMINAL : 5.29643 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.09794 dpm	EFF FILE : W150.CNF;106
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	236.000	230.202	2.000	9.1924	100.0000	8.60E-01	8.29E-02	7.99E-02	1.70E-01	5.72E-02
U232	5302.100	1273.000	1259.000	14.000	3.7417	100.0000	4.71E+00	3.55E-01	3.25E-02	7.52E-02	1.34E-01
U-235	4391.000	10.000	10.000	0.000	3.0409	80.90000	4.62E-02	1.50E-02	3.27E-02	7.78E-02	1.46E-02
U-238	4184.730	240.000	238.000	2.000	3.2215	100.0000	8.89E-01	8.51E-02	2.80E-02	6.61E-02	5.81E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

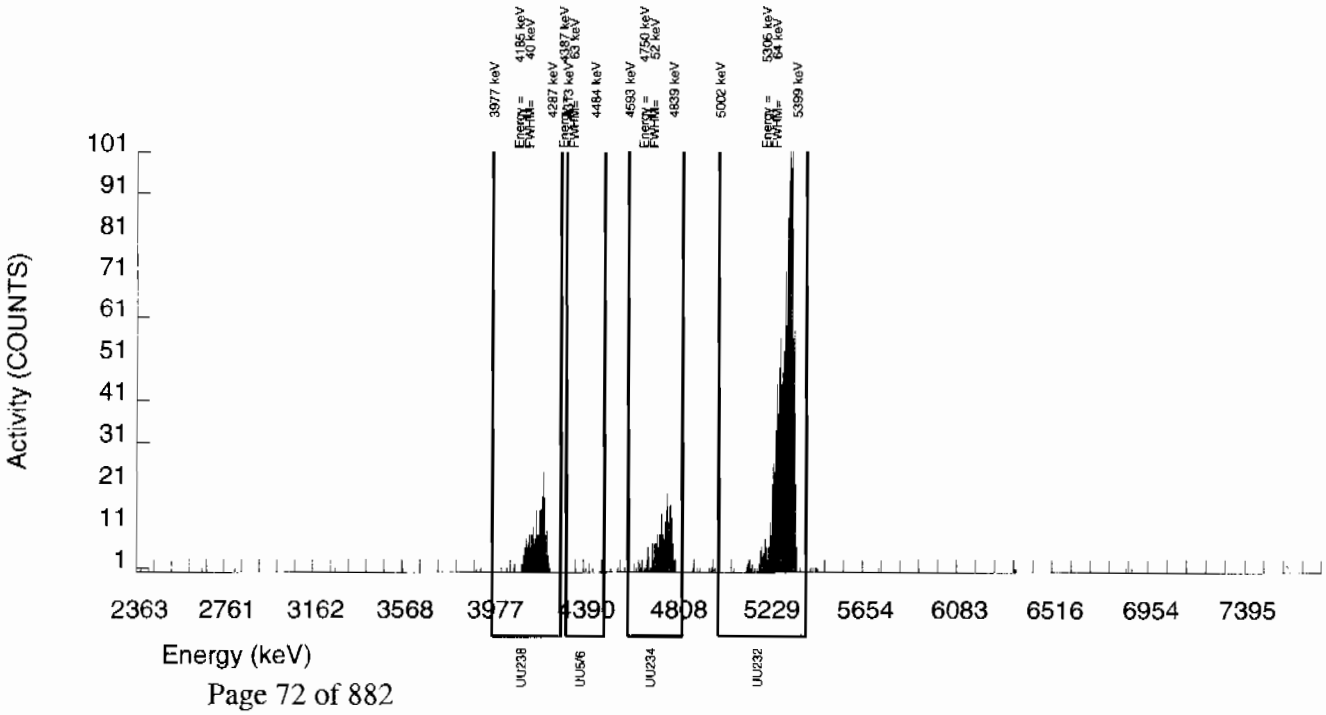

Alpha Spectroscopy Software version 7.1
effective date: 09 MAY 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 2-JUL-2009 00:00:00.

SAMPLE ID : S1201872427_UU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :75556
AVERAGE %EFFICIENCY :24.3854
% YIELD : 88.388

COUNT DATE:10-JUL-2009 21:20:05
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B151.CNF;329
PCI/G : 1.176E+01	PCI/G : 1.176E+01	NOMINAL : 5.29504 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.68017 dpm	EFF FILE : W151.CNF;104
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	7.000	0.558	3.000	9.1924	100.0000	1.17E-03	5.35E-03	4.47E-02	9.50E-02	5.35E-03
U232	5302.100	1143.000	1141.000	2.000	1.4142	100.0000	2.39E+00	1.82E-01	6.88E-03	1.94E-02	7.07E-02
U-235	4391.000	2.000	1.000	1.000	3.0409	80.90000	2.58E-03	4.48E-03	1.83E-02	4.36E-02	4.47E-03
U-238	4184.730	0.000	-2.000	2.000	3.2215	100.0000	-4.18E-03	3.62E-03	1.57E-02	3.70E-02	3.62E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

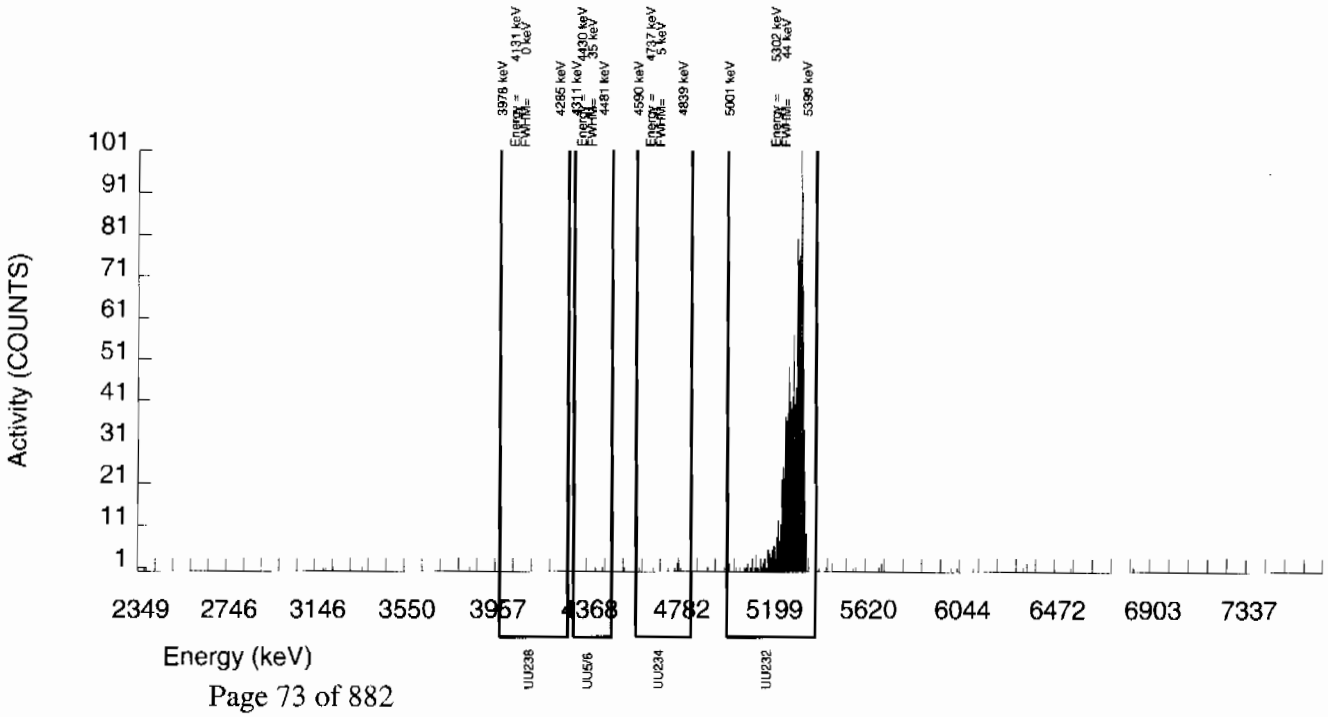

Alpha Spectroscopy Analysis Version 2.7
effective date 04 May 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S1201872428_UU
SAMPLE QTY: 0.502 G

DETECTOR NUMBER :76222
AVERAGE %EFFICIENCY :24.6763
% YIELD : 96.532

COUNT DATE:10-JUL-2009 21:20:08
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B152.CNF;326
PCI/G : 2.343E+01	PCI/G : 2.343E+01	NOMINAL : 5.29643 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.11276 dpm	EFF FILE : W152.CNF;91
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	126.000	116.196	6.000	9.1924	100.0000	4.38E-01	5.25E-02	8.06E-02	1.71E-01	4.27E-02
U232	5302.100	1263.000	1261.000	2.000	1.4142	100.0000	4.75E+00	3.58E-01	1.24E-02	3.50E-02	1.34E-01
U-235	4391.000	8.000	8.000	0.000	3.0409	80.90000	3.73E-02	1.34E-02	3.29E-02	7.85E-02	1.32E-02
U-238	4184.730	114.000	113.000	1.000	3.2215	100.0000	4.26E-01	5.01E-02	2.82E-02	6.67E-02	4.04E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

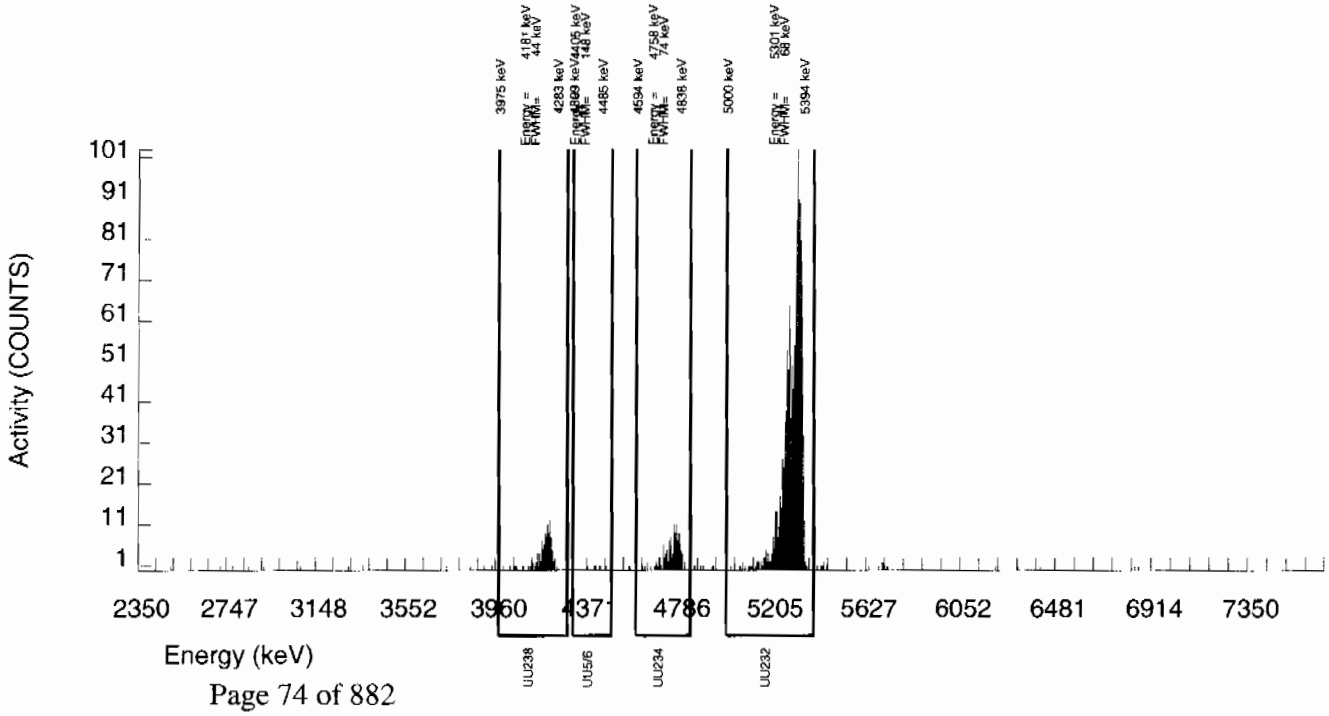

Alpha Spectroscopy Software Version 2.x
effective date: 09 Mar 1996

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 2-JUL-2009 00:00:00

SAMPLE ID : S1201872429_UU
SAMPLE QTY: 0.109 G

DETECTOR NUMBER :76223
AVERAGE %EFFICIENCY :25.0846
% YIELD : 95.112

COUNT DATE:10-JUL-2009 21:20:10
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B153.CNF;321
PCI/G : 1.079E+02	PCI/G : 1.079E+02	NOMINAL : 5.29504 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.03620 dpm	EFF FILE : W153.CNF;94
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	367.000	363.190	0.000	9.1924	100.0000	6.29E+00	5.79E-01	3.70E-01	7.88E-01	3.30E-01
U232	5302.100	1268.000	1263.000	5.000	2.2361	100.0000	2.19E+01	1.76E+00	9.01E-02	2.27E-01	6.18E-01
U-235	4391.000	9.000	9.000	0.000	3.0409	80.90000	1.93E-01	6.59E-02	1.51E-01	3.61E-01	6.42E-02
U-238	4184.730	317.000	315.000	2.000	3.2215	100.0000	5.46E+00	5.15E-01	1.30E-01	3.07E-01	3.09E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

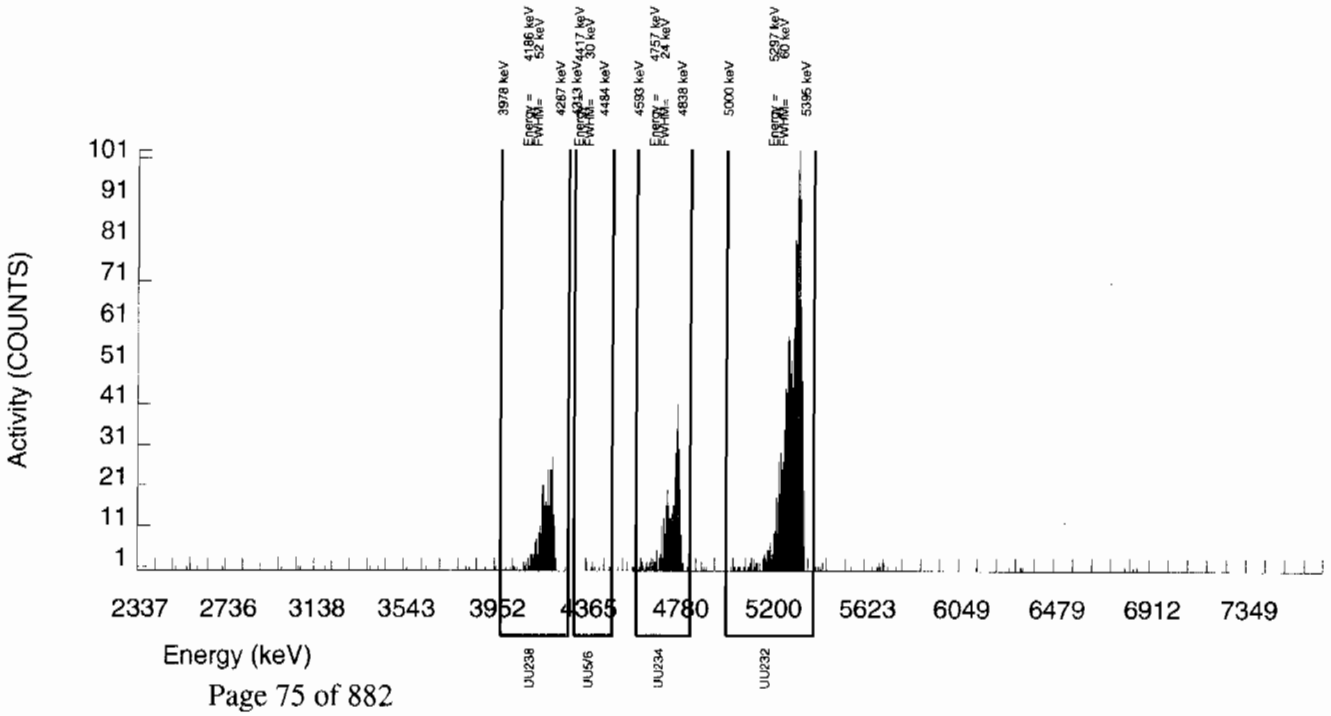

Radiochemistry Batch Checklist, Rev 9

Batch# 880723 **Product:** SS **Date:** 7/14/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			NA
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		
Batch non-conformances second reviewed and disposition verified to be completed.	✓		
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: S. Eulam 7/14/09

Secondary Review Performed By: K Pat 7/14/09

KAHL
7/17/09

Gamma Spec Que Sheet

I.G.- 7/6/09

06/26/2009

Batch #:880723 **Analyst: MXR1** **First Client DueDate07/17/2009** **Internal Due Date: 07/06/2009**

Gamma Spike Isotope: Mixed Gamma **Spike Code:** NA **Expiration Date:** NA **Vol:** NA **Nominal Concentration:** NA

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1.0mL **Nominal Concentration:** Am241: 15.92 Cs137: 5.639 Co60: 6.730 ✓

Initials: MS **Prep Date:** 6/29/09 **Witness:** NA

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (I/g/F)	Detector	Sealing Date/Time (if Applicable)
232278001-1	CAMO-09-10458	SAMPLE		.05 pCi/g	LANL010	SOIL	19-JUN-09 12:00:00 BL	114.89	1	6/26/09
232278002-1	CAMO-09-10459	SAMPLE		.05 pCi/g	LANL010	SOIL	19-JUN-09 12:00:00 BL	107.41	4	6/26/09
232347001-1	CAMO-09-10462	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	126.58	5	6/29/09
232347002-1	CAMO-09-10460	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	126.18	8	
232347003-1	CAMO-09-10461	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	126.88	13	
232347004-1	CAMO-09-10467	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	117.04	14	
232357001-1	CAMO-09-10480	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	112.85	15	
232357002-1	CAMO-09-10479	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	123.92	17	
232358001-1	CAMO-09-6005	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	126.60	18	
232358002-1	CAMO-09-6029	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	134.40	6 ~~20~~	
232358003-1	CAMO-09-6037	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	145.04	21	
232358004-1	CAMO-09-6033	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	134.08	22	
232358005-1	CAMO-09-6030	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 BL	124.55	23	
232358006-1	CAMO-09-6031	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 MS	137.44	9	
232358007-1	CAMO-09-6032	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 MS	100.62	10	
232358008-1	CAMO-09-6036	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 MS	121.35	11	
232358009-1	CAMO-09-6028	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 MS	133.79	12	
232358010-1	CAMO-09-6047	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 MS	133.28	16	
232358011-1	CAMO-09-6048	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00 MS	140.17	17	
1201870087-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	6/29/09 MS	145.00	18	
1201870088-1	DUP CAMO-09-10462(232347001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	22-JUN-09 12:00:00 MS	126.58	21	
1201870089-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	6/29/09 MS	155.44	23	

GEL Laboratories LLC, Radiochemistry Division

history ✓
✓ daily

Data Reviewed By: ~~[illegible]~~ 7/14/09 ~~7/14/09~~ AE 7/14/09
MS 7/14/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
880723	232278001	SAMPLE	06-JUL-09	Americium-241	-0.02865	0.3004	0.200
				Cerium-139	-0.02708	0.05534	0.050
				Cesium-134	0.079	0.1089	0.100
				Sodium-22	-0.00122	0.09266	0.080
				Thorium-234	1.894	2.345	2.00
880723	232278002	SAMPLE	06-JUL-09	Americium-241	0.06485	0.4038	0.200
				Cerium-139	0.02396	0.05051	0.050
				Cesium-134	0.08321	0.1081	0.100
				Thorium-234	0.7778	3.126	2.00
880723	232347001	SAMPLE	06-JUL-09	Cerium-139	0.00322	0.05179	0.050
				Sodium-22	-0.01266	0.09296	0.080
880723	232347002	SAMPLE	06-JUL-09	Americium-241	-0.02283	0.3001	0.200
				Thorium-234	0.05455	2.452	2.00
880723	232347003	SAMPLE	06-JUL-09	Cerium-139	-0.02302	0.0534	0.050
				Cesium-134	0.06555	0.1146	0.100
				Sodium-22	-0.02734	0.09677	0.080
880723	232347004	SAMPLE	06-JUL-09	Americium-241	-0.1319	0.2026	0.200
				Sodium-22	-0.03291	0.08205	0.080
880723	232357001	SAMPLE	06-JUL-09	Americium-241	0.1896	0.5516	0.200
				Cerium-139	0.00793	0.06582	0.050
				Cesium-134	0.1066	0.1145	0.100
				Europium-152	-0.07653	0.2101	0.200
				Sodium-22	-0.03956	0.09005	0.080
				Thorium-234	1.773	3.964	2.00
				Tin-113	0.03416	0.1027	0.100
880723	232357002	SAMPLE	06-JUL-09	Cerium-139	-0.00258	0.05512	0.050
				Cesium-134	0.1012	0.1262	0.100
				Cobalt-60	0.03742	0.1101	0.100
				Sodium-22	0.07822	0.1284	0.080
880723	232358001	SAMPLE	06-JUL-09	Americium-241	-0.09201	0.3101	0.200
				Thorium-234	1.374	2.732	2.00
880723	232358002	SAMPLE	06-JUL-09	Americium-241	-0.00825	0.3532	0.200
				Cerium-139	-0.02578	0.05591	0.050
				Cesium-134	0.1035	0.1101	0.100
				Sodium-22	-0.00959	0.08291	0.080
				Thorium-234	0.04384	2.856	2.00
880723	232358003	SAMPLE	06-JUL-09	Cerium-139	0.02318	0.05644	0.050
				Europium-152	0.04234	0.2023	0.200
				Sodium-22	0.01882	0.1079	0.080
880723	232358004	SAMPLE	06-JUL-09	Americium-241	0.1542	0.2185	0.200
880723	232358005	SAMPLE	06-JUL-09	Americium-241	0.03761	0.2596	0.200
				Cesium-134	0.09445	0.1113	0.100
				Sodium-22	0.0009	0.0846	0.080
880723	232358006	SAMPLE	06-JUL-09	Americium-241	-0.09827	0.2741	0.200
				Thorium-234	1.296	2.522	2.00

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
880723	232358007	SAMPLE	06-JUL-09	Americium-241	-0.2092	0.4481	0.200
				Cerium-139	-0.04366	0.05338	0.050
				Cesium-134	0.06817	0.1004	0.100
				Thorium-234	1.337	3.717	2.00
880723	232358008	SAMPLE	06-JUL-09	Americium-241	0.03138	0.2196	0.200
				Cerium-139	-0.00184	0.05079	0.050
880723	232358009	SAMPLE	06-JUL-09	Americium-241	0.04656	0.2499	0.200
				Thorium-234	0.7319	2.098	2.00
880723	232358010	SAMPLE	06-JUL-09	Americium-241	0.03489	0.2668	0.200
				Thorium-234	0.6745	2.145	2.00
880723	232358011	SAMPLE	06-JUL-09	Cerium-139	0.0218	0.0597	0.050
				Cesium-134	0.08665	0.1167	0.100
				Europium-152	0.02076	0.2073	0.200
				Sodium-22	-0.01757	0.0957	0.080
880723	1201870087	MB	06-JUL-09				
880723	1201870088	DUP	06-JUL-09	Cesium-134	0.07015	0.1197	0.100
				Cobalt-60	0.04829	0.1095	0.100
				Sodium-22	0.06557	0.1294	0.080
				Yttrium-88	0.04953	0.1057	0.100
880723	1201870089	LCS	06-JUL-09	Cerium-139	0.02647	0.07455	0.050
				Cesium-134	0.09152	0.1776	0.100
				Europium-152	-0.09306	0.3002	0.200
				Mercury-203	0.0068	0.1031	0.100
				Potassium-40	0.8824	1.186	1.00
				Ruthenium-106	-0.05382	1.089	0.800
				Sodium-22	0.00409	0.1016	0.080
				Thorium-234	-0.5	3.431	2.00
				Tin-113	0.04546	0.143	0.100
				Uranium-235	0.1149	0.5185	0.500
				Yttrium-88	0.03265	0.104	0.100

Gamma Review Report based on Result > MDA for Batch:880723

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232278001	19-JUN-09 12:00	06-JUL-09 11:09	17	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.619	0.1888	pCi/g	0.2779	N	911.4	3	1.374	IDENTIFIED	10.51	☐	
Americium-243	INT	0.3215	0.0449	pCi/g	0.1076	N	74.72	2	1.186	IDENTIFIED	13.32	☐	
Annihilation Rad.	—	0.1565	0.04511	pCi/g	0.05139	N	511.1	2	1.916	IDENTIFIED	28.69	☐	
Pb-214 Bismuth-211	INT	2.902	0.2519	pCi/g	0.3915	Y	352.3	4	1.223	IDENTIFIED	8.085	☑ UI	
Bismuth-212	7/14/09 LA	1.672	0.3372	pCi/g	0.8179	N	727.6	1	1.628	FAIL_ABUND	19.81	☐	
Bismuth-214	✓	0.9322	0.0967	pCi/g	0.1266	0.200	609.6	4	1.281	IDENTIFIED	9.689	☐	
Pb-214 Cadmium-109	INT	1.853	0.4465	pCi/g	1.44	Y	87.12	4	1.197	IDENTIFIED	23.65	☑ UI	
Cerium-143	—	710.3	240	pCi/g	0	N	87.12	4	1.197	NOT_IDENTI	23.65	☐	
Gross Gamma	—	8.454	1.478	pCi/g	2.459	N		0				☐	
Iodine-135	—	4.71E+17	0	pCi/g	0	N	511.1	2	1.916	NOT_IDENTI	28.69	☐	
Krypton-85	HE	20.25	4.521	pCi/g	16.75	N	239	7	1.295	NOT_IDENTI	4.491	☐	
Lead-212	✓	1.379	0.07975	pCi/g	0.1014	0.100	239	7	1.295	IDENTIFIED	4.491	☐	
Lead-214	✓	1.009	0.0915	pCi/g	0.1334	0.100	352.3	4	1.223	IDENTIFIED	8.085	☐	
Neptunium-237	HE	0.5335	0.1398	pCi/g	0.4526	N	87.12	4	1.197	IDENTIFIED	23.65	☐	
Polonium-212	NL	1.379	0.07975	pCi/g	0.1014	N	239	7	1.295	IDENTIFIED	4.491	☐	
Polonium-214	NL	1.009	0.0915	pCi/g	0.1334	N	352.3	4	1.223	IDENTIFIED	8.085	☐	
Polonium-216	NL	1.379	0.07975	pCi/g	0.1014	N	239	7	1.295	IDENTIFIED	4.491	☐	
Polonium-218	NL	1.009	0.0915	pCi/g	0.1334	N	352.3	4	1.223	IDENTIFIED	8.085	☐	
Potassium-40	✓	33.66	1.605	pCi/g	0.6663	1.00	1461	1	1.887	IDENTIFIED	3.182	☐	
Pb-214 Radium-224	INT	3.559	0.7624	pCi/g	1.155	Y	242.1	1	1.879	IDENTIFIED	21.23	☑ UI	
Radium-226	✓	0.9322	0.0967	pCi/g	0.1266	Y	609.6	4	1.281	IDENTIFIED	9.689	☐	
Radium-228	✓	1.619	0.1888	pCi/g	0.2779	0.500	911.4	3	1.374	IDENTIFIED	10.51	☐	
Strontium-85	LA	0.1059	0.02363	pCi/g	0.08757	Y	239	7	1.295	NOT_IDENTI	4.491	☑ UI	Data rejected due to low abundance.
Technetium-99m	—	1.83E+18	0	pCi/g	0	N	239	7	1.295	NOT_IDENTI	4.491	☐	
Thallium-200	HE	501	853.1	pCi/g	0	N	74.72	2	1.186	NOT_IDENTI	13.32	☐	
Thallium-208	✓	0.4973	0.04815	pCi/g	0.06629	0.080	583.5	1	1.355	IDENTIFIED	9.15	☐	
Thorium-228	✓	1.379	0.07975	pCi/g	0.1014	N	239	7	1.295	IDENTIFIED	4.491	☐	
Thorium-230	✓	0.9322	0.0967	pCi/g	0.1266	N	609.6	4	1.281	IDENTIFIED	9.689	☐	
Thorium-232	✓	1.619	0.1888	pCi/g	0.2779	N	911.4	3	1.374	IDENTIFIED	10.51	☐	
Tin-126	HE	0.1817	0.04377	pCi/g	0.142	N	87.12	4	1.197	IDENTIFIED	23.65	☐	
Titanium-44	LA	0.3324	0.0322	pCi/g	0.09217	N	77.17	1	1.14	FAIL_ABUND	8.698	☐	
Total Uranium	—	5.5704	3.67E-06	ug/g	3.4911	N		0				☐	
Uranium-234	✓	0.9322	0.0967	pCi/g	0.1266	N	609.6	4	1.281	IDENTIFIED	9.689	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232278002	19-JUN-09 12:00	06-JUL-09 11:09	17	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.295	0.1596	pCi/g	0.2321	N	910.6	3	1.218	IDENTIFIED	11.05	☐	
Americium-243	INT	0.2888	0.04404	pCi/g	0.1042	N	74.89	2	1.009	IDENTIFIED	14.13	☐	
Annihilation Rad.	HE	0.1227	0.03743	pCi/g	0.04963	N	510.2	2	1.521	IDENTIFIED	30.38	☐	
Bismuth-211	INT	3.155	0.2446	pCi/g	0.3135	Y	351.8	4	1.336	IDENTIFIED	6.979	☑ UI	
Bismuth-214	✓	0.9587	0.08326	pCi/g	0.1227	0.200	608.9	4	1.429	IDENTIFIED	7.868	☐	
Cadmium-109	INT	2.038	0.6811	pCi/g	1.606	Y	87.02	4	1.243	IDENTIFIED	32.88	☑ UI	
Cerium-143	—	1428	271.1	pCi/g	0	N	327.4	1	0.7605	FAIL_DECAY	31.85	☐	
Gross Gamma	—	8.2	1.262	pCi/g	1.992	N		0				☐	
Iodine-123	HE	2.89E+07	3.05E+07	pCi/g	0	N	87.02	4	1.243	NOT_IDENTI	32.88	☐	
Iodine-135	—	1.85E+17	0	pCi/g	0	N	510.2	2	1.521	NOT_IDENTI	30.38	☐	
Lead-212	✓	1.496	0.08352	pCi/g	0.08703	0.100	238.5	5	1.145	IDENTIFIED	3.88	☐	
Lead-214	✓	1.098	0.08977	pCi/g	0.1135	0.100	351.8	4	1.336	IDENTIFIED	6.979	☐	
Neptunium-237	HE	0.5866	0.2052	pCi/g	0.4566	N	87.02	4	1.243	IDENTIFIED	32.88	☐	
Polonium-212	NL	1.496	0.08352	pCi/g	0.08703	N	238.5	5	1.145	IDENTIFIED	3.88	☐	

Polonium-214	NL	1.098	0.08977	pCi/g	0.1135	N	351.8	4	1.336	IDENTIFIED	6.979	☐
Polonium-216	NL	1.496	0.08352	pCi/g	0.08703	N	238.5	5	1.145	IDENTIFIED	3.88	☐
Polonium-218	NL	1.098	0.08977	pCi/g	0.1135	N	351.8	4	1.336	IDENTIFIED	6.979	☐
Potassium-40	✓	33.6	1.587	pCi/g	0.5461	1.00	1460	1	1.898	IDENTIFIED	3.109	☐
Radium-224	INT	4.094	0.7389	pCi/g	0.9906	Y	241.4	1	1.864	IDENTIFIED	17.74	☑ UI
Radium-226	✓	0.9587	0.08326	pCi/g	0.1227	Y	608.9	4	1.429	IDENTIFIED	7.868	☐
Radium-228	✓	1.295	0.1596	pCi/g	0.2321	0.500	910.6	3	1.218	IDENTIFIED	11.05	☐
Thallium-200	HE	866.7	780.3	pCi/g	0	N	74.89	2	1.009	NOT_IDENTI	14.13	☐
Thallium-208	✓	0.4307	0.04533	pCi/g	0.06202	0.080	582.9	1	1.483	IDENTIFIED	10.04	☐
Thorium-228	✓	1.496	0.08352	pCi/g	0.08702	N	238.5	5	1.145	IDENTIFIED	3.88	☐
Thorium-230	✓	0.9587	0.08326	pCi/g	0.1227	N	608.9	4	1.429	IDENTIFIED	7.868	☐
Thorium-232	✓	1.295	0.1596	pCi/g	0.2321	N	910.6	3	1.218	IDENTIFIED	11.05	☐
Tin-126	HE	0.1998	0.06676	pCi/g	0.1627	N	87.02	4	1.243	IDENTIFIED	32.88	☐
Titanium-44	LA	0.3192	0.03395	pCi/g	0.0853	N	76.99	1	1.014	FAIL_ABUND	8.955	☐
Uranium-234	✓	0.9587	0.08326	pCi/g	0.1227	N	608.9	4	1.429	IDENTIFIED	7.868	☐
Zirconium-97	—	2.70E+07	6.45E+06	pCi/g	0	N	238.5	5	1.145	NOT_IDENTI	3.88	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347001	22-JUN-09 12:00	06-JUL-09 11:10	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.541	0.204	pCi/g	0.2519	N	910.9	3	1.558	IDENTIFIED	11.7	☐	
Americium-243	INT	0.3557	0.03064	pCi/g	0.05889	N	74.72	2	1.313	IDENTIFIED	7.672	☐	
Bismuth-210	HE	1.748	0.4374	pCi/g	0.8962	N	46.01	3	1.237	IDENTIFIED	24.72	☐	
Bismuth-211	INT	3.397	0.275	pCi/g	0.3458	Y	352	4	1.364	IDENTIFIED	7.066	☑ UI	
Bismuth-212	HE	1.242	0.3252	pCi/g	0.7543	N	728.3	1	1.73	FAIL_ABUND	25.78	☐	
Bismuth-214	✓	0.8092	0.1092	pCi/g	0.1264	0.200	609.5	4	1.526	IDENTIFIED	12.82	☐	
Cadmium-109	INT	3.432	0.3906	pCi/g	0.9704	Y	87.26	4	1.235	IDENTIFIED	10.73	☑ UI	
Cerium-143	—	416.4	68.66	pCi/g	0	N	328.2	1	1.429	FAIL_DECAY	37.24	☐	
Cesium-134	LA	0.1225	0.03032	pCi/g	0.1057	0.100	795.1	1	2.575	FAIL_ABUND	24.38	☑ UI	Data rejected due to low abundance.
Gross Gamma	—	8.961	1.367	pCi/g	3.346	N		0				☐	
Iodine-123	HE	1.91E+05	6.69E+05	pCi/g	0	N	87.26	4	1.235	NOT_IDENTI	10.73	☐	
Lead-210	HE	1.748	0.4374	pCi/g	0.8962	N	46.01	3	1.237	IDENTIFIED	24.72	☐	
Lead-212	✓	1.573	0.1026	pCi/g	0.09622	0.100	238.7	5	1.387	IDENTIFIED	3.672	☐	
Lead-214	✓	1.182	0.1005	pCi/g	0.1206	0.100	352	4	1.364	IDENTIFIED	7.066	☐	
Lutetium-177	HE	2.001	0.7856	pCi/g	1.914	N	209.4	1	0.8217	FAIL_ABUND	38.94	☐	
Neptunium-237	INT	0.9922	0.1524	pCi/g	0.2793	N	87.26	4	1.235	IDENTIFIED	10.73	☐	
Niobium-95m	HE	0.3344	0.07641	pCi/g	0.244	N	238.7	5	1.387	NOT_IDENTI	3.672	☐	
Polonium-210	HE	1.748	0.4361	pCi/g	0.8962	N	46.01	3	1.237	IDENTIFIED	24.72	☐	
Polonium-212	NL	1.573	0.1026	pCi/g	0.09622	N	238.7	5	1.387	IDENTIFIED	3.672	☐	
Polonium-214	NL	1.182	0.1005	pCi/g	0.1206	N	352	4	1.364	IDENTIFIED	7.066	☐	
Polonium-216	NL	1.573	0.1026	pCi/g	0.09622	N	238.7	5	1.387	IDENTIFIED	3.672	☐	
Polonium-218	NL	1.182	0.1005	pCi/g	0.1206	N	352	4	1.364	IDENTIFIED	7.066	☐	
Potassium-40	✓	34.07	1.474	pCi/g	0.3715	1.00	1460	1	2.124	IDENTIFIED	3.01	☐	
Radium-224	INT	4.114	0.8547	pCi/g	1.095	Y	241.3	1	2.26	IDENTIFIED	20.19	☑ UI	
Radium-226	✓	0.8092	0.1092	pCi/g	0.1264	Y	609.5	4	1.526	IDENTIFIED	12.82	☐	
Radium-228	✓	1.541	0.204	pCi/g	0.2519	0.500	910.9	3	1.558	IDENTIFIED	11.7	☐	
Sodium-24	HE	1.30E+05	1.02E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-200	HE	13.24	123.6	pCi/g	0	N	74.72	2	1.313	NOT_IDENTI	7.672	☐	
Thallium-208	LA	0.5139	0.04639	pCi/g	0.1427	0.080	583	1	1.428	FAIL_ABUND	8.243	☑ UI	Data rejected due to low abundance.
Thorium-228	✓	1.573	0.1026	pCi/g	0.09621	N	238.7	5	1.387	IDENTIFIED	3.672	☐	
Thorium-230	✓	0.8092	0.1092	pCi/g	0.1264	N	609.5	4	1.526	IDENTIFIED	12.82	☐	
Thorium-232	✓	1.541	0.204	pCi/g	0.2519	N	910.9	3	1.558	IDENTIFIED	11.7	☐	
Thorium-23[illegible]	✓ NVD	1.041	0.4498	pCi/g	1.041	2.00	63.17	2	1.46	IDENTIFIED	42.28	☑ UI	
Tin-126	INT	0.3379	0.03846	pCi/g	0.09541	N	87.26	4	1.235	IDENTIFIED	10.73	☐	
Titanium-44	LA	0.3349	0.02366	pCi/g	0.06286	N	77.06	1	1.348	FAIL_ABUND	5.898	☐	
Total Uranium	—	3.1186	1.34E-06	ug/g	1.5512	N		0				☐	
Uranium-234	✓	0.8092	0.1092	pCi/g	0.1264	N	609.5	4	1.526	IDENTIFIED	12.82	☐	
Uranium-238	HE	1.041	0.4498	pCi/g	1.041	N	63.17	2	1.46	IDENTIFIED	42.28	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347002	22-JUN-09 12:00	06-JUL-09 11:10	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.324	0.154	pCi/g	0.2311	N	910.7	3	1.608	IDENTIFIED	9.647	☐	
Americium-243	INT	0.3368	0.04565	pCi/g	0.09334	N	74.87	2	1.268	IDENTIFIED	12.46	☐	
Annihilation Rad.	HE	0.1076	0.03777	pCi/g	0.04879	N	510.4	2	1.682	IDENTIFIED	34.99	☐	
Bismuth-211	INT	2.85	0.2449	pCi/g	0.3527	Y	351.7	4	1.332	IDENTIFIED	7.926	☑ UI	
Bismuth-212	HE	1.137	0.2603	pCi/g	0.7149	N	726.9	1	1.595	FAIL_ABUND	22.52	☐	
Bismuth-214	✓	0.927	0.08287	pCi/g	0.1101	0.200	608.9	4	1.623	IDENTIFIED	8.103	☐	
Cerium-143	—	422.6	66.64	pCi/g	0	N	327.6	1	0.9507	FAIL_DECAY	32.76	☐	
Gross Gamma	—	7.897	1.437	pCi/g	2.86	N		0				☐	
Iodine-123	HE	8.85E+05	6.40E+05	pCi/g	0	N	87.26	3	0.7836	NOT_IDENTI	41.61	☐	
Iodine-133	HE	24.38	1226	pCi/g	0	N	510.4	2	1.682	FAIL_DECAY	34.99	☐	
Lead-212	✓	1.438	0.07686	pCi/g	0.08837	0.100	238.5	7	1.282	IDENTIFIED	3.866	☐	
Lead-214	✓	0.9915	0.08902	pCi/g	0.1229	0.100	351.7	4	1.332	IDENTIFIED	7.926	☐	
Lutetium-177	LA	3.602	0.7909	pCi/g	1.843	N	209.1	1	1.259	FAIL_ABUND	21.77	☐	
Neptunium-237	HE	0.4351	0.1882	pCi/g	0.4336	N	87.26	3	0.7836	IDENTIFIED	41.61	☐	
Niobium-95m	HE	0.2944	0.06585	pCi/g	0.2234	N	238.5	7	1.282	NOT_IDENTI	3.866	☐	
Niobium-97	HE	7323	15950	pCi/g	0	N	238.5	7	1.282	NOT_IDENTI	3.866	☐	
Polonium-212	NI	1.438	0.07686	pCi/g	0.08837	N	238.5	7	1.282	IDENTIFIED	3.866	☐	
Polonium-214	NI	0.9915	0.08902	pCi/g	0.1229	N	351.7	4	1.332	IDENTIFIED	7.926	☐	
Polonium-216	NI	1.438	0.07686	pCi/g	0.08837	N	238.5	7	1.282	IDENTIFIED	3.866	☐	
Polonium-218	NI	0.9915	0.08902	pCi/g	0.1229	N	351.7	4	1.332	IDENTIFIED	7.926	☐	
Potassium-40	✓	31.53	1.64	pCi/g	0.4613	1.00	1460	1	1.997	IDENTIFIED	3.016	☐	
Radium-224	INT	3.509	0.6263	pCi/g	1.005	Y	241.4	1	1.698	IDENTIFIED	17.61	☑ UI	
Radium-226	✓	0.927	0.08287	pCi/g	0.1101	Y	608.9	4	1.623	IDENTIFIED	8.103	☐	
Radium-228	✓	1.324	0.154	pCi/g	0.2311	0.500	910.7	3	1.608	IDENTIFIED	9.647	☐	
Thallium-200	—	211.5	105.6	pCi/g	0	N	74.87	2	1.268	NOT_IDENTI	12.46	☐	
Thallium-208	✓	0.378	0.03829	pCi/g	0.05771	0.080	582.9	1	1.424	IDENTIFIED	9.589	☐	
Thorium-228	✓	1.438	0.07686	pCi/g	0.08836	N	238.5	7	1.282	IDENTIFIED	3.866	☐	
Thorium-230	✓	0.927	0.08287	pCi/g	0.1101	N	608.9	4	1.623	IDENTIFIED	8.103	☐	
Thorium-232	✓	1.324	0.154	pCi/g	0.2311	N	910.7	3	1.608	IDENTIFIED	9.647	☐	
Tin-126	HE	0.1482	0.06224	pCi/g	0.1456	N	87.26	3	0.7836	IDENTIFIED	41.61	☐	
Titanium-44	NA	0.3301	0.03334	pCi/g	0.07993	N	77.1	1	1.29	FAIL_ABUND	8.552	☐	
Uranium-234	✓	0.927	0.08287	pCi/g	0.1101	N	608.9	4	1.623	IDENTIFIED	8.103	☐	
Zirconium-97	—	9.12E+05	3.67E+05	pCi/g	0	N	238.5	7	1.282	NOT_IDENTI	3.866	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347003	22-JUN-09 12:00	06-JUL-09 11:11	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.751	0.2124	pCi/g	0.309	N	911.3	3	1.92	IDENTIFIED	10.96	☐	
Americium-243	INT	0.2754	0.02658	pCi/g	0.06656	N	75.18	2	0.8968	IDENTIFIED	8.639	☐	
Annihilation Rad.	HE	0.09375	0.04197	pCi/g	0.06237	N	510.9	3	1.513	IDENTIFIED	44.64	☐	
Bismuth-211	INT	3.095	0.2322	pCi/g	0.3586	Y	352.1	4	1.702	IDENTIFIED	6.561	☑ UI	
Bismuth-212	HE	1.07	0.3135	pCi/g	0.8028	N	727.4	1	2.089	FAIL_ABUND	28.9	☐	
Bismuth-214	✓	0.951	0.09602	pCi/g	0.1703	0.200	609.2	4	1.429	IDENTIFIED	8.949	☐	
Cadmium-109	INT	2.628	0.4265	pCi/g	1.309	Y	87.51	5	1.051	IDENTIFIED	15.74	☑ UI	
Cerium-143	—	117	48.08	pCi/g	0	N	87.51	5	1.051	NOT_IDENTI	15.74	☐	
Gross Gamma	—	8.348	1.641	pCi/g	2.811	N		0				☐	
Iodine-123	HE	3.69E+05	7.53E+05	pCi/g	0	N	87.51	5	1.051	NOT_IDENTI	15.74	☐	
Iodine-133	HE	2172	1483	pCi/g	0	N	510.9	3	1.513	FAIL_DECAY	44.64	☐	
Iodine-135	HE	1.18E+14	2.31E+14	pCi/g	0	N	510.9	3	1.513	NOT_IDENTI	44.64	☐	
Lead-212	✓	1.403	0.08499	pCi/g	0.09638	0.100	238.9	5	1.207	IDENTIFIED	4.008	☐	
Lead-214	✓	1.077	0.0855	pCi/g	0.125	0.100	352.1	4	1.702	IDENTIFIED	6.561	☐	
Lutetium-177	HE	2.955	0.8163	pCi/g	1.878	N	209.4	2	1.509	FAIL_ABUND	27.34	☐	
Neptunium-237	INT	0.7599	0.1461	pCi/g	0.2968	N	87.51	5	1.051	IDENTIFIED	15.74	☐	

Niobium-97	HE	23230	19470	pCi/g	0	N	238.9	5	1.207	NOT_IDENTI	4.008	☐	
Polonium-212	NR	1.403	0.08499	pCi/g	0.09638	N	238.9	5	1.207	IDENTIFIED	4.008	☐	
Polonium-214	NR	1.077	0.0855	pCi/g	0.125	N	352.1	4	1.702	IDENTIFIED	6.561	☐	
Polonium-216	NR	1.403	0.08499	pCi/g	0.09638	N	238.9	5	1.207	IDENTIFIED	4.008	☐	
Polonium-218	NR	1.077	0.0855	pCi/g	0.125	N	352.1	4	1.702	IDENTIFIED	6.561	☐	
Potassium-40	✓	32.64	1.433	pCi/g	0.7562	1.00	1461	1	2.128	IDENTIFIED	3.152	☐	
Radium-224	INT	3.985	0.5993	pCi/g	1.097	Y	241.9	1	1.665	IDENTIFIED	14.51	☑	UI
Radium-226	✓	0.951	0.09602	pCi/g	0.1703	Y	609.2	4	1.429	IDENTIFIED	8.949	☐	
Radium-228	✓	1.751	0.2124	pCi/g	0.309	0.500	911.3	3	1.92	IDENTIFIED	10.96	☐	
Technetium-99m	HE	1.53E+14	8.15E+14	pCi/g	0	N	356.3	2	1.709	NOT_IDENTI	64.48	☐	
Thallium-200	HE	10.34	133	pCi/g	0	N	75.18	2	0.8968	NOT_IDENTI	8.639	☐	
Thallium-208	✓	0.4182	0.05215	pCi/g	0.07944	0.080	583.3	1	1.208	IDENTIFIED	11.76	☐	
Thorium-228	✓	1.403	0.08499	pCi/g	0.09637	N	238.9	5	1.207	IDENTIFIED	4.008	☐	
Thorium-230	✓	0.951	0.09602	pCi/g	0.1703	N	609.2	4	1.429	IDENTIFIED	8.949	☐	
Thorium-232	✓	1.751	0.2124	pCi/g	0.309	N	911.3	3	1.92	IDENTIFIED	10.96	☐	
Tin-126	INT	0.2588	0.04199	pCi/g	0.1287	N	87.51	5	1.051	IDENTIFIED	15.74	☐	
Titanium-44	LA	0.2888	0.02243	pCi/g	0.06484	N	77.46	1	1.023	FAIL_ABUND	6.508	☐	
Total Uranium	—	2.9386	1.83E-06	ug/g	1.5598	N		0				☐	
Tungsten-181	HE	0.3713	0.1099	pCi/g	0.3653	N	209.4	2	1.509	NOT_IDENTI	27.34	☐	
Uranium-234	✓	0.951	0.09602	pCi/g	0.1703	N	609.2	4	1.429	IDENTIFIED	8.949	☐	
Zirconium-97	HE	6.91E+05	4.15E+05	pCi/g	0	N	356.3	2	1.709	FAIL_DECAY	64.48	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347004	22-JUN-09 12:00	06-JUL-09 11:12	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual		Qual Comment
Actinium-228	✓	1.309	0.1816	pCi/g	0.2483	N	911.4	3	1.639	IDENTIFIED	12.57	☐		
Americium-243	INT	0.3564	0.03834	pCi/g	0.0813	N	74.89	2	1.372	IDENTIFIED	10.08	☐		
Annihilation Rad.	—	0.1317	0.03579	pCi/g	0.04363	N	510.4	1	1.974	IDENTIFIED	27.01	☐		
Bismuth-211	INT	3.193	0.2473	pCi/g	0.3144	Y	351.4	4	1.463	IDENTIFIED	7.07	☑	UI	
Bismuth-212	HE	0.8295	0.2575	pCi/g	0.7011	N	727.4	1	1.589	FAIL_ABUND	30.76	☐		
Bismuth-214	✓	0.9676	0.08886	pCi/g	0.1112	0.200	609	4	1.667	IDENTIFIED	8.287	☐		
Cadmium-109	INT	2.347	0.371	pCi/g	1.312	Y	87.14	4	1.158	IDENTIFIED	15.2	☑	UI	
Cerium-143	—	570.3	90.07	pCi/g	0	N	294.7	1	1.375	FAIL_DECAY	11.48	☐		
Gold-195	HE	0.417	0.1197	pCi/g	0.3827	N	74.89	2	1.372	FAIL_ABUND	10.08	☐		
Gross Gamma	—	9.114	1.425	pCi/g	2.803	N		0				☐		
Iodine-123	HE	3.05E+05	6.89E+05	pCi/g	0	N	87.14	4	1.158	NOT_IDENTI	15.2	☐		
Iodine-135	HE	2.62E+14	1.84E+14	pCi/g	0	N	795.9	1	1.422	NOT_IDENTI	63.4	☐		
Lead-212	✓	1.513	0.07811	pCi/g	0.08855	0.100	238.4	6	1.377	IDENTIFIED	3.658	☐		
Lead-214	✓	1.111	0.09078	pCi/g	0.1096	0.100	351.4	4	1.463	IDENTIFIED	7.07	☐		
Lutetium-177	HE	2.558	0.6576	pCi/g	1.808	N	209.1	1	1.331	FAIL_ABUND	25.56	☐		
Neptunium-237	INT	0.6786	0.1281	pCi/g	0.394	N	87.14	4	1.158	IDENTIFIED	15.2	☐		
Niobium-95m	LA	0.6992	0.08646	pCi/g	0.2848	N	238.4	6	1.377	NOT_IDENTI	3.658	☐		
Polonium-212	NR	1.513	0.07811	pCi/g	0.08855	N	238.4	6	1.377	IDENTIFIED	3.658	☐		
Polonium-214	NR	1.111	0.09078	pCi/g	0.1096	N	351.4	4	1.463	IDENTIFIED	7.07	☐		
Polonium-216	NR	1.513	0.07811	pCi/g	0.08855	N	238.4	6	1.377	IDENTIFIED	3.658	☐		
Polonium-218	NR	1.111	0.09078	pCi/g	0.1096	N	351.4	4	1.463	IDENTIFIED	7.07	☐		
Potassium-40	✓	36.91	1.686	pCi/g	0.5986	1.00	1461	1	2.081	IDENTIFIED	2.773	☐		
Radium-224	INT	3.89	0.699	pCi/g	1.007	Y	241.3	1	1.983	IDENTIFIED	17.74	☑	UI	
Radium-226	✓	0.9676	0.08886	pCi/g	0.1112	Y	609	4	1.667	IDENTIFIED	8.287	☐		
Radium-228	✓	1.309	0.1816	pCi/g	0.2483	0.500	911.4	3	1.639	IDENTIFIED	12.57	☐		
Sodium-24	HE	30130	1.11E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐		
Thallium-208	✓	0.4981	0.04106	pCi/g	0.06007	0.080	582.8	1	1.663	IDENTIFIED	7.501	☐		
Thorium-228	✓	1.513	0.07811	pCi/g	0.08854	N	238.4	6	1.377	IDENTIFIED	3.658	☐		
Thorium-230	✓	0.9675	0.08886	pCi/g	0.1112	N	609	4	1.667	IDENTIFIED	8.287	☐		
Thorium-232	✓	1.309	0.1816	pCi/g	0.2483	N	911.4	3	1.639	IDENTIFIED	12.57	☐		
Tin-126	INT	0.2311	0.03653	pCi/g	0.1296	N	87.14	4	1.158	IDENTIFIED	15.2	☐		
Titanium-44	LA	0.325	0.02783	pCi/g	0.07874	N	77.14	1	1.263	FAIL_ABUND	7.65	☐		
Total Uranium	—	4.5006	2.27E-06	ug/g	2.7572	N		0				☐		

Uranium-234	✓	0.9675	0.08886	pCi/g	0.1112	N	609	4	1.667	IDENTIFIED	8.287	☐
Zirconium-97	—	1.94E+06	3.49E+05	pCi/g	0	N	238.4	6	1.377	NOT_IDENTI	3.658	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232357001	22-JUN-09 12:00	06-JUL-09 11:13	14	SAMPLE	REVW	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.509	0.1876	pCi/g	0.2625	N	911.1	3	1.49	IDENTIFIED	11.12	☐	
Americium-243	HE	0.2523	0.05863	pCi/g	0.143	N	74.93	1	1.258	IDENTIFIED	22.56	☐	
Annihilation Rad.	—	0.1937	0.04516	pCi/g	0.05861	N	511	1	2.374	IDENTIFIED	23.14	☐	
Bismuth-211	INT	3.228	0.2896	pCi/g	0.4568	Y	352	4	1.393	IDENTIFIED	8.289	☑ UI	
Bismuth-212	HE	0.9923	0.2564	pCi/g	0.7781	N	727.4	1	1.167	FAIL_ABUND	25.54	☐	
Bismuth-214	✓	1.02	0.09811	pCi/g	0.1433	0.200	609.2	4	1.646	IDENTIFIED	8.871	☐	
Cadmium-109	INT	3.584	0.5935	pCi/g	1.808	Y	87.38	5	1.269	IDENTIFIED	15.53	☑ UI	
Cerium-143	—	345.8	71.84	pCi/g	0	N	87.38	5	1.269	FAIL_DECAY	15.53	☐	
Gross Gamma	—	8.668	1.478	pCi/g	2.728	N		0				☐	
Iodine-123	HE	3.93E+05	8.66E+05	pCi/g	0	N	87.38	5	1.269	NOT_IDENTI	15.53	☐	
Krypton-85	HE	21.41	4.938	pCi/g	18.21	N	238.7	8	1.303	NOT_IDENTI	4.781	☐	
Lead-212	✓	1.433	0.09065	pCi/g	0.1157	0.100	238.7	8	1.303	IDENTIFIED	4.781	☐	
Lead-214	✓	1.123	0.1049	pCi/g	0.1592	0.100	352	4	1.393	IDENTIFIED	8.289	☐	
Neptunium-237	INT	1.036	0.2022	pCi/g	0.527	N	87.38	5	1.269	IDENTIFIED	15.53	☐	
Niobium-97	HE	22290	19090	pCi/g	0	N	238.7	8	1.303	NOT_IDENTI	4.781	☐	
Polonium-212	NR	1.433	0.09065	pCi/g	0.1157	N	238.7	8	1.303	IDENTIFIED	4.781	☐	
Polonium-214	NR	1.123	0.1049	pCi/g	0.1592	N	352	4	1.393	IDENTIFIED	8.289	☐	
Polonium-216	NR	1.433	0.09065	pCi/g	0.1157	N	238.7	8	1.303	IDENTIFIED	4.781	☐	
Polonium-218	NR	1.123	0.1049	pCi/g	0.1592	N	352	4	1.393	IDENTIFIED	8.289	☐	
Potassium-40	✓	35.95	1.773	pCi/g	0.415	1.00	1461	1	2.312	IDENTIFIED	3.119	☐	
Radium-224	INT	4.12	0.9041	pCi/g	1.316	Y	241.5	1	2.002	IDENTIFIED	21.67	☑ UI	
Radium-226	✓	1.02	0.09811	pCi/g	0.1433	Y	609.2	4	1.646	IDENTIFIED	8.871	☐	
Radium-228	✓	1.509	0.1876	pCi/g	0.2625	0.500	911.1	3	1.49	IDENTIFIED	11.12	☐	
Strontium-85	LA	0.1085	0.02501	pCi/g	0.09224	Y	238.7	8	1.303	NOT_IDENTI	4.781	☑ UI	Data rejected due to low abundance.
Thallium-208	✓	0.462	0.0509	pCi/g	0.0749	0.080	583.2	1	1.269	IDENTIFIED	10.55	☐	
Thorium-228	✓	1.433	0.09065	pCi/g	0.1157	N	238.7	8	1.303	IDENTIFIED	4.781	☐	
Thorium-230	✓	1.02	0.09811	pCi/g	0.1433	N	609.2	4	1.646	IDENTIFIED	8.871	☐	
Thorium-232	✓	1.509	0.1876	pCi/g	0.2625	N	911.1	3	1.49	IDENTIFIED	11.12	☐	
Tin-126	INT	0.3529	0.05844	pCi/g	0.1794	N	87.38	5	1.269	IDENTIFIED	15.53	☐	
Titanium-44	LA	0.3599	0.04049	pCi/g	0.1186	N	77.28	1	1.207	FAIL_ABUND	9.786	☐	
Uranium-234	✓	1.02	0.09811	pCi/g	0.1433	N	609.2	4	1.646	IDENTIFIED	8.871	☐	
Zirconium-97	—	2.18E+06	4.16E+05	pCi/g	0	N	238.7	8	1.303	NOT_IDENTI	4.781	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232357002	22-JUN-09 12:00	06-JUL-09 11:13	14	SAMPLE	REVW	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.569	0.2231	pCi/g	0.3156	N	911.3	3	1.34	IDENTIFIED	13.27	☐	
Americium-243	INT	0.3927	0.03641	pCi/g	0.06875	N	75.01	2	1.524	IDENTIFIED	8.249	☐	
Annihilation Rad.	HE	0.1265	0.04118	pCi/g	0.05782	N	510.7	1	1.605	IDENTIFIED	32.38	☐	
Bismuth-211	INT	2.565	0.2481	pCi/g	0.4508	Y	352	4	1.154	IDENTIFIED	8.984	☑ UI	
Bismuth-212	HE	0.9936	0.3913	pCi/g	0.8078	N	727.3	1	2.309	FAIL_ABUND	39.11	☐	
Bismuth-214	✓	0.9603	0.09312	pCi/g	0.1391	0.200	609.2	4	1.476	IDENTIFIED	8.596	☐	
Cadmium-109	INT	3.743	0.4193	pCi/g	1.119	Y	87.48	5	1.037	IDENTIFIED	10.45	☑ UI	
Cerium-143	—	245.1	60.11	pCi/g	0	N	87.48	5	1.037	FAIL_DECAY	10.45	☐	
Gross Gamma	—	8.676	1.471	pCi/g	3.737	N		0				☐	
Iodine-123	HE	9.47E+05	7.11E+05	pCi/g	0	N	87.48	5	1.037	NOT_IDENTI	10.45	☐	
Krypton-85	HE	18.01	5.22	pCi/g	17.54	N	238.8	8	0.9679	NOT_IDENTI	4.246	☐	
Lead-212	✓	1.314	0.08024	pCi/g	0.1013	0.100	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Lead-214	✓	0.8922	0.08938	pCi/g	0.1499	0.100	352	4	1.154	IDENTIFIED	8.984	☐	
Lutetium-177	HE	3.324	0.7019	pCi/g	1.959	N	209.4	1	1.197	FAIL_ABUND	20.78	☐	
Neptunium-237	INT	1.082	0.1648	pCi/g	0.3226	N	87.48	5	1.037	IDENTIFIED	10.45	☐	

Polonium-212	NM	1.314	0.08024	pCi/g	0.1013	N	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Polonium-214	NM	0.8922	0.08938	pCi/g	0.1499	N	352	4	1.154	IDENTIFIED	8.984	☐	
Polonium-216	NM	1.314	0.08024	pCi/g	0.1013	N	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Polonium-218	NM	0.8922	0.08938	pCi/g	0.1499	N	352	4	1.154	IDENTIFIED	8.984	☐	
Potassium-40	✓	32.72	1.527	pCi/g	0.672	1.00	1460	1	2.027	IDENTIFIED	3.51	☐	
Radium-224	INT	3.727	0.6822	pCi/g	1.154	Y	241.8	1	1.749	IDENTIFIED	17.91	☑ UI	
Radium-226	✓	0.9603	0.09312	pCi/g	0.1391	Y	609.2	4	1.476	IDENTIFIED	8.596	☐	
Radium-228	✓	1.569	0.2231	pCi/g	0.3156	0.500	911.3	3	1.34	IDENTIFIED	13.27	☐	
Sodium-24	HE	2.01E+05	1.28E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.09123	0.02644	pCi/g	0.08886	Y	238.8	8	0.9679	NOT_IDENTI	4.246	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	2.10E+14	9.26E+14	pCi/g	0	N	238.8	8	0.9679	NOT_IDENTI	4.246	☐	
Thallium-200	HE	62.85	124.4	pCi/g	0	N	75.01	2	1.524	NOT_IDENTI	8.249	☐	
Thallium-208	✓	0.5023	0.05455	pCi/g	0.07183	0.080	582.9	1	1.366	IDENTIFIED	10.11	☐	
Thorium-228	✓	1.314	0.08024	pCi/g	0.1013	N	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Thorium-230	✓	0.9603	0.09312	pCi/g	0.1391	N	609.2	4	1.476	IDENTIFIED	8.596	☐	
Thorium-232	✓	1.569	0.2231	pCi/g	0.3156	N	911.3	3	1.34	IDENTIFIED	13.27	☐	
Thorium-234	✓	1.338	0.5645	pCi/g	1.18	2.00	63.42	2	0.9014	IDENTIFIED	41.19	☐	
Tin-126	INT	0.3686	0.04129	pCi/g	0.1101	N	87.48	5	1.037	IDENTIFIED	10.45	☐	
Titanium-44	LA	0.3721	0.0241	pCi/g	0.07574	N	77.4	1	1.024	FAIL_ABUND	4.935	☐	
Total Uranium	—	3.8778	1.68E-06	ug/g	1.7586	N		0				☐	
Uranium-234	✓	0.9603	0.09312	pCi/g	0.1391	N	609.2	4	1.476	IDENTIFIED	8.596	☐	
Uranium-238	HE	1.338	0.5645	pCi/g	1.18	N	63.42	2	0.9014	IDENTIFIED	41.19	☐	
Zirconium-97	—	1.26E+06	4.38E+05	pCi/g	0	N	238.8	8	0.9679	NOT_IDENTI	4.246	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358001	22-JUN-09 12:00	06-JUL-09 11:14	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	2.133	0.1918	pCi/g	0.1729	N	911.3	3	1.675	IDENTIFIED	6.082	☐	
Americium-243	INT	0.4382	0.04643	pCi/g	0.1008	N	74.86	2	1.197	IDENTIFIED	9.738	☐	
Annihilation Rad.	—	0.1464	0.0309	pCi/g	0.04104	N	510.9	1	1.751	IDENTIFIED	20.85	☐	
Bismuth-211	INT	4.16	0.2514	pCi/g	0.2621	Y	352	4	1.204	IDENTIFIED	5.12	☑ UI	
Bismuth-212	✓	1.39	0.232	pCi/g	0.4068	N	727.4	1	1.805	IDENTIFIED	15.92	☐	
Bismuth-214	✓	1.267	0.08793	pCi/g	0.09982	0.200	609.4	4	1.486	IDENTIFIED	5.31	☐	
Cadmium-109	INT	3.903	0.5349	pCi/g	1.284	Y	87.24	4	1.085	IDENTIFIED	12.91	☑ UI	
Cerium-143	—	421.4	63.67	pCi/g	0	N	328.6	1	1.152	FAIL_DECAY	41.04	☐	
Gross Gamma	—	11.28	1.295	pCi/g	2.784	N		0				☐	
Iodine-123	HE	8.42E+05	5.98E+05	pCi/g	0	N	87.24	4	1.085	NOT_IDENTI	12.91	☐	
Krypton-85	LA	21.7	3.635	pCi/g	12.4	N	238.7	8	1.251	NOT_IDENTI	2.71	☐	
Lead-212	✓	2.013	0.09026	pCi/g	0.0811	0.100	238.7	8	1.251	IDENTIFIED	2.71	☐	
Lead-214	✓	1.447	0.09524	pCi/g	0.09133	0.100	352	4	1.204	IDENTIFIED	5.12	☐	
Lutetium-177	HE	2.63	0.6064	pCi/g	1.687	N	209.5	1	1.385	FAIL_ABUND	22.89	☐	
Neptunium-237	INT	1.128	0.1936	pCi/g	0.3637	N	87.24	4	1.085	IDENTIFIED	12.91	☐	
Niobium-95	HE	0.08889	0.02175	pCi/g	0.0714	N	238.7	8	1.251	NOT_IDENTI	2.71	☐	
Polonium-212	NM	2.013	0.09026	pCi/g	0.0811	N	238.7	8	1.251	IDENTIFIED	2.71	☐	
Polonium-214	NM	1.447	0.09524	pCi/g	0.09133	N	352	4	1.204	IDENTIFIED	5.12	☐	
Polonium-216	NM	2.013	0.09026	pCi/g	0.0811	N	238.7	8	1.251	IDENTIFIED	2.71	☐	
Polonium-218	NM	1.447	0.09524	pCi/g	0.09133	N	352	4	1.204	IDENTIFIED	5.12	☐	
Potassium-40	✓	35.47	1.557	pCi/g	0.4815	1.00	1461	1	2.329	IDENTIFIED	2.205	☐	
Radium-224	INT	5.385	0.7126	pCi/g	0.9217	Y	241.6	1	1.944	IDENTIFIED	12.94	☑ UI	
Radium-226	✓	1.267	0.08793	pCi/g	0.09982	Y	609.4	4	1.486	IDENTIFIED	5.31	☐	
Radium-228	✓	2.133	0.1918	pCi/g	0.1729	0.500	911.3	3	1.675	IDENTIFIED	6.082	☐	
Strontium-85	LA	0.1099	0.01841	pCi/g	0.06282	Y	238.7	8	1.251	NOT_IDENTI	2.71	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	105.1	94.38	pCi/g	0	N	74.86	2	1.197	NOT_IDENTI	9.738	☐	
Thallium-208	✓	0.5903	0.04077	pCi/g	0.05186	0.080	583.4	1	1.576	IDENTIFIED	5.687	☐	
Thorium-228	✓	2.013	0.09026	pCi/g	0.0811	N	238.7	8	1.251	IDENTIFIED	2.71	☐	
Thorium-230	✓	1.267	0.08793	pCi/g	0.09981	N	609.4	4	1.486	IDENTIFIED	5.31	☐	
Thorium-232	✓	2.133	0.1918	pCi/g	0.1729	N	911.3	3	1.675	IDENTIFIED	6.082	☐	
Tin-126	INT	0.3843	0.05266	pCi/g	0.1272	N	87.24	4	1.085	IDENTIFIED	12.91	☐	

Titanium-44 LA	0.4808	0.03377	pCi/g	0.08842	N	77.16	1	1.072	FAIL_ABUND	5.6	☐	
Total Uranium —	4.1088	2.32E-06	ug/g	4.0676	N		0				☐	
Uranium-234 ✓	1.267	0.08793	pCi/g	0.09981	N	609.4	4	1.486	IDENTIFIED	5.31	☐	
Zirconium-97 —	1.68E+06	2.90E+05	pCi/g	0	N	238.7	8	1.251	NOT_IDENTI	2.71	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358002	22-JUN-09 12:00	06-JUL-09 11:15	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.572	0.1711	pCi/g	0.2552	N	911.1	3	1.807	IDENTIFIED	9.61	☐	
Americium-243 INT		0.4221	0.04618	pCi/g	0.1116	N	74.91	2	1.166	IDENTIFIED	9.964	☐	
Annihilation Rad.	HE	0.1086	0.03742	pCi/g	0.0545	N	510.7	2	1.923	IDENTIFIED	34.33	☐	
Barium-137m	HE	0.08788	0.02299	pCi/g	0.08543	N	87.46	6	1.414	NOT_IDENTI	12.13	☐	
Bismuth-211 INT		3.907	0.2742	pCi/g	0.3685	Y	351.9	4	1.275	IDENTIFIED	6.232	☑ UI	
Bismuth-212 LA		1.89	0.3042	pCi/g	0.8692	N	727.4	1	1.463	FAIL_ABUND	15.65	☐	
Bismuth-214 ✓		1.17	0.08972	pCi/g	0.1256	0.200	609.2	4	1.454	IDENTIFIED	6.724	☐	
Cadmium-109 INT		3.865	0.5059	pCi/g	1.535	Y	87.46	6	1.414	IDENTIFIED	12.13	☑ UI	
Cerium-143 —		467.8	74.93	pCi/g	0	N	328.7	1	1.273	FAIL_DECAY	41.9	☐	
Cesium-137 LA		0.0929	0.0243	pCi/g	0.0903	0.100	87.46	6	1.414	NOT_IDENTI	12.13	☑ UI	Data rejected due to low abundance.
Gross Gamma —		9.98	1.482	pCi/g	3.94	N		0				☐	
Iodine-123	HE	1.43E+06	7.79E+05	pCi/g	0	N	87.46	6	1.414	NOT_IDENTI	12.13	☐	
Iodine-133	HE	1823	1353	pCi/g	0	N	510.7	2	1.923	FAIL_DECAY	34.33	☐	
Krypton-85	HE	18.1	4.908	pCi/g	16.42	N	238.7	8	1.113	NOT_IDENTI	3.901	☐	
Lead-212 ✓		1.538	0.08253	pCi/g	0.1098	0.100	238.7	8	1.113	IDENTIFIED	3.901	☐	
Lead-214 ✓		1.359	0.1018	pCi/g	0.1318	0.100	351.9	4	1.275	IDENTIFIED	6.232	☐	
Lutetium-177	HE	3.572	0.9073	pCi/g	2.155	N	209.6	1	1.364	FAIL_ABUND	25.24	☐	
Neptunium-237 INT		1.118	0.1862	pCi/g	0.4939	N	87.46	6	1.414	IDENTIFIED	12.13	☐	
Niobium-95	HE	0.09161	0.02629	pCi/g	0.08879	N	238.7	8	1.113	NOT_IDENTI	3.901	☐	
Polonium-212 NR		1.538	0.08253	pCi/g	0.1098	N	238.7	8	1.113	IDENTIFIED	3.901	☐	
Polonium-214 NR		1.359	0.1018	pCi/g	0.1318	N	351.9	4	1.275	IDENTIFIED	6.232	☐	
Polonium-216 NR		1.538	0.08253	pCi/g	0.1098	N	238.7	8	1.113	IDENTIFIED	3.901	☐	
Polonium-218 NR		1.359	0.1018	pCi/g	0.1318	N	351.9	4	1.275	IDENTIFIED	6.232	☐	
Potassium-40 ✓		32.51	1.485	pCi/g	0.5252	1.00	1460	1	2.096	IDENTIFIED	3.149	☐	
Radium-224 INT		4.072	0.7147	pCi/g	1.249	Y	241.8	1	1.776	IDENTIFIED	17.3	☑ UI	
Radium-226 ✓		1.17	0.08972	pCi/g	0.1256	Y	609.2	4	1.454	IDENTIFIED	6.724	☐	
Radium-228 ✓		1.572	0.1711	pCi/g	0.2552	0.500	911.1	3	1.807	IDENTIFIED	9.61	☐	
Strontium-85 LA		0.09168	0.02486	pCi/g	0.08318	Y	238.7	8	1.113	NOT_IDENTI	3.901	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	53.8	128.6	pCi/g	0	N	74.91	2	1.166	NOT_IDENTI	9.964	☐	
Thallium-208 ✓		0.5372	0.04644	pCi/g	0.06992	0.080	583.1	1	1.511	IDENTIFIED	8.046	☐	
Thorium-228 ✓		1.538	0.08253	pCi/g	0.1098	N	238.7	8	1.113	IDENTIFIED	3.901	☐	
Thorium-230 ✓		1.17	0.08972	pCi/g	0.1256	N	609.2	4	1.454	IDENTIFIED	6.724	☐	
Thorium-232 ✓		1.572	0.1711	pCi/g	0.2552	N	911.1	3	1.807	IDENTIFIED	9.61	☐	
Tin-126 INT		0.3806	0.04981	pCi/g	0.152	N	87.46	6	1.414	IDENTIFIED	12.13	☐	
Titanium-44 LA		0.4049	0.03378	pCi/g	0.1001	N	77.16	1	1.105	FAIL_ABUND	6.983	☐	
Uranium-234 ✓		1.17	0.08972	pCi/g	0.1256	N	609.2	4	1.454	IDENTIFIED	6.724	☐	
Zirconium-97 —		9.77E+05	3.70E+05	pCi/g	0	N	238.7	8	1.113	NOT_IDENTI	3.901	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358003	22-JUN-09 12:00	06-JUL-09 11:15	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		2.261	0.2397	pCi/g	0.2889	N	911.5	3	1.924	IDENTIFIED	9.312	☐	
Americium-243 INT		0.4772	0.03704	pCi/g	0.06462	N	74.75	1	1.691	IDENTIFIED	6.782	☐	
Annihilation Rad. —		0.1432	0.03547	pCi/g	0.05717	N	511.2	3	2.783	IDENTIFIED	24.56	☐	
Bismuth-210	HE	1.463	0.437	pCi/g	1.038	N	46.34	3	1.458	IDENTIFIED	29.62	☐	
Bismuth-211 INT		4.385	0.3076	pCi/g	0.3927	Y	351.9	4	1.362	IDENTIFIED	6.252	☑ UI	
Bismuth-212 LA		1.695	0.3141	pCi/g	0.9542	N	727.4	1	2.367	FAIL_ABUND	17.99	☐	
Bismuth-214 ✓		1.353	0.1141	pCi/g	0.1561	0.200	609.4	4	1.647	IDENTIFIED	7.236	☐	
Cadmium-109 INT		2.925	0.4422	pCi/g	1.103	Y	87.26	4	1.275	IDENTIFIED	14.54	☑ UI	

Cerium-143	—	439.5	73.37	pCi/g	0	N	87.26	4	1.275	FAIL_DECAY	14.54	☐	
Cesium-134	LA	0.1363	0.03353	pCi/g	0.1285	0.100	511.2	3	2.783	NOT_IDENTI	24.56	☑ UI	Data rejected due to low abundance.
Curium-243	HE	0.1703	0.05197	pCi/g	0.1646	N	105.2	2	1.571	FAIL_ABUND	30.13	☐	
Europium-155	HE	0.19	0.05801	pCi/g	0.1754	N	105.2	2	1.571	IDENTIFIED	30.13	☐	
Gross Gamma	—	10.84	1.425	pCi/g	4.949	N		0				☐	
Iodine-135	HE	2.28E+14	2.25E+14	pCi/g	0	N	511.2	3	2.783	NOT_IDENTI	24.56	☐	
Krypton-85	HE	23.68	5.17	pCi/g	17.8	N	238.6	8	1.381	NOT_IDENTI	3.293	☐	
Lead-210	HE	1.463	0.437	pCi/g	1.038	N	46.34	3	1.458	IDENTIFIED	29.62	☐	
Lead-212	✓	1.86	0.09366	pCi/g	0.1022	0.100	238.6	8	1.381	IDENTIFIED	3.293	☐	
Lead-214	✓	1.525	0.1142	pCi/g	0.137	0.100	351.9	4	1.362	IDENTIFIED	6.252	☐	
Lutetium-177	HE	2.694	0.8282	pCi/g	2.018	N	209.8	1	1.019	FAIL_ABUND	30.59	☐	
Neptunium-237	INT	0.8457	0.1548	pCi/g	0.3177	N	87.26	4	1.275	IDENTIFIED	14.54	☐	
Niobium-95m	LA	0.8427	0.08878	pCi/g	0.3082	N	238.6	8	1.381	NOT_IDENTI	3.293	☐	
Polonium-210	HE	1.463	0.436	pCi/g	1.038	N	46.34	3	1.458	IDENTIFIED	29.62	☐	
Polonium-212	MU	1.86	0.09366	pCi/g	0.1022	N	238.6	8	1.381	IDENTIFIED	3.293	☐	
Polonium-214	MU	1.525	0.1142	pCi/g	0.137	N	351.9	4	1.362	IDENTIFIED	6.252	☐	
Polonium-216	MU	1.86	0.09366	pCi/g	0.1022	N	238.6	8	1.381	IDENTIFIED	3.293	☐	
Polonium-218	MU	1.525	0.1142	pCi/g	0.137	N	351.9	4	1.362	IDENTIFIED	6.252	☐	
Potassium-40	✓	36.25	1.666	pCi/g	0.6059	1.00	1461	1	2.33	IDENTIFIED	3.317	☐	
Radium-224	INT	4.81	0.7379	pCi/g	1.165	Y	241.4	1	1.819	IDENTIFIED	15.03	☑ UI	
Radium-226	✓	1.353	0.1141	pCi/g	0.1561	Y	609.4	4	1.647	IDENTIFIED	7.236	☐	
Radium-228	✓	2.261	0.2397	pCi/g	0.2889	0.500	911.5	3	1.924	IDENTIFIED	9.312	☐	
Sodium-24	HE	32470	1.49E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.1199	0.02619	pCi/g	0.09019	Y	238.6	8	1.381	NOT_IDENTI	3.293	☑ UI	Data rejected due to low abundance.
Thallium-208	✓	0.653	0.0603	pCi/g	0.07731	0.080	583.1	1	1.566	IDENTIFIED	8.419	☐	
Thorium-228	✓	1.86	0.09366	pCi/g	0.1022	N	238.6	8	1.381	IDENTIFIED	3.293	☐	
Thorium-230	✓	1.353	0.1141	pCi/g	0.1561	N	609.4	4	1.647	IDENTIFIED	7.236	☐	
Thorium-232	✓	2.261	0.2397	pCi/g	0.2889	N	911.5	3	1.924	IDENTIFIED	9.312	☐	
Thorium-234	✓	1.589	0.4542	pCi/g	1.132	2.00	63.45	2	1.558	IDENTIFIED	27.24	☐	
Tin-126	INT	0.288	0.04353	pCi/g	0.1085	N	87.26	4	1.275	IDENTIFIED	14.54	☐	
Titanium-44	LA	0.4134	0.02545	pCi/g	0.06911	N	77.19	1	1.381	FAIL_ABUND	4.816	☐	
Total Uranium	—	4.7595	1.35E-06	ug/g	1.6872	N		0				☐	
Uranium-234	✓	1.353	0.1141	pCi/g	0.1561	N	609.4	4	1.647	IDENTIFIED	7.236	☐	
Uranium-238	HE	1.589	0.4542	pCi/g	1.132	N	63.45	2	1.558	IDENTIFIED	27.24	☐	
Zirconium-97	—	1.30E+06	3.98E+05	pCi/g	0	N	238.6	8	1.381	NOT_IDENTI	3.293	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358004	22-JUN-09 12:00	06-JUL-09 11:16	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.789	0.1785	pCi/g	0.1869	N	912	3	2.264	IDENTIFIED	7.78	☐	
Americium-243	INT	0.4293	0.03709	pCi/g	0.0825	N	74.96	1	1.184	IDENTIFIED	7.711	☐	
Annihilation Rad.	—	0.1187	0.02972	pCi/g	0.03867	N	511.2	1	1.637	IDENTIFIED	24.84	☐	
Barium-137m	HE	0.06664	0.0265	pCi/g	0.05138	N	662.3	2	4.059	IDENTIFIED	39.59	☐	
Bismuth-211	INT	4.265	0.2276	pCi/g	0.2684	Y	352.2	4	1.452	IDENTIFIED	4.291	☑ UI	
Bismuth-212	LA	1.07	0.2041	pCi/g	0.5496	N	727.7	1	1.946	FAIL_ABUND	18.45	☐	
Bismuth-214	✓	1.218	0.08888	pCi/g	0.09523	0.200	609.8	4	1.849	IDENTIFIED	5.825	☐	
Cadmium-109	INT	2.966	0.4768	pCi/g	1.45	Y	87.27	3	1.44	IDENTIFIED	15.45	☑ UI	
Cerium-143	—	563.4	73.65	pCi/g	0	N	328.6	1	1.227	NOT_IDENTI	25.65	☐	
Cesium-134	LA	0.1239	0.03203	pCi/g	0.0772	0.100	796.4	3	1.789	FAIL_ABUND	25.44	☑ UI	Data rejected due to low abundance.
Cesium-135	HE	0.2766	0.07788	pCi/g	0.2529	N	796.4	3	1.789	NOT_IDENTI	25.44	☐	
Cesium-137	PW	0.07044	0.02801	pCi/g	0.05431	0.100	662.3	2	4.059	IDENTIFIED	39.59	☑ UI	Data rejected due to high peak-width.
Gross Gamma	—	10.65	1.438	pCi/g	2.539	N		0				☐	
Iodine-135	HE	9.01E+13	1.43E+14	pCi/g	0	N	796.4	3	1.789	NOT_IDENTI	25.44	☐	
Krypton-85	LA	36.6	3.979	pCi/g	14.06	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Lead-212	✓	1.927	0.0854	pCi/g	0.08158	0.100	238.9	10	1.276	IDENTIFIED	2.672	☐	
Lead-214	✓	1.484	0.08812	pCi/g	0.09539	0.100	352.2	4	1.452	IDENTIFIED	4.291	☐	
Lutetium-177	LA	3.262	0.6076	pCi/g	1.703	N	209.4	1	1.29	FAIL_ABUND	18.43	☐	
Neptunium-237	INT	0.8577	0.1638	pCi/g	0.306	N	87.27	3	1.44	IDENTIFIED	15.45	☐	

Niobium-95	HE	0.1067	0.02143	pCi/g	0.07036	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Niobium-95m	HE	0.3124	0.06595	pCi/g	0.2082	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Niobium-97	—	30060	14280	pCi/g	0	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Polonium-212	NM	1.927	0.0854	pCi/g	0.08158	N	238.9	10	1.276	IDENTIFIED	2.672	☐	
Polonium-214	NM	1.484	0.08812	pCi/g	0.09539	N	352.2	4	1.452	IDENTIFIED	4.291	☐	
Polonium-216	NM	1.927	0.0854	pCi/g	0.08158	N	238.9	10	1.276	IDENTIFIED	2.672	☐	
Polonium-218	NM	1.484	0.08812	pCi/g	0.09539	N	352.2	4	1.452	IDENTIFIED	4.291	☐	
Potassium-40	✓	35.47	1.45	pCi/g	0.4535	1.00	1462	1	3.057	IDENTIFIED	2.145	☑ UI ~~Data rejected due to high peak width.~~	
Radium-224	INT	4.41	0.5304	pCi/g	0.9269	Y	241.9	1	1.633	IDENTIFIED	11.71	☑ UI	
Radium-226	✓	1.218	0.08888	pCi/g	0.09523	Y	609.8	4	1.849	IDENTIFIED	5.825	☐	
Radium-228	✓	1.789	0.1785	pCi/g	0.1869	0.500	912	3	2.264	IDENTIFIED	7.78	☐	
Strontium-85	LA	0.1854	0.02016	pCi/g	0.07122	Y	238.9	10	1.276	NOT_IDENTI	2.672	☑ UI	Data rejected due to low abundance.
Thallium-208	✓	0.5986	0.03995	pCi/g	0.04788	0.080	583.7	1	1.923	IDENTIFIED	5.451	☐	
Thorium-228	✓	1.927	0.0854	pCi/g	0.08157	N	238.9	10	1.276	IDENTIFIED	2.672	☐	
Thorium-230	✓	1.218	0.08888	pCi/g	0.09523	N	609.8	4	1.849	IDENTIFIED	5.825	☐	
Thorium-232	✓	1.789	0.1785	pCi/g	0.1869	N	912	3	2.264	IDENTIFIED	7.78	☐	
Thorium-234	✓	1.871	0.8171	pCi/g	1.822	2.00	63.31	2	1.194	IDENTIFIED	42.81	☐	
Tin-126	INT	0.2921	0.04695	pCi/g	0.1417	N	87.27	3	1.44	IDENTIFIED	15.45	☐	
Titanium-44	LA	0.4238	0.02877	pCi/g	0.07727	N	77.24	1	1.144	FAIL_ABUND	5.496	☐	
Total Uranium	—	5.5493	2.43E-06	ug/g	2.7129	N		0				☐	
Uranium-234	✓	1.218	0.08888	pCi/g	0.09523	N	609.8	4	1.849	IDENTIFIED	5.825	☐	
Uranium-238	HE	1.871	0.8171	pCi/g	1.822	N	63.31	2	1.194	IDENTIFIED	42.81	☐	
Zirconium-97	—	1.00E+06	2.71E+05	pCi/g	0	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	

*** = Number of isotopes identified with a keyline at this energy.

usc 7/13/09

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358005	22-JUN-09 12:00	06-JUL-09 11:17	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.862	0.2037	pCi/g	0.2234	N	911.4	3	1.857	IDENTIFIED	9.297	☐	
Americium-243	INT	0.3028	0.03678	pCi/g	0.08602	N	74.91	2	0.7915	IDENTIFIED	11.3	☐	
Annihilation Rad.	—	0.1736	0.03482	pCi/g	0.04667	N	511	2	1.615	IDENTIFIED	19.84	☐	
Barium-137m	✓	0.6385	0.05341	pCi/g	0.05779	N	661.8	3	1.501	IDENTIFIED	7.965	☐	
Bismuth-211	INT	3.528	0.2664	pCi/g	0.3119	Y	352	4	1.155	IDENTIFIED	6.813	☑ UI	
Bismuth-212	HE	0.8136	0.3143	pCi/g	0.7194	N	728.2	1	0.8874	FAIL_ABUND	38.43	☐	
Bismuth-214	✓	1.015	0.08806	pCi/g	0.1195	0.200	609.5	4	1.468	IDENTIFIED	7.824	☐	
Cadmium-109	INT	2.638	0.4955	pCi/g	1.204	Y	87.27	3	1.112	IDENTIFIED	18.15	☑ UI	
Cerium-143	—	103.7	44.32	pCi/g	0	N	661.8	3	1.501	FAIL_DECAY	7.965	☐	
Cesium-137	✓	0.675	0.05649	pCi/g	0.06109	0.100	661.8	3	1.501	IDENTIFIED	7.965	☐	
Gross Gamma	—	9.156	1.342	pCi/g	2.259	N		0				☐	
Iodine-135	HE	8.35E+13	1.95E+14	pCi/g	0	N	511	2	1.615	NOT_IDENTI	19.84	☐	
Krypton-85	HE	19.2	3.959	pCi/g	14.07	N	238.7	7	1.002	NOT_IDENTI	3.623	☐	
Lead-212	✓	1.518	0.07746	pCi/g	0.08613	0.100	238.7	7	1.002	IDENTIFIED	3.623	☐	
Lead-214	✓	1.227	0.09804	pCi/g	0.1088	0.100	352	4	1.155	IDENTIFIED	6.813	☐	
Lutetium-177	HE	2.132	0.5817	pCi/g	1.655	N	209.1	1	1.09	FAIL_ABUND	27.15	☐	
Neptunium-237	INT	0.7627	0.1635	pCi/g	0.3842	N	87.27	3	1.112	IDENTIFIED	18.15	☐	
Polonium-212	NM	1.518	0.07746	pCi/g	0.08613	N	238.7	7	1.002	IDENTIFIED	3.623	☐	
Polonium-214	NM	1.227	0.09804	pCi/g	0.1088	N	352	4	1.155	IDENTIFIED	6.813	☐	
Polonium-216	NM	1.518	0.07746	pCi/g	0.08613	N	238.7	7	1.002	IDENTIFIED	3.623	☐	
Polonium-218	NM	1.227	0.09804	pCi/g	0.1088	N	352	4	1.155	IDENTIFIED	6.813	☐	
Potassium-40	✓	30.7	1.526	pCi/g	0.5374	1.00	1461	1	2.196	IDENTIFIED	3.274	☐	
Radium-224	INT	4.28	0.5881	pCi/g	0.9812	Y	241.6	1	1.626	IDENTIFIED	13.45	☑ UI	
Radium-226	✓	1.015	0.08806	pCi/g	0.1195	Y	609.5	4	1.468	IDENTIFIED	7.824	☐	
Radium-228	✓	1.862	0.2037	pCi/g	0.2234	0.500	911.4	3	1.857	IDENTIFIED	9.297	☐	
Strontium-85	LA	0.09728	0.02005	pCi/g	0.07128	Y	238.7	7	1.002	NOT_IDENTI	3.623	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	122.5	110.9	pCi/g	0	N	74.91	2	0.7915	NOT_IDENTI	11.3	☐	
Thallium-208	✓	0.4916	0.04905	pCi/g	0.05767	0.080	583.6	1	1.534	IDENTIFIED	9.435	☐	
Thorium-228	✓	1.518	0.07746	pCi/g	0.08612	N	238.7	7	1.002	IDENTIFIED	3.623	☐	
Thorium-230	✓	1.015	0.08806	pCi/g	0.1195	N	609.5	4	1.468	IDENTIFIED	7.824	☐	
Thorium-232	✓	1.862	0.2037	pCi/g	0.2234	N	911.4	3	1.857	IDENTIFIED	9.297	☐	

Thorium-234	✓	2.907	1.375	pCi/g	1.961	2.00	63.4	2	0.9269	IDENTIFIED	46.43	☐
Tin-126	INT	0.2597	0.04879	pCi/g	0.1193	N	87.27	3	1.112	IDENTIFIED	18.15	☐
Titanium-44	LA	0.3603	0.02904	pCi/g	0.0714	N	77.16	1	0.8512	FAIL_ABUND	6.686	☐
Total Uranium	—	8.6355	4.09E-06	ug/g	2.9198	N		0				☐
Uranium-234	✓	1.015	0.08806	pCi/g	0.1195	N	609.5	4	1.468	IDENTIFIED	7.824	☐
Uranium-238	HE	2.907	1.375	pCi/g	1.961	N	63.4	2	0.9269	IDENTIFIED	46.43	☐
Zirconium-97	HE	6.14E+05	3.46E+05	pCi/g	0	N	238.7	7	1.002	NOT_IDENTI	3.623	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358006	22-JUN-09 12:00	06-JUL-09 12:13	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.805	0.1767	pCi/g	0.2115	N	911.3	3	1.472	IDENTIFIED	7.848	☐	
Americium-243	INT	0.4268	0.04437	pCi/g	0.09371	N	74.95	1	1.233	IDENTIFIED	9.703	☐	
Annihilation Rad.	—	0.1203	0.03317	pCi/g	0.04589	N	510.9	1	2.171	IDENTIFIED	27.4	☐	
Bismuth-211	INT	3.927	0.2537	pCi/g	0.3131	Y	352	4	1.376	IDENTIFIED	5.626	☑ UI	
Bismuth-212	HE	1.134	0.2732	pCi/g	0.6622	N	727.6	1	1.847	FAIL_ABUND	23.69	☐	
Bismuth-214	✓	1.291	0.1008	pCi/g	0.09379	0.200	609.5	4	1.477	IDENTIFIED	6.661	☐	
Cadmium-109	INT	3.637	0.6003	pCi/g	1.264	Y	87.29	3	1.268	IDENTIFIED	15.99	☑ UI	
Cerium-143	—	151.1	43.53	pCi/g	0	N	328.2	1	1.029	FAIL_DECAY	39.22	☐	
Cesium-134	LA	0.09185	0.03873	pCi/g	0.08808	0.100	795.8	1	1.44	FAIL_ABUND	41.97	☑ UI	Data rejected due to low abundance.
Gross Gamma	—	10.6	1.515	pCi/g	3.444	N		0				☐	
Lead-212	✓	1.816	0.08659	pCi/g	0.08519	0.100	238.8	5	1.155	IDENTIFIED	3.125	☐	
Lead-214	✓	1.366	0.09516	pCi/g	0.1103	0.100	352	4	1.376	IDENTIFIED	5.626	☐	
Lutetium-177	HE	2.316	0.7408	pCi/g	1.711	N	209.6	1	1.195	FAIL_ABUND	31.87	☐	
Neptunium-237	INT	1.051	0.2047	pCi/g	0.4074	N	87.29	3	1.268	IDENTIFIED	15.99	☐	
Polonium-212	NI	1.816	0.08659	pCi/g	0.08519	N	238.8	5	1.155	IDENTIFIED	3.125	☐	
Polonium-214	NI	1.366	0.09516	pCi/g	0.1103	N	352	4	1.376	IDENTIFIED	5.626	☐	
Polonium-216	NI	1.816	0.08659	pCi/g	0.08519	N	238.8	5	1.155	IDENTIFIED	3.125	☐	
Polonium-218	NI	1.366	0.09516	pCi/g	0.1103	N	352	4	1.376	IDENTIFIED	5.626	☐	
Potassium-40	✓	38.09	1.73	pCi/g	0.414	1.00	1461	1	2.131	IDENTIFIED	2.561	☐	
Radium-224	INT	4.148	0.5391	pCi/g	0.9694	Y	241.9	1	1.577	IDENTIFIED	12.69	☑ UI	
Radium-226	✓	1.291	0.1008	pCi/g	0.09379	Y	609.5	4	1.477	IDENTIFIED	6.661	☐	
Radium-228	✓	1.805	0.1767	pCi/g	0.2115	0.500	911.3	3	1.472	IDENTIFIED	7.848	☐	
Thallium-208	✓	0.561	0.04468	pCi/g	0.05521	0.080	583.3	1	1.235	IDENTIFIED	7.136	☐	
Thorium-228	✓	1.816	0.08659	pCi/g	0.08518	N	238.8	5	1.155	IDENTIFIED	3.125	☐	
Thorium-230	✓	1.291	0.1008	pCi/g	0.09378	N	609.5	4	1.477	IDENTIFIED	6.661	☐	
Thorium-232	✓	1.805	0.1767	pCi/g	0.2115	N	911.3	3	1.472	IDENTIFIED	7.848	☐	
Tin-126	INT	0.358	0.0591	pCi/g	0.1251	N	87.29	3	1.268	IDENTIFIED	15.99	☐	
Titanium-44	LA	0.4284	0.03104	pCi/g	0.08068	N	77.22	1	1.004	FAIL_ABUND	6.176	☐	
Total Uranium	—	3.8635	2.20E-06	ug/g	3.7541	N		0				☐	
Uranium-234	✓	1.291	0.1008	pCi/g	0.09378	N	609.5	4	1.477	IDENTIFIED	6.661	☐	
Zirconium-97	HE	5.21E+05	2.95E+05	pCi/g	0	N	238.8	5	1.155	NOT_IDENTI	3.125	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358007	22-JUN-09 12:00	06-JUL-09 12:13	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.63	0.1896	pCi/g	0.2322	N	911.5	3	1.946	IDENTIFIED	9.86	☐	
Americium-243	INT	0.3283	0.05295	pCi/g	0.1306	N	75.02	2	1.075	IDENTIFIED	15.17	☐	
Annihilation Rad.	—	0.1453	0.04229	pCi/g	0.05808	N	511.3	2	1.983	IDENTIFIED	28.92	☐	
Barium-137m	✓	0.8585	0.05648	pCi/g	0.0683	N	661.9	2	1.451	IDENTIFIED	6.098	☐	
Bismuth-211	INT	3.972	0.3049	pCi/g	0.3716	Y	352.2	4	1.364	IDENTIFIED	6.755	☑ UI	
Bismuth-212	HE	1.426	0.368	pCi/g	0.7641	N	728.3	1	2.123	FAIL_ABUND	25.48	☐	
Bismuth-214	✓	1.224	0.105	pCi/g	0.1276	0.200	609.7	4	1.203	IDENTIFIED	7.686	☐	
Cadmium-109	INT	3.421	0.6628	pCi/g	1.489	Y	87.47	3	1.102	IDENTIFIED	18.53	☑ UI	
Cerium-143	—	228.2	57.18	pCi/g	0	N	328.2	1	1.015	NOT_IDENTI	63.67	☐	
Cesium-137	✓	0.9076	0.05975	pCi/g	0.0722	0.100	661.9	2	1.451	IDENTIFIED	6.098	☐	
Gross Gamma	—	10.36	1.53	pCi/g	3.722	N		0				☐	

Iodine-133	HE	1359	1484	pCi/g	0	N	511.3	2	1.983	FAIL_DECAY	28.92	☐	
Krypton-85	HE	16.65	5.203	pCi/g	16.59	N	238.9	8	1.125	NOT_IDENTI	3.85	☐	
Lead-212	V	1.695	0.09163	pCi/g	0.1102	0.100	238.9	8	1.125	IDENTIFIED	3.85	☐	
Lead-214	V	1.382	0.112	pCi/g	0.1336	0.100	352.2	4	1.364	IDENTIFIED	6.755	☐	
Lutetium-177	HE	3.235	0.7765	pCi/g	2.053	N	209.8	1	1.76	FAIL_ABUND	23.82	☐	
Mercury-203	LA	0.094	0.02364	pCi/g	0.08444	0.100	75.02	2	1.075	NOT_IDENTI	15.17	☑ UI	Data rejected due to low abundance.
Neptunium-237	INT	0.9889	0.2171	pCi/g	0.4874	N	87.47	3	1.102	IDENTIFIED	18.53	☐	
Niobium-97	HE	16400	21030	pCi/g	0	N	238.9	8	1.125	NOT_IDENTI	3.85	☐	
Polonium-212	NM	1.695	0.09163	pCi/g	0.1102	N	238.9	8	1.125	IDENTIFIED	3.85	☐	
Polonium-214	NM	1.382	0.112	pCi/g	0.1336	N	352.2	4	1.364	IDENTIFIED	6.755	☐	
Polonium-215	HE	1.406	0.4174	pCi/g	1.331	N	270.3	4	1.996	FAIL_ABUND	20.43	☐	
Polonium-216	NM	1.695	0.09163	pCi/g	0.1102	N	238.9	8	1.125	IDENTIFIED	3.85	☐	
Polonium-218	NM	1.382	0.112	pCi/g	0.1336	N	352.2	4	1.364	IDENTIFIED	6.755	☐	
Potassium-40	V	30.04	1.66	pCi/g	0.5993	1.00	1461	1	2.112	IDENTIFIED	3.464	☐	
Radium-223	LA	1.406	0.4174	pCi/g	1.331	Y	270.3	4	1.996	FAIL_ABUND	20.43	☑ UI	Data rejected due to low abundance.
Radium-224	INT	4.43	0.64	pCi/g	1.254	Y	241.9	1	1.47	IDENTIFIED	14.12	☑ UI	
Radium-226	V	1.224	0.105	pCi/g	0.1276	Y	609.7	4	1.203	IDENTIFIED	7.686	☐	
Radium-228	V	1.63	0.1896	pCi/g	0.2322	0.500	911.5	3	1.946	IDENTIFIED	9.86	☐	
Strontium-85	LA	0.08437	0.02637	pCi/g	0.08409	Y	238.9	8	1.125	NOT_IDENTI	3.85	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	2.26E+13	1.07E+15	pCi/g	0	N	238.9	8	1.125	NOT_IDENTI	3.85	☐	
Thallium-207	HE	1.406	0.4174	pCi/g	1.331	N	270.3	4	1.996	FAIL_ABUND	20.43	☐	
Thallium-208	V	0.4918	0.05982	pCi/g	0.06676	0.080	583.6	1	1.503	IDENTIFIED	11.69	☐	
Thorium-228	V	1.695	0.09163	pCi/g	0.1102	N	238.9	8	1.125	IDENTIFIED	3.85	☐	
Thorium-230	V	1.224	0.105	pCi/g	0.1276	N	609.7	4	1.203	IDENTIFIED	7.686	☐	
Thorium-231	LA	1.406	0.4174	pCi/g	1.331	Y	270.3	4	1.996	FAIL_ABUND	20.43	☑ UI	Data rejected due to low abundance.
Thorium-232	V	1.63	0.1896	pCi/g	0.2322	N	911.5	3	1.946	IDENTIFIED	9.86	☐	
Tin-126	INT	0.3368	0.06525	pCi/g	0.1476	N	87.47	3	1.102	IDENTIFIED	18.53	☐	
Titanium-44	LA	0.3652	0.03835	pCi/g	0.1042	N	77.33	1	0.9388	FAIL_ABUND	8.967	☐	
Uranium-234	V	1.224	0.105	pCi/g	0.1276	N	609.7	4	1.203	IDENTIFIED	7.686	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358008	22-JUN-09 12:00	06-JUL-09 12:14	14	SAMPLE	LOAD	I	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	V	1.632	0.1592	pCi/g	0.2206	N	911.1	3	1.363	IDENTIFIED	8.14	☐	
Americium-243	INT	0.386	0.03376	pCi/g	0.08765	N	74.24	1	0.9841	IDENTIFIED	7.862	☐	
Annihilation Rad.	HE	0.0793	0.03042	pCi/g	0.05476	N	510.5	2	1.622	IDENTIFIED	38.24	☐	
Barium-137m	V	0.2094	0.03184	pCi/g	0.06038	N	661.5	2	1.271	IDENTIFIED	14.79	☐	
Bismuth-211	INT	3.838	0.2754	pCi/g	0.3133	Y	351.4	4	1.264	IDENTIFIED	6.263	☑ UI	
Bismuth-212	HE	1.157	0.2429	pCi/g	0.6978	N	726.8	1	1.322	FAIL_ABUND	20.51	☐	
Bismuth-214	V	1.124	0.09325	pCi/g	0.1134	0.200	609	4	1.292	IDENTIFIED	7.12	☐	
Cadmium-109	INT	3.689	0.4391	pCi/g	1.2	Y	86.65	3	1.043	IDENTIFIED	11.02	☑ UI	
Cerium-143	—	607.3	85.58	pCi/g	0	N	327.7	1	1.28	FAIL_DECAY	20.51	☐	
Cesium-134	LA	0.09583	0.03475	pCi/g	0.09514	0.100	795	1	1.375	FAIL_ABUND	36.06	☑ UI	Data rejected due to low abundance.
Cesium-135	INT	0.5928	0.1361	pCi/g	0.2499	N	269.5	2	1.317	IDENTIFIED	22.51	☐	
Cesium-137	V	0.2213	0.03367	pCi/g	0.06383	0.100	661.5	2	1.271	IDENTIFIED	14.79	☐	
Gross Gamma	—	9.893	1.548	pCi/g	4.038	N		0				☐	
Iodine-133	—	2456	1198	pCi/g	0	N	510.5	2	1.622	FAIL_DECAY	38.24	☐	
Iodine-135	HE	2.20E+14	1.94E+14	pCi/g	0	N	269.5	2	1.317	NOT_IDENTI	22.51	☐	
Lead-212	V	1.631	0.08467	pCi/g	0.09313	0.100	238.1	7	1.018	IDENTIFIED	3.225	☐	
Lead-214	V	1.335	0.1019	pCi/g	0.1092	0.100	351.4	4	1.264	IDENTIFIED	6.263	☐	
Lutetium-177	HE	2.035	0.5974	pCi/g	1.87	N	208.8	1	0.9527	FAIL_ABUND	29.19	☐	
Neptunium-237	INT	1.067	0.168	pCi/g	0.4366	N	86.65	3	1.043	IDENTIFIED	11.02	☐	
Niobium-95m	LA	1.065	0.0988	pCi/g	0.3223	N	238.1	7	1.018	NOT_IDENTI	3.225	☐	
Niobium-97	HE	5947	20640	pCi/g	0	N	238.1	7	1.018	NOT_IDENTI	3.225	☐	
Polonium-212	NM	1.631	0.08467	pCi/g	0.09313	N	238.1	7	1.018	IDENTIFIED	3.225	☐	
Polonium-214	NM	1.335	0.1019	pCi/g	0.1092	N	351.4	4	1.264	IDENTIFIED	6.263	☐	
Polonium-216	NM	1.631	0.08467	pCi/g	0.09313	N	238.1	7	1.018	IDENTIFIED	3.225	☐	
Polonium-218	NM	1.335	0.1019	pCi/g	0.1092	N	351.4	4	1.264	IDENTIFIED	6.263	☐	

Potassium-40	✓	31.95	1.397	pCi/g	0.4832	1.00	1461	2	1.797	IDENTIFIED	2.807	☐
Radium-224	INT	4.368	0.631	pCi/g	1.059	Y	241.1	1	1.841	IDENTIFIED	14.03	☑ UI
Radium-226	✓	1.124	0.09325	pCi/g	0.1134	Y	609	4	1.292	IDENTIFIED	7.12	☐
Radium-228	✓	1.632	0.1592	pCi/g	0.2206	0.500	911.1	3	1.363	IDENTIFIED	8.14	☐
Thallium-208	✓	0.5997	0.04791	pCi/g	0.06153	0.080	582.8	1	1.322	IDENTIFIED	7.077	☐
Thorium-228	✓	1.631	0.08467	pCi/g	0.09312	N	238.1	7	1.018	IDENTIFIED	3.225	☐
Thorium-230	✓	1.123	0.09325	pCi/g	0.1134	N	609	4	1.292	IDENTIFIED	7.12	☐
Thorium-232	✓	1.632	0.1592	pCi/g	0.2206	N	911.1	3	1.363	IDENTIFIED	8.14	☐
Thorium-234	✓	2.199	0.7521	pCi/g	1.846	2.00	62.89	2	1.043	IDENTIFIED	33.12	☐
Tin-126	INT	0.3632	0.04323	pCi/g	0.1242	N	86.65	3	1.043	IDENTIFIED	11.02	☐
Titanium-44	LA	0.2108	0.02417	pCi/g	0.07151	N	1461	2	1.797	NOT_IDENTI	2.807	☐
Total Uranium	—	6.5818	2.24E-06	ug/g	2.7485	N		0				☐
Uranium-234	✓	1.123	0.09325	pCi/g	0.1134	N	609	4	1.292	IDENTIFIED	7.12	☐
Uranium-238	HE	2.199	0.7521	pCi/g	1.846	N	62.89	2	1.043	IDENTIFIED	33.12	☐
Zirconium-97	—	1.58E+06	3.85E+05	pCi/g	0	N	238.1	7	1.018	NOT_IDENTI	3.225	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358009	22-JUN-09 12:00	06-JUL-09 12:15	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.724	0.1812	pCi/g	0.2099	N	911.6	3	1.711	IDENTIFIED	8.966	☐	
Americium-243	INT	0.3617	0.03857	pCi/g	0.09256	N	74.91	2	0.9843	IDENTIFIED	10.11	☐	
Annihilation Rad.	—	0.1462	0.03873	pCi/g	0.04519	N	510.9	2	1.929	IDENTIFIED	26.32	☐	
Bismuth-211	INT	3.51	0.213	pCi/g	0.3157	Y	352	4	1.407	IDENTIFIED	5.193	☑ UI	
Bismuth-212	HE	0.7593	0.2842	pCi/g	0.7016	N	727.2	1	1.384	FAIL_ABUND	37.17	☐	
Bismuth-214	✓	1.189	0.09193	pCi/g	0.1161	0.200	609.6	4	1.499	IDENTIFIED	6.545	☐	
Cadmium-109	INT	2.879	0.5765	pCi/g	0.9974	Y	87.09	3	1.166	IDENTIFIED	19.66	☑ UI	
Cerium-143	—	294.9	53.15	pCi/g	0	N	328.3	1	1.576	FAIL_DECAY	23.93	☐	
Gross Gamma	—	9.62	1.536	pCi/g	3.108	N		0				☐	
Iodine-133	HE	958.7	1230	pCi/g	0	N	510.9	2	1.929	FAIL_DECAY	26.32	☐	
Iodine-135	HE	2.87E+14	1.95E+14	pCi/g	0	N	796	1	1.437	NOT_IDENTI	59.01	☐	
Krypton-85	HE	14.67	3.733	pCi/g	13.69	N	238.7	8	1.105	NOT_IDENTI	3.25	☐	
Lead-212	✓	1.69	0.08134	pCi/g	0.08427	0.100	238.7	8	1.105	IDENTIFIED	3.25	☐	
Lead-214	✓	1.221	0.08067	pCi/g	0.115	0.100	352	4	1.407	IDENTIFIED	5.193	☐	
Lutetium-177	HE	2.166	0.6427	pCi/g	1.723	N	209	1	0.9473	FAIL_ABUND	29.55	☐	
Neptunium-237	INT	0.8325	0.1875	pCi/g	0.4305	N	87.09	3	1.166	IDENTIFIED	19.66	☐	
Niobium-97	HE	14960	17740	pCi/g	0	N	238.7	8	1.105	NOT_IDENTI	3.25	☐	
Polonium-212	NU	1.69	0.08134	pCi/g	0.08427	N	238.7	8	1.105	IDENTIFIED	3.25	☐	
Polonium-214	NU	1.221	0.08067	pCi/g	0.115	N	352	4	1.407	IDENTIFIED	5.193	☐	
Polonium-216	NU	1.69	0.08134	pCi/g	0.08427	N	238.7	8	1.105	IDENTIFIED	3.25	☐	
Polonium-218	NU	1.221	0.08067	pCi/g	0.115	N	352	4	1.407	IDENTIFIED	5.193	☐	
Potassium-40	✓	33.27	1.51	pCi/g	0.4814	1.00	1461	1	2.176	IDENTIFIED	2.81	☐	
Radium-224	INT	4.809	0.5951	pCi/g	0.959	Y	241.7	1	1.701	IDENTIFIED	12.06	☑ UI	
Radium-226	✓	1.189	0.09193	pCi/g	0.1161	Y	609.6	4	1.499	IDENTIFIED	6.545	☐	
Radium-228	✓	1.724	0.1812	pCi/g	0.2099	0.500	911.6	3	1.711	IDENTIFIED	8.966	☐	
Strontium-85	LA	0.07437	0.01892	pCi/g	0.06936	Y	238.7	8	1.105	NOT_IDENTI	3.25	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	71.81	110.8	pCi/g	0	N	74.91	2	0.9843	NOT_IDENTI	10.11	☐	
Thallium-208	✓	0.6004	0.04472	pCi/g	0.05175	0.080	583.4	1	1.537	IDENTIFIED	6.533	☐	
Thorium-228	✓	1.69	0.08134	pCi/g	0.08426	N	238.7	8	1.105	IDENTIFIED	3.25	☐	
Thorium-230	✓	1.189	0.09192	pCi/g	0.1161	N	609.6	4	1.499	IDENTIFIED	6.545	☐	
Thorium-232	✓	1.724	0.1812	pCi/g	0.2099	N	911.6	3	1.711	IDENTIFIED	8.966	☐	
Tin-126	INT	0.2835	0.05676	pCi/g	0.1449	N	87.09	3	1.166	IDENTIFIED	19.66	☐	
Titanium-44	LA	0.3375	0.0268	pCi/g	0.07676	N	77.13	1	0.9425	FAIL_ABUND	7.145	☐	
Uranium-234	✓	1.189	0.09192	pCi/g	0.1161	N	609.6	4	1.499	IDENTIFIED	6.545	☐	
Zirconium-97	HE	5.86E+05	3.41E+05	pCi/g	0	N	238.7	8	1.105	NOT_IDENTI	3.25	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358010	22-JUN-09 12:00	06-JUL-09 12:15	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.268	0.1544	pCi/g	0.214	N	911.2	3	1.407	IDENTIFIED	10.63	☐	
Americium-243	INT	0.3227	0.03039	pCi/g	0.08982	N	74.99	2	0.8266	IDENTIFIED	8.598	☐	
Annihilation Rad.	—	0.1066	0.02966	pCi/g	0.04456	N	510.8	1	1.398	IDENTIFIED	27.66	☐	
Bismuth-211	INT	2.977	0.2078	pCi/g	0.292	Y	352	4	1.187	IDENTIFIED	6.253	☑ UI	
Bismuth-212	HE	0.7208	0.2216	pCi/g	0.432	N	727.8	1	1.505	IDENTIFIED	30.44	☐	
Bismuth-214	✓	0.8354	0.0764	pCi/g	0.1031	0.200	609.4	4	1.325	IDENTIFIED	8.229	☐	
Cadmium-109	INT	3.051	0.4664	pCi/g	1.22	Y	87.42	3	1.153	IDENTIFIED	14.67	☑ UI	
Cerium-143	—	417.8	62.67	pCi/g	0	N	143.9	1	1.255	FAIL_DECAY	60.06	☐	
Cesium-134	LA	0.08507	0.03213	pCi/g	0.08472	0.100	795.6	3	1.458	FAIL_ABUND	37.55	☑ UI	Data rejected due to low abundance.
Cesium-135	HE	0.2794	0.08216	pCi/g	0.263	N	795.6	3	1.458	NOT_IDENTI	37.55	☐	
Gross Gamma	—	8.778	1.53	pCi/g	3.696	N		0				☐	
Iodine-135	HE	9.35E+13	1.75E+14	pCi/g	0	N	795.6	3	1.458	NOT_IDENTI	37.55	☐	
Krypton-85	HE	17.34	3.91	pCi/g	13.32	N	238.7	8	1.007	NOT_IDENTI	3.328	☐	
Lead-212	✓	1.406	0.06818	pCi/g	0.08328	0.100	238.7	8	1.007	IDENTIFIED	3.328	☐	
Lead-214	✓	1.036	0.07718	pCi/g	0.1053	0.100	352	4	1.187	IDENTIFIED	6.253	☐	
Lutetium-177	HE	1.965	0.5225	pCi/g	1.664	N	209.4	1	0.9367	FAIL_ABUND	26.45	☐	
Neptunium-237	INT	0.8821	0.1627	pCi/g	0.359	N	87.42	3	1.153	IDENTIFIED	14.67	☐	
Niobium-95m	HE	0.2212	0.06565	pCi/g	0.2084	N	238.7	8	1.007	NOT_IDENTI	3.328	☐	
Polonium-212	NU	1.406	0.06818	pCi/g	0.08328	N	238.7	8	1.007	IDENTIFIED	3.328	☐	
Polonium-214	NU	1.036	0.07718	pCi/g	0.1053	N	352	4	1.187	IDENTIFIED	6.253	☐	
Polonium-216	NU	1.406	0.06818	pCi/g	0.08328	N	238.7	8	1.007	IDENTIFIED	3.328	☐	
Polonium-218	NU	1.036	0.07718	pCi/g	0.1053	N	352	4	1.187	IDENTIFIED	6.253	☐	
Potassium-40	✓	33.5	1.666	pCi/g	0.4277	1.00	1460	1	1.84	IDENTIFIED	2.649	☐	
Radium-224	INT	3.836	0.5378	pCi/g	0.9471	Y	241.5	1	1.74	IDENTIFIED	13.75	☑ UI	
Radium-226	✓	0.8354	0.0764	pCi/g	0.1031	Y	609.4	4	1.325	IDENTIFIED	8.229	☐	
Radium-228	✓	1.268	0.1544	pCi/g	0.214	0.500	911.2	3	1.407	IDENTIFIED	10.63	☐	
Sodium-24	HE	4349	94310	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.0879	0.01981	pCi/g	0.0675	Y	238.7	8	1.007	NOT_IDENTI	3.328	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	15.85	102.6	pCi/g	0	N	74.99	2	0.8266	NOT_IDENTI	8.598	☐	
Thallium-208	✓	0.3829	0.03727	pCi/g	0.0526	0.080	583.3	1	1.427	IDENTIFIED	9.106	☐	
Thorium-228	✓	1.406	0.06818	pCi/g	0.08327	N	238.7	8	1.007	IDENTIFIED	3.328	☐	
Thorium-230	✓	0.8354	0.07639	pCi/g	0.1031	N	609.4	4	1.325	IDENTIFIED	8.229	☐	
Thorium-232	✓	1.268	0.1544	pCi/g	0.214	N	911.2	3	1.407	IDENTIFIED	10.63	☐	
Tin-126	INT	0.3004	0.04592	pCi/g	0.1207	N	87.42	3	1.153	IDENTIFIED	14.67	☐	
Titanium-44	LA	0.2862	0.02211	pCi/g	0.07942	N	77.31	1	0.9059	FAIL_ABUND	6.665	☐	
Uranium-234	✓	0.8354	0.07639	pCi/g	0.1031	N	609.4	4	1.325	IDENTIFIED	8.229	☐	
Zirconium-97	—	1.10E+06	2.98E+05	pCi/g	0	N	238.7	8	1.007	NOT_IDENTI	3.328	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358011	22-JUN-09 12:00	06-JUL-09 13:25	14.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.881	0.2293	pCi/g	0.3157	N	911.1	3	1.568	IDENTIFIED	11.07	☐	
Americium-243	INT	0.4184	0.03099	pCi/g	0.07569	N	75.07	2	0.8441	IDENTIFIED	6.077	☐	
Annihilation Rad.	—	0.1534	0.03422	pCi/g	0.06489	N	510.7	2	1.528	IDENTIFIED	22.05	☐	
Bismuth-210	HE	1.039	0.4722	pCi/g	1.029	N	47.1	3	0.8966	IDENTIFIED	45.27	☐	
Bismuth-211	INT	4.395	0.3246	pCi/g	0.4175	Y	352.1	4	1.122	IDENTIFIED	6.457	☑ UI	
Bismuth-212	LA	1.641	0.2895	pCi/g	0.9255	N	727	1	1.334	FAIL_ABUND	17.04	☐	
Bismuth-214	✓	1.432	0.1109	pCi/g	0.1507	0.200	609.3	4	1.468	IDENTIFIED	6.308	☐	
Cadmium-109	INT	4.519	0.4886	pCi/g	1.27	Y	87.4	4	1.175	IDENTIFIED	10.03	☑ UI	
Cerium-143	—	537.2	82.33	pCi/g	0	N	328.1	1	0.9133	FAIL_DECAY	30.65	☐	
Gross Gamma	—	11.14	1.652	pCi/g	5.074	N		0				☐	
Iodine-123	HE	1.10E+06	8.81E+05	pCi/g	0	N	87.4	4	1.175	NOT_IDENTI	10.03	☐	
Iodine-135	HE	1.77E+14	2.97E+14	pCi/g	0	N	510.7	2	1.528	NOT_IDENTI	22.05	☐	
Krypton-85	HE	21.6	5.147	pCi/g	17.69	N	238.8	7	0.9479	NOT_IDENTI	3.193	☐	
Lead-210	HE	1.039	0.4722	pCi/g	1.029	N	47.1	3	0.8966	IDENTIFIED	45.27	☐	
Lead-212	✓	1.921	0.1042	pCi/g	0.1035	0.100	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Lead-214	✓	1.529	0.1197	pCi/g	0.1374	0.100	352.1	4	1.122	IDENTIFIED	6.457	☐	

Lutetium-177	HE	2.756	0.6653	pCi/g	2.147	N	209.4	2	0.973	FAIL_ABUND	23.85	☐	
Neptunium-237	INT	1.306	0.1952	pCi/g	0.3661	N	87.4	4	1.175	IDENTIFIED	10.03	☐	
Polonium-210	HE	1.039	0.4718	pCi/g	1.029	N	47.1	3	0.8966	IDENTIFIED	45.27	☐	
Polonium-212	NM	1.921	0.1042	pCi/g	0.1035	N	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Polonium-214	NM	1.529	0.1197	pCi/g	0.1374	N	352.1	4	1.122	IDENTIFIED	6.457	☐	
Polonium-216	NM	1.921	0.1042	pCi/g	0.1035	N	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Polonium-218	NM	1.529	0.1197	pCi/g	0.1374	N	352.1	4	1.122	IDENTIFIED	6.457	☐	
Potassium-40	✓	33.13	1.517	pCi/g	0.645	1.00	1460	1	2.056	IDENTIFIED	3.395	☐	
Radium-224	INT	5.993	0.787	pCi/g	1.178	Y	241.7	1	1.85	IDENTIFIED	12.58	☑ UI	
Radium-226	✓	1.432	0.1109	pCi/g	0.1507	Y	609.3	4	1.468	IDENTIFIED	6.308	☐	
Radium-228	✓	1.881	0.2293	pCi/g	0.3157	0.500	911.1	3	1.568	IDENTIFIED	11.07	☐	
Strontium-85	LA	0.1095	0.0261	pCi/g	0.08971	Y	238.8	7	0.9479	NOT_IDENTI	3.193	☑ UI	Data rejected due to low abundance.
Thallium-200	—	330.9	142.5	pCi/g	0	N	75.07	2	0.8441	NOT_IDENTI	6.077	☐	
Thallium-208	✓	0.6846	0.05723	pCi/g	0.07306	0.080	583.1	1	1.295	IDENTIFIED	7.359	☐	
Thorium-228	✓	1.921	0.1042	pCi/g	0.1035	N	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Thorium-230	✓	1.432	0.1109	pCi/g	0.1507	N	609.3	4	1.468	IDENTIFIED	6.308	☐	
Thorium-232	✓	1.881	0.2293	pCi/g	0.3157	N	911.1	3	1.568	IDENTIFIED	11.07	☐	
Thorium-234	✓	2.03	0.5234	pCi/g	1.339	2.00	63.58	2	0.7811	IDENTIFIED	24.13	☐	
Tin-126	INT	0.4449	0.0481	pCi/g	0.1249	N	87.4	4	1.175	IDENTIFIED	10.03	☐	
Titanium-44	LA	0.4533	0.02695	pCi/g	0.04994	N	77.37	1	0.8709	IDENTIFIED	4.215	☐	
Total Uranium	—	6.1865	1.56E-06	ug/g	1.9959	N		0				☐	
Tungsten-181	LA	0.8397	0.1697	pCi/g	0.4426	N	209.4	2	0.973	NOT_IDENTI	23.85	☐	
Uranium-234	✓	1.432	0.1109	pCi/g	0.1507	N	609.3	4	1.468	IDENTIFIED	6.308	☐	
Uranium-238	HE	2.03	0.5234	pCi/g	1.339	N	63.58	2	0.7811	IDENTIFIED	24.13	☐	
Zirconium-97	—	1.51E+06	4.48E+05	pCi/g	0	N	238.8	7	0.9479	NOT_IDENTI	3.193	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201870087		06-JUL-09 13:25	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Iodine-133	HE	1.945	2.835	pCi/g	0	N	0	3	0	NOT_IDENTI	0	☐	
Sodium-24	HE	11.58	31.11	pCi/g	0	N	0	3	0	NOT_IDENTI	0	☐	
Technetium-99m	HE	2.90E+06	7.86E+06	pCi/g	0	N	0	3	0	NOT_IDENTI	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201870088	22-JUN-09 12:00	06-JUL-09 13:26	14.1	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.852	0.1959	pCi/g	0.2983	N	911.3	3	1.872	IDENTIFIED	9.286	☐	
Americium-243	INT	0.3219	0.03457	pCi/g	0.05697	N	74.92	2	1.86	IDENTIFIED	10.05	☐	
Annihilation Rad.		0.1653	0.04065	pCi/g	0.06081	N	510.9	1	1.989	IDENTIFIED	24.38	☐	
Bismuth-211	INT	3.351	0.2347	pCi/g	0.3891	Y	351.9	4	1.735	IDENTIFIED	6.242	☑ UI	
Bismuth-212	HE	1.122	0.3518	pCi/g	0.8301	N	728.4	1	0.9433	FAIL_ABUND	31.03	☐	
Bismuth-214	✓	1.105	0.1059	pCi/g	0.146	0.200	609.5	4	1.548	IDENTIFIED	8.549	☐	
Cadmium-109	INT	1.776	0.4778	pCi/g	1.036	Y	87.37	5	1.182	IDENTIFIED	26.58	☑ UI	
Cerium-143	—	404.8	73.43	pCi/g	0	N	87.37	5	1.182	FAIL_DECAY	26.58	☐	
Gross Gamma	—	9.167	1.494	pCi/g	4.215	N		0				☐	
Iodine-123	HE	1.56E+05	8.05E+05	pCi/g	0	N	87.37	5	1.182	NOT_IDENTI	26.58	☐	
Lead-212	✓	1.242	0.0826	pCi/g	0.1199	0.100	238.7	6	1.298	IDENTIFIED	5.45	☐	
Lead-214	✓	1.166	0.08713	pCi/g	0.1357	0.100	351.9	4	1.735	IDENTIFIED	6.242	☐	
Lutetium-177	HE	2.12	0.7561	pCi/g	1.944	N	209.2	1	1.039	FAIL_ABUND	35.53	☐	
Neptunium-237	HE	0.5135	0.1479	pCi/g	0.3149	N	87.37	5	1.182	IDENTIFIED	26.58	☐	
Niobium-95m	HE	0.3978	0.08466	pCi/g	0.2796	N	238.7	6	1.298	NOT_IDENTI	5.45	☐	
Polonium-212	NM	1.242	0.0826	pCi/g	0.1199	N	238.7	6	1.298	IDENTIFIED	5.45	☐	
Polonium-214	NM	1.166	0.08713	pCi/g	0.1357	N	351.9	4	1.735	IDENTIFIED	6.242	☐	
Polonium-216	NM	1.242	0.0826	pCi/g	0.1199	N	238.7	6	1.298	IDENTIFIED	5.45	☐	
Polonium-218	NM	1.166	0.08713	pCi/g	0.1357	N	351.9	4	1.735	IDENTIFIED	6.242	☐	
Potassium-40	✓	36.95	1.728	pCi/g	0.6903	1.00	1461	1	2.251	IDENTIFIED	3.429	☐	
Radium-224	INT	1.869	0.5258	pCi/g	1.766	Y	241.9	1	1.747	IDENTIFIED	27.97	☑ UI	

Radium-226	✓	1.105	0.1059	pCi/g	0.146	Y	609.5	4	1.548	IDENTIFIED	8.549	☐
Radium-228	✓	1.852	0.1959	pCi/g	0.2983	0.500	911.3	3	1.872	IDENTIFIED	9.286	☐
Thallium-200	HE	217.6	140.7	pCi/g	0	N	74.92	2	1.86	NOT_IDENTI	10.05	☐
Thallium-208	✓	0.5532	0.05448	pCi/g	0.07586	0.080	583.5	1	1.49	IDENTIFIED	9.089	☐
Thorium-228	✓	1.242	0.0826	pCi/g	0.1199	N	238.7	6	1.298	IDENTIFIED	5.45	☐
Thorium-230	✓	1.105	0.1059	pCi/g	0.146	N	609.5	4	1.548	IDENTIFIED	8.549	☐
Thorium-232	✓	1.852	0.1959	pCi/g	0.2983	N	911.3	3	1.872	IDENTIFIED	9.286	☐
Tin-126	HE	0.1749	0.04704	pCi/g	0.1018	N	87.37	5	1.182	IDENTIFIED	26.58	☐
Titanium-44	LA	0.3206	0.02248	pCi/g	0.06434	N	77.18	1	1.395	FAIL_ABUND	5.87	☐
Uranium-234	✓	1.105	0.1059	pCi/g	0.146	N	609.5	4	1.548	IDENTIFIED	8.549	☐
Zirconium-97	—	1.45E+06	4.84E+05	pCi/g	0	N	238.7	6	1.298	NOT_IDENTI	5.45	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201870089		06-JUL-09 13:26	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	HE	0.9005	0.3218	pCi/g	0.7673	N	911.8	3	1.21	FAIL_ABUND	35.26	☐	
Americium-241		13.85	0.7615	pCi/g	0.5338	0.200	59.58	1	0.9376	IDENTIFIED	2.93	☐	
Barium-137m		5.378	0.1939	pCi/g	0.1264	N	661.8	2	1.43	IDENTIFIED	2.544	☐	
Bismuth-211		2.347	0.3131	pCi/g	0.6246	Y	352	4	1.227	IDENTIFIED	12.94	☐	
Bismuth-214		0.7493	0.1256	pCi/g	0.3398	0.200	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Cadmium-109		41.67	2.53	pCi/g	2.129	Y	88.1	3	0.9674	IDENTIFIED	3.62	☐	
Cesium-137		5.685	0.2056	pCi/g	0.1336	0.100	661.8	2	1.43	IDENTIFIED	2.544	☐	
Cobalt-57		0.3418	0.03143	pCi/g	0.06079	N	122	1	1.044	IDENTIFIED	8.709	☐	
Cobalt-60		6.996	0.3172	pCi/g	0.09187	0.100	1333	1	2.292	IDENTIFIED	2.66	☐	
Gross Gamma		27.66	3.85	pCi/g	2.868	N		0				☐	
Iodine-123	HE	309.5	254.3	pCi/g	0	N	88.1	3	0.9674	NOT_IDENTI	3.62	☐	
Iodine-133	HE	4.574	14.36	pCi/g	0	N	510.8	1	1.889	FAIL_DECAY	69.59	☐	
Lead-212		0.7908	0.0858	pCi/g	0.191	0.100	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Lead-214		0.8165	0.111	pCi/g	0.2178	0.100	352	4	1.227	IDENTIFIED	12.94	☐	
Neptunium-237		1.446	0.2916	pCi/g	0.861	N	93.14	1	1.546	NOT_IDENTI	34.98	☐	
Niobium-97		172.6	72.02	pCi/g	0	N	238.7	6	0.9457	NOT_IDENTI	10.24	☐	
Polonium-212		0.7908	0.0858	pCi/g	0.191	N	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Polonium-214		0.8165	0.111	pCi/g	0.2178	N	352	4	1.227	IDENTIFIED	12.94	☐	
Polonium-216		0.7908	0.0858	pCi/g	0.191	N	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Polonium-218		0.8165	0.111	pCi/g	0.2178	N	352	4	1.227	IDENTIFIED	12.94	☐	
Radium-226		0.7493	0.1256	pCi/g	0.3398	Y	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Radium-228		0.9005	0.3218	pCi/g	0.7673	0.500	911.8	3	1.21	FAIL_ABUND	35.26	☐	
Sodium-24	HE	49.76	113.4	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-208		0.3886	0.05855	pCi/g	0.1251	0.080	583.2	1	1.194	IDENTIFIED	14.71	☐	
Thorium-228		0.7908	0.0858	pCi/g	0.191	N	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Thorium-230		0.7493	0.1256	pCi/g	0.3398	N	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Thorium-232	HE	0.9005	0.3218	pCi/g	0.7673	N	911.8	3	1.21	FAIL_ABUND	35.26	☐	
Tin-126		4.142	0.2515	pCi/g	0.2129	N	88.1	3	0.9674	IDENTIFIED	3.62	☐	
Titanium-44	HE	0.1874	0.04985	pCi/g	0.103	N	77.2	1	1.001	FAIL_ABUND	26.21	☐	
Uranium-234		0.7493	0.1256	pCi/g	0.3398	N	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Zirconium-97	HE	1379	1103	pCi/g	0	N	238.7	6	0.9457	NOT_IDENTI	10.24	☐	

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232278001-1 06-JUL-2009 11:09	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.902			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.853			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.559			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1059			
232278002-1 06-JUL-2009 11:09	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.155			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.038			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.094			
232347001-1 06-JUL-2009 11:10	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.397			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.432			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1225		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.114			
	Thallium-208	UI	UI	UI	Data rejected due to low abundance.		.5139		.08	.08
	Thorium-234	UI	UI	UI	Data rejected due to no valid peak		1.041			
232347002-1 06-JUL-2009 11:10	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.85			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.509			
232347003-1 06-JUL-2009 11:11	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.095			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.628			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.985			
232347004-1 06-JUL-2009 11:12	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.193			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.347			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232347004-1 06-JUL-2009 11:12	Radium-224	UI	UI	UI	Data rejected due to interference.		3.89			
232357001-1 06-JUL-2009 11:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.228			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.584			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.12			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1085			
232357002-1 06-JUL-2009 11:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.565			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.743			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.727			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09123			
232358001-1 06-JUL-2009 11:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.16			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.903			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.385			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1099			
232358002-1 06-JUL-2009 11:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.907			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.865			
	Cesium-137	UI	UI	UI	Data rejected due to low abundance.		.0929		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.072			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09168			
232358003-1 06-JUL-2009 11:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.385			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232358003-1 06-JUL-2009 11:15	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.925			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1363		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.81			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1199			
232358004-1 06-JUL-2009 11:16	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.265			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.966			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1239		.1	.1
	Cesium-137	UI	UI	UI	Data rejected due to high peak-width.		.07044		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.41			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1854			
232358005-1 06-JUL-2009 11:17	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.528			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.638			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.28			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09728			
232358006-1 06-JUL-2009 12:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.927			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.637			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09185		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.148			
232358007-1 06-JUL-2009 12:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.972			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.421			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232358007-1 06-JUL-2009 12:13	Mercury-203	UI	UI	UI	Data rejected due to low abundance.		.094		.1	.1
	Radium-223	UI	UI	UI	Data rejected due to low abundance.		1.406			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.43			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08437			
	Thorium-231	UI	UI	UI	Data rejected due to low abundance.		1.406			
232358008-1 06-JUL-2009 12:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.838			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.689			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09583		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.368			
232358009-1 06-JUL-2009 12:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.51			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.879			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.809			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07437			
232358010-1 06-JUL-2009 12:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.977			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.051			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08507		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.836			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0879			
232358011-1 06-JUL-2009 13:25	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.395			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.519			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232358011-1 06-JUL-2009 13:25	Radium-224	UI	UI	UI	Data rejected due to interference.		5.993			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1095			
1201870088-1 DUP 06-JUL-2009 13:26	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.351			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.776			
	Radium-224	UI	UI	UI	Data rejected due to interference.		1.869			

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertanty	Units	DL	RDL
880723	232358011	SAMPLE	06-JUL-09	Uranium-235	0.3154	0.1286	pCi/g	0.224	0.500
				Zirconium-97	1.51E+06	4.48E+05	pCi/g	0	N
880723	1201870087	MB	06-JUL-09	Sodium-24	11.58	31.11	pCi/g	0	N
				Technetium-99m	2.90E+06	7.86E+06	pCi/g	0	N
880723	1201870088	DUP	06-JUL-09	Bismuth-211	3.351	0.2347	pCi/g	0.1946	Y
				Bismuth-214	1.105	0.1059	pCi/g	0.07306	0.200
				Cadmium-109	1.776	0.4778	pCi/g	0.5182	Y
				Cerium-143	404.8	73.43	pCi/g	0	N
				Cesium-134	0.07015	0.03286	pCi/g	0.05989	0.100
				Gross Gamma	9.167	1.494	pCi/g	2.054	N
				Iodine-123	1.56E+05	8.05E+05	pCi/g	0	N
				Krypton-85	17.58	5.659	pCi/g	9.205	N
				Lead-212	1.242	0.0826	pCi/g	0.05997	0.100
				Lead-214	1.166	0.08713	pCi/g	0.06789	0.100
				Mercury-203	0.04967	0.02295	pCi/g	0.04104	0.100
				Potassium-40	36.95	1.728	pCi/g	0.3454	1.00
				Radium-224	1.869	0.5258	pCi/g	0.8835	Y
				Radium-226	1.105	0.1059	pCi/g	0.07306	Y
				Radium-228	1.852	0.1959	pCi/g	0.1492	0.500
				Sodium-22	0.06557	0.03655	pCi/g	0.06473	0.080
				Strontium-85	0.08913	0.0287	pCi/g	0.04668	Y
				Thallium-200	217.6	140.7	pCi/g	0	N
				Thallium-208	0.5532	0.05448	pCi/g	0.03795	0.080
				Tin-113	0.06374	0.02705	pCi/g	0.04859	0.100
				Zirconium-97	1.45E+06	4.64E+05	pCi/g	0	N
880723	1201870089	LCS	06-JUL-09	Americium-241	13.85	0.7615	pCi/g	0.2671	0.200
				Barium-137m	5.378	0.1939	pCi/g	0.06322	N
				Bismuth-211	2.347	0.3131	pCi/g	0.3125	Y
				Bismuth-214	0.7493	0.1256	pCi/g	0.17	0.200
				Cadmium-109	41.67	2.53	pCi/g	1.065	Y
				Cesium-134	0.09152	0.05014	pCi/g	0.08886	0.100
				Cesium-137	5.685	0.2056	pCi/g	0.06683	0.100
				Cobalt-60	6.996	0.3172	pCi/g	0.04596	0.100
				Gross Gamma	27.66	3.85	pCi/g	1.389	N
				Iodine-123	309.5	254.3	pCi/g	0	N
				Krypton-85	20.59	7.374	pCi/g	12.13	N
				Lead-212	0.7908	0.0858	pCi/g	0.09555	0.100

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 13:11:35.61

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:14.
Sample ID         : G232347001           Sample quantity  : 1.26580E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.71  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.01*	181	420	1.24	93.19	88	10	2.52E-02	24.7	
2	0	63.17*	108	562	1.46	127.49	124	9	1.49E-02	42.3	
3	4	74.72*	636	500	1.31	150.59	143	18	8.84E-02	7.7	2.46E+00
4	4	77.06*	883	485	1.35	155.27	143	18	1.23E-01	5.9	
5	2	84.64*	152	445	1.52	170.43	166	27	2.11E-02	26.5	1.67E+00
6	2	87.26	331	335	1.23	175.67	166	27	4.60E-02	10.7	
7	2	89.67	200	324	1.15	180.48	166	27	2.77E-02	17.1	
8	2	92.95*	306	401	1.53	187.04	166	27	4.25E-02	14.1	
9	0	129.07	78	284	1.22	259.25	255	8	1.08E-02	39.3	
10	0	186.04*	205	297	1.48	373.14	368	11	2.84E-02	18.4	
11	0	209.35	91	314	0.82	419.74	413	11	1.27E-02	38.9	
12	6	238.70*	1129	185	1.39	478.40	472	19	1.57E-01	3.7	1.62E+00
13	6	241.30	259	295	2.26	483.60	472	19	3.60E-02	20.2	
14	0	270.50	72	135	1.21	541.97	538	9	1.00E-02	31.6	
15	0	277.56	73	190	1.31	556.07	551	11	1.01E-02	38.6	
16	0	295.35	322	152	1.30	591.63	587	11	4.48E-02	9.3	
17	0	300.26	75	172	1.97	601.45	598	11	1.04E-02	35.4	
18	0	328.19	56	116	1.43	657.29	654	9	7.74E-03	37.2	
19	0	338.31*	208	176	1.33	677.51	671	15	2.89E-02	15.8	
20	0	352.00*	521	157	1.36	704.87	697	16	7.24E-02	7.1	
21	0	463.44	77	81	1.43	927.61	922	13	1.07E-02	26.6	
22	0	583.01*	330	75	1.43	1166.56	1159	16	4.58E-02	8.2	
23	0	609.55*	274	166	1.53	1219.59	1211	18	3.81E-02	12.8	
24	0	728.33	91	84	1.73	1456.95	1448	17	1.27E-02	25.8	
25	0	795.12	53	36	2.58	1590.40	1586	9	7.43E-03	24.4	
26	0	910.95*	217	83	1.56	1821.82	1815	16	3.02E-02	11.7	
27	0	968.79	107	53	1.16	1937.39	1933	9	1.49E-02	14.9	
28	0	1120.86	54	97	1.74	2241.17	2235	15	7.44E-03	43.0	
29	0	1460.43*	1230	26	2.12	2919.38	2909	18	1.71E-01	3.0	
30	0	1592.44	22	4	1.95	3183.01	3179	8	3.10E-03	26.1	
31	0	1764.33*	58	12	1.73	3526.20	3520	13	8.12E-03	19.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 13:11:39

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:14
Sample ID : G232347001 Sample quantity : 126.58 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.71 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.407E+01	2.949E+00	3.717E-01	2.312E-02	91.653
CD-109	+	88.03	*	3.432E+00	7.813E-01	9.319E-01	7.096E-02	3.683
SN-126	+	64.28		4.121E-01	3.538E-01	4.131E-01	6.157E-02	0.998
	+	86.94		1.405E+00	6.520E-01	3.802E-01	1.565E-01	3.695
	+	87.57	*	3.379E-01	7.692E-02	9.162E-02	6.978E-03	3.688
BI-210	+	46.50	*	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PB-210	+	46.50	*	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PO-210	+	46.50	*	1.748E+00	8.722E-01	8.531E-01	5.738E-02	2.049
BI-211		72.87		1.015E+01	2.253E+00	3.897E+00	3.068E-01	2.604
	+	351.07	*	3.397E+00	5.500E-01	3.387E-01	2.684E-02	10.031
PB-212	+	74.81		2.194E+00	4.300E-01	3.481E-01	4.245E-02	6.302
	+	77.11		1.815E+00	2.565E-01	2.079E-01	1.618E-02	8.727
	+	87.30		1.563E+00	3.886E-01	4.234E-01	5.323E-02	3.691
	+	238.63	*	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
	+	300.09		1.634E+00	1.169E+00	1.079E+00	1.147E-01	1.514
PO-212	+	74.81		2.194E+00	4.300E-01	3.481E-01	4.245E-02	6.302
	+	77.11		1.815E+00	2.565E-01	2.079E-01	1.618E-02	8.727
	+	87.30		1.563E+00	3.886E-01	4.234E-01	5.323E-02	3.691
		115.19		1.982E+00	3.405E+00	5.741E+00	7.305E-01	0.345
	+	238.63	*	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
	+	300.09		1.634E+00	1.169E+00	1.079E+00	1.147E-01	1.514
BI-214	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.778E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
PB-214	+	74.81		3.781E+00	7.090E-01	5.999E-01	6.466E-02	6.302
	+	77.11		3.111E+00	4.995E-01	3.565E-01	3.883E-02	8.727
	+	87.30		2.677E+00	6.434E-01	7.253E-01	7.862E-02	3.691
	+	241.98		2.170E+00	9.097E-01	5.645E-01	6.362E-02	3.844
	+	295.21		1.228E+00	2.647E-01	2.288E-01	2.502E-02	5.367
	+	351.92	*	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008

--- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.781E+00	7.090E-01	5.999E-01	6.466E-02	6.302
	+	77.11		3.111E+00	4.995E-01	3.565E-01	3.883E-02	8.727
	+	87.30		2.677E+00	6.434E-01	7.253E-01	7.862E-02	3.691
	+	241.98		2.170E+00	9.097E-01	5.645E-01	6.362E-02	3.844
	+	295.21		1.228E+00	2.647E-01	2.288E-01	2.502E-02	5.367
	+	351.92	*	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
PO-216	+	74.81		2.194E+00	4.300E-01	3.481E-01	4.245E-02	6.302
	+	77.11		1.815E+00	2.565E-01	2.079E-01	1.618E-02	8.727
	+	87.30		1.563E+00	3.886E-01	4.234E-01	5.323E-02	3.691
	+	238.63	*	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
	+	300.09		1.634E+00	1.169E+00	1.079E+00	1.147E-01	1.514
PO-218	+	74.81		3.781E+00	7.090E-01	5.999E-01	6.466E-02	6.302
	+	77.11		3.111E+00	4.995E-01	3.565E-01	3.883E-02	8.727
	+	87.30		2.677E+00	6.434E-01	7.253E-01	7.862E-02	3.691
	+	241.98		2.170E+00	9.097E-01	5.645E-01	6.362E-02	3.844
	+	295.21		1.228E+00	2.647E-01	2.288E-01	2.502E-02	5.367
	+	351.92	*	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
RA-224	+	240.98	*	4.114E+00	1.709E+00	1.067E+00	1.044E-01	3.857
RA-226	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.778E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
AC-228	+	338.32		1.492E+00	7.731E-01	3.838E-01	1.578E-01	3.888
	+	911.07	*	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
	+	969.11		1.342E+00	5.103E-01	5.903E-01	1.394E-01	2.273
RA-228	+	338.32		1.492E+00	7.731E-01	3.838E-01	1.578E-01	3.888
	+	911.07	*	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
	+	969.11		1.342E+00	5.103E-01	5.903E-01	1.394E-01	2.273
TH-228	+	84.40		4.715E+00	2.572E+00	2.776E+00	3.478E-01	1.699
	+	238.60	*	1.573E+00	2.052E-01	9.371E-02	1.010E-02	16.783
	+	300.10		1.634E+00	1.509E+00	1.079E+00	6.403E-01	1.514
TH-230	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.777E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
TH-232	+	338.32		1.492E+00	4.848E-01	3.838E-01	3.009E-02	3.888
	+	911.07	*	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
	+	969.11		1.342E+00	5.103E-01	5.903E-01	1.394E-01	2.273
TH-234	+	63.29	*	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
	+	92.38		2.165E+00	7.244E-01	6.363E-01	1.143E-01	3.403
U-234	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755

---- Identified Nuclides ----

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	-	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.777E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
NP-237	+	86.50	*	9.922E-01	3.049E-01	2.682E-01	5.900E-02	3.700
		95.87		-1.776E-01	9.002E-01	1.302E+00	3.224E-01	-0.136
U-238	+	63.29	*	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
	+	92.38		2.165E+00	6.374E-01	6.363E-01	5.323E-02	3.403
AM-243	+	74.67	*	3.557E-01	6.128E-02	5.643E-02	4.420E-03	6.304
	+	86.72		3.721E+01	8.471E+00	1.006E+01	7.676E-01	3.697
		117.66		-4.117E+00	3.679E+00	5.731E+00	7.588E-01	-0.718
		142.18		-1.443E+01	1.857E+01	2.939E+01	3.652E+00	-0.491

---- Non-Identified Nuclides ----

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.166E-01	3.652E-01	6.126E-01	4.389E-02	0.190
NA-22		1274.54	*	-1.266E-02	5.865E-02	9.281E-02	5.406E-03	-0.136
NA-24		1368.53	*	1.296E-01	5.865E-02	Half-Life too short		
AL-26		1129.67		1.522E+00	2.382E+00	3.832E+00	2.567E-01	0.397
		1808.65	*	1.366E-02	3.320E-02	5.901E-02	3.386E-03	0.232
TI-44		67.85		2.338E-02	3.792E-02	4.268E-02	3.416E-03	0.548
	+	78.38	*	3.349E-01	4.733E-02	6.027E-02	4.676E-03	5.556
SC-46		889.25	*	-4.500E-03	4.602E-02	7.568E-02	7.601E-03	-0.059
	+	1120.51		1.418E-01	1.224E-01	1.448E-01	9.961E-03	0.980
V-48		944.10		8.416E-01	1.025E+00	1.810E+00	1.751E-01	0.465
		983.50	*	-3.767E-02	8.857E-02	1.402E-01	1.284E-02	-0.269
		1312.09		7.784E-02	1.020E-01	1.774E-01	1.029E-02	0.439
CR-51		320.08	*	-1.964E-01	3.835E-01	6.237E-01	5.516E-02	-0.315
MN-52		744.21		1.451E-01	2.227E-01	3.928E-01	3.050E-02	0.369
		848.13		-1.111E+00	6.911E+00	1.132E+01	1.061E+00	-0.098
		935.52		1.479E-01	2.443E-01	4.258E-01	4.163E-02	0.347
		1246.25		5.166E+00	8.621E+00	1.465E+01	8.520E-01	0.353
		1333.61		-6.294E-01	4.879E+00	7.722E+00	4.469E-01	-0.082
		1434.06	*	-2.205E-01	2.191E-01	3.074E-01	1.800E-02	-0.717
MN-54		834.83	*	-1.537E-02	4.423E-02	7.142E-02	6.543E-03	-0.215
CO-56		846.75	*	3.326E-02	4.446E-02	7.849E-02	7.340E-03	0.424
		977.42		-8.115E-01	3.739E+00	6.036E+00	5.579E-01	-0.134
		1037.82		-1.731E-01	3.966E-01	6.236E-01	5.501E-02	-0.278
		1175.09		-3.591E-01	2.995E+00	4.819E+00	2.796E-01	-0.075
		1238.25		5.116E-02	1.179E-01	1.972E-01	1.219E-02	0.259
		1360.21		-2.827E-01	1.059E+00	1.709E+00	9.930E-02	-0.165
		1771.40		-8.690E-01	4.140E-01	4.663E-01	2.693E-02	-1.864
CO-57		122.06	*	1.160E-02	2.400E-02	4.030E-02	5.718E-03	0.288
		136.48		-3.949E-02	2.196E-01	3.582E-01	4.798E-02	-0.110
CO-58		810.76	*	-2.535E-02	4.128E-02	6.458E-02	5.684E-03	-0.393
FE-59		142.65		-1.086E+00	2.871E+00	4.532E+00	5.612E-01	-0.240
		192.34		7.156E-01	9.900E-01	1.599E+00	2.292E-01	0.448

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1099.22	*	-3.860E-02	1.243E-01	1.976E-01	1.600E-02	-0.195
		1291.56		-3.454E-02	1.664E-01	2.632E-01	1.954E-02	-0.131
CO-60		1173.22		-5.301E-02	6.077E-02	9.108E-02	5.283E-03	-0.582
		1332.49	*	2.061E-02	4.156E-02	7.154E-02	4.140E-03	0.288
ZN-65		1115.52	*	-1.882E-02	1.337E-01	1.829E-01	1.278E-02	-0.103
GE-68		1077.35	*	-2.018E-01	1.534E+00	2.477E+00	1.903E-01	-0.081
AS-73		53.44	*	-6.348E-02	2.244E-01	3.711E-01	2.793E-02	-0.171
AS-74		595.88	*	5.351E-02	1.051E-01	1.770E-01	1.164E-02	0.302
		634.78		1.666E-01	4.150E-01	6.918E-01	4.560E-02	0.241
SE-75		66.05		5.713E-02	2.727E+00	4.046E+00	4.036E-01	0.014
		96.73		-5.441E-01	7.414E-01	1.037E+00	1.448E-01	-0.525
		121.11		5.556E-02	1.285E-01	2.153E-01	3.384E-02	0.258
		136.00		-5.990E-04	4.073E-02	6.691E-02	8.725E-03	-0.009
		198.60		2.418E-01	1.982E+00	3.133E+00	3.387E-01	0.077
		264.65	*	3.660E-04	4.848E-02	7.150E-02	6.826E-03	0.005
		279.53		8.697E-02	1.334E-01	2.041E-01	1.955E-02	0.426
		303.91		3.505E-01	2.515E+00	3.716E+00	4.309E-01	0.094
		400.65		1.648E-02	2.830E-01	4.707E-01	4.307E-02	0.035
BR-77	+	87.88		5.309E+02	1.209E+02	2.104E+02	1.601E+01	2.523
		200.40		-6.693E+01	1.280E+02	2.019E+02	2.016E+01	-0.331
	+	239.00		1.805E+02	2.211E+01	2.828E+01	2.772E+00	6.382
		249.79		-4.866E+01	5.100E+01	7.690E+01	7.457E+00	-0.633
		281.68		1.505E+01	7.591E+01	1.131E+02	1.044E+01	0.133
		297.23		2.639E+02	6.680E+01	9.333E+01	8.332E+00	2.827
		303.76		2.375E+01	1.543E+02	2.282E+02	2.004E+01	0.104
		439.47		-8.551E+00	1.178E+02	1.933E+02	1.178E+01	-0.044
		484.57		-1.259E+02	1.879E+02	2.930E+02	1.847E+01	-0.430
		520.65	*	4.895E+00	8.481E+00	1.445E+01	9.290E-01	0.339
		574.64		-1.565E+02	1.831E+02	2.565E+02	1.681E+01	-0.610
		578.91		5.746E+01	7.323E+01	1.122E+02	7.359E+00	0.512
		585.48		7.986E+02	2.045E+02	3.630E+02	2.384E+01	2.200
		755.35		1.685E+01	1.283E+02	2.170E+02	1.721E+01	0.078
		817.79		-4.075E+00	1.088E+02	1.805E+02	1.605E+01	-0.023
SR-82		698.33		-3.420E+01	4.027E+01	5.983E+01	4.244E+00	-0.572
		776.49	*	-1.139E-01	4.179E-01	6.819E-01	5.626E-02	-0.167
		1395.20		-9.591E+00	1.124E+01	1.640E+01	9.570E-01	-0.585
RB-83		520.41	*	4.089E-02	7.697E-02	1.307E-01	8.407E-03	0.313
		529.64		-3.054E-02	1.203E-01	1.925E-01	1.243E-02	-0.159
		552.65		1.645E-01	2.372E-01	4.055E-01	2.641E-02	0.406
RB-84		881.50	*	1.099E-02	7.781E-02	1.307E-01	1.296E-02	0.084
KR-85		513.99	*	-3.149E+01	1.093E+01	1.468E+01	9.408E-01	-2.145
SR-85		513.99	*	-1.595E-01	5.536E-02	7.435E-02	4.766E-03	-2.145
RB-86		1076.63	*	2.558E-01	9.194E-01	1.544E+00	1.188E-01	0.166
Y-88		898.02		-2.818E-02	5.028E-02	7.888E-02	8.066E-03	-0.357
		1836.01	*	-7.554E-03	3.378E-02	5.229E-02	2.992E-03	-0.144
ZR-88		392.90	*	-4.081E-03	3.419E-02	5.630E-02	3.279E-03	-0.072
Y-91		1204.90	*	5.022E+00	2.293E+01	3.794E+01	2.205E+00	0.132
NB-94		702.63	*	1.758E-02	4.270E-02	7.073E-02	5.061E-03	0.249
		871.10		-7.471E-03	4.055E-02	6.613E-02	6.445E-03	-0.113

---- Non-identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95		765.79	*	3.799E-02	5.188E-02	9.095E-02	7.356E-03	0.418
NB-95M		235.69	*	3.344E-01	1.528E-01	2.376E-01	2.599E-02	1.407
ZR-95		724.18		7.882E-02	1.210E-01	1.872E-01	1.557E-02	0.421
		756.15	*	-2.823E-02	7.706E-02	1.248E-01	1.109E-02	-0.226
NB-97		657.90	*	-8.863E-03	7.706E-02	Half-Life too short		
		1024.50		-4.105E+00	7.706E-02	Half-Life too short		
ZR-97		254.15		-7.037E-01	7.706E-02	Half-Life too short		
		355.39		-6.429E-02	7.706E-02	Half-Life too short		
		507.63	*	-1.043E+00	7.706E-02	Half-Life too short		
		602.52		-1.997E+00	7.706E-02	Half-Life too short		
		1021.30		-5.591E-01	7.706E-02	Half-Life too short		
		1147.95		-4.155E-01	7.706E-02	Half-Life too short		
		1362.66		-2.525E+00	7.706E-02	Half-Life too short		
		1750.46		-8.649E-03	7.706E-02	Half-Life too short		
MO-99		140.51		-6.496E+00	2.045E+01	3.300E+01	9.626E+00	-0.197
		181.06		5.847E+00	1.427E+01	2.077E+01	3.939E+00	0.281
		366.43		-4.658E+01	7.336E+01	1.176E+02	8.066E+00	-0.396
		739.58	*	5.567E-01	9.674E+00	1.628E+01	2.390E+00	0.034
		778.00		1.092E+01	2.865E+01	4.935E+01	4.083E+00	0.221
TC-99M		140.51	*	-5.238E+08	2.865E+01	Half-Life too short		
RH-101		127.23		3.195E-02	3.591E-02	5.406E-02	7.442E-03	0.591
		198.01	*	-2.218E-04	3.652E-02	5.741E-02	5.733E-03	-0.004
		325.23		1.229E-01	2.554E-01	3.861E-01	3.178E-02	0.318
RH-102		418.52		6.526E-02	3.213E-01	5.381E-01	3.218E-02	0.121
		475.06	*	-1.788E-02	3.381E-02	5.345E-02	3.348E-03	-0.335
		631.29		-7.775E-02	6.752E-02	9.812E-02	6.468E-03	-0.792
		697.49		-6.894E-02	9.399E-02	1.413E-01	1.001E-02	-0.488
		766.84		1.453E-01	1.314E-01	2.355E-01	1.909E-02	0.617
		1046.59		-1.813E-01	1.507E-01	2.177E-01	1.787E-02	-0.833
		1112.84		-1.577E-01	3.019E-01	4.277E-01	3.005E-02	-0.369
RU-103		497.08	*	-1.763E-02	4.507E-02	7.159E-02	9.240E-03	-0.246
	+	610.33		8.563E+00	2.577E+00	2.853E+00	4.488E-01	3.002
RH-106		511.85		1.198E-01	2.483E-01	4.584E-01	2.935E-02	0.261
		621.84	*	-1.311E-01	3.991E-01	6.282E-01	7.631E-02	-0.209
		1050.47		3.084E+00	2.849E+00	5.105E+00	4.156E-01	0.604
RU-106		511.85		1.198E-01	2.483E-01	4.584E-01	2.935E-02	0.261
		621.84	*	-1.311E-01	3.988E-01	6.282E-01	4.141E-02	-0.209
		1050.47		3.084E+00	2.849E+00	5.105E+00	4.156E-01	0.604
AG-108M		433.93	*	-3.015E-02	3.851E-02	6.024E-02	3.942E-03	-0.501
		614.37		3.991E-02	4.879E-02	7.451E-02	5.236E-03	0.536
		722.95		-1.029E-02	5.185E-02	7.327E-02	5.743E-03	-0.140
AG-110M		657.75	*	-5.589E-03	4.086E-02	6.509E-02	4.499E-03	-0.086
		677.61		-1.912E-01	3.728E-01	5.724E-01	4.066E-02	-0.334
		706.67		6.406E-02	2.709E-01	4.426E-01	3.318E-02	0.145
		763.93		-8.142E-02	1.964E-01	3.179E-01	2.645E-02	-0.256
		884.67		2.672E-02	5.623E-02	9.716E-02	9.919E-03	0.275
		937.48		-1.835E-01	1.345E-01	1.905E-01	1.911E-02	-0.963
		1384.27		-5.925E-02	1.576E-01	2.485E-01	1.536E-02	-0.238
IN-111		171.28		6.527E-02	7.873E-01	1.287E+00	1.280E-01	0.051

---- Non-Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		245.39	*	6.398E-01	9.370E-01	1.376E+00	1.341E-01	0.465
IN-113M		391.69	*	1.485E-02	4.951E-02	8.361E-02	5.187E-03	0.178
SN-113		391.69	*	1.485E-02	4.951E-02	8.361E-02	5.187E-03	0.178
IN-114M		190.27	*	4.063E-02	2.100E-01	2.940E-01	2.936E-02	-0.138
CD-115		260.90		-9.056E+01	9.745E+01	1.466E+02	1.402E+01	-0.618
		492.35		-7.692E+00	2.844E+01	4.567E+01	2.893E+00	-0.168
		527.90	*	1.871E-01	8.643E+00	1.414E+01	9.120E-01	0.013
SN-117M		156.02		-3.693E-01	2.211E+00	3.590E+00	3.958E-01	-0.103
		158.56	*	-2.087E-02	5.247E-02	8.414E-02	9.046E-03	-0.248
SB-122		563.90	*	3.036E-01	1.771E+00	2.919E+00	1.908E-01	0.104
		692.80		4.298E+01	3.712E+01	6.533E+01	4.582E+00	0.658
I-123		159.00	*	1.907E-01	3.712E+01	Half-Life too short		
		528.96		-2.939E+01	3.712E+01	Half-Life too short		
TE-123M		159.00	*	4.026E-03	2.822E-02	4.640E-02	4.985E-03	0.087
I-124		602.71	*	-6.136E-01	7.920E-01	1.013E+00	6.666E-02	-0.606
		722.78		1.848E-01	4.295E+00	6.250E+00	4.655E-01	0.030
		1325.50		5.853E+00	3.277E+01	5.405E+01	3.130E+00	0.108
		1376.25		2.005E+01	2.491E+01	4.583E+01	2.669E+00	0.438
		1509.49		1.395E+01	1.308E+01	2.505E+01	1.472E+00	0.557
		1691.02		1.789E+00	3.867E+00	6.857E+00	4.002E-01	0.261
SB-124		602.71		-4.260E-02	5.498E-02	7.030E-02	4.629E-03	-0.606
		645.85		-2.950E-03	5.866E-01	9.462E-01	6.861E-02	-0.003
		709.31		-4.589E-01	3.386E+00	5.632E+00	4.084E-01	-0.081
		713.82		7.439E-01	1.922E+00	3.315E+00	3.694E-01	0.224
		722.78		1.859E-02	4.322E-01	6.290E-01	4.820E-02	0.030
	+	968.20		1.363E+01	4.259E+00	7.973E+00	7.469E-01	1.709
		1045.16		-1.898E+00	3.085E+00	4.755E+00	3.913E-01	-0.399
		1325.50		6.290E-01	3.522E+00	5.809E+00	3.364E-01	0.108
		1368.21		1.004E+00	1.702E+00	3.071E+00	3.648E-01	0.327
		1436.60		1.311E+00	3.498E+00	6.172E+00	3.615E-01	0.212
		1691.02	*	4.247E-02	9.180E-02	1.628E-01	1.030E-02	0.261
SB-125		427.89	*	7.741E-02	1.035E-01	1.788E-01	1.121E-02	0.433
	+	463.38		8.052E-01	4.324E-01	5.794E-01	4.126E-02	1.390
		600.56		2.364E-04	2.321E-01	3.541E-01	2.619E-02	0.001
		635.90		1.800E-01	3.280E-01	5.529E-01	4.135E-02	0.325
TE-125M		109.28	*	-5.255E+00	8.683E+00	1.400E+01	1.800E+00	-0.375
I-126		388.63		7.190E-02	2.131E-01	3.607E-01	2.147E-02	0.199
		666.33	*	1.864E-01	2.057E-01	3.546E-01	2.354E-02	0.526
		753.82		7.180E-01	1.520E+00	2.641E+00	2.088E-01	0.272
SB-126		223.80		-4.365E-01	4.067E+00	6.516E+00	6.457E-01	-0.067
	+	278.60		4.610E+00	3.582E+00	4.498E+00	4.179E-01	1.025
	+	296.50		1.146E+01	2.365E+00	3.475E+00	3.108E-01	3.299
		414.70		-9.483E-03	8.189E-02	1.345E-01	8.015E-03	-0.070
		415.30		8.791E-01	6.653E+00	1.110E+01	6.615E-01	0.079
		555.20		-6.839E-01	4.339E+00	6.977E+00	4.548E-01	-0.098
		573.80		-1.054E+00	1.138E+00	1.707E+00	1.119E-01	-0.617
		593.00		-1.597E-01	1.025E+00	1.641E+00	1.079E-01	-0.097
		656.30		-1.150E+00	3.674E+00	5.760E+00	3.790E-01	-0.200
		666.33		7.770E-02	8.573E-02	1.478E-01	9.813E-03	0.526

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		1.052E+00	2.090E+00	3.514E+00	2.376E-01	0.299
		695.00		-4.019E-02	8.740E-02	1.347E-01	9.493E-03	-0.298
		697.00		-1.667E-01	3.031E-01	4.634E-01	3.278E-02	-0.360
		720.50	*	-5.278E-03	1.706E-01	2.461E-01	1.825E-02	-0.021
		856.80		-4.997E-01	5.569E-01	8.523E-01	8.108E-02	-0.586
		989.30		9.833E-02	1.508E+00	2.495E+00	2.266E-01	0.039
		1034.80		3.593E+00	1.032E+01	1.747E+01	1.467E+00	0.206
		1213.00		-2.253E+00	5.422E-00	8.459E+00	4.917E-01	-0.266
SB-127		61.10		1.175E+01	2.241E+01	3.397E+01	3.574E+00	0.346
		252.40		-1.725E+00	3.798E+00	5.812E+00	2.451E+00	-0.297
		290.80		-1.173E+00	2.017E+01	2.944E+01	3.292E+00	-0.040
		411.60		-3.953E+00	1.150E+01	1.861E+01	2.638E+00	-0.212
		444.90		-8.337E+00	9.148E+00	1.407E+01	1.495E+00	-0.593
		473.00		3.707E-01	1.548E+00	2.585E+00	2.867E-01	0.143
		543.00		9.595E+00	1.510E+01	2.575E+01	3.334E+00	0.373
		603.60		-7.668E+00	1.349E+01	1.768E+01	1.922E+00	-0.434
		685.20	*	2.940E-02	1.312E+00	2.114E+00	2.067E-01	0.014
		698.50		-1.279E+01	1.514E+01	2.236E+01	3.308E+00	-0.572
		722.20		-5.752E+00	2.991E+01	4.229E+01	4.191E+00	-0.136
		783.80		-7.198E-01	3.359E+00	5.507E+00	6.573E-01	-0.131
XE-127		57.60		4.715E-01	2.142E+00	3.524E+00	2.837E-01	0.134
		145.22		1.113E+00	7.272E-01	1.216E+00	1.475E-01	0.915
		172.10		-1.032E-01	1.220E-01	1.903E-01	1.893E-02	-0.542
		202.84	*	1.312E-02	5.682E-02	8.147E-02	8.132E-03	0.161
		374.96		-8.530E-02	2.138E-01	3.468E-01	2.263E-02	-0.246
I-131		80.18		1.894E+00	4.196E+00	4.649E+00	3.617E-01	0.407
		284.30		1.115E-02	1.498E+00	2.386E+00	2.291E-01	0.005
		364.48	*	4.219E-02	1.167E-01	1.982E-01	1.487E-02	0.213
		636.97		1.626E+00	1.686E+00	2.928E+00	2.108E-01	0.555
		722.89		-1.817E+00	7.889E+00	1.110E+01	8.330E-01	-0.164
TE-132		49.72		-9.107E-01	3.436E+00	5.071E+00	4.740E-01	-0.180
		111.76		-1.814E+01	2.246E+01	3.579E+01	4.825E+00	-0.507
		116.30		1.091E+01	2.078E+01	3.495E+01	5.005E+00	0.312
		228.16	*	3.969E-01	5.712E-01	9.457E-01	1.537E-01	0.420
BA-133		53.15		2.422E-01	9.584E-01	1.613E+00	1.209E-01	0.150
		79.62		1.906E+00	1.331E+00	1.552E+00	2.289E-01	1.228
		81.00		2.235E-02	9.819E-02	1.068E-01	1.646E-02	0.209
	+	276.40		7.348E-01	5.773E-01	6.867E-01	1.022E-01	1.070
		302.84		1.863E-01	1.752E-01	2.731E-01	3.661E-02	0.682
		356.01	*	-3.234E-03	4.777E-02	6.877E-02	8.493E-03	-0.047
		383.85		-3.846E-02	3.297E-01	5.436E-01	6.016E-02	-0.071
I-133		510.53		9.306E-02	3.297E-01	Half-Life too short		
		529.87	*	-1.122E-03	3.297E-01	Half-Life too short		
		706.58		4.504E-02	3.297E-01	Half-Life too short		
		856.28		-3.508E-01	3.297E-01	Half-Life too short		
		875.33		1.606E-02	3.297E-01	Half-Life too short		
		1236.41		6.005E-02	3.297E-01	Half-Life too short		
		1298.22		7.860E-03	3.297E-01	Half-Life too short		
CS-134		475.35		-9.485E-01	2.224E+00	3.544E+00	2.221E-01	-0.268

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		563.23		2.002E-01	4.069E-01	6.868E-01	4.562E-02	0.292
		569.32		2.673E-01	2.318E-01	4.075E-01	2.729E-02	0.656
		604.70		-1.454E-02	4.526E-02	6.099E-02	4.034E-03	-0.238
	+	795.84	*	1.225E-01	6.064E-02	1.047E-01	9.020E-03	1.169
		801.93		2.311E-01	4.501E-01	7.350E-01	6.388E-02	0.314
		1038.57		-4.615E-02	4.970E+00	8.144E+00	6.788E-01	-0.006
		1167.94		1.610E+00	3.465E+00	5.777E+00	3.416E-01	0.279
		1365.15		1.813E-01	1.277E+00	2.176E+00	1.389E-01	0.083
CS-135		268.24	*	2.232E-01	1.858E-01	2.809E-01	3.005E-02	0.795
I-135		288.45		-6.154E+08	1.858E-01	Half-Life too short		
		417.63		8.830E+08	1.858E-01	Half-Life too short		
		546.56		-1.204E+09	1.858E-01	Half-Life too short		
		836.80		1.314E+09	1.858E-01	Half-Life too short		
		1038.76		5.303E+07	1.858E-01	Half-Life too short		
		1124.00		1.049E+09	1.858E-01	Half-Life too short		
		1131.51		1.588E+08	1.858E-01	Half-Life too short		
		1260.41	*	-1.841E+08	1.858E-01	Half-Life too short		
		1457.56		6.030E+10	1.858E-01	Half-Life too short		
		1678.03		1.517E+08	1.858E-01	Half-Life too short		
		1706.46		-6.926E+08	1.858E-01	Half-Life too short		
		1791.20		4.795E+08	1.858E-01	Half-Life too short		
CS-136		66.91		-1.077E-01	4.716E-01	6.445E-01	9.741E-02	-0.167
	+	86.29		4.150E+00	1.024E+00	1.623E+00	1.982E-01	2.557
		153.22		1.279E+00	6.627E-01	1.138E+00	1.378E-01	1.124
		163.89		-2.404E-02	1.024E+00	1.669E+00	1.844E-01	-0.014
		176.55		2.610E-01	3.395E-01	5.707E-01	5.931E-02	0.457
		273.65		3.953E-02	6.604E-01	6.612E-01	6.544E-02	0.060
		340.57		2.503E-01	1.568E-01	2.504E-01	2.015E-02	0.999
		818.51		-5.757E-03	8.094E-02	1.339E-01	1.193E-02	-0.043
		1048.07	*	1.656E-02	1.286E-01	2.132E-01	1.826E-02	0.078
		1235.34		2.354E-01	7.461E-01	1.238E+00	1.237E-01	0.190
BA-137M		661.65	*	-4.364E-02	4.544E-02	6.735E-02	4.429E-03	-0.648
CS-137		661.65	*	-4.613E-02	4.803E-02	7.119E-02	4.697E-03	-0.648
CE-139		165.85	*	3.217E-03	3.063E-02	5.018E-02	4.983E-03	0.064
BA-140		162.64		2.633E-01	7.203E-01	1.194E+00	1.280E-01	0.221
		304.84		4.658E-02	1.457E+00	2.135E+00	5.992E-01	0.022
		423.70		-1.296E+00	2.012E+00	3.111E+00	9.900E-01	-0.416
		537.32	*	-2.289E-01	3.012E-01	4.476E-01	1.461E-01	-0.511
LA-140	+	328.77		4.621E-01	3.465E-01	5.142E-01	4.442E-02	0.899
		432.53		-1.322E-01	2.267E+00	3.728E+00	2.476E-01	-0.035
		487.03		2.153E-02	1.417E-01	2.351E-01	1.651E-02	0.092
		751.79		-2.308E-01	1.819E+00	2.920E+00	2.592E-01	-0.079
		815.85		2.991E-01	3.391E-01	6.061E-01	5.958E-02	0.494
		867.82		1.764E-01	1.550E+00	2.597E+00	2.623E-01	0.068
		919.63		-6.083E-01	3.349E+00	4.838E+00	5.688E-01	-0.126
		925.24		1.218E+00	1.158E+00	2.098E+00	2.176E-01	0.581
		1596.49	*	1.362E-01	8.765E-02	1.686E-01	9.907E-03	0.808
CE-141		145.44	*	1.070E-01	6.555E-02	1.097E-01	1.342E-02	0.975
CE-143		57.37		-2.268E-05	6.555E-02	Half-Life too short		

---- Non-Identified Nuclides ---

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		231.56		-5.234E-04	6.555E-02	Half-Life too short		
		293.26	*	4.164E-04	6.555E-02	Half-Life too short		
	+	350.59		1.507E-02	6.555E-02	Half-Life too short		
		490.36		-3.408E-04	6.555E-02	Half-Life too short		
		664.57		6.209E-04	6.555E-02	Half-Life too short		
		721.93		-1.061E-04	6.555E-02	Half-Life too short		
CE-144		80.11		1.030E+00	2.127E+00	2.362E+00	1.825E-01	0.436
		133.54	*	1.556E-01	2.383E-01	3.537E-01	6.549E-02	0.440
PM-144		476.78		-4.761E-02	7.958E-02	1.251E-01	9.187E-03	-0.380
		618.01		-3.279E-03	4.047E-02	5.873E-02	4.052E-03	-0.056
		696.49	*	-2.516E-02	4.211E-02	6.413E-02	4.534E-03	-0.392
		778.57		8.863E-01	2.526E+00	4.343E+00	3.598E-01	0.204
PR-144		696.49	*	-1.704E+00	2.852E+00	4.343E+00	3.069E-01	-0.392
		1489.15		-1.311E+00	1.369E+01	2.244E+01	1.318E+00	-0.058
PM-146		453.90	*	1.290E-02	4.516E-02	7.590E-02	6.735E-03	0.170
		633.02		-2.949E-01	1.679E+00	2.668E+00	9.860E-01	-0.111
		735.90		1.982E-01	1.875E-01	3.014E-01	8.538E-02	0.657
		747.13		-6.491E-02	1.035E-01	1.635E-01	2.216E-02	-0.397
ND-147	+	91.11		6.550E-01	2.308E-01	4.169E-01	3.708E-02	1.571
		319.41		-7.412E-01	3.235E+00	5.350E+00	4.490E-01	-0.139
		439.89		-1.598E+00	6.325E+00	1.026E+01	6.258E-01	-0.156
		531.02	*	1.279E-01	6.039E-01	1.001E+00	1.383E-01	0.128
PM-149		285.90	*	4.600E+00	6.543E+01	1.106E+02	1.752E+01	0.042
EU-152		121.78		3.784E-02	7.002E-02	1.177E-01	1.761E-02	0.321
		244.69		3.952E-01	3.981E-01	5.946E-01	5.796E-02	0.665
		344.27	*	8.536E-02	1.428E-01	1.761E-01	1.448E-02	0.485
		443.98		-2.637E-01	1.097E+00	1.779E+00	1.088E-01	-0.148
		778.89		4.474E-02	2.935E-01	4.966E-01	4.115E-02	0.090
		867.32		-2.547E-01	1.005E+00	1.629E+00	1.578E-01	-0.156
		964.01		5.184E-01	4.150E-01	6.645E-01	6.261E-02	0.780
		1085.78		8.819E-02	4.851E-01	8.069E-01	6.076E-02	0.109
		1112.02		-1.777E-01	4.162E-01	6.173E-01	4.348E-02	-0.288
		1407.95		1.745E-01	2.186E-01	3.977E-01	2.324E-02	0.439
GD-153		69.67		-2.915E-01	1.068E+00	1.562E+00	1.242E-01	-0.187
	+	83.37		2.700E+01	1.448E+01	1.859E+01	1.427E+00	1.452
		97.43	*	-8.118E-03	7.631E-02	1.109E-01	1.028E-02	-0.073
		103.18		-1.449E-01	9.662E-02	1.491E-01	1.542E-02	-0.972
EU-154		123.07		8.112E-03	5.118E-02	8.214E-02	1.309E-02	0.099
		247.94		3.738E-01	4.184E-01	6.230E-01	7.676E-02	0.600
		591.81		-3.608E-01	7.427E-01	1.120E+00	1.148E-01	-0.322
		723.30		-3.240E-03	2.197E-01	3.175E-01	2.695E-02	-0.010
		756.87		-2.331E-01	8.372E-01	1.366E+00	1.572E-01	-0.171
		873.19		2.389E-02	3.423E-01	5.713E-01	7.476E-02	0.042
		996.32		-1.625E-01	4.590E-01	7.196E-01	1.291E-01	-0.226
		1004.76		4.566E-01	2.772E-01	5.089E-01	6.013E-02	0.897
		1274.45	*	-2.240E-02	1.636E-01	2.609E-01	2.440E-02	-0.086
EU-155		48.70		3.426E-01	5.056E-01	7.793E-01	5.431E-02	0.440
		60.01		6.222E-01	2.200E+00	3.310E+00	2.741E-01	0.188
	+	86.54		4.068E-01	9.274E-02	1.567E-01	1.211E-02	2.597

---- Non-Identified Nuclides ---

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		105.31	*	1.489E-01	1.001E-01	1.728E-01	1.872E-02	0.862
TB-160	+	86.79		1.075E+00	2.447E-01	4.096E-01	3.124E-02	2.625
		197.04		-3.937E-01	6.219E-01	9.476E-01	9.463E-02	-0.416
		215.65		-1.173E-01	7.782E-01	1.246E+00	1.239E-01	-0.094
		298.57		2.710E-01	1.691E-01	2.053E-01	1.827E-02	1.320
		879.36	*	-7.617E-02	1.624E-01	2.501E-01	2.472E-02	-0.305
		962.29		8.289E-01	7.202E-01	1.181E+00	1.116E-01	0.702
		966.15		1.180E+00	3.462E-01	6.104E-01	5.734E-02	1.934
		1177.93		-1.680E-01	4.920E-01	7.767E-01	4.507E-02	-0.216
		1271.85		8.195E-01	9.100E-01	1.598E+00	9.285E-02	0.513
HO-166M		80.57		1.134E-01	2.708E-01	2.994E-01	2.312E-02	0.379
		184.41		1.127E-01	4.468E-02	7.010E-02	6.995E-03	1.608
		280.46		-5.856E-03	1.022E-01	1.496E-01	1.385E-02	-0.039
		410.95		5.395E-02	2.851E-01	4.771E-01	2.832E-02	0.113
		711.68	*	3.307E-02	7.377E-02	1.277E-01	9.306E-03	0.259
		752.31		4.393E-02	3.014E-01	5.106E-01	4.026E-02	0.086
		810.29		-3.268E-02	6.168E-02	9.731E-02	8.537E-03	-0.336
TM-171		51.35		1.363E+00	7.590E+00	1.203E+01	8.750E-01	0.113
		52.39		1.228E+00	3.982E+00	6.718E+00	4.971E-01	0.183
		59.40		1.149E+01	1.126E+01	1.744E+01	1.446E+00	0.658
		66.72	*	3.895E-01	1.667E+01	2.472E+01	1.987E+00	0.016
LU-176	+	88.36		8.014E-01	1.824E-01	3.239E-01	2.484E-02	2.475
		201.83		-1.796E-02	3.282E-02	4.977E-02	4.968E-03	-0.361
		306.84	*	1.648E-02	2.950E-02	4.491E-02	3.911E-03	0.367
		401.10		-1.212E+00	7.569E+00	1.242E+01	7.298E-01	-0.098
LU-177		112.95		4.393E-01	1.368E+00	2.288E+00	2.806E-01	0.192
	+	208.36	*	2.001E+00	1.571E+00	1.861E+00	1.855E-01	1.075
LU-177M		52.97		1.697E-01	4.288E-01	7.252E-01	5.417E-02	0.234
		54.07		-1.334E-01	2.434E-01	3.985E-01	3.030E-02	-0.335
		61.30		6.882E-01	7.248E-01	1.115E+00	9.172E-02	0.617
		121.62		1.541E-01	3.588E-01	6.014E-01	8.471E-02	0.256
		147.16		-3.929E-01	6.730E-01	1.074E+00	1.282E-01	-0.366
		171.86		-3.710E-01	5.019E-01	7.877E-01	7.834E-02	-0.471
		218.09		-2.664E-01	9.219E-01	1.465E+00	1.456E-01	-0.182
		268.79		9.504E-01	9.627E-01	1.435E+00	1.356E-01	0.662
		319.02		-3.892E-02	2.660E-01	4.421E-01	3.714E-02	-0.088
		367.43		3.846E-02	1.026E+00	1.711E+00	1.167E-01	0.022
		413.65	*	-9.151E-02	2.033E-01	3.270E-01	1.946E-02	-0.280
HF-181		56.28		-1.861E-01	2.992E-01	4.941E-01	3.894E-02	-0.377
		57.53		4.053E-02	1.802E-01	2.965E-01	2.385E-02	0.137
		65.20		2.043E-01	5.195E-01	7.823E-01	6.324E-02	0.261
		133.02		4.715E-02	7.391E-02	1.101E-01	1.460E-02	0.428
		136.25		-1.149E-01	4.722E-01	7.682E-01	9.970E-02	-0.150
		345.85		1.195E-01	2.819E-01	3.403E-01	2.585E-02	0.351
		482.03	*	1.024E-02	4.851E-02	8.078E-02	5.084E-03	0.127
W-181		56.28		-7.364E-02	1.186E-01	1.958E-01	1.544E-02	-0.376
		57.53		1.608E-02	7.145E-02	1.176E-01	9.456E-03	0.137
		65.20	*	8.038E-02	2.044E-01	3.078E-01	2.488E-02	0.261
TA-182		67.75		3.195E-02	7.846E-02	1.006E-01	8.055E-03	0.318

---- Non Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		100.10		1.372E-01	1.542E-01	2.635E-01	2.572E-02	0.521
		152.43		8.287E-01	3.606E-01	6.232E-01	7.108E-02	1.330
		222.10		-1.285E-01	3.734E-01	5.910E-01	5.861E-02	-0.217
		1001.68		1.510E-01	2.590E+00	4.279E+00	3.809E-01	0.035
	+	1121.28		3.927E-01	3.390E-01	4.000E-01	2.746E-02	0.982
		1189.05		-1.982E-01	4.106E-01	6.390E-01	3.710E-02	-0.310
		1221.42	*	-3.087E-02	2.379E-01	3.812E-01	2.216E-02	-0.081
		1230.97		1.410E-01	6.215E-01	1.026E+00	5.965E-02	0.137
RE-183		57.98		2.768E-02	7.484E-02	1.190E-01	9.639E-03	0.233
		59.32		5.610E-02	4.533E-02	7.078E-02	5.859E-03	0.793
		67.20		-2.887E-02	1.280E-01	1.750E-01	1.404E-02	-0.165
		162.32	*	1.926E-02	1.098E-01	1.806E-01	1.866E-02	0.107
	+	208.81		2.003E+00	1.573E+00	1.880E+00	1.874E-01	1.066
		291.72		-1.460E-01	1.058E+00	1.534E+00	1.387E-01	-0.095
RE-184		57.98		1.027E-01	2.776E-01	4.414E-01	3.576E-02	0.233
		59.32		2.079E-01	1.680E-01	2.623E-01	2.172E-02	0.793
		67.20		-1.070E-01	4.747E-01	6.490E-01	5.206E-02	-0.165
		161.27		-1.960E-01	3.632E-01	5.780E-01	6.040E-02	-0.339
		216.55		5.611E-02	2.781E-01	4.529E-01	4.504E-02	0.124
		252.85	*	-4.696E-02	2.434E-01	3.854E-01	3.724E-02	-0.122
		318.01		-2.385E-01	4.680E-01	7.613E-01	6.416E-02	-0.313
		792.07		9.288E-01	1.409E+00	2.167E+00	1.840E-01	0.429
		903.28		-2.651E-01	1.322E+00	1.912E+00	1.938E-01	-0.139
		920.93		2.020E-02	5.336E-01	8.661E-01	8.612E-02	0.023
OS-185		59.72		7.002E-02	1.269E-01	1.931E-01	1.601E-02	0.363
		61.14		4.768E-02	7.807E-02	1.188E-01	9.778E-03	0.401
		69.30		-3.813E-02	2.019E-01	2.762E-01	2.199E-02	-0.138
		592.07		-1.568E+00	2.997E+00	4.504E+00	2.961E-01	-0.348
		646.12	*	-5.625E-03	4.973E-02	7.945E-02	5.234E-03	-0.071
		717.42		-5.016E-01	1.020E+00	1.644E+00	1.211E-01	-0.305
		874.81		2.496E-01	6.575E-01	1.128E+00	1.106E-01	0.221
		880.27		-7.825E-02	9.012E-01	1.444E+00	1.429E-01	-0.054
RE-188		155.03	*	-8.114E-02	1.822E-01	2.922E-01	3.253E-02	-0.278
		477.96		1.552E+00	3.508E+00	5.933E+00	3.724E-01	0.262
		633.10		-5.070E-01	3.356E+00	5.354E+00	3.530E-01	-0.095
W-188	+	63.58		4.137E+01	3.514E+01	4.433E+01	3.608E+00	0.933
		227.08		5.435E+00	1.348E+01	2.212E+01	2.187E+00	0.246
		290.67	*	-5.825E-02	8.516E+00	1.248E+01	1.131E+00	-0.005
IR-192	+	295.96		9.264E-01	1.914E-01	2.837E-01	2.557E-02	3.266
		308.46		1.247E-02	1.044E-01	1.719E-01	1.498E-02	0.073
		316.51	*	1.827E-02	3.609E-02	6.208E-02	5.269E-03	0.294
		468.07		-5.614E-02	8.505E-02	1.126E-01	7.959E-03	-0.498
		604.41		-1.228E-01	5.991E-01	8.180E-01	9.628E-02	-0.150
		612.46		2.219E+00	9.748E-01	1.639E+00	1.343E-01	1.353
AU-195		65.12		4.103E-02	9.476E-02	1.429E-01	1.156E-02	0.287
		66.83		1.455E-03	5.513E-02	8.177E-02	6.568E-03	0.018
	+	75.70		1.146E+00	1.974E-01	3.519E-01	2.749E-02	3.257
		98.88	*	3.245E-01	2.036E-01	3.331E-01	3.176E-02	0.974
	+	129.76		4.343E+00	3.461E+00	5.067E+00	6.867E-01	0.857

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-200		367.94	*	1.324E-05	3.461E+00	Half-Life too short		
		579.30		2.705E-03	3.461E+00	Half-Life too short		
		828.27		1.905E-03	3.461E+00	Half-Life too short		
		1205.75		-4.093E-04	3.461E+00	Half-Life too short		
TL-201		68.90		1.182E+00	2.702E+00	3.469E+00	2.765E-01	0.341
		70.82		-1.580E-01	1.414E+00	2.081E+00	1.649E-01	-0.076
		80.30		1.535E+00	3.887E+00	4.288E+00	3.312E-01	0.358
		135.34		2.302E+00	2.038E+01	3.365E+01	4.395E+00	0.068
		167.43	*	6.535E-01	5.542E+00	9.083E+00	9.017E-01	0.072
TL-202		68.90		1.294E-01	2.959E-01	3.799E-01	3.029E-02	0.341
		70.82		-1.725E-02	1.544E-01	2.273E-01	1.801E-02	-0.076
		80.30		1.677E-01	4.246E-01	4.684E-01	3.619E-02	0.358
		439.56	*	-5.862E-03	7.468E-02	1.225E-01	7.470E-03	-0.048
HG-203		70.83		-7.467E-02	7.024E-01	1.034E+00	1.362E-01	-0.072
		72.87		1.984E+00	4.831E-01	7.619E-01	9.697E-02	2.604
		82.60		7.662E-01	9.978E-01	1.295E+00	1.706E-01	0.592
		279.20	*	4.274E-02	4.912E-02	7.612E-02	7.237E-03	0.561
BI-207		72.80		5.398E-01	1.286E-01	2.230E-01	1.756E-02	2.421
	+	74.97		6.385E-01	1.100E-01	1.743E-01	1.364E-02	3.664
	+	84.90		3.503E-01	1.879E-01	2.617E-01	2.003E-02	1.339
		569.67		5.192E-02	3.553E-02	6.374E-02	4.171E-03	0.815
		1063.62	*	4.937E-02	6.961E-02	1.207E-01	9.558E-03	0.409
		1770.23		-1.395E-01	6.471E-01	8.499E-01	4.909E-02	-0.164
TL-207		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
TL-208	+	277.35		7.437E-01	5.816E-01	7.213E-01	9.253E-02	1.031
		510.84		1.098E-01	2.339E-01	4.301E-01	4.519E-02	0.255
	+	583.14	*	5.139E-01	9.278E-02	1.408E-01	1.036E-02	3.650
		860.37		5.904E-01	3.771E-01	6.896E-01	6.998E-02	0.856
PO-209		260.50		-9.244E+00	1.037E+01	1.566E+01	1.498E+00	-0.590
		262.80		-1.256E+01	2.755E+01	4.277E+01	4.079E+00	-0.294
		896.60	*	1.204E+00	9.165E+00	1.535E+01	1.560E+00	0.078
PB-211		404.84	*	-4.830E-01	1.107E+00	1.716E+00	1.070E+00	-0.281
		427.08		1.838E-01	2.314E+00	3.838E+00	2.373E+00	0.048
		831.96		-9.104E-02	1.469E+00	2.429E+00	1.524E+00	-0.037
BI-212	+	727.18	*	1.242E+00	6.504E-01	7.468E-01	6.774E-02	1.663
		785.46		9.706E-01	2.057E+00	3.558E+00	2.985E-01	0.273
		1620.62		6.641E-01	1.419E+00	2.515E+00	1.476E-01	0.264
PO-215		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652

---- Non-Identified Nuclides ----

Nuclide	Line Idad	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
RN-219	+	271.23		4.635E-01	2.969E-01	4.345E-01	4.772E-02	1.067
		401.81	*	8.609E-02	4.595E-01	7.698E-01	1.050E-01	0.112
RN-220		549.76	*	1.630E+01	3.238E+01	5.461E+01	3.553E+00	0.298
RA-223		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
AC-227		79.80		1.838E+00	1.688E+00	1.914E+00	4.052E-01	0.960
		236.00		1.216E+00	3.433E-01	5.209E-01	6.835E-02	2.334
		256.20	*	3.798E-01	4.187E-01	6.962E-01	1.109E-01	0.546
		286.10		-1.837E-01	1.574E+00	2.635E+00	3.572E-01	-0.070
	+	299.80		3.028E+00	2.208E+00	2.688E+00	4.735E-01	1.126
		304.40		1.412E-01	2.273E+00	3.339E+00	6.179E-01	0.042
		334.20		-2.957E-01	3.245E+00	3.675E+00	7.029E-01	-0.080
TH-227		79.80		1.838E+00	1.689E+00	1.914E+00	4.105E-01	0.960
	+	94.00		8.366E+00	2.978E+00	3.310E+00	7.213E-01	2.527
		236.00		1.216E+00	3.374E-01	5.209E-01	6.272E-02	2.334
		256.20	*	3.798E-01	4.203E-01	6.962E-01	1.292E-01	0.546
		286.10		-1.837E-01	1.585E+00	2.635E+00	2.646E+00	-0.070
	+	299.80		3.028E+00	2.208E+00	2.688E+00	4.735E-01	1.126
		304.40		1.412E-01	2.273E+00	3.339E+00	6.179E-01	0.042
		334.20		-2.957E-01	3.245E+00	3.675E+00	7.029E-01	-0.080
TH-229	+	85.43		3.458E-01	1.855E-01	2.799E-01	2.140E-02	1.236
	+	88.47		2.795E-01	9.799E-02	1.863E-01	1.432E-02	1.501
		100.00		1.415E-01	1.616E-01	2.761E-01	2.690E-02	0.512
		193.63	*	-3.027E-01	5.410E-01	8.527E-01	8.516E-02	-0.355
		210.97		1.635E+00	9.375E-01	1.444E+00	1.439E-01	1.132
PA-231		283.67	*	1.936E-01	1.734E+00	2.682E+00	4.162E-01	0.072
	+	301.29		1.211E+00	8.703E-01	1.109E+00	1.375E-01	1.092
TH-231		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	-	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
U-231	-	84.21		8.225E-00	4.411E+00	5.743E+00	4.401E-01	1.432
	+	92.29		6.832E+00	2.011E+00	2.840E+00	2.372E-01	2.406
		95.87	*	-1.664E-01	8.426E-01	1.220E+00	1.096E-01	-0.136
		108.00		-1.520E+00	1.616E+00	2.567E+00	2.894E-01	-0.592
PA-233	-	75.28		1.863E+01	3.988E+00	5.390E+00	8.037E-01	3.457
	+	86.59		6.615E+00	2.256E+00	2.541E+00	6.738E-01	2.603
	+	300.12		8.442E-01	6.107E-01	7.511E-01	1.128E-01	1.124
		311.98	*	-3.097E-02	6.751E-02	1.103E-01	9.741E-03	-0.281
		340.50		1.455E+00	8.784E-01	1.315E+00	3.097E-01	1.106
		398.62		3.781E-01	2.294E+00	3.839E+00	9.931E-01	0.098
		415.76		1.450E-01	1.887E+00	3.137E+00	6.472E-01	0.046
PA-234	-	63.00		1.214E+00	1.043E+00	1.301E+00	1.985E-01	0.933
		94.67		5.993E-01	1.765E-01	2.718E-01	3.399E-02	2.205
		98.44		1.270E-01	1.112E-01	1.347E-01	7.536E-02	0.942
		99.86		3.826E-01	4.100E-01	7.015E-01	6.816E-02	0.545
		111.00		-1.396E-03	1.754E-01	2.902E-01	4.232E-02	-0.005
		131.20		-4.701E-02	1.250E-01	1.766E-01	2.371E-02	-0.266
		152.70		8.097E-01	3.740E-01	6.120E-01	1.138E-01	1.323
	+	186.00		5.365E+00	2.601E+00	2.625E+00	8.298E-01	2.044
		226.40		6.260E-02	4.379E-01	7.097E-01	9.984E-02	0.088
		227.20		1.933E-01	4.610E-01	7.569E-01	7.485E-02	0.255
		248.90		-2.340E-01	8.986E-01	1.364E+00	3.117E-01	-0.172
		293.70		5.084E+00	1.287E+00	1.751E+00	3.063E-01	2.904
		369.80		-1.571E-02	9.716E-01	1.615E+00	3.409E-01	-0.010
		568.70		1.072E+00	1.180E+00	2.043E+00	1.337E-01	0.525
		569.50		4.199E-01	3.176E-01	5.647E-01	3.695E-02	0.744
		574.00		-1.775E+00	1.806E+00	2.605E+00	1.706E-01	-0.682
		699.00		-6.843E-01	8.843E-01	1.312E+00	2.419E-01	-0.522
		706.10		-2.334E-02	1.364E+00	2.186E+00	9.694E-01	-0.011
		733.00		-3.118E-01	4.964E-01	6.556E-01	1.431E-01	-0.476
		742.81		-6.274E-01	1.578E+00	2.459E+00	1.650E+00	-0.255
	+	796.30		2.383E+00	1.328E+00	2.045E+00	5.529E-01	1.165
		805.60		-3.318E-01	1.078E+00	1.738E+00	5.331E-01	-0.191
		819.60		4.286E-01	1.433E+00	2.432E+00	9.266E-01	0.176
		826.30		-5.309E-01	1.011E+00	1.559E+00	6.986E-01	-0.341
		831.60		-1.637E-01	7.463E-01	1.216E+00	3.646E-01	-0.135
		876.40		5.389E-02	9.613E-01	1.599E+00	1.646E+00	0.034
		880.51		-6.138E-03	3.308E-01	5.337E-01	5.284E-02	-0.011
		883.24		1.513E-01	3.329E-01	5.490E-01	3.700E-01	0.276
		899.00		1.472E-01	9.909E-01	1.659E+00	7.306E-01	0.089
		925.00		8.616E-01	1.306E+00	2.291E+00	2.267E-01	0.376
		926.50		3.323E-02	1.980E-01	3.321E-01	8.547E-02	0.100
		946.00	*	-3.621E-02	3.874E-01	6.339E-01	1.221E-01	-0.057
		949.00		8.393E-02	5.445E-01	9.106E-01	8.753E-02	0.092
		980.50		1.233E-01	9.189E-01	1.531E+00	1.409E-01	0.081
		1394.10		-8.524E-01	1.306E+00	1.758E+00	1.139E+00	-0.485

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234M		766.41		2.380E+01	2.792E+01	3.805E+01	2.915E+01	0.626
		1001.03	*	-6.815E+00	8.578E+00	1.306E+01	1.489E+00	-0.522
U-235	+	89.95		2.805E+00	1.288E+00	1.603E+00	4.918E-01	1.750
	+	93.35		2.603E+00	1.034E+00	1.060E+00	2.968E-01	2.455
		105.00		1.432E+00	1.055E+00	1.680E+00	5.125E-01	0.852
		143.76	*	4.600E-02	2.239E-01	3.617E-01	7.078E-02	0.127
		163.35		2.424E-01	4.786E-01	7.947E-01	1.578E-01	0.305
	+	185.71		1.987E-01	7.568E-02	9.680E-02	9.661E-03	2.053
		205.31		7.530E-04	6.413E-01	9.061E-01	1.788E-01	0.001
NP-236		94.67		4.569E-01	1.277E-01	2.063E-01	1.810E-02	2.214
		98.44		9.597E-02	6.529E-02	1.019E-01	9.630E-03	0.942
		111.00		-1.056E-03	1.327E-01	2.195E-01	2.605E-02	-0.005
		160.31	*	-3.885E-02	8.125E-02	1.297E-01	1.370E-02	-0.299
NP-239		99.55		2.155E-01	1.386E-01	2.342E-01	2.262E-02	0.920
		117.00	*	-1.434E-02	1.800E-01	2.965E-01	3.885E-02	-0.048
	+	209.75		1.599E+00	1.255E+00	1.504E+00	1.499E-01	1.063
		228.18		1.643E-01	2.376E-01	3.950E-01	3.903E-02	0.416
	+	277.60		3.587E-01	2.787E-01	3.501E-01	3.258E-02	1.024
		334.30		-1.596E-01	1.839E+00	2.084E+00	1.660E-01	-0.077
AM-241		59.54	*	3.767E-02	6.697E-02	1.019E-01	9.119E-03	0.370
CM-243		99.55		2.217E-01	1.426E-01	2.410E-01	2.328E-02	0.920
		103.76	*	2.693E-02	8.766E-02	1.470E-01	1.537E-02	0.183
		117.00		-1.476E-02	1.852E-01	3.050E-01	3.996E-02	-0.048
	+	209.75		1.576E+00	1.237E+00	1.482E+00	1.477E-01	1.063
		228.18		1.660E-01	2.401E-01	3.990E-01	3.944E-02	0.416
	+	277.60		3.615E-01	2.809E-01	3.529E-01	3.285E-02	1.024
CM-247	+	278.00		1.487E+00	1.156E+00	1.441E+00	1.340E-01	1.032
		287.40		-4.939E-01	1.287E+00	2.124E+00	1.939E-01	-0.233
		402.60	*	4.753E-03	4.086E-02	6.818E-02	4.012E-03	0.070
CF-249		252.85		-1.770E-01	9.176E-01	1.453E+00	1.404E-01	-0.122
		333.44		7.567E-03	2.731E-01	2.681E-01	2.142E-02	0.028
		387.95	*	7.755E-03	4.413E-02	7.403E-02	4.428E-03	0.105
CF-251		176.60	*	9.421E-02	1.243E-01	2.089E-01	2.081E-02	0.451
		227.00		1.383E-01	4.098E-01	6.704E-01	6.631E-02	0.206
		285.00		1.150E+00	1.880E+00	3.182E+00	2.919E-01	0.361
ANH-511		511.00	*	3.056E-02	5.027E-02	9.305E-02	5.955E-03	0.328

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                            DETECTOR DATA                              *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G23234/001  *
* Acquisition date :  6-JUL-2009 11:10:14 Detector SN#     :            *
* Detector ID        : GAM05               Sensitivity     : 5.000     *
* Geometry           : CAN                 Energy tolerance: 1.500     *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000    *
* Elapsed real time:     0 02:00:01.71     Half life ratio :  8.000    *
*************************************************************************
*                                                                       *
*                             SAMPLE DATA                               *
*                                                                       *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID     *
* Sample ID          : G232347001           Analyst initials: MXR1      *
* Batch Number       : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                               QC DATA                                 *
* Standard Weight  :    0.00000                                         *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :             *
* MSD DPM          :     0.000            MSD Isotope     :             *
* LCS DPM          :     0.000            LCS Isotope     :             *
* LCSD DPM         :     0.000            LCSD Isotope    :             *
*************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.407E+01	2.890E+00	3.715E-01	0.000E+00
CD-109	3.432E+00	7.656E-01	9.704E-01	0.000E+00
SN-126	3.379E-01	7.538E-02	9.541E-02	0.000E+00
BI-210	1.748E+00	8.574E-01	8.962E-01	0.000E+00
PB-210	1.748E+00	8.574E-01	8.962E-01	0.000E+00
PO-210	1.748E+00	8.547E-01	8.962E-01	0.000E+00
BI-211	3.397E+00	5.390E-01	3.458E-01	0.000E+00
PB-212	1.573E+00	2.011E-01	9.622E-02	0.000E+00
PO-212	1.573E+00	2.011E-01	9.622E-02	0.000E+00
BI-214	8.092E-01	2.140E-01	1.264E-01	0.000E+00
PB-214	1.182E+00	1.970E-01	1.206E-01	0.000E+00
PO-214	1.182E+00	1.970E-01	1.206E-01	0.000E+00
PO-216	1.573E+00	2.011E-01	9.622E-02	0.000E+00
PO-218	1.182E+00	1.970E-01	1.206E-01	0.000E+00
RA-224	4.114E+00	1.675E+00	1.095E+00	0.000E+00
RA-226	8.092E-01	2.140E-01	1.264E-01	0.000E+00
AC-228	1.541E+00	3.999E-01	2.519E-01	0.000E+00
RA-228	1.541E+00	3.999E-01	2.519E-01	0.000E+00
TH-228	1.573E+00	2.011E-01	9.621E-02	0.000E+00
TH-230	8.092E-01	2.140E-01	1.264E-01	0.000E+00
TH-232	1.541E+00	3.999E-01	2.519E-01	0.000E+00
TH-234	1.041E+00	8.815E-01	1.041E+00	0.000E+00
U-234	8.092E-01	2.140E-01	1.264E-01	0.000E+00
NP-237	9.922E-01	2.988E-01	2.793E-01	0.000E+00
U-238	1.041E+00	8.815E-01	1.041E+00	0.000E+00
AM-243	3.557E-01	6.006E-02	5.889E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.166E-01	3.579E-01	6.227E-01	0.000E+00	NOT IDENT.

NA-22	-1.266E-02	5.748E-02	9.296E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.001E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.366E-02	3.254E-02	5.879E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.638E-02	6.286E-02	0.000E+00	FAIL ABUN
SC-46	-4.500E-03	4.510E-02	7.621E-02	0.000E+00	FAIL ABUN
V-48	-3.767E-02	8.680E-02	1.409E-01	0.000E+00	NOT IDENT.
CR-51	-1.964E-01	3.758E-01	6.376E-01	0.000E+00	NOT IDENT.
MN-52	-2.205E-01	2.147E-01	3.074E-01	0.000E+00	NOT IDENT.
MN-54	-1.537E-02	4.335E-02	7.199E-02	0.000E+00	NOT IDENT.
CO-56	3.326E-02	4.357E-02	7.911E-02	0.000E+00	NOT IDENT.
CO-57	1.160E-02	2.352E-02	4.177E-02	0.000E+00	NOT IDENT.
CO-58	-2.535E-02	4.045E-02	6.513E-02	0.000E+00	NOT IDENT.
FE-59	-3.860E-02	1.218E-01	1.983E-01	0.000E+00	NOT IDENT.
CO-60	2.061E-02	4.072E-02	7.161E-02	0.000E+00	NOT IDENT.
ZN-65	-1.882E-02	1.310E-01	1.836E-01	0.000E+00	NOT IDENT.
GE-68	-2.018E-01	1.503E+00	2.488E+00	0.000E+00	NOT IDENT.
AS-73	-6.348E-02	2.200E-01	3.891E-01	0.000E+00	NOT IDENT.
AS-74	5.351E-02	1.030E-01	1.793E-01	0.000E+00	NOT IDENT.
SE-75	3.660E-04	4.751E-02	7.330E-02	0.000E+00	NOT IDENT.
BR-77	4.895E+00	8.312E+00	1.466E+01	0.000E+00	FAIL ABUN
SR-82	-1.139E-01	4.096E-01	6.881E-01	0.000E+00	NOT IDENT.
RB-83	4.089E-02	7.543E-02	1.327E-01	0.000E+00	NOT IDENT.
RB-84	1.099E-02	7.626E-02	1.316E-01	0.000E+00	NOT IDENT.
KR-85	-3.149E-01	1.071E+01	1.490E+01	0.000E+00	NOT IDENT.
SR-85	-1.595E-01	5.425E-02	7.548E-02	0.000E+00	NOT IDENT.
RB-86	2.558E-01	9.010E-01	1.550E+00	0.000E+00	NOT IDENT.
Y-88	-7.554E-03	3.310E-02	5.208E-02	0.000E+00	NOT IDENT.
ZR-88	-4.081E-03	3.350E-02	5.739E-02	0.000E+00	NOT IDENT.
Y-91	5.022E+00	2.247E+01	3.804E+01	0.000E+00	NOT IDENT.
NB-94	1.758E-02	4.185E-02	7.148E-02	0.000E+00	NOT IDENT.
NB-95	3.799E-02	5.084E-02	9.180E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.498E-01	2.440E-01	0.000E+00	NOT IDENT.
ZR-95	-2.823E-02	7.551E-02	1.260E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.652E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.004E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.567E-01	9.480E+00	1.644E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.616E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.218E-04	3.579E-02	5.909E-02	0.000E+00	NOT IDENT.
RH-102	-1.788E-02	3.314E-02	5.433E-02	0.000E+00	NOT IDENT.
RU-103	-1.763E-02	4.417E-02	7.272E-02	0.000E+00	FAIL ABUN
RH-106	-1.311E-01	3.911E-01	6.360E-01	0.000E+00	NOT IDENT.
RU-106	-1.311E-01	3.909E-01	6.360E-01	0.000E+00	NOT IDENT.
AG-108M	-3.015E-02	3.774E-02	6.131E-02	0.000E+00	NOT IDENT.
AG-110M	-5.589E-03	4.005E-02	6.585E-02	0.000E+00	NOT IDENT.
IN-111	6.398E-01	9.182E-01	1.413E+00	0.000E+00	NOT IDENT.
IN-113M	1.485E-02	4.852E-02	8.523E-02	0.000E+00	NOT IDENT.
SN-113	1.485E-02	4.852E-02	8.523E-02	0.000E+00	NOT IDENT.
IN-114M	-4.063E-02	2.058E-01	3.028E-01	0.000E+00	NOT IDENT.
CD-115	1.871E-01	8.470E+00	1.435E+01	0.000E+00	NOT IDENT.
SN-117M	-2.087E-02	5.142E-02	8.689E-02	0.000E+00	NOT IDENT.
SB-122	3.036E-01	1.736E+00	2.960E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.310E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	4.026E-03	2.766E-02	4.791E-02	0.000E+00	NOT IDENT.
I-124	-6.136E-01	7.762E-01	1.026E+00	0.000E+00	NOT IDENT.
SB-124	4.247E-02	8.997E-02	1.623E-01	0.000E+00	FAIL ABUN
SB-125	7.741E-02	1.014E-01	1.821E-01	0.000E+00	FAIL ABUN
TE-125M	-5.255E+00	8.509E+00	1.454E+01	0.000E+00	NOT IDENT.
I-126	1.864E-01	2.016E-01	3.586E-01	0.000E+00	NOT IDENT.
SB-126	-5.278E-03	1.672E-01	2.486E-01	0.000E+00	FAIL ABUN
SB-127	2.940E-02	1.286E+00	2.137E+00	0.000E+00	NOT IDENT.
XE-127	1.312E-02	5.568E-02	8.384E-02	0.000E+00	NOT IDENT.
I-131	4.219E-02	1.143E-01	2.023E-01	0.000E+00	NOT IDENT.
TE-132	3.969E-01	5.598E-01	9.716E-01	0.000E+00	NOT IDENT.
BA-133	-3.234E-03	4.682E-02	7.020E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.747E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.943E-02	1.057E-01	0.000E+00	FAIL ABUN
CS-135	2.232E-01	1.821E-01	2.879E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.769E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.656E-02	1.260E-01	2.142E-01	0.000E+00	FAIL ABUN
BA-137M	-4.364E-02	4.453E-02	6.813E-02	0.000E+00	NOT IDENT.
CS-137	-4.613E-02	4.707E-02	7.202E-02	0.000E+00	NOT IDENT.
CE-139	3.217E-03	3.001E-02	5.179E-02	0.000E+00	NOT IDENT.
BA-140	-2.289E-01	2.951E-01	4.541E-01	0.000E+00	NOT IDENT.
LA-140	1.362E-01	8.590E-02	1.683E-01	0.000E+00	FAIL ABUN
CE-141	1.070E-01	6.423E-02	1.135E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.346E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.556E-01	2.336E-01	3.662E-01	0.000E+00	NOT IDENT.
PM-144	-2.516E-02	4.127E-02	6.482E-02	0.000E+00	NOT IDENT.

PR-142	-1.724E-03	2.795E+00	4.390E+00	0.000E+00	NOT IDENT.
PM-146	1.290E-02	4.426E-02	7.720E-02	0.000E+00	NOT IDENT.
ND-147	1.279E-01	5.918E-01	1.016E+00	0.000E+00	FAIL ABUN
PM-149	4.600E+00	6.412E+01	1.132E+02	0.000E+00	NOT IDENT.
EU-152	8.536E-02	1.399E-01	1.798E-01	0.000E+00	NOT IDENT.
GD-153	-8.118E-03	7.478E-02	1.153E-01	0.000E+00	FAIL ABUN
EU-154	-2.240E-02	1.603E-01	2.614E-01	0.000E+00	NOT IDENT.
EU-155	1.489E-01	9.805E-02	1.795E-01	0.000E+00	FAIL ABUN
TB-160	-7.617E-02	1.591E-01	2.520E-01	0.000E+00	FAIL ABUN
HO-166M	3.307E-02	7.229E-02	1.291E-01	0.000E+00	NOT IDENT.
TM-171	3.895E-01	1.634E+01	2.584E+01	0.000E+00	NOT IDENT.
LU-176	1.648E-02	2.891E-02	4.594E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.540E+00	1.914E+00	0.000E+00	FAIL ABUN
LU-177M	-9.151E-02	1.992E-01	3.331E-01	0.000E+00	NOT IDENT.
HF-181	1.024E-02	4.754E-02	8.209E-02	0.000E+00	NOT IDENT.
W-181	8.038E-02	2.003E-01	3.218E-01	0.000E+00	NOT IDENT.
TA-182	-3.087E-02	2.331E-01	3.820E-01	0.000E+00	FAIL ABUN
RE-183	1.926E-02	1.076E-01	1.864E-01	0.000E+00	FAIL ABUN
RE-184	-4.696E-02	2.385E-01	3.954E-01	0.000E+00	NOT IDENT.
OS-185	-5.625E-03	4.873E-02	8.040E-02	0.000E+00	NOT IDENT.
RE-188	-8.114E-02	1.786E-01	3.019E-01	0.000E+00	NOT IDENT.
W-188	-5.825E-02	8.345E+00	1.278E+01	0.000E+00	FAIL ABUN
IR-192	1.827E-02	3.536E-02	6.348E-02	0.000E+00	FAIL ABUN
AU-195	3.245E-01	1.996E-01	3.463E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.423E+02	0.000E+00	0.000E+00	SHORT HLTF
TL-201	6.535E-01	5.431E+00	9.373E+00	0.000E+00	NOT IDENT.
TL-202	-5.862E-03	7.319E-02	1.247E-01	0.000E+00	NOT IDENT.
HG-203	4.274E-02	4.814E-02	7.797E-02	0.000E+00	NOT IDENT.
BI-207	4.937E-02	6.822E-02	1.212E-01	0.000E+00	FAIL ABUN
TL-207	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
TL-208	0.000E+00	9.093E-02	1.427E-01	0.000E+00	FAIL ABUN
PO-209	1.204E+00	8.982E+00	1.545E+01	0.000E+00	NOT IDENT.
PB-211	-4.830E-01	1.085E+00	1.749E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.374E-01	7.543E-01	0.000E+00	FAIL ABUN
PO-215	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
RN-219	8.609E-02	4.503E-01	7.844E-01	0.000E+00	FAIL ABUN
RN-220	1.630E+01	3.173E+01	5.540E+01	0.000E+00	NOT IDENT.
RA-223	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
AC-227	3.798E-01	4.104E-01	7.141E-01	0.000E+00	FAIL ABUN
TH-227	3.798E-01	4.119E-01	7.141E-01	0.000E+00	FAIL ABUN
TH-229	-3.027E-01	5.302E-01	8.781E-01	0.000E+00	FAIL ABUN
PA-231	1.936E-01	1.699E+00	2.747E+00	0.000E+00	FAIL ABUN
TH-231	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
U-231	-1.664E-01	8.258E-01	1.269E+00	0.000E+00	FAIL ABUN
PA-233	-3.097E-02	6.616E-02	1.128E-01	0.000E+00	FAIL ABUN
PA-234	-3.621E-02	3.796E-01	6.378E-01	0.000E+00	FAIL ABUN
PA-234M	-6.815E+00	8.406E+00	1.313E+01	0.000E+00	NOT IDENT.
U-235	4.600E-02	2.195E-01	3.741E-01	0.000E+00	FAIL ABUN
NP-236	-3.885E-02	7.962E-02	1.339E-01	0.000E+00	NOT IDENT.
NP-239	-1.434E-02	1.764E-01	3.075E-01	0.000E+00	FAIL ABUN
AM-241	3.767E-02	6.563E-02	1.067E-01	0.000E+00	NOT IDENT.
CM-243	2.693E-02	8.591E-02	1.527E-01	0.000E+00	FAIL ABUN
CM-247	4.753E-03	4.004E-02	6.947E-02	0.000E+00	FAIL ABUN
CF-249	7.755E-03	4.325E-02	7.548E-02	0.000E+00	NOT IDENT.
CF-251	9.421E-02	1.218E-01	2.154E-01	0.000E+00	NOT IDENT.
ANH-511	3.056E-02	4.927E-02	9.448E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 13:11:37.02

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:14.
Sample ID         : G232347001           Sample quantity  : 1.26580E-02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.71  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1230	10.67*	1.004E+00	3.407E+01	3.407E+01	8.66
CD-109	88.03	331	3.72*	7.858E+00	3.361E+00	3.432E+00	22.76
SN-126	64.28	108	9.60	8.064E+00	4.121E-01	4.121E-01	85.86
	86.94	331	8.90	7.858E+00	1.405E+00	1.405E+00	46.42
	87.57	331	37.00*	7.858E+00	3.379E-01	3.379E-01	22.76
BI-210	46.50	181	4.05*	7.605E+00	1.746E+00	1.748E+00	50.06
PB-210	46.50	181	4.05*	7.605E+00	1.746E+00	1.748E+00	50.06
PO-210	46.50	181	4.05*	7.605E+00	1.746E+00	1.748E+00	49.90
BI-211	72.87	------	1.27	8.052E+00	------	Line Not Found	------
	351.07	521	12.94*	3.515E+00	3.397E+00	3.397E+00	16.19
PB-212	74.81	636	10.70	8.037E+00	2.194E+00	2.194E+00	19.60
	77.11	883	18.00	8.012E+00	1.815E+00	1.815E+00	14.13
	87.30	331	8.00	7.858E+00	1.563E+00	1.563E+00	24.86
	238.63	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.09	75	3.41	4.003E+00	1.634E+00	1.634E+00	71.57
PO-212	74.81	636	10.70	8.037E+00	2.194E+00	2.194E+00	19.60
	77.11	883	18.00	8.012E+00	1.815E+00	1.815E+00	14.13
	87.30	331	8.00	7.858E+00	1.563E+00	1.563E+00	24.86
	115.19	------	0.60	7.241E+00	------	Line Not Found	------
	238.63	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.09	75	3.41	4.003E+00	1.634E+00	1.634E+00	71.57
BI-214	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98
	768.36	------	5.04	1.760E+00	------	Line Not Found	------
	934.06	------	3.21	1.477E+00	------	Line Not Found	------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------	Line Not Found	------
	1377.67	------	4.11	1.054E+00	------	Line Not Found	------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
PB-214	74.81	636	6.21	8.037E+00	3.781E+00	3.781E+00	18.75
	77.11	883	10.50	8.012E+00	3.111E+00	3.111E+00	16.06
	87.30	331	4.67	7.858E+00	2.677E+00	2.677E+00	24.03
	241.98	259	7.49	4.734E+00	2.170E+00	2.170E+00	41.92

Nuclide Type:

Nuclide	Energy	Area	%Abr	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	322	19.20	4.056E+00	1.228E+00	1.228E+00	21.56
	351.92	521	37.20*	3.515E+00	1.182E+00	1.182E+00	17.01
PO-214	74.81	636	6.21	8.037E+00	3.781E+00	3.781E+00	18.75
	77.11	883	10.50	8.012E-00	3.111E+00	3.111E+00	16.06
	87.30	331	4.67	7.858E+00	2.677E+00	2.677E+00	24.03
	241.98	259	7.49	4.734E+00	2.170E+00	2.170E+00	41.92
	295.21	322	19.20	4.056E+00	1.228E+00	1.228E+00	21.56
	351.92	521	37.20*	3.515E+00	1.182E+00	1.182E+00	17.01
PO-216	74.81	636	10.70	8.037E+00	2.194E+00	2.194E+00	19.60
	77.11	883	18.00	8.012E+00	1.815E+00	1.815E+00	14.13
	87.30	331	8.00	7.858E+00	1.563E+00	1.563E+00	24.86
	238.63	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.09	75	3.41	4.003E+00	1.634E+00	1.634E+00	71.57
PO-218	74.81	636	6.21	8.037E+00	3.781E+00	3.781E+00	18.75
	77.11	883	10.50	8.012E+00	3.111E+00	3.111E+00	16.06
	87.30	331	4.67	7.858E+00	2.677E+00	2.677E+00	24.03
	241.98	259	7.49	4.734E+00	2.170E+00	2.170E+00	41.92
	295.21	322	19.20	4.056E+00	1.228E+00	1.228E+00	21.56
	351.92	521	37.20*	3.515E+00	1.182E+00	1.182E+00	17.01
RA-224	240.98	259	3.95*	4.734E+00	4.114E+00	4.114E+00	41.55
RA-226	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98
	768.36	------	5.04	1.760E+00	------ Line Not Found		------
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	------	4.11	1.054E+00	------ Line Not Found		------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
AC-228	338.32	208	11.40	3.633E+00	1.492E+00	1.492E+00	51.81
	911.07	217	27.70*	1.510E+00	1.541E+00	1.541E+00	26.47
	969.11	107	16.60	1.430E+00	1.342E+00	1.342E+00	38.04
RA-228	338.32	208	11.40	3.633E+00	1.492E+00	1.492E+00	51.81
	911.07	217	27.70*	1.510E+00	1.541E+00	1.541E+00	26.47
	969.11	107	16.60	1.430E+00	1.342E+00	1.342E+00	38.04
TH-228	84.40	152	1.21	7.904E+00	4.715E+00	4.715E+00	54.54
	238.60	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.10	75	3.41	4.003E+00	1.634E+00	1.634E+00	92.34
TH-230	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98
	768.36	------	5.04	1.760E+00	------ Line Not Found		------
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	------	4.11	1.054E+00	------ Line Not Found		------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
TH-232	338.32	208	11.40	3.633E+00	1.492E+00	1.492E+00	32.49
	911.07	217	27.70*	1.510E+00	1.541E+00	1.541E+00	26.47
	969.11	107	16.60	1.430E+00	1.342E+00	1.342E+00	38.04
TH-234	63.29	108	3.80*	8.064E+00	1.041E+00	1.041E+00	86.40
	92.38	306	5.41	7.748E+00	2.165E+00	2.165E+00	33.46
U-234	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	768.36	------	5.04	1.760E+00	------	Line Not Found	------
	934.06	------	3.21	1.477E+00	------	Line Not Found	------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------	Line Not Found	------
	1377.67	------	4.11	1.054E+00	------	Line Not Found	------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
NP-237	86.50	331	12.60*	7.858E+00	9.922E-01	9.922E-01	30.73
	95.87	------	2.60	7.687E+00	------	Line Not Found	------
U-238	63.29	108	3.80*	8.064E+00	1.041E+00	1.041E+00	86.40
	92.38	306	5.41	7.748E+00	2.165E+00	2.165E+00	29.44
AM-243	74.67	636	66.00*	8.037E+00	3.557E-01	3.557E-01	17.23
	86.72	331	0.34	7.858E+00	3.721E+01	3.721E+01	22.76
	117.66	------	0.55	7.181E+00	------	Line Not Found	------
	142.18	------	0.13	6.593E+00	------	Line Not Found	------

Flag: "*" - Keyline

Sample ID : G23234700. Acquisition date : 6-JUL-2009 11:10:14

Total number of lines in spectrum 31
Number of unidentified lines 1
Number of lines tentatively identified by NID 30 96.77%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.407E+01	3.407E+01	0.295E+01	8.66	
CD-109	464.00D	1.02	3.361E-00	3.432E+00	0.781E+00	22.76	
SN-126	1.00E+05Y	1.00	3.379E-01	3.379E-01	0.769E-01	22.76	
BI-210	22.26Y	1.00	1.746E+00	1.748E+00	0.875E+00	50.06	
PB-210	22.26Y	1.00	1.746E+00	1.748E+00	0.875E+00	50.06	
PO-210	22.26Y	1.00	1.746E+00	1.748E+00	0.872E+00	49.90	
BI-211	7.04E+08Y	1.00	3.397E-00	3.397E+00	0.550E+00	16.19	
PB-212	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
PO-212	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
BI-214	1600.00Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
PB-214	1600.00Y	1.00	1.182E+00	1.182E+00	0.201E+00	17.01	
PO-214	1600.00Y	1.00	1.182E+00	1.182E+00	0.201E+00	17.01	
PO-216	1.41E+10Y	1.00	1.573E-00	1.573E+00	0.205E+00	13.04	
PO-218	1600.00Y	1.00	1.182E+00	1.182E+00	0.201E+00	17.01	
RA-224	1.41E+10Y	1.00	4.114E+00	4.114E+00	1.709E+00	41.55	
RA-226	1600.00Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
AC-228	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.408E+00	26.47	
RA-228	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.408E+00	26.47	
TH-228	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
TH-230	4.47E+09Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
TH-232	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.408E+00	26.47	
TH-234	4.47E+09Y	1.00	1.041E+00	1.041E+00	0.900E+00	86.40	
U-234	4.47E+09Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
NP-237	2.14E+06Y	1.00	9.922E-01	9.922E-01	3.049E-01	30.73	
U-238	4.47E+09Y	1.00	1.041E+00	1.041E+00	0.900E+00	86.40	
AM-243	7380.00Y	1.00	3.557E-01	3.557E-01	0.613E-01	17.23	
	Total Activity :		7.164E+01	7.172E+01			

Grand Total Activity : 7.164E+01 7.172E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G23234F001 Acquisition date : 6-JUL-2009 11:10:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.67	200	324	1.15	180.48	166	27	2.77E-02	34.2	7.81E+00	T
0	129.07	78	284	1.22	259.25	255	8	1.08E-02	78.5	6.90E+00	T
0	186.04	205	297	1.48	373.14	368	11	2.84E-02	36.8	5.66E+00	T
0	209.35	91	314	0.82	419.74	413	11	1.27E-02	77.9	5.23E+00	T
0	270.50	72	135	1.21	541.97	538	9	1.00E-02	63.1	4.34E+00	T
0	277.56	73	190	1.31	556.07	551	11	1.01E-02	77.1	4.26E+00	T
0	328.19	56	116	1.43	657.29	654	9	7.74E-03	74.5	3.72E+00	T
0	463.44	77	81	1.43	927.61	922	13	1.07E-02	53.2	2.77E+00	T
0	583.01	330	75	1.43	1166.56	1159	16	4.58E-02	16.5	2.26E+00	T
0	728.33	91	84	1.73	1456.95	1448	17	1.27E-02	51.6	1.85E+00	T
0	795.12	53	36	2.58	1590.40	1586	9	7.43E-03	48.8	1.71E+00	T
0	1592.44	22	4	1.95	3183.01	3179	8	3.10E-03	52.3	9.35E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 13:11:42.52

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1 *
* Acquisition date  : 6-JUL-2009 11:10:14.  Detector SN#     :             *
* Detector ID       : GAM05                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.71          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232347001            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.26580E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00.5MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.407E+01	2.949E+00	3.717E-01	2.312E-02	91.653
CD-109	3.432E+00	7.813E-01	9.319E-01	7.096E-02	3.683
SN-126	3.379E-01	7.692E-02	9.162E-02	6.978E-03	3.688
BI-210	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PB-210	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PO-210	1.748E+00	8.722E-01	8.531E-01	5.738E-02	2.049
BI-211	3.397E+00	5.500E-01	3.387E-01	2.684E-02	10.031
PB-212	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
PO-212	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
BI-214	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
PB-214	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
PO-214	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
PO-216	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
PO-218	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
RA-224	4.114E+00	1.709E+00	1.067E+00	1.044E-01	3.857
RA-226	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
AC-228	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
RA-228	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.573E+00	2.052E-01	9.371E-02	1.010E-02	16.783
TH-230	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
TH-232	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
TH-234	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
U-234	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
NP-237	9.922E-01	3.049E-01	2.682E-01	5.900E-02	3.700
U-238	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
AM-243	3.557E-01	6.128E-02	5.643E-02	4.420E-03	6.304

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.166E-01		3.652E-01	6.126E-01	4.389E-02	0.190
NA-22	-1.266E-02		5.865E-02	9.281E-02	5.406E-03	-0.136
NA-24	1.296E-01		1.021E-01	Half-Life too short		
AL-26	1.366E-02		3.320E-02	5.901E-02	3.386E-03	0.232
TI-44	3.349E-01	+	4.733E-02	6.027E-02	4.676E-03	5.556
SC-46	-4.500E-03		4.602E-02	7.568E-02	7.601E-03	-0.059
V-48	-3.767E-02		8.857E-02	1.402E-01	1.284E-02	-0.269
CR-51	-1.964E-01		3.835E-01	6.237E-01	5.516E-02	-0.315
MN-52	-2.205E-01		2.191E-01	3.074E-01	1.800E-02	-0.717
MN-54	-1.537E-02		4.423E-02	7.142E-02	6.543E-03	-0.215
CO-56	3.326E-02		4.446E-02	7.849E-02	7.340E-03	0.424
CO-57	1.160E-02		2.400E-02	4.030E-02	5.718E-03	0.288
CO-58	-2.535E-02		4.128E-02	6.458E-02	5.684E-03	-0.393
FE-59	-3.860E-02		1.243E-01	1.976E-01	1.600E-02	-0.195
CO-60	2.061E-02		4.156E-02	7.154E-02	4.140E-03	0.288
ZN-65	-1.882E-02		1.337E-01	1.829E-01	1.278E-02	-0.103
GE-68	-2.018E-01		1.534E+00	2.477E+00	1.903E-01	-0.081
AS-73	-6.348E-02		2.244E-01	3.711E-01	2.793E-02	-0.171
AS-74	5.351E-02		1.051E-01	1.770E-01	1.164E-02	0.302
SE-75	3.660E-04		4.848E-02	7.150E-02	6.826E-03	0.005
BR-77	4.895E+00		8.481E+00	1.445E+01	9.290E-01	0.339
SR-82	-1.139E-01		4.179E-01	6.819E-01	5.626E-02	-0.167
RB-83	4.089E-02		7.697E-02	1.307E-01	8.407E-03	0.313
RB-84	1.099E-02		7.781E-02	1.307E-01	1.296E-02	0.084
KR-85	-3.149E+01		1.093E+01	1.468E+01	9.408E-01	-2.145
SR-85	-1.595E-01		5.536E-02	7.435E-02	4.766E-03	-2.145
RB-86	2.558E-01		9.194E-01	1.544E+00	1.188E-01	0.166
Y-88	-7.554E-03		3.378E-02	5.229E-02	2.992E-03	-0.144
ZR-88	-4.081E-03		3.419E-02	5.630E-02	3.279E-03	-0.072
Y-91	5.022E+00		2.293E+01	3.794E+01	2.205E+00	0.132
NB-94	1.758E-02		4.270E-02	7.073E-02	5.061E-03	0.249
NB-95	3.799E-02		5.188E-02	9.095E-02	7.356E-03	0.418
NB-95M	3.344E-01		1.528E-01	2.376E-01	2.599E-02	1.407
ZR-95	-2.823E-02		7.706E-02	1.248E-01	1.109E-02	-0.226
NB-97	-8.863E-03		1.863E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	-1.043E+00		4.084E-01	Half-Life too short		
MO-99	5.567E-01		9.674E+00	1.628E+01	2.390E+00	0.034
TC-99M	-5.238E-08		8.243E+08	Half-Life too short		
RH-101	-2.218E-04		3.652E-02	5.741E-02	5.733E-03	-0.004
RH-102	-1.788E-02		3.381E-02	5.345E-02	3.348E-03	-0.335
RU-103	-1.763E-02		4.507E-02	7.159E-02	9.240E-03	-0.246
RH-106	-1.311E-01		3.991E-01	6.282E-01	7.631E-02	-0.209
RU-106	-1.311E-01		3.988E-01	6.282E-01	4.141E-02	-0.209
AG-108M	-3.015E-02		3.851E-02	6.024E-02	3.942E-03	-0.501
AG-110M	-5.589E-03		4.086E-02	6.509E-02	4.499E-03	-0.086
IN-111	6.398E-01		9.370E-01	1.376E+00	1.341E-01	0.465
IN-113M	1.485E-02		4.951E-02	8.361E-02	5.187E-03	0.178
SN-113	1.485E-02		4.951E-02	8.361E-02	5.187E-03	0.178
IN-114M	-4.063E-02		2.100E-01	2.940E-01	2.936E-02	-0.138
CD-115	1.871E-01		8.643E+00	1.414E+01	9.120E-01	0.013
SN-117M	-2.087E-02		5.247E-02	8.414E-02	9.046E-03	-0.248
SB-122	3.036E-01		1.771E+00	2.919E+00	1.908E-01	0.104
I-123	1.907E-01		6.685E-01	Half-Life too short		
TE-123M	4.026E-03		2.822E-02	4.640E-02	4.985E-03	0.087
I-124	-6.136E-01		7.920E-01	1.013E+00	6.666E-02	-0.606
SB-124	4.247E-02		9.180E-02	1.628E-01	1.030E-02	0.261
SB-125	7.741E-02		1.035E-01	1.788E-01	1.121E-02	0.433
TE-125M	-5.255E+00		8.683E+00	1.400E+01	1.800E+00	-0.375
I-126	1.864E-01		2.057E-01	3.546E-01	2.354E-02	0.526
SB-126	-5.278E-03		1.706E-01	2.461E-01	1.825E-02	-0.021
SB-127	2.940E-02		1.312E+00	2.114E+00	2.067E-01	0.014
XE-127	1.312E-02		5.682E-02	8.147E-02	8.132E-03	0.161
I-131	4.219E-02		1.167E-01	1.982E-01	1.487E-02	0.213
TE-132	3.969E-01		5.712E-01	9.457E-01	1.537E-01	0.420
BA-133	-3.234E-03		4.777E-02	6.877E-02	8.493E-03	-0.047
I-133	-1.122E-03		1.401E-03	Half-Life too short		
CS-134	1.225E-01	+	6.064E-02	1.047E-01	9.020E-03	1.169
CS-135	2.232E-01		1.858E-01	2.809E-01	3.005E-02	0.795
I-135	-1.841E+08		1.923E+08	Half-Life too short		
CS-136	1.656E-02		1.286E-01	2.132E-01	1.826E-02	0.078
BA-137M	-4.364E-02		4.544E-02	6.735E-02	4.429E-03	-0.648
CS-137	-4.613E-02		4.803E-02	7.119E-02	4.697E-03	-0.648
CE-139	3.217E-03		3.063E-02	5.018E-02	4.983E-03	0.064
BA-140	-2.289E-01		3.012E-01	4.476E-01	1.461E-01	-0.511
LA-140	1.362E-01		8.765E-02	1.686E-01	9.907E-03	0.808
CE-141	1.070E-01		6.555E-02	1.097E-01	1.342E-02	0.975
CE-143	4.164E-04		6.866E-05	Half-Life too short		
CE-144	1.556E-01		2.383E-01	3.537E-01	6.549E-02	0.440
PM-144	-2.516E-02		4.211E-02	6.413E-02	4.534E-03	-0.392
PR-144	-1.704E+00		2.852E+00	4.343E+00	3.069E-01	-0.392
PM-146	1.290E-02		4.516E-02	7.590E-02	6.735E-03	0.170
ND-147	1.279E-01		6.039E-01	1.001E+00	1.383E-01	0.128
PM-149	4.600E+00		6.543E+01	1.106E+02	1.752E+01	0.042

--- Non Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	8.536E-02		1.428E-01	1.761E-01	1.448E-02	0.485
GD-153	-8.118E-03		7.631E-02	1.109E-01	1.028E-02	-0.073
EU-154	-2.240E-02		1.636E-01	2.609E-01	2.440E-02	-0.086
EU-155	1.489E-01		1.001E-01	1.728E-01	1.872E-02	0.862
TB-160	-7.617E-02		1.624E-01	2.501E-01	2.472E-02	-0.305
HO-166M	3.307E-02		7.377E-02	1.277E-01	9.306E-03	0.259
TM-171	3.895E-01		1.667E+01	2.472E+01	1.987E+00	0.016
LU-176	1.648E-02		2.950E-02	4.491E-02	3.911E-03	0.367
LU-177	2.001E+00	+	1.571E+00	1.861E+00	1.855E-01	1.075
LU-177M	-9.151E-02		2.033E-01	3.270E-01	1.946E-02	-0.280
HF-181	1.024E-02		4.851E-02	8.078E-02	5.084E-03	0.127
W-181	8.038E-02		2.044E-01	3.078E-01	2.488E-02	0.261
TA-182	-3.087E-02		2.379E-01	3.812E-01	2.216E-02	-0.081
RE-183	1.926E-02		1.098E-01	1.806E-01	1.866E-02	0.107
RE-184	-4.696E-02		2.434E-01	3.854E-01	3.724E-02	-0.122
OS-185	-5.625E-03		4.973E-02	7.945E-02	5.234E-03	-0.071
RE-188	-8.114E-02		1.822E-01	2.922E-01	3.253E-02	-0.278
W-188	-5.825E-02		8.516E+00	1.248E+01	1.131E+00	-0.005
IR-192	1.827E-02		3.609E-02	6.208E-02	5.269E-03	0.294
AU-195	3.245E-01		2.036E-01	3.331E-01	3.176E-02	0.974
TL-200	1.324E-05		1.236E-04	Half-Life too short		
TL-201	6.535E-01		5.542E+00	9.083E+00	9.017E-01	0.072
TL-202	-5.862E-03		7.468E-02	1.225E-01	7.470E-03	-0.048
HG-203	4.274E-02		4.912E-02	7.612E-02	7.237E-03	0.561
BI-207	4.937E-02		6.961E-02	1.207E-01	9.558E-03	0.409
TL-207	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
TL-208	5.139E-01	+	9.278E-02	1.408E-01	1.036E-02	3.650
PO-209	1.204E+00		9.165E+00	1.535E+01	1.560E+00	0.078
PB-211	-4.830E-01		1.107E+00	1.716E+00	1.070E+00	-0.281
BI-212	1.242E+00	+	6.504E-01	7.468E-01	6.774E-02	1.663
PO-215	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
RN-219	8.609E-02		4.595E-01	7.698E-01	1.050E-01	0.112
RN-220	1.630E+01		3.238E+01	5.461E+01	3.553E+00	0.298
RA-223	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
AC-227	3.798E-01		4.187E-01	6.962E-01	1.109E-01	0.546
TH-227	3.798E-01		4.203E-01	6.962E-01	1.292E-01	0.546
TH-229	-3.027E-01		5.410E-01	8.527E-01	8.516E-02	-0.355
PA-231	1.936E-01		1.734E+00	2.682E+00	4.162E-01	0.072
TH-231	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
U-231	-1.664E-01		8.426E-01	1.220E+00	1.096E-01	-0.136
PA-233	-3.097E-02		6.751E-02	1.103E-01	9.741E-03	-0.281
PA-234	-3.621E-02		3.874E-01	6.339E-01	1.221E-01	-0.057
PA-234M	-6.815E+00		8.578E+00	1.306E+01	1.489E+00	-0.522
U-235	4.600E-02		2.239E-01	3.617E-01	7.078E-02	0.127
NP-236	-3.885E-02		8.125E-02	1.297E-01	1.370E-02	-0.299
NP-239	-1.434E-02		1.800E-01	2.965E-01	3.885E-02	-0.048
AM-241	3.767E-02		6.697E-02	1.019E-01	9.119E-03	0.370
CM-243	2.693E-02		8.766E-02	1.470E-01	1.537E-02	0.183

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-247	4.753E-03		4.086E-02	6.818E-02	4.012E-03	0.070
CF-249	7.755E-03		4.413E-02	7.403E-02	4.428E-03	0.105
CF-251	9.421E-02		1.243E-01	2.089E-01	2.081E-02	0.451
ANH-511	3.056E-02		5.027E-02	9.305E-02	5.955E-03	0.328

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232347001           *
* Acquisition date  :  6-JUN-2009 11:10:14 Detector SN#     :               *
* Detector ID       : GAM05                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.71      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232347001           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.407E+01	2.890E+00	1.859E-01	1.474E+00
CD-109	3.432E+00	7.656E-01	4.855E-01	3.906E-01
SN-126	3.379E-01	7.538E-02	4.773E-02	3.846E-02
BI-210	1.748E+00	8.574E-01	4.484E-01	4.374E-01
PB-210	1.748E+00	8.574E-01	4.484E-01	4.374E-01
PO-210	1.748E+00	8.547E-01	4.484E-01	4.361E-01
BI-211	3.397E+00	5.390E-01	1.730E-01	2.750E-01
PB-212	1.573E+00	2.011E-01	4.814E-02	1.026E-01
PO-212	1.573E+00	2.011E-01	4.814E-02	1.026E-01
BI-214	8.092E-01	2.140E-01	6.324E-02	1.092E-01
PB-214	1.182E+00	1.970E-01	6.031E-02	1.005E-01
PO-214	1.182E+00	1.970E-01	6.031E-02	1.005E-01
PO-216	1.573E+00	2.011E-01	4.814E-02	1.026E-01
PO-218	1.182E+00	1.970E-01	6.031E-02	1.005E-01
RA-224	4.114E+00	1.675E+00	5.479E-01	8.547E-01
RA-226	8.092E-01	2.140E-01	6.324E-02	1.092E-01
AC-228	1.541E+00	3.999E-01	1.260E-01	2.040E-01
RA-228	1.541E+00	3.999E-01	1.260E-01	2.040E-01
TH-228	1.573E+00	2.011E-01	4.814E-02	1.026E-01
TH-230	8.092E-01	2.140E-01	6.324E-02	1.092E-01
TH-232	1.541E+00	3.999E-01	1.260E-01	2.040E-01
TH-234	1.041E+00	8.815E-01	5.206E-01	4.498E-01
U-234	8.092E-01	2.140E-01	6.324E-02	1.092E-01
NP-237	9.922E-01	2.988E-01	1.397E-01	1.524E-01
U-238	1.041E+00	8.815E-01	5.206E-01	4.498E-01
AM-243	3.557E-01	6.006E-02	2.946E-02	3.064E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.166E-01	3.579E-01	3.115E-01	1.826E-01 NOT IDENT.

NA-22	-1.266E-02	5.748E-02	4.651E-02	2.933E-02	NOT IDENT.
NA-24	1.296E+05	2.001E+05	0.000E+00	1.021E+05	SHORT HLIF
AL-26	1.366E-02	3.254E-02	2.941E-02	1.660E-02	NOT IDENT.
TI-44	3.349E-01	4.638E-02	3.145E-02	2.366E-02	FAIL ABUN
SC-46	-4.500E-03	4.510E-02	3.813E-02	2.301E-02	FAIL ABUN
V-48	-3.767E-02	8.680E-02	7.051E-02	4.428E-02	NOT IDENT.
CR-51	-1.964E-01	3.758E-01	3.190E-01	1.917E-01	NOT IDENT.
MN-52	-2.205E-01	2.147E-01	1.538E-01	1.095E-01	NOT IDENT.
MN-54	-1.537E-02	4.335E-02	3.602E-02	2.212E-02	NOT IDENT.
CO-56	3.326E-02	4.357E-02	3.958E-02	2.223E-02	NOT IDENT.
CO-57	1.160E-02	2.352E-02	2.090E-02	1.200E-02	NOT IDENT.
CO-58	-2.535E-02	4.045E-02	3.259E-02	2.064E-02	NOT IDENT.
FE-59	-3.860E-02	1.218E-01	9.923E-02	6.214E-02	NOT IDENT.
CO-60	2.061E-02	4.072E-02	3.583E-02	2.078E-02	NOT IDENT.
ZN-65	-1.882E-02	1.310E-01	9.185E-02	6.684E-02	NOT IDENT.
GE-68	-2.018E-01	1.503E+00	1.245E+00	7.670E-01	NOT IDENT.
AS-73	-6.348E-02	2.200E-01	1.946E-01	1.122E-01	NOT IDENT.
AS-74	5.351E-02	1.030E-01	8.971E-02	5.257E-02	NOT IDENT.
SE-75	3.660E-04	4.751E-02	3.667E-02	2.424E-02	NOT IDENT.
BR-77	4.895E+00	8.312E+00	7.337E+00	4.241E+00	FAIL ABUN
SR-82	-1.139E-01	4.096E-01	3.442E-01	2.090E-01	NOT IDENT.
RB-83	4.089E-02	7.543E-02	6.640E-02	3.848E-02	NOT IDENT.
RB-84	1.099E-02	7.626E-02	6.584E-02	3.891E-02	NOT IDENT.
KR-85	-3.149E+01	1.071E+01	7.455E+00	5.464E+00	NOT IDENT.
SR-85	-1.595E-01	5.425E-02	3.776E-02	2.768E-02	NOT IDENT.
RB-86	2.558E-01	9.010E-01	7.756E-01	4.597E-01	NOT IDENT.
Y-88	-7.554E-03	3.310E-02	2.606E-02	1.689E-02	NOT IDENT.
ZR-88	-4.081E-03	3.350E-02	2.871E-02	1.709E-02	NOT IDENT.
Y-91	5.022E+00	2.247E+01	1.903E+01	1.146E+01	NOT IDENT.
NB-94	1.758E-02	4.185E-02	3.576E-02	2.135E-02	NOT IDENT.
NB-95	3.799E-02	5.084E-02	4.593E-02	2.594E-02	NOT IDENT.
NB-95M	3.344E-01	1.498E-01	1.221E-01	7.641E-02	NOT IDENT.
ZR-95	-2.823E-02	7.551E-02	6.303E-02	3.853E-02	NOT IDENT.
NB-97	-8.863E+03	3.652E+04	0.000E+00	1.863E+04	SHORT HLIF
ZR-97	-1.043E+06	8.004E+05	0.000E+00	4.084E+05	SHORT HLIF
MO-99	5.567E-01	9.480E+00	8.226E+00	4.837E+00	NOT IDENT.
TC-99M	-5.238E+14	1.616E+15	0.000E+00	8.243E+14	SHORT HLIF
RH-101	-2.218E-04	3.579E-02	2.957E-02	1.826E-02	NOT IDENT.
RH-102	-1.788E-02	3.314E-02	2.718E-02	1.691E-02	NOT IDENT.
RU-103	-1.763E-02	4.417E-02	3.638E-02	2.253E-02	FAIL ABUN
RH-106	-1.311E-01	3.911E-01	3.182E-01	1.995E-01	NOT IDENT.
RU-106	-1.311E-01	3.909E-01	3.182E-01	1.994E-01	NOT IDENT.
AG-108M	-3.015E-02	3.774E-02	3.067E-02	1.925E-02	NOT IDENT.
AG-110M	-5.589E-03	4.005E-02	3.294E-02	2.043E-02	NOT IDENT.
IN-111	6.398E-01	9.182E-01	7.067E-01	4.685E-01	NOT IDENT.
IN-113M	1.485E-02	4.852E-02	4.264E-02	2.476E-02	NOT IDENT.
SN-113	1.485E-02	4.852E-02	4.264E-02	2.476E-02	NOT IDENT.
IN-114M	-4.063E-02	2.058E-01	1.515E-01	1.050E-01	NOT IDENT.
CD-115	1.871E-01	8.470E+00	7.178E+00	4.321E+00	NOT IDENT.
SN-117M	-2.087E-02	5.142E-02	4.347E-02	2.623E-02	NOT IDENT.
SB-122	3.036E-01	1.736E+00	1.481E+00	8.856E-01	NOT IDENT.
I-123	1.907E+05	1.310E+06	0.000E+00	6.685E+05	SHORT HLIF
TE-123M	4.026E-03	2.766E-02	2.397E-02	1.411E-02	NOT IDENT.
I-124	-6.136E-01	7.762E-01	5.132E-01	3.960E-01	NOT IDENT.
SB-124	4.247E-02	8.997E-02	8.122E-02	4.590E-02	FAIL ABUN
SB-125	7.741E-02	1.014E-01	9.109E-02	5.173E-02	FAIL ABUN
TE-125M	-5.255E+00	8.509E+00	7.274E+00	4.342E+00	NOT IDENT.
I-126	1.864E-01	2.016E-01	1.794E-01	1.028E-01	NOT IDENT.
SB-126	-5.278E-03	1.672E-01	1.244E-01	8.529E-02	FAIL ABUN
SB-127	2.940E-02	1.286E+00	1.069E+00	6.562E-01	NOT IDENT.
XE-127	1.312E-02	5.568E-02	4.194E-02	2.841E-02	NOT IDENT.
I-131	4.219E-02	1.143E-01	1.012E-01	5.833E-02	NOT IDENT.
TE-132	3.969E-01	5.598E-01	4.861E-01	2.856E-01	NOT IDENT.
BA-133	-3.234E-03	4.682E-02	3.512E-02	2.389E-02	FAIL ABUN
I-133	-1.122E+03	2.747E+03	0.000E+00	1.401E+03	SHORT HLIF
CS-134	1.225E-01	5.943E-02	5.286E-02	3.032E-02	FAIL ABUN
CS-135	2.232E-01	1.821E-01	1.440E-01	9.289E-02	NOT IDENT.
I-135	-1.841E+14	3.769E+14	0.000E+00	1.923E+14	SHORT HLIF
CS-136	1.656E-02	1.260E-01	1.071E-01	6.428E-02	FAIL ABUN
BA-137M	-4.364E-02	4.453E-02	3.408E-02	2.272E-02	NOT IDENT.
CS-137	-4.613E-02	4.707E-02	3.603E-02	2.402E-02	NOT IDENT.
CE-139	3.217E-03	3.001E-02	2.591E-02	1.531E-02	NOT IDENT.
BA-140	-2.289E-01	2.951E-01	2.272E-01	1.506E-01	NOT IDENT.
LA-140	1.362E-01	8.590E-02	8.418E-02	4.383E-02	FAIL ABUN
CE-141	1.070E-01	6.423E-02	5.677E-02	3.277E-02	NOT IDENT.
CE-143	4.164E+02	1.346E+02	0.000E+00	6.866E+01	SHORT HLIF
CE-144	1.556E-01	2.336E-01	1.832E-01	1.192E-01	NOT IDENT.
PM-144	-2.516E-02	4.127E-02	3.243E-02	2.105E-02	NOT IDENT.

PR-144	1.704E-00	2.795E-00	2.196E-00	1.426E+00	NOT IDENT.
PM-146	1.290E-02	4.426E-02	3.862E-02	2.258E-02	NOT IDENT.
ND-147	1.279E-01	5.918E-01	5.082E-01	3.019E-01	FAIL ABUN
PM-149	4.600E-00	6.412E+01	5.665E+01	3.272E+01	NOT IDENT.
EU-152	8.536E-02	1.399E-01	8.995E-02	7.138E-02	NOT IDENT.
GD-153	-8.118E-03	7.478E-02	5.770E-02	3.815E-02	FAIL ABUN
EU-154	-2.240E-02	1.603E-01	1.308E-01	8.180E-02	NOT IDENT.
EU-155	1.489E-01	9.805E-02	8.979E-02	5.003E-02	FAIL ABUN
TB-160	-7.617E-02	1.591E-01	1.261E-01	8.118E-02	FAIL ABUN
HO-166M	3.307E-02	7.229E-02	6.457E-02	3.688E-02	NOT IDENT.
TM-171	3.895E-01	1.634E+01	1.293E+01	8.335E+00	NOT IDENT.
LU-176	1.648E-02	2.891E-02	2.298E-02	1.475E-02	FAIL ABUN
LU-177	2.001E+00	1.540E+00	9.576E-01	7.856E-01	FAIL ABUN
LU-177M	-9.151E-02	1.992E-01	1.666E-01	1.016E-01	NOT IDENT.
HF-181	1.024E-02	4.754E-02	4.107E-02	2.426E-02	NOT IDENT.
W-181	8.038E-02	2.003E-01	1.610E-01	1.022E-01	NOT IDENT.
TA-182	-3.087E-02	2.331E-01	1.911E-01	1.189E-01	FAIL ABUN
RE-183	1.926E-02	1.076E-01	9.326E-02	5.488E-02	FAIL ABUN
RE-184	-4.696E-02	2.385E-01	1.978E-01	1.217E-01	NOT IDENT.
OS-185	-5.625E-03	4.873E-02	4.022E-02	2.486E-02	NOT IDENT.
RE-188	-8.114E-02	1.786E-01	1.510E-01	9.111E-02	NOT IDENT.
W-188	-5.825E-02	8.345E+00	6.392E+00	4.258E+00	FAIL ABUN
IR-192	1.827E-02	3.536E-02	3.176E-02	1.804E-02	FAIL ABUN
AU-195	3.245E-01	1.996E-01	1.732E-01	1.018E-01	FAIL ABUN
TL-200	1.324E+01	2.423E+02	0.000E+00	1.236E+02	SHORT HLIF
TL-201	6.535E-01	5.431E+00	4.689E+00	2.771E+00	NOT IDENT.
TL-202	-5.862E-03	7.319E-02	6.239E-02	3.734E-02	NOT IDENT.
HG-203	4.274E-02	4.814E-02	3.901E-02	2.456E-02	NOT IDENT.
BI-207	4.937E-02	6.822E-02	6.065E-02	3.480E-02	FAIL ABUN
TL-207	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
TL-208	5.139E-01	9.093E-02	7.138E-02	4.639E-02	FAIL ABUN
PO-209	1.204E+00	8.982E+00	7.731E+00	4.583E+00	NOT IDENT.
PB-211	-4.830E-01	1.085E+00	8.749E-01	5.536E-01	NOT IDENT.
BI-212	1.242E+00	6.374E-01	3.774E-01	3.252E-01	FAIL ABUN
PO-215	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
RN-219	8.609E-02	4.503E-01	3.924E-01	2.297E-01	FAIL ABUN
RN-220	1.630E+01	3.173E+01	2.771E+01	1.619E+01	NOT IDENT.
RA-223	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
AC-227	3.798E-01	4.104E-01	3.573E-01	2.094E-01	FAIL ABUN
TH-227	3.798E-01	4.119E-01	3.573E-01	2.101E-01	FAIL ABUN
TH-229	-3.027E-01	5.302E-01	4.393E-01	2.705E-01	FAIL ABUN
PA-231	1.936E-01	1.699E+00	1.374E+00	8.670E-01	FAIL ABUN
TH-231	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
U-231	-1.664E-01	8.258E-01	6.347E-01	4.213E-01	FAIL ABUN
PA-233	-3.097E-02	6.616E-02	5.644E-02	3.376E-02	FAIL ABUN
PA-234	-3.621E-02	3.796E-01	3.191E-01	1.937E-01	FAIL ABUN
PA-234M	-6.815E+00	8.406E+00	6.568E+00	4.289E+00	NOT IDENT.
U-235	4.600E-02	2.195E-01	1.871E-01	1.120E-01	FAIL ABUN
NP-236	-3.885E-02	7.962E-02	6.701E-02	4.062E-02	NOT IDENT.
NP-239	-1.434E-02	1.764E-01	1.538E-01	9.002E-02	FAIL ABUN
AM-241	3.767E-02	6.563E-02	5.339E-02	3.348E-02	NOT IDENT.
CM-243	2.693E-02	8.591E-02	7.642E-02	4.383E-02	FAIL ABUN
CM-247	4.753E-03	4.004E-02	3.476E-02	2.043E-02	FAIL ABUN
CF-249	7.755E-03	4.325E-02	3.776E-02	2.207E-02	NOT IDENT.
CF-251	9.421E-02	1.218E-01	1.078E-01	6.214E-02	NOT IDENT.
ANH-511	3.056E-02	4.927E-02	4.727E-02	2.514E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	364.7112
46.50	364.7112
46.50	364.7112
48.70	359.2905
49.72	378.4559
51.35	372.0956
52.39	355.3373
52.97	360.1935
53.15	360.3180
53.44	377.4742
54.07	391.3302
56.28	416.2829
56.28	416.2856
57.37	0.0000
57.53	407.9974
57.53	407.9991
57.60	408.0493
57.98	400.7905
57.98	400.7905
59.32	376.7447
59.32	376.7447
59.40	389.7919
59.54	417.3267
59.72	417.4616
60.01	435.0207
61.10	474.9614
61.14	474.9954
61.30	475.1295
63.00	488.5307
63.29	488.7759
63.29	488.7759
63.58	489.0201
64.28	538.7521
65.12	498.6966
65.20	498.7639
65.20	498.7639
66.05	495.1006
66.72	507.3520
66.83	507.4473
66.91	526.5286
67.20	526.7845
67.20	526.7845
67.75	490.6511
67.85	468.7598
68.90	489.1378
68.90	489.1378
69.30	524.9429
69.67	528.9368
70.82	552.0035
70.82	552.0035
70.83	552.0104
72.80	469.7683
72.87	469.8208
72.87	469.8208
74.67	471.1547
74.81	471.2576
74.81	471.2576
74.81	471.2576
74.81	471.2576
74.81	471.2576
74.81	471.2576
74.97	471.3760
75.28	471.6032
75.70	471.9100
77.11	472.9372
77.11	472.9372
77.11	472.9372

77.11	472.9372
77.11	472.9372
77.11	472.9372
78.38	409.6181
79.62	391.7313
79.80	391.8370
79.80	391.8370
80.11	403.2202
80.18	403.2614
80.30	403.3339
80.30	403.3339
80.57	392.2888
81.00	392.5388
81.07	392.5804
81.07	392.5804
81.07	392.5804
81.07	392.5804
82.60	402.2118
83.37	427.6740
83.78	414.4178
83.78	414.4178
83.78	414.4178
83.78	414.4178
84.21	370.9182
84.40	371.0207
84.90	371.2889
85.43	371.5722
86.29	372.0303
86.50	372.1418
86.54	372.1629
86.59	372.1900
86.72	372.2593
86.79	372.2955
86.94	372.3753
87.30	372.5652
87.30	372.5652
87.30	372.5652
87.30	372.5652
87.30	372.5652
87.30	372.5652
87.57	372.7083
87.88	372.8711
88.03	372.9509
88.36	373.1242
88.47	373.1815
89.95	373.9560
91.11	374.5572
92.29	375.1659
92.38	375.2126
92.38	375.2126
93.35	375.7099
94.00	322.9196
94.67	324.7340
94.67	324.7366
94.90	337.0371
94.90	337.0371
94.90	337.0371
94.90	337.0371
95.87	368.0178
95.87	368.0178
96.73	373.0278
97.43	348.8898
98.44	275.8063
98.44	275.8063
98.88	275.9656
99.55	279.4966
99.55	279.4966
99.86	310.8593
100.00	310.9161
100.10	308.0789
103.18	379.6434
103.76	323.0323
105.00	290.7039
105.31	294.6823
108.00	370.3204
109.28	353.4304
111.00	332.7698
111.00	332.7698

111.76	361.3211
112.95	316.0021
115.19	300.2263
116.30	298.6637
117.00	298.9103
117.00	298.9103
117.66	328.5669
121.11	270.8049
121.62	273.9193
121.78	268.0571
122.06	268.1432
122.32	275.1259
122.32	275.1259
122.32	275.1259
122.32	275.1259
123.07	279.7330
127.23	287.1701
129.76	324.5722
131.20	342.6169
133.02	289.0079
133.54	293.9643
135.34	318.1456
136.00	319.3724
136.25	328.4705
136.48	328.5505
140.51	328.9485
140.51	0.0000
142.18	348.6714
142.65	332.7090
143.76	306.8481
144.24	295.8926
144.24	295.8926
144.24	295.8926
144.24	295.8926
145.22	260.8089
145.44	253.7901
147.16	321.0873
152.43	241.3315
152.70	249.5440
153.22	250.6921
154.21	307.0420
154.21	307.0420
154.21	307.0420
154.21	307.0420
155.03	325.6661
156.02	293.2821
158.56	276.5939
159.00	0.0000
159.00	256.2141
160.31	280.1399
161.27	284.5066
162.32	260.1168
162.64	260.1959
163.35	251.1112
163.89	266.6847
165.85	268.2103
167.43	262.4084
171.28	259.2010
171.86	279.0501
172.10	279.1117
176.55	212.5275
176.60	212.5368
181.06	227.6141
184.41	241.7168
185.71	258.3758
186.00	258.4415
190.27	251.3848
192.34	224.5467
193.63	270.7188
197.04	266.1973
198.01	246.2469
198.60	243.1815
200.40	282.8990
201.83	287.1888
202.84	259.1719
205.31	268.2415
208.36	264.4105
208.81	264.5067

209.75	231.4858
209.75	231.4858
210.97	223.1296
215.65	232.5767
216.55	223.0455
218.09	245.9708
222.10	241.3304
223.80	229.7271
226.40	228.0148
227.00	215.0836
227.08	212.9245
227.20	212.9439
228.16	198.9653
228.18	198.9695
228.18	198.9695
231.56	0.0000
235.69	201.1910
236.00	209.9868
236.00	209.9868
238.60	209.2953
238.63	209.2997
238.63	209.2997
238.63	209.2997
239.00	209.3580
240.98	209.6626
241.98	209.8163
241.98	209.8163
241.98	209.8163
244.69	181.3929
245.39	170.9128
247.94	151.8102
248.90	186.7395
249.79	204.3776
252.40	187.0486
252.85	180.4662
252.85	180.4662
254.15	0.0000
256.20	170.9054
256.20	170.9054
260.50	195.9106
260.90	192.6241
262.80	170.5795
264.65	159.2613
268.24	150.4043
268.79	166.5804
269.46	157.6975
269.46	157.6975
269.46	157.6975
269.46	157.6975
271.23	134.5624
273.65	152.7531
276.40	171.0394
277.35	159.1359
277.60	159.1639
277.60	159.1639
278.00	159.2049
278.60	184.8128
279.20	177.3697
279.53	183.4220
280.46	183.5361
281.68	168.6289
283.67	165.4040
284.30	170.8035
285.00	158.9365
285.90	162.1510
286.10	165.7968
286.10	165.7968
287.40	176.8163
288.45	0.0000
290.67	166.5912
290.80	166.6046
291.72	163.6721
293.26	0.0000
293.70	148.7067
295.21	167.0768
295.21	167.0768
295.21	167.0768
295.96	167.1574

296.50	114.0106
297.23	114.0625
298.57	114.1602
299.80	114.2487
299.80	114.2487
300.09	114.2700
300.09	114.2700
300.09	114.2700
300.10	114.2708
300.12	114.2715
301.29	158.5750
302.84	151.0983
303.76	163.4018
303.91	163.4171
304.40	164.9949
304.40	164.9949
304.84	165.0410
306.84	142.2946
308.46	157.2438
311.98	159.3260
316.51	140.3736
318.01	155.2913
319.02	145.2135
319.41	150.7969
320.08	159.1882
323.87	115.9531
323.87	115.9531
323.87	115.9531
323.87	115.9531
325.23	133.0680
328.77	137.6895
333.44	121.2783
334.20	130.6655
334.20	130.6655
334.30	130.6724
338.28	132.8477
338.28	132.8477
338.28	132.8477
338.28	132.8477
338.32	132.8511
338.32	132.8511
338.32	132.8511
340.50	160.8097
340.57	160.8159
344.27	118.9139
345.85	125.2848
350.59	0.0000
351.07	125.3434
351.92	125.4051
351.92	125.4051
351.92	125.4051
355.39	0.0000
356.01	110.2580
364.48	130.0848
366.43	156.8406
367.43	139.8079
367.94	0.0000
369.80	140.9415
374.96	137.5172
383.85	128.5791
387.95	125.9740
388.63	124.0948
391.69	125.2583
391.69	125.2583
392.90	132.0866
398.62	119.9085
400.65	125.8423
401.10	133.6184
401.81	123.9813
402.60	123.0623
404.84	141.6371
410.95	136.2385
411.60	142.1254
413.65	140.3226
414.70	132.5983
415.30	121.9101
415.76	123.8886
417.63	0.0000

418.52	115.2689
423.70	122.4228
427.08	113.7981
427.89	103.0479
432.53	121.9717
433.93	133.8667
439.47	116.4631
439.56	116.4674
439.89	122.4091
443.98	115.7260
444.90	125.6730
445.03	123.7015
445.03	123.7015
445.03	123.7015
445.03	123.7015
453.90	86.4605
463.38	96.8283
468.07	111.7117
473.00	98.2620
475.06	113.4083
475.35	113.4235
476.78	118.5200
477.59	99.4725
477.96	97.4796
482.03	100.6799
484.57	109.8675
487.03	88.7981
490.36	0.0000
492.35	97.1016
497.08	99.3339
507.63	0.0000
510.53	0.0000
510.84	102.9930
511.00	97.9020
511.85	95.8973
511.85	95.8973
513.99	252.2177
513.99	252.2177
520.41	80.8921
520.65	81.9238
527.90	88.3411
528.96	0.0000
529.64	93.5461
529.87	0.0000
531.02	87.4301
537.32	107.2551
543.00	74.4293
546.56	0.0000
549.76	93.2981
552.65	85.1050
555.20	89.3510
563.23	79.2192
563.90	86.5380
568.70	80.4383
569.32	76.2793
569.50	72.1047
569.67	68.9745
573.80	100.4906
574.00	102.3611
574.64	96.8608
578.91	62.9341
579.30	0.0000
583.14	75.6475
585.48	73.6145
591.81	89.0254
592.07	89.0336
593.00	86.4884
595.88	83.4167
600.56	99.1722
602.52	0.0000
602.71	112.9297
602.71	112.9297
603.60	111.2010
604.41	93.5803
604.70	97.1228
609.31	82.7874
609.31	82.7874
609.31	82.7874

608.31	82.7877
610.33	82.8198
612.46	69.0736
614.37	67.3504
618.01	79.1063
621.84	94.9123
621.84	94.9123
631.29	99.5300
633.02	83.5301
633.10	83.5320
634.78	77.1557
635.90	73.9712
636.97	67.5650
645.85	76.3943
646.12	76.4013
656.30	79.9258
657.75	78.8867
657.90	0.0000
661.65	104.9689
661.65	104.9689
664.57	0.0000
666.33	71.5414
666.33	71.5414
675.00	60.8904
677.61	83.8014
685.20	73.1128
692.80	57.9882
695.00	85.4077
696.49	90.9292
696.49	90.9292
697.00	87.6582
697.49	93.1514
698.33	94.2746
698.50	94.2809
699.00	94.2977
702.63	84.5346
706.10	93.4274
706.58	0.0000
706.67	89.0486
709.31	90.7802
711.68	78.0049
713.82	74.3884
717.42	79.0765
720.50	67.8504
721.93	0.0000
722.20	69.4682
722.78	63.1655
722.78	63.1655
722.89	71.0643
722.95	71.0658
723.30	71.0737
724.18	71.0941
727.18	64.5768
733.00	76.0580
735.90	49.9614
739.58	63.9168
742.81	69.5496
744.21	52.8820
747.13	73.3633
751.79	62.3150
752.31	61.3943
753.82	57.7024
755.35	59.5938
756.15	67.0605
756.87	64.2804
763.93	86.8375
765.79	80.3503
766.41	74.7591
766.84	73.8343
768.36	64.5204
768.36	64.5204
768.36	64.5204
768.36	64.5204
776.49	68.4390
778.00	59.0920
778.57	57.2260
778.89	60.0469
783.80	71.4170

785.46	65.8130
792.07	72.6793
795.84	69.8011
796.30	63.0730
801.93	49.1436
805.60	58.6611
810.29	55.9031
810.76	58.7547
815.85	46.5077
817.79	58.8818
818.51	60.7943
819.60	56.0639
826.30	70.4605
828.27	0.0000
831.60	70.5749
831.96	71.5363
834.83	75.4174
836.80	0.0000
846.75	49.8196
848.13	63.2581
856.28	0.0000
856.80	84.5625
860.37	58.6792
867.32	65.5471
867.82	58.8083
871.10	60.7941
873.19	54.0723
874.81	49.2682
875.33	0.0000
876.40	54.1235
879.36	58.0396
880.27	53.2164
880.51	53.2208
881.50	52.2675
883.24	45.5150
884.67	48.4406
889.25	54.3252
896.60	61.2453
898.02	68.0774
899.00	56.4235
903.28	62.8229
911.07	57.5932
911.07	57.5932
911.07	57.5932
919.63	54.3076
920.93	53.3924
925.00	42.1392
925.24	36.2615
926.50	49.0194
934.06	36.3511
934.06	36.3511
934.06	36.3511
934.06	36.3511
935.52	45.2111
937.48	74.7383
944.10	48.2743
946.00	67.0274
949.00	58.2042
962.29	62.3764
964.01	62.8298
966.15	59.4678
968.20	93.2178
969.11	103.1600
969.11	103.1600
969.11	103.1600
977.42	65.6133
980.50	58.7035
983.50	70.6995
989.30	60.8362
996.32	58.9508
1001.03	79.0322
1001.68	67.0382
1004.76	45.0623
1021.30	0.0000
1024.50	0.0000
1034.80	53.4895
1037.82	66.6606
1038.57	61.6230

1038.76	0.0000
1045.16	66.7869
1046.59	77.9462
1048.07	58.7340
1050.47	45.5969
1050.47	45.5969
1063.62	57.9486
1076.63	52.0168
1077.35	58.1481
1085.78	53.1574
1099.22	76.9257
1112.02	66.6721
1112.84	67.2341
1115.52	67.0805
1120.29	65.3901
1120.29	65.3901
1120.29	65.3901
1120.29	65.3901
1120.51	65.3952
1121.28	69.0883
1124.00	0.0000
1129.67	59.2416
1131.51	0.0000
1147.95	0.0000
1167.94	65.6891
1173.22	84.5596
1175.09	75.1992
1177.93	81.5198
1189.05	80.6814
1204.90	63.0981
1205.75	0.0000
1213.00	71.6413
1221.42	67.5573
1230.97	77.2239
1235.34	86.8280
1236.41	0.0000
1238.11	83.7028
1238.11	83.7028
1238.11	83.7028
1238.11	83.7028
1238.25	83.7061
1246.25	66.8708
1260.41	0.0000
1271.85	44.8335
1274.45	59.8122
1274.54	60.8826
1291.56	58.9634
1298.22	0.0000
1312.09	40.9177
1325.50	31.3164
1325.50	31.3164
1332.49	23.7922
1333.61	31.3706
1360.21	28.9036
1362.66	0.0000
1365.15	23.3337
1368.21	17.7442
1368.53	0.0000
1376.25	19.6450
1377.67	24.3297
1377.67	24.3297
1377.67	24.3297
1377.67	24.3297
1384.27	24.3623
1394.10	26.2891
1395.20	30.0513
1407.95	25.4217
1434.06	29.3414
1436.60	15.1518
1457.56	0.0000
1460.81	8.3258
1489.15	22.9629
1509.49	12.4872
1596.49	6.8342
1620.62	15.6897
1678.03	0.0000
1691.02	13.9014
1691.02	13.9014

1706.46	0.0000
1750.46	0.0000
1764.49	10.0558
1764.49	10.0558
1764.49	10.0558
1764.49	10.0558
1770.23	15.8533
1771.40	50.3383
1791.20	0.0000
1808.65	9.1174
1836.01	10.1765

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G2J2347001

Total Uranium Activity	3.1186E+00	ug/g
Total Uranium Counting Unc.	2.6245E+00	ug/g
Total Uranium Tpu	1.3390E-06	ug/g
Total Uranium Mda	1.5512E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232347001       *
*   ANALYST       : KXR1                      DETECTOR   : GAM05            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:10:14.06    SAMPLE ALQT:  126.580 GRAM    *
*                                                                           *
*****************************************************************************
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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.961E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.367E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.346E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.628E+00
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VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:51:37.37

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358001.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:14:07.
Sample ID         : G232358001           Sample quantity  : 1.26600E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.95  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	4	74.86*	480	568	1.20	148.85	144	13	6.66E-02	9.7	2.04E+00
2	4	77.16*	829	466	1.07	153.44	144	13	1.15E-01	5.6	
3	2	84.16*	120	300	1.17	167.42	165	12	1.67E-02	24.6	8.01E-01
4	2	87.24	309	481	1.08	173.58	165	12	4.29E-02	12.9	
5	4	89.91	213	213	1.49	178.93	177	15	2.95E-02	10.3	1.57E+00
6	4	92.96*	372	531	1.50	185.02	177	15	5.17E-02	13.0	
7	0	186.00*	326	447	1.59	371.04	366	11	4.53E-02	14.2	
8	0	209.50	167	395	1.39	418.03	414	9	2.31E-02	22.9	
9	4	238.72*	2057	295	1.25	476.44	469	20	2.86E-01	2.7	9.04E-01
10	4	241.64	484	375	1.94	482.29	469	20	6.72E-02	12.9	
11	0	270.70	95	366	1.45	540.37	535	10	1.32E-02	39.2	
12	2	295.30*	675	199	1.35	589.56	584	22	9.37E-02	5.4	1.09E+00
13	2	300.23	184	236	1.71	599.42	584	22	2.56E-02	17.5	
14	0	328.55	84	287	1.15	656.05	650	11	1.16E-02	41.0	
15	0	338.45*	420	287	1.37	675.84	669	14	5.84E-02	10.0	
16	0	351.98*	989	336	1.20	702.89	696	14	1.37E-01	5.1	
17	0	462.85	171	194	1.19	924.55	918	14	2.38E-02	18.8	
18	0	510.93*	213	261	1.75	1020.70	1014	17	2.95E-02	20.8	
19	0	583.36*	659	152	1.58	1165.51	1159	14	9.16E-02	5.7	
20	0	609.43*	754	191	1.49	1217.64	1211	12	1.05E-01	5.3	
21	0	727.43	185	135	1.80	1453.58	1446	16	2.56E-02	15.9	
22	0	767.81	113	125	1.61	1534.32	1527	14	1.56E-02	23.2	
23	0	795.25	62	135	1.03	1589.20	1582	12	8.63E-03	39.5	
24	0	861.26*	92	94	1.81	1721.19	1715	13	1.28E-02	24.6	
25	0	911.31*	554	110	1.67	1821.27	1814	16	7.69E-02	6.1	
26	0	934.30	61	72	1.53	1867.23	1860	13	8.40E-03	31.6	
27	1	964.90	101	88	2.32	1928.42	1921	38	1.40E-02	22.7	8.24E-01
28	1	969.10*	324	79	2.31	1936.82	1921	38	4.50E-02	8.5	
29	0	1120.64	174	124	1.43	2239.84	2232	16	2.41E-02	16.2	
30	0	1238.41	108	143	2.23	2475.35	2468	18	1.50E-02	27.7	
31	0	1377.81	48	39	1.15	2754.12	2749	11	6.60E-03	29.2	
32	0	1461.01*	2416	63	2.33	2920.50	2910	21	3.36E-01	2.2	
33	0	1621.55	21	23	1.03	3241.55	3236	11	2.89E-03	54.2	
34	0	1730.05	59	11	2.45	3458.55	3447	22	8.19E-03	19.4	
35	0	1765.12	133	16	2.31	3528.68	3523	13	1.85E-02	11.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 13-JUL-2009 18:51:39

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:14:07
Sample ID : G232358001 Sample quantity : 126.60 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.95 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.547E+01	3.113E+00	4.817E-01	3.655E-02	73.641
CD-109	+	88.03	*	3.903E+00	1.070E+00	1.233E+00	1.140E-01	3.166
SN-126		64.28		2.358E-01	5.814E-01	9.704E-01	1.434E-01	0.243
	+	86.94		1.597E+00	7.806E-01	4.912E-01	2.037E-01	3.252
	+	87.57	*	3.843E-01	1.053E-01	1.221E-01	1.125E-02	3.146
TL-208		277.35		3.507E-01	3.420E-01	5.776E-01	6.066E-02	0.607
	+	510.84		6.777E-01	2.916E-01	1.871E-01	1.989E-02	3.623
	+	583.14	*	5.903E-01	8.155E-02	5.117E-02	4.011E-03	11.536
	+	860.37		7.544E-01	3.802E-01	3.605E-01	4.032E-02	2.093
BI-211		72.87		4.818E+00	3.631E+00	5.635E+00	4.652E-01	0.855
	+	351.07	*	4.160E+00	5.027E-01	2.567E-01	1.648E-02	16.205
BI-212	+	727.18	*	1.390E+00	4.639E-01	4.027E-01	4.011E-02	3.452
		785.46		4.216E-01	1.559E+00	2.618E+00	2.475E-01	0.161
	+	1620.62		1.268E+00	1.377E+00	1.473E+00	9.958E-02	0.861
PB-212	+	74.81		2.703E+00	6.261E-01	5.932E-01	7.435E-02	4.557
	+	77.11		2.606E+00	3.660E-01	3.319E-01	2.813E-02	7.851
	+	87.30		1.777E+00	5.185E-01	5.671E-01	7.702E-02	3.134
	+	238.63	*	2.013E+00	1.805E-01	7.899E-02	5.643E-03	25.483
	+	300.09		2.680E+00	9.627E-01	1.063E+00	8.728E-02	2.522
PO-212	+	74.81		2.703E+00	6.261E-01	5.932E-01	7.435E-02	4.557
	+	77.11		2.606E+00	3.660E-01	3.319E-01	2.813E-02	7.851
	+	87.30		1.777E+00	5.185E-01	5.671E-01	7.702E-02	3.134
		115.19		1.386E+00	3.398E+00	5.558E+00	3.501E-01	0.249
	+	238.63	*	2.013E+00	1.805E-01	7.899E-02	5.643E-03	25.483
	+	300.09		2.680E+00	9.627E-01	1.063E+00	8.728E-02	2.522
BI-214	+	609.31	*	1.267E+00	1.759E-01	9.856E-02	8.804E-03	12.857
	+	768.36		2.071E+00	9.854E-01	9.940E-01	1.088E-01	2.084
	+	934.06		2.054E+00	1.321E+00	1.414E+00	1.757E-01	1.453
	+	1120.29		1.460E+00	4.944E-01	3.864E-01	3.700E-02	3.779
	+	1238.11		2.515E+00	1.410E+00	1.247E+00	1.064E-01	2.017
	+	1377.67		1.735E+00	1.026E+00	1.327E+00	1.301E-01	1.307
	+	1764.49		1.473E+00	3.350E-01	2.723E-01	1.656E-02	5.407
PB-214	+	74.81		4.658E+00	1.046E+00	1.022E+00	1.141E-01	4.557
	+	77.11		4.467E+00	7.139E-01	5.689E-01	6.484E-02	7.851

---- Identified Nuclides ----

Nuclide	Line Ident	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		3.044E+00	8.669E-01	9.714E-01	1.165E-01	3.134
	-	241.98		2.840E+00	7.683E-01	4.748E-01	3.755E-02	5.980
	-	295.21		1.725E+00	2.367E-01	1.866E-01	1.583E-02	9.246
	-	351.92	*	1.447E+00	1.905E-01	8.946E-02	7.400E-03	16.175
PO-214	+	74.81		4.658E+00	1.046E+00	1.022E+00	1.141E-01	4.557
	+	77.11		4.467E+00	7.139E-01	5.689E-01	6.484E-02	7.851
	+	87.30		3.044E+00	8.669E-01	9.714E-01	1.165E-01	3.134
	-	241.98		2.840E+00	7.683E-01	4.748E-01	3.755E-02	5.980
	+	295.21		1.725E+00	2.367E-01	1.866E-01	1.583E-02	9.246
	+	351.92	*	1.447E+00	1.905E-01	8.946E-02	7.400E-03	16.175
PO-216	+	74.81		2.703E+00	6.261E-01	5.932E-01	7.435E-02	4.557
	+	77.11		2.606E+00	3.660E-01	3.319E-01	2.813E-02	7.851
	+	87.30		1.777E+00	5.185E-01	5.671E-01	7.702E-02	3.134
	+	238.63	*	2.013E+00	1.805E-01	7.899E-02	5.643E-03	25.483
	+	300.09		2.680E+00	9.627E-01	1.063E+00	8.728E-02	2.522
PO-218	+	74.81		4.658E+00	1.046E+00	1.022E+00	1.141E-01	4.557
	+	77.11		4.467E+00	7.139E-01	5.689E-01	6.484E-02	7.851
	+	87.30		3.044E+00	8.669E-01	9.714E-01	1.165E-01	3.134
	+	241.98		2.840E+00	7.683E-01	4.748E-01	3.755E-02	5.980
	+	295.21		1.725E+00	2.367E-01	1.866E-01	1.583E-02	9.246
	+	351.92	*	1.447E+00	1.905E-01	8.946E-02	7.400E-03	16.175
RA-224	+	240.98	*	5.385E+00	1.425E+00	8.979E-01	5.002E-02	5.997
RA-226	+	609.31	*	1.267E+00	1.759E-01	9.856E-02	8.804E-03	12.857
	+	768.36		2.071E+00	9.854E-01	9.940E-01	1.088E-01	2.084
	+	934.06		2.054E+00	1.321E+00	1.414E+00	1.757E-01	1.453
	+	1120.29		1.460E+00	4.944E-01	3.864E-01	3.700E-02	3.779
	+	1238.11		2.515E+00	1.410E+00	1.247E+00	1.064E-01	2.017
	+	1377.67		1.735E+00	1.026E+00	1.327E+00	1.301E-01	1.307
	+	1764.49		1.473E+00	3.350E-01	2.723E-01	1.656E-02	5.407
AC-228	+	338.32		1.959E+00	8.901E-01	3.096E-01	1.262E-01	6.330
	+	911.07	*	2.133E+00	3.835E-01	1.717E-01	2.275E-02	12.420
	+	969.11		2.191E+00	6.432E-01	3.220E-01	7.710E-02	6.805
RA-228	+	338.32		1.959E+00	8.901E-01	3.096E-01	1.262E-01	6.330
	+	911.07	*	2.133E+00	3.835E-01	1.717E-01	2.275E-02	12.420
	+	969.11		2.191E+00	6.432E-01	3.220E-01	7.710E-02	6.805
TH-228	+	84.40		4.806E+00	2.448E+00	3.759E+00	5.024E-01	1.279
	+	238.60	*	2.013E+00	1.805E-01	7.899E-02	5.643E-03	25.486
	+	300.10		2.680E+00	1.837E+00	1.063E+00	6.264E-01	2.522
TH-230	+	609.31	*	1.267E+00	1.759E-01	9.856E-02	8.804E-03	12.857
	+	768.36		2.071E+00	9.854E-01	9.939E-01	1.088E-01	2.084
	+	934.06		2.054E+00	1.321E+00	1.414E+00	1.757E-01	1.453
	+	1120.29		1.460E+00	4.944E-01	3.864E-01	3.700E-02	3.779
	+	1238.11		2.515E+00	1.410E+00	1.247E+00	1.064E-01	2.017
	+	1377.67		1.735E+00	1.026E+00	1.327E+00	1.301E-01	1.307
	+	1764.49		1.472E+00	3.350E-01	2.723E-01	1.656E-02	5.407
TH-232	+	338.32		1.959E+00	4.087E-01	3.096E-01	1.791E-02	6.330
	+	911.07	*	2.133E+00	3.835E-01	1.717E-01	2.275E-02	12.420
	+	969.11		2.191E+00	6.432E-01	3.220E-01	7.710E-02	6.805
U-234	+	609.31	*	1.267E+00	1.759E-01	9.856E-02	8.804E-03	12.857

--- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	768.36		2.071E+00	9.854E-01	9.939E-01	1.088E-01	2.084
	+	934.06		2.054E+00	1.321E+00	1.414E+00	1.757E-01	1.453
	+	1120.29		1.460E+00	4.944E-01	3.864E-01	3.700E-02	3.779
	+	1238.11		2.515E+00	1.410E+00	1.247E+00	1.064E-01	2.017
	+	1377.67		1.735E+00	1.026E+00	1.327E+00	1.301E-01	1.307
	+	1764.49		1.472E+00	3.350E-01	2.723E-01	1.656E-02	5.407
NP-237	+	86.50	*	1.128E+00	3.871E-01	3.492E-01	7.878E-02	3.231
		95.87		-4.217E-01	9.865E-01	1.396E+00	3.410E-01	-0.302
AM-243	+	74.67	*	4.382E-01	9.287E-02	9.655E-02	8.057E-03	4.539
	+	86.72		4.231E+01	1.160E+01	1.305E+01	1.193E+00	3.242
		117.66		-3.723E+00	3.597E+00	5.530E+00	3.401E-01	-0.673
		142.18		-5.403E+00	1.713E+01	2.687E+01	1.480E+00	-0.201
ANH-511	+	511.00	*	1.464E-01	6.179E-02	4.042E-02	2.669E-03	3.622

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-6.548E-02	2.655E-01	4.317E-01	3.128E-02	-0.152
NA-22		1274.54	*	-1.225E-02	3.926E-02	6.297E-02	4.285E-03	-0.195
NA-24		1368.53	*	-7.236E-02	3.926E-02	Half-Life too short		
AL-26		1129.67		1.619E-01	1.704E+00	2.607E+00	1.741E-01	0.062
		1808.65	*	3.321E-03	2.013E-02	3.398E-02	1.984E-03	0.098
TI-44		67.85		-1.965E-02	4.935E-02	8.088E-02	6.504E-03	-0.243
	+	78.38	*	4.808E-01	6.754E-02	8.478E-02	7.248E-03	5.672
SC-46		889.25	*	8.224E-03	3.354E-02	5.574E-02	6.217E-03	0.148
	+	1120.51		2.476E-01	8.222E-02	1.111E-01	7.678E-03	2.228
V-48		944.10		-3.819E-01	7.162E-01	1.114E+00	1.179E-01	-0.343
		983.50	*	-2.186E-02	7.156E-02	9.573E-02	9.469E-03	-0.228
		1312.09		2.218E-02	6.753E-02	1.135E-01	8.267E-03	0.195
CR-51		320.08	*	2.589E-02	3.225E-01	5.214E-01	3.357E-02	0.050
MN-52		744.21		1.018E-01	1.735E-01	2.983E-01	2.631E-02	0.341
		848.13		-1.067E+00	5.217E+00	8.444E+00	8.835E-01	-0.126
	+	935.52		3.962E-01	2.536E-01	3.434E-01	3.684E-02	1.154
		1246.25		3.189E-01	6.413E+00	9.048E+00	5.818E-01	0.035
		1333.61		-1.086E+00	4.053E+00	6.477E+00	4.893E-01	-0.168
		1434.06	*	-5.871E-02	1.786E-01	2.798E-01	2.062E-02	-0.210
MN-54		834.83	*	-2.491E-02	3.447E-02	5.402E-02	5.533E-03	-0.461
CO-56		846.75	*	-6.839E-03	3.476E-02	5.632E-02	5.879E-03	-0.121
		977.42		-1.488E+00	2.940E+00	3.831E+00	3.832E-01	-0.388
		1037.82		-1.943E-01	2.796E-01	4.457E-01	4.129E-02	-0.436
		1175.09		-1.168E+00	1.992E+00	3.168E+00	1.758E-01	-0.369
	+	1238.25		2.522E-01	1.408E-01	1.592E-01	1.061E-02	1.585
		1360.21		-1.520E-01	8.573E-01	1.375E+00	1.033E-01	-0.111
		1771.40		-4.653E-03	2.043E-01	2.835E-01	1.714E-02	-0.016
CO-57		122.06	*	-3.713E-04	2.434E-02	3.903E-02	2.312E-03	-0.010
		136.48		-1.508E-01	1.979E-01	3.049E-01	1.996E-02	-0.495
CO-58		810.76	*	-3.433E-02	3.131E-02	4.711E-02	4.651E-03	-0.729
FE-59		142.65		-1.553E-01	2.616E+00	4.106E+00	2.259E-01	-0.038

---- Non Identified Nuclides ----

Nuclide	Line Idad	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		192.34		4.467E-01	8.390E-01	1.384E+00	1.605E-01	0.323
		1099.22	*	-5.217E-03	7.992E-02	1.325E-01	1.091E-02	-0.039
		1291.56		-1.138E-02	1.102E-01	1.794E-01	1.507E-02	-0.063
CO-60		1173.22		3.079E-02	3.863E-02	6.721E-02	3.714E-03	0.458
		1332.49	*	2.621E-03	3.560E-02	5.856E-02	4.425E-03	0.045
ZN-65		1115.52	*	2.270E-02	8.423E-02	1.231E-01	8.670E-03	0.184
GE-68		1077.35	*	-4.069E-01	1.119E-00	1.789E+00	1.421E-01	-0.227
AS-73		53.44	*	-9.963E-02	1.085E-00	1.780E+00	1.411E-01	-0.056
AS-74		595.88	*	-7.439E-03	7.589E-02	1.221E-01	8.769E-03	-0.061
		634.78		-2.532E-01	2.920E-01	4.407E-01	3.281E-02	-0.575
SE-75		66.05		-6.702E+00	5.478E+00	8.598E+00	8.515E-01	-0.779
		96.73		-4.094E-01	7.972E-01	1.126E+00	1.484E-01	-0.364
		121.11		3.582E-02	1.260E-01	2.046E-01	1.910E-02	0.175
		136.00		-1.598E-02	3.648E-02	5.704E-02	3.248E-03	-0.280
		198.60		8.276E-01	1.627E+00	2.745E+00	1.863E-01	0.301
		264.65	*	-4.243E-03	4.306E-02	6.479E-02	3.705E-03	-0.065
		279.53		1.671E-02	9.850E-02	1.615E-01	9.980E-03	0.103
		303.91		1.397E+00	2.009E+00	2.968E+00	2.823E-01	0.471
		400.65		4.134E-02	2.167E-01	3.658E-01	3.332E-02	0.113
BR-77	+	87.88		6.042E+02	1.656E+02	2.480E+02	2.292E+01	2.436
		200.40		-1.786E+01	1.048E+02	1.738E+02	9.360E+00	-0.103
	+	239.00		2.312E+02	1.796E+01	2.615E+01	1.455E+00	8.842
		249.79		-1.198E+01	3.922E+01	6.348E+01	3.558E+00	-0.189
		281.68		-4.176E+01	5.881E+01	9.257E+01	5.282E+00	-0.451
		297.23		2.943E+02	4.610E+01	8.447E+01	4.850E+00	3.485
		303.76		9.591E+01	1.235E+02	1.836E+02	1.056E+01	0.522
		439.47		3.946E+01	8.457E+01	1.439E+02	8.771E+00	0.274
		484.57		-8.214E+01	1.355E+02	2.150E+02	1.380E+01	-0.382
		520.65	*	-4.746E+00	6.434E+00	9.735E+00	6.494E-01	-0.488
		574.64		-6.811E+01	1.267E+02	1.985E+02	1.398E+01	-0.343
		578.91		3.882E+01	5.914E+01	8.747E+01	6.184E+00	0.444
		585.48		1.430E+03	1.964E+02	3.343E+02	2.378E+01	4.278
		755.35		4.564E+01	9.820E+01	1.675E+02	1.506E+01	0.272
		817.79		-3.261E+01	7.783E+01	1.242E+02	1.238E+01	-0.263
SR-82		698.33		-3.673E+01	3.001E+01	4.537E+01	3.694E+00	-0.810
		776.49	*	-3.322E-01	3.306E-01	4.960E-01	4.619E-02	-0.670
		1395.20		-7.484E+00	9.042E+00	1.340E+01	9.988E-01	-0.558
RB-83		520.41	*	-4.916E-02	5.861E-02	8.796E-02	5.867E-03	-0.559
		529.64		-3.752E-02	8.344E-02	1.324E-01	8.914E-03	-0.283
		552.65		7.531E-02	1.625E-01	2.723E-01	1.876E-02	0.277
RB-84		881.50	*	2.146E-02	5.912E-02	9.372E-02	1.033E-02	0.229
KR-85		513.99	*	2.170E+01	7.269E+00	1.221E+01	8.091E-01	1.777
SR-85		513.99	*	1.099E-01	3.682E-02	6.187E-02	4.099E-03	1.777
RB-86		1076.63	*	-4.805E-02	6.806E-01	1.110E+00	8.839E-02	-0.043
Y-88		898.02		-3.524E-03	3.685E-02	5.977E-02	6.775E-03	-0.059
		1836.01	*	2.790E-02	2.314E-02	4.500E-02	2.563E-03	0.620
ZR-88		392.90	*	-2.007E-03	2.505E-02	4.180E-02	2.404E-03	-0.048
Y-91		1204.90	*	-5.029E+00	1.633E+01	2.642E+01	1.562E+00	-0.190
NB-94		702.63	*	2.555E-02	2.983E-02	5.196E-02	4.262E-03	0.492

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		871.10		3.263E-02	2.941E-02	5.149E-02	5.584E-03	0.634
NB-95		765.79	*	8.889E-02	4.350E-02	7.073E-02	6.470E-03	1.257
NB-95M		235.69	*	1.282E-01	1.228E-01	1.866E-01	1.369E-02	0.687
ZR-95		724.18		1.251E-01	9.353E-02	1.472E-01	1.365E-02	0.850
		756.15	*	5.837E-03	5.832E-02	9.734E-02	9.578E-03	0.060
NB-97		657.90	*	-4.413E-03	5.832E-02	Half-Life too short		
		1024.50		-2.937E+00	5.832E-02	Half-Life too short		
ZR-97		254.15		-5.608E-01	5.832E-02	Half-Life too short		
		355.39		-2.891E-02	5.832E-02	Half-Life too short		
		507.63	*	1.679E+00	5.832E-02	Half-Life too short		
		602.52		-2.145E+00	5.832E-02	Half-Life too short		
		1021.30		2.139E+00	5.832E-02	Half-Life too short		
		1147.95		1.030E+00	5.832E-02	Half-Life too short		
		1362.66		-8.685E-01	5.832E-02	Half-Life too short		
		1750.46		-6.163E-01	5.832E-02	Half-Life too short		
MO-99		140.51		-8.219E+00	1.948E+01	2.993E+01	8.049E+00	-0.275
		181.06		1.110E+01	1.259E+01	1.924E+01	3.266E+00	0.577
		366.43		-5.502E+00	5.513E+01	9.245E+01	5.341E+00	-0.060
		739.58	*	4.303E+00	7.217E+00	1.239E+01	1.891E+00	0.347
		778.00		-1.786E+01	2.203E+01	3.442E+01	3.214E+00	-0.519
TC-99M		140.51	*	-6.672E+08	2.203E+01	Half-Life too short		
RH-101		127.23		-2.070E-02	3.111E-02	4.846E-02	2.799E-03	-0.427
		198.01	*	7.368E-03	3.009E-02	5.034E-02	2.706E-03	0.146
		325.23		3.912E-02	2.342E-01	3.324E-01	1.921E-02	0.118
RH-102		418.52		-1.090E-01	2.394E-01	3.896E-01	2.315E-02	-0.280
		475.06	*	-2.013E-02	2.485E-02	3.907E-02	2.482E-03	-0.515
		631.29		3.277E-02	4.672E-02	7.856E-02	5.831E-03	0.417
		697.49		-3.605E-02	6.858E-02	1.086E-01	8.828E-03	-0.332
	+	766.84		3.098E-01	1.463E-01	1.875E-01	1.718E-02	1.653
		1046.59		1.272E-02	9.885E-02	1.668E-01	1.439E-02	0.076
		1112.84		-3.908E-02	2.171E-01	3.031E-01	2.152E-02	-0.129
RU-103		497.08	*	1.506E-02	3.313E-02	5.580E-02	7.245E-03	0.270
	+	610.33		1.341E+01	2.579E+00	2.548E+00	4.085E-01	5.263
RH-106	+	511.85		7.296E-01	3.080E-01	3.881E-01	2.565E-02	1.880
		621.84	*	4.529E-02	2.734E-01	4.453E-01	5.602E-02	0.102
		1050.47		-5.870E-01	2.017E+00	3.306E+00	2.825E-01	-0.178
RU-106	+	511.85		7.296E-01	3.080E-01	3.881E-01	2.565E-02	1.880
		621.84	*	4.529E-02	2.733E-01	4.453E-01	3.277E-02	0.102
		1050.47		-5.870E-01	2.017E+00	3.306E+00	2.825E-01	-0.178
AG-108M		433.93	*	9.631E-04	2.704E-02	4.503E-02	2.942E-03	0.021
		614.37		3.330E-03	3.791E-02	5.315E-02	4.096E-03	0.063
		722.95		1.941E-02	3.947E-02	5.898E-02	5.216E-03	0.329
AG-110M		657.75	*	-2.988E-03	2.797E-02	4.665E-02	3.679E-03	-0.064
		677.61		-6.413E-02	2.590E-01	4.273E-01	3.466E-02	-0.150
		706.67		3.218E-02	1.754E-01	2.957E-01	2.516E-02	0.109
		763.93		1.509E-01	1.575E-01	2.424E-01	2.266E-02	0.622
		884.67		-3.606E-02	4.181E-02	6.357E-02	7.179E-03	-0.567
		937.48		3.395E-02	1.061E-01	1.528E-01	1.673E-02	0.222
		1384.27		1.742E-01	1.531E-01	2.456E-01	1.904E-02	0.710

---- Non-Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-111		171.28		8.545E-02	6.528E-01	1.106E+00	5.817E-02	0.077
		245.39	*	1.639E-01	7.561E-01	1.073E+00	5.994E-02	0.153
IN-113M		391.69	*	-5.008E-03	3.672E-02	6.113E-02	3.750E-03	-0.082
SN-113		391.69	*	-5.008E-03	3.672E-02	6.113E-02	3.750E-03	-0.082
IN-114M		190.27	*	6.544E-02	1.734E-01	2.606E-01	1.391E-02	0.251
CD-115		260.90		1.444E+00	8.257E+01	1.352E+02	7.634E+00	0.011
		492.35		-1.030E+01	2.112E+01	3.373E+01	2.184E+00	-0.305
		527.90	*	-1.640E+00	6.142E+00	9.873E+00	6.636E-01	-0.166
SN-117M		156.02		-1.476E+00	1.896E+00	3.130E+00	1.672E-01	-0.472
		158.56	*	3.960E-02	4.606E-02	7.888E-02	4.192E-03	0.502
SB-122		563.90	*	-1.910E-01	1.290E+00	2.078E+00	1.448E-01	-0.092
		692.80		9.147E+00	2.697E+01	4.594E+01	3.704E+00	0.199
I-123		159.00	*	8.415E-01	2.697E+01	Half-Life too short		
		528.96		-3.935E+01	2.697E+01	Half-Life too short		
TE-123M		159.00	*	1.770E-02	2.515E-02	4.286E-02	2.312E-03	0.413
I-124		602.71	*	-3.192E-01	5.681E-01	7.531E-01	5.446E-02	-0.424
		722.78		1.739E+00	3.411E+00	5.105E+00	4.338E-01	0.341
		1325.50		1.990E+00	2.569E+01	4.230E+01	3.156E+00	0.047
		1376.25		5.651E+01	2.688E+01	4.582E+01	3.431E+00	1.233
		1509.49		6.276E+00	1.127E+01	1.976E+01	1.416E+00	0.318
		1691.02		6.640E-01	2.367E+00	4.064E+00	2.621E-01	0.163
SB-124		602.71		-2.215E-02	3.942E-02	5.226E-02	3.780E-03	-0.424
		645.85		-2.697E-01	4.256E-01	6.528E-01	5.292E-02	-0.413
		709.31		-1.972E+00	2.325E+00	3.671E+00	3.047E-01	-0.537
		713.82		7.915E-01	1.335E+00	2.300E+00	2.727E-01	0.344
		722.78		1.749E-01	3.432E-01	5.135E-01	4.461E-02	0.341
	+	968.20		2.226E+01	4.404E+00	6.837E+00	6.953E-01	3.256
		1045.16		1.180E+00	2.040E+00	3.542E+00	3.067E-01	0.333
		1325.50		2.138E-01	2.760E+00	4.544E+00	3.391E-01	0.047
		1368.21		-6.186E-01	1.490E+00	2.275E+00	2.910E-01	-0.272
		1436.60		-2.034E+00	3.389E+00	5.156E+00	3.796E-01	-0.395
		1691.02	*	1.575E-02	5.617E-02	9.642E-02	6.652E-03	0.163
SB-125		427.89	*	-9.684E-03	7.492E-02	1.238E-01	7.736E-03	-0.078
	+	463.38		1.078E+00	4.127E-01	5.013E-01	3.593E-02	2.151
		600.56		2.785E-02	1.562E-01	2.552E-01	2.033E-02	0.109
		635.90		-1.375E-01	2.314E-01	3.565E-01	2.941E-02	-0.386
TE-125M		109.28	*	1.148E+00	8.937E+00	1.451E+01	1.275E+00	0.079
I-126		388.63		-4.511E-02	1.616E-01	2.672E-01	1.536E-02	-0.169
		666.33	*	1.109E-01	1.433E-01	2.501E-01	1.923E-02	0.443
		753.82		2.432E-01	1.171E+00	1.967E+00	1.763E-01	0.124
SB-126		223.80		1.418E+00	3.422E+00	5.752E+00	3.161E-01	0.247
		278.60		2.576E+00	2.103E+00	3.591E+00	2.047E-01	0.717
	+	296.50		1.610E+01	1.968E+00	3.257E+00	1.870E-01	4.944
		414.70		-7.916E-02	6.100E-02	9.478E-02	5.606E-03	-0.835
		415.30		-1.261E-01	4.918E+00	8.194E+00	4.850E-01	-0.015
		555.20		-9.666E-01	3.120E+00	4.979E+00	3.440E-01	-0.194
		573.80		-7.383E-01	8.408E-01	1.287E+00	9.058E-02	-0.573
		593.00		-4.873E-01	7.553E-01	1.171E+00	8.389E-02	-0.416
		656.30		1.009E+00	2.532E+00	4.348E+00	3.299E-01	0.232

---- Non-identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		666.33		4.621E-02	5.972E-02	1.042E-01	8.014E-03	0.443
		675.00		1.414E+00	1.579E+00	2.773E+00	2.165E-01	0.510
		695.00		1.361E-02	6.093E-02	1.031E-01	8.344E-03	0.132
		697.00		-5.717E-02	2.206E-01	3.547E-01	2.881E-02	-0.161
		720.50	*	1.178E-02	1.324E-01	1.915E-01	1.621E-02	0.062
		856.80		-1.891E-01	4.418E-01	5.940E-01	6.300E-02	-0.318
		989.30		7.191E-01	1.031E+00	1.751E+00	1.713E-01	0.411
		1034.80		5.783E+00	7.663E+00	1.298E+01	1.153E+00	0.445
		1213.00		9.767E-01	4.027E+00	6.740E+00	4.052E-01	0.145
SB-127		61.10		-7.693E+01	5.505E+01	8.672E+01	8.776E+00	-0.887
		252.40		1.976E-02	2.926E+00	4.802E+00	1.990E+00	0.004
		290.80		-4.516E+00	1.763E+01	2.461E+01	2.141E+00	-0.184
		411.60		6.530E-01	8.757E+00	1.467E+01	2.076E+00	0.045
		444.90		-1.829E+00	6.246E+00	1.018E+01	1.083E+00	-0.180
		473.00		9.555E-01	1.153E+00	1.981E+00	2.206E-01	0.482
		543.00		-1.352E+01	1.147E+01	1.708E+01	2.241E+00	-0.792
		603.60		-2.560E+00	9.768E+00	1.331E+01	1.501E+00	-0.192
		685.20	*	1.361E-01	8.905E-01	1.503E+00	1.585E-01	0.091
		698.50		-1.237E+01	1.104E+01	1.701E+01	2.606E+00	-0.727
		722.20		1.132E+01	2.274E+01	3.401E+01	3.647E+00	0.333
		783.80		3.753E+00	2.571E+00	4.545E+00	5.774E-01	0.826
XE-127		57.60		-1.266E+00	7.118E+00	1.185E+01	9.133E-01	-0.107
		145.22		5.953E-01	6.565E-01	1.066E+00	5.830E-02	0.558
		172.10		3.326E-02	1.007E-01	1.716E-01	9.034E-03	0.194
		202.84	*	-3.410E-02	4.081E-02	6.589E-02	3.556E-03	-0.518
		374.96		-8.273E-02	1.583E-01	2.593E-01	1.495E-02	-0.319
I-131		80.18		2.181E+00	4.875E+00	6.711E+00	5.845E-01	0.325
		284.30		-2.238E-01	1.211E+00	1.952E+00	1.242E-01	-0.115
		364.48	*	1.123E-02	8.862E-02	1.502E-01	9.681E-03	0.075
		636.97		-6.926E-01	1.178E+00	1.814E+00	1.452E-01	-0.382
		722.89		3.001E+00	6.023E+00	9.004E+00	7.697E-01	0.333
TE-132		49.72		-2.064E+01	2.081E+01	3.361E+01	3.324E+00	-0.614
		111.76		-1.081E+01	2.264E+01	3.584E+01	3.200E+00	-0.302
		116.30		2.034E+00	2.050E+01	3.313E+01	2.888E+00	0.061
		228.16	*	-3.198E-01	4.856E-01	7.786E-01	1.092E-01	-0.411
BA-133		53.15		5.168E-01	4.740E+00	7.829E+00	6.212E-01	0.066
		79.62		1.347E+00	1.395E+00	2.122E+00	3.232E-01	0.635
		81.00		1.216E-02	1.299E-01	1.522E-01	2.424E-02	0.080
		276.40		2.838E-01	3.478E-01	5.647E-01	7.294E-02	0.503
		302.84		1.438E-01	1.426E-01	2.134E-01	2.483E-02	0.674
		356.01	*	-1.750E-02	4.105E-02	5.506E-02	6.360E-03	-0.318
		383.85		1.072E-01	2.453E-01	4.201E-01	4.558E-02	0.255
I-133	+	510.53		5.942E-01	2.453E-01	Half-Life too short		
		529.87	*	-9.648E-04	2.453E-01	Half-Life too short		
		706.58		3.007E-02	2.453E-01	Half-Life too short		
		856.28		-4.424E-02	2.453E-01	Half-Life too short		
		875.33		9.530E-03	2.453E-01	Half-Life too short		
		1236.41		5.170E-01	2.453E-01	Half-Life too short		
		1298.22		-4.780E-03	2.453E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		475.35		-1.585E-00	1.625E-00	2.527E+00	1.606E-01	-0.627
		563.23		6.679E-02	2.957E-01	4.876E-01	3.445E-02	0.137
		569.32		-1.748E-02	1.657E-01	2.649E-01	1.894E-02	-0.066
		604.70		6.391E-03	3.406E-02	4.820E-02	3.505E-03	0.133
	+	795.84	*	7.808E-02	6.215E-02	8.201E-02	7.932E-03	0.952
		801.93		-5.117E-01	3.856E-01	5.257E-01	5.129E-02	-0.973
		1038.57		-2.523E-00	3.434E+00	5.453E+00	4.798E-01	-0.463
		1167.94		-1.479E-01	2.217E-00	3.654E+00	2.072E-01	-0.040
		1365.15		-4.674E-01	1.013E+00	1.572E+00	1.250E-01	-0.297
CS-135		268.24	*	4.268E-02	1.689E-01	2.449E-01	1.851E-02	0.174
I-135		288.45		7.714E+08	1.689E-01	Half-Life too short		
		417.63		6.742E+08	1.689E-01	Half-Life too short		
		546.56		4.917E+08	1.689E-01	Half-Life too short		
		836.80		3.240E+08	1.689E-01	Half-Life too short		
		1038.76		-6.229E+08	1.689E-01	Half-Life too short		
		1124.00		4.506E+09	1.689E-01	Half-Life too short		
		1131.51		3.949E+08	1.689E-01	Half-Life too short		
		1260.41	*	-6.877E+07	1.689E-01	Half-Life too short		
		1457.56		5.213E+10	1.689E-01	Half-Life too short		
		1678.03		2.581E+07	1.689E-01	Half-Life too short		
		1706.46		5.042E+08	1.689E-01	Half-Life too short		
		1791.20		-9.291E+07	1.689E-01	Half-Life too short		
CS-136		66.91		-2.269E-01	8.056E-01	1.312E+00	1.981E-01	-0.173
	+	86.29		4.720E+00	1.370E+00	1.906E+00	2.512E-01	2.477
		153.22		4.727E-01	5.389E-01	9.397E-01	6.467E-02	0.503
		163.89		2.977E-01	9.163E-01	1.542E+00	1.053E-01	0.193
		176.55		3.638E-03	2.993E-01	5.038E-01	3.052E-02	0.007
		273.65		-4.295E-01	4.520E-01	6.082E-01	3.961E-02	-0.706
		340.57		5.061E-01	1.252E-01	2.117E-01	1.302E-02	2.391
		818.51		-1.941E-02	5.686E-02	9.128E-02	9.113E-03	-0.213
		1048.07	*	-7.550E-02	8.780E-02	1.376E-01	1.234E-02	-0.548
		1235.34		7.449E-01	6.353E-01	9.669E-01	9.939E-02	0.770
BA-137M		661.65	*	-1.523E-02	2.942E-02	4.783E-02	3.646E-03	-0.319
CS-137		661.65	*	-1.610E-02	3.110E-02	5.056E-02	3.864E-03	-0.319
CE-139		165.85	*	2.733E-02	2.627E-02	4.586E-02	2.407E-03	0.596
BA-140		162.64		-2.860E-01	6.419E-01	1.053E+00	6.381E-02	-0.272
		304.84		7.004E-01	1.173E+00	1.703E+00	4.645E-01	0.411
		423.70		4.796E-01	1.469E+00	2.475E+00	7.876E-01	0.194
		537.32	*	1.352E-01	1.987E-01	3.303E-01	1.080E-01	0.409
LA-140	+	328.77		4.557E-01	3.752E-01	4.433E-01	2.872E-02	1.028
		432.53		-9.938E-01	1.624E+00	2.610E+00	1.730E-01	-0.381
		487.03		2.116E-02	1.025E-01	1.709E-01	1.219E-02	0.124
		751.79		-5.816E-02	1.374E+00	2.274E+00	2.235E-01	-0.026
		815.85		1.745E-01	2.420E-01	4.179E-01	4.517E-02	0.417
		867.82		-1.103E+00	1.343E+00	1.714E+00	1.913E-01	-0.643
		919.63		-6.595E-01	2.442E+00	3.451E+00	4.360E-01	-0.191
		925.24		-1.295E-01	9.478E-01	1.453E+00	1.645E-01	-0.089
		1596.49	*	-8.028E-02	6.744E-02	9.645E-02	6.617E-03	-0.832
CE-141		145.44	*	5.792E-02	5.797E-02	9.535E-02	5.443E-03	0.607

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-143		57.37		-4.215E-05	5.797E-02	Half-Life too short		
		231.56		3.625E-04	5.797E-02	Half-Life too short		
		293.26	*	4.214E-04	5.797E-02	Half-Life too short		
	+	350.59		1.848E-02	5.797E-02	Half-Life too short		
		490.36		2.069E-04	5.797E-02	Half-Life too short		
		664.57		5.997E-04	5.797E-02	Half-Life too short		
		721.93		3.791E-04	5.797E-02	Half-Life too short		
CE-144		80.11		1.126E+00	2.472E+00	3.405E+00	2.948E-01	0.331
		133.54	*	6.852E-02	1.962E-01	3.169E-01	4.480E-02	0.216
PM-144		476.78		-3.041E-02	5.756E-02	9.207E-02	6.831E-03	-0.330
		618.01		-1.577E-02	2.802E-02	4.278E-02	3.256E-03	-0.369
		696.49	*	6.249E-03	3.014E-02	4.978E-02	4.041E-03	0.126
		778.57		-8.400E-01	1.951E+00	3.134E+00	2.930E-01	-0.268
PR-144		696.49	*	4.232E-01	2.041E+00	3.372E+00	2.736E-01	0.126
		1489.15		-1.155E+00	9.901E+00	1.579E+01	1.141E+00	-0.073
PM-146		453.90	*	-5.630E-03	3.724E-02	6.117E-02	5.442E-03	-0.092
		633.02		7.052E-02	1.164E+00	1.881E+00	6.982E-01	0.037
		735.90		4.064E-02	1.324E-01	2.082E-01	5.960E-02	0.195
		747.13		4.801E-03	7.847E-02	1.308E-01	1.855E-02	0.037
ND-147	+	91.11		8.141E-01	1.855E-01	4.587E-01	4.314E-02	1.775
		319.41		1.237E-01	2.762E+00	4.459E+00	2.575E-01	0.028
		439.89		1.652E+00	4.520E+00	7.649E+00	4.666E-01	0.216
		531.02	*	-6.326E-01	4.219E-01	6.037E-01	8.423E-02	-1.048
PM-149		285.90	*	-4.356E+01	5.848E+01	9.126E+01	1.290E+01	-0.477
EU-152		121.78		1.366E-02	6.934E-02	1.121E-01	8.642E-03	0.122
		244.69		2.141E-01	3.210E-01	4.683E-01	2.616E-02	0.457
		344.27	*	-4.073E-02	1.019E-01	1.273E-01	8.304E-03	-0.320
		443.98		-1.915E-02	7.604E-01	1.260E+00	7.721E-02	-0.015
		778.89		-2.370E-02	2.247E-01	3.692E-01	3.452E-02	-0.064
		867.32		-3.561E-01	8.205E-01	1.098E+00	1.184E-01	-0.324
	+	964.01		7.867E-01	3.655E-01	5.191E-01	5.317E-02	1.516
		1085.78		-7.882E-02	3.304E-01	5.413E-01	4.195E-02	-0.146
		1112.02		-4.818E-02	2.958E-01	4.296E-01	3.058E-02	-0.112
		1407.95		4.490E-02	1.697E-01	2.825E-01	2.098E-02	0.159
GD-153		69.67		-2.436E+00	1.891E+00	2.820E+00	2.289E-01	-0.864
	+	83.37		2.752E+01	1.375E+01	2.359E+01	2.095E+00	1.166
		97.43	*	-1.310E-02	8.214E-02	1.184E-01	9.254E-03	-0.111
		103.18		-7.222E-02	1.035E-01	1.633E-01	1.178E-02	-0.442
EU-154		123.07		-3.982E-03	4.984E-02	7.967E-02	7.534E-03	-0.050
		247.94		-9.619E-02	3.260E-01	4.874E-01	4.591E-02	-0.197
		591.81		-1.712E-01	5.440E-01	8.374E-01	8.907E-02	-0.204
		723.30		4.126E-02	1.690E-01	2.474E-01	2.332E-02	0.167
		756.87		-2.786E-01	6.501E-01	1.047E+00	1.284E-01	-0.266
		873.19		2.160E-01	2.561E-01	4.410E-01	6.142E-02	0.490
		996.32		-2.188E-01	3.356E-01	5.127E-01	9.375E-02	-0.427
		1004.76		-1.413E-01	1.885E-01	2.858E-01	3.514E-02	-0.495
		1274.45	*	-4.352E-02	1.103E-01	1.757E-01	1.755E-02	-0.248
EU-155		48.70		-7.025E-01	3.431E+00	5.751E+00	4.362E-01	-0.122
		60.01		-3.889E+00	5.739E+00	9.358E+00	7.141E-01	-0.416

---- Non-Identified Nuclides ----

Nuclide	Line Identd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.54		4.626E-01	1.269E-01	1.888E-01	1.739E-02	2.450
		105.31	*	1.176E-01	1.046E-01	1.759E-01	1.258E-02	0.669
TB-160	+	86.79		1.223E+00	3.351E-01	5.007E-01	4.581E-02	2.442
		197.04		-9.101E-02	5.102E-01	8.416E-01	4.520E-02	-0.108
		215.65		-2.748E-01	6.658E-01	1.049E+00	5.727E-02	-0.262
		298.57		2.447E-01	1.053E-01	1.851E-01	1.063E-02	1.322
		879.36	*	-2.058E-02	1.160E-01	1.873E-01	2.058E-02	-0.110
		962.29		1.040E+00	5.397E-01	8.629E-01	8.864E-02	1.206
	+	966.15		5.344E-01	2.483E-01	4.876E-01	4.976E-02	1.096
		1177.93		-3.114E-01	3.159E-01	4.871E-01	2.720E-02	-0.639
		1271.85		-5.104E-01	6.280E-01	9.661E-01	6.529E-02	-0.528
HO-166M		80.57		4.109E-01	3.416E-01	4.308E-01	3.743E-02	0.954
		184.41		1.046E-01	3.641E-02	5.961E-02	3.167E-03	1.755
		280.46		-7.423E-02	7.894E-02	1.230E-01	7.016E-03	-0.603
		410.95		1.530E-01	2.162E-01	3.723E-01	2.191E-02	0.411
		711.68	*	-1.069E-02	5.037E-02	8.289E-02	6.909E-03	-0.129
		752.31		-3.658E-02	2.342E-01	3.848E-01	3.440E-02	-0.095
		810.29		-6.941E-02	4.784E-02	6.944E-02	6.837E-03	-1.000
TM-171		51.35		-3.423E+01	4.042E+01	6.592E+01	5.225E+00	-0.519
		52.39		3.972E+00	2.031E+01	3.452E+01	2.742E+00	0.115
		59.40		-1.634E+01	3.109E+01	5.101E+01	3.873E+00	-0.320
		66.72	*	-3.308E-01	3.108E+01	5.112E+01	4.088E+00	-0.006
LU-176	+	88.36		9.114E-01	2.498E-01	3.745E-01	3.438E-02	2.434
		201.83		-2.879E-02	2.587E-02	4.133E-02	2.229E-03	-0.697
		306.84	*	8.364E-03	2.309E-02	3.522E-02	2.028E-03	0.237
		401.10		1.405E+00	5.743E+00	9.718E+00	5.649E-01	0.145
LU-177		112.95		-1.971E-01	1.392E+00	2.232E+00	1.438E-01	-0.088
	+	208.36	*	2.630E+00	1.213E+00	1.640E+00	8.898E-02	1.604
LU-177M		52.97		2.603E-01	2.139E+00	3.534E+00	2.806E-01	0.074
		54.07		3.908E-02	1.110E+00	1.827E+00	1.445E-01	0.021
		61.30		-1.326E+00	1.712E+00	2.781E+00	2.149E-01	-0.477
		121.62		6.338E-02	3.537E-01	5.717E-01	3.391E-02	0.111
		147.16		-4.421E-01	6.263E-01	9.634E-01	5.242E-02	-0.459
		171.86		2.194E-01	4.104E-01	7.046E-01	3.709E-02	0.311
		218.09		-1.715E-01	7.632E-01	1.241E+00	6.791E-02	-0.138
		268.79		8.294E-01	8.678E-01	1.303E+00	7.388E-02	0.637
		319.02		-4.141E-02	2.291E-01	3.657E-01	2.111E-02	-0.113
		367.43		1.908E-01	7.821E-01	1.332E+00	7.691E-02	0.143
		413.65	*	-2.074E-01	1.542E-01	2.395E-01	1.415E-02	-0.866
HF-181		56.28		1.244E-02	1.145E+00	1.921E+00	1.496E-01	0.006
		57.53		-4.660E-02	5.999E-01	1.002E+00	7.730E-02	-0.046
		65.20		-1.269E+00	1.074E+00	1.696E+00	1.345E-01	-0.748
		133.02		-1.647E-02	6.293E-02	9.936E-02	5.621E-03	-0.166
		136.25		-2.724E-01	4.245E-01	6.579E-01	3.684E-02	-0.414
		345.85		1.124E-01	1.896E-01	2.585E-01	1.496E-02	0.435
		482.03	*	7.225E-03	3.476E-02	5.796E-02	3.710E-03	0.125
W-181		56.28		5.673E-03	4.535E-01	7.612E-01	5.930E-02	0.007
		57.53		-1.842E-02	2.379E-01	3.976E-01	3.066E-02	-0.046
		65.20	*	-4.992E-01	4.226E-01	6.671E-01	5.291E-02	-0.748

---- Non-Identified Nuclides ----

Nuclide	line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		67.75		-6.024E-02	1.188E-01	1.918E-01	1.542E-02	-0.314
		100.10		5.413E-02	1.687E-01	2.775E-01	2.086E-02	0.195
		152.43		-8.867E-02	3.139E-01	4.902E-01	2.637E-02	-0.181
		222.10		3.688E-02	3.149E-01	5.238E-01	2.875E-02	0.070
		1001.68		1.269E+00	1.812E+00	3.034E+00	2.897E-01	0.418
	+	1121.28		6.857E-01	2.277E-01	3.081E-01	2.123E-02	2.226
		1189.05		-8.657E-02	2.785E-01	4.512E-01	2.580E-02	-0.192
		1221.42	*	-1.583E-01	1.771E-01	2.751E-01	1.683E-02	-0.575
		1230.97		4.083E-01	4.964E-01	7.474E-01	4.662E-02	0.546
RE-183		57.98		2.386E-02	2.314E-01	3.891E-01	2.989E-02	0.061
		59.32		-6.772E-02	1.267E-01	2.079E-01	1.579E-02	-0.326
		67.20		-6.479E-02	2.137E-01	3.478E-01	2.787E-02	-0.186
		162.32	*	-9.705E-02	9.843E-02	1.582E-01	8.350E-03	-0.614
	+	208.81		2.633E+00	1.214E+00	1.641E+00	8.906E-02	1.604
		291.72		-1.595E-01	9.327E-01	1.309E+00	7.500E-02	-0.122
RE-184		57.98		8.849E-02	8.584E-01	1.443E+00	1.109E-01	0.061
		59.32		-2.510E-01	4.696E-01	7.704E-01	5.853E-02	-0.326
		67.20		-2.403E-01	7.924E-01	1.290E+00	1.034E-01	-0.186
		161.27		-3.187E-01	3.157E-01	5.152E-01	2.725E-02	-0.619
		216.55		-8.587E-02	2.342E-01	3.832E-01	2.093E-02	-0.224
		252.85	*	-1.588E-02	1.942E-01	3.174E-01	1.783E-02	-0.050
		318.01		-1.749E-01	3.968E-01	6.250E-01	3.607E-02	-0.280
		792.07		6.872E-01	1.047E+00	1.564E+00	1.495E-01	0.439
		903.28		-3.011E-01	9.493E-01	1.340E+00	1.505E-01	-0.225
		920.93		-3.093E-01	3.989E-01	5.741E-01	6.291E-02	-0.539
OS-185		59.72		-1.244E-01	3.356E-01	5.539E-01	4.213E-02	-0.225
		61.14		-2.576E-01	1.902E-01	3.016E-01	2.327E-02	-0.854
		69.30		-3.848E-01	3.343E-01	5.016E-01	4.063E-02	-0.767
		592.07		-1.028E+00	2.143E+00	3.360E+00	2.406E-01	-0.306
		646.12	*	-3.694E-02	3.670E-02	5.465E-02	4.110E-03	-0.676
		717.42		-4.036E-02	7.629E-01	1.267E+00	1.067E-01	-0.032
		874.81		2.030E-01	5.034E-01	8.464E-01	9.233E-02	0.240
		880.27		-1.232E-01	6.840E-01	1.043E+00	1.148E-01	-0.118
RE-188		155.03	*	6.380E-02	1.473E-01	2.534E-01	1.356E-02	0.252
		477.96		-3.796E-01	2.534E+00	4.144E+00	2.640E-01	-0.092
		633.10		-5.689E-01	2.366E+00	3.744E+00	2.783E-01	-0.152
W-188		63.58		5.140E+01	6.027E+01	1.020E+02	8.013E+00	0.504
		227.08		-3.184E+00	1.144E+01	1.872E+01	1.032E+00	-0.170
		290.67	*	-1.534E+00	7.435E+00	1.041E+01	5.965E-01	-0.147
IR-192	+	295.96		1.301E+00	1.596E-01	2.694E-01	1.571E-02	4.830
		308.46		-9.458E-03	8.246E-02	1.324E-01	7.716E-03	-0.071
		316.51	*	-8.710E-03	3.008E-02	4.706E-02	2.729E-03	-0.185
		468.07		-6.120E-02	6.490E-02	8.568E-02	6.105E-03	-0.714
		604.41		-1.027E-01	4.698E-01	6.427E-01	7.809E-02	-0.160
		612.46		4.573E+00	9.095E-01	1.532E+00	1.344E-01	2.984
AU-195		65.12		-2.168E-01	1.968E-01	3.118E-01	2.472E-02	-0.695
		66.83		-2.339E-02	1.026E-01	1.676E-01	1.340E-02	-0.140
	+	75.70		1.412E+00	2.992E-01	4.887E-01	4.104E-02	2.889
		98.88	*	1.459E-01	2.254E-01	3.584E-01	2.742E-02	0.407

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		129.76		5.202E+00	2.777E+00	4.715E+00	2.698E-01	1.103
TL-200		367.94	*	1.051E-04	2.777E+00	Half-Life too short		
		579.30		2.126E-03	2.777E+00	Half-Life too short		
		828.27		6.510E-04	2.777E+00	Half-Life too short		
		1205.75		-2.058E-04	2.777E+00	Half-Life too short		
TL-201		68.90		-3.334E+00	3.909E+00	6.293E+00	5.088E-01	-0.530
		70.82		-1.030E-01	2.469E+00	3.660E+00	2.989E-01	-0.028
		80.30		6.259E+00	4.885E+00	6.187E+00	5.365E-01	1.012
		135.34		-4.017E+00	1.828E+01	2.887E+01	1.621E+00	-0.139
		167.43	*	-4.011E-01	4.788E+00	8.061E+00	4.232E-01	-0.050
TL-202		68.90		-3.650E-01	4.279E-01	6.889E-01	5.569E-02	-0.530
		70.82		-1.125E-02	2.695E-01	3.996E-01	3.262E-02	-0.028
		80.30		6.835E-01	5.334E-01	6.756E-01	5.858E-02	1.012
		439.56	*	2.556E-02	5.365E-02	9.133E-02	5.568E-03	0.280
HG-203		70.83		-4.792E-02	1.225E+00	1.817E+00	2.420E-01	-0.026
		72.87		9.420E-01	7.161E-01	1.102E+00	1.429E-01	0.855
		82.60		-2.450E-01	1.145E+00	1.666E+00	2.311E-01	-0.147
		279.20	*	3.448E-02	3.627E-02	6.135E-02	3.721E-03	0.562
BI-207		72.80		2.359E-01	2.105E-01	3.248E-01	2.681E-02	0.726
	+	74.97		7.866E-01	1.667E-01	2.439E-01	2.039E-02	3.226
	+	84.90		3.570E-01	1.784E-01	3.105E-01	2.794E-02	1.150
		569.67		-9.039E-03	2.636E-02	4.151E-02	2.909E-03	-0.218
		1063.62	*	1.858E-02	4.645E-02	7.954E-02	6.566E-03	0.234
		1770.23		6.288E-02	5.910E-01	7.157E-01	4.330E-02	0.088
TL-207		81.07		1.470E-02	2.862E-01	3.343E-01	2.916E-02	0.044
	+	83.78		2.354E-01	1.176E-01	2.016E-01	1.797E-02	1.168
		94.90		5.219E-01	2.409E-01	3.805E-01	3.097E-02	1.372
		122.32		9.898E-02	1.692E+00	2.720E+00	1.847E-01	0.036
		144.24		5.283E-01	6.648E-01	1.075E+00	7.504E-02	0.491
		154.21		3.546E-01	3.422E-01	5.993E-01	3.988E-02	0.592
	+	269.46		3.260E-01	2.560E-01	3.187E-01	1.893E-02	1.023
		323.87	*	-1.532E-01	7.159E-01	9.907E-01	1.636E-01	-0.155
	+	338.28		8.183E+00	1.852E+00	2.240E+00	2.357E-01	3.653
		445.03		-1.128E+00	1.828E+00	2.919E+00	3.054E-01	-0.386
PO-209		260.50		2.103E+00	8.646E+00	1.430E+01	8.070E-01	0.147
		262.80		1.693E+01	2.373E+01	3.998E+01	2.259E+00	0.424
		896.60	*	6.193E+00	6.574E+00	1.137E+01	1.282E+00	0.545
BI-210		46.50	*	-9.750E+00	5.935E+00	9.414E+00	7.284E-01	-1.036
PB-210		46.50	*	-9.750E+00	5.935E+00	9.414E+00	7.284E-01	-1.036
PO-210		46.50	*	-9.750E+00	5.923E+00	9.414E+00	6.262E-01	-1.036
PB-211		404.84	*	-2.886E-01	8.508E-01	1.368E+00	8.527E-01	-0.211
		427.08		-2.821E-01	1.691E+00	2.775E+00	1.716E+00	-0.102
		831.96		-5.111E-01	1.119E+00	1.708E+00	1.074E+00	-0.299
PO-215		81.07		1.470E-02	2.862E-01	3.343E-01	2.916E-02	0.044
	+	83.78		2.354E-01	1.176E-01	2.016E-01	1.797E-02	1.168
		94.90		5.219E-01	2.409E-01	3.805E-01	3.097E-02	1.372
		122.32		9.898E-02	1.692E+00	2.720E+00	1.847E-01	0.036
		144.24		5.283E-01	6.648E-01	1.075E+00	7.504E-02	0.491
		154.21		3.546E-01	3.422E-01	5.993E-01	3.988E-02	0.592

---- Non Identified Nuclides ----

Nuclide	Line Idnd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		3.260E-01	2.560E-01	3.187E-01	1.893E-02	1.023
		323.87	*	-1.532E-01	7.159E-01	9.907E-01	1.636E-01	-0.155
	-	338.28		8.183E+00	1.852E+00	2.240E+00	2.357E-01	3.653
		445.03		-1.128E+00	1.828E+00	2.919E+00	3.054E-01	-0.386
RN-219	+	271.23		4.183E-01	3.293E-01	4.126E-01	3.308E-02	1.014
		401.81	*	3.461E-02	3.555E-01	5.973E-01	8.131E-02	0.058
RN-220		549.76	*	-4.546E-01	2.182E+01	3.552E+01	2.441E+00	-0.013
RA-223		81.07		1.470E-02	2.862E-01	3.343E-01	2.916E-02	0.044
	+	83.78		2.354E-01	1.176E-01	2.016E-01	1.797E-02	1.168
		94.90		5.219E-01	2.409E-01	3.805E-01	3.097E-02	1.372
		122.32		9.898E-02	1.692E+00	2.720E+00	1.847E-01	0.036
		144.24		5.283E-01	6.648E-01	1.075E+00	7.504E-02	0.491
		154.21		3.546E-01	3.422E-01	5.993E-01	3.988E-02	0.592
	+	269.46		3.260E-01	2.560E-01	3.187E-01	1.893E-02	1.023
		323.87	*	-1.532E-01	7.159E-01	9.907E-01	1.636E-01	-0.155
	+	338.28		8.183E+00	1.852E+00	2.240E+00	2.357E-01	3.653
		445.03		-1.128E+00	1.828E+00	2.919E+00	3.054E-01	-0.386
AC-227		79.80		9.435E-01	1.935E+00	2.657E+00	5.716E-01	0.355
		236.00		8.177E-01	2.608E-01	4.104E-01	4.234E-02	1.992
		256.20	*	2.534E-02	3.299E-01	5.424E-01	7.534E-02	0.047
		286.10		-9.500E-01	1.406E+00	2.207E+00	2.542E-01	-0.431
	+	299.80		4.968E+00	1.916E+00	2.445E+00	3.977E-01	2.032
		304.40		1.483E+00	1.809E+00	2.674E+00	4.622E-01	0.555
		334.20		1.657E+00	2.606E+00	3.231E+00	5.922E-01	0.513
TH-227		79.80		9.435E-01	1.935E+00	2.657E+00	5.789E-01	0.355
	+	94.00		1.133E+01	3.843E+00	3.752E+00	8.119E-01	3.021
		236.00		8.177E-01	2.573E-01	4.104E-01	3.652E-02	1.992
		256.20	*	2.534E-02	3.299E-01	5.424E-01	9.135E-02	0.047
		286.10		-9.500E-01	1.694E+00	2.207E+00	2.210E+00	-0.431
	+	299.80		4.968E+00	1.916E+00	2.445E+00	3.977E-01	2.032
		304.40		1.483E+00	1.809E+00	2.674E+00	4.622E-01	0.555
		334.20		1.657E+00	2.606E+00	3.231E+00	5.922E-01	0.513
TH-229	+	85.43		3.524E-01	1.761E-01	3.168E-01	2.863E-02	1.113
	+	88.47		5.246E-01	1.438E-01	2.138E-01	1.959E-02	2.453
		100.00		6.259E-02	1.766E-01	2.908E-01	2.190E-02	0.215
		193.63	*	-1.678E-01	4.495E-01	7.414E-01	3.970E-02	-0.226
	+	210.97		2.085E+00	9.614E-01	1.268E+00	6.893E-02	1.645
PA-231		283.67	*	-4.049E-01	1.360E+00	2.180E+00	2.996E-01	-0.186
	+	301.29		1.987E+00	7.249E-01	9.790E-01	1.020E-01	2.030
TH-231		81.07		1.470E-02	2.862E-01	3.343E-01	2.916E-02	0.044
	+	83.78		2.354E-01	1.176E-01	2.016E-01	1.797E-02	1.168
		94.90		5.219E-01	2.409E-01	3.805E-01	3.097E-02	1.372
		122.32		9.898E-02	1.692E+00	2.720E+00	1.847E-01	0.036
		144.24		5.283E-01	6.648E-01	1.075E+00	7.504E-02	0.491
		154.21		3.546E-01	3.422E-01	5.993E-01	3.988E-02	0.592
	+	269.46		3.260E-01	2.560E-01	3.187E-01	1.893E-02	1.023
		323.87	*	-1.532E-01	7.159E-01	9.907E-01	1.636E-01	-0.155
	+	338.28		8.183E+00	1.852E+00	2.240E+00	2.357E-01	3.653
		445.03		-1.128E+00	1.828E+00	2.919E+00	3.054E-01	-0.386

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231	.	84.21		8.386E+00	4.190E+00	7.210E+00	6.450E-01	1.163
	-	92.29		9.260E+00	2.535E+00	3.292E-00	2.803E-01	2.813
		95.87	*	-3.953E-01	9.203E-01	1.309E+00	1.049E-01	-0.302
		108.00		-4.000E-01	1.672E-00	2.680E+00	1.822E-01	-0.149
PA-233	.	75.28		2.295E+01	5.671E+00	7.317E+00	1.113E+00	3.137
	-	86.59		7.522E+00	2.811E+00	3.077E+00	8.305E-01	2.445
	.	300.12		1.385E+00	5.186E-01	6.838E-01	9.173E-02	2.025
		311.98	*	-2.026E-02	5.408E-02	8.554E-02	5.240E-03	-0.237
		340.50		2.853E+00	9.116E-01	1.119E+00	2.569E-01	2.549
		398.62		-5.320E-01	1.789E+00	2.941E+00	7.604E-01	-0.181
		415.76		8.409E-01	1.392E+00	2.374E+00	4.895E-01	0.354
PA-234		63.00		2.315E+00	1.831E+00	3.090E+00	4.658E-01	0.749
		94.67		5.209E-01	1.851E-01	2.872E-01	3.474E-02	1.814
		98.44		5.867E-02	1.018E-01	1.444E-01	8.036E-02	0.406
		99.86		1.790E-01	4.482E-01	7.391E-01	5.575E-02	0.242
		111.00		-3.007E-02	1.784E-01	2.861E-01	3.069E-02	-0.105
		131.20		3.434E-04	1.061E-01	1.694E-01	9.643E-03	0.002
		152.70		1.149E-01	3.014E-01	4.829E-01	7.561E-02	0.238
	+	186.00		6.317E+00	2.630E+00	2.371E+00	7.223E-01	2.665
		226.40		-5.463E-02	3.615E-01	5.944E-01	6.786E-02	-0.092
		227.20		3.719E-02	3.863E-01	6.411E-01	3.534E-02	0.058
		248.90		-2.573E-01	6.893E-01	1.109E+00	2.378E-01	-0.232
		293.70		5.925E+00	1.300E+00	1.597E+00	2.565E-01	3.710
		369.80		4.748E-01	7.353E-01	1.263E+00	2.629E-01	0.376
		568.70		-2.169E-01	8.580E-01	1.359E+00	9.516E-02	-0.160
		569.50		-9.166E-02	2.333E-01	3.661E-01	2.565E-02	-0.250
		574.00		-9.067E-01	1.276E+00	1.977E+00	1.391E-01	-0.459
		699.00		-5.135E-01	6.380E-01	1.005E+00	1.897E-01	-0.511
		706.10		3.204E-01	9.056E-01	1.522E+00	6.778E-01	0.210
		733.00		1.248E-01	3.563E-01	5.251E-01	1.166E-01	0.238
		742.81		-3.662E-01	1.174E+00	1.869E+00	1.257E+00	-0.196
	+	796.30		1.519E+00	1.270E+00	1.586E+00	4.344E-01	0.958
		805.60		1.147E+00	8.652E-01	1.429E+00	4.428E-01	0.803
		819.60		-1.388E-01	1.000E+00	1.628E+00	6.246E-01	-0.085
		826.30		-3.791E-01	7.018E-01	1.075E+00	4.844E-01	-0.353
		831.60		-2.225E-01	5.548E-01	8.818E-01	2.675E-01	-0.252
		876.40		1.905E-02	7.275E-01	1.192E+00	1.228E+00	0.016
		880.51		3.614E-03	2.455E-01	3.797E-01	4.178E-02	0.010
		883.24		-3.366E-02	2.374E-01	3.823E-01	2.583E-01	-0.088
		899.00		-2.545E-01	7.345E-01	1.155E+00	5.119E-01	-0.220
		925.00		9.166E-02	1.043E+00	1.630E+00	1.776E-01	0.056
		926.50		1.254E-01	1.730E-01	2.557E-01	6.681E-02	0.491
		946.00	*	8.392E-02	2.614E-01	4.339E-01	8.559E-02	0.193
		949.00		1.345E-01	4.079E-01	6.772E-01	7.112E-02	0.199
		980.50		1.445E-01	7.217E-01	1.022E+00	1.016E-01	0.141
		1394.10		-8.346E-01	1.116E+00	1.439E+00	9.345E-01	-0.580
PA-234M	+	766.41		4.970E+01	4.455E+01	2.974E+01	2.282E+01	1.672
		1001.03	*	2.826E+00	5.918E+00	9.770E+00	1.164E+00	0.289
TH-234		63.29	*	1.374E+00	1.557E+00	2.612E+00	4.605E-01	0.526

---- Non Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.933E+00	9.285E-01	1.044E+00	1.882E-01	2.809
U-235	+	89.95		3.486E+00	1.297E+00	1.900E+00	5.878E-01	1.835
	+	93.35		3.526E+00	1.348E+00	1.236E+00	3.455E-01	2.852
		105.00		1.038E+00	1.074E+00	1.730E+00	5.090E-01	0.600
		143.76	*	4.818E-02	2.083E-01	3.302E-01	5.347E-02	0.146
		163.35		1.519E-01	4.307E-01	7.245E-01	1.291E-01	0.210
	+	185.71		2.340E-01	6.755E-02	8.760E-02	4.659E-03	2.671
		205.31		3.454E-01	5.118E-01	7.700E-01	1.375E-01	0.449
NP-236		94.67		3.982E-01	1.361E-01	2.182E-01	1.783E-02	1.825
		98.44		4.429E-02	7.301E-02	1.091E-01	8.406E-03	0.406
		111.00		-2.275E-02	1.349E-01	2.164E-01	1.423E-02	-0.105
		160.31	*	2.811E-03	7.186E-02	1.198E-01	6.349E-03	0.023
U-238		63.29	*	1.374E+00	1.557E+00	2.612E+00	4.605E-01	0.526
	+	92.38		2.933E+00	8.029E-01	1.044E+00	8.875E-02	2.809
NP-239		99.55		1.180E-01	1.490E-01	2.491E-01	1.887E-02	0.474
		117.00	*	-4.701E-02	1.792E-01	2.852E-01	1.765E-02	-0.165
	+	209.75		2.101E+00	9.685E-01	1.324E+00	7.188E-02	1.587
		228.18		-1.343E-01	2.021E-01	3.251E-01	1.793E-02	-0.413
		277.60		1.827E-01	1.650E-01	2.805E-01	1.598E-02	0.651
		334.30		9.076E-01	1.466E+00	1.826E+00	1.056E-01	0.497
AM-241		59.54	*	-9.201E-02	1.804E-01	2.962E-01	2.456E-02	-0.311
CM-243		99.55		1.214E-01	1.534E-01	2.563E-01	1.942E-02	0.474
		103.76	*	-1.260E-02	9.360E-02	1.510E-01	1.081E-02	-0.083
		117.00		-4.836E-02	1.843E-01	2.934E-01	1.816E-02	-0.165
	+	209.75		2.071E+00	9.547E-01	1.305E+00	7.085E-02	1.587
		228.18		-1.357E-01	2.041E-01	3.285E-01	1.812E-02	-0.413
		277.60		1.841E-01	1.663E-01	2.828E-01	1.611E-02	0.651
CM-247		278.00		7.765E-01	6.820E-01	1.161E+00	6.615E-02	0.669
		287.40		-2.298E-01	1.115E+00	1.793E+00	1.026E-01	-0.128
		402.60	*	-3.857E-03	3.190E-02	5.303E-02	3.089E-03	-0.073
CF-249		252.85		-5.988E-02	7.320E-01	1.196E+00	6.720E-02	-0.050
		333.44		9.031E-02	2.271E-01	2.390E-01	1.382E-02	0.378
		387.95	*	1.333E-02	3.322E-02	5.677E-02	3.263E-03	0.235
CF-251		176.60	*	9.035E-04	1.096E-01	1.845E-01	9.744E-03	0.005
		227.00		-1.044E-01	3.470E-01	5.672E-01	3.126E-02	-0.184
		285.00		-9.815E-02	1.566E+00	2.538E+00	1.450E-01	-0.039

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358001      *
* Acquisition date :  6-JUL-2009 11:14:07 Detector SN#     :               *
* Detector ID        : GAM18                Sensitivity      : 5.000       *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000       *
* Elapsed real time:    0 02:00:01.95       Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOL1D         *
* Sample ID          : G232358001           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.2660E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.547E+01	3.051E+00	4.815E-01	0.000E+00
CD-109	3.903E+00	1.048E+00	1.284E+00	0.000E+00
SN-126	3.843E-01	1.032E-01	1.272E-01	0.000E+00
TL-208	5.903E-01	7.992E-02	5.186E-02	0.000E+00
BI-211	4.160E+00	4.927E-01	2.621E-01	0.000E+00
BI-212	1.390E+00	4.546E-01	4.068E-01	0.000E+00
PB-212	2.013E+00	1.769E-01	8.110E-02	0.000E+00
PO-212	2.013E+00	1.769E-01	8.110E-02	0.000E+00
BI-214	1.267E+00	1.723E-01	9.982E-02	0.000E+00
PB-214	1.447E+00	1.867E-01	9.133E-02	0.000E+00
PO-214	1.447E+00	1.867E-01	9.133E-02	0.000E+00
PO-216	2.013E+00	1.769E-01	8.110E-02	0.000E+00
PO-218	1.447E+00	1.867E-01	9.133E-02	0.000E+00
RA-224	5.385E+00	1.397E+00	9.217E-01	0.000E+00
RA-226	1.267E+00	1.723E-01	9.982E-02	0.000E+00
AC-228	2.133E+00	3.759E-01	1.729E-01	0.000E+00
RA-228	2.133E+00	3.759E-01	1.729E-01	0.000E+00
TH-228	2.013E+00	1.769E-01	8.110E-02	0.000E+00
TH-230	1.267E+00	1.723E-01	9.981E-02	0.000E+00
TH-232	2.133E+00	3.759E-01	1.729E-01	0.000E+00
U-234	1.267E+00	1.723E-01	9.981E-02	0.000E+00
NP-237	1.128E+00	3.794E-01	3.637E-01	0.000E+00
AM-243	4.382E-01	9.101E-02	1.008E-01	0.000E+00
ANH-511	1.464E-01	6.056E-02	4.104E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-6.548E-02	2.602E-01	4.388E-01	0.000E+00	NOT IDENT.
NA-22	-1.225E-02	3.848E-02	6.307E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.806E+05	0.000E+00	0.000E+00	SHORT HLIF

AT-26	3.321E-03	1.973E-02	3.386E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.619E-02	8.842E-02	0.000E+00	FAIL ABUN
SC-46	8.224E-03	3.287E-02	5.614E-02	0.000E+00	FAIL ABUN
V-48	-2.186E-02	7.013E-02	9.626E-02	0.000E+00	NOT IDENT.
CR-51	2.589E-02	3.160E-01	5.331E-01	0.000E+00	NOT IDENT.
MN-52	-5.871E-02	1.750E-01	2.797E-01	0.000E+00	FAIL ABUN
MN-54	-2.491E-02	3.378E-02	5.445E-02	0.000E+00	NOT IDENT.
CO-56	-6.839E-03	3.407E-02	5.676E-02	0.000E+00	FAIL ABUN
CO-57	-3.713E-04	2.385E-02	4.045E-02	0.000E+00	NOT IDENT.
CO-58	-3.433E-02	3.069E-02	4.751E-02	0.000E+00	NOT IDENT.
FE-59	-5.217E-03	7.832E-02	1.330E-01	0.000E+00	NOT IDENT.
CO-60	2.621E-03	3.489E-02	5.862E-02	0.000E+00	NOT IDENT.
ZN-65	2.270E-02	8.254E-02	1.235E-01	0.000E+00	NOT IDENT.
GE-68	-4.069E-01	1.097E+00	1.796E+00	0.000E+00	NOT IDENT.
AS-73	-9.963E-02	1.064E+00	1.866E+00	0.000E+00	NOT IDENT.
AS-74	-7.439E-03	7.438E-02	1.237E-01	0.000E+00	NOT IDENT.
SE-75	-4.243E-03	4.220E-02	6.642E-02	0.000E+00	NOT IDENT.
BR-77	-4.746E+00	6.305E+00	9.882E+00	0.000E+00	FAIL ABUN
SR-82	-3.322E-01	3.239E-01	5.005E-01	0.000E+00	NOT IDENT.
RB-83	-4.916E-02	5.743E-02	8.929E-02	0.000E+00	NOT IDENT.
RB-84	2.146E-02	5.793E-02	9.440E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.124E+00	1.240E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.609E-02	6.282E-02	0.000E+00	NOT IDENT.
RB-86	-4.805E-02	6.670E-01	1.115E+00	0.000E+00	NOT IDENT.
Y-88	2.790E-02	2.267E-02	4.483E-02	0.000E+00	NOT IDENT.
ZR-88	-2.007E-03	2.455E-02	4.261E-02	0.000E+00	NOT IDENT.
Y-91	-5.029E+00	1.601E+01	2.649E+01	0.000E+00	NOT IDENT.
NB-94	2.555E-02	2.924E-02	5.251E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	4.263E-02	7.140E-02	0.000E+00	NOT IDENT.
NB-95M	1.282E-01	1.203E-01	1.917E-01	0.000E+00	NOT IDENT.
ZR-95	5.837E-03	5.716E-02	9.827E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.464E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.689E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.303E+00	7.073E+00	1.251E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.549E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	7.368E-03	2.949E-02	5.182E-02	0.000E+00	NOT IDENT.
RH-102	-2.013E-02	2.435E-02	3.972E-02	0.000E+00	FAIL ABUN
RU-103	1.506E-02	3.247E-02	5.668E-02	0.000E+00	FAIL ABUN
RH-106	4.529E-02	2.679E-01	4.509E-01	0.000E+00	FAIL ABUN
RU-106	4.529E-02	2.679E-01	4.509E-01	0.000E+00	FAIL ABUN
AG-108M	9.631E-04	2.650E-02	4.583E-02	0.000E+00	NOT IDENT.
AG-110M	-2.988E-03	2.741E-02	4.719E-02	0.000E+00	NOT IDENT.
IN-111	1.639E-01	7.410E-01	1.101E+00	0.000E+00	NOT IDENT.
IN-113M	-5.008E-03	3.599E-02	6.231E-02	0.000E+00	NOT IDENT.
SN-113	-5.008E-03	3.599E-02	6.231E-02	0.000E+00	NOT IDENT.
IN-114M	6.544E-02	1.700E-01	2.685E-01	0.000E+00	NOT IDENT.
CD-115	-1.640E+00	6.019E+00	1.002E+01	0.000E+00	NOT IDENT.
SN-117M	3.960E-02	4.514E-02	8.146E-02	0.000E+00	NOT IDENT.
SB-122	-1.910E-01	1.264E+00	2.107E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.172E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.770E-02	2.465E-02	4.426E-02	0.000E+00	NOT IDENT.
I-124	-3.192E-01	5.567E-01	7.629E-01	0.000E+00	NOT IDENT.
SB-124	1.575E-02	5.505E-02	9.617E-02	0.000E+00	FAIL ABUN
SB-125	-9.684E-03	7.342E-02	1.260E-01	0.000E+00	FAIL ABUN
TE-125M	1.148E+00	8.759E+00	1.507E+01	0.000E+00	NOT IDENT.
I-126	1.109E-01	1.404E-01	2.530E-01	0.000E+00	NOT IDENT.
SB-126	1.178E-02	1.298E-01	1.935E-01	0.000E+00	FAIL ABUN
SB-127	1.361E-01	8.727E-01	1.520E+00	0.000E+00	NOT IDENT.
XE-127	-3.410E-02	3.999E-02	6.780E-02	0.000E+00	NOT IDENT.
I-131	1.123E-02	8.685E-02	1.533E-01	0.000E+00	NOT IDENT.
TE-132	-3.198E-01	4.759E-01	7.999E-01	0.000E+00	NOT IDENT.
BA-133	-1.750E-02	4.023E-02	5.620E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.890E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.808E-02	6.091E-02	8.273E-02	0.000E+00	FAIL ABUN
CS-135	4.268E-02	1.655E-01	2.510E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.794E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.550E-02	8.604E-02	1.383E-01	0.000E+00	FAIL ABUN
BA-137M	-1.523E-02	2.883E-02	4.838E-02	0.000E+00	NOT IDENT.
CS-137	-1.610E-02	3.048E-02	5.114E-02	0.000E+00	NOT IDENT.
CE-139	2.733E-02	2.575E-02	4.733E-02	0.000E+00	NOT IDENT.
BA-140	1.352E-01	1.947E-01	3.351E-01	0.000E+00	NOT IDENT.
LA-140	-8.028E-02	6.609E-02	9.628E-02	0.000E+00	FAIL ABUN
CE-141	5.792E-02	5.681E-02	9.859E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.248E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	6.852E-02	1.923E-01	3.280E-01	0.000E+00	NOT IDENT.
PM-144	6.249E-03	2.953E-02	5.032E-02	0.000E+00	NOT IDENT.
PR-144	4.232E-01	2.000E+00	3.408E+00	0.000E+00	NOT IDENT.
PM-146	-5.630E-03	3.649E-02	6.222E-02	0.000E+00	NOT IDENT.

ND-147	-6.326E-01	4.134E-01	6.126E-01	0.000E+00	FAIL ABUN
PM-149	-4.356E-01	5.731E+01	9.346E-01	0.000E+00	NOT IDENT.
EU-152	-4.073E-02	9.985E-02	1.300E-01	0.000E+00	FAIL ABUN
GD-152	-1.310E-02	8.050E-02	1.231E-01	0.000E+00	FAIL ABUN
EU-154	-4.352E-02	1.081E-01	1.760E-01	0.000E+00	NOT IDENT.
EU-155	1.176E-01	1.025E-01	1.828E-01	0.000E+00	FAIL ABUN
TB-160	-2.058E-02	1.137E-01	1.887E-01	0.000E+00	FAIL ABUN
HO-166M	-1.069E-02	4.937E-02	8.376E-02	0.000E+00	NOT IDENT.
TM-171	-3.308E-01	3.046E+01	5.344E+01	0.000E+00	NOT IDENT.
LU-176	8.364E-03	2.262E-02	3.603E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.189E+00	1.687E+00	0.000E+00	FAIL ABUN
LU-177M	-2.074E-01	1.511E-01	2.440E-01	0.000E+00	NOT IDENT.
HF-181	7.225E-03	3.407E-02	5.891E-02	0.000E+00	NOT IDENT.
W-181	-4.992E-01	4.142E-01	6.976E-01	0.000E+00	NOT IDENT.
TA-182	-1.583E-01	1.735E-01	2.757E-01	0.000E+00	FAIL ABUN
RE-183	-9.705E-02	9.647E-02	1.633E-01	0.000E+00	FAIL ABUN
RE-184	-1.588E-02	1.903E-01	3.256E-01	0.000E+00	NOT IDENT.
OS-185	-3.694E-02	3.597E-02	5.530E-02	0.000E+00	NOT IDENT.
RE-188	6.380E-02	1.444E-01	2.618E-01	0.000E+00	NOT IDENT.
W-188	-1.534E+00	7.286E+00	1.066E+01	0.000E+00	NOT IDENT.
IR-192	-8.710E-03	2.948E-02	4.812E-02	0.000E+00	FAIL ABUN
AU-195	1.459E-01	2.209E-01	3.726E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.850E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-4.011E-01	4.692E+00	8.318E+00	0.000E+00	NOT IDENT.
TL-202	2.556E-02	5.258E-02	9.294E-02	0.000E+00	NOT IDENT.
HG-203	3.448E-02	3.555E-02	6.285E-02	0.000E+00	NOT IDENT.
BI-207	1.858E-02	4.552E-02	7.990E-02	0.000E+00	FAIL ABUN
TL-207	-1.532E-01	7.016E-01	1.013E+00	0.000E+00	FAIL ABUN
PO-209	6.193E+00	6.443E+00	1.144E+01	0.000E+00	NOT IDENT.
BI-210	-9.750E+00	5.817E+00	9.890E+00	0.000E+00	NOT IDENT.
PB-210	-9.750E+00	5.817E+00	9.890E+00	0.000E+00	NOT IDENT.
PO-210	-9.750E+00	5.804E+00	9.890E+00	0.000E+00	NOT IDENT.
PB-211	-2.886E-01	8.338E-01	1.393E+00	0.000E+00	NOT IDENT.
PO-215	-1.532E-01	7.016E-01	1.013E+00	0.000E+00	FAIL ABUN
RN-219	3.461E-02	3.484E-01	6.086E-01	0.000E+00	FAIL ABUN
RN-220	-4.546E-01	2.139E+01	3.603E+01	0.000E+00	NOT IDENT.
RA-223	-1.532E-01	7.016E-01	1.013E+00	0.000E+00	FAIL ABUN
AC-227	2.534E-02	3.233E-01	5.563E-01	0.000E+00	FAIL ABUN
TH-227	2.534E-02	3.233E-01	5.563E-01	0.000E+00	FAIL ABUN
TH-229	-1.678E-01	4.405E-01	7.635E-01	0.000E+00	FAIL ABUN
PA-231	-4.049E-01	1.333E+00	2.233E+00	0.000E+00	FAIL ABUN
TH-231	-1.532E-01	7.016E-01	1.013E+00	0.000E+00	FAIL ABUN
U-231	-3.953E-01	9.019E-01	1.361E+00	0.000E+00	FAIL ABUN
PA-233	-2.026E-02	5.300E-02	8.748E-02	0.000E+00	FAIL ABUN
PA-234	8.392E-02	2.562E-01	4.366E-01	0.000E+00	FAIL ABUN
PA-234M	2.826E+00	5.799E+00	9.822E+00	0.000E+00	FAIL ABUN
TH-234	1.374E+00	1.526E+00	2.732E+00	0.000E+00	FAIL ABUN
U-235	4.818E-02	2.041E-01	3.414E-01	0.000E+00	FAIL ABUN
NP-236	2.811E-03	7.043E-02	1.237E-01	0.000E+00	NOT IDENT.
U-238	1.374E+00	1.526E+00	2.732E+00	0.000E+00	FAIL ABUN
NP-239	-4.701E-02	1.756E-01	2.958E-01	0.000E+00	FAIL ABUN
AM-241	-9.201E-02	1.768E-01	3.101E-01	0.000E+00	NOT IDENT.
CM-243	-1.260E-02	9.173E-02	1.569E-01	0.000E+00	FAIL ABUN
CM-247	-3.857E-03	3.126E-02	5.404E-02	0.000E+00	NOT IDENT.
CF-249	1.333E-02	3.255E-02	5.787E-02	0.000E+00	NOT IDENT.
CF-251	9.035E-04	1.074E-01	1.903E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:51:38.3?

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358001.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:14:07.
Sample ID         : G232358001           Sample quantity  : 1.26600E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.95  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 080723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	2416	10.67*	1.893E+00	3.547E+01	3.547E+01	8.78
CD-109	88.03	309	3.72*	6.441E+00	3.822E+00	3.903E+00	27.41
SN-126	64.28	------	9.60	3.245E+00	------ Line Not Found		------
	86.94	309	8.90	6.441E+00	1.597E+00	1.597E+00	48.86
	87.57	309	37.00*	6.441E+00	3.843E-01	3.843E-01	27.41
TL-208	277.35	------	6.80	6.258E+00	------ Line Not Found		------
	510.84	213	21.60	4.309E+00	6.777E-01	6.777E-01	43.03
	583.14	659	84.20*	3.932E+00	5.903E-01	5.903E-01	13.81
	860.37	92	12.46	2.912E+00	7.544E-01	7.544E-01	50.40
BI-211	72.87	------	1.27	4.622E+00	------ Line Not Found		------
	351.07	989	12.94*	5.450E+00	4.160E+00	4.160E+00	12.09
BI-212	727.18	185	11.80*	3.336E+00	1.390E+00	1.390E+00	33.37
	785.46	------	1.97	3.140E+00	------ Line Not Found		------
	1620.62	21	2.75	1.770E+00	1.268E+00	1.268E+00	108.61
PB-212	74.81	480	10.70	4.917E+00	2.703E+00	2.703E+00	23.16
	77.11	829	18.00	5.241E+00	2.606E+00	2.606E+00	14.05
	87.30	309	8.00	6.441E+00	1.777E+00	1.777E+00	29.18
	238.63	2057	44.60*	6.792E+00	2.013E+00	2.013E+00	8.97
	300.09	184	3.41	5.983E+00	2.680E+00	2.680E+00	35.91
PO-212	74.81	480	10.70	4.917E+00	2.703E+00	2.703E+00	23.16
	77.11	829	18.00	5.241E+00	2.606E+00	2.606E+00	14.05
	87.30	309	8.00	6.441E+00	1.777E+00	1.777E+00	29.18
	115.19	------	0.60	8.058E+00	------ Line Not Found		------
	238.63	2057	44.60*	6.792E+00	2.013E+00	2.013E+00	8.97
	300.09	184	3.41	5.983E+00	2.680E+00	2.680E+00	35.91
BI-214	609.31	754	46.30*	3.811E+00	1.267E+00	1.267E+00	13.88
	768.36	113	5.04	3.197E+00	2.071E+00	2.071E+00	47.58
	934.06	61	3.21	2.721E+00	2.054E+00	2.054E+00	64.31
	1120.29	174	15.10	2.333E+00	1.460E+00	1.460E+00	33.86
	1238.11	108	5.94	2.148E+00	2.515E+00	2.515E+00	56.07
	1377.67	48	4.11	1.975E+00	1.735E+00	1.735E+00	59.14
	1764.49	133	15.80	1.694E+00	1.472E+00	1.473E+00	22.75

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	480	6.21	4.917E+00	4.657E+00	4.658E+00	22.45
	77.11	829	10.50	5.241E+00	4.467E+00	4.467E+00	15.98
	87.30	309	4.67	6.441E+00	3.044E+00	3.044E+00	28.47
	241.98	484	7.49	6.749E+00	2.840E+00	2.840E+00	27.05
	295.21	675	19.20	6.040E+00	1.725E+00	1.725E+00	13.73
	351.92	989	37.20*	5.450E+00	1.447E+00	1.447E+00	13.16
PO-214	74.81	480	6.21	4.917E+00	4.657E+00	4.658E+00	22.45
	77.11	829	10.50	5.241E+00	4.467E+00	4.467E+00	15.98
	87.30	309	4.67	6.441E+00	3.044E+00	3.044E+00	28.47
	241.98	484	7.49	6.749E+00	2.840E+00	2.840E+00	27.05
	295.21	675	19.20	6.040E+00	1.725E+00	1.725E+00	13.73
	351.92	989	37.20*	5.450E+00	1.447E+00	1.447E+00	13.16
PO-216	74.81	480	10.70	4.917E+00	2.703E+00	2.703E+00	23.16
	77.11	829	18.00	5.241E+00	2.606E+00	2.606E+00	14.05
	87.30	309	8.00	6.441E+00	1.777E+00	1.777E+00	29.18
	238.63	2057	44.60*	6.792E+00	2.013E+00	2.013E+00	8.97
	300.09	184	3.41	5.983E+00	2.680E+00	2.680E+00	35.91
PO-218	74.81	480	6.21	4.917E+00	4.657E+00	4.658E+00	22.45
	77.11	829	10.50	5.241E+00	4.467E+00	4.467E+00	15.98
	87.30	309	4.67	6.441E+00	3.044E+00	3.044E+00	28.47
	241.98	484	7.49	6.749E+00	2.840E+00	2.840E+00	27.05
	295.21	675	19.20	6.040E+00	1.725E+00	1.725E+00	13.73
	351.92	989	37.20*	5.450E+00	1.447E+00	1.447E+00	13.16
RA-224	240.98	484	3.95*	6.749E+00	5.385E+00	5.385E+00	26.47
RA-226	609.31	754	46.30*	3.811E+00	1.267E+00	1.267E+00	13.88
	768.36	113	5.04	3.197E+00	2.071E+00	2.071E+00	47.58
	934.06	61	3.21	2.721E+00	2.054E+00	2.054E+00	64.31
	1120.29	174	15.10	2.333E+00	1.460E+00	1.460E+00	33.86
	1238.11	108	5.94	2.148E+00	2.515E+00	2.515E+00	56.07
	1377.67	48	4.11	1.975E+00	1.735E+00	1.735E+00	59.14
	1764.49	133	15.80	1.694E+00	1.472E+00	1.473E+00	22.75
AC-228	338.32	420	11.40	5.579E+00	1.959E+00	1.959E+00	45.42
	911.07	554	27.70*	2.779E+00	2.133E+00	2.133E+00	17.98
	969.11	324	16.60	2.639E+00	2.191E+00	2.191E+00	29.35
RA-228	338.32	420	11.40	5.579E+00	1.959E+00	1.959E+00	45.42
	911.07	554	27.70*	2.779E+00	2.133E+00	2.133E+00	17.98
	969.11	324	16.60	2.639E+00	2.191E+00	2.191E+00	29.35
TH-228	84.40	120	1.21	6.113E+00	4.806E+00	4.806E+00	50.93
	238.60	2057	44.60*	6.792E+00	2.013E+00	2.013E+00	8.97
	300.10	184	3.41	5.983E+00	2.680E+00	2.680E+00	68.52
TH-230	609.31	754	46.30*	3.811E+00	1.267E+00	1.267E+00	13.88
	768.36	113	5.04	3.197E+00	2.071E+00	2.071E+00	47.58
	934.06	61	3.21	2.721E+00	2.054E+00	2.054E+00	64.31
	1120.29	174	15.10	2.333E+00	1.460E+00	1.460E+00	33.86
	1238.11	108	5.94	2.148E+00	2.515E+00	2.515E+00	56.07
	1377.67	48	4.11	1.975E+00	1.735E+00	1.735E+00	59.14
	1764.49	133	15.80	1.694E+00	1.472E+00	1.472E+00	22.75
TH-232	338.32	420	11.40	5.579E+00	1.959E+00	1.959E+00	20.86
	911.07	554	27.70*	2.779E+00	2.133E+00	2.133E+00	17.98

Sample ID : G232358001 Acquisition date : 6-JUL-2009 17:14:07

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	324	16.60	2.639E+00	2.191E+00	2.191E+00	29.35
U-234	609.31	754	46.30*	3.811E+00	1.267E+00	1.267E+00	13.88
	768.36	113	5.04	3.197E+00	2.071E+00	2.071E+00	47.58
	934.06	61	3.21	2.721E+00	2.054E+00	2.054E+00	64.31
	1120.29	174	15.10	2.333E+00	1.460E+00	1.460E+00	33.86
	1238.11	108	5.94	2.148E+00	2.515E+00	2.515E+00	56.07
	1377.67	48	4.11	1.975E+00	1.735E+00	1.735E+00	59.14
	1764.49	133	15.80	1.694E+00	1.472E+00	1.472E+00	22.75
NP-237	86.50	309	12.60*	6.441E+00	1.128E+00	1.128E+00	34.31
	95.87	------	2.60	7.180E+00	------ Line Not Found		------
AM-243	74.67	480	66.00*	4.917E+00	4.382E-01	4.382E-01	21.19
	86.72	309	0.34	6.441E+00	4.231E+01	4.231E+01	27.41
	117.66	------	0.55	8.112E+00	------ Line Not Found		------
	142.18	------	0.13	8.232E+00	------ Line Not Found		------
ANH-511	511.00	213	100.00*	4.309E+00	1.464E-01	1.464E-01	42.21

Flag: "*" = Keyline

Sample ID : 3232358001 Acquisition date : 6-JUL-2009 11:14:07

Total number of lines in spectrum 35
Number of unidentified lines 1
Number of lines tentatively identified by NID 34 97.14%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.547E+01	3.547E+01	0.311E+01	8.78	
CD-109	464.00D	1.02	3.822E+00	3.903E+00	1.070E+00	27.41	
SN-126	1.00E+05Y	1.00	3.843E-01	3.843E-01	1.053E-01	27.41	
TL-208	1.41E+10Y	1.00	5.903E-01	5.903E-01	0.815E-01	13.81	
BI-211	7.04E+08Y	1.00	4.160E+00	4.160E+00	0.503E+00	12.09	
BI-212	1.41E+10Y	1.00	1.390E+00	1.390E+00	0.464E+00	33.37	
PB-212	1.41E+10Y	1.00	2.013E+00	2.013E+00	0.181E+00	8.97	
PO-212	1.41E+10Y	1.00	2.013E+00	2.013E+00	0.181E+00	8.97	
BI-214	1600.00Y	1.00	1.267E+00	1.267E+00	0.176E+00	13.88	
PB-214	1600.00Y	1.00	1.447E+00	1.447E+00	0.190E+00	13.16	
PO-214	1600.00Y	1.00	1.447E+00	1.447E+00	0.190E+00	13.16	
PO-216	1.41E+10Y	1.00	2.013E+00	2.013E+00	0.181E+00	8.97	
PO-218	1600.00Y	1.00	1.447E+00	1.447E+00	0.190E+00	13.16	
RA-224	1.41E+10Y	1.00	5.385E+00	5.385E+00	1.425E+00	26.47	
RA-226	1600.00Y	1.00	1.267E+00	1.267E+00	0.176E+00	13.88	
AC-228	1.41E+10Y	1.00	2.133E+00	2.133E+00	0.384E+00	17.98	
RA-228	1.41E+10Y	1.00	2.133E+00	2.133E+00	0.384E+00	17.98	
TH-228	1.41E+10Y	1.00	2.013E+00	2.013E+00	0.181E+00	8.97	
TH-230	4.47E+09Y	1.00	1.267E+00	1.267E+00	0.176E+00	13.88	
TH-232	1.41E+10Y	1.00	2.133E+00	2.133E+00	0.384E+00	17.98	
U-234	4.47E+09Y	1.00	1.267E+00	1.267E+00	0.176E+00	13.88	
NP-237	2.14E+06Y	1.00	1.128E+00	1.128E+00	0.387E+00	34.31	
AM-243	7380.00Y	1.00	4.382E-01	4.382E-01	0.929E-01	21.19	
ANH-511	1.00E+09Y	1.00	1.464E-01	1.464E-01	0.618E-01	42.21	
	Total Activity :		7.678E+01	7.686E+01			

Grand Total Activity : 7.678E+01 7.686E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232358001 Acquisition date : 6-JUL-2009 11:14:07

ID	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	89.97	213	213	1.49	178.93	177	15	2.95E-02	20.7	6.70E+00	T
4	92.96	372	331	1.50	185.02	177	15	5.17E-02	26.0	6.96E+00	T
0	186.00	326	447	1.59	371.04	366	11	4.53E-02	28.4	7.65E+00	T
0	209.50	167	395	1.39	418.03	414	9	2.31E-02	45.8	7.25E+00	T
0	270.70	95	366	1.45	540.37	535	10	1.32E-02	78.3	6.34E+00	T
0	328.55	84	287	1.15	656.05	650	11	1.16E-02	82.1	5.68E+00	T
0	462.85	171	194	1.19	924.55	918	14	2.38E-02	37.6	4.60E+00	T
0	795.25	62	135	1.03	1589.20	1582	12	8.63E-03	79.0	3.11E+00	T
1	964.90	101	88	2.32	1928.42	1921	38	1.40E-02	45.3	2.65E+00	T
0	1730.05	59	11	2.45	3456.55	3447	22	8.19E-03	38.7	1.71E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:51:42.71

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : EKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358001.CNF;1 *
* Acquisition date  : 6-JUL-2009 11:14:07.  Detector SN#     :              *
* Detector ID       : GAM18                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.95          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232358001            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.26600E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.547E+01	3.113E+00	4.817E-01	3.655E-02	73.641
CD-109	3.903E+00	1.070E+00	1.233E+00	1.140E-01	3.166
SN-126	3.843E-01	1.053E-01	1.221E-01	1.125E-02	3.146
TL-208	5.903E-01	8.155E-02	5.117E-02	4.011E-03	11.536
BI-211	4.160E+00	5.027E-01	2.567E-01	1.648E-02	16.205
BI-212	1.390E+00	4.639E-01	4.027E-01	4.011E-02	3.452
PB-212	2.013E+00	1.805E-01	7.899E-02	5.643E-03	25.483
PO-212	2.013E+00	1.805E-01	7.899E-02	5.643E-03	25.483
BI-214	1.267E+00	1.759E-01	9.856E-02	8.804E-03	12.857
PB-214	1.447E+00	1.905E-01	8.946E-02	7.400E-03	16.175
PO-214	1.447E+00	1.905E-01	8.946E-02	7.400E-03	16.175
PO-216	2.013E+00	1.805E-01	7.899E-02	5.643E-03	25.483
PO-218	1.447E+00	1.905E-01	8.946E-02	7.400E-03	16.175
RA-224	5.385E+00	1.425E+00	8.979E-01	5.002E-02	5.997
RA-226	1.267E+00	1.759E-01	9.856E-02	8.804E-03	12.857
AC-228	2.133E+00	3.835E-01	1.717E-01	2.275E-02	12.420
RA-228	2.133E+00	3.835E-01	1.717E-01	2.275E-02	12.420
TH-228	2.013E+00	1.805E-01	7.899E-02	5.643E-03	25.486

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.267E-00	1.759E-01	9.856E-02	8.804E-03	12.857
TH-232	2.133E+00	3.835E-01	1.717E-01	2.275E-02	12.420
U-234	1.267E+00	1.759E-01	9.856E-02	8.804E-03	12.857
NP-237	1.128E-00	3.871E-01	3.492E-01	7.878E-02	3.231
AM-243	4.382E-01	9.287E-02	9.655E-02	8.057E-03	4.539
ANH-511	1.464E-01	6.179E-02	4.042E-02	2.669E-03	3.622

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-6.548E-02		2.655E-01	4.317E-01	3.128E-02	-0.152
NA-22	-1.225E-02		3.926E-02	6.297E-02	4.285E-03	-0.195
NA-24	-7.236E-02		9.217E-02	Half-Life too short		
AL-26	3.321E-03		2.013E-02	3.398E-02	1.984E-03	0.098
TI-44	4.808E-01	-	6.754E-02	8.478E-02	7.248E-03	5.672
SC-46	8.224E-03		3.354E-02	5.574E-02	6.217E-03	0.148
V-48	-2.186E-02		7.156E-02	9.573E-02	9.469E-03	-0.228
CR-51	2.589E-02		3.225E-01	5.214E-01	3.357E-02	0.050
MN-52	-5.871E-02		1.786E-01	2.798E-01	2.062E-02	-0.210
MN-54	-2.491E-02		3.447E-02	5.402E-02	5.533E-03	-0.461
CO-56	-6.839E-03		3.476E-02	5.632E-02	5.879E-03	-0.121
CO-57	-3.713E-04		2.434E-02	3.903E-02	2.312E-03	-0.010
CO-58	-3.433E-02		3.131E-02	4.711E-02	4.651E-03	-0.729
FE-59	-5.217E-03		7.992E-02	1.325E-01	1.091E-02	-0.039
CO-60	2.621E-03		3.560E-02	5.856E-02	4.425E-03	0.045
ZN-65	2.270E-02		8.423E-02	1.231E-01	8.670E-03	0.184
GE-68	-4.069E-01		1.119E+00	1.789E+00	1.421E-01	-0.227
AS-73	-9.963E-02		1.085E+00	1.780E+00	1.411E-01	-0.056
AS-74	-7.439E-03		7.589E-02	1.221E-01	8.769E-03	-0.061
SE-75	-4.243E-03		4.306E-02	6.479E-02	3.705E-03	-0.065
BR-77	-4.746E+00		6.434E+00	9.735E+00	6.494E-01	-0.488
SR-82	-3.322E-01		3.306E-01	4.960E-01	4.619E-02	-0.670
RB-83	-4.916E-02		5.861E-02	8.796E-02	5.867E-03	-0.559
RB-84	2.146E-02		5.912E-02	9.372E-02	1.033E-02	0.229
KR-85	2.170E+01		7.269E+00	1.221E+01	8.091E-01	1.777
SR-85	1.099E-01		3.682E-02	6.187E-02	4.099E-03	1.777
RB-86	-4.805E-02		6.806E-01	1.110E+00	8.839E-02	-0.043
Y-88	2.790E-02		2.314E-02	4.500E-02	2.563E-03	0.620
ZR-88	-2.007E-03		2.505E-02	4.180E-02	2.404E-03	-0.048
Y-91	-5.029E+00		1.633E+01	2.642E+01	1.562E+00	-0.190
NB-94	2.555E-02		2.983E-02	5.196E-02	4.262E-03	0.492
NB-95	8.889E-02		4.350E-02	7.073E-02	6.470E-03	1.257
NB-95M	1.282E-01		1.228E-01	1.866E-01	1.369E-02	0.687
ZR-95	5.837E-03		5.832E-02	9.734E-02	9.578E-03	0.060
NB-97	-4.413E-03		1.257E-02	Half-Life too short		
ZR-97	1.679E+00		2.903E-01	Half-Life too short		
MO-99	4.303E+00		7.217E+00	1.239E+01	1.891E+00	0.347

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TC-99M	-6.672E+08		7.903E+08	Half-Life too short		
RH-101	7.368E-03		3.009E-02	5.034E-02	2.706E-03	0.146
RH-102	-2.013E-02		2.485E-02	3.907E-02	2.482E-03	-0.515
RU-103	1.506E-02		3.313E-02	5.580E-02	7.245E-03	0.270
RH-106	4.529E-02		2.734E-01	4.453E-01	5.602E-02	0.102
RU-106	4.529E-02		2.733E-01	4.453E-01	3.277E-02	0.102
AG-108M	9.631E-04		2.704E-02	4.503E-02	2.942E-03	0.021
AG-110M	-2.988E-03		2.797E-02	4.665E-02	3.679E-03	-0.064
IN-111	1.639E-01		7.561E-01	1.073E+00	5.994E-02	0.153
IN-113M	-5.008E-03		3.672E-02	6.113E-02	3.750E-03	-0.082
SN-113	-5.008E-03		3.672E-02	6.113E-02	3.750E-03	-0.082
IN-114M	6.544E-02		1.734E-01	2.606E-01	1.391E-02	0.251
CD-115	-1.640E+00		6.142E+00	9.873E+00	6.636E-01	-0.166
SN-117M	3.960E-02		4.606E-02	7.888E-02	4.192E-03	0.502
SB-122	-1.910E-01		1.290E+00	2.078E+00	1.448E-01	-0.092
I-123	8.415E-01		5.978E-01	Half-Life too short		
TE-123M	1.770E-02		2.515E-02	4.286E-02	2.312E-03	0.413
I-124	-3.192E-01		5.681E-01	7.531E-01	5.446E-02	-0.424
SB-124	1.575E-02		5.617E-02	9.642E-02	6.652E-03	0.163
SB-125	-9.684E-03		7.492E-02	1.238E-01	7.736E-03	-0.078
TE-125M	1.148E+00		8.937E+00	1.451E+01	1.275E+00	0.079
I-126	1.109E-01		1.433E-01	2.501E-01	1.923E-02	0.443
SB-126	1.178E-02		1.324E-01	1.915E-01	1.621E-02	0.062
SB-127	1.361E-01		8.905E-01	1.503E+00	1.585E-01	0.091
XE-127	-3.410E-02		4.081E-02	6.589E-02	3.556E-03	-0.518
I-131	1.123E-02		8.862E-02	1.502E-01	9.681E-03	0.075
TE-132	-3.198E-01		4.856E-01	7.786E-01	1.092E-01	-0.411
BA-133	-1.750E-02		4.105E-02	5.506E-02	6.360E-03	-0.318
I-133	-9.648E-04		9.642E-04	Half-Life too short		
CS-134	7.808E-02	+	6.215E-02	8.201E-02	7.932E-03	0.952
CS-135	4.268E-02		1.689E-01	2.449E-01	1.851E-02	0.174
I-135	-6.877E+07		1.425E+08	Half-Life too short		
CS-136	-7.550E-02		8.780E-02	1.376E-01	1.234E-02	-0.548
BA-137M	-1.523E-02		2.942E-02	4.783E-02	3.646E-03	-0.319
CS-137	-1.610E-02		3.110E-02	5.056E-02	3.864E-03	-0.319
CE-139	2.733E-02		2.627E-02	4.586E-02	2.407E-03	0.596
BA-140	1.352E-01		1.987E-01	3.303E-01	1.080E-01	0.409
LA-140	-8.028E-02		6.744E-02	9.645E-02	6.617E-03	-0.832
CE-141	5.792E-02		5.797E-02	9.535E-02	5.443E-03	0.607
CE-143	4.214E-04		6.367E-05	Half-Life too short		
CE-144	6.852E-02		1.962E-01	3.169E-01	4.480E-02	0.216
PM-144	6.249E-03		3.014E-02	4.978E-02	4.041E-03	0.126
PR-144	4.232E-01		2.041E+00	3.372E+00	2.736E-01	0.126
PM-146	-5.630E-03		3.724E-02	6.117E-02	5.442E-03	-0.092
ND-147	-6.326E-01		4.219E-01	6.037E-01	8.423E-02	-1.048
PM-149	-4.356E+01		5.848E+01	9.126E+01	1.290E+01	-0.477
EU-152	-4.073E-02		1.019E-01	1.273E-01	8.304E-03	-0.320
GD-153	-1.310E-02		8.214E-02	1.184E-01	9.254E-03	-0.111

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154	-4.352E-02		1.103E-01	1.757E-01	1.755E-02	-0.248
EU-155	1.176E-01		1.046E-01	1.759E-01	1.258E-02	0.669
TB-160	-2.058E-02		1.160E-01	1.873E-01	2.058E-02	-0.110
HO-166M	-1.069E-02		5.037E-02	8.289E-02	6.909E-03	-0.129
TM-171	-3.308E-01		3.108E+01	5.112E+01	4.088E+00	-0.006
LU-176	8.364E-03		2.309E-02	3.522E-02	2.028E-03	0.237
LU-177	2.630E+00		1.213E+00	1.640E+00	8.898E-02	1.604
LU-177M	-2.074E-01		1.542E-01	2.395E-01	1.415E-02	-0.866
HF-181	7.225E-03		3.476E-02	5.796E-02	3.710E-03	0.125
W-181	-4.992E-01		4.226E-01	6.671E-01	5.291E-02	-0.748
TA-182	-1.583E-01		1.771E-01	2.751E-01	1.683E-02	-0.575
RE-183	-9.705E-02		9.843E-02	1.582E-01	8.350E-03	-0.614
RE-184	-1.588E-02		1.942E-01	3.174E-01	1.783E-02	-0.050
OS-185	-3.694E-02		3.670E-02	5.465E-02	4.110E-03	-0.676
RE-188	6.380E-02		1.473E-01	2.534E-01	1.356E-02	0.252
W-188	-1.534E+00		7.435E+00	1.041E+01	5.965E-01	-0.147
IR-192	-8.710E-03		3.008E-02	4.706E-02	2.729E-03	-0.185
AU-195	1.459E-01		2.254E-01	3.584E-01	2.742E-02	0.407
TL-200	1.051E-04		9.438E-05	Half-Life too short		
TL-201	-4.011E-01		4.788E+00	8.061E+00	4.232E-01	-0.050
TL-202	2.556E-02		5.365E-02	9.133E-02	5.568E-03	0.280
HG-203	3.448E-02		3.627E-02	6.135E-02	3.721E-03	0.562
BI-207	1.858E-02		4.645E-02	7.954E-02	6.566E-03	0.234
TL-207	-1.532E-01		7.159E-01	9.907E-01	1.636E-01	-0.155
PO-209	6.193E+00		6.574E+00	1.137E+01	1.282E+00	0.545
BI-210	-9.750E+00		5.935E+00	9.414E+00	7.284E-01	-1.036
PB-210	-9.750E+00		5.935E+00	9.414E+00	7.284E-01	-1.036
PO-210	-9.750E+00		5.923E+00	9.414E+00	6.262E-01	-1.036
PB-211	-2.886E-01		8.508E-01	1.368E+00	8.527E-01	-0.211
PO-215	-1.532E-01		7.159E-01	9.907E-01	1.636E-01	-0.155
RN-219	3.461E-02		3.555E-01	5.973E-01	8.131E-02	0.058
RN-220	-4.546E-01		2.182E+01	3.552E+01	2.441E+00	-0.013
RA-223	-1.532E-01		7.159E-01	9.907E-01	1.636E-01	-0.155
AC-227	2.534E-02		3.299E-01	5.424E-01	7.534E-02	0.047
TH-227	2.534E-02		3.299E-01	5.424E-01	9.135E-02	0.047
TH-229	-1.678E-01		4.495E-01	7.414E-01	3.970E-02	-0.226
PA-231	-4.049E-01		1.360E+00	2.180E+00	2.996E-01	-0.186
TH-231	-1.532E-01		7.159E-01	9.907E-01	1.636E-01	-0.155
U-231	-3.953E-01		9.203E-01	1.309E+00	1.049E-01	-0.302
PA-233	-2.026E-02		5.408E-02	8.554E-02	5.240E-03	-0.237
PA-234	8.392E-02		2.614E-01	4.339E-01	8.559E-02	0.193
PA-234M	2.826E+00		5.918E+00	9.770E+00	1.164E+00	0.289
TH-234	1.374E+00		1.557E+00	2.612E+00	4.605E-01	0.526
U-235	4.818E-02		2.083E-01	3.302E-01	5.347E-02	0.146
NP-236	2.811E-03		7.186E-02	1.198E-01	6.349E-03	0.023
U-238	1.374E+00		1.557E+00	2.612E+00	4.605E-01	0.526
NP-239	-4.701E-02		1.792E-01	2.852E-01	1.765E-02	-0.165
AM-241	-9.201E-02		1.804E-01	2.962E-01	2.456E-02	-0.311

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.260E-02		9.360E-02	1.510E-01	1.081E-02	-0.083
CM-247	-3.857E-03		3.190E-02	5.303E-02	3.089E-03	-0.073
CF-249	1.333E-02		3.322E-02	5.677E-02	3.263E-03	0.235
CF-251	9.035E-04		1.096E-01	1.845E-01	9.744E-03	0.005

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232358001           *
* Acquisition date  :  6-JUL-2009 11:14:07 Detector SN#     :               *
* Detector ID       : GAM18                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.95      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232358001           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.2660E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.547E+01	3.051E+00	2.409E-01	1.557E+00
CD-109	3.903E+00	1.048E+00	6.422E-01	5.349E-01
SN-126	3.843E-01	1.032E-01	6.363E-02	5.266E-02
TL-208	5.903E-01	7.992E-02	2.594E-02	4.077E-02
BI-211	4.160E+00	4.927E-01	1.311E-01	2.514E-01
BI-212	1.390E+00	4.546E-01	2.035E-01	2.320E-01
PB-212	2.013E+00	1.769E-01	4.058E-02	9.026E-02
PO-212	2.013E+00	1.769E-01	4.058E-02	9.026E-02
BI-214	1.267E+00	1.723E-01	4.994E-02	8.793E-02
PB-214	1.447E+00	1.867E-01	4.569E-02	9.524E-02
PO-214	1.447E+00	1.867E-01	4.569E-02	9.524E-02
PO-216	2.013E+00	1.769E-01	4.058E-02	9.026E-02
PO-218	1.447E+00	1.867E-01	4.569E-02	9.524E-02
RA-224	5.385E+00	1.397E+00	4.611E-01	7.126E-01
RA-226	1.267E+00	1.723E-01	4.994E-02	8.793E-02
AC-228	2.133E+00	3.759E-01	8.649E-02	1.918E-01
RA-228	2.133E+00	3.759E-01	8.649E-02	1.918E-01
TH-228	2.013E+00	1.769E-01	4.057E-02	9.026E-02
TH-230	1.267E+00	1.723E-01	4.994E-02	8.793E-02
TH-232	2.133E+00	3.759E-01	8.649E-02	1.918E-01
U-234	1.267E+00	1.723E-01	4.994E-02	8.793E-02
NP-237	1.128E+00	3.794E-01	1.820E-01	1.936E-01
AM-243	4.382E-01	9.101E-02	5.042E-02	4.643E-02
ANH-511	1.464E-01	6.056E-02	2.053E-02	3.090E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-6.548E-02	2.602E-01	2.195E-01	1.327E-01	NOT IDENT.
NA-22	-1.225E-02	3.848E-02	3.156E-02	1.963E-02	NOT IDENT.
NA-24	-7.236E+04	1.806E+05	0.000E+00	9.217E+04	SHORT HLIF

AL-26	3.321E-03	1.973E-02	1.694E-02	1.007E-02	NOT IDENT.
TI-44	4.808E-01	6.619E-02	4.424E-02	3.377E-02	FAIL ABUN
SC-46	8.224E-03	3.287E-02	2.809E-02	1.677E-02	FAIL ABUN
V-48	-2.186E-02	7.013E-02	4.816E-02	3.578E-02	NOT IDENT.
CR-51	2.589E-02	3.160E-01	2.667E-01	1.612E-01	NOT IDENT.
MN-52	-5.871E-02	1.750E-01	1.400E-01	8.930E-02	FAIL ABUN
MN-54	-2.491E-02	3.378E-02	2.724E-02	1.724E-02	NOT IDENT.
CO-56	-6.839E-03	3.407E-02	2.840E-02	1.738E-02	FAIL ABUN
CO-57	-3.713E-04	2.385E-02	2.024E-02	1.217E-02	NOT IDENT.
CO-58	-3.433E-02	3.069E-02	2.377E-02	1.566E-02	NOT IDENT.
FE-59	-5.217E-03	7.832E-02	6.655E-02	3.996E-02	NOT IDENT.
CO-60	2.621E-03	3.489E-02	2.933E-02	1.780E-02	NOT IDENT.
ZN-65	2.270E-02	8.254E-02	6.180E-02	4.211E-02	NOT IDENT.
GE-68	-4.069E-01	1.097E+00	8.987E-01	5.597E-01	NOT IDENT.
AS-73	-9.963E-02	1.064E+00	9.335E-01	5.427E-01	NOT IDENT.
AS-74	-7.439E-03	7.438E-02	6.186E-02	3.795E-02	NOT IDENT.
SE-75	-4.243E-03	4.220E-02	3.323E-02	2.153E-02	NOT IDENT.
BR-77	-4.746E+00	6.305E+00	4.944E+00	3.217E+00	FAIL ABUN
SR-82	-3.322E-01	3.239E-01	2.504E-01	1.653E-01	NOT IDENT.
RB-83	-4.916E-02	5.743E-02	4.467E-02	2.930E-02	NOT IDENT.
RB-84	2.146E-02	5.793E-02	4.723E-02	2.956E-02	NOT IDENT.
KR-85	2.170E+01	7.124E+00	6.204E+00	3.635E+00	NOT IDENT.
SR-85	1.099E-01	3.609E-02	3.143E-02	1.841E-02	NOT IDENT.
RB-86	-4.805E-02	6.670E-01	5.578E-01	3.403E-01	NOT IDENT.
Y-88	2.790E-02	2.267E-02	2.243E-02	1.157E-02	NOT IDENT.
ZR-88	-2.007E-03	2.455E-02	2.132E-02	1.252E-02	NOT IDENT.
Y-91	-5.029E+00	1.601E+01	1.325E+01	8.166E+00	NOT IDENT.
NB-94	2.555E-02	2.924E-02	2.627E-02	1.492E-02	NOT IDENT.
NB-95	8.889E-02	4.263E-02	3.572E-02	2.175E-02	NOT IDENT.
NB-95M	1.282E-01	1.203E-01	9.589E-02	6.140E-02	NOT IDENT.
ZR-95	5.837E-03	5.716E-02	4.917E-02	2.916E-02	NOT IDENT.
NB-97	-4.413E+03	2.464E+04	0.000E+00	1.257E+04	SHORT HLIF
ZR-97	1.679E+06	5.689E+05	0.000E+00	2.903E+05	SHORT HLIF
MO-99	4.303E+00	7.073E+00	6.261E+00	3.608E+00	NOT IDENT.
TC-99M	-6.672E+14	1.549E+15	0.000E+00	7.903E+14	SHORT HLIF
RH-101	7.368E-03	2.949E-02	2.593E-02	1.504E-02	NOT IDENT.
RH-102	-2.013E-02	2.435E-02	1.987E-02	1.243E-02	FAIL ABUN
RU-103	1.506E-02	3.247E-02	2.836E-02	1.656E-02	FAIL ABUN
RH-106	4.529E-02	2.679E-01	2.256E-01	1.367E-01	FAIL ABUN
RU-106	4.529E-02	2.679E-01	2.256E-01	1.367E-01	FAIL ABUN
AG-108M	9.631E-04	2.650E-02	2.293E-02	1.352E-02	NOT IDENT.
AG-110M	-2.988E-03	2.741E-02	2.361E-02	1.398E-02	NOT IDENT.
IN-111	1.639E-01	7.410E-01	5.507E-01	3.781E-01	NOT IDENT.
IN-113M	-5.008E-03	3.599E-02	3.118E-02	1.836E-02	NOT IDENT.
SN-113	-5.008E-03	3.599E-02	3.118E-02	1.836E-02	NOT IDENT.
IN-114M	6.544E-02	1.700E-01	1.343E-01	8.672E-02	NOT IDENT.
CD-115	-1.640E+00	6.019E+00	5.013E+00	3.071E+00	NOT IDENT.
SN-117M	3.960E-02	4.514E-02	4.075E-02	2.303E-02	NOT IDENT.
SB-122	-1.910E-01	1.264E+00	1.054E+00	6.449E-01	NOT IDENT.
I-123	8.415E+05	1.172E+06	0.000E+00	5.978E+05	SHORT HLIF
TE-123M	1.770E-02	2.465E-02	2.214E-02	1.258E-02	NOT IDENT.
I-124	-3.192E-01	5.567E-01	3.817E-01	2.840E-01	NOT IDENT.
SB-124	1.575E-02	5.505E-02	4.811E-02	2.808E-02	FAIL ABUN
SB-125	-9.684E-03	7.342E-02	6.306E-02	3.746E-02	FAIL ABUN
TE-125M	1.148E+00	8.759E+00	7.538E+00	4.469E+00	NOT IDENT.
I-126	1.109E-01	1.404E-01	1.266E-01	7.164E-02	NOT IDENT.
SB-126	1.178E-02	1.298E-01	9.679E-02	6.622E-02	FAIL ABUN
SB-127	1.361E-01	8.727E-01	7.605E-01	4.452E-01	NOT IDENT.
XE-127	-3.410E-02	3.999E-02	3.392E-02	2.040E-02	NOT IDENT.
I-131	1.123E-02	8.685E-02	7.669E-02	4.431E-02	NOT IDENT.
TE-132	-3.198E-01	4.759E-01	4.002E-01	2.428E-01	NOT IDENT.
BA-133	-1.750E-02	4.023E-02	2.812E-02	2.053E-02	NOT IDENT.
I-133	-9.648E+02	1.890E+03	0.000E+00	9.642E+02	SHORT HLIF
CS-134	7.808E-02	6.091E-02	4.139E-02	3.108E-02	FAIL ABUN
CS-135	4.268E-02	1.655E-01	1.256E-01	8.443E-02	NOT IDENT.
I-135	-6.877E+13	2.794E+14	0.000E+00	1.425E+14	SHORT HLIF
CS-136	-7.550E-02	8.604E-02	6.918E-02	4.390E-02	FAIL ABUN
BA-137M	-1.523E-02	2.883E-02	2.420E-02	1.471E-02	NOT IDENT.
CS-137	-1.610E-02	3.048E-02	2.559E-02	1.555E-02	NOT IDENT.
CE-139	2.733E-02	2.575E-02	2.368E-02	1.314E-02	NOT IDENT.
BA-140	1.352E-01	1.947E-01	1.677E-01	9.936E-02	NOT IDENT.
LA-140	-8.028E-02	6.609E-02	4.817E-02	3.372E-02	FAIL ABUN
CE-141	5.792E-02	5.681E-02	4.933E-02	2.898E-02	NOT IDENT.
CE-143	4.214E+02	1.248E+02	0.000E+00	6.367E+01	SHORT HLIF
CE-144	6.852E-02	1.923E-01	1.641E-01	9.812E-02	NOT IDENT.
PM-144	6.249E-03	2.953E-02	2.518E-02	1.507E-02	NOT IDENT.
PR-144	4.232E-01	2.000E+00	1.705E+00	1.020E+00	NOT IDENT.
PM-146	-5.630E-03	3.649E-02	3.113E-02	1.862E-02	NOT IDENT.

ND-147	-6.326E-01	4.134E-01	3.065E-01	2.109E-01	FAIL ABUN
PM-149	-4.356E+01	5.731E-01	4.676E-01	2.924E+01	NOT IDENT.
EU-152	-4.073E-02	9.985E-02	6.502E-02	5.094E-02	FAIL ABUN
GD-153	-1.310E-02	8.050E-02	6.157E-02	4.107E-02	FAIL ABUN
EU-154	-4.352E-02	1.081E-01	8.804E-02	5.514E-02	NOT IDENT.
EU-155	1.176E-01	1.025E-01	9.143E-02	5.229E-02	FAIL ABUN
TB-160	-2.058E-02	1.137E-01	9.441E-02	5.802E-02	FAIL ABUN
HO-166M	-1.069E-02	4.937E-02	4.190E-02	2.519E-02	NOT IDENT.
TM-171	-3.308E-01	3.046E+01	2.674E+01	1.554E+01	NOT IDENT.
LU-176	8.364E-03	2.262E-02	1.802E-02	1.154E-02	FAIL ABUN
LU-177	2.630E+00	1.189E+00	8.442E-01	6.064E-01	FAIL ABUN
LU-177M	-2.074E-01	1.511E-01	1.220E-01	7.711E-02	NOT IDENT.
HF-181	7.225E-03	3.407E-02	2.947E-02	1.738E-02	NOT IDENT.
W-181	-4.992E-01	4.142E-01	3.490E-01	2.113E-01	NOT IDENT.
TA-182	-1.583E-01	1.735E-01	1.379E-01	8.854E-02	FAIL ABUN
RE-183	-9.705E-02	9.647E-02	8.170E-02	4.922E-02	FAIL ABUN
RE-184	-1.588E-02	1.903E-01	1.629E-01	9.709E-02	NOT IDENT.
OS-185	-3.694E-02	3.597E-02	2.767E-02	1.835E-02	NOT IDENT.
RE-188	6.380E-02	1.444E-01	1.310E-01	7.365E-02	NOT IDENT.
W-188	-1.534E+00	7.286E+00	5.334E+00	3.718E+00	NOT IDENT.
IR-192	-8.710E-03	2.948E-02	2.407E-02	1.504E-02	FAIL ABUN
AU-195	1.459E-01	2.209E-01	1.864E-01	1.127E-01	FAIL ABUN
TL-200	1.051E+02	1.850E+02	0.000E+00	9.438E+01	SHORT HLIF
TL-201	-4.011E-01	4.692E+00	4.162E+00	2.394E+00	NOT IDENT.
TL-202	2.556E-02	5.258E-02	4.650E-02	2.683E-02	NOT IDENT.
HG-203	3.448E-02	3.555E-02	3.144E-02	1.814E-02	NOT IDENT.
BI-207	1.858E-02	4.552E-02	3.997E-02	2.322E-02	FAIL ABUN
TL-207	-1.532E-01	7.016E-01	5.067E-01	3.579E-01	FAIL ABUN
PO-209	6.193E+00	6.443E+00	5.726E+00	3.287E+00	NOT IDENT.
BI-210	-9.750E+00	5.817E+00	4.948E+00	2.968E+00	NOT IDENT.
PB-210	-9.750E+00	5.817E+00	4.948E+00	2.968E+00	NOT IDENT.
PO-210	-9.750E+00	5.804E+00	4.948E+00	2.961E+00	NOT IDENT.
PB-211	-2.886E-01	8.338E-01	6.972E-01	4.254E-01	NOT IDENT.
PO-215	-1.532E-01	7.016E-01	5.067E-01	3.579E-01	FAIL ABUN
RN-219	3.461E-02	3.484E-01	3.045E-01	1.777E-01	FAIL ABUN
RN-220	-4.546E-01	2.139E+01	1.802E+01	1.091E+01	NOT IDENT.
RA-223	-1.532E-01	7.016E-01	5.067E-01	3.579E-01	FAIL ABUN
AC-227	2.534E-02	3.233E-01	2.783E-01	1.649E-01	FAIL ABUN
TH-227	2.534E-02	3.233E-01	2.783E-01	1.649E-01	FAIL ABUN
TH-229	-1.678E-01	4.405E-01	3.820E-01	2.248E-01	FAIL ABUN
PA-231	-4.049E-01	1.333E+00	1.117E+00	6.802E-01	FAIL ABUN
TH-231	-1.532E-01	7.016E-01	5.067E-01	3.579E-01	FAIL ABUN
U-231	-3.953E-01	9.019E-01	6.810E-01	4.601E-01	FAIL ABUN
PA-233	-2.026E-02	5.300E-02	4.377E-02	2.704E-02	FAIL ABUN
PA-234	8.392E-02	2.562E-01	2.184E-01	1.307E-01	FAIL ABUN
PA-234M	2.826E+00	5.799E+00	4.914E+00	2.959E+00	FAIL ABUN
TH-234	1.374E+00	1.526E+00	1.367E+00	7.785E-01	FAIL ABUN
U-235	4.818E-02	2.041E-01	1.708E-01	1.041E-01	FAIL ABUN
NP-236	2.811E-03	7.043E-02	6.191E-02	3.593E-02	NOT IDENT.
U-238	1.374E+00	1.526E+00	1.367E+00	7.785E-01	FAIL ABUN
NP-239	-4.701E-02	1.756E-01	1.480E-01	8.959E-02	FAIL ABUN
AM-241	-9.201E-02	1.768E-01	1.551E-01	9.021E-02	NOT IDENT.
CM-243	-1.260E-02	9.173E-02	7.847E-02	4.680E-02	FAIL ABUN
CM-247	-3.857E-03	3.126E-02	2.704E-02	1.595E-02	NOT IDENT.
CF-249	1.333E-02	3.255E-02	2.895E-02	1.661E-02	NOT IDENT.
CF-251	9.035E-04	1.074E-01	9.518E-02	5.482E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	441.2491
46.50	441.2491
46.50	441.2491
48.70	311.1447
49.72	325.8891
51.35	315.3405
52.39	291.2116
52.97	301.8603
53.15	303.8869
53.44	313.3308
54.07	313.1641
56.28	341.5118
56.28	341.5156
57.37	0.0000
57.53	347.6912
57.53	347.6931
57.60	352.4029
57.98	338.9914
57.98	338.9914
59.32	387.1393
59.32	387.1393
59.40	387.2483
59.54	387.4387
59.72	378.3638
60.01	398.3383
61.10	459.7793
61.14	459.8430
61.30	437.6071
63.00	386.4270
63.29	410.3901
63.29	410.3901
63.58	410.7895
64.28	428.7899
65.12	488.8339
65.20	488.9629
65.20	488.9629
66.05	483.6630
66.72	422.6940
66.83	432.3923
66.91	432.5029
67.20	424.3076
67.20	424.3076
67.75	433.6734
67.85	450.0940
68.90	475.6213
68.90	475.6213
69.30	464.1010
69.67	480.8273
70.82	445.1420
70.82	445.1420
70.83	445.1561
72.80	479.9532
72.87	480.0561
72.87	480.0561
74.67	510.5409
74.81	510.7546
74.81	510.7546
74.81	510.7546
74.81	510.7546
74.81	510.7546
74.81	510.7546
74.97	510.9976
75.28	511.4702
75.70	512.1074
77.11	514.2314
77.11	514.2314
77.11	514.2314

77.11	514.2314
77.11	514.2314
77.11	514.2314
78.38	437.5238
79.62	410.8035
79.80	428.8843
79.80	428.8843
80.11	429.2622
80.18	429.3479
80.30	357.9108
80.30	357.9108
80.57	358.1854
81.00	427.3548
81.07	427.4399
81.07	427.4399
81.07	427.4399
81.07	427.4399
82.60	441.2781
83.37	398.5958
83.78	406.5800
83.78	406.5800
83.78	406.5800
83.78	406.5800
84.21	410.0752
84.40	410.2869
84.90	410.8472
85.43	411.4386
86.29	412.3953
86.50	412.6277
86.54	412.6713
86.59	412.7273
86.72	412.8705
86.79	412.9452
86.94	413.1133
87.30	449.9980
87.30	449.9980
87.30	449.9980
87.30	449.9980
87.30	449.9980
87.30	449.9980
87.57	450.3210
87.88	450.6913
88.03	450.8720
88.36	451.2650
88.47	451.3959
89.95	575.6266
91.11	333.2117
92.29	334.2249
92.38	334.3027
92.38	334.3027
93.35	335.1288
94.00	335.6818
94.67	342.4411
94.67	342.4461
94.90	342.6434
94.90	342.6434
94.90	342.6434
94.90	342.6434
95.87	383.8835
95.87	383.8835
96.73	376.9194
97.43	363.5257
98.44	345.6565
98.44	345.6565
98.88	355.7350
99.55	345.0223
99.55	345.0223
99.86	359.9290
100.00	360.0515
100.10	360.1407
103.18	410.2497
103.76	378.0716
105.00	355.8669
105.31	348.7057
108.00	404.1911
109.28	387.1843
111.00	387.6094
111.00	387.6094

111.76	405.4733
112.95	388.2092
115.19	359.7730
116.30	360.6385
117.00	360.0935
117.00	360.0935
117.66	381.3029
121.11	333.6118
121.62	344.9531
121.78	345.0681
122.06	366.1615
122.32	366.3579
122.32	366.3579
122.32	366.3579
122.32	366.3579
123.07	370.2344
127.23	420.0619
129.76	358.5282
131.20	427.8770
133.02	404.6741
133.54	372.4491
135.34	368.1030
136.00	371.9590
136.25	384.5787
136.48	391.5378
140.51	401.3711
140.51	0.0000
142.18	420.9217
142.65	401.8269
143.76	399.2067
144.24	369.7052
144.24	369.7052
144.24	369.7052
144.24	369.7052
145.22	357.7145
145.44	357.8600
147.16	417.8407
152.43	379.8326
152.70	354.3667
153.22	344.7740
154.21	333.9738
154.21	333.9738
154.21	333.9738
154.21	333.9738
155.03	355.5183
156.02	402.7313
158.56	327.6537
159.00	0.0000
159.00	332.3162
160.31	362.2841
161.27	403.6827
162.32	396.3953
162.64	384.1567
163.35	363.2443
163.89	362.6800
165.85	338.8250
167.43	370.1787
171.28	333.7091
171.86	317.7700
172.10	326.9219
176.55	341.0568
176.60	341.0826
181.06	331.1788
184.41	375.5896
185.71	352.3457
186.00	352.5002
190.27	328.3787
192.34	330.0183
193.63	363.9736
197.04	356.3950
198.01	339.9854
198.60	329.9328
200.40	369.4200
201.83	399.4412
202.84	381.0962
205.31	329.4655
208.36	390.3250
208.81	381.4117

209.75	357.0794
209.75	357.0794
210.97	313.6835
215.65	333.2715
216.55	342.0699
218.09	329.2563
222.10	343.6208
223.80	324.9258
226.40	333.8304
227.00	341.9037
227.08	341.9384
227.20	324.4037
228.16	341.4354
228.18	341.4434
228.18	341.4434
231.56	0.0000
235.69	331.8625
236.00	330.4098
236.00	330.4098
238.60	301.3444
238.63	301.3560
238.63	301.3560
238.63	301.3560
239.00	301.4928
240.98	302.2280
241.98	302.5991
241.98	302.5991
241.98	302.5991
244.69	247.6727
245.39	233.4895
247.94	253.9924
248.90	256.9609
249.79	247.1862
252.40	238.8823
252.85	247.0767
252.85	247.0767
254.15	0.0000
256.20	259.1885
256.20	259.1885
260.50	270.6595
260.90	278.9293
262.80	249.9534
264.65	282.1740
268.24	313.7091
268.79	313.9050
269.46	266.4418
269.46	266.4418
269.46	266.4418
269.46	266.4418
271.23	268.6197
273.65	338.7455
276.40	271.1109
277.35	267.5427
277.60	267.6136
277.60	267.6136
278.00	264.6185
278.60	258.5632
279.20	257.6913
279.53	279.6104
280.46	311.1131
281.68	290.6860
283.67	257.8997
284.30	258.0731
285.00	255.1322
285.90	279.4504
286.10	279.5075
286.10	279.5075
287.40	264.1740
288.45	0.0000
290.67	265.9307
290.80	265.9692
291.72	262.8577
293.26	0.0000
293.70	285.3525
295.21	246.2755
295.21	246.2755
295.21	246.2755
295.96	246.4675

296.50	246.6061
297.23	246.7910
298.57	247.1359
299.80	247.4487
299.80	247.4487
300.09	247.5234
300.09	247.5234
300.09	247.5234
300.10	247.5234
300.12	247.5305
301.29	246.7620
302.84	216.4736
303.76	208.1476
303.91	208.1774
304.40	201.4527
304.40	201.4527
304.84	208.3770
306.84	211.0789
308.46	221.7821
311.98	211.8135
316.51	211.6863
318.01	232.5514
319.02	228.4503
319.41	226.3710
320.08	224.3500
323.87	266.3007
323.87	266.3007
323.87	266.3007
323.87	266.3007
325.23	250.9629
328.77	218.5913
333.44	201.9996
334.20	193.3540
334.20	193.3540
334.30	193.3728
338.28	204.0205
338.28	204.0205
338.28	204.0205
338.28	204.0205
338.32	204.0290
338.32	204.0290
338.32	204.0290
340.50	171.5119
340.57	171.5238
344.27	201.8313
345.85	171.0270
350.59	0.0000
351.07	172.9583
351.92	173.0931
351.92	173.0931
351.92	173.0931
355.39	0.0000
356.01	186.5068
364.48	194.2375
366.43	209.0505
367.43	200.1760
367.94	0.0000
369.80	186.0665
374.96	192.3675
383.85	170.8603
387.95	179.7442
388.63	197.3701
391.69	187.7007
391.69	187.7007
392.90	182.3356
398.62	199.0028
400.65	190.0148
401.10	191.9507
401.81	196.7217
402.60	201.5112
404.84	221.5047
410.95	196.2921
411.60	207.6704
413.65	228.7142
414.70	216.6582
415.30	180.0068
415.76	165.9303
417.63	0.0000

418.52	183.2959
423.70	159.3744
427.08	166.4487
427.89	163.6982
432.53	178.6065
433.93	161.5877
439.47	152.6648
439.56	152.6745
439.89	157.5157
443.98	147.4007
444.90	148.4656
445.03	160.0506
445.03	160.0506
445.03	160.0506
445.03	160.0506
453.90	171.7777
463.38	154.3972
468.07	183.0254
473.00	141.6867
475.06	174.4094
475.35	177.4028
476.78	170.6749
477.59	158.9266
477.96	155.0183
482.03	146.5493
484.57	157.7190
487.03	131.1605
490.36	0.0000
492.35	154.5781
497.08	137.0686
507.63	0.0000
510.53	0.0000
510.84	159.5468
511.00	159.5632
511.85	159.6539
511.85	159.6539
513.99	134.9186
513.99	134.9186
520.41	153.5534
520.65	153.5792
527.90	134.7876
528.96	0.0000
529.64	133.9168
529.87	0.0000
531.02	147.3363
537.32	114.0324
543.00	157.7439
546.56	0.0000
549.76	135.6375
552.65	124.4707
555.20	139.2115
563.23	131.5494
563.90	143.0907
568.70	136.1794
569.32	127.8468
569.50	137.2909
569.67	137.3069
573.80	159.7150
574.00	154.4792
574.64	149.2837
578.91	129.9908
579.30	0.0000
583.14	151.0996
585.48	130.4997
591.81	140.4280
592.07	143.4012
593.00	149.8538
595.88	144.7856
600.56	151.5822
602.52	0.0000
602.71	171.0117
602.71	171.0117
603.60	171.0977
604.41	174.7459
604.70	158.7232
609.31	159.1433
609.31	159.1433
609.31	159.1433

609.31	159.1433
610.33	150.2915
612.46	116.4372
614.37	139.8770
618.01	141.2440
621.84	128.5816
621.84	128.5816
631.29	115.1430
633.02	120.6881
633.10	129.3922
634.78	139.3094
635.90	133.9487
636.97	129.6711
645.85	134.6814
646.12	142.3684
656.30	117.4583
657.75	125.8147
657.90	0.0000
661.65	141.7244
661.65	141.7244
664.57	0.0000
666.33	125.4691
666.33	125.4691
675.00	115.8498
677.61	133.6406
685.20	114.6043
692.80	126.2769
695.00	131.1019
696.49	134.9502
696.49	134.9502
697.00	143.4219
697.49	154.7110
698.33	172.5973
698.50	172.6123
699.00	167.0271
702.63	137.2522
706.10	133.7259
706.58	0.0000
706.67	131.8823
709.31	147.1482
711.68	128.4352
713.82	112.5019
717.42	131.6473
720.50	128.4604
721.93	0.0000
722.20	117.1758
722.78	120.4668
722.78	120.4668
722.89	120.4720
722.95	120.4745
723.30	130.2679
724.18	127.0656
727.18	132.2836
733.00	111.2566
735.90	109.5926
739.58	105.3204
742.81	123.7064
744.21	108.4342
747.13	122.0416
751.79	123.2760
752.31	125.2340
753.82	117.6117
755.35	108.0511
756.15	114.8479
756.87	125.5064
763.93	111.2585
765.79	116.3428
766.41	126.3521
766.84	131.9188
768.36	134.7862
768.36	134.7862
768.36	134.7862
768.36	134.7862
776.49	141.3745
778.00	133.5828
778.57	124.8411
778.89	119.0066
783.80	102.6566

785.46	129.1533
792.07	132.9102
795.84	94.3770
796.30	101.1391
801.93	131.4426
805.60	77.0209
810.29	117.7532
810.76	112.8311
815.85	83.3267
817.79	103.2573
818.51	101.3027
819.60	97.3779
826.30	108.6297
828.27	0.0000
831.60	127.8620
831.96	130.8801
834.83	153.0498
836.80	0.0000
846.75	119.6561
848.13	117.7165
856.28	0.0000
856.80	117.7217
860.37	90.1603
867.32	106.0756
867.82	118.2743
871.10	84.3290
873.19	87.4540
874.81	96.6719
875.33	0.0000
876.40	102.8453
879.36	98.8945
880.27	91.7926
880.51	85.6816
881.50	78.5744
883.24	93.9485
884.67	108.3097
889.25	97.2556
896.60	91.3883
898.02	110.9641
899.00	107.9245
903.28	106.5680
911.07	91.9297
911.07	91.9297
911.07	91.9297
919.63	94.8378
920.93	103.2880
925.00	92.2380
925.24	95.9868
926.50	81.9600
934.06	80.2694
934.06	80.2694
934.06	80.2694
934.06	80.2694
935.52	76.8892
937.48	87.6863
944.10	99.4280
946.00	94.2645
949.00	105.9111
962.29	97.5737
964.01	101.2559
966.15	104.5067
968.20	104.5873
969.11	104.6255
969.11	104.6255
969.11	104.6255
977.42	99.9599
980.50	87.3398
983.50	107.4766
989.30	85.1969
996.32	116.3869
1001.03	88.7819
1001.68	84.5225
1004.76	111.3993
1021.30	0.0000
1024.50	0.0000
1034.80	93.1387
1037.82	119.8802
1038.57	115.2639

1038.76	0.0000
1045.16	85.7238
1046.59	97.8882
1048.07	111.9308
1050.47	107.3593
1050.47	107.3593
1063.62	99.4194
1076.63	100.8200
1077.35	105.5547
1085.78	94.5243
1099.22	109.2083
1112.02	99.4059
1112.84	100.1770
1115.52	95.2551
1120.29	97.5603
1120.29	97.5603
1120.29	97.5603
1120.29	97.5603
1120.51	97.5674
1121.28	98.7883
1124.00	0.0000
1129.67	116.8680
1131.51	0.0000
1147.95	0.0000
1167.94	114.6623
1173.22	95.3921
1175.09	125.6436
1177.93	128.6853
1189.05	128.1673
1204.90	123.8994
1205.75	0.0000
1213.00	128.1637
1221.42	145.3030
1230.97	121.4490
1235.34	151.1508
1236.41	0.0000
1238.11	133.1447
1238.11	133.1447
1238.11	133.1447
1238.11	133.1447
1238.25	133.1494
1246.25	106.3367
1260.41	0.0000
1271.85	103.4059
1274.45	100.4708
1274.54	98.4648
1291.56	90.8883
1298.22	0.0000
1312.09	72.1391
1325.50	71.4014
1325.50	71.4014
1332.49	71.5479
1333.61	78.7268
1360.21	60.7861
1362.66	0.0000
1365.15	55.7139
1368.21	57.8262
1368.53	0.0000
1376.25	48.9029
1377.67	61.0886
1377.67	61.0886
1377.67	61.0886
1377.67	61.0886
1384.27	39.9368
1394.10	57.2098
1395.20	60.3486
1407.95	61.6051
1434.06	53.6343
1436.60	61.0384
1457.56	0.0000
1460.81	49.7851
1489.15	40.5552
1509.49	46.0018
1596.49	52.7844
1620.62	27.0319
1678.03	0.0000
1691.02	21.5999
1691.02	21.5999

1706.46	0.0000
1750.46	0.0000
1764.49	27.9590
1764.49	27.9590
1764.49	27.9590
1764.49	27.9590
1770.23	19.5520
1771.40	23.1132
1791.20	0.0000
1808.65	15.1263
1836.01	10.1450

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:GZ10358001

Total Uranium Activity	4.1088E-00	ug/g
Total Uranium Counting Unc.	4.5464E+00	ug/g
Total Uranium Tpu	2.3165E-06	ug/g
Total Uranium Mda	4.0676E-00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232358001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM18            *
*   SAMPLE DATE   : 22 JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:14:07.31    SAMPLE ALQT:  126.600 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.128E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.295E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.784E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.353E+00
```

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:52:27.64

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358002.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:15:01.
Sample ID         : G232358002           Sample quantity  : 1.34400E+02 GRAM
Detector name     : GAM06                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.38  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	74.91*	412	430	1.17	148.45	141	16	5.72E-02	10.0	2.43E+00
2	3	77.16*	616	421	1.11	152.94	141	16	8.55E-02	7.0	
3	3	87.46	261	337	1.41	173.54	170	21	3.62E-02	12.1	1.52E+00
4	3	90.13	160	343	1.15	178.88	170	21	2.22E-02	21.0	
5	3	92.97*	297	337	1.35	184.56	170	21	4.12E-02	13.3	
6	0	129.17	103	370	1.22	256.97	254	9	1.43E-02	34.9	
7	0	186.02*	202	478	1.17	370.70	364	13	2.81E-02	23.8	
8	0	209.63	158	359	1.36	417.91	412	12	2.20E-02	25.2	
9	4	238.73*	1071	223	1.11	476.13	471	18	1.49E-01	3.9	1.50E+00
10	4	241.79	249	306	1.78	482.26	471	18	3.46E-02	17.3	
11	0	270.82	92	273	1.51	540.32	533	13	1.28E-02	38.5	
12	2	295.22*	375	167	1.63	589.13	584	20	5.21E-02	8.3	3.55E+00
13	2	300.14	99	178	1.84	598.98	584	20	1.37E-02	27.9	
14	0	328.65	56	151	1.27	656.02	651	9	7.82E-03	41.9	
15	0	338.73	187	304	1.23	676.18	669	14	2.60E-02	21.1	
16	0	351.94*	587	178	1.28	702.60	697	12	8.15E-02	6.2	
17	0	409.36	40	142	1.03	817.47	811	11	5.54E-03	60.6	
18	0	463.63*	82	92	1.13	926.05	921	11	1.14E-02	26.1	
19	0	510.71*	94	153	1.92	1020.25	1014	16	1.30E-02	34.3	
20	0	583.13*	349	98	1.51	1165.15	1158	13	4.85E-02	8.0	
21	0	609.24*	403	80	1.45	1217.39	1212	11	5.60E-02	6.7	
22	0	727.40	143	74	1.46	1453.84	1446	15	1.98E-02	15.6	
23	0	768.01	54	46	1.87	1535.11	1529	11	7.45E-03	28.2	
24	0	795.06	46	39	1.52	1589.23	1585	8	6.45E-03	27.7	
25	0	859.74	69	45	1.68	1718.67	1711	14	9.57E-03	24.0	
26	0	911.12*	228	56	1.81	1821.50	1816	13	3.16E-02	9.6	
27	1	964.71	68	57	2.13	1928.75	1922	25	9.42E-03	24.3	9.57E-01
28	1	969.01*	156	39	2.09	1937.37	1922	25	2.17E-02	12.3	
29	0	1120.06	126	51	1.77	2239.71	2231	17	1.75E-02	15.7	
30	0	1460.21*	1196	36	2.10	2920.67	2910	20	1.66E-01	3.1	
31	0	1729.08*	26	8	1.15	3459.07	3451	15	3.56E-03	32.3	
32	0	1763.53*	69	0	1.23	3528.07	3521	13	9.57E-03	12.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 13-JUL-2009 18:52:30

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:15:01
Sample ID : G232358002 Sample quantity : 134.40 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA6 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.38 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.251E+01	2.970E+00	5.242E-01	3.467E-02	62.032
CD-109	+	88.03	*	3.865E+00	1.012E+00	1.457E+00	1.439E-01	2.652
SN-126		64.28		-1.642E-01	6.176E-01	1.020E+00	1.570E-01	-0.161
	+	86.94		1.582E+00	7.623E-01	6.647E-01	2.766E-01	2.380
	+	87.57	*	3.806E-01	9.961E-02	1.443E-01	1.420E-02	2.638
TL-208		277.35		7.094E-01	4.782E-01	7.862E-01	8.373E-02	0.902
	+	510.84		5.029E-01	3.490E-01	2.469E-01	2.478E-02	2.037
	+	583.14	*	5.372E-01	9.288E-02	6.861E-02	4.336E-03	7.830
	+	860.37		1.003E+00	4.873E-01	5.438E-01	4.158E-02	1.844
BI-211		72.87		1.129E+01	3.930E+00	6.841E+00	6.142E-01	1.651
	+	351.07	*	3.907E+00	5.483E-01	3.583E-01	2.313E-02	10.905
PB-212	+	74.81		2.603E+00	6.194E-01	6.493E-01	8.440E-02	4.010
	+	77.11		2.194E+00	3.661E-01	3.579E-01	3.268E-02	6.130
	+	87.30		1.760E+00	4.932E-01	7.363E-01	1.032E-01	2.391
	+	238.63	*	1.538E+00	1.651E-01	1.060E-01	7.815E-03	14.505
	+	300.09		2.208E+00	1.246E+00	1.348E+00	1.128E-01	1.638
PO-212	+	74.81		2.603E+00	6.194E-01	6.493E-01	8.440E-02	4.010
	+	77.11		2.194E+00	3.661E-01	3.579E-01	3.268E-02	6.130
	+	87.30		1.760E+00	4.932E-01	7.363E-01	1.032E-01	2.391
		115.19		2.334E+00	4.159E+00	6.986E+00	4.611E-01	0.334
	+	238.63	*	1.538E+00	1.651E-01	1.060E-01	7.815E-03	14.505
	+	300.09		2.208E+00	1.246E+00	1.348E+00	1.128E-01	1.638
BI-214	+	609.31	*	1.170E+00	1.794E-01	1.233E-01	9.099E-03	9.487
	+	768.36		1.746E+00	9.948E-01	1.359E+00	1.142E-01	1.284
		934.06		6.170E-01	1.381E+00	2.378E+00	2.259E-01	0.259
	+	1120.29		1.927E+00	6.311E-01	5.553E-01	5.072E-02	3.471
		1238.11		1.452E+00	1.191E+00	2.102E+00	1.755E-01	0.691
		1377.67		1.304E+00	1.127E+00	2.068E+00	1.846E-01	0.630
	+	1764.49		1.449E+00	3.841E-01	2.547E-01	1.491E-02	5.690
PB-214	+	74.81		4.486E+00	1.036E+00	1.119E+00	1.307E-01	4.010
	+	77.11		3.761E+00	6.899E-01	6.136E-01	7.297E-02	6.130
	+	87.30		3.015E+00	8.228E-01	1.261E+00	1.574E-01	2.391
	+	241.98		2.148E+00	7.634E-01	6.385E-01	5.181E-02	3.364
	+	295.21		1.468E+00	2.755E-01	2.361E-01	2.041E-02	6.217

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.359E+00	2.035E-01	1.282E-01	1.064E-02	10.602
PO-214	+	74.81		4.486E+00	1.036E+00	1.119E+00	1.307E-01	4.010
	+	77.11		3.761E+00	6.899E-01	6.136E-01	7.297E-02	6.130
	+	87.30		3.015E+00	8.228E-01	1.261E+00	1.574E-01	2.391
	+	241.98		2.148E+00	7.634E-01	6.385E-01	5.181E-02	3.364
	+	295.21		1.468E+00	2.755E-01	2.361E-01	2.041E-02	6.217
	+	351.92	*	1.359E+00	2.035E-01	1.282E-01	1.064E-02	10.602
PO-216	+	74.81		2.603E+00	6.194E-01	6.493E-01	8.440E-02	4.010
	+	77.11		2.194E+00	3.661E-01	3.579E-01	3.268E-02	6.130
	+	87.30		1.760E+00	4.932E-01	7.363E-01	1.032E-01	2.391
	+	238.63	*	1.538E+00	1.651E-01	1.060E-01	7.815E-03	14.505
	+	300.09		2.208E+00	1.246E+00	1.348E+00	1.128E-01	1.638
PO-218	+	74.81		4.486E+00	1.036E+00	1.119E+00	1.307E-01	4.010
	+	77.11		3.761E+00	6.899E-01	6.136E-01	7.297E-02	6.130
	+	87.30		3.015E+00	8.228E-01	1.261E+00	1.574E-01	2.391
	+	241.98		2.148E+00	7.634E-01	6.385E-01	5.181E-02	3.364
	+	295.21		1.468E+00	2.755E-01	2.361E-01	2.041E-02	6.217
	+	351.92	*	1.359E+00	2.035E-01	1.282E-01	1.064E-02	10.602
RA-224	+	240.98	*	4.072E+00	1.429E+00	1.207E+00	7.072E-02	3.375
RA-226	+	609.31	*	1.170E+00	1.794E-01	1.233E-01	9.099E-03	9.487
	+	768.36		1.746E+00	9.948E-01	1.359E+00	1.142E-01	1.284
		934.06		6.170E-01	1.381E+00	2.378E+00	2.259E-01	0.259
	+	1120.29		1.927E+00	6.311E-01	5.553E-01	5.072E-02	3.471
		1238.11		1.452E+00	1.191E+00	2.102E+00	1.755E-01	0.691
		1377.67		1.304E+00	1.127E+00	2.068E+00	1.846E-01	0.630
	+	1764.49		1.449E+00	3.841E-01	2.547E-01	1.491E-02	5.690
AC-228	+	338.32		1.375E+00	8.058E-01	4.473E-01	1.824E-01	3.073
	+	911.07	*	1.572E+00	3.422E-01	2.525E-01	2.580E-02	6.227
	+	969.11		1.900E+00	6.382E-01	4.420E-01	1.008E-01	4.298
RA-228	+	338.32		1.375E+00	8.058E-01	4.473E-01	1.824E-01	3.073
	+	911.07	*	1.572E+00	3.422E-01	2.525E-01	2.580E-02	6.227
	+	969.11		1.900E+00	6.382E-01	4.420E-01	1.008E-01	4.298
TH-228		84.40		2.921E+00	3.283E+00	4.893E+00	6.747E-01	0.597
	+	238.60	*	1.538E+00	1.651E-01	1.060E-01	7.814E-03	14.507
	+	300.10		2.208E+00	1.792E+00	1.348E+00	7.948E-01	1.638
TH-230	+	609.31	*	1.170E+00	1.794E-01	1.233E-01	9.099E-03	9.487
	+	768.36		1.745E+00	9.948E-01	1.359E+00	1.142E-01	1.284
		934.06		6.170E-01	1.381E+00	2.378E+00	2.259E-01	0.259
	+	1120.29		1.927E+00	6.311E-01	5.553E-01	5.072E-02	3.471
		1238.11		1.452E+00	1.191E+00	2.102E+00	1.755E-01	0.691
		1377.67		1.304E+00	1.127E+00	2.068E+00	1.846E-01	0.630
	+	1764.49		1.449E+00	3.841E-01	2.547E-01	1.491E-02	5.690
TH-232	+	338.32		1.375E+00	5.846E-01	4.473E-01	2.631E-02	3.073
	+	911.07	*	1.572E+00	3.422E-01	2.525E-01	2.580E-02	6.227
	+	969.11		1.900E+00	6.382E-01	4.420E-01	1.008E-01	4.298
U-234	+	609.31	*	1.170E+00	1.794E-01	1.233E-01	9.099E-03	9.487
	+	768.36		1.745E+00	9.948E-01	1.359E+00	1.142E-01	1.284
		934.06		6.170E-01	1.381E+00	2.378E+00	2.259E-01	0.259
	+	1120.29		1.927E+00	6.311E-01	5.553E-01	5.072E-02	3.471

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.452E+00	1.191E+00	2.102E+00	1.755E-01	0.691
		1377.67		1.304E+00	1.127E+00	2.068E+00	1.846E-01	0.630
	+	1764.49		1.449E+00	3.841E-01	2.547E-01	1.491E-02	5.690
NP-237	-	86.50	*	1.118E+00	3.725E-01	4.687E-01	1.070E-01	2.384
		95.87		-5.046E-01	1.173E+00	1.660E+00	4.087E-01	-0.304
AM-243	+	74.67	*	4.221E-01	9.235E-02	1.056E-01	9.539E-03	3.996
	+	86.72		4.191E+01	1.097E+01	1.753E+01	1.712E+00	2.391
		117.66		-9.347E-01	4.386E+00	7.162E+00	4.591E-01	-0.131
		142.18		5.407E+00	2.123E+01	3.445E+01	1.967E+00	0.157
ANH-511	+	511.00	*	1.086E-01	7.484E-02	5.335E-02	2.982E-03	2.036

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	4.240E-01	3.810E-01	6.702E-01	4.427E-02	0.633
NA-22		1274.54	*	-9.587E-03	5.166E-02	8.253E-02	5.096E-03	-0.116
NA-24		1368.53	*	-1.295E-02	5.166E-02	Half-Life too short		
AL-26		1129.67		8.167E-01	2.161E+00	3.591E+00	2.237E-01	0.227
		1808.65	*	-2.737E-02	2.942E-02	3.706E-02	2.129E-03	-0.739
TI-44		67.85		2.407E-02	5.823E-02	9.169E-02	8.183E-03	0.262
	+	78.38	*	4.049E-01	6.756E-02	9.485E-02	8.719E-03	4.268
SC-46		889.25	*	-2.773E-02	4.597E-02	7.241E-02	5.190E-03	-0.383
	+	1120.51		3.268E-01	1.048E-01	1.499E-01	9.428E-03	2.180
V-48		944.10		-3.732E-01	9.053E-01	1.440E+00	1.028E-01	-0.259
		983.50	*	2.282E-02	7.520E-02	1.281E-01	8.972E-03	0.178
		1312.09		5.139E-02	9.333E-02	1.608E-01	1.004E-02	0.320
CR-51		320.08	*	1.350E-01	4.148E-01	7.070E-01	4.658E-02	0.191
MN-52		744.21		2.136E-02	2.413E-01	3.910E-01	2.230E-02	0.055
		848.13		-2.434E+00	6.742E+00	1.091E+01	7.349E-01	-0.223
		935.52		3.695E-01	2.648E-01	4.874E-01	3.492E-02	0.758
		1246.25		-3.001E-01	7.377E+00	1.199E+01	7.313E-01	-0.025
		1333.61		3.551E+00	4.719E+00	8.397E+00	5.275E-01	0.423
		1434.06	*	1.089E-01	2.162E-01	3.766E-01	2.370E-02	0.289
MN-54		834.83	*	-1.203E-02	4.390E-02	7.182E-02	4.740E-03	-0.167
CO-56		846.75	*	-9.544E-03	4.543E-02	7.455E-02	5.012E-03	-0.128
		977.42		1.539E+00	3.748E+00	5.647E+00	3.967E-01	0.273
		1037.82		2.667E-01	3.754E-01	6.578E-01	4.829E-02	0.405
		1175.09		2.078E+00	2.637E+00	4.618E+00	2.735E-01	0.450
		1238.25		1.456E-01	1.192E-01	2.109E-01	1.355E-02	0.691
		1360.21		-3.372E-01	1.036E+00	1.599E+00	1.006E-01	-0.211
		1771.40		-4.904E-01	2.738E-01	2.768E-01	1.616E-02	-1.772
CO-57		122.06	*	-1.506E-02	2.937E-02	4.733E-02	2.891E-03	-0.318
		136.48		-7.160E-02	2.452E-01	3.972E-01	2.669E-02	-0.180
CO-58		810.76	*	1.295E-02	4.463E-02	7.650E-02	4.884E-03	0.169
FE-59		142.65		1.827E+00	3.206E+00	5.262E+00	3.001E-01	0.347
		192.34		-6.246E-01	1.211E+00	1.759E+00	2.059E-01	-0.355
		1099.22	*	5.259E-02	1.138E-01	1.946E-01	1.427E-02	0.270
		1291.56		-1.012E-03	1.453E-01	2.365E-01	1.830E-02	-0.004

---- Non-Identified Nuclides ----

Nuclide	Line Id	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60		1173.22		7.703E-03	5.330E-02	8.847E-02	5.234E-03	0.087
		1332.49	*	2.206E-02	4.324E-02	7.477E-02	4.697E-03	0.295
ZN-65		1115.52	*	8.920E-02	1.171E-01	1.816E-01	1.150E-02	0.491
GE-68		1077.35	*	2.939E-01	1.393E+00	2.343E+00	1.535E-01	0.125
AS-73		53.44	*	-3.690E-01	1.106E+00	1.836E+00	1.679E-01	-0.201
AS-74		595.88	*	-2.464E-02	1.061E-01	1.698E-01	9.028E-03	-0.145
		634.78		-2.675E-02	4.005E-01	6.462E-01	3.303E-02	-0.041
SE-75		66.05		-7.230E+00	5.798E+00	9.227E+00	9.875E-01	-0.784
		96.73		-3.028E-01	9.478E-01	1.355E+00	1.832E-01	-0.224
		121.11		-8.712E-02	1.562E-01	2.511E-01	2.376E-02	-0.347
		136.00		-4.820E-03	4.612E-02	7.529E-02	4.438E-03	-0.064
		198.60		-1.223E+00	2.243E+00	3.456E+00	2.412E-01	-0.354
		264.65	*	-8.930E-03	5.858E-02	7.976E-02	4.784E-03	-0.112
		279.53		9.355E-02	1.240E-01	2.158E-01	1.386E-02	0.434
		303.91		-1.752E+00	2.599E+00	3.602E+00	3.474E-01	-0.486
		400.65		2.603E-01	2.886E-01	5.032E-01	4.508E-02	0.517
BR-77	-	87.88		5.985E+02	1.567E+02	2.805E+02	2.768E+01	2.134
		200.40		-6.584E+01	1.411E+02	2.235E+02	1.259E+01	-0.295
	+	239.00		1.767E+02	1.723E+01	2.904E+01	1.699E+00	6.084
		249.79		2.680E+01	5.425E+01	8.917E+01	5.257E+00	0.301
		281.68		-1.363E+02	7.622E+01	1.170E+02	6.984E+00	-1.165
		297.23		2.653E+02	5.386E+01	1.022E+02	6.107E+00	2.595
		303.76		-9.237E+01	1.600E+02	2.238E+02	1.336E+01	-0.413
		439.47		-6.836E+01	1.313E+02	2.103E+02	1.183E+01	-0.325
		484.57		-7.895E+01	1.825E+02	2.871E+02	1.615E+01	-0.275
		520.65	*	-4.474E-01	8.762E+00	1.431E+01	7.975E-01	-0.031
		574.64		-1.903E+02	1.727E+02	2.467E+02	1.334E+01	-0.772
		578.91		7.712E+01	7.800E+01	1.216E+02	6.554E+00	0.634
		585.48		1.147E+03	2.166E+02	4.036E+02	2.165E+01	2.843
		755.35		1.919E+02	1.362E+02	2.450E+02	1.423E+01	0.783
		817.79		-4.472E+01	9.762E+01	1.561E+02	1.003E+01	-0.286
SR-82		698.33		-1.413E+01	4.058E+01	6.366E+01	3.356E+00	-0.222
		776.49	*	-9.684E-02	4.129E-01	6.799E-01	4.090E-02	-0.142
		1395.20		-5.441E+00	1.263E+01	1.922E+01	1.210E+00	-0.283
RB-83		520.41	*	-9.605E-03	7.982E-02	1.297E-01	7.229E-03	-0.074
		529.64		6.287E-02	1.171E-01	1.995E-01	1.107E-02	0.315
		552.65		-4.889E-02	2.397E-01	3.860E-01	2.118E-02	-0.127
RB-84		881.50	*	2.782E-02	8.120E-02	1.392E-01	9.865E-03	0.200
KR-85		513.99	*	1.810E+01	9.817E+00	1.607E+01	8.978E-01	1.126
SR-85		513.99	*	9.168E-02	4.973E-02	8.143E-02	4.548E-03	1.126
RB-86		1076.63	*	2.155E-03	8.395E-01	1.383E+00	9.071E-02	0.002
Y-88		898.02		-1.401E-02	5.026E-02	8.103E-02	5.924E-03	-0.173
		1836.01	*	8.456E-03	2.593E-02	4.663E-02	2.650E-03	0.181
ZR-88		392.90	*	2.648E-02	3.467E-02	6.015E-02	3.338E-03	0.440
Y-91		1204.90	*	-1.757E+00	2.263E+01	3.676E+01	2.205E+00	-0.048
NB-94		702.63	*	1.610E-02	4.154E-02	6.902E-02	3.666E-03	0.233
		871.10		-2.442E-02	3.907E-02	6.139E-02	4.282E-03	-0.398
NB-95		765.79	*	9.161E-02	5.257E-02	8.756E-02	5.176E-03	1.046
NB-95M		235.69	*	1.363E-01	1.667E-01	2.448E-01	1.850E-02	0.557

---- Non-Identified Nuclides ----

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ZR-95		724.18		1.425E-01	1.308E-01	2.025E-01	1.340E-02	0.703
		756.15	*	8.910E-02	8.171E-02	1.434E-01	1.010E-02	0.621
NB-97		657.90	*	-8.121E-02	8.171E-02	Half-Life too short		
		1024.50		1.778E+00	8.171E-02	Half-Life too short		
ZR-97		254.15		-5.297E-01	8.171E-02	Half-Life too short		
		355.39		2.855E-01	8.171E-02	Half-Life too short		
		507.63	*	9.771E-01	8.171E-02	Half-Life too short		
		602.52		-2.368E+00	8.171E-02	Half-Life too short		
		1021.30		-1.265E-01	8.171E-02	Half-Life too short		
		1147.95		-2.673E+00	8.171E-02	Half-Life too short		
		1362.66		-3.365E+00	8.171E-02	Half-Life too short		
		1750.46		9.701E-01	8.171E-02	Half-Life too short		
MO-99		140.51		-1.115E+01	2.374E+01	3.740E+01	1.007E+01	-0.298
		181.06		-7.483E+00	1.698E+01	2.341E+01	3.989E+00	-0.320
		366.43		5.875E+01	7.352E+01	1.279E+02	7.338E+00	0.459
		739.58	*	7.892E+00	1.090E+01	1.850E+01	2.538E+00	0.427
		778.00		-1.980E+01	2.877E+01	4.551E+01	2.745E+00	-0.435
TC-99M		140.51	*	-9.068E+08	2.877E+01	Half-Life too short		
RH-101		127.23		1.632E-02	4.146E-02	6.093E-02	3.639E-03	0.268
		198.01	*	-3.141E-02	4.177E-02	6.381E-02	3.584E-03	-0.492
		325.23		-1.917E-01	3.076E-01	4.285E-01	2.540E-02	-0.447
RH-102		418.52		3.817E-02	3.378E-01	5.636E-01	3.157E-02	0.068
		475.06	*	1.735E-02	3.454E-02	5.874E-02	3.308E-03	0.295
		631.29		-5.354E-02	6.483E-02	9.782E-02	5.020E-03	-0.547
		697.49		-1.428E-02	9.421E-02	1.502E-01	7.907E-03	-0.095
	+	766.84		2.611E-01	1.480E-01	2.287E-01	1.354E-02	1.142
		1046.59		4.600E-02	1.367E-01	2.325E-01	1.562E-02	0.198
		1112.84		-5.918E-02	3.238E-01	4.459E-01	2.827E-02	-0.133
RU-103		497.08	*	1.560E-02	4.729E-02	7.949E-02	9.983E-03	0.196
	+	610.33		1.238E+01	2.514E+00	3.178E+00	4.836E-01	3.895
RH-106	+	511.85		5.414E-01	3.730E-01	4.862E-01	2.717E-02	1.114
		621.84	*	-2.430E-02	3.736E-01	6.036E-01	6.909E-02	-0.040
		1050.47		-1.755E+00	2.780E+00	4.308E+00	2.887E-01	-0.407
RU-106	+	511.85		5.414E-01	3.730E-01	4.862E-01	2.717E-02	1.114
		621.84	*	-2.430E-02	3.736E-01	6.036E-01	3.130E-02	-0.040
		1050.47		-1.755E+00	2.780E+00	4.308E+00	2.886E-01	-0.407
AG-108M		433.93	*	-2.474E-03	4.241E-02	6.993E-02	4.289E-03	-0.035
		614.37		-3.486E-02	5.137E-02	6.635E-02	3.826E-03	-0.525
		722.95		3.362E-03	5.286E-02	7.396E-02	4.450E-03	0.045
AG-110M		657.75	*	-9.226E-02	4.515E-02	6.048E-02	3.265E-03	-1.526
		677.61		-4.109E-02	3.528E-01	5.645E-01	3.095E-02	-0.073
		706.67		-4.838E-02	2.604E-01	4.138E-01	2.368E-02	-0.117
		763.93		8.478E-02	1.966E-01	2.878E-01	1.797E-02	0.295
		884.67		3.852E-02	5.741E-02	1.011E-01	7.530E-03	0.381
		937.48		5.280E-02	1.295E-01	2.227E-01	1.677E-02	0.237
		1384.27		1.125E-01	1.936E-01	3.365E-01	2.229E-02	0.334
IN-111		171.28		-1.113E-01	8.920E-01	1.443E+00	7.844E-02	-0.077
		245.39	*	-1.517E-01	1.033E+00	1.430E+00	8.404E-02	-0.106
IN-113M		391.69	*	3.182E-02	5.125E-02	8.818E-02	5.248E-03	0.361

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113		391.69	*	3.182E-02	5.125E-02	8.818E-02	5.248E-03	0.361
IN-114M		190.27	*	-1.245E-01	2.443E-01	3.353E-01	1.866E-02	-0.371
CD-115		260.90		1.043E+01	1.053E+02	1.694E+02	1.004E+01	0.062
		492.35		-1.547E+01	2.805E+01	4.418E+01	2.482E+00	-0.350
		527.90	*	-3.327E+00	8.830E+00	1.406E+01	7.810E-01	-0.237
SN-117M		156.02		-2.442E+00	2.529E+00	3.962E+00	2.189E-01	-0.616
		158.56	*	5.209E-02	5.953E-02	1.003E-01	5.512E-03	0.519
SB-122		563.90	*	1.258E+00	1.863E+00	3.184E+00	1.735E-01	0.395
		692.80		-1.451E+01	3.886E+01	6.078E+01	3.173E+00	-0.239
I-123		159.00	*	1.431E+00	3.886E+01	Half-Life too short		
		528.96		2.374E+01	3.886E+01	Half-Life too short		
TE-123M		159.00	*	3.008E-02	3.275E-02	5.528E-02	3.079E-03	0.544
I-124		602.71	*	-2.780E-01	7.411E-01	9.983E-01	5.276E-02	-0.278
		722.78		-4.141E-01	4.632E+00	6.355E+00	3.495E-01	-0.065
		1325.50		-3.342E+01	3.434E+01	4.881E+01	3.059E+00	-0.685
		1376.25		5.718E+01	2.840E+01	5.650E+01	3.557E+00	1.012
		1509.49		1.099E+01	1.358E+01	2.462E+01	1.541E+00	0.446
		1691.02		3.040E+00	3.101E+00	6.081E+00	3.657E-01	0.500
SB-124		602.71		-1.929E-02	5.142E-02	6.927E-02	3.663E-03	-0.278
		645.85		-3.627E-01	5.670E-01	8.668E-01	5.100E-02	-0.418
		709.31		1.112E+00	3.261E+00	5.406E+00	2.905E-01	0.206
		713.82		5.332E-01	1.825E+00	3.016E+00	3.015E-01	0.177
		722.78		-4.165E-02	4.659E-01	6.392E-01	3.699E-02	-0.065
	+	968.20		1.930E+01	4.952E+00	8.379E+00	5.914E-01	2.303
		1045.16		-3.910E-01	3.074E+00	5.015E+00	3.374E-01	-0.078
		1325.50		-3.590E+00	3.689E+00	5.243E+00	3.286E-01	-0.685
		1368.21		2.459E-01	1.733E+00	2.871E+00	3.480E-01	0.086
		1436.60		9.249E-01	4.062E+00	6.794E+00	4.275E-01	0.136
		1691.02	*	7.212E-02	7.359E-02	1.443E-01	9.368E-03	0.500
SB-125		427.89	*	-1.132E-01	1.053E-01	1.614E-01	9.473E-03	-0.701
	+	463.38		8.578E-01	4.514E-01	6.437E-01	4.263E-02	1.332
		600.56		-9.868E-02	2.092E-01	3.281E-01	2.060E-02	-0.301
		635.90		6.745E-02	3.155E-01	5.208E-01	3.233E-02	0.130
TE-125M		109.28	*	-5.730E+00	1.074E+01	1.692E+01	1.537E+00	-0.339
I-126		388.63		-1.881E-03	2.201E-01	3.658E-01	2.038E-02	-0.005
		666.33	*	-4.253E-01	2.339E-01	3.253E-01	1.620E-02	-1.307
		753.82		5.411E-01	1.579E+00	2.616E+00	1.516E-01	0.207
SB-126		223.80		-1.205E+00	4.446E+00	7.063E+00	4.080E-01	-0.171
		278.60		5.611E+00	2.700E+00	4.917E+00	2.934E-01	1.141
	+	296.50		1.370E+01	2.426E+00	3.725E+00	2.225E-01	3.679
		414.70		2.598E-02	9.411E-02	1.378E-01	7.711E-03	0.189
		415.30		-2.048E+00	7.487E+00	1.134E+01	6.347E-01	-0.181
		555.20		1.993E+00	4.397E+00	7.424E+00	4.068E-01	0.269
		573.80		-1.216E+00	1.095E+00	1.608E+00	8.701E-02	-0.756
		593.00		4.297E-01	1.024E+00	1.720E+00	9.170E-02	0.250
		656.30		-5.196E+00	3.984E+00	5.760E+00	2.865E-01	-0.902
		666.33		-1.772E-01	9.747E-02	1.356E-01	6.751E-03	-1.307
		675.00		-1.305E+00	2.219E+00	3.406E+00	1.723E-01	-0.383
		695.00		7.718E-02	8.576E-02	1.483E-01	7.770E-03	0.521

---- Non-Identified Nuclides -- -

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		697.00		-4.466E-02	3.080E-01	4.914E-01	2.584E-02	-0.091
		720.50	*	-1.177E-01	1.891E-01	2.418E-01	1.325E-02	-0.487
		856.80		1.759E-01	5.597E-01	8.374E-01	5.717E-02	0.210
		989.20		1.718E-01	1.390E+00	2.327E+00	1.624E-01	0.074
		1034.80		-8.589E+00	1.031E+01	1.567E+01	1.062E+00	-0.548
		1213.00		-7.560E-01	5.234E+00	8.447E+00	5.083E-01	-0.090
SB-127		61.10		2.158E+01	5.780E+01	9.790E+01	1.098E+01	0.220
		252.40		3.991E-01	4.106E+00	6.605E+00	2.739E+00	0.060
		290.80		-1.082E+01	2.239E+01	3.171E+01	2.811E+00	-0.341
		411.60		9.070E+00	1.305E+01	1.981E+01	2.780E+00	0.458
		444.90		1.387E+00	9.385E+00	1.565E+01	1.620E+00	0.089
		473.00		-1.690E+00	1.621E+00	2.460E+00	2.645E-01	-0.687
		543.00		3.975E+00	1.623E+01	2.700E+01	3.373E+00	0.147
		603.60		-4.166E+00	1.261E+01	1.707E+01	1.730E+00	-0.244
		685.20	*	-4.119E-01	1.427E+00	2.252E+00	1.944E-01	-0.183
		698.50		-7.605E+00	1.531E+01	2.367E+01	3.317E+00	-0.321
		722.20		9.495E+00	3.018E+01	4.359E+01	3.727E+00	0.218
		783.80		2.632E+00	3.302E+00	5.861E+00	6.136E-01	0.449
XE-127		57.60		-3.200E+00	7.765E+00	1.284E+01	1.182E+00	-0.249
		145.22		3.405E-01	7.867E-01	1.307E+00	7.408E-02	0.260
		172.10		-4.710E-02	1.380E-01	2.211E-01	1.203E-02	-0.213
		202.84	*	2.823E-02	5.842E-02	8.938E-02	5.049E-03	0.316
		374.96		1.220E-01	2.114E-01	3.642E-01	2.068E-02	0.335
I-131		80.18		-7.326E+00	5.539E+00	7.575E+00	7.073E-01	-0.967
		284.30		1.898E-01	1.538E+00	2.606E+00	1.718E-01	0.073
		364.48	*	4.157E-02	1.192E-01	2.027E-01	1.301E-02	0.205
		636.97		9.346E-02	1.667E+00	2.717E+00	1.593E-01	0.034
		722.89		-6.039E-01	8.193E+00	1.126E+01	6.277E-01	-0.054
TE-132		49.72		1.650E+01	2.169E+01	3.731E+01	3.956E+00	0.442
		111.76		-7.692E+00	2.687E+01	4.383E+01	4.029E+00	-0.175
		116.30		1.117E+01	2.530E+01	4.231E+01	3.775E+00	0.264
		228.16	*	2.302E-01	6.428E-01	1.050E+00	1.484E-01	0.219
BA-133		53.15		-1.704E+00	4.841E+00	8.032E+00	7.333E-01	-0.212
		79.62		1.162E+00	1.714E+00	2.568E+00	4.005E-01	0.452
		81.00		-1.508E-01	1.295E-01	1.763E-01	2.870E-02	-0.855
		276.40		5.365E-01	5.198E-01	7.680E-01	1.001E-01	0.699
		302.84		8.206E-02	1.769E-01	2.673E-01	3.139E-02	0.307
		356.01	*	-5.639E-03	5.498E-02	7.911E-02	9.144E-03	-0.071
		383.85		9.863E-02	3.219E-01	5.455E-01	5.876E-02	0.181
I-133	+	510.53		4.412E-01	3.219E-01	Half-Life too short		
		529.87	*	1.823E-03	3.219E-01	Half-Life too short		
		706.58		-3.287E-02	3.219E-01	Half-Life too short		
		856.28		4.935E-02	3.219E-01	Half-Life too short		
		875.33		3.513E-02	3.219E-01	Half-Life too short		
		1236.41		7.964E-01	3.219E-01	Half-Life too short		
		1298.22		7.046E-02	3.219E-01	Half-Life too short		
CS-134		475.35		1.495E+00	2.282E+00	3.915E+00	2.205E-01	0.382
		563.23		3.460E-01	4.279E-01	7.382E-01	4.120E-02	0.469
		569.32		8.527E-02	2.230E-01	3.727E-01	2.092E-02	0.229

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		604.70		-1.227E-02	4.447E-02	6.058E-02	3.217E-03	-0.203
	+	795.84	*	1.035E-01	5.763E-02	1.087E-01	6.838E-03	0.953
		801.93		-2.686E-01	5.032E-01	7.614E-01	4.823E-02	-0.353
		1038.57		2.899E+00	4.755E+00	8.264E+00	5.586E-01	0.351
		1167.94		-4.087E-01	2.918E+00	4.719E+00	2.811E-01	-0.087
		1365.15		5.674E-01	1.230E+00	2.134E+00	1.456E-01	0.266
CS-135		268.24	*	2.097E-01	2.104E-01	3.130E-01	2.432E-02	0.670
I-135		288.45		-4.695E+08	2.104E-01	Half-Life too short		
		417.63		-3.861E+08	2.104E-01	Half-Life too short		
		546.56		-2.118E+08	2.104E-01	Half-Life too short		
		836.80		7.440E+08	2.104E-01	Half-Life too short		
		1038.76		8.628E+08	2.104E-01	Half-Life too short		
		1124.00		-1.310E+09	2.104E-01	Half-Life too short		
		1131.51		-2.895E+08	2.104E-01	Half-Life too short		
		1260.41	*	-2.271E+08	2.104E-01	Half-Life too short		
		1457.56		6.095E+10	2.104E-01	Half-Life too short		
		1678.03		-3.707E+08	2.104E-01	Half-Life too short		
		1706.46		3.663E+08	2.104E-01	Half-Life too short		
		1791.20		1.650E+08	2.104E-01	Half-Life too short		
CS-136		66.91		-6.200E-01	8.831E-01	1.435E+00	2.240E-01	-0.432
	+	86.29		4.675E+00	1.302E+00	2.188E+00	2.981E-01	2.136
		153.22		8.548E-01	7.307E-01	1.242E+00	8.729E-02	0.689
		163.89		-5.094E-01	1.163E+00	1.859E+00	1.293E-01	-0.274
		176.55		9.882E-02	4.031E-01	6.613E-01	4.117E-02	0.149
		273.65		-1.159E+00	6.440E-01	7.757E-01	5.238E-02	-1.493
		340.57		6.792E-01	1.701E-01	2.996E-01	1.868E-02	2.267
		818.51		2.985E-02	6.656E-02	1.163E-01	7.496E-03	0.257
		1048.07	*	-9.259E-04	1.225E-01	2.020E-01	1.449E-02	-0.005
		1235.34		8.820E-01	7.566E-01	1.328E+00	1.347E-01	0.664
BA-137M		661.65	*	8.788E-02	4.598E-02	8.401E-02	4.149E-03	1.046
CS-137		661.65	*	9.290E-02	4.860E-02	8.881E-02	4.412E-03	1.046
CE-139		165.85	*	-2.578E-02	3.407E-02	5.365E-02	2.901E-03	-0.480
BA-140		162.64		4.320E-02	8.143E-01	1.329E+00	8.253E-02	0.032
		304.84		-1.486E+00	1.594E+00	2.093E+00	5.719E-01	-0.710
		423.70		8.792E-01	2.038E+00	3.435E+00	1.091E+00	0.256
		537.32	*	2.039E-01	2.956E-01	4.954E-01	1.609E-01	0.412
LA-140	+	328.77		4.793E-01	4.029E-01	5.682E-01	3.751E-02	0.843
		432.53		9.717E-01	2.385E+00	4.041E+00	2.523E-01	0.240
		487.03		-6.117E-02	1.374E-01	2.182E-01	1.398E-02	-0.280
		751.79		-2.472E+00	1.918E+00	2.690E+00	1.904E-01	-0.919
		815.85		-5.481E-01	3.277E-01	4.541E-01	3.492E-02	-1.207
		867.82		2.034E-01	1.558E+00	2.441E+00	1.831E-01	0.083
		919.63		-6.589E-01	3.112E+00	4.827E+00	4.605E-01	-0.137
		925.24		1.385E-01	1.199E+00	2.014E+00	1.578E-01	0.069
		1596.49	*	-4.055E-02	9.744E-02	1.531E-01	9.448E-03	-0.265
CE-141		145.44	*	1.937E-02	7.088E-02	1.171E-01	6.909E-03	0.165
CE-143		57.37		-3.100E-04	7.088E-02	Half-Life too short		
		231.56		-5.922E-04	7.088E-02	Half-Life too short		
		293.26	*	4.678E-04	7.088E-02	Half-Life too short		

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	+	350.59		1.736E-02	7.088E-02	Half-Life too short		
		490.36		6.875E-05	7.088E-02	Half-Life too short		
		664.57		-2.015E-04	7.088E-02	Half-Life too short		
		721.93		-1.592E-04	7.088E-02	Half-Life too short		
CE-144		80.11		-3.567E+00	2.810E+00	3.857E+00	3.582E-01	-0.925
		133.54	*	1.098E-01	2.718E-01	3.984E-01	5.666E-02	0.275
PM-144		476.78		7.822E-02	8.105E-02	1.414E-01	9.619E-03	0.553
		618.01		3.262E-02	3.638E-02	6.322E-02	3.535E-03	0.516
		696.49	*	1.581E-02	4.090E-02	6.806E-02	3.579E-03	0.232
		778.57		-1.113E+00	2.587E+00	4.188E+00	2.529E-01	-0.266
PR-144		696.49	*	1.071E+00	2.770E+00	4.609E+00	2.422E-01	0.232
		1489.15		-6.170E+00	1.191E+01	1.727E+01	1.083E+00	-0.357
PM-146		453.90	*	1.935E-02	4.792E-02	8.124E-02	6.915E-03	0.238
		633.02		-9.003E-02	1.617E+00	2.612E+00	9.592E-01	-0.034
		735.90		1.355E-01	1.953E-01	3.185E-01	8.869E-02	0.425
		747.13		4.091E-02	1.009E-01	1.683E-01	2.099E-02	0.243
ND-147	+	91.11		7.241E-01	3.133E-01	5.464E-01	5.446E-02	1.325
		319.41		-1.327E+00	3.530E+00	5.803E+00	3.450E-01	-0.229
		439.89		-3.970E+00	6.932E+00	1.106E+01	6.228E-01	-0.359
		531.02	*	-2.356E-01	6.109E-01	9.705E-01	1.302E-01	-0.243
PM-149		285.90	*	7.188E+01	7.297E+01	1.274E+02	1.814E+01	0.564
EU-152		121.78		-1.900E-02	8.453E-02	1.378E-01	1.082E-02	-0.138
		244.69		4.078E-02	4.522E-01	6.363E-01	3.739E-02	0.064
		344.27	*	-5.662E-02	1.307E-01	1.722E-01	1.134E-02	-0.329
		443.98		5.711E-01	1.141E+00	1.944E+00	1.094E-01	0.294
		778.89		-1.455E-01	2.978E-01	4.795E-01	2.896E-02	-0.304
		867.32		1.881E-01	1.005E+00	1.545E+00	1.071E-01	0.122
	+	964.01		9.502E-01	4.668E-01	6.919E-01	4.894E-02	1.373
		1085.78		-2.487E-01	4.495E-01	6.976E-01	4.538E-02	-0.356
		1112.02		-1.269E-01	4.735E-01	6.453E-01	4.094E-02	-0.197
		1407.95		1.614E-01	2.246E-01	3.891E-01	2.450E-02	0.415
GD-153		69.67		1.190E+00	2.173E+00	3.267E+00	2.917E-01	0.364
		83.37		5.917E+00	1.907E+01	2.794E+01	2.655E+00	0.212
		97.43	*	-5.252E-03	9.800E-02	1.421E-01	1.188E-02	-0.037
		103.18		-4.422E-02	1.182E-01	1.926E-01	1.480E-02	-0.230
EU-154		123.07		5.467E-02	5.828E-02	9.892E-02	9.471E-03	0.553
		247.94		-2.288E-01	4.858E-01	6.546E-01	6.281E-02	-0.349
		591.81		3.287E-01	7.163E-01	1.207E+00	1.148E-01	0.272
		723.30		4.379E-02	2.231E-01	3.173E-01	2.170E-02	0.138
		756.87		7.289E-01	8.939E-01	1.535E+00	1.558E-01	0.475
		873.19		3.326E-02	3.340E-01	5.621E-01	6.274E-02	0.059
		996.32		-1.909E-01	4.561E-01	7.251E-01	1.234E-01	-0.263
		1004.76		2.388E-02	2.560E-01	4.270E-01	4.458E-02	0.056
		1274.45	*	-2.548E-02	1.445E-01	2.311E-01	2.212E-02	-0.110
EU-155		48.70		3.855E+00	3.532E+00	6.137E+00	5.139E-01	0.628
		60.01		-6.496E-01	6.373E+00	1.065E+01	9.753E-01	-0.061
	+	86.54		4.581E-01	1.201E-01	2.149E-01	2.113E-02	2.132
		105.31	*	9.607E-02	1.197E-01	2.033E-01	1.542E-02	0.473
TB-160	+	86.79		1.211E+00	3.170E-01	5.684E-01	5.555E-02	2.130

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		197.04		-3.160E-01	7.057E-01	1.093E+00	6.135E-02	-0.289
		215.65		8.512E-02	9.544E-01	1.427E+00	8.178E-02	0.060
		298.57		2.083E-01	1.265E-01	2.274E-01	1.358E-02	0.916
		879.36	*	-5.282E-02	1.638E-01	2.654E-01	1.874E-02	-0.199
		962.29		8.740E-01	7.267E-01	1.170E+00	8.281E-02	0.747
	+	966.15		6.454E-01	3.171E-01	6.225E-01	4.399E-02	1.037
		1177.93		-3.217E-06	4.385E-01	7.182E-01	4.258E-02	0.000
		1271.85		1.461E-02	8.322E-01	1.359E+00	8.365E-02	0.011
HO-166M		80.57		-5.549E-01	3.613E-01	4.876E-01	4.542E-02	-1.138
		184.41		1.275E-01	4.849E-02	7.694E-02	4.250E-03	1.657
		280.46		-1.089E-01	1.003E-01	1.604E-01	9.572E-03	-0.679
		410.95		3.580E-01	3.268E-01	5.119E-01	2.861E-02	0.699
		711.68	*	-3.891E-02	7.311E-02	1.124E-01	6.066E-03	-0.346
		752.31		-3.246E-01	3.237E-01	4.699E-01	2.716E-02	-0.691
		810.29		4.344E-02	6.816E-02	1.199E-01	7.615E-03	0.362
TM-171		51.35		-2.806E+01	4.335E+01	7.119E+01	6.384E+00	-0.394
		52.39		-1.328E+01	2.163E+01	3.553E+01	3.225E+00	-0.374
		59.40		-1.748E+00	3.426E+01	5.735E+01	5.271E+00	-0.030
		66.72	*	-3.303E+01	3.421E+01	5.525E+01	4.935E+00	-0.598
LU-176	+	88.36		9.026E-01	2.363E-01	4.349E-01	4.266E-02	2.075
		201.83		-4.448E-03	3.438E-02	5.525E-02	3.118E-03	-0.081
		306.84	*	-1.778E-02	2.892E-02	4.571E-02	2.726E-03	-0.389
		401.10		6.925E+00	7.625E+00	1.304E+01	7.263E-01	0.531
LU-177		112.95		4.022E-01	1.682E+00	2.797E+00	1.896E-01	0.144
	+	208.36	*	3.572E+00	1.815E+00	2.076E+00	1.180E-01	1.721
LU-177M		52.97		-1.046E+00	2.187E+00	3.611E+00	3.293E-01	-0.290
		54.07		-4.329E-01	1.132E+00	1.876E+00	1.720E-01	-0.231
		61.30		9.774E-01	1.839E+00	3.129E+00	2.845E-01	0.312
		121.62		-1.023E-01	4.312E-01	7.026E-01	4.303E-02	-0.146
		147.16		-1.096E+00	7.613E-01	1.170E+00	6.598E-02	-0.937
		171.86		-1.427E-01	5.578E-01	8.971E-01	4.880E-02	-0.159
		218.09		5.124E-01	1.007E+00	1.658E+00	9.525E-02	0.309
		268.79		1.398E+00	1.090E+00	1.647E+00	9.802E-02	0.849
		319.02		-1.250E-01	2.952E-01	4.841E-01	2.877E-02	-0.258
		367.43		6.070E-01	1.044E+00	1.796E+00	1.029E-01	0.338
		413.65	*	-3.355E-02	2.364E-01	3.338E-01	1.867E-02	-0.100
HF-181		56.28		-9.586E-02	1.216E+00	2.035E+00	1.873E-01	-0.047
		57.53		-2.524E-01	6.550E-01	1.084E+00	9.979E-02	-0.233
		65.20		1.130E-01	1.098E+00	1.842E+00	1.650E-01	0.061
		133.02		1.743E-02	8.631E-02	1.254E-01	7.346E-03	0.139
		136.25		-1.049E-01	5.297E-01	8.616E-01	4.999E-02	-0.122
		345.85		-2.429E-01	2.802E-01	3.225E-01	1.886E-02	-0.753
		482.03	*	-1.406E-02	4.781E-02	7.705E-02	4.336E-03	-0.182
W-181		56.28		-6.227E-02	4.825E-01	8.062E-01	7.422E-02	-0.077
		57.53		-1.001E-01	2.597E-01	4.299E-01	3.957E-02	-0.233
		65.20	*	4.446E-02	4.319E-01	7.248E-01	6.492E-02	0.061
TA-182		67.75		-1.335E-02	1.400E-01	2.163E-01	1.931E-02	-0.062
		100.10		9.507E-02	1.985E-01	3.340E-01	2.681E-02	0.285
		152.43		6.160E-01	3.889E-01	6.708E-01	3.736E-02	0.918

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		-7.300E-02	4.042E-01	6.453E-01	3.721E-02	-0.113
		1001.68		1.299E+00	2.514E+00	4.287E+00	2.970E-01	0.303
	-	1121.28		9.049E-01	2.902E-01	4.077E-01	2.562E-02	2.219
		1189.05		3.694E-01	4.012E-01	7.040E-01	4.194E-02	0.525
		1221.42	*	1.152E-01	2.456E-01	4.166E-01	2.516E-02	0.277
		1230.97		-2.907E-01	6.056E-01	9.498E-01	5.758E-02	-0.306
RE-183		57.98		-6.963E-02	2.569E-01	4.270E-01	3.929E-02	-0.163
		59.32		-7.881E-03	1.396E-01	2.336E-01	2.147E-02	-0.034
		67.20		-2.002E-01	2.455E-01	3.847E-01	3.435E-02	-0.520
		162.32	*	-5.273E-02	1.270E-01	2.033E-01	1.108E-02	-0.259
	-	208.81		3.575E+00	1.816E+00	2.102E+00	1.195E-01	1.701
		291.72		1.460E-01	1.174E+00	1.736E+00	1.037E-01	0.084
RE-184		57.98		-2.583E-01	9.530E-01	1.584E+00	1.457E-01	-0.163
		59.32		-2.921E-02	5.174E-01	8.658E-01	7.959E-02	-0.034
		67.20		-7.422E-01	9.104E-01	1.427E+00	1.274E-01	-0.520
		161.27		1.267E-01	4.145E-01	6.835E-01	3.732E-02	0.185
		216.55		-1.961E-01	3.316E-01	5.002E-01	2.869E-02	-0.392
		252.85	*	-4.033E-02	2.701E-01	4.290E-01	2.534E-02	-0.094
		318.01		-5.382E-01	5.136E-01	8.121E-01	4.828E-02	-0.663
		792.07		-5.944E-03	1.297E+00	1.882E+00	1.161E-01	-0.003
		903.28		-1.026E-01	1.290E+00	1.975E+00	1.431E-01	-0.052
		920.93		-9.627E-03	4.983E-01	8.270E-01	5.958E-02	-0.012
OS-185		59.72		-6.000E-02	3.763E-01	6.275E-01	5.759E-02	-0.096
		61.14		8.335E-02	2.006E-01	3.403E-01	3.097E-02	0.245
		69.30		9.083E-02	3.922E-01	5.824E-01	5.197E-02	0.156
		592.07		1.999E+00	2.897E+00	4.965E+00	2.649E-01	0.403
		646.12	*	-2.321E-02	4.805E-02	7.456E-02	3.759E-03	-0.311
		717.42		6.240E-01	1.014E+00	1.721E+00	9.377E-02	0.363
		874.81		3.365E-01	6.662E-01	1.159E+00	8.130E-02	0.290
		880.27		-2.811E-01	9.170E-01	1.488E+00	1.052E-01	-0.189
RE-188		155.03	*	-5.495E-03	1.993E-01	3.249E-01	1.799E-02	-0.017
		477.96		4.999E+00	3.613E+00	6.460E+00	3.637E-01	0.774
		633.10		-2.406E-01	3.228E+00	5.205E+00	2.666E-01	-0.046
W-188		63.58		1.761E+00	6.347E+01	1.059E+02	9.532E+00	0.017
		227.08		-1.949E+00	1.491E+01	2.383E+01	1.381E+00	-0.082
		290.67	*	-4.669E+00	9.378E+00	1.327E+01	7.928E-01	-0.352
IR-192	+	295.96		1.107E+00	1.963E-01	3.026E-01	1.835E-02	3.659
		308.46		3.163E-02	1.103E-01	1.878E-01	1.132E-02	0.168
		316.51	*	-3.704E-02	3.941E-02	6.277E-02	3.752E-03	-0.590
		468.07		4.389E-02	7.799E-02	1.179E-01	7.716E-03	0.372
		604.41		-1.755E-01	5.950E-01	8.084E-01	8.967E-02	-0.217
		612.46		1.400E+00	9.900E-01	1.570E+00	1.123E-01	0.891
AU-195		65.12		3.586E-02	2.012E-01	3.384E-01	3.032E-02	0.106
		66.83		-7.946E-02	1.118E-01	1.825E-01	1.630E-02	-0.435
	+	75.70		1.360E+00	2.976E-01	5.579E-01	5.060E-02	2.437
		98.88	*	3.529E-01	2.752E-01	4.245E-01	3.470E-02	0.831
	+	129.76		6.233E+00	4.360E+00	5.873E+00	3.477E-01	1.061
TL-200		367.94	*	5.380E-05	4.360E+00	Half-Life too short		
		579.30		2.589E-03	4.360E+00	Half-Life too short		

---- Non Identified Nuclides ----

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		828.27		1.930E-03	4.360E+00	Half-Life too short		
		1205.75		-2.378E-04	4.360E+00	Half-Life too short		
TL-201		68.90		1.891E+00	4.860E+00	7.266E+00	6.483E-01	0.260
		70.82		2.041E+00	2.775E+00	4.196E+00	3.751E-01	0.486
		80.30		-7.245E+00	5.121E+00	6.962E+00	6.474E-01	-1.041
		135.37		1.350E+01	2.474E+01	3.845E+01	2.237E+00	0.351
		167.43	*	-1.657E+00	6.236E+00	1.003E+01	5.431E-01	-0.165
TL-202		68.90		2.070E-01	5.319E-01	7.952E-01	7.096E-02	0.260
		70.82		2.228E-01	3.029E-01	4.580E-01	4.094E-02	0.486
		80.30		-7.910E-01	5.591E-01	7.601E-01	7.069E-02	-1.041
		439.56	*	-4.468E-02	8.316E-02	1.330E-01	7.485E-03	-0.336
HG-203		70.83		1.024E+00	1.382E+00	2.083E+00	2.877E-01	0.491
		72.87		2.208E+00	7.996E-01	1.338E+00	1.798E-01	1.651
		82.60		-1.304E-02	1.507E+00	2.054E+00	2.932E-01	-0.006
		279.20	*	5.642E-02	4.701E-02	8.314E-02	5.250E-03	0.679
BI-207		72.80		5.328E-01	2.521E-01	3.934E-01	3.532E-02	1.354
	+	74.97		7.576E-01	1.658E-01	2.768E-01	2.503E-02	2.737
		84.90		3.311E-01	2.458E-01	3.727E-01	3.585E-02	0.888
		569.67		1.090E-02	3.401E-02	5.660E-02	3.073E-03	0.193
		1063.62	*	5.161E-02	5.720E-02	1.024E-01	6.791E-03	0.504
		1770.23		-2.449E+00	7.595E-01	5.066E-01	2.959E-02	-4.834
TL-207		81.07		-3.363E-01	2.823E-01	3.886E-01	3.632E-02	-0.865
		83.78		4.600E-02	1.638E-01	2.397E-01	2.285E-02	0.192
		94.90		6.118E-01	2.950E-01	4.631E-01	4.032E-02	1.321
		122.32		-1.126E+00	2.034E+00	3.272E+00	2.274E-01	-0.344
		144.24		4.288E-01	8.148E-01	1.334E+00	9.521E-02	0.321
		154.21		1.897E-01	4.655E-01	7.713E-01	5.249E-02	0.246
	+	269.46		4.753E-01	3.673E-01	3.960E-01	2.458E-02	1.200
		323.87	*	-1.280E-01	9.037E-01	1.305E+00	2.161E-01	-0.098
	+	338.28		5.740E+00	2.493E+00	2.776E+00	2.936E-01	2.068
		445.03		-1.654E-03	2.696E+00	4.454E+00	4.531E-01	0.000
PO-209		260.50		4.563E+00	1.103E+01	1.804E+01	1.070E+00	0.253
		262.80		-1.871E+01	3.257E+01	4.843E+01	2.875E+00	-0.386
		896.60	*	-4.249E+00	9.016E+00	1.440E+01	1.043E+00	-0.295
BI-210		46.50	*	-3.323E-01	5.238E+00	8.718E+00	7.178E-01	-0.038
PB-210		46.50	*	-3.323E-01	5.238E+00	8.718E+00	7.178E-01	-0.038
PO-210		46.50	*	-3.323E-01	5.237E+00	8.718E+00	6.298E-01	-0.038
PB-211		404.84	*	6.836E-01	1.300E+00	1.853E+00	1.155E+00	0.369
		427.08		-2.255E+00	2.750E+00	3.681E+00	2.275E+00	-0.613
		831.96		-9.397E-02	1.396E+00	2.319E+00	1.448E+00	-0.041
BI-212	+	727.18	*	1.890E+00	6.084E-01	8.563E-01	6.440E-02	2.207
		785.46		2.093E+00	1.893E+00	3.447E+00	2.104E-01	0.607
		1620.62		5.242E-01	1.139E+00	2.057E+00	1.262E-01	0.255
PO-215		81.07		-3.363E-01	2.823E-01	3.886E-01	3.632E-02	-0.865
		83.78		4.600E-02	1.638E-01	2.397E-01	2.285E-02	0.192
		94.90		6.118E-01	2.950E-01	4.631E-01	4.032E-02	1.321
		122.32		-1.126E+00	2.034E+00	3.272E+00	2.274E-01	-0.344
		144.24		4.288E-01	8.148E-01	1.334E+00	9.521E-02	0.321
		154.21		1.897E-01	4.655E-01	7.713E-01	5.249E-02	0.246

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	-	269.46		4.753E-01	3.673E-01	3.960E-01	2.458E-02	1.200
		323.87	*	-1.280E-01	9.037E-01	1.305E+00	2.161E-01	-0.098
	-	338.28		5.740E+00	2.493E+00	2.776E+00	2.936E-01	2.068
		445.03		-1.654E-03	2.696E+00	4.454E+00	4.531E-01	0.000
RN-219	+	271.23		6.098E-01	4.724E-01	5.315E-01	4.366E-02	1.147
		401.81	*	1.699E-01	4.919E-01	7.890E-01	1.066E-01	0.215
RN-220		549.76	*	3.486E+00	3.149E+01	5.190E+01	2.853E+00	0.067
RA-223		81.07		-3.363E-01	2.823E-01	3.886E-01	3.632E-02	-0.865
		83.78		4.600E-02	1.638E-01	2.397E-01	2.285E-02	0.192
		94.90		6.118E-01	2.950E-01	4.631E-01	4.032E-02	1.321
		122.32		-1.126E+00	2.034E+00	3.272E+00	2.274E-01	-0.344
		144.24		4.288E-01	8.148E-01	1.334E+00	9.521E-02	0.321
		154.21		1.897E-01	4.655E-01	7.713E-01	5.249E-02	0.246
	+	269.46		4.753E-01	3.673E-01	3.960E-01	2.458E-02	1.200
		323.87	*	-1.280E-01	9.037E-01	1.305E+00	2.161E-01	-0.098
	+	338.28		5.740E+00	2.493E+00	2.776E+00	2.936E-01	2.068
		445.03		-1.654E-03	2.696E+00	4.454E+00	4.531E-01	0.000
AC-227		79.80		-1.434E-01	2.115E+00	3.088E+00	6.723E-01	-0.046
		236.00		1.003E+00	3.527E-01	5.466E-01	5.725E-02	1.835
		256.20	*	1.083E-01	4.429E-01	7.177E-01	1.005E-01	0.151
		286.10		1.800E+00	1.752E+00	3.071E+00	3.577E-01	0.586
	+	299.80		4.091E+00	2.379E+00	2.920E+00	4.773E-01	1.401
		304.40		-1.704E+00	2.355E+00	3.229E+00	5.603E-01	-0.528
		334.20		3.315E+00	3.769E+00	4.707E+00	8.644E-01	0.704
TH-227		79.80		-1.434E-01	2.115E+00	3.088E+00	6.807E-01	-0.046
	+	94.00		1.081E+01	3.718E+00	4.248E+00	9.288E-01	2.545
		236.00		1.003E+00	3.488E-01	5.466E-01	4.964E-02	1.835
		256.20	*	1.083E-01	4.430E-01	7.177E-01	1.216E-01	0.151
		286.10		1.800E+00	2.505E+00	3.071E+00	3.077E+00	0.586
	+	299.80		4.091E+00	2.379E+00	2.920E+00	4.773E-01	1.401
		304.40		-1.704E+00	2.355E+00	3.229E+00	5.603E-01	-0.528
		334.20		3.315E+00	3.769E+00	4.707E+00	8.644E-01	0.704
TH-229		85.43		5.378E-01	2.523E-01	3.888E-01	3.756E-02	1.383
	+	88.47		5.196E-01	1.360E-01	2.506E-01	2.452E-02	2.073
		100.00		1.035E-01	2.077E-01	3.496E-01	2.810E-02	0.296
		193.63	*	1.799E-01	6.084E-01	9.969E-01	5.570E-02	0.180
	+	210.97		2.832E+00	1.438E+00	1.631E+00	9.298E-02	1.736
PA-231		283.67	*	-2.539E-01	1.726E+00	2.888E+00	4.001E-01	-0.088
	+	301.29		1.637E+00	9.293E-01	1.171E+00	1.235E-01	1.398
TH-231		81.07		-3.363E-01	2.823E-01	3.886E-01	3.632E-02	-0.865
		83.78		4.600E-02	1.638E-01	2.397E-01	2.285E-02	0.192
		94.90		6.118E-01	2.950E-01	4.631E-01	4.032E-02	1.321
		122.32		-1.126E+00	2.034E+00	3.272E+00	2.274E-01	-0.344
		144.24		4.288E-01	8.148E-01	1.334E+00	9.521E-02	0.321
		154.21		1.897E-01	4.655E-01	7.713E-01	5.249E-02	0.246
	+	269.46		4.753E-01	3.673E-01	3.960E-01	2.458E-02	1.200
		323.87	*	-1.280E-01	9.037E-01	1.305E+00	2.161E-01	-0.098
	+	338.28		5.740E+00	2.493E+00	2.776E+00	2.936E-01	2.068
		445.03		-1.654E-03	2.696E+00	4.454E+00	4.531E-01	0.000

---- Non-Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		3.280E-00	5.774E-00	8.541E+00	8.170E-01	0.384
	+	92.29		8.832E-00	2.472E+00	3.726E+00	3.393E-01	2.370
		95.87	*	-4.731E-01	1.095E+00	1.557E+00	1.334E-01	-0.304
		108.00		-1.362E+00	2.006E+00	3.145E+00	2.266E-01	-0.433
PA-233		75.28		2.211E-01	5.593E+00	8.554E+00	1.334E+00	2.585
	+	86.59		7.450E+00	2.717E+00	3.495E+00	9.510E-01	2.131
	+	300.12		1.141E+00	6.548E-01	8.158E-01	1.102E-01	1.398
		311.98	*	3.236E-02	7.496E-02	1.285E-01	8.103E-03	0.252
		340.50		3.529E+00	1.189E+00	1.570E+00	3.609E-01	2.248
		398.62		-3.470E-01	2.374E+00	3.906E+00	1.008E+00	-0.089
		415.76		-9.091E-01	2.140E+00	3.195E+00	6.559E-01	-0.285
PA-234		63.00		-4.706E-01	1.916E+00	3.167E+00	4.981E-01	-0.149
		94.67		5.875E-01	2.243E-01	3.463E-01	4.324E-02	1.697
		98.44		1.355E-01	1.363E-01	1.750E-01	9.754E-02	0.774
		99.86		4.215E-01	5.372E-01	8.846E-01	7.126E-02	0.477
		111.00		-6.599E-02	2.128E-01	3.468E-01	3.798E-02	-0.190
		131.20		-2.388E-02	1.467E-01	2.092E-01	1.233E-02	-0.114
		152.70		4.729E-01	3.872E-01	6.496E-01	1.022E-01	0.728
	+	186.00		5.455E+00	3.085E+00	2.927E+00	8.929E-01	1.864
		226.40		-8.408E-02	4.792E-01	7.644E-01	8.833E-02	-0.110
		227.20		-5.592E-02	5.087E-01	8.141E-01	4.717E-02	-0.069
		248.90		4.501E-01	9.782E-01	1.545E+00	3.324E-01	0.291
		293.70		5.180E+00	1.343E+00	1.882E+00	3.039E-01	2.752
		369.80		-7.360E-01	1.032E+00	1.632E+00	3.395E-01	-0.451
		568.70		-2.226E-01	1.154E+00	1.847E+00	1.003E-01	-0.121
		569.50		1.281E-01	3.042E-01	5.101E-01	2.769E-02	0.251
		574.00		-2.340E+00	1.703E+00	2.438E+00	1.320E-01	-0.960
		699.00		-3.983E-01	8.959E-01	1.391E+00	2.478E-01	-0.286
		706.10		3.475E-02	1.309E+00	2.116E+00	9.325E-01	0.016
		733.00		-2.094E-01	5.358E-01	7.041E-01	1.493E-01	-0.297
		742.81		-1.650E+00	2.028E+00	2.500E+00	1.673E+00	-0.660
	+	796.30		2.014E+00	1.234E+00	2.128E+00	5.614E-01	0.946
		805.60		2.591E-01	1.181E+00	2.008E+00	6.041E-01	0.129
		819.60		1.579E-01	1.237E+00	2.093E+00	7.869E-01	0.075
		826.30		-5.187E-01	9.392E-01	1.446E+00	6.416E-01	-0.359
		831.60		-2.344E-01	7.335E-01	1.189E+00	3.487E-01	-0.197
		876.40		2.553E-01	9.810E-01	1.614E+00	1.657E+00	0.158
		880.51		-2.095E-02	3.316E-01	5.498E-01	3.890E-02	-0.038
		883.24		1.049E-01	3.374E-01	5.653E-01	3.790E-01	0.186
		899.00		5.306E-01	1.038E+00	1.746E+00	7.589E-01	0.304
		925.00		-3.109E-01	1.339E+00	2.177E+00	1.566E-01	-0.143
		926.50		5.988E-02	1.978E-01	3.371E-01	8.368E-02	0.178
		946.00	*	1.056E-01	3.313E-01	5.656E-01	1.025E-01	0.187
		949.00		3.561E-01	4.904E-01	8.674E-01	6.179E-02	0.411
		980.50		-5.951E-01	8.491E-01	1.310E+00	9.184E-02	-0.454
		1394.10		-3.873E-01	1.275E+00	1.927E+00	1.249E+00	-0.201
PA-234M		766.41		3.633E+01	3.570E+01	3.685E+01	2.816E+01	0.986
		1001.03	*	1.896E+00	8.324E+00	1.387E+01	1.378E+00	0.137
TH-234		63.29	*	4.384E-02	1.616E+00	2.696E+00	4.901E-01	0.016

---- Non-Identified Nuclides ----

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	-	92.38		2.797E-00	9.003E-01	1.171E-00	2.144E-01	2.389
U-235	+	89.95		3.101E+00	1.622E-00	2.170E-00	6.751E-01	1.429
	-	93.35		3.363E+00	1.300E-00	1.364E+00	3.835E-01	2.466
		105.00		9.143E-01	1.202E+00	1.992E+00	5.884E-01	0.459
		143.76	*	6.927E-02	2.526E-01	4.097E-01	6.664E-02	0.169
		163.35		-2.747E-02	5.452E-01	8.861E-01	1.583E-01	-0.031
	+	185.71		2.020E-01	9.684E-02	1.080E-01	5.978E-03	1.870
		205.31		-2.098E-01	7.075E-01	9.757E-01	1.750E-01	-0.215
NP-236		94.67		4.481E-01	1.655E-01	2.629E-01	2.298E-02	1.704
		98.44		1.024E-01	8.616E-02	1.323E-01	1.089E-02	0.774
		111.00		-4.992E-02	1.609E-01	2.623E-01	1.821E-02	-0.190
		160.31	*	8.353E-02	9.225E-02	1.556E-01	8.513E-03	0.537
U-238		63.29	*	4.384E-02	1.616E+00	2.696E+00	4.901E-01	0.016
	+	92.38		2.797E+00	7.829E-01	1.171E+00	1.064E-01	2.389
NP-239		99.55		1.428E-01	1.794E-01	2.956E-01	2.392E-02	0.483
		117.00	*	-1.182E-02	2.239E-01	3.680E-01	2.377E-02	-0.032
	+	209.75		2.853E+00	1.449E+00	1.693E+00	9.641E-02	1.685
		228.18		9.683E-02	2.682E-01	4.385E-01	2.543E-02	0.221
		277.60		3.398E-01	2.287E-01	3.791E-01	2.261E-02	0.896
		334.30		1.491E+00	1.948E+00	2.660E+00	1.569E-01	0.560
AM-241		59.54	*	-8.254E-03	1.990E-01	3.331E-01	3.257E-02	-0.025
CM-243		99.55		1.469E-01	1.846E-01	3.041E-01	2.461E-02	0.483
		103.76	*	-6.851E-03	1.092E-01	1.801E-01	1.373E-02	-0.038
		117.00		-1.216E-02	2.303E-01	3.785E-01	2.445E-02	-0.032
	+	209.75		2.812E+00	1.428E+00	1.669E+00	9.503E-02	1.685
		228.18		9.784E-02	2.709E-01	4.430E-01	2.569E-02	0.221
		277.60		3.425E-01	2.305E-01	3.822E-01	2.279E-02	0.896
CM-247		278.00		1.819E+00	8.964E-01	1.598E+00	9.535E-02	1.138
		287.40		9.079E-01	1.396E+00	2.422E+00	1.447E-01	0.375
		402.60	*	-1.091E-02	4.882E-02	6.899E-02	3.844E-03	-0.158
CF-249		252.85		-1.521E-01	1.018E+00	1.618E+00	9.553E-02	-0.094
		333.44		2.521E-01	3.269E-01	3.550E-01	2.095E-02	0.710
		387.95	*	-2.707E-02	4.605E-02	7.386E-02	4.119E-03	-0.367
CF-251		176.60	*	3.620E-02	1.477E-01	2.423E-01	1.326E-02	0.149
		227.00		-5.272E-02	4.527E-01	7.242E-01	4.196E-02	-0.073
		285.00		3.203E-02	2.016E+00	3.400E+00	2.030E-01	0.009

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358002      *
* Acquisition date :  6-JUL-2009 11:15:01 Detector SN#     :                *
* Detector ID        : CAM06               Sensitivity      : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.38      Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232358002           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.3440E-02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME :  4-FEB-2009 13:05:54 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.251E+01	2.910E+00	5.252E-01	0.000E+00
CD-109	3.865E+00	9.915E-01	1.535E+00	0.000E+00
SN-126	3.806E-01	9.762E-02	1.520E-01	0.000E+00
TL-208	5.372E-01	9.102E-02	6.992E-02	0.000E+00
BI-211	3.907E+00	5.374E-01	3.685E-01	0.000E+00
PB-212	1.538E+00	1.618E-01	1.098E-01	0.000E+00
PO-212	1.538E+00	1.618E-01	1.098E-01	0.000E+00
BI-214	1.170E+00	1.758E-01	1.256E-01	0.000E+00
PB-214	1.359E+00	1.994E-01	1.318E-01	0.000E+00
PO-214	1.359E+00	1.994E-01	1.318E-01	0.000E+00
PO-216	1.538E+00	1.618E-01	1.098E-01	0.000E+00
PO-218	1.359E+00	1.994E-01	1.318E-01	0.000E+00
RA-224	4.072E+00	1.401E+00	1.249E+00	0.000E+00
RA-226	1.170E+00	1.758E-01	1.256E-01	0.000E+00
AC-228	1.572E+00	3.354E-01	2.552E-01	0.000E+00
RA-228	1.572E+00	3.354E-01	2.552E-01	0.000E+00
TH-228	1.538E+00	1.618E-01	1.098E-01	0.000E+00
TH-230	1.170E+00	1.758E-01	1.256E-01	0.000E+00
TH-232	1.572E+00	3.354E-01	2.552E-01	0.000E+00
U-234	1.170E+00	1.758E-01	1.256E-01	0.000E+00
NP-237	1.118E+00	3.650E-01	4.939E-01	0.000E+00
AM-243	4.221E-01	9.051E-02	1.116E-01	0.000E+00
ANH-511	1.086E-01	7.334E-02	5.450E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	4.240E-01	3.733E-01	6.855E-01	0.000E+00	NOT IDENT.
NA-22	-9.587E-03	5.063E-02	8.291E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.065E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.737E-02	2.883E-02	3.699E-02	0.000E+00	NOT IDENT.

TI-44	0.000E+00	6.620E-02	1.001E-01	0.000E+00	FAIL ABUN
SC-46	-2.773E-02	4.505E-02	7.323E-02	0.000E+00	FAIL ABUN
V-48	2.282E-02	7.369E-02	1.293E-01	0.000E+00	NOT IDENT.
CR-51	1.350E-01	4.065E-01	7.283E-01	0.000E+00	NOT IDENT.
MN-52	1.089E-01	2.119E-01	3.774E-01	0.000E+00	NOT IDENT.
MN-54	-1.203E-02	4.302E-02	7.272E-02	0.000E+00	NOT IDENT.
CO-56	-9.544E-03	4.452E-02	7.547E-02	0.000E+00	NOT IDENT.
CO-57	-1.506E-02	2.879E-02	4.959E-02	0.000E+00	NOT IDENT.
CO-58	1.295E-02	4.374E-02	7.750E-02	0.000E+00	NOT IDENT.
FE-59	5.259E-02	1.116E-01	1.960E-01	0.000E+00	NOT IDENT.
CO-60	2.206E-02	4.237E-02	7.505E-02	0.000E+00	NOT IDENT.
ZN-65	8.920E-02	1.147E-01	1.828E-01	0.000E+00	NOT IDENT.
GE-68	2.939E-01	1.366E+00	2.361E+00	0.000E+00	NOT IDENT.
AS-73	-3.690E-01	1.084E+00	1.951E+00	0.000E+00	NOT IDENT.
AS-74	-2.464E-02	1.040E-01	1.730E-01	0.000E+00	NOT IDENT.
SE-75	-8.930E-03	5.741E-02	8.244E-02	0.000E+00	NOT IDENT.
BR-77	-4.474E-01	8.586E+00	1.462E+01	0.000E+00	FAIL ABUN
SR-82	-9.684E-02	4.047E-01	6.893E-01	0.000E+00	NOT IDENT.
RB-83	-9.605E-03	7.822E-02	1.325E-01	0.000E+00	NOT IDENT.
RB-84	2.782E-02	7.957E-02	1.408E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.620E+00	1.642E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.873E-02	8.318E-02	0.000E+00	NOT IDENT.
RB-86	2.155E-03	8.227E-01	1.394E+00	0.000E+00	NOT IDENT.
Y-88	8.456E-03	2.541E-02	4.652E-02	0.000E+00	NOT IDENT.
ZR-88	2.648E-02	3.398E-02	6.174E-02	0.000E+00	NOT IDENT.
Y-91	-1.757E+00	2.218E+01	3.697E+01	0.000E+00	NOT IDENT.
NB-94	1.610E-02	4.071E-02	7.010E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	5.152E-02	8.879E-02	0.000E+00	NOT IDENT.
NB-95M	1.363E-01	1.634E-01	2.535E-01	0.000E+00	NOT IDENT.
ZR-95	8.910E-02	8.008E-02	1.454E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.007E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.255E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	7.892E+00	1.068E+01	1.877E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.891E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.141E-02	4.094E-02	6.630E-02	0.000E+00	NOT IDENT.
RH-102	1.735E-02	3.385E-02	6.009E-02	0.000E+00	FAIL ABUN
RU-103	1.560E-02	4.635E-02	8.124E-02	0.000E+00	FAIL ABUN
RH-106	-2.430E-02	3.661E-01	6.144E-01	0.000E+00	FAIL ABUN
RU-106	-2.430E-02	3.661E-01	6.144E-01	0.000E+00	FAIL ABUN
AG-108M	-2.474E-03	4.157E-02	7.165E-02	0.000E+00	NOT IDENT.
AG-110M	-9.226E-02	4.424E-02	6.150E-02	0.000E+00	NOT IDENT.
IN-111	-1.517E-01	1.013E+00	1.480E+00	0.000E+00	NOT IDENT.
IN-113M	3.182E-02	5.022E-02	9.052E-02	0.000E+00	NOT IDENT.
SN-113	3.182E-02	5.022E-02	9.052E-02	0.000E+00	NOT IDENT.
IN-114M	-1.245E-01	2.394E-01	3.486E-01	0.000E+00	NOT IDENT.
CD-115	-3.327E+00	8.653E+00	1.435E+01	0.000E+00	NOT IDENT.
SN-117M	5.209E-02	5.834E-02	1.047E-01	0.000E+00	NOT IDENT.
SB-122	1.258E+00	1.826E+00	3.247E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.527E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	3.008E-02	3.210E-02	5.765E-02	0.000E+00	NOT IDENT.
I-124	-2.780E-01	7.263E-01	1.017E+00	0.000E+00	NOT IDENT.
SB-124	7.212E-02	7.212E-02	1.442E-01	0.000E+00	FAIL ABUN
SB-125	-1.132E-01	1.032E-01	1.655E-01	0.000E+00	FAIL ABUN
TE-125M	-5.730E+00	1.052E+01	1.776E+01	0.000E+00	NOT IDENT.
I-126	-4.253E-01	2.292E-01	3.307E-01	0.000E+00	NOT IDENT.
SB-126	-1.177E-01	1.853E-01	2.455E-01	0.000E+00	FAIL ABUN
SB-127	-4.119E-01	1.398E+00	2.288E+00	0.000E+00	NOT IDENT.
XE-127	2.823E-02	5.725E-02	9.282E-02	0.000E+00	NOT IDENT.
I-131	4.157E-02	1.168E-01	2.083E-01	0.000E+00	NOT IDENT.
TE-132	2.302E-01	6.299E-01	1.088E+00	0.000E+00	NOT IDENT.
BA-133	-5.639E-03	5.388E-02	8.134E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.652E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.035E-01	5.648E-02	1.101E-01	0.000E+00	FAIL ABUN
CS-135	2.097E-01	2.062E-01	3.234E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.854E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-9.259E-04	1.201E-01	2.037E-01	0.000E+00	FAIL ABUN
BA-137M	0.000E+00	4.506E-02	8.543E-02	0.000E+00	NOT IDENT.
CS-137	0.000E+00	4.763E-02	9.030E-02	0.000E+00	NOT IDENT.
CE-139	-2.578E-02	3.339E-02	5.591E-02	0.000E+00	NOT IDENT.
BA-140	2.039E-01	2.897E-01	5.057E-01	0.000E+00	NOT IDENT.
LA-140	-4.055E-02	9.549E-02	1.532E-01	0.000E+00	FAIL ABUN
CE-141	1.937E-02	6.946E-02	1.223E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.469E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.098E-01	2.664E-01	4.167E-01	0.000E+00	NOT IDENT.
PM-144	1.581E-02	4.008E-02	6.913E-02	0.000E+00	NOT IDENT.
PR-144	1.071E+00	2.715E+00	4.682E+00	0.000E+00	NOT IDENT.
PM-146	1.935E-02	4.696E-02	8.317E-02	0.000E+00	NOT IDENT.
ND-147	-2.356E-01	5.987E-01	9.908E-01	0.000E+00	FAIL ABUN

PM-149	7.188E-01	7.151E+01	1.315E+02	0.000E+00	NOT IDENT.
EU-152	5.662E-02	1.281E-01	1.771E-01	0.000E+00	FAIL ABUN
GD-153	-5.252E-03	9.604E-02	1.495E-01	0.000E+00	NOT IDENT.
EU-154	-2.548E-02	1.416E-01	2.322E-01	0.000E+00	NOT IDENT.
EU-155	9.607E-02	1.173E-01	2.135E-01	0.000E+00	FAIL ABUN
TB-160	-5.282E-02	1.605E-01	2.684E-01	0.000E+00	FAIL ABUN
HO-166M	-3.891E-02	7.165E-02	1.142E-01	0.000E+00	NOT IDENT.
TM-171	-3.302E+01	3.352E+01	5.848E+01	0.000E+00	NOT IDENT.
LU-176	-1.778E-02	2.835E-02	4.712E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.778E+00	2.155E+00	0.000E+00	FAIL ABUN
LU-177M	-3.355E-02	2.316E-01	3.423E-01	0.000E+00	NOT IDENT.
HF-181	-1.406E-02	4.686E-02	7.880E-02	0.000E+00	NOT IDENT.
W-181	4.446E-02	4.232E-01	7.674E-01	0.000E+00	NOT IDENT.
TA-182	1.152E-01	2.407E-01	4.189E-01	0.000E+00	FAIL ABUN
RE-183	-5.273E-02	1.244E-01	2.120E-01	0.000E+00	FAIL ABUN
RE-184	-4.033E-02	2.647E-01	4.438E-01	0.000E+00	NOT IDENT.
OS-185	-2.321E-02	4.709E-02	7.584E-02	0.000E+00	NOT IDENT.
RE-188	-5.495E-03	1.953E-01	3.390E-01	0.000E+00	NOT IDENT.
W-188	-4.669E+00	9.190E+00	1.369E+01	0.000E+00	NOT IDENT.
IR-192	-3.704E-02	3.862E-02	6.467E-02	0.000E+00	FAIL ABUN
AU-195	3.529E-01	2.697E-01	4.463E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.521E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.657E+00	6.111E+00	1.046E+01	0.000E+00	NOT IDENT.
TL-202	-4.468E-02	8.150E-02	1.363E-01	0.000E+00	NOT IDENT.
HG-203	5.642E-02	4.607E-02	8.585E-02	0.000E+00	NOT IDENT.
BI-207	5.161E-02	5.606E-02	1.032E-01	0.000E+00	FAIL ABUN
TL-207	-1.280E-01	8.856E-01	1.344E+00	0.000E+00	FAIL ABUN
PO-209	-4.249E+00	8.836E+00	1.456E+01	0.000E+00	NOT IDENT.
BI-210	-3.323E-01	5.133E+00	9.284E+00	0.000E+00	NOT IDENT.
PB-210	-3.323E-01	5.133E+00	9.284E+00	0.000E+00	NOT IDENT.
PO-210	-3.323E-01	5.133E+00	9.284E+00	0.000E+00	NOT IDENT.
PB-211	6.836E-01	1.274E+00	1.901E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.963E-01	8.692E-01	0.000E+00	FAIL ABUN
PO-215	-1.280E-01	8.856E-01	1.344E+00	0.000E+00	FAIL ABUN
RN-219	1.699E-01	4.821E-01	8.095E-01	0.000E+00	FAIL ABUN
RN-220	3.486E+00	3.086E+01	5.295E+01	0.000E+00	NOT IDENT.
RA-223	-1.280E-01	8.856E-01	1.344E+00	0.000E+00	FAIL ABUN
AC-227	1.083E-01	4.340E-01	7.422E-01	0.000E+00	FAIL ABUN
TH-227	1.083E-01	4.341E-01	7.422E-01	0.000E+00	FAIL ABUN
TH-229	1.799E-01	5.962E-01	1.036E+00	0.000E+00	FAIL ABUN
PA-231	-2.539E-01	1.692E+00	2.982E+00	0.000E+00	FAIL ABUN
TH-231	-1.280E-01	8.856E-01	1.344E+00	0.000E+00	FAIL ABUN
U-231	-4.731E-01	1.073E+00	1.637E+00	0.000E+00	FAIL ABUN
PA-233	3.236E-02	7.346E-02	1.324E-01	0.000E+00	FAIL ABUN
PA-234	1.056E-01	3.247E-01	5.714E-01	0.000E+00	FAIL ABUN
PA-234M	1.896E+00	8.157E+00	1.400E+01	0.000E+00	NOT IDENT.
TH-234	4.384E-02	1.583E+00	2.856E+00	0.000E+00	FAIL ABUN
U-235	6.927E-02	2.475E-01	4.280E-01	0.000E+00	FAIL ABUN
NP-236	8.353E-02	9.040E-02	1.622E-01	0.000E+00	NOT IDENT.
U-238	4.384E-02	1.583E+00	2.856E+00	0.000E+00	FAIL ABUN
NP-239	-1.182E-02	2.194E-01	3.858E-01	0.000E+00	FAIL ABUN
AM-241	-8.254E-03	1.950E-01	3.532E-01	0.000E+00	NOT IDENT.
CM-243	-6.851E-03	1.071E-01	1.892E-01	0.000E+00	FAIL ABUN
CM-247	-1.091E-02	4.784E-02	7.078E-02	0.000E+00	NOT IDENT.
CF-249	-2.707E-02	4.513E-02	7.582E-02	0.000E+00	NOT IDENT.
CF-251	3.620E-02	1.447E-01	2.522E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:52:28.62

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358002.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:15:01.
Sample ID         : G232358002           Sample quantity  : 1.34400E+02 GRAM
Detector name     : GAM06                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.38  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1196	10.67*	9.626E-01	3.251E+01	3.251E+01	9.13
CD-109	88.03	261	3.72*	5.174E+00	3.785E+00	3.865E+00	26.18
SN-126	64.28	------	9.60	2.881E+00	------ Line Not Found		------
	86.94	261	8.90	5.174E+00	1.582E+00	1.582E+00	48.18
	87.57	261	37.00*	5.174E+00	3.806E-01	3.806E-01	26.18
TL-208	277.35	------	6.80	3.899E+00	------ Line Not Found		------
	510.84	94	21.60	2.407E+00	5.029E-01	5.029E-01	69.39
	583.14	349	84.20*	2.157E+00	5.372E-01	5.372E-01	17.29
	860.37	69	12.46	1.540E+00	1.003E+00	1.003E+00	48.60
BI-211	72.87	------	1.27	3.913E+00	------ Line Not Found		------
	351.07	587	12.94*	3.241E+00	3.907E+00	3.907E+00	14.03
PB-212	74.81	412	10.70	4.130E+00	2.603E+00	2.603E+00	23.79
	77.11	616	18.00	4.353E+00	2.194E+00	2.194E+00	16.69
	87.30	261	8.00	5.174E+00	1.760E+00	1.760E+00	28.02
	238.63	1071	44.60*	4.363E+00	1.538E+00	1.538E+00	10.73
	300.09	99	3.41	3.669E+00	2.208E+00	2.208E+00	56.42
PO-212	74.81	412	10.70	4.130E+00	2.603E+00	2.603E+00	23.79
	77.11	616	18.00	4.353E+00	2.194E+00	2.194E+00	16.69
	87.30	261	8.00	5.174E+00	1.760E+00	1.760E+00	28.02
	115.19	------	0.60	6.030E+00	------ Line Not Found		------
	238.63	1071	44.60*	4.363E+00	1.538E+00	1.538E+00	10.73
	300.09	99	3.41	3.669E+00	2.208E+00	2.208E+00	56.42
BI-214	609.31	403	46.30*	2.080E+00	1.170E+00	1.170E+00	15.34
	768.36	54	5.04	1.703E+00	1.745E+00	1.746E+00	56.99
	934.06	------	3.21	1.429E+00	------ Line Not Found		------
	1120.29	126	15.10	1.211E+00	1.927E+00	1.927E+00	32.75
	1238.11	------	5.94	1.107E+00	------ Line Not Found		------
	1377.67	------	4.11	1.010E+00	------ Line Not Found		------
	1764.49	69	15.80	8.407E-01	1.449E+00	1.449E+00	26.50
PB-214	74.81	412	6.21	4.130E+00	4.486E+00	4.486E+00	23.10
	77.11	616	10.50	4.353E+00	3.761E+00	3.761E+00	18.34
	87.30	261	4.67	5.174E+00	3.015E+00	3.015E+00	27.29

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	249	7.49	4.322E+00	2.148E+00	2.148E+00	35.55
	295.21	375	19.20	3.716E+00	1.468E+00	1.468E+00	18.77
	351.92	587	37.20*	3.241E+00	1.359E+00	1.359E+00	14.97
PO-214	74.81	412	6.21	4.130E+00	4.486E+00	4.486E+00	23.10
	77.11	616	10.50	4.353E+00	3.761E+00	3.761E+00	18.34
	87.30	261	4.67	5.174E+00	3.015E+00	3.015E+00	27.29
	241.98	249	7.49	4.322E+00	2.148E+00	2.148E+00	35.55
	295.21	375	19.20	3.716E+00	1.468E+00	1.468E+00	18.77
	351.92	587	37.20*	3.241E+00	1.359E+00	1.359E+00	14.97
PO-216	74.81	412	10.70	4.130E+00	2.603E+00	2.603E+00	23.79
	77.11	616	18.00	4.353E+00	2.194E+00	2.194E+00	16.69
	87.30	261	8.00	5.174E+00	1.760E+00	1.760E+00	28.02
	238.63	1071	44.60*	4.363E+00	1.538E+00	1.538E+00	10.73
	300.09	99	3.41	3.669E+00	2.208E+00	2.208E+00	56.42
PO-218	74.81	412	6.21	4.130E+00	4.486E+00	4.486E+00	23.10
	77.11	616	10.50	4.353E+00	3.761E+00	3.761E+00	18.34
	87.30	261	4.67	5.174E+00	3.015E+00	3.015E+00	27.29
	241.98	249	7.49	4.322E+00	2.148E+00	2.148E+00	35.55
	295.21	375	19.20	3.716E+00	1.468E+00	1.468E+00	18.77
	351.92	587	37.20*	3.241E+00	1.359E+00	1.359E+00	14.97
RA-224	240.98	249	3.95*	4.322E+00	4.072E+00	4.072E+00	35.10
RA-226	609.31	403	46.30*	2.080E+00	1.170E+00	1.170E+00	15.34
	768.36	54	5.04	1.703E+00	1.745E+00	1.746E+00	56.99
	934.06	------	3.21	1.429E+00	------ Line Not Found		------
	1120.29	126	15.10	1.211E+00	1.927E+00	1.927E+00	32.75
	1238.11	------	5.94	1.107E+00	------ Line Not Found		------
	1377.67	------	4.11	1.010E+00	------ Line Not Found		------
	1764.49	69	15.80	8.407E-01	1.449E+00	1.449E+00	26.50
AC-228	338.32	187	11.40	3.339E+00	1.375E+00	1.375E+00	58.63
	911.07	228	27.70*	1.461E+00	1.572E+00	1.572E+00	21.77
	969.11	156	16.60	1.382E+00	1.900E+00	1.900E+00	33.60
RA-228	338.32	187	11.40	3.339E+00	1.375E+00	1.375E+00	58.63
	911.07	228	27.70*	1.461E+00	1.572E+00	1.572E+00	21.77
	969.11	156	16.60	1.382E+00	1.900E+00	1.900E+00	33.60
TH-228	84.40	------	1.21	4.965E+00	------ Line Not Found		------
	238.60	1071	44.60*	4.363E+00	1.538E+00	1.538E+00	10.73
	300.10	99	3.41	3.669E+00	2.208E+00	2.208E+00	81.17
TH-230	609.31	403	46.30*	2.080E+00	1.170E+00	1.170E+00	15.34
	768.36	54	5.04	1.703E+00	1.745E+00	1.745E+00	56.99
	934.06	------	3.21	1.429E+00	------ Line Not Found		------
	1120.29	126	15.10	1.211E+00	1.927E+00	1.927E+00	32.75
	1238.11	------	5.94	1.107E+00	------ Line Not Found		------
	1377.67	------	4.11	1.010E+00	------ Line Not Found		------
	1764.49	69	15.80	8.407E-01	1.449E+00	1.449E+00	26.50
TH-232	338.32	187	11.40	3.339E+00	1.375E+00	1.375E+00	42.53
	911.07	228	27.70*	1.461E+00	1.572E+00	1.572E+00	21.77
	969.11	156	16.60	1.382E+00	1.900E+00	1.900E+00	33.60
U-234	609.31	403	46.30*	2.080E+00	1.170E+00	1.170E+00	15.34
	768.36	54	5.04	1.703E+00	1.745E+00	1.745E+00	56.99

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	934.06	------	3.21	1.429E+00	------	Line Not Found	------
	1120.29	126	15.10	1.211E+00	1.927E-00	1.927E+00	32.75
	1238.11	------	5.94	1.107E+00	------	Line Not Found	------
	1377.67	------	4.11	1.010E+00	------	Line Not Found	------
	1764.49	69	15.80	8.407E-01	1.449E+00	1.449E+00	26.50
NP-237	86.50	261	12.60*	5.174E+00	1.118E+00	1.118E+00	33.33
	95.87	------	2.60	5.611E+00	------	Line Not Found	------
AM-243	74.67	412	66.00*	4.130E+00	4.221E-01	4.221E-01	21.88
	86.72	261	0.34	5.174E+00	4.191E-01	4.191E+01	26.18
	117.66	------	0.55	6.042E+00	------	Line Not Found	------
	142.18	------	0.13	5.887E+00	------	Line Not Found	------
ANH-511	511.00	94	100.00*	2.407E+00	1.086E-01	1.086E-01	68.89

Flag: "*" = Keyline

Sample ID : G232358002 Acquisition date : 6-JUL-2009 11:15:01

Total number of lines in spectrum 32
Number of unidentified lines 2
Number of lines tentatively identified by NID 30 93.75%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.251E+01	3.251E+01	0.297E+01	9.13	
CD-109	464.00D	1.02	3.785E+00	3.865E+00	1.012E+00	26.18	
SN-126	1.00E+05Y	1.00	3.806E-01	3.806E-01	0.996E-01	26.18	
TL-208	1.41E+10Y	1.00	5.372E-01	5.372E-01	0.929E-01	17.29	
BI-211	7.04E+08Y	1.00	3.907E+00	3.907E+00	0.548E+00	14.03	
PB-212	1.41E+10Y	1.00	1.538E+00	1.538E+00	0.165E+00	10.73	
PO-212	1.41E+10Y	1.00	1.538E+00	1.538E+00	0.165E+00	10.73	
BI-214	1600.00Y	1.00	1.170E+00	1.170E+00	0.179E+00	15.34	
PB-214	1600.00Y	1.00	1.359E+00	1.359E+00	0.204E+00	14.97	
PO-214	1600.00Y	1.00	1.359E+00	1.359E+00	0.204E+00	14.97	
PO-216	1.41E+10Y	1.00	1.538E+00	1.538E+00	0.165E+00	10.73	
PO-218	1600.00Y	1.00	1.359E+00	1.359E+00	0.204E+00	14.97	
RA-224	1.41E+10Y	1.00	4.072E+00	4.072E+00	1.429E+00	35.10	
RA-226	1600.00Y	1.00	1.170E+00	1.170E+00	0.179E+00	15.34	
AC-228	1.41E+10Y	1.00	1.572E+00	1.572E+00	0.342E+00	21.77	
RA-228	1.41E+10Y	1.00	1.572E+00	1.572E+00	0.342E+00	21.77	
TH-228	1.41E+10Y	1.00	1.538E+00	1.538E+00	0.165E+00	10.73	
TH-230	4.47E+09Y	1.00	1.170E+00	1.170E+00	0.179E+00	15.34	
TH-232	1.41E+10Y	1.00	1.572E+00	1.572E+00	0.342E+00	21.77	
U-234	4.47E+09Y	1.00	1.170E+00	1.170E+00	0.179E+00	15.34	
NP-237	2.14E+06Y	1.00	1.118E+00	1.118E+00	0.372E+00	33.33	
AM-243	7380.00Y	1.00	4.221E-01	4.221E-01	0.924E-01	21.88	
ANH-511	1.00E+09Y	1.00	1.086E-01	1.086E-01	0.748E-01	68.89	
		Total Activity :	6.647E+01	6.655E+01			

Grand Total Activity : 6.647E+01 6.655E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : C232358002 Acquisition date : 6-JUL-2009 11:15:01

Tc	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	90.13	160	343	1.15	178.88	170	21	2.22E-02	42.1	5.33E+00	T
3	92.97	297	337	1.35	184.56	170	21	4.12E-02	26.5	5.48E+00	T
0	129.17	103	370	1.22	256.97	254	9	1.43E-02	69.7	6.02E+00	T
0	186.02	202	478	1.17	370.70	364	13	2.81E-02	47.6	5.17E+00	T
0	209.63	158	359	1.36	417.91	412	12	2.20E-02	50.5	4.78E+00	T
0	270.82	92	273	1.51	540.32	533	13	1.28E-02	77.0	3.97E+00	T
0	328.65	56	161	1.27	656.02	651	9	7.82E-03	83.8	3.42E+00	T
0	409.36	40	142	1.03	817.47	811	11	5.54E-03	****	2.88E+00	
0	463.63	82	92	1.13	926.05	921	11	1.14E-02	52.2	2.60E+00	T
0	727.40	143	74	1.46	1453.84	1446	15	1.98E-02	31.3	1.79E+00	T
0	795.06	46	39	1.52	1589.23	1585	8	6.45E-03	55.3	1.65E+00	T
1	964.71	68	57	2.13	1928.75	1922	25	9.42E-03	48.6	1.39E+00	T
0	1729.08	26	8	1.15	3459.07	3451	15	3.56E-03	64.6	8.51E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:52:33.02

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358002.CNF;1  *
* Acquisition date  : 6-JUL-2009 11:15:01.  Detector SN#     :              *
* Detector ID       : GAM06                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.38          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID         *
* Sample ID         : G232358002            Analyst initials: MXR1          *
* Batch Number      : 880723                Sample Quantity : 1.34400E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 4-FEB-2009 13:05:54.47MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.251E+01	2.970E+00	5.242E-01	3.467E-02	62.032
CD-109	3.865E+00	1.012E+00	1.457E+00	1.439E-01	2.652
SN-126	3.806E-01	9.961E-02	1.443E-01	1.420E-02	2.638
TL-208	5.372E-01	9.288E-02	6.861E-02	4.336E-03	7.830
BI-211	3.907E+00	5.483E-01	3.583E-01	2.313E-02	10.905
PB-212	1.538E+00	1.651E-01	1.060E-01	7.815E-03	14.505
PO-212	1.538E+00	1.651E-01	1.060E-01	7.815E-03	14.505
BI-214	1.170E+00	1.794E-01	1.233E-01	9.099E-03	9.487
PB-214	1.359E+00	2.035E-01	1.282E-01	1.064E-02	10.602
PO-214	1.359E+00	2.035E-01	1.282E-01	1.064E-02	10.602
PO-216	1.538E+00	1.651E-01	1.060E-01	7.815E-03	14.505
PO-218	1.359E+00	2.035E-01	1.282E-01	1.064E-02	10.602
RA-224	4.072E+00	1.429E+00	1.207E+00	7.072E-02	3.375
RA-226	1.170E+00	1.794E-01	1.233E-01	9.099E-03	9.487
AC-228	1.572E+00	3.422E-01	2.525E-01	2.580E-02	6.227
RA-228	1.572E+00	3.422E-01	2.525E-01	2.580E-02	6.227
TH-228	1.538E+00	1.651E-01	1.060E-01	7.814E-03	14.507
TH-230	1.170E+00	1.794E-01	1.233E-01	9.099E-03	9.487

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.572E+00	3.422E-01	2.525E-01	2.580E-02	6.227
U-234	1.170E-00	1.794E-01	1.233E-01	9.099E-03	9.487
NP-237	1.118E+00	3.725E-01	4.687E-01	1.070E-01	2.384
AM-243	4.221E-01	9.235E-02	1.056E-01	9.539E-03	3.996
ANY-511	1.086E-01	7.484E-02	5.335E-02	2.982E-03	2.036

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	4.240E-01		3.810E-01	6.702E-01	4.427E-02	0.633
NA-22	-9.587E-03		5.166E-02	8.253E-02	5.096E-03	-0.116
NA-24	-1.295E-02		1.054E-01	Half-Life too short		
AL-26	-2.737E-02		2.942E-02	3.706E-02	2.129E-03	-0.739
TI-44	4.049E-01	+	6.756E-02	9.485E-02	8.719E-03	4.268
SC-46	-2.773E-02		4.597E-02	7.241E-02	5.190E-03	-0.383
V-48	2.282E-02		7.520E-02	1.281E-01	8.972E-03	0.178
CR-51	1.350E-01		4.148E-01	7.070E-01	4.658E-02	0.191
MN-52	1.089E-01		2.162E-01	3.766E-01	2.370E-02	0.289
MN-54	-1.203E-02		4.390E-02	7.182E-02	4.740E-03	-0.167
CO-56	-9.544E-03		4.543E-02	7.455E-02	5.012E-03	-0.128
CO-57	-1.506E-02		2.937E-02	4.733E-02	2.891E-03	-0.318
CO-58	1.295E-02		4.463E-02	7.650E-02	4.884E-03	0.169
FE-59	5.259E-02		1.138E-01	1.946E-01	1.427E-02	0.270
CO-60	2.206E-02		4.324E-02	7.477E-02	4.697E-03	0.295
ZN-65	8.920E-02		1.171E-01	1.816E-01	1.150E-02	0.491
GE-68	2.939E-01		1.393E+00	2.343E+00	1.535E-01	0.125
AS-73	-3.690E-01		1.106E+00	1.836E+00	1.679E-01	-0.201
AS-74	-2.464E-02		1.061E-01	1.698E-01	9.028E-03	-0.145
SE-75	-8.930E-03		5.858E-02	7.976E-02	4.784E-03	-0.112
BR-77	-4.474E-01		8.762E+00	1.431E+01	7.975E-01	-0.031
SR-82	-9.684E-02		4.129E-01	6.799E-01	4.090E-02	-0.142
RB-83	-9.605E-03		7.982E-02	1.297E-01	7.229E-03	-0.074
RB-84	2.782E-02		8.120E-02	1.392E-01	9.865E-03	0.200
KR-85	1.810E+01		9.817E+00	1.607E+01	8.978E-01	1.126
SR-85	9.168E-02		4.973E-02	8.143E-02	4.548E-03	1.126
RB-86	2.155E-03		8.395E-01	1.383E+00	9.071E-02	0.002
Y-88	8.456E-03		2.593E-02	4.663E-02	2.650E-03	0.181
ZR-88	2.648E-02		3.467E-02	6.015E-02	3.338E-03	0.440
Y-91	-1.757E+00		2.263E+01	3.676E+01	2.205E+00	-0.048
NB-94	1.610E-02		4.154E-02	6.902E-02	3.666E-03	0.233
NB-95	9.161E-02		5.257E-02	8.756E-02	5.176E-03	1.046
NB-95M	1.363E-01		1.667E-01	2.448E-01	1.850E-02	0.557
ZR-95	8.910E-02		8.171E-02	1.434E-01	1.010E-02	0.621
NB-97	-8.121E-02		2.044E-02	Half-Life too short		
ZR-97	9.771E-01		3.702E-01	Half-Life too short		
MO-99	7.892E+00		1.090E+01	1.850E+01	2.538E+00	0.427
TC-99M	-9.068E+08		9.649E+08	Half-Life too short		

---- Non-Identified Nuclides ---

Nuclide	Key-line Activity (pCi/GRAM)	K.L. Idad	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101	-3.141E-02		4.177E-02	6.381E-02	3.584E-03	-0.492
RH-102	1.735E-02		3.454E-02	5.874E-02	3.308E-03	0.295
RU-103	1.560E-02		4.729E-02	7.949E-02	9.983E-03	0.196
RH-106	-2.430E-02		3.736E-01	6.036E-01	6.909E-02	-0.040
RU-106	-2.430E-02		3.736E-01	6.036E-01	3.130E-02	-0.040
AG-108M	-2.474E-03		4.241E-02	6.993E-02	4.289E-03	-0.035
AG-110M	-9.226E-02		4.515E-02	6.048E-02	3.265E-03	-1.526
IN-111	-1.517E-01		1.033E+00	1.430E+00	8.404E-02	-0.106
IN-113M	3.182E-02		5.125E-02	8.818E-02	5.248E-03	0.361
SN-113	3.182E-02		5.125E-02	8.818E-02	5.248E-03	0.361
IN-114M	-1.245E-01		2.443E-01	3.353E-01	1.866E-02	-0.371
CD-115	-3.327E+00		8.830E+00	1.406E+01	7.810E-01	-0.237
SN-117M	5.209E-02		5.953E-02	1.003E-01	5.512E-03	0.519
SB-122	1.258E+00		1.863E+00	3.184E+00	1.735E-01	0.395
I-123	1.431E+00		7.791E-01	Half-Life too short		
TE-123M	3.008E-02		3.275E-02	5.528E-02	3.079E-03	0.544
I-124	-2.780E-01		7.411E-01	9.983E-01	5.276E-02	-0.278
SB-124	7.212E-02		7.359E-02	1.443E-01	9.368E-03	0.500
SB-125	-1.132E-01		1.053E-01	1.614E-01	9.473E-03	-0.701
TE-125M	-5.730E+00		1.074E+01	1.692E+01	1.537E+00	-0.339
I-126	-4.253E-01		2.339E-01	3.253E-01	1.620E-02	-1.307
SB-126	-1.177E-01		1.891E-01	2.418E-01	1.325E-02	-0.487
SB-127	-4.119E-01		1.427E+00	2.252E+00	1.944E-01	-0.183
XE-127	2.823E-02		5.842E-02	8.938E-02	5.049E-03	0.316
I-131	4.157E-02		1.192E-01	2.027E-01	1.301E-02	0.205
TE-132	2.302E-01		6.428E-01	1.050E+00	1.484E-01	0.219
BA-133	-5.639E-03		5.498E-02	7.911E-02	9.144E-03	-0.071
I-133	1.823E-03		1.353E-03	Half-Life too short		
CS-134	1.035E-01	+	5.763E-02	1.087E-01	6.838E-03	0.953
CS-135	2.097E-01		2.104E-01	3.130E-01	2.432E-02	0.670
I-135	-2.271E+08		1.966E+08	Half-Life too short		
CS-136	-9.259E-04		1.225E-01	2.020E-01	1.449E-02	-0.005
BA-137M	8.788E-02		4.598E-02	8.401E-02	4.149E-03	1.046
CS-137	9.290E-02		4.860E-02	8.881E-02	4.412E-03	1.046
CE-139	-2.578E-02		3.407E-02	5.365E-02	2.901E-03	-0.480
BA-140	2.039E-01		2.956E-01	4.954E-01	1.609E-01	0.412
LA-140	-4.055E-02		9.744E-02	1.531E-01	9.448E-03	-0.265
CE-141	1.937E-02		7.088E-02	1.171E-01	6.909E-03	0.165
CE-143	4.678E-04		7.493E-05	Half-Life too short		
CE-144	1.098E-01		2.718E-01	3.984E-01	5.666E-02	0.275
PM-144	1.581E-02		4.090E-02	6.806E-02	3.579E-03	0.232
PR-144	1.071E+00		2.770E+00	4.609E+00	2.422E-01	0.232
PM-146	1.935E-02		4.792E-02	8.124E-02	6.915E-03	0.238
ND-147	-2.356E-01		6.109E-01	9.705E-01	1.302E-01	-0.243
PM-149	7.188E+01		7.297E+01	1.274E+02	1.814E+01	0.564
EU-152	-5.662E-02		1.307E-01	1.722E-01	1.134E-02	-0.329
GD-153	-5.252E-03		9.800E-02	1.421E-01	1.188E-02	-0.037
EU-154	-2.548E-02		1.445E-01	2.311E-01	2.212E-02	-0.110

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Idod	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	9.607E-02		1.197E-01	2.033E-01	1.542E-02	0.473
TB-160	-5.282E-02		1.638E-01	2.654E-01	1.874E-02	-0.199
HO-166M	-3.891E-02		7.311E-02	1.124E-01	6.066E-03	-0.346
TM-171	-3.303E+01		3.421E+01	5.525E+01	4.935E+00	-0.598
LU-176	-1.778E-02		2.892E-02	4.571E-02	2.726E-03	-0.389
LU-177	3.572E+00	+	1.815E+00	2.076E+00	1.180E-01	1.721
LU-177M	-3.355E-02		2.364E-01	3.338E-01	1.867E-02	-0.100
HF-181	-1.406E-02		4.781E-02	7.705E-02	4.336E-03	-0.182
W-181	4.446E-02		4.319E-01	7.248E-01	6.492E-02	0.061
TA-182	1.152E-01		2.456E-01	4.166E-01	2.516E-02	0.277
RE-183	-5.273E-02		1.270E-01	2.033E-01	1.108E-02	-0.259
RE-184	-4.033E-02		2.701E-01	4.290E-01	2.534E-02	-0.094
OS-185	-2.321E-02		4.805E-02	7.456E-02	3.759E-03	-0.311
RE-188	-5.495E-03		1.993E-01	3.249E-01	1.799E-02	-0.017
W-188	-4.669E+00		9.378E+00	1.327E+01	7.928E-01	-0.352
IR-192	-3.704E-02		3.941E-02	6.277E-02	3.752E-03	-0.590
AU-195	3.529E-01		2.752E-01	4.245E-01	3.470E-02	0.831
TL-200	5.380E-05		1.286E-04	Half-Life too short		
TL-201	-1.657E+00		6.236E+00	1.003E+01	5.431E-01	-0.165
TL-202	-4.468E-02		8.316E-02	1.330E-01	7.485E-03	-0.336
HG-203	5.642E-02		4.701E-02	8.314E-02	5.250E-03	0.679
BI-207	5.161E-02		5.720E-02	1.024E-01	6.791E-03	0.504
TL-207	-1.280E-01		9.037E-01	1.305E+00	2.161E-01	-0.098
PO-209	-4.249E+00		9.016E+00	1.440E+01	1.043E+00	-0.295
BI-210	-3.323E-01		5.238E+00	8.718E+00	7.178E-01	-0.038
PB-210	-3.323E-01		5.238E+00	8.718E+00	7.178E-01	-0.038
PO-210	-3.323E-01		5.237E+00	8.718E+00	6.298E-01	-0.038
PB-211	6.836E-01		1.300E+00	1.853E+00	1.155E+00	0.369
BI-212	1.890E+00	+	6.084E-01	8.563E-01	6.440E-02	2.207
PO-215	-1.280E-01		9.037E-01	1.305E+00	2.161E-01	-0.098
RN-219	1.699E-01		4.919E-01	7.890E-01	1.066E-01	0.215
RN-220	3.486E+00		3.149E+01	5.190E+01	2.853E+00	0.067
RA-223	-1.280E-01		9.037E-01	1.305E+00	2.161E-01	-0.098
AC-227	1.083E-01		4.429E-01	7.177E-01	1.005E-01	0.151
TH-227	1.083E-01		4.430E-01	7.177E-01	1.216E-01	0.151
TH-229	1.799E-01		6.084E-01	9.969E-01	5.570E-02	0.180
PA-231	-2.539E-01		1.726E+00	2.888E+00	4.001E-01	-0.088
TH-231	-1.280E-01		9.037E-01	1.305E+00	2.161E-01	-0.098
U-231	-4.731E-01		1.095E+00	1.557E+00	1.334E-01	-0.304
PA-233	3.236E-02		7.496E-02	1.285E-01	8.103E-03	0.252
PA-234	1.056E-01		3.313E-01	5.656E-01	1.025E-01	0.187
PA-234M	1.896E+00		8.324E+00	1.387E+01	1.378E+00	0.137
TH-234	4.384E-02		1.616E+00	2.696E+00	4.901E-01	0.016
U-235	6.927E-02		2.526E-01	4.097E-01	6.664E-02	0.169
NP-236	8.353E-02		9.225E-02	1.556E-01	8.513E-03	0.537
U-238	4.384E-02		1.616E+00	2.696E+00	4.901E-01	0.016
NP-239	-1.182E-02		2.239E-01	3.680E-01	2.377E-02	-0.032
AM-241	-8.254E-03		1.990E-01	3.331E-01	3.257E-02	-0.025

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-6.851E-03		1.092E-01	1.801E-01	1.373E-02	-0.038
CM-247	-1.091E-02		4.882E-02	6.899E-02	3.844E-03	-0.158
CF-249	-2.707E-02		4.605E-02	7.386E-02	4.119E-03	-0.367
CF-251	3.620E-02		1.477E-01	2.423E-01	1.326E-02	0.149

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232358002           *
* Acquisition date  :  6-JUL-2009 11:15:01 Detector SN#     :               *
* Detector ID       : GAM06                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.38     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232358002           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.3440E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  4-FEB-2009 13:05:54 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.251E+01	2.910E+00	2.628E-01	1.485E+00
CD-109	3.865E+00	9.915E-01	7.682E-01	5.059E-01
SN-126	3.806E-01	9.762E-02	7.604E-02	4.981E-02
TL-208	5.372E-01	9.102E-02	3.498E-02	4.644E-02
BI-211	3.907E+00	5.374E-01	1.844E-01	2.742E-01
PB-212	1.538E+00	1.618E-01	5.492E-02	8.253E-02
PO-212	1.538E+00	1.618E-01	5.492E-02	8.253E-02
BI-214	1.170E+00	1.758E-01	6.282E-02	8.972E-02
PB-214	1.359E+00	1.994E-01	6.596E-02	1.018E-01
PO-214	1.359E+00	1.994E-01	6.596E-02	1.018E-01
PO-216	1.538E+00	1.618E-01	5.492E-02	8.253E-02
PO-218	1.359E+00	1.994E-01	6.596E-02	1.018E-01
RA-224	4.072E+00	1.401E+00	6.250E-01	7.147E-01
RA-226	1.170E+00	1.758E-01	6.282E-02	8.972E-02
AC-228	1.572E+00	3.354E-01	1.277E-01	1.711E-01
RA-228	1.572E+00	3.354E-01	1.277E-01	1.711E-01
TH-228	1.538E+00	1.618E-01	5.492E-02	8.253E-02
TH-230	1.170E+00	1.758E-01	6.282E-02	8.972E-02
TH-232	1.572E+00	3.354E-01	1.277E-01	1.711E-01
U-234	1.170E+00	1.758E-01	6.282E-02	8.972E-02
NP-237	1.118E+00	3.650E-01	2.471E-01	1.862E-01
AM-243	4.221E-01	9.051E-02	5.582E-02	4.618E-02
ANH-511	1.086E-01	7.334E-02	2.727E-02	3.742E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	4.240E-01	3.733E-01	3.430E-01	1.905E-01	NOT IDENT.
NA-22	-9.587E-03	5.063E-02	4.148E-02	2.583E-02	NOT IDENT.
NA-24	-1.295E+04	2.065E+05	0.000E+00	1.054E+05	SHORT HLIF
AL-26	-2.737E-02	2.883E-02	1.851E-02	1.471E-02	NOT IDENT.

TI-44	4.049E-01	6.620E-02	5.009E-02	3.378E-02	FAIL ABUN
SC-46	-2.773E-02	4.509E-02	3.664E-02	2.299E-02	FAIL ABUN
V-48	2.282E-02	7.369E-02	6.471E-02	3.760E-02	NOT IDENT.
CR-51	1.350E-01	4.065E-01	3.644E-01	2.074E-01	NOT IDENT.
MN-52	1.089E-01	2.119E-01	1.888E-01	1.081E-01	NOT IDENT.
MN-54	-1.203E-02	4.302E-02	3.638E-02	2.195E-02	NOT IDENT.
CO-56	-9.544E-03	4.452E-02	3.776E-02	2.272E-02	NOT IDENT.
CO-57	-1.506E-02	2.879E-02	2.481E-02	1.469E-02	NOT IDENT.
CO-58	1.295E-02	4.374E-02	3.877E-02	2.231E-02	NOT IDENT.
FE-59	5.259E-02	1.116E-01	9.806E-02	5.692E-02	NOT IDENT.
CO-60	2.206E-02	4.237E-02	3.755E-02	2.162E-02	NOT IDENT.
ZN-65	8.920E-02	1.147E-01	9.148E-02	5.854E-02	NOT IDENT.
GE-68	2.939E-01	1.366E+00	1.181E+00	6.967E-01	NOT IDENT.
AS-73	-3.690E-01	1.084E+00	9.760E-01	5.531E-01	NOT IDENT.
AS-74	-2.464E-02	1.040E-01	8.653E-02	5.307E-02	NOT IDENT.
SE-75	-8.930E-03	5.741E-02	4.124E-02	2.929E-02	NOT IDENT.
BR-77	-4.474E-01	8.586E+00	7.313E+00	4.381E+00	FAIL ABUN
SR-82	-9.684E-02	4.047E-01	3.449E-01	2.065E-01	NOT IDENT.
RB-83	-9.605E-03	7.822E-02	6.628E-02	3.991E-02	NOT IDENT.
RB-84	2.782E-02	7.957E-02	7.046E-02	4.060E-02	NOT IDENT.
KR-85	1.810E+01	9.620E+00	8.215E+00	4.908E+00	NOT IDENT.
SR-85	9.168E-02	4.873E-02	4.161E-02	2.486E-02	NOT IDENT.
RB-86	2.155E-03	8.227E-01	6.974E-01	4.197E-01	NOT IDENT.
Y-88	8.456E-03	2.541E-02	2.327E-02	1.296E-02	NOT IDENT.
ZR-88	2.648E-02	3.398E-02	3.089E-02	1.733E-02	NOT IDENT.
Y-91	-1.757E+00	2.218E+01	1.850E+01	1.132E+01	NOT IDENT.
NB-94	1.610E-02	4.071E-02	3.507E-02	2.077E-02	NOT IDENT.
NB-95	9.161E-02	5.152E-02	4.442E-02	2.629E-02	NOT IDENT.
NB-95M	1.363E-01	1.634E-01	1.268E-01	8.335E-02	NOT IDENT.
ZR-95	8.910E-02	8.008E-02	7.275E-02	4.086E-02	NOT IDENT.
NB-97	-8.121E+04	4.007E+04	0.000E+00	2.044E+04	SHORT HLIF
ZR-97	9.771E+05	7.255E+05	0.000E+00	3.702E+05	SHORT HLIF
MO-99	7.892E+00	1.068E+01	9.390E+00	5.451E+00	NOT IDENT.
TC-99M	-9.068E+14	1.891E+15	0.000E+00	9.649E+14	SHORT HLIF
RH-101	-3.141E-02	4.094E-02	3.317E-02	2.089E-02	NOT IDENT.
RH-102	1.735E-02	3.385E-02	3.006E-02	1.727E-02	FAIL ABUN
RU-103	1.560E-02	4.635E-02	4.065E-02	2.365E-02	FAIL ABUN
RH-106	-2.430E-02	3.661E-01	3.074E-01	1.868E-01	FAIL ABUN
RU-106	-2.430E-02	3.661E-01	3.074E-01	1.868E-01	FAIL ABUN
AG-108M	-2.474E-03	4.157E-02	3.585E-02	2.121E-02	NOT IDENT.
AG-110M	-9.226E-02	4.424E-02	3.077E-02	2.257E-02	NOT IDENT.
IN-111	-1.517E-01	1.013E+00	7.403E-01	5.167E-01	NOT IDENT.
IN-113M	3.182E-02	5.022E-02	4.529E-02	2.562E-02	NOT IDENT.
SN-113	3.182E-02	5.022E-02	4.529E-02	2.562E-02	NOT IDENT.
IN-114M	-1.245E-01	2.394E-01	1.744E-01	1.221E-01	NOT IDENT.
CD-115	-3.327E+00	8.653E+00	7.180E+00	4.415E+00	NOT IDENT.
SN-117M	5.209E-02	5.834E-02	5.236E-02	2.977E-02	NOT IDENT.
SB-122	1.258E+00	1.826E+00	1.624E+00	9.314E-01	NOT IDENT.
I-123	1.431E+06	1.527E+06	0.000E+00	7.791E+05	SHORT HLIF
TE-123M	3.008E-02	3.210E-02	2.884E-02	1.638E-02	NOT IDENT.
I-124	-2.780E-01	7.263E-01	5.087E-01	3.706E-01	NOT IDENT.
SB-124	7.212E-02	7.212E-02	7.212E-02	3.680E-02	FAIL ABUN
SB-125	-1.132E-01	1.032E-01	8.278E-02	5.263E-02	FAIL ABUN
TE-125M	-5.730E+00	1.052E+01	8.884E+00	5.369E+00	NOT IDENT.
I-126	-4.253E-01	2.292E-01	1.654E-01	1.169E-01	NOT IDENT.
SB-126	-1.177E-01	1.853E-01	1.228E-01	9.455E-02	FAIL ABUN
SB-127	-4.119E-01	1.398E+00	1.145E+00	7.134E-01	NOT IDENT.
XE-127	2.823E-02	5.725E-02	4.644E-02	2.921E-02	NOT IDENT.
I-131	4.157E-02	1.168E-01	1.042E-01	5.960E-02	NOT IDENT.
TE-132	2.302E-01	6.299E-01	5.443E-01	3.214E-01	NOT IDENT.
BA-133	-5.639E-03	5.388E-02	4.070E-02	2.749E-02	NOT IDENT.
I-133	1.823E+03	2.652E+03	0.000E+00	1.353E+03	SHORT HLIF
CS-134	1.035E-01	5.648E-02	5.509E-02	2.881E-02	FAIL ABUN
CS-135	2.097E-01	2.062E-01	1.618E-01	1.052E-01	NOT IDENT.
I-135	-2.271E+14	3.854E+14	0.000E+00	1.966E+14	SHORT HLIF
CS-136	-9.259E-04	1.201E-01	1.019E-01	6.126E-02	FAIL ABUN
BA-137M	8.788E-02	4.506E-02	4.274E-02	2.299E-02	NOT IDENT.
CS-137	9.290E-02	4.763E-02	4.518E-02	2.430E-02	NOT IDENT.
CE-139	-2.578E-02	3.339E-02	2.797E-02	1.703E-02	NOT IDENT.
BA-140	2.039E-01	2.897E-01	2.530E-01	1.478E-01	NOT IDENT.
LA-140	-4.055E-02	9.549E-02	7.664E-02	4.872E-02	FAIL ABUN
CE-141	1.937E-02	6.946E-02	6.119E-02	3.544E-02	NOT IDENT.
CE-143	4.678E+02	1.469E+02	0.000E+00	7.493E+01	SHORT HLIF
CE-144	1.098E-01	2.664E-01	2.085E-01	1.359E-01	NOT IDENT.
PM-144	1.581E-02	4.008E-02	3.459E-02	2.045E-02	NOT IDENT.
PR-144	1.071E+00	2.715E+00	2.342E+00	1.385E+00	NOT IDENT.
PM-146	1.935E-02	4.696E-02	4.161E-02	2.396E-02	NOT IDENT.
ND-147	-2.356E-01	5.987E-01	4.957E-01	3.055E-01	FAIL ABUN

PM-146	7.188E+01	7.151E+01	6.578E+01	3.648E+01	NOT IDENT.
EU-152	-5.662E-02	1.281E-01	8.862E-02	6.537E-02	FAIL ABUN
GD-153	-5.252E-03	9.604E-02	7.478E-02	4.900E-02	NOT IDENT
SM-154	-2.548E-02	1.416E-01	1.162E-01	7.227E-02	NOT IDENT.
EU-155	9.607E-02	1.173E-01	1.068E-01	5.986E-02	FAIL ABUN
TB-160	-5.282E-02	1.605E-01	1.343E-01	8.190E-02	FAIL ABUN
HO-166M	-3.891E-02	7.165E-02	5.712E-02	3.656E-02	NOT IDENT.
TM-171	-3.303E+01	3.352E+01	2.926E+01	1.710E+01	NOT IDENT.
LU-176	-1.778E-02	2.835E-02	2.357E-02	1.446E-02	FAIL ABUN
LU-177	3.572E+00	1.778E+00	1.078E+00	9.073E-01	FAIL ABUN
LU-177M	-3.355E-02	2.316E-01	1.713E-01	1.182E-01	NOT IDENT.
HF-181	-1.406E-02	4.686E-02	3.942E-02	2.391E-02	NOT IDENT.
W-181	4.446E-02	4.232E-01	3.840E-01	2.159E-01	NOT IDENT.
TA-182	1.152E-01	2.407E-01	2.096E-01	1.228E-01	FAIL ABUN
RE-182	-5.273E-02	1.244E-01	1.060E-01	6.349E-02	FAIL ABUN
RE-184	-4.033E-02	2.647E-01	2.220E-01	1.350E-01	NOT IDENT.
OS-185	-2.321E-02	4.709E-02	3.794E-02	2.403E-02	NOT IDENT.
RE-188	-5.495E-03	1.953E-01	1.696E-01	9.967E-02	NOT IDENT.
W-188	-4.669E+00	9.190E+00	6.851E+00	4.689E+00	NOT IDENT.
IR-192	-3.704E-02	3.862E-02	3.236E-02	1.971E-02	FAIL ABUN
AU-195	3.529E-01	2.697E-01	2.233E-01	1.376E-01	FAIL ABUN
TL-200	5.380E+01	2.521E+02	0.000E+00	1.286E+02	SHORT HLTF
TL-201	-1.657E+00	6.111E+00	5.231E+00	3.118E+00	NOT IDENT.
TL-202	-4.468E-02	8.150E-02	6.819E-02	4.158E-02	NOT IDENT.
HG-203	5.642E-02	4.607E-02	4.295E-02	2.351E-02	NOT IDENT.
BI-207	5.161E-02	5.606E-02	5.165E-02	2.860E-02	FAIL ABUN
TL-207	-1.280E-01	8.856E-01	6.723E-01	4.519E-01	FAIL ABUN
PO-209	-4.249E+00	8.836E+00	7.283E+00	4.508E+00	NOT IDENT.
BI-210	-3.323E-01	5.133E+00	4.645E+00	2.619E+00	NOT IDENT.
PB-210	-3.323E-01	5.133E+00	4.645E+00	2.619E+00	NOT IDENT.
PO-210	-3.323E-01	5.133E+00	4.645E+00	2.619E+00	NOT IDENT.
PB-211	6.836E-01	1.274E+00	9.509E-01	6.499E-01	NOT IDENT.
BI-212	1.890E+00	5.963E-01	4.348E-01	3.042E-01	FAIL ABUN
PO-215	-1.280E-01	8.856E-01	6.723E-01	4.519E-01	FAIL ABUN
RN-219	1.699E-01	4.821E-01	4.050E-01	2.460E-01	FAIL ABUN
RN-220	3.486E+00	3.086E+01	2.649E+01	1.574E+01	NOT IDENT.
RA-223	-1.280E-01	8.856E-01	6.723E-01	4.519E-01	FAIL ABUN
AC-227	1.083E-01	4.340E-01	3.713E-01	2.214E-01	FAIL ABUN
TH-227	1.083E-01	4.341E-01	3.713E-01	2.215E-01	FAIL ABUN
TH-229	1.799E-01	5.962E-01	5.184E-01	3.042E-01	FAIL ABUN
PA-231	-2.539E-01	1.692E+00	1.492E+00	8.631E-01	FAIL ABUN
TH-231	-1.280E-01	8.856E-01	6.723E-01	4.519E-01	FAIL ABUN
U-231	-4.731E-01	1.073E+00	8.192E-01	5.474E-01	FAIL ABUN
PA-233	3.236E-02	7.346E-02	6.624E-02	3.748E-02	FAIL ABUN
PA-234	1.056E-01	3.247E-01	2.858E-01	1.656E-01	FAIL ABUN
PA-234M	1.896E+00	8.157E+00	7.003E+00	4.162E+00	NOT IDENT.
TH-234	4.384E-02	1.583E+00	1.429E+00	8.079E-01	FAIL ABUN
U-235	6.927E-02	2.475E-01	2.141E-01	1.263E-01	FAIL ABUN
NP-236	8.353E-02	9.040E-02	8.117E-02	4.612E-02	NOT IDENT.
U-238	4.384E-02	1.583E+00	1.429E+00	8.079E-01	FAIL ABUN
NP-239	-1.182E-02	2.194E-01	1.930E-01	1.119E-01	FAIL ABUN
AM-241	-8.254E-03	1.950E-01	1.767E-01	9.948E-02	NOT IDENT.
CM-243	-6.851E-03	1.071E-01	9.466E-02	5.462E-02	FAIL ABUN
CM-247	-1.091E-02	4.784E-02	3.541E-02	2.441E-02	NOT IDENT.
CF-249	-2.707E-02	4.513E-02	3.793E-02	2.302E-02	NOT IDENT.
CF-251	3.620E-02	1.447E-01	1.262E-01	7.383E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	371.3148
46.50	371.3148
46.50	371.3148
48.70	348.2996
49.72	355.2886
51.35	403.6817
52.39	389.7957
52.97	382.8691
53.15	379.3296
53.44	379.5148
54.07	380.8316
56.28	389.5730
56.28	392.3310
57.37	0.0000
57.53	416.1435
57.53	416.1452
57.60	418.0325
57.98	419.2093
57.98	419.2093
59.32	434.8778
59.32	434.8778
59.40	434.9326
59.54	435.0287
59.72	445.3155
60.01	447.3673
61.10	426.8344
61.14	426.8608
61.30	429.7457
63.00	453.1574
63.29	442.2099
63.29	442.2099
63.58	444.2639
64.28	460.5517
65.12	448.0902
65.20	448.1444
65.20	448.1444
66.05	506.5499
66.72	506.1174
66.83	493.1248
66.91	493.1832
67.20	500.8704
67.20	500.8704
67.75	467.6056
67.85	440.2374
68.90	449.6521
68.90	449.6521
69.30	466.4089
69.67	448.6533
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70.83	467.4320
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72.87	484.2299
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74.81	485.5357
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74.81	485.5357
74.97	485.6436
75.28	485.8495
75.70	486.1299
77.11	465.4561
77.11	465.4561
77.11	465.4561

77.11	465.4561
77.11	465.4561
77.11	465.4561
78.38	432.8403
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79.80	482.3512
79.80	482.3512
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80.18	541.9656
80.30	542.0526
80.30	542.0526
80.57	549.8618
81.00	524.2641
81.07	524.3124
81.07	524.3124
81.07	524.3124
81.07	524.3124
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83.37	452.5020
83.78	463.4491
83.78	463.4491
83.78	463.4491
83.78	463.4491
84.21	449.9309
84.40	430.1406
84.90	430.4167
85.43	439.9032
86.29	480.2785
86.50	540.2633
86.54	540.2912
86.59	540.3256
86.72	540.4137
86.79	540.4609
86.94	548.2426
87.30	548.4888
87.30	548.4888
87.30	548.4888
87.30	548.4888
87.30	548.4888
87.30	548.4888
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87.88	453.5625
88.03	453.6471
88.36	453.8344
88.47	453.8974
89.95	454.7292
91.11	455.3756
92.29	456.0310
92.38	456.0797
92.38	456.0797
93.35	456.6144
94.00	456.9709
94.67	358.1163
94.67	358.1191
94.90	358.2164
94.90	358.2164
94.90	358.2164
94.90	358.2164
95.87	374.1546
95.87	374.1546
96.73	362.1042
97.43	351.5125
98.44	311.4404
98.44	311.4404
98.88	299.1364
99.55	326.3204
99.55	326.3204
99.86	326.4380
100.00	343.2048
100.10	343.2465
103.18	362.0677
103.76	352.5142
105.00	319.6664
105.31	319.7771
108.00	376.8111
109.28	365.5173
111.00	373.1111
111.00	373.1111

111.76	377.3690
112.95	366.9708
115.19	350.9900
116.30	351.4018
117.00	363.5804
117.00	363.5804
117.66	351.9028
121.11	353.1601
121.62	342.3641
121.78	342.4203
122.06	357.4974
122.32	357.5917
122.32	357.5917
122.32	357.5917
122.32	357.5917
123.07	297.8875
127.23	340.4914
129.76	321.0152
131.20	399.8697
133.02	355.3489
133.54	342.6005
135.34	339.9554
136.00	361.4287
136.25	361.5159
136.48	362.6078
140.51	374.1543
140.51	0.0000
142.18	356.4060
142.65	347.3922
143.76	351.8278
144.24	340.7604
144.24	340.7604
144.24	340.7604
144.24	340.7604
145.22	342.0874
145.44	343.1777
147.16	392.8184
152.43	298.0635
152.70	314.5843
153.22	318.8432
154.21	336.6200
154.21	336.6200
154.21	336.6200
154.21	336.6200
155.03	347.1662
156.02	372.2124
158.56	295.5354
159.00	0.0000
159.00	298.7478
160.31	298.0503
161.27	321.0806
162.32	337.9559
162.64	317.3088
163.35	320.6130
163.89	329.0636
165.85	329.6102
167.43	318.5928
171.28	315.4328
171.86	310.3599
172.10	320.8730
176.55	297.9105
176.60	297.9214
181.06	321.7273
184.41	320.8894
185.71	309.5935
186.00	309.6650
190.27	325.7484
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193.63	300.8581
197.04	319.7548
198.01	325.3214
198.60	312.6582
200.40	321.6290
201.83	309.1329
202.84	282.6028
205.31	298.5591
208.36	297.5042
208.81	293.5158

209.75	293.7137
209.75	293.7137
210.97	263.6056
215.65	275.1493
216.55	296.5346
218.09	257.5852
222.10	262.6510
223.80	261.8746
226.40	264.5206
227.00	258.0959
227.08	258.1104
227.20	257.0429
228.16	248.4913
228.18	248.4948
228.18	248.4948
231.56	0.0000
235.69	271.6700
236.00	271.7249
236.00	271.7249
238.60	252.4399
238.63	252.4451
238.63	252.4451
238.63	252.4451
239.00	252.5066
240.98	252.8382
241.98	253.0049
241.98	253.0049
241.98	253.0049
244.69	241.5528
245.39	211.6758
247.94	220.8603
248.90	193.2151
249.79	190.1669
252.40	201.5605
252.85	208.2656
252.85	208.2656
254.15	0.0000
256.20	197.6073
256.20	197.6073
260.50	184.7844
260.90	192.6267
262.80	210.2121
264.65	185.7096
268.24	189.7001
268.79	198.7160
269.46	199.2451
269.46	199.2451
269.46	199.2451
269.46	199.2451
271.23	182.8778
273.65	301.6535
276.40	201.4359
277.35	190.2393
277.60	190.2676
277.60	190.2676
278.00	179.0267
278.60	174.6876
279.20	193.6680
279.53	193.7047
280.46	240.6879
281.68	250.7871
283.67	191.4729
284.30	187.9312
285.00	195.2385
285.90	168.2128
286.10	168.2310
286.10	168.2310
287.40	175.6017
288.45	0.0000
290.67	199.5173
290.80	201.0451
291.72	186.0265
293.26	0.0000
293.70	181.6992
295.21	168.2163
295.21	168.2163
295.21	168.2163
295.96	168.2908

296.50	168.3428
297.23	168.4128
298.57	168.5415
299.80	168.6612
299.80	168.6612
300.09	168.6883
300.09	168.6883
300.09	168.6883
300.10	168.6883
300.12	168.6906
301.29	138.3884
302.84	158.2979
303.76	178.1779
303.91	178.1922
304.40	178.2422
304.40	178.2422
304.84	191.9993
306.84	184.0810
308.46	172.2362
311.98	168.9017
316.51	186.8110
318.01	186.9647
319.02	175.0867
319.41	173.2804
320.08	161.3580
323.87	187.8699
323.87	187.8699
323.87	187.8699
323.87	187.8699
325.23	204.9578
328.77	194.5422
333.44	157.8788
334.20	151.7493
334.20	151.7493
334.30	160.2742
338.28	172.2496
338.28	172.2496
338.28	172.2496
338.28	172.2496
338.32	172.2519
338.32	172.2519
338.32	172.2519
340.50	138.2712
340.57	128.9529
344.27	151.3074
345.85	163.5840
350.59	0.0000
351.07	134.3435
351.92	141.5901
351.92	141.5901
351.92	141.5901
355.39	0.0000
356.01	140.9454
364.48	131.1677
366.43	127.5183
367.43	130.4161
367.94	0.0000
369.80	162.7386
374.96	114.7757
383.85	112.4155
387.95	146.0466
388.63	134.6350
391.69	125.2688
391.69	125.2688
392.90	117.6863
398.62	130.4767
400.65	113.3157
401.10	108.8578
401.81	121.3045
402.60	134.5654
404.84	123.4801
410.95	119.0049
411.60	119.0411
413.65	125.5931
414.70	114.3768
415.30	130.5225
415.76	135.3857
417.63	0.0000

418.52	126.8407
423.70	109.6688
427.08	134.1356
427.89	133.2121
432.53	125.6931
433.93	147.2213
439.47	150.5128
439.56	150.5184
439.89	150.5410
443.98	112.6177
444.90	115.6031
445.03	118.5481
445.03	118.5481
445.03	118.5481
445.03	118.5481
453.90	95.4003
463.38	104.6737
468.07	80.8043
473.00	125.9194
475.06	103.2027
475.35	103.2154
476.78	99.3054
477.59	96.3582
477.96	89.4177
482.03	105.4915
484.57	94.6440
487.03	91.7473
490.36	0.0000
492.35	98.9420
497.08	92.1224
507.63	0.0000
510.53	0.0000
510.84	97.6643
511.00	97.6702
511.85	97.7033
511.85	97.7033
513.99	97.4496
513.99	97.4496
520.41	98.0325
520.65	98.0420
527.90	99.3303
528.96	0.0000
529.64	80.1264
529.87	0.0000
531.02	99.4499
537.32	86.4672
543.00	94.8096
546.56	0.0000
549.76	96.0746
552.65	102.3169
555.20	86.0282
563.23	86.2846
563.90	91.4423
568.70	87.4882
569.32	76.1824
569.50	73.0991
569.67	73.1043
573.80	92.8059
574.00	99.0023
574.64	98.5650
578.91	72.3174
579.30	0.0000
583.14	92.0876
585.48	77.6660
591.81	78.8815
592.07	75.7731
593.00	82.0300
595.88	98.7434
600.56	100.9904
602.52	0.0000
602.71	98.9823
602.71	98.9823
603.60	99.0125
604.41	97.3027
604.70	97.3141
609.31	83.5469
609.31	83.5469
609.31	83.5469

609.31	83.5469
610.33	73.1292
612.46	88.8661
614.37	95.8986
618.01	69.1340
621.84	83.9102
621.84	83.9102
631.29	92.5998
633.02	80.0189
633.10	80.0227
634.78	81.1207
635.90	75.8830
636.97	81.1809
645.85	82.4827
646.12	79.3158
656.30	111.4215
657.75	126.3358
657.90	0.0000
661.65	72.2849
661.65	72.2849
664.57	0.0000
666.33	139.4689
666.33	139.4689
675.00	86.4817
677.61	74.8005
685.20	95.3360
692.80	88.0519
695.00	69.8448
696.49	78.4786
696.49	78.4786
697.00	90.3185
697.49	91.4082
698.33	94.6602
698.50	97.8917
699.00	98.9831
702.63	85.0947
706.10	90.5789
706.58	0.0000
706.67	92.7523
709.31	75.5593
711.68	86.4160
713.82	65.9369
717.42	62.7635
720.50	86.6543
721.93	0.0000
722.20	63.2182
722.78	72.2624
722.78	72.2624
722.89	72.2656
722.95	68.6523
723.30	68.6601
724.18	75.9080
727.18	64.0386
733.00	83.3638
735.90	71.3445
739.58	69.7297
742.81	90.5199
744.21	67.6460
747.13	56.7849
751.79	86.3908
752.31	82.0294
753.82	62.3702
755.35	50.3574
756.15	55.8435
756.87	58.0464
763.93	54.8767
765.79	49.4154
766.41	56.7476
766.84	51.2616
768.36	80.5915
768.36	80.5915
768.36	80.5915
768.36	80.5915
776.49	70.6852
778.00	76.2269
778.57	73.4847
778.89	73.4912
783.80	60.7175

785.46	51.5430
792.07	67.9761
795.84	54.4674
796.30	68.0603
801.93	76.5721
805.60	68.5063
810.29	58.4011
810.76	62.1173
815.85	73.3489
817.79	54.8095
818.51	39.0247
819.60	46.4722
826.30	65.1835
828.27	0.0000
831.60	73.6735
831.96	69.0182
834.83	78.4065
836.80	0.0000
846.75	67.4282
848.13	66.5163
856.28	0.0000
856.80	56.3452
860.37	64.4573
867.32	51.4836
867.82	53.1228
871.10	65.0483
873.19	54.7089
874.81	52.8452
875.33	0.0000
876.40	53.8121
879.36	66.1377
880.27	66.1534
880.51	62.3772
881.50	58.6132
883.24	54.8564
884.67	52.0392
889.25	68.2075
896.60	70.2377
898.02	65.5172
899.00	55.0865
903.28	67.1917
911.07	61.9306
911.07	61.9306
911.07	61.9306
919.63	57.2937
920.93	52.5371
925.00	57.3730
925.24	52.5953
926.50	50.6989
934.06	60.3827
934.06	60.3827
934.06	60.3827
934.06	60.3827
935.52	47.9401
937.48	55.6388
944.10	51.8895
946.00	48.0682
949.00	44.2565
962.29	62.8845
964.01	60.8416
966.15	60.8749
968.20	60.9056
969.11	60.9197
969.11	60.9197
969.11	60.9197
977.42	46.5107
980.50	62.0612
983.50	47.5505
989.30	54.4209
996.32	69.1178
1001.03	61.4004
1001.68	55.5609
1004.76	59.5045
1021.30	0.0000
1024.50	0.0000
1034.80	69.7606
1037.82	51.1283
1038.57	53.1035

1036.76	0.0000
1045.16	65.0063
1046.59	53.2046
1048.07	58.1525
1050.47	65.0869
1050.47	65.0869
1063.62	38.5795
1076.63	48.6172
1077.35	47.6328
1085.78	55.6787
1099.22	59.8389
1112.02	72.0146
1112.84	66.8843
1115.52	49.7649
1120.29	61.1266
1120.29	61.1266
1120.29	61.1266
1120.29	61.1266
1120.51	61.1291
1121.28	56.7003
1124.00	0.0000
1129.67	60.2515
1131.51	0.0000
1147.95	0.0000
1167.94	59.7466
1173.22	58.8001
1175.09	51.7242
1177.93	64.9479
1189.05	64.0869
1204.90	68.3849
1205.75	0.0000
1213.00	67.4797
1221.42	68.6248
1230.97	86.2080
1235.34	81.1505
1236.41	0.0000
1238.11	79.1431
1238.11	79.1431
1238.11	79.1431
1238.11	79.1431
1238.25	79.1431
1246.25	57.6543
1260.41	0.0000
1271.85	47.6078
1274.45	49.7051
1274.54	49.7051
1291.56	45.7205
1298.22	0.0000
1312.09	37.5615
1325.50	46.0303
1325.50	46.0303
1332.49	27.2367
1333.61	24.0996
1360.21	27.3838
1362.66	0.0000
1365.15	18.9763
1368.21	21.0970
1368.53	0.0000
1376.25	15.8472
1377.67	24.3055
1377.67	24.3055
1377.67	24.3055
1377.67	24.3055
1384.27	27.5107
1394.10	25.4424
1395.20	32.8694
1407.95	23.3831
1434.06	18.1566
1436.60	21.3713
1457.56	0.0000
1460.81	17.1732
1489.15	19.4194
1509.49	15.1593
1596.49	28.2694
1620.62	10.4080
1678.03	0.0000
1691.02	6.7012
1691.02	6.7012

1706.46	0.0000
1750.48	0.0000
1764.49	6.7805
1764.49	6.7805
1764.49	6.7805
1764.49	6.7805
1770.23	55.2645
1771.40	26.1826
1791.20	0.0000
1808.65	13.6553
1836.01	4.8975

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232358002

Total Uranium Activity	1.6249E-01	ug/g
Total Uranium Counting Unc.	4.7123E+00	ug/g
Total Uranium Tpu	2.4041E-06	ug/g
Total Uranium Mda	4.2519E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232358002       *
*   ANALYST       : MXR1                      DETECTOR   : GAM06            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:15:01.30    SAMPLE ALQT:  134.400 GRAM    *
*                                                                           *
*****************************************************************************
```

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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.980E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.482E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.940E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.916E+00
```

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:53:18.72

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*****************************************************************************
*                          CEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358003.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:15:35.
Sample ID         : G232358003           Sample quantity  : 1.45040E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.83  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.34	172	644	1.46	91.86	85	11	2.39E-02	29.6	
2	0	63.45	195	808	1.56	126.01	122	9	2.71E-02	27.2	
3	2	74.75*	1029	892	1.69	148.59	142	16	1.43E-01	6.8	5.41E+00
4	2	77.19*	1315	685	1.38	153.45	142	16	1.83E-01	4.8	
5	2	87.26*	342	746	1.28	173.57	168	21	4.75E-02	14.5	2.30E+00
6	2	89.83	269	822	1.72	178.69	168	21	3.73E-02	21.7	
7	2	92.96*	363	485	1.48	184.94	168	21	5.04E-02	12.1	
8	0	105.18	119	391	1.57	209.34	206	8	1.66E-02	30.1	
9	0	186.09*	196	483	1.47	370.93	365	12	2.72E-02	23.8	
10	0	209.77	136	399	1.02	418.24	412	12	1.89E-02	30.6	
11	2	238.57*	1448	238	1.38	475.76	470	17	2.01E-01	3.3	1.33E+00
12	2	241.36	328	325	1.82	481.34	470	17	4.56E-02	15.0	
13	0	270.71	121	307	2.05	539.98	531	14	1.68E-02	32.0	
14	0	295.31*	384	180	1.71	589.12	584	11	5.33E-02	8.5	
15	0	338.51	279	155	1.64	675.45	670	10	3.87E-02	10.3	
16	0	351.92*	676	229	1.36	702.24	694	15	9.40E-02	6.3	
17	0	463.05	72	91	1.60	924.36	919	10	9.97E-03	27.7	
18	0	511.18*	116	113	2.78	1020.57	1012	15	1.60E-02	24.6	
19	0	583.12*	386	128	1.57	1164.42	1157	16	5.36E-02	8.4	
20	0	609.35*	420	108	1.65	1216.87	1211	14	5.84E-02	7.2	
21	0	727.36	112	70	2.37	1452.91	1447	13	1.55E-02	18.0	
22	0	860.28	70	47	1.56	1718.89	1710	17	9.77E-03	25.3	
23	0	911.50	278	63	1.92	1821.40	1811	21	3.87E-02	9.3	
24	0	934.19	53	47	1.72	1866.83	1859	15	7.38E-03	31.6	
25	1	964.79	57	31	2.18	1928.08	1920	22	7.86E-03	26.5	1.37E+00
26	1	969.09	151	36	1.81	1936.70	1920	22	2.09E-02	11.3	
27	0	1120.86	76	64	2.02	2240.62	2231	14	1.06E-02	24.9	
28	0	1460.70	1088	34	2.33	2921.64	2910	22	1.51E-01	3.3	
29	0	1729.96*	9	6	1.27	3461.72	3456	11	1.29E-03	74.0	
30	0	1763.83*	54	0	1.96	3529.67	3523	13	7.52E-03	14.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 13-JUL-2009 18:53:21

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358003.CNF;1		
Analyses by	: PEAK V16.9,PEAKIFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8		
Sample title	: MXR1		
Sample date	: 22-JUN-2009 12:00:00	Acquisition date	: 6-JUL-2009 11:15:35
Sample ID	: G232358003	Sample quantity	: 145.04 GRAM
Sample type	: SOLID	Sample geometry	:
Detector name	: GAMMA21	Detector geometry	: CAN
Elapsed live time	: 0 02:00:00.00	Elapsed real time	: 0 02:00:09.83 0.1%
Peak Width (FWHM)	: 3.00	Confidence level	: 5.00 %
Energy tolerance	: 1.50 keV	Half life ratio	: 8.00
Errors propagated	: Yes	Systematic Error	: 0.00 %
Efficiency type	: Empirical	Efficiencies at	: Peak Energy
Abundance limit	: 75.00	WTM error limit	: 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.625E+01	3.332E+00	6.027E-01	3.835E-02	60.141
CD-109	+	88.03	*	2.925E+00	8.843E-01	1.031E+00	8.543E-02	2.837
SN-126	+	64.28		6.288E-01	3.544E-01	4.255E-01	6.130E-02	1.478
	+	86.94		1.197E+00	6.046E-01	4.207E-01	1.737E-01	2.846
	+	87.57	*	2.880E-01	8.707E-02	1.014E-01	8.371E-03	2.841
EU-155		48.70		-1.024E-01	5.817E-01	8.290E-01	5.411E-02	-0.124
		60.01		-2.010E-02	2.420E+00	3.457E+00	2.441E-01	-0.006
	+	86.54		3.467E-01	1.049E-01	1.217E-01	1.008E-02	2.849
	+	105.31	*	1.900E-01	1.160E-01	1.646E-01	1.623E-02	1.155
TL-208		277.35		5.926E-01	4.495E-01	7.444E-01	7.885E-02	0.796
	+	510.84		6.630E-01	3.331E-01	2.569E-01	2.696E-02	2.581
	+	583.14	*	6.530E-01	1.206E-01	7.528E-02	5.711E-03	8.674
	+	860.37		1.199E+00	6.131E-01	5.882E-01	4.703E-02	2.038
BI-210	+	46.50	*	1.463E+00	8.739E-01	9.573E-01	7.252E-02	1.529
PB-210	+	46.50	*	1.463E+00	8.739E-01	9.573E-01	7.252E-02	1.529
PO-210	+	46.50	*	1.463E+00	8.720E-01	9.573E-01	6.187E-02	1.529
BI-211		72.87		1.289E+01	2.727E+00	4.169E+00	3.115E-01	3.091
	+	351.07	*	4.385E+00	6.151E-01	3.781E-01	2.406E-02	11.597
PB-212	+	74.81		2.943E+00	5.334E-01	3.713E-01	4.463E-02	7.927
	+	77.11		2.240E+00	2.759E-01	2.213E-01	1.697E-02	10.124
	+	87.30		1.332E+00	4.242E-01	4.685E-01	6.071E-02	2.843
	+	238.63	*	1.860E+00	1.873E-01	9.762E-02	7.438E-03	19.055
		300.09		1.756E+00	9.710E-01	1.547E+00	1.283E-01	1.135
PO-212	+	74.81		2.943E+00	5.334E-01	3.713E-01	4.463E-02	7.927
	+	77.11		2.240E+00	2.759E-01	2.213E-01	1.697E-02	10.124
	+	87.30		1.332E+00	4.242E-01	4.685E-01	6.071E-02	2.843
		115.19		3.775E+00	3.540E+00	5.869E+00	6.312E-01	0.643
	+	238.63	*	1.860E+00	1.873E-01	9.762E-02	7.438E-03	19.055
		300.09		1.756E+00	9.710E-01	1.547E+00	1.283E-01	1.135
BI-214	+	609.31	*	1.353E+00	2.282E-01	1.521E-01	1.318E-02	8.894
		768.36		9.272E-02	1.011E+00	1.696E+00	1.601E-01	0.055
	+	934.06		3.818E+00	2.443E+00	2.221E+00	2.091E-01	1.719
	+	1120.29		1.392E+00	7.046E-01	6.447E-01	5.799E-02	2.160
		1238.11		1.640E+00	1.421E+00	2.495E+00	2.037E-01	0.657

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		2.242E+00	1.439E+00	2.713E+00	2.370E-01	0.826
	+	1764.49		1.457E+00	4.227E-01	3.993E-01	2.261E-02	3.649
PB-214	+	74.81		5.072E+00	8.725E-01	6.398E-01	6.771E-02	7.927
	+	77.11		3.840E+00	5.561E-01	3.794E-01	4.101E-02	10.124
	+	87.30		2.282E+00	7.119E-01	8.026E-01	9.057E-02	2.843
	+	241.98		2.536E+00	7.912E-01	5.649E-01	4.699E-02	4.490
	+	295.21		1.405E+00	2.680E-01	2.644E-01	2.266E-02	5.312
	+	351.92	*	1.525E+00	2.283E-01	1.319E-01	1.085E-02	11.566
PO-214	+	74.81		5.072E+00	8.725E-01	6.398E-01	6.771E-02	7.927
	+	77.11		3.840E+00	5.561E-01	3.794E-01	4.101E-02	10.124
	+	87.30		2.282E+00	7.119E-01	8.026E-01	9.057E-02	2.843
	+	241.98		2.536E+00	7.912E-01	5.649E-01	4.699E-02	4.490
	+	295.21		1.405E+00	2.680E-01	2.644E-01	2.266E-02	5.312
	+	351.92	*	1.525E+00	2.283E-01	1.319E-01	1.085E-02	11.566
PO-216	+	74.81		2.943E+00	5.334E-01	3.713E-01	4.463E-02	7.927
	+	77.11		2.240E+00	2.759E-01	2.213E-01	1.697E-02	10.124
	+	87.30		1.332E+00	4.242E-01	4.685E-01	6.071E-02	2.843
	+	238.63	*	1.860E+00	1.873E-01	9.762E-02	7.438E-03	19.055
		300.09		1.756E+00	9.710E-01	1.547E+00	1.283E-01	1.135
PO-218	+	74.81		5.072E+00	8.725E-01	6.398E-01	6.771E-02	7.927
	+	77.11		3.840E+00	5.561E-01	3.794E-01	4.101E-02	10.124
	+	87.30		2.282E+00	7.119E-01	8.026E-01	9.057E-02	2.843
	+	241.98		2.536E+00	7.912E-01	5.649E-01	4.699E-02	4.490
	+	295.21		1.405E+00	2.680E-01	2.644E-01	2.266E-02	5.312
	+	351.92	*	1.525E+00	2.283E-01	1.319E-01	1.085E-02	11.566
RA-224	+	240.98	*	4.810E+00	1.476E+00	1.113E+00	6.844E-02	4.322
RA-226	+	609.31	*	1.353E+00	2.282E-01	1.521E-01	1.318E-02	8.894
		768.36		9.272E-02	1.011E+00	1.696E+00	1.601E-01	0.055
	+	934.06		3.818E+00	2.443E+00	2.221E+00	2.091E-01	1.719
	+	1120.29		1.392E+00	7.046E-01	6.447E-01	5.799E-02	2.160
		1238.11		1.640E+00	1.421E+00	2.495E+00	2.037E-01	0.657
		1377.67		2.242E+00	1.439E+00	2.713E+00	2.370E-01	0.826
	+	1764.49		1.457E+00	4.227E-01	3.993E-01	2.261E-02	3.649
AC-228	+	338.32		1.972E+00	9.003E-01	4.611E-01	1.879E-01	4.277
	+	911.07	*	2.261E+00	4.794E-01	2.843E-01	2.883E-02	7.953
	+	969.11		2.168E+00	6.940E-01	5.449E-01	1.241E-01	3.979
RA-228	+	338.32		1.972E+00	9.003E-01	4.611E-01	1.879E-01	4.277
	+	911.07	*	2.261E+00	4.794E-01	2.843E-01	2.883E-02	7.953
	+	969.11		2.168E+00	6.940E-01	5.449E-01	1.241E-01	3.979
TH-228		84.40		2.803E+00	2.339E+00	3.421E+00	4.373E-01	0.819
	+	238.60	*	1.860E+00	1.873E-01	9.761E-02	7.437E-03	19.058
		300.10		1.762E+00	1.415E+00	1.548E+00	9.123E-01	1.139
TH-230	+	609.31	*	1.353E+00	2.282E-01	1.521E-01	1.318E-02	8.894
		768.36		9.272E-02	1.011E+00	1.696E+00	1.601E-01	0.055
	+	934.06		3.818E+00	2.443E+00	2.220E+00	2.091E-01	1.719
	+	1120.29		1.392E+00	7.046E-01	6.447E-01	5.799E-02	2.160
		1238.11		1.640E+00	1.421E+00	2.495E+00	2.037E-01	0.657
		1377.67		2.242E+00	1.439E+00	2.713E+00	2.370E-01	0.826
	+	1764.49		1.457E+00	4.227E-01	3.993E-01	2.261E-02	3.649

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	+	338.32		1.972E+00	4.211E-01	4.611E-01	2.669E-02	4.277
	+	911.07	*	2.261E+00	4.794E-01	2.843E-01	2.883E-02	7.953
	+	969.11		2.168E+00	6.940E-01	5.449E-01	1.241E-01	3.979
TH-234	+	63.29	*	1.589E+00	9.083E-01	1.051E+00	1.821E-01	1.512
	+	92.38		2.116E+00	6.410E-01	7.032E-01	1.272E-01	3.009
U-234	+	609.31	*	1.353E+00	2.282E-01	1.521E-01	1.318E-02	8.894
		768.36		9.272E-02	1.011E+00	1.696E+00	1.601E-01	0.055
	+	934.06		3.818E+00	2.443E+00	2.220E+00	2.091E-01	1.719
	+	1120.29		1.392E+00	7.046E-01	6.447E-01	5.799E-02	2.160
		1238.11		1.640E+00	1.421E+00	2.495E+00	2.037E-01	0.657
		1377.67		2.242E+00	1.439E+00	2.713E+00	2.370E-01	0.826
	+	1764.49		1.457E+00	4.227E-01	3.993E-01	2.261E-02	3.649
U-235	+	89.95		3.115E+00	1.659E+00	1.399E+00	4.309E-01	2.228
	+	93.35		2.544E+00	9.437E-01	7.216E-01	2.024E-01	3.526
	-	105.00		1.863E+00	1.256E+00	1.599E+00	4.828E-01	1.165
		143.76	*	7.205E-02	2.275E-01	3.650E-01	6.476E-02	0.197
		163.35		-2.845E-01	5.020E-01	8.262E-01	1.503E-01	-0.344
	+	185.71		1.677E-01	8.054E-02	7.720E-02	4.747E-03	2.172
		205.31		-5.058E-01	6.337E-01	8.746E-01	1.584E-01	-0.578
NP-237	+	86.50	*	8.457E-01	3.096E-01	2.969E-01	6.591E-02	2.849
		95.87		-9.171E-02	9.659E-01	1.358E+00	3.360E-01	-0.068
U-238	+	63.29	*	1.589E+00	9.083E-01	1.051E+00	1.821E-01	1.512
	+	92.38		2.116E+00	5.456E-01	7.032E-01	6.068E-02	3.009
AM-243	+	74.67	*	4.772E-01	7.409E-02	6.019E-02	4.546E-03	7.928
	+	86.72		3.171E+01	9.588E+00	1.114E+01	9.139E-01	2.847
		117.66		-3.017E+00	3.821E+00	5.948E+00	6.554E-01	-0.507
		142.18		2.518E+00	1.869E+01	3.005E+01	2.791E+00	0.084
ANH-511	+	511.00	*	1.432E-01	7.095E-02	5.551E-02	3.541E-03	2.580

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.233E-01	3.783E-01	5.915E-01	4.164E-02	-0.209
NA-22		1274.54	*	1.882E-02	6.394E-02	1.070E-01	6.325E-03	0.176
NA-24		1368.53	*	3.247E-02	6.394E-02	Half-Life too short		
AL-26		1129.67		2.894E-01	2.521E+00	4.164E+00	2.506E-01	0.069
		1808.65	*	-2.184E-02	3.717E-02	5.253E-02	2.925E-03	-0.416
TI-44		67.85		2.451E-03	3.701E-02	4.446E-02	3.234E-03	0.055
	+	78.38	*	4.134E-01	5.091E-02	6.443E-02	4.983E-03	6.416
SC-46		889.25	*	2.138E-02	5.488E-02	9.386E-02	6.739E-03	0.228
	+	1120.51		2.361E-01	1.184E-01	1.670E-01	1.016E-02	1.414
V-48		944.10		-1.569E-01	1.160E+00	1.889E+00	1.328E-01	-0.083
		983.50	*	4.826E-03	8.736E-02	1.447E-01	9.954E-03	0.033
		1312.09		2.366E-02	1.095E-01	1.820E-01	1.088E-02	0.130
CR-51		320.08	*	1.357E-01	4.245E-01	7.123E-01	4.632E-02	0.191
MN-52		744.21		6.022E-03	2.426E-01	4.058E-01	2.968E-02	0.015
		848.13		8.140E-01	7.957E+00	1.332E+01	9.687E-01	0.061
	+	935.52		7.366E-01	4.690E-01	5.833E-01	4.115E-02	1.263

--- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1246.25		6.588E+00	9.675E-00	1.665E+01	9.721E-01	0.396
		1333.61		4.238E+00	6.324E+00	1.105E+01	6.645E-01	0.384
		1434.06	*	-3.132E-02	2.673E-01	4.231E-01	2.550E-02	-0.074
MN-54		834.83	*	3.297E-02	5.361E-02	9.301E-02	6.785E-03	0.355
CO-56		846.75	*	-1.454E-02	5.434E-02	8.811E-02	6.411E-03	-0.165
		977.42		1.828E+00	4.208E+00	7.063E+00	4.877E-01	0.259
		1037.82		2.377E-01	4.487E-01	7.716E-01	5.559E-02	0.308
		1175.09		-2.025E+00	3.374E+00	5.205E+00	2.952E-01	-0.389
		1238.25		1.687E-01	1.426E-01	2.512E-01	1.554E-02	0.672
		1360.21		8.656E-01	1.286E+00	2.273E+00	1.370E-01	0.381
		1771.40		-4.637E-01	3.879E-01	5.071E-01	2.864E-02	-0.914
CO-57		122.06	*	8.281E-03	2.547E-02	4.138E-02	4.762E-03	0.200
		136.48		-5.378E-02	2.183E-01	3.464E-01	3.644E-02	-0.155
CO-58		810.76	*	-5.232E-03	5.308E-02	8.753E-02	6.429E-03	-0.060
FE-59		142.65		1.554E+00	2.845E+00	4.604E+00	4.249E-01	0.338
		192.34		9.068E-01	1.098E+00	1.732E+00	2.079E-01	0.523
		1099.22	*	-1.268E-01	1.362E-01	2.032E-01	1.457E-02	-0.624
		1291.56		6.218E-02	1.875E-01	3.143E-01	2.366E-02	0.198
CO-60		1173.22		-3.588E-02	6.813E-02	1.059E-01	5.999E-03	-0.339
		1332.49	*	-2.297E-02	6.251E-02	9.702E-02	5.836E-03	-0.237
ZN-65		1115.52	*	-7.116E-02	1.467E-01	1.918E-01	1.177E-02	-0.371
GE-68		1077.35	*	-2.581E-01	1.757E+00	2.838E+00	1.812E-01	-0.091
AS-73		53.44	*	-1.251E-01	2.499E-01	4.026E-01	2.705E-02	-0.311
AS-74		595.88	*	5.065E-02	1.159E-01	1.929E-01	1.327E-02	0.263
		634.78		-4.613E-02	4.954E-01	7.900E-01	5.569E-02	-0.058
SE-75		66.05		3.994E-01	3.058E+00	4.363E+00	4.062E-01	0.092
		96.73		-1.209E-01	7.708E-01	1.080E+00	1.498E-01	-0.112
		121.11		1.495E-02	1.353E-01	2.183E-01	2.941E-02	0.068
		136.00		-1.564E-02	4.126E-02	6.514E-02	6.555E-03	-0.240
		198.60		9.604E-01	1.960E+00	3.340E+00	2.487E-01	0.288
		264.65	*	-1.035E-02	5.603E-02	7.991E-02	4.834E-03	-0.130
		279.53		9.671E-02	1.269E-01	2.172E-01	1.370E-02	0.445
		303.91		-3.271E+00	2.432E+00	3.722E+00	3.567E-01	-0.879
		400.65		-2.136E-02	3.130E-01	5.107E-01	4.543E-02	-0.042
BR-77	+	87.88		4.530E+02	1.369E+02	2.155E+02	1.784E+01	2.102
		200.40		1.145E+02	1.277E+02	2.203E+02	1.365E+01	0.519
	+	239.00		2.137E+02	1.927E+01	3.030E+01	1.866E+00	7.054
		249.79		1.628E+01	5.331E+01	8.991E+01	5.487E+00	0.181
		281.68		-5.311E+01	7.636E+01	1.226E+02	7.168E+00	-0.433
		297.23		2.248E+02	6.283E+01	1.041E+02	6.104E+00	2.161
		303.76		-1.920E+02	1.489E+02	2.299E+02	1.349E+01	-0.835
		439.47		-7.447E+01	1.336E+02	2.102E+02	1.223E+01	-0.354
		484.57		-1.583E+01	1.858E+02	2.999E+02	1.855E+01	-0.053
		520.65	*	3.298E+00	9.430E+00	1.568E+01	1.010E+00	0.210
		574.64		-2.962E+02	2.443E+02	3.330E+02	2.256E+01	-0.889
		578.91		2.165E+01	9.486E+01	1.351E+02	9.180E+00	0.160
		585.48		1.424E+03	2.666E+02	4.756E+02	3.249E+01	2.993
		755.35		9.806E+01	1.628E+02	2.836E+02	2.076E+01	0.346
		817.79		-1.137E+02	1.190E+02	1.789E+02	1.309E+01	-0.636

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SR-82		698.33		1.070E+01	4.347E+01	7.405E-01	5.362E+00	0.144
		776.49	*	-3.493E-01	4.585E-01	7.106E-01	5.210E-02	-0.492
		1395.20		-3.856E+00	1.611E+01	2.519E+01	1.519E+00	-0.153
RB-83		520.41	*	2.130E-02	8.663E-02	1.429E-01	9.211E-03	0.149
		529.64		-2.284E-02	1.264E-01	2.017E-01	1.312E-02	-0.113
		552.65		9.328E-02	2.498E-01	4.153E-01	2.761E-02	0.225
RB-84		881.50	*	1.170E-02	9.287E-02	1.555E-01	1.120E-02	0.075
KR-85		513.99	*	2.368E+01	1.034E+01	1.729E+01	1.107E+00	1.370
SR-85		513.99	*	1.199E-01	5.238E-02	8.758E-02	5.605E-03	1.370
RB-86		1076.63	*	-2.284E-01	1.063E+00	1.706E+00	1.090E-01	-0.134
Y-88		898.02		-2.137E-02	5.806E-02	9.288E-02	6.693E-03	-0.230
		1836.01	*	-1.450E-02	3.943E-02	5.908E-02	3.260E-03	-0.245
ZR-88		392.90	*	1.088E-03	3.873E-02	6.360E-02	3.430E-03	0.017
Y-91		1204.90	*	6.324E+00	2.840E+01	4.713E+01	2.707E+00	0.134
NB-94		702.63	*	5.879E-04	4.770E-02	7.991E-02	5.793E-03	0.007
		871.10		5.210E-03	4.534E-02	7.592E-02	5.486E-03	0.069
NB-95		765.79	*	1.145E-02	5.811E-02	9.823E-02	7.199E-03	0.117
NB-95M		235.69	*	8.427E-01	1.776E-01	2.942E-01	2.300E-02	2.864
ZR-95		724.18		1.129E-01	1.526E-01	2.352E-01	1.919E-02	0.480
		756.15	*	4.619E-02	9.643E-02	1.665E-01	1.388E-02	0.277
NB-97		657.90	*	-2.017E-02	9.643E-02	Half-Life too short		
		1024.50		-8.909E-01	9.643E-02	Half-Life too short		
ZR-97		254.15		1.340E+00	9.643E-02	Half-Life too short		
		355.39		2.202E+00	9.643E-02	Half-Life too short		
		507.63	*	1.303E+00	9.643E-02	Half-Life too short		
		602.52		1.729E+00	9.643E-02	Half-Life too short		
		1021.30		2.978E+00	9.643E-02	Half-Life too short		
		1147.95		2.165E+00	9.643E-02	Half-Life too short		
		1362.66		8.087E-01	9.643E-02	Half-Life too short		
		1750.46		4.286E-01	9.643E-02	Half-Life too short		
MO-99		140.51		-8.413E+00	2.092E+01	3.278E+01	9.170E+00	-0.257
		181.06		4.121E+00	1.530E+01	2.268E+01	3.913E+00	0.182
		366.43		2.000E+01	7.544E+01	1.259E+02	7.073E+00	0.159
		739.58	*	-3.480E+00	1.129E+01	1.836E+01	2.658E+00	-0.190
		778.00		-3.631E+01	3.283E+01	4.915E+01	3.604E+00	-0.739
TC-99M		140.51	*	-6.848E+08	3.283E+01	Half-Life too short		
RH-101		127.23		4.128E-02	3.497E-02	5.785E-02	6.349E-03	0.713
		198.01	*	6.894E-03	3.621E-02	6.112E-02	3.782E-03	0.113
		325.23		-1.756E-01	2.793E-01	4.471E-01	2.609E-02	-0.393
RH-102		418.52		1.030E-01	3.569E-01	5.939E-01	3.345E-02	0.173
		475.06	*	2.031E-02	3.484E-02	5.901E-02	3.607E-03	0.344
		631.29		1.268E-02	7.960E-02	1.294E-01	9.108E-03	0.098
		697.49		-3.668E-02	9.979E-02	1.625E-01	1.176E-02	-0.226
		766.84		-6.705E-03	1.470E-01	2.442E-01	1.790E-02	-0.027
		1046.59		-7.802E-02	1.583E-01	2.470E-01	1.622E-02	-0.316
		1112.84		1.252E-01	3.536E-01	5.205E-01	3.197E-02	0.240
RU-103		497.08	*	-1.789E-02	4.829E-02	7.610E-02	9.796E-03	-0.235
	+	610.33		1.432E+01	3.077E+00	3.574E+00	5.678E-01	4.006
RH-106	+	511.85		7.138E-01	3.536E-01	4.904E-01	3.132E-02	1.455

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		621.84	*	2.186E-01	4.096E-01	6.674E-01	3.259E-02	0.328
		1050.47		1.214E+00	3.116E+00	5.307E+00	3.474E-01	0.229
RU-106	+	511.85		7.138E-01	3.536E-01	4.904E-01	3.132E-02	1.455
		621.84	*	2.186E-01	4.090E-01	6.674E-01	4.671E-02	0.328
		1050.47		1.214E+00	3.116E+00	5.307E+00	3.474E-01	0.229
AG-108M		433.93	*	-4.140E-03	4.136E-02	6.711E-02	4.208E-03	-0.062
		614.37		3.395E-02	5.481E-02	8.140E-02	6.008E-03	0.417
		722.95		-7.865E-04	6.502E-02	9.359E-02	7.191E-03	-0.008
AG-110M		657.75	*	-2.551E-02	4.600E-02	7.405E-02	5.508E-03	-0.345
		677.61		-2.770E-01	3.854E-01	6.079E-01	4.547E-02	-0.456
		706.67		-1.775E-03	2.918E-01	4.880E-01	3.679E-02	-0.004
		763.93		-5.467E-02	2.389E-01	3.918E-01	2.983E-02	-0.140
		884.67		-4.245E-02	6.983E-02	1.092E-01	8.215E-03	-0.389
		937.48		1.639E-02	1.598E-01	2.302E-01	1.709E-02	0.071
		1384.27		-3.304E-01	2.360E-01	3.033E-01	1.932E-02	-1.089
IN-111		171.28		-3.530E-01	7.962E-01	1.320E+00	8.024E-02	-0.267
		245.39	*	-9.358E-02	9.710E-01	1.397E+00	8.564E-02	-0.067
IN-113M		391.69	*	-6.136E-03	5.562E-02	9.060E-02	5.253E-03	-0.068
SN-113		391.69	*	-6.136E-03	5.562E-02	9.060E-02	5.253E-03	-0.068
IN-114M		190.27	*	-8.575E-02	2.205E-01	3.159E-01	1.947E-02	-0.271
CD-115		260.90		-4.975E+01	1.028E+02	1.672E+02	1.007E+01	-0.298
		492.35		2.225E+01	3.144E+01	5.360E+01	3.347E+00	0.415
		527.90	*	-7.613E-01	9.453E+00	1.521E+01	9.880E-01	-0.050
SN-117M		156.02		2.334E+00	2.453E+00	4.037E+00	3.023E-01	0.578
		158.56	*	-9.937E-03	5.959E-02	9.448E-02	6.738E-03	-0.105
SB-122		563.90	*	-3.282E+00	2.333E+00	3.385E+00	2.272E-01	-0.970
		692.80		-4.919E+01	4.242E+01	6.443E+01	4.657E+00	-0.764
I-123		159.00	*	-9.496E-01	4.242E+01	Half-Life too short		
		528.96		-5.679E+01	4.242E+01	Half-Life too short		
TE-123M		159.00	*	-1.995E-02	3.263E-02	5.083E-02	3.626E-03	-0.392
I-124		602.71	*	4.358E-01	8.480E-01	1.240E+00	8.572E-02	0.352
		722.78		-6.813E-02	5.615E+00	8.082E+00	5.889E-01	-0.008
		1325.50		-1.097E+01	4.235E+01	6.649E+01	3.991E+00	-0.165
		1376.25		5.034E+01	3.772E+01	6.990E+01	4.214E+00	0.720
		1509.49		1.390E+00	1.849E+01	3.121E+01	1.872E+00	0.045
		1691.02		-1.468E+00	3.418E+00	5.078E+00	2.943E-01	-0.289
SB-124		602.71		3.024E-02	5.884E-02	8.602E-02	5.949E-03	0.352
		645.85		1.895E-01	6.973E-01	1.143E+00	8.815E-02	0.166
		709.31		8.552E-01	3.762E+00	6.394E+00	4.644E-01	0.134
		713.82		-6.613E-02	2.273E+00	3.791E+00	4.213E-01	-0.017
		722.78		-6.852E-03	5.647E-01	8.129E-01	6.101E-02	-0.008
	+	968.20		2.202E+01	5.186E+00	9.872E+00	6.853E-01	2.231
		1045.16		-2.861E+00	3.441E+00	5.174E+00	3.402E-01	-0.553
		1325.50		-1.178E+00	4.549E+00	7.142E+00	4.287E-01	-0.165
		1368.21		2.714E-01	2.489E+00	4.085E+00	4.895E-01	0.066
		1436.60		-1.823E+00	4.915E+00	7.446E+00	4.488E-01	-0.245
		1691.02	*	-3.482E-02	8.108E-02	1.205E-01	7.579E-03	-0.289
SB-125		427.89	*	9.240E-02	1.130E-01	1.939E-01	1.157E-02	0.477
	+	463.38		7.819E-01	4.361E-01	6.514E-01	4.529E-02	1.200

---- Non-identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		600.56		7.259E-02	2.374E-01	3.910E-01	3.004E-02	0.186
		635.90		-1.123E-01	3.918E-01	6.149E-01	4.852E-02	-0.183
TT-125M		109.28	*	3.368E+00	9.635E+00	1.378E+01	1.603E+00	0.244
I-126		388.63		4.132E-02	2.315E-01	3.836E-01	2.077E-02	0.108
		666.33	*	-1.546E-01	2.103E-01	3.322E-01	2.378E-02	-0.465
		753.82		-3.869E-01	1.882E+00	3.090E+00	2.262E-01	-0.125
SB-126		223.80		1.477E-01	4.124E+00	6.902E+00	4.280E-01	0.021
		278.60		3.339E+00	2.685E+00	4.679E+00	2.736E-01	0.714
	+	296.50		1.312E+01	2.365E+00	3.731E+00	2.189E-01	3.515
		414.70		-8.930E-02	8.998E-02	1.380E-01	7.727E-03	-0.647
		415.30		-4.377E+00	7.338E+00	1.155E+01	6.475E-01	-0.379
		555.20		2.849E+00	4.901E+00	8.259E+00	5.504E-01	0.345
		573.80		-2.147E+00	1.565E+00	2.285E+00	1.546E-01	-0.940
		593.00		2.820E-01	1.184E+00	1.942E+00	1.333E-01	0.145
		656.30		-6.234E+00	4.187E+00	6.201E+00	4.419E-01	-1.005
		666.33		-6.443E-02	8.767E-02	1.385E-01	9.910E-03	-0.465
		675.00		-1.034E+00	2.353E+00	3.808E+00	2.735E-01	-0.271
		695.00		-8.521E-02	9.242E-02	1.432E-01	1.036E-02	-0.595
		697.00		-9.947E-02	3.297E-01	5.396E-01	3.905E-02	-0.184
		720.50	*	1.322E-01	2.072E-01	3.189E-01	2.322E-02	0.415
		856.80		-4.644E-01	6.980E-01	9.083E-01	6.592E-02	-0.511
		989.30		-1.854E-01	1.561E+00	2.539E+00	1.740E-01	-0.073
		1034.80		-1.364E+00	1.254E+01	2.040E+01	1.353E+00	-0.067
		1213.00		2.971E+00	6.872E+00	1.158E+01	6.675E-01	0.257
SB-127		61.10		3.501E+01	2.407E+01	3.589E+01	3.463E+00	0.975
		252.40		6.570E-01	4.122E+00	6.893E+00	2.861E+00	0.095
		290.80		2.125E+00	2.194E+01	3.176E+01	2.792E+00	0.067
		411.60		1.517E+01	1.284E+01	2.210E+01	3.100E+00	0.687
		444.90		2.207E+00	9.595E+00	1.589E+01	1.665E+00	0.139
		473.00		3.954E-02	1.720E+00	2.803E+00	3.084E-01	0.014
		543.00		3.260E-01	1.725E+01	2.790E+01	3.627E+00	0.012
		603.60		7.637E+00	1.455E+01	2.127E+01	2.355E+00	0.359
		685.20	*	9.488E-02	1.479E+00	2.490E+00	2.489E-01	0.038
		698.50		6.200E+00	1.636E+01	2.809E+01	4.175E+00	0.221
		722.20		1.542E+00	3.737E+01	5.410E+01	5.301E+00	0.028
		783.80		7.277E+00	3.995E+00	7.414E+00	8.332E-01	0.982
XE-127		57.60		-4.936E-03	2.357E+00	3.717E+00	2.579E-01	-0.001
		145.22		2.858E-01	7.340E-01	1.190E+00	1.060E-01	0.240
		172.10		-4.949E-02	1.215E-01	2.016E-01	1.226E-02	-0.245
		202.84	*	-3.705E-02	5.545E-02	8.195E-02	5.079E-03	-0.452
		374.96		8.939E-02	2.372E-01	3.977E-01	2.206E-02	0.225
I-131		80.18		-2.551E+00	3.947E+00	5.058E+00	3.985E-01	-0.504
		284.30		-5.161E-01	1.604E+00	2.620E+00	1.699E-01	-0.197
		364.48	*	-2.514E-02	1.284E-01	2.088E-01	1.319E-02	-0.120
		636.97		1.266E-01	1.984E+00	3.203E+00	2.444E-01	0.040
		722.89		-1.202E-01	9.919E+00	1.428E+01	1.048E+00	-0.008
TE-132		49.72		-3.105E-02	3.893E+00	5.585E+00	5.004E-01	-0.006
		111.76		-2.382E+01	2.280E+01	3.508E+01	4.230E+00	-0.679
		116.30		2.298E+01	2.166E+01	3.582E+01	4.466E+00	0.641

---- Non-Identified Nuclides ----

Nuclide	Line Idd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		228.16	*	1.271E-01	5.751E-01	9.685E-01	1.386E-01	0.131
BA-133		53.15		-5.567E-01	1.081E+00	1.742E+00	1.168E-01	-0.320
		79.62		3.476E+00	1.288E+00	1.838E+00	2.716E-01	1.891
		81.00		-1.646E-01	1.073E-01	1.136E-01	1.759E-02	-1.449
		276.40		4.442E-01	4.585E-01	7.240E-01	9.410E-02	0.614
		302.84		6.948E-02	1.683E-01	2.767E-01	3.235E-02	0.251
		356.01	*	9.604E-03	5.951E-02	8.588E-02	9.882E-03	0.112
		383.85		-1.419E-01	3.618E-01	5.792E-01	6.196E-02	-0.245
I-133	+	510.53		5.818E-01	3.618E-01	Half-Life too short		
		529.87	*	-2.903E-04	3.618E-01	Half-Life too short		
		706.58		3.237E-03	3.618E-01	Half-Life too short		
		856.28		-3.122E-01	3.618E-01	Half-Life too short		
		875.33		-5.603E-02	3.618E-01	Half-Life too short		
		1236.41		3.360E-01	3.618E-01	Half-Life too short		
		1298.22		-7.479E-02	3.618E-01	Half-Life too short		
CS-134		475.35		1.273E+00	2.273E+00	3.844E+00	2.351E-01	0.331
		563.23		-6.125E-01	5.238E-01	7.729E-01	5.268E-02	-0.793
		569.32		8.508E-01	3.180E-01	5.842E-01	4.027E-02	1.456
		604.70		3.545E-02	4.975E-02	7.422E-02	5.158E-03	0.478
		795.84	*	1.363E-01	6.705E-02	1.260E-01	9.330E-03	1.081
		801.93		-4.498E-01	5.594E-01	8.684E-01	6.412E-02	-0.518
		1038.57		2.252E+00	5.667E+00	9.638E+00	6.374E-01	0.234
		1167.94		-3.324E-01	3.646E+00	5.900E+00	3.370E-01	-0.056
		1365.15		-1.242E+00	1.803E+00	2.637E+00	1.734E-01	-0.471
CS-135		268.24	*	2.593E-01	2.073E-01	3.200E-01	2.489E-02	0.810
I-135		288.45		-1.587E+09	2.073E-01	Half-Life too short		
		417.63		-9.142E+08	2.073E-01	Half-Life too short		
		546.56		7.541E+08	2.073E-01	Half-Life too short		
		836.80		1.714E+09	2.073E-01	Half-Life too short		
		1038.76		5.534E+08	2.073E-01	Half-Life too short		
		1124.00		2.690E+09	2.073E-01	Half-Life too short		
		1131.51		2.841E+08	2.073E-01	Half-Life too short		
		1260.41	*	2.280E+08	2.073E-01	Half-Life too short		
		1457.56		4.984E+10	2.073E-01	Half-Life too short		
		1678.03		4.682E+08	2.073E-01	Half-Life too short		
		1706.46		-9.244E+08	2.073E-01	Half-Life too short		
		1791.20		1.970E+08	2.073E-01	Half-Life too short		
CS-136		66.91		-6.464E-02	4.807E-01	6.792E-01	9.992E-02	-0.095
	+	86.29		3.538E+00	1.121E+00	1.622E+00	2.037E-01	2.181
		153.22		2.716E-01	7.004E-01	1.133E+00	1.017E-01	0.240
		163.89		-5.573E-01	1.063E+00	1.760E+00	1.355E-01	-0.317
		176.55		-1.664E-01	3.652E-01	6.044E-01	4.104E-02	-0.275
		273.65		-7.369E-01	5.644E-01	7.426E-01	4.978E-02	-0.992
		340.57		7.303E-01	1.852E-01	3.166E-01	1.945E-02	2.307
		818.51		-5.313E-02	8.476E-02	1.320E-01	9.664E-03	-0.403
		1048.07	*	4.312E-02	1.338E-01	2.267E-01	1.594E-02	0.190
		1235.34		3.263E-01	8.992E-01	1.501E+00	1.500E-01	0.217
BA-137M		661.65	*	6.057E-02	4.574E-02	8.350E-02	5.964E-03	0.725
CS-137		661.65	*	6.403E-02	4.835E-02	8.827E-02	6.323E-03	0.725

---- Non-Identified Nuclides ----

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-139		165.85	*	2.318E-02	3.100E-02	5.346E-02	3.239E-03	0.434
BA-140		162.64		-3.866E-01	7.477E-01	1.239E+00	8.904E-02	-0.312
		304.84		-1.957E+00	1.473E+00	2.107E+00	5.753E-01	-0.929
		423.70		-1.865E+00	2.354E+00	3.532E+00	1.122E+00	-0.528
		537.32	*	-3.341E-02	3.046E-01	4.884E-01	1.595E-01	-0.068
LA-140		328.77		3.143E-01	3.501E-01	6.001E-01	3.911E-02	0.524
		432.53		-7.366E-01	2.392E+00	3.826E+00	2.437E-01	-0.193
		487.03		-1.084E-02	1.520E-01	2.456E-01	1.701E-02	-0.044
		751.79		3.274E-01	2.064E+00	3.488E+00	2.925E-01	0.094
		815.85		-1.375E-01	3.848E-01	6.181E-01	5.231E-02	-0.222
		867.82		7.887E-01	1.939E+00	2.916E+00	2.266E-01	0.270
		919.63		1.114E+00	3.879E+00	5.735E+00	5.425E-01	0.194
		925.24		-5.701E-01	1.536E+00	2.246E+00	1.737E-01	-0.254
		1596.49	*	-3.821E-02	1.165E-01	1.850E-01	1.096E-02	-0.207
CE-141		145.44	*	2.778E-02	6.654E-02	1.079E-01	9.754E-03	0.257
CE-143		57.37		-2.345E-05	6.654E-02	Half-Life too short		
		231.56		-8.822E-04	6.654E-02	Half-Life too short		
		293.26	*	4.395E-04	6.654E-02	Half-Life too short		
	+	350.59		1.949E-02	6.654E-02	Half-Life too short		
		490.36		1.223E-03	6.654E-02	Half-Life too short		
		664.57		-1.184E-04	6.654E-02	Half-Life too short		
		721.93		-1.057E-04	6.654E-02	Half-Life too short		
CE-144		80.11		2.376E-01	1.829E+00	2.608E+00	2.040E-01	0.091
		133.54	*	-1.025E-01	2.215E-01	3.482E-01	5.763E-02	-0.294
PM-144		476.78		1.596E-02	8.146E-02	1.326E-01	9.571E-03	0.120
		618.01		-2.463E-02	4.293E-02	6.354E-02	4.622E-03	-0.388
		696.49	*	-1.321E-02	4.409E-02	7.213E-02	5.222E-03	-0.183
		778.57		-2.712E+00	2.970E+00	4.544E+00	3.333E-01	-0.597
PR-144		696.49	*	-8.948E-01	2.986E+00	4.885E+00	3.535E-01	-0.183
		1489.15		3.641E+00	1.483E+01	2.575E+01	1.547E+00	0.141
PM-146		453.90	*	3.954E-02	5.482E-02	9.335E-02	8.138E-03	0.424
		633.02		-3.969E-01	2.069E+00	3.267E+00	1.210E+00	-0.121
		735.90		3.092E-02	2.137E-01	3.448E-01	9.735E-02	0.090
		747.13		-6.522E-02	1.111E-01	1.751E-01	2.325E-02	-0.372
ND-147	+	91.11		7.275E-01	3.229E-01	4.217E-01	3.899E-02	1.725
		319.41		7.294E-01	3.580E+00	5.976E+00	3.496E-01	0.122
		439.89		-2.710E-01	7.023E+00	1.143E+01	6.660E-01	-0.024
		531.02	*	9.303E-02	6.538E-01	1.070E+00	1.481E-01	0.087
PM-149		285.90	*	5.691E+01	7.418E+01	1.266E+02	1.797E+01	0.450
EU-152		121.78		1.358E-02	7.440E-02	1.203E-01	1.502E-02	0.113
		244.69		1.122E-01	4.144E-01	6.097E-01	3.738E-02	0.184
		344.27	*	4.234E-02	1.687E-01	1.947E-01	1.266E-02	0.217
		443.98		7.585E-01	1.170E+00	1.990E+00	1.165E-01	0.381
		778.89		-2.515E-01	3.463E-01	5.403E-01	3.961E-02	-0.466
		867.32		-2.198E-01	1.301E+00	1.812E+00	1.311E-01	-0.121
	+	964.01		9.370E-01	5.009E-01	7.035E-01	4.895E-02	1.332
		1085.78		-1.071E-01	5.573E-01	8.958E-01	5.669E-02	-0.120
		1112.02		1.654E-01	5.081E-01	7.449E-01	4.579E-02	0.222
		1407.95		1.377E-01	2.610E-01	4.506E-01	2.717E-02	0.306

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153		69.67		1.602E-01	1.239E+00	1.649E+00	1.211E-01	0.097
		83.37		-6.068E-01	1.324E+01	1.874E+01	1.500E+00	-0.032
		97.43	*	-4.854E-03	8.063E-02	1.135E-01	1.027E-02	-0.043
		103.18		-8.223E-03	1.157E-01	1.626E-01	1.555E-02	-0.051
EU-154		123.07		-3.137E-03	5.311E-02	8.513E-02	1.158E-02	-0.037
		247.94		-4.217E-01	4.336E-01	6.452E-01	6.281E-02	-0.654
		591.81		7.753E-01	8.745E-01	1.425E+00	1.488E-01	0.544
		723.30		-5.514E-02	2.784E-01	3.928E-01	3.277E-02	-0.140
		756.87		1.467E-01	1.096E+00	1.846E+00	2.046E-01	0.079
		873.19		-6.734E-02	4.062E-01	6.628E-01	7.492E-02	-0.102
		996.32		2.072E-03	5.004E-01	8.240E-01	1.398E-01	0.003
		1004.76		-3.630E-02	2.818E-01	4.576E-01	4.738E-02	-0.079
		1274.45	*	5.261E-02	1.788E-01	2.989E-01	2.811E-02	0.176
TB-160	+	86.79		9.164E-01	2.770E-01	4.193E-01	3.442E-02	2.186
		197.04		-2.805E-01	6.104E-01	1.007E+00	6.230E-02	-0.278
		215.65		2.504E-01	9.105E-01	1.345E+00	8.348E-02	0.186
		298.57		1.536E-01	1.506E-01	2.297E-01	1.348E-02	0.669
		879.36	*	1.035E-01	1.840E-01	3.199E-01	2.305E-02	0.324
		962.29		4.138E-01	7.069E-01	1.082E+00	7.535E-02	0.382
	+	966.15		6.365E-01	3.402E-01	6.639E-01	4.614E-02	0.959
		1177.93		-8.683E-03	5.636E-01	9.183E-01	5.215E-02	-0.009
		1271.85		-4.276E-01	1.035E+00	1.607E+00	9.472E-02	-0.266
HO-166M		80.57		-4.053E-01	2.584E-01	3.133E-01	2.459E-02	-1.294
		184.41		8.314E-02	4.481E-02	6.990E-02	4.294E-03	1.189
		280.46		-9.724E-02	1.010E-01	1.601E-01	9.353E-03	-0.607
		410.95		4.904E-01	3.154E-01	5.581E-01	3.105E-02	0.879
		711.68	*	-1.200E-03	8.367E-02	1.398E-01	1.016E-02	-0.009
		752.31		3.591E-02	3.571E-01	6.006E-01	4.397E-02	0.060
		810.29		-1.373E-02	8.143E-02	1.335E-01	9.773E-03	-0.103
TM-171		51.35		9.124E+00	8.453E+00	1.327E+01	8.793E-01	0.688
		52.39		-1.806E-01	4.439E+00	7.255E+00	4.840E-01	-0.025
		59.40		9.758E-01	1.258E+01	1.804E+01	1.271E+00	0.054
		66.72	*	-3.303E+00	1.842E+01	2.599E+01	1.880E+00	-0.127
LU-176	+	88.36		6.831E-01	2.065E-01	3.321E-01	2.760E-02	2.057
		201.83		8.904E-03	3.200E-02	5.280E-02	3.272E-03	0.169
		306.84	*	-2.745E-03	2.697E-02	4.437E-02	2.602E-03	-0.062
		401.10		1.358E+00	8.292E+00	1.371E+01	7.502E-01	0.099
LU-177		112.95		3.931E-01	1.411E+00	2.293E+00	2.413E-01	0.171
	+	208.36	*	2.694E+00	1.656E+00	1.921E+00	1.192E-01	1.402
LU-177M		52.97		-1.852E-01	4.784E-01	7.735E-01	5.181E-02	-0.239
		54.07		-2.533E-01	2.687E-01	4.264E-01	2.878E-02	-0.594
		61.30		1.523E+00	7.683E-01	1.166E+00	8.263E-02	1.306
		121.62		6.126E-02	3.792E-01	6.129E-01	7.018E-02	0.100
		147.16		5.662E-02	7.009E-01	1.124E+00	9.742E-02	0.050
		171.86		-2.560E-01	5.014E-01	8.289E-01	5.042E-02	-0.309
		218.09		6.193E-01	9.308E-01	1.594E+00	9.892E-02	0.389
		268.79		1.993E+00	9.242E-01	1.656E+00	9.856E-02	1.204
		319.02		-3.033E-02	3.009E-01	4.945E-01	2.892E-02	-0.061
		367.43		8.910E-02	1.064E+00	1.757E+00	9.860E-02	0.051

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		413.65	*	-2.806E-01	2.278E-01	3.443E-01	1.924E-02	-0.815
HF-181		56.28		-7.827E-02	3.312E-01	5.374E-01	3.689E-02	-0.146
		57.53		-6.160E-03	1.981E-01	3.122E-01	2.165E-02	-0.020
		65.20		5.381E-01	5.810E-01	8.504E-01	6.113E-02	0.633
		133.02		-4.603E-02	7.083E-02	1.107E-01	1.146E-02	-0.416
		136.25		-9.428E-02	4.711E-01	7.490E-01	7.479E-02	-0.126
		345.85		-1.860E-01	2.649E-01	3.572E-01	2.055E-02	-0.521
		482.03	*	-2.094E-02	4.727E-02	7.412E-02	4.571E-03	-0.283
W-181		56.28		-3.090E-02	1.312E-01	2.130E-01	1.462E-02	-0.145
		57.53		-2.509E-03	7.854E-02	1.238E-01	8.583E-03	-0.020
		65.20	*	2.117E-01	2.286E-01	3.345E-01	2.405E-02	0.633
TA-182		67.75		2.767E-03	8.742E-02	1.049E-01	7.624E-03	0.026
		100.10		1.582E-01	1.739E-01	2.680E-01	2.489E-02	0.590
		152.43		6.592E-02	3.749E-01	6.026E-01	4.808E-02	0.109
		222.10		1.552E-01	3.743E-01	6.353E-01	3.941E-02	0.244
		1001.68		-4.230E-01	2.651E+00	4.294E+00	2.919E-01	-0.099
	+	1121.28		6.538E-01	3.280E-01	4.750E-01	2.888E-02	1.376
		1189.05		-9.125E-02	4.720E-01	7.567E-01	4.318E-02	-0.121
		1221.42	*	-5.750E-02	2.946E-01	4.717E-01	2.728E-02	-0.122
		1230.97		-3.171E-01	7.578E-01	1.192E+00	6.918E-02	-0.266
RE-183		57.98		9.765E-03	8.267E-02	1.254E-01	8.729E-03	0.078
		59.32		2.798E-03	5.101E-02	7.308E-02	5.146E-03	0.038
		67.20		-3.994E-02	1.414E-01	1.847E-01	1.340E-02	-0.216
		162.32	*	-3.081E-02	1.146E-01	1.916E-01	1.262E-02	-0.161
	+	208.81		2.696E+00	1.658E+00	1.922E+00	1.193E-01	1.403
		291.72		-4.351E-01	1.205E+00	1.690E+00	9.907E-02	-0.257
RE-184		57.98		3.622E-02	3.067E-01	4.652E-01	3.238E-02	0.078
		59.32		1.037E-02	1.891E-01	2.709E-01	1.907E-02	0.038
		67.20		-1.481E-01	5.243E-01	6.850E-01	4.968E-02	-0.216
		161.27		2.990E-02	3.749E-01	6.339E-01	4.273E-02	0.047
		216.55		-4.712E-02	3.051E-01	4.787E-01	2.972E-02	-0.098
		252.85	*	1.004E-01	2.693E-01	4.552E-01	2.769E-02	0.221
		318.01		-1.012E-01	5.193E-01	8.492E-01	4.969E-02	-0.119
		792.07		4.294E-02	1.445E+00	2.411E+00	1.767E-01	0.018
		903.28		7.194E-01	1.561E+00	2.350E+00	1.679E-01	0.306
		920.93		3.682E-01	6.402E-01	1.016E+00	7.214E-02	0.362
OS-185		59.72		2.351E-02	1.398E-01	2.011E-01	1.419E-02	0.117
		61.14		1.278E-01	8.341E-02	1.252E-01	8.866E-03	1.021
		69.30		7.856E-02	2.199E-01	2.955E-01	2.165E-02	0.266
		592.07		2.695E+00	3.461E+00	5.761E+00	3.954E-01	0.468
		646.12	*	2.723E-02	5.933E-02	9.866E-02	6.997E-03	0.276
		717.42		-1.343E-01	1.227E+00	2.034E+00	1.481E-01	-0.066
		874.81		-4.695E-01	7.803E-01	1.218E+00	8.795E-02	-0.385
		880.27		7.862E-01	1.040E+00	1.835E+00	1.322E-01	0.428
RE-188		155.03	*	1.827E-01	1.921E-01	3.164E-01	2.413E-02	0.577
		477.96		-3.069E+00	3.682E+00	5.520E+00	3.387E-01	-0.556
		633.10		-8.161E-01	4.125E+00	6.526E+00	4.597E-01	-0.125
W-188	+	63.58		6.312E+01	3.469E+01	4.604E+01	3.289E+00	1.371
		227.08		-5.186E+00	1.342E+01	2.206E+01	1.367E+00	-0.235

---- Non-Identified Nuclides ----

Nuclide	Line Idd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		290.67	*	1.833E+00	9.274E+00	1.352E+01	7.922E-01	0.136
IR-192	-	295.96		1.060E+00	1.913E-01	3.035E-01	1.808E-02	3.491
		308.46		-7.518E-02	1.049E-01	1.667E-01	9.885E-03	-0.451
		316.51	*	-3.255E-02	3.992E-02	6.309E-02	3.711E-03	-0.516
		468.07		1.016E-01	8.905E-02	1.390E-01	9.606E-03	0.731
		604.41		4.656E-01	6.671E-01	9.917E-01	1.186E-01	0.470
		612.46		3.842E+00	1.265E+00	2.141E+00	1.819E-01	1.794
AU-195		65.12		5.343E-02	1.075E-01	1.554E-01	1.117E-02	0.344
		66.83		-9.449E-03	6.092E-02	8.602E-02	6.229E-03	-0.110
		75.70		1.538E+00	2.387E-01	3.678E-01	2.796E-02	4.180
		98.88	*	1.693E-02	2.111E-01	3.300E-01	3.029E-02	0.051
		129.76		5.563E+00	3.157E+00	5.264E+00	5.636E-01	1.057
TL-200		367.94	*	-6.085E-05	3.157E+00	Half-Life too short		
		579.30		2.182E-03	3.157E+00	Half-Life too short		
		828.27		1.424E-03	3.157E+00	Half-Life too short		
		1205.75		3.929E-04	3.157E+00	Half-Life too short		
TL-201		68.90		2.705E+00	2.931E+00	3.664E+00	2.679E-01	0.738
		70.82		3.659E-02	1.519E+00	2.164E+00	1.598E-01	0.017
		80.30		-4.147E+00	3.637E+00	4.542E+00	3.558E-01	-0.913
		135.34		-1.271E+01	2.083E+01	3.258E+01	3.286E+00	-0.390
		167.43	*	2.152E+00	5.693E+00	9.708E+00	5.880E-01	0.222
TL-202		68.90		2.960E-01	3.208E-01	4.010E-01	2.932E-02	0.738
		70.82		3.994E-03	1.658E-01	2.362E-01	1.744E-02	0.017
		80.30		-4.527E-01	3.971E-01	4.958E-01	3.885E-02	-0.913
		439.56	*	-3.183E-02	8.397E-02	1.337E-01	7.782E-03	-0.238
HG-203		70.83		2.039E-02	7.538E-01	1.074E+00	1.381E-01	0.019
		72.87		2.520E+00	5.898E-01	8.151E-01	1.018E-01	3.091
		82.60		-6.268E-01	1.184E+00	1.364E+00	1.820E-01	-0.460
		279.20	*	4.630E-02	4.681E-02	8.081E-02	5.007E-03	0.573
BI-207		72.80		6.865E-01	1.562E-01	2.390E-01	1.785E-02	2.873
	+	74.97		8.565E-01	1.330E-01	1.862E-01	1.409E-02	4.599
		84.90		3.990E-01	1.795E-01	2.699E-01	2.185E-02	1.478
		569.67		1.252E-01	4.925E-02	9.016E-02	6.083E-03	1.388
		1063.62	*	6.144E-02	8.088E-02	1.410E-01	9.122E-03	0.436
		1770.23		-1.912E+00	9.510E-01	1.086E+00	6.135E-02	-1.761
TL-207		81.07		-3.580E-01	2.322E-01	2.515E-01	1.981E-02	-1.423
		83.78		9.870E-03	1.137E-01	1.618E-01	1.299E-02	0.061
		94.90		7.042E-01	2.432E-01	3.709E-01	3.278E-02	1.899
		122.32		1.146E+00	1.755E+00	2.878E+00	3.444E-01	0.398
		144.24		2.560E-01	7.353E-01	1.182E+00	1.184E-01	0.217
		154.21		5.286E-01	4.463E-01	7.389E-01	6.417E-02	0.715
	+	269.46		5.746E-01	3.700E-01	3.939E-01	2.443E-02	1.459
		323.87	*	-8.855E-01	8.486E-01	1.310E+00	2.165E-01	-0.676
	+	338.28		8.235E+00	1.902E+00	2.864E+00	3.015E-01	2.875
		445.03		4.896E-01	2.739E+00	4.521E+00	4.660E-01	0.108
PO-209		260.50		-6.316E+00	1.085E+01	1.756E+01	1.058E+00	-0.360
		262.80		-3.929E+01	3.538E+01	4.728E+01	2.840E+00	-0.831
		896.60	*	-6.011E-01	1.048E+01	1.725E+01	1.235E+00	-0.035
PB-211		404.84	*	-2.118E+00	1.794E+00	1.786E+00	1.113E+00	-1.186

---- Non-Identified Nuclides ----

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		427.08		9.872E-01	2.634E+00	4.287E+00	2.650E+00	0.230
		831.96		-2.201E+00	2.212E+00	2.573E-00	1.608E+00	-0.856
BI-212	-	727.18	*	1.695E+00	6.282E-01	9.339E-01	8.303E-02	1.815
		785.46		2.591E+00	2.389E+00	4.290E+00	3.146E-01	0.604
		1620.62		2.508E+00	1.806E+00	3.570E+00	2.105E-01	0.702
PO-215		81.07		-3.580E-01	2.322E-01	2.515E-01	1.981E-02	-1.423
		83.78		9.870E-03	1.137E-01	1.618E-01	1.299E-02	0.061
		94.90		7.042E-01	2.432E-01	3.709E-01	3.278E-02	1.899
		122.32		1.146E+00	1.755E+00	2.878E+00	3.444E-01	0.398
		144.24		2.560E-01	7.353E-01	1.182E+00	1.184E-01	0.217
		154.21		5.286E-01	4.463E-01	7.389E-01	6.417E-02	0.715
	+	269.46		5.746E-01	3.700E-01	3.939E-01	2.443E-02	1.459
		323.87	*	-8.855E-01	8.486E-01	1.310E+00	2.165E-01	-0.676
	+	338.28		8.235E+00	1.902E+00	2.864E+00	3.015E-01	2.875
		445.03		4.896E-01	2.739E+00	4.521E+00	4.660E-01	0.108
RN-219	+	271.23		7.372E-01	4.764E-01	5.105E-01	4.185E-02	1.444
		401.81	*	-1.818E-01	5.088E-01	8.145E-01	1.097E-01	-0.223
RN-220		549.76	*	-3.390E+01	3.445E+01	5.127E+01	3.400E+00	-0.661
RA-223		81.07		-3.580E-01	2.322E-01	2.515E-01	1.981E-02	-1.423
		83.78		9.870E-03	1.137E-01	1.618E-01	1.299E-02	0.061
		94.90		7.042E-01	2.432E-01	3.709E-01	3.278E-02	1.899
		122.32		1.146E+00	1.755E+00	2.878E+00	3.444E-01	0.398
		144.24		2.560E-01	7.353E-01	1.182E+00	1.184E-01	0.217
		154.21		5.286E-01	4.463E-01	7.389E-01	6.417E-02	0.715
	+	269.46		5.746E-01	3.700E-01	3.939E-01	2.443E-02	1.459
		323.87	*	-8.855E-01	8.486E-01	1.310E+00	2.165E-01	-0.676
	+	338.28		8.235E+00	1.902E+00	2.864E+00	3.015E-01	2.875
		445.03		4.896E-01	2.739E+00	4.521E+00	4.660E-01	0.108
AC-227		79.80		2.265E+00	1.535E+00	2.180E+00	4.619E-01	1.039
		236.00		2.860E+00	4.599E-01	6.600E-01	7.037E-02	4.334
		256.20	*	2.288E-01	4.451E-01	7.544E-01	1.062E-01	0.303
		286.10		1.305E+00	1.782E+00	3.043E+00	3.527E-01	0.429
		299.80		2.602E+00	1.848E+00	2.833E+00	4.620E-01	0.918
		304.40		-3.274E+00	2.251E+00	3.334E+00	5.774E-01	-0.982
		334.20		-2.249E+00	3.274E+00	4.411E+00	8.088E-01	-0.510
TH-227		79.80		2.265E+00	1.537E+00	2.180E+00	4.680E-01	1.039
	+	94.00		8.178E+00	2.668E+00	3.229E+00	7.051E-01	2.532
		236.00		2.860E+00	4.350E-01	6.600E-01	6.137E-02	4.334
		256.20	*	2.288E-01	4.456E-01	7.544E-01	1.282E-01	0.303
		286.10		1.305E+00	2.205E+00	3.043E+00	3.049E+00	0.429
		299.80		2.602E+00	1.848E+00	2.833E+00	4.620E-01	0.918
		304.40		-3.274E+00	2.251E+00	3.334E+00	5.774E-01	-0.982
		334.20		-2.249E+00	3.274E+00	4.411E+00	8.088E-01	-0.510
TH-229		85.43		6.418E-01	1.876E-01	2.854E-01	2.320E-02	2.248
	+	88.47		3.932E-01	1.189E-01	1.910E-01	1.589E-02	2.059
		100.00		1.679E-01	1.818E-01	2.802E-01	2.599E-02	0.599
		193.63	*	-5.308E-02	5.742E-01	9.356E-01	5.779E-02	-0.057
	+	210.97		2.135E+00	1.313E+00	1.508E+00	9.360E-02	1.416
PA-231		283.67	*	-5.069E-03	1.804E+00	2.993E+00	4.130E-01	-0.002

---- Non-Identified Nuclides ----

Nuclide	Line Idea	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		301.29		1.203E+00	7.383E-01	1.158E+00	1.215E-01	1.038
TH-231		81.07		-3.580E-01	2.322E-01	2.515E-01	1.981E-02	-1.423
		83.78		9.870E-03	1.137E-01	1.618E-01	1.299E-02	0.061
		94.90		7.042E-01	2.432E-01	3.709E-01	3.278E-02	1.899
		122.32		1.146E+00	1.755E+00	2.878E+00	3.444E-01	0.398
		144.24		2.560E-01	7.353E-01	1.182E+00	1.184E-01	0.217
		154.21		5.286E-01	4.463E-01	7.389E-01	6.417E-02	0.715
	+	269.46		5.746E-01	3.700E-01	3.939E-01	2.443E-02	1.459
		323.87	*	-8.855E-01	8.486E-01	1.310E+00	2.165E-01	-0.676
	+	338.28		8.235E+00	1.902E+00	2.864E+00	3.015E-01	2.875
		445.03		4.896E-01	2.739E+00	4.521E+00	4.660E-01	0.108
U-231		84.21		2.576E+00	4.053E+00	5.872E+00	4.729E-01	0.439
	+	92.29		6.682E+00	1.723E+00	2.799E+00	2.413E-01	2.387
		95.87	*	-8.599E-02	9.054E-01	1.273E+00	1.136E-01	-0.068
		108.00		-3.519E-01	1.828E+00	2.548E+00	2.555E-01	-0.138
PA-233	+	75.28		2.500E+01	5.013E+00	5.700E+00	8.430E-01	4.385
	+	86.59		5.638E+00	2.226E+00	2.583E+00	6.892E-01	2.183
		300.12		9.171E-01	5.116E-01	8.007E-01	1.078E-01	1.145
		311.98	*	7.293E-03	7.194E-02	1.196E-01	7.432E-03	0.061
		340.50		3.625E+00	1.263E+00	1.650E+00	3.788E-01	2.197
		398.62		-1.237E+00	2.666E+00	4.219E+00	1.088E+00	-0.293
		415.76		-2.040E+00	2.111E+00	3.175E+00	6.519E-01	-0.643
PA-234	+	63.00		1.852E+00	1.045E+00	1.354E+00	1.994E-01	1.368
		94.67		6.049E-01	1.862E-01	2.728E-01	3.421E-02	2.218
		98.44		-9.297E-03	8.666E-02	1.343E-01	7.505E-02	-0.069
		99.86		2.319E-01	4.667E-01	7.091E-01	6.570E-02	0.327
		111.00		-1.153E-01	1.861E-01	2.813E-01	3.758E-02	-0.410
		131.20		3.199E-02	1.171E-01	1.894E-01	1.998E-02	0.169
		152.70		1.513E-01	3.656E-01	5.912E-01	9.880E-02	0.256
	+	186.00		4.527E+00	2.564E+00	2.586E+00	7.918E-01	1.751
		226.40		4.671E-02	4.277E-01	7.175E-01	8.441E-02	0.065
		227.20		-2.210E-01	4.598E-01	7.528E-01	4.664E-02	-0.294
		248.90		-2.476E-01	9.169E-01	1.507E+00	3.251E-01	-0.164
		293.70		5.566E+00	1.365E+00	1.868E+00	3.008E-01	2.980
		369.80		-8.019E-01	1.039E+00	1.608E+00	3.340E-01	-0.499
		568.70		3.612E+00	1.628E+00	2.936E+00	1.979E-01	1.230
		569.50		1.145E+00	4.394E-01	8.059E-01	5.436E-02	1.421
		574.00		-2.848E+00	2.414E+00	3.450E+00	2.336E-01	-0.825
		699.00		5.440E-01	9.660E-01	1.671E+00	3.092E-01	0.325
		706.10		-8.488E-02	1.464E+00	2.439E+00	1.081E+00	-0.035
		733.00		3.272E-01	5.787E-01	8.794E-01	1.910E-01	0.372
		742.81		5.628E-01	1.690E+00	2.830E+00	1.898E+00	0.199
		796.30		2.122E+00	1.411E+00	2.399E+00	6.398E-01	0.885
		805.60		1.827E+00	1.504E+00	2.557E+00	7.750E-01	0.715
		819.60		-4.094E-01	1.488E+00	2.392E+00	9.032E-01	-0.171
		826.30		7.489E-02	1.063E+00	1.777E+00	7.908E-01	0.042
		831.60		-1.121E+00	9.514E-01	1.327E+00	3.912E-01	-0.845
		876.40		5.277E-02	1.136E+00	1.888E+00	1.939E+00	0.028
		880.51		1.855E-01	3.822E-01	6.598E-01	4.753E-02	0.281

--- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		883.24		-2.912E-01	4.433E-01	6.148E-01	4.122E-01	-0.474
		899.00		-4.888E-01	1.212E+00	1.903E+00	8.267E-01	-0.257
		925.00		-3.739E-01	1.636E+00	2.512E+00	1.780E-01	-0.149
		926.50		-7.670E-02	2.662E-01	3.610E-01	8.952E-02	-0.212
		946.00	*	-1.913E-01	4.157E-01	6.537E-01	1.182E-01	-0.293
		949.00		3.730E-01	6.155E-01	1.070E+00	7.500E-02	0.349
		980.50		-8.685E-01	1.019E+00	1.535E+00	1.058E-01	-0.566
		1394.10		-3.928E-01	1.727E+00	2.672E+00	1.731E+00	-0.147
PA-234M		766.41		7.178E-01	2.371E+01	3.960E+01	3.031E+01	0.018
		1001.03	*	3.209E-01	8.624E+00	1.424E+01	1.402E+00	0.023
NP-236		94.67		4.604E-01	1.353E-01	2.070E-01	1.825E-02	2.224
		98.44		-7.011E-03	6.540E-02	1.015E-01	9.282E-03	-0.069
		111.00		-8.721E-02	1.406E-01	2.128E-01	2.197E-02	-0.410
		160.31	*	-4.644E-02	9.045E-02	1.414E-01	9.728E-03	-0.328
NP-239		99.55		7.804E-02	1.485E-01	2.355E-01	2.176E-02	0.331
		117.00	*	1.002E-01	1.894E-01	3.099E-01	3.393E-02	0.323
	+	209.75		2.151E+00	1.323E+00	1.561E+00	9.688E-02	1.378
		228.18		5.265E-02	2.400E-01	4.044E-01	2.504E-02	0.130
		277.60		3.270E-01	2.085E-01	3.602E-01	2.111E-02	0.908
		334.30		-1.329E+00	1.840E+00	2.491E+00	1.446E-01	-0.534
AM-241		59.54	*	8.637E-03	7.367E-02	1.058E-01	8.256E-03	0.082
CM-243		99.55		8.030E-02	1.528E-01	2.423E-01	2.239E-02	0.331
	+	103.76	*	1.703E-01	1.039E-01	1.544E-01	1.485E-02	1.103
		117.00		1.031E-01	1.949E-01	3.188E-01	3.490E-02	0.323
	+	209.75		2.120E+00	1.304E+00	1.539E+00	9.549E-02	1.378
		228.18		5.320E-02	2.425E-01	4.085E-01	2.530E-02	0.130
		277.60		3.297E-01	2.102E-01	3.631E-01	2.128E-02	0.908
CM-247		278.00		1.412E+00	8.511E-01	1.506E+00	8.817E-02	0.938
		287.40		2.941E-02	1.441E+00	2.392E+00	1.401E-01	0.012
		402.60	*	2.670E-03	4.560E-02	7.494E-02	4.111E-03	0.036
CF-249		252.85		3.786E-01	1.015E+00	1.716E+00	1.044E-01	0.221
		333.44		-3.480E-01	2.602E-01	3.370E-01	1.957E-02	-1.033
		387.95	*	6.032E-03	4.774E-02	7.889E-02	4.277E-03	0.076
CF-251		176.60	*	-7.523E-02	1.344E-01	2.217E-01	1.354E-02	-0.339
		227.00		-1.431E-01	4.079E-01	6.715E-01	4.160E-02	-0.213
		285.00		-6.465E-01	2.052E+00	3.352E+00	1.962E-01	-0.193

VAX VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GTL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358003      *
* Acquisition date :  6-JUL-2009 11:15:35 Detector SN#     :                *
* Detector ID        : CAM21                Sensitivity      : 5.000        *
* Geometry           : CAN                  Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:09.83       Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232358003           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.4504E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope      :                *
* LCS DPM          :    0.000             LCS Isotope      :                *
* LCSD DPM         :    0.000             LCSD Isotope     :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.625E+01	3.265E+00	6.059E-01	0.000E+00
CD-109	2.925E+00	8.666E-01	1.103E+00	0.000E+00
SN-126	2.880E-01	8.533E-02	1.085E-01	0.000E+00
EU-155	1.900E-01	1.137E-01	1.754E-01	0.000E+00
TL-208	6.530E-01	1.182E-01	7.731E-02	0.000E+00
BI-210	1.463E+00	8.564E-01	1.038E+00	0.000E+00
PB-210	1.463E+00	8.564E-01	1.038E+00	0.000E+00
PO-210	1.463E+00	8.545E-01	1.038E+00	0.000E+00
BI-211	4.385E+00	6.028E-01	3.927E-01	0.000E+00
PB-212	1.860E+00	1.836E-01	1.022E-01	0.000E+00
PO-212	1.860E+00	1.836E-01	1.022E-01	0.000E+00
BI-214	1.353E+00	2.237E-01	1.561E-01	0.000E+00
PB-214	1.525E+00	2.237E-01	1.370E-01	0.000E+00
PO-214	1.525E+00	2.237E-01	1.370E-01	0.000E+00
PO-216	1.860E+00	1.836E-01	1.022E-01	0.000E+00
PO-218	1.525E+00	2.237E-01	1.370E-01	0.000E+00
RA-224	4.810E+00	1.446E+00	1.165E+00	0.000E+00
RA-226	1.353E+00	2.237E-01	1.561E-01	0.000E+00
AC-228	2.261E+00	4.698E-01	2.889E-01	0.000E+00
RA-228	2.261E+00	4.698E-01	2.889E-01	0.000E+00
TH-228	1.860E+00	1.836E-01	1.022E-01	0.000E+00
TH-230	1.353E+00	2.237E-01	1.561E-01	0.000E+00
TH-232	2.261E+00	4.698E-01	2.889E-01	0.000E+00
TH-234	1.589E+00	8.902E-01	1.132E+00	0.000E+00
U-234	1.353E+00	2.237E-01	1.561E-01	0.000E+00
U-235	7.205E-02	2.229E-01	3.865E-01	0.000E+00
NP-237	8.457E-01	3.034E-01	3.177E-01	0.000E+00
U-238	1.589E+00	8.902E-01	1.132E+00	0.000E+00
AM-243	4.772E-01	7.261E-02	6.462E-02	0.000E+00
ANH-511	1.432E-01	6.953E-02	5.717E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM)	2 S.D. Act error (pCi/GRAM)	MDA (pCi/GRAM)		Ident
BE-7	-1.233E-01	3.707E-01	6.102E-01	0.000E+00	NOT IDENT.
NA-22	1.882E-02	6.266E-02	1.079E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.919E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.184E-02	3.643E-02	5.255E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.989E-02	6.911E-02	0.000E+00	FAIL ABUN
SC-46	2.138E-02	5.379E-02	9.546E-02	0.000E+00	FAIL ABUN
V-48	4.826E-03	8.561E-02	1.468E-01	0.000E+00	NOT IDENT.
CR-51	1.357E-01	4.160E-01	7.413E-01	0.000E+00	NOT IDENT.
MN-52	-3.132E-02	2.620E-01	4.255E-01	0.000E+00	FAIL ABUN
MN-54	3.297E-02	5.254E-02	9.473E-02	0.000E+00	NOT IDENT.
CO-56	-1.454E-02	5.326E-02	8.971E-02	0.000E+00	NOT IDENT.
CO-57	8.281E-03	2.496E-02	4.397E-02	0.000E+00	NOT IDENT.
CO-58	-5.232E-03	5.202E-02	8.921E-02	0.000E+00	NOT IDENT.
FE-59	-1.268E-01	1.335E-01	2.056E-01	0.000E+00	NOT IDENT.
CO-60	-2.297E-02	6.126E-02	9.775E-02	0.000E+00	NOT IDENT.
ZN-65	-7.116E-02	1.438E-01	1.941E-01	0.000E+00	NOT IDENT.
GE-68	-2.581E-01	1.722E+00	2.874E+00	0.000E+00	NOT IDENT.
AS-73	-1.251E-01	2.449E-01	4.352E-01	0.000E+00	NOT IDENT.
AS-74	5.065E-02	1.136E-01	1.980E-01	0.000E+00	NOT IDENT.
SE-75	-1.035E-02	5.491E-02	8.351E-02	0.000E+00	NOT IDENT.
BR-77	3.298E+00	9.242E+00	1.614E+01	0.000E+00	FAIL ABUN
SR-82	-3.493E-01	4.494E-01	7.250E-01	0.000E+00	NOT IDENT.
RB-83	2.130E-02	8.489E-02	1.472E-01	0.000E+00	NOT IDENT.
RB-84	1.170E-02	9.101E-02	1.582E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.013E+01	1.780E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.133E-02	9.019E-02	0.000E+00	NOT IDENT.
RB-86	-2.284E-01	1.042E+00	1.728E+00	0.000E+00	NOT IDENT.
Y-88	-1.450E-02	3.864E-02	5.907E-02	0.000E+00	NOT IDENT.
ZR-88	1.088E-03	3.796E-02	6.589E-02	0.000E+00	NOT IDENT.
Y-91	6.324E+00	2.783E+01	4.760E+01	0.000E+00	NOT IDENT.
NB-94	5.879E-04	4.675E-02	8.171E-02	0.000E+00	NOT IDENT.
NB-95	1.145E-02	5.695E-02	1.002E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.740E-01	3.082E-01	0.000E+00	NOT IDENT.
ZR-95	4.619E-02	9.450E-02	1.700E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.095E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.792E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-3.480E+00	1.106E+01	1.875E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.668E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	6.894E-03	3.548E-02	6.428E-02	0.000E+00	NOT IDENT.
RH-102	2.031E-02	3.414E-02	6.088E-02	0.000E+00	NOT IDENT.
RU-103	-1.789E-02	4.732E-02	7.843E-02	0.000E+00	FAIL ABUN
RH-106	2.186E-01	4.014E-01	6.844E-01	0.000E+00	FAIL ABUN
RU-106	2.186E-01	4.008E-01	6.844E-01	0.000E+00	FAIL ABUN
AG-108M	-4.140E-03	4.054E-02	6.938E-02	0.000E+00	NOT IDENT.
AG-110M	-2.551E-02	4.508E-02	7.583E-02	0.000E+00	NOT IDENT.
IN-111	-9.358E-02	9.516E-01	1.463E+00	0.000E+00	NOT IDENT.
IN-113M	-6.136E-03	5.450E-02	9.387E-02	0.000E+00	NOT IDENT.
SN-113	-6.136E-03	5.450E-02	9.387E-02	0.000E+00	NOT IDENT.
IN-114M	-8.575E-02	2.161E-01	3.325E-01	0.000E+00	NOT IDENT.
CD-115	-7.613E-01	9.264E+00	1.566E+01	0.000E+00	NOT IDENT.
SN-117M	-9.937E-03	5.840E-02	9.984E-02	0.000E+00	NOT IDENT.
SB-122	-3.282E+00	2.286E+00	3.478E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.522E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.995E-02	3.198E-02	5.371E-02	0.000E+00	NOT IDENT.
I-124	4.358E-01	8.311E-01	1.272E+00	0.000E+00	NOT IDENT.
SB-124	-3.482E-02	7.946E-02	1.207E-01	0.000E+00	FAIL ABUN
SB-125	9.240E-02	1.108E-01	2.005E-01	0.000E+00	FAIL ABUN
TE-125M	3.368E+00	9.442E+00	1.468E+01	0.000E+00	NOT IDENT.
I-126	-1.546E-01	2.061E-01	3.401E-01	0.000E+00	NOT IDENT.
SB-126	1.322E-01	2.030E-01	3.259E-01	0.000E+00	FAIL ABUN
SB-127	9.488E-02	1.450E+00	2.548E+00	0.000E+00	NOT IDENT.
XE-127	-3.705E-02	5.434E-02	8.614E-02	0.000E+00	NOT IDENT.
I-131	-2.514E-02	1.259E-01	2.167E-01	0.000E+00	NOT IDENT.
TE-132	1.271E-01	5.636E-01	1.015E+00	0.000E+00	NOT IDENT.
BA-133	9.604E-03	5.832E-02	8.917E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.894E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.571E-02	1.285E-01	0.000E+00	NOT IDENT.
CS-135	2.593E-01	2.032E-01	3.344E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.411E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.312E-02	1.311E-01	2.297E-01	0.000E+00	FAIL ABUN
BA-137M	6.057E-02	4.482E-02	8.550E-02	0.000E+00	NOT IDENT.
CS-137	6.403E-02	4.738E-02	9.038E-02	0.000E+00	NOT IDENT.
CE-139	2.318E-02	3.038E-02	5.644E-02	0.000E+00	NOT IDENT.
BA-140	-3.341E-02	2.985E-01	5.025E-01	0.000E+00	NOT IDENT.
LA-140	-3.821E-02	1.142E-01	1.856E-01	0.000E+00	NOT IDENT.

CE-141	2.778E-02	6.527E-02	1.143E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.438E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.025E-01	2.170E-01	3.693E-01	0.000E+00	NOT IDENT.
PM-147	-1.321E-02	4.321E-02	7.377E-02	0.000E+00	NOT IDENT.
PR-144	-8.948E-01	2.926E+00	4.996E+00	0.000E+00	NOT IDENT.
PM-146	3.954E-02	5.372E-02	9.640E-02	0.000E+00	NOT IDENT.
ND-147	9.303E-02	6.407E-01	1.101E+00	0.000E+00	FAIL ABUN
PM-149	5.691E-01	7.270E+01	1.321E+02	0.000E+00	NOT IDENT.
EU-152	4.234E-02	1.653E-01	2.023E-01	0.000E+00	FAIL ABUN
GD-153	-4.854E-03	7.901E-02	1.212E-01	0.000E+00	NOT IDENT.
EU-154	5.261E-02	1.752E-01	3.015E-01	0.000E+00	NOT IDENT.
TB-160	1.035E-01	1.803E-01	3.254E-01	0.000E+00	FAIL ABUN
HO-166M	-1.200E-03	8.199E-02	1.429E-01	0.000E+00	NOT IDENT.
TM-171	-3.303E+00	1.805E+01	2.796E+01	0.000E+00	NOT IDENT.
LU-176	-2.745E-03	2.643E-02	4.622E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.623E+00	2.018E+00	0.000E+00	FAIL ABUN
LU-177M	-2.806E-01	2.233E-01	3.563E-01	0.000E+00	NOT IDENT.
HF-181	-2.094E-02	4.633E-02	7.644E-02	0.000E+00	NOT IDENT.
W-181	2.117E-01	2.240E-01	3.602E-01	0.000E+00	NOT IDENT.
TA-182	-5.750E-02	2.887E-01	4.762E-01	0.000E+00	FAIL ABUN
RE-183	-3.081E-02	1.123E-01	2.023E-01	0.000E+00	FAIL ABUN
RE-184	1.004E-01	2.640E-01	4.762E-01	0.000E+00	NOT IDENT.
OS-185	2.723E-02	5.815E-02	1.011E-01	0.000E+00	NOT IDENT.
RE-188	1.827E-01	1.883E-01	3.345E-01	0.000E+00	NOT IDENT.
W-188	1.833E+00	9.088E+00	1.410E+01	0.000E+00	FAIL ABUN
IR-192	-3.255E-02	3.912E-02	6.567E-02	0.000E+00	FAIL ABUN
AU-195	1.693E-02	2.069E-01	3.522E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.584E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.152E+00	5.579E+00	1.025E+01	0.000E+00	NOT IDENT.
TL-202	-3.183E-02	8.229E-02	1.382E-01	0.000E+00	NOT IDENT.
HG-203	4.630E-02	4.587E-02	8.436E-02	0.000E+00	NOT IDENT.
BI-207	6.144E-02	7.926E-02	1.428E-01	0.000E+00	FAIL ABUN
TL-207	-8.855E-01	8.316E-01	1.363E+00	0.000E+00	FAIL ABUN
PO-209	-6.011E-01	1.027E+01	1.755E+01	0.000E+00	NOT IDENT.
PB-211	-2.118E+00	1.758E+00	1.849E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.156E-01	9.542E-01	0.000E+00	FAIL ABUN
PO-215	-8.855E-01	8.316E-01	1.363E+00	0.000E+00	FAIL ABUN
RN-219	-1.818E-01	4.986E-01	8.435E-01	0.000E+00	FAIL ABUN
RN-220	-3.390E+01	3.376E+01	5.272E+01	0.000E+00	NOT IDENT.
RA-223	-8.855E-01	8.316E-01	1.363E+00	0.000E+00	FAIL ABUN
AC-227	2.288E-01	4.362E-01	7.890E-01	0.000E+00	NOT IDENT.
TH-227	2.288E-01	4.367E-01	7.890E-01	0.000E+00	FAIL ABUN
TH-229	-5.308E-02	5.627E-01	9.845E-01	0.000E+00	FAIL ABUN
PA-231	-5.069E-03	1.768E+00	3.123E+00	0.000E+00	NOT IDENT.
TH-231	-8.855E-01	8.316E-01	1.363E+00	0.000E+00	FAIL ABUN
U-231	-8.599E-02	8.873E-01	1.360E+00	0.000E+00	FAIL ABUN
PA-233	7.293E-03	7.050E-02	1.245E-01	0.000E+00	FAIL ABUN
PA-234	-1.913E-01	4.074E-01	6.639E-01	0.000E+00	FAIL ABUN
PA-234M	3.209E-01	8.452E+00	1.444E+01	0.000E+00	NOT IDENT.
NP-236	-4.644E-02	8.864E-02	1.494E-01	0.000E+00	NOT IDENT.
NP-239	1.002E-01	1.856E-01	3.296E-01	0.000E+00	FAIL ABUN
AM-241	8.637E-03	7.219E-02	1.141E-01	0.000E+00	NOT IDENT.
CM-243	0.000E+00	1.019E-01	1.646E-01	0.000E+00	FAIL ABUN
CM-247	2.670E-03	4.469E-02	7.760E-02	0.000E+00	NOT IDENT.
CF-249	6.032E-03	4.679E-02	8.176E-02	0.000E+00	NOT IDENT.
CF-251	-7.523E-02	1.317E-01	2.337E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:53:19.96

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*****************************************************************************
*                          GFL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358003.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:15:35.
Sample ID         : G232358003           Sample quantity  : 1.45040E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.83  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1088	10.67*	7.284E-01	3.625E+01	3.625E+01	9.19
CD-109	88.03	342	3.72*	8.312E+00	2.865E+00	2.925E+00	30.23
SN-126	64.28	195	9.60	8.365E+00	6.288E-01	6.288E-01	56.36
	86.94	342	8.90	8.312E+00	1.197E+00	1.197E+00	50.50
	87.57	342	37.00*	8.312E+00	2.880E-01	2.880E-01	30.23
EU-155	48.70	------	4.60	7.705E+00	------ Line Not Found		------
	60.01	------	1.11	8.277E+00	------ Line Not Found		------
	86.54	342	30.90	8.312E+00	3.449E-01	3.467E-01	30.26
	105.31	119	20.70*	7.886E+00	1.890E-01	1.900E-01	61.05
TL-208	277.35	------	6.80	3.917E+00	------ Line Not Found		------
	510.84	116	21.60	2.088E+00	6.630E-01	6.630E-01	50.24
	583.14	386	84.20*	1.818E+00	6.530E-01	6.530E-01	18.47
	860.37	70	12.46	1.219E+00	1.199E+00	1.199E+00	51.14
BI-210	46.50	172	4.05*	7.517E+00	1.462E+00	1.463E+00	59.71
PB-210	46.50	172	4.05*	7.517E+00	1.462E+00	1.463E+00	59.71
PO-210	46.50	172	4.05*	7.517E+00	1.462E+00	1.463E+00	59.58
BI-211	72.87	------	1.27	8.456E+00	------ Line Not Found		------
	351.07	676	12.94*	3.085E+00	4.385E+00	4.385E+00	14.03
PB-212	74.81	1029	10.70	8.453E+00	2.943E+00	2.943E+00	18.12
	77.11	1315	18.00	8.441E+00	2.240E+00	2.240E+00	12.31
	87.30	342	8.00	8.312E+00	1.332E+00	1.332E+00	31.84
	238.63	1448	44.60*	4.517E+00	1.860E+00	1.860E+00	10.07
	300.09	------	3.41	3.625E+00	------ Line Not Found		------
PO-212	74.81	1029	10.70	8.453E+00	2.943E+00	2.943E+00	18.12
	77.11	1315	18.00	8.441E+00	2.240E+00	2.240E+00	12.31
	87.30	342	8.00	8.312E+00	1.332E+00	1.332E+00	31.84
	115.19	------	0.60	7.596E+00	------ Line Not Found		------
	238.63	1448	44.60*	4.517E+00	1.860E+00	1.860E+00	10.07
	300.09	------	3.41	3.625E+00	------ Line Not Found		------
BI-214	609.31	420	46.30*	1.736E+00	1.353E+00	1.353E+00	16.87
	768.36	------	5.04	1.367E+00	------ Line Not Found		------
	934.06	53	3.21	1.122E+00	3.818E+00	3.818E+00	63.98

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1120.29	76	15.10	9.387E-01	1.392E+00	1.392E+00	50.60
	1238.11	------	5.94	8.528E-01	------	Line Not Found	------
	1377.67	------	4.11	7.701E-01	------	Line Not Found	------
	1764.49	54	15.80	6.089E-01	1.457E+00	1.457E+00	29.01
PB-214	74.81	1029	6.21	8.453E+00	5.071E+00	5.072E+00	17.20
	77.11	1315	10.50	8.441E+00	3.840E+00	3.840E+00	14.48
	87.30	342	4.67	8.312E+00	2.282E+00	2.282E+00	31.20
	241.98	328	7.49	4.469E+00	2.536E+00	2.536E+00	31.19
	295.21	384	19.20	3.683E+00	1.405E+00	1.405E+00	19.08
	351.92	676	37.20*	3.085E+00	1.525E+00	1.525E+00	14.97
PO-214	74.81	1029	6.21	8.453E+00	5.071E+00	5.072E+00	17.20
	77.11	1315	10.50	8.441E+00	3.840E+00	3.840E+00	14.48
	87.30	342	4.67	8.312E+00	2.282E+00	2.282E+00	31.20
	241.98	328	7.49	4.469E+00	2.536E+00	2.536E+00	31.19
	295.21	384	19.20	3.683E+00	1.405E+00	1.405E+00	19.08
	351.92	676	37.20*	3.085E+00	1.525E+00	1.525E+00	14.97
PO-216	74.81	1029	10.70	8.453E+00	2.943E+00	2.943E+00	18.12
	77.11	1315	18.00	8.441E+00	2.240E+00	2.240E+00	12.31
	87.30	342	8.00	8.312E+00	1.332E+00	1.332E+00	31.84
	238.63	1448	44.60*	4.517E+00	1.860E+00	1.860E+00	10.07
	300.09	------	3.41	3.625E+00	------	Line Not Found	------
PO-218	74.81	1029	6.21	8.453E+00	5.071E+00	5.072E+00	17.20
	77.11	1315	10.50	8.441E+00	3.840E+00	3.840E+00	14.48
	87.30	342	4.67	8.312E+00	2.282E+00	2.282E+00	31.20
	241.98	328	7.49	4.469E+00	2.536E+00	2.536E+00	31.19
	295.21	384	19.20	3.683E+00	1.405E+00	1.405E+00	19.08
	351.92	676	37.20*	3.085E+00	1.525E+00	1.525E+00	14.97
RA-224	240.98	328	3.95*	4.469E+00	4.810E+00	4.810E+00	30.69
RA-226	609.31	420	46.30*	1.736E+00	1.353E+00	1.353E+00	16.87
	768.36	------	5.04	1.367E+00	------	Line Not Found	------
	934.06	53	3.21	1.122E+00	3.818E+00	3.818E+00	63.98
	1120.29	76	15.10	9.387E-01	1.392E+00	1.392E+00	50.60
	1238.11	------	5.94	8.528E-01	------	Line Not Found	------
	1377.67	------	4.11	7.701E-01	------	Line Not Found	------
	1764.49	54	15.80	6.089E-01	1.457E+00	1.457E+00	29.01
AC-228	338.32	279	11.40	3.211E+00	1.972E+00	1.972E+00	45.65
	911.07	278	27.70*	1.150E+00	2.261E+00	2.261E+00	21.21
	969.11	151	16.60	1.082E+00	2.168E+00	2.168E+00	32.01
RA-228	338.32	279	11.40	3.211E+00	1.972E+00	1.972E+00	45.65
	911.07	278	27.70*	1.150E+00	2.261E+00	2.261E+00	21.21
	969.11	151	16.60	1.082E+00	2.168E+00	2.168E+00	32.01
TH-228	84.40	------	1.21	8.360E+00	------	Line Not Found	------
	238.60	1448	44.60*	4.517E+00	1.860E+00	1.860E+00	10.07
	300.10	------	3.41	3.625E+00	------	Line Not Found	------
TH-230	609.31	420	46.30*	1.736E+00	1.353E+00	1.353E+00	16.87
	768.36	------	5.04	1.367E+00	------	Line Not Found	------
	934.06	53	3.21	1.122E+00	3.818E+00	3.818E+00	63.98
	1120.29	76	15.10	9.387E-01	1.392E+00	1.392E+00	50.60
	1238.11	------	5.94	8.528E-01	------	Line Not Found	------

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	------	4.11	7.701E-01	------	Line Not Found	------
	1764.49	54	15.80	6.089E-01	1.457E+00	1.457E+00	29.01
TH-232	338.32	279	11.40	3.211E+00	1.972E+00	1.972E+00	21.35
	911.07	278	27.70*	1.150E+00	2.261E+00	2.261E+00	21.21
	969.11	151	16.60	1.082E+00	2.168E+00	2.168E+00	32.01
TH-234	63.29	195	3.80*	8.365E+00	1.589E+00	1.589E+00	57.18
	92.38	363	5.41	8.196E+00	2.116E+00	2.116E+00	30.29
U-234	609.31	420	46.30*	1.736E+00	1.353E+00	1.353E+00	16.87
	768.36	------	5.04	1.367E+00	------	Line Not Found	------
	934.06	53	3.21	1.122E+00	3.818E+00	3.818E+00	63.98
	1120.29	76	15.10	9.387E-01	1.392E+00	1.392E+00	50.60
	1238.11	------	5.94	8.528E-01	------	Line Not Found	------
	1377.67	------	4.11	7.701E-01	------	Line Not Found	------
	1764.49	54	15.80	6.089E-01	1.457E+00	1.457E+00	29.01
U-235	89.95	269	2.70	8.263E+00	3.115E+00	3.115E+00	53.25
	93.35	363	4.50	8.196E+00	2.544E+00	2.544E+00	37.09
	105.00	119	2.10	7.886E+00	1.863E+00	1.863E+00	67.39
	143.76	------	10.50*	6.734E+00	------	Line Not Found	------
	163.35	------	4.70	6.178E+00	------	Line Not Found	------
	185.71	196	54.00	5.596E+00	1.677E-01	1.677E-01	48.04
	205.31	------	4.70	5.160E+00	------	Line Not Found	------
NP-237	86.50	342	12.60*	8.312E+00	8.457E-01	8.457E-01	36.60
	95.87	------	2.60	8.129E+00	------	Line Not Found	------
U-238	63.29	195	3.80*	8.365E+00	1.589E+00	1.589E+00	57.18
	92.38	363	5.41	8.196E+00	2.116E+00	2.116E+00	25.78
AM-243	74.67	1029	66.00*	8.453E+00	4.772E-01	4.772E-01	15.53
	86.72	342	0.34	8.312E+00	3.171E+01	3.171E+01	30.23
	117.66	------	0.55	7.522E+00	------	Line Not Found	------
	142.18	------	0.13	6.781E+00	------	Line Not Found	------
ANH-511	511.00	116	100.00*	2.088E+00	1.432E-01	1.432E-01	49.54

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232358003 Acquisition date : 6-JUL-2009 11:15:35

Total number of lines in spectrum 30
Number of unidentified lines 1
Number of lines tentatively identified by NID 29 96.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.625E+01	3.625E+01	0.333E+01	9.19	
CD-109	464.00D	1.02	2.865E+00	2.925E+00	0.884E+00	30.23	
SN-126	1.00E+05Y	1.00	2.880E-01	2.880E-01	0.871E-01	30.23	
EU-155	4.96Y	1.01	1.890E-01	1.900E-01	1.160E-01	61.05	
TL-208	1.41E+10Y	1.00	6.530E-01	6.530E-01	1.206E-01	18.47	
BI-210	22.26Y	1.00	1.462E+00	1.463E+00	0.874E+00	59.71	
PB-210	22.26Y	1.00	1.462E+00	1.463E+00	0.874E+00	59.71	
PO-210	22.26Y	1.00	1.462E+00	1.463E+00	0.872E+00	59.58	
BI-211	7.04E+08Y	1.00	4.385E+00	4.385E+00	0.615E+00	14.03	
PB-212	1.41E+10Y	1.00	1.860E+00	1.860E+00	0.187E+00	10.07	
PO-212	1.41E+10Y	1.00	1.860E+00	1.860E+00	0.187E+00	10.07	
BI-214	1600.00Y	1.00	1.353E+00	1.353E+00	0.228E+00	16.87	
PB-214	1600.00Y	1.00	1.525E+00	1.525E+00	0.228E+00	14.97	
PO-214	1600.00Y	1.00	1.525E+00	1.525E+00	0.228E+00	14.97	
PO-216	1.41E+10Y	1.00	1.860E+00	1.860E+00	0.187E+00	10.07	
PO-218	1600.00Y	1.00	1.525E+00	1.525E+00	0.228E+00	14.97	
RA-224	1.41E+10Y	1.00	4.810E+00	4.810E+00	1.476E+00	30.69	
RA-226	1600.00Y	1.00	1.353E+00	1.353E+00	0.228E+00	16.87	
AC-228	1.41E+10Y	1.00	2.261E+00	2.261E+00	0.479E+00	21.21	
RA-228	1.41E+10Y	1.00	2.261E+00	2.261E+00	0.479E+00	21.21	
TH-228	1.41E+10Y	1.00	1.860E+00	1.860E+00	0.187E+00	10.07	
TH-230	4.47E+09Y	1.00	1.353E+00	1.353E+00	0.228E+00	16.87	
TH-232	1.41E+10Y	1.00	2.261E+00	2.261E+00	0.479E+00	21.21	
TH-234	4.47E+09Y	1.00	1.589E+00	1.589E+00	0.908E+00	57.18	
U-234	4.47E+09Y	1.00	1.353E+00	1.353E+00	0.228E+00	16.87	
U-235	7.04E+08Y	1.00	1.677E-01	1.677E-01	0.805E-01	48.04	K
NP-237	2.14E+06Y	1.00	8.457E-01	8.457E-01	3.096E-01	36.60	
U-238	4.47E+09Y	1.00	1.589E+00	1.589E+00	0.908E+00	57.18	
AM-243	7380.00Y	1.00	4.772E-01	4.772E-01	0.741E-01	15.53	
ANH-511	1.00E+09Y	1.00	1.432E-01	1.432E-01	0.709E-01	49.54	
	Total Activity :		8.284E+01	8.291E+01			

Grand Total Activity : 8.284E+01 8.291E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232358003 Acquisition date : 6-JUL-2009 11:15:35

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	209.77	136	399	1.02	418.24	412	12	1.89E-02	61.2	5.07E+00	T
0	270.71	121	307	2.05	539.98	531	14	1.68E-02	64.1	4.01E+00	T
0	463.05	72	91	1.60	924.36	919	10	9.97E-03	55.3	2.32E+00	T
0	727.36	112	70	2.37	1452.91	1447	13	1.55E-02	36.0	1.45E+00	T
1	964.79	57	31	2.18	1928.08	1920	22	7.86E-03	53.0	1.09E+00	T
0	1729.96	9	6	1.27	3461.72	3456	11	1.29E-03	****	6.20E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:53:24.52

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*****************************************************************************
*                          CEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358003.CNF;1 *
* Acquisition date  : 6-JUL-2009 11:15:35.  Detector SN#     :             *
* Detector ID       : GAM21                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:09.83          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232358003            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.45040E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :                *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.625E+01	3.332E+00	6.027E-01	3.835E-02	60.141
CD-109	2.925E+00	8.843E-01	1.031E+00	8.543E-02	2.837
SN-126	2.880E-01	8.707E-02	1.014E-01	8.371E-03	2.841
EU-155	1.900E-01	1.160E-01	1.646E-01	1.623E-02	1.155
TL-208	6.530E-01	1.206E-01	7.528E-02	5.711E-03	8.674
BI-210	1.463E+00	8.739E-01	9.573E-01	7.252E-02	1.529
PB-210	1.463E+00	8.739E-01	9.573E-01	7.252E-02	1.529
PO-210	1.463E+00	8.720E-01	9.573E-01	6.187E-02	1.529
BI-211	4.385E+00	6.151E-01	3.781E-01	2.406E-02	11.597
PB-212	1.860E+00	1.873E-01	9.762E-02	7.438E-03	19.055
PO-212	1.860E+00	1.873E-01	9.762E-02	7.438E-03	19.055
BI-214	1.353E+00	2.282E-01	1.521E-01	1.318E-02	8.894
PB-214	1.525E+00	2.283E-01	1.319E-01	1.085E-02	11.566
PO-214	1.525E+00	2.283E-01	1.319E-01	1.085E-02	11.566
PO-216	1.860E+00	1.873E-01	9.762E-02	7.438E-03	19.055
PO-218	1.525E+00	2.283E-01	1.319E-01	1.085E-02	11.566
RA-224	4.810E+00	1.476E+00	1.113E+00	6.844E-02	4.322
RA-226	1.353E+00	2.282E-01	1.521E-01	1.318E-02	8.894

Sample ID : G232358003 Acquisition date : 6-JUL-2009 11:15:35

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	2.261E+00	4.794E-01	2.843E-01	2.883E-02	7.953
RA-228	2.261E+00	4.794E-01	2.843E-01	2.883E-02	7.953
TH-228	1.860E+00	1.873E-01	9.761E-02	7.437E-03	19.058
TH-230	1.353E+00	2.282E-01	1.521E-01	1.318E-02	8.894
TH-232	2.261E+00	4.794E-01	2.843E-01	2.883E-02	7.953
TH-234	1.589E+00	9.083E-01	1.051E+00	1.821E-01	1.512
U-234	1.353E+00	2.282E-01	1.521E-01	1.318E-02	8.894
U-235	1.677E-01	8.054E-02	3.650E-01	6.476E-02	0.459
NP-237	8.457E-01	3.096E-01	2.969E-01	6.591E-02	2.849
U-238	1.589E+00	9.083E-01	1.051E+00	1.821E-01	1.512
AM-243	4.772E-01	7.409E-02	6.019E-02	4.546E-03	7.928
ANH-511	1.432E-01	7.095E-02	5.551E-02	3.541E-03	2.580

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.233E-01		3.783E-01	5.915E-01	4.164E-02	-0.209
NA-22	1.882E-02		6.394E-02	1.070E-01	6.325E-03	0.176
NA-24	3.247E-02		1.489E-01	Half-Life too short		
AL-26	-2.184E-02		3.717E-02	5.253E-02	2.925E-03	-0.416
TI-44	4.134E-01	+	5.091E-02	6.443E-02	4.983E-03	6.416
SC-46	2.138E-02		5.488E-02	9.386E-02	6.739E-03	0.228
V-48	4.826E-03		8.736E-02	1.447E-01	9.954E-03	0.033
CR-51	1.357E-01		4.245E-01	7.123E-01	4.632E-02	0.191
MN-52	-3.132E-02		2.673E-01	4.231E-01	2.550E-02	-0.074
MN-54	3.297E-02		5.361E-02	9.301E-02	6.785E-03	0.355
CO-56	-1.454E-02		5.434E-02	8.811E-02	6.411E-03	-0.165
CO-57	8.281E-03		2.547E-02	4.138E-02	4.762E-03	0.200
CO-58	-5.232E-03		5.308E-02	8.753E-02	6.429E-03	-0.060
FE-59	-1.268E-01		1.362E-01	2.032E-01	1.457E-02	-0.624
CO-60	-2.297E-02		6.251E-02	9.702E-02	5.836E-03	-0.237
ZN-65	-7.116E-02		1.467E-01	1.918E-01	1.177E-02	-0.371
GE-68	-2.581E-01		1.757E+00	2.838E+00	1.812E-01	-0.091
AS-73	-1.251E-01		2.499E-01	4.026E-01	2.705E-02	-0.311
AS-74	5.065E-02		1.159E-01	1.929E-01	1.327E-02	0.263
SE-75	-1.035E-02		5.603E-02	7.991E-02	4.834E-03	-0.130
BR-77	3.298E+00		9.430E+00	1.568E+01	1.010E+00	0.210
SR-82	-3.493E-01		4.585E-01	7.106E-01	5.210E-02	-0.492
RB-83	2.130E-02		8.663E-02	1.429E-01	9.211E-03	0.149
RB-84	1.170E-02		9.287E-02	1.555E-01	1.120E-02	0.075
KR-85	2.368E+01		1.034E+01	1.729E+01	1.107E+00	1.370
SR-85	1.199E-01		5.238E-02	8.758E-02	5.605E-03	1.370
RB-86	-2.284E-01		1.063E+00	1.706E+00	1.090E-01	-0.134
Y-88	-1.450E-02		3.943E-02	5.908E-02	3.260E-03	-0.245
ZR-88	1.088E-03		3.873E-02	6.360E-02	3.430E-03	0.017
Y-91	6.324E+00		2.840E+01	4.713E+01	2.707E+00	0.134
NB-94	5.879E-04		4.770E-02	7.991E-02	5.793E-03	0.007

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Idod	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	1.145E-02		5.811E-02	9.823E-02	7.199E-03	0.117
NB-95M	8.427E-01		1.776E-01	2.942E-01	2.300E-02	2.864
ZR-95	4.619E-02		9.643E-02	1.665E-01	1.388E-02	0.277
NB-97	-2.017E-02		2.090E-02	Half-Life too short		
ZR-97	1.303E+00		3.975E-01	Half-Life too short		
MO-99	-3.480E+00		1.129E+01	1.836E+01	2.658E+00	-0.190
TC-99M	-6.848E+08		8.510E+08	Half-Life too short		
RH-101	6.894E-03		3.621E-02	6.112E-02	3.782E-03	0.113
RH-102	2.031E-02		3.484E-02	5.901E-02	3.607E-03	0.344
RU-103	-1.789E-02		4.829E-02	7.610E-02	9.796E-03	-0.235
RH-106	2.186E-01		4.096E-01	6.674E-01	8.259E-02	0.328
RU-106	2.186E-01		4.090E-01	6.674E-01	4.671E-02	0.328
AG-108M	-4.140E-03		4.136E-02	6.711E-02	4.208E-03	-0.062
AG-110M	-2.551E-02		4.600E-02	7.405E-02	5.508E-03	-0.345
IN-111	-9.358E-02		9.710E-01	1.397E+00	8.564E-02	-0.067
IN-113M	-6.136E-03		5.562E-02	9.060E-02	5.253E-03	-0.068
SN-113	-6.136E-03		5.562E-02	9.060E-02	5.253E-03	-0.068
IN-114M	-8.575E-02		2.205E-01	3.159E-01	1.947E-02	-0.271
CD-115	-7.613E-01		9.453E+00	1.521E+01	9.880E-01	-0.050
SN-117M	-9.937E-03		5.959E-02	9.448E-02	6.738E-03	-0.105
SB-122	-3.282E+00		2.333E+00	3.385E+00	2.272E-01	-0.970
I-123	-9.496E-01		7.766E-01	Half-Life too short		
TE-123M	-1.995E-02		3.263E-02	5.083E-02	3.626E-03	-0.392
I-124	4.358E-01		8.480E-01	1.240E+00	8.572E-02	0.352
SB-124	-3.482E-02		8.108E-02	1.205E-01	7.579E-03	-0.289
SB-125	9.240E-02		1.130E-01	1.939E-01	1.157E-02	0.477
TE-125M	3.368E+00		9.635E+00	1.378E+01	1.603E+00	0.244
I-126	-1.546E-01		2.103E-01	3.322E-01	2.378E-02	-0.465
SB-126	1.322E-01		2.072E-01	3.189E-01	2.322E-02	0.415
SB-127	9.488E-02		1.479E+00	2.490E+00	2.489E-01	0.038
XE-127	-3.705E-02		5.545E-02	8.195E-02	5.079E-03	-0.452
I-131	-2.514E-02		1.284E-01	2.088E-01	1.319E-02	-0.120
TE-132	1.271E-01		5.751E-01	9.685E-01	1.386E-01	0.131
BA-133	9.604E-03		5.951E-02	8.588E-02	9.882E-03	0.112
I-133	-2.903E-04		1.476E-03	Half-Life too short		
CS-134	1.363E-01		6.705E-02	1.260E-01	9.330E-03	1.081
CS-135	2.593E-01		2.073E-01	3.200E-01	2.489E-02	0.810
I-135	2.280E+08		2.250E+08	Half-Life too short		
CS-136	4.312E-02		1.338E-01	2.267E-01	1.594E-02	0.190
BA-137M	6.057E-02		4.574E-02	8.350E-02	5.964E-03	0.725
CS-137	6.403E-02		4.835E-02	8.827E-02	6.323E-03	0.725
CE-139	2.318E-02		3.100E-02	5.346E-02	3.239E-03	0.434
BA-140	-3.341E-02		3.046E-01	4.884E-01	1.595E-01	-0.068
LA-140	-3.821E-02		1.165E-01	1.850E-01	1.096E-02	-0.207
CE-141	2.778E-02		6.654E-02	1.079E-01	9.754E-03	0.257
CE-143	4.395E-04		7.337E-05	Half-Life too short		
CE-144	-1.025E-01		2.215E-01	3.482E-01	5.763E-02	-0.294
PM-144	-1.321E-02		4.409E-02	7.213E-02	5.222E-03	-0.183

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144	-8.948E-01		2.986E+00	4.885E+00	3.535E-01	-0.183
PM-146	3.954E-02		5.482E-02	9.335E-02	8.138E-03	0.424
ND-147	9.303E-02		6.538E-01	1.070E+00	1.481E-01	0.087
PM-149	5.691E+01		7.418E+01	1.266E+02	1.797E+01	0.450
EU-152	4.234E-02		1.687E-01	1.947E-01	1.266E-02	0.217
GD-153	-4.854E-03		8.063E-02	1.135E-01	1.027E-02	-0.043
EU-154	5.261E-02		1.788E-01	2.989E-01	2.811E-02	0.176
TB-160	1.035E-01		1.840E-01	3.199E-01	2.305E-02	0.324
HO-166M	-1.200E-03		8.367E-02	1.398E-01	1.016E-02	-0.009
TM-171	-3.303E+00		1.842E+01	2.599E+01	1.880E+00	-0.127
LU-176	-2.745E-03		2.697E-02	4.437E-02	2.602E-03	-0.062
LU-177	2.694E+00	+	1.656E+00	1.921E+00	1.192E-01	1.402
LU-177M	-2.806E-01		2.278E-01	3.443E-01	1.924E-02	-0.815
HF-181	-2.094E-02		4.727E-02	7.412E-02	4.571E-03	-0.283
W-181	2.117E-01		2.286E-01	3.345E-01	2.405E-02	0.633
TA-182	-5.750E-02		2.946E-01	4.717E-01	2.728E-02	-0.122
RE-183	-3.081E-02		1.146E-01	1.916E-01	1.262E-02	-0.161
RE-184	1.004E-01		2.693E-01	4.552E-01	2.769E-02	0.221
OS-185	2.723E-02		5.933E-02	9.866E-02	6.997E-03	0.276
RE-188	1.827E-01		1.921E-01	3.164E-01	2.413E-02	0.577
W-188	1.833E+00		9.274E+00	1.352E+01	7.922E-01	0.136
IR-192	-3.255E-02		3.992E-02	6.309E-02	3.711E-03	-0.516
AU-195	1.693E-02		2.111E-01	3.300E-01	3.029E-02	0.051
TL-200	-6.085E-05		1.318E-04	Half-Life too short		
TL-201	2.152E+00		5.693E+00	9.708E+00	5.880E-01	0.222
TL-202	-3.183E-02		8.397E-02	1.337E-01	7.782E-03	-0.238
HG-203	4.630E-02		4.681E-02	8.081E-02	5.007E-03	0.573
BI-207	6.144E-02		8.088E-02	1.410E-01	9.122E-03	0.436
TL-207	-8.855E-01		8.486E-01	1.310E+00	2.165E-01	-0.676
PO-209	-6.011E-01		1.048E+01	1.725E+01	1.235E+00	-0.035
PB-211	-2.118E+00		1.794E+00	1.786E+00	1.113E+00	-1.186
BI-212	1.695E+00	+	6.282E-01	9.339E-01	8.303E-02	1.815
PO-215	-8.855E-01		8.486E-01	1.310E+00	2.165E-01	-0.676
RN-219	-1.818E-01		5.088E-01	8.145E-01	1.097E-01	-0.223
RN-220	-3.390E+01		3.445E+01	5.127E+01	3.400E+00	-0.661
RA-223	-8.855E-01		8.486E-01	1.310E+00	2.165E-01	-0.676
AC-227	2.288E-01		4.451E-01	7.544E-01	1.062E-01	0.303
TH-227	2.288E-01		4.456E-01	7.544E-01	1.282E-01	0.303
TH-229	-5.308E-02		5.742E-01	9.356E-01	5.779E-02	-0.057
PA-231	-5.069E-03		1.804E+00	2.993E+00	4.130E-01	-0.002
TH-231	-8.855E-01		8.486E-01	1.310E+00	2.165E-01	-0.676
U-231	-8.599E-02		9.054E-01	1.273E+00	1.136E-01	-0.068
PA-233	7.293E-03		7.194E-02	1.196E-01	7.432E-03	0.061
PA-234	-1.913E-01		4.157E-01	6.537E-01	1.182E-01	-0.293
PA-234M	3.209E-01		8.624E+00	1.424E+01	1.402E+00	0.023
NP-236	-4.644E-02		9.045E-02	1.414E-01	9.728E-03	-0.328
NP-239	1.002E-01		1.894E-01	3.099E-01	3.393E-02	0.323
AM-241	8.637E-03		7.367E-02	1.058E-01	8.256E-03	0.082

Sample ID : G232758003 Acquisition date : 6-JUL-2009 11:15:35

---- Non Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.703E-01	+	1.039E-01	1.544E-01	1.485E-02	1.103
CM-247	2.670E-03		4.560E-02	7.494E-02	4.111E-03	0.036
CF-249	6.032E-03		4.774E-02	7.889E-02	4.277E-03	0.076
CF-251	-7.523E-02		1.344E-01	2.217E-01	1.354E-02	-0.339

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.CAMMA]G232358003           *
* Acquisition date  :  6-JUL-2009 11:15:35 Detector SN#     :               *
* Detector ID       : GAM21                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:09.83      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOL1D          *
* Sample ID         : G232358003           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.4504E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.625E+01	3.265E+00	3.031E-01	1.666E+00
CD-109	2.925E+00	8.666E-01	5.518E-01	4.422E-01
SN-126	2.880E-01	8.533E-02	5.427E-02	4.353E-02
EU-155	1.900E-01	1.137E-01	8.777E-02	5.801E-02
TL-208	6.530E-01	1.182E-01	3.868E-02	6.030E-02
BI-210	1.463E+00	8.564E-01	5.192E-01	4.370E-01
PB-210	1.463E+00	8.564E-01	5.192E-01	4.370E-01
PO-210	1.463E+00	8.545E-01	5.192E-01	4.360E-01
BI-211	4.385E+00	6.028E-01	1.965E-01	3.076E-01
PB-212	1.860E+00	1.836E-01	5.115E-02	9.366E-02
PO-212	1.860E+00	1.836E-01	5.115E-02	9.366E-02
BI-214	1.353E+00	2.237E-01	7.808E-02	1.141E-01
PB-214	1.525E+00	2.237E-01	6.852E-02	1.142E-01
PO-214	1.525E+00	2.237E-01	6.852E-02	1.142E-01
PO-216	1.860E+00	1.836E-01	5.115E-02	9.366E-02
PO-218	1.525E+00	2.237E-01	6.852E-02	1.142E-01
RA-224	4.810E+00	1.446E+00	5.831E-01	7.379E-01
RA-226	1.353E+00	2.237E-01	7.808E-02	1.141E-01
AC-228	2.261E+00	4.698E-01	1.446E-01	2.397E-01
RA-228	2.261E+00	4.698E-01	1.446E-01	2.397E-01
TH-228	1.860E+00	1.836E-01	5.115E-02	9.366E-02
TH-230	1.353E+00	2.237E-01	7.808E-02	1.141E-01
TH-232	2.261E+00	4.698E-01	1.446E-01	2.397E-01
TH-234	1.589E+00	8.902E-01	5.663E-01	4.542E-01
U-234	1.353E+00	2.237E-01	7.808E-02	1.141E-01
U-235	7.205E-02	2.229E-01	1.934E-01	1.137E-01
NP-237	8.457E-01	3.034E-01	1.590E-01	1.548E-01
U-238	1.589E+00	8.902E-01	5.663E-01	4.542E-01
AM-243	4.772E-01	7.261E-02	3.233E-02	3.704E-02
ANH-511	1.432E-01	6.953E-02	2.860E-02	3.547E-02

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-1.233E-01	3.707E-01	3.053E-01	1.891E-01	NOT IDENT.
NA-22	1.882E-02	6.266E-02	5.397E-02	3.197E-02	NOT IDENT.
NA-24	3.247E+04	2.919E+05	0.000E+00	1.489E+05	SHORT HLIF
AL-26	-2.184E-02	3.643E-02	2.629E-02	1.859E-02	NOT IDENT.
TI-44	4.134E-01	4.989E-02	3.457E-02	2.545E-02	FAIL ABUN
SC-46	2.138E-02	5.379E-02	4.776E-02	2.744E-02	FAIL ABUN
V-48	4.826E-03	8.561E-02	7.344E-02	4.368E-02	NOT IDENT.
CR-51	1.357E-01	4.160E-01	3.709E-01	2.122E-01	NOT IDENT.
MN-52	-3.132E-02	2.620E-01	2.129E-01	1.337E-01	FAIL ABUN
MN-54	3.297E-02	5.254E-02	4.739E-02	2.681E-02	NOT IDENT.
CO-56	-1.454E-02	5.326E-02	4.488E-02	2.717E-02	NOT IDENT.
CO-57	8.281E-03	2.496E-02	2.200E-02	1.273E-02	NOT IDENT.
CO-58	-5.232E-03	5.202E-02	4.463E-02	2.654E-02	NOT IDENT.
FE-59	-1.268E-01	1.335E-01	1.029E-01	6.809E-02	NOT IDENT.
CO-60	-2.297E-02	6.126E-02	4.890E-02	3.125E-02	NOT IDENT.
ZN-65	-7.116E-02	1.438E-01	9.709E-02	7.335E-02	NOT IDENT.
GE-68	-2.581E-01	1.722E+00	1.438E+00	8.783E-01	NOT IDENT.
AS-73	-1.251E-01	2.449E-01	2.177E-01	1.250E-01	NOT IDENT.
AS-74	5.065E-02	1.136E-01	9.905E-02	5.794E-02	NOT IDENT.
SE-75	-1.035E-02	5.491E-02	4.178E-02	2.802E-02	NOT IDENT.
BR-77	3.298E+00	9.242E+00	8.074E+00	4.715E+00	FAIL ABUN
SR-82	-3.493E-01	4.494E-01	3.627E-01	2.293E-01	NOT IDENT.
RB-83	2.130E-02	8.489E-02	7.362E-02	4.331E-02	NOT IDENT.
RB-84	1.170E-02	9.101E-02	7.915E-02	4.643E-02	NOT IDENT.
KR-85	2.368E+01	1.013E+01	8.907E+00	5.170E+00	NOT IDENT.
SR-85	1.199E-01	5.133E-02	4.512E-02	2.619E-02	NOT IDENT.
RB-86	-2.284E-01	1.042E+00	8.644E-01	5.317E-01	NOT IDENT.
Y-88	-1.450E-02	3.864E-02	2.955E-02	1.972E-02	NOT IDENT.
ZR-88	1.088E-03	3.796E-02	3.296E-02	1.937E-02	NOT IDENT.
Y-91	6.324E+00	2.783E+01	2.381E+01	1.420E+01	NOT IDENT.
NB-94	5.879E-04	4.675E-02	4.088E-02	2.385E-02	NOT IDENT.
NB-95	1.145E-02	5.695E-02	5.015E-02	2.906E-02	NOT IDENT.
NB-95M	8.427E-01	1.740E-01	1.542E-01	8.878E-02	NOT IDENT.
ZR-95	4.619E-02	9.450E-02	8.505E-02	4.821E-02	NOT IDENT.
NB-97	-2.017E+04	4.095E+04	0.000E+00	2.090E+04	SHORT HLIF
ZR-97	1.303E+06	7.792E+05	0.000E+00	3.975E+05	SHORT HLIF
MO-99	-3.480E+00	1.106E+01	9.381E+00	5.645E+00	NOT IDENT.
TC-99M	-6.848E+14	1.668E+15	0.000E+00	8.510E+14	SHORT HLIF
RH-101	6.894E-03	3.548E-02	3.216E-02	1.810E-02	NOT IDENT.
RH-102	2.031E-02	3.414E-02	3.046E-02	1.742E-02	NOT IDENT.
RU-103	-1.789E-02	4.732E-02	3.924E-02	2.414E-02	FAIL ABUN
RH-106	2.186E-01	4.014E-01	3.424E-01	2.048E-01	FAIL ABUN
RU-106	2.186E-01	4.008E-01	3.424E-01	2.045E-01	FAIL ABUN
AG-108M	-4.140E-03	4.054E-02	3.471E-02	2.068E-02	NOT IDENT.
AG-110M	-2.551E-02	4.508E-02	3.794E-02	2.300E-02	NOT IDENT.
IN-111	-9.358E-02	9.516E-01	7.319E-01	4.855E-01	NOT IDENT.
IN-113M	-6.136E-03	5.450E-02	4.697E-02	2.781E-02	NOT IDENT.
SN-113	-6.136E-03	5.450E-02	4.697E-02	2.781E-02	NOT IDENT.
IN-114M	-8.575E-02	2.161E-01	1.663E-01	1.102E-01	NOT IDENT.
CD-115	-7.613E-01	9.264E+00	7.834E+00	4.727E+00	NOT IDENT.
SN-117M	-9.937E-03	5.840E-02	4.995E-02	2.979E-02	NOT IDENT.
SB-122	-3.282E+00	2.286E+00	1.740E+00	1.166E+00	NOT IDENT.
I-123	-9.496E+05	1.522E+06	0.000E+00	7.766E+05	SHORT HLIF
TE-123M	-1.995E-02	3.198E-02	2.687E-02	1.631E-02	NOT IDENT.
I-124	4.358E-01	8.311E-01	6.365E-01	4.240E-01	NOT IDENT.
SB-124	-3.482E-02	7.946E-02	6.038E-02	4.054E-02	FAIL ABUN
SB-125	9.240E-02	1.108E-01	1.003E-01	5.651E-02	FAIL ABUN
TE-125M	3.368E+00	9.442E+00	7.342E+00	4.817E+00	NOT IDENT.
I-126	-1.546E-01	2.061E-01	1.701E-01	1.052E-01	NOT IDENT.
SB-126	1.322E-01	2.030E-01	1.630E-01	1.036E-01	FAIL ABUN
SB-127	9.488E-02	1.450E+00	1.275E+00	7.397E-01	NOT IDENT.
XE-127	-3.705E-02	5.434E-02	4.310E-02	2.773E-02	NOT IDENT.
I-131	-2.514E-02	1.259E-01	1.084E-01	6.422E-02	NOT IDENT.
TE-132	1.271E-01	5.636E-01	5.080E-01	2.876E-01	NOT IDENT.
BA-133	9.604E-03	5.832E-02	4.461E-02	2.975E-02	NOT IDENT.
I-133	-2.903E+02	2.894E+03	0.000E+00	1.476E+03	SHORT HLIF
CS-134	1.363E-01	6.571E-02	6.430E-02	3.353E-02	NOT IDENT.
CS-135	2.593E-01	2.032E-01	1.673E-01	1.037E-01	NOT IDENT.
I-135	2.280E+14	4.411E+14	0.000E+00	2.250E+14	SHORT HLIF
CS-136	4.312E-02	1.311E-01	1.149E-01	6.691E-02	FAIL ABUN
BA-137M	6.057E-02	4.482E-02	4.277E-02	2.287E-02	NOT IDENT.
CS-137	6.403E-02	4.738E-02	4.522E-02	2.418E-02	NOT IDENT.
CE-139	2.318E-02	3.038E-02	2.824E-02	1.550E-02	NOT IDENT.
BA-140	-3.341E-02	2.985E-01	2.514E-01	1.523E-01	NOT IDENT.
LA-140	-3.821E-02	1.142E-01	9.284E-02	5.826E-02	NOT IDENT.

CE-141	2.778E-02	6.521E-02	5.717E-02	3.327E-02	NOT IDENT.
CE-143	4.395E-02	1.438E+02	0.000E+00	7.337E+01	SHORT HLIF
CE-144	-1.025E-01	2.170E-01	1.847E-01	1.107E-01	NOT IDENT.
PM-147	-1.321E-02	4.321E-02	3.691E-02	2.204E-02	NOT IDENT.
PR-144	-8.948E-01	2.926E+00	2.500E+00	1.493E+00	NOT IDENT.
PM-146	3.954E-02	5.372E-02	4.823E-02	2.741E-02	NOT IDENT.
ND-147	9.303E-02	6.407E-01	5.509E-01	3.269E-01	FAIL ABUN
PM-149	5.691E+01	7.270E+01	6.607E+01	3.709E+01	NOT IDENT.
EU-152	4.234E-02	1.653E-01	1.012E-01	8.434E-02	FAIL ABUN
GD-153	-4.854E-03	7.901E-02	6.063E-02	4.031E-02	NOT IDENT.
EU-154	5.261E-02	1.752E-01	1.508E-01	8.938E-02	NOT IDENT.
TB-160	1.035E-01	1.803E-01	1.628E-01	9.200E-02	FAIL ABUN
HO-166M	-1.200E-03	8.199E-02	7.150E-02	4.183E-02	NOT IDENT.
TM-171	-3.303E+00	1.805E+01	1.399E+01	9.210E+00	NOT IDENT.
LU-176	-2.745E-03	2.643E-02	2.312E-02	1.348E-02	FAIL ABUN
LU-177	2.694E+00	1.623E+00	1.010E+00	8.282E-01	FAIL ABUN
LU-177M	-2.806E-01	2.233E-01	1.783E-01	1.139E-01	NOT IDENT.
HF-181	-2.094E-02	4.633E-02	3.824E-02	2.364E-02	NOT IDENT.
W-181	2.117E-01	2.240E-01	1.802E-01	1.143E-01	NOT IDENT.
TA-182	-5.750E-02	2.887E-01	2.382E-01	1.473E-01	FAIL ABUN
RE-183	-3.081E-02	1.123E-01	1.012E-01	5.731E-02	FAIL ABUN
RE-184	1.004E-01	2.640E-01	2.382E-01	1.347E-01	NOT IDENT.
OS-185	2.723E-02	5.815E-02	5.057E-02	2.967E-02	NOT IDENT.
RE-188	1.827E-01	1.883E-01	1.673E-01	9.607E-02	NOT IDENT.
W-188	1.833E+00	9.088E+00	7.053E+00	4.637E+00	FAIL ABUN
IR-192	-3.255E-02	3.912E-02	3.286E-02	1.996E-02	FAIL ABUN
AU-195	1.693E-02	2.069E-01	1.762E-01	1.056E-01	FAIL ABUN
TL-200	-6.085E+01	2.584E+02	0.000E+00	1.318E+02	SHORT HLIF
TL-201	2.152E+00	5.579E+00	5.126E+00	2.846E+00	NOT IDENT.
TL-202	-3.183E-02	8.229E-02	6.914E-02	4.198E-02	NOT IDENT.
HG-203	4.630E-02	4.587E-02	4.220E-02	2.340E-02	NOT IDENT.
BI-207	6.144E-02	7.926E-02	7.147E-02	4.044E-02	FAIL ABUN
TL-207	-8.855E-01	8.316E-01	6.819E-01	4.243E-01	FAIL ABUN
PO-209	-6.011E-01	1.027E+01	8.778E+00	5.240E+00	NOT IDENT.
PB-211	-2.118E+00	1.758E+00	9.249E-01	8.970E-01	NOT IDENT.
BI-212	1.695E+00	6.156E-01	4.774E-01	3.141E-01	FAIL ABUN
PO-215	-8.855E-01	8.316E-01	6.819E-01	4.243E-01	FAIL ABUN
RN-219	-1.818E-01	4.986E-01	4.220E-01	2.544E-01	FAIL ABUN
RN-220	-3.390E+01	3.376E+01	2.637E+01	1.722E+01	NOT IDENT.
RA-223	-8.855E-01	8.316E-01	6.819E-01	4.243E-01	FAIL ABUN
AC-227	2.288E-01	4.362E-01	3.947E-01	2.225E-01	NOT IDENT.
TH-227	2.288E-01	4.367E-01	3.947E-01	2.228E-01	FAIL ABUN
TH-229	-5.308E-02	5.627E-01	4.925E-01	2.871E-01	FAIL ABUN
PA-231	-5.069E-03	1.768E+00	1.562E+00	9.022E-01	NOT IDENT.
TH-231	-8.855E-01	8.316E-01	6.819E-01	4.243E-01	FAIL ABUN
U-231	-8.599E-02	8.873E-01	6.804E-01	4.527E-01	FAIL ABUN
PA-233	7.293E-03	7.050E-02	6.229E-02	3.597E-02	FAIL ABUN
PA-234	-1.913E-01	4.074E-01	3.322E-01	2.078E-01	FAIL ABUN
PA-234M	3.209E-01	8.452E+00	7.227E+00	4.312E+00	NOT IDENT.
NP-236	-4.644E-02	8.864E-02	7.473E-02	4.523E-02	NOT IDENT.
NP-239	1.002E-01	1.856E-01	1.649E-01	9.471E-02	FAIL ABUN
AM-241	8.637E-03	7.219E-02	5.708E-02	3.683E-02	NOT IDENT.
CM-243	1.703E-01	1.019E-01	8.234E-02	5.197E-02	FAIL ABUN
CM-247	2.670E-03	4.469E-02	3.882E-02	2.280E-02	NOT IDENT.
CF-249	6.032E-03	4.679E-02	4.090E-02	2.387E-02	NOT IDENT.
CF-251	-7.523E-02	1.317E-01	1.169E-01	6.720E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	587.1991
46.50	587.1991
46.50	587.1991
48.70	603.6066
49.72	576.8273
51.35	538.7420
52.39	606.4134
52.97	633.3954
53.15	645.7870
53.44	632.7645
54.07	648.6050
56.28	635.0776
56.28	635.0806
57.37	0.0000
57.53	644.8753
57.53	644.8765
57.60	644.9316
57.98	639.1761
57.98	639.1761
59.32	669.5764
59.32	669.5764
59.40	669.6422
59.54	669.7577
59.72	669.9055
60.01	689.9012
61.10	669.3833
61.14	669.4155
61.30	654.7023
63.00	684.1297
63.29	769.7037
63.29	769.7037
63.58	769.9686
64.28	809.2892
65.12	831.6213
65.20	786.9652
65.20	786.9652
66.05	801.0094
66.72	809.9239
66.83	810.0281
66.91	810.1026
67.20	830.3009
67.20	830.3009
67.75	811.4369
67.85	811.5292
68.90	740.3965
68.90	740.3965
69.30	803.1517
69.67	803.4874
70.82	843.7018
70.82	843.7018
70.83	843.7111
72.80	848.8877
72.87	848.9513
72.87	848.9513
74.67	778.6111
74.81	778.7274
74.81	778.7274
74.81	778.7274
74.81	778.7274
74.81	778.7274
74.81	778.7274
74.97	778.8608
75.28	779.1219
75.70	779.4710
77.11	780.6403
77.11	780.6403
77.11	780.6403

77.11	780.6403
77.11	780.6403
77.11	780.6403
78.38	672.4170
79.62	782.6951
79.80	782.8427
79.80	782.8427
80.11	783.0925
80.18	831.5698
80.30	831.6722
80.30	831.6722
80.57	831.9042
81.00	845.6164
81.07	845.6776
81.07	845.6776
81.07	845.6776
81.07	845.6776
82.60	796.3492
83.37	763.7377
83.78	764.0577
83.78	764.0577
83.78	764.0577
83.78	764.0577
84.21	742.4014
84.40	717.1718
84.90	705.6855
85.43	709.4460
86.29	750.7233
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86.54	669.5448
86.59	669.5786
86.72	669.6653
86.79	669.7087
86.94	669.8100
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87.30	670.0486
87.30	670.0486
87.30	670.0486
87.30	670.0486
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88.03	670.5284
88.36	670.7430
88.47	670.8153
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92.29	673.2901
92.38	673.3467
92.38	673.3467
93.35	487.9866
94.00	493.4079
94.67	543.2590
94.67	543.2610
94.90	543.3784
94.90	543.3784
94.90	543.3784
94.90	543.3784
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95.87	576.3658
96.73	535.7488
97.43	530.9545
98.44	530.2238
98.44	530.2238
98.88	515.7368
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99.55	498.8915
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100.10	472.1620
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103.76	513.3334
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105.31	492.6918
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111.00	494.0446

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116.30	425.5159
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117.00	432.2954
117.66	472.8432
121.11	422.8266
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121.78	428.5212
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122.32	402.4607
122.32	402.4607
122.32	402.4607
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136.48	433.4634
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142.65	421.0170
143.76	434.7008
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144.24	430.4058
144.24	430.4058
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145.44	437.4596
147.16	435.7733
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153.22	446.6132
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154.21	412.2003
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162.64	429.0217
163.35	429.2280
163.89	423.9725
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171.28	387.9899
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172.10	376.4078
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176.60	391.1546
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184.41	415.9568
185.71	376.9533
186.00	377.0238
190.27	379.2454
192.34	337.2923
193.63	379.0059
197.04	391.5608
198.01	372.4301
198.60	361.4970
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201.83	351.1057
202.84	381.6938
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208.81	297.8105

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209.75	297.9732
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216.55	323.8342
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227.20	296.2404
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228.18	275.7650
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236.00	248.0547
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238.63	266.9569
238.63	266.9569
239.00	267.0087
240.98	267.2903
241.98	245.6987
241.98	245.6987
241.98	245.6987
244.69	264.9763
245.39	246.1399
247.94	283.2035
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252.85	260.4037
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256.20	255.1398
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264.65	234.2424
268.24	231.4713
268.79	216.5236
269.46	216.5953
269.46	216.5953
269.46	216.5953
269.46	216.5953
271.23	209.4316
273.65	288.1128
276.40	218.4364
277.35	210.4614
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277.60	203.1377
278.00	204.0319
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279.20	225.3364
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280.46	271.7245
281.68	259.3492
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284.30	240.3707
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286.10	205.7951
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291.72	226.0417
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295.21	241.6139
295.21	241.6139
295.96	278.2612

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299.80	179.8962
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300.09	168.5747
300.09	168.5747
300.10	168.5747
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304.40	239.7209
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306.84	174.6255
308.46	188.4224
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319.02	188.3391
319.41	179.5397
320.08	181.5561
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323.87	245.7581
323.87	245.7581
323.87	245.7581
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334.20	220.5362
334.30	220.5444
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338.28	196.8526
338.28	196.8526
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338.32	196.8550
338.32	196.8550
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350.59	0.0000
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351.92	158.1945
351.92	158.1945
355.39	0.0000
356.01	162.7820
364.48	164.0160
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374.96	148.6432
383.85	152.1944
387.95	141.3347
388.63	142.3821
391.69	157.7177
391.69	157.7177
392.90	157.7919
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400.65	147.1046
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401.81	152.2449
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413.65	176.3810
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443.98	106.1886
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445.03	109.3229
445.03	109.3229
445.03	109.3229
445.03	109.3229
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473.00	111.4422
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476.78	93.8584
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477.96	107.4597
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487.03	93.1393
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511.85	98.4819
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513.99	84.4727
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563.90	151.2445
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569.32	96.6995
569.50	97.7784
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574.00	153.0243
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592.07	81.7350
593.00	90.8968
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600.56	93.2668
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602.71	92.2404
603.60	94.0744
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604.70	85.0555
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609.31	103.2916
609.31	103.2916

609.31	103.2916
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621.84	61.1078
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635.90	98.6023
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696.49	84.4701
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697.49	88.2063
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722.78	86.5220
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723.30	92.9432
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744.21	56.3867
747.13	66.7734
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756.87	81.0799
763.93	98.2236
765.79	86.9294
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768.36	91.7131
768.36	91.7131
768.36	91.7131
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778.57	76.7780
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796.30	62.8311
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805.60	57.2461
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810.76	68.7803
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889.25	58.3667
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911.07	56.6949
911.07	56.6949
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934.06	44.2090
934.06	44.2090
934.06	44.2090
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949.00	51.2499
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968.20	45.5218
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969.11	66.1757
969.11	66.1757
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1076.63	56.6517
1077.35	56.6608
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1120.29	57.7132
1120.29	57.7132
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1238.11	78.1860
1238.11	78.1860
1238.11	78.1860
1238.25	78.1891
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1298.22	0.0000
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1325.50	41.2756
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1362.66	0.0000
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1368.21	29.8457
1368.53	0.0000
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1377.67	23.4860
1377.67	23.4860
1377.67	23.4860
1377.67	23.4860
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1395.20	34.2591
1407.95	25.7480
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1457.56	0.0000
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1489.15	16.7658
1509.49	26.1621
1596.49	25.5602
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1691.02	10.5561
1691.02	10.5561

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1750.46	0.0000
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1764.49	10.1796
1764.49	10.1796
1764.49	10.1796
1770.23	44.6315
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1791.20	0.0000
1808.65	11.7037
1836.01	9.7886

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232358003

Total Uranium Activity	4.7595E+00	ug/g
Total Uranium Counting Unc.	2.6503E+00	ug/g
Total Uranium Tpu	1.3502E-06	ug/g
Total Uranium Mda	1.6872E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232358003       *
*   ANALYST       : MXR1                      DETECTOR   : GAM21            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:15:35.34    SAMPLE ALQT:  145.040 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.084E+01
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.425E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 4.949E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 2.421E+00
```

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:54:10.79

```
*************************************************************************
*                          CEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358004.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:16:10.
Sample ID         : G232358004           Sample quantity  : 1.34080E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.95  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.31*	122	767	1.19	125.98	122	9	1.70E-02	42.8	
2	2	74.96*	674	723	1.18	149.29	145	13	9.37E-02	7.7	6.03E-01
3	2	77.24*	1027	632	1.14	153.85	145	13	1.43E-01	5.5	
4	0	84.00*	105	610	1.40	167.36	165	7	1.46E-02	40.7	
5	0	87.27	307	711	1.44	173.91	171	7	4.26E-02	15.5	
6	0	93.74*	151	1155	1.58	186.84	180	11	2.09E-02	46.6	
7	0	129.50	182	613	1.55	258.34	253	11	2.52E-02	27.4	
8	0	186.19*	279	609	1.65	371.71	367	11	3.87E-02	18.8	
9	0	209.41	232	454	1.29	418.13	414	10	3.22E-02	18.4	
10	4	238.88*	2208	347	1.28	477.06	468	23	3.07E-01	2.7	1.30E+00
11	4	241.86	445	412	1.63	483.03	468	23	6.17E-02	11.7	
12	0	270.50	126	359	1.66	540.31	536	10	1.74E-02	29.6	
13	0	295.36	831	297	1.36	590.01	583	14	1.15E-01	5.6	
14	0	300.61*	135	252	1.40	600.52	596	10	1.88E-02	24.2	
15	0	328.62	113	223	1.23	656.54	652	9	1.57E-02	25.7	
16	0	338.55*	435	368	1.50	676.39	668	16	6.04E-02	11.1	
17	0	352.22*	1138	299	1.45	703.74	698	12	1.58E-01	4.3	
18	0	463.50	126	287	1.75	926.31	918	18	1.74E-02	32.9	
19	0	511.18*	192	307	1.64	1021.69	1013	18	2.67E-02	24.8	
20	0	583.67*	741	176	1.92	1166.69	1159	15	1.03E-01	5.5	
21	0	609.79*	802	236	1.85	1218.94	1211	18	1.11E-01	5.8	
22	0	662.32	80	186	4.06	1324.03	1318	16	1.11E-02	39.6	
23	0	727.68	156	149	1.95	1454.78	1447	14	2.17E-02	18.5	
24	0	767.83	136	189	2.10	1535.10	1526	17	1.89E-02	24.8	
25	0	796.35	108	124	1.79	1592.17	1584	17	1.50E-02	25.4	
26	0	911.97*	508	173	2.26	1823.49	1815	19	7.05E-02	7.8	
27	1	965.43	96	136	2.53	1930.46	1923	26	1.33E-02	27.7	2.77E+00
28	1	969.62*	321	94	2.54	1938.85	1923	26	4.46E-02	9.4	
29	0	1095.42	37	83	0.76	2190.59	2181	15	5.08E-03	56.6	
30	0	1120.79	211	154	1.65	2241.36	2233	18	2.93E-02	15.4	
31	0	1238.96	102	139	2.95	2477.87	2468	18	1.42E-02	28.8	
32	0	1379.17	55	55	1.71	2758.52	2752	16	7.71E-03	33.7	
33	0	1461.75*	2678	87	3.06	2923.82	2912	23	3.72E-01	2.1	
34	0	1766.27*	181	25	2.48	3533.51	3526	15	2.51E-02	9.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 13-JUL-2009 18:54:13

```
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358004.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,LNBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:16:10
Sample ID         : G232358004           Sample quantity  : 134.08 GRAM
Sample type       : SOLID                Sample geometry  :
Detector name     : GAMMA22              Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.95   0.0%
Peak Width (FWHM):     3.00              Confidence level :     5.00 %
Energy tolerance :     1.50 keV          Half life ratio  :     8.00
Errors propagated: Yes                   Systematic Error :     0.00 %
Efficiency type  : Empirical             Efficiencies at  : Peak Energy
Abundance limit  :    75.00              WTM error limit  :     3.00
```

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.547E+01	2.900E+00	4.526E-01	3.150E-02	78.371
CD-109	+	88.03	*	2.966E+00	9.537E-01	1.377E+00	1.230E-01	2.155
SN-126	+	64.28		7.405E-01	6.429E-01	6.808E-01	9.818E-02	1.088
	+	86.94		1.214E+00	6.274E-01	5.731E-01	2.373E-01	2.119
	+	87.57	*	2.921E-01	9.390E-02	1.345E-01	1.197E-02	2.171
BA-137M	+	661.65	*	6.664E-02	5.299E-02	5.054E-02	3.750E-03	1.318
CS-137	+	661.65	*	7.044E-02	5.602E-02	5.343E-02	3.974E-03	1.318
TL-208		277.35		6.456E-01	3.422E-01	5.717E-01	5.974E-02	1.129
	+	510.84		5.494E-01	2.790E-01	1.752E-01	1.850E-02	3.135
	+	583.14	*	5.986E-01	7.991E-02	4.699E-02	3.618E-03	12.739
		860.37		8.126E-01	2.730E-01	5.006E-01	5.221E-02	1.623
BI-211		72.87		7.272E+00	3.268E+00	4.903E+00	3.752E-01	1.483
	+	351.07	*	4.265E+00	4.551E-01	2.611E-01	1.656E-02	16.336
PB-212	+	74.81		2.648E+00	5.202E-01	4.807E-01	5.847E-02	5.508
	+	77.11		2.297E+00	3.118E-01	2.745E-01	2.184E-02	8.366
	+	87.30		1.351E+00	4.548E-01	6.518E-01	8.712E-02	2.072
	+	238.63	*	1.927E+00	1.708E-01	7.881E-02	5.572E-03	24.450
	+	300.09		1.755E+00	8.599E-01	7.680E-01	6.256E-02	2.285
PO-212	+	74.81		2.648E+00	5.202E-01	4.807E-01	5.847E-02	5.508
	+	77.11		2.297E+00	3.118E-01	2.745E-01	2.184E-02	8.366
	+	87.30		1.351E+00	4.548E-01	6.518E-01	8.712E-02	2.072
		115.19		1.826E+00	3.221E+00	5.459E+00	3.543E-01	0.334
	+	238.63	*	1.927E+00	1.708E-01	7.881E-02	5.572E-03	24.450
	+	300.09		1.755E+00	8.599E-01	7.680E-01	6.256E-02	2.285
BI-214	+	609.31	*	1.218E+00	1.778E-01	9.353E-02	8.226E-03	13.018
	+	768.36		2.280E+00	1.155E+00	1.010E+00	1.065E-01	2.257
		934.06		6.481E-01	1.007E+00	1.724E+00	2.021E-01	0.376
	+	1120.29		1.623E+00	5.223E-01	3.681E-01	3.490E-02	4.411
	+	1238.11		2.167E+00	1.262E+00	1.224E+00	1.023E-01	1.771
		1377.67		1.817E+00	1.021E+00	1.681E+00	1.553E-01	1.081
		1764.49		1.795E+00	3.447E-01	6.740E-01	3.948E-02	2.663
PB-214	+	74.81		4.562E+00	8.577E-01	8.282E-01	8.900E-02	5.508
	+	77.11		3.938E+00	6.130E-01	4.707E-01	5.184E-02	8.366
	+	87.30		2.314E+00	7.650E-01	1.117E+00	1.312E-01	2.072

---- Identified Nuclides ----

Nuclide	Line Idnd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.326E+00	5.744E-01	4.736E-01	3.713E-02	4.911
	+	295.21		1.893E+00	2.654E-01	1.720E-01	1.448E-02	11.008
	+	351.92	*	1.484E+00	1.762E-01	9.278E-02	7.621E-03	15.990
PO-214	+	74.81		4.562E+00	8.577E-01	8.282E-01	8.900E-02	5.508
	+	77.11		3.938E+00	6.130E-01	4.707E-01	5.184E-02	8.366
	+	87.30		2.314E+00	7.650E-01	1.117E+00	1.312E-01	2.072
	+	241.98		2.326E+00	5.744E-01	4.736E-01	3.713E-02	4.911
	+	295.21		1.893E+00	2.654E-01	1.720E-01	1.448E-02	11.008
	+	351.92	*	1.484E+00	1.762E-01	9.278E-02	7.621E-03	15.990
PO-216	+	74.81		2.648E+00	5.202E-01	4.807E-01	5.847E-02	5.508
	+	77.11		2.297E+00	3.118E-01	2.745E-01	2.184E-02	8.366
	+	87.30		1.351E+00	4.548E-01	6.518E-01	8.712E-02	2.072
	+	238.63	*	1.927E+00	1.708E-01	7.881E-02	5.572E-03	24.450
	+	300.09		1.755E+00	8.599E-01	7.680E-01	6.256E-02	2.285
PO-218	+	74.81		4.562E+00	8.577E-01	8.282E-01	8.900E-02	5.508
	+	77.11		3.938E+00	6.130E-01	4.707E-01	5.184E-02	8.366
	+	87.30		2.314E+00	7.650E-01	1.117E+00	1.312E-01	2.072
	+	241.98		2.326E+00	5.744E-01	4.736E-01	3.713E-02	4.911
	+	295.21		1.893E+00	2.654E-01	1.720E-01	1.448E-02	11.008
	+	351.92	*	1.484E+00	1.762E-01	9.278E-02	7.621E-03	15.990
RA-224	+	240.98	*	4.410E+00	1.061E+00	8.956E-01	4.904E-02	4.925
RA-226	+	609.31	*	1.218E+00	1.778E-01	9.353E-02	8.226E-03	13.018
	+	768.36		2.280E+00	1.155E+00	1.010E+00	1.065E-01	2.257
		934.06		6.481E-01	1.007E+00	1.724E+00	2.021E-01	0.376
	+	1120.29		1.623E+00	5.223E-01	3.681E-01	3.490E-02	4.411
	+	1238.11		2.167E+00	1.262E+00	1.224E+00	1.023E-01	1.771
		1377.67		1.817E+00	1.021E+00	1.681E+00	1.553E-01	1.081
		1764.49		1.795E+00	3.447E-01	6.740E-01	3.948E-02	2.663
AC-228	+	338.32		1.806E+00	8.379E-01	3.245E-01	1.322E-01	5.567
	+	911.07	*	1.789E+00	3.570E-01	1.849E-01	2.313E-02	9.673
	+	969.11		1.989E+00	6.003E-01	3.160E-01	7.476E-02	6.295
RA-228	+	338.32		1.806E+00	8.379E-01	3.245E-01	1.322E-01	5.567
	+	911.07	*	1.789E+00	3.570E-01	1.849E-01	2.313E-02	9.673
	+	969.11		1.989E+00	6.003E-01	3.160E-01	7.476E-02	6.295
TH-228	+	84.40		3.174E+00	2.616E+00	3.616E+00	4.742E-01	0.878
	+	238.60	*	1.927E+00	1.708E-01	7.880E-02	5.572E-03	24.452
	+	300.10		1.755E+00	1.337E+00	7.680E-01	4.526E-01	2.285
TH-230	+	609.31	*	1.218E+00	1.778E-01	9.353E-02	8.226E-03	13.018
	+	768.36		2.280E+00	1.155E+00	1.010E+00	1.065E-01	2.257
		934.06		6.481E-01	1.007E+00	1.724E+00	2.021E-01	0.376
	+	1120.29		1.623E+00	5.223E-01	3.680E-01	3.490E-02	4.411
	+	1238.11		2.167E+00	1.262E+00	1.224E+00	1.023E-01	1.771
		1377.67		1.816E+00	1.021E+00	1.681E+00	1.553E-01	1.081
		1764.49		1.795E+00	3.447E-01	6.740E-01	3.948E-02	2.663
TH-232	+	338.32		1.806E+00	4.133E-01	3.245E-01	1.849E-02	5.567
	+	911.07	*	1.789E+00	3.570E-01	1.849E-01	2.313E-02	9.673
	+	969.11		1.989E+00	6.003E-01	3.160E-01	7.476E-02	6.295
TH-234	+	63.29	*	1.871E+00	1.634E+00	1.721E+00	2.983E-01	1.087
	+	92.38		9.321E-01	8.844E-01	7.496E-01	1.346E-01	1.244

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.218E+00	1.778E-01	9.353E-02	8.226E-03	13.018
	+	768.36		2.280E+00	1.155E+00	1.010E+00	1.065E-01	2.257
		934.06		6.481E-01	1.007E+00	1.724E+00	2.021E-01	0.376
	+	1120.29		1.623E+00	5.223E-01	3.680E-01	3.490E-02	4.411
	+	1238.11		2.167E+00	1.262E+00	1.224E+00	1.023E-01	1.771
		1377.67		1.816E+00	1.021E+00	1.681E+00	1.553E-01	1.081
		1764.49		1.795E+00	3.447E-01	6.740E-01	3.948E-02	2.663
NP-237	+	86.50	*	8.577E-01	3.276E-01	2.905E-01	6.516E-02	2.952
		95.87		6.377E-01	9.342E-01	1.405E+00	3.430E-01	0.454
U-238	+	63.29	*	1.871E+00	1.634E+00	1.721E+00	2.983E-01	1.087
	+	92.38		9.321E-01	8.719E-01	7.496E-01	6.271E-02	1.244
AM-243	+	74.67	*	4.293E-01	7.418E-02	7.813E-02	6.075E-03	5.494
	+	86.72		3.216E+01	1.034E+01	1.087E+01	9.579E-01	2.958
		117.66		-2.691E+00	3.440E+00	5.581E+00	3.542E-01	-0.482
		142.18		-9.254E+00	1.632E+01	2.641E+01	1.480E+00	-0.350
ANH-511	+	511.00	*	1.187E-01	5.945E-02	3.786E-02	2.454E-03	3.135

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.111E-01	2.677E-01	4.475E-01	3.201E-02	0.472
NA-22		1274.54	*	-1.501E-02	3.880E-02	6.293E-02	4.005E-03	-0.239
NA-24		1368.53	*	-5.542E-02	3.880E-02	Half-Life too short		
AL-26		1129.67		-6.023E-01	1.638E+00	2.176E+00	1.434E-01	-0.277
		1808.65	*	-1.146E-02	1.877E-02	2.791E-02	1.588E-03	-0.410
TI-44		67.85		-1.332E-02	4.616E-02	6.458E-02	4.753E-03	-0.206
	+	78.38	*	4.238E-01	5.754E-02	7.324E-02	5.899E-03	5.787
SC-46		889.25	*	-2.805E-02	3.275E-02	5.117E-02	5.246E-03	-0.548
	+	1120.51		2.753E-01	8.667E-02	1.102E-01	7.475E-03	2.498
V-48		944.10		-4.826E-01	7.166E-01	1.128E+00	1.105E-01	-0.428
		983.50	*	-8.356E-02	5.563E-02	8.069E-02	7.451E-03	-1.036
		1312.09		1.210E-02	6.145E-02	1.035E-01	6.851E-03	0.117
CR-51		320.08	*	6.130E-02	3.035E-01	5.063E-01	3.218E-02	0.121
MN-52		744.21		4.650E-03	1.791E-01	2.911E-01	2.445E-02	0.016
		848.13		-1.260E+00	4.787E+00	7.849E+00	7.623E-01	-0.161
		935.52		1.568E-01	1.938E-01	3.348E-01	3.317E-02	0.469
		1246.25		2.326E+00	6.310E+00	9.255E+00	5.692E-01	0.251
		1333.61		2.002E+00	3.564E+00	6.165E+00	4.169E-01	0.325
		1434.06	*	2.880E-02	1.608E-01	2.694E-01	1.800E-02	0.107
MN-54		834.83	*	1.909E-02	3.426E-02	5.874E-02	5.603E-03	0.325
CO-56		846.75	*	-3.283E-02	3.334E-02	5.203E-02	5.044E-03	-0.631
		977.42		2.073E+00	2.604E+00	3.960E+00	3.692E-01	0.523
		1037.82		5.310E-02	2.640E-01	4.385E-01	3.871E-02	0.121
		1175.09		-3.983E-01	1.918E+00	3.066E+00	1.732E-01	-0.130
	+	1238.25		2.173E-01	1.260E-01	1.450E-01	9.343E-03	1.498
		1360.21		-3.351E-01	7.901E-01	1.257E+00	8.484E-02	-0.267
		1771.40		5.672E-01	2.248E-01	4.310E-01	2.514E-02	1.316
CO-57		122.06	*	3.060E-05	2.260E-02	3.757E-02	2.297E-03	0.001

---- Non-Identified Nuclides ----

Nuclide	Line Iced	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-6.309E-02	1.978E-01	3.235E-01	2.155E-02	-0.195
CO-58		810.76	*	-9.795E-03	3.239E-02	5.323E-02	4.924E-03	-0.184
FE-59		142.65		-1.542E+00	2.571E+00	4.104E+00	2.296E-01	-0.376
		192.34		4.909E-01	8.967E-01	1.370E+00	1.582E-01	0.358
		1099.22	*	-9.368E-02	9.747E-02	1.221E-01	9.813E-03	-0.767
		1291.56		6.234E-02	9.655E-02	1.678E-01	1.335E-02	0.372
CO-60		1173.22		-3.955E-02	3.901E-02	5.878E-02	3.313E-03	-0.673
		1332.49	*	3.376E-02	3.119E-02	5.601E-02	3.788E-03	0.603
ZN-65		1115.52	*	8.028E-03	8.824E-02	1.233E-01	8.506E-03	0.065
GE-68		1077.35	*	3.217E-01	1.176E+00	1.953E+00	1.492E-01	0.165
AS-73		53.44	*	7.192E-01	6.637E-01	1.077E+00	7.484E-02	0.668
AS-74		595.88	*	-3.905E-02	7.325E-02	1.174E-01	8.247E-03	-0.333
		634.78		-5.955E-02	2.830E-01	4.595E-01	3.336E-02	-0.130
SE-75		66.05		-2.216E+00	4.685E+00	6.501E+00	6.081E-01	-0.341
		96.73		-1.493E-01	7.500E-01	1.103E+00	1.454E-01	-0.135
		121.11		2.936E-02	1.212E-01	2.030E-01	1.920E-02	0.145
		136.00		-1.754E-02	3.813E-02	5.991E-02	3.492E-03	-0.293
		198.60		3.163E-01	1.722E+00	2.725E+00	1.828E-01	0.116
		264.65	*	2.542E-02	3.969E-02	6.240E-02	3.510E-03	0.407
		279.53		5.312E-02	9.493E-02	1.616E-01	9.839E-03	0.329
		303.91		7.002E-01	1.898E+00	2.794E+00	2.642E-01	0.251
		400.65		6.730E-02	2.138E-01	3.531E-01	3.201E-02	0.191
BR-77	+	87.88		4.594E+02	1.477E+02	2.300E+02	2.053E+01	1.997
		200.40		-4.027E+01	1.075E+02	1.712E+02	9.053E+00	-0.235
	+	239.00		2.214E+02	1.693E+01	2.467E+01	1.349E+00	8.975
		249.79		-3.830E+01	4.168E+01	6.345E+01	3.497E+00	-0.604
		281.68		-8.586E+01	5.656E+01	8.856E+01	4.969E+00	-0.969
		297.23		4.414E+02	5.666E+01	8.589E+01	4.850E+00	5.139
		303.76		3.961E+01	1.163E+02	1.710E+02	9.678E+00	0.232
		439.47		6.270E+01	8.076E+01	1.360E+02	8.165E+00	0.461
		484.57		-5.636E+01	1.266E+02	2.075E+02	1.309E+01	-0.272
		520.65	*	4.418E-01	6.311E+00	1.010E+01	6.612E-01	0.044
		574.64		3.765E+01	1.304E+02	2.097E+02	1.445E+01	0.180
		578.91		-1.874E+01	6.194E+01	8.621E+01	5.963E+00	-0.217
		585.48		1.723E+03	2.074E+02	3.438E+02	2.392E+01	5.010
		755.35		-2.173E+00	1.029E+02	1.665E+02	1.421E+01	-0.013
		817.79		7.145E+00	7.840E+01	1.318E+02	1.229E+01	0.054
SR-82		698.33		-3.453E+00	2.715E+01	4.395E+01	3.449E+00	-0.079
		776.49	*	-1.800E-01	3.540E-01	5.074E-01	4.465E-02	-0.355
		1395.20		-4.957E+00	8.271E+00	1.284E+01	8.636E-01	-0.386
RB-83		520.41	*	3.855E-04	5.758E-02	9.182E-02	6.009E-03	0.004
		529.64		-2.823E-02	8.259E-02	1.351E-01	8.923E-03	-0.209
		552.65		-7.864E-02	1.509E-01	2.430E-01	1.641E-02	-0.324
RB-84		881.50	*	1.299E-02	5.292E-02	8.939E-02	9.073E-03	0.145
KR-85		513.99	*	3.660E+01	7.958E+00	1.377E+01	8.952E-01	2.658
SR-85		513.99	*	1.854E-01	4.032E-02	6.974E-02	4.535E-03	2.658
RB-86		1076.63	*	3.254E-01	7.029E-01	1.181E+00	9.035E-02	0.276
Y-88		898.02		1.258E-02	3.444E-02	5.842E-02	6.078E-03	0.215
		1836.01	*	1.253E-02	2.508E-02	4.422E-02	2.474E-03	0.283

--- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	-8.970E-03	2.613E-02	4.188E-02	2.380E-03	-0.214
Y-91		1204.90	*	6.459E+00	1.672E+01	2.767E+01	1.621E+00	0.233
NB-94		702.63	*	1.045E-02	2.785E-02	4.636E-02	3.662E-03	0.225
		871.10		-1.283E-03	2.663E-02	4.417E-02	4.422E-03	-0.029
NB-95		765.79	*	1.067E-01	4.286E-02	6.940E-02	6.014E-03	1.538
NB-95M		235.69	*	3.124E-01	1.319E-01	2.011E-01	1.461E-02	1.553
ZR-95		724.18		1.081E-01	9.393E-02	1.419E-01	1.268E-02	0.762
		756.15	*	1.660E-02	5.942E-02	9.790E-02	9.229E-03	0.170
NB-97		657.90	*	3.006E-02	5.942E-02	Half-Life too short		
		1024.60		-1.474E+00	5.942E-02	Half-Life too short		
ZR-97		254.15		-2.190E-01	5.942E-02	Half-Life too short		
		355.39		4.328E+00	5.942E-02	Half-Life too short		
		507.63	*	1.002E+00	5.942E-02	Half-Life too short		
		602.52		9.710E-01	5.942E-02	Half-Life too short		
		1021.30		7.517E-01	5.942E-02	Half-Life too short		
		1147.95		-1.578E+00	5.942E-02	Half-Life too short		
		1362.66		-1.138E-01	5.942E-02	Half-Life too short		
		1750.46		-1.154E-01	5.942E-02	Half-Life too short		
MO-99		140.51		-1.055E+01	1.908E+01	3.019E+01	8.125E+00	-0.349
		181.06		-6.282E+00	1.339E+01	1.854E+01	3.141E+00	-0.339
		366.43		2.334E+00	5.404E+01	8.635E+01	4.920E+00	0.027
		739.58	*	-2.822E+00	7.355E+00	1.163E+01	1.748E+00	-0.243
		778.00		-1.122E+01	2.259E+01	3.534E+01	3.116E+00	-0.318
TC-99M		140.51	*	-8.593E+08	2.259E+01	Half-Life too short		
RH-101		127.23		2.568E-02	3.221E-02	4.851E-02	2.890E-03	0.529
		198.01	*	1.213E-02	3.167E-02	5.045E-02	2.662E-03	0.241
		325.23		1.972E-02	2.112E-01	3.043E-01	1.731E-02	0.065
RH-102		418.52		2.172E-02	2.407E-01	3.921E-01	2.298E-02	0.055
		475.06	*	7.833E-03	2.441E-02	3.988E-02	2.491E-03	0.196
		631.29		-3.403E-02	4.431E-02	6.940E-02	5.023E-03	-0.490
		697.49		1.921E-02	6.269E-02	1.041E-01	8.156E-03	0.185
	+	766.84		3.410E-01	1.716E-01	1.948E-01	1.691E-02	1.751
		1046.59		-3.713E-02	1.014E-01	1.619E-01	1.328E-02	-0.229
		1112.84		3.260E-02	2.252E-01	3.166E-01	2.197E-02	0.103
RU-103		497.08	*	-1.532E-03	3.070E-02	5.130E-02	6.632E-03	-0.030
	+	610.33		1.289E+01	2.546E+00	2.335E+00	3.726E-01	5.519
RH-106	+	511.85		5.915E-01	2.963E-01	3.680E-01	2.388E-02	1.607
		621.84	*	-4.965E-02	2.626E-01	4.277E-01	5.336E-02	-0.116
		1050.47		3.048E-01	2.024E+00	3.347E+00	2.722E-01	0.091
RU-106	+	511.85		5.915E-01	2.963E-01	3.680E-01	2.388E-02	1.607
		621.84	*	-4.965E-02	2.626E-01	4.277E-01	3.071E-02	-0.116
		1050.47		3.048E-01	2.024E+00	3.347E+00	2.722E-01	0.091
AG-108M		433.93	*	-5.373E-04	2.676E-02	4.323E-02	2.789E-03	-0.012
		614.37		2.109E-02	3.681E-02	5.439E-02	4.102E-03	0.388
		722.95		2.296E-02	4.102E-02	5.971E-02	5.075E-03	0.384
AG-110M		657.75	*	3.398E-02	3.163E-02	4.844E-02	3.727E-03	0.702
		677.61		-2.694E-02	2.617E-01	4.253E-01	3.351E-02	-0.063
		706.67		1.900E-04	1.726E-01	2.813E-01	2.307E-02	0.001
		763.93		1.833E-01	1.477E-01	2.266E-01	2.013E-02	0.809

---- Non-Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		6.689E-03	3.886E-02	6.531E-02	6.810E-03	0.102
		937.48		7.370E-02	9.709E-02	1.674E-01	1.700E-02	0.440
		1384.27		7.729E-02	1.397E-01	2.111E-01	1.487E-02	0.366
IN-111		171.28		-1.552E-01	7.022E-01	1.136E+00	5.842E-02	-0.137
		245.39	*	7.242E-01	7.415E-01	1.141E+00	6.268E-02	0.635
IN-113M		391.69	*	-1.636E-02	3.853E-02	6.153E-02	3.735E-03	-0.266
SN-113		391.69	*	-1.636E-02	3.853E-02	6.153E-02	3.735E-03	-0.266
IN-114M		190.27	*	6.118E-02	1.814E-01	2.610E-01	1.367E-02	0.234
CD-115		260.90		-6.241E+00	7.754E+01	1.296E+02	7.194E+00	-0.048
		492.35		-1.347E+01	1.963E+01	3.168E+01	2.015E+00	-0.425
		527.90	*	-3.671E+00	5.994E+00	9.654E+00	6.364E-01	-0.380
SN-117M		156.02		1.103E+00	1.960E+00	3.269E+00	1.739E-01	0.337
		158.56	*	-9.208E-02	4.858E-02	7.413E-02	3.904E-03	-1.242
SB-122		563.90	*	9.014E-01	1.219E+00	2.100E+00	1.433E-01	0.429
		692.80		-2.512E+00	2.604E+01	4.225E+01	3.288E+00	-0.059
I-123		159.00	*	-1.862E+00	2.604E+01	Half-Life too short		
		528.96		-8.091E+01	2.604E+01	Half-Life too short		
TE-123M		159.00	*	-3.910E-02	2.619E-02	4.060E-02	2.169E-03	-0.963
I-124		602.71	*	-2.846E-01	5.575E-01	7.602E-01	5.370E-02	-0.374
		722.78		1.650E+00	3.525E+00	5.098E+00	4.149E-01	0.324
		1325.50		4.575E+00	2.311E+01	3.893E+01	2.613E+00	0.118
		1376.25		6.693E+01	2.449E+01	4.393E+01	2.960E+00	1.524
		1509.49		1.380E+01	1.059E+01	1.936E+01	1.271E+00	0.713
		1691.02		-2.684E+00	2.532E+00	3.491E+00	2.133E-01	-0.769
SB-124		602.71		-1.974E-02	3.868E-02	5.274E-02	3.727E-03	-0.374
		645.85		1.068E-01	4.172E-01	6.948E-01	5.508E-02	0.154
		709.31		-3.208E-01	2.201E+00	3.553E+00	2.835E-01	-0.090
		713.82		-8.538E-01	1.291E+00	2.006E+00	2.332E-01	-0.426
		722.78		1.660E-01	3.546E-01	5.127E-01	4.274E-02	0.324
	+	968.20		2.021E+01	4.240E+00	6.568E+00	6.213E-01	3.077
		1045.16		-4.025E-01	2.114E+00	3.419E+00	2.813E-01	-0.118
		1325.50		4.914E-01	2.483E+00	4.182E+00	2.807E-01	0.118
		1368.21		-6.904E-01	1.421E+00	2.201E+00	2.720E-01	-0.314
		1436.60		1.444E+00	2.786E+00	4.823E+00	3.221E-01	0.299
		1691.02	*	-6.366E-02	6.008E-02	8.281E-02	5.450E-03	-0.769
SB-125		427.89	*	1.854E-02	7.783E-02	1.275E-01	7.866E-03	0.145
	+	463.38		7.078E-01	4.685E-01	4.520E-01	3.201E-02	1.566
		600.56		7.914E-02	1.574E-01	2.549E-01	1.992E-02	0.310
		635.90		1.932E-02	2.256E-01	3.725E-01	3.010E-02	0.052
TE-125M		109.28	*	-2.221E+00	8.730E+00	1.419E+01	1.265E+00	-0.157
I-126		388.63		4.050E-02	1.717E-01	2.771E-01	1.573E-02	0.146
		666.33	*	1.744E-02	1.673E-01	2.368E-01	1.770E-02	0.074
		753.82		1.272E+00	1.194E+00	2.050E+00	1.746E-01	0.621
SB-126		223.80		-1.691E+00	3.591E+00	5.581E+00	3.015E-01	-0.303
		278.60		2.856E+00	1.986E+00	3.476E+00	1.948E-01	0.822
	+	296.50		1.768E+01	2.218E+00	3.066E+00	1.731E-01	5.766
		414.70		-4.975E-02	5.921E-02	9.185E-02	5.360E-03	-0.542
		415.30		-2.588E+00	4.876E+00	7.693E+00	4.492E-01	-0.336
		555.20		-1.836E+00	2.916E+00	4.561E+00	3.086E-01	-0.403

--- Non-Identified Nuclides ---

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		573.80		7.542E-01	8.370E-01	1.420E+00	9.779E-02	0.531
		593.00		-3.288E-01	7.303E-01	1.149E+00	8.045E-02	-0.286
		656.30		2.492E+00	2.902E+00	4.374E+00	3.231E-01	0.570
		666.33		7.270E-03	6.971E-02	9.871E-02	7.377E-03	0.074
		675.00		-2.491E-01	1.558E+00	2.523E+00	1.911E-01	-0.099
		695.00		-2.070E-02	5.945E-02	9.493E-02	7.413E-03	-0.218
		697.00		4.770E-02	2.087E-01	3.449E-01	2.701E-02	0.138
		720.50	*	7.371E-02	1.258E-01	1.842E-01	1.495E-02	0.400
		856.80		-7.015E-01	3.951E-01	5.790E-01	5.689E-02	-1.211
		989.30		5.073E-01	9.477E-01	1.616E+00	1.478E-01	0.314
		1034.80		-2.805E+00	7.216E+00	1.151E+01	9.681E-01	-0.244
		1213.00		2.045E+00	3.728E+00	6.233E+00	3.687E-01	0.328
SB-127		61.10		1.164E+01	4.329E+01	6.234E+01	6.009E+00	0.187
		252.40		2.154E+00	3.016E+00	4.977E+00	2.061E+00	0.433
		290.80		1.391E+01	1.549E+01	2.353E+01	2.033E+00	0.591
		411.60		1.751E+00	8.218E+00	1.348E+01	1.904E+00	0.130
		444.90		-4.839E+00	6.532E+00	1.007E+01	1.066E+00	-0.480
		473.00		-1.253E+00	1.205E+00	1.750E+00	1.939E-01	-0.716
		543.00		-5.354E+00	1.054E+01	1.700E+01	2.219E+00	-0.315
		603.60		-9.721E+00	9.464E+00	1.228E+01	1.372E+00	-0.792
		685.20	*	-1.199E-01	9.257E-01	1.500E+00	1.553E-01	-0.080
		698.50		-2.980E+00	1.027E+01	1.645E+01	2.496E+00	-0.181
		722.20		6.447E+00	2.317E+01	3.303E+01	3.450E+00	0.195
		783.80		2.491E+00	2.608E+00	4.418E+00	5.440E-01	0.564
XE-127		57.60		-1.137E+00	4.843E+00	7.710E+00	5.390E-01	-0.147
		145.22		4.802E-01	6.469E-01	1.074E+00	5.949E-02	0.447
		172.10		-8.930E-03	1.088E-01	1.768E-01	9.099E-03	-0.051
		202.84	*	-1.947E-02	4.209E-02	6.672E-02	3.537E-03	-0.292
		374.96		2.765E-02	1.617E-01	2.666E-01	1.517E-02	0.104
I-131		80.18		6.670E-01	5.128E+00	5.666E+00	4.676E-01	0.118
		284.30		7.134E-01	1.133E+00	1.934E+00	1.213E-01	0.369
		364.48	*	-7.961E-02	8.931E-02	1.359E-01	8.659E-03	-0.586
		636.97		5.641E-01	1.172E+00	1.977E+00	1.548E-01	0.285
		722.89		3.310E+00	6.248E+00	9.076E+00	7.434E-01	0.365
TE-132		49.72		2.188E-01	1.137E+01	1.838E+01	1.682E+00	0.012
		111.76		-6.890E+00	2.174E+01	3.573E+01	3.238E+00	-0.193
		116.30		-3.860E+00	1.968E+01	3.259E+01	2.887E+00	-0.118
		228.16	*	9.929E-02	4.995E-01	8.046E-01	1.126E-01	0.123
BA-133		53.15		1.735E+00	2.885E+00	4.615E+00	3.204E-01	0.376
		79.62		2.411E+00	1.423E+00	1.904E+00	2.850E-01	1.266
		81.00		6.408E-02	1.171E-01	1.325E-01	2.079E-02	0.484
		276.40		4.774E-01	3.671E-01	5.611E-01	7.224E-02	0.851
		302.84		1.342E-01	1.388E-01	2.097E-01	2.430E-02	0.640
		356.01	*	1.742E-02	4.133E-02	6.028E-02	6.938E-03	0.289
		383.85		-8.491E-03	2.554E-01	4.162E-01	4.499E-02	-0.020
I-133	+	510.53		4.823E-01	2.554E-01	Half-Life too short		
		529.87	*	-3.656E-04	2.554E-01	Half-Life too short		
		706.58		2.281E-02	2.554E-01	Half-Life too short		
		856.28		-4.162E-01	2.554E-01	Half-Life too short		

--- Non-Identified Nuclides ---

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		875.33		-2.347E-02	2.554E-01	Half-Life too short		
		1236.41		2.904E-01	2.554E-01	Half-Life too short		
		1298.22		-1.073E-01	2.554E-01	Half-Life too short		
CS-134		475.35		7.035E-01	1.595E+00	2.623E+00	1.639E-01	0.268
		563.23		2.423E-01	2.833E-01	4.908E-01	3.397E-02	0.494
		569.32		-1.397E-01	1.681E-01	2.621E-01	1.835E-02	-0.533
		604.70		-2.144E-02	3.309E-02	4.456E-02	3.165E-03	-0.481
	+	795.84	*	1.239E-01	6.406E-02	7.620E-02	6.935E-03	1.627
		801.93		-1.755E-01	4.066E-01	5.349E-01	4.902E-02	-0.328
		1038.57		4.490E-01	3.319E+00	5.490E+00	4.580E-01	0.082
		1167.94		-3.615E-01	2.130E+00	3.414E+00	1.965E-01	-0.106
		1365.15		4.080E-01	9.669E-01	1.659E+00	1.201E-01	0.246
CS-135		268.24	*	2.766E-01	1.558E-01	2.448E-01	1.833E-02	1.130
I-135		288.45		-1.721E+09	1.558E-01	Half-Life too short		
		417.63		7.577E+08	1.558E-01	Half-Life too short		
		546.56		5.206E+08	1.558E-01	Half-Life too short		
		836.80		1.026E+09	1.558E-01	Half-Life too short		
		1038.76		5.070E+07	1.558E-01	Half-Life too short		
		1124.00		1.278E+10	1.558E-01	Half-Life too short		
		1131.51		-2.302E+08	1.558E-01	Half-Life too short		
		1260.41	*	9.005E+07	1.558E-01	Half-Life too short		
		1457.56		3.781E+10	1.558E-01	Half-Life too short		
		1678.03		-9.344E+07	1.558E-01	Half-Life too short		
		1706.46		-6.799E+08	1.558E-01	Half-Life too short		
		1791.20		1.926E+08	1.558E-01	Half-Life too short		
CS-136		66.91		-3.139E-01	7.269E-01	1.009E+00	1.488E-01	-0.311
	+	86.29		3.588E+00	1.203E+00	1.771E+00	2.293E-01	2.026
		153.22		6.251E-01	5.765E-01	9.751E-01	6.713E-02	0.641
		163.89		-1.836E-01	9.401E-01	1.513E+00	1.021E-01	-0.121
		176.55		2.094E-01	3.185E-01	5.292E-01	3.154E-02	0.396
		273.65		-5.108E-01	4.375E-01	5.965E-01	3.835E-02	-0.856
		340.57		6.694E-01	1.413E-01	2.353E-01	1.428E-02	2.844
		818.51		-1.615E-02	5.659E-02	9.293E-02	8.676E-03	-0.174
		1048.07	*	-1.350E-02	8.919E-02	1.446E-01	1.238E-02	-0.093
		1235.34		4.279E-01	5.718E-01	8.568E-01	8.694E-02	0.499
CE-139		165.85	*	-4.182E-03	2.752E-02	4.471E-02	2.291E-03	-0.094
BA-140		162.64		2.769E-02	6.624E-01	1.075E+00	6.433E-02	0.026
		304.84		3.400E-01	1.110E+00	1.624E+00	4.426E-01	0.209
		423.70		-1.387E+00	1.571E+00	2.326E+00	7.398E-01	-0.596
		537.32	*	8.696E-03	1.957E-01	3.266E-01	1.067E-01	0.027
LA-140	+	328.77		5.486E-01	2.836E-01	4.256E-01	2.724E-02	1.289
		432.53		4.708E-01	1.624E+00	2.667E+00	1.747E-01	0.177
		487.03		4.431E-02	9.927E-02	1.703E-01	1.198E-02	0.260
		751.79		7.464E-01	1.406E+00	2.348E+00	2.213E-01	0.318
		815.85		6.481E-02	2.466E-01	4.189E-01	4.282E-02	0.155
		867.82		-2.519E+00	1.185E+00	1.661E+00	1.722E-01	-1.517
		919.63		1.903E-01	2.429E+00	3.466E+00	4.119E-01	0.055
		925.24		-6.650E-01	8.572E-01	1.338E+00	1.406E-01	-0.497
		1596.49	*	-1.031E-01	7.322E-02	1.018E-01	6.495E-03	-1.013

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	6.200E-02	5.720E-02	9.705E-02	5.606E-03	0.639
CE-143		57.37		-9.708E-05	5.720E-02	Half-Life too short		
		231.56		5.083E-04	5.720E-02	Half-Life too short		
		293.26	*	5.634E-04	5.720E-02	Half-Life too short		
		350.59		1.808E-02	5.720E-02	Half-Life too short		
		490.36		-1.090E-06	5.720E-02	Half-Life too short		
		664.57		8.866E-04	5.720E-02	Half-Life too short		
		721.93		3.427E-06	5.720E-02	Half-Life too short		
CE-144		80.11		5.084E-01	2.602E+00	2.887E+00	2.367E-01	0.176
		133.54	*	-5.501E-02	2.120E-01	3.042E-01	4.319E-02	-0.181
PM-144		476.78		5.171E-02	5.668E-02	9.532E-02	6.986E-03	0.543
		618.01		-1.329E-03	3.034E-02	4.277E-02	3.183E-03	-0.031
		696.49	*	5.648E-04	2.799E-02	4.572E-02	3.580E-03	0.012
		778.57		-1.019E+00	2.004E+00	3.131E+00	2.764E-01	-0.326
PR-144		696.49	*	3.825E-02	1.896E+00	3.096E+00	2.423E-01	0.012
		1489.15		-1.097E+00	7.671E+00	1.235E+01	8.155E-01	-0.089
PM-146		453.90	*	-1.264E-02	3.753E-02	5.762E-02	5.087E-03	-0.219
		633.02		-9.038E-01	1.190E+00	1.789E+00	6.632E-01	-0.505
		735.90		1.183E-03	1.295E-01	2.003E-01	5.711E-02	0.006
		747.13		-1.513E-02	8.095E-02	1.297E-01	1.807E-02	-0.117
ND-147		91.11		2.953E-01	3.905E-01	4.395E-01	4.062E-02	0.672
		319.41		1.471E-01	2.599E+00	4.310E+00	2.449E-01	0.034
		439.89		2.528E+00	4.324E+00	7.206E+00	4.331E-01	0.351
		531.02	*	3.892E-02	4.244E-01	7.108E-01	9.873E-02	0.055
PM-149		285.90	*	7.773E+00	5.313E+01	8.906E+01	1.256E+01	0.087
EU-152		121.78		5.833E-04	6.550E-02	1.089E-01	8.556E-03	0.005
		244.69		6.391E-01	3.235E-01	5.162E-01	2.835E-02	1.238
		344.27	*	3.447E-02	9.765E-02	1.346E-01	8.679E-03	0.256
		443.98		-7.932E-01	7.806E-01	1.185E+00	7.155E-02	-0.669
		778.89		-1.441E-01	2.330E-01	3.612E-01	3.189E-02	-0.399
		867.32		-1.508E+00	7.562E-01	1.079E+00	1.075E-01	-1.397
	+	964.01		6.822E-01	3.834E-01	4.974E-01	4.735E-02	1.372
		1085.78		1.545E-02	4.141E-01	5.775E-01	4.318E-02	0.027
		1112.02		4.752E-02	3.241E-01	4.555E-01	3.169E-02	0.104
		1407.95		-6.924E-02	1.518E-01	2.400E-01	1.611E-02	-0.288
GD-153		69.67		-7.638E-01	1.571E+00	2.335E+00	1.741E-01	-0.327
	+	83.37		1.817E+01	1.487E+01	2.187E+01	1.856E+00	0.831
		97.43	*	-6.474E-03	7.649E-02	1.130E-01	8.843E-03	-0.057
		103.18		-1.070E-01	9.374E-02	1.512E-01	1.107E-02	-0.708
EU-154		123.07		-6.663E-03	4.808E-02	7.685E-02	7.360E-03	-0.087
		247.94		-1.312E-02	3.395E-01	4.966E-01	4.650E-02	-0.026
		591.81		-1.085E-01	5.455E-01	8.238E-01	8.674E-02	-0.132
		723.30		1.322E-01	1.715E-01	2.534E-01	2.306E-02	0.522
		756.87		-1.915E-01	6.690E-01	1.038E+00	1.238E-01	-0.184
		873.19		-4.861E-02	2.282E-01	3.738E-01	4.965E-02	-0.130
		996.32		-3.107E-01	3.109E-01	4.677E-01	8.405E-02	-0.664
		1004.76		1.189E-01	1.652E-01	2.843E-01	3.370E-02	0.418
		1274.45	*	-3.802E-02	1.087E-01	1.768E-01	1.713E-02	-0.215
EU-155		48.70		7.552E-01	1.784E+00	2.928E+00	1.975E-01	0.258

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		2.113E+00	4.504E+00	6.523E+00	4.586E-01	0.324
	+	86.54		3.516E-01	1.131E-01	1.730E-01	1.536E-02	2.032
		105.31	*	6.485E-02	9.625E-02	1.642E-01	1.195E-02	0.395
TB-160	+	86.79		9.293E-01	2.988E-01	4.558E-01	4.018E-02	2.039
		197.04		9.520E-02	5.364E-01	8.491E-01	4.476E-02	0.112
		215.65		4.854E-01	7.289E-01	1.112E+00	5.963E-02	0.437
		298.57		5.291E-01	1.334E-01	1.827E-01	1.032E-02	2.896
		879.36	*	4.167E-02	1.064E-01	1.814E-01	1.836E-02	0.230
		962.29		1.129E+00	5.008E-01	8.217E-01	7.842E-02	1.374
	+	966.15		4.634E-01	2.604E-01	4.363E-01	4.140E-02	1.062
		1177.93		-1.160E-01	3.175E-01	5.023E-01	2.847E-02	-0.231
		1271.85		6.167E-01	6.138E-01	1.084E+00	6.865E-02	0.569
HO-166M		80.57		1.645E-01	3.236E-01	3.663E-01	3.017E-02	0.449
		184.41		1.396E-01	3.870E-02	6.175E-02	3.215E-03	2.261
		280.46		-8.074E-02	7.465E-02	1.193E-01	6.692E-03	-0.677
		410.95		3.007E-02	2.058E-01	3.366E-01	1.956E-02	0.089
		711.68	*	-1.158E-02	4.909E-02	7.875E-02	6.305E-03	-0.147
		752.31		2.031E-01	2.372E-01	4.032E-01	3.427E-02	0.504
		810.29		-1.488E-02	4.948E-02	8.132E-02	7.502E-03	-0.183
TM-171		51.35		-2.758E+01	2.378E+01	3.664E+01	2.528E+00	-0.753
		52.39		-2.461E+00	1.259E+01	1.959E+01	1.357E+00	-0.126
		59.40		2.437E+01	2.394E+01	3.546E+01	2.486E+00	0.687
		66.72	*	-8.656E+00	2.774E+01	3.876E+01	2.831E+00	-0.223
LU-176	+	88.36		6.927E-01	2.227E-01	3.508E-01	3.118E-02	1.975
		201.83		-4.688E-02	2.714E-02	4.092E-02	2.167E-03	-1.146
		306.84	*	1.189E-02	2.214E-02	3.435E-02	1.946E-03	0.346
		401.10		1.481E+00	5.782E+00	9.394E+00	5.392E-01	0.158
LU-177		112.95		1.868E-02	1.338E+00	2.220E+00	1.471E-01	0.008
	+	208.36	*	3.262E+00	1.215E+00	1.641E+00	8.745E-02	1.988
LU-177M		52.97		5.883E-01	1.292E+00	2.057E+00	1.427E-01	0.286
		54.07		8.917E-01	6.791E-01	1.109E+00	7.713E-02	0.804
		61.30		1.022E+00	1.369E+00	2.008E+00	1.421E-01	0.509
		121.62		-3.363E-02	3.352E-01	5.554E-01	3.402E-02	-0.061
		147.16		-3.150E-01	6.074E-01	9.825E-01	5.402E-02	-0.321
		171.86		3.722E-02	4.428E-01	7.236E-01	3.724E-02	0.051
		218.09		3.538E-01	7.828E-01	1.276E+00	6.861E-02	0.277
		268.79		1.532E+00	8.044E-01	1.272E+00	7.090E-02	1.205
		319.02		1.624E-02	2.170E-01	3.601E-01	2.045E-02	0.045
		367.43		-8.542E-02	7.436E-01	1.211E+00	6.899E-02	-0.071
		413.65	*	-8.483E-02	1.470E-01	2.316E-01	1.350E-02	-0.366
HF-181		56.28		-8.723E-01	7.572E-01	1.164E+00	8.122E-02	-0.749
		57.53		-1.019E-01	4.085E-01	6.501E-01	4.544E-02	-0.157
		65.20		-6.734E-02	9.211E-01	1.302E+00	9.416E-02	-0.052
		133.02		-6.162E-03	6.680E-02	9.667E-02	5.617E-03	-0.064
		136.25		-1.694E-01	4.255E-01	6.942E-01	3.981E-02	-0.244
		345.85		-2.193E-01	2.450E-01	2.491E-01	1.420E-02	-0.881
		482.03	*	-3.129E-02	3.319E-02	5.294E-02	3.332E-03	-0.591
W-181		56.28		-3.454E-01	3.000E-01	4.612E-01	3.218E-02	-0.749
		57.53		-4.048E-02	1.620E-01	2.578E-01	1.802E-02	-0.157

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		65.20	*	-2.649E-02	3.624E-01	5.122E-01	3.704E-02	-0.052
TA-182		67.75		-2.674E-02	1.093E-01	1.531E-01	1.126E-02	-0.175
		100.10		4.698E-02	1.528E-01	2.589E-01	1.961E-02	0.181
		152.43		9.379E-02	3.152E-01	5.220E-01	2.814E-02	0.180
		222.10		1.840E-01	3.139E-01	5.137E-01	2.771E-02	0.358
		1001.68		9.323E-02	1.694E-00	2.750E+00	2.462E-01	0.034
	+	1121.28		7.623E-01	2.400E-01	3.050E-01	2.064E-02	2.499
		1189.05		-2.449E-01	2.632E-01	3.986E-01	2.291E-02	-0.614
		1221.42	*	-1.898E-01	1.682E-01	2.619E-01	1.565E-02	-0.725
		1230.97		3.107E-01	4.804E-01	7.183E-01	4.340E-02	0.433
RE-183		57.98		5.164E-02	1.669E-01	2.578E-01	1.803E-02	0.200
		59.32		1.001E-01	9.749E-02	1.444E-01	1.012E-02	0.693
		67.20		-6.445E-02	1.958E-01	2.733E-01	2.002E-02	-0.236
		162.32	*	1.623E-02	1.015E-01	1.654E-01	8.587E-03	0.098
	+	208.81		3.264E+00	1.216E+00	1.634E+00	8.709E-02	1.998
		291.72		8.405E-01	8.465E-01	1.292E+00	7.280E-02	0.651
RE-184		57.98		1.915E-01	6.192E-01	9.564E-01	6.689E-02	0.200
		59.32		3.709E-01	3.613E-01	5.353E-01	3.752E-02	0.693
		67.20		-2.390E-01	7.260E-01	1.013E+00	7.425E-02	-0.236
		161.27		2.531E-01	3.205E-01	5.374E-01	2.802E-02	0.471
		216.55		5.195E-02	2.438E-01	3.944E-01	2.117E-02	0.132
		252.85	*	4.627E-02	1.899E-01	3.220E-01	1.778E-02	0.144
		318.01		-4.202E-02	3.811E-01	6.276E-01	3.565E-02	-0.067
		792.07		-1.500E+00	1.079E+00	1.291E+00	1.162E-01	-1.161
		903.28		-6.204E-01	9.646E-01	1.279E+00	1.319E-01	-0.485
		920.93		1.330E-01	4.108E-01	6.003E-01	6.059E-02	0.222
OS-185		59.72		2.902E-01	2.610E-01	3.878E-01	2.722E-02	0.748
		61.14		4.964E-02	1.503E-01	2.171E-01	1.535E-02	0.229
		69.30		-1.483E-01	2.659E-01	4.157E-01	3.092E-02	-0.357
		592.07		-8.104E-01	2.142E+00	3.294E+00	2.305E-01	-0.246
		646.12	*	1.030E-02	3.551E-02	5.923E-02	4.340E-03	0.174
		717.42		-2.445E-01	7.296E-01	1.162E+00	9.383E-02	-0.210
		874.81		-8.795E-02	4.472E-01	7.336E-01	7.381E-02	-0.120
		880.27		2.650E-01	5.971E-01	1.021E+00	1.035E-01	0.259
RE-188		155.03	*	2.474E-01	1.580E-01	2.707E-01	1.445E-02	0.914
		477.96		2.322E+00	2.543E+00	4.281E+00	2.682E-01	0.542
		633.10		-1.184E+00	2.250E+00	3.581E+00	2.596E-01	-0.331
W-188	+	63.58		7.433E+01	6.386E+01	7.832E+01	5.611E+00	0.949
		227.08		-5.792E+00	1.175E+01	1.844E+01	9.986E-01	-0.314
		290.67	*	5.784E+00	6.504E+00	9.893E+00	5.573E-01	0.585
IR-192	+	295.96		1.428E+00	1.798E-01	2.510E-01	1.441E-02	5.690
		308.46		1.427E-02	7.847E-02	1.311E-01	7.518E-03	0.109
		316.51	*	1.678E-02	2.873E-02	4.870E-02	2.780E-03	0.344
		468.07		2.894E-02	6.025E-02	8.666E-02	6.097E-03	0.334
		604.41		-5.151E-01	4.580E-01	5.883E-01	7.089E-02	-0.876
		612.46		7.798E+00	1.158E+00	1.838E+00	1.586E-01	4.243
AU-195		65.12		1.543E-02	1.689E-01	2.403E-01	1.737E-02	0.064
		66.83		-2.588E-02	9.148E-02	1.280E-01	9.354E-03	-0.202
	+	75.70		1.383E+00	2.390E-01	4.235E-01	3.324E-02	3.266

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		98.88	*	2.222E-01	2.081E-01	3.362E-01	2.584E-02	0.661
	+	129.76		7.353E+00	4.058E+00	4.680E+00	2.757E-01	1.571
TL-200		367.94	*	-3.690E-05	4.058E+00	Half-Life too short		
		579.30		8.423E-04	4.058E+00	Half-Life too short		
		828.27		-5.689E-04	4.058E+00	Half-Life too short		
		1205.75		3.983E-04	4.058E+00	Half-Life too short		
TL-201		68.90		-1.940E+00	3.312E+00	5.174E+00	3.837E-01	-0.375
		70.82		9.527E-01	2.123E+00	3.049E+00	2.294E-01	0.313
		80.30		8.415E-02	4.740E+00	5.198E+00	4.269E-01	0.016
		135.34		-1.156E+01	1.995E+01	2.986E+01	1.719E+00	-0.387
		167.43	*	7.199E-01	4.999E+00	8.197E+00	4.202E-01	0.088
TL-202		68.90		-2.123E-01	3.625E-01	5.662E-01	4.199E-02	-0.375
		70.82		1.040E-01	2.317E-01	3.327E-01	2.504E-02	0.313
		80.30		9.187E-03	5.175E-01	5.675E-01	4.661E-02	0.016
		439.56	*	3.974E-02	5.119E-02	8.617E-02	5.176E-03	0.461
HG-203		70.83		4.763E-01	1.055E+00	1.513E+00	1.958E-01	0.315
		72.87		1.422E+00	6.546E-01	9.587E-01	1.207E-01	1.483
	+	82.60		1.333E+00	1.100E+00	1.594E+00	2.170E-01	0.836
		279.20	*	3.372E-02	3.513E-02	6.055E-02	3.618E-03	0.557
BI-207		72.80		3.764E-01	1.892E-01	2.826E-01	2.161E-02	1.332
	+	74.97		7.705E-01	1.331E-01	2.086E-01	1.627E-02	3.693
	+	84.90		2.358E-01	1.930E-01	2.940E-01	2.537E-02	0.802
		569.67		-1.717E-02	2.598E-02	4.091E-02	2.806E-03	-0.420
		1063.62	*	-1.556E-02	4.615E-02	7.376E-02	5.824E-03	-0.211
		1770.23		2.383E+00	6.155E-01	1.205E+00	7.033E-02	1.978
TL-207		81.07		1.361E-01	2.577E-01	2.920E-01	2.418E-02	0.466
	+	83.78		1.555E-01	1.272E-01	1.896E-01	1.616E-02	0.820
	+	94.90		4.502E-01	4.212E-01	3.803E-01	3.074E-02	1.184
		122.32		2.260E-01	1.563E+00	2.610E+00	1.816E-01	0.087
		144.24		2.733E-01	6.465E-01	1.064E+00	7.493E-02	0.257
		154.21		5.117E-01	3.703E-01	6.307E-01	4.194E-02	0.811
	+	269.46		3.843E-01	2.289E-01	3.046E-01	1.782E-02	1.262
		323.87	*	3.761E-01	6.231E-01	9.217E-01	1.519E-01	0.408
	+	338.28		7.543E+00	1.849E+00	2.072E+00	2.171E-01	3.640
		445.03		-1.199E+00	1.863E+00	2.891E+00	3.010E-01	-0.415
PO-209		260.50		2.661E+00	8.141E+00	1.381E+01	7.665E-01	0.193
		262.80		-3.294E+01	2.306E+01	3.645E+01	2.025E+00	-0.904
		896.60	*	7.365E+00	6.132E+00	1.086E+01	1.124E+00	0.678
BI-210		46.50	*	-1.521E+00	2.598E+00	4.090E+00	3.092E-01	-0.372
PB-210		46.50	*	-1.521E+00	2.598E+00	4.090E+00	3.092E-01	-0.372
PO-210		46.50	*	-1.521E+00	2.597E+00	4.090E+00	2.636E-01	-0.372
PB-211		404.84	*	-9.234E-02	8.093E-01	1.306E+00	8.138E-01	-0.071
		427.08		-4.470E-01	1.770E+00	2.793E+00	1.727E+00	-0.160
		831.96		-3.285E-01	1.088E+00	1.755E+00	1.102E+00	-0.187
BI-212	+	727.18	*	1.070E+00	4.081E-01	5.416E-01	5.222E-02	1.976
		785.46		2.036E+00	1.552E+00	2.681E+00	2.389E-01	0.760
		1620.62		1.103E+00	9.473E-01	1.740E+00	1.099E-01	0.634
PO-215		81.07		1.361E-01	2.577E-01	2.920E-01	2.418E-02	0.466
	+	83.78		1.555E-01	1.272E-01	1.896E-01	1.616E-02	0.820

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	-	94.90		4.502E-01	4.212E-01	3.803E-01	3.074E-02	1.184
		122.32		2.260E-01	1.563E+00	2.610E+00	1.816E-01	0.087
		144.24		2.733E-01	6.465E-01	1.064E+00	7.493E-02	0.257
		154.21		5.117E-01	3.703E-01	6.307E-01	4.194E-02	0.811
	+	269.46		3.843E-01	2.289E-01	3.046E-01	1.782E-02	1.262
		323.87	*	3.761E-01	6.231E-01	9.217E-01	1.519E-01	0.408
	+	338.28		7.543E+00	1.849E+00	2.072E+00	2.171E-01	3.640
		445.03		-1.199E+00	1.863E+00	2.891E+00	3.010E-01	-0.415
RN-219	+	271.23		4.931E-01	2.949E-01	3.956E-01	3.145E-02	1.246
		401.81	*	1.069E-02	3.566E-01	5.731E-01	7.784E-02	0.019
RN-220		549.76	*	5.820E+00	2.074E+01	3.499E+01	2.356E+00	0.166
RA-223		81.07		1.361E-01	2.577E-01	2.920E-01	2.418E-02	0.466
	+	83.78		1.555E-01	1.272E-01	1.896E-01	1.616E-02	0.820
	-	94.90		4.502E-01	4.212E-01	3.803E-01	3.074E-02	1.184
		122.32		2.260E-01	1.563E+00	2.610E+00	1.816E-01	0.087
		144.24		2.733E-01	6.465E-01	1.064E+00	7.493E-02	0.257
		154.21		5.117E-01	3.703E-01	6.307E-01	4.194E-02	0.811
	+	269.46		3.843E-01	2.289E-01	3.046E-01	1.782E-02	1.262
		323.87	*	3.761E-01	6.231E-01	9.217E-01	1.519E-01	0.408
	+	338.28		7.543E+00	1.849E+00	2.072E+00	2.171E-01	3.640
		445.03		-1.199E+00	1.863E+00	2.891E+00	3.010E-01	-0.415
AC-227		79.80		1.800E+00	1.760E+00	2.305E+00	4.915E-01	0.781
		236.00		1.270E+00	2.912E-01	4.363E-01	4.479E-02	2.911
		256.20	*	-6.805E-02	3.213E-01	5.349E-01	7.409E-02	-0.127
		286.10		3.584E-01	1.269E+00	2.138E+00	2.452E-01	0.168
	+	299.80		3.252E+00	1.658E+00	2.191E+00	3.556E-01	1.485
		304.40		5.011E-01	1.735E+00	2.541E+00	4.384E-01	0.197
		334.20		9.170E-01	2.694E+00	3.118E+00	5.706E-01	0.294
TH-227		79.80		1.800E+00	1.761E+00	2.305E+00	4.979E-01	0.781
	+	94.00		3.602E+00	3.445E+00	3.567E+00	7.708E-01	1.010
		236.00		1.270E+00	2.835E-01	4.363E-01	3.857E-02	2.911
		256.20	*	-6.805E-02	3.213E-01	5.349E-01	8.992E-02	-0.127
		286.10		3.584E-01	1.318E+00	2.138E+00	2.141E+00	0.168
	+	299.80		3.252E+00	1.658E+00	2.191E+00	3.556E-01	1.485
		304.40		5.011E-01	1.735E+00	2.541E+00	4.384E-01	0.197
		334.20		9.170E-01	2.694E+00	3.118E+00	5.706E-01	0.294
TH-229	+	85.43		2.328E-01	1.905E-01	3.062E-01	2.658E-02	0.760
	+	88.47		3.988E-01	1.282E-01	2.007E-01	1.781E-02	1.987
		100.00		4.692E-02	1.596E-01	2.703E-01	2.051E-02	0.174
		193.63	*	-2.478E-01	4.656E-01	7.385E-01	3.881E-02	-0.336
		210.97		2.069E+00	8.184E-01	1.270E+00	6.785E-02	1.629
PA-231		283.67	*	5.564E-01	1.293E+00	2.189E+00	2.999E-01	0.254
	+	301.29		1.301E+00	6.429E-01	8.894E-01	9.225E-02	1.463
TH-231		81.07		1.361E-01	2.577E-01	2.920E-01	2.418E-02	0.466
	+	83.78		1.555E-01	1.272E-01	1.896E-01	1.616E-02	0.820
	+	94.90		4.502E-01	4.212E-01	3.803E-01	3.074E-02	1.184
		122.32		2.260E-01	1.563E+00	2.610E+00	1.816E-01	0.087
		144.24		2.733E-01	6.465E-01	1.064E+00	7.493E-02	0.257
		154.21		5.117E-01	3.703E-01	6.307E-01	4.194E-02	0.811

-- Non-identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		3.843E-01	2.289E-01	3.046E-01	1.782E-02	1.262
		323.87	*	3.761E-01	6.231E-01	9.217E-01	1.519E-01	0.408
	+	338.28		7.543E+00	1.849E+00	2.072E+00	2.171E-01	3.640
		445.03		-1.199E+00	1.863E+00	2.891E+00	3.010E-01	-0.415
U-231	+	84.21		5.541E+00	4.534E+00	6.677E+00	5.719E-01	0.830
	+	92.29		2.943E+00	2.753E+00	3.050E+00	2.555E-01	0.965
		95.87	*	5.980E-01	8.651E-01	1.317E+00	1.051E-01	0.454
		108.00		-3.631E-01	1.552E+00	2.578E+00	1.793E-01	-0.141
PA-233	+	75.28		2.249E+01	4.822E+00	6.394E+00	9.535E-01	3.517
	+	86.59		5.718E+00	2.343E+00	2.812E+00	7.557E-01	2.034
	+	300.12		9.067E-01	4.546E-01	6.154E-01	8.230E-02	1.473
		311.98	*	-1.812E-02	5.286E-02	8.628E-02	5.210E-03	-0.210
		340.50		3.511E+00	1.067E+00	1.218E+00	2.795E-01	2.881
		398.62		-1.258E+00	1.812E+00	2.802E+00	7.241E-01	-0.449
		415.76		-1.779E-01	1.368E+00	2.205E+00	4.542E-01	-0.081
PA-234	+	63.00		2.180E+00	1.894E+00	2.333E+00	3.436E-01	0.935
	+	94.67		3.212E-01	3.018E-01	2.844E-01	3.428E-02	1.129
		98.44		8.688E-02	9.708E-02	1.364E-01	7.589E-02	0.637
		99.86		1.820E-01	4.021E-01	6.841E-01	5.198E-02	0.266
		111.00		-1.111E-01	1.759E-01	2.817E-01	3.052E-02	-0.394
		131.20		1.086E-01	1.098E-01	1.661E-01	9.724E-03	0.654
		152.70		2.665E-01	3.053E-01	5.099E-01	7.985E-02	0.523
	+	186.00		4.809E+00	2.330E+00	2.345E+00	7.142E-01	2.051
		226.40		-1.814E-01	3.751E-01	5.885E-01	6.692E-02	-0.308
		227.20		-1.995E-01	4.013E-01	6.297E-01	3.411E-02	-0.317
		248.90		-3.183E-01	7.527E-01	1.125E+00	2.409E-01	-0.283
		293.70		7.041E+00	1.384E+00	1.536E+00	2.462E-01	4.583
		369.80		4.093E-01	7.125E-01	1.190E+00	2.474E-01	0.344
		568.70		-8.182E-01	8.426E-01	1.301E+00	8.918E-02	-0.629
		569.50		-1.524E-01	2.305E-01	3.630E-01	2.489E-02	-0.420
		574.00		7.218E-01	1.284E+00	2.144E+00	1.476E-01	0.337
		699.00		-5.236E-02	5.835E-01	9.465E-01	1.774E-01	-0.055
		706.10		4.917E-01	8.816E-01	1.439E+00	6.398E-01	0.342
		733.00		1.056E-01	3.455E-01	4.931E-01	1.088E-01	0.214
		742.81		7.225E-01	1.237E+00	1.919E+00	1.290E+00	0.376
	+	796.30		2.411E+00	1.391E+00	1.502E+00	4.084E-01	1.605
		805.60		7.291E-01	9.173E-01	1.411E+00	4.347E-01	0.517
		819.60		-3.755E-01	9.966E-01	1.610E+00	6.148E-01	-0.233
		826.30		-3.081E-01	6.737E-01	1.069E+00	4.802E-01	-0.288
		831.60		-3.455E-01	5.646E-01	8.949E-01	2.694E-01	-0.386
		876.40		-2.891E-01	7.046E-01	1.029E+00	1.059E+00	-0.281
		880.51		1.319E-01	2.184E-01	3.770E-01	3.821E-02	0.350
		883.24		1.053E-01	2.361E-01	3.858E-01	2.602E-01	0.273
		899.00		-7.294E-01	7.809E-01	1.103E+00	4.864E-01	-0.661
		925.00		-5.047E-01	9.401E-01	1.496E+00	1.502E-01	-0.337
		926.50		-5.476E-02	1.411E-01	2.262E-01	5.834E-02	-0.242
		946.00	*	-2.221E-01	2.599E-01	3.994E-01	7.715E-02	-0.556
		949.00		2.483E-01	3.727E-01	6.406E-01	6.232E-02	0.388
		980.50		-2.907E-01	6.173E-01	9.397E-01	8.720E-02	-0.309

---- Non-Identified Nuclides ----

Nuclide	Line Idea	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-4.228E-01	9.248E-01	1.387E+00	9.000E-01	-0.305
PA-234M	+	766.41		5.471E+01	4.996E+01	3.046E+01	2.335E+01	1.796
		1001.03	*	7.897E-02	5.425E+00	8.778E+00	1.005E-00	0.009
U-235		89.95		-2.339E+00	1.863E+00	1.723E+00	5.320E-01	-1.357
	+	93.35		1.121E+00	1.090E+00	1.157E+00	3.229E-01	0.969
		105.00		4.529E-01	9.474E-01	1.594E+00	4.695E-01	0.284
		143.76	*	-3.431E-02	1.998E-01	3.230E-01	5.240E-02	-0.106
		163.35		3.896E-02	4.422E-01	7.186E-01	1.278E-01	0.054
	+	185.71		1.781E-01	6.778E-02	8.653E-02	4.512E-03	2.058
		205.31		4.632E-01	5.345E-01	7.749E-01	1.382E-01	0.598
NP-236	+	94.67		2.436E-01	2.279E-01	2.159E-01	1.751E-02	1.128
		98.44		6.566E-02	6.384E-02	1.031E-01	7.966E-03	0.637
		111.00		-8.405E-02	1.329E-01	2.131E-01	1.439E-02	-0.394
		160.31	*	4.261E-02	7.204E-02	1.201E-01	6.285E-03	0.355
NP-239		99.55		7.254E-02	1.355E-01	2.310E-01	1.761E-02	0.314
		117.00	*	-1.499E-01	1.735E-01	2.808E-01	1.793E-02	-0.534
	+	209.75		2.605E+00	9.703E-01	1.314E+00	7.013E-02	1.982
		228.18		4.074E-02	2.084E-01	3.358E-01	1.821E-02	0.121
		277.60		2.697E-01	1.588E-01	2.740E-01	1.534E-02	0.984
		334.30		4.594E-01	1.522E+00	1.758E+00	1.001E-01	0.261
AM-241		59.54	*	1.542E-01	1.388E-01	2.062E-01	1.602E-02	0.748
CM-243		99.55		7.463E-02	1.394E-01	2.376E-01	1.812E-02	0.314
		103.76	*	2.333E-03	8.559E-02	1.436E-01	1.044E-02	0.016
		117.00		-1.542E-01	1.785E-01	2.889E-01	1.844E-02	-0.534
	+	209.75		2.567E+00	9.565E-01	1.296E+00	6.912E-02	1.982
		228.18		4.116E-02	2.106E-01	3.393E-01	1.840E-02	0.121
		277.60		2.719E-01	1.601E-01	2.762E-01	1.547E-02	0.984
CM-247		278.00		8.247E-01	6.461E-01	1.125E+00	6.301E-02	0.733
		287.40		-1.104E+00	1.094E+00	1.636E+00	9.203E-02	-0.675
		402.60	*	-2.424E-03	3.182E-02	5.087E-02	2.925E-03	-0.048
CF-249		252.85		1.744E-01	7.161E-01	1.214E+00	6.703E-02	0.144
		333.44		2.165E-01	2.188E-01	2.351E-01	1.338E-02	0.921
		387.95	*	1.219E-02	3.555E-02	5.766E-02	3.274E-03	0.211
CF-251		176.60	*	7.459E-02	1.166E-01	1.936E-01	1.001E-02	0.385
		227.00		-1.748E-01	3.565E-01	5.597E-01	3.032E-02	-0.312
		285.00		1.305E+00	1.452E+00	2.502E+00	1.406E-01	0.521

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          CBL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358004      *
* Acquisition date :  6-JUL-2009 11:16:10 Detector SN#     :                *
* Detector ID        : GAM22               Sensitivity      : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.95     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLTD         *
* Sample ID          : G232358004           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.3408E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.547E+01	2.842E+00	4.535E-01	0.000E+00
CD-109	2.966E+00	9.346E-01	1.450E+00	0.000E+00
SN-126	2.921E-01	9.202E-02	1.417E-01	0.000E+00
BA-137M	6.664E-02	5.193E-02	5.138E-02	0.000E+00
CS-137	7.044E-02	5.490E-02	5.431E-02	0.000E+00
TL-208	5.986E-01	7.831E-02	4.788E-02	0.000E+00
BI-211	4.265E+00	4.460E-01	2.684E-01	0.000E+00
PB-212	1.927E+00	1.674E-01	8.158E-02	0.000E+00
PO-212	1.927E+00	1.674E-01	8.158E-02	0.000E+00
BI-214	1.218E+00	1.742E-01	9.523E-02	0.000E+00
PB-214	1.484E+00	1.727E-01	9.539E-02	0.000E+00
PO-214	1.484E+00	1.727E-01	9.539E-02	0.000E+00
PO-216	1.927E+00	1.674E-01	8.158E-02	0.000E+00
PO-218	1.484E+00	1.727E-01	9.539E-02	0.000E+00
RA-224	4.410E+00	1.039E+00	9.269E-01	0.000E+00
RA-226	1.218E+00	1.742E-01	9.523E-02	0.000E+00
AC-228	1.789E+00	3.499E-01	1.869E-01	0.000E+00
RA-228	1.789E+00	3.499E-01	1.869E-01	0.000E+00
TH-228	1.927E+00	1.674E-01	8.157E-02	0.000E+00
TH-230	1.218E+00	1.742E-01	9.523E-02	0.000E+00
TH-232	1.789E+00	3.499E-01	1.869E-01	0.000E+00
TH-234	1.871E+00	1.602E+00	1.822E+00	0.000E+00
U-234	1.218E+00	1.742E-01	9.523E-02	0.000E+00
NP-237	8.577E-01	3.211E-01	3.060E-01	0.000E+00
U-238	1.871E+00	1.602E+00	1.822E+00	0.000E+00
AM-243	4.293E-01	7.269E-02	8.250E-02	0.000E+00
ANH-511	1.187E-01	5.826E-02	3.867E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	2.111E-01	2.624E-01	4.576E-01	0.000E+00	NOT IDENT.
NA-20	-1.501E-02	3.803E-02	6.321E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.679E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.146E-02	1.829E-02	2.785E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.639E-02	7.727E-02	0.000E+00	FAIL ABUN
SC-46	-2.805E-02	3.210E-02	5.174E-02	0.000E+00	FAIL ABUN
V-48	-8.356E-02	5.452E-02	8.143E-02	0.000E+00	NOT IDENT.
CR-51	6.130E-02	2.974E-01	5.214E-01	0.000E+00	NOT IDENT.
MN-52	2.880E-02	1.576E-01	2.700E-01	0.000E+00	NOT IDENT.
MN-54	1.909E-02	3.358E-02	5.946E-02	0.000E+00	NOT IDENT.
CO-56	-3.283E-02	3.268E-02	5.265E-02	0.000E+00	FAIL ABUN
CO-57	3.060E-05	2.215E-02	3.934E-02	0.000E+00	NOT IDENT.
CO-58	-9.795E-03	3.175E-02	5.391E-02	0.000E+00	NOT IDENT.
FE-59	-9.368E-02	9.552E-02	1.230E-01	0.000E+00	NOT IDENT.
CO-60	3.376E-02	3.057E-02	5.622E-02	0.000E+00	NOT IDENT.
ZN-65	8.028E-03	8.648E-02	1.242E-01	0.000E+00	NOT IDENT.
GE-68	3.217E-01	1.153E+00	1.968E+00	0.000E+00	NOT IDENT.
AS-73	7.192E-01	6.504E-01	1.144E+00	0.000E+00	NOT IDENT.
AS-74	-3.905E-02	7.178E-02	1.196E-01	0.000E+00	NOT IDENT.
SE-75	2.542E-02	3.889E-02	6.448E-02	0.000E+00	NOT IDENT.
BR-77	4.418E-01	6.185E+00	1.031E+01	0.000E+00	FAIL ABUN
SR-82	-1.800E-01	3.469E-01	5.144E-01	0.000E+00	NOT IDENT.
RB-83	3.855E-04	5.642E-02	9.374E-02	0.000E+00	NOT IDENT.
RB-84	1.299E-02	5.186E-02	9.041E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.799E+00	1.406E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.951E-02	7.122E-02	0.000E+00	NOT IDENT.
RB-86	3.254E-01	6.889E-01	1.190E+00	0.000E+00	NOT IDENT.
Y-88	1.253E-02	2.458E-02	4.411E-02	0.000E+00	NOT IDENT.
ZR-88	-8.970E-03	2.561E-02	4.297E-02	0.000E+00	NOT IDENT.
Y-91	6.459E+00	1.639E+01	2.783E+01	0.000E+00	NOT IDENT.
NB-94	1.045E-02	2.729E-02	4.708E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	4.200E-02	7.036E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.293E-01	2.082E-01	0.000E+00	NOT IDENT.
ZR-95	1.660E-02	5.823E-02	9.929E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.798E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.320E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.822E+00	7.208E+00	1.180E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.523E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.213E-02	3.104E-02	5.239E-02	0.000E+00	NOT IDENT.
RH-102	7.833E-03	2.392E-02	4.079E-02	0.000E+00	FAIL ABUN
RU-103	-1.532E-03	3.009E-02	5.242E-02	0.000E+00	FAIL ABUN
RH-106	-4.965E-02	2.574E-01	4.352E-01	0.000E+00	FAIL ABUN
RU-106	-4.965E-02	2.573E-01	4.352E-01	0.000E+00	FAIL ABUN
AG-108M	-5.373E-04	2.622E-02	4.428E-02	0.000E+00	NOT IDENT.
AG-110M	3.398E-02	3.100E-02	4.925E-02	0.000E+00	NOT IDENT.
IN-111	7.242E-01	7.266E-01	1.181E+00	0.000E+00	NOT IDENT.
IN-113M	-1.636E-02	3.776E-02	6.314E-02	0.000E+00	NOT IDENT.
SN-113	-1.636E-02	3.776E-02	6.314E-02	0.000E+00	NOT IDENT.
IN-114M	6.118E-02	1.778E-01	2.712E-01	0.000E+00	NOT IDENT.
CD-115	-3.671E+00	5.874E+00	9.854E+00	0.000E+00	NOT IDENT.
SN-117M	-9.208E-02	4.761E-02	7.728E-02	0.000E+00	NOT IDENT.
SB-122	9.014E-01	1.195E+00	2.141E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.222E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-3.910E-02	2.567E-02	4.232E-02	0.000E+00	NOT IDENT.
I-124	-2.846E-01	5.464E-01	7.742E-01	0.000E+00	NOT IDENT.
SB-124	-6.366E-02	5.887E-02	8.274E-02	0.000E+00	FAIL ABUN
SB-125	1.854E-02	7.628E-02	1.307E-01	0.000E+00	FAIL ABUN
TE-125M	-2.221E+00	8.556E+00	1.489E+01	0.000E+00	NOT IDENT.
I-126	1.744E-02	1.639E-01	2.407E-01	0.000E+00	NOT IDENT.
SB-126	7.371E-02	1.233E-01	1.870E-01	0.000E+00	FAIL ABUN
SB-127	-1.199E-01	9.072E-01	1.524E+00	0.000E+00	NOT IDENT.
XE-127	-1.947E-02	4.124E-02	6.926E-02	0.000E+00	NOT IDENT.
I-131	-7.961E-02	8.752E-02	1.396E-01	0.000E+00	NOT IDENT.
TE-132	9.929E-02	4.895E-01	8.335E-01	0.000E+00	NOT IDENT.
BA-133	1.742E-02	4.050E-02	6.196E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.884E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.278E-02	7.720E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.526E-01	2.529E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.793E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.350E-02	8.741E-02	1.458E-01	0.000E+00	FAIL ABUN
CE-139	-4.182E-03	2.697E-02	4.658E-02	0.000E+00	NOT IDENT.
BA-140	8.696E-03	1.917E-01	3.333E-01	0.000E+00	NOT IDENT.
LA-140	-1.031E-01	7.175E-02	1.018E-01	0.000E+00	FAIL ABUN
CE-141	6.200E-02	5.606E-02	1.013E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.444E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-5.501E-02	2.077E-01	3.180E-01	0.000E+00	NOT IDENT.
PM-144	5.648E-04	2.743E-02	4.644E-02	0.000E+00	NOT IDENT.
PR-144	3.825E-02	1.858E+00	3.145E+00	0.000E+00	NOT IDENT.

PM-146	-1.264E-02	3.678E-02	5.897E-02	0.000E+00	NOT IDENT.
ND-147	3.892E-02	4.159E-01	7.255E-01	0.000E+00	NOT IDENT.
PM-149	7.773E+00	5.207E+01	9.190E+01	0.000E+00	NOT IDENT.
EU-152	3.447E-02	9.569E-02	1.384E-01	0.000E+00	FAIL ABUN
GD-153	-6.474E-03	7.496E-02	1.188E-01	0.000E+00	FAIL ABUN
EU-154	-3.802E-02	1.066E-01	1.775E-01	0.000E+00	NOT IDENT.
EU-155	6.485E-02	9.433E-02	1.724E-01	0.000E+00	FAIL ABUN
TB-160	4.167E-02	1.043E-01	1.835E-01	0.000E+00	FAIL ABUN
HO-166M	-1.158E-02	4.811E-02	7.995E-02	0.000E+00	NOT IDENT.
TM-170	-8.656E+00	2.719E+01	4.101E+01	0.000E+00	NOT IDENT.
LU-176	1.189E-02	2.170E-02	3.540E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.191E+00	1.703E+00	0.000E+00	FAIL ABUN
LU-177M	-8.433E-02	1.441E-01	2.374E-01	0.000E+00	NOT IDENT.
HF-181	-3.129E-02	3.253E-02	5.413E-02	0.000E+00	NOT IDENT.
W-181	-2.649E-02	3.551E-01	5.420E-01	0.000E+00	NOT IDENT.
TA-182	-1.898E-01	1.648E-01	2.633E-01	0.000E+00	FAIL ABUN
RE-183	1.623E-02	9.948E-02	1.724E-01	0.000E+00	FAIL ABUN
RE-184	4.627E-02	1.861E-01	3.330E-01	0.000E+00	NOT IDENT.
OS-185	1.030E-02	3.480E-02	6.024E-02	0.000E+00	NOT IDENT.
RE-188	2.474E-01	1.548E-01	2.824E-01	0.000E+00	NOT IDENT.
W-188	5.784E+00	6.374E+00	1.021E+01	0.000E+00	FAIL ABUN
IR-192	1.678E-02	2.816E-02	5.017E-02	0.000E+00	FAIL ABUN
AU-195	2.222E-01	2.039E-01	3.533E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.813E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	7.199E-01	4.899E+00	8.537E+00	0.000E+00	NOT IDENT.
TL-202	3.974E-02	5.017E-02	8.825E-02	0.000E+00	NOT IDENT.
HG-203	3.372E-02	3.443E-02	6.251E-02	0.000E+00	FAIL ABUN
BI-207	-1.556E-02	4.523E-02	7.434E-02	0.000E+00	FAIL ABUN
TL-207	3.761E-01	6.106E-01	9.490E-01	0.000E+00	FAIL ABUN
PO-209	7.365E+00	6.010E+00	1.098E+01	0.000E+00	NOT IDENT.
BI-210	-1.521E+00	2.546E+00	4.353E+00	0.000E+00	NOT IDENT.
PB-210	-1.521E+00	2.546E+00	4.353E+00	0.000E+00	NOT IDENT.
PO-210	-1.521E+00	2.545E+00	4.353E+00	0.000E+00	NOT IDENT.
PB-211	-9.234E-02	7.931E-01	1.339E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.000E-01	5.496E-01	0.000E+00	FAIL ABUN
PO-215	3.761E-01	6.106E-01	9.490E-01	0.000E+00	FAIL ABUN
RN-219	1.069E-02	3.495E-01	5.878E-01	0.000E+00	FAIL ABUN
RN-220	5.820E+00	2.032E+01	3.569E+01	0.000E+00	NOT IDENT.
RA-223	3.761E-01	6.106E-01	9.490E-01	0.000E+00	FAIL ABUN
AC-227	-6.805E-02	3.148E-01	5.530E-01	0.000E+00	FAIL ABUN
TH-227	-6.805E-02	3.149E-01	5.530E-01	0.000E+00	FAIL ABUN
TH-229	-2.478E-01	4.563E-01	7.673E-01	0.000E+00	FAIL ABUN
PA-231	5.564E-01	1.267E+00	2.259E+00	0.000E+00	FAIL ABUN
TH-231	3.761E-01	6.106E-01	9.490E-01	0.000E+00	FAIL ABUN
U-231	5.980E-01	8.478E-01	1.385E+00	0.000E+00	FAIL ABUN
PA-233	-1.812E-02	5.181E-02	8.889E-02	0.000E+00	FAIL ABUN
PA-234	-2.221E-01	2.547E-01	4.034E-01	0.000E+00	FAIL ABUN
PA-234M	7.897E-02	5.316E+00	8.856E+00	0.000E+00	FAIL ABUN
U-235	-3.431E-02	1.958E-01	3.373E-01	0.000E+00	FAIL ABUN
NP-236	4.261E-02	7.060E-02	1.252E-01	0.000E+00	FAIL ABUN
NP-239	-1.499E-01	1.700E-01	2.943E-01	0.000E+00	FAIL ABUN
AM-241	1.542E-01	1.360E-01	2.185E-01	0.000E+00	NOT IDENT.
CM-243	2.333E-03	8.387E-02	1.508E-01	0.000E+00	FAIL ABUN
CM-247	-2.424E-03	3.119E-02	5.217E-02	0.000E+00	NOT IDENT.
CF-249	1.219E-02	3.484E-02	5.918E-02	0.000E+00	NOT IDENT.
CF-251	7.459E-02	1.142E-01	2.015E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:54:11.73

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*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358004.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:16:10.
Sample ID         : G232358004           Sample quantity  : 1.34080E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.95  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	2678	10.67*	1.981E+00	3.547E+01	3.547E+01	8.17
CD-109	88.03	307	3.72*	7.941E+00	2.905E+00	2.966E+00	32.15
SN-126	64.28	122	9.60	4.824E+00	7.405E-01	7.405E-01	86.83
	86.94	307	8.90	7.941E+00	1.214E+00	1.214E+00	51.67
	87.57	307	37.00*	7.941E+00	2.921E-01	2.921E-01	32.15
BA-137M	661.65	80	89.98*	3.737E+00	6.658E-02	6.664E-02	79.52
CS-137	661.65	80	85.12*	3.737E+00	7.038E-02	7.044E-02	79.53
TL-208	277.35	------	6.80	6.634E+00	------ Line Not Found		------
	510.84	192	21.60	4.532E+00	5.494E-01	5.494E-01	50.78
	583.14	741	84.20*	4.117E+00	5.986E-01	5.986E-01	13.35
	860.37	------	12.46	3.015E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	6.380E+00	------ Line Not Found		------
	351.07	1138	12.94*	5.774E+00	4.265E+00	4.265E+00	10.67
PB-212	74.81	674	10.70	6.665E+00	2.648E+00	2.648E+00	19.65
	77.11	1027	18.00	6.952E+00	2.297E+00	2.297E+00	13.58
	87.30	307	8.00	7.941E+00	1.351E+00	1.351E+00	33.67
	238.63	2208	44.60*	7.192E+00	1.927E+00	1.927E+00	8.86
	300.09	135	3.41	6.339E+00	1.755E+00	1.755E+00	49.00
PO-212	74.81	674	10.70	6.665E+00	2.648E+00	2.648E+00	19.65
	77.11	1027	18.00	6.952E+00	2.297E+00	2.297E+00	13.58
	87.30	307	8.00	7.941E+00	1.351E+00	1.351E+00	33.67
	115.19	------	0.60	8.992E+00	------ Line Not Found		------
	238.63	2208	44.60*	7.192E+00	1.927E+00	1.927E+00	8.86
	300.09	135	3.41	6.339E+00	1.755E+00	1.755E+00	49.00
BI-214	609.31	802	46.30*	3.983E+00	1.218E+00	1.218E+00	14.60
	768.36	136	5.04	3.316E+00	2.280E+00	2.280E+00	50.68
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	211	15.10	2.411E+00	1.623E+00	1.623E+00	32.17
	1238.11	102	5.94	2.225E+00	2.167E+00	2.167E+00	58.22
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	------	15.80	1.812E+00	------ Line Not Found		------
PB-214	74.81	674	6.21	6.665E+00	4.562E+00	4.562E+00	18.80

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	1027	10.50	6.952E+00	3.937E+00	3.938E+00	15.57
	87.30	307	4.67	7.941E+00	2.314E+00	2.314E+00	33.06
	241.98	445	7.49	7.145E+00	2.326E+00	2.326E+00	24.70
	295.21	831	19.20	6.403E+00	1.893E+00	1.893E+00	14.02
	351.92	1138	37.20*	5.774E+00	1.484E+00	1.484E+00	11.88
PO-214	74.81	674	6.21	6.665E+00	4.562E+00	4.562E+00	18.80
	77.11	1027	10.50	6.952E+00	3.937E+00	3.938E+00	15.57
	87.30	307	4.67	7.941E+00	2.314E+00	2.314E+00	33.06
	241.98	445	7.49	7.145E+00	2.326E+00	2.326E+00	24.70
	295.21	831	19.20	6.403E+00	1.893E+00	1.893E+00	14.02
	351.92	1138	37.20*	5.774E+00	1.484E+00	1.484E+00	11.88
PO-216	74.81	674	10.70	6.665E+00	2.648E+00	2.648E+00	19.65
	77.11	1027	18.00	6.952E+00	2.297E+00	2.297E+00	13.58
	87.30	307	8.00	7.941E+00	1.351E+00	1.351E+00	33.67
	238.63	2208	44.60*	7.192E+00	1.927E+00	1.927E+00	8.86
	300.09	135	3.41	6.339E+00	1.755E+00	1.755E+00	49.00
PO-218	74.81	674	6.21	6.665E+00	4.562E+00	4.562E+00	18.80
	77.11	1027	10.50	6.952E+00	3.937E+00	3.938E+00	15.57
	87.30	307	4.67	7.941E+00	2.314E+00	2.314E+00	33.06
	241.98	445	7.49	7.145E+00	2.326E+00	2.326E+00	24.70
	295.21	831	19.20	6.403E+00	1.893E+00	1.893E+00	14.02
	351.92	1138	37.20*	5.774E+00	1.484E+00	1.484E+00	11.88
RA-224	240.98	445	3.95*	7.145E+00	4.410E+00	4.410E+00	24.05
RA-226	609.31	802	46.30*	3.983E+00	1.218E+00	1.218E+00	14.60
	768.36	136	5.04	3.316E+00	2.280E+00	2.280E+00	50.68
	934.06	------	3.21	2.811E+00	------	Line Not Found	------
	1120.29	211	15.10	2.411E+00	1.623E+00	1.623E+00	32.17
	1238.11	102	5.94	2.225E+00	2.167E+00	2.167E+00	58.22
	1377.67	------	4.11	2.059E+00	------	Line Not Found	------
	1764.49	------	15.80	1.812E+00	------	Line Not Found	------
AC-228	338.32	435	11.40	5.913E+00	1.806E+00	1.806E+00	46.39
	911.07	508	27.70*	2.869E+00	1.789E+00	1.789E+00	19.96
	969.11	321	16.60	2.723E+00	1.989E+00	1.989E+00	30.17
RA-228	338.32	435	11.40	5.913E+00	1.806E+00	1.806E+00	46.39
	911.07	508	27.70*	2.869E+00	1.789E+00	1.789E+00	19.96
	969.11	321	16.60	2.723E+00	1.989E+00	1.989E+00	30.17
TH-228	84.40	105	1.21	7.665E+00	3.174E+00	3.174E+00	82.42
	238.60	2208	44.60*	7.192E+00	1.927E+00	1.927E+00	8.86
	300.10	135	3.41	6.339E+00	1.755E+00	1.755E+00	76.20
TH-230	609.31	802	46.30*	3.983E+00	1.218E+00	1.218E+00	14.60
	768.36	136	5.04	3.316E+00	2.280E+00	2.280E+00	50.68
	934.06	------	3.21	2.811E+00	------	Line Not Found	------
	1120.29	211	15.10	2.411E+00	1.623E+00	1.623E+00	32.17
	1238.11	102	5.94	2.225E+00	2.167E+00	2.167E+00	58.22
	1377.67	------	4.11	2.059E+00	------	Line Not Found	------
	1764.49	------	15.80	1.812E+00	------	Line Not Found	------
TH-232	338.32	435	11.40	5.913E+00	1.806E+00	1.806E+00	22.88
	911.07	508	27.70*	2.869E+00	1.789E+00	1.789E+00	19.96
	969.11	321	16.60	2.723E+00	1.989E+00	1.989E+00	30.17

Sample ID : G232358004 Acquisition date : 6-JUL-2009 11:16:10

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	122	3.80*	4.824E+00	1.871E+00	1.871E+00	87.36
	92.38	151	5.41	8.370E+00	9.321E-01	9.321E-01	94.88
U-234	609.31	802	46.30*	3.983E+00	1.218E+00	1.218E+00	14.60
	768.36	136	5.04	3.316E+00	2.280E+00	2.280E+00	50.68
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	211	15.10	2.411E+00	1.623E+00	1.623E+00	32.17
	1238.11	102	5.94	2.225E+00	2.167E+00	2.167E+00	58.22
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	------	15.80	1.812E+00	------ Line Not Found		------
NP-237	86.50	307	12.60*	7.941E+00	8.577E-01	8.577E-01	38.20
	95.87	------	2.60	8.481E+00	------ Line Not Found		------
U-238	63.29	122	3.80*	4.824E+00	1.871E+00	1.871E+00	87.36
	92.38	151	5.41	8.370E+00	9.321E-01	9.321E-01	93.54
AM-243	74.67	674	66.00*	6.665E+00	4.293E-01	4.293E-01	17.28
	86.72	307	0.34	7.941E+00	3.216E+01	3.216E+01	32.15
	117.66	------	0.55	9.009E+00	------ Line Not Found		------
	142.18	------	0.13	8.872E+00	------ Line Not Found		------
ANH-511	511.00	192	100.00*	4.532E+00	1.187E-01	1.187E-01	50.09

Flag: "*" = Keyline

Sample ID : G232358004 Acquisition date : 6-JUL-2009 17:16:10

Total number of lines in spectrum 34
Number of unidentified lines 3
Number of lines tentatively identified by NID 31 91.18%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.547E+01	3.547E+01	0.290E+01	8.17	
CD-109	464.00D	1.02	2.905E+00	2.966E+00	0.954E+00	32.15	
SN-126	1.00E+05Y	1.00	2.921E-01	2.921E-01	0.939E-01	32.15	
BA-137M	30.17Y	1.00	6.658E-02	6.664E-02	5.299E-02	79.52	
CS-137	30.17Y	1.00	7.038E-02	7.044E-02	5.602E-02	79.53	
TL-208	1.41E+10Y	1.00	5.986E-01	5.986E-01	0.799E-01	13.35	
BI-211	7.04E+08Y	1.00	4.265E+00	4.265E+00	0.455E+00	10.67	
PB-212	1.41E+10Y	1.00	1.927E+00	1.927E+00	0.171E+00	8.86	
PO-212	1.41E+10Y	1.00	1.927E+00	1.927E+00	0.171E+00	8.86	
BI-214	1600.00Y	1.00	1.218E+00	1.218E+00	0.178E+00	14.60	
PB-214	1600.00Y	1.00	1.484E+00	1.484E+00	0.176E+00	11.88	
PO-214	1600.00Y	1.00	1.484E+00	1.484E+00	0.176E+00	11.88	
PO-216	1.41E+10Y	1.00	1.927E+00	1.927E+00	0.171E+00	8.86	
PO-218	1600.00Y	1.00	1.484E+00	1.484E+00	0.176E+00	11.88	
RA-224	1.41E+10Y	1.00	4.410E+00	4.410E+00	1.061E+00	24.05	
RA-226	1600.00Y	1.00	1.218E+00	1.218E+00	0.178E+00	14.60	
AC-228	1.41E+10Y	1.00	1.789E+00	1.789E+00	0.357E+00	19.96	
RA-228	1.41E+10Y	1.00	1.789E+00	1.789E+00	0.357E+00	19.96	
TH-228	1.41E+10Y	1.00	1.927E+00	1.927E+00	0.171E+00	8.86	
TH-230	4.47E+09Y	1.00	1.218E+00	1.218E+00	0.178E+00	14.60	
TH-232	1.41E+10Y	1.00	1.789E+00	1.789E+00	0.357E+00	19.96	
TH-234	4.47E+09Y	1.00	1.871E+00	1.871E+00	1.634E+00	87.36	
U-234	4.47E+09Y	1.00	1.218E+00	1.218E+00	0.178E+00	14.60	
NP-237	2.14E+06Y	1.00	8.577E-01	8.577E-01	3.276E-01	38.20	
U-238	4.47E+09Y	1.00	1.871E+00	1.871E+00	1.634E+00	87.36	
AM-243	7380.00Y	1.00	4.293E-01	4.293E-01	0.742E-01	17.28	
ANH-511	1.00E+09Y	1.00	1.187E-01	1.187E-01	0.594E-01	50.09	
	Total Activity :		7.562E+01	7.569E+01			

Grand Total Activity : 7.562E+01 7.569E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines Page : 5
Sample ID : G2523580J4 Acquisition date : 6-JUL-2009 11:16:10

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	129.50	182	613	1.55	258.34	253	11	2.52E-02	54.9	9.00E+00	T
0	186.19	279	609	1.65	371.71	367	11	3.87E-02	37.7	8.11E+00	T
0	209.41	232	454	1.29	418.13	414	10	3.22E-02	36.9	7.68E+00	T
0	270.50	126	359	1.66	540.31	536	10	1.74E-02	59.3	6.73E+00	T
0	328.62	113	223	1.23	656.54	652	9	1.57E-02	51.3	6.02E+00	T
0	463.50	126	287	1.75	926.31	918	18	1.74E-02	65.8	4.85E+00	T
0	727.68	156	149	1.95	1454.78	1447	14	2.17E-02	36.9	3.47E+00	T
0	796.35	108	124	1.79	1592.17	1584	17	1.50E-02	50.9	3.22E+00	T
1	965.43	96	136	2.53	1930.46	1923	26	1.33E-02	55.4	2.73E+00	T
0	1095.42	37	83	0.76	2190.59	2181	15	5.08E-03	****	2.46E+00	
0	1379.17	56	55	1.71	2758.52	2752	16	7.71E-03	67.4	2.06E+00	
0	1766.27	181	25	2.48	3533.51	3526	15	2.51E-02	19.8	1.81E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:54:16.73

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]C232358004.CNF;1 *
* Acquisition date  : 6-JUL-2009 11:16:10.  Detector SN#     :             *
* Detector ID       : GAM22                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.95          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232358004            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.34080E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45.3MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.547E+01	2.900E+00	4.526E-01	3.150E-02	78.371
CD-109	2.966E+00	9.537E-01	1.377E+00	1.230E-01	2.155
SN-126	2.921E-01	9.390E-02	1.345E-01	1.197E-02	2.171
BA-137M	6.664E-02	5.299E-02	5.054E-02	3.750E-03	1.318
CS-137	7.044E-02	5.602E-02	5.343E-02	3.974E-03	1.318
TL-208	5.986E-01	7.991E-02	4.699E-02	3.618E-03	12.739
BI-211	4.265E+00	4.551E-01	2.611E-01	1.656E-02	16.336
PB-212	1.927E+00	1.708E-01	7.881E-02	5.572E-03	24.450
PO-212	1.927E+00	1.708E-01	7.881E-02	5.572E-03	24.450
BI-214	1.218E+00	1.778E-01	9.353E-02	8.226E-03	13.018
PB-214	1.484E+00	1.762E-01	9.278E-02	7.621E-03	15.990
PO-214	1.484E+00	1.762E-01	9.278E-02	7.621E-03	15.990
PO-216	1.927E+00	1.708E-01	7.881E-02	5.572E-03	24.450
PO-218	1.484E+00	1.762E-01	9.278E-02	7.621E-03	15.990
RA-224	4.410E+00	1.061E+00	8.956E-01	4.904E-02	4.925
RA-226	1.218E+00	1.778E-01	9.353E-02	8.226E-03	13.018
AC-228	1.789E+00	3.570E-01	1.849E-01	2.313E-02	9.673
RA-228	1.789E+00	3.570E-01	1.849E-01	2.313E-02	9.673

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.927E+00	1.708E-01	7.880E-02	5.572E-03	24.452
TH-230	1.218E+00	1.778E-01	9.353E-02	8.226E-03	13.018
TH-232	1.789E+00	3.570E-01	1.849E-01	2.313E-02	9.673
TH-234	1.871E+00	1.634E+00	1.721E+00	2.983E-01	1.087
U-234	1.218E+00	1.778E-01	9.353E-02	8.226E-03	13.018
NP-237	8.577E-01	3.276E-01	2.905E-01	6.516E-02	2.952
U-238	1.871E+00	1.634E+00	1.721E+00	2.983E-01	1.087
AM-243	4.293E-01	7.418E-02	7.813E-02	6.075E-03	5.494
ANH-511	1.187E-01	5.945E-02	3.786E-02	2.454E-03	3.135

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.111E-01		2.677E-01	4.475E-01	3.201E-02	0.472
NA-22	-1.501E-02		3.880E-02	6.293E-02	4.005E-03	-0.239
NA-24	-5.542E-02		8.565E-02	Half-Life too short		
AL-26	-1.146E-02		1.877E-02	2.791E-02	1.588E-03	-0.410
TI-44	4.238E-01	+	5.754E-02	7.324E-02	5.899E-03	5.787
SC-46	-2.805E-02		3.275E-02	5.117E-02	5.246E-03	-0.548
V-48	-8.356E-02		5.563E-02	8.069E-02	7.451E-03	-1.036
CR-51	6.130E-02		3.035E-01	5.063E-01	3.218E-02	0.121
MN-52	2.880E-02		1.608E-01	2.694E-01	1.800E-02	0.107
MN-54	1.909E-02		3.426E-02	5.874E-02	5.603E-03	0.325
CO-56	-3.283E-02		3.334E-02	5.203E-02	5.044E-03	-0.631
CO-57	3.060E-05		2.260E-02	3.757E-02	2.297E-03	0.001
CO-58	-9.795E-03		3.239E-02	5.323E-02	4.924E-03	-0.184
FE-59	-9.368E-02		9.747E-02	1.221E-01	9.813E-03	-0.767
CO-60	3.376E-02		3.119E-02	5.601E-02	3.788E-03	0.603
ZN-65	8.028E-03		8.824E-02	1.233E-01	8.506E-03	0.065
GE-68	3.217E-01		1.176E+00	1.953E+00	1.492E-01	0.165
AS-73	7.192E-01		6.637E-01	1.077E+00	7.484E-02	0.668
AS-74	-3.905E-02		7.325E-02	1.174E-01	8.247E-03	-0.333
SE-75	2.542E-02		3.969E-02	6.240E-02	3.510E-03	0.407
BR-77	4.418E-01		6.311E+00	1.010E+01	6.612E-01	0.044
SR-82	-1.800E-01		3.540E-01	5.074E-01	4.465E-02	-0.355
RB-83	3.855E-04		5.758E-02	9.182E-02	6.009E-03	0.004
RB-84	1.299E-02		5.292E-02	8.939E-02	9.073E-03	0.145
KR-85	3.660E+01		7.958E+00	1.377E+01	8.952E-01	2.658
SR-85	1.854E-01		4.032E-02	6.974E-02	4.535E-03	2.658
RB-86	3.254E-01		7.029E-01	1.181E+00	9.035E-02	0.276
Y-88	1.253E-02		2.508E-02	4.422E-02	2.474E-03	0.283
ZR-88	-8.970E-03		2.613E-02	4.188E-02	2.380E-03	-0.214
Y-91	6.459E+00		1.672E+01	2.767E+01	1.621E+00	0.233
NB-94	1.045E-02		2.785E-02	4.636E-02	3.662E-03	0.225
NB-95	1.067E-01		4.286E-02	6.940E-02	6.014E-03	1.538
NB-95M	3.124E-01		1.319E-01	2.011E-01	1.461E-02	1.553
ZR-95	1.660E-02		5.942E-02	9.790E-02	9.229E-03	0.170

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	3.006E-02		1.428E-02	Half-Life too short		
ZR-97	1.002E+00		2.714E-01	Half-Life too short		
MO-99	-2.822E+00		7.355E+00	1.163E+01	1.748E+00	-0.243
TC-99M	-8.593E+08		7.769E+08	Half-Life too short		
RH-101	1.213E-02		3.167E-02	5.045E-02	2.662E-03	0.241
RH-102	7.833E-03		2.441E-02	3.988E-02	2.491E-03	0.196
RU-103	-1.532E-03		3.070E-02	5.130E-02	6.632E-03	-0.030
RH-106	-4.965E-02		2.626E-01	4.277E-01	5.336E-02	-0.116
RU-106	-4.965E-02		2.626E-01	4.277E-01	3.071E-02	-0.116
AG-108M	-5.373E-04		2.676E-02	4.323E-02	2.789E-03	-0.012
AG-110M	3.398E-02		3.163E-02	4.844E-02	3.727E-03	0.702
IN-111	7.242E-01		7.415E-01	1.141E+00	6.268E-02	0.635
IN-113M	-1.636E-02		3.853E-02	6.153E-02	3.735E-03	-0.266
SN-113	-1.636E-02		3.853E-02	6.153E-02	3.735E-03	-0.266
IN-114M	6.118E-02		1.814E-01	2.610E-01	1.367E-02	0.234
CD-115	-3.671E+00		5.994E+00	9.654E+00	6.364E-01	-0.380
SN-117M	-9.208E-02		4.858E-02	7.413E-02	3.904E-03	-1.242
SB-122	9.014E-01		1.219E+00	2.100E+00	1.433E-01	0.429
I-123	-1.862E+00		6.236E-01	Half-Life too short		
TE-123M	-3.910E-02		2.619E-02	4.060E-02	2.169E-03	-0.963
I-124	-2.846E-01		5.575E-01	7.602E-01	5.370E-02	-0.374
SB-124	-6.366E-02		6.008E-02	8.281E-02	5.450E-03	-0.769
SB-125	1.854E-02		7.783E-02	1.275E-01	7.866E-03	0.145
TE-125M	-2.221E+00		8.730E+00	1.419E+01	1.265E+00	-0.157
I-126	1.744E-02		1.673E-01	2.368E-01	1.770E-02	0.074
SB-126	7.371E-02		1.258E-01	1.842E-01	1.495E-02	0.400
SB-127	-1.199E-01		9.257E-01	1.500E+00	1.553E-01	-0.080
XE-127	-1.947E-02		4.209E-02	6.672E-02	3.537E-03	-0.292
I-131	-7.961E-02		8.931E-02	1.359E-01	8.659E-03	-0.586
TE-132	9.929E-02		4.995E-01	8.046E-01	1.126E-01	0.123
BA-133	1.742E-02		4.133E-02	6.028E-02	6.938E-03	0.289
I-133	-3.656E-04		9.614E-04	Half-Life too short		
CS-134	1.239E-01	+	6.406E-02	7.620E-02	6.935E-03	1.627
CS-135	2.766E-01		1.558E-01	2.448E-01	1.833E-02	1.130
I-135	9.005E+07		1.425E+08	Half-Life too short		
CS-136	-1.350E-02		8.919E-02	1.446E-01	1.238E-02	-0.093
CE-139	-4.182E-03		2.752E-02	4.471E-02	2.291E-03	-0.094
BA-140	8.696E-03		1.957E-01	3.266E-01	1.067E-01	0.027
LA-140	-1.031E-01		7.322E-02	1.018E-01	6.495E-03	-1.013
CE-141	6.200E-02		5.720E-02	9.705E-02	5.606E-03	0.639
CE-143	5.634E-04		7.365E-05	Half-Life too short		
CE-144	-5.501E-02		2.120E-01	3.042E-01	4.319E-02	-0.181
PM-144	5.648E-04		2.799E-02	4.572E-02	3.580E-03	0.012
PR-144	3.825E-02		1.896E+00	3.096E+00	2.423E-01	0.012
PM-146	-1.264E-02		3.753E-02	5.762E-02	5.087E-03	-0.219
ND-147	3.892E-02		4.244E-01	7.108E-01	9.873E-02	0.055
PM-149	7.773E+00		5.313E+01	8.906E+01	1.256E+01	0.087
EU-152	3.447E-02		9.765E-02	1.346E-01	8.679E-03	0.256

---- Non-identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Idcd	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-6.474E-03		7.649E-02	1.130E-01	8.843E-03	-0.057
EU-154	-3.802E-02		1.087E-01	1.768E-01	1.713E-02	-0.215
EU-155	6.485E-02		9.625E-02	1.642E-01	1.195E-02	0.395
TB-160	4.167E-02		1.064E-01	1.814E-01	1.836E-02	0.230
HO-166M	-1.158E-02		4.909E-02	7.875E-02	6.305E-03	-0.147
TM-171	-8.656E+00		2.774E+01	3.876E+01	2.831E+00	-0.223
LU-176	1.189E-02		2.214E-02	3.435E-02	1.946E-03	0.346
LU-177	3.262E+00	+	1.215E+00	1.641E+00	8.745E-02	1.988
LU-177M	-8.483E-02		1.470E-01	2.316E-01	1.350E-02	-0.366
HF-181	-3.129E-02		3.319E-02	5.294E-02	3.332E-03	-0.591
W-181	-2.649E-02		3.624E-01	5.122E-01	3.704E-02	-0.052
TA-182	-1.898E-01		1.682E-01	2.619E-01	1.565E-02	-0.725
RE-183	1.623E-02		1.015E-01	1.654E-01	8.587E-03	0.098
RE-184	4.627E-02		1.899E-01	3.220E-01	1.778E-02	0.144
OS-185	1.030E-02		3.551E-02	5.923E-02	4.340E-03	0.174
RE-188	2.474E-01		1.580E-01	2.707E-01	1.445E-02	0.914
W-188	5.784E+00		6.504E+00	9.893E+00	5.573E-01	0.585
IR-192	1.678E-02		2.873E-02	4.870E-02	2.780E-03	0.344
AU-195	2.222E-01		2.081E-01	3.362E-01	2.584E-02	0.661
TL-200	-3.690E-05		9.248E-05	Half-Life too short		
TL-201	7.199E-01		4.999E+00	8.197E+00	4.202E-01	0.088
TL-202	3.974E-02		5.119E-02	8.617E-02	5.176E-03	0.461
HG-203	3.372E-02		3.513E-02	6.055E-02	3.618E-03	0.557
BI-207	-1.556E-02		4.615E-02	7.376E-02	5.824E-03	-0.211
TL-207	3.761E-01		6.231E-01	9.217E-01	1.519E-01	0.408
PO-209	7.365E+00		6.132E+00	1.086E+01	1.124E+00	0.678
BI-210	-1.521E+00		2.598E+00	4.090E+00	3.092E-01	-0.372
PB-210	-1.521E+00		2.598E+00	4.090E+00	3.092E-01	-0.372
PO-210	-1.521E+00		2.597E+00	4.090E+00	2.636E-01	-0.372
PB-211	-9.234E-02		8.093E-01	1.306E+00	8.138E-01	-0.071
BI-212	1.070E+00	+	4.081E-01	5.416E-01	5.222E-02	1.976
PO-215	3.761E-01		6.231E-01	9.217E-01	1.519E-01	0.408
RN-219	1.069E-02		3.566E-01	5.731E-01	7.784E-02	0.019
RN-220	5.820E+00		2.074E+01	3.499E+01	2.356E+00	0.166
RA-223	3.761E-01		6.231E-01	9.217E-01	1.519E-01	0.408
AC-227	-6.805E-02		3.213E-01	5.349E-01	7.409E-02	-0.127
TH-227	-6.805E-02		3.213E-01	5.349E-01	8.992E-02	-0.127
TH-229	-2.478E-01		4.656E-01	7.385E-01	3.881E-02	-0.336
PA-231	5.564E-01		1.293E+00	2.189E+00	2.999E-01	0.254
TH-231	3.761E-01		6.231E-01	9.217E-01	1.519E-01	0.408
U-231	5.980E-01		8.651E-01	1.317E+00	1.051E-01	0.454
PA-233	-1.812E-02		5.286E-02	8.628E-02	5.210E-03	-0.210
PA-234	-2.221E-01		2.599E-01	3.994E-01	7.715E-02	-0.556
PA-234M	7.897E-02		5.425E+00	8.778E+00	1.005E+00	0.009
U-235	-3.431E-02		1.998E-01	3.230E-01	5.240E-02	-0.106
NP-236	4.261E-02		7.204E-02	1.201E-01	6.285E-03	0.355
NP-239	-1.499E-01		1.735E-01	2.808E-01	1.793E-02	-0.534
AM-241	1.542E-01		1.388E-01	2.062E-01	1.602E-02	0.748

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Idad	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.333E-03		8.559E-02	1.436E-01	1.044E-02	0.016
CM-247	-2.424E-03		3.182E-02	5.087E-02	2.925E-03	-0.048
CF-249	1.219E-02		3.555E-02	5.766E-02	3.274E-03	0.211
CF-251	7.459E-02		1.166E-01	1.936E-01	1.001E-02	0.385

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                        OEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                            DETECTOR DATA                              *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232358004       *
* Acquisition date  :  6-JUL-2009 11:16:10 Detector SN#     :           *
* Detector ID       : CAM22                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000     *
* Elapsed real time:     0 02:00:01.95     Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                             SAMPLE DATA                               *
*                                                                       *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232358004           Analyst initials: MXR1       *
* Batch Number      : 880723               Sample Quantity : 1.3408E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
*                                                                       *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.547E+01	2.842E+00	2.269E-01	1.450E+00
CD-109	2.966E+00	9.346E-01	7.253E-01	4.768E-01
SN-126	2.921E-01	9.202E-02	7.088E-02	4.695E-02
BA-137M	6.664E-02	5.193E-02	2.571E-02	2.650E-02
CS-137	7.044E-02	5.490E-02	2.717E-02	2.801E-02
TL-208	5.986E-01	7.831E-02	2.396E-02	3.995E-02
BI-211	4.265E+00	4.460E-01	1.343E-01	2.276E-01
PB-212	1.927E+00	1.674E-01	4.081E-02	8.540E-02
PO-212	1.927E+00	1.674E-01	4.081E-02	8.540E-02
BI-214	1.218E+00	1.742E-01	4.764E-02	8.888E-02
PB-214	1.484E+00	1.727E-01	4.773E-02	8.812E-02
PO-214	1.484E+00	1.727E-01	4.773E-02	8.812E-02
PO-216	1.927E+00	1.674E-01	4.081E-02	8.540E-02
PO-218	1.484E+00	1.727E-01	4.773E-02	8.812E-02
RA-224	4.410E+00	1.039E+00	4.637E-01	5.304E-01
RA-226	1.218E+00	1.742E-01	4.764E-02	8.888E-02
AC-228	1.789E+00	3.499E-01	9.351E-02	1.785E-01
RA-228	1.789E+00	3.499E-01	9.351E-02	1.785E-01
TH-228	1.927E+00	1.674E-01	4.081E-02	8.540E-02
TH-230	1.218E+00	1.742E-01	4.764E-02	8.888E-02
TH-232	1.789E+00	3.499E-01	9.351E-02	1.785E-01
TH-234	1.871E+00	1.602E+00	9.115E-01	8.171E-01
U-234	1.218E+00	1.742E-01	4.764E-02	8.888E-02
NP-237	8.577E-01	3.211E-01	1.531E-01	1.638E-01
U-238	1.871E+00	1.602E+00	9.115E-01	8.171E-01
AM-243	4.293E-01	7.269E-02	4.128E-02	3.709E-02
ANH-511	1.187E-01	5.826E-02	1.934E-02	2.972E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BR-7	2.111E-01	2.624E-01	2.290E-01	1.339E-01	NOT IDENT.
NA-22	-1.501E-02	3.803E-02	3.162E-02	1.940E-02	NOT IDENT.
NA-24	-6.542E+04	1.679E+05	0.000E+00	8.565E+04	SHORT HLIF
AL-26	-1.146E-02	1.839E-02	1.393E-02	9.384E-03	NOT IDENT.
TI-44	4.238E-01	5.639E-02	3.866E-02	2.877E-02	FAIL ABUN
SC-46	-2.805E-02	3.210E-02	2.588E-02	1.638E-02	FAIL ABUN
V-48	-8.356E-02	5.452E-02	4.074E-02	2.781E-02	NOT IDENT.
CR-51	6.130E-02	2.974E-01	2.608E-01	1.518E-01	NOT IDENT.
MN-52	2.880E-02	1.576E-01	1.351E-01	8.041E-02	NOT IDENT.
MN-54	1.909E-02	3.358E-02	2.975E-02	1.713E-02	NOT IDENT.
CO-56	-3.283E-02	3.268E-02	2.634E-02	1.667E-02	FAIL ABUN
CO-57	3.060E-05	2.215E-02	1.968E-02	1.130E-02	NOT IDENT.
CO-58	-9.795E-03	3.175E-02	2.697E-02	1.620E-02	NOT IDENT.
FE-59	-9.368E-02	9.552E-02	6.153E-02	4.874E-02	NOT IDENT.
CO-60	3.376E-02	3.057E-02	2.813E-02	1.560E-02	NOT IDENT.
ZN-65	8.028E-03	8.648E-02	6.213E-02	4.412E-02	NOT IDENT.
GE-68	3.217E-01	1.153E+00	9.846E-01	5.880E-01	NOT IDENT.
AS-73	7.192E-01	6.504E-01	5.723E-01	3.318E-01	NOT IDENT.
AS-74	-3.905E-02	7.178E-02	5.984E-02	3.662E-02	NOT IDENT.
SE-75	2.542E-02	3.889E-02	3.226E-02	1.984E-02	NOT IDENT.
BR-77	4.418E-01	6.185E+00	5.160E+00	3.156E+00	FAIL ABUN
SR-82	-1.800E-01	3.469E-01	2.573E-01	1.770E-01	NOT IDENT.
RB-83	3.855E-04	5.642E-02	4.690E-02	2.879E-02	NOT IDENT.
RB-84	1.299E-02	5.186E-02	4.523E-02	2.646E-02	NOT IDENT.
KR-85	3.660E+01	7.799E+00	7.034E+00	3.979E+00	NOT IDENT.
SR-85	1.854E-01	3.951E-02	3.563E-02	2.016E-02	NOT IDENT.
RB-86	3.254E-01	6.889E-01	5.952E-01	3.515E-01	NOT IDENT.
Y-88	1.253E-02	2.458E-02	2.207E-02	1.254E-02	NOT IDENT.
ZR-88	-8.970E-03	2.561E-02	2.150E-02	1.307E-02	NOT IDENT.
Y-91	6.459E+00	1.639E+01	1.392E+01	8.361E+00	NOT IDENT.
NB-94	1.045E-02	2.729E-02	2.355E-02	1.392E-02	NOT IDENT.
NB-95	1.067E-01	4.200E-02	3.520E-02	2.143E-02	NOT IDENT.
NB-95M	3.124E-01	1.293E-01	1.042E-01	6.595E-02	NOT IDENT.
ZR-95	1.660E-02	5.823E-02	4.967E-02	2.971E-02	NOT IDENT.
NB-97	3.006E+04	2.798E+04	0.000E+00	1.428E+04	SHORT HLIF
ZR-97	1.002E+06	5.320E+05	0.000E+00	2.714E+05	SHORT HLIF
MO-99	-2.822E+00	7.208E+00	5.902E+00	3.677E+00	NOT IDENT.
TC-99M	-8.593E+14	1.523E+15	0.000E+00	7.769E+14	SHORT HLIF
RH-101	1.213E-02	3.104E-02	2.621E-02	1.583E-02	NOT IDENT.
RH-102	7.833E-03	2.392E-02	2.041E-02	1.220E-02	FAIL ABUN
RU-103	-1.532E-03	3.009E-02	2.623E-02	1.535E-02	FAIL ABUN
RH-106	-4.965E-02	2.574E-01	2.177E-01	1.313E-01	FAIL ABUN
RU-106	-4.965E-02	2.573E-01	2.177E-01	1.313E-01	FAIL ABUN
AG-108M	-5.373E-04	2.622E-02	2.215E-02	1.338E-02	NOT IDENT.
AG-110M	3.398E-02	3.100E-02	2.464E-02	1.582E-02	NOT IDENT.
IN-111	7.242E-01	7.266E-01	5.906E-01	3.707E-01	NOT IDENT.
IN-113M	-1.636E-02	3.776E-02	3.159E-02	1.927E-02	NOT IDENT.
SN-113	-1.636E-02	3.776E-02	3.159E-02	1.927E-02	NOT IDENT.
IN-114M	6.118E-02	1.778E-01	1.357E-01	9.071E-02	NOT IDENT.
CD-115	-3.671E+00	5.874E+00	4.930E+00	2.997E+00	NOT IDENT.
SN-117M	-9.208E-02	4.761E-02	3.866E-02	2.429E-02	NOT IDENT.
SB-122	9.014E-01	1.195E+00	1.071E+00	6.096E-01	NOT IDENT.
I-123	-1.862E+06	1.222E+06	0.000E+00	6.236E+05	SHORT HLIF
TE-123M	-3.910E-02	2.567E-02	2.117E-02	1.310E-02	NOT IDENT.
I-124	-2.846E-01	5.464E-01	3.873E-01	2.788E-01	NOT IDENT.
SB-124	-6.366E-02	5.887E-02	4.140E-02	3.004E-02	FAIL ABUN
SB-125	1.854E-02	7.628E-02	6.538E-02	3.892E-02	FAIL ABUN
TE-125M	-2.221E+00	8.556E+00	7.447E+00	4.365E+00	NOT IDENT.
I-126	1.744E-02	1.639E-01	1.204E-01	8.363E-02	NOT IDENT.
SB-126	7.371E-02	1.233E-01	9.356E-02	6.290E-02	FAIL ABUN
SB-127	-1.199E-01	9.072E-01	7.626E-01	4.628E-01	NOT IDENT.
XE-127	-1.947E-02	4.124E-02	3.465E-02	2.104E-02	NOT IDENT.
I-131	-7.961E-02	8.752E-02	6.985E-02	4.465E-02	NOT IDENT.
TE-132	9.929E-02	4.895E-01	4.170E-01	2.497E-01	NOT IDENT.
BA-133	1.742E-02	4.050E-02	3.100E-02	2.066E-02	NOT IDENT.
I-133	-3.656E+02	1.884E+03	0.000E+00	9.614E+02	SHORT HLIF
CS-134	1.239E-01	6.278E-02	3.863E-02	3.203E-02	FAIL ABUN
CS-135	2.766E-01	1.526E-01	1.265E-01	7.788E-02	NOT IDENT.
I-135	9.005E+13	2.793E+14	0.000E+00	1.425E+14	SHORT HLIF
CS-136	-1.350E-02	8.741E-02	7.293E-02	4.460E-02	FAIL ABUN
CE-139	-4.182E-03	2.697E-02	2.330E-02	1.376E-02	NOT IDENT.
BA-140	8.696E-03	1.917E-01	1.667E-01	9.783E-02	NOT IDENT.
LA-140	-1.031E-01	7.175E-02	5.094E-02	3.661E-02	FAIL ABUN
CE-141	6.200E-02	5.606E-02	5.069E-02	2.860E-02	NOT IDENT.
CE-143	5.634E+02	1.444E+02	0.000E+00	7.365E+01	SHORT HLIF
CE-144	-5.501E-02	2.077E-01	1.591E-01	1.060E-01	NOT IDENT.
PM-144	5.648E-04	2.743E-02	2.323E-02	1.400E-02	NOT IDENT.
PR-144	3.825E-02	1.858E+00	1.573E+00	9.479E-01	NOT IDENT.

PM-146	-1.264E-02	3.678E-02	2.950E-02	1.877E-02	NOT IDENT.
ND-147	3.892E-02	4.159E-01	3.629E-01	2.122E-01	NOT IDENT.
PM-149	7.773E+00	5.207E+01	4.598E+01	2.657E+01	NOT IDENT.
EU-152	3.447E-02	9.569E-02	6.925E-02	4.882E-02	FAIL ABUN
GD-153	-6.474E-03	7.496E-02	5.944E-02	3.824E-02	FAIL ABUN
EU-154	-3.802E-02	1.066E-01	8.882E-02	5.437E-02	NOT IDENT.
EU-155	6.485E-02	9.433E-02	8.626E-02	4.813E-02	FAIL ABUN
TB-160	4.167E-02	1.043E-01	9.178E-02	5.319E-02	FAIL ABUN
HO-166M	-1.158E-02	4.811E-02	4.000E-02	2.455E-02	NOT IDENT.
TM-171	-8.656E+00	2.719E+01	2.052E+01	1.387E+01	NOT IDENT.
LU-176	1.189E-02	2.170E-02	1.771E-02	1.107E-02	FAIL ABUN
LU-177	3.262E+00	1.191E+00	8.520E-01	6.076E-01	FAIL ABUN
LU-177M	-8.483E-02	1.441E-01	1.188E-01	7.352E-02	NOT IDENT.
HF-181	-3.129E-02	3.253E-02	2.708E-02	1.660E-02	NOT IDENT.
W-181	-2.649E-02	3.551E-01	2.712E-01	1.812E-01	NOT IDENT.
TA-182	-1.898E-01	1.648E-01	1.317E-01	8.409E-02	FAIL ABUN
RE-183	1.623E-02	9.948E-02	8.624E-02	5.075E-02	FAIL ABUN
RE-184	4.627E-02	1.861E-01	1.666E-01	9.497E-02	NOT IDENT.
OS-185	1.030E-02	3.480E-02	3.014E-02	1.775E-02	NOT IDENT.
RE-188	2.474E-01	1.548E-01	1.413E-01	7.900E-02	NOT IDENT.
W-188	5.784E+00	6.374E+00	5.106E+00	3.252E+00	FAIL ABUN
IR-192	1.678E-02	2.816E-02	2.510E-02	1.437E-02	FAIL ABUN
AU-195	2.222E-01	2.039E-01	1.768E-01	1.040E-01	FAIL ABUN
TL-200	-3.690E+01	1.813E+02	0.000E+00	9.248E+01	SHORT HLIF
TL-201	7.199E-01	4.899E+00	4.271E+00	2.499E+00	NOT IDENT.
TL-202	3.974E-02	5.017E-02	4.415E-02	2.560E-02	NOT IDENT.
HG-203	3.372E-02	3.443E-02	3.127E-02	1.757E-02	FAIL ABUN
BI-207	-1.556E-02	4.523E-02	3.719E-02	2.307E-02	FAIL ABUN
TL-207	3.761E-01	6.106E-01	4.748E-01	3.116E-01	FAIL ABUN
PO-209	7.365E+00	6.010E+00	5.494E+00	3.066E+00	NOT IDENT.
BI-210	-1.521E+00	2.546E+00	2.178E+00	1.299E+00	NOT IDENT.
PB-210	-1.521E+00	2.546E+00	2.178E+00	1.299E+00	NOT IDENT.
PO-210	-1.521E+00	2.545E+00	2.178E+00	1.299E+00	NOT IDENT.
PB-211	-9.234E-02	7.931E-01	6.699E-01	4.047E-01	NOT IDENT.
BI-212	1.070E+00	4.000E-01	2.750E-01	2.041E-01	FAIL ABUN
PO-215	3.761E-01	6.106E-01	4.748E-01	3.116E-01	FAIL ABUN
RN-219	1.069E-02	3.495E-01	2.941E-01	1.783E-01	FAIL ABUN
RN-220	5.820E+00	2.032E+01	1.786E+01	1.037E+01	NOT IDENT.
RA-223	3.761E-01	6.106E-01	4.748E-01	3.116E-01	FAIL ABUN
AC-227	-6.805E-02	3.148E-01	2.767E-01	1.606E-01	FAIL ABUN
TH-227	-6.805E-02	3.149E-01	2.767E-01	1.607E-01	FAIL ABUN
TH-229	-2.478E-01	4.563E-01	3.839E-01	2.328E-01	FAIL ABUN
PA-231	5.564E-01	1.267E+00	1.130E+00	6.466E-01	FAIL ABUN
TH-231	3.761E-01	6.106E-01	4.748E-01	3.116E-01	FAIL ABUN
U-231	5.980E-01	8.478E-01	6.929E-01	4.325E-01	FAIL ABUN
PA-233	-1.812E-02	5.181E-02	4.447E-02	2.643E-02	FAIL ABUN
PA-234	-2.221E-01	2.547E-01	2.018E-01	1.300E-01	FAIL ABUN
PA-234M	7.897E-02	5.316E+00	4.431E+00	2.712E+00	FAIL ABUN
U-235	-3.431E-02	1.958E-01	1.687E-01	9.990E-02	FAIL ABUN
NP-236	4.261E-02	7.060E-02	6.264E-02	3.602E-02	FAIL ABUN
NP-239	-1.499E-01	1.700E-01	1.472E-01	8.675E-02	FAIL ABUN
AM-241	1.542E-01	1.360E-01	1.093E-01	6.941E-02	NOT IDENT.
CM-243	2.333E-03	8.387E-02	7.544E-02	4.279E-02	FAIL ABUN
CM-247	-2.424E-03	3.119E-02	2.610E-02	1.591E-02	NOT IDENT.
CF-249	1.219E-02	3.484E-02	2.961E-02	1.777E-02	NOT IDENT.
CF-251	7.459E-02	1.142E-01	1.008E-01	5.829E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	434.0855
46.50	434.0855
46.50	434.0855
48.70	404.3636
49.72	426.1190
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52.39	441.8154
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53.15	422.3373
53.44	408.6429
54.07	391.0098
56.28	526.0968
56.28	526.1023
57.37	0.0000
57.53	508.3809
57.53	508.3844
57.60	508.4904
57.98	484.2344
57.98	484.2344
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59.32	463.6880
59.40	463.8002
59.54	457.3672
59.72	457.6146
60.01	497.8398
61.10	559.3903
61.14	559.4570
61.30	544.7285
63.00	585.9453
63.29	586.4366
63.29	586.4366
63.58	586.9273
64.28	630.1131
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65.20	658.7177
66.05	645.0972
66.72	642.9171
66.83	643.1171
66.91	658.4972
67.20	659.0255
67.20	659.0255
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68.90	717.1429
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69.67	723.1957
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70.82	703.1859
70.83	703.2047
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74.81	689.2567
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74.81	689.2567
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75.70	690.8292
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77.11	693.3020
77.11	693.3020

77.11	693.3020
77.11	693.3020
77.11	693.3020
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79.80	564.9030
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80.30	602.9921
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81.07	554.9528
81.07	554.9528
81.07	554.9528
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83.78	646.2573
83.78	646.2573
83.78	646.2573
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86.72	491.2544
86.79	491.3323
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87.30	1012.3480
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87.30	1012.3480
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88.47	1025.7964
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91.11	927.6757
92.29	666.9468
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92.38	667.0795
93.35	668.5107
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94.67	488.5163
94.67	488.5225
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94.90	493.1183
94.90	493.1183
94.90	493.1183
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95.87	515.9590
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98.44	455.4777
98.44	455.4777
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99.55	475.1627
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100.10	479.3834
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103.76	494.1093
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105.31	483.6242
108.00	536.5393
109.28	539.7672
111.00	545.3364
111.00	545.3364

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116.30	504.5205
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117.00	518.4548
117.66	505.8096
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121.62	462.6788
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122.06	461.1364
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122.32	454.6533
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136.25	536.4625
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144.24	497.8504
144.24	497.8504
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145.44	487.8579
147.16	540.1167
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152.70	482.3841
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154.21	463.3178
154.21	463.3178
154.21	463.3178
154.21	463.3178
155.03	453.7958
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162.64	472.2994
163.35	469.7228
163.89	474.1907
165.85	485.8217
167.43	471.4948
171.28	468.9223
171.86	455.8414
172.10	467.3957
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176.60	436.9783
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186.00	456.3369
190.27	419.8307
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193.63	463.0720
197.04	424.3846
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198.60	422.0061
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202.84	463.1342
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208.81	499.4122

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209.75	445.3280
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218.09	408.0202
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226.40	430.8756
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227.08	428.9903
227.20	429.0492
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228.18	401.7128
228.18	401.7128
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236.00	400.5616
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238.63	377.4120
238.63	377.4120
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241.98	378.8058
241.98	378.8058
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248.90	334.4173
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252.85	303.6815
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256.20	332.2925
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268.79	327.0131
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269.46	361.3510
269.46	361.3510
269.46	361.3510
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284.30	278.5503
285.00	266.4542
285.90	286.5480
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286.10	279.9787
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290.80	243.8678
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295.21	263.9681
295.21	263.9681
295.96	264.1538

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299.80	162.8925
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300.09	162.9360
300.09	162.9360
300.10	162.9381
300.12	162.9423
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303.91	251.6785
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304.84	256.7090
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319.41	266.2683
320.08	261.5453
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323.87	246.4257
323.87	246.4257
323.87	246.4257
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334.20	246.9818
334.30	247.0032
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338.28	282.5369
338.28	282.5369
338.28	282.5369
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338.32	282.5438
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351.92	234.6198
351.92	234.6198
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356.01	231.3785
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388.63	237.3616
391.69	251.3576
391.69	251.3576
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401.81	223.0333
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410.95	224.5250
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413.65	230.2200
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433.93	188.7496
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439.56	159.5093
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444.90	198.7711
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445.03	195.5656
445.03	195.5656
445.03	195.5656
453.90	198.1777
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475.35	174.3080
476.78	166.7881
477.59	170.1689
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487.03	154.6272
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511.00	173.7516
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511.85	173.8424
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513.99	171.6611
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520.65	167.9997
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529.64	166.2533
529.87	0.0000
531.02	166.3893
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546.56	0.0000
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552.65	155.0852
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563.90	147.4032
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569.32	184.5688
569.50	177.8232
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602.71	207.4896
603.60	214.3346
604.41	222.8697
604.70	204.3310
609.31	175.7692
609.31	175.7692
609.31	175.7692

609.31	175.7692
610.33	175.8634
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618.01	156.4469
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621.84	158.0360
631.29	157.8071
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634.78	155.0851
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636.97	144.2402
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661.65	170.3652
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666.33	160.3037
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677.61	155.3429
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695.00	154.5746
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696.49	148.4971
697.00	150.5952
697.49	145.4722
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722.78	148.5298
722.89	148.5356
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768.36	168.0110
768.36	168.0110
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778.89	155.1688
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911.07	127.6793
911.07	127.6793
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926.50	109.9338
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934.06	121.9482
934.06	121.9482
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969.11	120.5448
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1236.41	0.0000
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1238.11	154.5808
1238.11	154.5808
1238.11	154.5808
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1325.50	70.5205
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1368.53	0.0000
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1377.67	64.4409
1377.67	64.4409
1377.67	64.4409
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1395.20	61.0218
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1434.06	49.7070
1436.60	41.7808
1457.56	0.0000
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1596.49	74.4697
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1691.02	41.2114

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1764.49	36.0763
1764.49	36.0763
1764.49	36.0763
1770.23	25.8003
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1791.20	0.0000
1808.65	22.1565
1836.01	23.2513

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232358004

Total Uranium Activity	5.5493E+00	ug/g
Total Uranium Counting Unc.	4.7654E+00	ug/g
Total Uranium Tpu	2.4313E-06	ug/g
Total Uranium Mda	2.7129E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID   : G232358004      *
*   ANALYST       : MXR1                      DETECTOR    : GAM22           *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:16:10.84    SAMPLE ALQT:  134.080 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.065E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.438E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.539E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.238E+00
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VAX/VMS Nuclide Identification Report Generated 15-JUL-2009 18:55:04.72

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358005.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:17:12.
Sample ID         : G232358005           Sample quantity  : 1.24550E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.86  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.40*	95	485	0.93	126.97	122	11	1.33E-02	46.4	
2	3	74.91*	270	285	0.79	150.00	145	14	3.75E-02	11.3	1.04E+00
3	3	77.16*	503	262	0.85	154.49	145	14	6.99E-02	6.7	
4	0	87.27	167	301	1.11	174.73	172	6	2.32E-02	18.1	
5	5	89.95	117	250	0.83	180.09	178	15	1.62E-02	21.6	3.81E+00
6	5	92.93*	287	338	1.30	186.04	178	15	3.98E-02	13.3	
7	0	186.06*	187	254	1.01	372.35	368	10	2.60E-02	18.1	
8	0	209.06	93	182	1.09	418.36	414	8	1.29E-02	27.1	
9	4	238.74*	1040	136	1.00	477.74	470	22	1.44E-01	3.6	1.33E+00
10	4	241.62	258	185	1.63	483.50	470	22	3.58E-02	13.4	
11	0	270.97	67	172	1.51	542.22	537	9	9.35E-03	37.7	
12	0	295.38*	251	145	1.17	591.04	587	10	3.49E-02	11.1	
13	0	299.75	36	159	0.99	599.80	597	9	5.06E-03	64.0	
14	0	338.89	291	172	1.35	678.10	672	14	4.04E-02	11.3	
15	0	351.98*	521	169	1.15	704.29	698	13	7.23E-02	6.8	
16	0	462.94	96	102	1.16	926.29	920	11	1.34E-02	22.7	
17	0	510.99*	147	89	1.62	1022.43	1013	18	2.04E-02	19.8	
18	0	583.57*	312	107	1.53	1167.65	1162	15	4.34E-02	9.4	
19	0	609.53	342	93	1.47	1219.59	1213	12	4.74E-02	7.8	
20	0	661.79	389	103	1.50	1324.17	1315	18	5.40E-02	8.0	
21	0	728.22	60	98	0.89	1457.08	1451	16	8.29E-03	38.4	
22	0	911.36	261	57	1.86	1823.56	1815	19	3.62E-02	9.3	
23	0	934.56	42	69	1.50	1869.99	1863	16	5.89E-03	46.2	
24	0	969.72	83	98	1.43	1940.35	1934	14	1.15E-02	27.6	
25	0	1120.62	51	67	1.09	2242.36	2237	12	7.03E-03	35.1	
26	0	1460.94*	1083	29	2.20	2923.52	2913	19	1.50E-01	3.3	
27	0	1694.10*	6	5	0.93	3390.26	3382	10	8.37E-04	84.7	
28	0	1764.81	51	4	2.45	3531.81	3524	15	7.14E-03	16.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 13-JUL-2009 18:55:07

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358005.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,FNBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:17:12
Sample ID : G232358005 Sample quantity : 124.55 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA23 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:03.86 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Idcd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.070E+01	3.051E+00	5.380E-01	4.024E-02	57.059
CD-109	+	88.03	*	2.638E+00	9.910E-01	1.160E+00	1.133E-01	2.273
SN-126	+	64.28		1.151E+00	1.083E+00	7.095E-01	1.080E-01	1.622
	+	86.94		1.080E+00	5.961E-01	4.821E-01	2.005E-01	2.240
	+	87.57	*	2.597E-01	9.757E-02	1.149E-01	1.118E-02	2.261
BA-137M	+	661.65	*	6.385E-01	1.068E-01	5.721E-02	2.922E-03	11.162
CS-137	+	661.65	*	6.750E-01	1.130E-01	6.047E-02	3.106E-03	11.162
TL-208		277.35		5.525E-01	3.714E-01	6.688E-01	7.067E-02	0.826
	+	510.84		8.038E-01	3.293E-01	2.131E-01	2.164E-02	3.773
	+	583.14	*	4.916E-01	9.810E-02	5.699E-02	3.700E-03	8.625
		860.37		5.370E-01	3.520E-01	6.362E-01	5.751E-02	0.844
BI-211		72.87		1.565E+00	3.196E+00	4.831E+00	4.261E-01	0.324
	+	351.07	*	3.528E+00	5.328E-01	3.061E-01	1.995E-02	11.524
PB-212	+	74.81		1.868E+00	4.862E-01	5.081E-01	6.555E-02	3.676
	+	77.11		1.952E+00	3.147E-01	2.856E-01	2.569E-02	6.837
	+	87.30		1.201E+00	4.670E-01	5.339E-01	7.441E-02	2.250
	+	238.63	*	1.518E+00	1.549E-01	8.409E-02	6.046E-03	18.048
	+	300.09		8.265E-01	1.060E+00	1.162E+00	9.649E-02	0.711
PO-212	+	74.81		1.868E+00	4.862E-01	5.081E-01	6.555E-02	3.676
	+	77.11		1.952E+00	3.147E-01	2.856E-01	2.569E-02	6.837
	+	87.30		1.201E+00	4.670E-01	5.339E-01	7.441E-02	2.250
		115.19		-8.264E-01	3.020E+00	5.081E+00	3.241E-01	-0.163
	+	238.63	*	1.518E+00	1.549E-01	8.409E-02	6.046E-03	18.048
	+	300.09		8.265E-01	1.060E+00	1.162E+00	9.649E-02	0.711
BI-214	+	609.31	*	1.015E+00	1.761E-01	1.182E-01	8.885E-03	8.585
		768.36		5.584E-01	8.545E-01	1.459E+00	1.315E-01	0.383
	+	934.06		2.672E+00	2.483E+00	1.973E+00	2.128E-01	1.355
	+	1120.29		8.036E-01	5.693E-01	5.375E-01	4.995E-02	1.495
		1238.11		1.980E+00	1.128E+00	2.057E+00	1.753E-01	0.962
		1377.67		7.614E-01	1.084E+00	1.948E+00	1.883E-01	0.391
	+	1764.49		1.123E+00	3.694E-01	2.565E-01	1.595E-02	4.377
PB-214	+	74.81		3.218E+00	8.174E-01	8.756E-01	1.013E-01	3.676
	+	77.11		3.347E+00	5.967E-01	4.895E-01	5.771E-02	6.837
	+	87.30		2.058E+00	7.892E-01	9.146E-01	1.134E-01	2.250

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.257E+00	6.331E-01	5.071E-01	4.033E-02	4.451
	+	295.21		9.994E-01	2.381E-01	2.044E-01	1.752E-02	4.891
	+	351.92	*	1.227E+00	1.961E-01	1.067E-01	8.909E-03	11.496
PO-214	+	74.81		3.218E+00	8.174E-01	8.756E-01	1.013E-01	3.676
	+	77.11		3.347E+00	5.967E-01	4.895E-01	5.771E-02	6.837
	+	87.30		2.058E+00	7.892E-01	9.146E-01	1.134E-01	2.250
	+	241.98		2.257E+00	6.331E-01	5.071E-01	4.033E-02	4.451
	+	295.21		9.994E-01	2.381E-01	2.044E-01	1.752E-02	4.891
	+	351.92	*	1.227E+00	1.961E-01	1.067E-01	8.909E-03	11.496
PO-216	+	74.81		1.868E+00	4.862E-01	5.081E-01	6.555E-02	3.676
	+	77.11		1.952E+00	3.147E-01	2.856E-01	2.569E-02	6.837
	+	87.30		1.201E+00	4.670E-01	5.339E-01	7.441E-02	2.250
	+	238.63	*	1.518E+00	1.549E-01	8.409E-02	6.046E-03	18.048
	+	300.09		8.265E-01	1.060E+00	1.162E+00	9.649E-02	0.711
PO-218	+	74.81		3.218E+00	8.174E-01	8.756E-01	1.013E-01	3.676
	+	77.11		3.347E+00	5.967E-01	4.895E-01	5.771E-02	6.837
	+	87.30		2.058E+00	7.892E-01	9.146E-01	1.134E-01	2.250
	+	241.98		2.257E+00	6.331E-01	5.071E-01	4.033E-02	4.451
	+	295.21		9.994E-01	2.381E-01	2.044E-01	1.752E-02	4.891
	+	351.92	*	1.227E+00	1.961E-01	1.067E-01	8.909E-03	11.496
RA-224	+	240.98	*	4.280E+00	1.176E+00	9.580E-01	5.398E-02	4.468
RA-226	+	609.31	*	1.015E+00	1.761E-01	1.182E-01	8.885E-03	8.585
		768.36		5.584E-01	8.545E-01	1.459E+00	1.315E-01	0.383
	+	934.06		2.672E+00	2.483E+00	1.973E+00	2.128E-01	1.355
	+	1120.29		8.036E-01	5.693E-01	5.375E-01	4.995E-02	1.495
		1238.11		1.980E+00	1.128E+00	2.057E+00	1.753E-01	0.962
		1377.67		7.614E-01	1.084E+00	1.948E+00	1.883E-01	0.391
	+	1764.49		1.123E+00	3.694E-01	2.565E-01	1.595E-02	4.377
AC-228	+	338.32		2.173E+00	1.014E+00	3.840E-01	1.566E-01	5.659
	+	911.07	*	1.862E+00	4.074E-01	2.222E-01	2.564E-02	8.380
	+	969.11		1.047E+00	6.269E-01	5.526E-01	1.287E-01	1.895
RA-228	+	338.32		2.173E+00	1.014E+00	3.840E-01	1.566E-01	5.659
	+	911.07	*	1.862E+00	4.074E-01	2.222E-01	2.564E-02	8.380
	+	969.11		1.047E+00	6.269E-01	5.526E-01	1.287E-01	1.895
TH-228		84.40		3.798E+00	2.608E+00	4.006E+00	5.493E-01	0.948
	+	238.60	*	1.518E+00	1.549E-01	8.408E-02	6.045E-03	18.050
	+	300.10		8.265E-01	1.165E+00	1.162E+00	6.850E-01	0.711
TH-230	+	609.31	*	1.015E+00	1.761E-01	1.182E-01	8.884E-03	8.585
		768.36		5.584E-01	8.545E-01	1.459E+00	1.315E-01	0.383
	+	934.06		2.672E+00	2.483E+00	1.973E+00	2.128E-01	1.355
	+	1120.29		8.036E-01	5.692E-01	5.375E-01	4.995E-02	1.495
		1238.11		1.980E+00	1.128E+00	2.057E+00	1.753E-01	0.962
		1377.67		7.613E-01	1.084E+00	1.948E+00	1.883E-01	0.391
	+	1764.49		1.123E+00	3.694E-01	2.565E-01	1.595E-02	4.377
TH-232	+	338.32		2.173E+00	5.088E-01	3.840E-01	2.268E-02	5.659
	+	911.07	*	1.862E+00	4.074E-01	2.222E-01	2.564E-02	8.380
	+	969.11		1.047E+00	6.269E-01	5.526E-01	1.287E-01	1.895
TH-234	+	63.29	*	2.907E+00	2.750E+00	1.881E+00	3.390E-01	1.545
	+	92.38		2.852E+00	9.184E-01	6.775E-01	1.235E-01	4.209

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.015E+00	1.761E-01	1.182E-01	8.884E-03	8.585
		768.36		5.584E-01	8.545E-01	1.459E+00	1.315E-01	0.383
	+	934.06		2.672E+00	2.483E+00	1.973E+00	2.128E-01	1.355
	+	1120.29		8.036E-01	5.692E-01	5.375E-01	4.995E-02	1.495
		1238.11		1.980E+00	1.128E+00	2.057E+00	1.753E-01	0.962
		1377.67		7.613E-01	1.084E+00	1.948E+00	1.883E-01	0.391
	+	1764.49		1.123E+00	3.694E-01	2.565E-01	1.595E-02	4.377
NP-237	+	86.50	*	7.627E-01	3.269E-01	3.701E-01	8.428E-02	2.061
		95.87		2.767E-01	9.298E-01	1.358E+00	3.335E-01	0.204
U-238	+	63.29	*	2.907E+00	2.750E+00	1.881E+00	3.390E-01	1.545
	+	92.38		2.852E+00	7.988E-01	6.775E-01	6.054E-02	4.209
AM-243	+	74.67	*	3.028E-01	7.356E-02	8.268E-02	7.348E-03	3.662
	+	86.72		2.860E+01	1.074E+01	1.384E+01	1.336E+00	2.067
		117.66		3.533E-01	3.190E+00	5.455E+00	3.378E-01	0.065
		142.18		3.677E+00	1.533E+01	2.599E+01	1.415E+00	0.142
ANH-511	+	511.00	*	1.736E-01	6.964E-02	4.604E-02	2.674E-03	3.771

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.648E-01	3.506E-01	5.976E-01	4.061E-02	0.443
NA-22		1274.54	*	9.034E-04	5.231E-02	8.452E-02	5.676E-03	0.011
NA-24		1368.53	*	-1.126E-01	5.231E-02	Half-Life too short		
AL-26		1129.67		-6.115E-01	2.149E+00	3.334E+00	2.124E-01	-0.183
		1808.65	*	1.214E-02	3.403E-02	6.057E-02	3.640E-03	0.200
TI-44		67.85		-1.054E-02	4.648E-02	6.833E-02	5.950E-03	-0.154
	+	78.38	*	3.603E-01	5.807E-02	6.867E-02	6.225E-03	5.246
SC-46		889.25	*	-2.715E-02	4.530E-02	7.163E-02	6.400E-03	-0.379
	+	1120.51		1.363E-01	9.610E-02	1.365E-01	8.894E-03	0.998
V-48		944.10		-1.665E-01	1.008E+00	1.573E+00	1.371E-01	-0.106
		983.50	*	8.357E-03	7.453E-02	1.250E-01	1.040E-02	0.067
		1312.09		1.460E-02	8.359E-02	1.425E-01	1.014E-02	0.102
CR-51		320.08	*	-2.048E-01	3.539E-01	5.712E-01	3.745E-02	-0.359
MN-52		744.21		-1.101E-01	2.183E-01	3.377E-01	2.150E-02	-0.326
		848.13		2.764E+00	7.070E+00	1.179E+01	9.623E-01	0.234
	+	935.52		5.157E-01	4.782E-01	5.199E-01	4.570E-02	0.992
		1246.25		1.171E-01	8.549E+00	1.384E+01	8.857E-01	0.008
		1333.61		2.459E+00	4.602E+00	8.183E+00	6.007E-01	0.300
		1434.06	*	-1.762E-01	2.595E-01	3.903E-01	2.824E-02	-0.451
MN-54		834.83	*	2.776E-02	4.286E-02	7.310E-02	5.788E-03	0.380
CO-56		846.75	*	1.068E-02	4.766E-02	7.829E-02	6.369E-03	0.136
		977.42		4.838E-02	3.590E+00	5.375E+00	4.506E-01	0.009
		1037.82		1.104E-01	3.566E-01	5.995E-01	4.914E-02	0.184
		1175.09		-1.905E+00	2.609E+00	3.923E+00	2.220E-01	-0.486
		1238.25		1.973E-01	1.125E-01	2.060E-01	1.371E-02	0.958
		1360.21		-8.990E-01	1.057E+00	1.540E+00	1.128E-01	-0.584
		1771.40		1.866E-01	2.444E-01	4.226E-01	2.614E-02	0.442
CO-57		122.06	*	5.445E-03	2.094E-02	3.596E-02	2.120E-03	0.151

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-1.730E-01	1.703E-01	2.708E-01	1.761E-02	-0.639
CO-58		810.76	*	-7.885E-03	4.315E-02	6.844E-02	5.142E-03	-0.115
FE-59		142.65		1.406E+00	2.360E+00	4.034E+00	2.194E-01	0.349
		192.34		5.076E-01	8.462E-01	1.424E+00	1.647E-01	0.356
		1099.22	*	-1.958E-02	1.108E-01	1.785E-01	1.375E-02	-0.110
		1291.56		-8.323E-02	1.561E-01	2.476E-01	2.055E-02	-0.336
CO-60		1173.22		-1.175E-02	5.169E-02	8.217E-02	4.635E-03	-0.143
		1332.49	*	1.144E-02	4.324E-02	7.443E-02	5.464E-03	0.154
ZN-65		1115.52	*	-3.043E-02	1.148E-01	1.546E-01	1.021E-02	-0.197
GE-68		1077.35	*	1.495E+00	1.642E+00	2.901E+00	2.076E-01	0.515
AS-73		53.44	*	8.239E-01	8.945E-01	1.533E+00	1.353E-01	0.537
AS-74		595.88	*	-9.690E-03	9.336E-02	1.545E-01	8.518E-03	-0.063
		634.78		3.117E-01	3.750E-01	6.624E-01	3.506E-02	0.471
SE-75		66.05		-5.166E+00	4.964E+00	6.875E+00	7.215E-01	-0.751
		96.73		-6.427E-01	7.821E-01	1.049E+00	1.406E-01	-0.613
		121.11		-3.389E-02	1.130E-01	1.890E-01	1.763E-02	-0.179
		136.00		-1.683E-02	3.182E-02	5.206E-02	2.940E-03	-0.323
		198.60		4.113E-01	1.661E+00	2.733E+00	1.845E-01	0.151
		264.65	*	-2.369E-02	4.378E-02	6.684E-02	3.891E-03	-0.354
		279.53		-4.526E-02	1.067E-01	1.769E-01	1.112E-02	-0.256
		303.91		1.322E+00	2.336E+00	3.617E+00	3.470E-01	0.366
		400.65		4.370E-02	2.824E-01	4.681E-01	4.259E-02	0.093
BR-77	+	87.88		4.086E+02	1.535E+02	2.252E+02	2.198E+01	1.814
		200.40		-9.615E+01	1.104E+02	1.706E+02	9.124E+00	-0.564
	+	239.00		1.744E+02	1.600E+01	2.743E+01	1.542E+00	6.359
		249.79		-5.514E+01	4.559E+01	6.645E+01	3.778E+00	-0.830
		281.68		-7.795E+01	6.324E+01	9.959E+01	5.805E+00	-0.783
		297.23		1.200E+02	5.229E+01	7.340E+01	4.311E+00	1.635
		303.76		5.461E+01	1.448E+02	2.213E+02	1.303E+01	0.247
		439.47		7.627E+01	1.096E+02	1.873E+02	1.096E+01	0.407
		484.57		-4.653E+01	1.948E+02	3.079E+02	1.800E+01	-0.151
		520.65	*	1.809E+00	8.367E+00	1.362E+01	7.881E-01	0.133
		574.64		-7.546E+00	1.520E+02	2.535E+02	1.423E+01	-0.030
		578.91		-1.430E+01	7.042E+01	1.000E+02	5.595E+00	-0.143
		585.48		1.058E+03	1.988E+02	3.949E+02	2.198E+01	2.680
		755.35		1.230E+02	1.313E+02	2.315E+02	1.516E+01	0.531
		817.79		3.668E+01	9.918E+01	1.665E+02	1.268E+01	0.220
SR-82		698.33		-9.957E+00	3.690E+01	5.921E+01	3.344E+00	-0.168
		776.49	*	-4.251E-01	4.257E-01	6.228E-01	4.296E-02	-0.683
		1395.20		5.879E-01	1.232E+01	2.058E+01	1.500E+00	0.029
RB-83		520.41	*	1.936E-02	7.678E-02	1.253E-01	7.254E-03	0.155
		529.64		-4.950E-02	1.110E-01	1.697E-01	9.783E-03	-0.292
		552.65		-2.369E-01	2.078E-01	3.166E-01	1.804E-02	-0.748
RB-84		881.50	*	-4.451E-02	7.943E-02	1.263E-01	1.109E-02	-0.353
KR-85		513.99	*	1.920E+01	7.917E+00	1.388E+01	8.055E-01	1.383
SR-85		513.99	*	9.728E-02	4.011E-02	7.032E-02	4.080E-03	1.383
RB-86		1076.63	*	3.888E-01	1.031E+00	1.746E+00	1.252E-01	0.223
Y-88		898.02		-2.954E-02	4.782E-02	7.538E-02	6.892E-03	-0.392
		1836.01	*	1.223E-02	3.288E-02	5.915E-02	3.483E-03	0.207

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	7.841E-03	3.210E-02	5.364E-02	3.097E-03	0.146
Y-91		1204.90	*	-8.749E+00	2.178E-01	3.393E+01	2.024E+00	-0.258
NB-94		702.63	*	-6.756E-04	4.008E-02	6.568E-02	3.753E-03	-0.010
		871.10		-5.703E-02	3.724E-02	5.217E-02	4.481E-03	-1.093
NB-95		765.79	*	9.918E-04	4.772E-02	7.774E-02	5.224E-03	0.013
NB-95M		235.69	*	-3.150E-02	1.279E-01	1.790E-01	1.320E-02	-0.176
ZR-95		724.18		-1.869E-02	1.171E-01	1.623E-01	1.147E-02	-0.115
		756.15	*	6.859E-02	7.797E-02	1.367E-01	1.049E-02	0.502
NB-97		657.90	*	-1.034E-03	7.797E-02	Half-Life too short		
		1024.50		-2.296E+00	7.797E-02	Half-Life too short		
ZR-97		254.15		-1.240E-01	7.797E-02	Half-Life too short		
		355.39		9.690E-01	7.797E-02	Half-Life too short		
		507.63	*	6.140E-01	7.797E-02	Half-Life too short		
		602.52		3.210E-01	7.797E-02	Half-Life too short		
		1021.30		-1.632E+00	7.797E-02	Half-Life too short		
		1147.95		-2.636E+00	7.797E-02	Half-Life too short		
		1362.66		1.008E+00	7.797E-02	Half-Life too short		
		1750.46		-1.687E+00	7.797E-02	Half-Life too short		
MO-99		140.51		-2.860E+00	1.716E+01	2.798E+01	7.520E+00	-0.102
		181.06		-4.418E+00	1.184E+01	1.809E+01	3.065E+00	-0.244
		366.43		-3.684E+00	6.320E+01	1.042E+02	6.105E+00	-0.035
		739.58	*	4.130E+00	9.221E+00	1.566E+01	2.192E+00	0.264
		778.00		-2.430E+01	3.008E+01	4.503E+01	3.119E+00	-0.540
TC-99M		140.51	*	-2.334E+08	3.008E+01	Half-Life too short		
RH-101		127.23		-3.812E-02	2.809E-02	4.437E-02	2.548E-03	-0.859
		198.01	*	6.691E-03	3.046E-02	5.005E-02	2.668E-03	0.134
		325.23		-2.415E-01	2.367E-01	3.723E-01	2.200E-02	-0.649
RH-102		418.52		7.737E-02	2.878E-01	4.798E-01	2.796E-02	0.161
		475.06	*	-3.206E-02	3.194E-02	4.711E-02	2.758E-03	-0.680
		631.29		-6.684E-03	6.159E-02	1.013E-01	5.383E-03	-0.066
		697.49		-3.494E-02	8.500E-02	1.346E-01	7.588E-03	-0.260
		766.84		9.141E-02	1.212E-01	2.093E-01	1.410E-02	0.437
		1046.59		-8.354E-02	1.255E-01	1.915E-01	1.450E-02	-0.436
		1112.84		-8.225E-02	2.714E-01	3.948E-01	2.619E-02	-0.208
RU-103		497.08	*	-3.079E-02	4.559E-02	6.886E-02	8.717E-03	-0.447
	+	610.33		1.074E+01	2.349E+00	2.972E+00	4.543E-01	3.612
RH-106	+	511.85		8.654E-01	3.471E-01	4.550E-01	2.642E-02	1.902
		621.84	*	-6.154E-02	3.453E-01	5.650E-01	6.516E-02	-0.109
		1050.47		-5.206E-01	2.666E+00	4.304E+00	3.237E-01	-0.121
RU-106	+	511.85		8.654E-01	3.471E-01	4.550E-01	2.642E-02	1.902
		621.84	*	-6.154E-02	3.452E-01	5.650E-01	3.036E-02	-0.109
		1050.47		-5.206E-01	2.666E+00	4.304E+00	3.237E-01	-0.121
AG-108M		433.93	*	-5.063E-03	3.394E-02	5.462E-02	3.463E-03	-0.093
		614.37		-2.376E-03	4.685E-02	6.728E-02	3.997E-03	-0.035
		722.95		-7.169E-04	5.000E-02	7.061E-02	4.591E-03	-0.010
AG-110M		657.75	*	-6.002E-03	4.413E-02	6.217E-02	3.455E-03	-0.097
		677.61		-5.541E-01	3.445E-01	4.812E-01	2.754E-02	-1.152
		706.67		-1.185E-01	2.458E-01	3.870E-01	2.370E-02	-0.306
		763.93		-1.179E-01	1.803E-01	2.750E-01	1.925E-02	-0.429

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		-1.092E-02	5.722E-02	9.475E-02	8.593E-03	-0.116
		937.48		1.246E-01	1.321E-01	2.144E-01	1.947E-02	0.581
		1384.27		-1.511E-01	1.879E-01	2.780E-01	2.109E-02	-0.543
IN-111		171.28		-1.210E-01	6.900E-01	1.129E+00	5.790E-02	-0.107
		245.39	*	2.285E-01	8.399E-01	1.222E+00	6.915E-02	0.187
IN-113M		391.69	*	6.025E-02	4.775E-02	8.468E-02	5.217E-03	0.711
SN-113		391.69	*	6.025E-02	4.775E-02	8.468E-02	5.217E-03	0.711
IN-114M		190.27	*	3.348E-02	1.752E-01	2.597E-01	1.369E-02	0.129
CD-115		260.90		-4.338E+01	8.992E+01	1.381E+02	7.929E+00	-0.314
		492.35		1.301E+01	2.814E+01	4.691E+01	2.739E+00	0.277
		527.90	*	-5.812E+00	8.617E+00	1.293E+01	7.459E-01	-0.450
SN-117M		156.02		-1.066E+00	1.898E+00	3.069E+00	1.606E-01	-0.347
		158.56	*	-5.923E-03	4.417E-02	7.287E-02	3.787E-03	-0.081
SB-122		563.90	*	8.780E-02	1.717E+00	2.864E+00	1.620E-01	0.031
		692.80		9.250E+00	3.413E+01	5.742E+01	3.196E+00	0.161
I-123		159.00	*	-6.468E-02	3.413E+01	Half-Life too short		
		528.96		-8.759E+01	3.413E+01	Half-Life too short		
TE-123M		159.00	*	-1.357E-03	2.404E-02	3.982E-02	2.101E-03	-0.034
I-124		602.71	*	8.436E-02	6.982E-01	1.024E+00	5.611E-02	0.082
		722.78		3.030E-01	4.346E+00	6.207E+00	3.740E-01	0.049
		1325.50		-1.041E+00	3.418E+01	5.686E+01	4.130E+00	-0.018
		1376.25		3.214E+01	2.793E+01	5.252E+01	3.838E+00	0.612
		1509.49		3.958E+00	1.400E+01	2.403E+01	1.704E+00	0.165
		1691.02		-4.285E-01	3.900E+00	6.212E+00	4.055E-01	-0.069
SB-124		602.71		5.852E-03	4.843E-02	7.103E-02	3.894E-03	0.082
		645.85		6.733E-01	5.207E-01	9.519E-01	5.746E-02	0.707
		709.31		3.372E+00	2.991E+00	5.358E+00	3.116E-01	0.629
		713.82		-8.424E-01	1.754E+00	2.743E+00	2.814E-01	-0.307
		722.78		3.047E-02	4.371E-01	6.241E-01	3.925E-02	0.049
		968.20		1.091E+01	4.548E+00	7.700E+00	6.529E-01	1.416
		1045.16		-1.341E+00	2.592E+00	4.020E+00	3.052E-01	-0.334
		1325.50		-1.118E-01	3.671E+00	6.107E+00	4.435E-01	-0.018
		1368.21		-9.844E-01	1.684E+00	2.532E+00	3.211E-01	-0.389
		1436.60		1.737E+00	4.507E+00	7.830E+00	5.662E-01	0.222
		1691.02	*	-1.016E-02	9.250E-02	1.474E-01	1.027E-02	-0.069
SB-125		427.89	*	1.951E-02	1.031E-01	1.703E-01	1.036E-02	0.115
	+	463.38		1.026E+00	4.711E-01	6.448E-01	4.393E-02	1.591
		600.56		2.121E-02	2.010E-01	3.375E-01	2.175E-02	0.063
		635.90		4.908E-02	2.960E-01	4.973E-01	3.162E-02	0.099
TE-125M		109.28	*	7.222E+00	7.553E+00	1.343E+01	1.197E+00	0.538
I-126		388.63		-8.446E-02	2.079E-01	3.327E-01	1.924E-02	-0.254
		666.33	*	-3.731E-02	2.038E-01	2.846E-01	1.473E-02	-0.131
		753.82		6.158E-01	1.544E+00	2.605E+00	1.699E-01	0.236
SB-126		223.80		2.778E-01	3.736E+00	6.047E+00	3.339E-01	0.046
		278.60		7.981E-01	2.304E+00	3.976E+00	2.313E-01	0.201
	+	296.50		9.332E+00	2.146E+00	3.166E+00	1.859E-01	2.947
		414.70		-5.059E-02	7.226E-02	1.118E-01	6.505E-03	-0.453
		415.30		-2.765E+00	5.967E+00	9.410E+00	5.478E-01	-0.294
		555.20		2.594E+00	3.803E+00	6.719E+00	3.822E-01	0.386

---- Non-Identified Nuclides ----

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		573.80		-2.476E-02	1.006E+00	1.681E+00	9.444E-02	-0.015
		593.00		-5.154E-01	8.792E-01	1.392E+00	7.699E-02	-0.370
		656.30		9.476E-01	3.674E+00	5.437E+00	2.799E-01	0.174
		666.33		-1.555E-02	8.494E-02	1.186E-01	6.138E-03	-0.131
		675.00		3.256E-01	2.104E+00	3.511E+00	1.861E-01	0.093
		695.00		-5.033E-02	7.732E-02	1.194E-01	6.686E-03	-0.421
		697.00		-1.685E-01	2.750E-01	4.271E-01	2.404E-02	-0.395
		720.50	*	8.811E-02	1.508E-01	2.468E-01	1.478E-02	0.357
		856.80		-8.415E-01	5.712E-01	7.805E-01	6.494E-02	-1.078
		989.30		4.718E-01	1.336E+00	2.289E+00	1.890E-01	0.206
		1034.80		-5.083E+00	9.425E+00	1.465E+01	1.132E+00	-0.347
		1213.00		3.294E+00	5.319E+00	9.107E+00	5.509E-01	0.362
SB-127		61.10		3.176E+00	4.822E+01	7.237E+01	7.874E+00	0.044
		252.40		2.629E+00	3.492E+00	5.565E+00	2.307E+00	0.472
		290.80		-2.736E+00	1.821E+01	2.684E+01	2.358E+00	-0.102
		411.60		7.804E+00	1.022E+01	1.753E+01	2.476E+00	0.445
		444.90		1.543E+00	8.964E+00	1.474E+01	1.544E+00	0.105
		473.00		-1.446E+00	1.482E+00	2.182E+00	2.372E-01	-0.663
		543.00		6.748E+00	1.453E+01	2.523E+01	3.176E+00	0.267
		603.60		1.589E+00	1.197E+01	1.757E+01	1.799E+00	0.090
		685.20	*	-5.606E-01	1.161E+00	1.822E+00	1.606E-01	-0.308
		698.50		-9.031E-01	1.365E+01	2.229E+01	3.156E+00	-0.041
		722.20		1.845E+01	2.866E+01	4.388E+01	3.903E+00	0.420
		783.80		2.580E+00	3.755E+00	6.407E+00	7.073E-01	0.403
XE-127		57.60		-4.325E-01	5.912E+00	9.564E+00	8.378E-01	-0.045
		145.22		-6.696E-02	6.062E-01	1.003E+00	5.410E-02	-0.067
		172.10		-9.204E-02	1.076E-01	1.694E-01	8.700E-03	-0.543
		202.84	*	3.575E-03	4.157E-02	6.793E-02	3.647E-03	0.053
		374.96		1.455E-01	1.959E-01	3.395E-01	1.981E-02	0.429
I-131		80.18		1.593E-01	4.132E+00	6.043E+00	5.569E-01	0.026
		284.30		6.727E-01	1.281E+00	2.232E+00	1.444E-01	0.301
		364.48	*	-1.968E-02	1.070E-01	1.749E-01	1.141E-02	-0.113
		636.97		-4.421E-01	1.527E+00	2.469E+00	1.487E-01	-0.179
		722.89		3.308E-02	7.639E+00	1.082E+01	6.592E-01	0.003
TE-132		49.72		1.677E+00	1.798E+01	2.968E+01	3.079E+00	0.056
		111.76		-1.110E+01	1.946E+01	3.233E+01	2.919E+00	-0.343
		116.30		-6.674E+00	1.806E+01	3.021E+01	2.648E+00	-0.221
		228.16	*	-8.727E-03	5.322E-01	8.553E-01	1.201E-01	-0.010
BA-133		53.15		3.362E+00	3.895E+00	6.662E+00	5.877E-01	0.505
		79.62		-5.478E-01	1.312E+00	1.862E+00	2.891E-01	-0.294
		81.00		4.068E-02	9.549E-02	1.426E-01	2.311E-02	0.285
		276.40		5.760E-01	3.647E-01	6.546E-01	8.489E-02	0.880
		302.84		-1.111E-01	1.657E-01	2.324E-01	2.719E-02	-0.478
		356.01	*	-7.778E-03	4.995E-02	7.054E-02	8.184E-03	-0.110
		383.85		-2.066E-01	3.143E-01	4.927E-01	5.357E-02	-0.419
I-133	+	510.53		7.060E-01	3.143E-01	Half-Life too short		
		529.87	*	-1.678E-04	3.143E-01	Half-Life too short		
		706.58		-9.390E-02	3.143E-01	Half-Life too short		
		856.28		-4.100E-01	3.143E-01	Half-Life too short		

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		875.33		-3.204E-03	3.143E-01	Half-Life too short		
		1236.41		5.034E-01	3.143E-01	Half-Life too short		
		1298.22		-4.506E-03	3.143E-01	Half-Life too short		
CS-134		475.35		-1.221E+00	2.060E+00	3.157E+00	1.848E-01	-0.387
		563.23		5.676E-02	3.909E-01	6.563E-01	3.796E-02	0.086
		569.32		-2.562E-03	2.238E-01	3.544E-01	2.060E-02	-0.007
		604.70		-1.162E-02	4.285E-02	6.023E-02	3.315E-03	-0.193
		795.84	*	9.445E-02	6.146E-02	1.105E-01	8.066E-03	0.855
		801.93		-2.173E-01	4.724E-01	7.311E-01	5.403E-02	-0.297
		1038.57		-7.651E-03	4.521E+00	7.374E+00	5.660E-01	-0.001
		1167.94		4.198E-01	3.036E+00	5.009E+00	2.871E-01	0.084
		1365.15		1.438E-01	1.185E+00	2.009E+00	1.562E-01	0.072
CS-135		268.24	*	8.410E-02	1.822E-01	2.659E-01	2.031E-02	0.316
I-135		288.45		-6.391E+08	1.822E-01	Half-Life too short		
		417.63		2.288E+08	1.822E-01	Half-Life too short		
		546.56		1.553E+07	1.822E-01	Half-Life too short		
		836.80		7.970E+07	1.822E-01	Half-Life too short		
		1038.76		-1.039E+08	1.822E-01	Half-Life too short		
		1124.00		1.942E+09	1.822E-01	Half-Life too short		
		1131.51		2.121E+08	1.822E-01	Half-Life too short		
		1260.41	*	8.350E+07	1.822E-01	Half-Life too short		
		1457.56		3.828E+10	1.822E-01	Half-Life too short		
		1678.03		-6.680E+08	1.822E-01	Half-Life too short		
		1706.46		5.186E+08	1.822E-01	Half-Life too short		
		1791.20		7.042E+08	1.822E-01	Half-Life too short		
CS-136		66.91		-1.993E-01	7.376E-01	1.082E+00	1.674E-01	-0.184
	+	86.29		3.191E+00	1.237E+00	1.662E+00	2.251E-01	1.920
		153.22		1.878E-01	5.590E-01	9.459E-01	6.438E-02	0.199
		163.89		3.282E-01	9.282E-01	1.564E+00	1.051E-01	0.210
		176.55		-2.623E-02	3.058E-01	5.012E-01	2.987E-02	-0.052
		273.65		-5.280E-01	4.781E-01	6.012E-01	3.975E-02	-0.878
		340.57		3.404E-01	1.359E-01	2.515E-01	1.575E-02	1.354
		818.51		4.969E-02	7.262E-02	1.257E-01	9.594E-03	0.395
		1048.07	*	-1.193E-01	1.130E-01	1.637E-01	1.305E-02	-0.728
		1235.34		-7.012E-02	7.038E-01	1.129E+00	1.160E-01	-0.062
CE-139		165.85	*	5.117E-03	2.739E-02	4.575E-02	2.332E-03	0.112
BA-140		162.64		2.674E-01	6.335E-01	1.072E+00	6.371E-02	0.250
		304.84		1.194E+00	1.335E+00	2.064E+00	5.638E-01	0.578
		423.70		1.299E+00	1.909E+00	3.196E+00	1.016E+00	0.406
		537.32	*	1.046E-01	2.483E-01	4.279E-01	1.391E-01	0.244
LA-140		328.77		2.667E-01	2.848E-01	4.999E-01	3.296E-02	0.533
		432.53		3.570E-01	2.099E+00	3.461E+00	2.231E-01	0.103
		487.03		1.323E-01	1.434E-01	2.470E-01	1.631E-02	0.535
		751.79		3.722E-02	1.797E+00	2.934E+00	2.251E-01	0.013
		815.85		-2.488E-01	3.289E-01	4.856E-01	4.220E-02	-0.512
		867.82		1.311E+00	1.465E+00	2.559E+00	2.300E-01	0.512
		919.63		1.345E+00	3.276E+00	4.984E+00	5.433E-01	0.270
		925.24		-5.364E-01	1.230E+00	1.917E+00	1.803E-01	-0.280
		1596.49	*	-1.617E-01	9.608E-02	1.078E-01	7.396E-03	-1.500

---- Non-Identified Nuclides ----

Nuclide	Line Tded	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	-1.225E-02	5.421E-02	8.914E-02	5.027E-03	-0.137
CE-143		57.37		-5.676E-06	5.421E-02	Half-Life too short		
		231.56		-8.936E-04	5.421E-02	Half-Life too short		
		293.26	*	1.037E-04	5.421E-02	Half-Life too short		
		350.59		1.569E-02	5.421E-02	Half-Life too short		
		490.36		-7.378E-04	5.421E-02	Half-Life too short		
		664.57		4.498E-03	5.421E-02	Half-Life too short		
		721.93		5.050E-04	5.421E-02	Half-Life too short		
CE-144		80.11		-2.556E-02	2.090E+00	3.048E+00	2.794E-01	-0.008
		133.54	*	-6.159E-02	1.773E-01	2.920E-01	4.123E-02	-0.211
PM-144		476.78		9.006E-03	7.395E-02	1.204E-01	8.412E-03	0.075
		618.01		1.177E-02	3.557E-02	6.061E-02	3.496E-03	0.194
		696.49	*	-2.108E-02	3.775E-02	5.895E-02	3.316E-03	-0.358
		778.57		-1.079E+00	2.661E+00	4.153E+00	2.881E-01	-0.260
PR-144		696.49	*	-1.428E+00	2.556E+00	3.992E+00	2.244E-01	-0.358
		1489.15		-1.272E+01	1.259E+01	1.685E+01	1.203E+00	-0.755
PM-146		453.90	*	4.982E-02	4.630E-02	8.086E-02	7.003E-03	0.616
		633.02		-7.058E-02	1.554E+00	2.567E+00	9.433E-01	-0.027
		735.90		-2.868E-02	1.786E-01	2.461E-01	6.884E-02	-0.117
		747.13		-4.558E-02	9.622E-02	1.491E-01	1.909E-02	-0.306
ND-147	+	91.11		5.618E-01	2.492E-01	4.015E-01	3.948E-02	1.399
		319.41		-1.845E+00	2.954E+00	4.750E+00	2.806E-01	-0.388
		439.89		5.491E+00	5.911E+00	1.024E+01	5.996E-01	0.536
		531.02	*	-8.831E-02	5.081E-01	8.448E-01	1.141E-01	-0.105
PM-149		285.90	*	9.744E+00	5.964E+01	1.019E+02	1.445E+01	0.096
EU-152		121.78		2.662E-02	6.092E-02	1.055E-01	8.110E-03	0.252
		244.69		-1.856E-01	3.566E-01	4.843E-01	2.740E-02	-0.383
		344.27	*	6.988E-02	9.858E-02	1.541E-01	1.022E-02	0.453
		443.98		7.477E-02	1.075E+00	1.755E+00	1.027E-01	0.043
		778.89		-1.578E-01	3.125E-01	4.833E-01	3.353E-02	-0.327
		867.32		5.565E-01	9.510E-01	1.615E+00	1.376E-01	0.344
		964.01		9.624E-02	3.843E-01	5.664E-01	4.827E-02	0.170
		1085.78		5.707E-02	4.409E-01	7.335E-01	5.161E-02	0.078
		1112.02		-1.294E-01	3.595E-01	5.519E-01	3.668E-02	-0.235
		1407.95		-8.250E-02	1.954E-01	3.042E-01	2.212E-02	-0.271
GD-153		69.67		-5.688E-01	1.575E+00	2.475E+00	2.162E-01	-0.230
		83.37		8.170E-01	1.425E+01	2.228E+01	2.092E+00	0.037
		97.43	*	-1.096E-02	8.150E-02	1.157E-01	9.448E-03	-0.095
		103.18		3.464E-02	9.754E-02	1.544E-01	1.154E-02	0.224
EU-154		123.07		-1.947E-02	4.313E-02	7.146E-02	6.745E-03	-0.272
		247.94		1.752E-01	3.740E-01	5.527E-01	5.232E-02	0.317
		591.81		-2.085E-01	6.892E-01	1.011E+00	9.729E-02	-0.206
		723.30		3.110E-04	2.093E-01	2.962E-01	2.154E-02	0.001
		756.87		3.298E-01	8.415E-01	1.419E+00	1.504E-01	0.232
		873.19		-4.331E-01	3.190E-01	4.523E-01	5.540E-02	-0.958
		996.32		-6.234E-01	4.557E-01	6.307E-01	1.107E-01	-0.988
		1004.76		-2.121E-01	2.680E-01	4.094E-01	4.605E-02	-0.518
		1274.45	*	6.639E-03	1.466E-01	2.377E-01	2.359E-02	0.028
EU-155		48.70		-1.760E+00	2.920E+00	4.625E+00	3.730E-01	-0.381

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		3.473E+00	5.183E+00	8.097E+00	7.033E-01	0.429
	+	86.54		3.127E-01	1.175E-01	1.696E-01	1.648E-02	1.844
		105.31	*	5.239E-02	9.100E-02	1.599E-01	1.179E-02	0.328
TB-160	+	86.79		8.264E-01	3.105E-01	4.565E-01	4.411E-02	1.810
		197.04		-3.715E-01	5.310E-01	8.303E-01	4.420E-02	-0.447
		215.65		-2.530E-01	7.070E-01	1.120E+00	6.120E-02	-0.226
	+	298.57		1.190E-01	1.524E-01	1.748E-01	1.027E-02	0.681
		879.36	*	8.750E-02	1.576E-01	2.769E-01	2.421E-02	0.316
		962.29		2.439E-02	6.347E-01	9.499E-01	8.111E-02	0.026
		966.15		7.611E-01	2.765E-01	4.987E-01	4.239E-02	1.526
		1177.93		-2.621E-01	4.388E-01	6.718E-01	3.822E-02	-0.390
		1271.85		-2.125E-02	8.599E-01	1.383E+00	9.234E-02	-0.015
HO-166M		80.57		2.546E-01	2.568E-01	3.964E-01	3.645E-02	0.642
		184.41		3.657E-02	3.567E-02	5.706E-02	2.982E-03	0.641
		280.46		-5.655E-02	8.331E-02	1.360E-01	7.920E-03	-0.416
		410.95		2.696E-01	2.627E-01	4.586E-01	2.666E-02	0.588
		711.68	*	-3.699E-02	6.802E-02	1.060E-01	6.205E-03	-0.349
		752.31		-1.558E-01	3.124E-01	4.850E-01	3.152E-02	-0.321
		810.29		-1.214E-02	6.696E-02	1.063E-01	7.948E-03	-0.114
TM-171		51.35		-3.664E+01	3.740E+01	5.769E+01	5.015E+00	-0.635
		52.39		1.007E+01	1.784E+01	3.007E+01	2.642E+00	0.335
		59.40		6.095E+00	2.817E+01	4.282E+01	3.720E+00	0.142
		66.72	*	-9.367E+00	2.842E+01	4.154E+01	3.612E+00	-0.226
LU-176	+	88.36		6.160E-01	2.314E-01	3.213E-01	3.114E-02	1.918
		201.83		3.819E-03	2.599E-02	4.264E-02	2.285E-03	0.090
		306.84	*	6.638E-03	2.473E-02	4.223E-02	2.488E-03	0.157
		401.10		2.137E+00	7.496E+00	1.252E+01	7.256E-01	0.171
LU-177		112.95		4.782E-01	1.197E+00	2.078E+00	1.363E-01	0.230
	+	208.36	*	2.132E+00	1.163E+00	1.612E+00	8.723E-02	1.322
LU-177M		52.97		1.545E+00	1.786E+00	3.054E+00	2.692E-01	0.506
		54.07		1.367E-01	8.942E-01	1.472E+00	1.301E-01	0.093
		61.30		-1.245E-02	1.544E+00	2.305E+00	2.002E-01	-0.005
		121.62		1.303E-01	3.105E-01	5.374E-01	3.176E-02	0.242
		147.16		1.179E-01	5.526E-01	9.334E-01	5.007E-02	0.126
		171.86		-3.443E-01	4.424E-01	7.000E-01	3.594E-02	-0.492
		218.09		4.692E-01	7.878E-01	1.316E+00	7.213E-02	0.357
		268.79		6.104E-01	9.372E-01	1.386E+00	8.009E-02	0.440
		319.02		-8.093E-02	2.491E-01	4.090E-01	2.415E-02	-0.198
		367.43		3.111E-01	9.135E-01	1.546E+00	9.055E-02	0.201
		413.65	*	-2.969E-01	1.887E-01	2.712E-01	1.578E-02	-1.095
HF-181		56.28		5.804E-01	9.203E-01	1.551E+00	1.366E-01	0.374
		57.53		-2.715E-02	5.001E-01	8.099E-01	7.097E-02	-0.034
		65.20		1.140E-02	9.533E-01	1.415E+00	1.229E-01	0.008
		133.02		-2.697E-02	5.566E-02	9.114E-02	5.117E-03	-0.296
		136.25		-3.064E-01	3.657E-01	5.878E-01	3.262E-02	-0.521
		345.85		3.301E-02	2.323E-01	2.927E-01	1.727E-02	0.113
		482.03	*	-4.457E-02	4.933E-02	7.375E-02	4.313E-03	-0.604
W-181		56.28		2.301E-01	3.646E-01	6.147E-01	5.413E-02	0.374
		57.53		-1.066E-02	1.983E-01	3.212E-01	2.815E-02	-0.033

---- Non-identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20	*	4.486E-03	3.750E-01	5.568E-01	4.837E-02	0.008
TA-182		67.75		-3.399E-02	1.099E-01	1.607E-01	1.399E-02	-0.212
		100.10		-1.154E-01	1.748E-01	2.572E-01	2.013E-02	-0.449
		152.43		-1.362E-01	2.959E-01	4.821E-01	2.548E-02	-0.282
		222.10		2.418E-01	3.343E-01	5.606E-01	3.089E-02	0.431
		1001.68		4.285E+00	2.455E+00	4.617E+00	3.749E-01	0.928
	+	1121.28		3.773E-01	2.661E-01	3.842E-01	2.498E-02	0.982
		1189.05		1.651E-02	4.289E-01	6.975E-01	4.047E-02	0.024
		1221.42	*	-6.408E-02	2.685E-01	4.264E-01	2.617E-02	-0.150
		1230.97		-7.046E-01	6.309E-01	9.189E-01	5.732E-02	-0.767
RE-183		57.98		-1.258E-01	1.986E-01	3.101E-01	2.712E-02	-0.406
		59.32		2.394E-02	1.148E-01	1.744E-01	1.516E-02	0.137
		67.20		-1.237E-01	2.025E-01	2.901E-01	2.524E-02	-0.426
		162.32	*	6.378E-02	9.586E-02	1.641E-01	8.442E-03	0.389
	+	208.81		2.133E+00	1.164E+00	1.635E+00	8.849E-02	1.305
		291.72		-1.068E-01	9.636E-01	1.424E+00	8.346E-02	-0.075
RE-184		57.98		-4.667E-01	7.367E-01	1.150E+00	1.006E-01	-0.406
		59.32		8.873E-02	4.254E-01	6.464E-01	5.617E-02	0.137
		67.20		-4.588E-01	7.510E-01	1.076E+00	9.361E-02	-0.426
		161.27		-1.455E-01	3.135E-01	5.078E-01	2.620E-02	-0.287
		216.55		-1.052E-02	2.520E-01	4.064E-01	2.223E-02	-0.026
		252.85	*	1.796E-01	2.200E-01	3.690E-01	2.104E-02	0.487
		318.01		-5.312E-02	4.256E-01	7.080E-01	4.181E-02	-0.075
		792.07		-6.830E-01	1.309E+00	2.031E+00	1.455E-01	-0.336
		903.28		8.919E-01	1.234E+00	1.950E+00	1.767E-01	0.457
		920.93		3.340E-01	5.116E-01	8.534E-01	7.611E-02	0.391
OS-185		59.72		1.875E-01	3.015E-01	4.702E-01	4.083E-02	0.399
		61.14		1.422E-02	1.672E-01	2.513E-01	2.183E-02	0.057
		69.30		-1.691E-01	2.762E-01	4.280E-01	3.736E-02	-0.395
		592.07		-5.928E-01	2.648E+00	4.080E+00	2.258E-01	-0.145
		646.12	*	3.938E-02	4.521E-02	8.017E-02	4.184E-03	0.491
		717.42		1.961E-01	9.265E-01	1.547E+00	9.192E-02	0.127
		874.81		-2.206E-02	6.218E-01	1.040E+00	9.005E-02	-0.021
		880.27		-3.537E-01	9.090E-01	1.471E+00	1.289E-01	-0.240
RE-188		155.03	*	1.709E-01	1.506E-01	2.637E-01	1.384E-02	0.648
		477.96		2.151E+00	3.361E+00	5.685E+00	3.327E-01	0.378
		633.10		3.072E-01	3.081E+00	5.151E+00	2.732E-01	0.060
W-188	+	63.58		1.155E+02	1.077E+02	9.639E+01	8.372E+00	1.198
		227.08		3.776E+00	1.210E+01	1.984E+01	1.100E+00	0.190
		290.67	*	-1.207E+00	7.658E+00	1.128E+01	6.606E-01	-0.107
IR-192	+	295.96		7.539E-01	1.735E-01	2.648E-01	1.578E-02	2.848
		308.46		-1.271E-01	9.518E-02	1.465E-01	8.732E-03	-0.867
		316.51	*	1.936E-02	3.180E-02	5.535E-02	3.284E-03	0.350
		468.07		1.039E-02	8.418E-02	1.204E-01	8.109E-03	0.086
		604.41		-1.161E-01	5.765E-01	8.165E-01	9.133E-02	-0.142
		612.46		1.409E+00	9.058E-01	1.498E+00	1.092E-01	0.941
AU-195		65.12		8.726E-04	1.742E-01	2.586E-01	2.246E-02	0.003
		66.83		-2.736E-02	9.367E-02	1.373E-01	1.194E-02	-0.199
	+	75.70		9.757E-01	2.370E-01	3.999E-01	3.572E-02	2.440

---- Non-Identified Nuclides -- -

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		98.88	*	2.635E-01	2.167E-01	3.534E-01	2.820E-02	0.746
		129.76		2.749E+00	2.599E+00	4.575E+00	2.601E-01	0.601
TL-200		367.94	*	1.225E-04	2.599E-00	Half-Life too short		
		579.30		-2.402E-04	2.599E+00	Half-Life too short		
		828.27		1.128E-03	2.599E+00	Half-Life too short		
		1205.75		-1.035E-03	2.599E+00	Half-Life too short		
TL-201		68.90		-2.042E+00	3.449E+00	5.350E+00	4.667E-01	-0.382
		70.82		-1.726E-02	2.136E-00	3.149E+00	2.760E-01	-0.005
		80.30		4.802E-01	3.839E+00	5.644E+00	5.180E-01	0.085
		135.34		2.782E+00	1.612E+01	2.737E+01	1.524E+00	0.102
		167.43	*	-3.088E+00	4.916E+00	7.867E+00	4.015E-01	-0.393
TL-202		68.90		-2.235E-01	3.774E-01	5.855E-01	5.107E-02	-0.382
		70.82		-1.884E-03	2.330E-01	3.437E-01	3.011E-02	-0.005
		80.30		5.241E-02	4.191E-01	6.161E-01	5.655E-02	0.085
		439.56	*	5.153E-02	6.969E-02	1.194E-01	6.987E-03	0.432
HG-203		70.83		-2.571E-04	1.060E+00	1.564E+00	2.141E-01	0.000
		72.87		3.061E-01	6.256E-01	9.446E-01	1.260E-01	0.324
		82.60		-8.633E-01	1.044E+00	1.571E+00	2.231E-01	-0.550
		279.20	*	-1.298E-02	4.001E-02	6.672E-02	4.121E-03	-0.195
BI-207		72.80		9.347E-02	1.868E-01	2.825E-01	2.491E-02	0.331
	+	74.97		5.435E-01	1.320E-01	2.170E-01	1.931E-02	2.505
		84.90		1.333E-01	1.919E-01	2.872E-01	2.730E-02	0.464
		569.67		5.285E-04	3.500E-02	5.556E-02	3.130E-03	0.010
		1063.62	*	-1.284E-02	5.964E-02	9.590E-02	7.046E-03	-0.134
		1770.23		2.034E-01	6.722E-01	9.729E-01	6.024E-02	0.209
TL-207		81.07		-1.262E-02	2.163E-01	3.141E-01	2.898E-02	-0.040
		83.78		8.295E-02	1.308E-01	1.954E-01	1.840E-02	0.425
		94.90		1.526E-01	2.300E-01	3.440E-01	2.935E-02	0.444
		122.32		2.943E-01	1.447E+00	2.479E+00	1.677E-01	0.119
		144.24		-4.960E-02	6.142E-01	1.018E+00	7.050E-02	-0.049
		154.21		4.884E-01	3.553E-01	6.272E-01	4.122E-02	0.779
		269.46		2.500E-01	2.354E-01	3.564E-01	2.155E-02	0.701
		323.87	*	-6.524E-01	6.902E-01	1.076E+00	1.782E-01	-0.606
	+	338.28		9.075E+00	2.269E+00	2.697E+00	2.856E-01	3.365
		445.03		7.045E-01	2.559E+00	4.238E+00	4.365E-01	0.166
PO-209		260.50		-1.650E+00	9.341E+00	1.466E+01	8.416E-01	-0.113
		262.80		1.932E+00	2.578E+01	4.113E+01	2.366E+00	0.047
		896.60	*	3.433E-02	8.376E+00	1.403E+01	1.273E+00	0.002
BI-210		46.50	*	8.323E-01	4.708E+00	7.654E+00	5.959E-01	0.109
PB-210		46.50	*	8.323E-01	4.708E+00	7.654E+00	5.959E-01	0.109
PO-210		46.50	*	8.323E-01	4.708E+00	7.654E+00	5.135E-01	0.109
PB-211		404.84	*	6.677E-01	1.079E+00	1.706E+00	1.064E+00	0.391
		427.08		1.098E+00	2.472E+00	3.997E+00	2.471E+00	0.275
		831.96		-4.689E-01	1.419E+00	2.163E+00	1.353E+00	-0.217
BI-212	+	727.18	*	8.136E-01	6.286E-01	7.131E-01	5.660E-02	1.141
		785.46		1.694E+00	2.247E+00	3.859E+00	2.721E-01	0.439
		1620.62		6.050E-01	1.472E+00	2.562E+00	1.738E-01	0.236
PO-215		81.07		-1.262E-02	2.163E-01	3.141E-01	2.898E-02	-0.040
		83.78		8.295E-02	1.308E-01	1.954E-01	1.840E-02	0.425

-- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		1.526E-01	2.300E-01	3.440E-01	2.935E-02	0.444
		122.32		2.943E-01	1.447E+00	2.479E+00	1.677E-01	0.119
		144.24		-4.960E-02	6.142E-01	1.018E+00	7.050E-02	-0.049
		154.21		4.884E-01	3.553E-01	6.272E-01	4.122E-02	0.779
		269.46		2.500E-01	2.354E-01	3.564E-01	2.155E-02	0.701
		323.87	*	-6.524E-01	6.902E-01	1.076E+00	1.782E-01	-0.606
	+	338.28		9.075E+00	2.269E+00	2.697E+00	2.856E-01	3.365
		445.03		7.045E-01	2.559E+00	4.238E+00	4.365E-01	0.166
RN-219	+	271.23		4.544E-01	3.444E-01	4.342E-01	3.516E-02	1.047
		401.81	*	-3.673E-02	4.571E-01	7.458E-01	1.015E-01	-0.049
RN-220		549.76	*	1.006E+01	2.774E+01	4.789E+01	2.733E+00	0.210
RA-223		81.07		-1.262E-02	2.163E-01	3.141E-01	2.898E-02	-0.040
		83.78		8.295E-02	1.308E-01	1.954E-01	1.840E-02	0.425
		94.90		1.526E-01	2.300E-01	3.440E-01	2.935E-02	0.444
		122.32		2.943E-01	1.447E+00	2.479E+00	1.677E-01	0.119
		144.24		-4.960E-02	6.142E-01	1.018E+00	7.050E-02	-0.049
		154.21		4.884E-01	3.553E-01	6.272E-01	4.122E-02	0.779
		269.46		2.500E-01	2.354E-01	3.564E-01	2.155E-02	0.701
		323.87	*	-6.524E-01	6.902E-01	1.076E+00	1.782E-01	-0.606
	+	338.28		9.075E+00	2.269E+00	2.697E+00	2.856E-01	3.365
		445.03		7.045E-01	2.559E+00	4.238E+00	4.365E-01	0.166
AC-227		79.80		-7.778E-01	1.665E+00	2.348E+00	5.099E-01	-0.331
		236.00		-6.199E-02	2.391E-01	3.342E-01	3.457E-02	-0.185
		256.20	*	-2.956E-01	3.731E-01	5.579E-01	7.770E-02	-0.530
		286.10		1.780E-01	1.428E+00	2.434E+00	2.819E-01	0.073
	+	299.80		1.532E+00	1.976E+00	2.490E+00	4.062E-01	0.615
		304.40		1.378E+00	2.119E+00	3.285E+00	5.692E-01	0.419
		334.20		1.314E+00	2.564E+00	3.913E+00	7.188E-01	0.336
TH-227		79.80		-7.778E-01	1.665E+00	2.348E+00	5.163E-01	-0.331
	+	94.00		1.102E+01	3.793E+00	3.660E+00	7.978E-01	3.011
		236.00		-6.199E-02	2.390E-01	3.342E-01	2.985E-02	-0.185
		256.20	*	-2.956E-01	3.742E-01	5.579E-01	9.412E-02	-0.530
		286.10		1.780E-01	1.439E+00	2.434E+00	2.438E+00	0.073
	+	299.80		1.532E+00	1.976E+00	2.490E+00	4.062E-01	0.615
		304.40		1.378E+00	2.119E+00	3.285E+00	5.692E-01	0.419
		334.20		1.314E+00	2.564E+00	3.913E+00	7.188E-01	0.336
TH-229		85.43		-4.135E-02	1.937E-01	2.754E-01	2.630E-02	-0.150
	+	88.47		3.546E-01	1.332E-01	1.818E-01	1.758E-02	1.950
		100.00		-1.121E-01	1.830E-01	2.703E-01	2.119E-02	-0.415
		193.63	*	1.634E-01	4.676E-01	7.779E-01	4.120E-02	0.210
		210.97		2.742E-01	7.996E-01	1.184E+00	6.428E-02	0.232
PA-231		283.67	*	1.459E+00	1.452E+00	2.573E+00	3.550E-01	0.567
		301.29		6.226E-01	6.550E-01	1.036E+00	1.087E-01	0.601
TH-231		81.07		-1.262E-02	2.163E-01	3.141E-01	2.898E-02	-0.040
		83.78		8.295E-02	1.308E-01	1.954E-01	1.840E-02	0.425
		94.90		1.526E-01	2.300E-01	3.440E-01	2.935E-02	0.444
		122.32		2.943E-01	1.447E+00	2.479E+00	1.677E-01	0.119
		144.24		-4.960E-02	6.142E-01	1.018E+00	7.050E-02	-0.049
		154.21		4.884E-01	3.553E-01	6.272E-01	4.122E-02	0.779

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		2.500E-01	2.354E-01	3.564E-01	2.155E-02	0.701
		323.87	*	-6.524E-01	6.902E-01	1.076E+00	1.782E-01	-0.606
	+	338.28		9.075E+00	2.269E+00	2.697E+00	2.856E-01	3.365
		445.03		7.045E-01	2.559E+00	4.238E+00	4.365E-01	0.166
U-231		84.21		5.414E+00	4.590E+00	7.031E+00	6.646E-01	0.770
	+	92.29		9.006E+00	2.523E+00	3.327E+00	2.978E-01	2.707
		95.87	*	2.595E-01	8.699E-01	1.274E+00	1.068E-01	0.204
		108.00		-9.698E-02	1.396E+00	2.383E+00	1.665E-01	-0.041
PA-233	+	75.28		1.586E+01	4.348E+00	6.336E+00	9.830E-01	2.503
	+	86.59		5.085E+00	2.306E+00	2.768E+00	7.521E-01	1.837
	+	300.12		4.270E-01	5.495E-01	6.999E-01	9.428E-02	0.610
		311.98	*	2.807E-02	6.091E-02	1.052E-01	6.574E-03	0.267
		340.50		1.929E+00	8.296E-01	1.323E+00	3.042E-01	1.458
		398.62		1.789E+00	2.241E+00	3.800E+00	9.824E-01	0.471
		415.76		8.928E-01	1.610E+00	2.727E+00	5.617E-01	0.327
PA-234	+	63.00		3.389E+00	3.190E+00	2.910E+00	4.522E-01	1.164
		94.67		2.350E-01	1.716E-01	2.638E-01	3.262E-02	0.891
		98.44		1.040E-01	1.052E-01	1.436E-01	8.001E-02	0.724
		99.86		4.489E-03	4.513E-01	6.917E-01	5.434E-02	0.006
		111.00		-1.854E-01	1.550E-01	2.478E-01	2.680E-02	-0.748
		131.20		-6.176E-02	9.713E-02	1.585E-01	8.956E-03	-0.390
		152.70		-9.826E-02	2.918E-01	4.778E-01	7.466E-02	-0.206
	+	186.00		5.147E+00	2.436E+00	2.475E+00	7.537E-01	2.079
		226.40		-9.522E-02	3.948E-01	6.265E-01	7.163E-02	-0.152
		227.20		1.291E-01	4.137E-01	6.778E-01	3.759E-02	0.190
		248.90		-4.482E-01	7.850E-01	1.194E+00	2.563E-01	-0.375
		293.70		2.722E+00	9.399E-01	1.473E+00	2.373E-01	1.847
		369.80		3.135E-01	8.358E-01	1.414E+00	2.947E-01	0.222
		568.70		-3.451E-01	1.139E+00	1.763E+00	9.936E-02	-0.196
		569.50		6.867E-04	3.103E-01	4.920E-01	2.772E-02	0.001
		574.00		-2.145E-01	1.546E+00	2.560E+00	1.437E-01	-0.084
		699.00		-1.190E-01	8.131E-01	1.318E+00	2.365E-01	-0.090
		706.10		-5.158E-01	1.242E+00	1.933E+00	8.529E-01	-0.267
		733.00		-1.219E-01	4.792E-01	6.529E-01	1.395E-01	-0.187
		742.81		-3.259E-01	1.477E+00	2.331E+00	1.561E+00	-0.140
		796.30		1.657E+00	1.276E+00	2.141E+00	5.705E-01	0.774
		805.60		-6.168E-01	1.258E+00	1.925E+00	5.837E-01	-0.320
		819.60		6.117E-01	1.291E+00	2.158E+00	8.161E-01	0.283
		826.30		2.404E-01	8.836E-01	1.445E+00	6.444E-01	0.166
		831.60		-3.688E-01	7.286E-01	1.102E+00	3.265E-01	-0.335
		876.40		8.001E-01	1.236E+00	1.668E+00	1.714E+00	0.480
		880.51		-1.290E-01	3.315E-01	5.365E-01	4.703E-02	-0.240
		883.24		6.537E-03	3.335E-01	5.601E-01	3.767E-01	0.012
		899.00		-5.246E-01	1.004E+00	1.557E+00	6.821E-01	-0.337
		925.00		-5.999E-01	1.359E+00	2.117E+00	1.881E-01	-0.283
		926.50		9.416E-03	2.116E-01	3.186E-01	8.081E-02	0.030
		946.00	*	-2.900E-02	3.382E-01	5.584E-01	1.050E-01	-0.052
		949.00		2.277E-01	4.844E-01	8.422E-01	7.300E-02	0.270
		980.50		-3.311E-01	8.314E-01	1.323E+00	1.105E-01	-0.250

--- Non-Identified Nuclides ----

Nuclide	Line Id	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		4.645E-01	1.364E+00	2.310E+00	1.500E+00	0.201
PA-234M		766.41		1.296E+01	2.154E+01	3.289E+01	2.516E+01	0.394
		1001.03	*	9.434E+00	8.007E+00	1.448E+01	1.564E+00	0.652
U-235	.	89.95		2.406E+00	1.280E+00	1.793E+00	5.571E-01	1.342
	-	93.35		3.428E+00	1.326E+00	1.294E+00	3.632E-01	2.649
		105.00		5.289E-01	9.063E-01	1.571E+00	4.633E-01	0.337
		143.76	*	-2.849E-02	1.902E-01	3.143E-01	5.084E-02	-0.091
		163.35		8.314E-02	4.308E-01	7.203E-01	1.280E-01	0.115
	+	185.71		1.906E-01	6.976E-02	9.107E-02	4.768E-03	2.093
		205.31		-3.168E-01	5.275E-01	7.253E-01	1.295E-01	-0.437
NP-236		94.67		1.805E-01	1.293E-01	2.004E-01	1.717E-02	0.901
		98.44		7.858E-02	6.667E-02	1.086E-01	8.725E-03	0.724
		111.00		-1.402E-01	1.166E-01	1.874E-01	1.260E-02	-0.748
		160.31	*	-5.631E-02	7.038E-02	1.119E-01	5.789E-03	-0.503
NP-239		99.55		5.518E-02	1.531E-01	2.395E-01	1.891E-02	0.230
		117.00	*	-9.651E-02	1.580E-01	2.608E-01	1.628E-02	-0.370
	+	209.75		1.702E+00	9.289E-01	1.286E+00	6.973E-02	1.323
		228.18		-3.644E-03	2.221E-01	3.571E-01	1.982E-02	-0.010
		277.60		2.892E-01	1.777E-01	3.244E-01	1.886E-02	0.892
		334.30		7.745E-01	1.449E+00	2.224E+00	1.314E-01	0.348
AM-241		59.54	*	3.761E-02	1.636E-01	2.488E-01	2.315E-02	0.151
CM-243		99.55		5.677E-02	1.576E-01	2.464E-01	1.945E-02	0.230
		103.76	*	5.386E-02	8.206E-02	1.448E-01	1.073E-02	0.372
		117.00		-9.929E-02	1.625E-01	2.683E-01	1.674E-02	-0.370
	+	209.75		1.678E+00	9.156E-01	1.268E+00	6.873E-02	1.323
		228.18		-3.682E-03	2.245E-01	3.608E-01	2.003E-02	-0.010
		277.60		2.916E-01	1.791E-01	3.270E-01	1.901E-02	0.892
CM-247		278.00		9.698E-01	7.438E-01	1.339E+00	7.790E-02	0.724
		287.40		-1.339E+00	1.152E+00	1.809E+00	1.057E-01	-0.740
		402.60	*	-2.384E-03	4.125E-02	6.740E-02	3.907E-03	-0.035
CF-249		252.85		6.769E-01	8.293E-01	1.391E+00	7.932E-02	0.487
		333.44		1.482E-01	1.874E-01	2.934E-01	1.734E-02	0.505
		387.95	*	-3.932E-02	4.365E-02	6.738E-02	3.899E-03	-0.584
CF-251		176.60	*	-7.794E-03	1.121E-01	1.839E-01	9.505E-03	-0.042
		227.00		1.146E-01	3.674E-01	6.020E-01	3.338E-02	0.190
		285.00		3.194E-01	1.667E+00	2.853E+00	1.666E-01	0.112

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358005 *
* Acquisition date :  6-JUL-2009 11:17:12 Detector SN#     :            *
* Detector ID        : GAM23              Sensitivity      : 5.000     *
* Geometry           : CAN                Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:03.86     Half life ratio :  8.000     *
*************************************************************************
*                                                                       *
*                               SAMPLE DATA                             *
*                                                                       *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID    *
* Sample ID          : G232358005           Analyst initials: MXR1     *
* Batch Number       : 880723               Sample Quantity : 1.2455E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                                 QC DATA                               *
* Standard Weight  :   0.00000                                          *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.070E+01	2.990E+00	5.374E-01	0.000E+00
CD-109	2.638E+00	9.712E-01	1.204E+00	0.000E+00
SN-126	2.597E-01	9.562E-02	1.193E-01	0.000E+00
BA-137M	6.385E-01	1.047E-01	5.779E-02	0.000E+00
CS-137	6.750E-01	1.107E-01	6.109E-02	0.000E+00
TL-208	4.916E-01	9.614E-02	5.767E-02	0.000E+00
BI-211	3.528E+00	5.221E-01	3.119E-01	0.000E+00
PB-212	1.518E+00	1.518E-01	8.613E-02	0.000E+00
PO-212	1.518E+00	1.518E-01	8.613E-02	0.000E+00
BI-214	1.015E+00	1.726E-01	1.195E-01	0.000E+00
PB-214	1.227E+00	1.922E-01	1.088E-01	0.000E+00
PO-214	1.227E+00	1.922E-01	1.088E-01	0.000E+00
PO-216	1.518E+00	1.518E-01	8.613E-02	0.000E+00
PO-218	1.227E+00	1.922E-01	1.088E-01	0.000E+00
RA-224	4.280E+00	1.153E+00	9.812E-01	0.000E+00
RA-226	1.015E+00	1.726E-01	1.195E-01	0.000E+00
AC-228	1.862E+00	3.993E-01	2.234E-01	0.000E+00
RA-228	1.862E+00	3.993E-01	2.234E-01	0.000E+00
TH-228	1.518E+00	1.518E-01	8.612E-02	0.000E+00
TH-230	1.015E+00	1.726E-01	1.195E-01	0.000E+00
TH-232	1.862E+00	3.993E-01	2.234E-01	0.000E+00
TH-234	2.907E+00	2.695E+00	1.961E+00	0.000E+00
U-234	1.015E+00	1.726E-01	1.195E-01	0.000E+00
NP-237	7.627E-01	3.204E-01	3.842E-01	0.000E+00
U-238	2.907E+00	2.695E+00	1.961E+00	0.000E+00
AM-243	3.028E-01	7.209E-02	8.602E-02	0.000E+00
ANH-511	1.736E-01	6.825E-02	4.667E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	2.648E-01	3.436E-01	6.064E-01	0.000E+00	NOT IDENT.
NA-22	9.034E-04	5.126E-02	8.460E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.029E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.214E-02	3.335E-02	6.033E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.691E-02	7.140E-02	0.000E+00	FAIL ABUN
SC-46	-2.715E-02	4.439E-02	7.206E-02	0.000E+00	FAIL ABUN
V-48	8.357E-03	7.304E-02	1.255E-01	0.000E+00	NOT IDENT.
CR-51	-2.048E-01	3.468E-01	5.828E-01	0.000E+00	NOT IDENT.
MN-52	-1.762E-01	2.543E-01	3.900E-01	0.000E+00	FAIL ABUN
MN-54	2.776E-02	4.201E-02	7.361E-02	0.000E+00	NOT IDENT.
CO-56	1.068E-02	4.671E-02	7.881E-02	0.000E+00	NOT IDENT.
CO-57	5.445E-03	2.052E-02	3.717E-02	0.000E+00	NOT IDENT.
CO-58	-7.885E-03	4.229E-02	6.894E-02	0.000E+00	NOT IDENT.
FE-59	-1.958E-02	1.086E-01	1.791E-01	0.000E+00	NOT IDENT.
CO-60	1.144E-02	4.238E-02	7.445E-02	0.000E+00	NOT IDENT.
ZN-65	-3.043E-02	1.125E-01	1.550E-01	0.000E+00	NOT IDENT.
GE-68	1.495E+00	1.609E+00	2.911E+00	0.000E+00	NOT IDENT.
AS-73	8.239E-01	8.767E-01	1.602E+00	0.000E+00	NOT IDENT.
AS-74	-9.690E-03	9.149E-02	1.562E-01	0.000E+00	NOT IDENT.
SE-75	-2.369E-02	4.290E-02	6.837E-02	0.000E+00	NOT IDENT.
BR-77	1.809E+00	8.200E+00	1.380E+01	0.000E+00	FAIL ABUN
SR-82	-4.251E-01	4.172E-01	6.277E-01	0.000E+00	NOT IDENT.
RB-83	1.936E-02	7.524E-02	1.270E-01	0.000E+00	NOT IDENT.
RB-84	-4.451E-02	7.784E-02	1.270E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.759E+00	1.407E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.930E-02	7.128E-02	0.000E+00	NOT IDENT.
RB-86	3.888E-01	1.010E+00	1.752E+00	0.000E+00	NOT IDENT.
Y-88	1.223E-02	3.222E-02	5.889E-02	0.000E+00	NOT IDENT.
ZR-88	7.841E-03	3.145E-02	5.458E-02	0.000E+00	NOT IDENT.
Y-91	-8.749E+00	2.135E+01	3.398E+01	0.000E+00	NOT IDENT.
NB-94	-6.756E-04	3.928E-02	6.629E-02	0.000E+00	NOT IDENT.
NB-95	9.918E-04	4.676E-02	7.837E-02	0.000E+00	NOT IDENT.
NB-95M	-3.150E-02	1.253E-01	1.834E-01	0.000E+00	NOT IDENT.
ZR-95	6.859E-02	7.641E-02	1.378E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.945E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.788E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.130E+00	9.037E+00	1.580E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.372E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	6.691E-03	2.985E-02	5.140E-02	0.000E+00	NOT IDENT.
RH-102	-3.206E-02	3.130E-02	4.781E-02	0.000E+00	NOT IDENT.
RU-103	-3.079E-02	4.468E-02	6.984E-02	0.000E+00	FAIL ABUN
RH-106	-6.154E-02	3.384E-01	5.712E-01	0.000E+00	FAIL ABUN
RU-106	-6.154E-02	3.383E-01	5.712E-01	0.000E+00	FAIL ABUN
AG-108M	-5.063E-03	3.327E-02	5.550E-02	0.000E+00	NOT IDENT.
AG-110M	-6.002E-03	4.325E-02	6.280E-02	0.000E+00	NOT IDENT.
IN-111	2.285E-01	8.231E-01	1.251E+00	0.000E+00	NOT IDENT.
IN-113M	6.025E-02	4.679E-02	8.616E-02	0.000E+00	NOT IDENT.
SN-113	6.025E-02	4.679E-02	8.616E-02	0.000E+00	NOT IDENT.
IN-114M	3.348E-02	1.717E-01	2.669E-01	0.000E+00	NOT IDENT.
CD-115	-5.812E+00	8.445E+00	1.310E+01	0.000E+00	NOT IDENT.
SN-117M	-5.923E-03	4.329E-02	7.506E-02	0.000E+00	NOT IDENT.
SB-122	8.780E-02	1.683E+00	2.899E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.123E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.357E-03	2.356E-02	4.101E-02	0.000E+00	NOT IDENT.
I-124	8.436E-02	6.842E-01	1.036E+00	0.000E+00	NOT IDENT.
SB-124	-1.016E-02	9.065E-02	1.469E-01	0.000E+00	NOT IDENT.
SB-125	1.951E-02	1.010E-01	1.731E-01	0.000E+00	FAIL ABUN
TE-125M	7.222E+00	7.402E+00	1.390E+01	0.000E+00	NOT IDENT.
I-126	-3.731E-02	1.997E-01	2.874E-01	0.000E+00	NOT IDENT.
SB-126	8.811E-02	1.477E-01	2.490E-01	0.000E+00	FAIL ABUN
SB-127	-5.606E-01	1.138E+00	1.840E+00	0.000E+00	NOT IDENT.
XE-127	3.575E-03	4.074E-02	6.974E-02	0.000E+00	NOT IDENT.
I-131	-1.968E-02	1.048E-01	1.781E-01	0.000E+00	NOT IDENT.
TE-132	-8.727E-03	5.215E-01	8.767E-01	0.000E+00	NOT IDENT.
BA-133	-7.778E-03	4.895E-02	7.187E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.409E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	9.445E-02	6.024E-02	1.113E-01	0.000E+00	NOT IDENT.
CS-135	8.410E-02	1.785E-01	2.719E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.813E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.193E-01	1.107E-01	1.643E-01	0.000E+00	FAIL ABUN
CE-139	5.117E-03	2.684E-02	4.709E-02	0.000E+00	NOT IDENT.
BA-140	1.046E-01	2.434E-01	4.335E-01	0.000E+00	NOT IDENT.
LA-140	-1.617E-01	9.416E-02	1.076E-01	0.000E+00	NOT IDENT.
CE-141	-1.225E-02	5.313E-02	9.192E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.687E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-6.159E-02	1.738E-01	3.014E-01	0.000E+00	NOT IDENT.
PM-144	-2.108E-02	3.699E-02	5.951E-02	0.000E+00	NOT IDENT.
PR-144	-1.428E+00	2.505E+00	4.030E+00	0.000E+00	NOT IDENT.

PM-146	4.932E-02	4.538E-02	8.211E-02	0.000E+00	NOT IDENT.
ND-147	-8.831E-02	4.979E-01	8.559E-01	0.000E+00	FAIL ABUN
PM-149	9.744E+00	5.844E+01	1.041E+02	0.000E+00	NOT IDENT.
EU-152	6.988E-02	9.661E-02	1.571E-01	0.000E+00	NOT IDENT.
GD-153	-1.096E-02	7.987E-02	1.199E-01	0.000E+00	NOT IDENT.
EU-154	6.639E-03	1.437E-01	2.379E-01	0.000E+00	NOT IDENT.
EU-155	5.239E-02	8.918E-02	1.656E-01	0.000E+00	FAIL ABUN
TB-160	8.750E-02	1.544E-01	2.786E-01	0.000E+00	FAIL ABUN
HO-166M	-3.699E-02	6.666E-02	1.070E-01	0.000E+00	NOT IDENT.
TM-171	-9.367E-00	2.785E+01	4.327E+01	0.000E+00	NOT IDENT.
LU-176	6.638E-03	2.423E-02	4.311E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.140E+00	1.655E+00	0.000E+00	FAIL ABUN
LU-177M	-2.969E-01	1.849E-01	2.758E-01	0.000E+00	NOT IDENT.
HF-181	-4.457E-02	4.834E-02	7.482E-02	0.000E+00	NOT IDENT.
W-181	4.486E-03	3.675E-01	5.802E-01	0.000E+00	NOT IDENT.
TA-182	-6.408E-02	2.631E-01	4.270E-01	0.000E+00	FAIL ABUN
RE-183	6.378E-02	9.394E-02	1.690E-01	0.000E+00	FAIL ABUN
RE-184	1.796E-01	2.156E-01	3.777E-01	0.000E+00	NOT IDENT.
OS-185	3.938E-02	4.431E-02	8.101E-02	0.000E+00	NOT IDENT.
RE-188	1.709E-01	1.476E-01	2.717E-01	0.000E+00	NOT IDENT.
W-188	-1.207E+00	7.505E+00	1.153E+01	0.000E+00	FAIL ABUN
IR-192	1.936E-02	3.116E-02	5.649E-02	0.000E+00	FAIL ABUN
AU-195	2.635E-01	2.123E-01	3.663E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.173E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.088E+00	4.818E+00	8.097E+00	0.000E+00	NOT IDENT.
TL-202	5.153E-02	6.830E-02	1.213E-01	0.000E+00	NOT IDENT.
HG-203	-1.298E-02	3.921E-02	6.820E-02	0.000E+00	NOT IDENT.
BI-207	-1.284E-02	5.845E-02	9.624E-02	0.000E+00	FAIL ABUN
TL-207	-6.524E-01	6.764E-01	1.098E+00	0.000E+00	FAIL ABUN
PO-209	3.433E-02	8.208E+00	1.411E+01	0.000E+00	NOT IDENT.
BI-210	8.323E-01	4.614E+00	8.011E+00	0.000E+00	NOT IDENT.
PB-210	8.323E-01	4.614E+00	8.011E+00	0.000E+00	NOT IDENT.
PO-210	8.323E-01	4.614E+00	8.011E+00	0.000E+00	NOT IDENT.
PB-211	6.677E-01	1.058E+00	1.735E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.160E-01	7.194E-01	0.000E+00	FAIL ABUN
PO-215	-6.524E-01	6.764E-01	1.098E+00	0.000E+00	FAIL ABUN
RN-219	-3.673E-02	4.479E-01	7.586E-01	0.000E+00	FAIL ABUN
RN-220	1.006E+01	2.719E+01	4.850E+01	0.000E+00	NOT IDENT.
RA-223	-6.524E-01	6.764E-01	1.098E+00	0.000E+00	FAIL ABUN
AC-227	-2.956E-01	3.657E-01	5.709E-01	0.000E+00	FAIL ABUN
TH-227	-2.956E-01	3.667E-01	5.709E-01	0.000E+00	FAIL ABUN
TH-229	1.634E-01	4.583E-01	7.991E-01	0.000E+00	FAIL ABUN
PA-231	1.459E+00	1.423E+00	2.630E+00	0.000E+00	NOT IDENT.
TH-231	-6.524E-01	6.764E-01	1.098E+00	0.000E+00	FAIL ABUN
U-231	2.595E-01	8.525E-01	1.321E+00	0.000E+00	FAIL ABUN
PA-233	2.807E-02	5.969E-02	1.073E-01	0.000E+00	FAIL ABUN
PA-234	-2.900E-02	3.315E-01	5.613E-01	0.000E+00	FAIL ABUN
PA-234M	9.434E+00	7.847E+00	1.454E+01	0.000E+00	NOT IDENT.
U-235	-2.849E-02	1.864E-01	3.242E-01	0.000E+00	FAIL ABUN
NP-236	-5.631E-02	6.897E-02	1.153E-01	0.000E+00	NOT IDENT.
NP-239	-9.651E-02	1.548E-01	2.697E-01	0.000E+00	FAIL ABUN
AM-241	3.761E-02	1.603E-01	2.596E-01	0.000E+00	NOT IDENT.
CM-243	5.386E-02	8.042E-02	1.499E-01	0.000E+00	FAIL ABUN
CM-247	-2.384E-03	4.042E-02	6.855E-02	0.000E+00	NOT IDENT.
CF-249	-3.932E-02	4.278E-02	6.857E-02	0.000E+00	NOT IDENT.
CF-251	-7.794E-03	1.099E-01	1.892E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:55:05.62

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]C232358005.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:17:12.
Sample ID         : G232358005           Sample quantity  : 1.24550E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.86  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1083	10.67*	9.966E-01	3.070E+01	3.070E+01	9.94
CD-109	88.03	167	3.72*	5.230E+00	2.583E+00	2.638E+00	37.57
SN-126	64.28	95	9.60	2.604E+00	1.151E+00	1.151E+00	94.10
	86.94	167	8.90	5.230E+00	1.080E+00	1.080E+00	55.20
	87.57	167	37.00*	5.230E+00	2.597E-01	2.597E-01	37.57
BA-137M	661.65	389	89.98*	2.040E+00	6.380E-01	6.385E-01	16.73
CS-137	661.65	389	85.12*	2.040E+00	6.744E-01	6.750E-01	16.74
TL-208	277.35	------	6.80	4.140E+00	------ Line Not Found		------
	510.84	147	21.60	2.544E+00	8.038E-01	8.038E-01	40.97
	583.14	312	84.20*	2.275E+00	4.916E-01	4.916E-01	19.96
	860.37	------	12.46	1.609E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.829E+00	------ Line Not Found		------
	351.07	521	12.94*	3.438E+00	3.528E+00	3.528E+00	15.10
PB-212	74.81	270	10.70	4.067E+00	1.868E+00	1.868E+00	26.03
	77.11	503	18.00	4.314E+00	1.952E+00	1.952E+00	16.12
	87.30	167	8.00	5.230E+00	1.201E+00	1.201E+00	38.88
	238.63	1040	44.60*	4.632E+00	1.518E+00	1.518E+00	10.21
	300.09	36	3.41	3.899E+00	8.265E-01	8.265E-01	128.24
PO-212	74.81	270	10.70	4.067E+00	1.868E+00	1.868E+00	26.03
	77.11	503	18.00	4.314E+00	1.952E+00	1.952E+00	16.12
	87.30	167	8.00	5.230E+00	1.201E+00	1.201E+00	38.88
	115.19	------	0.60	6.293E+00	------ Line Not Found		------
	238.63	1040	44.60*	4.632E+00	1.518E+00	1.518E+00	10.21
	300.09	36	3.41	3.899E+00	8.265E-01	8.265E-01	128.24
BI-214	609.31	342	46.30*	2.191E+00	1.015E+00	1.015E+00	17.36
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	42	3.21	1.490E+00	2.672E+00	2.672E+00	92.94
	1120.29	51	15.10	1.257E+00	8.036E-01	8.036E-01	70.84
	1238.11	------	5.94	1.148E+00	------ Line Not Found		------
	1377.67	------	4.11	1.046E+00	------ Line Not Found		------
	1764.49	51	15.80	8.739E-01	1.123E+00	1.123E+00	32.91
PB-214	74.81	270	6.21	4.067E+00	3.218E+00	3.218E+00	25.40

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	503	10.50	4.314E+00	3.347E+00	3.347E+00	17.83
	87.30	167	4.67	5.230E+00	2.058E+00	2.058E+00	38.35
	241.98	258	7.49	4.592E+00	2.257E+00	2.257E+00	28.05
	295.21	251	19.20	3.944E+00	9.994E-01	9.994E-01	23.83
	351.92	521	37.20*	3.438E+00	1.227E+00	1.227E+00	15.98
PO-214	74.81	270	6.21	4.067E+00	3.218E+00	3.218E+00	25.40
	77.11	503	10.50	4.314E+00	3.347E+00	3.347E+00	17.83
	87.30	167	4.67	5.230E+00	2.058E+00	2.058E+00	38.35
	241.98	258	7.49	4.592E+00	2.257E+00	2.257E+00	28.05
	295.21	251	19.20	3.944E+00	9.994E-01	9.994E-01	23.83
	351.92	521	37.20*	3.438E+00	1.227E+00	1.227E+00	15.98
PO-216	74.81	270	10.70	4.067E+00	1.868E+00	1.868E+00	26.03
	77.11	503	18.00	4.314E+00	1.952E+00	1.952E+00	16.12
	87.30	167	8.00	5.230E+00	1.201E+00	1.201E+00	38.88
	238.63	1040	44.60*	4.632E+00	1.518E+00	1.518E+00	10.21
	300.09	36	3.41	3.899E+00	8.265E-01	8.265E-01	128.24
PO-218	74.81	270	6.21	4.067E+00	3.218E+00	3.218E+00	25.40
	77.11	503	10.50	4.314E+00	3.347E+00	3.347E+00	17.83
	87.30	167	4.67	5.230E+00	2.058E+00	2.058E+00	38.35
	241.98	258	7.49	4.592E+00	2.257E+00	2.257E+00	28.05
	295.21	251	19.20	3.944E+00	9.994E-01	9.994E-01	23.83
	351.92	521	37.20*	3.438E+00	1.227E+00	1.227E+00	15.98
RA-224	240.98	258	3.95*	4.592E+00	4.280E+00	4.280E+00	27.48
RA-226	609.31	342	46.30*	2.191E+00	1.015E+00	1.015E+00	17.36
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	42	3.21	1.490E+00	2.672E+00	2.672E+00	92.94
	1120.29	51	15.10	1.257E+00	8.036E-01	8.036E-01	70.84
	1238.11	------	5.94	1.148E+00	------ Line Not Found		------
	1377.67	------	4.11	1.046E+00	------ Line Not Found		------
	1764.49	51	15.80	8.739E-01	1.123E+00	1.123E+00	32.91
AC-228	338.32	291	11.40	3.542E+00	2.173E+00	2.173E+00	46.65
	911.07	261	27.70*	1.525E+00	1.862E+00	1.862E+00	21.88
	969.11	83	16.60	1.439E+00	1.047E+00	1.047E+00	59.87
RA-228	338.32	291	11.40	3.542E+00	2.173E+00	2.173E+00	46.65
	911.07	261	27.70*	1.525E+00	1.862E+00	1.862E+00	21.88
	969.11	83	16.60	1.439E+00	1.047E+00	1.047E+00	59.87
TH-228	84.40	------	1.21	5.004E+00	------ Line Not Found		------
	238.60	1040	44.60*	4.632E+00	1.518E+00	1.518E+00	10.21
	300.10	36	3.41	3.899E+00	8.265E-01	8.265E-01	140.90
TH-230	609.31	342	46.30*	2.191E+00	1.015E+00	1.015E+00	17.36
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	42	3.21	1.490E+00	2.672E+00	2.672E+00	92.94
	1120.29	51	15.10	1.257E+00	8.036E-01	8.036E-01	70.84
	1238.11	------	5.94	1.148E+00	------ Line Not Found		------
	1377.67	------	4.11	1.046E+00	------ Line Not Found		------
	1764.49	51	15.80	8.739E-01	1.123E+00	1.123E+00	32.91
TH-232	338.32	291	11.40	3.542E+00	2.173E+00	2.173E+00	23.41
	911.07	261	27.70*	1.525E+00	1.862E+00	1.862E+00	21.88
	969.11	83	16.60	1.439E+00	1.047E+00	1.047E+00	59.87

Sample ID : G232358005 Acquisition date : 6-JUN-2009 11:17:12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	95	3.80*	2.604E+00	2.907E+00	2.907E+00	94.59
	92.38	287	5.41	5.601E+00	2.852E+00	2.852E+00	32.21
U-234	609.31	342	46.30*	2.191E+00	1.015E+00	1.015E+00	17.36
	768.36	------	5.04	1.785E+00	------	Line Not Found	------
	934.06	42	3.21	1.490E+00	2.672E+00	2.672E+00	92.94
	1120.29	51	15.10	1.257E+00	8.036E-01	8.036E-01	70.84
	1238.11	------	5.94	1.148E+00	------	Line Not Found	------
	1377.67	------	4.11	1.046E+00	------	Line Not Found	------
	1764.49	51	15.80	8.739E-01	1.123E+00	1.123E+00	32.91
NP-237	86.50	167	12.60*	5.230E+00	7.627E-01	7.627E-01	42.86
	95.87	------	2.60	5.757E+00	------	Line Not Found	------
U-238	63.29	95	3.80*	2.604E+00	2.907E+00	2.907E+00	94.59
	92.38	287	5.41	5.601E+00	2.852E+00	2.852E+00	28.01
AM-243	74.67	270	66.00*	4.067E+00	3.028E-01	3.028E-01	24.29
	86.72	167	0.34	5.230E+00	2.860E+01	2.860E+01	37.57
	117.66	------	0.55	6.314E+00	------	Line Not Found	------
	142.18	------	0.13	6.209E+00	------	Line Not Found	------
ANH-511	511.00	147	100.00*	2.544E+00	1.736E-01	1.736E-01	40.11

Flag: "*" = Keyline

Sample ID : G232358005 Acquisition Date : 6-JUN 2009 11:17:12

Total number of lines in spectrum 28
Number of unidentified lines 1
Number of lines tentatively identified by NID 27 96.43%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.070E+01	3.070E+01	0.305E+01	9.94	
CD-109	464.00D	1.02	2.583E+00	2.638E+00	0.991E+00	37.57	
SN-126	1.00E+05Y	1.00	2.597E-01	2.597E-01	0.976E-01	37.57	
BA-137M	30.17Y	1.00	6.380E-01	6.385E-01	1.068E-01	16.73	
CS-137	30.17Y	1.00	6.744E-01	6.750E-01	1.130E-01	16.74	
TL-208	1.41E+10Y	1.00	4.916E-01	4.916E-01	0.981E-01	19.96	
BI-211	7.04E+08Y	1.00	3.528E+00	3.528E+00	0.533E+00	15.10	
PB-212	1.41E+10Y	1.00	1.518E+00	1.518E+00	0.155E+00	10.21	
PO-212	1.41E+10Y	1.00	1.518E+00	1.518E+00	0.155E+00	10.21	
BI-214	1600.00Y	1.00	1.015E+00	1.015E+00	0.176E+00	17.36	
PB-214	1600.00Y	1.00	1.227E+00	1.227E+00	0.196E+00	15.98	
PO-214	1600.00Y	1.00	1.227E+00	1.227E+00	0.196E+00	15.98	
PO-216	1.41E+10Y	1.00	1.518E+00	1.518E+00	0.155E+00	10.21	
PO-218	1600.00Y	1.00	1.227E+00	1.227E+00	0.196E+00	15.98	
RA-224	1.41E+10Y	1.00	4.280E+00	4.280E+00	1.176E+00	27.48	
RA-226	1600.00Y	1.00	1.015E+00	1.015E+00	0.176E+00	17.36	
AC-228	1.41E+10Y	1.00	1.862E+00	1.862E+00	0.407E+00	21.88	
RA-228	1.41E+10Y	1.00	1.862E+00	1.862E+00	0.407E+00	21.88	
TH-228	1.41E+10Y	1.00	1.518E+00	1.518E+00	0.155E+00	10.21	
TH-230	4.47E+09Y	1.00	1.015E+00	1.015E+00	0.176E+00	17.36	
TH-232	1.41E+10Y	1.00	1.862E+00	1.862E+00	0.407E+00	21.88	
TH-234	4.47E+09Y	1.00	2.907E+00	2.907E+00	2.750E+00	94.59	
U-234	4.47E+09Y	1.00	1.015E+00	1.015E+00	0.176E+00	17.36	
NP-237	2.14E+06Y	1.00	7.627E-01	7.627E-01	3.269E-01	42.86	
U-238	4.47E+09Y	1.00	2.907E+00	2.907E+00	2.750E+00	94.59	
AM-243	7380.00Y	1.00	3.028E-01	3.028E-01	0.736E-01	24.29	
ANH-511	1.00E+09Y	1.00	1.736E-01	1.736E-01	0.696E-01	40.11	
		Total Activity :	6.960E+01	6.966E+01			

Grand Total Activity : 6.960E+01 6.966E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232358005 Acquisition date : 6-JUL-2009 11:17:12

It	Energy	Area	Bkgrd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.95	117	250	0.83	180.09	178	15	1.62E-02	43.2	5.42E+00	T
0	186.06	187	254	1.01	372.35	368	10	2.60E-02	36.2	5.48E+00	T
0	209.06	93	182	1.09	418.36	414	8	1.29E-02	54.3	5.09E+00	T
0	270.97	67	172	1.51	542.22	537	9	9.35E-03	75.4	4.21E+00	T
0	462.94	96	102	1.16	926.29	920	11	1.34E-02	45.4	2.76E+00	T
0	728.22	60	98	0.89	1457.08	1451	16	8.29E-03	76.9	1.87E+00	T
0	1694.10	6	5	0.93	3390.26	3382	10	8.37E-04	****	8.96E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:15:10.15

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358005.CNF;1 *
* Acquisition date  : 6-JUL-2009 11:17:12.  Detector SN#     :             *
* Detector ID       : GAM23                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:03.86          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232358005            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.24550E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 2-JUN-2009 11:17:00.62MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.070E+01	3.051E+00	5.380E-01	4.024E-02	57.059
CD-109	2.638E+00	9.910E-01	1.160E+00	1.133E-01	2.273
SN-126	2.597E-01	9.757E-02	1.149E-01	1.118E-02	2.261
BA-137M	6.385E-01	1.068E-01	5.721E-02	2.922E-03	11.162
CS-137	6.750E-01	1.130E-01	6.047E-02	3.106E-03	11.162
TL-208	4.916E-01	9.810E-02	5.699E-02	3.700E-03	8.625
BI-211	3.528E+00	5.328E-01	3.061E-01	1.995E-02	11.524
PB-212	1.518E+00	1.549E-01	8.409E-02	6.046E-03	18.048
PO-212	1.518E+00	1.549E-01	8.409E-02	6.046E-03	18.048
BI-214	1.015E+00	1.761E-01	1.182E-01	8.885E-03	8.585
PB-214	1.227E+00	1.961E-01	1.067E-01	8.909E-03	11.496
PO-214	1.227E+00	1.961E-01	1.067E-01	8.909E-03	11.496
PO-216	1.518E+00	1.549E-01	8.409E-02	6.046E-03	18.048
PO-218	1.227E+00	1.961E-01	1.067E-01	8.909E-03	11.496
RA-224	4.280E+00	1.176E+00	9.580E-01	5.398E-02	4.468
RA-226	1.015E+00	1.761E-01	1.182E-01	8.885E-03	8.585
AC-228	1.862E+00	4.074E-01	2.222E-01	2.564E-02	8.380
RA-228	1.862E+00	4.074E-01	2.222E-01	2.564E-02	8.380

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.518E+00	1.549E-01	8.408E-02	6.045E-03	18.050
TH-230	1.015E+00	1.761E-01	1.182E-01	8.884E-03	8.585
TH-232	1.862E+00	4.074E-01	2.222E-01	2.564E-02	8.380
TH-234	2.907E+00	2.750E+00	1.881E+00	3.390E-01	1.545
U-234	1.015E+00	1.761E-01	1.182E-01	8.884E-03	8.585
NP-237	7.627E-01	3.269E-01	3.701E-01	8.428E-02	2.061
U-238	2.907E+00	2.750E+00	1.881E+00	3.390E-01	1.545
AM-243	3.028E-01	7.356E-02	8.268E-02	7.348E-03	3.662
ANH-511	1.736E-01	6.964E-02	4.604E-02	2.674E-03	3.771

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.648E-01		3.506E-01	5.976E-01	4.061E-02	0.443
NA-22	9.034E-04		5.231E-02	8.452E-02	5.676E-03	0.011
NA-24	-1.126E-01		1.035E-01	Half-Life too short		
AL-26	1.214E-02		3.403E-02	6.057E-02	3.640E-03	0.200
TI-44	3.603E-01	+	5.807E-02	6.867E-02	6.225E-03	5.246
SC-46	-2.715E-02		4.530E-02	7.163E-02	6.400E-03	-0.379
V-48	8.357E-03		7.453E-02	1.250E-01	1.040E-02	0.067
CR-51	-2.048E-01		3.539E-01	5.712E-01	3.745E-02	-0.359
MN-52	-1.762E-01		2.595E-01	3.903E-01	2.824E-02	-0.451
MN-54	2.776E-02		4.286E-02	7.310E-02	5.788E-03	0.380
CO-56	1.068E-02		4.766E-02	7.829E-02	6.369E-03	0.136
CO-57	5.445E-03		2.094E-02	3.596E-02	2.120E-03	0.151
CO-58	-7.885E-03		4.315E-02	6.844E-02	5.142E-03	-0.115
FE-59	-1.958E-02		1.108E-01	1.785E-01	1.375E-02	-0.110
CO-60	1.144E-02		4.324E-02	7.443E-02	5.464E-03	0.154
ZN-65	-3.043E-02		1.148E-01	1.546E-01	1.021E-02	-0.197
GE-68	1.495E+00		1.642E+00	2.901E+00	2.076E-01	0.515
AS-73	8.239E-01		8.945E-01	1.533E+00	1.353E-01	0.537
AS-74	-9.690E-03		9.336E-02	1.545E-01	8.518E-03	-0.063
SE-75	-2.369E-02		4.378E-02	6.684E-02	3.891E-03	-0.354
BR-77	1.809E+00		8.367E+00	1.362E+01	7.881E-01	0.133
SR-82	-4.251E-01		4.257E-01	6.228E-01	4.296E-02	-0.683
RB-83	1.936E-02		7.678E-02	1.253E-01	7.254E-03	0.155
RB-84	-4.451E-02		7.943E-02	1.263E-01	1.109E-02	-0.353
KR-85	1.920E+01		7.917E+00	1.388E+01	8.055E-01	1.383
SR-85	9.728E-02		4.011E-02	7.032E-02	4.080E-03	1.383
RB-86	3.888E-01		1.031E+00	1.746E+00	1.252E-01	0.223
Y-88	1.223E-02		3.288E-02	5.915E-02	3.483E-03	0.207
ZR-88	7.841E-03		3.210E-02	5.364E-02	3.097E-03	0.146
Y-91	-8.749E+00		2.178E+01	3.393E+01	2.024E+00	-0.258
NB-94	-6.756E-04		4.008E-02	6.568E-02	3.753E-03	-0.010
NB-95	9.918E-04		4.772E-02	7.774E-02	5.224E-03	0.013
NB-95M	-3.150E-02		1.279E-01	1.790E-01	1.320E-02	-0.176
ZR-95	6.859E-02		7.797E-02	1.367E-01	1.049E-02	0.502

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-1.034E-03		2.013E-02	Half-Life too short		
ZR-97	6.140E-01		3.463E-01	Half-Life too short		
MO-99	4.130E+00		9.221E+00	1.566E+01	2.192E+00	0.264
TC-99M	-2.334E+08		7.001E+08	Half-Life too short		
RH-101	6.691E-03		3.046E-02	5.005E-02	2.668E-03	0.134
RH-102	-3.206E-02		3.194E-02	4.711E-02	2.758E-03	-0.680
RU-103	-3.079E-02		4.559E-02	6.886E-02	8.717E-03	-0.447
RH-106	-6.154E-02		3.453E-01	5.650E-01	6.516E-02	-0.109
RU-106	-6.154E-02		3.452E-01	5.650E-01	3.036E-02	-0.109
AG-108M	-5.063E-03		3.394E-02	5.462E-02	3.463E-03	-0.093
AG-110M	-6.002E-03		4.413E-02	6.217E-02	3.455E-03	-0.097
IN-111	2.285E-01		8.399E-01	1.222E+00	6.915E-02	0.187
IN-113M	6.025E-02		4.775E-02	8.468E-02	5.217E-03	0.711
SN-113	6.025E-02		4.775E-02	8.468E-02	5.217E-03	0.711
IN-114M	3.348E-02		1.752E-01	2.597E-01	1.369E-02	0.129
CD-115	-5.812E+00		8.617E+00	1.293E+01	7.459E-01	-0.450
SN-117M	-5.923E-03		4.417E-02	7.287E-02	3.787E-03	-0.081
SB-122	8.780E-02		1.717E+00	2.864E+00	1.620E-01	0.031
I-123	-6.468E-02		5.730E-01	Half-Life too short		
TE-123M	-1.357E-03		2.404E-02	3.982E-02	2.101E-03	-0.034
I-124	8.436E-02		6.982E-01	1.024E+00	5.611E-02	0.082
SB-124	-1.016E-02		9.250E-02	1.474E-01	1.027E-02	-0.069
SB-125	1.951E-02		1.031E-01	1.703E-01	1.036E-02	0.115
TE-125M	7.222E+00		7.553E+00	1.343E+01	1.197E+00	0.538
I-126	-3.731E-02		2.038E-01	2.846E-01	1.473E-02	-0.131
SB-126	8.811E-02		1.508E-01	2.468E-01	1.478E-02	0.357
SB-127	-5.606E-01		1.161E+00	1.822E+00	1.606E-01	-0.308
XE-127	3.575E-03		4.157E-02	6.793E-02	3.647E-03	0.053
I-131	-1.968E-02		1.070E-01	1.749E-01	1.141E-02	-0.113
TE-132	-8.727E-03		5.322E-01	8.553E-01	1.201E-01	-0.010
BA-133	-7.778E-03		4.995E-02	7.054E-02	8.184E-03	-0.110
I-133	-1.678E-04		1.229E-03	Half-Life too short		
CS-134	9.445E-02		6.146E-02	1.105E-01	8.066E-03	0.855
CS-135	8.410E-02		1.822E-01	2.659E-01	2.031E-02	0.316
I-135	8.350E+07		1.945E+08	Half-Life too short		
CS-136	-1.193E-01		1.130E-01	1.637E-01	1.305E-02	-0.728
CE-139	5.117E-03		2.739E-02	4.575E-02	2.332E-03	0.112
BA-140	1.046E-01		2.483E-01	4.279E-01	1.391E-01	0.244
LA-140	-1.617E-01		9.608E-02	1.078E-01	7.396E-03	-1.500
CE-141	-1.225E-02		5.421E-02	8.914E-02	5.027E-03	-0.137
CE-143	1.037E-04		4.432E-05	Half-Life too short		
CE-144	-6.159E-02		1.773E-01	2.920E-01	4.123E-02	-0.211
PM-144	-2.108E-02		3.775E-02	5.895E-02	3.316E-03	-0.358
PR-144	-1.428E+00		2.556E+00	3.992E+00	2.244E-01	-0.358
PM-146	4.982E-02		4.630E-02	8.086E-02	7.003E-03	0.616
ND-147	-8.831E-02		5.081E-01	8.448E-01	1.141E-01	-0.105
PM-149	9.744E+00		5.964E+01	1.019E+02	1.445E+01	0.096
EU-152	6.988E-02		9.858E-02	1.541E-01	1.022E-02	0.453

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Used	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-1.096E-02		8.150E-02	1.157E-01	9.448E-03	-0.095
EU-154	6.639E-03		1.466E-01	2.377E-01	2.359E-02	0.028
EU-155	5.239E-02		9.100E-02	1.599E-01	1.179E-02	0.328
TB-160	8.750E-02		1.576E-01	2.769E-01	2.421E-02	0.316
HO-166M	-3.699E-02		6.802E-02	1.060E-01	6.205E-03	-0.349
TM-171	-9.367E+00		2.842E+01	4.154E+01	3.612E+00	-0.226
LU-176	6.638E-03		2.473E-02	4.223E-02	2.488E-03	0.157
LU-177	2.132E+00	+	1.163E+00	1.612E+00	8.723E-02	1.322
LU-177M	-2.969E-01		1.887E-01	2.712E-01	1.578E-02	-1.095
HF-181	-4.457E-02		4.933E-02	7.375E-02	4.313E-03	-0.604
W-181	4.486E-03		3.750E-01	5.568E-01	4.837E-02	0.008
TA-182	-6.408E-02		2.685E-01	4.264E-01	2.617E-02	-0.150
RE-183	6.378E-02		9.586E-02	1.641E-01	8.442E-03	0.389
RE-184	1.796E-01		2.200E-01	3.690E-01	2.104E-02	0.487
OS-185	3.938E-02		4.521E-02	8.017E-02	4.184E-03	0.491
RE-188	1.709E-01		1.506E-01	2.637E-01	1.384E-02	0.648
W-188	-1.207E+00		7.658E+00	1.128E+01	6.606E-01	-0.107
IR-192	1.936E-02		3.180E-02	5.535E-02	3.284E-03	0.350
AU-195	2.635E-01		2.167E-01	3.534E-01	2.820E-02	0.746
TL-200	1.225E-04		1.109E-04	Half-Life too short		
TL-201	-3.088E+00		4.916E+00	7.867E+00	4.015E-01	-0.393
TL-202	5.153E-02		6.969E-02	1.194E-01	6.987E-03	0.432
HG-203	-1.298E-02		4.001E-02	6.672E-02	4.121E-03	-0.195
BI-207	-1.284E-02		5.964E-02	9.590E-02	7.046E-03	-0.134
TL-207	-6.524E-01		6.902E-01	1.076E+00	1.782E-01	-0.606
PO-209	3.433E-02		8.376E+00	1.403E+01	1.273E+00	0.002
BI-210	8.323E-01		4.708E+00	7.654E+00	5.959E-01	0.109
PB-210	8.323E-01		4.708E+00	7.654E+00	5.959E-01	0.109
PO-210	8.323E-01		4.708E+00	7.654E+00	5.135E-01	0.109
PB-211	6.677E-01		1.079E+00	1.706E+00	1.064E+00	0.391
BI-212	8.136E-01	+	6.286E-01	7.131E-01	5.660E-02	1.141
PO-215	-6.524E-01		6.902E-01	1.076E+00	1.782E-01	-0.606
RN-219	-3.673E-02		4.571E-01	7.458E-01	1.015E-01	-0.049
RN-220	1.006E+01		2.774E+01	4.789E+01	2.733E+00	0.210
RA-223	-6.524E-01		6.902E-01	1.076E+00	1.782E-01	-0.606
AC-227	-2.956E-01		3.731E-01	5.579E-01	7.770E-02	-0.530
TH-227	-2.956E-01		3.742E-01	5.579E-01	9.412E-02	-0.530
TH-229	1.634E-01		4.676E-01	7.779E-01	4.120E-02	0.210
PA-231	1.459E+00		1.452E+00	2.573E+00	3.550E-01	0.567
TH-231	-6.524E-01		6.902E-01	1.076E+00	1.782E-01	-0.606
U-231	2.595E-01		8.699E-01	1.274E+00	1.068E-01	0.204
PA-233	2.807E-02		6.091E-02	1.052E-01	6.574E-03	0.267
PA-234	-2.900E-02		3.382E-01	5.584E-01	1.050E-01	-0.052
PA-234M	9.434E+00		8.007E+00	1.448E+01	1.564E+00	0.652
U-235	-2.849E-02		1.902E-01	3.143E-01	5.084E-02	-0.091
NP-236	-5.631E-02		7.038E-02	1.119E-01	5.789E-03	-0.503
NP-239	-9.651E-02		1.580E-01	2.608E-01	1.628E-02	-0.370
AM-241	3.761E-02		1.636E-01	2.488E-01	2.315E-02	0.151

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	5.386E-02		8.206E-02	1.448E-01	1.073E-02	0.372
CM-247	-2.384E-03		4.125E-02	6.740E-02	3.907E-03	-0.035
CF-249	-3.932E-02		4.365E-02	6.738E-02	3.899E-03	-0.584
CF-251	-7.794E-03		1.121E-01	1.839E-01	9.505E-03	-0.042

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232358005       *
* Acquisition date  :  6-JUL-2009 11:17:12 Detector SN#     :           *
* Detector ID       : GAM23                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:03.86      Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                               SAMPLE DATA                             *
*                                                                       *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232358005           Analyst initials: MXR1       *
* Batch Number      : 880723               Sample Quantity : 1.2455E-02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                 QC DATA                               *
*                                                                       *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.070E+01	2.990E+00	2.689E-01	1.526E+00
CD-109	2.638E+00	9.712E-01	6.026E-01	4.955E-01
SN-126	2.597E-01	9.562E-02	5.966E-02	4.879E-02
BA-137M	6.385E-01	1.047E-01	2.891E-02	5.341E-02
CS-137	6.750E-01	1.107E-01	3.056E-02	5.649E-02
TL-208	4.916E-01	9.614E-02	2.885E-02	4.905E-02
BI-211	3.528E+00	5.221E-01	1.561E-01	2.664E-01
PB-212	1.518E+00	1.518E-01	4.309E-02	7.746E-02
PO-212	1.518E+00	1.518E-01	4.309E-02	7.746E-02
BI-214	1.015E+00	1.726E-01	5.979E-02	8.806E-02
PB-214	1.227E+00	1.922E-01	5.441E-02	9.804E-02
PO-214	1.227E+00	1.922E-01	5.441E-02	9.804E-02
PO-216	1.518E+00	1.518E-01	4.309E-02	7.746E-02
PO-218	1.227E+00	1.922E-01	5.441E-02	9.804E-02
RA-224	4.280E+00	1.153E+00	4.909E-01	5.881E-01
RA-226	1.015E+00	1.726E-01	5.979E-02	8.806E-02
AC-228	1.862E+00	3.993E-01	1.118E-01	2.037E-01
RA-228	1.862E+00	3.993E-01	1.118E-01	2.037E-01
TH-228	1.518E+00	1.518E-01	4.309E-02	7.746E-02
TH-230	1.015E+00	1.726E-01	5.979E-02	8.806E-02
TH-232	1.862E+00	3.993E-01	1.118E-01	2.037E-01
TH-234	2.907E+00	2.695E+00	9.811E-01	1.375E+00
U-234	1.015E+00	1.726E-01	5.979E-02	8.806E-02
NP-237	7.627E-01	3.204E-01	1.922E-01	1.635E-01
U-238	2.907E+00	2.695E+00	9.811E-01	1.375E+00
AM-243	3.028E-01	7.209E-02	4.303E-02	3.678E-02
ANH-511	1.736E-01	6.825E-02	2.335E-02	3.482E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	2.648E-01	3.436E-01	3.034E-01	1.753E-01	NOT IDENT.
NA-22	9.034E-04	5.126E-02	4.232E-02	2.615E-02	NOT IDENT.
NA-24	-1.126E+05	2.029E+05	0.000E+00	1.035E+05	SHORT HLIF
AL-26	1.214E-02	3.335E-02	3.018E-02	1.702E-02	NOT IDENT.
TI-44	3.603E-01	5.691E-02	3.572E-02	2.904E-02	FAIL ABUN
SC-46	-2.715E-02	4.439E-02	3.605E-02	2.265E-02	FAIL ABUN
V-48	8.357E-03	7.304E-02	6.281E-02	3.726E-02	NOT IDENT.
CR-51	-2.048E-01	3.468E-01	2.916E-01	1.769E-01	NOT IDENT.
MN-52	-1.762E-01	2.543E-01	1.951E-01	1.298E-01	FAIL ABUN
MN-54	2.776E-02	4.201E-02	3.682E-02	2.143E-02	NOT IDENT.
CO-56	1.068E-02	4.671E-02	3.943E-02	2.383E-02	NOT IDENT.
CO-57	5.445E-03	2.052E-02	1.860E-02	1.047E-02	NOT IDENT.
CO-58	-7.885E-03	4.223E-02	3.449E-02	2.158E-02	NOT IDENT.
FE-59	-1.958E-02	1.086E-01	8.958E-02	5.540E-02	NOT IDENT.
CO-60	1.144E-02	4.238E-02	3.725E-02	2.162E-02	NOT IDENT.
ZN-65	-3.043E-02	1.125E-01	7.757E-02	5.742E-02	NOT IDENT.
GE-68	1.495E+00	1.609E+00	1.456E+00	8.209E-01	NOT IDENT.
AS-73	8.239E-01	8.767E-01	8.014E-01	4.473E-01	NOT IDENT.
AS-74	-9.690E-03	9.149E-02	7.817E-02	4.668E-02	NOT IDENT.
SE-75	-2.369E-02	4.290E-02	3.421E-02	2.189E-02	NOT IDENT.
BR-77	1.809E+00	8.200E+00	6.904E+00	4.183E+00	FAIL ABUN
SR-82	-4.251E-01	4.172E-01	3.140E-01	2.128E-01	NOT IDENT.
RB-83	1.936E-02	7.524E-02	6.354E-02	3.839E-02	NOT IDENT.
RB-84	-4.451E-02	7.784E-02	6.355E-02	3.971E-02	NOT IDENT.
KR-85	1.920E+01	7.759E+00	7.040E+00	3.959E+00	NOT IDENT.
SR-85	9.728E-02	3.930E-02	3.566E-02	2.005E-02	NOT IDENT.
RB-86	3.888E-01	1.010E+00	8.766E-01	5.153E-01	NOT IDENT.
Y-88	1.223E-02	3.222E-02	2.946E-02	1.644E-02	NOT IDENT.
ZR-88	7.841E-03	3.145E-02	2.731E-02	1.605E-02	NOT IDENT.
Y-91	-8.749E+00	2.135E+01	1.700E+01	1.089E+01	NOT IDENT.
NB-94	-6.756E-04	3.928E-02	3.317E-02	2.004E-02	NOT IDENT.
NB-95	9.918E-04	4.676E-02	3.921E-02	2.386E-02	NOT IDENT.
NB-95M	-3.150E-02	1.253E-01	9.175E-02	6.393E-02	NOT IDENT.
ZR-95	6.859E-02	7.641E-02	6.896E-02	3.898E-02	NOT IDENT.
NB-97	-1.034E+03	3.945E+04	0.000E+00	2.013E+04	SHORT HLIF
ZR-97	6.140E+05	6.788E+05	0.000E+00	3.463E+05	SHORT HLIF
MO-99	4.130E+00	9.037E+00	7.903E+00	4.611E+00	NOT IDENT.
TC-99M	-2.334E+14	1.372E+15	0.000E+00	7.001E+14	SHORT HLIF
RH-101	6.691E-03	2.985E-02	2.571E-02	1.523E-02	NOT IDENT.
RH-102	-3.206E-02	3.130E-02	2.392E-02	1.597E-02	NOT IDENT.
RU-103	-3.079E-02	4.468E-02	3.494E-02	2.280E-02	FAIL ABUN
RH-106	-6.154E-02	3.384E-01	2.858E-01	1.726E-01	FAIL ABUN
RU-106	-6.154E-02	3.383E-01	2.858E-01	1.726E-01	FAIL ABUN
AG-108M	-5.063E-03	3.327E-02	2.777E-02	1.697E-02	NOT IDENT.
AG-110M	-6.002E-03	4.325E-02	3.142E-02	2.207E-02	NOT IDENT.
IN-111	2.285E-01	8.231E-01	6.258E-01	4.199E-01	NOT IDENT.
IN-113M	6.025E-02	4.679E-02	4.311E-02	2.387E-02	NOT IDENT.
SN-113	6.025E-02	4.679E-02	4.311E-02	2.387E-02	NOT IDENT.
IN-114M	3.348E-02	1.717E-01	1.335E-01	8.762E-02	NOT IDENT.
CD-115	-5.812E+00	8.445E+00	6.553E+00	4.309E+00	NOT IDENT.
SN-117M	-5.923E-03	4.329E-02	3.755E-02	2.208E-02	NOT IDENT.
SB-122	8.780E-02	1.683E+00	1.451E+00	8.585E-01	NOT IDENT.
I-123	-6.468E+04	1.123E+06	0.000E+00	5.730E+05	SHORT HLIF
TE-123M	-1.357E-03	2.356E-02	2.052E-02	1.202E-02	NOT IDENT.
I-124	8.436E-02	6.842E-01	5.181E-01	3.491E-01	NOT IDENT.
SB-124	-1.016E-02	9.065E-02	7.349E-02	4.625E-02	NOT IDENT.
SB-125	1.951E-02	1.010E-01	8.660E-02	5.155E-02	FAIL ABUN
TE-125M	7.222E+00	7.402E+00	6.953E+00	3.777E+00	NOT IDENT.
I-126	-3.731E-02	1.997E-01	1.438E-01	1.019E-01	NOT IDENT.
SB-126	8.811E-02	1.477E-01	1.246E-01	7.538E-02	FAIL ABUN
SB-127	-5.606E-01	1.138E+00	9.205E-01	5.806E-01	NOT IDENT.
XE-127	3.575E-03	4.074E-02	3.489E-02	2.079E-02	NOT IDENT.
I-131	-1.968E-02	1.048E-01	8.912E-02	5.348E-02	NOT IDENT.
TE-132	-8.727E-03	5.215E-01	4.386E-01	2.661E-01	NOT IDENT.
BA-133	-7.778E-03	4.895E-02	3.595E-02	2.498E-02	NOT IDENT.
I-133	-1.678E+02	2.409E+03	0.000E+00	1.229E+03	SHORT HLIF
CS-134	9.445E-02	6.024E-02	5.568E-02	3.073E-02	NOT IDENT.
CS-135	8.410E-02	1.785E-01	1.360E-01	9.108E-02	NOT IDENT.
I-135	8.350E+13	3.813E+14	0.000E+00	1.945E+14	SHORT HLIF
CS-136	-1.193E-01	1.107E-01	8.222E-02	5.650E-02	FAIL ABUN
CE-139	5.117E-03	2.684E-02	2.356E-02	1.369E-02	NOT IDENT.
BA-140	1.046E-01	2.434E-01	2.169E-01	1.242E-01	NOT IDENT.
LA-140	-1.617E-01	9.416E-02	5.381E-02	4.804E-02	NOT IDENT.
CE-141	-1.225E-02	5.313E-02	4.599E-02	2.711E-02	NOT IDENT.
CE-143	1.037E+02	8.687E+01	0.000E+00	4.432E+01	SHORT HLIF
CE-144	-6.159E-02	1.738E-01	1.508E-01	8.865E-02	NOT IDENT.
PM-144	-2.108E-02	3.699E-02	2.977E-02	1.887E-02	NOT IDENT.
PR-144	-1.428E+00	2.505E+00	2.016E+00	1.278E+00	NOT IDENT.

PM-146	4.982E-02	4.538E-02	4.108E-02	2.315E-02	NOT IDENT.
ND-147	-8.831E-02	4.979E-01	4.282E-01	2.541E-01	FAIL ABUN
PM-149	9.744E+00	5.844E+01	5.208E+01	2.982E+01	NOT IDENT.
EU-152	6.988E-02	9.661E-02	7.861E-02	4.929E-02	NOT IDENT.
GD-153	-1.096E-02	7.987E-02	5.998E-02	4.075E-02	NOT IDENT.
EU-154	6.639E-03	1.437E-01	1.190E-01	7.331E-02	NOT IDENT.
EU-155	5.239E-02	8.918E-02	8.282E-02	4.550E-02	FAIL ABUN
TB-160	8.750E-02	1.544E-01	1.394E-01	7.879E-02	FAIL ABUN
HO-166M	-3.699E-02	6.666E-02	5.352E-02	3.401E-02	NOT IDENT.
TM-171	-9.367E+00	2.785E+01	2.165E+01	1.421E+01	NOT IDENT.
LU-176	6.638E-03	2.423E-02	2.157E-02	1.236E-02	FAIL ABUN
LU-177	2.132E-00	1.140E+00	8.279E-01	5.817E-01	FAIL ABUN
LU-177M	-2.969E-01	1.849E-01	1.380E-01	9.436E-02	NOT IDENT.
HF-181	-4.457E-02	4.834E-02	3.743E-02	2.466E-02	NOT IDENT.
W-181	4.486E-03	3.675E-01	2.903E-01	1.875E-01	NOT IDENT.
TA-182	-6.408E-02	2.631E-01	2.136E-01	1.342E-01	FAIL ABUN
RE-183	6.378E-02	9.394E-02	8.455E-02	4.793E-02	FAIL ABUN
RE-184	1.796E-01	2.156E-01	1.890E-01	1.100E-01	NOT IDENT.
OS-185	3.938E-02	4.431E-02	4.053E-02	2.261E-02	NOT IDENT.
RE-188	1.709E-01	1.476E-01	1.359E-01	7.530E-02	NOT IDENT.
W-188	-1.207E+00	7.505E+00	5.766E+00	3.829E+00	FAIL ABUN
IR-192	1.936E-02	3.116E-02	2.826E-02	1.590E-02	FAIL ABUN
AU-195	2.635E-01	2.123E-01	1.832E-01	1.083E-01	FAIL ABUN
TL-200	1.225E+02	2.173E+02	0.000E+00	1.109E+02	SHORT HLIF
TL-201	-3.088E+00	4.818E+00	4.051E+00	2.458E+00	NOT IDENT.
TL-202	5.153E-02	6.830E-02	6.069E-02	3.485E-02	NOT IDENT.
HG-203	-1.298E-02	3.921E-02	3.412E-02	2.001E-02	NOT IDENT.
BI-207	-1.284E-02	5.845E-02	4.815E-02	2.982E-02	FAIL ABUN
TL-207	-6.524E-01	6.764E-01	5.493E-01	3.451E-01	FAIL ABUN
PO-209	3.433E-02	8.208E+00	7.058E+00	4.188E+00	NOT IDENT.
BI-210	8.323E-01	4.614E+00	4.008E+00	2.354E+00	NOT IDENT.
PB-210	8.323E-01	4.614E+00	4.008E+00	2.354E+00	NOT IDENT.
PO-210	8.323E-01	4.614E+00	4.008E+00	2.354E+00	NOT IDENT.
PB-211	6.677E-01	1.058E+00	8.681E-01	5.397E-01	NOT IDENT.
BI-212	8.136E-01	6.160E-01	3.599E-01	3.143E-01	FAIL ABUN
PO-215	-6.524E-01	6.764E-01	5.493E-01	3.451E-01	FAIL ABUN
RN-219	-3.673E-02	4.479E-01	3.795E-01	2.285E-01	FAIL ABUN
RN-220	1.006E+01	2.719E+01	2.426E+01	1.387E+01	NOT IDENT.
RA-223	-6.524E-01	6.764E-01	5.493E-01	3.451E-01	FAIL ABUN
AC-227	-2.956E-01	3.657E-01	2.856E-01	1.866E-01	FAIL ABUN
TH-227	-2.956E-01	3.667E-01	2.856E-01	1.871E-01	FAIL ABUN
TH-229	1.634E-01	4.583E-01	3.998E-01	2.338E-01	FAIL ABUN
PA-231	1.459E+00	1.423E+00	1.316E+00	7.262E-01	NOT IDENT.
TH-231	-6.524E-01	6.764E-01	5.493E-01	3.451E-01	FAIL ABUN
U-231	2.595E-01	8.525E-01	6.608E-01	4.349E-01	FAIL ABUN
PA-233	2.807E-02	5.969E-02	5.369E-02	3.045E-02	FAIL ABUN
PA-234	-2.900E-02	3.315E-01	2.808E-01	1.691E-01	FAIL ABUN
PA-234M	9.434E+00	7.847E+00	7.274E+00	4.004E+00	NOT IDENT.
U-235	-2.849E-02	1.864E-01	1.622E-01	9.511E-02	FAIL ABUN
NP-236	-5.631E-02	6.897E-02	5.767E-02	3.519E-02	NOT IDENT.
NP-239	-9.651E-02	1.548E-01	1.349E-01	7.898E-02	FAIL ABUN
AM-241	3.761E-02	1.603E-01	1.299E-01	8.178E-02	NOT IDENT.
CM-243	5.386E-02	8.042E-02	7.502E-02	4.103E-02	FAIL ABUN
CM-247	-2.384E-03	4.042E-02	3.429E-02	2.062E-02	NOT IDENT.
CF-249	-3.932E-02	4.278E-02	3.431E-02	2.183E-02	NOT IDENT.
CF-251	-7.794E-03	1.099E-01	9.464E-02	5.607E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	148.2101
46.50	148.2101
46.50	148.2101
48.70	161.0755
49.72	151.9251
51.35	191.8435
52.39	146.9751
52.97	138.2089
53.15	134.2397
53.44	135.4684
54.07	144.1464
56.28	134.3117
56.28	134.3137
57.37	0.0000
57.53	158.1933
57.53	158.1951
57.60	158.2475
57.98	175.3403
57.98	175.3403
59.32	166.2616
59.32	166.2616
59.40	166.3252
59.54	166.4362
59.72	153.8739
60.01	159.7402
61.10	179.0326
61.14	179.0659
61.30	186.3109
63.00	174.1582
63.29	174.3887
63.29	174.3887
63.58	174.6176
64.28	175.1695
65.12	199.7058
65.20	199.7760
65.20	199.7760
66.05	217.9642
66.72	196.7418
66.83	196.8379
66.91	196.9066
67.20	213.2182
67.20	213.2182
67.75	199.0859
67.85	199.1731
68.90	231.6966
68.90	231.6966
69.30	235.4047
69.67	240.2029
70.82	237.2803
70.82	237.2803
70.83	237.2900
72.80	255.6668
72.87	255.7381
72.87	255.7381
74.67	247.4293
74.81	247.5663
74.81	247.5663
74.81	247.5663
74.81	247.5663
74.81	247.5663
74.81	247.5663
74.97	247.7250
75.28	248.0291
75.70	248.4418
77.11	249.8153
77.11	249.8153
77.11	249.8153

77.11	249.8153
77.11	249.8153
77.11	249.8153
78.38	256.7732
79.62	259.5256
79.80	259.7010
79.80	259.7010
80.11	241.5434
80.18	241.6073
80.30	241.7159
80.30	241.7159
80.57	201.8917
81.00	226.9151
81.07	250.1340
81.07	250.1340
81.07	250.1340
81.07	250.1340
82.60	285.3299
83.37	259.2704
83.78	246.4041
83.78	246.4041
83.78	246.4041
83.78	246.4041
84.21	228.0448
84.40	212.5719
84.90	236.4429
85.43	272.9760
86.29	298.9914
86.50	296.0641
86.54	296.1061
86.59	296.1578
86.72	296.2955
86.79	296.3662
86.94	253.9389
87.30	254.2616
87.30	254.2616
87.30	254.2616
87.30	254.2616
87.30	254.2616
87.30	254.2616
87.57	253.7119
87.88	253.9879
88.03	254.1201
88.36	254.4124
88.47	254.5103
89.95	210.3898
91.11	211.2236
92.29	212.0682
92.38	212.1313
92.38	212.1313
93.35	212.8215
94.00	213.2808
94.67	213.7494
94.67	213.7534
94.90	213.9146
94.90	213.9146
94.90	213.9146
94.90	213.9146
95.87	196.7112
95.87	196.7112
96.73	224.9786
97.43	215.6803
98.44	174.5781
98.44	174.5792
98.88	174.8241
99.55	197.4036
99.55	197.4036
99.86	197.5964
100.00	221.1580
100.10	221.2304
103.18	187.1681
103.76	182.5011
105.00	184.0271
105.31	184.1994
108.00	188.2175
109.28	166.9001
111.00	214.5681
111.00	214.5681

111.76	204.7986
112.95	180.6670
115.12	199.0479
116.31	192.7511
117.00	192.2593
117.00	192.2593
117.66	181.3315
121.11	183.9188
121.62	166.6308
121.78	166.7023
122.06	170.3391
122.32	170.4565
122.32	170.4565
122.32	170.4565
122.32	170.4565
123.07	186.6451
127.23	236.7520
129.76	206.9375
131.20	231.0684
133.02	195.9962
133.54	193.5370
135.34	172.5972
136.00	181.0644
136.25	185.7279
136.48	190.3864
140.51	184.8839
140.51	0.0000
142.18	197.6208
142.65	181.1979
143.76	204.8427
144.24	201.3603
144.24	201.3603
144.24	201.3603
144.24	201.3603
145.22	196.2370
145.44	193.5464
147.16	184.0362
152.43	207.0346
152.70	210.9431
153.22	198.8745
154.21	172.7337
154.21	172.7337
154.21	172.7337
154.21	172.7337
155.03	173.9974
156.02	206.7707
158.56	177.2522
159.00	0.0000
159.00	174.5407
160.31	201.9571
161.27	196.5874
162.32	172.8800
162.64	183.6276
163.35	194.5490
163.89	194.7678
165.85	196.5362
167.43	204.9863
171.28	188.8906
171.86	204.8685
172.10	204.9679
176.55	174.9723
176.60	174.9902
181.06	185.3376
184.41	171.0829
185.71	168.9723
186.00	169.0658
190.27	163.7801
192.34	163.8916
193.63	172.4895
197.04	192.1474
198.01	161.4352
198.60	162.6393
200.40	194.3370
201.83	168.7797
202.84	169.0779
205.31	182.3828
208.36	158.0505
208.81	158.1726

209.75	172.6826
209.75	172.6826
210.97	179.3903
215.65	180.2656
216.55	171.9879
218.09	149.9335
222.10	158.4619
223.80	174.0269
226.40	175.8362
227.00	157.5347
227.08	157.5553
227.20	157.5848
228.16	170.8851
228.18	170.8899
228.18	170.8899
231.56	0.0000
235.69	175.0999
236.00	175.1840
236.00	175.1840
238.60	153.7563
238.63	153.7634
238.63	153.7634
238.63	153.7634
239.00	153.8496
240.98	154.3106
241.98	154.5425
241.98	154.5425
241.98	154.5425
244.69	159.0760
245.39	134.0979
247.94	119.4593
248.90	142.6554
249.79	154.0874
252.40	115.1578
252.85	117.4920
252.85	117.4920
254.15	0.0000
256.20	148.7083
256.20	148.7083
260.50	134.7690
260.90	142.8452
262.80	127.1852
264.65	145.8929
268.24	147.1936
268.79	152.5042
269.46	166.5205
269.46	166.5205
269.46	166.5205
269.46	166.5205
271.23	107.8037
273.65	162.2363
276.40	123.4395
277.35	128.8560
277.60	126.2681
277.60	126.2681
278.00	135.1095
278.60	152.7784
279.20	162.5638
279.53	159.9970
280.46	159.3140
281.68	165.7421
283.67	111.3728
284.30	120.3115
285.00	127.5051
285.90	122.3356
286.10	122.3672
286.10	122.3672
287.40	143.8882
288.45	0.0000
290.67	129.8683
290.80	129.8883
291.72	128.6125
293.26	0.0000
293.70	131.8030
295.21	122.0070
295.21	122.0070
295.21	122.0070
295.96	122.1211

296.50	97.0444
297.23	97.1334
298.57	97.2966
299.80	90.2283
299.80	90.2283
300.09	121.3099
300.09	121.3099
300.09	121.3099
300.10	121.3119
300.12	121.3140
301.29	137.3998
302.84	155.0533
303.76	132.0167
303.91	126.2371
304.40	124.8617
304.40	124.8617
304.84	110.4022
306.84	124.6893
308.46	149.5584
311.98	106.2366
316.51	97.6039
318.01	113.4601
319.02	120.0600
319.41	121.9634
320.08	126.6815
323.87	150.4660
323.87	150.4660
323.87	150.4660
323.87	150.4660
325.23	163.7271
328.77	123.2968
333.44	108.1793
334.20	114.2876
334.20	114.2876
334.30	114.3006
338.28	122.7458
338.28	122.7458
338.28	122.7458
338.28	122.7458
338.32	122.7518
338.32	122.7518
338.32	122.7518
340.50	123.0513
340.57	123.0592
344.27	82.1232
345.85	93.9468
350.59	0.0000
351.07	94.8020
351.92	94.8896
351.92	94.8896
351.92	94.8896
355.39	0.0000
356.01	107.8232
364.48	107.8243
366.43	100.2575
367.43	97.4380
367.94	0.0000
369.80	89.8648
374.96	90.3421
383.85	114.9398
387.95	129.3394
388.63	119.4708
391.69	91.8723
391.69	91.8723
392.90	101.9798
398.62	91.4902
400.65	113.8311
401.10	113.8811
401.81	116.9841
402.60	118.0819
404.84	98.1086
410.95	93.5919
411.60	87.5419
413.65	127.4872
414.70	103.1098
415.30	98.0610
415.76	75.6215
417.63	0.0000

418.52	84.0120
423.70	83.3854
427.08	105.3276
427.89	102.3052
432.53	90.3975
433.93	89.3581
439.47	82.4922
439.56	82.4994
439.89	82.5235
443.98	98.5482
444.90	97.5779
445.03	95.4906
445.03	95.4906
445.03	95.4906
445.03	95.4906
453.90	72.9661
463.38	93.8169
468.07	94.1888
473.00	97.8011
475.06	100.1223
475.35	92.6085
476.78	86.2488
477.59	78.7555
477.96	79.8580
482.03	111.5262
484.57	103.0771
487.03	73.9299
490.36	0.0000
492.35	78.6149
497.08	97.5447
507.63	0.0000
510.53	0.0000
510.84	69.7993
511.00	69.8080
511.85	69.8541
511.85	69.8541
513.99	47.9794
513.99	47.9794
520.41	78.1284
520.65	78.1433
527.90	89.7998
528.96	0.0000
529.64	76.4294
529.87	0.0000
531.02	68.4074
537.32	66.0172
543.00	73.5605
546.56	0.0000
549.76	72.0991
552.65	89.6260
555.20	61.3878
563.23	73.7227
563.90	79.2896
568.70	82.3337
569.32	77.7431
569.50	77.7533
569.67	77.7615
573.80	72.4166
574.00	74.2852
574.64	70.6024
578.91	71.4333
579.30	0.0000
583.14	60.7407
585.48	60.8375
591.81	68.4886
592.07	65.8147
593.00	71.5005
595.88	75.4102
600.56	86.0501
602.52	0.0000
602.71	83.6492
602.71	83.6492
603.60	85.2781
604.41	91.6445
604.70	91.6634
609.31	73.2383
609.31	73.2383
609.31	73.2383

609.31	73.2383
610.33	82.4878
612.46	71.4844
614.37	74.7552
618.01	72.7028
621.84	72.8847
621.84	72.8847
631.29	75.2597
633.02	73.4116
633.10	70.5174
634.78	59.9565
635.90	66.7730
636.97	71.6604
645.85	47.7182
646.12	54.5439
656.30	57.1791
657.75	71.9476
657.90	0.0000
661.65	56.0565
661.65	56.0565
664.57	0.0000
666.33	65.7520
666.33	65.7520
675.00	68.4121
677.61	87.3877
685.20	64.8429
692.80	60.1245
695.00	72.2426
696.49	76.3229
696.49	76.3229
697.00	76.3470
697.49	76.3692
698.33	76.4063
698.50	72.3920
699.00	77.4418
702.63	82.6446
706.10	82.8128
706.58	0.0000
706.67	84.8593
709.31	52.6132
711.68	73.9606
713.82	67.9651
717.42	54.8912
720.50	53.4600
721.93	0.0000
722.20	52.6632
722.78	61.1763
722.78	61.1763
722.89	61.1807
722.95	61.1821
723.30	61.1953
724.18	71.4304
727.18	54.5156
733.00	64.9491
735.90	54.7826
739.58	50.4344
742.81	58.7743
744.21	59.8521
747.13	58.9148
751.79	61.1376
752.31	69.4471
753.82	57.0558
755.35	49.8363
756.15	50.8961
756.87	54.0338
763.93	71.9733
765.79	72.0457
766.41	61.6245
766.84	62.6836
768.36	71.0995
768.36	71.0995
768.36	71.0995
768.36	71.0995
776.49	74.5604
778.00	74.6193
778.57	68.3341
778.89	71.5013
783.80	71.6872

785.46	70.6935
792.07	94.2322
795.84	65.7751
796.30	68.9736
801.93	70.2394
805.60	62.9079
810.29	57.7165
810.76	55.5915
815.85	56.8081
817.79	41.8431
818.51	38.6385
819.60	39.7334
826.30	42.0231
828.27	0.0000
831.60	64.8237
831.96	62.6729
834.83	55.1886
836.80	0.0000
846.75	59.8689
848.13	55.5521
856.28	0.0000
856.80	88.6036
860.37	47.1184
867.32	46.1774
867.82	40.6892
871.10	65.1686
873.19	60.6396
874.81	48.7332
875.33	0.0000
876.40	42.3295
879.36	48.8389
880.27	62.6889
880.51	62.6958
881.50	62.7249
883.24	56.3150
884.67	58.1999
889.25	62.9545
896.60	52.9528
898.02	63.2132
899.00	63.2423
903.28	43.1330
911.07	44.8916
911.07	44.8916
911.07	44.8916
919.63	43.4578
920.93	38.8307
925.00	55.4454
925.24	55.4514
926.50	46.6208
934.06	45.3623
934.06	45.3623
934.06	45.3623
934.06	45.3623
935.52	45.3916
937.48	35.6963
944.10	52.4014
946.00	51.3051
949.00	42.8110
962.29	58.8512
964.01	64.0265
966.15	41.0810
968.20	82.2353
969.11	88.8480
969.11	88.8480
969.11	88.8480
977.42	44.7905
980.50	53.0485
983.50	45.3907
989.30	44.5344
996.32	71.8561
1001.03	46.7021
1001.68	39.9023
1004.76	70.1631
1021.30	0.0000
1024.50	0.0000
1034.80	52.2948
1037.82	39.5166
1038.57	43.4808

1038.76	0.0000
1045.16	46.5697
1046.59	50.5621
1048.07	55.5534
1050.47	51.6361
1050.47	51.6361
1063.62	49.9105
1076.63	63.2128
1077.35	53.1941
1085.78	43.3009
1099.22	58.7104
1112.02	51.0476
1112.84	51.5573
1115.52	52.3870
1120.29	53.0643
1120.29	53.0643
1120.29	53.0643
1120.29	53.0643
1120.51	53.0685
1121.28	50.7500
1124.00	0.0000
1129.67	61.4453
1131.51	0.0000
1147.95	0.0000
1167.94	56.0918
1173.22	54.1180
1175.09	61.4439
1177.93	65.6788
1189.05	76.4100
1204.90	61.0539
1205.75	0.0000
1213.00	54.8945
1221.42	83.6450
1230.97	92.4233
1235.34	78.7304
1236.41	0.0000
1238.11	55.3791
1238.11	55.3791
1238.11	55.3791
1238.11	55.3791
1238.25	55.3812
1246.25	69.4169
1260.41	0.0000
1271.85	46.3244
1274.45	44.2081
1274.54	44.2098
1291.56	56.7014
1298.22	0.0000
1312.09	31.8193
1325.50	36.6577
1325.50	36.6577
1332.49	28.2631
1333.61	23.5604
1360.21	31.3657
1362.66	0.0000
1365.15	19.0395
1368.21	23.8220
1368.53	0.0000
1376.25	21.0163
1377.67	24.8493
1377.67	24.8493
1377.67	24.8493
1377.67	24.8493
1384.27	35.4347
1394.10	23.0550
1395.20	26.9072
1407.95	27.0127
1434.06	35.0081
1436.60	24.3295
1457.56	0.0000
1460.81	16.6644
1489.15	23.7229
1509.49	18.8913
1596.49	32.6027
1620.62	16.4085
1678.03	0.0000
1691.02	16.7160
1691.02	16.7160

1706.46	0.0000
1750.46	0.0000
1764.49	6.3863
1764.49	6.3863
1764.49	6.3863
1764.49	6.3863
1770.23	7.4614
1771.40	5.5977
1791.20	0.0000
1808.65	10.3565
1836.01	7.5818

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G2323b8005

Total Uranium Activity	8.6355E-00	ug/g
Total Uranium Counting Unc.	8.0179E+00	ug/g
Total Uranium Tpu	4.0907E-06	ug/g
Total Uranium Mda	2.9198E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GTL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232358005       *
*   ANALYST       : MXR1                      DETECTOR   : GAM23            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:17:12.81    SAMPLE ALQT:  124.550 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.156E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.342E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.259E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.080E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:13:46.43

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358006.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:13:17.
Sample ID         : G232358006           Sample quantity  : 1.37440E+02 GRAM
Detector name     : GAM09                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.86  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	4	74.95	447	536	1.23	148.86	143	18	6.20E-02	9.7	1.36E+00
2	4	77.22	701	417	1.00	153.40	143	18	9.74E-02	6.2	
3	4	87.29	267	533	1.27	173.54	170	20	3.71E-02	16.0	1.10E+00
4	4	90.21	124	387	1.02	179.37	170	20	1.73E-02	26.5	
5	4	92.86*	260	495	1.26	184.68	170	20	3.61E-02	17.2	
6	0	128.99	101	371	1.38	256.90	253	8	1.41E-02	34.5	
7	0	186.25*	219	438	1.48	371.40	367	11	3.04E-02	20.5	
8	0	209.62	119	375	1.20	418.14	413	10	1.65E-02	31.9	
9	4	238.83*	1481	224	1.16	476.53	471	17	2.06E-01	3.1	1.85E+00
10	4	241.86	297	253	1.58	482.60	471	17	4.13E-02	12.7	
11	0	270.07	118	184	1.22	539.00	535	8	1.64E-02	21.9	
12	0	295.33	439	196	1.09	589.51	585	9	6.10E-02	7.5	
13	0	300.12	91	230	1.31	599.09	595	9	1.26E-02	32.0	
14	0	328.16	81	235	1.03	655.16	649	12	1.13E-02	39.2	
15	0	338.36	266	254	1.36	675.57	669	12	3.69E-02	13.5	
16	0	352.03*	701	210	1.38	702.92	699	12	9.74E-02	5.6	
17	0	463.32	114	132	1.39	925.48	921	12	1.59E-02	22.0	
18	0	510.86*	125	175	2.17	1020.55	1014	15	1.73E-02	27.4	
19	0	583.28*	440	124	1.23	1165.40	1159	13	6.11E-02	7.1	
20	0	609.50*	537	139	1.48	1217.86	1210	16	7.46E-02	6.7	
21	0	727.64	104	104	1.85	1454.19	1447	15	1.44E-02	23.7	
22	0	768.50	70	48	1.57	1535.93	1532	8	9.72E-03	20.9	
23	0	795.85	50	82	1.44	1590.64	1585	14	6.93E-03	42.0	
24	0	860.83*	66	52	1.40	1720.65	1716	13	9.15E-03	26.2	
25	0	911.34*	317	67	1.47	1821.69	1816	13	4.41E-02	7.8	
26	0	968.99*	141	164	1.44	1937.04	1928	16	1.96E-02	22.3	
27	0	1002.31	21	70	0.59	2003.72	1997	12	2.86E-03	85.0	
28	0	1120.45*	138	62	1.53	2240.12	2233	13	1.92E-02	14.6	
29	0	1378.07	22	32	1.55	2755.71	2751	10	3.03E-03	53.2	
30	0	1460.80*	1701	28	2.13	2921.31	2911	22	2.36E-01	2.6	
31	0	1631.39	31	7	1.36	3262.81	3255	13	4.32E-03	24.7	
32	0	1730.20	19	15	0.81	3460.64	3453	12	2.68E-03	46.1	
33	0	1764.51*	95	16	1.48	3529.35	3521	16	1.32E-02	14.4	
34	0	1848.79	7	14	0.72	3698.10	3689	11	1.02E-03	104.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 14:13:49

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358006.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:13:17
Sample ID : G232358006 Sample quantity : 137.44 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA9 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.86 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.809E+01	3.460E+00	4.128E-01	3.097E-02	92.279
CD-109	+	88.03	*	3.637E+00	1.201E+00	1.194E+00	9.863E-02	3.046
SN-126		64.28		1.754E-01	5.563E-01	8.814E-01	1.271E-01	0.199
	+	86.94		1.489E+00	7.772E-01	4.954E-01	2.045E-01	3.004
	+	87.57	*	3.580E-01	1.182E-01	1.182E-01	9.731E-03	3.029
TL-208		277.35		3.857E-01	3.529E-01	5.946E-01	6.266E-02	0.649
	+	510.84		5.571E-01	3.106E-01	2.074E-01	2.137E-02	2.686
	+	583.14	*	5.610E-01	8.937E-02	5.406E-02	3.825E-03	10.378
	+	860.37		7.922E-01	4.223E-01	4.660E-01	4.398E-02	1.700
BI-211		72.87		2.674E+00	3.199E+00	5.111E+00	3.777E-01	0.523
	+	351.07	*	3.927E+00	5.073E-01	3.036E-01	1.929E-02	12.934
PB-212	+	74.81		2.633E+00	6.002E-01	5.426E-01	6.491E-02	4.852
	+	77.11		2.322E+00	3.364E-01	3.051E-01	2.309E-02	7.609
	+	87.30		1.656E+00	5.712E-01	5.486E-01	7.099E-02	3.018
	+	238.63	*	1.816E+00	1.732E-01	8.200E-02	5.907E-03	22.144
	+	300.09		1.708E+00	1.101E+00	1.218E+00	1.004E-01	1.402
PO-212	+	74.81		2.633E+00	6.002E-01	5.426E-01	6.491E-02	4.852
	+	77.11		2.322E+00	3.364E-01	3.051E-01	2.309E-02	7.609
	+	87.30		1.656E+00	5.712E-01	5.486E-01	7.099E-02	3.018
		115.19		-1.364E-01	3.331E+00	5.591E+00	3.462E-01	-0.024
	+	238.63	*	1.816E+00	1.732E-01	8.200E-02	5.907E-03	22.144
	+	300.09		1.708E+00	1.101E+00	1.218E+00	1.004E-01	1.402
BI-214	+	609.31	*	1.291E+00	2.016E-01	9.190E-02	7.492E-03	14.045
	+	768.36		1.882E+00	8.074E-01	1.182E+00	1.143E-01	1.592
		934.06		8.185E-01	1.156E+00	2.027E+00	2.215E-01	0.404
	+	1120.29		1.741E+00	5.348E-01	4.855E-01	4.482E-02	3.587
		1238.11		1.824E+00	1.022E+00	1.845E+00	1.562E-01	0.989
	+	1377.67		1.211E+00	1.295E+00	1.421E+00	1.381E-01	0.852
	+	1764.49		1.647E+00	4.837E-01	2.883E-01	1.754E-02	5.712
PB-214	+	74.81		4.536E+00	1.001E+00	9.350E-01	9.833E-02	4.852
	+	77.11		3.980E+00	6.516E-01	5.231E-01	5.618E-02	7.609
	+	87.30		2.837E+00	9.617E-01	9.399E-01	1.058E-01	3.018
	+	241.98		2.188E+00	5.817E-01	4.938E-01	3.932E-02	4.430
	+	295.21		1.454E+00	2.501E-01	1.987E-01	1.692E-02	7.320

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.366E+00	1.903E-01	1.070E-01	8.794E-03	12.766
PO-214	+	74.81		4.536E+00	1.001E+00	9.350E-01	9.833E-02	4.852
	+	77.11		3.980E+00	6.516E-01	5.231E-01	5.618E-02	7.609
	+	87.30		2.837E+00	9.617E-01	9.399E-01	1.058E-01	3.018
	+	241.98		2.188E+00	5.817E-01	4.938E-01	3.932E-02	4.430
	+	295.21		1.454E+00	2.501E-01	1.987E-01	1.692E-02	7.320
	+	351.92	*	1.366E+00	1.903E-01	1.070E-01	8.794E-03	12.766
PO-216	+	74.81		2.633E+00	6.002E-01	5.426E-01	6.491E-02	4.852
	+	77.11		2.322E+00	3.364E-01	3.051E-01	2.309E-02	7.609
	+	87.30		1.656E+00	5.712E-01	5.486E-01	7.099E-02	3.018
	+	238.63	*	1.816E+00	1.732E-01	8.200E-02	5.907E-03	22.144
	+	300.09		1.708E+00	1.101E+00	1.218E+00	1.004E-01	1.402
PO-218	+	74.81		4.536E+00	1.001E+00	9.350E-01	9.833E-02	4.852
	+	77.11		3.980E+00	6.516E-01	5.231E-01	5.618E-02	7.609
	+	87.30		2.837E+00	9.617E-01	9.399E-01	1.058E-01	3.018
	+	241.98		2.188E+00	5.817E-01	4.938E-01	3.932E-02	4.430
	+	295.21		1.454E+00	2.501E-01	1.987E-01	1.692E-02	7.320
	+	351.92	*	1.366E+00	1.903E-01	1.070E-01	8.794E-03	12.766
RA-224	+	240.98	*	4.148E+00	1.078E+00	9.332E-01	5.272E-02	4.445
RA-226	+	609.31	*	1.291E+00	2.016E-01	9.190E-02	7.492E-03	14.045
	+	768.36		1.882E+00	8.074E-01	1.182E+00	1.143E-01	1.592
		934.06		8.185E-01	1.156E+00	2.027E+00	2.215E-01	0.404
	+	1120.29		1.741E+00	5.348E-01	4.855E-01	4.482E-02	3.587
		1238.11		1.824E+00	1.022E+00	1.845E+00	1.562E-01	0.989
	+	1377.67		1.211E+00	1.295E+00	1.421E+00	1.381E-01	0.852
	+	1764.49		1.647E+00	4.837E-01	2.883E-01	1.754E-02	5.712
AC-228	+	338.32		1.638E+00	8.009E-01	3.550E-01	1.447E-01	4.615
	+	911.07	*	1.805E+00	3.534E-01	2.089E-01	2.444E-02	8.641
	+	969.11		1.413E+00	7.109E-01	3.724E-01	8.687E-02	3.794
RA-228	+	338.32		1.638E+00	8.009E-01	3.550E-01	1.447E-01	4.615
	+	911.07	*	1.805E+00	3.534E-01	2.089E-01	2.444E-02	8.641
	+	969.11		1.413E+00	7.109E-01	3.724E-01	8.687E-02	3.794
TH-228		84.40		1.814E-01	2.601E+00	3.988E+00	5.082E-01	0.045
	+	238.60	*	1.816E+00	1.732E-01	8.199E-02	5.907E-03	22.147
	+	300.10		1.708E+00	1.485E+00	1.218E+00	7.180E-01	1.402
TH-230	+	609.31	*	1.291E+00	2.016E-01	9.190E-02	7.492E-03	14.045
	+	768.36		1.882E+00	8.073E-01	1.182E+00	1.143E-01	1.592
		934.06		8.185E-01	1.156E+00	2.027E+00	2.215E-01	0.404
	+	1120.29		1.741E+00	5.348E-01	4.854E-01	4.482E-02	3.587
		1238.11		1.824E+00	1.022E+00	1.845E+00	1.562E-01	0.989
	+	1377.67		1.211E+00	1.295E+00	1.421E+00	1.381E-01	0.852
	+	1764.49		1.647E+00	4.837E-01	2.883E-01	1.754E-02	5.712
TH-232	+	338.32		1.638E+00	4.522E-01	3.550E-01	2.041E-02	4.615
	+	911.07	*	1.805E+00	3.534E-01	2.089E-01	2.444E-02	8.641
	+	969.11		1.413E+00	7.109E-01	3.724E-01	8.687E-02	3.794
U-234	+	609.31	*	1.291E+00	2.016E-01	9.190E-02	7.492E-03	14.045
	+	768.36		1.882E+00	8.073E-01	1.182E+00	1.143E-01	1.592
		934.06		8.185E-01	1.156E+00	2.027E+00	2.215E-01	0.404
	+	1120.29		1.741E+00	5.348E-01	4.854E-01	4.482E-02	3.587

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.824E+00	1.022E+00	1.845E+00	1.562E-01	0.989
	+	1377.67		1.211E+00	1.295E+00	1.421E+00	1.381E-01	0.852
	+	1764.49		1.647E+00	4.837E-01	2.883E-01	1.754E-02	5.712
NP-237	+	86.50	*	1.051E+00	4.093E-01	3.849E-01	8.539E-02	2.732
		95.87		-5.012E-01	9.238E-01	1.359E+00	3.291E-01	-0.369
AM-243	+	74.67	*	4.268E-01	8.875E-02	8.829E-02	6.586E-03	4.834
	+	86.72		3.943E+01	1.302E+01	1.316E+01	1.075E+00	2.996
		117.66		-1.252E-01	3.465E+00	5.811E+00	3.544E-01	-0.022
		142.18		-8.567E+00	1.655E+01	2.696E+01	1.495E+00	-0.318
ANH-511	+	511.00	*	1.203E-01	6.634E-02	4.482E-02	2.714E-03	2.685

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	6.745E-02	2.930E-01	4.931E-01	3.386E-02	0.137
NA-22		1274.54	*	1.215E-02	4.566E-02	7.594E-02	5.090E-03	0.160
NA-24		1368.53	*	-3.857E-02	4.566E-02	Half-Life too short		
AL-26		1129.67		6.300E-01	1.807E+00	3.046E+00	1.911E-01	0.207
		1808.65	*	-1.169E-02	2.340E-02	3.361E-02	1.967E-03	-0.348
TI-44		67.85		1.060E-02	4.916E-02	7.705E-02	5.587E-03	0.138
	+	78.38	*	4.284E-01	6.208E-02	7.608E-02	5.807E-03	5.631
SC-46		889.25	*	-1.343E-02	3.769E-02	6.114E-02	5.629E-03	-0.220
	+	1120.51		2.954E-01	8.858E-02	1.355E-01	8.713E-03	2.180
V-48		944.10		5.941E-01	7.790E-01	1.383E+00	1.227E-01	0.430
		983.50	*	-4.289E-03	6.665E-02	1.098E-01	9.254E-03	-0.039
		1312.09		-3.178E-03	7.423E-02	1.194E-01	8.555E-03	-0.027
CR-51		320.08	*	4.020E-02	3.385E-01	5.402E-01	3.481E-02	0.074
MN-52		744.21		-2.909E-02	1.986E-01	3.137E-01	2.297E-02	-0.093
		848.13		2.931E-01	5.361E+00	9.030E+00	7.813E-01	0.032
		935.52		1.047E-01	2.208E-01	3.814E-01	3.420E-02	0.274
		1246.25		2.016E+00	7.356E+00	1.221E+01	7.742E-01	0.165
		1333.61		-3.273E+00	4.294E+00	6.225E+00	4.623E-01	-0.526
		1434.06	*	5.978E-02	1.872E-01	3.271E-01	2.379E-02	0.183
MN-54		834.83	*	-2.364E-03	3.461E-02	5.777E-02	4.897E-03	-0.041
CO-56		846.75	*	1.124E-02	3.443E-02	5.937E-02	5.126E-03	0.189
		977.42		-2.023E+00	2.719E+00	4.167E+00	3.543E-01	-0.485
		1037.82		-2.616E-01	3.151E-01	4.784E-01	3.937E-02	-0.547
		1175.09		-1.013E+00	2.364E+00	3.714E+00	2.042E-01	-0.273
		1238.25		1.752E-01	1.015E-01	1.835E-01	1.208E-02	0.955
		1360.21		-2.513E-01	1.087E+00	1.703E+00	1.259E-01	-0.148
		1771.40		8.247E-02	2.078E-01	3.300E-01	1.996E-02	0.250
CO-57		122.06	*	-1.254E-02	2.282E-02	3.738E-02	2.231E-03	-0.335
		136.48		-2.500E-01	1.955E-01	3.023E-01	1.990E-02	-0.827
CO-58		810.76	*	-2.265E-02	3.597E-02	5.718E-02	4.680E-03	-0.396
FE-59		142.65		4.757E-01	2.573E+00	4.232E+00	2.344E-01	0.112
		192.34		5.836E-01	8.522E-01	1.433E+00	1.664E-01	0.407
		1099.22	*	2.454E-02	8.971E-02	1.509E-01	1.155E-02	0.163
		1291.56		-2.715E-02	1.274E-01	2.015E-01	1.675E-02	-0.135

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60		1173.22		-3.242E-02	4.955E-02	7.634E-02	4.181E-03	-0.425
		1332.49	*	-4.829E-02	4.017E-02	5.448E-02	4.046E-03	-0.886
ZN-65		1115.52	*	6.681E-02	9.465E-02	1.467E-01	9.575E-03	0.455
GE-68		1077.35	*	2.099E-02	1.243E+00	2.048E-00	1.461E-01	0.010
AS-73		53.44	*	-1.053E+00	1.005E+00	1.490E+00	1.100E-01	-0.707
AS-74		595.88	*	2.193E-02	8.646E-02	1.436E-01	9.004E-03	0.153
		634.78		-1.163E-01	3.546E-01	5.604E-01	3.544E-02	-0.207
SE-75		66.05		-1.776E+00	5.096E+00	7.797E+00	7.261E-01	-0.228
		96.73		-2.753E-01	7.459E-01	1.115E+00	1.430E-01	-0.247
		121.11		-4.417E-02	1.221E-01	2.017E-01	1.886E-02	-0.219
		136.00		-5.725E-02	3.698E-02	5.652E-02	3.243E-03	-1.013
		198.60		2.722E+00	1.643E+00	2.861E+00	1.952E-01	0.951
		264.65	*	4.788E-03	4.070E-02	6.474E-02	3.751E-03	0.074
		279.53		-7.883E-02	1.006E-01	1.530E-01	9.547E-03	-0.515
		303.91		8.506E-01	2.224E+00	3.235E+00	3.085E-01	0.263
		400.65		-6.186E-02	2.364E-01	3.901E-01	3.495E-02	-0.159
BR-77	+	87.88		5.698E+02	1.881E+02	2.378E+02	1.963E+01	2.396
		200.40		-6.250E+01	1.122E+02	1.785E+02	9.696E+00	-0.350
	+	239.00		2.111E+02	1.777E+01	2.757E+01	1.555E+00	7.657
		249.79		1.462E+01	4.428E+01	7.258E+01	4.126E+00	0.201
		281.68		1.331E+01	5.528E+01	8.968E+01	5.176E+00	0.148
		297.23		1.306E+02	5.927E+01	7.913E+01	4.580E+00	1.650
		303.76		5.579E+01	1.381E+02	2.014E+02	1.166E+01	0.277
		439.47		9.054E+01	9.640E+01	1.700E+02	9.804E+00	0.533
		484.57		3.457E+01	1.491E+02	2.509E+02	1.495E+01	0.138
		520.65	*	-4.753E+00	7.260E+00	1.137E+01	6.919E-01	-0.418
		574.64		1.422E+02	1.597E+02	2.763E+02	1.721E+01	0.515
		578.91		-5.910E+01	7.273E+01	9.530E+01	5.944E+00	-0.620
		585.48		7.836E+02	1.641E+02	3.060E+02	1.912E+01	2.561
		755.35		1.583E+02	1.186E+02	2.105E+02	1.571E+01	0.752
		817.79		-7.014E+00	9.224E+01	1.541E+02	1.272E+01	-0.046
SR-82		698.33		2.005E+01	3.009E+01	5.118E+01	3.466E+00	0.392
		776.49	*	-2.023E-01	3.675E-01	5.557E-01	4.293E-02	-0.364
		1395.20		-2.212E+00	9.347E+00	1.446E+01	1.062E+00	-0.153
RB-83		520.41	*	-4.073E-02	6.587E-02	1.035E-01	6.296E-03	-0.394
		529.64		-2.205E-02	9.269E-02	1.495E-01	9.142E-03	-0.147
		552.65		1.223E-01	1.841E-01	3.166E-01	1.956E-02	0.386
RB-84		881.50	*	2.425E-02	6.664E-02	1.147E-01	1.044E-02	0.211
KR-85		513.99	*	7.778E+00	8.038E+00	1.256E+01	7.619E-01	0.619
SR-85		513.99	*	3.942E-02	4.073E-02	6.367E-02	3.861E-03	0.619
RB-86		1076.63	*	2.148E-03	7.703E-01	1.267E+00	9.055E-02	0.002
Y-88		898.02		2.127E-02	3.708E-02	6.500E-02	6.087E-03	0.327
		1836.01	*	-3.063E-03	2.693E-02	4.307E-02	2.462E-03	-0.071
ZR-88		392.90	*	-9.774E-03	2.820E-02	4.636E-02	2.561E-03	-0.211
Y-91		1204.90	*	-1.155E+00	2.028E+01	3.289E+01	1.922E+00	-0.035
NB-94		702.63	*	-5.543E-04	3.459E-02	5.559E-02	3.793E-03	-0.010
		871.10		-2.057E-02	3.109E-02	4.870E-02	4.363E-03	-0.422
NB-95		765.79	*	2.087E-02	4.597E-02	6.745E-02	5.120E-03	0.309
NB-95M		235.69	*	5.485E-03	1.215E-01	1.755E-01	1.298E-02	0.031

---- Non-Identified Nuclides ----

Nuclide	Line Id	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95		724.18		4.338E-02	9.381E-02	1.389E-01	1.107E-02	0.312
		756.15	*	6.259E-02	7.051E-02	1.211E-01	1.025E-02	0.517
NB-97		657.90	*	-5.789E-03	7.051E-02	Half-Life too short		
		1024.50		8.396E-01	7.051E-02	Half-Life too short		
ZR-97		254.15		-1.378E-01	7.051E-02	Half-Life too short		
		355.39		-1.025E+00	7.051E-02	Half-Life too short		
		507.63	*	5.213E-01	7.051E-02	Half-Life too short		
		602.52		-2.081E+00	7.051E-02	Half-Life too short		
		1021.30		1.237E+00	7.051E-02	Half-Life too short		
		1147.95		5.866E-01	7.051E-02	Half-Life too short		
		1362.66		2.705E-01	7.051E-02	Half-Life too short		
		1750.46		-1.437E+00	7.051E-02	Half-Life too short		
MO-99		140.51		-6.876E-01	1.869E+01	3.051E+01	8.207E+00	-0.023
		181.06		8.434E+00	1.281E+01	2.055E+01	3.491E+00	0.410
		366.43		2.454E+01	5.990E+01	1.033E+02	5.842E+00	0.237
		739.58	*	-2.998E+00	8.236E+00	1.272E+01	1.839E+00	-0.236
		778.00		-6.449E+00	2.413E+01	3.747E+01	2.902E+00	-0.172
TC-99M		140.51	*	-6.189E+07	2.413E+01	Half-Life too short		
RH-101		127.23		3.463E-04	3.203E-02	4.814E-02	2.804E-03	0.007
		198.01	*	4.787E-02	3.008E-02	5.240E-02	2.839E-03	0.914
		325.23		-4.854E-02	2.327E-01	3.207E-01	1.852E-02	-0.151
RH-102		418.52		-1.323E-01	2.607E-01	4.215E-01	2.388E-02	-0.314
		475.06	*	-1.553E-02	2.639E-02	4.185E-02	2.479E-03	-0.371
		631.29		-2.536E-02	5.872E-02	9.096E-02	5.749E-03	-0.279
		697.49		3.868E-02	7.041E-02	1.187E-01	8.024E-03	0.326
		766.84		6.974E-02	1.372E-01	2.008E-01	1.527E-02	0.347
		1046.59		4.395E-02	1.086E-01	1.858E-01	1.411E-02	0.237
		1112.84		-1.345E-01	2.477E-01	3.441E-01	2.257E-02	-0.391
RU-103		497.08	*	9.613E-03	3.761E-02	6.323E-02	8.056E-03	0.152
	+	610.33		1.367E+01	2.805E+00	2.908E+00	4.540E-01	4.700
RH-106	+	511.85		5.998E-01	3.307E-01	4.137E-01	2.506E-02	1.450
		621.84	*	5.101E-02	3.086E-01	5.080E-01	6.095E-02	0.100
		1050.47		2.550E-01	2.200E+00	3.666E+00	2.764E-01	0.070
RU-106	+	511.85		5.998E-01	3.307E-01	4.137E-01	2.506E-02	1.450
		621.84	*	5.101E-02	3.086E-01	5.080E-01	3.205E-02	0.100
		1050.47		2.550E-01	2.200E+00	3.666E+00	2.764E-01	0.070
AG-108M		433.93	*	1.665E-02	2.955E-02	5.108E-02	3.189E-03	0.326
		614.37		-2.393E-02	3.833E-02	5.028E-02	3.396E-03	-0.476
		722.95		-1.481E-02	4.520E-02	6.071E-02	4.538E-03	-0.244
AG-110M		657.75	*	-4.593E-03	3.274E-02	5.233E-02	3.500E-03	-0.088
		677.61		1.923E-01	2.680E-01	4.605E-01	3.153E-02	0.418
		706.67		1.152E-02	2.154E-01	3.480E-01	2.494E-02	0.033
		763.93		1.071E-01	1.672E-01	2.519E-01	1.976E-02	0.425
		884.67		-3.676E-02	4.811E-02	7.474E-02	7.029E-03	-0.492
		937.48		-5.651E-02	1.115E-01	1.771E-01	1.638E-02	-0.319
		1384.27		7.654E-03	1.667E-01	2.444E-01	1.869E-02	0.031
IN-111		171.28		-4.406E-01	7.089E-01	1.135E+00	5.972E-02	-0.388
		245.39	*	-3.141E-01	8.184E-01	1.142E+00	6.470E-02	-0.275
IN-113M		391.69	*	2.215E-03	4.186E-02	7.052E-02	4.178E-03	0.031

---- Non-Identified Nuclides ----

Nuclide	Line Tded	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113		391.69	*	2.215E-03	4.186E-02	7.052E-02	4.178E-03	0.031
IN-114M		190.27	*	6.501E-02	1.796E-01	2.686E-01	1.443E-02	0.242
CD-115		260.90		-2.352E-01	8.742E-01	1.363E+02	7.801E+00	-0.173
		492.35		-3.669E-00	2.414E-01	3.948E-01	2.365E-00	-0.093
		527.90	*	-6.740E-01	6.753E+00	1.102E+01	6.732E-01	-0.061
SN-117M		156.02		-1.413E+00	2.017E+00	3.241E+00	1.736E-01	-0.436
		158.56	*	-1.909E-03	4.765E-02	7.868E-02	4.189E-03	-0.024
SB-122		563.90	*	5.709E-01	1.499E+00	2.522E+00	1.565E-01	0.226
		692.80		7.909E+00	2.939E+01	4.848E+01	3.252E+00	0.163
I-123		159.00	*	-3.648E-02	2.939E+01	Half-Life too short		
		528.96		-1.708E+01	2.939E+01	Half-Life too short		
TE-123M		159.00	*	-7.286E-04	2.568E-02	4.241E-02	2.291E-03	-0.017
I-124		602.71	*	-5.184E-01	6.042E-01	7.782E-01	4.888E-02	-0.666
		722.78		-1.704E+00	3.901E+00	5.160E+00	3.645E-01	-0.330
		1325.50		-1.515E+01	3.045E+01	4.628E+01	3.395E+00	-0.327
		1376.25		4.545E+01	3.086E+01	5.220E+01	3.849E+00	0.871
		1509.49		1.505E+01	1.356E+01	2.529E+01	1.793E+00	0.595
		1691.02		-1.187E+00	2.732E+00	4.053E+00	2.607E-01	-0.293
SB-124		602.71		-3.575E-02	4.166E-02	5.366E-02	3.371E-03	-0.666
		645.85		5.308E-02	4.974E-01	8.127E-01	5.707E-02	0.065
		709.31		3.539E-01	2.764E+00	4.491E+00	3.100E-01	0.079
		713.82		-9.323E-01	1.493E+00	2.251E+00	2.456E-01	-0.414
		722.78		-1.704E-01	3.899E-01	5.158E-01	3.760E-02	-0.330
	+	968.20		1.436E+01	6.520E+00	7.239E+00	6.232E-01	1.984
		1045.16		-6.747E-01	2.450E+00	3.936E+00	2.997E-01	-0.171
		1325.50		-1.617E+00	3.251E+00	4.940E+00	3.625E-01	-0.327
		1368.21		1.614E-01	1.616E+00	2.639E+00	3.357E-01	0.061
		1436.60		4.713E-01	3.299E+00	5.642E+00	4.100E-01	0.084
		1691.02	*	-2.799E-02	6.441E-02	9.555E-02	6.578E-03	-0.293
SB-125		427.89	*	5.431E-02	8.422E-02	1.463E-01	8.718E-03	0.371
	+	463.38		9.961E-01	4.439E-01	5.592E-01	3.818E-02	1.781
		600.56		8.706E-02	1.658E-01	2.808E-01	2.001E-02	0.310
		635.90		-9.174E-02	2.789E-01	4.405E-01	3.192E-02	-0.208
TE-125M		109.28	*	6.515E+00	8.276E+00	1.433E+01	1.232E+00	0.455
I-126		388.63		2.300E-01	1.869E-01	3.342E-01	1.850E-02	0.688
		666.33	*	-1.954E-01	1.605E-01	2.303E-01	1.473E-02	-0.849
		753.82		5.113E-01	1.402E+00	2.313E+00	1.721E-01	0.221
SB-126		223.80		5.518E-01	3.603E+00	5.885E+00	3.276E-01	0.094
		278.60		1.532E+00	2.124E+00	3.532E+00	2.037E-01	0.434
	+	296.50		1.361E+01	2.181E+00	3.367E+00	1.949E-01	4.042
		414.70		2.385E-02	6.240E-02	1.069E-01	6.036E-03	0.223
		415.30		7.376E-01	5.162E+00	8.718E+00	4.923E-01	0.085
		555.20		-1.292E-01	3.634E+00	5.941E+00	3.674E-01	-0.022
		573.80		9.152E-01	1.032E+00	1.784E+00	1.111E-01	0.513
		593.00		-6.652E-01	8.459E-01	1.291E+00	8.087E-02	-0.515
		656.30		1.468E+00	2.849E+00	4.813E+00	3.053E-01	0.305
		666.33		-8.145E-02	6.688E-02	9.597E-02	6.141E-03	-0.849
		675.00		-2.062E+00	1.775E+00	2.550E+00	1.657E-01	-0.808
		695.00		-3.023E-02	6.738E-02	1.041E-01	7.009E-03	-0.290

--- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		697.00		-2.645E-02	2.349E-01	3.745E-01	2.530E-02	-0.071
		720.50	*	3.562E-02	1.357E-01	2.069E-01	1.456E-02	0.172
		856.80		7.869E-02	4.664E-01	6.938E-01	6.083E-02	0.113
		889.30		-1.332E-02	1.102E+00	1.822E+00	1.523E-01	-0.007
		1034.80		5.475E+00	8.361E+00	1.458E+01	1.132E+00	0.375
		1213.00		-6.449E-01	4.890E+00	7.876E+00	4.680E-01	-0.082
SB-127		61.10		-6.385E+01	5.288E+01	7.735E+01	7.512E+00	-0.826
		252.40		1.519E+00	3.300E+00	5.350E+00	2.217E+00	0.284
		290.80		-1.094E+01	1.848E+01	2.489E+01	2.179E+00	-0.439
		411.60		1.832E+00	9.500E+00	1.608E+01	2.260E+00	0.114
		444.90		-7.041E+00	7.308E+00	1.129E+01	1.180E+00	-0.624
		473.00		-4.923E-01	1.228E+00	1.974E+00	2.155E-01	-0.249
		543.00		3.490E+00	1.174E+01	1.973E+01	2.524E+00	0.177
		603.60		-7.485E+00	9.989E+00	1.298E+01	1.389E+00	-0.577
		685.20	*	1.459E-01	1.030E+00	1.682E+00	1.613E-01	0.087
		698.50		5.200E+00	1.148E+01	1.917E+01	2.808E+00	0.271
		722.20		-1.783E+01	2.691E+01	3.448E+01	3.324E+00	-0.517
		783.80		1.580E+00	2.670E+00	4.699E+00	5.438E-01	0.336
XE-127		57.60		3.789E+00	6.878E+00	1.103E+01	7.955E-01	0.343
		145.22		9.031E-02	6.389E-01	1.047E+00	5.760E-02	0.086
		172.10		1.377E-01	1.082E-01	1.873E-01	9.865E-03	0.735
		202.84	*	1.936E-04	4.266E-02	6.960E-02	3.791E-03	0.003
		374.96		-7.000E-02	1.810E-01	2.980E-01	1.672E-02	-0.235
I-131		80.18		-8.227E-01	4.022E+00	6.137E+00	4.777E-01	-0.134
		284.30		-1.152E-01	1.220E+00	1.935E+00	1.242E-01	-0.060
		364.48	*	5.320E-02	1.001E-01	1.737E-01	1.101E-02	0.306
		636.97		3.789E-01	1.400E+00	2.319E+00	1.614E-01	0.163
		722.89		-2.527E+00	6.901E+00	9.221E+00	6.568E-01	-0.274
TE-132		49.72		1.602E+00	2.015E+01	3.185E+01	3.035E+00	0.050
		111.76		8.875E-01	2.135E+01	3.600E+01	3.170E+00	0.025
		116.30		1.200E+01	2.007E+01	3.445E+01	2.988E+00	0.348
		228.16	*	1.218E-01	5.190E-01	8.496E-01	1.195E-01	0.143
BA-133		53.15		-5.240E+00	4.382E+00	6.436E+00	4.755E-01	-0.814
		79.62		-1.174E+00	1.290E+00	1.887E+00	2.779E-01	-0.622
		81.00		-8.906E-02	9.858E-02	1.442E-01	2.225E-02	-0.618
		276.40		1.948E-01	3.515E-01	5.779E-01	7.482E-02	0.337
		302.84		1.151E-01	1.519E-01	2.267E-01	2.642E-02	0.507
		356.01	*	-2.047E-02	4.393E-02	6.299E-02	7.249E-03	-0.325
		383.85		-4.182E-02	2.854E-01	4.759E-01	5.115E-02	-0.088
I-133	+	510.53		5.048E-01	2.854E-01	Half-Life too short		
		529.87	*	-8.146E-04	2.854E-01	Half-Life too short		
		706.58		-3.892E-02	2.854E-01	Half-Life too short		
		856.28		2.792E-02	2.854E-01	Half-Life too short		
		875.33		-3.465E-02	2.854E-01	Half-Life too short		
		1236.41		3.172E-01	2.854E-01	Half-Life too short		
		1298.22		-5.612E-02	2.854E-01	Half-Life too short		
CS-134		475.35		-7.890E-01	1.723E+00	2.761E+00	1.636E-01	-0.286
		563.23		3.184E-01	3.513E-01	6.111E-01	3.860E-02	0.521
		569.32		-2.397E-02	1.853E-01	3.002E-01	1.914E-02	-0.080

---- Non-Identified Nuclides ---

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		604.70		-2.564E-02	3.645E-02	4.793E-02	3.026E-03	-0.535
	+	795.84	*	9.185E-02	7.745E-02	8.676E-02	6.974E-03	1.059
		801.93		-4.381E-01	4.597E-01	5.967E-01	4.834E-02	-0.734
		1038.57		-1.578E+00	4.076E+00	6.490E+00	5.003E-01	-0.243
		1167.94		-5.642E-01	2.802E+00	4.501E+00	2.510E-01	-0.125
		1365.15		-6.039E-01	1.229E+00	1.844E+00	1.446E-01	-0.327
CS-135		268.24	*	1.110E-01	1.572E-01	2.360E-01	1.797E-02	0.470
T-135		288.45		1.439E+09	1.572E-01	Half-Life too short		
		417.63		4.024E+07	1.572E-01	Half-Life too short		
		546.56		1.294E+06	1.572E-01	Half-Life too short		
		836.80		9.186E+08	1.572E-01	Half-Life too short		
		1038.76		-3.030E+08	1.572E-01	Half-Life too short		
		1124.00		7.371E+08	1.572E-01	Half-Life too short		
		1131.51		5.937E+07	1.572E-01	Half-Life too short		
		1260.41	*	-3.517E+07	1.572E-01	Half-Life too short		
		1457.56		3.119E+10	1.572E-01	Half-Life too short		
		1678.03		1.273E+08	1.572E-01	Half-Life too short		
		1706.46		1.649E+09	1.572E-01	Half-Life too short		
		1791.20		-4.017E+08	1.572E-01	Half-Life too short		
CS-136		66.91		-1.251E-01	7.854E-01	1.212E+00	1.782E-01	-0.103
	+	86.29		4.408E+00	1.514E+00	1.807E+00	2.264E-01	2.439
		153.22		3.482E-01	5.778E-01	9.795E-01	6.756E-02	0.356
		163.89		3.806E-01	9.208E-01	1.546E+00	1.055E-01	0.246
		176.55		4.908E-02	3.240E-01	5.361E-01	3.252E-02	0.092
		273.65		4.185E-01	4.361E-01	6.638E-01	4.364E-02	0.630
		340.57		2.607E-01	1.290E-01	2.164E-01	1.322E-02	1.205
		818.51		2.255E-02	6.432E-02	1.113E-01	9.202E-03	0.203
		1048.07	*	-2.311E-02	9.940E-02	1.602E-01	1.280E-02	-0.144
		1235.34		-2.312E-01	6.561E-01	1.039E+00	1.063E-01	-0.223
BA-137M		661.65	*	2.413E-02	3.233E-02	5.553E-02	3.524E-03	0.435
CS-137		661.65	*	2.551E-02	3.417E-02	5.870E-02	3.738E-03	0.435
CE-139		165.85	*	-4.529E-03	2.705E-02	4.431E-02	2.321E-03	-0.102
BA-140		162.64		2.978E-01	6.422E-01	1.081E+00	6.551E-02	0.275
		304.84		-3.323E-02	1.258E+00	1.772E+00	4.836E-01	-0.019
		423.70		-5.326E-02	1.586E+00	2.645E+00	8.401E-01	-0.020
		537.32	*	1.559E-01	2.185E-01	3.695E-01	1.204E-01	0.422
LA-140	+	328.77		5.842E-01	4.598E-01	4.896E-01	3.167E-02	1.193
		432.53		2.331E-01	1.759E+00	2.960E+00	1.879E-01	0.079
		487.03		4.505E-02	1.159E-01	1.972E-01	1.325E-02	0.228
		751.79		-1.048E+00	1.625E+00	2.443E+00	2.070E-01	-0.429
		815.85		-7.459E-02	2.807E-01	4.612E-01	4.272E-02	-0.162
		867.82		1.163E+00	1.357E+00	2.180E+00	2.040E-01	0.534
		919.63		-1.713E+00	2.414E+00	3.733E+00	4.129E-01	-0.459
		925.24		7.767E-01	1.018E+00	1.803E+00	1.728E-01	0.431
		1596.49	*	-1.122E-01	7.129E-02	8.433E-02	5.748E-03	-1.330
CE-141		145.44	*	3.244E-02	5.483E-02	9.324E-02	5.353E-03	0.348
CE-143		57.37		6.546E-04	5.483E-02	Half-Life too short		
		231.56		-6.436E-04	5.483E-02	Half-Life too short		
		293.26	*	1.511E-04	5.483E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		350.59		1.781E-02	5.483E-02	Half-Life too short		
		490.36		-1.607E-04	5.483E-02	Half-Life too short		
		664.57		-3.656E-04	5.483E-02	Half-Life too short		
		721.93		-4.368E-04	5.483E-02	Half-Life too short		
CE-144		80.11		-4.716E-01	2.031E+00	3.094E+00	2.391E-01	-0.152
		133.54	*	1.682E-01	1.929E-01	3.173E-01	4.492E-02	0.530
PM-144		476.78		8.797E-03	6.047E-02	1.012E-01	7.139E-03	0.087
		618.01		3.176E-02	2.911E-02	5.137E-02	3.404E-03	0.618
		696.49	*	-6.615E-03	3.132E-02	4.949E-02	3.342E-03	-0.134
		778.57		-1.579E-01	2.101E+00	3.328E+00	2.581E-01	-0.047
PR-144		696.49	*	-4.480E-01	2.121E+00	3.351E+00	2.262E-01	-0.134
		1489.15		-1.656E+00	1.074E+01	1.756E+01	1.254E+00	-0.094
PM-146		453.90	*	3.215E-03	3.930E-02	6.573E-02	5.682E-03	0.049
		633.02		8.927E-01	1.425E+00	2.363E+00	8.722E-01	0.378
		735.90		1.358E-02	1.359E-01	2.199E-01	6.203E-02	0.062
		747.13		-2.147E-02	8.462E-02	1.321E-01	1.757E-02	-0.163
ND-147	+	91.11		5.152E-01	2.769E-01	4.323E-01	3.733E-02	1.192
		319.41		-3.424E-01	2.879E+00	4.522E+00	2.615E-01	-0.076
		439.89		4.962E+00	5.029E+00	8.893E+00	5.133E-01	0.558
		531.02	*	-1.020E-01	4.670E-01	7.543E-01	1.030E-01	-0.135
PM-149		285.90	*	-5.121E+01	6.214E+01	9.348E+01	1.324E+01	-0.548
EU-152		121.78		-5.155E-02	6.660E-02	1.079E-01	8.351E-03	-0.478
		244.69		1.535E-01	3.169E-01	4.715E-01	2.671E-02	0.326
		344.27	*	-6.669E-02	8.861E-02	1.382E-01	8.956E-03	-0.482
		443.98		-4.563E-01	8.591E-01	1.378E+00	7.975E-02	-0.331
		778.89		-1.135E-02	2.437E-01	3.870E-01	3.002E-02	-0.029
		867.32		9.914E-01	8.330E-01	1.388E+00	1.237E-01	0.714
		964.01		3.044E-01	3.501E-01	5.506E-01	4.766E-02	0.553
		1085.78		1.538E-01	3.822E-01	6.520E-01	4.566E-02	0.236
		1112.02		-2.383E-01	3.227E-01	4.753E-01	3.125E-02	-0.501
		1407.95		3.424E-01	1.949E-01	3.739E-01	2.738E-02	0.916
GD-153		69.67		-3.164E-01	1.909E+00	2.697E+00	1.967E-01	-0.117
		83.37		-6.956E+00	1.664E+01	2.291E+01	1.816E+00	-0.304
		97.43	*	-7.711E-02	8.105E-02	1.160E-01	8.375E-03	-0.665
		103.18		-3.143E-02	9.415E-02	1.570E-01	1.067E-02	-0.200
EU-154		123.07		1.283E-02	4.698E-02	7.956E-02	7.548E-03	0.161
		247.94		3.424E-02	3.339E-01	5.408E-01	5.120E-02	0.063
		591.81		-9.851E-02	5.839E-01	9.395E-01	9.447E-02	-0.105
		723.30		2.474E-02	1.839E-01	2.618E-01	2.135E-02	0.094
		756.87		4.711E-01	7.704E-01	1.295E+00	1.448E-01	0.364
		873.19		-5.353E-02	2.628E-01	4.310E-01	5.390E-02	-0.124
		996.32		2.893E-01	4.039E-01	6.288E-01	1.107E-01	0.460
		1004.76		-1.187E-01	2.367E-01	3.157E-01	3.569E-02	-0.376
		1274.45	*	3.611E-02	1.279E-01	2.129E-01	2.112E-02	0.170
EU-155		48.70		-7.380E-01	3.277E+00	5.108E+00	3.667E-01	-0.144
		60.01		-4.924E+00	5.410E+00	8.058E+00	5.749E-01	-0.611
	+	86.54		4.310E-01	1.424E-01	1.815E-01	1.497E-02	2.374
		105.31	*	8.436E-02	9.712E-02	1.690E-01	1.150E-02	0.499
TB-160	+	86.79		1.140E+00	3.762E-01	4.854E-01	3.967E-02	2.348

--- Non-Identified Nuclides ---

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		197.04		-4.118E-02	5.118E-01	8.331E-01	4.510E-02	-0.049
		215.65		-3.322E-01	6.954E-01	1.104E+00	6.095E-02	-0.301
		298.57		7.376E-02	1.623E-01	1.887E-01	1.093E-02	0.391
		879.36	*	1.406E-01	1.279E-01	2.330E-01	2.114E-02	0.603
		962.29		-3.358E-01	6.218E-01	8.531E-01	7.402E-02	-0.394
		966.15		6.376E-01	2.626E-01	4.529E-01	3.910E-02	1.408
		1177.93		1.143E-01	3.695E-01	6.191E-01	3.424E-02	0.185
		1271.85		5.505E-01	7.563E-01	1.309E+00	8.713E-02	0.421
HO-166M		80.57		-8.109E-02	2.642E-01	4.011E-01	3.109E-02	-0.202
		184.41		4.092E-02	3.722E-02	5.755E-02	3.071E-03	0.711
		280.46		-1.627E-01	8.098E-02	1.124E-01	6.487E-03	-1.447
		410.95		2.416E-01	2.327E-01	4.119E-01	2.316E-02	0.587
		711.68	*	-5.310E-03	5.840E-02	9.314E-02	6.455E-03	-0.057
		752.31		-1.337E-01	2.733E-01	4.175E-01	3.099E-02	-0.320
		810.29		-6.543E-02	5.602E-02	8.439E-02	6.883E-03	-0.775
TM-171		51.35		3.569E+00	3.865E+01	6.104E+01	4.513E+00	0.058
		52.39		-4.971E+00	1.924E+01	2.983E+01	2.207E+00	-0.167
		59.40		-1.108E+01	2.901E+01	4.446E+01	3.170E+00	-0.249
		66.72	*	-7.681E+00	3.018E+01	4.638E+01	3.353E+00	-0.166
LU-176	+	88.36		8.492E-01	2.803E-01	3.322E-01	2.729E-02	2.556
		201.83		-2.391E-02	2.745E-02	4.297E-02	2.338E-03	-0.557
		306.84	*	-7.789E-03	2.301E-02	3.572E-02	2.068E-03	-0.218
		401.10		-1.259E+00	6.216E+00	1.030E+01	5.737E-01	-0.122
LU-177		112.95		-2.699E-01	1.327E+00	2.215E+00	1.392E-01	-0.122
	+	208.36	*	2.316E+00	1.482E+00	1.642E+00	9.000E-02	1.410
LU-177M		52.97		-2.430E+00	1.973E+00	2.891E+00	2.137E-01	-0.840
		54.07		-9.047E-02	9.923E-01	1.549E+00	1.141E-01	-0.058
		61.30		-1.951E+00	1.652E+00	2.427E+00	1.737E-01	-0.804
		121.62		-2.307E-01	3.388E-01	5.518E-01	3.293E-02	-0.418
		147.16		-7.821E-01	5.886E-01	9.206E-01	5.038E-02	-0.850
		171.86		5.082E-01	4.403E-01	7.596E-01	3.999E-02	0.669
		218.09		2.315E-01	8.003E-01	1.317E+00	7.292E-02	0.176
	+	268.79		2.199E+00	9.729E-01	1.321E+00	7.590E-02	1.664
		319.02		-1.163E-02	2.364E-01	3.732E-01	2.158E-02	-0.031
		367.43		-2.556E-01	8.556E-01	1.419E+00	8.012E-02	-0.180
		413.65	*	-1.939E-01	1.653E-01	2.558E-01	1.443E-02	-0.758
HF-181		56.28		1.059E-01	1.103E+00	1.735E+00	1.262E-01	0.061
		57.53		4.112E-01	5.777E-01	9.331E-01	6.731E-02	0.441
		65.20		-1.617E+00	1.055E+00	1.524E+00	1.098E-01	-1.062
		133.02		5.375E-02	6.431E-02	1.005E-01	5.732E-03	0.535
		136.25		-5.737E-01	4.235E-01	6.534E-01	3.687E-02	-0.878
		345.85		-2.137E-01	1.657E-01	2.587E-01	1.482E-02	-0.826
		482.03	*	-1.941E-02	3.911E-02	6.246E-02	3.717E-03	-0.311
W-181		56.28		4.245E-02	4.369E-01	6.874E-01	4.999E-02	0.062
		57.53		1.630E-01	2.290E-01	3.699E-01	2.668E-02	0.441
		65.20	*	-6.360E-01	4.150E-01	5.991E-01	4.317E-02	-1.062
TA-182		67.75		1.730E-02	1.164E-01	1.819E-01	1.319E-02	0.095
		100.10		4.065E-02	1.639E-01	2.743E-01	1.923E-02	0.148
		152.43		-8.093E-02	3.097E-01	5.078E-01	2.743E-02	-0.159

--- Non-Identified Nuclides ---

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		-6.299E-02	3.183E-01	5.111E-01	2.841E-02	-0.123
	-	1001.68		1.845E+00	3.139E+00	3.716E+00	3.048E-01	0.496
	+	1121.28		8.178E-01	2.453E-01	3.698E-01	2.373E-02	2.212
		1189.05		-6.683E-02	3.021E-01	4.825E-01	2.731E-02	-0.139
		1221.42	*	-1.791E-01	2.070E-01	3.111E-01	1.880E-02	-0.576
		1230.97		4.204E-01	5.252E-01	9.045E-01	5.569E-02	0.465
RE-183		57.98		8.650E-02	2.254E-01	3.587E-01	2.581E-02	0.241
		59.32		-4.145E-02	1.184E-01	1.818E-01	1.297E-02	-0.228
		67.20		7.450E-03	2.089E-01	3.250E-01	2.353E-02	0.023
		162.32	*	5.040E-02	9.858E-02	1.663E-01	8.777E-03	0.303
	+	208.81		2.309E+00	1.477E+00	1.677E+00	9.196E-02	1.377
		291.72		-3.615E-01	9.441E-01	1.295E+00	7.488E-02	-0.279
RE-184		57.98		3.208E-01	8.357E-01	1.330E+00	9.570E-02	0.241
		59.32		-1.536E-01	4.388E-01	6.737E-01	4.805E-02	-0.228
		67.20		2.762E-02	7.744E-01	1.205E+00	8.724E-02	0.023
		161.27		-9.418E-02	3.237E-01	5.283E-01	2.795E-02	-0.178
		216.55		1.886E-01	2.467E-01	4.149E-01	2.293E-02	0.455
		252.85	*	1.649E-01	2.138E-01	3.583E-01	2.041E-02	0.460
		318.01		-1.976E-01	4.140E-01	6.342E-01	3.668E-02	-0.312
		792.07		3.657E-04	1.007E+00	1.480E+00	1.172E-01	0.000
		903.28		-4.798E-02	9.632E-01	1.600E+00	1.485E-01	-0.030
		920.93		-6.765E-01	4.176E-01	5.733E-01	5.224E-02	-1.180
OS-185		59.72		-2.886E-01	3.224E-01	4.809E-01	3.428E-02	-0.600
		61.14		-2.187E-01	1.815E-01	2.664E-01	1.905E-02	-0.821
		69.30		-1.579E-01	3.177E-01	4.821E-01	3.512E-02	-0.328
		592.07		-1.622E-01	2.323E+00	3.768E+00	2.360E-01	-0.043
		646.12	*	1.052E-02	4.244E-02	7.011E-02	4.441E-03	0.150
		717.42		3.201E-01	8.079E-01	1.345E+00	9.414E-02	0.238
		874.81		-6.619E-03	5.089E-01	8.357E-01	7.529E-02	-0.008
		880.27		5.155E-01	7.402E-01	1.307E+00	1.188E-01	0.394
RE-188		155.03	*	9.932E-02	1.570E-01	2.664E-01	1.430E-02	0.373
		477.96		1.512E+00	2.769E+00	4.760E+00	2.825E-01	0.318
		633.10		1.768E+00	2.774E+00	4.721E+00	2.985E-01	0.375
W-188		63.58		3.738E+01	5.819E+01	9.343E+01	6.711E+00	0.400
		227.08		-8.170E+00	1.219E+01	1.909E+01	1.066E+00	-0.428
		290.67	*	-4.573E+00	7.721E+00	1.041E+01	6.019E-01	-0.439
IR-192	+	295.96		1.097E+00	1.762E-01	2.807E-01	1.650E-02	3.910
		308.46		-2.502E-03	8.901E-02	1.410E-01	8.259E-03	-0.018
		316.51	*	-1.560E-02	3.158E-02	4.832E-02	2.809E-03	-0.323
		468.07		-2.791E-02	6.851E-02	9.590E-02	6.491E-03	-0.291
		604.41		-3.611E-01	4.885E-01	6.374E-01	7.396E-02	-0.567
		612.46		7.212E-01	7.268E-01	1.139E+00	9.063E-02	0.633
AU-195		65.12		-2.872E-01	1.931E-01	2.794E-01	2.013E-02	-1.028
		66.83		-1.980E-02	9.955E-02	1.533E-01	1.109E-02	-0.129
	+	75.70		1.375E+00	2.860E-01	4.328E-01	3.248E-02	3.178
		98.88	*	9.702E-02	2.066E-01	3.488E-01	2.478E-02	0.278
	+	129.76		5.409E+00	3.747E+00	4.633E+00	2.673E-01	1.168
TL-200		367.94	*	-1.055E-04	3.747E+00	Half-Life too short		
		579.30		-1.610E-03	3.747E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Idcd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		828.27		-2.855E-03	3.747E+00	Half-Life too short		
		1205.75		-3.638E-04	3.747E+00	Half-Life too short		
TL-201		68.90		9.364E-01	3.908E+00	6.126E+00	4.457E-01	0.153
		70.82		2.033E-01	2.208E+00	3.435E+00	2.517E-01	0.059
		80.30		-5.893E-01	3.751E+00	5.736E+00	4.438E-01	-0.103
		135.34		-2.053E+01	1.843E+01	2.877E+01	1.628E+00	-0.714
		167.43	*	3.432E+00	4.886E+00	8.297E+00	4.349E-01	0.414
TL-202		68.90		1.018E-01	4.248E-01	6.659E-01	4.845E-02	0.153
		70.82		2.204E-02	2.393E-01	3.724E-01	2.728E-02	0.059
		80.30		-6.390E-02	4.067E-01	6.219E-01	4.812E-02	-0.103
		439.56	*	5.686E-02	6.054E-02	1.067E-01	6.157E-03	0.533
HG-203		70.83		9.964E-02	1.086E+00	1.690E+00	2.167E-01	0.059
		72.87		5.232E-01	6.281E-01	9.999E-01	1.243E-01	0.523
		82.60		-6.142E-01	1.211E+00	1.659E+00	2.205E-01	-0.370
		279.20	*	-4.172E-03	3.715E-02	5.899E-02	3.615E-03	-0.071
BI-207		72.80		1.472E-01	1.865E-01	2.976E-01	2.199E-02	0.495
	+	74.97		7.661E-01	1.593E-01	2.299E-01	1.718E-02	3.333
		84.90		1.214E-01	1.870E-01	2.934E-01	2.357E-02	0.414
		569.67		-1.119E-02	2.888E-02	4.581E-02	2.848E-03	-0.244
		1063.62	*	-1.750E-03	5.270E-02	8.649E-02	6.353E-03	-0.020
		1770.23		-4.157E-01	5.376E-01	6.437E-01	3.898E-02	-0.646
TL-207		81.07		-1.953E-01	2.160E-01	3.182E-01	2.477E-02	-0.614
		83.78		1.693E-02	1.274E-01	1.960E-01	1.559E-02	0.086
		94.90		2.863E-01	2.218E-01	3.577E-01	2.666E-02	0.800
		122.32		-5.187E-01	1.584E+00	2.619E+00	1.789E-01	-0.198
		144.24		-6.193E-02	6.580E-01	1.070E+00	7.496E-02	-0.058
		154.21		4.087E-01	3.690E-01	6.364E-01	4.244E-02	0.642
	+	269.46		5.172E-01	2.290E-01	3.349E-01	2.013E-02	1.544
		323.87	*	3.435E-02	6.913E-01	9.753E-01	1.610E-01	0.035
	+	338.28		6.841E+00	1.982E+00	2.450E+00	2.574E-01	2.792
		445.03		-1.685E+00	2.078E+00	3.254E+00	3.341E-01	-0.518
PO-209		260.50		3.309E+00	8.994E+00	1.455E+01	8.322E-01	0.227
		262.80		9.793E+00	2.505E+01	4.055E+01	2.323E+00	0.242
		896.60	*	-7.894E-01	6.841E+00	1.130E+01	1.051E+00	-0.070
BI-210		46.50	*	3.855E+00	4.847E+00	7.756E+00	5.936E-01	0.497
PB-210		46.50	*	3.855E+00	4.847E+00	7.756E+00	5.936E-01	0.497
PO-210		46.50	*	3.855E+00	4.844E+00	7.756E+00	5.084E-01	0.497
PB-211		404.84	*	1.774E-01	8.631E-01	1.453E+00	9.052E-01	0.122
		427.08		1.291E+00	2.030E+00	3.254E+00	2.011E+00	0.397
		831.96		-8.722E-02	1.121E+00	1.868E+00	1.170E+00	-0.047
BI-212	+	727.18	*	1.134E+00	5.464E-01	6.512E-01	5.696E-02	1.742
		785.46		9.774E-01	1.665E+00	2.927E+00	2.294E-01	0.334
		1620.62		1.655E+00	1.277E+00	2.472E+00	1.662E-01	0.670
PO-215		81.07		-1.953E-01	2.160E-01	3.182E-01	2.477E-02	-0.614
		83.78		1.693E-02	1.274E-01	1.960E-01	1.559E-02	0.086
		94.90		2.863E-01	2.218E-01	3.577E-01	2.666E-02	0.800
		122.32		-5.187E-01	1.584E+00	2.619E+00	1.789E-01	-0.198
		144.24		-6.193E-02	6.580E-01	1.070E+00	7.496E-02	-0.058
		154.21		4.087E-01	3.690E-01	6.364E-01	4.244E-02	0.642

---- Non-Identified Nuclides ----

Nuclide	line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	-	269.46		5.172E-01	2.290E-01	3.349E-01	2.013E-02	1.544
		323.87	*	3.435E-02	6.913E-01	9.753E-01	1.610E-01	0.035
	-	338.28		6.841E+00	1.982E+00	2.450E+00	2.574E-01	2.792
		445.03		-1.685E+00	2.078E+00	3.254E+00	3.341E-01	-0.518
RN-219	-	271.23		6.636E-01	2.960E-01	4.291E-01	3.462E-02	1.547
		401.81	*	4.798E-02	3.857E-01	6.514E-01	8.801E-02	0.074
RN-220		549.76	*	-2.679E+00	2.465E+01	4.009E+01	2.473E+00	-0.067
RA-223		81.07		-1.953E-01	2.160E-01	3.182E-01	2.477E-02	-0.614
		83.78		1.693E-02	1.274E-01	1.960E-01	1.559E-02	0.086
		94.90		2.863E-01	2.218E-01	3.577E-01	2.666E-02	0.800
		122.32		-5.187E-01	1.584E+00	2.619E+00	1.789E-01	-0.198
		144.24		-6.193E-02	6.580E-01	1.070E+00	7.496E-02	-0.058
		154.21		4.087E-01	3.690E-01	6.364E-01	4.244E-02	0.642
	+	269.46		5.172E-01	2.290E-01	3.349E-01	2.013E-02	1.544
		323.87	*	3.435E-02	6.913E-01	9.753E-01	1.610E-01	0.035
	+	338.28		6.841E+00	1.982E+00	2.450E+00	2.574E-01	2.792
		445.03		-1.685E+00	2.078E+00	3.254E+00	3.341E-01	-0.518
AC-227		79.80		-1.457E+00	1.650E+00	2.396E+00	5.068E-01	-0.608
		236.00		2.615E-02	2.341E-01	3.397E-01	3.518E-02	0.077
		256.20	*	-4.243E-01	3.584E-01	5.285E-01	7.358E-02	-0.803
		286.10		-6.941E-01	1.454E+00	2.249E+00	2.598E-01	-0.309
	+	299.80		3.165E+00	2.088E+00	2.670E+00	4.347E-01	1.186
		304.40		1.050E+00	1.930E+00	2.837E+00	4.907E-01	0.370
		334.20		-6.017E-01	2.414E+00	3.303E+00	6.052E-01	-0.182
TH-227		79.80		-1.457E+00	1.651E+00	2.396E+00	5.135E-01	-0.608
	+	94.00		8.623E+00	3.489E+00	3.606E+00	7.707E-01	2.391
		236.00		2.615E-02	2.341E-01	3.397E-01	3.039E-02	0.077
		256.20	*	-4.243E-01	3.607E-01	5.285E-01	8.914E-02	-0.803
		286.10		-6.941E-01	1.610E+00	2.249E+00	2.253E+00	-0.309
	+	299.80		3.165E+00	2.088E+00	2.670E+00	4.347E-01	1.186
		304.40		1.050E+00	1.930E+00	2.837E+00	4.907E-01	0.370
		334.20		-6.017E-01	2.414E+00	3.303E+00	6.052E-01	-0.182
TH-229		85.43		1.231E-01	1.865E-01	2.925E-01	2.361E-02	0.421
	+	88.47		4.888E-01	1.614E-01	1.876E-01	1.538E-02	2.605
		100.00		4.984E-02	1.716E-01	2.877E-01	2.019E-02	0.173
		193.63	*	-2.415E-02	4.760E-01	7.620E-01	4.109E-02	-0.032
	+	210.97		1.828E+00	1.170E+00	1.220E+00	6.706E-02	1.498
PA-231		283.67	*	-4.544E-01	1.385E+00	2.162E+00	2.977E-01	-0.210
	+	301.29		1.266E+00	8.200E-01	1.050E+00	1.097E-01	1.206
TH-231		81.07		-1.953E-01	2.160E-01	3.182E-01	2.477E-02	-0.614
		83.78		1.693E-02	1.274E-01	1.960E-01	1.559E-02	0.086
		94.90		2.863E-01	2.218E-01	3.577E-01	2.666E-02	0.800
		122.32		-5.187E-01	1.584E+00	2.619E+00	1.789E-01	-0.198
		144.24		-6.193E-02	6.580E-01	1.070E+00	7.496E-02	-0.058
		154.21		4.087E-01	3.690E-01	6.364E-01	4.244E-02	0.642
	+	269.46		5.172E-01	2.290E-01	3.349E-01	2.013E-02	1.544
		323.87	*	3.435E-02	6.913E-01	9.753E-01	1.610E-01	0.035
	+	338.28		6.841E+00	1.982E+00	2.450E+00	2.574E-01	2.792
		445.03		-1.685E+00	2.078E+00	3.254E+00	3.341E-01	-0.518

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-237		84.21		9.343E-02	4.575E+00	7.002E+00	5.591E-01	0.013
	+	92.29		7.093E+00	2.494E+00	3.312E+00	2.558E-01	2.141
		95.87	*	-4.731E-01	8.651E-01	1.283E+00	9.440E-02	-0.369
		108.00		-8.230E-02	1.553E+00	2.614E+00	1.703E-01	-0.031
PA-233	+	75.28		2.236E+01	5.447E+00	6.755E+00	9.957E-01	3.310
	+	86.59		7.009E+00	2.919E+00	2.957E+00	7.888E-01	2.370
	+	300.12		8.825E-01	5.763E-01	7.483E-01	1.005E-01	1.179
		311.98	*	-2.211E-03	6.274E-02	9.929E-02	6.104E-03	-0.022
		340.50		1.478E+00	7.551E-01	1.146E+00	2.631E-01	1.289
		398.62		5.216E-01	1.888E+00	3.212E+00	8.288E-01	0.162
		415.76		3.293E-01	1.464E+00	2.483E+00	5.101E-01	0.133
PA-234		63.00		7.245E-01	1.751E+00	2.784E+00	4.106E-01	0.260
		94.67		3.127E-01	1.657E-01	2.686E-01	3.126E-02	1.164
		98.44		-1.791E-02	8.604E-02	1.408E-01	7.826E-02	-0.127
		99.86		4.211E-02	4.383E-01	7.301E-01	5.131E-02	0.058
		111.00		-7.583E-02	1.684E-01	2.784E-01	2.952E-02	-0.272
		131.20		-6.948E-02	1.082E-01	1.565E-01	8.983E-03	-0.444
		152.70		-4.793E-02	3.016E-01	4.964E-01	7.777E-02	-0.097
	+	186.00		5.118E+00	2.615E+00	2.493E+00	7.596E-01	2.053
		226.40		-1.458E-01	3.867E-01	6.144E-01	7.036E-02	-0.237
		227.20		-2.769E-01	4.166E-01	6.524E-01	3.643E-02	-0.424
		248.90		4.452E-01	7.669E-01	1.264E+00	2.713E-01	0.352
		293.70		3.406E+00	9.564E-01	1.402E+00	2.255E-01	2.429
		369.80		-2.449E-03	8.031E-01	1.331E+00	2.766E-01	-0.002
		568.70		4.219E-01	9.103E-01	1.542E+00	9.584E-02	0.274
		569.50		-7.976E-02	2.577E-01	4.115E-01	2.558E-02	-0.194
		574.00		1.659E+00	1.565E+00	2.735E+00	1.703E-01	0.606
		699.00		-1.103E-01	6.887E-01	1.093E+00	2.003E-01	-0.101
		706.10		2.108E-01	1.107E+00	1.801E+00	7.974E-01	0.117
		733.00		9.447E-02	3.881E-01	5.596E-01	1.213E-01	0.169
		742.81		1.015E+00	1.405E+00	2.123E+00	1.424E+00	0.478
	+	796.30		1.787E+00	1.575E+00	1.665E+00	4.470E-01	1.074
		805.60		1.034E+00	1.012E+00	1.750E+00	5.338E-01	0.591
		819.60		4.364E-01	1.150E+00	1.974E+00	7.492E-01	0.221
		826.30		-1.942E-01	7.447E-01	1.214E+00	5.424E-01	-0.160
		831.60		1.095E-02	5.847E-01	9.833E-01	2.929E-01	0.011
		876.40		-8.957E-01	1.226E+00	1.197E+00	1.231E+00	-0.748
		880.51		2.019E-01	2.691E-01	4.773E-01	4.337E-02	0.423
		883.24		-2.538E-01	3.255E-01	4.250E-01	2.860E-01	-0.597
		899.00		2.755E-01	7.730E-01	1.316E+00	5.770E-01	0.209
		925.00		5.556E-01	1.111E+00	1.930E+00	1.751E-01	0.288
		926.50		1.119E-01	1.730E-01	3.001E-01	7.631E-02	0.373
		946.00	*	-6.651E-02	2.819E-01	4.578E-01	8.639E-02	-0.145
		949.00		-1.036E-01	4.116E-01	6.675E-01	5.889E-02	-0.155
		980.50		6.248E-01	6.899E-01	1.234E+00	1.045E-01	0.506
		1394.10		9.365E-02	1.042E+00	1.696E+00	1.102E+00	0.055
PA-234M		766.41		1.188E+01	2.239E+01	3.030E+01	2.320E+01	0.392
	+	1001.03	*	6.003E+00	1.022E+01	1.250E+01	1.359E+00	0.480
TH-234		63.29	*	1.296E+00	1.475E+00	2.369E+00	4.109E-01	0.547

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.231E+00	8.612E-01	1.050E+00	1.855E-01	2.126
U-235	+	89.95		2.201E+00	1.348E-00	1.744E+00	5.352E-01	1.262
	+	93.35		2.683E+00	1.184E+00	1.252E+00	3.472E-01	2.143
		105.00		6.434E-01	9.782E-01	1.661E+00	4.875E-01	0.387
		143.76	*	1.447E-02	2.017E-01	3.302E-01	5.351E-02	0.044
		163.35		-3.311E-02	4.364E-01	7.183E-01	1.280E-01	-0.046
	+	185.71		1.896E-01	7.840E-02	9.186E-02	4.909E-03	2.064
		205.31		-1.807E-01	5.583E-01	7.955E-01	1.422E-01	-0.227
NP-236		94.67		2.390E-01	1.240E-01	2.040E-01	1.525E-02	1.172
		98.44		-1.357E-02	6.461E-02	1.064E-01	7.599E-03	-0.127
		111.00		-5.736E-02	1.273E-01	2.106E-01	1.341E-02	-0.272
		160.31	*	-2.683E-03	7.244E-02	1.195E-01	6.339E-03	-0.022
U-238		63.29	*	1.296E+00	1.475E+00	2.369E+00	4.109E-01	0.547
	+	92.38		2.231E+00	7.848E-01	1.050E+00	8.096E-02	2.126
NP-239		99.55		4.045E-02	1.456E-01	2.441E-01	1.721E-02	0.166
		117.00	*	-2.820E-03	1.734E-01	2.910E-01	1.782E-02	-0.010
	+	209.75		1.841E+00	1.178E+00	1.346E+00	7.385E-02	1.369
		228.18		5.003E-02	2.147E-01	3.517E-01	1.965E-02	0.142
		277.60		1.734E-01	1.688E-01	2.849E-01	1.642E-02	0.609
		334.30		-3.134E-01	1.368E+00	1.877E+00	1.081E-01	-0.167
AM-241		59.54	*	-9.827E-02	1.696E-01	2.572E-01	2.024E-02	-0.382
CM-243		99.55		4.162E-02	1.498E-01	2.512E-01	1.771E-02	0.166
		103.76	*	-3.045E-02	8.712E-02	1.452E-01	9.812E-03	-0.210
		117.00		-2.901E-03	1.783E-01	2.994E-01	1.833E-02	-0.010
	+	209.75		1.815E+00	1.161E+00	1.326E+00	7.280E-02	1.369
		228.18		5.055E-02	2.170E-01	3.553E-01	1.986E-02	0.142
		277.60		1.748E-01	1.702E-01	2.872E-01	1.655E-02	0.609
CM-247		278.00		9.680E-01	6.822E-01	1.174E+00	6.770E-02	0.824
		287.40		1.467E+00	1.138E+00	1.950E+00	1.127E-01	0.752
		402.60	*	8.322E-03	3.397E-02	5.778E-02	3.224E-03	0.144
CF-249		252.85		6.214E-01	8.059E-01	1.350E+00	7.692E-02	0.460
		333.44		-5.334E-02	2.292E-01	2.429E-01	1.399E-02	-0.220
		387.95	*	2.867E-02	3.903E-02	6.816E-02	3.776E-03	0.421
CF-251		176.60	*	1.691E-02	1.184E-01	1.958E-01	1.036E-02	0.086
		227.00		-2.492E-01	3.699E-01	5.790E-01	3.232E-02	-0.430
		285.00		-6.213E-01	1.629E+00	2.538E+00	1.466E-01	-0.245

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          CEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358006      *
* Acquisition date :  6-JUL-2009 12:13:17 Detector SN#     :               *
* Detector ID        : GAM09                Sensitivity      : 5.000       *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000       *
* Elapsed real time:    0 02:00:01.86       Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232358006           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.3744E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 16-MAR-2009 10:48:05 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.809E+01	3.391E+00	4.140E-01	0.000E+00
CD-109	3.637E+00	1.177E+00	1.264E+00	0.000E+00
SN-126	3.580E-01	1.158E-01	1.251E-01	0.000E+00
TL-208	5.610E-01	8.758E-02	5.521E-02	0.000E+00
BI-211	3.927E+00	4.972E-01	3.131E-01	0.000E+00
PB-212	1.816E+00	1.697E-01	8.519E-02	0.000E+00
PO-212	1.816E+00	1.697E-01	8.519E-02	0.000E+00
BI-214	1.291E+00	1.976E-01	9.379E-02	0.000E+00
PB-214	1.366E+00	1.865E-01	1.103E-01	0.000E+00
PO-214	1.366E+00	1.865E-01	1.103E-01	0.000E+00
PO-216	1.816E+00	1.697E-01	8.519E-02	0.000E+00
PO-218	1.366E+00	1.865E-01	1.103E-01	0.000E+00
RA-224	4.148E+00	1.057E+00	9.694E-01	0.000E+00
RA-226	1.291E+00	1.976E-01	9.379E-02	0.000E+00
AC-228	1.805E+00	3.463E-01	2.115E-01	0.000E+00
RA-228	1.805E+00	3.463E-01	2.115E-01	0.000E+00
TH-228	1.816E+00	1.697E-01	8.518E-02	0.000E+00
TH-230	1.291E+00	1.976E-01	9.378E-02	0.000E+00
TH-232	1.805E+00	3.463E-01	2.115E-01	0.000E+00
U-234	1.291E+00	1.976E-01	9.378E-02	0.000E+00
NP-237	1.051E+00	4.011E-01	4.074E-01	0.000E+00
AM-243	4.268E-01	8.697E-02	9.371E-02	0.000E+00
ANH-511	1.203E-01	6.502E-02	4.589E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	6.745E-02	2.871E-01	5.056E-01	0.000E+00	NOT IDENT.
NA-22	1.215E-02	4.475E-02	7.638E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.019E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.169E-02	2.293E-02	3.356E-02	0.000E+00	NOT IDENT.

TI-44	0.000E+00	6.083E-02	8.068E-02	0.000E+00	FAIL ABUN
SC-46	-1.343E-02	3.694E-02	6.194E-02	0.000E+00	FAIL ABUN
V-48	-4.289E-03	6.532E-02	1.110E-01	0.000E+00	NOT IDENT.
CR-51	4.020E-02	3.317E-01	5.581E-01	0.000E+00	NOT IDENT.
MN-52	5.978E-02	1.835E-01	3.282E-01	0.000E+00	NOT IDENT.
MN-54	-2.364E-03	3.391E-02	5.859E-02	0.000E+00	NOT IDENT.
CO-56	1.124E-02	3.374E-02	6.020E-02	0.000E+00	NOT IDENT.
CO-57	-1.254E-02	2.236E-02	3.932E-02	0.000E+00	NOT IDENT.
CO-58	-2.265E-02	3.525E-02	5.802E-02	0.000E+00	NOT IDENT.
FE-59	2.454E-02	8.791E-02	1.522E-01	0.000E+00	NOT IDENT.
CO-60	-4.829E-02	3.936E-02	5.474E-02	0.000E+00	NOT IDENT.
ZN-65	6.681E-02	9.275E-02	1.479E-01	0.000E+00	NOT IDENT.
GE-68	2.099E-02	1.218E+00	2.066E+00	0.000E+00	NOT IDENT.
AS-73	-1.053E+00	9.851E-01	1.591E+00	0.000E+00	NOT IDENT.
AS-74	2.193E-02	8.473E-02	1.466E-01	0.000E+00	NOT IDENT.
SE-75	4.788E-03	3.989E-02	6.713E-02	0.000E+00	NOT IDENT.
BR-77	-4.753E+00	7.115E+00	1.164E+01	0.000E+00	FAIL ABUN
SR-82	-2.023E-01	3.601E-01	5.644E-01	0.000E+00	NOT IDENT.
RB-83	-4.073E-02	6.455E-02	1.059E-01	0.000E+00	NOT IDENT.
RB-84	2.425E-02	6.530E-02	1.162E-01	0.000E+00	NOT IDENT.
KR-85	7.778E+00	7.877E+00	1.286E+01	0.000E+00	NOT IDENT.
SR-85	3.942E-02	3.992E-02	6.519E-02	0.000E+00	NOT IDENT.
RB-86	2.148E-03	7.549E-01	1.279E+00	0.000E+00	NOT IDENT.
Y-88	-3.063E-03	2.639E-02	4.300E-02	0.000E+00	NOT IDENT.
ZR-88	-9.774E-03	2.763E-02	4.772E-02	0.000E+00	NOT IDENT.
Y-91	-1.155E+00	1.988E+01	3.311E+01	0.000E+00	NOT IDENT.
NB-94	-5.543E-04	3.389E-02	5.657E-02	0.000E+00	NOT IDENT.
NB-95	2.087E-02	4.505E-02	6.852E-02	0.000E+00	NOT IDENT.
NB-95M	5.485E-03	1.190E-01	1.824E-01	0.000E+00	NOT IDENT.
ZR-95	6.259E-02	6.910E-02	1.230E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.005E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.775E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.998E+00	8.072E+00	1.293E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.648E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.787E-02	2.947E-02	5.463E-02	0.000E+00	NOT IDENT.
RH-102	-1.553E-02	2.586E-02	4.292E-02	0.000E+00	NOT IDENT.
RU-103	9.613E-03	3.686E-02	6.478E-02	0.000E+00	FAIL ABUN
RH-106	5.101E-02	3.024E-01	5.182E-01	0.000E+00	FAIL ABUN
RU-106	5.101E-02	3.024E-01	5.182E-01	0.000E+00	FAIL ABUN
AG-108M	1.665E-02	2.896E-02	5.247E-02	0.000E+00	NOT IDENT.
AG-110M	-4.593E-03	3.208E-02	5.332E-02	0.000E+00	NOT IDENT.
IN-111	-3.141E-01	8.021E-01	1.185E+00	0.000E+00	NOT IDENT.
IN-113M	2.215E-03	4.102E-02	7.258E-02	0.000E+00	NOT IDENT.
SN-113	2.215E-03	4.102E-02	7.258E-02	0.000E+00	NOT IDENT.
IN-114M	6.501E-02	1.760E-01	2.802E-01	0.000E+00	NOT IDENT.
CD-115	-6.740E-01	6.618E+00	1.128E+01	0.000E+00	NOT IDENT.
SN-117M	-1.909E-03	4.669E-02	8.237E-02	0.000E+00	NOT IDENT.
SB-122	5.709E-01	1.469E+00	2.577E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.260E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-7.286E-04	2.516E-02	4.440E-02	0.000E+00	NOT IDENT.
I-124	-5.184E-01	5.921E-01	7.943E-01	0.000E+00	NOT IDENT.
SB-124	-2.799E-02	6.312E-02	9.555E-02	0.000E+00	FAIL ABUN
SB-125	5.431E-02	8.254E-02	1.503E-01	0.000E+00	FAIL ABUN
TE-125M	6.515E+00	8.111E+00	1.511E+01	0.000E+00	NOT IDENT.
I-126	-1.954E-01	1.572E-01	2.346E-01	0.000E+00	NOT IDENT.
SB-126	3.562E-02	1.330E-01	2.105E-01	0.000E+00	FAIL ABUN
SB-127	1.459E-01	1.009E+00	1.712E+00	0.000E+00	NOT IDENT.
XE-127	1.936E-04	4.181E-02	7.253E-02	0.000E+00	NOT IDENT.
I-131	5.320E-02	9.807E-02	1.790E-01	0.000E+00	NOT IDENT.
TE-132	1.218E-01	5.086E-01	8.834E-01	0.000E+00	NOT IDENT.
BA-133	-2.047E-02	4.305E-02	6.495E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.184E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	7.590E-02	8.808E-02	0.000E+00	FAIL ABUN
CS-135	1.110E-01	1.541E-01	2.447E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.749E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-2.311E-02	9.741E-02	1.618E-01	0.000E+00	FAIL ABUN
BA-137M	2.413E-02	3.168E-02	5.658E-02	0.000E+00	NOT IDENT.
CS-137	2.551E-02	3.349E-02	5.981E-02	0.000E+00	NOT IDENT.
CE-139	-4.529E-03	2.651E-02	4.635E-02	0.000E+00	NOT IDENT.
BA-140	1.559E-01	2.142E-01	3.779E-01	0.000E+00	NOT IDENT.
LA-140	-1.122E-01	6.986E-02	8.443E-02	0.000E+00	FAIL ABUN
CE-141	3.244E-02	5.373E-02	9.776E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.531E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.682E-01	1.891E-01	3.332E-01	0.000E+00	NOT IDENT.
PM-144	-6.615E-03	3.070E-02	5.037E-02	0.000E+00	NOT IDENT.
PR-144	-4.480E-01	2.079E+00	3.411E+00	0.000E+00	NOT IDENT.
PM-146	3.215E-03	3.852E-02	6.746E-02	0.000E+00	NOT IDENT.
ND-147	-1.020E-01	4.576E-01	7.718E-01	0.000E+00	FAIL ABUN

PM-149	-5.121E-01	6.090E-01	9.679E-01	0.000E+00	NOT IDENT.
NU-152	-6.669E-02	8.684E-02	1.426E-01	0.000E+00	NOT IDENT.
GD-153	-7.711E-02	7.943E-02	1.225E-01	0.000E+00	NOT IDENT.
EU-154	3.611E-02	1.253E-01	2.141E-01	0.000E+00	NOT IDENT.
EU-155	8.436E-02	9.518E-02	1.783E-01	0.000E+00	FAIL ABUN
TB-160	1.406E-01	1.254E-01	2.361E-01	0.000E+00	FAIL ABUN
HO-166M	-5.310E-03	5.724E-02	9.476E-02	0.000E+00	NOT IDENT.
TM-171	-7.681E+00	2.958E+01	4.932E+01	0.000E+00	NOT IDENT.
LU-176	-7.789E-03	2.255E-02	3.694E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.452E+00	1.711E+00	0.000E+00	FAIL ABUN
LU-177M	-1.939E-01	1.620E-01	2.630E-01	0.000E+00	FAIL ABUN
HF-181	-1.941E-02	3.833E-02	6.403E-02	0.000E+00	NOT IDENT.
W-181	-6.360E-01	4.067E-01	6.374E-01	0.000E+00	NOT IDENT.
TA-182	-1.791E-01	2.029E-01	3.132E-01	0.000E+00	FAIL ABUN
RE-183	5.040E-02	9.661E-02	1.740E-01	0.000E+00	FAIL ABUN
RE-184	1.649E-01	2.095E-01	3.718E-01	0.000E+00	NOT IDENT.
OS-185	1.052E-02	4.159E-02	7.147E-02	0.000E+00	NOT IDENT.
RE-188	9.932E-02	1.538E-01	2.790E-01	0.000E+00	NOT IDENT.
W-188	-4.573E+00	7.566E+00	1.077E+01	0.000E+00	NOT IDENT.
IR-192	-1.560E-02	3.094E-02	4.994E-02	0.000E+00	FAIL ABUN
AU-195	9.702E-02	2.025E-01	3.683E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.094E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.432E+00	4.788E+00	8.677E+00	0.000E+00	NOT IDENT.
TL-202	5.686E-02	5.933E-02	1.096E-01	0.000E+00	NOT IDENT.
HG-203	-4.172E-03	3.641E-02	6.111E-02	0.000E+00	NOT IDENT.
BI-207	-1.750E-03	5.164E-02	8.730E-02	0.000E+00	FAIL ABUN
TL-207	3.435E-02	6.775E-01	1.007E+00	0.000E+00	FAIL ABUN
PO-209	-7.894E-01	6.704E+00	1.144E+01	0.000E+00	NOT IDENT.
BI-210	3.855E+00	4.750E+00	8.301E+00	0.000E+00	NOT IDENT.
PB-210	3.855E+00	4.750E+00	8.301E+00	0.000E+00	NOT IDENT.
PO-210	3.855E+00	4.748E+00	8.301E+00	0.000E+00	NOT IDENT.
PB-211	1.774E-01	8.459E-01	1.494E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.354E-01	6.622E-01	0.000E+00	FAIL ABUN
PO-215	3.435E-02	6.775E-01	1.007E+00	0.000E+00	FAIL ABUN
RN-219	4.798E-02	3.780E-01	6.701E-01	0.000E+00	FAIL ABUN
RN-220	-2.679E+00	2.415E+01	4.099E+01	0.000E+00	NOT IDENT.
RA-223	3.435E-02	6.775E-01	1.007E+00	0.000E+00	FAIL ABUN
AC-227	-4.243E-01	3.513E-01	5.483E-01	0.000E+00	FAIL ABUN
TH-227	-4.243E-01	3.535E-01	5.483E-01	0.000E+00	FAIL ABUN
TH-229	-2.415E-02	4.665E-01	7.948E-01	0.000E+00	FAIL ABUN
PA-231	-4.544E-01	1.357E+00	2.239E+00	0.000E+00	FAIL ABUN
TH-231	3.435E-02	6.775E-01	1.007E+00	0.000E+00	FAIL ABUN
U-231	-4.731E-01	8.478E-01	1.355E+00	0.000E+00	FAIL ABUN
PA-233	-2.211E-03	6.148E-02	1.026E-01	0.000E+00	FAIL ABUN
PA-234	-6.651E-02	2.762E-01	4.631E-01	0.000E+00	FAIL ABUN
PA-234M	6.003E+00	1.002E+01	1.263E+01	0.000E+00	FAIL ABUN
TH-234	1.296E+00	1.446E+00	2.522E+00	0.000E+00	FAIL ABUN
U-235	1.447E-02	1.977E-01	3.463E-01	0.000E+00	FAIL ABUN
NP-236	-2.683E-03	7.099E-02	1.251E-01	0.000E+00	NOT IDENT.
U-238	1.296E+00	1.446E+00	2.522E+00	0.000E+00	FAIL ABUN
NP-239	-2.820E-03	1.699E-01	3.064E-01	0.000E+00	FAIL ABUN
AM-241	-9.827E-02	1.662E-01	2.741E-01	0.000E+00	NOT IDENT.
CM-243	-3.045E-02	8.538E-02	1.532E-01	0.000E+00	FAIL ABUN
CM-247	8.322E-03	3.329E-02	5.944E-02	0.000E+00	NOT IDENT.
CF-249	2.867E-02	3.825E-02	7.017E-02	0.000E+00	NOT IDENT.
CF-251	1.691E-02	1.160E-01	2.046E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:13:47.82

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358006.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:13:17.
Sample ID         : G232358006           Sample quantity  : 1.37440E+02 GRAM
Detector name     : GAM09                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.86  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1701	10.67*	1.143E+00	3.809E+01	3.809E+01	9.08
CD-109	88.03	267	3.72*	5.509E+00	3.561E+00	3.637E+00	33.01
SN-126	64.28	------	9.60	2.949E+00	------ Line Not Found		------
	86.94	267	8.90	5.509E+00	1.489E+00	1.489E+00	52.21
	87.57	267	37.00*	5.509E+00	3.580E-01	3.580E-01	33.01
TL-208	277.35	------	6.80	4.495E+00	------ Line Not Found		------
	510.84	125	21.60	2.831E+00	5.571E-01	5.571E-01	55.76
	583.14	440	84.20*	2.544E+00	5.610E-01	5.610E-01	15.93
	860.37	66	12.46	1.824E+00	7.922E-01	7.922E-01	53.31
BI-211	72.87	------	1.27	4.083E+00	------ Line Not Found		------
	351.07	701	12.94*	3.770E+00	3.927E+00	3.927E+00	12.92
PB-212	74.81	447	10.70	4.329E+00	2.633E+00	2.633E+00	22.80
	77.11	701	18.00	4.584E+00	2.322E+00	2.322E+00	14.49
	87.30	267	8.00	5.509E+00	1.656E+00	1.656E+00	34.49
	238.63	1481	44.60*	4.995E+00	1.816E+00	1.816E+00	9.54
	300.09	91	3.41	4.244E+00	1.708E+00	1.708E+00	64.44
PO-212	74.81	447	10.70	4.329E+00	2.633E+00	2.633E+00	22.80
	77.11	701	18.00	4.584E+00	2.322E+00	2.322E+00	14.49
	87.30	267	8.00	5.509E+00	1.656E+00	1.656E+00	34.49
	115.19	------	0.60	6.606E+00	------ Line Not Found		------
	238.63	1481	44.60*	4.995E+00	1.816E+00	1.816E+00	9.54
	300.09	91	3.41	4.244E+00	1.708E+00	1.708E+00	64.44
BI-214	609.31	537	46.30*	2.454E+00	1.291E+00	1.291E+00	15.62
	768.36	70	5.04	2.016E+00	1.882E+00	1.882E+00	42.90
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	138	15.10	1.437E+00	1.741E+00	1.741E+00	30.71
	1238.11	------	5.94	1.314E+00	------ Line Not Found		------
	1377.67	22	4.11	1.199E+00	1.211E+00	1.211E+00	106.88
	1764.49	95	15.80	9.996E-01	1.647E+00	1.647E+00	29.37
PB-214	74.81	447	6.21	4.329E+00	4.536E+00	4.536E+00	22.07
	77.11	701	10.50	4.584E+00	3.980E+00	3.980E+00	16.37
	87.30	267	4.67	5.509E+00	2.837E+00	2.837E+00	33.90

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	297	7.49	4.952E+00	2.187E+00	2.188E+00	26.59
	295.21	439	19.20	4.294E+00	1.454E+00	1.454E+00	17.20
	351.92	701	37.20*	3.770E+00	1.366E+00	1.366E+00	13.93
PO-214	74.81	447	6.21	4.329E+00	4.536E+00	4.536E+00	22.07
	77.11	701	10.50	4.584E+00	3.980E+00	3.980E+00	16.37
	87.30	267	4.67	5.509E+00	2.837E+00	2.837E+00	33.90
	241.98	297	7.49	4.952E+00	2.187E+00	2.188E+00	26.59
	295.21	439	19.20	4.294E+00	1.454E+00	1.454E+00	17.20
	351.92	701	37.20*	3.770E+00	1.366E+00	1.366E+00	13.93
PO-216	74.81	447	10.70	4.329E+00	2.633E+00	2.633E+00	22.80
	77.11	701	18.00	4.584E+00	2.322E+00	2.322E+00	14.49
	87.30	267	8.00	5.509E+00	1.656E+00	1.656E+00	34.49
	238.63	1481	44.60*	4.995E+00	1.816E+00	1.816E+00	9.54
	300.09	91	3.41	4.244E+00	1.708E+00	1.708E+00	64.44
PO-218	74.81	447	6.21	4.329E+00	4.536E+00	4.536E+00	22.07
	77.11	701	10.50	4.584E+00	3.980E+00	3.980E+00	16.37
	87.30	267	4.67	5.509E+00	2.837E+00	2.837E+00	33.90
	241.98	297	7.49	4.952E+00	2.187E+00	2.188E+00	26.59
	295.21	439	19.20	4.294E+00	1.454E+00	1.454E+00	17.20
	351.92	701	37.20*	3.770E+00	1.366E+00	1.366E+00	13.93
RA-224	240.98	297	3.95*	4.952E+00	4.148E+00	4.148E+00	25.99
RA-226	609.31	537	46.30*	2.454E+00	1.291E+00	1.291E+00	15.62
	768.36	70	5.04	2.016E+00	1.882E+00	1.882E+00	42.90
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	138	15.10	1.437E+00	1.741E+00	1.741E+00	30.71
	1238.11	------	5.94	1.314E+00	------ Line Not Found		------
	1377.67	22	4.11	1.199E+00	1.211E+00	1.211E+00	106.88
	1764.49	95	15.80	9.996E-01	1.647E+00	1.647E+00	29.37
AC-228	338.32	266	11.40	3.883E+00	1.638E+00	1.638E+00	48.89
	911.07	317	27.70*	1.733E+00	1.805E+00	1.805E+00	19.57
	969.11	141	16.60	1.639E+00	1.413E+00	1.413E+00	50.31
RA-228	338.32	266	11.40	3.883E+00	1.638E+00	1.638E+00	48.89
	911.07	317	27.70*	1.733E+00	1.805E+00	1.805E+00	19.57
	969.11	141	16.60	1.639E+00	1.413E+00	1.413E+00	50.31
TH-228	84.40	------	1.21	5.277E+00	------ Line Not Found		------
	238.60	1481	44.60*	4.995E+00	1.816E+00	1.816E+00	9.54
	300.10	91	3.41	4.244E+00	1.708E+00	1.708E+00	86.94
TH-230	609.31	537	46.30*	2.454E+00	1.291E+00	1.291E+00	15.62
	768.36	70	5.04	2.016E+00	1.882E+00	1.882E+00	42.90
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	138	15.10	1.437E+00	1.741E+00	1.741E+00	30.71
	1238.11	------	5.94	1.314E+00	------ Line Not Found		------
	1377.67	22	4.11	1.199E+00	1.211E+00	1.211E+00	106.88
	1764.49	95	15.80	9.996E-01	1.647E+00	1.647E+00	29.37
TH-232	338.32	266	11.40	3.883E+00	1.638E+00	1.638E+00	27.61
	911.07	317	27.70*	1.733E+00	1.805E+00	1.805E+00	19.57
	969.11	141	16.60	1.639E+00	1.413E+00	1.413E+00	50.31
U-234	609.31	537	46.30*	2.454E+00	1.291E+00	1.291E+00	15.62
	768.36	70	5.04	2.016E+00	1.882E+00	1.882E+00	42.90

Nuclide Type:

Nuclide	Energy	Area	%Abr	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	138	15.10	1.437E+00	1.741E+00	1.741E+00	30.71
	1238.11	------	5.94	1.314E+00	------ Line Not Found		------
	1377.67	22	4.11	1.199E+00	1.211E+00	1.211E+00	106.88
	1764.49	95	15.80	9.996E-01	1.647E+00	1.647E+00	29.37
NP-237	86.50	267	12.60*	5.509E+00	1.051E+00	1.051E+00	38.93
	95.87	------	2.60	6.046E+00	------ Line Not Found		------
AM-243	74.67	447	66.00*	4.329E+00	4.268E-01	4.268E-01	20.79
	86.72	267	0.34	5.509E+00	3.943E+01	3.943E+01	33.01
	117.66	------	0.55	6.630E+00	------ Line Not Found		------
	142.18	------	0.13	6.551E+00	------ Line Not Found		------
ANH-511	511.00	125	100.00*	2.831E+00	1.203E-01	1.203E-01	55.13

Flag: "*" = Keyline

Sample ID : G232358006 Acquisition date : 6-JUL-2009 12:13:17

Total number of lines in spectrum 34
Number of unidentified lines 3
Number of lines tentatively identified by NID 31 91.18%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.809E+01	3.809E+01	0.346E+01	9.08	
CD-109	464.00D	1.00	3.561E+00	3.637E+00	1.201E+00	33.01	
SN-126	1.00E+05Y	1.00	3.580E-01	3.580E-01	1.182E-01	33.01	
TL-208	1.41E+10Y	1.00	5.610E-01	5.610E-01	0.894E-01	15.93	
BI-211	7.04E+08Y	1.00	3.927E+00	3.927E+00	0.507E+00	12.92	
PB-212	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.173E+00	9.54	
PO-212	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.173E+00	9.54	
BI-214	1600.00Y	1.00	1.291E+00	1.291E+00	0.202E+00	15.62	
PB-214	1600.00Y	1.00	1.366E+00	1.366E+00	0.190E+00	13.93	
PO-214	1600.00Y	1.00	1.366E+00	1.366E+00	0.190E+00	13.93	
PO-216	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.173E+00	9.54	
PO-218	1600.00Y	1.00	1.366E+00	1.366E+00	0.190E+00	13.93	
RA-224	1.41E+10Y	1.00	4.148E+00	4.148E+00	1.078E+00	25.99	
RA-226	1600.00Y	1.00	1.291E+00	1.291E+00	0.202E+00	15.62	
AC-228	1.41E+10Y	1.00	1.805E+00	1.805E+00	0.353E+00	19.57	
RA-228	1.41E+10Y	1.00	1.805E+00	1.805E+00	0.353E+00	19.57	
TH-228	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.173E+00	9.54	
TH-230	4.47E+09Y	1.00	1.291E+00	1.291E+00	0.202E+00	15.62	
TH-232	1.41E+10Y	1.00	1.805E+00	1.805E+00	0.353E+00	19.57	
U-234	4.47E+09Y	1.00	1.291E+00	1.291E+00	0.202E+00	15.62	
NP-237	2.14E+06Y	1.00	1.051E+00	1.051E+00	0.409E+00	38.93	
AM-243	7380.00Y	1.00	4.268E-01	4.268E-01	0.887E-01	20.79	
ANH-511	1.00E+09Y	1.00	1.203E-01	1.203E-01	0.663E-01	55.13	
			---	---			
	Total Activity :		7.418E+01	7.426E+01			

Grand Total Activity : 7.418E+01 7.426E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : 1237358006 Acquisition date : 6-JUN-2009 12:13:17

Id	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	90.21	124	387	1.02	179.37	170	20	1.73E-02	53.0	5.72E+00	T
4	92.86	260	495	1.26	184.68	170	20	3.61E-02	34.3	5.88E+00	T
0	128.99	101	371	1.38	256.90	253	8	1.41E-02	69.0	6.65E+00	T
0	186.25	219	438	1.48	371.40	367	11	3.04E-02	41.0	5.85E+00	T
0	209.62	119	375	1.20	418.14	413	10	1.65E-02	63.7	5.45E+00	T
0	270.07	118	184	1.22	539.00	535	8	1.64E-02	43.9	4.58E+00	T
0	328.16	87	235	1.03	655.16	649	12	1.13E-02	78.4	3.97E+00	T
0	463.32	114	132	1.39	925.48	921	12	1.59E-02	44.0	3.06E+00	T
0	727.64	104	104	1.85	1454.19	1447	15	1.44E-02	47.4	2.11E+00	T
0	795.85	50	82	1.44	1590.64	1585	14	6.93E-03	83.9	1.95E+00	T
0	1002.31	27	70	0.59	2003.72	1997	12	2.86E-03	****	1.59E+00	T
0	1631.39	31	7	1.36	3262.81	3255	13	4.32E-03	49.4	1.05E+00	
0	1730.20	19	15	0.81	3460.64	3453	12	2.68E-03	92.3	1.01E+00	
0	1848.79	7	14	0.72	3698.10	3689	11	1.02E-03	****	9.74E-01	

Flags: "T" Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:13:54.01

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]C232358006.CNF;1 *
* Acquisition date  : 6-JUL-2009 12:13:17.  Detector SN#     :             *
* Detector ID       : GAM09                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.86          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232358006            Analyst Initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.37440E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 10:48:05.3MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.809E+01	3.460E+00	4.128E-01	3.097E-02	92.279
CD-109	3.637E+00	1.201E+00	1.194E+00	9.863E-02	3.046
SN-126	3.580E-01	1.182E-01	1.182E-01	9.731E-03	3.029
TL-208	5.610E-01	8.937E-02	5.406E-02	3.825E-03	10.378
BI-211	3.927E+00	5.073E-01	3.036E-01	1.929E-02	12.934
PB-212	1.816E+00	1.732E-01	8.200E-02	5.907E-03	22.144
PO-212	1.816E+00	1.732E-01	8.200E-02	5.907E-03	22.144
BI-214	1.291E+00	2.016E-01	9.190E-02	7.492E-03	14.045
PB-214	1.366E+00	1.903E-01	1.070E-01	8.794E-03	12.766
PO-214	1.366E+00	1.903E-01	1.070E-01	8.794E-03	12.766
PO-216	1.816E+00	1.732E-01	8.200E-02	5.907E-03	22.144
PO-218	1.366E+00	1.903E-01	1.070E-01	8.794E-03	12.766
RA-224	4.148E+00	1.078E+00	9.332E-01	5.272E-02	4.445
RA-226	1.291E+00	2.016E-01	9.190E-02	7.492E-03	14.045
AC-228	1.805E+00	3.534E-01	2.089E-01	2.444E-02	8.641
RA-228	1.805E+00	3.534E-01	2.089E-01	2.444E-02	8.641
TH-228	1.816E+00	1.732E-01	8.199E-02	5.907E-03	22.147
TH-230	1.291E+00	2.016E-01	9.190E-02	7.492E-03	14.045

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.805E+00	3.534E-01	2.089E-01	2.444E-02	8.641
U-234	1.291E+00	2.016E-01	9.190E-02	7.492E-03	14.045
NP-237	1.051E+00	4.093E-01	3.849E-01	8.539E-02	2.732
AM-243	4.268E-01	8.875E-02	8.829E-02	6.586E-03	4.834
ANH-511	1.203E-01	6.634E-02	4.482E-02	2.714E-03	2.685

---- Non Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	6.745E-02		2.930E-01	4.931E-01	3.386E-02	0.137
NA-22	1.215E-02		4.566E-02	7.594E-02	5.090E-03	0.160
NA-24	-3.857E-02		1.030E-01	Half-Life too short		
AL-26	-1.169E-02		2.340E-02	3.361E-02	1.967E-03	-0.348
TI-44	4.284E-01	+	6.208E-02	7.608E-02	5.807E-03	5.631
SC-46	-1.343E-02		3.769E-02	6.114E-02	5.629E-03	-0.220
V-48	-4.289E-03		6.665E-02	1.098E-01	9.254E-03	-0.039
CR-51	4.020E-02		3.385E-01	5.402E-01	3.481E-02	0.074
MN-52	5.978E-02		1.872E-01	3.271E-01	2.379E-02	0.183
MN-54	-2.364E-03		3.461E-02	5.777E-02	4.897E-03	-0.041
CO-56	1.124E-02		3.443E-02	5.937E-02	5.126E-03	0.189
CO-57	-1.254E-02		2.282E-02	3.738E-02	2.231E-03	-0.335
CO-58	-2.265E-02		3.597E-02	5.718E-02	4.680E-03	-0.396
FE-59	2.454E-02		8.971E-02	1.509E-01	1.155E-02	0.163
CO-60	-4.829E-02		4.017E-02	5.448E-02	4.046E-03	-0.886
ZN-65	6.681E-02		9.465E-02	1.467E-01	9.575E-03	0.455
GE-68	2.099E-02		1.243E+00	2.048E+00	1.461E-01	0.010
AS-73	-1.053E+00		1.005E+00	1.490E+00	1.100E-01	-0.707
AS-74	2.193E-02		8.646E-02	1.436E-01	9.004E-03	0.153
SE-75	4.788E-03		4.070E-02	6.474E-02	3.751E-03	0.074
BR-77	-4.753E+00		7.260E+00	1.137E+01	6.919E-01	-0.418
SR-82	-2.023E-01		3.675E-01	5.557E-01	4.293E-02	-0.364
RB-83	-4.073E-02		6.587E-02	1.035E-01	6.296E-03	-0.394
RB-84	2.425E-02		6.664E-02	1.147E-01	1.044E-02	0.211
KR-85	7.778E+00		8.038E+00	1.256E+01	7.619E-01	0.619
SR-85	3.942E-02		4.073E-02	6.367E-02	3.861E-03	0.619
RB-86	2.148E-03		7.703E-01	1.267E+00	9.055E-02	0.002
Y-88	-3.063E-03		2.693E-02	4.307E-02	2.462E-03	-0.071
ZR-88	-9.774E-03		2.820E-02	4.636E-02	2.561E-03	-0.211
Y-91	-1.155E+00		2.028E+01	3.289E+01	1.922E+00	-0.035
NB-94	-5.543E-04		3.459E-02	5.559E-02	3.793E-03	-0.010
NB-95	2.087E-02		4.597E-02	6.745E-02	5.120E-03	0.309
NB-95M	5.485E-03		1.215E-01	1.755E-01	1.298E-02	0.031
ZR-95	6.259E-02		7.051E-02	1.211E-01	1.025E-02	0.517
NB-97	-5.789E-03		1.533E-02	Half-Life too short		
ZR-97	5.213E-01		2.947E-01	Half-Life too short		
MO-99	-2.998E+00		8.236E+00	1.272E+01	1.839E+00	-0.236
TC-99M	-6.189E+07		8.410E+08	Half-Life too short		

--- Non-Identified Nuclides ---

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101	4.787E-02		3.008E-02	5.240E-02	2.839E-03	0.914
RH-102	-1.553E-02		2.639E-02	4.185E-02	2.479E-03	-0.371
RU-103	9.613E-03		3.761E-02	6.323E-02	8.056E-03	0.152
RH-106	5.101E-02		3.086E-01	5.080E-01	6.095E-02	0.100
RU-106	5.101E-02		3.086E-01	5.080E-01	3.205E-02	0.100
AG-108M	1.665E-02		2.955E-02	5.108E-02	3.189E-03	0.326
AG-110M	-4.593E-03		3.274E-02	5.233E-02	3.500E-03	-0.088
IN-111	-3.141E-01		8.184E-01	1.142E+00	6.470E-02	-0.275
IN-113M	2.215E-03		4.186E-02	7.052E-02	4.178E-03	0.031
SN-113	2.215E-03		4.186E-02	7.052E-02	4.178E-03	0.031
IN-114M	6.501E-02		1.796E-01	2.686E-01	1.443E-02	0.242
CD-115	-6.740E-01		6.753E+00	1.102E+01	6.732E-01	-0.061
SN-117M	-1.909E-03		4.765E-02	7.868E-02	4.189E-03	-0.024
SB-122	5.709E-01		1.499E+00	2.522E+00	1.565E-01	0.226
I-123	-3.648E-02		6.427E-01	Half-Life too short		
TE-123M	-7.286E-04		2.568E-02	4.241E-02	2.291E-03	-0.017
I-124	-5.184E-01		6.042E-01	7.782E-01	4.888E-02	-0.666
SB-124	-2.799E-02		6.441E-02	9.555E-02	6.578E-03	-0.293
SB-125	5.431E-02		8.422E-02	1.463E-01	8.718E-03	0.371
TE-125M	6.515E+00		8.276E+00	1.433E+01	1.232E+00	0.455
I-126	-1.954E-01		1.605E-01	2.303E-01	1.473E-02	-0.849
SB-126	3.562E-02		1.357E-01	2.069E-01	1.456E-02	0.172
SB-127	1.459E-01		1.030E+00	1.682E+00	1.613E-01	0.087
XE-127	1.936E-04		4.266E-02	6.960E-02	3.791E-03	0.003
I-131	5.320E-02		1.001E-01	1.737E-01	1.101E-02	0.306
TE-132	1.218E-01		5.190E-01	8.496E-01	1.195E-01	0.143
BA-133	-2.047E-02		4.393E-02	6.299E-02	7.249E-03	-0.325
I-133	-8.146E-04		1.114E-03	Half-Life too short		
CS-134	9.185E-02	+	7.745E-02	8.676E-02	6.974E-03	1.059
CS-135	1.110E-01		1.572E-01	2.360E-01	1.797E-02	0.470
I-135	-3.517E+07		1.913E+08	Half-Life too short		
CS-136	-2.311E-02		9.940E-02	1.602E-01	1.280E-02	-0.144
BA-137M	2.413E-02		3.233E-02	5.553E-02	3.524E-03	0.435
CS-137	2.551E-02		3.417E-02	5.870E-02	3.738E-03	0.435
CE-139	-4.529E-03		2.705E-02	4.431E-02	2.321E-03	-0.102
BA-140	1.559E-01		2.185E-01	3.695E-01	1.204E-01	0.422
LA-140	-1.122E-01		7.129E-02	8.433E-02	5.748E-03	-1.330
CE-141	3.244E-02		5.483E-02	9.324E-02	5.353E-03	0.348
CE-143	1.511E-04		4.353E-05	Half-Life too short		
CE-144	1.682E-01		1.929E-01	3.173E-01	4.492E-02	0.530
PM-144	-6.615E-03		3.132E-02	4.949E-02	3.342E-03	-0.134
PR-144	-4.480E-01		2.121E+00	3.351E+00	2.262E-01	-0.134
PM-146	3.215E-03		3.930E-02	6.573E-02	5.682E-03	0.049
ND-147	-1.020E-01		4.670E-01	7.543E-01	1.030E-01	-0.135
PM-149	-5.121E+01		6.214E+01	9.348E+01	1.324E+01	-0.548
EU-152	-6.669E-02		8.861E-02	1.382E-01	8.956E-03	-0.482
GD-153	-7.711E-02		8.105E-02	1.160E-01	8.375E-03	-0.665
EU-154	3.611E-02		1.279E-01	2.129E-01	2.112E-02	0.170

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	8.436E-02		9.712E-02	1.690E-01	1.150E-02	0.499
TB-160	1.406E-01		1.279E-01	2.330E-01	2.114E-02	0.603
HO-166M	-5.310E-03		5.840E-02	9.314E-02	6.455E-03	-0.057
TM-171	-7.681E+00		3.018E+01	4.638E+01	3.353E+00	-0.166
LU-176	-7.789E-03		2.301E-02	3.572E-02	2.068E-03	-0.218
LU-177	2.316E+00	+	1.482E+00	1.642E+00	9.000E-02	1.410
LU-177M	-1.939E-01		1.653E-01	2.558E-01	1.443E-02	-0.758
HF-181	-1.941E-02		3.911E-02	6.246E-02	3.717E-03	-0.311
W-181	-6.360E-01		4.150E-01	5.991E-01	4.317E-02	-1.062
TA-182	-1.791E-01		2.070E-01	3.111E-01	1.880E-02	-0.576
RE-183	5.040E-02		9.858E-02	1.663E-01	8.777E-03	0.303
RE-184	1.649E-01		2.138E-01	3.583E-01	2.041E-02	0.460
OS-185	1.052E-02		4.244E-02	7.011E-02	4.441E-03	0.150
RE-188	9.932E-02		1.570E-01	2.664E-01	1.430E-02	0.373
W-188	-4.573E+00		7.721E+00	1.041E+01	6.019E-01	-0.439
IR-192	-1.560E-02		3.158E-02	4.832E-02	2.809E-03	-0.323
AU-195	9.702E-02		2.066E-01	3.488E-01	2.478E-02	0.278
TL-200	-1.055E-04		1.068E-04	Half-Life too short		
TL-201	3.432E+00		4.886E+00	8.297E+00	4.349E-01	0.414
TL-202	5.686E-02		6.054E-02	1.067E-01	6.157E-03	0.533
HG-203	-4.172E-03		3.715E-02	5.899E-02	3.615E-03	-0.071
BI-207	-1.750E-03		5.270E-02	8.649E-02	6.353E-03	-0.020
TL-207	3.435E-02		6.913E-01	9.753E-01	1.610E-01	0.035
PO-209	-7.894E-01		6.841E+00	1.130E+01	1.051E+00	-0.070
BI-210	3.855E+00		4.847E+00	7.756E+00	5.936E-01	0.497
PB-210	3.855E+00		4.847E+00	7.756E+00	5.936E-01	0.497
PO-210	3.855E+00		4.844E+00	7.756E+00	5.084E-01	0.497
PB-211	1.774E-01		8.631E-01	1.453E+00	9.052E-01	0.122
BI-212	1.134E+00	+	5.464E-01	6.512E-01	5.696E-02	1.742
PO-215	3.435E-02		6.913E-01	9.753E-01	1.610E-01	0.035
RN-219	4.798E-02		3.857E-01	6.514E-01	8.801E-02	0.074
RN-220	-2.679E+00		2.465E+01	4.009E+01	2.473E+00	-0.067
RA-223	3.435E-02		6.913E-01	9.753E-01	1.610E-01	0.035
AC-227	-4.243E-01		3.584E-01	5.285E-01	7.358E-02	-0.803
TH-227	-4.243E-01		3.607E-01	5.285E-01	8.914E-02	-0.803
TH-229	-2.415E-02		4.760E-01	7.620E-01	4.109E-02	-0.032
PA-231	-4.544E-01		1.385E+00	2.162E+00	2.977E-01	-0.210
TH-231	3.435E-02		6.913E-01	9.753E-01	1.610E-01	0.035
U-231	-4.731E-01		8.651E-01	1.283E+00	9.440E-02	-0.369
PA-233	-2.211E-03		6.274E-02	9.929E-02	6.104E-03	-0.022
PA-234	-6.651E-02		2.819E-01	4.578E-01	8.639E-02	-0.145
PA-234M	6.003E+00	+	1.022E+01	1.250E+01	1.359E+00	0.480
TH-234	1.296E+00		1.475E+00	2.369E+00	4.109E-01	0.547
U-235	1.447E-02		2.017E-01	3.302E-01	5.351E-02	0.044
NP-236	-2.683E-03		7.244E-02	1.195E-01	6.339E-03	-0.022
U-238	1.296E+00		1.475E+00	2.369E+00	4.109E-01	0.547
NP-239	-2.820E-03		1.734E-01	2.910E-01	1.782E-02	-0.010
AM-241	-9.827E-02		1.696E-01	2.572E-01	2.024E-02	-0.382

Sample ID : G232358006 Acquisition date : 6-JUN-2009 12:13:17

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Idod	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.045E-02		8.712E-02	1.452E-01	9.812E-03	-0.210
CM-247	8.322E-03		3.397E-02	5.778E-02	3.224E-03	0.144
CF-249	2.867E-02		3.903E-02	6.816E-02	3.776E-03	0.421
CF-251	1.691E-02		1.184E-01	1.958E-01	1.036E-02	0.086

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          CEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYSSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G232L58006           *
* Acquisition date  :  6-OCT-2009 12:13:17 Detector SN#     :               *
* Detector ID       : CAM09                 Sensitivity     : 5.000         *
* Geometry          : CAN                   Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.86       Half life ratio : 8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232358006           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.3744E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 10:48:05 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.809E+01	3.391E+00	2.071E-01	1.730E+00
CD-109	3.637E+00	1.177E+00	6.322E-01	6.003E-01
SN-126	3.580E-01	1.158E-01	6.260E-02	5.910E-02
TL-208	5.610E-01	8.758E-02	2.762E-02	4.468E-02
BI-211	3.927E+00	4.972E-01	1.566E-01	2.537E-01
PB-212	1.816E+00	1.697E-01	4.262E-02	8.659E-02
PO-212	1.816E+00	1.697E-01	4.262E-02	8.659E-02
BI-214	1.291E+00	1.976E-01	4.692E-02	1.008E-01
PB-214	1.366E+00	1.865E-01	5.521E-02	9.516E-02
PO-214	1.366E+00	1.865E-01	5.521E-02	9.516E-02
PO-216	1.816E+00	1.697E-01	4.262E-02	8.659E-02
PO-218	1.366E+00	1.865E-01	5.521E-02	9.516E-02
RA-224	4.148E+00	1.057E+00	4.850E-01	5.391E-01
RA-226	1.291E+00	1.976E-01	4.692E-02	1.008E-01
AC-228	1.805E+00	3.463E-01	1.058E-01	1.767E-01
RA-228	1.805E+00	3.463E-01	1.058E-01	1.767E-01
TH-228	1.816E+00	1.697E-01	4.262E-02	8.659E-02
TH-230	1.291E+00	1.976E-01	4.692E-02	1.008E-01
TH-232	1.805E+00	3.463E-01	1.058E-01	1.767E-01
U-234	1.291E+00	1.976E-01	4.692E-02	1.008E-01
NP-237	1.051E+00	4.011E-01	2.038E-01	2.047E-01
AM-243	4.268E-01	8.697E-02	4.688E-02	4.437E-02
ANH-511	1.203E-01	6.502E-02	2.296E-02	3.317E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	6.745E-02	2.871E-01	2.530E-01	1.465E-01	NOT IDENT.
NA-22	1.215E-02	4.475E-02	3.821E-02	2.283E-02	NOT IDENT.
NA-24	-3.857E+04	2.019E+05	0.000E+00	1.030E+05	SHORT HLIF
AL-26	-1.169E-02	2.293E-02	1.679E-02	1.170E-02	NOT IDENT.

TI-44	4.284E-01	6.083E-02	4.036E-02	3.104E-02	FAIL ABUN
SC-46	-1.343E-02	3.694E-02	3.099E-02	1.885E-02	FAIL ABUN
V-48	-4.289E-03	6.532E-02	5.553E-02	3.332E-02	NOT IDENT.
CR-51	4.020E-02	3.317E-01	2.792E-01	1.693E-01	NOT IDENT.
MN-52	5.978E-02	1.835E-01	1.642E-01	9.360E-02	NOT IDENT.
MN-54	-2.364E-03	3.391E-02	2.931E-02	1.730E-02	NOT IDENT.
CO-56	1.124E-02	3.374E-02	3.012E-02	1.722E-02	NOT IDENT.
CO-57	-1.254E-02	2.236E-02	1.967E-02	1.141E-02	NOT IDENT.
CO-58	-2.265E-02	3.525E-02	2.903E-02	1.798E-02	NOT IDENT.
FE-59	2.454E-02	8.791E-02	7.616E-02	4.485E-02	NOT IDENT.
CO-60	-4.829E-02	3.936E-02	2.739E-02	2.008E-02	NOT IDENT.
ZN-65	6.681E-02	9.275E-02	7.401E-02	4.732E-02	NOT IDENT.
GE-68	2.099E-02	1.218E-00	1.034E+00	6.216E-01	NOT IDENT.
AS-73	-1.053E+00	9.851E-01	7.959E-01	5.026E-01	NOT IDENT.
AS-74	2.193E-02	8.473E-02	7.336E-02	4.323E-02	NOT IDENT.
SE-75	4.788E-03	3.989E-02	3.358E-02	2.035E-02	NOT IDENT.
BR-77	-4.753E+00	7.115E+00	5.822E+00	3.630E+00	FAIL ABUN
SR-82	-2.023E-01	3.601E-01	2.824E-01	1.837E-01	NOT IDENT.
RB-83	-4.073E-02	6.455E-02	5.299E-02	3.293E-02	NOT IDENT.
RB-84	2.425E-02	6.530E-02	5.815E-02	3.332E-02	NOT IDENT.
KR-85	7.778E+00	7.877E+00	6.435E+00	4.019E+00	NOT IDENT.
SR-85	3.942E-02	3.992E-02	3.261E-02	2.037E-02	NOT IDENT.
RB-86	2.148E-03	7.549E-01	6.397E-01	3.851E-01	NOT IDENT.
Y-88	-3.063E-03	2.639E-02	2.151E-02	1.347E-02	NOT IDENT.
ZR-88	-9.774E-03	2.763E-02	2.387E-02	1.410E-02	NOT IDENT.
Y-91	-1.155E+00	1.988E+01	1.657E+01	1.014E+01	NOT IDENT.
NB-94	-5.543E-04	3.389E-02	2.830E-02	1.729E-02	NOT IDENT.
NB-95	2.087E-02	4.505E-02	3.428E-02	2.298E-02	NOT IDENT.
NB-95M	5.485E-03	1.190E-01	9.124E-02	6.073E-02	NOT IDENT.
ZR-95	6.259E-02	6.910E-02	6.155E-02	3.526E-02	NOT IDENT.
NB-97	-5.789E+03	3.005E+04	0.000E+00	1.533E+04	SHORT HLIF
ZR-97	5.213E+05	5.775E+05	0.000E+00	2.947E+05	SHORT HLIF
MO-99	-2.998E+00	8.072E+00	6.468E+00	4.118E+00	NOT IDENT.
TC-99M	-6.189E+13	1.648E+15	0.000E+00	8.410E+14	SHORT HLIF
RH-101	4.787E-02	2.947E-02	2.733E-02	1.504E-02	NOT IDENT.
RH-102	-1.553E-02	2.586E-02	2.147E-02	1.319E-02	NOT IDENT.
RU-103	9.613E-03	3.686E-02	3.241E-02	1.881E-02	FAIL ABUN
RH-106	5.101E-02	3.024E-01	2.593E-01	1.543E-01	FAIL ABUN
RU-106	5.101E-02	3.024E-01	2.593E-01	1.543E-01	FAIL ABUN
AG-108M	1.665E-02	2.896E-02	2.625E-02	1.477E-02	NOT IDENT.
AG-110M	-4.593E-03	3.208E-02	2.668E-02	1.637E-02	NOT IDENT.
IN-111	-3.141E-01	8.021E-01	5.931E-01	4.092E-01	NOT IDENT.
IN-113M	2.215E-03	4.102E-02	3.631E-02	2.093E-02	NOT IDENT.
SN-113	2.215E-03	4.102E-02	3.631E-02	2.093E-02	NOT IDENT.
IN-114M	6.501E-02	1.760E-01	1.402E-01	8.981E-02	NOT IDENT.
CD-115	-6.740E-01	6.618E+00	5.642E+00	3.376E+00	NOT IDENT.
SN-117M	-1.909E-03	4.669E-02	4.121E-02	2.382E-02	NOT IDENT.
SB-122	5.709E-01	1.469E+00	1.289E+00	7.495E-01	NOT IDENT.
I-123	-3.648E+04	1.260E+06	0.000E+00	6.427E+05	SHORT HLIF
TE-123M	-7.286E-04	2.516E-02	2.221E-02	1.284E-02	NOT IDENT.
I-124	-5.184E-01	5.921E-01	3.974E-01	3.021E-01	NOT IDENT.
SB-124	-2.799E-02	6.312E-02	4.780E-02	3.220E-02	FAIL ABUN
SB-125	5.431E-02	8.254E-02	7.519E-02	4.211E-02	FAIL ABUN
TE-125M	6.515E+00	8.111E+00	7.558E+00	4.138E+00	NOT IDENT.
I-126	-1.954E-01	1.572E-01	1.173E-01	8.023E-02	NOT IDENT.
SB-126	3.562E-02	1.330E-01	1.053E-01	6.784E-02	FAIL ABUN
SB-127	1.459E-01	1.009E+00	8.567E-01	5.150E-01	NOT IDENT.
XE-127	1.936E-04	4.181E-02	3.629E-02	2.133E-02	NOT IDENT.
I-131	5.320E-02	9.807E-02	8.956E-02	5.004E-02	NOT IDENT.
TE-132	1.218E-01	5.086E-01	4.420E-01	2.595E-01	NOT IDENT.
BA-133	-2.047E-02	4.305E-02	3.250E-02	2.197E-02	NOT IDENT.
I-133	-8.146E+02	2.184E+03	0.000E+00	1.114E+03	SHORT HLIF
CS-134	9.185E-02	7.590E-02	4.407E-02	3.873E-02	FAIL ABUN
CS-135	1.110E-01	1.541E-01	1.224E-01	7.862E-02	NOT IDENT.
I-135	-3.517E+13	3.749E+14	0.000E+00	1.913E+14	SHORT HLIF
CS-136	-2.311E-02	9.741E-02	8.092E-02	4.970E-02	FAIL ABUN
BA-137M	2.413E-02	3.168E-02	2.831E-02	1.616E-02	NOT IDENT.
CS-137	2.551E-02	3.349E-02	2.992E-02	1.709E-02	NOT IDENT.
CE-139	-4.529E-03	2.651E-02	2.319E-02	1.353E-02	NOT IDENT.
BA-140	1.559E-01	2.142E-01	1.891E-01	1.093E-01	NOT IDENT.
LA-140	-1.122E-01	6.986E-02	4.224E-02	3.564E-02	FAIL ABUN
CE-141	3.244E-02	5.373E-02	4.891E-02	2.742E-02	NOT IDENT.
CE-143	1.511E+02	8.531E+01	0.000E+00	4.353E+01	SHORT HLIF
CE-144	1.682E-01	1.891E-01	1.667E-01	9.646E-02	NOT IDENT.
PM-144	-6.615E-03	3.070E-02	2.520E-02	1.566E-02	NOT IDENT.
PR-144	-4.480E-01	2.079E+00	1.707E+00	1.061E+00	NOT IDENT.
PM-146	3.215E-03	3.852E-02	3.375E-02	1.965E-02	NOT IDENT.
ND-147	-1.020E-01	4.576E-01	3.861E-01	2.335E-01	FAIL ABUN

PM-149	-5.121E-01	6.090E-01	4.842E-01	3.107E-01	NOT IDENT.
EU-152	-6.669E-02	8.684E-02	7.135E-02	4.430E-02	NOT IDENT.
GD-153	-7.711E-02	7.943E-02	6.128E-02	4.053E-02	NOT IDENT.
EU-154	3.611E-02	1.253E-01	1.071E-01	6.393E-02	NOT IDENT.
EU-155	8.436E-02	9.518E-02	8.920E-02	4.856E-02	FAIL ABUN
TB-160	1.406E-01	1.254E-01	1.181E-01	6.397E-02	FAIL ABUN
HO-166M	-5.310E-03	5.724E-02	4.741E-02	2.920E-02	NOT IDENT.
TM-171	-7.681E+00	2.958E+01	2.468E+01	1.509E+01	NOT IDENT.
LU-176	-7.789E-03	2.255E-02	1.848E-02	1.150E-02	FAIL ABUN
LU-177	2.316E+00	1.452E+00	8.558E-01	7.408E-01	FAIL ABUN
LU-177M	-1.939E-01	1.620E-01	1.316E-01	8.263E-02	FAIL ABUN
HF-181	-1.941E-02	3.833E-02	3.204E-02	1.955E-02	NOT IDENT.
W-181	-6.360E-01	4.067E-01	3.189E-01	2.075E-01	NOT IDENT.
TA-182	-1.791E-01	2.029E-01	1.567E-01	1.035E-01	FAIL ABUN
RE-183	5.040E-02	9.661E-02	8.706E-02	4.929E-02	FAIL ABUN
RE-184	1.649E-01	2.095E-01	1.860E-01	1.069E-01	NOT IDENT.
OS-185	1.052E-02	4.159E-02	3.575E-02	2.122E-02	NOT IDENT.
RE-188	9.932E-02	1.538E-01	1.396E-01	7.849E-02	NOT IDENT.
W-188	-4.573E+00	7.566E+00	5.389E+00	3.860E+00	NOT IDENT.
IR-192	-1.560E-02	3.094E-02	2.498E-02	1.579E-02	FAIL ABUN
AU-195	9.702E-02	2.025E-01	1.843E-01	1.033E-01	FAIL ABUN
TL-200	-1.055E+02	2.094E+02	0.000E+00	1.068E+02	SHORT HLTF
TL-201	3.432E+00	4.788E+00	4.341E+00	2.443E+00	NOT IDENT.
TL-202	5.686E-02	5.933E-02	5.484E-02	3.027E-02	NOT IDENT.
HG-203	-4.172E-03	3.641E-02	3.057E-02	1.858E-02	NOT IDENT.
BI-207	-1.750E-03	5.164E-02	4.368E-02	2.635E-02	FAIL ABUN
TL-207	3.435E-02	6.775E-01	5.040E-01	3.457E-01	FAIL ABUN
PO-209	-7.894E-01	6.704E+00	5.725E+00	3.420E+00	NOT IDENT.
BI-210	3.855E+00	4.750E+00	4.153E+00	2.423E+00	NOT IDENT.
PB-210	3.855E+00	4.750E+00	4.153E+00	2.423E+00	NOT IDENT.
PO-210	3.855E+00	4.748E+00	4.153E+00	2.422E+00	NOT IDENT.
PB-211	1.774E-01	8.459E-01	7.475E-01	4.316E-01	NOT IDENT.
BI-212	1.134E+00	5.354E-01	3.313E-01	2.732E-01	FAIL ABUN
PO-215	3.435E-02	6.775E-01	5.040E-01	3.457E-01	FAIL ABUN
RN-219	4.798E-02	3.780E-01	3.353E-01	1.928E-01	FAIL ABUN
RN-220	-2.679E+00	2.415E+01	2.051E+01	1.232E+01	NOT IDENT.
RA-223	3.435E-02	6.775E-01	5.040E-01	3.457E-01	FAIL ABUN
AC-227	-4.243E-01	3.513E-01	2.743E-01	1.792E-01	FAIL ABUN
TH-227	-4.243E-01	3.535E-01	2.743E-01	1.804E-01	FAIL ABUN
TH-229	-2.415E-02	4.665E-01	3.976E-01	2.380E-01	FAIL ABUN
PA-231	-4.544E-01	1.357E+00	1.120E+00	6.923E-01	FAIL ABUN
TH-231	3.435E-02	6.775E-01	5.040E-01	3.457E-01	FAIL ABUN
U-231	-4.731E-01	8.478E-01	6.779E-01	4.325E-01	FAIL ABUN
PA-233	-2.211E-03	6.148E-02	5.135E-02	3.137E-02	FAIL ABUN
PA-234	-6.651E-02	2.762E-01	2.317E-01	1.409E-01	FAIL ABUN
PA-234M	6.003E+00	1.002E+01	6.321E+00	5.112E+00	FAIL ABUN
TH-234	1.296E+00	1.446E+00	1.262E+00	7.377E-01	FAIL ABUN
U-235	1.447E-02	1.977E-01	1.732E-01	1.009E-01	FAIL ABUN
NP-236	-2.683E-03	7.099E-02	6.260E-02	3.622E-02	NOT IDENT.
U-238	1.296E+00	1.446E+00	1.262E+00	7.377E-01	FAIL ABUN
NP-239	-2.820E-03	1.699E-01	1.533E-01	8.668E-02	FAIL ABUN
AM-241	-9.827E-02	1.662E-01	1.371E-01	8.479E-02	NOT IDENT.
CM-243	-3.045E-02	8.538E-02	7.662E-02	4.356E-02	FAIL ABUN
CM-247	8.322E-03	3.329E-02	2.974E-02	1.698E-02	NOT IDENT.
CF-249	2.867E-02	3.825E-02	3.510E-02	1.951E-02	NOT IDENT.
CF-251	1.691E-02	1.160E-01	1.024E-01	5.919E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	241.9827
46.50	241.9827
46.50	241.9827
48.70	288.3991
49.72	277.5000
51.35	268.1957
52.39	267.8390
52.97	293.3393
53.15	294.6872
53.44	294.9378
54.07	257.1989
56.28	287.7228
56.28	287.7256
57.37	0.0000
57.53	271.8232
57.53	271.8249
57.60	279.1265
57.98	281.8400
57.98	281.8400
59.32	296.2367
59.32	296.2367
59.40	296.3009
59.54	304.9181
59.72	319.6524
60.01	317.4715
61.10	363.5422
61.14	363.5808
61.30	363.7366
63.00	323.6906
63.29	301.8498
63.29	301.8498
63.58	320.4982
64.28	323.5415
65.12	432.7354
65.20	432.8238
65.20	432.8238
66.05	359.6161
66.72	363.9403
66.83	364.0412
66.91	364.1153
67.20	354.4670
67.20	354.4670
67.75	354.9536
67.85	355.0431
68.90	358.4597
68.90	358.4597
69.30	399.9287
69.67	382.4208
70.82	380.1577
70.82	380.1577
70.83	380.1670
72.80	384.4844
72.87	384.5498
72.87	384.5498
74.67	388.7104
74.81	388.8373
74.81	388.8373
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74.81	388.8373
74.97	388.9830
75.28	389.2650
75.70	389.6457
77.11	390.9146
77.11	390.9146
77.11	390.9146

77.11	390.9146
77.11	390.9146
77.11	390.9146
78.38	392.0472
79.62	386.7624
79.80	386.9173
79.80	386.9173
80.11	351.4059
80.18	351.4604
80.30	351.5549
80.30	351.5549
80.57	364.5583
81.00	398.1959
81.07	398.2576
81.07	398.2576
81.07	398.2576
81.07	398.2576
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83.78	376.1523
84.21	385.5278
84.40	385.6852
84.90	349.9438
85.43	363.2685
86.29	432.5778
86.50	432.7715
86.54	432.8072
86.59	362.0068
86.72	362.1070
86.79	362.1581
86.94	362.2754
87.30	362.5503
87.30	362.5503
87.30	362.5503
87.30	362.5503
87.30	362.5503
87.30	362.5503
87.57	362.7570
87.88	362.9914
88.03	363.1065
88.36	363.3558
88.47	363.4411
89.95	364.5578
91.11	365.4273
92.29	366.3053
92.38	366.3735
92.38	366.3735
93.35	367.0917
94.00	280.2824
94.67	287.2444
94.67	287.2460
94.90	287.3774
94.90	287.3774
94.90	287.3774
94.90	287.3774
95.87	311.7054
95.87	311.7054
96.73	301.6505
97.43	320.6105
98.44	298.2312
98.44	298.2312
98.88	271.9150
99.55	281.1350
99.55	281.1350
99.86	289.2892
100.00	278.7155
100.10	278.7699
103.18	295.5814
103.76	295.9030
105.00	277.7714
105.31	268.0686
108.00	298.2263
109.28	271.8259
111.00	307.9936
111.00	307.9936

111.76	297.5253
112.95	305.4246
115.19	308.4494
116.30	278.8697
117.00	284.6989
117.00	284.6989
117.66	284.1052
121.11	281.1626
121.62	288.7841
121.78	292.5520
122.06	286.2259
122.32	281.7303
122.32	281.7303
122.32	281.7303
122.32	281.7303
123.07	270.9842
127.23	289.1346
129.76	284.7044
131.20	313.4713
133.02	259.3929
133.54	256.2202
135.34	299.9527
136.00	317.2524
136.25	308.8744
136.48	304.2596
140.51	295.6784
140.51	0.0000
142.18	327.8750
142.65	292.8155
143.76	290.4334
144.24	298.2891
144.24	298.2891
144.24	298.2891
144.24	298.2891
145.22	272.8728
145.44	266.2555
147.16	316.8576
152.43	297.9927
152.70	298.1055
153.22	279.9247
154.21	265.7664
154.21	265.7664
154.21	265.7664
154.21	265.7664
155.03	273.8444
156.02	314.0957
158.56	275.1984
159.00	0.0000
159.00	268.5295
160.31	269.0135
161.27	278.1844
162.32	255.0409
162.64	256.1333
163.35	278.9731
163.89	259.5178
165.85	270.0588
167.43	239.0237
171.28	276.9736
171.86	230.4896
172.10	230.5627
176.55	262.8796
176.60	262.8957
181.06	265.3938
184.41	304.3646
185.71	278.0604
186.00	278.1611
190.27	236.4048
192.34	231.3897
193.63	238.8940
197.04	256.2688
198.01	212.4327
198.60	212.5801
200.40	275.8080
201.83	287.6052
202.84	251.8211
205.31	281.0007
208.36	250.8230
208.81	235.8833

209.75	236.1350
209.75	236.1350
210.97	214.0646
215.65	248.1696
216.55	215.9245
218.09	228.8885
222.10	225.6748
223.80	228.2014
226.40	242.6113
227.00	250.1882
227.08	250.2098
227.20	250.2410
228.16	222.9007
228.18	222.9050
228.18	222.9050
231.56	0.0000
235.69	221.4578
236.00	234.3717
236.00	234.3717
238.60	207.1004
238.63	207.1083
238.63	207.1083
238.63	207.1083
239.00	207.1858
240.98	207.6050
241.98	207.8170
241.98	207.8170
241.98	207.8170
244.69	165.1990
245.39	192.8684
247.94	181.9863
248.90	173.4863
249.79	174.7262
252.40	165.3841
252.85	164.3698
252.85	164.3698
254.15	0.0000
256.20	202.0408
256.20	202.0408
260.50	163.4023
260.90	178.8251
262.80	161.5648
264.65	160.7509
268.24	157.4307
268.79	139.2737
269.46	147.6561
269.46	147.6561
269.46	147.6561
269.46	147.6561
271.23	191.1075
273.65	163.2247
276.40	176.9955
277.35	161.5526
277.60	161.5910
277.60	161.5910
278.00	144.9276
278.60	158.3922
279.20	174.1035
279.53	186.4344
280.46	212.2927
281.68	134.2285
283.67	156.8819
284.30	150.2429
285.00	166.0453
285.90	181.8973
286.10	172.9461
286.10	172.9461
287.40	133.7975
288.45	0.0000
290.67	177.5977
290.80	177.6201
291.72	164.2203
293.26	0.0000
293.70	147.5479
295.21	166.4218
295.21	166.4218
295.21	166.4218
295.96	173.3297

296.56	197.2120
297.23	197.3395
298.57	197.5696
299.80	192.6635
299.80	192.6635
300.09	192.7118
300.09	192.7118
300.09	192.7118
300.10	192.7152
300.12	192.7187
301.29	177.5471
302.84	147.0146
303.76	153.9734
303.91	153.9926
304.40	138.6527
304.40	138.6527
304.84	152.4038
306.84	149.8030
308.46	145.4304
311.98	156.1986
316.51	144.1091
318.01	144.2871
319.02	135.1646
319.41	139.8324
320.08	137.5962
323.87	140.9244
323.87	140.9244
323.87	140.9244
323.87	140.9244
325.23	148.0470
328.77	146.7257
333.44	147.2769
334.20	147.3640
334.20	147.3640
334.30	147.3768
338.28	153.1235
338.28	153.1235
338.28	153.1235
338.28	153.1235
338.32	153.1262
338.32	153.1262
338.32	153.1262
340.50	152.3312
340.57	146.6994
344.27	146.5172
345.85	154.0315
350.59	0.0000
351.07	136.5211
351.92	139.6341
351.92	139.6341
351.92	139.6341
355.39	0.0000
356.01	139.8916
364.48	130.1894
366.43	126.7830
367.43	142.1725
367.94	0.0000
369.80	129.8013
374.96	138.4368
383.85	136.5967
387.95	129.6907
388.63	118.7885
391.69	130.9488
391.69	130.9488
392.90	131.0601
398.62	113.1823
400.65	129.9284
401.10	129.0475
401.81	125.4207
402.60	119.0301
404.84	120.1393
410.95	115.0731
411.60	128.1221
413.65	144.1039
414.70	102.3395
415.30	104.2429
415.76	104.2754
417.63	0.0000

418.52	119.3926
423.70	104.8291
427.08	97.5587
427.89	99.4882
432.53	102.6149
433.93	95.1699
439.47	94.5663
439.56	94.5724
439.89	92.7004
443.98	107.1703
444.90	115.7730
445.03	113.8843
445.03	113.8843
445.03	113.8843
445.03	113.8843
453.90	98.3008
463.38	95.0437
468.07	106.2947
473.00	97.5371
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475.35	100.5770
476.78	90.9850
477.59	94.9031
477.96	87.1751
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484.57	87.5212
487.03	83.7547
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497.08	93.0692
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510.53	0.0000
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511.00	99.7455
511.85	99.7948
511.85	99.7948
513.99	110.7977
513.99	110.7977
520.41	104.2534
520.65	104.2662
527.90	79.7632
528.96	0.0000
529.64	82.8354
529.87	0.0000
531.02	82.8987
537.32	67.1513
543.00	70.3760
546.56	0.0000
549.76	88.7976
552.65	76.8094
555.20	92.0942
563.23	83.3413
563.90	88.4550
568.70	77.4670
569.32	90.7464
569.50	93.8165
569.67	93.8250
573.80	96.0712
574.00	91.9913
574.64	96.1113
578.91	116.4116
579.30	0.0000
583.14	83.1852
585.48	64.1615
591.81	84.5875
592.07	80.4708
593.00	97.0236
595.88	88.8975
600.56	79.7822
602.52	0.0000
602.71	102.8934
602.71	102.8934
603.60	96.3004
604.41	102.9811
604.70	102.9963
609.31	67.6442
609.31	67.6442
609.31	67.6442

609.31	67.6442
610.33	67.6779
612.46	75.0454
614.37	80.1234
618.01	61.6648
621.84	80.6282
621.84	80.6282
631.29	93.6227
633.02	76.8563
633.10	76.8585
634.78	95.8877
635.90	93.8292
636.97	80.1655
645.85	82.6251
646.12	80.5157
656.30	63.8708
657.75	77.7630
657.90	0.0000
661.65	62.9630
661.65	62.9630
664.57	0.0000
666.33	91.9760
666.33	91.9760
675.00	86.9746
677.61	53.7521
685.20	66.8835
692.80	64.9475
695.00	78.0139
696.49	73.7296
696.49	73.7296
697.00	75.9152
697.49	66.1696
698.33	64.0235
698.50	68.3698
699.00	82.4965
702.63	91.3264
706.10	91.4674
706.58	0.0000
706.67	89.3121
709.31	81.7818
711.68	75.3171
713.82	74.2961
717.42	60.1865
720.50	65.7458
721.93	0.0000
722.20	84.2180
722.78	78.9741
722.78	78.9741
722.89	78.9763
722.95	78.9785
723.30	70.2148
724.18	63.2162
727.18	71.4310
733.00	59.9316
735.90	60.6682
739.58	68.4974
742.81	50.8895
744.21	68.6318
747.13	65.3901
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752.31	78.8631
753.82	71.1328
755.35	55.6076
756.15	63.4135
756.87	65.6584
763.93	57.1453
765.79	71.4863
766.41	84.0194
766.84	98.3367
768.36	89.4531
768.36	89.4531
768.36	89.4531
768.36	89.4531
776.49	77.4102
778.00	65.1102
778.57	60.6346
778.89	60.6412
783.80	60.3131

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792.07	66.2345
795.84	56.9876
796.30	56.9984
801.93	81.6086
805.60	57.2091
810.29	79.1517
810.76	70.0651
815.85	63.8237
817.79	65.6974
818.51	55.6759
819.60	55.6997
826.30	60.4232
828.27	0.0000
831.60	66.0516
831.96	66.0603
834.83	69.8064
836.80	0.0000
846.75	51.6715
848.13	57.2380
856.28	0.0000
856.80	60.2059
860.37	69.5618
867.32	40.2949
867.82	46.5039
871.10	61.4593
873.19	53.1202
874.81	45.6923
875.33	0.0000
876.40	69.0444
879.36	43.9007
880.27	52.3250
880.51	51.3947
881.50	57.9570
883.24	71.0904
884.67	70.1917
889.25	60.9343
896.60	56.3979
898.02	47.0227
899.00	50.8017
903.28	64.0721
911.07	62.3616
911.07	62.3616
911.07	62.3616
919.63	60.6578
920.93	70.1681
925.00	50.3280
925.24	48.4326
926.50	52.2540
934.06	59.0620
934.06	59.0620
934.06	59.0620
934.06	59.0620
935.52	60.0453
937.48	71.5320
944.10	43.9740
946.00	57.3955
949.00	56.4980
962.29	84.9755
964.01	75.3997
966.15	69.0317
968.20	63.6185
969.11	63.6378
969.11	63.6378
969.11	63.6378
977.42	59.9505
980.50	43.5575
983.50	59.1042
989.30	51.4524
996.32	48.6536
1001.03	71.4714
1001.68	72.1356
1004.76	61.8010
1021.30	0.0000
1024.50	0.0000
1034.80	51.2408
1037.82	70.0328
1038.57	69.0635

1038.76	0.0000
1045.16	62.2863
1046.59	48.4688
1048.07	58.3864
1050.47	52.4902
1050.47	52.4902
1063.62	59.6689
1076.63	59.9150
1077.35	57.9292
1085.78	49.0694
1099.22	56.3117
1112.02	68.4198
1112.84	67.7986
1115.52	48.8431
1120.29	68.8168
1120.29	68.8168
1120.29	68.8168
1120.29	68.8168
1120.51	68.8234
1121.28	60.7383
1124.00	0.0000
1129.67	64.9531
1131.51	0.0000
1147.95	0.0000
1167.94	81.0869
1173.22	84.2942
1175.09	76.1138
1177.93	63.8225
1189.05	65.0580
1204.90	79.8762
1205.75	0.0000
1213.00	85.2592
1221.42	87.5478
1230.97	77.3314
1235.34	112.9992
1236.41	0.0000
1238.11	76.4361
1238.11	76.4361
1238.11	76.4361
1238.11	76.4361
1238.25	76.4397
1246.25	78.7061
1260.41	0.0000
1271.85	49.6690
1274.45	51.8209
1274.54	51.8209
1291.56	53.1201
1298.22	0.0000
1312.09	39.5239
1325.50	47.1689
1325.50	47.1689
1332.49	49.4028
1333.61	41.8964
1360.21	42.1859
1362.66	0.0000
1365.15	35.7409
1368.21	27.0972
1368.53	0.0000
1376.25	28.9635
1377.67	30.4227
1377.67	30.4227
1377.67	30.4227
1377.67	30.4227
1384.27	27.9856
1394.10	22.9113
1395.20	25.1001
1407.95	20.8007
1434.06	22.9553
1436.60	22.9696
1457.56	0.0000
1460.81	15.7113
1489.15	22.3320
1509.49	20.5686
1596.49	29.5658
1620.62	14.3829
1678.03	0.0000
1691.02	11.6831
1691.02	11.6831

1706.46	0.0000
1750.46	0.0000
1764.49	12.8524
1764.49	12.8524
1764.49	12.8524
1764.49	12.8524
1770.23	18.6646
1771.40	8.4860
1791.20	0.0000
1808.65	10.9727
1836.01	10.0297

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G2323580006

Total Uranium Activity	5.8635E-00	ug/g
Total Uranium Counting Unc.	4.3025E+00	ug/g
Total Uranium Dpa	2.1952E-06	ug/g
Total Uranium Mda	3.7541E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                            CHARLESTON, SC 29417                           *
*                             GROSS GAMMA REPORT                            *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232358006       *
*   ANALYST       : MXRI                      DETECTOR   : GAM09            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 12:13:17.87    SAMPLE ALQT:  137.440 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.060E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.515E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.444E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.667E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:14:46.25

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358007.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:13:44.
Sample ID         : G232358007           Sample quantity  : 1.00620E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.98  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	1	75.02*	228	380	1.08	150.17	145	14	3.16E-02	15.2	1.28E+00
2	1	77.33	402	337	0.94	154.80	145	14	5.59E-02	9.0	
3	1	87.47	177	341	1.10	175.05	171	22	2.46E-02	18.5	1.89E+00
4	1	90.04	119	327	1.11	180.20	171	22	1.65E-02	26.5	
5	1	92.88*	306	307	1.11	185.88	171	22	4.25E-02	11.9	
6	0	186.45*	241	294	1.22	372.86	368	11	3.35E-02	16.0	
7	0	209.84	124	231	1.76	419.58	416	9	1.73E-02	23.8	
8	2	238.89*	1036	177	1.12	477.65	473	15	1.44E-01	3.8	1.32E+00
9	2	241.94	238	208	1.47	483.75	473	15	3.30E-02	14.1	
10	0	270.29	120	149	2.00	540.39	536	9	1.67E-02	20.4	
11	0	295.45*	319	180	1.26	590.68	586	10	4.44E-02	9.8	
12	0	300.85	89	155	1.60	601.48	597	10	1.23E-02	28.5	
13	0	328.18	43	194	1.01	656.11	653	11	6.01E-03	63.7	
14	0	338.46	261	215	1.46	676.65	671	14	3.62E-02	13.3	
15	0	352.15*	535	186	1.36	704.01	699	12	7.43E-02	6.8	
16	0	511.26*	114	149	1.98	1022.03	1013	17	1.58E-02	28.9	
17	0	583.63*	291	155	1.50	1166.70	1158	18	4.05E-02	11.7	
18	0	609.68	384	109	1.20	1218.77	1212	14	5.34E-02	7.7	
19	0	661.90	487	107	1.45	1323.19	1319	12	6.76E-02	6.1	
20	0	728.29	97	90	2.12	1455.91	1446	19	1.35E-02	25.5	
21	0	861.75	79	38	1.24	1722.75	1717	13	1.09E-02	19.8	
22	0	911.49*	210	42	1.95	1822.22	1814	15	2.92E-02	9.9	
23	1	964.82	52	19	1.92	1928.87	1924	26	7.18E-03	20.7	2.21E+00
24	1	969.37	133	19	1.88	1937.96	1924	26	1.85E-02	11.1	
25	0	1003.02	34	50	3.72	2005.25	1994	16	4.69E-03	50.6	
26	0	1121.19*	69	72	2.15	2241.58	2233	17	9.58E-03	31.2	
27	0	1378.18	36	16	1.60	2755.62	2750	12	5.03E-03	28.4	
28	0	1461.11*	951	19	2.11	2921.53	2914	19	1.32E-01	3.5	
29	0	1591.44	10	38	0.48	3182.29	3174	14	1.42E-03	132.4	
30	0	1764.96*	69	0	1.88	3529.49	3522	17	9.54E-03	13.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 14:14:48

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358007.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:13:44
Sample ID : G232358007 Sample quantity : 100.62 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA10 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.98 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Idded	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.004E+01	3.320E+00	6.044E-01	5.206E-02	49.701
CD-109	+	88.03	*	3.421E+00	1.326E+00	1.489E+00	1.688E-01	2.297
SN-126		64.28		-5.859E-01	8.261E-01	1.309E+00	2.239E-01	-0.447
	+	86.94		1.400E+00	7.843E-01	6.203E-01	2.605E-01	2.257
	+	87.57	*	3.368E-01	1.305E-01	1.477E-01	1.671E-02	2.280
BA-137M	+	661.65	*	8.585E-01	1.130E-01	6.873E-02	3.391E-03	12.492
CS-137	+	661.65	*	9.076E-01	1.195E-01	7.265E-02	3.605E-03	12.492
TL-208		277.35		2.351E-01	4.459E-01	7.510E-01	8.191E-02	0.313
	+	510.84		6.727E-01	3.955E-01	2.703E-01	2.841E-02	2.489
	+	583.14	*	4.918E-01	1.196E-01	6.716E-02	4.513E-03	7.323
	+	860.37		1.284E+00	5.240E-01	4.393E-01	4.290E-02	2.923
BI-211		72.87		2.783E+00	5.014E+00	7.608E+00	8.366E-01	0.366
	+	351.07	*	3.972E+00	6.099E-01	3.732E-01	2.721E-02	10.644
PB-212	+	74.81		2.025E+00	6.801E-01	8.015E-01	1.154E-01	2.527
	+	77.11		1.979E+00	4.157E-01	4.441E-01	4.856E-02	4.456
	+	87.30		1.557E+00	6.234E-01	6.860E-01	1.035E-01	2.270
	+	238.63	*	1.695E+00	1.833E-01	1.106E-01	8.390E-03	15.328
	+	300.09		2.231E+00	1.285E+00	1.369E+00	1.203E-01	1.630
PO-212	+	74.81		2.025E+00	6.801E-01	8.015E-01	1.154E-01	2.527
	+	77.11		1.979E+00	4.157E-01	4.441E-01	4.856E-02	4.456
	+	87.30		1.557E+00	6.234E-01	6.860E-01	1.035E-01	2.270
		115.19		-3.298E+00	4.130E+00	6.439E+00	4.607E-01	-0.512
	+	238.63	*	1.695E+00	1.833E-01	1.106E-01	8.390E-03	15.328
	+	300.09		2.231E+00	1.285E+00	1.369E+00	1.203E-01	1.630
BI-214	+	609.31	*	1.224E+00	2.100E-01	1.283E-01	9.766E-03	9.539
		768.36		4.304E-01	9.164E-01	1.567E+00	1.444E-01	0.275
		934.06		1.558E+00	1.430E+00	2.553E+00	2.962E-01	0.610
	+	1120.29		1.206E+00	7.615E-01	5.380E-01	5.257E-02	2.241
		1238.11		1.378E+00	1.188E+00	2.142E+00	1.963E-01	0.643
	+	1377.67		2.828E+00	1.635E+00	1.879E+00	2.006E-01	1.505
	+	1764.49		1.661E+00	4.624E-01	4.013E-01	2.680E-02	4.140
PB-214	+	74.81		3.489E+00	1.155E+00	1.381E+00	1.826E-01	2.527
	+	77.11		3.393E+00	7.580E-01	7.614E-01	1.015E-01	4.456
	+	87.30		2.668E+00	1.054E+00	1.175E+00	1.607E-01	2.270

--- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.336E+00	6.876E-01	6.659E-01	5.540E-02	3.509
	+	295.21		1.408E+00	3.029E-01	2.503E-01	2.260E-02	5.623
	+	351.92	*	1.382E+00	2.241E-01	1.342E-01	1.203E-02	10.297
PO-214	-	74.81		3.489E+00	1.155E+00	1.381E+00	1.826E-01	2.527
	+	77.11		3.393E+00	7.580E-01	7.614E-01	1.015E-01	4.456
	+	87.30		2.668E+00	1.054E-00	1.175E+00	1.607E-01	2.270
	+	241.98		2.336E+00	6.876E-01	6.659E-01	5.540E-02	3.509
	+	295.21		1.408E+00	3.029E-01	2.503E-01	2.260E-02	5.623
	+	351.92	*	1.382E+00	2.241E-01	1.342E-01	1.203E-02	10.297
PO-216	-	74.81		2.025E+00	6.801E-01	8.015E-01	1.154E-01	2.527
	+	77.11		1.979E+00	4.157E-01	4.441E-01	4.856E-02	4.456
	+	87.30		1.557E+00	6.234E-01	6.860E-01	1.035E-01	2.270
	+	238.63	*	1.695E+00	1.833E-01	1.106E-01	8.390E-03	15.328
	+	300.09		2.231E+00	1.285E+00	1.369E+00	1.203E-01	1.630
PO-218	+	74.81		3.489E+00	1.155E+00	1.381E+00	1.826E-01	2.527
	+	77.11		3.393E+00	7.580E-01	7.614E-01	1.015E-01	4.456
	+	87.30		2.668E+00	1.054E+00	1.175E+00	1.607E-01	2.270
	+	241.98		2.336E+00	6.876E-01	6.659E-01	5.540E-02	3.509
	+	295.21		1.408E+00	3.029E-01	2.503E-01	2.260E-02	5.623
	+	351.92	*	1.382E+00	2.241E-01	1.342E-01	1.203E-02	10.297
RA-224	+	240.98	*	4.430E+00	1.280E+00	1.258E+00	7.725E-02	3.520
RA-226	+	609.31	*	1.224E+00	2.100E-01	1.283E-01	9.766E-03	9.539
		768.36		4.304E-01	9.164E-01	1.567E+00	1.444E-01	0.275
		934.06		1.558E+00	1.430E+00	2.553E+00	2.962E-01	0.610
	+	1120.29		1.206E+00	7.615E-01	5.380E-01	5.257E-02	2.241
		1238.11		1.378E+00	1.188E+00	2.142E+00	1.963E-01	0.643
	+	1377.67		2.828E+00	1.635E+00	1.879E+00	2.006E-01	1.505
	+	1764.49		1.661E+00	4.624E-01	4.013E-01	2.680E-02	4.140
AC-228	+	338.32		2.134E+00	1.042E+00	4.201E-01	1.719E-01	5.079
	+	911.07	*	1.630E+00	3.792E-01	2.339E-01	2.887E-02	6.969
	+	969.11		1.831E+00	5.946E-01	4.034E-01	9.537E-02	4.539
RA-228	+	338.32		2.134E+00	1.042E+00	4.201E-01	1.719E-01	5.079
	+	911.07	*	1.630E+00	3.792E-01	2.339E-01	2.887E-02	6.969
	+	969.11		1.831E+00	5.946E-01	4.034E-01	9.537E-02	4.539
TH-228		84.40		6.658E-01	3.441E+00	5.129E+00	7.647E-01	0.130
	+	238.60	*	1.695E+00	1.833E-01	1.106E-01	8.389E-03	15.329
	+	300.10		2.231E+00	1.829E+00	1.369E+00	8.080E-01	1.629
TH-230	+	609.31	*	1.224E+00	2.100E-01	1.283E-01	9.766E-03	9.539
		768.36		4.304E-01	9.163E-01	1.567E+00	1.444E-01	0.275
		934.06		1.558E+00	1.430E+00	2.552E+00	2.962E-01	0.610
	+	1120.29		1.206E+00	7.615E-01	5.379E-01	5.257E-02	2.241
		1238.11		1.378E+00	1.188E+00	2.142E+00	1.963E-01	0.643
	+	1377.67		2.828E+00	1.635E+00	1.878E+00	2.006E-01	1.505
	+	1764.49		1.661E+00	4.624E-01	4.013E-01	2.680E-02	4.140
TH-232	+	338.32		2.134E+00	5.873E-01	4.201E-01	2.816E-02	5.079
	+	911.07	*	1.630E+00	3.792E-01	2.339E-01	2.887E-02	6.969
	+	969.11		1.831E+00	5.946E-01	4.034E-01	9.537E-02	4.539
U-234	+	609.31	*	1.224E+00	2.100E-01	1.283E-01	9.766E-03	9.539
		768.36		4.304E-01	9.163E-01	1.567E+00	1.444E-01	0.275

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		1.558E+00	1.430E+00	2.552E+00	2.962E-01	0.610
	+	1120.29		1.206E+00	7.615E-01	5.379E-01	5.257E-02	2.241
		1238.11		1.378E+00	1.188E+00	2.142E+00	1.963E-01	0.643
	+	1377.67		2.828E+00	1.635E+00	1.878E+00	2.006E-01	1.505
	+	1764.49		1.661E+00	4.624E-01	4.013E-01	2.680E-02	4.140
NP-237	+	86.50	*	9.889E-01	4.342E-01	4.876E-01	1.146E-01	2.028
		95.87		-4.693E-01	1.305E+00	1.864E+00	4.657E-01	-0.252
AM-243	+	74.67	*	3.283E-01	1.059E-01	1.305E-01	1.430E-02	2.515
	+	86.72		3.708E+01	1.437E+01	1.649E+01	1.857E+00	2.249
		117.66		2.022E+00	4.379E+00	7.262E+00	5.039E-01	0.278
		142.18		-2.104E+01	2.200E+01	3.380E+01	2.018E+00	-0.622
ANH-511	+	511.00	*	1.453E-01	8.457E-02	5.840E-02	3.741E-03	2.488

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.860E-01	4.170E-01	6.942E-01	5.162E-02	0.268
NA-22		1274.54	*	-5.227E-02	5.273E-02	7.737E-02	5.993E-03	-0.676
NA-24		1368.53	*	-4.796E-02	5.273E-02	Half-Life too short		
AL-26		1129.67		-9.701E-02	2.094E+00	3.246E+00	2.277E-01	-0.030
		1808.65	*	-6.355E-03	3.314E-02	5.091E-02	3.228E-03	-0.125
TI-44		67.85		-5.403E-03	6.877E-02	1.132E-01	1.278E-02	-0.048
	+	78.38	*	3.652E-01	7.670E-02	1.042E-01	1.140E-02	3.505
SC-46		889.25	*	3.371E-02	4.694E-02	8.202E-02	8.117E-03	0.411
	+	1120.51		2.045E-01	1.285E-01	1.505E-01	1.081E-02	1.359
V-48		944.10		-4.673E-01	1.052E+00	1.629E+00	1.578E-01	-0.287
		983.50	*	1.802E-02	8.498E-02	1.409E-01	1.303E-02	0.128
		1312.09		3.305E-02	8.580E-02	1.493E-01	1.247E-02	0.221
CR-51		320.08	*	-5.826E-01	4.328E-01	6.548E-01	4.729E-02	-0.890
MN-52		744.21		-5.414E-02	2.304E-01	3.730E-01	2.433E-02	-0.145
		848.13		-2.495E+00	7.412E+00	1.177E+01	1.043E+00	-0.212
		935.52		1.299E-01	2.783E-01	4.733E-01	4.627E-02	0.275
		1246.25		-5.682E+00	7.715E+00	1.188E+01	8.654E-01	-0.478
		1333.61		1.392E+00	5.309E+00	9.088E+00	7.896E-01	0.153
		1434.06	*	-1.461E-01	2.559E-01	3.843E-01	3.248E-02	-0.380
MN-54		834.83	*	9.180E-03	4.895E-02	8.164E-02	6.975E-03	0.112
CO-56		846.75	*	-5.905E-03	4.796E-02	7.776E-02	6.867E-03	-0.076
		977.42		-4.142E+00	4.228E+00	4.935E+00	4.599E-01	-0.839
		1037.82		6.205E-02	3.869E-01	6.358E-01	5.717E-02	0.098
		1175.09		-3.104E+00	2.638E+00	3.869E+00	2.397E-01	-0.802
		1238.25		1.396E-01	1.191E-01	2.152E-01	1.605E-02	0.649
		1360.21		-5.150E-01	1.223E+00	1.906E+00	1.647E-01	-0.270
		1771.40		6.651E-02	2.961E-01	4.402E-01	2.917E-02	0.151
CO-57		122.06	*	-7.069E-03	2.981E-02	4.775E-02	3.150E-03	-0.148
		136.48		7.768E-02	2.517E-01	4.115E-01	2.878E-02	0.189
CO-58		810.76	*	3.679E-02	4.681E-02	8.241E-02	6.594E-03	0.446
FE-59		142.65		1.040E+00	3.222E+00	5.257E+00	3.132E-01	0.198
		192.34		1.268E+00	1.137E+00	1.811E+00	2.130E-01	0.700

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1099.22	*	-1.587E-01	1.184E-01	1.600E-01	1.336E-02	-0.992
		1291.56		-1.681E-02	1.430E-01	2.344E-01	2.169E-02	-0.072
CO-60		1173.22		-2.203E-02	5.278E-02	8.466E-02	5.221E-03	-0.260
		1332.49	*	3.122E-02	4.674E-02	8.380E-02	7.283E-03	0.373
ZN-65		1115.52	*	2.279E-02	1.219E-01	1.736E-01	1.264E-02	0.131
GE-68		1077.35	*	-2.055E-01	1.588E+00	2.520E+00	1.997E-01	-0.082
AS-73		53.44	*	2.361E+00	1.847E+00	3.207E+00	4.244E-01	0.736
AS-74		595.88	*	2.362E-02	9.874E-02	1.691E-01	9.659E-03	0.140
		634.78		8.868E-02	3.666E-01	6.268E-01	3.308E-02	0.141
SE-75		66.05		-7.255E+00	7.473E+00	1.178E+01	1.517E+00	-0.616
		96.73		-9.221E-01	1.061E+00	1.461E+00	2.068E-01	-0.631
		121.11		-2.499E-02	1.585E-01	2.550E-01	2.498E-02	-0.098
		136.00		4.942E-02	4.635E-02	7.824E-02	4.859E-03	0.632
		198.60		-3.247E+00	2.297E+00	3.307E+00	2.343E-01	-0.982
		264.65	*	2.376E-02	4.896E-02	7.866E-02	5.017E-03	0.302
		279.53		2.098E-01	1.257E-01	2.227E-01	1.526E-02	0.942
		303.91		1.272E-01	2.681E+00	3.932E+00	3.942E-01	0.032
		400.65		-1.026E-02	3.030E-01	4.940E-01	4.824E-02	-0.021
BR-77	+	87.88		5.359E+02	2.077E+02	3.007E+02	3.409E+01	1.782
		200.40		5.856E+01	1.415E+02	2.283E+02	1.317E+01	0.256
	+	239.00		1.971E+02	1.939E+01	3.159E+01	1.934E+00	6.240
		249.79		1.516E+01	5.175E+01	8.825E+01	5.480E+00	0.172
		281.68		-1.198E+02	7.506E+01	1.132E+02	7.288E+00	-1.058
		297.23		2.365E+02	7.503E+01	1.051E+02	6.859E+00	2.251
		303.76		1.395E+01	1.668E+02	2.453E+02	1.610E+01	0.057
		439.47		7.638E+01	1.290E+02	2.181E+02	1.466E+01	0.350
		484.57		-3.852E+01	2.024E+02	3.216E+02	2.107E+01	-0.120
		520.65	*	-1.503E+00	9.443E+00	1.496E+01	9.493E-01	-0.100
		574.64		-6.237E+01	1.749E+02	2.788E+02	1.650E+01	-0.224
		578.91		2.599E+01	7.682E+01	1.170E+02	6.879E+00	0.222
		585.48		1.136E+03	2.143E+02	4.261E+02	2.478E+01	2.665
		755.35		-3.949E+01	1.384E+02	2.229E+02	1.506E+01	-0.177
		817.79		-5.010E+01	1.064E+02	1.660E+02	1.352E+01	-0.302
SR-82		698.33		-1.132E+01	3.822E+01	6.203E+01	3.480E+00	-0.183
		776.49	*	-4.330E-01	4.347E-01	6.478E-01	4.670E-02	-0.668
		1395.20		-9.559E+00	1.196E+01	1.709E+01	1.463E+00	-0.559
RB-83		520.41	*	-1.814E-02	8.513E-02	1.343E-01	8.521E-03	-0.135
		529.64		2.426E-02	1.279E-01	2.083E-01	1.309E-02	0.116
		552.65		-8.152E-02	2.438E-01	3.784E-01	2.312E-02	-0.215
RB-84		881.50	*	3.206E-02	7.468E-02	1.278E-01	1.240E-02	0.251
KR-85		513.99	*	1.665E+01	1.041E+01	1.668E+01	1.066E+00	0.998
SR-85		513.99	*	8.437E-02	5.274E-02	8.456E-02	5.401E-03	0.998
RB-86		1076.63	*	-2.896E-01	9.520E-01	1.480E+00	1.174E-01	-0.196
Y-88		898.02		1.654E-02	5.017E-02	8.461E-02	8.596E-03	0.196
		1836.01	*	5.206E-03	3.744E-02	6.245E-02	3.832E-03	0.083
ZR-88		392.90	*	-2.476E-03	3.603E-02	5.866E-02	3.987E-03	-0.042
Y-91		1204.90	*	-6.925E+00	2.413E+01	3.929E+01	2.610E+00	-0.176
NB-94		702.63	*	-5.275E-03	3.605E-02	5.918E-02	3.369E-03	-0.089
		871.10		8.212E-03	3.981E-02	6.657E-02	6.280E-03	0.123

---- Non-Identified Nuclides ----

Nuclide	Line Idd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95		765.79	*	3.755E-02	5.071E-02	8.863E-02	6.185E-03	0.424
NB-95M		235.69	*	9.320E-02	1.526E-01	2.366E-01	1.835E-02	0.394
ZR-95		724.18		-5.220E-02	1.218E-01	1.661E-01	1.184E-02	-0.314
		756.15	*	8.766E-04	7.972E-02	1.320E-01	1.037E-02	0.007
NB-97		657.90	*	1.640E-02	7.972E-02	Half-Life too short		
		1024.50		-1.256E-01	7.972E-02	Half-Life too short		
ZR-97		254.15		2.348E-01	7.972E-02	Half-Life too short		
		355.39		-2.746E-01	7.972E-02	Half-Life too short		
		507.63	*	-1.195E-01	7.972E-02	Half-Life too short		
		602.52		2.691E+00	7.972E-02	Half-Life too short		
		1021.30		-1.690E+00	7.972E-02	Half-Life too short		
		1147.95		-9.127E-01	7.972E-02	Half-Life too short		
		1362.66		-4.777E-01	7.972E-02	Half-Life too short		
		1750.46		1.914E+00	7.972E-02	Half-Life too short		
MO-99		140.51		2.514E-01	2.371E+01	3.818E+01	1.031E+01	0.007
		181.06		-7.870E+00	1.769E+01	2.415E+01	4.123E+00	-0.326
		366.43		1.239E+01	7.547E+01	1.253E+02	8.486E+00	0.099
		739.58	*	2.519E+00	9.485E+00	1.611E+01	2.264E+00	0.156
		778.00		-6.279E+00	2.989E+01	4.838E+01	3.505E+00	-0.130
TC-99M		140.51	*	2.264E+07	2.989E+01	Half-Life too short		
RH-101		127.23		-6.689E-03	3.877E-02	6.220E-02	3.975E-03	-0.108
		198.01	*	-4.063E-03	4.042E-02	6.280E-02	3.608E-03	-0.065
		325.23		1.000E-01	2.719E-01	4.079E-01	2.716E-02	0.245
RH-102		418.52		2.465E-01	3.425E-01	5.852E-01	3.961E-02	0.421
		475.06	*	-8.925E-03	3.746E-02	5.944E-02	3.921E-03	-0.150
		631.29		-2.476E-02	5.804E-02	9.352E-02	4.976E-03	-0.265
		697.49		-2.877E-02	8.875E-02	1.437E-01	8.039E-03	-0.200
		766.84		1.456E-01	1.327E-01	2.371E-01	1.660E-02	0.614
		1046.59		-1.560E-01	1.616E-01	2.342E-01	1.967E-02	-0.666
		1112.84		8.138E-02	2.921E-01	4.413E-01	3.230E-02	0.184
RU-103		497.08	*	2.625E-03	5.036E-02	8.044E-02	1.044E-02	0.033
	+	610.33		1.296E+01	2.815E+00	3.336E+00	5.113E-01	3.887
RH-106	+	511.85		7.243E-01	4.215E-01	5.169E-01	3.309E-02	1.401
		621.84	*	-1.994E-02	3.795E-01	6.340E-01	7.328E-02	-0.031
		1050.47		4.876E-01	3.314E+00	5.397E+00	4.502E-01	0.090
RU-106	+	511.85		7.243E-01	4.215E-01	5.169E-01	3.309E-02	1.401
		621.84	*	-1.994E-02	3.795E-01	6.340E-01	3.443E-02	-0.031
		1050.47		4.876E-01	3.314E+00	5.397E+00	4.502E-01	0.090
AG-108M		433.93	*	-1.347E-02	3.765E-02	5.948E-02	4.265E-03	-0.226
		614.37		1.368E-02	5.040E-02	7.581E-02	4.572E-03	0.180
		722.95		-3.972E-02	5.641E-02	7.407E-02	4.859E-03	-0.536
AG-110M		657.75	*	1.848E-02	4.481E-02	6.826E-02	3.698E-03	0.271
		677.61		-1.621E-01	3.709E-01	5.961E-01	3.346E-02	-0.272
		706.67		-4.571E-02	2.099E-01	3.417E-01	2.091E-02	-0.134
		763.93		-1.488E-01	1.991E-01	3.077E-01	2.227E-02	-0.484
		884.67		-3.173E-02	5.810E-02	8.927E-02	8.948E-03	-0.355
		937.48		-6.433E-02	1.388E-01	2.150E-01	2.158E-02	-0.299
		1384.27		1.632E-02	1.577E-01	2.308E-01	2.038E-02	0.071
IN-111		171.28		-4.135E-01	9.301E-01	1.448E+00	7.965E-02	-0.286

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		245.39	*	4.629E-01	9.750E-01	1.494E+00	9.227E-02	0.310
IN-113M		391.69	*	-1.460E-02	5.288E-02	8.488E-02	6.052E-03	-0.172
SN-113		391.69	*	-1.460E-02	5.288E-02	8.488E-02	6.052E-03	-0.172
IN-114M		190.27	*	-1.299E-01	2.337E-01	3.147E-01	1.785E-02	-0.413
CD-115		260.90		-1.098E+02	9.660E+01	1.505E+02	9.478E+00	-0.729
		492.35		2.507E+00	3.170E+01	5.140E+01	3.347E+00	0.049
		527.90	*	-2.296E-01	9.675E+00	1.549E+01	9.749E-01	-0.015
SN-117M		156.02		3.440E-01	2.571E+00	4.143E+00	2.345E-01	0.083
		158.56	*	-3.422E-03	6.139E-02	9.794E-02	5.493E-03	-0.035
SB-122		563.90	*	1.674E+00	1.951E+00	3.324E+00	1.999E-01	0.503
		692.80		4.076E+01	3.971E+01	7.116E+01	3.918E+00	0.573
I-123		159.00	*	-3.411E-01	3.971E+01	Half-Life too short		
		528.96		-2.551E+01	3.971E+01	Half-Life too short		
TE-123M		159.00	*	-6.811E-03	3.342E-02	5.291E-02	3.005E-03	-0.129
I-124		602.71	*	5.644E-01	6.272E-01	1.047E+00	5.906E-02	0.539
		722.78		-3.639E+00	4.890E+00	6.382E+00	3.885E-01	-0.570
		1325.50		-9.087E+00	3.426E+01	5.484E+01	4.702E+00	-0.166
		1376.25		7.673E+01	3.752E+01	6.978E+01	6.005E+00	1.100
		1509.49		1.676E+01	1.551E+01	2.941E+01	2.405E+00	0.570
		1691.02		1.781E+00	4.192E+00	7.339E+00	5.279E-01	0.243
SB-124		602.71		3.891E-02	4.325E-02	7.218E-02	4.074E-03	0.539
		645.85		1.616E-02	5.570E-01	9.340E-01	5.574E-02	0.017
		709.31		-2.424E+00	2.982E+00	4.575E+00	2.664E-01	-0.530
		713.82		2.198E+00	1.988E+00	3.566E+00	3.664E-01	0.616
		722.78		-3.637E-01	4.888E-01	6.379E-01	4.050E-02	-0.570
	+	968.20		1.861E+01	4.498E+00	8.232E+00	7.760E-01	2.261
		1045.16		1.139E+00	3.159E+00	5.289E+00	4.453E-01	0.215
		1325.50		-9.701E-01	3.658E+00	5.855E+00	5.019E-01	-0.166
		1368.21		-1.923E-01	2.127E+00	3.474E+00	4.682E-01	-0.055
		1436.60		3.368E+00	4.093E+00	7.595E+00	6.412E-01	0.443
		1691.02	*	4.198E-02	9.884E-02	1.730E-01	1.315E-02	0.243
SB-125		427.89	*	8.024E-02	1.087E-01	1.860E-01	1.295E-02	0.431
		463.38		3.322E-01	3.539E-01	6.074E-01	4.556E-02	0.547
		600.56		-5.184E-02	1.982E-01	3.264E-01	2.151E-02	-0.159
		635.90		2.856E-02	2.923E-01	4.936E-01	3.130E-02	0.058
TE-125M		109.28	*	-1.311E+00	1.116E+01	1.807E+01	1.734E+00	-0.073
I-126		388.63		8.177E-02	2.319E-01	3.882E-01	2.638E-02	0.211
		666.33	*	1.054E-01	2.439E-01	3.700E-01	1.856E-02	0.285
		753.82		1.122E+00	1.528E+00	2.697E+00	1.813E-01	0.416
SB-126		223.80		-9.555E-01	4.441E+00	7.428E+00	4.447E-01	-0.129
		278.60		4.107E+00	2.801E+00	4.916E+00	3.155E-01	0.836
	+	296.50		1.317E+01	2.712E+00	4.059E+00	2.649E-01	3.245
		414.70		1.350E-03	8.572E-02	1.399E-01	9.478E-03	0.010
		415.30		4.458E+00	7.045E+00	1.197E+01	8.109E-01	0.372
		555.20		4.815E-01	4.684E+00	7.549E+00	4.596E-01	0.064
		573.80		-5.520E-01	1.088E+00	1.761E+00	1.044E-01	-0.313
		593.00		-6.472E-01	9.885E-01	1.575E+00	9.045E-02	-0.411
		656.30		3.716E+00	4.079E+00	6.541E+00	3.274E-01	0.568
		666.33		4.391E-02	1.017E-01	1.542E-01	7.737E-03	0.285

---- Non-Identified Nuclides ----

Nuclide		Line Energy Tded (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		1.831E+00	2.324E+00	4.103E+00	2.123E-01	0.446
		695.00		-1.840E-02	8.847E-02	1.448E-01	8.034E-03	-0.127
		697.00		-1.039E-01	2.976E-01	4.811E-01	2.687E-02	-0.216
		720.50	*	9.726E-02	1.788E-01	2.745E-01	1.659E-02	0.354
		856.80		-5.832E-01	5.775E-01	6.831E-01	6.200E-02	-0.854
		989.30		8.834E-01	1.444E+00	2.490E+00	2.285E-01	0.355
		1034.80		2.366E+00	1.055E+01	1.746E+01	1.496E+00	0.136
		1213.00		-5.884E+00	5.596E+00	8.414E+00	5.693E-01	-0.699
SB-127		61.10		2.388E+01	8.222E+01	1.384E+02	1.909E+01	0.173
		252.40		-7.186E-02	3.899E+00	6.537E+00	2.714E+00	-0.011
		290.80		-7.404E+00	2.310E+01	3.299E+01	3.047E+00	-0.224
		411.60		9.892E-01	1.263E+01	2.070E+01	3.012E+00	0.048
		444.90		-8.514E+00	9.783E+00	1.475E+01	1.620E+00	-0.577
		473.00		-9.344E-01	1.776E+00	2.753E+00	3.111E-01	-0.339
		543.00		4.075E+00	1.673E+01	2.731E+01	3.498E+00	0.149
		603.60		3.145E+00	1.148E+01	1.731E+01	1.789E+00	0.182
		685.20	*	3.444E-01	1.336E+00	2.272E+00	1.993E-01	0.152
		698.50		-1.651E+00	1.421E+01	2.342E+01	3.314E+00	-0.070
		722.20		-2.024E+01	3.264E+01	4.329E+01	3.874E+00	-0.468
		783.80		1.485E+00	3.452E+00	5.907E+00	6.659E-01	0.251
XE-127		57.60		-1.151E+00	1.094E+01	1.818E+01	2.311E+00	-0.063
		145.22		3.983E-01	8.448E-01	1.363E+00	8.037E-02	0.292
		172.10		2.055E-02	1.359E-01	2.182E-01	1.202E-02	0.094
		202.84	*	9.108E-03	5.151E-02	8.800E-02	5.096E-03	0.104
		374.96		3.976E-02	2.301E-01	3.818E-01	2.589E-02	0.104
I-131		80.18		6.661E+00	5.703E+00	8.874E+00	9.772E-01	0.751
		284.30		-1.545E+00	1.508E+00	2.356E+00	1.657E-01	-0.656
		364.48	*	6.120E-02	1.196E-01	2.032E-01	1.493E-02	0.301
		636.97		3.288E-02	1.484E+00	2.489E+00	1.493E-01	0.013
		722.89		-6.197E+00	8.626E+00	1.130E+01	6.959E-01	-0.548
TE-132		49.72		-3.436E+01	3.998E+01	6.411E+01	9.014E+00	-0.536
		111.76		1.088E+00	2.782E+01	4.535E+01	4.381E+00	0.024
		116.30		-1.062E+01	2.495E+01	3.964E+01	3.701E+00	-0.268
		228.16	*	-8.789E-02	6.178E-01	1.035E+00	1.475E-01	-0.085
BA-133		53.15		8.400E+00	8.162E+00	1.411E+01	1.868E+00	0.595
		79.62		1.212E+00	1.813E+00	2.755E+00	4.591E-01	0.440
		81.00		2.092E-02	1.359E-01	2.021E-01	3.492E-02	0.104
		276.40		1.632E-02	4.288E-01	7.175E-01	9.504E-02	0.023
		302.84		9.405E-02	1.899E-01	2.876E-01	3.467E-02	0.327
		356.01	*	-8.718E-03	6.051E-02	8.628E-02	1.041E-02	-0.101
		383.85		-2.636E-01	3.811E-01	5.945E-01	6.796E-02	-0.443
I-133	+	510.53		6.097E-01	3.811E-01	Half-Life too short		
		529.87	*	1.359E-03	3.811E-01	Half-Life too short		
		706.58		-3.122E-02	3.811E-01	Half-Life too short		
		856.28		-1.955E-01	3.811E-01	Half-Life too short		
		875.33		5.716E-02	3.811E-01	Half-Life too short		
		1236.41		2.090E-01	3.811E-01	Half-Life too short		
		1298.22		-3.004E-02	3.811E-01	Half-Life too short		
CS-134		475.35		-6.747E-01	2.442E+00	3.863E+00	2.548E-01	-0.175

---- Non-Identified Nuclides ----

Nuclide	Line Idled	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		563.23		1.265E-02	4.637E-01	7.419E-01	4.553E-02	0.017
		569.32		-8.287E-02	2.486E-01	3.782E-01	2.320E-02	-0.219
		604.70		-7.188E-03	4.122E-02	5.912E-02	3.343E-03	-0.122
		795.84	*	6.817E-02	5.583E-02	1.011E-01	7.790E-03	0.675
		801.93		2.068E-01	4.487E-01	7.712E-01	6.038E-02	0.268
		1038.57		-2.672E+00	4.909E+00	7.439E+00	6.335E-01	-0.359
		1167.94		2.161E+00	3.226E+00	5.711E+00	3.582E-01	0.378
		1365.15		1.758E+00	1.468E+00	2.796E+00	2.523E-01	0.629
CS-135		268.24	*	1.606E-01	1.934E-01	3.019E-01	2.440E-02	0.532
I-135		288.45		4.488E+08	1.934E-01	Half-Life too short		
		417.63		-1.055E+09	1.934E-01	Half-Life too short		
		546.56		3.355E+08	1.934E-01	Half-Life too short		
		836.80		7.833E+08	1.934E-01	Half-Life too short		
		1038.76		-7.064E+08	1.934E-01	Half-Life too short		
		1124.00		3.039E+09	1.934E-01	Half-Life too short		
		1131.51		7.925E+06	1.934E-01	Half-Life too short		
		1260.41	*	-2.929E+07	1.934E-01	Half-Life too short		
		1457.56		2.262E+10	1.934E-01	Half-Life too short		
		1678.03		-4.747E+08	1.934E-01	Half-Life too short		
		1706.46		-1.233E+09	1.934E-01	Half-Life too short		
		1791.20		2.282E+07	1.934E-01	Half-Life too short		
CS-136		66.91		-9.459E-01	1.133E+00	1.791E+00	3.068E-01	-0.528
	+	86.29		4.146E+00	1.655E+00	2.302E+00	3.391E-01	1.801
		153.22		-7.850E-02	7.335E-01	1.169E+00	8.371E-02	-0.067
		163.89		9.800E-01	1.184E+00	1.966E+00	1.378E-01	0.499
		176.55		-2.959E-01	4.118E-01	6.296E-01	3.960E-02	-0.470
		273.65		-2.973E-01	5.364E-01	7.554E-01	5.388E-02	-0.394
		340.57		5.351E-01	1.831E-01	3.100E-01	2.178E-02	1.727
		818.51		-2.525E-02	7.679E-02	1.218E-01	9.946E-03	-0.207
		1048.07	*	-1.171E-01	1.442E-01	2.129E-01	1.864E-02	-0.550
		1235.34		5.959E-01	7.293E-01	1.289E+00	1.392E-01	0.462
CE-139		165.85	*	-4.366E-02	3.582E-02	5.350E-02	2.922E-03	-0.816
BA-140		162.64		5.354E-01	8.451E-01	1.391E+00	8.734E-02	0.385
		304.84		5.555E-01	1.519E+00	2.273E+00	6.243E-01	0.244
		423.70		-5.910E-01	2.147E+00	3.412E+00	1.091E+00	-0.173
		537.32	*	1.241E-01	3.007E-01	4.937E-01	1.610E-01	0.251
LA-140	+	328.77		4.124E-01	5.260E-01	5.840E-01	4.255E-02	0.706
		432.53		-1.751E+00	2.313E+00	3.539E+00	2.573E-01	-0.495
		487.03		-1.248E-02	1.555E-01	2.492E-01	1.801E-02	-0.050
		751.79		-5.331E-01	1.873E+00	3.019E+00	2.365E-01	-0.177
		815.85		-3.070E-01	3.517E-01	5.240E-01	4.793E-02	-0.586
		867.82		-9.616E-01	1.801E+00	2.391E+00	2.337E-01	-0.402
		919.63		1.759E+00	3.098E+00	5.228E+00	6.134E-01	0.336
		925.24		-4.712E-01	1.290E+00	2.018E+00	2.089E-01	-0.234
		1596.49	*	4.570E-02	9.536E-02	1.513E-01	1.174E-02	0.302
CE-141		145.44	*	-8.469E-03	7.755E-02	1.219E-01	7.463E-03	-0.069
CE-143		57.37		-2.720E-04	7.755E-02	Half-Life too short		
		231.56		-9.367E-04	7.755E-02	Half-Life too short		
		293.26	*	2.282E-04	7.755E-02	Half-Life too short		

--- Non-identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		350.59		1.452E-02	7.755E-02	Half-Life too short		
		490.36		1.969E-04	7.755E-02	Half-Life too short		
		664.57		6.603E-03	7.755E-02	Half-Life too short		
		721.93		-2.541E-04	7.755E-02	Half-Life too short		
CE-144		80.11		3.306E+00	2.880E+00	4.478E+00	4.914E-01	0.738
		133.54	*	-1.313E-01	2.411E-01	3.776E-01	5.425E-02	-0.348
PM-144		476.78		4.173E-02	8.770E-02	1.463E-01	1.114E-02	0.285
		618.01		-8.237E-04	3.803E-02	6.371E-02	3.722E-03	-0.013
		696.49	*	-1.104E-02	4.165E-02	6.785E-02	3.785E-03	-0.163
		778.57		7.602E-01	2.548E+00	4.326E+00	3.140E-01	0.176
PR-144		696.49	*	-7.474E-01	2.820E+00	4.595E+00	2.562E-01	-0.163
		1489.15		-1.287E-02	1.338E+01	2.198E+01	1.815E+00	-0.001
PM-146		453.90	*	-5.805E-03	5.616E-02	9.034E-02	8.344E-03	-0.064
		633.02		8.019E-02	1.484E+00	2.496E+00	9.173E-01	0.032
		735.90		3.562E-02	1.855E-01	2.735E-01	7.658E-02	0.130
		747.13		-3.475E-02	1.042E-01	1.670E-01	2.153E-02	-0.208
ND-147	+	91.11		6.972E-01	3.781E-01	5.927E-01	6.608E-02	1.176
		319.41		-2.764E+00	3.656E+00	5.772E+00	3.831E-01	-0.479
		439.89		3.433E+00	6.763E+00	1.137E+01	7.643E-01	0.302
		531.02	*	-3.646E-01	6.426E-01	9.768E-01	1.341E-01	-0.373
PM-149		285.90	*	3.373E+01	7.245E+01	1.237E+02	1.788E+01	0.273
EU-152		121.78		-2.299E-02	8.666E-02	1.386E-01	1.142E-02	-0.166
		244.69		2.775E-01	3.946E-01	6.139E-01	3.787E-02	0.452
		344.27	*	8.145E-02	1.247E-01	1.907E-01	1.405E-02	0.427
		443.98		-7.835E-01	1.174E+00	1.808E+00	1.213E-01	-0.433
		778.89		8.657E-02	2.918E-01	4.954E-01	3.598E-02	0.175
		867.32		7.254E-02	1.016E+00	1.489E+00	1.391E-01	0.049
	+	964.01		8.166E-01	3.471E-01	6.199E-01	5.873E-02	1.317
		1085.78		-5.578E-01	5.041E-01	7.018E-01	5.463E-02	-0.795
		1112.02		-7.274E-03	4.072E-01	6.136E-01	4.501E-02	-0.012
		1407.95		1.358E-01	2.317E-01	4.110E-01	3.504E-02	0.330
GD-153		69.67		1.228E-01	2.561E+00	4.061E+00	4.529E-01	0.030
		83.37		-1.851E+01	2.072E+01	2.900E+01	3.215E+00	-0.638
		97.43	*	-6.240E-02	1.104E-01	1.559E-01	1.451E-02	-0.400
		103.18		-7.885E-02	1.303E-01	2.047E-01	1.731E-02	-0.385
EU-154		123.07		1.823E-02	5.998E-02	9.852E-02	9.736E-03	0.185
		247.94		-3.067E-01	3.993E-01	6.414E-01	6.277E-02	-0.478
		591.81		-4.098E-01	7.417E-01	1.117E+00	1.088E-01	-0.367
		723.30		-1.670E-01	2.412E-01	3.178E-01	2.329E-02	-0.525
		756.87		5.936E-02	8.676E-01	1.445E+00	1.550E-01	0.041
		873.19		2.266E-01	3.426E-01	5.972E-01	7.684E-02	0.379
		996.32		1.628E-02	5.349E-01	7.515E-01	1.353E-01	0.022
		1004.76		1.094E-02	2.883E-01	4.053E-01	4.826E-02	0.027
		1274.45	*	-1.430E-01	1.481E-01	2.175E-01	2.317E-02	-0.657
EU-155		48.70		4.090E+00	6.656E+00	1.142E+01	1.372E+00	0.358
		60.01		-3.348E+00	8.702E+00	1.426E+01	1.757E+00	-0.235
	+	86.54		4.054E-01	1.572E-01	2.298E-01	2.601E-02	1.764
		105.31	*	-1.293E-02	1.291E-01	2.097E-01	1.739E-02	-0.062
TB-160	+	86.79		1.072E+00	4.154E-01	6.143E-01	6.921E-02	1.745

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		197.04		2.712E-01	6.622E-01	1.069E+00	6.133E-02	0.254
		215.65		-2.084E-01	8.601E-01	1.392E+00	8.227E-02	-0.150
		298.57		8.223E-02	1.936E-01	2.170E-01	1.418E-02	0.379
		879.36	*	1.805E-02	1.547E-01	2.562E-01	2.471E-02	0.070
		962.29		8.398E-01	6.844E-01	1.114E+00	1.058E-01	0.754
	+	966.15		5.549E-01	2.359E-01	5.136E-01	4.853E-02	1.080
		1177.93		9.446E-02	4.267E-01	7.292E-01	4.547E-02	0.130
		1271.85		-9.567E-02	8.609E-01	1.415E+00	1.089E-01	-0.068
HO-166M		80.57		2.173E-01	3.765E-01	5.715E-01	6.278E-02	0.380
		184.41		3.593E-02	5.018E-02	7.540E-02	4.235E-03	0.477
		280.46		2.072E-02	9.795E-02	1.653E-01	1.063E-02	0.125
		410.95		1.931E-01	3.072E-01	5.205E-01	3.529E-02	0.371
		711.68	*	1.301E-02	6.971E-02	1.177E-01	6.905E-03	0.111
		752.31		-5.315E-02	3.190E-01	5.201E-01	3.480E-02	-0.102
		810.29		3.309E-02	7.148E-02	1.226E-01	9.767E-03	0.270
TM-171		51.35		-5.109E+01	7.365E+01	1.192E+02	1.568E+01	-0.429
		52.39		2.163E+01	3.657E+01	6.255E+01	8.284E+00	0.346
		59.40		-4.358E+01	4.785E+01	7.627E+01	9.475E+00	-0.571
		66.72	*	-4.019E+01	4.318E+01	6.828E+01	7.778E+00	-0.589
LU-176	+	88.36		7.987E-01	3.095E-01	4.501E-01	5.063E-02	1.775
		201.83		1.816E-02	3.162E-02	5.497E-02	3.178E-03	0.330
		306.84	*	3.733E-03	2.938E-02	4.754E-02	3.127E-03	0.079
		401.10		-3.623E+00	8.151E+00	1.291E+01	8.767E-01	-0.281
LU-177		112.95		2.084E+00	1.681E+00	2.877E+00	2.118E-01	0.724
	+	208.36	*	3.235E+00	1.553E+00	2.059E+00	1.203E-01	1.571
LU-177M		52.97		3.120E+00	3.714E+00	6.390E+00	8.466E-01	0.488
		54.07		2.296E+00	1.871E+00	3.245E+00	4.280E-01	0.707
		61.30		1.179E+00	2.578E+00	4.362E+00	5.278E-01	0.270
		121.62		-2.351E-01	4.471E-01	7.059E-01	4.670E-02	-0.333
		147.16		-3.970E-01	7.796E-01	1.221E+00	7.147E-02	-0.325
		171.86		-1.371E-01	5.695E-01	8.959E-01	4.932E-02	-0.153
		218.09		-1.972E-01	9.542E-01	1.598E+00	9.486E-02	-0.123
	+	268.79		2.986E+00	1.235E+00	1.641E+00	1.043E-01	1.820
		319.02		-2.138E-01	3.062E-01	4.855E-01	3.220E-02	-0.440
		367.43		-2.490E-01	1.074E+00	1.737E+00	1.176E-01	-0.143
		413.65	*	-1.925E-01	2.229E-01	3.418E-01	2.317E-02	-0.563
HF-181		56.28		-6.810E-01	1.840E+00	3.022E+00	3.904E-01	-0.225
		57.53		-2.026E-01	9.297E-01	1.537E+00	1.956E-01	-0.132
		65.20		-1.363E+00	1.443E+00	2.294E+00	2.650E-01	-0.594
		133.02		-1.505E-02	7.513E-02	1.201E-01	7.456E-03	-0.125
		136.25		3.157E-01	5.430E-01	8.982E-01	5.497E-02	0.351
		345.85		-2.693E-02	2.460E-01	3.524E-01	2.370E-02	-0.076
		482.03	*	7.872E-03	5.380E-02	8.776E-02	5.761E-03	0.090
W-181		56.28		-2.714E-01	7.286E-01	1.197E+00	1.546E-01	-0.227
		57.53		-8.039E-02	3.685E-01	6.092E-01	7.752E-02	-0.132
		65.20	*	-5.360E-01	5.674E-01	9.020E-01	1.042E-01	-0.594
TA-182		67.75		-2.350E-02	1.629E-01	2.675E-01	3.022E-02	-0.088
		100.10		1.243E-01	2.147E-01	3.594E-01	3.194E-02	0.346
		152.43		-1.299E-02	3.905E-01	6.249E-01	3.585E-02	-0.021

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		-6.837E-03	3.936E-01	6.645E-01	3.968E-02	-0.010
	+	1001.68		4.154E+00	4.218E+00	4.512E+00	4.070E-01	0.921
	-	1121.28		5.662E-01	3.557E-01	4.196E-01	3.008E-02	1.349
		1189.05		2.782E-01	3.894E-01	6.911E-01	4.425E-02	0.402
		1221.42	*	-4.420E-02	2.546E-01	4.187E-01	2.887E-02	-0.106
		1230.97		-1.123E-01	6.051E-01	9.932E-01	6.996E-02	-0.113
RE-183		57.98		-1.915E-01	3.643E-01	5.930E-01	7.503E-02	-0.323
		59.32		-1.953E-01	1.949E-01	3.088E-01	3.841E-02	-0.632
		67.20		-6.129E-02	2.965E-01	4.855E-01	5.508E-02	-0.126
		162.32	*	6.590E-02	1.289E-01	2.111E-01	1.168E-02	0.312
	+	208.81		3.225E+00	1.548E+00	2.086E+00	1.220E-01	1.546
		291.72		-3.064E-01	1.198E+00	1.720E+00	1.118E-01	-0.178
RE-184		57.98		-7.101E-01	1.351E+00	2.199E+00	2.783E-01	-0.323
		59.32		-7.235E-01	7.220E-01	1.144E+00	1.423E-01	-0.632
		67.20		-2.272E-01	1.099E+00	1.800E+00	2.042E-01	-0.126
		161.27		-1.127E-01	4.228E-01	6.668E-01	3.703E-02	-0.169
		216.55		7.343E-02	2.966E-01	5.073E-01	3.004E-02	0.145
		252.85	*	-2.781E-03	2.538E-01	4.257E-01	2.654E-02	-0.007
		318.01		3.290E-01	5.254E-01	9.014E-01	5.976E-02	0.365
		792.07		-1.725E+00	1.215E+00	1.731E+00	1.308E-01	-0.996
		903.28		2.137E-01	1.309E+00	1.978E+00	1.993E-01	0.108
		920.93		2.371E-01	5.329E-01	9.086E-01	9.012E-02	0.261
OS-185		59.72		-2.659E-01	5.189E-01	8.453E-01	1.045E-01	-0.315
		61.14		9.088E-02	2.832E-01	4.772E-01	5.785E-02	0.190
		69.30		-1.707E-01	4.603E-01	7.161E-01	8.004E-02	-0.238
		592.07		-1.409E+00	3.021E+00	4.594E+00	2.642E-01	-0.307
		646.12	*	-1.961E-02	4.919E-02	7.955E-02	4.087E-03	-0.247
		717.42		3.972E-01	1.091E+00	1.865E+00	1.115E-01	0.213
		874.81		2.082E-01	6.862E-01	1.158E+00	1.103E-01	0.180
		880.27		4.128E-01	8.474E-01	1.459E+00	1.410E-01	0.283
RE-188		155.03	*	1.493E-01	1.997E-01	3.310E-01	1.881E-02	0.451
		477.96		1.730E+00	4.025E+00	6.693E+00	4.406E-01	0.259
		633.10		2.270E-01	2.972E+00	5.012E+00	2.656E-01	0.045
W-188		63.58		4.052E+01	8.600E+01	1.436E+02	1.688E+01	0.282
		227.08		4.734E+00	1.485E+01	2.542E+01	1.530E+00	0.186
		290.67	*	-3.886E+00	9.706E+00	1.378E+01	8.947E-01	-0.282
IR-192	+	295.96		1.062E+00	2.190E-01	3.330E-01	2.199E-02	3.190
		308.46		-9.526E-03	1.085E-01	1.791E-01	1.190E-02	-0.053
		316.51	*	2.159E-02	4.032E-02	6.885E-02	4.577E-03	0.314
		468.07		-1.390E-02	8.570E-02	1.370E-01	1.016E-02	-0.101
		604.41		-3.724E-02	5.564E-01	8.082E-01	9.101E-02	-0.046
		612.46		2.295E+00	1.031E+00	1.777E+00	1.310E-01	1.292
AU-195		65.12		-2.451E-01	2.640E-01	4.201E-01	4.858E-02	-0.583
		66.83		-1.302E-01	1.429E-01	2.263E-01	2.575E-02	-0.575
	+	75.70		1.058E+00	3.413E-01	5.674E-01	6.206E-02	1.865
		98.88	*	1.920E-01	2.931E-01	4.692E-01	4.258E-02	0.409
		129.76		1.876E+00	3.420E+00	5.657E+00	3.569E-01	0.332
TL-200		367.94	*	-1.073E-04	3.420E+00	Half-Life too short		
		579.30		3.928E-04	3.420E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		828.27		-4.311E-04	3.420E+00	Half-Life too short		
		1205.75		-4.349E-04	3.420E+00	Half-Life too short		
TL-201		68.90		-4.255E+00	5.617E+00	9.017E+00	1.010E+00	-0.472
		70.82		1.778E+00	3.427E+00	5.209E+00	5.775E-01	0.341
		80.30		3.291E+00	5.431E+00	8.255E+00	9.062E-01	0.399
		135.34		7.278E+00	2.316E+01	3.789E+01	2.328E+00	0.192
		167.43	*	1.197E-01	6.361E+00	1.016E+01	5.555E-01	0.012
TL-202		68.90		-4.625E-01	6.106E-01	9.801E-01	1.098E-01	-0.472
		70.82		1.927E-01	3.715E-01	5.646E-01	6.259E-02	0.341
		80.30		3.568E-01	5.889E-01	8.951E-01	9.826E-02	0.399
		439.56	*	3.833E-02	8.156E-02	1.367E-01	9.191E-03	0.280
HG-203		70.83		8.697E-01	1.688E+00	2.562E+00	3.916E-01	0.339
		72.87		5.445E-01	9.826E-01	1.488E+00	2.212E-01	0.366
		82.60		-1.132E+00	1.434E+00	2.154E+00	3.314E-01	-0.525
		279.20	*	9.400E-02	4.729E-02	8.475E-02	5.719E-03	1.109
BI-207		72.80		1.395E-01	2.922E-01	4.420E-01	4.862E-02	0.316
	+	74.97		5.893E-01	1.901E-01	3.006E-01	3.290E-02	1.961
		84.90		1.728E-01	2.480E-01	3.786E-01	4.224E-02	0.456
		569.67		-9.945E-03	3.902E-02	5.981E-02	3.567E-03	-0.166
		1063.62	*	1.793E-02	6.374E-02	1.059E-01	8.625E-03	0.169
		1770.23		2.411E-01	6.136E-01	9.536E-01	6.327E-02	0.253
TL-207		81.07		3.333E-02	2.992E-01	4.440E-01	4.884E-02	0.075
		83.78		-5.996E-02	1.717E-01	2.487E-01	2.761E-02	-0.241
		94.90		7.544E-01	3.171E-01	5.097E-01	4.977E-02	1.480
		122.32		1.636E-01	2.050E+00	3.334E+00	2.461E-01	0.049
		144.24		1.043E+00	8.475E-01	1.408E+00	1.032E-01	0.741
		154.21		8.397E-02	4.742E-01	7.660E-01	5.309E-02	0.110
	+	269.46		7.025E-01	2.908E-01	4.183E-01	2.760E-02	1.679
		323.87	*	1.406E+00	8.348E-01	1.336E+00	2.250E-01	1.052
	+	338.28		8.910E+00	2.575E+00	3.031E+00	3.351E-01	2.940
		445.03		-2.497E+00	2.777E+00	4.175E+00	4.512E-01	-0.598
PO-209		260.50		-1.034E+01	1.036E+01	1.597E+01	1.005E+00	-0.648
		262.80		1.978E+00	2.733E+01	4.597E+01	2.901E+00	0.043
		896.60	*	3.372E+00	9.214E+00	1.558E+01	1.572E+00	0.216
BI-210		46.50	*	7.512E+00	1.070E+01	1.846E+01	1.810E+00	0.407
PB-210		46.50	*	7.512E+00	1.070E+01	1.846E+01	1.810E+00	0.407
PO-210		46.50	*	7.512E+00	1.070E+01	1.846E+01	1.657E+00	0.407
PB-211		404.84	*	-2.761E-01	1.142E+00	1.812E+00	1.131E+00	-0.152
		427.08		1.517E+00	2.615E+00	4.147E+00	2.567E+00	0.366
		831.96		3.210E-01	1.609E+00	2.667E+00	1.670E+00	0.120
BI-212	+	727.18	*	1.426E+00	7.359E-01	7.691E-01	6.153E-02	1.854
		785.46		9.420E-01	2.128E+00	3.642E+00	2.697E-01	0.259
		1620.62		9.407E-01	1.455E+00	2.643E+00	2.015E-01	0.356
PO-215		81.07		3.333E-02	2.992E-01	4.440E-01	4.884E-02	0.075
		83.78		-5.996E-02	1.717E-01	2.487E-01	2.761E-02	-0.241
		94.90		7.544E-01	3.171E-01	5.097E-01	4.977E-02	1.480
		122.32		1.636E-01	2.050E+00	3.334E+00	2.461E-01	0.049
		144.24		1.043E+00	8.475E-01	1.408E+00	1.032E-01	0.741
		154.21		8.397E-02	4.742E-01	7.660E-01	5.309E-02	0.110

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	-	269.46		7.025E-01	2.908E-01	4.183E-01	2.760E-02	1.679
		323.87	*	1.406E-00	8.348E-01	1.336E+00	2.250E-01	1.052
	+	338.28		8.910E+00	2.575E+00	3.031E+00	3.351E-01	2.940
		445.03		-2.497E-00	2.777E+00	4.175E+00	4.512E-01	-0.598
RN-219	-	271.23		9.013E-01	3.762E-01	5.412E-01	4.611E-01	1.666
		401.81	*	-1.149E-01	4.985E-01	8.011E-01	1.126E-01	-0.143
RN-220		549.76	*	-2.760E+00	3.201E+01	5.081E+01	3.116E+00	-0.054
RA-223		81.07		3.333E-02	2.992E-01	4.440E-01	4.884E-02	0.075
		83.78		-5.996E-02	1.717E-01	2.487E-01	2.761E-02	-0.241
		94.90		7.544E-01	3.171E-01	5.097E-01	4.977E-02	1.480
		122.32		1.636E-01	2.050E+00	3.334E+00	2.461E-01	0.049
		144.24		1.043E+00	8.475E-01	1.408E+00	1.032E-01	0.741
		154.21		8.397E-02	4.742E-01	7.660E-01	5.309E-02	0.110
	-	269.46		7.025E-01	2.908E-01	4.183E-01	2.760E-02	1.679
		323.87	*	1.406E+00	8.348E-01	1.336E+00	2.250E-01	1.052
	+	338.28		8.910E+00	2.575E+00	3.031E+00	3.351E-01	2.940
		445.03		-2.497E+00	2.777E+00	4.175E+00	4.512E-01	-0.598
AC-227		79.80		2.370E+00	2.281E+00	3.462E+00	7.805E-01	0.685
		236.00		1.938E-01	2.865E-01	4.452E-01	4.728E-02	0.435
		256.20	*	1.018E-01	4.143E-01	7.036E-01	9.962E-02	0.145
		286.10		1.420E+00	1.697E+00	2.948E+00	3.511E-01	0.482
	+	299.80		4.134E+00	2.451E+00	3.072E+00	5.089E-01	1.346
		304.40		-3.245E-01	2.406E+00	3.474E+00	6.103E-01	-0.093
		334.20		-1.747E+00	3.939E+00	3.808E+00	7.096E-01	-0.459
TH-227		79.80		2.370E+00	2.282E+00	3.462E+00	7.896E-01	0.685
	+	94.00		1.422E+01	4.660E+00	5.254E+00	1.173E+00	2.706
		236.00		1.938E-01	2.863E-01	4.452E-01	4.118E-02	0.435
		256.20	*	1.018E-01	4.144E-01	7.036E-01	1.201E-01	0.145
		286.10		1.420E+00	2.208E+00	2.948E+00	2.954E+00	0.482
	+	299.80		4.134E+00	2.451E+00	3.072E+00	5.089E-01	1.346
		304.40		-3.245E-01	2.406E+00	3.474E+00	6.103E-01	-0.093
		334.20		-1.747E+00	3.939E+00	3.808E+00	7.096E-01	-0.459
TH-229		85.43		5.486E-02	2.496E-01	3.724E-01	4.166E-02	0.147
	+	88.47		4.598E-01	1.782E-01	2.596E-01	2.912E-02	1.771
		100.00		8.587E-02	2.291E-01	3.782E-01	3.367E-02	0.227
		193.63	*	-2.505E-01	6.234E-01	9.657E-01	5.507E-02	-0.259
	+	210.97		2.553E+00	1.226E+00	1.589E+00	9.327E-02	1.607
PA-231		283.67	*	-2.203E+00	1.725E+00	2.612E+00	3.673E-01	-0.843
	+	301.29		1.654E+00	9.584E-01	1.239E+00	1.349E-01	1.335
TH-231		81.07		3.333E-02	2.992E-01	4.440E-01	4.884E-02	0.075
		83.78		-5.996E-02	1.717E-01	2.487E-01	2.761E-02	-0.241
		94.90		7.544E-01	3.171E-01	5.097E-01	4.977E-02	1.480
		122.32		1.636E-01	2.050E+00	3.334E+00	2.461E-01	0.049
		144.24		1.043E+00	8.475E-01	1.408E+00	1.032E-01	0.741
		154.21		8.397E-02	4.742E-01	7.660E-01	5.309E-02	0.110
	+	269.46		7.025E-01	2.908E-01	4.183E-01	2.760E-02	1.679
		323.87	*	1.406E+00	8.348E-01	1.336E+00	2.250E-01	1.052
	+	338.28		8.910E+00	2.575E+00	3.031E+00	3.351E-01	2.940
		445.03		-2.497E+00	2.777E+00	4.175E+00	4.512E-01	-0.598

---- Non-Identified Nuclides ----

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-237		84.21		5.970E-01	6.044E+00	8.970E+00	9.977E-01	0.067
	+	92.29		1.170E+01	3.037E+00	4.596E+00	4.732E-01	2.545
		95.87	*	-4.429E-01	1.228E+00	1.759E+00	1.686E-01	-0.252
		108.00		7.240E-01	2.049E+00	3.390E+00	2.669E-01	0.214
PA-233	-	75.28		1.720E+01	5.961E+00	8.783E+00	1.472E+00	1.958
	+	86.59		6.593E+00	3.055E+00	3.752E+00	1.042E+00	1.757
	+	300.12		1.153E+00	6.750E-01	8.597E-01	1.184E-01	1.341
		311.98	*	-3.622E-02	7.366E-02	1.185E-01	8.198E-03	-0.306
		340.50		2.987E+00	1.162E+00	1.626E+00	3.775E-01	1.837
		398.62		-2.788E-02	2.465E+00	4.026E+00	1.051E+00	-0.007
		415.76		8.279E-01	1.990E+00	3.324E+00	6.942E-01	0.249
PA-234		63.00		2.588E+00	2.645E+00	4.443E+00	7.774E-01	0.583
		94.67		5.504E-01	2.275E-01	3.860E-01	5.116E-02	1.426
		98.44		7.377E-02	1.310E-01	1.880E-01	1.050E-01	0.392
		99.86		2.797E-01	5.833E-01	9.668E-01	8.627E-02	0.289
		111.00		2.436E-02	2.251E-01	3.680E-01	4.178E-02	0.066
		131.20		-1.503E-02	1.255E-01	2.016E-01	1.263E-02	-0.075
		152.70		6.994E-02	3.745E-01	6.056E-01	9.559E-02	0.115
	+	186.00		7.546E+00	3.340E+00	3.167E+00	9.666E-01	2.383
		226.40		3.342E-01	4.709E-01	8.171E-01	9.534E-02	0.409
		227.20		1.662E-01	5.012E-01	8.582E-01	5.165E-02	0.194
		248.90		1.236E-01	8.700E-01	1.472E+00	3.179E-01	0.084
		293.70		3.814E+00	1.186E+00	1.795E+00	2.935E-01	2.124
		369.80		-2.470E-01	1.034E+00	1.670E+00	3.526E-01	-0.148
		568.70		-6.134E-01	1.255E+00	1.881E+00	1.123E-01	-0.326
		569.50		-1.011E-01	3.453E-01	5.274E-01	3.146E-02	-0.192
		574.00		-8.152E-01	1.664E+00	2.698E+00	1.599E-01	-0.302
		699.00		4.857E-02	8.069E-01	1.349E+00	2.418E-01	0.036
		706.10		9.558E-02	1.045E+00	1.752E+00	7.731E-01	0.055
		733.00		3.788E-01	4.622E-01	7.272E-01	1.556E-01	0.521
		742.81		-5.890E-01	1.637E+00	2.461E+00	1.649E+00	-0.239
		796.30		1.026E+00	1.131E+00	1.950E+00	5.219E-01	0.526
		805.60		-3.579E-01	1.256E+00	1.960E+00	5.966E-01	-0.183
		819.60		5.690E-01	1.373E+00	2.327E+00	8.827E-01	0.245
		826.30		-6.300E-01	1.056E+00	1.574E+00	7.035E-01	-0.400
		831.60		1.065E-01	8.155E-01	1.354E+00	4.035E-01	0.079
		876.40		-1.896E-01	9.891E-01	1.554E+00	1.599E+00	-0.122
		880.51		1.343E-01	3.071E-01	5.261E-01	5.088E-02	0.255
		883.24		5.703E-02	3.232E-01	5.351E-01	3.605E-01	0.107
		899.00		-4.988E-02	1.036E+00	1.692E+00	7.451E-01	-0.029
		925.00		-1.824E-01	1.410E+00	2.265E+00	2.238E-01	-0.081
		926.50		4.006E-02	2.099E-01	3.485E-01	8.967E-02	0.115
		946.00	*	-1.017E-01	3.731E-01	5.889E-01	1.135E-01	-0.173
		949.00		4.954E-01	5.697E-01	1.001E+00	9.649E-02	0.495
		980.50		9.727E-01	8.604E-01	1.557E+00	1.446E-01	0.625
		1394.10		-4.310E-01	1.329E+00	2.031E+00	1.322E+00	-0.212
PA-234M		766.41		2.514E+01	2.834E+01	3.762E+01	2.879E+01	0.668
		1001.03	*	-1.203E+00	8.866E+00	1.408E+01	1.619E+00	-0.085
TH-234		63.29	*	1.337E+00	2.226E+00	3.715E+00	7.322E-01	0.360

-- Non-Identified Nuclides ----

Nuclide	Line Iden	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		3.679E+00	1.120E+00	1.447E+00	2.938E-01	2.543
U-235	-	89.95		2.978E+00	1.837E+00	2.292E+00	7.232E-01	1.299
	+	93.35		4.424E+00	1.646E+00	1.744E+00	4.972E-01	2.536
		105.00		-3.652E-01	1.282E+00	2.058E+00	6.317E-01	-0.177
		143.76	*	3.068E-01	2.638E-01	4.313E-01	7.052E-02	0.711
		163.35		4.091E-01	5.614E-01	9.213E-01	1.648E-01	0.444
	+	185.71		2.795E-01	9.097E-02	1.168E-01	6.575E-03	2.392
		205.31		-4.263E-01	6.715E-01	9.560E-01	1.720E-01	-0.446
NP-236		94.67		4.223E-01	1.688E-01	2.933E-01	2.877E-02	1.440
		98.44		5.570E-02	9.412E-02	1.421E-01	1.300E-02	0.392
		111.00		1.842E-02	1.703E-01	2.784E-01	2.103E-02	0.066
		160.31	*	-6.517E-02	9.583E-02	1.479E-01	8.243E-03	-0.441
U-238		63.29	*	1.337E+00	2.226E+00	3.715E+00	7.322E-01	0.360
	+	92.38		3.679E+00	9.554E-01	1.447E+00	1.487E-01	2.543
NP-239		99.55		9.800E-02	1.972E-01	3.271E-01	2.934E-02	0.300
		117.00	*	-8.922E-02	2.199E-01	3.498E-01	2.447E-02	-0.255
	+	209.75		2.572E+00	1.235E+00	1.676E+00	9.818E-02	1.534
		228.18		-3.771E-02	2.556E-01	4.284E-01	2.582E-02	-0.088
		277.60		2.095E-01	2.143E-01	3.687E-01	2.364E-02	0.568
		334.30		-1.072E+00	2.222E+00	2.139E+00	1.431E-01	-0.501
AM-241		59.54	*	-2.092E-01	2.784E-01	4.478E-01	5.750E-02	-0.467
CM-243		99.55		1.008E-01	2.029E-01	3.366E-01	3.019E-02	0.300
		103.76	*	-2.193E-02	1.138E-01	1.840E-01	1.541E-02	-0.119
		117.00		-9.178E-02	2.262E-01	3.599E-01	2.517E-02	-0.255
	+	209.75		2.536E+00	1.217E+00	1.652E+00	9.678E-02	1.534
		228.18		-3.810E-02	2.583E-01	4.328E-01	2.609E-02	-0.088
		277.60		2.112E-01	2.160E-01	3.717E-01	2.383E-02	0.568
CM-247		278.00		9.813E-01	9.007E-01	1.557E+00	9.987E-02	0.630
		287.40		1.279E+00	1.403E+00	2.451E+00	1.587E-01	0.522
		402.60	*	1.391E-02	4.409E-02	7.353E-02	4.992E-03	0.189
CF-249		252.85		-1.048E-02	9.566E-01	1.604E+00	1.000E-01	-0.007
		333.44		3.717E-02	2.880E-01	3.082E-01	2.061E-02	0.121
		387.95	*	2.461E-02	4.858E-02	8.207E-02	5.576E-03	0.300
CF-251		176.60	*	-9.436E-02	1.503E-01	2.311E-01	1.282E-02	-0.408
		227.00		2.023E-01	4.489E-01	7.726E-01	4.648E-02	0.262
		285.00		-1.014E+00	1.935E+00	3.126E+00	2.019E-01	-0.324

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358007      *
* Acquisition date :  6-JUL-2009 12:13:44 Detector SN#     :                *
* Detector ID        : CAM10               Sensitivity      : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.98      Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232358007           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.0062E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.004E+01	3.254E+00	5.993E-01	0.000E+00
CD-109	3.421E+00	1.299E+00	1.489E+00	0.000E+00
SN-126	3.368E-01	1.279E-01	1.476E-01	0.000E+00
BA-137M	8.585E-01	1.107E-01	6.830E-02	0.000E+00
CS-137	9.076E-01	1.171E-01	7.220E-02	0.000E+00
TL-208	4.918E-01	1.172E-01	6.676E-02	0.000E+00
BI-211	3.972E+00	5.977E-01	3.716E-01	0.000E+00
PB-212	1.695E+00	1.796E-01	1.102E-01	0.000E+00
PO-212	1.695E+00	1.796E-01	1.102E-01	0.000E+00
BI-214	1.224E+00	2.058E-01	1.276E-01	0.000E+00
PB-214	1.382E+00	2.196E-01	1.336E-01	0.000E+00
PO-214	1.382E+00	2.196E-01	1.336E-01	0.000E+00
PO-216	1.695E+00	1.796E-01	1.102E-01	0.000E+00
PO-218	1.382E+00	2.196E-01	1.336E-01	0.000E+00
RA-224	4.430E+00	1.254E+00	1.254E+00	0.000E+00
RA-226	1.224E+00	2.058E-01	1.276E-01	0.000E+00
AC-228	1.630E+00	3.716E-01	2.322E-01	0.000E+00
RA-228	1.630E+00	3.716E-01	2.322E-01	0.000E+00
TH-228	1.695E+00	1.796E-01	1.102E-01	0.000E+00
TH-230	1.224E+00	2.058E-01	1.276E-01	0.000E+00
TH-232	1.630E+00	3.716E-01	2.322E-01	0.000E+00
U-234	1.224E+00	2.058E-01	1.276E-01	0.000E+00
NP-237	9.889E-01	4.255E-01	4.874E-01	0.000E+00
AM-243	3.283E-01	1.038E-01	1.306E-01	0.000E+00
ANH-511	1.453E-01	8.288E-02	5.808E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.860E-01	4.086E-01	6.906E-01	0.000E+00	NOT IDENT.
NA-22	-5.227E-02	5.168E-02	7.674E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	2.574E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-6.355E-03	3.248E-02	5.045E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.517E-02	1.042E-01	0.000E+00	FAIL ABUN
SC-46	3.371E-02	4.601E-02	8.144E-02	0.000E+00	FAIL ABUN
V-48	1.802E-02	8.329E-02	1.399E-01	0.000E+00	NOT IDENT.
CR-51	-5.826E-01	4.242E-01	6.521E-01	0.000E+00	NOT IDENT.
MN-52	-1.461E-01	2.508E-01	3.810E-01	0.000E+00	NOT IDENT.
MN-54	9.180E-03	4.797E-02	8.108E-02	0.000E+00	NOT IDENT.
CO-56	-5.905E-03	4.700E-02	7.722E-02	0.000E+00	NOT IDENT.
CO-57	-7.069E-03	2.922E-02	4.769E-02	0.000E+00	NOT IDENT.
CO-58	3.679E-02	4.588E-02	8.185E-02	0.000E+00	NOT IDENT.
FE-59	-1.587E-01	1.161E-01	1.588E-01	0.000E+00	NOT IDENT.
CO-60	3.122E-02	4.581E-02	8.312E-02	0.000E+00	NOT IDENT.
ZN-65	2.279E-02	1.195E-01	1.722E-01	0.000E+00	NOT IDENT.
GE-68	-2.055E-01	1.556E+00	2.501E+00	0.000E+00	NOT IDENT.
AS-73	2.361E+00	1.810E+00	3.211E+00	0.000E+00	NOT IDENT.
AS-74	2.362E-02	9.676E-02	1.681E-01	0.000E+00	NOT IDENT.
SE-75	2.376E-02	4.798E-02	7.838E-02	0.000E+00	NOT IDENT.
BR-77	-1.503E+00	9.254E+00	1.488E+01	0.000E+00	FAIL ABUN
SR-82	-4.330E-01	4.260E-01	6.435E-01	0.000E+00	NOT IDENT.
RB-83	-1.814E-02	8.343E-02	1.335E-01	0.000E+00	NOT IDENT.
RB-84	3.206E-02	7.319E-02	1.269E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.020E+01	1.659E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.169E-02	8.409E-02	0.000E+00	NOT IDENT.
RB-86	-2.896E-01	9.330E-01	1.469E+00	0.000E+00	NOT IDENT.
Y-88	5.206E-03	3.669E-02	6.188E-02	0.000E+00	NOT IDENT.
ZR-88	-2.476E-03	3.531E-02	5.839E-02	0.000E+00	NOT IDENT.
Y-91	-6.925E+00	2.364E+01	3.898E+01	0.000E+00	NOT IDENT.
NB-94	-5.275E-03	3.533E-02	5.880E-02	0.000E+00	NOT IDENT.
NB-95	3.755E-02	4.969E-02	8.804E-02	0.000E+00	NOT IDENT.
NB-95M	9.320E-02	1.495E-01	2.358E-01	0.000E+00	NOT IDENT.
ZR-95	8.766E-04	7.813E-02	1.312E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.121E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.791E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.519E+00	9.295E+00	1.600E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.093E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-4.063E-03	3.961E-02	6.263E-02	0.000E+00	NOT IDENT.
RH-102	-8.925E-03	3.671E-02	5.913E-02	0.000E+00	NOT IDENT.
RU-103	2.625E-03	4.935E-02	8.001E-02	0.000E+00	FAIL ABUN
RH-106	-1.994E-02	3.719E-01	6.302E-01	0.000E+00	FAIL ABUN
RU-106	-1.994E-02	3.719E-01	6.302E-01	0.000E+00	FAIL ABUN
AG-108M	-1.347E-02	3.690E-02	5.918E-02	0.000E+00	NOT IDENT.
AG-110M	1.848E-02	4.391E-02	6.783E-02	0.000E+00	NOT IDENT.
IN-111	4.629E-01	9.555E-01	1.489E+00	0.000E+00	NOT IDENT.
IN-113M	-1.460E-02	5.182E-02	8.448E-02	0.000E+00	NOT IDENT.
SN-113	-1.460E-02	5.182E-02	8.448E-02	0.000E+00	NOT IDENT.
IN-114M	-1.299E-01	2.290E-01	3.139E-01	0.000E+00	NOT IDENT.
CD-115	-2.296E-01	9.481E+00	1.540E+01	0.000E+00	NOT IDENT.
SN-117M	-3.422E-03	6.016E-02	9.773E-02	0.000E+00	NOT IDENT.
SB-122	1.674E+00	1.912E+00	3.305E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.640E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-6.811E-03	3.275E-02	5.280E-02	0.000E+00	NOT IDENT.
I-124	5.644E-01	6.147E-01	1.041E+00	0.000E+00	NOT IDENT.
SB-124	4.198E-02	9.686E-02	1.715E-01	0.000E+00	FAIL ABUN
SB-125	8.024E-02	1.065E-01	1.850E-01	0.000E+00	NOT IDENT.
TE-125M	-1.311E+00	1.093E+01	1.805E+01	0.000E+00	NOT IDENT.
I-126	1.054E-01	2.390E-01	3.677E-01	0.000E+00	NOT IDENT.
SB-126	9.726E-02	1.752E-01	2.728E-01	0.000E+00	FAIL ABUN
SB-127	3.444E-01	1.310E+00	2.258E+00	0.000E+00	NOT IDENT.
XE-127	9.108E-03	5.048E-02	8.775E-02	0.000E+00	NOT IDENT.
I-131	6.120E-02	1.172E-01	2.023E-01	0.000E+00	NOT IDENT.
TE-132	-8.789E-02	6.054E-01	1.032E+00	0.000E+00	NOT IDENT.
BA-133	-8.718E-03	5.930E-02	8.590E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.909E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.817E-02	5.472E-02	1.004E-01	0.000E+00	NOT IDENT.
CS-135	1.606E-01	1.896E-01	3.008E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.452E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.171E-01	1.413E-01	2.113E-01	0.000E+00	FAIL ABUN
CE-139	-4.366E-02	3.511E-02	5.338E-02	0.000E+00	NOT IDENT.
BA-140	1.241E-01	2.947E-01	4.910E-01	0.000E+00	NOT IDENT.
LA-140	4.570E-02	9.345E-02	1.499E-01	0.000E+00	FAIL ABUN
CE-141	-8.469E-03	7.600E-02	1.217E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.121E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.313E-01	2.362E-01	3.770E-01	0.000E+00	NOT IDENT.
PM-144	-1.104E-02	4.081E-02	6.742E-02	0.000E+00	NOT IDENT.
PR-144	-7.474E-01	2.764E+00	4.566E+00	0.000E+00	NOT IDENT.
PM-146	-5.805E-03	5.504E-02	8.988E-02	0.000E+00	NOT IDENT.
ND-147	-3.646E-01	6.298E-01	9.713E-01	0.000E+00	FAIL ABUN

PM-149	3.373E-01	7.100E-01	1.232E+02	0.000E+00	NOT IDENT.
SM-151	8.165E-02	1.222E-01	1.899E-01	0.000E+00	FAIL ABUN
GD-153	-6.240E-02	1.082E-01	1.558E-01	0.000E+00	NOT IDENT.
EU-154	-1.430E-01	1.451E-01	2.158E-01	0.000E+00	NOT IDENT.
EU-155	-1.293E-02	1.266E-01	2.095E-01	0.000E+00	FAIL ABUN
TB-160	1.805E-02	1.516E-01	2.544E-01	0.000E+00	FAIL ABUN
HO-166M	1.301E-02	6.831E-02	1.169E-01	0.000E+00	NOT IDENT.
TM-171	-4.019E-01	4.231E-01	6.830E-01	0.000E+00	NOT IDENT.
LU-176	3.733E-03	2.879E-02	4.735E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.522E-00	2.053E-00	0.000E+00	FAIL ABUN
LU-177M	-1.925E-01	2.185E-01	3.402E-01	0.000E+00	FAIL ABUN
HF-181	7.872E-03	5.272E-02	8.730E-02	0.000E+00	NOT IDENT.
W-181	-5.360E-01	5.560E-01	9.024E-01	0.000E+00	NOT IDENT.
TA-182	-4.420E-02	2.496E-01	4.154E-01	0.000E+00	FAIL ABUN
RE-183	6.590E-02	1.264E-01	2.107E-01	0.000E+00	FAIL ABUN
RE-184	-2.781E-03	2.487E-01	4.242E-01	0.000E+00	NOT IDENT.
OS-185	-1.961E-02	4.820E-02	7.907E-02	0.000E+00	NOT IDENT.
RE-188	1.493E-01	1.957E-01	3.303E-01	0.000E+00	NOT IDENT.
W-188	-3.886E+00	9.512E+00	1.373E+01	0.000E+00	NOT IDENT.
IR-192	2.159E-02	3.951E-02	6.857E-02	0.000E+00	FAIL ABUN
AU-195	1.920E-01	2.873E-01	4.689E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.625E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.197E-01	6.233E+00	1.013E+01	0.000E+00	NOT IDENT.
TL-202	3.833E-02	7.993E-02	1.360E-01	0.000E+00	NOT IDENT.
HG-203	0.000E+00	4.634E-02	8.444E-02	0.000E+00	NOT IDENT.
BI-207	1.793E-02	6.246E-02	1.051E-01	0.000E+00	FAIL ABUN
TL-207	0.000E+00	8.181E-01	1.331E+00	0.000E+00	FAIL ABUN
PO-209	3.372E+00	9.030E+00	1.547E+01	0.000E+00	NOT IDENT.
BI-210	7.512E+00	1.049E+01	1.849E+01	0.000E+00	NOT IDENT.
PB-210	7.512E+00	1.049E+01	1.849E+01	0.000E+00	NOT IDENT.
PO-210	7.512E+00	1.049E+01	1.849E+01	0.000E+00	NOT IDENT.
PB-211	-2.761E-01	1.119E+00	1.803E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	7.212E-01	7.641E-01	0.000E+00	FAIL ABUN
PO-215	0.000E+00	8.181E-01	1.331E+00	0.000E+00	FAIL ABUN
RN-219	-1.149E-01	4.885E-01	7.973E-01	0.000E+00	FAIL ABUN
RN-220	-2.760E+00	3.137E+01	5.052E+01	0.000E+00	NOT IDENT.
RA-223	0.000E+00	8.181E-01	1.331E+00	0.000E+00	FAIL ABUN
AC-227	1.018E-01	4.060E-01	7.012E-01	0.000E+00	FAIL ABUN
TH-227	1.018E-01	4.062E-01	7.012E-01	0.000E+00	FAIL ABUN
TH-229	-2.505E-01	6.109E-01	9.632E-01	0.000E+00	FAIL ABUN
PA-231	-2.203E+00	1.690E+00	2.602E+00	0.000E+00	FAIL ABUN
TH-231	0.000E+00	8.181E-01	1.331E+00	0.000E+00	FAIL ABUN
U-231	-4.429E-01	1.203E+00	1.758E+00	0.000E+00	FAIL ABUN
PA-233	-3.622E-02	7.219E-02	1.180E-01	0.000E+00	FAIL ABUN
PA-234	-1.017E-01	3.657E-01	5.846E-01	0.000E+00	FAIL ABUN
PA-234M	-1.203E+00	8.689E+00	1.398E+01	0.000E+00	NOT IDENT.
TH-234	1.337E+00	2.181E+00	3.717E+00	0.000E+00	FAIL ABUN
U-235	3.068E-01	2.585E-01	4.305E-01	0.000E+00	FAIL ABUN
NP-236	-6.517E-02	9.391E-02	1.476E-01	0.000E+00	NOT IDENT.
U-238	1.337E+00	2.181E+00	3.717E+00	0.000E+00	FAIL ABUN
NP-239	-8.922E-02	2.155E-01	3.494E-01	0.000E+00	FAIL ABUN
AM-241	-2.092E-01	2.728E-01	4.481E-01	0.000E+00	NOT IDENT.
CM-243	-2.193E-02	1.115E-01	1.838E-01	0.000E+00	FAIL ABUN
CM-247	1.391E-02	4.321E-02	7.318E-02	0.000E+00	NOT IDENT.
CF-249	2.461E-02	4.761E-02	8.169E-02	0.000E+00	NOT IDENT.
CF-251	-9.436E-02	1.473E-01	2.306E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:14:47.16

```
*********************************************************************** *********
*                          GEL Laboratories LLC                                   *
*                            2040 Savage Road                                     *
*                          Charleston, SC 29414                                   *
***********************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358007.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:13:44.
Sample ID         : G232358007           Sample quantity  : 1.00620E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.98  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
***********************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	951	10.67*	1.107E+00	3.004E+01	3.004E+01	11.05
CD-109	88.03	177	3.72*	5.295E+00	3.349E+00	3.421E+00	38.75
SN-126	64.28	------	9.60	2.419E+00	------ Line Not Found		------
	86.94	177	8.90	5.295E+00	1.400E+00	1.400E+00	56.02
	87.57	177	37.00*	5.295E+00	3.368E-01	3.368E-01	38.75
BA-137M	661.65	487	89.98*	2.354E+00	8.578E-01	8.585E-01	13.16
CS-137	661.65	487	85.12*	2.354E+00	9.068E-01	9.076E-01	13.17
TL-208	277.35	------	6.80	4.610E+00	------ Line Not Found		------
	510.84	114	21.60	2.927E+00	6.727E-01	6.727E-01	58.79
	583.14	291	84.20*	2.625E+00	4.918E-01	4.918E-01	24.33
	860.37	79	12.46	1.838E+00	1.284E+00	1.284E+00	40.80
BI-211	72.87	------	1.27	3.633E+00	------ Line Not Found		------
	351.07	535	12.94*	3.885E+00	3.972E+00	3.972E+00	15.35
PB-212	74.81	228	10.70	3.918E+00	2.025E+00	2.025E+00	33.58
	77.11	402	18.00	4.212E+00	1.979E+00	1.979E+00	21.00
	87.30	177	8.00	5.295E+00	1.557E+00	1.557E+00	40.02
	238.63	1036	44.60*	5.110E+00	1.695E+00	1.695E+00	10.81
	300.09	89	3.41	4.352E+00	2.231E+00	2.231E+00	57.59
PO-212	74.81	228	10.70	3.918E+00	2.025E+00	2.025E+00	33.58
	77.11	402	18.00	4.212E+00	1.979E+00	1.979E+00	21.00
	87.30	177	8.00	5.295E+00	1.557E+00	1.557E+00	40.02
	115.19	------	0.60	6.657E+00	------ Line Not Found		------
	238.63	1036	44.60*	5.110E+00	1.695E+00	1.695E+00	10.81
	300.09	89	3.41	4.352E+00	2.231E+00	2.231E+00	57.59
BI-214	609.31	384	46.30*	2.530E+00	1.224E+00	1.224E+00	17.15
	768.36	------	5.04	2.053E+00	------ Line Not Found		------
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	69	15.10	1.414E+00	1.206E+00	1.206E+00	63.17
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	36	4.11	1.163E+00	2.828E+00	2.828E+00	57.83
	1764.49	69	15.80	9.763E-01	1.661E+00	1.661E+00	27.83
PB-214	74.81	228	6.21	3.918E+00	3.489E+00	3.489E+00	33.09

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	402	10.50	4.212E+00	3.392E+00	3.393E+00	22.34
	87.30	177	4.67	5.295E+00	2.668E+00	2.668E-00	39.51
	241.98	238	7.49	5.066E+00	2.336E+00	2.336E+00	29.43
	295.21	319	19.20	4.408E-00	1.408E+00	1.408E+00	21.52
	351.92	535	37.20*	3.885E+00	1.382E+00	1.382E+00	16.22
PO-214	74.81	228	6.21	3.918E+00	3.489E+00	3.489E+00	33.09
	77.11	402	10.50	4.212E+00	3.392E+00	3.393E+00	22.34
	87.30	177	4.67	5.295E+00	2.668E+00	2.668E+00	39.51
	241.98	238	7.49	5.066E+00	2.336E+00	2.336E-00	29.43
	295.21	319	19.20	4.408E+00	1.408E+00	1.408E+00	21.52
	351.92	535	37.20*	3.885E+00	1.382E+00	1.382E+00	16.22
PO-216	74.81	228	10.70	3.918E+00	2.025E+00	2.025E+00	33.58
	77.11	402	18.00	4.212E+00	1.979E+00	1.979E+00	21.00
	87.30	177	8.00	5.295E+00	1.557E+00	1.557E+00	40.02
	238.63	1036	44.60*	5.110E+00	1.695E+00	1.695E+00	10.81
	300.09	89	3.41	4.352E+00	2.231E+00	2.231E+00	57.59
PO-218	74.81	228	6.21	3.918E+00	3.489E+00	3.489E+00	33.09
	77.11	402	10.50	4.212E+00	3.392E+00	3.393E+00	22.34
	87.30	177	4.67	5.295E+00	2.668E+00	2.668E+00	39.51
	241.98	238	7.49	5.066E+00	2.336E+00	2.336E+00	29.43
	295.21	319	19.20	4.408E+00	1.408E+00	1.408E+00	21.52
	351.92	535	37.20*	3.885E+00	1.382E+00	1.382E+00	16.22
RA-224	240.98	238	3.95*	5.066E+00	4.430E+00	4.430E+00	28.89
RA-226	609.31	384	46.30*	2.530E+00	1.224E+00	1.224E+00	17.15
	768.36	------	5.04	2.053E+00	------ Line Not Found		------
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	69	15.10	1.414E+00	1.206E+00	1.206E+00	63.17
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	36	4.11	1.163E+00	2.828E+00	2.828E+00	57.83
	1764.49	69	15.80	9.763E-01	1.661E+00	1.661E+00	27.83
AC-228	338.32	261	11.40	3.999E+00	2.134E+00	2.134E+00	48.84
	911.07	210	27.70*	1.739E+00	1.630E+00	1.630E+00	23.26
	969.11	133	16.60	1.636E+00	1.831E+00	1.831E+00	32.47
RA-228	338.32	261	11.40	3.999E+00	2.134E+00	2.134E+00	48.84
	911.07	210	27.70*	1.739E+00	1.630E+00	1.630E+00	23.26
	969.11	133	16.60	1.636E+00	1.831E+00	1.831E+00	32.47
TH-228	84.40	------	1.21	5.004E+00	------ Line Not Found		------
	238.60	1036	44.60*	5.110E+00	1.695E+00	1.695E+00	10.81
	300.10	89	3.41	4.352E+00	2.231E+00	2.231E+00	81.99
TH-230	609.31	384	46.30*	2.530E+00	1.224E+00	1.224E+00	17.15
	768.36	------	5.04	2.053E+00	------ Line Not Found		------
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	69	15.10	1.414E+00	1.206E+00	1.206E+00	63.17
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	36	4.11	1.163E+00	2.828E+00	2.828E+00	57.83
	1764.49	69	15.80	9.763E-01	1.661E+00	1.661E+00	27.83
TH-232	338.32	261	11.40	3.999E+00	2.134E+00	2.134E+00	27.53
	911.07	210	27.70*	1.739E+00	1.630E+00	1.630E+00	23.26
	969.11	133	16.60	1.636E+00	1.831E+00	1.831E+00	32.47

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	384	46.30*	2.530E+00	1.224E-00	1.224E+00	17.15
	768.36	------	5.04	2.053E+00	------	Line Not Found	------
	934.06	------	3.21	1.697E+00	------	Line Not Found	------
	1120.29	69	15.10	1.414E+00	1.206E+00	1.206E-00	63.17
	1238.11	------	5.94	1.283E+00	------	Line Not Found	------
	1377.67	36	4.11	1.163E+00	2.828E+00	2.828E+00	57.83
	1764.49	69	15.80	9.763E-01	1.661E+00	1.661E+00	27.83
NP-237	86.50	177	12.60*	5.295E+00	9.889E-01	9.889E-01	43.91
	95.87	------	2.60	5.933E+00	------	Line Not Found	------
AM-243	74.67	228	66.00*	3.918E+00	3.283E-01	3.283E-01	32.25
	86.72	177	0.34	5.295E+00	3.708E+01	3.708E+01	38.75
	117.66	------	0.55	6.694E+00	------	Line Not Found	------
	142.18	------	0.13	6.676E+00	------	Line Not Found	------
ANH-511	511.00	114	100.00*	2.927E+00	1.453E-01	1.453E-01	58.20

Flag: "*" = Keyline

Sample ID : G232258007 Acquisition date : 6-JUN-2009 12:13:44

Total number of lines in spectrum 30
Number of unidentified lines 1
Number of lines tentatively identified by NTD 29 96.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.004E+01	3.004E+01	0.332E+01	11.05	
CD-109	464.00D	1.02	3.349E-00	3.421E+00	1.326E+00	38.75	
SN-126	1.00E+05Y	1.00	3.368E-01	3.368E-01	1.305E-01	38.75	
BA-137M	30.17Y	1.00	8.578E-01	8.585E-01	1.130E-01	13.16	
CS-137	30.17Y	1.00	9.068E-01	9.076E-01	1.195E-01	13.17	
TL-208	1.41E+10Y	1.00	4.918E-01	4.918E-01	1.196E-01	24.33	
BI-211	7.04E+08Y	1.00	3.972E+00	3.972E+00	0.610E+00	15.35	
PB-212	1.41E+10Y	1.00	1.695E+00	1.695E+00	0.183E+00	10.81	
PO-212	1.41E+10Y	1.00	1.695E+00	1.695E+00	0.183E+00	10.81	
BI-214	1600.00Y	1.00	1.224E+00	1.224E+00	0.210E+00	17.15	
PB-214	1600.00Y	1.00	1.382E+00	1.382E+00	0.224E+00	16.22	
PO-214	1600.00Y	1.00	1.382E+00	1.382E+00	0.224E+00	16.22	
PO-216	1.41E+10Y	1.00	1.695E+00	1.695E+00	0.183E+00	10.81	
PO-218	1600.00Y	1.00	1.382E+00	1.382E+00	0.224E+00	16.22	
RA-224	1.41E+10Y	1.00	4.430E+00	4.430E+00	1.280E+00	28.89	
RA-226	1600.00Y	1.00	1.224E+00	1.224E+00	0.210E+00	17.15	
AC-228	1.41E+10Y	1.00	1.630E+00	1.630E+00	0.379E+00	23.26	
RA-228	1.41E+10Y	1.00	1.630E+00	1.630E+00	0.379E+00	23.26	
TH-228	1.41E+10Y	1.00	1.695E+00	1.695E+00	0.183E+00	10.81	
TH-230	4.47E+09Y	1.00	1.224E+00	1.224E+00	0.210E+00	17.15	
TH-232	1.41E+10Y	1.00	1.630E+00	1.630E+00	0.379E+00	23.26	
U-234	4.47E+09Y	1.00	1.224E+00	1.224E+00	0.210E+00	17.15	
NP-237	2.14E+06Y	1.00	9.889E-01	9.889E-01	4.342E-01	43.91	
AM-243	7380.00Y	1.00	3.283E-01	3.283E-01	1.059E-01	32.25	
ANH-511	1.00E+09Y	1.00	1.453E-01	1.453E-01	0.846E-01	58.20	
		Total Activity :	6.656E+01	6.663E+01			

Grand Total Activity : 6.656E+01 6.663E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232358007 Acquisition date : 6-JUL-2009 12:13:44

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	90.04	119	327	1.11	180.20	171	22	1.65E-02	53.0	5.52E+00	T
1	92.88	306	307	1.11	185.88	171	22	4.25E-02	23.9	5.73E+00	T
0	186.45	241	294	1.22	372.86	368	11	3.35E-02	32.1	5.97E+00	T
0	209.84	124	231	1.76	419.58	416	9	1.73E-02	47.6	5.56E+00	T
0	270.29	120	149	2.00	540.39	536	9	1.67E-02	40.9	4.69E+00	T
0	328.18	43	194	1.01	656.11	653	11	6.01E-03	****	4.09E+00	T
0	728.29	97	90	2.12	1455.91	1446	19	1.35E-02	51.0	2.16E+00	T
1	964.62	52	19	1.92	1928.87	1924	26	7.18E-03	41.4	1.64E+00	T
0	1003.02	34	50	3.72	2005.25	1994	16	4.69E-03	****	1.58E+00	T
0	1591.44	10	38	0.48	3182.29	3174	14	1.42E-03	****	1.04E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:14:52.10

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358007.CNF;1 *
* Acquisition date  : 6-JUL-2009 12:13:44.  Detector SN#     :             *
* Detector ID       : GAM10                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.98          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232358007            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.00620E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08.8MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.004E+01	3.320E+00	6.044E-01	5.206E-02	49.701
CD-109	3.421E+00	1.326E+00	1.489E+00	1.688E-01	2.297
SN-126	3.368E-01	1.305E-01	1.477E-01	1.671E-02	2.280
BA-137M	8.585E-01	1.130E-01	6.873E-02	3.391E-03	12.492
CS-137	9.076E-01	1.195E-01	7.265E-02	3.605E-03	12.492
TL-208	4.918E-01	1.196E-01	6.716E-02	4.513E-03	7.323
BI-211	3.972E+00	6.099E-01	3.732E-01	2.721E-02	10.644
PB-212	1.695E+00	1.833E-01	1.106E-01	8.390E-03	15.328
PO-212	1.695E+00	1.833E-01	1.106E-01	8.390E-03	15.328
BI-214	1.224E+00	2.100E-01	1.283E-01	9.766E-03	9.539
PB-214	1.382E+00	2.241E-01	1.342E-01	1.203E-02	10.297
PO-214	1.382E+00	2.241E-01	1.342E-01	1.203E-02	10.297
PO-216	1.695E+00	1.833E-01	1.106E-01	8.390E-03	15.328
PO-218	1.382E+00	2.241E-01	1.342E-01	1.203E-02	10.297
RA-224	4.430E+00	1.280E+00	1.258E+00	7.725E-02	3.520
RA-226	1.224E+00	2.100E-01	1.283E-01	9.766E-03	9.539
AC-228	1.630E+00	3.792E-01	2.339E-01	2.887E-02	6.969
RA-228	1.630E+00	3.792E-01	2.339E-01	2.887E-02	6.969

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.695E+00	1.833E-01	1.106E-01	8.389E-03	15.329
TH-230	1.224E+00	2.100E-01	1.283E-01	9.766E-03	9.539
TH-232	1.630E+00	3.792E-01	2.339E-01	2.887E-02	6.969
U-234	1.224E+00	2.100E-01	1.283E-01	9.766E-03	9.539
NP-237	9.889E-01	4.342E-01	4.876E-01	1.146E-01	2.028
AM-243	3.283E-01	1.059E-01	1.305E-01	1.430E-02	2.515
ANH-511	1.453E-01	8.457E-02	5.840E-02	3.741E-03	2.488

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.860E-01		4.170E-01	6.942E-01	5.162E-02	0.268
NA-22	-5.227E-02		5.273E-02	7.737E-02	5.993E-03	-0.676
NA-24	-4.796E-02		1.313E-01	Half-Life too short		
AL-26	-6.355E-03		3.314E-02	5.091E-02	3.228E-03	-0.125
TI-44	3.652E-01	+	7.670E-02	1.042E-01	1.140E-02	3.505
SC-46	3.371E-02		4.694E-02	8.202E-02	8.117E-03	0.411
V-48	1.802E-02		8.498E-02	1.409E-01	1.303E-02	0.128
CR-51	-5.826E-01		4.328E-01	6.548E-01	4.729E-02	-0.890
MN-52	-1.461E-01		2.559E-01	3.843E-01	3.248E-02	-0.380
MN-54	9.180E-03		4.895E-02	8.164E-02	6.975E-03	0.112
CO-56	-5.905E-03		4.796E-02	7.776E-02	6.867E-03	-0.076
CO-57	-7.069E-03		2.981E-02	4.775E-02	3.150E-03	-0.148
CO-58	3.679E-02		4.681E-02	8.241E-02	6.594E-03	0.446
FE-59	-1.587E-01		1.184E-01	1.600E-01	1.336E-02	-0.992
CO-60	3.122E-02		4.674E-02	8.380E-02	7.283E-03	0.373
ZN-65	2.279E-02		1.219E-01	1.736E-01	1.264E-02	0.131
GE-68	-2.055E-01		1.588E+00	2.520E+00	1.997E-01	-0.082
AS-73	2.361E+00		1.847E+00	3.207E+00	4.244E-01	0.736
AS-74	2.362E-02		9.874E-02	1.691E-01	9.659E-03	0.140
SE-75	2.376E-02		4.896E-02	7.866E-02	5.017E-03	0.302
BR-77	-1.503E+00		9.443E+00	1.496E+01	9.493E-01	-0.100
SR-82	-4.330E-01		4.347E-01	6.478E-01	4.670E-02	-0.668
RB-83	-1.814E-02		8.513E-02	1.343E-01	8.521E-03	-0.135
RB-84	3.206E-02		7.468E-02	1.278E-01	1.240E-02	0.251
KR-85	1.665E+01		1.041E+01	1.668E+01	1.066E+00	0.998
SR-85	8.437E-02		5.274E-02	8.456E-02	5.401E-03	0.998
RB-86	-2.896E-01		9.520E-01	1.480E+00	1.174E-01	-0.196
Y-88	5.206E-03		3.744E-02	6.245E-02	3.832E-03	0.083
ZR-88	-2.476E-03		3.603E-02	5.866E-02	3.987E-03	-0.042
Y-91	-6.925E+00		2.413E+01	3.929E+01	2.610E+00	-0.176
NB-94	-5.275E-03		3.605E-02	5.918E-02	3.369E-03	-0.089
NB-95	3.755E-02		5.071E-02	8.863E-02	6.185E-03	0.424
NB-95M	9.320E-02		1.526E-01	2.366E-01	1.835E-02	0.394
ZR-95	8.766E-04		7.972E-02	1.320E-01	1.037E-02	0.007
NB-97	1.640E-02		2.103E-02	Half-Life too short		
ZR-97	-1.195E-01		3.975E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Idad	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	2.519E+00		9.485E+00	1.611E+01	2.264E+00	0.156
TC-99M	2.264E+07		1.068E+09	Half-Life too short		
RH-101	-4.063E-03		4.042E-02	6.280E-02	3.608E-03	-0.065
RH-102	-8.925E-03		3.746E-02	5.944E-02	3.921E-03	-0.150
RU-103	2.625E-03		5.036E-02	8.044E-02	1.044E-02	0.033
RH-106	-1.994E-02		3.795E-01	6.340E-01	7.328E-02	-0.031
RU-106	-1.994E-02		3.795E-01	6.340E-01	3.443E-02	-0.031
AG-108M	-1.347E-02		3.765E-02	5.948E-02	4.265E-03	-0.226
AG-110M	1.848E-02		4.481E-02	6.826E-02	3.698E-03	0.271
IN-111	4.629E-01		9.750E-01	1.494E+00	9.227E-02	0.310
IN-113M	-1.460E-02		5.288E-02	8.488E-02	6.052E-03	-0.172
SN-113	-1.460E-02		5.288E-02	8.488E-02	6.052E-03	-0.172
IN-114M	-1.299E-01		2.337E-01	3.147E-01	1.785E-02	-0.413
CD-115	-2.296E-01		9.675E+00	1.549E+01	9.749E-01	-0.015
SN-117M	-3.422E-03		6.139E-02	9.794E-02	5.493E-03	-0.035
SB-122	1.674E+00		1.951E+00	3.324E+00	1.999E-01	0.503
I-123	-3.411E-01		8.368E-01	Half-Life too short		
TE-123M	-6.811E-03		3.342E-02	5.291E-02	3.005E-03	-0.129
I-124	5.644E-01		6.272E-01	1.047E+00	5.906E-02	0.539
SB-124	4.198E-02		9.884E-02	1.730E-01	1.315E-02	0.243
SB-125	8.024E-02		1.087E-01	1.860E-01	1.295E-02	0.431
TE-125M	-1.311E+00		1.116E+01	1.807E+01	1.734E+00	-0.073
I-126	1.054E-01		2.439E-01	3.700E-01	1.856E-02	0.285
SB-126	9.726E-02		1.788E-01	2.745E-01	1.659E-02	0.354
SB-127	3.444E-01		1.336E+00	2.272E+00	1.993E-01	0.152
XE-127	9.108E-03		5.151E-02	8.800E-02	5.096E-03	0.104
I-131	6.120E-02		1.196E-01	2.032E-01	1.493E-02	0.301
TE-132	-8.789E-02		6.178E-01	1.035E+00	1.475E-01	-0.085
BA-133	-8.718E-03		6.051E-02	8.628E-02	1.041E-02	-0.101
I-133	1.359E-03		1.484E-03	Half-Life too short		
CS-134	6.817E-02		5.583E-02	1.011E-01	7.790E-03	0.675
CS-135	1.606E-01		1.934E-01	3.019E-01	2.440E-02	0.532
I-135	-2.929E+07		2.271E+08	Half-Life too short		
CS-136	-1.171E-01		1.442E-01	2.129E-01	1.864E-02	-0.550
CE-139	-4.366E-02		3.582E-02	5.350E-02	2.922E-03	-0.816
BA-140	1.241E-01		3.007E-01	4.937E-01	1.610E-01	0.251
LA-140	4.570E-02		9.536E-02	1.513E-01	1.174E-02	0.302
CE-141	-8.469E-03		7.755E-02	1.219E-01	7.463E-03	-0.069
CE-143	2.282E-04		5.718E-05	Half-Life too short		
CE-144	-1.313E-01		2.411E-01	3.776E-01	5.425E-02	-0.348
PM-144	-1.104E-02		4.165E-02	6.785E-02	3.785E-03	-0.163
PR-144	-7.474E-01		2.820E+00	4.595E+00	2.562E-01	-0.163
PM-146	-5.805E-03		5.616E-02	9.034E-02	8.344E-03	-0.064
ND-147	-3.646E-01		6.426E-01	9.768E-01	1.341E-01	-0.373
PM-149	3.373E+01		7.245E+01	1.237E+02	1.788E+01	0.273
EU-152	8.145E-02		1.247E-01	1.907E-01	1.405E-02	0.427
GD-153	-6.240E-02		1.104E-01	1.559E-01	1.451E-02	-0.400
EU-154	-1.430E-01		1.481E-01	2.175E-01	2.317E-02	-0.657

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	-1.293E-02		1.291E-01	2.097E-01	1.739E-02	-0.062
TB-160	1.815E-02		1.547E-01	2.562E-01	2.471E-02	0.070
HO-166M	1.301E-02		6.971E-02	1.177E-01	6.905E-03	0.111
TM-171	-4.079E+01		4.318E+01	6.828E+01	7.778E+00	-0.589
LU-176	3.733E-03		2.938E-02	4.754E-02	3.127E-03	0.079
LU-177	3.235E-00	-	1.553E+00	2.059E+00	1.203E-01	1.571
LU-177M	-1.925E-01		2.229E-01	3.418E-01	2.317E-02	-0.563
HF-181	7.872E-03		5.380E-02	8.776E-02	5.761E-03	0.090
W-181	-5.360E-01		5.674E-01	9.020E-01	1.042E-01	-0.594
TA-182	-4.420E-02		2.546E-01	4.187E-01	2.887E-02	-0.106
RE-183	6.590E-02		1.289E-01	2.111E-01	1.168E-02	0.312
RE-184	-2.781E-03		2.538E-01	4.257E-01	2.654E-02	-0.007
OS-185	-1.961E-02		4.919E-02	7.955E-02	4.087E-03	-0.247
RE-188	1.493E-01		1.997E-01	3.310E-01	1.881E-02	0.451
W-188	-3.886E+00		9.706E+00	1.378E+01	8.947E-01	-0.282
IR-192	2.159E-02		4.032E-02	6.885E-02	4.577E-03	0.314
AU-195	1.920E-01		2.931E-01	4.692E-01	4.258E-02	0.409
TL-200	-1.073E-04		1.339E-04	Half-Life too short		
TL-201	1.197E-01		6.361E+00	1.016E+01	5.555E-01	0.012
TL-202	3.833E-02		8.156E-02	1.367E-01	9.191E-03	0.280
HG-203	9.400E-02		4.729E-02	8.475E-02	5.719E-03	1.109
BI-207	1.793E-02		6.374E-02	1.059E-01	8.625E-03	0.169
TL-207	1.406E+00		8.348E-01	1.336E+00	2.250E-01	1.052
PO-209	3.372E+00		9.214E+00	1.558E+01	1.572E+00	0.216
BI-210	7.512E+00		1.070E+01	1.846E+01	1.810E+00	0.407
PB-210	7.512E+00		1.070E+01	1.846E+01	1.810E+00	0.407
PO-210	7.512E+00		1.070E+01	1.846E+01	1.657E+00	0.407
PB-211	-2.761E-01		1.142E+00	1.812E+00	1.131E+00	-0.152
BI-212	1.426E+00	+	7.359E-01	7.691E-01	6.153E-02	1.854
PO-215	1.406E+00		8.348E-01	1.336E+00	2.250E-01	1.052
RN-219	-1.149E-01		4.985E-01	8.011E-01	1.126E-01	-0.143
RN-220	-2.760E+00		3.201E+01	5.081E+01	3.116E+00	-0.054
RA-223	1.406E+00		8.348E-01	1.336E+00	2.250E-01	1.052
AC-227	1.018E-01		4.143E-01	7.036E-01	9.962E-02	0.145
TH-227	1.018E-01		4.144E-01	7.036E-01	1.201E-01	0.145
TH-229	-2.505E-01		6.234E-01	9.657E-01	5.507E-02	-0.259
PA-231	-2.203E+00		1.725E+00	2.612E+00	3.673E-01	-0.843
TH-231	1.406E+00		8.348E-01	1.336E+00	2.250E-01	1.052
U-231	-4.429E-01		1.228E+00	1.759E+00	1.686E-01	-0.252
PA-233	-3.622E-02		7.366E-02	1.185E-01	8.198E-03	-0.306
PA-234	-1.017E-01		3.731E-01	5.889E-01	1.135E-01	-0.173
PA-234M	-1.203E+00		8.866E+00	1.408E+01	1.619E+00	-0.085
TH-234	1.337E+00		2.226E+00	3.715E+00	7.322E-01	0.360
U-235	3.068E-01		2.638E-01	4.313E-01	7.052E-02	0.711
NP-236	-6.517E-02		9.583E-02	1.479E-01	8.243E-03	-0.441
U-238	1.337E+00		2.226E+00	3.715E+00	7.322E-01	0.360
NP-239	-8.922E-02		2.199E-01	3.498E-01	2.447E-02	-0.255
AM-241	-2.092E-01		2.784E-01	4.478E-01	5.750E-02	-0.467

---- Non-identified Nuclides ---

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-2.193E-02		1.138E-01	1.840E-01	1.541E-02	-0.119
CM-247	1.391E-02		4.409E-02	7.353E-02	4.992E-03	0.189
CF-249	2.461E-02		4.858E-02	8.207E-02	5.576E-03	0.300
CF-251	-9.436E-02		1.503E-01	2.311E-01	1.282E-02	-0.408

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYSSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G232358007           *
* Acquisition date  :  6-JUN-2009 12:13:44 Detector SN#     :               *
* Detector ID       : GAM10                 Sensitivity     : 5.000         *
* Geometry          : CAN                   Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.98       Half life ratio : 8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232358007           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.0062E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.004E+01	3.254E+00	2.998E-01	1.660E+00
CD-109	3.421E+00	1.299E+00	7.447E-01	6.628E-01
SN-126	3.368E-01	1.279E-01	7.386E-02	6.525E-02
BA-137M	8.585E-01	1.107E-01	3.417E-02	5.648E-02
CS-137	9.076E-01	1.171E-01	3.612E-02	5.975E-02
TL-208	4.918E-01	1.172E-01	3.340E-02	5.982E-02
BI-211	3.972E+00	5.977E-01	1.859E-01	3.049E-01
PB-212	1.695E+00	1.796E-01	5.515E-02	9.163E-02
PO-212	1.695E+00	1.796E-01	5.515E-02	9.163E-02
BI-214	1.224E+00	2.058E-01	6.383E-02	1.050E-01
PB-214	1.382E+00	2.196E-01	6.684E-02	1.120E-01
PO-214	1.382E+00	2.196E-01	6.684E-02	1.120E-01
PO-216	1.695E+00	1.796E-01	5.515E-02	9.163E-02
PO-218	1.382E+00	2.196E-01	6.684E-02	1.120E-01
RA-224	4.430E+00	1.254E+00	6.275E-01	6.400E-01
RA-226	1.224E+00	2.058E-01	6.383E-02	1.050E-01
AC-228	1.630E+00	3.716E-01	1.162E-01	1.896E-01
RA-228	1.630E+00	3.716E-01	1.162E-01	1.896E-01
TH-228	1.695E+00	1.796E-01	5.515E-02	9.163E-02
TH-230	1.224E+00	2.058E-01	6.383E-02	1.050E-01
TH-232	1.630E+00	3.716E-01	1.162E-01	1.896E-01
U-234	1.224E+00	2.058E-01	6.383E-02	1.050E-01
NP-237	9.889E-01	4.255E-01	2.439E-01	2.171E-01
AM-243	3.283E-01	1.038E-01	6.531E-02	5.295E-02
ANH-511	1.453E-01	8.288E-02	2.906E-02	4.229E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.860E-01	4.086E-01	3.455E-01	2.085E-01 NOT IDENT.
NA-22	-5.227E-02	5.168E-02	3.839E-02	2.637E-02 NOT IDENT.

NA-24	-4.796E-04	2.574E+05	0.000E+00	1.313E+05	SHORT HLIF
AL-28	-6.355E-03	3.248E-02	2.524E-02	1.657E-02	NOT IDENT.
TI-44	3.652E-01	7.517E-02	5.213E-02	3.835E-02	FAIL ABUN
SC-46	3.371E-02	4.601E-02	4.074E-02	2.347E-02	FAIL ABUN
V-48	1.802E-02	8.329E-02	6.997E-02	4.249E-02	NOT IDENT.
CR-51	-5.826E-01	4.242E-01	3.262E-01	2.164E-01	NOT IDENT.
MN-52	-1.461E-01	2.508E-01	1.906E-01	1.280E-01	NOT IDENT.
MN-54	9.180E-02	4.797E-02	4.056E-02	2.447E-02	NOT IDENT.
CO-56	-5.905E-03	4.700E-02	3.864E-02	2.398E-02	NOT IDENT.
CO-57	-7.069E-03	2.922E-02	2.386E-02	1.491E-02	NOT IDENT.
CO-58	3.679E-02	4.588E-02	4.095E-02	2.341E-02	NOT IDENT.
FE-59	-1.587E-01	1.161E-01	7.945E-02	5.922E-02	NOT IDENT.
CO-60	3.122E-02	4.581E-02	4.158E-02	2.337E-02	NOT IDENT.
ZN-65	2.279E-02	1.195E-01	8.617E-02	6.095E-02	NOT IDENT.
GE-68	-2.055E-01	1.556E+00	1.251E+00	7.938E-01	NOT IDENT.
AS-73	2.361E-00	1.810E+00	1.606E+00	9.234E-01	NOT IDENT.
AS-74	2.362E-02	9.676E-02	8.409E-02	4.937E-02	NOT IDENT.
SE-75	2.376E-02	4.798E-02	3.921E-02	2.448E-02	NOT IDENT.
BR-77	-1.503E+00	9.254E+00	7.445E-00	4.722E+00	FAIL ABUN
SR-82	-4.330E-01	4.260E-01	3.219E-01	2.174E-01	NOT IDENT.
RB-83	-1.814E-02	8.343E-02	6.680E-02	4.256E-02	NOT IDENT.
RB-84	3.206E-02	7.319E-02	6.351E-02	3.734E-02	NOT IDENT.
KR-85	1.665E+01	1.020E+01	8.302E+00	5.203E+00	NOT IDENT.
SR-85	8.437E-02	5.169E-02	4.207E-02	2.637E-02	NOT IDENT.
RB-86	-2.896E-01	9.330E-01	7.349E-01	4.760E-01	NOT IDENT.
Y-88	5.206E-03	3.669E-02	3.096E-02	1.872E-02	NOT IDENT.
ZR-88	-2.476E-03	3.531E-02	2.921E-02	1.802E-02	NOT IDENT.
Y-91	-6.925E+00	2.364E+01	1.950E+01	1.206E+01	NOT IDENT.
NB-94	-5.275E-03	3.533E-02	2.942E-02	1.803E-02	NOT IDENT.
NB-95	3.755E-02	4.969E-02	4.405E-02	2.535E-02	NOT IDENT.
NB-95M	9.320E-02	1.495E-01	1.180E-01	7.629E-02	NOT IDENT.
ZR-95	8.766E-04	7.813E-02	6.562E-02	3.986E-02	NOT IDENT.
NB-97	1.640E+04	4.121E+04	0.000E+00	2.103E+04	SHORT HLIF
ZR-97	-1.195E+05	7.791E+05	0.000E+00	3.975E+05	SHORT HLIF
MO-99	2.519E+00	9.295E+00	8.005E+00	4.742E+00	NOT IDENT.
TC-99M	2.264E+13	2.093E+15	0.000E+00	1.068E+15	SHORT HLIF
RH-101	-4.063E-03	3.961E-02	3.134E-02	2.021E-02	NOT IDENT.
RH-102	-8.925E-03	3.671E-02	2.958E-02	1.873E-02	NOT IDENT.
RU-103	2.625E-03	4.935E-02	4.003E-02	2.518E-02	FAIL ABUN
RH-106	-1.994E-02	3.719E-01	3.153E-01	1.898E-01	FAIL ABUN
RU-106	-1.994E-02	3.719E-01	3.153E-01	1.898E-01	FAIL ABUN
AG-108M	-1.347E-02	3.690E-02	2.961E-02	1.883E-02	NOT IDENT.
AG-110M	1.848E-02	4.391E-02	3.394E-02	2.240E-02	NOT IDENT.
IN-111	4.629E-01	9.555E-01	7.451E-01	4.875E-01	NOT IDENT.
IN-113M	-1.460E-02	5.182E-02	4.226E-02	2.644E-02	NOT IDENT.
SN-113	-1.460E-02	5.182E-02	4.226E-02	2.644E-02	NOT IDENT.
IN-114M	-1.299E-01	2.290E-01	1.570E-01	1.169E-01	NOT IDENT.
CD-115	-2.296E-01	9.481E+00	7.705E+00	4.837E+00	NOT IDENT.
SN-117M	-3.422E-03	6.016E-02	4.890E-02	3.069E-02	NOT IDENT.
SB-122	1.674E+00	1.912E+00	1.654E+00	9.755E-01	NOT IDENT.
I-123	-3.411E+05	1.640E+06	0.000E+00	8.368E+05	SHORT HLIF
TE-123M	-6.811E-03	3.275E-02	2.641E-02	1.671E-02	NOT IDENT.
I-124	5.644E-01	6.147E-01	5.206E-01	3.136E-01	NOT IDENT.
SB-124	4.198E-02	9.686E-02	8.580E-02	4.942E-02	FAIL ABUN
SB-125	8.024E-02	1.065E-01	9.258E-02	5.436E-02	NOT IDENT.
TE-125M	-1.311E+00	1.093E+01	9.032E+00	5.578E+00	NOT IDENT.
I-126	1.054E-01	2.390E-01	1.840E-01	1.219E-01	NOT IDENT.
SB-126	9.726E-02	1.752E-01	1.365E-01	8.939E-02	FAIL ABUN
SB-127	3.444E-01	1.310E+00	1.130E+00	6.682E-01	NOT IDENT.
XE-127	9.108E-03	5.048E-02	4.390E-02	2.576E-02	NOT IDENT.
I-131	6.120E-02	1.172E-01	1.012E-01	5.982E-02	NOT IDENT.
TE-132	-8.789E-02	6.054E-01	5.163E-01	3.089E-01	NOT IDENT.
BA-133	-8.718E-03	5.930E-02	4.297E-02	3.026E-02	NOT IDENT.
I-133	1.359E+03	2.909E+03	0.000E+00	1.484E+03	SHORT HLIF
CS-134	6.817E-02	5.472E-02	5.022E-02	2.792E-02	NOT IDENT.
CS-135	1.606E-01	1.896E-01	1.505E-01	9.672E-02	NOT IDENT.
I-135	-2.929E+13	4.452E+14	0.000E+00	2.271E+14	SHORT HLIF
CS-136	-1.171E-01	1.413E-01	1.057E-01	7.208E-02	FAIL ABUN
CE-139	-4.366E-02	3.511E-02	2.671E-02	1.791E-02	NOT IDENT.
BA-140	1.241E-01	2.947E-01	2.456E-01	1.503E-01	NOT IDENT.
LA-140	4.570E-02	9.345E-02	7.501E-02	4.768E-02	FAIL ABUN
CE-141	-8.469E-03	7.600E-02	6.089E-02	3.877E-02	NOT IDENT.
CE-143	2.282E+02	1.121E+02	0.000E+00	5.718E+01	SHORT HLIF
CE-144	-1.313E-01	2.362E-01	1.886E-01	1.205E-01	NOT IDENT.
PM-144	-1.104E-02	4.081E-02	3.373E-02	2.082E-02	NOT IDENT.
PR-144	-7.474E-01	2.764E+00	2.284E+00	1.410E+00	NOT IDENT.
PM-146	-5.805E-03	5.504E-02	4.497E-02	2.808E-02	NOT IDENT.
ND-147	-3.646E-01	6.298E-01	4.860E-01	3.213E-01	FAIL ABUN

PM-149	3.373E+01	7.100E+01	6.163E+01	3.622E+01	NOT IDENT.
EU-152	8.145E-02	1.222E-01	9.499E-02	6.236E-02	FAIL ABUN
GD-153	-6.240E-02	1.082E-01	7.793E-02	5.518E-02	NOT IDENT.
EU-154	-1.430E-01	1.451E-01	1.079E-01	7.404E-02	NOT IDENT.
EU-155	-1.293E-02	1.266E-01	1.048E-01	6.457E-02	FAIL ABUN
TB-160	1.805E-02	1.516E-01	1.273E-01	7.733E-02	FAIL ABUN
HO-166M	1.301E-02	6.831E-02	5.849E-02	3.485E-02	NOT IDENT.
TM-171	-4.019E+01	4.231E+01	3.417E+01	2.159E+01	NOT IDENT.
LU-176	3.733E-03	2.879E-02	2.369E-02	1.469E-02	FAIL ABUN
LU-177	3.235E+00	1.522E+00	1.027E+00	7.765E-01	FAIL ABUN
LU-177M	-1.925E-01	2.185E-01	1.702E-01	1.115E-01	FAIL ABUN
HF-181	7.872E-03	5.272E-02	4.367E-02	2.690E-02	NOT IDENT.
W-181	-5.360E-01	5.560E-01	4.515E-01	2.837E-01	NOT IDENT.
TA-182	-4.420E-02	2.496E-01	2.078E-01	1.273E-01	FAIL ABUN
RE-183	6.590E-02	1.264E-01	1.054E-01	6.447E-02	FAIL ABUN
RE-184	-2.781E-02	2.487E-01	2.122E-01	1.269E-01	NOT IDENT.
OS-185	-1.961E-02	4.820E-02	3.956E-02	2.459E-02	NOT IDENT.
RE-188	1.493E-01	1.957E-01	1.653E-01	9.983E-02	NOT IDENT.
W-188	-3.886E+00	9.512E+00	6.868E+00	4.853E+00	NOT IDENT.
IR-192	2.159E-02	3.951E-02	3.431E-02	2.016E-02	FAIL ABUN
AU-195	1.920E-01	2.873E-01	2.346E-01	1.466E-01	FAIL ABUN
TL-200	-1.073E+02	2.625E+02	0.000E+00	1.339E+02	SHORT HLIF
TL-201	1.197E-01	6.233E+00	5.070E+00	3.180E+00	NOT IDENT.
TL-202	3.833E-02	7.993E-02	6.805E-02	4.078E-02	NOT IDENT.
HG-203	9.400E-02	4.634E-02	4.224E-02	2.364E-02	NOT IDENT.
BI-207	1.793E-02	6.246E-02	5.260E-02	3.187E-02	FAIL ABUN
TL-207	1.406E+00	8.181E-01	6.659E-01	4.174E-01	FAIL ABUN
PO-209	3.372E+00	9.030E+00	7.742E+00	4.607E+00	NOT IDENT.
BI-210	7.512E+00	1.049E+01	9.248E+00	5.352E+00	NOT IDENT.
PB-210	7.512E+00	1.049E+01	9.248E+00	5.352E+00	NOT IDENT.
PO-210	7.512E+00	1.049E+01	9.248E+00	5.350E+00	NOT IDENT.
PB-211	-2.761E-01	1.119E+00	9.022E-01	5.708E-01	NOT IDENT.
BI-212	1.426E+00	7.212E-01	3.823E-01	3.680E-01	FAIL ABUN
PO-215	1.406E+00	8.181E-01	6.659E-01	4.174E-01	FAIL ABUN
RN-219	-1.149E-01	4.885E-01	3.989E-01	2.492E-01	FAIL ABUN
RN-220	-2.760E+00	3.137E+01	2.528E+01	1.601E+01	NOT IDENT.
RA-223	1.406E+00	8.181E-01	6.659E-01	4.174E-01	FAIL ABUN
AC-227	1.018E-01	4.060E-01	3.508E-01	2.072E-01	FAIL ABUN
TH-227	1.018E-01	4.062E-01	3.508E-01	2.072E-01	FAIL ABUN
TH-229	-2.505E-01	6.109E-01	4.819E-01	3.117E-01	FAIL ABUN
PA-231	-2.203E+00	1.690E+00	1.302E+00	8.624E-01	FAIL ABUN
TH-231	1.406E+00	8.181E-01	6.659E-01	4.174E-01	FAIL ABUN
U-231	-4.429E-01	1.203E+00	8.795E-01	6.140E-01	FAIL ABUN
PA-233	-3.622E-02	7.219E-02	5.903E-02	3.683E-02	FAIL ABUN
PA-234	-1.017E-01	3.657E-01	2.925E-01	1.866E-01	FAIL ABUN
PA-234M	-1.203E+00	8.689E+00	6.994E+00	4.433E+00	NOT IDENT.
TH-234	1.337E+00	2.181E+00	1.860E+00	1.113E+00	FAIL ABUN
U-235	3.068E-01	2.585E-01	2.154E-01	1.319E-01	FAIL ABUN
NP-236	-6.517E-02	9.391E-02	7.385E-02	4.792E-02	NOT IDENT.
U-238	1.337E+00	2.181E+00	1.860E+00	1.113E+00	FAIL ABUN
NP-239	-8.922E-02	2.155E-01	1.748E-01	1.100E-01	FAIL ABUN
AM-241	-2.092E-01	2.728E-01	2.242E-01	1.392E-01	NOT IDENT.
CM-243	-2.193E-02	1.115E-01	9.196E-02	5.688E-02	FAIL ABUN
CM-247	1.391E-02	4.321E-02	3.661E-02	2.205E-02	NOT IDENT.
CF-249	2.461E-02	4.761E-02	4.087E-02	2.429E-02	NOT IDENT.
CF-251	-9.436E-02	1.473E-01	1.153E-01	7.517E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	242.9830
46.50	242.9830
46.50	242.9830
48.70	241.6839
49.72	273.6707
51.35	265.5868
52.39	241.2466
52.97	241.6037
53.15	234.2768
53.44	225.1450
54.07	230.1617
56.28	267.0266
56.28	267.0288
57.37	0.0000
57.53	256.5630
57.53	256.5641
57.60	251.9063
57.98	270.9529
57.98	270.9529
59.32	299.1892
59.32	299.1892
59.40	299.2457
59.54	299.3448
59.72	292.8593
60.01	290.2227
61.10	301.3874
61.14	301.4149
61.30	299.6301
63.00	280.8114
63.29	295.2843
63.29	295.2843
63.58	295.4782
64.28	326.4941
65.12	331.8904
65.20	331.9491
65.20	331.9491
66.05	327.7831
66.72	322.5059
66.83	326.4248
66.91	326.4818
67.20	303.6289
67.20	303.6289
67.75	300.1442
67.85	300.2092
68.90	359.7179
68.90	359.7179
69.30	347.4792
69.67	337.3231
70.82	334.0766
70.82	334.0766
70.83	334.0836
72.80	363.1750
72.87	363.2282
72.87	363.2282
74.67	369.9418
74.81	370.0478
74.81	370.0478
74.81	370.0478
74.81	370.0478
74.81	370.0478
74.81	370.0478
74.97	370.1673
75.28	370.4006
75.70	370.7148
77.11	371.7654
77.11	371.7654
77.11	371.7654

77.11	371.7654
77.11	371.7654
77.11	371.7654
78.38	333.3685
79.62	291.2991
79.80	266.2550
79.80	266.2550
80.11	266.4171
80.18	266.4528
80.30	296.1273
80.30	296.1273
80.57	296.2830
81.00	308.3914
81.07	308.4326
81.07	308.4326
81.07	308.4326
81.07	308.4326
82.60	339.0829
83.37	326.1742
83.78	301.0905
83.78	301.0905
83.78	301.0905
83.78	301.0905
84.21	284.9247
84.40	285.0268
84.90	259.9022
85.43	290.0631
86.29	339.9458
86.50	340.0792
86.54	340.1034
86.59	340.1346
86.72	278.7687
86.79	278.8028
86.94	278.8808
87.30	279.0667
87.30	279.0667
87.30	279.0667
87.30	279.0667
87.30	279.0667
87.30	279.0667
87.57	279.2043
87.88	279.3633
88.03	279.4399
88.36	279.6088
88.47	279.6641
89.95	280.4162
91.11	281.0009
92.29	281.5912
92.38	281.6366
92.38	281.6366
93.35	282.1191
94.00	282.4413
94.67	282.7690
94.67	282.7719
94.90	240.3005
94.90	240.3005
94.90	240.3005
94.90	240.3005
95.87	294.0249
95.87	294.0249
96.73	297.5137
97.43	282.5939
98.44	237.1758
98.44	237.1758
98.88	246.2348
99.55	253.4631
99.55	253.4631
99.86	247.4602
100.00	247.5192
100.10	247.5623
103.18	271.4510
103.76	247.0093
105.00	266.0730
105.31	257.9536
108.00	250.7823
109.28	269.9843
111.00	265.5096
111.00	265.5096

111.76	255.4015
112.95	215.1428
115.19	256.7573
116.30	240.3948
117.00	241.7007
117.00	241.7007
117.66	220.9033
121.11	238.9606
121.62	255.0132
121.78	244.4893
122.06	244.5892
122.32	234.0897
122.32	234.0897
122.32	234.0897
122.32	234.0897
123.07	225.8651
127.23	275.2319
129.76	260.1626
131.20	261.7619
133.02	248.4430
133.54	259.3844
135.34	238.4477
136.00	225.7044
136.25	245.2262
136.48	251.7886
140.51	262.9372
140.51	0.0000
142.18	311.4364
142.65	264.7752
143.76	235.7007
144.24	236.9398
144.24	236.9398
144.24	236.9398
144.24	236.9398
145.22	254.7371
145.44	276.6827
147.16	272.9162
152.43	242.7600
152.70	232.9083
153.22	250.7336
154.21	249.9371
154.21	249.9371
154.21	249.9371
154.21	249.9371
155.03	228.0535
156.02	249.3942
158.56	239.0580
159.00	0.0000
159.00	241.4121
160.31	259.6268
161.27	247.6588
162.32	227.8689
162.64	227.9561
163.35	220.3224
163.89	214.8691
165.85	269.2163
167.43	225.8919
171.28	246.1060
171.86	230.4567
172.10	212.4409
176.55	239.6523
176.60	237.3935
181.06	253.4333
184.41	252.6607
185.71	211.1384
186.00	211.2058
190.27	214.4968
192.34	184.4628
193.63	240.7349
197.04	214.8905
198.01	209.2950
198.60	258.2909
200.40	210.9844
201.83	203.1274
202.84	210.3516
205.31	230.5689
208.36	204.4904
208.81	214.4606

209.75	223.3149
209.75	223.3149
210.97	205.0302
215.65	212.0761
216.55	199.0625
218.09	207.3734
222.10	206.3988
223.80	218.3717
226.40	195.5899
227.00	201.9854
227.08	206.4897
227.20	201.1270
228.16	199.5124
228.18	199.5158
228.18	199.5158
231.56	0.0000
235.69	192.6000
236.00	192.6568
236.00	192.6568
238.60	211.4513
238.63	211.4567
238.63	211.4567
238.63	211.4567
239.00	211.5278
240.98	211.9118
241.98	212.1055
241.98	212.1055
241.98	212.1055
244.69	148.9310
245.39	150.4854
247.94	173.8937
248.90	144.7305
249.79	145.7629
252.40	154.3700
252.85	154.4315
252.85	154.4315
254.15	0.0000
256.20	146.5878
256.20	146.5878
260.50	147.1361
260.90	154.5927
262.80	127.9557
264.65	125.0644
268.24	140.1004
268.79	134.2024
269.46	132.7851
269.46	132.7851
269.46	132.7851
269.46	132.7851
271.23	164.3608
273.65	172.1799
276.40	171.6351
277.35	160.5056
277.60	150.2124
277.60	150.2124
278.00	152.1395
278.60	143.7597
279.20	121.2682
279.53	123.1823
280.46	156.2126
281.68	183.6843
283.67	162.2814
284.30	156.7015
285.00	147.3450
285.90	133.2740
286.10	122.8966
286.10	122.8966
287.40	130.5942
288.45	0.0000
290.67	166.9927
290.80	163.9723
291.72	158.0160
293.26	0.0000
293.70	146.0906
295.21	149.3112
295.21	149.3112
295.21	149.3112
295.96	133.3926

296.50	144.8866
297.23	144.9701
298.57	145.1232
299.80	137.6169
299.80	137.6169
300.09	137.6477
300.09	137.6477
300.09	137.6477
300.10	137.6477
300.12	137.6499
301.29	151.5527
302.84	136.4094
303.76	133.4375
303.91	133.4545
304.40	141.1760
304.40	141.1760
304.84	127.4099
306.84	133.9736
308.46	134.6893
311.98	140.8382
316.51	128.7362
318.01	125.9732
319.02	151.2821
319.41	150.3549
320.08	163.0474
323.87	91.8735
323.87	91.8735
323.87	91.8735
323.87	91.8735
325.23	115.3468
328.77	120.1397
333.44	117.6050
334.20	125.5156
334.20	125.5156
334.30	125.5234
338.28	121.9471
338.28	121.9471
338.28	121.9471
338.28	121.9471
338.32	121.9509
338.32	121.9509
338.32	121.9509
340.50	138.6881
340.57	138.6945
344.27	109.0338
345.85	123.3927
350.59	0.0000
351.07	117.4913
351.92	125.1079
351.92	125.1079
351.92	125.1079
355.39	0.0000
356.01	137.0100
364.48	100.1465
366.43	112.3127
367.43	120.4156
367.94	0.0000
369.80	124.6263
374.96	112.9519
383.85	139.9836
387.95	111.8782
388.63	111.9269
391.69	118.2639
391.69	118.2639
392.90	112.2324
398.62	109.5682
400.65	112.7846
401.10	124.0981
401.81	119.0232
402.60	107.7894
404.84	120.2760
410.95	115.5735
411.60	124.9105
413.65	137.4708
414.70	110.6687
415.30	98.2935
415.76	101.4259
417.63	0.0000

418.52	94.3395
423.70	107.1146
427.08	91.7007
427.89	88.6186
432.53	108.7274
433.93	96.2606
439.47	97.6247
439.56	100.7798
439.89	98.6989
443.98	110.5131
444.90	111.6238
445.03	111.6335
445.03	111.6335
445.03	111.6335
445.03	111.6335
453.90	112.2045
463.38	100.0385
468.07	114.1740
473.00	112.3476
475.06	107.1198
475.35	107.1365
476.78	99.7150
477.59	101.9044
477.96	102.9990
482.03	100.0031
484.57	93.6801
487.03	88.4150
490.36	0.0000
492.35	89.7503
497.08	86.7249
507.63	0.0000
510.53	0.0000
510.84	97.1855
511.00	97.1937
511.85	97.2358
511.85	97.2358
513.99	91.0006
513.99	91.0006
520.41	89.9878
520.65	89.9978
527.90	88.1299
528.96	0.0000
529.64	80.4898
529.87	0.0000
531.02	89.3724
537.32	76.3742
543.00	78.8111
546.56	0.0000
549.76	81.3041
552.65	85.8801
555.20	81.5213
563.23	90.8111
563.90	75.1399
568.70	85.4304
569.32	84.3315
569.50	84.3384
569.67	84.3452
573.80	80.2304
574.00	80.2369
574.64	80.1628
578.91	67.7747
579.30	0.0000
583.14	73.3430
585.48	73.4240
591.81	78.4146
592.07	78.4252
593.00	80.0508
595.88	70.1384
600.56	78.5044
602.52	0.0000
602.71	56.1301
602.71	56.1301
603.60	67.0366
604.41	74.6823
604.70	74.6923
609.31	75.1553
609.31	75.1553
609.31	75.1553

609.31	75.1553
610.33	75.1894
612.46	73.4258
614.37	73.4902
618.01	78.2120
621.84	76.5035
621.84	76.5035
631.29	62.9415
633.02	58.3581
633.10	58.3611
634.78	56.5501
635.90	58.4334
636.97	56.6052
645.85	63.3466
646.12	72.6699
656.30	56.1475
657.75	60.8645
657.90	0.0000
661.65	70.3455
661.65	70.3455
664.57	0.0000
666.33	76.7499
666.33	76.7499
675.00	66.0283
677.61	76.4873
685.20	66.3103
692.80	61.7675
695.00	77.9941
696.49	78.9918
696.49	78.9918
697.00	76.1543
697.49	73.3117
698.33	73.3380
698.50	69.5336
699.00	65.7370
702.63	61.0641
706.10	49.6844
706.58	0.0000
706.67	53.5186
709.31	66.9700
711.68	61.2875
713.82	57.5068
717.42	66.2289
720.50	57.6614
721.93	0.0000
722.20	73.7280
722.78	76.9512
722.78	76.9512
722.89	76.9551
722.95	76.9570
723.30	80.1758
724.18	72.1820
727.18	59.7416
733.00	43.4608
735.90	49.9575
739.58	48.4155
742.81	54.2938
744.21	56.2640
747.13	60.2124
751.79	62.2672
752.31	61.3066
753.82	45.7630
755.35	61.3773
756.15	56.5245
756.87	54.5904
763.93	79.1747
765.79	63.5797
766.41	58.7036
766.84	62.6266
768.36	75.3908
768.36	75.3908
768.36	75.3908
768.36	75.3908
776.49	69.7311
778.00	58.9614
778.57	49.1455
778.89	48.1674
783.80	55.1510

785.46	59.1270
792.07	82.9808
795.84	49.4629
796.30	54.4172
801.93	47.5910
805.60	56.5895
810.29	51.7144
810.76	47.7445
815.85	58.7940
817.79	49.8608
818.51	47.8793
819.60	40.9129
826.30	64.0172
828.27	0.0000
831.60	66.1434
831.96	67.1538
834.83	70.2324
836.80	0.0000
846.75	57.4314
848.13	61.4915
856.28	0.0000
856.80	57.2961
860.37	33.7459
867.32	35.5187
867.82	50.7495
871.10	44.7101
873.19	38.6411
874.81	44.7670
875.33	0.0000
876.40	47.8457
879.36	41.7798
880.27	36.6961
880.51	36.6987
881.50	36.7110
883.24	40.8145
884.67	52.0633
889.25	41.9199
896.60	48.1739
898.02	47.1713
899.00	49.2387
903.28	48.4285
911.07	42.2272
911.07	42.2272
911.07	42.2272
919.63	37.8716
920.93	41.3320
925.00	47.5958
925.24	50.7035
926.50	44.5128
934.06	41.5098
934.06	41.5098
934.06	41.5098
934.06	41.5098
935.52	48.7969
937.48	57.1390
944.10	53.0980
946.00	52.0886
949.00	43.7965
962.29	40.1424
964.01	48.8963
966.15	39.8425
968.20	39.8685
969.11	39.8796
969.11	39.8796
969.11	39.8796
977.42	56.1185
980.50	31.5967
983.50	46.3858
989.30	39.0767
996.32	49.3931
1001.03	56.1779
1001.68	56.1883
1004.76	42.4463
1021.30	0.0000
1024.50	0.0000
1034.80	44.9757
1037.82	45.0167
1038.57	52.5314

1038.76	0.0000
1045.16	46.1893
1046.59	68.7781
1048.07	67.7312
1050.47	57.0216
1050.47	57.0216
1063.62	41.0411
1076.63	48.7859
1077.35	48.7969
1085.78	56.5246
1099.22	64.3814
1112.02	45.1756
1112.84	40.6867
1115.52	43.8496
1120.29	43.9082
1120.29	43.9082
1120.29	43.9082
1120.29	43.9082
1120.51	43.9121
1121.28	43.9219
1124.00	0.0000
1129.67	44.0244
1131.51	0.0000
1147.95	0.0000
1167.94	49.1246
1173.22	51.0522
1175.09	59.4349
1177.93	46.4701
1189.05	48.4728
1204.90	63.6559
1205.75	0.0000
1213.00	70.3583
1221.42	64.8728
1230.97	65.0328
1235.34	61.3342
1236.41	0.0000
1238.11	60.4323
1238.11	60.4323
1238.11	60.4323
1238.11	60.4323
1238.25	60.4349
1246.25	55.8287
1260.41	0.0000
1271.85	40.9546
1274.45	47.6542
1274.54	47.6542
1291.56	35.4162
1298.22	0.0000
1312.09	25.0140
1325.50	30.8880
1325.50	30.8880
1332.49	23.2051
1333.61	27.0806
1360.21	30.1750
1362.66	0.0000
1365.15	15.5924
1368.21	26.3320
1368.53	0.0000
1376.25	16.7501
1377.67	26.8092
1377.67	26.8092
1377.67	26.8092
1377.67	26.8092
1384.27	11.7476
1394.10	21.5873
1395.20	25.5186
1407.95	22.6416
1434.06	26.7396
1436.60	12.8820
1457.56	0.0000
1460.81	16.9391
1489.15	16.0436
1509.49	13.0942
1596.49	10.5557
1620.62	11.3455
1678.03	0.0000
1691.02	12.5552
1691.02	12.5552

1706.46	0.0000
1750.46	0.0000
1764.49	12.7373
1764.49	12.7373
1764.49	12.7373
1764.49	12.7373
1770.23	9.1082
1771.40	9.1103
1793.20	0.0000
1808.65	9.6339
1836.01	8.6074

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:C232358007

Total Uranium Activity	4.1196E-00	ug/g
Total Uranium Counting Unc.	6.4905E-00	ug/g
Total Uranium Tpu	3.3115E-06	ug/g
Total Uranium Mda	5.5331E-00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID   : C232358007      *
*   ANALYST       : MXR1                      DETECTOR    : GAM10           *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 12:13:44.66    SAMPLE AMOT:  100.620 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.036E+01
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.530E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 3.722E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 1.798E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:15:41.84

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358008.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:14:10.
Sample ID         : G232358008           Sample quantity  : 1.21350E+02 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.71  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.39*	34	357	0.72	92.79	89	8	4.77E-03	100.9	
2	0	62.89*	119	455	1.04	125.79	122	8	1.66E-02	33.1	
3	4	74.24	485	393	0.98	148.48	140	16	6.74E-02	7.9	3.05E+00
4	4	76.52*	646	329	0.83	153.03	140	16	8.98E-02	5.8	
5	2	83.45*	148	263	1.54	166.91	164	13	2.05E-02	18.8	1.78E+00
6	2	86.65	300	327	1.04	173.29	164	13	4.17E-02	11.0	
7	0	92.45*	363	443	1.37	184.90	182	11	5.04E-02	13.2	
8	0	185.47*	202	376	1.13	370.94	365	13	2.80E-02	21.8	
9	0	208.76	102	258	0.95	417.53	414	8	1.41E-02	29.2	
10	4	238.09*	1291	159	1.02	476.18	471	17	1.79E-01	3.2	1.49E+00
11	4	241.12*	303	234	1.84	482.23	471	17	4.21E-02	14.0	
12	0	269.53	154	247	1.32	539.06	532	13	2.14E-02	22.5	
13	0	276.79	43	193	0.99	553.57	548	10	6.02E-03	61.8	
14	0	294.80	373	213	1.11	589.61	583	12	5.18E-02	9.4	
15	0	299.21	34	151	0.87	598.42	595	7	4.73E-03	56.9	
16	0	327.71	125	143	1.28	655.42	650	11	1.74E-02	20.5	
17	0	337.88*	217	249	1.13	675.76	669	13	3.02E-02	16.7	
18	0	351.42*	662	224	1.26	702.84	696	14	9.20E-02	6.3	
19	0	408.93	33	136	1.40	817.87	815	10	4.56E-03	69.0	
20	0	462.43*	91	89	0.87	924.87	920	12	1.26E-02	23.7	
21	0	510.46*	79	147	1.62	1020.91	1013	13	1.10E-02	38.2	
22	0	582.82*	451	113	1.32	1165.64	1158	15	6.27E-02	7.1	
23	0	608.95*	448	123	1.29	1217.91	1212	13	6.23E-02	7.1	
24	0	661.49	151	81	1.27	1322.98	1317	12	2.10E-02	14.8	
25	0	726.80	101	78	1.32	1453.59	1446	13	1.41E-02	20.5	
26	0	773.32	22	51	1.38	1546.64	1541	10	3.01E-03	65.9	
27	0	795.04	50	68	1.38	1590.08	1583	12	6.94E-03	36.1	
28	0	860.59	70	53	1.92	1721.18	1715	12	9.75E-03	24.1	
29	0	911.09*	276	45	1.36	1822.17	1816	14	3.83E-02	8.1	
30	1	964.31	89	13	2.12	1928.62	1921	44	1.23E-02	16.1	2.27E+00
31	1	968.87*	157	26	2.13	1937.74	1921	44	2.18E-02	11.2	
32	0	1120.14	86	54	1.67	2240.28	2234	12	1.20E-02	20.2	
33	0	1460.68*	1386	21	1.80	2921.35	2913	17	1.92E-01	2.8	
34	0	1630.54	20	5	2.04	3261.07	3256	10	2.78E-03	30.6	
35	0	1729.60	30	4	1.43	3459.20	3451	15	4.19E-03	23.0	
36	0	1764.21*	99	0	1.53	3528.41	3520	15	1.37E-02	10.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 14:15:44

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358008.CNF;1
Analyses by : PEAK V16.9,PEAKFIT V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MX87
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:14:10
Sample ID : G232358008 Sample quantity : 121.35 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA1 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.71 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.195E+01	2.793E+00	4.842E-01	3.246E-02	65.985
CD-109	+	88.03	*	3.689E+00	8.781E-01	1.162E+00	1.064E-01	3.175
SN-126	+	64.28		8.702E-01	5.895E-01	6.804E-01	9.681E-02	1.279
	+	86.94		1.510E+00	7.087E-01	5.683E-01	2.355E-01	2.657
	+	87.57	*	3.632E-01	8.645E-02	1.202E-01	1.095E-02	3.021
CS-135	+	268.24	*	5.928E-01	2.722E-01	2.451E-01	2.210E-02	2.418
BA-137M	+	661.65	*	2.094E-01	6.369E-02	5.991E-02	4.233E-03	3.495
CS-137	+	661.65	*	2.213E-01	6.734E-02	6.333E-02	4.488E-03	3.495
TL-208	+	277.35		4.000E-01	4.964E-01	6.017E-01	7.055E-02	0.665
	+	510.84		3.671E-01	2.833E-01	2.506E-01	2.598E-02	1.465
	+	583.14	*	5.997E-01	9.582E-02	6.095E-02	4.517E-03	9.840
	+	860.37		8.777E-01	4.290E-01	4.648E-01	4.009E-02	1.888
BI-210	+	46.50	*	1.546E+00	3.121E+00	4.013E+00	2.974E-01	0.385
PB-210	+	46.50	*	1.546E+00	3.121E+00	4.013E+00	2.974E-01	0.385
PO-210	+	46.50	*	1.546E+00	3.121E+00	4.013E+00	2.517E-01	0.385
BI-211	+	72.87		2.006E+01	3.508E+00	4.544E+00	3.423E-01	4.414
	+	351.07	*	3.838E+00	5.508E-01	3.084E-01	2.162E-02	12.446
PB-212	+	74.81		2.381E+00	4.721E-01	5.211E-01	6.315E-02	4.569
	+	77.11		1.813E+00	2.550E-01	2.922E-01	2.320E-02	6.205
	+	87.30		1.680E+00	4.337E-01	6.305E-01	8.515E-02	2.664
	+	238.63	*	1.631E+00	1.693E-01	9.124E-02	7.434E-03	17.874
	+	300.09		6.629E-01	7.571E-01	1.211E+00	1.150E-01	0.548
PO-212	+	74.81		2.381E+00	4.721E-01	5.211E-01	6.315E-02	4.569
	+	77.11		1.813E+00	2.550E-01	2.922E-01	2.320E-02	6.205
	+	87.30		1.680E+00	4.337E-01	6.305E-01	8.515E-02	2.664
		115.19		1.218E+00	3.529E+00	5.888E+00	4.066E-01	0.207
	+	238.63	*	1.631E+00	1.693E-01	9.124E-02	7.434E-03	17.874
	+	300.09		6.629E-01	7.571E-01	1.211E+00	1.150E-01	0.548
BI-214	+	609.31	*	1.124E+00	1.865E-01	1.124E-01	9.586E-03	10.000
		768.36		1.015E+00	8.802E-01	1.363E+00	1.314E-01	0.745
		934.06		3.293E-01	1.199E+00	2.037E+00	2.040E-01	0.162
	+	1120.29		1.120E+00	4.635E-01	5.381E-01	4.861E-02	2.082
		1238.11		1.472E+00	1.005E+00	1.798E+00	1.477E-01	0.818
		1377.67		7.551E-01	1.041E+00	1.821E+00	1.646E-01	0.415

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1764.49		1.764E+00	3.892E-01	2.865E-01	1.624E-02	6.157
PB-214	+	74.81		4.102E+00	7.792E-01	8.979E-01	9.603E-02	4.569
	+	77.11		3.108E+00	4.972E-01	5.009E-01	5.512E-02	6.205
	+	87.30		2.878E+00	7.200E-01	1.080E+00	1.286E-01	2.664
	+	241.98		2.304E+00	6.779E-01	5.352E-01	4.751E-02	4.304
	+	295.21		1.275E+00	2.702E-01	1.921E-01	1.883E-02	6.637
	+	351.92	*	1.335E+00	2.039E-01	1.075E-01	9.378E-03	12.420
PO-214	+	74.81		4.102E+00	7.792E-01	8.979E-01	9.603E-02	4.569
	+	77.11		3.108E+00	4.972E-01	5.009E-01	5.512E-02	6.205
	+	87.30		2.878E+00	7.200E-01	1.080E+00	1.286E-01	2.664
	+	241.98		2.304E+00	6.779E-01	5.352E-01	4.751E-02	4.304
	+	295.21		1.275E+00	2.702E-01	1.921E-01	1.883E-02	6.637
	+	351.92	*	1.335E+00	2.039E-01	1.075E-01	9.378E-03	12.420
PO-216	+	74.81		2.381E+00	4.721E-01	5.211E-01	6.315E-02	4.569
	+	77.11		1.813E+00	2.550E-01	2.922E-01	2.320E-02	6.205
	+	87.30		1.680E+00	4.337E-01	6.305E-01	8.515E-02	2.664
	+	238.63	*	1.631E+00	1.693E-01	9.124E-02	7.434E-03	17.874
	+	300.09		6.629E-01	7.571E-01	1.211E+00	1.150E-01	0.548
PO-218	+	74.81		4.102E+00	7.792E-01	8.979E-01	9.603E-02	4.569
	+	77.11		3.108E+00	4.972E-01	5.009E-01	5.512E-02	6.205
	+	87.30		2.878E+00	7.200E-01	1.080E+00	1.286E-01	2.664
	+	241.98		2.304E+00	6.779E-01	5.352E-01	4.751E-02	4.304
	+	295.21		1.275E+00	2.702E-01	1.921E-01	1.883E-02	6.637
	+	351.92	*	1.335E+00	2.039E-01	1.075E-01	9.378E-03	12.420
RA-224	+	240.98	*	4.368E+00	1.262E+00	1.038E+00	7.119E-02	4.208
RA-226	+	609.31	*	1.124E+00	1.865E-01	1.124E-01	9.586E-03	10.000
		768.36		1.015E+00	8.802E-01	1.363E+00	1.314E-01	0.745
		934.06		3.293E-01	1.199E+00	2.037E+00	2.040E-01	0.162
	+	1120.29		1.120E+00	4.635E-01	5.381E-01	4.861E-02	2.082
		1238.11		1.472E+00	1.005E+00	1.798E+00	1.477E-01	0.818
		1377.67		7.551E-01	1.041E+00	1.821E+00	1.646E-01	0.415
	+	1764.49		1.764E+00	3.892E-01	2.865E-01	1.624E-02	6.157
AC-228	+	338.32		1.387E+00	7.323E-01	4.014E-01	1.642E-01	3.456
	+	911.07	*	1.632E+00	3.185E-01	2.197E-01	2.365E-02	7.427
	+	969.11		1.635E+00	5.258E-01	3.752E-01	8.621E-02	4.358
RA-228	+	338.32		1.387E+00	7.323E-01	4.014E-01	1.642E-01	3.456
	+	911.07	*	1.632E+00	3.185E-01	2.197E-01	2.365E-02	7.427
	+	969.11		1.635E+00	5.258E-01	3.752E-01	8.621E-02	4.358
TH-228	+	84.40		5.643E+00	2.245E+00	4.282E+00	5.657E-01	1.318
	+	238.60	*	1.631E+00	1.693E-01	9.123E-02	7.433E-03	17.876
	+	300.10		6.629E-01	8.502E-01	1.211E+00	7.158E-01	0.548
TH-230	+	609.31	*	1.123E+00	1.865E-01	1.124E-01	9.586E-03	10.000
		768.36		1.015E+00	8.801E-01	1.363E+00	1.314E-01	0.745
		934.06		3.293E-01	1.199E+00	2.037E+00	2.040E-01	0.162
	+	1120.29		1.120E+00	4.635E-01	5.380E-01	4.861E-02	2.082
		1238.11		1.472E+00	1.005E+00	1.798E+00	1.477E-01	0.818
		1377.67		7.551E-01	1.041E+00	1.821E+00	1.646E-01	0.415
	+	1764.49		1.764E+00	3.892E-01	2.865E-01	1.624E-02	6.157
TH-232	+	338.32		1.387E+00	4.720E-01	4.014E-01	2.704E-02	3.456

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	-	911.07	*	1.632E+00	3.185E-01	2.197E-01	2.365E-02	7.427
	-	969.11		1.635E+00	5.258E-01	3.752E-01	8.621E-02	4.358
TH-234	-	63.29	*	2.199E+00	1.504E+00	1.780E+00	3.054E-01	1.235
	-	92.38		2.879E-00	9.191E-01	9.468E-01	1.713E-01	3.041
U-234	-	609.31	*	1.123E-00	1.865E-01	1.124E-01	9.586E-03	10.000
		768.36		1.015E+00	8.801E-01	1.363E+00	1.314E-01	0.745
		934.06		3.293E-01	1.199E+00	2.037E+00	2.040E-01	0.162
	+	1120.29		1.120E+00	4.635E-01	5.380E-01	4.861E-02	2.082
		1238.11		1.472E+00	1.005E+00	1.798E+00	1.477E-01	0.818
		1377.67		7.551E-01	1.041E+00	1.821E+00	1.646E-01	0.415
	+	1764.49		1.764E+00	3.892E-01	2.865E-01	1.624E-02	6.157
NP-237	+	86.50	*	1.067E+00	3.360E-01	4.225E-01	9.509E-02	2.524
		95.87		-9.447E-01	1.018E+00	1.371E+00	3.362E-01	-0.689
U-238	+	63.29	*	2.199E+00	1.504E+00	1.780E+00	3.054E-01	1.235
	+	92.38		2.879E+00	7.971E-01	9.468E-01	8.177E-02	3.041
AM-243	+	74.67	*	3.860E-01	6.751E-02	8.469E-02	6.521E-03	4.558
	+	86.72		4.000E+01	9.520E+00	1.582E+01	1.425E+00	2.529
		117.66		-4.806E+00	3.851E+00	6.009E+00	4.069E-01	-0.800
		142.18		-3.586E+00	1.788E+01	2.872E+01	1.701E+00	-0.125
ANH-511	+	511.00	*	7.930E-02	6.084E-02	5.415E-02	3.338E-03	1.464

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.662E-02	3.232E-01	5.362E-01	3.682E-02	0.068
NA-22		1274.54	*	-1.530E-02	4.458E-02	7.001E-02	4.292E-03	-0.219
NA-24		1368.53	*	-7.044E-02	4.458E-02	Half-Life too short		
AL-26		1129.67		-2.852E+00	1.862E+00	2.613E+00	1.577E-01	-1.091
		1808.65	*	1.670E-02	2.400E-02	4.568E-02	2.520E-03	0.366
TI-44		67.85		3.969E-02	5.235E-02	6.803E-02	4.825E-03	0.583
		78.38	*	2.108E-01	4.833E-02	6.913E-02	5.578E-03	3.050
SC-46		889.25	*	8.250E-03	3.646E-02	6.200E-02	4.981E-03	0.133
	+	1120.51		1.900E-01	7.761E-02	1.220E-01	7.495E-03	1.557
V-48		944.10		-8.042E-01	8.642E-01	1.306E+00	1.016E-01	-0.616
		983.50	*	1.816E-02	7.832E-02	1.151E-01	8.608E-03	0.158
		1312.09		1.107E-03	7.564E-02	1.232E-01	7.828E-03	0.009
CR-51		320.08	*	6.301E-01	3.585E-01	6.377E-01	4.889E-02	0.988
MN-52		744.21		1.645E-01	2.210E-01	3.769E-01	2.816E-02	0.436
		848.13		5.096E-01	5.337E+00	8.994E+00	7.101E-01	0.057
		935.52		1.907E-01	2.425E-01	4.268E-01	3.343E-02	0.447
		1246.25		1.754E+00	7.315E+00	1.217E+01	7.231E-01	0.144
		1333.61		4.715E+00	4.626E+00	8.346E+00	5.408E-01	0.565
		1434.06	*	-6.328E-02	1.742E-01	2.637E-01	1.690E-02	-0.240
MN-54		834.83	*	-3.428E-03	4.009E-02	6.661E-02	5.227E-03	-0.051
CO-56		846.75	*	-1.416E-02	3.675E-02	5.924E-02	4.675E-03	-0.239
		977.42		-1.403E+00	2.891E+00	4.566E+00	3.438E-01	-0.307
		1037.82		3.493E-01	3.111E-01	5.634E-01	4.265E-02	0.620
		1175.09		4.298E-01	2.327E+00	3.874E+00	2.133E-01	0.111

--- Non-Identified Nuclides ---

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.25		1.603E-01	9.983E-02	1.807E-01	1.130E-02	0.887
		1360.21		-3.684E-01	1.007E+00	1.554E+00	1.005E-01	-0.237
		1771.40		-8.381E-01	3.402E-01	3.564E-01	2.013E-02	-2.352
CO-57		122.06	*	3.190E-02	2.625E-02	4.498E-02	2.950E-03	0.709
		136.48		3.039E-02	2.075E-01	3.420E-01	2.384E-02	0.089
CO-58		810.76	*	9.120E-05	3.624E-02	6.071E-02	4.722E-03	0.002
FE-59		142.65		-3.398E-01	2.723E+00	4.386E+00	2.592E-01	-0.077
		192.34		6.326E-01	1.030E+00	1.586E+00	1.871E-01	0.399
		1099.22	*	2.856E-03	8.607E-02	1.421E-01	1.037E-02	0.020
		1291.56		-9.632E-02	1.318E-01	1.978E-01	1.534E-02	-0.487
CO-60		1173.22		-3.650E-03	4.744E-02	7.719E-02	4.241E-03	-0.047
		1332.49	*	4.184E-02	4.123E-02	7.437E-02	4.819E-03	0.563
ZN-65		1115.52	*	2.406E-02	1.002E-01	1.491E-01	9.263E-03	0.161
GE-68		1077.35	*	-2.522E-01	1.331E+00	2.156E+00	1.427E-01	-0.117
AS-73		53.44	*	-7.329E-01	6.501E-01	1.034E+00	6.601E-02	-0.709
AS-74		595.88	*	3.552E-03	8.702E-02	1.421E-01	9.521E-03	0.025
		634.78		7.978E-02	3.337E-01	5.523E-01	3.822E-02	0.144
SE-75		66.05		-2.521E+00	5.005E+00	6.682E+00	6.081E-01	-0.377
		96.73		-1.231E-01	8.224E-01	1.179E+00	1.576E-01	-0.104
		121.11		1.744E-01	1.398E-01	2.389E-01	2.330E-02	0.730
		136.00		-5.173E-03	3.920E-02	6.390E-02	3.952E-03	-0.081
		198.60		-9.727E-01	1.851E+00	2.922E+00	2.107E-01	-0.333
		264.65	*	3.992E-02	5.027E-02	7.413E-02	5.533E-03	0.539
		279.53		1.389E-03	1.214E-01	1.760E-01	1.429E-02	0.008
		303.91		-1.051E+00	2.325E+00	3.286E+00	3.482E-01	-0.320
		400.65		1.908E-02	2.583E-01	4.308E-01	3.804E-02	0.044
BR-77	+	87.88		5.781E+02	1.376E+02	2.528E+02	2.313E+01	2.287
		200.40		-1.178E+01	1.231E+02	1.982E+02	1.178E+01	-0.059
	+	239.00		1.896E+02	1.776E+01	2.818E+01	1.920E+00	6.729
		249.79		4.033E-01	4.982E+01	7.986E+01	5.641E+00	0.005
		281.68		-2.378E+01	7.287E+01	1.046E+02	8.092E+00	-0.227
		297.23		1.536E+02	6.069E+01	7.787E+01	5.853E+00	1.973
		303.76		-6.830E+01	1.441E+02	2.035E+02	1.508E+01	-0.336
		439.47		-5.905E+01	1.045E+02	1.663E+02	9.406E+00	-0.355
		484.57		7.275E+00	1.681E+02	2.775E+02	1.660E+01	0.026
		520.65	*	2.752E+00	7.501E+00	1.263E+01	7.863E-01	0.218
		574.64		-4.677E+01	1.634E+02	2.446E+02	1.607E+01	-0.191
		578.91		6.434E+01	6.807E+01	1.056E+02	6.969E+00	0.609
		585.48		8.531E+02	1.989E+02	3.498E+02	2.322E+01	2.439
		755.35		3.264E+01	1.176E+02	1.937E+02	1.457E+01	0.169
		817.79		3.474E+01	8.989E+01	1.555E+02	1.210E+01	0.223
SR-82		698.33		-6.941E+00	3.642E+01	5.792E+01	4.202E+00	-0.120
		776.49	*	-4.343E-01	4.226E-01	5.323E-01	4.053E-02	-0.816
		1395.20		-5.228E-02	9.931E+00	1.607E+01	1.036E+00	-0.003
RB-83		520.41	*	2.490E-02	6.788E-02	1.143E-01	7.114E-03	0.218
		529.64		7.217E-02	1.010E-01	1.741E-01	1.095E-02	0.414
		552.65		5.775E-02	1.961E-01	3.275E-01	2.108E-02	0.176
RB-84		881.50	*	2.862E-02	6.299E-02	1.094E-01	8.759E-03	0.262
KR-85		513.99	*	9.659E+00	8.374E+00	1.309E+01	8.093E-01	0.738

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SR-85		513.99	*	4.895E-02	4.244E-02	6.632E-02	4.101E-03	0.738
RB-86		1076.63	*	-1.064E-01	8.165E-01	1.329E+00	8.809E-02	-0.080
Y-88		898.02		-1.063E-02	3.966E-02	6.440E-02	5.220E-03	-0.165
		1836.01	*	1.017E-02	2.903E-02	5.146E-02	2.794E-03	0.198
ZR-88		392.90	*	6.374E-03	3.083E-02	5.186E-02	2.747E-03	0.123
Y-91		1204.90	*	-1.512E+01	1.898E+01	2.873E+01	1.634E+00	-0.526
NB-94		702.63	*	5.607E-04	3.611E-02	5.833E-02	4.244E-03	0.010
		871.10		8.237E-03	3.353E-02	5.713E-02	4.556E-03	0.144
NB-95		765.79	*	2.864E-02	4.797E-02	7.629E-02	5.775E-03	0.375
NB-95M		235.69	*	1.065E+00	1.976E-01	3.157E-01	2.611E-02	3.373
ZR-95		724.18		1.379E-01	1.196E-01	1.848E-01	1.522E-02	0.746
		756.15	*	-2.532E-02	7.122E-02	1.106E-01	9.417E-03	-0.229
NB-97		657.90	*	5.947E-03	7.122E-02	Half-Life too short		
		1024.50		-6.503E-02	7.122E-02	Half-Life too short		
ZR-97		254.15		-1.842E+00	7.122E-02	Half-Life too short		
		355.39		-2.967E-01	7.122E-02	Half-Life too short		
		507.63	*	1.576E+00	7.122E-02	Half-Life too short		
		602.52		-2.420E+00	7.122E-02	Half-Life too short		
		1021.30		-1.104E+00	7.122E-02	Half-Life too short		
		1147.95		-1.730E+00	7.122E-02	Half-Life too short		
		1362.66		-8.753E-01	7.122E-02	Half-Life too short		
		1750.46		1.273E+00	7.122E-02	Half-Life too short		
MO-99		140.51		-9.053E+00	1.997E+01	3.186E+01	8.596E+00	-0.284
		181.06		-2.053E+00	1.457E+01	2.049E+01	3.494E+00	-0.100
		366.43		9.113E+00	5.824E+01	9.806E+01	5.917E+00	0.093
		739.58	*	-7.582E+00	9.090E+00	1.338E+01	1.948E+00	-0.567
		778.00		-1.172E+01	2.868E+01	3.944E+01	3.006E+00	-0.297
TC-99M		140.51	*	-8.161E+08	2.868E+01	Half-Life too short		
RH-101		127.23		3.977E-02	3.400E-02	5.800E-02	3.695E-03	0.686
		198.01	*	-1.025E-02	3.554E-02	5.503E-02	3.241E-03	-0.186
		325.23		-6.154E-03	2.605E-01	3.793E-01	2.661E-02	-0.016
RH-102		418.52		4.926E-02	2.761E-01	4.627E-01	2.544E-02	0.106
		475.06	*	-1.633E-02	3.050E-02	4.841E-02	2.864E-03	-0.337
		631.29		-5.710E-02	5.413E-02	7.945E-02	5.483E-03	-0.719
		697.49		1.903E-02	8.255E-02	1.356E-01	9.830E-03	0.140
		766.84		5.625E-02	1.408E-01	2.028E-01	1.536E-02	0.277
		1046.59		-9.096E-02	1.168E-01	1.779E-01	1.233E-02	-0.511
		1112.84		5.786E-02	2.769E-01	4.010E-01	2.499E-02	0.144
RU-103		497.08	*	3.107E-02	3.964E-02	6.839E-02	8.734E-03	0.454
	+	610.33		1.190E+01	2.532E+00	2.914E+00	4.608E-01	4.083
RH-106	+	511.85		3.953E-01	3.033E-01	4.358E-01	2.688E-02	0.907
		621.84	*	-2.781E-02	3.262E-01	5.262E-01	6.467E-02	-0.053
		1050.47		3.160E+00	2.452E+00	4.469E+00	3.079E-01	0.707
RU-106	+	511.85		3.953E-01	3.033E-01	4.358E-01	2.688E-02	0.907
		621.84	*	-2.781E-02	3.262E-01	5.262E-01	3.604E-02	-0.053
		1050.47		3.160E+00	2.452E+00	4.469E+00	3.079E-01	0.707
AG-108M		433.93	*	7.915E-03	3.463E-02	5.808E-02	3.559E-03	0.136
		614.37		8.270E-03	4.591E-02	6.568E-02	4.749E-03	0.126
		722.95		-2.751E-02	4.975E-02	6.429E-02	4.993E-03	-0.428

---- Non-Identified Nuclides ----

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-110M		657.75	*	-1.039E-03	4.343E-02	6.051E-02	4.452E-03	-0.017
		677.61		-9.879E-02	2.992E-01	4.693E-01	3.492E-02	-0.211
		706.67		3.005E-02	2.244E-01	3.656E-01	2.769E-02	0.082
		763.93		-4.557E-02	1.834E-01	2.886E-01	2.262E-02	-0.158
		884.67		-4.572E-02	4.746E-02	7.154E-02	5.950E-01	-0.639
		937.48		3.801E-02	1.163E-01	1.984E-01	1.619E-02	0.192
		1384.27		6.634E-02	1.713E-01	2.906E-01	1.968E-02	0.228
IN-111		171.28		3.220E-02	7.843E-01	1.278E+00	6.826E-02	0.025
		245.39	*	6.612E-01	8.834E-01	1.303E+00	9.066E-02	0.508
IN-113M		391.69	*	8.713E-03	4.446E-02	7.474E-02	4.268E-03	0.117
SN-113		391.69	*	8.713E-03	4.446E-02	7.474E-02	4.268E-03	0.117
IN-114M		190.27	*	-9.353E-02	2.072E-01	2.850E-01	1.632E-02	-0.328
CD-115		260.90		-9.895E+01	9.903E+01	1.495E+02	1.095E+01	-0.662
		492.35		-1.077E+01	2.534E+01	4.036E+01	2.437E+00	-0.267
		527.90	*	-9.329E-02	7.394E+00	1.210E+01	7.596E-01	-0.008
SN-117M		156.02		-1.627E-01	2.197E+00	3.573E+00	1.976E-01	-0.046
		158.56	*	-1.543E-02	5.177E-02	8.334E-02	4.548E-03	-0.185
SB-122		563.90	*	7.022E-02	1.527E+00	2.502E+00	1.628E-01	0.028
		692.80		-1.134E+01	3.708E+01	5.847E+01	4.225E+00	-0.194
I-123		159.00	*	-5.621E-01	3.708E+01	Half-Life too short		
		528.96		2.528E+01	3.708E+01	Half-Life too short		
TE-123M		159.00	*	-1.122E-02	2.822E-02	4.523E-02	2.500E-03	-0.248
I-124		602.71	*	-5.768E-01	6.602E-01	8.364E-01	5.636E-02	-0.690
		722.78		-2.488E+00	4.319E+00	5.562E+00	4.101E-01	-0.447
		1325.50		-8.973E+00	3.023E+01	4.661E+01	3.000E+00	-0.193
		1376.25		3.365E+01	2.618E+01	4.843E+01	3.128E+00	0.695
		1509.49		-6.771E-02	1.338E+01	2.155E+01	1.359E+00	-0.003
		1691.02		1.547E+00	2.159E+00	4.175E+00	2.462E-01	0.371
SB-124		602.71		-3.977E-02	4.552E-02	5.767E-02	3.887E-03	-0.690
		645.85		-5.464E-02	5.196E-01	8.350E-01	6.355E-02	-0.065
		709.31		1.912E+00	2.832E+00	4.811E+00	3.516E-01	0.397
		713.82		-1.215E+00	1.681E+00	2.529E+00	2.820E-01	-0.480
		722.78		-2.487E-01	4.317E-01	5.560E-01	4.220E-02	-0.447
	+	968.20		1.662E+01	3.947E+00	7.114E+00	5.407E-01	2.336
		1045.16		-4.854E+00	2.507E+00	3.273E+00	2.272E-01	-1.483
		1325.50		-9.578E-01	3.227E+00	4.975E+00	3.202E-01	-0.193
		1368.21		-4.283E-01	1.709E+00	2.675E+00	3.266E-01	-0.160
		1436.60		-8.646E-01	2.925E+00	4.465E+00	2.861E-01	-0.194
		1691.02	*	3.646E-02	5.092E-02	9.841E-02	6.286E-03	0.371
SB-125		427.89	*	-1.279E-02	9.409E-02	1.544E-01	8.997E-03	-0.083
	+	463.38		8.219E-01	3.940E-01	5.494E-01	3.731E-02	1.496
		600.56		9.410E-02	1.798E-01	3.037E-01	2.285E-02	0.310
		635.90		6.970E-02	2.752E-01	4.555E-01	3.542E-02	0.153
TE-125M		109.28	*	2.194E+00	8.981E+00	1.495E+01	1.378E+00	0.147
I-126		388.63		9.098E-02	1.879E-01	3.214E-01	1.730E-02	0.283
		666.33	*	-1.452E-01	2.107E-01	2.703E-01	1.916E-02	-0.537
		753.82		-5.130E-01	1.403E+00	2.177E+00	1.637E-01	-0.236
SB-126		223.80		-1.223E+00	4.041E+00	6.412E+00	4.143E-01	-0.191
		278.60		7.702E-01	2.708E+00	4.000E+00	3.100E-01	0.193

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		296.50		1.116E+01	2.342E+00	3.320E+00	2.499E-01	3.362
		414.70		-2.271E-02	7.948E-02	1.113E-01	6.088E-03	-0.204
		415.30		9.656E-01	6.477E+00	9.448E+00	5.171E-01	0.102
		555.20		1.460E+00	3.573E+00	6.025E+00	3.887E-01	0.242
		573.80		-9.124E-02	1.026E+00	1.617E+00	1.062E-01	-0.056
		593.00		-6.204E-01	8.920E-01	1.371E+00	9.158E-02	-0.453
		656.30		1.125E+00	3.747E+00	5.415E+00	3.811E-01	0.208
		666.33		-6.051E-02	8.783E-02	1.127E-01	7.988E-03	-0.537
		675.00		-9.412E-02	1.842E+00	2.965E+00	2.116E-01	-0.032
		695.00		9.101E-03	7.968E-02	1.297E-01	9.391E-03	0.070
		697.00		3.439E-02	2.731E-01	4.450E-01	3.226E-02	0.077
		720.50	*	-1.995E-02	1.575E-01	2.152E-01	1.584E-02	-0.093
		856.80		4.262E-01	4.916E-01	7.798E-01	6.181E-02	0.547
		989.30		2.650E-01	1.171E+00	1.980E+00	1.472E-01	0.134
		1034.80		-1.227E+00	8.356E+00	1.360E+01	9.577E-01	-0.090
		1213.00		-1.597E+00	4.686E+00	7.436E+00	4.266E-01	-0.215
SB-127		61.10		7.465E+01	4.497E+01	7.026E+01	6.516E+00	1.062
		252.40		9.787E-01	3.758E+00	6.064E+00	2.527E+00	0.161
		290.80		-1.307E+01	1.961E+01	2.735E+01	2.750E+00	-0.478
		411.60		5.514E+00	1.104E+01	1.656E+01	2.315E+00	0.333
		444.90		4.346E+00	8.480E+00	1.443E+01	1.501E+00	0.301
		473.00		7.646E-01	1.414E+00	2.409E+00	2.627E-01	0.317
		543.00		-8.949E+00	1.469E+01	2.291E+01	2.955E+00	-0.391
		603.60		-8.672E+00	1.139E+01	1.463E+01	1.607E+00	-0.593
		685.20	*	4.267E-01	1.156E+00	1.924E+00	1.922E-01	0.222
		698.50		-2.117E+00	1.367E+01	2.179E+01	3.242E+00	-0.097
		722.20		-4.395E+00	2.772E+01	3.770E+01	3.722E+00	-0.117
		783.80		3.414E+00	3.062E+00	5.504E+00	6.306E-01	0.620
XE-127		57.60		1.383E+00	5.119E+00	8.061E+00	5.152E-01	0.172
		145.22		2.085E-01	6.737E-01	1.115E+00	6.507E-02	0.187
		172.10		-2.768E-02	1.233E-01	1.985E-01	1.064E-02	-0.139
		202.84	*	1.958E-02	4.963E-02	7.881E-02	4.725E-03	0.248
		374.96		9.634E-02	1.848E-01	3.173E-01	1.838E-02	0.304
I-131		80.18		1.621E+00	5.817E+00	6.304E+00	5.238E-01	0.257
		284.30		-6.337E-01	1.353E+00	2.227E+00	1.824E-01	-0.285
		364.48	*	-5.232E-02	9.969E-02	1.608E-01	1.081E-02	-0.325
		636.97		6.905E-01	1.409E+00	2.375E+00	1.785E-01	0.291
		722.89		-4.271E+00	7.612E+00	9.825E+00	7.299E-01	-0.435
TE-132		49.72		6.303E+00	1.243E+01	1.889E+01	1.668E+00	0.334
		111.76		-5.885E+00	2.346E+01	3.831E+01	3.590E+00	-0.154
		116.30		-1.016E+01	2.175E+01	3.515E+01	3.226E+00	-0.289
		228.16	*	7.303E-02	5.677E-01	9.185E-01	1.330E-01	0.080
BA-133		53.15		-2.948E+00	2.837E+00	4.533E+00	2.892E-01	-0.650
		79.62		-4.382E-01	1.919E+00	2.000E+00	2.997E-01	-0.219
		81.00		-6.467E-02	1.218E-01	1.450E-01	2.282E-02	-0.446
	+	276.40		3.952E-01	4.913E-01	6.210E-01	8.642E-02	0.636
		302.84		-3.188E-02	1.544E-01	2.224E-01	2.791E-02	-0.143
		356.01	*	-8.857E-03	4.767E-02	6.810E-02	8.052E-03	-0.130
		383.85		-1.333E-01	2.882E-01	4.651E-01	4.991E-02	-0.287

---- Non-Identified Nuclides ----

Nuclide	Line Idcd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-133	-	510.53		3.328E-01	2.882E-01	Half-Life too short		
		529.87	*	2.456E-03	2.882E-01	Half-Life too short		
		706.58		1.734E-02	2.882E-01	Half-Life too short		
		856.28		1.153E-01	2.882E-01	Half-Life too short		
		875.33		-4.197E-02	2.882E-01	Half-Life too short		
		1236.41		2.306E-01	2.882E-01	Half-Life too short		
		1298.22		4.051E-02	2.882E-01	Half-Life too short		
CS-134		475.35		-6.020E-01	1.963E+00	3.165E+00	1.873E-01	-0.190
		563.23		1.319E-01	3.412E-01	5.738E-01	3.793E-02	0.230
		569.32		2.217E-04	2.158E-01	3.445E-01	2.306E-02	0.001
		604.70		-4.142E-03	3.811E-02	5.291E-02	3.586E-03	-0.078
	+	795.84	*	9.583E-02	6.951E-02	9.461E-02	7.346E-03	1.013
		801.93		1.046E-01	4.588E-01	7.279E-01	5.659E-02	0.144
		1038.57		4.791E+00	3.914E+00	7.143E+00	5.003E-01	0.671
		1167.94		9.105E-01	2.719E+00	4.581E+00	2.548E-01	0.199
		1365.15		2.383E-01	1.174E+00	1.957E+00	1.366E-01	0.122
I-135		288.45		1.690E+09	1.174E+00	Half-Life too short		
		417.63		7.953E+08	1.174E+00	Half-Life too short		
		546.56		2.288E+08	1.174E+00	Half-Life too short		
		836.80		4.914E+08	1.174E+00	Half-Life too short		
		1038.76		1.207E+09	1.174E+00	Half-Life too short		
		1124.00		3.789E+09	1.174E+00	Half-Life too short		
		1131.51		-1.312E+08	1.174E+00	Half-Life too short		
		1260.41	*	2.199E+08	1.174E+00	Half-Life too short		
		1457.56		5.045E+10	1.174E+00	Half-Life too short		
		1678.03		2.153E+07	1.174E+00	Half-Life too short		
		1706.46		0.000E+00	1.174E+00	Half-Life too short		
		1791.20		5.143E+08	1.174E+00	Half-Life too short		
CS-136		66.91		2.646E-02	9.925E-01	1.067E+00	1.558E-01	0.025
	+	86.29		4.471E+00	1.146E+00	1.853E+00	2.423E-01	2.413
		153.22		4.529E-01	6.520E-01	1.091E+00	7.715E-02	0.415
		163.89		7.493E-01	1.018E+00	1.706E+00	1.170E-01	0.439
		176.55		-7.114E-04	3.570E-01	5.798E-01	3.597E-02	-0.001
		273.65		-5.151E-02	6.452E-01	6.329E-01	5.232E-02	-0.081
		340.57		1.330E-01	1.293E-01	2.018E-01	1.413E-02	0.659
		818.51		2.161E-02	6.711E-02	1.154E-01	8.993E-03	0.187
		1048.07	*	3.016E-02	1.024E-01	1.735E-01	1.278E-02	0.174
		1235.34		4.994E-01	6.133E-01	1.059E+00	1.062E-01	0.472
CE-139		165.85	*	-1.841E-03	3.051E-02	4.954E-02	2.599E-03	-0.037
BA-140		162.64		1.417E-01	7.145E-01	1.173E+00	7.177E-02	0.121
		304.84		1.240E-01	1.219E+00	1.948E+00	5.390E-01	0.064
		423.70		6.779E-01	1.785E+00	3.005E+00	9.538E-01	0.226
		537.32	*	2.478E-01	2.599E-01	4.333E-01	1.413E-01	0.572
LA-140	+	328.77		9.312E-01	3.885E-01	5.397E-01	4.067E-02	1.725
		432.53		1.802E+00	2.013E+00	3.506E+00	2.184E-01	0.514
		487.03		-6.781E-03	1.324E-01	2.171E-01	1.464E-02	-0.031
		751.79		1.294E-01	1.643E+00	2.659E+00	2.274E-01	0.049
		815.85		-9.351E-02	2.883E-01	4.687E-01	4.154E-02	-0.200
		867.82		-3.611E-01	1.420E+00	2.137E+00	1.807E-01	-0.169

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		-8.496E-01	2.730E+00	4.189E+00	4.231E-01	-0.203
		925.24		-5.028E-01	1.033E+00	1.637E+00	1.389E-01	-0.307
		1596.49	*	6.256E-03	8.085E-02	1.363E-01	8.372E-03	0.046
CE-141		145.44	*	-1.232E-02	6.206E-02	1.007E-01	6.101E-03	-0.122
CE-143		57.37		1.666E-04	6.206E-02	Half-Life too short		
		231.56		8.055E-05	6.206E-02	Half-Life too short		
		293.26	*	6.073E-04	6.206E-02	Half-Life too short		
	+	350.59		1.741E-02	6.206E-02	Half-Life too short		
		490.36		7.147E-04	6.206E-02	Half-Life too short		
		664.57		2.575E-04	6.206E-02	Half-Life too short		
		721.93		-1.260E-04	6.206E-02	Half-Life too short		
CE-144		80.11		3.966E+00	2.700E+00	3.192E+00	2.634E-01	1.243
		133.54	*	-1.342E-01	2.069E-01	3.292E-01	4.726E-02	-0.408
PM-144		476.78		-4.382E-03	6.926E-02	1.136E-01	8.007E-03	-0.039
		618.01		-7.082E-03	3.329E-02	5.318E-02	3.789E-03	-0.133
		696.49	*	6.493E-03	3.717E-02	6.079E-02	4.407E-03	0.107
		778.57		-1.253E+00	2.650E+00	3.622E+00	2.762E-01	-0.346
PR-144		696.49	*	4.397E-01	2.517E+00	4.117E+00	2.983E-01	0.107
		1489.15		-1.896E+00	1.065E+01	1.663E+01	1.054E+00	-0.114
PM-146		453.90	*	-1.642E-02	4.281E-02	6.879E-02	5.914E-03	-0.239
		633.02		-1.030E+00	1.429E+00	2.090E+00	7.737E-01	-0.493
		735.90		-5.941E-03	1.458E-01	2.337E-01	6.607E-02	-0.025
		747.13		5.566E-02	9.893E-02	1.660E-01	2.220E-02	0.335
ND-147	+	91.11		1.351E+00	3.770E-01	5.132E-01	4.865E-02	2.632
		319.41		3.187E+00	3.058E+00	5.387E+00	3.842E-01	0.592
		439.89		-2.427E+00	5.455E+00	8.753E+00	4.956E-01	-0.277
		531.02	*	4.042E-01	5.046E-01	8.714E-01	1.197E-01	0.464
PM-149		285.90	*	-7.522E+00	6.513E+01	1.091E+02	1.641E+01	-0.069
EU-152		121.78		1.001E-01	7.684E-02	1.317E-01	1.081E-02	0.760
		244.69		2.791E-01	3.570E-01	5.275E-01	3.663E-02	0.529
		344.27	*	5.892E-02	1.214E-01	1.624E-01	1.178E-02	0.363
		443.98		6.030E-01	9.930E-01	1.702E+00	9.685E-02	0.354
		778.89		-1.377E-01	3.070E-01	4.209E-01	3.210E-02	-0.327
		867.32		-1.837E-01	9.523E-01	1.394E+00	1.110E-01	-0.132
	+	964.01		1.064E+00	3.530E-01	5.926E-01	4.523E-02	1.795
		1085.78		-1.161E-01	3.964E-01	6.338E-01	4.139E-02	-0.183
		1112.02		-1.142E-01	3.726E-01	5.484E-01	3.422E-02	-0.208
		1407.95		2.385E-01	1.863E-01	3.479E-01	2.239E-02	0.685
GD-153		69.67		1.610E+00	1.649E+00	2.517E+00	1.824E-01	0.640
	+	83.37		3.231E+01	1.245E+01	2.392E+01	2.060E+00	1.351
		97.43	*	4.205E-02	8.457E-02	1.252E-01	1.019E-02	0.336
		103.18		5.277E-02	1.019E-01	1.716E-01	1.316E-02	0.308
EU-154		123.07		4.665E-02	5.472E-02	9.245E-02	9.117E-03	0.505
		247.94		-2.932E-01	3.943E-01	5.815E-01	6.006E-02	-0.504
		591.81		-1.803E-01	6.471E-01	1.031E+00	1.064E-01	-0.175
		723.30		-6.271E-02	2.067E-01	2.762E-01	2.326E-02	-0.227
		756.87		-4.058E-01	7.931E-01	1.212E+00	1.360E-01	-0.335
		873.19		1.778E-01	2.967E-01	5.190E-01	6.125E-02	0.343
		996.32		1.197E-01	3.700E-01	6.292E-01	1.082E-01	0.190

---- Non-Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		1.363E-02	2.055E-01	3.421E-01	3.661E-02	0.040
		1274.45	*	-4.389E-02	1.245E-01	1.953E-01	1.863E-02	-0.225
EU-155		48.70		2.089E-01	1.927E+00	2.877E+00	1.828E-01	0.073
		60.01		1.646E+00	4.540E+00	6.813E+00	4.396E-01	0.242
	+	86.54		4.373E-01	1.042E-01	1.801E-01	1.633E-02	2.428
		105.31	*	-3.762E-02	1.054E-01	1.718E-01	1.312E-02	-0.219
TB-160	+	86.79		1.156E+00	2.752E-01	4.740E-01	4.273E-02	2.439
		197.04		2.995E-01	5.964E-01	9.556E-01	5.609E-02	0.313
		215.65		-4.925E-01	7.438E-01	1.160E+00	7.282E-02	-0.425
	+	298.57		9.544E-02	1.089E-01	1.955E-01	1.465E-02	0.488
		879.36	*	4.648E-02	1.305E-01	2.245E-01	1.797E-02	0.207
		962.29		8.562E-01	6.175E-01	1.010E+00	7.720E-02	0.848
		966.15		1.193E+00	2.802E-01	5.446E-01	4.147E-02	2.190
		1177.93		-4.685E-02	3.721E-01	6.027E-01	3.328E-02	-0.078
		1271.85		-1.246E-01	7.163E-01	1.146E+00	6.992E-02	-0.109
HO-166M		80.57		3.557E-02	3.759E-01	4.016E-01	3.333E-02	0.089
	+	184.41		1.344E-01	5.898E-02	6.945E-02	3.893E-03	1.935
		280.46		-1.513E-02	9.209E-02	1.338E-01	1.037E-02	-0.113
		410.95		2.981E-01	2.796E-01	4.376E-01	2.380E-02	0.681
		711.68	*	-3.540E-02	6.416E-02	9.854E-02	7.213E-03	-0.359
		752.31		2.601E-03	2.755E-01	4.430E-01	3.327E-02	0.006
		810.29		-2.772E-03	5.487E-02	9.149E-02	7.093E-03	-0.030
TM-171		51.35		2.805E+01	2.439E+01	3.983E+01	2.542E+00	0.704
		52.39		-2.070E+00	1.212E+01	2.001E+01	1.277E+00	-0.103
		59.40		4.648E+00	2.436E+01	3.629E+01	2.326E+00	0.128
		66.72	*	-6.468E+00	3.292E+01	4.053E+01	2.836E+00	-0.160
LU-176		88.36		9.721E-01	2.877E-01	3.616E-01	3.297E-02	2.688
		201.83		-1.676E-02	2.980E-02	4.694E-02	2.804E-03	-0.357
		306.84	*	1.876E-02	2.394E-02	4.176E-02	3.073E-03	0.449
		401.10		1.025E+00	6.897E+00	1.155E+01	6.193E-01	0.089
LU-177		112.95		1.477E+00	1.440E+00	2.457E+00	1.728E-01	0.601
	+	208.36	*	2.035E+00	1.195E+00	1.829E+00	1.119E-01	1.113
LU-177M		52.97		-1.177E+00	1.273E+00	2.043E+00	1.304E-01	-0.576
		54.07		-6.899E-01	6.818E-01	1.090E+00	6.957E-02	-0.633
		61.30		3.018E+00	1.416E+00	2.256E+00	1.480E-01	1.338
		121.62		6.301E-01	3.867E-01	6.708E-01	4.405E-02	0.939
		147.16		-8.329E-01	6.626E-01	1.026E+00	5.929E-02	-0.812
		171.86		-1.229E-01	5.045E-01	8.118E-01	4.347E-02	-0.151
		218.09		-1.836E-01	8.596E-01	1.371E+00	8.681E-02	-0.134
	+	268.79		2.965E+00	1.353E+00	1.590E+00	1.195E-01	1.864
		319.02		1.922E-01	2.507E-01	4.366E-01	3.117E-02	0.440
		367.43		-7.226E-02	8.350E-01	1.385E+00	8.316E-02	-0.052
		413.65	*	-1.149E-02	1.897E-01	2.714E-01	1.482E-02	-0.042
HF-181		56.28		-1.286E-01	7.416E-01	1.237E+00	7.899E-02	-0.104
		57.53		1.936E-01	4.285E-01	6.796E-01	4.343E-02	0.285
		65.20		-5.077E-01	9.067E-01	1.298E+00	8.920E-02	-0.391
		133.02		-2.975E-02	6.568E-02	1.058E-01	6.548E-03	-0.281
		136.25		-5.421E-02	4.508E-01	7.352E-01	4.480E-02	-0.074
		345.85		1.769E-02	2.151E-01	3.147E-01	2.064E-02	0.056

---- Non Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	-9.429E-03	4.225E-02	6.846E-02	4.084E-03	-0.138
W-181		56.28		-5.072E-02	2.937E-01	4.901E-01	3.129E-02	-0.103
		57.53		7.671E-02	1.698E-01	2.694E-01	1.722E-02	0.285
		65.20	*	-1.996E-01	3.565E-01	5.103E-01	3.508E-02	-0.391
TA-182		67.75		9.815E-02	1.242E-01	1.617E-01	1.145E-02	0.607
		100.10		3.547E-02	1.793E-01	2.889E-01	2.285E-02	0.123
		152.43		2.305E-01	3.491E-01	5.840E-01	3.289E-02	0.395
		222.10		2.206E-02	3.642E-01	5.881E-01	3.777E-02	0.038
		1001.68		-9.309E-01	2.063E+00	3.291E+00	2.414E-01	-0.283
	+	1121.28		5.260E-01	2.149E-01	3.451E-01	2.117E-02	1.524
		1189.05		1.713E-01	3.364E-01	5.734E-01	3.205E-02	0.299
		1221.42	*	7.663E-02	2.156E-01	3.623E-01	2.097E-02	0.212
		1230.97		-4.151E-01	5.020E-01	7.609E-01	4.449E-02	-0.546
RE-183		57.98		1.162E-01	1.767E-01	2.691E-01	1.720E-02	0.432
		59.32		1.719E-02	9.909E-02	1.475E-01	9.454E-03	0.116
		67.20		2.562E-01	2.512E-01	2.895E-01	2.038E-02	0.885
		162.32	*	9.569E-03	1.108E-01	1.812E-01	9.690E-03	0.053
	+	208.81		2.029E+00	1.191E+00	1.813E+00	1.111E-01	1.119
		291.72		-6.029E-01	1.065E+00	1.500E+00	1.140E-01	-0.402
RE-184		57.98		4.310E-01	6.554E-01	9.979E-01	6.380E-02	0.432
		59.32		6.369E-02	3.672E-01	5.467E-01	3.503E-02	0.116
		67.20		9.498E-01	9.315E-01	1.073E+00	7.555E-02	0.885
		161.27		-1.361E-01	3.566E-01	5.718E-01	3.075E-02	-0.238
		216.55		3.723E-02	2.623E-01	4.257E-01	2.681E-02	0.087
		252.85	*	-6.925E-02	2.450E-01	3.865E-01	2.758E-02	-0.179
		318.01		-7.100E-03	4.376E-01	7.335E-01	5.250E-02	-0.010
		792.07		1.396E+00	1.173E+00	1.900E+00	1.459E-01	0.734
		903.28		4.701E-01	1.022E+00	1.656E+00	1.330E-01	0.284
		920.93		8.949E-02	4.289E-01	7.270E-01	5.762E-02	0.123
OS-185		59.72		7.573E-02	2.672E-01	3.997E-01	2.570E-02	0.189
		61.14		2.880E-01	1.536E-01	2.431E-01	1.591E-02	1.185
		69.30		2.253E-01	2.927E-01	4.436E-01	3.201E-02	0.508
		592.07		-1.132E+00	2.635E+00	4.150E+00	2.770E-01	-0.273
		646.12	*	1.816E-03	4.379E-02	7.121E-02	4.973E-03	0.026
		717.42		1.216E+00	8.936E-01	1.596E+00	1.173E-01	0.762
		874.81		-5.081E-01	5.766E-01	8.814E-01	7.040E-02	-0.576
		880.27		4.784E-01	7.387E-01	1.301E+00	1.041E-01	0.368
RE-188		155.03	*	5.039E-02	1.751E-01	2.888E-01	1.605E-02	0.174
		477.96		-3.313E-01	3.132E+00	5.120E+00	3.040E-01	-0.065
		633.10		-2.043E+00	2.759E+00	4.185E+00	2.892E-01	-0.488
W-188	+	63.58		8.739E+01	5.818E+01	7.915E+01	5.338E+00	1.104
		227.08		2.038E+00	1.323E+01	2.143E+01	1.401E+00	0.095
		290.67	*	-4.925E+00	8.214E+00	1.153E+01	8.777E-01	-0.427
IR-192	+	295.96		9.623E-01	1.951E-01	2.790E-01	2.123E-02	3.449
		308.46		3.110E-02	9.126E-02	1.559E-01	1.152E-02	0.199
		316.51	*	-1.294E-02	3.291E-02	5.403E-02	3.895E-03	-0.239
		468.07		-2.779E-02	7.781E-02	1.073E-01	7.237E-03	-0.259
		604.41		-4.982E-02	5.108E-01	7.101E-01	8.424E-02	-0.070
		612.46		4.699E-01	8.435E-01	1.249E+00	1.044E-01	0.376

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-198		65.12		-8.887E-02	1.656E-01	2.372E-01	1.629E-02	-0.375
		66.83		-1.101E-02	1.088E-01	1.347E-01	9.440E-03	-0.082
		75.70		1.593E+00	2.241E-01	4.583E-01	3.574E-02	3.477
		98.88	*	2.477E-01	2.502E-01	3.781E-01	3.028E-02	0.655
		129.76		5.543E+00	2.983E+00	5.185E+00	3.261E-01	1.069
TL-200		367.94	*	-4.558E-05	2.983E+00	Half-Life too short		
		579.30		2.806E-03	2.983E+00	Half-Life too short		
		828.27		-8.777E-04	2.983E+00	Half-Life too short		
		1205.75		-6.299E-04	2.983E+00	Half-Life too short		
TL-201		68.90		3.560E+00	3.648E+00	5.574E+00	4.003E-01	0.639
		70.82		1.337E+00	2.146E+00	3.231E+00	2.374E-01	0.414
		80.30		1.250E+00	5.415E+00	5.847E+00	4.836E-01	0.214
		135.34		-6.142E+00	1.987E+01	3.216E+01	1.968E+00	-0.191
		167.43	*	-1.932E+00	5.617E+00	9.009E+00	4.748E-01	-0.214
TL-202		68.90		3.869E-01	3.965E-01	6.058E-01	4.350E-02	0.639
		70.82		1.449E-01	2.326E-01	3.502E-01	2.573E-02	0.414
		80.30		1.356E-01	5.871E-01	6.339E-01	5.243E-02	0.214
		439.56	*	-3.591E-02	6.568E-02	1.047E-01	5.921E-03	-0.343
HG-203		70.83		6.630E-01	1.058E+00	1.590E+00	2.041E-01	0.417
	+	72.87		3.925E+00	7.907E-01	1.205E+00	1.508E-01	3.257
	+	82.60		2.371E+00	9.478E-01	1.752E+00	2.397E-01	1.353
		279.20	*	8.087E-03	4.611E-02	6.761E-02	5.434E-03	0.120
BI-207	+	72.80		1.170E+00	2.046E-01	3.544E-01	2.667E-02	3.300
	+	74.97		6.928E-01	1.212E-01	2.533E-01	1.958E-02	2.735
	+	84.90		4.192E-01	1.615E-01	3.478E-01	3.056E-02	1.206
		569.67		3.183E-03	3.359E-02	5.396E-02	3.530E-03	0.059
		1063.62	*	1.271E-02	5.569E-02	9.364E-02	6.331E-03	0.136
		1770.23		-1.066E-01	4.834E-01	6.390E-01	3.611E-02	-0.167
TL-207		81.07		-1.320E-01	2.683E-01	3.213E-01	2.685E-02	-0.411
	+	83.78		2.764E-01	1.065E-01	2.051E-01	1.776E-02	1.348
		94.90		-8.536E-02	2.402E-01	3.434E-01	2.876E-02	-0.249
		122.32		1.861E+00	1.827E+00	3.110E+00	2.285E-01	0.599
		144.24		3.335E-01	6.890E-01	1.135E+00	8.269E-02	0.294
		154.21		3.288E-01	4.071E-01	6.843E-01	4.676E-02	0.481
	+	269.46		6.974E-01	3.186E-01	3.761E-01	2.909E-02	1.854
		323.87	*	-4.531E-01	7.355E-01	1.015E+00	1.725E-01	-0.446
	+	338.28		5.794E+00	2.036E+00	2.524E+00	2.795E-01	2.295
		445.03		1.336E+00	2.418E+00	4.124E+00	4.211E-01	0.324
PO-209		260.50		-8.887E+00	1.037E+01	1.580E+01	1.156E+00	-0.562
		262.80		-4.736E+00	3.245E+01	4.473E+01	3.298E+00	-0.106
		896.60	*	1.323E+00	6.941E+00	1.176E+01	9.478E-01	0.112
PB-211		404.84	*	2.071E-01	1.117E+00	1.624E+00	1.012E+00	0.128
		427.08		-4.412E-01	2.107E+00	3.412E+00	2.109E+00	-0.129
		831.96		8.439E-02	1.221E+00	2.052E+00	1.284E+00	0.041
BI-212	+	727.18	*	1.157E+00	4.857E-01	6.931E-01	6.219E-02	1.669
		785.46		1.135E+00	1.873E+00	3.273E+00	2.505E-01	0.347
		1620.62		7.184E-01	1.148E+00	2.094E+00	1.274E-01	0.343
PO-215		81.07		-1.320E-01	2.683E-01	3.213E-01	2.685E-02	-0.411
	+	83.78		2.764E-01	1.065E-01	2.051E-01	1.776E-02	1.348

--- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		-8.536E-02	2.402E-01	3.434E-01	2.876E-02	-0.249
		122.32		1.861E+00	1.827E+00	3.110E+00	2.285E-01	0.599
		144.24		3.335E-01	6.890E-01	1.135E+00	8.269E-02	0.294
		154.21		3.288E-01	4.071E-01	6.843E-01	4.676E-02	0.481
	+	269.46		6.974E-01	3.186E-01	3.761E-01	2.909E-02	1.854
		323.87	*	-4.531E-01	7.355E-01	1.015E+00	1.725E-01	-0.446
	+	338.28		5.794E+00	2.036E+00	2.524E+00	2.795E-01	2.295
		445.03		1.336E+00	2.418E+00	4.124E+00	4.211E-01	0.324
RN-219		271.23		4.571E-01	4.159E-01	4.646E-01	4.393E-02	0.984
		401.81	*	2.277E-02	4.241E-01	7.064E-01	9.484E-02	0.032
RN-220		549.76	*	-9.072E+00	2.710E+01	4.320E+01	2.772E+00	-0.210
RA-223		81.07		-1.320E-01	2.683E-01	3.213E-01	2.685E-02	-0.411
	+	83.78		2.764E-01	1.065E-01	2.051E-01	1.776E-02	1.348
		94.90		-8.536E-02	2.402E-01	3.434E-01	2.876E-02	-0.249
		122.32		1.861E+00	1.827E+00	3.110E+00	2.285E-01	0.599
		144.24		3.335E-01	6.890E-01	1.135E+00	8.269E-02	0.294
		154.21		3.288E-01	4.071E-01	6.843E-01	4.676E-02	0.481
	+	269.46		6.974E-01	3.186E-01	3.761E-01	2.909E-02	1.854
		323.87	*	-4.531E-01	7.355E-01	1.015E+00	1.725E-01	-0.446
	+	338.28		5.794E+00	2.036E+00	2.524E+00	2.795E-01	2.295
		445.03		1.336E+00	2.418E+00	4.124E+00	4.211E-01	0.324
AC-227		79.80		1.544E+00	2.266E+00	2.508E+00	5.354E-01	0.616
		236.00		3.668E+00	5.558E-01	7.300E-01	8.032E-02	5.024
		256.20	*	2.483E-01	4.045E-01	6.651E-01	9.714E-02	0.373
		286.10		5.582E-01	1.526E+00	2.613E+00	3.294E-01	0.214
	+	299.80		1.228E+00	1.414E+00	2.524E+00	4.279E-01	0.487
		304.40		-3.401E-01	1.971E+00	2.982E+00	5.337E-01	-0.114
		334.20		5.382E-01	3.043E+00	3.957E+00	7.393E-01	0.136
TH-227		79.80		1.544E+00	2.266E+00	2.508E+00	5.424E-01	0.616
		94.00		1.775E+00	2.087E+00	3.483E+00	7.565E-01	0.510
		236.00		3.668E+00	5.219E-01	7.300E-01	7.072E-02	5.024
		256.20	*	2.483E-01	4.052E-01	6.651E-01	1.160E-01	0.373
		286.10		5.582E-01	1.624E+00	2.613E+00	2.621E+00	0.214
	+	299.80		1.228E+00	1.414E+00	2.524E+00	4.279E-01	0.487
		304.40		-3.401E-01	1.971E+00	2.982E+00	5.337E-01	-0.114
		334.20		5.382E-01	3.043E+00	3.957E+00	7.393E-01	0.136
TH-229	+	85.43		8.145E-01	1.939E-01	3.521E-01	3.117E-02	2.313
		88.47		5.177E-01	1.635E-01	2.045E-01	1.861E-02	2.532
		100.00		5.170E-02	1.879E-01	3.036E-01	2.404E-02	0.170
		193.63	*	1.595E-01	5.247E-01	8.603E-01	4.987E-02	0.185
		210.97		1.345E+00	8.514E-01	1.311E+00	8.092E-02	1.026
PA-231		283.67	*	-7.710E-01	1.527E+00	2.505E+00	3.679E-01	-0.308
		301.29		4.221E-01	6.464E-01	9.854E-01	1.128E-01	0.428
TH-231		81.07		-1.320E-01	2.683E-01	3.213E-01	2.685E-02	-0.411
	+	83.78		2.764E-01	1.065E-01	2.051E-01	1.776E-02	1.348
		94.90		-8.536E-02	2.402E-01	3.434E-01	2.876E-02	-0.249
		122.32		1.861E+00	1.827E+00	3.110E+00	2.285E-01	0.599
		144.24		3.335E-01	6.890E-01	1.135E+00	8.269E-02	0.294
		154.21		3.288E-01	4.071E-01	6.843E-01	4.676E-02	0.481

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		6.974E-01	3.186E-01	3.761E-01	2.909E-02	1.854
		323.87	*	-4.531E-01	7.355E-01	1.015E+00	1.725E-01	-0.446
	+	338.28		5.794E+00	2.036E+00	2.524E+00	2.795E-01	2.295
		445.03		1.336E+00	2.478E+00	4.124E+00	4.211E-01	0.324
U-231	+	84.21		9.916E+00	3.820E+00	7.536E+00	6.562E-01	1.316
	+	92.29		9.153E+00	2.534E+00	3.316E+00	2.867E-01	2.760
		95.87	*	-8.917E-01	9.388E-01	1.294E+00	1.072E-01	-0.689
		108.00		-3.884E-01	1.694E+00	2.772E+00	2.033E-01	-0.140
PA-233	+	75.28		2.022E+01	4.370E+00	7.561E+00	1.125E+00	2.674
	+	86.59		7.110E+00	2.475E+00	2.925E+00	7.881E-01	2.431
	+	300.12		3.425E-01	3.928E-01	7.026E-01	1.000E-01	0.487
		311.98	*	-1.210E-02	5.926E-02	9.835E-02	7.434E-03	-0.123
		340.50		8.977E-01	7.047E-01	1.073E+00	2.490E-01	0.837
		398.62		-3.787E-01	2.112E+00	3.467E+00	8.929E-01	-0.109
		415.76		-1.690E-01	1.752E+00	2.619E+00	5.368E-01	-0.065
PA-234	+	63.00		2.563E+00	1.738E+00	2.387E+00	3.466E-01	1.074
		94.67		3.547E-02	1.745E-01	2.565E-01	3.142E-02	0.138
		98.44		1.344E-01	1.245E-01	1.535E-01	8.548E-02	0.876
		99.86		1.807E-01	4.775E-01	7.746E-01	6.141E-02	0.233
		111.00		-9.226E-02	1.856E-01	3.000E-01	3.326E-02	-0.308
		131.20		-5.988E-02	1.101E-01	1.769E-01	1.105E-02	-0.339
		152.70		3.230E-01	3.428E-01	5.735E-01	9.029E-02	0.563
	+	186.00		4.839E+00	2.572E+00	2.516E+00	7.681E-01	1.923
		226.40		1.262E-01	4.207E-01	6.859E-01	8.189E-02	0.184
		227.20		7.879E-02	4.522E-01	7.333E-01	4.796E-02	0.107
		248.90		-5.272E-01	8.738E-01	1.344E+00	2.938E-01	-0.392
	+	293.70		6.121E+00	1.542E+00	1.751E+00	2.942E-01	3.496
		369.80		5.158E-02	7.888E-01	1.320E+00	2.754E-01	0.039
		568.70		-3.015E-01	1.100E+00	1.721E+00	1.125E-01	-0.175
		569.50		2.484E-02	2.978E-01	4.781E-01	3.127E-02	0.052
		574.00		-6.421E-01	1.600E+00	2.457E+00	1.613E-01	-0.261
		699.00		-2.327E-01	7.702E-01	1.211E+00	2.242E-01	-0.192
		706.10		-9.777E-02	1.140E+00	1.825E+00	8.094E-01	-0.054
		733.00		-5.706E-02	4.167E-01	5.965E-01	1.298E-01	-0.096
		742.81		9.577E-01	1.555E+00	2.409E+00	1.616E+00	0.398
	+	796.30		1.864E+00	1.434E+00	1.858E+00	4.974E-01	1.004
		805.60		-3.518E-01	1.016E+00	1.645E+00	5.003E-01	-0.214
		819.60		2.323E-01	1.173E+00	1.991E+00	7.537E-01	0.117
		826.30		-7.427E-03	7.863E-01	1.314E+00	5.861E-01	-0.006
		831.60		2.431E-02	6.424E-01	1.078E+00	3.192E-01	0.023
		876.40		-3.891E-01	9.306E-01	1.344E+00	1.381E+00	-0.290
		880.51		1.422E-01	2.684E-01	4.682E-01	3.748E-02	0.304
		883.24		-1.004E-01	2.801E-01	4.374E-01	2.937E-01	-0.230
		899.00		-8.853E-02	8.187E-01	1.348E+00	5.880E-01	-0.066
		925.00		-3.161E-01	1.143E+00	1.850E+00	1.461E-01	-0.171
		926.50		-1.628E-02	1.654E-01	2.723E-01	6.819E-02	-0.060
		946.00	*	-2.344E-01	3.062E-01	4.671E-01	8.588E-02	-0.502
		949.00		2.757E-01	4.580E-01	7.985E-01	6.180E-02	0.345
		980.50		-4.056E-01	8.876E-01	1.186E+00	8.901E-02	-0.342

---- Non-Identified Nuclides ----

Nuclide	Line Ident	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-9.930E-02	1.022E+00	1.627E+00	1.055E+00	-0.061
PA-234M		766.41		1.206E+01	2.289E+01	3.210E+01	2.457E+01	0.376
		1001.03	*	-3.269E+00	6.796E+00	1.081E+01	1.105E+00	-0.302
U-235		89.95		3.839E+00	1.952E+00	1.933E+00	5.981E-01	1.986
	+	93.35		3.461E+00	1.331E+00	1.213E+00	3.397E-01	2.853
		105.00		-1.465E-01	1.034E+00	1.698E+00	5.019E-01	-0.086
		143.76	*	8.895E-02	2.140E-01	3.512E-01	5.736E-02	0.253
		163.35		3.992E-01	4.798E-01	7.995E-01	1.426E-01	0.499
	+	185.71		1.792E-01	7.864E-02	9.329E-02	5.254E-03	1.921
		205.31		-2.141E-01	6.247E-01	8.614E-01	1.556E-01	-0.249
NP-236		94.67		2.956E-02	1.324E-01	1.948E-01	1.636E-02	0.152
		98.44		1.016E-01	7.565E-02	1.160E-01	9.336E-03	0.876
		111.00		-6.979E-02	1.403E-01	2.269E-01	1.622E-02	-0.308
		160.31	*	-6.497E-02	8.014E-02	1.260E-01	6.812E-03	-0.516
NP-239		99.55		1.593E-01	1.645E-01	2.622E-01	2.085E-02	0.608
		117.00	*	-1.912E-01	1.895E-01	2.989E-01	2.035E-02	-0.640
	+	209.75		1.619E+00	9.501E-01	1.452E+00	8.924E-02	1.115
		228.18		3.064E-02	2.350E-01	3.803E-01	2.495E-02	0.081
	+	277.60		1.929E-01	2.388E-01	3.085E-01	2.384E-02	0.625
		334.30		2.624E-01	1.722E+00	2.235E+00	1.525E-01	0.117
AM-241		59.54	*	3.138E-02	1.419E-01	2.116E-01	1.531E-02	0.148
CM-243		99.55		1.639E-01	1.692E-01	2.697E-01	2.145E-02	0.608
		103.76	*	6.396E-02	9.475E-02	1.603E-01	1.222E-02	0.399
		117.00		-1.967E-01	1.949E-01	3.075E-01	2.093E-02	-0.640
	+	209.75		1.595E+00	9.365E-01	1.431E+00	8.797E-02	1.115
		228.18		3.096E-02	2.374E-01	3.842E-01	2.521E-02	0.081
	+	277.60		1.945E-01	2.407E-01	3.110E-01	2.403E-02	0.625
CM-247	+	278.00		8.000E-01	9.903E-01	1.285E+00	9.946E-02	0.622
		287.40		1.439E+00	1.293E+00	2.178E+00	1.668E-01	0.661
		402.60	*	-8.767E-03	3.983E-02	6.351E-02	3.413E-03	-0.138
CF-249		252.85		-2.610E-01	9.234E-01	1.457E+00	1.040E-01	-0.179
		333.44		9.284E-02	2.842E-01	2.947E-01	2.017E-02	0.315
		387.95	*	9.929E-03	3.867E-02	6.530E-02	3.529E-03	0.152
CF-251		176.60	*	8.368E-06	1.305E-01	2.120E-01	1.155E-02	0.000
		227.00		2.219E-02	4.030E-01	6.500E-01	4.248E-02	0.034
		285.00		-5.678E-01	1.728E+00	2.864E+00	2.203E-01	-0.198

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358008      *
* Acquisition date :  6-JUL-2009 12:14:10 Detector SN#     :                *
* Detector ID        : GAMI                Sensitivity      : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.71      Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232358008           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.2135E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.195E+01	2.738E+00	4.832E-01	0.000E+00
CD-109	3.689E+00	8.606E-01	1.200E+00	0.000E+00
SN-126	3.632E-01	8.472E-02	1.242E-01	0.000E+00
CS-135	5.928E-01	2.668E-01	2.499E-01	0.000E+00
BA-137M	2.094E-01	6.242E-02	6.038E-02	0.000E+00
CS-137	2.213E-01	6.599E-02	6.383E-02	0.000E+00
TL-208	5.997E-01	9.390E-02	6.153E-02	0.000E+00
BI-210	1.546E+00	3.059E+00	4.176E+00	0.000E+00
PB-210	1.546E+00	3.059E+00	4.176E+00	0.000E+00
PO-210	1.546E+00	3.058E+00	4.176E+00	0.000E+00
BI-211	3.838E+00	5.398E-01	3.133E-01	0.000E+00
PB-212	1.631E+00	1.660E-01	9.313E-02	0.000E+00
PO-212	1.631E+00	1.660E-01	9.313E-02	0.000E+00
BI-214	1.124E+00	1.828E-01	1.134E-01	0.000E+00
PB-214	1.335E+00	1.998E-01	1.092E-01	0.000E+00
PO-214	1.335E+00	1.998E-01	1.092E-01	0.000E+00
PO-216	1.631E+00	1.660E-01	9.313E-02	0.000E+00
PO-218	1.335E+00	1.998E-01	1.092E-01	0.000E+00
RA-224	4.368E+00	1.237E+00	1.059E+00	0.000E+00
RA-226	1.124E+00	1.828E-01	1.134E-01	0.000E+00
AC-228	1.632E+00	3.121E-01	2.206E-01	0.000E+00
RA-228	1.632E+00	3.121E-01	2.206E-01	0.000E+00
TH-228	1.631E+00	1.660E-01	9.312E-02	0.000E+00
TH-230	1.123E+00	1.828E-01	1.134E-01	0.000E+00
TH-232	1.632E+00	3.121E-01	2.206E-01	0.000E+00
TH-234	2.199E+00	1.474E+00	1.846E+00	0.000E+00
U-234	1.123E+00	1.828E-01	1.134E-01	0.000E+00
NP-237	1.067E+00	3.293E-01	4.366E-01	0.000E+00
U-238	2.199E+00	1.474E+00	1.846E+00	0.000E+00
AM-243	3.860E-01	6.616E-02	8.765E-02	0.000E+00
ANH-511	7.930E-02	5.963E-02	5.476E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error % Ided	MDA (pCi/GRAM	)	
BE-7	3.662E-02	3.167E-01	5.427E-01	0.000E+00	NOT IDENT.
NA-22	-1.530E-02	4.369E-02	6.999E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.111E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.670E-02	2.352E-02	4.547E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.737E-02	7.151E-02	0.000E+00	NOT IDENT.
SC-46	8.250E-03	3.573E-02	6.227E-02	0.000E+00	FAIL ABUN
V-48	1.816E-02	7.676E-02	1.154E-01	0.000E+00	NOT IDENT.
CR-51	6.301E-01	3.514E-01	6.486E-01	0.000E+00	NOT IDENT.
MN-52	-6.328E-02	1.708E-01	2.632E-01	0.000E+00	NOT IDENT.
MN-54	-3.428E-03	3.929E-02	6.694E-02	0.000E+00	NOT IDENT.
CO-56	-1.416E-02	3.602E-02	5.953E-02	0.000E+00	NOT IDENT.
CO-57	3.190E-02	2.573E-02	4.628E-02	0.000E+00	NOT IDENT.
CO-58	9.120E-05	3.552E-02	6.104E-02	0.000E+00	NOT IDENT.
FE-59	2.856E-03	8.435E-02	1.423E-01	0.000E+00	NOT IDENT.
CO-60	4.184E-02	4.041E-02	7.430E-02	0.000E+00	NOT IDENT.
ZN-65	2.406E-02	9.818E-02	1.493E-01	0.000E+00	NOT IDENT.
GE-68	-2.522E-01	1.305E+00	2.160E+00	0.000E+00	NOT IDENT.
AS-73	-7.329E-01	6.371E-01	1.075E+00	0.000E+00	NOT IDENT.
AS-74	3.552E-03	8.528E-02	1.434E-01	0.000E+00	NOT IDENT.
SE-75	3.992E-02	4.926E-02	7.557E-02	0.000E+00	NOT IDENT.
BR-77	2.752E+00	7.351E+00	1.276E+01	0.000E+00	FAIL ABUN
SR-82	-4.343E-01	4.141E-01	5.354E-01	0.000E+00	NOT IDENT.
RB-83	2.490E-02	6.652E-02	1.155E-01	0.000E+00	NOT IDENT.
RB-84	2.862E-02	6.173E-02	1.098E-01	0.000E+00	NOT IDENT.
KR-85	9.659E+00	8.207E+00	1.323E+01	0.000E+00	NOT IDENT.
SR-85	4.895E-02	4.159E-02	6.706E-02	0.000E+00	NOT IDENT.
RB-86	-1.064E-01	8.002E-01	1.332E+00	0.000E+00	NOT IDENT.
Y-88	1.017E-02	2.845E-02	5.121E-02	0.000E+00	NOT IDENT.
ZR-88	6.374E-03	3.021E-02	5.261E-02	0.000E+00	NOT IDENT.
Y-91	-1.512E+01	1.860E+01	2.875E+01	0.000E+00	NOT IDENT.
NB-94	5.607E-04	3.539E-02	5.875E-02	0.000E+00	NOT IDENT.
NB-95	2.864E-02	4.701E-02	7.676E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.936E-01	3.223E-01	0.000E+00	NOT IDENT.
ZR-95	-2.532E-02	6.979E-02	1.113E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.046E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.536E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-7.582E+00	8.908E+00	1.347E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.763E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.025E-02	3.483E-02	5.629E-02	0.000E+00	NOT IDENT.
RH-102	-1.633E-02	2.989E-02	4.900E-02	0.000E+00	NOT IDENT.
RU-103	3.107E-02	3.885E-02	6.918E-02	0.000E+00	FAIL ABUN
RH-106	-2.781E-02	3.197E-01	5.308E-01	0.000E+00	FAIL ABUN
RU-106	-2.781E-02	3.197E-01	5.308E-01	0.000E+00	FAIL ABUN
AG-108M	7.915E-03	3.394E-02	5.885E-02	0.000E+00	NOT IDENT.
AG-110M	-1.039E-03	4.256E-02	6.100E-02	0.000E+00	NOT IDENT.
IN-111	6.612E-01	8.657E-01	1.329E+00	0.000E+00	NOT IDENT.
IN-113M	8.713E-03	4.357E-02	7.583E-02	0.000E+00	NOT IDENT.
SN-113	8.713E-03	4.357E-02	7.583E-02	0.000E+00	NOT IDENT.
IN-114M	-9.353E-02	2.030E-01	2.917E-01	0.000E+00	NOT IDENT.
CD-115	-9.329E-02	7.246E+00	1.223E+01	0.000E+00	NOT IDENT.
SN-117M	-1.543E-02	5.073E-02	8.549E-02	0.000E+00	NOT IDENT.
SB-122	7.022E-02	1.497E+00	2.527E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.386E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.122E-02	2.766E-02	4.639E-02	0.000E+00	NOT IDENT.
I-124	-5.768E-01	6.470E-01	8.441E-01	0.000E+00	NOT IDENT.
SB-124	3.646E-02	4.990E-02	9.803E-02	0.000E+00	FAIL ABUN
SB-125	-1.279E-02	9.221E-02	1.565E-01	0.000E+00	FAIL ABUN
TE-125M	2.194E+00	8.801E+00	1.540E+01	0.000E+00	NOT IDENT.
I-126	-1.452E-01	2.065E-01	2.724E-01	0.000E+00	NOT IDENT.
SB-126	-1.995E-02	1.544E-01	2.167E-01	0.000E+00	NOT IDENT.
SB-127	4.267E-01	1.133E+00	1.938E+00	0.000E+00	NOT IDENT.
XE-127	1.958E-02	4.863E-02	8.060E-02	0.000E+00	NOT IDENT.
I-131	-5.232E-02	9.769E-02	1.633E-01	0.000E+00	NOT IDENT.
TE-132	7.303E-02	5.564E-01	9.380E-01	0.000E+00	NOT IDENT.
BA-133	-8.857E-03	4.672E-02	6.917E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.347E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.812E-02	9.514E-02	0.000E+00	FAIL ABUN
I-135	0.000E+00	3.793E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.016E-02	1.003E-01	1.739E-01	0.000E+00	FAIL ABUN
CE-139	-1.841E-03	2.990E-02	5.079E-02	0.000E+00	NOT IDENT.
BA-140	2.478E-01	2.547E-01	4.379E-01	0.000E+00	NOT IDENT.
LA-140	6.256E-03	7.924E-02	1.359E-01	0.000E+00	FAIL ABUN
CE-141	-1.232E-02	6.082E-02	1.034E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.677E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-1.342E-01	2.028E-01	3.383E-01	0.000E+00	NOT IDENT.
PM-144	6.493E-03	3.643E-02	6.124E-02	0.000E+00	NOT IDENT.
PR-144	4.397E-01	2.467E+00	4.147E+00	0.000E+00	NOT IDENT.
PM-146	-1.642E-02	4.196E-02	6.967E-02	0.000E+00	NOT IDENT.
ND-147	4.042E-01	4.945E-01	8.808E-01	0.000E+00	FAIL ABUN
PM-148	-7.522E+00	6.383E+01	1.111E+02	0.000E+00	NOT IDENT.
EU-1[illegible]	5.892E-02	1.190E-01	1.650E-01	0.000E+00	FAIL ABUN
GD-1[illegible]	4.205E-02	8.288E-02	1.292E-01	0.000E+00	FAIL ABUN
EU-154	-4.389E-02	1.220E-01	1.952E-01	0.000E+00	NOT IDENT.
EU-155	-3.762E-02	1.033E-01	1.771E-01	0.000E+00	FAIL ABUN
TB-160	4.648E-02	1.279E-01	2.255E-01	0.000E+00	FAIL ABUN
HO-166M	-3.540E-02	6.288E-02	9.923E-02	0.000E+00	FAIL ABUN
TM-171	-6.468E+00	3.226E+01	4.201E+01	0.000E+00	NOT IDENT.
YB-176	1.876E-02	2.346E-02	4.249E-02	0.000E+00	NOT IDENT.
LU-177	0.000E+00	1.171E+00	1.870E+00	0.000E+00	FAIL ABUN
LU-177M	-1.149E-02	1.859E-01	2.752E-01	0.000E+00	FAIL ABUN
HF-181	-9.429E-03	4.140E-02	6.928E-02	0.000E+00	NOT IDENT.
W-181	-1.996E-01	3.494E-01	5.290E-01	0.000E+00	NOT IDENT.
TA-182	7.663E-02	2.113E-01	3.624E-01	0.000E+00	FAIL ABUN
RE-183	9.569E-03	1.086E-01	1.858E-01	0.000E+00	FAIL ABUN
RE-184	-6.925E-02	2.401E-01	3.942E-01	0.000E+00	NOT IDENT.
OS-185	1.816E-03	4.291E-02	7.180E-02	0.000E+00	NOT IDENT.
RE-188	5.039E-02	1.715E-01	2.964E-01	0.000E+00	NOT IDENT.
W-188	-4.925E+00	8.050E+00	1.174E+01	0.000E+00	FAIL ABUN
IR-192	-1.294E-02	3.225E-02	5.496E-02	0.000E+00	FAIL ABUN
AU-195	2.477E-01	2.452E-01	3.900E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.086E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.932E+00	5.505E+00	9.235E+00	0.000E+00	NOT IDENT.
TL-202	-3.591E-02	6.437E-02	1.060E-01	0.000E+00	NOT IDENT.
HG-203	8.087E-03	4.519E-02	6.888E-02	0.000E+00	FAIL ABUN
BI-207	1.271E-02	5.458E-02	9.383E-02	0.000E+00	FAIL ABUN
TL-207	-4.531E-01	7.208E-01	1.032E+00	0.000E+00	FAIL ABUN
PO-209	1.323E+00	6.802E+00	1.181E+01	0.000E+00	NOT IDENT.
PB-211	2.071E-01	1.095E+00	1.647E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.760E-01	6.978E-01	0.000E+00	FAIL ABUN
PO-215	-4.531E-01	7.208E-01	1.032E+00	0.000E+00	FAIL ABUN
RN-219	2.277E-02	4.156E-01	7.164E-01	0.000E+00	NOT IDENT.
RN-220	-9.072E+00	2.655E+01	4.364E+01	0.000E+00	NOT IDENT.
RA-223	-4.531E-01	7.208E-01	1.032E+00	0.000E+00	FAIL ABUN
AC-227	2.483E-01	3.964E-01	6.783E-01	0.000E+00	FAIL ABUN
TH-227	2.483E-01	3.971E-01	6.783E-01	0.000E+00	FAIL ABUN
TH-229	1.595E-01	5.142E-01	8.804E-01	0.000E+00	FAIL ABUN
PA-231	-7.710E-01	1.497E+00	2.551E+00	0.000E+00	NOT IDENT.
TH-231	-4.531E-01	7.208E-01	1.032E+00	0.000E+00	FAIL ABUN
U-231	-8.917E-01	9.200E-01	1.336E+00	0.000E+00	FAIL ABUN
PA-233	-1.210E-02	5.807E-02	1.001E-01	0.000E+00	FAIL ABUN
PA-234	-2.344E-01	3.001E-01	4.688E-01	0.000E+00	FAIL ABUN
PA-234M	-3.269E+00	6.660E+00	1.084E+01	0.000E+00	NOT IDENT.
U-235	8.895E-02	2.097E-01	3.607E-01	0.000E+00	FAIL ABUN
NP-236	-6.497E-02	7.854E-02	1.292E-01	0.000E+00	NOT IDENT.
NP-239	-1.912E-01	1.857E-01	3.077E-01	0.000E+00	FAIL ABUN
AM-241	3.138E-02	1.390E-01	2.196E-01	0.000E+00	NOT IDENT.
CM-243	6.396E-02	9.286E-02	1.652E-01	0.000E+00	FAIL ABUN
CM-247	-8.767E-03	3.903E-02	6.441E-02	0.000E+00	FAIL ABUN
CF-249	9.929E-03	3.790E-02	6.625E-02	0.000E+00	NOT IDENT.
CF-251	8.368E-06	1.279E-01	2.172E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:15:42.76

```
*****************************************************************************
*                          CEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358008.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:14:10.
Sample ID         : G232358008           Sample quantity  : 1.21350E+02 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.71  0.0%
Energy tolerance : 1.50000 keV           Analyst initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1386	10.67*	1.257E+00	3.195E+01	3.195E+01	8.74
CD-109	88.03	300	3.72*	6.909E+00	3.613E+00	3.689E+00	23.80
SN-126	64.28	119	9.60	4.424E+00	8.702E-01	8.702E-01	67.74
	86.94	300	8.90	6.909E+00	1.510E+00	1.510E+00	46.93
	87.57	300	37.00*	6.909E+00	3.632E-01	3.632E-01	23.80
CS-135	268.24	154	16.00*	5.027E+00	5.928E-01	5.928E-01	45.92
BA-137M	661.65	151	89.98*	2.489E+00	2.092E-01	2.094E-01	30.42
CS-137	661.65	151	85.12*	2.489E+00	2.211E-01	2.213E-01	30.42
TL-208	277.35	43	6.80	4.931E+00	4.000E-01	4.000E-01	124.09
	510.84	79	21.60	3.080E+00	3.671E-01	3.671E-01	77.18
	583.14	451	84.20*	2.765E+00	5.997E-01	5.997E-01	15.98
	860.37	70	12.46	1.985E+00	8.777E-01	8.777E-01	48.87
BI-210	46.50	34	4.05*	1.699E+00	1.545E+00	1.546E+00	201.85
PB-210	46.50	34	4.05*	1.699E+00	1.545E+00	1.546E+00	201.85
PO-210	46.50	34	4.05*	1.699E+00	1.545E+00	1.546E+00	201.81
BI-211	72.87	485	1.27	5.894E+00	2.006E+01	2.006E+01	17.49
	351.07	662	12.94*	4.125E+00	3.838E+00	3.838E+00	14.35
PB-212	74.81	485	10.70	5.894E+00	2.381E+00	2.381E+00	19.83
	77.11	646	18.00	6.125E+00	1.813E+00	1.813E+00	14.07
	87.30	300	8.00	6.909E+00	1.680E+00	1.680E+00	25.82
	238.63	1291	44.60*	5.489E+00	1.631E+00	1.631E+00	10.38
	300.09	34	3.41	4.656E+00	6.629E-01	6.629E-01	114.21
PO-212	74.81	485	10.70	5.894E+00	2.381E+00	2.381E+00	19.83
	77.11	646	18.00	6.125E+00	1.813E+00	1.813E+00	14.07
	87.30	300	8.00	6.909E+00	1.680E+00	1.680E+00	25.82
	115.19	------	0.60	7.604E+00	------	Line Not Found	------
	238.63	1291	44.60*	5.489E+00	1.631E+00	1.631E+00	10.38
	300.09	34	3.41	4.656E+00	6.629E-01	6.629E-01	114.21
BI-214	609.31	448	46.30*	2.667E+00	1.123E+00	1.124E+00	16.60
	768.36	------	5.04	2.191E+00	------	Line Not Found	------
	934.06	------	3.21	1.847E+00	------	Line Not Found	------
	1120.29	86	15.10	1.574E+00	1.120E+00	1.120E+00	41.39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1238.11	------	5.94	1.443E+00	------	Line Not Found	------
	1377.67	------	4.11	1.318E+00	------	Line Not Found	------
	1764.49	99	15.80	1.095E+00	1.764E+00	1.764E+00	22.06
PB-214	74.81	485	6.21	5.894E+00	4.102E+00	4.102E+00	18.99
	77.11	646	10.50	6.125E+00	3.108E+00	3.108E+00	16.00
	87.30	300	4.67	6.909E+00	2.878E+00	2.878E+00	25.02
	241.98	303	7.49	5.441E+00	2.303E+00	2.304E+00	29.43
	295.21	373	19.20	4.708E+00	1.275E+00	1.275E+00	21.19
	351.92	662	37.20*	4.125E+00	1.335E+00	1.335E+00	15.27
PO-214	74.81	485	6.21	5.894E+00	4.102E+00	4.102E+00	18.99
	77.11	646	10.50	6.125E+00	3.108E+00	3.108E+00	16.00
	87.30	300	4.67	6.909E+00	2.878E+00	2.878E+00	25.02
	241.98	303	7.49	5.441E+00	2.303E+00	2.304E+00	29.43
	295.21	373	19.20	4.708E+00	1.275E+00	1.275E+00	21.19
	351.92	662	37.20*	4.125E+00	1.335E+00	1.335E+00	15.27
PO-216	74.81	485	10.70	5.894E+00	2.381E+00	2.381E+00	19.83
	77.11	646	18.00	6.125E+00	1.813E+00	1.813E+00	14.07
	87.30	300	8.00	6.909E+00	1.680E+00	1.680E+00	25.82
	238.63	1291	44.60*	5.489E+00	1.631E+00	1.631E+00	10.38
	300.09	34	3.41	4.656E+00	6.629E-01	6.629E-01	114.21
PO-218	74.81	485	6.21	5.894E+00	4.102E+00	4.102E+00	18.99
	77.11	646	10.50	6.125E+00	3.108E+00	3.108E+00	16.00
	87.30	300	4.67	6.909E+00	2.878E+00	2.878E+00	25.02
	241.98	303	7.49	5.441E+00	2.303E+00	2.304E+00	29.43
	295.21	373	19.20	4.708E+00	1.275E+00	1.275E+00	21.19
	351.92	662	37.20*	4.125E+00	1.335E+00	1.335E+00	15.27
RA-224	240.98	303	3.95*	5.441E+00	4.368E+00	4.368E+00	28.89
RA-226	609.31	448	46.30*	2.667E+00	1.123E+00	1.124E+00	16.60
	768.36	------	5.04	2.191E+00	------	Line Not Found	------
	934.06	------	3.21	1.847E+00	------	Line Not Found	------
	1120.29	86	15.10	1.574E+00	1.120E+00	1.120E+00	41.39
	1238.11	------	5.94	1.443E+00	------	Line Not Found	------
	1377.67	------	4.11	1.318E+00	------	Line Not Found	------
	1764.49	99	15.80	1.095E+00	1.764E+00	1.764E+00	22.06
AC-228	338.32	217	11.40	4.251E+00	1.387E+00	1.387E+00	52.78
	911.07	276	27.70*	1.888E+00	1.632E+00	1.632E+00	19.52
	969.11	157	16.60	1.789E+00	1.635E+00	1.635E+00	32.16
RA-228	338.32	217	11.40	4.251E+00	1.387E+00	1.387E+00	52.78
	911.07	276	27.70*	1.888E+00	1.632E+00	1.632E+00	19.52
	969.11	157	16.60	1.789E+00	1.635E+00	1.635E+00	32.16
TH-228	84.40	148	1.21	6.702E+00	5.643E+00	5.643E+00	39.78
	238.60	1291	44.60*	5.489E+00	1.631E+00	1.631E+00	10.38
	300.10	34	3.41	4.656E+00	6.629E-01	6.629E-01	128.26
TH-230	609.31	448	46.30*	2.667E+00	1.123E+00	1.123E+00	16.60
	768.36	------	5.04	2.191E+00	------	Line Not Found	------
	934.06	------	3.21	1.847E+00	------	Line Not Found	------
	1120.29	86	15.10	1.574E+00	1.120E+00	1.120E+00	41.39
	1238.11	------	5.94	1.443E+00	------	Line Not Found	------
	1377.67	------	4.11	1.318E+00	------	Line Not Found	------

Sample ID : G232358008 Acquisition date : 6-JUL-2009 12:14:10

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	99	15.80	1.095E+00	1.764E+00	1.764E+00	22.06
TH-232	338.32	217	11.40	4.251E+00	1.387E+00	1.387E+00	34.02
	911.07	276	27.70*	1.888E+00	1.632E+00	1.632E+00	19.52
	969.11	157	16.60	1.789E+00	1.635E+00	1.635E+00	32.16
TH-234	63.29	119	3.80*	4.424E+00	2.199E+00	2.199E+00	68.42
	92.38	363	5.41	7.201E+00	2.879E+00	2.879E+00	31.92
U-234	609.31	448	46.20*	2.667E+00	1.123E+00	1.123E+00	16.60
	768.36	------	5.04	2.191E+00	------	Line Not Found	------
	934.06	------	3.21	1.847E+00	------	Line Not Found	------
	1120.29	86	15.10	1.574E+00	1.120E+00	1.120E+00	41.39
	1238.11	------	5.94	1.443E+00	------	Line Not Found	------
	1377.67	------	4.11	1.318E+00	------	Line Not Found	------
	1764.49	99	15.80	1.095E+00	1.764E+00	1.764E+00	22.06
NP-237	86.50	300	12.60*	6.909E+00	1.067E+00	1.067E+00	31.50
	95.87	------	2.60	7.329E+00	------	Line Not Found	------
U-238	63.29	119	3.80*	4.424E+00	2.199E+00	2.199E+00	68.42
	92.38	363	5.41	7.201E+00	2.879E+00	2.879E+00	27.68
AM-243	74.67	485	66.00*	5.894E+00	3.860E-01	3.860E-01	17.49
	86.72	300	0.34	6.909E+00	4.000E+01	4.000E+01	23.80
	117.66	------	0.55	7.600E+00	------	Line Not Found	------
	142.18	------	0.13	7.314E+00	------	Line Not Found	------
ANH-511	511.00	79	100.00*	3.080E+00	7.930E-02	7.930E-02	76.73

Flag: "*" = Keyline

Sample ID : G232358008 Acquisition date : 6-JUL-2009 12:14:10

Total number of lines in spectrum	36	
Number of unidentified lines	4	
Number of lines tentatively identified by NID	32	88.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.195E+01	3.195E+01	0.279E+01	8.74	
CD-109	464.00D	1.02	3.613E+00	3.689E+00	0.878E+00	23.80	
SN-126	1.00E+05Y	1.00	3.632E-01	3.632E-01	0.865E-01	23.80	
CS-135	2.30E+06Y	1.00	5.928E-01	5.928E-01	2.722E-01	45.92	
BA-137M	30.17Y	1.00	2.092E-01	2.094E-01	0.637E-01	30.42	
CS-137	30.17Y	1.00	2.211E-01	2.213E-01	0.673E-01	30.42	
TL-208	1.41E+10Y	1.00	5.997E-01	5.997E-01	0.958E-01	15.98	
BI-210	22.26Y	1.00	1.545E+00	1.546E+00	3.121E+00	201.85	
PB-210	22.26Y	1.00	1.545E+00	1.546E+00	3.121E+00	201.85	
PO-210	22.26Y	1.00	1.545E+00	1.546E+00	3.121E+00	201.81	
BI-211	7.04E+08Y	1.00	3.838E+00	3.838E+00	0.551E+00	14.35	
PB-212	1.41E+10Y	1.00	1.631E+00	1.631E+00	0.169E+00	10.38	
PO-212	1.41E+10Y	1.00	1.631E+00	1.631E+00	0.169E+00	10.38	
BI-214	1600.00Y	1.00	1.123E+00	1.124E+00	0.187E+00	16.60	
PB-214	1600.00Y	1.00	1.335E+00	1.335E+00	0.204E+00	15.27	
PO-214	1600.00Y	1.00	1.335E+00	1.335E+00	0.204E+00	15.27	
PO-216	1.41E+10Y	1.00	1.631E+00	1.631E+00	0.169E+00	10.38	
PO-218	1600.00Y	1.00	1.335E+00	1.335E+00	0.204E+00	15.27	
RA-224	1.41E+10Y	1.00	4.368E+00	4.368E+00	1.262E+00	28.89	
RA-226	1600.00Y	1.00	1.123E+00	1.124E+00	0.187E+00	16.60	
AC-228	1.41E+10Y	1.00	1.632E+00	1.632E+00	0.318E+00	19.52	
RA-228	1.41E+10Y	1.00	1.632E+00	1.632E+00	0.318E+00	19.52	
TH-228	1.41E+10Y	1.00	1.631E+00	1.631E+00	0.169E+00	10.38	
TH-230	4.47E+09Y	1.00	1.123E+00	1.123E+00	0.186E+00	16.60	
TH-232	1.41E+10Y	1.00	1.632E+00	1.632E+00	0.318E+00	19.52	
TH-234	4.47E+09Y	1.00	2.199E+00	2.199E+00	1.504E+00	68.42	
U-234	4.47E+09Y	1.00	1.123E+00	1.123E+00	0.186E+00	16.60	
NP-237	2.14E+06Y	1.00	1.067E+00	1.067E+00	0.336E+00	31.50	
U-238	4.47E+09Y	1.00	2.199E+00	2.199E+00	1.504E+00	68.42	
AM-243	7380.00Y	1.00	3.860E-01	3.860E-01	0.675E-01	17.49	
ANH-511	1.00E+09Y	1.00	7.930E-02	7.930E-02	6.084E-02	76.73	
			---	---			
	Total Activity :		7.624E+01	7.632E+01			

Grand Total Activity : 7.624E+01 7.632E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232358008 Acquisition date : 6-JUL-2009 12:14:10

Tt	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.47	202	376	1.13	370.94	365	13	2.80E-02	43.5	6.45E+00	T
0	208.76	102	258	0.95	417.53	414	8	1.41E-02	58.4	5.99E+00	T
0	327.71	125	143	1.28	655.42	650	11	1.74E-02	41.0	4.35E+00	T
0	408.93	33	136	1.40	817.87	815	10	4.56E-03	****	3.67E+00	
0	462.43	91	89	0.87	924.87	920	12	1.26E-02	47.5	3.33E+00	T
0	726.80	101	78	1.32	1453.59	1446	13	1.41E-02	41.0	2.30E+00	T
0	773.32	23	51	1.38	1546.64	1541	10	3.01E-03	****	2.18E+00	
0	795.04	50	68	1.38	1590.08	1583	12	6.94E-03	72.1	2.13E+00	T
1	964.31	89	13	2.12	1928.62	1921	44	1.23E-02	32.3	1.80E+00	T
0	1630.54	20	5	2.04	3261.07	3256	10	2.78E-03	61.2	1.16E+00	
0	1729.60	30	4	1.43	3459.20	3451	15	4.19E-03	45.9	1.11E+00	

Flags: "T" - Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:15:48.25

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]C232358008.CNF;1 *
* Acquisition date  : 6-JUL-2009 12:14:10.  Detector SN#     :             *
* Detector ID       : GAM11                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.71          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232358008            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.21350E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 1-NOV-2008 15:37:21.59MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.195E+01	2.793E+00	4.842E-01	3.246E-02	65.985
CD-109	3.689E+00	8.781E-01	1.162E+00	1.064E-01	3.175
SN-126	3.632E-01	8.645E-02	1.202E-01	1.095E-02	3.021
CS-135	5.928E-01	2.722E-01	2.451E-01	2.210E-02	2.418
BA-137M	2.094E-01	6.369E-02	5.991E-02	4.233E-03	3.495
CS-137	2.213E-01	6.734E-02	6.333E-02	4.488E-03	3.495
TL-208	5.997E-01	9.582E-02	6.095E-02	4.517E-03	9.840
BI-210	1.546E+00	3.121E+00	4.013E+00	2.974E-01	0.385
PB-210	1.546E+00	3.121E+00	4.013E+00	2.974E-01	0.385
PO-210	1.546E+00	3.121E+00	4.013E+00	2.517E-01	0.385
BI-211	3.838E+00	5.508E-01	3.084E-01	2.162E-02	12.446
PB-212	1.631E+00	1.693E-01	9.124E-02	7.434E-03	17.874
PO-212	1.631E+00	1.693E-01	9.124E-02	7.434E-03	17.874
BI-214	1.124E+00	1.865E-01	1.124E-01	9.586E-03	10.000
PB-214	1.335E+00	2.039E-01	1.075E-01	9.378E-03	12.420
PO-214	1.335E+00	2.039E-01	1.075E-01	9.378E-03	12.420
PO-216	1.631E+00	1.693E-01	9.124E-02	7.434E-03	17.874
PO-218	1.335E+00	2.039E-01	1.075E-01	9.378E-03	12.420

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-224	4.368E+00	1.262E+00	1.038E+00	7.119E-02	4.208
RA-226	1.124E+00	1.865E-01	1.124E-01	9.586E-03	10.000
AC-228	1.632E+00	3.185E-01	2.197E-01	2.365E-02	7.427
RA-228	1.632E+00	3.185E-01	2.197E-01	2.365E-02	7.427
TH-228	1.631E+00	1.693E-01	9.123E-02	7.433E-03	17.876
TH-230	1.123E+00	1.865E-01	1.124E-01	9.586E-03	10.000
TH-232	1.632E+00	3.185E-01	2.197E-01	2.365E-02	7.427
TH-234	2.199E+00	1.504E+00	1.780E+00	3.054E-01	1.235
U-234	1.123E+00	1.865E-01	1.124E-01	9.586E-03	10.000
NP-237	1.067E+00	3.360E-01	4.225E-01	9.509E-02	2.524
U-238	2.199E+00	1.504E+00	1.780E+00	3.054E-01	1.235
AM-243	3.860E-01	6.751E-02	8.469E-02	6.521E-03	4.558
ANH-511	7.930E-02	6.084E-02	5.415E-02	3.338E-03	1.464

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.662E-02		3.232E-01	5.362E-01	3.682E-02	0.068
NA-22	-1.530E-02		4.458E-02	7.001E-02	4.292E-03	-0.219
NA-24	-7.044E-02		1.077E-01	Half-Life too short		
AL-26	1.670E-02		2.400E-02	4.568E-02	2.520E-03	0.366
TI-44	2.108E-01		4.833E-02	6.913E-02	5.578E-03	3.050
SC-46	8.250E-03		3.646E-02	6.200E-02	4.981E-03	0.133
V-48	1.816E-02		7.832E-02	1.151E-01	8.608E-03	0.158
CR-51	6.301E-01		3.585E-01	6.377E-01	4.889E-02	0.988
MN-52	-6.328E-02		1.742E-01	2.637E-01	1.690E-02	-0.240
MN-54	-3.428E-03		4.009E-02	6.661E-02	5.227E-03	-0.051
CO-56	-1.416E-02		3.675E-02	5.924E-02	4.675E-03	-0.239
CO-57	3.190E-02		2.625E-02	4.498E-02	2.950E-03	0.709
CO-58	9.120E-05		3.624E-02	6.071E-02	4.722E-03	0.002
FE-59	2.856E-03		8.607E-02	1.421E-01	1.037E-02	0.020
CO-60	4.184E-02		4.123E-02	7.437E-02	4.819E-03	0.563
ZN-65	2.406E-02		1.002E-01	1.491E-01	9.263E-03	0.161
GE-68	-2.522E-01		1.331E+00	2.156E+00	1.427E-01	-0.117
AS-73	-7.329E-01		6.501E-01	1.034E+00	6.601E-02	-0.709
AS-74	3.552E-03		8.702E-02	1.421E-01	9.521E-03	0.025
SE-75	3.992E-02		5.027E-02	7.413E-02	5.533E-03	0.539
BR-77	2.752E+00		7.501E+00	1.263E+01	7.863E-01	0.218
SR-82	-4.343E-01		4.226E-01	5.323E-01	4.053E-02	-0.816
RB-83	2.490E-02		6.788E-02	1.143E-01	7.114E-03	0.218
RB-84	2.862E-02		6.299E-02	1.094E-01	8.759E-03	0.262
KR-85	9.659E+00		8.374E+00	1.309E+01	8.093E-01	0.738
SR-85	4.895E-02		4.244E-02	6.632E-02	4.101E-03	0.738
RB-86	-1.064E-01		8.165E-01	1.329E+00	8.809E-02	-0.080
Y-88	1.017E-02		2.903E-02	5.146E-02	2.794E-03	0.198
ZR-88	6.374E-03		3.083E-02	5.186E-02	2.747E-03	0.123
Y-91	-1.512E+01		1.898E+01	2.873E+01	1.634E+00	-0.526

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	5.607E-04		3.611E-02	5.833E-02	4.244E-03	0.010
NB-95	2.864E-02		4.797E-02	7.629E-02	5.775E-03	0.375
NB-95M	1.065E+00		1.976E-01	3.157E-01	2.611E-02	3.373
ZR-95	-2.532E-02		7.122E-02	1.106E-01	9.417E-03	-0.229
NB-97	5.947E-03		2.064E-02	Half-Life too short		
ZR-97	1.576E+00		3.845E-01	Half-Life too short		
MO-99	-7.582E+00		9.090E+00	1.338E+01	1.948E+00	-0.567
TC-99M	-8.161E+08		8.996E+08	Half-Life too short		
RH-101	-1.025E-02		3.554E-02	5.503E-02	3.241E-03	-0.186
RH-102	-1.633E-02		3.050E-02	4.841E-02	2.864E-03	-0.337
RU-103	3.107E-02		3.964E-02	6.839E-02	8.734E-03	0.454
RH-106	-2.781E-02		3.262E-01	5.262E-01	6.467E-02	-0.053
RU-106	-2.781E-02		3.262E-01	5.262E-01	3.604E-02	-0.053
AG-108M	7.915E-03		3.463E-02	5.808E-02	3.559E-03	0.136
AG-110M	-1.039E-03		4.343E-02	6.051E-02	4.452E-03	-0.017
IN-111	6.612E-01		8.834E-01	1.303E+00	9.066E-02	0.508
IN-113M	8.713E-03		4.446E-02	7.474E-02	4.268E-03	0.117
SN-113	8.713E-03		4.446E-02	7.474E-02	4.268E-03	0.117
IN-114M	-9.353E-02		2.072E-01	2.850E-01	1.632E-02	-0.328
CD-115	-9.329E-02		7.394E+00	1.210E+01	7.596E-01	-0.008
SN-117M	-1.543E-02		5.177E-02	8.334E-02	4.548E-03	-0.185
SB-122	7.022E-02		1.527E+00	2.502E+00	1.628E-01	0.028
I-123	-5.621E-01		7.070E-01	Half-Life too short		
TE-123M	-1.122E-02		2.822E-02	4.523E-02	2.500E-03	-0.248
I-124	-5.768E-01		6.602E-01	8.364E-01	5.636E-02	-0.690
SB-124	3.646E-02		5.092E-02	9.841E-02	6.286E-03	0.371
SB-125	-1.279E-02		9.409E-02	1.544E-01	8.997E-03	-0.083
TE-125M	2.194E+00		8.981E+00	1.495E+01	1.378E+00	0.147
I-126	-1.452E-01		2.107E-01	2.703E-01	1.916E-02	-0.537
SB-126	-1.995E-02		1.575E-01	2.152E-01	1.584E-02	-0.093
SB-127	4.267E-01		1.156E+00	1.924E+00	1.922E-01	0.222
XE-127	1.958E-02		4.963E-02	7.881E-02	4.725E-03	0.248
I-131	-5.232E-02		9.969E-02	1.608E-01	1.081E-02	-0.325
TE-132	7.303E-02		5.677E-01	9.185E-01	1.330E-01	0.080
BA-133	-8.857E-03		4.767E-02	6.810E-02	8.052E-03	-0.130
I-133	2.456E-03		1.198E-03	Half-Life too short		
CS-134	9.583E-02	+	6.951E-02	9.461E-02	7.346E-03	1.013
I-135	2.199E+08		1.935E+08	Half-Life too short		
CS-136	3.016E-02		1.024E-01	1.735E-01	1.278E-02	0.174
CE-139	-1.841E-03		3.051E-02	4.954E-02	2.599E-03	-0.037
BA-140	2.478E-01		2.599E-01	4.333E-01	1.413E-01	0.572
LA-140	6.256E-03		8.085E-02	1.363E-01	8.372E-03	0.046
CE-141	-1.232E-02		6.206E-02	1.007E-01	6.101E-03	-0.122
CE-143	6.073E-04		8.558E-05	Half-Life too short		
CE-144	-1.342E-01		2.069E-01	3.292E-01	4.726E-02	-0.408
PM-144	6.493E-03		3.717E-02	6.079E-02	4.407E-03	0.107
PR-144	4.397E-01		2.517E+00	4.117E+00	2.983E-01	0.107
PM-146	-1.642E-02		4.281E-02	6.879E-02	5.914E-03	-0.239

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	4.042E-01		5.046E-01	8.714E-01	1.197E-01	0.464
PM-149	-7.522E+00		6.513E+01	1.091E+02	1.641E+01	-0.069
EU-152	5.892E-02		1.214E-01	1.624E-01	1.178E-02	0.363
GD-153	4.205E-02		8.457E-02	1.252E-01	1.019E-02	0.336
EU-154	-4.389E-02		1.245E-01	1.953E-01	1.863E-02	-0.225
EU-155	-3.762E-02		1.054E-01	1.718E-01	1.312E-02	-0.219
TB-160	4.648E-02		1.305E-01	2.245E-01	1.797E-02	0.207
HO-166M	-3.540E-02		6.416E-02	9.854E-02	7.213E-03	-0.359
TM-171	-6.468E+00		3.292E+01	4.053E+01	2.836E+00	-0.160
LU-176	1.876E-02		2.394E-02	4.176E-02	3.073E-03	0.449
LU-177	2.035E+00	+	1.195E+00	1.829E+00	1.119E-01	1.113
LU-177M	-1.149E-02		1.897E-01	2.714E-01	1.482E-02	-0.042
HF-181	-9.429E-03		4.225E-02	6.846E-02	4.084E-03	-0.138
W-181	-1.996E-01		3.565E-01	5.103E-01	3.508E-02	-0.391
TA-182	7.663E-02		2.156E-01	3.623E-01	2.097E-02	0.212
RE-183	9.569E-03		1.108E-01	1.812E-01	9.690E-03	0.053
RE-184	-6.925E-02		2.450E-01	3.865E-01	2.758E-02	-0.179
OS-185	1.816E-03		4.379E-02	7.121E-02	4.973E-03	0.026
RE-188	5.039E-02		1.751E-01	2.888E-01	1.605E-02	0.174
W-188	-4.925E+00		8.214E+00	1.153E+01	8.777E-01	-0.427
IR-192	-1.294E-02		3.291E-02	5.403E-02	3.895E-03	-0.239
AU-195	2.477E-01		2.502E-01	3.781E-01	3.028E-02	0.655
TL-200	-4.558E-05		1.064E-04	Half-Life too short		
TL-201	-1.932E+00		5.617E+00	9.009E+00	4.748E-01	-0.214
TL-202	-3.591E-02		6.568E-02	1.047E-01	5.921E-03	-0.343
HG-203	8.087E-03		4.611E-02	6.761E-02	5.434E-03	0.120
BI-207	1.271E-02		5.569E-02	9.364E-02	6.331E-03	0.136
TL-207	-4.531E-01		7.355E-01	1.015E+00	1.725E-01	-0.446
PO-209	1.323E+00		6.941E+00	1.176E+01	9.478E-01	0.112
PB-211	2.071E-01		1.117E+00	1.624E+00	1.012E+00	0.128
BI-212	1.157E+00	+	4.857E-01	6.931E-01	6.219E-02	1.669
PO-215	-4.531E-01		7.355E-01	1.015E+00	1.725E-01	-0.446
RN-219	2.277E-02		4.241E-01	7.064E-01	9.484E-02	0.032
RN-220	-9.072E+00		2.710E+01	4.320E+01	2.772E+00	-0.210
RA-223	-4.531E-01		7.355E-01	1.015E+00	1.725E-01	-0.446
AC-227	2.483E-01		4.045E-01	6.651E-01	9.714E-02	0.373
TH-227	2.483E-01		4.052E-01	6.651E-01	1.160E-01	0.373
TH-229	1.595E-01		5.247E-01	8.603E-01	4.987E-02	0.185
PA-231	-7.710E-01		1.527E+00	2.505E+00	3.679E-01	-0.308
TH-231	-4.531E-01		7.355E-01	1.015E+00	1.725E-01	-0.446
U-231	-8.917E-01		9.388E-01	1.294E+00	1.072E-01	-0.689
PA-233	-1.210E-02		5.926E-02	9.835E-02	7.434E-03	-0.123
PA-234	-2.344E-01		3.062E-01	4.671E-01	8.588E-02	-0.502
PA-234M	-3.269E+00		6.796E+00	1.081E+01	1.105E+00	-0.302
U-235	8.895E-02		2.140E-01	3.512E-01	5.736E-02	0.253
NP-236	-6.497E-02		8.014E-02	1.260E-01	6.812E-03	-0.516
NP-239	-1.912E-01		1.895E-01	2.989E-01	2.035E-02	-0.640
AM-241	3.138E-02		1.419E-01	2.116E-01	1.531E-02	0.148

Sample ID : C232358008 Acquisition date : 6-JUL-2009 12:14:10

---- Non-Identified Nuclides ---

Nuclide	Key-line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	6.396E-02		9.475E-02	1.603E-01	1.222E-02	0.399
CM-247	-8.767E-03		3.983E-02	6.351E-02	3.413E-03	-0.138
CF-249	9.929E-03		3.867E-02	6.530E-02	3.529E-03	0.152
CF-251	8.368E-06		1.305E-01	2.120E-01	1.155E-02	0.000

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          CEL Laboratories INC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232358008           *
* Acquisition date  :  6-JUL-2009 12:14:10 Detector SN#     :               *
* Detector ID       : GAM11                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.71      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232358008           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.2135E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.195E+01	2.738E+00	2.418E-01	1.397E+00
CD-109	3.689E+00	8.606E-01	6.005E-01	4.391E-01
SN-126	3.632E-01	8.472E-02	6.214E-02	4.323E-02
CS-135	5.928E-01	2.668E-01	1.250E-01	1.361E-01
BA-137M	2.094E-01	6.242E-02	3.021E-02	3.184E-02
CS-137	2.213E-01	6.599E-02	3.194E-02	3.367E-02
TL-208	5.997E-01	9.390E-02	3.078E-02	4.791E-02
BI-210	1.546E+00	3.059E+00	2.089E+00	1.561E+00
PB-210	1.546E+00	3.059E+00	2.089E+00	1.561E+00
PO-210	1.546E+00	3.058E+00	2.089E+00	1.560E+00
BI-211	3.838E+00	5.398E-01	1.568E-01	2.754E-01
PB-212	1.631E+00	1.660E-01	4.659E-02	8.467E-02
PO-212	1.631E+00	1.660E-01	4.659E-02	8.467E-02
BI-214	1.124E+00	1.828E-01	5.672E-02	9.325E-02
PB-214	1.335E+00	1.998E-01	5.464E-02	1.019E-01
PO-214	1.335E+00	1.998E-01	5.464E-02	1.019E-01
PO-216	1.631E+00	1.660E-01	4.659E-02	8.467E-02
PO-218	1.335E+00	1.998E-01	5.464E-02	1.019E-01
RA-224	4.368E+00	1.237E+00	5.300E-01	6.310E-01
RA-226	1.124E+00	1.828E-01	5.672E-02	9.325E-02
AC-228	1.632E+00	3.121E-01	1.104E-01	1.592E-01
RA-228	1.632E+00	3.121E-01	1.104E-01	1.592E-01
TH-228	1.631E+00	1.660E-01	4.659E-02	8.467E-02
TH-230	1.123E+00	1.828E-01	5.672E-02	9.325E-02
TH-232	1.632E+00	3.121E-01	1.104E-01	1.592E-01
TH-234	2.199E+00	1.474E+00	9.234E-01	7.521E-01
U-234	1.123E+00	1.828E-01	5.672E-02	9.325E-02
NP-237	1.067E+00	3.293E-01	2.184E-01	1.680E-01
U-238	2.199E+00	1.474E+00	9.234E-01	7.521E-01
AM-243	3.860E-01	6.616E-02	4.385E-02	3.376E-02
ANH-511	7.930E-02	5.963E-02	2.740E-02	3.042E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	3.662E-02	3.167E-01	2.715E-01	1.616E-01	NOT IDENT.
NA-22	-1.530E-02	4.369E-02	3.502E-02	2.229E-02	NOT IDENT.
NA-24	-7.044E+04	2.111E+05	0.000E+00	1.077E+05	SHORT HLIF
AL-26	1.670E-02	2.352E-02	2.275E-02	1.200E-02	NOT IDENT.
TI-44	2.108E-01	4.737E-02	3.577E-02	2.417E-02	NOT IDENT.
SC-46	8.250E-03	3.573E-02	3.115E-02	1.823E-02	FAIL ABUN
V-48	1.816E-02	7.676E-02	5.773E-02	3.916E-02	NOT IDENT.
CR-51	6.301E-01	3.514E-01	3.245E-01	1.793E-01	NOT IDENT.
MN-52	-6.328E-02	1.708E-01	1.317E-01	8.712E-02	NOT IDENT.
MN-54	-3.428E-03	3.929E-02	3.349E-02	2.004E-02	NOT IDENT.
CO-56	-1.416E-02	3.602E-02	2.978E-02	1.838E-02	NOT IDENT.
CO-57	3.190E-02	2.573E-02	2.315E-02	1.313E-02	NOT IDENT.
CO-58	9.120E-05	3.552E-02	3.054E-02	1.812E-02	NOT IDENT.
FE-59	2.856E-03	8.435E-02	7.118E-02	4.303E-02	NOT IDENT.
CO-60	4.184E-02	4.041E-02	3.717E-02	2.062E-02	NOT IDENT.
ZN-65	2.406E-02	9.818E-02	7.469E-02	5.009E-02	NOT IDENT.
GE-68	-2.522E-01	1.305E+00	1.080E+00	6.657E-01	NOT IDENT.
AS-73	-7.329E-01	6.371E-01	5.378E-01	3.251E-01	NOT IDENT.
AS-74	3.552E-03	8.528E-02	7.177E-02	4.351E-02	NOT IDENT.
SE-75	3.992E-02	4.926E-02	3.781E-02	2.513E-02	NOT IDENT.
BR-77	2.752E+00	7.351E+00	6.386E+00	3.751E+00	FAIL ABUN
SR-82	-4.343E-01	4.141E-01	2.679E-01	2.113E-01	NOT IDENT.
RB-83	2.490E-02	6.652E-02	5.779E-02	3.394E-02	NOT IDENT.
RB-84	2.862E-02	6.173E-02	5.495E-02	3.149E-02	NOT IDENT.
KR-85	9.659E+00	8.207E+00	6.620E+00	4.187E+00	NOT IDENT.
SR-85	4.895E-02	4.159E-02	3.355E-02	2.122E-02	NOT IDENT.
RB-86	-1.064E-01	8.002E-01	6.663E-01	4.083E-01	NOT IDENT.
Y-88	1.017E-02	2.845E-02	2.562E-02	1.451E-02	NOT IDENT.
ZR-88	6.374E-03	3.021E-02	2.632E-02	1.542E-02	NOT IDENT.
Y-91	-1.512E+01	1.860E+01	1.438E+01	9.491E+00	NOT IDENT.
NB-94	5.607E-04	3.539E-02	2.939E-02	1.806E-02	NOT IDENT.
NB-95	2.864E-02	4.701E-02	3.840E-02	2.399E-02	NOT IDENT.
NB-95M	1.065E+00	1.936E-01	1.612E-01	9.880E-02	NOT IDENT.
ZR-95	-2.532E-02	6.979E-02	5.569E-02	3.561E-02	NOT IDENT.
NB-97	5.947E+03	4.046E+04	0.000E+00	2.064E+04	SHORT HLIF
ZR-97	1.576E+06	7.536E+05	0.000E+00	3.845E+05	SHORT HLIF
MO-99	-7.582E+00	8.908E+00	6.740E+00	4.545E+00	NOT IDENT.
TC-99M	-8.161E+14	1.763E+15	0.000E+00	8.996E+14	SHORT HLIF
RH-101	-1.025E-02	3.483E-02	2.816E-02	1.777E-02	NOT IDENT.
RH-102	-1.633E-02	2.989E-02	2.451E-02	1.525E-02	NOT IDENT.
RU-103	3.107E-02	3.885E-02	3.461E-02	1.982E-02	FAIL ABUN
RH-106	-2.781E-02	3.197E-01	2.656E-01	1.631E-01	FAIL ABUN
RU-106	-2.781E-02	3.197E-01	2.656E-01	1.631E-01	FAIL ABUN
AG-108M	7.915E-03	3.394E-02	2.944E-02	1.731E-02	NOT IDENT.
AG-110M	-1.039E-03	4.256E-02	3.052E-02	2.171E-02	NOT IDENT.
IN-111	6.612E-01	8.657E-01	6.649E-01	4.417E-01	NOT IDENT.
IN-113M	8.713E-03	4.357E-02	3.794E-02	2.223E-02	NOT IDENT.
SN-113	8.713E-03	4.357E-02	3.794E-02	2.223E-02	NOT IDENT.
IN-114M	-9.353E-02	2.030E-01	1.459E-01	1.036E-01	NOT IDENT.
CD-115	-9.329E-02	7.246E+00	6.121E+00	3.697E+00	NOT IDENT.
SN-117M	-1.543E-02	5.073E-02	4.277E-02	2.589E-02	NOT IDENT.
SB-122	7.022E-02	1.497E+00	1.264E+00	7.635E-01	NOT IDENT.
I-123	-5.621E+05	1.386E+06	0.000E+00	7.070E+05	SHORT HLIF
TE-123M	-1.122E-02	2.766E-02	2.321E-02	1.411E-02	NOT IDENT.
I-124	-5.768E-01	6.470E-01	4.223E-01	3.301E-01	NOT IDENT.
SB-124	3.646E-02	4.990E-02	4.905E-02	2.546E-02	FAIL ABUN
SB-125	-1.279E-02	9.221E-02	7.831E-02	4.705E-02	FAIL ABUN
TE-125M	2.194E+00	8.801E+00	7.707E+00	4.491E+00	NOT IDENT.
I-126	-1.452E-01	2.065E-01	1.363E-01	1.054E-01	NOT IDENT.
SB-126	-1.995E-02	1.544E-01	1.084E-01	7.876E-02	NOT IDENT.
SB-127	4.267E-01	1.133E+00	9.696E-01	5.782E-01	NOT IDENT.
XE-127	1.958E-02	4.863E-02	4.032E-02	2.481E-02	NOT IDENT.
I-131	-5.232E-02	9.769E-02	8.168E-02	4.984E-02	NOT IDENT.
TE-132	7.303E-02	5.564E-01	4.693E-01	2.839E-01	NOT IDENT.
BA-133	-8.857E-03	4.672E-02	3.460E-02	2.384E-02	FAIL ABUN
I-133	2.456E+03	2.347E+03	0.000E+00	1.198E+03	SHORT HLIF
CS-134	9.583E-02	6.812E-02	4.760E-02	3.475E-02	FAIL ABUN
I-135	2.199E+14	3.793E+14	0.000E+00	1.935E+14	SHORT HLIF
CS-136	3.016E-02	1.003E-01	8.698E-02	5.118E-02	FAIL ABUN
CE-139	-1.841E-03	2.990E-02	2.541E-02	1.525E-02	NOT IDENT.
BA-140	2.478E-01	2.547E-01	2.191E-01	1.300E-01	NOT IDENT.
LA-140	6.256E-03	7.924E-02	6.798E-02	4.043E-02	FAIL ABUN
CE-141	-1.232E-02	6.082E-02	5.172E-02	3.103E-02	NOT IDENT.
CE-143	6.073E+02	1.677E+02	0.000E+00	8.558E+01	SHORT HLIF

CE-144	-1.942E-01	2.028E-01	1.693E-01	1.035E-01	NOT IDENT.
PM-144	6.493E-03	3.643E-02	3.064E-02	1.858E-02	NOT IDENT.
PR-144	4.397E-01	2.467E-00	2.075E-00	1.259E+00	NOT IDENT.
PM-146	-7.642E-02	4.196E-02	3.485E-02	2.141E-02	NOT IDENT.
ND-147	4.042E-01	4.945E-01	4.406E-01	2.523E-01	FAIL ABUN
PM-149	-7.522E-00	6.383E-01	5.560E-01	3.256E+01	NOT IDENT.
EU-152	5.892E-02	1.190E-01	8.255E-02	6.072E-02	FAIL ABUN
GD-152	4.205E-02	8.288E-02	6.462E-02	4.228E-02	FAIL ABUN
EU-154	-4.389E-02	1.220E-01	9.767E-02	6.226E-02	NOT IDENT.
EU-155	-3.762E-02	1.033E-01	8.859E-02	5.272E-02	FAIL ABUN
TB-160	4.648E-02	1.279E-01	1.128E-01	6.525E-02	FAIL ABUN
HO-166M	-3.540E-02	6.288E-02	4.965E-02	3.208E-02	FAIL ABUN
TM-171	-6.468E+00	3.226E-01	2.102E+01	1.646E+01	NOT IDENT.
LU-176	1.876E-02	2.346E-02	2.126E-02	1.197E-02	NOT IDENT.
LU-177	2.035E-00	1.171E+00	9.355E-01	5.974E-01	FAIL ABUN
LU-177M	-1.149E-02	1.859E-01	1.377E-01	9.484E-02	FAIL ABUN
HF-181	-9.429E-03	4.140E-02	3.466E-02	2.112E-02	NOT IDENT.
W-181	-1.996E-01	3.494E-01	2.646E-01	1.783E-01	NOT IDENT.
TA-182	7.663E-02	2.113E-01	1.813E-01	1.078E-01	FAIL ABUN
RE-183	9.569E-03	1.086E-01	9.297E-02	5.542E-02	FAIL ABUN
RE-184	-6.925E-02	2.401E-01	1.972E-01	1.225E-01	NOT IDENT.
OS-185	1.816E-03	4.291E-02	3.592E-02	2.189E-02	NOT IDENT.
RE-188	5.039E-02	1.715E-01	1.483E-01	8.753E-02	NOT IDENT.
W-188	-4.925E+00	8.050E+00	5.873E+00	4.107E+00	FAIL ABUN
IR-192	-1.294E-02	3.225E-02	2.750E-02	1.646E-02	FAIL ABUN
AU-195	2.477E-01	2.452E-01	1.951E-01	1.251E-01	FAIL ABUN
TL-200	-4.558E+01	2.086E-02	0.000E+00	1.064E+02	SHORT HLIF
TL-201	-1.932E+00	5.505E+00	4.620E+00	2.808E+00	NOT IDENT.
TL-202	-3.591E-02	6.437E-02	5.305E-02	3.284E-02	NOT IDENT.
HG-203	8.087E-03	4.519E-02	3.446E-02	2.306E-02	FAIL ABUN
BI-207	1.271E-02	5.458E-02	4.694E-02	2.785E-02	FAIL ABUN
TL-207	-4.531E-01	7.208E-01	5.165E-01	3.677E-01	FAIL ABUN
PO-209	1.323E+00	6.802E+00	5.910E+00	3.471E+00	NOT IDENT.
PB-211	2.071E-01	1.095E+00	8.238E-01	5.586E-01	NOT IDENT.
BI-212	1.157E+00	4.760E-01	3.491E-01	2.429E-01	FAIL ABUN
PO-215	-4.531E-01	7.208E-01	5.165E-01	3.677E-01	FAIL ABUN
RN-219	2.277E-02	4.156E-01	3.584E-01	2.121E-01	NOT IDENT.
RN-220	-9.072E+00	2.655E+01	2.183E+01	1.355E+01	NOT IDENT.
RA-223	-4.531E-01	7.208E-01	5.165E-01	3.677E-01	FAIL ABUN
AC-227	2.483E-01	3.964E-01	3.393E-01	2.022E-01	FAIL ABUN
TH-227	2.483E-01	3.971E-01	3.393E-01	2.026E-01	FAIL ABUN
TH-229	1.595E-01	5.142E-01	4.405E-01	2.623E-01	FAIL ABUN
PA-231	-7.710E-01	1.497E+00	1.276E+00	7.637E-01	NOT IDENT.
TH-231	-4.531E-01	7.208E-01	5.165E-01	3.677E-01	FAIL ABUN
U-231	-8.917E-01	9.200E-01	6.682E-01	4.694E-01	FAIL ABUN
PA-233	-1.210E-02	5.807E-02	5.006E-02	2.963E-02	FAIL ABUN
PA-234	-2.344E-01	3.001E-01	2.345E-01	1.531E-01	FAIL ABUN
PA-234M	-3.269E+00	6.660E+00	5.422E+00	3.398E+00	NOT IDENT.
U-235	8.895E-02	2.097E-01	1.804E-01	1.070E-01	FAIL ABUN
NP-236	-6.497E-02	7.854E-02	6.466E-02	4.007E-02	NOT IDENT.
NP-239	-1.912E-01	1.857E-01	1.540E-01	9.474E-02	FAIL ABUN
AM-241	3.138E-02	1.390E-01	1.099E-01	7.093E-02	NOT IDENT.
CM-243	6.396E-02	9.286E-02	8.266E-02	4.738E-02	FAIL ABUN
CM-247	-8.767E-03	3.903E-02	3.223E-02	1.991E-02	FAIL ABUN
CF-249	9.929E-03	3.790E-02	3.315E-02	1.934E-02	NOT IDENT.
CF-251	8.368E-06	1.279E-01	1.086E-01	6.526E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	374.9230
46.50	374.9230
46.50	374.9230
48.70	352.6481
49.72	346.0151
51.35	331.6884
52.39	370.6200
52.97	405.7074
53.15	410.4012
53.44	409.6871
54.07	414.6976
56.28	398.7552
56.28	398.7569
57.37	0.0000
57.53	376.8568
57.53	376.8576
57.60	387.9482
57.98	370.0044
57.98	370.0044
59.32	409.2039
59.32	409.2039
59.40	409.2555
59.54	409.3459
59.72	407.9844
60.01	408.1706
61.10	411.8291
61.14	402.9656
61.30	403.0660
63.00	459.6515
63.29	444.4326
63.29	444.4326
63.58	441.6552
64.28	442.1229
65.12	488.8870
65.20	488.9450
65.20	488.9450
66.05	479.4907
66.72	480.5858
66.83	480.6663
66.91	474.4962
67.20	407.4178
67.20	407.4178
67.75	436.4247
67.85	436.4888
68.90	452.6443
68.90	452.6443
69.30	470.9023
69.67	468.1543
70.82	504.9926
70.82	504.9926
70.83	505.0008
72.80	531.2759
72.87	531.3275
72.87	531.3275
74.67	532.6571
74.81	532.7604
74.81	532.7604
74.81	532.7604
74.81	532.7604
74.81	532.7604
74.81	532.7604
74.97	532.8766
75.28	533.1046
75.70	533.4102
77.11	510.9343
77.11	510.9343
77.11	510.9343

77.11	510.9343
77.11	510.9343
77.11	510.9343
78.38	453.0847
79.62	536.2329
79.80	437.4566
79.80	437.4566
80.11	361.5265
80.18	460.5131
80.30	460.5851
80.30	460.5851
80.57	460.7494
81.00	513.0797
81.07	513.1270
81.07	513.1270
81.07	513.1270
81.07	513.1270
82.60	493.2808
83.37	458.6096
83.78	593.6412
83.78	593.6412
83.78	593.6412
83.78	593.6412
84.21	593.9705
84.40	594.1151
84.90	594.4941
85.43	594.8944
86.29	595.5435
86.50	652.2988
86.54	652.3299
86.59	652.3714
86.72	652.4803
86.79	652.5348
86.94	593.1522
87.30	593.4209
87.30	593.4209
87.30	593.4209
87.30	593.4209
87.30	593.4209
87.30	593.4209
87.57	463.6265
87.88	422.8075
88.03	422.8864
88.36	411.5213
88.47	411.5784
89.95	423.8934
91.11	424.4977
92.29	656.9835
92.38	657.0562
92.38	657.0562
93.35	547.5439
94.00	547.9714
94.67	403.0690
94.67	403.0714
94.90	403.1825
94.90	403.1825
94.90	403.1825
94.90	403.1825
95.87	388.1226
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96.73	360.5445
97.43	334.3995
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98.44	312.9940
98.88	336.5231
99.55	340.4236
99.55	340.4236
99.86	364.3124
100.00	364.3709
100.10	364.4151
103.18	337.5997
103.76	334.8833
105.00	356.9226
105.31	362.9315
108.00	365.9832
109.28	342.8519
111.00	376.0672
111.00	376.0672

111.76	368.4724
112.95	324.4328
115.19	333.1392
116.30	353.3817
117.00	359.6013
117.00	359.6013
117.66	374.7608
121.11	310.2573
121.62	299.4404
121.78	317.4578
122.06	317.5487
122.32	325.6232
122.32	325.6232
122.32	325.6232
122.32	325.6232
123.07	339.8664
127.23	354.3378
129.76	328.0544
131.20	381.9262
133.02	354.3340
133.54	350.4734
135.34	337.9268
136.00	330.0392
136.25	328.0935
136.48	317.0238
140.51	344.6642
140.51	0.0000
142.18	325.8521
142.65	329.0498
143.76	308.9919
144.24	303.0070
144.24	303.0070
144.24	303.0070
144.24	303.0070
145.22	317.5749
145.44	342.1513
147.16	370.3076
152.43	327.8662
152.70	321.7759
153.22	331.1806
154.21	311.9093
154.21	311.9093
154.21	311.9093
154.21	311.9093
155.03	327.5881
156.02	329.9341
158.56	307.9309
159.00	0.0000
159.00	310.1143
160.31	323.9179
161.27	314.8638
162.32	310.9978
162.64	301.7500
163.35	283.2558
163.89	286.5002
165.85	315.0486
167.43	320.6704
171.28	296.6278
171.86	318.7151
172.10	318.7780
176.55	298.9552
176.60	298.9660
181.06	288.0344
184.41	286.0519
185.71	286.3434
186.00	286.4096
190.27	295.2053
192.34	270.4668
193.63	282.7813
197.04	272.8535
198.01	295.4516
198.60	308.3854
200.40	294.9114
201.83	304.8499
202.84	283.8221
205.31	310.5657
208.36	292.3411
208.81	277.3846

209.75	259.9276
209.75	259.9276
210.97	229.1441
215.65	265.7818
216.55	240.0043
218.09	255.4170
222.10	266.9886
223.80	275.9967
226.40	250.3658
227.00	258.0923
227.08	253.7505
227.20	253.7718
228.16	249.5777
228.18	249.5812
228.18	249.5812
231.56	0.0000
235.69	269.9117
236.00	285.7454
236.00	285.7454
238.60	240.3633
238.63	240.3683
238.63	240.3683
238.63	240.3683
239.00	240.4268
240.98	240.7426
241.98	228.8013
241.98	228.8013
241.98	228.8013
244.69	181.6029
245.39	179.9219
247.94	234.7397
248.90	234.2542
249.79	212.2764
252.40	209.3100
252.85	223.7717
252.85	223.7717
254.15	0.0000
256.20	204.2654
256.20	204.2654
260.50	237.0997
260.90	236.0480
262.80	212.2477
264.65	173.2075
268.24	189.1862
268.79	189.2508
269.46	189.3282
269.46	189.3282
269.46	189.3282
269.46	189.3282
271.23	215.1475
273.65	179.5532
276.40	182.4204
277.35	196.1494
277.60	196.1787
277.60	196.1787
278.00	204.0277
278.60	195.0952
279.20	186.1589
279.53	178.6864
280.46	184.7953
281.68	195.4549
283.67	201.4050
284.30	199.6743
285.00	193.4281
285.90	196.2457
286.10	181.7956
286.10	181.7956
287.40	166.3216
288.45	0.0000
290.67	201.0261
290.80	201.0396
291.72	211.7346
293.26	0.0000
293.70	174.1261
295.21	145.4824
295.21	145.4824
295.21	145.4824
295.96	145.5469

296.50	145.5918
297.23	145.6523
298.57	144.2453
299.80	151.9450
299.80	151.9450
300.09	177.8042
300.09	177.8042
300.09	177.8042
300.10	177.8042
300.12	177.8066
301.29	184.0085
302.84	168.9503
303.76	182.7441
303.91	182.7588
304.40	172.3638
304.40	172.3638
304.84	166.8543
306.84	148.2798
308.46	152.9950
311.98	148.7050
316.51	161.9600
318.01	160.2533
319.02	143.7535
319.41	142.8622
320.08	121.9133
323.87	169.3886
323.87	169.3886
323.87	169.3886
323.87	169.3886
325.23	183.3809
328.77	177.5560
333.44	157.8767
334.20	167.2317
334.20	167.2317
334.30	167.2405
338.28	182.4891
338.28	182.4891
338.28	182.4891
338.28	182.4891
338.32	182.4915
338.32	182.4915
338.32	182.4915
340.50	146.0374
340.57	146.0412
344.27	135.4277
345.85	152.6744
350.59	0.0000
351.07	131.2175
351.92	131.2739
351.92	131.2739
351.92	131.2739
355.39	0.0000
356.01	140.9436
364.48	133.9969
366.43	112.4036
367.43	120.0190
367.94	0.0000
369.80	117.3217
374.96	116.6713
383.85	131.4672
387.95	123.1358
388.63	121.2655
391.69	131.9608
391.69	131.9608
392.90	132.9934
398.62	137.1906
400.65	135.4010
401.10	138.3117
401.81	139.3182
402.60	149.5152
404.84	139.5147
410.95	115.7871
411.60	114.2136
413.65	114.3205
414.70	124.0409
415.30	112.7958
415.76	117.4249
417.63	0.0000

418.52	111.3473
423.70	112.5789
427.08	126.3580
427.89	126.4041
432.53	110.1019
433.93	125.7687
439.47	125.1000
439.56	125.1047
439.89	122.1909
443.98	111.6371
444.90	117.5596
445.03	117.5669
445.03	117.5669
445.03	117.5669
445.03	117.5669
453.90	113.1006
463.38	108.6223
468.07	120.3805
473.00	103.1139
475.06	123.0479
475.35	116.1159
476.78	112.2124
477.59	107.2841
477.96	112.2675
482.03	108.4758
484.57	104.6039
487.03	106.7048
490.36	0.0000
492.35	102.9384
497.08	86.1134
507.63	0.0000
510.53	0.0000
510.84	134.2440
511.00	134.2521
511.85	110.7963
511.85	110.7963
513.99	104.1684
513.99	104.1684
520.41	87.9240
520.65	87.9324
527.90	86.1538
528.96	0.0000
529.64	77.0836
529.87	0.0000
531.02	74.0800
537.32	80.3617
543.00	114.1766
546.56	0.0000
549.76	101.1825
552.65	84.9210
555.20	75.7850
563.23	78.0651
563.90	88.3600
568.70	97.7786
569.32	92.6543
569.50	90.6018
569.67	90.6061
573.80	95.0974
574.00	103.1250
574.64	96.7026
578.91	72.3157
579.30	0.0000
583.14	97.2588
585.48	107.0065
591.81	96.5238
592.07	99.6469
593.00	97.6030
595.88	85.2291
600.56	86.4124
602.52	0.0000
602.71	109.3989
602.71	109.3989
603.60	111.1719
604.41	93.8276
604.70	93.8364
609.31	92.9437
609.31	92.9437
609.31	92.9437

609.31	92.9437
610.33	95.7621
612.46	97.5762
614.37	92.4114
618.01	93.2262
621.84	86.0059
621.84	86.0059
631.29	89.4430
633.02	86.3362
633.10	86.3382
634.78	71.6391
635.90	76.9352
636.97	71.6922
645.85	85.6532
646.12	81.4309
656.30	79.5850
657.75	92.0093
657.90	0.0000
661.65	86.8127
661.65	86.8127
664.57	0.0000
666.33	99.3672
666.33	99.3672
675.00	73.6679
677.61	74.7988
685.20	74.9817
692.80	104.1566
695.00	92.4101
696.49	90.3041
696.49	90.3041
697.00	91.3937
697.49	89.2574
698.33	100.0363
698.50	98.9674
699.00	96.8313
702.63	91.5555
706.10	93.8117
706.58	0.0000
706.67	88.4363
709.31	72.3194
711.68	89.6566
713.82	87.5536
717.42	56.2707
720.50	75.8208
721.93	0.0000
722.20	75.8610
722.78	88.5194
722.78	88.5194
722.89	88.5234
722.95	88.5254
723.30	84.9217
724.18	84.9446
727.18	81.4050
733.00	73.0064
735.90	66.3866
739.58	81.7126
742.81	65.4346
744.21	67.6445
747.13	72.0731
751.79	69.9859
752.31	68.9032
753.82	74.4065
755.35	62.3980
756.15	74.4580
756.87	77.7603
763.93	96.5809
765.79	82.3590
766.41	87.8652
766.84	95.2000
768.36	73.2633
768.36	73.2633
768.36	73.2633
768.36	73.2633
776.49	81.8322
778.00	70.8477
778.57	77.1572
778.89	77.1641
783.80	65.3159

785.46	77.3127
792.07	66.3955
795.84	75.9626
796.30	80.7209
801.93	67.8175
805.60	74.9850
810.29	58.3998
810.76	58.4075
815.85	62.2059
817.79	52.0215
818.51	55.7483
819.60	55.7654
826.30	59.5951
828.27	0.0000
831.60	72.7394
831.96	69.9493
834.83	85.8738
836.80	0.0000
846.75	61.8079
848.13	51.5267
856.28	0.0000
856.80	53.1243
860.37	63.9188
867.32	67.8062
867.82	65.3033
871.10	55.6198
873.19	52.8213
874.81	68.8875
875.33	0.0000
876.40	66.0836
879.36	50.0746
880.27	48.1974
880.51	49.1457
881.50	46.3223
883.24	57.6926
884.67	65.2841
889.25	50.2072
896.60	50.3054
898.02	58.8692
899.00	58.8844
903.28	51.9785
911.07	63.8348
911.07	63.8348
911.07	63.8348
919.63	60.7300
920.93	50.6256
925.00	57.3718
925.24	59.2880
926.50	52.6121
934.06	64.2151
934.06	64.2151
934.06	64.2151
934.06	64.2151
935.52	63.2809
937.48	62.3525
944.10	69.1846
946.00	67.2955
949.00	54.8395
962.29	59.5735
964.01	59.8745
966.15	59.9073
968.20	59.9376
969.11	59.9515
969.11	59.9515
969.11	59.9515
977.42	60.0751
980.50	64.8304
983.50	53.2344
989.30	51.5055
996.32	54.5143
1001.03	62.3737
1001.68	60.4333
1004.76	52.6750
1021.30	0.0000
1024.50	0.0000
1034.80	56.0050
1037.82	43.2624
1038.57	42.2861

1038.76	0.0000
1045.16	77.8106
1046.59	65.0278
1048.07	52.2366
1050.47	47.3359
1050.47	47.3359
1063.62	59.3530
1076.63	64.4922
1077.35	64.5028
1085.78	56.6730
1099.22	50.8630
1112.02	72.0146
1112.84	63.4544
1115.52	51.4788
1120.29	79.0208
1120.29	79.0208
1120.29	79.0208
1120.29	79.0208
1120.51	79.0240
1121.28	72.1641
1124.00	0.0000
1129.67	86.3569
1131.51	0.0000
1147.95	0.0000
1167.94	65.8199
1173.22	66.9104
1175.09	62.8805
1177.93	65.9627
1189.05	67.1387
1204.90	74.5090
1205.75	0.0000
1213.00	76.6815
1221.42	74.7703
1230.97	86.2080
1235.34	78.0688
1236.41	0.0000
1238.11	74.0010
1238.11	74.0010
1238.11	74.0010
1238.11	74.0010
1238.25	70.9204
1246.25	74.1270
1260.41	0.0000
1271.85	50.7127
1274.45	52.8096
1274.54	52.8116
1291.56	59.2266
1298.22	0.0000
1312.09	38.6034
1325.50	37.6597
1325.50	37.6597
1332.49	30.3794
1333.61	30.3853
1360.21	35.8096
1362.66	0.0000
1365.15	26.3550
1368.21	31.6455
1368.53	0.0000
1376.25	26.4119
1377.67	33.8164
1377.67	33.8164
1377.67	33.8164
1377.67	33.8164
1384.27	31.7432
1394.10	22.2612
1395.20	25.4473
1407.95	21.2565
1434.06	21.3607
1436.60	18.1649
1457.56	0.0000
1460.81	20.3931
1489.15	19.4194
1509.49	27.0691
1596.49	23.5570
1620.62	14.1922
1678.03	0.0000
1691.02	4.7864
1691.02	4.7864

1736.46	0.0000
1750.46	0.0000
1764.49	11.8659
1764.49	11.8659
1764.49	11.8659
1764.49	11.8659
1770.93	13.5732
1771.43	54.3027
1791.20	0.0000
1808.65	5.8523
1836.01	8.8154

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G2J2358008

Total Uranium Activity	6.5818E+00	ug/g
Total Uranium Counting Unc.	4.3868E+00	ug/g
Total Uranium Tpu	2.2381E-06	ug/g
Total Uranium Mda	2.7485E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          KEL Laboratories LLC                             *
*                              2040 SAVACE ROAD                             *
*                            CHARLESTON ,SC 29417                           *
*                             GROSS GAMMA REPORT                            *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232358008       *
*   ANALYST       : MXR1                      DETECTOR   : GAM11            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 12:14:10.18    SAMPLE ALQT:  121.350 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.893E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.548E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 4.038E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.964E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:16:40.16

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358009.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:15:11.
Sample ID         : G232358009           Sample quantity  : 1.33790E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.59  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.39*	32	493	1.29	126.25	122	8	4.43E-03	125.6	
2	5	74.91*	392	460	0.98	149.31	145	14	5.44E-02	10.1	2.39E+00
3	5	77.13	567	423	0.94	153.76	145	14	7.87E-02	7.1	
4	0	87.09	211	501	1.17	173.69	170	8	2.93E-02	19.7	
5	3	90.02	171	259	1.16	179.55	177	13	2.38E-02	15.9	2.73E+00
6	3	92.93*	223	423	1.28	185.37	177	13	3.09E-02	18.5	
7	0	129.13	55	302	0.73	257.81	254	7	7.60E-03	54.4	
8	0	186.08*	166	368	1.43	371.76	367	10	2.30E-02	23.9	
9	0	208.98*	109	276	0.95	417.58	414	9	1.51E-02	29.5	
10	5	238.70*	1347	186	1.11	477.05	471	17	1.87E-01	3.2	1.03E+00
11	5	241.71	336	235	1.70	483.08	471	17	4.67E-02	12.1	
12	0	270.49	165	194	2.19	540.66	535	12	2.29E-02	18.7	
13	2	295.33	404	147	1.20	590.36	584	21	5.60E-02	7.0	7.31E-01
14	2	300.29	76	167	1.53	600.28	584	21	1.06E-02	33.4	
15	0	328.31	115	168	1.58	656.34	651	11	1.59E-02	23.9	
16	0	338.39*	254	150	1.24	676.53	672	8	3.53E-02	10.6	
17	0	351.99*	609	113	1.41	703.72	700	9	8.46E-02	5.2	
18	0	462.79	54	118	1.42	925.41	922	11	7.54E-03	41.1	
19	0	510.94*	146	181	1.93	1021.75	1013	20	2.02E-02	26.3	
20	0	583.44*	451	89	1.54	1166.78	1161	14	6.26E-02	6.5	
21	0	609.57*	473	111	1.50	1219.06	1213	12	6.58E-02	6.5	
22	0	662.25	35	62	1.81	1324.44	1318	10	4.82E-03	45.8	
23	0	727.24	66	130	1.38	1454.46	1451	13	9.21E-03	37.2	
24	0	796.00	28	70	1.44	1592.00	1585	10	3.89E-03	59.0	
25	0	861.33	66	73	1.37	1722.67	1715	13	9.19E-03	29.5	
26	0	911.59*	290	66	1.71	1823.22	1815	18	4.03E-02	9.0	
27	0	965.22	41	44	1.41	1930.49	1927	8	5.72E-03	31.5	
28	0	969.28	170	40	1.26	1938.61	1934	10	2.36E-02	10.4	
29	0	1121.04	87	79	1.64	2242.15	2237	14	1.21E-02	23.7	
30	0	1461.32*	1438	25	2.18	2922.65	2913	22	2.00E-01	2.8	
31	0	1590.14	51	11	6.28	3180.24	3172	18	7.03E-03	21.9	
32	0	1631.49	16	6	2.42	3262.93	3255	12	2.19E-03	40.1	
33	0	1765.00*	80	12	2.28	3529.88	3523	19	1.10E-02	15.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 14:16:43

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358009.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:15:11
Sample ID : G232358009 Sample quantity : 133.79 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA12 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.59 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.327E+01	3.020E+00	4.805E-01	3.426E-02	69.246
CD-109	+	88.03	*	2.879E+00	1.153E+00	9.476E-01	7.251E-02	3.039
SN-126	+	64.28		2.897E-01	7.291E-01	7.836E-01	1.100E-01	0.370
	+	86.94		1.179E+00	6.708E-01	5.761E-01	2.371E-01	2.046
	+	87.57	*	2.835E-01	1.135E-01	1.376E-01	1.049E-02	2.060
BA-137M	+	661.65	*	4.815E-02	4.425E-02	6.444E-02	4.177E-03	0.747
CS-137	+	661.65	*	5.090E-02	4.678E-02	6.812E-02	4.431E-03	0.747
TL-208		277.35		3.193E-01	3.483E-01	5.960E-01	6.242E-02	0.536
	+	510.84		6.768E-01	3.630E-01	2.048E-01	2.115E-02	3.304
	+	583.14	*	6.004E-01	8.944E-02	5.080E-02	3.634E-03	11.818
	+	860.37		8.311E-01	4.962E-01	4.470E-01	3.906E-02	1.860
BI-211		72.87		2.123E+00	3.301E+00	5.110E+00	3.428E-01	0.415
	+	351.07	*	3.510E+00	4.261E-01	3.072E-01	1.931E-02	11.428
PB-212	+	74.81		2.231E+00	5.195E-01	5.393E-01	6.234E-02	4.137
	+	77.11		1.829E+00	2.904E-01	3.060E-01	2.119E-02	5.976
	+	87.30		1.311E+00	5.411E-01	6.384E-01	8.019E-02	2.054
	+	238.63	*	1.690E+00	1.627E-01	8.144E-02	5.782E-03	20.753
	+	300.09		1.481E+00	9.977E-01	1.154E+00	9.425E-02	1.283
PO-212	+	74.81		2.231E+00	5.195E-01	5.393E-01	6.234E-02	4.137
	+	77.11		1.829E+00	2.904E-01	3.060E-01	2.119E-02	5.976
	+	87.30		1.311E+00	5.411E-01	6.384E-01	8.019E-02	2.054
		115.19		3.055E-01	3.301E+00	5.444E+00	3.453E-01	0.056
	+	238.63	*	1.690E+00	1.627E-01	8.144E-02	5.782E-03	20.753
	+	300.09		1.481E+00	9.977E-01	1.154E+00	9.425E-02	1.283
BI-214	+	609.31	*	1.189E+00	1.839E-01	1.141E-01	9.392E-03	10.422
		768.36		-2.583E-01	8.027E-01	1.286E+00	1.215E-01	-0.201
		934.06		1.691E+00	1.147E+00	2.083E+00	2.130E-01	0.812
	+	1120.29		1.134E+00	5.475E-01	4.329E-01	3.932E-02	2.621
		1238.11		1.294E+00	1.018E+00	1.813E+00	1.515E-01	0.714
		1377.67		1.745E+00	1.067E+00	2.014E+00	1.892E-01	0.866
	+	1764.49		1.426E+00	4.484E-01	2.868E-01	1.700E-02	4.973
PB-214	+	74.81		3.844E+00	8.679E-01	9.292E-01	9.345E-02	4.137
	+	77.11		3.136E+00	5.523E-01	5.247E-01	5.401E-02	5.976
	+	87.30		2.246E+00	9.159E-01	1.094E+00	1.184E-01	2.054

---- Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.536E+00	6.436E-01	4.905E-01	3.860E-02	5.171
	+	295.21		1.372E+00	2.240E-01	2.021E-01	1.706E-02	6.787
	+	351.92	*	1.221E+00	1.613E-01	1.119E-01	9.141E-03	10.912
PO-214	+	74.81		3.844E+00	8.679E-01	9.292E-01	9.345E-02	4.137
	+	77.11		3.136E+00	5.523E-01	5.247E-01	5.401E-02	5.976
	+	87.30		2.246E+00	9.159E-01	1.094E+00	1.184E-01	2.054
	+	241.98		2.536E+00	6.436E-01	4.905E-01	3.860E-02	5.171
	+	295.21		1.372E+00	2.240E-01	2.021E-01	1.706E-02	6.787
	+	351.92	*	1.221E+00	1.613E-01	1.119E-01	9.141E-03	10.912
PO-216	+	74.81		2.231E+00	5.195E-01	5.393E-01	6.234E-02	4.137
	+	77.11		1.829E+00	2.904E-01	3.060E-01	2.119E-02	5.976
	+	87.30		1.311E+00	5.411E-01	6.384E-01	8.019E-02	2.054
	+	238.63	*	1.690E+00	1.627E-01	8.144E-02	5.782E-03	20.753
	+	300.09		1.481E+00	9.977E-01	1.154E+00	9.425E-02	1.283
PO-218	+	74.81		3.844E+00	8.679E-01	9.292E-01	9.345E-02	4.137
	+	77.11		3.136E+00	5.523E-01	5.247E-01	5.401E-02	5.976
	+	87.30		2.246E+00	9.159E-01	1.094E+00	1.184E-01	2.054
	+	241.98		2.536E+00	6.436E-01	4.905E-01	3.860E-02	5.171
	+	295.21		1.372E+00	2.240E-01	2.021E-01	1.706E-02	6.787
	+	351.92	*	1.221E+00	1.613E-01	1.119E-01	9.141E-03	10.912
RA-224	+	240.98	*	4.809E+00	1.190E+00	9.269E-01	5.113E-02	5.188
RA-226	+	609.31	*	1.189E+00	1.839E-01	1.141E-01	9.392E-03	10.422
		768.36		-2.583E-01	8.027E-01	1.286E+00	1.215E-01	-0.201
		934.06		1.691E+00	1.147E+00	2.083E+00	2.130E-01	0.812
	+	1120.29		1.134E+00	5.475E-01	4.329E-01	3.932E-02	2.621
		1238.11		1.294E+00	1.018E+00	1.813E+00	1.515E-01	0.714
		1377.67		1.745E+00	1.067E+00	2.014E+00	1.892E-01	0.866
	+	1764.49		1.426E+00	4.484E-01	2.868E-01	1.700E-02	4.973
AC-228	+	338.32		1.615E+00	7.424E-01	3.768E-01	1.535E-01	4.287
	+	911.07	*	1.724E+00	3.625E-01	2.077E-01	2.280E-02	8.302
	+	969.11		1.778E+00	5.511E-01	3.989E-01	9.197E-02	4.458
RA-228	+	338.32		1.615E+00	7.424E-01	3.768E-01	1.535E-01	4.287
	+	911.07	*	1.724E+00	3.625E-01	2.077E-01	2.280E-02	8.302
	+	969.11		1.778E+00	5.511E-01	3.989E-01	9.197E-02	4.458
TH-228		84.40		2.808E+00	2.667E+00	4.113E+00	5.086E-01	0.683
	+	238.60	*	1.690E+00	1.627E-01	8.143E-02	5.782E-03	20.755
	+	300.10		1.481E+00	1.320E+00	1.155E+00	6.803E-01	1.283
TH-230	+	609.31	*	1.189E+00	1.838E-01	1.141E-01	9.392E-03	10.422
		768.36		-2.583E-01	8.027E-01	1.286E+00	1.214E-01	-0.201
		934.06		1.691E+00	1.147E+00	2.083E+00	2.130E-01	0.812
	+	1120.29		1.134E+00	5.475E-01	4.329E-01	3.932E-02	2.621
		1238.11		1.294E+00	1.018E+00	1.813E+00	1.515E-01	0.714
		1377.67		1.745E+00	1.067E+00	2.014E+00	1.892E-01	0.866
	+	1764.49		1.426E+00	4.483E-01	2.868E-01	1.700E-02	4.973
TH-232	+	338.32		1.615E+00	3.554E-01	3.768E-01	2.135E-02	4.287
	+	911.07	*	1.724E+00	3.625E-01	2.077E-01	2.280E-02	8.302
	+	969.11		1.778E+00	5.511E-01	3.989E-01	9.197E-02	4.458
TH-234	+	63.29	*	7.319E-01	1.843E+00	1.982E+00	3.375E-01	0.369
	+	92.38		1.930E+00	7.880E-01	6.899E-01	1.206E-01	2.798

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.189E+00	1.838E-01	1.141E-01	9.392E-03	10.422
		768.36		-2.583E-01	8.027E-01	1.286E+00	1.214E-01	-0.201
		934.06		1.691E+00	1.147E+00	2.083E+00	2.130E-01	0.812
	+	1120.29		1.134E+00	5.475E-01	4.329E-01	3.932E-02	2.621
		1238.11		1.294E+00	1.018E+00	1.813E+00	1.515E-01	0.714
		1377.67		1.745E+00	1.067E+00	2.014E+00	1.892E-01	0.866
	+	1764.49		1.426E+00	4.483E-01	2.868E-01	1.700E-02	4.973
NP-237	+	86.50	*	8.325E-01	3.750E-01	4.089E-01	8.982E-02	2.036
		95.87		5.366E-01	9.036E-01	1.374E+00	3.314E-01	0.391
U-238	+	63.29	*	7.319E-01	1.843E+00	1.982E+00	3.375E-01	0.369
	+	92.38		1.930E+00	7.258E-01	6.899E-01	5.022E-02	2.798
AM-243	+	74.67	*	3.617E-01	7.714E-02	8.769E-02	5.958E-03	4.125
	+	86.72		3.122E+01	1.250E+01	1.530E+01	1.156E+00	2.041
		117.66		-6.863E-01	3.457E+00	5.622E+00	3.541E-01	-0.122
		142.18		-6.335E+00	1.590E+01	2.534E+01	1.434E+00	-0.250
ANH-511	+	511.00	*	1.462E-01	7.746E-02	4.426E-02	2.697E-03	3.303

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.435E-01	3.263E-01	5.525E-01	3.802E-02	0.441
NA-22		1274.54	*	4.196E-02	4.441E-02	7.950E-02	5.120E-03	0.528
NA-24		1368.53	*	-1.060E-01	4.441E-02	Half-Life too short		
AL-26		1129.67		-5.315E-02	1.855E+00	2.848E+00	1.736E-01	-0.019
		1808.65	*	3.036E-02	2.833E-02	5.589E-02	3.207E-03	0.543
TI-44		67.85		-4.536E-02	4.596E-02	7.065E-02	4.599E-03	-0.642
	+	78.38	*	3.375E-01	5.360E-02	7.278E-02	5.091E-03	4.637
SC-46		889.25	*	5.836E-03	3.943E-02	6.479E-02	5.370E-03	0.090
	+	1120.51		1.924E-01	9.199E-02	1.265E-01	7.862E-03	1.521
V-48		944.10		8.083E-01	8.295E-01	1.463E+00	1.175E-01	0.552
		983.50	*	-1.930E-02	6.831E-02	1.064E-01	8.196E-03	-0.181
		1312.09		3.642E-02	7.810E-02	1.344E-01	9.122E-03	0.271
CR-51		320.08	*	-1.762E-01	3.454E-01	5.556E-01	3.532E-02	-0.317
MN-52		744.21		-8.719E-02	1.992E-01	3.147E-01	2.248E-02	-0.277
		848.13		1.790E+00	5.964E+00	9.965E+00	7.938E-01	0.180
		935.52		2.603E-01	2.214E-01	3.950E-01	3.198E-02	0.659
		1246.25		-3.511E+00	7.098E+00	1.120E+01	6.902E-01	-0.313
		1333.61		3.016E-01	3.808E+00	6.302E+00	4.401E-01	0.048
		1434.06	*	4.453E-03	2.335E-01	3.806E-01	2.615E-02	0.012
MN-54		834.83	*	9.228E-03	3.678E-02	6.122E-02	4.812E-03	0.151
CO-56		846.75	*	-5.457E-04	4.038E-02	6.561E-02	5.219E-03	-0.008
		977.42		2.011E-02	3.102E+00	4.956E+00	3.845E-01	0.004
		1037.82		-4.153E-01	3.092E-01	4.477E-01	3.458E-02	-0.927
		1175.09		-7.385E-01	2.500E+00	4.040E+00	2.227E-01	-0.183
		1238.25		1.387E-01	1.016E-01	1.823E-01	1.173E-02	0.761
		1360.21		9.085E-02	8.969E-01	1.486E+00	1.035E-01	0.061
		1771.40		-4.349E-02	2.586E-01	3.493E-01	2.060E-02	-0.124
CO-57		122.06	*	-1.061E-02	2.317E-02	3.715E-02	2.323E-03	-0.286

---- Non-Identified Nuclides ----

Nuclide	Line Idcd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-1.662E-01	1.904E-01	2.968E-01	1.996E-02	-0.560
CO-58		810.76	*	-1.924E-02	4.039E-02	6.311E-02	4.856E-03	-0.305
FE-59		142.65		-3.753E-02	2.486E+00	3.976E+00	2.246E-01	-0.009
		192.34		3.736E-01	9.066E-01	1.472E+00	1.701E-01	0.254
		1099.22	*	-1.264E-01	1.031E-01	1.534E-01	1.133E-02	-0.824
		1291.56		-2.788E-02	1.325E-01	2.131E-01	1.716E-02	-0.131
CO-60		1173.22		-2.604E-02	4.896E-02	7.743E-02	4.256E-03	-0.336
		1332.49	*	-1.870E-02	3.672E-02	5.605E-02	3.915E-03	-0.334
ZN-65		1115.52	*	9.392E-03	9.693E-02	1.406E-01	8.845E-03	0.067
GE-68		1077.35	*	-1.311E-01	1.306E+00	2.159E+00	1.456E-01	-0.061
AS-73		53.44	*	-5.239E-02	7.654E-01	1.280E+00	8.263E-02	-0.041
AS-74		595.88	*	3.333E-02	8.544E-02	1.469E-01	9.351E-03	0.227
		634.78		-1.371E-01	3.339E-01	5.382E-01	3.468E-02	-0.255
SE-75		66.05		3.157E+00	4.832E+00	7.520E+00	6.565E-01	0.420
		96.73		-8.935E-01	7.783E-01	1.069E+00	1.353E-01	-0.836
		121.11		-3.728E-02	1.237E-01	1.998E-01	1.902E-02	-0.187
		136.00		-2.577E-02	3.577E-02	5.623E-02	3.320E-03	-0.458
		198.60		-1.223E+00	1.750E+00	2.633E+00	1.769E-01	-0.464
		264.65	*	-3.970E-03	4.480E-02	6.586E-02	3.733E-03	-0.060
		279.53		-4.587E-02	1.002E-01	1.605E-01	9.835E-03	-0.286
		303.91		-1.338E+00	2.255E+00	3.146E+00	2.979E-01	-0.425
		400.65		1.447E-01	2.450E-01	4.145E-01	3.705E-02	0.349
BR-77	+	87.88		4.513E+02	1.807E+02	2.345E+02	1.793E+01	1.924
		200.40		-3.030E+01	1.110E+02	1.740E+02	9.229E+00	-0.174
	+	239.00		1.965E+02	1.674E+01	2.712E+01	1.493E+00	7.248
		249.79		3.117E+01	4.461E+01	7.754E+01	4.306E+00	0.402
		281.68		-2.716E+01	5.976E+01	9.750E+01	5.510E+00	-0.279
		297.23		1.780E+02	4.392E+01	8.276E+01	4.697E+00	2.151
		303.76		-8.599E+01	1.398E+02	1.948E+02	1.107E+01	-0.441
		439.47		-5.159E+01	9.682E+01	1.504E+02	8.661E+00	-0.343
		484.57		-1.205E+02	1.715E+02	2.608E+02	1.560E+01	-0.462
		520.65	*	4.534E+00	7.633E+00	1.276E+01	7.827E-01	0.355
		574.64		9.339E+01	1.448E+02	2.536E+02	1.601E+01	0.368
		578.91		-2.270E+01	6.161E+01	8.610E+01	5.444E+00	-0.264
		585.48		1.231E+03	2.011E+02	3.777E+02	2.394E+01	3.258
		755.35		8.047E+01	1.212E+02	2.097E+02	1.516E+01	0.384
		817.79		-1.643E+01	9.639E+01	1.548E+02	1.196E+01	-0.106
SR-82		698.33		6.030E+00	3.164E+01	5.308E+01	3.597E+00	0.114
		776.49	*	-7.106E-01	3.970E-01	5.431E-01	4.019E-02	-1.308
		1395.20		3.094E+00	1.001E+01	1.702E+01	1.178E+00	0.182
RB-83		520.41	*	4.602E-02	7.143E-02	1.162E-01	7.123E-03	0.396
		529.64		4.724E-02	1.036E-01	1.714E-01	1.057E-02	0.276
		552.65		3.443E-02	1.794E-01	3.061E-01	1.912E-02	0.112
RB-84		881.50	*	-6.408E-02	6.547E-02	9.453E-02	7.777E-03	-0.678
KR-85		513.99	*	1.467E+01	7.467E+00	1.340E+01	8.186E-01	1.095
SR-85		513.99	*	7.437E-02	3.784E-02	6.793E-02	4.149E-03	1.095
RB-86		1076.63	*	-2.470E-01	8.000E-01	1.298E+00	8.763E-02	-0.190
Y-88		898.02		1.885E-02	4.318E-02	7.265E-02	6.103E-03	0.259
		1836.01	*	1.010E-02	2.622E-02	4.715E-02	2.654E-03	0.214

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	2.984E-03	2.819E-02	4.639E-02	2.544E-03	0.064
Y-91		1204.90	*	3.692E-01	2.116E+01	3.501E+01	2.024E+00	0.011
NB-94		702.63	*	4.012E-03	3.554E-02	5.919E-02	4.031E-03	0.068
		871.10		-7.806E-04	3.277E-02	5.306E-02	4.322E-03	-0.015
NB-95		765.79	*	1.865E-02	4.159E-02	7.060E-02	5.164E-03	0.264
NB-95M		235.69	*	-3.250E-02	1.198E-01	1.758E-01	1.282E-02	-0.185
ZR-95		724.18		-9.169E-02	1.165E-01	1.522E-01	1.200E-02	-0.602
		756.15	*	4.017E-02	7.175E-02	1.230E-01	1.016E-02	0.327
NB-97		657.90	*	1.496E-02	7.175E-02	Half-Life too short		
		1024.50		2.552E+00	7.175E-02	Half-Life too short		
ZR-97		254.15		-2.057E+00	7.175E-02	Half-Life too short		
		355.39		-2.262E-01	7.175E-02	Half-Life too short		
		507.63	*	5.859E-01	7.175E-02	Half-Life too short		
		602.52		-2.133E+00	7.175E-02	Half-Life too short		
		1021.30		-1.514E+00	7.175E-02	Half-Life too short		
		1147.95		1.348E+00	7.175E-02	Half-Life too short		
		1362.66		-6.560E-01	7.175E-02	Half-Life too short		
		1750.46		2.044E-01	7.175E-02	Half-Life too short		
MO-99		140.51		-9.606E+00	1.856E+01	2.884E+01	7.766E+00	-0.333
		181.06		-2.387E+00	1.363E+01	1.917E+01	3.248E+00	-0.125
		366.43		2.808E+01	6.303E+01	1.063E+02	5.942E+00	0.264
		739.58	*	4.441E+00	8.299E+00	1.425E+01	2.049E+00	0.312
		778.00		-2.286E+01	2.699E+01	4.093E+01	3.034E+00	-0.559
TC-99M		140.51	*	-8.674E+08	2.699E+01	Half-Life too short		
RH-101		127.23		-3.612E-03	3.287E-02	4.767E-02	2.893E-03	-0.076
		198.01	*	-2.617E-03	3.241E-02	5.043E-02	2.668E-03	-0.052
		325.23		3.564E-02	2.347E-01	3.456E-01	1.963E-02	0.103
RH-102		418.52		-1.366E-01	2.697E-01	4.223E-01	2.382E-02	-0.323
		475.06	*	-7.879E-03	2.986E-02	4.715E-02	2.800E-03	-0.167
		631.29		-3.840E-03	5.530E-02	9.167E-02	5.902E-03	-0.042
		697.49		-1.651E-02	7.398E-02	1.201E-01	8.131E-03	-0.137
		766.84		4.626E-02	1.124E-01	1.900E-01	1.391E-02	0.243
		1046.59		-3.558E-02	1.253E-01	2.021E-01	1.432E-02	-0.176
		1112.84		5.526E-02	2.220E-01	3.700E-01	2.335E-02	0.149
RU-103		497.08	*	-1.196E-02	3.851E-02	6.019E-02	7.677E-03	-0.199
	+	610.33		1.259E+01	2.569E+00	2.965E+00	4.641E-01	4.247
RH-106	+	511.85		7.287E-01	3.861E-01	4.385E-01	2.674E-02	1.662
		621.84	*	-3.245E-01	2.962E-01	4.446E-01	5.360E-02	-0.730
		1050.47		2.144E+00	2.361E+00	4.242E+00	2.988E-01	0.505
RU-106	+	511.85		7.287E-01	3.861E-01	4.385E-01	2.674E-02	1.662
		621.84	*	-3.245E-01	2.943E-01	4.446E-01	2.855E-02	-0.730
		1050.47		2.144E+00	2.361E+00	4.242E+00	2.988E-01	0.505
AG-108M		433.93	*	4.181E-03	3.112E-02	5.096E-02	3.175E-03	0.082
		614.37		-1.220E-02	4.277E-02	6.020E-02	4.127E-03	-0.203
		722.95		-2.643E-02	5.186E-02	6.998E-02	5.169E-03	-0.378
AG-110M		657.75	*	1.541E-02	3.766E-02	5.681E-02	3.872E-03	0.271
		677.61		1.372E-02	3.050E-01	5.072E-01	3.512E-02	0.027
		706.67		1.127E-01	2.201E-01	3.766E-01	2.689E-02	0.299
		763.93		-5.300E-02	1.715E-01	2.746E-01	2.083E-02	-0.193

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		9.233E-03	4.635E-02	7.666E-02	6.348E-03	0.120
		937.48		-3.426E-02	1.118E-01	1.747E-01	1.470E-02	-0.196
		1384.27		-1.533E-01	1.731E-01	2.498E-01	1.808E-02	-0.614
IN-111		171.28		-1.559E-01	7.108E-01	1.129E+00	5.806E-02	-0.138
		245.39	*	-5.219E-01	8.117E-01	1.154E+00	6.387E-02	-0.452
IN-113M		391.69	*	1.790E-02	4.097E-02	6.890E-02	4.056E-03	0.260
SN-113		391.69	*	1.790E-02	4.097E-02	6.890E-02	4.056E-03	0.260
IN-114M		190.27	*	-1.262E-01	1.930E-01	2.616E-01	1.372E-02	-0.483
CD-115		260.90		-2.599E+01	8.637E+01	1.430E+02	7.997E+00	-0.182
		492.35		-1.970E+01	2.638E+01	3.986E+01	2.398E+00	-0.494
		527.90	*	-3.893E+00	7.558E+00	1.154E+01	7.105E-01	-0.337
SN-117M		156.02		2.167E-01	1.957E+00	3.176E+00	1.696E-01	0.068
		158.56	*	-2.143E-02	4.788E-02	7.556E-02	3.991E-03	-0.284
SB-122		563.90	*	9.562E-01	1.503E+00	2.633E+00	1.654E-01	0.363
		692.80		5.679E+00	3.028E+01	5.085E+01	3.423E+00	0.112
I-123		159.00	*	-4.439E-01	3.028E+01	Half-Life too short		
		528.96		-9.083E+00	3.028E+01	Half-Life too short		
TE-123M		159.00	*	-8.853E-03	2.607E-02	4.135E-02	2.215E-03	-0.214
I-124		602.71	*	-4.146E-01	6.191E-01	8.851E-01	5.648E-02	-0.468
		722.78		-1.872E+00	4.495E+00	6.133E+00	4.276E-01	-0.305
		1325.50		2.835E+01	2.889E+01	5.240E+01	3.624E+00	0.541
		1376.25		4.022E+01	2.837E+01	5.275E+01	3.664E+00	0.763
		1509.49		1.614E+01	1.282E+01	2.425E+01	1.632E+00	0.666
		1691.02		1.446E+00	2.835E+00	5.149E+00	3.196E-01	0.281
SB-124		602.71		-2.858E-02	4.268E-02	6.102E-02	3.895E-03	-0.468
		645.85		-1.475E-01	4.581E-01	7.413E-01	5.290E-02	-0.199
		709.31		-5.654E-01	2.874E+00	4.673E+00	3.208E-01	-0.121
		713.82		-1.073E+00	1.643E+00	2.561E+00	2.785E-01	-0.419
		722.78		-1.871E-01	4.492E-01	6.129E-01	4.413E-02	-0.305
	+	968.20		1.807E+01	4.002E+00	7.470E+00	5.854E-01	2.419
		1045.16		-8.997E-01	2.555E+00	4.141E+00	2.940E-01	-0.217
		1325.50		3.026E+00	3.084E+00	5.593E+00	3.868E-01	0.541
		1368.21		-1.072E+00	1.781E+00	2.614E+00	3.261E-01	-0.410
		1436.60		-1.100E+00	4.083E+00	6.404E+00	4.397E-01	-0.172
		1691.02	*	3.408E-02	6.683E-02	1.214E-01	8.100E-03	0.281
SB-125		427.89	*	-4.274E-02	8.989E-02	1.409E-01	8.379E-03	-0.303
	+	463.38		4.906E-01	4.046E-01	5.125E-01	3.502E-02	0.957
		600.56		-8.861E-02	1.718E-01	2.765E-01	1.994E-02	-0.320
		635.90		8.056E-02	2.550E-01	4.351E-01	3.199E-02	0.185
TE-125M		109.28	*	7.817E-01	8.168E+00	1.351E+01	1.164E+00	0.058
I-126		388.63		7.275E-02	1.790E-01	3.006E-01	1.651E-02	0.242
		666.33	*	1.700E-01	1.978E-01	3.097E-01	2.019E-02	0.549
		753.82		8.129E-01	1.416E+00	2.431E+00	1.755E-01	0.334
SB-126		223.80		2.662E+00	3.488E+00	6.101E+00	3.315E-01	0.436
		278.60		5.305E-01	2.173E+00	3.615E+00	2.041E-01	0.147
	+	296.50		1.284E+01	1.937E+00	3.372E+00	1.914E-01	3.806
		414.70		-3.544E-02	6.602E-02	1.032E-01	5.800E-03	-0.343
		415.30		-1.825E+00	5.338E+00	8.466E+00	4.760E-01	-0.216
		555.20		-1.015E+00	3.507E+00	5.775E+00	3.611E-01	-0.176

---- Non-Identified Nuclides ----

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		573.80		2.923E-01	9.280E-01	1.587E+00	1.001E-01	0.184
		593.00		-8.723E-01	8.281E-01	1.270E+00	8.073E-02	-0.687
		656.30		2.731E+00	3.404E+00	5.343E+00	3.460E-01	0.511
		666.33		7.085E-02	8.245E-02	1.291E-01	8.417E-03	0.549
		675.00		-2.980E-01	1.865E+00	3.052E+00	2.011E-01	-0.098
		695.00		-2.256E-02	6.838E-02	1.100E-01	7.422E-03	-0.205
		697.00		-1.359E-01	2.450E-01	3.867E-01	2.616E-02	-0.351
		720.50	*	3.160E-02	1.498E-01	2.444E-01	1.699E-02	0.129
		856.80		-3.119E-01	5.421E-01	7.032E-01	5.649E-02	-0.444
		989.30		-4.438E-01	1.245E+00	1.924E+00	1.472E-01	-0.231
		1034.80		2.607E+00	8.135E+00	1.401E+01	1.010E+00	0.186
		1213.00		-1.719E-01	4.645E+00	7.645E+00	4.477E-01	-0.022
SB-127		61.10		7.703E+00	4.620E+01	7.094E+01	6.464E+00	0.109
		252.40		1.092E+00	3.280E+00	5.558E+00	2.303E+00	0.197
		290.80		-9.810E+00	1.809E+01	2.544E+01	2.208E+00	-0.386
		411.60		1.015E+01	1.001E+01	1.717E+01	2.412E+00	0.591
		444.90		-1.692E+00	7.612E+00	1.211E+01	1.266E+00	-0.140
		473.00		-8.720E-01	1.374E+00	2.100E+00	2.294E-01	-0.415
		543.00		6.267E+00	1.197E+01	2.091E+01	2.682E+00	0.300
		603.60		4.388E-01	1.029E+01	1.502E+01	1.617E+00	0.029
		685.20	*	-5.837E-01	1.057E+00	1.664E+00	1.603E-01	-0.351
		698.50		2.269E+00	1.191E+01	1.998E+01	2.927E+00	0.114
		722.20		2.106E+00	2.916E+01	4.199E+01	4.021E+00	0.050
		783.80		1.747E+00	3.076E+00	5.254E+00	5.954E-01	0.333
XE-127		57.60		-1.957E+00	5.261E+00	8.796E+00	5.559E-01	-0.223
		145.22		2.673E-01	6.376E-01	1.038E+00	5.801E-02	0.257
		172.10		-9.725E-02	1.115E-01	1.711E-01	8.807E-03	-0.568
		202.84	*	2.571E-02	4.269E-02	6.984E-02	3.714E-03	0.368
		374.96		8.464E-02	1.848E-01	3.117E-01	1.732E-02	0.272
I-131		80.18		-1.211E+00	4.123E+00	6.102E+00	4.369E-01	-0.198
		284.30		6.708E-01	1.235E+00	2.122E+00	1.339E-01	0.316
		364.48	*	-4.388E-03	1.010E-01	1.655E-01	1.040E-02	-0.027
		636.97		4.546E-01	1.379E+00	2.353E+00	1.664E-01	0.193
		722.89		-3.925E+00	7.946E+00	1.074E+01	7.554E-01	-0.365
TE-132		49.72		-1.740E+01	1.379E+01	2.221E+01	1.989E+00	-0.783
		111.76		-2.953E+00	2.215E+01	3.550E+01	3.147E+00	-0.083
		116.30		-8.971E+00	2.028E+01	3.263E+01	2.871E+00	-0.275
		228.16	*	-1.051E-01	4.951E-01	8.305E-01	1.164E-01	-0.127
BA-133		53.15		1.233E+00	3.317E+00	5.640E+00	3.646E-01	0.219
		79.62		-1.466E-01	1.271E+00	1.898E+00	2.734E-01	-0.077
		81.00		-5.884E-02	9.814E-02	1.424E-01	2.155E-02	-0.413
		276.40		4.002E-01	3.594E-01	5.906E-01	7.614E-02	0.678
		302.84		-1.994E-02	1.538E-01	2.229E-01	2.585E-02	-0.089
		356.01	*	-1.490E-02	4.625E-02	6.462E-02	7.414E-03	-0.231
		383.85		-1.399E-03	2.948E-01	4.823E-01	5.172E-02	-0.003
I-133	+	510.53		6.139E-01	2.948E-01	Half-Life too short		
		529.87	*	9.587E-04	2.948E-01	Half-Life too short		
		706.58		9.950E-02	2.948E-01	Half-Life too short		
		856.28		-1.034E-01	2.948E-01	Half-Life too short		

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		875.33		5.365E-02	2.948E-01	Half-Life too short		
		1236.41		3.474E-01	2.948E-01	Half-Life too short		
		1298.22		4.398E-02	2.948E-01	Half-Life too short		
CS-134		475.35		8.478E-02	1.921E+00	3.104E+00	1.844E-01	0.027
		563.23		1.319E-01	3.493E-01	6.020E-01	3.847E-02	0.219
		569.32		-8.845E-02	1.827E-01	2.913E-01	1.880E-02	-0.304
		604.70		1.985E-02	3.619E-02	5.548E-02	3.559E-03	0.358
	+	795.84	*	5.390E-02	6.375E-02	8.927E-02	6.806E-03	0.604
		801.93		-5.687E-02	4.277E-01	6.719E-01	5.144E-02	-0.085
		1038.57		-3.590E+00	3.804E+00	5.773E+00	4.140E-01	-0.622
		1167.94		1.355E+00	2.530E+00	4.383E+00	2.442E-01	0.309
		1365.15		-1.378E-01	1.147E+00	1.842E+00	1.370E-01	-0.075
CS-135		268.24	*	1.017E-01	1.601E-01	2.466E-01	1.855E-02	0.412
I-135		288.45		-6.044E+08	1.601E-01	Half-Life too short		
		417.63		-6.289E+08	1.601E-01	Half-Life too short		
		546.56		-4.388E+08	1.601E-01	Half-Life too short		
		836.80		-4.860E+08	1.601E-01	Half-Life too short		
		1038.76		-9.225E+08	1.601E-01	Half-Life too short		
		1124.00		3.254E+09	1.601E-01	Half-Life too short		
		1131.51		8.366E+07	1.601E-01	Half-Life too short		
		1260.41	*	2.873E+08	1.601E-01	Half-Life too short		
		1457.56		2.404E+10	1.601E-01	Half-Life too short		
		1678.03		-4.552E+08	1.601E-01	Half-Life too short		
		1706.46		8.975E+08	1.601E-01	Half-Life too short		
		1791.20		3.701E+08	1.601E-01	Half-Life too short		
CS-136		66.91		9.595E-02	7.636E-01	1.161E+00	1.666E-01	0.083
	+	86.29		3.490E+00	1.437E+00	1.838E+00	2.232E-01	1.898
		153.22		-6.347E-02	5.990E-01	9.452E-01	6.528E-02	-0.067
		163.89		1.761E-01	9.305E-01	1.511E+00	1.021E-01	0.117
		176.55		4.927E-01	3.415E-01	5.809E-01	3.464E-02	0.848
		273.65		-2.799E-01	4.306E-01	6.050E-01	3.913E-02	-0.463
		340.57		3.177E-01	1.353E-01	2.255E-01	1.361E-02	1.409
		818.51		-3.695E-02	7.081E-02	1.098E-01	8.496E-03	-0.337
		1048.07	*	2.360E-02	1.067E-01	1.797E-01	1.350E-02	0.131
		1235.34		2.103E-01	6.074E-01	1.026E+00	1.040E-01	0.205
CE-139		165.85	*	7.882E-03	2.753E-02	4.489E-02	2.300E-03	0.176
BA-140		162.64		1.065E-01	6.461E-01	1.049E+00	6.281E-02	0.102
		304.84		3.019E-01	1.267E+00	1.883E+00	5.134E-01	0.160
		423.70		-5.764E-02	1.796E+00	2.911E+00	9.246E-01	-0.020
		537.32	*	8.552E-02	2.262E-01	3.889E-01	1.268E-01	0.220
LA-140	+	328.77		8.464E-01	4.087E-01	5.115E-01	3.267E-02	1.655
		432.53		1.995E-01	1.886E+00	3.082E+00	1.953E-01	0.065
		487.03		-4.394E-02	1.353E-01	2.121E-01	1.429E-02	-0.207
		751.79		-5.230E-01	1.640E+00	2.621E+00	2.171E-01	-0.200
		815.85		1.876E-01	2.989E-01	5.149E-01	4.535E-02	0.364
		867.82		-4.552E-01	1.394E+00	1.959E+00	1.686E-01	-0.232
		919.63		-1.397E+00	3.336E+00	4.378E+00	4.518E-01	-0.319
		925.24		8.718E-01	1.145E+00	1.973E+00	1.724E-01	0.442
		1596.49	*	2.015E-02	8.421E-02	1.272E-01	8.284E-03	0.158

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CE-141		145.44	*	3.942E-02	5.515E-02	9.225E-02	5.371E-03	0.427
CE-143		57.37		-2.389E-04	5.515E-02	Half-Life too short		
		231.56		-4.838E-05	5.515E-02	Half-Life too short		
		293.26	*	2.949E-04	5.515E-02	Half-Life too short		
	+	350.59		1.593E-02	5.515E-02	Half-Life too short		
		490.36		1.747E-03	5.515E-02	Half-Life too short		
		664.57		3.196E-04	5.515E-02	Half-Life too short		
		721.93		6.858E-05	5.515E-02	Half-Life too short		
CE-144		80.11		-6.165E-01	2.083E+00	3.082E+00	2.187E-01	-0.200
		133.54	*	5.441E-02	1.896E-01	3.127E-01	4.451E-02	0.174
PM-144		476.78		6.470E-02	6.800E-02	1.167E-01	8.246E-03	0.554
		618.01		2.204E-02	2.944E-02	5.187E-02	3.491E-03	0.425
		696.49	*	-2.287E-02	3.350E-02	5.227E-02	3.536E-03	-0.438
		778.57		-5.327E-01	2.352E+00	3.780E+00	2.804E-01	-0.141
PR-144		696.49	*	-1.549E+00	2.269E+00	3.540E+00	2.394E-01	-0.438
		1489.15		-1.056E+01	1.003E+01	1.271E+01	8.605E-01	-0.831
PM-146		453.90	*	-2.369E-02	4.326E-02	6.702E-02	5.794E-03	-0.354
		633.02		-9.375E-01	1.414E+00	2.163E+00	7.987E-01	-0.433
		735.90		-3.557E-02	1.519E-01	2.295E-01	6.466E-02	-0.155
		747.13		2.860E-03	8.868E-02	1.462E-01	1.929E-02	0.020
ND-147	+	91.11		7.147E-01	2.354E-01	4.298E-01	3.524E-02	1.663
		319.41		-1.811E+00	2.954E+00	4.724E+00	2.686E-01	-0.383
		439.89		-3.132E+00	5.021E+00	7.734E+00	4.458E-01	-0.405
		531.02	*	2.360E-01	5.183E-01	8.566E-01	1.172E-01	0.275
PM-149		285.90	*	-1.923E+01	5.941E+01	9.741E+01	1.375E+01	-0.197
EU-152		121.78		-3.553E-02	6.792E-02	1.085E-01	8.631E-03	-0.327
		244.69		3.492E-03	3.180E-01	4.738E-01	2.621E-02	0.007
		344.27	*	-5.598E-02	9.186E-02	1.458E-01	9.343E-03	-0.384
		443.98		2.851E-01	8.779E-01	1.456E+00	8.422E-02	0.196
		778.89		8.484E-02	2.612E-01	4.398E-01	3.262E-02	0.193
		867.32		-4.923E-02	8.767E-01	1.218E+00	9.889E-02	-0.040
	+	964.01		4.960E-01	3.154E-01	5.737E-01	4.516E-02	0.864
		1085.78		-2.556E-01	4.329E-01	6.842E-01	4.545E-02	-0.374
		1112.02		8.941E-02	3.076E-01	5.250E-01	3.319E-02	0.170
		1407.95		1.794E-01	1.977E-01	3.572E-01	2.467E-02	0.502
GD-153		69.67		-2.445E-01	1.631E+00	2.608E+00	1.715E-01	-0.094
		83.37		1.839E+01	1.514E+01	2.364E+01	1.728E+00	0.778
		97.43	*	-6.561E-02	7.895E-02	1.108E-01	7.701E-03	-0.592
		103.18		-2.039E-02	9.539E-02	1.562E-01	1.043E-02	-0.131
EU-154		123.07		-4.798E-03	4.803E-02	7.826E-02	7.562E-03	-0.061
		247.94		-8.993E-02	3.326E-01	5.532E-01	5.194E-02	-0.163
		591.81		-2.773E-02	5.556E-01	9.025E-01	9.128E-02	-0.031
		723.30		-1.949E-01	2.231E-01	2.883E-01	2.327E-02	-0.676
		756.87		3.494E-01	7.663E-01	1.305E+00	1.439E-01	0.268
		873.19		-1.587E-02	3.026E-01	4.885E-01	5.826E-02	-0.032
		996.32		-9.340E-02	4.009E-01	6.600E-01	1.141E-01	-0.142
		1004.76		-8.537E-02	2.239E-01	3.634E-01	3.940E-02	-0.235
		1274.45	*	1.105E-01	1.237E-01	2.201E-01	2.145E-02	0.502
EU-155		48.70		-1.903E+00	2.142E+00	3.524E+00	2.303E-01	-0.540

---- Non Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		1.731E-00	4.928E+00	7.640E+00	4.801E-01	0.227
	+	86.54		3.413E-01	1.367E-01	1.832E-01	1.400E-02	1.863
		105.31	*	3.990E-02	9.840E-02	1.651E-01	1.113E-02	0.242
TB-160	+	86.79		9.024E-01	3.613E-01	4.856E-01	3.672E-02	1.858
		197.04		2.901E-02	5.443E-01	8.528E-01	4.507E-02	0.034
		215.65		-9.746E-01	7.101E-01	1.035E+00	5.580E-02	-0.941
		298.57		8.895E-02	1.043E-01	1.809E-01	1.027E-02	0.492
		879.36	*	-5.596E-02	1.347E-01	2.089E-01	1.716E-02	-0.268
		962.29		7.745E-01	5.545E-01	9.057E-01	7.142E-02	0.855
	+	966.15		3.370E-01	2.143E-01	4.598E-01	3.611E-02	0.733
		1177.93		2.068E-01	3.972E-01	6.840E-01	3.789E-02	0.302
		1271.85		-2.962E-01	7.470E-01	1.180E+00	7.554E-02	-0.251
HO-166M		80.57		-7.187E-02	2.674E-01	3.961E-01	2.823E-02	-0.181
		184.41		5.576E-02	3.705E-02	5.886E-02	3.068E-03	0.947
		280.46		-1.265E-01	7.743E-02	1.175E-01	6.636E-03	-1.077
		410.95		3.481E-01	2.434E-01	4.301E-01	2.407E-02	0.809
		711.68	*	-3.698E-02	6.219E-02	9.770E-02	6.725E-03	-0.378
		752.31		-1.008E-01	2.852E-01	4.549E-01	3.278E-02	-0.222
		810.29		-6.057E-02	6.169E-02	9.144E-02	7.011E-03	-0.662
TM-171		51.35		1.380E+01	2.735E+01	4.750E+01	3.096E+00	0.290
		52.39		1.026E+01	1.423E+01	2.488E+01	1.615E+00	0.413
		59.40		6.753E+00	2.617E+01	4.043E+01	2.536E+00	0.167
		66.72	*	3.497E+00	2.940E+01	4.470E+01	2.893E+00	0.078
LU-176	+	88.36		6.724E-01	2.692E-01	3.407E-01	2.596E-02	1.974
		201.83		6.243E-03	2.668E-02	4.289E-02	2.278E-03	0.146
		306.84	*	3.338E-03	2.376E-02	3.941E-02	2.240E-03	0.085
		401.10		6.995E+00	6.402E+00	1.116E+01	6.179E-01	0.627
LU-177		112.95		8.147E-01	1.382E+00	2.281E+00	1.457E-01	0.357
	+	208.36	*	2.166E+00	1.285E+00	1.661E+00	8.885E-02	1.304
LU-177M		52.97		6.138E-01	1.497E+00	2.549E+00	1.650E-01	0.241
		54.07		-1.039E-01	7.755E-01	1.292E+00	8.314E-02	-0.080
		61.30		4.144E-01	1.455E+00	2.246E+00	1.419E-01	0.184
		121.62		-1.546E-01	3.477E-01	5.579E-01	3.484E-02	-0.277
		147.16		-3.484E-01	6.042E-01	9.528E-01	5.280E-02	-0.366
		171.86		-3.839E-01	4.572E-01	7.030E-01	3.618E-02	-0.546
		218.09		6.194E-01	7.874E-01	1.296E+00	7.003E-02	0.478
		268.79		1.244E+00	8.190E-01	1.326E+00	7.453E-02	0.938
		319.02		-1.611E-01	2.452E-01	3.909E-01	2.222E-02	-0.412
		367.43		3.573E-01	8.799E-01	1.480E+00	8.271E-02	0.241
		413.65	*	-1.850E-01	1.727E-01	2.598E-01	1.458E-02	-0.712
HF-181		56.28		-6.719E-01	8.249E-01	1.354E+00	8.612E-02	-0.496
		57.53		-1.745E-01	4.437E-01	7.412E-01	4.686E-02	-0.235
		65.20		3.255E-02	9.469E-01	1.436E+00	9.226E-02	0.023
		133.02		2.527E-02	6.508E-02	9.690E-02	5.715E-03	0.261
		136.25		-3.344E-01	4.117E-01	6.441E-01	3.743E-02	-0.519
		345.85		-1.384E-01	1.793E-01	2.816E-01	1.591E-02	-0.492
		482.03	*	1.249E-02	4.275E-02	7.024E-02	4.194E-03	0.178
W-181		56.28		-2.655E-01	3.267E-01	5.364E-01	3.411E-02	-0.495
		57.53		-6.927E-02	1.759E-01	2.938E-01	1.857E-02	-0.236

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20	*	1.280E-02	3.723E-01	5.647E-01	3.628E-02	0.023
TA-182		67.75		-1.095E-01	1.089E-01	1.673E-01	1.089E-02	-0.655
		100.10		7.394E-02	1.568E-01	2.645E-01	1.803E-02	0.280
		152.43		-1.946E-01	3.175E-01	4.988E-01	2.704E-02	-0.390
		222.10		1.707E-02	3.182E-01	5.411E-01	2.935E-02	0.032
		1001.68		1.177E+00	2.228E+00	3.893E+00	2.935E-01	0.302
	+	1121.28		5.328E-01	2.547E-01	3.543E-01	2.198E-02	1.504
		1189.05		1.732E-01	3.458E-01	5.938E-01	3.348E-02	0.292
		1221.42	*	-8.300E-02	2.028E-01	3.230E-01	1.916E-02	-0.257
		1230.97		-3.738E-01	4.878E-01	7.511E-01	4.522E-02	-0.498
RE-183		57.98		-6.005E-03	1.756E-01	2.975E-01	1.877E-02	-0.020
		59.32		6.276E-02	1.046E-01	1.644E-01	1.031E-02	0.382
		67.20		-1.102E-01	2.088E-01	3.081E-01	1.999E-02	-0.358
		162.32	*	-1.926E-02	1.002E-01	1.599E-01	8.315E-03	-0.120
	+	208.81		2.160E+00	1.281E+00	1.683E+00	9.006E-02	1.283
		291.72		-4.077E-01	9.541E-01	1.355E+00	7.682E-02	-0.301
RE-184		57.98		-2.227E-02	6.512E-01	1.103E+00	6.960E-02	-0.020
		59.32		2.326E-01	3.878E-01	6.091E-01	3.821E-02	0.382
		67.20		-4.084E-01	7.743E-01	1.142E+00	7.410E-02	-0.358
		161.27		1.265E-01	3.196E-01	5.248E-01	2.740E-02	0.241
		216.55		-2.378E-02	2.506E-01	3.941E-01	2.126E-02	-0.060
		252.85	*	-4.514E-02	2.120E-01	3.531E-01	1.965E-02	-0.128
		318.01		-1.253E-01	4.313E-01	7.036E-01	3.999E-02	-0.178
		792.07		3.839E-01	1.066E+00	1.577E+00	1.186E-01	0.243
		903.28		2.212E-01	1.166E+00	1.745E+00	1.453E-01	0.127
		920.93		-1.172E-01	4.979E-01	7.629E-01	6.258E-02	-0.154
OS-185		59.72		1.506E-01	2.852E-01	4.461E-01	2.800E-02	0.338
		61.14		2.557E-02	1.590E-01	2.441E-01	1.541E-02	0.105
		69.30		-2.265E-01	2.805E-01	4.590E-01	3.012E-02	-0.493
		592.07		-3.576E-01	2.280E+00	3.669E+00	2.332E-01	-0.097
		646.12	*	-2.021E-02	3.960E-02	6.303E-02	4.073E-03	-0.321
		717.42		4.291E-01	9.271E-01	1.582E+00	1.096E-01	0.271
		874.81		1.444E-01	5.953E-01	9.877E-01	8.075E-02	0.146
		880.27		-2.266E-01	7.385E-01	1.159E+00	9.524E-02	-0.196
RE-188		155.03	*	1.693E-01	1.632E-01	2.702E-01	1.449E-02	0.627
		477.96		1.635E+00	3.152E+00	5.259E+00	3.130E-01	0.311
		633.10		-1.857E+00	2.746E+00	4.330E+00	2.789E-01	-0.429
W-188	+	63.58		2.909E+01	7.313E+01	8.483E+01	5.411E+00	0.343
		227.08		3.814E+00	1.149E+01	1.975E+01	1.076E+00	0.193
		290.67	*	-3.276E+00	7.491E+00	1.063E+01	6.025E-01	-0.308
IR-192	+	295.96		1.035E+00	1.566E-01	2.813E-01	1.623E-02	3.679
		308.46		7.012E-02	8.534E-02	1.483E-01	8.530E-03	0.473
		316.51	*	6.588E-03	3.240E-02	5.436E-02	3.106E-03	0.121
		468.07		-8.857E-03	7.277E-02	1.011E-01	6.855E-03	-0.088
		604.41		3.697E-03	5.007E-01	7.285E-01	8.494E-02	0.005
		612.46		2.149E+00	8.901E-01	1.521E+00	1.224E-01	1.413
AU-195		65.12		-7.633E-03	1.743E-01	2.635E-01	1.692E-02	-0.029
		66.83		1.369E-02	9.692E-02	1.475E-01	9.552E-03	0.093
	+	75.70		1.166E+00	2.486E-01	4.286E-01	2.935E-02	2.720

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	6.427E-02	1.999E-01	3.323E-01	2.285E-02	0.193
	+	129.76		3.011E+00	3.279E+00	4.732E+00	2.835E-01	0.636
TL-200		367.94	*	7.181E-05	3.279E+00	Half-Life too short		
		579.30		-1.379E-03	3.279E+00	Half-Life too short		
		828.27		-7.732E-04	3.279E+00	Half-Life too short		
		1205.75		6.818E-04	3.279E+00	Half-Life too short		
TL-201		68.90		-3.374E+00	3.507E+00	5.703E+00	3.734E-01	-0.592
		70.82		3.134E+00	2.165E+00	3.465E+00	2.294E-01	0.905
		80.30		-1.113E+00	3.841E+00	5.685E+00	4.042E-01	-0.196
		135.34		-2.152E+00	1.802E+01	2.918E+01	1.703E+00	-0.074
		167.43	*	-1.274E+00	5.165E+00	8.206E+00	4.206E-01	-0.155
TL-202		68.90		-3.666E-01	3.811E-01	6.198E-01	4.058E-02	-0.592
		70.82		3.397E-01	2.346E-01	3.755E-01	2.486E-02	0.905
		80.30		-1.206E-01	4.164E-01	6.163E-01	4.382E-02	-0.196
		439.56	*	-3.550E-02	6.057E-02	9.364E-02	5.393E-03	-0.379
HG-203		70.83		1.544E+00	1.077E+00	1.705E+00	2.120E-01	0.906
		72.87		4.154E-01	6.471E-01	9.997E-01	1.204E-01	0.415
		82.60		-1.372E-01	1.102E+00	1.641E+00	2.123E-01	-0.084
		279.20	*	-1.417E-03	3.742E-02	6.134E-02	3.688E-03	-0.023
BI-207		72.80		1.029E-01	1.921E-01	2.962E-01	1.986E-02	0.347
	+	74.97		6.492E-01	1.385E-01	2.199E-01	1.497E-02	2.953
		84.90		2.096E-01	1.974E-01	3.059E-01	2.270E-02	0.685
		569.67		-2.162E-02	2.901E-02	4.531E-02	2.853E-03	-0.477
		1063.62	*	2.672E-02	5.431E-02	9.444E-02	6.515E-03	0.283
		1770.23		-3.525E-02	5.556E-01	7.745E-01	4.571E-02	-0.046
TL-207		81.07		-1.385E-01	2.156E-01	3.132E-01	2.242E-02	-0.442
		83.78		1.263E-01	1.312E-01	2.027E-01	1.488E-02	0.623
		94.90		4.406E-01	2.225E-01	3.612E-01	2.566E-02	1.220
		122.32		-4.958E-01	1.617E+00	2.611E+00	1.848E-01	-0.190
		144.24		1.651E-01	6.408E-01	1.037E+00	7.342E-02	0.159
		154.21		3.590E-01	3.774E-01	6.226E-01	4.153E-02	0.577
	+	269.46		7.417E-01	2.811E-01	3.328E-01	1.960E-02	2.229
		323.87	*	5.238E-01	6.952E-01	1.064E+00	1.753E-01	0.492
	+	338.28		6.746E+00	1.598E+00	2.480E+00	2.594E-01	2.720
		445.03		-2.680E-01	2.143E+00	3.436E+00	3.527E-01	-0.078
PO-209		260.50		1.009E+00	8.966E+00	1.515E+01	8.472E-01	0.067
		262.80		8.323E+00	2.433E+01	4.155E+01	2.327E+00	0.200
		896.60	*	1.058E+00	7.807E+00	1.280E+01	1.068E+00	0.083
BI-210		46.50	*	1.561E+00	3.141E+00	5.405E+00	4.072E-01	0.289
PB-210		46.50	*	1.561E+00	3.141E+00	5.405E+00	4.072E-01	0.289
PO-210		46.50	*	1.561E+00	3.140E+00	5.405E+00	3.467E-01	0.289
PB-211		404.84	*	-1.024E+00	1.098E+00	1.341E+00	8.354E-01	-0.764
		427.08		-1.376E-01	1.974E+00	3.186E+00	1.969E+00	-0.043
		831.96		-4.362E-01	1.266E+00	1.948E+00	1.219E+00	-0.224
BI-212	+	727.18	*	7.593E-01	5.683E-01	6.914E-01	5.986E-02	1.098
		785.46		4.765E-01	1.796E+00	3.003E+00	2.244E-01	0.159
		1620.62		1.151E+00	1.233E+00	2.301E+00	1.482E-01	0.500
PO-215		81.07		-1.385E-01	2.156E-01	3.132E-01	2.242E-02	-0.442
		83.78		1.263E-01	1.312E-01	2.027E-01	1.488E-02	0.623

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		4.406E-01	2.225E-01	3.612E-01	2.566E-02	1.220
		122.32		-4.958E-01	1.617E+00	2.611E+00	1.848E-01	-0.190
		144.24		1.651E-01	6.408E-01	1.037E+00	7.342E-02	0.159
		154.21		3.590E-01	3.774E-01	6.226E-01	4.153E-02	0.577
	-	269.46		7.417E-01	2.811E-01	3.328E-01	1.960E-02	2.229
		323.87	*	5.238E-01	6.952E-01	1.064E+00	1.753E-01	0.492
	+	338.28		6.746E+00	1.598E+00	2.480E+00	2.594E-01	2.720
		445.03		-2.680E-01	2.143E+00	3.436E+00	3.527E-01	-0.078
RN-219	-	271.23		9.516E-01	3.642E-01	4.345E-01	3.468E-02	2.190
		401.81	*	4.034E-01	4.061E-01	6.981E-01	9.422E-02	0.578
RN-220		549.76	*	1.374E+01	2.328E+01	4.088E+01	2.549E+00	0.336
RA-223		81.07		-1.385E-01	2.156E-01	3.132E-01	2.242E-02	-0.442
		83.78		1.263E-01	1.312E-01	2.027E-01	1.488E-02	0.623
		94.90		4.406E-01	2.225E-01	3.612E-01	2.566E-02	1.220
		122.32		-4.958E-01	1.617E+00	2.611E+00	1.848E-01	-0.190
		144.24		1.651E-01	6.408E-01	1.037E+00	7.342E-02	0.159
		154.21		3.590E-01	3.774E-01	6.226E-01	4.153E-02	0.577
	+	269.46		7.417E-01	2.811E-01	3.328E-01	1.960E-02	2.229
		323.87	*	5.238E-01	6.952E-01	1.064E+00	1.753E-01	0.492
	+	338.28		6.746E+00	1.598E+00	2.480E+00	2.594E-01	2.720
		445.03		-2.680E-01	2.143E+00	3.436E+00	3.527E-01	-0.078
AC-227		79.80		-2.359E-01	1.610E+00	2.400E+00	5.025E-01	-0.098
		236.00		6.906E-02	2.330E-01	3.537E-01	3.638E-02	0.195
		256.20	*	-1.333E-01	3.468E-01	5.714E-01	7.925E-02	-0.233
		286.10		-2.934E-02	1.403E+00	2.340E+00	2.689E-01	-0.013
	+	299.80		2.745E+00	1.889E+00	2.463E+00	4.001E-01	1.114
		304.40		-4.263E-02	1.978E+00	2.889E+00	4.985E-01	-0.015
		334.20		2.007E-01	2.923E+00	3.604E+00	6.592E-01	0.056
TH-227		79.80		-2.359E-01	1.611E+00	2.400E+00	5.093E-01	-0.098
	+	94.00		7.458E+00	3.177E+00	3.688E+00	7.836E-01	2.022
		236.00		6.906E-02	2.330E-01	3.537E-01	3.135E-02	0.195
		256.20	*	-1.333E-01	3.470E-01	5.714E-01	9.613E-02	-0.233
		286.10		-2.934E-02	1.403E+00	2.340E+00	2.344E+00	-0.013
	+	299.80		2.745E+00	1.889E+00	2.463E+00	4.001E-01	1.114
		304.40		-4.263E-02	1.978E+00	2.889E+00	4.985E-01	-0.015
		334.20		2.007E-01	2.923E+00	3.604E+00	6.592E-01	0.056
TH-229		85.43		1.327E-01	2.021E-01	3.082E-01	2.299E-02	0.430
	+	88.47		3.871E-01	1.550E-01	1.947E-01	1.481E-02	1.988
		100.00		4.958E-02	1.668E-01	2.770E-01	1.889E-02	0.179
		193.63	*	5.737E-01	4.993E-01	8.370E-01	4.407E-02	0.685
		210.97		4.696E-01	8.546E-01	1.243E+00	6.668E-02	0.378
PA-231		283.67	*	4.608E-01	1.380E+00	2.344E+00	3.217E-01	0.197
	+	301.29		1.098E+00	7.430E-01	9.750E-01	1.013E-01	1.126
TH-231		81.07		-1.385E-01	2.156E-01	3.132E-01	2.242E-02	-0.442
		83.78		1.263E-01	1.312E-01	2.027E-01	1.488E-02	0.623
		94.90		4.406E-01	2.225E-01	3.612E-01	2.566E-02	1.220
		122.32		-4.958E-01	1.617E+00	2.611E+00	1.848E-01	-0.190
		144.24		1.651E-01	6.408E-01	1.037E+00	7.342E-02	0.159
		154.21		3.590E-01	3.774E-01	6.226E-01	4.153E-02	0.577

---- Non-Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		7.417E-01	2.811E-01	3.328E-01	1.960E-02	2.229
		323.87	*	5.238E-01	6.952E-01	1.064E+00	1.753E-01	0.492
	+	338.28		6.746E+00	1.598E+00	2.480E+00	2.594E-01	2.720
		445.03		-2.680E-01	2.143E+00	3.436E+00	3.527E-01	-0.078
U-231		84.21		4.834E+00	4.668E+00	7.233E+00	5.332E-01	0.668
	+	92.29		6.136E+00	2.308E+00	3.225E+00	2.350E-01	1.903
		95.87	*	5.066E-01	8.450E-01	1.297E+00	9.134E-02	0.391
		108.00		-2.638E-01	1.562E+00	2.556E+00	1.665E-01	-0.103
PA-233	+	75.28		1.895E+01	4.703E+00	6.582E+00	9.489E-01	2.879
	+	86.59		5.550E+00	2.632E+00	2.989E+00	7.920E-01	1.857
	+	300.12		7.652E-01	5.218E-01	6.848E-01	9.166E-02	1.117
		311.98	*	-2.594E-02	5.746E-02	9.281E-02	5.616E-03	-0.279
		340.50		1.864E+00	8.194E-01	1.194E+00	2.737E-01	1.562
		398.62		-8.736E-01	2.007E+00	3.159E+00	8.148E-01	-0.277
		415.76		-6.185E-01	1.494E+00	2.347E+00	4.820E-01	-0.264
PA-234	+	63.00		8.531E-01	2.147E+00	2.545E+00	3.657E-01	0.335
		94.67		4.594E-01	1.709E-01	2.753E-01	3.142E-02	1.669
		98.44		1.761E-02	8.241E-02	1.355E-01	7.528E-02	0.130
		99.86		1.149E-01	4.234E-01	7.024E-01	4.796E-02	0.164
		111.00		-1.641E-01	1.706E-01	2.675E-01	2.847E-02	-0.614
		131.20		-5.837E-02	1.122E-01	1.585E-01	9.431E-03	-0.368
		152.70		-7.909E-02	3.089E-01	4.933E-01	7.730E-02	-0.160
	+	186.00		3.969E+00	2.250E+00	2.453E+00	7.468E-01	1.618
		226.40		-1.377E-02	3.703E-01	6.267E-01	7.136E-02	-0.022
		227.20		-1.642E-03	3.963E-01	6.714E-01	3.659E-02	-0.002
		248.90		7.253E-02	7.592E-01	1.285E+00	2.752E-01	0.056
		293.70		4.367E+00	1.093E+00	1.562E+00	2.505E-01	2.796
		369.80		-1.624E-01	8.479E-01	1.374E+00	2.853E-01	-0.118
		568.70		-7.137E-01	9.365E-01	1.460E+00	9.189E-02	-0.489
		569.50		-1.333E-01	2.522E-01	4.005E-01	2.522E-02	-0.333
		574.00		4.464E-01	1.413E+00	2.424E+00	1.530E-01	0.184
		699.00		2.311E-02	7.061E-01	1.170E+00	2.144E-01	0.020
		706.10		4.880E-01	1.152E+00	1.925E+00	8.525E-01	0.253
		733.00		-1.243E-01	4.366E-01	6.004E-01	1.299E-01	-0.207
		742.81		-1.061E+00	1.510E+00	2.036E+00	1.365E+00	-0.521
	+	796.30		1.049E+00	1.269E+00	1.730E+00	4.626E-01	0.606
		805.60		1.303E-01	1.073E+00	1.756E+00	5.337E-01	0.074
		819.60		-3.895E-01	1.259E+00	1.982E+00	7.498E-01	-0.197
		826.30		2.601E-01	8.442E-01	1.401E+00	6.248E-01	0.186
		831.60		-3.939E-01	6.557E-01	9.919E-01	2.939E-01	-0.397
		876.40		1.146E+00	1.426E+00	1.481E+00	1.522E+00	0.774
		880.51		-8.546E-02	2.662E-01	4.169E-01	3.427E-02	-0.205
		883.24		-2.401E-01	3.256E-01	4.178E-01	2.807E-01	-0.575
		899.00		4.791E-02	8.997E-01	1.463E+00	6.387E-01	0.033
		925.00		9.407E-01	1.271E+00	2.187E+00	1.788E-01	0.430
		926.50		9.173E-02	1.860E-01	3.118E-01	7.834E-02	0.294
		946.00	*	1.361E-01	3.142E-01	5.257E-01	9.722E-02	0.259
		949.00		1.131E-01	4.629E-01	7.631E-01	6.100E-02	0.148
		980.50		-5.473E-01	7.692E-01	1.142E+00	8.830E-02	-0.479

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		3.575E-01	1.073E+00	1.794E+00	1.164E+00	0.199
PA-234M		766.41		8.412E+00	1.882E+01	3.005E+01	2.300E+01	0.280
		1001.03	*	4.770E+00	7.291E-00	1.283E+01	1.331E+00	0.372
U-235	-	89.95		3.053E+00	1.348E+00	1.770E+00	5.408E-01	1.725
	+	93.35		2.320E+00	1.070E+00	1.236E+00	3.415E-01	1.877
		105.00		3.728E-01	9.722E-01	1.621E+00	4.753E-01	0.230
		143.76	*	4.038E-02	1.964E-01	3.169E-01	5.147E-02	0.127
		163.35		1.469E-01	4.334E-01	7.078E-01	1.259E-01	0.208
	-	185.71		1.470E-01	7.069E-02	9.056E-02	4.728E-03	1.623
		205.31		-1.033E-01	5.327E-01	7.402E-01	1.320E-01	-0.140
NP-236		94.67		3.508E-01	1.260E-01	2.091E-01	1.489E-02	1.678
		98.44		1.329E-02	6.186E-02	1.024E-01	7.068E-03	0.130
		111.00		-1.242E-01	1.286E-01	2.024E-01	1.302E-02	-0.614
		160.31	*	-2.615E-02	7.303E-02	1.157E-01	6.065E-03	-0.226
NP-239		99.55		3.654E-02	1.413E-01	2.342E-01	1.603E-02	0.156
		117.00	*	7.358E-03	1.736E-01	2.855E-01	1.802E-02	0.026
	+	209.75		1.722E+00	1.022E+00	1.330E+00	7.127E-02	1.295
		228.18		-8.937E-02	2.068E-01	3.436E-01	1.874E-02	-0.260
		277.60		1.365E-01	1.674E-01	2.861E-01	1.614E-02	0.477
		334.30		1.137E-01	1.656E+00	2.042E+00	1.158E-01	0.056
AM-241		59.54	*	4.656E-02	1.524E-01	2.359E-01	1.676E-02	0.197
CM-243		99.55		3.760E-02	1.453E-01	2.410E-01	1.649E-02	0.156
		103.76	*	8.393E-04	8.761E-02	1.448E-01	9.641E-03	0.006
		117.00		7.570E-03	1.786E-01	2.937E-01	1.854E-02	0.026
	+	209.75		1.698E+00	1.007E+00	1.311E+00	7.025E-02	1.295
		228.18		-9.029E-02	2.089E-01	3.471E-01	1.894E-02	-0.260
		277.60		1.376E-01	1.688E-01	2.884E-01	1.627E-02	0.477
CM-247		278.00		3.993E-01	6.947E-01	1.174E+00	6.625E-02	0.340
		287.40		5.018E-01	1.104E+00	1.888E+00	1.069E-01	0.266
		402.60	*	3.830E-02	3.475E-02	6.067E-02	3.365E-03	0.631
CF-249		252.85		-1.701E-01	7.990E-01	1.331E+00	7.407E-02	-0.128
		333.44		1.464E-01	2.314E-01	2.655E-01	1.506E-02	0.551
		387.95	*	1.108E-03	3.766E-02	6.171E-02	3.392E-03	0.018
CF-251		176.60	*	1.793E-01	1.247E-01	2.122E-01	1.097E-02	0.845
		227.00		1.227E-01	3.490E-01	6.004E-01	3.272E-02	0.204
		285.00		-7.184E-01	1.601E+00	2.609E+00	1.476E-01	-0.275

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          CEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358009      *
* Acquisition date :  6-JUN-2009 12:15:11 Detector SN#     :                *
* Detector ID        : GAM12               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.59     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232358009           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.3379E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.327E+01	2.960E+00	4.814E-01	0.000E+00
CD-109	2.879E+00	1.130E+00	9.974E-01	0.000E+00
SN-126	2.835E-01	1.112E-01	1.449E-01	0.000E+00
BA-137M	4.815E-02	4.337E-02	6.549E-02	0.000E+00
CS-137	5.090E-02	4.584E-02	6.923E-02	0.000E+00
TL-208	6.004E-01	8.765E-02	5.175E-02	0.000E+00
BI-211	3.510E+00	4.176E-01	3.157E-01	0.000E+00
PB-212	1.690E+00	1.594E-01	8.427E-02	0.000E+00
PO-212	1.690E+00	1.594E-01	8.427E-02	0.000E+00
BI-214	1.189E+00	1.802E-01	1.161E-01	0.000E+00
PB-214	1.221E+00	1.581E-01	1.150E-01	0.000E+00
PO-214	1.221E+00	1.581E-01	1.150E-01	0.000E+00
PO-216	1.690E+00	1.594E-01	8.427E-02	0.000E+00
PO-218	1.221E+00	1.581E-01	1.150E-01	0.000E+00
RA-224	4.809E+00	1.166E+00	9.590E-01	0.000E+00
RA-226	1.189E+00	1.802E-01	1.161E-01	0.000E+00
AC-228	1.724E+00	3.552E-01	2.099E-01	0.000E+00
RA-228	1.724E+00	3.552E-01	2.099E-01	0.000E+00
TH-228	1.690E+00	1.594E-01	8.426E-02	0.000E+00
TH-230	1.189E+00	1.802E-01	1.161E-01	0.000E+00
TH-232	1.724E+00	3.552E-01	2.099E-01	0.000E+00
TH-234	7.319E-01	1.806E+00	2.098E+00	0.000E+00
U-234	1.189E+00	1.802E-01	1.161E-01	0.000E+00
NP-237	8.325E-01	3.675E-01	4.305E-01	0.000E+00
U-238	7.319E-01	1.806E+00	2.098E+00	0.000E+00
AM-243	3.617E-01	7.560E-02	9.256E-02	0.000E+00
ANH-511	1.462E-01	7.591E-02	4.519E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	2.435E-01	3.198E-01	5.648E-01	0.000E+00	NOT IDENT.
NA-22	4.196E-02	4.352E-02	7.985E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.147E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.036E-02	2.776E-02	5.577E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.252E-02	7.676E-02	0.000E+00	FAIL ABUN
SC-46	5.836E-03	3.864E-02	6.550E-02	0.000E+00	FAIL ABUN
V-48	-1.930E-02	6.694E-02	1.074E-01	0.000E+00	NOT IDENT.
CR-51	-1.762E-01	3.385E-01	5.720E-01	0.000E+00	NOT IDENT.
MN-52	4.453E-03	2.288E-01	3.814E-01	0.000E+00	NOT IDENT.
MN-54	9.228E-03	3.604E-02	6.196E-02	0.000E+00	NOT IDENT.
CO-56	-5.457E-04	3.957E-02	6.639E-02	0.000E+00	NOT IDENT.
CO-57	-1.061E-02	2.271E-02	3.888E-02	0.000E+00	NOT IDENT.
CO-58	-1.924E-02	3.958E-02	6.391E-02	0.000E+00	NOT IDENT.
FE-59	-1.264E-01	1.010E-01	1.545E-01	0.000E+00	NOT IDENT.
CO-60	-1.870E-02	3.599E-02	5.625E-02	0.000E+00	NOT IDENT.
ZN-65	9.392E-03	9.500E-02	1.416E-01	0.000E+00	NOT IDENT.
GE-68	-1.311E-01	1.280E+00	2.175E+00	0.000E+00	NOT IDENT.
AS-73	-5.239E-02	7.501E-01	1.358E+00	0.000E+00	NOT IDENT.
AS-74	3.333E-02	8.373E-02	1.496E-01	0.000E+00	NOT IDENT.
SE-75	-3.970E-03	4.390E-02	6.803E-02	0.000E+00	NOT IDENT.
BR-77	4.534E+00	7.480E+00	1.303E+01	0.000E+00	FAIL ABUN
SR-82	-7.106E-01	3.891E-01	5.504E-01	0.000E+00	NOT IDENT.
RB-83	4.602E-02	7.000E-02	1.186E-01	0.000E+00	NOT IDENT.
RB-84	-6.408E-02	6.416E-02	9.558E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.317E+00	1.369E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.708E-02	6.936E-02	0.000E+00	NOT IDENT.
RB-86	-2.470E-01	7.840E-01	1.308E+00	0.000E+00	NOT IDENT.
Y-88	1.010E-02	2.570E-02	4.704E-02	0.000E+00	NOT IDENT.
ZR-88	2.984E-03	2.762E-02	4.759E-02	0.000E+00	NOT IDENT.
Y-91	3.692E-01	2.074E+01	3.520E+01	0.000E+00	NOT IDENT.
NB-94	4.012E-03	3.483E-02	6.010E-02	0.000E+00	NOT IDENT.
NB-95	1.865E-02	4.076E-02	7.157E-02	0.000E+00	NOT IDENT.
NB-95M	-3.250E-02	1.174E-01	1.820E-01	0.000E+00	NOT IDENT.
ZR-95	4.017E-02	7.032E-02	1.248E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.477E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.675E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.441E+00	8.133E+00	1.445E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.642E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.617E-03	3.176E-02	5.235E-02	0.000E+00	NOT IDENT.
RH-102	-7.879E-03	2.926E-02	4.820E-02	0.000E+00	NOT IDENT.
RU-103	-1.196E-02	3.774E-02	6.149E-02	0.000E+00	FAIL ABUN
RH-106	-3.245E-01	2.902E-01	4.524E-01	0.000E+00	FAIL ABUN
RU-106	-3.245E-01	2.884E-01	4.524E-01	0.000E+00	FAIL ABUN
AG-108M	4.181E-03	3.049E-02	5.218E-02	0.000E+00	NOT IDENT.
AG-110M	1.541E-02	3.691E-02	5.775E-02	0.000E+00	NOT IDENT.
IN-111	-5.219E-01	7.955E-01	1.193E+00	0.000E+00	NOT IDENT.
IN-113M	1.790E-02	4.015E-02	7.068E-02	0.000E+00	NOT IDENT.
SN-113	1.790E-02	4.015E-02	7.068E-02	0.000E+00	NOT IDENT.
IN-114M	-1.262E-01	1.891E-01	2.718E-01	0.000E+00	NOT IDENT.
CD-115	-3.893E+00	7.407E+00	1.177E+01	0.000E+00	NOT IDENT.
SN-117M	-2.143E-02	4.692E-02	7.874E-02	0.000E+00	NOT IDENT.
SB-122	9.562E-01	1.473E+00	2.684E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.281E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-8.853E-03	2.554E-02	4.309E-02	0.000E+00	NOT IDENT.
I-124	-4.146E-01	6.067E-01	9.012E-01	0.000E+00	NOT IDENT.
SB-124	3.408E-02	6.549E-02	1.213E-01	0.000E+00	FAIL ABUN
SB-125	-4.274E-02	8.810E-02	1.444E-01	0.000E+00	FAIL ABUN
TE-125M	7.817E-01	8.004E+00	1.417E+01	0.000E+00	NOT IDENT.
I-126	1.700E-01	1.939E-01	3.147E-01	0.000E+00	NOT IDENT.
SB-126	3.160E-02	1.468E-01	2.480E-01	0.000E+00	FAIL ABUN
SB-127	-5.837E-01	1.035E+00	1.691E+00	0.000E+00	NOT IDENT.
XE-127	2.571E-02	4.183E-02	7.247E-02	0.000E+00	NOT IDENT.
I-131	-4.388E-03	9.900E-02	1.700E-01	0.000E+00	NOT IDENT.
TE-132	-1.051E-01	4.852E-01	8.601E-01	0.000E+00	NOT IDENT.
BA-133	-1.490E-02	4.533E-02	6.641E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.410E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.390E-02	6.248E-02	9.043E-02	0.000E+00	FAIL ABUN
CS-135	1.017E-01	1.569E-01	2.547E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.819E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.360E-02	1.046E-01	1.811E-01	0.000E+00	FAIL ABUN
CE-139	7.882E-03	2.698E-02	4.674E-02	0.000E+00	NOT IDENT.
BA-140	8.552E-02	2.217E-01	3.967E-01	0.000E+00	NOT IDENT.
LA-140	2.015E-02	8.252E-02	1.272E-01	0.000E+00	FAIL ABUN
CE-141	3.942E-02	5.405E-02	9.628E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.042E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	5.441E-02	1.858E-01	3.268E-01	0.000E+00	NOT IDENT.
PM-144	-2.287E-02	3.283E-02	5.308E-02	0.000E+00	NOT IDENT.
PR-144	-1.549E+00	2.223E+00	3.595E+00	0.000E+00	NOT IDENT.

PM-146	2.369E-02	4.240E-02	6.858E-02	0.000E+00	NOT IDENT.
ND-147	2.360E-01	5.079E-01	8.740E-01	0.000E+00	FAIL ABUN
PM-149	-1.923E-01	5.822E-01	1.005E+02	0.000E+00	NOT IDENT.
EU-152	-5.598E-02	9.002E-02	1.499E-01	0.000E+00	FAIL ABUN
GD-153	-6.561E-02	7.737E-02	1.164E-01	0.000E+00	NOT IDENT.
EU-154	1.105E-01	1.212E-01	2.211E-01	0.000E+00	NOT IDENT
EU-155	3.990E-02	9.644E-02	1.733E-01	0.000E+00	FAIL ABUN
TB-160	-5.596E-02	1.320E-01	2.113E-01	0.000E+00	FAIL ABUN
HO-166M	-3.698E-02	6.095E-02	9.918E-02	0.000E+00	NOT IDENT.
TM-171	3.497E+00	2.881E+01	4.727E+01	0.000E+00	NOT IDENT.
LU-176	3.338E-03	2.328E-02	4.061E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.260E+00	1.723E+00	0.000E+00	FAIL ABUN
LU-177M	-1.850E-01	1.692E-01	2.663E-01	0.000E+00	NOT IDENT.
HF-181	1.249E-02	4.189E-02	7.179E-02	0.000E+00	NOT IDENT.
W-181	1.280E-02	3.649E-01	5.973E-01	0.000E+00	NOT IDENT.
TA-182	-8.300E-02	1.988E-01	3.247E-01	0.000E+00	FAIL ABUN
RE-183	-1.926E-02	9.822E-02	1.666E-01	0.000E+00	FAIL ABUN
RE-184	-4.514E-02	2.077E-01	3.650E-01	0.000E+00	NOT IDENT.
OS-185	-2.021E-02	3.881E-02	6.409E-02	0.000E+00	NOT IDENT.
RE-188	1.693E-01	1.599E-01	2.817E-01	0.000E+00	NOT IDENT.
W-188	-3.276E+00	7.341E+00	1.096E+01	0.000E+00	FAIL ABUN
IR-192	6.588E-03	3.175E-02	5.598E-02	0.000E+00	FAIL ABUN
AU-195	6.427E-02	1.959E-01	3.491E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.172E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.274E+00	5.061E+00	8.543E+00	0.000E+00	NOT IDENT.
TL-202	-3.550E-02	5.936E-02	9.588E-02	0.000E+00	NOT IDENT.
HG-203	-1.417E-03	3.667E-02	6.330E-02	0.000E+00	NOT IDENT.
BI-207	2.672E-02	5.323E-02	9.517E-02	0.000E+00	FAIL ABUN
TL-207	5.238E-01	6.813E-01	1.095E+00	0.000E+00	FAIL ABUN
PO-209	1.058E+00	7.651E+00	1.294E+01	0.000E+00	NOT IDENT.
BI-210	1.561E+00	3.078E+00	5.750E+00	0.000E+00	NOT IDENT.
PB-210	1.561E+00	3.078E+00	5.750E+00	0.000E+00	NOT IDENT.
PO-210	1.561E+00	3.077E+00	5.750E+00	0.000E+00	NOT IDENT.
PB-211	-1.024E+00	1.076E+00	1.375E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.569E-01	7.016E-01	0.000E+00	FAIL ABUN
PO-215	5.238E-01	6.813E-01	1.095E+00	0.000E+00	FAIL ABUN
RN-219	4.034E-01	3.980E-01	7.158E-01	0.000E+00	FAIL ABUN
RN-220	1.374E+01	2.281E+01	4.169E+01	0.000E+00	NOT IDENT.
RA-223	5.238E-01	6.813E-01	1.095E+00	0.000E+00	FAIL ABUN
AC-227	-1.333E-01	3.399E-01	5.906E-01	0.000E+00	FAIL ABUN
TH-227	-1.333E-01	3.401E-01	5.906E-01	0.000E+00	FAIL ABUN
TH-229	5.737E-01	4.893E-01	8.692E-01	0.000E+00	FAIL ABUN
PA-231	4.608E-01	1.352E+00	2.419E+00	0.000E+00	FAIL ABUN
TH-231	5.238E-01	6.813E-01	1.095E+00	0.000E+00	FAIL ABUN
U-231	5.066E-01	8.281E-01	1.363E+00	0.000E+00	FAIL ABUN
PA-233	-2.594E-02	5.631E-02	9.560E-02	0.000E+00	FAIL ABUN
PA-234	1.361E-01	3.079E-01	5.308E-01	0.000E+00	FAIL ABUN
PA-234M	4.770E+00	7.146E+00	1.294E+01	0.000E+00	NOT IDENT.
U-235	4.038E-02	1.924E-01	3.308E-01	0.000E+00	FAIL ABUN
NP-236	-2.615E-02	7.157E-02	1.205E-01	0.000E+00	NOT IDENT.
NP-239	7.358E-03	1.702E-01	2.991E-01	0.000E+00	FAIL ABUN
AM-241	4.656E-02	1.493E-01	2.499E-01	0.000E+00	NOT IDENT.
CM-243	8.393E-04	8.586E-02	1.520E-01	0.000E+00	FAIL ABUN
CM-247	3.830E-02	3.406E-02	6.222E-02	0.000E+00	NOT IDENT.
CF-249	1.108E-03	3.691E-02	6.332E-02	0.000E+00	NOT IDENT.
CF-251	1.793E-01	1.222E-01	2.208E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:16:41.29

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*****************************************************************************
*                          GTL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358009.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:15:11.
Sample ID         : G232358009           Sample quantity  : 1.33790E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.59  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1438	10.67*	1.137E+00	3.327E+01	3.327E+01	9.08
CD-109	88.03	211	3.72*	5.643E+00	2.820E+00	2.879E+00	40.04
SN-126	64.28	32	9.60	3.219E+00	2.897E-01	2.897E-01	251.67
	86.94	211	8.90	5.643E+00	1.179E+00	1.179E+00	56.92
	87.57	211	37.00*	5.643E+00	2.835E-01	2.835E-01	40.04
BA-137M	661.65	35	89.98*	2.250E+00	4.811E-02	4.815E-02	91.91
CS-137	661.65	35	85.12*	2.250E+00	5.085E-02	5.090E-02	91.91
TL-208	277.35	------	6.80	4.505E+00	------ Line Not Found		------
	510.84	146	21.60	2.793E+00	6.768E-01	6.768E-01	53.64
	583.14	451	84.20*	2.503E+00	6.004E-01	6.004E-01	14.90
	860.37	66	12.46	1.793E+00	8.311E-01	8.311E-01	59.71
BI-211	72.87	------	1.27	4.387E+00	------ Line Not Found		------
	351.07	609	12.94*	3.760E+00	3.510E+00	3.510E+00	12.14
PB-212	74.81	392	10.70	4.605E+00	2.231E+00	2.231E+00	23.28
	77.11	567	18.00	4.829E+00	1.829E+00	1.829E+00	15.88
	87.30	211	8.00	5.643E+00	1.311E+00	1.311E+00	41.27
	238.63	1347	44.60*	5.013E+00	1.690E+00	1.690E+00	9.63
	300.09	76	3.41	4.246E+00	1.481E+00	1.481E+00	67.37
PO-212	74.81	392	10.70	4.605E+00	2.231E+00	2.231E+00	23.28
	77.11	567	18.00	4.829E+00	1.829E+00	1.829E+00	15.88
	87.30	211	8.00	5.643E+00	1.311E+00	1.311E+00	41.27
	115.19	------	0.60	6.604E+00	------ Line Not Found		------
	238.63	1347	44.60*	5.013E+00	1.690E+00	1.690E+00	9.63
	300.09	76	3.41	4.246E+00	1.481E+00	1.481E+00	67.37
BI-214	609.31	473	46.30*	2.413E+00	1.189E+00	1.189E+00	15.46
	768.36	------	5.04	1.981E+00	------ Line Not Found		------
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	87	15.10	1.422E+00	1.134E+00	1.134E+00	48.26
	1238.11	------	5.94	1.305E+00	------ Line Not Found		------
	1377.67	------	4.11	1.192E+00	------ Line Not Found		------
	1764.49	80	15.80	9.899E-01	1.426E+00	1.426E+00	31.43
PB-214	74.81	392	6.21	4.605E+00	3.844E+00	3.844E+00	22.58

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	567	10.50	4.829E+00	3.135E+00	3.136E+00	17.61
	87.30	211	4.67	5.643E-00	2.246E+00	2.246E+00	40.78
	241.98	336	7.49	4.970E+00	2.536E+00	2.536E+00	25.38
	295.21	404	19.20	4.300E+00	1.371E+00	1.372E+00	16.33
	351.92	609	37.20*	3.760E+00	1.221E+00	1.221E+00	13.21
PO-214	74.81	392	6.21	4.605E+00	3.844E+00	3.844E+00	22.58
	77.11	567	10.50	4.829E+00	3.135E+00	3.136E+00	17.61
	87.30	211	4.67	5.643E+00	2.246E+00	2.246E+00	40.78
	241.98	336	7.49	4.970E+00	2.536E+00	2.536E+00	25.38
	295.21	404	19.20	4.300E+00	1.371E+00	1.372E+00	16.33
	351.92	609	37.20*	3.760E+00	1.221E+00	1.221E+00	13.21
PO-216	74.81	392	10.70	4.605E+00	2.231E+00	2.231E+00	23.28
	77.11	567	18.00	4.829E+00	1.829E+00	1.829E+00	15.88
	87.30	211	8.00	5.643E+00	1.311E+00	1.311E+00	41.27
	238.63	1347	44.60*	5.013E+00	1.690E+00	1.690E+00	9.63
	300.09	76	3.41	4.246E+00	1.481E+00	1.481E+00	67.37
PO-218	74.81	392	6.21	4.605E+00	3.844E+00	3.844E+00	22.58
	77.11	567	10.50	4.829E+00	3.135E+00	3.136E+00	17.61
	87.30	211	4.67	5.643E+00	2.246E+00	2.246E+00	40.78
	241.98	336	7.49	4.970E+00	2.536E+00	2.536E+00	25.38
	295.21	404	19.20	4.300E+00	1.371E+00	1.372E+00	16.33
	351.92	609	37.20*	3.760E+00	1.221E+00	1.221E+00	13.21
RA-224	240.98	336	3.95*	4.970E+00	4.809E+00	4.809E+00	24.75
RA-226	609.31	473	46.30*	2.413E+00	1.189E+00	1.189E+00	15.46
	768.36	------	5.04	1.981E+00	------	Line Not Found	------
	934.06	------	3.21	1.670E+00	------	Line Not Found	------
	1120.29	87	15.10	1.422E+00	1.134E+00	1.134E+00	48.26
	1238.11	------	5.94	1.305E+00	------	Line Not Found	------
	1377.67	------	4.11	1.192E+00	------	Line Not Found	------
	1764.49	80	15.80	9.899E-01	1.426E+00	1.426E+00	31.43
AC-228	338.32	254	11.40	3.877E+00	1.615E+00	1.615E+00	45.96
	911.07	290	27.70*	1.706E+00	1.724E+00	1.724E+00	21.02
	969.11	170	16.60	1.616E+00	1.778E+00	1.778E+00	30.99
RA-228	338.32	254	11.40	3.877E+00	1.615E+00	1.615E+00	45.96
	911.07	290	27.70*	1.706E+00	1.724E+00	1.724E+00	21.02
	969.11	170	16.60	1.616E+00	1.778E+00	1.778E+00	30.99
TH-228	84.40	------	1.21	5.453E+00	------	Line Not Found	------
	238.60	1347	44.60*	5.013E+00	1.690E+00	1.690E+00	9.63
	300.10	76	3.41	4.246E+00	1.481E+00	1.481E+00	89.13
TH-230	609.31	473	46.30*	2.413E+00	1.189E+00	1.189E+00	15.46
	768.36	------	5.04	1.981E+00	------	Line Not Found	------
	934.06	------	3.21	1.670E+00	------	Line Not Found	------
	1120.29	87	15.10	1.422E+00	1.134E+00	1.134E+00	48.26
	1238.11	------	5.94	1.305E+00	------	Line Not Found	------
	1377.67	------	4.11	1.192E+00	------	Line Not Found	------
	1764.49	80	15.80	9.899E-01	1.426E+00	1.426E+00	31.43
TH-232	338.32	254	11.40	3.877E+00	1.615E+00	1.615E+00	22.00
	911.07	290	27.70*	1.706E+00	1.724E+00	1.724E+00	21.02
	969.11	170	16.60	1.616E+00	1.778E+00	1.778E+00	30.99

Sample ID : G232258009 Acquisition date : 6-JUL-2009 12:15:11

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	32	3.80*	3.219E+00	7.319E-01	7.319E-01	251.86
	92.38	223	5.41	5.985E+00	1.930E+00	1.930E+00	40.83
U-234	609.31	473	46.30*	2.413E+00	1.189E+00	1.189E+00	15.46
	768.36	------	5.04	1.981E+00	------	Line Not Found	------
	934.06	------	3.21	1.670E+00	------	Line Not Found	------
	1120.29	87	15.10	1.422E+00	1.134E+00	1.134E+00	48.26
	1238.11	------	5.94	1.305E+00	------	Line Not Found	------
	1377.67	------	4.11	1.192E+00	------	Line Not Found	------
	1764.49	80	15.80	9.899E-01	1.426E+00	1.426E+00	31.43
NP-237	86.50	211	12.60*	5.643E+00	8.325E-01	8.325E-01	45.05
	95.87	------	2.60	6.124E+00	------	Line Not Found	------
U-238	63.29	32	3.80*	3.219E+00	7.319E-01	7.319E-01	251.86
	92.38	223	5.41	5.985E+00	1.930E+00	1.930E+00	37.61
AM-243	74.67	392	66.00*	4.605E+00	3.617E-01	3.617E-01	21.33
	86.72	211	0.34	5.643E+00	3.122E+01	3.122E+01	40.04
	117.66	------	0.55	6.624E+00	------	Line Not Found	------
	142.18	------	0.13	6.534E+00	------	Line Not Found	------
ANH-511	511.00	146	100.00*	2.793E+00	1.462E-01	1.462E-01	52.99

Flag: "*" = Keyline

Sample ID : C232358009 Acquisition date : 6-OCT-2009 12:15:11

Total number of lines in spectrum 33
Number of unidentified lines 2
Number of lines tentatively identified by NID 31 93.94%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.327E+01	3.327E+01	0.302E+01	9.08	
CD-109	464.00D	1.02	2.820E+00	2.879E-00	1.153E-00	40.04	
SN-126	1.00E+05Y	1.00	2.835E-01	2.835E-01	1.135E-01	40.04	
BA-137M	30.17Y	1.00	4.811E-02	4.815E-02	4.425E-02	91.91	
CS-137	30.17Y	1.00	5.085E-02	5.090E-02	4.678E-02	91.91	
TL-208	1.41E+10Y	1.00	6.004E-01	6.004E-01	0.894E-01	14.90	
BI-211	7.04E+08Y	1.00	3.510E+00	3.510E+00	0.426E+00	12.14	
PB-212	1.41E+10Y	1.00	1.690E+00	1.690E+00	0.163E+00	9.63	
PO-212	1.41E+10Y	1.00	1.690E+00	1.690E+00	0.163E+00	9.63	
BI-214	1600.00Y	1.00	1.189E+00	1.189E+00	0.184E+00	15.46	
PB-214	1600.00Y	1.00	1.221E+00	1.221E+00	0.161E+00	13.21	
PO-214	1600.00Y	1.00	1.221E+00	1.221E+00	0.161E+00	13.21	
PO-216	1.41E+10Y	1.00	1.690E+00	1.690E+00	0.163E+00	9.63	
PO-218	1600.00Y	1.00	1.221E+00	1.221E+00	0.161E+00	13.21	
RA-224	1.41E+10Y	1.00	4.809E+00	4.809E+00	1.190E+00	24.75	
RA-226	1600.00Y	1.00	1.189E+00	1.189E+00	0.184E+00	15.46	
AC-228	1.41E+10Y	1.00	1.724E+00	1.724E+00	0.362E+00	21.02	
RA-228	1.41E+10Y	1.00	1.724E+00	1.724E+00	0.362E+00	21.02	
TH-228	1.41E+10Y	1.00	1.690E+00	1.690E+00	0.163E+00	9.63	
TH-230	4.47E+09Y	1.00	1.189E+00	1.189E+00	0.184E+00	15.46	
TH-232	1.41E+10Y	1.00	1.724E+00	1.724E+00	0.362E+00	21.02	
TH-234	4.47E+09Y	1.00	7.319E-01	7.319E-01	18.43E-01	251.86	
U-234	4.47E+09Y	1.00	1.189E+00	1.189E+00	0.184E+00	15.46	
NP-237	2.14E+06Y	1.00	8.325E-01	8.325E-01	3.750E-01	45.05	
U-238	4.47E+09Y	1.00	7.319E-01	7.319E-01	18.43E-01	251.86	
AM-243	7380.00Y	1.00	3.617E-01	3.617E-01	0.771E-01	21.33	
ANH-511	1.00E+09Y	1.00	1.462E-01	1.462E-01	0.775E-01	52.99	
		Total Activity :	6.855E+01	6.861E+01			

Grand Total Activity : 6.855E+01 6.861E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232358009 Acquisition date : 6-JUL-2009 12:15:11

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	90.02	111	259	1.16	179.55	177	13	2.38E-02	31.9	5.83E+00	T
0	129.13	55	302	0.73	257.81	254	7	7.60E-03	****	6.64E+00	T
0	186.08	166	368	1.43	371.76	367	10	2.30E-02	47.8	5.86E+00	T
0	208.98	109	276	0.95	417.58	414	9	1.51E-02	59.1	5.47E+00	T
0	270.49	165	194	2.19	540.66	535	12	2.29E-02	37.4	4.59E+00	T
0	328.31	115	168	1.58	656.34	651	11	1.59E-02	47.9	3.97E+00	T
0	462.79	54	118	1.42	925.41	922	11	7.54E-03	82.2	3.03E+00	T
0	727.24	66	130	1.38	1454.46	1451	13	9.21E-03	74.3	2.08E+00	T
0	796.00	28	70	1.44	1592.00	1585	10	3.89E-03	****	1.92E+00	T
0	965.22	41	44	1.41	1930.49	1927	8	5.72E-03	63.1	1.62E+00	T
0	1590.14	51	11	6.28	3180.24	3172	18	7.03E-03	43.8	1.07E+00	
0	1631.49	16	6	2.42	3262.93	3255	12	2.19E-03	80.2	1.05E+00	

Flags: "T" - Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:16:46.38

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358009.CNF;1 *
* Acquisition date  : 6-JUL-2009 12:15:11.  Detector SN#     :             *
* Detector ID       : GAM12                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.59          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232358009            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.33790E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24.5MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.327E+01	3.020E+00	4.805E-01	3.426E-02	69.246
CD-109	2.879E+00	1.153E+00	9.476E-01	7.251E-02	3.039
SN-126	2.835E-01	1.135E-01	1.376E-01	1.049E-02	2.060
BA-137M	4.815E-02	4.425E-02	6.444E-02	4.177E-03	0.747
CS-137	5.090E-02	4.678E-02	6.812E-02	4.431E-03	0.747
TL-208	6.004E-01	8.944E-02	5.080E-02	3.634E-03	11.818
BI-211	3.510E+00	4.261E-01	3.072E-01	1.931E-02	11.428
PB-212	1.690E+00	1.627E-01	8.144E-02	5.782E-03	20.753
PO-212	1.690E+00	1.627E-01	8.144E-02	5.782E-03	20.753
BI-214	1.189E+00	1.839E-01	1.141E-01	9.392E-03	10.422
PB-214	1.221E+00	1.613E-01	1.119E-01	9.141E-03	10.912
PO-214	1.221E+00	1.613E-01	1.119E-01	9.141E-03	10.912
PO-216	1.690E+00	1.627E-01	8.144E-02	5.782E-03	20.753
PO-218	1.221E+00	1.613E-01	1.119E-01	9.141E-03	10.912
RA-224	4.809E+00	1.190E+00	9.269E-01	5.113E-02	5.188
RA-226	1.189E+00	1.839E-01	1.141E-01	9.392E-03	10.422
AC-228	1.724E+00	3.625E-01	2.077E-01	2.280E-02	8.302
RA-228	1.724E+00	3.625E-01	2.077E-01	2.280E-02	8.302

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.690E+00	1.627E-01	8.143E-02	5.782E-03	20.755
TH-230	1.189E+00	1.838E-01	1.141E-01	9.392E-03	10.422
TH-232	1.724E+00	3.625E-01	2.077E-01	2.280E-02	8.302
TH-234	7.319E-01	1.843E+00	1.982E+00	3.375E-01	0.369
U-234	1.189E+00	1.838E-01	1.141E-01	9.392E-03	10.422
NP-237	8.325E-01	3.750E-01	4.089E-01	8.982E-02	2.036
U-238	7.319E-01	1.843E+00	1.982E+00	3.375E-01	0.369
AM-243	3.617E-01	7.714E-02	8.769E-02	5.958E-03	4.125
ANH-511	1.462E-01	7.746E-02	4.426E-02	2.697E-03	3.303

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.435E-01		3.263E-01	5.525E-01	3.802E-02	0.441
NA-22	4.196E-02		4.441E-02	7.950E-02	5.120E-03	0.528
NA-24	-1.060E-01		1.095E-01	Half-Life too short		
AL-26	3.036E-02		2.833E-02	5.589E-02	3.207E-03	0.543
TI-44	3.375E-01	+	5.360E-02	7.278E-02	5.091E-03	4.637
SC-46	5.836E-03		3.943E-02	6.479E-02	5.370E-03	0.090
V-48	-1.930E-02		6.831E-02	1.064E-01	8.196E-03	-0.181
CR-51	-1.762E-01		3.454E-01	5.556E-01	3.532E-02	-0.317
MN-52	4.453E-03		2.335E-01	3.806E-01	2.615E-02	0.012
MN-54	9.228E-03		3.678E-02	6.122E-02	4.812E-03	0.151
CO-56	-5.457E-04		4.038E-02	6.561E-02	5.219E-03	-0.008
CO-57	-1.061E-02		2.317E-02	3.715E-02	2.323E-03	-0.286
CO-58	-1.924E-02		4.039E-02	6.311E-02	4.856E-03	-0.305
FE-59	-1.264E-01		1.031E-01	1.534E-01	1.133E-02	-0.824
CO-60	-1.870E-02		3.672E-02	5.605E-02	3.915E-03	-0.334
ZN-65	9.392E-03		9.693E-02	1.406E-01	8.845E-03	0.067
GE-68	-1.311E-01		1.306E+00	2.159E+00	1.456E-01	-0.061
AS-73	-5.239E-02		7.654E-01	1.280E+00	8.263E-02	-0.041
AS-74	3.333E-02		8.544E-02	1.469E-01	9.351E-03	0.227
SE-75	-3.970E-03		4.480E-02	6.586E-02	3.733E-03	-0.060
BR-77	4.534E+00		7.633E+00	1.276E+01	7.827E-01	0.355
SR-82	-7.106E-01		3.970E-01	5.431E-01	4.019E-02	-1.308
RB-83	4.602E-02		7.143E-02	1.162E-01	7.123E-03	0.396
RB-84	-6.408E-02		6.547E-02	9.453E-02	7.777E-03	-0.678
KR-85	1.467E+01		7.467E+00	1.340E+01	8.186E-01	1.095
SR-85	7.437E-02		3.784E-02	6.793E-02	4.149E-03	1.095
RB-86	-2.470E-01		8.000E-01	1.298E+00	8.763E-02	-0.190
Y-88	1.010E-02		2.622E-02	4.715E-02	2.654E-03	0.214
ZR-88	2.984E-03		2.819E-02	4.639E-02	2.544E-03	0.064
Y-91	3.692E-01		2.116E+01	3.501E+01	2.024E+00	0.011
NB-94	4.012E-03		3.554E-02	5.919E-02	4.031E-03	0.068
NB-95	1.865E-02		4.159E-02	7.060E-02	5.164E-03	0.264
NB-95M	-3.250E-02		1.198E-01	1.758E-01	1.282E-02	-0.185
ZR-95	4.017E-02		7.175E-02	1.230E-01	1.016E-02	0.327

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	1.496E-02		1.774E-02	Half-Life too short		
ZR-97	5.859E-01		3.405E-01	Half-Life too short		
MO-99	4.441E+00		8.299E+00	1.425E+01	2.049E+00	0.312
TC-99M	-8.674E+08		8.379E+08	Half-Life too short		
RH-101	-2.617E-03		3.241E-02	5.043E-02	2.668E-03	-0.052
RH-102	-7.879E-03		2.986E-02	4.715E-02	2.800E-03	-0.167
RU-103	-1.196E-02		3.851E-02	6.019E-02	7.677E-03	-0.199
RH-106	-3.245E-01		2.962E-01	4.446E-01	5.360E-02	-0.730
RU-106	-3.245E-01		2.943E-01	4.446E-01	2.855E-02	-0.730
AG-108M	4.181E-03		3.112E-02	5.096E-02	3.175E-03	0.082
AG-110M	1.541E-02		3.766E-02	5.681E-02	3.872E-03	0.271
IN-111	-5.219E-01		8.117E-01	1.154E+00	6.387E-02	-0.452
IN-113M	1.790E-02		4.097E-02	6.890E-02	4.056E-03	0.260
SN-113	1.790E-02		4.097E-02	6.890E-02	4.056E-03	0.260
IN-114M	-1.262E-01		1.930E-01	2.616E-01	1.372E-02	-0.483
CD-115	-3.893E+00		7.558E+00	1.154E+01	7.105E-01	-0.337
SN-117M	-2.143E-02		4.788E-02	7.556E-02	3.991E-03	-0.284
SB-122	9.562E-01		1.503E+00	2.633E+00	1.654E-01	0.363
I-123	-4.439E-01		6.536E-01	Half-Life too short		
TE-123M	-8.853E-03		2.607E-02	4.135E-02	2.215E-03	-0.214
I-124	-4.146E-01		6.191E-01	8.851E-01	5.648E-02	-0.468
SB-124	3.408E-02		6.683E-02	1.214E-01	8.100E-03	0.281
SB-125	-4.274E-02		8.989E-02	1.409E-01	8.379E-03	-0.303
TE-125M	7.817E-01		8.168E+00	1.351E+01	1.164E+00	0.058
I-126	1.700E-01		1.978E-01	3.097E-01	2.019E-02	0.549
SB-126	3.160E-02		1.498E-01	2.444E-01	1.699E-02	0.129
SB-127	-5.837E-01		1.057E+00	1.664E+00	1.603E-01	-0.351
XE-127	2.571E-02		4.269E-02	6.984E-02	3.714E-03	0.368
I-131	-4.388E-03		1.010E-01	1.655E-01	1.040E-02	-0.027
TE-132	-1.051E-01		4.951E-01	8.305E-01	1.164E-01	-0.127
BA-133	-1.490E-02		4.625E-02	6.462E-02	7.414E-03	-0.231
I-133	9.587E-04		1.230E-03	Half-Life too short		
CS-134	5.390E-02	+	6.375E-02	8.927E-02	6.806E-03	0.604
CS-135	1.017E-01		1.601E-01	2.466E-01	1.855E-02	0.412
I-135	2.873E+08		1.948E+08	Half-Life too short		
CS-136	2.360E-02		1.067E-01	1.797E-01	1.350E-02	0.131
CE-139	7.882E-03		2.753E-02	4.489E-02	2.300E-03	0.176
BA-140	8.552E-02		2.262E-01	3.889E-01	1.268E-01	0.220
LA-140	2.015E-02		8.421E-02	1.272E-01	8.284E-03	0.158
CE-141	3.942E-02		5.515E-02	9.225E-02	5.371E-03	0.427
CE-143	2.949E-04		5.315E-05	Half-Life too short		
CE-144	5.441E-02		1.896E-01	3.127E-01	4.451E-02	0.174
PM-144	-2.287E-02		3.350E-02	5.227E-02	3.536E-03	-0.438
PR-144	-1.549E+00		2.269E+00	3.540E+00	2.394E-01	-0.438
PM-146	-2.369E-02		4.326E-02	6.702E-02	5.794E-03	-0.354
ND-147	2.360E-01		5.183E-01	8.566E-01	1.172E-01	0.275
PM-149	-1.923E+01		5.941E+01	9.741E+01	1.375E+01	-0.197
EU-152	-5.598E-02		9.186E-02	1.458E-01	9.343E-03	-0.384

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CD-153	-6.561E-02		7.895E-02	1.108E-01	7.701E-03	-0.592
EU-154	1.105E-01		1.237E-01	2.201E-01	2.145E-02	0.502
EU-155	3.990E-02		9.840E-02	1.651E-01	1.113E-02	0.242
TB-160	-5.596E-02		1.347E-01	2.089E-01	1.716E-02	-0.268
HO-166M	-3.698E-02		6.219E-02	9.770E-02	6.725E-03	-0.378
TM-171	3.497E+00		2.940E+01	4.470E+01	2.893E+00	0.078
LU-176	3.338E-03		2.376E-02	3.941E-02	2.240E-03	0.085
LU-177	2.166E+00	+	1.285E+00	1.661E+00	8.885E-02	1.304
LU-177M	-1.850E-01		1.727E-01	2.598E-01	1.458E-02	-0.712
HF-181	1.249E-02		4.275E-02	7.024E-02	4.194E-03	0.178
W-181	1.280E-02		3.723E-01	5.647E-01	3.628E-02	0.023
TA-182	-8.300E-02		2.028E-01	3.230E-01	1.916E-02	-0.257
RE-183	-1.926E-02		1.002E-01	1.599E-01	8.315E-03	-0.120
RE-184	-4.514E-02		2.120E-01	3.531E-01	1.965E-02	-0.128
OS-185	-2.021E-02		3.960E-02	6.303E-02	4.073E-03	-0.321
RE-188	1.693E-01		1.632E-01	2.702E-01	1.449E-02	0.627
W-188	-3.276E+00		7.491E+00	1.063E+01	6.025E-01	-0.308
IR-192	6.588E-03		3.240E-02	5.436E-02	3.106E-03	0.121
AU-195	6.427E-02		1.999E-01	3.323E-01	2.285E-02	0.193
TL-200	7.181E-05		1.108E-04	Half-Life too short		
TL-201	-1.274E+00		5.165E+00	8.206E+00	4.206E-01	-0.155
TL-202	-3.550E-02		6.057E-02	9.364E-02	5.393E-03	-0.379
HG-203	-1.417E-03		3.742E-02	6.134E-02	3.688E-03	-0.023
BI-207	2.672E-02		5.431E-02	9.444E-02	6.515E-03	0.283
TL-207	5.238E-01		6.952E-01	1.064E+00	1.753E-01	0.492
PO-209	1.058E+00		7.807E+00	1.280E+01	1.068E+00	0.083
BI-210	1.561E+00		3.141E+00	5.405E+00	4.072E-01	0.289
PB-210	1.561E+00		3.141E+00	5.405E+00	4.072E-01	0.289
PO-210	1.561E+00		3.140E+00	5.405E+00	3.467E-01	0.289
PB-211	-1.024E+00		1.098E+00	1.341E+00	8.354E-01	-0.764
BI-212	7.593E-01	+	5.683E-01	6.914E-01	5.986E-02	1.098
PO-215	5.238E-01		6.952E-01	1.064E+00	1.753E-01	0.492
RN-219	4.034E-01		4.061E-01	6.981E-01	9.422E-02	0.578
RN-220	1.374E+01		2.328E+01	4.088E+01	2.549E+00	0.336
RA-223	5.238E-01		6.952E-01	1.064E+00	1.753E-01	0.492
AC-227	-1.333E-01		3.468E-01	5.714E-01	7.925E-02	-0.233
TH-227	-1.333E-01		3.470E-01	5.714E-01	9.613E-02	-0.233
TH-229	5.737E-01		4.993E-01	8.370E-01	4.407E-02	0.685
PA-231	4.608E-01		1.380E+00	2.344E+00	3.217E-01	0.197
TH-231	5.238E-01		6.952E-01	1.064E+00	1.753E-01	0.492
U-231	5.066E-01		8.450E-01	1.297E+00	9.134E-02	0.391
PA-233	-2.594E-02		5.746E-02	9.281E-02	5.616E-03	-0.279
PA-234	1.361E-01		3.142E-01	5.257E-01	9.722E-02	0.259
PA-234M	4.770E+00		7.291E+00	1.283E+01	1.331E+00	0.372
U-235	4.038E-02		1.964E-01	3.169E-01	5.147E-02	0.127
NP-236	-2.615E-02		7.303E-02	1.157E-01	6.065E-03	-0.226
NP-239	7.358E-03		1.736E-01	2.855E-01	1.802E-02	0.026
AM-241	4.656E-02		1.524E-01	2.359E-01	1.676E-02	0.197

---- Non-identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	8.393E-04		8.761E-02	1.448E-01	9.641E-03	0.006
CM-247	3.830E-02		3.475E-02	6.067E-02	3.365E-03	0.631
CF-249	1.108E-03		3.766E-02	6.171E-02	3.392E-03	0.018
CF-251	1.793E-01		1.247E-01	2.122E-01	1.097E-02	0.845

VAX/VMS Nuclide Identification Report Generated

```
*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                            DETECTOR DATA                              *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232358009       *
* Acquisition date  :  6-JUL-2009 12:15:11 Detector SN#     :           *
* Detector ID       : GAM12                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:01.59      Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                             SAMPLE DATA                               *
*                                                                       *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232358009           Analyst initials: MXR1       *
* Batch Number      : 880723               Sample Quantity : 1.3379E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                               QC DATA                                 *
*                                                                       *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.327E+01	2.960E+00	2.408E-01	1.510E+00
CD-109	2.879E+00	1.130E+00	4.990E-01	5.765E-01
SN-126	2.835E-01	1.112E-01	7.249E-02	5.676E-02
BA-137M	4.815E-02	4.337E-02	3.277E-02	2.213E-02
CS-137	5.090E-02	4.584E-02	3.464E-02	2.339E-02
TL-208	6.004E-01	8.765E-02	2.589E-02	4.472E-02
BI-211	3.510E+00	4.176E-01	1.580E-01	2.130E-01
PB-212	1.690E+00	1.594E-01	4.216E-02	8.134E-02
PO-212	1.690E+00	1.594E-01	4.216E-02	8.134E-02
BI-214	1.189E+00	1.802E-01	5.809E-02	9.193E-02
PB-214	1.221E+00	1.581E-01	5.754E-02	8.067E-02
PO-214	1.221E+00	1.581E-01	5.754E-02	8.067E-02
PO-216	1.690E+00	1.594E-01	4.216E-02	8.134E-02
PO-218	1.221E+00	1.581E-01	5.754E-02	8.067E-02
RA-224	4.809E+00	1.166E+00	4.798E-01	5.951E-01
RA-226	1.189E+00	1.802E-01	5.809E-02	9.193E-02
AC-228	1.724E+00	3.552E-01	1.050E-01	1.812E-01
RA-228	1.724E+00	3.552E-01	1.050E-01	1.812E-01
TH-228	1.690E+00	1.594E-01	4.216E-02	8.134E-02
TH-230	1.189E+00	1.802E-01	5.809E-02	9.192E-02
TH-232	1.724E+00	3.552E-01	1.050E-01	1.812E-01
TH-234	7.319E-01	1.806E+00	1.050E+00	9.216E-01
U-234	1.189E+00	1.802E-01	5.809E-02	9.192E-02
NP-237	8.325E-01	3.675E-01	2.154E-01	1.875E-01
U-238	7.319E-01	1.806E+00	1.050E+00	9.216E-01
AM-243	3.617E-01	7.560E-02	4.631E-02	3.857E-02
ANH-511	1.462E-01	7.591E-02	2.261E-02	3.873E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

NA-22	2.435E-01	3.198E-01	2.826E-01	1.632E-01	NOT IDENT.
NA-22	4.196E-02	4.352E-02	3.995E-02	2.221E-02	NOT IDENT.
NA-24	-1.060E+05	2.147E+05	0.000E+00	1.095E+05	SHORT HLIF
AL-26	3.036E-02	2.776E-02	2.790E-02	1.416E-02	NOT IDENT.
TI-44	3.375E-01	5.252E-02	3.840E-02	2.680E-02	FAIL ABUN
SC-46	5.836E-03	3.864E-02	3.277E-02	1.972E-02	FAIL ABUN
V-48	-1.930E-02	6.694E-02	5.371E-02	3.415E-02	NOT IDENT.
CR-51	-1.762E-01	3.385E-01	2.862E-01	1.727E-01	NOT IDENT.
MN-52	4.453E-03	2.288E-01	1.908E-01	1.167E-01	NOT IDENT.
MN-54	9.228E-03	3.604E-02	3.100E-02	1.839E-02	NOT IDENT.
CO-56	-5.457E-04	3.957E-02	3.321E-02	2.019E-02	NOT IDENT.
CO-57	-1.061E-02	2.271E-02	1.945E-02	1.159E-02	NOT IDENT.
CO-58	-1.924E-02	3.958E-02	3.197E-02	2.020E-02	NOT IDENT.
FE-59	-1.264E-01	1.010E-01	7.729E-02	5.154E-02	NOT IDENT.
CO-60	-1.870E-02	3.599E-02	2.814E-02	1.836E-02	NOT IDENT.
ZN-65	9.392E-03	9.500E-02	7.083E-02	4.847E-02	NOT IDENT.
GE-68	-1.311E-01	1.280E+00	1.088E+00	6.530E-01	NOT IDENT.
AS-73	-5.239E-02	7.501E-01	6.796E-01	3.827E-01	NOT IDENT.
AS-74	3.333E-02	8.373E-02	7.484E-02	4.272E-02	NOT IDENT.
SE-75	-3.970E-03	4.390E-02	3.404E-02	2.240E-02	NOT IDENT.
BR-77	4.534E+00	7.480E+00	6.518E+00	3.816E+00	FAIL ABUN
SR-82	-7.106E-01	3.891E-01	2.754E-01	1.985E-01	NOT IDENT.
RB-83	4.602E-02	7.000E-02	5.933E-02	3.572E-02	NOT IDENT.
RB-84	-6.408E-02	6.416E-02	4.782E-02	3.273E-02	NOT IDENT.
KR-85	1.467E+01	7.317E+00	6.847E+00	3.733E+00	NOT IDENT.
SR-85	7.437E-02	3.708E-02	3.470E-02	1.892E-02	NOT IDENT.
RB-86	-2.470E-01	7.840E-01	6.543E-01	4.000E-01	NOT IDENT.
Y-88	1.010E-02	2.570E-02	2.353E-02	1.311E-02	NOT IDENT.
ZR-88	2.984E-03	2.762E-02	2.381E-02	1.409E-02	NOT IDENT.
Y-91	3.692E-01	2.074E+01	1.761E+01	1.058E+01	NOT IDENT.
NB-94	4.012E-03	3.483E-02	3.007E-02	1.777E-02	NOT IDENT.
NB-95	1.865E-02	4.076E-02	3.581E-02	2.079E-02	NOT IDENT.
NB-95M	-3.250E-02	1.174E-01	9.104E-02	5.990E-02	NOT IDENT.
ZR-95	4.017E-02	7.032E-02	6.241E-02	3.588E-02	NOT IDENT.
NB-97	1.496E+04	3.477E+04	0.000E+00	1.774E+04	SHORT HLIF
ZR-97	5.859E+05	6.675E+05	0.000E+00	3.405E+05	SHORT HLIF
MO-99	4.441E+00	8.133E+00	7.231E+00	4.149E+00	NOT IDENT.
TC-99M	-8.674E+14	1.642E+15	0.000E+00	8.379E+14	SHORT HLIF
RH-101	-2.617E-03	3.176E-02	2.619E-02	1.620E-02	NOT IDENT.
RH-102	-7.879E-03	2.926E-02	2.412E-02	1.493E-02	NOT IDENT.
RU-103	-1.196E-02	3.774E-02	3.076E-02	1.926E-02	FAIL ABUN
RH-106	-3.245E-01	2.902E-01	2.263E-01	1.481E-01	FAIL ABUN
RU-106	-3.245E-01	2.884E-01	2.263E-01	1.472E-01	FAIL ABUN
AG-108M	4.181E-03	3.049E-02	2.611E-02	1.556E-02	NOT IDENT.
AG-110M	1.541E-02	3.691E-02	2.889E-02	1.883E-02	NOT IDENT.
IN-111	-5.219E-01	7.955E-01	5.971E-01	4.059E-01	NOT IDENT.
IN-113M	1.790E-02	4.015E-02	3.536E-02	2.049E-02	NOT IDENT.
SN-113	1.790E-02	4.015E-02	3.536E-02	2.049E-02	NOT IDENT.
IN-114M	-1.262E-01	1.891E-01	1.360E-01	9.649E-02	NOT IDENT.
CD-115	-3.893E+00	7.407E+00	5.889E+00	3.779E+00	NOT IDENT.
SN-117M	-2.143E-02	4.692E-02	3.940E-02	2.394E-02	NOT IDENT.
SB-122	9.562E-01	1.473E+00	1.343E+00	7.517E-01	NOT IDENT.
I-123	-4.439E+05	1.281E+06	0.000E+00	6.536E+05	SHORT HLIF
TE-123M	-8.853E-03	2.554E-02	2.156E-02	1.303E-02	NOT IDENT.
I-124	-4.146E-01	6.067E-01	4.508E-01	3.095E-01	NOT IDENT.
SB-124	3.408E-02	6.549E-02	6.068E-02	3.341E-02	FAIL ABUN
SB-125	-4.274E-02	8.810E-02	7.223E-02	4.495E-02	FAIL ABUN
TE-125M	7.817E-01	8.004E+00	7.089E+00	4.084E+00	NOT IDENT.
I-126	1.700E-01	1.939E-01	1.575E-01	9.891E-02	NOT IDENT.
SB-126	3.160E-02	1.468E-01	1.241E-01	7.488E-02	FAIL ABUN
SB-127	-5.837E-01	1.035E+00	8.458E-01	5.283E-01	NOT IDENT.
XE-127	2.571E-02	4.183E-02	3.626E-02	2.134E-02	NOT IDENT.
I-131	-4.388E-03	9.900E-02	8.505E-02	5.051E-02	NOT IDENT.
TE-132	-1.051E-01	4.852E-01	4.303E-01	2.475E-01	NOT IDENT.
BA-133	-1.490E-02	4.533E-02	3.322E-02	2.313E-02	NOT IDENT.
I-133	9.587E+02	2.410E+03	0.000E+00	1.230E+03	SHORT HLIF
CS-134	5.390E-02	6.248E-02	4.524E-02	3.188E-02	FAIL ABUN
CS-135	1.017E-01	1.569E-01	1.274E-01	8.003E-02	NOT IDENT.
I-135	2.873E+14	3.819E+14	0.000E+00	1.948E+14	SHORT HLIF
CS-136	2.360E-02	1.046E-01	9.062E-02	5.336E-02	FAIL ABUN
CE-139	7.882E-03	2.698E-02	2.339E-02	1.377E-02	NOT IDENT.
BA-140	8.552E-02	2.217E-01	1.985E-01	1.131E-01	NOT IDENT.
LA-140	2.015E-02	8.252E-02	6.365E-02	4.210E-02	FAIL ABUN
CE-141	3.942E-02	5.405E-02	4.817E-02	2.758E-02	NOT IDENT.
CE-143	2.949E+02	1.042E+02	0.000E+00	5.315E+01	SHORT HLIF
CE-144	5.441E-02	1.858E-01	1.635E-01	9.482E-02	NOT IDENT.
PM-144	-2.287E-02	3.283E-02	2.656E-02	1.675E-02	NOT IDENT.
PR-144	-1.549E+00	2.223E+00	1.798E+00	1.134E+00	NOT IDENT.

PM-146	-2.369E-02	4.240E-02	3.431E-02	2.163E-02	NOT IDENT.
ND-147	2.360E-01	5.079E-01	4.373E-01	2.592E-01	FAIL ABUN
PM-149	-1.923E-01	5.822E+01	5.027E+01	2.971E+01	NOT IDENT.
EU-152	-5.598E-02	9.002E-02	7.500E-02	4.593E-02	FAIL ABUN
GD-153	-6.561E-02	7.737E-02	5.822E-02	3.948E-02	NOT IDENT.
EU-154	1.105E-01	1.212E-01	1.106E-01	6.184E-02	NOT IDENT.
EU-155	3.990E-02	9.644E-02	8.669E-02	4.920E-02	FAIL ABUN
TB-160	-5.596E-02	1.320E-01	1.057E-01	6.733E-02	FAIL ABUN
HO-166M	-3.698E-02	6.095E-02	4.962E-02	3.109E-02	NOT IDENT.
TM-171	3.497E+00	2.881E+01	2.365E+01	1.470E+01	NOT IDENT.
LU-176	3.338E-03	2.328E-02	2.032E-02	1.188E-02	FAIL ABUN
LU-177	2.166E+00	1.260E+00	8.620E-01	6.427E-01	FAIL ABUN
LU-177M	-1.850E-01	1.692E-01	1.332E-01	8.634E-02	NOT IDENT.
HF-181	1.249E-02	4.189E-02	3.592E-02	2.137E-02	NOT IDENT.
W-181	1.280E-02	3.649E-01	2.988E-01	1.862E-01	NOT IDENT.
TA-182	-8.300E-02	1.988E-01	1.624E-01	1.014E-01	FAIL ABUN
RE-183	-1.926E-02	9.822E-02	8.336E-02	5.011E-02	FAIL ABUN
RE-184	-4.514E-02	2.077E-01	1.826E-01	1.060E-01	NOT IDENT.
OS-185	-2.021E-02	3.881E-02	3.206E-02	1.980E-02	NOT IDENT.
RE-188	1.693E-01	1.599E-01	1.410E-01	8.160E-02	NOT IDENT.
W-188	-3.276E+00	7.341E+00	5.485E+00	3.746E+00	FAIL ABUN
IR-192	6.588E-03	3.175E-02	2.801E-02	1.620E-02	FAIL ABUN
AU-195	6.427E-02	1.959E-01	1.747E-01	9.993E-02	FAIL ABUN
TL-200	7.181E+01	2.172E+02	0.000E+00	1.108E+02	SHORT HLIF
TL-201	-1.274E+00	5.061E+00	4.274E+00	2.582E+00	NOT IDENT.
TL-202	-3.550E-02	5.936E-02	4.797E-02	3.028E-02	NOT IDENT.
HG-203	-1.417E-03	3.667E-02	3.167E-02	1.871E-02	NOT IDENT.
BI-207	2.672E-02	5.323E-02	4.761E-02	2.716E-02	FAIL ABUN
TL-207	5.238E-01	6.813E-01	5.479E-01	3.476E-01	FAIL ABUN
PO-209	1.058E+00	7.651E+00	6.472E+00	3.903E+00	NOT IDENT.
BI-210	1.561E+00	3.078E+00	2.877E+00	1.570E+00	NOT IDENT.
PB-210	1.561E+00	3.078E+00	2.877E+00	1.570E+00	NOT IDENT.
PO-210	1.561E+00	3.077E+00	2.877E+00	1.570E+00	NOT IDENT.
PB-211	-1.024E+00	1.076E+00	6.877E-01	5.488E-01	NOT IDENT.
BI-212	7.593E-01	5.569E-01	3.510E-01	2.842E-01	FAIL ABUN
PO-215	5.238E-01	6.813E-01	5.479E-01	3.476E-01	FAIL ABUN
RN-219	4.034E-01	3.980E-01	3.581E-01	2.030E-01	FAIL ABUN
RN-220	1.374E+01	2.281E+01	2.086E+01	1.164E+01	NOT IDENT.
RA-223	5.238E-01	6.813E-01	5.479E-01	3.476E-01	FAIL ABUN
AC-227	-1.333E-01	3.399E-01	2.955E-01	1.734E-01	FAIL ABUN
TH-227	-1.333E-01	3.401E-01	2.955E-01	1.735E-01	FAIL ABUN
TH-229	5.737E-01	4.893E-01	4.349E-01	2.496E-01	FAIL ABUN
PA-231	4.608E-01	1.352E+00	1.210E+00	6.899E-01	FAIL ABUN
TH-231	5.238E-01	6.813E-01	5.479E-01	3.476E-01	FAIL ABUN
U-231	5.066E-01	8.281E-01	6.818E-01	4.225E-01	FAIL ABUN
PA-233	-2.594E-02	5.631E-02	4.783E-02	2.873E-02	FAIL ABUN
PA-234	1.361E-01	3.079E-01	2.656E-01	1.571E-01	FAIL ABUN
PA-234M	4.770E+00	7.146E+00	6.476E+00	3.646E+00	NOT IDENT.
U-235	4.038E-02	1.924E-01	1.655E-01	9.818E-02	FAIL ABUN
NP-236	-2.615E-02	7.157E-02	6.030E-02	3.652E-02	NOT IDENT.
NP-239	7.358E-03	1.702E-01	1.496E-01	8.682E-02	FAIL ABUN
AM-241	4.656E-02	1.493E-01	1.250E-01	7.618E-02	NOT IDENT.
CM-243	8.393E-04	8.586E-02	7.602E-02	4.380E-02	FAIL ABUN
CM-247	3.830E-02	3.406E-02	3.113E-02	1.738E-02	NOT IDENT.
CF-249	1.108E-03	3.691E-02	3.168E-02	1.883E-02	NOT IDENT.
CF-251	1.793E-01	1.222E-01	1.105E-01	6.233E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	237.0810
46.50	237.0810
46.50	237.0810
48.70	278.9607
49.72	295.3192
51.35	249.5683
52.39	250.4054
52.97	256.9240
53.15	257.0705
53.44	272.0341
54.07	263.8933
56.28	290.1707
56.28	290.1732
57.37	0.0000
57.53	286.0086
57.53	286.0103
57.60	286.0691
57.98	284.6379
57.98	284.6379
59.32	271.2177
59.32	271.2177
59.40	289.8076
59.54	289.9271
59.72	282.1325
60.01	299.6062
61.10	311.1941
61.14	311.2303
61.30	311.3731
63.00	342.3032
63.29	342.5825
63.29	342.5825
63.58	342.8623
64.28	370.3733
65.12	355.0964
65.20	347.1028
65.20	347.1028
66.05	322.2922
66.72	359.3553
66.83	359.4649
66.91	359.5440
67.20	390.9389
67.20	390.9389
67.75	398.8321
67.85	398.9422
68.90	420.3560
68.90	420.3560
69.30	426.2435
69.67	401.9699
70.82	349.6426
70.82	349.6426
70.83	349.6523
72.80	433.8033
72.87	433.8828
72.87	433.8828
74.67	412.8782
74.81	413.0244
74.81	413.0244
74.81	413.0244
74.81	413.0244
74.81	413.0244
74.81	413.0244
74.97	413.1899
75.28	413.5108
75.70	413.9447
77.11	415.3926
77.11	415.3926
77.11	415.3926

77.11	415.3926
77.11	415.3926
77.11	415.3926
78.38	353.5792
79.62	357.4336
79.80	357.5879
79.80	357.5879
80.11	364.8448
80.18	364.9046
80.30	365.0101
80.30	365.0101
80.57	365.2451
81.00	382.4295
81.07	382.4941
81.07	382.4941
81.07	382.4941
81.07	382.4941
82.60	378.2525
83.37	335.2631
83.78	356.7367
83.78	356.7367
83.78	356.7367
83.78	356.7367
84.21	352.8576
84.40	353.0121
84.90	359.0750
85.43	407.6367
86.29	469.4184
86.50	489.5072
86.54	489.5519
86.59	489.6072
86.72	489.7520
86.79	489.8283
86.94	489.9968
87.30	490.3942
87.30	490.3942
87.30	490.3942
87.30	490.3942
87.30	490.3942
87.30	490.3942
87.57	490.6943
87.88	227.7271
88.03	227.8040
88.36	227.9724
88.47	228.0286
89.95	313.1417
91.11	289.5736
92.29	290.3195
92.38	290.3766
92.38	290.3766
93.35	290.9853
94.00	259.6564
94.67	248.4691
94.67	248.4717
94.90	248.5938
94.90	248.5938
94.90	248.5938
94.90	248.5938
95.87	250.5538
95.87	250.5538
96.73	313.4004
97.43	289.1567
98.44	256.2737
98.44	256.2750
98.88	251.6506
99.55	257.8361
99.55	257.8361
99.86	258.0006
100.00	256.1270
100.10	251.3114
103.18	275.4288
103.76	265.9359
105.00	263.6421
105.31	262.8200
108.00	277.0734
109.28	256.9291
111.00	296.5934
111.00	296.5934

115.76	270.1110
116.95	255.7244
116.79	270.8514
116.30	281.4612
117.00	256.6602
[illegible]	256.6602
117.66	258.9869
121.[illegible]	258.5797
121.62	268.9654
121.78	269.0422
122.06	264.0982
122.32	264.2198
122.32	264.2198
122.32	264.2198
122.32	264.2198
123.07	263.5540
127.23	273.6795
129.76	264.0616
131.20	283.2848
133.02	245.3344
133.54	260.0515
135.34	259.7911
136.00	273.5971
136.25	274.7529
136.48	274.8550
140.51	272.4705
140.51	0.0000
142.18	270.0482
142.65	257.6308
143.76	251.7664
144.24	254.0645
144.24	254.0645
144.24	254.0645
144.24	254.0645
145.22	247.0659
145.44	238.7019
147.16	283.8258
152.43	289.3352
152.70	283.0452
153.22	270.4391
154.21	236.5863
154.21	236.5863
154.21	236.5863
154.21	236.5863
155.03	239.0222
156.02	249.0370
158.56	258.5962
159.00	0.0000
159.00	255.5277
160.31	252.7787
161.27	229.3345
162.32	252.4356
162.64	239.5448
163.35	237.6198
163.89	243.2340
165.85	241.7398
167.43	261.9287
171.28	242.4988
171.86	267.9522
172.10	268.0416
176.55	232.1057
176.60	232.1217
181.06	255.2062
184.41	216.1325
185.71	247.2694
186.00	247.3638
190.27	263.3714
192.34	243.7581
193.63	230.5936
197.04	237.2659
198.01	242.0994
198.60	252.5142
200.40	238.2609
201.83	223.8357
202.84	214.9673
205.31	227.0845
208.36	212.3841
208.81	224.5920

209.75	236.9530
209.75	236.9530
210.97	256.3510
215.65	250.8069
216.55	218.5244
218.09	189.8052
222.10	229.8777
223.80	209.2251
226.40	225.7148
227.00	211.7505
227.08	211.7706
227.20	223.2705
228.16	220.8614
228.18	229.7018
228.18	229.7018
231.56	0.0000
235.69	226.6332
236.00	233.8401
236.00	233.8401
238.60	194.8249
238.63	194.8315
238.63	194.8315
238.63	194.8315
239.00	194.9080
240.98	195.3271
241.98	195.5367
241.98	195.5367
241.98	195.5367
244.69	178.4725
245.39	198.7709
247.94	195.8781
248.90	189.7517
249.79	177.2676
252.40	175.9368
252.85	187.8148
252.85	187.8148
254.15	0.0000
256.20	187.5551
256.20	187.5551
260.50	182.8949
260.90	191.2017
262.80	167.7398
264.65	171.9094
268.24	168.1027
268.79	159.3422
269.46	169.7822
269.46	169.7822
269.46	169.7822
269.46	169.7822
271.23	170.0798
273.65	189.7563
276.40	153.5973
277.35	157.1507
277.60	159.0470
277.60	159.0470
278.00	163.7620
278.60	172.2350
279.20	172.3366
279.53	177.0494
280.46	198.6605
281.68	176.4809
283.67	150.6206
284.30	148.8393
285.00	168.6099
285.90	166.8777
286.10	160.3464
286.10	160.3464
287.40	145.5206
288.45	0.0000
290.67	168.7574
290.80	173.3002
291.72	171.9407
293.26	0.0000
293.70	158.6561
295.21	163.6077
295.21	163.6077
295.21	163.6077
295.96	163.7212

296.50	163.8004
297.23	163.9113
298.57	164.1119
299.80	164.2967
299.80	164.2967
300.09	164.3416
300.09	164.3416
300.09	164.3416
300.10	164.3416
300.12	164.3442
301.29	167.3740
302.84	169.1314
303.76	176.8972
303.91	176.9198
304.40	158.6889
304.40	158.6889
304.84	152.6465
306.84	147.1854
308.46	124.4279
311.98	143.0592
316.51	145.5578
318.01	159.2622
319.02	161.3353
319.41	161.3888
320.08	159.5492
323.87	131.9368
323.87	131.9368
323.87	131.9368
323.87	131.9368
325.23	147.6327
328.77	155.8716
333.44	121.2773
334.20	151.3674
334.20	151.3674
334.30	151.3792
338.28	163.0111
338.28	163.0111
338.28	163.0111
338.28	163.0111
338.32	163.0187
338.32	163.0187
338.32	163.0187
340.50	136.9464
340.57	136.9528
344.27	148.0293
345.85	152.1718
350.59	0.0000
351.07	131.7807
351.92	143.9867
351.92	143.9867
351.92	143.9867
355.39	0.0000
356.01	127.5215
364.48	127.3759
366.43	124.5563
367.43	122.6422
367.94	0.0000
369.80	136.9670
374.96	115.2681
383.85	127.2449
387.95	117.4268
388.63	108.2919
391.69	105.4659
391.69	105.4659
392.90	109.6597
398.62	123.4991
400.65	110.2833
401.10	101.0401
401.81	107.2817
402.60	97.0207
404.84	136.4634
410.95	104.8729
411.60	110.1164
413.65	137.3254
414.70	114.5218
415.30	105.1965
415.76	104.1901
417.63	0.0000

418.52	112.7428
423.70	118.3900
427.08	107.1159
427.89	116.6333
432.53	104.3567
433.93	99.1794
439.47	103.7900
439.56	103.7960
439.89	102.7606
443.98	87.1087
444.90	100.9810
445.03	97.8005
445.03	97.8005
445.03	97.8005
445.03	97.8005
453.90	113.3480
463.38	98.9882
468.07	100.1505
473.00	109.3437
475.06	109.4870
475.35	101.9175
476.78	88.9881
477.59	95.5477
477.96	99.9147
482.03	99.0814
484.57	114.5073
487.03	110.3139
490.36	0.0000
492.35	110.6783
497.08	92.3172
507.63	0.0000
510.53	0.0000
510.84	89.7642
511.00	89.7729
511.85	89.8186
511.85	89.8186
513.99	89.9329
513.99	89.9329
520.41	82.7916
520.65	83.6014
527.90	91.7921
528.96	0.0000
529.64	80.6792
529.87	0.0000
531.02	79.6237
537.32	77.4378
543.00	67.7527
546.56	0.0000
549.76	68.0127
552.65	76.2973
555.20	86.4115
563.23	86.7988
563.90	82.2612
568.70	86.1445
569.32	80.6738
569.50	80.6824
569.67	87.1073
573.80	80.8715
574.00	80.8801
574.64	78.1498
578.91	76.7944
579.30	0.0000
583.14	67.4270
585.48	69.3604
591.81	69.0792
592.07	72.1837
593.00	93.7801
595.88	81.8340
600.56	96.9516
602.52	0.0000
602.71	110.6599
602.71	110.6599
603.60	88.7030
604.41	94.9675
604.70	82.5257
609.31	95.5229
609.31	95.5229
609.31	95.5229

609.31	95.5229
610.33	79.6439
612.46	85.9867
614.37	90.7666
618.01	64.9099
621.84	85.7724
621.84	85.7724
631.29	85.2385
633.02	89.1026
633.10	89.1072
634.78	83.4904
635.90	68.3490
636.97	74.0829
645.85	72.5043
646.12	76.3301
656.30	63.9274
657.75	68.7710
657.90	0.0000
661.65	99.9857
661.65	99.9857
664.57	0.0000
666.33	75.4800
666.33	75.4800
675.00	80.3110
677.61	76.5351
685.20	75.8386
692.80	67.3272
695.00	76.1871
696.49	86.9923
696.49	86.9923
697.00	85.0565
697.49	80.1862
698.33	74.3486
698.50	74.3542
699.00	81.2229
702.63	91.1609
706.10	89.3426
706.58	0.0000
706.67	83.4747
709.31	89.4737
711.68	88.5872
713.82	86.7023
717.42	75.9905
720.50	86.7470
721.93	0.0000
722.20	85.7145
722.78	98.9282
722.78	98.9282
722.89	100.5820
722.95	100.5845
723.30	110.4944
724.18	108.8882
727.18	79.2988
733.00	77.8495
735.90	68.4126
739.58	56.8135
742.81	76.8571
744.21	69.9128
747.13	66.0032
751.79	77.1598
752.31	81.1879
753.82	67.1996
755.35	64.2328
756.15	67.2666
756.87	64.2750
763.93	88.6488
765.79	73.5970
766.41	79.6673
766.84	83.7173
768.36	105.9767
768.36	105.9767
768.36	105.9767
768.36	105.9767
776.49	101.2793
778.00	85.1300
778.57	75.0135
778.89	62.8582
783.80	70.1000

785.46	71.1655
792.07	59.4698
795.84	66.3695
796.30	73.1906
801.93	75.0682
805.60	69.7149
810.29	80.1214
810.76	73.9723
815.85	52.5066
817.79	62.8511
818.51	68.0222
819.60	65.9906
826.30	59.9668
828.27	0.0000
831.60	73.5637
831.96	69.4291
834.83	64.3220
836.80	0.0000
846.75	65.6701
848.13	58.4049
856.28	0.0000
856.80	76.7440
860.37	58.6865
867.32	49.0376
867.82	57.0543
871.10	52.6172
873.19	58.9791
874.81	56.9083
875.33	0.0000
876.40	37.9617
879.36	58.0629
880.27	54.9148
880.51	53.8638
881.50	61.2809
883.24	63.4351
884.67	47.6027
889.25	56.1637
896.60	60.5695
898.02	57.4132
899.00	64.8795
903.28	63.9185
911.07	56.6256
911.07	56.6256
911.07	56.6256
919.63	69.6671
920.93	65.5303
925.00	54.7702
925.24	53.7012
926.50	54.8001
934.06	40.9446
934.06	40.9446
934.06	40.9446
934.06	40.9446
935.52	44.2001
937.48	60.4146
944.10	41.0940
946.00	54.1077
949.00	56.3329
962.29	43.5391
964.01	74.4243
966.15	65.3979
968.20	21.8149
969.11	67.2853
969.11	67.2853
969.11	67.2853
977.42	55.8099
980.50	64.6335
983.50	55.9282
989.30	60.4369
996.32	72.5163
1001.03	56.0842
1001.68	57.0162
1004.76	69.0445
1021.30	0.0000
1024.50	0.0000
1034.80	49.2907
1037.82	69.8212
1038.57	63.3184

1038.76	0.0000
1045.16	65.3259
1046.59	66.2880
1048.07	55.1132
1050.47	48.6125
1050.47	48.6125
1063.62	54.4552
1076.63	65.0581
1077.35	62.2429
1085.78	71.8685
1099.22	89.2725
1112.02	52.4465
1112.84	53.0669
1115.52	54.0025
1120.29	50.8053
1120.29	50.8053
1120.29	50.8053
1120.29	50.8053
1120.51	50.8096
1121.28	57.3804
1124.00	0.0000
1129.67	60.0862
1131.51	0.0000
1147.95	0.0000
1167.94	55.2953
1173.22	77.7311
1175.09	79.7211
1177.93	68.1116
1189.05	72.2415
1204.90	82.3901
1205.75	0.0000
1213.00	72.7534
1221.42	75.8877
1230.97	82.0273
1235.34	84.1111
1236.41	0.0000
1238.11	80.2156
1238.11	80.2156
1238.11	80.2156
1238.11	80.2156
1238.25	78.2382
1246.25	79.4108
1260.41	0.0000
1271.85	57.9906
1274.45	40.0228
1274.54	40.0244
1291.56	55.2932
1298.22	0.0000
1312.09	37.4080
1325.50	28.4124
1325.50	28.4124
1332.49	35.5825
1333.61	26.4401
1360.21	25.6042
1362.66	0.0000
1365.15	27.6888
1368.21	34.8965
1368.53	0.0000
1376.25	30.8557
1377.67	26.7511
1377.67	26.7511
1377.67	26.7511
1377.67	26.7511
1384.27	43.2886
1394.10	20.6665
1395.20	23.7730
1407.95	23.8516
1434.06	34.4502
1436.60	34.4717
1457.56	0.0000
1460.81	19.9679
1489.15	22.2253
1509.49	15.9540
1596.49	17.9133
1620.62	14.1078
1678.03	0.0000
1691.02	10.4560
1691.02	10.4560

1706.46	0.0000
1750.46	0.0000
1764.49	11.8296
1764.49	11.8296
1764.49	11.8296
1764.49	11.8296
1770.23	16.9196
1771.40	15.2314
1791.20	0.0000
1808.65	6.8223
1836.01	6.8608

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:C232358009

Total Uranium Activity	2.1960E-00	ug/g
Total Uranium Counting Unc.	5.3747E-00	ug/g
Total Uranium Tpu	2.7422E-06	ug/g
Total Uranium Mda	3.1232E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                              2040 SAVAGE ROAD                             *
*                           CHARLESTON ,SC 29407                            *
*                            GROSS GAMMA REPORT                             *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID   : G232358009      *
*   ANALYST       : MXR1                      DETECTOR    : GAM12           *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 12:15:17.51    SAMPLE ALQT:  133.790 GRAM    *
*                                                                           *
*****************************************************************************
```

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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.620E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.536E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.108E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.504E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:17:35.34

```
*************************************************************************
*                          CEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358010.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:15:57.
Sample ID         : G232358010           Sample quantity  : 1.33280E+02 GRAM
Detector name     : CAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.94  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.71*	32	487	1.10	127.43	122	9	4.43E-03	129.0	
2	4	74.99	383	323	0.83	149.98	146	14	5.32E-02	8.6	5.56E-01
3	4	77.31*	528	289	0.91	154.61	146	14	7.34E-02	6.7	
4	1	87.42*	247	405	1.15	174.83	163	32	3.43E-02	14.7	3.76E+00
5	1	90.13	181	419	1.41	180.26	163	32	2.51E-02	21.3	
6	1	92.98*	260	410	1.42	185.97	163	32	3.61E-02	17.2	
7	0	129.20*	59	333	0.86	258.41	255	8	8.22E-03	55.7	
8	0	143.95*	47	259	1.25	287.89	284	7	6.59E-03	60.1	
9	0	186.07*	194	360	1.08	372.14	367	11	2.69E-02	21.0	
10	0	209.35	107	233	0.94	418.70	415	8	1.49E-02	26.5	
11	5	238.69*	1221	144	1.01	477.39	470	21	1.70E-01	3.3	1.73E+00
12	5	241.46	293	202	1.74	482.92	470	21	4.07E-02	13.7	
13	0	270.23	102	217	1.32	540.45	537	11	1.42E-02	29.4	
14	4	295.21*	384	116	1.23	590.43	586	22	5.34E-02	6.8	4.57E+00
15	4	299.94	134	198	2.22	599.87	586	22	1.86E-02	23.9	
16	0	329.00	79	241	0.79	658.00	653	14	1.09E-02	44.6	
17	0	338.30	233	156	0.99	676.61	672	10	3.23E-02	12.0	
18	0	352.00*	570	162	1.19	703.99	699	12	7.92E-02	6.3	
19	0	463.43	98	153	1.61	926.86	920	16	1.36E-02	29.9	
20	0	510.84*	118	154	1.40	1021.69	1014	15	1.65E-02	27.7	
21	0	583.30*	321	110	1.43	1166.59	1160	14	4.46E-02	9.1	
22	0	609.35*	372	117	1.32	1218.70	1212	14	5.16E-02	8.2	
23	0	727.82	70	96	1.51	1455.64	1449	12	9.72E-03	30.4	
24	0	785.47	42	62	0.81	1570.94	1563	13	5.87E-03	41.3	
25	0	795.59	49	68	1.46	1591.17	1585	13	6.81E-03	37.6	
26	0	861.47	72	79	1.72	1722.93	1714	19	9.98E-03	32.2	
27	0	911.16*	235	80	1.41	1822.32	1816	13	3.27E-02	10.6	
28	1	964.42	59	44	2.12	1928.85	1920	31	8.17E-03	29.2	1.84E+00
29	1	968.81*	162	58	2.13	1937.61	1920	31	2.26E-02	12.5	
30	0	1120.60*	82	71	1.43	2241.20	2233	15	1.14E-02	26.3	
31	0	1377.67	48	9	1.78	2755.33	2749	14	6.70E-03	20.1	
32	0	1460.36*	1559	23	1.84	2920.72	2911	18	2.17E-01	2.6	
33	0	1630.01*	11	8	0.99	3260.02	3254	10	1.52E-03	60.5	
34	0	1729.03	28	3	1.02	3458.07	3452	13	3.83E-03	23.4	
35	0	1763.73*	70	0	2.18	3527.46	3521	12	9.67E-03	12.8	
36	0	1847.34	13	7	1.65	3694.68	3686	13	1.74E-03	50.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 14:17:37

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358010.CNF;1
Analyses by : PEAK V16.9,PEAKFFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:15:57
Sample ID : G232358010 Sample quantity : 133.28 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.94 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.350E+01	3.333E+00	4.269E-01	3.594E-02	78.474
CD-109	+	88.03	*	3.051E+00	9.329E-01	1.160E+00	1.000E-01	2.630
SN-126	+	64.28		2.670E-01	6.901E-01	8.030E-01	1.163E-01	0.332
	+	86.94		1.249E+00	6.332E-01	4.806E-01	1.987E-01	2.599
	+	87.57	*	3.004E-01	9.184E-02	1.148E-01	9.859E-03	2.617
CE-141	+	145.44	*	5.221E-02	6.278E-02	9.166E-02	5.256E-03	0.570
TL-208		277.35		4.731E-01	3.758E-01	5.929E-01	6.186E-02	0.798
	+	510.84		4.936E-01	2.777E-01	2.020E-01	2.060E-02	2.443
	+	583.14	*	3.829E-01	7.455E-02	5.165E-02	3.558E-03	7.413
	+	860.37		8.169E-01	5.316E-01	3.693E-01	3.527E-02	2.212
BI-211		72.87		3.266E+00	3.391E+00	5.159E+00	3.915E-01	0.633
	+	351.07	*	2.977E+00	4.157E-01	2.842E-01	1.765E-02	10.475
BI-212	+	727.18	*	7.208E-01	4.432E-01	4.259E-01	3.673E-02	1.693
	+	785.46		2.790E+00	2.317E+00	2.589E+00	2.018E-01	1.078
		1620.62		6.677E-02	1.177E+00	1.905E+00	1.397E-01	0.035
PB-212	+	74.81		1.990E+00	4.186E-01	5.237E-01	6.336E-02	3.801
	+	77.11		1.551E+00	2.397E-01	2.961E-01	2.313E-02	5.237
	+	87.30		1.389E+00	4.469E-01	5.325E-01	7.011E-02	2.609
	+	238.63	*	1.406E+00	1.364E-01	8.052E-02	5.680E-03	17.460
	+	300.09		2.361E+00	1.145E+00	1.046E+00	8.480E-02	2.258
PO-212	+	74.81		1.990E+00	4.186E-01	5.237E-01	6.336E-02	3.801
	+	77.11		1.551E+00	2.397E-01	2.961E-01	2.313E-02	5.237
	+	87.30		1.389E+00	4.469E-01	5.325E-01	7.011E-02	2.609
		115.19		1.455E+00	3.417E+00	5.716E+00	3.657E-01	0.255
	+	238.63	*	1.406E+00	1.364E-01	8.052E-02	5.680E-03	17.460
	+	300.09		2.361E+00	1.145E+00	1.046E+00	8.480E-02	2.258
BI-214	+	609.31	*	8.354E-01	1.528E-01	1.014E-01	8.087E-03	8.242
		768.36		1.260E-01	7.261E-01	1.181E+00	1.135E-01	0.107
		934.06		1.097E+00	1.077E+00	1.927E+00	2.139E-01	0.570
	+	1120.29		9.879E-01	5.278E-01	4.742E-01	4.415E-02	2.083
		1238.11		1.341E+00	9.406E-01	1.677E+00	1.481E-01	0.800
	+	1377.67		2.562E+00	1.064E+00	1.245E+00	1.315E-01	2.059
	+	1764.49		1.155E+00	3.051E-01	2.460E-01	1.556E-02	4.696
PB-214	+	74.81		3.430E+00	6.942E-01	9.023E-01	9.630E-02	3.801

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		2.658E+00	4.581E-01	5.076E-01	5.539E-02	5.237
	+	87.30		2.380E+00	7.505E-01	9.122E-01	1.051E-01	2.609
	+	241.98		2.023E+00	5.785E-01	4.845E-01	3.792E-02	4.176
	+	295.21		1.190E+00	1.901E-01	1.833E-01	1.538E-02	6.495
	+	351.92	*	1.036E+00	1.544E-01	1.025E-01	8.313E-03	10.104
PO-214	+	74.81		3.430E+00	6.942E-01	9.023E-01	9.630E-02	3.801
	+	77.11		2.658E+00	4.581E-01	5.076E-01	5.539E-02	5.237
	+	87.30		2.380E+00	7.505E-01	9.122E-01	1.051E-01	2.609
	+	241.98		2.023E+00	5.785E-01	4.845E-01	3.792E-02	4.176
	+	295.21		1.190E+00	1.901E-01	1.833E-01	1.538E-02	6.495
	+	351.92	*	1.036E+00	1.544E-01	1.025E-01	8.313E-03	10.104
PO-216	+	74.81		1.990E+00	4.186E-01	5.237E-01	6.336E-02	3.801
	+	77.11		1.551E+00	2.397E-01	2.961E-01	2.313E-02	5.237
	+	87.30		1.389E+00	4.469E-01	5.325E-01	7.011E-02	2.609
	+	238.63	*	1.406E+00	1.364E-01	8.052E-02	5.680E-03	17.460
	+	300.09		2.361E+00	1.145E+00	1.046E+00	8.480E-02	2.258
PO-218	+	74.81		3.430E+00	6.942E-01	9.023E-01	9.630E-02	3.801
	+	77.11		2.658E+00	4.581E-01	5.076E-01	5.539E-02	5.237
	+	87.30		2.380E+00	7.505E-01	9.122E-01	1.051E-01	2.609
	+	241.98		2.023E+00	5.785E-01	4.845E-01	3.792E-02	4.176
	+	295.21		1.190E+00	1.901E-01	1.833E-01	1.538E-02	6.495
	+	351.92	*	1.036E+00	1.544E-01	1.025E-01	8.313E-03	10.104
RA-224	+	240.98	*	3.836E+00	1.076E+00	9.158E-01	4.997E-02	4.189
RA-226	+	609.31	*	8.354E-01	1.528E-01	1.014E-01	8.087E-03	8.242
		768.36		1.260E-01	7.261E-01	1.181E+00	1.135E-01	0.107
		934.06		1.097E+00	1.077E+00	1.927E+00	2.139E-01	0.570
	+	1120.29		9.879E-01	5.278E-01	4.742E-01	4.415E-02	2.083
		1238.11		1.341E+00	9.406E-01	1.677E+00	1.481E-01	0.800
	+	1377.67		2.562E+00	1.064E+00	1.245E+00	1.315E-01	2.059
	+	1764.49		1.155E+00	3.051E-01	2.460E-01	1.556E-02	4.696
AC-228	+	338.32		1.340E+00	6.340E-01	3.349E-01	1.364E-01	4.002
	+	911.07	*	1.268E+00	3.087E-01	2.118E-01	2.514E-02	5.988
	+	969.11		1.548E+00	5.309E-01	3.172E-01	7.424E-02	4.880
RA-228	+	338.32		1.340E+00	6.340E-01	3.349E-01	1.364E-01	4.002
	+	911.07	*	1.268E+00	3.087E-01	2.118E-01	2.514E-02	5.988
	+	969.11		1.548E+00	5.309E-01	3.172E-01	7.424E-02	4.880
TH-228		84.40		2.830E+00	2.447E+00	4.021E+00	5.206E-01	0.704
	+	238.60	*	1.406E+00	1.364E-01	8.051E-02	5.680E-03	17.462
	+	300.10		2.361E+00	1.792E+00	1.046E+00	6.161E-01	2.258
TH-230	+	609.31	*	8.354E-01	1.528E-01	1.014E-01	8.087E-03	8.242
		768.36		1.260E-01	7.261E-01	1.180E+00	1.135E-01	0.107
		934.06		1.097E+00	1.077E+00	1.927E+00	2.139E-01	0.570
	+	1120.29		9.879E-01	5.278E-01	4.742E-01	4.415E-02	2.083
		1238.11		1.341E+00	9.405E-01	1.677E+00	1.481E-01	0.800
	+	1377.67		2.562E+00	1.064E+00	1.245E+00	1.315E-01	2.059
	+	1764.49		1.155E+00	3.051E-01	2.460E-01	1.556E-02	4.696
TH-232	+	338.32		1.340E+00	3.308E-01	3.349E-01	1.869E-02	4.002
	+	911.07	*	1.268E+00	3.087E-01	2.118E-01	2.514E-02	5.988
	+	969.11		1.548E+00	5.309E-01	3.172E-01	7.424E-02	4.880

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-234	+	63.29	*	6.745E-01	1.745E+00	2.029E+00	3.528E-01	0.332
	+	92.38		2.044E+00	7.930E-01	7.496E-01	1.336E-01	2.727
U-234	+	609.31	*	8.354E-01	1.528E-01	1.014E-01	8.087E-03	8.242
		768.36		1.260E-01	7.261E-01	1.180E+00	1.135E-01	0.107
		934.06		1.097E+00	1.077E+00	1.927E+00	2.139E-01	0.570
	+	1120.29		9.879E-01	5.278E-01	4.742E-01	4.415E-02	2.083
		1238.11		1.341E+00	9.405E-01	1.677E+00	1.481E-01	0.800
	+	1377.67		2.562E+00	1.064E+00	1.245E+00	1.315E-01	2.059
	+	1764.49		1.155E+00	3.051E-01	2.460E-01	1.556E-02	4.696
U-235	+	89.95		2.926E+00	1.540E+00	1.535E+00	4.725E-01	1.906
	+	93.35		2.458E+00	1.089E+00	8.943E-01	2.489E-01	2.748
		105.00		-3.607E-02	1.008E+00	1.663E+00	4.889E-01	-0.022
	+	143.76	*	1.783E-01	2.161E-01	3.260E-01	5.284E-02	0.547
		163.35		-1.895E-01	4.571E-01	7.174E-01	1.275E-01	-0.264
	+	185.71		1.582E-01	6.685E-02	6.731E-02	3.475E-03	2.350
		205.31		4.186E-01	5.390E-01	7.899E-01	1.408E-01	0.530
NP-237	+	86.50	*	8.821E-01	3.254E-01	3.412E-01	7.614E-02	2.585
		95.87		-3.050E-01	1.032E+00	1.476E+00	3.590E-01	-0.207
U-238	+	63.29	*	6.745E-01	1.745E+00	2.029E+00	3.528E-01	0.332
	+	92.38		2.044E+00	7.234E-01	7.496E-01	6.045E-02	2.727
AM-243	+	74.67	*	3.227E-01	6.079E-02	8.517E-02	6.538E-03	3.789
	+	86.72		3.308E+01	1.011E+01	1.276E+01	1.087E+00	2.592
		117.66		1.016E+00	3.694E+00	6.144E+00	3.862E-01	0.165
		142.18		2.129E+01	1.837E+01	2.794E+01	1.554E+00	0.762
ANH-511	+	511.00	*	1.066E-01	5.931E-02	4.365E-02	2.564E-03	2.442

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.757E-01	2.915E-01	5.181E-01	3.483E-02	0.725
NA-22		1274.54	*	2.892E-03	4.264E-02	6.995E-02	5.199E-03	0.041
NA-24		1368.53	*	4.349E-03	4.264E-02	Half-Life too short		
AL-26		1129.67		-1.159E+00	1.842E+00	2.790E+00	1.778E-01	-0.415
		1808.65	*	5.919E-03	2.357E-02	4.109E-02	2.454E-03	0.144
TI-44		67.85		-3.603E-02	5.126E-02	7.248E-02	5.362E-03	-0.497
	+	78.38	*	2.862E-01	4.423E-02	7.536E-02	5.946E-03	3.797
SC-46		889.25	*	-1.985E-02	3.524E-02	5.564E-02	5.229E-03	-0.357
	+	1120.51		1.676E-01	8.884E-02	1.121E-01	7.330E-03	1.495
V-48		944.10		-3.016E-01	8.389E-01	1.266E+00	1.150E-01	-0.238
		983.50	*	-2.730E-02	6.177E-02	9.795E-02	8.444E-03	-0.279
		1312.09		4.449E-02	8.192E-02	1.402E-01	1.145E-02	0.317
CR-51		320.08	*	-2.054E-01	3.415E-01	5.415E-01	3.403E-02	-0.379
MN-52		744.21		1.141E-01	1.893E-01	3.203E-01	2.307E-02	0.356
		848.13		-3.099E+00	5.862E+00	9.376E+00	8.200E-01	-0.331
		935.52		1.594E-01	2.051E-01	3.621E-01	3.322E-02	0.440
		1246.25		3.972E+00	6.706E+00	1.146E+01	7.882E-01	0.347
		1333.61		5.407E-01	4.598E+00	7.566E+00	6.490E-01	0.071
		1434.06	*	1.407E-01	1.758E-01	3.174E-01	2.624E-02	0.443

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MN-54		834.83	*	-1.036E-02	3.620E-02	5.924E-02	5.058E-03	-0.175
CO-56		846.75	*	-1.188E-02	3.872E-02	6.313E-02	5.507E-03	-0.188
		977.42		6.480E-01	3.169E+00	4.637E+00	4.033E-01	0.140
		1037.82		-7.641E-02	2.972E-01	4.791E-01	4.018E-02	-0.159
		1175.09		-6.462E-01	2.118E+00	3.271E-00	1.823E-01	-0.198
		1238.25		1.360E-01	9.321E-02	1.671E-01	1.177E-02	0.814
		1360.21		2.971E-01	8.454E-01	1.438E+00	1.224E-01	0.207
		1771.40		1.360E-01	1.712E-01	3.155E-01	1.979E-02	0.431
CO-57		122.06	*	-9.458E-03	2.427E-02	3.930E-02	2.403E-03	-0.241
		136.48		6.452E-02	1.991E-01	3.302E-01	2.190E-02	0.195
CO-58		810.76	*	-3.851E-02	3.620E-02	5.503E-02	4.510E-03	-0.700
FE-59	+	142.65		2.261E+00	2.719E+00	4.321E+00	2.400E-01	0.523
		192.34		4.557E-01	9.948E-01	1.520E+00	1.753E-01	0.300
		1099.22	*	2.778E-02	9.032E-02	1.525E-01	1.184E-02	0.182
		1291.56		2.282E-02	1.197E-01	1.987E-01	1.795E-02	0.115
CO-60		1173.22		-7.287E-04	4.287E-02	6.814E-02	3.774E-03	-0.011
		1332.49	*	1.074E-02	4.115E-02	6.872E-02	5.896E-03	0.156
ZN-65		1115.52	*	-8.062E-02	1.113E-01	1.432E-01	9.510E-03	-0.563
GE-68		1077.35	*	4.929E-01	1.203E+00	2.053E+00	1.494E-01	0.240
AS-73		53.44	*	-3.112E-01	8.133E-01	1.347E+00	9.947E-02	-0.231
AS-74		595.88	*	-8.595E-03	7.667E-02	1.237E-01	7.483E-03	-0.069
		634.78		6.834E-02	3.218E-01	5.309E-01	3.231E-02	0.129
SE-75		66.05		-1.940E+00	5.209E+00	7.485E+00	7.045E-01	-0.259
		96.73		-1.837E-01	8.361E-01	1.203E+00	1.565E-01	-0.153
		121.11		6.437E-03	1.298E-01	2.139E-01	2.022E-02	0.030
		136.00		1.488E-02	3.726E-02	6.199E-02	3.594E-03	0.240
		198.60		3.021E-01	1.671E+00	2.723E+00	1.818E-01	0.111
		264.65	*	-5.434E-04	4.416E-02	6.504E-02	3.644E-03	-0.008
		279.53		5.284E-02	9.773E-02	1.660E-01	1.006E-02	0.318
		303.91		5.577E-01	1.917E+00	2.869E+00	2.703E-01	0.194
		400.65		8.889E-02	2.364E-01	4.007E-01	3.559E-02	0.222
BR-77	+	87.88		4.783E+02	1.462E+02	2.343E+02	2.019E+01	2.041
		200.40		-8.008E+01	1.124E+02	1.759E+02	9.231E+00	-0.455
	+	239.00		1.635E+02	1.406E+01	2.477E+01	1.349E+00	6.601
		249.79		-4.492E+00	4.482E+01	7.144E+01	3.922E+00	-0.063
		281.68		-7.457E+01	5.615E+01	8.805E+01	4.912E+00	-0.847
		297.23		2.475E+02	4.447E+01	8.520E+01	4.770E+00	2.905
		303.76		4.114E+01	1.194E+02	1.794E+02	1.005E+01	0.229
		439.47		-9.444E+00	9.339E+01	1.534E+02	8.623E+00	-0.062
		484.57		-2.747E+01	1.540E+02	2.504E+02	1.450E+01	-0.110
		520.65	*	-6.531E-01	7.102E+00	1.157E+01	6.827E-01	-0.056
		574.64		-1.807E+02	1.419E+02	2.080E+02	1.252E+01	-0.868
		578.91		2.212E+01	6.173E+01	9.043E+01	5.448E+00	0.245
		585.48		8.259E+02	1.719E+02	3.120E+02	1.883E+01	2.647
		755.35		7.075E+01	1.180E+02	1.988E+02	1.463E+01	0.356
		817.79		8.209E+01	8.894E+01	1.593E+02	1.319E+01	0.515
SR-82		698.33		1.520E+00	3.054E+01	4.949E+01	3.254E+00	0.031
		776.49	*	-9.505E-02	3.690E-01	5.788E-01	4.437E-02	-0.164
		1395.20		-4.424E+00	1.116E+01	1.717E+01	1.443E+00	-0.258

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-83		520.41	*	-8.039E-03	6.410E-02	1.042E-01	6.146E-03	-0.077
		529.64		4.052E-03	1.011E-01	1.660E-01	9.834E-03	0.024
		552.65		-4.601E-02	1.764E-01	2.826E-01	1.689E-02	-0.163
RB-84		881.50	*	6.747E-02	6.496E-02	1.169E-01	1.084E-02	0.577
KR-85		513.99	*	1.734E+01	7.819E+00	1.305E+01	7.677E-01	1.329
SR-85		513.99	*	8.790E-02	3.963E-02	6.614E-02	3.891E-03	1.329
RB-86		1076.63	*	-8.491E-02	7.585E-01	1.237E+00	9.016E-02	-0.069
Y-88		898.02		-3.097E-02	3.633E-02	5.543E-02	5.309E-03	-0.559
		1836.01	*	-1.473E-02	3.447E-02	5.139E-02	2.958E-03	-0.287
ZR-88		392.90	*	1.022E-02	2.807E-02	4.761E-02	2.572E-03	0.215
Y-91		1204.90	*	8.973E+00	1.871E+01	3.178E+01	1.941E+00	0.282
NB-94		702.63	*	-1.478E-02	3.141E-02	4.867E-02	3.228E-03	-0.304
		871.10		3.239E-03	3.142E-02	5.057E-02	4.605E-03	0.064
NB-95		765.79	*	3.058E-02	4.059E-02	6.888E-02	5.174E-03	0.444
NB-95M		235.69	*	2.212E-01	1.313E-01	2.014E-01	1.460E-02	1.098
ZR-95		724.18		3.097E-02	1.086E-01	1.552E-01	1.216E-02	0.200
		756.15	*	4.302E-02	6.818E-02	1.151E-01	9.644E-03	0.374
NB-97		657.90	*	-3.401E-02	6.818E-02	Half-Life too short		
		1024.50		-2.833E+00	6.818E-02	Half-Life too short		
ZR-97		254.15		-2.279E-01	6.818E-02	Half-Life too short		
		355.39		4.567E-01	6.818E-02	Half-Life too short		
		507.63	*	1.104E+00	6.818E-02	Half-Life too short		
		602.52		5.443E-01	6.818E-02	Half-Life too short		
		1021.30		4.463E-01	6.818E-02	Half-Life too short		
		1147.95		4.558E-01	6.818E-02	Half-Life too short		
		1362.66		-2.053E+00	6.818E-02	Half-Life too short		
		1750.46		1.272E-01	6.818E-02	Half-Life too short		
MO-99		140.51		-4.666E+00	2.125E+01	2.979E+01	8.015E+00	-0.157
		181.06		5.801E+00	1.350E+01	1.959E+01	3.316E+00	0.296
		366.43		-1.335E+01	5.972E+01	9.833E+01	5.414E+00	-0.136
		739.58	*	-6.355E+00	7.985E+00	1.179E+01	1.697E+00	-0.539
		778.00		-2.111E+01	2.951E+01	3.933E+01	3.024E+00	-0.537
TC-99M		140.51	*	-4.219E+08	2.951E+01	Half-Life too short		
RH-101		127.23		1.556E-02	3.446E-02	5.079E-02	3.018E-03	0.306
		198.01	*	1.129E-02	3.068E-02	5.040E-02	2.638E-03	0.224
		325.23		1.596E-01	2.349E-01	3.587E-01	2.008E-02	0.445
RH-102		418.52		-1.202E-01	2.494E-01	4.002E-01	2.212E-02	-0.300
		475.06	*	1.081E-02	2.723E-02	4.599E-02	2.649E-03	0.235
		631.29		5.412E-02	5.124E-02	8.970E-02	5.457E-03	0.603
		697.49		2.589E-02	7.053E-02	1.172E-01	7.690E-03	0.221
		766.84		7.895E-02	1.073E-01	1.815E-01	1.366E-02	0.435
		1046.59		-7.367E-02	1.148E-01	1.773E-01	1.376E-02	-0.415
		1112.84		-8.449E-03	2.734E-01	3.843E-01	2.566E-02	-0.022
RU-103		497.08	*	8.284E-04	3.594E-02	5.916E-02	7.489E-03	0.014
	+	610.33		8.847E+00	2.001E+00	2.440E+00	3.786E-01	3.626
RH-106	+	511.85		5.315E-01	2.957E-01	3.998E-01	2.349E-02	1.329
		621.84	*	2.460E-01	2.930E-01	5.045E-01	5.992E-02	0.488
		1050.47		-1.333E+00	2.328E+00	3.643E+00	2.805E-01	-0.366
RU-106	+	511.85		5.315E-01	2.957E-01	3.998E-01	2.349E-02	1.329

---- Non-identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		621.84	*	2.460E-01	2.920E-01	5.045E-01	3.066E-02	0.488
		1050.47		-1.333E+00	2.328E+00	3.643E+00	2.805E-01	-0.366
AG-108M		433.93	*	9.288E-03	2.964E-02	5.000E-02	3.056E-03	0.186
		614.37		-1.302E-02	4.293E-02	5.832E-02	3.815E-03	-0.223
		722.95		6.863E-04	4.401E-02	6.120E-02	4.483E-03	0.011
AG-110M		657.75	*	-3.685E-02	3.635E-02	5.429E-02	3.502E-03	-0.679
		677.61		-2.586E-01	2.996E-01	4.387E-01	2.908E-02	-0.589
		706.67		-2.037E-02	1.885E-01	3.012E-01	2.105E-02	-0.068
		763.93		-1.230E-01	1.688E-01	2.550E-01	1.979E-02	-0.482
		884.67		-7.776E-03	4.586E-02	7.530E-02	7.214E-03	-0.103
		937.48		-1.104E-01	1.047E-01	1.565E-01	1.478E-02	-0.706
		1384.27		-5.155E-02	1.748E-01	2.278E-01	1.979E-02	-0.226
IN-111		171.28		-4.526E-01	7.066E-01	1.116E+00	5.670E-02	-0.406
		245.39	*	-2.382E-01	7.991E-01	1.092E+00	5.975E-02	-0.218
IN-113M		391.69	*	-8.816E-03	4.074E-02	6.686E-02	3.886E-03	-0.132
SN-113		391.69	*	-8.816E-03	4.074E-02	6.686E-02	3.886E-03	-0.132
IN-114M		190.27	*	1.497E-01	1.917E-01	2.837E-01	1.472E-02	0.528
CD-115		260.90		-2.507E+00	8.890E+01	1.420E+02	7.848E+00	-0.018
		492.35		-6.842E+00	2.392E+01	3.856E+01	2.243E+00	-0.177
		527.90	*	4.206E+00	7.312E+00	1.244E+01	7.367E-01	0.338
SN-117M		156.02		-8.015E-01	1.977E+00	3.171E+00	1.669E-01	-0.253
		158.56	*	-1.606E-02	4.793E-02	7.704E-02	4.013E-03	-0.208
SB-122		563.90	*	8.925E-01	1.490E+00	2.531E+00	1.518E-01	0.353
		692.80		6.249E+00	2.985E+01	4.902E+01	3.187E+00	0.127
I-123		159.00	*	-3.492E-01	2.985E+01	Half-Life too short		
		528.96		1.169E+01	2.985E+01	Half-Life too short		
TE-123M		159.00	*	-6.958E-03	2.616E-02	4.217E-02	2.229E-03	-0.165
I-124		602.71	*	2.660E-02	5.446E-01	7.698E-01	4.663E-02	0.035
		722.78		2.336E-01	3.839E+00	5.367E+00	3.706E-01	0.044
		1325.50		2.267E+00	2.824E+01	4.631E+01	3.908E+00	0.049
	+	1376.25		6.683E+01	2.743E+01	4.764E+01	4.032E+00	1.403
		1509.49		3.663E+00	1.144E+01	1.933E+01	1.535E+00	0.190
		1691.02		-9.175E-01	2.149E+00	3.198E+00	2.197E-01	-0.287
SB-124		602.71		1.833E-03	3.755E-02	5.306E-02	3.216E-03	0.035
		645.85		1.700E-01	4.480E-01	7.486E-01	5.093E-02	0.227
		709.31		-5.467E-01	2.492E+00	3.941E+00	2.649E-01	-0.139
		713.82		2.141E+00	1.489E+00	2.654E+00	2.866E-01	0.807
		722.78		2.334E-02	3.836E-01	5.363E-01	3.828E-02	0.044
	+	968.20		1.574E+01	4.180E+00	6.728E+00	5.925E-01	2.339
		1045.16		-3.585E-01	2.338E+00	3.784E+00	2.943E-01	-0.095
		1325.50		2.419E-01	3.014E+00	4.943E+00	4.171E-01	0.049
		1368.21		3.477E-02	1.506E+00	2.396E+00	3.208E-01	0.015
		1436.60		-1.665E+00	3.313E+00	4.929E+00	4.071E-01	-0.338
		1691.02	*	-2.163E-02	5.066E-02	7.537E-02	5.497E-03	-0.287
SB-125		427.89	*	-8.161E-03	8.090E-02	1.330E-01	7.751E-03	-0.061
	+	463.38		7.970E-01	4.793E-01	4.968E-01	3.324E-02	1.604
		600.56		9.229E-03	1.528E-01	2.499E-01	1.732E-02	0.037
		635.90		-1.287E-01	2.596E-01	4.042E-01	2.845E-02	-0.319
TE-125M		109.28	*	5.904E-01	8.865E+00	1.466E+01	1.289E+00	0.040

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-126		388.63		-2.409E-02	1.721E-01	2.838E-01	1.536E-02	-0.085
		666.33	*	-1.437E-01	1.807E-01	2.752E-01	1.694E-02	-0.522
		753.82		-1.344E-01	1.359E+00	2.165E+00	1.589E-01	-0.062
SB-126		223.80		1.740E+00	3.723E+00	6.117E+00	3.289E-01	0.284
		278.60		1.432E+00	2.117E+00	3.617E+00	2.016E-01	0.396
	+	296.50		1.114E+01	1.637E+00	3.049E+00	1.707E-01	3.654
		414.70		1.383E-02	6.368E-02	1.070E-01	5.895E-03	0.129
		415.30		2.049E+00	5.207E+00	8.839E+00	4.873E-01	0.232
		555.20		8.746E-01	3.563E+00	5.841E+00	3.494E-01	0.150
		573.80		-4.849E-01	8.896E-01	1.390E+00	8.362E-02	-0.349
		593.00		-2.621E-01	7.786E-01	1.233E+00	7.457E-02	-0.213
		656.30		-2.250E+00	3.134E+00	4.788E+00	2.918E-01	-0.470
		666.33		-5.990E-02	7.531E-02	1.147E-01	7.060E-03	-0.522
		675.00		3.624E-02	1.767E+00	2.801E+00	1.755E-01	0.013
		695.00		-1.502E-02	7.347E-02	1.107E-01	7.232E-03	-0.136
		697.00		1.041E-01	2.339E-01	3.908E-01	2.562E-02	0.267
		720.50	*	-1.798E-02	1.447E-01	2.080E-01	1.430E-02	-0.086
		856.80		-3.161E-01	4.771E-01	6.291E-01	5.587E-02	-0.502
		989.30		6.456E-01	1.004E+00	1.765E+00	1.509E-01	0.366
		1034.80		1.831E+00	8.085E+00	1.362E+01	1.080E+00	0.134
		1213.00		1.299E+00	4.264E+00	7.150E+00	4.472E-01	0.182
SB-127		61.10		1.678E+01	4.961E+01	7.436E+01	7.278E+00	0.226
		252.40		4.979E-01	3.365E+00	5.420E+00	2.245E+00	0.092
		290.80		-9.813E+00	1.789E+01	2.521E+01	2.176E+00	-0.389
		411.60		6.058E-01	9.421E+00	1.568E+01	2.196E+00	0.039
		444.90		-2.515E+00	7.395E+00	1.194E+01	1.239E+00	-0.211
		473.00		-1.287E+00	1.287E+00	1.963E+00	2.125E-01	-0.656
		543.00		-7.058E+00	1.277E+01	1.999E+01	2.538E+00	-0.353
		603.60		1.970E+00	8.962E+00	1.291E+01	1.365E+00	0.153
		685.20	*	-2.431E-02	1.008E+00	1.624E+00	1.534E-01	-0.015
		698.50		7.430E-01	1.143E+01	1.855E+01	2.701E+00	0.040
		722.20		1.512E+01	2.513E+01	3.735E+01	3.558E+00	0.405
		783.80		2.349E+00	3.212E+00	4.994E+00	5.764E-01	0.470
XE-127		57.60		2.018E+00	6.184E+00	9.768E+00	7.109E-01	0.207
	+	145.22		5.771E-01	6.939E-01	1.111E+00	6.102E-02	0.520
		172.10		-6.659E-02	1.069E-01	1.689E-01	8.591E-03	-0.394
		202.84	*	3.772E-03	4.301E-02	6.976E-02	3.671E-03	0.054
		374.96		-4.454E-02	1.781E-01	2.923E-01	1.600E-02	-0.152
I-131		80.18		-2.293E+00	6.059E+00	6.224E+00	5.015E-01	-0.369
		284.30		-1.002E+00	1.142E+00	1.834E+00	1.145E-01	-0.547
		364.48	*	2.672E-02	9.393E-02	1.592E-01	9.881E-03	0.168
		636.97		-4.439E-01	1.308E+00	2.062E+00	1.390E-01	-0.215
		722.89		2.132E-01	6.746E+00	9.398E+00	6.547E-01	0.023
TE-132		49.72		-2.316E+00	1.567E+01	2.623E+01	2.506E+00	-0.088
		111.76		7.050E+00	2.250E+01	3.751E+01	3.366E+00	0.188
		116.30		-2.381E+00	2.113E+01	3.466E+01	3.055E+00	-0.069
		228.16	*	-1.139E-02	5.273E-01	8.472E-01	1.185E-01	-0.013
BA-133		53.15		-2.317E+00	3.590E+00	5.884E+00	4.348E-01	-0.394
		79.62		2.416E-01	1.895E+00	2.031E+00	3.019E-01	0.119

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		81.00		-8.590E-02	1.416E-01	1.418E-01	2.210E-02	-0.606
		276.40		9.563E-02	3.977E-01	5.624E-01	7.233E-02	0.170
		302.84		1.153E-01	1.375E-01	2.128E-01	2.460E-02	0.542
		356.01	*	1.849E-02	4.265E-02	6.404E-02	7.320E-03	0.289
		383.85		-1.252E-01	2.636E-01	4.252E-01	4.542E-02	-0.295
I-133	+	510.53		4.479E-01	2.636E-01	Half-Life too short		
		529.87	*	-2.483E-04	2.636E-01	Half-Life too short		
		706.58		-1.559E-02	2.636E-01	Half-Life too short		
		856.28		-2.471E-01	2.636E-01	Half-Life too short		
		875.33		-4.355E-02	2.636E-01	Half-Life too short		
		1236.41		4.544E-01	2.636E-01	Half-Life too short		
		1298.22		4.671E-02	2.636E-01	Half-Life too short		
CS-134		475.35		1.585E+00	1.746E+00	3.043E+00	1.753E-01	0.521
		563.23		1.870E-01	3.480E-01	5.888E-01	3.601E-02	0.318
		569.32		1.210E-01	1.849E-01	3.154E-01	1.948E-02	0.384
		604.70		-8.157E-03	3.225E-02	4.396E-02	2.678E-03	-0.186
	+	795.84	*	8.507E-02	6.426E-02	8.366E-02	6.707E-03	1.017
		801.93		-1.566E-01	4.580E-01	6.443E-01	5.214E-02	-0.243
		1038.57		3.900E-01	3.737E+00	6.227E+00	4.904E-01	0.063
		1167.94		-4.041E-01	2.387E+00	3.852E+00	2.174E-01	-0.105
		1365.15		4.213E-02	1.003E+00	1.638E+00	1.456E-01	0.026
CS-135		268.24	*	2.794E-01	1.643E-01	2.548E-01	1.903E-02	1.096
I-135		288.45		1.369E+09	1.643E-01	Half-Life too short		
		417.63		-6.694E+08	1.643E-01	Half-Life too short		
		546.56		5.897E+08	1.643E-01	Half-Life too short		
		836.80		6.363E+08	1.643E-01	Half-Life too short		
		1038.76		1.965E+08	1.643E-01	Half-Life too short		
		1124.00		1.922E+09	1.643E-01	Half-Life too short		
		1131.51		-2.029E+08	1.643E-01	Half-Life too short		
		1260.41	*	9.349E+07	1.643E-01	Half-Life too short		
		1457.56		6.666E+10	1.643E-01	Half-Life too short		
		1678.03		1.012E+08	1.643E-01	Half-Life too short		
		1706.46		-1.933E+08	1.643E-01	Half-Life too short		
		1791.20		-8.558E+06	1.643E-01	Half-Life too short		
CS-136		66.91		-8.944E-01	8.213E-01	1.126E+00	1.664E-01	-0.794
	+	86.29		3.698E+00	1.184E+00	1.888E+00	2.408E-01	1.959
		153.22		2.087E-01	5.778E-01	9.566E-01	6.546E-02	0.218
		163.89		-2.350E-01	9.673E-01	1.532E+00	1.027E-01	-0.153
		176.55		1.615E-01	3.210E-01	5.324E-01	3.146E-02	0.303
		273.65		-2.952E-01	4.676E-01	6.196E-01	3.969E-02	-0.477
		340.57		4.143E-01	1.326E-01	2.269E-01	1.351E-02	1.826
		818.51		2.258E-02	6.655E-02	1.143E-01	9.485E-03	0.198
		1048.07	*	-3.675E-02	9.870E-02	1.573E-01	1.280E-02	-0.234
		1235.34		4.321E-01	5.920E-01	1.014E+00	1.067E-01	0.426
BA-137M		661.65	*	4.256E-02	3.827E-02	6.640E-02	4.047E-03	0.641
CS-137		661.65	*	4.499E-02	4.046E-02	7.019E-02	4.294E-03	0.641
CE-139		165.85	*	-3.715E-03	2.757E-02	4.463E-02	2.257E-03	-0.083
BA-140		162.64		2.528E-01	6.794E-01	1.104E+00	6.548E-02	0.229
		304.84		-6.262E-01	1.162E+00	1.611E+00	4.389E-01	-0.389

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		423.70		-5.976E-01	1.587E+00	2.546E+00	8.080E-01	-0.235
		537.32	*	1.623E-01	2.348E-01	3.930E-01	1.279E-01	0.413
LA-140	+	328.77		5.279E-01	4.719E-01	4.797E-01	3.029E-02	1.100
		432.53		-7.929E-01	1.754E+00	2.817E+00	1.752E-01	-0.281
		487.03		7.072E-02	1.217E-01	2.078E-01	1.364E-02	0.340
		751.79		-2.863E-01	1.552E+00	2.454E+00	2.056E-01	-0.117
		815.85		2.249E-01	2.839E-01	5.035E-01	4.673E-02	0.447
		867.82		-5.273E-01	1.352E+00	1.842E+00	1.748E-01	-0.286
		919.63		-6.147E-01	2.366E+00	3.748E+00	4.211E-01	-0.164
		925.24		3.700E-01	9.231E-01	1.591E+00	1.556E-01	0.233
		1596.49	*	-8.629E-02	7.687E-02	1.065E-01	7.969E-03	-0.810
CE-143		57.37		4.484E-05	7.687E-02	Half-Life too short		
		231.56		-8.247E-04	7.687E-02	Half-Life too short		
		293.26	*	4.178E-04	7.687E-02	Half-Life too short		
	+	350.59		1.352E-02	7.687E-02	Half-Life too short		
		490.36		-9.617E-04	7.687E-02	Half-Life too short		
		664.57		-2.708E-04	7.687E-02	Half-Life too short		
		721.93		5.006E-04	7.687E-02	Half-Life too short		
CE-144		80.11		-1.077E+00	3.062E+00	3.153E+00	2.523E-01	-0.342
		133.54	*	7.675E-02	2.235E-01	3.267E-01	4.636E-02	0.235
PM-144		476.78		5.719E-02	6.240E-02	1.086E-01	7.511E-03	0.526
		618.01		-1.036E-02	3.144E-02	4.983E-02	3.192E-03	-0.208
		696.49	*	3.872E-03	3.252E-02	5.299E-02	3.473E-03	0.073
		778.57		-3.686E-01	2.450E+00	3.489E+00	2.686E-01	-0.106
PR-144		696.49	*	2.622E-01	2.203E+00	3.589E+00	2.351E-01	0.073
		1489.15		-5.244E+00	9.357E+00	1.341E+01	1.078E+00	-0.391
PM-146		453.90	*	4.678E-03	3.949E-02	6.569E-02	5.611E-03	0.071
		633.02		6.918E-01	1.375E+00	2.277E+00	8.394E-01	0.304
		735.90		6.747E-02	1.420E-01	2.356E-01	6.638E-02	0.286
		747.13		7.758E-04	8.637E-02	1.389E-01	1.840E-02	0.006
ND-147	+	91.11		6.850E-01	2.990E-01	4.740E-01	4.246E-02	1.445
		319.41		-9.526E-01	2.896E+00	4.660E+00	2.612E-01	-0.204
		439.89		3.585E-01	4.954E+00	8.228E+00	4.629E-01	0.044
		531.02	*	-1.334E-01	5.053E-01	8.118E-01	1.102E-01	-0.164
PM-149		285.90	*	1.207E+01	5.474E+01	9.320E+01	1.313E+01	0.129
EU-152		121.78		-2.601E-02	7.068E-02	1.146E-01	8.995E-03	-0.227
		244.69		1.227E-01	3.215E-01	4.626E-01	2.531E-02	0.265
		344.27	*	-5.022E-02	9.546E-02	1.397E-01	8.848E-03	-0.359
		443.98		4.512E-01	8.806E-01	1.502E+00	8.469E-02	0.300
		778.89		-4.915E-02	2.829E-01	4.017E-01	3.093E-02	-0.122
		867.32		-2.047E-01	8.538E-01	1.188E+00	1.075E-01	-0.172
	+	964.01		6.447E-01	3.804E-01	5.172E-01	4.580E-02	1.247
		1085.78		-1.825E-02	3.633E-01	5.952E-01	4.249E-02	-0.031
		1112.02		-6.671E-02	3.666E-01	5.281E-01	3.533E-02	-0.126
		1407.95		1.371E-01	1.745E-01	3.097E-01	2.589E-02	0.443
GD-153		69.67		-7.700E-01	1.684E+00	2.562E+00	1.911E-01	-0.300
		83.37		1.705E+01	1.414E+01	2.342E+01	1.930E+00	0.728
		97.43	*	1.292E-02	8.443E-02	1.237E-01	9.342E-03	0.104
		103.18		-5.528E-02	1.008E-01	1.631E-01	1.157E-02	-0.339

---- Non-Identified Nuclides ----

Nuclide		Line Energy Fded (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154		123.07		-1.038E-02	4.959E-02	8.087E-02	7.743E-03	-0.128
		247.94		-3.888E-02	3.748E-01	5.198E-01	4.861E-02	-0.075
		591.81		1.381E-01	5.589E-01	9.041E-01	8.969E-02	0.153
		723.30		1.635E-02	1.890E-01	2.650E-01	2.124E-02	0.062
		756.87		5.694E-01	7.548E-01	1.283E+00	1.427E-01	0.444
		873.19		9.036E-02	2.712E-01	4.649E-01	5.865E-02	0.194
		996.32		-3.381E-01	3.554E-01	5.283E-01	9.345E-02	-0.640
		1004.76		-2.529E-01	2.147E-01	3.170E-01	3.626E-02	-0.798
		1274.45	*	1.120E-02	1.195E-01	1.965E-01	2.049E-02	0.057
EU-155		48.70		2.336E-01	2.516E+00	4.250E+00	3.083E-01	0.055
		60.01		2.243E+00	5.251E+00	7.911E+00	5.725E-01	0.284
	+	86.54		3.616E-01	1.107E-01	1.822E-01	1.565E-02	1.985
		105.31	*	-1.573E-02	1.027E-01	1.686E-01	1.193E-02	-0.093
TB-160	+	86.79		9.562E-01	2.924E-01	4.755E-01	4.052E-02	2.011
		197.04		3.586E-01	5.260E-01	8.749E-01	4.575E-02	0.410
		215.65		3.044E-02	7.241E-01	1.169E+00	6.237E-02	0.026
	+	298.57		3.399E-01	1.637E-01	1.903E-01	1.066E-02	1.786
		879.36	*	3.761E-02	1.367E-01	2.327E-01	2.150E-02	0.162
		962.29		8.528E-01	5.332E-01	8.927E-01	7.924E-02	0.955
		966.15		1.148E+00	2.587E-01	4.967E-01	4.387E-02	2.311
		1177.93		-6.816E-02	3.338E-01	5.363E-01	3.015E-02	-0.127
		1271.85		-7.875E-02	6.960E-01	1.122E+00	8.265E-02	-0.070
HO-166M		80.57		-1.797E-01	3.918E-01	3.994E-01	3.209E-02	-0.450
		184.41		1.005E-01	3.942E-02	6.247E-02	3.220E-03	1.609
		280.46		-3.959E-02	7.713E-02	1.246E-01	6.950E-03	-0.318
		410.95		2.733E-02	2.362E-01	3.943E-01	2.166E-02	0.069
		711.68	*	-3.035E-02	5.715E-02	8.790E-02	5.937E-03	-0.345
		752.31		-6.180E-02	2.682E-01	4.225E-01	3.092E-02	-0.146
		810.29		-4.797E-02	5.483E-02	8.495E-02	6.937E-03	-0.565
TM-171		51.35		6.795E+00	3.055E+01	5.180E+01	3.830E+00	0.131
		52.39		-8.252E+00	1.577E+01	2.598E+01	1.922E+00	-0.318
		59.40		5.173E+00	2.907E+01	4.331E+01	3.132E+00	0.119
		66.72	*	-3.232E+01	3.129E+01	4.348E+01	3.202E+00	-0.743
LU-176	+	88.36		7.125E-01	2.178E-01	3.606E-01	3.092E-02	1.976
		201.83		-1.910E-02	2.691E-02	4.207E-02	2.211E-03	-0.454
		306.84	*	-1.061E-02	2.443E-02	3.453E-02	1.935E-03	-0.307
		401.10		-2.167E+00	6.323E+00	1.029E+01	5.603E-01	-0.211
LU-177		112.95		-6.981E-01	1.408E+00	2.278E+00	1.483E-01	-0.306
	+	208.36	*	1.965E+00	1.045E+00	1.605E+00	8.496E-02	1.225
LU-177M		52.97		-1.185E+00	1.619E+00	2.644E+00	1.955E-01	-0.448
		54.07		-3.158E-01	8.410E-01	1.393E+00	1.027E-01	-0.227
		61.30		1.184E+00	1.547E+00	2.362E+00	1.714E-01	0.501
		121.62		-9.125E-02	3.607E-01	5.875E-01	3.595E-02	-0.155
		147.16		-3.949E-01	7.155E-01	9.931E-01	5.415E-02	-0.398
		171.86		-2.420E-01	4.392E-01	6.965E-01	3.541E-02	-0.347
		218.09		6.148E-01	8.377E-01	1.392E+00	7.442E-02	0.442
	+	268.79		1.786E+00	1.054E+00	1.322E+00	7.338E-02	1.351
		319.02		-9.761E-03	2.318E-01	3.880E-01	2.173E-02	-0.025
		367.43		-1.655E-01	8.274E-01	1.364E+00	7.501E-02	-0.121

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		413.65	*	-1.071E-03	1.635E-01	2.709E-01	1.492E-02	-0.004
HF-181		56.28		2.068E-01	9.089E-01	1.538E+00	1.125E-01	0.134
		57.53		2.556E-01	5.172E-01	8.227E-01	5.989E-02	0.311
	+	65.20		5.119E-01	1.322E+00	1.535E+00	1.125E-01	0.334
		133.02		-1.809E-02	7.241E-02	1.027E-01	5.942E-03	-0.176
		136.25		1.413E-01	4.296E-01	7.129E-01	4.066E-02	0.198
		345.85		-9.287E-02	1.857E-01	2.723E-01	1.515E-02	-0.341
		482.03	*	-2.627E-02	3.878E-02	6.081E-02	3.517E-03	-0.432
W-181		56.28		8.256E-02	3.600E-01	6.090E-01	4.455E-02	0.136
		57.53		1.011E-01	2.050E-01	3.261E-01	2.374E-02	0.310
	+	65.20	*	2.013E-01	5.197E-01	6.035E-01	4.423E-02	0.334
TA-182		67.75		-8.975E-02	1.215E-01	1.715E-01	1.268E-02	-0.523
		100.10		1.987E-01	1.905E-01	2.905E-01	2.127E-02	0.684
		152.43		2.658E-01	3.162E-01	5.327E-01	2.843E-02	0.499
		222.10		-1.920E-01	3.354E-01	5.255E-01	2.821E-02	-0.365
		1001.68		1.294E+00	2.041E+00	3.595E+00	3.016E-01	0.360
	+	1121.28		4.640E-01	2.460E-01	3.073E-01	2.006E-02	1.510
		1189.05		1.013E-01	3.297E-01	5.526E-01	3.216E-02	0.183
		1221.42	*	1.686E-01	2.125E-01	3.672E-01	2.354E-02	0.459
		1230.97		-3.344E-01	4.995E-01	7.718E-01	5.085E-02	-0.433
RE-183		57.98		6.814E-02	2.165E-01	3.248E-01	2.361E-02	0.210
		59.32		1.429E-02	1.183E-01	1.757E-01	1.271E-02	0.081
		67.20		-1.661E-01	2.164E-01	3.048E-01	2.249E-02	-0.545
		162.32	*	3.342E-02	1.049E-01	1.702E-01	8.730E-03	0.196
	+	208.81		1.959E+00	1.042E+00	1.605E+00	8.499E-02	1.221
		291.72		-4.689E-01	9.334E-01	1.320E+00	7.384E-02	-0.355
RE-184		57.98		2.527E-01	8.028E-01	1.205E+00	8.754E-02	0.210
		59.32		5.295E-02	4.382E-01	6.510E-01	4.709E-02	0.081
		67.20		-6.158E-01	8.022E-01	1.130E+00	8.339E-02	-0.545
		161.27		3.236E-01	3.224E-01	5.466E-01	2.816E-02	0.592
		216.55		1.111E-01	2.601E-01	4.270E-01	2.279E-02	0.260
		252.85	*	1.518E-02	2.182E-01	3.507E-01	1.929E-02	0.043
		318.01		1.793E-01	4.023E-01	6.899E-01	3.865E-02	0.260
		792.07		4.905E-01	1.220E+00	1.556E+00	1.228E-01	0.315
		903.28		2.477E-01	9.458E-01	1.501E+00	1.425E-01	0.165
		920.93		-3.782E-01	3.969E-01	5.960E-01	5.556E-02	-0.634
OS-185		59.72		1.595E-01	3.120E-01	4.719E-01	3.413E-02	0.338
		61.14		1.052E-01	1.690E-01	2.567E-01	1.862E-02	0.410
		69.30		-9.695E-02	2.869E-01	4.579E-01	3.409E-02	-0.212
		592.07		6.140E-01	2.186E+00	3.640E+00	2.200E-01	0.169
		646.12	*	7.641E-03	3.878E-02	6.386E-02	3.890E-03	0.120
		717.42		2.029E-02	8.945E-01	1.414E+00	9.659E-02	0.014
		874.81		-3.847E-01	5.435E-01	8.482E-01	7.775E-02	-0.454
		880.27		5.861E-01	7.520E-01	1.328E+00	1.229E-01	0.441
RE-188		155.03	*	3.492E-02	1.582E-01	2.604E-01	1.376E-02	0.134
		477.96		2.514E+00	2.847E+00	4.948E+00	2.855E-01	0.508
		633.10		1.415E+00	2.705E+00	4.560E+00	2.775E-01	0.310
W-188	+	63.58		2.681E+01	6.922E+01	8.715E+01	6.357E+00	0.308
		227.08		7.779E+00	1.214E+01	2.009E+01	1.083E+00	0.387

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		290.67	*	-4.190E+00	7.470E+00	1.052E+01	5.885E-01	-0.398
IR-192	-	295.96		8.984E-01	1.324E-01	2.455E-01	1.397E-02	3.660
		308.46		-3.404E-02	8.339E-02	1.332E-01	7.556E-03	-0.256
		316.51	*	-5.233E-03	3.093E-02	5.144E-02	2.898E-03	-0.102
		468.07		4.967E-02	6.440E-02	9.885E-02	6.553E-03	0.502
		604.41		-1.241E-01	4.312E-01	5.850E-01	6.718E-02	-0.212
		612.46		1.175E+00	8.450E-01	1.323E+00	1.030E-01	0.888
AU-195	+	65.12		9.321E-02	2.406E-01	2.825E-01	2.069E-02	0.330
		66.83		-1.092E-01	1.030E-01	1.429E-01	1.053E-02	-0.764
	+	75.70		1.040E+00	1.959E-01	4.403E-01	3.404E-02	2.362
		98.88	*	2.014E-01	2.439E-01	3.684E-01	2.735E-02	0.547
	+	129.76		2.979E+00	3.323E+00	4.804E+00	2.820E-01	0.620
TL-200		367.94	*	1.585E-05	3.323E+00	Half-Life too short		
		579.30		8.372E-04	3.323E+00	Half-Life too short		
		828.27		5.364E-05	3.323E+00	Half-Life too short		
		1205.75		-1.980E-04	3.323E+00	Half-Life too short		
TL-201		68.90		-1.677E+00	3.794E+00	5.776E+00	4.292E-01	-0.290
		70.82		2.369E+00	2.195E+00	3.368E+00	2.526E-01	0.703
		80.30		-2.036E+00	5.645E+00	5.808E+00	4.656E-01	-0.351
		135.34		4.238E+00	1.889E+01	3.123E+01	1.788E+00	0.136
		167.43	*	-1.400E+00	5.111E+00	8.080E+00	4.089E-01	-0.173
TL-202		68.90		-1.822E-01	4.122E-01	6.276E-01	4.664E-02	-0.290
		70.82		2.567E-01	2.379E-01	3.650E-01	2.738E-02	0.703
		80.30		-2.207E-01	6.119E-01	6.295E-01	5.046E-02	-0.351
		439.56	*	-2.786E-03	5.883E-02	9.697E-02	5.451E-03	-0.029
HG-203		70.83		1.169E+00	1.087E+00	1.657E+00	2.142E-01	0.706
		72.87		6.389E-01	6.666E-01	1.009E+00	1.267E-01	0.633
		82.60		1.670E-01	1.596E+00	1.705E+00	2.297E-01	0.098
		279.20	*	1.716E-02	3.674E-02	6.222E-02	3.700E-03	0.276
BI-207		72.80		1.547E-01	1.969E-01	2.979E-01	2.259E-02	0.519
	+	74.97		5.792E-01	1.091E-01	2.148E-01	1.652E-02	2.696
		84.90		3.348E-01	1.847E-01	3.096E-01	2.589E-02	1.082
		569.67		1.677E-02	2.841E-02	4.829E-02	2.902E-03	0.347
		1063.62	*	1.055E-02	5.070E-02	8.512E-02	6.380E-03	0.124
		1770.23		2.120E-01	4.097E-01	6.685E-01	4.199E-02	0.317
TL-207		81.07		-1.947E-01	3.113E-01	3.124E-01	2.521E-02	-0.623
		83.78		1.381E-01	1.200E-01	1.985E-01	1.642E-02	0.696
		94.90		5.791E-01	2.448E-01	4.160E-01	3.241E-02	1.392
		122.32		-7.120E-01	1.683E+00	2.721E+00	1.894E-01	-0.262
	+	144.24		5.780E-01	6.954E-01	1.099E+00	7.700E-02	0.526
		154.21		1.507E-01	3.679E-01	6.102E-01	4.031E-02	0.247
	+	269.46		4.202E-01	2.480E-01	3.089E-01	1.800E-02	1.360
		323.87	*	-7.574E-02	7.097E-01	1.027E+00	1.690E-01	-0.074
	+	338.28		5.597E+00	1.466E+00	2.172E+00	2.262E-01	2.576
		445.03		-7.688E-01	2.099E+00	3.384E+00	3.446E-01	-0.227
PO-209		260.50		-2.731E+00	9.334E+00	1.470E+01	8.123E-01	-0.186
		262.80		-5.722E+00	2.566E+01	4.054E+01	2.243E+00	-0.141
		896.60	*	-2.756E+00	6.559E+00	1.049E+01	9.983E-01	-0.263
BI-210		46.50	*	4.675E-01	3.748E+00	6.269E+00	4.951E-01	0.075

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-210		46.50	*	4.675E-01	3.748E+00	6.269E+00	4.951E-01	0.075
PO-210		46.50	*	4.675E-01	3.748E+00	6.269E+00	4.287E-01	0.075
PB-211		404.84	*	-4.476E-01	9.415E-01	1.451E+00	9.040E-01	-0.309
		427.08		5.412E-01	1.792E+00	2.973E+00	1.837E+00	0.182
		831.96		-7.267E-01	1.207E+00	1.772E+00	1.110E+00	-0.410
PO-215		81.07		-1.947E-01	3.113E-01	3.124E-01	2.521E-02	-0.623
		83.78		1.381E-01	1.200E-01	1.985E-01	1.642E-02	0.696
		94.90		5.791E-01	2.448E-01	4.160E-01	3.241E-02	1.392
		122.32		-7.120E-01	1.683E+00	2.721E+00	1.894E-01	-0.262
	+	144.24		5.780E-01	6.954E-01	1.099E+00	7.700E-02	0.526
		154.21		1.507E-01	3.679E-01	6.102E-01	4.031E-02	0.247
	+	269.46		4.202E-01	2.480E-01	3.089E-01	1.800E-02	1.360
		323.87	*	-7.574E-02	7.097E-01	1.027E+00	1.690E-01	-0.074
	+	338.28		5.597E+00	1.466E+00	2.172E+00	2.262E-01	2.576
		445.03		-7.688E-01	2.099E+00	3.384E+00	3.446E-01	-0.227
RN-219	+	271.23		5.391E-01	3.195E-01	4.109E-01	3.259E-02	1.312
		401.81	*	-1.006E-01	3.880E-01	6.342E-01	8.536E-02	-0.159
RN-220		549.76	*	-1.375E+01	2.308E+01	3.595E+01	2.146E+00	-0.383
RA-223		81.07		-1.947E-01	3.113E-01	3.124E-01	2.521E-02	-0.623
		83.78		1.381E-01	1.200E-01	1.985E-01	1.642E-02	0.696
		94.90		5.791E-01	2.448E-01	4.160E-01	3.241E-02	1.392
		122.32		-7.120E-01	1.683E+00	2.721E+00	1.894E-01	-0.262
	+	144.24		5.780E-01	6.954E-01	1.099E+00	7.700E-02	0.526
		154.21		1.507E-01	3.679E-01	6.102E-01	4.031E-02	0.247
	+	269.46		4.202E-01	2.480E-01	3.089E-01	1.800E-02	1.360
		323.87	*	-7.574E-02	7.097E-01	1.027E+00	1.690E-01	-0.074
	+	338.28		5.597E+00	1.466E+00	2.172E+00	2.262E-01	2.576
		445.03		-7.688E-01	2.099E+00	3.384E+00	3.446E-01	-0.227
AC-227		79.80		-3.129E-01	2.390E+00	2.508E+00	5.331E-01	-0.125
		236.00		6.522E-01	2.736E-01	4.219E-01	4.326E-02	1.546
		256.20	*	-2.622E-01	3.645E-01	5.581E-01	7.726E-02	-0.470
		286.10		3.804E-01	1.299E+00	2.220E+00	2.543E-01	0.171
	+	299.80		4.375E+00	2.210E+00	2.519E+00	4.085E-01	1.737
		304.40		-2.949E-01	1.761E+00	2.542E+00	4.381E-01	-0.116
		334.20		2.732E+00	3.043E+00	3.373E+00	6.162E-01	0.810
TH-227		79.80		-3.129E-01	2.390E+00	2.508E+00	5.401E-01	-0.125
	+	94.00		7.900E+00	3.211E+00	3.772E+00	8.110E-01	2.094
		236.00		6.522E-01	2.715E-01	4.219E-01	3.724E-02	1.546
		256.20	*	-2.622E-01	3.654E-01	5.581E-01	9.378E-02	-0.470
		286.10		3.804E-01	1.353E+00	2.220E+00	2.223E+00	0.171
	+	299.80		4.375E+00	2.210E+00	2.519E+00	4.085E-01	1.737
		304.40		-2.949E-01	1.761E+00	2.542E+00	4.381E-01	-0.116
		334.20		2.732E+00	3.043E+00	3.373E+00	6.162E-01	0.810
TH-229		85.43		5.543E-01	1.917E-01	3.252E-01	2.734E-02	1.704
	+	88.47		4.101E-01	1.254E-01	2.078E-01	1.779E-02	1.974
		100.00		2.151E-01	1.994E-01	3.044E-01	2.232E-02	0.706
		193.63	*	5.457E-02	5.019E-01	8.161E-01	4.251E-02	0.067
		210.97		1.404E+00	8.331E-01	1.283E+00	6.811E-02	1.094
PA-231		283.67	*	-1.846E+00	1.315E+00	2.011E+00	2.753E-01	-0.918

--- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	301.29		1.750E-00	8.565E-01	9.796E-01	1.013E-01	1.786
TH-231		81.07		-1.947E-01	3.113E-01	3.124E-01	2.521E-02	-0.623
		83.78		1.381E-01	1.200E-01	1.985E-01	1.642E-02	0.696
		94.90		5.791E-01	2.448E-01	4.160E-01	3.241E-02	1.392
		122.32		-7.120E-01	1.683E+00	2.721E+00	1.894E-01	-0.262
	+	144.24		5.780E-01	6.954E-01	1.099E+00	7.700E-02	0.526
		154.21		1.507E-01	3.679E-01	6.102E-01	4.031E-02	0.247
	+	269.46		4.202E-01	2.480E-01	3.089E-01	1.800E-02	1.360
		323.87	*	-7.574E-02	7.097E-01	1.027E+00	1.690E-01	-0.074
	+	338.28		5.597E+00	1.466E+00	2.172E+00	2.262E-01	2.576
		445.03		-7.688E-01	2.099E+00	3.384E+00	3.446E-01	-0.227
U-231		84.21		4.376E+00	4.258E+00	7.022E+00	5.833E-01	0.623
	+	92.29		6.500E+00	2.300E+00	3.304E+00	2.668E-01	1.967
		95.87	*	-2.880E-01	9.717E-01	1.393E+00	1.072E-01	-0.207
		108.00		9.820E-02	1.636E+00	2.707E+00	1.835E-01	0.036
PA-233	+	75.28		1.690E+01	3.840E+00	6.625E+00	9.841E-01	2.552
	+	86.59		5.881E+00	2.337E+00	2.953E+00	7.910E-01	1.991
	+	300.12		1.220E+00	6.058E-01	7.009E-01	9.360E-02	1.740
		311.98	*	-7.470E-03	5.619E-02	9.367E-02	5.597E-03	-0.080
		340.50		2.269E+00	8.528E-01	1.185E+00	2.716E-01	1.914
		398.62		3.523E-01	1.965E+00	3.294E+00	8.490E-01	0.107
		415.76		-4.656E-01	1.478E+00	2.396E+00	4.914E-01	-0.194
PA-234	+	63.00		7.862E-01	2.032E+00	2.609E+00	3.861E-01	0.301
		94.67		5.848E-01	1.902E-01	3.134E-01	3.716E-02	1.866
		98.44		6.211E-02	1.049E-01	1.485E-01	8.260E-02	0.418
		99.86		5.700E-01	5.058E-01	7.738E-01	5.681E-02	0.737
		111.00		9.061E-02	1.765E-01	2.961E-01	3.182E-02	0.306
		131.20		7.046E-02	1.198E-01	1.764E-01	1.029E-02	0.400
		152.70		2.352E-01	3.080E-01	5.143E-01	8.045E-02	0.457
	+	186.00		4.272E+00	2.214E+00	2.362E+00	7.191E-01	1.808
		226.40		2.131E-01	3.977E-01	6.540E-01	7.429E-02	0.326
		227.20		2.468E-01	4.137E-01	6.835E-01	3.686E-02	0.361
		248.90		-1.046E-01	8.216E-01	1.204E+00	2.577E-01	-0.087
		293.70		4.706E+00	1.107E+00	1.523E+00	2.439E-01	3.090
		369.80		1.063E-01	7.912E-01	1.328E+00	2.754E-01	0.080
		568.70		3.432E-01	9.326E-01	1.562E+00	9.382E-02	0.220
		569.50		1.670E-01	2.534E-01	4.326E-01	2.600E-02	0.386
		574.00		-1.027E+00	1.369E+00	2.102E+00	1.265E-01	-0.489
		699.00		1.002E-01	6.536E-01	1.067E+00	1.948E-01	0.094
		706.10		2.083E-01	9.469E-01	1.548E+00	6.851E-01	0.135
		733.00		-1.915E-02	4.289E-01	5.915E-01	1.280E-01	-0.032
		742.81		-2.955E-01	1.256E+00	1.951E+00	1.308E+00	-0.151
	+	796.30		1.655E+00	1.320E+00	1.633E+00	4.383E-01	1.014
		805.60		3.929E-01	9.698E-01	1.661E+00	5.068E-01	0.236
		819.60		9.580E-02	1.179E+00	1.985E+00	7.534E-01	0.048
		826.30		-3.673E-01	7.633E-01	1.195E+00	5.341E-01	-0.307
		831.60		-3.496E-01	5.829E-01	9.114E-01	2.717E-01	-0.384
		876.40		-4.199E-01	9.130E-01	1.282E+00	1.319E+00	-0.327
		880.51		2.426E-01	2.712E-01	4.828E-01	4.470E-02	0.502

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		883.24		1.069E-01	2.870E-01	4.776E-01	3.215E-01	0.224
		899.00		-5.319E-01	7.571E-01	1.114E+00	4.891E-01	-0.477
		925.00		5.650E-01	1.006E+00	1.758E+00	1.632E-01	0.321
		926.50		4.424E-02	1.530E-01	2.604E-01	6.641E-02	0.170
		946.00	*	-7.212E-02	3.006E-01	4.601E-01	8.728E-02	-0.157
		949.00		-1.338E-02	4.512E-01	7.471E-01	6.744E-02	-0.018
		980.50		2.719E-01	7.065E-01	1.160E+00	1.005E-01	0.234
		1394.10		-6.961E-01	1.316E+00	1.859E+00	1.210E+00	-0.374
PA-234M		766.41		1.809E+01	2.166E+01	2.897E+01	2.218E+01	0.624
		1001.03	*	5.869E+00	6.620E+00	1.184E+01	1.303E+00	0.496
NP-236		94.67		4.454E-01	1.388E-01	2.379E-01	1.859E-02	1.872
		98.44		4.693E-02	7.496E-02	1.123E-01	8.376E-03	0.418
		111.00		6.854E-02	1.334E-01	2.240E-01	1.480E-02	0.306
		160.31	*	-2.168E-03	7.424E-02	1.209E-01	6.250E-03	-0.018
NP-239		99.55		2.309E-01	1.683E-01	2.600E-01	1.916E-02	0.888
		117.00	*	2.825E-02	1.853E-01	3.069E-01	1.938E-02	0.092
	+	209.75		1.563E+00	8.308E-01	1.288E+00	6.829E-02	1.213
		228.18		-5.085E-03	2.182E-01	3.505E-01	1.892E-02	-0.015
		277.60		2.391E-01	1.719E-01	2.850E-01	1.588E-02	0.839
		334.30		1.574E+00	1.704E+00	1.916E+00	1.070E-01	0.821
AM-241		59.54	*	3.489E-02	1.690E-01	2.520E-01	2.008E-02	0.138
CM-243		99.55		2.376E-01	1.732E-01	2.676E-01	1.971E-02	0.888
		103.76	*	-3.454E-02	9.256E-02	1.508E-01	1.063E-02	-0.229
		117.00		2.906E-02	1.907E-01	3.157E-01	1.994E-02	0.092
	+	209.75		1.540E+00	8.189E-01	1.270E+00	6.731E-02	1.213
		228.18		-5.137E-03	2.205E-01	3.542E-01	1.912E-02	-0.015
		277.60		2.411E-01	1.733E-01	2.873E-01	1.601E-02	0.839
CM-247		278.00		5.862E-01	7.065E-01	1.165E+00	6.489E-02	0.503
		287.40		9.747E-01	1.070E+00	1.879E+00	1.050E-01	0.519
		402.60	*	-2.255E-02	3.515E-02	5.616E-02	3.062E-03	-0.402
CF-249		252.85		5.721E-02	8.225E-01	1.322E+00	7.273E-02	0.043
		333.44		1.660E-01	2.211E-01	2.432E-01	1.359E-02	0.682
		387.95	*	-8.339E-03	3.508E-02	5.749E-02	3.113E-03	-0.145
CF-251		176.60	*	5.564E-02	1.172E-01	1.941E-01	9.921E-03	0.287
		227.00		1.852E-01	3.714E-01	6.109E-01	3.294E-02	0.303
		285.00		-1.011E+00	1.463E+00	2.375E+00	1.326E-01	-0.426

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358010      *
* Acquisition date :  6-JUL-2009 12:15:57 Detector SN#     :                *
* Detector ID        : GAM16               Sensitivity      : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.94      Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232358010           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.3328E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.350E+01	3.266E+00	4.277E-01	0.000E+00
CD-109	3.051E+00	9.142E-01	1.220E+00	0.000E+00
SN-126	3.004E-01	9.001E-02	1.207E-01	0.000E+00
CE-141	5.221E-02	6.153E-02	9.560E-02	0.000E+00
TL-208	3.829E-01	7.306E-02	5.260E-02	0.000E+00
BI-211	2.977E+00	4.073E-01	2.920E-01	0.000E+00
BI-212	7.208E-01	4.343E-01	4.320E-01	0.000E+00
PB-212	1.406E+00	1.336E-01	8.328E-02	0.000E+00
PO-212	1.406E+00	1.336E-01	8.328E-02	0.000E+00
BI-214	8.354E-01	1.497E-01	1.031E-01	0.000E+00
PB-214	1.036E+00	1.513E-01	1.053E-01	0.000E+00
PO-214	1.036E+00	1.513E-01	1.053E-01	0.000E+00
PO-216	1.406E+00	1.336E-01	8.328E-02	0.000E+00
PO-218	1.036E+00	1.513E-01	1.053E-01	0.000E+00
RA-224	3.836E+00	1.054E+00	9.471E-01	0.000E+00
RA-226	8.354E-01	1.497E-01	1.031E-01	0.000E+00
AC-228	1.268E+00	3.026E-01	2.140E-01	0.000E+00
RA-228	1.268E+00	3.026E-01	2.140E-01	0.000E+00
TH-228	1.406E+00	1.336E-01	8.327E-02	0.000E+00
TH-230	8.354E-01	1.497E-01	1.031E-01	0.000E+00
TH-232	1.268E+00	3.026E-01	2.140E-01	0.000E+00
TH-234	6.745E-01	1.710E+00	2.145E+00	0.000E+00
U-234	8.354E-01	1.497E-01	1.031E-01	0.000E+00
U-235	1.783E-01	2.118E-01	3.401E-01	0.000E+00
NP-237	8.821E-01	3.189E-01	3.590E-01	0.000E+00
U-238	6.745E-01	1.710E+00	2.145E+00	0.000E+00
AM-243	3.227E-01	5.957E-02	8.982E-02	0.000E+00
ANH-511	1.066E-01	5.813E-02	4.456E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	3.757E-01	2.856E-01	5.294E-01	0.000E+00	NOT IDENT.
NA-22	2.892E-03	4.178E-02	7.024E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.848E+05	0.000E+00	0.000E-00	SHORT HLIF
AL-26	5.919E-03	2.310E-02	4.100E-02	0.000E+00	NOT IDENT.
TI-44	0.000E-00	4.334E-02	7.942E-02	0.000E+00	FAIL ABUN
SC-46	-1.985E-02	3.454E-02	5.623E-02	0.000E+00	FAIL ABUN
V-48	-2.730E-02	6.053E-02	9.882E-02	0.000E+00	NOT IDENT.
CR-51	-2.054E-01	3.347E-01	5.573E-01	0.000E+00	NOT IDENT.
MN-52	1.407E-01	1.723E-01	3.180E-01	0.000E+00	NOT IDENT.
MN-54	-1.036E-02	3.548E-02	5.994E-02	0.000E+00	NOT IDENT.
CO-56	-1.188E-02	3.794E-02	6.386E-02	0.000E+00	NOT IDENT.
CO-57	-9.458E-03	2.378E-02	4.111E-02	0.000E+00	NOT IDENT.
CO-58	-3.851E-02	3.547E-02	5.571E-02	0.000E+00	NOT IDENT.
FE-59	2.778E-02	8.852E-02	1.535E-01	0.000E+00	FAIL ABUN
CO-60	1.074E-02	4.033E-02	6.895E-02	0.000E+00	NOT IDENT.
ZN-65	-8.062E-02	1.090E-01	1.441E-01	0.000E+00	NOT IDENT.
GE-68	4.929E-01	1.179E+00	2.068E+00	0.000E+00	NOT IDENT.
AS-73	-3.112E-01	7.971E-01	1.428E+00	0.000E+00	NOT IDENT.
AS-74	-8.595E-03	7.513E-02	1.259E-01	0.000E+00	NOT IDENT.
SE-75	-5.434E-04	4.328E-02	6.715E-02	0.000E+00	NOT IDENT.
BR-77	-6.531E-01	6.960E+00	1.181E+01	0.000E+00	FAIL ABUN
SR-82	-9.505E-02	3.616E-01	5.864E-01	0.000E+00	NOT IDENT.
RB-83	-8.039E-03	6.282E-02	1.063E-01	0.000E+00	NOT IDENT.
RB-84	6.747E-02	6.366E-02	1.181E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.663E+00	1.332E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.883E-02	6.750E-02	0.000E+00	NOT IDENT.
RB-86	-8.491E-02	7.433E-01	1.246E+00	0.000E+00	NOT IDENT.
Y-88	-1.473E-02	3.378E-02	5.126E-02	0.000E+00	NOT IDENT.
ZR-88	1.022E-02	2.751E-02	4.882E-02	0.000E+00	NOT IDENT.
Y-91	8.973E+00	1.833E+01	3.195E+01	0.000E+00	NOT IDENT.
NB-94	-1.478E-02	3.078E-02	4.940E-02	0.000E+00	NOT IDENT.
NB-95	3.058E-02	3.978E-02	6.981E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.287E-01	2.084E-01	0.000E+00	NOT IDENT.
ZR-95	4.302E-02	6.682E-02	1.167E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.358E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.844E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-6.355E+00	7.825E+00	1.195E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.883E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.129E-02	3.006E-02	5.229E-02	0.000E+00	NOT IDENT.
RH-102	1.081E-02	2.668E-02	4.701E-02	0.000E+00	NOT IDENT.
RU-103	8.284E-04	3.522E-02	6.041E-02	0.000E+00	FAIL ABUN
RH-106	2.460E-01	2.872E-01	5.132E-01	0.000E+00	FAIL ABUN
RU-106	2.460E-01	2.861E-01	5.132E-01	0.000E+00	FAIL ABUN
AG-108M	9.288E-03	2.905E-02	5.118E-02	0.000E+00	NOT IDENT.
AG-110M	-3.685E-02	3.562E-02	5.516E-02	0.000E+00	NOT IDENT.
IN-111	-2.382E-01	7.831E-01	1.128E+00	0.000E+00	NOT IDENT.
IN-113M	-8.816E-03	3.992E-02	6.856E-02	0.000E+00	NOT IDENT.
SN-113	-8.816E-03	3.992E-02	6.856E-02	0.000E+00	NOT IDENT.
IN-114M	1.497E-01	1.879E-01	2.946E-01	0.000E+00	NOT IDENT.
CD-115	4.206E+00	7.165E+00	1.270E+01	0.000E+00	NOT IDENT.
SN-117M	-1.606E-02	4.697E-02	8.023E-02	0.000E+00	NOT IDENT.
SB-122	8.925E-01	1.460E+00	2.579E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.287E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-6.958E-03	2.564E-02	4.392E-02	0.000E+00	NOT IDENT.
I-124	2.660E-02	5.337E-01	7.834E-01	0.000E+00	FAIL ABUN
SB-124	-2.163E-02	4.965E-02	7.530E-02	0.000E+00	FAIL ABUN
SB-125	-8.161E-03	7.928E-02	1.362E-01	0.000E+00	FAIL ABUN
TE-125M	5.904E-01	8.688E+00	1.537E+01	0.000E+00	NOT IDENT.
I-126	-1.437E-01	1.771E-01	2.796E-01	0.000E+00	NOT IDENT.
SB-126	-1.798E-02	1.418E-01	2.110E-01	0.000E+00	FAIL ABUN
SB-127	-2.431E-02	9.875E-01	1.649E+00	0.000E+00	NOT IDENT.
XE-127	3.772E-03	4.214E-02	7.235E-02	0.000E+00	FAIL ABUN
I-131	2.672E-02	9.205E-02	1.634E-01	0.000E+00	NOT IDENT.
TE-132	-1.139E-02	5.167E-01	8.769E-01	0.000E+00	NOT IDENT.
BA-133	1.849E-02	4.180E-02	6.578E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.395E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.297E-02	8.472E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.610E-01	2.630E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.424E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.675E-02	9.673E-02	1.585E-01	0.000E+00	FAIL ABUN
BA-137M	4.256E-02	3.751E-02	6.747E-02	0.000E+00	NOT IDENT.
CS-137	4.499E-02	3.965E-02	7.132E-02	0.000E+00	NOT IDENT.
CE-139	-3.715E-03	2.702E-02	4.645E-02	0.000E+00	NOT IDENT.
BA-140	1.623E-01	2.301E-01	4.008E-01	0.000E+00	NOT IDENT.
LA-140	-8.629E-02	7.533E-02	1.065E-01	0.000E+00	FAIL ABUN
CE-143	0.000E+00	1.228E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	7.675E-02	2.190E-01	3.413E-01	0.000E+00	NOT IDENT.

PM-144	3.872E-03	3.187E-02	5.379E-02	0.000E+00	NOT IDENT.
PR-144	2.622E-01	2.159E+00	3.643E+00	0.000E+00	NOT IDENT.
PM-146	4.678E-03	3.870E-02	6.719E-02	0.000E+00	NOT IDENT.
ND-147	1.334E-01	4.952E-01	8.281E-01	0.000E+00	FAIL ABUN
PM-149	1.207E+01	5.364E+01	9.610E+01	0.000E+00	NOT IDENT.
EU-152	-5.022E-02	9.355E-02	1.436E-01	0.000E+00	FAIL ABUN
GD-153	1.292E-02	8.274E-02	1.299E-01	0.000E+00	NOT IDENT.
EU-154	1.120E-02	1.171E-01	1.973E-01	0.000E+00	NOT IDENT.
EU-155	-1.573E-02	1.006E-01	1.768E-01	0.000E+00	FAIL ABUN
TB-160	3.761E-02	1.339E-01	2.353E-01	0.000E+00	FAIL ABUN
HO-166M	-3.035E-02	5.601E-02	8.919E-02	0.000E+00	NOT IDENT.
TM-171	-3.232E+01	3.066E+01	4.594E+01	0.000E+00	NOT IDENT.
LU-176	-1.061E-02	2.394E-02	3.556E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.024E+00	1.664E+00	0.000E+00	FAIL ABUN
LU-177M	-1.071E-03	1.602E-01	2.776E-01	0.000E+00	FAIL ABUN
HF-181	-2.627E-02	3.800E-02	6.214E-02	0.000E+00	FAIL ABUN
W-181	2.013E-01	5.093E-01	6.379E-01	0.000E+00	FAIL ABUN
TA-182	1.686E-01	2.083E-01	3.690E-01	0.000E+00	FAIL ABUN
RE-183	3.342E-02	1.028E-01	1.772E-01	0.000E+00	FAIL ABUN
RE-184	1.518E-02	2.138E-01	3.624E-01	0.000E+00	NOT IDENT.
OS-185	7.641E-03	3.800E-02	6.492E-02	0.000E+00	NOT IDENT.
RE-188	3.492E-02	1.550E-01	2.713E-01	0.000E+00	NOT IDENT.
W-188	-4.190E+00	7.320E+00	1.085E+01	0.000E+00	FAIL ABUN
IR-192	-5.233E-03	3.031E-02	5.295E-02	0.000E+00	FAIL ABUN
AU-195	2.014E-01	2.391E-01	3.867E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.010E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.400E+00	5.009E+00	8.407E+00	0.000E+00	NOT IDENT.
TL-202	-2.786E-03	5.765E-02	9.924E-02	0.000E+00	NOT IDENT.
HG-203	1.716E-02	3.601E-02	6.418E-02	0.000E+00	NOT IDENT.
BI-207	1.055E-02	4.969E-02	8.575E-02	0.000E+00	FAIL ABUN
TL-207	-7.574E-02	6.955E-01	1.057E+00	0.000E+00	FAIL ABUN
PO-209	-2.756E+00	6.427E+00	1.060E+01	0.000E+00	NOT IDENT.
BI-210	4.675E-01	3.673E+00	6.663E+00	0.000E+00	NOT IDENT.
PB-210	4.675E-01	3.673E+00	6.663E+00	0.000E+00	NOT IDENT.
PO-210	4.675E-01	3.673E+00	6.663E+00	0.000E+00	NOT IDENT.
PB-211	-4.476E-01	9.226E-01	1.487E+00	0.000E+00	NOT IDENT.
PO-215	-7.574E-02	6.955E-01	1.057E+00	0.000E+00	FAIL ABUN
RN-219	-1.006E-01	3.802E-01	6.501E-01	0.000E+00	FAIL ABUN
RN-220	-1.375E+01	2.262E+01	3.664E+01	0.000E+00	NOT IDENT.
RA-223	-7.574E-02	6.955E-01	1.057E+00	0.000E+00	FAIL ABUN
AC-227	-2.622E-01	3.572E-01	5.765E-01	0.000E+00	FAIL ABUN
TH-227	-2.622E-01	3.580E-01	5.765E-01	0.000E+00	FAIL ABUN
TH-229	5.457E-02	4.919E-01	8.470E-01	0.000E+00	FAIL ABUN
PA-231	-1.846E+00	1.288E+00	2.073E+00	0.000E+00	FAIL ABUN
TH-231	-7.574E-02	6.955E-01	1.057E+00	0.000E+00	FAIL ABUN
U-231	-2.880E-01	9.523E-01	1.463E+00	0.000E+00	FAIL ABUN
PA-233	-7.470E-03	5.506E-02	9.643E-02	0.000E+00	FAIL ABUN
PA-234	-7.212E-02	2.946E-01	4.645E-01	0.000E+00	FAIL ABUN
PA-234M	5.869E+00	6.488E+00	1.194E+01	0.000E+00	NOT IDENT.
NP-236	-2.168E-03	7.276E-02	1.258E-01	0.000E+00	NOT IDENT.
NP-239	2.825E-02	1.816E-01	3.213E-01	0.000E+00	FAIL ABUN
AM-241	3.489E-02	1.656E-01	2.668E-01	0.000E+00	NOT IDENT.
CM-243	-3.454E-02	9.070E-02	1.582E-01	0.000E+00	FAIL ABUN
CM-247	-2.255E-02	3.444E-02	5.757E-02	0.000E+00	NOT IDENT.
CF-249	-8.339E-03	3.438E-02	5.897E-02	0.000E+00	NOT IDENT.
CF-251	5.564E-02	1.148E-01	2.018E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:17:36.26

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.CAMMA]G232358010.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 12:15:57.
Sample ID         : G232358010           Sample quantity  : 1.33280E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.94  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1559	10.67*	1.228E+00	3.350E+01	3.350E+01	9.95
CD-109	88.03	247	3.72*	6.262E+00	2.988E+00	3.051E+00	30.57
SN-126	64.28	32	9.60	3.504E+00	2.670E-01	2.670E-01	258.46
	86.94	247	8.90	6.262E+00	1.249E+00	1.249E+00	50.70
	87.57	247	37.00*	6.262E+00	3.004E-01	3.004E-01	30.57
CE-141	145.44	47	48.40*	7.133E+00	3.869E-02	5.221E-02	120.25
TL-208	277.35	------	6.80	4.948E+00	------ Line Not Found		------
	510.84	118	21.60	3.129E+00	4.936E-01	4.936E-01	56.25
	583.14	321	84.20*	2.807E+00	3.829E-01	3.829E-01	19.47
	860.37	72	12.46	1.988E+00	8.169E-01	8.169E-01	65.08
BI-211	72.87	------	1.27	4.802E+00	------ Line Not Found		------
	351.07	570	12.94*	4.167E+00	2.977E+00	2.977E+00	13.96
BI-212	727.18	70	11.80*	2.318E+00	7.208E-01	7.208E-01	61.49
	785.46	42	1.97	2.164E+00	2.790E+00	2.790E+00	83.03
	1620.62	------	2.75	1.135E+00	------ Line Not Found		------
PB-212	74.81	383	10.70	5.064E+00	1.990E+00	1.990E+00	21.03
	77.11	528	18.00	5.330E+00	1.551E+00	1.551E+00	15.46
	87.30	247	8.00	6.262E+00	1.389E+00	1.389E+00	32.17
	238.63	1221	44.60*	5.483E+00	1.406E+00	1.406E+00	9.70
	300.09	134	3.41	4.681E+00	2.361E+00	2.361E+00	48.52
PO-212	74.81	383	10.70	5.064E+00	1.990E+00	1.990E+00	21.03
	77.11	528	18.00	5.330E+00	1.551E+00	1.551E+00	15.46
	87.30	247	8.00	6.262E+00	1.389E+00	1.389E+00	32.17
	115.19	------	0.60	7.278E+00	------ Line Not Found		------
	238.63	1221	44.60*	5.483E+00	1.406E+00	1.406E+00	9.70
	300.09	134	3.41	4.681E+00	2.361E+00	2.361E+00	48.52
BI-214	609.31	372	46.30*	2.705E+00	8.354E-01	8.354E-01	18.29
	768.36	------	5.04	2.208E+00	------ Line Not Found		------
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	82	15.10	1.553E+00	9.879E-01	9.879E-01	53.43
	1238.11	------	5.94	1.417E+00	------ Line Not Found		------
	1377.67	48	4.11	1.289E+00	2.562E+00	2.562E+00	41.53

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	70	15.80	1.075E+00	1.155E+00	1.155E+00	26.41
PB-214	74.81	383	6.21	5.064E+00	3.430E+00	3.430E+00	20.24
	77.11	528	10.50	5.330E+00	2.658E+00	2.658E+00	17.23
	87.30	247	4.67	6.262E+00	2.380E+00	2.380E+00	31.53
	241.98	293	7.49	5.441E+00	2.023E+00	2.023E+00	28.59
	295.21	384	19.20	4.734E+00	1.190E+00	1.190E+00	15.97
	351.92	570	37.20*	4.167E+00	1.036E+00	1.036E+00	14.90
PO-214	74.81	383	6.21	5.064E+00	3.430E+00	3.430E+00	20.24
	77.11	528	10.50	5.330E+00	2.658E+00	2.658E+00	17.23
	87.30	247	4.67	6.262E+00	2.380E+00	2.380E+00	31.53
	241.98	293	7.49	5.441E+00	2.023E+00	2.023E+00	28.59
	295.21	384	19.20	4.734E+00	1.190E+00	1.190E+00	15.97
	351.92	570	37.20*	4.167E+00	1.036E+00	1.036E+00	14.90
PO-216	74.81	383	10.70	5.064E+00	1.990E+00	1.990E+00	21.03
	77.11	528	18.00	5.330E+00	1.551E+00	1.551E+00	15.46
	87.30	247	8.00	6.262E+00	1.389E+00	1.389E+00	32.17
	238.63	1221	44.60*	5.483E+00	1.406E+00	1.406E+00	9.70
	300.09	134	3.41	4.681E+00	2.361E+00	2.361E+00	48.52
PO-218	74.81	383	6.21	5.064E+00	3.430E+00	3.430E+00	20.24
	77.11	528	10.50	5.330E+00	2.658E+00	2.658E+00	17.23
	87.30	247	4.67	6.262E+00	2.380E+00	2.380E+00	31.53
	241.98	293	7.49	5.441E+00	2.023E+00	2.023E+00	28.59
	295.21	384	19.20	4.734E+00	1.190E+00	1.190E+00	15.97
	351.92	570	37.20*	4.167E+00	1.036E+00	1.036E+00	14.90
RA-224	240.98	293	3.95*	5.441E+00	3.836E+00	3.836E+00	28.04
RA-226	609.31	372	46.30*	2.705E+00	8.354E-01	8.354E-01	18.29
	768.36	------	5.04	2.208E+00	------	Line Not Found	------
	934.06	------	3.21	1.843E+00	------	Line Not Found	------
	1120.29	82	15.10	1.553E+00	9.879E-01	9.879E-01	53.43
	1238.11	------	5.94	1.417E+00	------	Line Not Found	------
	1377.67	48	4.11	1.289E+00	2.562E+00	2.562E+00	41.53
	1764.49	70	15.80	1.075E+00	1.155E+00	1.155E+00	26.41
AC-228	338.32	233	11.40	4.290E+00	1.340E+00	1.340E+00	47.30
	911.07	235	27.70*	1.886E+00	1.268E+00	1.268E+00	24.34
	969.11	162	16.60	1.781E+00	1.548E+00	1.548E+00	34.29
RA-228	338.32	233	11.40	4.290E+00	1.340E+00	1.340E+00	47.30
	911.07	235	27.70*	1.886E+00	1.268E+00	1.268E+00	24.34
	969.11	162	16.60	1.781E+00	1.548E+00	1.548E+00	34.29
TH-228	84.40	------	1.21	6.023E+00	------	Line Not Found	------
	238.60	1221	44.60*	5.483E+00	1.406E+00	1.406E+00	9.70
	300.10	134	3.41	4.681E+00	2.361E+00	2.361E+00	75.89
TH-230	609.31	372	46.30*	2.705E+00	8.354E-01	8.354E-01	18.29
	768.36	------	5.04	2.208E+00	------	Line Not Found	------
	934.06	------	3.21	1.843E+00	------	Line Not Found	------
	1120.29	82	15.10	1.553E+00	9.879E-01	9.879E-01	53.43
	1238.11	------	5.94	1.417E+00	------	Line Not Found	------
	1377.67	48	4.11	1.289E+00	2.562E+00	2.562E+00	41.53
	1764.49	70	15.80	1.075E+00	1.155E+00	1.155E+00	26.41
TH-232	338.32	233	11.40	4.290E+00	1.340E+00	1.340E+00	24.68

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	911.07	235	27.70*	1.886E+00	1.268E+00	1.268E+00	24.34
	969.11	162	16.60	1.781E+00	1.548E+00	1.548E+00	34.29
TH-234	63.29	32	3.80*	3.504E+00	6.745E-01	6.745E-01	258.64
	92.38	260	5.41	6.624E+00	2.044E+00	2.044E+00	38.79
U-234	609.31	372	46.30*	2.705E+00	8.354E-01	8.354E-01	18.29
	768.36	------	5.04	2.208E+00	------	Line Not Found	------
	934.06	------	3.21	1.843E+00	------	Line Not Found	------
	1120.29	82	15.10	1.553E+00	9.879E-01	9.879E-01	53.43
	1238.11	------	5.94	1.417E+00	------	Line Not Found	------
	1377.67	48	4.11	1.289E+00	2.562E+00	2.562E+00	41.53
	1764.49	70	15.80	1.075E+00	1.155E+00	1.155E+00	26.41
U-235	89.95	181	2.70	6.451E+00	2.926E+00	2.926E+00	52.64
	93.35	260	4.50	6.624E+00	2.458E+00	2.458E+00	44.31
	105.00	------	2.10	7.107E+00	------	Line Not Found	------
	143.76	47	10.50*	7.133E+00	1.783E-01	1.783E-01	121.20
	163.35	------	4.70	6.812E+00	------	Line Not Found	------
	185.71	194	54.00	6.387E+00	1.582E-01	1.582E-01	42.26
	205.31	------	4.70	6.035E+00	------	Line Not Found	------
NP-237	86.50	247	12.60*	6.262E+00	8.821E-01	8.821E-01	36.89
	95.87	------	2.60	6.774E+00	------	Line Not Found	------
U-238	63.29	32	3.80*	3.504E+00	6.745E-01	6.745E-01	258.64
	92.38	260	5.41	6.624E+00	2.044E+00	2.044E+00	35.39
AM-243	74.67	383	66.00*	5.064E+00	3.227E-01	3.227E-01	18.84
	86.72	247	0.34	6.262E+00	3.308E+01	3.308E+01	30.57
	117.66	------	0.55	7.296E+00	------	Line Not Found	------
	142.18	------	0.13	7.157E+00	------	Line Not Found	------
ANH-511	511.00	118	100.00*	3.129E+00	1.066E-01	1.066E-01	55.63

Flag: "*" = Keyline

Sample ID : G232358010 Acquisition date : 6-JUL-2009 12:15:57

Total number of lines in spectrum	36	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	33	91.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.350E+01	3.350E+01	0.333E+01	9.95	
CD-109	464.00D	1.02	2.988E+00	3.051E+00	0.933E+00	30.57	
SN-126	1.00E+05Y	1.00	3.004E-01	3.004E-01	0.918E-01	30.57	
CE-141	32.50D	1.35	3.869E-02	5.221E-02	6.278E-02	120.25	
TL-208	1.41E+10Y	1.00	3.829E-01	3.829E-01	0.745E-01	19.47	
BI-211	7.04E+08Y	1.00	2.977E+00	2.977E+00	0.416E+00	13.96	
BI-212	1.41E+10Y	1.00	7.208E-01	7.208E-01	4.432E-01	61.49	
PB-212	1.41E+10Y	1.00	1.406E+00	1.406E+00	0.136E+00	9.70	
PO-212	1.41E+10Y	1.00	1.406E+00	1.406E+00	0.136E+00	9.70	
BI-214	1600.00Y	1.00	8.354E-01	8.354E-01	1.528E-01	18.29	
PB-214	1600.00Y	1.00	1.036E+00	1.036E+00	0.154E+00	14.90	
PO-214	1600.00Y	1.00	1.036E+00	1.036E+00	0.154E+00	14.90	
PO-216	1.41E+10Y	1.00	1.406E+00	1.406E+00	0.136E+00	9.70	
PO-218	1600.00Y	1.00	1.036E+00	1.036E+00	0.154E+00	14.90	
RA-224	1.41E+10Y	1.00	3.836E+00	3.836E+00	1.076E+00	28.04	
RA-226	1600.00Y	1.00	8.354E-01	8.354E-01	1.528E-01	18.29	
AC-228	1.41E+10Y	1.00	1.268E+00	1.268E+00	0.309E+00	24.34	
RA-228	1.41E+10Y	1.00	1.268E+00	1.268E+00	0.309E+00	24.34	
TH-228	1.41E+10Y	1.00	1.406E+00	1.406E+00	0.136E+00	9.70	
TH-230	4.47E+09Y	1.00	8.354E-01	8.354E-01	1.528E-01	18.29	
TH-232	1.41E+10Y	1.00	1.268E+00	1.268E+00	0.309E+00	24.34	
TH-234	4.47E+09Y	1.00	6.745E-01	6.745E-01	17.45E-01	258.64	
U-234	4.47E+09Y	1.00	8.354E-01	8.354E-01	1.528E-01	18.29	
U-235	7.04E+08Y	1.00	1.783E-01	1.783E-01	2.161E-01	121.20	
NP-237	2.14E+06Y	1.00	8.821E-01	8.821E-01	3.254E-01	36.89	
U-238	4.47E+09Y	1.00	6.745E-01	6.745E-01	17.45E-01	258.64	
AM-243	7380.00Y	1.00	3.227E-01	3.227E-01	0.608E-01	18.84	
ANH-511	1.00E+09Y	1.00	1.066E-01	1.066E-01	0.593E-01	55.63	
	Total Activity :		6.346E+01	6.354E+01			

Grand Total Activity : 6.346E+01 6.354E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232358010 Acquisition date : 6-JUN-2009 12:15:57

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	128.20	59	333	0.86	258.41	255	8	8.22E-03	****	7.29E+00	T
0	209.35	107	233	0.94	418.70	415	8	1.49E-02	52.9	5.96E+00	T
0	270.23	102	217	1.32	540.45	537	11	1.42E-02	58.7	5.04E+00	T
0	329.00	79	241	0.79	658.00	653	14	1.09E-02	89.2	4.38E+00	T
0	463.43	98	153	1.61	926.86	920	16	1.36E-02	59.8	3.38E+00	T
0	795.59	49	68	1.46	1591.17	1585	13	6.81E-03	75.1	2.14E+00	T
1	964.42	59	44	2.12	1928.85	1920	31	8.17E-03	58.3	1.79E+00	T
0	1620.01	11	8	0.99	3260.02	3254	10	1.52E-03	****	1.13E+00	
0	1729.03	28	3	1.02	3458.07	3452	13	3.83E-03	46.7	1.09E+00	
0	1847.34	13	7	1.65	3694.68	3686	13	1.74E-03	****	1.05E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:17:41.04

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358010.CNF;1 *
* Acquisition date  : 6-JUL-2009 12:15:57.  Detector SN#     :              *
* Detector ID       : GAM16                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.94          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232358010            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.33280E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09.0MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.350E+01	3.333E+00	4.269E-01	3.594E-02	78.474
CD-109	3.051E+00	9.329E-01	1.160E+00	1.000E-01	2.630
SN-126	3.004E-01	9.184E-02	1.148E-01	9.859E-03	2.617
CE-141	5.221E-02	6.278E-02	9.166E-02	5.256E-03	0.570
TL-208	3.829E-01	7.455E-02	5.165E-02	3.558E-03	7.413
BI-211	2.977E+00	4.157E-01	2.842E-01	1.765E-02	10.475
BI-212	7.208E-01	4.432E-01	4.259E-01	3.673E-02	1.693
PB-212	1.406E+00	1.364E-01	8.052E-02	5.680E-03	17.460
PO-212	1.406E+00	1.364E-01	8.052E-02	5.680E-03	17.460
BI-214	8.354E-01	1.528E-01	1.014E-01	8.087E-03	8.242
PB-214	1.036E+00	1.544E-01	1.025E-01	8.313E-03	10.104
PO-214	1.036E+00	1.544E-01	1.025E-01	8.313E-03	10.104
PO-216	1.406E+00	1.364E-01	8.052E-02	5.680E-03	17.460
PO-218	1.036E+00	1.544E-01	1.025E-01	8.313E-03	10.104
RA-224	3.836E+00	1.076E+00	9.158E-01	4.997E-02	4.189
RA-226	8.354E-01	1.528E-01	1.014E-01	8.087E-03	8.242
AC-228	1.268E+00	3.087E-01	2.118E-01	2.514E-02	5.988
RA-228	1.268E+00	3.087E-01	2.118E-01	2.514E-02	5.988

Sample ID : G232358010 Acquisition date : 6-JUN-2009 12:15:57

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.406E+00	1.364E-01	8.051E-02	5.680E-03	17.462
TH-230	8.354E-01	1.528E-01	1.014E-01	8.087E-03	8.242
TH-232	1.268E+00	3.087E-01	2.118E-01	2.514E-02	5.988
TH-234	6.745E-01	1.745E+00	2.029E+00	3.528E-01	0.332
U-234	8.354E-01	1.528E-01	1.014E-01	8.087E-03	8.242
U-235	1.783E-01	2.161E-01	3.260E-01	5.284E-02	0.547
NP-237	8.821E-01	3.254E-01	3.412E-01	7.614E-02	2.585
U-238	6.745E-01	1.745E+00	2.029E+00	3.528E-01	0.332
AM-241	3.227E-01	6.079E-02	8.517E-02	6.538E-03	3.789
ANH-511	1.066E-01	5.931E-02	4.365E-02	2.564E-03	2.442

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.757E-01		2.915E-01	5.181E-01	3.483E-02	0.725
NA-22	2.892E-03		4.264E-02	6.995E-02	5.199E-03	0.041
NA-24	4.349E-03		9.431E-02	Half-Life too short		
AL-26	5.919E-03		2.357E-02	4.109E-02	2.454E-03	0.144
TI-44	2.862E-01	+	4.423E-02	7.536E-02	5.946E-03	3.797
SC-46	-1.985E-02		3.524E-02	5.564E-02	5.229E-03	-0.357
V-48	-2.730E-02		6.177E-02	9.795E-02	8.444E-03	-0.279
CR-51	-2.054E-01		3.415E-01	5.415E-01	3.403E-02	-0.379
MN-52	1.407E-01		1.758E-01	3.174E-01	2.624E-02	0.443
MN-54	-1.036E-02		3.620E-02	5.924E-02	5.058E-03	-0.175
CO-56	-1.188E-02		3.872E-02	6.313E-02	5.507E-03	-0.188
CO-57	-9.458E-03		2.427E-02	3.930E-02	2.403E-03	-0.241
CO-58	-3.851E-02		3.620E-02	5.503E-02	4.510E-03	-0.700
FE-59	2.778E-02		9.032E-02	1.525E-01	1.184E-02	0.182
CO-60	1.074E-02		4.115E-02	6.872E-02	5.896E-03	0.156
ZN-65	-8.062E-02		1.113E-01	1.432E-01	9.510E-03	-0.563
GE-68	4.929E-01		1.203E+00	2.053E+00	1.494E-01	0.240
AS-73	-3.112E-01		8.133E-01	1.347E+00	9.947E-02	-0.231
AS-74	-8.595E-03		7.667E-02	1.237E-01	7.483E-03	-0.069
SE-75	-5.434E-04		4.416E-02	6.504E-02	3.644E-03	-0.008
BR-77	-6.531E-01		7.102E+00	1.157E+01	6.827E-01	-0.056
SR-82	-9.505E-02		3.690E-01	5.788E-01	4.437E-02	-0.164
RB-83	-8.039E-03		6.410E-02	1.042E-01	6.146E-03	-0.077
RB-84	6.747E-02		6.496E-02	1.169E-01	1.084E-02	0.577
KR-85	1.734E+01		7.819E+00	1.305E+01	7.677E-01	1.329
SR-85	8.790E-02		3.963E-02	6.614E-02	3.891E-03	1.329
RB-86	-8.491E-02		7.585E-01	1.237E+00	9.016E-02	-0.069
Y-88	-1.473E-02		3.447E-02	5.139E-02	2.958E-03	-0.287
ZR-88	1.022E-02		2.807E-02	4.761E-02	2.572E-03	0.215
Y-91	8.973E+00		1.871E+01	3.178E+01	1.941E+00	0.282
NB-94	-1.478E-02		3.141E-02	4.867E-02	3.228E-03	-0.304
NB-95	3.058E-02		4.059E-02	6.888E-02	5.174E-03	0.444
NB-95M	2.212E-01		1.313E-01	2.014E-01	1.460E-02	1.098

---- Non-Identified Nuclides ---

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	4.302E-02		6.818E-02	1.151E-01	9.644E-03	0.374
NB-97	-3.401E-02		1.713E-02	Half-Life too short		
ZR-97	1.104E-00		2.982E-01	Half-Life too short		
MO-99	-6.355E-00		7.985E+00	1.179E+01	1.697E+00	-0.539
TC-99M	-4.219E+08		9.608E+08	Half-Life too short		
RH-101	1.129E-02		3.068E-02	5.040E-02	2.638E-03	0.224
RH-102	1.081E-02		2.723E-02	4.599E-02	2.649E-03	0.235
RU-103	8.284E-04		3.594E-02	5.916E-02	7.489E-03	0.014
RH-106	2.460E-01		2.930E-01	5.045E-01	5.992E-02	0.488
RU-106	2.460E-01		2.920E-01	5.045E-01	3.066E-02	0.488
AG-108M	9.288E-03		2.964E-02	5.000E-02	3.056E-03	0.186
AG-110M	-3.685E-02		3.635E-02	5.429E-02	3.502E-03	-0.679
IN-111	-2.382E-01		7.991E-01	1.092E+00	5.975E-02	-0.218
IN-113M	-8.816E-03		4.074E-02	6.686E-02	3.886E-03	-0.132
SN-113	-8.816E-03		4.074E-02	6.686E-02	3.886E-03	-0.132
IN-114M	1.497E-01		1.917E-01	2.837E-01	1.472E-02	0.528
CD-115	4.206E+00		7.312E+00	1.244E+01	7.367E-01	0.338
SN-117M	-1.606E-02		4.793E-02	7.704E-02	4.013E-03	-0.208
SB-122	8.925E-01		1.490E+00	2.531E+00	1.518E-01	0.353
I-123	-3.492E-01		6.564E-01	Half-Life too short		
TE-123M	-6.958E-03		2.616E-02	4.217E-02	2.229E-03	-0.165
I-124	2.660E-02		5.446E-01	7.698E-01	4.663E-02	0.035
SB-124	-2.163E-02		5.066E-02	7.537E-02	5.497E-03	-0.287
SB-125	-8.161E-03		8.090E-02	1.330E-01	7.751E-03	-0.061
TE-125M	5.904E-01		8.865E+00	1.466E+01	1.289E+00	0.040
I-126	-1.437E-01		1.807E-01	2.752E-01	1.694E-02	-0.522
SB-126	-1.798E-02		1.447E-01	2.080E-01	1.430E-02	-0.086
SB-127	-2.431E-02		1.008E+00	1.624E+00	1.534E-01	-0.015
XE-127	3.772E-03		4.301E-02	6.976E-02	3.671E-03	0.054
I-131	2.672E-02		9.393E-02	1.592E-01	9.881E-03	0.168
TE-132	-1.139E-02		5.273E-01	8.472E-01	1.185E-01	-0.013
BA-133	1.849E-02		4.265E-02	6.404E-02	7.320E-03	0.289
I-133	-2.483E-04		1.222E-03	Half-Life too short		
CS-134	8.507E-02		6.426E-02	8.366E-02	6.707E-03	1.017
CS-135	2.794E-01		1.643E-01	2.548E-01	1.903E-02	1.096
I-135	9.349E+07		1.747E+08	Half-Life too short		
CS-136	-3.675E-02		9.870E-02	1.573E-01	1.280E-02	-0.234
BA-137M	4.256E-02		3.827E-02	6.640E-02	4.047E-03	0.641
CS-137	4.499E-02		4.046E-02	7.019E-02	4.294E-03	0.641
CE-139	-3.715E-03		2.757E-02	4.463E-02	2.257E-03	-0.083
BA-140	1.623E-01		2.348E-01	3.930E-01	1.279E-01	0.413
LA-140	-8.629E-02		7.687E-02	1.065E-01	7.969E-03	-0.810
CE-143	4.178E-04		6.267E-05	Half-Life too short		
CE-144	7.675E-02		2.235E-01	3.267E-01	4.636E-02	0.235
PM-144	3.872E-03		3.252E-02	5.299E-02	3.473E-03	0.073
PR-144	2.622E-01		2.203E+00	3.589E+00	2.351E-01	0.073
PM-146	4.678E-03		3.949E-02	6.569E-02	5.611E-03	0.071
ND-147	-1.334E-01		5.053E-01	8.118E-01	1.102E-01	-0.164

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	F.L. Ident	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	1.207E+01		5.474E+01	9.320E+01	1.313E+01	0.129
EU-152	-5.022E-02		9.546E-02	1.397E-01	8.848E-03	-0.359
GD-153	1.292E-02		8.442E-02	1.237E-01	9.342E-03	0.104
EU-154	1.120E-02		1.195E-01	1.965E-01	2.049E-02	0.057
EU-155	-1.573E-02		1.027E-01	1.686E-01	1.193E-02	-0.093
TB-160	3.761E-02		1.367E-01	2.327E-01	2.150E-02	0.162
HO-166M	-3.035E-02		5.715E-02	8.790E-02	5.937E-03	-0.345
TM-171	-3.232E+01		3.129E+01	4.348E+01	3.202E+00	-0.743
LU-176	-1.061E-02		2.443E-02	3.453E-02	1.935E-03	-0.307
LU-177	1.965E+00	+	1.045E+00	1.605E+00	8.496E-02	1.225
LU-177M	-1.071E-03		1.635E-01	2.709E-01	1.492E-02	-0.004
HF-181	-2.627E-02		3.878E-02	6.081E-02	3.517E-03	-0.432
W-181	2.013E-01	+	5.197E-01	6.035E-01	4.423E-02	0.334
TA-182	1.686E-01		2.125E-01	3.672E-01	2.354E-02	0.459
RE-183	3.342E-02		1.049E-01	1.702E-01	8.730E-03	0.196
RE-184	1.518E-02		2.182E-01	3.507E-01	1.929E-02	0.043
OS-185	7.641E-03		3.878E-02	6.386E-02	3.890E-03	0.120
RE-188	3.492E-02		1.582E-01	2.604E-01	1.376E-02	0.134
W-188	-4.190E+00		7.470E+00	1.052E+01	5.885E-01	-0.398
IR-192	-5.233E-03		3.093E-02	5.144E-02	2.898E-03	-0.102
AU-195	2.014E-01		2.439E-01	3.684E-01	2.735E-02	0.547
TL-200	1.585E-05		1.026E-04	Half-Life too short		
TL-201	-1.400E+00		5.111E+00	8.080E+00	4.089E-01	-0.173
TL-202	-2.786E-03		5.883E-02	9.697E-02	5.451E-03	-0.029
HG-203	1.716E-02		3.674E-02	6.222E-02	3.700E-03	0.276
BI-207	1.055E-02		5.070E-02	8.512E-02	6.380E-03	0.124
TL-207	-7.574E-02		7.097E-01	1.027E+00	1.690E-01	-0.074
PO-209	-2.756E+00		6.559E+00	1.049E+01	9.983E-01	-0.263
BI-210	4.675E-01		3.748E+00	6.269E+00	4.951E-01	0.075
PB-210	4.675E-01		3.748E+00	6.269E+00	4.951E-01	0.075
PO-210	4.675E-01		3.748E+00	6.269E+00	4.287E-01	0.075
PB-211	-4.476E-01		9.415E-01	1.451E+00	9.040E-01	-0.309
PO-215	-7.574E-02		7.097E-01	1.027E+00	1.690E-01	-0.074
RN-219	-1.006E-01		3.880E-01	6.342E-01	8.536E-02	-0.159
RN-220	-1.375E+01		2.308E+01	3.595E+01	2.146E+00	-0.383
RA-223	-7.574E-02		7.097E-01	1.027E+00	1.690E-01	-0.074
AC-227	-2.622E-01		3.645E-01	5.581E-01	7.726E-02	-0.470
TH-227	-2.622E-01		3.654E-01	5.581E-01	9.378E-02	-0.470
TH-229	5.457E-02		5.019E-01	8.161E-01	4.251E-02	0.067
PA-231	-1.846E+00		1.315E+00	2.011E+00	2.753E-01	-0.918
TH-231	-7.574E-02		7.097E-01	1.027E+00	1.690E-01	-0.074
U-231	-2.880E-01		9.717E-01	1.393E+00	1.072E-01	-0.207
PA-233	-7.470E-03		5.619E-02	9.367E-02	5.597E-03	-0.080
PA-234	-7.212E-02		3.006E-01	4.601E-01	8.728E-02	-0.157
PA-234M	5.869E+00		6.620E+00	1.184E+01	1.303E+00	0.496
NP-236	-2.168E-03		7.424E-02	1.209E-01	6.250E-03	-0.018
NP-239	2.825E-02		1.853E-01	3.069E-01	1.938E-02	0.092
AM-241	3.489E-02		1.690E-01	2.520E-01	2.008E-02	0.138

---- Non-Identified Nuclides ---

Nuclide	Key Line Activity (pCi/GRAM)	K.L. Idcd	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.454E-02		9.256E-02	1.508E-01	1.063E-02	-0.229
CM-247	-2.255E-02		3.515E-02	5.616E-02	3.062E-03	-0.402
CF-249	-8.339E-03		3.508E-02	5.749E-02	3.113E-03	-0.145
CF-251	5.564E-02		1.172E-01	1.941E-01	9.921E-03	0.287

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYSSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G232358010           *
* Acquisition date  :  6-JUL-2009 12:15:57 Detector SN#     :               *
* Detector ID       : GAM16                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.94     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232358010           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.3328E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.350E+01	3.266E+00	2.140E-01	1.666E+00
CD-109	3.051E+00	9.142E-01	6.104E-01	4.664E-01
SN-126	3.004E-01	9.001E-02	6.040E-02	4.592E-02
CE-141	5.221E-02	6.153E-02	4.783E-02	3.139E-02
TL-208	3.829E-01	7.306E-02	2.631E-02	3.727E-02
BI-211	2.977E+00	4.073E-01	1.461E-01	2.078E-01
BI-212	7.208E-01	4.343E-01	2.161E-01	2.216E-01
PB-212	1.406E+00	1.336E-01	4.166E-02	6.818E-02
PO-212	1.406E+00	1.336E-01	4.166E-02	6.818E-02
BI-214	8.354E-01	1.497E-01	5.160E-02	7.640E-02
PB-214	1.036E+00	1.513E-01	5.268E-02	7.718E-02
PO-214	1.036E+00	1.513E-01	5.268E-02	7.718E-02
PO-216	1.406E+00	1.336E-01	4.166E-02	6.818E-02
PO-218	1.036E+00	1.513E-01	5.268E-02	7.718E-02
RA-224	3.836E+00	1.054E+00	4.738E-01	5.378E-01
RA-226	8.354E-01	1.497E-01	5.160E-02	7.640E-02
AC-228	1.268E+00	3.026E-01	1.071E-01	1.544E-01
RA-228	1.268E+00	3.026E-01	1.071E-01	1.544E-01
TH-228	1.406E+00	1.336E-01	4.166E-02	6.818E-02
TH-230	8.354E-01	1.497E-01	5.160E-02	7.639E-02
TH-232	1.268E+00	3.026E-01	1.071E-01	1.544E-01
TH-234	6.745E-01	1.710E+00	1.073E+00	8.723E-01
U-234	8.354E-01	1.497E-01	5.160E-02	7.639E-02
U-235	1.783E-01	2.118E-01	1.701E-01	1.081E-01
NP-237	8.821E-01	3.189E-01	1.796E-01	1.627E-01
U-238	6.745E-01	1.710E+00	1.073E+00	8.723E-01
AM-243	3.227E-01	5.957E-02	4.494E-02	3.039E-02
ANH-511	1.066E-01	5.813E-02	2.229E-02	2.966E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	3.757E-01	2.850E-01	2.649E-01	1.457E-01	NOT IDENT.
NA-22	2.892E-03	4.178E-02	3.514E-02	2.132E-02	NOT IDENT.
NA-24	4.349E-03	1.848E+05	0.000E+00	9.431E+04	SHORT HLIF
AL-26	5.919E-03	2.310E-02	2.051E-02	1.179E-02	NOT IDENT.
TI-44	2.862E-01	4.334E-02	3.973E-02	2.211E-02	FAIL ABUN
SC-46	-1.985E-02	3.484E-02	2.813E-02	1.762E-02	FAIL ABUN
V-48	-2.730E-02	6.053E-02	4.944E-02	2.088E-02	NOT IDENT.
CR-51	-2.054E-01	3.347E-01	2.788E-01	1.708E-01	NOT IDENT.
MN-52	1.407E-01	1.723E-01	1.591E-01	8.792E-02	NOT IDENT.
MN-54	-1.036E-02	3.548E-02	2.999E-02	1.810E-02	NOT IDENT.
CO-56	-1.188E-02	3.794E-02	3.195E-02	1.936E-02	NOT IDENT.
CO-57	-9.458E-03	2.378E-02	2.057E-02	1.213E-02	NOT IDENT.
CO-58	-3.851E-02	3.547E-02	2.787E-02	1.810E-02	NOT IDENT.
FE-59	2.778E-02	8.852E-02	7.680E-02	4.516E-02	FAIL ABUN
CO-60	1.074E-02	4.033E-02	3.449E-02	2.058E-02	NOT IDENT.
ZN-65	-8.062E-02	1.090E-01	7.212E-02	5.563E-02	NOT IDENT.
GE-68	4.929E-01	1.179E+00	1.034E+00	6.014E-01	NOT IDENT.
AS-73	-3.112E-01	7.971E-01	7.145E-01	4.067E-01	NOT IDENT.
AS-74	-8.595E-03	7.513E-02	6.299E-02	3.833E-02	NOT IDENT.
SE-75	-5.434E-04	4.328E-02	3.360E-02	2.208E-02	NOT IDENT.
BR-77	-6.531E-01	6.960E+00	5.906E+00	3.551E+00	FAIL ABUN
SR-82	-9.505E-02	3.616E-01	2.934E-01	1.845E-01	NOT IDENT.
RB-83	-8.039E-03	6.282E-02	5.318E-02	3.205E-02	NOT IDENT.
RB-84	6.747E-02	6.366E-02	5.910E-02	3.248E-02	NOT IDENT.
KR-85	1.734E+01	7.663E+00	6.664E+00	3.910E+00	NOT IDENT.
SR-85	8.790E-02	3.883E-02	3.377E-02	1.981E-02	NOT IDENT.
RB-86	-8.491E-02	7.433E-01	6.234E-01	3.792E-01	NOT IDENT.
Y-88	-1.473E-02	3.378E-02	2.565E-02	1.724E-02	NOT IDENT.
ZR-88	1.022E-02	2.751E-02	2.442E-02	1.403E-02	NOT IDENT.
Y-91	8.973E+00	1.833E+01	1.598E+01	9.353E+00	NOT IDENT.
NB-94	-1.478E-02	3.078E-02	2.472E-02	1.570E-02	NOT IDENT.
NB-95	3.058E-02	3.978E-02	3.492E-02	2.030E-02	NOT IDENT.
NB-95M	2.212E-01	1.287E-01	1.042E-01	6.565E-02	NOT IDENT.
ZR-95	4.302E-02	6.682E-02	5.837E-02	3.409E-02	NOT IDENT.
NB-97	-3.401E+04	3.358E+04	0.000E+00	1.713E+04	SHORT HLIF
ZR-97	1.104E+06	5.844E+05	0.000E+00	2.982E+05	SHORT HLIF
MO-99	-6.355E+00	7.825E+00	5.981E+00	3.992E+00	NOT IDENT.
TC-99M	-4.219E+14	1.883E+15	0.000E+00	9.608E+14	SHORT HLIF
RH-101	1.129E-02	3.006E-02	2.616E-02	1.534E-02	NOT IDENT.
RH-102	1.081E-02	2.668E-02	2.352E-02	1.361E-02	NOT IDENT.
RU-103	8.284E-04	3.522E-02	3.022E-02	1.797E-02	FAIL ABUN
RH-106	2.460E-01	2.872E-01	2.567E-01	1.465E-01	FAIL ABUN
RU-106	2.460E-01	2.861E-01	2.567E-01	1.460E-01	FAIL ABUN
AG-108M	9.288E-03	2.905E-02	2.561E-02	1.482E-02	NOT IDENT.
AG-110M	-3.685E-02	3.562E-02	2.760E-02	1.817E-02	NOT IDENT.
IN-111	-2.382E-01	7.831E-01	5.645E-01	3.996E-01	NOT IDENT.
IN-113M	-8.816E-03	3.992E-02	3.430E-02	2.037E-02	NOT IDENT.
SN-113	-8.816E-03	3.992E-02	3.430E-02	2.037E-02	NOT IDENT.
IN-114M	1.497E-01	1.879E-01	1.474E-01	9.585E-02	NOT IDENT.
CD-115	4.206E+00	7.165E+00	6.351E+00	3.656E+00	NOT IDENT.
SN-117M	-1.606E-02	4.697E-02	4.014E-02	2.397E-02	NOT IDENT.
SB-122	8.925E-01	1.460E+00	1.290E+00	7.448E-01	NOT IDENT.
I-123	-3.492E+05	1.287E+06	0.000E+00	6.564E+05	SHORT HLIF
TE-123M	-6.958E-03	2.564E-02	2.197E-02	1.308E-02	NOT IDENT.
I-124	2.660E-02	5.337E-01	3.919E-01	2.723E-01	FAIL ABUN
SB-124	-2.163E-02	4.965E-02	3.767E-02	2.533E-02	FAIL ABUN
SB-125	-8.161E-03	7.928E-02	6.815E-02	4.045E-02	FAIL ABUN
TE-125M	5.904E-01	8.688E+00	7.689E+00	4.433E+00	NOT IDENT.
I-126	-1.437E-01	1.771E-01	1.399E-01	9.034E-02	NOT IDENT.
SB-126	-1.798E-02	1.418E-01	1.056E-01	7.234E-02	FAIL ABUN
SB-127	-2.431E-02	9.875E-01	8.252E-01	5.038E-01	NOT IDENT.
XE-127	3.772E-03	4.214E-02	3.619E-02	2.150E-02	FAIL ABUN
I-131	2.672E-02	9.205E-02	8.176E-02	4.697E-02	NOT IDENT.
TE-132	-1.139E-02	5.167E-01	4.387E-01	2.636E-01	NOT IDENT.
BA-133	1.849E-02	4.180E-02	3.291E-02	2.133E-02	NOT IDENT.
I-133	-2.483E+02	2.395E+03	0.000E+00	1.222E+03	SHORT HLIF
CS-134	8.507E-02	6.297E-02	4.239E-02	3.213E-02	FAIL ABUN
CS-135	2.794E-01	1.610E-01	1.316E-01	8.216E-02	NOT IDENT.
I-135	9.349E+13	3.424E+14	0.000E+00	1.747E+14	SHORT HLIF
CS-136	-3.675E-02	9.673E-02	7.928E-02	4.935E-02	FAIL ABUN
BA-137M	4.256E-02	3.751E-02	3.375E-02	1.914E-02	NOT IDENT.
CS-137	4.499E-02	3.965E-02	3.568E-02	2.023E-02	NOT IDENT.
CE-139	-3.715E-03	2.702E-02	2.324E-02	1.379E-02	NOT IDENT.
BA-140	1.623E-01	2.301E-01	2.005E-01	1.174E-01	NOT IDENT.
LA-140	-8.629E-02	7.533E-02	5.329E-02	3.844E-02	FAIL ABUN
CE-143	4.178E+02	1.228E+02	0.000E+00	6.267E+01	SHORT HLIF
CE-144	7.675E-02	2.190E-01	1.707E-01	1.117E-01	NOT IDENT.

PM-144	3.872E-03	3.187E-02	2.691E-02	1.626E-02	NOT IDENT.
PR-144	2.622E-01	2.159E+00	1.823E+00	1.101E+00	NOT IDENT.
PM-146	4.678E-03	3.870E-02	3.362E-02	1.975E-02	NOT IDENT.
ND-147	-1.334E-01	4.952E-01	4.143E-01	2.526E-01	FAIL ABUN
PM-149	1.207E+01	5.364E+01	4.808E+01	2.737E-01	NOT IDENT.
EU-152	-5.022E-02	9.355E-02	7.184E-02	4.773E-02	FAIL ABUN
GD-153	1.292E-02	8.274E-02	6.500E-02	4.222E-02	NOT IDENT.
EU-154	1.120E-02	1.171E-01	9.871E-02	5.973E-02	NOT IDENT.
EU-155	-1.573E-02	1.006E-01	8.847E-02	5.133E-02	FAIL ABUN
TB-160	3.761E-02	1.339E-01	1.177E-01	6.833E-02	FAIL ABUN
HO-166M	-3.035E-02	5.601E-02	4.462E-02	2.857E-02	NOT IDENT.
TM-171	-3.232E+01	3.066E+01	2.298E-01	1.564E+01	NOT IDENT.
LU-176	-1.061E-02	2.394E-02	1.779E-02	1.222E-02	FAIL ABUN
LU-177	1.965E+00	1.024E+00	8.323E-01	5.225E-01	FAIL ABUN
LU-177M	-1.071E-03	1.602E-01	1.389E-01	8.173E-02	FAIL ABUN
HF-181	-2.627E-02	3.800E-02	3.109E-02	1.939E-02	FAIL ABUN
W-181	2.013E-01	5.093E-01	3.192E-01	2.598E-01	FAIL ABUN
TA-182	1.686E-01	2.083E-01	1.846E-01	1.063E-01	FAIL ABUN
RE-183	3.342E-02	1.028E-01	8.865E-02	5.245E-02	FAIL ABUN
RE-184	1.518E-02	2.138E-01	1.813E-01	1.091E-01	NOT IDENT.
OS-185	7.641E-03	3.800E-02	3.248E-02	1.939E-02	NOT IDENT.
RE-188	3.492E-02	1.550E-01	1.358E-01	7.911E-02	NOT IDENT.
W-188	-4.190E+00	7.320E+00	5.426E+00	3.735E+00	FAIL ABUN
IR-192	-5.233E-03	3.031E-02	2.649E-02	1.547E-02	FAIL ABUN
AU-195	2.014E-01	2.391E-01	1.935E-01	1.220E-01	FAIL ABUN
TL-200	1.585E+01	2.010E+02	0.000E+00	1.026E+02	SHORT HLIF
TL-201	-1.400E+00	5.009E+00	4.206E+00	2.556E+00	NOT IDENT.
TL-202	-2.786E-03	5.765E-02	4.965E-02	2.942E-02	NOT IDENT.
HG-203	1.716E-02	3.601E-02	3.211E-02	1.837E-02	NOT IDENT.
BI-207	1.055E-02	4.969E-02	4.290E-02	2.535E-02	FAIL ABUN
TL-207	-7.574E-02	6.955E-01	5.288E-01	3.549E-01	FAIL ABUN
PO-209	-2.756E+00	6.427E+00	5.303E+00	3.279E+00	NOT IDENT.
BI-210	4.675E-01	3.673E+00	3.333E+00	1.874E+00	NOT IDENT.
PB-210	4.675E-01	3.673E+00	3.333E+00	1.874E+00	NOT IDENT.
PO-210	4.675E-01	3.673E+00	3.333E+00	1.874E+00	NOT IDENT.
PB-211	-4.476E-01	9.226E-01	7.439E-01	4.707E-01	NOT IDENT.
PO-215	-7.574E-02	6.955E-01	5.288E-01	3.549E-01	FAIL ABUN
RN-219	-1.006E-01	3.802E-01	3.252E-01	1.940E-01	FAIL ABUN
RN-220	-1.375E+01	2.262E+01	1.833E+01	1.154E+01	NOT IDENT.
RA-223	-7.574E-02	6.955E-01	5.288E-01	3.549E-01	FAIL ABUN
AC-227	-2.622E-01	3.572E-01	2.884E-01	1.823E-01	FAIL ABUN
TH-227	-2.622E-01	3.580E-01	2.884E-01	1.827E-01	FAIL ABUN
TH-229	5.457E-02	4.919E-01	4.238E-01	2.509E-01	FAIL ABUN
PA-231	-1.846E+00	1.288E+00	1.037E+00	6.573E-01	FAIL ABUN
TH-231	-7.574E-02	6.955E-01	5.288E-01	3.549E-01	FAIL ABUN
U-231	-2.880E-01	9.523E-01	7.321E-01	4.859E-01	FAIL ABUN
PA-233	-7.470E-03	5.506E-02	4.824E-02	2.809E-02	FAIL ABUN
PA-234	-7.212E-02	2.946E-01	2.324E-01	1.503E-01	FAIL ABUN
PA-234M	5.869E+00	6.488E+00	5.974E+00	3.310E+00	NOT IDENT.
NP-236	-2.168E-03	7.276E-02	6.296E-02	3.712E-02	NOT IDENT.
NP-239	2.825E-02	1.816E-01	1.607E-01	9.266E-02	FAIL ABUN
AM-241	3.489E-02	1.656E-01	1.335E-01	8.450E-02	NOT IDENT.
CM-243	-3.454E-02	9.070E-02	7.913E-02	4.628E-02	FAIL ABUN
CM-247	-2.255E-02	3.444E-02	2.880E-02	1.757E-02	NOT IDENT.
CF-249	-8.339E-03	3.438E-02	2.950E-02	1.754E-02	NOT IDENT.
CF-251	5.564E-02	1.148E-01	1.010E-01	5.859E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	325.2345
46.50	325.2345
46.50	325.2345
48.70	330.1541
49.72	333.4757
51.35	314.3750
52.39	341.4085
52.97	351.7958
53.15	350.0750
53.44	337.4432
54.07	342.3773
56.28	339.9526
56.28	339.9540
57.37	0.0000
57.53	332.6652
57.53	332.6659
57.60	343.7515
57.98	350.8408
57.98	350.8408
59.32	375.2267
59.32	375.2267
59.40	375.2740
59.54	375.3569
59.72	354.7690
60.01	354.9309
61.10	374.7941
61.14	360.0023
61.30	360.0920
63.00	409.5077
63.29	409.6881
63.29	409.6881
63.58	453.5516
64.28	446.5887
65.12	409.8900
65.20	409.9387
65.20	409.9387
66.05	437.3254
66.72	472.1195
66.83	472.1986
66.91	475.2435
67.20	460.4942
67.20	460.4942
67.75	469.8424
67.85	469.9114
68.90	470.8799
68.90	470.8799
69.30	467.0459
69.67	476.4070
70.82	416.3183
70.82	416.3183
70.83	416.3251
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77.11	466.7501

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83.78	411.8753
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92.38	416.3196
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94.67	417.4668
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94.90	417.5819
94.90	417.5819
94.90	417.5819
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122.32	348.5966
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131.20	353.1054
133.02	371.4955
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144.24	344.8362
144.24	344.8362
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163.35	320.6082
163.89	310.3752
165.85	304.6510
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171.86	292.5909
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176.60	273.7899
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184.41	320.8848
185.71	314.8721
186.00	314.9449
190.27	274.8463
192.34	305.8682
193.63	313.6108
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198.01	277.3192
198.60	283.8427
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201.83	300.5713
202.84	280.4579
205.31	250.5116
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208.81	291.3614

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209.75	276.4958
210.97	263.6019
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216.55	276.7617
218.09	268.4043
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223.80	264.0441
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227.20	246.1478
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228.18	262.6597
228.18	262.6597
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236.00	271.7211
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238.63	226.0999
238.63	226.0999
239.00	226.1549
240.98	226.4520
241.98	226.6013
241.98	226.6013
241.98	226.6013
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247.94	199.6550
248.90	207.7349
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252.85	208.2627
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269.46	162.9758
269.46	162.9758
269.46	162.9758
269.46	162.9758
271.23	205.0624
273.65	235.2147
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277.35	175.4548
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277.60	170.9814
278.00	165.3974
278.60	171.9839
279.20	173.8484
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280.46	185.6967
281.68	205.6787
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284.30	181.6042
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286.10	161.8975
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293.26	0.0000
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295.21	161.8492
295.96	161.9209

296.50	161.9709
297.23	162.0382
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299.80	162.2772
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300.09	162.3033
300.09	162.3033
300.10	162.3033
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308.46	161.8510
311.98	162.4740
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323.87	186.3275
323.87	186.3275
323.87	186.3275
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334.30	116.1392
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338.28	156.4192
338.28	156.4192
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351.92	147.2143
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387.95	133.6357
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391.69	144.3919
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398.62	141.0281
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401.10	152.7192
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439.89	117.3032
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444.90	124.4172
445.03	124.4250
445.03	124.4250
445.03	124.4250
445.03	124.4250
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602.71	83.3516
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609.31	93.9880

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696.49	86.0039
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768.36	95.6087
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911.07	71.4569
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1077.35	55.5716
1085.78	53.6902
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1112.84	75.4593
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1368.53	0.0000
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1377.67	25.3623
1377.67	25.3623
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1457.56	0.0000
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1596.49	32.9797
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1691.02	10.5300
1691.02	10.5300

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1764.49	10.1708
1764.49	10.1708
1764.49	10.1708
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1791.20	0.0000
1808.65	8.7784
1836.01	18.9871

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:C232358010

Total Uranium Activity	2.0891E+00	ug/g
Total Uranium Counting Unc.	5.0870E-00	ug/g
Total Uranium Tpu	2.5954E-06	ug/g
Total Uranium Mda	3.1941E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232358010       *
*   ANALYST       : MXR1                      DETECTOR   : GAM16            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 12:15:57.50    SAMPLE ALQT:  133.280 GRAM    *
*                                                                           *
*****************************************************************************
```

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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.778E+00
GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.530E+00
GROSS GAMMA MDA    (pCi/GRAM  )   : 3.696E+00
GROSS GAMMA DLC    (pCi/GRAM  )   : 1.795E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:25:50.03

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358011.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:25:09.
Sample ID         : G232358011           Sample quantity  : 1.40170E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.82  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	47.10*	103	553	0.90	95.41	90	10	1.43E-02	45.3	
2	0	63.58*	192	611	0.78	128.35	124	8	2.66E-02	24.1	
3	0	66.92*	115	520	1.42	135.01	132	7	1.60E-02	34.4	
4	5	75.07*	686	440	0.84	151.30	144	17	9.52E-02	6.1	1.49E+00
5	5	77.37*	1096	421	0.87	155.89	144	17	1.52E-01	4.2	
6	4	84.52*	124	555	1.27	170.18	165	32	1.73E-02	33.0	1.21E+00
7	4	87.40*	404	455	1.18	175.94	165	32	5.61E-02	10.0	
8	4	90.23*	281	299	0.84	181.60	165	32	3.90E-02	11.2	
9	4	93.11*	348	434	1.27	187.35	165	32	4.83E-02	12.6	
10	0	105.55	99	540	2.14	212.22	205	12	1.37E-02	48.2	
11	0	129.31	118	345	1.16	259.71	256	8	1.64E-02	28.6	
12	0	186.13*	206	289	1.37	373.26	369	10	2.85E-02	17.8	
13	0	209.40	120	234	0.97	419.77	416	8	1.67E-02	23.9	
14	5	238.81*	1321	146	0.95	478.54	472	19	1.84E-01	3.2	1.57E+00
15	5	241.68*	362	257	1.85	484.29	472	19	5.02E-02	12.6	
16	0	270.76	131	253	1.45	542.40	536	13	1.82E-02	26.6	
17	0	295.26*	357	177	1.11	591.37	587	10	4.96E-02	8.8	
18	0	300.25	60	189	1.01	601.34	597	10	8.36E-03	44.7	
19	0	328.10	62	107	0.91	657.01	653	7	8.59E-03	30.6	
20	0	338.31*	227	212	1.05	677.42	672	11	3.15E-02	14.2	
21	0	352.07*	627	227	1.12	704.92	699	13	8.71E-02	6.5	
22	0	510.71*	119	97	1.53	1022.01	1015	12	1.65E-02	22.0	
23	0	583.12*	393	86	1.29	1166.74	1160	14	5.45E-02	7.4	
24	0	609.27*	433	80	1.47	1219.02	1214	10	6.01E-02	6.3	
25	0	726.99*	107	53	1.33	1454.34	1449	12	1.49E-02	17.0	
26	0	860.20	86	47	1.55	1720.66	1714	14	1.19E-02	20.4	
27	0	911.12*	234	91	1.57	1822.45	1816	14	3.25E-02	11.1	
28	0	934.64	35	54	0.94	1869.47	1861	15	4.90E-03	49.1	
29	2	964.53	64	47	2.13	1929.23	1923	19	8.83E-03	26.6	2.37E+00
30	2	968.52*	150	38	1.69	1937.21	1923	19	2.08E-02	11.3	
31	0	1120.17	138	36	1.98	2240.41	2234	15	1.91E-02	12.9	
32	0	1238.64	23	64	1.31	2477.29	2472	10	3.16E-03	69.5	
33	0	1460.12*	1054	33	2.06	2920.17	2909	22	1.46E-01	3.4	
34	0	1587.71	25	9	1.57	3175.30	3169	12	3.45E-03	31.4	
35	0	1763.93	63	0	2.21	3527.73	3521	15	8.75E-03	12.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 15:25:53

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358011.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:25:09
Sample ID : G232358011 Sample quantity : 140.17 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.82 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.313E+01	3.035E+00	6.425E-01	3.950E-02	51.569
TI-44	+	67.85		5.048E-02	3.499E-02	5.041E-02	4.408E-03	1.001
	+	78.38	*	4.533E-01	5.391E-02	4.690E-02	3.918E-03	9.664
CD-109	+	88.03	*	4.519E+00	9.771E-01	1.195E+00	9.627E-02	3.781
SN-126	+	64.28		8.037E-01	4.071E-01	4.433E-01	6.801E-02	1.813
	+	86.94		1.850E+00	8.483E-01	4.881E-01	2.014E-01	3.789
	+	87.57	*	4.449E-01	9.619E-02	1.176E-01	9.481E-03	3.784
EU-155		48.70		8.021E-01	6.021E-01	9.401E-01	6.890E-02	0.853
		60.01		1.695E+00	2.849E+00	4.288E+00	3.897E-01	0.395
	+	86.54		5.356E-01	1.160E-01	1.412E-01	1.157E-02	3.792
	+	105.31	*	2.023E-01	1.959E-01	1.971E-01	1.889E-02	1.026
TL-208		277.35		2.953E-01	5.073E-01	7.717E-01	8.907E-02	0.383
	+	510.84		7.103E-01	3.223E-01	2.992E-01	3.210E-02	2.374
	+	583.14	*	6.846E-01	1.145E-01	7.139E-02	5.660E-03	9.590
	+	860.37		1.450E+00	6.035E-01	6.162E-01	5.028E-02	2.353
BI-210	+	46.50	*	1.039E+00	9.445E-01	9.565E-01	7.655E-02	1.086
PB-210	+	46.50	*	1.039E+00	9.445E-01	9.565E-01	7.655E-02	1.086
PO-210	+	46.50	*	1.039E+00	9.436E-01	9.565E-01	6.657E-02	1.086
BI-211		72.87		7.799E+00	2.787E+00	4.360E+00	3.728E-01	1.789
	+	351.07	*	4.395E+00	6.491E-01	4.038E-01	2.901E-02	10.883
PB-212	+	74.81		2.581E+00	4.521E-01	4.381E-01	5.528E-02	5.891
	+	77.11		2.456E+00	2.921E-01	2.612E-01	2.193E-02	9.405
	+	87.30		2.058E+00	4.902E-01	5.434E-01	6.984E-02	3.786
	+	238.63	*	1.921E+00	2.085E-01	9.930E-02	8.714E-03	19.344
	+	300.09		1.386E+00	1.245E+00	1.420E+00	1.327E-01	0.976
PO-212	+	74.81		2.581E+00	4.521E-01	4.381E-01	5.528E-02	5.891
	+	77.11		2.456E+00	2.921E-01	2.612E-01	2.193E-02	9.405
	+	87.30		2.058E+00	4.902E-01	5.434E-01	6.984E-02	3.786
		115.19		3.194E+00	4.034E+00	6.809E+00	7.085E-01	0.469
	+	238.63	*	1.921E+00	2.085E-01	9.930E-02	8.714E-03	19.344
	+	300.09		1.386E+00	1.245E+00	1.420E+00	1.327E-01	0.976
BI-214	+	609.31	*	1.432E+00	2.217E-01	1.474E-01	1.322E-02	9.718
		768.36		1.340E-01	1.017E+00	1.650E+00	1.594E-01	0.081
	+	934.06		2.503E+00	2.468E+00	2.540E+00	2.410E-01	0.986

-- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1120.29		2.433E+00	6.638E-01	6.102E-01	5.448E-02	3.987
	+	1238.11		1.114E+00	1.551E+00	1.918E+00	1.537E-01	0.581
		1377.67		7.762E-01	1.308E+00	2.271E+00	1.940E-01	0.342
	+	1764.49		1.579E+00	4.080E-01	3.716E-01	2.136E-02	4.249
PB-214	+	74.81		4.447E+00	7.365E-01	7.549E-01	8.499E-02	5.891
	+	77.11		4.211E+00	5.948E-01	4.477E-01	5.077E-02	9.405
	+	87.30		3.525E+00	8.091E-01	9.309E-01	1.039E-01	3.786
	+	241.98		3.160E+00	8.488E-01	5.985E-01	5.625E-02	5.281
	+	295.21		1.440E+00	2.894E-01	2.428E-01	2.337E-02	5.930
	+	351.92	*	1.529E+00	2.395E-01	1.329E-01	1.179E-02	11.502
PO-214	+	74.81		4.447E+00	7.365E-01	7.549E-01	8.499E-02	5.891
	+	77.11		4.211E+00	5.948E-01	4.477E-01	5.077E-02	9.405
	+	87.30		3.525E+00	8.091E-01	9.309E-01	1.039E-01	3.786
	+	241.98		3.160E+00	8.488E-01	5.985E-01	5.625E-02	5.281
	+	295.21		1.440E+00	2.894E-01	2.428E-01	2.337E-02	5.930
	+	351.92	*	1.529E+00	2.395E-01	1.329E-01	1.179E-02	11.502
PO-216	+	74.81		2.581E+00	4.521E-01	4.381E-01	5.528E-02	5.891
	+	77.11		2.456E+00	2.921E-01	2.612E-01	2.193E-02	9.405
	+	87.30		2.058E+00	4.902E-01	5.434E-01	6.984E-02	3.786
	+	238.63	*	1.921E+00	2.085E-01	9.930E-02	8.714E-03	19.344
	+	300.09		1.386E+00	1.245E+00	1.420E+00	1.327E-01	0.976
PO-218	+	74.81		4.447E+00	7.365E-01	7.549E-01	8.499E-02	5.891
	+	77.11		4.211E+00	5.948E-01	4.477E-01	5.077E-02	9.405
	+	87.30		3.525E+00	8.091E-01	9.309E-01	1.039E-01	3.786
	+	241.98		3.160E+00	8.488E-01	5.985E-01	5.625E-02	5.281
	+	295.21		1.440E+00	2.894E-01	2.428E-01	2.337E-02	5.930
	+	351.92	*	1.529E+00	2.395E-01	1.329E-01	1.179E-02	11.502
RA-224	+	240.98	*	5.993E+00	1.574E+00	1.131E+00	8.529E-02	5.300
RA-226	+	609.31	*	1.432E+00	2.217E-01	1.474E-01	1.322E-02	9.718
		768.36		1.340E-01	1.017E+00	1.650E+00	1.594E-01	0.081
	+	934.06		2.503E+00	2.468E+00	2.540E+00	2.410E-01	0.986
	+	1120.29		2.433E+00	6.638E-01	6.102E-01	5.448E-02	3.987
	+	1238.11		1.114E+00	1.551E+00	1.918E+00	1.537E-01	0.581
		1377.67		7.762E-01	1.308E+00	2.271E+00	1.940E-01	0.342
	+	1764.49		1.579E+00	4.080E-01	3.716E-01	2.136E-02	4.249
AC-228	+	338.32		1.737E+00	8.662E-01	4.788E-01	1.959E-01	3.629
	+	911.07	*	1.881E+00	4.587E-01	3.114E-01	3.186E-02	6.041
	+	969.11		2.125E+00	6.830E-01	5.015E-01	1.143E-01	4.237
RA-228	+	338.32		1.737E+00	8.662E-01	4.788E-01	1.959E-01	3.629
	+	911.07	*	1.881E+00	4.587E-01	3.114E-01	3.186E-02	6.041
	+	969.11		2.125E+00	6.830E-01	5.015E-01	1.143E-01	4.237
TH-228	+	84.40		4.167E+00	2.805E+00	3.573E+00	4.589E-01	1.166
	+	238.60	*	1.921E+00	2.085E-01	9.929E-02	8.714E-03	19.346
	+	300.10		1.386E+00	1.485E+00	1.420E+00	8.391E-01	0.976
TH-230	+	609.31	*	1.432E+00	2.217E-01	1.474E-01	1.322E-02	9.718
		768.36		1.340E-01	1.017E+00	1.650E+00	1.594E-01	0.081
	+	934.06		2.503E+00	2.468E+00	2.540E+00	2.410E-01	0.986
	+	1120.29		2.433E+00	6.638E-01	6.102E-01	5.448E-02	3.987
	+	1238.11		1.114E+00	1.551E+00	1.918E+00	1.537E-01	0.581

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		7.762E-01	1.308E-00	2.271E+00	1.940E-01	0.342
	+	1764.49		1.579E+00	4.080E-01	3.716E-01	2.136E-02	4.249
TH-232	+	338.32		1.737E-00	5.087E-01	4.788E-01	3.269E-02	3.629
	+	911.07	*	1.881E+00	4.587E-01	3.114E-01	3.186E-02	6.041
	+	969.11		2.125E+00	6.830E-01	5.015E-01	1.143E-01	4.237
TH-234	+	63.29	*	2.030E+00	1.047E+00	1.253E+00	2.273E-01	1.621
	+	92.38		2.644E+00	8.176E-01	8.123E-01	1.460E-01	3.255
U-234	+	609.31	*	1.432E+00	2.217E-01	1.474E-01	1.322E-02	9.718
		768.36		1.340E-01	1.017E+00	1.650E+00	1.594E-01	0.081
	+	934.06		2.503E+00	2.468E+00	2.540E+00	2.410E-01	0.986
	+	1120.29		2.433E+00	6.638E-01	6.102E-01	5.448E-02	3.987
	+	1238.11		1.114E+00	1.551E+00	1.918E+00	1.537E-01	0.581
		1377.67		7.762E-01	1.308E+00	2.271E+00	1.940E-01	0.342
	+	1764.49		1.579E+00	4.080E-01	3.716E-01	2.136E-02	4.249
U-235	+	89.95		4.255E+00	1.616E+00	1.619E+00	4.977E-01	2.628
	+	93.35		3.179E+00	1.196E+00	9.788E-01	2.739E-01	3.248
	+	105.00		1.983E+00	2.003E+00	1.931E+00	5.811E-01	1.027
		143.76	*	3.154E-01	2.573E-01	4.255E-01	7.606E-02	0.741
		163.35		-1.892E-01	5.400E-01	8.651E-01	1.611E-01	-0.219
	+	185.71		2.065E-01	7.490E-02	8.090E-02	5.993E-03	2.553
		205.31		-5.589E-01	6.928E-01	9.054E-01	1.684E-01	-0.617
NP-237	+	86.50	*	1.306E+00	3.905E-01	3.445E-01	7.636E-02	3.792
		95.87		-1.935E-01	1.092E+00	1.575E+00	3.884E-01	-0.123
U-238	+	63.29	*	2.030E+00	1.047E+00	1.253E+00	2.273E-01	1.621
	+	92.38		2.644E+00	7.013E-01	8.123E-01	6.819E-02	3.255
AM-243	+	74.67	*	4.184E-01	6.198E-02	7.102E-02	6.025E-03	5.892
	+	86.72		4.899E+01	1.059E+01	1.292E+01	1.046E+00	3.791
		117.66		2.110E+00	4.289E+00	7.179E+00	7.643E-01	0.294
		142.18		-9.918E+00	2.068E+01	3.320E+01	3.148E+00	-0.299
ANH-511	+	511.00	*	1.534E-01	6.844E-02	6.324E-02	4.274E-03	2.426

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	5.095E-02	3.863E-01	6.422E-01	4.735E-02	0.079
NA-22		1274.54	*	-1.757E-02	6.018E-02	9.506E-02	5.387E-03	-0.185
NA-24		1368.53	*	-1.273E-01	6.018E-02	Half-Life too short		
AL-26		1129.67		-6.338E-01	2.453E+00	3.717E+00	2.196E-01	-0.171
		1808.65	*	-1.673E-03	3.699E-02	6.061E-02	3.466E-03	-0.028
SC-46		889.25	*	-1.086E-02	5.582E-02	9.149E-02	6.706E-03	-0.119
	+	1120.51		4.129E-01	1.093E-01	1.789E-01	1.071E-02	2.308
V-48		944.10		-3.901E-01	1.219E+00	1.967E+00	1.400E-01	-0.198
		983.50	*	3.013E-02	9.609E-02	1.635E-01	1.132E-02	0.184
		1312.09		6.748E-02	1.035E-01	1.806E-01	1.028E-02	0.374
CR-51		320.08	*	1.378E-02	4.290E-01	7.207E-01	5.497E-02	0.019
MN-52		744.21		3.863E-01	3.148E-01	5.527E-01	4.211E-02	0.699
		848.13		-1.482E-01	7.999E+00	1.335E+01	9.965E-01	-0.011
	+	935.52		4.884E-01	4.806E-01	5.557E-01	3.975E-02	0.879

---- Non-Identified Nuclides ----

Nuclide	Line Ident	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1246.25		-5.135E+00	9.417E+00	1.378E+01	7.744E-01	-0.373
		1333.61		4.812E+00	6.129E+00	1.085E+01	6.196E-01	0.444
		1434.06	*	1.068E-01	2.904E-01	4.930E-01	2.849E-02	0.217
MN-54		834.83	*	-5.996E-02	5.374E-02	8.181E-02	6.137E-03	-0.733
CO-56		846.75	*	-2.475E-02	5.361E-02	8.606E-02	6.430E-03	-0.288
		977.42		1.006E+00	4.388E+00	7.409E+00	5.153E-01	0.136
		1037.82		-4.637E-02	4.203E-01	6.868E-01	4.938E-02	-0.068
		1175.09		-2.604E-02	3.081E+00	5.044E+00	2.785E-01	-0.005
	+	1238.25		1.118E-01	1.556E-01	2.328E-01	1.394E-02	0.480
		1360.21		6.945E-01	1.338E+00	2.314E+00	1.327E-01	0.300
		1771.40		-5.260E-01	3.460E-01	4.047E-01	2.325E-02	-1.300
CO-57		122.06	*	5.307E-03	2.818E-02	4.667E-02	5.178E-03	0.114
		136.48		4.573E-02	2.446E-01	4.030E-01	4.239E-02	0.113
CO-58		810.76	*	2.003E-02	5.311E-02	9.159E-02	6.941E-03	0.219
FE-59		142.65		6.090E-01	3.181E+00	5.193E+00	4.903E-01	0.117
		192.34		1.503E-01	1.189E+00	1.790E+00	2.273E-01	0.084
		1099.22	*	6.317E-02	1.184E-01	2.045E-01	1.453E-02	0.309
		1291.56		-3.862E-02	1.619E-01	2.565E-01	1.878E-02	-0.151
CO-60		1173.22		2.611E-02	6.703E-02	1.134E-01	6.257E-03	0.230
		1332.49	*	6.103E-02	5.419E-02	9.913E-02	5.661E-03	0.616
ZN-65		1115.52	*	-1.300E-01	1.474E-01	1.869E-01	1.129E-02	-0.695
GE-68		1077.35	*	5.250E-01	1.857E+00	3.133E+00	1.982E-01	0.168
AS-73		53.44	*	5.438E-02	2.709E-01	4.580E-01	3.716E-02	0.119
AS-74		595.88	*	-9.058E-02	1.193E-01	1.826E-01	1.326E-02	-0.496
		634.78		3.428E-01	4.656E-01	7.982E-01	5.934E-02	0.429
SE-75	+	66.05		4.933E+00	3.431E+00	5.176E+00	5.488E-01	0.953
		96.73		-8.635E-01	8.996E-01	1.239E+00	1.698E-01	-0.697
		121.11		-8.904E-02	1.527E-01	2.450E-01	3.216E-02	-0.363
		136.00		8.384E-03	4.593E-02	7.568E-02	7.602E-03	0.111
		198.60		3.413E-01	2.123E+00	3.456E+00	2.950E-01	0.099
		264.65	*	-5.451E-02	6.343E-02	8.254E-02	6.227E-03	-0.660
		279.53		1.344E-01	1.258E-01	2.216E-01	1.729E-02	0.607
		303.91		-7.998E-01	2.738E+00	3.922E+00	4.112E-01	-0.204
		400.65		-3.466E-02	2.927E-01	4.825E-01	4.411E-02	-0.072
BR-77	+	87.88		7.184E+02	1.553E+02	2.512E+02	2.023E+01	2.860
		200.40		2.143E+02	1.413E+02	2.417E+02	1.806E+01	0.886
	+	239.00		2.266E+02	2.239E+01	3.286E+01	2.479E+00	6.896
		249.79		-1.002E+01	5.650E+01	8.968E+01	6.757E+00	-0.112
		281.68		-5.368E+01	7.672E+01	1.249E+02	9.263E+00	-0.430
		297.23		3.097E+02	8.550E+01	1.136E+02	8.299E+00	2.727
		303.76		-4.666E+01	1.725E+02	2.476E+02	1.795E+01	-0.188
		439.47		6.231E+01	1.284E+02	2.191E+02	1.359E+01	0.284
		484.57		9.961E+00	2.143E+02	3.539E+02	2.324E+01	0.028
		520.65	*	-3.308E+00	9.292E+00	1.480E+01	1.010E+00	-0.223
		574.64		1.338E+02	2.167E+02	3.599E+02	2.574E+01	0.372
		578.91		-5.241E+01	9.947E+01	1.322E+02	9.484E+00	-0.396
		585.48		1.420E+03	2.651E+02	4.797E+02	3.458E+01	2.961
		755.35		1.477E+02	1.657E+02	2.864E+02	2.181E+01	0.516
		817.79		1.452E+01	1.191E+02	2.016E+02	1.520E+01	0.072

---- Non Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SR-82		698.33		3.379E+01	4.590E+01	7.825E+01	5.941E+00	0.432
		776.49	*	-2.744E-01	4.926E-01	7.895E-01	6.001E-02	-0.348
		1395.20		-7.782E+00	1.441E+01	2.153E+01	1.240E+00	-0.361
RB-83		520.41	*	-6.215E-02	8.497E-02	1.312E-01	8.950E-03	-0.474
		529.64		-6.160E-02	1.385E-01	2.193E-01	1.510E-02	-0.281
		552.65		1.795E-01	2.674E-01	4.575E-01	3.215E-02	0.392
RB-84		881.50	*	2.079E-02	9.360E-02	1.590E-01	1.170E-02	0.131
KR-85		513.99	*	2.160E+01	1.029E+01	1.724E+01	1.169E+00	1.253
SR-85		513.99	*	1.095E-01	5.219E-02	8.744E-02	5.928E-03	1.253
RB-86		1076.63	*	1.240E-01	1.100E+00	1.830E+00	1.159E-01	0.068
Y-88		898.02		-2.684E-02	6.048E-02	9.699E-02	7.124E-03	-0.277
		1836.01	*	-3.360E-02	4.401E-02	6.044E-02	3.451E-03	-0.556
ZR-88		392.90	*	-1.195E-03	3.756E-02	6.144E-02	3.556E-03	-0.019
Y-91		1204.90	*	4.095E+00	2.628E+01	4.356E+01	2.425E+00	0.094
NB-94		702.63	*	7.468E-03	4.685E-02	7.655E-02	5.816E-03	0.098
		871.10		-1.962E-02	4.404E-02	7.038E-02	5.205E-03	-0.279
NB-95		765.79	*	3.341E-02	5.867E-02	9.856E-02	7.501E-03	0.339
NB-95M		235.69	*	2.507E-02	1.607E-01	2.275E-01	2.034E-02	0.110
ZR-95		724.18		1.024E-01	1.566E-01	2.323E-01	1.962E-02	0.441
		756.15	*	7.050E-02	9.352E-02	1.601E-01	1.376E-02	0.440
NB-97		657.90	*	-9.854E-03	9.352E-02	Half-Life too short		
		1024.50		-4.220E+00	9.352E-02	Half-Life too short		
ZR-97		254.15		-1.283E-01	9.352E-02	Half-Life too short		
		355.39		5.899E-01	9.352E-02	Half-Life too short		
		507.63	*	1.512E+00	9.352E-02	Half-Life too short		
		602.52		6.081E-01	9.352E-02	Half-Life too short		
		1021.30		2.788E+00	9.352E-02	Half-Life too short		
		1147.95		-5.760E-01	9.352E-02	Half-Life too short		
		1362.66		1.209E+00	9.352E-02	Half-Life too short		
		1750.46		-4.466E-01	9.352E-02	Half-Life too short		
MO-99		140.51		-4.882E+01	2.766E+01	3.606E+01	1.010E+01	-1.354
		181.06		3.287E+00	1.715E+01	2.461E+01	4.365E+00	0.134
		366.43		3.387E+00	7.842E+01	1.311E+02	8.309E+00	0.026
		739.58	*	-7.157E+00	1.329E+01	2.035E+01	2.979E+00	-0.352
		778.00		-6.237E+00	3.428E+01	5.671E+01	4.310E+00	-0.110
TC-99M		140.51	*	-4.981E+09	3.428E+01	Half-Life too short		
RH-101		127.23		2.301E-02	4.098E-02	6.062E-02	6.483E-03	0.380
		198.01	*	1.333E-02	3.903E-02	6.403E-02	4.777E-03	0.208
		325.23		-5.801E-02	2.973E-01	4.273E-01	2.996E-02	-0.136
RH-102		418.52		-1.996E-02	3.646E-01	6.023E-01	3.627E-02	-0.033
		475.06	*	-4.327E-02	3.712E-02	5.588E-02	3.629E-03	-0.774
		631.29		-4.849E-02	7.420E-02	1.137E-01	8.440E-03	-0.426
		697.49		5.588E-02	1.042E-01	1.754E-01	1.331E-02	0.319
		766.84		7.669E-02	1.532E-01	2.556E-01	1.945E-02	0.300
		1046.59		-5.577E-02	1.607E-01	2.565E-01	1.678E-02	-0.217
		1112.84		-1.380E-01	3.794E-01	5.099E-01	3.085E-02	-0.271
RU-103		497.08	*	3.052E-03	4.916E-02	8.118E-02	1.060E-02	0.038
	+	610.33		1.518E+01	3.099E+00	3.737E+00	6.000E-01	4.062
RH-106	+	511.85		7.648E-01	3.412E-01	5.363E-01	3.627E-02	1.426

---- Non Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Kcy	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		621.84	*	-1.346E-01	4.104E-01	6.476E-01	8.156E-02	-0.208
		1050.47		-2.242E+00	3.313E+00	5.121E+00	3.337E-01	-0.438
RU-106	+	511.85		7.648E-01	3.412E-01	5.363E-01	3.627E-02	1.426
		621.84	*	-1.346E-01	4.102E-01	6.476E-01	4.780E-02	-0.208
		1050.47		-2.242E+00	3.313E+00	5.121E+00	3.337E-01	-0.438
AG-108M		433.93	*	-1.555E-02	4.168E-02	6.731E-02	4.461E-03	-0.231
		614.37		9.121E-04	5.588E-02	7.861E-02	6.086E-03	0.012
		722.95		-4.767E-02	6.971E-02	8.878E-02	7.097E-03	-0.537
AG-110M		657.75	*	-1.102E-02	4.623E-02	7.335E-02	5.729E-03	-0.150
		677.61		2.060E-02	4.232E-01	6.871E-01	5.385E-02	0.030
		706.67		-5.426E-02	2.900E-01	4.605E-01	3.625E-02	-0.118
		763.93		-1.365E-01	2.336E-01	3.565E-01	2.811E-02	-0.383
		884.67		1.435E-02	6.658E-02	1.131E-01	8.672E-03	0.127
		937.48		-3.119E-02	1.686E-01	2.350E-01	1.767E-02	-0.133
		1384.27		-5.948E-02	2.144E-01	3.342E-01	2.041E-02	-0.178
IN-111		171.28		-2.282E-01	9.022E-01	1.451E+00	1.065E-01	-0.157
		245.39	*	1.661E-01	1.029E+00	1.457E+00	1.099E-01	0.114
IN-113M		391.69	*	-3.325E-03	5.394E-02	8.935E-02	5.510E-03	-0.037
SN-113		391.69	*	-3.325E-03	5.394E-02	8.935E-02	5.510E-03	-0.037
IN-114M		190.27	*	3.920E-02	2.344E-01	3.353E-01	2.491E-02	0.117
CD-115		260.90		7.073E+01	1.169E+02	1.925E+02	1.446E+01	0.367
		492.35		6.919E+00	3.233E+01	5.399E+01	3.577E+00	0.128
		527.90	*	1.851E+00	1.007E+01	1.673E+01	1.150E+00	0.111
SN-117M		156.02		2.930E+00	2.567E+00	4.349E+00	3.590E-01	0.674
		158.56	*	2.209E-02	6.182E-02	1.022E-01	8.192E-03	0.216
SB-122		563.90	*	1.302E+00	2.040E+00	3.486E+00	2.472E-01	0.374
		692.80		-2.729E+01	4.602E+01	7.055E+01	5.352E+00	-0.387
I-123		159.00	*	1.099E+00	4.602E+01	Half-Life too short		
		528.96		-3.208E+01	4.602E+01	Half-Life too short		
TE-123M		159.00	*	2.062E-02	3.303E-02	5.512E-02	4.428E-03	0.374
I-124		602.71	*	-2.000E-01	8.504E-01	1.226E+00	8.941E-02	-0.163
		722.78		-4.328E+00	6.101E+00	7.742E+00	5.894E-01	-0.559
		1325.50		1.964E+01	4.332E+01	7.385E+01	4.213E+00	0.266
		1376.25		4.373E+01	3.454E+01	6.412E+01	3.684E+00	0.682
		1509.49		-4.003E+00	1.829E+01	2.851E+01	1.655E+00	-0.140
		1691.02		-1.192E-01	4.260E+00	7.046E+00	4.078E-01	-0.017
SB-124		602.71		-1.369E-02	5.819E-02	8.387E-02	6.119E-03	-0.163
		645.85		-3.340E-01	6.752E-01	1.048E+00	8.457E-02	-0.319
		709.31		3.476E+00	3.823E+00	6.598E+00	5.017E-01	0.527
		713.82		-9.606E-01	2.406E+00	3.750E+00	4.250E-01	-0.256
		722.78		-4.293E-01	6.052E-01	7.679E-01	6.008E-02	-0.559
	+	968.20		2.161E+01	5.127E+00	9.582E+00	6.709E-01	2.255
		1045.16		7.828E-01	3.340E+00	5.632E+00	3.690E-01	0.139
		1325.50		2.081E+00	4.590E+00	7.823E+00	4.463E-01	0.266
		1368.21		-1.345E+00	2.433E+00	3.647E+00	4.319E-01	-0.369
		1436.60		-3.868E+00	5.358E+00	7.758E+00	4.485E-01	-0.498
		1691.02	*	-2.789E-03	9.966E-02	1.648E-01	1.036E-02	-0.017
SB-125		427.89	*	1.959E-01	1.155E-01	2.097E-01	1.329E-02	0.934
		463.38		7.738E-01	3.849E-01	6.998E-01	5.099E-02	1.106

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		600.56		1.851E-01	2.401E-01	4.119E-01	3.306E-02	0.449
		635.90		4.044E-02	3.842E-01	6.284E-01	5.175E-02	0.064
TE-125M		109.28	*	3.895E+00	1.123E+01	1.654E+01	1.880E+00	0.236
I-126		388.63		-3.736E-02	2.353E-01	3.876E-01	2.268E-02	-0.096
		666.33	*	2.228E-01	2.576E-01	4.416E-01	3.330E-02	0.504
		753.82		1.716E+00	1.830E+00	3.181E+00	2.423E-01	0.539
SB-126		223.80		3.193E+00	4.562E+00	7.569E+00	5.702E-01	0.422
		278.60		3.275E+00	2.885E+00	4.854E+00	3.609E-01	0.675
	+	296.50		1.351E+01	2.581E+00	4.025E+00	2.944E-01	3.357
		414.70		-1.008E-01	9.284E-02	1.436E-01	8.597E-03	-0.702
		415.30		-2.417E+00	7.692E+00	1.252E+01	7.501E-01	-0.193
		555.20		4.737E+00	5.030E+00	8.760E+00	6.168E-01	0.541
		573.80		7.083E-01	1.368E+00	2.311E+00	1.652E-01	0.306
		593.00		-1.980E-01	1.151E+00	1.849E+00	1.340E-01	-0.107
		656.30		-1.039E+00	4.258E+00	6.755E+00	5.075E-01	-0.154
		666.33		9.287E-02	1.074E-01	1.841E-01	1.388E-02	0.504
		675.00		8.045E-01	2.575E+00	4.270E+00	3.227E-01	0.188
		695.00		-4.970E-02	1.012E-01	1.565E-01	1.188E-02	-0.317
		697.00		1.990E-02	3.494E-01	5.666E-01	4.301E-02	0.035
		720.50	*	1.185E-01	2.220E-01	3.271E-01	2.490E-02	0.362
		856.80		5.850E-01	7.106E-01	1.117E+00	8.312E-02	0.524
		989.30		-7.064E-01	1.608E+00	2.550E+00	1.757E-01	-0.277
		1034.80		-1.992E+00	1.125E+01	1.826E+01	1.209E+00	-0.109
		1213.00		3.006E-01	6.488E+00	1.065E+01	5.940E-01	0.028
SB-127		61.10		1.200E+01	2.837E+01	4.250E+01	4.755E+00	0.282
		252.40		9.558E-01	4.243E+00	6.849E+00	2.859E+00	0.140
		290.80		-7.975E+00	2.229E+01	3.183E+01	3.145E+00	-0.251
		411.60		1.054E+01	1.277E+01	2.205E+01	3.132E+00	0.478
		444.90		3.537E+00	9.820E+00	1.661E+01	1.782E+00	0.213
		473.00		9.004E-01	1.740E+00	2.963E+00	3.331E-01	0.304
		543.00		1.850E+00	1.803E+01	2.972E+01	3.928E+00	0.062
		603.60		2.181E+00	1.435E+01	2.050E+01	2.325E+00	0.106
		685.20	*	3.152E-01	1.600E+00	2.626E+00	2.703E-01	0.120
		698.50		1.401E+01	1.748E+01	2.978E+01	4.485E+00	0.470
		722.20		-1.493E+01	4.049E+01	5.371E+01	5.409E+00	-0.278
		783.80		1.800E+00	3.955E+00	6.859E+00	7.844E-01	0.262
XE-127		57.60		8.373E-01	2.740E+00	4.487E+00	3.948E-01	0.187
		145.22		1.223E+00	8.153E-01	1.381E+00	1.273E-01	0.886
		172.10		-6.916E-02	1.361E-01	2.164E-01	1.588E-02	-0.320
		202.84	*	-2.974E-02	5.399E-02	8.505E-02	6.361E-03	-0.350
		374.96		1.058E-02	2.395E-01	4.000E-01	2.464E-02	0.026
I-131		80.18		-2.793E-01	5.584E+00	5.903E+00	4.925E-01	-0.047
		284.30		-2.080E+00	1.528E+00	2.380E+00	1.883E-01	-0.874
		364.48	*	-1.196E-01	1.288E-01	2.027E-01	1.416E-02	-0.590
		636.97		-3.180E-01	2.025E+00	3.245E+00	2.592E-01	-0.098
		722.89		-7.532E+00	1.070E+01	1.359E+01	1.042E+00	-0.554
TE-132		49.72		-2.336E+00	4.185E+00	6.052E+00	5.864E-01	-0.386
		111.76		-2.524E+01	2.651E+01	4.198E+01	4.953E+00	-0.601
		116.30		2.742E+01	2.526E+01	4.282E+01	5.212E+00	0.641

--- Non-Identified Nuclides ----

Nuclide	Line Idad	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		228.16	*	-3.918E-01	6.402E-01	9.942E-01	1.487E-01	-0.394
BA-133		53.15		3.884E-01	1.149E+00	1.950E+00	1.573E-01	0.199
		79.62		3.418E+00	1.806E+00	2.074E+00	3.122E-01	1.648
		81.00		-3.240E-02	1.316E-01	1.370E-01	2.150E-02	-0.236
		276.40		4.598E-01	5.179E-01	7.606E-01	1.048E-01	0.605
		302.84		3.471E-02	1.935E-01	2.868E-01	3.570E-02	0.121
		356.01	*	-3.690E-03	5.797E-02	8.371E-02	1.000E-02	-0.044
		383.85		1.893E-01	3.579E-01	6.134E-01	6.722E-02	0.309
I-133	+	510.53		6.698E-01	3.579E-01	Half-Life too short		
		529.87	*	-1.358E-03	3.579E-01	Half-Life too short		
		706.58		-4.783E-02	3.579E-01	Half-Life too short		
		856.28		4.521E-02	3.579E-01	Half-Life too short		
		875.33		-4.376E-02	3.579E-01	Half-Life too short		
		1236.41		4.650E-01	3.579E-01	Half-Life too short		
		1298.22		5.176E-02	3.579E-01	Half-Life too short		
CS-134		475.35		-2.828E+00	2.426E+00	3.652E+00	2.373E-01	-0.774
		563.23		2.463E-01	4.592E-01	7.797E-01	5.605E-02	0.316
		569.32		4.799E-02	2.617E-01	4.329E-01	3.144E-02	0.111
		604.70		-6.426E-02	5.584E-02	6.873E-02	5.038E-03	-0.935
		795.84	*	8.665E-02	6.247E-02	1.148E-01	8.782E-03	0.755
		801.93		-3.073E-01	5.334E-01	8.579E-01	6.541E-02	-0.358
		1038.57		5.959E-01	5.204E+00	8.686E+00	5.730E-01	0.069
		1167.94		-2.395E+00	3.680E+00	5.683E+00	3.164E-01	-0.421
		1365.15		-4.010E-01	1.678E+00	2.635E+00	1.663E-01	-0.152
CS-135		268.24	*	2.720E-01	2.230E-01	3.347E-01	3.013E-02	0.813
I-135		288.45		1.610E+09	2.230E-01	Half-Life too short		
		417.63		5.102E+08	2.230E-01	Half-Life too short		
		546.56		3.738E+08	2.230E-01	Half-Life too short		
		836.80		5.265E+08	2.230E-01	Half-Life too short		
		1038.76		2.562E+07	2.230E-01	Half-Life too short		
		1124.00		3.047E+09	2.230E-01	Half-Life too short		
		1131.51		-3.394E+08	2.230E-01	Half-Life too short		
		1260.41	*	1.768E+08	2.230E-01	Half-Life too short		
		1457.56		8.217E+10	2.230E-01	Half-Life too short		
		1678.03		1.589E+08	2.230E-01	Half-Life too short		
		1706.46		6.864E+08	2.230E-01	Half-Life too short		
		1791.20		-2.614E+08	2.230E-01	Half-Life too short		
CS-136	+	66.91		7.796E-01	5.495E-01	8.182E-01	1.271E-01	0.953
	+	86.29		5.491E+00	1.298E+00	1.958E+00	2.449E-01	2.804
		153.22		5.318E-01	7.351E-01	1.230E+00	1.173E-01	0.432
		163.89		-6.339E-01	1.165E+00	1.852E+00	1.607E-01	-0.342
		176.55		-3.089E-02	4.076E-01	6.600E-01	5.240E-02	-0.047
		273.65		-5.885E-01	6.211E-01	8.023E-01	6.506E-02	-0.734
		340.57		6.694E-01	1.895E-01	3.237E-01	2.301E-02	2.068
		818.51		2.421E-04	8.526E-02	1.428E-01	1.078E-02	0.002
		1048.07	*	1.729E-02	1.408E-01	2.350E-01	1.647E-02	0.074
		1235.34		7.631E-01	9.529E-01	1.459E+00	1.441E-01	0.523
BA-137M		661.65	*	-2.895E-02	5.201E-02	8.053E-02	6.065E-03	-0.359
CS-137		661.65	*	-3.060E-02	5.498E-02	8.513E-02	6.427E-03	-0.359

---- Non-Identified Nuclides ----

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-139		165.85	*	2.180E-02	3.408E-02	5.688E-02	4.160E-03	0.383
BA-140		162.64		-2.542E-01	8.041E-01	1.292E+00	1.059E-01	-0.197
		304.84		9.367E-01	1.549E+00	2.337E+00	6.459E-01	0.401
		423.70		9.174E-01	2.252E+00	3.601E+00	1.146E+00	-0.255
		537.32	*	-2.072E-01	3.277E-01	4.993E-01	1.635E-01	-0.415
LA-140	+	328.77		5.501E-01	3.397E-01	5.909E-01	4.464E-02	0.931
		432.53		-2.271E+00	2.549E+00	3.973E+00	2.670E-01	-0.572
		487.03		-2.041E-03	1.625E-01	2.671E-01	1.942E-02	-0.008
		751.79		-2.286E+00	2.298E+00	3.345E+00	2.892E-01	-0.683
		815.85		-9.663E-02	3.814E-01	6.239E-01	5.404E-02	-0.155
		867.82		2.231E+00	1.759E+00	3.026E+00	2.400E-01	0.737
		919.63		-2.353E+00	3.940E+00	5.869E+00	5.603E-01	-0.401
		925.24		1.538E+00	1.568E+00	2.714E+00	2.126E-01	0.567
		1596.49	*	-2.467E-02	1.098E-01	1.697E-01	9.862E-03	-0.145
CE-141		145.44	*	7.870E-02	7.410E-02	1.241E-01	1.161E-02	0.634
CE-143		57.37		-8.993E-05	7.410E-02	Half-Life too short		
		231.56		4.939E-04	7.410E-02	Half-Life too short		
		293.26	*	5.372E-04	7.410E-02	Half-Life too short		
	+	350.59		2.044E-02	7.410E-02	Half-Life too short		
		490.36		-2.003E-04	7.410E-02	Half-Life too short		
		664.57		1.227E-03	7.410E-02	Half-Life too short		
		721.93		-6.569E-04	7.410E-02	Half-Life too short		
CE-144		80.11		-4.896E-02	2.807E+00	2.975E+00	2.468E-01	-0.016
		133.54	*	-8.790E-02	2.753E-01	3.887E-01	6.411E-02	-0.226
PM-144		476.78		-2.999E-02	8.396E-02	1.348E-01	1.017E-02	-0.223
		618.01		-1.582E-02	4.113E-02	6.466E-02	4.941E-03	-0.245
		696.49	*	1.102E-02	4.726E-02	7.772E-02	5.901E-03	0.142
		778.57		-9.329E-01	2.934E+00	4.793E+00	3.644E-01	-0.195
PR-144		696.49	*	7.462E-01	3.201E+00	5.263E+00	3.995E-01	0.142
		1489.15		-8.088E+00	1.613E+01	2.386E+01	1.384E+00	-0.339
PM-146		453.90	*	1.024E-02	5.625E-02	9.395E-02	8.440E-03	0.109
		633.02		4.893E-01	1.940E+00	3.197E+00	1.187E+00	0.153
		735.90		-2.928E-02	2.161E-01	3.434E-01	9.725E-02	-0.085
		747.13		1.031E-01	1.320E-01	2.249E-01	3.024E-02	0.458
ND-147	+	91.11		9.993E-01	2.402E-01	5.014E-01	4.529E-02	1.993
		319.41		5.460E-01	3.708E+00	6.267E+00	4.440E-01	0.087
		439.89		4.982E+00	6.637E+00	1.150E+01	7.143E-01	0.433
		531.02	*	-9.231E-02	6.920E-01	1.122E+00	1.574E-01	-0.082
PM-149		285.90	*	-1.273E+01	7.292E+01	1.218E+02	1.813E+01	-0.105
EU-152		121.78		9.347E-03	8.168E-02	1.349E-01	1.634E-02	0.069
		244.69		7.559E-01	4.177E-01	6.537E-01	4.930E-02	1.156
		344.27	*	2.076E-02	1.362E-01	2.004E-01	1.479E-02	0.104
		443.98		-1.963E-01	1.183E+00	1.933E+00	1.207E-01	-0.102
		778.89		-2.104E-01	3.447E-01	5.487E-01	4.170E-02	-0.383
		867.32		1.209E+00	1.168E+00	1.906E+00	1.412E-01	0.634
	+	964.01		1.035E+00	5.553E-01	7.806E-01	5.482E-02	1.326
		1085.78		1.220E-02	5.544E-01	9.148E-01	5.729E-02	0.013
		1112.02		-1.653E-01	5.001E-01	7.339E-01	4.445E-02	-0.225
		1407.95		1.240E-01	2.166E-01	3.802E-01	2.192E-02	0.326

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153		69.67		-1.241E-01	1.796E+00	1.907E+00	1.654E-01	-0.065
	-	83.37		2.387E+01	1.589E+01	2.245E+01	1.839E+00	1.063
		97.43	*	-2.274E-02	9.023E-02	1.297E-01	1.142E-02	-0.175
		103.18		-1.761E-01	1.334E-01	1.800E-01	1.674E-02	-0.978
EU-154		123.07		1.732E-02	5.739E-02	9.538E-02	1.266E-02	0.182
		247.94		-1.700E-01	4.805E-01	6.533E-01	6.982E-02	-0.260
		591.81		2.702E-01	7.951E-01	1.329E+00	1.422E-01	0.203
		723.30		-1.005E-01	2.856E-01	3.797E-01	3.277E-02	-0.265
		756.87		1.943E-01	1.070E+00	1.747E+00	1.969E-01	0.111
		873.19		-2.000E-01	3.761E-01	5.941E-01	6.780E-02	-0.337
		996.32		-1.839E-01	4.871E-01	7.756E-01	1.317E-01	-0.237
		1004.76		-7.237E-02	3.119E-01	5.056E-01	5.242E-02	-0.143
		1274.45	*	-3.846E-02	1.693E-01	2.693E-01	2.491E-02	-0.143
TB-160	-	86.79		1.417E+00	3.063E-01	4.998E-01	4.043E-02	2.835
		197.04		-1.568E-01	6.585E-01	1.054E+00	7.863E-02	-0.149
		215.65		-2.744E-01	9.043E-01	1.438E+00	1.081E-01	-0.191
		298.57		1.601E-01	2.150E-01	2.329E-01	1.699E-02	0.687
		879.36	*	4.101E-02	1.826E-01	3.105E-01	2.287E-02	0.132
		962.29		1.119E+00	8.442E-01	1.374E+00	9.659E-02	0.814
		966.15		1.598E+00	3.846E-01	7.486E-01	5.250E-02	2.134
		1177.93		-4.434E-01	5.043E-01	7.576E-01	4.187E-02	-0.585
		1271.85		2.087E-01	9.692E-01	1.615E+00	9.124E-02	0.129
HO-166M		80.57		-8.188E-02	3.616E-01	3.772E-01	3.124E-02	-0.217
		184.41		5.683E-02	4.839E-02	7.410E-02	5.485E-03	0.767
		280.46		2.107E-02	9.911E-02	1.687E-01	1.253E-02	0.125
		410.95		2.838E-01	3.085E-01	5.379E-01	3.203E-02	0.527
		711.68	*	-3.551E-02	8.910E-02	1.390E-01	1.057E-02	-0.256
		752.31		-1.563E-01	3.755E-01	5.801E-01	4.418E-02	-0.269
		810.29		1.463E-02	8.154E-02	1.385E-01	1.047E-02	0.106
TM-171		51.35		-1.383E+00	9.477E+00	1.397E+01	1.085E+00	-0.099
		52.39		2.998E+00	5.076E+00	8.095E+00	6.428E-01	0.370
		59.40		2.169E+01	1.467E+01	2.264E+01	2.059E+00	0.958
	+	66.72	*	2.976E+01	2.063E+01	3.111E+01	2.735E+00	0.957
LU-176	+	88.36		1.055E+00	2.282E-01	3.894E-01	3.146E-02	2.710
		201.83		-8.146E-03	3.339E-02	5.338E-02	3.990E-03	-0.153
		306.84	*	-1.063E-03	3.062E-02	4.852E-02	3.503E-03	-0.022
		401.10		-2.508E+00	7.657E+00	1.244E+01	7.297E-01	-0.202
LU-177		112.95		-2.184E+00	1.655E+00	2.577E+00	2.626E-01	-0.848
	+	208.36	*	2.756E+00	1.331E+00	2.055E+00	1.541E-01	1.341
LU-177M		52.97		1.439E-01	5.272E-01	8.651E-01	6.952E-02	0.166
		54.07		-6.370E-02	2.934E-01	4.897E-01	4.024E-02	-0.130
		61.30		4.085E-01	8.907E-01	1.336E+00	1.206E-01	0.306
		121.62		-6.566E-02	4.197E-01	6.864E-01	7.579E-02	-0.096
		147.16		-4.434E-01	7.738E-01	1.236E+00	1.119E-01	-0.359
		171.86		-2.937E-01	5.568E-01	8.844E-01	6.489E-02	-0.332
		218.09		1.056E+00	1.034E+00	1.737E+00	1.306E-01	0.608
		268.79		2.528E+00	1.111E+00	1.762E+00	1.319E-01	1.434
		319.02		8.821E-02	3.058E-01	5.205E-01	3.689E-02	0.169
		367.43		7.200E-01	1.105E+00	1.909E+00	1.206E-01	0.377

---- Non-Identified Nuclides ---

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		413.65	*	-2.140E-01	2.268E-01	3.542E-01	2.118E-02	-0.604
HF-181		56.28		-5.465E-01	3.848E-01	6.144E-01	5.272E-02	-0.889
		57.53		5.610E-02	2.299E-01	3.759E-01	3.303E-02	0.149
		65.20		2.137E-00	8.635E-01	1.054E+00	9.334E-02	2.027
		133.02		-2.363E-02	8.644E-02	1.225E-01	1.254E-02	-0.193
		136.25		8.982E-02	5.275E-01	8.689E-01	8.666E-02	0.103
		345.85		-2.476E-01	2.755E-01	3.723E-01	2.498E-02	-0.665
		482.03	*	-1.096E-02	5.339E-02	8.663E-02	5.673E-03	-0.127
W-181		56.28		-2.160E-01	1.523E-01	2.433E-01	2.088E-02	-0.888
		57.53		2.206E-02	9.106E-02	1.489E-01	1.308E-02	0.148
		65.20	*	8.397E-01	3.394E-01	4.142E-01	3.668E-02	2.027
TA-182	+	67.75		1.194E-01	8.274E-02	1.259E-01	1.101E-02	0.948
		100.10		1.763E-01	2.855E-01	3.153E-01	2.848E-02	0.559
		152.43		3.440E-01	3.882E-01	6.537E-01	5.611E-02	0.526
		222.10		2.337E-02	4.238E-01	6.842E-01	5.152E-02	0.034
		1001.68		3.160E+00	2.851E+00	5.136E+00	3.504E-01	0.615
	+	1121.28		1.143E+00	3.025E-01	4.887E-01	2.923E-02	2.339
		1189.05		-6.066E-02	4.576E-01	7.409E-01	4.107E-02	-0.082
		1221.42	*	1.874E-01	3.030E-01	5.183E-01	2.897E-02	0.362
		1230.97		2.994E-02	7.407E-01	1.124E+00	6.295E-02	0.027
RE-183		57.98		9.591E-02	9.609E-02	1.542E-01	1.366E-02	0.622
		59.32		8.667E-02	5.947E-02	9.179E-02	8.336E-03	0.944
	+	67.20		2.108E-01	1.461E-01	2.212E-01	1.940E-02	0.953
		162.32	*	-3.268E-02	1.234E-01	1.988E-01	1.522E-02	-0.164
	+	208.81		2.735E+00	1.320E+00	2.038E+00	1.529E-01	1.342
		291.72		-3.665E-01	1.183E+00	1.696E+00	1.247E-01	-0.216
RE-184		57.98		3.556E-01	3.563E-01	5.718E-01	5.066E-02	0.622
		59.32		3.211E-01	2.203E-01	3.400E-01	3.088E-02	0.944
	+	67.20		7.811E-01	5.414E-01	8.197E-01	7.190E-02	0.953
		161.27		-4.516E-01	4.175E-01	6.482E-01	5.029E-02	-0.697
		216.55		1.092E-01	3.190E-01	5.220E-01	3.925E-02	0.209
		252.85	*	-2.348E-02	2.773E-01	4.422E-01	3.329E-02	-0.053
		318.01		-9.280E-02	5.254E-01	8.733E-01	6.200E-02	-0.106
		792.07		4.545E-01	1.341E+00	2.305E+00	1.748E-01	0.197
		903.28		-1.517E-01	1.555E+00	2.378E+00	1.730E-01	-0.064
		920.93		-3.554E-01	6.241E-01	9.838E-01	7.095E-02	-0.361
OS-185		59.72		1.908E-01	1.637E-01	2.506E-01	2.280E-02	0.761
		61.14		4.175E-02	9.702E-02	1.454E-01	1.314E-02	0.287
		69.30		1.261E-03	3.177E-01	3.391E-01	2.946E-02	0.004
		592.07		9.643E-01	3.189E+00	5.320E+00	3.853E-01	0.181
		646.12	*	-2.118E-02	5.788E-02	9.094E-02	6.799E-03	-0.233
		717.42		9.156E-01	1.318E+00	2.236E+00	1.701E-01	0.410
		874.81		-6.503E-01	7.538E-01	1.152E+00	8.502E-02	-0.565
		880.27		2.871E-01	1.059E+00	1.806E+00	1.330E-01	0.159
RE-188		155.03	*	1.313E-01	2.045E-01	3.412E-01	2.848E-02	0.385
		477.96		-8.306E-02	3.787E+00	6.227E+00	4.058E-01	-0.013
		633.10		1.048E+00	3.870E+00	6.413E+00	4.763E-01	0.163
W-188	+	63.58		8.075E+01	3.963E+01	5.602E+01	5.001E+00	1.441
		227.08		-1.242E+01	1.480E+01	2.278E+01	1.717E+00	-0.545

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		290.67	*	-3.078E+00	9.247E+00	1.324E+01	9.740E-01	-0.232
IR-192	+	295.96		1.087E+00	2.079E-01	3.231E-01	2.388E-02	3.364
		308.46		3.120E-02	1.107E-01	1.885E-01	1.368E-02	0.165
		316.51	*	2.787E-03	4.109E-02	6.920E-02	4.941E-03	0.040
		468.07		-1.210E-01	8.742E-02	1.300E-01	9.422E-03	-0.931
		604.41		-8.696E-01	7.526E-01	9.190E-01	1.120E-01	-0.946
		612.46		2.833E+00	1.123E+00	1.909E+00	1.681E-01	1.485
AU-195		65.12		4.123E-01	1.580E-01	1.937E-01	1.716E-02	2.128
	+	66.83		9.842E-02	6.822E-02	1.032E-01	9.069E-03	0.954
	+	75.70		1.349E+00	1.998E-01	4.296E-01	3.628E-02	3.140
		98.88	*	2.142E-01	3.580E-01	3.950E-01	3.526E-02	0.542
	+	129.76		6.927E+00	4.030E+00	5.948E+00	6.243E-01	1.165
TL-200		367.94	*	3.309E-04	4.030E+00	Half-Life too short		
		579.30		-9.274E-04	4.030E+00	Half-Life too short		
		828.27		3.895E-03	4.030E+00	Half-Life too short		
		1205.75		6.993E-04	4.030E+00	Half-Life too short		
TL-201		68.90		2.481E+00	3.848E+00	4.285E+00	3.729E-01	0.579
		70.82		-9.814E-01	2.463E+00	2.555E+00	2.204E-01	-0.384
		80.30		-5.526E-01	5.243E+00	5.520E+00	4.576E-01	-0.100
		135.34		1.372E+01	2.324E+01	3.886E+01	3.905E+00	0.353
		167.43	*	3.505E+00	6.373E+00	1.060E+01	7.751E-01	0.331
TL-202		68.90		2.674E-01	4.147E-01	4.618E-01	4.019E-02	0.579
		70.82		-1.055E-01	2.647E-01	2.746E-01	2.369E-02	-0.384
		80.30		-5.941E-02	5.637E-01	5.935E-01	4.920E-02	-0.100
		439.56	*	2.739E-02	8.071E-02	1.364E-01	8.464E-03	0.201
HG-203		70.83		-4.657E-01	1.200E+00	1.245E+00	1.695E-01	-0.374
		72.87		1.527E+00	5.667E-01	8.537E-01	1.123E-01	1.789
		82.60		-1.550E-01	1.303E+00	1.599E+00	2.157E-01	-0.097
		279.20	*	6.052E-02	4.718E-02	8.367E-02	6.455E-03	0.723
BI-207		72.80		3.624E-01	1.587E-01	2.468E-01	2.111E-02	1.468
	+	74.97		7.510E-01	1.113E-01	1.997E-01	1.692E-02	3.761
	+	84.90		3.096E-01	2.061E-01	3.036E-01	2.473E-02	1.020
		569.67		6.469E-03	4.121E-02	6.804E-02	4.847E-03	0.095
		1063.62	*	8.394E-02	7.639E-02	1.373E-01	8.824E-03	0.611
		1770.23		3.156E-01	5.088E-01	8.764E-01	5.035E-02	0.360
TL-207		81.07		-7.312E-02	2.907E-01	3.026E-01	2.501E-02	-0.242
	+	83.78		2.041E-01	1.359E-01	1.943E-01	1.589E-02	1.051
		94.90		6.326E-01	2.627E-01	4.540E-01	3.904E-02	1.393
		122.32		6.011E-01	1.953E+00	3.248E+00	3.759E-01	0.185
		144.24		1.080E+00	8.308E-01	1.398E+00	1.434E-01	0.773
		154.21		1.088E-01	4.747E-01	7.815E-01	7.267E-02	0.139
	+	269.46		6.934E-01	3.724E-01	4.172E-01	3.206E-02	1.662
		323.87	*	-5.884E-01	9.029E-01	1.244E+00	2.113E-01	-0.473
	+	338.28		7.255E+00	2.218E+00	3.034E+00	3.377E-01	2.391
		445.03		1.110E+00	2.776E+00	4.706E+00	4.956E-01	0.236
PO-209		260.50		1.099E+01	1.196E+01	1.998E+01	1.501E+00	0.550
		262.80		-4.514E+00	3.323E+01	5.276E+01	3.959E+00	-0.086
		896.60	*	-2.404E+00	1.101E+01	1.801E+01	1.315E+00	-0.134
PB-211		404.84	*	-8.901E-02	1.085E+00	1.790E+00	1.116E+00	-0.050

---- Non-Identified Nuclides --

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		427.08		2.483E+00	2.996E+00	4.513E+00	2.791E+00	0.550
		831.96		1.276E+00	1.807E+00	2.880E+00	1.800E+00	0.443
BI-212	+	727.18	*	1.641E+00	5.791E-01	9.085E-01	8.319E-02	1.806
		785.46		1.930E+00	2.322E+00	4.135E+00	3.139E-01	0.467
		1620.62		1.205E+00	1.400E+00	2.669E+00	1.550E-01	0.451
PO-215		81.07		-7.312E-02	2.907E-01	3.026E-01	2.501E-02	-0.242
	+	83.78		2.041E-01	1.359E-01	1.943E-01	1.589E-02	1.051
		94.90		6.326E-01	2.627E-01	4.540E-01	3.904E-02	1.393
		122.32		6.011E-01	1.953E+00	3.248E+00	3.759E-01	0.185
		144.24		1.080E+00	8.308E-01	1.398E+00	1.434E-01	0.773
		154.21		1.088E-01	4.747E-01	7.815E-01	7.267E-02	0.139
	+	269.46		6.934E-01	3.724E-01	4.172E-01	3.206E-02	1.662
		323.87	*	-5.884E-01	9.029E-01	1.244E+00	2.113E-01	-0.473
	+	338.28		7.255E+00	2.218E+00	3.034E+00	3.377E-01	2.391
		445.03		1.110E+00	2.776E+00	4.706E+00	4.956E-01	0.236
RN-219	+	271.23		8.897E-01	4.802E-01	5.432E-01	5.092E-02	1.638
		401.81	*	-1.776E-01	4.651E-01	7.519E-01	1.025E-01	-0.236
RN-220		549.76	*	-2.244E+01	3.542E+01	5.514E+01	3.865E+00	-0.407
RA-223		81.07		-7.312E-02	2.907E-01	3.026E-01	2.501E-02	-0.242
	+	83.78		2.041E-01	1.359E-01	1.943E-01	1.589E-02	1.051
		94.90		6.326E-01	2.627E-01	4.540E-01	3.904E-02	1.393
		122.32		6.011E-01	1.953E+00	3.248E+00	3.759E-01	0.185
		144.24		1.080E+00	8.308E-01	1.398E+00	1.434E-01	0.773
		154.21		1.088E-01	4.747E-01	7.815E-01	7.267E-02	0.139
	+	269.46		6.934E-01	3.724E-01	4.172E-01	3.206E-02	1.662
		323.87	*	-5.884E-01	9.029E-01	1.244E+00	2.113E-01	-0.473
	+	338.28		7.255E+00	2.218E+00	3.034E+00	3.377E-01	2.391
		445.03		1.110E+00	2.776E+00	4.706E+00	4.956E-01	0.236
AC-227		79.80		2.323E+00	2.267E+00	2.513E+00	5.372E-01	0.924
		236.00		4.780E-01	3.129E-01	4.724E-01	5.439E-02	1.012
		256.20	*	-9.491E-02	4.680E-01	7.410E-01	1.094E-01	-0.128
		286.10		3.035E-01	1.677E+00	2.852E+00	3.546E-01	0.106
	+	299.80		2.569E+00	2.336E+00	3.038E+00	5.126E-01	0.845
		304.40		3.335E-01	2.413E+00	3.568E+00	6.363E-01	0.093
		334.20		1.826E+00	3.107E+00	4.694E+00	8.781E-01	0.389
TH-227		79.80		2.323E+00	2.269E+00	2.513E+00	5.441E-01	0.924
	+	94.00		1.022E+01	3.394E+00	4.053E+00	8.812E-01	2.521
		236.00		4.780E-01	3.119E-01	4.724E-01	4.848E-02	1.012
		256.20	*	-9.491E-02	4.681E-01	7.410E-01	1.302E-01	-0.128
		286.10		3.035E-01	1.704E+00	2.852E+00	2.859E+00	0.106
	+	299.80		2.569E+00	2.336E+00	3.038E+00	5.126E-01	0.845
		304.40		3.335E-01	2.413E+00	3.568E+00	6.363E-01	0.093
		334.20		1.826E+00	3.107E+00	4.694E+00	8.781E-01	0.389
TH-229	+	85.43		3.056E-01	2.034E-01	3.289E-01	2.673E-02	0.929
	+	88.47		6.074E-01	1.313E-01	2.269E-01	1.835E-02	2.677
		100.00		1.861E-01	2.981E-01	3.294E-01	2.972E-02	0.565
		193.63	*	1.628E-01	5.913E-01	9.686E-01	7.209E-02	0.168
		210.97		2.086E+00	1.050E+00	1.630E+00	1.223E-01	1.280
PA-231		283.67	*	-2.285E+00	1.760E+00	2.718E+00	3.950E-01	-0.841

---- Not-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	301.29		1.027E+00	9.255E-01	1.199E+00	1.359E-01	0.857
TH-231		81.07		-7.312E-02	2.907E-01	3.026E-01	2.501E-02	-0.242
	+	83.78		2.041E-01	1.359E-01	1.943E-01	1.589E-02	1.051
		94.90		6.326E-01	2.627E-01	4.540E-01	3.904E-02	1.393
		122.32		6.011E-01	1.953E+00	3.248E+00	3.759E-01	0.185
		144.24		1.080E+00	8.308E-01	1.398E+00	1.434E-01	0.773
		154.21		1.088E-01	4.747E-01	7.815E-01	7.267E-02	0.139
	+	269.46		6.934E-01	3.724E-01	4.172E-01	3.206E-02	1.662
		323.87	*	-5.884E-01	9.029E-01	1.244E+00	2.113E-01	-0.473
	+	338.28		7.255E+00	2.218E+00	3.034E+00	3.377E-01	2.391
		445.03		1.110E+00	2.776E+00	4.706E+00	4.956E-01	0.236
U-231	+	84.21		7.382E+00	4.914E+00	7.019E+00	5.731E-01	1.052
	+	92.29		8.474E+00	2.248E+00	3.543E+00	2.972E-01	2.391
		95.87	*	-1.841E-01	1.038E+00	1.499E+00	1.301E-01	-0.123
		108.00		2.259E+00	2.078E+00	3.156E+00	3.070E-01	0.716
PA-233	+	75.28		2.192E+01	4.276E+00	6.140E+00	9.369E-01	3.570
	+	86.59		8.710E+00	2.905E+00	3.080E+00	8.211E-01	2.827
	+	300.12		7.161E-01	6.479E-01	8.452E-01	1.195E-01	0.847
		311.98	*	-2.747E-02	7.540E-02	1.242E-01	9.265E-03	-0.221
		340.50		3.661E+00	1.278E+00	1.692E+00	3.933E-01	2.163
		398.62		-3.947E-01	2.463E+00	4.046E+00	1.047E+00	-0.098
		415.76		3.033E-01	2.092E+00	3.498E+00	7.221E-01	0.087
PA-234	+	63.00		2.367E+00	1.201E+00	1.654E+00	2.594E-01	1.431
		94.67		6.386E-01	2.044E-01	3.398E-01	4.204E-02	1.880
		98.44		9.788E-02	1.355E-01	1.601E-01	8.936E-02	0.612
		99.86		4.780E-01	7.542E-01	8.341E-01	7.516E-02	0.573
		111.00		9.669E-02	2.161E-01	3.361E-01	4.407E-02	0.288
		131.20		1.388E-01	1.426E-01	2.140E-01	2.221E-02	0.649
		152.70		3.750E-01	3.849E-01	6.430E-01	1.094E-01	0.583
	+	186.00		5.575E+00	2.624E+00	2.858E+00	8.831E-01	1.951
		226.40		-3.722E-01	4.745E-01	7.306E-01	9.149E-02	-0.509
		227.20		-4.890E-01	5.071E-01	7.751E-01	5.842E-02	-0.631
		248.90		-3.449E-01	9.865E-01	1.489E+00	3.278E-01	-0.232
		293.70		6.527E+00	1.505E+00	1.988E+00	3.319E-01	3.283
		369.80		2.600E-01	1.071E+00	1.807E+00	3.787E-01	0.144
		568.70		-9.011E-02	1.346E+00	2.186E+00	1.556E-01	-0.041
		569.50		8.460E-02	3.618E-01	6.007E-01	4.279E-02	0.141
		574.00		1.191E+00	2.071E+00	3.513E+00	2.511E-01	0.339
		699.00		5.693E-01	1.003E+00	1.681E+00	3.133E-01	0.339
		706.10		-3.397E-01	1.464E+00	2.304E+00	1.023E+00	-0.147
		733.00		1.676E-01	6.060E-01	8.653E-01	1.889E-01	0.194
		742.81		7.716E-02	2.096E+00	3.380E+00	2.268E+00	0.023
		796.30		1.126E+00	1.258E+00	2.188E+00	5.851E-01	0.515
		805.60		4.131E-01	1.376E+00	2.351E+00	7.138E-01	0.176
		819.60		9.413E-01	1.475E+00	2.545E+00	9.620E-01	0.370
		826.30		-6.036E-01	1.060E+00	1.621E+00	7.222E-01	-0.372
		831.60		6.379E-01	8.635E-01	1.494E+00	4.412E-01	0.427
		876.40		-1.655E-01	1.087E+00	1.766E+00	1.814E+00	-0.094
		880.51		2.175E-01	3.817E-01	6.668E-01	4.909E-02	0.326

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		883.24		7.265E-02	3.948E-01	6.636E-01	4.450E-01	0.109
		899.00		-9.535E-01	1.286E+00	1.894E+00	8.235E-01	-0.503
		925.00		1.425E+00	1.716E+00	2.937E+00	2.113E-01	0.485
		926.50		1.805E-01	2.854E-01	4.357E-01	1.082E-01	0.414
		946.00	*	-2.203E-01	4.324E-01	6.829E-01	1.237E-01	-0.323
		949.00		3.242E-01	6.318E-01	1.094E+00	7.757E-02	0.296
		980.50		-3.159E-01	1.071E+00	1.728E+00	1.199E-01	-0.183
		1394.10		-8.264E-01	1.607E+00	2.253E+00	1.459E+00	-0.367
PA-234M		766.41		1.020E+01	2.567E+01	4.061E+01	3.110E+01	0.251
		1001.03	*	6.137E+00	9.173E+00	1.601E+01	1.579E+00	0.383
NP-236		94.67		4.874E-01	1.490E-01	2.579E-01	2.213E-02	1.889
		98.44		7.398E-02	9.395E-02	1.210E-01	1.076E-02	0.611
		111.00		7.314E-02	1.633E-01	2.542E-01	2.544E-02	0.288
		160.31	*	-7.036E-02	9.315E-02	1.469E-01	1.154E-02	-0.479
NP-239		99.55		1.928E-01	2.484E-01	2.779E-01	2.497E-02	0.694
		117.00	*	2.782E-01	2.179E-01	3.718E-01	3.934E-02	0.748
	+	209.75		2.180E+00	1.053E+00	1.634E+00	1.226E-01	1.334
		228.18		-1.624E-01	2.613E-01	4.070E-01	3.068E-02	-0.399
		277.60		1.204E-01	2.338E-01	3.698E-01	2.751E-02	0.326
		334.30		1.043E+00	1.752E+00	2.662E+00	1.833E-01	0.392
AM-241		59.54	*	1.066E-01	8.653E-02	1.326E-01	1.287E-02	0.804
CM-243		99.55		1.984E-01	2.556E-01	2.859E-01	2.569E-02	0.694
		103.76	*	-2.837E-02	1.054E-01	1.726E-01	1.614E-02	-0.164
		117.00		2.862E-01	2.242E-01	3.825E-01	4.047E-02	0.748
	+	209.75		2.149E+00	1.038E+00	1.611E+00	1.208E-01	1.334
		228.18		-1.641E-01	2.640E-01	4.112E-01	3.100E-02	-0.399
		277.60		1.214E-01	2.357E-01	3.728E-01	2.774E-02	0.326
CM-247		278.00		4.999E-01	9.709E-01	1.536E+00	1.142E-01	0.326
		287.40		5.727E-01	1.352E+00	2.325E+00	1.716E-01	0.246
		402.60	*	-1.233E-02	4.228E-02	6.887E-02	4.048E-03	-0.179
CF-249		252.85		-8.849E-02	1.045E+00	1.666E+00	1.255E-01	-0.053
		333.44		-4.921E-03	2.636E-01	3.357E-01	2.317E-02	-0.015
		387.95	*	-2.211E-03	4.914E-02	8.151E-02	4.782E-03	-0.027
CF-251		176.60	*	-7.403E-03	1.488E-01	2.412E-01	1.776E-02	-0.031
		227.00		-3.635E-01	4.492E-01	6.928E-01	5.222E-02	-0.525
		285.00		-2.336E+00	1.962E+00	3.093E+00	2.288E-01	-0.755

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358011      *
* Acquisition date :  6-JUL-2009 13:25:09 Detector SN#     :               *
* Detector ID        : GAM17               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:08.82      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232358011           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.4017E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.313E+01	2.974E+00	6.450E-01	0.000E+00
TI-44	4.533E-01	5.283E-02	4.994E-02	0.000E+00
CD-109	4.519E+00	9.576E-01	1.270E+00	0.000E+00
SN-126	4.449E-01	9.427E-02	1.249E-01	0.000E+00
EU-155	2.023E-01	1.920E-01	2.087E-01	0.000E+00
TL-208	6.846E-01	1.122E-01	7.306E-02	0.000E+00
BI-210	1.039E+00	9.256E-01	1.029E+00	0.000E+00
PB-210	1.039E+00	9.256E-01	1.029E+00	0.000E+00
PO-210	1.039E+00	9.247E-01	1.029E+00	0.000E+00
BI-211	4.395E+00	6.361E-01	4.175E-01	0.000E+00
PB-212	1.921E+00	2.043E-01	1.035E-01	0.000E+00
PO-212	1.921E+00	2.043E-01	1.035E-01	0.000E+00
BI-214	1.432E+00	2.173E-01	1.507E-01	0.000E+00
PB-214	1.529E+00	2.347E-01	1.374E-01	0.000E+00
PO-214	1.529E+00	2.347E-01	1.374E-01	0.000E+00
PO-216	1.921E+00	2.043E-01	1.035E-01	0.000E+00
PO-218	1.529E+00	2.347E-01	1.374E-01	0.000E+00
RA-224	5.993E+00	1.542E+00	1.178E+00	0.000E+00
RA-226	1.432E+00	2.173E-01	1.507E-01	0.000E+00
AC-228	1.881E+00	4.495E-01	3.157E-01	0.000E+00
RA-228	1.881E+00	4.495E-01	3.157E-01	0.000E+00
TH-228	1.921E+00	2.043E-01	1.035E-01	0.000E+00
TH-230	1.432E+00	2.173E-01	1.507E-01	0.000E+00
TH-232	1.881E+00	4.495E-01	3.157E-01	0.000E+00
TH-234	2.030E+00	1.026E+00	1.339E+00	0.000E+00
U-234	1.432E+00	2.173E-01	1.507E-01	0.000E+00
U-235	3.154E-01	2.522E-01	4.478E-01	0.000E+00
NP-237	1.306E+00	3.827E-01	3.661E-01	0.000E+00
U-238	2.030E+00	1.026E+00	1.339E+00	0.000E+00
AM-243	4.184E-01	6.074E-02	7.569E-02	0.000E+00
ANH-511	1.534E-01	6.707E-02	6.489E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM	)	
BE-7	5.095E-02	3.785E-01	6.599E-01	0.000E+00	NOT IDENT.
NA-22	-1.757E-02	5.898E-02	9.570E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	3.103E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.673E-03	3.625E-02	6.057E-02	0.000E+00	NOT IDENT.
SC-46	-1.086E-02	5.470E-02	9.281E-02	0.000E+00	FAIL ABUN
V-48	3.013E-02	9.416E-02	1.655E-01	0.000E+00	NOT IDENT.
CR-51	1.378E-02	4.204E-01	7.466E-01	0.000E+00	NOT IDENT.
MN-52	1.068E-01	2.846E-01	4.951E-01	0.000E+00	FAIL ABUN
MN-54	-5.996E-02	5.266E-02	8.310E-02	0.000E+00	NOT IDENT.
CO-56	-2.475E-02	5.254E-02	8.739E-02	0.000E+00	FAIL ABUN
CO-57	5.307E-03	2.762E-02	4.928E-02	0.000E+00	NOT IDENT.
CO-58	2.003E-02	5.204E-02	9.309E-02	0.000E+00	NOT IDENT.
FE-59	6.317E-02	1.160E-01	2.065E-01	0.000E+00	NOT IDENT.
CO-60	6.103E-02	5.311E-02	9.970E-02	0.000E+00	NOT IDENT.
ZN-65	-1.300E-01	1.444E-01	1.887E-01	0.000E+00	NOT IDENT.
GE-68	5.250E-01	1.820E+00	3.165E+00	0.000E+00	NOT IDENT.
AS-73	5.438E-02	2.655E-01	4.913E-01	0.000E+00	NOT IDENT.
AS-74	-9.058E-02	1.170E-01	1.867E-01	0.000E+00	NOT IDENT.
SE-75	-5.451E-02	6.216E-02	8.583E-02	0.000E+00	FAIL ABUN
BR-77	-3.308E+00	9.106E+00	1.519E+01	0.000E+00	FAIL ABUN
SR-82	-2.744E-01	4.828E-01	8.031E-01	0.000E+00	NOT IDENT.
RB-83	-6.215E-02	8.327E-02	1.346E-01	0.000E+00	NOT IDENT.
RB-84	2.079E-02	9.172E-02	1.613E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.009E+01	1.769E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.115E-02	8.971E-02	0.000E+00	NOT IDENT.
RB-86	1.240E-01	1.078E+00	1.849E+00	0.000E+00	NOT IDENT.
Y-88	-3.360E-02	4.313E-02	6.038E-02	0.000E+00	NOT IDENT.
ZR-88	-1.195E-03	3.681E-02	6.339E-02	0.000E+00	NOT IDENT.
Y-91	4.095E+00	2.575E+01	4.391E+01	0.000E+00	NOT IDENT.
NB-94	7.468E-03	4.591E-02	7.803E-02	0.000E+00	NOT IDENT.
NB-95	3.341E-02	5.749E-02	1.003E-01	0.000E+00	NOT IDENT.
NB-95M	2.507E-02	1.574E-01	2.371E-01	0.000E+00	NOT IDENT.
ZR-95	7.050E-02	9.165E-02	1.630E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.450E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.771E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-7.157E+00	1.303E+01	2.072E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.757E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.333E-02	3.825E-02	6.696E-02	0.000E+00	NOT IDENT.
RH-102	-4.327E-02	3.638E-02	5.743E-02	0.000E+00	NOT IDENT.
RU-103	3.052E-03	4.818E-02	8.335E-02	0.000E+00	FAIL ABUN
RH-106	-1.346E-01	4.022E-01	6.619E-01	0.000E+00	FAIL ABUN
RU-106	-1.346E-01	4.020E-01	6.619E-01	0.000E+00	FAIL ABUN
AG-108M	-1.555E-02	4.085E-02	6.930E-02	0.000E+00	NOT IDENT.
AG-110M	-1.102E-02	4.530E-02	7.488E-02	0.000E+00	NOT IDENT.
IN-111	1.661E-01	1.009E+00	1.517E+00	0.000E+00	NOT IDENT.
IN-113M	-3.325E-03	5.286E-02	9.219E-02	0.000E+00	NOT IDENT.
SN-113	-3.325E-03	5.286E-02	9.219E-02	0.000E+00	NOT IDENT.
IN-114M	3.920E-02	2.297E-01	3.509E-01	0.000E+00	NOT IDENT.
CD-115	1.851E+00	9.872E+00	1.716E+01	0.000E+00	NOT IDENT.
SN-117M	2.209E-02	6.059E-02	1.073E-01	0.000E+00	NOT IDENT.
SB-122	1.302E+00	2.000E+00	3.570E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.726E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.062E-02	3.237E-02	5.790E-02	0.000E+00	NOT IDENT.
I-124	-2.000E-01	8.334E-01	1.253E+00	0.000E+00	NOT IDENT.
SB-124	-2.789E-03	9.767E-02	1.650E-01	0.000E+00	FAIL ABUN
SB-125	1.959E-01	1.132E-01	2.159E-01	0.000E+00	NOT IDENT.
TE-125M	3.895E+00	1.100E+01	1.750E+01	0.000E+00	NOT IDENT.
I-126	2.228E-01	2.525E-01	4.507E-01	0.000E+00	NOT IDENT.
SB-126	1.185E-01	2.176E-01	3.332E-01	0.000E+00	FAIL ABUN
SB-127	3.152E-01	1.568E+00	2.679E+00	0.000E+00	NOT IDENT.
XE-127	-2.974E-02	5.291E-02	8.891E-02	0.000E+00	NOT IDENT.
I-131	-1.196E-01	1.262E-01	2.094E-01	0.000E+00	NOT IDENT.
TE-132	-3.918E-01	6.274E-01	1.037E+00	0.000E+00	NOT IDENT.
BA-133	-3.690E-03	5.681E-02	8.653E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.377E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.665E-02	6.122E-02	1.167E-01	0.000E+00	NOT IDENT.
CS-135	2.720E-01	2.185E-01	3.480E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	5.822E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.729E-02	1.380E-01	2.376E-01	0.000E+00	FAIL ABUN
BA-137M	-2.895E-02	5.097E-02	8.220E-02	0.000E+00	NOT IDENT.
CS-137	-3.060E-02	5.388E-02	8.689E-02	0.000E+00	NOT IDENT.
CE-139	2.180E-02	3.340E-02	5.970E-02	0.000E+00	NOT IDENT.
BA-140	-2.072E-01	3.212E-01	5.118E-01	0.000E+00	NOT IDENT.
LA-140	-2.467E-02	1.076E-01	1.700E-01	0.000E+00	FAIL ABUN

CE-141	7.870E-02	7.262E-02	1.306E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.614E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-8.790E-02	2.698E-01	4.097E-01	0.000E+00	NOT IDENT.
PM-144	1.102E-02	4.631E-02	7.924E-02	0.000E+00	NOT IDENT.
PR-144	7.462E-01	3.137E+00	5.367E+00	0.000E+00	NOT IDENT.
PM-146	1.024E-02	5.512E-02	9.664E-02	0.000E+00	NOT IDENT.
ND-147	-9.231E-02	6.781E-01	1.151E+00	0.000E+00	FAIL ABUN
PM-149	-1.273E+01	7.146E+01	1.264E+02	0.000E+00	NOT IDENT.
EU-152	2.076E-02	1.335E-01	2.073E-01	0.000E+00	FAIL ABUN
GD-153	-2.274E-02	8.842E-02	1.375E-01	0.000E+00	FAIL ABUN
EU-154	-3.846E-02	1.659E-01	2.711E-01	0.000E+00	NOT IDENT.
TB-160	4.101E-02	1.789E-01	3.151E-01	0.000E+00	FAIL ABUN
HO-166M	-3.551E-02	8.732E-02	1.416E-01	0.000E+00	NOT IDENT.
TM-171	2.976E+01	2.021E+01	3.323E+01	0.000E+00	FAIL ABUN
LU-176	-1.063E-03	3.001E-02	5.031E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.304E+00	2.147E+00	0.000E+00	FAIL ABUN
LU-177M	-2.140E-01	2.222E-01	3.650E-01	0.000E+00	NOT IDENT.
HF-181	-1.096E-02	5.232E-02	8.900E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	3.326E-01	4.426E-01	0.000E+00	NOT IDENT.
TA-182	1.874E-01	2.969E-01	5.223E-01	0.000E+00	FAIL ABUN
RE-183	-3.268E-02	1.209E-01	2.087E-01	0.000E+00	FAIL ABUN
RE-184	-2.348E-02	2.718E-01	4.602E-01	0.000E+00	FAIL ABUN
OS-185	-2.118E-02	5.672E-02	9.287E-02	0.000E+00	NOT IDENT.
RE-188	1.313E-01	2.004E-01	3.586E-01	0.000E+00	NOT IDENT.
W-188	-3.075E+00	9.062E+00	1.374E+01	0.000E+00	FAIL ABUN
IR-192	2.787E-03	4.027E-02	7.170E-02	0.000E+00	FAIL ABUN
AU-195	2.142E-01	3.508E-01	4.187E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.793E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.505E+00	6.246E+00	1.112E+01	0.000E+00	NOT IDENT.
TL-202	2.739E-02	7.909E-02	1.404E-01	0.000E+00	NOT IDENT.
HG-203	6.052E-02	4.624E-02	8.691E-02	0.000E+00	NOT IDENT.
BI-207	8.394E-02	7.487E-02	1.388E-01	0.000E+00	FAIL ABUN
TL-207	-5.884E-01	8.848E-01	1.288E+00	0.000E+00	FAIL ABUN
PO-209	-2.404E+00	1.079E+01	1.826E+01	0.000E+00	NOT IDENT.
PB-211	-8.901E-02	1.064E+00	1.846E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.675E-01	9.255E-01	0.000E+00	FAIL ABUN
PO-215	-5.884E-01	8.848E-01	1.288E+00	0.000E+00	FAIL ABUN
RN-219	-1.776E-01	4.558E-01	7.753E-01	0.000E+00	FAIL ABUN
RN-220	-2.244E+01	3.472E+01	5.650E+01	0.000E+00	NOT IDENT.
RA-223	-5.884E-01	8.848E-01	1.288E+00	0.000E+00	FAIL ABUN
AC-227	-9.491E-02	4.586E-01	7.710E-01	0.000E+00	FAIL ABUN
TH-227	-9.491E-02	4.587E-01	7.710E-01	0.000E+00	FAIL ABUN
TH-229	1.628E-01	5.795E-01	1.013E+00	0.000E+00	FAIL ABUN
PA-231	-2.285E+00	1.724E+00	2.823E+00	0.000E+00	FAIL ABUN
TH-231	-5.884E-01	8.848E-01	1.288E+00	0.000E+00	FAIL ABUN
U-231	-1.841E-01	1.018E+00	1.590E+00	0.000E+00	FAIL ABUN
PA-233	-2.747E-02	7.390E-02	1.287E-01	0.000E+00	FAIL ABUN
PA-234	-2.203E-01	4.237E-01	6.918E-01	0.000E+00	FAIL ABUN
PA-234M	6.137E+00	8.989E+00	1.620E+01	0.000E+00	NOT IDENT.
NP-236	-7.036E-02	9.129E-02	1.543E-01	0.000E+00	NOT IDENT.
NP-239	2.782E-01	2.136E-01	3.928E-01	0.000E+00	FAIL ABUN
AM-241	1.066E-01	8.480E-02	1.419E-01	0.000E+00	NOT IDENT.
CM-243	-2.837E-02	1.033E-01	1.828E-01	0.000E+00	FAIL ABUN
CM-247	-1.233E-02	4.144E-02	7.102E-02	0.000E+00	NOT IDENT.
CF-249	-2.211E-03	4.815E-02	8.411E-02	0.000E+00	NOT IDENT.
CF-251	-7.403E-03	1.458E-01	2.528E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:25:51.03

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*****************************************************************************
*                          CEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358011.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:25:09.
Sample ID         : G232358011           Sample quantity  : 1.40170E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.82  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1054	10.67*	7.984E-01	3.313E+01	3.313E+01	9.16
TI-44	67.85	115	91.92	6.658E+00	5.045E-02	5.048E-02	69.31
	78.38	1096	97.60*	6.641E+00	4.530E-01	4.533E-01	11.89
CD-109	88.03	404	3.72*	6.573E+00	4.425E+00	4.519E+00	21.62
SN-126	64.28	192	9.60	6.651E+00	8.037E-01	8.037E-01	50.65
	86.94	404	8.90	6.573E+00	1.850E+00	1.850E+00	45.87
	87.57	404	37.00*	6.573E+00	4.449E-01	4.449E-01	21.62
EU-155	48.70	------	4.60	6.570E+00	------ Line Not Found		------
	60.01	------	1.11	6.637E+00	------ Line Not Found		------
	86.54	404	30.90	6.573E+00	5.327E-01	5.356E-01	21.66
	105.31	99	20.70*	6.354E+00	2.012E-01	2.023E-01	96.85
TL-208	277.35	------	6.80	3.655E+00	------ Line Not Found		------
	510.84	119	21.60	2.073E+00	7.103E-01	7.103E-01	45.38
	583.14	393	84.20*	1.824E+00	6.846E-01	6.846E-01	16.72
	860.37	86	12.46	1.268E+00	1.450E+00	1.450E+00	41.62
BI-210	46.50	103	4.05*	6.561E+00	1.038E+00	1.039E+00	90.90
PB-210	46.50	103	4.05*	6.561E+00	1.038E+00	1.039E+00	90.90
PO-210	46.50	103	4.05*	6.561E+00	1.038E+00	1.039E+00	90.81
BI-211	72.87	------	1.27	6.655E+00	------ Line Not Found		------
	351.07	627	12.94*	2.955E+00	4.395E+00	4.395E+00	14.77
PB-212	74.81	686	10.70	6.649E+00	2.581E+00	2.581E+00	17.52
	77.11	1096	18.00	6.641E+00	2.456E+00	2.456E+00	11.89
	87.30	404	8.00	6.573E+00	2.058E+00	2.058E+00	23.82
	238.63	1321	44.60*	4.131E+00	1.921E+00	1.921E+00	10.85
	300.09	60	3.41	3.412E+00	1.386E+00	1.386E+00	89.85
PO-212	74.81	686	10.70	6.649E+00	2.581E+00	2.581E+00	17.52
	77.11	1096	18.00	6.641E+00	2.456E+00	2.456E+00	11.89
	87.30	404	8.00	6.573E+00	2.058E+00	2.058E+00	23.82
	115.19	------	0.60	6.204E+00	------ Line Not Found		------
	238.63	1321	44.60*	4.131E+00	1.921E+00	1.921E+00	10.85
	300.09	60	3.41	3.412E+00	1.386E+00	1.386E+00	89.85
BI-214	609.31	433	46.30*	1.749E+00	1.432E+00	1.432E+00	15.48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.05	35	3.21	1.176E+00	2.503E+00	2.503E+00	98.60
	1120.29	138	15.10	1.003E+00	2.433E+00	2.433E+00	27.28
	1238.11	23	5.94	9.197E-01	1.114E+00	1.114E+00	139.25
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	63	15.80	6.763E-01	1.579E+00	1.579E+00	25.85
PB-214	[illegible].81	686	6.21	6.649E+00	4.447E+00	4.447E+00	16.56
	77.11	1096	10.50	6.641E+00	4.211E+00	4.211E+00	14.12
	87.30	404	4.67	6.573E+00	3.525E+00	3.525E+00	22.95
	241.98	362	7.49	4.092E+00	3.160E+00	3.160E+00	26.86
	295.21	357	19.20	3.463E+00	1.440E+00	1.440E+00	20.10
	351.92	627	37.20*	2.955E+00	1.529E+00	1.529E+00	15.67
PO-214	74.81	686	6.21	6.649E+00	4.447E+00	4.447E+00	16.56
	77.11	1096	10.50	6.641E+00	4.211E+00	4.211E+00	14.12
	87.30	404	4.67	6.573E+00	3.525E+00	3.525E+00	22.95
	241.98	362	7.49	4.092E+00	3.160E+00	3.160E+00	26.86
	295.21	357	19.20	3.463E+00	1.440E+00	1.440E+00	20.10
	351.92	627	37.20*	2.955E+00	1.529E+00	1.529E+00	15.67
PO-216	74.81	686	10.70	6.649E+00	2.581E+00	2.581E+00	17.52
	77.11	1096	18.00	6.641E+00	2.456E+00	2.456E+00	11.89
	87.30	404	8.00	6.573E+00	2.058E+00	2.058E+00	23.82
	238.63	1321	44.60*	4.131E+00	1.921E+00	1.921E+00	10.85
	300.09	60	3.41	3.412E+00	1.386E+00	1.386E+00	89.85
PO-218	74.81	686	6.21	6.649E+00	4.447E+00	4.447E+00	16.56
	77.11	1096	10.50	6.641E+00	4.211E+00	4.211E+00	14.12
	87.30	404	4.67	6.573E+00	3.525E+00	3.525E+00	22.95
	241.98	362	7.49	4.092E+00	3.160E+00	3.160E+00	26.86
	295.21	357	19.20	3.463E+00	1.440E+00	1.440E+00	20.10
	351.92	627	37.20*	2.955E+00	1.529E+00	1.529E+00	15.67
RA-224	240.98	362	3.95*	4.092E+00	5.993E+00	5.993E+00	26.26
RA-226	609.31	433	46.30*	1.749E+00	1.432E+00	1.432E+00	15.48
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	35	3.21	1.176E+00	2.503E+00	2.503E+00	98.60
	1120.29	138	15.10	1.003E+00	2.433E+00	2.433E+00	27.28
	1238.11	23	5.94	9.197E-01	1.114E+00	1.114E+00	139.25
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	63	15.80	6.763E-01	1.579E+00	1.579E+00	25.85
AC-228	338.32	227	11.40	3.065E+00	1.737E+00	1.737E+00	49.86
	911.07	234	27.70*	1.203E+00	1.881E+00	1.881E+00	24.38
	969.11	150	16.60	1.140E+00	2.125E+00	2.125E+00	32.15
RA-228	338.32	227	11.40	3.065E+00	1.737E+00	1.737E+00	49.86
	911.07	234	27.70*	1.203E+00	1.881E+00	1.881E+00	24.38
	969.11	150	16.60	1.140E+00	2.125E+00	2.125E+00	32.15
TH-228	84.40	124	1.21	6.597E+00	4.167E+00	4.167E+00	67.30
	238.60	1321	44.60*	4.131E+00	1.921E+00	1.921E+00	10.85
	300.10	60	3.41	3.412E+00	1.386E+00	1.386E+00	107.14
TH-230	609.31	433	46.30*	1.749E+00	1.432E+00	1.432E+00	15.48
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	35	3.21	1.176E+00	2.503E+00	2.503E+00	98.60

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1120.29	138	15.10	1.003E+00	2.433E+00	2.433E+00	27.28
	1238.11	23	5.94	9.197E-01	1.114E+00	1.114E+00	139.25
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	63	15.80	6.763E-01	1.579E+00	1.579E+00	25.85
TH-232	338.32	227	11.40	3.065E+00	1.737E+00	1.737E+00	29.28
	911.07	234	27.70*	1.203E+00	1.881E+00	1.881E+00	24.38
	969.11	150	16.60	1.140E+00	2.125E+00	2.125E+00	32.15
TH-234	63.29	192	3.80*	6.651E+00	2.030E+00	2.030E+00	51.56
	92.38	348	5.41	6.516E+00	2.644E+00	2.644E+00	30.92
U-234	609.31	433	46.30*	1.749E+00	1.432E+00	1.432E+00	15.48
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	35	3.21	1.176E+00	2.503E+00	2.503E+00	98.60
	1120.29	138	15.10	1.003E+00	2.433E+00	2.433E+00	27.28
	1238.11	23	5.94	9.197E-01	1.114E+00	1.114E+00	139.25
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	63	15.80	6.763E-01	1.579E+00	1.579E+00	25.85
U-235	89.95	281	2.70	6.546E+00	4.255E+00	4.255E+00	37.99
	93.35	348	4.50	6.516E+00	3.179E+00	3.179E+00	37.61
	105.00	99	2.10	6.354E+00	1.983E+00	1.983E+00	100.97
	143.76	------	10.50*	5.697E+00	------ Line Not Found		------
	163.35	------	4.70	5.337E+00	------ Line Not Found		------
	185.71	206	54.00	4.936E+00	2.065E-01	2.065E-01	36.27
	205.31	------	4.70	4.621E+00	------ Line Not Found		------
NP-237	86.50	404	12.60*	6.573E+00	1.306E+00	1.306E+00	29.89
	95.87	------	2.60	6.484E+00	------ Line Not Found		------
U-238	63.29	192	3.80*	6.651E+00	2.030E+00	2.030E+00	51.56
	92.38	348	5.41	6.516E+00	2.644E+00	2.644E+00	26.52
AM-243	74.67	686	66.00*	6.649E+00	4.184E-01	4.184E-01	14.81
	86.72	404	0.34	6.573E+00	4.899E+01	4.899E+01	21.62
	117.66	------	0.55	6.163E+00	------ Line Not Found		------
	142.18	------	0.13	5.726E+00	------ Line Not Found		------
ANH-511	511.00	119	100.00*	2.073E+00	1.534E-01	1.534E-01	44.61

Flag: "*" = Keyline

Sample ID : G232358011 Acquisition date : 6-JUL-2009 13:25:09

Total number of lines in spectrum 35
Number of unidentified lines 1
Number of lines tentatively identified by NID 34 97.14%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.313E+01	3.313E+01	0.303E+01	9.16	
TI-44	47.30Y	1.00	4.530E-01	4.533E-01	0.539E-01	11.89	
CD-109	464.00D	1.02	4.425E+00	4.519E+00	0.977E+00	21.62	
SN-126	1.00E+05Y	1.00	4.449E-01	4.449E-01	0.962E-01	21.62	
EU-155	4.96Y	1.01	2.012E-01	2.023E-01	1.959E-01	96.85	
TL-208	1.41E+10Y	1.00	6.846E-01	6.846E-01	1.145E-01	16.72	
BI-210	22.26Y	1.00	1.038E+00	1.039E+00	0.944E+00	90.90	
PB-210	22.26Y	1.00	1.038E+00	1.039E+00	0.944E+00	90.90	
PO-210	22.26Y	1.00	1.038E+00	1.039E+00	0.944E+00	90.81	
BI-211	7.04E+08Y	1.00	4.395E+00	4.395E+00	0.649E+00	14.77	
PB-212	1.41E+10Y	1.00	1.921E+00	1.921E+00	0.208E+00	10.85	
PO-212	1.41E+10Y	1.00	1.921E+00	1.921E+00	0.208E+00	10.85	
BI-214	1600.00Y	1.00	1.432E+00	1.432E+00	0.222E+00	15.48	
PB-214	1600.00Y	1.00	1.529E+00	1.529E+00	0.239E+00	15.67	
PO-214	1600.00Y	1.00	1.529E+00	1.529E+00	0.239E+00	15.67	
PO-216	1.41E+10Y	1.00	1.921E+00	1.921E+00	0.208E+00	10.85	
PO-218	1600.00Y	1.00	1.529E+00	1.529E+00	0.239E+00	15.67	
RA-224	1.41E+10Y	1.00	5.993E+00	5.993E+00	1.574E+00	26.26	
RA-226	1600.00Y	1.00	1.432E+00	1.432E+00	0.222E+00	15.48	
AC-228	1.41E+10Y	1.00	1.881E+00	1.881E+00	0.459E+00	24.38	
RA-228	1.41E+10Y	1.00	1.881E+00	1.881E+00	0.459E+00	24.38	
TH-228	1.41E+10Y	1.00	1.921E+00	1.921E+00	0.208E+00	10.85	
TH-230	4.47E+09Y	1.00	1.432E+00	1.432E+00	0.222E+00	15.48	
TH-232	1.41E+10Y	1.00	1.881E+00	1.881E+00	0.459E+00	24.38	
TH-234	4.47E+09Y	1.00	2.030E+00	2.030E+00	1.047E+00	51.56	
U-234	4.47E+09Y	1.00	1.432E+00	1.432E+00	0.222E+00	15.48	
U-235	7.04E+08Y	1.00	2.065E-01	2.065E-01	0.749E-01	36.27	K
NP-237	2.14E+06Y	1.00	1.306E+00	1.306E+00	0.390E+00	29.89	
U-238	4.47E+09Y	1.00	2.030E+00	2.030E+00	1.047E+00	51.56	
AM-243	7380.00Y	1.00	4.184E-01	4.184E-01	0.620E-01	14.81	
ANH-511	1.00E+09Y	1.00	1.534E-01	1.534E-01	0.684E-01	44.61	
	Total Activity :		8.263E+01	8.273E+01			

Grand Total Activity : 8.263E+01 8.273E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232358011 Acquisition date : 6-JUL-2009 13:25:09

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	129.31	118	345	1.16	259.71	256	8	1.64E-02	57.2	5.96E+00	T
0	209.40	120	234	0.97	419.77	416	8	1.67E-02	47.7	4.56E+00	T
0	270.76	131	253	1.45	542.40	536	13	1.82E-02	53.2	3.73E+00	T
0	328.10	62	107	0.91	657.01	653	7	8.59E-03	61.3	3.15E+00	T
0	726.99	107	53	1.33	1454.34	1449	12	1.49E-02	34.1	1.48E+00	T
2	964.53	64	47	2.13	1929.23	1923	19	8.83E-03	53.2	1.14E+00	T
0	1587.71	25	9	1.57	3175.30	3169	12	3.45E-03	62.8	7.42E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:25:56.53

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*****************************************************************************
*                          CEI Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232358011.CNF;1 *
* Acquisition date  : 6-JUL-2009 13:25:09.  Detector SN#     :             *
* Detector ID       : GAMI7                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:08.82          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID         *
* Sample ID         : G232358011            Analyst initials: MXR1          *
* Batch Number      : 880723                Sample Quantity : 1.40170E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14.8MS Isotope       :             *
* MSD ID           :                      MSD Isotope      :             *
* LCS ID           : 1032-A               LCS Isotope      :             *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.313E+01	3.035E+00	6.425E-01	3.950E-02	51.569
TI-44	4.533E-01	5.391E-02	4.690E-02	3.918E-03	9.664
CD-109	4.519E+00	9.771E-01	1.195E+00	9.627E-02	3.781
SN-126	4.449E-01	9.619E-02	1.176E-01	9.481E-03	3.784
EU-155	2.023E-01	1.959E-01	1.971E-01	1.889E-02	1.026
TL-208	6.846E-01	1.145E-01	7.139E-02	5.660E-03	9.590
BI-210	1.039E+00	9.445E-01	9.565E-01	7.655E-02	1.086
PB-210	1.039E+00	9.445E-01	9.565E-01	7.655E-02	1.086
PO-210	1.039E+00	9.436E-01	9.565E-01	6.657E-02	1.086
BI-211	4.395E+00	6.491E-01	4.038E-01	2.901E-02	10.883
PB-212	1.921E+00	2.085E-01	9.930E-02	8.714E-03	19.344
PO-212	1.921E+00	2.085E-01	9.930E-02	8.714E-03	19.344
BI-214	1.432E+00	2.217E-01	1.474E-01	1.322E-02	9.718
PB-214	1.529E+00	2.395E-01	1.329E-01	1.179E-02	11.502
PO-214	1.529E+00	2.395E-01	1.329E-01	1.179E-02	11.502
PO-216	1.921E+00	2.085E-01	9.930E-02	8.714E-03	19.344
PO-218	1.529E+00	2.395E-01	1.329E-01	1.179E-02	11.502
RA-224	5.993E+00	1.574E+00	1.131E+00	8.529E-02	5.300

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	1.432E+00	2.217E-01	1.474E-01	1.322E-02	9.718
AC-228	1.881E+00	4.587E-01	3.114E-01	3.186E-02	6.041
RA-228	1.881E+00	4.587E-01	3.114E-01	3.186E-02	6.041
TH-228	1.921E-00	2.085E-01	9.929E-02	8.714E-03	19.346
TH-230	1.432E+00	2.217E-01	1.474E-01	1.322E-02	9.718
TH-232	1.881E+00	4.587E-01	3.114E-01	3.186E-02	6.041
TH-234	2.030E+00	1.047E+00	1.253E+00	2.273E-01	1.621
U-234	1.432E+00	2.217E-01	1.474E-01	1.322E-02	9.718
U-235	2.065E-01	7.490E-02	4.255E-01	7.606E-02	0.485
NP-237	1.306E+00	3.905E-01	3.445E-01	7.636E-02	3.792
U-238	2.030E+00	1.047E+00	1.253E+00	2.273E-01	1.621
AM-243	4.184E-01	6.198E-02	7.102E-02	6.025E-03	5.892
ANH-511	1.534E-01	6.844E-02	6.324E-02	4.274E-03	2.426

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	5.095E-02		3.863E-01	6.422E-01	4.735E-02	0.079
NA-22	-1.757E-02		6.018E-02	9.506E-02	5.387E-03	-0.185
NA-24	-1.273E-01		1.583E-01	Half-Life too short		
AL-26	-1.673E-03		3.699E-02	6.061E-02	3.466E-03	-0.028
SC-46	-1.086E-02		5.582E-02	9.149E-02	6.706E-03	-0.119
V-48	3.013E-02		9.609E-02	1.635E-01	1.132E-02	0.184
CR-51	1.378E-02		4.290E-01	7.207E-01	5.497E-02	0.019
MN-52	1.068E-01		2.904E-01	4.930E-01	2.849E-02	0.217
MN-54	-5.996E-02		5.374E-02	8.181E-02	6.137E-03	-0.733
CO-56	-2.475E-02		5.361E-02	8.606E-02	6.430E-03	-0.288
CO-57	5.307E-03		2.818E-02	4.667E-02	5.178E-03	0.114
CO-58	2.003E-02		5.311E-02	9.159E-02	6.941E-03	0.219
FE-59	6.317E-02		1.184E-01	2.045E-01	1.453E-02	0.309
CO-60	6.103E-02		5.419E-02	9.913E-02	5.661E-03	0.616
ZN-65	-1.300E-01		1.474E-01	1.869E-01	1.129E-02	-0.695
GE-68	5.250E-01		1.857E+00	3.133E+00	1.982E-01	0.168
AS-73	5.438E-02		2.709E-01	4.580E-01	3.716E-02	0.119
AS-74	-9.058E-02		1.193E-01	1.826E-01	1.326E-02	-0.496
SE-75	-5.451E-02		6.343E-02	8.254E-02	6.227E-03	-0.660
BR-77	-3.308E+00		9.292E+00	1.480E+01	1.010E+00	-0.223
SR-82	-2.744E-01		4.926E-01	7.895E-01	6.001E-02	-0.348
RB-83	-6.215E-02		8.497E-02	1.312E-01	8.950E-03	-0.474
RB-84	2.079E-02		9.360E-02	1.590E-01	1.170E-02	0.131
KR-85	2.160E+01		1.029E+01	1.724E+01	1.169E+00	1.253
SR-85	1.095E-01		5.219E-02	8.744E-02	5.928E-03	1.253
RB-86	1.240E-01		1.100E+00	1.830E+00	1.159E-01	0.068
Y-88	-3.360E-02		4.401E-02	6.044E-02	3.451E-03	-0.556
ZR-88	-1.195E-03		3.756E-02	6.144E-02	3.556E-03	-0.019
Y-91	4.095E+00		2.628E+01	4.356E+01	2.425E+00	0.094
NB-94	7.468E-03		4.685E-02	7.655E-02	5.816E-03	0.098

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	3.341E-02		5.867E-02	9.856E-02	7.501E-03	0.339
NB-95M	2.507E-02		1.607E-01	2.275E-01	2.034E-02	0.110
ZR-95	7.050E-02		9.352E-02	1.601E-01	1.376E-02	0.440
NB-97	-9.854E-03		2.270E-02	Half-Life too short		
ZR-97	1.512E+00		4.475E-01	Half-Life too short		
MO-99	-7.157E+00		1.329E+01	2.035E+01	2.979E+00	-0.352
TC-99M	-4.981E+09		1.406E+09	Half-Life too short		
RH-101	1.333E-02		3.903E-02	6.403E-02	4.777E-03	0.208
RH-102	-4.327E-02		3.712E-02	5.588E-02	3.629E-03	-0.774
RU-103	3.052E-03		4.916E-02	8.118E-02	1.060E-02	0.038
RH-106	-1.346E-01		4.104E-01	6.476E-01	8.156E-02	-0.208
RU-106	-1.346E-01		4.102E-01	6.476E-01	4.780E-02	-0.208
AG-108M	-1.555E-02		4.168E-02	6.731E-02	4.461E-03	-0.231
AG-110M	-1.102E-02		4.623E-02	7.335E-02	5.729E-03	-0.150
IN-111	1.661E-01		1.029E+00	1.457E+00	1.099E-01	0.114
IN-113M	-3.325E-03		5.394E-02	8.935E-02	5.510E-03	-0.037
SN-113	-3.325E-03		5.394E-02	8.935E-02	5.510E-03	-0.037
IN-114M	3.920E-02		2.344E-01	3.353E-01	2.491E-02	0.117
CD-115	1.851E+00		1.007E+01	1.673E+01	1.150E+00	0.111
SN-117M	2.209E-02		6.182E-02	1.022E-01	8.192E-03	0.216
SB-122	1.302E+00		2.040E+00	3.486E+00	2.472E-01	0.374
I-123	1.099E+00		8.806E-01	Half-Life too short		
TE-123M	2.062E-02		3.303E-02	5.512E-02	4.428E-03	0.374
I-124	-2.000E-01		8.504E-01	1.226E+00	8.941E-02	-0.163
SB-124	-2.789E-03		9.966E-02	1.648E-01	1.036E-02	-0.017
SB-125	1.959E-01		1.155E-01	2.097E-01	1.329E-02	0.934
TE-125M	3.895E+00		1.123E+01	1.654E+01	1.880E+00	0.236
I-126	2.228E-01		2.576E-01	4.416E-01	3.330E-02	0.504
SB-126	1.185E-01		2.220E-01	3.271E-01	2.490E-02	0.362
SB-127	3.152E-01		1.600E+00	2.626E+00	2.703E-01	0.120
XE-127	-2.974E-02		5.399E-02	8.505E-02	6.361E-03	-0.350
I-131	-1.196E-01		1.288E-01	2.027E-01	1.416E-02	-0.590
TE-132	-3.918E-01		6.402E-01	9.942E-01	1.487E-01	-0.394
BA-133	-3.690E-03		5.797E-02	8.371E-02	1.000E-02	-0.044
I-133	-1.358E-03		1.723E-03	Half-Life too short		
CS-134	8.665E-02		6.247E-02	1.148E-01	8.782E-03	0.755
CS-135	2.720E-01		2.230E-01	3.347E-01	3.013E-02	0.813
I-135	1.768E+08		2.970E+08	Half-Life too short		
CS-136	1.729E-02		1.408E-01	2.350E-01	1.647E-02	0.074
BA-137M	-2.895E-02		5.201E-02	8.053E-02	6.065E-03	-0.359
CS-137	-3.060E-02		5.498E-02	8.513E-02	6.427E-03	-0.359
CE-139	2.180E-02		3.408E-02	5.688E-02	4.160E-03	0.383
BA-140	-2.072E-01		3.277E-01	4.993E-01	1.635E-01	-0.415
LA-140	-2.467E-02		1.098E-01	1.697E-01	9.862E-03	-0.145
CE-141	7.870E-02		7.410E-02	1.241E-01	1.161E-02	0.634
CE-143	5.372E-04		8.233E-05	Half-Life too short		
CE-144	-8.790E-02		2.753E-01	3.887E-01	6.411E-02	-0.226
PM-144	1.102E-02		4.726E-02	7.772E-02	5.901E-03	0.142

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144	7.462E-01		3.201E-00	5.263E-00	3.995E-01	0.142
PM-146	1.024E-02		5.625E-02	9.395E-02	8.440E-03	0.109
ND-147	-9.231E-02		6.920E-01	1.122E+00	1.574E-01	-0.082
PM-149	-1.273E+01		7.292E+01	1.218E+02	1.813E+01	-0.105
EU-152	2.076E-02		1.362E-01	2.004E-01	1.479E-02	0.104
GD-153	-2.274E-02		9.023E-02	1.297E-01	1.142E-02	-0.175
EU-154	-3.846E-02		1.693E-01	2.693E-01	2.491E-02	-0.143
TB-160	4.101E-02		1.826E-01	3.105E-01	2.287E-02	0.132
HO-166M	-3.551E-02		8.910E-02	1.390E-01	1.057E-02	-0.256
TM-171	2.976E+01	+	2.063E+01	3.111E+01	2.735E+00	0.957
LU-176	-1.063E-03		3.062E-02	4.852E-02	3.503E-03	-0.022
LU-177	2.756E+00	+	1.331E+00	2.055E+00	1.541E-01	1.341
LU-177M	-2.140E-01		2.268E-01	3.542E-01	2.118E-02	-0.604
HF-181	-1.096E-02		5.339E-02	8.663E-02	5.673E-03	-0.127
W-181	8.397E-01		3.394E-01	4.142E-01	3.668E-02	2.027
TA-182	1.874E-01		3.030E-01	5.183E-01	2.897E-02	0.362
RE-183	-3.268E-02		1.234E-01	1.988E-01	1.522E-02	-0.164
RE-184	-2.348E-02		2.773E-01	4.422E-01	3.329E-02	-0.053
OS-185	-2.118E-02		5.788E-02	9.094E-02	6.799E-03	-0.233
RE-188	1.313E-01		2.045E-01	3.412E-01	2.848E-02	0.385
W-188	-3.075E+00		9.247E+00	1.324E+01	9.740E-01	-0.232
IR-192	2.787E-03		4.109E-02	6.920E-02	4.941E-03	0.040
AU-195	2.142E-01		3.580E-01	3.950E-01	3.526E-02	0.542
TL-200	3.309E-04		1.425E-04	Half-Life too short		
TL-201	3.505E+00		6.373E+00	1.060E+01	7.751E-01	0.331
TL-202	2.739E-02		8.071E-02	1.364E-01	8.464E-03	0.201
HG-203	6.052E-02		4.718E-02	8.367E-02	6.455E-03	0.723
BI-207	8.394E-02		7.639E-02	1.373E-01	8.824E-03	0.611
TL-207	-5.884E-01		9.029E-01	1.244E+00	2.113E-01	-0.473
PO-209	-2.404E+00		1.101E+01	1.801E+01	1.315E+00	-0.134
PB-211	-8.901E-02		1.085E+00	1.790E+00	1.116E+00	-0.050
BI-212	1.641E+00	+	5.791E-01	9.085E-01	8.319E-02	1.806
PO-215	-5.884E-01		9.029E-01	1.244E+00	2.113E-01	-0.473
RN-219	-1.776E-01		4.651E-01	7.519E-01	1.025E-01	-0.236
RN-220	-2.244E+01		3.542E+01	5.514E+01	3.865E+00	-0.407
RA-223	-5.884E-01		9.029E-01	1.244E+00	2.113E-01	-0.473
AC-227	-9.491E-02		4.680E-01	7.410E-01	1.094E-01	-0.128
TH-227	-9.491E-02		4.681E-01	7.410E-01	1.302E-01	-0.128
TH-229	1.628E-01		5.913E-01	9.686E-01	7.209E-02	0.168
PA-231	-2.285E+00		1.760E+00	2.718E+00	3.950E-01	-0.841
TH-231	-5.884E-01		9.029E-01	1.244E+00	2.113E-01	-0.473
U-231	-1.841E-01		1.038E+00	1.499E+00	1.301E-01	-0.123
PA-233	-2.747E-02		7.540E-02	1.242E-01	9.265E-03	-0.221
PA-234	-2.203E-01		4.324E-01	6.829E-01	1.237E-01	-0.323
PA-234M	6.137E+00		9.173E+00	1.601E+01	1.579E+00	0.383
NP-236	-7.036E-02		9.315E-02	1.469E-01	1.154E-02	-0.479
NP-239	2.782E-01		2.179E-01	3.718E-01	3.934E-02	0.748
AM-241	1.066E-01		8.653E-02	1.326E-01	1.287E-02	0.804

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-2.837E-02		1.054E-01	1.726E-01	1.614E-02	-0.164
CM-247	-1.233E-02		4.228E-02	6.887E-02	4.048E-03	-0.179
CF-249	-2.211E-03		4.914E-02	8.151E-02	4.782E-03	-0.027
CF-251	-7.403E-03		1.488E-01	2.412E-01	1.776E-02	-0.031

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232358011       *
* Acquisition date  :  6-JUL-2009 13:25:09 Detector SN#     :           *
* Detector ID       : GAM17                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000     *
* Elapsed real time:     0 02:00:08.82     Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                               SAMPLE DATA                             *
*                                                                       *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232358011           Analyst initials: MXR1       *
* Batch Number      : 880723               Sample Quantity : 1.4017E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                 QC DATA                               *
*                                                                       *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.313E+01	2.974E+00	3.227E-01	1.517E+00
TI-44	4.533E-01	5.283E-02	2.498E-02	2.695E-02
CD-109	4.519E+00	9.576E-01	6.353E-01	4.886E-01
SN-126	4.449E-01	9.427E-02	6.249E-02	4.810E-02
EU-155	2.023E-01	1.920E-01	1.044E-01	9.797E-02
TL-208	6.846E-01	1.122E-01	3.655E-02	5.723E-02
BI-210	1.039E+00	9.256E-01	5.146E-01	4.722E-01
PB-210	1.039E+00	9.256E-01	5.146E-01	4.722E-01
PO-210	1.039E+00	9.247E-01	5.146E-01	4.718E-01
BI-211	4.395E+00	6.361E-01	2.089E-01	3.246E-01
PB-212	1.921E+00	2.043E-01	5.177E-02	1.042E-01
PO-212	1.921E+00	2.043E-01	5.177E-02	1.042E-01
BI-214	1.432E+00	2.173E-01	7.538E-02	1.109E-01
PB-214	1.529E+00	2.347E-01	6.875E-02	1.197E-01
PO-214	1.529E+00	2.347E-01	6.875E-02	1.197E-01
PO-216	1.921E+00	2.043E-01	5.177E-02	1.042E-01
PO-218	1.529E+00	2.347E-01	6.875E-02	1.197E-01
RA-224	5.993E+00	1.542E+00	5.894E-01	7.870E-01
RA-226	1.432E+00	2.173E-01	7.538E-02	1.109E-01
AC-228	1.881E+00	4.495E-01	1.580E-01	2.293E-01
RA-228	1.881E+00	4.495E-01	1.580E-01	2.293E-01
TH-228	1.921E+00	2.043E-01	5.176E-02	1.042E-01
TH-230	1.432E+00	2.173E-01	7.538E-02	1.109E-01
TH-232	1.881E+00	4.495E-01	1.580E-01	2.293E-01
TH-234	2.030E+00	1.026E+00	6.700E-01	5.234E-01
U-234	1.432E+00	2.173E-01	7.538E-02	1.109E-01
U-235	3.154E-01	2.522E-01	2.240E-01	1.286E-01
NP-237	1.306E+00	3.827E-01	1.832E-01	1.952E-01
U-238	2.030E+00	1.026E+00	6.700E-01	5.234E-01
AM-243	4.184E-01	6.074E-02	3.787E-02	3.099E-02
ANH-511	1.534E-01	6.707E-02	3.246E-02	3.422E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	5.095E-02	3.785E-01	3.301E-01	1.931E-01	NOT IDENT.
NA-22	-1.757E-02	5.898E-02	4.788E-02	3.009E-02	NOT IDENT.
NA-24	-1.273E+05	3.103E+05	0.000E+00	1.583E+05	SHORT HLIF
AL-26	-1.673E-03	3.625E-02	3.030E-02	1.850E-02	NOT IDENT.
SC-46	-1.086E-02	5.470E-02	4.643E-02	2.791E-02	FAIL ABUN
V-48	3.013E-02	9.416E-02	8.281E-02	4.804E-02	NOT IDENT.
CR-51	1.378E-02	4.204E-01	3.735E-01	2.145E-01	NOT IDENT.
MN-52	1.068E-01	2.846E-01	2.477E-01	1.452E-01	FAIL ABUN
MN-54	-5.996E-02	5.266E-02	4.157E-02	2.687E-02	NOT IDENT.
CO-56	-2.475E-02	5.254E-02	4.372E-02	2.681E-02	FAIL ABUN
CO-57	5.307E-03	2.762E-02	2.465E-02	1.409E-02	NOT IDENT.
CO-58	2.003E-02	5.204E-02	4.657E-02	2.655E-02	NOT IDENT.
FE-59	6.317E-02	1.160E-01	1.033E-01	5.918E-02	NOT IDENT.
CO-60	6.103E-02	5.311E-02	4.988E-02	2.709E-02	NOT IDENT.
ZN-65	-1.300E-01	1.444E-01	9.441E-02	7.369E-02	NOT IDENT.
GE-68	5.250E-01	1.820E+00	1.584E+00	9.285E-01	NOT IDENT.
AS-73	5.438E-02	2.655E-01	2.458E-01	1.355E-01	NOT IDENT.
AS-74	-9.058E-02	1.170E-01	9.342E-02	5.967E-02	NOT IDENT.
SE-75	-5.451E-02	6.216E-02	4.294E-02	3.171E-02	FAIL ABUN
BR-77	-3.308E+00	9.106E+00	7.597E+00	4.646E+00	FAIL ABUN
SR-82	-2.744E-01	4.828E-01	4.018E-01	2.463E-01	NOT IDENT.
RB-83	-6.215E-02	8.327E-02	6.732E-02	4.249E-02	NOT IDENT.
RB-84	2.079E-02	9.172E-02	8.071E-02	4.680E-02	NOT IDENT.
KR-85	2.160E+01	1.009E+01	8.852E+00	5.147E+00	NOT IDENT.
SR-85	1.095E-01	5.115E-02	4.488E-02	2.610E-02	NOT IDENT.
RB-86	1.240E-01	1.078E+00	9.252E-01	5.500E-01	NOT IDENT.
Y-88	-3.360E-02	4.313E-02	3.021E-02	2.200E-02	NOT IDENT.
ZR-88	-1.195E-03	3.681E-02	3.171E-02	1.878E-02	NOT IDENT.
Y-91	4.095E+00	2.575E+01	2.197E+01	1.314E+01	NOT IDENT.
NB-94	7.468E-03	4.591E-02	3.904E-02	2.342E-02	NOT IDENT.
NB-95	3.341E-02	5.749E-02	5.018E-02	2.933E-02	NOT IDENT.
NB-95M	2.507E-02	1.574E-01	1.186E-01	8.033E-02	NOT IDENT.
ZR-95	7.050E-02	9.165E-02	8.153E-02	4.676E-02	NOT IDENT.
NB-97	-9.854E+03	4.450E+04	0.000E+00	2.270E+04	SHORT HLIF
ZR-97	1.512E+06	8.771E+05	0.000E+00	4.475E+05	SHORT HLIF
MO-99	-7.157E+00	1.303E+01	1.037E+01	6.647E+00	NOT IDENT.
TC-99M	-4.981E+15	2.757E+15	0.000E+00	1.406E+15	SHORT HLIF
RH-101	1.333E-02	3.825E-02	3.350E-02	1.951E-02	NOT IDENT.
RH-102	-4.327E-02	3.638E-02	2.873E-02	1.856E-02	NOT IDENT.
RU-103	3.052E-03	4.818E-02	4.170E-02	2.458E-02	FAIL ABUN
RH-106	-1.346E-01	4.022E-01	3.311E-01	2.052E-01	FAIL ABUN
RU-106	-1.346E-01	4.020E-01	3.311E-01	2.051E-01	FAIL ABUN
AG-108M	-1.555E-02	4.085E-02	3.467E-02	2.084E-02	NOT IDENT.
AG-110M	-1.102E-02	4.530E-02	3.746E-02	2.311E-02	NOT IDENT.
IN-111	1.661E-01	1.009E+00	7.592E-01	5.146E-01	NOT IDENT.
IN-113M	-3.325E-03	5.286E-02	4.612E-02	2.697E-02	NOT IDENT.
SN-113	-3.325E-03	5.286E-02	4.612E-02	2.697E-02	NOT IDENT.
IN-114M	3.920E-02	2.297E-01	1.756E-01	1.172E-01	NOT IDENT.
CD-115	1.851E+00	9.872E+00	8.584E+00	5.037E+00	NOT IDENT.
SN-117M	2.209E-02	6.059E-02	5.370E-02	3.091E-02	NOT IDENT.
SB-122	1.302E+00	2.000E+00	1.786E+00	1.020E+00	NOT IDENT.
I-123	1.099E+06	1.726E+06	0.000E+00	8.806E+05	SHORT HLIF
TE-123M	2.062E-02	3.237E-02	2.897E-02	1.652E-02	NOT IDENT.
I-124	-2.000E-01	8.334E-01	6.271E-01	4.252E-01	NOT IDENT.
SB-124	-2.789E-03	9.767E-02	8.252E-02	4.983E-02	FAIL ABUN
SB-125	1.959E-01	1.132E-01	1.080E-01	5.773E-02	NOT IDENT.
TE-125M	3.895E+00	1.100E+01	8.753E+00	5.615E+00	NOT IDENT.
I-126	2.228E-01	2.525E-01	2.255E-01	1.288E-01	NOT IDENT.
SB-126	1.185E-01	2.176E-01	1.667E-01	1.110E-01	FAIL ABUN
SB-127	3.152E-01	1.568E+00	1.340E+00	8.002E-01	NOT IDENT.
XE-127	-2.974E-02	5.291E-02	4.448E-02	2.700E-02	NOT IDENT.
I-131	-1.196E-01	1.262E-01	1.048E-01	6.441E-02	NOT IDENT.
TE-132	-3.918E-01	6.274E-01	5.188E-01	3.201E-01	NOT IDENT.
BA-133	-3.690E-03	5.681E-02	4.329E-02	2.898E-02	NOT IDENT.
I-133	-1.358E+03	3.377E+03	0.000E+00	1.723E+03	SHORT HLIF
CS-134	8.665E-02	6.122E-02	5.840E-02	3.123E-02	NOT IDENT.
CS-135	2.720E-01	2.185E-01	1.741E-01	1.115E-01	NOT IDENT.
I-135	1.768E+14	5.822E+14	0.000E+00	2.970E+14	SHORT HLIF
CS-136	1.729E-02	1.380E-01	1.189E-01	7.042E-02	FAIL ABUN
BA-137M	-2.895E-02	5.097E-02	4.112E-02	2.601E-02	NOT IDENT.
CS-137	-3.060E-02	5.388E-02	4.347E-02	2.749E-02	NOT IDENT.
CE-139	2.180E-02	3.340E-02	2.987E-02	1.704E-02	NOT IDENT.
BA-140	-2.072E-01	3.212E-01	2.561E-01	1.639E-01	NOT IDENT.
LA-140	-2.467E-02	1.076E-01	8.504E-02	5.491E-02	FAIL ABUN

CE-141	7.870E-02	7.262E-02	6.534E-02	3.705E-02	NOT IDENT.
CE-143	5.372E-02	1.614E-02	0.000E-00	8.233E-01	SHORT HLIF
CE-144	-8.790E-02	2.698E-01	2.050E-01	1.376E-01	NOT IDENT.
PM-144	1.102E-02	4.631E-02	3.964E-02	2.363E-02	NOT IDENT.
PR-144	7.462E-01	3.137E+00	2.685E+01	1.600E+00	NOT IDENT.
PM-146	1.024E-02	5.512E-02	4.835E-02	2.812E-02	NOT IDENT.
ND-147	-9.231E-02	6.781E-01	5.757E-01	3.460E-01	FAIL ABUN
PM-149	-1.273E+01	7.146E+01	6.325E+01	3.646E+01	NOT IDENT.
EU-152	2.076E-02	1.335E-01	1.037E-01	6.810E-02	FAIL ABUN
GD-153	-2.274E-02	8.842E-02	6.878E-02	4.511E-02	FAIL ABUN
EU-154	-3.846E-02	1.659E-01	1.356E-01	8.463E-02	NOT IDENT.
TB-160	4.101E-02	1.789E-01	1.576E-01	9.130E-02	FAIL ABUN
HO-166M	-3.551E-02	8.732E-02	7.086E-02	4.455E-02	NOT IDENT.
TM-171	2.976E-01	2.021E-01	1.662E+01	1.031E+01	FAIL ABUN
LU-176	-1.063E-03	3.001E-02	2.517E-02	1.531E-02	FAIL ABUN
LU-177	2.756E+00	1.304E+00	1.074E+00	6.653E-01	FAIL ABUN
LU-177M	-2.140E-01	2.222E-01	1.826E-01	1.134E-01	NOT IDENT.
HF-181	-1.096E-02	5.232E-02	4.453E-02	2.669E-02	NOT IDENT.
W-181	8.397E-01	3.326E-01	2.214E-01	1.697E-01	NOT IDENT.
TA-182	1.874E-01	2.969E-01	2.613E-01	1.515E-01	FAIL ABUN
RE-183	-3.268E-02	1.209E-01	1.044E-01	6.168E-02	FAIL ABUN
RE-184	-2.348E-02	2.718E-01	2.303E-01	1.387E-01	FAIL ABUN
OS-185	-2.118E-02	5.672E-02	4.646E-02	2.894E-02	NOT IDENT.
RE-188	1.313E-01	2.004E-01	1.794E-01	1.022E-01	NOT IDENT.
W-188	-3.075E+00	9.062E+00	6.874E+00	4.624E+00	FAIL ABUN
IR-192	2.787E-03	4.027E-02	3.587E-02	2.055E-02	FAIL ABUN
AU-195	2.142E-01	3.508E-01	2.095E-01	1.790E-01	FAIL ABUN
TL-200	3.309E+02	2.793E+02	0.000E+00	1.425E+02	SHORT HLIF
TL-201	3.505E+00	6.246E+00	5.564E+00	3.187E+00	NOT IDENT.
TL-202	2.739E-02	7.909E-02	7.023E-02	4.035E-02	NOT IDENT.
HG-203	6.052E-02	4.624E-02	4.348E-02	2.359E-02	NOT IDENT.
BI-207	8.394E-02	7.487E-02	6.944E-02	3.820E-02	FAIL ABUN
TL-207	-5.884E-01	8.848E-01	6.446E-01	4.514E-01	FAIL ABUN
PO-209	-2.404E+00	1.079E+01	9.138E+00	5.504E+00	NOT IDENT.
PB-211	-8.901E-02	1.064E+00	9.234E-01	5.427E-01	NOT IDENT.
BI-212	1.641E+00	5.675E-01	4.630E-01	2.895E-01	FAIL ABUN
PO-215	-5.884E-01	8.848E-01	6.446E-01	4.514E-01	FAIL ABUN
RN-219	-1.776E-01	4.558E-01	3.879E-01	2.326E-01	FAIL ABUN
RN-220	-2.244E+01	3.472E+01	2.826E+01	1.771E+01	NOT IDENT.
RA-223	-5.884E-01	8.848E-01	6.446E-01	4.514E-01	FAIL ABUN
AC-227	-9.491E-02	4.586E-01	3.857E-01	2.340E-01	FAIL ABUN
TH-227	-9.491E-02	4.587E-01	3.857E-01	2.340E-01	FAIL ABUN
TH-229	1.628E-01	5.795E-01	5.070E-01	2.957E-01	FAIL ABUN
PA-231	-2.285E+00	1.724E+00	1.412E+00	8.798E-01	FAIL ABUN
TH-231	-5.884E-01	8.848E-01	6.446E-01	4.514E-01	FAIL ABUN
U-231	-1.841E-01	1.018E+00	7.955E-01	5.192E-01	FAIL ABUN
PA-233	-2.747E-02	7.390E-02	6.439E-02	3.770E-02	FAIL ABUN
PA-234	-2.203E-01	4.237E-01	3.461E-01	2.162E-01	FAIL ABUN
PA-234M	6.137E+00	8.989E+00	8.105E+00	4.586E+00	NOT IDENT.
NP-236	-7.036E-02	9.129E-02	7.720E-02	4.658E-02	NOT IDENT.
NP-239	2.782E-01	2.136E-01	1.965E-01	1.090E-01	FAIL ABUN
AM-241	1.066E-01	8.480E-02	7.101E-02	4.326E-02	NOT IDENT.
CM-243	-2.837E-02	1.033E-01	9.147E-02	5.272E-02	FAIL ABUN
CM-247	-1.233E-02	4.144E-02	3.553E-02	2.114E-02	NOT IDENT.
CF-249	-2.211E-03	4.815E-02	4.208E-02	2.457E-02	NOT IDENT.
CF-251	-7.403E-03	1.458E-01	1.265E-01	7.438E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	415.2505
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46.50	415.2505
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49.72	472.1278
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52.39	445.1234
52.97	466.4312
53.15	465.7906
53.44	477.8971
54.07	496.6974
56.28	589.3996
56.28	589.4020
57.37	0.0000
57.53	550.9097
57.53	550.9109
57.60	550.9714
57.98	525.3563
57.98	525.3563
59.32	522.5422
59.32	522.5422
59.40	522.6081
59.54	541.9197
59.72	542.0743
60.01	583.6967
61.10	612.8168
61.14	612.8547
61.30	613.0076
63.00	641.3344
63.29	646.0742
63.29	646.0742
63.58	586.9236
64.28	516.8914
65.12	517.5447
65.20	517.6062
65.20	517.6062
66.05	518.2615
66.72	586.7007
66.83	633.0835
66.91	633.1585
67.20	614.0065
67.20	614.0065
67.75	618.6123
67.85	613.0969
68.90	572.8489
68.90	572.8489
69.30	640.6107
69.67	640.9551
70.82	702.0803
70.82	702.0803
70.83	702.0889
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72.87	629.5589
72.87	629.5589
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74.81	626.7275
74.81	626.7275
74.81	626.7275
74.81	626.7275
74.81	626.7275
74.81	626.7275
74.97	626.8643
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75.70	627.4925
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77.11	628.6956

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77.11	628.6956
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80.30	600.9526
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81.07	601.5626
81.07	601.5626
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83.78	524.4007
83.78	524.4007
83.78	524.4007
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84.90	525.1547
85.43	525.5086
86.29	526.0803
86.50	526.2206
86.54	526.2479
86.59	526.2793
86.72	526.3672
86.79	526.4112
86.94	526.5117
87.30	526.7505
87.30	526.7505
87.30	526.7505
87.30	526.7505
87.30	526.7505
87.30	526.7505
87.57	526.9285
87.88	527.1317
88.03	527.2322
88.36	527.4479
88.47	527.5212
89.95	528.4866
91.11	529.2406
92.29	530.0008
92.38	530.0573
92.38	530.0573
93.35	530.6793
94.00	531.0940
94.67	531.5170
94.67	531.5192
94.90	531.6657
94.90	531.6657
94.90	531.6657
94.90	531.6657
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95.87	466.9303
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98.44	383.8012
98.44	383.8027
98.88	393.0795
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99.55	377.8058
99.86	389.6301
100.00	389.6927
100.10	389.7400
103.18	477.1563
103.76	428.5481
105.00	429.1462
105.31	429.2950
108.00	350.7527
109.28	378.0220
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111.00	372.1543

111.78	432.3426
112.95	446.7335
115.19	372.5045
116.30	361.0382
117.00	347.4072
117.00	347.4072
117.66	360.5601
121.11	372.8130
121.62	356.0535
121.78	344.1406
122.06	344.2393
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122.32	340.3379
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136.48	352.1976
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140.51	0.0000
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144.24	334.3712
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145.44	330.6569
147.16	390.4577
152.43	319.3924
152.70	324.6045
153.22	336.0587
154.21	358.9796
154.21	358.9796
154.21	358.9796
154.21	358.9796
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162.64	316.0182
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163.89	329.8372
165.85	295.0591
167.43	298.5722
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171.86	314.2873
172.10	314.3492
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176.60	308.1648
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184.41	315.5694
185.71	300.6879
186.00	287.2402
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202.84	301.6302
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208.81	265.3490

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209.75	242.9528
210.97	259.9515
215.65	293.6401
216.55	268.9832
218.09	254.1357
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223.80	245.3788
226.40	265.3969
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227.08	263.3452
227.20	267.7187
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228.18	251.5636
228.18	251.5636
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236.00	245.2324
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238.63	216.0519
238.63	216.0519
238.63	216.0519
239.00	216.1045
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241.98	216.5299
241.98	216.5299
241.98	216.5299
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247.94	208.3250
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249.79	203.2715
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252.85	211.4185
252.85	211.4185
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256.20	222.9629
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260.90	205.8215
262.80	218.3198
264.65	235.5214
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268.79	175.3018
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269.46	205.7983
269.46	205.7983
269.46	205.7983
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277.60	210.6684
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295.21	168.0831
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300.09	176.1453
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323.87	180.0251
323.87	180.0251
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334.20	156.2693
334.30	156.2775
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338.28	180.4849
338.28	180.4849
338.28	180.4849
338.32	180.4873
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338.32	180.4873
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351.92	137.7299
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367.43	129.3673
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391.69	132.8136
391.69	132.8136
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444.90	99.8472
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445.03	99.8534
445.03	99.8534
445.03	99.8534
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475.35	121.9745
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511.85	92.2575
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569.50	91.5574
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602.71	105.5962
603.60	90.2552
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604.70	128.4913
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609.31	91.8285
609.31	91.8285

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621.84	80.6996
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661.65	104.0915
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666.33	90.4225
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696.49	80.5646
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722.78	97.4773
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756.87	70.0375
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768.36	84.5515
768.36	84.5515
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778.89	74.3505
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911.07	69.4964
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969.11	57.9724
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1112.02	70.6264
1112.84	70.2571
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1120.29	55.0694
1120.29	55.0694
1120.29	55.0694
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1238.11	70.8615
1238.11	70.8615
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1298.22	0.0000
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1325.50	39.7209
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1333.61	30.3617
1360.21	27.3616
1362.66	0.0000
1365.15	32.6549
1368.21	36.8899
1368.53	0.0000
1376.25	24.2793
1377.67	29.5654
1377.67	29.5654
1377.67	29.5654
1377.67	29.5654
1384.27	31.7175
1394.10	29.6589
1395.20	32.8429
1407.95	19.1162
1434.06	25.6123
1436.60	35.2344
1457.56	0.0000
1460.81	19.3044
1489.15	25.8721
1509.49	28.1307
1596.49	23.0679
1620.62	9.4542
1678.03	0.0000
1691.02	15.3047
1691.02	15.3047

1726.46	0.0000
1750.46	0.0000
1764.49	10.1627
1764.49	10.1627
1764.49	10.1627
1764.49	10.1627
1770.23	5.0853
1771.40	27.1299
1791.20	0.0000
1808.65	10.7207
1836.01	15.6596

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:3732358011

Total Uranium Activity	6.1865E+00	ug/g
Total Uranium Counting Unc.	3.0544E+00	ug/g
Total Uranium Tpu	1.5584E-06	ug/g
Total Uranium Mda	1.9959E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                            CHARLESTON ,SC 29417                           *
*                             GROSS GAMMA REPORT                            *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232358011       *
*   ANALYST       : MXR1                      DETECTOR   : GAM17            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 13:25:09.32    SAMPLE ALQT:  140.170 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.114E+01
GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.652E+00
GROSS GAMMA MDA    (pCi/GRAM  )   : 5.074E+00
GROSS GAMMA DLC    (pCi/GRAM  )   : 2.477E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:26:52.49

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:25:36.
Sample ID         : G1201870087          Sample quantity  : 1.45000E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.74  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	185.67*	10	132	1.22	370.37	364	12	1.39E-03	258.2	
2	0	353.37*	19	87	1.68	705.66	698	13	2.65E-03	112.1	
3	0	912.73*	23	31	3.43	1824.11	1812	21	3.14E-03	71.0	
4	0	1463.28	12	21	1.16	2925.04	2913	14	1.67E-03	86.0	
5	0	1765.60	15	5	1.02	3529.65	3524	10	2.10E-03	37.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUN-2009 15:26:55

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087.CNF;1
Analyses by : PEAK V1.6.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 00:00:00 Acquisition date : 6-JUN-2009 13:25:36
Sample ID : G1201870087 Sample quantity : 145.00 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.74 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	477.59	*	5.849E-03	1.175E-01	1.947E-01	1.411E-02	0.030
NA-22	1274.54	*	4.793E-03	1.406E-02	2.444E-02	1.663E-03	0.196
NA-24	1368.53	*	1.158E-05	1.406E-02	Half-Life too short		
AL-26	1129.67		-2.289E-01	6.162E-01	9.688E-01	6.469E-02	-0.236
	1808.65	*	7.324E-03	1.548E-02	2.770E-02	1.617E-03	0.264
K-40	1460.81	*	4.765E-02	1.996E-01	3.567E-01	2.707E-02	0.134
TI-44	67.85		1.245E-03	2.167E-02	3.614E-02	2.906E-03	0.034
	78.38	*	-9.543E-03	1.567E-02	2.431E-02	2.079E-03	-0.393
SC-46	889.25	*	1.634E-02	1.596E-02	2.908E-02	3.243E-03	0.562
	1120.51		1.695E-02	1.879E-02	3.440E-02	2.377E-03	0.493
V-48	944.10		-7.753E-03	2.748E-01	4.450E-01	4.710E-02	-0.017
	983.50	*	-1.186E-02	2.093E-02	3.101E-02	3.067E-03	-0.383
	1312.09		-5.485E-03	2.552E-02	4.048E-02	2.949E-03	-0.136
CR-51	320.08	*	3.410E-02	1.206E-01	1.996E-01	1.285E-02	0.171
MN-52	744.21		1.422E-02	3.777E-02	6.535E-02	5.763E-03	0.218
	848.13		-9.007E-01	1.214E+00	1.812E+00	1.896E-01	-0.497
	935.52		3.763E-02	4.074E-02	7.364E-02	7.898E-03	0.511
	1246.25		1.126E-01	9.937E-01	1.662E+00	1.069E-01	0.068
	1333.61		-2.617E-01	6.976E-01	1.056E+00	7.976E-02	-0.248
	1434.06	*	2.970E-02	4.073E-02	7.415E-02	5.464E-03	0.401
MN-54	834.83	*	-1.559E-04	1.595E-02	2.619E-02	2.683E-03	-0.006
CO-56	846.75	*	-9.019E-03	1.691E-02	2.602E-02	2.716E-03	-0.347
	977.42		-5.071E-02	1.070E+00	1.722E+00	1.722E-01	-0.029
	1037.82		-5.117E-02	1.070E-01	1.668E-01	1.545E-02	-0.307
	1175.09		7.870E-03	7.812E-01	1.294E+00	7.183E-02	0.006
	1238.25		-4.571E-03	2.409E-02	3.846E-02	2.563E-03	-0.119
	1360.21		-4.343E-01	3.588E-01	4.310E-01	3.239E-02	-1.008
	1771.40		-7.089E-02	1.209E-01	1.344E-01	8.122E-03	-0.527
CO-57	122.06	*	3.359E-03	9.650E-03	1.594E-02	9.440E-04	0.211
	136.48		-1.000E-02	8.721E-02	1.376E-01	9.008E-03	-0.073
CO-58	810.76	*	2.264E-03	1.550E-02	2.597E-02	2.564E-03	0.087
FE-59	142.65		-8.678E-01	1.160E+00	1.687E+00	9.279E-02	-0.515
	192.34		-1.595E-01	2.889E-01	4.604E-01	5.340E-02	-0.346
	1099.22	*	-2.510E-02	3.288E-02	4.910E-02	4.042E-03	-0.511

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1291.56		-4.716E-02	4.536E-02	6.187E-02	5.199E-03	-0.762
CO-60	1173.22		-9.742E-03	1.774E-02	2.722E-02	1.504E-03	-0.358
	1332.49	*	-5.181E-03	1.381E-02	2.090E-02	1.579E-03	-0.248
ZN-65	1115.52	*	7.632E-03	3.377E-02	5.773E-02	4.066E-03	0.132
GE-68	1077.35	*	-3.328E-01	5.075E-01	7.143E-01	5.675E-02	-0.466
AS-73	53.44	*	-5.026E-01	5.357E-01	7.856E-01	6.228E-02	-0.640
AS-74	595.88	*	2.658E-04	3.333E-02	5.397E-02	3.878E-03	0.005
	634.78		-4.546E-02	1.233E-01	1.902E-01	1.416E-02	-0.239
SE-75	66.05		-2.332E+00	2.504E+00	3.768E+00	3.731E-01	-0.619
	96.73		1.082E-01	2.971E-01	4.966E-01	6.549E-02	0.218
	121.11		1.538E-02	5.119E-02	8.422E-02	7.862E-03	0.183
	136.00		-1.204E-03	1.594E-02	2.524E-02	1.437E-03	-0.048
	198.60		4.340E-01	7.905E-01	1.337E+00	9.073E-02	0.325
	264.65	*	1.434E-03	1.682E-02	2.770E-02	1.584E-03	0.052
	279.53		3.911E-02	4.105E-02	7.206E-02	4.452E-03	0.543
	303.91		-3.048E-02	8.168E-01	1.317E+00	1.252E-01	-0.023
	400.65		-4.454E-02	9.610E-02	1.537E-01	1.400E-02	-0.290
BR-77	87.88		1.001E+00	7.421E+00	1.227E+01	1.134E+00	0.082
	200.40		2.991E+00	7.567E+00	1.295E+01	6.973E-01	0.231
	239.00		2.247E-01	4.796E-01	8.061E-01	4.484E-02	0.279
	249.79		-2.301E-01	3.130E+00	5.110E+00	2.864E-01	-0.045
	281.68		-1.637E+00	4.094E+00	6.429E+00	3.669E-01	-0.255
	297.23		2.187E+00	2.408E+00	4.182E+00	2.401E-01	0.523
	303.76		-2.706E+00	8.135E+00	1.276E+01	7.340E-01	-0.212
	439.47		2.875E+00	6.683E+00	1.152E+01	7.025E-01	0.249
	484.57		-6.580E+00	1.002E+01	1.530E+01	9.823E-01	-0.430
	520.65	*	-1.810E-01	4.970E-01	7.827E-01	5.222E-02	-0.231
	574.64		4.712E+00	9.831E+00	1.675E+01	1.180E+00	0.281
	578.91		-4.789E+00	4.114E+00	5.784E+00	4.090E-01	-0.828
	585.48		1.796E+00	8.224E+00	1.361E+01	9.684E-01	0.132
	755.35		-3.588E+00	7.131E+00	1.109E+01	9.963E-01	-0.324
	817.79		2.434E-01	5.426E+00	8.992E+00	8.962E-01	0.027
SR-82	698.33		7.431E+00	1.332E+01	2.206E+01	1.796E+00	0.337
	776.49	*	-2.623E-02	1.281E-01	2.069E-01	1.927E-02	-0.127
	1395.20		-1.989E+00	4.079E+00	6.083E+00	4.533E-01	-0.327
RB-83	520.41	*	-6.830E-03	2.835E-02	4.527E-02	3.020E-03	-0.151
	529.64		6.479E-03	3.998E-02	6.653E-02	4.480E-03	0.097
	552.65		3.005E-02	7.215E-02	1.231E-01	8.485E-03	0.244
RB-84	881.50	*	-1.078E-03	2.971E-02	4.173E-02	4.600E-03	-0.026
KR-85	513.99	*	-4.327E+00	5.120E+00	7.980E+00	5.287E-01	-0.542
SR-85	513.99	*	-2.049E-02	2.425E-02	3.779E-02	2.504E-03	-0.542
RB-86	1076.63	*	-1.104E-01	2.502E-01	3.663E-01	2.916E-02	-0.301
Y-88	898.02		6.938E-03	1.473E-02	2.560E-02	2.902E-03	0.271
	1836.01	*	-1.689E-03	1.963E-02	3.168E-02	1.805E-03	-0.053
ZR-88	392.90	*	6.353E-03	1.105E-02	1.947E-02	1.120E-03	0.326
Y-91	1204.90	*	3.738E+00	5.820E+00	1.046E+01	6.184E-01	0.357
NB-94	702.63	*	3.242E-03	1.448E-02	2.469E-02	2.026E-03	0.131
	871.10		8.961E-03	1.685E-02	2.909E-02	3.154E-03	0.308
NB-95	765.79	*	-8.236E-03	1.400E-02	2.142E-02	1.960E-03	-0.384

---- Non-Identified Nuclides ----

Nuclide	Line Fitted Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	235.69	*	-7.354E-02	4.598E-02	6.612E-02	4.851E-03	-1.112
ZR-95	724.18		-2.867E-02	3.317E-02	4.949E-02	4.589E-03	-0.579
	756.15	*	-5.545E-03	2.601E-02	4.205E-02	4.137E-03	-0.132
NB-97	657.90	*	-1.029E-06	2.601E-02	Half-Life too short		
	1024.50		2.976E-03	2.601E-02	Half-Life too short		
ZR-97	254.15		-5.904E-04	2.601E-02	Half-Life too short		
	355.39		1.552E-04	2.601E-02	Half-Life too short		
	507.63	*	-2.713E-03	2.601E-02	Half-Life too short		
	602.52		-1.600E-03	2.601E-02	Half-Life too short		
	1021.30		-4.666E-04	2.601E-02	Half-Life too short		
	1147.95		4.666E-04	2.601E-02	Half-Life too short		
	1362.66		2.980E-04	2.601E-02	Half-Life too short		
	1750.46		7.791E-04	2.601E-02	Half-Life too short		
MO-99	140.51		3.485E-01	1.894E+00	2.946E+00	7.922E-01	0.118
	181.06		-2.284E-01	1.127E+00	1.635E+00	2.776E-01	-0.140
	366.43		-3.660E-01	5.264E+00	8.816E+00	5.092E-01	-0.042
	739.58	*	2.998E-01	6.557E-01	1.146E+00	1.749E-01	0.262
	778.00		1.318E+00	2.131E+00	3.758E+00	3.508E-01	0.351
TC-99M	140.51	*	2.895E+00	2.131E+00	Half-Life too short		
RH-101	127.23		-2.542E-03	1.179E-02	1.850E-02	1.069E-03	-0.137
	198.01	*	7.049E-03	1.493E-02	2.515E-02	1.352E-03	0.280
	325.23		-4.264E-03	8.828E-02	1.413E-01	8.167E-03	-0.030
RH-102	418.52		-1.121E-02	1.204E-01	1.991E-01	1.183E-02	-0.056
	475.06	*	-7.315E-03	1.232E-02	1.911E-02	1.214E-03	-0.383
	631.29		1.091E-02	2.495E-02	4.201E-02	3.118E-03	0.260
	697.49		1.782E-02	3.723E-02	6.129E-02	4.983E-03	0.291
	766.84		-5.395E-03	3.729E-02	6.065E-02	5.557E-03	-0.089
	1046.59		-1.905E-02	4.522E-02	7.140E-02	6.161E-03	-0.267
	1112.84		-8.093E-02	8.681E-02	1.256E-01	8.916E-03	-0.644
RU-103	497.08	*	1.062E-02	1.567E-02	2.730E-02	3.544E-03	0.389
	610.33		-1.263E-01	4.105E-01	6.261E-01	1.004E-01	-0.202
RH-106	511.85		-1.314E-01	1.286E-01	2.304E-01	1.523E-02	-0.570
	621.84	*	-4.287E-03	1.366E-01	2.193E-01	2.759E-02	-0.020
	1050.47		4.398E-01	9.364E-01	1.652E+00	1.412E-01	0.266
RU-106	511.85		-1.314E-01	1.286E-01	2.304E-01	1.523E-02	-0.570
	621.84	*	-4.287E-03	1.366E-01	2.193E-01	1.614E-02	-0.020
	1050.47		4.398E-01	9.364E-01	1.652E+00	1.412E-01	0.266
AG-108M	433.93	*	-5.067E-03	1.391E-02	2.234E-02	1.460E-03	-0.227
	614.37		-3.525E-03	2.101E-02	3.341E-02	2.574E-03	-0.106
	722.95		-2.560E-03	1.650E-02	2.701E-02	2.389E-03	-0.095
CD-109	88.03	*	3.169E-02	3.065E-01	5.056E-01	4.674E-02	0.063
AG-110M	657.75	*	-3.820E-04	1.380E-02	2.310E-02	1.822E-03	-0.017
	677.61		1.700E-02	1.194E-01	2.030E-01	1.647E-02	0.084
	706.67		-5.221E-02	8.614E-02	1.344E-01	1.143E-02	-0.389
	763.93		-1.027E-02	5.914E-02	9.590E-02	8.966E-03	-0.107
	884.67		-2.819E-02	2.114E-02	2.781E-02	3.141E-03	-1.014
	937.48		2.966E-02	4.711E-02	8.231E-02	9.010E-03	0.360
	1384.27		-7.019E-03	6.906E-02	1.106E-01	8.572E-03	-0.063
IN-111	171.28		1.772E-02	6.299E-02	1.082E-01	5.691E-03	0.164

---- Non-Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		245.39	*	-2.479E-02	7.775E-02	1.111E-01	6.211E-03	-0.223
IN-113M		391.69	*	1.257E-02	1.614E-02	2.892E-02	1.774E-03	0.435
SN-113		391.69	*	1.257E-02	1.614E-02	2.892E-02	1.774E-03	0.435
IN-114M		190.27	*	4.414E-02	5.960E-02	9.526E-02	5.086E-03	0.463
CD-115		260.90		-1.247E+00	5.133E+00	8.231E+00	4.646E-01	-0.152
		492.35		5.163E-01	1.502E+00	2.552E+00	1.652E-01	0.202
		527.90	*	-2.113E-01	4.307E-01	6.661E-01	4.477E-02	-0.317
SN-117M		156.02		-3.436E-01	5.787E-01	9.406E-01	5.024E-02	-0.365
		158.56	*	7.000E-03	1.488E-02	2.435E-02	1.294E-03	0.287
SB-122		563.90	*	2.531E-03	1.172E-01	1.911E-01	1.332E-02	0.013
		692.80		-1.931E+00	2.668E+00	4.117E+00	3.319E-01	-0.469
I-123		159.00	*	-1.512E-05	2.668E+00	Half-Life too short		
		528.96		5.673E-04	2.668E+00	Half-Life too short		
TE-123M		159.00	*	-1.030E-03	1.113E-02	1.756E-02	9.474E-04	-0.059
I-124		602.71	*	-8.954E-02	9.298E-02	1.358E-01	9.822E-03	-0.659
		722.78		-4.773E-02	4.956E-01	8.166E-01	6.940E-02	-0.058
		1325.50		-1.283E-01	4.096E+00	6.666E+00	4.974E-01	-0.019
		1376.25		-8.131E-01	3.274E+00	5.090E+00	3.812E-01	-0.160
		1509.49		5.573E-02	2.055E+00	3.446E+00	2.469E-01	0.016
		1691.02		3.726E-01	4.768E-01	9.095E-01	5.866E-02	0.410
SB-124		602.71		-1.670E-02	1.735E-02	2.534E-02	1.833E-03	-0.659
		645.85		8.261E-02	2.077E-01	3.481E-01	2.822E-02	0.237
		709.31		-3.443E-01	1.048E+00	1.686E+00	1.400E-01	-0.204
		713.82		8.928E-02	6.548E-01	1.106E+00	1.312E-01	0.081
		722.78		-1.291E-02	1.340E-01	2.208E-01	1.919E-02	-0.058
		968.20		-9.412E-01	1.116E+00	1.539E+00	1.565E-01	-0.612
		1045.16		-5.969E-02	8.940E-01	1.483E+00	1.284E-01	-0.040
		1325.50		-3.707E-02	1.183E+00	1.925E+00	1.437E-01	-0.019
		1368.21		2.410E-01	5.937E-01	1.042E+00	1.332E-01	0.231
		1436.60		1.158E-01	1.541E+00	2.534E+00	1.866E-01	0.046
		1691.02	*	2.377E-02	3.042E-02	5.802E-02	4.003E-03	0.410
SB-125		427.89	*	-3.940E-02	3.698E-02	5.486E-02	3.428E-03	-0.718
		463.38		-1.126E-01	1.145E-01	1.704E-01	1.222E-02	-0.661
		600.56		6.395E-02	8.724E-02	1.501E-01	1.196E-02	0.426
		635.90		-9.405E-02	1.308E-01	1.936E-01	1.597E-02	-0.486
TE-125M		109.28	*	-1.166E-01	3.498E+00	5.639E+00	4.948E-01	-0.021
I-126		388.63		-5.564E-02	5.425E-02	8.212E-02	4.720E-03	-0.678
		666.33	*	-3.616E-03	4.806E-02	7.996E-02	6.147E-03	-0.045
		753.82		-1.066E-01	3.808E-01	6.102E-01	5.470E-02	-0.175
SB-126		223.80		-4.617E-01	1.108E+00	1.778E+00	9.770E-02	-0.260
		278.60		4.958E-01	6.387E-01	1.106E+00	6.305E-02	0.448
		296.50		-1.580E-01	4.278E-01	6.410E-01	3.679E-02	-0.247
		414.70		-1.871E-03	2.019E-02	3.339E-02	1.975E-03	-0.056
		415.30		4.625E-03	1.699E+00	2.835E+00	1.678E-01	0.002
		555.20		-1.128E-01	1.034E+00	1.661E+00	1.148E-01	-0.068
		573.80		1.217E-01	2.952E-01	4.996E-01	3.515E-02	0.244
		593.00		-4.436E-01	3.056E-01	4.183E-01	2.997E-02	-1.061
		656.30		9.526E-02	8.924E-01	1.515E+00	1.149E-01	0.063
		666.33		-1.485E-03	1.974E-02	3.284E-02	2.525E-03	-0.045

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		-1.896E-01	5.278E-01	8.493E-01	6.632E-02	-0.223
		695.00		2.976E-03	2.200E-02	3.724E-02	3.014E-03	0.080
		697.00		3.113E-02	8.427E-02	1.372E-01	1.115E-02	0.227
		720.50	*	7.886E-04	3.913E-02	6.531E-02	5.528E-03	0.012
		856.80		-5.382E-02	1.464E-01	2.303E-01	2.443E-02	-0.234
		989.30		3.798E-01	3.330E-01	6.179E-01	6.045E-02	0.615
		1034.80		1.356E-01	2.203E+00	3.583E+00	3.181E-01	0.038
		1213.00		4.541E-01	9.971E-01	1.753E+00	1.054E-01	0.259
SN-126		64.28		-2.722E-02	2.681E-01	4.290E-01	6.342E-02	-0.063
		86.94		-7.483E-02	1.375E-01	2.109E-01	8.748E-02	-0.355
		87.57	*	-1.707E-02	3.218E-02	5.072E-02	4.673E-03	-0.337
SB-127		61.10		-9.811E+00	7.510E+00	1.133E+01	9.626E-01	-0.866
		252.40		-6.260E-02	4.696E-01	7.613E-01	3.126E-01	-0.082
		290.80		-1.338E-01	2.340E+00	3.779E+00	2.548E-01	-0.035
		411.60		1.641E-01	1.236E+00	2.089E+00	2.724E-01	0.079
		444.90		-2.704E-01	9.891E-01	1.595E+00	1.451E-01	-0.170
		473.00		7.859E-02	1.765E-01	3.038E-01	2.942E-02	0.259
		543.00		-5.903E-01	1.770E+00	2.778E+00	3.309E-01	-0.213
		603.60		-1.932E+00	1.462E+00	2.035E+00	2.003E-01	-0.950
		685.20	*	1.158E-02	1.481E-01	2.497E-01	2.246E-02	0.046
		698.50		1.364E+00	1.748E+00	3.108E+00	4.446E-01	0.439
		722.20		8.369E-01	3.042E+00	5.212E+00	4.797E-01	0.161
		783.80		-7.033E-02	3.427E-01	5.516E-01	6.316E-02	-0.127
XE-127		57.60		6.358E-01	2.899E+00	4.929E+00	3.799E-01	0.129
		145.22		-1.112E-02	2.787E-01	4.268E-01	2.333E-02	-0.026
		172.10		1.521E-02	4.129E-02	7.129E-02	3.753E-03	0.213
		202.84	*	-1.718E-02	1.664E-02	2.567E-02	1.386E-03	-0.669
		374.96		4.929E-02	6.799E-02	1.213E-01	6.996E-03	0.406
I-131		80.18		-9.429E-01	1.026E+00	1.579E+00	1.370E-01	-0.597
		284.30		6.389E-02	3.177E-01	5.255E-01	3.318E-02	0.122
		364.48	*	-2.756E-02	2.495E-02	3.787E-02	2.424E-03	-0.728
		636.97		-7.507E-02	3.693E-01	5.805E-01	4.625E-02	-0.129
		722.89		-1.950E-01	1.452E+00	2.383E+00	2.029E-01	-0.082
TE-132		49.72		5.768E-02	2.690E+00	4.547E+00	3.845E-01	0.013
		111.76		-3.323E-02	2.393E+00	3.857E+00	2.821E-01	-0.009
		116.30		-1.265E+00	2.273E+00	3.490E+00	2.462E-01	-0.363
		228.16	*	3.152E-02	5.503E-02	9.459E-02	1.235E-02	0.333
BA-133		53.15		-2.274E+00	2.487E+00	3.656E+00	2.901E-01	-0.622
		79.62		-5.490E-01	5.493E-01	8.317E-01	1.267E-01	-0.660
		81.00		-1.030E-02	4.073E-02	6.582E-02	1.048E-02	-0.156
		276.40		-5.617E-02	1.443E-01	2.268E-01	2.929E-02	-0.248
		302.84		-1.425E-02	5.824E-02	9.210E-02	1.071E-02	-0.155
		356.01	*	-8.799E-03	2.170E-02	2.849E-02	3.291E-03	-0.309
		383.85		8.930E-02	1.157E-01	2.068E-01	2.243E-02	0.432
I-133		510.53		-5.960E-04	1.157E-01	Half-Life too short		
		529.87	*	1.945E-06	1.157E-01	Half-Life too short		
		706.58		-2.458E-04	1.157E-01	Half-Life too short		
		856.28		-3.233E-04	1.157E-01	Half-Life too short		
		875.33		-6.268E-05	1.157E-01	Half-Life too short		

---- Non-Identified Nuclides ---

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1236.41		7.128E-05	1.157E-01	Half-Life too short		
	1298.22		3.614E-05	1.157E-01	Half-Life too short		
CS-134	475.35		-2.491E-01	7.877E-01	1.258E-00	7.994E-02	-0.198
	563.23		-3.036E-03	1.441E-01	2.337E-01	1.651E-02	-0.013
	569.32		-4.406E-02	9.345E-02	1.411E-01	1.009E-02	-0.312
	604.70		-2.754E-02	1.724E-02	2.348E-02	1.707E-03	-1.173
	795.84	*	3.434E-04	1.647E-02	2.726E-02	2.636E-03	0.013
	801.93		7.199E-02	1.938E-01	3.288E-01	3.208E-02	0.219
	1038.57		-3.995E-01	1.400E+00	2.248E+00	1.978E-01	-0.178
	1167.94		4.595E-01	9.372E-01	1.649E+00	9.353E-02	0.279
	1365.15		3.363E-01	4.283E-01	8.033E-01	6.390E-02	0.419
CS-135	268.24	*	-2.412E-02	6.014E-02	9.469E-02	7.158E-03	-0.255
I-135	288.45		-3.085E+01	6.014E-02	Half-Life too short		
	417.63		2.533E+01	6.014E-02	Half-Life too short		
	546.56		-3.047E+00	6.014E-02	Half-Life too short		
	836.80		2.025E+01	6.014E-02	Half-Life too short		
	1038.76		-1.153E+01	6.014E-02	Half-Life too short		
	1124.00		-3.000E+01	6.014E-02	Half-Life too short		
	1131.51		1.090E-02	6.014E-02	Half-Life too short		
	1260.41	*	-1.341E+00	6.014E-02	Half-Life too short		
	1457.56		2.214E+00	6.014E-02	Half-Life too short		
	1678.03		-9.541E+00	6.014E-02	Half-Life too short		
	1706.46		5.545E+00	6.014E-02	Half-Life too short		
	1791.20		-2.458E+01	6.014E-02	Half-Life too short		
CS-136	66.91		-1.773E-01	2.729E-01	4.167E-01	6.291E-02	-0.426
	86.29		-2.012E-01	2.900E-01	4.506E-01	5.938E-02	-0.447
	153.22		7.114E-03	1.677E-01	2.855E-01	1.963E-02	0.025
	163.89		6.118E-02	3.005E-01	4.864E-01	3.319E-02	0.126
	176.55		-3.306E-02	9.759E-02	1.603E-01	9.703E-03	-0.206
	273.65		-7.379E-03	1.176E-01	1.907E-01	1.241E-02	-0.039
	340.57		4.550E-03	3.667E-02	5.939E-02	3.649E-03	0.077
	818.51		-3.558E-03	1.954E-02	3.140E-02	3.134E-03	-0.113
	1048.07	*	5.109E-03	2.960E-02	5.055E-02	4.528E-03	0.101
	1235.34		4.347E-03	1.033E-01	1.714E-01	1.761E-02	0.025
BA-137M	661.65	*	1.064E-03	1.395E-02	2.359E-02	1.798E-03	0.045
CS-137	661.65	*	1.124E-03	1.475E-02	2.494E-02	1.906E-03	0.045
CE-139	165.85	*	-8.876E-03	1.113E-02	1.775E-02	9.319E-04	-0.500
BA-140	162.64		7.511E-02	2.056E-01	3.361E-01	2.037E-02	0.224
	304.84		9.827E-02	3.546E-01	5.857E-01	1.598E-01	0.168
	423.70		4.436E-01	5.236E-01	9.069E-01	2.885E-01	0.489
	537.32	*	4.370E-02	7.132E-02	1.217E-01	3.982E-02	0.359
LA-140	328.77		2.866E-02	8.178E-02	1.355E-01	8.777E-03	0.212
	432.53		1.270E-01	5.532E-01	9.397E-01	6.229E-02	0.135
	487.03		-4.992E-03	3.593E-02	5.828E-02	4.157E-03	-0.086
	751.79		-1.693E-02	4.424E-01	7.308E-01	7.181E-02	-0.023
	815.85		-3.291E-02	8.412E-02	1.313E-01	1.419E-02	-0.251
	867.82		-3.121E-01	4.646E-01	7.032E-01	7.847E-02	-0.444
	919.63		3.099E-01	7.976E-01	1.203E+00	1.519E-01	0.258
	925.24		-5.248E-02	2.911E-01	4.615E-01	5.226E-02	-0.114

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1596.49	*	-5.106E-03	7.500E-02	4.000E-02	2.744E-03	-0.128
CE-141	145.44	*	1.119E-02	2.337E-02	3.835E-02	2.189E-03	0.292
CE-143	57.37		5.440E+00	1.295E-01	2.230E+01	2.009E+00	0.244
	231.56		-4.191E+00	2.145E-01	3.479E+01	1.074E+01	-0.120
	293.26	*	3.604E-01	1.226E+00	2.032E+00	4.150E-01	0.177
	350.59		2.245E+01	2.000E-01	2.978E+01	9.032E+00	0.754
	490.36		-1.580E+01	2.709E+01	4.115E+01	1.277E+01	-0.384
	664.57		-1.072E+01	1.180E+01	1.694E+01	5.430E+00	-0.633
	721.93		5.583E+00	1.217E+01	2.107E+01	6.134E+00	0.265
CE-144	80.11		-8.383E-01	8.888E-01	1.365E+00	1.182E-01	-0.614
	133.54	*	-1.194E-02	8.547E-02	1.348E-01	1.906E-02	-0.089
PM-144	476.78		-1.218E-02	2.787E-02	4.394E-02	3.259E-03	-0.277
	618.01		-1.057E-02	1.603E-02	2.315E-02	1.762E-03	-0.456
	696.49	*	2.451E-03	1.607E-02	2.561E-02	2.079E-03	0.096
	778.57		6.457E-01	9.321E-01	1.657E+00	1.549E-01	0.390
PR-144	696.49	*	1.655E-01	1.085E+00	1.729E+00	1.403E-01	0.096
	1489.15		4.925E-01	5.845E+00	9.587E+00	6.927E-01	0.051
PM-146	453.90	*	1.586E-03	1.822E-02	3.043E-02	2.707E-03	0.052
	633.02		-7.905E-02	6.504E-01	1.032E+00	3.830E-01	-0.077
	735.90		-1.588E-02	5.148E-02	8.167E-02	2.338E-02	-0.194
	747.13		8.803E-03	3.733E-02	6.357E-02	9.020E-03	0.138
ND-147	91.11		4.691E-03	7.207E-02	1.183E-01	1.112E-02	0.040
	319.41		3.865E-01	7.829E-01	1.323E+00	7.638E-02	0.292
	439.89		5.699E-01	1.509E+00	2.591E+00	1.581E-01	0.220
	531.02	*	4.044E-02	1.378E-01	2.324E-01	3.242E-02	0.174
PM-149	285.90	*	7.595E-01	3.481E+00	5.763E+00	8.138E-01	0.132
EU-152	121.78		5.025E-03	2.894E-02	4.712E-02	3.631E-03	0.107
	244.69		-1.174E-01	1.573E-01	2.187E-01	1.222E-02	-0.537
	344.27	*	-2.461E-02	4.304E-02	6.516E-02	4.252E-03	-0.378
	443.98		-2.004E-01	3.821E-01	6.000E-01	3.677E-02	-0.334
	778.89		2.358E-02	1.100E-01	1.864E-01	1.742E-02	0.127
	867.32		-1.556E-01	4.105E-01	6.442E-01	6.945E-02	-0.242
	964.01		5.673E-02	1.147E-01	1.970E-01	2.018E-02	0.288
	1085.78		3.497E-02	1.600E-01	2.741E-01	2.124E-02	0.128
	1112.02		-1.213E-01	1.205E-01	1.713E-01	1.220E-02	-0.708
	1407.95		3.353E-02	8.513E-02	1.467E-01	1.090E-02	0.228
GD-153	69.67		-1.143E+00	8.282E-01	1.199E+00	9.729E-02	-0.954
	83.37		2.714E+00	6.550E+00	1.050E+01	9.327E-01	0.259
	97.43	*	-7.752E-03	3.168E-02	5.059E-02	3.955E-03	-0.153
	103.18		1.653E-02	4.218E-02	7.045E-02	5.081E-03	0.235
EU-154	123.07		-9.019E-03	2.088E-02	3.224E-02	3.049E-03	-0.280
	247.94		4.551E-02	1.505E-01	2.529E-01	2.382E-02	0.180
	591.81		-2.030E-01	2.931E-01	4.391E-01	4.671E-02	-0.462
	723.30		-1.825E-02	6.721E-02	1.084E-01	1.022E-02	-0.168
	756.87		-8.322E-03	3.008E-01	4.972E-01	6.096E-02	-0.017
	873.19		5.821E-02	1.414E-01	2.417E-01	3.366E-02	0.241
	996.32		-2.293E-01	1.704E-01	2.152E-01	3.935E-02	-1.066
	1004.76		-4.639E-02	1.018E-01	1.549E-01	1.905E-02	-0.299
	1274.45	*	1.756E-02	3.894E-02	6.887E-02	6.879E-03	0.255

---- Non-Identified Nuclides ----

Nuclide	Line Idea	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		48.70		-1.173E+00	1.741E+00	2.808E+00	2.130E-01	-0.418
		60.01		-3.436E-01	2.524E+00	4.181E+00	3.191E-01	-0.082
		86.54		-2.616E-02	3.959E-02	6.181E-02	5.693E-03	-0.423
		105.31	*	-1.426E-02	4.477E-02	7.071E-02	5.050E-03	-0.202
TB-160		86.79		-4.901E-02	9.705E-02	1.533E-01	1.403E-02	-0.320
		197.04		-1.990E-02	2.315E-01	3.767E-01	2.023E-02	-0.053
		215.65		6.290E-02	2.614E-01	4.419E-01	2.412E-02	0.142
		298.57		4.919E-03	4.334E-02	7.086E-02	4.070E-03	0.069
		879.36	*	6.929E-03	5.540E-02	9.204E-02	1.011E-02	0.075
		962.29		2.146E-02	1.874E-01	3.086E-01	3.170E-02	0.070
		966.15		2.646E-02	7.232E-02	1.225E-01	1.250E-02	0.216
		1177.93		9.834E-02	1.198E-01	2.197E-01	1.227E-02	0.448
		1271.85		-9.499E-02	2.182E-01	3.299E-01	2.229E-02	-0.288
HO-166M		80.57		-3.991E-02	1.133E-01	1.820E-01	1.581E-02	-0.219
	+	184.41		4.711E-03	2.433E-02	2.688E-02	1.428E-03	0.175
		280.46		7.589E-03	3.470E-02	5.751E-02	3.280E-03	0.132
		410.95		-1.558E-02	9.676E-02	1.592E-01	9.370E-03	-0.098
		711.68	*	-1.284E-03	2.550E-02	4.229E-02	3.525E-03	-0.030
		752.31		-1.744E-02	1.050E-01	1.707E-01	1.526E-02	-0.102
		810.29		3.606E-04	2.541E-02	4.195E-02	4.130E-03	0.009
TM-171		51.35		1.172E+01	2.023E+01	3.556E+01	2.818E+00	0.330
		52.39		-6.615E-01	1.023E+01	1.727E+01	1.372E+00	-0.038
		59.40		4.912E+00	1.350E+01	2.315E+01	1.758E+00	0.212
		66.72	*	-9.000E+00	1.468E+01	2.256E+01	1.804E+00	-0.399
LU-176		88.36		1.793E-02	7.124E-02	1.187E-01	1.090E-02	0.151
		201.83		-1.647E-02	1.214E-02	1.830E-02	9.871E-04	-0.900
		306.84	*	4.282E-03	1.039E-02	1.739E-02	1.001E-03	0.246
		401.10		-1.027E+00	2.595E+00	4.178E+00	2.428E-01	-0.246
LU-177		112.95		1.861E-01	2.999E-01	5.067E-01	3.265E-02	0.367
		208.36	*	-7.215E-02	1.883E-01	3.044E-01	1.651E-02	-0.237
LU-177M		52.97		-9.091E-01	1.097E+00	1.625E+00	1.290E-01	-0.560
		54.07		-2.883E-01	5.410E-01	8.144E-01	6.438E-02	-0.354
		61.30		-7.570E-01	7.217E-01	1.114E+00	8.608E-02	-0.679
		121.62		2.499E-02	1.438E-01	2.342E-01	1.389E-02	0.107
		147.16		2.055E-02	2.801E-01	4.461E-01	2.427E-02	0.046
		171.86		3.529E-02	1.879E-01	3.207E-01	1.688E-02	0.110
		218.09		-7.721E-02	3.365E-01	5.262E-01	2.878E-02	-0.147
		268.79		-8.021E-02	3.023E-01	4.825E-01	2.736E-02	-0.166
		319.02		1.401E-02	9.681E-02	1.582E-01	9.134E-03	0.089
		367.43		8.000E-02	3.551E-01	6.094E-01	3.519E-02	0.131
		413.65	*	-2.536E-02	7.021E-02	1.133E-01	6.693E-03	-0.224
HF-181		56.28		-3.050E-02	4.694E-01	7.839E-01	6.107E-02	-0.039
		57.53		9.791E-02	2.465E-01	4.240E-01	3.270E-02	0.231
		65.20		-3.131E-01	4.499E-01	6.892E-01	5.467E-02	-0.454
		133.02		6.166E-03	2.369E-02	3.857E-02	2.182E-03	0.160
		136.25		-4.668E-02	1.743E-01	2.718E-01	1.522E-02	-0.172
		345.85		-6.622E-02	8.326E-02	1.115E-01	6.450E-03	-0.594
		482.03	*	3.258E-03	1.490E-02	2.512E-02	1.608E-03	0.130
W-181		56.28		-1.276E-02	1.991E-01	3.325E-01	2.590E-02	-0.038

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		57.53		4.159E-02	1.046E-01	1.800E-01	1.388E-02	0.231
		65.20	*	-1.319E-01	1.894E-01	2.902E-01	2.302E-02	-0.454
TA-182		67.75		-3.358E-02	5.398E-02	8.276E-02	6.652E-03	-0.406
		100.10		-1.599E-02	6.587E-02	1.049E-01	7.885E-03	-0.152
		152.43		-2.978E-02	1.290E-01	1.998E-01	1.075E-02	-0.149
		222.10		8.062E-02	1.286E-01	2.228E-01	1.223E-02	0.362
		1001.68		2.941E-01	9.864E-01	1.606E+00	1.533E-01	0.183
		1121.28		1.434E-02	5.085E-02	8.744E-02	6.024E-03	0.164
		1189.05		1.072E-01	9.880E-02	1.875E-01	1.072E-02	0.572
		1221.42	*	-1.774E-02	5.923E-02	9.304E-02	5.692E-03	-0.191
		1230.97		-2.247E-02	1.226E-01	1.953E-01	1.218E-02	-0.115
RE-183		57.98		4.197E-02	1.009E-01	1.736E-01	1.334E-02	0.242
		59.32		1.983E-02	5.207E-02	8.936E-02	6.789E-03	0.222
		67.20		-6.669E-02	9.566E-02	1.460E-01	1.170E-02	-0.457
		162.32	*	8.563E-03	4.204E-02	6.800E-02	3.589E-03	0.126
		208.81		-1.473E-01	3.386E-01	5.449E-01	2.957E-02	-0.270
		291.72		-1.148E-02	3.727E-01	6.032E-01	3.456E-02	-0.019
RE-184		57.98		1.616E-01	3.884E-01	6.685E-01	5.136E-02	0.242
		59.32		7.629E-02	2.003E-01	3.437E-01	2.612E-02	0.222
		67.20		-2.567E-01	3.682E-01	5.619E-01	4.504E-02	-0.457
		161.27		-8.452E-02	1.330E-01	2.151E-01	1.138E-02	-0.393
		216.55		-3.418E-02	1.008E-01	1.629E-01	8.901E-03	-0.210
		252.85	*	-1.427E-02	9.478E-02	1.536E-01	8.628E-03	-0.093
		318.01		-5.987E-02	1.703E-01	2.646E-01	1.527E-02	-0.226
		792.07		6.723E-03	3.362E-01	5.567E-01	5.320E-02	0.012
		903.28		-1.278E-01	3.974E-01	5.141E-01	5.771E-02	-0.249
		920.93		5.584E-02	1.942E-01	2.869E-01	3.144E-02	0.195
OS-185		59.72		1.489E-02	1.424E-01	2.398E-01	1.824E-02	0.062
		61.14		-1.017E-01	7.868E-02	1.190E-01	9.185E-03	-0.854
		69.30		-2.112E-01	1.450E-01	2.087E-01	1.690E-02	-1.012
		592.07		-1.089E+00	1.137E+00	1.652E+00	1.182E-01	-0.659
		646.12	*	6.745E-03	1.818E-02	3.039E-02	2.285E-03	0.222
		717.42		8.870E-02	3.723E-01	6.350E-01	5.347E-02	0.140
		874.81		6.899E-03	2.680E-01	4.400E-01	4.799E-02	0.016
		880.27		-5.520E-02	3.656E-01	5.047E-01	5.552E-02	-0.109
RE-188		155.03	*	-2.745E-03	5.842E-02	9.880E-02	5.287E-03	-0.028
		477.96		1.338E-01	1.147E+00	1.914E+00	1.220E-01	0.070
		633.10		-9.871E-02	1.212E+00	1.934E+00	1.438E-01	-0.051
W-188		63.58		-1.134E+01	2.636E+01	4.132E+01	3.247E+00	-0.274
		227.08		2.068E+00	4.693E+00	8.012E+00	4.416E-01	0.258
		290.67	*	-1.670E-01	2.929E+00	4.732E+00	2.710E-01	-0.035
IR-192		295.96		-1.636E-02	4.633E-02	6.948E-02	4.052E-03	-0.235
		308.46		2.165E-02	3.706E-02	6.298E-02	3.669E-03	0.344
		316.51	*	-2.837E-03	1.296E-02	1.930E-02	1.119E-03	-0.147
		468.07		2.603E-03	2.594E-02	4.326E-02	3.083E-03	0.060
		604.41		-2.939E-01	2.183E-01	3.035E-01	3.688E-02	-0.968
		612.46		1.808E-01	3.427E-01	5.771E-01	5.062E-02	0.313
AU-195		65.12		-6.165E-02	8.918E-02	1.367E-01	1.084E-02	-0.451
		66.83		-3.017E-02	4.738E-02	7.268E-02	5.815E-03	-0.415

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	75.70		-8.813E-02	9.688E-02	1.310E-01	1.100E-02	-0.673
	98.88	*	-5.052E-02	8.761E-02	1.357E-01	1.038E-02	-0.372
	129.76		-4.767E-02	1.107E+00	1.763E+00	1.009E-01	-0.027
TL-200	367.94	*	4.063E-01	1.508E+00	2.597E+00	1.500E-01	0.156
	579.30		-1.674E+01	1.264E+01	1.745E+01	1.234E+00	-0.959
	828.27		-2.189E+00	1.551E+01	2.482E+01	2.515E+00	-0.129
	1205.75		1.866E+00	6.837E+00	1.172E+01	6.942E-01	0.159
TI-201	68.90		-1.794E-01	4.040E-01	6.513E-01	5.265E-02	-0.275
	70.82		-3.909E-01	2.522E-01	3.621E-01	2.956E-02	-1.080
	80.30		-1.732E-01	3.728E-01	5.938E-01	5.148E-02	-0.292
	135.34		-4.419E-02	1.895E+00	3.014E+00	1.692E-01	-0.015
	167.43	*	-2.991E-01	4.997E-01	8.092E-01	4.248E-02	-0.370
TL-202	68.90		-5.876E-02	1.323E-01	2.133E-01	1.725E-02	-0.275
	70.82		-1.277E-01	8.239E-02	1.183E-01	9.656E-03	-1.080
	80.30		-5.659E-02	1.218E-01	1.940E-01	1.682E-02	-0.292
	439.56	*	7.722E-03	1.905E-02	3.279E-02	1.999E-03	0.235
HG-203	70.83		-7.594E-01	4.961E-01	7.027E-01	9.362E-02	-1.081
	72.87		1.313E-01	2.470E-01	4.212E-01	5.462E-02	0.312
	82.60		1.626E-01	4.198E-01	7.063E-01	9.800E-02	0.230
	279.20	*	1.255E-02	1.465E-02	2.551E-02	1.547E-03	0.492
BI-207	72.80		4.567E-02	8.122E-02	1.389E-01	1.146E-02	0.329
	74.97		-3.821E-02	5.642E-02	7.777E-02	6.502E-03	-0.491
	84.90		-8.778E-03	8.415E-02	1.303E-01	1.172E-02	-0.067
	569.67		-5.057E-03	1.483E-02	2.274E-02	1.594E-03	-0.222
	1063.62	*	1.256E-03	2.111E-02	3.552E-02	2.932E-03	0.035
	1770.23		-4.798E-01	4.463E-01	3.049E-01	1.845E-02	-1.574
TL-207	81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
	83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
	94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
	122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
	144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
	154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
	269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
	323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
	338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
	445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
TL-208	277.35		1.527E-02	1.460E-01	2.400E-01	2.520E-02	0.064
	510.84		-8.136E-02	1.212E-01	2.198E-01	2.337E-02	-0.370
	583.14	*	-3.275E-03	1.825E-02	2.891E-02	2.266E-03	-0.113
	860.37		4.862E-02	1.441E-01	2.342E-01	2.620E-02	0.208
PO-209	260.50		-8.814E-01	4.001E+00	6.430E+00	3.629E-01	-0.137
	262.80		5.182E+00	1.077E+01	1.831E+01	1.035E+00	0.283
	896.60	*	-9.936E-01	3.070E+00	4.793E+00	5.406E-01	-0.207
BI-210	46.50	*	-1.172E+01	3.494E+00	4.627E+00	3.580E-01	-2.534
PB-210	46.50	*	-1.172E+01	3.494E+00	4.627E+00	3.580E-01	-2.534
PO-210	46.50	*	-1.172E+01	3.464E+00	4.627E+00	3.078E-01	-2.534
BI-211	72.87		7.389E-01	1.388E+00	2.369E+00	1.956E-01	0.312
	351.07	*	2.839E-02	1.199E-01	1.791E-01	1.149E-02	0.159
PB-211	404.84	*	5.489E-02	3.752E-01	6.327E-01	3.945E-01	0.087

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		427.08		-5.250E-01	8.931E-01	1.300E+00	8.039E-01	-0.404
		831.96		-2.146E-02	4.886E-01	7.988E-01	5.024E-01	-0.027
BI-212		727.18	*	1.833E-02	9.898E-02	1.685E-01	1.678E-02	0.109
		785.46		-2.205E-01	6.621E-01	1.048E+00	9.904E-02	-0.210
		1620.62		2.942E-02	5.914E-01	9.892E-01	6.689E-02	0.030
PB-212		74.81		-1.209E-01	1.957E-01	2.707E-01	3.393E-02	-0.447
		77.11		-4.447E-03	8.876E-02	1.434E-01	1.215E-02	-0.031
		87.30		-9.547E-02	1.487E-01	2.317E-01	3.147E-02	-0.412
		238.63	*	1.196E-02	2.678E-02	4.495E-02	3.212E-03	0.266
		300.09		-5.351E-02	3.121E-01	4.978E-01	4.087E-02	-0.107
PO-212		74.81		-1.209E-01	1.957E-01	2.707E-01	3.393E-02	-0.447
		77.11		-4.447E-03	8.876E-02	1.434E-01	1.215E-02	-0.031
		87.30		-9.547E-02	1.487E-01	2.317E-01	3.147E-02	-0.412
		115.19		2.597E-01	1.409E+00	2.303E+00	1.451E-01	0.113
		238.63	*	1.196E-02	2.678E-02	4.495E-02	3.212E-03	0.266
		300.09		-5.351E-02	3.121E-01	4.978E-01	4.087E-02	-0.107
BI-214		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.213E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
PB-214		74.81		-2.084E-01	3.369E-01	4.665E-01	5.208E-02	-0.447
		77.11		-7.624E-03	1.522E-01	2.458E-01	2.801E-02	-0.031
		87.30		-1.636E-01	2.545E-01	3.969E-01	4.761E-02	-0.412
		241.98		-1.417E-01	1.527E-01	2.345E-01	1.854E-02	-0.604
		295.21		-3.297E-02	6.611E-02	9.808E-02	8.321E-03	-0.336
	+	351.92	*	2.440E-02	5.476E-02	6.300E-02	5.211E-03	0.387
PO-214		74.81		-2.084E-01	3.369E-01	4.665E-01	5.208E-02	-0.447
		77.11		-7.624E-03	1.522E-01	2.458E-01	2.801E-02	-0.031
		87.30		-1.636E-01	2.545E-01	3.969E-01	4.761E-02	-0.412
		241.98		-1.417E-01	1.527E-01	2.345E-01	1.854E-02	-0.604
		295.21		-3.297E-02	6.611E-02	9.808E-02	8.321E-03	-0.336
	+	351.92	*	2.440E-02	5.476E-02	6.300E-02	5.211E-03	0.387
PO-215		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
PO-216		74.81		-1.209E-01	1.957E-01	2.707E-01	3.393E-02	-0.447
		77.11		-4.447E-03	8.876E-02	1.434E-01	1.215E-02	-0.031
		87.30		-9.547E-02	1.487E-01	2.317E-01	3.147E-02	-0.412
		238.63	*	1.196E-02	2.678E-02	4.495E-02	3.212E-03	0.266

---- Non-Identified Nuclides ----

Nuclide	Line Tded	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		300.09		-5.351E-02	3.121E-01	4.978E-01	4.087E-02	-0.107
PO-218		74.81		-2.084E-01	3.369E-01	4.665E-01	5.208E-02	-0.447
		77.11		-7.624E-03	1.522E-01	2.458E-01	2.801E-02	-0.031
		87.30		-1.636E-01	2.545E-01	3.969E-01	4.761E-02	-0.412
		241.98		-1.417E-01	1.527E-01	2.345E-01	1.854E-02	-0.604
		295.21		-3.297E-02	6.611E-02	9.808E-02	8.321E-03	-0.336
	+	351.92	*	2.440E-02	5.476E-02	6.300E-02	5.211E-03	0.387
RN-219		271.23		5.414E-02	9.316E-02	1.592E-01	1.277E-02	0.340
		401.81	*	-2.799E-02	1.634E-01	2.689E-01	3.661E-02	-0.104
RN-220		549.76	*	-4.851E+00	1.041E+01	1.603E+01	1.102E+00	-0.303
RA-223		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
RA-224		240.98	*	-2.880E-02	2.845E-01	4.651E-01	2.591E-02	-0.062
RA-226		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.213E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
AC-227		79.80		-7.341E-01	7.130E-01	1.062E+00	2.285E-01	-0.691
		236.00		-1.079E-01	8.990E-02	1.335E-01	1.377E-02	-0.808
		256.20	*	-8.167E-03	1.547E-01	2.524E-01	3.506E-02	-0.032
		286.10		1.045E-01	6.204E-01	1.023E+00	1.178E-01	0.102
		299.80		-8.357E-02	5.836E-01	9.329E-01	1.518E-01	-0.090
		304.40		2.355E-01	7.706E-01	1.278E+00	2.209E-01	0.184
		334.20		-4.592E-01	1.064E+00	1.640E+00	3.005E-01	-0.280
TH-227		79.80		-7.341E-01	7.135E-01	1.062E+00	2.314E-01	-0.691
		94.00		-8.578E-01	9.602E-01	1.479E+00	3.201E-01	-0.580
		236.00		-1.079E-01	8.973E-02	1.335E-01	1.188E-02	-0.808
		256.20	*	-8.167E-03	1.547E-01	2.524E-01	4.251E-02	-0.032
		286.10		1.045E-01	6.291E-01	1.023E+00	1.025E+00	0.102
		299.80		-8.357E-02	5.836E-01	9.329E-01	1.518E-01	-0.090
		304.40		2.355E-01	7.706E-01	1.278E+00	2.209E-01	0.184
		334.20		-4.592E-01	1.064E+00	1.640E+00	3.005E-01	-0.280
AC-228		338.32		-6.784E-02	1.184E-01	1.700E-01	6.930E-02	-0.399
		911.07	*	3.833E-02	6.724E-02	1.194E-01	1.581E-02	0.321
		969.11		-7.795E-02	1.151E-01	1.595E-01	3.820E-02	-0.489
RA-228		338.32		-6.784E-02	1.184E-01	1.700E-01	6.930E-02	-0.399
		911.07	*	3.833E-02	6.724E-02	1.194E-01	1.581E-02	0.321
		969.11		-7.795E-02	1.151E-01	1.595E-01	3.820E-02	-0.489

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228		84.40		2.319E-01	1.151E+00	1.821E+00	2.433E-01	0.127
		238.60	*	1.134E-02	2.674E-02	4.482E-02	3.202E-03	0.253
		300.10		-5.402E-02	3.137E-01	4.976E-01	2.933E-01	-0.109
TH-229		85.43		-2.726E-02	8.161E-02	1.241E-01	1.122E-02	-0.220
		88.47		1.127E-02	4.102E-02	6.846E-02	6.272E-03	0.165
		100.00		-1.740E-02	7.159E-02	1.140E-01	8.581E-03	-0.153
		193.63	*	-5.297E-02	1.781E-01	2.907E-01	1.557E-02	-0.182
		210.97		-4.687E-02	2.730E-01	4.477E-01	2.434E-02	-0.105
TH-230		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.212E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
PA-231		283.67	*	2.127E-02	6.326E-01	1.032E+00	1.418E-01	0.021
		301.29		-7.533E-03	2.245E-01	3.623E-01	3.777E-02	-0.021
TH-231		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
U-231		84.21		2.055E-01	7.037E-01	1.120E+00	1.002E-01	0.183
		92.29		-2.009E-01	2.829E-01	4.494E-01	3.826E-02	-0.447
		95.87	*	-8.062E-02	1.368E-01	2.134E-01	1.710E-02	-0.378
		108.00		1.748E-01	2.380E-01	4.062E-01	2.762E-02	0.430
TH-232		338.32		-6.784E-02	1.152E-01	1.700E-01	9.835E-03	-0.399
		911.07	*	3.833E-02	6.724E-02	1.194E-01	1.581E-02	0.321
		969.11		-7.795E-02	1.151E-01	1.595E-01	3.820E-02	-0.489
PA-233		75.28		-9.569E-01	1.612E+00	2.216E+00	3.371E-01	-0.432
		86.59		-4.218E-01	6.539E-01	1.008E+00	2.720E-01	-0.419
		300.12		-2.844E-02	1.613E-01	2.570E-01	3.447E-02	-0.111
		311.98	*	-1.502E-02	2.497E-02	3.781E-02	2.316E-03	-0.397
		340.50		4.010E-02	2.655E-01	4.308E-01	9.891E-02	0.093
		398.62		1.118E-01	7.839E-01	1.329E+00	3.435E-01	0.084
		415.76		-7.390E-02	6.736E-01	1.112E+00	2.293E-01	-0.066
PA-234		63.00		-4.662E-01	8.370E-01	1.295E+00	1.952E-01	-0.360
		94.67		-3.033E-02	7.291E-02	1.154E-01	1.396E-02	-0.263
		98.44		-3.407E-02	4.174E-02	5.601E-02	3.117E-02	-0.608
		99.86		-4.412E-02	1.813E-01	2.887E-01	2.178E-02	-0.153
		111.00		-6.155E-02	7.762E-02	1.170E-01	1.255E-02	-0.526
		131.20		2.572E-02	4.135E-02	6.932E-02	3.946E-03	0.371
		152.70		1.676E-02	1.299E-01	2.075E-01	3.249E-02	0.081
	+	186.00		1.696E-01	8.772E-01	1.010E+00	3.077E-01	0.168

---- Non-Identified Nuclides ----

Nuclide	Line Idod	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		226.40		8.680E-02	1.625E-01	2.788E-01	3.182E-02	0.311
		227.20		6.108E-02	1.708E-01	2.899E-01	1.598E-02	0.211
		248.90		6.156E-02	3.563E-01	5.925E-01	1.270E-01	0.104
		293.70		-4.231E-02	3.047E-01	4.641E-01	7.453E-02	-0.091
		369.80		9.575E-02	3.555E-01	6.108E-01	1.271E-01	0.157
		568.70		-2.133E-01	4.652E-01	7.017E-01	4.913E-02	-0.304
		569.50		-5.291E-02	1.310E-01	1.994E-01	1.397E-02	-0.265
		574.00		4.918E-01	6.276E-01	1.101E+00	7.748E-02	0.447
		699.00		1.982E-01	3.189E-01	5.594E-01	1.056E-01	0.354
		706.10		-7.831E-02	4.226E-01	6.887E-01	3.066E-01	-0.114
		733.00		-1.232E-01	1.323E-01	1.866E-01	4.144E-02	-0.660
		742.81		6.725E-03	5.488E-01	9.130E-01	6.139E-01	0.007
		796.30		5.860E-02	3.186E-01	5.380E-01	1.473E-01	0.109
		805.60		5.405E-01	4.951E-01	8.568E-01	2.655E-01	0.631
		819.60		-9.402E-02	4.594E-01	7.327E-01	2.811E-01	-0.128
		826.30		-3.796E-03	3.233E-01	5.312E-01	2.393E-01	-0.007
		831.60		-3.451E-02	2.501E-01	4.039E-01	1.225E-01	-0.085
		876.40		-2.721E-02	3.763E-01	6.087E-01	6.271E-01	-0.045
		880.51		-3.579E-02	1.415E-01	1.931E-01	2.125E-02	-0.185
		883.24		-7.757E-02	1.283E-01	1.740E-01	1.176E-01	-0.446
		899.00		1.037E-03	3.039E-01	4.963E-01	2.200E-01	0.002
		925.00		-1.684E-02	4.460E-01	7.222E-01	7.868E-02	-0.023
		926.50		-3.256E-02	7.089E-02	1.070E-01	2.796E-02	-0.304
		946.00	*	-3.346E-02	1.266E-01	1.982E-01	3.909E-02	-0.169
		949.00		5.238E-02	1.868E-01	3.143E-01	3.301E-02	0.167
		980.50		5.873E-02	2.710E-01	4.533E-01	4.508E-02	0.130
		1394.10		-3.585E-01	5.769E-01	7.547E-01	4.902E-01	-0.475
PA-234M		766.41		-2.869E+00	6.507E+00	9.546E+00	7.326E+00	-0.301
		1001.03	*	2.319E+00	3.207E+00	5.445E+00	6.489E-01	0.426
TH-234		63.29	*	-4.240E-01	7.143E-01	1.101E+00	1.941E-01	-0.385
		92.38		-1.769E-01	2.596E-01	4.106E-01	7.402E-02	-0.431
U-234		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.212E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
U-235		89.95		-1.017E+00	5.638E-01	6.528E-01	2.020E-01	-1.558
		93.35		-9.441E-02	3.038E-01	4.926E-01	1.377E-01	-0.192
		105.00		-5.537E-02	4.393E-01	7.044E-01	2.073E-01	-0.079
		143.76	*	-7.464E-02	9.983E-02	1.437E-01	2.328E-02	-0.519
		163.35		8.933E-02	1.964E-01	3.221E-01	5.740E-02	0.277
	+	185.71		6.281E-03	3.243E-02	3.777E-02	2.009E-03	0.166
		205.31		9.044E-02	2.037E-01	3.486E-01	6.225E-02	0.259
NP-236		94.67		-2.271E-02	5.528E-02	8.762E-02	7.159E-03	-0.259
		98.44		-2.576E-02	2.818E-02	4.234E-02	3.261E-03	-0.608
		111.00		-4.656E-02	5.858E-02	8.850E-02	5.821E-03	-0.526
		160.31	*	-3.406E-02	3.371E-02	4.980E-02	2.638E-03	-0.684

---- Non-Identified Nuclides ----

Nuclide	Line Idad	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237		86.50	*	-6.451E-02	9.773E-02	1.511E-01	3.409E-02	-0.427
		95.87		-2.477E-01	4.240E-01	6.556E-01	1.601E-01	-0.378
U-238		63.29	*	-4.240E-01	7.143E-01	1.101E+00	1.941E-01	-0.385
		92.38		-1.769E-01	2.581E-01	4.106E-01	3.490E-02	-0.431
NP-239		99.55		-3.971E-02	6.260E-02	9.639E-02	7.304E-03	-0.412
		117.00	*	-3.486E-04	7.464E-02	1.201E-01	7.431E-03	-0.003
		209.75		-1.438E-01	2.826E-01	4.516E-01	2.453E-02	-0.318
		228.18		5.173E-02	8.966E-02	1.545E-01	8.522E-03	0.335
		277.60		1.472E-02	7.108E-02	1.178E-01	6.710E-03	0.125
		334.30		-2.602E-01	6.011E-01	9.291E-01	5.373E-02	-0.280
AM-241		59.54	*	2.624E-02	7.863E-02	1.345E-01	1.116E-02	0.195
AM-243		74.67	*	-1.768E-02	3.181E-02	4.431E-02	3.697E-03	-0.399
		86.72		-1.724E+00	3.580E+00	5.666E+00	5.181E-01	-0.304
		117.66		-3.464E-01	1.509E+00	2.380E+00	1.464E-01	-0.146
		142.18		-4.187E+00	7.969E+00	1.216E+01	6.697E-01	-0.344
CM-243		99.55		-4.084E-02	6.438E-02	9.914E-02	7.512E-03	-0.412
		103.76	*	-2.085E-03	3.984E-02	6.433E-02	4.605E-03	-0.032
		117.00		-3.584E-04	7.675E-02	1.235E-01	7.641E-03	-0.003
		209.75		-1.417E-01	2.785E-01	4.450E-01	2.417E-02	-0.318
		228.18		5.225E-02	9.055E-02	1.560E-01	8.607E-03	0.335
		277.60		1.483E-02	7.162E-02	1.187E-01	6.762E-03	0.125
CM-247		278.00		1.289E-01	2.944E-01	4.970E-01	2.832E-02	0.259
		287.40		-3.303E-01	5.240E-01	8.042E-01	4.600E-02	-0.411
		402.60	*	3.112E-03	1.470E-02	2.504E-02	1.459E-03	0.124
CF-249		252.85		-5.522E-02	3.668E-01	5.945E-01	3.339E-02	-0.093
		333.44		1.197E-02	7.359E-02	1.198E-01	6.929E-03	0.100
		387.95	*	-7.719E-03	1.591E-02	2.551E-02	1.466E-03	-0.303
CF-251		176.60	*	-1.604E-02	5.017E-02	8.255E-02	4.360E-03	-0.194
		227.00		7.175E-02	1.522E-01	2.605E-01	1.435E-02	0.275
		285.00		4.240E-01	7.113E-01	1.215E+00	6.943E-02	0.349
ANH-511		511.00	*	-1.871E-02	2.620E-02	4.750E-02	3.137E-03	-0.394

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          CEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
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*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087 *
* Acquisition date :  6-JUL-2009 13:25:36 Detector SN#     :            *
* Detector ID        : GAM18              Sensitivity      : 5.000     *
* Geometry           : CAN                Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:00.74     Half life ratio :  8.000     *
*************************************************************************
*                                                                       *
*                               SAMPLE DATA                             *
*                                                                       *
* Sample date        : 29-JUN-2009 00:00:00 Nuclide Library : SOLID    *
* Sample ID          : G1201870087          Analyst initials: MXR1     *
* Batch Number       : 880723               Sample Quantity : 1.4500E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                                 QC DATA                               *
* Standard Weight  :    0.00000                                         *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)	
BE-7	5.849E-03	1.151E-01	2.008E-01	0.000E+00 NOT IDENT.
NA-22	4.793E-03	1.378E-02	2.465E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	6.098E+01	0.000E+00	0.000E+00 SHORT HLIF
AL-26	7.324E-03	1.517E-02	2.770E-02	0.000E+00 NOT IDENT.
K-40	4.765E-02	1.956E-01	3.586E-01	0.000E+00 NOT IDENT.
TI-44	-9.543E-03	1.536E-02	2.607E-02	0.000E+00 NOT IDENT.
SC-46	1.634E-02	1.564E-02	2.958E-02	0.000E+00 NOT IDENT.
V-48	-1.186E-02	2.051E-02	3.146E-02	0.000E+00 NOT IDENT.
CR-51	3.410E-02	1.182E-01	2.077E-01	0.000E+00 NOT IDENT.
MN-52	2.970E-02	3.992E-02	7.458E-02	0.000E+00 NOT IDENT.
MN-54	-1.559E-04	1.563E-02	2.667E-02	0.000E+00 NOT IDENT.
CO-56	-9.019E-03	1.658E-02	2.649E-02	0.000E+00 NOT IDENT.
CO-57	3.359E-03	9.457E-03	1.693E-02	0.000E+00 NOT IDENT.
CO-58	2.264E-03	1.519E-02	2.647E-02	0.000E+00 NOT IDENT.
FE-59	-2.510E-02	3.222E-02	4.969E-02	0.000E+00 NOT IDENT.
CO-60	-5.181E-03	1.353E-02	2.106E-02	0.000E+00 NOT IDENT.
ZN-65	7.632E-03	3.310E-02	5.840E-02	0.000E+00 NOT IDENT.
GE-68	-3.328E-01	4.973E-01	7.233E-01	0.000E+00 NOT IDENT.
AS-73	-5.026E-01	5.249E-01	8.492E-01	0.000E+00 NOT IDENT.
AS-74	2.658E-04	3.266E-02	5.539E-02	0.000E+00 NOT IDENT.
SE-75	1.434E-03	1.648E-02	2.895E-02	0.000E+00 NOT IDENT.
BR-77	-1.810E-01	4.871E-01	8.058E-01	0.000E+00 NOT IDENT.
SR-82	-2.623E-02	1.255E-01	2.111E-01	0.000E+00 NOT IDENT.
RB-83	-6.830E-03	2.778E-02	4.661E-02	0.000E+00 NOT IDENT.
RB-84	-1.078E-03	2.912E-02	4.245E-02	0.000E+00 NOT IDENT.
KR-85	-4.327E+00	5.018E+00	8.218E+00	0.000E+00 NOT IDENT.

SR-85	-2.049E-02	2.376E-02	3.892E-02	0.000E+00	NOT IDENT.
RB-86	-1.104E-01	2.452E-01	3.709E-01	0.000E+00	NOT IDENT.
Y-88	-1.689E-03	1.924E-02	3.168E-02	0.000E+00	NOT IDENT.
ZR-88	6.353E-03	1.083E-02	2.017E-02	0.000E+00	NOT IDENT.
Y-91	3.738E+00	5.703E+00	1.056E+01	0.000E+00	NOT IDENT.
NB-94	3.242E-03	1.419E-02	2.525E-02	0.000E+00	NOT IDENT.
NB-95	-8.236E-03	1.372E-02	2.186E-02	0.000E+00	NOT IDENT.
NB-95M	-7.354E-02	4.506E-02	6.927E-02	0.000E+00	NOT IDENT.
ZR-95	-5.545E-03	2.549E-02	4.292E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.259E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.388E-02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.998E-01	6.426E-01	1.171E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.541E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	7.049E-03	1.463E-02	2.644E-02	0.000E+00	NOT IDENT.
RH-102	-7.315E-03	1.208E-02	1.972E-02	0.000E+00	NOT IDENT.
RU-103	1.062E-02	1.536E-02	2.813E-02	0.000E+00	NOT IDENT.
RH-106	-4.287E-03	1.338E-01	2.249E-01	0.000E+00	NOT IDENT.
RU-106	-4.287E-03	1.338E-01	2.249E-01	0.000E+00	NOT IDENT.
AG-108M	-5.067E-03	1.363E-02	2.309E-02	0.000E+00	NOT IDENT.
CD-109	3.169E-02	3.004E-01	5.409E-01	0.000E+00	NOT IDENT.
AG-110M	-3.820E-04	1.352E-02	2.365E-02	0.000E+00	NOT IDENT.
IN-111	-2.479E-02	7.620E-02	1.163E-01	0.000E+00	NOT IDENT.
IN-113M	1.257E-02	1.582E-02	2.997E-02	0.000E+00	NOT IDENT.
SN-113	1.257E-02	1.582E-02	2.997E-02	0.000E+00	NOT IDENT.
IN-114M	4.414E-02	5.840E-02	1.003E-01	0.000E+00	NOT IDENT.
CD-115	-2.113E-01	4.220E-01	6.855E-01	0.000E+00	NOT IDENT.
SN-117M	7.000E-03	1.458E-02	2.573E-02	0.000E+00	NOT IDENT.
SB-122	2.531E-03	1.149E-01	1.964E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.601E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.030E-03	1.091E-02	1.855E-02	0.000E+00	NOT IDENT.
I-124	-8.954E-02	9.112E-02	1.394E-01	0.000E+00	NOT IDENT.
SB-124	2.377E-02	2.981E-02	5.812E-02	0.000E+00	NOT IDENT.
SB-125	-3.940E-02	3.624E-02	5.672E-02	0.000E+00	NOT IDENT.
TE-125M	-1.166E-01	3.428E+00	6.006E+00	0.000E+00	NOT IDENT.
I-126	-3.616E-03	4.710E-02	8.186E-02	0.000E+00	NOT IDENT.
SB-126	7.886E-04	3.834E-02	6.674E-02	0.000E+00	NOT IDENT.
SN-126	-1.707E-02	3.154E-02	5.427E-02	0.000E+00	NOT IDENT.
SB-127	1.158E-02	1.451E-01	2.555E-01	0.000E+00	NOT IDENT.
XE-127	-1.718E-02	1.630E-02	2.698E-02	0.000E+00	NOT IDENT.
I-131	-2.756E-02	2.445E-02	3.930E-02	0.000E+00	NOT IDENT.
TE-132	3.152E-02	5.393E-02	9.917E-02	0.000E+00	NOT IDENT.
BA-133	-8.799E-03	2.126E-02	2.958E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.557E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.434E-04	1.614E-02	2.779E-02	0.000E+00	NOT IDENT.
CS-135	-2.412E-02	5.893E-02	9.893E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.027E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.109E-03	2.901E-02	5.121E-02	0.000E+00	NOT IDENT.
BA-137M	1.064E-03	1.367E-02	2.416E-02	0.000E+00	NOT IDENT.
CS-137	1.124E-03	1.445E-02	2.554E-02	0.000E+00	NOT IDENT.
CE-139	-8.876E-03	1.091E-02	1.874E-02	0.000E+00	NOT IDENT.
BA-140	4.370E-02	6.990E-02	1.252E-01	0.000E+00	NOT IDENT.
LA-140	-5.106E-03	2.450E-02	4.013E-02	0.000E+00	NOT IDENT.
CE-141	1.119E-02	2.290E-02	4.060E-02	0.000E+00	NOT IDENT.
CE-143	3.604E-01	1.202E+00	2.119E+00	0.000E+00	NOT IDENT.
CE-144	-1.194E-02	8.376E-02	1.430E-01	0.000E+00	NOT IDENT.
PM-144	2.451E-03	1.575E-02	2.620E-02	0.000E+00	NOT IDENT.
PR-144	1.655E-01	1.063E+00	1.768E+00	0.000E+00	NOT IDENT.
PM-146	1.586E-03	1.786E-02	3.142E-02	0.000E+00	NOT IDENT.
ND-147	4.044E-02	1.350E-01	2.391E-01	0.000E+00	NOT IDENT.
PM-149	7.595E-01	3.412E+00	6.013E+00	0.000E+00	NOT IDENT.
EU-152	-2.461E-02	4.218E-02	6.770E-02	0.000E+00	NOT IDENT.
GD-153	-7.752E-03	3.105E-02	5.401E-02	0.000E+00	NOT IDENT.
EU-154	1.756E-02	3.816E-02	6.946E-02	0.000E+00	NOT IDENT.
EU-155	-1.426E-02	4.388E-02	7.537E-02	0.000E+00	NOT IDENT.
TB-160	6.929E-03	5.429E-02	9.363E-02	0.000E+00	NOT IDENT.
HO-166M	-1.284E-03	2.499E-02	4.323E-02	0.000E+00	FAIL ABUN
TM-171	-9.000E+00	1.439E+01	2.428E+01	0.000E+00	NOT IDENT.
LU-176	4.282E-03	1.018E-02	1.812E-02	0.000E+00	NOT IDENT.
LU-177	-7.215E-02	1.845E-01	3.198E-01	0.000E+00	NOT IDENT.
LU-177M	-2.536E-02	6.880E-02	1.173E-01	0.000E+00	NOT IDENT.
HF-181	3.258E-03	1.461E-02	2.590E-02	0.000E+00	NOT IDENT.
W-181	-1.319E-01	1.857E-01	3.125E-01	0.000E+00	NOT IDENT.
TA-182	-1.774E-02	5.805E-02	9.393E-02	0.000E+00	NOT IDENT.
RE-183	8.563E-03	4.120E-02	7.182E-02	0.000E+00	NOT IDENT.
RE-184	-1.427E-02	9.288E-02	1.607E-01	0.000E+00	NOT IDENT.
OS-185	6.745E-03	1.782E-02	3.113E-02	0.000E+00	NOT IDENT.
RE-188	-2.745E-03	5.725E-02	1.044E-01	0.000E+00	NOT IDENT.
W-188	-1.670E-01	2.870E+00	4.935E+00	0.000E+00	NOT IDENT.

[illegible]-192	-2.837E-03	1.271E-02	2.009E-02	0.000E+00	NOT IDENT.
AU-195	-5.052E-02	8.586E-02	1.448E-01	0.000E+00	NOT IDENT.
TL-200	4.062E-01	1.478E+00	2.695E+00	0.000E+00	NOT IDENT.
TL-201	-2.991E-01	4.897E-01	8.540E-01	0.000E+00	NOT IDENT.
TL-202	7.722E-03	1.867E-02	3.389E-02	0.000E+00	NOT IDENT.
HG-203	1.255E-02	1.436E-02	2.663E-02	0.000E+00	NOT IDENT.
BI-207	1.256E-03	2.069E-02	3.598E-02	0.000E+00	NOT IDENT.
TL-207	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
TL-208	-3.275E-03	1.788E-02	2.969E-02	0.000E+00	NOT IDENT.
PO-209	-9.936E-01	3.009E+00	4.874E+00	0.000E+00	NOT IDENT.
BI-210	-1.172E+01	3.425E+00	5.016E+00	0.000E+00	NOT IDENT.
PB-210	-1.172E+01	3.425E+00	5.016E+00	0.000E+00	NOT IDENT.
PO-210	-1.172E+01	3.394E+00	5.016E+00	0.000E+00	NOT IDENT.
BI-211	2.839E-02	1.175E-01	1.860E-01	0.000E+00	NOT IDENT.
PB-211	5.489E-02	3.677E-01	6.551E-01	0.000E+00	NOT IDENT.
BI-212	1.833E-02	9.700E-02	1.722E-01	0.000E+00	NOT IDENT.
PB-212	1.196E-02	2.625E-02	4.709E-02	0.000E+00	NOT IDENT.
PO-212	1.196E-02	2.625E-02	4.709E-02	0.000E+00	NOT IDENT.
BI-214	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
PB-214	2.440E-02	5.367E-02	6.542E-02	0.000E+00	FAIL ABUN
PO-214	2.440E-02	5.367E-02	6.542E-02	0.000E+00	FAIL ABUN
PO-215	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
PO-216	1.196E-02	2.625E-02	4.709E-02	0.000E+00	NOT IDENT.
PO-218	2.440E-02	5.367E-02	6.542E-02	0.000E+00	FAIL ABUN
RN-219	-2.799E-02	1.601E-01	2.785E-01	0.000E+00	NOT IDENT.
RN-220	-4.851E+00	1.021E+01	1.649E+01	0.000E+00	NOT IDENT.
RA-223	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
RA-224	-2.880E-02	2.788E-01	4.871E-01	0.000E+00	NOT IDENT.
RA-226	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
AC-227	-8.167E-03	1.516E-01	2.640E-01	0.000E+00	NOT IDENT.
TH-227	-8.167E-03	1.516E-01	2.640E-01	0.000E+00	NOT IDENT.
AC-228	3.833E-02	6.589E-02	1.213E-01	0.000E+00	NOT IDENT.
RA-228	3.833E-02	6.589E-02	1.213E-01	0.000E+00	NOT IDENT.
TH-228	1.134E-02	2.620E-02	4.695E-02	0.000E+00	NOT IDENT.
TH-229	-5.297E-02	1.745E-01	3.059E-01	0.000E+00	NOT IDENT.
TH-230	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
PA-231	2.127E-02	6.200E-01	1.077E+00	0.000E+00	NOT IDENT.
TH-231	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
U-231	-8.062E-02	1.340E-01	2.279E-01	0.000E+00	NOT IDENT.
TH-232	3.833E-02	6.589E-02	1.213E-01	0.000E+00	NOT IDENT.
PA-233	-1.502E-02	2.447E-02	3.937E-02	0.000E+00	NOT IDENT.
PA-234	-3.346E-02	1.241E-01	2.012E-01	0.000E+00	FAIL ABUN
PA-234M	2.319E+00	3.143E+00	5.522E+00	0.000E+00	NOT IDENT.
TH-234	-4.240E-01	7.001E-01	1.186E+00	0.000E+00	NOT IDENT.
U-234	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
U-235	-7.464E-02	9.783E-02	1.522E-01	0.000E+00	FAIL ABUN
NP-236	-3.406E-02	3.304E-02	5.261E-02	0.000E+00	NOT IDENT.
NP-237	-6.451E-02	9.577E-02	1.617E-01	0.000E+00	NOT IDENT.
U-238	-4.240E-01	7.001E-01	1.186E+00	0.000E+00	NOT IDENT.
NP-239	-3.486E-04	7.315E-02	1.277E-01	0.000E+00	NOT IDENT.
AM-241	2.624E-02	7.706E-02	1.451E-01	0.000E+00	NOT IDENT.
AM-243	-1.768E-02	3.117E-02	4.757E-02	0.000E+00	NOT IDENT.
CM-243	-2.085E-03	3.904E-02	6.859E-02	0.000E+00	NOT IDENT.
CM-247	3.112E-03	1.441E-02	2.593E-02	0.000E+00	NOT IDENT.
CF-249	-7.719E-03	1.559E-02	2.643E-02	0.000E+00	NOT IDENT.
CF-251	-1.604E-02	4.917E-02	8.703E-02	0.000E+00	NOT IDENT.
ANH-511	-1.871E-02	2.568E-02	4.892E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:26:53.54

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G120187008 7.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:25:36.
Sample ID         : G120187008 7         Sample quantity  : 1.45000E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.74  0.0%
Energy tolerance : 1.50000 keV           Analyst initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
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Nuclide Line Activity Report

Flag: "*" = Keyline

Sample ID : G1201870087 Acquisition date : 6-JUL-2009 13:25:36

Total number of lines in spectrum	5	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	3	60.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : C120 870087 Acquisition date : 6-JUL-2009 13:25:16

Id	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.67	10	132	1.22	370.37	364	12	1.39E-03	****	7.65E+00	T
0	353.37	19	87	1.68	705.66	698	13	2.65E-03	****	5.44E+00	T
0	912.73	23	31	3.43	1824.11	1812	21	3.14E-03	****	2.78E+00	
0	1463.28	12	21	1.16	2925.04	2913	14	1.67E-03	****	1.89E+00	
0	1765.60	15	5	1.02	3529.65	3524	10	2.10E-03	75.3	1.69E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:26:58.57

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*****************************************************************************
*                          CEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.CAMMA]G1201870087.CNF;1  *
* Acquisition date  : 6-JUL-2009 13:25:36.  Detector SN#     :             *
* Detector ID       : GAM18                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:00.74          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201870087           Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.45000E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	5.849E-03		1.175E-01	1.947E-01	1.411E-02	0.030
NA-22	4.793E-03		1.406E-02	2.444E-02	1.663E-03	0.196
NA-24	1.158E-05		3.111E-05	Half-Life too short		
AL-26	7.324E-03		1.548E-02	2.770E-02	1.617E-03	0.264
K-40	4.765E-02		1.996E-01	3.567E-01	2.707E-02	0.134
TI-44	-9.543E-03		1.567E-02	2.431E-02	2.079E-03	-0.393
SC-46	1.634E-02		1.596E-02	2.908E-02	3.243E-03	0.562
V-48	-1.186E-02		2.093E-02	3.101E-02	3.067E-03	-0.383
CR-51	3.410E-02		1.206E-01	1.996E-01	1.285E-02	0.171
MN-52	2.970E-02		4.073E-02	7.415E-02	5.464E-03	0.401
MN-54	-1.559E-04		1.595E-02	2.619E-02	2.683E-03	-0.006
CO-56	-9.019E-03		1.691E-02	2.602E-02	2.716E-03	-0.347
CO-57	3.359E-03		9.650E-03	1.594E-02	9.440E-04	0.211
CO-58	2.264E-03		1.550E-02	2.597E-02	2.564E-03	0.087
FE-59	-2.510E-02		3.288E-02	4.910E-02	4.042E-03	-0.511
CO-60	-5.181E-03		1.381E-02	2.090E-02	1.579E-03	-0.248
ZN-65	7.632E-03		3.377E-02	5.773E-02	4.066E-03	0.132

---- Non-identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	-3.328E-01		5.075E-01	7.143E-01	5.675E-02	-0.466
AS-73	-5.026E-01		5.357E-01	7.856E-01	6.228E-02	-0.640
AS-74	2.658E-04		3.333E-02	5.397E-02	3.878E-03	0.005
SE-75	1.434E-03		1.682E-02	2.770E-02	1.584E-03	0.052
BR-77	-1.810E-01		4.970E-01	7.827E-01	5.222E-02	-0.231
SR-82	-2.623E-02		1.281E-01	2.069E-01	1.927E-02	-0.127
RB-82	-6.830E-03		2.835E-02	4.527E-02	3.020E-03	-0.151
RB-84	-1.078E-03		2.971E-02	4.173E-02	4.600E-03	-0.026
KR-85	-4.327E+00		5.120E+00	7.980E+00	5.287E-01	-0.542
SR-85	-2.049E-02		2.425E-02	3.779E-02	2.504E-03	-0.542
RB-86	-1.104E-01		2.502E-01	3.663E-01	2.916E-02	-0.301
Y-88	-1.689E-03		1.963E-02	3.168E-02	1.805E-03	-0.053
ZR-88	6.353E-03		1.105E-02	1.947E-02	1.120E-03	0.326
Y-91	3.738E+00		5.820E+00	1.046E+01	6.184E-01	0.357
NB-94	3.242E-03		1.448E-02	2.469E-02	2.026E-03	0.131
NB-95	-8.236E-03		1.400E-02	2.142E-02	1.960E-03	-0.384
NB-95M	-7.354E-02		4.598E-02	6.612E-02	4.851E-03	-1.112
ZR-95	-5.545E-03		2.601E-02	4.205E-02	4.137E-03	-0.132
NB-97	-1.029E-06		1.153E-05	Half-Life too short		
ZR-97	-2.713E-03		3.769E-04	Half-Life too short		
MO-99	2.998E-01		6.557E-01	1.146E+00	1.749E-01	0.262
TC-99M	2.895E+00		7.860E+00	Half-Life too short		
RH-101	7.049E-03		1.493E-02	2.515E-02	1.352E-03	0.280
RH-102	-7.315E-03		1.232E-02	1.911E-02	1.214E-03	-0.383
RU-103	1.062E-02		1.567E-02	2.730E-02	3.544E-03	0.389
RH-106	-4.287E-03		1.366E-01	2.193E-01	2.759E-02	-0.020
RU-106	-4.287E-03		1.366E-01	2.193E-01	1.614E-02	-0.020
AG-108M	-5.067E-03		1.391E-02	2.234E-02	1.460E-03	-0.227
CD-109	3.169E-02		3.065E-01	5.056E-01	4.674E-02	0.063
AG-110M	-3.820E-04		1.380E-02	2.310E-02	1.822E-03	-0.017
IN-111	-2.479E-02		7.775E-02	1.111E-01	6.211E-03	-0.223
IN-113M	1.257E-02		1.614E-02	2.892E-02	1.774E-03	0.435
SN-113	1.257E-02		1.614E-02	2.892E-02	1.774E-03	0.435
IN-114M	4.414E-02		5.960E-02	9.526E-02	5.086E-03	0.463
CD-115	-2.113E-01		4.307E-01	6.661E-01	4.477E-02	-0.317
SN-117M	7.000E-03		1.488E-02	2.435E-02	1.294E-03	0.287
SB-122	2.531E-03		1.172E-01	1.911E-01	1.332E-02	0.013
I-123	-1.512E-05		8.169E-05	Half-Life too short		
TE-123M	-1.030E-03		1.113E-02	1.756E-02	9.474E-04	-0.059
I-124	-8.954E-02		9.298E-02	1.358E-01	9.822E-03	-0.659
SB-124	2.377E-02		3.042E-02	5.802E-02	4.003E-03	0.410
SB-125	-3.940E-02		3.698E-02	5.486E-02	3.428E-03	-0.718
TE-125M	-1.166E-01		3.498E+00	5.639E+00	4.948E-01	-0.021
I-126	-3.616E-03		4.806E-02	7.996E-02	6.147E-03	-0.045
SB-126	7.886E-04		3.913E-02	6.531E-02	5.528E-03	0.012
SN-126	-1.707E-02		3.218E-02	5.072E-02	4.673E-03	-0.337
SB-127	1.158E-02		1.481E-01	2.497E-01	2.246E-02	0.046
XE-127	-1.718E-02		1.664E-02	2.567E-02	1.386E-03	-0.669

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	-2.756E-02		2.495E-02	3.787E-02	2.424E-03	-0.728
TE-132	3.152E-02		5.503E-02	9.459E-02	1.235E-02	0.333
BA-133	-8.799E-03		2.170E-02	2.849E-02	3.291E-03	-0.309
I-133	1.945E-06		2.835E-06	Half-Life too short		
CS-134	3.434E-04		1.647E-02	2.726E-02	2.636E-03	0.013
CS-135	-2.412E-02		6.014E-02	9.469E-02	7.158E-03	-0.255
I-135	-1.341E+00		5.238E+00	Half-Life too short		
CS-136	5.109E-03		2.960E-02	5.055E-02	4.528E-03	0.101
BA-137M	1.064E-03		1.395E-02	2.359E-02	1.798E-03	0.045
CS-137	1.124E-03		1.475E-02	2.494E-02	1.906E-03	0.045
CE-139	-8.876E-03		1.113E-02	1.775E-02	9.319E-04	-0.500
BA-140	4.370E-02		7.132E-02	1.217E-01	3.982E-02	0.359
LA-140	-5.106E-03		2.500E-02	4.000E-02	2.744E-03	-0.128
CE-141	1.119E-02		2.337E-02	3.835E-02	2.189E-03	0.292
CE-143	3.604E-01		1.226E+00	2.032E+00	4.150E-01	0.177
CE-144	-1.194E-02		8.547E-02	1.348E-01	1.906E-02	-0.089
PM-144	2.451E-03		1.607E-02	2.561E-02	2.079E-03	0.096
PR-144	1.655E-01		1.085E+00	1.729E+00	1.403E-01	0.096
PM-146	1.586E-03		1.822E-02	3.043E-02	2.707E-03	0.052
ND-147	4.044E-02		1.378E-01	2.324E-01	3.242E-02	0.174
PM-149	7.595E-01		3.481E+00	5.763E+00	8.138E-01	0.132
EU-152	-2.461E-02		4.304E-02	6.516E-02	4.252E-03	-0.378
GD-153	-7.752E-03		3.168E-02	5.059E-02	3.955E-03	-0.153
EU-154	1.756E-02		3.894E-02	6.887E-02	6.879E-03	0.255
EU-155	-1.426E-02		4.477E-02	7.071E-02	5.055E-03	-0.202
TB-160	6.929E-03		5.540E-02	9.204E-02	1.011E-02	0.075
HO-166M	-1.284E-03		2.550E-02	4.229E-02	3.525E-03	-0.030
TM-171	-9.000E+00		1.468E+01	2.256E+01	1.804E+00	-0.399
LU-176	4.282E-03		1.039E-02	1.739E-02	1.001E-03	0.246
LU-177	-7.215E-02		1.883E-01	3.044E-01	1.651E-02	-0.237
LU-177M	-2.536E-02		7.021E-02	1.133E-01	6.693E-03	-0.224
HF-181	3.258E-03		1.490E-02	2.512E-02	1.608E-03	0.130
W-181	-1.319E-01		1.894E-01	2.902E-01	2.302E-02	-0.454
TA-182	-1.774E-02		5.923E-02	9.304E-02	5.692E-03	-0.191
RE-183	8.563E-03		4.204E-02	6.800E-02	3.589E-03	0.126
RE-184	-1.427E-02		9.478E-02	1.536E-01	8.628E-03	-0.093
OS-185	6.745E-03		1.818E-02	3.039E-02	2.285E-03	0.222
RE-188	-2.745E-03		5.842E-02	9.880E-02	5.287E-03	-0.028
W-188	-1.670E-01		2.929E+00	4.732E+00	2.710E-01	-0.035
IR-192	-2.837E-03		1.296E-02	1.930E-02	1.119E-03	-0.147
AU-195	-5.052E-02		8.761E-02	1.357E-01	1.038E-02	-0.372
TL-200	4.063E-01		1.508E+00	2.597E+00	1.500E-01	0.156
TL-201	-2.991E-01		4.997E-01	8.092E-01	4.248E-02	-0.370
TL-202	7.722E-03		1.905E-02	3.279E-02	1.999E-03	0.235
HG-203	1.255E-02		1.465E-02	2.551E-02	1.547E-03	0.492
BI-207	1.256E-03		2.111E-02	3.552E-02	2.932E-03	0.035
TL-207	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
TL-208	-3.275E-03		1.825E-02	2.891E-02	2.266E-03	-0.113

--- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	-9.936E-01		3.070E+00	4.793E+00	5.406E-01	-0.207
BI-210	-1.172E+01		3.494E+00	4.627E+00	3.580E-01	-2.534
PB-210	-1.172E+01		3.494E+00	4.627E+00	3.580E-01	-2.534
PO-210	-1.172E+01		3.464E+00	4.627E+00	3.078E-01	-2.534
BI-211	2.839E-02		1.199E-01	1.791E-01	1.149E-02	0.159
PB-211	5.489E-02		3.752E-01	6.327E-01	3.945E-01	0.087
BI-212	1.833E-02		9.898E-02	1.685E-01	1.678E-02	0.109
PB-212	1.196E-02		2.678E-02	4.495E-02	3.212E-03	0.266
PO-212	1.196E-02		2.678E-02	4.495E-02	3.212E-03	0.266
BI-214	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
PB-214	2.440E-02	+	5.476E-02	6.300E-02	5.211E-03	0.387
PO-214	2.440E-02	+	5.476E-02	6.300E-02	5.211E-03	0.387
PO-215	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
PO-216	1.196E-02		2.678E-02	4.495E-02	3.212E-03	0.266
PO-218	2.440E-02	+	5.476E-02	6.300E-02	5.211E-03	0.387
RN-219	-2.799E-02		1.634E-01	2.689E-01	3.661E-02	-0.104
RN-220	-4.851E+00		1.041E+01	1.603E+01	1.102E+00	-0.303
RA-223	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
RA-224	-2.880E-02		2.845E-01	4.651E-01	2.591E-02	-0.062
RA-226	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
AC-227	-8.167E-03		1.547E-01	2.524E-01	3.506E-02	-0.032
TH-227	-8.167E-03		1.547E-01	2.524E-01	4.251E-02	-0.032
AC-228	3.833E-02		6.724E-02	1.194E-01	1.581E-02	0.321
RA-228	3.833E-02		6.724E-02	1.194E-01	1.581E-02	0.321
TH-228	1.134E-02		2.674E-02	4.482E-02	3.202E-03	0.253
TH-229	-5.297E-02		1.781E-01	2.907E-01	1.557E-02	-0.182
TH-230	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
PA-231	2.127E-02		6.326E-01	1.032E+00	1.418E-01	0.021
TH-231	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
U-231	-8.062E-02		1.368E-01	2.134E-01	1.710E-02	-0.378
TH-232	3.833E-02		6.724E-02	1.194E-01	1.581E-02	0.321
PA-233	-1.502E-02		2.497E-02	3.781E-02	2.316E-03	-0.397
PA-234	-3.346E-02		1.266E-01	1.982E-01	3.909E-02	-0.169
PA-234M	2.319E+00		3.207E+00	5.445E+00	6.489E-01	0.426
TH-234	-4.240E-01		7.143E-01	1.101E+00	1.941E-01	-0.385
U-234	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
U-235	-7.464E-02		9.983E-02	1.437E-01	2.328E-02	-0.519
NP-236	-3.406E-02		3.371E-02	4.980E-02	2.638E-03	-0.684
NP-237	-6.451E-02		9.773E-02	1.511E-01	3.409E-02	-0.427
U-238	-4.240E-01		7.143E-01	1.101E+00	1.941E-01	-0.385
NP-239	-3.486E-04		7.464E-02	1.201E-01	7.431E-03	-0.003
AM-241	2.624E-02		7.863E-02	1.345E-01	1.116E-02	0.195
AM-243	-1.768E-02		3.181E-02	4.431E-02	3.697E-03	-0.399
CM-243	-2.085E-03		3.984E-02	6.433E-02	4.605E-03	-0.032
CM-247	3.112E-03		1.470E-02	2.504E-02	1.459E-03	0.124
CF-249	-7.719E-03		1.591E-02	2.551E-02	1.466E-03	-0.303
CF-251	-1.604E-02		5.017E-02	8.255E-02	4.360E-03	-0.194
ANH-511	-1.871E-02		2.620E-02	4.750E-02	3.137E-03	-0.394

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
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*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201870087          *
* Acquisition date  :  6-JUL-2009 13:25:36 Detector SN#     :               *
* Detector ID       : GAM18                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:00.74      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201870087          Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.4500E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	5.849E-03	1.151E-01	1.005E-01	5.873E-02 NOT IDENT.
NA-22	4.793E-03	1.378E-02	1.233E-02	7.030E-03 NOT IDENT.
NA-24	1.158E+01	6.098E+01	0.000E+00	3.111E+01 SHORT HLIF
AL-26	7.324E-03	1.517E-02	1.386E-02	7.738E-03 NOT IDENT.
K-40	4.765E-02	1.956E-01	1.794E-01	9.980E-02 NOT IDENT.
TI-44	-9.543E-03	1.536E-02	1.304E-02	7.835E-03 NOT IDENT.
SC-46	1.634E-02	1.564E-02	1.480E-02	7.982E-03 NOT IDENT.
V-48	-1.186E-02	2.051E-02	1.574E-02	1.046E-02 NOT IDENT.
CR-51	3.410E-02	1.182E-01	1.039E-01	6.031E-02 NOT IDENT.
MN-52	2.970E-02	3.992E-02	3.731E-02	2.036E-02 NOT IDENT.
MN-54	-1.559E-04	1.563E-02	1.334E-02	7.974E-03 NOT IDENT.
CO-56	-9.019E-03	1.658E-02	1.326E-02	8.457E-03 NOT IDENT.
CO-57	3.359E-03	9.457E-03	8.472E-03	4.825E-03 NOT IDENT.
CO-58	2.264E-03	1.519E-02	1.324E-02	7.748E-03 NOT IDENT.
FE-59	-2.510E-02	3.222E-02	2.486E-02	1.644E-02 NOT IDENT.
CO-60	-5.181E-03	1.353E-02	1.054E-02	6.905E-03 NOT IDENT.
ZN-65	7.632E-03	3.310E-02	2.922E-02	1.689E-02 NOT IDENT.
GE-68	-3.328E-01	4.973E-01	3.618E-01	2.537E-01 NOT IDENT.
AS-73	-5.026E-01	5.249E-01	4.249E-01	2.678E-01 NOT IDENT.
AS-74	2.658E-04	3.266E-02	2.771E-02	1.666E-02 NOT IDENT.
SE-75	1.434E-03	1.648E-02	1.448E-02	8.410E-03 NOT IDENT.
BR-77	-1.810E-01	4.871E-01	4.031E-01	2.485E-01 NOT IDENT.
SR-82	-2.623E-02	1.255E-01	1.056E-01	6.404E-02 NOT IDENT.
RB-83	-6.830E-03	2.778E-02	2.332E-02	1.418E-02 NOT IDENT.
RB-84	-1.078E-03	2.912E-02	2.124E-02	1.485E-02 NOT IDENT.
KR-85	-4.327E+00	5.018E+00	4.111E+00	2.560E+00 NOT IDENT.

SR-85	-2.049E-02	2.376E-02	1.947E-02	1.212E-02	NOT IDENT.
RB-86	-1.104E-01	2.452E-01	1.855E-01	1.251E-01	NOT IDENT.
Y-88	-1.639E-03	1.924E-02	1.585E-02	9.815E-03	NOT IDENT.
ZR-88	6.353E-03	1.083E-02	1.009E-02	5.525E-03	NOT IDENT.
Y-91	3.738E+00	5.703E+00	5.285E+00	2.910E+00	NOT IDENT.
NB-94	3.242E-03	1.419E-02	1.263E-02	7.240E-03	NOT IDENT.
NB-95	-8.236E-03	1.372E-02	1.094E-02	6.998E-03	NOT IDENT.
NB-95M	-7.354E-02	4.506E-02	3.466E-02	2.299E-02	NOT IDENT.
ZR-95	-5.545E-03	2.549E-02	2.147E-02	1.301E-02	NOT IDENT.
NB-97	-1.029E+00	2.259E+01	0.000E+00	1.153E+01	SHORT HLIF
ZR-97	-2.713E-03	7.388E+02	0.000E+00	3.769E+02	SHORT HLIF
MO-99	2.998E-01	6.426E-01	5.857E-01	3.279E-01	NOT IDENT.
TC-99M	2.895E+06	1.541E+07	0.000E+00	7.860E+06	SHORT HLIF
RH-101	7.049E-03	1.463E-02	1.323E-02	7.463E-03	NOT IDENT.
RH-102	-7.315E-03	1.208E-02	9.864E-03	6.161E-03	NOT IDENT.
RU-103	1.062E-02	1.536E-02	1.407E-02	7.834E-03	NOT IDENT.
RH-106	-4.287E-03	1.338E-01	1.125E-01	6.828E-02	NOT IDENT.
RU-106	-4.287E-03	1.338E-01	1.125E-01	6.828E-02	NOT IDENT.
AG-108M	-5.067E-03	1.363E-02	1.155E-02	6.956E-03	NOT IDENT.
CD-109	3.169E-02	3.004E-01	2.706E-01	1.532E-01	NOT IDENT.
AG-110M	-3.820E-04	1.352E-02	1.183E-02	6.900E-03	NOT IDENT.
IN-111	-2.479E-02	7.620E-02	5.820E-02	3.888E-02	NOT IDENT.
IN-113M	1.257E-02	1.582E-02	1.499E-02	8.069E-03	NOT IDENT.
SN-113	1.257E-02	1.582E-02	1.499E-02	8.069E-03	NOT IDENT.
IN-114M	4.414E-02	5.840E-02	5.016E-02	2.980E-02	NOT IDENT.
CD-115	-2.113E-01	4.220E-01	3.429E-01	2.153E-01	NOT IDENT.
SN-117M	7.000E-03	1.458E-02	1.288E-02	7.438E-03	NOT IDENT.
SB-122	2.531E-03	1.149E-01	9.824E-02	5.861E-02	NOT IDENT.
I-123	-1.512E+01	1.601E+02	0.000E+00	8.169E+01	SHORT HLIF
TE-123M	-1.030E-03	1.091E-02	9.282E-03	5.564E-03	NOT IDENT.
I-124	-8.954E-02	9.112E-02	6.973E-02	4.649E-02	NOT IDENT.
SB-124	2.377E-02	2.981E-02	2.908E-02	1.521E-02	NOT IDENT.
SB-125	-3.940E-02	3.624E-02	2.838E-02	1.849E-02	NOT IDENT.
TE-125M	-1.166E-01	3.428E+00	3.005E+00	1.749E+00	NOT IDENT.
I-126	-3.616E-03	4.710E-02	4.095E-02	2.403E-02	NOT IDENT.
SB-126	7.886E-04	3.834E-02	3.339E-02	1.956E-02	NOT IDENT.
SN-126	-1.707E-02	3.154E-02	2.715E-02	1.609E-02	NOT IDENT.
SB-127	1.158E-02	1.451E-01	1.278E-01	7.404E-02	NOT IDENT.
XE-127	-1.718E-02	1.630E-02	1.350E-02	8.318E-03	NOT IDENT.
I-131	-2.756E-02	2.445E-02	1.966E-02	1.248E-02	NOT IDENT.
TE-132	3.152E-02	5.393E-02	4.961E-02	2.752E-02	NOT IDENT.
BA-133	-8.799E-03	2.126E-02	1.480E-02	1.085E-02	NOT IDENT.
I-133	1.945E+00	5.557E+00	0.000E+00	2.835E+00	SHORT HLIF
CS-134	3.434E-04	1.614E-02	1.390E-02	8.233E-03	NOT IDENT.
CS-135	-2.412E-02	5.893E-02	4.949E-02	3.007E-02	NOT IDENT.
I-135	-1.341E+06	1.027E+07	0.000E+00	5.238E+06	SHORT HLIF
CS-136	5.109E-03	2.901E-02	2.562E-02	1.480E-02	NOT IDENT.
BA-137M	1.064E-03	1.367E-02	1.209E-02	6.975E-03	NOT IDENT.
CS-137	1.124E-03	1.445E-02	1.278E-02	7.373E-03	NOT IDENT.
CE-139	-8.876E-03	1.091E-02	9.376E-03	5.567E-03	NOT IDENT.
BA-140	4.370E-02	6.990E-02	6.265E-02	3.566E-02	NOT IDENT.
LA-140	-5.106E-03	2.450E-02	2.008E-02	1.250E-02	NOT IDENT.
CE-141	1.119E-02	2.290E-02	2.031E-02	1.168E-02	NOT IDENT.
CE-143	3.604E-01	1.202E+00	1.060E+00	6.131E-01	NOT IDENT.
CE-144	-1.194E-02	8.376E-02	7.152E-02	4.274E-02	NOT IDENT.
PM-144	2.451E-03	1.575E-02	1.311E-02	8.036E-03	NOT IDENT.
PR-144	1.655E-01	1.063E+00	8.846E-01	5.424E-01	NOT IDENT.
PM-146	1.586E-03	1.786E-02	1.572E-02	9.110E-03	NOT IDENT.
ND-147	4.044E-02	1.350E-01	1.196E-01	6.889E-02	NOT IDENT.
PM-149	7.595E-01	3.412E+00	3.008E+00	1.741E+00	NOT IDENT.
EU-152	-2.461E-02	4.218E-02	3.387E-02	2.152E-02	NOT IDENT.
GD-153	-7.752E-03	3.105E-02	2.702E-02	1.584E-02	NOT IDENT.
EU-154	1.756E-02	3.816E-02	3.475E-02	1.947E-02	NOT IDENT.
EU-155	-1.426E-02	4.388E-02	3.771E-02	2.239E-02	NOT IDENT.
TB-160	6.929E-03	5.429E-02	4.684E-02	2.770E-02	NOT IDENT.
HO-166M	-1.284E-03	2.499E-02	2.163E-02	1.275E-02	FAIL ABUN
TM-171	-9.000E+00	1.439E+01	1.215E+01	7.340E+00	NOT IDENT.
LU-176	4.282E-03	1.018E-02	9.065E-03	5.193E-03	NOT IDENT.
LU-177	-7.215E-02	1.845E-01	1.600E-01	9.414E-02	NOT IDENT.
LU-177M	-2.536E-02	6.880E-02	5.867E-02	3.510E-02	NOT IDENT.
HF-181	3.258E-03	1.461E-02	1.296E-02	7.452E-03	NOT IDENT.
W-181	-1.319E-01	1.857E-01	1.563E-01	9.472E-02	NOT IDENT.
TA-182	-1.774E-02	5.805E-02	4.699E-02	2.962E-02	NOT IDENT.
RE-183	8.563E-03	4.120E-02	3.593E-02	2.102E-02	NOT IDENT.
RE-184	-1.427E-02	9.288E-02	8.039E-02	4.739E-02	NOT IDENT.
OS-185	6.745E-03	1.782E-02	1.558E-02	9.090E-03	NOT IDENT.
RE-188	-2.745E-03	5.725E-02	5.225E-02	2.921E-02	NOT IDENT.
W-188	-1.670E-01	2.870E+00	2.469E+00	1.465E+00	NOT IDENT.

IR-192	-2.837E-03	1.271E-02	1.005E-02	6.482E-03	NOT IDENT.
AU-198	-5.052E-02	8.586E-02	7.246E-02	4.381E-02	NOT IDENT.
TL-200	4.063E-01	1.478E+00	1.348E+00	7.542E-01	NOT IDENT.
TL-201	-2.991E-01	4.897E-01	4.273E-01	2.498E-01	NOT IDENT.
TL-202	7.722E-03	1.867E-02	1.695E-02	9.527E-03	NOT IDENT.
HG-203	1.255E-02	1.436E-02	1.332E-02	7.326E-03	NOT IDENT.
BI-207	1.256E-03	2.069E-02	1.800E-02	1.056E-02	NOT IDENT.
TL-207	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
TL-208	-3.275E-03	1.788E-02	1.485E-02	9.124E-03	NOT IDENT.
PO-209	-9.936E-01	3.009E+00	2.438E+00	1.535E+00	NOT IDENT.
BI-210	-1.172E+01	3.425E+00	2.509E+00	1.747E+00	NOT IDENT.
PB-210	-1.172E+01	3.425E+00	2.509E+00	1.747E+00	NOT IDENT.
PO-210	-1.172E+01	3.394E+00	2.509E+00	1.732E+00	NOT IDENT.
BI-211	2.839E-02	1.175E-01	9.304E-02	5.996E-02	NOT IDENT.
PB-211	5.489E-02	3.677E-01	3.277E-01	1.876E-01	NOT IDENT.
BI-212	1.833E-02	9.700E-02	8.614E-02	4.949E-02	NOT IDENT.
PB-212	1.196E-02	2.625E-02	2.356E-02	1.339E-02	NOT IDENT.
PO-212	1.196E-02	2.625E-02	2.356E-02	1.339E-02	NOT IDENT.
BI-214	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
PB-214	2.440E-02	5.367E-02	3.273E-02	2.738E-02	FAIL ABUN
PO-214	2.440E-02	5.367E-02	3.273E-02	2.738E-02	FAIL ABUN
PO-215	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
PO-216	1.196E-02	2.625E-02	2.356E-02	1.339E-02	NOT IDENT.
PO-218	2.440E-02	5.367E-02	3.273E-02	2.738E-02	FAIL ABUN
RN-219	-2.799E-02	1.601E-01	1.393E-01	8.170E-02	NOT IDENT.
RN-220	-4.851E+00	1.021E+01	8.248E+00	5.207E+00	NOT IDENT.
RA-223	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
RA-224	-2.880E-02	2.788E-01	2.437E-01	1.422E-01	NOT IDENT.
RA-226	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
AC-227	-8.167E-03	1.516E-01	1.321E-01	7.735E-02	NOT IDENT.
TH-227	-8.167E-03	1.516E-01	1.321E-01	7.735E-02	NOT IDENT.
AC-228	3.833E-02	6.589E-02	6.070E-02	3.362E-02	NOT IDENT.
RA-228	3.833E-02	6.589E-02	6.070E-02	3.362E-02	NOT IDENT.
TH-228	1.134E-02	2.620E-02	2.349E-02	1.337E-02	NOT IDENT.
TH-229	-5.297E-02	1.745E-01	1.530E-01	8.904E-02	NOT IDENT.
TH-230	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
PA-231	2.127E-02	6.200E-01	5.386E-01	3.163E-01	NOT IDENT.
TH-231	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
U-231	-8.062E-02	1.340E-01	1.140E-01	6.839E-02	NOT IDENT.
TH-232	3.833E-02	6.589E-02	6.070E-02	3.362E-02	NOT IDENT.
PA-233	-1.502E-02	2.447E-02	1.970E-02	1.249E-02	NOT IDENT.
PA-234	-3.346E-02	1.241E-01	1.007E-01	6.332E-02	FAIL ABUN
PA-234M	2.319E+00	3.143E+00	2.763E+00	1.603E+00	NOT IDENT.
TH-234	-4.240E-01	7.001E-01	5.933E-01	3.572E-01	NOT IDENT.
U-234	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
U-235	-7.464E-02	9.783E-02	7.614E-02	4.991E-02	FAIL ABUN
NP-236	-3.406E-02	3.304E-02	2.632E-02	1.686E-02	NOT IDENT.
NP-237	-6.451E-02	9.577E-02	8.091E-02	4.886E-02	NOT IDENT.
U-238	-4.240E-01	7.001E-01	5.933E-01	3.572E-01	NOT IDENT.
NP-239	-3.486E-04	7.315E-02	6.388E-02	3.732E-02	NOT IDENT.
AM-241	2.624E-02	7.706E-02	7.258E-02	3.932E-02	NOT IDENT.
AM-243	-1.768E-02	3.117E-02	2.380E-02	1.590E-02	NOT IDENT.
CM-243	-2.085E-03	3.904E-02	3.432E-02	1.992E-02	NOT IDENT.
CM-247	3.112E-03	1.441E-02	1.297E-02	7.350E-03	NOT IDENT.
CF-249	-7.719E-03	1.559E-02	1.322E-02	7.956E-03	NOT IDENT.
CF-251	-1.604E-02	4.917E-02	4.354E-02	2.509E-02	NOT IDENT.
ANH-511	-1.871E-02	2.568E-02	2.448E-02	1.310E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	235.6872
46.50	235.6872
46.50	235.6872
48.70	113.5499
49.72	101.4476
51.35	84.0305
52.39	95.2561
52.97	107.2877
53.15	108.2711
53.44	108.3906
54.07	94.0405
56.28	93.8927
56.28	93.8938
57.37	88.7209
57.53	88.7722
57.53	88.7727
57.60	93.4191
57.98	90.7682
57.98	90.7682
59.32	88.4092
59.32	88.4092
59.40	88.4341
59.54	88.4776
59.72	94.1250
60.01	98.8849
61.10	122.6702
61.14	122.6872
61.30	117.1325
63.00	103.6755
63.29	106.6071
63.29	106.6071
63.58	106.7108
64.28	99.3884
65.12	117.6998
65.20	117.7309
65.20	117.7309
66.05	125.6762
66.72	112.5912
66.83	112.6320
66.91	112.6608
67.20	112.7664
67.20	112.7664
67.75	110.0937
67.85	110.1294
68.90	123.9498
68.90	123.9498
69.30	118.3342
69.67	115.5835
70.82	130.4977
70.82	130.4977
70.83	130.5018
72.80	116.7059
72.87	116.7310
72.87	116.7310
74.67	125.1901
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.97	126.2810
75.28	118.5592
75.70	130.4795
77.11	115.2588
77.11	115.2588
77.11	115.2588

77.11	115.2588
77.11	115.2588
77.11	115.2588
78.38	120.6280
79.62	126.0194
79.80	129.0624
79.80	129.0624
80.11	129.1761
80.18	129.2019
80.30	116.3210
80.30	116.3210
80.57	116.4103
81.00	114.5590
81.07	114.5818
81.07	114.5818
81.07	114.5818
81.07	114.5818
82.60	110.0694
83.37	101.2784
83.78	107.4174
83.78	107.4174
83.78	107.4174
83.78	107.4174
84.21	106.5391
84.40	106.5941
84.90	109.7606
85.43	110.9271
86.29	121.2927
86.50	121.3611
86.54	121.3739
86.59	121.3904
86.72	116.3728
86.79	116.3939
86.94	116.4412
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.57	117.6514
87.88	98.4618
88.03	98.5013
88.36	94.5217
88.47	94.5491
89.95	167.3808
91.11	132.0562
92.29	111.9217
92.38	111.9478
92.38	111.9478
93.35	100.8990
94.00	103.1280
94.67	127.0596
94.67	127.0615
94.90	154.0087
94.90	154.0087
94.90	154.0087
94.90	154.0087
95.87	121.2263
95.87	121.2263
96.73	85.1443
97.43	94.6519
98.44	100.0996
98.44	100.0996
98.88	92.9003
99.55	93.0515
99.55	93.0515
99.86	82.6581
100.00	82.6862
100.10	82.7067
103.18	83.3155
103.76	89.7656
105.00	93.2032
105.31	96.4505
108.00	77.8521
109.28	91.9830
111.00	105.2236
111.00	105.2236

111.76	88.1937
112.35	79.7986
115.19	81.2740
116.30	96.6772
117.00	80.5043
117.00	80.5043
118.66	84.9761
121.11	75.7211
121.62	77.9990
121.78	78.0250
122.06	73.6721
122.32	73.7117
122.32	73.7117
122.32	73.7117
122.32	73.7117
123.07	90.3548
127.23	78.9005
129.76	91.5866
131.20	77.2867
133.02	87.6794
133.54	100.1449
135.34	94.8486
136.00	98.3600
136.25	104.0625
136.48	99.5819
140.51	100.3428
140.51	0.0000
142.18	124.6752
142.65	122.4942
143.76	117.0089
144.24	120.5560
144.24	120.5560
144.24	120.5560
144.24	120.5560
145.22	101.2183
145.44	101.2594
147.16	109.6543
152.43	92.0453
152.70	87.4260
153.22	91.8814
154.21	81.5212
154.21	81.5212
154.21	81.5212
154.21	81.5212
155.03	86.9045
156.02	97.6052
158.56	70.6531
159.00	0.0000
159.00	83.9629
160.31	105.4079
161.27	101.1425
162.32	82.6564
162.64	80.0327
163.35	80.1274
163.89	85.5461
165.85	103.7037
167.43	105.7654
171.28	91.0936
171.86	93.8866
172.10	89.4068
176.55	98.2244
176.60	98.2318
181.06	98.1813
184.41	87.4535
185.71	87.6252
186.00	87.6637
190.27	54.9774
192.34	76.3833
193.63	76.5278
197.04	81.5957
198.01	78.8916
198.60	79.8983
200.40	98.9518
201.83	126.5369
202.84	114.4234
205.31	87.3008
208.36	95.2942
208.81	93.4459

209.75	90.7020
209.75	90.7020
210.9[illegible]	81.2899
215.65	76.0310
216.55	89.6127
218.09	78.2104
222.10	73.7717
223.80	100.2017
226.40	80.0412
227.00	78.1494
227.08	78.1573
227.20	79.1467
228.16	76.3093
228.18	76.3111
228.18	76.3111
231.56	79.5879
235.69	119.5100
236.00	108.6874
236.00	108.6874
238.60	73.3536
238.63	73.3564
238.63	73.3564
238.63	73.3564
239.00	75.3732
240.98	109.3588
241.98	124.4240
241.98	124.4240
241.98	124.4240
244.69	99.8680
245.39	84.9598
247.94	77.2003
248.90	85.3191
249.79	85.4099
252.40	82.6513
252.85	82.6951
252.85	82.6951
254.15	0.0000
256.20	75.9341
256.20	75.9341
260.50	80.3839
260.90	79.4032
262.80	66.3142
264.65	69.5211
268.24	73.9105
268.79	77.0382
269.46	69.8998
269.46	69.8998
269.46	69.8998
269.46	69.8998
271.23	64.8890
273.65	73.3260
276.40	75.6210
277.35	69.4781
277.60	69.4966
277.60	69.4966
278.00	66.4141
278.60	62.3044
279.20	62.3447
279.53	58.2089
280.46	70.7548
281.68	78.1414
283.67	71.0007
284.30	66.8691
285.00	61.6918
285.90	65.9377
286.10	65.9512
286.10	65.9512
287.40	82.8164
288.45	0.0000
290.67	79.9475
290.80	79.9591
291.72	81.0899
293.26	79.1113
293.70	72.8156
295.21	85.6151
295.21	85.6151
295.21	85.6151
295.96	80.3928

296.50	81.4964
297.23	66.7289
298.57	76.3682
299.80	76.4648
299.80	76.4648
300.09	75.4256
300.09	75.4256
300.09	75.4256
300.10	75.4256
300.12	75.4277
301.29	69.1359
302.84	71.3766
303.76	73.5768
303.91	68.2549
304.40	65.0880
304.40	65.0880
304.84	67.2528
306.84	63.1097
308.46	58.9276
311.98	63.4365
316.51	48.6015
318.01	60.5715
319.02	54.1351
319.41	48.7402
320.08	54.1908
323.87	67.4454
323.87	67.4454
323.87	67.4454
323.87	67.4454
325.23	63.1764
328.77	66.6703
333.44	71.3586
334.20	88.9868
334.20	88.9868
334.30	88.9954
338.28	79.4026
338.28	79.4026
338.28	79.4026
338.28	79.4026
338.32	79.4059
338.32	79.4059
338.32	79.4059
340.50	76.2521
340.57	76.2573
344.27	76.5184
345.85	81.4415
350.59	64.2463
351.07	69.6297
351.92	60.3034
351.92	60.3034
351.92	60.3034
355.39	0.0000
356.01	69.9401
364.48	74.0813
366.43	63.3486
367.43	56.1580
367.94	56.1830
369.80	58.9967
374.96	48.3198
383.85	44.0930
387.95	61.7583
388.63	67.3272
391.69	42.5332
391.69	42.5332
392.90	45.3525
398.62	47.4259
400.65	58.6811
401.10	56.8398
401.81	56.8722
402.60	53.1766
404.84	55.1425
410.95	57.2910
411.60	53.5620
413.65	62.1199
414.70	57.4615
415.30	57.4891
415.76	56.5671
417.63	0.0000

418.52	59.5239
423.70	42.6896
427.08	58.9704
427.89	62.8144
432.53	48.7108
433.93	60.2368
439.47	50.8883
439.56	50.8915
439.89	49.9440
443.98	53.9506
444.90	50.1312
445.03	50.1363
445.03	50.1363
445.03	50.1363
445.03	50.1363
453.90	52.4068
463.38	65.4722
468.07	51.9661
473.00	44.2771
475.06	58.1365
475.35	53.2209
476.78	55.2474
477.59	46.3947
477.96	45.4194
482.03	42.5785
484.57	50.5891
487.03	44.7138
490.36	54.7758
492.35	48.8666
497.08	46.0230
507.63	0.0000
510.53	0.0000
510.84	63.6168
511.00	65.6431
511.85	69.7223
511.85	69.7223
513.99	183.1520
513.99	183.1520
520.41	52.8404
520.65	52.8493
527.90	50.0348
528.96	0.0000
529.64	40.8906
529.87	0.0000
531.02	37.8573
537.32	36.9835
543.00	47.4263
546.56	0.0000
549.76	44.5222
552.65	34.2294
555.20	40.5168
563.23	42.8058
563.90	40.7339
568.70	46.0915
569.32	49.2525
569.50	49.2571
569.67	49.2628
573.80	44.1318
574.00	37.8316
574.64	42.0518
578.91	61.1308
579.30	66.4161
583.14	41.2090
585.48	52.9053
591.81	61.5995
592.07	64.7961
593.00	76.5211
595.88	59.6176
600.56	55.5090
602.52	0.0000
602.71	74.8176
602.71	74.8176
603.60	80.2020
604.41	87.7296
604.70	92.0238
609.31	55.7895
609.31	55.7895
609.31	55.7895

609.31	55.7895
610.32	65.4842
612.46	68.7875
614.37	78.5463
618.01	60.3791
621.84	44.3012
621.84	44.3012
631.29	43.4502
633.02	51.1022
633.10	50.0171
634.78	52.2410
635.90	59.8958
636.97	49.0353
645.85	41.6089
646.12	41.6154
656.30	40.3763
657.75	41.3260
657.90	0.0000
661.65	38.6521
661.65	38.6521
664.57	48.8507
666.33	41.5155
666.33	41.5155
675.00	42.6327
677.61	36.1943
685.20	41.9284
692.80	52.3815
695.00	45.8857
696.49	44.9834
696.49	44.9834
697.00	44.0577
697.49	45.0068
698.33	43.1493
698.50	43.1531
699.00	44.1027
702.63	45.1240
706.10	42.3779
706.58	0.0000
706.67	49.9269
709.31	44.3331
711.68	42.4969
713.82	43.4881
717.42	42.6196
720.50	40.7875
721.93	34.1719
722.20	37.0243
722.78	40.8339
722.78	40.8339
722.89	40.8357
722.95	40.8365
723.30	39.8945
724.18	45.6133
727.18	27.5987
733.00	34.3586
735.90	28.6725
739.58	27.7663
742.81	35.4817
744.21	32.6262
747.13	34.5945
751.79	33.7083
752.31	33.7168
753.82	35.6691
755.35	37.6249
756.15	36.6741
756.87	33.7902
763.93	33.9034
765.79	36.8419
766.41	35.8829
766.84	32.0097
768.36	26.2084
768.36	26.2084
768.36	26.2084
768.36	26.2084
776.49	38.9754
778.00	32.1769
778.57	30.2350
778.89	35.1167
783.80	32.2635

785.46	34.2452
792.07	27.4793
795.84	28.5097
796.30	26.5490
801.95	28.5888
805.60	33.5732
810.29	36.6123
810.76	34.6411
815.85	32.7355
817.79	25.8143
818.51	30.7881
819.60	27.8223
826.30	29.8981
828.27	30.9212
831.60	33.9633
831.96	33.9689
834.83	41.0132
836.80	0.0000
846.75	45.2481
848.13	46.2817
856.28	0.0000
856.80	48.4736
860.37	36.4109
867.32	48.6904
867.82	52.7596
871.10	38.6084
873.19	36.6086
874.81	41.7215
875.33	0.0000
876.40	36.6577
879.36	31.6055
880.27	27.5378
880.51	29.5806
881.50	26.5316
883.24	34.7201
884.67	43.9370
889.25	24.5698
896.60	32.8587
898.02	21.5764
899.00	23.6406
903.28	24.7114
911.07	24.7900
911.07	24.7900
911.07	24.7900
919.63	21.3218
920.93	23.1109
925.00	24.9292
925.24	27.0093
926.50	31.1804
934.06	29.1889
934.06	29.1889
934.06	29.1889
934.06	29.1889
935.52	22.9476
937.48	28.1849
944.10	31.3983
946.00	32.4689
949.00	28.3129
962.29	30.5671
964.01	30.5877
966.15	30.6131
968.20	34.8624
969.11	29.5911
969.11	29.5911
969.11	29.5911
977.42	25.4443
980.50	21.2284
983.50	31.8787
989.30	18.1043
996.32	45.9141
1001.03	21.3932
1001.68	28.8875
1004.76	42.8459
1021.30	0.0000
1024.50	0.0000
1034.80	22.7432
1037.82	26.9498
1038.57	25.0978

1038.76	0.0000
1045.16	27.9534
1046.59	30.7649
1048.07	27.9827
1050.47	26.1396
1050.47	26.1396
1063.62	28.1376
1076.63	26.3828
1077.35	27.3311
1085.78	26.4668
1099.22	35.1366
1112.02	34.3364
1112.84	35.3005
1115.52	27.6932
1120.29	21.9989
1120.29	21.9989
1120.29	21.9989
1120.29	21.9989
1120.51	24.8701
1121.28	27.7468
1124.00	0.0000
1129.67	26.8662
1131.51	0.0000
1147.95	0.0000
1167.94	23.3211
1173.22	34.0686
1175.09	26.2975
1177.93	18.5229
1189.05	14.6756
1204.90	18.6832
1205.75	21.6394
1213.00	18.7316
1221.42	22.7345
1230.97	16.8541
1235.34	15.8845
1236.41	0.0000
1238.11	20.8660
1238.11	20.8660
1238.11	20.8660
1238.11	20.8660
1238.25	20.8667
1246.25	21.9148
1260.41	0.0000
1271.85	19.0749
1274.45	13.0612
1274.54	14.0664
1291.56	31.3060
1298.22	0.0000
1312.09	26.4171
1325.50	20.4004
1325.50	20.4004
1332.49	16.3538
1333.61	16.3588
1360.21	21.6357
1362.66	0.0000
1365.15	8.2539
1368.21	11.3587
1368.53	0.0000
1376.25	17.5947
1377.67	17.6018
1377.67	17.6018
1377.67	17.6018
1377.67	17.6018
1384.27	19.7091
1394.10	22.8839
1395.20	22.8908
1407.95	18.7948
1434.06	12.6198
1436.60	16.8382
1457.56	0.0000
1460.81	13.7703
1489.15	18.1431
1509.49	18.7762
1596.49	16.3152
1620.62	15.4468
1678.03	0.0000
1691.02	6.8727
1691.02	6.8727

1706.46	0.0000
1750.46	0.0000
1764.49	12.9810
1764.49	12.9810
1764.49	12.9810
1764.49	12.9810
1770.23	15.9971
1771.40	14.2235
1791.20	0.0000
1808.65	10.0842
1836.01	18.2609

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201870087

Total Uranium Activity	-1.2958E-00	ug/g
Total Uranium Counting Unc.	2.0832E+00	ug/g
Total Uranium Tpu	1.0628E-06	ug/g
Total Uranium Mda	1.7653E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                            CHARLESTON ,SC 29417                           *
*                             GROSS GAMMA REPORT                            *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID   : G1201870087     *
*   ANALYST       : MXR1                      DETECTOR    : GAM18           *
*   SAMPLE DATE   : 29-JUN-2009 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 13:25:36.18    SAMPLE ALQT:  145.000 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.313E-02
GROSS GAMMA ERROR   (pCi/GRAM  )  : 8.763E-02
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.767E-01
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.322E-01
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:27:50.13

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:26:00.
Sample ID         : G1201870088          Sample quantity  : 1.26580E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.58  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.38	81	457	1.63	91.94	87	10	1.12E-02	50.8	
2	3	74.92*	606	672	1.86	148.92	140	21	8.41E-02	10.1	2.85E+00
3	3	77.18*	890	471	1.40	153.42	140	21	1.24E-01	5.9	
4	0	87.37*	181	643	1.18	173.78	168	9	2.52E-02	26.6	
5	0	90.14	91	374	0.97	179.31	176	6	1.26E-02	35.6	
6	0	92.80*	245	561	1.54	184.63	182	12	3.40E-02	20.8	
7	0	186.06*	222	323	1.18	370.87	365	13	3.09E-02	18.3	
8	0	209.21	93	266	1.04	417.10	412	11	1.29E-02	35.5	
9	0	238.67*	844	372	1.30	475.95	471	9	1.17E-01	5.4	
10	0	241.94	111	261	1.75	482.48	480	8	1.54E-02	28.0	
11	0	270.02	81	181	1.43	538.60	534	11	1.13E-02	33.8	
12	0	295.45*	261	195	1.43	589.39	582	13	3.63E-02	12.8	
13	0	299.99	66	140	1.32	598.47	595	10	9.19E-03	35.5	
14	1	338.23	227	91	1.82	674.87	668	44	3.15E-02	11.1	1.72E+00
15	1	351.94*	451	94	1.73	702.28	668	44	6.27E-02	6.2	
16	0	408.77	24	68	1.41	815.86	814	7	3.39E-03	58.8	
17	0	510.91*	116	101	1.99	1020.04	1012	17	1.62E-02	24.4	
18	0	562.03	44	51	3.79	1122.24	1116	12	6.10E-03	35.9	
19	0	583.47*	285	75	1.49	1165.11	1157	15	3.96E-02	9.1	
20	0	609.47*	299	72	1.55	1217.10	1208	15	4.16E-02	8.5	
21	0	728.43	64	65	0.94	1455.06	1448	17	8.95E-03	31.0	
22	0	768.27	25	39	0.64	1534.77	1530	9	3.53E-03	48.2	
23	0	861.58	44	49	1.91	1721.49	1716	13	6.07E-03	37.8	
24	0	911.26	199	30	1.87	1820.93	1813	15	2.76E-02	9.3	
25	0	969.10	113	36	1.73	1936.71	1932	11	1.58E-02	14.1	
26	0	1120.81	44	49	2.31	2240.52	2234	13	6.05E-03	37.2	
27	0	1460.72	968	26	2.25	2921.67	2913	17	1.35E-01	3.4	
28	0	1763.87*	45	7	1.94	3529.77	3523	14	6.27E-03	20.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 15:27:53

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:26:00
Sample ID : G1201870088 Sample quantity : 126.58 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:09.58 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.695E+01	3.457E+00	6.906E-01	4.395E-02	53.508
CD-109	+	88.03	*	1.776E+00	9.556E-01	9.947E-01	8.243E-02	1.786
SN-126		64.28		6.646E-02	2.592E-01	4.254E-01	6.128E-02	0.156
	+	86.94		7.270E-01	4.893E-01	4.942E-01	2.040E-01	1.471
	+	87.57	*	1.749E-01	9.407E-02	9.780E-02	8.076E-03	1.788
TL-208		277.35		2.235E-01	4.555E-01	7.330E-01	7.764E-02	0.305
	+	510.84		7.652E-01	3.817E-01	2.771E-01	2.908E-02	2.761
	+	583.14	*	5.532E-01	1.090E-01	7.485E-02	5.678E-03	7.390
	+	860.37		8.542E-01	6.494E-01	6.612E-01	5.287E-02	1.292
BI-210	+	46.50	*	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PB-210	+	46.50	*	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PO-210	+	46.50	*	7.869E-01	8.012E-01	8.779E-01	5.674E-02	0.896
BI-211		72.87		1.221E+01	2.284E+00	3.913E+00	2.924E-01	3.119
	+	351.07	*	3.351E+00	4.695E-01	3.811E-01	2.425E-02	8.794
PB-212	+	74.81		1.986E+00	4.651E-01	3.367E-01	4.047E-02	5.897
	+	77.11		1.737E+00	2.436E-01	2.007E-01	1.539E-02	8.657
	+	87.30		8.088E-01	4.425E-01	5.825E-01	7.548E-02	1.388
	+	238.63	*	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
	+	300.09		1.586E+00	1.132E+00	1.384E+00	1.148E-01	1.146
PO-212	+	74.81		1.986E+00	4.651E-01	3.367E-01	4.047E-02	5.897
	+	77.11		1.737E+00	2.436E-01	2.007E-01	1.539E-02	8.657
	+	87.30		8.088E-01	4.425E-01	5.825E-01	7.548E-02	1.388
		115.19		9.035E-01	3.464E+00	5.632E+00	6.058E-01	0.160
	+	238.63	*	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
	+	300.09		1.586E+00	1.132E+00	1.384E+00	1.148E-01	1.146
BI-214	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.656E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
PB-214	+	74.81		3.421E+00	7.773E-01	5.802E-01	6.140E-02	5.897
	+	77.11		2.978E+00	4.753E-01	3.440E-01	3.719E-02	8.657

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	-	87.30		1.386E+00	7.529E-01	9.979E-01	1.126E-01	1.388
	+	241.98		9.855E-01	5.574E-01	9.667E-01	8.042E-02	1.019
	-	295.21		1.096E+00	2.962E-01	2.600E-01	2.228E-02	4.216
	+	351.92	*	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-214	+	74.81		3.421E+00	7.773E-01	5.802E-01	6.140E-02	5.897
	+	77.11		2.978E+00	4.753E-01	3.440E-01	3.719E-02	8.657
	+	87.30		1.386E+00	7.529E-01	9.979E-01	1.126E-01	1.388
	-	241.98		9.855E-01	5.574E-01	9.667E-01	8.042E-02	1.019
	+	295.21		1.096E+00	2.962E-01	2.600E-01	2.228E-02	4.216
	+	351.92	*	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-216	+	74.81		1.986E+00	4.651E-01	3.367E-01	4.047E-02	5.897
	+	77.11		1.737E+00	2.436E-01	2.007E-01	1.539E-02	8.657
	+	87.30		8.088E-01	4.425E-01	5.825E-01	7.548E-02	1.388
	+	238.63	*	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
	+	300.09		1.586E+00	1.132E+00	1.384E+00	1.148E-01	1.146
PO-218	+	74.81		3.421E+00	7.773E-01	5.802E-01	6.140E-02	5.897
	+	77.11		2.978E+00	4.753E-01	3.440E-01	3.719E-02	8.657
	+	87.30		1.386E+00	7.529E-01	9.979E-01	1.126E-01	1.388
	+	241.98		9.855E-01	5.574E-01	9.667E-01	8.042E-02	1.019
	+	295.21		1.096E+00	2.962E-01	2.600E-01	2.228E-02	4.216
	+	351.92	*	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
RA-224	+	240.98	*	1.869E+00	1.052E+00	1.720E+00	1.058E-01	1.086
RA-226	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.656E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
AC-228	+	338.32		1.838E+00	8.524E-01	4.153E-01	1.693E-01	4.425
	+	911.07	*	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
	+	969.11		1.872E+00	6.778E-01	6.388E-01	1.455E-01	2.931
RA-228	+	338.32		1.838E+00	8.524E-01	4.153E-01	1.693E-01	4.425
	+	911.07	*	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
	+	969.11		1.872E+00	6.778E-01	6.388E-01	1.455E-01	2.931
TH-228		84.40		2.878E+00	2.340E+00	3.242E+00	4.144E-01	0.888
	+	238.60	*	1.242E+00	1.652E-01	1.167E-01	8.895E-03	10.641
	+	300.10		1.586E+00	1.462E+00	1.384E+00	8.159E-01	1.146
TH-230	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.655E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
TH-232	+	338.32		1.838E+00	4.201E-01	4.153E-01	2.404E-02	4.425
	+	911.07	*	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
	+	969.11		1.872E+00	6.778E-01	6.388E-01	1.455E-01	2.931
U-234	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662

---- Identified Nuclides ---

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.655E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
NP-237	+	86.50	*	5.135E-01	2.959E-01	3.023E-01	6.712E-02	1.699
		95.87		-5.696E-01	9.699E-01	1.314E+00	3.252E-01	-0.433
AM-243	+	74.67	*	3.219E-01	6.914E-02	5.458E-02	4.122E-03	5.898
	+	86.72		1.926E+01	1.036E+01	1.163E+01	9.542E-01	1.656
		117.66		7.535E-01	3.724E+00	6.039E+00	6.654E-01	0.125
		142.18		-2.529E+00	1.827E+01	2.907E+01	2.699E+00	-0.087
ANH-511	+	511.00	*	1.653E-01	8.129E-02	5.988E-02	3.820E-03	2.760

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.641E-01	4.302E-01	6.562E-01	4.619E-02	-0.403
NA-22		1274.54	*	6.557E-02	7.311E-02	1.292E-01	7.638E-03	0.508
NA-24		1368.53	*	-3.166E-01	7.311E-02	Half-Life too short		
AL-26		1129.67		-6.877E-01	2.495E+00	3.862E+00	2.324E-01	-0.178
		1808.65	*	-1.051E-02	3.649E-02	5.552E-02	3.091E-03	-0.189
TI-44		67.85		1.219E-02	3.007E-02	4.355E-02	3.169E-03	0.280
	+	78.38	*	3.206E-01	4.496E-02	6.169E-02	4.771E-03	5.196
SC-46		889.25	*	-1.588E-02	5.375E-02	8.622E-02	6.190E-03	-0.184
	+	1120.51		1.547E-01	1.153E-01	1.564E-01	9.521E-03	0.989
V-48		944.10		-2.187E-01	1.206E+00	1.953E+00	1.372E-01	-0.112
		983.50	*	5.992E-02	9.991E-02	1.742E-01	1.198E-02	0.344
		1312.09		-1.081E-01	1.262E-01	1.828E-01	1.092E-02	-0.591
CR-51		320.08	*	-4.038E-02	3.992E-01	6.552E-01	4.261E-02	-0.062
MN-52		744.21		4.735E-02	2.872E-01	4.863E-01	3.557E-02	0.097
		848.13		4.625E+00	8.389E+00	1.462E+01	1.063E+00	0.316
		935.52		-1.984E-01	3.239E-01	4.971E-01	3.507E-02	-0.399
		1246.25		-1.209E+01	1.038E+01	1.483E+01	8.660E-01	-0.815
		1333.61		3.150E-01	7.218E+00	1.176E+01	7.072E-01	0.027
		1434.06	*	-3.840E-02	2.686E-01	4.216E-01	2.541E-02	-0.091
MN-54		834.83	*	-1.488E-02	5.587E-02	9.065E-02	6.613E-03	-0.164
CO-56		846.75	*	3.235E-02	5.503E-02	9.619E-02	6.999E-03	0.336
		977.42		-2.161E+00	4.513E+00	6.681E+00	4.614E-01	-0.324
		1037.82		-7.076E-02	4.476E-01	7.227E-01	5.207E-02	-0.098
		1175.09		-7.305E-01	3.583E+00	5.732E+00	3.251E-01	-0.127
		1238.25		9.062E-02	1.518E-01	2.584E-01	1.598E-02	0.351
		1360.21		4.502E-01	1.398E+00	2.370E+00	1.428E-01	0.190
		1771.40		-5.249E-01	3.998E-01	4.864E-01	2.747E-02	-1.079
CO-57		122.06	*	-6.008E-03	2.436E-02	3.871E-02	4.455E-03	-0.155
		136.48		6.559E-02	2.184E-01	3.541E-01	3.725E-02	0.185
CO-58		810.76	*	-3.180E-02	5.495E-02	8.627E-02	6.337E-03	-0.369
FE-59		142.65		1.353E+00	2.787E+00	4.503E+00	4.156E-01	0.300

---- Non-Identified Nuclides - -

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		192.34		-4.383E-01	1.119E+00	1.595E+00	1.914E-01	-0.275
		1099.22	*	-8.393E-02	1.356E-01	2.072E-01	1.486E-02	-0.405
		1291.56		1.329E-01	1.814E-01	3.191E-01	2.402E-02	0.417
CO-60		1173.22		1.193E-02	7.294E-02	1.208E-01	6.846E-03	0.099
		1332.49	*	4.829E-02	6.165E-02	1.094E-01	6.580E-03	0.441
ZN-65		1115.52	*	1.213E-02	1.657E-01	2.348E-01	1.440E-02	0.052
GE-68		1077.35	*	-1.613E+00	1.887E+00	2.804E+00	1.789E-01	-0.575
AS-73		53.44	*	1.299E-01	2.351E-01	3.917E-01	2.632E-02	0.332
AS-74		595.88	*	4.065E-02	1.220E-01	2.020E-01	1.390E-02	0.201
		634.78		1.891E-01	4.714E-01	7.847E-01	5.532E-02	0.241
SE-75		66.05		-1.125E+00	2.664E+00	4.243E+00	3.950E-01	-0.265
		96.73		-2.737E-01	7.630E-01	1.056E+00	1.464E-01	-0.259
		121.11		-3.874E-02	1.293E-01	2.049E-01	2.760E-02	-0.189
		136.00		1.976E-02	4.058E-02	6.628E-02	6.671E-03	0.298
		198.60		-4.780E-01	1.862E+00	3.089E+00	2.300E-01	-0.155
		264.65	*	4.877E-02	5.346E-02	8.239E-02	4.984E-03	0.592
		279.53		6.237E-02	1.252E-01	2.129E-01	1.343E-02	0.293
		303.91		1.354E+00	2.544E+00	3.812E+00	3.652E-01	0.355
		400.65		3.381E-01	2.989E-01	5.252E-01	4.672E-02	0.644
BR-77	+	87.88		2.824E+02	1.519E+02	2.123E+02	1.757E+01	1.330
		200.40		-1.093E+02	1.264E+02	2.038E+02	1.262E+01	-0.536
	+	239.00		1.466E+02	1.835E+01	2.915E+01	1.795E+00	5.028
		249.79		1.275E+01	5.153E+01	8.691E+01	5.304E+00	0.147
		281.68		-5.589E+01	7.860E+01	1.255E+02	7.338E+00	-0.445
		297.23		2.896E+02	7.440E+01	1.050E+02	6.159E+00	2.758
		303.76		8.525E+01	1.600E+02	2.400E+02	1.408E+01	0.355
		439.47		1.220E+02	1.254E+02	2.193E+02	1.276E+01	0.556
		484.57		-1.725E+02	2.204E+02	3.353E+02	2.074E+01	-0.514
		520.65	*	3.035E+00	9.724E+00	1.617E+01	1.042E+00	0.188
		574.64		-5.127E+02	2.583E+02	3.139E+02	2.126E+01	-1.633
		578.91		4.588E+01	8.958E+01	1.328E+02	9.022E+00	0.346
		585.48		1.335E+03	2.710E+02	4.940E+02	3.374E+01	2.701
		755.35		3.379E+01	1.600E+02	2.719E+02	1.991E+01	0.124
		817.79		-6.687E+01	1.325E+02	2.089E+02	1.528E+01	-0.320
SR-82		698.33		-3.284E+01	4.636E+01	7.310E+01	5.293E+00	-0.449
		776.49	*	-1.496E-01	5.124E-01	8.311E-01	6.093E-02	-0.180
		1395.20		-1.254E+01	1.543E+01	2.149E+01	1.296E+00	-0.583
RB-83		520.41	*	4.499E-02	8.573E-02	1.451E-01	9.348E-03	0.310
		529.64		-8.516E-02	1.349E-01	2.060E-01	1.340E-02	-0.413
		552.65		3.275E-02	2.533E-01	4.141E-01	2.753E-02	0.079
RB-84		881.50	*	-3.621E-03	1.014E-01	1.673E-01	1.205E-02	-0.022
KR-85		513.99	*	1.758E+01	1.132E+01	1.812E+01	1.160E+00	0.970
SR-85		513.99	*	8.913E-02	5.739E-02	9.189E-02	5.881E-03	0.970
RB-86		1076.63	*	-9.767E-01	1.154E+00	1.717E+00	1.096E-01	-0.569
Y-88		898.02		3.973E-02	5.489E-02	9.741E-02	7.019E-03	0.408
		1836.01	*	4.953E-02	5.518E-02	1.061E-01	5.854E-03	0.467
ZR-88		392.90	*	3.692E-02	3.619E-02	6.331E-02	3.415E-03	0.583
Y-91		1204.90	*	7.631E+00	3.021E+01	5.035E+01	2.892E+00	0.152
NB-94		702.63	*	2.511E-02	4.630E-02	8.070E-02	5.851E-03	0.311

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		871.10		-3.763E-02	4.366E-02	6.501E-02	4.698E-03	-0.579
NB-95		765.79	*	7.909E-02	6.715E-02	1.091E-01	7.996E-03	0.725
NB-95M		235.69	*	3.978E-01	1.693E-01	2.723E-01	2.129E-02	1.461
ZR-95		724.18		9.015E-02	1.390E-01	2.158E-01	1.760E-02	0.418
		756.15	*	2.710E-02	9.296E-02	1.591E-01	1.326E-02	0.170
NB-97		657.90	*	-3.414E-02	9.296E-02	Half-Life too short		
		1024.50		1.468E+00	9.296E-02	Half-Life too short		
ZR-97		254.15		-2.325E+00	9.296E-02	Half-Life too short		
		355.39		1.203E+00	9.296E-02	Half-Life too short		
		507.63	*	1.450E+00	9.296E-02	Half-Life too short		
		602.52		-3.840E+00	9.296E-02	Half-Life too short		
		1021.30		1.151E-01	9.296E-02	Half-Life too short		
		1147.95		6.764E-01	9.296E-02	Half-Life too short		
		1362.66		1.565E+00	9.296E-02	Half-Life too short		
		1750.46		2.543E+00	9.296E-02	Half-Life too short		
MO-99		140.51		-1.404E+01	2.126E+01	3.248E+01	9.086E+00	-0.432
		181.06		1.600E+01	1.527E+01	2.333E+01	4.026E+00	0.686
		366.43		3.043E+01	7.787E+01	1.312E+02	7.373E+00	0.232
		739.58	*	6.249E+00	1.174E+01	2.047E+01	2.965E+00	0.305
		778.00		-2.414E+01	3.605E+01	5.625E+01	4.125E+00	-0.429
TC-99M		140.51	*	-1.435E+09	3.605E+01	Half-Life too short		
RH-101		127.23		3.104E-02	3.210E-02	5.328E-02	5.847E-03	0.583
		198.01	*	1.570E-02	3.341E-02	5.712E-02	3.534E-03	0.275
		325.23		-1.339E-01	2.619E-01	4.193E-01	2.447E-02	-0.319
RH-102		418.52		-1.837E-01	3.549E-01	5.583E-01	3.145E-02	-0.329
		475.06	*	-1.124E-02	3.807E-02	6.051E-02	3.699E-03	-0.186
		631.29		1.230E-02	7.896E-02	1.286E-01	9.048E-03	0.096
		697.49		-2.079E-02	1.075E-01	1.773E-01	1.283E-02	-0.117
	+	766.84		1.638E-01	1.583E-01	2.639E-01	1.934E-02	0.621
		1046.59		-2.026E-03	1.632E-01	2.675E-01	1.757E-02	-0.008
		1112.84		2.049E-01	3.718E-01	5.830E-01	3.581E-02	0.351
RU-103		497.08	*	-2.277E-02	5.178E-02	8.092E-02	1.042E-02	-0.281
	+	610.33		1.171E+01	2.733E+00	3.418E+00	5.431E-01	3.425
RH-106	+	511.85		8.239E-01	4.052E-01	5.381E-01	3.436E-02	1.531
		621.84	*	2.491E-01	4.594E-01	7.489E-01	9.266E-02	0.333
		1050.47		-1.151E+00	3.311E+00	5.227E+00	3.421E-01	-0.220
RU-106	+	511.85		8.239E-01	4.052E-01	5.381E-01	3.436E-02	1.531
		621.84	*	2.491E-01	4.587E-01	7.489E-01	5.241E-02	0.333
		1050.47		-1.151E+00	3.311E+00	5.227E+00	3.421E-01	-0.220
AG-108M		433.93	*	-2.350E-02	3.795E-02	5.879E-02	3.687E-03	-0.400
		614.37		4.115E-02	5.614E-02	8.510E-02	6.281E-03	0.484
		722.95		2.742E-02	6.062E-02	9.237E-02	7.097E-03	0.297
AG-110M		657.75	*	-3.334E-02	4.682E-02	7.386E-02	5.495E-03	-0.451
		677.61		-2.414E-01	4.077E-01	6.477E-01	4.845E-02	-0.373
		706.67		-1.019E-01	2.987E-01	4.862E-01	3.665E-02	-0.210
		763.93		1.472E-01	2.540E-01	3.908E-01	2.975E-02	0.377
		884.67		7.074E-02	7.264E-02	1.307E-01	9.834E-03	0.541
		937.48		-1.040E-01	1.535E-01	2.347E-01	1.743E-02	-0.443
		1384.27		-2.837E-01	2.444E-01	3.226E-01	2.055E-02	-0.880

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-111		171.28		-1.453E-02	7.618E-01	1.282E+00	7.792E-02	-0.011
		245.39	*	4.262E-01	9.961E-01	1.486E+00	9.104E-02	0.287
IN-113M		391.69	*	6.374E-02	5.410E-02	9.528E-02	5.524E-03	0.669
SN-113		391.69	*	6.374E-02	5.410E-02	9.528E-02	5.524E-03	0.669
IN-114M		190.27	*	6.853E-02	2.027E-01	3.024E-01	1.864E-02	0.227
CD-115		260.90		-9.402E+01	1.048E+02	1.660E+02	9.997E+00	-0.566
		492.35		-2.128E+01	3.269E+01	5.011E+01	3.130E+00	-0.425
		527.90	*	6.255E+00	9.846E+00	1.680E+01	1.091E+00	0.372
SN-117M		156.02		1.699E+00	2.272E+00	3.741E+00	2.802E-01	0.454
		158.56	*	-1.392E-03	5.565E-02	8.869E-02	6.325E-03	-0.016
SB-122		563.90	*	-3.890E+00	3.114E+00	3.766E+00	2.528E-01	-1.033
		692.80		2.494E+01	4.505E+01	7.871E+01	5.690E+00	0.317
I-123		159.00	*	1.559E-01	4.505E+01	Half-Life too short		
		528.96		-6.317E+00	4.505E+01	Half-Life too short		
TE-123M		159.00	*	2.922E-03	3.016E-02	4.832E-02	3.447E-03	0.060
I-124		602.71	*	-9.016E-01	8.791E-01	1.052E+00	7.276E-02	-0.857
		722.78		2.581E+00	5.329E+00	8.148E+00	5.937E-01	0.317
		1325.50		1.446E+00	4.815E+01	7.832E+01	4.701E+00	0.018
		1376.25		4.338E+01	3.808E+01	7.046E+01	4.247E+00	0.616
		1509.49		9.829E+00	1.737E+01	3.156E+01	1.893E+00	0.311
		1691.02		1.744E-01	3.993E+00	6.698E+00	3.881E-01	0.026
SB-124		602.71		-6.169E-02	6.015E-02	7.200E-02	4.980E-03	-0.857
		645.85		-1.568E-01	6.604E-01	1.035E+00	7.979E-02	-0.152
		709.31		1.180E+00	3.847E+00	6.591E+00	4.788E-01	0.179
		713.82		-9.601E-01	2.145E+00	3.438E+00	3.821E-01	-0.279
		722.78		2.560E-01	5.285E-01	8.081E-01	6.066E-02	0.317
	+	968.20		1.904E+01	5.520E+00	9.965E+00	6.917E-01	1.911
		1045.16		9.851E-02	3.566E+00	5.871E+00	3.861E-01	0.017
		1325.50		1.532E-01	5.101E+00	8.296E+00	4.979E-01	0.018
		1368.21		-2.281E+00	2.633E+00	3.658E+00	4.384E-01	-0.623
		1436.60		5.798E+00	4.520E+00	8.929E+00	5.382E-01	0.649
		1691.02	*	4.079E-03	9.340E-02	1.567E-01	9.858E-03	0.026
SB-125		427.89	*	-9.888E-02	1.165E-01	1.783E-01	1.064E-02	-0.555
		463.38		5.514E-01	3.777E-01	6.711E-01	4.666E-02	0.822
		600.56		-1.336E-01	2.669E-01	3.662E-01	2.813E-02	-0.365
		635.90		-4.112E-02	3.608E-01	5.730E-01	4.521E-02	-0.072
TE-125M		109.28	*	-1.305E+01	8.998E+00	1.345E+01	1.565E+00	-0.970
I-126		388.63		-4.061E-02	2.437E-01	3.954E-01	2.141E-02	-0.103
		666.33	*	1.801E-01	2.369E-01	4.196E-01	3.004E-02	0.429
		753.82		1.594E+00	1.816E+00	3.260E+00	2.387E-01	0.489
SB-126		223.80		2.978E+00	4.039E+00	6.965E+00	4.319E-01	0.428
		278.60		2.619E+00	2.672E+00	4.640E+00	2.713E-01	0.564
	+	296.50		1.029E+01	2.704E+00	3.689E+00	2.164E-01	2.788
		414.70		9.066E-03	9.787E-02	1.464E-01	8.194E-03	0.062
		415.30		2.095E-01	7.759E+00	1.199E+01	6.717E-01	0.017
		555.20		-3.515E+00	5.860E+00	7.535E+00	5.021E-01	-0.467
		573.80		-2.870E+00	1.535E+00	2.084E+00	1.411E-01	-1.377
		593.00		-3.392E-01	1.248E+00	1.964E+00	1.349E-01	-0.173
		656.30		-1.573E+00	4.209E+00	6.847E+00	4.879E-01	-0.230

--- Non-Identified Nuclides ---

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		666.33		7.509E-02	9.878E-02	1.749E-01	1.252E-02	0.429
		675.00		1.253E-00	2.505E-00	4.369E+00	3.138E-01	0.287
		695.00		7.136E-02	1.011E-01	1.783E-01	1.290E-02	0.400
		697.00		-1.182E-02	3.555E-01	5.936E-01	4.297E-02	-0.020
		720.50	*	6.013E-02	1.979E-01	3.073E-01	2.238E-02	0.196
		856.80		2.761E-01	6.731E-01	1.017E+00	7.381E-02	0.271
		989.30		-1.727E-01	1.801E+00	2.937E+00	2.014E-01	-0.059
		1034.80		-1.164E+00	1.210E+01	1.968E+01	1.305E+00	-0.059
		1213.00		6.938E-01	7.361E+00	1.209E+01	6.967E-01	0.057
SB-127		61.10		7.656E+00	2.134E+01	3.518E+01	3.405E+00	0.218
		252.40		-2.717E+00	4.007E+00	6.164E+00	2.558E+00	-0.441
		290.80		1.467E+01	2.205E+01	3.331E+01	2.939E+00	0.440
		411.60		1.962E+00	1.528E+01	2.188E+01	3.072E+00	0.090
		444.90		-5.481E-01	9.868E+00	1.603E+01	1.684E+00	-0.034
		473.00		-2.059E-01	1.840E+00	2.968E+00	3.274E-01	-0.069
		543.00		-1.128E+00	1.891E+01	3.038E+01	3.956E+00	-0.037
		603.60		-2.457E+00	1.383E+01	1.873E+01	2.079E+00	-0.131
		685.20	*	-4.788E-01	1.429E+00	2.320E+00	2.326E-01	-0.206
		698.50		-1.541E+01	1.789E+01	2.765E+01	4.116E+00	-0.557
		722.20		1.204E+01	3.661E+01	5.493E+01	5.398E+00	0.219
		783.80		1.802E+00	4.062E+00	7.019E+00	7.905E-01	0.257
XE-127		57.60		-1.594E+00	2.220E+00	3.533E+00	2.452E-01	-0.451
		145.22		5.596E-01	7.126E-01	1.175E+00	1.047E-01	0.476
		172.10		4.363E-02	1.160E-01	1.982E-01	1.206E-02	0.220
		202.84	*	1.058E-02	5.262E-02	8.118E-02	5.032E-03	0.130
		374.96		-2.907E-01	2.416E-01	3.639E-01	2.019E-02	-0.799
I-131		80.18		-1.790E-02	3.660E+00	4.828E+00	3.805E-01	-0.004
		284.30		8.648E-02	1.516E+00	2.522E+00	1.636E-01	0.034
		364.48	*	-6.412E-02	1.224E-01	1.939E-01	1.225E-02	-0.331
		636.97		-7.261E-01	1.889E+00	2.918E+00	2.226E-01	-0.249
		722.89		4.400E+00	9.335E+00	1.425E+01	1.047E+00	0.309
TE-132		49.72		-3.503E+00	3.898E+00	5.324E+00	4.784E-01	-0.658
		111.76		-7.485E+00	2.272E+01	3.608E+01	4.357E+00	-0.207
		116.30		8.062E+00	2.191E+01	3.573E+01	4.461E+00	0.226
		228.16	*	-3.365E-01	5.814E-01	9.411E-01	1.348E-01	-0.358
BA-133		53.15		5.117E-01	1.008E+00	1.677E+00	1.125E-01	0.305
		79.62		3.010E+00	1.177E+00	1.720E+00	2.542E-01	1.749
		81.00		-1.227E-01	9.928E-02	1.062E-01	1.645E-02	-1.155
		276.40		3.398E-01	4.630E-01	7.283E-01	9.465E-02	0.467
		302.84		2.436E-01	1.753E-01	2.772E-01	3.241E-02	0.879
		356.01	*	-1.100E-02	5.778E-02	8.086E-02	9.304E-03	-0.136
		383.85		-8.380E-02	3.723E-01	6.016E-01	6.435E-02	-0.139
I-133	+	510.53		7.219E-01	3.723E-01	Half-Life too short		
		529.87	*	-3.176E-03	3.723E-01	Half-Life too short		
		706.58		-7.914E-02	3.723E-01	Half-Life too short		
		856.28		2.350E-01	3.723E-01	Half-Life too short		
		875.33		6.783E-02	3.723E-01	Half-Life too short		
		1236.41		7.037E-02	3.723E-01	Half-Life too short		
		1298.22		-2.446E-02	3.723E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Iden	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		475.35		3.777E-01	2.441E+00	4.018E+00	2.457E-01	0.094
	+	563.23		8.327E-01	6.002E-01	8.245E-01	5.619E-02	1.010
		569.32		9.463E-01	3.291E-01	6.021E-01	4.151E-02	1.572
		604.70		3.563E-03	4.719E-02	6.611E-02	4.595E-03	0.054
		795.84	*	7.015E-02	6.573E-02	1.187E-01	8.785E-03	0.591
		801.93		-4.385E-01	5.479E-01	8.402E-01	6.204E-02	-0.522
		1038.57		-3.781E+00	5.640E+00	8.571E+00	5.667E-01	-0.441
		1167.94		1.668E-01	3.873E+00	6.347E+00	3.625E-01	0.026
		1365.15		-6.143E-01	1.680E+00	2.552E+00	1.678E-01	-0.241
CS-135		268.24	*	2.359E-01	2.021E-01	3.142E-01	2.444E-02	0.751
I-135		288.45		9.895E+08	2.021E-01	Half-Life too short		
		417.63		-2.908E+08	2.021E-01	Half-Life too short		
		546.56		-1.462E+09	2.021E-01	Half-Life too short		
		836.80		3.321E+08	2.021E-01	Half-Life too short		
		1038.76		-1.184E+09	2.021E-01	Half-Life too short		
		1124.00		7.294E+09	2.021E-01	Half-Life too short		
		1131.51		-2.839E+08	2.021E-01	Half-Life too short		
		1260.41	*	-9.902E+07	2.021E-01	Half-Life too short		
		1457.56		6.462E+10	2.021E-01	Half-Life too short		
		1678.03		1.112E+08	2.021E-01	Half-Life too short		
		1706.46		-4.992E+08	2.021E-01	Half-Life too short		
		1791.20		1.665E+09	2.021E-01	Half-Life too short		
CS-136		66.91		-2.036E-01	4.572E-01	6.713E-01	9.876E-02	-0.303
	+	86.29		2.158E+00	1.179E+00	1.574E+00	1.977E-01	1.371
		153.22		-1.148E-02	6.578E-01	1.050E+00	9.418E-02	-0.011
		163.89		2.852E-01	9.883E-01	1.685E+00	1.297E-01	0.169
		176.55		-2.927E-01	3.638E-01	5.914E-01	4.016E-02	-0.495
		273.65		-9.046E-01	5.879E-01	7.493E-01	5.023E-02	-1.207
		340.57		6.387E-01	1.660E-01	3.136E-01	1.927E-02	2.037
		818.51		-1.770E-02	9.542E-02	1.557E-01	1.140E-02	-0.114
		1048.07	*	7.705E-03	1.481E-01	2.444E-01	1.719E-02	0.032
		1235.34		3.363E-01	9.621E-01	1.608E+00	1.607E-01	0.209
BA-137M		661.65	*	6.488E-03	4.788E-02	8.120E-02	5.800E-03	0.080
CS-137		661.65	*	6.859E-03	5.061E-02	8.584E-02	6.149E-03	0.080
CE-139		165.85	*	2.732E-03	2.858E-02	4.835E-02	2.930E-03	0.057
BA-140		162.64		1.116E-01	6.935E-01	1.177E+00	8.459E-02	0.095
		304.84		-2.757E-01	1.506E+00	2.124E+00	5.800E-01	-0.130
		423.70		1.528E+00	2.308E+00	3.861E+00	1.226E+00	0.396
		537.32	*	-1.941E-02	3.457E-01	5.569E-01	1.819E-01	-0.035
LA-140		328.77		5.420E-01	3.377E-01	6.015E-01	3.921E-02	0.901
		432.53		8.823E-01	2.258E+00	3.799E+00	2.420E-01	0.232
		487.03		3.207E-02	1.618E-01	2.673E-01	1.851E-02	0.120
		751.79		-4.885E-01	2.141E+00	3.497E+00	2.933E-01	-0.140
		815.85		-1.926E-01	4.205E-01	6.671E-01	5.646E-02	-0.289
		867.82		-1.108E+00	2.020E+00	2.622E+00	2.038E-01	-0.423
		919.63		-2.022E+00	3.617E+00	5.276E+00	4.991E-01	-0.383
		925.24		1.019E+00	1.478E+00	2.609E+00	2.018E-01	0.391
		1596.49	*	9.722E-03	1.225E-01	2.067E-01	1.225E-02	0.047
CE-141		145.44	*	5.502E-02	6.474E-02	1.069E-01	9.664E-03	0.515

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-143		57.37		-1.880E-04	6.474E-02	Half-Life too short		
		231.56		-4.067E-04	6.474E-02	Half-Life too short		
		293.26	*	4.048E-04	6.474E-02	Half-Life too short		
	+	350.59		1.559E-02	6.474E-02	Half-Life too short		
		490.36		5.722E-04	6.474E-02	Half-Life too short		
		664.57		4.569E-04	6.474E-02	Half-Life too short		
		721.93		3.782E-04	6.474E-02	Half-Life too short		
CE-144		80.11		9.476E-01	1.692E+00	2.459E+00	1.924E-01	0.385
		133.54	*	-1.026E-01	2.179E-01	3.415E-01	5.652E-02	-0.300
PM-144		476.78		-7.000E-02	9.067E-02	1.363E-01	9.837E-03	-0.514
		618.01		-1.493E-04	4.494E-02	7.225E-02	5.256E-03	-0.002
		696.49	*	2.872E-02	4.759E-02	8.333E-02	6.033E-03	0.345
		778.57		-1.330E+00	3.077E+00	4.914E+00	3.604E-01	-0.271
PR-144		696.49	*	1.945E+00	3.223E+00	5.643E+00	4.084E-01	0.345
		1489.15		-3.899E+00	1.558E+01	2.492E+01	1.498E+00	-0.156
PM-146		453.90	*	2.317E-02	5.392E-02	9.069E-02	7.907E-03	0.255
		633.02		7.861E-01	1.961E+00	3.229E+00	1.196E+00	0.243
		735.90		-2.602E-01	2.548E-01	3.008E-01	8.493E-02	-0.865
		747.13		6.989E-03	1.194E-01	2.003E-01	2.660E-02	0.035
ND-147	+	91.11		2.832E-01	2.033E-01	4.016E-01	3.713E-02	0.705
		319.41		-2.159E+00	3.439E+00	5.452E+00	3.190E-01	-0.396
		439.89		7.107E+00	6.527E+00	1.150E+01	6.698E-01	0.618
		531.02	*	-4.697E-01	7.083E-01	1.077E+00	1.491E-01	-0.436
PM-149		285.90	*	-1.116E+02	7.627E+01	1.132E+02	1.607E+01	-0.986
EU-152		121.78		-3.555E-02	7.174E-02	1.126E-01	1.405E-02	-0.316
		244.69		5.291E-01	4.216E-01	6.585E-01	4.038E-02	0.804
		344.27	*	-3.407E-03	1.105E-01	1.818E-01	1.182E-02	-0.019
		443.98		-4.443E-01	1.220E+00	1.935E+00	1.134E-01	-0.230
		778.89		-1.085E-01	3.601E-01	5.831E-01	4.275E-02	-0.186
		867.32		-4.481E-01	1.224E+00	1.638E+00	1.185E-01	-0.274
		964.01		6.849E-01	4.948E-01	8.143E-01	5.666E-02	0.841
		1085.78		-6.019E-01	6.418E-01	9.492E-01	6.006E-02	-0.634
		1112.02		2.092E-02	5.065E-01	7.936E-01	4.879E-02	0.026
		1407.95		2.550E-01	2.668E-01	4.892E-01	2.950E-02	0.521
GD-153		69.67		9.291E-02	1.109E+00	1.585E+00	1.164E-01	0.059
		83.37		-7.838E+00	1.789E+01	1.754E+01	1.404E+00	-0.447
		97.43	*	1.592E-02	7.918E-02	1.129E-01	1.022E-02	0.141
		103.18		-1.104E-01	9.988E-02	1.533E-01	1.467E-02	-0.720
EU-154		123.07		-3.178E-02	4.976E-02	7.736E-02	1.052E-02	-0.411
		247.94		-6.253E-02	4.276E-01	6.417E-01	6.247E-02	-0.097
		591.81		3.479E-01	8.808E-01	1.429E+00	1.492E-01	0.243
		723.30		2.376E-02	2.634E-01	3.839E-01	3.203E-02	0.062
		756.87		-9.209E-02	1.055E+00	1.746E+00	1.935E-01	-0.053
		873.19		9.637E-02	3.782E-01	6.438E-01	7.277E-02	0.150
		996.32		-1.228E-01	5.723E-01	9.217E-01	1.564E-01	-0.133
		1004.76		4.374E-02	3.219E-01	5.366E-01	5.556E-02	0.082
		1274.45	*	1.814E-01	2.046E-01	3.604E-01	3.390E-02	0.503
EU-155		48.70		-1.001E-01	5.599E-01	7.968E-01	5.201E-02	-0.126
		60.01		-1.867E-01	2.133E+00	3.472E+00	2.452E-01	-0.054

---- Non-identified Nuclides ----

Nuclide	Line Idnd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.54		2.105E-01	1.133E-01	1.525E-01	1.263E-02	1.381
		105.31	*	1.413E-01	9.937E-02	1.676E-01	1.652E-02	0.843
TB-160	+	86.79		5.569E-01	2.996E-01	4.019E-01	3.299E-02	1.386
		197.04		3.260E-01	5.646E-01	9.692E-01	5.995E-02	0.336
		215.65		3.593E-01	8.201E-01	1.281E+00	7.952E-02	0.281
	+	298.57		2.285E-01	1.625E-01	2.402E-01	1.409E-02	0.951
		879.36	*	-7.121E-02	2.036E-01	3.258E-01	2.348E-02	-0.219
		962.29		9.747E-01	8.597E-01	1.426E+00	9.934E-02	0.683
		966.15		9.756E-01	4.245E-01	7.236E-01	5.029E-02	1.348
		1177.93		-2.487E-01	5.785E-01	9.045E-01	5.137E-02	-0.275
		1271.85		-4.907E-01	1.162E+00	1.800E+00	1.061E-01	-0.273
HO-166M		80.57		-1.766E-01	2.383E-01	2.991E-01	2.348E-02	-0.590
		184.41		6.549E-02	4.478E-02	6.941E-02	4.264E-03	0.943
		280.46		1.188E-02	9.895E-02	1.652E-01	9.651E-03	0.072
		410.95		1.767E-01	3.683E-01	5.439E-01	3.026E-02	0.325
		711.68	*	3.563E-02	8.049E-02	1.396E-01	1.015E-02	0.255
		752.31		7.761E-02	3.470E-01	5.911E-01	4.327E-02	0.131
		810.29		-3.099E-02	8.079E-02	1.293E-01	9.465E-03	-0.240
TM-171		51.35		3.463E+00	8.610E+00	1.259E+01	8.341E-01	0.275
		52.39		3.694E+00	4.313E+00	7.030E+00	4.690E-01	0.525
		59.40		-2.722E+00	1.109E+01	1.796E+01	1.266E+00	-0.152
		66.72	*	-1.118E+01	1.754E+01	2.560E+01	1.853E+00	-0.437
LU-176	+	88.36		4.148E-01	2.231E-01	3.172E-01	2.637E-02	1.307
		201.83		5.912E-03	3.047E-02	5.020E-02	3.110E-03	0.118
		306.84	*	-1.033E-02	2.983E-02	4.359E-02	2.557E-03	-0.237
		401.10		6.970E+00	7.894E+00	1.370E+01	7.496E-01	0.509
LU-177		112.95		2.878E-01	1.399E+00	2.271E+00	2.389E-01	0.127
	+	208.36	*	2.120E+00	1.512E+00	1.890E+00	1.173E-01	1.122
LU-177M		52.97		2.461E-01	4.475E-01	7.456E-01	4.994E-02	0.330
		54.07		-6.653E-02	2.550E-01	4.131E-01	2.789E-02	-0.161
		61.30		6.084E-01	6.667E-01	1.116E+00	7.908E-02	0.545
		121.62		-1.837E-01	3.659E-01	5.741E-01	6.574E-02	-0.320
		147.16		-3.585E-01	6.937E-01	1.083E+00	9.390E-02	-0.331
		171.86		-1.070E-02	4.778E-01	8.037E-01	4.888E-02	-0.013
		218.09		-2.848E-01	8.902E-01	1.467E+00	9.105E-02	-0.194
	+	268.79		1.876E+00	1.271E+00	1.598E+00	9.514E-02	1.173
		319.02		-1.099E-01	2.850E-01	4.594E-01	2.687E-02	-0.239
		367.43		9.572E-01	1.089E+00	1.888E+00	1.059E-01	0.507
		413.65	*	2.090E-01	2.368E-01	3.647E-01	2.038E-02	0.573
HF-181		56.28		-4.989E-01	3.258E-01	5.012E-01	3.441E-02	-0.995
		57.53		-1.395E-01	1.865E-01	2.966E-01	2.057E-02	-0.470
		65.20		1.236E-01	4.958E-01	8.064E-01	5.797E-02	0.153
		133.02		-7.285E-02	6.991E-02	1.066E-01	1.103E-02	-0.683
		136.25		1.457E-01	4.714E-01	7.647E-01	7.635E-02	0.190
		345.85		-8.924E-02	2.099E-01	3.358E-01	1.932E-02	-0.266
		482.03	*	1.406E-02	5.384E-02	8.931E-02	5.508E-03	0.157
W-181		56.28		-1.973E-01	1.290E-01	1.985E-01	1.362E-02	-0.994
		57.53		-5.531E-02	7.389E-02	1.175E-01	8.147E-03	-0.471
		65.20	*	4.856E-02	1.949E-01	3.169E-01	2.278E-02	0.153

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-162		67.75		-7.823E-03	7.277E-02	1.032E-01	7.507E-03	-0.076
		100.10		2.207E-01	1.776E-01	2.655E-01	2.466E-02	0.831
		152.43		3.638E-02	3.510E-01	5.632E-01	4.494E-02	0.065
		222.10		1.238E-01	3.580E-01	6.077E-01	3.770E-02	0.204
		1001.68		1.475E+00	3.031E+00	5.215E+00	3.546E-01	0.283
	+	1121.28		4.282E-01	3.192E-01	4.234E-01	2.574E-02	1.011
		1189.05		-4.274E-01	4.935E-01	7.355E-01	4.197E-02	-0.581
		1221.42	*	1.225E-01	3.574E-01	5.976E-01	3.456E-02	0.205
		1230.97		-1.275E-01	8.387E-01	1.348E+00	7.824E-02	-0.095
RE-183		57.98		-3.688E-02	7.522E-02	1.208E-01	8.406E-03	-0.305
		59.32		-1.182E-02	4.501E-02	7.286E-02	5.130E-03	-0.162
		67.20		-5.281E-02	1.305E-01	1.818E-01	1.319E-02	-0.290
		162.32	*	-1.156E-02	1.081E-01	1.815E-01	1.195E-02	-0.064
	+	208.81		2.104E+00	1.500E+00	1.880E+00	1.167E-01	1.119
		291.72		1.062E+00	1.162E+00	1.786E+00	1.047E-01	0.595
RE-184		57.98		-1.367E-01	2.789E-01	4.477E-01	3.117E-02	-0.305
		59.32		-4.380E-02	1.667E-01	2.699E-01	1.901E-02	-0.162
		67.20		-1.957E-01	4.835E-01	6.738E-01	4.887E-02	-0.290
		161.27		-6.276E-02	3.536E-01	5.922E-01	3.992E-02	-0.106
		216.55		-3.732E-02	2.790E-01	4.517E-01	2.804E-02	-0.083
		252.85	*	-2.406E-01	2.517E-01	3.974E-01	2.418E-02	-0.605
		318.01		-9.380E-02	4.983E-01	8.137E-01	4.761E-02	-0.115
		792.07		-5.158E-01	1.461E+00	2.359E+00	1.729E-01	-0.219
		903.28		-4.895E-01	1.512E+00	2.038E+00	1.456E-01	-0.240
		920.93		-7.494E-01	6.052E-01	8.519E-01	6.047E-02	-0.880
OS-185		59.72		-2.504E-02	1.237E-01	2.006E-01	1.415E-02	-0.125
		61.14		5.752E-02	7.221E-02	1.205E-01	8.538E-03	0.477
		69.30		3.752E-02	1.966E-01	2.823E-01	2.069E-02	0.133
		592.07		9.538E-02	3.581E+00	5.784E+00	3.970E-01	0.016
		646.12	*	5.061E-03	5.549E-02	8.986E-02	6.373E-03	0.056
		717.42		-3.119E-01	1.173E+00	1.914E+00	1.393E-01	-0.163
		874.81		5.289E-01	7.586E-01	1.346E+00	9.715E-02	0.393
		880.27		2.005E-01	1.123E+00	1.892E+00	1.363E-01	0.106
RE-188		155.03	*	5.642E-02	1.796E-01	2.906E-01	2.216E-02	0.194
		477.96		-1.577E+00	4.113E+00	6.397E+00	3.925E-01	-0.247
		633.10		1.651E+00	3.888E+00	6.481E+00	4.565E-01	0.255
W-188		63.58		1.121E+01	2.579E+01	4.256E+01	3.040E+00	0.263
		227.08		2.726E-01	1.335E+01	2.232E+01	1.383E+00	0.012
		290.67	*	6.439E+00	9.148E+00	1.387E+01	8.130E-01	0.464
IR-192	+	295.96		8.276E-01	2.177E-01	2.991E-01	1.781E-02	2.767
		308.46		-6.701E-02	1.026E-01	1.625E-01	9.638E-03	-0.412
		316.51	*	9.225E-03	3.775E-02	6.330E-02	3.724E-03	0.146
		468.07		-8.653E-02	9.085E-02	1.373E-01	9.488E-03	-0.630
		604.41		6.138E-02	6.334E-01	8.899E-01	1.064E-01	0.069
		612.46		4.017E+00	1.354E+00	2.313E+00	1.965E-01	1.736
AU-195		65.12		1.417E-02	9.045E-02	1.467E-01	1.054E-02	0.097
		66.83		-2.606E-02	5.761E-02	8.472E-02	6.134E-03	-0.308
	+	75.70		1.038E+00	2.229E-01	3.463E-01	2.632E-02	2.996
		98.88	*	1.931E-01	2.281E-01	3.352E-01	3.077E-02	0.576

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		129.76		3.464E+00	2.958E+00	4.927E+00	5.275E-01	0.703
TL-200		367.94	*	2.176E-04	2.958E+00	Half-Life too short		
		579.30		1.998E-03	2.958E+00	Half-Life too short		
		828.27		1.364E-03	2.958E+00	Half-Life too short		
		1205.75		4.168E-04	2.958E+00	Half-Life too short		
TL-201		68.90		9.584E-01	2.476E+00	3.584E+00	2.621E-01	0.267
		70.82		8.955E-02	1.500E+00	2.140E+00	1.581E-01	0.042
		80.30		-1.088E+00	3.415E+00	4.428E+00	3.469E-01	-0.246
		135.34		1.085E+01	2.072E+01	3.390E+01	3.419E+00	0.320
		167.43	*	-1.682E+00	5.313E+00	8.833E+00	5.350E-01	-0.190
TL-202		68.90		1.033E-01	2.669E-01	3.862E-01	2.824E-02	0.267
		70.82		9.623E-03	1.612E-01	2.300E-01	1.699E-02	0.042
		80.30		-1.170E-01	3.671E-01	4.760E-01	3.729E-02	-0.246
		439.56	*	8.995E-02	7.708E-02	1.366E-01	7.950E-03	0.659
HG-203		70.83		4.578E-02	7.303E-01	1.042E+00	1.340E-01	0.044
		72.87		2.390E+00	5.070E-01	7.662E-01	9.565E-02	3.119
		82.60		-9.077E-01	1.323E+00	1.267E+00	1.690E-01	-0.717
		279.20	*	4.967E-02	4.589E-02	8.009E-02	4.962E-03	0.620
BI-207		72.80		6.677E-01	1.308E-01	2.248E-01	1.679E-02	2.970
	+	74.97		5.778E-01	1.241E-01	1.736E-01	1.313E-02	3.329
		84.90		4.004E-01	1.689E-01	2.586E-01	2.093E-02	1.548
		569.67		1.221E-01	5.090E-02	9.251E-02	6.241E-03	1.320
		1063.62	*	1.401E-02	8.373E-02	1.395E-01	9.025E-03	0.100
		1770.23		-2.064E-01	7.727E-01	9.976E-01	5.637E-02	-0.207
TL-207		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022
PO-209		260.50		-8.929E+00	1.067E+01	1.695E+01	1.021E+00	-0.527
		262.80		-1.546E+01	3.029E+01	4.761E+01	2.860E+00	-0.325
		896.60	*	6.425E+00	9.736E+00	1.720E+01	1.231E+00	0.373
PB-211		404.84	*	2.169E-01	1.339E+00	1.917E+00	1.195E+00	0.113
		427.08		-1.796E+00	2.884E+00	4.140E+00	2.559E+00	-0.434
		831.96		-6.086E-01	1.752E+00	2.746E+00	1.716E+00	-0.222
BI-212	+	727.18	*	1.122E+00	7.036E-01	8.218E-01	7.307E-02	1.366
		785.46		6.702E-01	2.418E+00	4.124E+00	3.023E-01	0.163
		1620.62		1.096E+00	1.971E+00	3.556E+00	2.097E-01	0.308
PO-215		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152

---- Non-identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022
RN-219	+	271.23		5.660E-01	3.849E-01	5.100E-01	4.180E-02	1.110
		401.81	*	4.753E-01	5.006E-01	8.656E-01	1.166E-01	0.549
RN-220		549.76	*	1.556E+01	3.317E+01	5.582E+01	3.702E+00	0.279
RA-223		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022
AC-227		79.80		1.971E+00	1.402E+00	2.020E+00	4.281E-01	0.976
		236.00		1.652E+00	3.804E-01	6.020E-01	6.419E-02	2.744
		256.20	*	2.854E-01	4.113E-01	7.054E-01	9.925E-02	0.405
		286.10		-2.704E+00	1.780E+00	2.653E+00	3.074E-01	-1.019
	+	299.80		2.939E+00	2.138E+00	2.929E+00	4.777E-01	1.004
		304.40		5.228E-01	2.300E+00	3.363E+00	5.824E-01	0.155
		334.20		-1.609E+00	3.193E+00	4.351E+00	7.978E-01	-0.370
TH-227		79.80		1.971E+00	1.404E+00	2.020E+00	4.338E-01	0.976
	+	94.00		6.319E+00	2.965E+00	3.071E+00	6.705E-01	2.058
		236.00		1.652E+00	3.705E-01	6.020E-01	5.598E-02	2.744
		256.20	*	2.854E-01	4.122E-01	7.054E-01	1.199E-01	0.405
		286.10		-2.704E+00	3.226E+00	2.653E+00	2.657E+00	-1.019
	+	299.80		2.939E+00	2.138E+00	2.929E+00	4.777E-01	1.004
		304.40		5.228E-01	2.300E+00	3.363E+00	5.824E-01	0.155
		334.20		-1.609E+00	3.193E+00	4.351E+00	7.978E-01	-0.370
TH-229		85.43		6.579E-01	1.771E-01	2.763E-01	2.246E-02	2.381
	+	88.47		2.388E-01	1.284E-01	1.819E-01	1.514E-02	1.312
		100.00		2.366E-01	1.856E-01	2.779E-01	2.578E-02	0.851
		193.63	*	-8.417E-02	5.510E-01	8.672E-01	5.356E-02	-0.097
		210.97		1.321E+00	9.138E-01	1.439E+00	8.930E-02	0.918
PA-231		283.67	*	7.009E-01	1.681E+00	2.847E+00	3.929E-01	0.246
	+	301.29		1.176E+00	8.427E-01	1.192E+00	1.250E-01	0.987
TH-231		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022

---- Non-Identified Nuclides ----

Nuclide	Line Idd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		3.421E+00	4.517E+00	5.622E+00	4.528E-01	0.608
	+	92.29		5.242E+00	2.225E+00	2.677E+00	2.308E-01	1.958
		95.87	*	-5.421E-01	9.145E-01	1.251E+00	1.116E-01	-0.433
		108.00		-8.187E-01	1.633E+00	2.576E+00	2.583E-01	-0.318
PA-233	+	75.28		1.686E+01	4.207E+00	5.337E+00	7.894E-01	3.159
	+	86.59		3.423E+00	2.037E+00	2.476E+00	6.606E-01	1.383
	+	300.12		8.195E-01	5.914E-01	8.182E-01	1.102E-01	1.001
		311.98	*	-1.614E-02	7.073E-02	1.153E-01	7.166E-03	-0.140
		340.50		3.419E+00	1.145E+00	1.628E+00	3.737E-01	2.101
		398.62		-2.653E+00	2.600E+00	3.795E+00	9.783E-01	-0.699
		415.76		-2.750E-01	2.099E+00	3.306E+00	6.787E-01	-0.083
PA-234		63.00		4.015E-01	7.507E-01	1.240E+00	1.826E-01	0.324
		94.67		3.309E-01	1.732E-01	2.586E-01	3.243E-02	1.279
		98.44		1.208E-01	1.132E-01	1.373E-01	7.671E-02	0.880
		99.86		8.146E-01	4.622E-01	7.054E-01	6.536E-02	1.155
		111.00		8.226E-02	1.735E-01	2.842E-01	3.796E-02	0.289
		131.20		3.468E-02	1.117E-01	1.813E-01	1.913E-02	0.191
		152.70		2.137E-02	3.404E-01	5.452E-01	9.113E-02	0.039
	+	186.00		5.891E+00	2.809E+00	2.599E+00	7.960E-01	2.267
		226.40		9.539E-03	4.277E-01	7.153E-01	8.415E-02	0.013
		227.20		-1.117E-01	4.580E-01	7.563E-01	4.685E-02	-0.148
		248.90		6.481E-01	8.973E-01	1.496E+00	3.227E-01	0.433
		293.70		4.227E+00	1.249E+00	1.843E+00	2.969E-01	2.293
		369.80		7.289E-02	1.077E+00	1.777E+00	3.690E-01	0.041
		568.70		4.898E+00	1.764E+00	3.130E+00	2.110E-01	1.565
		569.50		1.118E+00	4.542E-01	8.274E-01	5.581E-02	1.351
		574.00		-4.461E+00	2.427E+00	3.172E+00	2.147E-01	-1.406
		699.00		-1.082E+00	1.045E+00	1.574E+00	2.911E-01	-0.687
		706.10		-1.965E-01	1.468E+00	2.426E+00	1.076E+00	-0.081
		733.00		-1.756E-01	5.472E-01	7.503E-01	1.630E-01	-0.234
		742.81		5.519E-01	1.900E+00	3.192E+00	2.141E+00	0.173
		796.30		1.262E+00	1.320E+00	2.297E+00	6.126E-01	0.550
		805.60		1.177E+00	1.419E+00	2.461E+00	7.458E-01	0.478
		819.60		2.814E-01	1.644E+00	2.773E+00	1.047E+00	0.101
		826.30		-1.196E+00	1.244E+00	1.664E+00	7.404E-01	-0.719
		831.60		-4.253E-01	8.909E-01	1.399E+00	4.125E-01	-0.304
		876.40		1.256E-01	1.142E+00	1.901E+00	1.952E+00	0.066
		880.51		5.680E-02	4.077E-01	6.843E-01	4.929E-02	0.083
		883.24		1.761E-01	4.486E-01	7.434E-01	4.985E-01	0.237
		899.00		2.967E-01	1.116E+00	1.886E+00	8.194E-01	0.157
		925.00		1.038E+00	1.616E+00	2.843E+00	2.015E-01	0.365
		926.50		1.465E-01	2.527E-01	4.370E-01	1.084E-01	0.335
		946.00	*	5.747E-02	4.379E-01	7.319E-01	1.324E-01	0.079
		949.00		2.292E-02	6.594E-01	1.092E+00	7.654E-02	0.021
		980.50		-4.979E-02	1.086E+00	1.781E+00	1.227E-01	-0.028
		1394.10		-7.066E-01	1.713E+00	2.473E+00	1.603E+00	-0.286
PA-234M		766.41		1.860E+01	3.135E+01	4.320E+01	3.306E+01	0.431
		1001.03	*	5.272E+00	9.816E+00	1.695E+01	1.669E+00	0.311
TH-234		63.29	*	2.337E-01	6.483E-01	1.066E+00	1.848E-01	0.219

---- Non-Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		1.635E+00	7.411E-01	8.305E-01	1.502E-01	1.969
U-235	+	89.95		1.206E+00	9.353E-01	1.585E+00	4.882E-01	0.761
	+	93.35		1.966E+00	9.854E-01	9.723E-01	2.728E-01	2.022
		105.00		1.194E+00	1.037E+00	1.643E+00	4.961E-01	0.726
		143.76	*	1.439E-01	2.238E-01	3.619E-01	6.422E-02	0.398
		163.35		1.196E-01	4.637E-01	7.889E-01	1.435E-01	0.152
	+	185.71		2.182E-01	8.085E-02	9.583E-02	5.892E-03	2.277
		205.31		3.097E-01	6.105E-01	9.139E-01	1.656E-01	0.339
NP-236		94.67		2.522E-01	1.295E-01	1.963E-01	1.730E-02	1.285
		98.44		9.135E-02	6.924E-02	1.038E-01	9.487E-03	0.880
		111.00		6.222E-02	1.311E-01	2.150E-01	2.220E-02	0.289
		160.31	*	-2.803E-02	8.495E-02	1.334E-01	9.179E-03	-0.210
U-238		63.29	*	2.337E-01	6.483E-01	1.066E+00	1.848E-01	0.219
	+	92.38		1.635E+00	6.940E-01	8.305E-01	7.167E-02	1.969
NP-239		99.55		2.491E-01	1.562E-01	2.368E-01	2.188E-02	1.052
		117.00	*	5.651E-02	1.891E-01	3.078E-01	3.370E-02	0.184
	+	209.75		1.677E+00	1.196E+00	1.492E+00	9.262E-02	1.124
		228.18		-1.369E-01	2.375E-01	3.856E-01	2.388E-02	-0.355
		277.60		5.914E-02	2.157E-01	3.536E-01	2.072E-02	0.167
		334.30		-9.298E-01	1.802E+00	2.462E+00	1.429E-01	-0.378
AM-241		59.54	*	-1.397E-02	6.493E-02	1.053E-01	8.216E-03	-0.133
CM-243		99.55		2.563E-01	1.608E-01	2.436E-01	2.251E-02	1.052
		103.76	*	1.010E-02	9.030E-02	1.463E-01	1.408E-02	0.069
		117.00		5.814E-02	1.946E-01	3.166E-01	3.466E-02	0.184
	+	209.75		1.653E+00	1.179E+00	1.471E+00	9.130E-02	1.124
		228.18		-1.383E-01	2.400E-01	3.896E-01	2.413E-02	-0.355
		277.60		5.962E-02	2.174E-01	3.565E-01	2.088E-02	0.167
CM-247		278.00		3.099E-01	8.662E-01	1.463E+00	8.563E-02	0.212
		287.40		-9.128E-01	1.496E+00	2.246E+00	1.315E-01	-0.406
		402.60	*	3.260E-02	4.501E-02	7.554E-02	4.144E-03	0.432
CF-249		252.85		-9.067E-01	9.486E-01	1.498E+00	9.111E-02	-0.605
		333.44		-2.440E-01	2.396E-01	3.125E-01	1.815E-02	-0.781
		387.95	*	-1.479E-02	4.996E-02	8.033E-02	4.355E-03	-0.184
CF-251		176.60	*	-1.370E-01	1.340E-01	2.158E-01	1.318E-02	-0.635
		227.00		2.783E-02	4.058E-01	6.800E-01	4.213E-02	0.041
		285.00		-7.496E-01	1.959E+00	3.180E+00	1.861E-01	-0.236

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088     *
* Acquisition date :  6-JUL-2009 13:26:00 Detector SN#     :                *
* Detector ID        : GAM21               Sensitivity      : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:09.58      Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201870088          Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.695E+01	3.388E+00	6.903E-01	0.000E+00
CD-109	1.776E+00	9.365E-01	1.036E+00	0.000E+00
SN-126	1.749E-01	9.219E-02	1.018E-01	0.000E+00
TL-208	5.532E-01	1.068E-01	7.586E-02	0.000E+00
BI-210	7.869E-01	7.857E-01	9.223E-01	0.000E+00
PB-210	7.869E-01	7.857E-01	9.223E-01	0.000E+00
PO-210	7.869E-01	7.851E-01	9.223E-01	0.000E+00
BI-211	3.351E+00	4.601E-01	3.891E-01	0.000E+00
PB-212	1.242E+00	1.619E-01	1.199E-01	0.000E+00
PO-212	1.242E+00	1.619E-01	1.199E-01	0.000E+00
BI-214	1.105E+00	2.075E-01	1.460E-01	0.000E+00
PB-214	1.166E+00	1.708E-01	1.357E-01	0.000E+00
PO-214	1.166E+00	1.708E-01	1.357E-01	0.000E+00
PO-216	1.242E+00	1.619E-01	1.199E-01	0.000E+00
PO-218	1.166E+00	1.708E-01	1.357E-01	0.000E+00
RA-224	1.869E+00	1.031E+00	1.766E+00	0.000E+00
RA-226	1.105E+00	2.075E-01	1.460E-01	0.000E+00
AC-228	1.852E+00	3.840E-01	2.983E-01	0.000E+00
RA-228	1.852E+00	3.840E-01	2.983E-01	0.000E+00
TH-228	1.242E+00	1.619E-01	1.199E-01	0.000E+00
TH-230	1.105E+00	2.075E-01	1.460E-01	0.000E+00
TH-232	1.852E+00	3.840E-01	2.983E-01	0.000E+00
U-234	1.105E+00	2.075E-01	1.460E-01	0.000E+00
NP-237	5.135E-01	2.899E-01	3.149E-01	0.000E+00
AM-243	3.219E-01	6.776E-02	5.697E-02	0.000E+00
ANH-511	1.653E-01	7.966E-02	6.081E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-2.641E-01	4.215E-01	6.669E-01	0.000E+00	NOT IDENT.

NA-22	6.557E-02	7.164E-02	1.294E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	3.286E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.051E-02	3.576E-02	5.532E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.406E-02	6.434E-02	0.000E+00	FAIL ABUN
SC-46	-1.589E-02	5.267E-02	8.683E-02	0.000E+00	FAIL ABUN
V-48	5.992E-02	9.791E-02	1.752E-01	0.000E+00	NOT IDENT.
CR-51	-4.018E-02	3.912E-01	6.698E-01	0.000E+00	NOT IDENT.
MN-52	-3.840E-02	2.632E-01	4.216E-01	0.000E+00	NOT IDENT.
MN-54	-1.488E-02	5.475E-02	9.138E-02	0.000E+00	NOT IDENT.
CO-56	3.235E-02	5.393E-02	9.694E-02	0.000E+00	NOT IDENT.
CO-57	-6.008E-03	2.388E-02	4.012E-02	0.000E+00	NOT IDENT.
CO-58	-3.180E-02	5.385E-02	8.700E-02	0.000E+00	NOT IDENT.
FE-59	-8.393E-02	1.329E-01	2.080E-01	0.000E+00	NOT IDENT.
CO-60	4.829E-02	6.042E-02	1.095E-01	0.000E+00	NOT IDENT.
ZN-65	1.213E-02	1.624E-01	2.356E-01	0.000E+00	NOT IDENT.
GE-68	-1.613E+00	1.849E+00	2.815E+00	0.000E+00	NOT IDENT.
AS-73	1.299E-01	2.304E-01	4.107E-01	0.000E+00	NOT IDENT.
AS-74	4.065E-02	1.196E-01	2.047E-01	0.000E+00	NOT IDENT.
SE-75	4.877E-02	5.239E-02	8.447E-02	0.000E+00	NOT IDENT.
BR-77	3.035E+00	9.529E+00	1.642E+01	0.000E+00	FAIL ABUN
SR-82	-1.496E-01	5.021E-01	8.387E-01	0.000E+00	NOT IDENT.
RB-83	4.499E-02	8.402E-02	1.473E-01	0.000E+00	NOT IDENT.
RB-84	-3.621E-03	9.934E-02	1.685E-01	0.000E+00	NOT IDENT.
KR-85	1.758E+01	1.109E+01	1.840E+01	0.000E+00	NOT IDENT.
SR-85	8.913E-02	5.625E-02	9.330E-02	0.000E+00	NOT IDENT.
RB-86	-9.767E-01	1.131E+00	1.724E+00	0.000E+00	NOT IDENT.
Y-88	4.953E-02	5.407E-02	1.057E-01	0.000E+00	NOT IDENT.
ZR-88	3.692E-02	3.547E-02	6.454E-02	0.000E+00	NOT IDENT.
Y-91	7.631E+00	2.961E+01	5.047E+01	0.000E+00	NOT IDENT.
NB-94	2.511E-02	4.537E-02	8.156E-02	0.000E+00	NOT IDENT.
NB-95	7.909E-02	6.581E-02	1.101E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.659E-01	2.796E-01	0.000E+00	NOT IDENT.
ZR-95	2.710E-02	9.110E-02	1.606E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.522E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	9.490E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	6.249E+00	1.150E+01	2.068E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.128E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.570E-02	3.274E-02	5.880E-02	0.000E+00	NOT IDENT.
RH-102	-1.124E-02	3.731E-02	6.151E-02	0.000E+00	FAIL ABUN
RU-103	-2.277E-02	5.075E-02	8.219E-02	0.000E+00	FAIL ABUN
RH-106	2.491E-01	4.503E-01	7.582E-01	0.000E+00	FAIL ABUN
RU-106	2.491E-01	4.496E-01	7.582E-01	0.000E+00	FAIL ABUN
AG-108M	-2.350E-02	3.719E-02	5.984E-02	0.000E+00	NOT IDENT.
AG-110M	-3.334E-02	4.588E-02	7.472E-02	0.000E+00	NOT IDENT.
IN-111	4.262E-01	9.761E-01	1.525E+00	0.000E+00	NOT IDENT.
IN-113M	6.374E-02	5.302E-02	9.712E-02	0.000E+00	NOT IDENT.
SN-113	6.374E-02	5.302E-02	9.712E-02	0.000E+00	NOT IDENT.
IN-114M	6.853E-02	1.986E-01	3.115E-01	0.000E+00	NOT IDENT.
CD-115	6.255E+00	9.649E+00	1.705E+01	0.000E+00	NOT IDENT.
SN-117M	-1.392E-03	5.454E-02	9.159E-02	0.000E+00	NOT IDENT.
SB-122	-3.890E+00	3.052E+00	3.818E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.577E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.922E-03	2.955E-02	4.990E-02	0.000E+00	NOT IDENT.
I-124	-9.016E-01	8.615E-01	1.066E+00	0.000E+00	NOT IDENT.
SB-124	4.079E-03	9.153E-02	1.563E-01	0.000E+00	FAIL ABUN
SB-125	-9.888E-02	1.142E-01	1.815E-01	0.000E+00	NOT IDENT.
TE-125M	-1.305E+01	8.818E+00	1.396E+01	0.000E+00	NOT IDENT.
I-126	1.801E-01	2.322E-01	4.244E-01	0.000E+00	NOT IDENT.
SB-126	6.013E-02	1.939E-01	3.104E-01	0.000E+00	FAIL ABUN
SB-127	-4.788E-01	1.400E+00	2.346E+00	0.000E+00	NOT IDENT.
XE-127	1.058E-02	5.157E-02	8.354E-02	0.000E+00	NOT IDENT.
I-131	-6.412E-02	1.200E-01	1.979E-01	0.000E+00	NOT IDENT.
TE-132	-3.365E-01	5.698E-01	9.669E-01	0.000E+00	NOT IDENT.
BA-133	-1.100E-02	5.663E-02	8.254E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.353E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.015E-02	6.441E-02	1.197E-01	0.000E+00	FAIL ABUN
CS-135	2.359E-01	1.981E-01	3.220E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	6.048E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.705E-03	1.451E-01	2.455E-01	0.000E+00	FAIL ABUN
BA-137M	6.488E-03	4.692E-02	8.214E-02	0.000E+00	NOT IDENT.
CS-137	6.859E-03	4.960E-02	8.683E-02	0.000E+00	NOT IDENT.
CE-139	2.732E-03	2.801E-02	4.990E-02	0.000E+00	NOT IDENT.
BA-140	-1.941E-02	3.388E-01	5.651E-01	0.000E+00	NOT IDENT.
LA-140	9.722E-03	1.201E-01	2.063E-01	0.000E+00	NOT IDENT.
CE-141	5.502E-02	6.345E-02	1.106E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.439E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.026E-01	2.136E-01	3.535E-01	0.000E+00	NOT IDENT.
PM-144	2.872E-02	4.664E-02	8.422E-02	0.000E+00	NOT IDENT.

PR-144	1.945E+00	3.159E+00	5.704E+00	0.000E+00	NOT IDENT.
PM-146	2.317E-02	5.284E-02	9.225E-02	0.000E+00	NOT IDENT.
ND-147	-4.697E-01	6.941E-01	1.093E+00	0.000E+00	FAIL ABUN
PM-149	-1.116E+02	7.474E+01	1.160E+02	0.000E+00	NOT IDENT.
EU-152	-3.407E-03	1.083E-01	1.856E-01	0.000E+00	NOT IDENT.
GD-153	1.592E-02	7.760E-02	1.174E-01	0.000E+00	NOT IDENT.
EU-154	1.814E-01	2.005E-01	3.610E-01	0.000E+00	NOT IDENT.
EU-155	1.413E-01	9.739E-02	1.740E-01	0.000E+00	FAIL ABUN
TB-160	-7.121E-02	1.996E-01	3.281E-01	0.000E+00	FAIL ABUN
HO-166M	3.563E-02	7.888E-02	1.410E-01	0.000E+00	NOT IDENT.
TM-171	-1.118E+01	1.719E+01	2.676E+01	0.000E+00	NOT IDENT.
LU-176	-1.033E-02	2.923E-02	4.459E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.482E+00	1.944E+00	0.000E+00	FAIL ABUN
LU-177M	2.090E-01	2.321E-01	3.715E-01	0.000E+00	FAIL ABUN
HF-181	1.406E-02	5.276E-02	9.076E-02	0.000E+00	NOT IDENT.
W-181	4.856E-02	1.910E-01	3.314E-01	0.000E+00	NOT IDENT.
TA-182	1.225E-01	3.503E-01	5.990E-01	0.000E+00	FAIL ABUN
RE-183	-1.156E-02	1.059E-01	1.873E-01	0.000E+00	FAIL ABUN
RE-184	-2.406E-01	2.467E-01	4.077E-01	0.000E+00	NOT IDENT.
OS-185	5.061E-03	5.438E-02	9.093E-02	0.000E+00	NOT IDENT.
RE-188	5.642E-02	1.760E-01	3.001E-01	0.000E+00	NOT IDENT.
W-188	6.439E+00	8.965E+00	1.420E+01	0.000E+00	NOT IDENT.
IR-192	9.225E-03	3.699E-02	6.473E-02	0.000E+00	FAIL ABUN
AU-195	1.931E-01	2.235E-01	3.484E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.758E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.682E+00	5.207E+00	9.114E+00	0.000E+00	NOT IDENT.
TL-202	8.995E-02	7.553E-02	1.390E-01	0.000E+00	NOT IDENT.
HG-203	4.967E-02	4.497E-02	8.204E-02	0.000E+00	NOT IDENT.
BI-207	1.401E-02	8.205E-02	1.402E-01	0.000E+00	FAIL ABUN
TL-207	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
PO-209	6.425E+00	9.541E+00	1.732E+01	0.000E+00	NOT IDENT.
PB-211	2.169E-01	1.313E+00	1.953E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.895E-01	8.301E-01	0.000E+00	FAIL ABUN
PO-215	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
RN-219	4.753E-01	4.906E-01	8.820E-01	0.000E+00	FAIL ABUN
RN-220	1.556E+01	3.251E+01	5.662E+01	0.000E+00	NOT IDENT.
RA-223	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
AC-227	2.854E-01	4.031E-01	7.235E-01	0.000E+00	FAIL ABUN
TH-227	2.854E-01	4.040E-01	7.235E-01	0.000E+00	FAIL ABUN
TH-229	-8.417E-02	5.400E-01	8.930E-01	0.000E+00	FAIL ABUN
PA-231	7.009E-01	1.647E+00	2.915E+00	0.000E+00	FAIL ABUN
TH-231	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
U-231	-5.421E-01	8.963E-01	1.301E+00	0.000E+00	FAIL ABUN
PA-233	-1.614E-02	6.932E-02	1.179E-01	0.000E+00	FAIL ABUN
PA-234	5.747E-02	4.292E-01	7.364E-01	0.000E+00	FAIL ABUN
PA-234M	5.272E+00	9.619E+00	1.704E+01	0.000E+00	NOT IDENT.
TH-234	2.337E-01	6.353E-01	1.115E+00	0.000E+00	FAIL ABUN
U-235	1.439E-01	2.193E-01	3.743E-01	0.000E+00	FAIL ABUN
NP-236	-2.803E-02	8.325E-02	1.378E-01	0.000E+00	NOT IDENT.
U-238	2.337E-01	6.353E-01	1.115E+00	0.000E+00	FAIL ABUN
NP-239	5.651E-02	1.854E-01	3.192E-01	0.000E+00	FAIL ABUN
AM-241	-1.397E-02	6.363E-02	1.102E-01	0.000E+00	NOT IDENT.
CM-243	1.010E-02	8.849E-02	1.520E-01	0.000E+00	FAIL ABUN
CM-247	3.260E-02	4.411E-02	7.697E-02	0.000E+00	NOT IDENT.
CF-249	-1.479E-02	4.896E-02	8.189E-02	0.000E+00	NOT IDENT.
CF-251	-1.370E-01	1.313E-01	2.225E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:27:51.37

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:26:00.
Sample ID         : G1201870088          Sample quantity  : 1.26580E+02 GRAM
Detector name     : CAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.58  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	968	10.67*	7.284E-01	3.695E+01	3.695E+01	9.36
CD-109	88.03	181	3.72*	8.310E+00	1.739E+00	1.776E+00	53.79
SN-126	64.28	------	9.60	8.381E+00	------ Line Not Found		------
	86.94	181	8.90	8.310E+00	7.270E-01	7.270E-01	67.31
	87.57	181	37.00*	8.310E+00	1.749E-01	1.749E-01	53.79
TL-208	277.35	------	6.80	3.917E+00	------ Line Not Found		------
	510.84	116	21.60	2.089E+00	7.652E-01	7.652E-01	49.88
	583.14	285	84.20*	1.817E+00	5.532E-01	5.532E-01	19.70
	860.37	44	12.46	1.217E+00	8.542E-01	8.542E-01	76.02
BI-210	46.50	81	4.05*	7.520E+00	7.859E-01	7.869E-01	101.89
PB-210	46.50	81	4.05*	7.520E+00	7.859E-01	7.869E-01	101.89
PO-210	46.50	81	4.05*	7.520E+00	7.859E-01	7.869E-01	101.81
BI-211	72.87	------	1.27	8.456E+00	------ Line Not Found		------
	351.07	451	12.94*	3.085E+00	3.351E+00	3.351E+00	14.01
PB-212	74.81	606	10.70	8.452E+00	1.986E+00	1.986E+00	23.42
	77.11	890	18.00	8.441E+00	1.737E+00	1.737E+00	14.02
	87.30	181	8.00	8.310E+00	8.088E-01	8.088E-01	54.72
	238.63	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.09	66	3.41	3.626E+00	1.586E+00	1.586E+00	71.39
PO-212	74.81	606	10.70	8.452E+00	1.986E+00	1.986E+00	23.42
	77.11	890	18.00	8.441E+00	1.737E+00	1.737E+00	14.02
	87.30	181	8.00	8.310E+00	8.088E-01	8.088E-01	54.72
	115.19	------	0.60	7.596E+00	------ Line Not Found		------
	238.63	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.09	66	3.41	3.626E+00	1.586E+00	1.586E+00	71.39
BI-214	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	606	6.21	8.452E+00	3.421E+00	3.421E+00	22.72
	77.11	890	10.50	8.441E+00	2.978E+00	2.978E+00	15.96
	87.30	181	4.67	8.310E+00	1.385E+00	1.386E+00	54.34
	241.98	111	7.49	4.459E+00	9.855E-01	9.855E-01	56.56
	295.21	261	19.20	3.682E+00	1.096E+00	1.096E+00	27.02
	351.92	451	37.20*	3.085E+00	1.166E+00	1.166E+00	14.95
PO-214	74.81	606	6.21	8.452E+00	3.421E+00	3.421E+00	22.72
	77.11	890	10.50	8.441E+00	2.978E+00	2.978E+00	15.96
	87.30	181	4.67	8.310E+00	1.385E+00	1.386E+00	54.34
	241.98	111	7.49	4.459E+00	9.855E-01	9.855E-01	56.56
	295.21	261	19.20	3.682E+00	1.096E+00	1.096E+00	27.02
	351.92	451	37.20*	3.085E+00	1.166E+00	1.166E+00	14.95
PO-216	74.81	606	10.70	8.452E+00	1.986E+00	1.986E+00	23.42
	77.11	890	18.00	8.441E+00	1.737E+00	1.737E+00	14.02
	87.30	181	8.00	8.310E+00	8.088E-01	8.088E-01	54.72
	238.63	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.09	66	3.41	3.626E+00	1.586E+00	1.586E+00	71.39
PO-218	74.81	606	6.21	8.452E+00	3.421E+00	3.421E+00	22.72
	77.11	890	10.50	8.441E+00	2.978E+00	2.978E+00	15.96
	87.30	181	4.67	8.310E+00	1.385E+00	1.386E+00	54.34
	241.98	111	7.49	4.459E+00	9.855E-01	9.855E-01	56.56
	295.21	261	19.20	3.682E+00	1.096E+00	1.096E+00	27.02
	351.92	451	37.20*	3.085E+00	1.166E+00	1.166E+00	14.95
RA-224	240.98	111	3.95*	4.459E+00	1.869E+00	1.869E+00	56.28
RA-226	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47
AC-228	338.32	227	11.40	3.213E+00	1.838E+00	1.838E+00	46.38
	911.07	199	27.70*	1.151E+00	1.852E+00	1.852E+00	21.16
	969.11	113	16.60	1.082E+00	1.872E+00	1.872E+00	36.21
RA-228	338.32	227	11.40	3.213E+00	1.838E+00	1.838E+00	46.38
	911.07	199	27.70*	1.151E+00	1.852E+00	1.852E+00	21.16
	969.11	113	16.60	1.082E+00	1.872E+00	1.872E+00	36.21
TH-228	84.40	------	1.21	8.360E+00	------ Line Not Found		------
	238.60	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.10	66	3.41	3.626E+00	1.586E+00	1.586E+00	92.20
TH-230	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47
TH-232	338.32	227	11.40	3.213E+00	1.838E+00	1.838E+00	22.86
	911.07	199	27.70*	1.151E+00	1.852E+00	1.852E+00	21.16

Sample ID : G1201870083 Acquisition date : 6-JUL-2009 13:26:00

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	113	16.60	1.082E+00	1.872E+00	1.872E+00	36.21
U-234	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47
NP-237	86.50	181	12.60*	8.310E+00	5.135E-01	5.135E-01	57.62
	95.87	------	2.60	8.129E+00	------ Line Not Found		------
AM-243	74.67	606	66.00*	8.452E+00	3.219E-01	3.219E-01	21.48
	86.72	181	0.34	8.310E+00	1.926E+01	1.926E+01	53.79
	117.66	------	0.55	7.522E+00	------ Line Not Found		------
	142.18	------	0.13	6.781E+00	------ Line Not Found		------
ANH-511	511.00	116	100.00*	2.089E+00	1.653E-01	1.653E-01	49.18

Flag: "*" = Keyline

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

Total number of lines in spectrum 28
Number of unidentified lines 1
Number of lines tentatively identified by NID 27 96.43%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.695E+01	3.695E+01	0.346E+01	9.36	
CD-109	464.00D	1.02	1.739E-00	1.776E-00	0.956E+00	53.79	
SN-126	1.00E+05Y	1.00	1.749E-01	1.749E-01	0.941E-01	53.79	
TL-208	1.41E+10Y	1.00	5.532E-01	5.532E-01	1.090E-01	19.70	
BI-210	22.26Y	1.00	7.859E-01	7.869E-01	8.018E-01	101.89	
PB-210	22.26Y	1.00	7.859E-01	7.869E-01	8.018E-01	101.89	
PO-210	22.26Y	1.00	7.859E-01	7.869E-01	8.012E-01	101.81	
BI-211	7.04E+08Y	1.00	3.351E+00	3.351E+00	0.469E+00	14.01	
PB-212	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
PO-212	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
BI-214	1600.00Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
PB-214	1600.00Y	1.00	1.166E+00	1.166E+00	0.174E+00	14.95	
PO-214	1600.00Y	1.00	1.166E+00	1.166E+00	0.174E+00	14.95	
PO-216	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
PO-218	1600.00Y	1.00	1.166E+00	1.166E+00	0.174E+00	14.95	
RA-224	1.41E+10Y	1.00	1.869E+00	1.869E+00	1.052E+00	56.28	
RA-226	1600.00Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
AC-228	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.392E+00	21.16	
RA-228	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.392E+00	21.16	
TH-228	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
TH-230	4.47E+09Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
TH-232	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.392E+00	21.16	
U-234	4.47E+09Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
NP-237	2.14E+06Y	1.00	5.135E-01	5.135E-01	2.959E-01	57.62	
AM-243	7380.00Y	1.00	3.219E-01	3.219E-01	0.691E-01	21.48	
ANH-511	1.00E+09Y	1.00	1.653E-01	1.653E-01	0.813E-01	49.18	
	Total Activity :		6.644E+01	6.648E+01			

Grand Total Activity : 6.644E+01 6.648E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G12018/0088 Acquisition date : 6-JUL-2009 13:26:00

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	90.14	91	374	0.97	179.31	176	6	1.26E-02	71.2	8.26E+00	T
0	92.80	245	561	1.54	184.63	182	12	3.40E-02	41.5	8.20E+00	T
0	186.06	222	323	1.18	370.87	365	13	3.09E-02	36.5	5.60E+00	T
0	209.21	93	266	1.04	417.10	412	11	1.29E-02	71.1	5.08E+00	T
0	270.02	81	181	1.43	538.60	534	11	1.13E-02	67.5	4.02E+00	T
0	408.77	24	68	1.41	815.36	814	7	3.39E-03	****	2.64E+00	
0	562.03	44	51	3.79	1122.24	1116	12	6.10E-03	71.8	1.89E+00	T
0	728.43	64	65	0.94	1455.06	1448	17	8.95E-03	62.1	1.44E+00	T

Flags: "T" - Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:27:56.67

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1  *
* Acquisition date  : 6-JUL-2009 13:26:00.  Detector SN#     :              *
* Detector ID       : GAM21                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:09.58          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201870088           Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.26580E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.695E+01	3.457E+00	6.906E-01	4.395E-02	53.508
CD-109	1.776E+00	9.556E-01	9.947E-01	8.243E-02	1.786
SN-126	1.749E-01	9.407E-02	9.780E-02	8.076E-03	1.788
TL-208	5.532E-01	1.090E-01	7.485E-02	5.678E-03	7.390
BI-210	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PB-210	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PO-210	7.869E-01	8.012E-01	8.779E-01	5.674E-02	0.896
BI-211	3.351E+00	4.695E-01	3.811E-01	2.425E-02	8.794
PB-212	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
PO-212	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
BI-214	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
PB-214	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-214	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-216	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
PO-218	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
RA-224	1.869E+00	1.052E+00	1.720E+00	1.058E-01	1.086
RA-226	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
AC-228	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
TH-228	1.242E+00	1.652E-01	1.167E-01	8.895E-03	10.641
TH-230	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
TH-232	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
U-234	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
NP-237	5.135E-01	2.959E-01	3.023E-01	6.712E-02	1.699
AM-243	3.219E-01	6.914E-02	5.458E-02	4.122E-03	5.898
ANH-511	1.653E-01	8.129E-02	5.988E-02	3.820E-03	2.760

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.641E-01		4.302E-01	6.562E-01	4.619E-02	-0.403
NA-22	6.557E-02		7.311E-02	1.292E-01	7.638E-03	0.508
NA-24	-3.166E-01		1.728E-01	Half-Life too short		
AL-26	-1.051E-02		3.649E-02	5.552E-02	3.091E-03	-0.189
TI-44	3.206E-01	+	4.496E-02	6.169E-02	4.771E-03	5.196
SC-46	-1.588E-02		5.375E-02	8.622E-02	6.190E-03	-0.184
V-48	5.992E-02		9.991E-02	1.742E-01	1.198E-02	0.344
CR-51	-4.038E-02		3.992E-01	6.552E-01	4.261E-02	-0.062
MN-52	-3.840E-02		2.686E-01	4.216E-01	2.541E-02	-0.091
MN-54	-1.488E-02		5.587E-02	9.065E-02	6.613E-03	-0.164
CO-56	3.235E-02		5.503E-02	9.619E-02	6.999E-03	0.336
CO-57	-6.008E-03		2.436E-02	3.871E-02	4.455E-03	-0.155
CO-58	-3.180E-02		5.495E-02	8.627E-02	6.337E-03	-0.369
FE-59	-8.393E-02		1.356E-01	2.072E-01	1.486E-02	-0.405
CO-60	4.829E-02		6.165E-02	1.094E-01	6.580E-03	0.441
ZN-65	1.213E-02		1.657E-01	2.348E-01	1.440E-02	0.052
GE-68	-1.613E+00		1.887E+00	2.804E+00	1.789E-01	-0.575
AS-73	1.299E-01		2.351E-01	3.917E-01	2.632E-02	0.332
AS-74	4.065E-02		1.220E-01	2.020E-01	1.390E-02	0.201
SE-75	4.877E-02		5.346E-02	8.239E-02	4.984E-03	0.592
BR-77	3.035E+00		9.724E+00	1.617E+01	1.042E+00	0.188
SR-82	-1.496E-01		5.124E-01	8.311E-01	6.093E-02	-0.180
RB-83	4.499E-02		8.573E-02	1.451E-01	9.348E-03	0.310
RB-84	-3.621E-03		1.014E-01	1.673E-01	1.205E-02	-0.022
KR-85	1.758E+01		1.132E+01	1.812E+01	1.160E+00	0.970
SR-85	8.913E-02		5.739E-02	9.189E-02	5.881E-03	0.970
RB-86	-9.767E-01		1.154E+00	1.717E+00	1.096E-01	-0.569
Y-88	4.953E-02		5.518E-02	1.061E-01	5.854E-03	0.467
ZR-88	3.692E-02		3.619E-02	6.331E-02	3.415E-03	0.583
Y-91	7.631E+00		3.021E+01	5.035E+01	2.892E+00	0.152
NB-94	2.511E-02		4.630E-02	8.070E-02	5.851E-03	0.311
NB-95	7.909E-02		6.715E-02	1.091E-01	7.996E-03	0.725
NB-95M	3.978E-01		1.693E-01	2.723E-01	2.129E-02	1.461
ZR-95	2.710E-02		9.296E-02	1.591E-01	1.326E-02	0.170
NB-97	-3.414E-02		2.307E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ident	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1.450E+00		4.842E-01	Half-Life too short		
MO-99	6.249E+00		1.174E+01	2.047E+01	2.965E+00	0.305
TC-99M	-1.435E+09		1.086E+09	Half-Life too short		
RH-101	1.570E-02		3.341E-02	5.712E-02	3.534E-03	0.275
RH-102	-1.124E-02		3.807E-02	6.051E-02	3.699E-03	-0.186
RU-103	-2.277E-02		5.178E-02	8.092E-02	1.042E-02	-0.281
RH-106	2.491E-01		4.594E-01	7.489E-01	9.266E-02	0.333
RU-106	2.491E-01		4.587E-01	7.489E-01	5.241E-02	0.333
AG-108M	-2.350E-02		3.795E-02	5.879E-02	3.687E-03	-0.400
AG-110M	-3.334E-02		4.682E-02	7.386E-02	5.495E-03	-0.451
IN-111	4.262E-01		9.961E-01	1.486E+00	9.104E-02	0.287
IN-113M	6.374E-02		5.410E-02	9.528E-02	5.524E-03	0.669
SN-113	6.374E-02		5.410E-02	9.528E-02	5.524E-03	0.669
IN-114M	6.853E-02		2.027E-01	3.024E-01	1.864E-02	0.227
CD-115	6.255E+00		9.846E+00	1.680E+01	1.091E+00	0.372
SN-117M	-1.392E-03		5.565E-02	8.869E-02	6.325E-03	-0.016
SB-122	-3.890E+00		3.114E+00	3.766E+00	2.528E-01	-1.033
I-123	1.559E-01		8.046E-01	Half-Life too short		
TE-123M	2.922E-03		3.016E-02	4.832E-02	3.447E-03	0.060
I-124	-9.016E-01		8.791E-01	1.052E+00	7.276E-02	-0.857
SB-124	4.079E-03		9.340E-02	1.567E-01	9.858E-03	0.026
SB-125	-9.888E-02		1.165E-01	1.783E-01	1.064E-02	-0.555
TE-125M	-1.305E+01		8.998E+00	1.345E+01	1.565E+00	-0.970
I-126	1.801E-01		2.369E-01	4.196E-01	3.004E-02	0.429
SB-126	6.013E-02		1.979E-01	3.073E-01	2.238E-02	0.196
SB-127	-4.788E-01		1.429E+00	2.320E+00	2.326E-01	-0.206
XE-127	1.058E-02		5.262E-02	8.118E-02	5.032E-03	0.130
I-131	-6.412E-02		1.224E-01	1.939E-01	1.225E-02	-0.331
TE-132	-3.365E-01		5.814E-01	9.411E-01	1.348E-01	-0.358
BA-133	-1.100E-02		5.778E-02	8.086E-02	9.304E-03	-0.136
I-133	-3.176E-03		1.711E-03	Half-Life too short		
CS-134	7.015E-02		6.573E-02	1.187E-01	8.785E-03	0.591
CS-135	2.359E-01		2.021E-01	3.142E-01	2.444E-02	0.751
I-135	-9.902E+07		3.086E+08	Half-Life too short		
CS-136	7.705E-03		1.481E-01	2.444E-01	1.719E-02	0.032
BA-137M	6.488E-03		4.788E-02	8.120E-02	5.800E-03	0.080
CS-137	6.859E-03		5.061E-02	8.584E-02	6.149E-03	0.080
CE-139	2.732E-03		2.858E-02	4.835E-02	2.930E-03	0.057
BA-140	-1.941E-02		3.457E-01	5.569E-01	1.819E-01	-0.035
LA-140	9.722E-03		1.225E-01	2.067E-01	1.225E-02	0.047
CE-141	5.502E-02		6.474E-02	1.069E-01	9.664E-03	0.515
CE-143	4.048E-04		7.343E-05	Half-Life too short		
CE-144	-1.026E-01		2.179E-01	3.415E-01	5.652E-02	-0.300
PM-144	2.872E-02		4.759E-02	8.333E-02	6.033E-03	0.345
PR-144	1.945E+00		3.223E+00	5.643E+00	4.084E-01	0.345
PM-146	2.317E-02		5.392E-02	9.069E-02	7.907E-03	0.255
ND-147	-4.697E-01		7.083E-01	1.077E+00	1.491E-01	-0.436
PM-149	-1.116E+02		7.627E+01	1.132E+02	1.607E+01	-0.986

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Idea	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-3.407E-03		1.115E-01	1.818E-01	1.182E-02	-0.019
GD-153	1.592E-02		7.918E-02	1.129E-01	1.022E-02	0.141
EU-154	1.814E-01		2.046E-01	3.604E-01	3.390E-02	0.503
EU-155	1.413E-01		9.937E-02	1.676E-01	1.652E-02	0.843
TB-160	-7.121E-02		2.036E-01	3.258E-01	2.348E-02	-0.219
HO-166M	3.563E-02		8.049E-02	1.396E-01	1.015E-02	0.255
TM-171	-1.118E+01		1.754E+01	2.560E+01	1.853E+00	-0.437
LU-176	-1.033E-02		2.983E-02	4.359E-02	2.557E-03	-0.237
LU-177	2.120E+00	+	1.512E+00	1.890E+00	1.173E-01	1.122
LU-177M	2.090E-01		2.368E-01	3.647E-01	2.038E-02	0.573
HF-181	1.406E-02		5.384E-02	8.931E-02	5.508E-03	0.157
W-181	4.856E-02		1.949E-01	3.169E-01	2.278E-02	0.153
TA-182	1.225E-01		3.574E-01	5.976E-01	3.456E-02	0.205
RE-183	-1.156E-02		1.081E-01	1.815E-01	1.195E-02	-0.064
RE-184	-2.406E-01		2.517E-01	3.974E-01	2.418E-02	-0.605
OS-185	5.061E-03		5.549E-02	8.986E-02	6.373E-03	0.056
RE-188	5.642E-02		1.796E-01	2.906E-01	2.216E-02	0.194
W-188	6.439E+00		9.148E+00	1.387E+01	8.130E-01	0.464
IR-192	9.225E-03		3.775E-02	6.330E-02	3.724E-03	0.146
AU-195	1.931E-01		2.281E-01	3.352E-01	3.077E-02	0.576
TL-200	2.176E-04		1.407E-04	Half-Life too short		
TL-201	-1.682E+00		5.313E+00	8.833E+00	5.350E-01	-0.190
TL-202	8.995E-02		7.708E-02	1.366E-01	7.950E-03	0.659
HG-203	4.967E-02		4.589E-02	8.009E-02	4.962E-03	0.620
BI-207	1.401E-02		8.373E-02	1.395E-01	9.025E-03	0.100
TL-207	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
PO-209	6.425E+00		9.736E+00	1.720E+01	1.231E+00	0.373
PB-211	2.169E-01		1.339E+00	1.917E+00	1.195E+00	0.113
BI-212	1.122E+00	+	7.036E-01	8.218E-01	7.307E-02	1.366
PO-215	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
RN-219	4.753E-01		5.006E-01	8.656E-01	1.166E-01	0.549
RN-220	1.556E+01		3.317E+01	5.582E+01	3.702E+00	0.279
RA-223	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
AC-227	2.854E-01		4.113E-01	7.054E-01	9.925E-02	0.405
TH-227	2.854E-01		4.122E-01	7.054E-01	1.199E-01	0.405
TH-229	-8.417E-02		5.510E-01	8.672E-01	5.356E-02	-0.097
PA-231	7.009E-01		1.681E+00	2.847E+00	3.929E-01	0.246
TH-231	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
U-231	-5.421E-01		9.145E-01	1.251E+00	1.116E-01	-0.433
PA-233	-1.614E-02		7.073E-02	1.153E-01	7.166E-03	-0.140
PA-234	5.747E-02		4.379E-01	7.319E-01	1.324E-01	0.079
PA-234M	5.272E+00		9.816E+00	1.695E+01	1.669E+00	0.311
TH-234	2.337E-01		6.483E-01	1.066E+00	1.848E-01	0.219
U-235	1.439E-01		2.238E-01	3.619E-01	6.422E-02	0.398
NP-236	-2.803E-02		8.495E-02	1.334E-01	9.179E-03	-0.210
U-238	2.337E-01		6.483E-01	1.066E+00	1.848E-01	0.219
NP-239	5.651E-02		1.891E-01	3.078E-01	3.370E-02	0.184
AM-241	-1.397E-02		6.493E-02	1.053E-01	8.216E-03	-0.133

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

---- Non-identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Idad	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.010E-02		9.030E-02	1.463E-01	1.408E-02	0.069
CM-247	3.260E-02		4.501E-02	7.554E-02	4.144E-03	0.432
CF-249	-1.479E-02		4.996E-02	8.033E-02	4.355E-03	-0.184
CF-251	-1.370E-01		1.340E-01	2.158E-01	1.318E-02	-0.635

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201870088      *
* Acquisition date  :  6-JUL-2009 13:26:00 Detector SN#     :           *
* Detector ID       : GAM21                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:09.58      Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOL1D      *
* Sample ID         : G1201870088          Analyst initials: MXR1       *
* Batch Number      : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
*                                                                       *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.695E+01	3.388E+00	3.454E-01	1.728E+00
CD-109	1.776E+00	9.365E-01	5.182E-01	4.778E-01
SN-126	1.749E-01	9.219E-02	5.095E-02	4.704E-02
TL-208	5.532E-01	1.068E-01	3.795E-02	5.448E-02
BI-210	7.869E-01	7.857E-01	4.614E-01	4.009E-01
PB-210	7.869E-01	7.857E-01	4.614E-01	4.009E-01
PO-210	7.869E-01	7.851E-01	4.614E-01	4.006E-01
BI-211	3.351E+00	4.601E-01	1.946E-01	2.347E-01
PB-212	1.242E+00	1.619E-01	5.997E-02	8.260E-02
PO-212	1.242E+00	1.619E-01	5.997E-02	8.260E-02
BI-214	1.105E+00	2.075E-01	7.306E-02	1.059E-01
PB-214	1.166E+00	1.708E-01	6.789E-02	8.713E-02
PO-214	1.166E+00	1.708E-01	6.789E-02	8.713E-02
PO-216	1.242E+00	1.619E-01	5.997E-02	8.260E-02
PO-218	1.166E+00	1.708E-01	6.789E-02	8.713E-02
RA-224	1.869E+00	1.031E+00	8.835E-01	5.258E-01
RA-226	1.105E+00	2.075E-01	7.306E-02	1.059E-01
AC-228	1.852E+00	3.840E-01	1.492E-01	1.959E-01
RA-228	1.852E+00	3.840E-01	1.492E-01	1.959E-01
TH-228	1.242E+00	1.619E-01	5.996E-02	8.260E-02
TH-230	1.105E+00	2.075E-01	7.306E-02	1.059E-01
TH-232	1.852E+00	3.840E-01	1.492E-01	1.959E-01
U-234	1.105E+00	2.075E-01	7.306E-02	1.059E-01
NP-237	5.135E-01	2.899E-01	1.575E-01	1.479E-01
AM-243	3.219E-01	6.776E-02	2.850E-02	3.457E-02
ANH-511	1.653E-01	7.966E-02	3.042E-02	4.065E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-2.641E-01	4.215E-01	3.337E-01	2.151E-01 NOT IDENT.

NA-22	6.557E-02	7.164E-02	6.473E-02	3.655E-02	NOT IDENT.
NA-24	-3.166E-05	3.386E-05	0.000E+00	1.728E+05	SHORT HLIF
AL-26	-1.051E-02	3.576E-02	2.768E-02	1.825E-02	NOT IDENT.
TI-44	3.206E-01	4.406E-02	3.219E-02	2.248E-02	FAIL ABUN
SC-46	-1.588E-02	5.267E-02	4.344E-02	2.687E-02	FAIL ABUN
V-48	5.992E-02	9.791E-02	8.763E-02	4.996E-02	NOT IDENT.
CR-51	-4.038E-02	3.912E-01	3.351E-01	1.996E-01	NOT IDENT.
MN-52	-3.840E-02	2.632E-01	2.109E-01	1.343E-01	NOT IDENT.
MN-54	-1.488E-02	5.475E-02	4.572E-02	2.793E-02	NOT IDENT.
CO-56	3.235E-02	5.393E-02	4.850E-02	2.751E-02	NOT IDENT.
CO-57	-6.008E-03	2.388E-02	2.007E-02	1.218E-02	NOT IDENT.
CO-58	-3.180E-02	5.385E-02	4.353E-02	2.747E-02	NOT IDENT.
FE-59	-8.393E-02	1.329E-01	1.041E-01	6.779E-02	NOT IDENT.
CO-60	4.829E-02	6.042E-02	5.478E-02	3.082E-02	NOT IDENT.
ZN-65	1.213E-02	1.624E-01	1.179E-01	8.286E-02	NOT IDENT.
GE-68	-1.613E+00	1.849E+00	1.409E+00	9.434E-01	NOT IDENT.
AS-73	1.299E-01	2.304E-01	2.055E-01	1.175E-01	NOT IDENT.
AS-74	4.065E-02	1.196E-01	1.024E-01	6.100E-02	NOT IDENT.
SE-75	4.877E-02	5.239E-02	4.226E-02	2.673E-02	NOT IDENT.
BR-77	3.035E+00	9.529E+00	8.213E+00	4.862E+00	FAIL ABUN
SR-82	-1.496E-01	5.021E-01	4.196E-01	2.562E-01	NOT IDENT.
RB-83	4.499E-02	8.402E-02	7.367E-02	4.287E-02	NOT IDENT.
RB-84	-3.621E-03	9.934E-02	8.430E-02	5.068E-02	NOT IDENT.
KR-85	1.758E+01	1.109E+01	9.205E+00	5.659E+00	NOT IDENT.
SR-85	8.913E-02	5.625E-02	4.668E-02	2.870E-02	NOT IDENT.
RB-86	-9.767E-01	1.131E+00	8.625E-01	5.769E-01	NOT IDENT.
Y-88	4.953E-02	5.407E-02	5.287E-02	2.759E-02	NOT IDENT.
ZR-88	3.692E-02	3.547E-02	3.229E-02	1.809E-02	NOT IDENT.
Y-91	7.631E+00	2.961E+01	2.525E+01	1.511E+01	NOT IDENT.
NB-94	2.511E-02	4.537E-02	4.080E-02	2.315E-02	NOT IDENT.
NB-95	7.909E-02	6.581E-02	5.510E-02	3.358E-02	NOT IDENT.
NB-95M	3.978E-01	1.659E-01	1.399E-01	8.466E-02	NOT IDENT.
ZR-95	2.710E-02	9.110E-02	8.035E-02	4.648E-02	NOT IDENT.
NB-97	-3.414E+04	4.522E+04	0.000E+00	2.307E+04	SHORT HLIF
ZR-97	1.450E+06	9.490E+05	0.000E+00	4.842E+05	SHORT HLIF
MO-99	6.249E+00	1.150E+01	1.034E+01	5.870E+00	NOT IDENT.
TC-99M	-1.435E+15	2.128E+15	0.000E+00	1.086E+15	SHORT HLIF
RH-101	1.570E-02	3.274E-02	2.942E-02	1.670E-02	NOT IDENT.
RH-102	-1.124E-02	3.731E-02	3.077E-02	1.904E-02	FAIL ABUN
RU-103	-2.277E-02	5.075E-02	4.112E-02	2.589E-02	FAIL ABUN
RH-106	2.491E-01	4.503E-01	3.793E-01	2.297E-01	FAIL ABUN
RU-106	2.491E-01	4.496E-01	3.793E-01	2.294E-01	FAIL ABUN
AG-108M	-2.350E-02	3.719E-02	2.994E-02	1.897E-02	NOT IDENT.
AG-110M	-3.334E-02	4.588E-02	3.738E-02	2.341E-02	NOT IDENT.
IN-111	4.262E-01	9.761E-01	7.627E-01	4.980E-01	NOT IDENT.
IN-113M	6.374E-02	5.302E-02	4.859E-02	2.705E-02	NOT IDENT.
SN-113	6.374E-02	5.302E-02	4.859E-02	2.705E-02	NOT IDENT.
IN-114M	6.853E-02	1.986E-01	1.558E-01	1.013E-01	NOT IDENT.
CD-115	6.255E+00	9.649E+00	8.529E+00	4.923E+00	NOT IDENT.
SN-117M	-1.392E-03	5.454E-02	4.582E-02	2.782E-02	NOT IDENT.
SB-122	-3.890E+00	3.052E+00	1.910E+00	1.557E+00	NOT IDENT.
I-123	1.559E+05	1.577E+06	0.000E+00	8.046E+05	SHORT HLIF
TE-123M	2.922E-03	2.955E-02	2.496E-02	1.508E-02	NOT IDENT.
I-124	-9.016E-01	8.615E-01	5.333E-01	4.395E-01	NOT IDENT.
SB-124	4.079E-03	9.153E-02	7.818E-02	4.670E-02	FAIL ABUN
SB-125	-9.888E-02	1.142E-01	9.079E-02	5.827E-02	NOT IDENT.
TE-125M	-1.305E+01	8.818E+00	6.985E+00	4.499E+00	NOT IDENT.
I-126	1.801E-01	2.322E-01	2.123E-01	1.185E-01	NOT IDENT.
SB-126	6.013E-02	1.939E-01	1.553E-01	9.895E-02	FAIL ABUN
SB-127	-4.788E-01	1.400E+00	1.174E+00	7.144E-01	NOT IDENT.
XE-127	1.058E-02	5.157E-02	4.180E-02	2.631E-02	NOT IDENT.
I-131	-6.412E-02	1.200E-01	9.900E-02	6.122E-02	NOT IDENT.
TE-132	-3.365E-01	5.698E-01	4.837E-01	2.907E-01	NOT IDENT.
BA-133	-1.100E-02	5.663E-02	4.129E-02	2.889E-02	NOT IDENT.
I-133	-3.176E+03	3.353E+03	0.000E+00	1.711E+03	SHORT HLIF
CS-134	7.015E-02	6.441E-02	5.989E-02	3.286E-02	FAIL ABUN
CS-135	2.359E-01	1.981E-01	1.611E-01	1.011E-01	NOT IDENT.
I-135	-9.902E+13	6.048E+14	0.000E+00	3.086E+14	SHORT HLIF
CS-136	7.705E-03	1.451E-01	1.228E-01	7.403E-02	FAIL ABUN
BA-137M	6.488E-03	4.692E-02	4.109E-02	2.394E-02	NOT IDENT.
CS-137	6.859E-03	4.960E-02	4.344E-02	2.531E-02	NOT IDENT.
CE-139	2.732E-03	2.801E-02	2.497E-02	1.429E-02	NOT IDENT.
BA-140	-1.941E-02	3.388E-01	2.827E-01	1.729E-01	NOT IDENT.
LA-140	9.722E-03	1.201E-01	1.032E-01	6.127E-02	NOT IDENT.
CE-141	5.502E-02	6.345E-02	5.532E-02	3.237E-02	NOT IDENT.
CE-143	4.048E+02	1.439E+02	0.000E+00	7.343E+01	SHORT HLIF
CE-144	-1.026E-01	2.136E-01	1.769E-01	1.090E-01	NOT IDENT.
PM-144	2.872E-02	4.664E-02	4.214E-02	2.380E-02	NOT IDENT.

PR-144	1.945E+00	3.159E+00	2.854E+00	1.612E+00	NOT IDENT.
PM-146	2.317E-02	5.284E-02	4.615E-02	2.696E-02	NOT IDENT.
ND-147	-4.697E-01	6.941E-01	5.469E-01	3.541E-01	FAIL ABUN
PM-149	-1.116E-02	7.474E+01	5.802E+01	3.813E+01	NOT IDENT.
EU-152	-3.407E-03	1.083E-01	9.287E-02	5.527E-02	NOT IDENT.
GD-153	1.592E-02	7.760E-02	5.875E-02	3.959E-02	NOT IDENT.
EU-154	1.814E-01	2.005E-01	1.806E-01	1.023E-01	NOT IDENT.
EU-155	1.413E-01	9.739E-02	8.707E-02	4.969E-02	FAIL ABUN
TB-160	-7.121E-02	1.996E-01	1.642E-01	1.018E-01	FAIL ABUN
HO-166M	3.563E-02	7.888E-02	7.057E-02	4.024E-02	NOT IDENT.
TM-171	-1.118E+01	1.719E+01	1.339E+01	8.770E+00	NOT IDENT.
LU-176	-1.033E-02	2.923E-02	2.231E-02	1.492E-02	FAIL ABUN
LU-177	2.120E+00	1.482E+00	9.725E-01	7.561E-01	FAIL ABUN
LU-177M	2.090E-01	2.321E-01	1.858E-01	1.184E-01	FAIL ABUN
HF-181	1.406E-02	5.276E-02	4.541E-02	2.692E-02	NOT IDENT.
W-181	4.856E-02	1.910E-01	1.658E-01	9.744E-02	NOT IDENT.
TA-182	1.225E-01	3.503E-01	2.997E-01	1.787E-01	FAIL ABUN
RE-183	-1.156E-02	1.059E-01	9.373E-02	5.404E-02	FAIL ABUN
RE-184	-2.406E-01	2.467E-01	2.040E-01	1.259E-01	NOT IDENT.
OS-185	5.061E-03	5.438E-02	4.549E-02	2.775E-02	NOT IDENT.
RE-188	5.642E-02	1.760E-01	1.502E-01	8.978E-02	NOT IDENT.
W-188	6.439E+00	8.965E+00	7.105E+00	4.574E+00	NOT IDENT.
IR-192	9.225E-03	3.699E-02	3.238E-02	1.887E-02	FAIL ABUN
AU-195	1.931E-01	2.235E-01	1.743E-01	1.140E-01	FAIL ABUN
TL-200	2.176E+02	2.758E+02	0.000E+00	1.407E+02	SHORT HLIF
TL-201	-1.682E+00	5.207E+00	4.560E+00	2.657E+00	NOT IDENT.
TL-202	8.995E-02	7.553E-02	6.954E-02	3.854E-02	NOT IDENT.
HG-203	4.967E-02	4.497E-02	4.104E-02	2.295E-02	NOT IDENT.
BI-207	1.401E-02	8.205E-02	7.012E-02	4.186E-02	FAIL ABUN
TL-207	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
PO-209	6.425E+00	9.541E+00	8.666E+00	4.868E+00	NOT IDENT.
PB-211	2.169E-01	1.313E+00	9.773E-01	6.697E-01	NOT IDENT.
BI-212	1.122E+00	6.895E-01	4.153E-01	3.518E-01	FAIL ABUN
PO-215	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
RN-219	4.753E-01	4.906E-01	4.413E-01	2.503E-01	FAIL ABUN
RN-220	1.556E+01	3.251E+01	2.833E+01	1.659E+01	NOT IDENT.
RA-223	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
AC-227	2.854E-01	4.031E-01	3.620E-01	2.057E-01	FAIL ABUN
TH-227	2.854E-01	4.040E-01	3.620E-01	2.061E-01	FAIL ABUN
TH-229	-8.417E-02	5.400E-01	4.467E-01	2.755E-01	FAIL ABUN
PA-231	7.009E-01	1.647E+00	1.459E+00	8.403E-01	FAIL ABUN
TH-231	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
U-231	-5.421E-01	8.963E-01	6.509E-01	4.573E-01	FAIL ABUN
PA-233	-1.614E-02	6.932E-02	5.899E-02	3.536E-02	FAIL ABUN
PA-234	5.747E-02	4.292E-01	3.684E-01	2.190E-01	FAIL ABUN
PA-234M	5.272E+00	9.619E+00	8.527E+00	4.908E+00	NOT IDENT.
TH-234	2.337E-01	6.353E-01	5.580E-01	3.241E-01	FAIL ABUN
U-235	1.439E-01	2.193E-01	1.872E-01	1.119E-01	FAIL ABUN
NP-236	-2.803E-02	8.325E-02	6.892E-02	4.248E-02	NOT IDENT.
U-238	2.337E-01	6.353E-01	5.580E-01	3.241E-01	FAIL ABUN
NP-239	5.651E-02	1.854E-01	1.597E-01	9.457E-02	FAIL ABUN
AM-241	-1.397E-02	6.363E-02	5.513E-02	3.247E-02	NOT IDENT.
CM-243	1.010E-02	8.849E-02	7.604E-02	4.515E-02	FAIL ABUN
CM-247	3.260E-02	4.411E-02	3.851E-02	2.251E-02	NOT IDENT.
CF-249	-1.479E-02	4.896E-02	4.097E-02	2.498E-02	NOT IDENT.
CF-251	-1.370E-01	1.313E-01	1.113E-01	6.699E-02	NOT IDENT.

ENERGY	MDA COUNTS
46.50	376.0986
46.50	376.0986
46.50	376.0986
48.70	426.7433
49.72	443.5883
51.35	397.3392
52.39	380.8830
52.97	396.7646
53.15	400.9389
53.44	398.0293
54.07	431.0414
56.28	501.9162
56.28	501.9185
57.37	0.0000
57.53	486.2946
57.53	486.2955
57.60	486.3371
57.98	487.5942
57.98	487.5942
59.32	526.4482
59.32	526.4482
59.40	526.5000
59.54	526.5908
59.72	530.8220
60.01	535.1263
61.10	540.9887
61.14	514.2216
61.30	517.4127
63.00	562.8784
63.29	578.5692
63.29	578.5692
63.58	578.7684
64.28	597.8644
65.12	582.9218
65.20	576.7626
65.20	576.7626
66.05	612.5732
66.72	633.4446
66.83	619.6937
66.91	619.7506
67.20	621.0651
67.20	621.0651
67.75	609.8239
67.85	566.6856
68.90	557.3771
68.90	557.3771
69.30	567.6160
69.67	567.8532
70.82	600.2622
70.82	600.2622
70.83	600.2688
72.80	486.6901
72.87	486.7265
72.87	486.7265
74.67	487.6784
74.81	487.7513
74.81	487.7513
74.81	487.7513
74.81	487.7513
74.81	487.7513
74.81	487.7513
74.97	487.8349
75.28	487.9984
75.70	488.2171
77.11	488.9495
77.11	488.9495
77.11	488.9495

77.11	488.9495
77.11	488.9495
77.11	488.9495
78.38	489.6036
79.62	496.5485
79.80	496.6422
79.80	496.6422
80.11	496.8006
80.18	524.2047
80.30	524.2693
80.30	524.2693
80.57	524.4156
81.00	556.2526
81.07	556.2929
81.07	556.2929
81.07	556.2929
81.07	556.2929
82.60	552.9421
83.37	553.3719
83.78	553.6038
83.78	553.6038
83.78	553.6038
83.78	553.6038
84.21	476.3319
84.40	467.2611
84.90	451.8418
85.43	440.2290
86.29	493.1388
86.50	528.8347
86.54	528.8557
86.59	528.8823
86.72	556.0765
86.79	556.1125
86.94	703.7244
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.57	475.0959
87.88	475.2412
88.03	475.3113
88.36	475.4634
88.47	475.5146
89.95	782.3257
91.11	459.7053
92.29	460.2236
92.38	460.2623
92.38	460.2623
93.35	563.0615
94.00	433.6526
94.67	433.9239
94.67	433.9254
94.90	434.0192
94.90	434.0192
94.90	434.0192
94.90	434.0192
95.87	446.3842
95.87	446.3842
96.73	403.9512
97.43	383.6574
98.44	332.5838
98.44	332.5838
98.88	355.0131
99.55	312.3282
99.55	312.3282
99.86	296.9668
100.00	322.7567
100.10	322.7870
103.18	417.5132
103.76	367.1281
105.00	323.3414
105.31	311.5710
108.00	374.9817
109.28	410.0147
111.00	327.1962
111.00	327.1962

111.76	362.1005
112.95	342.9308
115.19	334.8788
116.30	338.4538
117.00	333.2050
117.00	333.2050
117.66	322.4921
121.11	302.6433
121.62	318.0703
121.78	318.1114
122.06	305.0626
122.32	300.7519
122.32	300.7519
122.32	300.7519
122.32	300.7519
123.07	309.6878
127.23	304.1253
129.76	321.2291
131.20	346.9177
133.02	383.8004
133.54	356.3690
135.34	309.3497
136.00	308.4002
136.25	317.3024
136.48	317.3571
140.51	341.6053
140.51	0.0000
142.18	326.4815
142.65	303.2655
143.76	304.6241
144.24	302.5074
144.24	302.5074
144.24	302.5074
144.24	302.5074
145.22	300.4974
145.44	300.5447
147.16	338.8109
152.43	298.6944
152.70	299.8704
153.22	305.5775
154.21	315.8709
154.21	315.8709
154.21	315.8709
154.21	315.8709
155.03	293.6366
156.02	279.2587
158.56	293.2327
159.00	0.0000
159.00	287.7031
160.31	295.8349
161.27	286.3495
162.32	281.1466
162.64	264.9840
163.35	264.2097
163.89	259.7959
165.85	252.9126
167.43	259.5087
171.28	251.1057
171.86	256.6432
172.10	243.9848
176.55	297.4495
176.60	308.3754
181.06	240.2290
184.41	318.4431
185.71	273.5656
186.00	273.6168
190.27	230.9115
192.34	267.9527
193.63	251.6916
197.04	233.0938
198.01	234.1516
198.60	263.7453
200.40	276.0312
201.83	243.3101
202.84	245.6576
205.31	233.0098
208.36	265.8893
208.81	232.8675

209.75	216.5953
209.75	216.5953
210.97	221.3937
215.65	202.2514
216.55	219.5135
218.09	229.4479
222.10	205.6605
223.80	203.0481
226.40	216.4596
227.00	212.7820
227.08	212.7917
227.20	220.3053
228.16	221.3595
228.18	221.3624
228.18	221.3624
231.56	0.0000
235.69	243.3038
236.00	232.3551
236.00	232.3551
238.60	290.8484
238.63	290.8541
238.63	290.8541
238.63	290.8541
239.00	485.8992
240.98	486.4116
241.98	548.0972
241.98	548.0972
241.98	548.0972
244.69	189.2688
245.39	179.8715
247.94	184.1754
248.90	159.1267
249.79	167.9512
252.40	187.1813
252.85	196.7283
252.85	196.7283
254.15	0.0000
256.20	159.9384
256.20	159.9384
260.50	194.6367
260.90	197.5395
262.80	183.6130
264.65	145.0072
268.24	166.0208
268.79	178.8395
269.46	182.0934
269.46	182.0934
269.46	182.0934
269.46	182.0934
271.23	164.6676
273.65	241.6946
276.40	173.1006
277.35	180.3955
277.60	189.2388
277.60	189.2388
278.00	184.7836
278.60	167.5090
279.20	159.8540
279.53	175.2883
280.46	181.1497
281.68	200.5377
283.67	145.7227
284.30	155.4204
285.00	165.1281
285.90	189.3510
286.10	192.2687
286.10	192.2687
287.40	175.2275
288.45	0.0000
290.67	142.0135
290.80	142.0207
291.72	140.4688
293.26	0.0000
293.70	181.0020
295.21	177.8951
295.21	177.8951
295.21	177.8951
295.96	116.4814

296.50	116.5107
297.23	116.5503
298.57	116.6235
299.80	116.6895
299.80	116.6895
300.09	153.9865
300.09	153.9865
300.09	153.9865
300.10	153.9865
300.12	153.9884
301.29	136.2317
302.84	111.9846
303.76	125.0200
303.91	125.0294
304.40	129.9300
304.40	129.9300
304.84	139.7028
306.84	137.9723
308.46	137.6557
311.98	133.9638
316.51	123.4591
318.01	132.3649
319.02	133.4068
319.41	137.3528
320.08	127.5800
323.87	169.0815
323.87	169.0815
323.87	169.0815
323.87	169.0815
325.23	159.3461
328.77	132.0093
333.44	172.7505
334.20	159.6419
334.20	159.6419
334.30	159.6478
338.28	121.6727
338.28	121.6727
338.28	121.6727
338.28	121.6727
338.32	121.6742
338.32	121.6742
338.32	121.6742
340.50	121.7883
340.57	121.7913
344.27	121.9835
345.85	122.0646
350.59	0.0000
351.07	122.3334
351.92	122.3769
351.92	122.3769
351.92	122.3769
355.39	0.0000
356.01	121.2560
364.48	117.0114
366.43	110.0994
367.43	103.1345
367.94	0.0000
369.80	126.2861
374.96	140.6084
383.85	120.9492
387.95	124.1726
388.63	124.2057
391.69	94.0240
391.69	94.0240
392.90	90.0223
398.62	120.6342
400.65	84.2047
401.10	89.2934
401.81	92.3619
402.60	92.5036
404.84	110.0829
410.95	117.1282
411.60	122.2500
413.65	84.9620
414.70	106.3658
415.30	104.5670
415.76	105.4361
417.63	0.0000

418.52	109.2897
423.70	93.1262
427.08	116.8096
427.89	113.7696
432.53	78.0290
433.93	90.3955
439.47	73.0792
439.56	68.9645
439.89	72.0610
443.98	101.0338
444.90	88.6917
445.03	88.6959
445.03	88.6959
445.03	88.6959
445.03	88.6959
453.90	82.7686
463.38	89.2733
468.07	120.6105
473.00	95.8195
475.06	94.8457
475.35	85.4734
476.78	101.1585
477.59	100.1438
477.96	95.9834
482.03	82.5344
484.57	98.2904
487.03	76.3951
490.36	0.0000
492.35	85.9679
497.08	88.2031
507.63	0.0000
510.53	0.0000
510.84	82.2756
511.00	82.2799
511.85	82.3028
511.85	82.3028
513.99	86.2325
513.99	86.2325
520.41	65.6025
520.65	69.8398
527.90	63.6387
528.96	0.0000
529.64	81.7166
529.87	0.0000
531.02	88.1227
537.32	88.2990
543.00	74.6023
546.56	0.0000
549.76	63.0116
552.65	68.4125
555.20	82.0180
563.23	139.4167
563.90	141.2331
568.70	69.0585
569.32	63.1233
569.50	74.0202
569.67	74.0253
573.80	126.9566
574.00	127.9188
574.64	129.1406
578.91	59.2660
579.30	0.0000
583.14	69.0516
585.48	68.3802
591.81	69.7104
592.07	78.9705
593.00	82.2399
595.88	72.5615
600.56	82.1119
602.52	0.0000
602.71	88.6231
602.71	88.6231
603.60	68.7467
604.41	63.3335
604.70	63.3392
609.31	70.6732
609.31	70.6732
609.31	70.6732

609.31	70.6732
610.33	74.3192
612.46	74.3659
614.37	56.2581
618.01	74.1210
621.84	57.8342
621.84	57.8342
631.29	71.1207
633.02	63.4927
633.10	63.4941
634.78	61.3334
635.90	62.4481
636.97	65.7554
645.85	62.6235
646.12	57.1340
656.30	71.6190
657.75	77.1589
657.90	0.0000
661.65	68.0471
661.65	68.0471
664.57	0.0000
666.33	64.4515
666.33	64.4515
675.00	52.6060
677.61	69.2673
685.20	60.1546
692.80	61.2036
695.00	62.1677
696.49	64.0488
696.49	64.0488
697.00	74.2692
697.49	76.1359
698.33	82.6535
698.50	86.3720
699.00	91.0276
702.63	64.1526
706.10	73.5176
706.58	0.0000
706.67	79.1116
709.31	66.1277
711.68	55.9167
713.82	62.4758
717.42	61.6011
720.50	56.0461
721.93	0.0000
722.20	56.0706
722.78	52.8746
722.78	52.8746
722.89	52.8757
722.95	52.8769
723.30	60.8938
724.18	56.0986
727.18	68.9752
733.00	54.6203
735.90	73.9526
739.58	48.8114
742.81	55.4277
744.21	57.3265
747.13	52.6663
751.79	57.4370
752.31	48.0273
753.82	44.2767
755.35	51.8333
756.15	51.8445
756.87	59.3958
763.93	55.0484
765.79	55.0733
766.41	63.1819
766.84	74.6652
768.36	72.8032
768.36	72.8032
768.36	72.8032
768.36	72.8032
776.49	61.5802
778.00	64.4459
778.57	58.7683
778.89	58.7734
783.80	53.1494

785.46	56.0195
792.07	73.2277
795.84	50.4488
798.30	51.4072
801.93	63.8689
805.60	44.8428
810.29	55.4004
810.76	61.1380
815.85	55.4736
817.79	53.5858
818.51	50.7237
819.60	44.9929
826.30	60.4058
828.27	0.0000
831.60	61.4414
831.96	60.4865
834.83	70.1336
836.80	0.0000
846.75	46.2441
848.13	46.2588
856.28	0.0000
856.80	43.0398
860.37	53.0156
867.32	43.1441
867.82	48.1273
871.10	47.4717
873.19	36.8318
874.81	34.9065
875.33	0.0000
876.40	43.6487
879.36	56.2961
880.27	49.5121
880.51	49.5142
881.50	53.4099
883.24	50.5168
884.67	41.7866
889.25	48.6389
896.60	35.0779
898.02	36.0636
899.00	39.9707
903.28	45.1670
911.07	46.9199
911.07	46.9199
911.07	46.9199
919.63	44.6583
920.93	52.8992
925.00	37.2586
925.24	37.2605
926.50	41.1942
934.06	45.1914
934.06	45.1914
934.06	45.1914
934.06	45.1914
935.52	51.1018
937.48	52.1072
944.10	47.2578
946.00	47.2773
949.00	50.2643
962.29	50.4075
964.01	49.1539
966.15	69.5250
968.20	93.3055
969.11	69.2865
969.11	69.2865
969.11	69.2865
977.42	52.3531
980.50	48.6162
983.50	41.6975
989.30	50.6939
996.32	56.7402
1001.03	46.8307
1001.68	47.8340
1004.76	49.8586
1021.30	0.0000
1024.50	0.0000
1034.80	45.1483
1037.82	46.1797
1038.57	51.2054

1038.76	0.0000
1045.76	45.2417
1046.59	43.2432
1048.07	44.2614
1050.47	47.3022
1050.47	47.3022
1063.62	52.4718
1076.63	56.6517
1077.35	56.6608
1085.78	63.8459
1099.22	54.8679
1112.02	51.3372
1112.84	44.3160
1115.52	59.4099
1120.29	58.1504
1120.29	58.1504
1120.29	58.1504
1120.29	58.1504
1120.51	60.1932
1121.28	52.4770
1124.00	0.0000
1129.67	47.9417
1131.51	0.0000
1147.95	0.0000
1167.94	53.5256
1173.22	57.6999
1175.09	60.8125
1177.93	63.9375
1189.05	69.2328
1204.90	60.1051
1205.75	0.0000
1213.00	66.4219
1221.42	77.9541
1230.97	82.2531
1235.34	78.1494
1236.41	0.0000
1238.11	75.0586
1238.11	75.0586
1238.11	75.0586
1238.11	75.0586
1238.25	74.0190
1246.25	69.9471
1260.41	0.0000
1271.85	52.4333
1274.45	40.9170
1274.54	40.9170
1291.56	30.5151
1298.22	0.0000
1312.09	47.5177
1325.50	37.0422
1325.50	37.0422
1332.49	26.4893
1333.61	34.9725
1360.21	21.2899
1362.66	0.0000
1365.15	23.4377
1368.21	31.9775
1368.53	0.0000
1376.25	20.2787
1377.67	26.6886
1377.67	26.6886
1377.67	26.6886
1377.67	26.6886
1384.27	28.8556
1394.10	23.5496
1395.20	27.8355
1407.95	17.1654
1434.06	17.2370
1436.60	7.5443
1457.56	0.0000
1460.81	15.1467
1489.15	16.7658
1509.49	14.0154
1596.49	18.9335
1620.62	15.2003
1678.03	0.0000
1691.02	8.6368
1691.02	8.6368

1706.46	1.0000
1750.46	0.0000
1764.49	10.1796
1764.49	10.1796
1764.49	10.1796
1764.49	10.1796
1770.23	11.8865
1771.40	23.2893
1791.20	0.0000
1808.65	7.8025
1836.01	7.8309

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201870086

Total Uranium Activity	7.6191E-01	ug/g
Total Uranium Counting Unc.	1.8928E+00	ug/g
Total Uranium Tpu	9.6570E-07	ug/g
Total Uranium Mda	1.6624E-00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G1201870088      *
*   ANALYST       : MXR1                      DETECTOR   : GAM21            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 13:26:00.29    SAMPLE ALQT:  126.580 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.167E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.494E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 4.215E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.054E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:27:06.99

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:26:36.
Sample ID         : G1201870089          Sample quantity  : 1.55440E+02 GRAM
Detector name     : CAM23                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:03.12  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.58	2148	499	0.94	119.33	115	10	5.97E-01	2.9	
2	0	77.20*	164	505	1.00	154.57	152	9	4.54E-02	26.2	
3	0	88.10	1679	557	0.97	176.38	172	10	4.66E-01	3.6	
4	0	93.14*	96	296	1.55	186.45	183	9	2.66E-02	35.0	
5	0	122.01	376	232	1.04	244.21	240	8	1.04E-01	8.7	
6	0	135.61	46	395	0.90	271.43	269	11	1.26E-02	85.5	
7	0	185.73*	139	314	1.70	371.70	366	13	3.85E-02	28.0	
8	0	238.69*	338	340	0.95	477.63	473	8	9.40E-02	10.2	
9	0	241.27	27	439	4.91	482.80	482	14	7.64E-03	166.0	
10	0	295.50*	90	229	0.78	591.29	587	9	2.50E-02	32.1	
11	0	338.30	92	180	1.22	676.92	673	10	2.56E-02	29.1	
12	0	352.03*	216	159	1.23	704.38	699	10	6.00E-02	12.9	
13	0	510.79*	42	161	1.89	1022.03	1015	14	1.17E-02	69.6	
14	0	583.23*	154	93	1.19	1166.97	1161	11	4.28E-02	14.7	
15	0	609.65	157	112	1.15	1219.84	1213	14	4.37E-02	16.3	
16	0	661.82	2043	138	1.43	1324.22	1317	15	5.67E-01	2.5	
17	0	911.76	79	153	1.21	1824.36	1817	14	2.19E-02	35.3	
18	0	1173.52	1675	66	1.88	2348.22	2339	16	4.65E-01	2.7	
19	0	1332.81	1554	23	2.29	2667.05	2656	23	4.32E-01	2.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 14:27:10

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:26:36
Sample ID : G1201870089 Sample quantity : 155.44 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA23 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:03.12 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	3.418E-01	6.286E-02	5.645E-02	3.328E-03	6.056
	+	136.48		3.367E-01	5.764E-01	4.411E-01	2.869E-02	0.763
CO-60	+	1173.22		6.730E+00	5.228E-01	1.537E-01	8.668E-03	43.801
	+	1332.49	*	6.996E+00	6.343E-01	9.085E-02	6.670E-03	77.006
CD-109	+	88.03	*	4.167E+01	5.059E+00	1.961E+00	1.915E-01	21.247
SN-126		64.28		-4.689E-02	7.440E-01	1.214E+00	1.847E-01	-0.039
	+	86.94		1.722E+01	7.273E+00	8.214E-01	3.416E-01	20.965
	+	87.57	*	4.142E+00	5.029E-01	1.960E-01	1.908E-02	21.130
BA-137M	+	661.65	*	5.378E+00	3.878E-01	1.226E-01	6.262E-03	43.871
CS-137	+	661.65	*	5.685E+00	4.111E-01	1.296E-01	6.656E-03	43.871
TL-208		277.35		-2.829E-01	5.879E-01	9.716E-01	1.027E-01	-0.291
	+	510.84		3.690E-01	5.149E-01	4.323E-01	4.392E-02	0.853
	+	583.14	*	3.886E-01	1.171E-01	1.210E-01	7.853E-03	3.212
		860.37		4.732E-01	7.113E-01	1.195E+00	1.081E-01	0.396
BI-211		72.87		-3.848E+00	5.053E+00	7.771E+00	6.855E-01	-0.495
	+	351.07	*	2.347E+00	6.263E-01	5.957E-01	3.882E-02	3.940
PB-212		74.81		4.137E-01	6.314E-01	9.568E-01	1.234E-01	0.432
	+	77.11		1.016E+00	5.404E-01	5.053E-01	4.546E-02	2.011
	+	87.30		1.916E+01	3.013E+00	9.097E-01	1.268E-01	21.060
	+	238.63	*	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
		300.09		2.711E+00	1.470E+00	2.435E+00	2.022E-01	1.113
PO-212		74.81		4.137E-01	6.314E-01	9.568E-01	1.234E-01	0.432
	+	77.11		1.016E+00	5.404E-01	5.053E-01	4.546E-02	2.011
	+	87.30		1.916E+01	3.013E+00	9.097E-01	1.268E-01	21.060
		115.19		-2.401E+00	4.663E+00	7.746E+00	4.942E-01	-0.310
	+	238.63	*	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
		300.09		2.711E+00	1.470E+00	2.435E+00	2.022E-01	1.113
PB-214		74.81		7.128E-01	1.087E+00	1.649E+00	1.908E-01	0.432
	+	77.11		1.742E+00	9.359E-01	8.662E-01	1.021E-01	2.011
	+	87.30		3.282E+01	4.720E+00	1.558E+00	1.932E-01	21.060
	+	241.98		3.857E-01	1.281E+00	9.401E-01	7.477E-02	0.410
	+	295.21		5.737E-01	3.718E-01	4.175E-01	3.579E-02	1.374
	+	351.92	*	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-214		74.81		7.128E-01	1.087E+00	1.649E+00	1.908E-01	0.432

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		1.742E+00	9.359E-01	8.662E-01	1.021E-01	2.011
	+	87.30		3.282E+01	4.720E+00	1.558E+00	1.932E-01	21.060
	+	241.98		3.857E-01	1.281E+00	9.401E-01	7.477E-02	0.410
	+	295.21		5.737E-01	3.718E-01	4.175E-01	3.579E-02	1.374
	+	351.92	*	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-216		74.81		4.137E-01	6.314E-01	9.568E-01	1.234E-01	0.432
	+	77.11		1.016E-00	5.404E-01	5.053E-01	4.546E-02	2.011
	+	87.30		1.916E+01	3.013E+00	9.097E-01	1.268E-01	21.060
	+	238.63	*	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
		300.09		2.711E+00	1.470E+00	2.435E+00	2.022E-01	1.113
PO-218		74.81		7.128E-01	1.087E+00	1.649E+00	1.908E-01	0.432
	+	77.11		1.742E+00	9.359E-01	8.662E-01	1.021E-01	2.011
	+	87.30		3.282E+01	4.720E+00	1.558E+00	1.932E-01	21.060
	+	241.98		3.857E-01	1.281E+00	9.401E-01	7.477E-02	0.410
	+	295.21		5.737E-01	3.718E-01	4.175E-01	3.579E-02	1.374
	+	351.92	*	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
RA-224	+	240.98	*	7.313E-01	2.428E+00	1.887E+00	1.063E-01	0.388
TH-228		84.40		1.291E+00	4.406E+00	6.505E+00	8.919E-01	0.198
	+	238.60	*	7.908E-01	1.716E-01	1.803E-01	1.297E-02	4.385
		300.10		2.700E+00	2.155E+00	2.433E+00	1.434E+00	1.110
AM-241	+	59.54	*	1.385E+01	1.523E+00	4.871E-01	4.532E-02	28.436
ANH-511	+	511.00	*	7.970E-02	1.110E-01	9.341E-02	5.426E-03	0.853

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.667E-01	6.477E-01	1.071E+00	7.279E-02	0.249
NA-22		1274.54	*	4.085E-03	6.159E-02	1.003E-01	6.737E-03	0.041
NA-24		1368.53	*	4.976E-05	6.159E-02	Half-Life too short		
AL-26		1129.67		-3.055E+00	3.800E+00	5.769E+00	3.675E-01	-0.530
		1808.65	*	2.016E-02	5.029E-02	9.069E-02	5.451E-03	0.222
K-40		1460.81	*	8.824E-01	5.928E-01	1.176E+00	8.796E-02	0.750
TI-44		67.85		-6.432E-02	7.118E-02	1.091E-01	9.504E-03	-0.589
	+	78.38	*	1.874E-01	9.970E-02	9.457E-02	8.572E-03	1.982
SC-46		889.25	*	6.992E-02	9.817E-02	1.713E-01	1.530E-02	0.408
		1120.51		1.486E-01	1.170E-01	2.074E-01	1.352E-02	0.716
V-48		944.10		-6.626E-01	1.914E+00	3.120E+00	2.719E-01	-0.212
		983.50	*	7.630E-02	1.345E-01	2.313E-01	1.924E-02	0.330
		1312.09		-7.490E-03	8.033E-02	1.324E-01	9.418E-03	-0.057
CR-51		320.08	*	6.613E-02	5.314E-01	8.968E-01	5.880E-02	0.074
MN-52		744.21		-9.996E-03	2.047E-01	3.326E-01	2.117E-02	-0.030
		848.13		-2.775E+00	5.958E+00	9.196E+00	7.504E-01	-0.302
		935.52		1.703E-01	2.831E-01	4.876E-01	4.286E-02	0.349
		1246.25		-3.975E+00	4.055E+00	5.603E+00	3.586E-01	-0.709
	+	1333.61		3.522E+02	3.194E+01	4.133E+01	3.034E+00	8.522
		1434.06	*	-2.425E-02	1.219E-01	1.938E-01	1.402E-02	-0.125
MN-54		834.83	*	-2.482E-02	8.379E-02	1.319E-01	1.044E-02	-0.188
CO-56		846.75	*	1.970E-02	8.411E-02	1.379E-01	1.122E-02	0.143

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		977.42		-4.857E+00	7.412E+00	1.175E+01	9.851E-01	-0.413
		1037.82		-2.579E-02	7.711E-01	1.271E+00	1.042E-01	-0.020
		1175.09		2.957E-02	2.286E+01	3.523E+01	1.994E+00	8.394
		1238.25		1.205E-01	1.233E-01	2.205E-01	1.467E-02	0.546
		1360.21		6.114E-02	9.945E-01	1.678E+00	1.228E-01	0.036
		1771.40		-7.557E-01	4.697E-01	4.997E-01	3.091E-02	-1.512
CO-58		810.76	*	4.627E-02	7.822E-02	1.325E-01	9.951E-03	0.349
FE-59		142.65		-4.835E-01	3.226E+00	5.381E+00	2.926E-01	-0.090
		192.34		3.343E-01	1.214E+00	2.013E+00	2.329E-01	0.166
		1099.22	*	4.258E-02	2.121E-01	3.525E-01	2.715E-02	0.121
		1291.56		3.531E-02	1.283E-01	2.243E-01	1.862E-02	0.157
ZN-65		1115.52	*	-2.400E-01	2.278E-01	3.436E-01	2.269E-02	-0.699
GE-68		1077.35	*	6.311E-01	3.247E+00	5.406E+00	3.869E-01	0.117
AS-73		53.44	*	-1.904E+00	1.890E+00	2.941E+00	2.597E-01	-0.647
AS-74		595.88	*	7.119E-02	1.333E-01	2.303E-01	1.270E-02	0.309
		634.78		-7.722E-02	5.711E-01	9.381E-01	4.966E-02	-0.082
SE-75		66.05		1.748E+00	6.768E+00	1.110E+01	1.164E+00	0.158
		96.73		-7.403E-02	1.090E-00	1.554E+00	2.084E-01	-0.048
	+	121.11		1.794E+00	3.541E-01	4.674E-01	4.359E-02	3.837
	+	136.00		6.179E-02	1.057E-01	9.956E-02	5.622E-03	0.621
		198.60		-4.488E-01	2.646E+00	4.293E+00	2.898E-01	-0.105
		264.65	*	3.823E-02	6.883E-02	1.130E-01	6.579E-03	0.338
		279.53		1.746E-02	1.642E-01	2.800E-01	1.761E-02	0.062
		303.91		-4.015E+00	3.406E+00	5.327E+00	5.111E-01	-0.754
		400.65		1.215E-01	4.927E-01	8.199E-01	7.460E-02	0.148
BR-77	+	87.88		9.989E+02	1.213E+02	1.221E+02	1.191E+01	8.182
		200.40		7.703E+00	2.711E+01	4.488E+01	2.401E+00	0.172
	+	239.00		1.393E+01	2.958E+00	4.911E+00	2.761E-01	2.837
		249.79		-2.114E+01	1.424E+01	1.761E+01	1.001E+00	-1.201
		281.68		-4.765E+00	1.621E+01	2.706E+01	1.577E+00	-0.176
		297.23		6.166E+00	1.254E+01	1.922E+01	1.128E+00	0.321
		303.76		-4.337E+01	3.339E+01	5.206E+01	3.064E+00	-0.833
		439.47		6.003E+00	3.523E+01	5.785E+01	3.385E+00	0.104
		484.57		4.368E+01	5.109E+01	8.698E+01	5.085E+00	0.502
		520.65	*	1.047E+00	2.350E+00	3.878E+00	2.245E-01	0.270
		574.64		-6.555E+01	4.323E+01	6.405E+01	3.595E+00	-1.024
		578.91		1.801E+01	1.957E+01	3.103E+01	1.736E+00	0.580
		585.48		1.204E+02	4.498E+01	7.892E+01	4.392E+00	1.525
		755.35		-2.522E+01	3.904E+01	6.025E+01	3.945E+00	-0.419
		817.79		-2.929E-01	3.493E+01	5.638E+01	4.292E+00	-0.005
SR-82		698.33		-1.619E+01	4.959E+01	7.917E+01	4.472E+00	-0.205
		776.49	*	-5.600E-01	6.424E-01	9.639E-01	6.650E-02	-0.581
		1395.20		-1.553E+00	1.212E+01	1.965E+01	1.432E+00	-0.079
RB-83		520.41	*	4.442E-02	1.322E-01	2.166E-01	1.254E-02	0.205
		529.64		-2.313E-02	2.052E-01	3.245E-01	1.871E-02	-0.071
		552.65		8.442E-02	3.659E-01	6.240E-01	3.555E-02	0.135
RB-84		881.50	*	4.110E-02	1.489E-01	2.541E-01	2.232E-02	0.162
KR-85		513.99	*	2.059E+01	1.475E+01	2.337E+01	1.356E+00	0.881
SR-85		513.99	*	9.748E-02	6.983E-02	1.106E-01	6.420E-03	0.881

---- Non-Identified Nuclides ----

Nuclide	Line Used	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86		1076.63	*	-6.610E-01	1.609E+00	2.565E+00	1.838E-01	-0.258
Y-88		898.02		4.217E-02	1.060E-01	1.816E-01	1.660E-02	0.232
		1836.01	*	3.265E-02	5.612E-02	1.038E-01	6.113E-03	0.314
ZR-88		392.90	*	1.777E-02	5.602E-02	9.382E-02	5.416E-03	0.189
Y-91		1204.90	*	-5.611E+00	2.539E+01	4.005E+01	2.389E+00	-0.140
NB-94		702.63	*	-1.939E-02	6.400E-02	1.025E-01	5.855E-03	-0.189
		871.10		-1.240E-02	8.704E-02	1.448E-01	1.243E-02	-0.086
NB-95		765.79	*	-1.190E-02	7.527E-02	1.208E-01	8.118E-03	-0.099
NB-95M		235.69	*	1.358E-01	1.926E-01	2.891E-01	2.133E-02	0.470
ZR-95		724.18		-1.698E-01	1.825E-01	2.773E-01	1.961E-02	-0.612
		756.15	*	-5.953E-03	1.341E-01	2.176E-01	1.669E-02	-0.027
NB-97		657.90	*	1.726E-04	1.341E-01	Half-Life too short		
		1024.50		-9.646E-03	1.341E-01	Half-Life too short		
ZR-97		254.15		-1.059E-03	1.341E-01	Half-Life too short		
		355.39		-1.757E-03	1.341E-01	Half-Life too short		
		507.63	*	1.379E-03	1.341E-01	Half-Life too short		
		602.52		-7.745E-03	1.341E-01	Half-Life too short		
		1021.30		3.640E-03	1.341E-01	Half-Life too short		
		1147.95		7.271E-04	1.341E-01	Half-Life too short		
		1362.66		-1.770E-03	1.341E-01	Half-Life too short		
		1750.46		1.873E-03	1.341E-01	Half-Life too short		
MO-99		140.51		-3.796E+00	5.970E+00	8.511E+00	2.288E+00	-0.446
		181.06		1.067E+00	3.813E+00	5.712E+00	9.680E-01	0.187
		366.43		-2.774E-01	2.498E+01	4.132E+01	2.421E+00	-0.007
		739.58	*	-1.830E+00	3.762E+00	5.896E+00	8.251E-01	-0.310
		778.00		-5.709E+00	1.021E+01	1.576E+01	1.091E+00	-0.362
TC-99M		140.51	*	-3.004E+01	1.021E+01	Half-Life too short		
RH-101		127.23		-2.922E-02	4.215E-02	6.883E-02	3.953E-03	-0.425
		198.01	*	-2.894E-03	4.974E-02	8.119E-02	4.328E-03	-0.036
		325.23		-3.711E-01	3.751E-01	5.909E-01	3.492E-02	-0.628
RH-102		418.52		-4.286E-01	5.925E-01	9.246E-01	5.387E-02	-0.464
		475.06	*	1.541E-02	6.850E-02	1.120E-01	6.555E-03	0.138
		631.29		9.285E-02	1.107E-01	1.941E-01	1.032E-02	0.478
		697.49		3.260E-02	1.391E-01	2.328E-01	1.312E-02	0.140
		766.84		-7.393E-02	2.109E-01	3.332E-01	2.245E-02	-0.222
		1046.59		1.199E-01	3.021E-01	5.111E-01	3.870E-02	0.235
		1112.84		8.624E-02	5.670E-01	9.383E-01	6.225E-02	0.092
RU-103		497.08	*	-2.505E-02	7.564E-02	1.185E-01	1.501E-02	-0.211
	+	610.33		7.081E+00	2.554E+00	3.133E+00	4.789E-01	2.260
RH-106	+	511.85		3.924E-01	5.467E-01	6.114E-01	3.550E-02	0.642
		621.84	*	-5.382E-02	6.388E-01	1.055E+00	1.216E-01	-0.051
		1050.47		1.294E-02	5.755E+00	9.479E+00	7.131E-01	0.001
RU-106	+	511.85		3.924E-01	5.467E-01	6.114E-01	3.550E-02	0.642
		621.84	*	-5.382E-02	6.388E-01	1.055E+00	5.668E-02	-0.051
		1050.47		1.294E-02	5.755E+00	9.479E+00	7.131E-01	0.001
AG-108M		433.93	*	-8.553E-02	6.992E-02	1.047E-01	6.638E-03	-0.817
		614.37		-1.736E-02	8.035E-02	1.133E-01	6.733E-03	-0.153
		722.95		-2.668E-02	8.770E-02	1.402E-01	9.119E-03	-0.190
AG-110M		657.75	*	8.299E-02	8.642E-02	1.346E-01	7.478E-03	0.617

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		677.61		-1.452E-01	6.061E-01	9.799E-01	5.608E-02	-0.148
		706.67		7.677E-02	4.048E-01	6.734E-01	4.124E-02	0.114
		763.93		-1.548E-01	3.226E-01	5.039E-01	3.527E-02	-0.307
		884.67		-1.036E-01	1.245E-01	1.967E-01	1.793E-02	-0.527
		937.48		2.294E-02	3.111E-01	5.206E-01	4.727E-02	0.044
		1384.27		-3.392E-01	2.505E-01	3.185E-01	2.416E-02	-1.065
IN-111		171.28		8.539E-02	2.144E-01	3.614E-01	1.854E-02	0.236
		245.39	*	4.994E-02	3.198E-01	4.599E-01	2.603E-02	0.109
IN-113M		391.69	*	4.546E-02	8.050E-02	1.368E-01	8.429E-03	0.332
SN-113		391.69	*	4.546E-02	8.050E-02	1.368E-01	8.429E-03	0.332
IN-114M		190.27	*	-2.205E-01	2.637E-01	3.609E-01	1.902E-02	-0.611
CD-115		260.90		6.139E+00	2.060E+01	3.333E+01	1.914E+00	0.184
		492.35		6.618E+00	7.064E+00	1.207E+01	7.046E-01	0.548
		527.90	*	-8.663E-01	2.088E+00	3.224E+00	1.861E-01	-0.269
SN-117M		156.02		-7.933E-01	2.026E+00	3.300E+00	1.727E-01	-0.240
		158.56	*	7.476E-03	4.879E-02	8.173E-02	4.247E-03	0.091
SB-122		563.90	*	-1.427E-01	5.727E-01	9.456E-01	5.349E-02	-0.151
		692.80		5.223E+00	1.187E+01	2.016E+01	1.122E+00	0.259
I-123		159.00	*	3.095E-04	1.187E+01	Half-Life too short		
		528.96		-2.784E-02	1.187E+01	Half-Life too short		
TE-123M		159.00	*	2.161E-02	3.552E-02	6.089E-02	3.213E-03	0.355
I-124		602.71	*	-4.403E-01	4.292E-01	5.560E-01	3.047E-02	-0.792
		722.78		1.455E-02	2.555E+00	4.182E+00	2.520E-01	0.003
		1325.50		7.394E+00	1.784E+01	2.759E+01	2.004E+00	0.268
		1376.25		1.566E+01	1.462E+01	2.745E+01	2.006E+00	0.571
		1509.49		5.850E+00	6.545E+00	1.239E+01	8.787E-01	0.472
		1691.02		3.246E-01	1.430E+00	2.466E+00	1.610E-01	0.132
SB-124		602.71		-8.239E-02	8.031E-02	1.040E-01	5.705E-03	-0.792
		645.85		2.704E-01	9.218E-01	1.558E+00	9.403E-02	0.174
		709.31		-2.368E-01	5.191E+00	8.479E+00	4.932E-01	-0.028
		713.82		1.369E+00	3.059E+00	5.176E+00	5.310E-01	0.264
		722.78		3.948E-03	6.932E-01	1.135E+00	7.135E-02	0.003
		968.20		1.202E+01	6.613E+00	1.192E+01	1.010E+00	1.008
		1045.16		1.910E+00	6.097E+00	1.026E+01	7.787E-01	0.186
		1325.50		2.142E+00	5.169E+00	7.995E+00	5.807E-01	0.268
		1368.21		1.648E-01	2.209E+00	3.721E+00	4.719E-01	0.044
		1436.60		7.013E-01	4.538E+00	7.735E+00	5.593E-01	0.091
		1691.02	*	2.077E-02	9.152E-02	1.578E-01	1.100E-02	0.132
SB-125		427.89	*	-4.843E-02	1.895E-01	3.041E-01	1.850E-02	-0.159
		463.38		5.491E-01	6.128E-01	1.041E+00	7.090E-02	0.528
		600.56		1.670E-01	3.375E-01	5.812E-01	3.745E-02	0.287
		635.90		-2.070E-01	5.842E-01	9.447E-01	6.007E-02	-0.219
TE-125M		109.28	*	-7.287E+00	1.034E+01	1.702E+01	1.516E+00	-0.428
I-126		388.63		-1.058E-01	2.674E-01	4.297E-01	2.485E-02	-0.246
		666.33	*	-3.556E-02	2.875E-01	4.059E-01	2.101E-02	-0.088
		753.82		-1.128E+00	2.127E+00	3.318E+00	2.164E-01	-0.340
SB-126		223.80		-2.297E+00	4.288E+00	6.701E+00	3.700E-01	-0.343
		278.60		6.534E-01	2.535E+00	4.356E+00	2.534E-01	0.150
	+	296.50		3.739E+00	2.412E+00	3.269E+00	1.919E-01	1.144

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/CRAM)	Act error	MDA (pCi/CRAM)	MDA error	Act/MDA
		414.70		4.601E-02	1.008E-01	1.692E-01	9.846E-03	0.272
		415.30		4.232E+00	8.372E+00	1.409E+01	8.204E-01	0.300
		555.20		3.729E-01	5.233E+00	8.829E+00	5.022E-01	0.042
		573.80		-1.955E+00	1.257E+00	1.850E+00	1.039E-01	-1.057
		593.00		-6.106E-02	1.163E+00	1.933E+00	1.069E-01	-0.032
		656.30		1.528E+00	5.144E+00	7.593E+00	3.908E-01	0.201
		666.33		-1.460E-02	1.181E-01	1.667E-01	8.627E-03	-0.088
		675.00		1.387E-01	2.648E+00	4.379E+00	2.322E-01	0.032
		695.00		-6.268E-02	9.731E-02	1.515E-01	8.479E-03	-0.414
		697.00		1.395E-01	3.217E-01	5.465E-01	3.076E-02	0.255
		720.50	*	-1.172E-02	1.896E-01	3.088E-01	1.850E-02	-0.038
		856.80		-8.235E-02	7.997E-01	1.275E+00	1.061E-01	-0.065
		989.30		-1.621E-01	2.130E+00	3.512E+00	2.899E-01	-0.046
		1034.80		-1.015E+01	1.524E+01	2.389E+01	1.845E+00	-0.425
		1213.00		-1.614E+00	4.203E+00	6.458E+00	3.907E-01	-0.250
SB-127		61.10		1.301E+02	3.334E+01	5.576E+01	5.231E+00	2.334
		252.40		1.855E+00	1.999E+00	3.123E+00	1.283E+00	0.594
		290.80		-3.137E+00	1.068E+01	1.561E+01	1.069E+00	-0.201
		411.60		-1.677E+00	6.456E+00	1.040E+01	1.353E+00	-0.161
		444.90		9.348E-01	5.347E+00	8.776E+00	7.817E-01	0.107
		473.00		4.250E-01	1.007E+00	1.665E+00	1.560E-01	0.255
		543.00		-1.217E-01	8.022E+00	1.349E+01	1.526E+00	-0.009
		603.60		-3.612E+00	6.386E+00	8.697E+00	7.504E-01	-0.415
		685.20	*	4.151E-01	7.287E-01	1.247E+00	8.576E-02	0.333
		698.50		-6.816E+00	7.304E+00	1.098E+01	1.432E+00	-0.621
		722.20		-1.768E-01	1.548E+01	2.531E+01	1.767E+00	-0.007
		783.80		1.068E-01	1.964E+00	3.199E+00	3.060E-01	0.033
XE-127		57.60		-7.139E-01	1.340E+01	2.006E+01	1.758E+00	-0.036
		145.22		-1.621E-02	8.241E-01	1.381E+00	7.452E-02	-0.012
		172.10		1.722E-02	1.434E-01	2.382E-01	1.223E-02	0.072
		202.84	*	-4.111E-02	6.185E-02	9.689E-02	5.201E-03	-0.424
		374.96		7.952E-02	3.170E-01	5.314E-01	3.100E-02	0.150
I-131		80.18		-1.183E+00	3.836E+00	5.487E+00	5.039E-01	-0.216
		284.30		2.171E-02	1.343E+00	2.276E+00	1.463E-01	0.010
		364.48	*	-7.063E-02	1.161E-01	1.853E-01	1.200E-02	-0.381
		636.97		1.089E-01	1.723E+00	2.868E+00	1.714E-01	0.038
		722.89		-2.207E+00	7.695E+00	1.232E+01	7.452E-01	-0.179
TE-132		49.72		-1.563E+00	9.207E+00	1.499E+01	1.352E+00	-0.104
		111.76		3.887E+00	7.343E+00	1.285E+01	9.546E-01	0.302
		116.30		-1.391E+00	7.301E+00	1.232E+01	8.755E-01	-0.113
		228.16	*	7.997E-02	2.251E-01	3.689E-01	4.822E-02	0.217
BA-133		53.15		-1.063E+01	8.757E+00	1.347E+01	1.189E+00	-0.789
		79.62		1.077E-01	2.084E+00	3.052E+00	4.737E-01	0.035
		81.00		-1.079E-01	1.583E-01	2.195E-01	3.559E-02	-0.492
		276.40		-2.018E-01	5.694E-01	9.477E-01	1.229E-01	-0.213
		302.84		-3.877E-01	2.490E-01	3.770E-01	4.410E-02	-1.028
		356.01	*	1.849E-02	9.041E-02	1.338E-01	1.552E-02	0.138
		383.85		4.292E-01	5.829E-01	9.983E-01	1.085E-01	0.430
I-133	+	510.53		1.892E-03	5.829E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	529.87	*	4.574E-06	5.829E-01	Half-Life too short		
	706.58		3.355E-04	5.829E-01	Half-Life too short		
	856.28		9.404E-04	5.829E-01	Half-Life too short		
	875.33		2.397E-04	5.829E-01	Half-Life too short		
	1236.41		1.149E-03	5.829E-01	Half-Life too short		
	1298.22		-6.616E-04	5.829E-01	Half-Life too short		
CS-134	475.35		2.306E+00	4.405E+00	7.325E+00	4.288E-01	0.315
	563.23		-8.726E-02	7.052E-01	1.175E+00	6.793E-02	-0.074
	569.32		2.458E-01	3.746E-01	6.481E-01	3.767E-02	0.379
	604.70		-3.364E-02	6.911E-02	9.482E-02	5.219E-03	-0.355
	795.84	*	9.152E-02	1.003E-01	1.732E-01	1.265E-02	0.528
	801.93		2.109E-01	8.495E-01	1.402E+00	1.036E-01	0.150
	1038.57		1.608E+00	1.024E+01	1.710E+01	1.313E+00	0.094
	1167.94		5.838E+00	6.620E+00	1.015E+01	5.818E-01	0.575
	1365.15		-1.278E+00	1.522E+00	2.084E+00	1.621E-01	-0.613
CS-135	268.24	*	-4.274E-01	2.709E-01	3.824E-01	2.922E-02	-1.118
I-135	288.45		-1.455E+02	2.709E-01	Half-Life too short		
	417.63		-5.456E+01	2.709E-01	Half-Life too short		
	546.56		-6.805E+01	2.709E-01	Half-Life too short		
	836.80		-8.333E+01	2.709E-01	Half-Life too short		
	1038.76		5.566E+01	2.709E-01	Half-Life too short		
	1124.00		-2.235E+02	2.709E-01	Half-Life too short		
	1131.51		-7.818E+00	2.709E-01	Half-Life too short		
	1260.41	*	-1.126E+00	2.709E-01	Half-Life too short		
	1457.56		-6.068E+01	2.709E-01	Half-Life too short		
	1678.03		8.986E+01	2.709E-01	Half-Life too short		
	1706.46		9.017E+00	2.709E-01	Half-Life too short		
	1791.20		4.717E+01	2.709E-01	Half-Life too short		
CS-136	66.91		3.044E-01	7.735E-01	1.273E+00	1.970E-01	0.239
	86.29		2.462E+00	1.409E+00	2.158E+00	2.922E-01	1.141
	153.22		-5.053E-03	5.839E-01	9.725E-01	6.613E-02	-0.005
	163.89		-6.872E-01	9.982E-01	1.592E+00	1.069E-01	-0.432
	176.55		9.530E-02	3.284E-01	5.494E-01	3.271E-02	0.173
	273.65		-2.524E-01	5.279E-01	8.099E-01	5.350E-02	-0.312
	340.57		1.521E-01	1.673E-01	2.614E-01	1.636E-02	0.582
	818.51		8.486E-02	1.180E-01	2.007E-01	1.531E-02	0.423
	1048.07	*	8.966E-02	1.889E-01	3.213E-01	2.559E-02	0.279
	1235.34		-1.425E-01	5.955E-01	9.368E-01	9.622E-02	-0.152
CE-139	165.85	*	2.647E-02	4.083E-02	6.975E-02	3.556E-03	0.380
BA-140	162.64		-4.790E-01	6.716E-01	1.069E+00	6.356E-02	-0.448
	304.84		-6.113E-03	1.382E+00	2.326E+00	6.353E-01	-0.003
	423.70		4.367E-01	2.580E+00	4.248E+00	1.350E+00	0.103
	537.32	*	1.568E-02	3.403E-01	5.749E-01	1.869E-01	0.027
LA-140	328.77		8.750E-02	3.351E-01	5.681E-01	3.746E-02	0.154
	432.53		-3.013E+00	2.912E+00	4.425E+00	2.853E-01	-0.681
	487.03		-1.690E-01	1.955E-01	2.952E-01	1.949E-02	-0.573
	751.79		4.085E-01	2.437E+00	4.022E+00	3.085E-01	0.102
	815.85		-2.203E-01	4.911E-01	7.636E-01	6.637E-02	-0.288
	867.82		9.131E-01	2.350E+00	3.877E+00	3.485E-01	0.235

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		919.63		2.022E+00	5.656E+00	8.985E+00	9.794E-01	0.225
		925.24		8.988E-02	2.222E+00	3.716E+00	3.496E-01	0.024
		1596.49	*	-7.876E-03	7.972E-02	1.277E-01	8.763E-03	-0.062
CE-141		145.44	*	4.834E-03	7.331E-02	1.234E-01	6.958E-03	0.039
CE-143		57.37		-7.613E+00	5.959E+01	8.894E+01	8.820E+00	-0.086
		231.56		-2.923E+01	8.924E+01	1.399E+02	4.318E+01	-0.209
		293.26	*	3.456E+00	5.498E+00	8.471E+00	1.733E+00	0.408
	+	350.59		4.081E+02	1.627E+02	1.509E+02	4.581E+01	2.704
		490.36		2.572E+01	1.309E+02	2.131E+02	6.586E+01	0.121
		664.57		1.487E+03	4.866E+02	2.756E+02	8.692E+01	5.397
		721.93		6.649E+00	6.041E+01	9.964E+01	2.838E+01	0.067
CE-144		80.11		-9.807E-01	3.334E+00	4.775E+00	4.377E-01	-0.205
		133.54	*	1.766E-01	2.840E-01	4.480E-01	6.326E-02	0.394
PM-144		476.78		4.942E-02	1.513E-01	2.489E-01	1.738E-02	0.199
		618.01		2.488E-02	6.052E-02	1.035E-01	5.968E-03	0.240
		696.49	*	5.962E-02	6.205E-02	1.095E-01	6.155E-03	0.545
		778.57		-1.837E+00	4.503E+00	7.045E+00	4.886E-01	-0.261
PR-144		696.49	*	4.024E+00	4.188E+00	7.389E+00	4.153E-01	0.545
		1489.15		-1.235E+01	1.770E+01	2.505E+01	1.788E+00	-0.493
PM-146		453.90	*	3.483E-03	9.392E-02	1.526E-01	1.322E-02	0.023
		633.02		1.997E+00	3.010E+00	5.063E+00	1.861E+00	0.394
		735.90		1.120E-01	3.162E-01	5.278E-01	1.477E-01	0.212
		747.13		-4.812E-02	2.092E-01	3.352E-01	4.291E-02	-0.144
ND-147		91.11		1.311E-01	2.580E-01	3.401E-01	3.344E-02	0.385
		319.41		-7.748E-01	3.603E+00	5.967E+00	3.524E-01	-0.130
		439.89		-1.088E+00	7.996E+00	1.290E+01	7.547E-01	-0.084
		531.02	*	4.929E-01	6.687E-01	1.175E+00	1.587E-01	0.419
PM-149		285.90	*	2.004E+01	1.512E+01	2.677E+01	3.794E+00	0.749
EU-152	+	121.78		1.010E+00	1.923E-01	2.874E-01	2.210E-02	3.515
		244.69		4.794E-02	6.234E-01	8.915E-01	5.043E-02	0.054
		344.27	*	-9.306E-02	1.920E-01	2.862E-01	1.897E-02	-0.325
		443.98		-1.000E+00	2.115E+00	3.337E+00	1.953E-01	-0.300
		778.89		-2.588E-01	5.271E-01	8.183E-01	5.678E-02	-0.316
		867.32		5.970E-01	2.116E+00	3.467E+00	2.953E-01	0.172
		964.01		-8.160E-01	7.997E-01	1.246E+00	1.062E-01	-0.655
		1085.78		-3.418E-01	1.005E+00	1.606E+00	1.130E-01	-0.213
		1112.02		4.787E-01	8.069E-01	1.375E+00	9.143E-02	0.348
		1407.95		1.532E-01	2.472E-01	4.526E-01	3.291E-02	0.339
GD-153		69.67		1.772E-01	2.448E+00	3.935E+00	3.438E-01	0.045
		83.37		-7.607E+00	2.271E+01	3.526E+01	3.310E+00	-0.216
		97.43	*	-5.600E-02	1.210E-01	1.673E-01	1.367E-02	-0.335
		103.18		4.165E-02	1.377E-01	2.177E-01	1.627E-02	0.191
EU-154	+	123.07		7.090E-01	1.405E-01	1.877E-01	1.772E-02	3.776
		247.94		2.992E-01	6.531E-01	9.612E-01	9.098E-02	0.311
		591.81		-8.541E-01	1.173E+00	1.848E+00	1.778E-01	-0.462
		723.30		-1.711E-01	3.678E-01	5.807E-01	4.224E-02	-0.295
		756.87		1.074E+00	1.563E+00	2.678E+00	2.838E-01	0.401
		873.19		3.617E-01	7.420E-01	1.282E+00	1.571E-01	0.282
		996.32		6.163E-01	9.534E-01	1.637E+00	2.874E-01	0.376

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		1.727E-01	5.298E-01	8.961E-01	1.008E-01	0.193
		1274.45	*	1.804E-02	1.736E-01	2.844E-01	2.823E-02	0.063
EU-155		48.70		2.024E+00	5.684E+00	9.495E+00	7.659E-01	0.213
	+	60.01		4.492E+02	4.706E+01	4.415E+01	3.835E+00	10.175
		86.54		7.876E-01	2.167E-01	3.433E-01	3.336E-02	2.294
		105.31	*	-9.864E-02	1.346E-01	2.223E-01	1.639E-02	-0.444
TB-160	+	86.79		1.239E+01	1.505E+00	1.104E+00	1.067E-01	11.226
		197.04		-1.478E-01	7.847E-01	1.273E+00	6.775E-02	-0.116
		215.65		2.021E-01	1.169E+00	1.908E+00	1.042E-01	0.106
		298.57		3.146E-01	2.058E-01	3.357E-01	1.972E-02	0.937
		879.36	*	-7.479E-02	3.232E-01	5.336E-01	4.666E-02	-0.140
		962.29		5.513E-02	1.269E+00	2.115E+00	1.806E-01	0.026
		966.15		-1.442E-01	5.118E-01	8.365E-01	7.110E-02	-0.172
		1177.93		3.322E+00	9.685E-01	1.770E+00	1.007E-01	1.877
		1271.85		-1.268E+00	1.078E+00	1.437E+00	9.593E-02	-0.882
HO-166M		80.57		-2.937E-01	4.375E-01	6.101E-01	5.610E-02	-0.481
	+	184.41		1.696E-01	9.526E-02	8.676E-02	4.534E-03	1.954
		280.46		-2.224E-02	1.371E-01	2.304E-01	1.342E-02	-0.097
		410.95		2.011E-01	4.913E-01	8.232E-01	4.785E-02	0.244
		711.68	*	-1.491E-02	1.247E-01	2.024E-01	1.185E-02	-0.074
		752.31		-3.121E-01	6.060E-01	9.477E-01	6.158E-02	-0.329
		810.29		1.094E-01	1.262E-01	2.180E-01	1.630E-02	0.502
TM-171		51.35		1.452E+01	7.226E+01	1.194E+02	1.038E+01	0.122
		52.39		-1.042E+00	3.671E+01	5.996E+01	5.268E+00	-0.017
	+	59.40		2.352E+03	2.464E+02	2.475E+02	2.150E+01	9.504
		66.72	*	1.228E+01	4.186E+01	6.866E+01	5.971E+00	0.179
LU-176	+	88.36		9.824E+00	1.193E+00	1.185E+00	1.149E-01	8.288
		201.83		-1.394E-02	4.358E-02	6.968E-02	3.735E-03	-0.200
		306.84	*	1.864E-02	4.055E-02	6.995E-02	4.121E-03	0.266
		401.10		6.609E+00	1.314E+01	2.219E+01	1.286E+00	0.298
LU-177		112.95		3.060E-01	9.524E-01	1.649E+00	1.082E-01	0.186
		208.36	*	3.360E-01	7.708E-01	1.278E+00	6.914E-02	0.263
LU-177M		52.97		-2.751E+00	3.750E+00	5.919E+00	5.217E-01	-0.465
		54.07		-5.228E-01	1.974E+00	3.184E+00	2.814E-01	-0.164
		61.30		3.598E-01	2.522E+00	3.802E+00	3.302E-01	0.095
	+	121.62		5.021E+00	9.231E-01	1.423E+00	8.414E-02	3.527
		147.16		-1.709E-01	8.555E-01	1.416E+00	7.596E-02	-0.121
		171.86		8.629E-02	6.464E-01	1.074E+00	5.515E-02	0.080
		218.09		4.673E-01	1.416E+00	2.325E+00	1.274E-01	0.201
		268.79		-6.673E-01	1.285E+00	1.968E+00	1.137E-01	-0.339
		319.02		-2.040E-01	4.362E-01	7.118E-01	4.204E-02	-0.287
		367.43		1.360E+00	1.698E+00	2.933E+00	1.718E-01	0.464
		413.65	*	-5.401E-02	3.449E-01	5.589E-01	3.252E-02	-0.097
HF-181		56.28		1.420E+00	2.164E+00	3.355E+00	2.954E-01	0.423
		57.53		-8.660E-02	1.151E+00	1.722E+00	1.509E-01	-0.050
		65.20		-1.230E+00	1.289E+00	1.965E+00	1.707E-01	-0.626
		133.02		5.127E-02	8.070E-02	1.279E-01	7.179E-03	0.401
	+	136.25		6.649E-01	1.138E+00	1.074E+00	5.962E-02	0.619
		345.85		-2.998E-01	3.376E-01	4.875E-01	2.876E-02	-0.615

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		482.03	*	-1.529E-02	7.838E-02	1.246E-01	7.285E-03	-0.123
W-181		56.28		5.992E-01	9.180E-01	1.423E+00	1.253E-01	0.421
		57.53		-3.709E-02	4.886E-01	7.310E-01	6.406E-02	-0.051
		65.20	*	-5.180E-01	5.429E-01	8.279E-01	7.192E-02	-0.626
TA-182		67.75		-9.993E-02	1.600E-01	2.495E-01	2.172E-02	-0.401
		100.10		-1.352E-01	2.355E-01	3.516E-01	2.752E-02	-0.385
		152.43		5.664E-02	4.308E-01	7.229E-01	3.820E-02	0.078
		222.10		-2.203E-01	5.489E-01	8.659E-01	4.771E-02	-0.254
		1001.68		-4.209E-01	4.796E+00	7.889E+00	6.405E-01	-0.053
		1121.28		5.696E-01	3.257E-01	5.929E-01	3.856E-02	0.961
		1189.05		2.724E-01	5.201E-01	8.907E-01	5.168E-02	0.306
		1221.42	*	1.030E-01	2.638E-01	4.483E-01	2.752E-02	0.230
		1230.97		-2.254E-02	6.354E-01	1.024E+00	6.388E-02	-0.022
RE-183		57.98		7.848E-01	5.024E-01	7.989E-01	6.987E-02	0.982
	+	59.32		9.008E+00	9.437E-01	9.539E-01	8.290E-02	9.443
		67.20		-2.842E-02	2.778E-01	4.463E-01	3.883E-02	-0.064
		162.32	*	-5.242E-02	1.345E-01	2.182E-01	1.123E-02	-0.240
		208.81		7.130E-01	1.410E+00	2.346E+00	1.270E-01	0.304
		291.72		4.827E-01	1.665E+00	2.534E+00	1.485E-01	0.190
RE-184		57.98		3.022E+00	1.934E+00	3.076E+00	2.690E-01	0.982
	+	59.32		3.466E+01	3.631E+00	3.670E+00	3.189E-01	9.443
		67.20		-1.094E-01	1.069E+00	1.718E+00	1.495E-01	-0.064
		161.27		1.129E-01	4.569E-01	7.680E-01	3.962E-02	0.147
		216.55		-2.598E-01	4.480E-01	7.026E-01	3.844E-02	-0.370
		252.85	*	4.596E-01	3.823E-01	6.507E-01	3.710E-02	0.706
		318.01		-2.832E-01	7.472E-01	1.226E+00	7.238E-02	-0.231
		792.07		-9.272E-01	2.173E+00	3.406E+00	2.440E-01	-0.272
		903.28		-7.128E-01	2.746E+00	4.176E+00	3.784E-01	-0.171
		920.93		1.321E-01	1.278E+00	2.146E+00	1.914E-01	0.062
OS-185	+	59.72		2.504E+01	2.624E+00	2.565E+00	2.228E-01	9.762
		61.14		9.745E-01	3.224E-01	5.401E-01	4.691E-02	1.804
		69.30		3.074E-02	4.202E-01	6.759E-01	5.900E-02	0.045
		592.07		-2.586E+00	4.580E+00	7.329E+00	4.056E-01	-0.353
		646.12	*	3.382E-02	8.036E-02	1.370E-01	7.151E-03	0.247
		717.42		-3.155E-01	1.737E+00	2.804E+00	1.666E-01	-0.113
		874.81		4.496E-01	1.394E+00	2.387E+00	2.067E-01	0.188
		880.27		-1.936E-01	1.832E+00	3.051E+00	2.673E-01	-0.063
RE-188		155.03	*	-5.458E-02	2.083E-01	3.418E-01	1.794E-02	-0.160
		477.96		3.160E+00	6.309E+00	1.049E+01	6.137E-01	0.301
		633.10		3.044E+00	5.541E+00	9.522E+00	5.051E-01	0.320
W-188		63.58		-2.746E+00	7.775E+01	1.178E+02	1.023E+01	-0.023
		227.08		2.944E+00	1.928E+01	3.130E+01	1.735E+00	0.094
		290.67	*	-3.511E+00	1.344E+01	1.969E+01	1.153E+00	-0.178
IR-192	+	295.96		4.075E-01	2.629E-01	3.582E-01	2.135E-02	1.137
		308.46		-8.754E-02	1.468E-01	2.382E-01	1.419E-02	-0.368
		316.51	*	1.745E-02	5.418E-02	9.252E-02	5.488E-03	0.189
		468.07		-1.445E-01	1.414E-01	2.135E-01	1.438E-02	-0.677
		604.41		-4.552E-01	8.757E-01	1.195E+00	1.337E-01	-0.381
		612.46		6.555E-01	1.394E+00	2.107E+00	1.536E-01	0.311

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		-2.611E-01	2.548E-01	3.867E-01	3.359E-02	-0.675
		66.83		5.457E-02	1.346E-01	2.220E-01	1.931E-02	0.246
	+	75.70		8.714E-01	4.635E-01	4.872E-01	4.351E-02	1.788
		98.88	*	2.264E-01	3.021E-01	4.905E-01	3.914E-02	0.462
		129.76		3.087E+00	3.669E+00	6.431E+00	3.655E-01	0.480
TL-200		367.94	*	6.258E+00	7.082E+00	1.228E+01	7.193E-01	0.509
		579.30		5.818E+01	5.814E+01	9.275E+01	5.188E+00	0.627
		828.27		6.908E+00	9.612E+01	1.558E+02	1.216E+01	0.044
		1205.75		-2.979E+01	3.000E+01	4.233E+01	2.529E+00	-0.704
TL-201		68.90		-4.997E-04	1.276E+00	2.046E+00	1.785E-01	0.000
		70.82		-5.141E-01	7.522E-01	1.161E+00	1.017E-01	-0.443
		80.30		-4.752E-01	1.429E+00	2.040E+00	1.872E-01	-0.233
	+	135.34		7.423E+00	1.270E+01	1.130E+01	6.291E-01	0.657
		167.43	*	1.786E+00	1.731E+00	3.011E+00	1.537E-01	0.593
TL-202		68.90		-1.642E-04	4.194E-01	6.724E-01	5.865E-02	0.000
		70.82		-1.685E-01	2.465E-01	3.804E-01	3.333E-02	-0.443
		80.30		-1.558E-01	4.684E-01	6.688E-01	6.139E-02	-0.233
		439.56	*	1.216E-02	1.009E-01	1.652E-01	9.666E-03	0.074
HG-203		70.83		-9.998E-01	1.470E+00	2.263E+00	3.100E-01	-0.442
		72.87		-6.837E-01	9.005E-01	1.381E+00	1.841E-01	-0.495
		82.60		-4.359E-01	1.502E+00	2.338E+00	3.321E-01	-0.186
		279.20	*	6.799E-03	5.730E-02	9.780E-02	6.041E-03	0.070
BI-207		72.80		-2.271E-01	2.950E-01	4.535E-01	3.999E-02	-0.501
		74.97		1.177E-01	1.825E-01	2.769E-01	2.464E-02	0.425
		84.90		6.815E-02	3.348E-01	4.917E-01	4.674E-02	0.139
		569.67		2.963E-02	5.814E-02	9.968E-02	5.615E-03	0.297
		1063.62	*	3.057E-02	1.368E-01	2.285E-01	1.679E-02	0.134
		1770.23		-1.590E+00	1.076E+00	1.244E+00	7.700E-02	-1.278
TL-207		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
PO-209		260.50		3.998E+00	1.634E+01	2.634E+01	1.512E+00	0.152
		262.80		-1.328E+01	4.546E+01	7.082E+01	4.073E+00	-0.187
		896.60	*	7.944E+00	1.977E+01	3.390E+01	3.077E+00	0.234
BI-210		46.50	*	-7.392E+00	8.147E+00	1.277E+01	9.945E-01	-0.579
PB-210		46.50	*	-7.392E+00	8.147E+00	1.277E+01	9.945E-01	-0.579
PO-210		46.50	*	-7.392E+00	8.142E+00	1.277E+01	8.570E-01	-0.579
PB-211		404.84	*	-2.315E-02	1.865E+00	3.056E+00	1.905E+00	-0.008
		427.08		-1.867E+00	4.384E+00	6.707E+00	4.146E+00	-0.278
		831.96		-6.446E-01	2.822E+00	4.420E+00	2.766E+00	-0.146
BI-212		727.18	*	4.611E-01	6.068E-01	1.044E+00	8.289E-02	0.442
		785.46		1.568E+00	3.854E+00	6.441E+00	4.541E-01	0.244

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1620.62		3.857E-01	2.052E+00	3.470E+00	2.353E-01	0.111
BI-214	-	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
PO-215		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
RN-219		271.23		2.656E-01	4.224E-01	6.920E-01	5.603E-02	0.384
		401.81	*	3.941E-01	8.252E-01	1.388E+00	1.889E-01	0.284
RN-220		549.76	*	-1.059E+00	4.889E+01	8.208E+01	4.684E+00	-0.013
RA-223		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
RA-226	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
AC-227		79.80		-1.866E-01	2.631E+00	3.824E+00	8.306E-01	-0.049
		236.00		3.966E-01	3.826E-01	5.855E-01	6.057E-02	0.677
		256.20	*	5.621E-01	6.703E-01	1.111E+00	1.547E-01	0.506
		286.10		3.402E+00	2.694E+00	4.788E+00	5.545E-01	0.711
		299.80		4.010E+00	2.879E+00	4.565E+00	7.447E-01	0.878
		304.40		-2.672E+00	3.176E+00	5.043E+00	8.738E-01	-0.530
		334.20		-1.864E-01	4.473E+00	6.550E+00	1.203E+00	-0.028
TH-227		79.80		-1.866E-01	2.631E+00	3.824E+00	8.410E-01	-0.049
	+	94.00		5.894E+00	4.320E+00	4.359E+00	9.503E-01	1.352
		236.00		3.966E-01	3.820E-01	5.855E-01	5.230E-02	0.677
		256.20	*	5.621E-01	6.724E-01	1.111E+00	1.875E-01	0.506

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		286.10		3.402E+00	4.326E+00	4.788E+00	4.796E+00	0.711
		299.80		4.010E+00	2.879E+00	4.565E+00	7.447E-01	0.878
		304.40		-2.672E+00	3.176E+00	5.043E+00	8.738E-01	-0.530
		334.20		-1.864E-01	4.473E+00	6.550E+00	1.203E+00	-0.028
AC-228	+	338.32		1.100E+00	7.808E-01	8.345E-01	3.403E-01	1.318
	+	911.07	*	9.005E-01	6.436E-01	7.509E-01	8.664E-02	1.199
		969.11		1.446E+00	7.658E-01	1.271E+00	2.958E-01	1.138
RA-228	+	338.32		1.100E+00	7.808E-01	8.345E-01	3.403E-01	1.318
	+	911.07	*	9.005E-01	6.436E-01	7.509E-01	8.664E-02	1.199
		969.11		1.446E+00	7.658E-01	1.271E+00	2.958E-01	1.138
TH-229		85.43		9.966E-02	3.295E-01	4.861E-01	4.642E-02	0.205
	+	88.47		5.655E+00	6.867E-01	6.746E-01	6.524E-02	8.383
		100.00		-1.334E-01	2.565E-01	3.846E-01	3.015E-02	-0.347
		193.63	*	1.865E-01	7.561E-01	1.251E+00	6.626E-02	0.149
		210.97		-1.467E-01	1.193E+00	1.921E+00	1.043E-01	-0.076
TH-230	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
PA-231		283.67	*	-8.965E-01	2.654E+00	4.416E+00	6.091E-01	-0.203
		301.29		1.813E-01	1.010E+00	1.664E+00	1.746E-01	0.109
TH-231		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
U-231		84.21		9.459E-01	2.624E+00	3.892E+00	3.679E-01	0.243
	+	92.29		1.667E+00	1.175E+00	1.333E+00	1.193E-01	1.250
		95.87	*	8.139E-02	4.366E-01	6.354E-01	5.330E-02	0.128
		108.00		1.869E-01	7.281E-01	1.262E+00	8.817E-02	0.148
TH-232	+	338.32		1.100E+00	6.424E-01	8.345E-01	4.929E-02	1.318
	+	911.07	*	9.005E-01	6.436E-01	7.509E-01	8.664E-02	1.199
		969.11		1.446E+00	7.658E-01	1.271E+00	2.958E-01	1.138
PA-233		75.28		3.663E+00	5.318E+00	8.051E+00	1.249E+00	0.455
		86.59		1.683E+01	5.711E+00	5.962E+00	1.620E+00	2.824
		300.12		1.384E+00	7.728E-01	1.255E+00	1.691E-01	1.102
		311.98	*	-2.314E-02	1.038E-01	1.720E-01	1.076E-02	-0.135
		340.50		1.151E+00	1.239E+00	1.898E+00	4.365E-01	0.606
		398.62		2.357E+00	4.070E+00	6.838E+00	1.768E+00	0.345
		415.76		1.328E+00	3.374E+00	5.628E+00	1.159E+00	0.236
PA-234		63.00		4.643E-01	2.414E+00	3.718E+00	5.777E-01	0.125

--- Non-Identified Nuclides ----

Nuclide	Line Idad	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.67		1.656E-02	2.351E-01	3.395E-01	4.199E-02	0.049
		98.44		1.033E-01	1.389E-01	2.065E-01	1.150E-01	0.500
		99.86		-1.551E-02	6.348E-01	9.842E-01	7.732E-02	-0.016
		111.00		-7.467E-02	2.296E-01	3.858E-01	4.172E-02	-0.194
		131.20		-1.333E-01	1.395E-01	2.240E-01	1.266E-02	-0.595
		152.70		-2.329E-02	4.382E-01	7.284E-01	1.138E-01	-0.032
	+	186.00		6.104E+00	3.888E+00	3.429E+00	1.044E+00	1.780
		226.40		-4.506E-01	6.660E-01	1.029E+00	1.176E-01	-0.438
		227.20		1.666E-01	7.057E-01	1.150E+00	6.380E-02	0.145
		248.90		-5.513E-01	1.473E+00	2.016E+00	4.326E-01	-0.273
		293.70		1.711E+00	1.381E+00	2.173E+00	3.500E-01	0.788
		369.80		-1.317E-01	1.645E+00	2.707E+00	5.640E-01	-0.049
		568.70		1.673E+00	1.925E+00	3.372E+00	1.901E-01	0.496
		569.50		3.016E-01	5.190E-01	8.937E-01	5.036E-02	0.337
		574.00		-4.009E+00	2.777E+00	4.136E+00	2.323E-01	-0.969
		699.00		-1.030E+00	1.359E+00	2.072E+00	3.717E-01	-0.497
		706.10		6.974E-01	2.086E+00	3.470E+00	1.531E+00	0.201
		733.00		-3.798E-01	7.999E-01	1.252E+00	2.676E-01	-0.303
		742.81		-3.673E-01	2.969E+00	4.781E+00	3.201E+00	-0.077
		796.30		1.550E+00	2.008E+00	3.370E+00	8.980E-01	0.460
		805.60		-6.927E-01	2.318E+00	3.681E+00	1.116E+00	-0.188
		819.60		2.818E+00	3.144E+00	5.114E+00	1.934E+00	0.551
		826.30		3.445E-01	2.054E+00	3.347E+00	1.492E+00	0.103
		831.60		-2.624E-01	1.461E+00	2.319E+00	6.872E-01	-0.113
		876.40		-9.872E-01	2.332E+00	3.414E+00	3.510E+00	-0.289
		880.51		-1.103E-01	6.982E-01	1.158E+00	1.016E-01	-0.095
		883.24		-1.610E-01	7.292E-01	1.191E+00	8.010E-01	-0.135
		899.00		-7.266E-02	2.234E+00	3.732E+00	1.635E+00	-0.019
		925.00		-1.899E-01	3.508E+00	5.836E+00	5.185E-01	-0.033
		926.50		1.486E-01	5.165E-01	8.737E-01	2.216E-01	0.170
		946.00	*	-2.227E-01	8.955E-01	1.468E+00	2.759E-01	-0.152
		949.00		5.319E-01	1.301E+00	2.215E+00	1.920E-01	0.240
		980.50		1.059E+00	1.935E+00	3.324E+00	2.776E-01	0.319
		1394.10		2.061E-01	1.479E+00	2.513E+00	1.631E+00	0.082
PA-234M		766.41		-1.051E+01	3.417E+01	5.261E+01	4.024E+01	-0.200
		1001.03	*	2.964E+00	1.621E+01	2.717E+01	2.935E+00	0.109
TH-234		63.29	*	-5.000E-01	2.098E+00	3.135E+00	5.649E-01	-0.159
	+	92.38		1.525E+00	1.102E+00	1.230E+00	2.242E-01	1.240
U-234	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
U-235		89.95		1.636E+00	1.817E+00	2.383E+00	7.405E-01	0.687
	+	93.35		1.834E+00	1.382E+00	1.470E+00	4.128E-01	1.247
		105.00		-1.063E+00	1.353E+00	2.169E+00	6.396E-01	-0.490
		143.76	*	1.149E-01	2.830E-01	4.834E-01	7.818E-02	0.238

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Ko/	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		163.35		-5.968E-01	6.762E-01	1.056E+00	1.877E-01	-0.565
	+	185.71		2.261E-01	1.270E-01	1.279E-01	6.697E-03	1.767
		205.31		3.452E-01	7.782E-01	1.290E+00	2.303E-01	0.268
NP-236		94.67		1.391E-02	1.784E-01	2.578E-01	2.208E-02	0.054
		98.44		7.808E-02	9.581E-02	1.561E-01	1.255E-02	0.500
		111.00		-5.648E-02	1.736E-01	2.918E-01	1.961E-02	-0.194
		160.31	*	-1.329E-02	1.061E-01	1.749E-01	9.044E-03	-0.076
NP-237		86.50	*	1.446E+00	5.833E-01	7.927E-01	1.805E-01	1.824
		95.87		2.508E-01	1.347E+00	1.958E+00	4.808E-01	0.128
U-238		63.29	*	-5.000E-01	2.098E+00	3.135E+00	5.649E-01	-0.159
	+	92.38		1.525E+00	1.075E+00	1.230E+00	1.099E-01	1.240
NP-239		99.55		3.278E-02	2.139E-01	3.355E-01	2.648E-02	0.098
		117.00	*	1.726E-01	2.596E-01	4.375E-01	2.731E-02	0.395
		209.75		1.064E+00	1.181E+00	2.001E+00	1.084E-01	0.532
		228.18		1.281E-01	3.686E-01	6.043E-01	3.355E-02	0.212
		277.60		-9.816E-02	2.849E-01	4.749E-01	2.761E-02	-0.207
		334.30		2.927E-01	2.490E+00	3.692E+00	2.181E-01	0.079
AM-243		74.67	*	6.889E-02	1.024E-01	1.555E-01	1.382E-02	0.443
	+	86.72		4.561E+02	5.538E+01	3.835E+01	3.704E+00	11.893
		117.66		3.645E+00	5.553E+00	8.858E+00	5.486E-01	0.411
		142.18		-8.541E+00	2.445E+01	3.837E+01	2.089E+00	-0.223
CM-243		99.55		3.371E-02	2.200E-01	3.450E-01	2.724E-02	0.098
		103.76	*	-3.592E-02	1.162E-01	1.964E-01	1.455E-02	-0.183
		117.00		1.775E-01	2.669E-01	4.499E-01	2.808E-02	0.395
		209.75		1.048E+00	1.163E+00	1.971E+00	1.069E-01	0.532
		228.18		1.294E-01	3.723E-01	6.103E-01	3.389E-02	0.212
		277.60		-9.891E-02	2.871E-01	4.785E-01	2.782E-02	-0.207
CM-247		278.00		4.907E-01	1.156E+00	2.005E+00	1.166E-01	0.245
		287.40		2.205E-01	2.197E+00	3.736E+00	2.184E-01	0.059
		402.60	*	4.620E-03	7.464E-02	1.229E-01	7.122E-03	0.038
CF-249		252.85		1.779E+00	1.480E+00	2.519E+00	1.436E-01	0.706
		333.44		1.365E-01	3.287E-01	4.987E-01	2.946E-02	0.274
		387.95	*	1.321E-02	7.693E-02	1.279E-01	7.401E-03	0.103
CF-251		176.60	*	5.093E-02	1.689E-01	2.828E-01	1.461E-02	0.180
		227.00		5.863E-02	6.221E-01	1.007E+00	5.581E-02	0.058
		285.00		1.391E+00	3.055E+00	5.285E+00	3.086E-01	0.263

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089     *
* Acquisition date :  6-JUL-2009 13:26:36 Detector SN#     :               *
* Detector ID        : GAM23                Sensitivity      : 5.000       *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:     0 01:00:00.00      Abundance limit : 75.000       *
* Elapsed real time:     0 01:00:03.12      Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 29-JUN-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201870089          Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.5544E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	3.418E-01	6.161E-02	6.079E-02	0.000E+00
CO-60	6.996E+00	6.216E-01	9.187E-02	0.000E+00
CD-109	4.167E+01	4.958E+00	2.129E+00	0.000E+00
SN-126	4.142E+00	4.929E-01	2.129E-01	0.000E+00
BA-137M	5.378E+00	3.801E-01	1.264E-01	0.000E+00
CS-137	5.685E+00	4.029E-01	1.336E-01	0.000E+00
TL-208	3.886E-01	1.148E-01	1.251E-01	0.000E+00
BI-211	2.347E+00	6.137E-01	6.246E-01	0.000E+00
PB-212	7.908E-01	1.682E-01	1.910E-01	0.000E+00
PO-212	7.908E-01	1.682E-01	1.910E-01	0.000E+00
PB-214	8.165E-01	2.175E-01	2.178E-01	0.000E+00
PO-214	8.165E-01	2.175E-01	2.178E-01	0.000E+00
PO-216	7.908E-01	1.682E-01	1.910E-01	0.000E+00
PO-218	8.165E-01	2.175E-01	2.178E-01	0.000E+00
RA-224	7.313E-01	2.380E+00	1.998E+00	0.000E+00
TH-228	7.908E-01	1.682E-01	1.910E-01	0.000E+00
AM-241	1.385E+01	1.493E+00	5.338E-01	0.000E+00
ANH-511	7.970E-02	1.088E-01	9.697E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	2.667E-01	6.348E-01	1.114E+00	0.000E+00	NOT IDENT.
NA-22	4.085E-03	6.035E-02	1.016E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.222E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.016E-02	4.929E-02	9.091E-02	0.000E+00	NOT IDENT.
K-40	8.824E-01	5.809E-01	1.186E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	9.771E-02	1.030E-01	0.000E+00	FAIL ABUN
SC-46	6.992E-02	9.621E-02	1.752E-01	0.000E+00	NOT IDENT.
V-48	7.630E-02	1.318E-01	2.359E-01	0.000E+00	NOT IDENT.
CR-51	6.613E-02	5.208E-01	9.425E-01	0.000E+00	NOT IDENT.

MN-52	-2.425E-02	1.195E-01	1.955E-01	0.000E+00	FAIL ABUN
MN-54	-2.482E-02	8.211E-02	1.351E-01	0.000E+00	NOT IDENT.
CO-56	1.970E-02	8.243E-02	1.412E-01	0.000E+00	NOT IDENT.
CO-58	4.627E-02	7.665E-02	1.358E-01	0.000E+00	NOT IDENT.
FE-59	4.258E-02	2.078E-01	3.584E-01	0.000E+00	NOT IDENT.
ZN-65	-2.400E-01	2.232E-01	3.492E-01	0.000E+00	NOT IDENT.
GE-68	6.311E-01	3.182E+00	5.499E+00	0.000E+00	NOT IDENT.
AS-73	-1.904E+00	1.852E+00	3.232E+00	0.000E+00	NOT IDENT.
AS-74	7.119E-02	1.306E-01	2.381E-01	0.000E+00	NOT IDENT.
SE-75	3.823E-02	6.745E-02	1.194E-01	0.000E+00	FAIL ABUN
BR-77	1.047E+00	2.303E+00	4.024E+00	0.000E+00	FAIL ABUN
SR-82	-5.600E-01	6.295E-01	9.894E-01	0.000E+00	NOT IDENT.
RB-83	4.442E-02	1.296E-01	2.247E-01	0.000E+00	NOT IDENT.
RB-84	4.110E-02	1.459E-01	2.599E-01	0.000E+00	NOT IDENT.
KR-85	2.059E+01	1.445E+01	2.425E+01	0.000E+00	NOT IDENT.
SR-85	9.748E-02	6.843E-02	1.148E-01	0.000E+00	NOT IDENT.
RB-86	-6.610E-01	1.577E+00	2.609E+00	0.000E+00	NOT IDENT.
Y-88	3.265E-02	5.500E-02	1.040E-01	0.000E+00	NOT IDENT.
ZR-88	1.777E-02	5.490E-02	9.807E-02	0.000E+00	NOT IDENT.
Y-91	-5.611E+00	2.488E+01	4.061E+01	0.000E+00	NOT IDENT.
NB-94	-1.939E-02	6.272E-02	1.055E-01	0.000E+00	NOT IDENT.
NB-95	-1.190E-02	7.377E-02	1.241E-01	0.000E+00	NOT IDENT.
NB-95M	1.358E-01	1.887E-01	3.062E-01	0.000E+00	NOT IDENT.
ZR-95	-5.953E-03	1.314E-01	2.235E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.412E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.163E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.830E+00	3.687E+00	6.060E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.582E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.894E-03	4.874E-02	8.638E-02	0.000E+00	NOT IDENT.
RH-102	1.541E-02	6.713E-02	1.165E-01	0.000E+00	NOT IDENT.
RU-103	-2.505E-02	7.413E-02	1.232E-01	0.000E+00	FAIL ABUN
RH-106	-5.382E-02	6.260E-01	1.089E+00	0.000E+00	FAIL ABUN
RU-106	-5.382E-02	6.260E-01	1.089E+00	0.000E+00	FAIL ABUN
AG-108M	-8.553E-02	6.852E-02	1.092E-01	0.000E+00	NOT IDENT.
AG-110M	8.299E-02	8.469E-02	1.388E-01	0.000E+00	NOT IDENT.
IN-111	4.994E-02	3.134E-01	4.867E-01	0.000E+00	NOT IDENT.
IN-113M	4.546E-02	7.889E-02	1.430E-01	0.000E+00	NOT IDENT.
SN-113	4.546E-02	7.889E-02	1.430E-01	0.000E+00	NOT IDENT.
IN-114M	-2.205E-01	2.584E-01	3.844E-01	0.000E+00	NOT IDENT.
CD-115	-8.663E-01	2.046E+00	3.344E+00	0.000E+00	NOT IDENT.
SN-117M	7.476E-03	4.781E-02	8.746E-02	0.000E+00	NOT IDENT.
SB-122	-1.427E-01	5.613E-01	9.790E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.984E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.161E-02	3.481E-02	6.515E-02	0.000E+00	NOT IDENT.
I-124	-4.403E-01	4.206E-01	5.746E-01	0.000E+00	NOT IDENT.
SB-124	2.077E-02	8.969E-02	1.585E-01	0.000E+00	NOT IDENT.
SB-125	-4.843E-02	1.857E-01	3.172E-01	0.000E+00	NOT IDENT.
TE-125M	-7.287E+00	1.013E+01	1.838E+01	0.000E+00	NOT IDENT.
I-126	-3.556E-02	2.818E-01	4.184E-01	0.000E+00	NOT IDENT.
SB-126	-1.172E-02	1.858E-01	3.176E-01	0.000E+00	FAIL ABUN
SB-127	4.151E-01	7.141E-01	1.284E+00	0.000E+00	NOT IDENT.
XE-127	-4.111E-02	6.061E-02	1.030E-01	0.000E+00	NOT IDENT.
I-131	-7.063E-02	1.138E-01	1.940E-01	0.000E+00	NOT IDENT.
TE-132	7.997E-02	2.206E-01	3.911E-01	0.000E+00	NOT IDENT.
BA-133	1.849E-02	8.861E-02	1.402E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.815E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	9.152E-02	9.827E-02	1.776E-01	0.000E+00	NOT IDENT.
CS-135	-4.274E-01	2.655E-01	4.037E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.685E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.966E-02	1.852E-01	3.271E-01	0.000E+00	NOT IDENT.
CE-139	2.647E-02	4.002E-02	7.455E-02	0.000E+00	NOT IDENT.
BA-140	1.568E-02	3.335E-01	5.960E-01	0.000E+00	NOT IDENT.
LA-140	-7.876E-03	7.813E-02	1.285E-01	0.000E+00	NOT IDENT.
CE-141	4.834E-03	7.185E-02	1.323E-01	0.000E+00	NOT IDENT.
CE-143	3.456E+00	5.388E+00	8.923E+00	0.000E+00	FAIL ABUN
CE-144	1.766E-01	2.784E-01	4.814E-01	0.000E+00	NOT IDENT.
PM-144	5.962E-02	6.081E-02	1.127E-01	0.000E+00	NOT IDENT.
PR-144	4.024E+00	4.104E+00	7.607E+00	0.000E+00	NOT IDENT.
PM-146	3.483E-03	9.204E-02	1.589E-01	0.000E+00	NOT IDENT.
ND-147	4.929E-01	6.553E-01	1.219E+00	0.000E+00	NOT IDENT.
PM-149	2.004E+01	1.482E+01	2.822E+01	0.000E+00	NOT IDENT.
EU-152	-9.306E-02	1.882E-01	3.002E-01	0.000E+00	FAIL ABUN
GD-153	-5.600E-02	1.186E-01	1.812E-01	0.000E+00	NOT IDENT.
EU-154	1.804E-02	1.701E-01	2.879E-01	0.000E+00	FAIL ABUN
EU-155	-9.864E-02	1.319E-01	2.403E-01	0.000E+00	FAIL ABUN
TB-160	-7.479E-02	3.167E-01	5.458E-01	0.000E+00	FAIL ABUN
HO-166M	-1.491E-02	1.222E-01	2.083E-01	0.000E+00	FAIL ABUN
TM-171	1.228E+01	4.102E+01	7.505E+01	0.000E+00	FAIL ABUN

LU-176	1.864E-02	3.974E-02	7.359E-02	0.000E+00	FAIL ABUN
LU-177	3.360E-01	7.554E-01	1.268E+00	0.000E+00	NOT IDENT.
LU-177M	-5.401E-02	3.380E-01	5.835E-01	0.000E+00	FAIL ABUN
HF-181	-1.529E-02	7.631E-02	1.295E-01	0.000E+00	FAIL ABUN
W-181	-5.180E-01	5.321E-01	9.054E-01	0.000E+00	NOT IDENT.
TA-182	1.030E-01	2.585E-01	4.544E-01	0.000E+00	NOT IDENT.
RE-183	-5.242E-02	1.318E-01	2.334E-01	0.000E+00	FAIL ABUN
RE-184	4.596E-01	3.746E-01	6.880E-01	0.000E+00	FAIL ABUN
OS-185	3.382E-02	7.876E-02	1.414E-01	0.000E+00	FAIL ABUN
RE-188	-5.458E-02	2.041E-01	3.660E-01	0.000E+00	NOT IDENT.
W-188	-3.511E+00	1.317E+01	2.074E+01	0.000E+00	NOT IDENT.
IR-192	1.745E-02	5.309E-02	9.727E-02	0.000E+00	FAIL ABUN
AU-195	2.264E-01	7.961E-01	5.311E-01	0.000E+00	FAIL ABUN
TL-200	6.258E+00	6.941E+00	1.286E+01	0.000E+00	NOT IDENT.
TL-201	1.786E+00	1.696E+00	3.217E+00	0.000E+00	FAIL ABUN
TL-202	1.216E-02	9.887E-02	1.722E-01	0.000E+00	NOT IDENT.
HG-203	6.799E-03	5.616E-02	1.031E-01	0.000E+00	NOT IDENT.
BI-207	3.057E-02	1.340E-01	2.325E-01	0.000E+00	NOT IDENT.
TL-207	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
PO-209	7.944E+00	1.938E+01	3.466E+01	0.000E+00	NOT IDENT.
BI-210	-7.392E+00	7.984E+00	1.408E+01	0.000E+00	NOT IDENT.
PB-210	-7.392E+00	7.984E+00	1.408E+01	0.000E+00	NOT IDENT.
PO-210	-7.392E+00	7.979E+00	1.408E+01	0.000E+00	NOT IDENT.
PB-211	-2.315E-02	1.828E+00	3.192E+00	0.000E+00	NOT IDENT.
BI-212	4.611E-01	5.947E-01	1.074E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
PO-215	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
RN-219	3.941E-01	8.087E-01	1.451E+00	0.000E+00	NOT IDENT.
RN-220	-1.059E+00	4.792E+01	8.503E+01	0.000E+00	NOT IDENT.
RA-223	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
AC-227	5.621E-01	6.569E-01	1.175E+00	0.000E+00	NOT IDENT.
TH-227	5.621E-01	6.590E-01	1.175E+00	0.000E+00	FAIL ABUN
AC-228	0.000E+00	6.307E-01	7.673E-01	0.000E+00	FAIL ABUN
RA-228	0.000E+00	6.307E-01	7.673E-01	0.000E+00	FAIL ABUN
TH-229	1.865E-01	7.410E-01	1.332E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
PA-231	-8.965E-01	2.601E+00	4.655E+00	0.000E+00	NOT IDENT.
TH-231	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
U-231	8.139E-02	4.279E-01	6.884E-01	0.000E+00	FAIL ABUN
TH-232	0.000E+00	6.307E-01	7.673E-01	0.000E+00	FAIL ABUN
PA-233	-2.314E-02	1.017E-01	1.809E-01	0.000E+00	NOT IDENT.
PA-234	-2.227E-01	8.776E-01	1.498E+00	0.000E+00	FAIL ABUN
PA-234M	2.964E+00	1.589E+01	2.769E+01	0.000E+00	NOT IDENT.
TH-234	-5.000E-01	2.056E+00	3.431E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
U-235	1.149E-01	2.773E-01	5.185E-01	0.000E+00	FAIL ABUN
NP-236	-1.329E-02	1.039E-01	1.871E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	5.716E-01	8.610E-01	0.000E+00	NOT IDENT.
U-238	-5.000E-01	2.056E+00	3.431E+00	0.000E+00	FAIL ABUN
NP-239	1.726E-01	2.544E-01	4.717E-01	0.000E+00	NOT IDENT.
AM-243	6.889E-02	1.003E-01	1.696E-01	0.000E+00	FAIL ABUN
CM-243	-3.592E-02	1.139E-01	2.124E-01	0.000E+00	NOT IDENT.
CM-247	4.620E-03	7.314E-02	1.283E-01	0.000E+00	NOT IDENT.
CF-249	1.321E-02	7.539E-02	1.338E-01	0.000E+00	NOT IDENT.
CF-251	5.093E-02	1.655E-01	3.018E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:27:08.17

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:26:36.
Sample ID         : G1201870089          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:03.12  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	376	85.51*	6.334E+00	3.352E-01	3.418E-01	18.39
	136.48	46	10.60	6.279E+00	3.303E-01	3.367E-01	171.17
CO-60	1173.22	1675	100.00	1.205E+00	6.712E+00	6.730E+00	7.77
	1332.49	1554	100.00*	1.076E+00	6.977E+00	6.996E+00	9.07
CD-109	88.03	1679	3.72*	5.290E+00	4.120E+01	4.167E+01	12.14
SN-126	64.28	------	9.60	2.723E+00	------ Line Not Found		------
	86.94	1679	8.90	5.290E+00	1.722E+01	1.722E+01	42.23
	87.57	1679	37.00*	5.290E+00	4.142E+00	4.142E+00	12.14
BA-137M	661.65	2043	89.98*	2.040E+00	5.375E+00	5.378E+00	7.21
CS-137	661.65	2043	85.12*	2.040E+00	5.682E+00	5.685E+00	7.23
TL-208	277.35	------	6.80	4.140E+00	------ Line Not Found		------
	510.84	42	21.60	2.544E+00	3.690E-01	3.690E-01	139.55
	583.14	154	84.20*	2.276E+00	3.886E-01	3.886E-01	30.14
	860.37	------	12.46	1.609E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.829E+00	------ Line Not Found		------
	351.07	216	12.94*	3.437E+00	2.347E+00	2.347E+00	26.68
PB-212	74.81	------	10.70	4.056E+00	------ Line Not Found		------
	77.11	164	18.00	4.319E+00	1.016E+00	1.016E+00	53.19
	87.30	1679	8.00	5.290E+00	1.916E+01	1.916E+01	15.73
	238.63	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PO-212	74.81	------	10.70	4.056E+00	------ Line Not Found		------
	77.11	164	18.00	4.319E+00	1.016E+00	1.016E+00	53.19
	87.30	1679	8.00	5.290E+00	1.916E+01	1.916E+01	15.73
	115.19	------	0.60	6.293E+00	------ Line Not Found		------
	238.63	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PB-214	74.81	------	6.21	4.056E+00	------ Line Not Found		------
	77.11	164	10.50	4.319E+00	1.742E+00	1.742E+00	53.73
	87.30	1679	4.67	5.290E+00	3.282E+01	3.282E+01	14.38
	241.98	27	7.49	4.597E+00	3.857E-01	3.857E-01	332.10
	295.21	90	19.20	3.942E+00	5.737E-01	5.737E-01	64.81

Sample ID : G[illegible]1870089 Acquisition date : 6-JUL-2009 13:26:36

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	216	37.20*	3.437E+00	8.165E-01	8.165E-01	27.19
PO-214	74.81	------	6.21	4.056E+00	------ Line Not Found		------
	77.11	164	10.50	4.319E+00	1.742E+00	1.742E+00	53.73
	87.30	1679	4.67	5.290E+00	3.282E+01	3.282E+01	14.38
	241.98	27	7.49	4.597E+00	3.857E-01	3.857E-01	332.10
	295.21	90	19.20	3.942E+00	5.737E-01	5.737E-01	64.81
	351.92	216	37.20*	3.437E+00	8.165E-01	8.165E-01	27.19
PO-216	74.81	------	10.70	4.056E+00	------ Line Not Found		------
	77.11	164	18.00	4.319E+00	1.016E+00	1.016E+00	53.19
	87.30	1679	8.00	5.290E+00	1.916E+01	1.916E+01	15.73
	238.63	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PO-218	74.81	------	6.21	4.056E+00	------ Line Not Found		------
	77.11	164	10.50	4.319E+00	1.742E+00	1.742E+00	53.73
	87.30	1679	4.67	5.290E+00	3.282E+01	3.282E+01	14.38
	241.98	27	7.49	4.597E+00	3.857E-01	3.857E-01	332.10
	295.21	90	19.20	3.942E+00	5.737E-01	5.737E-01	64.81
	351.92	216	37.20*	3.437E+00	8.165E-01	8.165E-01	27.19
RA-224	240.98	27	3.95*	4.597E+00	7.313E-01	7.313E-01	332.05
TH-228	84.40	------	1.21	5.004E+00	------ Line Not Found		------
	238.60	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.10	------	3.41	3.895E+00	------ Line Not Found		------
AM-241	59.54	2148	35.90*	2.086E+00	1.385E+01	1.385E+01	11.00
ANH-511	511.00	42	100.00*	2.544E+00	7.970E-02	7.970E-02	139.30

Flag: "*" = Keyline

Sample ID : GI201870089 Acquisition date : 6-JUL-2009 13:26:36

Total number of lines in spectrum 19
Number of unidentified lines 0
Number of lines tentatively identified by NID 19 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	3.352E-01	3.418E-01	0.629E-01	18.39	
CO-60	5.27Y	1.00	6.977E+00	6.996E+00	0.634E+00	9.07	
CD-109	464.00D	1.01	4.120E+01	4.167E+01	0.506E+01	12.14	
SN-126	1.00E+05Y	1.00	4.142E+00	4.142E+00	0.503E+00	12.14	
BA-137M	30.17Y	1.00	5.375E+00	5.378E+00	0.388E+00	7.21	
CS-137	30.17Y	1.00	5.682E+00	5.685E+00	0.411E+00	7.23	
TL-208	1.41E+10Y	1.00	3.886E-01	3.886E-01	1.171E-01	30.14	
BI-211	7.04E+08Y	1.00	2.347E+00	2.347E+00	0.626E+00	26.68	
PB-212	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
PO-212	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
PB-214	1600.00Y	1.00	8.165E-01	8.165E-01	2.220E-01	27.19	
PO-214	1600.00Y	1.00	8.165E-01	8.165E-01	2.220E-01	27.19	
PO-216	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
PO-218	1600.00Y	1.00	8.165E-01	8.165E-01	2.220E-01	27.19	
RA-224	1.41E+10Y	1.00	7.313E-01	7.313E-01	24.28E-01	332.05	
TH-228	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
AM-241	432.20Y	1.00	1.385E+01	1.385E+01	0.152E+01	11.00	
ANH-511	1.00E+09Y	1.00	7.970E-02	7.970E-02	11.10E-02	139.30	
			---	---			
	Total Activity :		8.672E+01	8.722E+01			

Grand Total Activity : 8.672E+01 8.722E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : C1201870089 Acquisition date : 6-OCT-2009 12:26:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	93.14	96	296	1.55	186.45	183	9	2.66E-02	70.0	5.61E+00	T
0	185.73	139	314	1.70	371.70	366	13	3.85E-02	55.9	5.49E+00	T
0	338.30	92	180	1.22	676.92	673	10	2.56E-02	58.1	3.55E-00	T
0	609.65	157	112	1.15	1219.84	1213	14	4.37E-02	32.7	2.19E+00	T
0	911.76	79	153	1.21	1824.36	1817	14	2.19E-02	70.5	1.52E-00	T

Flags: 'T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:27:13.59

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1  *
* Acquisition date  : 6-JUL-2009 13:26:36.  Detector SN#     :             *
* Detector ID       : GAM23                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 01:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 01:00:03.12          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201870089           Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.55440E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 2-JUN-2009 11:17:00.62MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	3.418E-01	6.286E-02	5.645E-02	3.328E-03	6.056
CO-60	6.996E+00	6.343E-01	9.085E-02	6.670E-03	77.006
CD-109	4.167E+01	5.059E+00	1.961E+00	1.915E-01	21.247
SN-126	4.142E+00	5.029E-01	1.960E-01	1.908E-02	21.130
BA-137M	5.378E+00	3.878E-01	1.226E-01	6.262E-03	43.871
CS-137	5.685E+00	4.111E-01	1.296E-01	6.656E-03	43.871
TL-208	3.886E-01	1.171E-01	1.210E-01	7.853E-03	3.212
BI-211	2.347E+00	6.263E-01	5.957E-01	3.882E-02	3.940
PB-212	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
PO-212	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
PB-214	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-214	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-216	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
PO-218	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
RA-224	7.313E-01	2.428E+00	1.887E+00	1.063E-01	0.388
TH-228	7.908E-01	1.716E-01	1.803E-01	1.297E-02	4.385
AM-241	1.385E+01	1.523E+00	4.871E-01	4.532E-02	28.436
ANH-511	7.970E-02	1.110E-01	9.341E-02	5.426E-03	0.853

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.667E-01		6.477E-01	1.071E+00	7.279E-02	0.249
NA-22	4.085E-03		6.159E-02	1.003E-01	6.737E-03	0.041
NA-24	4.976E-05		1.134E-04	Half-Life too short		
AL-26	2.016E-02		5.029E-02	9.069E-02	5.451E-03	0.222
K-40	8.824E-01		5.928E-01	1.176E+00	8.796E-02	0.750
TI-44	1.874E-01	+	9.970E-02	9.457E-02	8.572E-03	1.982
SC-46	6.992E-02		9.817E-02	1.713E-01	1.530E-02	0.408
V-48	7.630E-02		1.345E-01	2.313E-01	1.924E-02	0.330
CR-51	6.613E-02		5.314E-01	8.968E-01	5.880E-02	0.074
MN-52	-2.425E-02		1.219E-01	1.938E-01	1.402E-02	-0.125
MN-54	-2.482E-02		8.379E-02	1.319E-01	1.044E-02	-0.188
CO-56	1.970E-02		8.411E-02	1.379E-01	1.122E-02	0.143
CO-58	4.627E-02		7.822E-02	1.325E-01	9.951E-03	0.349
FE-59	4.258E-02		2.121E-01	3.525E-01	2.715E-02	0.121
ZN-65	-2.400E-01		2.278E-01	3.436E-01	2.269E-02	-0.699
GE-68	6.311E-01		3.247E+00	5.406E+00	3.869E-01	0.117
AS-73	-1.904E+00		1.890E+00	2.941E+00	2.597E-01	-0.647
AS-74	7.119E-02		1.333E-01	2.303E-01	1.270E-02	0.309
SE-75	3.823E-02		6.883E-02	1.130E-01	6.579E-03	0.338
BR-77	1.047E+00		2.350E+00	3.878E+00	2.245E-01	0.270
SR-82	-5.600E-01		6.424E-01	9.639E-01	6.650E-02	-0.581
RB-83	4.442E-02		1.322E-01	2.166E-01	1.254E-02	0.205
RB-84	4.110E-02		1.489E-01	2.541E-01	2.232E-02	0.162
KR-85	2.059E+01		1.475E+01	2.337E+01	1.356E+00	0.881
SR-85	9.748E-02		6.983E-02	1.106E-01	6.420E-03	0.881
RB-86	-6.610E-01		1.609E+00	2.565E+00	1.838E-01	-0.258
Y-88	3.265E-02		5.612E-02	1.038E-01	6.113E-03	0.314
ZR-88	1.777E-02		5.602E-02	9.382E-02	5.416E-03	0.189
Y-91	-5.611E+00		2.539E+01	4.005E+01	2.389E+00	-0.140
NB-94	-1.939E-02		6.400E-02	1.025E-01	5.855E-03	-0.189
NB-95	-1.190E-02		7.527E-02	1.208E-01	8.118E-03	-0.099
NB-95M	1.358E-01		1.926E-01	2.891E-01	2.133E-02	0.470
ZR-95	-5.953E-03		1.341E-01	2.176E-01	1.669E-02	-0.027
NB-97	1.726E-04		7.202E-05	Half-Life too short		
ZR-97	1.379E-03		1.103E-03	Half-Life too short		
MO-99	-1.830E+00		3.762E+00	5.896E+00	8.251E-01	-0.310
TC-99M	-3.004E+01		2.338E+01	Half-Life too short		
RH-101	-2.894E-03		4.974E-02	8.119E-02	4.328E-03	-0.036
RH-102	1.541E-02		6.850E-02	1.120E-01	6.555E-03	0.138
RU-103	-2.505E-02		7.564E-02	1.185E-01	1.501E-02	-0.211
RH-106	-5.382E-02		6.388E-01	1.055E+00	1.216E-01	-0.051
RU-106	-5.382E-02		6.388E-01	1.055E+00	5.668E-02	-0.051
AG-108M	-8.553E-02		6.992E-02	1.047E-01	6.638E-03	-0.817
AG-110M	8.299E-02		8.642E-02	1.346E-01	7.478E-03	0.617
IN-111	4.994E-02		3.198E-01	4.599E-01	2.603E-02	0.109
IN-113M	4.546E-02		8.050E-02	1.368E-01	8.429E-03	0.332
SN-113	4.546E-02		8.050E-02	1.368E-01	8.429E-03	0.332
IN-114M	-2.205E-01		2.637E-01	3.609E-01	1.902E-02	-0.611

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CD-115	-8.663E-01		2.088E+00	3.224E+00	1.861E-01	-0.269
SN-117M	7.476E-03		4.879E-02	8.173E-02	4.247E-03	0.091
SB-122	-1.427E-01		5.727E-01	9.456E-01	5.349E-02	-0.151
I-123	3.095E-04		2.543E-04	Half-Life too short		
TE-123M	2.161E-02		3.552E-02	6.089E-02	3.213E-03	0.355
I-124	-4.403E-01		4.292E-01	5.560E-01	3.047E-02	-0.792
SB-124	2.077E-02		9.152E-02	1.578E-01	1.100E-02	0.132
SB-125	-4.843E-02		1.895E-01	3.041E-01	1.850E-02	-0.159
TE-125M	-7.287E+00		1.034E+01	1.702E+01	1.516E+00	-0.428
I-126	-3.556E-02		2.875E-01	4.059E-01	2.101E-02	-0.088
SB-126	-1.172E-02		1.896E-01	3.088E-01	1.850E-02	-0.038
SB-127	4.151E-01		7.287E-01	1.247E+00	8.576E-02	0.333
XE-127	-4.111E-02		6.185E-02	9.689E-02	5.201E-03	-0.424
I-131	-7.063E-02		1.161E-01	1.853E-01	1.200E-02	-0.381
TE-132	7.997E-02		2.251E-01	3.689E-01	4.822E-02	0.217
BA-133	1.849E-02		9.041E-02	1.338E-01	1.552E-02	0.138
I-133	4.574E-06		1.436E-05	Half-Life too short		
CS-134	9.152E-02		1.003E-01	1.732E-01	1.265E-02	0.528
CS-135	-4.274E-01		2.709E-01	3.824E-01	2.922E-02	-1.118
I-135	-1.126E+00		2.391E+01	Half-Life too short		
CS-136	8.966E-02		1.889E-01	3.213E-01	2.559E-02	0.279
CE-139	2.647E-02		4.083E-02	6.975E-02	3.556E-03	0.380
BA-140	1.568E-02		3.403E-01	5.749E-01	1.869E-01	0.027
LA-140	-7.876E-03		7.972E-02	1.277E-01	8.763E-03	-0.062
CE-141	4.834E-03		7.331E-02	1.234E-01	6.958E-03	0.039
CE-143	3.456E+00		5.498E+00	8.471E+00	1.733E+00	0.408
CE-144	1.766E-01		2.840E-01	4.480E-01	6.326E-02	0.394
PM-144	5.962E-02		6.205E-02	1.095E-01	6.155E-03	0.545
PR-144	4.024E+00		4.188E+00	7.389E+00	4.153E-01	0.545
PM-146	3.483E-03		9.392E-02	1.526E-01	1.322E-02	0.023
ND-147	4.929E-01		6.687E-01	1.175E+00	1.587E-01	0.419
PM-149	2.004E+01		1.512E+01	2.677E+01	3.794E+00	0.749
EU-152	-9.306E-02		1.920E-01	2.862E-01	1.897E-02	-0.325
GD-153	-5.600E-02		1.210E-01	1.673E-01	1.367E-02	-0.335
EU-154	1.804E-02		1.736E-01	2.844E-01	2.823E-02	0.063
EU-155	-9.864E-02		1.346E-01	2.223E-01	1.639E-02	-0.444
TB-160	-7.479E-02		3.232E-01	5.336E-01	4.666E-02	-0.140
HO-166M	-1.491E-02		1.247E-01	2.024E-01	1.185E-02	-0.074
TM-171	1.228E+01		4.186E+01	6.866E+01	5.971E+00	0.179
LU-176	1.864E-02		4.055E-02	6.995E-02	4.121E-03	0.266
LU-177	3.360E-01		7.708E-01	1.278E+00	6.914E-02	0.263
LU-177M	-5.401E-02		3.449E-01	5.589E-01	3.252E-02	-0.097
HF-181	-1.529E-02		7.838E-02	1.246E-01	7.285E-03	-0.123
W-181	-5.180E-01		5.429E-01	8.279E-01	7.192E-02	-0.626
TA-182	1.030E-01		2.638E-01	4.483E-01	2.752E-02	0.230
RE-183	-5.242E-02		1.345E-01	2.182E-01	1.123E-02	-0.240
RE-184	4.596E-01		3.823E-01	6.507E-01	3.710E-02	0.706
OS-185	3.382E-02		8.036E-02	1.370E-01	7.151E-03	0.247

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Idcd	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188	-5.458E-02		2.083E-01	3.418E-01	1.794E-02	-0.160
W-188	-3.511E+00		1.344E+01	1.969E+01	1.153E+00	-0.178
IR-192	1.745E-02		5.418E-02	9.252E-02	5.488E-03	0.189
AU-195	2.264E-01		3.021E-01	4.905E-01	3.914E-02	0.462
TL-200	6.258E-00		7.082E+00	1.228E+01	7.193E-01	0.509
TL-201	1.786E+00		1.731E+00	3.011E+00	1.537E-01	0.593
TL-202	1.216E-02		1.009E-01	1.652E-01	9.666E-03	0.074
HG-203	6.799E-03		5.730E-02	9.780E-02	6.041E-03	0.070
BI-207	3.057E-02		1.368E-01	2.285E-01	1.679E-02	0.134
TL-207	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
PO-209	7.944E+00		1.977E+01	3.390E+01	3.077E+00	0.234
BI-210	-7.392E+00		8.147E+00	1.277E+01	9.945E-01	-0.579
PB-210	-7.392E+00		8.147E+00	1.277E+01	9.945E-01	-0.579
PO-210	-7.392E+00		8.142E+00	1.277E+01	8.570E-01	-0.579
PB-211	-2.315E-02		1.865E+00	3.056E+00	1.905E+00	-0.008
BI-212	4.611E-01		6.068E-01	1.044E+00	8.289E-02	0.442
BI-214	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
PO-215	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
RN-219	3.941E-01		8.252E-01	1.388E+00	1.889E-01	0.284
RN-220	-1.059E+00		4.889E+01	8.208E+01	4.684E+00	-0.013
RA-223	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
RA-226	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
AC-227	5.621E-01		6.703E-01	1.111E+00	1.547E-01	0.506
TH-227	5.621E-01		6.724E-01	1.111E+00	1.875E-01	0.506
AC-228	9.005E-01	+	6.436E-01	7.509E-01	8.664E-02	1.199
RA-228	9.005E-01	+	6.436E-01	7.509E-01	8.664E-02	1.199
TH-229	1.865E-01		7.561E-01	1.251E+00	6.626E-02	0.149
TH-230	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
PA-231	-8.965E-01		2.654E+00	4.416E+00	6.091E-01	-0.203
TH-231	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
U-231	8.139E-02		4.366E-01	6.354E-01	5.330E-02	0.128
TH-232	9.005E-01	+	6.436E-01	7.509E-01	8.664E-02	1.199
PA-233	-2.314E-02		1.038E-01	1.720E-01	1.076E-02	-0.135
PA-234	-2.227E-01		8.955E-01	1.468E+00	2.759E-01	-0.152
PA-234M	2.964E+00		1.621E+01	2.717E+01	2.935E+00	0.109
TH-234	-5.000E-01		2.098E+00	3.135E+00	5.649E-01	-0.159
U-234	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
U-235	1.149E-01		2.830E-01	4.834E-01	7.818E-02	0.238
NP-236	-1.329E-02		1.061E-01	1.749E-01	9.044E-03	-0.076
NP-237	1.446E+00		5.833E-01	7.927E-01	1.805E-01	1.824
U-238	-5.000E-01		2.098E+00	3.135E+00	5.649E-01	-0.159
NP-239	1.726E-01		2.596E-01	4.375E-01	2.731E-02	0.395
AM-243	6.889E-02		1.024E-01	1.555E-01	1.382E-02	0.443
CM-243	-3.592E-02		1.162E-01	1.964E-01	1.455E-02	-0.183
CM-247	4.620E-03		7.464E-02	1.229E-01	7.122E-03	0.038
CF-249	1.321E-02		7.693E-02	1.279E-01	7.401E-03	0.103
CF-251	5.093E-02		1.689E-01	2.828E-01	1.461E-02	0.180

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201870089          *
* Acquisition date  :  6-JUL-2009 13:26:36 Detector SN#     :               *
* Detector ID       : GAM23                 Sensitivity     : 5.000         *
* Geometry          : CAN                   Energy tolerance: 1.500         *
* Elapsed live time:    0 01:00:00.00       Abundance limit : 75.000        *
* Elapsed real time:    0 01:00:03.12       Half life ratio : 8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201870089          Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.5544E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	3.418E-01	6.161E-02	3.042E-02	3.143E-02
CO-60	6.996E+00	6.216E-01	4.596E-02	3.172E-01
CD-109	4.167E+01	4.958E+00	1.065E+00	2.530E+00
SN-126	4.142E+00	4.929E-01	1.065E-01	2.515E-01
BA-137M	5.378E+00	3.801E-01	6.322E-02	1.939E-01
CS-137	5.685E+00	4.029E-01	6.683E-02	2.056E-01
TL-208	3.886E-01	1.148E-01	6.260E-02	5.855E-02
BI-211	2.347E+00	6.137E-01	3.125E-01	3.131E-01
PB-212	7.908E-01	1.682E-01	9.555E-02	8.580E-02
PO-212	7.908E-01	1.682E-01	9.555E-02	8.580E-02
PB-214	8.165E-01	2.175E-01	1.089E-01	1.110E-01
PO-214	8.165E-01	2.175E-01	1.089E-01	1.110E-01
PO-216	7.908E-01	1.682E-01	9.555E-02	8.580E-02
PO-218	8.165E-01	2.175E-01	1.089E-01	1.110E-01
RA-224	7.313E-01	2.380E+00	9.995E-01	1.214E+00
TH-228	7.908E-01	1.682E-01	9.554E-02	8.580E-02
AM-241	1.385E+01	1.493E+00	2.671E-01	7.615E-01
ANH-511	7.970E-02	1.088E-01	4.851E-02	5.551E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	2.667E-01	6.348E-01	5.572E-01	3.239E-01	NOT IDENT.
NA-22	4.085E-03	6.035E-02	5.081E-02	3.079E-02	NOT IDENT.
NA-24	4.976E+01	2.222E+02	0.000E+00	1.134E+02	SHORT HLIF
AL-26	2.016E-02	4.929E-02	4.548E-02	2.515E-02	NOT IDENT.
K-40	8.824E-01	5.809E-01	5.933E-01	2.964E-01	NOT IDENT.
TI-44	1.874E-01	9.771E-02	5.151E-02	4.985E-02	FAIL ABUN
SC-46	6.992E-02	9.621E-02	8.763E-02	4.908E-02	NOT IDENT.
V-48	7.630E-02	1.318E-01	1.180E-01	6.727E-02	NOT IDENT.
CR-51	6.613E-02	5.208E-01	4.715E-01	2.657E-01	NOT IDENT.

MN-52	-2.425E-02	1.195E-01	9.783E-02	6.095E-02	FAIL ABUN
MN-54	-2.482E-02	8.211E-02	6.758E-02	4.189E-02	NOT IDENT.
CO-56	1.970E-02	8.243E-02	7.063E-02	4.206E-02	NOT IDENT.
CO-58	4.627E-02	7.665E-02	6.794E-02	3.911E-02	NOT IDENT.
FE-59	4.258E-02	2.078E-01	1.793E-01	1.060E-01	NOT IDENT.
ZN-65	-2.400E-01	2.232E-01	1.747E-01	1.139E-01	NOT IDENT.
GE-68	6.311E-01	3.182E+00	2.751E+00	1.624E+00	NOT IDENT.
AS-73	-1.904E+00	1.852E+00	1.617E+00	9.450E-01	NOT IDENT.
AS-74	7.119E-02	1.306E-01	1.191E-01	6.665E-02	NOT IDENT.
SE-75	3.823E-02	6.745E-02	5.972E-02	3.442E-02	FAIL ABUN
BR-77	1.047E-00	2.303E+00	2.013E+00	1.175E+00	FAIL ABUN
SR-82	-5.600E-01	6.295E-01	4.950E-01	3.212E-01	NOT IDENT.
RB-83	4.442E-02	1.296E-01	1.124E-01	6.611E-02	NOT IDENT.
RB-84	4.110E-02	1.459E-01	1.300E-01	7.444E-02	NOT IDENT.
KR-85	2.059E+01	1.445E+01	1.213E-01	7.374E+00	NOT IDENT.
SR-85	9.748E-02	6.843E-02	5.745E-02	3.491E-02	NOT IDENT.
RB-86	-6.610E-01	1.577E+00	1.305E+00	8.045E-01	NOT IDENT.
Y-88	3.265E-02	5.500E-02	5.205E-02	2.806E-02	NOT IDENT.
ZR-88	1.777E-02	5.490E-02	4.906E-02	2.801E-02	NOT IDENT.
Y-91	-5.611E+00	2.488E+01	2.032E+01	1.269E+01	NOT IDENT.
NB-94	-1.939E-02	6.272E-02	5.276E-02	3.200E-02	NOT IDENT.
NB-95	-1.190E-02	7.377E-02	6.206E-02	3.764E-02	NOT IDENT.
NB-95M	1.358E-01	1.887E-01	1.532E-01	9.628E-02	NOT IDENT.
ZR-95	-5.953E-03	1.314E-01	1.118E-01	6.704E-02	NOT IDENT.
NB-97	1.726E+02	1.412E+02	0.000E+00	7.202E+01	SHORT HLIF
ZR-97	1.379E+03	2.163E+03	0.000E+00	1.103E+03	SHORT HLIF
MO-99	-1.830E+00	3.687E+00	3.032E+00	1.881E+00	NOT IDENT.
TC-99M	-3.004E+07	4.582E+07	0.000E+00	2.338E+07	SHORT HLIF
RH-101	-2.894E-03	4.874E-02	4.322E-02	2.487E-02	NOT IDENT.
RH-102	1.541E-02	6.713E-02	5.827E-02	3.425E-02	NOT IDENT.
RU-103	-2.505E-02	7.413E-02	6.161E-02	3.782E-02	FAIL ABUN
RH-106	-5.382E-02	6.260E-01	5.449E-01	3.194E-01	FAIL ABUN
RU-106	-5.382E-02	6.260E-01	5.449E-01	3.194E-01	FAIL ABUN
AG-108M	-8.553E-02	6.852E-02	5.461E-02	3.496E-02	NOT IDENT.
AG-110M	8.299E-02	8.469E-02	6.942E-02	4.321E-02	NOT IDENT.
IN-111	4.994E-02	3.134E-01	2.435E-01	1.599E-01	NOT IDENT.
IN-113M	4.546E-02	7.889E-02	7.156E-02	4.025E-02	NOT IDENT.
SN-113	4.546E-02	7.889E-02	7.156E-02	4.025E-02	NOT IDENT.
IN-114M	-2.205E-01	2.584E-01	1.923E-01	1.319E-01	NOT IDENT.
CD-115	-8.663E-01	2.046E+00	1.673E+00	1.044E+00	NOT IDENT.
SN-117M	7.476E-03	4.781E-02	4.375E-02	2.440E-02	NOT IDENT.
SB-122	-1.427E-01	5.613E-01	4.898E-01	2.864E-01	NOT IDENT.
I-123	3.095E+02	4.984E+02	0.000E+00	2.543E+02	SHORT HLIF
TE-123M	2.161E-02	3.481E-02	3.259E-02	1.776E-02	NOT IDENT.
I-124	-4.403E-01	4.206E-01	2.875E-01	2.146E-01	NOT IDENT.
SB-124	2.077E-02	8.969E-02	7.927E-02	4.576E-02	NOT IDENT.
SB-125	-4.843E-02	1.857E-01	1.587E-01	9.477E-02	NOT IDENT.
TE-125M	-7.287E+00	1.013E+01	9.197E+00	5.169E+00	NOT IDENT.
I-126	-3.556E-02	2.818E-01	2.093E-01	1.438E-01	NOT IDENT.
SB-126	-1.172E-02	1.858E-01	1.589E-01	9.481E-02	FAIL ABUN
SB-127	4.151E-01	7.141E-01	6.425E-01	3.643E-01	NOT IDENT.
XE-127	-4.111E-02	6.061E-02	5.155E-02	3.092E-02	NOT IDENT.
I-131	-7.063E-02	1.138E-01	9.707E-02	5.804E-02	NOT IDENT.
TE-132	7.997E-02	2.206E-01	1.957E-01	1.126E-01	NOT IDENT.
BA-133	1.849E-02	8.861E-02	7.014E-02	4.521E-02	NOT IDENT.
I-133	4.574E+00	2.815E+01	0.000E+00	1.436E+01	SHORT HLIF
CS-134	9.152E-02	9.827E-02	8.886E-02	5.014E-02	NOT IDENT.
CS-135	-4.274E-01	2.655E-01	2.020E-01	1.354E-01	NOT IDENT.
I-135	-1.126E+06	4.685E+07	0.000E+00	2.391E+07	SHORT HLIF
CS-136	8.966E-02	1.852E-01	1.637E-01	9.447E-02	NOT IDENT.
CE-139	2.647E-02	4.002E-02	3.730E-02	2.042E-02	NOT IDENT.
BA-140	1.568E-02	3.335E-01	2.982E-01	1.701E-01	NOT IDENT.
LA-140	-7.876E-03	7.813E-02	6.428E-02	3.986E-02	NOT IDENT.
CE-141	4.834E-03	7.185E-02	6.619E-02	3.666E-02	NOT IDENT.
CE-143	3.456E+00	5.388E+00	4.464E+00	2.749E+00	FAIL ABUN
CE-144	1.766E-01	2.784E-01	2.408E-01	1.420E-01	NOT IDENT.
PM-144	5.962E-02	6.081E-02	5.639E-02	3.103E-02	NOT IDENT.
PR-144	4.024E+00	4.104E+00	3.806E+00	2.094E+00	NOT IDENT.
PM-146	3.483E-03	9.204E-02	7.950E-02	4.696E-02	NOT IDENT.
ND-147	4.929E-01	6.553E-01	6.098E-01	3.344E-01	NOT IDENT.
PM-149	2.004E+01	1.482E+01	1.412E+01	7.561E+00	NOT IDENT.
EU-152	-9.306E-02	1.882E-01	1.502E-01	9.600E-02	FAIL ABUN
GD-153	-5.600E-02	1.186E-01	9.066E-02	6.052E-02	NOT IDENT.
EU-154	1.804E-02	1.701E-01	1.440E-01	8.681E-02	FAIL ABUN
EU-155	-9.864E-02	1.319E-01	1.202E-01	6.729E-02	FAIL ABUN
TB-160	-7.479E-02	3.167E-01	2.731E-01	1.616E-01	FAIL ABUN
HO-166M	-1.491E-02	1.222E-01	1.042E-01	6.233E-02	FAIL ABUN
TM-171	1.228E+01	4.102E+01	3.755E+01	2.093E+01	FAIL ABUN

LU-176	1.864E-02	3.974E-02	3.682E-02	2.028E-02	FAIL ABUN
LU-177	3.360E-01	7.554E-01	6.794E-01	3.854E-01	NOT IDENT.
LU-177M	-5.401E-02	3.380E-01	2.919E-01	1.725E-01	FAIL ABUN
HF-181	-1.529E-02	7.681E-02	6.479E-02	3.919E-02	FAIL ABUN
W-181	-5.180E-01	5.321E-01	4.530E-01	2.715E-01	NOT IDENT.
TA-182	1.030E-01	2.585E-01	2.274E-01	1.319E-01	NOT IDENT.
RE-183	-5.242E-02	1.318E-01	1.168E-01	6.725E-02	FAIL ABUN
RE-184	4.596E-01	3.746E-01	3.442E-01	1.911E-01	FAIL ABUN
OS-185	3.382E-02	7.875E-02	7.072E-02	4.018E-02	FAIL ABUN
RE-188	-5.458E-02	2.041E-01	1.831E-01	1.041E-01	NOT IDENT.
W-188	-3.511E+00	1.317E+01	1.038E+01	6.720E+00	NOT IDENT.
IR-192	1.745E-02	5.309E-02	4.866E-02	2.709E-02	FAIL ABUN
AU-195	2.264E-01	2.961E-01	2.657E-01	1.511E-01	FAIL ABUN
TL-200	6.258E+00	6.941E+00	6.435E+00	3.541E+00	NOT IDENT.
TL-201	1.786E+00	1.696E+00	1.610E+00	8.656E-01	FAIL ABUN
TL-202	1.216E-02	9.887E-02	8.614E-02	5.045E-02	NOT IDENT.
HG-203	6.799E-03	5.616E-02	5.160E-02	2.865E-02	NOT IDENT.
BI-207	3.057E-02	1.340E-01	1.163E-01	6.839E-02	NOT IDENT.
TL-207	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
PO-209	7.944E+00	1.938E+01	1.734E+01	9.887E+00	NOT IDENT.
BI-210	-7.392E+00	7.984E+00	7.045E+00	4.074E+00	NOT IDENT.
PB-210	-7.392E+00	7.984E+00	7.045E+00	4.074E+00	NOT IDENT.
PO-210	-7.392E+00	7.979E+00	7.045E+00	4.071E+00	NOT IDENT.
PB-211	-2.315E-02	1.828E+00	1.597E+00	9.327E-01	NOT IDENT.
BI-212	4.611E-01	5.947E-01	5.372E-01	3.034E-01	NOT IDENT.
BI-214	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
PO-215	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
RN-219	3.941E-01	8.087E-01	7.257E-01	4.126E-01	NOT IDENT.
RN-220	-1.059E+00	4.792E+01	4.254E+01	2.445E+01	NOT IDENT.
RA-223	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
RA-226	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
AC-227	5.621E-01	6.569E-01	5.876E-01	3.351E-01	NOT IDENT.
TH-227	5.621E-01	6.590E-01	5.876E-01	3.362E-01	FAIL ABUN
AC-228	9.005E-01	6.307E-01	3.839E-01	3.218E-01	FAIL ABUN
RA-228	9.005E-01	6.307E-01	3.839E-01	3.218E-01	FAIL ABUN
TH-229	1.865E-01	7.410E-01	6.663E-01	3.781E-01	FAIL ABUN
TH-230	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
PA-231	-8.965E-01	2.601E+00	2.329E+00	1.327E+00	NOT IDENT.
TH-231	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
U-231	8.139E-02	4.279E-01	3.444E-01	2.183E-01	FAIL ABUN
TH-232	9.005E-01	6.307E-01	3.839E-01	3.218E-01	FAIL ABUN
PA-233	-2.314E-02	1.017E-01	9.052E-02	5.190E-02	NOT IDENT.
PA-234	-2.227E-01	8.776E-01	7.495E-01	4.477E-01	FAIL ABUN
PA-234M	2.964E+00	1.589E+01	1.386E+01	8.105E+00	NOT IDENT.
TH-234	-5.000E-01	2.056E+00	1.717E+00	1.049E+00	FAIL ABUN
U-234	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
U-235	1.149E-01	2.773E-01	2.594E-01	1.415E-01	FAIL ABUN
NP-236	-1.329E-02	1.039E-01	9.358E-02	5.303E-02	NOT IDENT.
NP-237	1.446E+00	5.716E-01	4.307E-01	2.916E-01	NOT IDENT.
U-238	-5.000E-01	2.056E+00	1.717E+00	1.049E+00	FAIL ABUN
NP-239	1.726E-01	2.544E-01	2.360E-01	1.298E-01	NOT IDENT.
AM-243	6.889E-02	1.003E-01	8.483E-02	5.118E-02	FAIL ABUN
CM-243	-3.592E-02	1.139E-01	1.062E-01	5.810E-02	NOT IDENT.
CM-247	4.620E-03	7.314E-02	6.421E-02	3.732E-02	NOT IDENT.
CF-249	1.321E-02	7.539E-02	6.691E-02	3.846E-02	NOT IDENT.
CF-251	5.093E-02	1.655E-01	1.510E-01	8.445E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	212.4345
46.50	212.4345
46.50	212.4345
48.70	216.1013
49.72	245.4948
51.35	252.7462
52.39	263.3304
52.97	295.8694
53.15	321.7654
53.44	318.1454
54.07	300.6483
56.28	313.7410
56.28	313.7456
57.37	343.3562
57.53	343.6252
57.53	343.6290
57.60	343.7429
57.98	349.9807
57.98	349.9807
59.32	262.0734
59.32	262.0734
59.40	262.1736
59.54	262.3487
59.72	262.5738
60.01	262.9352
61.10	201.7668
61.14	201.8044
61.30	201.9554
63.00	166.2745
63.29	183.7181
63.29	183.7181
63.58	183.9593
64.28	187.0637
65.12	229.0105
65.20	229.0910
65.20	229.0910
66.05	185.2695
66.72	193.4628
66.83	189.1831
66.91	189.2491
67.20	207.0115
67.20	207.0115
67.75	222.8738
67.85	235.0535
68.90	219.5601
68.90	219.5601
69.30	219.9321
69.67	225.8129
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70.83	265.8390
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72.87	321.9160
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74.81	299.9434
74.97	300.1357
75.28	300.5041
75.70	279.8279
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77.11	304.5693
77.11	304.5693

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77.11	304.5693
77.11	304.5693
78.33	306.0645
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79.80	247.4075
79.80	247.4075
80.11	252.3128
80.18	252.3796
80.30	252.4930
80.30	252.4930
80.57	263.5380
81.00	263.9625
81.07	271.7505
81.07	271.7505
81.07	271.7505
81.07	271.7505
82.60	270.1899
83.37	287.2997
83.78	282.2730
83.78	282.2730
83.78	282.2730
83.78	282.2730
84.21	274.9033
84.40	286.0343
84.90	306.9060
85.43	307.4902
86.29	327.3169
86.50	333.8594
86.54	333.9069
86.59	333.9651
86.72	334.1204
86.79	334.2002
86.94	287.0614
87.30	287.4261
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87.30	287.4261
87.30	287.4261
87.30	287.4261
87.30	287.4261
87.57	287.6983
87.88	288.0112
88.03	288.1611
88.36	288.4925
88.47	288.6036
89.95	191.2634
91.11	182.4204
92.29	200.0189
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92.38	178.3832
93.35	178.9636
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94.67	179.7438
94.67	179.7472
94.90	179.8827
94.90	179.8827
94.90	179.8827
94.90	179.8827
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95.87	162.5712
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97.43	197.7069
98.44	152.4485
98.44	152.4495
98.88	152.6633
99.55	159.1566
99.55	159.1566
99.86	159.3121
100.00	175.4438
100.10	175.5012
103.18	150.9823
103.76	159.1676
105.00	181.5176
105.31	181.6876
108.00	160.3647
109.28	171.9834
111.00	171.1436
111.00	171.1436

111.76	155.3056
112.95	169.5359
115.19	189.5694
116.30	185.8362
117.00	161.0821
117.00	161.0821
117.66	163.9792
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121.62	178.0318
121.78	178.1082
122.06	178.2414
122.32	178.3643
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136.25	163.8776
136.48	163.9691
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144.24	181.8738
144.24	181.8738
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145.44	185.1718
147.16	189.6414
152.43	173.9469
152.70	180.6732
153.22	172.3579
154.21	156.5993
154.21	156.5993
154.21	156.5993
154.21	156.5993
155.03	172.0958
156.02	174.3735
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162.64	181.6947
163.35	203.2602
163.89	191.8608
165.85	172.2124
167.43	154.2278
171.28	155.4413
171.86	164.4858
172.10	164.5656
176.55	148.1300
176.60	148.1451
181.06	157.9582
184.41	162.5035
185.71	162.9015
186.00	162.9915
190.27	189.8012
192.34	166.9646
193.63	177.6231
197.04	185.9491
198.01	186.2714
198.60	193.7169
200.40	177.7093
201.83	193.7841
202.84	200.3887
205.31	176.0938
208.36	194.9290
208.81	194.0251

209.75	178.4915
209.75	178.4915
210.97	204.2615
215.65	205.8655
216.55	233.9462
218.09	206.6940
222.10	202.6588
223.80	194.5642
226.40	201.8860
227.00	180.3501
227.08	180.3737
227.20	180.4075
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228.18	176.3322
228.18	176.3322
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236.00	152.0465
236.00	152.0465
238.60	275.4340
238.63	275.4466
238.63	275.4466
238.63	275.4466
239.00	232.4347
240.98	233.1311
241.98	206.7979
241.98	206.7979
241.98	206.7979
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245.39	179.3559
247.94	143.0147
248.90	151.6415
249.79	195.7022
252.40	138.8667
252.85	140.0865
252.85	140.0865
254.15	0.0000
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256.20	155.5193
260.50	153.0428
260.90	146.2734
262.80	160.4138
264.65	133.2565
268.24	193.9492
268.79	168.6788
269.46	139.9235
269.46	139.9235
269.46	139.9235
269.46	139.9235
271.23	164.6035
273.65	182.5885
276.40	157.5824
277.35	164.7955
277.60	163.9731
277.60	163.9731
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281.68	163.0973
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284.30	167.1976
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285.90	144.4978
286.10	144.5352
286.10	144.5352
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290.67	178.3905
290.80	178.4180
291.72	162.9092
293.26	161.7975
293.70	177.6476
295.21	198.2613
295.21	198.2613
295.21	198.2613
295.96	208.3242

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297.23	211.5350
298.57	152.7917
299.80	153.0272
299.80	153.0272
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300.09	132.8632
300.09	132.8632
300.10	132.8654
300.12	132.8677
301.29	168.3922
302.84	188.3826
303.76	178.6214
303.91	174.1201
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306.84	127.4197
308.46	144.0868
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316.51	130.7524
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319.02	153.3073
319.41	150.6064
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323.87	144.8932
323.87	144.8932
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334.20	145.8671
334.30	138.3639
338.28	143.5182
338.28	143.5182
338.28	143.5182
338.28	143.5182
338.32	143.5251
338.32	143.5251
338.32	143.5251
340.50	142.3609
340.57	142.3701
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345.85	165.0417
350.59	142.4153
351.07	139.8090
351.92	139.9382
351.92	139.9382
351.92	139.9382
355.39	0.0000
356.01	138.6299
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366.43	154.7664
367.43	131.5414
367.94	129.6616
369.80	145.5419
374.96	127.6573
383.85	128.8118
387.95	137.2988
388.63	152.3253
391.69	123.8278
391.69	123.8278
392.90	133.9734
398.62	125.6733
400.65	144.0517
401.10	133.0292
401.81	138.1623
402.60	148.3593
404.84	147.6686
410.95	141.4052
411.60	160.8328
413.65	147.8851
414.70	137.8201
415.30	135.8554
415.76	135.9142
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427.08	145.5999
427.89	143.6407
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433.93	164.1695
439.47	154.5423
439.56	154.5558
439.89	155.6456
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444.90	137.4485
445.03	142.7112
445.03	142.7112
445.03	142.7112
445.03	142.7112
453.90	140.6448
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468.07	172.3228
473.00	149.3885
475.06	153.9515
475.35	144.2970
476.78	141.2324
477.59	132.6976
477.96	129.4995
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484.57	100.9070
487.03	138.0749
490.36	113.3739
492.35	99.3605
497.08	124.9449
507.63	0.0000
510.53	0.0000
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511.00	111.9143
511.85	111.7666
511.85	111.7666
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513.99	83.5197
520.41	99.3346
520.65	99.3536
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528.96	0.0000
529.64	106.7764
529.87	0.0000
531.02	89.1097
537.32	105.8084
543.00	96.2644
546.56	0.0000
549.76	93.0899
552.65	97.8569
555.20	104.4508
563.23	105.0548
563.90	103.2609
568.70	84.1839
569.32	86.0727
569.50	86.0840
569.67	86.0931
573.80	110.4817
574.00	110.4992
574.64	114.2645
578.91	77.6449
579.30	77.6652
583.14	106.5299
585.48	84.2366
591.81	98.7041
592.07	98.7220
593.00	91.2572
595.88	89.5496
600.56	89.8325
602.52	0.0000
602.71	118.3716
602.71	118.3716
603.60	104.2288
604.41	96.3848
604.70	96.4046
609.31	67.5315
609.31	67.5315
609.31	67.5315

609.31	67.5315
610.33	67.5765
612.46	88.9583
614.37	87.4795
618.01	83.2256
621.84	97.8189
621.84	97.8189
631.29	82.0138
633.02	90.7986
633.10	94.6671
634.78	106.3745
635.90	110.3206
636.97	101.6803
645.85	84.7241
646.12	81.8159
656.30	89.8528
657.75	96.4752
657.90	0.0000
661.65	100.3116
661.65	100.3116
664.57	93.5968
666.33	100.2717
666.33	100.2717
675.00	88.2417
677.61	89.3738
685.20	84.7946
692.80	75.1556
695.00	90.3032
696.49	63.2676
696.49	63.2676
697.00	70.3196
697.49	72.3498
698.33	77.4117
698.50	91.4954
699.00	90.5164
702.63	85.6682
706.10	81.8029
706.58	0.0000
706.67	83.8491
709.31	90.0495
711.68	90.1712
713.82	80.1379
717.42	88.4358
720.50	85.5360
721.93	84.5866
722.20	90.7165
722.78	93.8036
722.78	93.8036
722.89	101.9678
722.95	101.9702
723.30	105.0520
724.18	114.2887
727.18	84.8399
733.00	96.3982
735.90	82.1738
739.58	97.7809
742.81	91.7704
744.21	92.8740
747.13	103.3594
751.79	86.0071
752.31	100.5428
753.82	97.5135
755.35	96.5579
756.15	81.0183
756.87	69.6205
763.93	89.7058
765.79	82.4871
766.41	85.6476
766.84	89.8465
768.36	89.9200
768.36	89.9200
768.36	89.9200
768.36	89.9200
776.49	91.3627
778.00	81.9762
778.57	77.7958
778.89	78.8617
783.80	86.4463

785.46	86.5204
792.07	104.8201
795.84	78.5058
796.30	80.6461
801.93	79.8175
805.60	92.7625
810.29	66.2670
810.76	70.5584
815.85	92.1792
817.79	93.3423
818.51	81.5701
819.60	80.5408
826.30	98.0538
828.27	97.0730
831.60	97.2356
831.96	96.1704
834.83	99.5559
836.80	0.0000
846.75	81.6394
848.13	87.1406
856.28	0.0000
856.80	114.8566
860.37	94.2368
867.32	96.7527
867.82	94.5748
871.10	109.2262
873.19	94.6346
874.81	99.3054
875.33	0.0000
876.40	110.4248
879.36	105.0497
880.27	103.2523
880.51	103.2637
881.50	97.7770
883.24	106.1677
884.67	119.1712
889.25	103.6898
896.60	108.6925
898.02	111.5527
899.00	117.1842
903.28	120.5238
911.07	122.5167
911.07	122.5167
911.07	122.5167
919.63	121.4316
920.93	131.5234
925.00	139.2980
925.24	135.5479
926.50	129.9730
934.06	131.3617
934.06	131.3617
934.06	131.3617
934.06	131.3617
935.52	122.9356
937.48	130.6160
944.10	142.3950
946.00	141.5639
949.00	126.5302
962.29	129.1855
964.01	168.5485
966.15	156.2448
968.20	118.0076
969.11	111.3342
969.11	111.3342
969.11	111.3342
977.42	116.5516
980.50	95.4873
983.50	94.6444
989.30	98.7502
996.32	92.2477
1001.03	94.3773
1001.68	98.2958
1004.76	89.6528
1021.30	0.0000
1024.50	0.0000
1034.80	107.5497
1037.82	98.7915
1038.57	96.8436

1038.76	0.0000
1045.16	100.0753
1046.59	95.1758
1048.07	91.2663
1050.47	92.3491
1050.47	92.3491
1063.62	94.8299
1076.63	109.3681
1077.35	97.3552
1085.78	94.6579
1099.22	96.1635
1112.02	89.5182
1112.84	95.6523
1115.52	123.2550
1120.29	82.6578
1120.29	82.6578
1120.29	82.6578
1120.29	82.6578
1120.51	82.6644
1121.28	73.5000
1124.00	0.0000
1129.67	83.9753
1131.51	0.0000
1147.95	0.0000
1167.94	69.4470
1173.22	67.6475
1175.09	49.9883
1177.93	50.0410
1189.05	42.9152
1204.90	36.8429
1205.75	45.2781
1213.00	33.7813
1221.42	29.6463
1230.97	33.9948
1235.34	44.6848
1236.41	0.0000
1238.11	31.9495
1238.11	31.9495
1238.11	31.9495
1238.11	31.9495
1238.25	31.9507
1246.25	37.3783
1260.41	0.0000
1271.85	40.9378
1274.45	23.7214
1274.54	23.7223
1291.56	14.8725
1298.22	0.0000
1312.09	21.5248
1325.50	21.3837
1325.50	21.3837
1332.49	18.8421
1333.61	18.8484
1360.21	9.5047
1362.66	0.0000
1365.15	17.1355
1368.21	15.2461
1368.53	0.0000
1376.25	19.1057
1377.67	19.1148
1377.67	19.1148
1377.67	19.1148
1377.67	19.1148
1384.27	29.6885
1394.10	11.5275
1395.20	15.3756
1407.95	11.5769
1434.06	13.6143
1436.60	11.6782
1457.56	0.0000
1460.81	9.8026
1489.15	17.7922
1509.49	9.9428
1596.49	12.2260
1620.62	13.3319
1678.03	0.0000
1691.02	6.2685
1691.02	6.2685

1706.46	0.0000
1750.46	0.0000
1764.49	10.6438
1764.49	10.6433
1764.49	10.6438
1764.49	10.6438
1770.23	27.7139
1771.40	27.7220
1791.20	0.0000
1808.65	8.4735
1836.01	8.5295

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201870089

Total Uranium Activity	-1.4343E+00	ug/g
Total Uranium Counting Unc.	6.1187E+00	ug/g
Total Uranium Tpu	3.1218E-06	ug/g
Total Uranium Mda	5.1083E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID   : G1201870089     *
*   ANALYST       : MXR1                      DETECTOR    : GAM23           *
*   SAMPLE DATE   : 29-JUN-2009 00:00:00.00   COUNT TIME :    0 01:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 13:26:36.56    SAMPLE ALQT:  155.440 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 2.766E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.850E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.868E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.389E+00
```

Radiochemistry Batch Checklist, Rev 9

Batch# 861715 Product: H3 Date: 7/14/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Alena Marie Hunt

Secondary Review Performed By: [illegible] 7/14/09

Tritium Que Sheet

100 Vac

01-JUL-09

Batch #: 881715 **Analyst:** KXK2 **First Client Due Date** 17-JUL-09 **Internal Due Date:** 06-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** ——— **Expiration Date:** ——— **Vol:** ———

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.3

Prep Date: 7/7/09 **Initials:** KXK2 **Pipet ID:** 29709168 **Witness:** DJM 7-7-09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Total Moisture Dist ~~Vol~~ (mL) KK 7/7
232037001-1	CAMO-09-6157	SAMPLE		.25 pCi/mL	SOIL	LANL010	16-JUN-09	10	6-2	1		410.62	322.34	88.28
232037002-1	CAMO-09-6154	SAMPLE		.25 pCi/mL	SOIL	LANL010	16-JUN-09	10	6-3	2		473.47	395.35	78.12
232037003-1	CAMO-09-6160	SAMPLE		.25 pCi/mL	SOIL	LANL010	16-JUN-09	10	6-4	3		467.18	~~365.46~~	110.72 356.
232037004-1	CAMO-09-6158	SAMPLE		.25 pCi/mL	SOIL	LANL010	16-JUN-09	10	6-5	4		485.56	403.99	81.57
232037005-1	CAMO-09-6159	SAMPLE		.25 pCi/mL	SOIL	LANL010	16-JUN-09	10	6-6	5		518.25	418.23	100.02
232037006-1	CAMO-09-6153	SAMPLE		.25 pCi/mL	SOIL	LANL010	16-JUN-09	10	6-7	6		570.87	464.69	106.18
232037007-1	CAMO-09-6161	SAMPLE		.25 pCi/mL	SOIL	LANL010	16-JUN-09	10	6-8	7		540.08	455.83	84.25
232037008-1	CAMO-09-6162	SAMPLE		.25 pCi/mL	SOIL	LANL010	16-JUN-09	10	6-9	8		453.90	350.41	103.49
232037009-1	CAMO-09-6169	SAMPLE		.25 pCi/mL	SOIL	LANL010	16-JUN-09	10	6-10	9		468.96	386.42	82.54
232358001-1	CAMO-09-6005	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-11	10		498.69	411.42	87.27
232358002-1	CAMO-09-6029	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-12	11		513.26	432.16	81.10
232358003-1	CAMO-09-6037	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	26-1	12		501.80	459.65	42.15
232358004-1	CAMO-09-6033	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	30-2	13		543.12	483.38	59.74
232358005-1	CAMO-09-6030	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	26-3	14		417.44	316.84	100.60
232358006-1	CAMO-09-6031	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	26-4	15		602.31	519.79	82.52
232358007-1	CAMO-09-6032	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	26-5	16		426.76	346.96	79.80
232358008-1	CAMO-09-6036	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	26-6	17		472.51	383.21	89.30
232358009-1	CAMO-09-6028	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	26-7	18		524.57	442.21	82.36
232358010-1	CAMO-09-6047	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	26-8	19		430.50	348.27	82.23
232358011-1	CAMO-09-6048	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	26-9	20		524.48	477.80	46.68
1201872558-1	MB for batch 881715	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	26-10	21		60.00	0	60.00
1201872559-1	CAMO-09-6157(232037001DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	16-JUN-09	10	26-11	1		410.62	322.34	88.28
1201872560-1	LCS for batch 881715	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	26-12	22		60.00	0	60.00

KKG 7/8/09

Bkg Rack #: 6-1 | 36.1

Comments:

Bkg prepared with dead water? Yes/No

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656*

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Ecoscint Ultra)*

Data Reviewed By Nana Manetti

GEL Laboratories LLC, Radiochemistry Division

DATE	7/7/2009	INITIALS	KXK2		BATCH NUMBER	881715

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232037001	410.62	0.215	88.28	322.34	10	55
232037002	473.47	0.165	78.12	395.35	10	85
232037003	467.18	0.237	110.72	356.46	10	200
232037004	485.56	0.168	81.57	403.99	10	701
232037005	518.25	0.193	100.02	418.23	10	801
232037006	570.87	0.186	106.18	464.69	10	521
232037007	540.08	0.156	84.25	455.83	10	610
232037008	453.90	0.228	103.49	350.41	10	18
232037009	468.96	0.176	82.54	386.42	10	203
232358001	498.69	0.175	87.27	411.42	10	32
232358002	513.26	0.158	81.10	432.16	10	614
232358003	501.80	0.084	42.15	459.65	10	602
232358004	543.12	0.110	59.74	483.38	10	62
232358005	417.44	0.241	100.60	316.84	10	812
232358006	602.31	0.137	82.52	519.79	10	40
232358007	426.76	0.187	79.80	346.96	10	606
232358008	472.51	0.189	89.30	383.21	10	74
232358009	524.57	0.157	82.36	442.21	10	734
232358010	430.5	0.191	82.23	348.27	10	908
232358011	524.48	0.089	46.68	477.80	10	111
MB	60	1	60			151
LCS	60	1	60			912

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.5

Batch : 881715
Analyst : KXK2
Prep Date : 7/7/2009

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL Ecoscint Ultra

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1.0 ml Stdev : +/- 0.005480 ml
Pipet, 5.0 ml Stdev : +/- 0.025729 ml

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2546.65
LCS Volume Added: 0.30

Procedure Code : LSC_VH3S
Parmname : Tritium
Required MDC : 250 pCi/L
Halflife of Tritium : 12.28 years

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232037001.1	410.62	0.0883	0.0100	2.5729E-05	322.34	21.50%	1	6/16/2009 12:00
2	232037002.1	473.47	0.0781	0.0100	2.5729E-05	395.35	16.50%	2	6/16/2009 12:00
3	232037003.1	467.18	0.1107	0.0100	2.5729E-05	356.46	23.70%	3	6/16/2009 12:00
4	232037004.1	485.56	0.0816	0.0100	2.5729E-05	403.99	16.80%	4	6/16/2009 12:00
5	232037005.1	518.25	0.1000	0.0100	2.5729E-05	418.23	19.30%	5	6/16/2009 12:00
6	232037006.1	570.87	0.1062	0.0100	2.5729E-05	464.69	18.60%	6	6/16/2009 12:00
7	232037007.1	540.08	0.0843	0.0100	2.5729E-05	455.83	15.60%	7	6/16/2009 12:00
8	232037008.1	453.90	0.1035	0.0100	2.5729E-05	350.41	22.80%	8	6/16/2009 12:00
9	232037009.1	468.96	0.0825	0.0100	2.5729E-05	386.42	17.60%	9	6/16/2009 12:00
10	232358001.1	498.69	0.0873	0.0100	2.5729E-05	411.42	17.50%	10	6/22/2009 12:00
11	232358002.1	513.26	0.0811	0.0100	2.5729E-05	432.16	15.80%	11	6/22/2009 12:00
12	232358003.1	501.80	0.0422	0.0100	2.5729E-05	459.65	8.40%	12	6/22/2009 12:00
13	232358004.1	543.12	0.0597	0.0100	2.5729E-05	483.38	11.00%	13	6/22/2009 12:00
14	232358005.1	417.44	0.1006	0.0100	2.5729E-05	316.84	24.10%	14	6/22/2009 12:00
15	232358006.1	602.31	0.0825	0.0100	2.5729E-05	519.79	13.70%	15	6/22/2009 12:00
16	232358007.1	426.76	0.0798	0.0100	2.5729E-05	346.96	18.70%	16	6/22/2009 12:00
17	232358008.1	472.51	0.0893	0.0100	2.5729E-05	383.21	18.90%	17	6/22/2009 12:00
18	232358009.1	524.57	0.0824	0.0100	2.5729E-05	442.21	15.70%	18	6/22/2009 12:00
19	232358010.1	430.50	0.0822	0.0100	2.5729E-05	348.27	19.10%	19	6/22/2009 12:00
20	232358011.1	524.48	0.0467	0.0100	2.5729E-05	477.80	8.90%	20	6/22/2009 12:00
21	1201872558.1	60.00	0.0600	0.0100	2.5729E-05	0.00	100.00%	21	7/7/2009 0:00
22	1201872559.1	410.62	0.0883	0.0100	2.5729E-05	322.34	21.50%	1	6/16/2009 12:00
23	1201872560.1	60.00	0.0600	0.0100	2.5729E-05	0.00	100.00%	22	7/7/2009 0:00

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	6-2	100	112.5	3.65	3.35	60	7/9/2009 7:03	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2437	0.00792	6-1	7/9/2009 5:59
2	6-3	100	108.3	3.73	3.35	60	7/9/2009 8:47	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2476	0.00792	6-1	7/9/2009 5:59
3	6-4	100	109.6	3.18	3.35	60	7/9/2009 10:31	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2464	0.00792	6-1	7/9/2009 5:59
4	6-5	100	103.4	3.85	3.35	60	7/9/2009 12:16	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2516	0.00792	6-1	7/9/2009 5:59
5	6-6	100	109.9	2.99	3.35	60	7/9/2009 14:00	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2462	0.00792	6-1	7/9/2009 5:59
6	6-7	100	111	3.86	3.35	60	7/9/2009 15:44	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2451	0.00792	6-1	7/9/2009 5:59
7	6-8	100	109.7	3.46	3.35	60	7/9/2009 17:28	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2463	0.00792	6-1	7/9/2009 5:59
8	6-9	100	106.1	3.11	3.35	60	7/9/2009 19:12	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2495	0.00792	6-1	7/9/2009 5:59
9	6-10	100	107	3.54	3.35	60	7/9/2009 20:56	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2487	0.00792	6-1	7/9/2009 5:59
10	6-11	100	109.6	3.71	3.35	60	7/9/2009 22:41	0.997	LSCBROWN	8/6/2008	8/31/2009	0.2464	0.00792	6-1	7/9/2009 5:59
11	6-12	100	110.4	3.91	3.35	60	7/10/2009 0:25	0.997	LSCBROWN	8/6/2008	8/31/2009	0.2457	0.00792	6-1	7/9/2009 5:59
12	28-1	71.95	105.5	3.34	3.35	60	7/10/2009 5:49	0.997	LSCBROWN	8/6/2008	8/31/2009	0.2500	0.00792	6-1	7/9/2009 5:59
13	30-2	60	135.1	2.85	2.85	60	7/13/2009 13:00	0.997	LSCGOLD	8/6/2008	8/31/2009	0.2048	0.00792	30-1	7/13/2009 11:58
14	28-3	40	109.1	3.5	3.35	60	7/10/2009 13:01	0.997	LSCBROWN	8/6/2008	8/31/2009	0.2469	0.00792	6-1	7/9/2009 5:59
15	28-4	40	109	2.67	3.35	60	7/10/2009 13:43	0.997	LSCBROWN	8/6/2008	8/31/2009	0.2470	0.00792	6-1	7/9/2009 5:59
16	28-5	40	106.5	3.03	3.35	60	7/10/2009 14:25	0.997	LSCBROWN	8/6/2008	8/31/2009	0.2491	0.00792	6-1	7/9/2009 5:59
17	28-6	40	105.6	3.85	3.35	60	7/10/2009 15:07	0.997	LSCBROWN	8/6/2008	8/31/2009	0.2499	0.00792	6-1	7/9/2009 5:59
18	28-7	40	111.8	3.83	3.35	60	7/10/2009 15:50	0.997	LSCBROWN	8/6/2008	8/31/2009	0.2444	0.00792	6-1	7/9/2009 5:59
19	28-8	40	110.5	4.05	3.35	60	7/10/2009 16:32	0.997	LSCBROWN	8/6/2008	8/31/2009	0.2456	0.00792	6-1	7/9/2009 5:59
20	28-9	40	114	3.92	3.35	60	7/10/2009 17:14	0.997	LSCBROWN	8/6/2008	8/31/2009	0.2422	0.00792	6-1	7/9/2009 5:59
21	28-10	40	112	3.35	3.35	60	7/10/2009 17:56	0.999	LSCBROWN	8/6/2008	8/31/2009	0.2442	0.00792	6-1	7/9/2009 5:59
22	28-11	40	110.8	3.2	3.35	60	7/10/2009 18:39	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2453	0.00792	6-1	7/9/2009 5:59
23	28-12	40	110.1	33.92	3.35	60	7/10/2009 19:21	0.999	LSCBROWN	8/6/2008	8/31/2009	0.2460	0.00792	6-1	7/9/2009 5:59

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

* - RPD changed to 0% due to activity below MDC for 1201872559.1

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	129.1780	91.2008	250	187.9663	**55.6477**	1.013	0.300	0.304	56.3644	56.4975		SAMPLE				
2	127.1427	89.7639	250	185.0048	**69.3765**	0.803	0.380	0.305	55.7162	55.9253		SAMPLE				
3	127.7443	90.1886	250	185.8802	**-31.1837**	1.741	-0.170	0.296	54.3017	54.3019		SAMPLE				
4	125.1263	88.3402	250	182.0707	**89.8371**	0.614	0.500	0.307	55.1847	55.5382		SAMPLE				
5	127.8895	90.2911	250	186.0915	**-66.1112**	0.813	-0.360	0.293	53.7709	53.7710		SAMPLE				
6	128.4252	90.6693	250	186.8710	**94.0498**	0.603	0.510	0.307	56.6696	57.0469		SAMPLE				
7	127.7973	90.2260	250	185.9573	**20.1861**	2.734	0.110	0.301	55.1853	55.2032		SAMPLE				
8	126.1971	89.0962	250	183.6288	**-43.4909**	1.229	-0.240	0.295	53.4293	53.4295		SAMPLE				
9	126.5795	89.3662	250	184.1853	**34.5346**	1.590	0.190	0.302	54.9006	54.9533		SAMPLE				
10	127.6359	90.1120	250	185.7224	**65.9801**	0.847	0.360	0.305	55.8722	56.0609		SAMPLE				
11	128.0198	90.3831	250	186.2810	**102.9443**	0.550	0.560	0.308	56.6401	57.0921		SAMPLE				
12	134.7271	95.1185	250	197.7714	**-1.8070**	31.977	-0.010	0.320	57.7835	57.7838		SAMPLE				
13	158.4499	111.8670	250	234.7657	**0.000E+00**	0.000	0.000	0.308	68.0042	68.0047		SAMPLE				
14	159.2668	112.4437	250	236.6093	**27.4438**	2.524	0.150	0.379	69.2670	69.2933		SAMPLE				
15	159.2096	112.4034	250	238.5237	**-124.3671**	0.515	-0.680	0.350	64.0343	64.0350		SAMPLE				
16	157.8287	111.4284	250	236.4548	**-58.0181**	1.134	-0.320	0.363	65.7678	65.7686		SAMPLE				
17	157.3825	111.0993	250	235.7564	**90.3855**	0.780	0.500	0.390	70.4968	70.7773		SAMPLE				
18	160.9077	113.6023	250	241.0678	**88.7249**	0.811	0.480	0.389	71.9664	72.2312		SAMPLE				
19	160.1015	113.0330	250	239.8599	**128.7422**	0.566	0.700	0.396	72.8933	73.4427		SAMPLE				
20	162.3524	114.6222	250	243.2320	**106.3067**	0.688	0.570	0.392	73.1495	73.5232		SAMPLE				
21	160.6766	113.4391	250	240.7215	**0.000E+00**	0.000	0.000	0.374	68.9599	68.9607		MB				
22	160.4356	113.2689	250	240.3604	**-27.6452**	2.457	-0.150	0.369	67.9252	67.9260	232037001.1	DUP	0.0%	0.3347		
23	159.5051	112.6120	250	238.9664	**5601.4098**	0.032	30.570	0.951	174.1992	427.2497		LCS			5735.6896	97.7%

ID: TRITIUM 9 JUL 2007 06:1

USER: 6 COMMENT: BROWN

PRESET TIME : 60.00

DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: ST
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDI
TWO PHASE :	NO	ADC	: NO	CYCLE REPEATS :	1	DISK	: OF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0		
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 0.0 - 240.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND 1 CPM	WIND 1 %ERROR	LUMEX %	ELAPSED TIME
1	6-1	60.00	102.8	3.35	19.68	6.97	62.48
2	6-2	100.00	112.5	3.65	13.17	4.88	166.53
3	6-3	100.00	108.3	3.73	12.79	4.46	270.58
4	6-4	100.00	109.6	3.18	14.32	4.73	374.65
5	6-5	100.00	103.4	3.85	12.84	5.18	478.83
6	6-6	100.00	109.9	2.99	15.51	5.49	583.00
7	6-7	100.00	111.0	3.86	13.16	5.88	687.22
8	6-8	100.00	109.7	3.46	13.84	5.25	791.36
9	6-9	100.00	106.1	3.11	14.75	4.95	895.47
10	6-10	100.00	107.0	3.54	13.91	5.94	999.67
11	6-11	100.00	109.6	3.71	13.14	5.12	1103.79
12	6-12	100.00	110.4	3.91	12.71	5.22	1207.92

Bkg BKG 1 2 3 4 5 6 7 8 9 10 11

7/13/09

ID: TRITIUM 10 JUL 2009 06:0

USER: 6 COMMENT:BROWN

PRESET TIME : 100.00

DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: ST
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDI
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0		
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 0.0 - 240.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	LUMEX %	ELAPSED TIME
12 1	28-1	71.95	105.5	3.34	17.41	6.46	74.77
2	28-2	0.05	94.8	0.00	0.00	0.00	75.60
3	28-3	0.05	109.2	0.00	0.00	3.18	76.47
4	28-4	0.05	109.3	0.00	0.00	3.25	77.42
5	28-5	0.05	107.4	0.00	0.00	2.22	78.27
6	28-6	0.05	105.4	0.00	0.00	2.88	79.12
7	28-7	0.05	111.8	0.00	0.00	6.38	79.97
8	28-8	0.05	111.6	0.00	0.00	6.40	80.83
9	28-9	0.05	114.1	20.00	200.00	3.[illegible]	81.75
10	28-10	0.05	111.4	20.00	200.00	4.42	82.60
11	28-11	0.05	111.4	0.00	0.00	9.31	84.23
12	28-12	0.05	111.1	20.00	200.00	7.08	85.08

7-13-09

Filename: 10:49 AMab

Instrument Type	LS 6000
Data Capture Date	10 Jul 2009 12:17:04
User Filename	C:\LSCCAPTURE\RED\USER06\UN071001.BSF

User Number	6
User Id	TRITIUM
User Comments	BROWN

Scintillator Choice:	LIQUID

Sam	Rack	Time	H#	Raw CPM1	CPM Iso1	%Err1	LumEx	ElTime
~~2~~	~~28-2~~	~~40.00~~	~~126.7~~	~~5.43~~	~~3.00~~	~~24.56~~	~~5.84~~	~~41.82~~
3	28-3	40.00	109.1	5.75	3.50	21.67	5.21	84.11
4	28-4	40.00	109.0	5.00	2.67	26.44	5.45	126.39
5	28-5	40.00	106.5	5.40	3.03	24.30	5.60	168.65
6	28-6	40.00	105.6	6.12	3.85	20.33	5.38	210.89
7	28-7	40.00	111.8	6.70	3.83	21.41	6.58	253.17
8	28-8	40.00	110.5	6.20	4.05	19.45	5.00	295.37
9	28-9	40.00	114.0	6.22	3.92	20.11	5.46	337.60
10	28-10	40.00	112.0	5.18	3.35	21.48	4.44	379.76
11	28-11	40.00	110.8	5.35	3.20	22.86	5.14	421.97
12	28-12	40.00	110.1	35.70	33.92	5.57	2.31	464.15

XL 7/14/09

ID: TRITIUM 13 JUL 2009 11:52

USER: 2 COMMENT: GOLD

PRESET TIME :	60.00						
DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STD
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0		
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 0.0 - 235.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 1000.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	30-1	60.00	116.5	2.85	15.52	44.93	3.86	0.28	61.74
2	30-2	60.00	135.1	2.85	15.43	42.87	3.95	0.21	123.98

Sample Count Start Time:	13 Jul 2009 11:58:09		
Data Capture Date	13 Jul 2009 12:58:36		
User Filename	S02071330-1A.XLS		
	U02071330-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GOLD		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	30-1	60.00
H#, Total Counts:	116.5	2436	
Start, End, X-Axis:	0	990	Channel Number

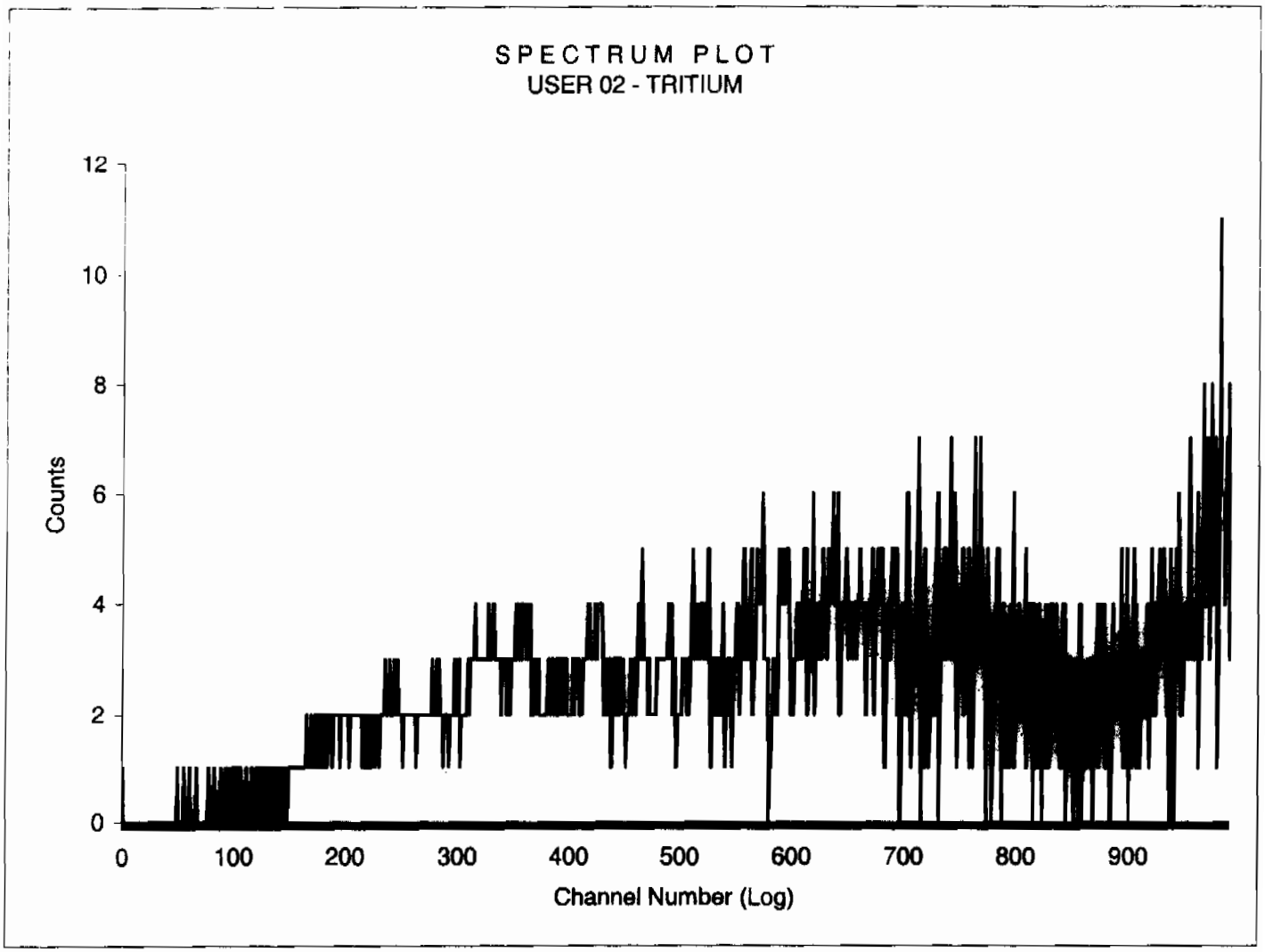

Sample Count Start Time:	9 Jul 2009 05:59:48		
Data Capture Date	09 Jul 2009 06:59:27		
User Filename	S06070906-1A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	6-1	60.00
H#, Total Counts:	102.8	2214	
Start, End, X-Axis:	0	990	Channel Number

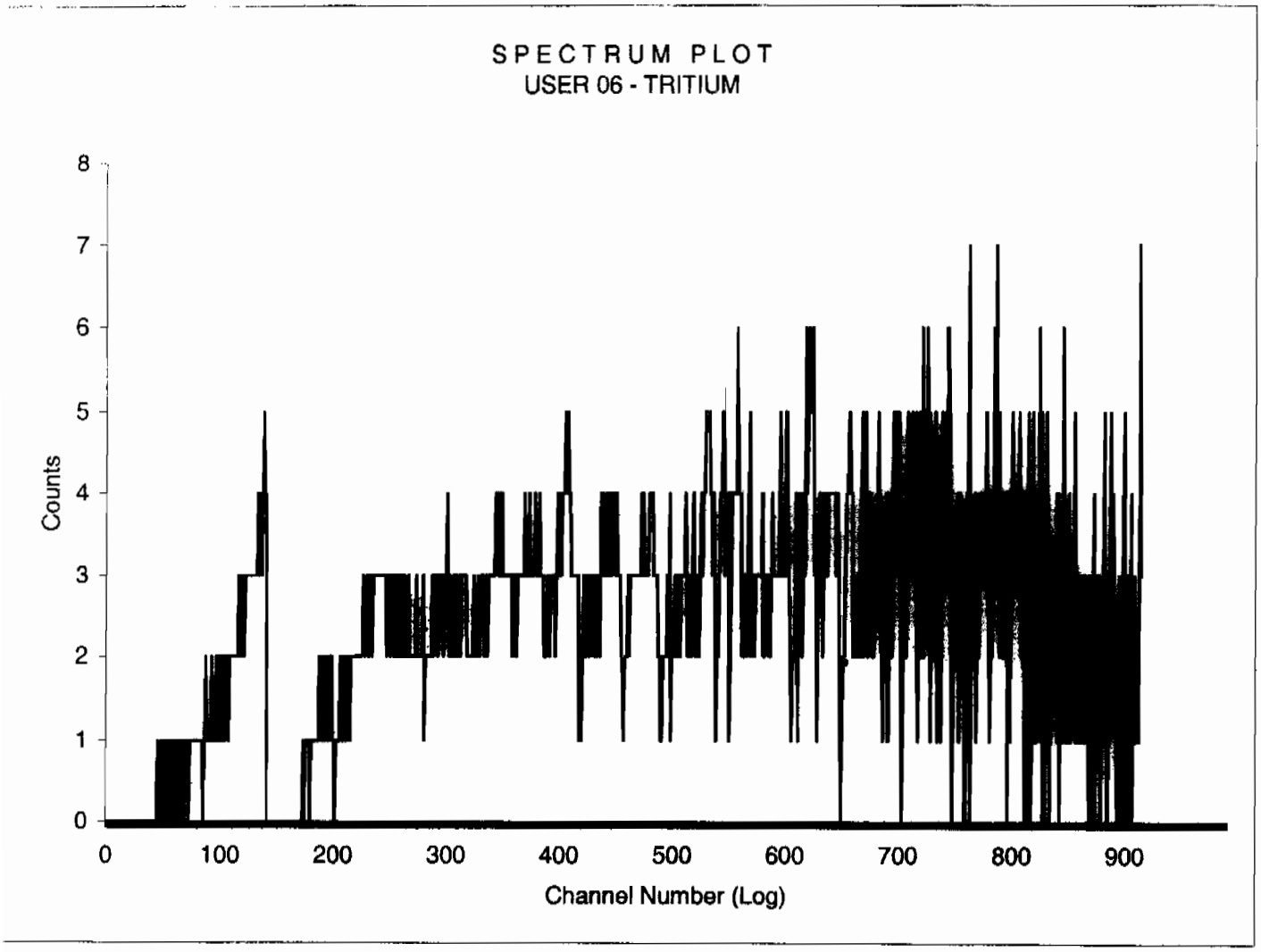

Sample Count Start Time:	9 Jul 2009 07:03:51		
Data Capture Date	09 Jul 2009 08:43:32		
User Filename	S06070906-2A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	6-2	100.00
H#, Total Counts:	112.5	3561	
Start, End, X-Axis:	0	990	Channel Number

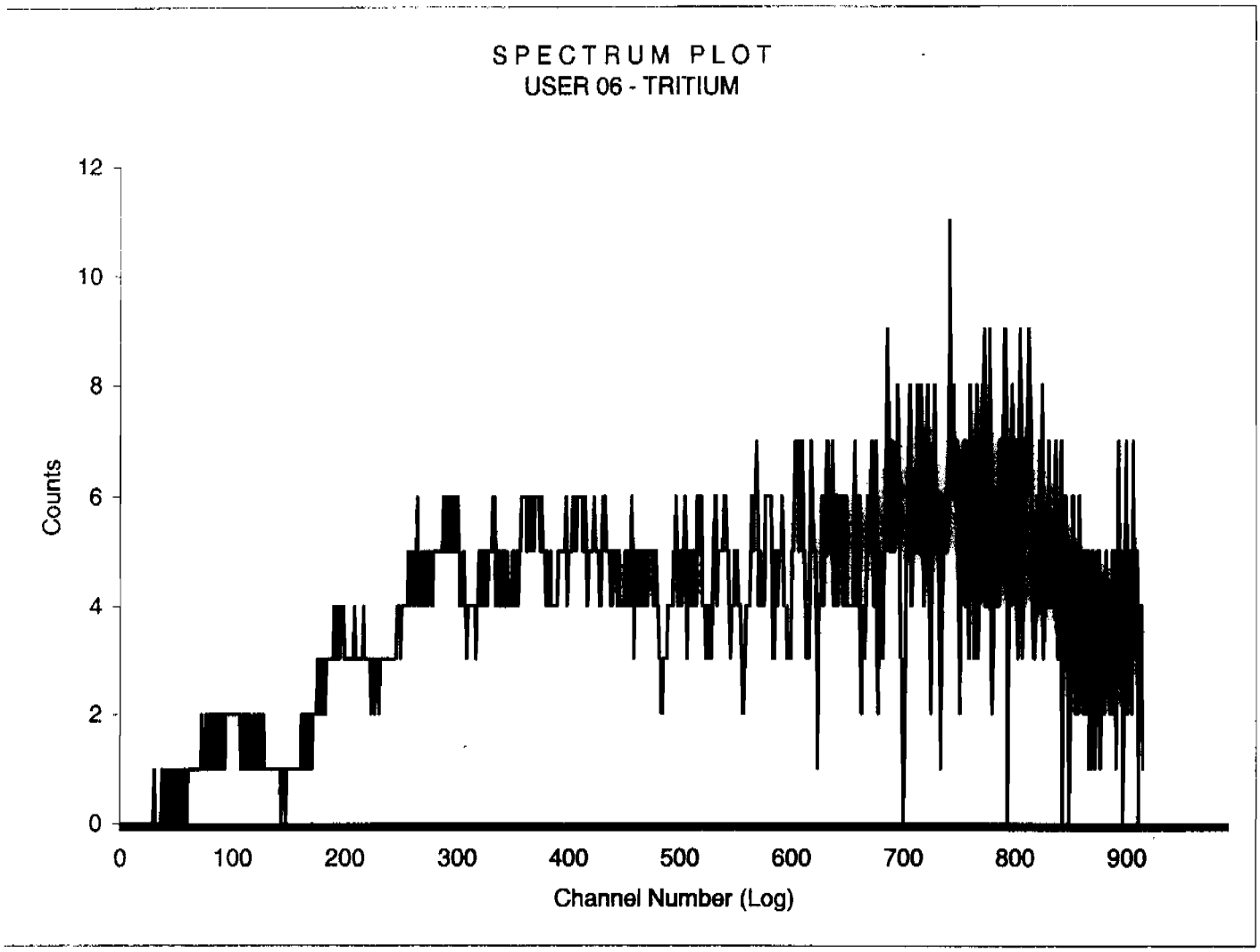

Sample Count Start Time:	9 Jul 2009 08:47:54		
Data Capture Date	09 Jul 2009 10:27:48		
User Filename	S06070906-3A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	6-3	100.00
H#, Total Counts:	108.3	3589	
Start, End, X-Axis:	0	990	Channel Number

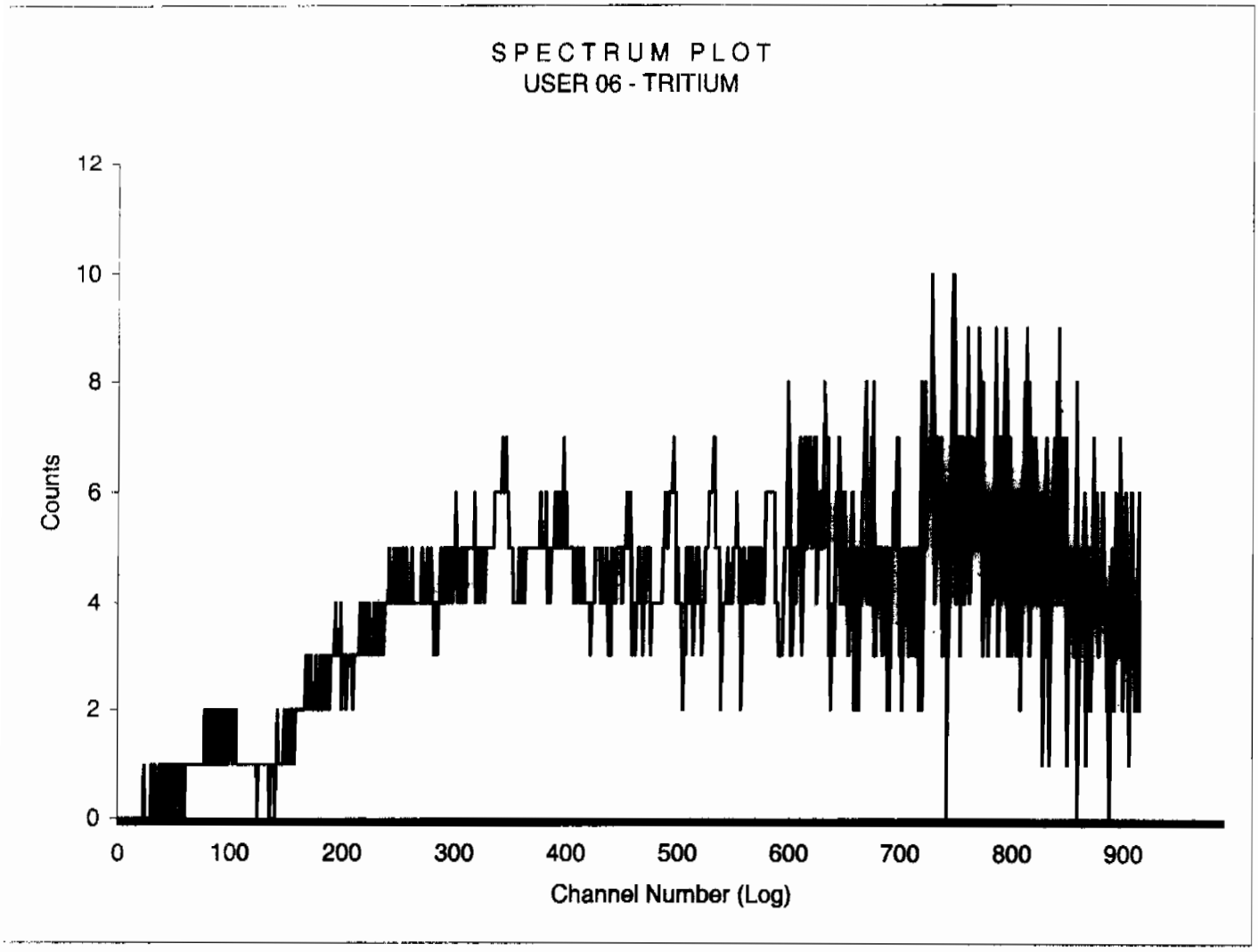

Sample Count Start Time:	9 Jul 2009 10:31:58		
Data Capture Date	09 Jul 2009 12:11:39		
User Filename	S06070906-4A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	6-4	100.00
H#, Total Counts:	109.6	3438	
Start, End, X-Axis:	0	990	Channel Number

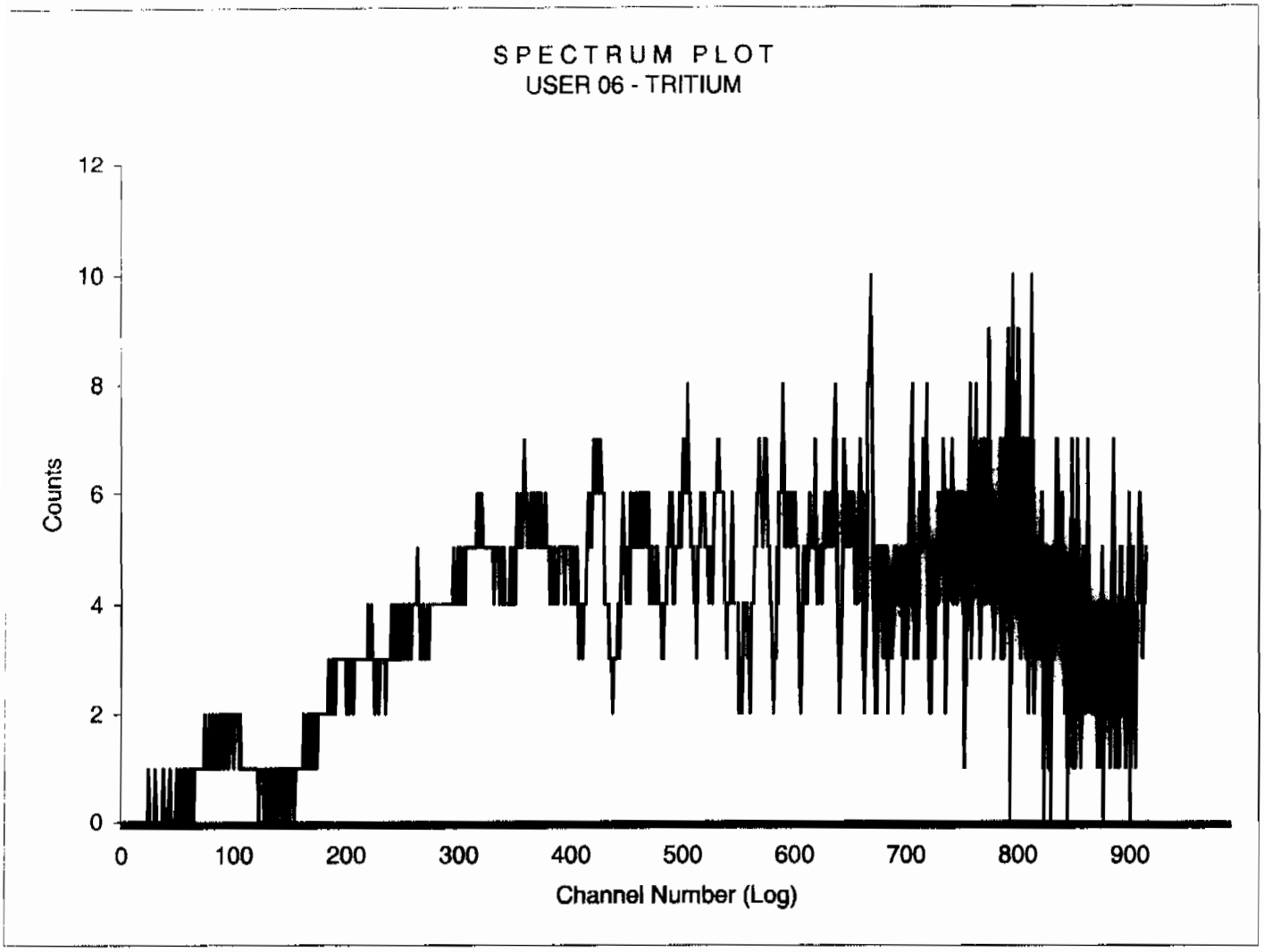

Sample Count Start Time:	9 Jul 2009 12:16:09		
Data Capture Date	09 Jul 2009 13:55:49		
User Filename	S06070906-5A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	6-5	100.00
H#, Total Counts:	103.4	3536	
Start, End, X-Axis:	0	990	Channel Number

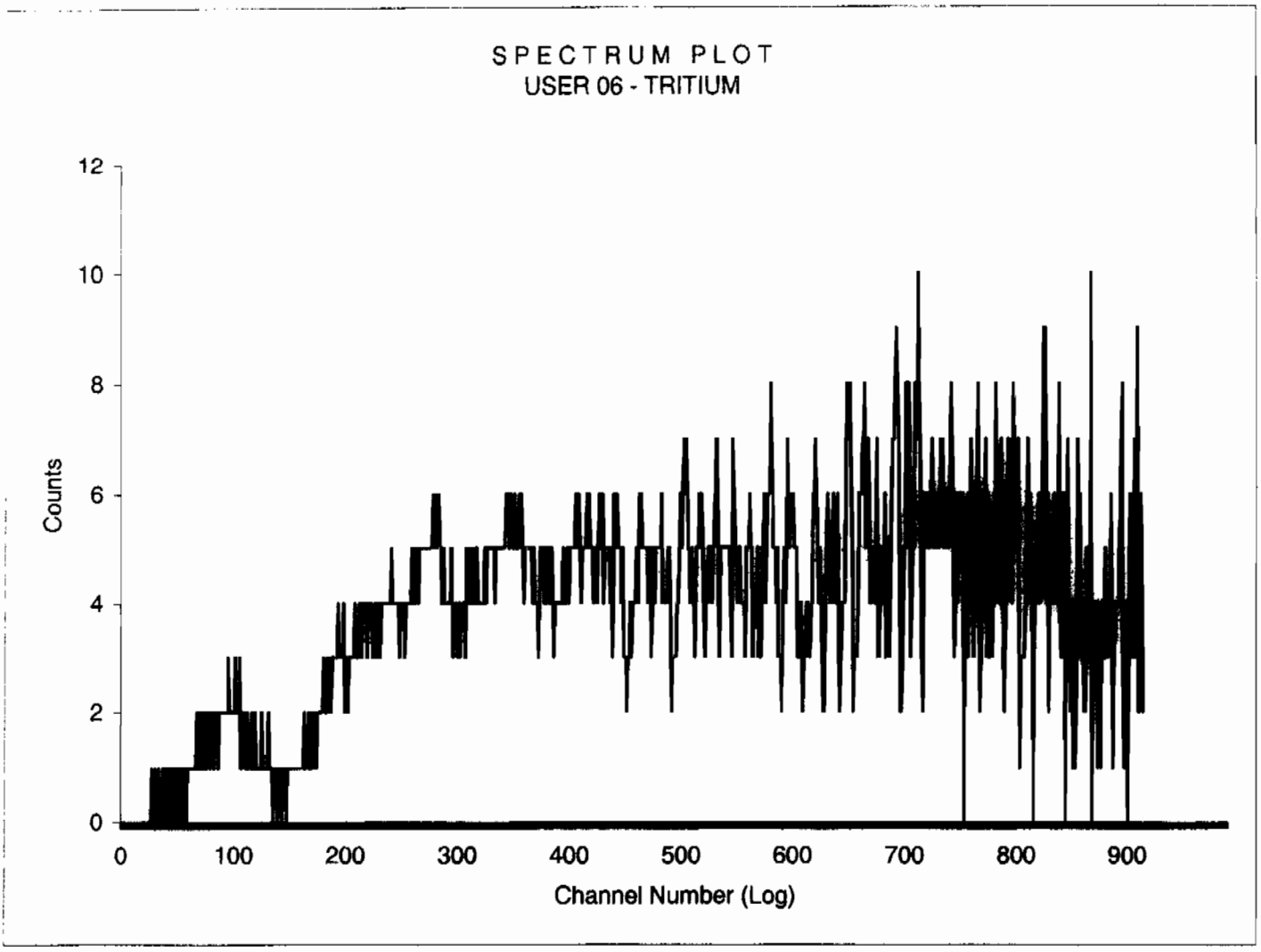

Sample Count Start Time:	9 Jul 2009 14:00:19		
Data Capture Date	09 Jul 2009 15:40:00		
User Filename	S06070906-6A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	6-6	100.00
H#, Total Counts:	109.9	3472	
Start, End, X-Axis:	0	990	Channel Number

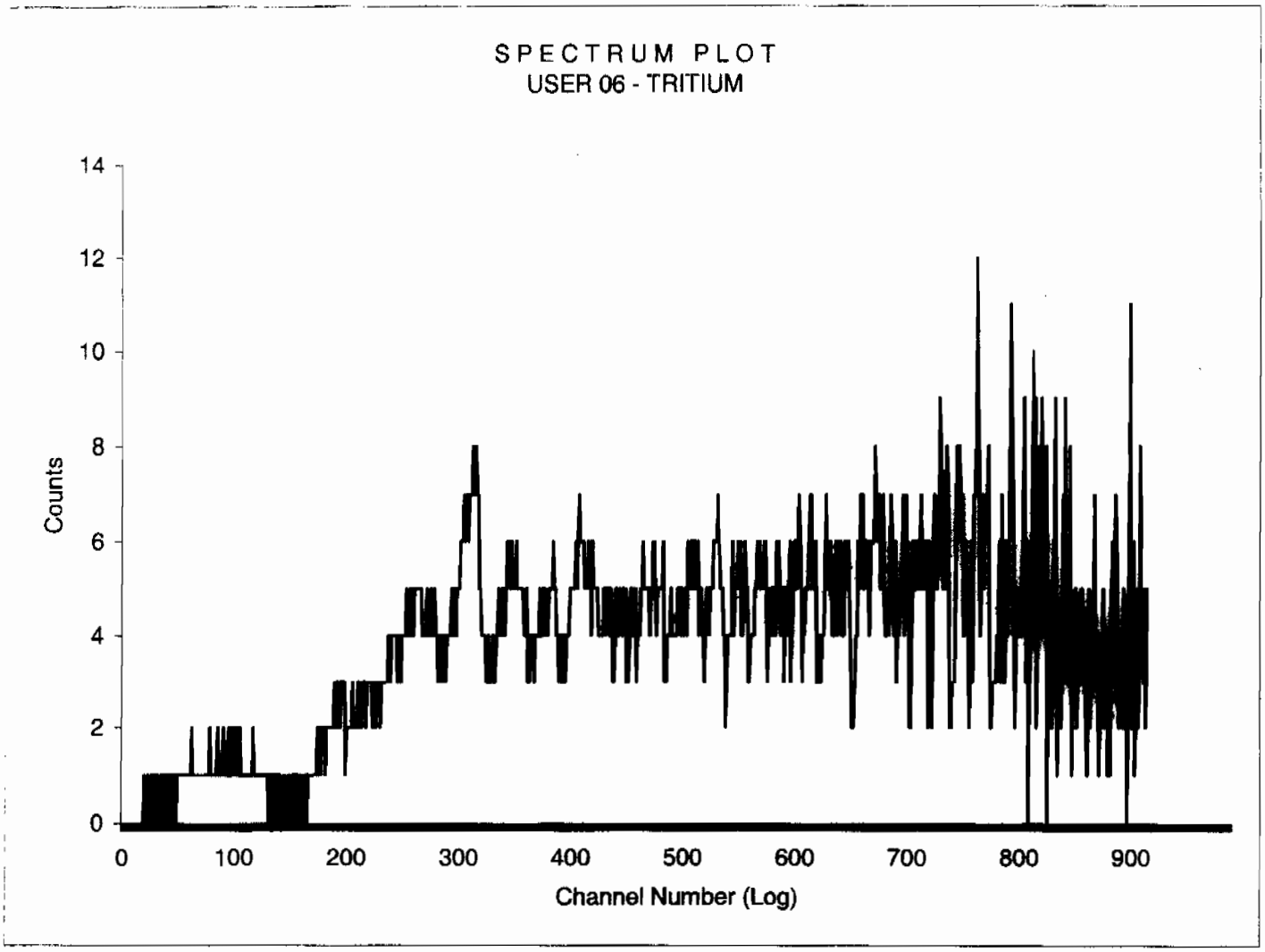

Sample Count Start Time:	9 Jul 2009 15:44:32		
Data Capture Date	09 Jul 2009 17:24:14		
User Filename	S06070906-7A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	6-7	100.00
H#, Total Counts:	111.0	3523	
Start, End, X-Axis:	0	990	Channel Number

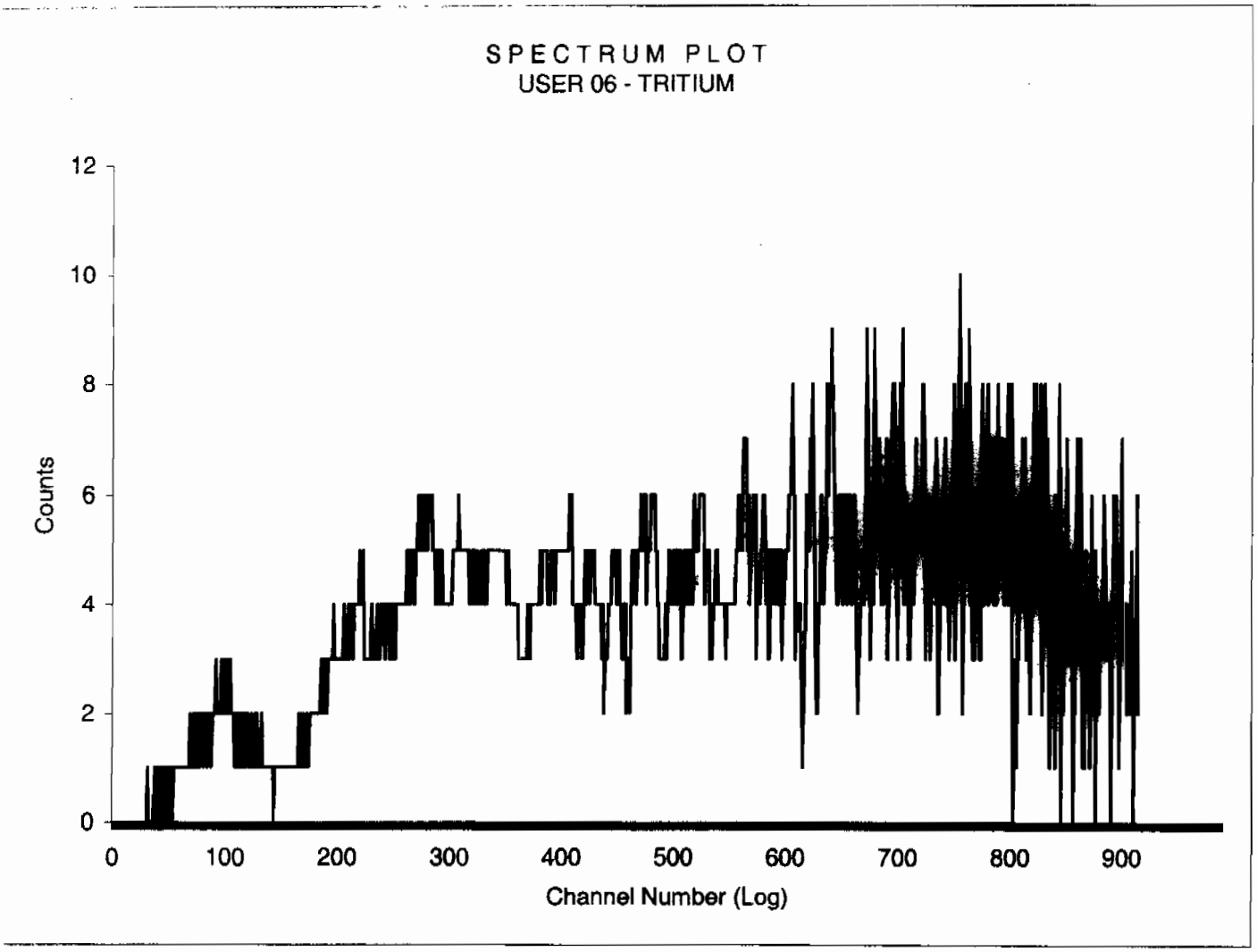

Sample Count Start Time:	9 Jul 2009 17:28:41		
Data Capture Date	09 Jul 2009 19:08:22		
User Filename	S06070906-8A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	6-8	100.00
H#, Total Counts:	109.7	3419	
Start, End, X-Axis:	0	990	Channel Number

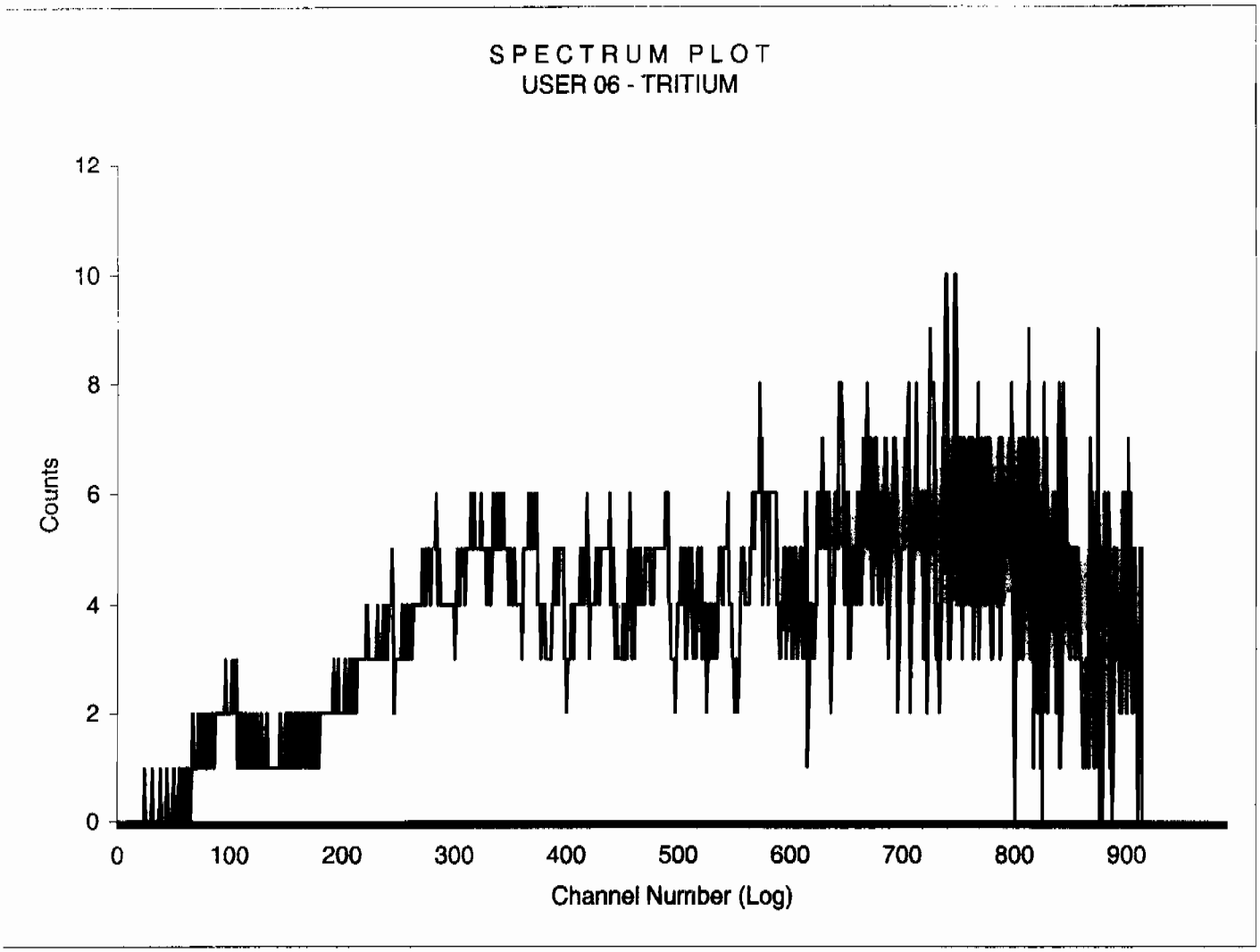

Sample Count Start Time:	9 Jul 2009 19:12:47		
Data Capture Date	09 Jul 2009 20:52:29		
User Filename	S06070906-9A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	6-9	100.00
H#, Total Counts:	106.1	3526	
Start, End, X-Axis:	0	990	Channel Number

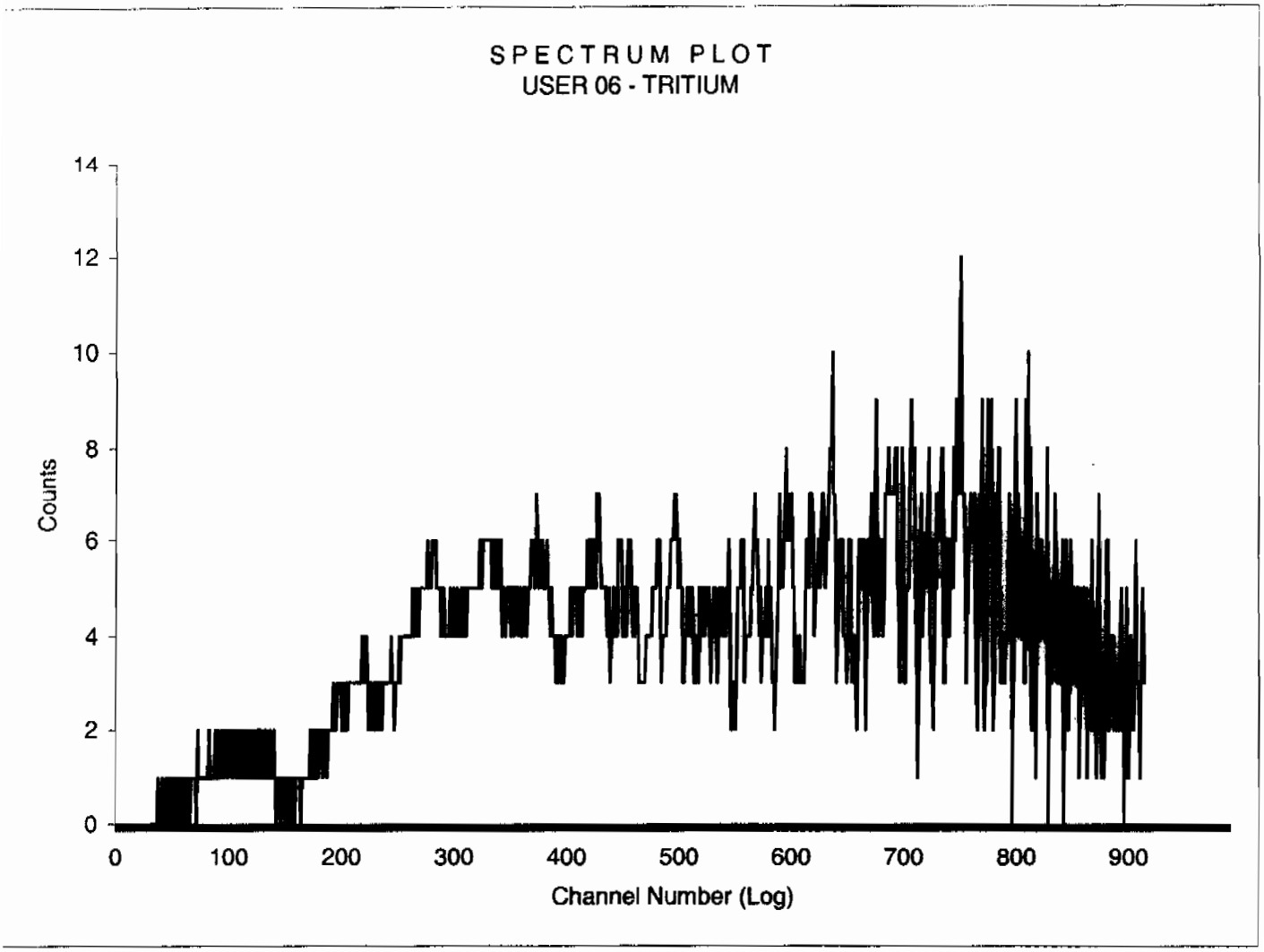

Sample Count Start Time:	9 Jul 2009 20:56:59		
Data Capture Date	09 Jul 2009 22:36:41		
User Filename	S06070906-10A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	6-10	100.00
H#, Total Counts:	107.0	3348	
Start, End, X-Axis:	0	990	Channel Number

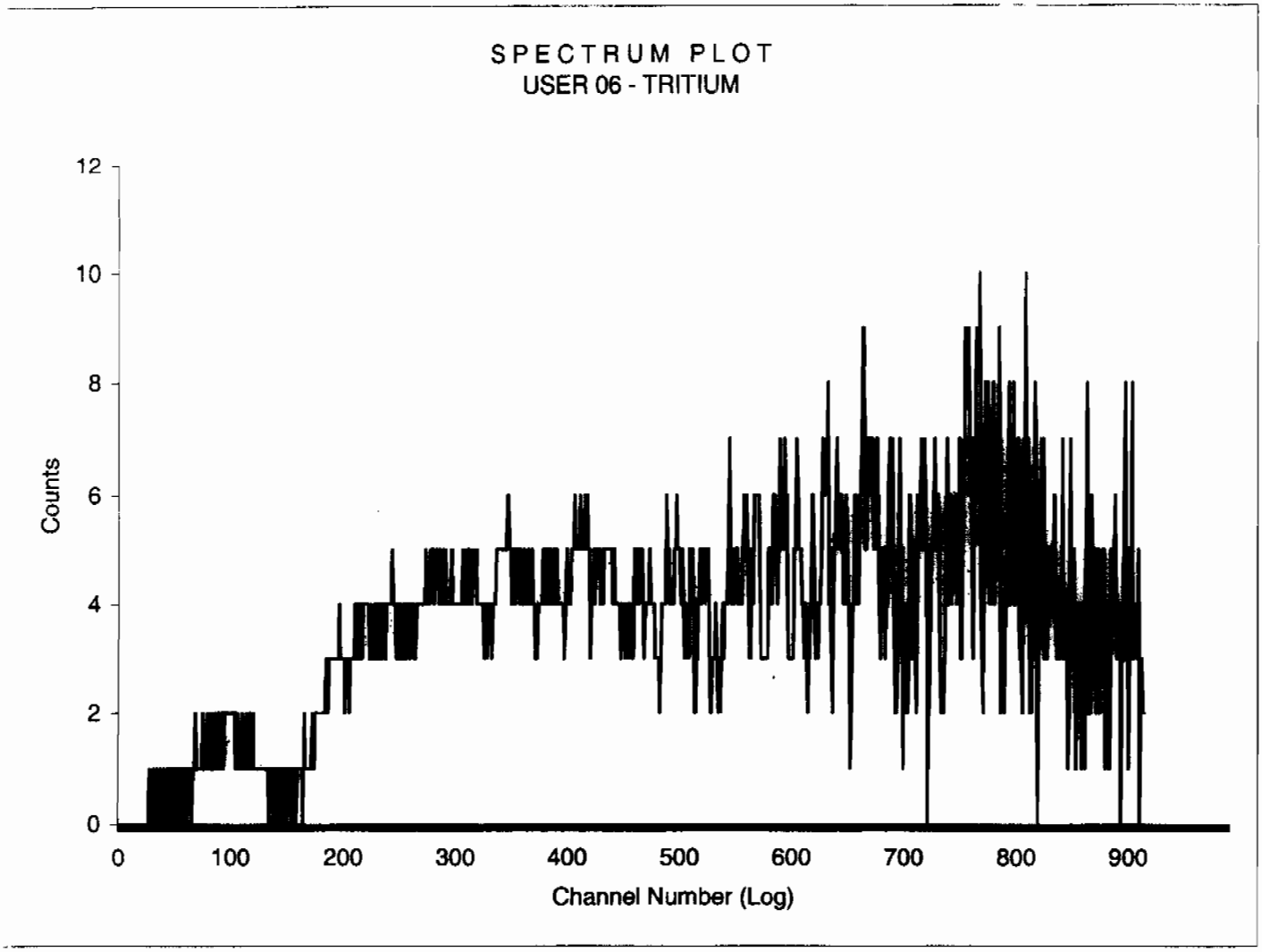

Sample Count Start Time:	9 Jul 2009 22:41:06		
Data Capture Date	10 Jul 2009 00:20:49		
User Filename	S06071006-11A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	6-11	100.00
H#, Total Counts:	109.6	3513	
Start, End, X-Axis:	0	990	Channel Number

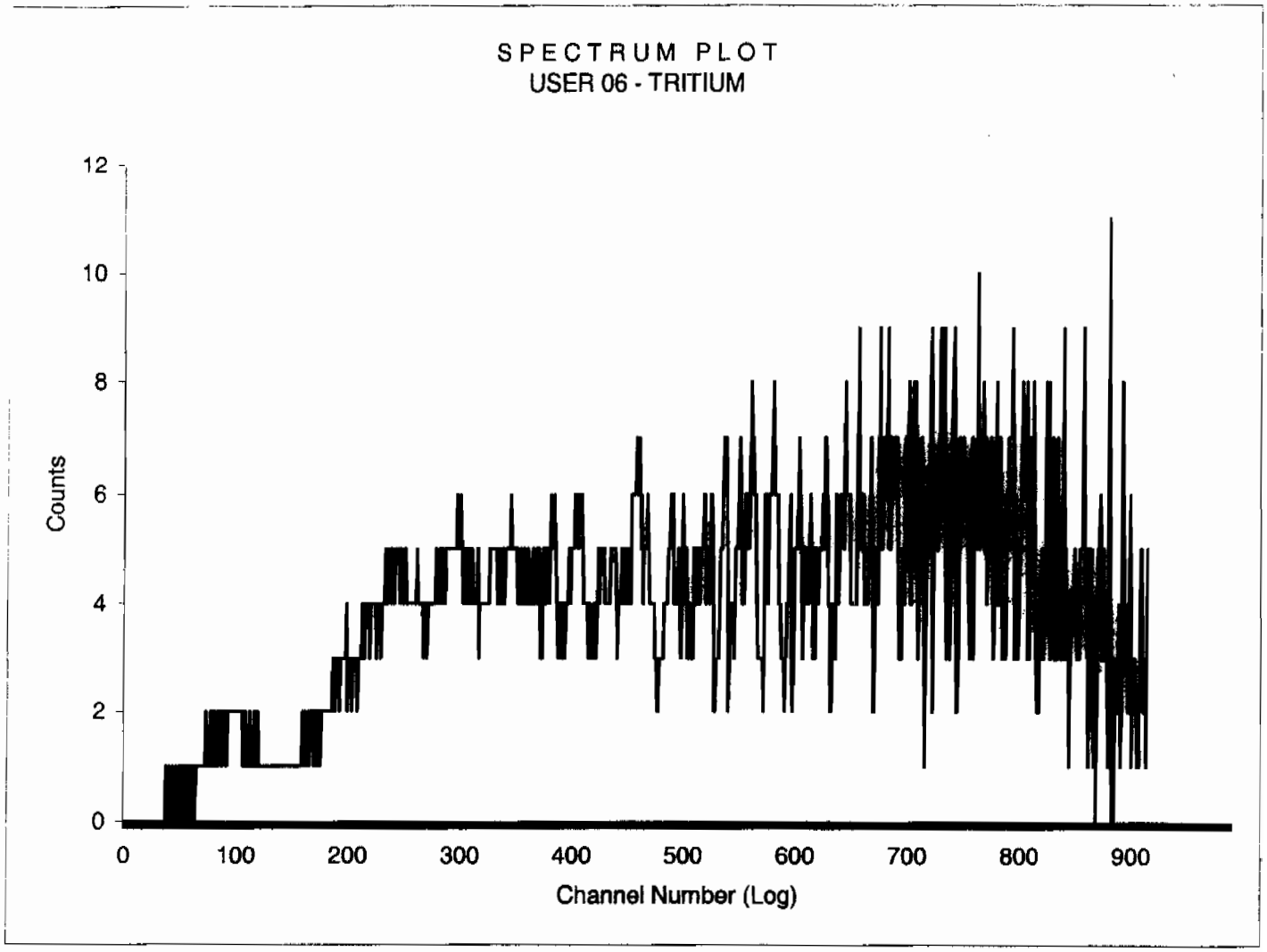

Sample Count Start Time:	10 Jul 2009 00:25:14		
Data Capture Date	10 Jul 2009 02:04:57		
User Filename	S06071006-12A.XLS		
	U06070906-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	12	6-12	100.00
H#, Total Counts:	110.4	3512	
Start, End, X-Axis:	0	990	Channel Number

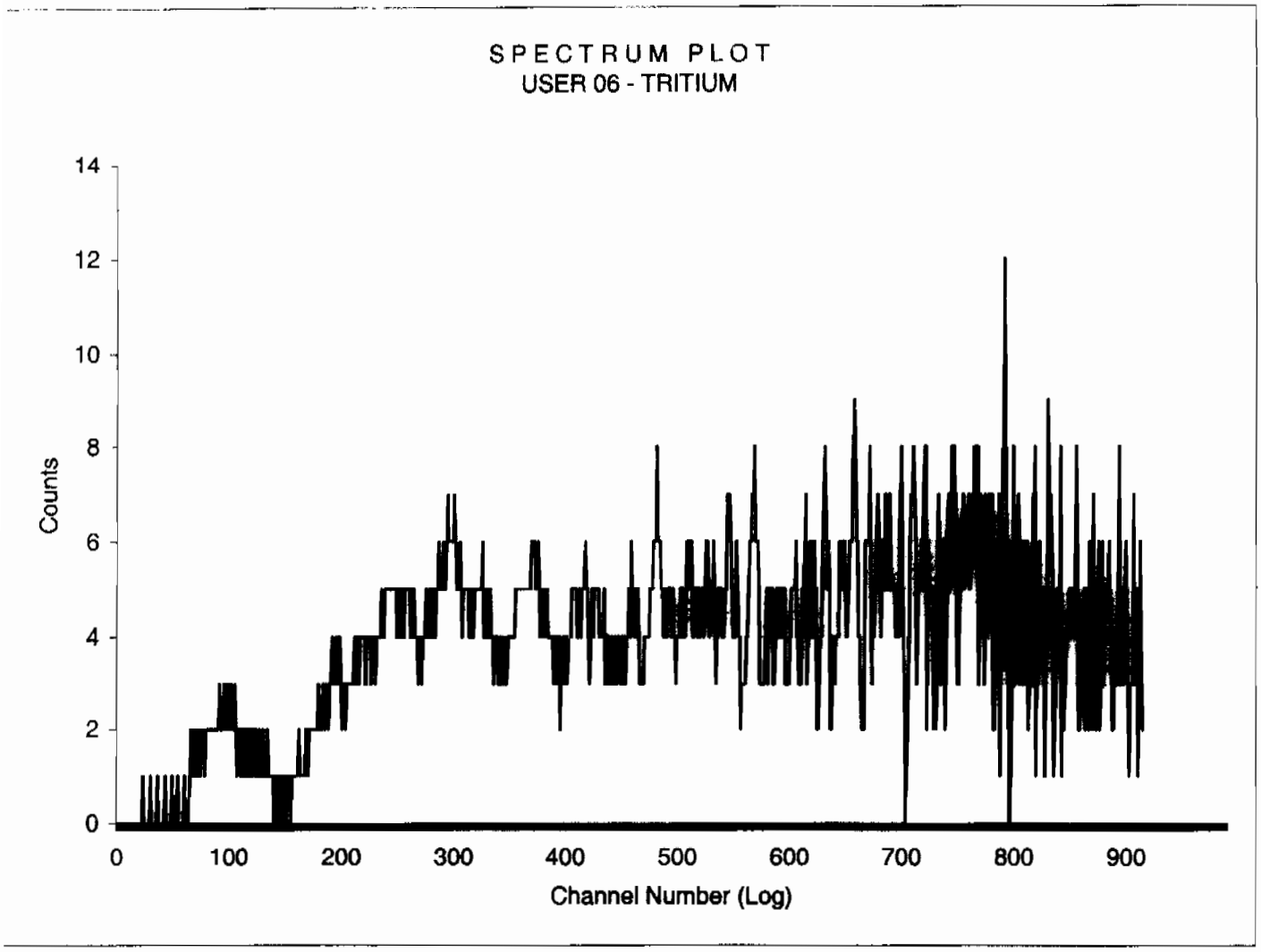

Sample Count Start Time:	10 Jul 2009 05:49:37		
Data Capture Date	10 Jul 2009 07:02:07		
User Filename	S06071028-1A.XLS		
	U06071028-1A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	28-1	71.95
H#, Total Counts:	105.5	2404	
Start, End, X-Axis:	0	990	Channel Number

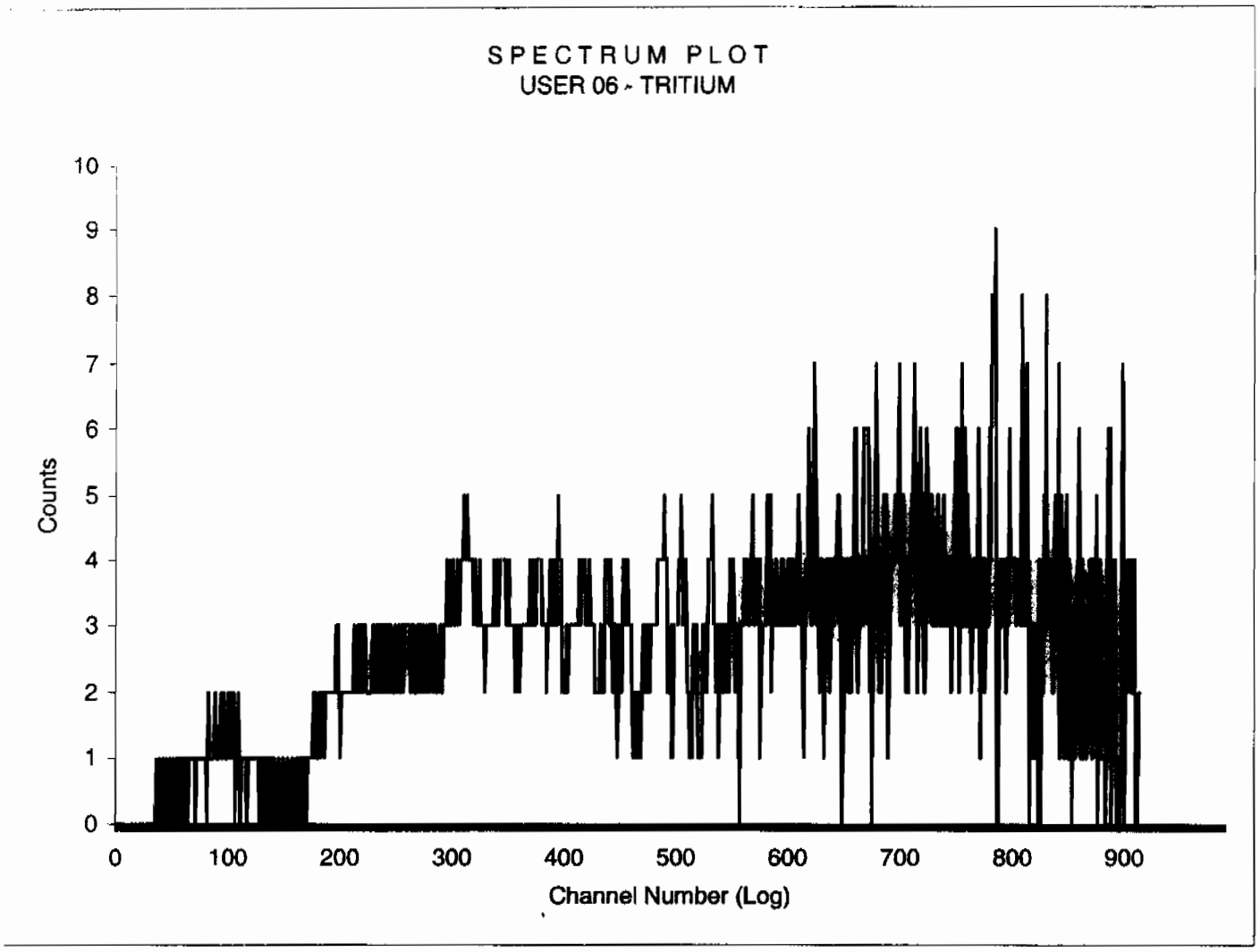

Sample Count Start Time:	13 Jul 2009 13:00:24		
Data Capture Date	13 Jul 2009 14:00:51		
User Filename	S02071330-2A.XLS		
	U02071330-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GOLD		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	30-2	60.00
H#, Total Counts:	135.1	2405	
Start, End, X-Axis:	0	990	Channel Number

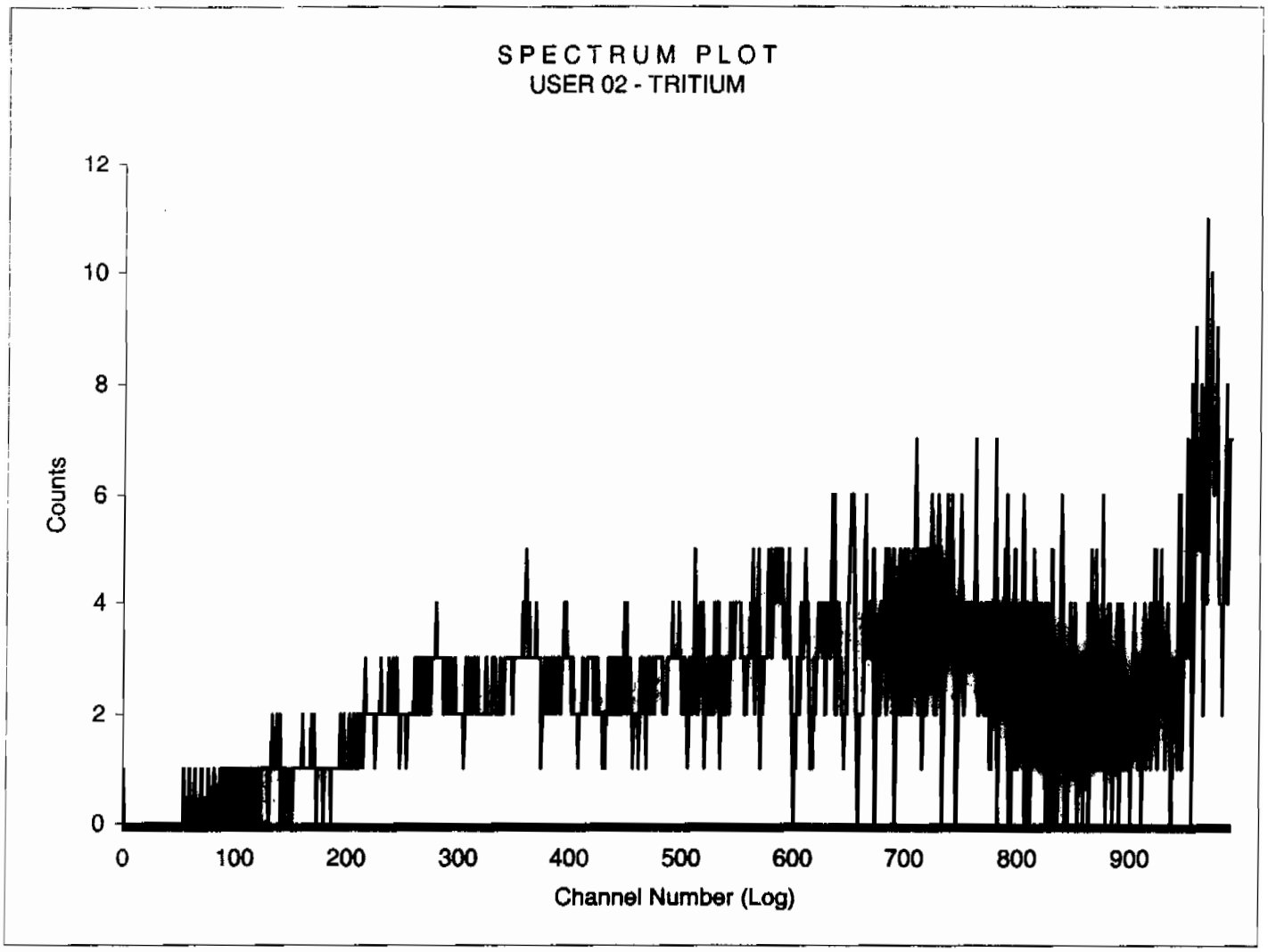

Sample Count Start Time:	10 Jul 2009 13:01:11		
Data Capture Date	10 Jul 2009 13:39:55		
User Filename	S06071028-3B.XLS		
	U06071028-2A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	28-3	40.00
H#, Total Counts:	109.1	1413	
Start, End, X-Axis:	0	990	Channel Number

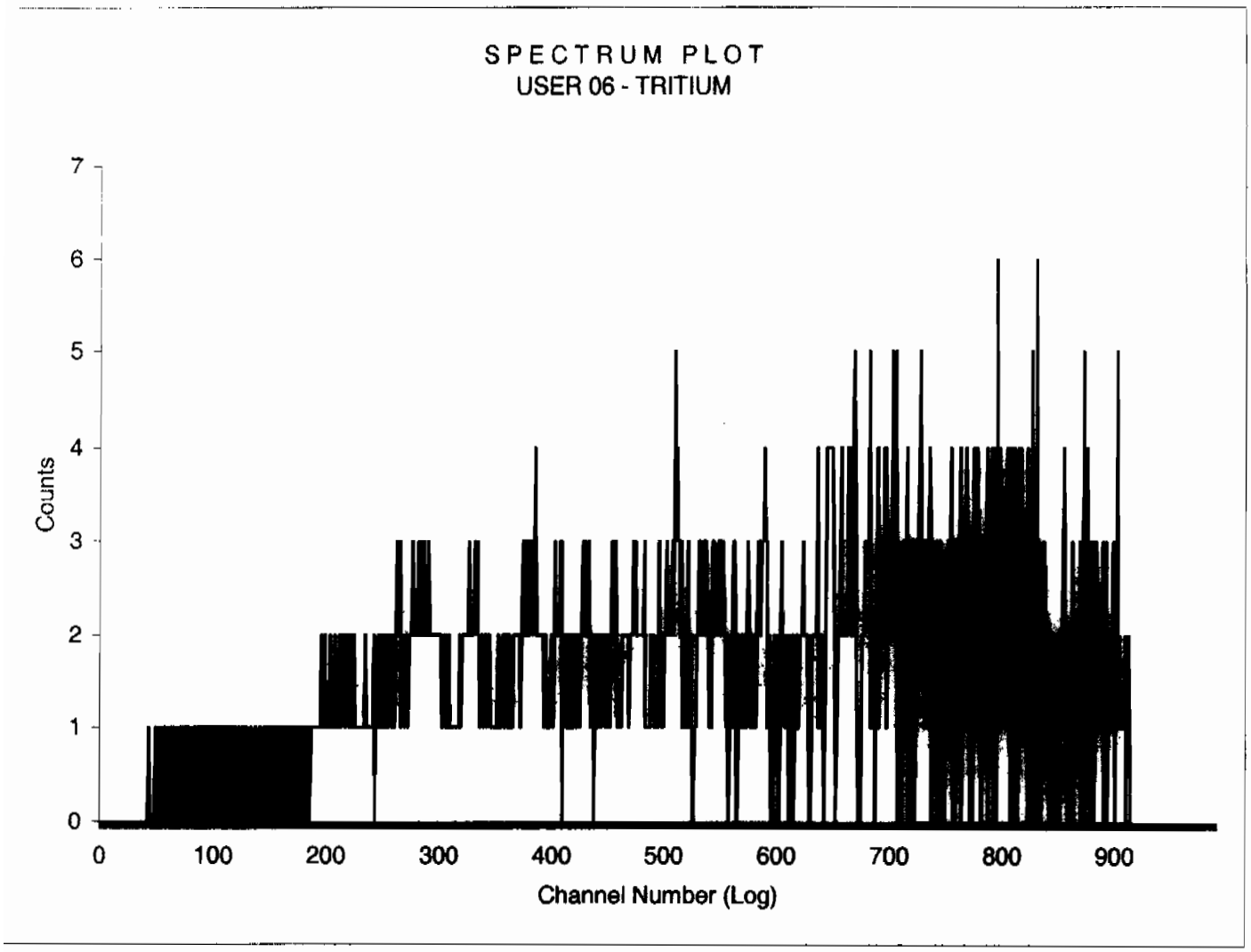

Sample Count Start Time:	10 Jul 2009 13:43:27		
Data Capture Date	10 Jul 2009 14:22:22		
User Filename	S06071028-4B.XLS		
	U06071028-2A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	28-4	40.00
H#, Total Counts:	109.0	1429	
Start, End, X-Axis:	0	990	Channel Number

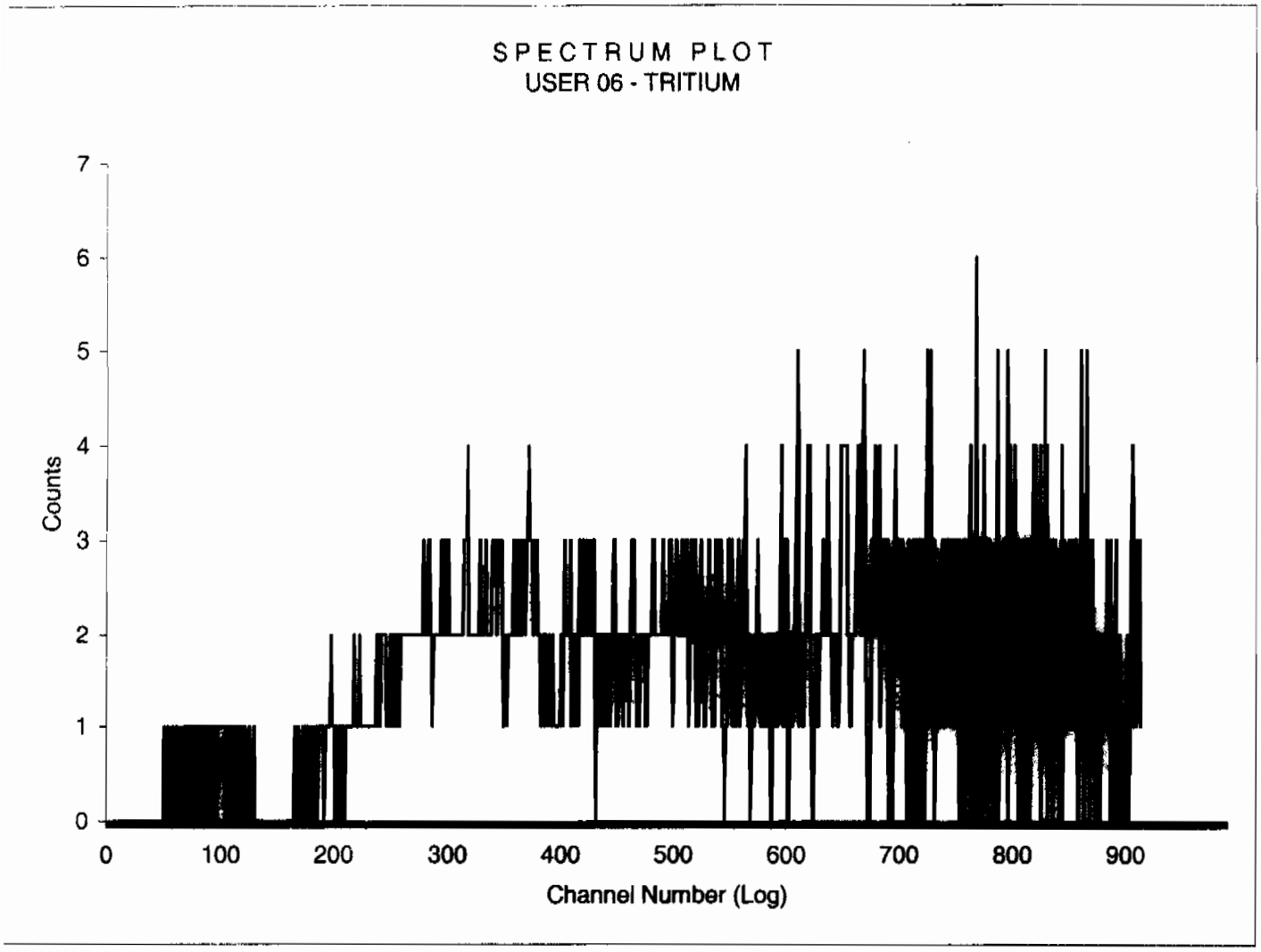

Sample Count Start Time:	10 Jul 2009 14:25:43		
Data Capture Date	10 Jul 2009 15:04:26		
User Filename	S06071028-5B.XLS		
	U06071028-2A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	28-5	40.00
H#, Total Counts:	106.5	1371	
Start, End, X-Axis:	0	990	Channel Number

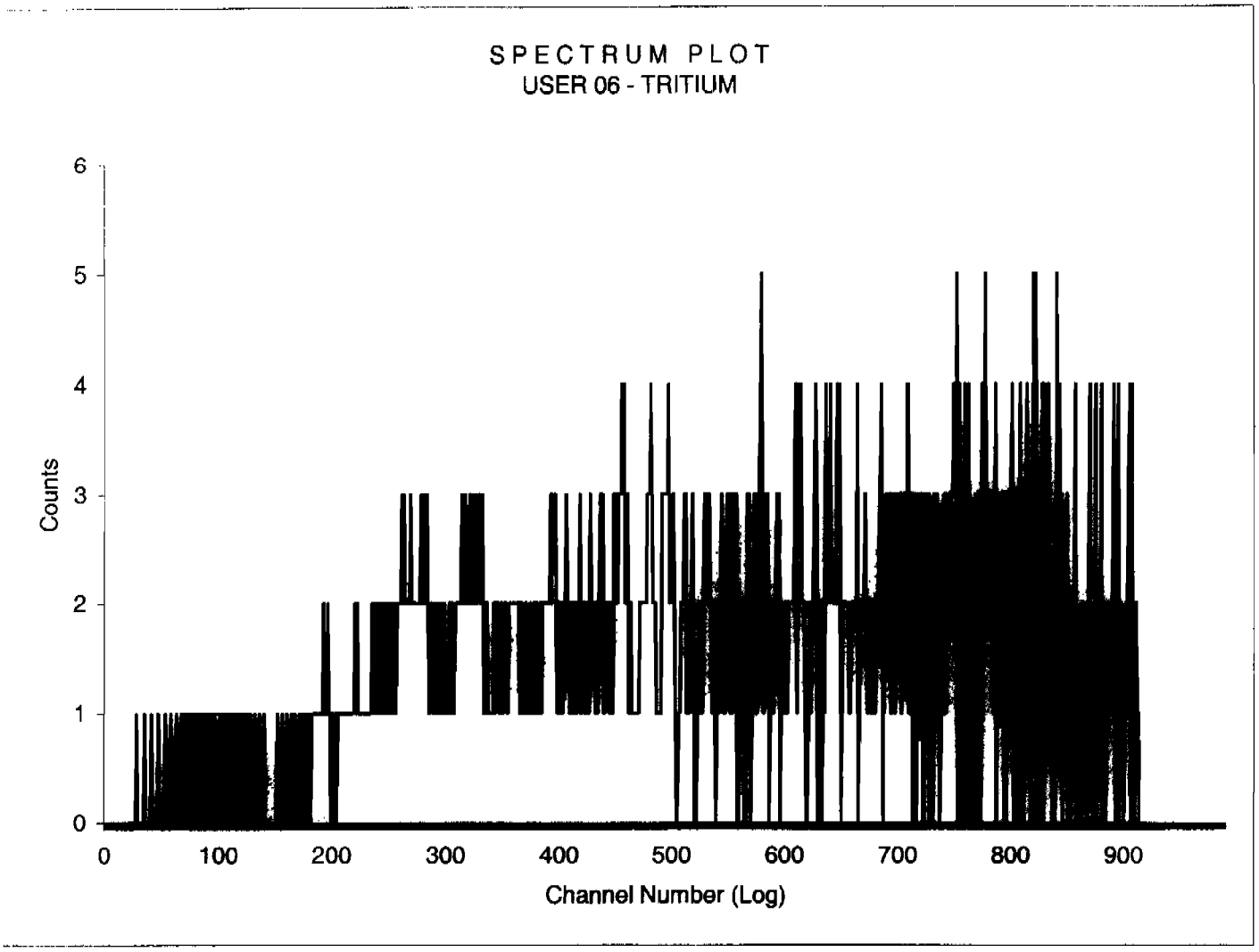

Sample Count Start Time:	10 Jul 2009 15:07:57		
Data Capture Date	10 Jul 2009 15:46:41		
User Filename	S06071028-6B.XLS		
	U06071028-2A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	28-6	40.00
H#, Total Counts:	105.6	1430	
Start, End, X-Axis:	0	990	Channel Number

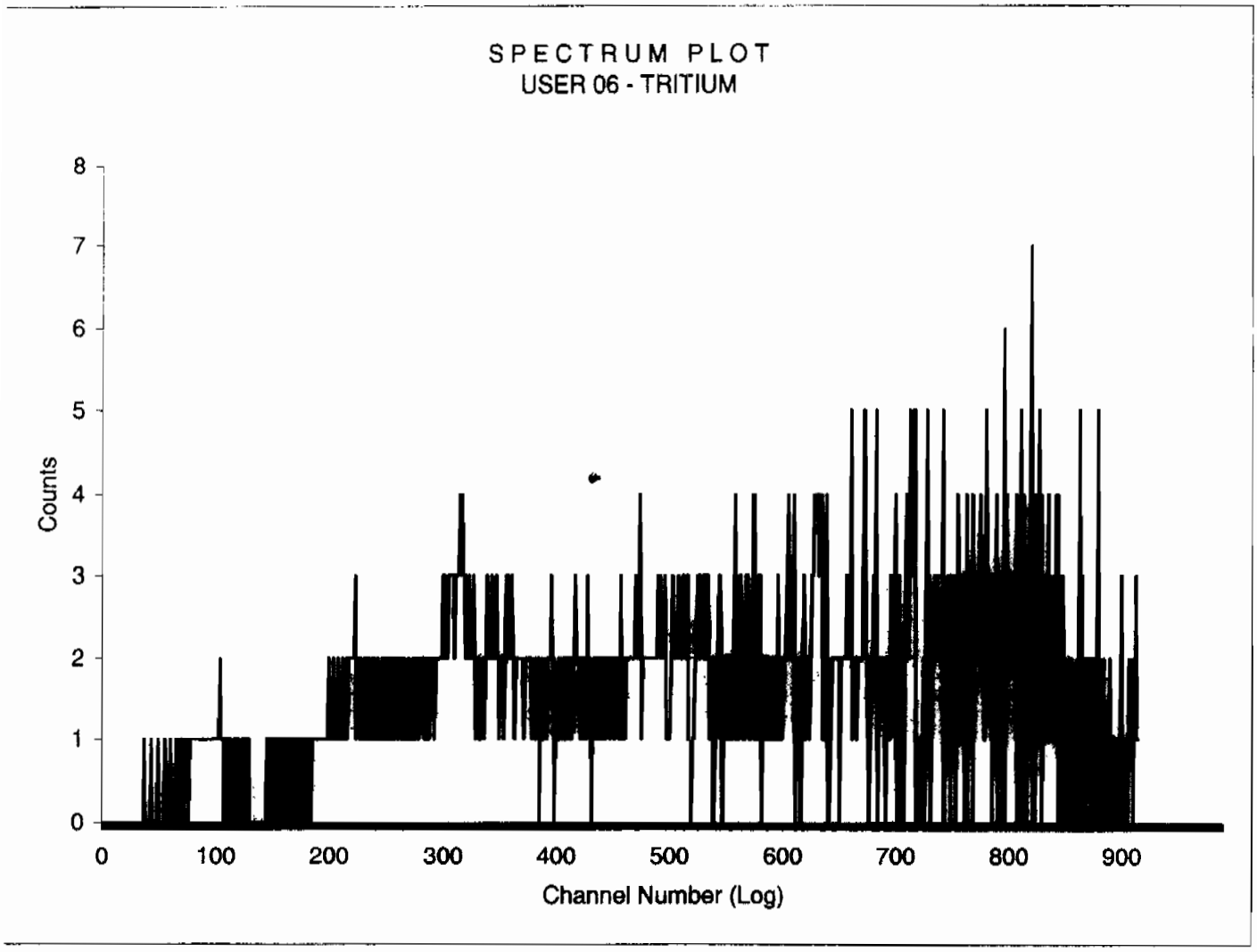

Sample Count Start Time:	10 Jul 2009 15:50:14		
Data Capture Date	10 Jul 2009 16:28:58		
User Filename	S06071028-7B.XLS		
	U06071028-2A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	28-7	40.00
H#, Total Counts:	111.8	1425	
Start, End, X-Axis:	0	990	Channel Number

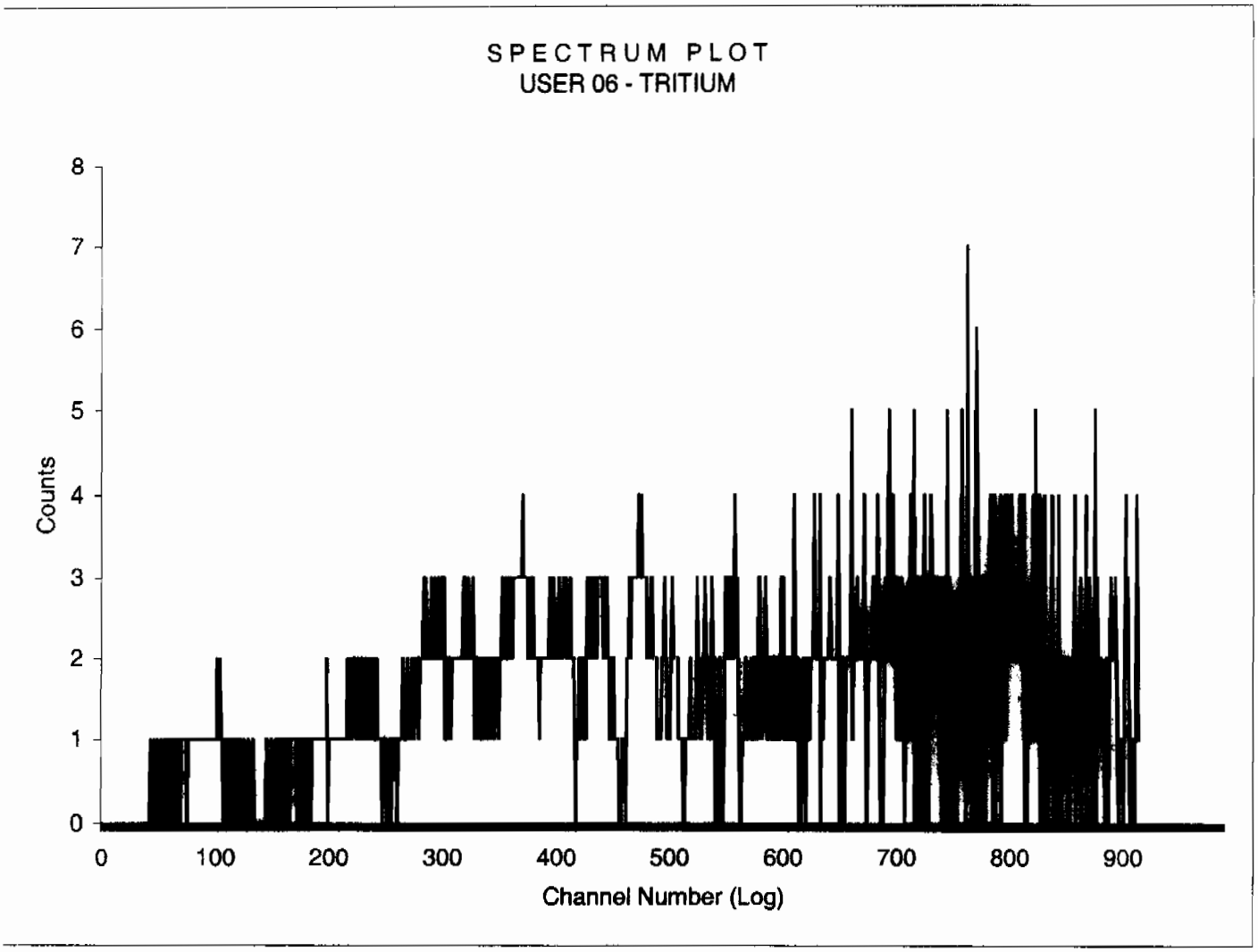

Sample Count Start Time:	10 Jul 2009 16:32:26		
Data Capture Date	10 Jul 2009 17:11:11		
User Filename	S06071028-8B.XLS		
	U06071028-2A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	28-8	40.00
H#, Total Counts:	110.5	1395	
Start, End, X-Axis:	0	990	Channel Number

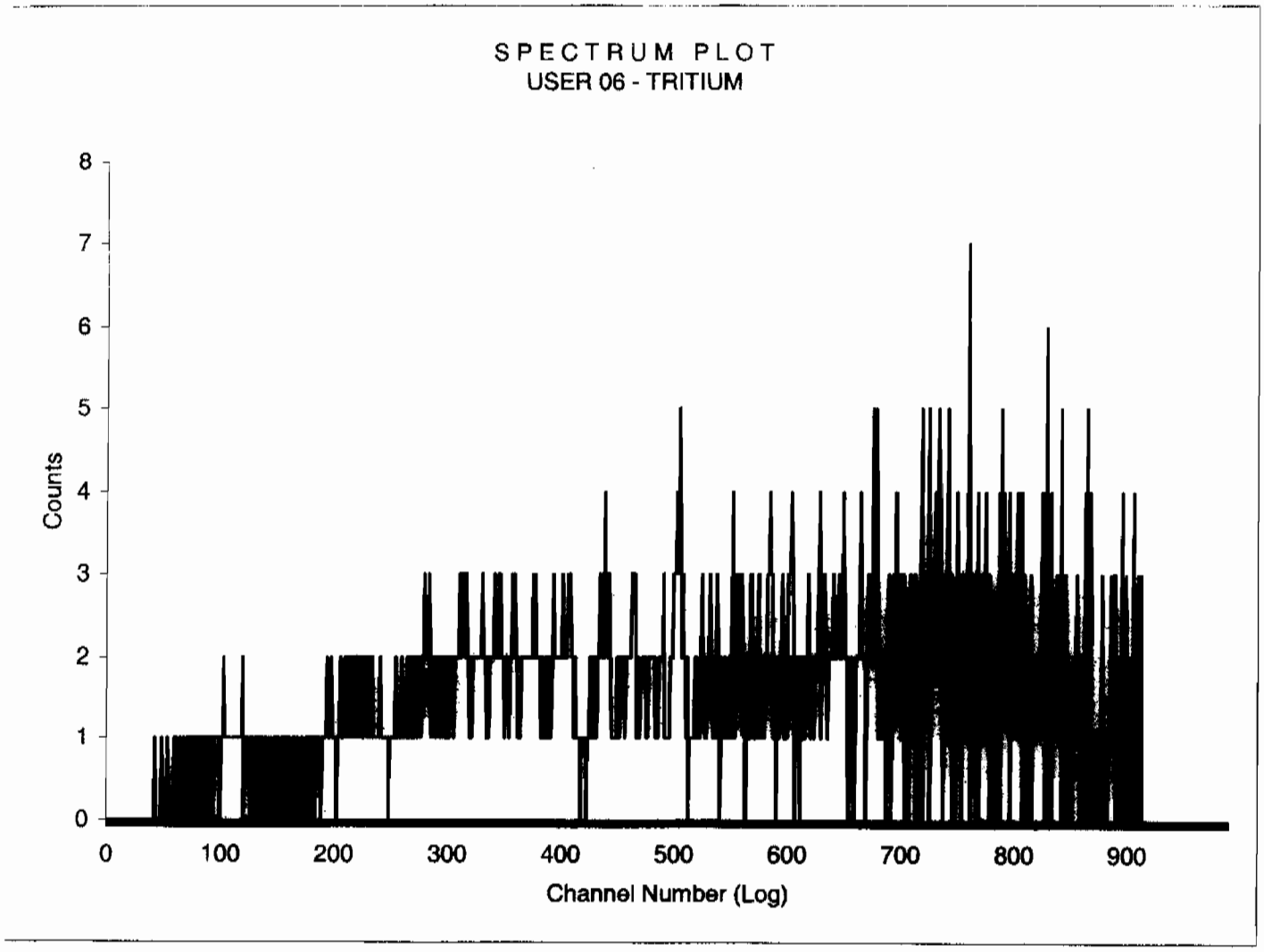

Sample Count Start Time:	10 Jul 2009 17:14:40		
Data Capture Date	10 Jul 2009 17:53:24		
User Filename	S06071028-9B.XLS		
	U06071028-2A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	28-9	40.00
H#, Total Counts:	114.0	1393	
Start, End, X-Axis:	0	990	Channel Number

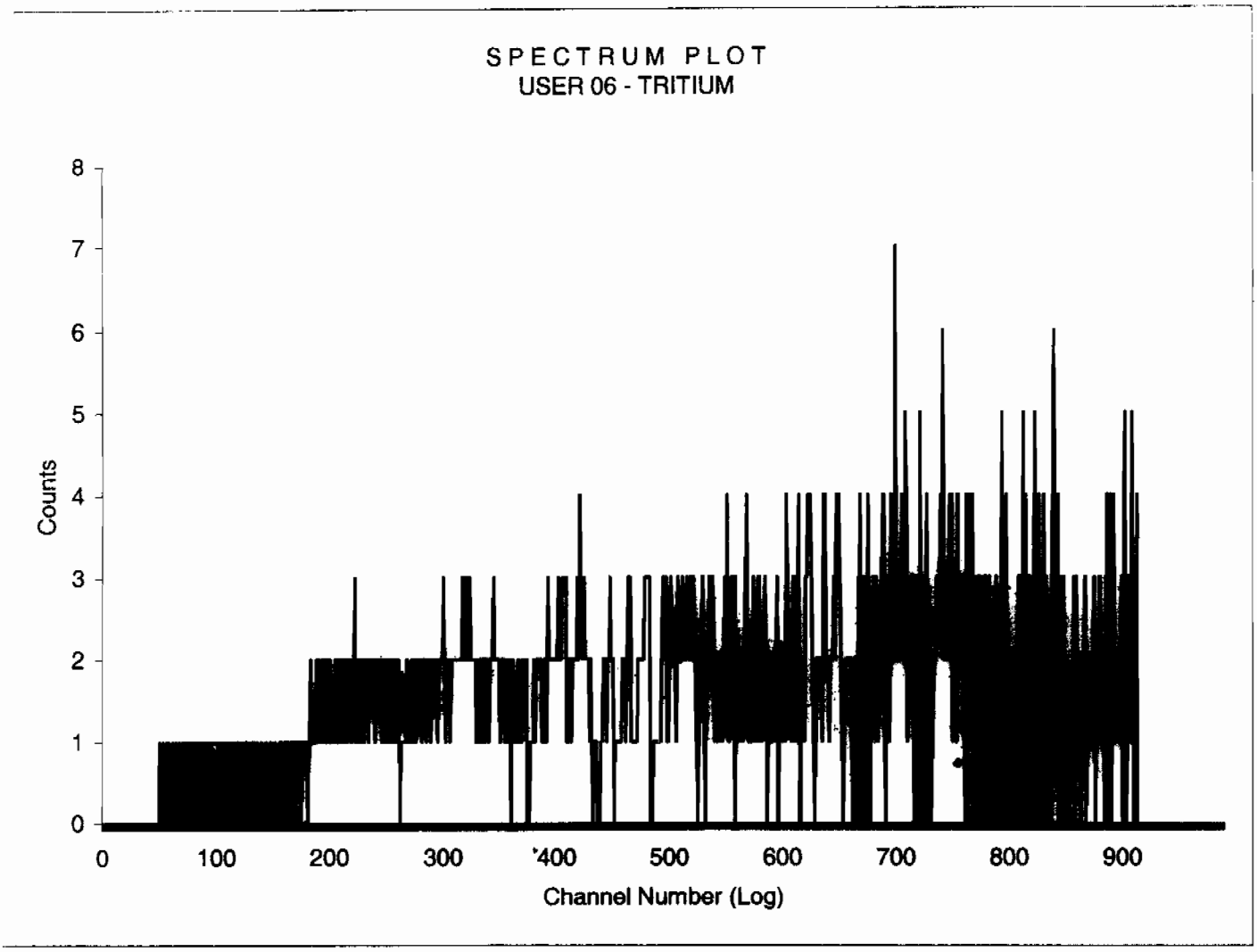

Sample Count Start Time:	10 Jul 2009 17:56:50		
Data Capture Date	10 Jul 2009 18:35:34		
User Filename	S06071028-10B.XLS		
	U06071028-2A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	28-10	40.00
H#, Total Counts:	112.0	1361	
Start, End, X-Axis:	0	990	Channel Number

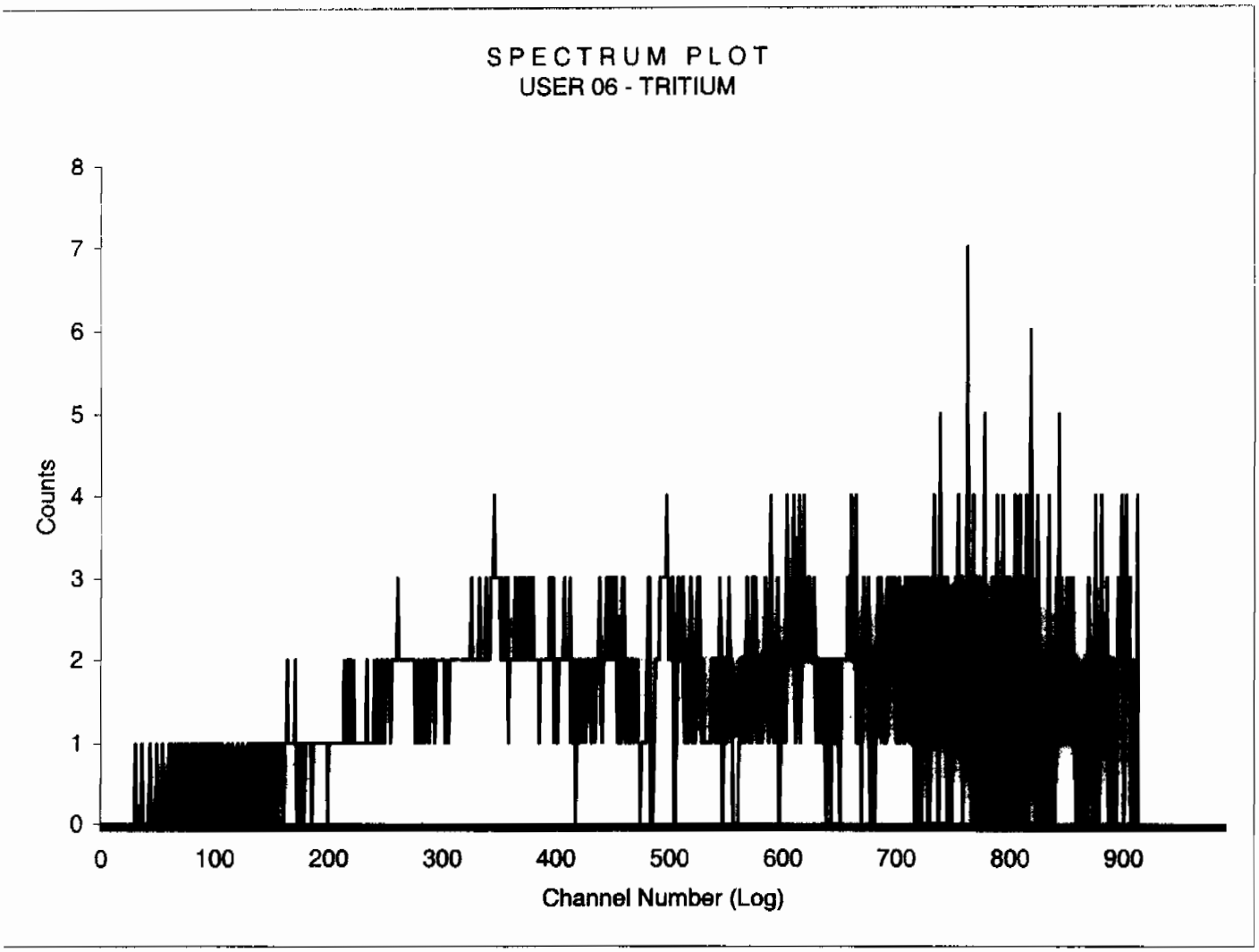

Sample Count Start Time:	10 Jul 2009 18:39:02		
Data Capture Date	10 Jul 2009 19:17:47		
User Filename	S06071028-11B.XLS		
	U06071028-2A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	28-11	40.00
H#, Total Counts:	110.8	1365	
Start, End, X-Axis:	0	990	Channel Number

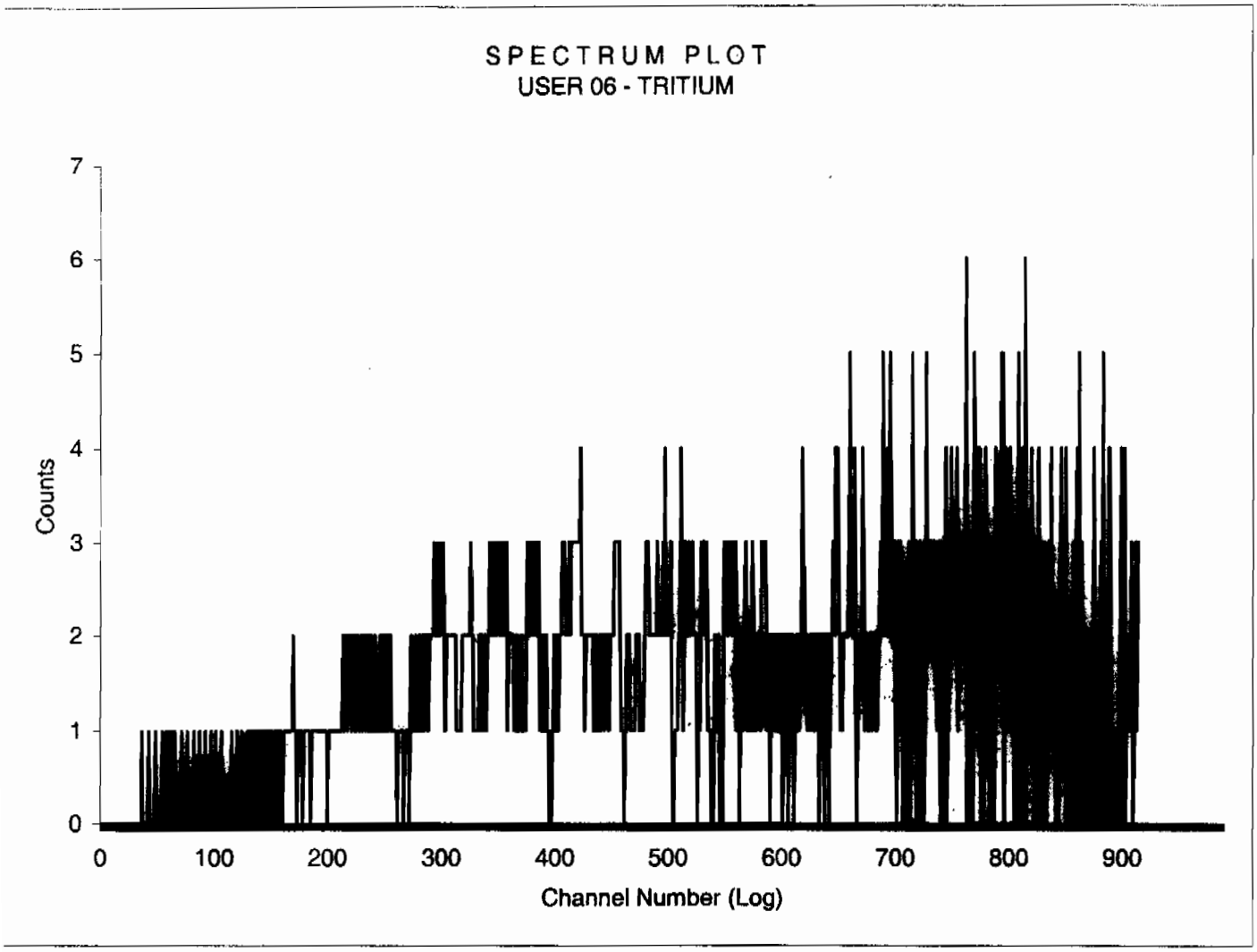

Sample Count Start Time:	10 Jul 2009 19:21:13		
Data Capture Date	10 Jul 2009 20:00:20		
User Filename	S06071028-12B.XLS		
	U06071028-2A.XLS		
Spectrum Type	Log Counts		
User Number	06		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	12	28-12	40.00
H#, Total Counts:	110.1	2934	
Start, End, X-Axis:	0	990	Channel Number

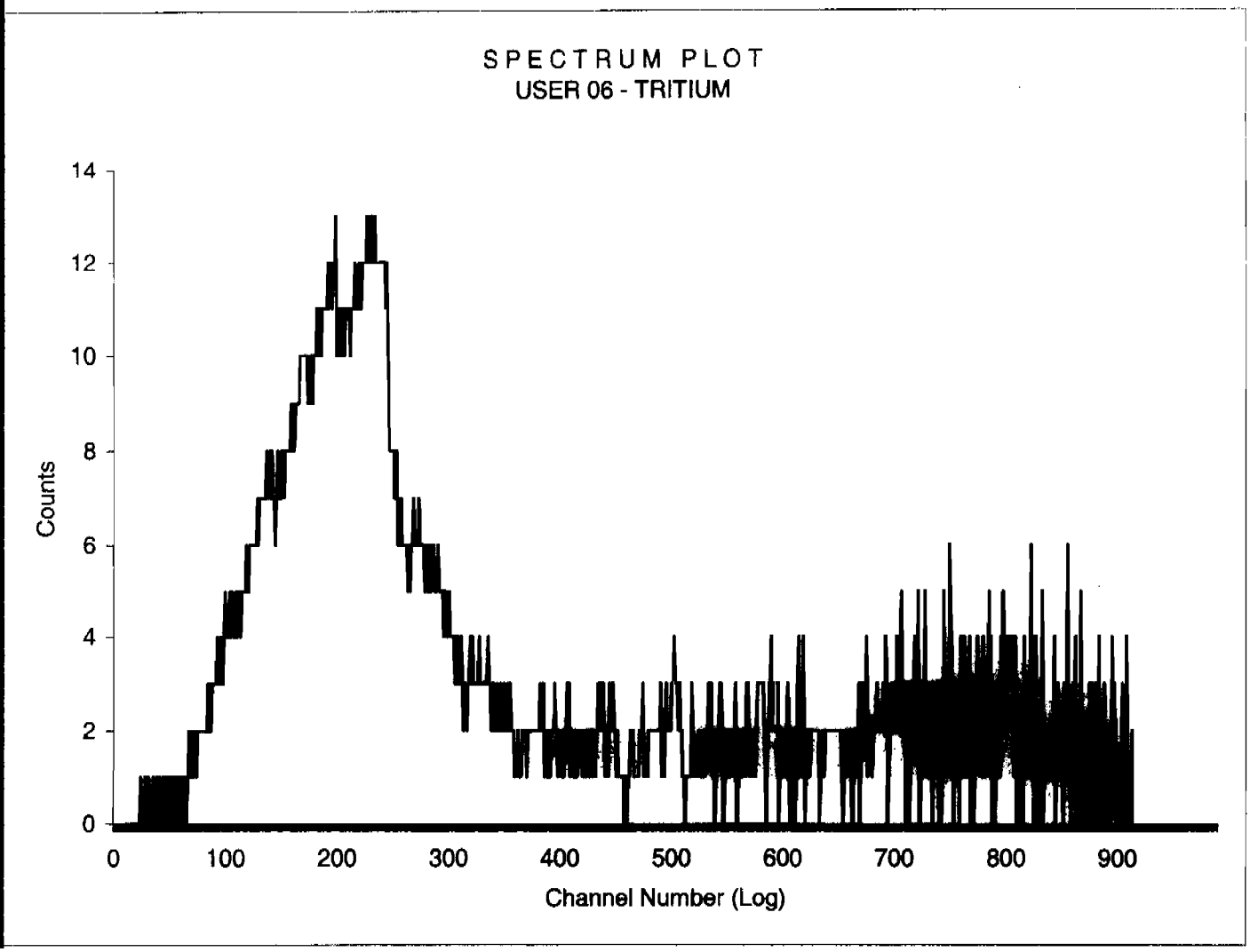

BACKGROUND AND EFFICIENCY DATA

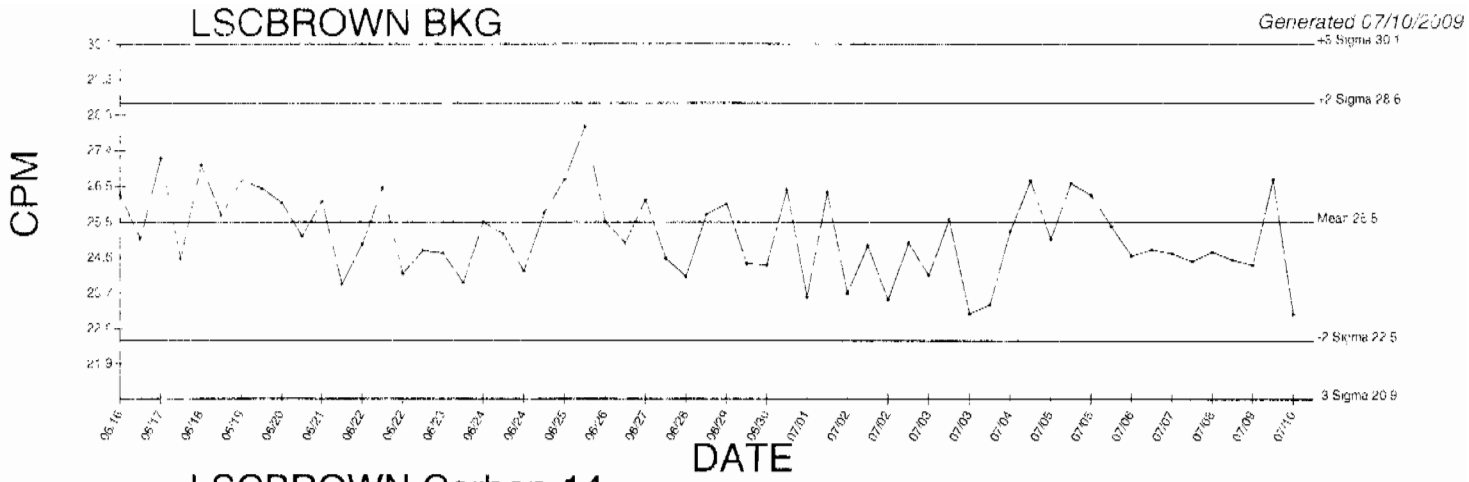

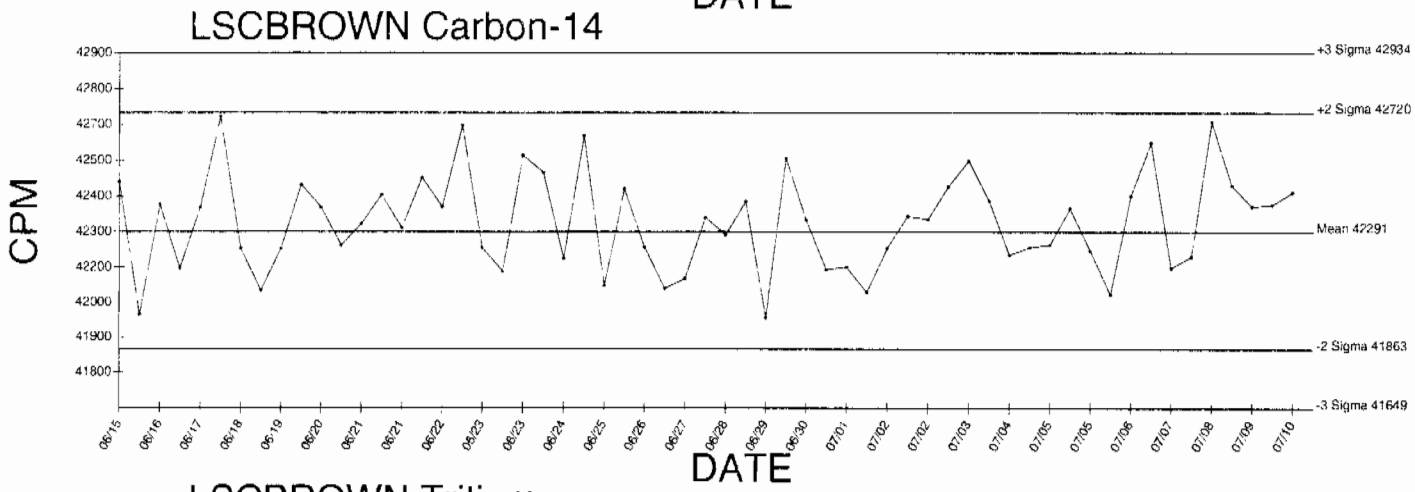

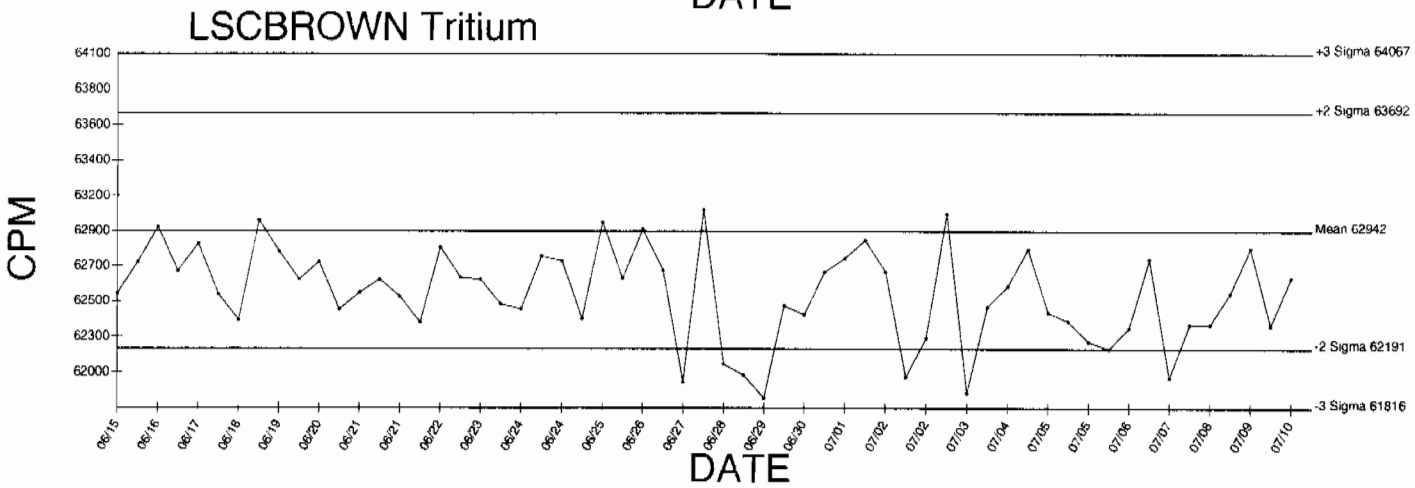

● Denotes Outlier

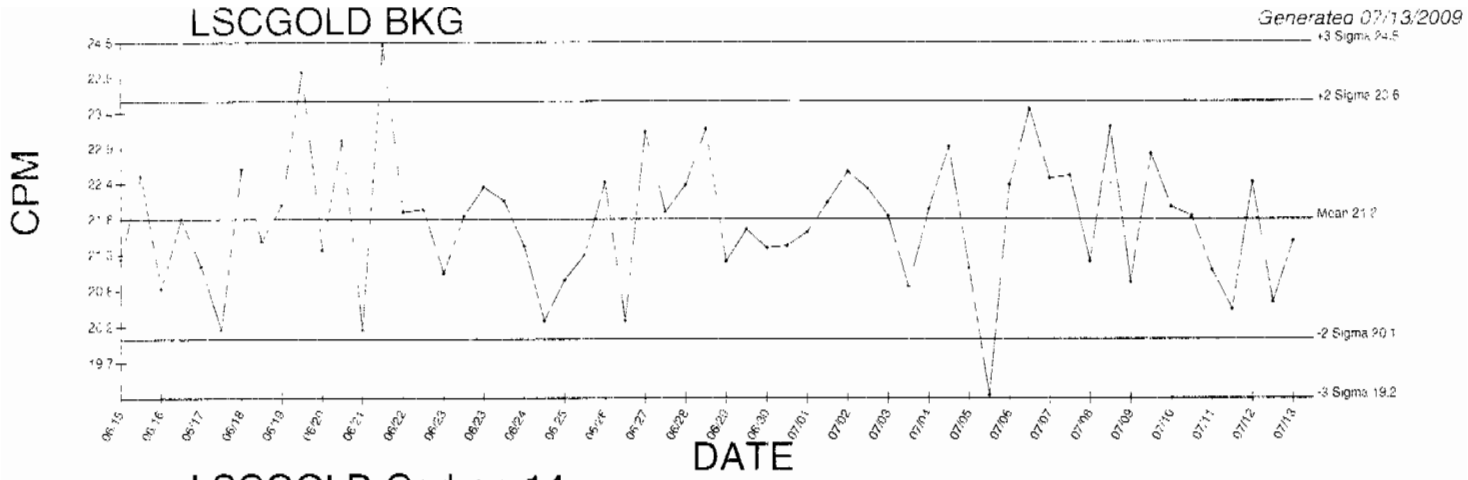

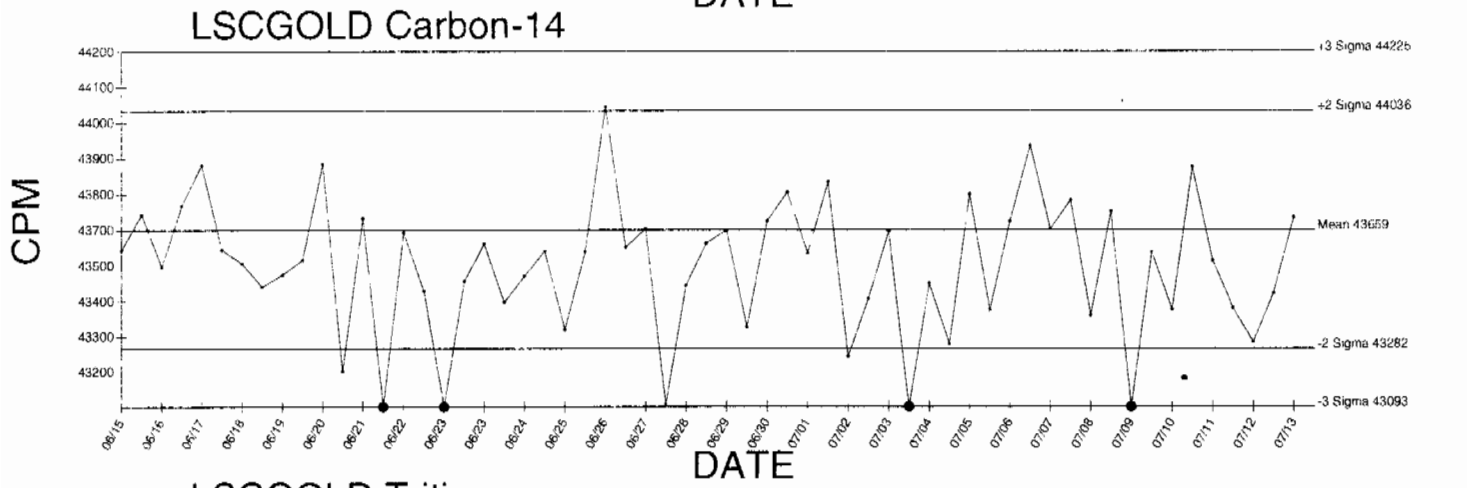

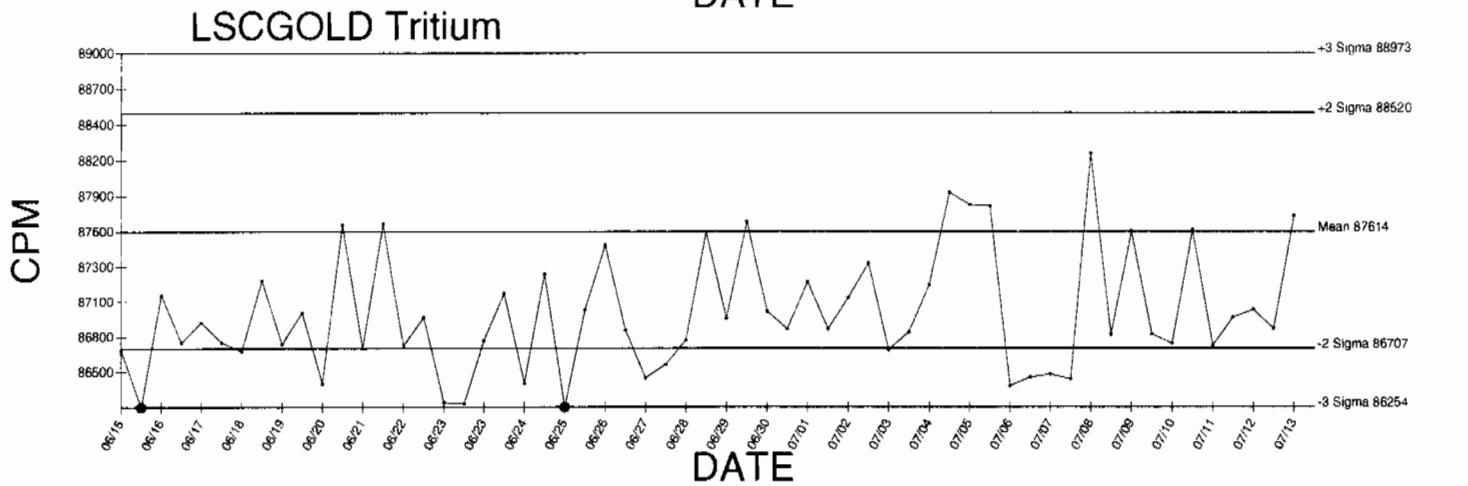

● Denotes Outlier

QA filename : DKA100:[ENV_ALPHA.QA.W]W133.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:19 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.235007 through 0.255007

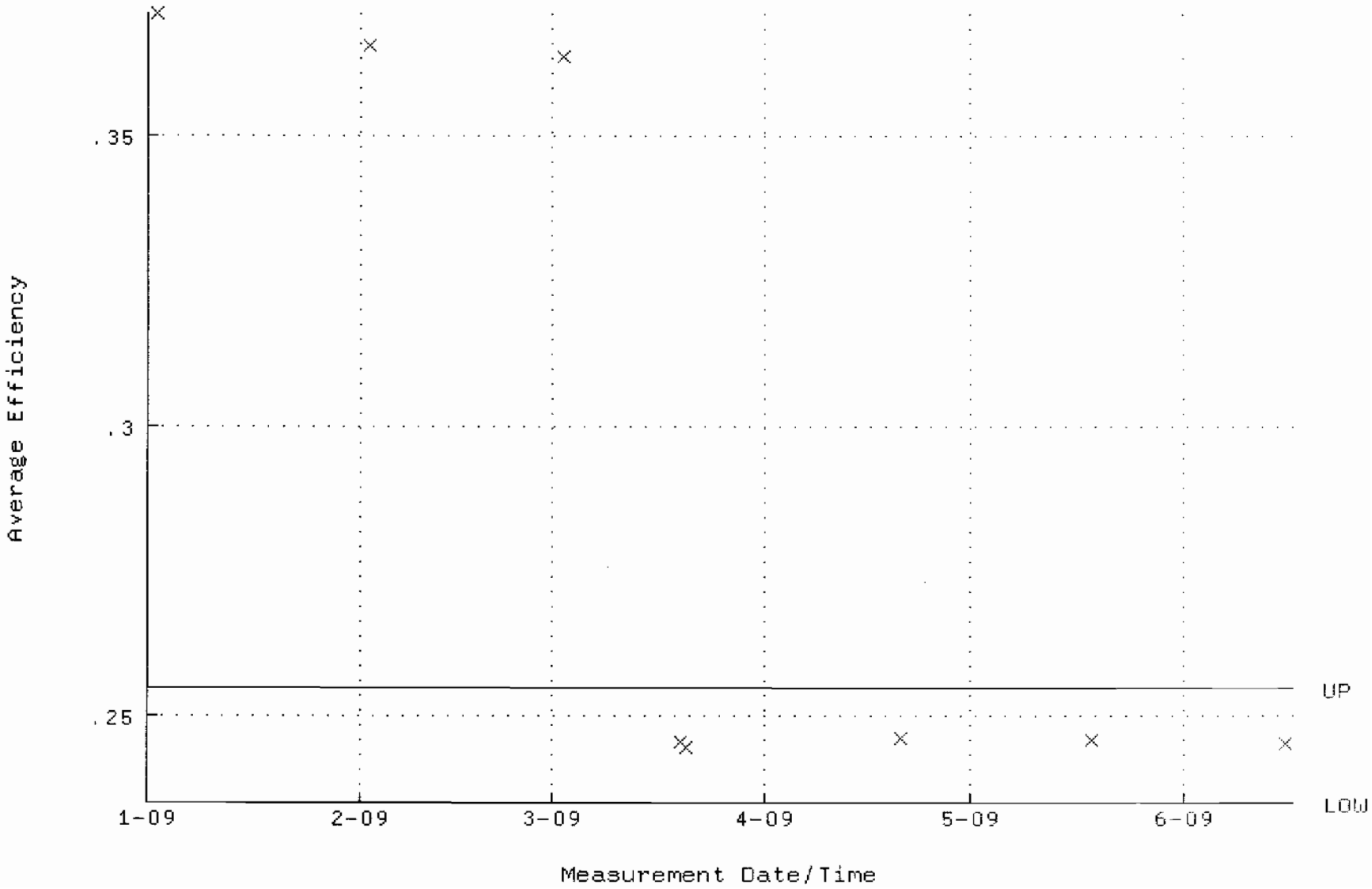

QA filename : DKA100:[ENV_ALPHA.QA.W]W133.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:19 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 90.1899 through 99.6835

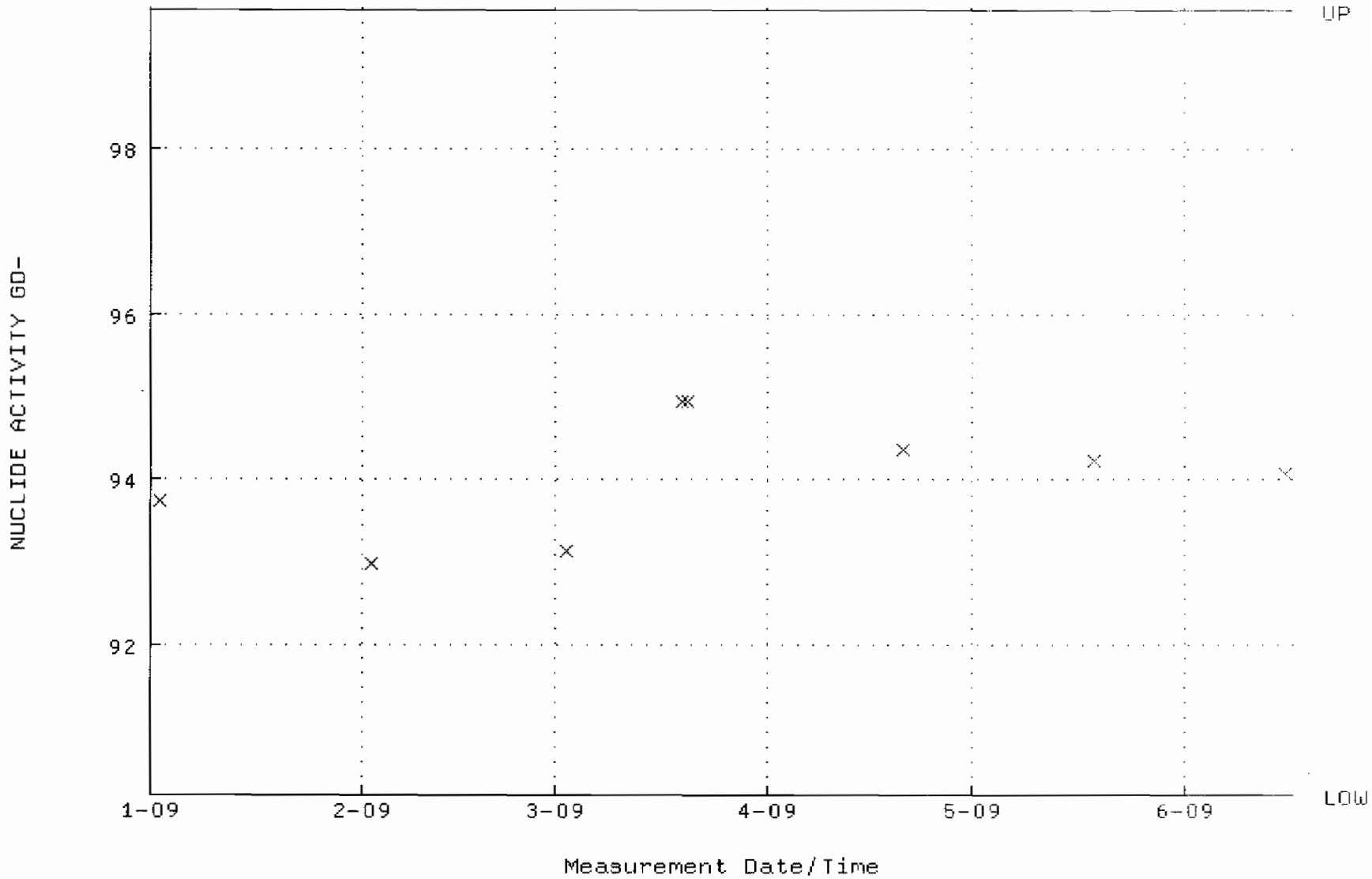

QA filename : DKA100:[ENV_ALPHA.QA.B]B133.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:14 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

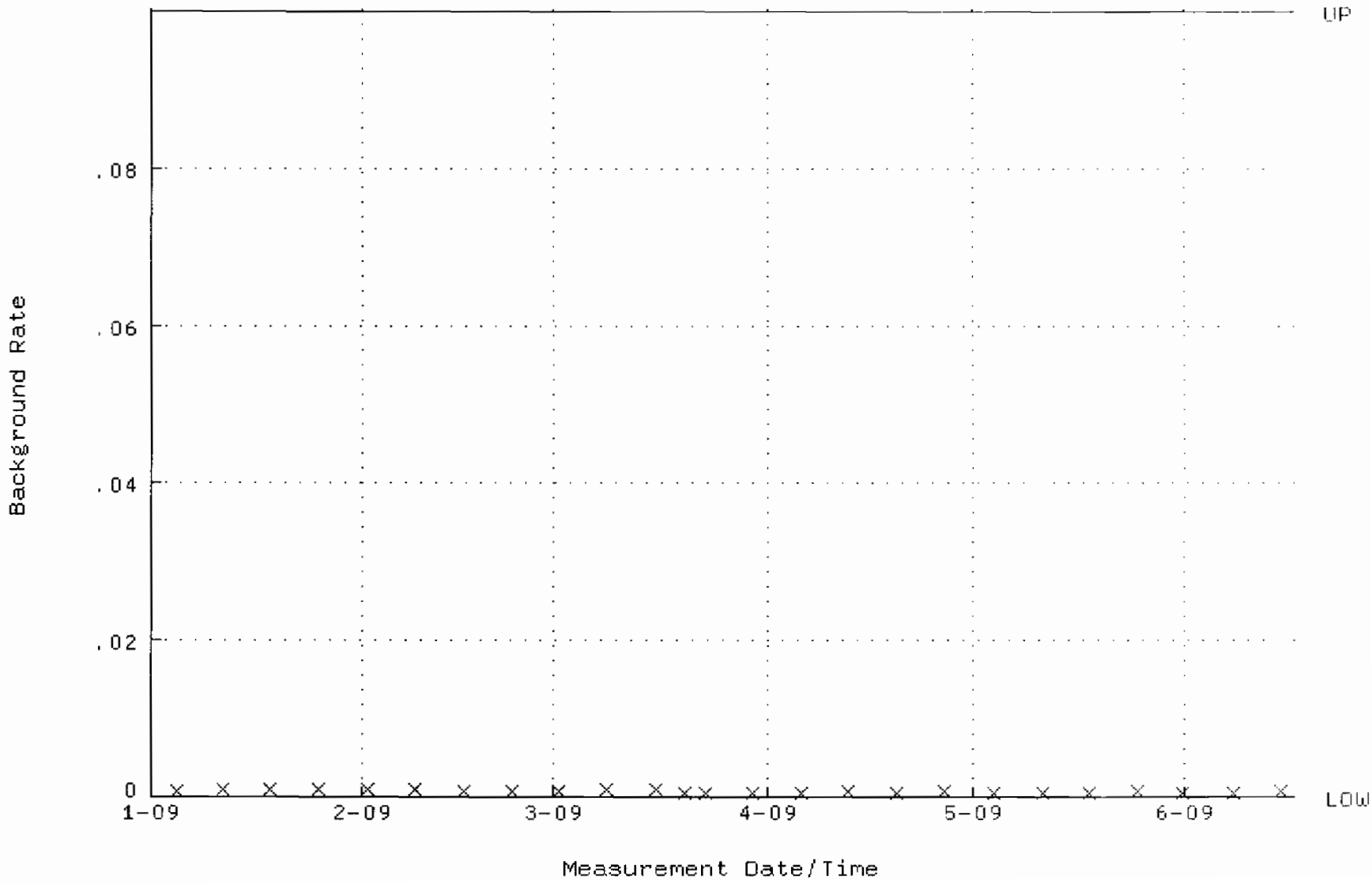

QA filename : DKA100:[ENV_ALPHA.QA.W]W139.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:47 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.240299 through 0.260299

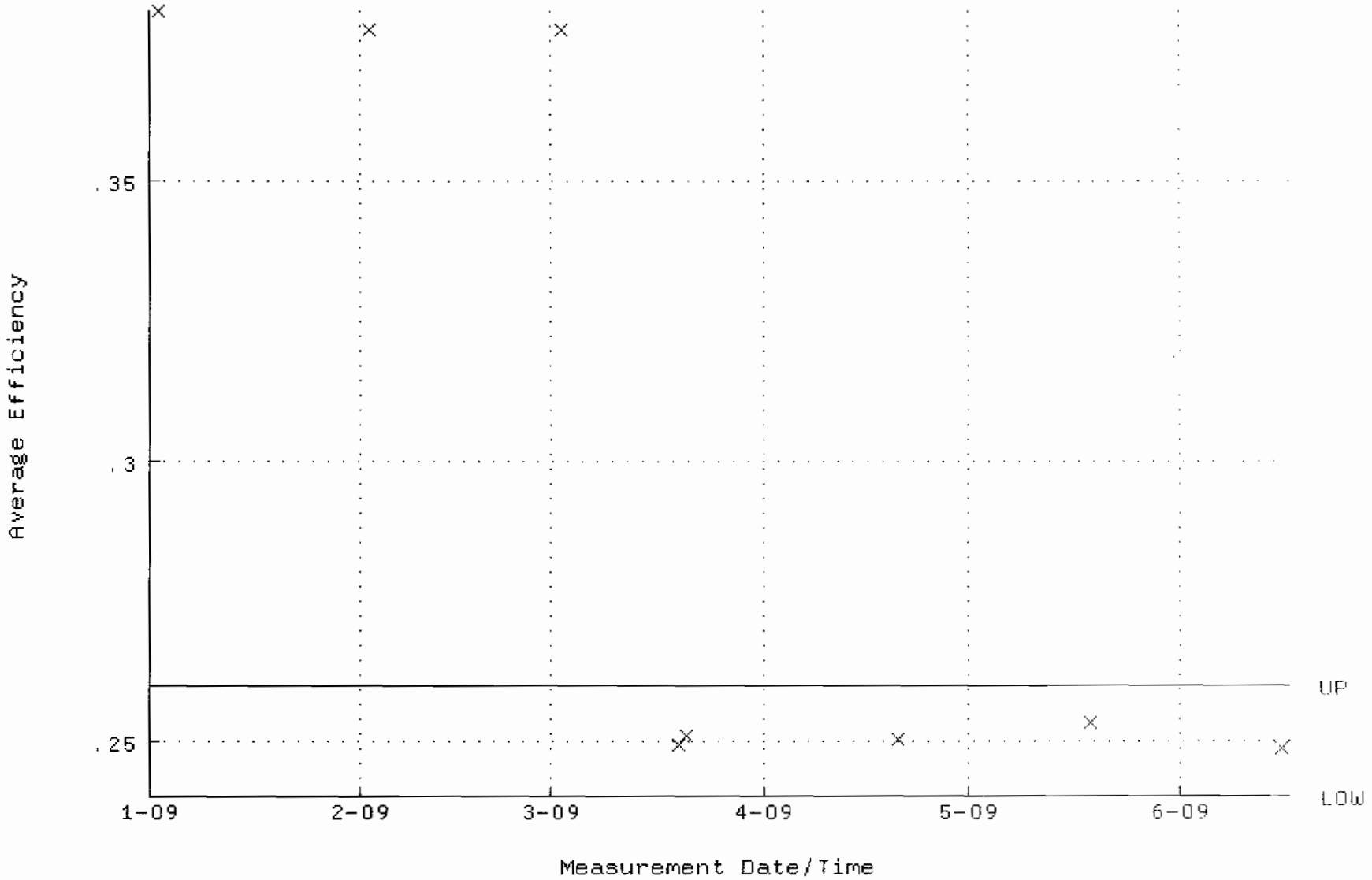

QA filename : DKA100:[ENV_ALPHA.QA.W]W139.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:47 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 85.8145 through 94.8477

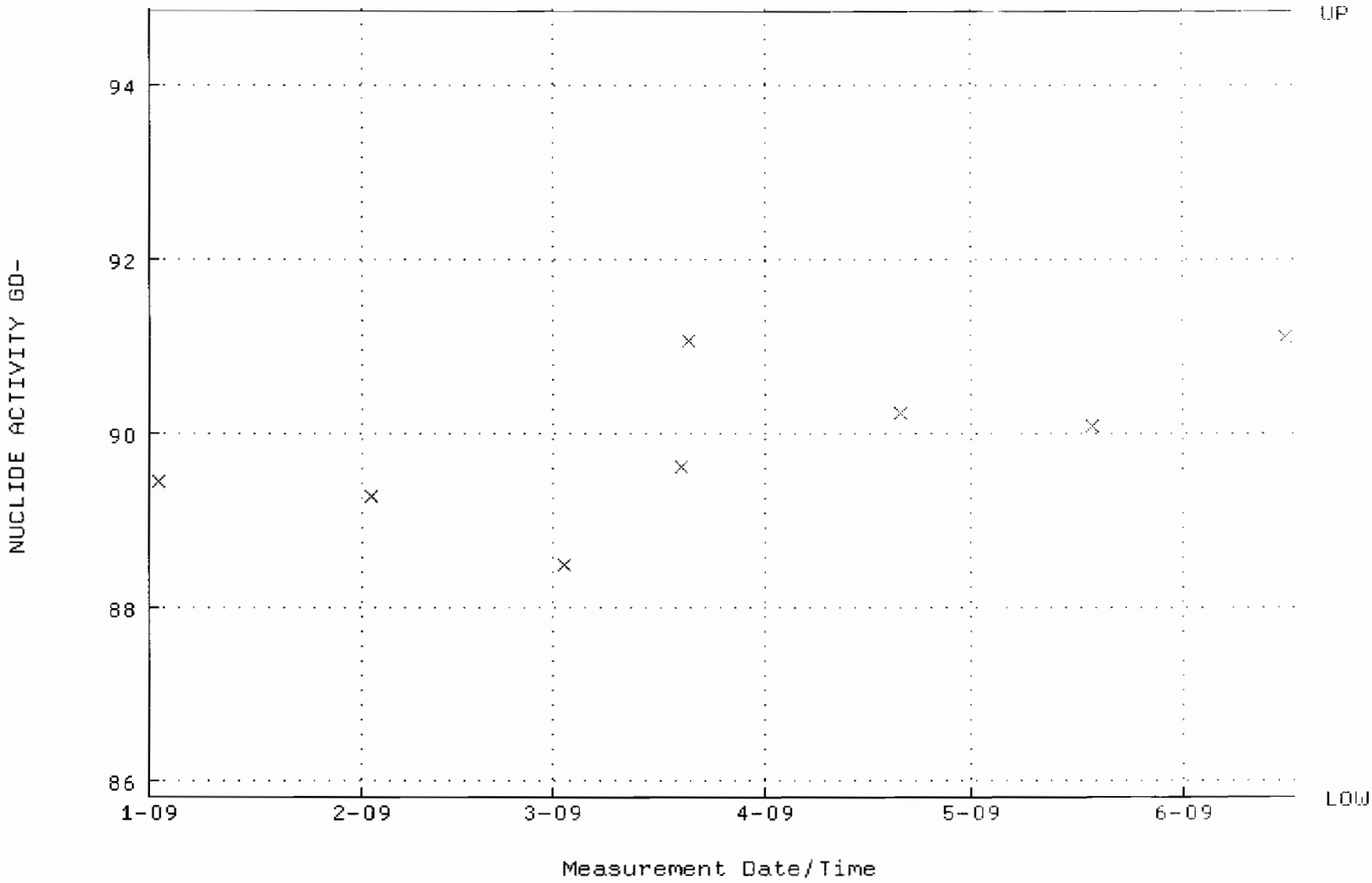

QA filename : DKA100:[ENV_ALPHA.QA.B]B139.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:39 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

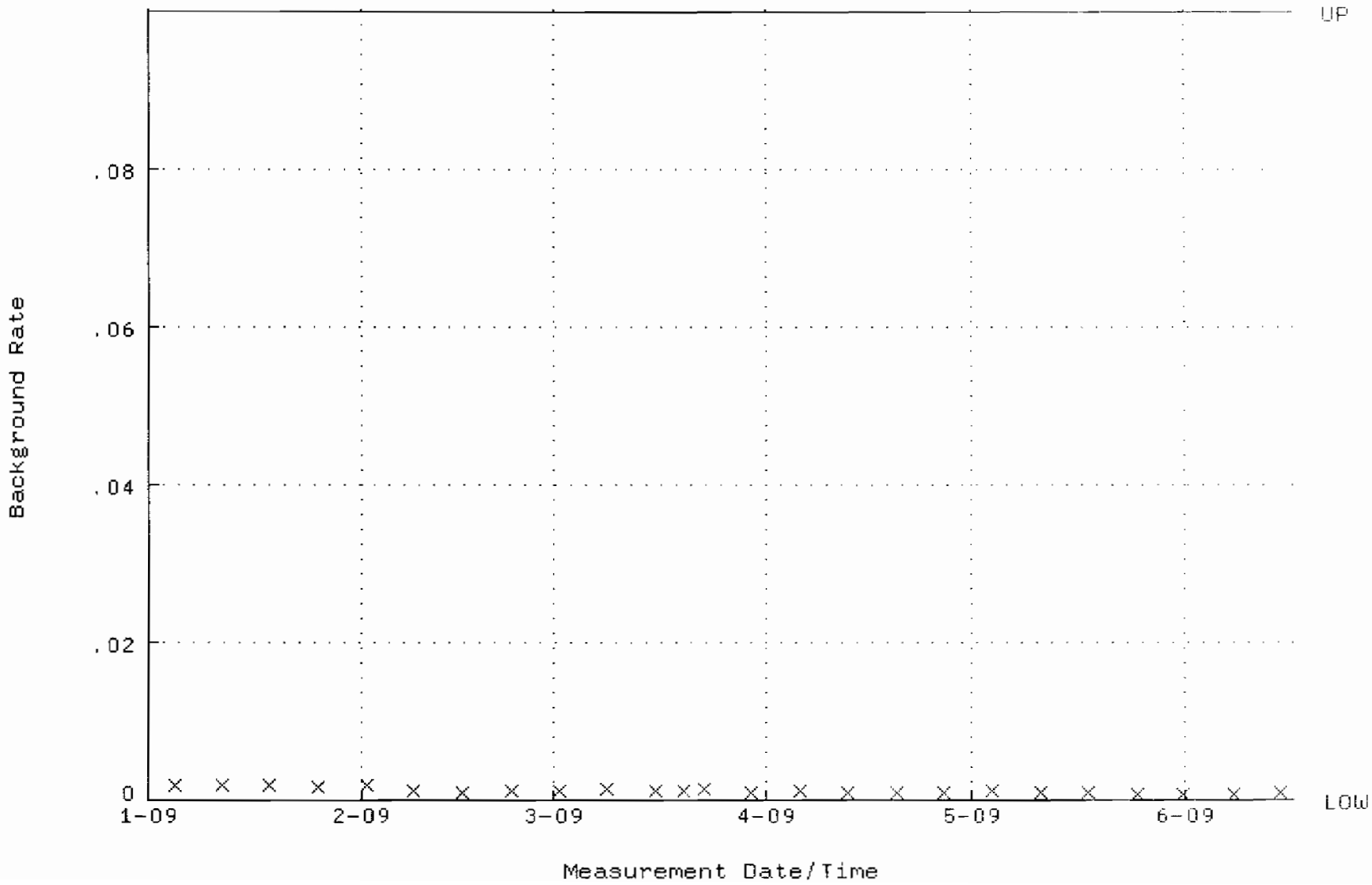

QA filename : DKA100:[ENV_ALPHA.QA.W]W140.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:52 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.246178 through 0.266178

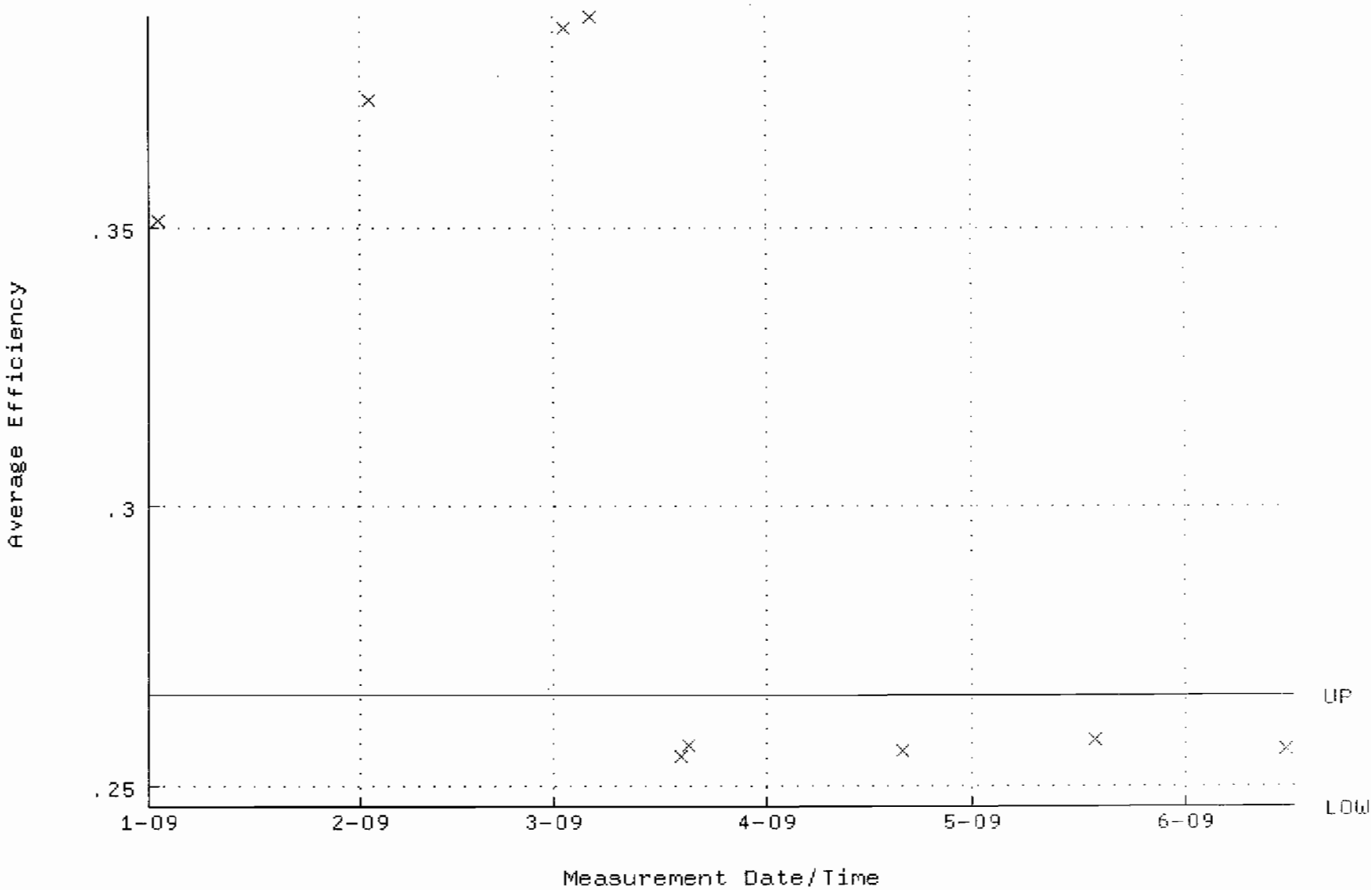

QA filename : DKA100:[ENV_ALPHA.QA.W]W140.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:52 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 83.8171 through 92.6399

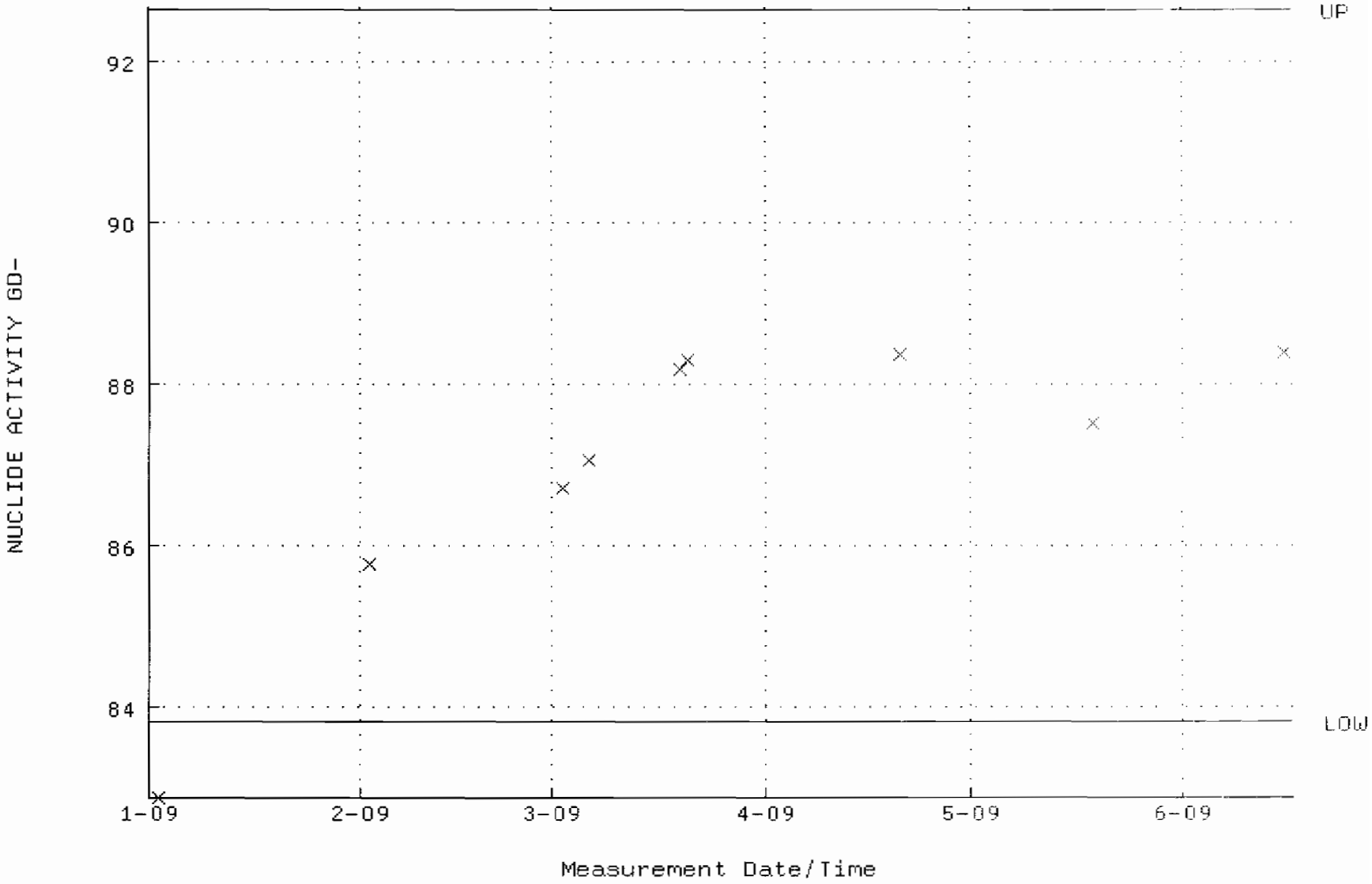

QA filename : DKA100:[ENV_ALPHA.QA.B]B140.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:43 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

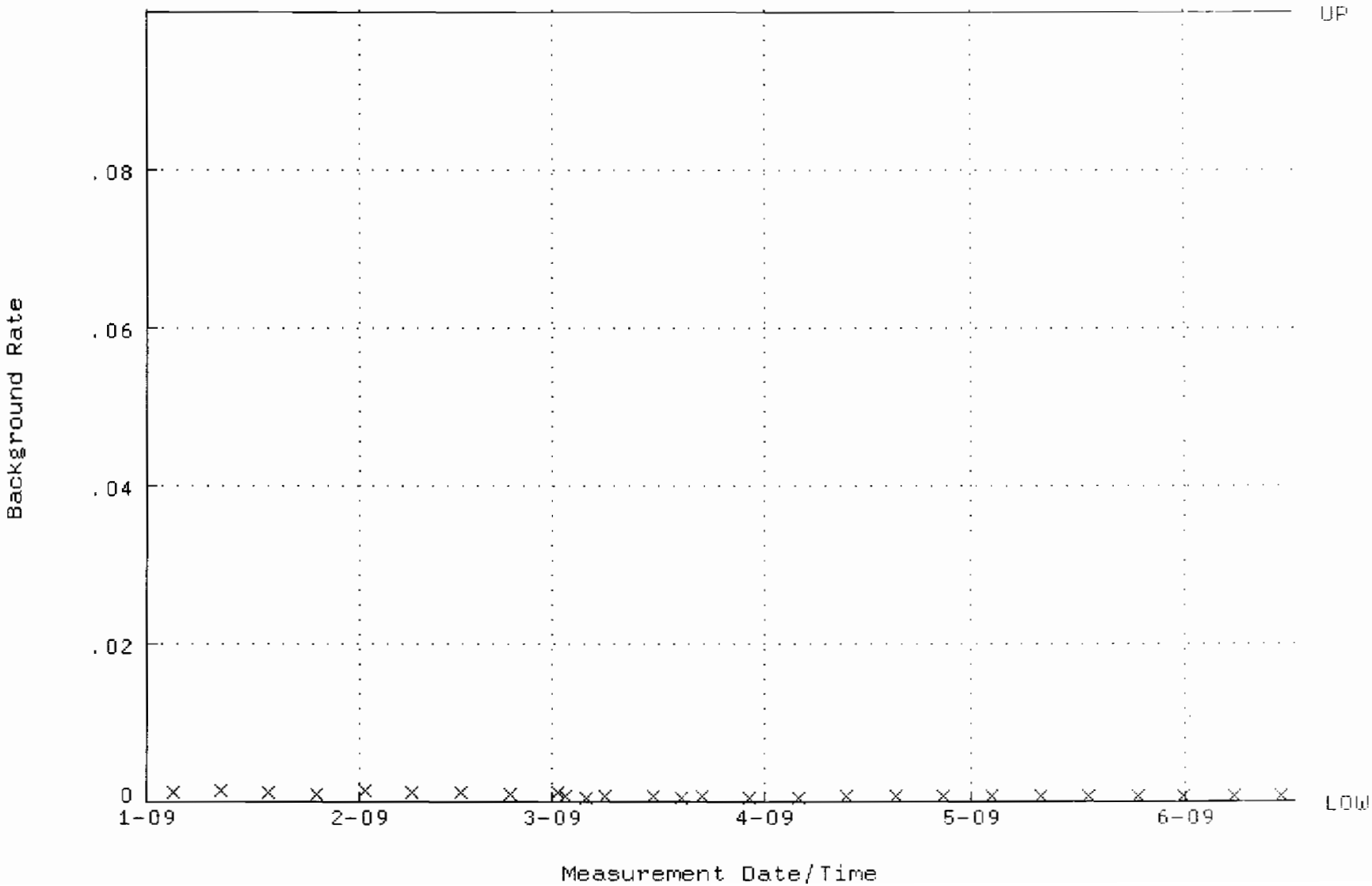

QA filename : DKA100:[ENV_ALPHA.QA.W]W141.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:56 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.247845 through 0.267845

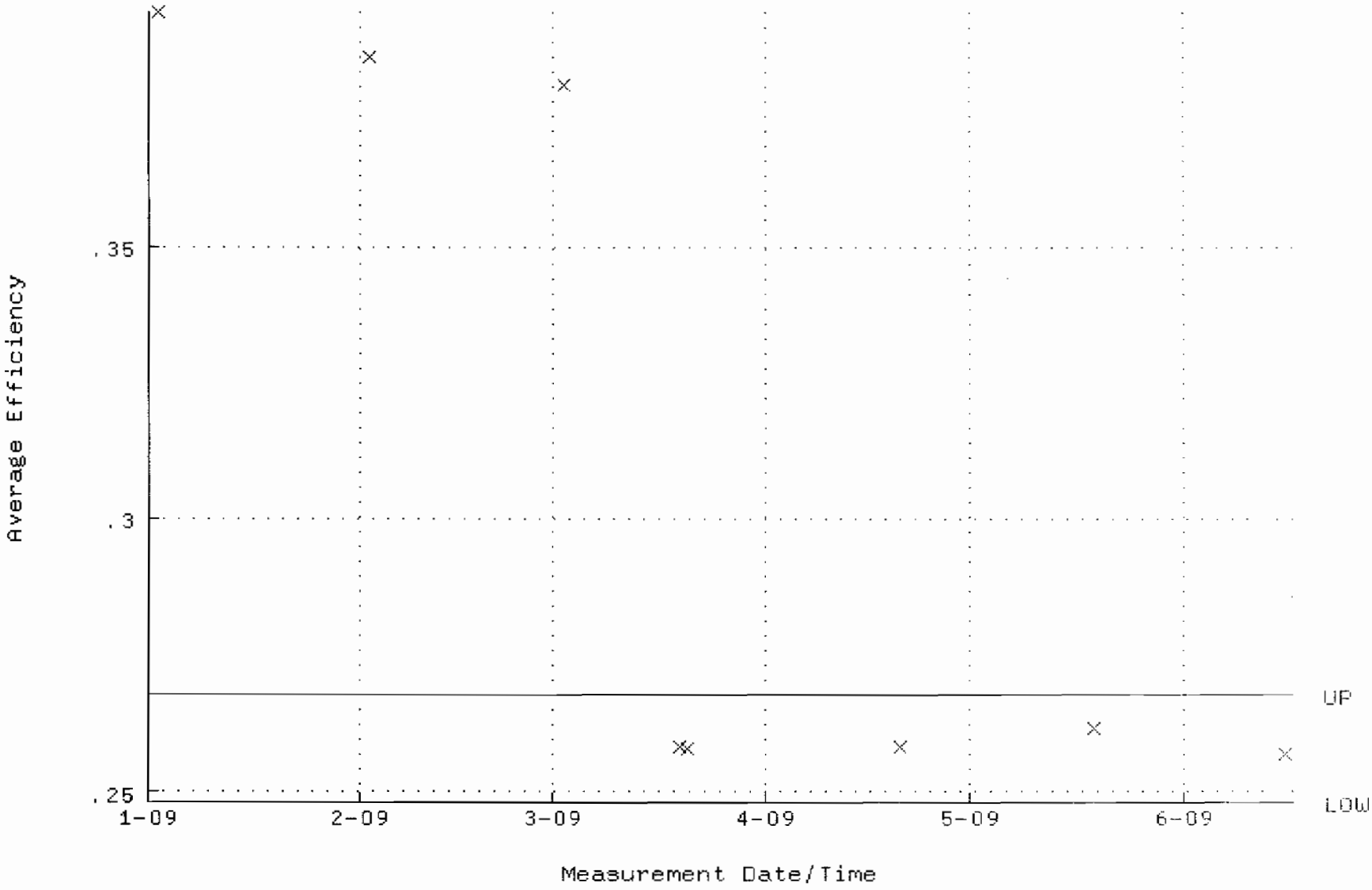

QA filename : DKA100:[ENV_ALPHA.QA.W]W141.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:56 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 80.8595 through 89.3711

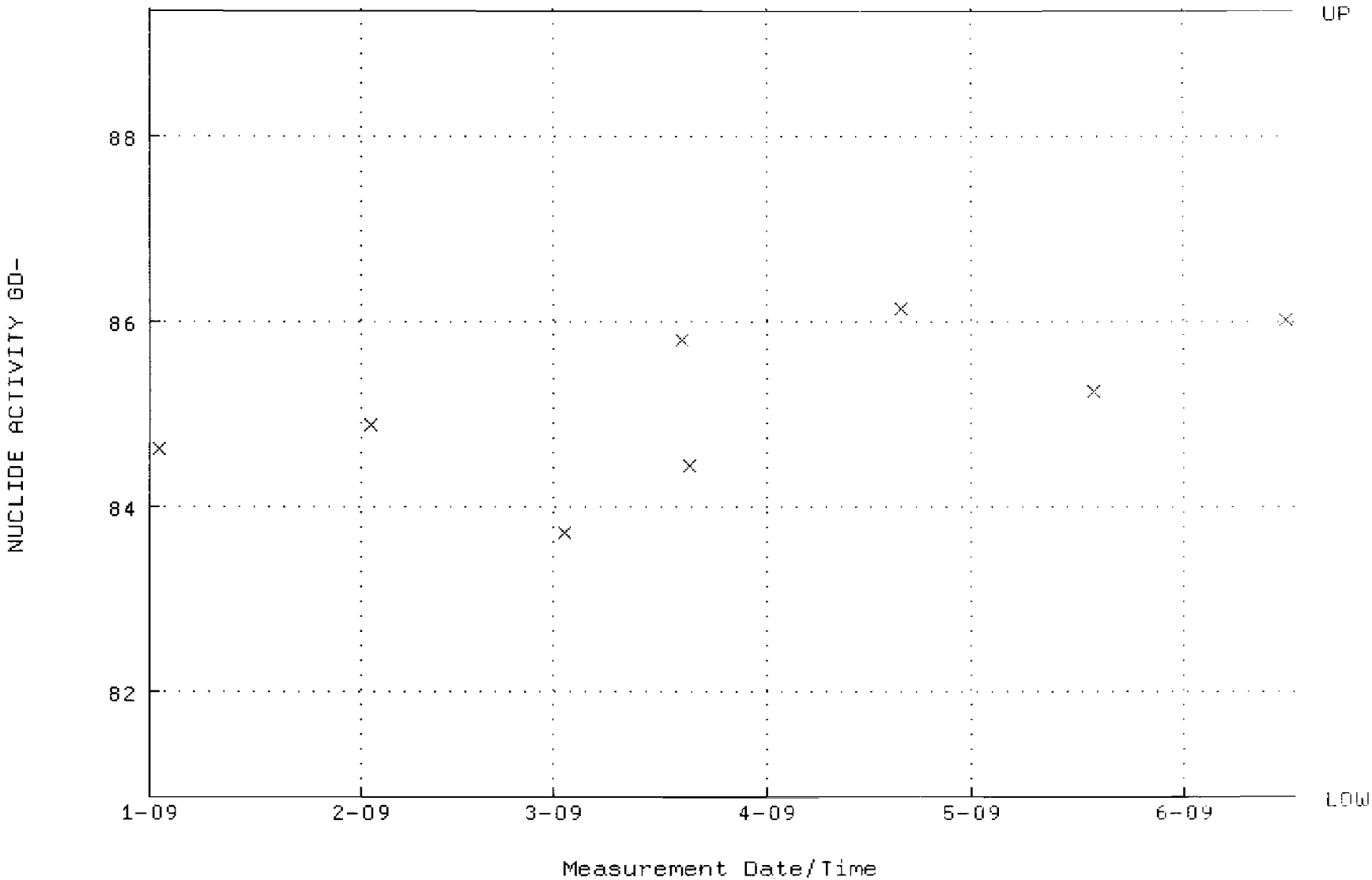

QA filename : DKA100:[ENV_ALPHA.QA.B]B141.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:47 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

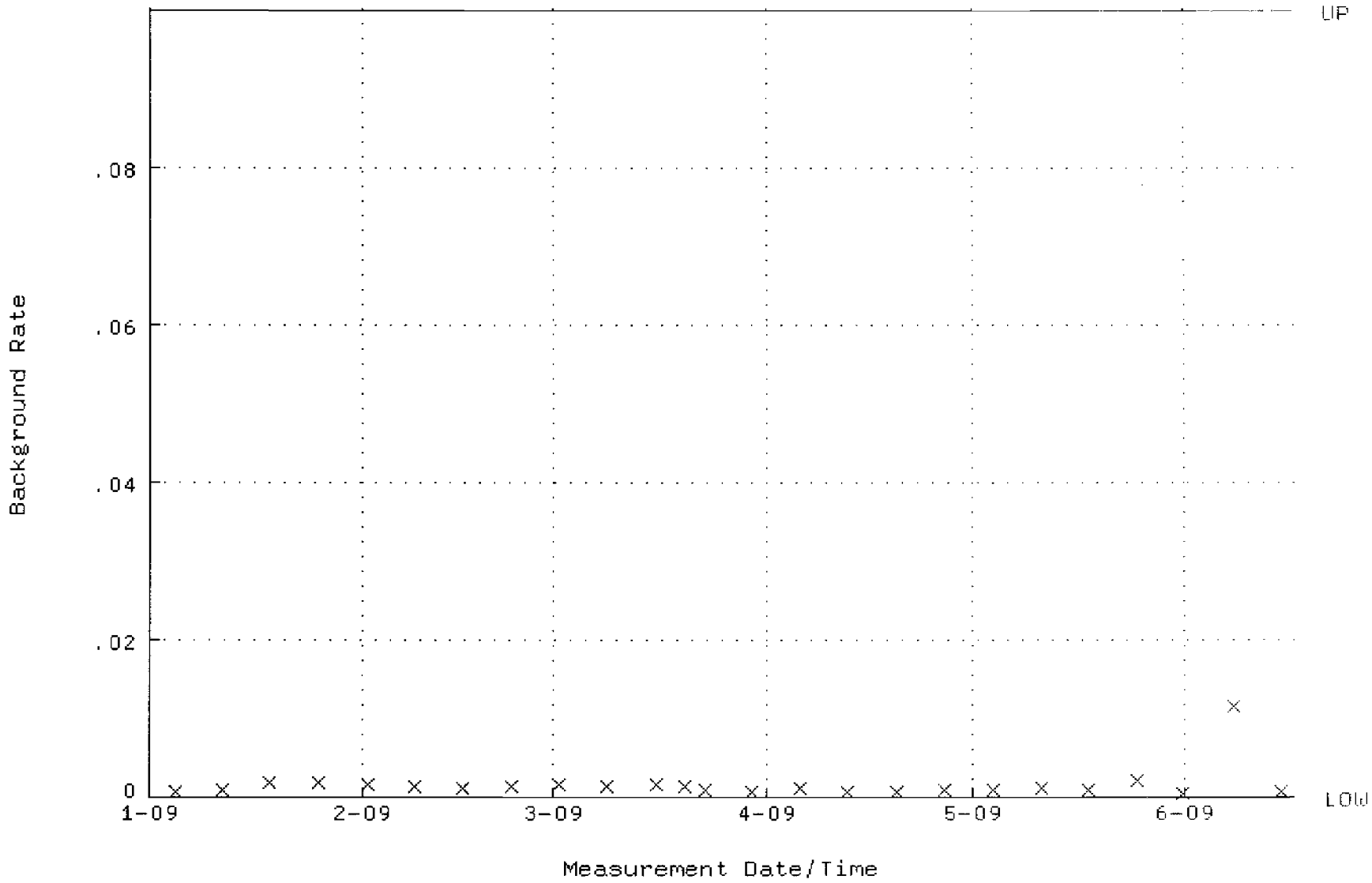

QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:02 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.252182 through 0.272182

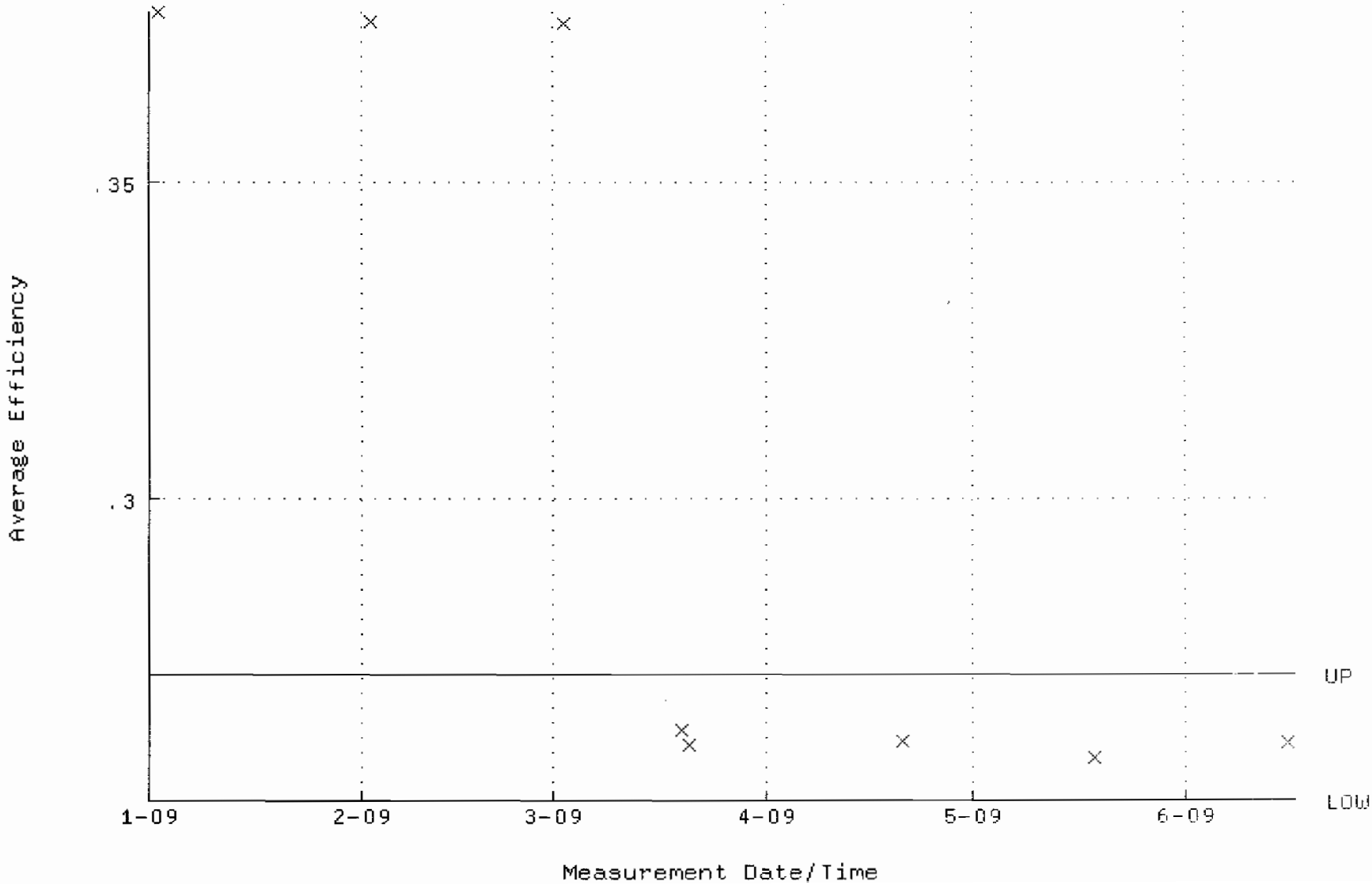

QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:02 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 81.0245 through 89.5533

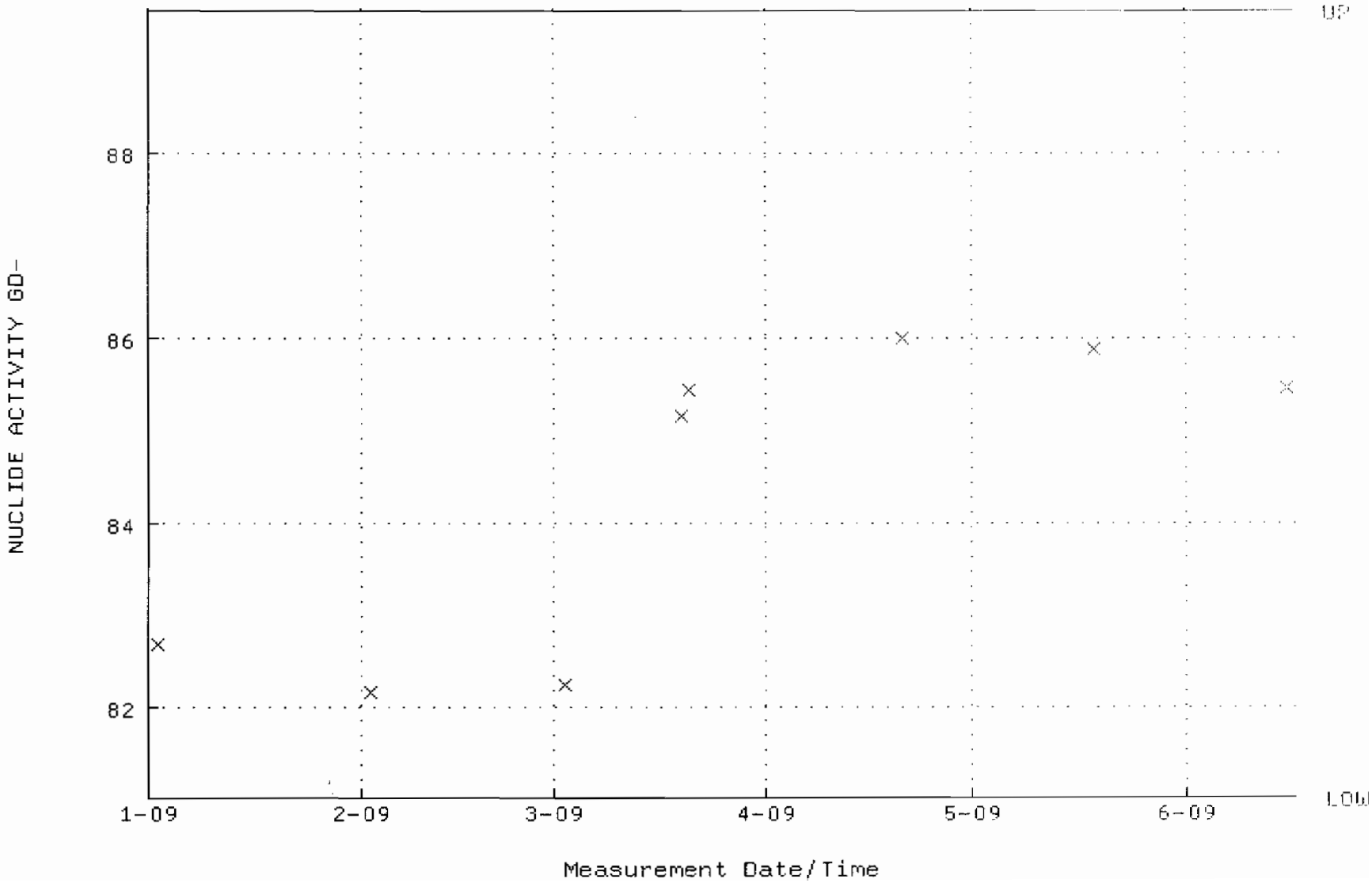

QA filename : DKA100:[ENV_ALPHA.QA.B]B142.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

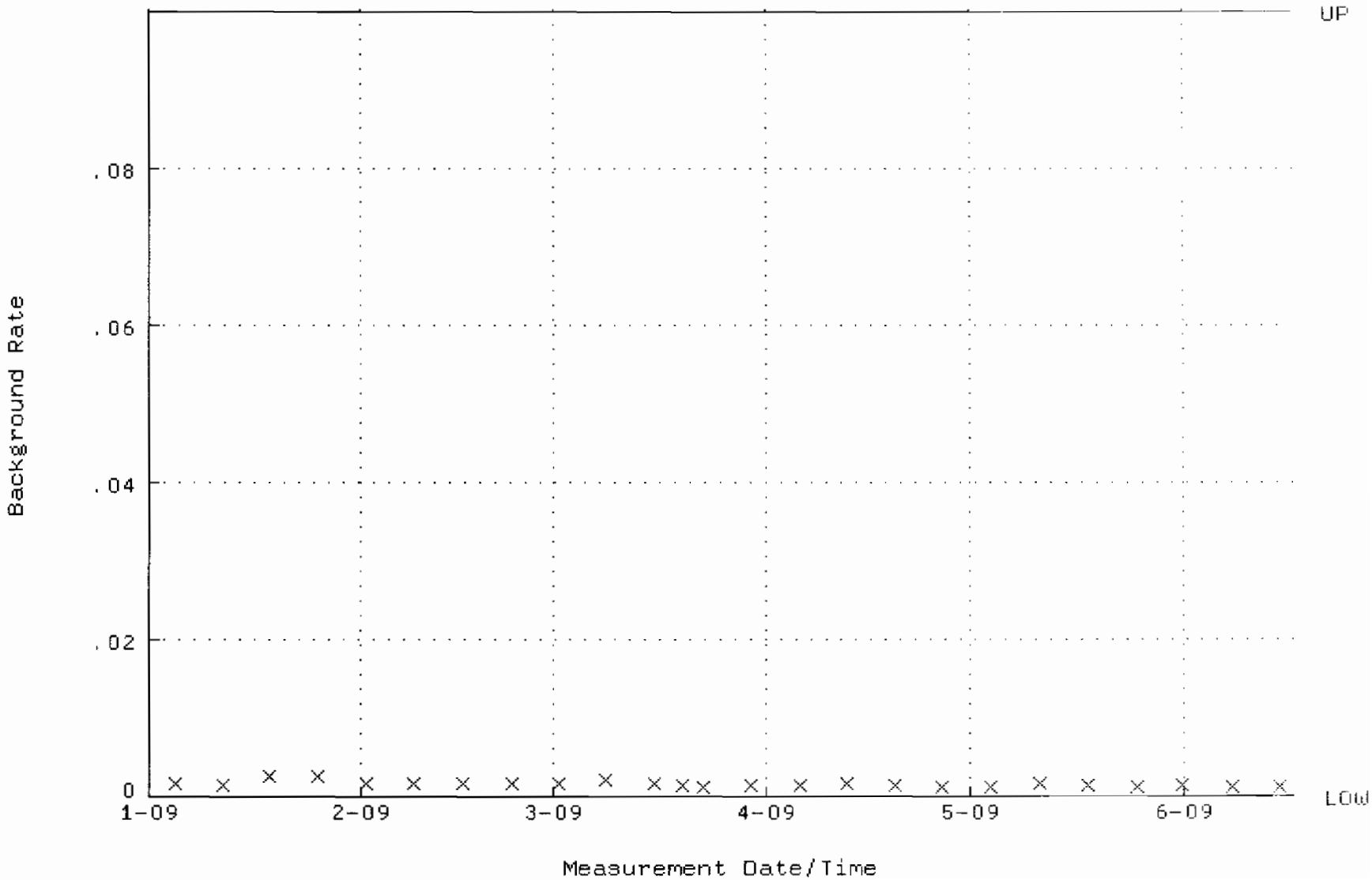

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:11 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.237963 through 0.257963

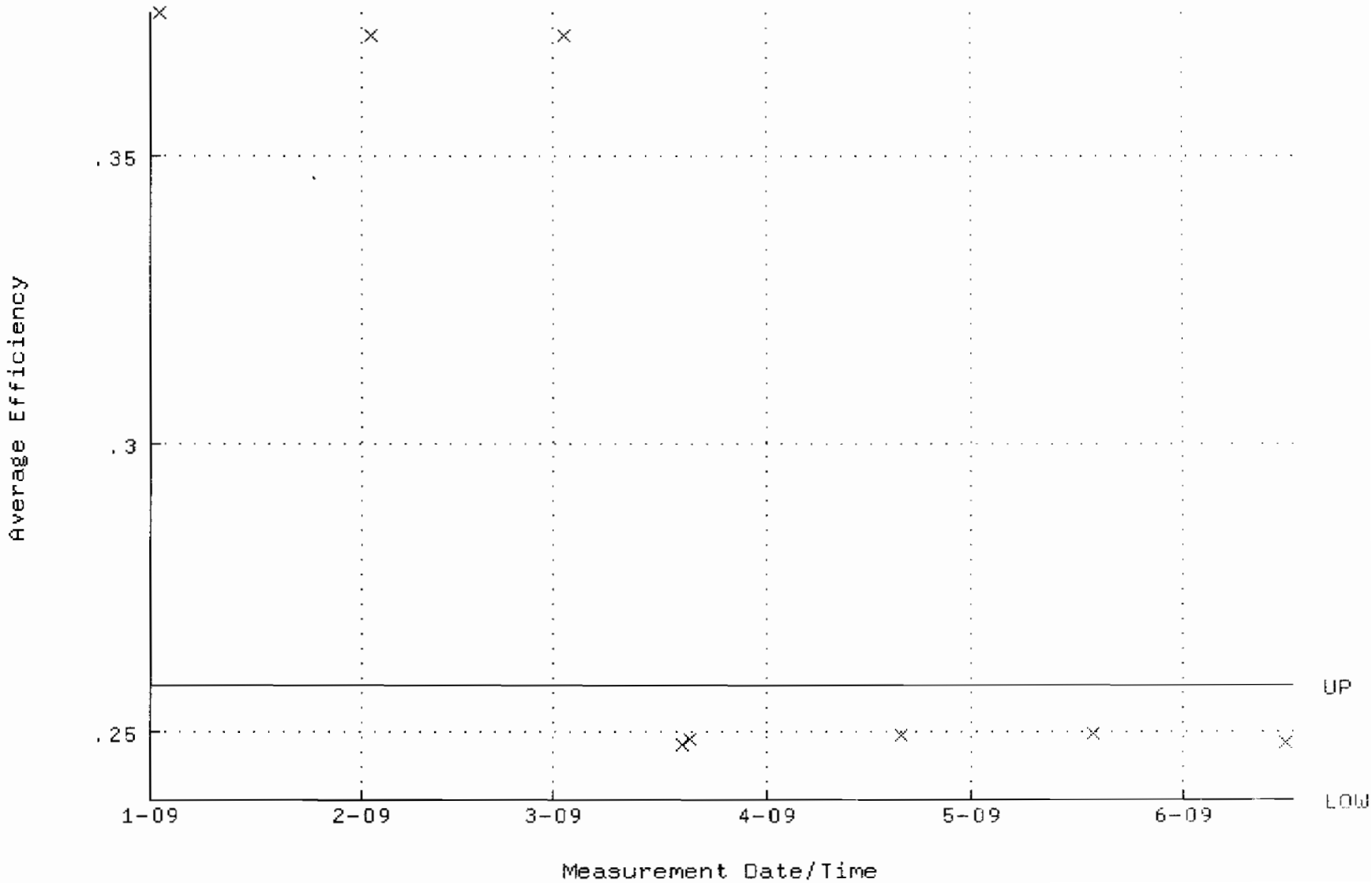

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:11 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.6507 through 93.5613

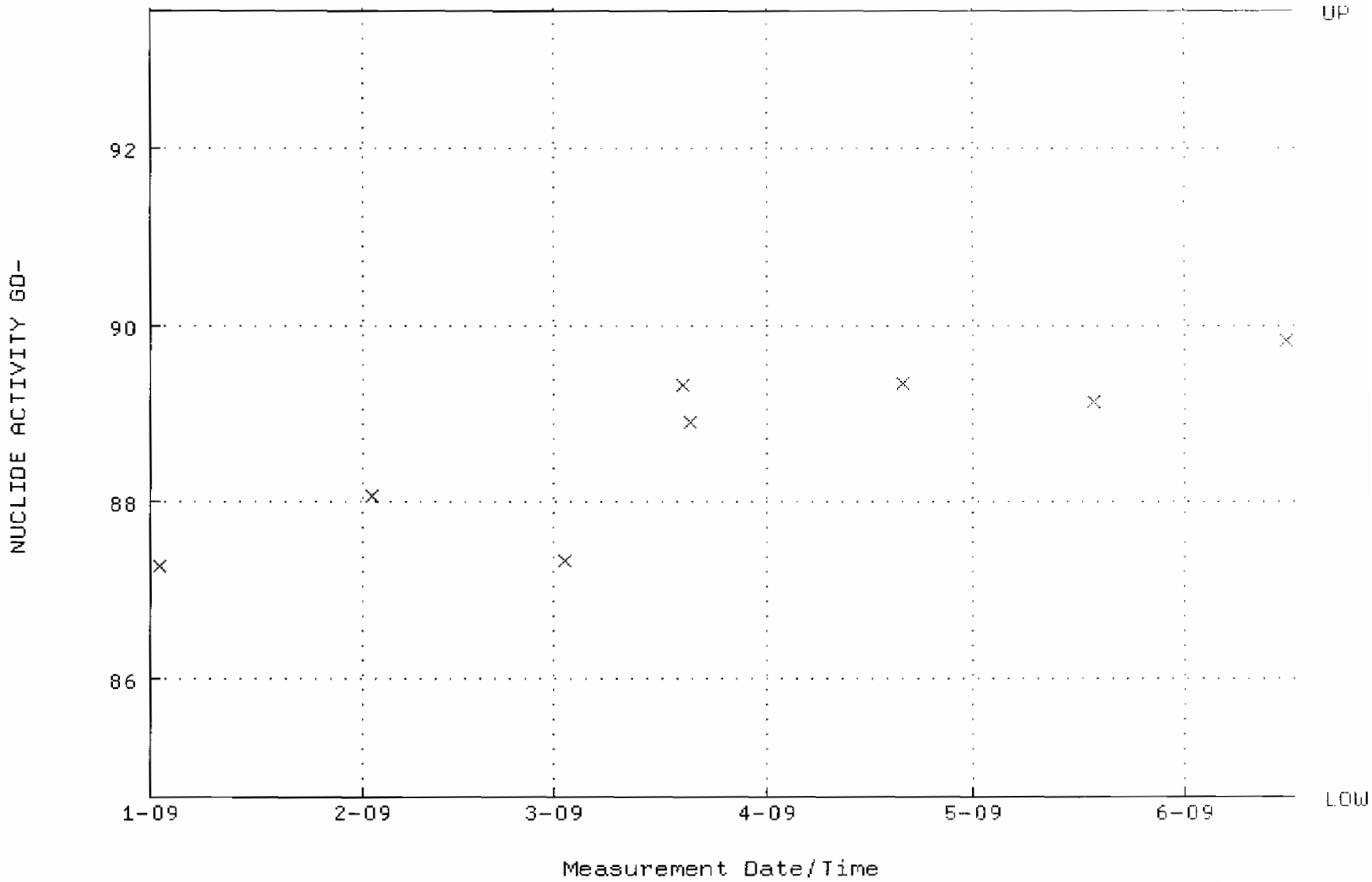

QA filename : DKA100:[ENV_ALPHA.QA.B]B144.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:00 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

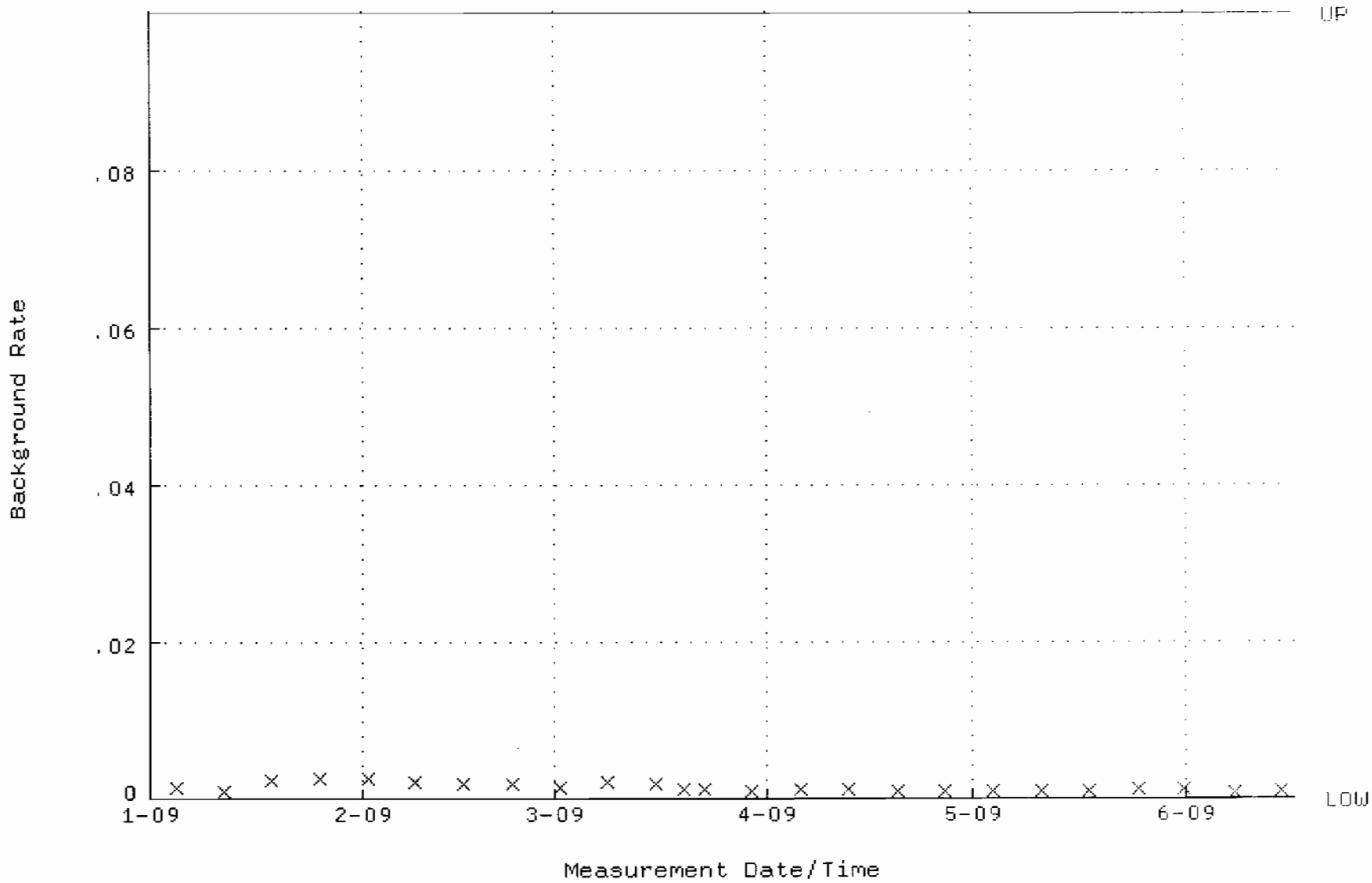

QA filename : DKA100:[ENV_ALPHA.QA.W]W145.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:15 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.239850 through 0.259850

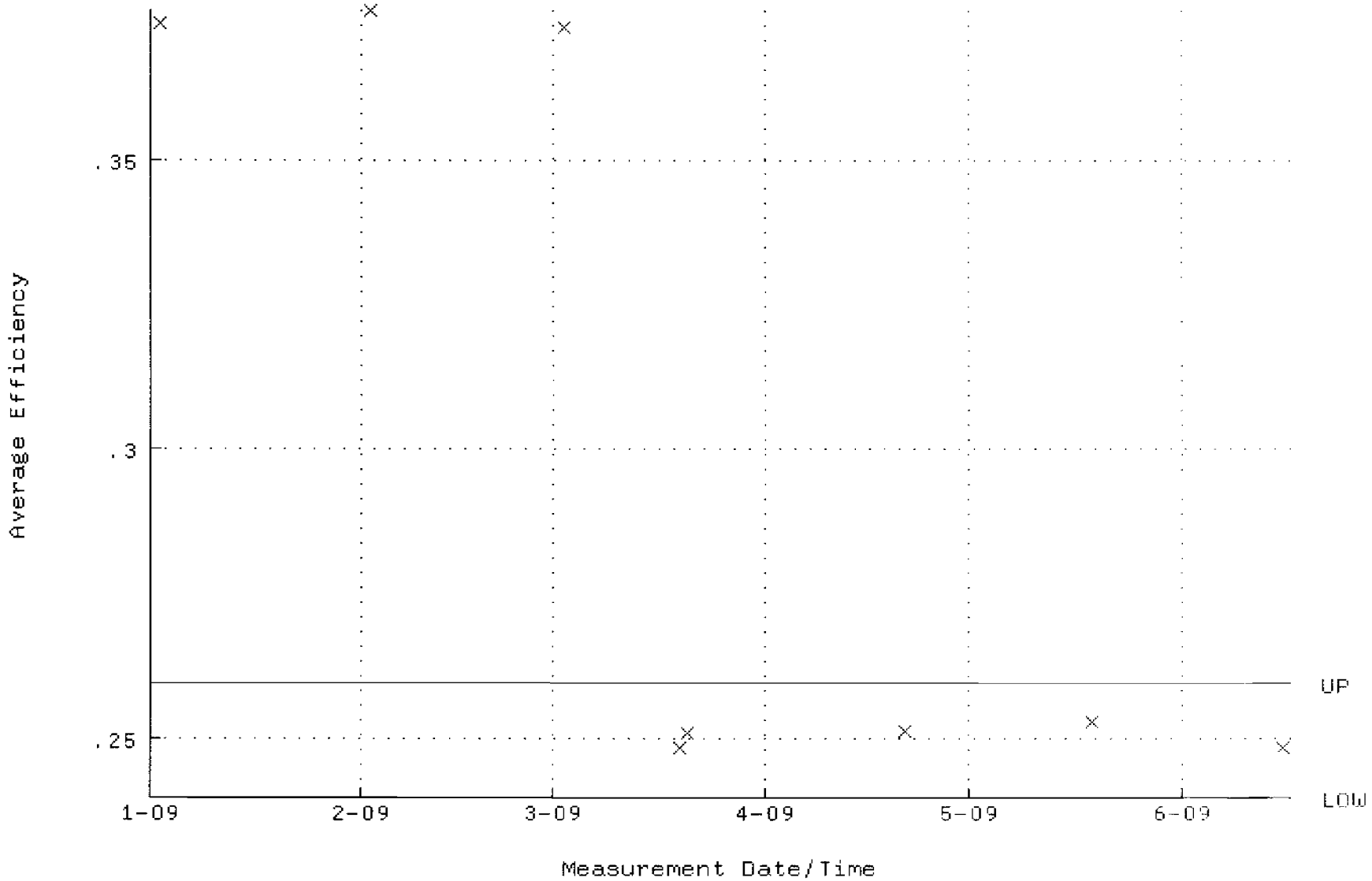

QA filename : DKA100:[ENV_ALPHA.QA.W]W145.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:15 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.9354 through 93.8760

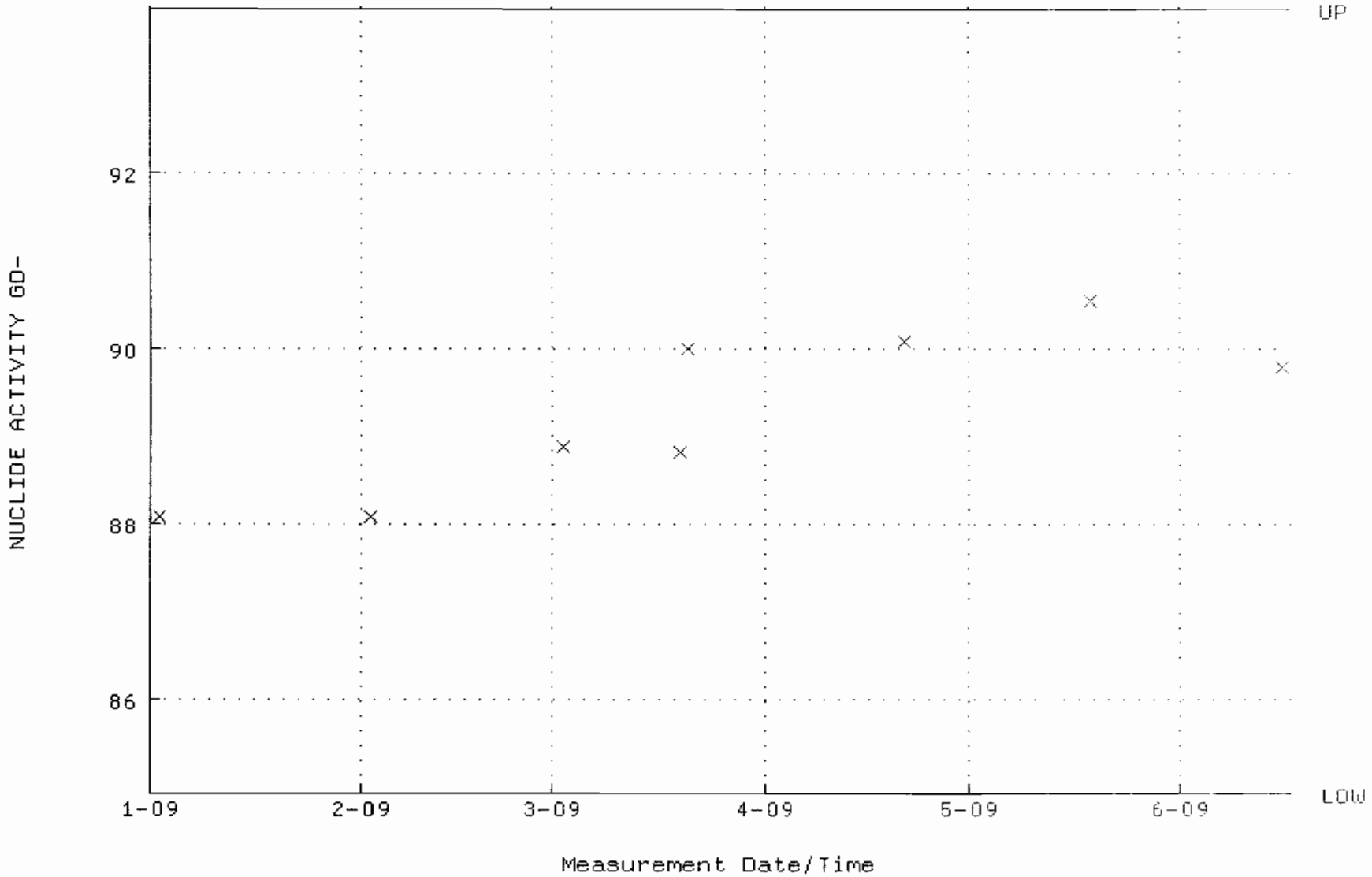

QA filename : DKA100:[ENV_ALPHA.QA.B]B145.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:04 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

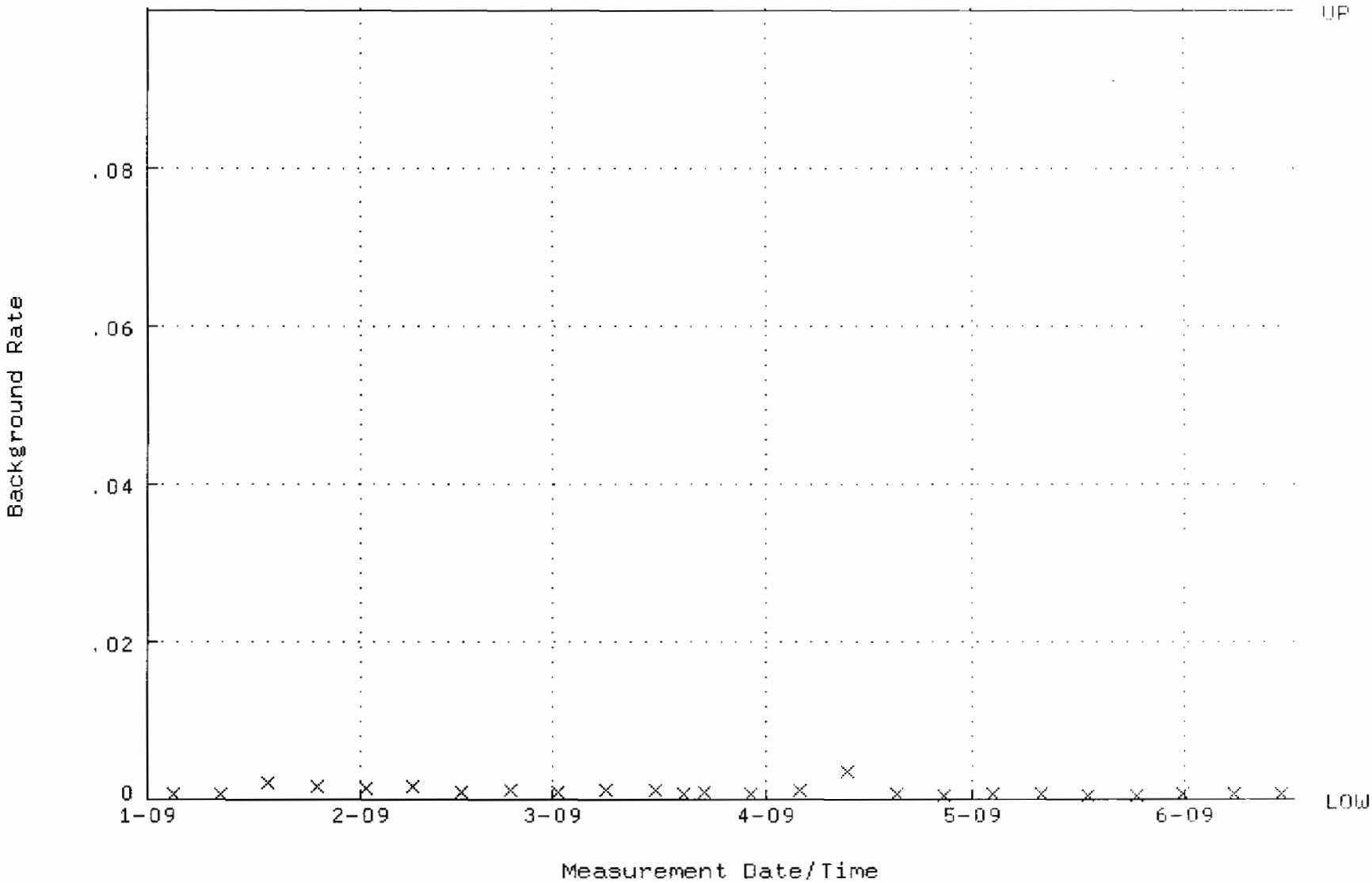

QA filename : DKA100:[ENV_ALPHA.QA.W]W146.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:19 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.241831 through 0.261831

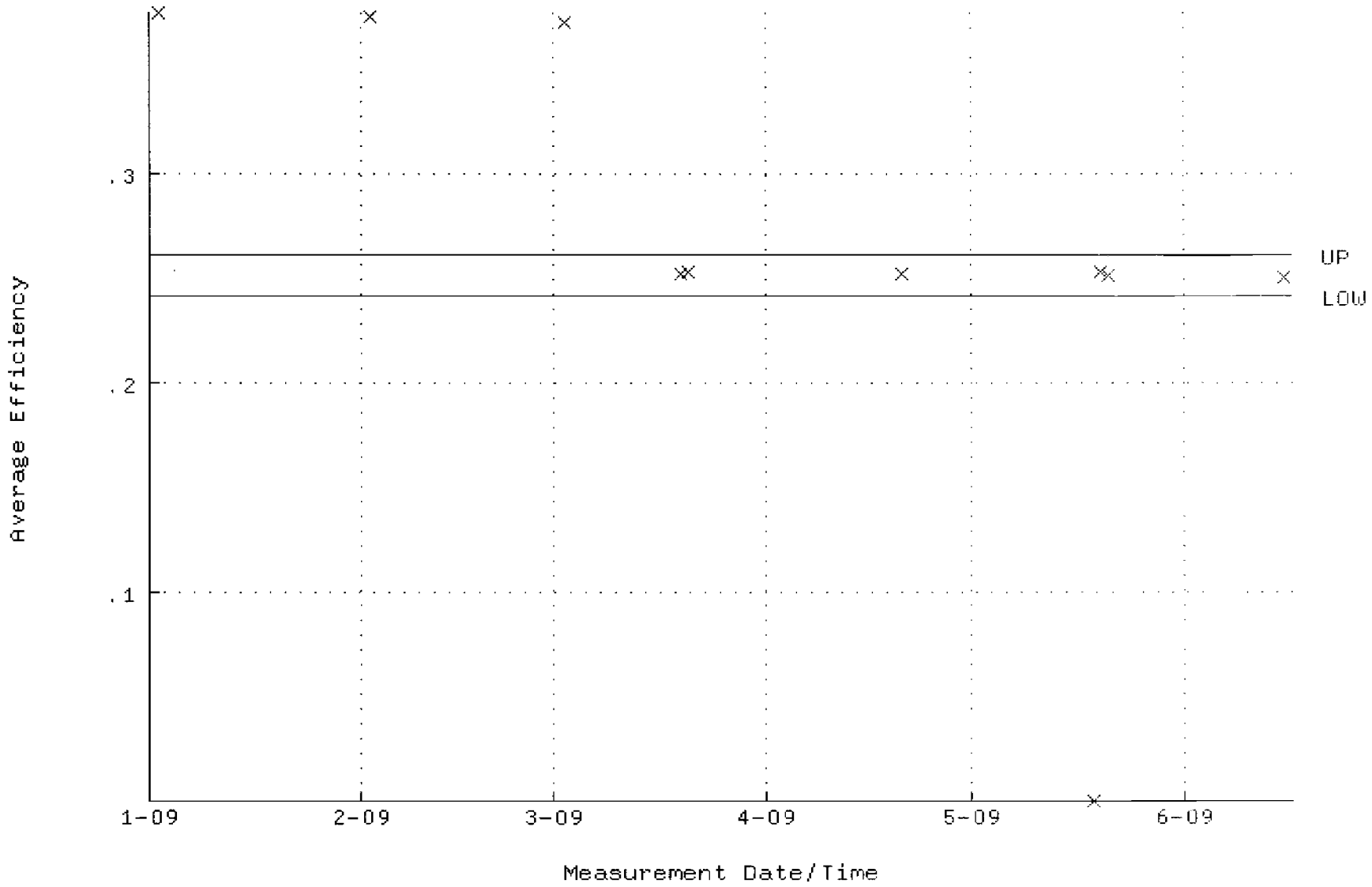

QA filename : DKA100:[ENV_ALPHA.QA.W]W146.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:19 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.8578 through 93.7902

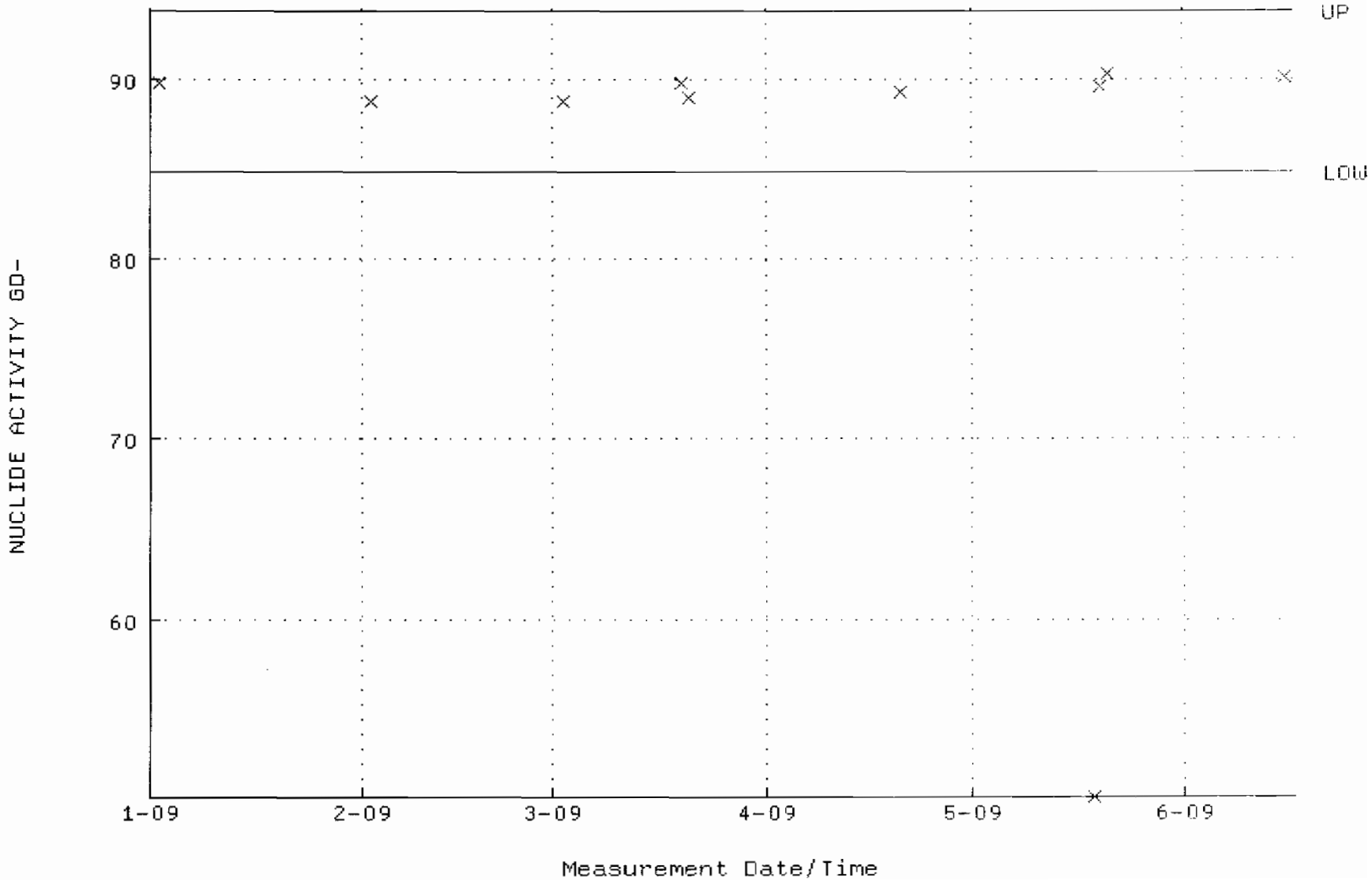

QA filename : DKA100:[ENV_ALPHA.QA.B]B146.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:09 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

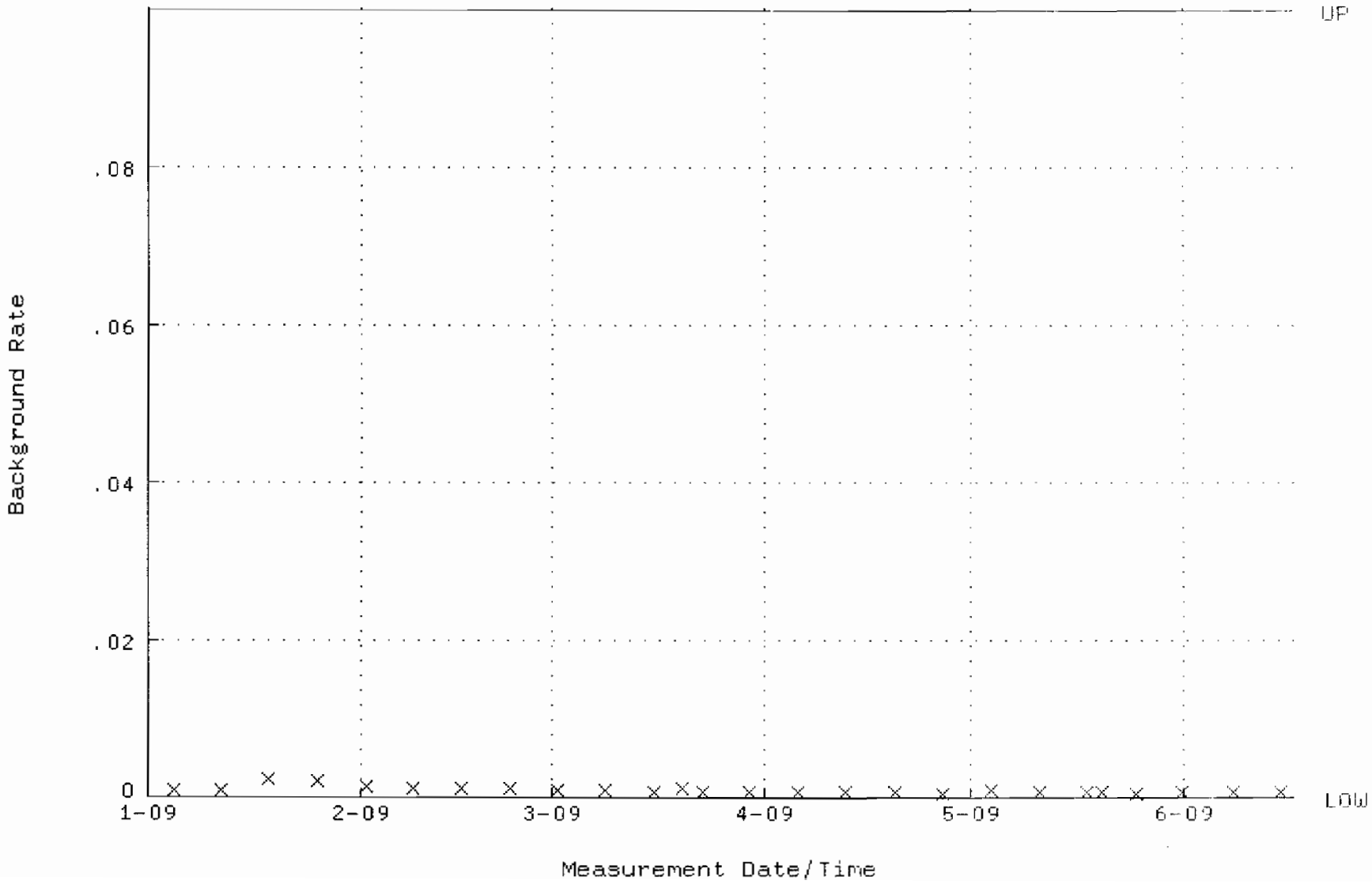

QA filename : DKA100:[ENV_ALPHA.QA.W]W147.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:24 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.237046 through 0.257046

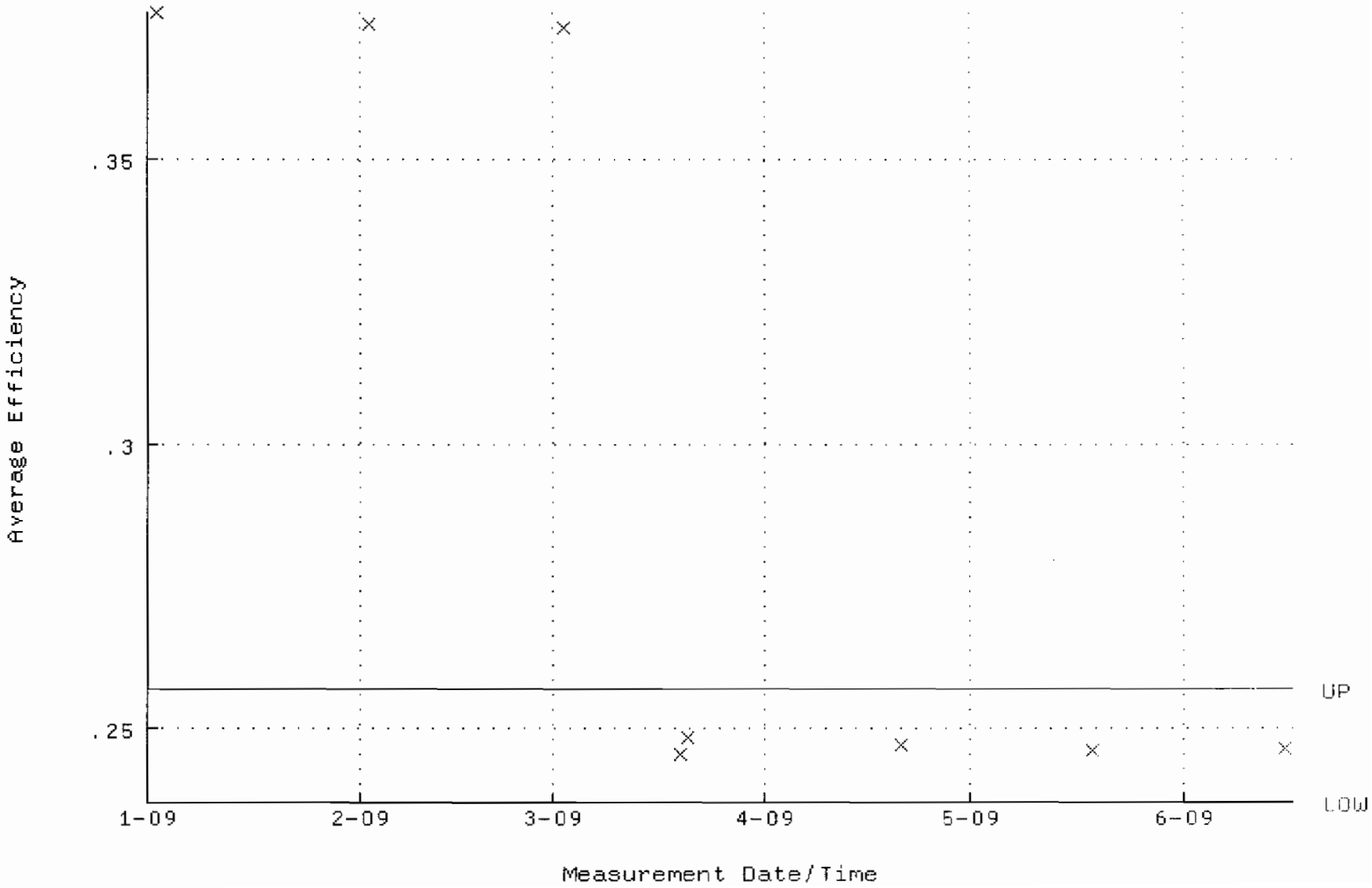

QA filename : DKA100:[ENV_ALPHA.QA.W]W147.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:24 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.9777 through 93.9227

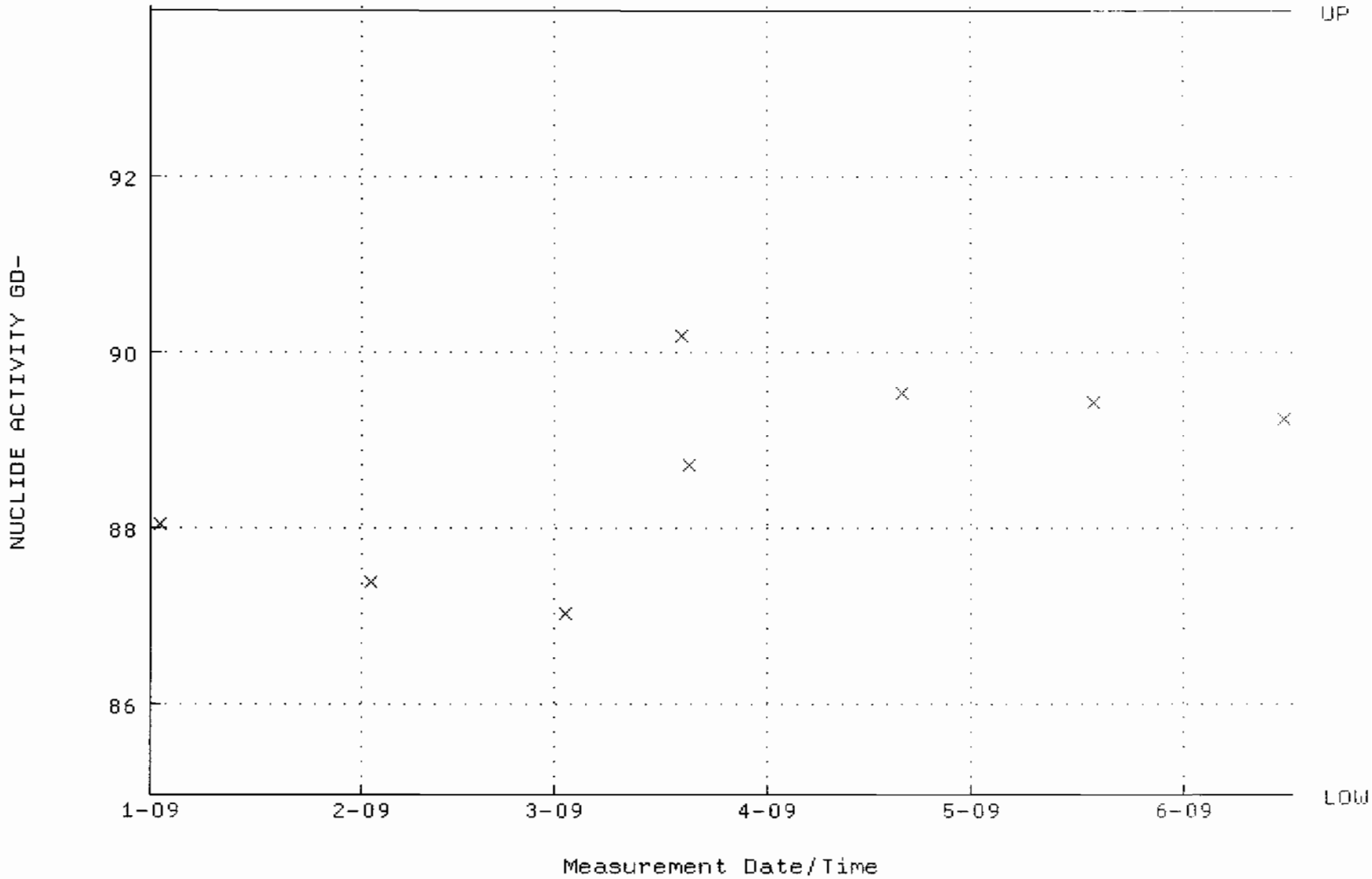

QA filename : DKA100:[ENV_ALPHA.QA.B]B147.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:13 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

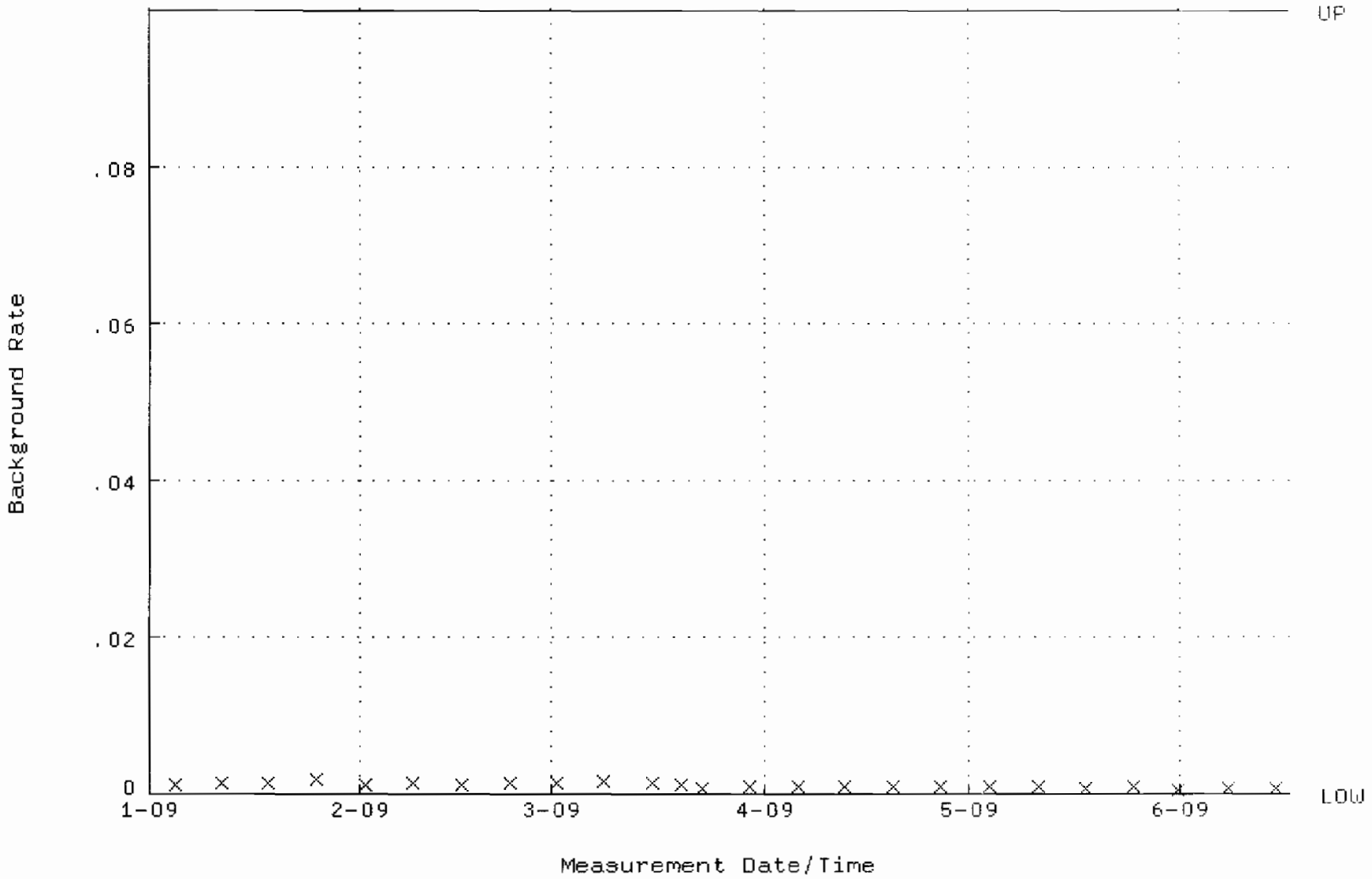

QA filename : DKA100:[ENV_ALPHA.QA.W]W148.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:28 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.237934 through 0.257934

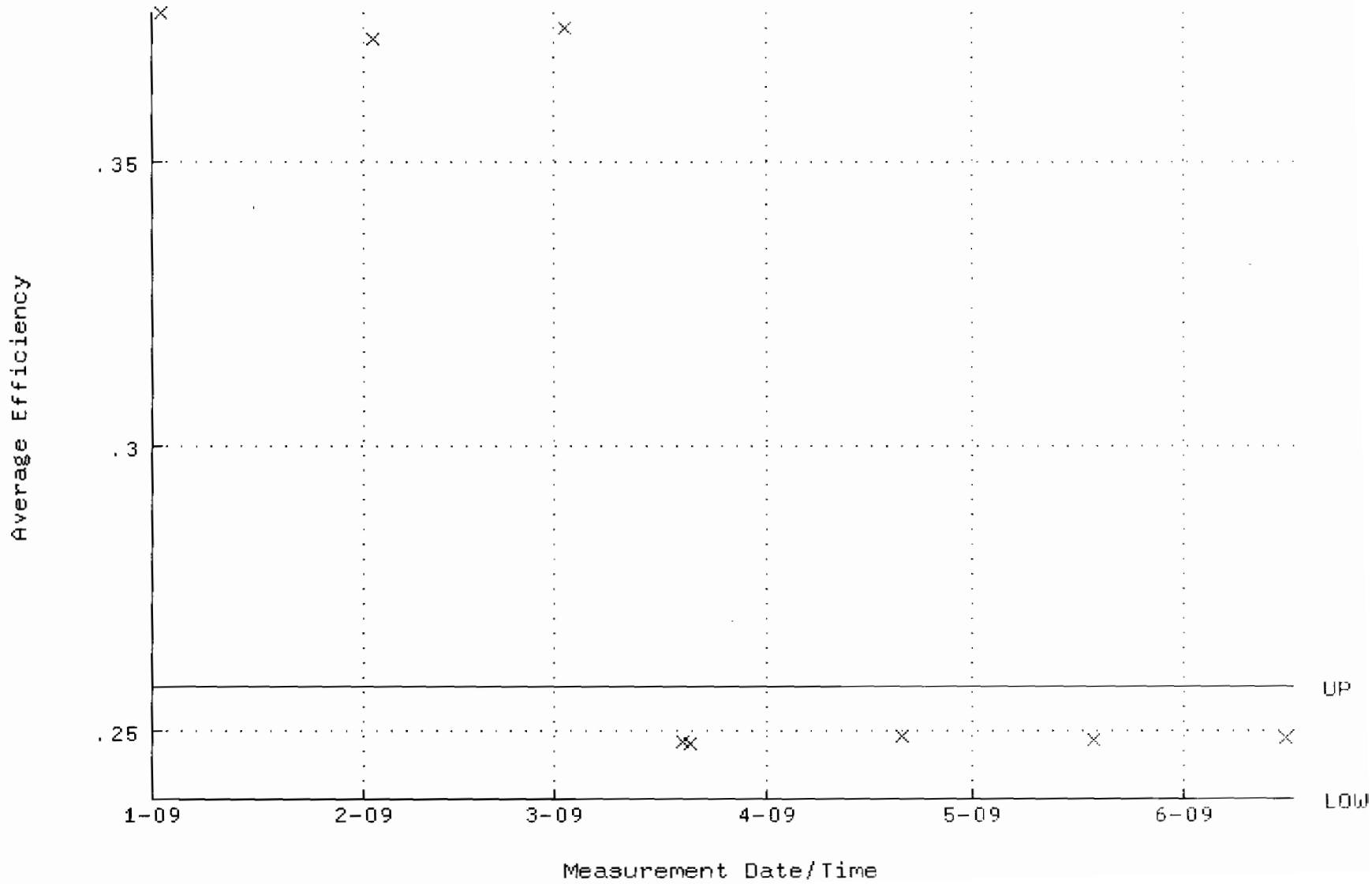

QA filename : DKA100:[ENV_ALPHA.QA.W]W148.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:28 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 85.0831 through 94.0393

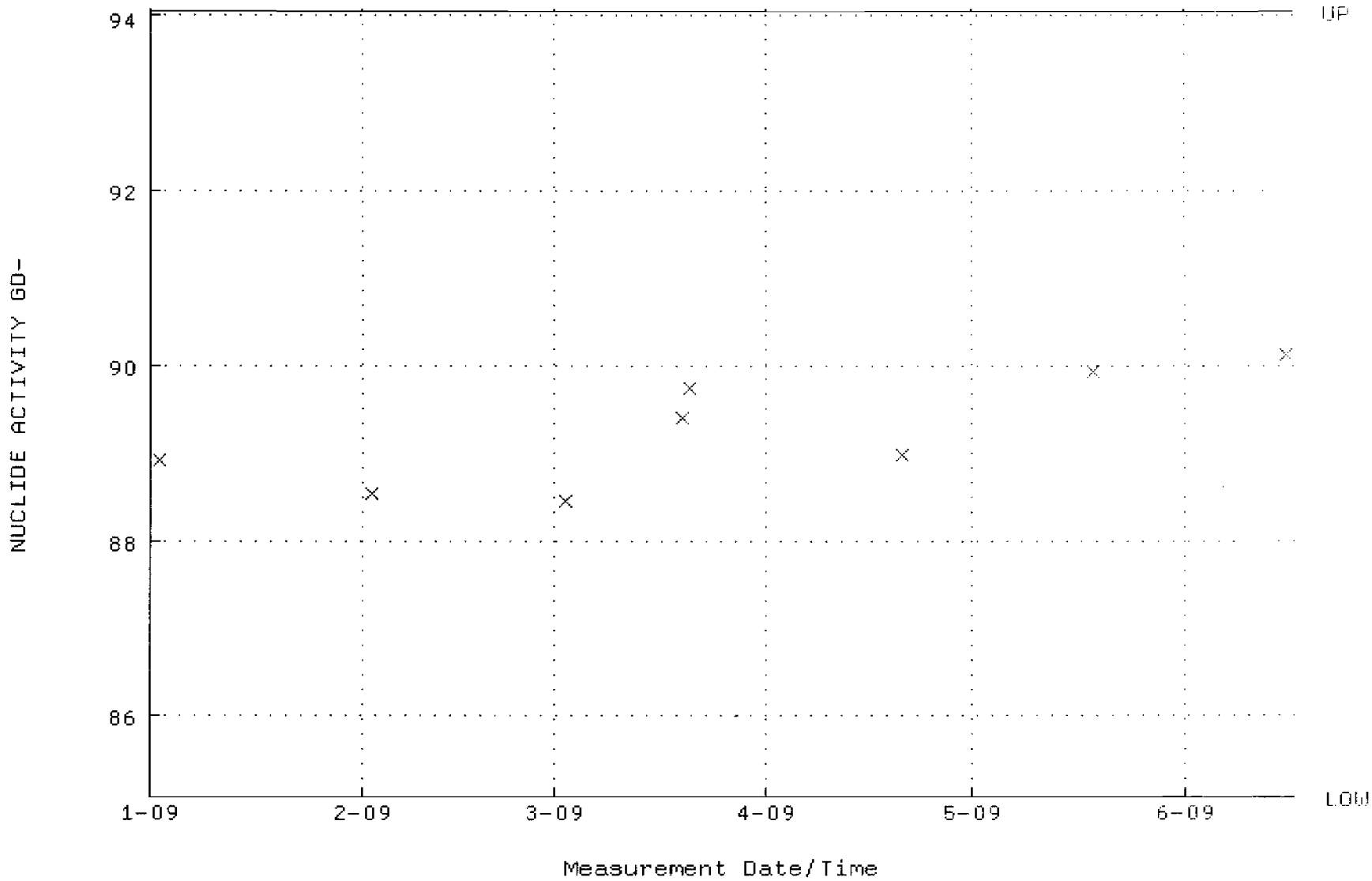

QA filename : DKA100:[ENV_ALPHA.QA.B]B148.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:17 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

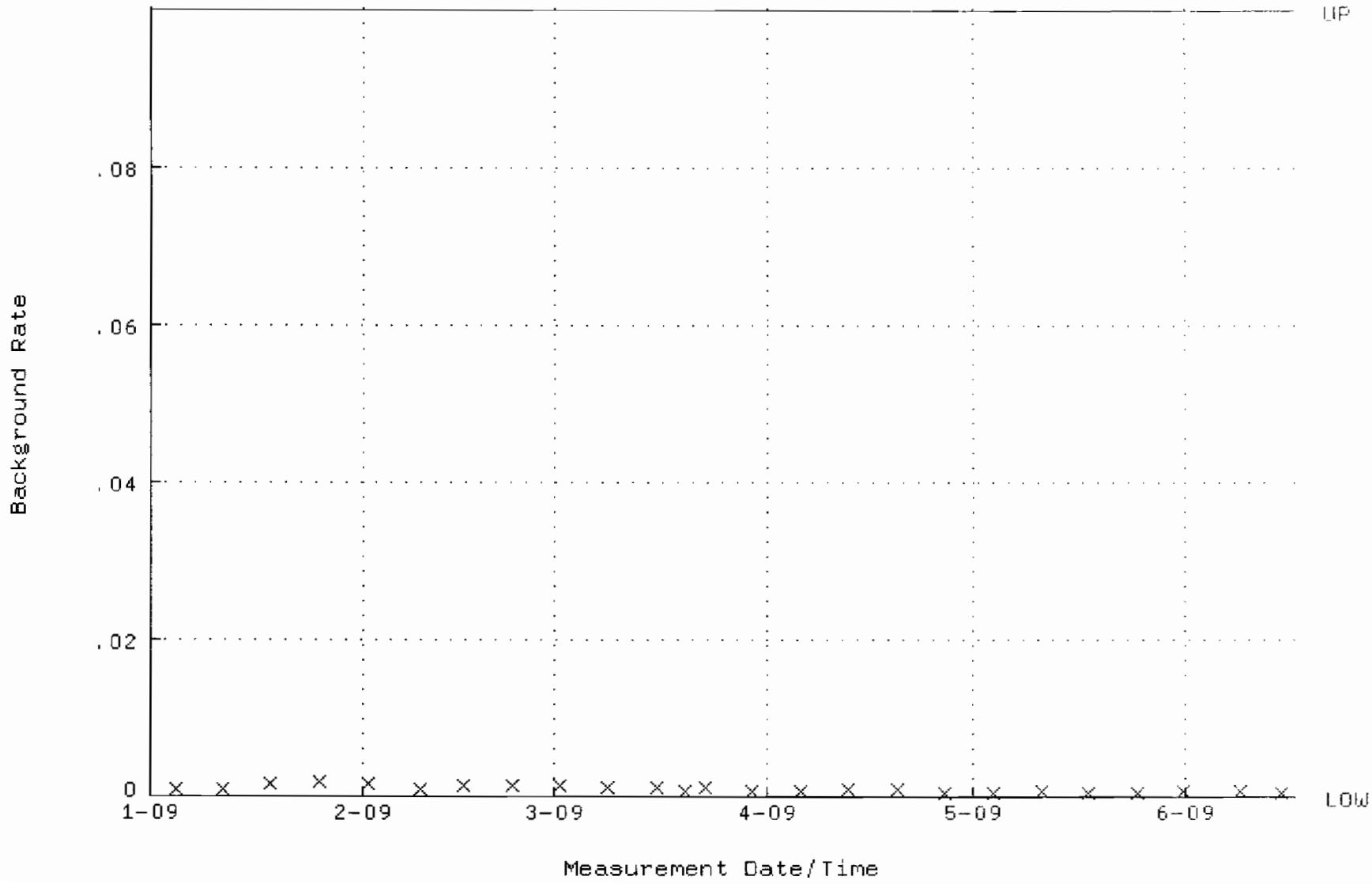

QA filename : DKA100:[ENV_ALPHA.QA.W]W149.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:32 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.242495 through 0.262495

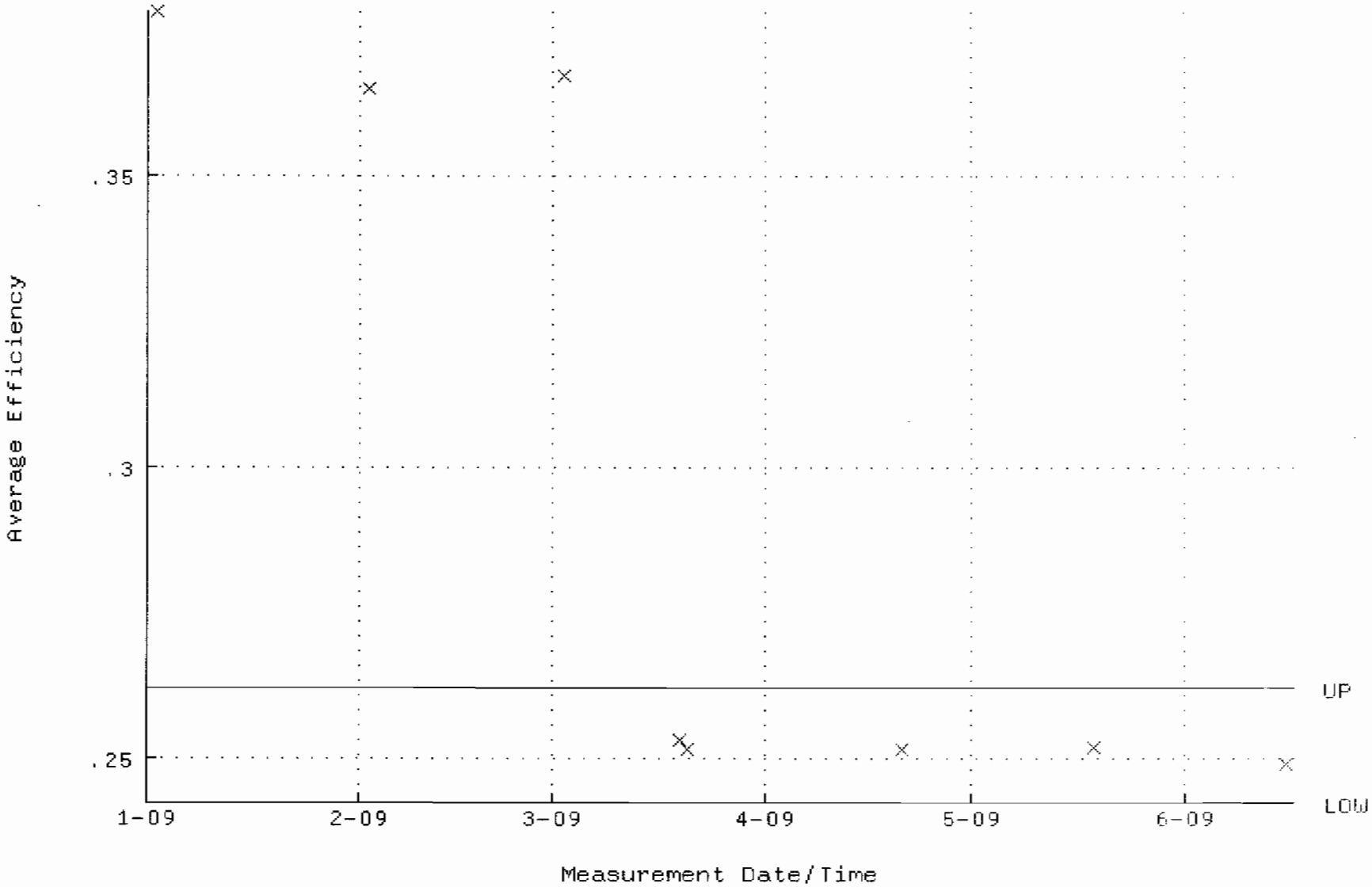

QA filename : DKA100:[ENV_ALPHA.QA.W]W149.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:32 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.8126 through 93.7402

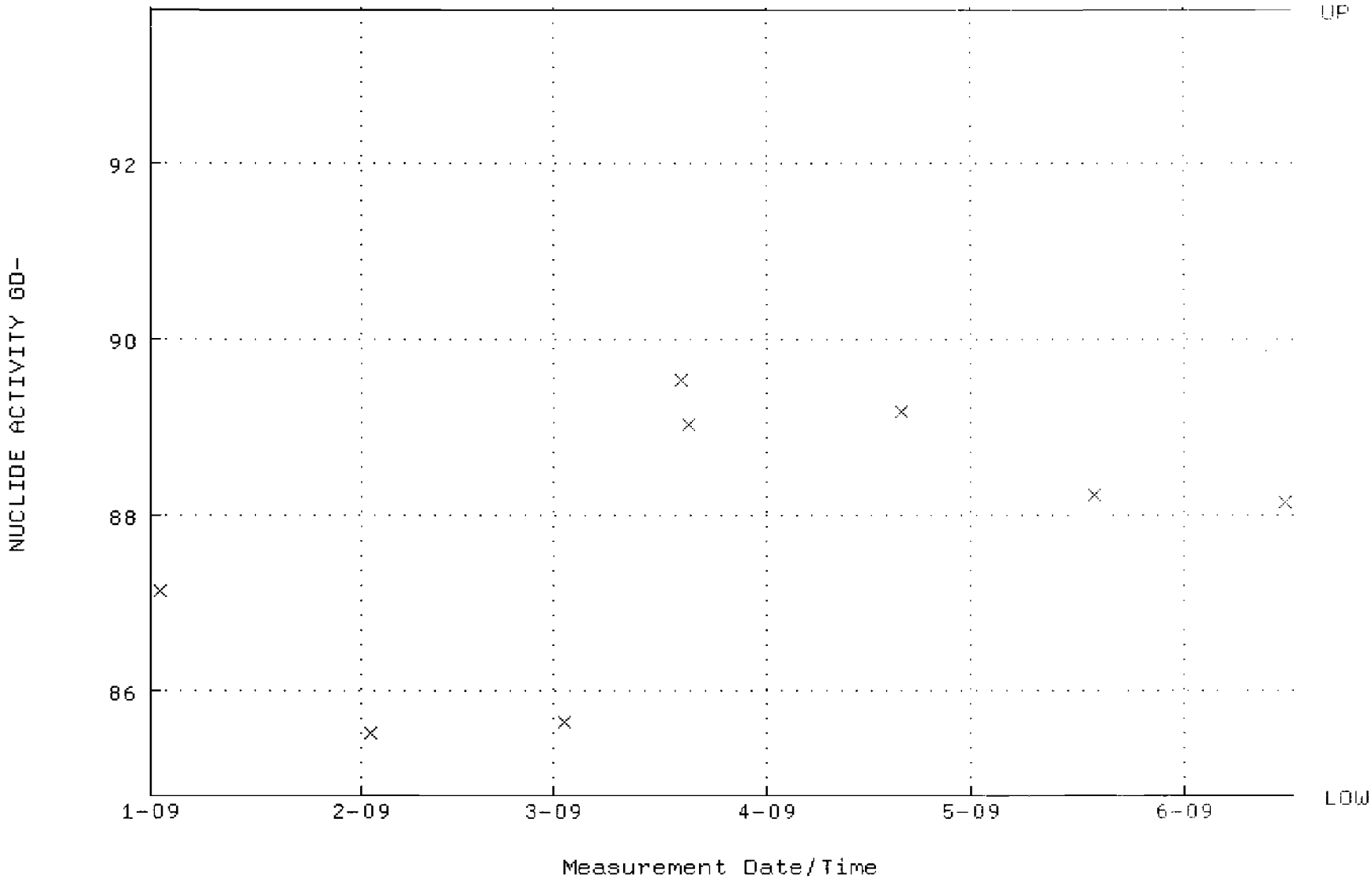

QA filename : DKA100:[ENV_ALPHA.QA.B]B149.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:21 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

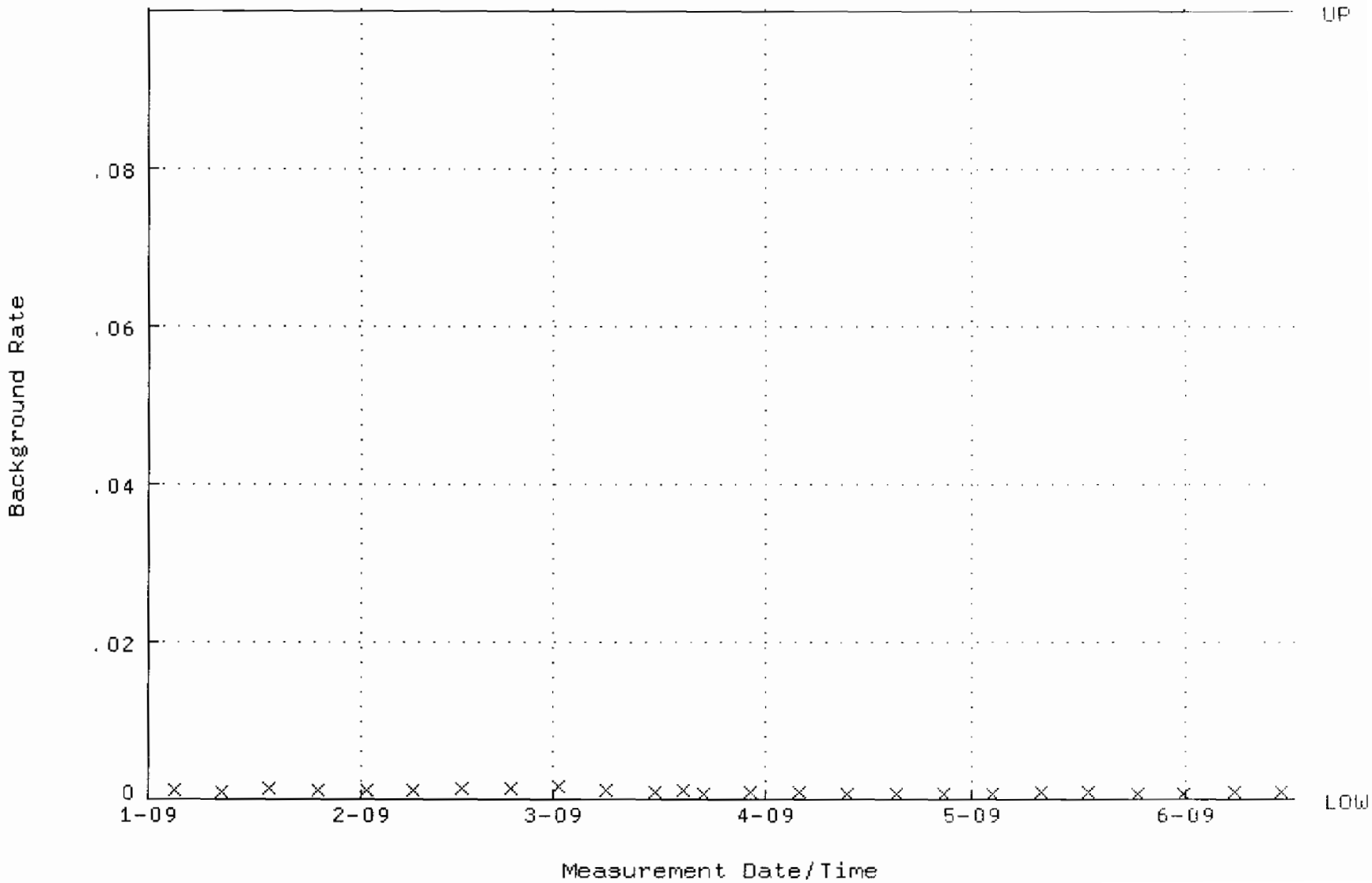

QA filename : DKA100:[ENV_ALPHA.QA.W]W150.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:37 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.238314 through 0.258314

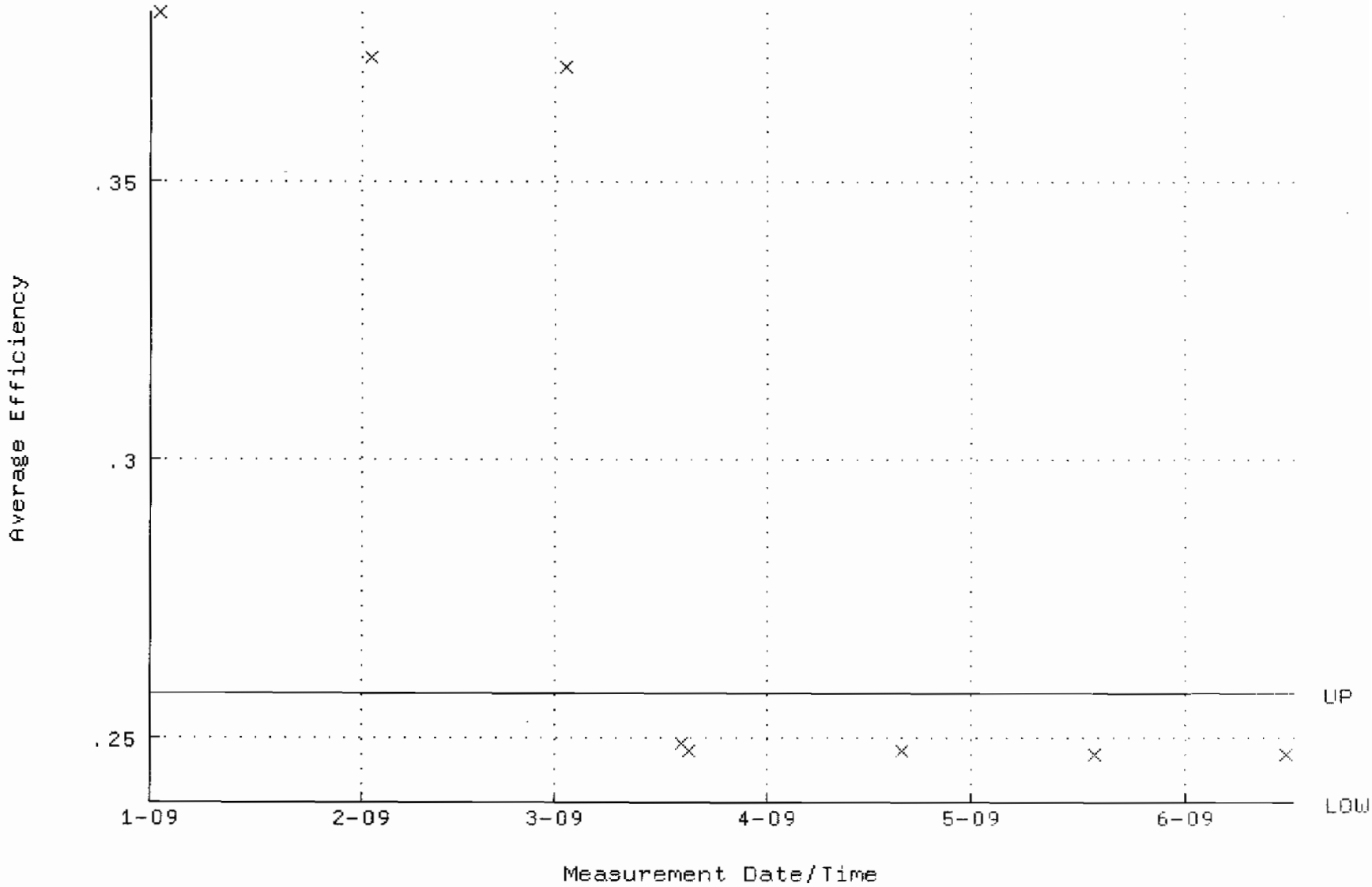

QA filename : DKA100:[ENV_ALPHA.QA.W]W150.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:37 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.4039 through 93.2885

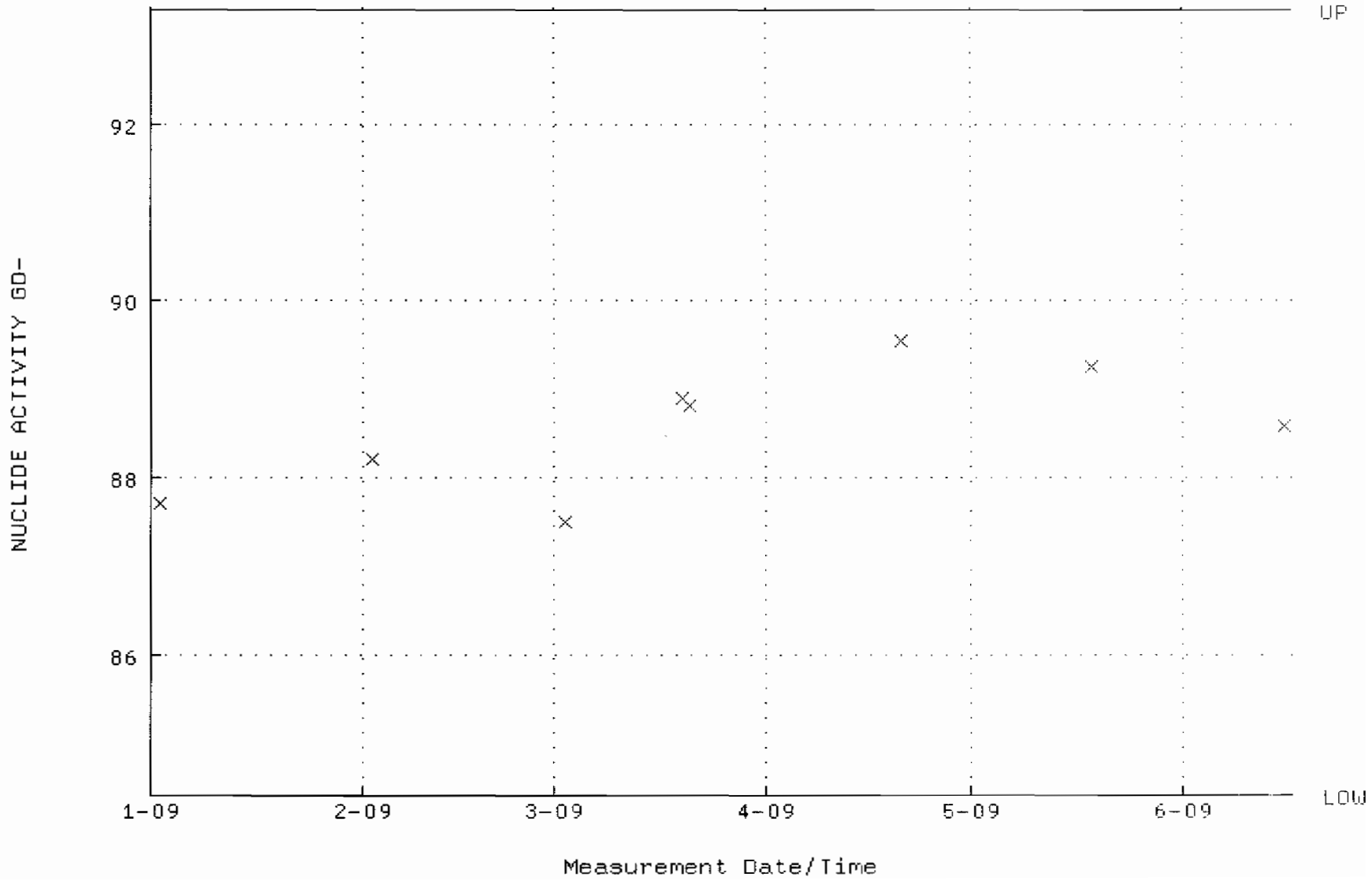

QA filename : DKA100:[ENV_ALPHA.QA.B]B150.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:24 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

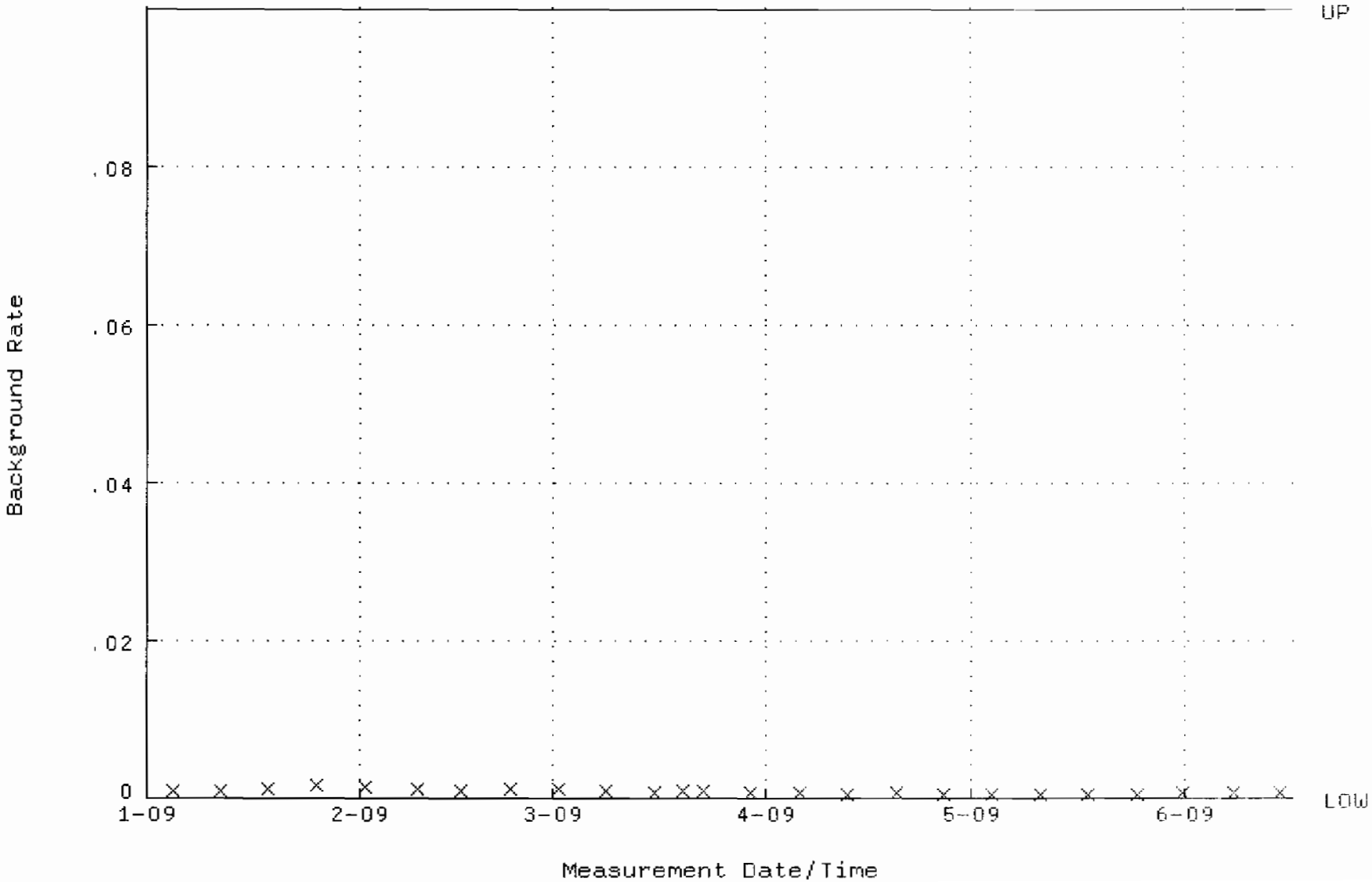

QA filename : DKA100:[ENV_ALPHA.QA.W]W151.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:42 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.233693 through 0.253693

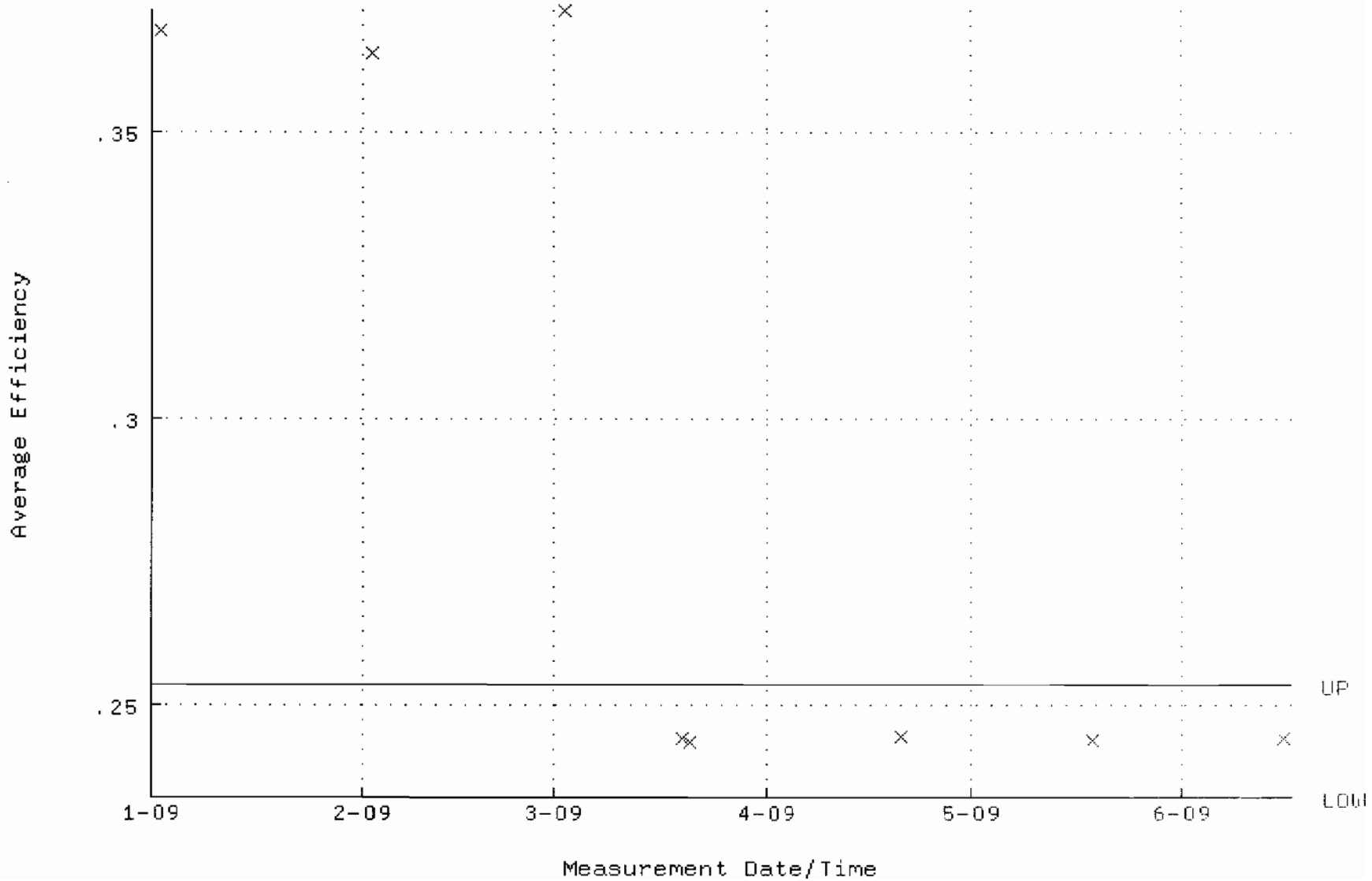

QA filename : DKA100:[ENV_ALPHA.QA.W]W151.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:42 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 86.5749 through 95.6881

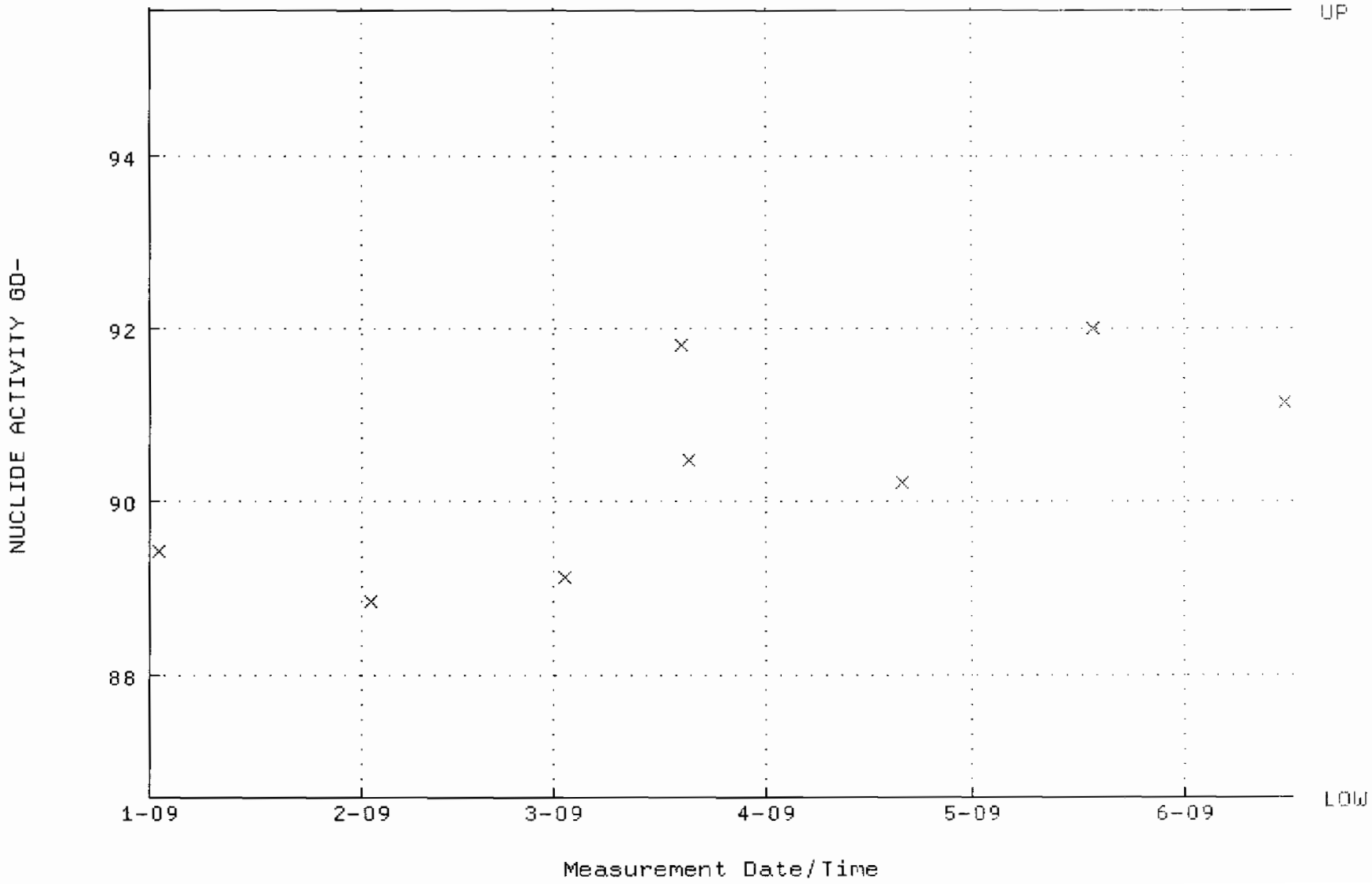

QA filename : DKA100:[ENV_ALPHA.QA.B]B151.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:28 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

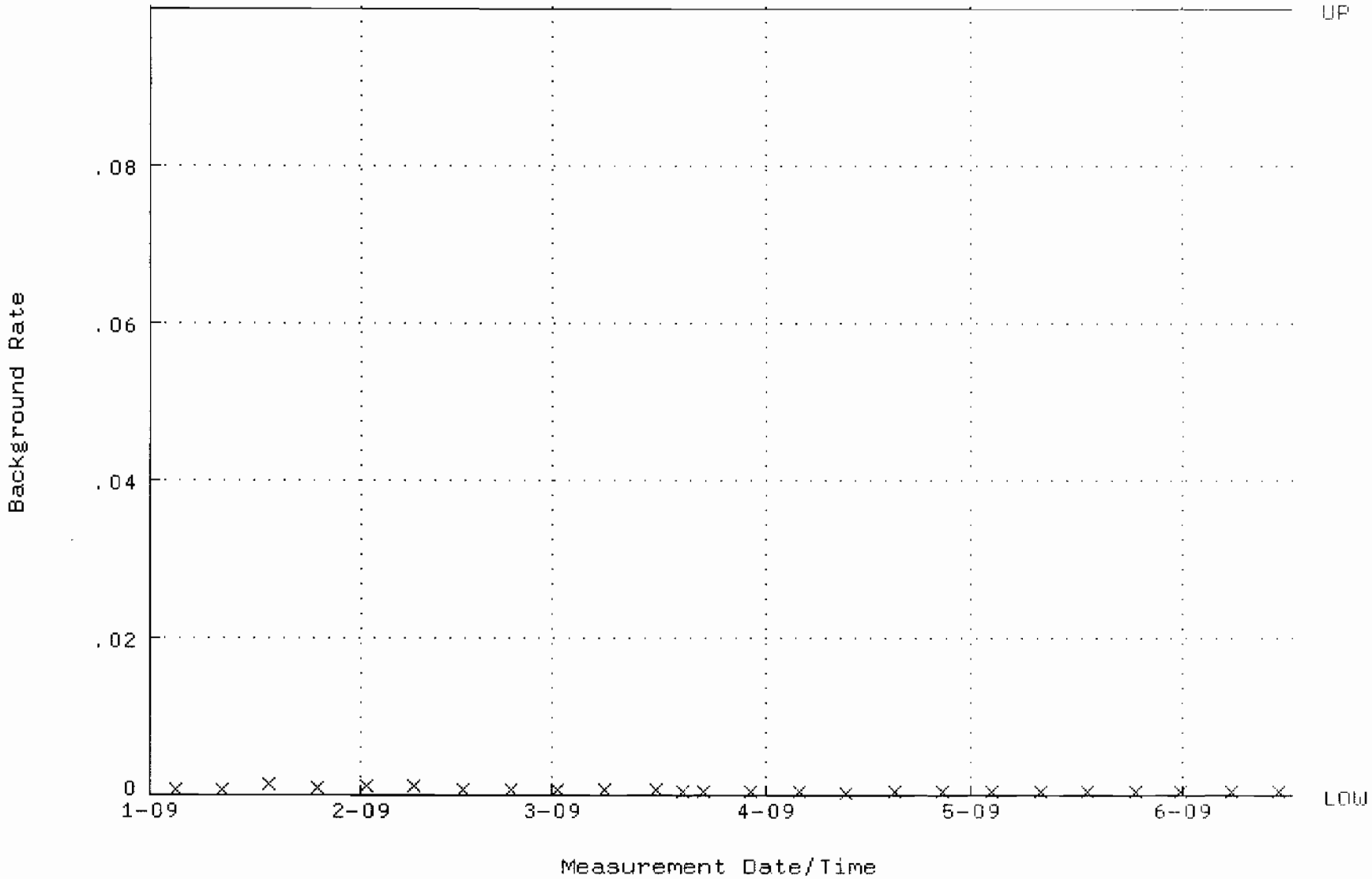

QA filename : DKA100:[ENV_ALPHA.QA.W]W152.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:46 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.238479 through 0.258479

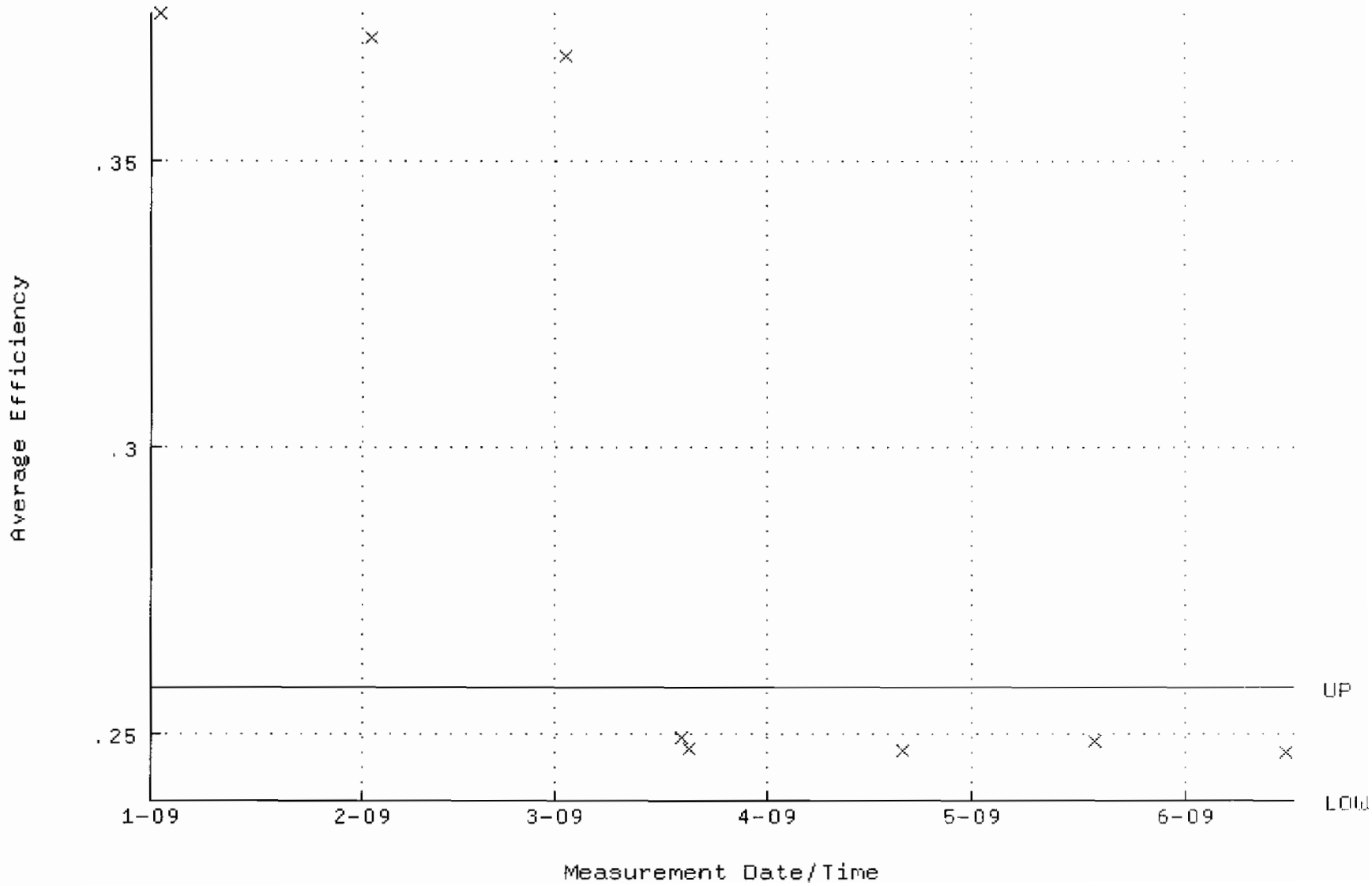

QA filename : DKA100:[ENV_ALPHA.QA.W]W152.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:46 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 83.7180 through 92.5304

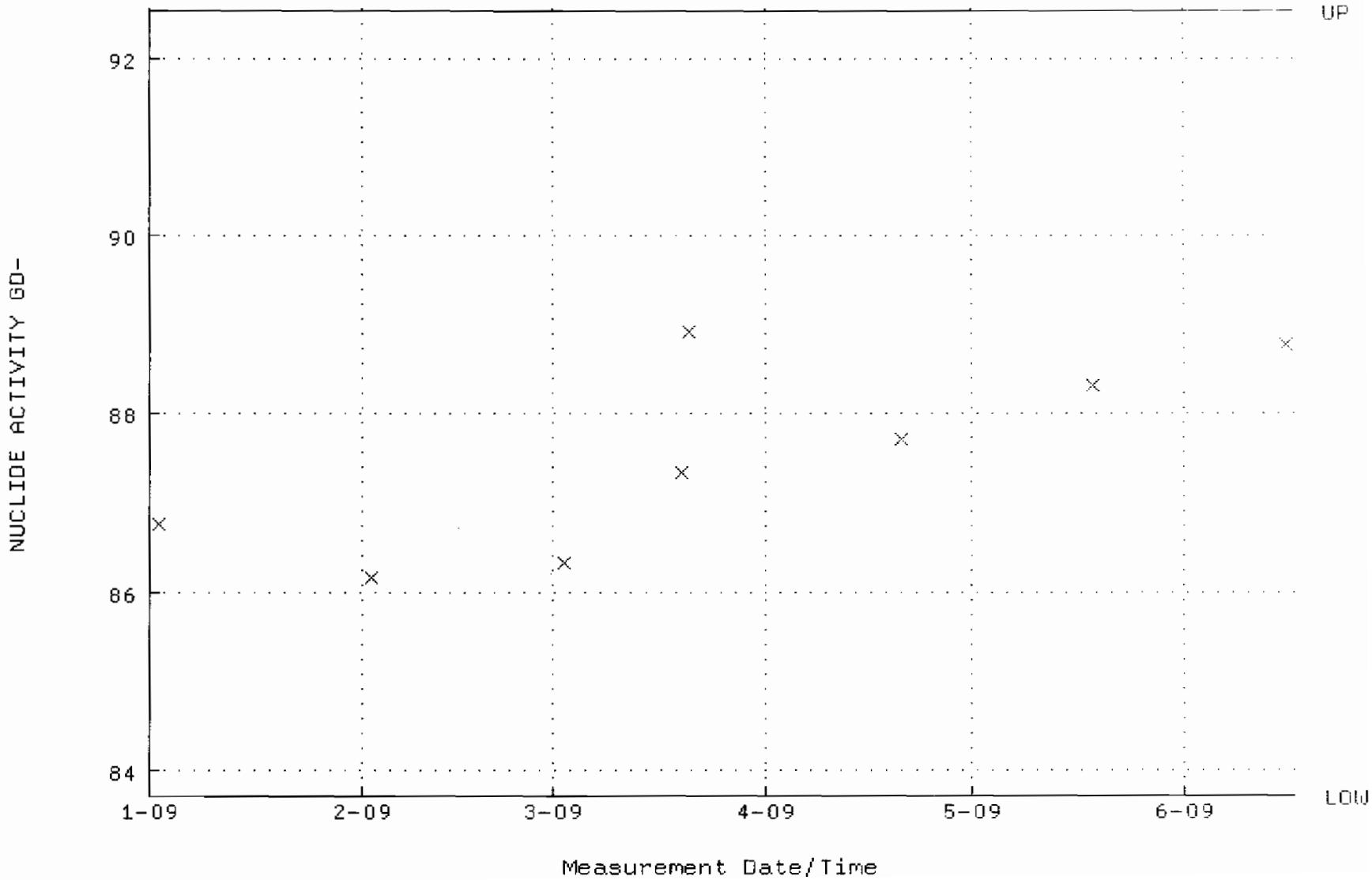

QA filename : DKA100:[ENV_ALPHA.QA.B]B152.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:32 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

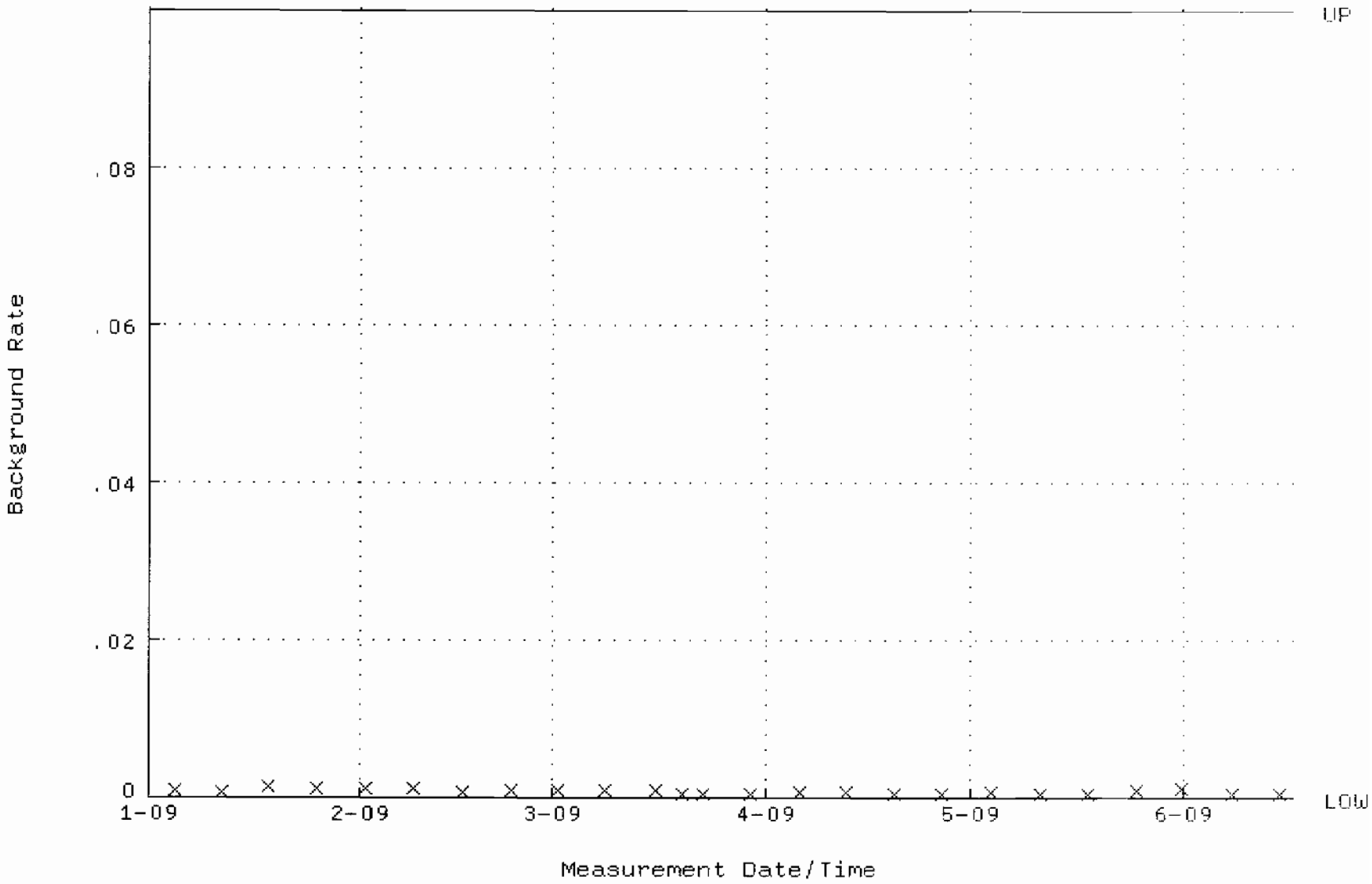

QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.244738 through 0.264738

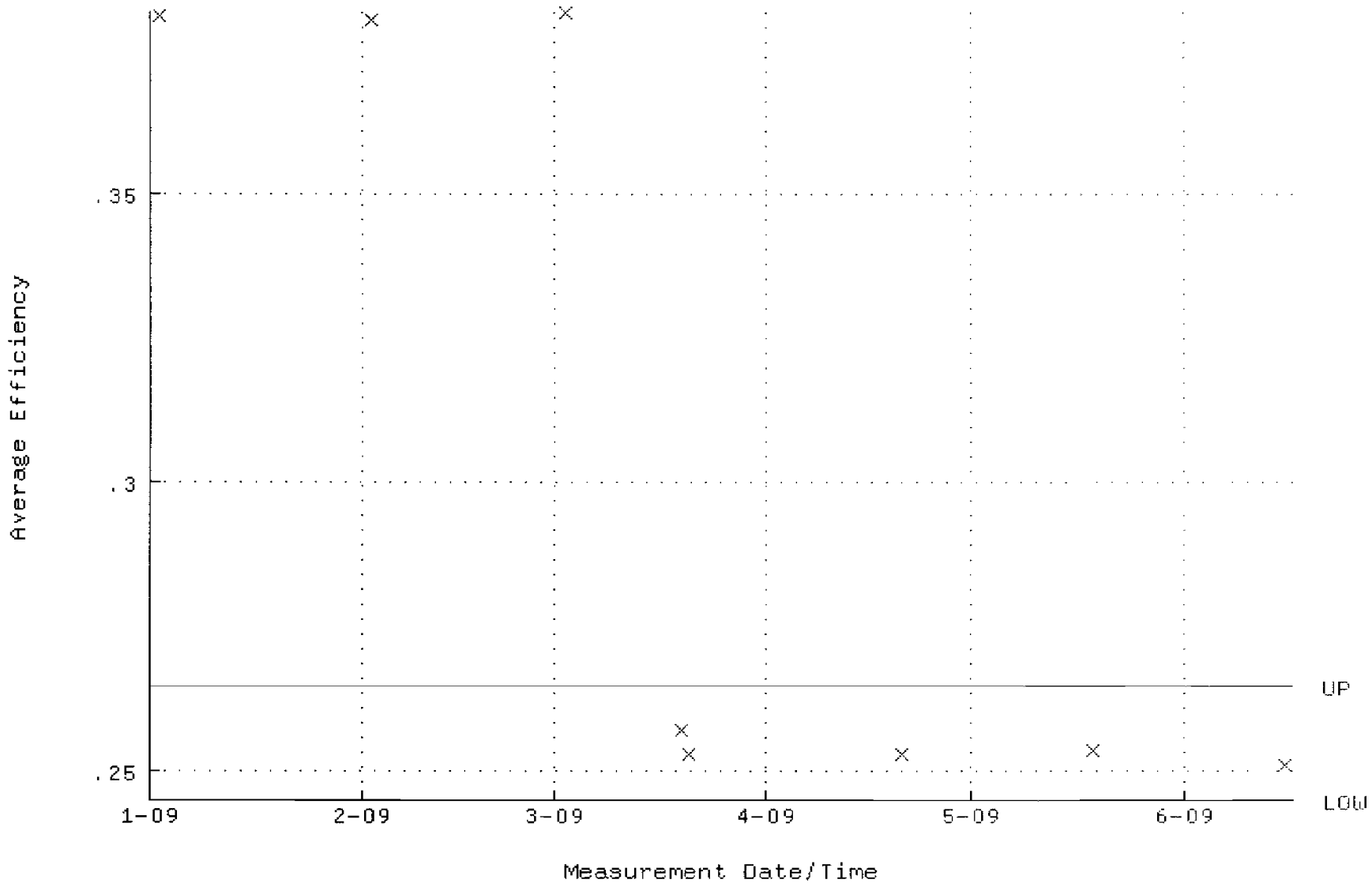

QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 81.3634 through 89.9280

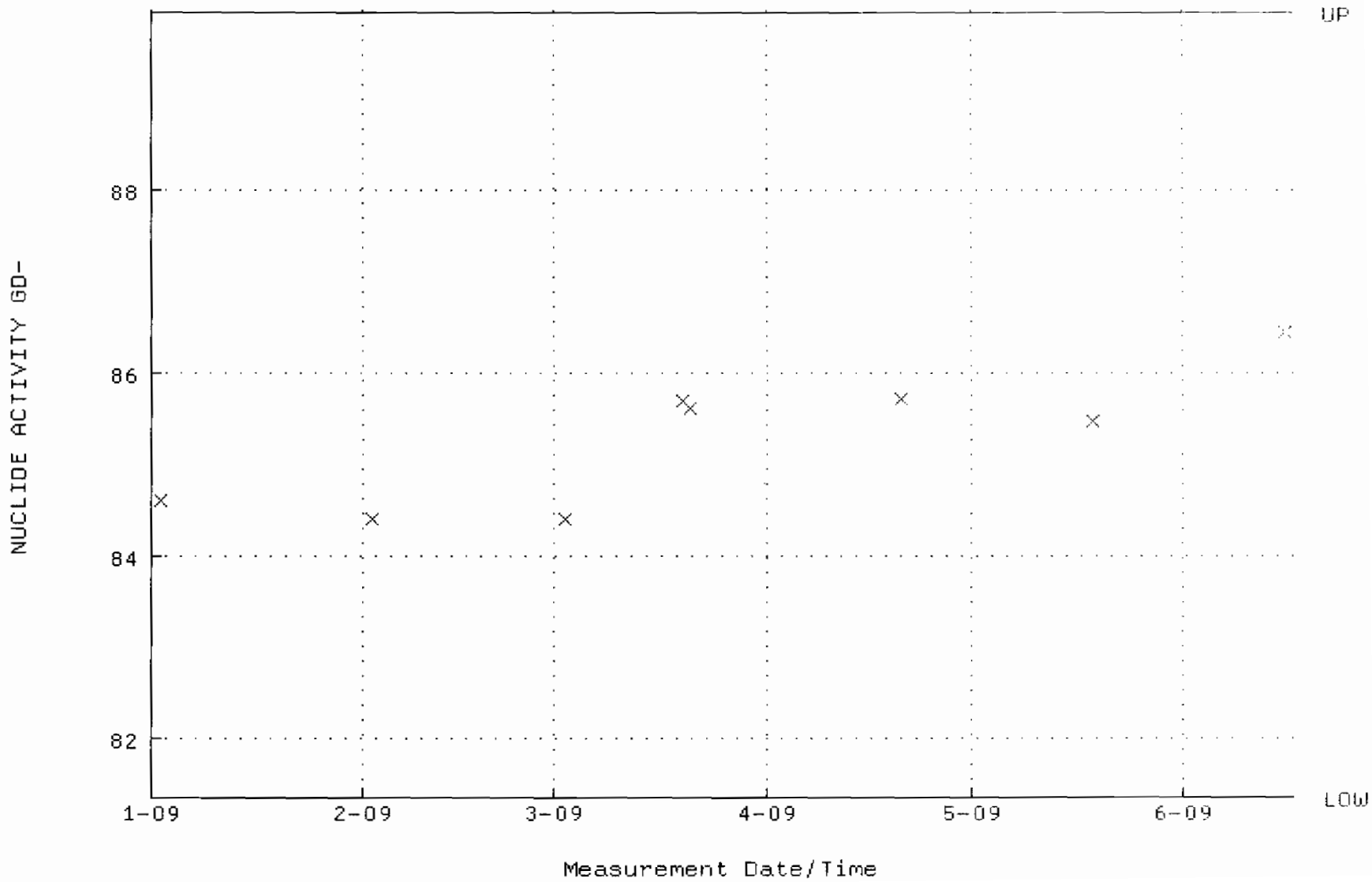

QA filename : DKA100:[ENV_ALPHA.QA.B]B153.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:36 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

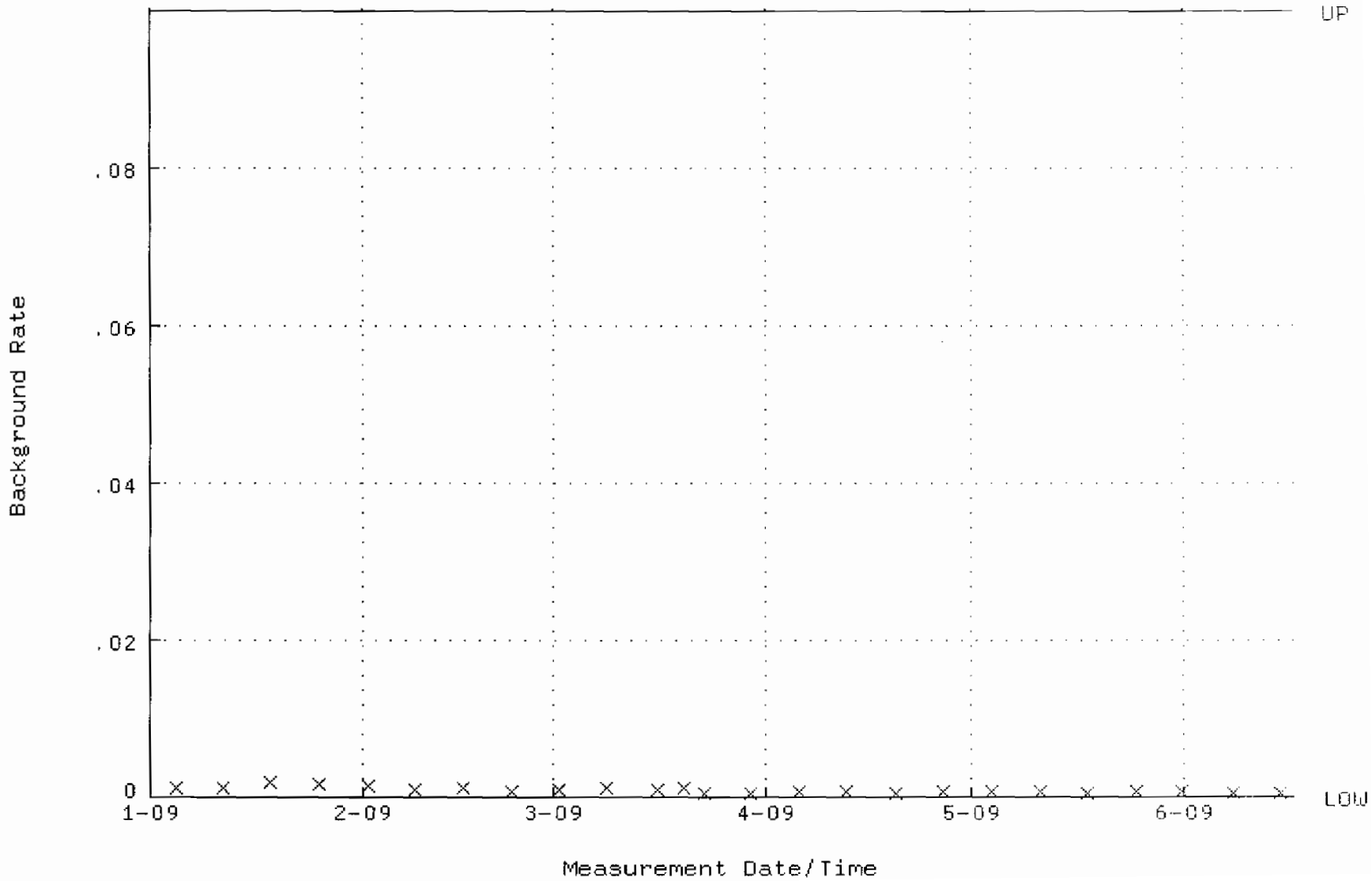

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:01 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

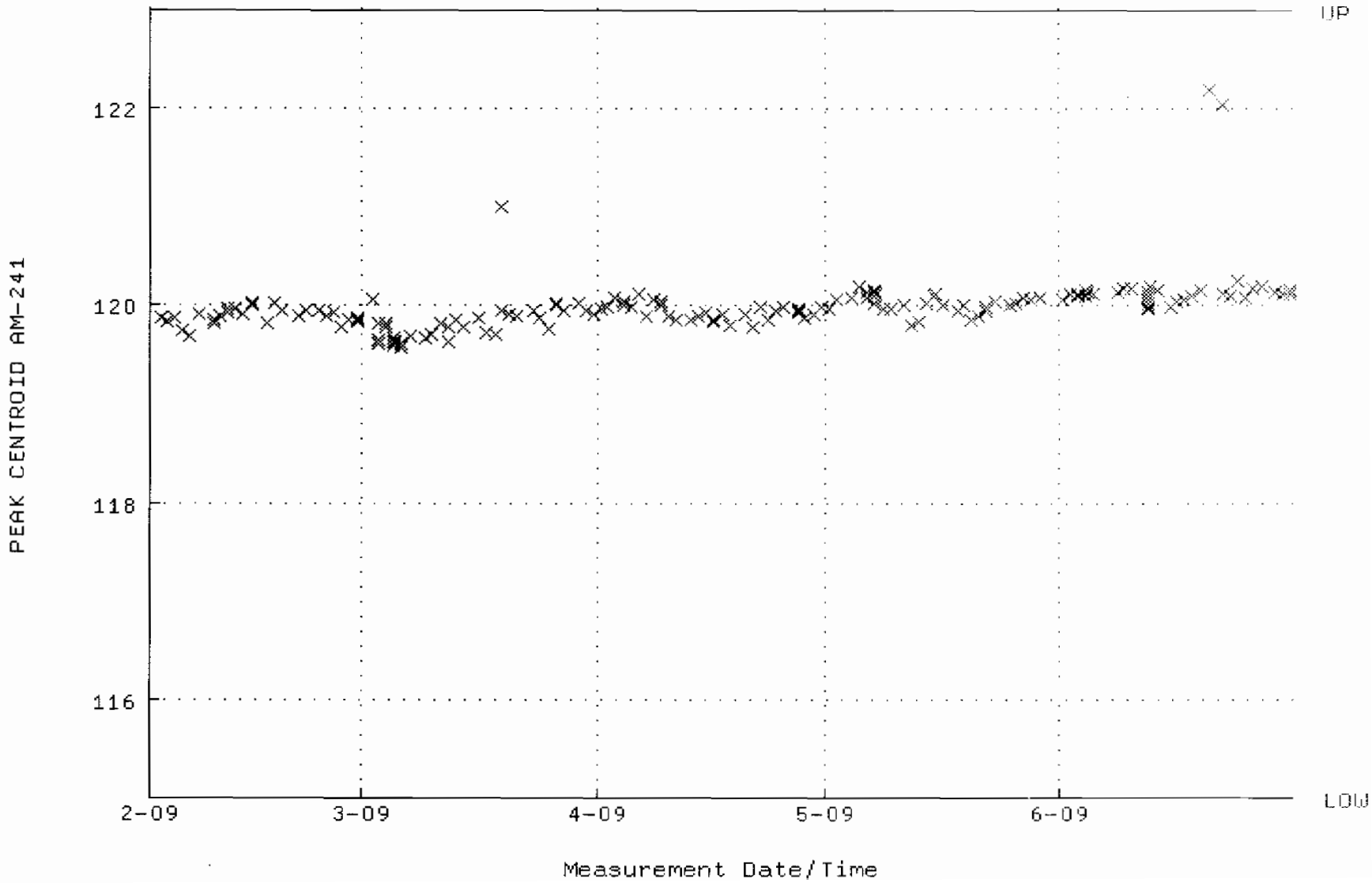

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM05.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.60580 through 1.72440

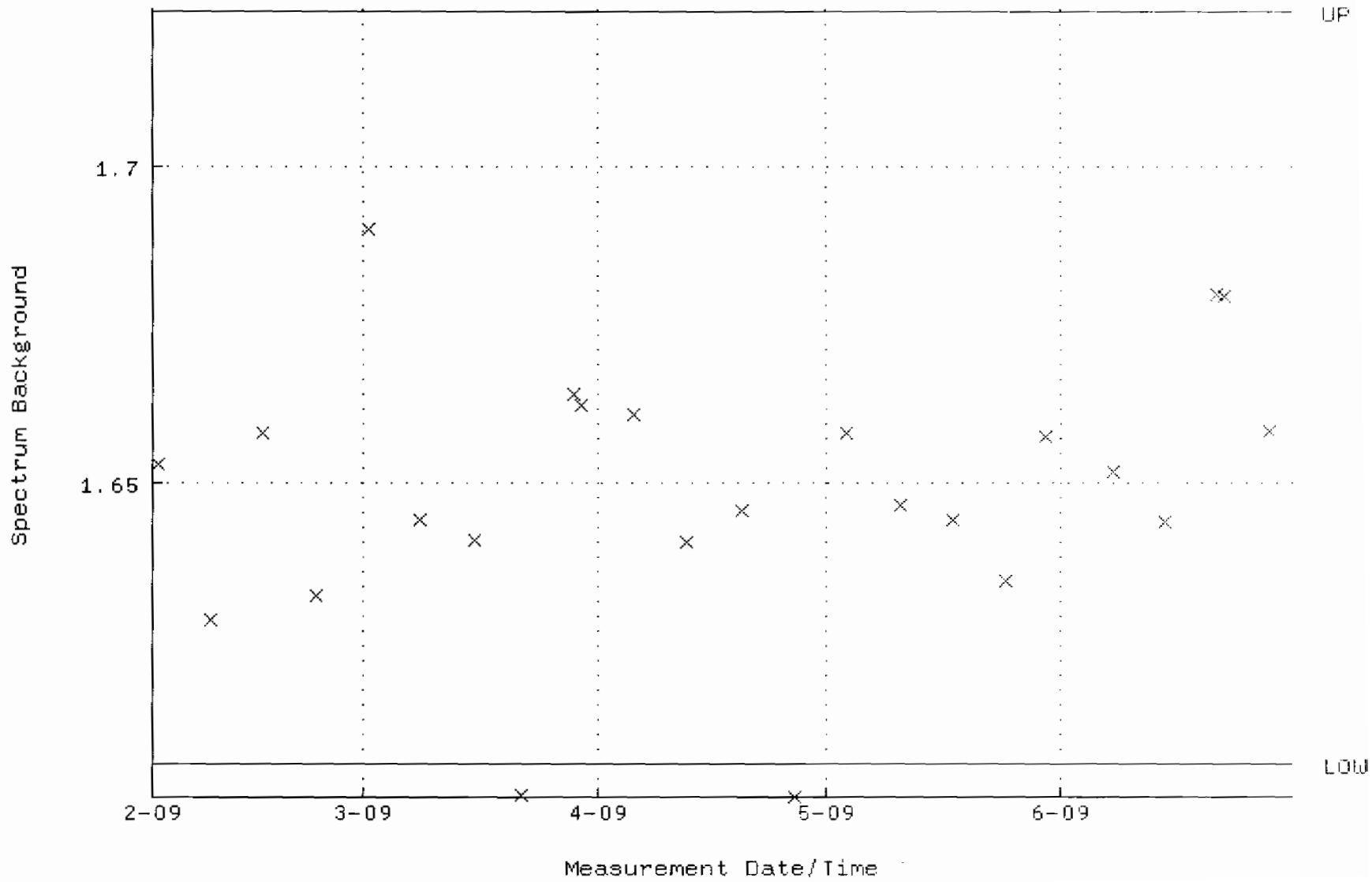

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM06_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 5-FEB-2009 05:58:08 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

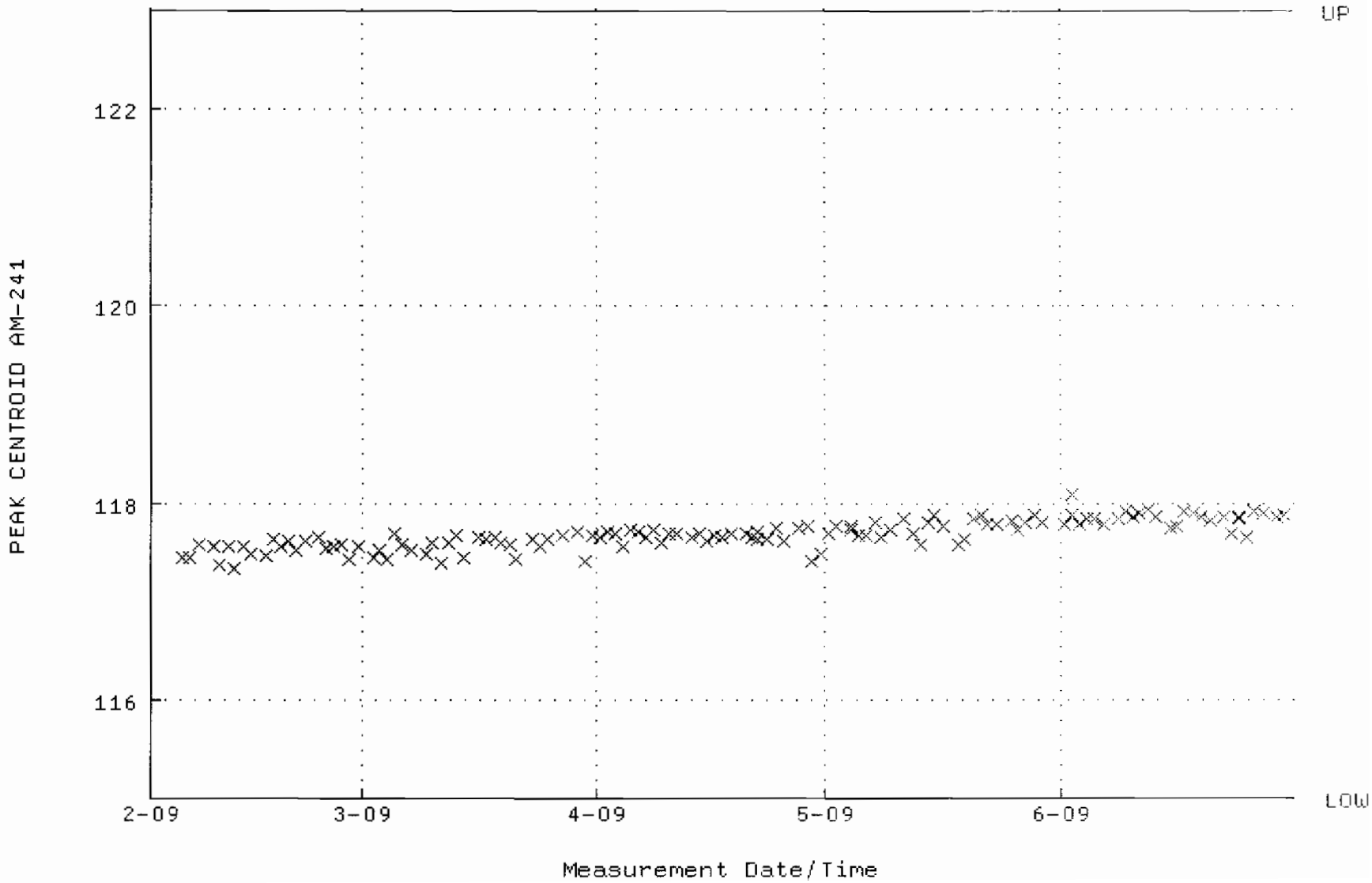

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM06.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.51800 through 1.70270

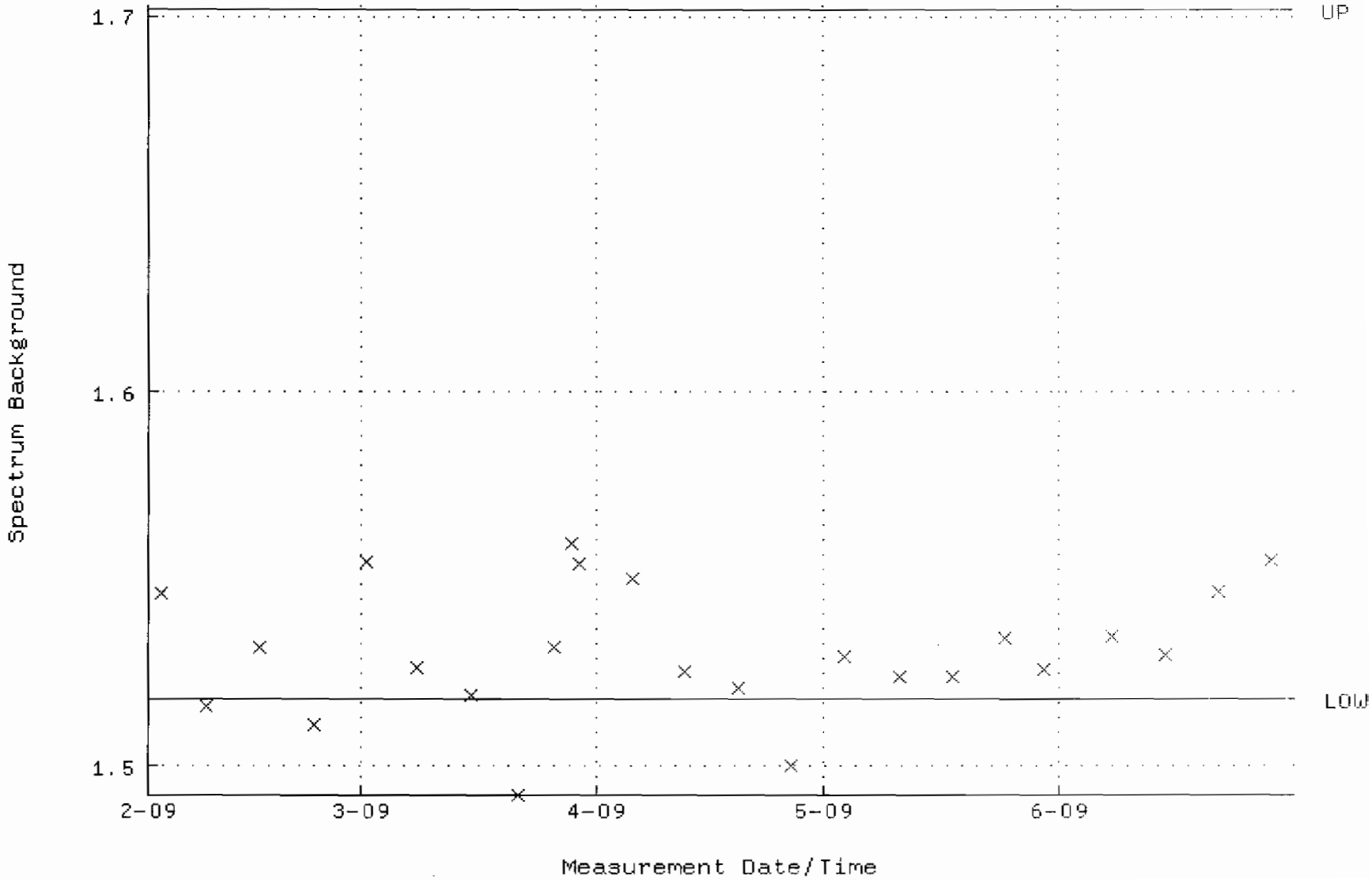

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM09_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:16 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

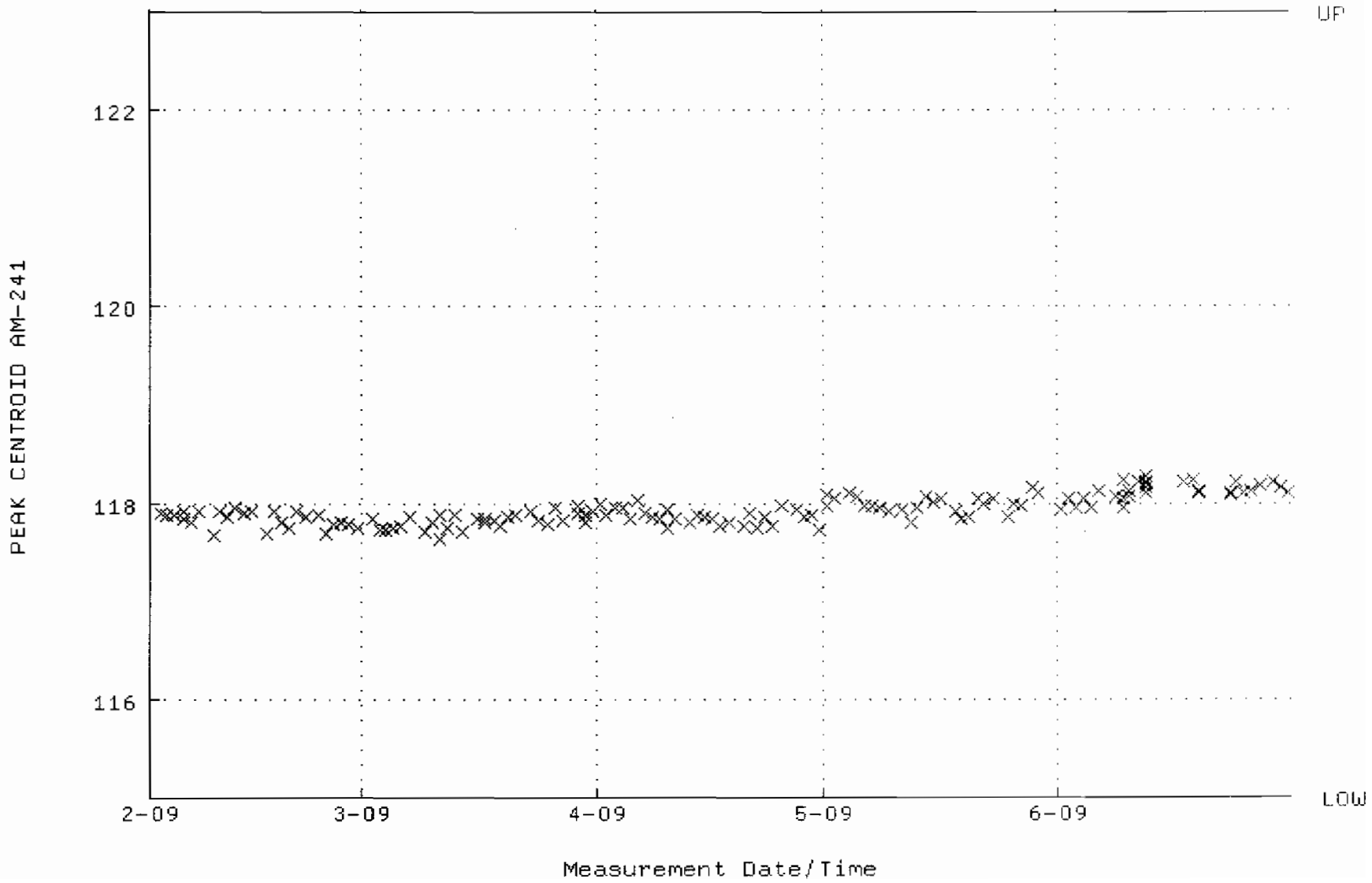

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM09.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.63773 through 2.00167

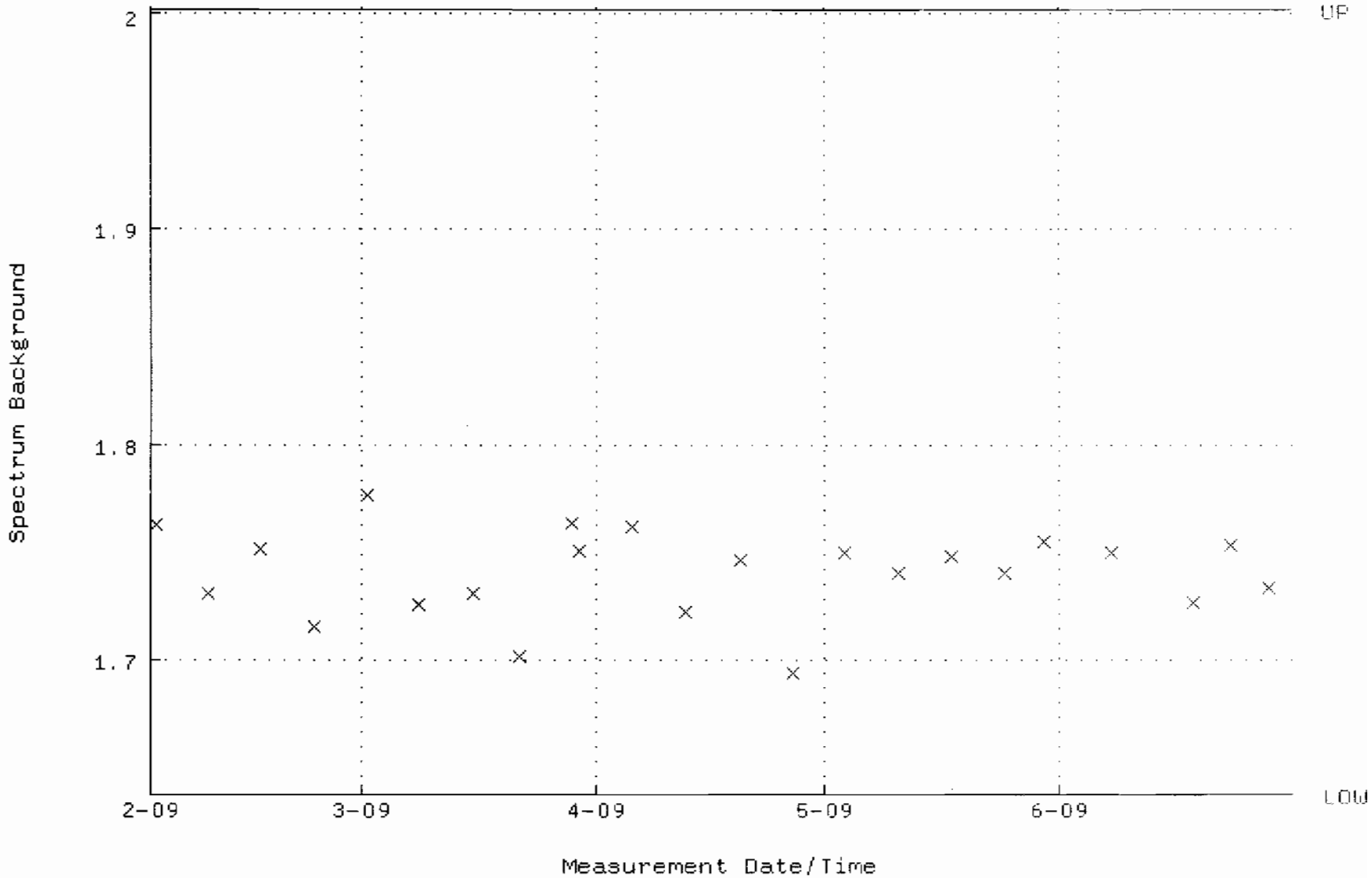

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM10_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:33 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

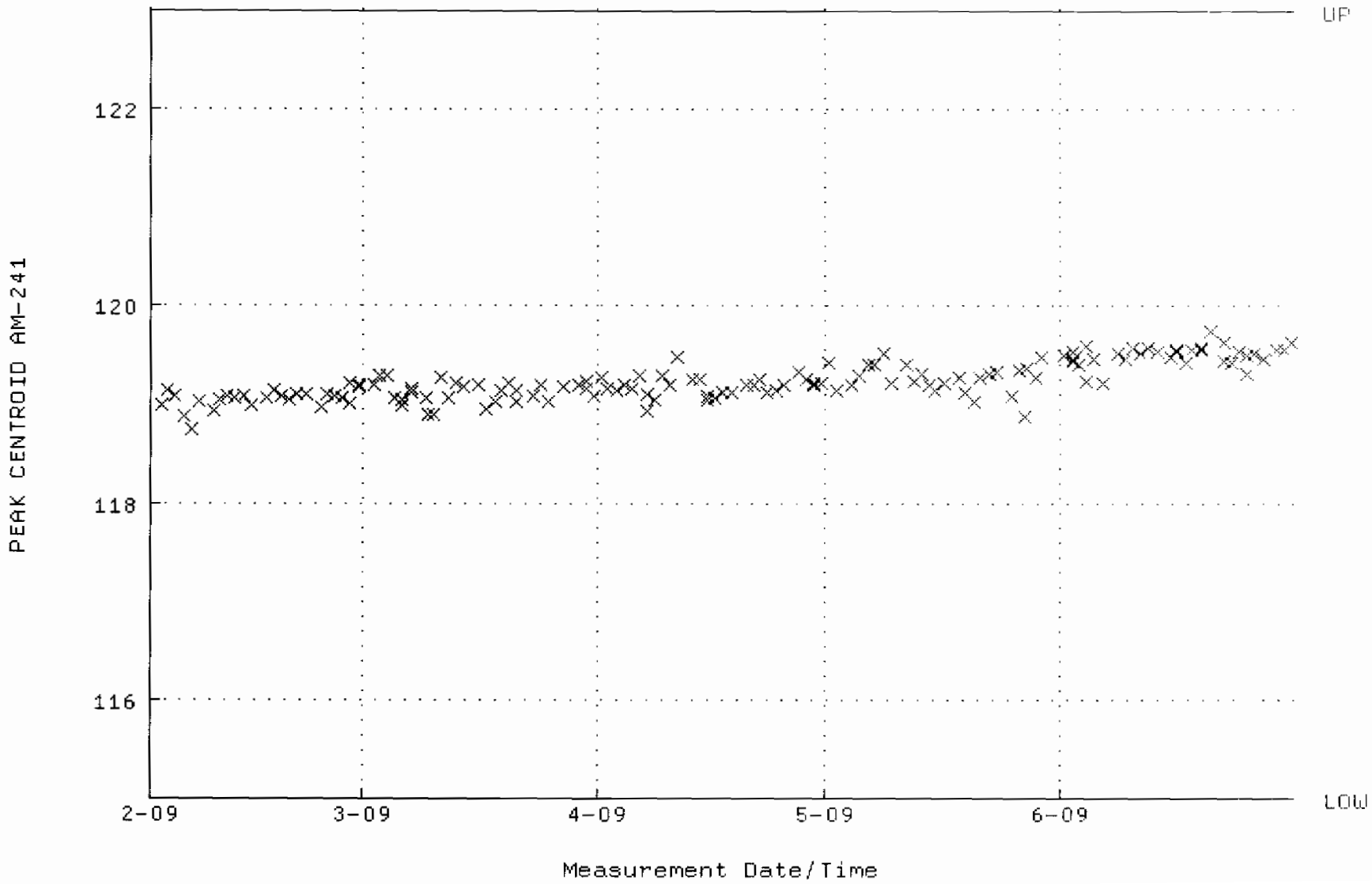

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM10.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.36818 through 1.67222

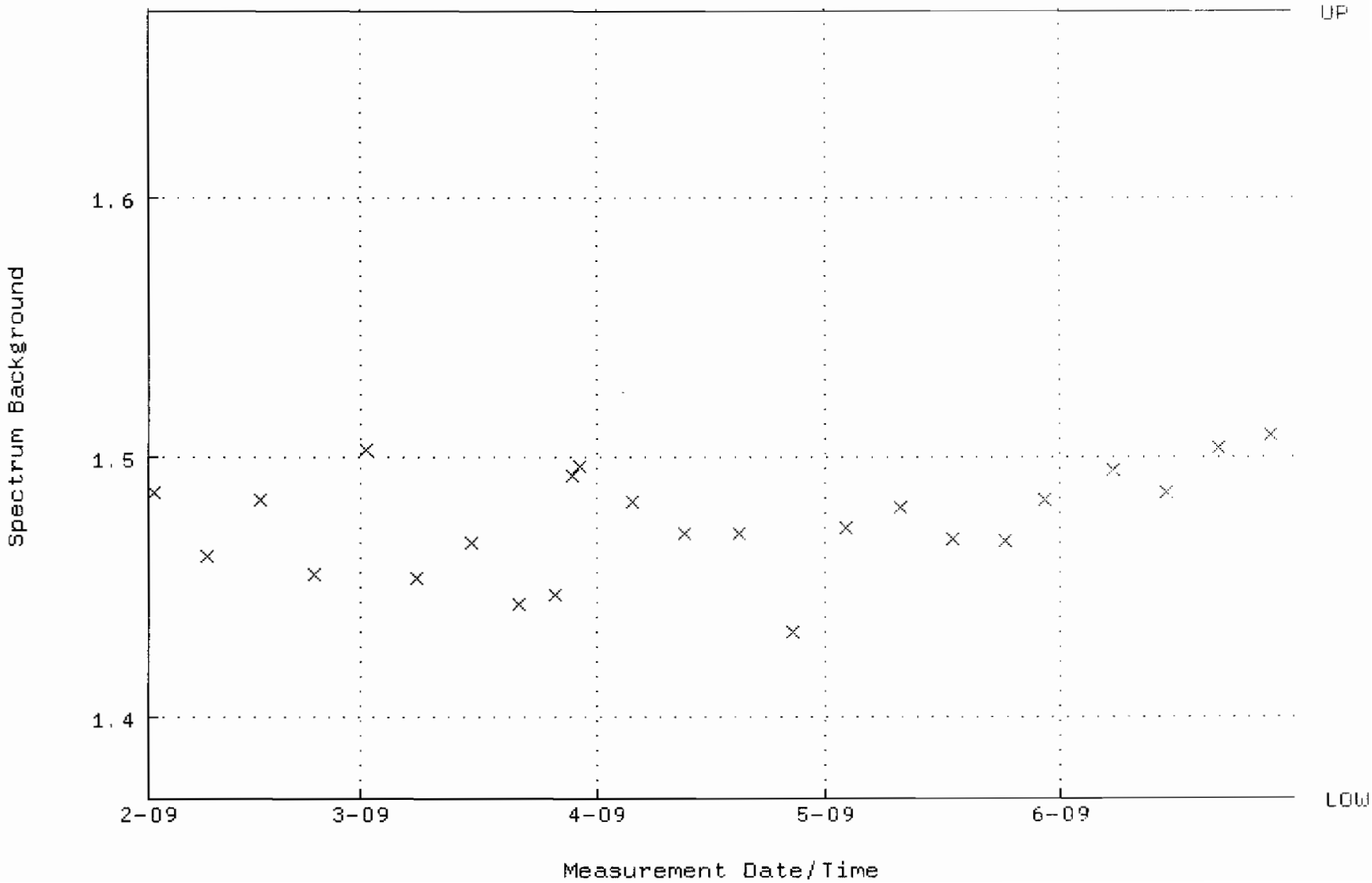

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:41 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

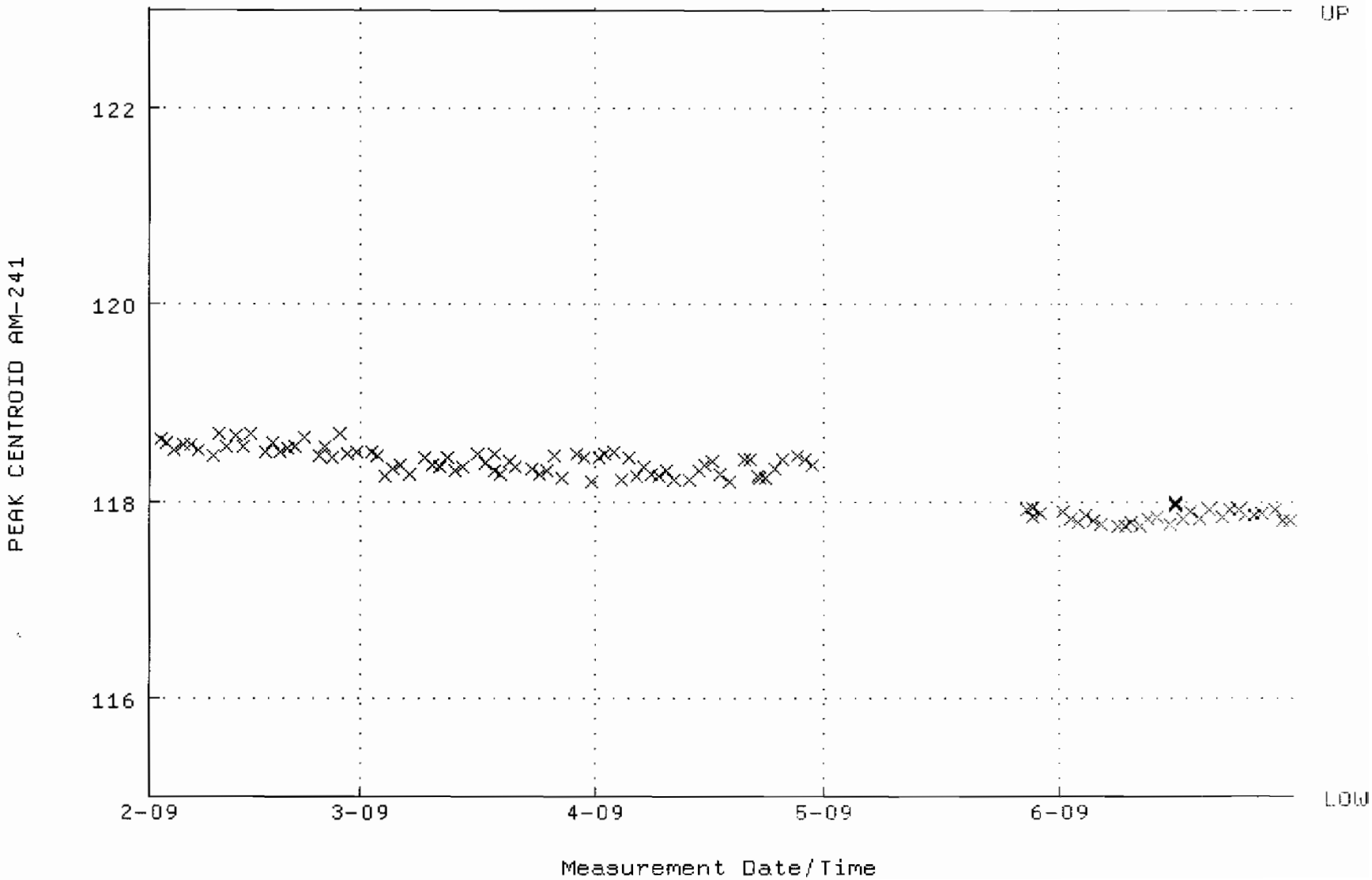

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM11.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:39 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.47699 through 1.80520

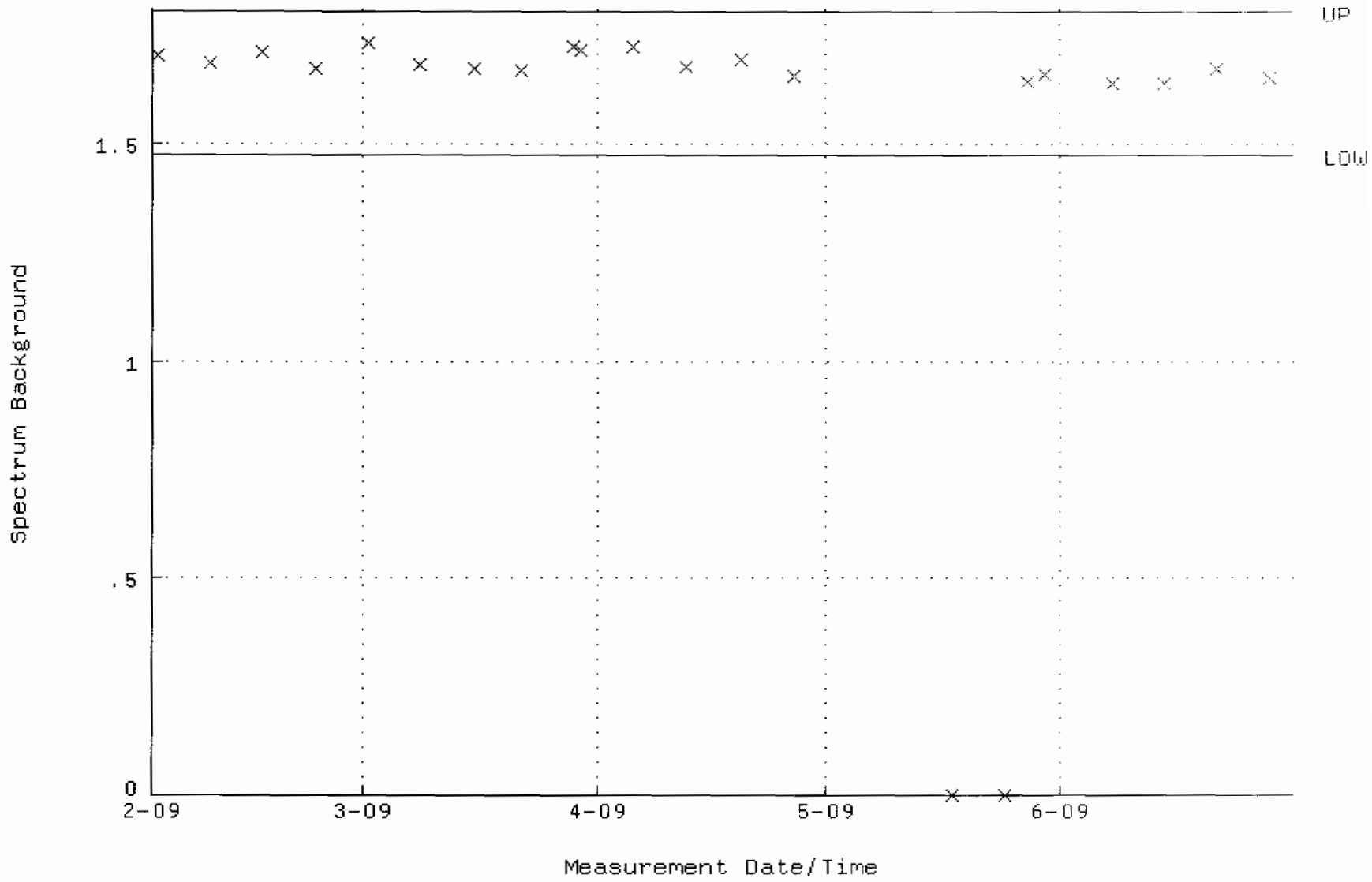

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM12_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:49 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

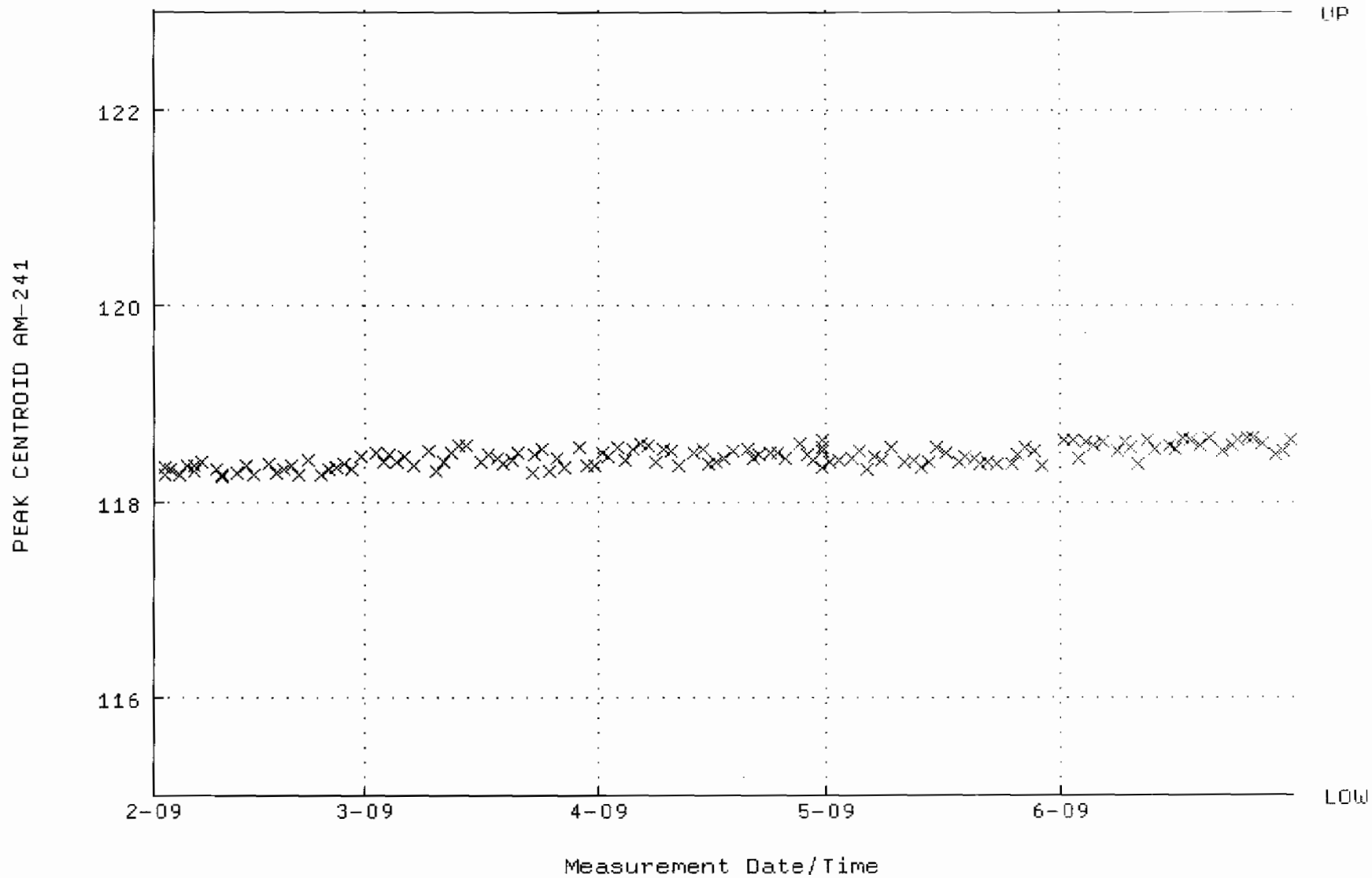

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM12.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:52 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.40364 through 1.71556

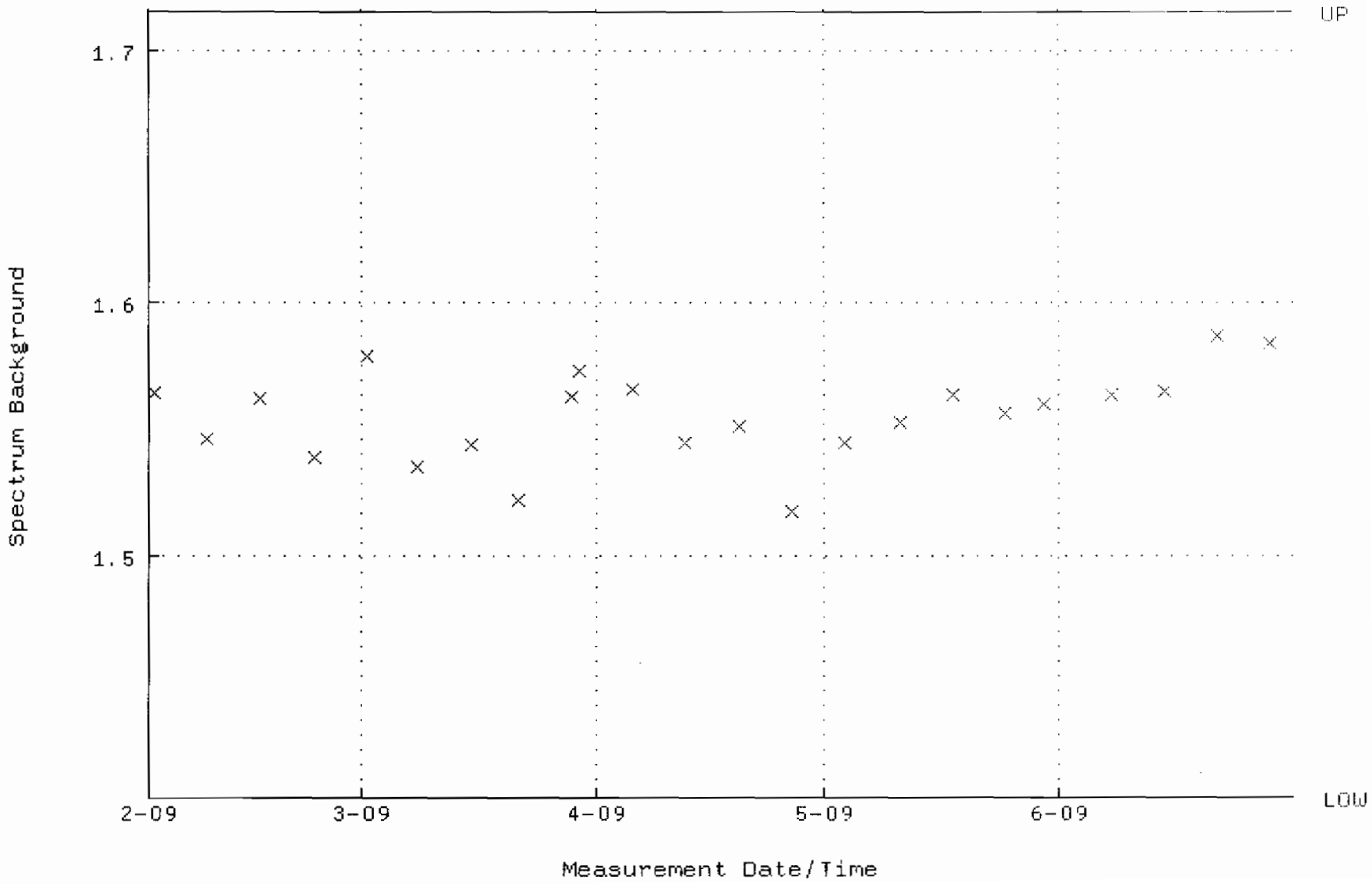

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

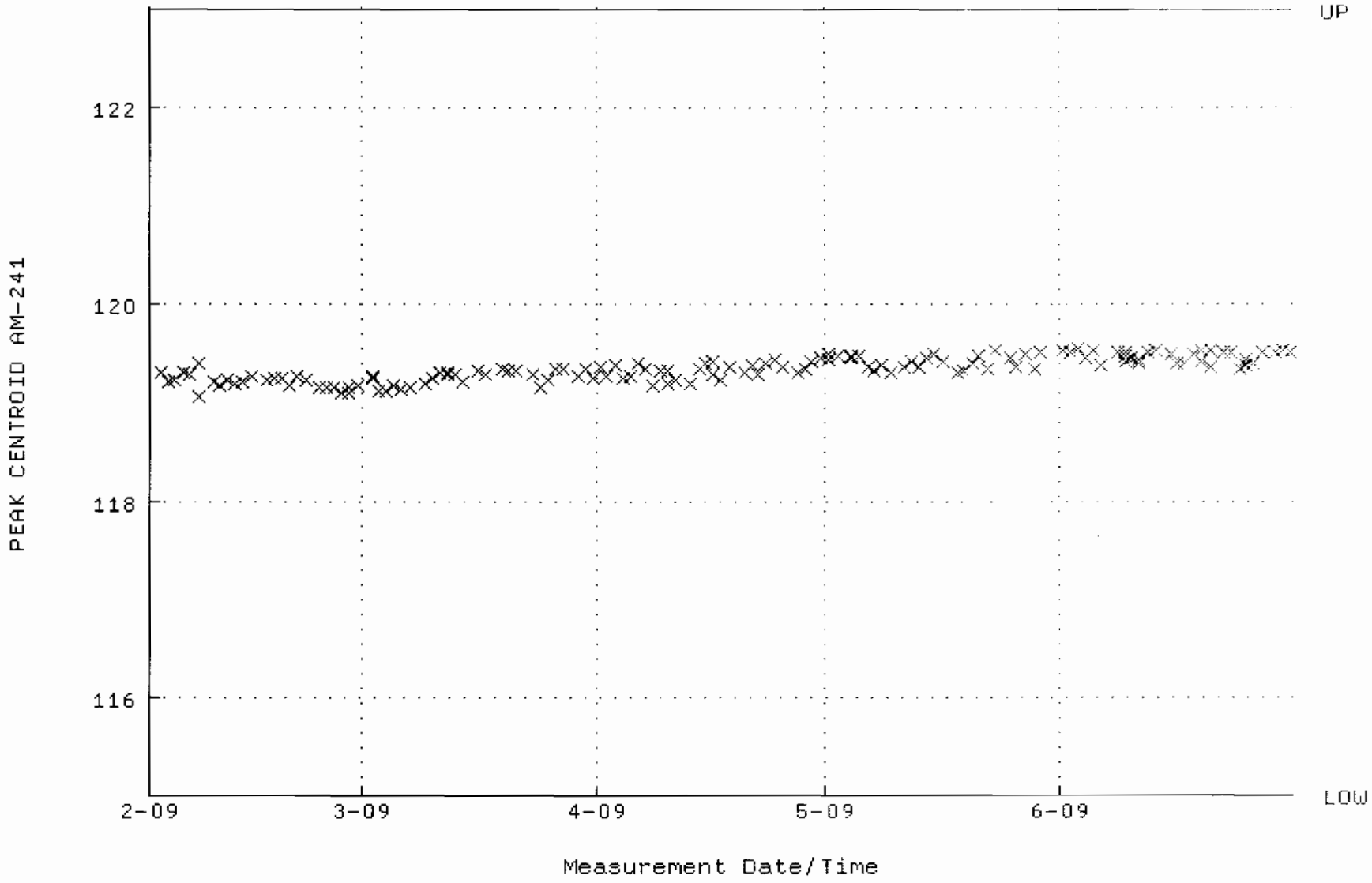

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM16.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:06 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.55150 through 1.89585

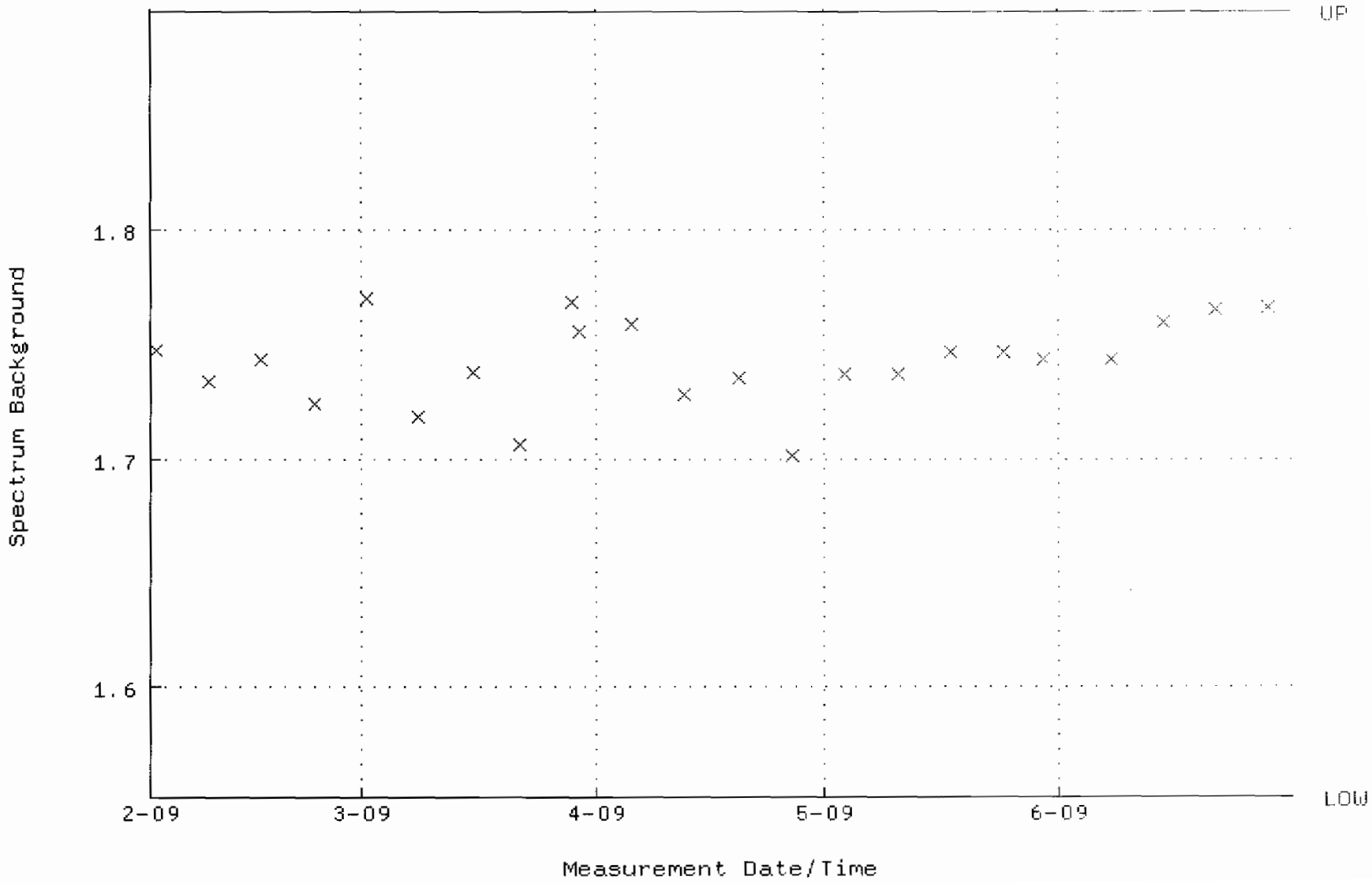

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:14:08 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

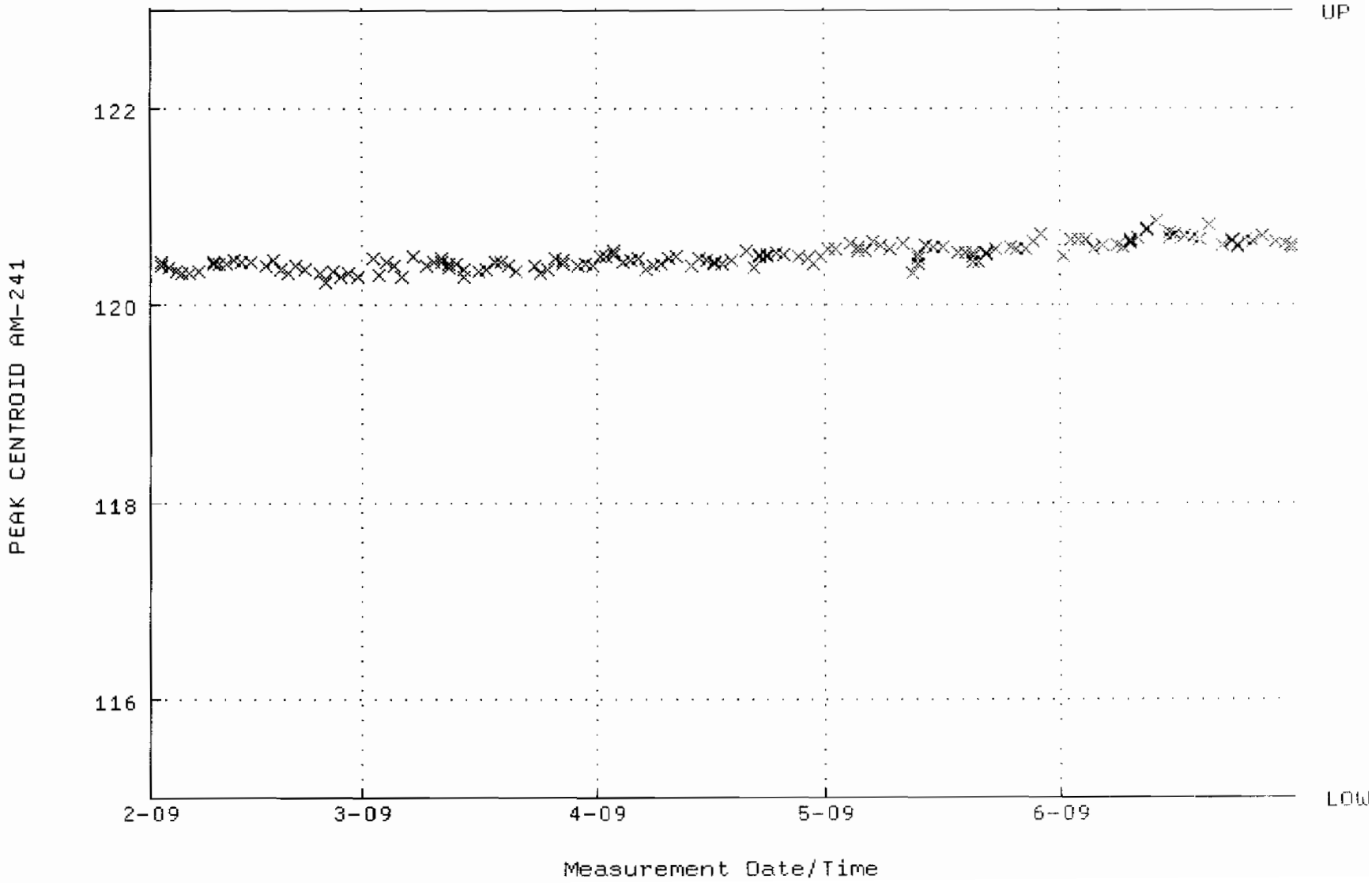

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM17.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.31148 through 1.60292

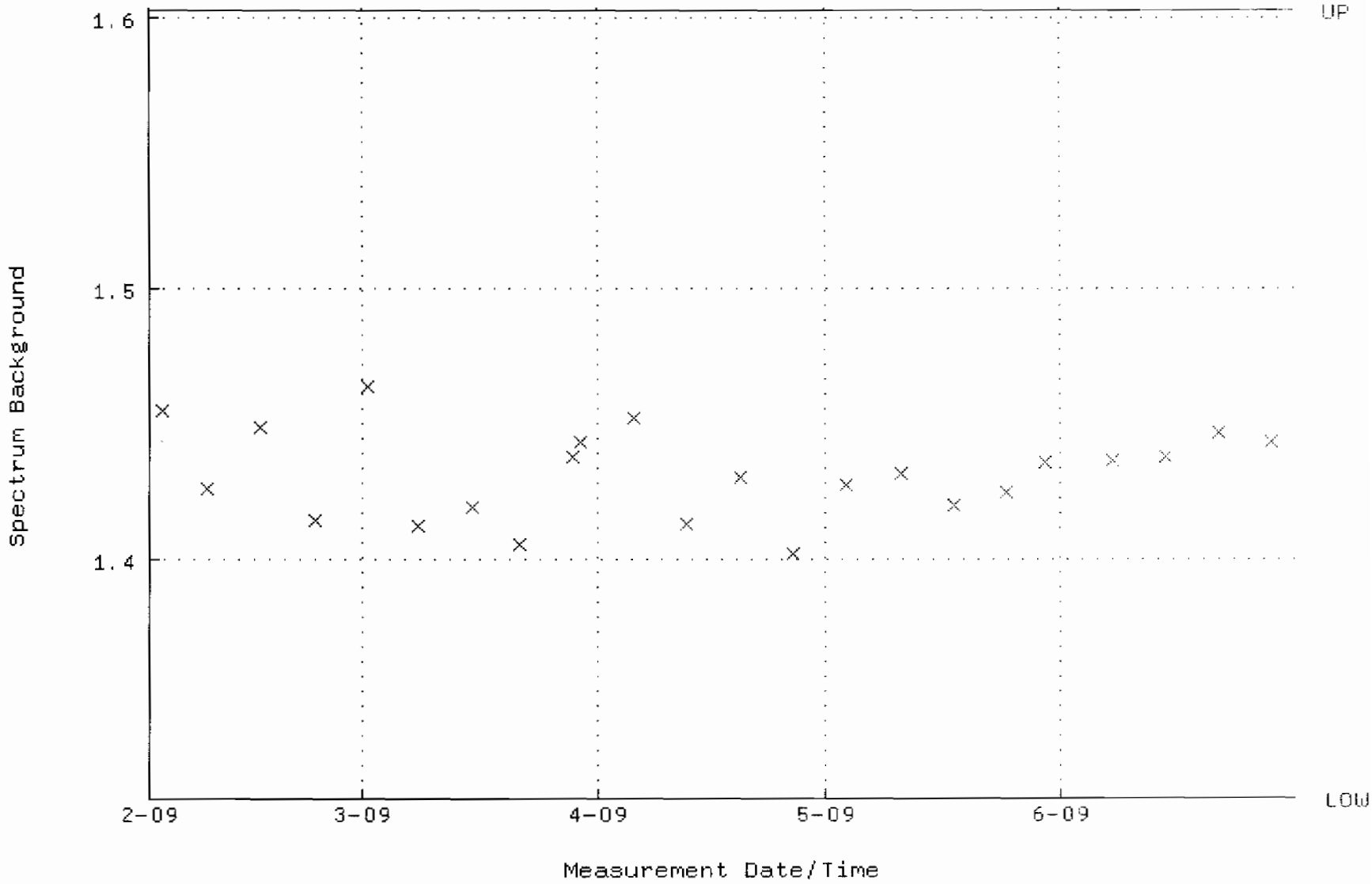

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:24:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

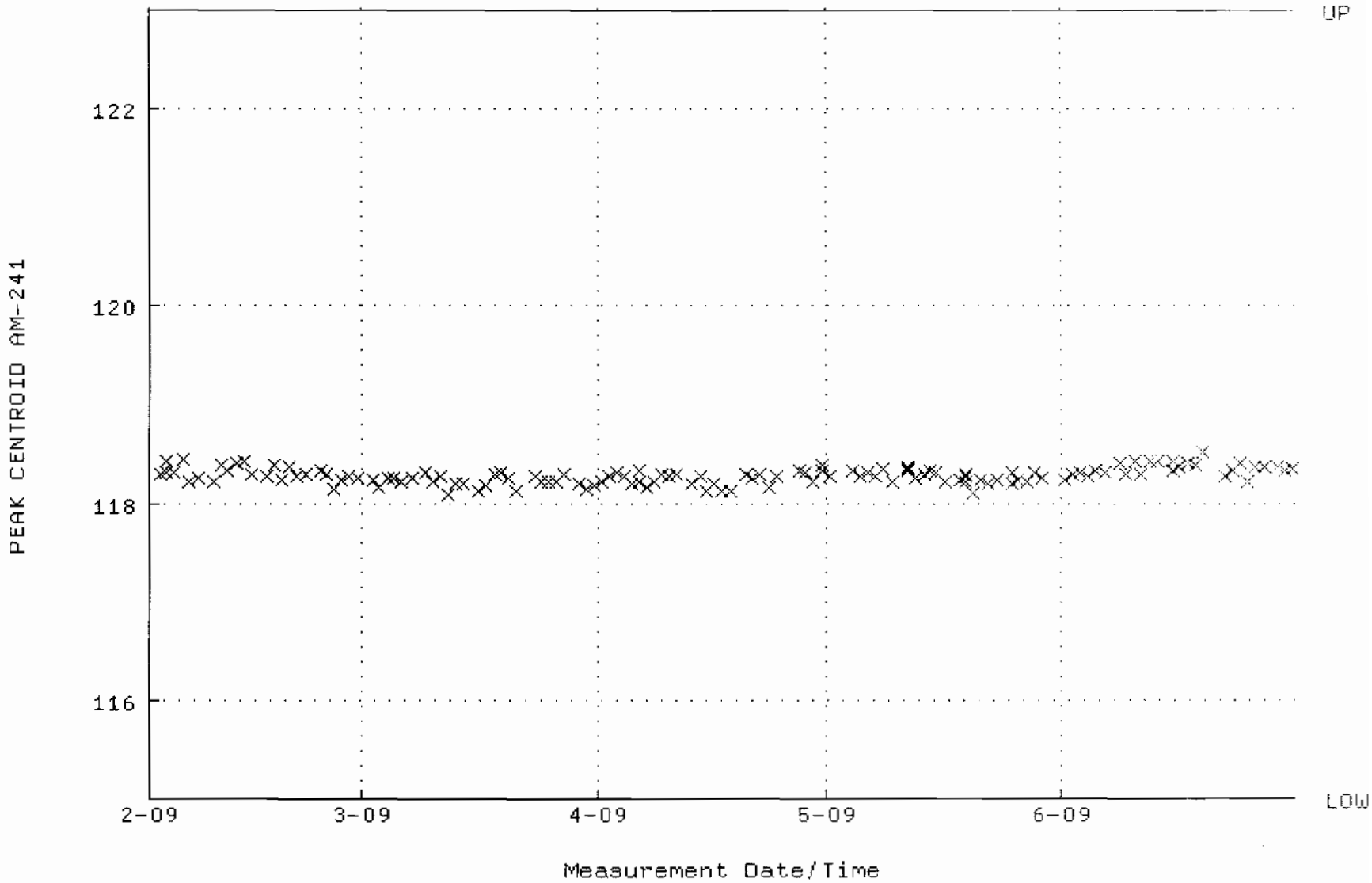

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.22710 through 2.72210

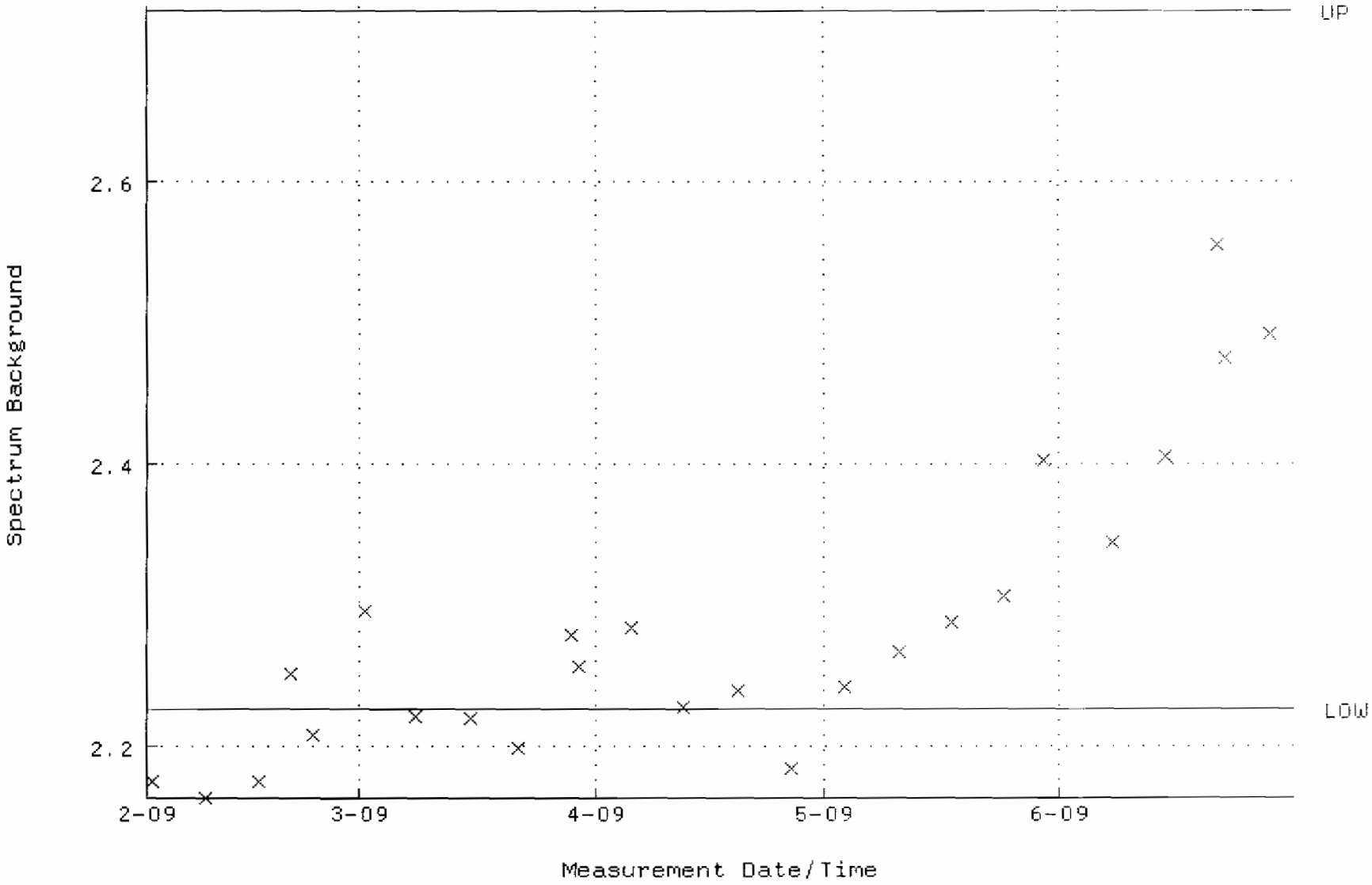

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:33:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

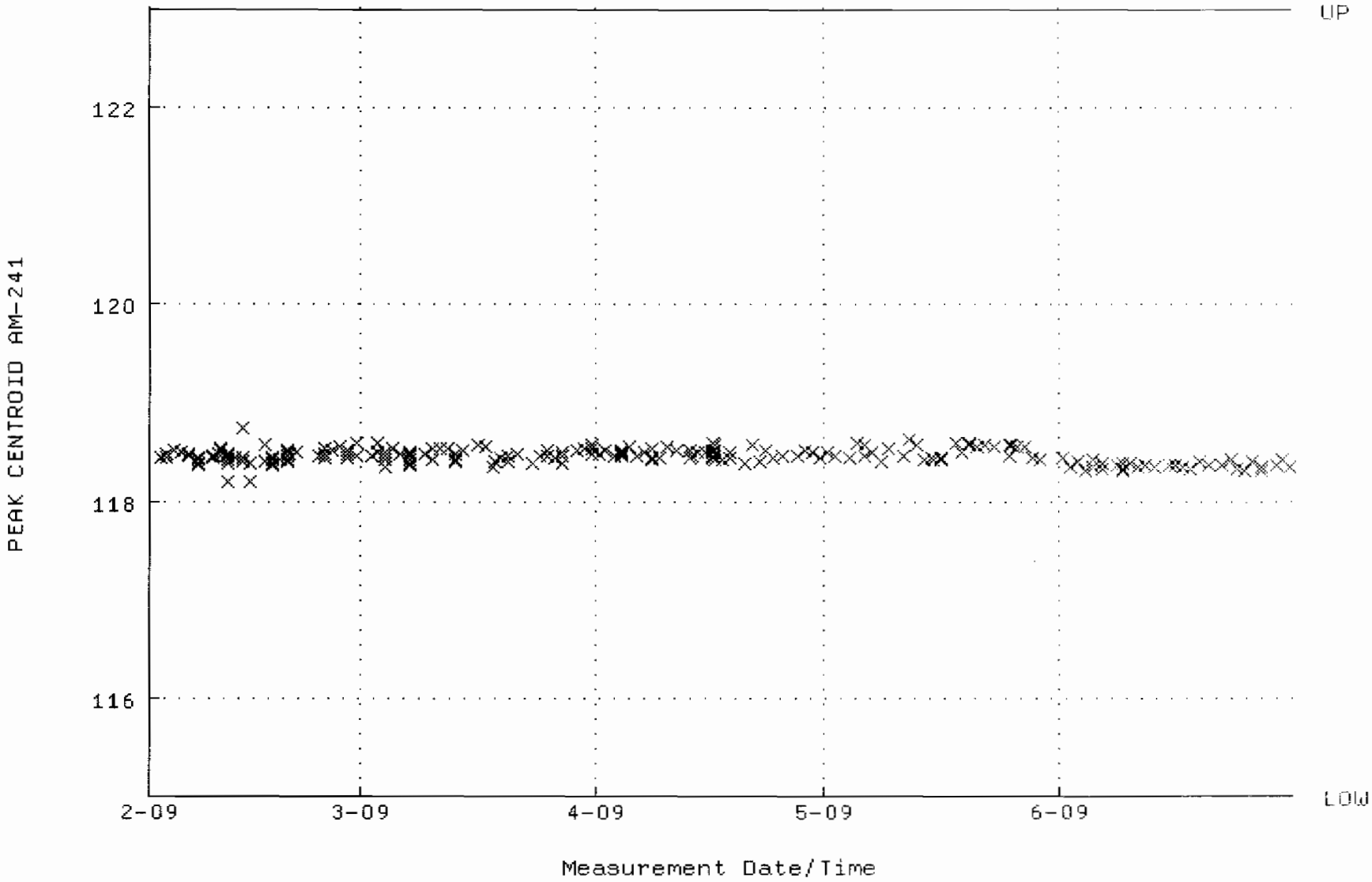

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM21.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:00 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.71450 through 2.09550

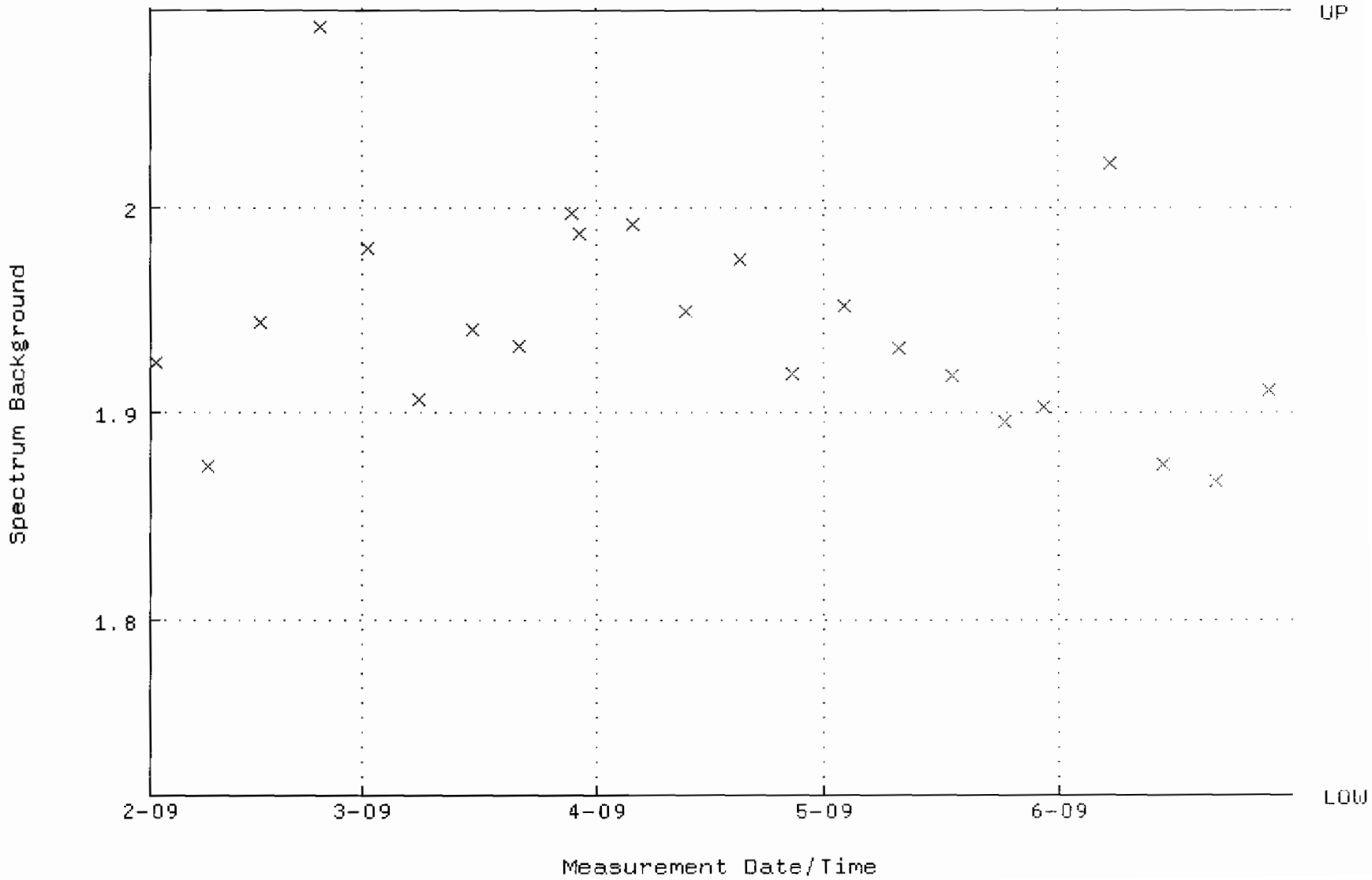

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
Parameter Name : PSCENTRO-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

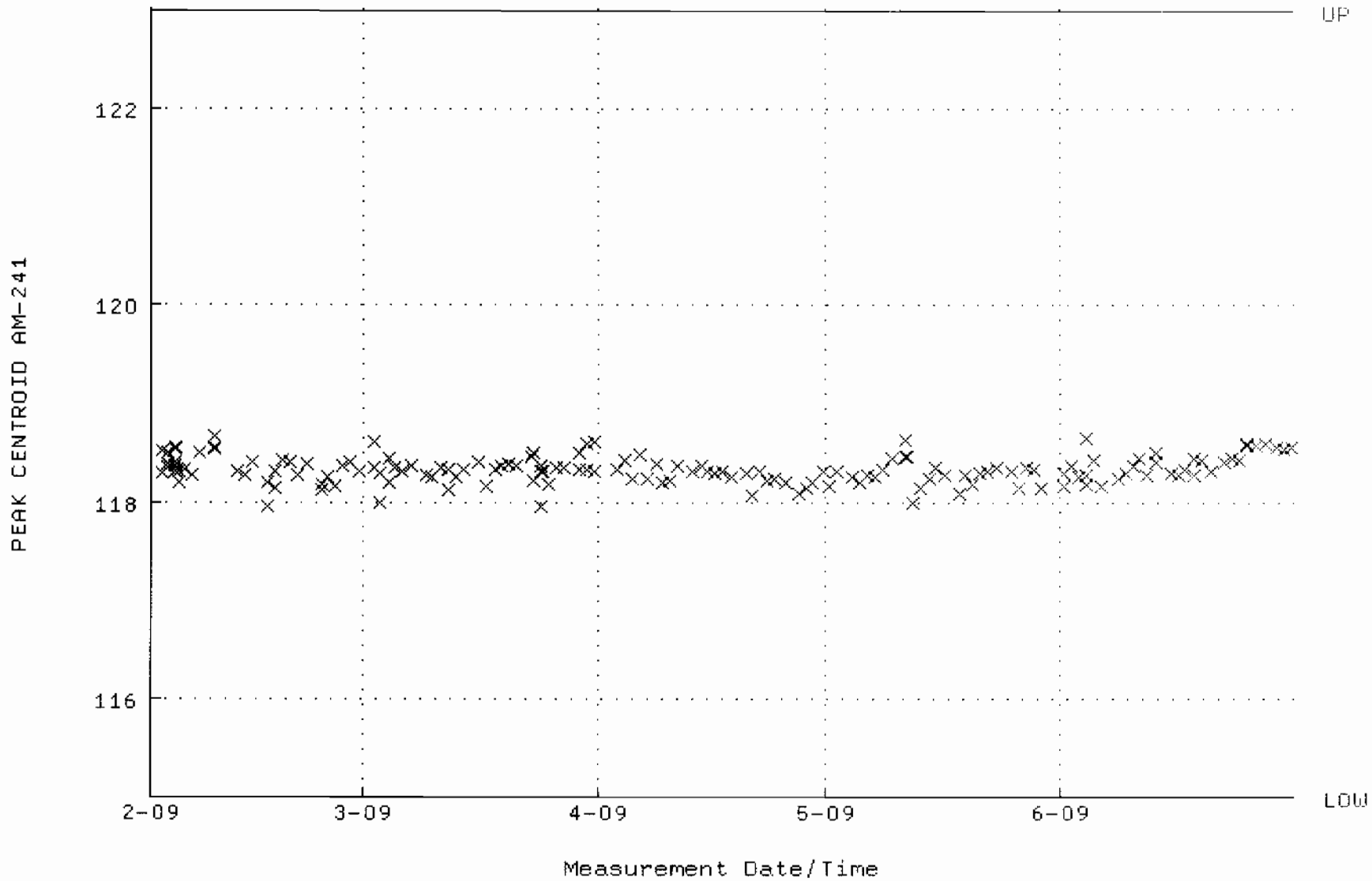

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM22.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.23300 through 2.45570

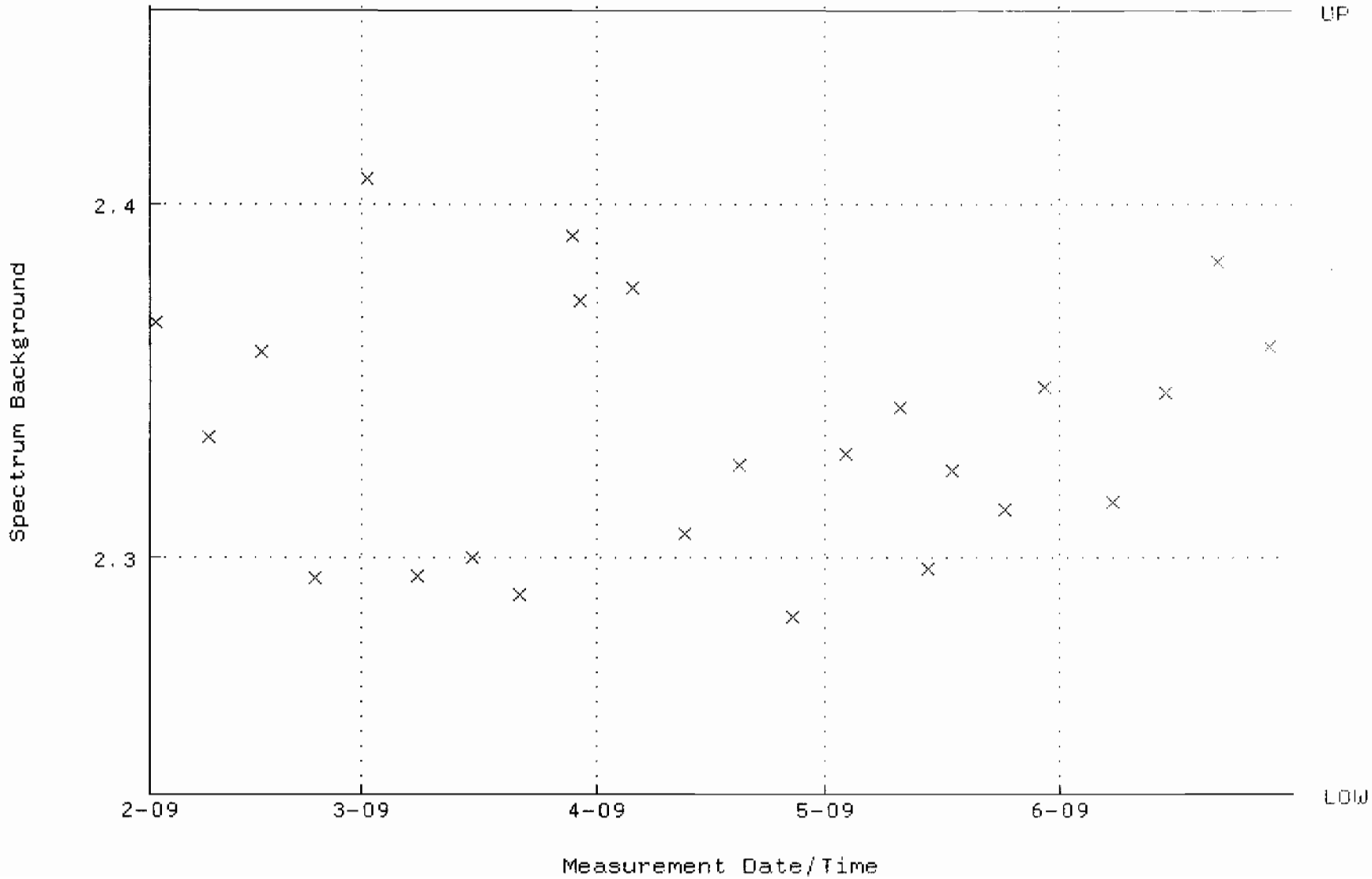

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:29:05 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

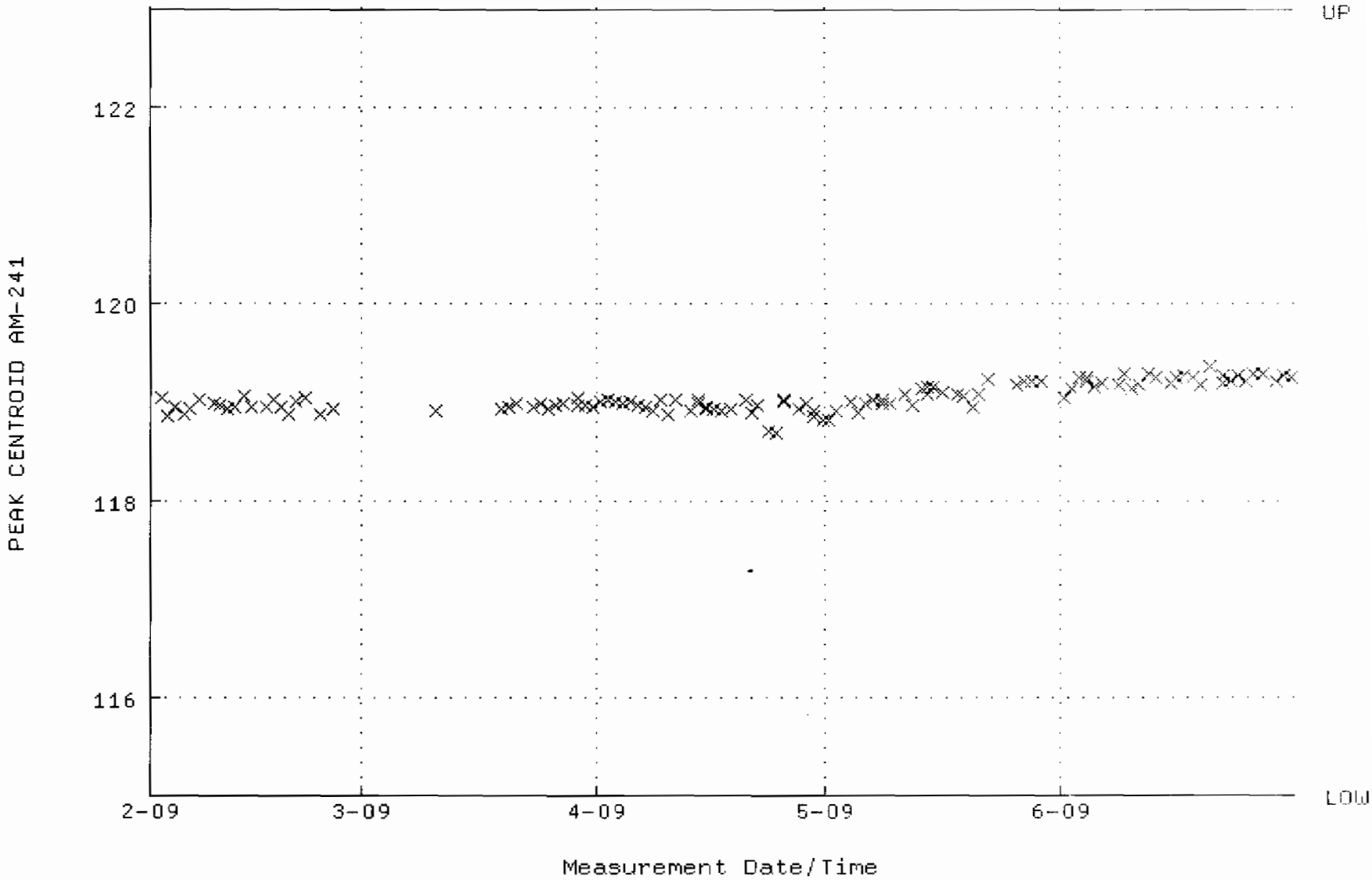

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM23.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.26405 through 1.54495

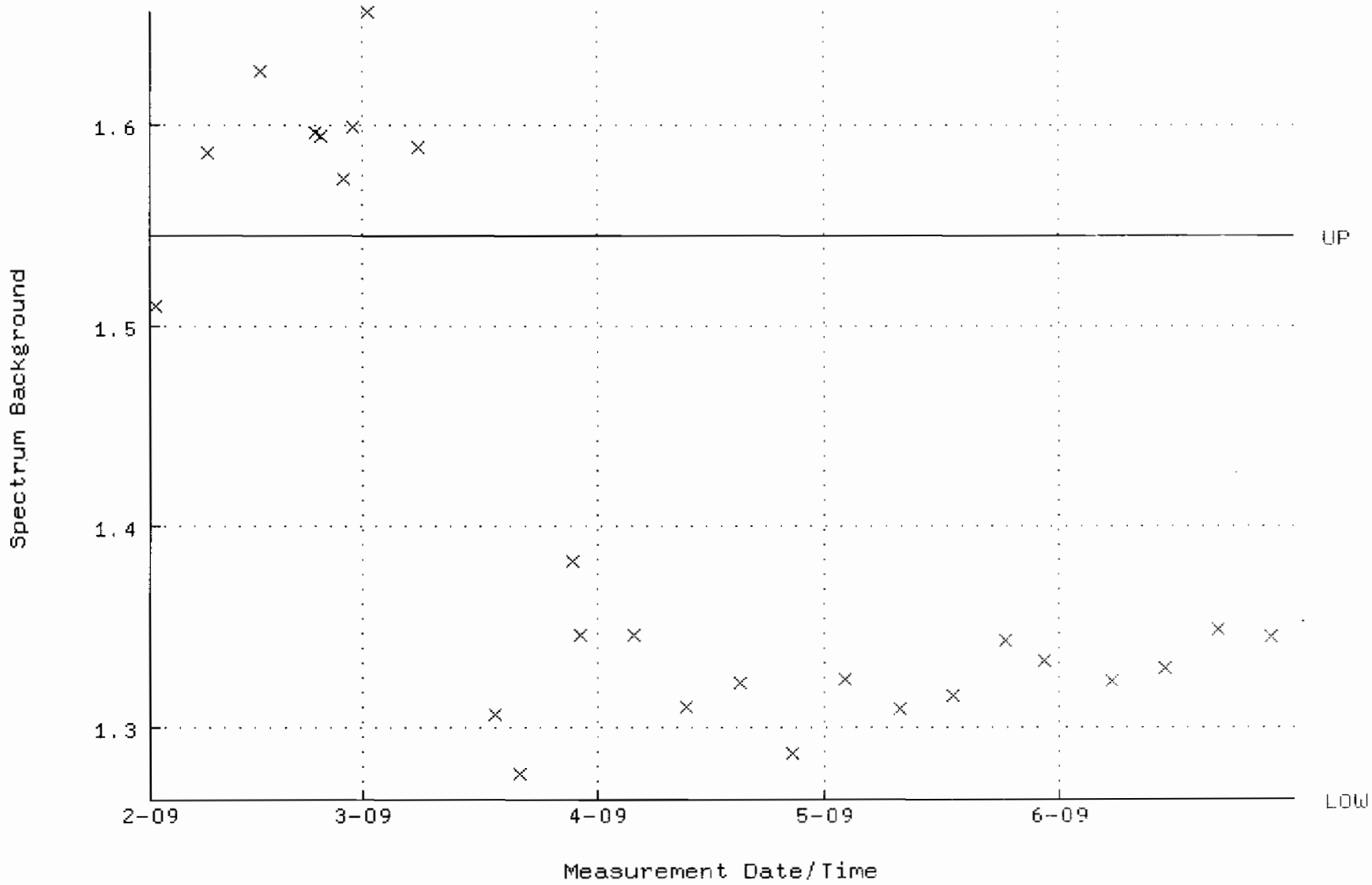

STANDARDS DATA

Amersham International plc
Amersham Laboratories

0134

NAMAS
CALIBRATION
No. 0146

[redacted]

Description

Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement

Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy

The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity

No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data

Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks:

The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

RC-5-024-061

W.F. Case

Amersham
The Health Science Group

Standard Traceability Log Rad

Source Material Info

Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info

Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

[illegible] 4/9/09
Amanda L. Tetu 4/9/09

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404·352·8677
Fax 404·352·2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-

Service
24937 Avenue Tibbitts, Valencia, California 91355
Laboratory
1380 Seaboard Industrial Blvd., Atlanta, Georgia 30318

ANALYTICS
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www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info

Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info

Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David Dry 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

	Isotope	Result	
	Mixed Gamma N1	440.7	pCi/L
	Mixed Gamma N2	461.1	pCi/L
	Mixed Gamma N3	467.4	pCi/L
Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**
Certificate Value =	444.3738739	pCi/L	
Lower Limit =	428.4865624	pCi/L	
Upper Limit =	484.3134376	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	27.91343762		
10 % of Mean =	45.64000000		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David D[illegible] 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr	**Isotope**	**Result**		
12/4/2008		**pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L		**Rule 3 (Pass/Fail)**
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

12/4/08
Amanda Fehr

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATE 4/14/2000 Scott C Neld 12/1/04

Angela L. Johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–225	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	425 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01-001

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Page 875 of 882

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: 7726794
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Reference LOV (available at SMO)

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID (LAB USE)
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special Instructions Below	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
-												
-												
-												
-												
-												
-												
-												

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab

Sample Tracking (LAB USE)
Date Entered (mm/dd/yy)
Entered by

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well decontaminated rad materials being sent to GEL on behalf of Hank Hinton
Please list as separate report.

Abnormal Conditions on Receipt (LAB USE)

Turnaround Time ☒Normal ☐Rush Required Report Date

QC Initials

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry		DEP	Weston / 7577 / 845-0867

1. Relinquished by	DEP Emp	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

Eckert & Ziegler
Analytics

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CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

RECEIVED 12/15/08

End of Certificate

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL

(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

Analyst: D. Roy	Serial #	Value		Uncertainty	
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L

Mean Value (Counting) =	2.407	pCi/L	**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L		**Rule 3 (Pass/Fail)**

Target =	2.397	pCi/L
Lower Limit =	2.259244371	pCi/L
Upper Limit =	2.554088963	pCi/L
Rule 1 Pass/Fail	**Pass**	
Two sigma =	0.147422296	
10 % of Mean =	0.240666667	
Rule 2 (Pass/Fail)	**Pass**	

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 880723**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232278001	SAMPLE	MXR1	GAM01	06-JUL-09 11:09	DONE	CAN	30-JAN-09 00:00
232278002	SAMPLE	MXR1	GAM04	06-JUL-09 11:09	DONE	CAN	05-MAY-09 00:00
232347001	SAMPLE	MXR1	GAM05	06-JUL-09 11:10	DONE	CAN	11-JUN-09 00:00
232347002	SAMPLE	MXR1	GAM08	06-JUL-09 11:10	DONE	CAN	30-JAN-09 00:00
232347003	SAMPLE	MXR1	GAM13	06-JUL-09 11:11	DONE	CAN	02-FEB-09 00:00
232347004	SAMPLE	MXR1	GAM14	06-JUL-09 11:12	DONE	CAN	06-MAR-09 00:00
232357001	SAMPLE	MXR1	GAM15	06-JUL-09 11:13	DONE	CAN	16-FEB-09 00:00
232357002	SAMPLE	MXR1	GAM17	06-JUL-09 11:13	DONE	CAN	27-JAN-09 00:00
232358001	SAMPLE	MXR1	GAM18	06-JUL-09 11:14	DONE	CAN	23-APR-09 00:00
232358002	SAMPLE	MXR1	GAM06	06-JUL-09 11:15	DONE	CAN	04-FEB-09 00:00
232358003	SAMPLE	MXR1	GAM21	06-JUL-09 11:15	DONE	CAN	25-JUL-08 00:00
232358004	SAMPLE	MXR1	GAM22	06-JUL-09 11:16	DONE	CAN	18-FEB-09 00:00
232358005	SAMPLE	MXR1	GAM23	06-JUL-09 11:17	DONE	CAN	02-JUN-09 00:00
232358006	SAMPLE	MXR1	GAM09	06-JUL-09 12:13	DONE	CAN	16-MAR-09 00:00
232358007	SAMPLE	MXR1	GAM10	06-JUL-09 12:13	DONE	CAN	16-MAR-09 00:00
232358008	SAMPLE	MXR1	GAM11	06-JUL-09 12:14	DONE	CAN	01-NOV-08 00:00
232358009	SAMPLE	MXR1	GAM12	06-JUL-09 12:15	DONE	CAN	10-FEB-09 00:00
232358010	SAMPLE	MXR1	GAM16	06-JUL-09 12:15	DONE	CAN	13-NOV-08 00:00
232358011	SAMPLE	MXR1	GAM17	06-JUL-09 13:25	DONE	CAN	27-JAN-09 00:00
1201870087	MB	MXR1	GAM18	06-JUL-09 13:25	DONE	CAN	23-APR-09 00:00
1201870088	DUP	MXR1	GAM21	06-JUL-09 13:26	DONE	CAN	25-JUL-08 00:00
1201870089	LCS	MXR1	GAM23	06-JUL-09 13:26	DONE	CAN	02-JUN-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 881676**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	AXD2	1133	10-JUL-09 21:19	DONE		
232347002	SAMPLE	AXD2	1134	10-JUL-09 21:19	DONE		
232347003	SAMPLE	AXD2	1135	10-JUL-09 21:19	DONE		
232347004	SAMPLE	AXD2	1136	10-JUL-09 21:19	DUSE		
232357001	SAMPLE	AXD2	1137	10-JUL-09 21:19	DONE		
232357002	SAMPLE	AXD2	1138	10-JUL-09 21:19	DUSE		
232358001	SAMPLE	AXD2	1139	10-JUL-09 21:19	DONE		
232358002	SAMPLE	AXD2	1140	10-JUL-09 21:19	DONE		
232358003	SAMPLE	AXD2	1141	10-JUL-09 21:19	DONE		
232358004	SAMPLE	AXD2	1142	10-JUL-09 21:19	DONE		
232358005	SAMPLE	AXD2	1144	10-JUL-09 21:19	DONE		
232358006	SAMPLE	AXD2	1145	10-JUL-09 21:19	DONE		
232358007	SAMPLE	AXD2	1146	10-JUL-09 21:19	DONE		
232358008	SAMPLE	AXD2	1147	10-JUL-09 21:19	DONE		
232358009	SAMPLE	AXD2	1148	10-JUL-09 21:19	DONE		
232358010	SAMPLE	AXD2	1149	10-JUL-09 21:20	DONE		
232358011	SAMPLE	AXD2	1150	10-JUL-09 21:20	DONE		
1201872427	MB	AXD2	1151	10-JUL-09 21:20	DONE		
1201872428	DUP	AXD2	1152	10-JUL-09 21:20	DONE		
1201872429	LCS	AXD2	1153	10-JUL-09 21:20	DONE		
232347004	SAMPLE	AXD2	1165	14-JUL-09 09:06	DONE		
232357002	SAMPLE	AXD2	1166	14-JUL-09 09:06	DONE		

Instrument Run Log

Instrument Type: LSC **Batch ID: 881715**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232037001	SAMPLE	KXK2	LSCBROWN	09-JUL-09 07:03	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232037002	SAMPLE	KXK2	LSCBROWN	09-JUL-09 08:47	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232037003	SAMPLE	KXK2	LSCBROWN	09-JUL-09 10:31	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232037004	SAMPLE	KXK2	LSCBROWN	09-JUL-09 12:16	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232037005	SAMPLE	KXK2	LSCBROWN	09-JUL-09 14:00	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232037006	SAMPLE	KXK2	LSCBROWN	09-JUL-09 15:44	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232037007	SAMPLE	KXK2	LSCBROWN	09-JUL-09 17:28	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232037008	SAMPLE	KXK2	LSCBROWN	09-JUL-09 19:12	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232037009	SAMPLE	KXK2	LSCBROWN	09-JUL-09 20:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358001	SAMPLE	KXK2	LSCBROWN	09-JUL-09 22:41	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358002	SAMPLE	KXK2	LSCBROWN	10-JUL-09 00:25	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358003	SAMPLE	KXK2	LSCBROWN	10-JUL-09 05:49	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358005	SAMPLE	KXK2	LSCBROWN	10-JUL-09 13:01	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358006	SAMPLE	KXK2	LSCBROWN	10-JUL-09 13:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358007	SAMPLE	KXK2	LSCBROWN	10-JUL-09 14:25	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358008	SAMPLE	KXK2	LSCBROWN	10-JUL-09 15:07	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358009	SAMPLE	KXK2	LSCBROWN	10-JUL-09 15:50	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358010	SAMPLE	KXK2	LSCBROWN	10-JUL-09 16:32	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358011	SAMPLE	KXK2	LSCBROWN	10-JUL-09 17:14	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201872558	MB	KXK2	LSCBROWN	10-JUL-09 17:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201872559	DUP	KXK2	LSCBROWN	10-JUL-09 18:39	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201872560	LCS	KXK2	LSCBROWN	10-JUL-09 19:21	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232358004	SAMPLE	KXK2	LSCGOLD	13-JUL-09 13:00	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Thursday, June 25, 2009

REQUEST NUMBER: 09-2479

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2479
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 6/25/2009
TURNAROUND/REPORT DUE: 7/10/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2479

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	EPA:906.0	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	HASL-300:ISOU	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2479

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOU	1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2479

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2479

REQUEST NUMBER: 09-2479

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6007	1	POLY	H3	Ice	R
CAMO-09-6006	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6006	1	POLY	H3	Ice	R
CAMO-09-6008	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6008	1	POLY	H3	Ice	R
CAMO-09-6009	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6009	1	POLY	H3	Ice	R
CAMO-09-6034	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6034	1	POLY	H3	Ice	R
CAMO-09-6043	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6043	1	POLY	H3	Ice	R
CAMO-09-6045	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6045	1	POLY	H3	Ice	R
CAMO-09-6041	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6041	1	POLY	H3	Ice	R
CAMO-09-6040	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6040	1	POLY	H3	Ice	R
CAMO-09-6044	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6044	1	POLY	H3	Ice	R
CAMO-09-6035	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6035	1	POLY	H3	Ice	R
CAMO-09-6038	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6038	1	POLY	H3	Ice	R
CAMO-09-6039	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6039	1	POLY	H3	Ice	R
CAMO-09-6042	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6042	1	POLY	H3	Ice	R
CAMO-09-6049	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6049	1	POLY	H3	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time

6/25/09 1400 4-2474

Printed Name	Signature	Printed Name	Signature
Printed Name	Signature	Printed Name	Signature
Printed Name	Signature	Printed Name	Signature

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name	Signature

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6006

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Alluv
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604950	ok	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Light brown dry Loamy → sand soil, some root material & tuff fragments

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-07 AM 6.16.09 above drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 17$ dpm

$\beta/\gamma \leq 929$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.23.09	(Printed Name)	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	1509

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6007

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		1253	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604950	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	1.0.	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	2.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan, indurated tuff

FTB: CAMO-09-6059

SAMPLE COMMENTS: Interface @ 1.0' bgs

LOCATION DESC: 03-049(a) 07 AG 6.17.09, above drainage (5) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 920 dpm

COLLECTED BY (PRINT) A. Gaumas **REVIEWED BY (PRINT)** Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gaumas	6.23.09	(Printed Name)	6/23/09
(Signature)	1605	(Signature)	1505

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6008

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		0850	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	AG 6.23.09 ok 03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604951	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	AG 6.23.09 ~~Req~~ 15 Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sediment from wetland, moist → wet, brown, -/ cobbles

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) - 04 ~~05~~ AG 6.17.09, drainage ⑥ of Sigma, in wetland.

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 343 dpm

PID Ambient / Reading = 0.0 / 5.7 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09 1505	(Printed Name) [illegible]	6/23/09 1509
(Signature) [illegible]		(Signature) [illegible]	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6009

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	ok
TIME COLLECTED (HH:MM)		0908	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	~~ok~~ 03-049(a) 6.23.09	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604951		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~NO~~ 6.25.09 Rasy 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/tan moist indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a) 04~~05~~ 6.17.09

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq$ 23 dpm

$\beta/\gamma \leq$ 520 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{3.2}$ ppm

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature) [signature]	6.23.09 1505	(Printed Name) [illegible] (Signature)	6/23/09 1505

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6034

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		1020	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604981	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.23.09	N	
1	AG 6.23.09 Rec'd 15-Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Moist, light brown loamy sediment

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) 06, drainage (S) of Sigmas

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 29$ dpm

$\beta/\gamma \leq 656$ dpm

PID Ambient Reading = 0.0 / 5.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 15.05	(Printed Name) (Signature) [signature]	6/23/09 1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6035

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		1032	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604981	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Aug 6.2009 15 Res Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan/Pink highly indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-06, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α: 17 dpm

β/γ: 452 dpm

PID Ambient / Reading = 0.0 / 4.3 ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature)	6.23.09 15.05	(Printed Name) (Signature)	6/23/09
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6038

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Mlh
TIME COLLECTED (HH:MM)		0945	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604983	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	Rec 6.23.09 Rec'd 15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: light brown, moist, loamy soil

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-09, in drainage (5) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 704 dpm

PID ambient / Reading = 0.0 / 4.3 ppm

COLLECTED BY (PRINT) A. Gonmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonmas (Signature) [signature]	6.23.09 1509	(Printed Name) [signature] (Signature)	6/23/09 1509
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6039

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		AG 6.22.09 ~~0850~~ 0954	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604983	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA **COMPOSITE TIME INTERVAL:** NA **WATER FLOWING:** YES / (NO) / NA

BOREHOLE: YES / (NO) / NA **BOREHOLE DECLINATION:** NA **BOREHOLE DIRECTION:** NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	AG 6.23.09 ~~Reg~~ 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Highly indurated tan tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 63 · 049(a) - 09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 493 dpm

PID Ambient Reading 0.0 / 6.7 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Melissa Martyn	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	305
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6040

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		0925	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604984	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.23.09	N	
1	AG 6.23.09 ~~Rec~~ 15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown moist sediment w/ some root material, light & loamy

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) · 10, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 622 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{8.2}$ ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature)	6.23.09 1505	(Printed Name) (Signature)	6/23/09 1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6041

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		0936	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	↓
LOCATION ID:	MO-604984	ok	FIELD QC TYPE:	NA	↓
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	RG 6-29-09 15 Rush Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Tan/gray indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-10, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 622 dpm

PID Ambient Reading = 0.0 / 2.4 ppm

COLLECTED BY (PRINT) A. Gourmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gourmas	6.23.09	(Printed Name)	6/23/09
(Signature)	1505	(Signature)	1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6042

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2006	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1355	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604985	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AUG. 23, 2009	N	
1	15-Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sediment, brown → light brown eroded tuff & duff

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-11

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

β/γ = 343 dpm

PID Ambient / Reading = 0.0 / 5.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Melissa Martin	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	3:09
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6043

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	OBT3
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604985	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/gray/tan weathered tuff → indurated tuff

FTB: CAMO-09-6060

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-11

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 1331 dpm

PID ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Sherri Sherwood	6/23/09
(Signature) [signature]	1505	(Signature) Sherri Sherwood	3:25
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6044

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	SED
TIME COLLECTED (HH:MM)		1405	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604986	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~	~~15-Day~~	~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Eroded tuff sediment tan/brown with duff material

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-12, in drainage (5) of sigma

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 17$ dpm

$\beta/\gamma \leq 1419$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{2.1}$ ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.23.09	(Printed Name)	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	1500
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6045

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	qbt3
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604986	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/gray indurated tuff

FR: CAMO-09-6054

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a) 12, in drainage below Sigma (S)

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 23$ dpm

$\beta/\gamma \leq 1324$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature) [signature]	6.23.09 1505	(Printed Name) (Signature) [signature]	6/23/09 1509
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6049

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Ally
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	UNK	MD-604960	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-6006

~~Light brown, Loamy~~ → Sand soil, some root material & tuff material

OK AG 6.23.09

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-07

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 17$ dpm

$\beta/\gamma \leq 929$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Luian

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 15.05	(Printed Name) [signature] (Signature)	6/23/09 1509

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6054

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1430	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	OK	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604786	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~7196A~~	~~250 ML POLY~~	~~Ice~~ AG 6.28.09	N	
~~2~~		~~8290~~	~~1 LITER AMBER GLASS~~	~~Ice~~ AG 3/31/09	N	
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-6045

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-12

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature)	6.23.09 1505	(Printed Name) (Signature)	6/23/09 1505
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6059

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1253	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604950	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / (NA)		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / (NA)

BOREHOLE: YES / NO / (NA) BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
AG 6.23.09 ~~2~~ 1	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6007
tan indurated tuff

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-07

FIELD SCREENING/MEASUREMENT RESULTS: NA

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Luyian

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 1505	(Printed Name) Sherri Sherwood (Signature) [signature]	6/23/09 3:30
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6060

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604985	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
AG 6.23.09 2 1	Reg	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6043

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-11

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 1505	(Printed Name) Sherri Sherwood (Signature) [signature]	6/23/09 3:30
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6006	ARS Sample ID:	ARS2-09-00074-001
Sample Collection Date:	06/23/09 12:45	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 13:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	36.36	71.52	133.66	71.66	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	38.24	15.57	19.98	16.64		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	18.87	7.43	1.68	7.48		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.14	0.19	0.11	0.19		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.02	0.05	0.08	0.05	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.24	0.20	0.07	0.20		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.20	0.13	11.20	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.28	0.53	0.19	0.53		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.32	0.77	0.20	0.78		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.63	1.32	0.35	1.32		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	0.76	1.87	1.03	1.88	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.03	0.13	0.08	0.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.19

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6007	ARS Sample ID:	ARS2-09-00074-002
Sample Collection Date:	06/23/09 12:53	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 16:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	40.37	70.68	127.53	70.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	24.88	14.72	20.61	15.04		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	31.24	11.09	2.24	11.12		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.09	0.10	0.15	0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.26	0.22	0.11	0.22	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.00	-0.04	0.09	-0.04	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	18.25	0.17	18.25	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.34	0.59	0.19	0.59		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	3.44	1.68	0.30	1.88		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.55	1.03	0.45	1.03		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	4.27	4.99	2.02	5.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.03	0.12	0.07	0.12	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.32

Quality Assurance Review

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6006	ARS Sample ID:	ARS2-09-00074-003
Sample Collection Date:	06/23/09 08:50	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-5.38	40.13	128.32	40.13	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	44.77	17.27	21.30	18.12		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	22.94	8.55	1.81	8.56		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	11.82	0.12	11.82	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	13.46	0.07	13.46	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.98	0.87	0.14	0.88	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.32	0.51	0.16	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-228	1.84	0.79	0.32	0.80		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.76	1.01	0.33	1.01		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.02	2.64	1.33	2.68		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.54	0.62	0.21	0.62		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 3.34

Quality Assurance Review

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ARS AMERICAN RADIATION SERVICES, INC.

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ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6009
Sample Collection Date: 06/23/09 09:08
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-004
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	43.37	74.66	133.72	74.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	49.40	17.43	20.15	18.45		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.06	0.11	0.09	0.11	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	25.46	8.08	1.48	8.11		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	0.07	0.10	0.07	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.07	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.10	0.13	0.06	0.13		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.50	0.48	0.17	0.48	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.40	0.50	0.16	0.50		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.30	0.52	0.28	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	-0.06	86.23	0.19	86.23	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.27	3.20	1.19	3.42		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.04	0.09	0.04	0.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.89

Quality Assurance Review

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6034	ARS Sample ID:	ARS2-09-00074-005
Sample Collection Date:	06/23/09 10:20	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 16:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.11	87.03	133.66	87.47	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	39.92	16.41	19.96	17.12		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.18	0.26	0.15	0.26	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.31	-19.95	4.04	-19.95	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	18.47	0.16	18.47	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.13	0.11	0.13	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.70	0.41	0.10	0.41		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.26	0.38	0.18	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.32	0.64	0.19	0.64		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.66	0.66	0.54	0.66		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.99	0.87	0.40	0.87		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	7.19	4.21	1.68	4.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.10	0.42	0.20	0.42	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.43

Quality Assurance Review

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LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6035	ARS Sample ID:	ARS2-09-00074-006
Sample Collection Date:	06/23/09 10:32	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	111.18	99.15	127.53	100.08	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	33.01	16.15	20.61	16.62		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	1.12	7.61	4.21	7.61	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO 60	0.00	11.98	0.12	11.98	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	15.68	0.08	15.68	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	63.35	0.14	63.35	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.36	0.55	0.18	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.60	0.60	0.48	0.60		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.19	1.05	0.53	1.06		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.93	3.27	1.41	3.34		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.10	0.32	0.15	0.32	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.47

Quality Assurance Review

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LELAP Certificate # 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6038	ARS Sample ID:	ARS2-09-00074-007
Sample Collection Date:	06/23/09 09:45	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	53.28	77.58	128.32	77.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	48.71	18.23	21.30	19.18		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.66	-28.61	4.37	-28.61	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	14.16	0.14	14.16	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	1.24	0.52	0.09	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.47	0.42	0.17	0.42	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.42	0.58	0.17	0.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.46	0.32	0.42	0.32	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.35	1.09	0.22	1.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.46	3.13	1.47	3.23		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.48	0.41	0.12	0.41		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.50

Quality Assurance Review

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LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6039	ARS Sample ID:	ARS2-09-00074-008
Sample Collection Date:	06/23/09 09:54	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	Yrv	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	76.84	87.88	133.72	88.39	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	42.51	16.91	20.15	17.69		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	1.00	9.18	5.09	9.16	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	13.72	0.14	13.72	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.23	0.21	0.10	0.21	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.31	0.33	0.09	0.33		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	14.27	0.16	14.27	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.60	0.58	0.15	0.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	2.37	0.69	0.37	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.23	0.37	0.29	0.37	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	4.86	4.48	1.08	4.61		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.00	-0.10	0.14	-0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.87

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6040	ARS Sample ID:	ARS2-09-00074-009
Sample Collection Date:	06/23/09 09:25	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	90.02	93.81	133.66	94.46	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	35.56	16.05	19.98	16.63		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.15	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.11	-15.37	3.52	-15.37	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.20	0.21	0.15	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.20	0.11	0.20	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.16	0.20	0.09	0.20		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.53	0.58	0.17	0.58	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.21	0.59	0.21	0.59		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.00	1.00	0.40	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.74	1.00	0.40	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.55	2.91	1.43	2.97		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.57	0.57	0.21	0.57		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 3.28

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate # 30558 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6041
Sample Collection Date: 06/23/09 09:36
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-010
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	57.98	76.78	127.53	79.10	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	31.92	18.72	20.61	16.20		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	0.24	4.79	2.96	4.79	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.14	0.21	0.12	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.11	0.15	0.09	0.15	SE	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	37.23	0.08	37.23	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	12.46	0.14	12.46	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.39	0.49	0.11	0.50		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.58	0.26	0.53	0.36		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.38	0.49	0.21	0.49		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	6.68	3.68	1.44	4.15		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.28	0.27	0.12	0.27		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.65

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6042	ARS Sample ID:	ARS2-09-00074-011
Sample Collection Date:	06/23/09 13:55	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	14.17	55.49	128.32	55.52	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	39.84	16.88	21.30	17.87		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-0.91	-13.77	2.91	-13.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.15	0.21	0.13	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.51	0.31	0.08	0.31		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.50	0.38	0.14	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.46	0.54	0.16	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.32	0.71	0.33	0.71	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.90	0.96	0.19	0.96		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.11	4.22	1.59	4.38		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.42	0.34	0.12	0.34		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.02

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6043	ARS Sample ID:	ARS2-09-00074-012
Sample Collection Date:	06/23/09 14:00	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	9.94	88.52	133.72	88.52	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	42.67	16.45	20.15	17.26		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-2.18	-39.09	4.20	-39.09	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	10.77	0.11	10.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.22	0.08	0.22	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.20	0.18	0.07	0.18		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.20	0.13	11.20	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.51	0.52	0.16	0.53		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.09	0.81	0.20	0.81		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.80	1.04	0.23	1.04		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.71	2.93	1.27	3.05		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.31	0.23	0.07	0.23		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.80

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6044	ARS Sample ID:	ARS2-09-00074-013
Sample Collection Date:	06/23/09 14:05	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	LLD	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	36.21	71.59	133.66	71.73	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	58.06	18.08	19.98	19.43		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	28.36	10.23	2.10	10.26		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	13.72	0.14	13.72	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.13	0.10	0.13	SU	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.04	0.18	0.10	0.18	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.24	0.38	0.16	0.38	SU	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.55	0.56	0.13	0.86		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	-0.14	137.77	0.37	137.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.06	0.70	0.26	0.70		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.86	3.02	1.45	3.08		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.16	0.26	0.12	0.26		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.59

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate # 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6045
Sample Collection Date: 06/23/09 14:10
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-014
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	93.40	92.88	127.53	93.58	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	46.96	17.64	20.61	18.56		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.07	0.14	0.11	0.14	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	29.56	9.50	1.76	9.54		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.02	0.06	0.12	0.06	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.22	0.08	0.22	BT	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.03	0.13	0.09	0.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.96	0.13	11.96	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.18	0.82	0.19	0.82		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	2.21	0.85	0.34	0.86		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.09	1.00	0.29	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.62	3.28	1.42	3.38		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.08	0.27	0.14	0.27	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.16

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6049	ARS Sample ID:	ARS2-09-00074-015
Sample Collection Date:	06/23/09 12:45	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	14.17	55.49	126.32	55.52	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	27.37	15.33	21.30	15.69		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.18	0.21	0.10	0.21	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-2.13	-31.44	3.53	-31.44	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	10.13	0.10	10.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.14	0.07	0.14	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.26	0.21	0.06	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.89	0.51	0.12	0.51	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.59	0.48	0.10	0.49		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	-0.12	101.60	0.27	101.68	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.86	0.86	0.42	0.86		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.93	3.29	1.15	3.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.02	0.10	0.06	0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.15

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-6006 → 6009
6034 → 6035
6038 → 6045
6049
10463
7143
7144

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-6059
6060
6054
10468
9118
9119

Reason: QC of Samples

Print Last Name Gomez Signature [signature] Date 6.23.09

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Section I.

REQUEST NUMBER: 09-2479 VALIDATION DATE: 8/4/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Lonnie Morris ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☒ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The reported results that were rejected by the laboratory due to interference, no valid peaks, or low abundance were qualified R,R5a. In the QC samples, the laboratory also rejected several results. No sample data were qualified as a result.
2. The alpha spec U-232 tracer %R was > the laboratory UAL but ≤125% for sample CAMO-09-6006. All associated sample results were detects and, thus, were qualified J-,R3a.
3. The results for gamma spec analyte Th-234 for samples -6034, -6043, -6045, -6044 and -6042 were > the MDCs but ≤3X the 1-sigma TPUs and, thus, were qualified U,R11.
4. All reported results that were ≤ the MDC were qualified U,R5.
5. It should be noted that an MS was not analyzed for tritium. However, an LCS was analyzed and passed acceptance

DATA VALIDATION COVER SHEET

5119-1

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Data Validation Cover Sheet

criteria. Thus, no sample data were qualified.

6. It should be noted that the matrix QC analysis for gamma spectroscopy was performed on a parent sample from another LANL RN. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 08/05/09

VALIDATOR'S SIGNATURE: DATE: 8/4/09

Form 5119-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 **Rad Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☒	☐	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST

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Rad Analytical Data Validation Checklist

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☒	☐	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6007	Project:	LANL01004
Sample ID:	232433001	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	4.27%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.338		0.220	+/-0.0518	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	-0.00597	U,R5	0.101	+/-0.0179	0.100	pCi/g						
Uranium-238		0.343		0.0854	+/-0.0522	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-8.08E-06	U,R5	0.324	+/-0.102	0.200	pCi/g		MXR1	07/07/09	0604	881219	2
Bismuth-211	UI	3.46	R,R5a	0.345	+/-0.239		pCi/g						
Bismuth-214		1.01		0.111	+/-0.0862	0.200	pCi/g						
Cadmium-109	UI	3.04	R,R5a	1.31	+/-0.515		pCi/g						
Cerium-139	U	0.0118	U,R5	0.0544	+/-0.0161	0.050	pCi/g						
Cesium-134	U	0.0468		0.0924	+/-0.0261	0.100	pCi/g						
Cesium-137	U	-0.0331		0.0705	+/-0.0223	0.100	pCi/g						
Cobalt-60	U	0.0112		0.0723	+/-0.0214	0.100	pCi/g						
Europium-152	U	-0.0113		0.165	+/-0.0563	0.200	pCi/g						
Lanthanum-140	U	0.0349		0.154	+/-0.0444		pCi/g						
Lead-212		1.45		0.116	+/-0.102	0.100	pCi/g						
Lead-214		1.20		0.120	+/-0.0888	0.100	pCi/g						
Mercury-203	U	0.00309	U,R5	0.0764	+/-0.0228	0.100	pCi/g						
Potassium-40		35.2		0.599	+/-1.68	1.00	pCi/g						
Radium-223	U	-0.556	U,R5	1.23	+/-0.383		pCi/g						
Radium-224	UI	2.50	R,R5a	1.52	+/-0.685		pCi/g						
Radium-226		1.01		0.111	+/-0.0862		pCi/g						
Radium-228		1.46		0.241	+/-0.218	0.500	pCi/g						
Ruthenium-106	U	-0.0198	U,R5	0.598	+/-0.178	0.800	pCi/g						
Sodium-22	U	-0.0219		0.0829	+/-0.0263	0.080	pCi/g						
Strontium-85	U	0.0226		0.069	+/-0.0232		pCi/g						
Thallium-208		0.506		0.0662	+/-0.0522	0.080	pCi/g						
Thorium-227	U	-0.582	U,R5	0.552	+/-0.185		pCi/g						
Thorium-231	U	-0.556		1.23	+/-0.383		pCi/g						
Thorium-234	U	1.11		2.62	+/-1.16	2.00	pCi/g						
Tin-113	U	-0.0309		0.074	+/-0.0234	0.100	pCi/g						
Uranium-235	U	0.167		0.396	+/-0.119	0.500	pCi/g						
Yttrium-88	U	-0.00398		0.0567	+/-0.0177	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6007
Sample ID: 232433001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		375	239	+/-85.3	250	pCi/L		KXK2	07/17/09	1156	883039	3

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	70.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6006
Sample ID: 232433002
Matrix: R
Collect Date: 23-JUN-09
Receive Date: 26-JUN-09
Collector: Client
Moisture: 11.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.863	J-,R3a	0.152	+/-0.082	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236		0.0745		0.0698	+/-0.0192	0.100	pCi/g						
Uranium-238		0.977		0.0592	+/-0.0901	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.0992	U,R5	0.339	+/-0.0993	0.200	pCi/g		MXR1	07/07/09	0604	881219	2
Bismuth-211	UI	3.48	R,R5a	0.293	+/-0.250		pCi/g						
Bismuth-214	UI	0.990		0.270	+/-0.0807	0.200	pCi/g						
Cadmium-109	UI	3.02		1.61	+/-0.482		pCi/g						
Cerium-139	U	-0.00773	U,R5	0.044	+/-0.0135	0.050	pCi/g						
Cesium-134	UI	0.130	R,R5a	0.0838	+/-0.0299	0.100	pCi/g						
Cesium-137		0.144		0.0639	+/-0.0303	0.100	pCi/g						
Cobalt-60	U	0.0178	U,R5	0.0619	+/-0.0173	0.100	pCi/g						
Europium-152	U	-0.0387		0.147	+/-0.0512	0.200	pCi/g						
Lanthanum-140	U	-0.0293		0.121	+/-0.0397		pCi/g						
Lead-212		1.37		0.0834	+/-0.076	0.100	pCi/g						
Lead-214		1.21		0.102	+/-0.0924	0.100	pCi/g						
Mercury-203	U	0.0486	U,R5	0.0686	+/-0.0187	0.100	pCi/g						
Potassium-40		20.7		0.464	+/-1.06	1.00	pCi/g						
Radium-223	U	0.523	U,R5	1.06	+/-0.332		pCi/g						
Radium-224	UI	5.31	R,R5a	0.950	+/-0.707		pCi/g						
Radium-226	UI	0.990	R,R5a	0.270	+/-0.0807		pCi/g						
Radium-228		1.44		0.203	+/-0.154	0.500	pCi/g						
Ruthenium-106	U	-0.0616	U,R5	0.469	+/-0.149	0.800	pCi/g						
Sodium-22	U	0.00203		0.0688	+/-0.0205	0.080	pCi/g						
Strontium-85	U	0.00209		0.0551	+/-0.0191		pCi/g						
Thallium-208		0.397		0.0551	+/-0.0428	0.080	pCi/g						
Thorium-227	U	0.262	U,R5	0.617	+/-0.173		pCi/g						
Thorium-231	U	0.523		1.06	+/-0.332		pCi/g						
Thorium-234	U	0.495		2.85	+/-0.810	2.00	pCi/g						
Tin-113	U	0.031		0.0718	+/-0.0203	0.100	pCi/g						
Uranium-235	U	0.152		0.338	+/-0.0982	0.500	pCi/g						
Yttrium-88	U	-9.45E-05		0.0547	+/-0.017	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		557		153	+/-68.2	250	pCi/L		KXK2	07/14/09	1939	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6008	Project:	LANL01004
Sample ID:	232433003	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	23.1%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.611		0.187	+/-0.0675	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	0.0254	U,R5	0.0857	+/-0.0184	0.100	pCi/g						
Uranium-238		0.625		0.0728	+/-0.0671	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.00789	U,R5	0.116	+/-0.0391	0.200	pCi/g		MXR1	07/07/09	0605	881219	2
Bismuth-211	UI	3.85	R,R5a	0.416	+/-0.322		pCi/g						
Bismuth-214	UI	1.09		0.335	+/-0.113	0.200	pCi/g						
Cadmium-109	UI	2.71		1.30	+/-0.492		pCi/g						
Cerium-139	U	-0.00307	U,R5	0.0592	+/-0.0182	0.050	pCi/g						
Cesium-134	U	0.042	U,R5	0.106	+/-0.0303	0.100	pCi/g						
Cesium-137		0.245		0.0951	+/-0.0501	0.100	pCi/g						
Cobalt-60	U	-0.00109	U,R5	0.0911	+/-0.0286	0.100	pCi/g						
Europium-152	U	0.0789		0.206	+/-0.0766	0.200	pCi/g						
Lanthanum-140	U	-0.0898		0.164	+/-0.057		pCi/g						
Lead-212		1.83		0.109	+/-0.119	0.100	pCi/g						
Lead-214		1.34		0.145	+/-0.117	0.100	pCi/g						
Mercury-203	U	0.058	U,R5	0.0886	+/-0.0251	0.100	pCi/g						
Potassium-40		29.6		0.779	+/-1.38	1.00	pCi/g						
Radium-223	U	-0.0144	U,R5	1.41	+/-0.486		pCi/g						
Radium-224	UI	4.99	R,R5a	1.24	+/-0.886		pCi/g						
Radium-226	UI	1.09	R,R5a	0.335	+/-0.113		pCi/g						
Radium-228		2.13		0.284	+/-0.231	0.500	pCi/g						
Ruthenium-106	U	0.204	U,R5	0.762	+/-0.228	0.800	pCi/g						
Sodium-22	U	-0.0205	U,R5	0.0962	+/-0.0311	0.080	pCi/g						
Strontium-85	UI	0.129	R,R5a	0.0979	+/-0.0292		pCi/g						
Thallium-208		0.596		0.0812	+/-0.0625	0.080	pCi/g						
Thorium-227	U	0.108	U,R5	0.771	+/-0.238		pCi/g						
Thorium-231	U	-0.0144	U,R5	1.41	+/-0.486		pCi/g						
Thorium-234		2.31		1.17	+/-0.615	2.00	pCi/g						
Tin-113	U	0.00117	U,R5	0.104	+/-0.0314	0.100	pCi/g						
Uranium-235	U	0.226		0.442	+/-0.135	0.500	pCi/g						
Yttrium-88	U	0.0304		0.0952	+/-0.0267	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	116		170	+/-52.8	250	pCi/L		KXK2	07/16/09	1037	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6009
Sample ID: 232433004
Matrix: R
Collect Date: 23-JUN-09
Receive Date: 26-JUN-09
Collector: Client
Moisture: 17%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.811		0.202	+/-0.085	0.100	pCi/g		HAKB	07/11/09 1544	882536	1
Uranium-235/236	U	0.0494	U,R5	0.0924	+/-0.0168	0.100	pCi/g					
Uranium-238		0.958		0.0785	+/-0.0953	0.100	pCi/g					
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.00603	U,R5	0.354	+/-0.0991	0.200	pCi/g		MXR1	07/07/09 0605	881219	2
Bismuth-211	UI	4.01	R,R5a	0.398	+/-0.295		pCi/g					
Bismuth-214		1.18		0.125	+/-0.0915	0.200	pCi/g					
Cadmium-109	UI	3.83	R,R5a	1.56	+/-0.468		pCi/g					
Cerium-139	U	-0.012	U,R5	0.0582	+/-0.0173	0.050	pCi/g					
Cesium-134	UI	0.140	R,R5a	0.103	+/-0.0317	0.100	pCi/g					
Cesium-137	U	0.063	U,R5	0.0718	+/-0.0255	0.100	pCi/g					
Cobalt-60	U	-0.0402		0.0696	+/-0.0238	0.100	pCi/g					
Europium-152	U	0.0783		0.185	+/-0.0734	0.200	pCi/g					
Lanthanum-140	U	-0.0299		0.146	+/-0.0459		pCi/g					
Lead-212		1.80		0.106	+/-0.0893	0.100	pCi/g					
Lead-214		1.40		0.139	+/-0.109	0.100	pCi/g					
Mercury-203	UI	0.0875	R,R5a	0.0777	+/-0.0276	0.100	pCi/g					
Potassium-40		34.8		0.628	+/-1.53	1.00	pCi/g					
Radium-223	U	0.208	U,R5	1.33	+/-0.434		pCi/g					
Radium-224	UI	4.55	R,R5a	1.20	+/-0.621		pCi/g					
Radium-226		1.18		0.125	+/-0.0915		pCi/g					
Radium-228		1.87		0.232	+/-0.184	0.500	pCi/g					
Ruthenium-106	U	0.0885	U,R5	0.576	+/-0.170	0.800	pCi/g					
Sodium-22	U	-0.0676	U,R5	0.0819	+/-0.0284	0.080	pCi/g					
Strontium-85	UI	0.107	R,R5a	0.0812	+/-0.0234		pCi/g					
Thallium-208		0.529		0.0703	+/-0.0436	0.080	pCi/g					
Thorium-227	U	0.0707	U,R5	0.742	+/-0.222		pCi/g					
Thorium-231	U	0.208		1.33	+/-0.434		pCi/g					
Thorium-234	U	0.972		2.97	+/-0.827	2.00	pCi/g					
Tin-113	U	-0.0198		0.0819	+/-0.0246	0.100	pCi/g					
Uranium-235	U	0.213		0.432	+/-0.126	0.500	pCi/g					
Yttrium-88	U	-0.02		0.0458	+/-0.0163	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		403		153	+/-60.1	250	pCi/L		KXK2	07/14/09 2256	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6034	Project:	LANL01004
Sample ID:	232433005	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	22.4%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		2.62		0.169	+/-0.208	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236		0.133		0.0773	+/-0.0287	0.100	pCi/g						
Uranium-238		2.81		0.0657	+/-0.221	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0451	U,R5	0.371	+/-0.131	0.200	pCi/g		MXR1	07/07/09	0606	881219	2
Bismuth-211	UI	3.36	R,R5a	0.443	+/-0.319		pCi/g						
Bismuth-214		1.08		0.162	+/-0.116	0.200	pCi/g						
Cadmium-109	U	1.99	U,R5	2.02	+/-0.703		pCi/g						
Cerium-139	U	-0.00754		0.0622	+/-0.0193	0.050	pCi/g						
Cesium-134	U	0.0357		0.110	+/-0.0324	0.100	pCi/g						
Cesium-137		0.827		0.0845	+/-0.0661	0.100	pCi/g						
Cobalt-60	U	-0.0281	U,R5	0.0839	+/-0.0274	0.100	pCi/g						
Europium-152	U	0.0773		0.230	+/-0.0697	0.200	pCi/g						
Lanthanum-140	U	-0.167		0.168	+/-0.0678		pCi/g						
Lead-212		1.33		0.127	+/-0.0847	0.100	pCi/g						
Lead-214		1.17		0.155	+/-0.115	0.100	pCi/g						
Mercury-203	U	0.00612	U,R5	0.0889	+/-0.0275	0.100	pCi/g						
Potassium-40		22.6		0.732	+/-1.45	1.00	pCi/g						
Radium-223	U	-1.12	U,R5	1.34	+/-0.471		pCi/g						
Radium-224	UI	3.15	R,R5a	1.45	+/-0.925		pCi/g						
Radium-226		1.08		0.162	+/-0.116		pCi/g						
Radium-228		1.46		0.257	+/-0.201	0.500	pCi/g						
Ruthenium-106	U	-0.103	U,R5	0.708	+/-0.222	0.800	pCi/g						
Sodium-22	U	-0.0289		0.0978	+/-0.0318	0.080	pCi/g						
Strontium-85	U	0.0675		0.0929	+/-0.0303		pCi/g						
Thallium-208		0.458		0.0856	+/-0.0646	0.080	pCi/g						
Thorium-227	U	-0.163	U,R5	0.813	+/-0.258		pCi/g						
Thorium-231	U	-1.12	U,R5	1.34	+/-0.471		pCi/g						
Thorium-234		4.51	U,R11	2.86	+/-1.79	2.00	pCi/g						
Tin-113	U	-0.0404	U,R5	0.0888	+/-0.030	0.100	pCi/g						
Uranium-235	U	0.288		0.465	+/-0.146	0.500	pCi/g						
Yttrium-88	U	-0.00281		0.0763	+/-0.0243	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		419		154	+/-61.0	250	pCi/L		KXK2	07/15/09	0035	883013	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6043	Project:	LANL01004
Sample ID:	232433006	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	7.85%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.32		0.188	+/-0.120	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	0.0562	U,R5	0.0861	+/-0.0174	0.100	pCi/g						
Uranium-238		1.83		0.0731	+/-0.156	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.0784	U,R5	0.244	+/-0.0858	0.200	pCi/g		MXR1	07/07/09	0638	881219	2
Bismuth-211	UI	4.33	R,R5a	0.388	+/-0.297		pCi/g						
Bismuth-214		1.24		0.138	+/-0.110	0.200	pCi/g						
Cadmium-109	UI	1.87	R,R5a	1.47	+/-0.311		pCi/g						
Cerium-139	U	-0.0133	U,R5	0.0584	+/-0.0185	0.050	pCi/g						
Cesium-134	U	0.110	U,R5	0.115	+/-0.0424	0.100	pCi/g						
Cesium-137		0.122		0.0757	+/-0.0328	0.100	pCi/g						
Cobalt-60	U	0.00256	U,R5	0.0844	+/-0.0261	0.100	pCi/g						
Europium-152	U	-0.0333	↓	0.190	+/-0.0644	0.200	pCi/g						
Lanthanum-140	U	0.0682	↓	0.138	+/-0.0392		pCi/g						
Lead-212		1.90		0.106	+/-0.101	0.100	pCi/g						
Lead-214		1.51		0.135	+/-0.111	0.100	pCi/g						
Mercury-203	U	-0.00692	U,R5	0.0814	+/-0.0254	0.100	pCi/g						
Potassium-40		31.9		0.673	+/-1.48	1.00	pCi/g						
Radium-223	U	-0.16	U,R5	1.33	+/-0.468		pCi/g						
Radium-224	UI	5.23	R,R5a	1.20	+/-0.727		pCi/g						
Radium-226		1.24		0.138	+/-0.110		pCi/g						
Radium-228		1.72		0.273	+/-0.206	0.500	pCi/g						
Ruthenium-106	U	0.226	U,R5	0.677	+/-0.202	0.800	pCi/g						
Sodium-22	U	-0.0418	U,R5	0.0745	+/-0.0257	0.080	pCi/g						
Strontium-85	UI	0.0925	R,R5a	0.0835	+/-0.0256		pCi/g						
Thallium-208		0.586		0.0731	+/-0.0521	0.080	pCi/g						
Thorium-227	U	0.048	U,R5	0.761	+/-0.240		pCi/g						
Thorium-231	U	-0.16	U,R5	1.33	+/-0.468		pCi/g						
Thorium-234		2.31	U,R11	2.18	+/-0.921	2.00	pCi/g						
Tin-113	U	-0.0281	U,R5	0.0861	+/-0.0271	0.100	pCi/g						
Uranium-235	U	0.139	↓	0.436	+/-0.134	0.500	pCi/g						
Yttrium-88	U	-0.00876	↓	0.0685	+/-0.0227	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		316		154	+/-56.1	250	pCi/L		KXK2	07/15/09	0214	883013	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6045	Project:	LANL01004
Sample ID:	232433007	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	8%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.29		0.225	+/-0.124	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	0.0733	U,R5	0.103	+/-0.0235	0.100	pCi/g						
Uranium-238		1.44		0.0875	+/-0.135	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0403	U,R5	0.285	+/-0.0913	0.200	pCi/g		MXR1	07/07/09	0639	881219	2
Bismuth-211	UI	4.55	R,R5a	0.344	+/-0.273		pCi/g						
Bismuth-214		1.31		0.141	+/-0.104	0.200	pCi/g						
Cadmium-109	UI	5.06	R,R5a	1.35	+/-0.686		pCi/g						
Cerium-139	U	-0.0367	U,R5	0.0525	+/-0.0172	0.050	pCi/g						
Cesium-134	UI	0.129	R,R5a	0.114	+/-0.0306	0.100	pCi/g						
Cesium-137		0.162		0.0777	+/-0.028	0.100	pCi/g						
Cobalt-60	U	-0.0109	U,R5	0.0805	+/-0.0254	0.100	pCi/g						
Europium-152	U	0.0298		0.180	+/-0.0609	0.200	pCi/g						
Lanthanum-140	U	-0.0855		0.153	+/-0.0521		pCi/g						
Lead-212		1.89		0.0959	+/-0.0934	0.100	pCi/g						
Lead-214		1.58		0.121	+/-0.104	0.100	pCi/g						
Mercury-203	U	0.0476	U,R5	0.0791	+/-0.0229	0.100	pCi/g						
Potassium-40		36.9		0.518	+/-1.71	1.00	pCi/g						
Radium-223	U	0.255	U,R5	1.24	+/-0.416		pCi/g						
Radium-224	UI	4.80	R,R5a	1.09	+/-0.701		pCi/g						
Radium-226		1.31		0.141	+/-0.104		pCi/g						
Radium-228		1.96		0.244	+/-0.210	0.500	pCi/g						
Ruthenium-106	U	0.231	U,R5	0.641	+/-0.184	0.800	pCi/g						
Sodium-22	U	-0.0236	U,R5	0.0889	+/-0.0284	0.080	pCi/g						
Strontium-85	UI	0.0874	R,R5a	0.0853	+/-0.024		pCi/g						
Thallium-208		0.635		0.0716	+/-0.0506	0.080	pCi/g						
Thorium-227	U	-0.0107	U,R5	0.702	+/-0.209		pCi/g						
Thorium-231	U	0.255	U,R5	1.24	+/-0.416		pCi/g						
Thorium-234		2.81	U,R11	2.32	+/-1.20	2.00	pCi/g						
Tin-113	U	-0.0115	U,R5	0.0834	+/-0.0259	0.100	pCi/g						
Uranium-235	U	-0.113		0.379	+/-0.121	0.500	pCi/g						
Yttrium-88	U	0.0304		0.086	+/-0.0238	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		264		154	+/-53.9	250	pCi/L		KXK2	07/15/09	0352	883013	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6041	Project:	LANL01004
Sample ID:	232433008	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	5.2%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.08		0.167	+/-0.0987	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	0.0682	U,R5	0.0767	+/-0.0204	0.100	pCi/g						
Uranium-238		1.43		0.0651	+/-0.123	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0844	U,R5	0.123	+/-0.0381	0.200	pCi/g		MXR1	07/07/09	0639	881219	2
Bismuth-211	UI	3.75	R,R5a	0.473	+/-0.314		pCi/g						
Bismuth-214		1.19		0.162	+/-0.128	0.200	pCi/g						
Cadmium-109	UI	4.21	R,R5a	1.17	+/-0.573		pCi/g						
Cerium-139	U	0.00799	U,R5	0.0621	+/-0.0191	0.050	pCi/g						
Cesium-134	UI	0.199	R,R5a	0.141	+/-0.0478	0.100	pCi/g						
Cesium-137		0.288		0.0949	+/-0.0565	0.100	pCi/g						
Cobalt-60	U	-0.0131	U,R5	0.0969	+/-0.031	0.100	pCi/g						
Europium-152	U	-0.0148		0.229	+/-0.0809	0.200	pCi/g						
Lanthanum-140	U	-0.04		0.194	+/-0.0627		pCi/g						
Lead-212		1.90		0.115	+/-0.110	0.100	pCi/g						
Lead-214		1.31		0.165	+/-0.114	0.100	pCi/g						
Mercury-203	U	0.0545	U,R5	0.0913	+/-0.0263	0.100	pCi/g						
Potassium-40		29.9		0.855	+/-1.41	1.00	pCi/g						
Radium-223	U	-0.762	U,R5	1.42	+/-0.458		pCi/g						
Radium-224	UI	4.82	R,R5a	1.31	+/-0.765		pCi/g						
Radium-226		1.19		0.162	+/-0.128		pCi/g						
Radium-228		1.70		0.351	+/-0.210	0.500	pCi/g						
Ruthenium-106	U	-0.00629	U,R5	0.786	+/-0.241	0.800	pCi/g						
Sodium-22	U	-0.0105	U,R5	0.107	+/-0.0328	0.080	pCi/g						
Strontium-85	UI	0.226	R,R5a	0.118	+/-0.034		pCi/g						
Thallium-208		0.599		0.0875	+/-0.060	0.080	pCi/g						
Thorium-227	U	0.205	U,R5	0.881	+/-0.260		pCi/g						
Thorium-231	U	-0.762	U,R5	1.42	+/-0.458		pCi/g						
Thorium-234		2.72		1.19	+/-0.745	2.00	pCi/g						
Tin-113	U	0.000811	U,R5	0.104	+/-0.0321	0.100	pCi/g						
Uranium-235	U	0.214		0.474	+/-0.145	0.500	pCi/g						
Yttrium-88	U	0.00219		0.0853	+/-0.0257	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		247		155	+/-53.3	250	pCi/L		KXK2	07/15/09	0531	883013	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6040	Project:	LANL01004
Sample ID:	232433009	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	27.3%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		2.92		0.164	+/-0.231	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236		0.169		0.075	+/-0.0299	0.100	pCi/g						
Uranium-238		5.69		0.0637	+/-0.428	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0274	U,R5	0.255	+/-0.0965	0.200	pCi/g		MXR1	07/07/09	0640	881219	2
Bismuth-211	UI	3.59	R,R5a	0.424	+/-0.305		pCi/g						
Bismuth-214		1.17		0.145	+/-0.109	0.200	pCi/g						
Cadmium-109	UI	3.94	R,R5a	1.44	+/-0.696		pCi/g						
Cerium-139	U	0.0223	U,R5	0.0581	+/-0.0186	0.050	pCi/g						
Cesium-134	U	0.115	U,R5	0.117	+/-0.035	0.100	pCi/g						
Cesium-137		0.413		0.0826	+/-0.0532	0.100	pCi/g						
Cobalt-60	U	0.0137	U,R5	0.0891	+/-0.0271	0.100	pCi/g						
Europium-152	U	-0.0869		0.190	+/-0.0833	0.200	pCi/g						
Lanthanum-140	U	-0.00216		0.207	+/-0.0654		pCi/g						
Lead-212		1.53		0.110	+/-0.090	0.100	pCi/g						
Lead-214		1.25		0.148	+/-0.111	0.100	pCi/g						
Mercury-203	U	0.0212	U,R5	0.0857	+/-0.0264	0.100	pCi/g						
Potassium-40		24.6		0.686	+/-1.41	1.00	pCi/g						
Radium-223	U	-1.24	U,R5	1.30	+/-0.453		pCi/g						
Radium-224	UI	4.94	R,R5a	1.25	+/-0.753		pCi/g						
Radium-226		1.17		0.145	+/-0.109		pCi/g						
Radium-228		1.61		0.255	+/-0.224	0.500	pCi/g						
Ruthenium-106	U	0.112	U,R5	0.603	+/-0.187	0.800	pCi/g						
Sodium-22	U	-0.0112	U,R5	0.0825	+/-0.0265	0.080	pCi/g						
Strontium-85	UI	0.100	R,R5a	0.0888	+/-0.0282		pCi/g						
Thallium-208		0.572		0.0707	+/-0.0553	0.080	pCi/g						
Thorium-227	U	0.00544	U,R5	0.768	+/-0.240		pCi/g						
Thorium-231	U	-1.24	U,R5	1.30	+/-0.453		pCi/g						
Thorium-234		7.92		2.17	+/-1.32	2.00	pCi/g						
Tin-113	U	-0.0402	U,R5	0.0893	+/-0.0294	0.100	pCi/g						
Uranium-235	U	0.0376		0.429	+/-0.149	0.500	pCi/g						
Yttrium-88	U	0.00592		0.0864	+/-0.0259	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	36.9		232	+/-66.4	250	pCi/L		KXK2	07/15/09	0835	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6044
Sample ID: 232433010
Matrix: R
Collect Date: 23-JUN-09
Receive Date: 26-JUN-09
Collector: Client
Moisture: 12.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.35		0.255	+/-0.132	0.100	pCi/g		HAKB	07/11/09 1544	882536	1
Uranium-235/236	U	0.097	U,R5	0.117	+/-0.0269	0.100	pCi/g					
Uranium-238		1.84		0.0992	+/-0.168	0.100	pCi/g					
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0486	U,R5	0.687	+/-0.247	0.200	pCi/g		MXR1	07/07/09 0640	881219	2
Bismuth-211	UI	4.27	R,R5a	0.565	+/-0.391		pCi/g					
Bismuth-214		1.58		0.188	+/-0.140	0.200	pCi/g					
Cadmium-109	UI	3.83	R,R5a	2.86	+/-1.01		pCi/g					
Cerium-139	U	-0.0201	U,R5	0.0786	+/-0.0257	0.050	pCi/g					
Cesium-134	U	0.0624	U,R5	0.140	+/-0.0403	0.100	pCi/g					
Cesium-137		0.207		0.103	+/-0.0528	0.100	pCi/g					
Cobalt-60	U	-0.0418	U,R5	0.0832	+/-0.0298	0.100	pCi/g					
Europium-152	U	0.00439		0.266	+/-0.101	0.200	pCi/g					
Lanthanum-140	U	-0.0243		0.196	+/-0.0684		pCi/g					
Lead-212		2.09		0.153	+/-0.131	0.100	pCi/g					
Lead-214		1.48		0.191	+/-0.142	0.100	pCi/g					
Mercury-203	U	0.0812	U,R5	0.106	+/-0.0523	0.100	pCi/g					
Potassium-40		28.4		0.962	+/-1.64	1.00	pCi/g					
Radium-223	U	0.276	U,R5	1.96	+/-0.687		pCi/g					
Radium-224	UI	6.03	R,R5a	1.74	+/-1.07		pCi/g					
Radium-226		1.58		0.188	+/-0.140		pCi/g					
Radium-228		1.80		0.355	+/-0.270	0.500	pCi/g					
Ruthenium-106	U	0.252	U,R5	0.944	+/-0.289	0.800	pCi/g					
Sodium-22	U	0.015	U,R5	0.123	+/-0.0377	0.080	pCi/g					
Strontium-85	UI	0.257	R,R5a	0.138	+/-0.0392		pCi/g					
Thallium-208		0.662		0.0916	+/-0.058	0.080	pCi/g					
Thorium-227	U	-0.13	U,R5	1.15	+/-0.355		pCi/g					
Thorium-231	U	0.276	U,R5	1.96	+/-0.687		pCi/g					
Thorium-234		8.40	U,R11	4.74	+/-3.34	2.00	pCi/g					
Tin-113	U	0.0164	U,R5	0.135	+/-0.0414	0.100	pCi/g					
Uranium-235	U	0.466		0.556	+/-0.236	0.500	pCi/g					
Yttrium-88	U	0.0625		0.106	+/-0.0262	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	174		233	+/-74.1	250	pCi/L		KXK2	07/15/09 0907	883013	3

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Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6035
Sample ID: 232433011
Matrix: R
Collect Date: 23-JUN-09
Receive Date: 26-JUN-09
Collector: Client
Moisture: 3.99%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.990		0.182	+/-0.0937	0.100	pCi/g		HAKB	07/11/09 1544	882536	1
Uranium-235/236	U	0.0791	U,R5	0.0833	+/-0.0205	0.100	pCi/g					
Uranium-238		0.900		0.0708	+/-0.0873	0.100	pCi/g					
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0393	U,R5	0.312	+/-0.101	0.200	pCi/g		MXR1	07/07/09 0641	881219	2
Bismuth-211	UI	4.27	R,R5a	0.346	+/-0.280		pCi/g					
Bismuth-214		1.31		0.117	+/-0.0937	0.200	pCi/g					
Cadmium-109	UI	3.20	R,R5a	1.50	+/-0.577		pCi/g					
Cerium-139	U	-0.00276	U,R5	0.0553	+/-0.0166	0.050	pCi/g					
Cesium-134	U	0.0587		0.0904	+/-0.0342	0.100	pCi/g					
Cesium-137	U	-0.0425		0.0636	+/-0.0211	0.100	pCi/g					
Cobalt-60	U	-0.00357		0.0673	+/-0.0209	0.100	pCi/g					
Europium-152	U	-0.129		0.157	+/-0.0555	0.200	pCi/g					
Lanthanum-140	U	-0.0573		0.128	+/-0.0426		pCi/g					
Lead-212		1.98		0.0962	+/-0.0904	0.100	pCi/g					
Lead-214		1.48		0.123	+/-0.105	0.100	pCi/g					
Mercury-203	U	0.0123	U,R5	0.0778	+/-0.0227	0.100	pCi/g					
Potassium-40		38.0		0.544	+/-1.88	1.00	pCi/g					
Radium-223	U	-0.135	U,R5	1.16	+/-0.397		pCi/g					
Radium-224	UI	5.93	R,R5a	1.09	+/-0.698		pCi/g					
Radium-226		1.31		0.117	+/-0.0937		pCi/g					
Radium-228		2.02		0.234	+/-0.198	0.500	pCi/g					
Ruthenium-106	U	0.000944	U,R5	0.567	+/-0.173	0.800	pCi/g					
Sodium-22	U	0.0227		0.0862	+/-0.0254	0.080	pCi/g					
Strontium-85	U	0.0482		0.0709	+/-0.0228		pCi/g					
Thallium-208		0.546		0.0646	+/-0.0425	0.080	pCi/g					
Thorium-227	U	0.192	U,R5	0.706	+/-0.212		pCi/g					
Thorium-231	U	-0.135		1.16	+/-0.397		pCi/g					
Thorium-234	U	2.17		2.52	+/-0.987	2.00	pCi/g					
Tin-113	U	-0.0363		0.0765	+/-0.0237	0.100	pCi/g					
Uranium-235	U	0.0649		0.407	+/-0.121	0.500	pCi/g					
Yttrium-88	U	0.0213		0.0606	+/-0.0165	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	192		231	+/-74.6	250	pCi/L		KXK2	07/15/09 0939	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6038
Sample ID: 232433012
Matrix: R
Collect Date: 23-JUN-09
Receive Date: 26-JUN-09
Collector: Client
Moisture: 25.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		2.73		0.174	+/-0.217	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236		0.142		0.0797	+/-0.0277	0.100	pCi/g						
Uranium-238		4.02		0.0677	+/-0.307	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	UI	0.178	R,R5a	0.144	+/-0.0486	0.200	pCi/g		MXR1	07/07/09	0703	881219	2
Bismuth-211	UI	3.10		0.475	+/-0.331		pCi/g						
Bismuth-214	UI	1.34		0.370	+/-0.125	0.200	pCi/g						
Cadmium-109	UI	3.08		1.29	+/-0.475		pCi/g						
Cerium-139	U	0.00847	U,R5	0.0639	+/-0.0202	0.050	pCi/g						
Cesium-134	U	0.0756	U,R5	0.126	+/-0.0355	0.100	pCi/g						
Cesium-137		3.09		0.084	+/-0.150	0.100	pCi/g						
Cobalt-60	U	-0.00983	U,R5	0.0942	+/-0.0301	0.100	pCi/g						
Europium-152	U	-0.0563		0.232	+/-0.0843	0.200	pCi/g						
Lanthanum-140	U	0.00896		0.186	+/-0.056		pCi/g						
Lead-212		1.48		0.121	+/-0.0932	0.100	pCi/g						
Lead-214		1.08		0.166	+/-0.119	0.100	pCi/g						
Mercury-203	U	0.0484	U,R5	0.0883	+/-0.0323	0.100	pCi/g						
Potassium-40		26.4		0.756	+/-1.37	1.00	pCi/g						
Radium-223	U	-0.408	U,R5	1.51	+/-0.549		pCi/g						
Radium-224	UI	3.95	R,R5a	1.37	+/-0.880		pCi/g						
Radium-226	UI	1.34	R,R5a	0.370	+/-0.125		pCi/g						
Radium-228		1.39		0.359	+/-0.218	0.500	pCi/g						
Ruthenium-106	U	-0.23	U,R5	0.731	+/-0.241	0.800	pCi/g						
Sodium-22	U	-0.0278	U,R5	0.0926	+/-0.0307	0.080	pCi/g						
Strontium-85	UI	0.113	R,R5a	0.105	+/-0.033		pCi/g						
Thallium-208		0.441		0.0818	+/-0.0533	0.080	pCi/g						
Thorium-227	U	0.00645	U,R5	0.830	+/-0.268		pCi/g						
Thorium-231	U	-0.408	U,R5	1.51	+/-0.549		pCi/g						
Thorium-234		4.47		1.38	+/-0.667	2.00	pCi/g						
Tin-113	U	5.73E-05	U,R5	0.111	+/-0.0342	0.100	pCi/g						
Uranium-235	U	0.339		0.433	+/-0.188	0.500	pCi/g						
Yttrium-88	U	0.0168		0.0672	+/-0.0183	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	223		229	+/-75.8	250	pCi/L		KXK2	07/15/09	1011	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6039	Project:	LANL01004
Sample ID:	232433013	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	9.12%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.914		0.315	+/-0.106	0.100	pCi/g		HAKB	07/11/09 1544	882536	1
Uranium-235/236	U	0.0428	U,R5	0.144	+/-0.0229	0.100	pCi/g					
Uranium-238		1.02		0.123	+/-0.114	0.100	pCi/g					
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.157	U,R5	0.327	+/-0.104	0.200	pCi/g		MXR1	07/07/09 0704	881219	2
Bismuth-211	UI	3.83	R,R5a	0.293	+/-0.247		pCi/g					
Bismuth-214		1.15		0.102	+/-0.099	0.200	pCi/g					
Cadmium-109	UI	2.96	R,R5a	1.41	+/-0.531		pCi/g					
Cerium-139	U	0.0171	U,R5	0.0468	+/-0.0135	0.050	pCi/g					
Cesium-134	U	0.0754	U,R5	0.083	+/-0.0278	0.100	pCi/g					
Cesium-137		0.153		0.0565	+/-0.0368	0.100	pCi/g					
Cobalt-60	U	-0.00663	U,R5	0.0618	+/-0.0193	0.100	pCi/g					
Europium-152	U	0.0684		0.145	+/-0.0491	0.200	pCi/g					
Lanthanum-140	U	-0.0376		0.117	+/-0.0375		pCi/g					
Lead-212		1.72		0.084	+/-0.0833	0.100	pCi/g					
Lead-214		1.33		0.107	+/-0.0927	0.100	pCi/g					
Mercury-203	U	0.0612	U,R5	0.0679	+/-0.0195	0.100	pCi/g					
Potassium-40		35.9		0.473	+/-1.61	1.00	pCi/g					
Radium-223	U	0.357	U,R5	1.03	+/-0.355		pCi/g					
Radium-224	UI	4.65	R,R5a	0.954	+/-0.624		pCi/g					
Radium-226		1.15		0.102	+/-0.099		pCi/g					
Radium-228		1.56		0.214	+/-0.185	0.500	pCi/g					
Ruthenium-106	U	-0.045	U,R5	0.475	+/-0.149	0.800	pCi/g					
Sodium-22	U	0.0142	U,R5	0.071	+/-0.0212	0.080	pCi/g					
Strontium-85	UI	0.126	R,R5a	0.0688	+/-0.020		pCi/g					
Thallium-208		0.575		0.0565	+/-0.0429	0.080	pCi/g					
Thorium-227	U	-0.00638	U,R5	0.600	+/-0.183		pCi/g					
Thorium-231	U	0.357		1.03	+/-0.355		pCi/g					
Thorium-234	U	1.70		2.58	+/-1.15	2.00	pCi/g					
Tin-113	U	-0.0398		0.0669	+/-0.021	0.100	pCi/g					
Uranium-235	U	0.0386		0.355	+/-0.112	0.500	pCi/g					
Yttrium-88	U	0.0117		0.051	+/-0.0148	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	61.4		229	+/-66.9	250	pCi/L		KXK2	07/15/09 1043	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6042	Project:	LANL01004
Sample ID:	232433014	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	17.8%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		3.36		0.195	+/-0.266	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236		0.233		0.0893	+/-0.0388	0.100	pCi/g						
Uranium-238		2.92		0.0758	+/-0.235	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0474	U,R5	0.258	+/-0.0932	0.200	pCi/g		MXR1	07/07/09	0705	881219	2
Bismuth-211	UI	3.26	R,R5a	0.360	+/-0.288		pCi/g						
Bismuth-214	UI	1.08		0.276	+/-0.0982	0.200	pCi/g						
Cadmium-109	UI	2.83		1.82	+/-0.629		pCi/g						
Cerium-139	U	-0.0348	U,R5	0.055	+/-0.0181	0.050	pCi/g						
Cesium-134	U	0.0657	U,R5	0.103	+/-0.0305	0.100	pCi/g						
Cesium-137		0.548		0.0618	+/-0.0463	0.100	pCi/g						
Cobalt-60	U	-0.0115	U,R5	0.0607	+/-0.0193	0.100	pCi/g						
Europium-152	U	0.0409		0.177	+/-0.0709	0.200	pCi/g						
Lanthanum-140	U	-0.0908		0.136	+/-0.048		pCi/g						
Lead-212		1.66		0.0982	+/-0.0861	0.100	pCi/g						
Lead-214		1.13		0.128	+/-0.105	0.100	pCi/g						
Mercury-203	U	0.00119	U,R5	0.0685	+/-0.021	0.100	pCi/g						
Potassium-40		31.4		0.694	+/-1.45	1.00	pCi/g						
Radium-223	U	0.144	U,R5	1.17	+/-0.413		pCi/g						
Radium-224	UI	5.15	R,R5a	1.12	+/-0.743		pCi/g						
Radium-226	UI	1.08	R,R5a	0.276	+/-0.0982		pCi/g						
Radium-228		1.60		0.202	+/-0.197	0.500	pCi/g						
Ruthenium-106	U	0.189	U,R5	0.597	+/-0.179	0.800	pCi/g						
Sodium-22	U	0.0102	U,R5	0.0871	+/-0.0262	0.080	pCi/g						
Strontium-85	UI	0.198	R,R5a	0.0929	+/-0.0273		pCi/g						
Thallium-208		0.540		0.058	+/-0.0488	0.080	pCi/g						
Thorium-227	U	0.193	U,R5	0.733	+/-0.221		pCi/g						
Thorium-231	U	0.144	U,R5	1.17	+/-0.413		pCi/g						
Thorium-234		2.76	U,R11	2.13	+/-1.10	2.00	pCi/g						
Tin-113	U	0.00965	U,R5	0.0791	+/-0.0246	0.100	pCi/g						
Uranium-235	U	0.282		0.376	+/-0.169	0.500	pCi/g						
Yttrium-88	U	0.0402		0.0679	+/-0.0179	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	114		231	+/-70.2	250	pCi/L		KXK2	07/15/09	1114	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6049	Project:	LANL01004
Sample ID:	232433015	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	11.6%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.900		0.221	+/-0.0922	0.100	pCi/g		HAKB	07/11/09 1544	882536	1
Uranium-235/236	U	0.0781	U,R5	0.101	+/-0.0224	0.100	pCi/g					
Uranium-238		1.05		0.086	+/-0.104	0.100	pCi/g					
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0949	U,R5	0.251	+/-0.0773	0.200	pCi/g		MXR1	07/07/09 0706	881219	2
Bismuth-211	UI	3.72	R,R5a	0.299	+/-0.245		pCi/g					
Bismuth-214		1.12		0.116	+/-0.0849	0.200	pCi/g					
Cadmium-109	UI	3.23	R,R5a	0.953	+/-0.456		pCi/g					
Cerium-139	U	-0.0131	U,R5	0.0422	+/-0.0128	0.050	pCi/g					
Cesium-134	UI	0.107	R,R5a	0.0983	+/-0.0414	0.100	pCi/g					
Cesium-137		0.197		0.0679	+/-0.0413	0.100	pCi/g					
Cobalt-60	U	-0.0135	U,R5	0.0684	+/-0.0214	0.100	pCi/g					
Europium-152	U	0.0434		0.157	+/-0.0463	0.200	pCi/g					
Lanthanum-140	U	0.00356		0.147	+/-0.0447		pCi/g					
Lead-212		1.23		0.118	+/-0.0748	0.100	pCi/g					
Lead-214		1.29		0.104	+/-0.0918	0.100	pCi/g					
Mercury-203	U	0.0405	U,R5	0.0694	+/-0.019	0.100	pCi/g					
Potassium-40		19.9		0.622	+/-1.15	1.00	pCi/g					
Radium-223	U	-0.671	U,R5	0.991	+/-0.318		pCi/g					
Radium-224	UI	2.59	R,R5a	1.19	+/-0.502		pCi/g					
Radium-226		1.12		0.116	+/-0.0849		pCi/g					
Radium-228		1.42		0.237	+/-0.180	0.500	pCi/g					
Ruthenium-106	U	0.0307	U,R5	0.523	+/-0.155	0.800	pCi/g					
Sodium-22	U	-0.0349	U,R5	0.0796	+/-0.0267	0.080	pCi/g					
Strontium-85	UI	0.0903	R,R5a	0.0731	+/-0.0194		pCi/g					
Thallium-208		0.381		0.0613	+/-0.041	0.080	pCi/g					
Thorium-227	U	-0.031	U,R5	0.579	+/-0.179		pCi/g					
Thorium-231	U	-0.671		0.991	+/-0.318		pCi/g					
Thorium-234	U	1.28		1.93	+/-1.05	2.00	pCi/g					
Tin-113	U	0.0227		0.0729	+/-0.021	0.100	pCi/g					
Uranium-235	U	0.0803		0.320	+/-0.092	0.500	pCi/g					
Yttrium-88	U	0.0145		0.0587	+/-0.0161	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	11.7		233	+/-65.5	250	pCi/L		KXK2	07/15/09 1146	883013	3

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8/4/09

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2479

REQUEST NUMBER: 09-2479

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232433 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6007	1	POLY	H3	Ice	R
CAMO-09-6006	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6006	1	POLY	H3	Ice	R
CAMO-09-6008	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6008	1	POLY	H3	Ice	R
CAMO-09-6009	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6009	1	POLY	H3	Ice	R
CAMO-09-6034	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6034	1	POLY	H3	Ice	R
CAMO-09-6043	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6043	1	POLY	H3	Ice	R
CAMO-09-6045	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6045	1	POLY	H3	Ice	R
CAMO-09-6041	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6041	1	POLY	H3	Ice	R
CAMO-09-6040	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6040	1	POLY	H3	Ice	R
CAMO-09-6044	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6044	1	POLY	H3	Ice	R
CAMO-09-6035	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6035	1	POLY	H3	Ice	R
CAMO-09-6038	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6038	1	POLY	H3	Ice	R
CAMO-09-6039	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6039	1	POLY	H3	Ice	R
CAMO-09-6042	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6042	1	POLY	H3	Ice	R
CAMO-09-6049	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6049	1	POLY	H3	Ice	R

Relinquished By: **Date** **Time** **Received By:** **Date** **Time**

9-2479

Printed Name	Signature	Printed Name	Signature
[illegible] 6/25/09 1400		Patricia Dent P. Dent 6/26/09 08:40	
Printed Name	Signature	Printed Name	Signature
Printed Name	Signature	Printed Name	Signature

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Thursday, June 25, 2009

REQUEST NUMBER: 09-2479

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2479
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009
TURNAROUND/REPORT DUE: 7/10/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2479

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	EPA:906.0	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	HASL-300:ISOU	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	[illegible]	R	[illegible]	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2479

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOU	1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2479

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

June 27, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232433
SDG: 09-2479

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 26, 2009, and analyzed for Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2479
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232433
SDG: 09-2479

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232433
SDG # : 09-2479

June 27, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 26, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232433001	CAMO-09-6007
232433002	CAMO-09-6006
232433003	CAMO-09-6008
232433004	CAMO-09-6009
232433005	CAMO-09-6034
232433006	CAMO-09-6043
232433007	CAMO-09-6045
232433008	CAMO-09-6041
232433009	CAMO-09-6040
232433010	CAMO-09-6044
232433011	CAMO-09-6035
232433012	CAMO-09-6038
232433013	CAMO-09-6039
232433014	CAMO-09-6042
232433015	CAMO-09-6049

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

GEL Laboratories LLC PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178 www.gel.com

List of current GEL Certifications as of 27 June 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2479

REQUEST NUMBER: 09-2479

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS: 232433 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6007	1	POLY	H3	Ice	R
CAMO-09-6006	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6006	1	POLY	H3	Ice	R
CAMO-09-6008	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6008	1	POLY	H3	Ice	R
CAMO-09-6009	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6009	1	POLY	H3	Ice	R
CAMO-09-6034	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6034	1	POLY	H3	Ice	R
CAMO-09-6043	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6043	1	POLY	H3	Ice	R
CAMO-09-6045	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6045	1	POLY	H3	Ice	R
CAMO-09-6041	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6041	1	POLY	H3	Ice	R
CAMO-09-6040	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6040	1	POLY	H3	Ice	R
CAMO-09-6044	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6044	1	POLY	H3	Ice	R
CAMO-09-6035	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6035	1	POLY	H3	Ice	R
CAMO-09-6038	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6038	1	POLY	H3	Ice	R
CAMO-09-6039	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6039	1	POLY	H3	Ice	R
CAMO-09-6042	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6042	1	POLY	H3	Ice	R
CAMO-09-6049	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-6049	1	POLY	H3	Ice	R

Relinquished By: **Date** **Time** **Received By:** **Date** **Time**

9-2479

Printed Name	Signature	Printed Name	Signature
	6/25/09 1400		
		Patricia Dent	P. Dent 6/26/09 08:40

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Thursday, June 25, 2009

REQUEST NUMBER: 09-2479

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2479
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009
TURNAROUND/REPORT DUE: 7/10/2009
TURNAROUND REQ'D: 16 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2479

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	EPA:906.0	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	HASL-300:ISOU	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2479

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOU	1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2479

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2479**
Received By: Patricia Dent	**Date Received: JUNE 26, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,3,6,23,24C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5664 6C
7209 7847 5642 2C
7209 7847 5572 24C
7209 7847 5609 3C
7209 7847 5561 23C
7209 7847 5594 3C
7209 7847 5583 3C
7209 7847 5653 2C

PM (or PMA) review: Initials PM Date 27 JUN 09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 56.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018amr2a0512bgdo

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5664 Form 0201

FRI
Deliver By:
26JUN09

29407 -SC-US XX CHS CHSA A1

ORIGIN ID: SAFA (505) 665-9968
YLENE VALDEZ
S ALAMOS NATL LAB.
00 BLDG 1237 DPU 03

S ALAMOS, NM 87545
ITED STATES US

Ship Date: 25JUN09
ActWgt: 18.0 LB MA
System#: 0014176/C
Account: S *******

VALERIE DAVIS
ENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 55
Fe

2°C

Ref: 6b018amr2a0512bgdo

Delivery
Bar

BILL SI

PRIORITY OVERNIGHT

TRK# 7209 7847 5842 Form 0201

F
De
21

29407 -SC-US XX CHS

Part # 156108-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 29.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

(843) 556-8171
FedEx
Express

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

Ref: 6b010amr1a05101cc

Delivery Address
Barcode

24°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5572 Form 0201

FRI
Deliver By:
26JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 51.0 LB MAN
System#: 0014176/CAFE
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-
Fedl
Ex

Ref: 6b010amr1a015agumo

Delivery Addr
Barcode

3°C

BILL SENDEI

PRIORITY OVERNIGHT

TRK# 7209 7847 5500 Form 0201

FRI
Deliver
26JUN

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 55.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010aur1a05101cce

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5581 Form 0201

FRI
Deliver By:
26JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRT V3 04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 52.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010aue81115700

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5584 Form 0201

FRI
Deliver By:
26JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 53.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-0171

FedEx Express

Ref: 6b01Bauu61115700

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

FRI
Deliver By
26JUN09

TRK# 7288 7847 5583 Form 0201

29407 -SC-US XX CHSA

Part #156148-434 NRT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
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Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-0171

FedEx Express

Ref: 6b01Bamr2a0512bgdo

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

FRI
Deliver By:
26JUN09

TRK# 7288 7847 5653 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part #156148-434 NRT V3.04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

RADIOLOGICAL ANALYSIS

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882536
Prep Batch Number:	881115

Sample ID	Client ID
232433001	CAMO-09-6007
232433002	CAMO-09-6006
232433003	CAMO-09-6008
232433004	CAMO-09-6009
232433005	CAMO-09-6034
232433006	CAMO-09-6043
232433007	CAMO-09-6045
232433008	CAMO-09-6041
232433009	CAMO-09-6040
232433010	CAMO-09-6044
232433011	CAMO-09-6035
232433012	CAMO-09-6038
232433013	CAMO-09-6039
232433014	CAMO-09-6042
232433015	CAMO-09-6049
1201874417	Method Blank (MB)
1201874418	232433008(CAMO-09-6041) Sample Duplicate (DUP)
1201874419	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874417 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232433008 (CAMO-09-6041). The QC was from LANL work order 232433.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population. Sample, 232433002 (CAMO-09-6006), did not meet the client tracer yield requirements, however it is less than 110 percent and does meet the GEL standard tracer yield requirements.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881219
Prep Batch Number:	881115

Sample ID	Client ID
232433001	CAMO-09-6007
232433002	CAMO-09-6006
232433003	CAMO-09-6008
232433004	CAMO-09-6009
232433005	CAMO-09-6034
232433006	CAMO-09-6043
232433007	CAMO-09-6045
232433008	CAMO-09-6041
232433009	CAMO-09-6040
232433010	CAMO-09-6044
232433011	CAMO-09-6035
232433012	CAMO-09-6038
232433013	CAMO-09-6039
232433014	CAMO-09-6042
232433015	CAMO-09-6049
1201871423	Method Blank (MB)
1201871424	232424001(CAMO-09-10463) Sample Duplicate (DUP)
1201871425	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, September 2008, November 2008, January 2009, February 2009, March 2009, April 2009, May 2009 and June 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232424001 (CAMO-09-10463). The QC was from LANL work order 232424.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank results for the following are greater than 1.65 times the CSU, but less than the minimum detectable activity: U-235. 1201871423 (MB).

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The results for the following were greater than the decision level in the method blank, but less than the minimum detectable activity: Th-234 and U-235. 1201871423 (MB).

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232433001	CAMO-09-6007
			232433002	CAMO-09-6006
			232433003	CAMO-09-6008
			232433004	CAMO-09-6009
			232433005	CAMO-09-6034
			232433006	CAMO-09-6043
			232433007	CAMO-09-6045
			232433008	CAMO-09-6041
			232433009	CAMO-09-6040
			232433010	CAMO-09-6044
			232433011	CAMO-09-6035
			232433012	CAMO-09-6038
			232433013	CAMO-09-6039
			232433014	CAMO-09-6042
			232433015	CAMO-09-6049
			1201871424	CAMO-09-10463(232424001DUP)
		Cadmium-109	232433001	CAMO-09-6007
			232433003	CAMO-09-6008
			232433004	CAMO-09-6009
			232433006	CAMO-09-6043
			232433007	CAMO-09-6045
			232433008	CAMO-09-6041
			232433009	CAMO-09-6040
			232433010	CAMO-09-6044
			232433011	CAMO-09-6035
			232433012	CAMO-09-6038

			232433013	CAMO-09-6039
			232433014	CAMO-09-6042
			232433015	CAMO-09-6049
			1201871424	CAMO-09-10463(232424001DUP)
		Radium-224	232433001	CAMO-09-6007
			232433002	CAMO-09-6006
			232433003	CAMO-09-6008
			232433004	CAMO-09-6009
			232433005	CAMO-09-6034
			232433006	CAMO-09-6043
			232433007	CAMO-09-6045
			232433008	CAMO-09-6041
			232433009	CAMO-09-6040
			232433010	CAMO-09-6044
			232433011	CAMO-09-6035
			232433012	CAMO-09-6038
			232433013	CAMO-09-6039
			232433014	CAMO-09-6042
			232433015	CAMO-09-6049
			1201871424	CAMO-09-10463(232424001DUP)
UI	Data rejected due to low abundance.	Americium-241	232433012	CAMO-09-6038
		Bismuth-214	232433002	CAMO-09-6006
			232433003	CAMO-09-6008
			232433012	CAMO-09-6038
			232433014	CAMO-09-6042
			1201871424	CAMO-09-10463(232424001DUP)
		Cadmium-109	232433002	CAMO-09-6006
		Cesium-134	232433002	CAMO-09-6006
			232433004	CAMO-09-6009

			232433007	CAMO-09-6045
			232433008	CAMO-09-6041
			232433015	CAMO-09-6049
		Radium-226	232433002	CAMO-09-6006
			232433003	CAMO-09-6008
			232433012	CAMO-09-6038
			232433014	CAMO-09-6042
			1201871424	CAMO-09-10463(232424001DUP)
		Strontium-85	232433003	CAMO-09-6008
			232433004	CAMO-09-6009
			232433006	CAMO-09-6043
			232433007	CAMO-09-6045
			232433008	CAMO-09-6041
			232433009	CAMO-09-6040
			232433010	CAMO-09-6044
			232433012	CAMO-09-6038
			232433013	CAMO-09-6039
			232433014	CAMO-09-6042
			232433015	CAMO-09-6049
			1201871423	MB for batch 881219
UI	Data rejected due to no valid peak.	Mercury-203	232433004	CAMO-09-6009

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883013

Sample ID	Client ID
232433002	CAMO-09-6006
232433003	CAMO-09-6008
232433004	CAMO-09-6009
232433005	CAMO-09-6034
232433006	CAMO-09-6043
232433007	CAMO-09-6045
232433008	CAMO-09-6041
232433009	CAMO-09-6040
232433010	CAMO-09-6044
232433011	CAMO-09-6035
232433012	CAMO-09-6038
232433013	CAMO-09-6039
232433014	CAMO-09-6042
232433015	CAMO-09-6049
1201875577	Method Blank (MB)
1201875578	232433003(CAMO-09-6008) Sample Duplicate (DUP)
1201875579	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232433003 (CAMO-09-6008). The QC was from LANL work order 232433.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples 1201875578 (CAMO-09-6008) and 232433003 (CAMO-09-6008) were recounted due to high relative percent difference/relative error ratio.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883039

Sample ID	Client ID
232433001	CAMO-09-6007
1201875658	Method Blank (MB)
1201875659	232851001(CAMO-09-7145) Sample Duplicate (DUP)
1201875660	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232851001 (CAMO-09-7145). The QC was from LANL work order 232851.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Sample 232433001 (CAMO-09-6007) was reanalyzed due to originally having low moisture content.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 712814 was generated due to Container scanning event for custody missed. 1. Container scanning event for custody missed: 232433 001. Sample was rebatched and reanalyzed due to insufficient moisture content. 1. The analyst did not scan the sample into the batch prior to analysis,

however the sample did remain in their custody at all times. The analyst has been instructed on the proper scanning procedures.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 7/17/09

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
17-JUL-09	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LSC	GL-RAD-A-002	Solid	LANL
Batch ID:	**Sample Numbers:**		
883039	See Below		

Potentially affected work order(s)(SDG): 232433(09-2479),232746(09-2526),232754(09-2536),232758(09-2541),232851(09-2547)

Application Issues:

Container scanning event for custody missed

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Container scanning event for custody missed: 232433 001. Sample was rebatched and reanalyzed due to insufficient moisture content.	1. The analyst did not scan the sample into the batch prior to analysis, however the sample did remain in their custody at all times. The analyst has been instructed on the proper scanning procedures.

Originator's Name:

Heather McCarty 17-JUL-09

Data Validator/Group Leader:

Heather McCarty

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2479 GEL Work Order: 232433

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/17/09

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6007	Project:	LANL01004
Sample ID:	232433001	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	4.27%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.338	0.220	+/-0.0518	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	-0.00597	0.101	+/-0.0179	0.100	pCi/g						
Uranium-238		0.343	0.0854	+/-0.0522	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-8.08E-06	0.324	+/-0.102	0.200	pCi/g		MXR1	07/07/09	0604	881219	2
Bismuth-211	UI	3.46	0.345	+/-0.239		pCi/g						
Bismuth-214		1.01	0.111	+/-0.0862	0.200	pCi/g						
Cadmium-109	UI	3.04	1.31	+/-0.515		pCi/g						
Cerium-139	U	0.0118	0.0544	+/-0.0161	0.050	pCi/g						
Cesium-134	U	0.0468	0.0924	+/-0.0261	0.100	pCi/g						
Cesium-137	U	-0.0331	0.0705	+/-0.0223	0.100	pCi/g						
Cobalt-60	U	0.0112	0.0723	+/-0.0214	0.100	pCi/g						
Europium-152	U	-0.0113	0.165	+/-0.0563	0.200	pCi/g						
Lanthanum-140	U	0.0349	0.154	+/-0.0444		pCi/g						
Lead-212		1.45	0.116	+/-0.102	0.100	pCi/g						
Lead-214		1.20	0.120	+/-0.0888	0.100	pCi/g						
Mercury-203	U	0.00309	0.0764	+/-0.0228	0.100	pCi/g						
Potassium-40		35.2	0.599	+/-1.68	1.00	pCi/g						
Radium-223	U	-0.556	1.23	+/-0.383		pCi/g						
Radium-224	UI	2.50	1.52	+/-0.685		pCi/g						
Radium-226		1.01	0.111	+/-0.0862		pCi/g						
Radium-228		1.46	0.241	+/-0.218	0.500	pCi/g						
Ruthenium-106	U	-0.0198	0.598	+/-0.178	0.800	pCi/g						
Sodium-22	U	-0.0219	0.0829	+/-0.0263	0.080	pCi/g						
Strontium-85	U	0.0226	0.069	+/-0.0232		pCi/g						
Thallium-208		0.506	0.0662	+/-0.0522	0.080	pCi/g						
Thorium-227	U	-0.582	0.552	+/-0.185		pCi/g						
Thorium-231	U	-0.556	1.23	+/-0.383		pCi/g						
Thorium-234	U	1.11	2.62	+/-1.16	2.00	pCi/g						
Tin-113	U	-0.0309	0.074	+/-0.0234	0.100	pCi/g						
Uranium-235	U	0.167	0.396	+/-0.119	0.500	pCi/g						
Yttrium-88	U	-0.00398	0.0567	+/-0.0177	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6007
Sample ID: 232433001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		375	239	+/-85.3	250	pCi/L		KXK2	07/17/09	1156	883039	3

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	70.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

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Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6007
Sample ID: 232433001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6006
Sample ID: 232433002
Matrix: R
Collect Date: 23-JUN-09
Receive Date: 26-JUN-09
Collector: Client
Moisture: 11.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.863	0.152	+/-0.082	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236		0.0745	0.0698	+/-0.0192	0.100	pCi/g						
Uranium-238		0.977	0.0592	+/-0.0901	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0992	0.339	+/-0.0993	0.200	pCi/g		MXR1	07/07/09	0604	881219	2
Bismuth-211	UI	3.48	0.293	+/-0.250		pCi/g						
Bismuth-214	UI	0.990	0.270	+/-0.0807	0.200	pCi/g						
Cadmium-109	UI	3.02	1.61	+/-0.482		pCi/g						
Cerium-139	U	-0.00773	0.044	+/-0.0135	0.050	pCi/g						
Cesium-134	UI	0.130	0.0838	+/-0.0299	0.100	pCi/g						
Cesium-137		0.144	0.0639	+/-0.0303	0.100	pCi/g						
Cobalt-60	U	0.0178	0.0619	+/-0.0173	0.100	pCi/g						
Europium-152	U	-0.0387	0.147	+/-0.0512	0.200	pCi/g						
Lanthanum-140	U	-0.0293	0.121	+/-0.0397		pCi/g						
Lead-212		1.37	0.0834	+/-0.076	0.100	pCi/g						
Lead-214		1.21	0.102	+/-0.0924	0.100	pCi/g						
Mercury-203	U	0.0486	0.0686	+/-0.0187	0.100	pCi/g						
Potassium-40		20.7	0.464	+/-1.06	1.00	pCi/g						
Radium-223	U	0.523	1.06	+/-0.332		pCi/g						
Radium-224	UI	5.31	0.950	+/-0.707		pCi/g						
Radium-226	UI	0.990	0.270	+/-0.0807		pCi/g						
Radium-228		1.44	0.203	+/-0.154	0.500	pCi/g						
Ruthenium-106	U	-0.0616	0.469	+/-0.149	0.800	pCi/g						
Sodium-22	U	0.00203	0.0688	+/-0.0205	0.080	pCi/g						
Strontium-85	U	0.00209	0.0551	+/-0.0191		pCi/g						
Thallium-208		0.397	0.0551	+/-0.0428	0.080	pCi/g						
Thorium-227	U	0.262	0.617	+/-0.173		pCi/g						
Thorium-231	U	0.523	1.06	+/-0.332		pCi/g						
Thorium-234	U	0.495	2.85	+/-0.810	2.00	pCi/g						
Tin-113	U	0.031	0.0718	+/-0.0203	0.100	pCi/g						
Uranium-235	U	0.152	0.338	+/-0.0982	0.500	pCi/g						
Yttrium-88	U	-9.45E-05	0.0547	+/-0.017	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		557	153	+/-68.2	250	pCi/L		KXK2	07/14/09	1939	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6006
Sample ID: 232433002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	107 *	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6008
Sample ID: 232433003
Matrix: R
Collect Date: 23-JUN-09
Receive Date: 26-JUN-09
Collector: Client
Moisture: 23.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.611	0.187	+/-0.0675	0.100	pCi/g		HAKB	07/11/09 1544	882536	1
Uranium-235/236	U	0.0254	0.0857	+/-0.0184	0.100	pCi/g					
Uranium-238		0.625	0.0728	+/-0.0671	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.00789	0.116	+/-0.0391	0.200	pCi/g		MXR1	07/07/09 0605	881219	2
Bismuth-211	UI	3.85	0.416	+/-0.322		pCi/g					
Bismuth-214	UI	1.09	0.335	+/-0.113	0.200	pCi/g					
Cadmium-109	UI	2.71	1.30	+/-0.492		pCi/g					
Cerium-139	U	-0.00307	0.0592	+/-0.0182	0.050	pCi/g					
Cesium-134	U	0.042	0.106	+/-0.0303	0.100	pCi/g					
Cesium-137		0.245	0.0951	+/-0.0501	0.100	pCi/g					
Cobalt-60	U	-0.00109	0.0911	+/-0.0286	0.100	pCi/g					
Europium-152	U	0.0789	0.206	+/-0.0766	0.200	pCi/g					
Lanthanum-140	U	-0.0898	0.164	+/-0.057		pCi/g					
Lead-212		1.83	0.109	+/-0.119	0.100	pCi/g					
Lead-214		1.34	0.145	+/-0.117	0.100	pCi/g					
Mercury-203	U	0.058	0.0886	+/-0.0251	0.100	pCi/g					
Potassium-40		29.6	0.779	+/-1.38	1.00	pCi/g					
Radium-223	U	-0.0144	1.41	+/-0.486		pCi/g					
Radium-224	UI	4.99	1.24	+/-0.886		pCi/g					
Radium-226	UI	1.09	0.335	+/-0.113		pCi/g					
Radium-228		2.13	0.284	+/-0.231	0.500	pCi/g					
Ruthenium-106	U	0.204	0.762	+/-0.228	0.800	pCi/g					
Sodium-22	U	-0.0205	0.0962	+/-0.0311	0.080	pCi/g					
Strontium-85	UI	0.129	0.0979	+/-0.0292		pCi/g					
Thallium-208		0.596	0.0812	+/-0.0625	0.080	pCi/g					
Thorium-227	U	0.108	0.771	+/-0.238		pCi/g					
Thorium-231	U	-0.0144	1.41	+/-0.486		pCi/g					
Thorium-234		2.31	1.17	+/-0.615	2.00	pCi/g					
Tin-113	U	0.00117	0.104	+/-0.0314	0.100	pCi/g					
Uranium-235	U	0.226	0.442	+/-0.135	0.500	pCi/g					
Yttrium-88	U	0.0304	0.0952	+/-0.0267	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	116	170	+/-52.8	250	pCi/L		KXK2	07/16/09 1037	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6008
Sample ID: 232433003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	83.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6009
Sample ID: 232433004
Matrix: R
Collect Date: 23-JUN-09
Receive Date: 26-JUN-09
Collector: Client
Moisture: 17%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.811	0.202	+/-0.085	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	0.0494	0.0924	+/-0.0168	0.100	pCi/g						
Uranium-238		0.958	0.0785	+/-0.0953	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.00603	0.354	+/-0.0991	0.200	pCi/g		MXR1	07/07/09	0605	881219	2
Bismuth-211	UI	4.01	0.398	+/-0.295		pCi/g						
Bismuth-214		1.18	0.125	+/-0.0915	0.200	pCi/g						
Cadmium-109	UI	3.83	1.56	+/-0.468		pCi/g						
Cerium-139	U	-0.012	0.0582	+/-0.0173	0.050	pCi/g						
Cesium-134	UI	0.140	0.103	+/-0.0317	0.100	pCi/g						
Cesium-137	U	0.063	0.0718	+/-0.0255	0.100	pCi/g						
Cobalt-60	U	-0.0402	0.0696	+/-0.0238	0.100	pCi/g						
Europium-152	U	0.0783	0.185	+/-0.0734	0.200	pCi/g						
Lanthanum-140	U	-0.0299	0.146	+/-0.0459		pCi/g						
Lead-212		1.80	0.106	+/-0.0893	0.100	pCi/g						
Lead-214		1.40	0.139	+/-0.109	0.100	pCi/g						
Mercury-203	UI	0.0875	0.0777	+/-0.0276	0.100	pCi/g						
Potassium-40		34.8	0.628	+/-1.53	1.00	pCi/g						
Radium-223	U	0.208	1.33	+/-0.434		pCi/g						
Radium-224	UI	4.55	1.20	+/-0.621		pCi/g						
Radium-226		1.18	0.125	+/-0.0915		pCi/g						
Radium-228		1.87	0.232	+/-0.184	0.500	pCi/g						
Ruthenium-106	U	0.0885	0.576	+/-0.170	0.800	pCi/g						
Sodium-22	U	-0.0676	0.0819	+/-0.0284	0.080	pCi/g						
Strontium-85	UI	0.107	0.0812	+/-0.0234		pCi/g						
Thallium-208		0.529	0.0703	+/-0.0436	0.080	pCi/g						
Thorium-227	U	0.0707	0.742	+/-0.222		pCi/g						
Thorium-231	U	0.208	1.33	+/-0.434		pCi/g						
Thorium-234	U	0.972	2.97	+/-0.827	2.00	pCi/g						
Tin-113	U	-0.0198	0.0819	+/-0.0246	0.100	pCi/g						
Uranium-235	U	0.213	0.432	+/-0.126	0.500	pCi/g						
Yttrium-88	U	-0.02	0.0458	+/-0.0163	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		403	153	+/-60.1	250	pCi/L		KXK2	07/14/09	2256	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6009
Sample ID: 232433004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	77.6	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6034	Project:	LANL01004
Sample ID:	232433005	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	22.4%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		2.62	0.169	+/-0.208	0.100	pCi/g		HAKB	07/11/09 1544	882536	1
Uranium-235/236		0.133	0.0773	+/-0.0287	0.100	pCi/g					
Uranium-238		2.81	0.0657	+/-0.221	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0451	0.371	+/-0.131	0.200	pCi/g		MXR1	07/07/09 0606	881219	2
Bismuth-211	UI	3.36	0.443	+/-0.319		pCi/g					
Bismuth-214		1.08	0.162	+/-0.116	0.200	pCi/g					
Cadmium-109	U	1.99	2.02	+/-0.703		pCi/g					
Cerium-139	U	-0.00754	0.0622	+/-0.0193	0.050	pCi/g					
Cesium-134	U	0.0357	0.110	+/-0.0324	0.100	pCi/g					
Cesium-137		0.827	0.0845	+/-0.0661	0.100	pCi/g					
Cobalt-60	U	-0.0281	0.0839	+/-0.0274	0.100	pCi/g					
Europium-152	U	0.0773	0.230	+/-0.0697	0.200	pCi/g					
Lanthanum-140	U	-0.167	0.168	+/-0.0678		pCi/g					
Lead-212		1.33	0.127	+/-0.0847	0.100	pCi/g					
Lead-214		1.17	0.155	+/-0.115	0.100	pCi/g					
Mercury-203	U	0.00612	0.0889	+/-0.0275	0.100	pCi/g					
Potassium-40		22.6	0.732	+/-1.45	1.00	pCi/g					
Radium-223	U	-1.12	1.34	+/-0.471		pCi/g					
Radium-224	UI	3.15	1.45	+/-0.925		pCi/g					
Radium-226		1.08	0.162	+/-0.116		pCi/g					
Radium-228		1.46	0.257	+/-0.201	0.500	pCi/g					
Ruthenium-106	U	-0.103	0.708	+/-0.222	0.800	pCi/g					
Sodium-22	U	-0.0289	0.0978	+/-0.0318	0.080	pCi/g					
Strontium-85	U	0.0675	0.0929	+/-0.0303		pCi/g					
Thallium-208		0.458	0.0856	+/-0.0646	0.080	pCi/g					
Thorium-227	U	-0.163	0.813	+/-0.258		pCi/g					
Thorium-231	U	-1.12	1.34	+/-0.471		pCi/g					
Thorium-234		4.51	2.86	+/-1.79	2.00	pCi/g					
Tin-113	U	-0.0404	0.0888	+/-0.030	0.100	pCi/g					
Uranium-235	U	0.288	0.465	+/-0.146	0.500	pCi/g					
Yttrium-88	U	-0.00281	0.0763	+/-0.0243	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		419	154	+/-61.0	250	pCi/L		KXK2	07/15/09 0035	883013	3

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6034
Sample ID: 232433005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	92.9	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
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A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6043	Project:	LANL01004
Sample ID:	232433006	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	7.85%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		1.32	0.188	+/-0.120	0.100	pCi/g	HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	0.0562	0.0861	+/-0.0174	0.100	pCi/g					
Uranium-238		1.83	0.0731	+/-0.156	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.0784	0.244	+/-0.0858	0.200	pCi/g	MXR1	07/07/09	0638	881219	2
Bismuth-211	UI	4.33	0.388	+/-0.297		pCi/g					
Bismuth-214		1.24	0.138	+/-0.110	0.200	pCi/g					
Cadmium-109	UI	1.87	1.47	+/-0.311		pCi/g					
Cerium-139	U	-0.0133	0.0584	+/-0.0185	0.050	pCi/g					
Cesium-134	U	0.110	0.115	+/-0.0424	0.100	pCi/g					
Cesium-137		0.122	0.0757	+/-0.0328	0.100	pCi/g					
Cobalt-60	U	0.00256	0.0844	+/-0.0261	0.100	pCi/g					
Europium-152	U	-0.0333	0.190	+/-0.0644	0.200	pCi/g					
Lanthanum-140	U	0.0682	0.138	+/-0.0392		pCi/g					
Lead-212		1.90	0.106	+/-0.101	0.100	pCi/g					
Lead-214		1.51	0.135	+/-0.111	0.100	pCi/g					
Mercury-203	U	-0.00692	0.0814	+/-0.0254	0.100	pCi/g					
Potassium-40		31.9	0.673	+/-1.48	1.00	pCi/g					
Radium-223	U	-0.16	1.33	+/-0.468		pCi/g					
Radium-224	UI	5.23	1.20	+/-0.727		pCi/g					
Radium-226		1.24	0.138	+/-0.110		pCi/g					
Radium-228		1.72	0.273	+/-0.206	0.500	pCi/g					
Ruthenium-106	U	0.226	0.677	+/-0.202	0.800	pCi/g					
Sodium-22	U	-0.0418	0.0745	+/-0.0257	0.080	pCi/g					
Strontium-85	UI	0.0925	0.0835	+/-0.0256		pCi/g					
Thallium-208		0.586	0.0731	+/-0.0521	0.080	pCi/g					
Thorium-227	U	0.048	0.761	+/-0.240		pCi/g					
Thorium-231	U	-0.16	1.33	+/-0.468		pCi/g					
Thorium-234		2.31	2.18	+/-0.921	2.00	pCi/g					
Tin-113	U	-0.0281	0.0861	+/-0.0271	0.100	pCi/g					
Uranium-235	U	0.139	0.436	+/-0.134	0.500	pCi/g					
Yttrium-88	U	-0.00876	0.0685	+/-0.0227	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		316	154	+/-56.1	250	pCi/L	KXK2	07/15/09	0214	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6043
Sample ID: 232433006

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	85.9	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6045	Project:	LANL01004
Sample ID:	232433007	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	8%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.29	0.225	+/-0.124	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	0.0733	0.103	+/-0.0235	0.100	pCi/g						
Uranium-238		1.44	0.0875	+/-0.135	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0403	0.285	+/-0.0913	0.200	pCi/g		MXR1	07/07/09	0639	881219	2
Bismuth-211	UI	4.55	0.344	+/-0.273		pCi/g						
Bismuth-214		1.31	0.141	+/-0.104	0.200	pCi/g						
Cadmium-109	UI	5.06	1.35	+/-0.686		pCi/g						
Cerium-139	U	-0.0367	0.0525	+/-0.0172	0.050	pCi/g						
Cesium-134	UI	0.129	0.114	+/-0.0306	0.100	pCi/g						
Cesium-137		0.162	0.0777	+/-0.028	0.100	pCi/g						
Cobalt-60	U	-0.0109	0.0805	+/-0.0254	0.100	pCi/g						
Europium-152	U	0.0298	0.180	+/-0.0609	0.200	pCi/g						
Lanthanum-140	U	-0.0855	0.153	+/-0.0521		pCi/g						
Lead-212		1.89	0.0959	+/-0.0934	0.100	pCi/g						
Lead-214		1.58	0.121	+/-0.104	0.100	pCi/g						
Mercury-203	U	0.0476	0.0791	+/-0.0229	0.100	pCi/g						
Potassium-40		36.9	0.518	+/-1.71	1.00	pCi/g						
Radium-223	U	0.255	1.24	+/-0.416		pCi/g						
Radium-224	UI	4.80	1.09	+/-0.701		pCi/g						
Radium-226		1.31	0.141	+/-0.104		pCi/g						
Radium-228		1.96	0.244	+/-0.210	0.500	pCi/g						
Ruthenium-106	U	0.231	0.641	+/-0.184	0.800	pCi/g						
Sodium-22	U	-0.0236	0.0889	+/-0.0284	0.080	pCi/g						
Strontium-85	UI	0.0874	0.0853	+/-0.024		pCi/g						
Thallium-208		0.635	0.0716	+/-0.0506	0.080	pCi/g						
Thorium-227	U	-0.0107	0.702	+/-0.209		pCi/g						
Thorium-231	U	0.255	1.24	+/-0.416		pCi/g						
Thorium-234		2.81	2.32	+/-1.20	2.00	pCi/g						
Tin-113	U	-0.0115	0.0834	+/-0.0259	0.100	pCi/g						
Uranium-235	U	-0.113	0.379	+/-0.121	0.500	pCi/g						
Yttrium-88	U	0.0304	0.086	+/-0.0238	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		264	154	+/-53.9	250	pCi/L		KXK2	07/15/09	0352	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6045
Sample ID: 232433007

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	72.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6041	Project:	LANL01004
Sample ID:	232433008	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	5.2%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		1.08	0.167	+/-0.0987	0.100	pCi/g	HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	0.0682	0.0767	+/-0.0204	0.100	pCi/g					
Uranium-238		1.43	0.0651	+/-0.123	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0844	0.123	+/-0.0381	0.200	pCi/g	MXR1	07/07/09	0639	881219	2
Bismuth-211	UI	3.75	0.473	+/-0.314		pCi/g					
Bismuth-214		1.19	0.162	+/-0.128	0.200	pCi/g					
Cadmium-109	UI	4.21	1.17	+/-0.573		pCi/g					
Cerium-139	U	0.00799	0.0621	+/-0.0191	0.050	pCi/g					
Cesium-134	UI	0.199	0.141	+/-0.0478	0.100	pCi/g					
Cesium-137		0.288	0.0949	+/-0.0565	0.100	pCi/g					
Cobalt-60	U	-0.0131	0.0969	+/-0.031	0.100	pCi/g					
Europium-152	U	-0.0148	0.229	+/-0.0809	0.200	pCi/g					
Lanthanum-140	U	-0.04	0.194	+/-0.0627		pCi/g					
Lead-212		1.90	0.115	+/-0.110	0.100	pCi/g					
Lead-214		1.31	0.165	+/-0.114	0.100	pCi/g					
Mercury-203	U	0.0545	0.0913	+/-0.0263	0.100	pCi/g					
Potassium-40		29.9	0.855	+/-1.41	1.00	pCi/g					
Radium-223	U	-0.762	1.42	+/-0.458		pCi/g					
Radium-224	UI	4.82	1.31	+/-0.765		pCi/g					
Radium-226		1.19	0.162	+/-0.128		pCi/g					
Radium-228		1.70	0.351	+/-0.210	0.500	pCi/g					
Ruthenium-106	U	-0.00629	0.786	+/-0.241	0.800	pCi/g					
Sodium-22	U	-0.0105	0.107	+/-0.0328	0.080	pCi/g					
Strontium-85	UI	0.226	0.118	+/-0.034		pCi/g					
Thallium-208		0.599	0.0875	+/-0.060	0.080	pCi/g					
Thorium-227	U	0.205	0.881	+/-0.260		pCi/g					
Thorium-231	U	-0.762	1.42	+/-0.458		pCi/g					
Thorium-234		2.72	1.19	+/-0.745	2.00	pCi/g					
Tin-113	U	0.000811	0.104	+/-0.0321	0.100	pCi/g					
Uranium-235	U	0.214	0.474	+/-0.145	0.500	pCi/g					
Yttrium-88	U	0.00219	0.0853	+/-0.0257	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		247	155	+/-53.3	250	pCi/L	KXK2	07/15/09	0531	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6041
Sample ID: 232433008

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	98.0	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6040	Project:	LANL01004
Sample ID:	232433009	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	27.3%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		2.92	0.164	+/-0.231	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236		0.169	0.075	+/-0.0299	0.100	pCi/g						
Uranium-238		5.69	0.0637	+/-0.428	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0274	0.255	+/-0.0965	0.200	pCi/g		MXR1	07/07/09	0640	881219	2
Bismuth-211	UI	3.59	0.424	+/-0.305		pCi/g						
Bismuth-214		1.17	0.145	+/-0.109	0.200	pCi/g						
Cadmium-109	UI	3.94	1.44	+/-0.696		pCi/g						
Cerium-139	U	0.0223	0.0581	+/-0.0186	0.050	pCi/g						
Cesium-134	U	0.115	0.117	+/-0.035	0.100	pCi/g						
Cesium-137		0.413	0.0826	+/-0.0532	0.100	pCi/g						
Cobalt-60	U	0.0137	0.0891	+/-0.0271	0.100	pCi/g						
Europium-152	U	-0.0869	0.190	+/-0.0833	0.200	pCi/g						
Lanthanum-140	U	-0.00216	0.207	+/-0.0654		pCi/g						
Lead-212		1.53	0.110	+/-0.090	0.100	pCi/g						
Lead-214		1.25	0.148	+/-0.111	0.100	pCi/g						
Mercury-203	U	0.0212	0.0857	+/-0.0264	0.100	pCi/g						
Potassium-40		24.6	0.686	+/-1.41	1.00	pCi/g						
Radium-223	U	-1.24	1.30	+/-0.453		pCi/g						
Radium-224	UI	4.94	1.25	+/-0.753		pCi/g						
Radium-226		1.17	0.145	+/-0.109		pCi/g						
Radium-228		1.61	0.255	+/-0.224	0.500	pCi/g						
Ruthenium-106	U	0.112	0.603	+/-0.187	0.800	pCi/g						
Sodium-22	U	-0.0112	0.0825	+/-0.0265	0.080	pCi/g						
Strontium-85	UI	0.100	0.0888	+/-0.0282		pCi/g						
Thallium-208		0.572	0.0707	+/-0.0553	0.080	pCi/g						
Thorium-227	U	0.00544	0.768	+/-0.240		pCi/g						
Thorium-231	U	-1.24	1.30	+/-0.453		pCi/g						
Thorium-234		7.92	2.17	+/-1.32	2.00	pCi/g						
Tin-113	U	-0.0402	0.0893	+/-0.0294	0.100	pCi/g						
Uranium-235	U	0.0376	0.429	+/-0.149	0.500	pCi/g						
Yttrium-88	U	0.00592	0.0864	+/-0.0259	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	36.9	232	+/-66.4	250	pCi/L		KXK2	07/15/09	0835	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6040
Sample ID: 232433009

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	101	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
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A The TIC is a suspected aldol-condensation product
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D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6044	Project:	LANL01004
Sample ID:	232433010	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	12.8%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		1.35	0.255	+/-0.132	0.100	pCi/g	HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	0.097	0.117	+/-0.0269	0.100	pCi/g					
Uranium-238		1.84	0.0992	+/-0.168	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.0486	0.687	+/-0.247	0.200	pCi/g	MXR1	07/07/09	0640	881219	2
Bismuth-211	UI	4.27	0.565	+/-0.391		pCi/g					
Bismuth-214		1.58	0.188	+/-0.140	0.200	pCi/g					
Cadmium-109	UI	3.83	2.86	+/-1.01		pCi/g					
Cerium-139	U	-0.0201	0.0786	+/-0.0257	0.050	pCi/g					
Cesium-134	U	0.0624	0.140	+/-0.0403	0.100	pCi/g					
Cesium-137		0.207	0.103	+/-0.0528	0.100	pCi/g					
Cobalt-60	U	-0.0418	0.0832	+/-0.0298	0.100	pCi/g					
Europium-152	U	0.00439	0.266	+/-0.101	0.200	pCi/g					
Lanthanum-140	U	-0.0243	0.196	+/-0.0684		pCi/g					
Lead-212		2.09	0.153	+/-0.131	0.100	pCi/g					
Lead-214		1.48	0.191	+/-0.142	0.100	pCi/g					
Mercury-203	U	0.0812	0.106	+/-0.0523	0.100	pCi/g					
Potassium-40		28.4	0.962	+/-1.64	1.00	pCi/g					
Radium-223	U	0.276	1.96	+/-0.687		pCi/g					
Radium-224	UI	6.03	1.74	+/-1.07		pCi/g					
Radium-226		1.58	0.188	+/-0.140		pCi/g					
Radium-228		1.80	0.355	+/-0.270	0.500	pCi/g					
Ruthenium-106	U	0.252	0.944	+/-0.289	0.800	pCi/g					
Sodium-22	U	0.015	0.123	+/-0.0377	0.080	pCi/g					
Strontium-85	UI	0.257	0.138	+/-0.0392		pCi/g					
Thallium-208		0.662	0.0916	+/-0.058	0.080	pCi/g					
Thorium-227	U	-0.13	1.15	+/-0.355		pCi/g					
Thorium-231	U	0.276	1.96	+/-0.687		pCi/g					
Thorium-234		8.40	4.74	+/-3.34	2.00	pCi/g					
Tin-113	U	0.0164	0.135	+/-0.0414	0.100	pCi/g					
Uranium-235	U	0.466	0.556	+/-0.236	0.500	pCi/g					
Yttrium-88	U	0.0625	0.106	+/-0.0262	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	174	233	+/-74.1	250	pCi/L	KXK2	07/15/09	0907	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6044
Sample ID: 232433010

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	64.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6035	Project:	LANL01004
Sample ID:	232433011	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	3.99%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.990	0.182	+/-0.0937	0.100	pCi/g		HAKB	07/11/09 1544	882536	1
Uranium-235/236	U	0.0791	0.0833	+/-0.0205	0.100	pCi/g					
Uranium-238		0.900	0.0708	+/-0.0873	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0393	0.312	+/-0.101	0.200	pCi/g		MXR1	07/07/09 0641	881219	2
Bismuth-211	UI	4.27	0.346	+/-0.280		pCi/g					
Bismuth-214		1.31	0.117	+/-0.0937	0.200	pCi/g					
Cadmium-109	UI	3.20	1.50	+/-0.577		pCi/g					
Cerium-139	U	-0.00276	0.0553	+/-0.0166	0.050	pCi/g					
Cesium-134	U	0.0587	0.0904	+/-0.0342	0.100	pCi/g					
Cesium-137	U	-0.0425	0.0636	+/-0.0211	0.100	pCi/g					
Cobalt-60	U	-0.00357	0.0673	+/-0.0209	0.100	pCi/g					
Europium-152	U	-0.129	0.157	+/-0.0555	0.200	pCi/g					
Lanthanum-140	U	-0.0573	0.128	+/-0.0426		pCi/g					
Lead-212		1.98	0.0962	+/-0.0904	0.100	pCi/g					
Lead-214		1.48	0.123	+/-0.105	0.100	pCi/g					
Mercury-203	U	0.0123	0.0778	+/-0.0227	0.100	pCi/g					
Potassium-40		38.0	0.544	+/-1.88	1.00	pCi/g					
Radium-223	U	-0.135	1.16	+/-0.397		pCi/g					
Radium-224	UI	5.93	1.09	+/-0.698		pCi/g					
Radium-226		1.31	0.117	+/-0.0937		pCi/g					
Radium-228		2.02	0.234	+/-0.198	0.500	pCi/g					
Ruthenium-106	U	0.000944	0.567	+/-0.173	0.800	pCi/g					
Sodium-22	U	0.0227	0.0862	+/-0.0254	0.080	pCi/g					
Strontium-85	U	0.0482	0.0709	+/-0.0228		pCi/g					
Thallium-208		0.546	0.0646	+/-0.0425	0.080	pCi/g					
Thorium-227	U	0.192	0.706	+/-0.212		pCi/g					
Thorium-231	U	-0.135	1.16	+/-0.397		pCi/g					
Thorium-234	U	2.17	2.52	+/-0.987	2.00	pCi/g					
Tin-113	U	-0.0363	0.0765	+/-0.0237	0.100	pCi/g					
Uranium-235	U	0.0649	0.407	+/-0.121	0.500	pCi/g					
Yttrium-88	U	0.0213	0.0606	+/-0.0165	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	192	231	+/-74.6	250	pCi/L		KXK2	07/15/09 0939	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6035
Sample ID: 232433011

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	89.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6038
Sample ID: 232433012
Matrix: R
Collect Date: 23-JUN-09
Receive Date: 26-JUN-09
Collector: Client
Moisture: 25.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date Time	Batch	Mtd.
Rad Alpha Spec Analysis										
ISOU "Dry Weight Corrected"										
Uranium-233/234		2.73	0.174	+/-0.217	0.100	pCi/g	HAKB	07/11/09 1544	882536	1
Uranium-235/236		0.142	0.0797	+/-0.0277	0.100	pCi/g				
Uranium-238		4.02	0.0677	+/-0.307	0.100	pCi/g				
Rad Gamma Spec Analysis										
GAMMA SPEC "Dry Weight Corrected"										
Americium-241	UI	0.178	0.144	+/-0.0486	0.200	pCi/g	MXR1	07/07/09 0703	881219	2
Bismuth-211	UI	3.10	0.475	+/-0.331		pCi/g				
Bismuth-214	UI	1.34	0.370	+/-0.125	0.200	pCi/g				
Cadmium-109	UI	3.08	1.29	+/-0.475		pCi/g				
Cerium-139	U	0.00847	0.0639	+/-0.0202	0.050	pCi/g				
Cesium-134	U	0.0756	0.126	+/-0.0355	0.100	pCi/g				
Cesium-137		3.09	0.084	+/-0.150	0.100	pCi/g				
Cobalt-60	U	-0.00983	0.0942	+/-0.0301	0.100	pCi/g				
Europium-152	U	-0.0563	0.232	+/-0.0843	0.200	pCi/g				
Lanthanum-140	U	0.00896	0.186	+/-0.056		pCi/g				
Lead-212		1.48	0.121	+/-0.0932	0.100	pCi/g				
Lead-214		1.08	0.166	+/-0.119	0.100	pCi/g				
Mercury-203	U	0.0484	0.0883	+/-0.0323	0.100	pCi/g				
Potassium-40		26.4	0.756	+/-1.37	1.00	pCi/g				
Radium-223	U	-0.408	1.51	+/-0.549		pCi/g				
Radium-224	UI	3.95	1.37	+/-0.880		pCi/g				
Radium-226	UI	1.34	0.370	+/-0.125		pCi/g				
Radium-228		1.39	0.359	+/-0.218	0.500	pCi/g				
Ruthenium-106	U	-0.23	0.731	+/-0.241	0.800	pCi/g				
Sodium-22	U	-0.0278	0.0926	+/-0.0307	0.080	pCi/g				
Strontium-85	UI	0.113	0.105	+/-0.033		pCi/g				
Thallium-208		0.441	0.0818	+/-0.0533	0.080	pCi/g				
Thorium-227	U	0.00645	0.830	+/-0.268		pCi/g				
Thorium-231	U	-0.408	1.51	+/-0.549		pCi/g				
Thorium-234		4.47	1.38	+/-0.667	2.00	pCi/g				
Tin-113	U	5.73E-05	0.111	+/-0.0342	0.100	pCi/g				
Uranium-235	U	0.339	0.433	+/-0.188	0.500	pCi/g				
Yttrium-88	U	0.0168	0.0672	+/-0.0183	0.100	pCi/g				
Rad Liquid Scintillation Analysis										
H3 "As Received"										
Tritium	U	223	229	+/-75.8	250	pCi/L	KXK2	07/15/09 1011	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6038
Sample ID: 232433012

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
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A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6039	Project:	LANL01004
Sample ID:	232433013	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	9.12%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.914	0.315	+/-0.106	0.100	pCi/g		HAKB	07/11/09	1544	882536	1
Uranium-235/236	U	0.0428	0.144	+/-0.0229	0.100	pCi/g						
Uranium-238		1.02	0.123	+/-0.114	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.157	0.327	+/-0.104	0.200	pCi/g		MXR1	07/07/09	0704	881219	2
Bismuth-211	UI	3.83	0.293	+/-0.247		pCi/g						
Bismuth-214		1.15	0.102	+/-0.099	0.200	pCi/g						
Cadmium-109	UI	2.96	1.41	+/-0.531		pCi/g						
Cerium-139	U	0.0171	0.0468	+/-0.0135	0.050	pCi/g						
Cesium-134	U	0.0754	0.083	+/-0.0278	0.100	pCi/g						
Cesium-137		0.153	0.0565	+/-0.0368	0.100	pCi/g						
Cobalt-60	U	-0.00663	0.0618	+/-0.0193	0.100	pCi/g						
Europium-152	U	0.0684	0.145	+/-0.0491	0.200	pCi/g						
Lanthanum-140	U	-0.0376	0.117	+/-0.0375		pCi/g						
Lead-212		1.72	0.084	+/-0.0833	0.100	pCi/g						
Lead-214		1.33	0.107	+/-0.0927	0.100	pCi/g						
Mercury-203	U	0.0612	0.0679	+/-0.0195	0.100	pCi/g						
Potassium-40		35.9	0.473	+/-1.61	1.00	pCi/g						
Radium-223	U	0.357	1.03	+/-0.355		pCi/g						
Radium-224	UI	4.65	0.954	+/-0.624		pCi/g						
Radium-226		1.15	0.102	+/-0.099		pCi/g						
Radium-228		1.56	0.214	+/-0.185	0.500	pCi/g						
Ruthenium-106	U	-0.045	0.475	+/-0.149	0.800	pCi/g						
Sodium-22	U	0.0142	0.071	+/-0.0212	0.080	pCi/g						
Strontium-85	UI	0.126	0.0688	+/-0.020		pCi/g						
Thallium-208		0.575	0.0565	+/-0.0429	0.080	pCi/g						
Thorium-227	U	-0.00638	0.600	+/-0.183		pCi/g						
Thorium-231	U	0.357	1.03	+/-0.355		pCi/g						
Thorium-234	U	1.70	2.58	+/-1.15	2.00	pCi/g						
Tin-113	U	-0.0398	0.0669	+/-0.021	0.100	pCi/g						
Uranium-235	U	0.0386	0.355	+/-0.112	0.500	pCi/g						
Yttrium-88	U	0.0117	0.051	+/-0.0148	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	61.4	229	+/-66.9	250	pCi/L		KXK2	07/15/09	1043	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6039
Sample ID: 232433013

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	53.3	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6042
Sample ID: 232433014
Matrix: R
Collect Date: 23-JUN-09
Receive Date: 26-JUN-09
Collector: Client
Moisture: 17.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		3.36	0.195	+/-0.266	0.100	pCi/g		HAKB	07/11/09 1544	882536	1
Uranium-235/236		0.233	0.0893	+/-0.0388	0.100	pCi/g					
Uranium-238		2.92	0.0758	+/-0.235	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0474	0.258	+/-0.0932	0.200	pCi/g		MXR1	07/07/09 0705	881219	2
Bismuth-211	UI	3.26	0.360	+/-0.288		pCi/g					
Bismuth-214	UI	1.08	0.276	+/-0.0982	0.200	pCi/g					
Cadmium-109	UI	2.83	1.82	+/-0.629		pCi/g					
Cerium-139	U	-0.0348	0.055	+/-0.0181	0.050	pCi/g					
Cesium-134	U	0.0657	0.103	+/-0.0305	0.100	pCi/g					
Cesium-137		0.548	0.0618	+/-0.0463	0.100	pCi/g					
Cobalt-60	U	-0.0115	0.0607	+/-0.0193	0.100	pCi/g					
Europium-152	U	0.0409	0.177	+/-0.0709	0.200	pCi/g					
Lanthanum-140	U	-0.0908	0.136	+/-0.048		pCi/g					
Lead-212		1.66	0.0982	+/-0.0861	0.100	pCi/g					
Lead-214		1.13	0.128	+/-0.105	0.100	pCi/g					
Mercury-203	U	0.00119	0.0685	+/-0.021	0.100	pCi/g					
Potassium-40		31.4	0.694	+/-1.45	1.00	pCi/g					
Radium-223	U	0.144	1.17	+/-0.413		pCi/g					
Radium-224	UI	5.15	1.12	+/-0.743		pCi/g					
Radium-226	UI	1.08	0.276	+/-0.0982		pCi/g					
Radium-228		1.60	0.202	+/-0.197	0.500	pCi/g					
Ruthenium-106	U	0.189	0.597	+/-0.179	0.800	pCi/g					
Sodium-22	U	0.0102	0.0871	+/-0.0262	0.080	pCi/g					
Strontium-85	UI	0.198	0.0929	+/-0.0273		pCi/g					
Thallium-208		0.540	0.058	+/-0.0488	0.080	pCi/g					
Thorium-227	U	0.193	0.733	+/-0.221		pCi/g					
Thorium-231	U	0.144	1.17	+/-0.413		pCi/g					
Thorium-234		2.76	2.13	+/-1.10	2.00	pCi/g					
Tin-113	U	0.00965	0.0791	+/-0.0246	0.100	pCi/g					
Uranium-235	U	0.282	0.376	+/-0.169	0.500	pCi/g					
Yttrium-88	U	0.0402	0.0679	+/-0.0179	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	114	231	+/-70.2	250	pCi/L		KXK2	07/15/09 1114	883013	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6042
Sample ID: 232433014

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	85.1	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6049	Project:	LANL01004
Sample ID:	232433015	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	11.6%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.900	0.221	+/-0.0922	0.100	pCi/g		HAKB	07/11/09 1544	882536	1
Uranium-235/236	U	0.0781	0.101	+/-0.0224	0.100	pCi/g					
Uranium-238		1.05	0.086	+/-0.104	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0949	0.251	+/-0.0773	0.200	pCi/g		MXR1	07/07/09 0706	881219	2
Bismuth-211	UI	3.72	0.299	+/-0.245		pCi/g					
Bismuth-214		1.12	0.116	+/-0.0849	0.200	pCi/g					
Cadmium-109	UI	3.23	0.953	+/-0.456		pCi/g					
Cerium-139	U	-0.0131	0.0422	+/-0.0128	0.050	pCi/g					
Cesium-134	UI	0.107	0.0983	+/-0.0414	0.100	pCi/g					
Cesium-137		0.197	0.0679	+/-0.0413	0.100	pCi/g					
Cobalt-60	U	-0.0135	0.0684	+/-0.0214	0.100	pCi/g					
Europium-152	U	0.0434	0.157	+/-0.0463	0.200	pCi/g					
Lanthanum-140	U	0.00356	0.147	+/-0.0447		pCi/g					
Lead-212		1.23	0.118	+/-0.0748	0.100	pCi/g					
Lead-214		1.29	0.104	+/-0.0918	0.100	pCi/g					
Mercury-203	U	0.0405	0.0694	+/-0.019	0.100	pCi/g					
Potassium-40		19.9	0.622	+/-1.15	1.00	pCi/g					
Radium-223	U	-0.671	0.991	+/-0.318		pCi/g					
Radium-224	UI	2.59	1.19	+/-0.502		pCi/g					
Radium-226		1.12	0.116	+/-0.0849		pCi/g					
Radium-228		1.42	0.237	+/-0.180	0.500	pCi/g					
Ruthenium-106	U	0.0307	0.523	+/-0.155	0.800	pCi/g					
Sodium-22	U	-0.0349	0.0796	+/-0.0267	0.080	pCi/g					
Strontium-85	UI	0.0903	0.0731	+/-0.0194		pCi/g					
Thallium-208		0.381	0.0613	+/-0.041	0.080	pCi/g					
Thorium-227	U	-0.031	0.579	+/-0.179		pCi/g					
Thorium-231	U	-0.671	0.991	+/-0.318		pCi/g					
Thorium-234	U	1.28	1.93	+/-1.05	2.00	pCi/g					
Tin-113	U	0.0227	0.0729	+/-0.021	0.100	pCi/g					
Uranium-235	U	0.0803	0.320	+/-0.092	0.500	pCi/g					
Yttrium-88	U	0.0145	0.0587	+/-0.0161	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	11.7	233	+/-65.5	250	pCi/L		KXK2	07/15/09 1146	883013	3

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Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6049
Sample ID: 232433015

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	74.0	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

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QC Summary

Report Date: July 17, 2009
Page 1 of 6

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232433

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882536										
QC1201874418 232433008 DUP										
Uranium-233/234		1.08		1.24	pCi/g	0.362		(0-1)	HAKB	07/11/0915:44
	TPU:	+/-0.0987		+/-0.120						
	Yield:	98.0		67.5						
Uranium-235/236	U	0.0682	U	0.0577	pCi/g	0.120		(0-1)		
	TPU:	+/-0.0204		+/-0.0235						
	Yield:	98.0		67.5						
Uranium-238		1.43		1.40	pCi/g	0.0612		(0-1)		
	TPU:	+/-0.123		+/-0.133						
	Yield:	98.0		67.5						
QC1201874419 LCS										
Uranium-233/234				6.24	pCi/g			(75%-125%)		07/11/0915:44
	TPU:			+/-0.576						
	Yield:			104						
Uranium-235/236				0.586	pCi/g			(75%-125%)		
	TPU:			+/-0.123						
	Yield:			104						
Uranium-238	5.75			5.86	pCi/g		102	(75%-125%)		
	TPU:			+/-0.545						
	Yield:			104						
QC1201874417 MB										
Uranium-233/234			U	-0.00719	pCi/g					07/11/0915:44
	TPU:			+/-0.00364						
	Yield:			95.6						
Uranium-235/236			U	0.00449	pCi/g					
	TPU:			+/-0.00319						
	Yield:			95.6						
Uranium-238			U	0.00545	pCi/g					
	TPU:			+/-0.00482						
	Yield:			95.6						
Rad Gamma Spec										
Batch 881219										
QC1201871424 232424001 DUP										
Americium-241	U	0.221	U	0.109	pCi/g	0.279		(0-1)	MXR1	07/07/0908:27
	TPU:	+/-0.0961		+/-0.105						
Bismuth-211	UI	3.10	UI	3.04	pCi/g	0.0525		(0-1)		
	TPU:	+/-0.279		+/-0.254						
Bismuth-214		1.01	UI	1.00	pCi/g	0.0192		(0-1)		
	TPU:	+/-0.0988		+/-0.0837						
Cadmium-109	UI	2.45	UI	2.67	pCi/g	0.105		(0-1)		
	TPU:	+/-0.506		+/-0.572						
Cerium-139	U	-0.0127	U	-0.00565	pCi/g	0.118		(0-1)		
	TPU:	+/-0.0165		+/-0.0133						
Cesium-134	UI	0.133	U	0.0529	pCi/g	0.748		(0-1)		

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QC Summary

Workorder: 232433

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881219										
	TPU:	+/-0.030		+/-0.0235						
Cesium-137	U	-0.0572	U	-0.0188	pCi/g	0.443		(0-1)		
	TPU:	+/-0.0226		+/-0.0208						
Cobalt-60	U	-0.00257	U	0.0588	pCi/g	0.685		(0-1)		
	TPU:	+/-0.0245		+/-0.0202						
Europium-152	U	-0.0428	U	-0.0504	pCi/g	0.0334		(0-1)		
	TPU:	+/-0.066		+/-0.0484						
Lanthanum-140	U	-0.0476	U	-0.028	pCi/g	0.101		(0-1)		
	TPU:	+/-0.054		+/-0.0428						
Lead-212		1.55		1.46	pCi/g	0.285		(0-1)		
	TPU:	+/-0.0837		+/-0.0796						
Lead-214		1.08		1.06	pCi/g	0.0491		(0-1)		
	TPU:	+/-0.101		+/-0.0927						
Mercury-203	U	0.0241	U	0.0478	pCi/g	0.266		(0-1)		
	TPU:	+/-0.0232		+/-0.0212						
Potassium-40		36.5		37.4	pCi/g	0.133		(0-1)		
	TPU:	+/-1.70		+/-1.69						
Radium-223	U	-0.304	U	-0.672	pCi/g	0.257		(0-1)		
	TPU:	+/-0.391		+/-0.325						
Radium-224	UI	3.30	UI	4.18	pCi/g	0.318		(0-1)		
	TPU:	+/-0.778		+/-0.609						
Radium-226		1.01	UI	1.00	pCi/g	0.0192		(0-1)		
	TPU:	+/-0.0988		+/-0.0837						
Radium-228		1.71		1.34	pCi/g	0.509		(0-1)		
	TPU:	+/-0.182		+/-0.174						
Ruthenium-106	U	0.328	U	-0.137	pCi/g	0.633		(0-1)		
	TPU:	+/-0.193		+/-0.174						
Sodium-22	U	0.000929	U	0.000354	pCi/g	0.00533		(0-1)		
	TPU:	+/-0.0276		+/-0.0265						
Strontium-85	UI	0.107	U	0.0476	pCi/g	0.650		(0-1)		
	TPU:	+/-0.0254		+/-0.0201						
Thallium-208		0.512		0.444	pCi/g	0.379		(0-1)		
	TPU:	+/-0.0437		+/-0.0462						
Thorium-227	U	0.157	U	0.343	pCi/g	0.227		(0-1)		
	TPU:	+/-0.225		+/-0.184						
Thorium-231	U	-0.304	U	-0.672	pCi/g	0.257		(0-1)		
	TPU:	+/-0.391		+/-0.325						
Thorium-234	U	2.03	U	0.542	pCi/g	0.354		(0-1)		
	TPU:	+/-1.24		+/-0.867						
Tin-113	U	-0.0181	U	-0.00334	pCi/g	0.152		(0-1)		
	TPU:	+/-0.0267		+/-0.0218						
Uranium-235	UI	0.424	U	0.0372	pCi/g	0.554		(0-1)		
	TPU:	+/-0.247		+/-0.102						
Yttrium-88	U	0.00321	U	-0.00667	pCi/g	0.174		(0-1)		
	TPU:	+/-0.016		+/-0.0124						
QC1201871425 LCS										
Americium-241	16.3			16.0	pCi/g		98	(75%-125%)		07/07/0908:19
	TPU:			+/-0.737						
Bismuth-211				2.67	pCi/g					
	TPU:			+/-0.462						
Bismuth-214				1.15	pCi/g					

QC Summary

Workorder: 232433

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881219										
	TPU:			+/-0.168						
Cadmium-109				54.9	pCi/g					
	TPU:			+/-2.49						
Cerium-139			U	0.0657	pCi/g					
	TPU:			+/-0.0266						
Cesium-134			U	0.141	pCi/g					
	TPU:			+/-0.0627						
Cesium-137	5.78			6.44	pCi/g		112	(75%-125%)		
	TPU:			+/-0.263						
Cobalt-60	7.10			7.44	pCi/g		105	(75%-125%)		
	TPU:			+/-0.290						
Europium-152			U	0.101	pCi/g					
	TPU:			+/-0.115						
Lanthanum-140			U	0.00704	pCi/g					
	TPU:			+/-0.0494						
Lead-212				1.45	pCi/g					
	TPU:			+/-0.128						
Lead-214				0.927	pCi/g					
	TPU:			+/-0.162						
Mercury-203			U	0.00971	pCi/g					
	TPU:			+/-0.035						
Potassium-40			U	0.851	pCi/g					
	TPU:			+/-0.335						
Radium-223			U	0.763	pCi/g					
	TPU:			+/-0.681						
Radium-224				8.07	pCi/g					
	TPU:			+/-0.972						
Radium-226				1.15	pCi/g					
	TPU:			+/-0.168						
Radium-228				1.41	pCi/g					
	TPU:			+/-0.317						
Ruthenium-106			U	-0.159	pCi/g					
	TPU:			+/-0.358						
Sodium-22			U	-0.0642	pCi/g					
	TPU:			+/-0.0369						
Strontium-85			U	0.106	pCi/g					
	TPU:			+/-0.0437						
Thallium-208				0.495	pCi/g					
	TPU:			+/-0.0729						
Thorium-227			U	0.843	pCi/g					
	TPU:			+/-0.381						
Thorium-231			U	0.763	pCi/g					
	TPU:			+/-0.681						
Thorium-234			U	-0.644	pCi/g					
	TPU:			+/-0.617						
Tin-113			U	0.0761	pCi/g					
	TPU:			+/-0.0493						
Uranium-235			U	0.164	pCi/g					
	TPU:			+/-0.175						
Yttrium-88			U	0.00432	pCi/g					
	TPU:			+/-0.0302						

QC Summary

Workorder: 232433

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881219										
QC1201871423 MB										
Americium-241			U	0.0324	pCi/g					07/07/0908:11
	TPU:			+/-0.0505						
Bismuth-211			U	-0.00403	pCi/g					
	TPU:			+/-0.0726						
Bismuth-214			U	0.0331	pCi/g					
	TPU:			+/-0.0328						
Cadmium-109			U	0.0647	pCi/g					
	TPU:			+/-0.210						
Cerium-139			U	-0.0211	pCi/g					
	TPU:			+/-0.00865						
Cesium-134			U	0.0108	pCi/g					
	TPU:			+/-0.0129						
Cesium-137			U	0.0103	pCi/g					
	TPU:			+/-0.0116						
Cobalt-60			U	0.00453	pCi/g					
	TPU:			+/-0.0109						
Europium-152			U	-0.0594	pCi/g					
	TPU:			+/-0.0303						
Lanthanum-140			U	-0.0124	pCi/g					
	TPU:			+/-0.0221						
Lead-212			U	-0.0069	pCi/g					
	TPU:			+/-0.0187						
Lead-214			U	0.0349	pCi/g					
	TPU:			+/-0.0252						
Mercury-203			U	-0.00206	pCi/g					
	TPU:			+/-0.0136						
Potassium-40			U	0.196	pCi/g					
	TPU:			+/-0.175						
Radium-223			U	-0.0975	pCi/g					
	TPU:			+/-0.182						
Radium-224			U	-0.203	pCi/g					
	TPU:			+/-0.197						
Radium-226			U	0.0331	pCi/g					
	TPU:			+/-0.0328						
Radium-228			U	0.0117	pCi/g					
	TPU:			+/-0.0434						
Ruthenium-106			U	0.0893	pCi/g					
	TPU:			+/-0.108						
Sodium-22			U	0.00161	pCi/g					
	TPU:			+/-0.00953						
Strontium-85			UI	0.0486	pCi/g					
	TPU:			+/-0.0124						
Thallium-208			U	-0.00746	pCi/g					
	TPU:			+/-0.0126						
Thorium-227			U	-0.00368	pCi/g					
	TPU:			+/-0.119						
Thorium-231			U	-0.0975	pCi/g					
	TPU:			+/-0.182						
Thorium-234			U	0.634	pCi/g					
	TPU:			+/-0.749						

QC Summary

Workorder: 232433

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881219										
Tin-113			U	-0.0194	pCi/g					
	TPU:			+/-0.0132						
Uranium-235			U	0.170	pCi/g					
	TPU:			+/-0.0829						
Yttrium-88			U	-0.0122	pCi/g					
	TPU:			+/-0.0118						
Rad Liquid Scintillation										
Batch 883013										
QC1201875578 232433003 DUP										
Tritium	U	116	U	152	pCi/L	0.170		(0-1)	KXK2	07/16/0912:15
	TPU:	+/-52.8		+/-53.8						
QC1201875579 LCS										
Tritium	5730			5360	pCi/L		93.4	(75%-125%)		07/15/0913:22
	TPU:			+/-464						
QC1201875577 MB										
Tritium			U	108	pCi/L					07/15/0912:18
	TPU:			+/-69.7						
Batch 883039										
QC1201875659 232851001 DUP										
Tritium		687		999	pCi/L	0.744		(0-1)	KXK2	07/16/0921:33
	TPU:	+/-96.5		+/-113						
QC1201875660 LCS										
Tritium	5730			7000	pCi/L		122	(75%-125%)		07/16/0907:54
	TPU:			+/-573						
QC1201875658 MB										
Tritium			U	-22.1	pCi/L					07/16/0920:36
	TPU:			+/-69.5						

Notes:
The Qualifiers in this report are defined as follows:

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit

QC Summary

Workorder: 232433

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time

NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 882536 Product: lc Date: 7/14/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (If required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		case narrative
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed. If applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/14/09

Secondary Review Performed By: [signature] 7/15/09

LANL

7/8 - 7/20

Uranium Que Sheet

06-JUL-09

Batch #: 882536 Analyst: HAKB First Client Due Date:20-JUL-09 Internal Due Date:09-JUL-09

Tracer Isotope: U-232/U-236 Tracer Code: 1283 - B Expiration Date: 12/16/09 Vol: 1

LCS Isotope: U-238 LCS Code: SRM 0244-A Expiration Date: 10/31/20 Vol: 0.103g

Spike Isotope: U-238 Spike Code: NA Expiration Date: NA Vol: NA

Prep Date: 7/6/09 Initials: HAKB Pipet ID: 2971058 Balance ID: 50410272 Witness: KM 7-6-09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/ml/l)	U Det #
232433001-1	CAMO-09-6007	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	1	1	0.513	138
232433002-1	CAMO-09-6006	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	2	2	0.507	139
232433003-1	CAMO-09-6008	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	3	3	0.510	140
232433004-1	CAMO-09-6009	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	4	4	0.510	141
232433005-1	CAMO-09-6034	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	5	5	0.500	142
232433006-1	CAMO-09-6043	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	6	6	0.512	143
232433007-1	CAMO-09-6045	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	7	7	0.504	145
232433008-1	CAMO-09-6041	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	8	8	0.500	146
232433009-1	CAMO-09-6040	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	9	9	0.501	147
232433010-1	CAMO-09-6044	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	10	10	0.501	148
232433011-1	CAMO-09-6035	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	11	11	0.504	149
232433012-1	CAMO-09-6038	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	12	12	0.499	150
232433013-1	CAMO-09-6039	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	13	13	0.500	151
232433014-1	CAMO-09-6042	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	14	14	0.501	152
232433015-1	CAMO-09-6049	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	15	15	0.499	153
1201874417-1	MB for batch 882536	MB		.1 pCi/g	SOIL	QC ACCOUNT		16	16	1.00	154
1201874418-1	CAMO-09-6041(232433008DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	23-JUN-09	17	17	0.502	155
1201874419-1	LCS for batch 882536 * SRM 0244-A	LCS		.1 pCi/g	SOIL	QC ACCOUNT		18	18	0.103	156

Choose SOP used: GL-RAD-A-011
~~GL-RAD-A-038~~
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: [signature] 7/14/09

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 882536

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874418	DUP	Uranium-233/234	0.502 g	1.24	0.120	0.236	-.01432271	pCi/g	NO
		Uranium-235/236	0.502 g	0.0577	0.0235	0.108	.008944223	pCi/g	NO
		Uranium-238	0.502 g	1.40	0.133	0.0918	.010856574	pCi/g	NO
1201874419	LCS	Uranium-233/234	0.103 g	6.24	0.576	0.770	-.06980583	pCi/g	NO
		Uranium-235/236	0.103 g	0.586	0.123	0.353	.043592233	pCi/g	NO
		Uranium-238	0.103 g	5.86	0.545	0.300	.052912621	pCi/g	NO
1201874417	MB	Uranium-233/234	1.00 g	-0.00719	0.00364	0.0827	-.00719	pCi/g	NO
		Uranium-235/236	1.00 g	0.00449	0.00319	0.0379	.00449	pCi/g	YES
		Uranium-238	1.00 g	0.00545	0.00482	0.0322	.00545	pCi/g	YES
232433001	CAMO-09-6007	Uranium-233/234	0.513 g	0.338	0.0518	0.220	-.01401559	pCi/g	NO
		Uranium-235/236	0.513 g	-0.00597	0.0179	0.101	.008752437	pCi/g	YES
		Uranium-238	0.513 g	0.343	0.0522	0.0854	.010623782	pCi/g	NO
232433002	CAMO-09-6006	Uranium-233/234	0.507 g	0.863	0.082	0.152	-.01418146	pCi/g	NO
		Uranium-235/236	0.507 g	0.0745	0.0192	0.0698	.008856016	pCi/g	NO
		Uranium-238	0.507 g	0.977	0.0901	0.0592	.010749507	pCi/g	NO
232433003	CAMO-09-6008	Uranium-233/234	0.510 g	0.611	0.0675	0.187	-.01409804	pCi/g	NO
		Uranium-235/236	0.510 g	0.0254	0.0184	0.0857	.008803922	pCi/g	YES
		Uranium-238	0.510 g	0.625	0.0671	0.0728	.010686275	pCi/g	NO
232433004	CAMO-09-6009	Uranium-233/234	0.510 g	0.811	0.085	0.202	-.01409804	pCi/g	NO
		Uranium-235/236	0.510 g	0.0494	0.0168	0.0924	.008803922	pCi/g	NO
		Uranium-238	0.510 g	0.958	0.0953	0.0785	.010686275	pCi/g	NO
232433005	CAMO-09-6034	Uranium-233/234	0.500 g	2.62	0.208	0.169	-.01438	pCi/g	NO
		Uranium-235/236	0.500 g	0.133	0.0287	0.0773	.00898	pCi/g	NO
		Uranium-238	0.500 g	2.81	0.221	0.0657	.0109	pCi/g	NO
232433006	CAMO-09-6043	Uranium-233/234	0.512 g	1.32	0.120	0.188	-.01404297	pCi/g	NO
		Uranium-235/236	0.512 g	0.0562	0.0174	0.0861	.008769531	pCi/g	NO
		Uranium-238	0.512 g	1.83	0.156	0.0731	.010644531	pCi/g	NO
232433007	CAMO-09-6045	Uranium-233/234	0.504 g	1.29	0.124	0.225	-.01426587	pCi/g	NO
		Uranium-235/236	0.504 g	0.0733	0.0235	0.103	.008908730	pCi/g	NO
		Uranium-238	0.504 g	1.44	0.135	0.0875	.010813492	pCi/g	NO
232433008	CAMO-09-6041	Uranium-233/234	0.500 g	1.08	0.0987	0.167	-.01438	pCi/g	NO
		Uranium-235/236	0.500 g	0.0682	0.0204	0.0767	.00898	pCi/g	NO
		Uranium-238	0.500 g	1.43	0.123	0.0651	.0109	pCi/g	NO
232433009	CAMO-09-6040	Uranium-233/234	0.501 g	2.92	0.231	0.164	-.01435130	pCi/g	NO
		Uranium-235/236	0.501 g	0.169	0.0299	0.075	.008962076	pCi/g	NO
		Uranium-238	0.501 g	5.69	0.428	0.0637	.010878244	pCi/g	NO
232433010	CAMO-09-6044	Uranium-233/234	0.501 g	1.35	0.132	0.255	-.01435130	pCi/g	NO
		Uranium-235/236	0.501 g	0.097	0.0269	0.117	.008962076	pCi/g	NO
		Uranium-238	0.501 g	1.84	0.168	0.0992	.010878244	pCi/g	NO
232433011	CAMO-09-6035	Uranium-233/234	0.504 g	0.990	0.0937	0.182	-.01426587	pCi/g	NO
		Uranium-235/236	0.504 g	0.0791	0.0205	0.0833	.008908730	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232433011	CAMO-09-6035	Uranium-238	0.504 g	0.900	0.0873	0.0708	.010813492	pCi/g	NO
232433012	CAMO-09-6038	Uranium-233/234	0.499 g	2.73	0.217	0.174	-.01440882	pCi/g	NO
		Uranium-235/236	0.499 g	0.142	0.0277	0.0797	.008997996	pCi/g	NO
		Uranium-238	0.499 g	4.02	0.307	0.0677	.010921844	pCi/g	NO
232433013	CAMO-09-6039	Uranium-233/234	0.500 g	0.914	0.106	0.315	-.01438	pCi/g	NO
		Uranium-235/236	0.500 g	0.0428	0.0229	0.144	.00898	pCi/g	YES
		Uranium-238	0.500 g	1.02	0.114	0.123	.0109	pCi/g	NO
232433014	CAMO-09-6042	Uranium-233/234	0.501 g	3.36	0.266	0.195	-.01435130	pCi/g	NO
		Uranium-235/236	0.501 g	0.233	0.0388	0.0893	.008962076	pCi/g	NO
		Uranium-238	0.501 g	2.92	0.235	0.0758	.010878244	pCi/g	NO
232433015	CAMO-09-6049	Uranium-233/234	0.499 g	0.900	0.0922	0.221	-.01440882	pCi/g	NO
		Uranium-235/236	0.499 g	0.0781	0.0224	0.101	.008997996	pCi/g	NO
		Uranium-238	0.499 g	1.05	0.104	0.086	.010921844	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536 SAMPLE DATE : 23-JUN-2009 00:00:00	SAMPLE ID : S0232433001_UU SAMPLE QTY: 0.513 G
DETECTOR NUMBER :65877 AVERAGE %EFFICIENCY :25.7486 % YIELD : 70.651	COUNT DATE:11-JUL-2009 15:44:11 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 2.292E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.292E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29629 dpm RESULTS : 3.74188 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B138.CNF;331 BKG DATE : 5-JUL-2009 EFF FILE : W138.CNF;88 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	83.000	70.095	10.000	9.1924	100.0000	3.38E-01	5.18E-02	1.03E-01	2.20E-01	4.58E-02
U232	5302.100	973.000	963.000	10.000	3.1623	100.0000	4.65E+00	3.66E-01	3.55E-02	8.41E-02	1.51E-01
U-235	4391.000	4.000	-1.000	5.000	3.0409	80.90000	-5.97E-03	1.79E-02	4.22E-02	1.01E-01	1.79E-02
U-238	4184.730	81.000	71.000	10.000	3.2215	100.0000	3.43E-01	5.22E-02	3.62E-02	8.54E-02	4.60E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

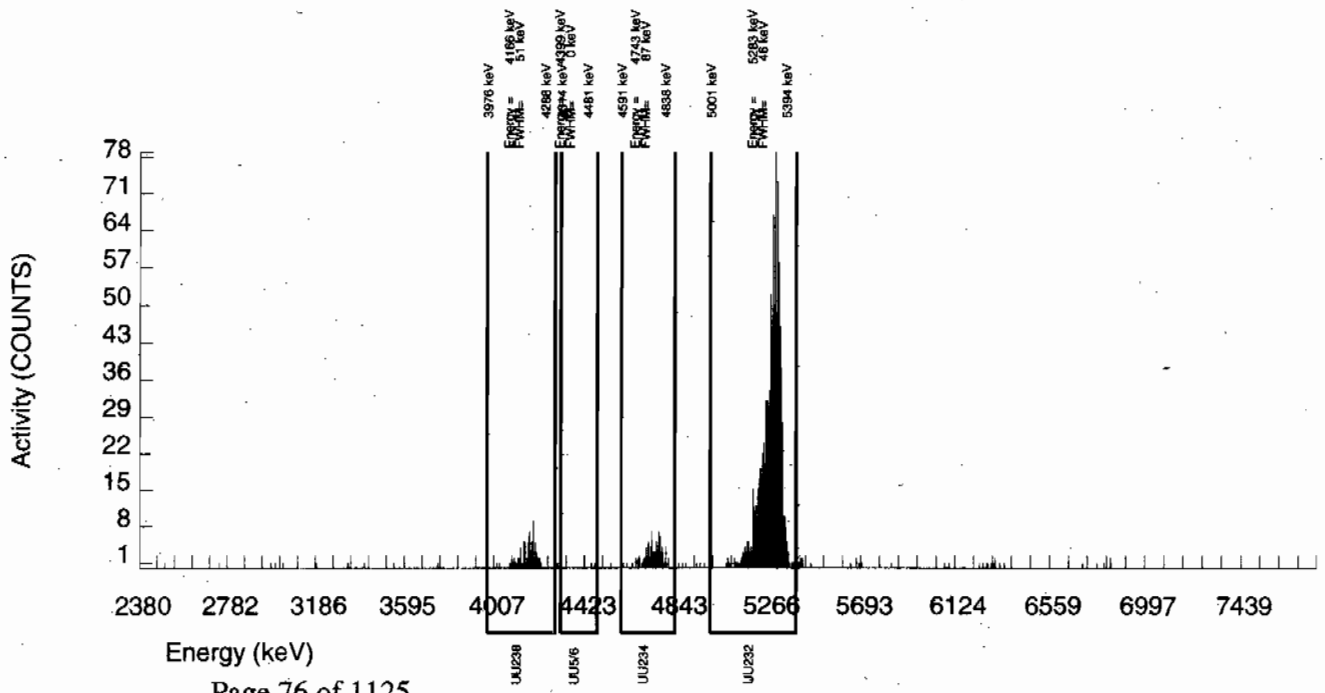

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433002_UU
SAMPLE QTY: 0.507 G

DETECTOR NUMBER :76231
AVERAGE %EFFICIENCY :24.8825
% YIELD : 106.666

COUNT DATE:11-JUL-2009 15:44:13
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B139.CNF;328
PCI/G : 2.319E+01	PCI/G : 2.319E+01	NOMINAL : 5.29629 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.64935 dpm	EFF FILE : W139.CNF;88
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	268.000	257.761	6.000	9.1924	100.0000	8.63E-01	8.20E-02	7.16E-02	1.52E-01	5.50E-02
U232	5302.100	1408.000	1405.000	3.000	1.7321	100.0000	4.71E+00	3.55E-01	1.35E-02	3.60E-02	1.26E-01
U-235	4391.000	19.000	18.000	1.000	3.0409	80.90000	7.45E-02	1.92E-02	2.93E-02	6.98E-02	1.85E-02
U-238	4184.730	296.000	292.000	4.000	3.2215	100.0000	9.77E-01	9.01E-02	2.51E-02	5.92E-02	5.80E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

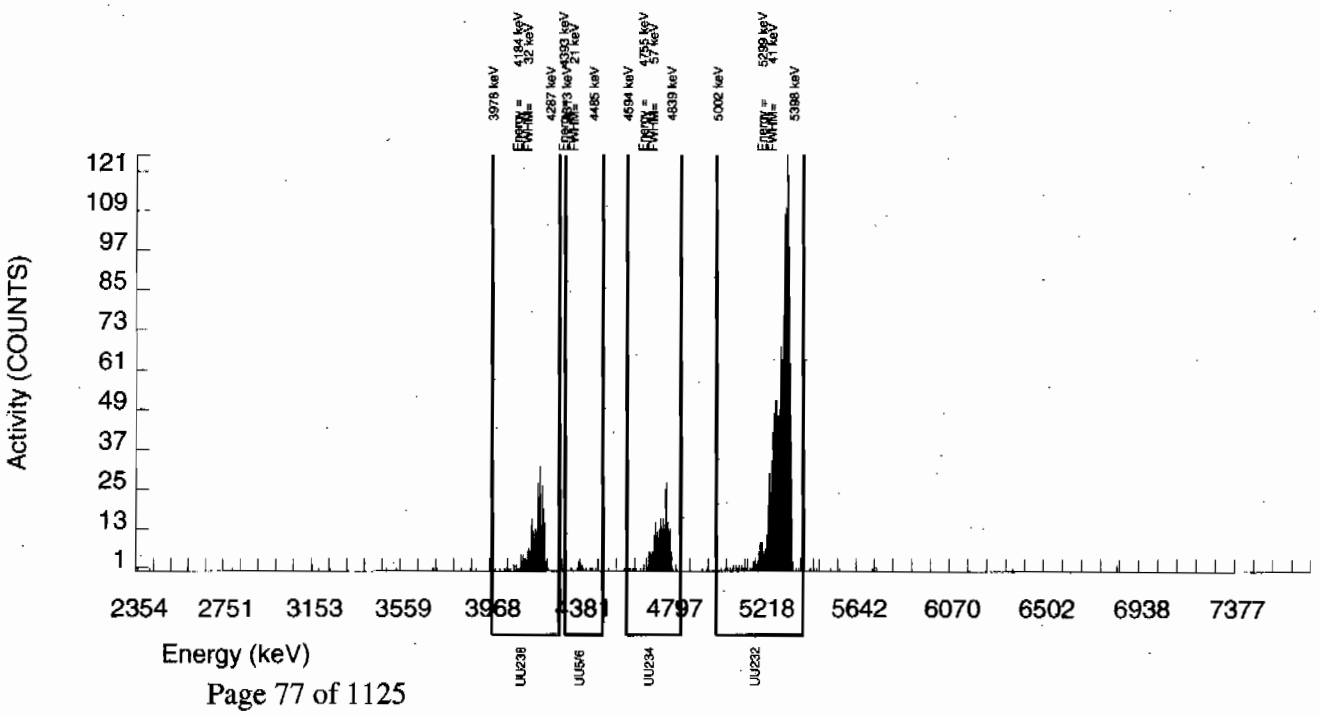

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433003_UU
SAMPLE QTY: 0.510 G

DETECTOR NUMBER :78771
AVERAGE %EFFICIENCY :25.6478
% YIELD : 83.744

COUNT DATE:11-JUL-2009 15:44:16
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B140.CNF;328
PCI/G : 2.306E+01	PCI/G : 2.306E+01	NOMINAL : 5.29630 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.43534 dpm	EFF FILE : W140.CNF;93
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	158.000	148.570	6.000	9.1924	100.0000	6.11E-01	6.75E-02	8.79E-02	1.87E-01	5.21E-02
U232	5302.100	1140.000	1137.000	3.000	1.7321	100.0000	4.68E+00	3.57E-01	1.66E-02	4.43E-02	1.39E-01
U-235	4391.000	9.000	5.000	4.000	3.0409	80.90000	2.54E-02	1.84E-02	3.60E-02	8.57E-02	1.83E-02
U-238	4184.730	152.000	152.000	0.000	3.2215	100.0000	6.25E-01	6.71E-02	3.08E-02	7.28E-02	5.07E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

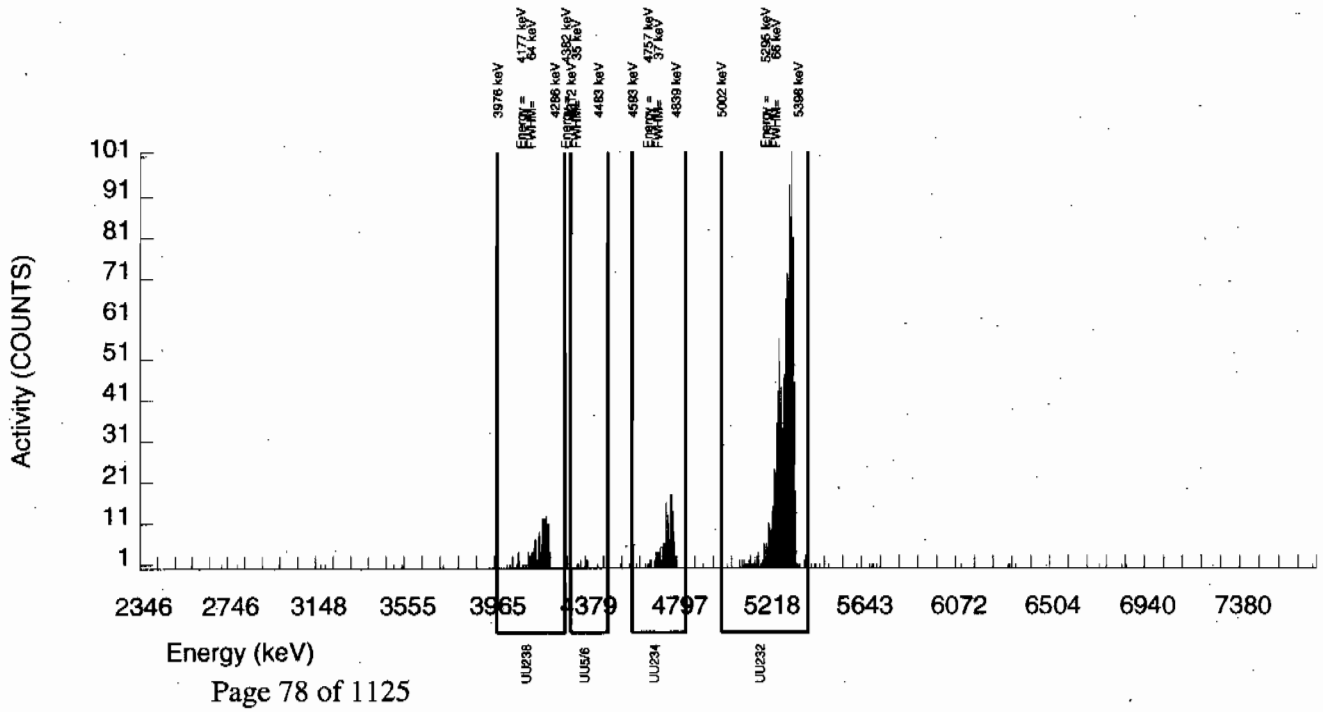

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536 SAMPLE DATE : 23-JUN-2009 00:00:00	SAMPLE ID : S0232433004_UU SAMPLE QTY: 0.510 G
DETECTOR NUMBER :76232 AVERAGE %EFFICIENCY :25.6623 % YIELD : 77.587	COUNT DATE:11-JUL-2009 15:44:18 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 2.306E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.306E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29629 dpm RESULTS : 4.10924 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B141.CNF;331 BKG DATE : 5-JUL-2009 EFF FILE : W141.CNF;91 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	191.000	182.820	5.000	9.1924	100.0000	8.11E-01	8.50E-02	9.49E-02	2.02E-01	6.16E-02
U232	5302.100	1061.000	1054.000	7.000	2.6458	100.0000	4.68E+00	3.68E-01	2.73E-02	6.66E-02	1.45E-01
U-235	4391.000	9.000	9.000	0.000	3.0409	80.90000	4.93E-02	1.68E-02	3.88E-02	9.24E-02	1.64E-02
U-238	4184.730	217.000	216.000	1.000	3.2215	100.0000	9.58E-01	9.53E-02	3.32E-02	7.85E-02	6.55E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

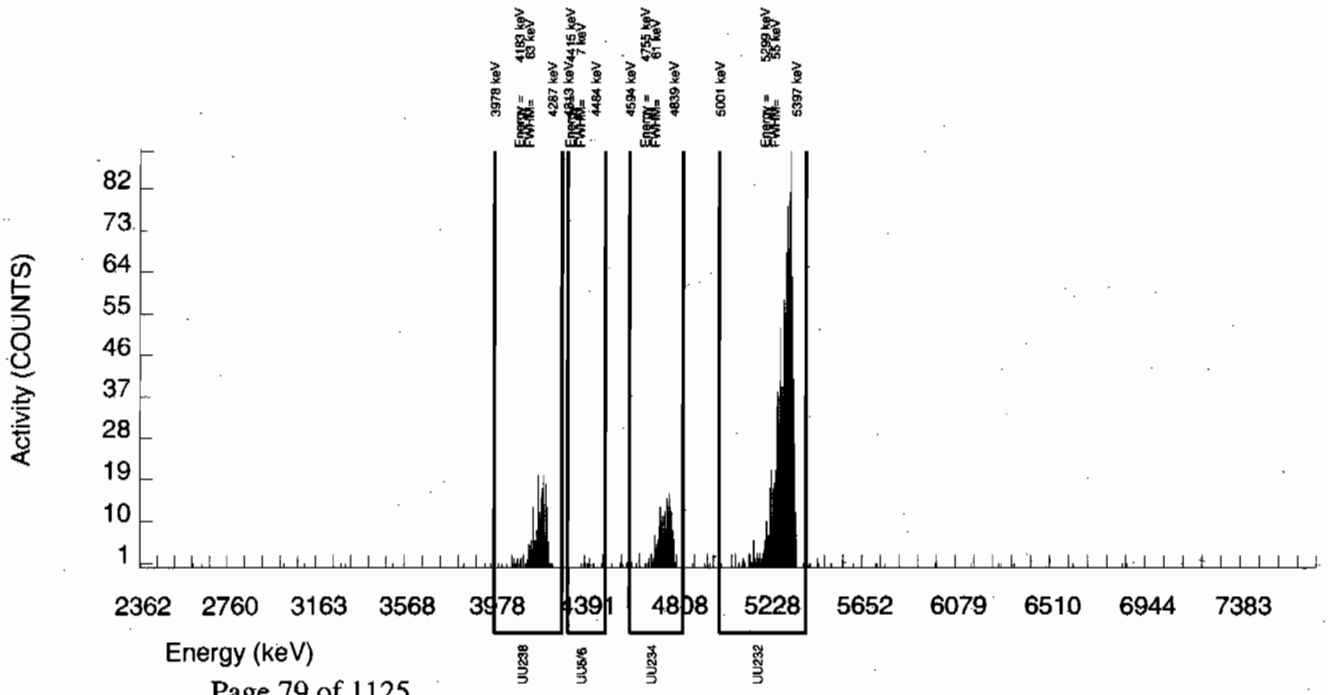

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433005_UU
SAMPLE QTY: 0.500 G

DETECTOR NUMBER :64261
AVERAGE %EFFICIENCY :26.1225
% YIELD : 92.925

COUNT DATE:11-JUL-2009 15:44:21
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B142.CNF;325
PCI/G : 2.352E+01	PCI/G : 2.352E+01	NOMINAL : 5.29629 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.92158 dpm	EFF FILE : W142.CNF;95
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	719.000	707.123	8.000	9.1924	100.0000	2.62E+00	2.08E-01	7.94E-02	1.69E-01	9.98E-02
U232	5302.100	1296.000	1285.000	11.000	3.3166	100.0000	4.77E+00	3.59E-01	2.86E-02	6.73E-02	1.34E-01
U-235	4391.000	32.000	29.000	3.000	3.0409	80.90000	1.33E-01	2.87E-02	3.25E-02	7.73E-02	2.71E-02
U-238	4184.730	760.000	758.000	2.000	3.2215	100.0000	2.81E+00	2.21E-01	2.78E-02	6.57E-02	1.02E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

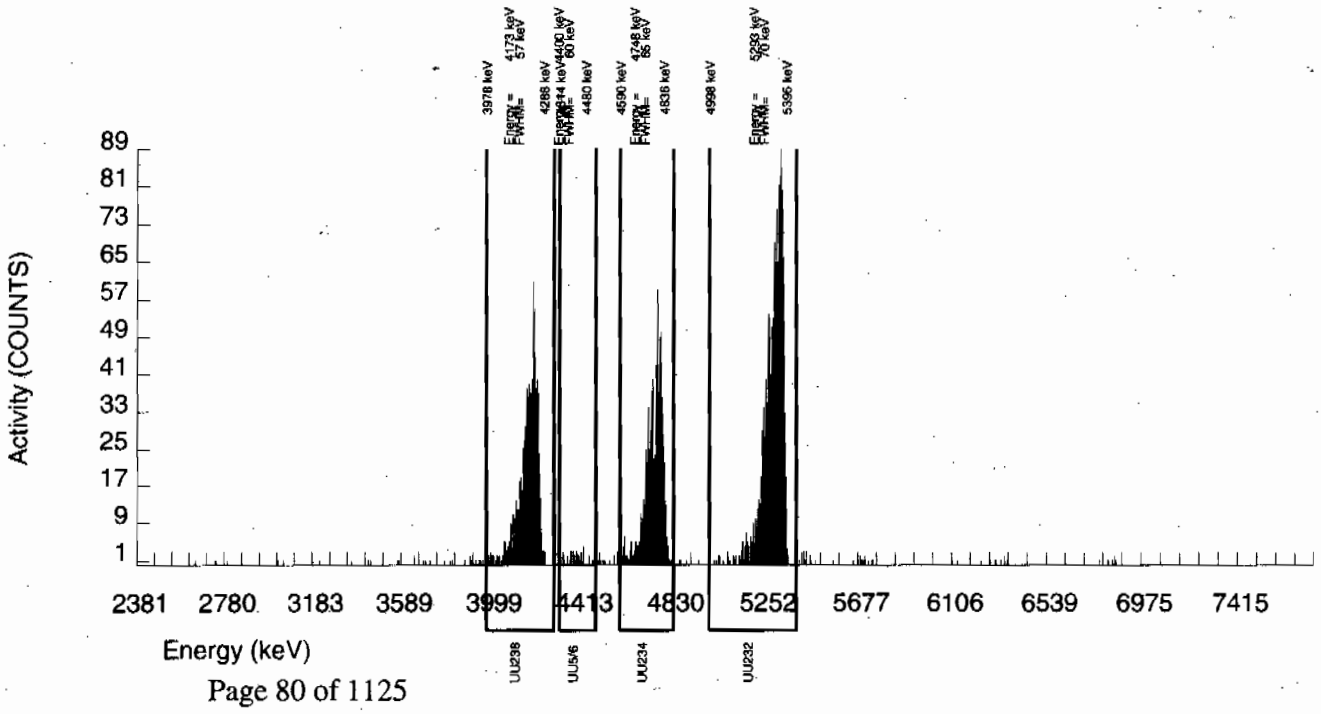

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433006_UU
SAMPLE QTY: 0.512 G

DETECTOR NUMBER :75551
AVERAGE %EFFICIENCY :24.7777
% YIELD : 85.923

COUNT DATE:11-JUL-2009 15:44:26
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B144.CNF;327
PCI/G : 2.297E+01	PCI/G : 2.297E+01	NOMINAL : 5.29629 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.55071 dpm	EFF FILE : W144.CNF;92
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	328.000	319.600	5.000	9.1924	100.0000	1.32E+00	1.20E-01	8.84E-02	1.88E-01	7.50E-02
U232	5302.100	1142.000	1127.000	15.000	3.8730	100.0000	4.66E+00	3.58E-01	3.72E-02	8.57E-02	1.41E-01
U-235	4391.000	11.000	11.000	0.000	3.0409	80.90000	5.62E-02	1.74E-02	3.61E-02	8.61E-02	1.69E-02
U-238	4184.730	445.000	442.000	3.000	3.2215	100.0000	1.83E+00	1.56E-01	3.10E-02	7.31E-02	8.75E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

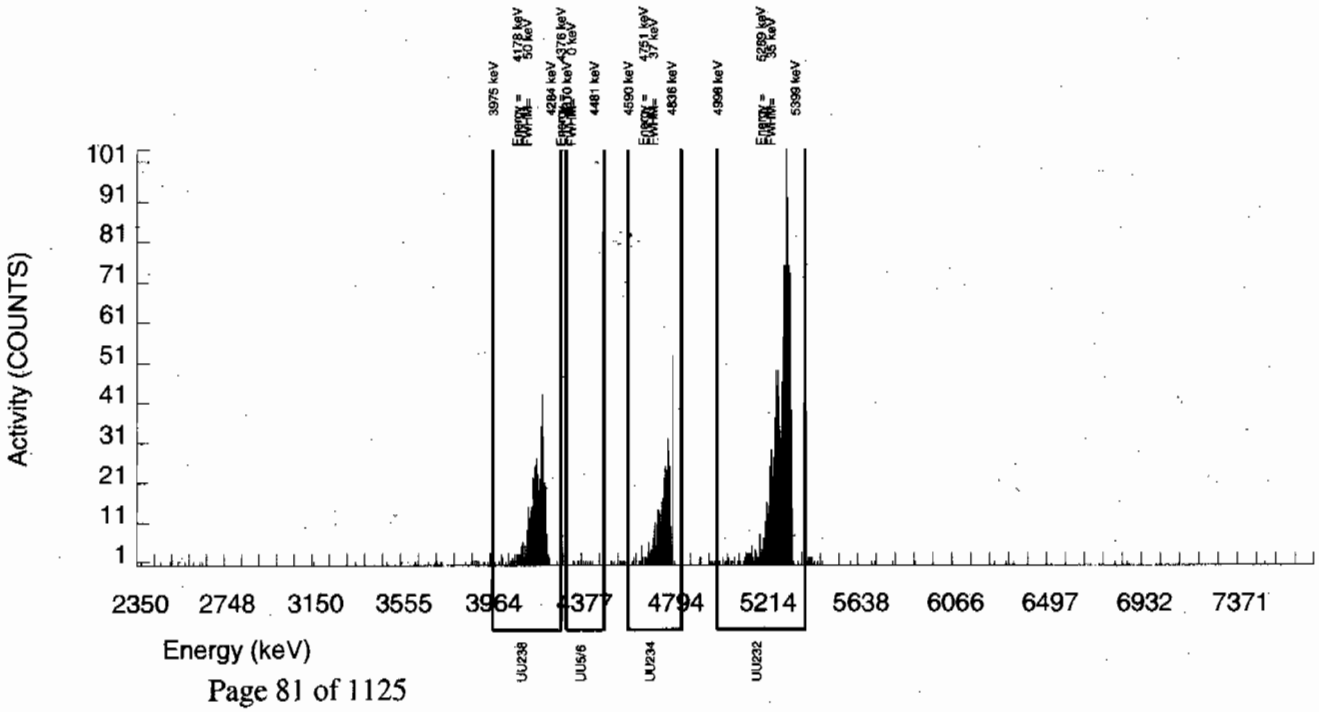

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433007_UU
SAMPLE QTY: 0.504 G

DETECTOR NUMBER :72526
AVERAGE %EFFICIENCY :24.8445
% YIELD : 72.766

COUNT DATE:11-JUL-2009 15:44:28
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B145.CNF;325
PCI/G : 2.333E+01	PCI/G : 2.333E+01	NOMINAL : 5.29629 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.85388 dpm	EFF FILE : W145.CNF;97
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	267.000	261.113	3.000	9.1924	100.0000	1.29E+00	1.24E-01	1.06E-01	2.25E-01	8.08E-02
U232	5302.100	962.000	957.000	5.000	2.2361	100.0000	4.73E+00	3.78E-01	2.57E-02	6.48E-02	1.54E-01
U-235	4391.000	13.000	12.000	1.000	3.0409	80.90000	7.33E-02	2.35E-02	4.32E-02	1.03E-01	2.29E-02
U-238	4184.730	291.000	291.000	0.000	3.2215	100.0000	1.44E+00	1.35E-01	3.71E-02	8.75E-02	8.43E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

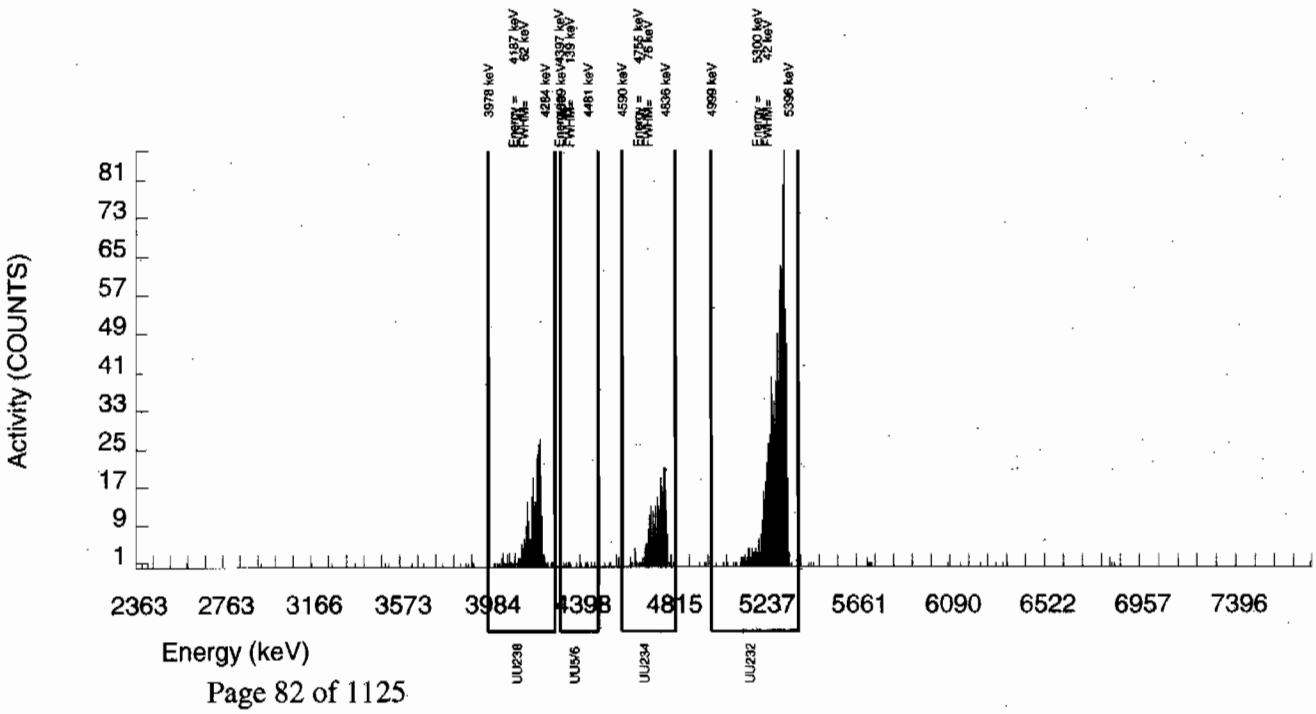

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433008_UU
SAMPLE QTY: 0.500 G

DETECTOR NUMBER :72527
AVERAGE %EFFICIENCY :24.9899
% YIELD : 97.968

COUNT DATE:11-JUL-2009 15:44:31
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B146.CNF;330
PCI/G : 2.352E+01	PCI/G : 2.352E+01	NOMINAL : 5.29629 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.18868 dpm	EFF FILE : W146.CNF;99
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	301.000	294.090	3.000	9.1924	100.0000	1.08E+00	9.87E-02	7.87E-02	1.67E-01	6.37E-02
U232	5302.100	1301.000	1296.000	5.000	2.2361	100.0000	4.77E+00	3.58E-01	1.91E-02	4.83E-02	1.33E-01
U-235	4391.000	17.000	15.000	2.000	3.0409	80.90000	6.82E-02	2.04E-02	3.22E-02	7.67E-02	1.98E-02
U-238	4184.730	390.000	389.000	1.000	3.2215	100.0000	1.43E+00	1.23E-01	2.76E-02	6.51E-02	7.28E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

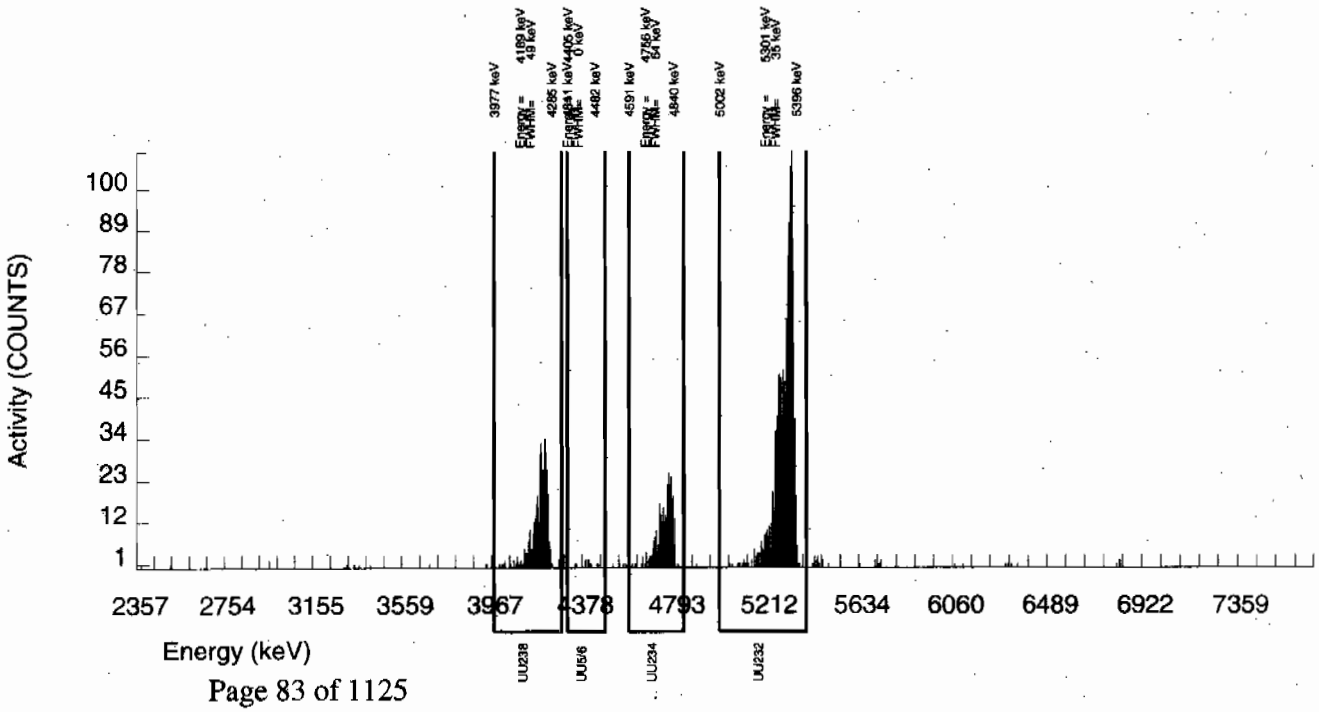

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433009_UU
SAMPLE QTY: 0.501 G

DETECTOR NUMBER :75550
AVERAGE %EFFICIENCY :24.6626
% YIELD : 101.260

COUNT DATE:11-JUL-2009 15:44:33
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B147.CNF;330
PCI/G : 2.347E+01	PCI/G : 2.347E+01	NOMINAL : 5.29629 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.36301 dpm	EFF FILE : W147.CNF;98
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	820.000	811.011	5.000	9.1924	100.0000	2.92E+00	2.31E-01	7.70E-02	1.64E-01	1.03E-01
U232	5302.100	1327.000	1322.000	5.000	2.2361	100.0000	4.76E+00	3.62E-01	1.87E-02	4.72E-02	1.31E-01
U-235	4391.000	38.000	38.000	0.000	3.0409	80.90000	1.69E-01	2.99E-02	3.15E-02	7.50E-02	2.74E-02
U-238	4184.730	1581.000	1581.000	0.000	3.2215	100.0000	5.69E+00	4.28E-01	2.70E-02	6.37E-02	1.43E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

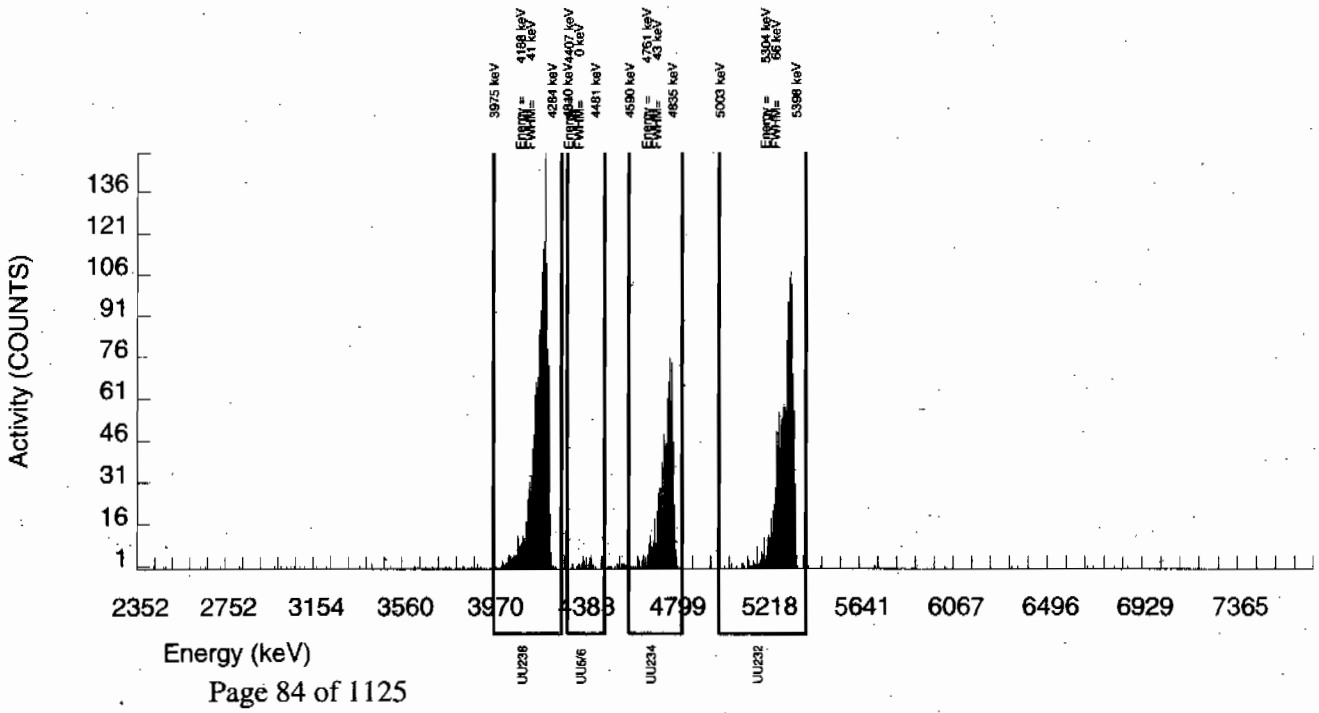

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433010_UU
SAMPLE QTY: 0.501 G

DETECTOR NUMBER :74429
AVERAGE %EFFICIENCY :24.8716
% YIELD : 64.483

COUNT DATE:11-JUL-2009 15:44:37
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B148.CNF;329
PCI/G : 2.347E+01	PCI/G : 2.347E+01	NOMINAL : 5.29629 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.41523 dpm	EFF FILE : W148.CNF;113
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	248.000	240.439	5.000	9.1924	100.0000	1.35E+00	1.32E-01	1.20E-01	2.55E-01	8.87E-02
U232	5302.100	850.000	849.000	1.000	1.0000	100.0000	4.76E+00	3.82E-01	1.30E-02	4.13E-02	1.64E-01
U-235	4391.000	14.000	14.000	0.000	3.0409	80.90000	9.70E-02	2.69E-02	4.90E-02	1.17E-01	2.59E-02
U-238	4184.730	330.000	328.000	2.000	3.2215	100.0000	1.84E+00	1.68E-01	4.20E-02	9.92E-02	1.02E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

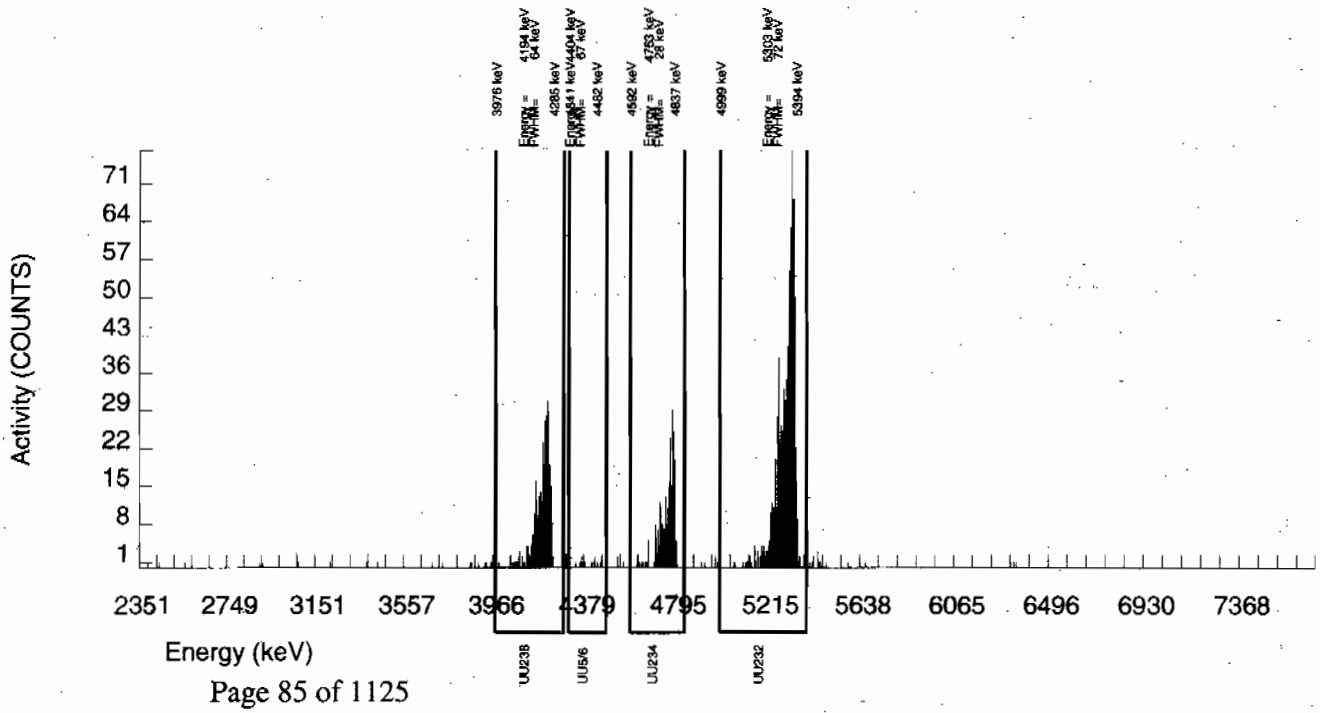

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433011_UU
SAMPLE QTY: 0.504 G

DETECTOR NUMBER :33449
AVERAGE %EFFICIENCY :24.9030
% YIELD : 89.738

COUNT DATE:11-JUL-2009 15:44:39
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B149.CNF;333
PCI/G : 2.333E+01	PCI/G : 2.333E+01	NOMINAL : 5.29630 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.75280 dpm	EFF FILE : W149.CNF;98
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	251.000	247.431	0.000	9.1924	100.0000	9.90E-01	9.37E-02	8.55E-02	1.82E-01	6.29E-02
U232	5302.100	1188.000	1183.000	5.000	2.2361	100.0000	4.73E+00	3.60E-01	2.08E-02	5.24E-02	1.38E-01
U-235	4391.000	16.000	16.000	0.000	3.0409	80.90000	7.91E-02	2.05E-02	3.50E-02	8.33E-02	1.98E-02
U-238	4184.730	226.000	225.000	1.000	3.2215	100.0000	9.00E-01	8.73E-02	3.00E-02	7.08E-02	6.03E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

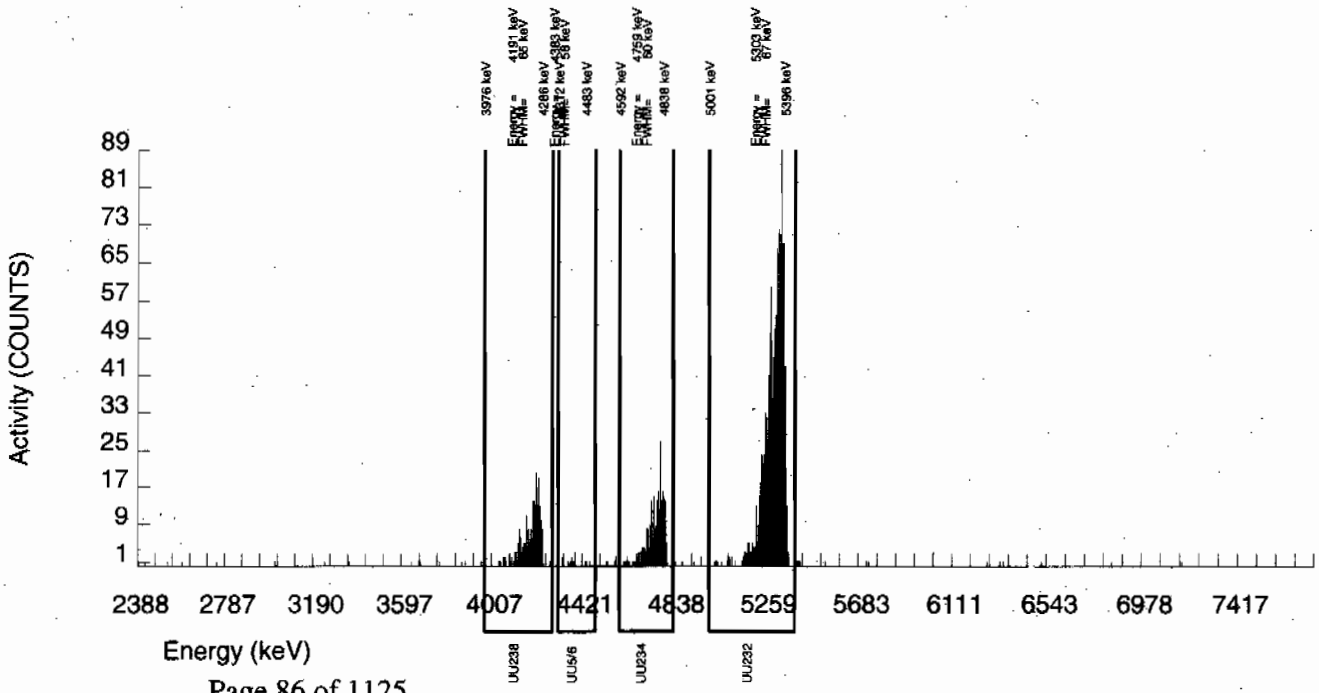

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433012_UU
SAMPLE QTY: 0.499 G

DETECTOR NUMBER :75552
AVERAGE %EFFICIENCY :24.7088
% YIELD : 95.490

COUNT DATE:11-JUL-2009 15:44:41
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B150.CNF;334
PCI/G : 2.357E+01	PCI/G : 2.357E+01	NOMINAL : 5.29629 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.05741 dpm	EFF FILE : W150.CNF;106
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	719.000	713.232	2.000	9.1924	100.0000	2.73E+00	2.17E-01	8.18E-02	1.74E-01	1.02E-01
U232	5302.100	1263.000	1249.000	14.000	3.7417	100.0000	4.78E+00	3.61E-01	3.33E-02	7.70E-02	1.37E-01
U-235	4391.000	30.000	30.000	0.000	3.0409	80.90000	1.42E-01	2.77E-02	3.35E-02	7.97E-02	2.59E-02
U-238	4184.730	1052.000	1050.000	2.000	3.2215	100.0000	4.02E+00	3.07E-01	2.87E-02	6.77E-02	1.24E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

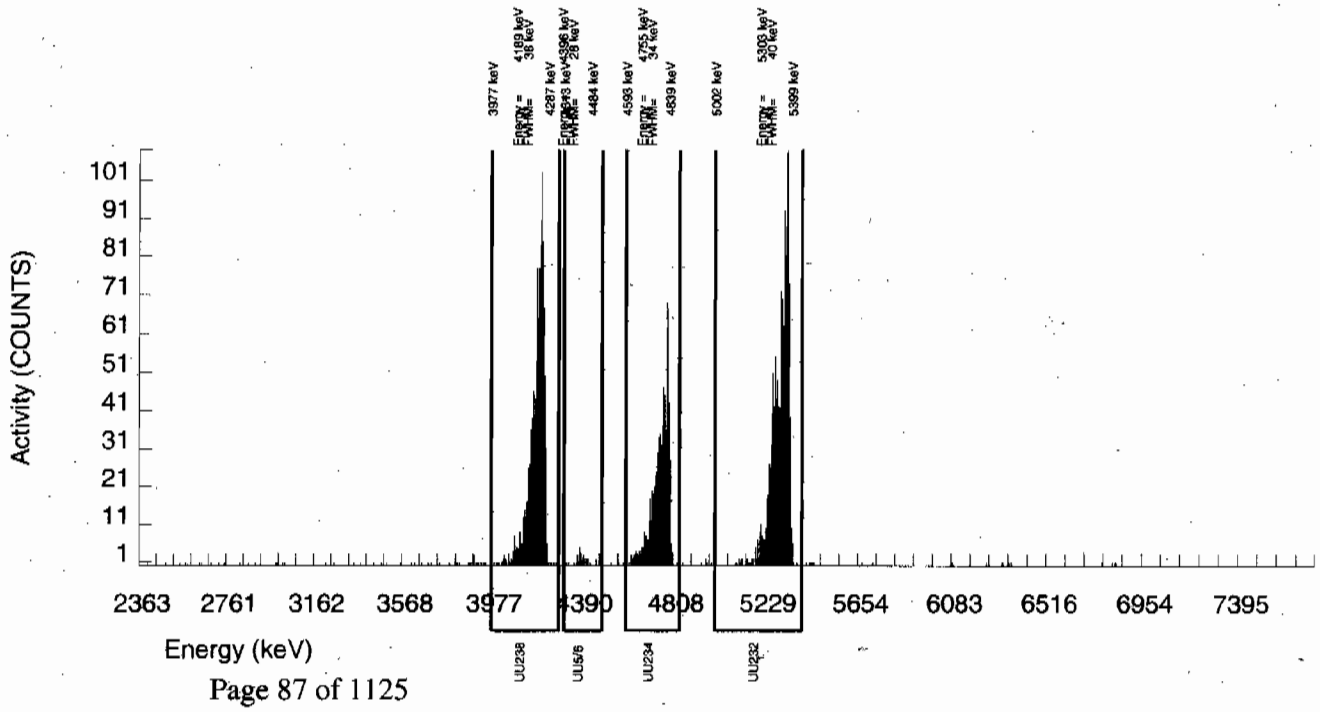

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232433013_UU
SAMPLE QTY: 0.500 G

DETECTOR NUMBER :75556
AVERAGE %EFFICIENCY :24.3854
% YIELD : 53.297

COUNT DATE:11-JUL-2009 15:44:43
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B151.CNF;329
PCI/G : 2.352E+01	PCI/G : 2.352E+01	NOMINAL : 5.29630 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.82277 dpm	EFF FILE : W151.CNF;104
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	137.000	131.924	3.000	9.1924	100.0000	9.14E-01	1.06E-01	1.48E-01	3.15E-01	8.14E-02
U232	5302.100	690.000	688.000	2.000	1.4142	100.0000	4.77E+00	3.99E-01	2.28E-02	6.44E-02	1.82E-01
U-235	4391.000	6.000	5.000	1.000	3.0409	80.90000	4.28E-02	2.29E-02	6.06E-02	1.44E-01	2.27E-02
U-238	4184.730	149.000	147.000	2.000	3.2215	100.0000	1.02E+00	1.14E-01	5.19E-02	1.23E-01	8.52E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

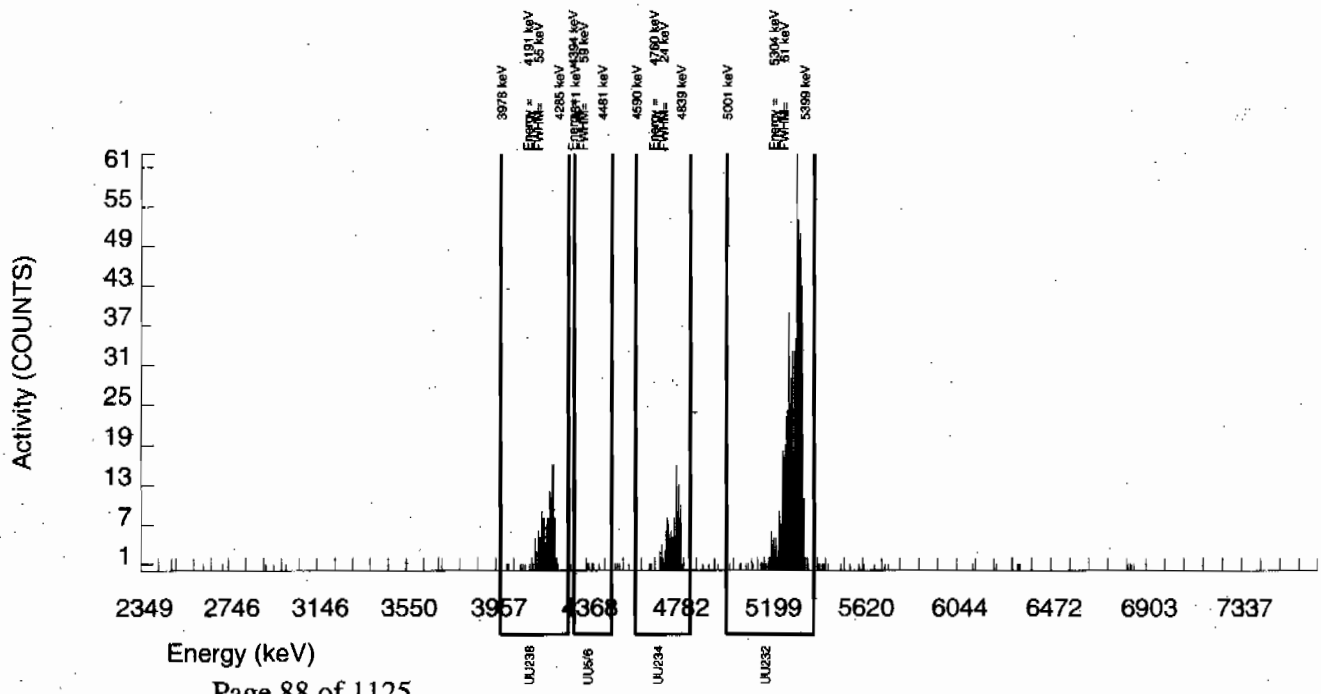

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536 SAMPLE DATE : 23-JUN-2009 00:00:00	SAMPLE ID : S0232433014_UU SAMPLE QTY: 0.501 G
DETECTOR NUMBER :76222 AVERAGE %EFFICIENCY :24.6763 % YIELD : 85.051	COUNT DATE:11-JUL-2009 15:44:46 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 2.347E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.347E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29629 dpm RESULTS : 4.50455 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B152.CNF;326 BKG DATE : 5-JUL-2009 EFF FILE : W152.CNF;91 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	794.000	784.648	6.000	9.1924	100.0000	3.36E+00	2.66E-01	9.16E-02	1.95E-01	1.21E-01
U232	5302.100	1113.000	1111.000	2.000	1.4142	100.0000	4.76E+00	3.65E-01	1.41E-02	3.98E-02	1.43E-01
U-235	4391.000	44.000	44.000	0.000	3.0409	80.90000	2.33E-01	3.88E-02	3.75E-02	8.93E-02	3.51E-02
U-238	4184.730	683.000	682.000	1.000	3.2215	100.0000	2.92E+00	2.35E-01	3.21E-02	7.58E-02	1.12E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

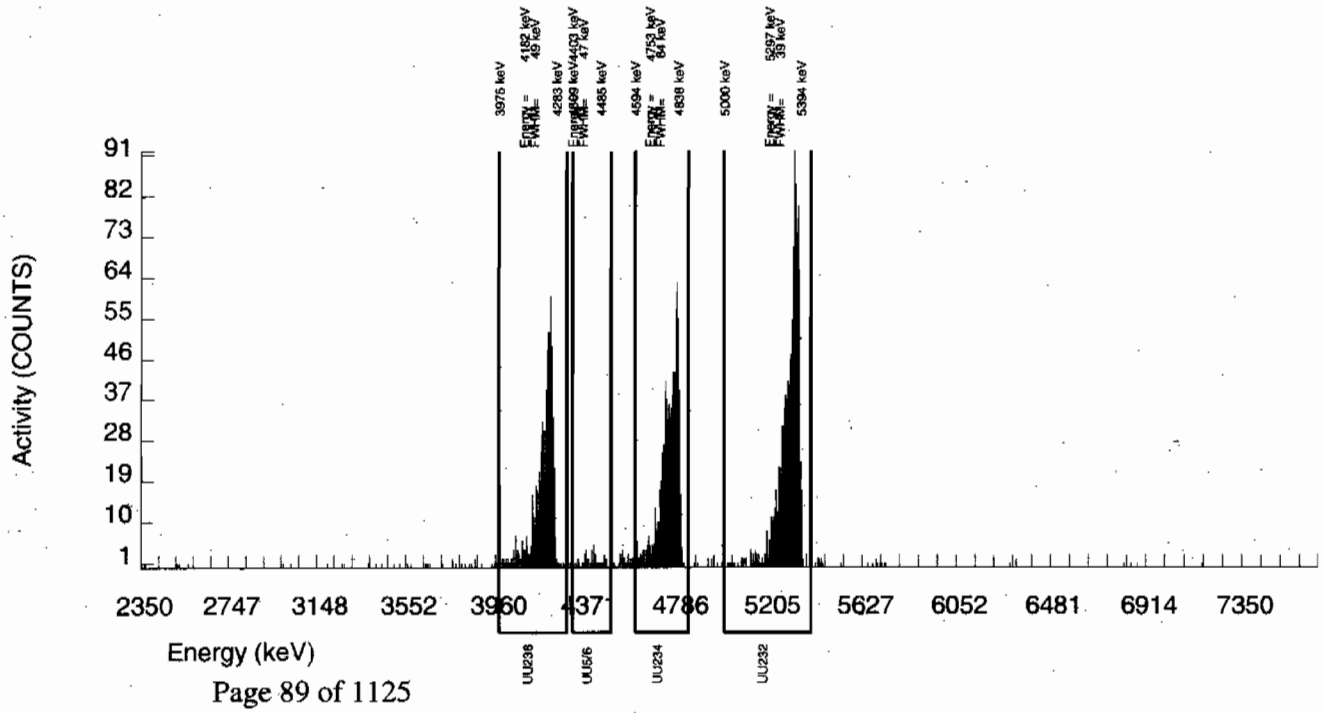

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536 SAMPLE DATE : 23-JUN-2009 00:00:00	SAMPLE ID : S0232433015_UU SAMPLE QTY: 0.499 G
DETECTOR NUMBER :76223 AVERAGE %EFFICIENCY :25.0846 % YIELD : 74.027	COUNT DATE:11-JUL-2009 15:44:48 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 2.357E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.357E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29630 dpm RESULTS : 3.92070 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B153.CNF;321 BKG DATE : 5-JUL-2009 EFF FILE : W153.CNF;94 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	188.000	185.034	0.000	9.1924	100.0000	8.99E-01	9.22E-02	1.04E-01	2.21E-01	6.61E-02
U232	5302.100	988.000	983.000	5.000	2.2361	100.0000	4.78E+00	3.74E-01	2.53E-02	6.37E-02	1.53E-01
U-235	4391.000	13.000	13.000	0.000	3.0409	80.90000	7.81E-02	2.24E-02	4.25E-02	1.01E-01	2.17E-02
U-238	4184.730	219.000	217.000	2.000	3.2215	100.0000	1.05E+00	1.04E-01	3.64E-02	8.60E-02	7.23E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

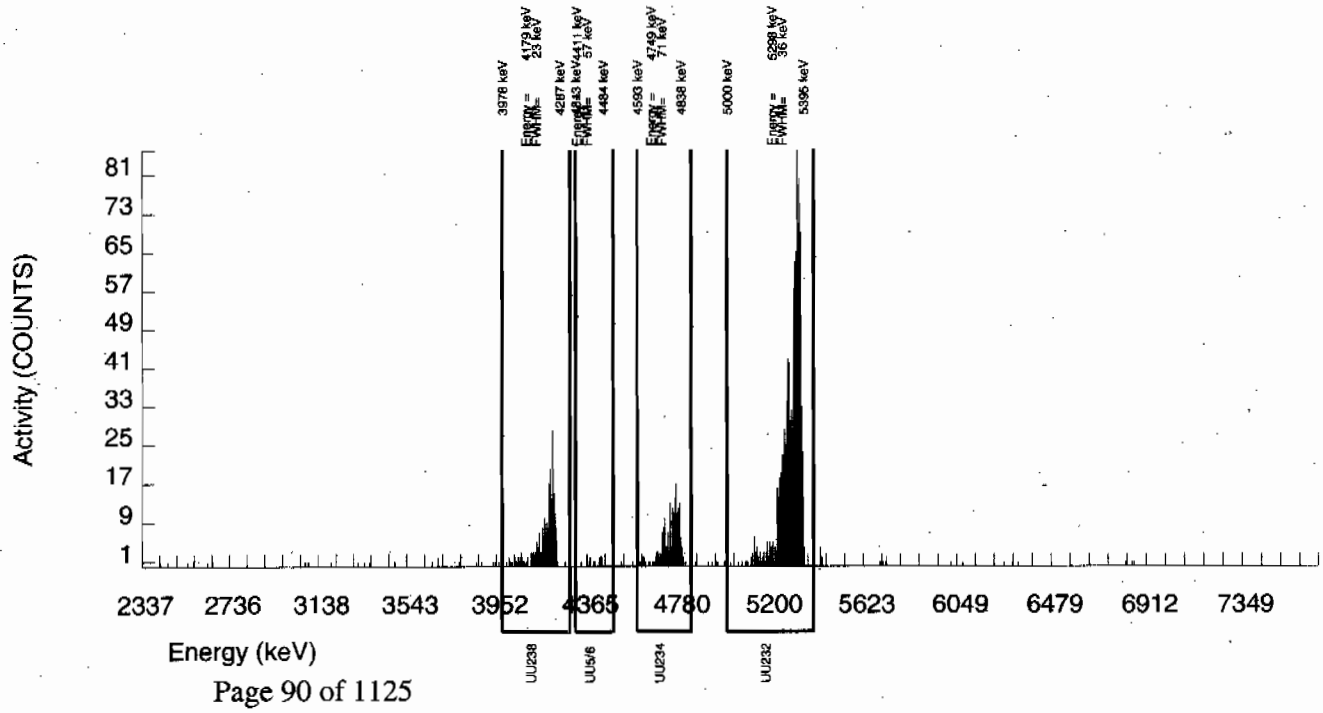

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536 SAMPLE DATE : 6-JUL-2009 00:00:00.	SAMPLE ID : S1201874417_UU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :76224 AVERAGE %EFFICIENCY :25.9356 % YIELD : 95.562	COUNT DATE:11-JUL-2009 15:44:52 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29448 dpm RESULTS : 5.05949 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B154.CNF;323 BKG DATE : 5-JUL-2009 EFF FILE : W154.CNF;92 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	3.000	-3.958	3.000	9.1924	100.0000	-7.19E-03	3.64E-03	3.89E-02	8.27E-02	3.63E-03
U232	5302.100	1321.000	1312.000	9.000	3.0000	100.0000	2.38E+00	1.78E-01	1.27E-02	3.03E-02	6.63E-02
U-235	4391.000	2.000	2.000	0.000	3.0409	80.90000	4.49E-03	3.19E-03	1.59E-02	3.79E-02	3.18E-03
U-238	4184.730	5.000	3.000	2.000	3.2215	100.0000	5.45E-03	4.82E-03	1.36E-02	3.22E-02	4.81E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

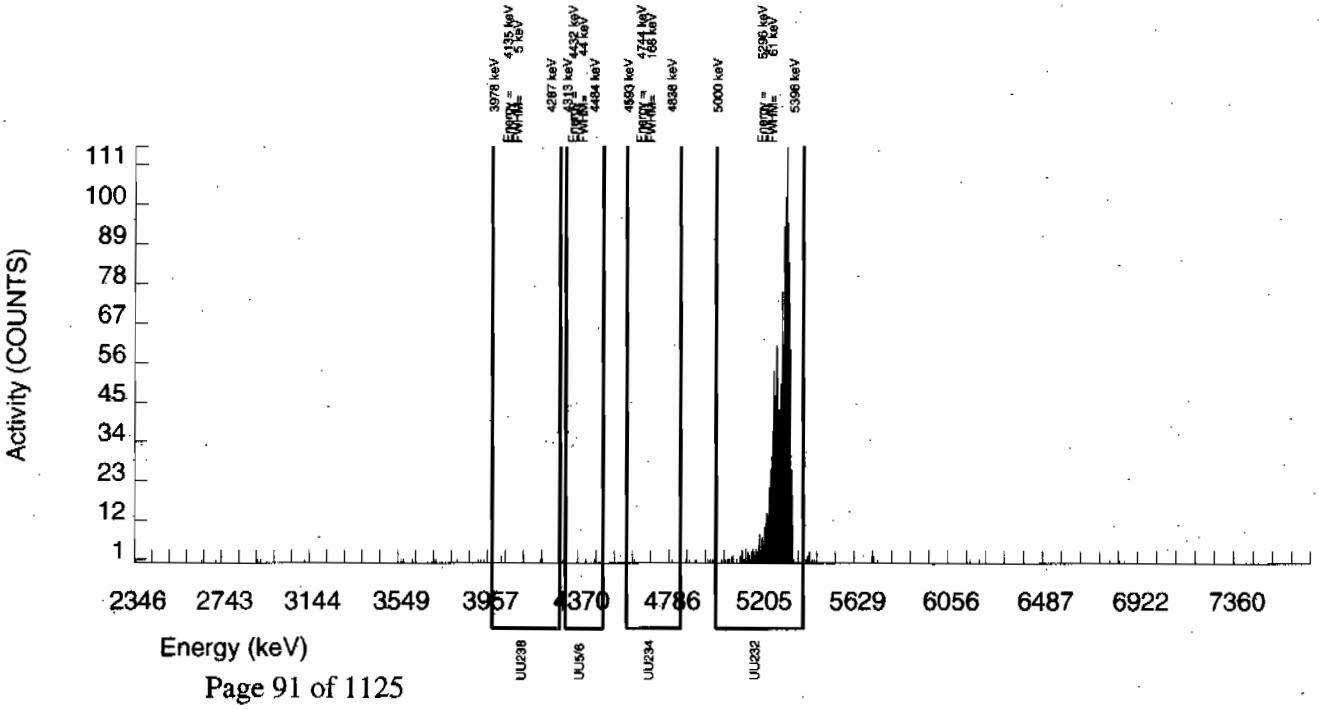

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S1201874418_UU
SAMPLE QTY: 0.502 G

DETECTOR NUMBER :75553
AVERAGE %EFFICIENCY :25.6275
% YIELD : 67.520

COUNT DATE:11-JUL-2009 15:44:54
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B155.CNF;330
PCI/G : 2.343E+01	PCI/G : 2.343E+01	NOMINAL : 5.29630 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.57608 dpm	EFF FILE : W155.CNF;101
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	243.000	239.236	1.000	9.1924	100.0000	1.24E+00	1.20E-01	1.11E-01	2.36E-01	8.05E-02
U232	5302.100	924.000	916.000	8.000	2.8284	100.0000	4.75E+00	3.77E-01	3.41E-02	8.23E-02	1.58E-01
U-235	4391.000	11.000	9.000	2.000	3.0409	80.90000	5.77E-02	2.35E-02	4.53E-02	1.08E-01	2.31E-02
U-238	4184.730	275.000	270.000	5.000	3.2215	100.0000	1.40E+00	1.33E-01	3.89E-02	9.18E-02	8.68E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

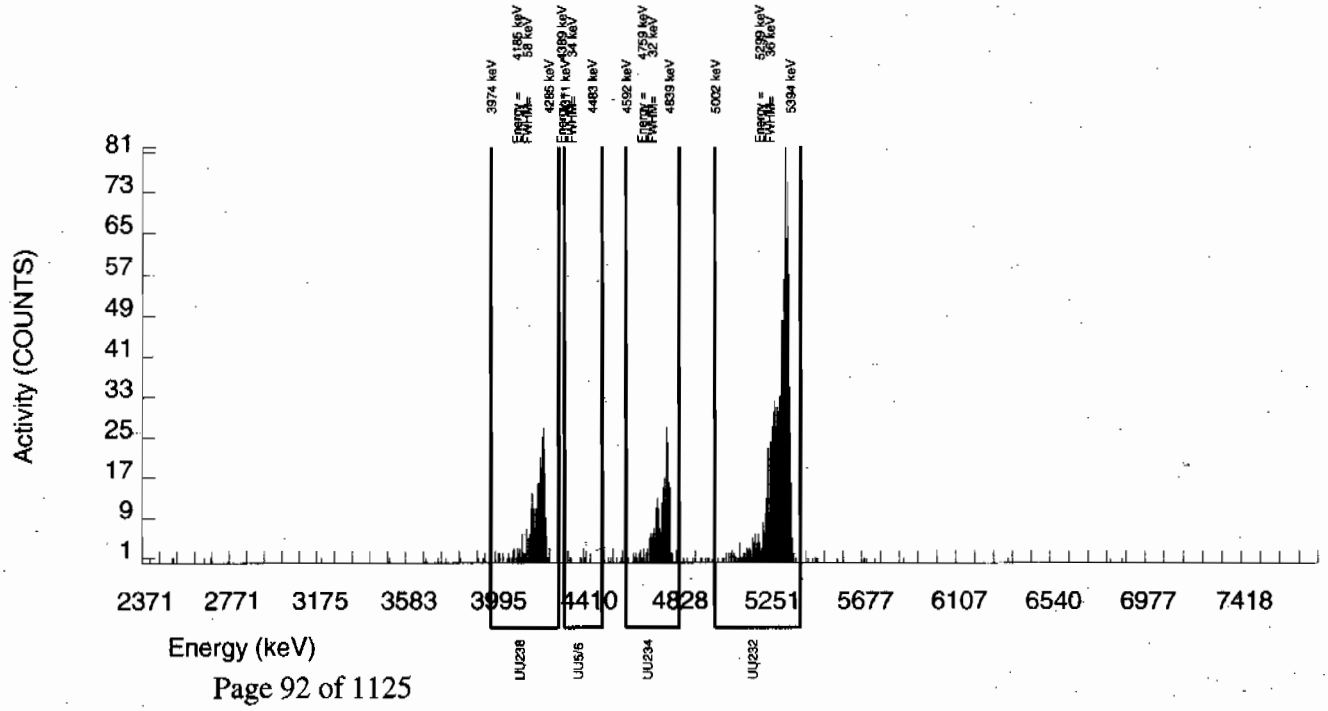

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882536 SAMPLE DATE : 6-JUL-2009 00:00:00.	SAMPLE ID : S1201874419_UU SAMPLE QTY: 0.103 G
DETECTOR NUMBER :75554 AVERAGE %EFFICIENCY :24.9092 % YIELD : 103.746	COUNT DATE:11-JUL-2009 15:44:57 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 1.142E+02	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.142E+02	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29448 dpm RESULTS : 5.49280 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B156.CNF;331 BKG DATE : 5-JUL-2009 EFF FILE : W156.CNF;105 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	377.000	368.873	4.000	9.1924	100.0000	6.24E+00	5.76E-01	3.62E-01	7.70E-01	3.29E-01
U232	5302.100	1379.000	1368.000	11.000	3.3166	100.0000	2.32E+01	1.87E+00	1.31E-01	3.07E-01	6.31E-01
U-235	4391.000	29.000	28.000	1.000	3.0409	80.90000	5.86E-01	1.23E-01	1.48E-01	3.53E-01	1.15E-01
U-238	4184.730	348.000	346.000	2.000	3.2215	100.0000	5.86E+00	5.45E-01	1.27E-01	3.00E-01	3.17E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

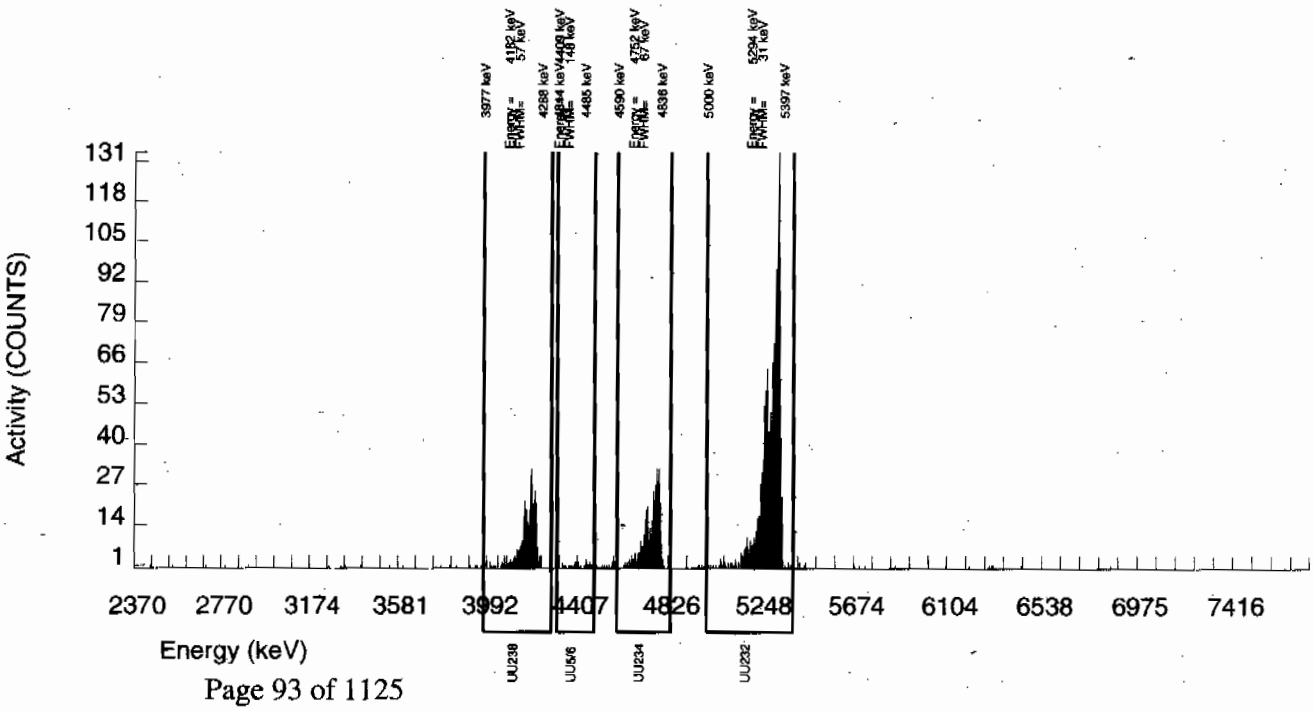

Radiochemistry Batch Checklist, Rev 9

Batch# 881219 Product: γ / LANL Date: 7/14/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			n/a
Samples have been blank corrected (if required)			n/a
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			n/a
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			n/a
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent	✓		
Aux data is correct.			n/a
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			n/a
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			n/a
Batch non-conformances second reviewed and disposition verified to be completed.			n/a
Aliquot Correction completed if required.			n/a
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Maggie Stamps 7/14/09

Secondary Review Performed By: [illegible] 7/14/09

7/20

Gamma Spec Que Sheet 1.G.-7/7/09

06/30/2009

Batch #:881219 **Analyst: MXR1** **First Client DueDate07/20/2009** **Internal Due Date: 07/09/2009**

Gamma Spike Isotope: Mixed Gamma **Spike Code:** n/a **Expiration Date:** n/a **Vol:** n/a **Nominal Concentration:** n/a

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1.0mL **Nominal Concentration:** Cs137-5.776 Co60-7.101 Am241-16.31

Initials: MS **Prep Date:** 6/30/09 **Witness:** n/a

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
232424001-1	CAMO-09-10463	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	116.50	1	6/30/09
232433001-1	CAMO-09-6007	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	122.34	2	
232433002-1	CAMO-09-6006	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	121.04	4	
232433003-1	CAMO-09-6008	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	103.26	5	
232433004-1	CAMO-09-6009	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	137.71	6	
232433005-1	CAMO-09-6034	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	77.49	8	
232433006-1	CAMO-09-6043	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	92.89	11	
232433007-1	CAMO-09-6045	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	105.82	12	
232433008-1	CAMO-09-6041	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	108.51	13	
232433009-1	CAMO-09-6040	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	58.66	14	
232433010-1	CAMO-09-6044	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	78.03	15	
232433011-1	CAMO-09-6035	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	121.42	16	
232433012-1	CAMO-09-6038	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	75.90	17	
232433013-1	CAMO-09-6039	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	105.65	18	
232433014-1	CAMO-09-6042	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	80.36	22	
232433015-1	CAMO-09-6049	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	122.28	23	
1201871423-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	6/30/09	137.71	2	
1201871424-1	DUP CAMO-09-10463(232424001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	23-JUN-09 12:00:00	119.46	4	
1201871425-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	6/30/09	151.73	5	

GEL Laboratories LLC, Radiochemistry Division

history ✓ dailies

Data Reviewed By: Maggie Stamps 7/14/09 7/14/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881219	232424001	SAMPLE	07-JUL-09	Americium-241	0.2211	0.3061	0.200
				Cerium-139	-0.01267	0.05584	0.050
				Sodium-22	0.00093	0.09198	0.080
				Thorium-234	2.031	2.438	2.00
881219	232433001	SAMPLE	07-JUL-09	Americium-241	-8.08E-06	0.3243	0.200
				Cerium-139	0.01177	0.05441	0.050
				Sodium-22	-0.02189	0.08293	0.080
				Thorium-234	1.112	2.62	2.00
881219	232433002	SAMPLE	07-JUL-09	Americium-241	-0.09923	0.3394	0.200
				Thorium-234	0.4954	2.848	2.00
881219	232433003	SAMPLE	07-JUL-09	Cerium-139	-0.00307	0.05922	0.050
				Cesium-134	0.04202	0.1062	0.100
				Europium-152	0.07887	0.2057	0.200
				Sodium-22	-0.0205	0.0962	0.080
				Tin-113	0.00117	0.1042	0.100
881219	232433004	SAMPLE	07-JUL-09	Americium-241	-0.00603	0.3538	0.200
				Cerium-139	-0.01199	0.05816	0.050
				Sodium-22	-0.06759	0.08188	0.080
				Thorium-234	0.9715	2.972	2.00
881219	232433005	SAMPLE	07-JUL-09	Americium-241	0.04505	0.3705	0.200
				Cerium-139	-0.00754	0.06223	0.050
				Cesium-134	0.03567	0.1103	0.100
				Europium-152	0.0773	0.2302	0.200
				Sodium-22	-0.02886	0.09783	0.080
881219	232433006	SAMPLE	07-JUL-09	Americium-241	-0.07842	0.2441	0.200
				Cerium-139	-0.01325	0.05835	0.050
				Cesium-134	0.1102	0.1145	0.100
881219	232433007	SAMPLE	07-JUL-09	Americium-241	0.04025	0.2846	0.200
				Cerium-139	-0.03669	0.05251	0.050
				Sodium-22	-0.02361	0.08893	0.080
881219	232433008	SAMPLE	07-JUL-09	Cerium-139	0.00799	0.06211	0.050
				Europium-152	-0.01484	0.2291	0.200
				Sodium-22	-0.01046	0.1068	0.080
				Tin-113	0.00081	0.1036	0.100
881219	232433009	SAMPLE	07-JUL-09	Americium-241	0.02742	0.255	0.200
				Cerium-139	0.02234	0.05806	0.050
				Cesium-134	0.1149	0.1169	0.100
				Sodium-22	-0.01124	0.08251	0.080
881219	232433010	SAMPLE	07-JUL-09	Americium-241	-0.04863	0.6873	0.200
				Cerium-139	-0.02008	0.07859	0.050
				Cesium-134	0.06242	0.1399	0.100
				Europium-152	0.00439	0.2662	0.200
				Mercury-203	0.0812	0.1064	0.100
				Ruthenium-106	0.2516	0.9443	0.800
				Sodium-22	0.01503	0.123	0.080
				Tin-113	0.01641	0.1348	0.100

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881219	232433010	SAMPLE	07-JUL-09	Uranium-235	0.4658	0.5558	0.500
				Yttrium-88	0.06253	0.1058	0.100
881219	232433011	SAMPLE	07-JUL-09	Americium-241	0.03932	0.3119	0.200
				Cerium-139	-0.00276	0.05526	0.050
				Sodium-22	0.02274	0.08615	0.080
				Thorium-234	2.169	2.518	2.00
881219	232433012	SAMPLE	07-JUL-09	Cerium-139	0.00847	0.06389	0.050
				Cesium-134	0.07556	0.1261	0.100
				Europium-152	-0.05633	0.2317	0.200
				Sodium-22	-0.02776	0.09258	0.080
				Tin-113	5.73E-05	0.1106	0.100
881219	232433013	SAMPLE	07-JUL-09	Americium-241	0.1565	0.3272	0.200
				Thorium-234	1.697	2.578	2.00
881219	232433014	SAMPLE	07-JUL-09	Americium-241	0.04738	0.2579	0.200
				Cerium-139	-0.0348	0.05496	0.050
				Cesium-134	0.06574	0.1028	0.100
				Sodium-22	0.01019	0.08711	0.080
881219	232433015	SAMPLE	07-JUL-09	Americium-241	0.09487	0.2512	0.200
881219	1201871423	MB	07-JUL-09				
881219	1201871424	DUP	07-JUL-09	Americium-241	0.1091	0.3744	0.200
				Sodium-22	0.00035	0.08849	0.080
				Thorium-234	0.5417	3.041	2.00
881219	1201871425	LCS	07-JUL-09	Cerium-139	0.06566	0.09612	0.050
				Cesium-134	0.1409	0.2266	0.100
				Europium-152	0.101	0.3582	0.200
				Mercury-203	0.00971	0.1247	0.100
				Potassium-40	0.8505	1.323	1.00
				Ruthenium-106	-0.1586	1.175	0.800
				Sodium-22	-0.06415	0.1062	0.080
				Tin-113	0.07611	0.1766	0.100
				Uranium-235	0.1641	0.6198	0.500
				Yttrium-88	0.00432	0.1004	0.100

GEL QUALS

Batch ID: 881219

Report run on: July 14, 2009 11:49 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232424001-1 06-JUL-2009 06:03	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.097			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.445			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1328		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.297			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1068			
	Uranium-235	UI	UI	UI	Data rejected due to high peak-width.		.4239		.5	.5
232433001-1 07-JUL-2009 06:04	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.456			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.043			
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.498			
232433002-1 07-JUL-2009 06:04	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.476			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		.9898		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to low abundance.		3.016			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1298		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.312			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		.9898			
232433003-1 07-JUL-2009 06:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.846			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.087		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.711			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.994			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.087			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1288			

GEL QUALS

Batch ID: 881219

Report run on: July 14, 2009 11:49 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232433004-1 07-JUL-2009 06:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.013			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.831			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1396		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to no valid peak.		.08752		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.55			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1071			
232433005-1 07-JUL-2009 06:06	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.358			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.146			
232433006-1 07-JUL-2009 06:38	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.33			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.871			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.225			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09246			
232433007-1 07-JUL-2009 06:39	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.549			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		5.064			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1286		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.795			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08739			
232433008-1 07-JUL-2009 06:39	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.754			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.212			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.199		.1	.1

GEL QUALS

Batch ID: 881219

Report run on: July 14, 2009 11:49 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232433008-1 07-JUL-2009 06:39	Radium-224	UI	UI	UI	Data rejected due to interference.		4.82			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.2258			
232433009-1 07-JUL-2009 06:40	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.587			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.941			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.942			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1			
232433010-1 07-JUL-2009 06:40	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.265			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.833			
	Radium-224	UI	UI	UI	Data rejected due to interference.		6.031			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.2574			
232433011-1 07-JUL-2009 06:41	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.265			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.203			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.931			
232433012-1 07-JUL-2009 07:03	Americium-241	UI	UI	UI	Data rejected due to low abundance.		.1781		.2	.2
	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.1			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.335		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.079			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.949			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.335			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1132			

GEL QUALS

Batch ID: 881219

Report run on: July 14, 2009 11:49 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232433013-1 07-JUL-2009 07:04	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.829			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.958			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.646			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1258			
232433014-1 07-JUL-2009 07:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.257			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.083		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.83			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.145			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.083			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1976			
232433015-1 07-JUL-2009 07:06	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.718			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.229			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1073		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.593			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09025			
1201871423-1 MB 07-JUL-2009 08:11	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.04857			
1201871424-1 DUP 07-JUL-2009 08:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.041			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.002		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.671			
	Radium-224	UI	UI	UI	~~NA~~ Data rejected due to interference. MJE 7/16/09		4.179			

GEL QUALS

Batch ID: 881219

Report run on: July 14, 2009 11:49 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
1201871424-1 DUP 07-JUL-2009 08:27	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.002			

Gamma Review Report based on Result > MDA for Batch:881219

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232424001	23-JUN-09 12:00	07-JUL-09 06:03	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.707	0.1822	pCi/g	0.2639	N	911.6	3	1.852	IDENTIFIED	9.402	☐	
Americium-243 INT	0.4553	0.05477	pCi/g	0.1001	N	74.74	2	1.573	IDENTIFIED	11.27	☐	
Annihilation Rad.	0.1391	0.04308	pCi/g	0.05159	N	511.3	3	2.433	IDENTIFIED	30.85	☐	
Pb214 Bismuth-211 INT	3.097	0.2788	pCi/g	0.3786	Y	352.3	4	1.402	IDENTIFIED	8.427	☑ UI	
Bismuth-212 HE	0.8524	0.1997	pCi/g	0.6646	N	727.7	1	1.862	FAIL_ABUND	23.12	☐	
Bismuth-214 ✓	1.009	0.0988	pCi/g	0.1286	0.200	609.7	4	1.629	IDENTIFIED	9.069	☐	
Pb214 Cadmium-109 INT	2.445	0.5057	pCi/g	1.649	Y	87.25	3	1.117	IDENTIFIED	20.17	☑ UI	
Cerium-141 HE	0.1234	0.07132	pCi/g	0.1151	N	144.8	3	4.958	IDENTIFIED	57.72	☐	
Cerium-143	124.2	45.87	pCi/g	0	N	144.8	3	4.958	NOT_IDENTI	57.72	☐	
Cesium-134 LA	0.1328	0.02997	pCi/g	0.1152	0.100	511.3	3	2.433	NOT_IDENTI	30.85	☑ UI	Data rejected due to low abundance.
Gross Gamma	9.072	1.658	pCi/g	2.835	N		0				☐	
Iodine-133 HE	629.1	1129	pCi/g	0	N	511.3	3	2.433	FAIL_DECAY	30.85	☐	
Krypton-85 HE	21.13	5.021	pCi/g	16.93	N	239	9	1.185	NOT_IDENTI	3.982	☐	
Lead-212 ✓	1.551	0.0837	pCi/g	0.1033	0.100	239	9	1.185	IDENTIFIED	3.982	☐	
Lead-214 ✓	1.077	0.101	pCi/g	0.1299	0.100	352.3	4	1.402	IDENTIFIED	8.427	☐	
Lutetium-177 HE	2.09	0.7997	pCi/g	1.963	N	209.6	1	1.271	FAIL_ABUND	38.16	☐	
Neptunium-237 HE	0.7072	0.1635	pCi/g	0.4691	N	87.25	3	1.117	IDENTIFIED	20.17	☐	
Niobium-97 HE	6831	15380	pCi/g	0	N	239	9	1.185	NOT_IDENTI	3.982	☐	
Polonium-212 nr	1.551	0.0837	pCi/g	0.1033	N	239	9	1.185	IDENTIFIED	3.982	☐	
Polonium-214 nr	1.077	0.101	pCi/g	0.1299	N	352.3	4	1.402	IDENTIFIED	8.427	☐	
Polonium-216 nr	1.551	0.0837	pCi/g	0.1033	N	239	9	1.185	IDENTIFIED	3.982	☐	
Polonium-218 nr	1.077	0.101	pCi/g	0.1299	N	352.3	4	1.402	IDENTIFIED	8.427	☐	
Potassium-40 ✓	36.5	1.698	pCi/g	0.5368	1.00	1461	1	1.983	IDENTIFIED	3.004	☐	
Pb214 Radium-224 INT	3.297	0.7781	pCi/g	1.175	Y	242	1	1.789	IDENTIFIED	23.43	☑ UI	
Radium-226 ✓	1.009	0.0988	pCi/g	0.1286	Y	609.7	4	1.629	IDENTIFIED	9.069	☐	
Radium-228 ✓	1.707	0.1822	pCi/g	0.2639	0.500	911.6	3	1.852	IDENTIFIED	9.402	☐	
Sodium-24 HE	89990	94500	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA	0.1068	0.02538	pCi/g	0.08558	Y	239	9	1.185	NOT_IDENTI	3.982	☑ UI	Data rejected due to low abundance.
Technetium-99m HE	2.10E+14	5.23E+14	pCi/g	0	N	239	9	1.185	NOT_IDENTI	3.982	☐	
Thallium-200	370	111.8	pCi/g	0	N	74.74	2	1.573	NOT_IDENTI	11.27	☐	
Thallium-208 ✓	0.5124	0.04366	pCi/g	0.06639	0.080	583.6	1	1.374	IDENTIFIED	7.908	☐	
Thorium-228 ✓	1.551	0.0837	pCi/g	0.1033	N	239	9	1.185	IDENTIFIED	3.982	☐	
Thorium-230 ✓	1.009	0.0988	pCi/g	0.1285	N	609.7	4	1.629	IDENTIFIED	9.069	☐	
Thorium-232 ✓	1.707	0.1822	pCi/g	0.2639	N	911.6	3	1.852	IDENTIFIED	9.402	☐	
Tin-126 HE	0.2408	0.04981	pCi/g	0.1621	N	87.25	3	1.117	IDENTIFIED	20.17	☐	
Titanium-44 LA	0.3806	0.03291	pCi/g	0.09123	N	77.12	1	1.088	FAIL_ABUND	7.522	☐	
Total Uranium	6.2396	3.68E-06	ug/g	3.6293	N		0				☐	
Uranium-234 ✓	1.009	0.0988	pCi/g	0.1285	N	609.7	4	1.629	IDENTIFIED	9.069	☐	
Uranium-235 ↑PW	0.4239	0.2471	pCi/g	0.3935	0.500	144.8	3	4.958	IDENTIFIED	57.72	☑ UI	Data rejected due to high peak-width.
Zirconium-97	7.03E+05	2.98E+05	pCi/g	0	N	239	9	1.185	NOT_IDENTI	3.982	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433001	23-JUN-09 12:00	07-JUL-09 06:04	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.459	0.2175	pCi/g	0.2408	N	911.3	3	1.959	IDENTIFIED	13.71	☐	
Americium-243 INT	0.3287	0.04107	pCi/g	0.09633	N	74.77	2	1.042	IDENTIFIED	11.38	☐	
Annihilation Rad. HE	0.09796	0.03486	pCi/g	0.05501	N	511.1	1	2.397	IDENTIFIED	35.44	☐	
Pb214 Bismuth-211 INT	3.456	0.2387	pCi/g	0.3446	Y	351.9	4	1.283	IDENTIFIED	5.603	☑ UI	
Bismuth-212 LA	1.359	0.2615	pCi/g	0.768	N	727.3	1	1.312	FAIL_ABUND	18.73	☐	
Bismuth-214 ✓	1.009	0.08621	pCi/g	0.1107	0.200	609.3	4	1.513	IDENTIFIED	7.463	☐	

Pb214	Cadmium-109 INT	3.043	0.5146	pCi/g	1.314	Y	87.25	5	1.065	IDENTIFIED	15.86	☑ UI	
	Cerium-143	248	50.68	pCi/g	0	N	87.25	5	1.065	FAIL_DECAY	15.86	☐	
	Gross Gamma	8.935	1.532	pCi/g	2.778	N		0				☐	
	Iodine-123 HE	1.63E+05	5.18E+05	pCi/g	0	N	87.25	5	1.065	NOT_IDENTI	15.86	☐	
	Lead-212 ✓	1.452	0.1016	pCi/g	0.1157	0.100	238.5	5	1.096	IDENTIFIED	5.156	☐	
	Lead-214 ✓	1.202	0.08878	pCi/g	0.1201	0.100	351.9	4	1.283	IDENTIFIED	5.603	☐	
	Lutetium-177 HE	2.092	0.6346	pCi/g	1.821	N	209.1	1	0.6883	FAIL_ABUND	30.09	☐	
	Neptunium-237 INT	0.8801	0.1744	pCi/g	0.4235	N	87.25	5	1.065	IDENTIFIED	15.86	☐	
	Polonium-212 NV	1.452	0.1016	pCi/g	0.1157	N	238.5	5	1.096	IDENTIFIED	5.156	☐	
	Polonium-214 NV	1.202	0.08878	pCi/g	0.1201	N	351.9	4	1.283	IDENTIFIED	5.603	☐	
	Polonium-216 NV	1.452	0.1016	pCi/g	0.1157	N	238.5	5	1.096	IDENTIFIED	5.156	☐	
	Polonium-218 NV	1.202	0.08878	pCi/g	0.1201	N	351.9	4	1.283	IDENTIFIED	5.603	☐	
	Potassium-40 ✓	35.24	1.679	pCi/g	0.5986	1.00	1461	1	2.083	IDENTIFIED	2.994	☐	
Pb214	Radium-224 INT	2.498	0.6845	pCi/g	1.515	Y	241.8	1	1.539	IDENTIFIED	27.08	☑ UI	
	Radium-226 ✓	1.009	0.08621	pCi/g	0.1107	Y	609.3	4	1.513	IDENTIFIED	7.463	☐	
	Radium-228 ✓	1.459	0.2175	pCi/g	0.2408	0.500	911.3	3	1.959	IDENTIFIED	13.71	☐	
	Sodium-24 HE	59910	88820	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Thallium-200	308	102.8	pCi/g	0	N	74.77	2	1.042	NOT_IDENTI	11.38	☐	
	Thallium-208 ✓	0.5058	0.0522	pCi/g	0.06616	0.080	583.4	1	1.52	IDENTIFIED	9.646	☐	
	Thorium-228 ✓	1.452	0.1016	pCi/g	0.1157	N	238.5	5	1.096	IDENTIFIED	5.156	☐	
	Thorium-230 ✓	1.009	0.08621	pCi/g	0.1107	N	609.3	4	1.513	IDENTIFIED	7.463	☐	
	Thorium-232 ✓	1.459	0.2175	pCi/g	0.2408	N	911.3	3	1.959	IDENTIFIED	13.71	☐	
	Tin-126 INT	0.2997	0.05069	pCi/g	0.1302	N	87.25	5	1.065	IDENTIFIED	15.86	☐	
	Titanium-44 LA	0.3287	0.03117	pCi/g	0.07769	N	77.11	1	1.028	FAIL_ABUND	7.887	☐	
	Uranium-234 ✓	1.009	0.08621	pCi/g	0.1107	N	609.3	4	1.513	IDENTIFIED	7.463	☐	
	Zirconium-97 HE	5.33E+05	2.83E+05	pCi/g	0	N	238.5	5	1.096	NOT_IDENTI	5.156	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433002	23-JUN-09 12:00	07-JUL-09 06:04	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.437	0.154	pCi/g	0.2026	N	910.5	3	1.714	IDENTIFIED	9.231	☐	
	Americium-243 INT	0.3064	0.04254	pCi/g	0.09988	N	74.84	2	0.983	IDENTIFIED	12.65	☐	
	Annihilation Rad. HE	0.1029	0.03319	pCi/g	0.04683	N	510.6	3	2.315	IDENTIFIED	32.13	☐	
	Barium-137m NV	0.1358	0.02864	pCi/g	0.06041	N	661	2	1.386	IDENTIFIED	20.94	☐	
Pb214	Bismuth-211 INT	3.476	0.2498	pCi/g	0.2932	Y	351.7	4	1.138	IDENTIFIED	6.345	☑ UI	
	Bismuth-212 HE	0.9189	0.1971	pCi/g	0.6272	N	726.9	1	1.179	FAIL_ABUND	21.11	☐	
	Bismuth-214 LA	0.9898	0.08074	pCi/g	0.2699	0.200	608.9	4	1.428	FAIL_ABUND	7.283	☑ UI	Data rejected due to low abundance.
	Cadmium-109 LA	3.016	0.4821	pCi/g	1.608	Y	510.6	3	2.315	NOT_IDENTI	32.13	☑ UI	Data rejected due to low abundance.
	Cerium-143	380.8	56.97	pCi/g	0	N	327.8	1	1.689	FAIL_DECAY	26.33	☐	
	Cesium-134 LA	0.1298	0.02993	pCi/g	0.08377	0.100	794.5	2	1.337	FAIL_ABUND	22.81	☑ UI	Data rejected due to low abundance.
	Cesium-137 ✓	0.1436	0.03028	pCi/g	0.06386	0.100	661	2	1.386	IDENTIFIED	20.94	☐	
	Gross Gamma	7.604	1.172	pCi/g	2.329	N		0				☐	
	Iodine-123 HE	52250	4.53E+05	pCi/g	0	N	510.6	3	2.315	NOT_IDENTI	32.13	☐	
	Iodine-135 HE	8.15E+13	8.46E+13	pCi/g	0	N	794.5	2	1.337	NOT_IDENTI	22.81	☐	
	Lead-212 ✓	1.373	0.07604	pCi/g	0.08344	0.100	238.5	6	1.137	IDENTIFIED	3.815	☐	
	Lead-214 ✓	1.209	0.09244	pCi/g	0.1022	0.100	351.7	4	1.138	IDENTIFIED	6.345	☐	
	Lutetium-177 LA	3.573	0.8434	pCi/g	1.725	N	209.7	1	1.292	FAIL_ABUND	23.37	☐	
	Neptunium-237 ~~INT~~ LA	1.092	0.1985	pCi/g	0.4777	N	92.82	1	1.531	NOT_IDENTI	21.33	☐	
	Niobium-97	32160	10880	pCi/g	0	N	238.5	6	1.137	NOT_IDENTI	3.815	☐	
	Polonium-212 NV	1.373	0.07604	pCi/g	0.08344	N	238.5	6	1.137	IDENTIFIED	3.815	☐	
	Polonium-214 NV	1.209	0.09244	pCi/g	0.1022	N	351.7	4	1.138	IDENTIFIED	6.345	☐	
	Polonium-216 NV	1.373	0.07604	pCi/g	0.08344	N	238.5	6	1.137	IDENTIFIED	3.815	☐	
	Polonium-218 NV	1.209	0.09244	pCi/g	0.1022	N	351.7	4	1.138	IDENTIFIED	6.345	☐	
	Potassium-40 ✓	20.7	1.062	pCi/g	0.4636	1.00	1459	1	2.072	IDENTIFIED	3.698	☐	
Pb214	Radium-224 INT	5.312	0.7069	pCi/g	0.9497	Y	241.5	1	2.035	IDENTIFIED	12.88	☑ UI	
	Radium-226 LA	0.9898	0.08074	pCi/g	0.2699	Y	608.9	4	1.428	FAIL_ABUND	7.283	☑ UI	Data rejected due to low abundance.
	Radium-228 ✓	1.437	0.154	pCi/g	0.2026	0.500	910.5	3	1.714	IDENTIFIED	9.231	☐	
	Thallium-200 HE	21.37	88.31	pCi/g	0	N	74.84	2	0.983	NOT_IDENTI	12.65	☐	

Thallium-208 ✓	0.397	0.04283	pCi/g	0.0551	0.080	582.8	1	1.308	IDENTIFIED	10.32		
Thorium-228 ✓	1.373	0.07604	pCi/g	0.08343	N	238.5	6	1.137	IDENTIFIED	3.815		
Thorium-230 LA	0.9898	0.08074	pCi/g	0.2699	N	608.9	4	1.428	FAIL_ABUND	7.283		
Thorium-232 ✓	1.437	0.154	pCi/g	0.2026	N	910.5	3	1.714	IDENTIFIED	9.231		
Tin-126 LA	0.2984	0.04779	pCi/g	0.1595	N	968.3	1	2.264	NOT_IDENTI	11.34		
Titanium-44 LA	0.3257	0.03267	pCi/g	0.0809	N	77.14	1	1.063	FAIL_ABUND	8.225		
Uranium-234 LA	0.9898	0.08074	pCi/g	0.2699	N	608.9	4	1.428	FAIL_ABUND	7.283		
Zirconium-97	9.92E+05	2.54E+05	pCi/g	0	N	238.5	6	1.137	NOT_IDENTI	3.815		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433003	23-JUN-09 12:00	07-JUL-09 06:05	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		2.127	0.2311	pCi/g	0.2835	N	911.1	3	1.926	IDENTIFIED	8.928		
Americium-243 INT		0.4203	0.03397	pCi/g	0.06797	N	74.83	1	1.203	IDENTIFIED	7.071		
Annihilation Rad.	HE	0.08619	0.05238	pCi/g	0.06276	N	511	2	1.713	IDENTIFIED	60.69		
Barium-137m NV		0.2315	0.04738	pCi/g	0.08995	N	661.5	2	1.858	IDENTIFIED	20.2		
Bismuth-210 ✓		3.777	0.5716	pCi/g	1.043	N	46.45	3	1.302	IDENTIFIED	14.62		
Pb-214 Bismuth-211 INT		3.846	0.3222	pCi/g	0.416	Y	351.8	4	1.318	IDENTIFIED	7.388	✓ UI	
Bismuth-212 LA		1.769	0.3378	pCi/g	0.9544	N	727.1	1	1.816	FAIL_ABUND	18.55		
Bismuth-214 LA		1.087	0.1132	pCi/g	0.3348	0.200	609.4	4	1.427	FAIL_ABUND	9.529	UI	Data rejected due to low abundance.
Pb214 Cadmium-109 INT		2.711	0.4921	pCi/g	1.3	Y	87.39	3	1.194	IDENTIFIED	17.75	✓ UI	
Cerium-143		394.3	69.85	pCi/g	0	N	328	1	0.8937	FAIL_DECAY	43.67		
Cesium-137 ✓		0.2447	0.05009	pCi/g	0.09509	0.100	661.5	2	1.858	IDENTIFIED	20.2		
Gross Gamma		10.6	1.589	pCi/g	4.521	N		0					
Iodine-133	HE	2100	1369	pCi/g	0	N	511	2	1.713	FAIL_DECAY	60.69		
Iodine-135	HE	1.27E+14	1.20E+14	pCi/g	0	N	1125	1	4.663	FAIL_DECAY	12.96		
Krypton-85	HE	25.48	5.782	pCi/g	19.36	N	238.6	9	1.343	NOT_IDENTI	3.697		
Lead-210 ✓		3.777	0.5716	pCi/g	1.043	N	46.45	3	1.302	IDENTIFIED	14.62		
Lead-212 ✓		1.826	0.1194	pCi/g	0.1093	0.100	238.6	9	1.343	IDENTIFIED	3.697		
Lead-214 ✓		1.338	0.1174	pCi/g	0.145	0.100	351.8	4	1.318	IDENTIFIED	7.388		
Lutetium-177	HE	2.673	0.8765	pCi/g	2.144	N	209.5	1	1.41	FAIL_ABUND	32.42		
Neptunium-237 INT		0.7841	0.1637	pCi/g	0.3958	N	87.39	3	1.194	IDENTIFIED	17.75		
Niobium-95m	HE	0.4232	0.092	pCi/g	0.2876	N	238.6	9	1.343	NOT_IDENTI	3.697		
Niobium-97	HE	22540	22270	pCi/g	0	N	238.6	9	1.343	NOT_IDENTI	3.697		
Polonium-210 NV		3.777	0.5667	pCi/g	1.043	N	46.45	3	1.302	IDENTIFIED	14.62		
Polonium-212 NV		1.826	0.1194	pCi/g	0.1093	N	238.6	9	1.343	IDENTIFIED	3.697		
Polonium-214 NV		1.338	0.1174	pCi/g	0.145	N	351.8	4	1.318	IDENTIFIED	7.388		
Polonium-216 NV		1.826	0.1194	pCi/g	0.1093	N	238.6	9	1.343	IDENTIFIED	3.697		
Polonium-218 NV		1.338	0.1174	pCi/g	0.145	N	351.8	4	1.318	IDENTIFIED	7.388		
Potassium-40 ✓		29.55	1.382	pCi/g	0.7794	1.00	1460	1	2.013	IDENTIFIED	3.493		
Pb-214 Radium-224 INT		4.994	0.8855	pCi/g	1.244	Y	241.6	1	1.95	IDENTIFIED	17.04	✓ UI	
Radium-226 LA		1.087	0.1132	pCi/g	0.3348	Y	609.4	4	1.427	FAIL_ABUND	9.529	UI	Data rejected due to low abundance.
Radium-228 ✓		2.127	0.2311	pCi/g	0.2835	0.500	911.1	3	1.926	IDENTIFIED	8.928		
Sodium-24	HE	12710	1.01E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Strontium-85 LA		0.1288	0.02922	pCi/g	0.09786	Y	238.6	9	1.343	NOT_IDENTI	3.697	UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5957	0.06249	pCi/g	0.08116	0.080	583.1	1	1.739	IDENTIFIED	9.824		
Thorium-228 ✓		1.826	0.1194	pCi/g	0.1093	N	238.6	9	1.343	IDENTIFIED	3.697		
Thorium-230 LA		1.087	0.1131	pCi/g	0.3348	N	609.4	4	1.427	FAIL_ABUND	9.529		
Thorium-232 ✓		2.127	0.2311	pCi/g	0.2835	N	911.1	3	1.926	IDENTIFIED	8.928		
Thorium-234 ✓		2.309	0.6152	pCi/g	1.173	2.00	63.1	2	1.192	IDENTIFIED	25.12		
Tin-126 INT		0.267	0.04847	pCi/g	0.1279	N	87.39	3	1.194	IDENTIFIED	17.75		
Titanium-44 LA		0.4386	0.0278	pCi/g	0.07675	N	77.05	1	1.157	FAIL_ABUND	5.004		
Total Uranium		6.9747	1.83E-06	ug/g	1.7495	N		0					
Uranium-234 LA		1.087	0.1131	pCi/g	0.3348	N	609.4	4	1.427	FAIL_ABUND	9.529		
Uranium-238	HE	2.309	0.6152	pCi/g	1.173	N	63.1	2	1.192	IDENTIFIED	25.12		
Zirconium-97		1.06E+06	3.69E+05	pCi/g	0	N	238.6	9	1.343	NOT_IDENTI	3.697		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433004	23-JUN-09 12:00	07-JUL-09 06:05	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.872	0.1838	pCi/g	0.2316	N	911	3	1.483	IDENTIFIED	8.38		
Americium-243 INT		0.3411	0.0411	pCi/g	0.1206	N	75.03	2	1.049	IDENTIFIED	11.17		
Annihilation Rad.		0.1591	0.04071	pCi/g	0.05333	N	511.2	2	1.633	IDENTIFIED	25.44		
Pb214 Bismuth-211 INT		4.013	0.2951	pCi/g	0.3975	Y	351.8	4	1.317	IDENTIFIED	6.608	✓ UI	
Bismuth-212 LA		1.507	0.2748	pCi/g	0.7715	N	727.5	1	2.108	FAIL_ABUND	17.84		
Bismuth-214 ✓		1.175	0.09147	pCi/g	0.1254	0.200	609.2	4	1.375	IDENTIFIED	6.857		
Pb214 Cadmium-109 INT		3.831	0.468	pCi/g	1.56	Y	87.27	3	1.221	IDENTIFIED	11.19	✓ UI	
Cerium-143		415.6	67.95	pCi/g	0	N	328	1	1.235	FAIL_DECAY	50.87		
Cesium-134 LA		0.1396	0.03166	pCi/g	0.1033	0.100	794.9	2	0.8869	FAIL_ABUND	22.45	✓ UI	Data rejected due to low abundance.
Gross Gamma		9.941	1.444	pCi/g	3.293	N		0					
Iodine-133	HE	920.3	1120	pCi/g	0	N	511.2	2	1.633	FAIL_DECAY	25.44		
Iodine-135	HE	1.53E+14	1.16E+14	pCi/g	0	N	794.9	2	0.8869	NOT_IDENTI	22.45		
Krypton-85	HE	21.19	4.636	pCi/g	16.06	N	238.7	7	1.192	NOT_IDENTI	3.329		
Lead-212 ✓		1.798	0.08929	pCi/g	0.1056	0.100	238.7	7	1.192	IDENTIFIED	3.329		
Lead-214 ✓		1.396	0.1089	pCi/g	0.1385	0.100	351.8	4	1.317	IDENTIFIED	6.608		
Lutetium-177	HE	3.226	0.7506	pCi/g	2.08	N	209.2	1	1.582	FAIL_ABUND	23.09		
Mercury-203 MP		0.08752	0.02762	pCi/g	0.07769	0.100	277.8	1	1.254	IDENTIFIED	31.4	✓ UI	
Neptunium-237 INT		1.108	0.1772	pCi/g	0.4844	N	87.27	3	1.221	IDENTIFIED	11.19		
Polonium-212 NR		1.798	0.08929	pCi/g	0.1056	N	238.7	7	1.192	IDENTIFIED	3.329		
Polonium-214 NR		1.396	0.1089	pCi/g	0.1385	N	351.8	4	1.317	IDENTIFIED	6.608		
Polonium-216 NR		1.798	0.08929	pCi/g	0.1056	N	238.7	7	1.192	IDENTIFIED	3.329		
Polonium-218 NR		1.396	0.1089	pCi/g	0.1385	N	351.8	4	1.317	IDENTIFIED	6.608		
Potassium-40 ✓		34.76	1.533	pCi/g	0.6284	1.00	1460	1	2.107	IDENTIFIED	2.918		
Pb214 Radium-224 INT		4.55	0.6205	pCi/g	1.202	Y	241.7	1	1.555	IDENTIFIED	13.32	✓ UI	
Radium-226 ✓		1.175	0.09147	pCi/g	0.1254	Y	609.2	4	1.375	IDENTIFIED	6.857		
Radium-228 ✓		1.872	0.1838	pCi/g	0.2316	0.500	911	3	1.483	IDENTIFIED	8.38		
Strontium-85 LA		0.1071	0.02343	pCi/g	0.08119	Y	238.7	7	1.192	NOT_IDENTI	3.329	✓ UI	Data rejected due to low abundance.
Thallium-200	HE	197.2	104.2	pCi/g	0	N	75.03	2	1.049	NOT_IDENTI	11.17		
Thallium-208 ✓		0.5291	0.04357	pCi/g	0.0703	0.080	583.2	1	1.599	IDENTIFIED	7.605		
Thorium-228 ✓		1.798	0.08929	pCi/g	0.1056	N	238.7	7	1.192	IDENTIFIED	3.329		
Thorium-230 ✓		1.175	0.09147	pCi/g	0.1254	N	609.2	4	1.375	IDENTIFIED	6.857		
Thorium-232 ✓		1.872	0.1838	pCi/g	0.2316	N	911	3	1.483	IDENTIFIED	8.38		
Tin-126 INT		0.3773	0.04609	pCi/g	0.1545	N	87.27	3	1.221	IDENTIFIED	11.19		
Titanium-44 LA		0.4157	0.03428	pCi/g	0.09958	N	77.23	1	1.119	FAIL_ABUND	6.867		
Uranium-234 ✓		1.175	0.09147	pCi/g	0.1254	N	609.2	4	1.375	IDENTIFIED	6.857		
Zirconium-97		8.62E+05	3.02E+05	pCi/g	0	N	238.7	7	1.192	NOT_IDENTI	3.329		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433005	23-JUN-09 12:00	07-JUL-09 06:06	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.463	0.2013	pCi/g	0.2567	N	910.7	3	1.281	IDENTIFIED	12.12		
Americium-243 INT		0.3066	0.05346	pCi/g	0.1207	N	74.82	1	1.148	IDENTIFIED	16.6		
Annihilation Rad.	HE	0.1513	0.06019	pCi/g	0.06335	N	510.9	1	2.033	IDENTIFIED	39.68		
Barium-137m NR		0.7823	0.06253	pCi/g	0.07993	N	661.3	3	1.74	IDENTIFIED	7.563		
Pb214 Bismuth-211 INT		3.358	0.3194	pCi/g	0.4434	Y	351.7	4	1.534	IDENTIFIED	8.916	✓ UI	
Bismuth-214 ✓		1.079	0.1163	pCi/g	0.1624	0.200	609	4	1.566	IDENTIFIED	10.09		
Cerium-143		299.8	67.73	pCi/g	0	N	661.3	3	1.74	FAIL_DECAY	7.563		
Cesium-137 ✓		0.827	0.06613	pCi/g	0.08449	0.100	661.3	3	1.74	IDENTIFIED	7.563		
Gross Gamma		7.904	1.313	pCi/g	2.704	N		0					
Lead-212 ✓		1.334	0.08471	pCi/g	0.1272	0.100	238.5	5	1.078	IDENTIFIED	5.17		
Lead-214 ✓		1.168	0.1152	pCi/g	0.1545	0.100	351.7	4	1.534	IDENTIFIED	8.916		
Neptunium-237	HE	0.5747	0.2119	pCi/g	0.5213	N	86.91	2	1.068	IDENTIFIED	34.93		
Polonium-212 NR		1.334	0.08471	pCi/g	0.1272	N	238.5	5	1.078	IDENTIFIED	5.17		
Polonium-214 NR		1.168	0.1152	pCi/g	0.1545	N	351.7	4	1.534	IDENTIFIED	8.916		
Polonium-216 NR		1.334	0.08471	pCi/g	0.1272	N	238.5	5	1.078	IDENTIFIED	5.17		
Polonium-218 NR		1.168	0.1152	pCi/g	0.1545	N	351.7	4	1.534	IDENTIFIED	8.916		

Potassium-40 ✓		22.55	1.453	pCi/g	0.7322	1.00	1460	1	1.956	IDENTIFIED	4.852	☐
Pb214 Radium-224 INT		3.146	0.9248	pCi/g	1.448	Y	241.3	1	1.868	IDENTIFIED	29.25	☑ ✓ UI
Radium-226 ✓		1.079	0.1163	pCi/g	0.1624	Y	609	4	1.566	IDENTIFIED	10.09	☐
Radium-228 ✓		1.463	0.2013	pCi/g	0.2567	0.500	910.7	3	1.281	IDENTIFIED	12.12	☐
Sodium-24	HE	1.29E+05	1.15E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐
Thallium-208 ✓		0.4581	0.06461	pCi/g	0.08562	0.080	583	1	1.543	IDENTIFIED	13.72	☐
Thorium-228 ✓		1.334	0.08471	pCi/g	0.1272	N	238.5	5	1.078	IDENTIFIED	5.17	☐
Thorium-230 ✓		1.079	0.1163	pCi/g	0.1624	N	609	4	1.566	IDENTIFIED	10.09	☐
Thorium-232 ✓		1.463	0.2013	pCi/g	0.2567	N	910.7	3	1.281	IDENTIFIED	12.12	☐
Thorium-234 ✓		4.509	1.785	pCi/g	2.864	2.00	63.05	2	1.525	IDENTIFIED	38.41	☐
Tin-126	HE	0.1957	0.06926	pCi/g	0.1887	N	86.91	2	1.068	IDENTIFIED	34.93	☐
Titanium-44 LA		0.3587	0.037	pCi/g	0.1046	N	77.19	1	0.9202	FAIL_ABUND	8.803	☐
Total Uranium		13.546	5.31E-06	ug/g	4.2634	N		0				☐
Uranium-234 ✓		1.079	0.1163	pCi/g	0.1624	N	609	4	1.566	IDENTIFIED	10.09	☐
Uranium-238	HE	4.509	1.785	pCi/g	2.864	N	63.05	2	1.525	IDENTIFIED	38.41	☐
Zirconium-97		1.85E+06	3.83E+05	pCi/g	0	N	238.5	5	1.078	NOT_IDENTI	5.17	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433006	23-JUN-09 12:00	07-JUL-09 06:38	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.722	0.2063	pCi/g	0.273	N	910.9	3	1.68	IDENTIFIED	10.7	☐	
Americium-243 INT		0.4323	0.03715	pCi/g	0.09629	N	74.26	1	0.8995	IDENTIFIED	7.692	☐	
Annihilation Rad.		0.207	0.04232	pCi/g	0.06055	N	510.4	2	2.019	IDENTIFIED	20.22	☐	
Barium-137m	HE	0.1154	0.03106	pCi/g	0.07162	N	661.8	2	1.168	IDENTIFIED	26.69	☐	
Pb214 Bismuth-211 INT		4.33	0.2969	pCi/g	0.388	Y	351.5	4	1.105	IDENTIFIED	5.896	☑ ✓ UI	
Bismuth-212	HE	0.8675	0.3066	pCi/g	0.7749	N	727.7	1	1.174	FAIL_ABUND	35.06	☐	
Bismuth-214 ✓		1.236	0.11	pCi/g	0.1375	0.200	608.9	4	1.35	IDENTIFIED	7.806	☐	
Pb214 Cadmium-109 INT		1.871	0.3105	pCi/g	1.47	Y	89.41	1	0.8585	IDENTIFIED	15.98	☑ ✓ UI	
Cerium-143		612.4	90.54	pCi/g	0	N	294.7	1	1.165	FAIL_DECAY	9.784	☐	
Cesium-137 ✓		0.122	0.03284	pCi/g	0.07571	0.100	661.8	2	1.168	IDENTIFIED	26.69	☐	
Gross Gamma		10.7	1.692	pCi/g	5.449	N		0				☐	
Iodine-133	HE	2115	1201	pCi/g	0	N	510.4	2	2.019	FAIL_DECAY	20.22	☐	
Iodine-135	HE	7.02E+13	1.21E+14	pCi/g	0	N	795.1	1	0.7813	NOT_IDENTI	38.3	☐	
Krypton-85	HE	18.29	5.054	pCi/g	16.51	N	238.1	9	0.9739	NOT_IDENTI	3.383	☐	
Lead-212 ✓		1.904	0.1008	pCi/g	0.1055	0.100	238.1	9	0.9739	IDENTIFIED	3.383	☐	
Lead-214 ✓		1.506	0.1105	pCi/g	0.1354	0.100	351.5	4	1.105	IDENTIFIED	5.896	☐	
Lutetium-177	HE	3.263	0.7396	pCi/g	2.136	N	208.6	1	0.9186	FAIL_ABUND	22.46	☐	
Neptunium-237 INT		1.298	0.2184	pCi/g	0.5117	N	86.55	2	1.371	IDENTIFIED	12.5	☐	
Niobium-95m LA		1.395	0.1128	pCi/g	0.3831	N	238.1	9	0.9739	NOT_IDENTI	3.383	☐	
Niobium-97	HE	16770	17330	pCi/g	0	N	238.1	9	0.9739	NOT_IDENTI	3.383	☐	
Polonium-212 nr		1.904	0.1008	pCi/g	0.1055	N	238.1	9	0.9739	IDENTIFIED	3.383	☐	
Polonium-214 nr		1.506	0.1105	pCi/g	0.1354	N	351.5	4	1.105	IDENTIFIED	5.896	☐	
Polonium-216 nr		1.904	0.1008	pCi/g	0.1055	N	238.1	9	0.9739	IDENTIFIED	3.383	☐	
Polonium-218 nr		1.506	0.1105	pCi/g	0.1354	N	351.5	4	1.105	IDENTIFIED	5.896	☐	
Potassium-40 ✓		31.89	1.483	pCi/g	0.6733	1.00	1461	2	1.765	IDENTIFIED	3.223	☐	
Pb214 Radium-224 INT		5.225	0.7268	pCi/g	1.201	Y	241.2	1	1.742	IDENTIFIED	13.48	☑ ✓ UI	
Radium-226 ✓		1.236	0.11	pCi/g	0.1375	Y	608.9	4	1.35	IDENTIFIED	7.806	☐	
Radium-228 ✓		1.722	0.2063	pCi/g	0.273	0.500	910.9	3	1.68	IDENTIFIED	10.7	☐	
Sodium-24	HE	66070	91340	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.09246	0.02555	pCi/g	0.08345	Y	238.1	9	0.9739	NOT_IDENTI	3.383	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.586	0.05205	pCi/g	0.07305	0.080	582.9	1	1.295	IDENTIFIED	8.073	☐	
Thorium-228 ✓		1.904	0.1008	pCi/g	0.1055	N	238.1	9	0.9739	IDENTIFIED	3.383	☐	
Thorium-230 ✓		1.236	0.11	pCi/g	0.1375	N	608.9	4	1.35	IDENTIFIED	7.806	☐	
Thorium-232 ✓		1.722	0.2063	pCi/g	0.273	N	910.9	3	1.68	IDENTIFIED	10.7	☐	
Thorium-234 ✓		2.313	0.9211	pCi/g	2.184	2.00	62.77	2	0.974	IDENTIFIED	38.89	☐	
Tin-126 INT		0.4421	0.05875	pCi/g	0.1453	N	86.55	2	1.371	IDENTIFIED	12.5	☐	
Titanium-44 LA		0.2573	0.03128	pCi/g	0.08149	N	1461	2	1.765	NOT_IDENTI	3.223	☐	
Total Uranium		6.9447	2.74E-06	ug/g	3.252	N		0				☐	

Uranium-234	✓	1.236	0.11	pCi/g	0.1375	N	608.9	4	1.35	IDENTIFIED	7.806	☐
Uranium-238	HE	2.313	0.9211	pCi/g	2.184	N	62.77	2	0.974	IDENTIFIED	38.89	☐
Zirconium-97		1.97E+06	3.84E+05	pCi/g	0	N	238.1	9	0.9739	NOT_IDENTI	3.383	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433007	23-JUN-09 12:00	07-JUL-09 06:39	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.961	0.2102	pCi/g	0.2436	N	911.8	3	1.529	IDENTIFIED	9.205	☐	
Americium-243	INT	0.4005	0.0425	pCi/g	0.1072	N	74.88	1	0.8443	IDENTIFIED	10.05	☐	
Annihilation Rad.	HE	0.1261	0.04596	pCi/g	0.05691	N	511.5	3	2.133	IDENTIFIED	36.31	☐	
Barium-137m	nr	0.1536	0.02647	pCi/g	0.07346	N	661.9	2	1.399	IDENTIFIED	16.92	☐	
Pb214 Bismuth-211	INT	4.549	0.2734	pCi/g	0.3439	Y	352	4	1.344	IDENTIFIED	5.123	☑ UI	
Bismuth-212	LA	1.801	0.3392	pCi/g	0.795	N	728.3	1	1.999	FAIL_ABUND	18.33	☐	
Bismuth-214	✓	1.305	0.1042	pCi/g	0.1411	0.200	609.6	4	1.296	IDENTIFIED	6.839	☐	
Pb214 Cadmium-109	INT	5.064	0.6864	pCi/g	1.352	Y	87.21	4	1.29	IDENTIFIED	13.01	☑ UI	
Cerium-143		263.3	54.15	pCi/g	0	N	328.4	1	1.131	FAIL_DECAY	45.97	☐	
Cesium-134	LA	0.1286	0.03059	pCi/g	0.1144	0.100	511.5	3	2.133	NOT_IDENTI	36.31	☑ UI	Data rejected due to low abundance.
Cesium-137	✓	0.1624	0.02798	pCi/g	0.07765	0.100	661.9	2	1.399	IDENTIFIED	16.92	☐	
Gross Gamma		11.32	1.721	pCi/g	3.435	N		0				☐	
Iodine-123	HE	3.54E+05	5.70E+05	pCi/g	0	N	87.21	4	1.29	NOT_IDENTI	13.01	☐	
Iodine-135	HE	2.42E+14	1.25E+14	pCi/g	0	N	511.5	3	2.133	NOT_IDENTI	36.31	☐	
Krypton-85	HE	17.29	4.741	pCi/g	16.87	N	238.7	8	1.143	NOT_IDENTI	3.42	☐	
Lead-212	✓	1.894	0.09336	pCi/g	0.09588	0.100	238.7	8	1.143	IDENTIFIED	3.42	☐	
Lead-214	✓	1.582	0.1037	pCi/g	0.1205	0.100	352	4	1.344	IDENTIFIED	5.123	☐	
Lutetium-177	HE	2.057	0.7967	pCi/g	1.852	N	209.4	1	0.9882	FAIL_ABUND	38.64	☐	
Neptunium-237	INT	1.465	0.2495	pCi/g	0.3975	N	87.21	4	1.29	IDENTIFIED	13.01	☐	
Niobium-97	HE	16670	17500	pCi/g	0	N	238.7	8	1.143	NOT_IDENTI	3.42	☐	
Polonium-212	nr	1.894	0.09336	pCi/g	0.09588	N	238.7	8	1.143	IDENTIFIED	3.42	☐	
Polonium-214	nr	1.582	0.1037	pCi/g	0.1205	N	352	4	1.344	IDENTIFIED	5.123	☐	
Polonium-216	nr	1.894	0.09336	pCi/g	0.09588	N	238.7	8	1.143	IDENTIFIED	3.42	☐	
Polonium-218	nr	1.582	0.1037	pCi/g	0.1205	N	352	4	1.344	IDENTIFIED	5.123	☐	
Potassium-40	✓	36.88	1.705	pCi/g	0.5179	1.00	1462	1	2.078	IDENTIFIED	2.945	☐	
Pb214 Radium-224	INT	4.795	0.7005	pCi/g	1.091	Y	241.7	1	1.661	IDENTIFIED	14.35	☑ UI	
Radium-226	✓	1.305	0.1042	pCi/g	0.1411	Y	609.6	4	1.296	IDENTIFIED	6.839	☐	
Radium-228	✓	1.961	0.2102	pCi/g	0.2436	0.500	911.8	3	1.529	IDENTIFIED	9.205	☐	
Sodium-24	HE	53590	1.03E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.08739	0.02397	pCi/g	0.08529	Y	238.7	8	1.143	NOT_IDENTI	3.42	☑ UI	Data rejected due to low abundance.
Thallium-208	✓	0.6352	0.05055	pCi/g	0.07157	0.080	583.6	1	1.515	IDENTIFIED	7.109	☐	
Thorium-228	✓	1.894	0.09336	pCi/g	0.09587	N	238.7	8	1.143	IDENTIFIED	3.42	☐	
Thorium-230	✓	1.305	0.1042	pCi/g	0.1411	N	609.6	4	1.296	IDENTIFIED	6.839	☐	
Thorium-232	✓	1.961	0.2102	pCi/g	0.2436	N	911.8	3	1.529	IDENTIFIED	9.205	☐	
Thorium-234	✓	2.814	1.196	pCi/g	2.317	2.00	63.49	2	0.8257	IDENTIFIED	41.66	☐	
Tin-126	INT	0.4988	0.0676	pCi/g	0.1338	N	87.21	4	1.29	IDENTIFIED	13.01	☐	
Titanium-44	LA	0.4643	0.03398	pCi/g	0.09216	N	77.15	1	0.9235	FAIL_ABUND	6.447	☐	
Total Uranium		8.318	3.56E-06	ug/g	3.4502	N		0				☐	
Uranium-234	✓	1.305	0.1042	pCi/g	0.1411	N	609.6	4	1.296	IDENTIFIED	6.839	☐	
Uranium-238	HE	2.814	1.196	pCi/g	2.317	N	63.49	2	0.8257	IDENTIFIED	41.66	☐	
Zirconium-97	HE	95610	3.05E+05	pCi/g	0	N	238.7	8	1.143	NOT_IDENTI	3.42	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433008	23-JUN-09 12:00	07-JUL-09 06:39	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.7	0.2095	pCi/g	0.3507	N	911.9	3	1.165	IDENTIFIED	11.18	☐	
Americium-243	INT	0.3793	0.03537	pCi/g	0.07255	N	75.23	2	0.984	IDENTIFIED	8.275	☐	
Annihilation Rad.		0.2155	0.05645	pCi/g	0.06301	N	511.5	1	1.817	IDENTIFIED	25.97	☐	
Barium-137m	nr	0.2721	0.05346	pCi/g	0.08975	N	662.3	3	1.647	IDENTIFIED	19.22	☐	
Bismuth-210	HE	1.337	0.4783	pCi/g	0.9836	N	47.03	3	1.042	IDENTIFIED	35.52	☐	

Pb214	Bismuth-211 INT	3.754	0.3136	pCi/g	0.4725	Y	352.4	4	1.407	IDENTIFIED	7.523	☑ UI		
	Bismuth-212 HE	1.707	0.4343	pCi/g	0.9802	N	727.9	1	1.77	FAIL_ABUND	24.98	☐		
	Bismuth-214 ✓	1.185	0.1282	pCi/g	0.1622	0.200	609.8	4	1.252	IDENTIFIED	9.752	☐		
Pb214	Cadmium-109 INT	4.212	0.5733	pCi/g	1.174	Y	87.67	3	1.277	IDENTIFIED	13.02	☑ UI		
	Cerium-143	159.8	51.19	pCi/g	0	N	662.3	3	1.647	NOT_IDENTI	19.22	☐		
	Cesium-134 LA	0.199	0.04779	pCi/g	0.1407	0.100	795.6	1	1.679	FAIL_ABUND	23.67	☑ UI	Data rejected due to low abundance.	
	Cesium-137 ✓	0.2877	0.05652	pCi/g	0.09487	0.100	662.3	3	1.647	IDENTIFIED	19.22	☐		
	Gross Gamma	10.08	1.633	pCi/g	3.498	N		0				☐		
	Krypton-85 LA	44.66	6.73	pCi/g	23.36	N	239.1	7	1.222	NOT_IDENTI	3.639	☐		
	Lead-210 HE	1.337	0.4783	pCi/g	0.9836	N	47.03	3	1.042	IDENTIFIED	35.52	☐		
	Lead-212 ✓	1.895	0.1103	pCi/g	0.1148	0.100	239.1	7	1.222	IDENTIFIED	3.639	☐		
	Lead-214 ✓	1.306	0.1143	pCi/g	0.1647	0.100	352.4	4	1.407	IDENTIFIED	7.523	☐		
	Lutetium-177 HE	2.482	0.9169	pCi/g	2.123	N	209.8	2	1.051	FAIL_ABUND	36.72	☐		
	Neptunium-237 INT	1.218	0.208	pCi/g	0.3382	N	87.67	3	1.277	IDENTIFIED	13.02	☐		
	Polonium-210 HE	1.337	0.4776	pCi/g	0.9836	N	47.03	3	1.042	IDENTIFIED	35.52	☐		
	Polonium-212 nr	1.895	0.1103	pCi/g	0.1148	N	239.1	7	1.222	IDENTIFIED	3.639	☐		
	Polonium-214 nr	1.306	0.1143	pCi/g	0.1647	N	352.4	4	1.407	IDENTIFIED	7.523	☐		
	Polonium-216 nr	1.895	0.1103	pCi/g	0.1148	N	239.1	7	1.222	IDENTIFIED	3.639	☐		
	Polonium-218 nr	1.306	0.1143	pCi/g	0.1647	N	352.4	4	1.407	IDENTIFIED	7.523	☐		
	Potassium-40 ✓	29.91	1.406	pCi/g	0.8551	1.00	1461	1	1.932	IDENTIFIED	3.57	☐		
Pb214	Radium-224 INT	4.82	0.7645	pCi/g	1.307	Y	242.1	1	1.917	IDENTIFIED	15.36	☑ UI		
	Radium-226 ✓	1.185	0.1282	pCi/g	0.1622	Y	609.8	4	1.252	IDENTIFIED	9.752	☐		
	Radium-228 ✓	1.7	0.2095	pCi/g	0.3507	0.500	911.9	3	1.165	IDENTIFIED	11.18	☐		
	Strontium-85 LA	0.2258	0.03403	pCi/g	0.1181	Y	239.1	7	1.222	NOT_IDENTI	3.639	☑ UI	Data rejected due to low abundance.	
	Thallium-200 HE	202.7	135.5	pCi/g	0	N	75.23	2	0.984	NOT_IDENTI	8.275	☐		
	Thallium-208 ✓	0.5994	0.05997	pCi/g	0.08751	0.080	583.7	1	1.499	IDENTIFIED	9.108	☐		
	Thorium-228 ✓	1.895	0.1103	pCi/g	0.1148	N	239.1	7	1.222	IDENTIFIED	3.639	☐		
	Thorium-230 ✓	1.185	0.1282	pCi/g	0.1622	N	609.8	4	1.252	IDENTIFIED	9.752	☐		
	Thorium-232 ✓	1.7	0.2095	pCi/g	0.3507	N	911.9	3	1.165	IDENTIFIED	11.18	☐		
	Thorium-234 ✓	2.715	0.7446	pCi/g	1.185	2.00	63.63	2	1.026	IDENTIFIED	25.85	☐		
	Tin-126 INT	0.4148	0.05646	pCi/g	0.1155	N	87.67	3	1.277	IDENTIFIED	13.02	☐		
	Titanium-44 LA	0.4174	0.02897	pCi/g	0.07879	N	77.5	1	1.07	FAIL_ABUND	5.498	☐		
	Total Uranium	8.1747	2.22E-06	ug/g	1.7668	N		0				☐		
	Tungsten-181 HE	0.4614	0.1312	pCi/g	0.4231	N	209.8	2	1.051	NOT_IDENTI	36.72	☐		
	Uranium-234 ✓	1.185	0.1282	pCi/g	0.1622	N	609.8	4	1.252	IDENTIFIED	9.752	☐		
	Uranium-238 ✓	2.715	0.7446	pCi/g	1.185	N	63.63	2	1.026	IDENTIFIED	25.85	☐		
	Zirconium-97 HE	1.32E+05	3.95E+05	pCi/g	0	N	239.1	7	1.222	NOT_IDENTI	3.639	☐		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433009	23-JUN-09 12:00	07-JUL-09 06:40	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.609	0.2239	pCi/g	0.2552	N	911.2	3	2.258	IDENTIFIED	12.62	☐	
	Americium-243 INT	0.4615	0.0536	pCi/g	0.09671	N	74.92	2	1.583	IDENTIFIED	10.99	☐	
	Annihilation Rad. HE	0.1051	0.05324	pCi/g	0.06023	N	510.8	1	2.153	IDENTIFIED	50.56	☐	
	Barium-137m nr	0.3909	0.05031	pCi/g	0.07814	N	661.3	3	1.693	IDENTIFIED	12.52	☐	
Pb214	Bismuth-211 INT	3.587	0.3049	pCi/g	0.4236	Y	351.6	4	1.61	IDENTIFIED	7.889	☑ UI	
	Bismuth-212 HE	1.029	0.2422	pCi/g	0.8128	N	727.2	1	1.242	FAIL_ABUND	23.15	☐	
	Bismuth-214 ✓	1.17	0.109	pCi/g	0.1451	0.200	608.9	4	1.636	IDENTIFIED	8.435	☐	
Pb214	Cadmium-109 INT	3.941	0.6961	pCi/g	1.437	Y	87.29	5	1.46	IDENTIFIED	17.12	☑ UI	
	Cerium-143	593.5	86.72	pCi/g	0	N	661.3	3	1.693	FAIL_DECAY	12.52	☐	
	Cesium-137 ✓	0.4132	0.05319	pCi/g	0.0826	0.100	661.3	3	1.693	IDENTIFIED	12.52	☐	
	Gross Gamma	9.696	1.885	pCi/g	4.911	N		0				☐	
	Iodine-123 HE	4.37E+05	6.65E+05	pCi/g	0	N	87.29	5	1.46	NOT_IDENTI	17.12	☐	
	Krypton-85 HE	19.78	5.578	pCi/g	17.56	N	238.4	9	1.258	NOT_IDENTI	4.629	☐	
	Lead-212 ✓	1.527	0.08996	pCi/g	0.11	0.100	238.4	9	1.258	IDENTIFIED	4.629	☐	
	Lead-214 ✓	1.248	0.111	pCi/g	0.1477	0.100	351.6	4	1.61	IDENTIFIED	7.889	☐	
	Neptunium-237 INT	1.14	0.2331	pCi/g	0.4202	N	87.29	5	1.46	IDENTIFIED	17.12	☐	
	Niobium-95m LA	0.5552	0.1035	pCi/g	0.3097	N	238.4	9	1.258	NOT_IDENTI	4.629	☐	

	Niobium-97		54440	19860	pCi/g	0	N	238.4	9	1.258	NOT_IDENTI	4.629	☐	
	Polonium-212 NV		1.527	0.08996	pCi/g	0.11	N	238.4	9	1.258	IDENTIFIED	4.629	☐	
	Polonium-214 NV		1.248	0.111	pCi/g	0.1477	N	351.6	4	1.61	IDENTIFIED	7.889	☐	
	Polonium-216 NV		1.527	0.08996	pCi/g	0.11	N	238.4	9	1.258	IDENTIFIED	4.629	☐	
	Polonium-218 NV		1.248	0.111	pCi/g	0.1477	N	351.6	4	1.61	IDENTIFIED	7.889	☐	
	Potassium-40 ✓		24.59	1.41	pCi/g	0.6855	1.00	1461	1	2.237	IDENTIFIED	4.435	☐	
PbZ14	Radium-224 INT		4.942	0.7528	pCi/g	1.252	Y	241.3	1	1.983	IDENTIFIED	14.96	☑ UI	
	Radium-226 ✓		1.17	0.109	pCi/g	0.1451	Y	608.9	4	1.636	IDENTIFIED	8.435	☐	
	Radium-228 ✓		1.609	0.2239	pCi/g	0.2552	0.500	911.2	3	2.258	IDENTIFIED	12.62	☐	
	Sodium-24	HE	1.38E+05	1.21E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Strontium-85 LA		0.1	0.02821	pCi/g	0.0888	Y	238.4	9	1.258	NOT_IDENTI	4.629	☑ UI	Data rejected due to low abundance.
	Thallium-200	HE	10.43	126.8	pCi/g	0	N	74.92	2	1.583	NOT_IDENTI	10.99	☐	
	Thallium-208 ✓		0.5718	0.0553	pCi/g	0.07073	0.080	583.1	1	1.771	IDENTIFIED	9.046	☐	
	Thorium-228 ✓		1.527	0.08996	pCi/g	0.11	N	238.4	9	1.258	IDENTIFIED	4.629	☐	
	Thorium-230 ✓		1.17	0.109	pCi/g	0.145	N	608.9	4	1.636	IDENTIFIED	8.435	☐	
	Thorium-232 ✓		1.609	0.2239	pCi/g	0.2552	N	911.2	3	2.258	IDENTIFIED	12.62	☐	
	Thorium-234 ✓		7.924	1.32	pCi/g	2.173	2.00	63.38	2	1.167	IDENTIFIED	14.27	☐	
	Tin-126 INT		0.3882	0.06856	pCi/g	0.142	N	87.29	5	1.46	IDENTIFIED	17.12	☐	
	Titanium-44 LA		0.4053	0.03526	pCi/g	0.09093	N	77.16	1	1.359	FAIL_ABUND	7.8	☐	
	Total Uranium		23.592	3.93E-06	ug/g	3.2354	N		0				☐	
	Tungsten-181	HE	1.211	0.247	pCi/g	0.7212	N	87.29	5	1.46	NOT_IDENTI	17.12	☐	
	Uranium-234 ✓		1.17	0.109	pCi/g	0.145	N	608.9	4	1.636	IDENTIFIED	8.435	☐	
	Uranium-238 ✓		7.924	1.32	pCi/g	2.173	N	63.38	2	1.167	IDENTIFIED	14.27	☐	
	Zirconium-97		2.40E+06	4.16E+05	pCi/g	0	N	238.4	9	1.258	NOT_IDENTI	4.629	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433010	23-JUN-09 12:00	07-JUL-09 06:40	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓		1.802	0.2701	pCi/g	0.3545	N	911.3	3	1.941	IDENTIFIED	13.92	☐	
MS-PB 7/14/09	Americium-243 INT		0.4011	0.07463	pCi/g	0.1701	N	74.91	1	1.16	IDENTIFIED	17.76	☐	
	Annihilation Rad.	HE	0.12	0.0578	pCi/g	0.08138	N	511	3	1.918	IDENTIFIED	48.1	☐	
	Barium-137m	HE	0.196	0.04992	pCi/g	0.09769	N	661.7	2	0.8083	IDENTIFIED	25.34	☐	
PbZ14	Bismuth-211 INT		4.265	0.3914	pCi/g	0.565	Y	352.1	4	1.474	IDENTIFIED	8.512	☑ UI	
	Bismuth-212	HE	1.162	0.4478	pCi/g	1.055	N	727.8	1	1.205	FAIL_ABUND	38.35	☐	
	Bismuth-214 ✓		1.58	0.1396	pCi/g	0.1879	0.200	609.3	4	1.435	IDENTIFIED	8.019	☐	
PbZ14	Cadmium-109 INT		3.833	1.008	pCi/g	2.859	Y	87.11	3	1.081	IDENTIFIED	25.66	☑ UI	
	Cerium-143		704.8	105.7	pCi/g	0	N	328	1	0.6428	NOT_IDENTI	76.15	☐	
	Cesium-137 ✓		0.2072	0.05277	pCi/g	0.1033	0.100	661.7	2	0.8083	IDENTIFIED	25.34	☐	
	Gross Gamma		10.9	2.239	pCi/g	4.978	N		0				☐	
	Iodine-133	HE	2611	1769	pCi/g	0	N	511	3	1.918	FAIL_DECAY	48.1	☐	
	Iodine-135	HE	9.12E+13	1.58E+14	pCi/g	0	N	511	3	1.918	NOT_IDENTI	48.1	☐	
	Krypton-85 LA		50.92	7.759	pCi/g	27.21	N	238.7	10	1.431	NOT_IDENTI	4.696	☐	
	Lead-212 ✓		2.094	0.1311	pCi/g	0.1528	0.100	238.7	10	1.431	IDENTIFIED	4.696	☐	
	Lead-214 ✓		1.483	0.1415	pCi/g	0.1911	0.100	352.1	4	1.474	IDENTIFIED	8.512	☐	
	Lutetium-177	HE	4.369	1.015	pCi/g	2.909	N	209.3	1	1.622	FAIL_ABUND	22.98	☐	
	Neptunium-237	HE	1.109	0.3131	pCi/g	0.6578	N	87.11	3	1.081	IDENTIFIED	25.66	☐	
	Niobium-95m	HE	0.4838	0.1204	pCi/g	0.381	N	238.7	10	1.431	NOT_IDENTI	4.696	☐	
	Niobium-97	HE	24630	26780	pCi/g	0	N	238.7	10	1.431	NOT_IDENTI	4.696	☐	
	Polonium-212 NV		2.094	0.1311	pCi/g	0.1528	N	238.7	10	1.431	IDENTIFIED	4.696	☐	
	Polonium-214 NV		1.483	0.1415	pCi/g	0.1911	N	352.1	4	1.474	IDENTIFIED	8.512	☐	
	Polonium-216 NV		2.094	0.1311	pCi/g	0.1528	N	238.7	10	1.431	IDENTIFIED	4.696	☐	
	Polonium-218 NV		1.483	0.1415	pCi/g	0.1911	N	352.1	4	1.474	IDENTIFIED	8.512	☐	
	Potassium-40 ✓		28.38	1.641	pCi/g	0.9623	1.00	1461	1	1.869	IDENTIFIED	4.338	☐	
PbZ14	Radium-224 INT		6.831	1.068	pCi/g	1.739	Y	241.7	1	1.728	IDENTIFIED	17.36	☑ UI	
	Radium-226 ✓		1.58	0.1396	pCi/g	0.1879	Y	609.3	4	1.435	IDENTIFIED	8.019	☐	
	Radium-228 ✓		1.802	0.2701	pCi/g	0.3545	0.500	911.3	3	1.941	IDENTIFIED	13.92	☐	
	Strontium-85 LA		0.2574	0.03923	pCi/g	0.1375	Y	238.7	10	1.431	NOT_IDENTI	4.696	☑ UI	Data rejected due to low abundance.
	Technetium-99m	HE	2.94E+14	9.06E+14	pCi/g	0	N	238.7	10	1.431	NOT_IDENTI	4.696	☐	

Thallium-208 ✓		0.6621	0.05796	pCi/g	0.09156	0.080	583.2	1	1.785	IDENTIFIED	8.154	☐
Thorium-228 ✓		2.094	0.1311	pCi/g	0.1528	N	238.7	10	1.431	IDENTIFIED	4.696	☐
Thorium-230 ✓		1.58	0.1396	pCi/g	0.1879	N	609.3	4	1.435	IDENTIFIED	8.019	☐
Thorium-232 ✓		1.802	0.2701	pCi/g	0.3545	N	911.3	3	1.941	IDENTIFIED	13.92	☐
Thorium-234 ✓		8.401	3.339	pCi/g	4.735	2.00	63.54	2	1.41	IDENTIFIED	38.5	☐
Tin-126	HE	0.3775	0.09927	pCi/g	0.2522	N	87.11	3	1.081	IDENTIFIED	25.66	☐
Titanium-44 LA		0.4903	0.06026	pCi/g	0.1538	N	77.19	1	1.348	FAIL_ABUND	10.97	☐
Total Uranium		25.21	9.93E-06	ug/g	7.0486	N		0				☐
Uranium-234 ✓		1.58	0.1396	pCi/g	0.1879	N	609.3	4	1.435	IDENTIFIED	8.019	☐
Uranium-238	HE	8.401	3.339	pCi/g	4.735	N	63.54	2	1.41	IDENTIFIED	38.5	☐
Zirconium-97		1.53E+06	4.97E+05	pCi/g	0	N	238.7	10	1.431	NOT_IDENTI	4.696	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433011	23-JUN-09 12:00	07-JUL-09 06:41	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		2.015	0.198	pCi/g	0.2341	N	911	3	1.776	IDENTIFIED	7.83	☐	
Americium-243 INT		0.4727	0.04472	pCi/g	0.1092	N	74.98	2	1.131	IDENTIFIED	8.644	☐	
Annihilation Rad.	HE	0.1162	0.03815	pCi/g	0.0515	N	510.7	1	1.748	IDENTIFIED	32.7	☐	
Pb214 Bismuth-211 INT		4.265	0.2803	pCi/g	0.3462	Y	351.9	4	1.15	IDENTIFIED	5.793	☑ UI	
Bismuth-212 ✓		1.223	0.2108	pCi/g	0.569	N	727.5	1	1.4	IDENTIFIED	16.68	☐	
Bismuth-214 ✓		1.307	0.09369	pCi/g	0.1173	0.200	609.4	4	1.238	IDENTIFIED	5.953	☐	
Pb214 Cadmium-109 INT		3.203	0.5772	pCi/g	1.499	Y	87.36	3	1.086	IDENTIFIED	17.5	☑ UI	
Cerium-143		484.1	70.7	pCi/g	0	N	327.7	1	3.065	FAIL_DECAY	22.04	☐	
Gross Gamma		11.18	1.556	pCi/g	4.336	N		0				☐	
Iodine-135	HE	2.74E+13	1.06E+14	pCi/g	0	N	795.4	1	1.27	NOT_IDENTI	58.17	☐	
Lead-212 ✓		1.977	0.0904	pCi/g	0.09616	0.100	238.7	6	0.9892	IDENTIFIED	2.911	☐	
Lead-214 ✓		1.484	0.1049	pCi/g	0.1234	0.100	351.9	4	1.15	IDENTIFIED	5.793	☐	
Lutetium-177 LA		3.637	0.6999	pCi/g	1.94	N	209.3	1	1.108	FAIL_ABUND	19.06	☐	
Neptunium-237 INT		0.9264	0.1924	pCi/g	0.4186	N	87.36	3	1.086	IDENTIFIED	17.5	☐	
Niobium-97	HE	9347	14080	pCi/g	0	N	238.7	6	0.9892	NOT_IDENTI	2.911	☐	
Polonium-212 NV		1.977	0.0904	pCi/g	0.09616	N	238.7	6	0.9892	IDENTIFIED	2.911	☐	
Polonium-214 NV		1.484	0.1049	pCi/g	0.1234	N	351.9	4	1.15	IDENTIFIED	5.793	☐	
Polonium-216 NV		1.977	0.0904	pCi/g	0.09616	N	238.7	6	0.9892	IDENTIFIED	2.911	☐	
Polonium-218 NV		1.484	0.1049	pCi/g	0.1234	N	351.9	4	1.15	IDENTIFIED	5.793	☐	
Potassium-40 ✓		37.96	1.879	pCi/g	0.544	1.00	1460	1	1.748	IDENTIFIED	2.603	☐	
Pb214 Radium-224 INT		5.931	0.6983	pCi/g	1.094	Y	241.6	1	1.87	IDENTIFIED	11.45	☑ UI	
Radium-226 ✓		1.307	0.09369	pCi/g	0.1173	Y	609.4	4	1.238	IDENTIFIED	5.953	☐	
Radium-228 ✓		2.015	0.198	pCi/g	0.2341	0.500	911	3	1.776	IDENTIFIED	7.83	☐	
Sodium-24	HE	99770	70090	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-200	HE	154.3	102.9	pCi/g	0	N	74.98	2	1.131	NOT_IDENTI	8.644	☐	
Thallium-208 ✓		0.5462	0.04254	pCi/g	0.0646	0.080	583.2	1	1.317	IDENTIFIED	6.985	☐	
Thorium-228 ✓		1.977	0.0904	pCi/g	0.09615	N	238.7	6	0.9892	IDENTIFIED	2.911	☐	
Thorium-230 ✓		1.307	0.09369	pCi/g	0.1173	N	609.4	4	1.238	IDENTIFIED	5.953	☐	
Thorium-232 ✓		2.015	0.198	pCi/g	0.2341	N	911	3	1.776	IDENTIFIED	7.83	☐	
Tin-126 INT		0.3155	0.05685	pCi/g	0.1686	N	87.36	3	1.086	IDENTIFIED	17.5	☐	
Titanium-44 LA		0.4206	0.02896	pCi/g	0.09922	N	77.31	1	0.7986	FAIL_ABUND	5.665	☐	
Total Uranium		6.4838	2.94E-06	ug/g	3.7484	N		0				☐	
Uranium-234 ✓		1.307	0.09369	pCi/g	0.1173	N	609.4	4	1.238	IDENTIFIED	5.953	☐	
Zirconium-97		8.81E+05	3.08E+05	pCi/g	0	N	238.7	6	0.9892	NOT_IDENTI	2.911	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433012	23-JUN-09 12:00	07-JUL-09 07:03	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.391	0.2176	pCi/g	0.3594	N	911.2	3	1.47	IDENTIFIED	14.79	☐	
Americium-241 LA		0.1781	0.04855	pCi/g	0.144	0.200	63.51	3	0.9092	NOT_IDENTI	11.84	☑ UI	Data rejected due to low abundance.
Americium-243 INT		0.3377	0.03114	pCi/g	0.07743	N	75.11	2	0.9019	IDENTIFIED	8.192	☐	
Annihilation Rad.	HE	0.1704	0.04821	pCi/g	0.07789	N	510.7	2	1.991	IDENTIFIED	28.09	☐	

Barium-137m NV		2.926	0.1421	pCi/g	0.07944	N	661.6	2	1.358	IDENTIFIED	3.067	☐	
Bismuth-210 ✓		6.299	0.6548	pCi/g	1.137	N	46.85	3	0.8715	IDENTIFIED	9.585	☐	
Pb214 Bismuth-211 INT		3.1	0.3313	pCi/g	0.4753	Y	352	4	1.233	IDENTIFIED	10.07	☑ UI	
Bismuth-212	HE	0.9601	0.3141	pCi/g	0.8402	N	726.7	1	1.841	FAIL_ABUND	32.39	☐	
Bismuth-214 LA		1.335	0.1249	pCi/g	0.3696	0.200	609.2	4	1.391	FAIL_ABUND	8.209	☑ UI	Data rejected due to low abundance.
Pb214 Cadmium-109 INT		3.079	0.4752	pCi/g	1.292	Y	87.42	3	1.057	IDENTIFIED	14.9	☑ UI	
Cerium-143		379.7	72.94	pCi/g	0	N	144.1	1	1.213	FAIL_DECAY	54.73	☐	
Cesium-137 ✓		3.093	0.1504	pCi/g	0.08397	0.100	661.6	2	1.358	IDENTIFIED	3.067	☐	
Gross Gamma		11.34	1.729	pCi/g	4.445	N		0				☐	
Iodine-133	HE	1930	1711	pCi/g	0	N	510.7	2	1.991	FAIL_DECAY	28.09	☐	
Krypton-85	HE	22.37	6.531	pCi/g	20.71	N	238.8	8	0.9503	NOT_IDENTI	4.512	☐	
Lead-210 ✓		6.299	0.6548	pCi/g	1.137	N	46.85	3	0.8715	IDENTIFIED	9.585	☐	
Lead-212 ✓		1.481	0.09318	pCi/g	0.1206	0.100	238.8	8	0.9503	IDENTIFIED	4.512	☐	
Lead-214 ✓		1.078	0.1186	pCi/g	0.1657	0.100	352	4	1.233	IDENTIFIED	10.07	☐	
Neptunium-237 INT		0.8905	0.1653	pCi/g	0.3724	N	87.42	3	1.057	IDENTIFIED	14.9	☐	
Niobium-97		87550	26310	pCi/g	0	N	238.8	8	0.9503	NOT_IDENTI	4.512	☐	
Polonium-210 NV		6.299	0.6429	pCi/g	1.137	N	46.85	3	0.8715	IDENTIFIED	9.585	☐	
Polonium-212 NV		1.481	0.09318	pCi/g	0.1206	N	238.8	8	0.9503	IDENTIFIED	4.512	☐	
Polonium-214 NV		1.078	0.1186	pCi/g	0.1657	N	352	4	1.233	IDENTIFIED	10.07	☐	
Polonium-216 NV		1.481	0.09318	pCi/g	0.1206	N	238.8	8	0.9503	IDENTIFIED	4.512	☐	
Polonium-218 NV		1.078	0.1186	pCi/g	0.1657	N	352	4	1.233	IDENTIFIED	10.07	☐	
Potassium-40 ✓		26.44	1.372	pCi/g	0.7562	1.00	1460	1	2.064	IDENTIFIED	4.181	☐	
Pb214 Radium-224 INT		3.949	0.8802	pCi/g	1.374	Y	241.8	1	1.851	IDENTIFIED	21.97	☑ UI	
Radium-226 LA		1.335	0.1249	pCi/g	0.3696	Y	609.2	4	1.391	FAIL_ABUND	8.209	☑ UI	Data rejected due to low abundance.
Radium-228 ✓		1.391	0.2176	pCi/g	0.3594	0.500	911.2	3	1.47	IDENTIFIED	14.79	☐	
Strontium-85 LA		0.1132	0.03303	pCi/g	0.1047	Y	238.8	8	0.9503	NOT_IDENTI	4.512	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	193.3	158.7	pCi/g	0	N	75.11	2	0.9019	NOT_IDENTI	8.192	☐	
Thallium-208 ✓		0.4413	0.05326	pCi/g	0.08184	0.080	583	1	1.4	IDENTIFIED	11.4	☐	
Thorium-228 ✓		1.481	0.09318	pCi/g	0.1206	N	238.8	8	0.9503	IDENTIFIED	4.512	☐	
Thorium-230 LA		1.335	0.1249	pCi/g	0.3696	N	609.2	4	1.391	FAIL_ABUND	8.209	☐	
Thorium-232 ✓		1.391	0.2176	pCi/g	0.3594	N	911.2	3	1.47	IDENTIFIED	14.79	☐	
Thorium-234 ✓		4.474	0.6673	pCi/g	1.377	2.00	63.51	3	0.9092	IDENTIFIED	11.84	☐	
Tin-126 INT		0.3033	0.0468	pCi/g	0.1271	N	87.42	3	1.057	IDENTIFIED	14.9	☐	
Titanium-44 LA		0.3498	0.02498	pCi/g	0.07899	N	77.34	1	0.8844	FAIL_ABUND	5.779	☐	
Total Uranium		13.468	1.99E-06	ug/g	2.0516	N		0				☐	
Tungsten-181 LA		1.256	0.1617	pCi/g	0.4874	N	209.2	1	1.012	NOT_IDENTI	53.08	☐	
Uranium-234 LA		1.335	0.1249	pCi/g	0.3696	N	609.2	4	1.391	FAIL_ABUND	8.209	☐	
Uranium-238 ✓		4.474	0.6673	pCi/g	1.377	N	63.51	3	0.9092	IDENTIFIED	11.84	☐	
Zirconium-97		2.06E+06	5.03E+05	pCi/g	0	N	238.8	8	0.9503	NOT_IDENTI	4.512	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433013	23-JUN-09 12:00	07-JUL-09 07:04	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.559	0.1854	pCi/g	0.2139	N	911.6	3	1.779	IDENTIFIED	9.88	☐	
Americium-243 INT		0.4069	0.04691	pCi/g	0.09556	N	74.93	2	1.236	IDENTIFIED	10.74	☐	
Annihilation Rad.		0.1401	0.03122	pCi/g	0.04144	N	511.2	1	1.504	IDENTIFIED	22.04	☐	
Barium-137m NV		0.145	0.03478	pCi/g	0.05346	N	661.5	2	1.875	IDENTIFIED	23.68	☐	
Pb214 Bismuth-211 INT		3.829	0.2471	pCi/g	0.2933	Y	352.1	4	1.426	IDENTIFIED	5.599	☑ UI	
Bismuth-212	HE	0.7907	0.2153	pCi/g	0.6176	N	727.9	1	2.033	FAIL_ABUND	26.76	☐	
Bismuth-214 ✓		1.151	0.09897	pCi/g	0.1015	0.200	609.4	4	1.639	IDENTIFIED	7.345	☐	
Pb214 Cadmium-109 INT		2.958	0.531	pCi/g	1.411	Y	87.26	4	1.173	IDENTIFIED	17.35	☑ UI	
Cerium-143		337	55.42	pCi/g	0	N	327.8	1	1.147	NOT_IDENTI	62.66	☐	
Cesium-135	HE	0.3057	0.08006	pCi/g	0.2568	N	795.5	2	1.544	NOT_IDENTI	36.53	☐	
Cesium-137 ✓		0.1533	0.03677	pCi/g	0.05652	0.100	661.5	2	1.875	IDENTIFIED	23.68	☐	
Gross Gamma		10.18	1.463	pCi/g	2.539	N		0				☐	
Iodine-123	HE	3.61E+05	5.04E+05	pCi/g	0	N	87.26	4	1.173	NOT_IDENTI	17.35	☐	
Iodine-135	HE	1.21E+14	1.08E+14	pCi/g	0	N	795.5	2	1.544	NOT_IDENTI	36.53	☐	
Krypton-85 LA		24.88	3.963	pCi/g	13.6	N	238.8	8	1.251	NOT_IDENTI	3.263	☐	

	Lead-212 ✓	1.722	0.08332	pCi/g	0.08397	0.100	238.8	8	1.251	IDENTIFIED	3.263	☐	
	Lead-214 ✓	1.332	0.09273	pCi/g	0.1073	0.100	352.1	4	1.426	IDENTIFIED	5.599	☐	
	Lutetium-177 LA	3.145	0.6518	pCi/g	1.683	N	209.7	1	1.349	FAIL_ABUND	20.55	☐	
	Neptunium-237 INT	0.8554	0.1771	pCi/g	0.4502	N	87.26	4	1.173	IDENTIFIED	17.35	☐	
	Polonium-212 nr	1.722	0.08332	pCi/g	0.08397	N	238.8	8	1.251	IDENTIFIED	3.263	☐	
	Polonium-214 nr	1.332	0.09273	pCi/g	0.1073	N	352.1	4	1.426	IDENTIFIED	5.599	☐	
	Polonium-216 nr	1.722	0.08332	pCi/g	0.08397	N	238.8	8	1.251	IDENTIFIED	3.263	☐	
	Polonium-218 nr	1.332	0.09273	pCi/g	0.1073	N	352.1	4	1.426	IDENTIFIED	5.599	☐	
	Potassium-40 ✓	35.89	1.606	pCi/g	0.473	1.00	1461	1	2.058	IDENTIFIED	2.374	☐	
Pb214	Radium-224 INT	4.646	0.6244	pCi/g	0.9544	Y	241.7	1	1.679	IDENTIFIED	13.15	☑ UI	
	Radium-226 ✓	1.151	0.09897	pCi/g	0.1015	Y	609.4	4	1.639	IDENTIFIED	7.345	☐	
	Radium-228 ✓	1.559	0.1854	pCi/g	0.2139	0.500	911.6	3	1.779	IDENTIFIED	9.88	☐	
	Strontium-85 LA	0.1258	0.02004	pCi/g	0.06878	Y	238.8	8	1.251	NOT_IDENTI	3.263	☑ UI	Data rejected due to low abundance.
	Technetium-99m HE	1.23E+14	5.45E+14	pCi/g	0	N	238.8	8	1.251	NOT_IDENTI	3.263	☐	
	Thallium-200 HE	122.5	89.87	pCi/g	0	N	74.93	2	1.236	NOT_IDENTI	10.74	☐	
	Thallium-208 ✓	0.5754	0.04294	pCi/g	0.05652	0.080	583.3	1	1.276	IDENTIFIED	6.35	☐	
	Thorium-228 ✓	1.722	0.08332	pCi/g	0.08397	N	238.8	8	1.251	IDENTIFIED	3.263	☐	
	Thorium-230 ✓	1.151	0.09897	pCi/g	0.1015	N	609.4	4	1.639	IDENTIFIED	7.345	☐	
	Thorium-232 ✓	1.559	0.1854	pCi/g	0.2139	N	911.6	3	1.779	IDENTIFIED	9.88	☐	
	Tin-126 INT	0.2913	0.0523	pCi/g	0.1452	N	87.26	4	1.173	IDENTIFIED	17.35	☐	
	Titanium-44 LA	0.4238	0.03283	pCi/g	0.08903	N	77.2	1	1.027	FAIL_ABUND	6.483	☐	
	Total Uranium	5.0659	3.43E-06	ug/g	3.8379	N		0				☐	
	Uranium-234 ✓	1.151	0.09897	pCi/g	0.1015	N	609.4	4	1.639	IDENTIFIED	7.345	☐	
	Zirconium-97	6.38E+05	2.71E+05	pCi/g	0	N	238.8	8	1.251	NOT_IDENTI	3.263	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433014	23-JUN-09 12:00	07-JUL-09 07:05	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.604	0.1965	pCi/g	0.2022	N	911.9	3	2.101	IDENTIFIED	10.53	☐	
	Americium-243 INT	0.3755	0.04742	pCi/g	0.09932	N	74.89	2	1.268	IDENTIFIED	12.01	☐	
	Annihilation Rad. HE	0.08597	0.03791	pCi/g	0.05184	N	511.4	1	2.287	IDENTIFIED	43.98	☐	
	Barium-137m nr	0.5185	0.0438	pCi/g	0.05842	N	661.9	2	2.13	IDENTIFIED	7.589	☐	
Pb214	Bismuth-211 INT	3.257	0.2883	pCi/g	0.3602	Y	352	4	1.61	IDENTIFIED	8.264	☑ UI	
	Bismuth-212 LA	1.494	0.2442	pCi/g	0.6871	N	727.8	1	2.45	FAIL_ABUND	16.71	☐	
	Bismuth-214 LA	1.083	0.0982	pCi/g	0.276	0.200	609.8	4	1.478	FAIL_ABUND	7.924	☑ UI	Data rejected due to low abundance.
Pb214	Cadmium-109 INT	2.83	0.6285	pCi/g	1.82	Y	87.24	5	1.276	IDENTIFIED	21.76	☑ UI	
	Cerium-143	403.5	65.82	pCi/g	0	N	329.2	1	1.745	FAIL_DECAY	37.31	☐	
	Cesium-137 ✓	0.5481	0.04632	pCi/g	0.06176	0.100	661.9	2	2.13	IDENTIFIED	7.589	☐	
	Gross Gamma	9.398	1.453	pCi/g	2.507	N		0				☐	
	Iodine-123 HE	4.13E+05	6.51E+05	pCi/g	0	N	87.24	5	1.276	NOT_IDENTI	21.76	☐	
	Krypton-85 LA	39.07	5.394	pCi/g	18.36	N	238.8	9	1.323	NOT_IDENTI	3.795	☐	
	Lead-212 ✓	1.659	0.08606	pCi/g	0.0982	0.100	238.8	9	1.323	IDENTIFIED	3.795	☐	
	Lead-214 ✓	1.133	0.1046	pCi/g	0.1276	0.100	352	4	1.61	IDENTIFIED	8.264	☐	
	Neptunium-237 HE	0.8184	0.2004	pCi/g	0.4599	N	87.24	5	1.276	IDENTIFIED	21.76	☐	
	Niobium-97	76410	17740	pCi/g	0	N	238.8	9	1.323	NOT_IDENTI	3.795	☐	
	Polonium-212 nr	1.659	0.08606	pCi/g	0.0982	N	238.8	9	1.323	IDENTIFIED	3.795	☐	
	Polonium-214 nr	1.133	0.1046	pCi/g	0.1276	N	352	4	1.61	IDENTIFIED	8.264	☐	
	Polonium-216 nr	1.659	0.08606	pCi/g	0.0982	N	238.8	9	1.323	IDENTIFIED	3.795	☐	
	Polonium-218 nr	1.133	0.1046	pCi/g	0.1276	N	352	4	1.61	IDENTIFIED	8.264	☐	
	Potassium-40 ✓	31.42	1.454	pCi/g	0.6941	1.00	1462	1	2.976	IDENTIFIED	3.052	☐	
Pb214	Radium-224 INT	5.145	0.7425	pCi/g	1.116	Y	241.8	1	1.81	IDENTIFIED	14.17	☑ UI	
	Radium-226 LA	1.083	0.0982	pCi/g	0.276	Y	609.8	4	1.478	FAIL_ABUND	7.924	☑ UI	Data rejected due to low abundance.
	Radium-228 ✓	1.604	0.1965	pCi/g	0.2022	0.500	911.9	3	2.101	IDENTIFIED	10.53	☐	
	Silver-110m HE	0.08709	0.02284	pCi/g	0.07377	N	87.24	5	1.276	NOT_IDENTI	21.76	☐	
	Sodium-24 HE	1.92E+05	1.14E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Strontium-85 LA	0.1976	0.02727	pCi/g	0.09285	Y	238.8	9	1.323	NOT_IDENTI	3.795	☑ UI	Data rejected due to low abundance.
	Technetium-99m HE	1.09E+15	6.55E+14	pCi/g	0	N	238.8	9	1.323	NOT_IDENTI	3.795	☐	
	Thallium-200 HE	70.9	108	pCi/g	0	N	74.89	2	1.268	NOT_IDENTI	12.01	☐	

Thallium-208 ✓		0.5398	0.04882	pCi/g	0.05802	0.080	583.4	1	1.426	IDENTIFIED	8.184	☐
Thorium-228 ✓		1.659	0.08606	pCi/g	0.09819	N	238.8	9	1.323	IDENTIFIED	3.795	☐
Thorium-230 LA		1.083	0.0982	pCi/g	0.276	N	609.8	4	1.478	FAIL_ABUND	7.924	☐
Thorium-232 ✓		1.604	0.1965	pCi/g	0.2022	N	911.9	3	2.101	IDENTIFIED	10.53	☐
Thorium-234 ✓		2.756	1.099	pCi/g	2.126	2.00	63.2	2	1.277	IDENTIFIED	38.92	☐
Tin-126	HE	0.2787	0.0619	pCi/g	0.1658	N	87.24	5	1.276	IDENTIFIED	21.76	☐
Titanium-44 LA		0.4068	0.03493	pCi/g	0.08895	N	77.25	1	1.276	FAIL_ABUND	7.606	☐
Total Uranium		8.3309	3.27E-06	ug/g	3.165	N		0				☐
Uranium-234 LA		1.083	0.0982	pCi/g	0.276	N	609.8	4	1.478	FAIL_ABUND	7.924	☐
Uranium-238	HE	2.756	1.099	pCi/g	2.126	N	63.2	2	1.277	IDENTIFIED	38.92	☐
Zirconium-97		9.45E+05	3.34E+05	pCi/g	0	N	238.8	9	1.323	NOT_IDENTI	3.795	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433015	23-JUN-09 12:00	07-JUL-09 07:06	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.422	0.1799	pCi/g	0.2366	N	911.4	3	1.877	IDENTIFIED	11.26	☐	
Americium-243 INT		0.3644	0.03668	pCi/g	0.07892	N	74.88	2	0.8601	IDENTIFIED	9.03	☐	
Annihilation Rad.		0.1617	0.03606	pCi/g	0.04269	N	511.4	1	2.113	IDENTIFIED	22.11	☐	
Barium-137m NR		0.1864	0.03903	pCi/g	0.06419	N	662.1	3	1.734	IDENTIFIED	20.78	☐	
PbZM Bismuth-211 INT		3.718	0.2454	pCi/g	0.2989	Y	352	4	1.144	IDENTIFIED	5.742	☑ UI	
Bismuth-212 LA		1.68	0.2689	pCi/g	0.7958	N	727.3	1	2.015	FAIL_ABUND	15.5	☐	
Bismuth-214 ✓		1.123	0.08487	pCi/g	0.1159	0.200	609.6	4	1.322	IDENTIFIED	6.554	☐	
PbZM Cadmium-109 INT		3.229	0.4557	pCi/g	0.9527	Y	87.28	4	1.181	IDENTIFIED	13.25	☑ UI	
Cerium-143		157.7	38.15	pCi/g	0	N	662.1	3	1.734	FAIL_DECAY	20.78	☐	
Cesium-134 LA		0.1073	0.04139	pCi/g	0.09831	0.100	796.1	1	1.516	FAIL_ABUND	38.4	☑ UI	Data rejected due to low abundance.
Cesium-137 ✓		0.197	0.04126	pCi/g	0.06785	0.100	662.1	3	1.734	IDENTIFIED	20.78	☐	
Gross Gamma		7.699	1.173	pCi/g	2.305	N		0				☐	
Iodine-123	HE	63260	4.45E+05	pCi/g	0	N	87.28	4	1.181	NOT_IDENTI	13.25	☐	
Krypton-85	HE	17.85	3.827	pCi/g	14.46	N	238.8	9	0.9929	NOT_IDENTI	4.887	☐	
Lead-212 ✓		1.232	0.07477	pCi/g	0.1178	0.100	238.8	9	0.9929	IDENTIFIED	4.887	☐	
Lead-214 ✓		1.293	0.0918	pCi/g	0.1042	0.100	352	4	1.144	IDENTIFIED	5.742	☐	
Neptunium-237 INT		0.9339	0.1632	pCi/g	0.3507	N	87.28	4	1.181	IDENTIFIED	13.25	☐	
Niobium-97	HE	16330	14990	pCi/g	0	N	238.8	9	0.9929	NOT_IDENTI	4.887	☐	
Polonium-212 NR		1.232	0.07477	pCi/g	0.1178	N	238.8	9	0.9929	IDENTIFIED	4.887	☐	
Polonium-214 NR		1.293	0.0918	pCi/g	0.1042	N	352	4	1.144	IDENTIFIED	5.742	☐	
Polonium-216 NR		1.232	0.07477	pCi/g	0.1178	N	238.8	9	0.9929	IDENTIFIED	4.887	☐	
Polonium-218 NR		1.293	0.0918	pCi/g	0.1042	N	352	4	1.144	IDENTIFIED	5.742	☐	
Potassium-40 ✓		19.94	1.154	pCi/g	0.6223	1.00	1461	1	2.05	IDENTIFIED	4.416	☐	
PbZM Radium-224 INT		2.593	0.5023	pCi/g	1.19	Y	241.7	1	1.362	IDENTIFIED	19.17	☑ UI	
Radium-226 ✓		1.123	0.08487	pCi/g	0.1159	Y	609.6	4	1.322	IDENTIFIED	6.554	☐	
Radium-228 ✓		1.422	0.1799	pCi/g	0.2366	0.500	911.4	3	1.877	IDENTIFIED	11.26	☐	
Strontium-85 LA		0.09025	0.01935	pCi/g	0.07312	Y	238.8	9	0.9929	NOT_IDENTI	4.887	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	3.72E+12	4.15E+14	pCi/g	0	N	238.8	9	0.9929	NOT_IDENTI	4.887	☐	
Thallium-200	HE	18.39	92.42	pCi/g	0	N	74.88	2	0.8601	NOT_IDENTI	9.03	☐	
Thallium-208 ✓		0.3813	0.04102	pCi/g	0.06129	0.080	583.6	1	1.261	IDENTIFIED	10.26	☐	
Thorium-228 ✓		1.232	0.07477	pCi/g	0.1178	N	238.8	9	0.9929	IDENTIFIED	4.887	☐	
Thorium-230 ✓		1.123	0.08487	pCi/g	0.1159	N	609.6	4	1.322	IDENTIFIED	6.554	☐	
Thorium-232 ✓		1.422	0.1799	pCi/g	0.2366	N	911.4	3	1.877	IDENTIFIED	11.26	☐	
Tin-126 INT		0.318	0.04487	pCi/g	0.09435	N	87.28	4	1.181	IDENTIFIED	13.25	☐	
Titanium-44 LA		0.3651	0.02818	pCi/g	0.07047	N	77.18	1	0.9137	FAIL_ABUND	6.268	☐	
Total Uranium		3.8451	3.12E-06	ug/g	2.8794	N		0				☐	
Uranium-234 ✓		1.123	0.08487	pCi/g	0.1159	N	609.6	4	1.322	IDENTIFIED	6.554	☐	
Zirconium-97	HE	1.25E+05	2.78E+05	pCi/g	0	N	238.8	9	0.9929	NOT_IDENTI	4.887	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871423		07-JUL-09 08:11	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Iodine-133	HE	6.869	3.806	pCi/g	0	N	511	1	2.767	FAIL_DECAY	824.9	☐	
Krypton-85	HE	10.28	2.622	pCi/g	9.569	N	143.6	3	0.7071	NOT_IDENTI	48.16	☐	
Strontium-85	LA	0.04857	0.01239	pCi/g	0.04521	Y	143.6	3	0.7071	NOT_IDENTI	48.16	☑ UI	Data rejected due to low abundance.
Total Uranium		1.9639	2.23E-06	ug/g	1.831	N		0				☐	
Zirconium-97	HE	528.7	326.6	pCi/g	0	N	143.6	3	0.7071	NOT_IDENTI	48.16	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871424	23-JUN-09 12:00	07-JUL-09 08:27	13.9	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.344	0.1744	pCi/g	0.2287	N	910.5	3	2.17	IDENTIFIED	11.77	☐	
Americium-243 INT		0.3909	0.05401	pCi/g	0.1008	N	74.9	1	1.316	IDENTIFIED	12.57	☐	
Annihilation Rad.		0.1455	0.03676	pCi/g	0.04835	N	510.2	1	2.042	IDENTIFIED	25.11	☐	
Pb214 Bismuth-211 INT		3.041	0.2543	pCi/g	0.3121	Y	351.7	4	1.268	IDENTIFIED	7.65	☑ UI	
Bismuth-214 LA		1.002	0.08367	pCi/g	0.2778	0.200	608.8	4	1.252	FAIL_ABUND	7.499	☑ UI	Data rejected due to low abundance.
Pb214 Cadmium-109 INT		2.671	0.5723	pCi/g	1.266	Y	87.34	4	1.399	IDENTIFIED	20.57	☑ UI	
Cerium-143		320	56.54	pCi/g	0	N	87.34	4	1.399	FAIL_DECAY	20.57	☐	
Cesium-135 nvp		0.5674	0.1433	pCi/g	0.2485	N	269.6	2	1.356	IDENTIFIED	24.91	☐	
Gross Gamma		9.355	1.347	pCi/g	2.402	N		0				☐	
Iodine-135	HE	1.50E+14	1.34E+14	pCi/g	0	N	269.6	2	1.356	NOT_IDENTI	24.91	☐	
Lead-212 ✓		1.458	0.07963	pCi/g	0.09457	0.100	238.4	6	1.063	IDENTIFIED	3.702	☐	
Lead-214 ✓		1.058	0.09267	pCi/g	0.1088	0.100	351.7	4	1.268	IDENTIFIED	7.65	☐	
Neptunium-237	HE	0.7723	0.1837	pCi/g	0.4174	N	87.34	4	1.399	IDENTIFIED	20.57	☐	
Polonium-212 nv		1.458	0.07963	pCi/g	0.09457	N	238.4	6	1.063	IDENTIFIED	3.702	☐	
Polonium-214 nv		1.058	0.09267	pCi/g	0.1088	N	351.7	4	1.268	IDENTIFIED	7.65	☐	
Polonium-216 nv		1.458	0.07963	pCi/g	0.09457	N	238.4	6	1.063	IDENTIFIED	3.702	☐	
Polonium-218 nv		1.058	0.09267	pCi/g	0.1088	N	351.7	4	1.268	IDENTIFIED	7.65	☐	
Potassium-40 ✓		37.4	1.685	pCi/g	0.4162	1.00	1459	1	1.974	IDENTIFIED	2.771	☐	
Pb214 Radium-224 INT		4.179	0.6087	pCi/g	1.076	Y	241.3	1	1.694	IDENTIFIED	14.18	☑ UI	
Radium-226 LA		1.002	0.08367	pCi/g	0.2778	Y	608.8	4	1.252	FAIL_ABUND	7.499	☑ UI	Data rejected due to low abundance.
Radium-228 ✓		1.344	0.1744	pCi/g	0.2287	0.500	910.5	3	2.17	IDENTIFIED	11.77	☐	
Sodium-24	HE	40690	92360	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Technetium-99m	HE	6.42E+14	5.78E+14	pCi/g	0	N	238.4	6	1.063	NOT_IDENTI	3.702	☐	
Thallium-208 ✓		0.4443	0.04621	pCi/g	0.06324	0.080	582.7	1	1.441	IDENTIFIED	9.913	☐	
Thorium-228 ✓		1.458	0.07963	pCi/g	0.09456	N	238.4	6	1.063	IDENTIFIED	3.702	☐	
Thorium-230 LA		1.002	0.08367	pCi/g	0.2778	N	608.8	4	1.252	FAIL_ABUND	7.499	☐	
Thorium-232 ✓		1.344	0.1744	pCi/g	0.2287	N	910.5	3	2.17	IDENTIFIED	11.77	☐	
Tin-126 INT		0.263	0.05636	pCi/g	0.1257	N	87.34	4	1.399	IDENTIFIED	20.57	☐	
Titanium-44 LA		0.3294	0.03348	pCi/g	0.08106	N	77.09	1	0.939	FAIL_ABUND	8.393	☐	
Uranium-234 LA		1.002	0.08367	pCi/g	0.2778	N	608.8	4	1.252	FAIL_ABUND	7.499	☐	
Zirconium-97		1.04E+06	2.93E+05	pCi/g	0	N	238.4	6	1.063	NOT_IDENTI	3.702	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871425		07-JUL-09 08:19	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228		1.489	0.3166	pCi/g	0.6766	N	910.9	3	2.014	IDENTIFIED	21.61	☐	
Americium-241		15.95	0.7367	pCi/g	0.2449	0.200	59.45	1	1.287	IDENTIFIED	1.161	☐ 98-106	
Americium-243		0.2927	0.04609	pCi/g	0.1194	N	74.8	1	1.359	IDENTIFIED	15.25	☐	
Arsenic-73		2.561	0.5514	pCi/g	0.9208	N	53.59	1	2.202	IDENTIFIED	21.2	☐	
Barium-137m		6.096	0.2485	pCi/g	0.1358	N	661.5	3	1.728	IDENTIFIED	2.409	☐	
Bismuth-211		2.666	0.4617	pCi/g	0.7361	Y	351.7	4	1.411	IDENTIFIED	16.86	☐	
Bismuth-214		1.147	0.1681	pCi/g	0.4112	0.200	609.3	4	1.978	FAIL_ABUND	14.04	☐	
Cadmium-109		54.85	2.49	pCi/g	2.106	Y	88.02	3	1.249	IDENTIFIED	2.474	☐	
Cerium-143	HE	11.59	3.197	pCi/g	10.08	N	661.5	3	1.728	FAIL_ABUND	2.409	☐	
Cesium-137		6.444	0.2632	pCi/g	0.1435	0.100	661.5	3	1.728	IDENTIFIED	2.409	☐ 112-116	
Cobalt-57		0.4065	0.04348	pCi/g	0.07356	N	122.1	2	1.243	IDENTIFIED	8.001	☐	

Cobalt-60		7.436	0.2899	pCi/g	0.1183	0.100	1332	1	2.005	IDENTIFIED	2.612	☐	105%
Gross Gamma		33.59	3.093	pCi/g	6.18	N		0				☐	
Iodine-135	HE	9.13E+06	1.23E+07	pCi/g	0	N	510.3	1	0.9275	NOT_IDENTI	78.92	☐	
Lead-212		1.445	0.1276	pCi/g	0.2128	0.100	238.6	7	1.178	IDENTIFIED	6.995	☐	
Lead-214		0.9273	0.1624	pCi/g	0.2461	0.100	351.7	4	1.411	IDENTIFIED	16.86	☐	
Neptunium-237		11.48	1.3	pCi/g	1.353	N	93.56	1	1.626	NOT_IDENTI	23.18	☐	
Niobium-97		850.6	82.23	pCi/g	0	N	238.6	7	1.178	NOT_IDENTI	6.995	☐	
Polonium-212		1.445	0.1276	pCi/g	0.2128	N	238.6	7	1.178	IDENTIFIED	6.995	☐	
Polonium-214		0.9273	0.1624	pCi/g	0.2461	N	351.7	4	1.411	IDENTIFIED	16.86	☐	
Polonium-216		1.445	0.1276	pCi/g	0.2128	N	238.6	7	1.178	IDENTIFIED	6.995	☐	
Polonium-218		0.9273	0.1624	pCi/g	0.2461	N	351.7	4	1.411	IDENTIFIED	16.86	☐	
Radium-224		8.072	0.9718	pCi/g	3.186	Y	122.1	2	1.243	NOT_IDENTI	8.001	☐	
Radium-226		1.147	0.1681	pCi/g	0.4112	Y	609.3	4	1.978	FAIL_ABUND	14.04	☐	
Radium-228		1.409	0.3166	pCi/g	0.6766	0.500	910.9	3	2.014	IDENTIFIED	21.61	☐	
Silver-110m		0.4596	0.05616	pCi/g	0.2038	N	88.02	3	1.249	NOT_IDENTI	2.474	☐	
Sodium-24	HE	2.476	96.95	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Technetium-99m	HE	8.24E+06	1.61E+07	pCi/g	0	N	238.6	7	1.178	NOT_IDENTI	6.995	☐	
Thallium-208		0.4954	0.0729	pCi/g	0.126	0.080	583.2	1	1.907	IDENTIFIED	14.25	☐	
Thorium-228		1.445	0.1276	pCi/g	0.2128	N	238.6	7	1.178	IDENTIFIED	6.995	☐	
Thorium-230		1.147	0.1681	pCi/g	0.4112	N	609.3	4	1.978	FAIL_ABUND	14.04	☐	
Thorium-232		1.409	0.3166	pCi/g	0.6766	N	910.9	3	2.014	IDENTIFIED	21.61	☐	
Tin-126		5.454	0.2476	pCi/g	0.2092	N	88.02	3	1.249	IDENTIFIED	2.474	☐	
Titanium-44		0.3087	0.03113	pCi/g	0.1024	N	77.05	1	1.133	FAIL_ABUND	9.302	☐	
Uranium-234		1.147	0.1681	pCi/g	0.4112	N	609.3	4	1.978	FAIL_ABUND	14.04	☐	
Zirconium-97	HE	1764	1061	pCi/g	0	N	238.6	7	1.178	NOT_IDENTI	6.995	☐	

*** = Number of isotopes identified with a keyline at this energy.

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertainty	Units	DL	RDL
881219	232433014	SAMPLE	07-JUL-09	Thallium-200	70.9	108	pCi/g	0	N
				Thallium-208	0.5398	0.04882	pCi/g	0.02903	0.080
				Thorium-234	2.756	1.099	pCi/g	1.063	2.00
				Uranium-235	0.2824	0.1692	pCi/g	0.1883	0.500
				Yttrium-88	0.04019	0.0179	pCi/g	0.03396	0.100
				Zirconium-97	9.45E+05	3.34E+05	pCi/g	0	N
881219	232433015	SAMPLE	07-JUL-09	Bismuth-211	3.718	0.2454	pCi/g	0.1495	Y
				Bismuth-214	1.123	0.08487	pCi/g	0.05798	0.200
				Cadmium-109	3.229	0.4557	pCi/g	0.4766	Y
				Cerium-143	157.7	38.15	pCi/g	0	N
				Cesium-134	0.1073	0.04139	pCi/g	0.04918	0.100
				Cesium-137	0.197	0.04126	pCi/g	0.03395	0.100
				Gross Gamma	7.699	1.173	pCi/g	1.099	N
				Iodine-123	63260	4.45E+05	pCi/g	0	N
				Krypton-85	17.85	3.827	pCi/g	7.234	N
				Lead-212	1.232	0.07477	pCi/g	0.05895	0.100
				Lead-214	1.293	0.0918	pCi/g	0.05214	0.100
				Mercury-203	0.0405	0.01903	pCi/g	0.03474	0.100
				Nioblum-97	16330	14990	pCi/g	0	N
				Potassium-40	19.94	1.154	pCi/g	0.3113	1.00
				Radium-224	2.593	0.5023	pCi/g	0.5952	Y
				Radium-226	1.123	0.08487	pCi/g	0.05798	Y
				Radium-228	1.422	0.1799	pCi/g	0.1184	0.500
				Strontium-85	0.09025	0.01935	pCi/g	0.03658	Y
				Technetium-99m	3.72E+12	4.15E+14	pCi/g	0	N
				Thallium-200	18.39	92.42	pCi/g	0	N
				Thallium-208	0.3813	0.04102	pCi/g	0.03067	0.080
				Thorium-234	1.28	1.049	pCi/g	0.9675	2.00
				Zirconium-97	1.25E+05	2.78E+05	pCi/g	0	N
881219	1201871423	MB	07-JUL-09	Iodine-133	6.869	3.806	pCi/g	0	N
				Krypton-85	10.28	2.622	pCi/g	4.787	N
				Strontium-85	0.04857	0.01239	pCi/g	0.02262	
				Thorium-234	0.6338	0.7486	pCi/g	0.6153	2.00
				Uranium-235	0.1696	0.08287	pCi/g	0.09657	0.500
				Zirconium-97	528.7	326.6	pCi/g	0	N
881219	1201871424	DUP	07-JUL-09	Bismuth-211	3.041	0.2543	pCi/g	0.1562	Y
				Bismuth-214	1.092	0.08367	pCi/g	0.139	0.200

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:03:59.53

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232424001.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:03:34.
Sample ID         : G232424001           Sample quantity  : 1.16500E+02 GRAM
Detector name     : GAM01                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.08  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.32*	65	395	1.17	127.41	123	10	9.05E-03	60.2	
2	4	74.74	380	397	1.57	150.25	143	16	5.28E-02	11.3	2.43E+00
3	4	77.12	497	306	1.09	155.00	143	16	6.91E-02	7.5	
4	0	87.25*	142	267	1.12	175.27	173	6	1.97E-02	20.2	
5	0	93.14*	77	500	1.76	187.05	182	10	1.06E-02	59.6	
6	0	144.84*	82	466	4.96	290.43	285	14	1.14E-02	57.7	
7	0	186.35*	185	316	1.58	373.45	368	11	2.57E-02	21.1	
8	0	209.63	84	266	1.27	420.01	414	10	1.16E-02	38.2	
9	4	239.02*	954	155	1.18	478.77	472	24	1.32E-01	4.0	1.08E+00
10	4	242.02*	178	246	1.79	484.77	472	24	2.47E-02	23.4	
11	0	270.07	102	151	1.62	540.86	536	9	1.42E-02	23.8	
12	1	295.68	273	111	1.40	592.08	586	23	3.79E-02	8.9	2.14E+00
13	1	300.78	85	110	1.47	602.27	586	23	1.17E-02	26.4	
14	0	338.55	145	168	1.30	677.80	673	10	2.01E-02	18.7	
15	0	352.26*	410	180	1.40	705.22	700	13	5.69E-02	8.4	
16	0	511.33*	105	139	2.43	1023.29	1014	18	1.46E-02	30.9	
17	0	583.60*	292	58	1.37	1167.80	1162	11	4.06E-02	7.9	
18	0	609.68*	305	93	1.63	1219.93	1215	14	4.23E-02	9.1	
19	0	727.68	56	32	1.86	1455.86	1451	10	7.81E-03	23.1	
20	0	769.12	21	96	0.94	1538.71	1535	12	2.92E-03	95.8	
21	0	911.56*	216	42	1.85	1823.48	1817	13	3.00E-02	9.4	
22	4	964.89	52	23	2.55	1930.08	1924	21	7.18E-03	26.4	9.23E-01
23	4	969.29*	118	38	1.60	1938.87	1924	21	1.64E-02	13.6	
24	0	1120.80*	63	42	1.61	2241.76	2234	14	8.75E-03	26.1	
25	0	1461.31*	1165	10	1.98	2922.39	2916	14	1.62E-01	3.0	
26	0	1731.25	10	12	1.39	3461.89	3454	10	1.35E-03	75.2	
27	0	1765.34*	23	6	2.50	3530.00	3523	13	3.17E-03	35.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:04:02

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232424001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:03:34
Sample ID : G232424001 Sample quantity : 116.50 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA1 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.08 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.650E+01	3.397E+00	5.387E-01	3.829E-02	67.753
CD-109	+	88.03	*	2.445E+00	1.011E+00	1.608E+00	1.480E-01	1.520
SN-126	+	64.28		8.041E-01	9.762E-01	9.385E-01	1.411E-01	0.857
	+	86.94		1.001E+00	5.793E-01	6.934E-01	2.875E-01	1.444
	+	87.57	*	2.408E-01	9.962E-02	1.581E-01	1.451E-02	1.523
CE-141	+	145.44	*	1.234E-01	1.426E-01	1.128E-01	6.629E-03	1.094
TL-208		277.35		2.650E-01	4.252E-01	7.237E-01	7.659E-02	0.366
	+	510.84		6.439E-01	4.025E-01	2.370E-01	2.371E-02	2.717
	+	583.14	*	5.124E-01	8.731E-02	6.600E-02	4.182E-03	7.764
		860.37		5.009E-01	3.969E-01	7.139E-01	5.395E-02	0.702
BI-211		72.87		9.889E+00	3.755E+00	6.496E+00	5.441E-01	1.522
	+	351.07	*	3.097E+00	5.576E-01	3.744E-01	2.371E-02	8.273
PB-212	+	74.81		2.808E+00	7.248E-01	5.991E-01	7.542E-02	4.687
	+	77.11		2.063E+00	3.566E-01	3.376E-01	2.877E-02	6.109
	+	87.30		1.114E+00	4.740E-01	7.798E-01	1.057E-01	1.428
	+	238.63	*	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
	+	300.09		2.142E+00	1.143E+00	1.422E+00	1.177E-01	1.507
PO-212	+	74.81		2.808E+00	7.248E-01	5.991E-01	7.542E-02	4.687
	+	77.11		2.063E+00	3.566E-01	3.376E-01	2.877E-02	6.109
	+	87.30		1.114E+00	4.740E-01	7.798E-01	1.057E-01	1.428
		115.19		-1.232E+00	4.228E+00	6.625E+00	4.308E-01	-0.186
	+	238.63	*	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
	+	300.09		2.142E+00	1.143E+00	1.422E+00	1.177E-01	1.507
BI-214	+	609.31	*	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
	+	768.36		7.823E-01	1.501E+00	1.087E+00	9.146E-02	0.720
		934.06		-5.240E-01	1.274E+00	1.974E+00	1.848E-01	-0.265
	+	1120.29		1.104E+00	5.848E-01	6.008E-01	5.344E-02	1.838
		1238.11		2.163E-01	1.196E+00	2.027E+00	1.691E-01	0.107
		1377.67		3.301E-01	1.169E+00	2.009E+00	1.881E-01	0.164
	+	1764.49		5.558E-01	3.976E-01	2.822E-01	1.679E-02	1.969
PB-214	+	74.81		4.838E+00	1.218E+00	1.032E+00	1.159E-01	4.687
	+	77.11		3.536E+00	6.681E-01	5.788E-01	6.616E-02	6.109
	+	87.30		1.908E+00	8.029E-01	1.336E+00	1.599E-01	1.428
	+	241.98		1.739E+00	8.265E-01	6.128E-01	4.924E-02	2.837

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	295.21		1.212E+00	2.405E-01	2.489E-01	2.131E-02	4.871
	+	351.92	*	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
PO-214	+	74.81		4.838E+00	1.218E+00	1.032E+00	1.159E-01	4.687
	+	77.11		3.536E+00	6.681E-01	5.788E-01	6.616E-02	6.109
	+	87.30		1.908E+00	8.029E-01	1.336E+00	1.599E-01	1.428
	+	241.98		1.739E+00	8.265E-01	6.128E-01	4.924E-02	2.837
	+	295.21		1.212E+00	2.405E-01	2.489E-01	2.131E-02	4.871
	+	351.92	*	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
PO-216	+	74.81		2.808E+00	7.248E-01	5.991E-01	7.542E-02	4.687
	+	77.11		2.063E+00	3.566E-01	3.376E-01	2.877E-02	6.109
	+	87.30		1.114E+00	4.740E-01	7.798E-01	1.057E-01	1.428
	+	238.63	*	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
	+	300.09		2.142E+00	1.143E+00	1.422E+00	1.177E-01	1.507
PO-218	+	74.81		4.838E+00	1.218E+00	1.032E+00	1.159E-01	4.687
	+	77.11		3.536E+00	6.681E-01	5.788E-01	6.616E-02	6.109
	+	87.30		1.908E+00	8.029E-01	1.336E+00	1.599E-01	1.428
	+	241.98		1.739E+00	8.265E-01	6.128E-01	4.924E-02	2.837
	+	295.21		1.212E+00	2.405E-01	2.489E-01	2.131E-02	4.871
	+	351.92	*	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
RA-224	+	240.98	*	3.297E+00	1.556E+00	1.158E+00	6.661E-02	2.847
RA-226	+	609.31	*	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
	+	768.36		7.823E-01	1.501E+00	1.087E+00	9.146E-02	0.720
		934.06		-5.240E-01	1.274E+00	1.974E+00	1.848E-01	-0.265
	+	1120.29		1.104E+00	5.848E-01	6.008E-01	5.344E-02	1.838
		1238.11		2.163E-01	1.196E+00	2.027E+00	1.691E-01	0.107
		1377.67		3.301E-01	1.169E+00	2.009E+00	1.881E-01	0.164
	+	1764.49		5.558E-01	3.976E-01	2.822E-01	1.679E-02	1.969
AC-228	+	338.32		1.206E+00	6.663E-01	4.233E-01	1.725E-01	2.849
	+	911.07	*	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
	+	969.11		1.645E+00	5.839E-01	4.451E-01	1.012E-01	3.695
RA-228	+	338.32		1.206E+00	6.663E-01	4.233E-01	1.725E-01	2.849
	+	911.07	*	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
	+	969.11		1.645E+00	5.839E-01	4.451E-01	1.012E-01	3.695
TH-228		84.40		3.278E+00	3.252E+00	4.793E+00	6.399E-01	0.684
	+	238.60	*	1.551E+00	1.674E-01	1.017E-01	7.412E-03	15.244
	+	300.10		2.142E+00	1.694E+00	1.422E+00	8.380E-01	1.506
TH-230	+	609.31	*	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
	+	768.36		7.823E-01	1.501E+00	1.087E+00	9.146E-02	0.720
		934.06		-5.240E-01	1.274E+00	1.974E+00	1.848E-01	-0.265
	+	1120.29		1.104E+00	5.847E-01	6.008E-01	5.344E-02	1.838
		1238.11		2.163E-01	1.196E+00	2.027E+00	1.691E-01	0.107
		1377.67		3.301E-01	1.169E+00	2.009E+00	1.881E-01	0.164
	+	1764.49		5.558E-01	3.976E-01	2.822E-01	1.679E-02	1.969
TH-232	+	338.32		1.206E+00	4.551E-01	4.233E-01	2.434E-02	2.849
	+	911.07	*	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
	+	969.11		1.645E+00	5.839E-01	4.451E-01	1.012E-01	3.695
TH-234	+	63.29	*	2.031E+00	2.474E+00	2.370E+00	4.236E-01	0.857
	+	92.38		8.314E-01	1.002E+00	9.470E-01	1.709E-01	0.878
U-234	+	609.31	*	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	768.36		7.823E-01	1.501E+00	1.087E+00	9.146E-02	0.720
		934.06		-5.240E-01	1.274E+00	1.974E+00	1.848E-01	-0.265
	+	1120.29		1.104E+00	5.847E-01	6.008E-01	5.344E-02	1.838
		1238.11		2.163E-01	1.196E+00	2.027E+00	1.691E-01	0.107
		1377.67		3.301E-01	1.169E+00	2.009E+00	1.881E-01	0.164
	+	1764.49		5.558E-01	3.976E-01	2.822E-01	1.679E-02	1.969
U-235		89.95		-4.485E-01	1.913E+00	2.099E+00	6.492E-01	-0.214
	+	93.35		9.995E-01	1.223E+00	1.129E+00	3.157E-01	0.885
		105.00		9.675E-01	1.211E+00	1.951E+00	5.750E-01	0.496
	+	143.76	*	4.239E-01	4.941E-01	3.857E-01	6.271E-02	1.099
		163.35		1.051E-01	5.357E-01	9.101E-01	1.624E-01	0.115
	+	185.71		2.096E-01	8.924E-02	8.081E-02	4.406E-03	2.594
		205.31		-2.020E-02	6.687E-01	9.822E-01	1.759E-01	-0.021
NP-237	+	86.50	*	7.072E-01	3.269E-01	4.575E-01	1.032E-01	1.546
		95.87		-1.697E-01	1.170E+00	1.649E+00	4.032E-01	-0.103
U-238	+	63.29	*	2.031E+00	2.474E+00	2.370E+00	4.236E-01	0.857
	+	92.38		8.314E-01	9.931E-01	9.470E-01	8.081E-02	0.878
AM-243	+	74.67	*	4.553E-01	1.095E-01	9.747E-02	8.214E-03	4.671
	+	86.72		2.652E+01	1.097E+01	1.725E+01	1.571E+00	1.537
		117.66		-6.006E-01	4.322E+00	6.815E+00	4.335E-01	-0.088
		142.18		1.613E+01	2.171E+01	3.381E+01	1.925E+00	0.477
ANH-511	+	511.00	*	1.391E-01	8.617E-02	5.121E-02	2.836E-03	2.716

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-3.094E-01	3.832E-01	5.712E-01	3.733E-02	-0.542
NA-22		1274.54	*	9.293E-04	5.512E-02	9.217E-02	5.908E-03	0.010
NA-24		1368.53	*	8.999E-02	5.512E-02	Half-Life too short		
AL-26		1129.67		1.364E+00	2.176E+00	3.724E+00	2.184E-01	0.366
		1808.65	*	5.647E-03	2.955E-02	5.056E-02	2.915E-03	0.112
TI-44		67.85		1.854E-02	6.555E-02	8.776E-02	7.298E-03	0.211
	+	78.38	*	3.806E-01	6.581E-02	8.887E-02	7.623E-03	4.283
SC-46		889.25	*	-5.948E-02	4.950E-02	7.027E-02	4.938E-03	-0.846
	+	1120.51		1.869E-01	9.820E-02	1.397E-01	8.292E-03	1.338
V-48		944.10		3.342E-01	9.884E-01	1.668E+00	1.159E-01	0.200
		983.50	*	6.140E-02	8.757E-02	1.519E-01	1.030E-02	0.404
		1312.09		1.289E-02	9.308E-02	1.575E-01	1.062E-02	0.082
CR-51		320.08	*	-4.172E-01	4.060E-01	6.174E-01	3.996E-02	-0.676
MN-52		744.21		8.409E-02	2.433E-01	4.144E-01	2.378E-02	0.203
		848.13		1.870E+00	6.865E+00	1.156E+01	7.689E-01	0.162
		935.52		1.439E-01	2.166E-01	3.808E-01	2.659E-02	0.378
		1246.25		-3.838E+00	8.512E+00	1.368E+01	8.401E-01	-0.281
		1333.61		-1.267E+00	5.282E+00	8.529E+00	5.910E-01	-0.149
		1434.06	*	6.055E-03	2.148E-01	3.573E-01	2.444E-02	0.017
MN-54		834.83	*	-1.017E-02	4.419E-02	7.091E-02	4.632E-03	-0.143
CO-56		846.75	*	1.167E-02	4.776E-02	8.015E-02	5.322E-03	0.146
		977.42		-4.020E-01	3.847E+00	6.182E+00	4.209E-01	-0.065

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1037.82		5.872E-02	3.647E-01	6.008E-01	4.260E-02	0.098
		1175.09		-4.663E-01	2.862E+00	4.735E+00	2.614E-01	-0.098
		1238.25		1.483E-02	1.191E-01	2.012E-01	1.292E-02	0.074
		1360.21		2.093E-01	1.048E+00	1.793E+00	1.239E-01	0.117
		1771.40		-3.666E-01	3.543E-01	4.680E-01	2.771E-02	-0.783
CO-57		122.06	*	-1.275E-02	2.993E-02	4.645E-02	2.852E-03	-0.275
		136.48		-6.693E-02	2.233E-01	3.742E-01	2.514E-02	-0.179
CO-58		810.76	*	-1.897E-02	4.339E-02	6.798E-02	4.314E-03	-0.279
FE-59		142.65		4.450E+00	3.277E+00	5.253E+00	2.986E-01	0.847
		192.34		1.445E-01	1.071E+00	1.747E+00	2.038E-01	0.083
		1099.22	*	5.040E-03	1.239E-01	2.004E-01	1.412E-02	0.025
		1291.56		-6.316E-03	1.542E-01	2.561E-01	2.054E-02	-0.025
CO-60		1173.22		-4.870E-02	5.987E-02	9.317E-02	5.129E-03	-0.523
		1332.49	*	-2.574E-03	4.905E-02	8.110E-02	5.620E-03	-0.032
ZN-65		1115.52	*	2.571E-02	1.311E-01	1.870E-01	1.119E-02	0.138
GE-68		1077.35	*	-2.524E-01	1.756E+00	2.792E+00	1.743E-01	-0.090
AS-73		53.44	*	6.306E-01	1.087E+00	1.814E+00	1.544E-01	0.348
AS-74		595.88	*	8.431E-02	9.965E-02	1.777E-01	9.506E-03	0.475
		634.78		-1.058E-01	3.719E-01	6.046E-01	3.137E-02	-0.175
SE-75		66.05		-2.635E+00	6.311E+00	8.884E+00	9.056E-01	-0.297
		96.73		-3.829E-02	9.174E-01	1.302E+00	1.723E-01	-0.029
		121.11		-5.476E-02	1.578E-01	2.459E-01	2.329E-02	-0.223
		136.00		-1.042E-02	4.230E-02	7.107E-02	4.187E-03	-0.147
		198.60		-9.936E-01	2.039E+00	3.248E+00	2.244E-01	-0.306
		264.65	*	4.522E-02	5.363E-02	8.302E-02	4.885E-03	0.545
		279.53		8.306E-02	1.233E-01	2.107E-01	1.330E-02	0.394
		303.91		1.044E+00	2.783E+00	4.128E+00	3.949E-01	0.253
		400.65		-1.028E-02	2.868E-01	4.631E-01	4.109E-02	-0.022
BR-77	+	87.88		3.556E+02	1.471E+02	2.478E+02	2.280E+01	1.435
		200.40		1.021E+02	1.217E+02	2.110E+02	1.170E+01	0.484
	+	239.00		1.673E+02	1.643E+01	2.778E+01	1.596E+00	6.021
		249.79		-1.691E+01	5.773E+01	8.219E+01	4.754E+00	-0.206
		281.68		-2.864E+01	7.060E+01	1.137E+02	6.647E+00	-0.252
		297.23		2.120E+02	5.168E+01	9.714E+01	5.682E+00	2.183
		303.76		8.690E+01	1.592E+02	2.393E+02	1.398E+01	0.363
		439.47		7.682E+01	1.160E+02	1.962E+02	1.082E+01	0.391
		484.57		-4.738E+01	1.883E+02	2.953E+02	1.638E+01	-0.160
		520.65	*	9.548E-01	8.355E+00	1.347E+01	7.444E-01	0.071
		574.64		6.519E-01	1.628E+02	2.732E+02	1.481E+01	0.002
		578.91		5.989E+00	7.398E+01	1.094E+02	5.916E+00	0.055
		585.48		1.135E+03	2.153E+02	4.113E+02	2.215E+01	2.760
		755.35		1.037E+02	1.366E+02	2.401E+02	1.401E+01	0.432
		817.79		8.423E+00	1.054E+02	1.746E+02	1.114E+01	0.048
SR-82		698.33		-3.132E+01	4.021E+01	6.233E+01	3.335E+00	-0.503
		776.49	*	-1.549E-01	4.727E-01	6.428E-01	3.868E-02	-0.241
		1395.20		-2.769E+00	1.257E+01	2.019E+01	1.390E+00	-0.137
RB-83		520.41	*	6.168E-03	8.108E-02	1.302E-01	7.200E-03	0.047
		529.64		4.915E-02	1.138E-01	1.983E-01	1.094E-02	0.248
		552.65		-6.288E-02	2.172E-01	3.566E-01	1.952E-02	-0.176

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-84		881.50	*	-9.763E-02	8.775E-02	1.265E-01	8.798E-03	-0.772
KR-85		513.99	*	2.113E+01	1.004E+01	1.681E+01	9.304E-01	1.257
SR-85		513.99	*	1.068E-01	5.076E-02	8.496E-02	4.703E-03	1.257
RB-86		1076.63	*	-2.441E-01	1.083E+00	1.708E+00	1.068E-01	-0.143
Y-88		898.02		3.130E-02	5.159E-02	8.919E-02	6.385E-03	0.351
		1836.01	*	3.207E-03	3.203E-02	5.352E-02	3.029E-03	0.060
ZR-88		392.90	*	1.251E-02	3.531E-02	5.870E-02	3.173E-03	0.213
Y-91		1204.90	*	-7.012E+00	2.359E+01	3.848E+01	2.224E+00	-0.182
NB-94		702.63	*	2.994E-02	3.825E-02	6.759E-02	3.642E-03	0.443
		871.10		-2.090E-02	4.351E-02	6.772E-02	4.646E-03	-0.309
NB-95		765.79	*	2.722E-02	5.356E-02	8.161E-02	4.835E-03	0.334
NB-95M		235.69	*	-4.054E-02	1.492E-01	2.138E-01	1.598E-02	-0.190
ZR-95		724.18		4.508E-03	1.173E-01	1.693E-01	1.128E-02	0.027
		756.15	*	3.507E-02	8.511E-02	1.456E-01	1.029E-02	0.241
NB-97		657.90	*	6.831E-03	8.511E-02	Half-Life too short		
		1024.50		-6.211E-01	8.511E-02	Half-Life too short		
ZR-97		254.15		7.464E-01	8.511E-02	Half-Life too short		
		355.39		5.616E-01	8.511E-02	Half-Life too short		
		507.63	*	7.031E-01	8.511E-02	Half-Life too short		
		602.52		-1.286E+00	8.511E-02	Half-Life too short		
		1021.30		5.426E-01	8.511E-02	Half-Life too short		
		1147.95		-1.361E+00	8.511E-02	Half-Life too short		
		1362.66		5.059E-01	8.511E-02	Half-Life too short		
		1750.46		-1.720E+00	8.511E-02	Half-Life too short		
MO-99		140.51		4.453E+00	2.216E+01	3.354E+01	9.033E+00	0.133
		181.06		5.908E+00	1.432E+01	2.172E+01	3.695E+00	0.272
		366.43		4.233E+00	7.182E+01	1.173E+02	6.568E+00	0.036
		739.58	*	-4.644E-01	1.006E+01	1.657E+01	2.276E+00	-0.028
		778.00		-1.866E+01	2.838E+01	4.373E+01	2.637E+00	-0.427
TC-99M		140.51	*	2.103E+08	2.838E+01	Half-Life too short		
RH-101		127.23		2.002E-02	3.754E-02	6.092E-02	3.650E-03	0.329
		198.01	*	1.323E-03	3.709E-02	6.057E-02	3.348E-03	0.022
		325.23		-4.225E-01	2.711E-01	3.973E-01	2.303E-02	-1.064
RH-102		418.52		-1.072E-01	3.312E-01	5.213E-01	2.854E-02	-0.206
		475.06	*	3.447E-03	3.510E-02	5.676E-02	3.148E-03	0.061
		631.29		-2.281E-02	6.181E-02	9.980E-02	5.195E-03	-0.229
		697.49		-9.222E-03	9.328E-02	1.535E-01	8.206E-03	-0.060
		766.84		2.608E-01	1.432E-01	2.469E-01	1.465E-02	1.056
		1046.59		8.863E-02	1.413E-01	2.436E-01	1.569E-02	0.364
		1112.84		2.162E-01	3.238E-01	5.113E-01	3.065E-02	0.423
RU-103		497.08	*	-4.632E-03	4.643E-02	7.362E-02	9.225E-03	-0.063
	+	610.33		1.063E+01	2.518E+00	3.177E+00	4.841E-01	3.346
RH-106	+	511.85		6.929E-01	4.293E-01	5.155E-01	2.854E-02	1.344
		621.84	*	3.277E-01	3.880E-01	6.872E-01	7.886E-02	0.477
		1050.47		1.606E-01	2.766E+00	4.499E+00	2.887E-01	0.036
RU-106	+	511.85		6.929E-01	4.293E-01	5.155E-01	2.854E-02	1.344
		621.84	*	3.277E-01	3.866E-01	6.872E-01	3.607E-02	0.477
		1050.47		1.606E-01	2.766E+00	4.499E+00	2.887E-01	0.036
AG-108M		433.93	*	2.910E-02	3.640E-02	6.244E-02	3.763E-03	0.466

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		614.37		-8.284E-03	5.090E-02	7.260E-02	4.223E-03	-0.114
		722.95		-6.469E-03	5.591E-02	7.915E-02	4.804E-03	-0.082
AG-110M		657.75	*	1.761E-02	4.168E-02	7.175E-02	3.944E-03	0.245
		677.61		6.297E-02	3.687E-01	6.217E-01	3.465E-02	0.101
		706.67		-2.150E-01	2.462E-01	3.761E-01	2.178E-02	-0.572
		763.93		-6.767E-02	1.992E-01	2.707E-01	1.694E-02	-0.250
		884.67		6.530E-02	6.051E-02	1.091E-01	7.991E-03	0.599
		937.48		5.669E-03	1.180E-01	1.934E-01	1.423E-02	0.029
		1384.27		-2.461E-02	1.882E-01	3.065E-01	2.206E-02	-0.080
IN-111		171.28		-3.509E-01	7.912E-01	1.306E+00	7.005E-02	-0.269
		245.39	*	-6.609E-02	8.699E-01	1.437E+00	8.292E-02	-0.046
IN-113M		391.69	*	-1.806E-02	5.343E-02	8.453E-02	4.917E-03	-0.214
SN-113		391.69	*	-1.806E-02	5.343E-02	8.453E-02	4.917E-03	-0.214
IN-114M		190.27	*	7.382E-02	2.176E-01	3.284E-01	1.800E-02	0.225
CD-115		260.90		-6.128E+01	9.823E+01	1.567E+02	9.116E+00	-0.391
		492.35		2.424E+01	2.836E+01	4.858E+01	2.695E+00	0.499
		527.90	*	1.080E+00	7.890E+00	1.344E+01	7.419E-01	0.080
SN-117M		156.02		1.060E-01	2.331E+00	3.945E+00	2.161E-01	0.027
		158.56	*	-4.368E-02	5.812E-02	9.500E-02	5.169E-03	-0.460
SB-122		563.90	*	7.341E-01	1.673E+00	2.902E+00	1.581E-01	0.253
		692.80		-1.622E+01	3.553E+01	5.660E+01	3.003E+00	-0.287
I-123		159.00	*	-4.523E-01	3.553E+01	Half-Life too short		
		528.96		5.126E+01	3.553E+01	Half-Life too short		
TE-123M		159.00	*	-1.249E-02	3.218E-02	5.346E-02	2.950E-03	-0.234
I-124		602.71	*	-5.242E-01	6.852E-01	9.978E-01	5.314E-02	-0.525
		722.78		-1.984E+00	4.840E+00	6.599E+00	3.667E-01	-0.301
		1325.50		-5.101E+00	3.523E+01	5.764E+01	3.957E+00	-0.088
		1376.25		3.763E+01	2.933E+01	5.589E+01	3.857E+00	0.673
		1509.49		-8.329E-01	1.201E+01	1.955E+01	1.313E+00	-0.043
		1691.02		-3.364E+00	3.858E+00	5.129E+00	3.192E-01	-0.656
SB-124		602.71		-3.761E-02	4.916E-02	7.158E-02	3.814E-03	-0.525
		645.85		4.756E-02	5.816E-01	9.763E-01	5.821E-02	0.049
		709.31		-9.342E-01	3.281E+00	5.050E+00	2.749E-01	-0.185
		713.82		-4.911E-01	1.837E+00	2.968E+00	2.978E-01	-0.165
		722.78		-2.063E-01	5.034E-01	6.862E-01	4.009E-02	-0.301
	+	968.20		1.667E+01	4.685E+00	8.738E+00	5.986E-01	1.907
		1045.16		1.864E+00	3.029E+00	5.215E+00	3.363E-01	0.357
		1325.50		-5.666E-01	3.913E+00	6.403E+00	4.395E-01	-0.088
		1368.21		5.189E-01	2.020E+00	3.472E+00	4.323E-01	0.149
		1436.60		6.044E-01	3.863E+00	6.563E+00	4.487E-01	0.092
		1691.02	*	-8.253E-02	9.467E-02	1.258E-01	8.415E-03	-0.656
SB-125		427.89	*	8.587E-02	1.078E-01	1.843E-01	1.061E-02	0.466
		463.38		9.943E-01	3.688E-01	6.883E-01	4.503E-02	1.445
		600.56		7.841E-02	2.058E-01	3.544E-01	2.236E-02	0.221
		635.90		-1.143E-01	3.129E-01	5.055E-01	3.171E-02	-0.226
TE-125M		109.28	*	-4.082E+00	1.081E+01	1.658E+01	1.480E+00	-0.246
I-126		388.63		-1.076E-01	2.249E-01	3.519E-01	1.911E-02	-0.306
		666.33	*	2.745E-01	1.859E-01	3.466E-01	1.763E-02	0.792
		753.82		6.401E-01	1.655E+00	2.827E+00	1.645E-01	0.226

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-126		223.80		6.683E-01	4.245E+00	7.123E+00	4.042E-01	0.094
		278.60		1.457E+00	2.609E+00	4.432E+00	2.591E-01	0.329
	+	296.50		1.118E+01	2.105E+00	3.752E+00	2.195E-01	2.981
		414.70		-8.512E-03	8.376E-02	1.344E-01	7.344E-03	-0.063
		415.30		-1.390E+00	6.828E+00	1.086E+01	5.939E-01	-0.128
		555.20		4.352E+00	4.063E+00	7.392E+00	4.042E-01	0.589
		573.80		2.012E-01	1.113E+00	1.894E+00	1.027E-01	0.106
		593.00		-7.291E-01	9.626E-01	1.506E+00	8.075E-02	-0.484
		656.30		3.520E+00	3.562E+00	6.410E+00	3.256E-01	0.549
		666.33		1.143E-01	7.744E-02	1.444E-01	7.345E-03	0.792
		675.00		1.822E+00	2.107E+00	3.759E+00	1.939E-01	0.485
		695.00		1.492E-01	8.245E-02	1.564E-01	8.325E-03	0.954
		697.00		2.049E-01	2.921E-01	5.124E-01	2.736E-02	0.400
		720.50	*	4.509E-02	1.622E-01	2.683E-01	1.486E-02	0.168
		856.80		-3.848E-01	5.751E-01	8.830E-01	5.943E-02	-0.436
		989.30		-1.473E-01	1.481E+00	2.377E+00	1.605E-01	-0.062
		1034.80		1.889E+00	1.030E+01	1.699E+01	1.106E+00	0.111
		1213.00		-6.809E+00	5.607E+00	8.339E+00	4.877E-01	-0.817
SB-127		61.10		1.363E+01	5.697E+01	8.364E+01	8.887E+00	0.163
		252.40		-9.280E-01	3.934E+00	6.403E+00	2.654E+00	-0.145
		290.80		-1.150E+01	2.253E+01	3.118E+01	2.715E+00	-0.369
		411.60		4.829E+00	1.167E+01	1.939E+01	2.702E+00	0.249
		444.90		-1.426E+00	9.216E+00	1.465E+01	1.499E+00	-0.097
		473.00		1.520E-01	1.556E+00	2.517E+00	2.679E-01	0.060
		543.00		-4.082E-01	1.416E+01	2.377E+01	2.954E+00	-0.017
		603.60		8.246E-01	1.084E+01	1.664E+01	1.679E+00	0.050
		685.20	*	1.070E-01	1.267E+00	2.121E+00	1.826E-01	0.050
		698.50		-9.727E+00	1.444E+01	2.250E+01	3.150E+00	-0.432
		722.20		-1.930E-01	3.165E+01	4.544E+01	3.867E+00	-0.004
		783.80		1.803E+00	3.712E+00	6.351E+00	6.606E-01	0.284
XE-127		57.60		-1.112E-01	7.026E+00	1.141E+01	9.735E-01	-0.010
	+	145.22		1.365E+00	1.578E+00	1.342E+00	7.570E-02	1.017
		172.10		-1.805E-02	1.291E-01	2.159E-01	1.159E-02	-0.084
		202.84	*	-1.943E-02	5.412E-02	8.598E-02	4.778E-03	-0.226
		374.96		3.031E-02	2.144E-01	3.521E-01	1.950E-02	0.086
I-131		80.18		9.255E-01	4.876E+00	7.066E+00	6.159E-01	0.131
		284.30		-1.245E+00	1.557E+00	2.441E+00	1.582E-01	-0.510
		364.48	*	-5.347E-02	1.196E-01	1.884E-01	1.185E-02	-0.284
		636.97		6.697E-01	1.584E+00	2.736E+00	1.623E-01	0.245
		722.89		-3.567E+00	8.699E+00	1.186E+01	6.675E-01	-0.301
TE-132		49.72		-1.697E+01	1.927E+01	2.995E+01	3.026E+00	-0.567
		111.76		-2.906E+00	2.656E+01	4.151E+01	3.739E+00	-0.070
		116.30		-1.437E+01	2.429E+01	3.742E+01	3.294E+00	-0.384
		228.16	*	-4.452E-01	5.787E-01	9.198E-01	1.293E-01	-0.484
BA-133		53.15		4.762E+00	4.726E+00	8.024E+00	6.821E-01	0.593
		79.62		1.713E-01	1.558E+00	2.247E+00	3.424E-01	0.076
		81.00		-1.776E-01	1.298E-01	1.672E-01	2.664E-02	-1.062
		276.40		1.040E-01	4.222E-01	7.055E-01	9.160E-02	0.147
		302.84		1.629E-01	1.928E-01	2.949E-01	3.444E-02	0.553

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		356.01	*	-1.701E-02	5.567E-02	7.692E-02	8.840E-03	-0.221
		383.85		-5.580E-02	3.528E-01	5.659E-01	6.054E-02	-0.099
I-133	+	510.53		4.751E-01	3.528E-01	Half-Life too short		
		529.87	*	6.291E-04	3.528E-01	Half-Life too short		
		706.58		-1.427E-01	3.528E-01	Half-Life too short		
		856.28		-1.291E-01	3.528E-01	Half-Life too short		
		875.33		1.346E-02	3.528E-01	Half-Life too short		
		1236.41		4.349E-02	3.528E-01	Half-Life too short		
		1298.22		5.700E-03	3.528E-01	Half-Life too short		
CS-134		475.35		1.354E+00	2.197E+00	3.705E+00	2.055E-01	0.365
		563.23		3.116E-01	4.166E-01	7.380E-01	4.117E-02	0.422
		569.32		5.789E-03	2.258E-01	3.799E-01	2.134E-02	0.015
		604.70		-1.451E-02	4.295E-02	6.006E-02	3.215E-03	-0.242
		795.84	*	1.328E-01	5.995E-02	1.149E-01	7.208E-03	1.156
		801.93		-1.675E-01	4.525E-01	7.163E-01	4.518E-02	-0.234
		1038.57		-1.277E+00	4.790E+00	7.512E+00	4.874E-01	-0.170
		1167.94		7.008E-01	3.396E+00	5.798E+00	3.219E-01	0.121
		1365.15		-1.547E+00	1.391E+00	1.894E+00	1.400E-01	-0.817
CS-135		268.24	*	1.545E-01	2.025E-01	3.099E-01	2.380E-02	0.499
I-135		288.45		8.838E+08	2.025E-01	Half-Life too short		
		417.63		7.473E+08	2.025E-01	Half-Life too short		
		546.56		-3.923E+08	2.025E-01	Half-Life too short		
		836.80		-2.819E+08	2.025E-01	Half-Life too short		
		1038.76		-2.469E+08	2.025E-01	Half-Life too short		
		1124.00		1.495E+09	2.025E-01	Half-Life too short		
		1131.51		-1.522E+08	2.025E-01	Half-Life too short		
		1260.41	*	-6.170E+07	2.025E-01	Half-Life too short		
		1457.56		8.780E+09	2.025E-01	Half-Life too short		
		1678.03		1.994E+08	2.025E-01	Half-Life too short		
		1706.46		-4.668E+08	2.025E-01	Half-Life too short		
		1791.20		-6.612E+07	2.025E-01	Half-Life too short		
CS-136		66.91		-5.516E-01	9.632E-01	1.339E+00	2.045E-01	-0.412
	+	86.29		2.925E+00	1.242E+00	2.050E+00	2.697E-01	1.427
		153.22		1.175E-01	6.606E-01	1.125E+00	7.872E-02	0.104
		163.89		-3.786E-01	1.130E+00	1.878E+00	1.298E-01	-0.202
		176.55		8.453E-02	3.786E-01	6.426E-01	3.958E-02	0.132
		273.65		-1.024E-01	5.284E-01	7.538E-01	5.011E-02	-0.136
		340.57		2.924E-01	1.812E-01	2.872E-01	1.754E-02	1.018
		818.51		-2.433E-02	8.497E-02	1.357E-01	8.676E-03	-0.179
		1048.07	*	-7.098E-02	1.277E-01	1.934E-01	1.337E-02	-0.367
		1235.34		-5.791E-02	7.187E-01	1.195E+00	1.210E-01	-0.048
BA-137M		661.65	*	-5.408E-02	4.269E-02	6.313E-02	3.188E-03	-0.857
CS-137		661.65	*	-5.717E-02	4.512E-02	6.674E-02	3.389E-03	-0.857
CE-139		165.85	*	-1.267E-02	3.306E-02	5.481E-02	2.927E-03	-0.231
BA-140		162.64		1.966E-01	8.000E-01	1.362E+00	8.387E-02	0.144
		304.84		-4.664E-01	1.590E+00	2.225E+00	6.075E-01	-0.210
		423.70		-3.407E-02	1.958E+00	3.157E+00	1.002E+00	-0.011
		537.32	*	-2.659E-02	2.663E-01	4.447E-01	1.444E-01	-0.060
LA-140		328.77		4.999E-01	3.295E-01	5.830E-01	3.780E-02	0.857

---- Non-Identified Nuclides ----

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		432.53		-9.564E-01	2.273E+00	3.541E+00	2.174E-01	-0.270
		487.03		-3.740E-02	1.532E-01	2.402E-01	1.524E-02	-0.156
		751.79		-1.699E-01	1.923E+00	3.151E+00	2.237E-01	-0.054
		815.85		-3.703E-02	3.301E-01	5.359E-01	4.102E-02	-0.069
		867.82		4.128E-01	1.662E+00	2.784E+00	2.060E-01	0.148
		919.63		-3.603E-01	3.335E+00	5.226E+00	4.920E-01	-0.069
		925.24		2.645E-01	1.341E+00	2.229E+00	1.711E-01	0.119
		1596.49	*	-4.764E-02	1.079E-01	1.652E-01	1.077E-02	-0.288
CE-143		57.37		-2.585E-04	1.079E-01	Half-Life too short		
		231.56		1.329E-03	1.079E-01	Half-Life too short		
		293.26	*	1.242E-04	1.079E-01	Half-Life too short		
		350.59		8.495E-03	1.079E-01	Half-Life too short		
		490.36		-2.260E-04	1.079E-01	Half-Life too short		
		664.57		5.089E-04	1.079E-01	Half-Life too short		
		721.93		7.066E-05	1.079E-01	Half-Life too short		
CE-144		80.11		3.826E-01	2.514E+00	3.635E+00	3.151E-01	0.105
		133.54	*	3.885E-02	2.370E-01	3.776E-01	5.370E-02	0.103
PM-144		476.78		4.711E-02	7.872E-02	1.324E-01	8.917E-03	0.356
		618.01		-4.160E-03	4.147E-02	6.487E-02	3.662E-03	-0.064
		696.49	*	2.899E-02	4.016E-02	7.058E-02	3.769E-03	0.411
		778.57		-1.236E+00	2.616E+00	4.106E+00	2.480E-01	-0.301
PR-144		696.49	*	1.963E+00	2.720E+00	4.780E+00	2.550E-01	0.411
		1489.15		2.321E+00	1.133E+01	1.947E+01	1.315E+00	0.119
PM-146		453.90	*	-6.797E-03	4.906E-02	7.795E-02	6.582E-03	-0.087
		633.02		-2.099E-01	1.558E+00	2.566E+00	9.427E-01	-0.082
		735.90		1.260E-01	1.850E-01	3.183E-01	8.868E-02	0.396
		747.13		-4.856E-02	1.126E-01	1.784E-01	2.228E-02	-0.272
ND-147		91.11		4.414E-01	4.492E-01	5.371E-01	5.059E-02	0.822
		319.41		-4.103E+00	3.544E+00	5.352E+00	3.112E-01	-0.767
		439.89		7.839E+00	6.226E+00	1.098E+01	6.060E-01	0.714
		531.02	*	-1.207E-01	5.735E-01	9.502E-01	1.273E-01	-0.127
PM-149		285.90	*	1.182E+01	6.959E+01	1.157E+02	1.642E+01	0.102
EU-152		121.78		-4.548E-02	8.684E-02	1.340E-01	1.055E-02	-0.339
		244.69		2.445E-01	3.865E-01	6.604E-01	3.808E-02	0.370
		344.27	*	-4.280E-02	1.320E-01	1.942E-01	1.257E-02	-0.220
		443.98		1.117E-02	1.159E+00	1.868E+00	1.031E-01	0.006
		778.89		-1.143E-01	3.055E-01	4.848E-01	2.927E-02	-0.236
		867.32		-9.591E-02	1.081E+00	1.754E+00	1.197E-01	-0.055
	+	964.01		8.296E-01	4.417E-01	6.764E-01	4.645E-02	1.226
		1085.78		-1.838E-01	5.108E-01	7.904E-01	4.891E-02	-0.233
		1112.02		-7.156E-02	4.415E-01	6.551E-01	3.931E-02	-0.109
		1407.95		3.158E-02	2.488E-01	4.187E-01	2.877E-02	0.075
GD-153		69.67		8.599E-01	2.098E+00	3.090E+00	2.572E-01	0.278
		83.37		1.476E+01	1.876E+01	2.752E+01	2.439E+00	0.536
		97.43	*	-6.398E-03	9.847E-02	1.395E-01	1.104E-02	-0.046
		103.18		-1.274E-01	1.187E-01	1.785E-01	1.314E-02	-0.714
EU-154		123.07		-2.200E-02	6.199E-02	9.650E-02	9.259E-03	-0.228
		247.94		3.791E-01	4.609E-01	7.103E-01	6.767E-02	0.534
		591.81		-5.293E-01	6.519E-01	1.007E+00	9.593E-02	-0.525

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		723.30		-4.386E-02	2.324E-01	3.259E-01	2.244E-02	-0.135
		756.87		3.246E-01	9.420E-01	1.602E+00	1.628E-01	0.203
		873.19		-1.614E-01	3.717E-01	5.803E-01	6.434E-02	-0.278
		996.32		-4.709E-01	4.955E-01	7.130E-01	1.207E-01	-0.660
		1004.76		-2.700E-01	2.830E-01	4.102E-01	4.218E-02	-0.658
		1274.45	*	-6.479E-03	1.531E-01	2.544E-01	2.474E-02	-0.025
EU-155		48.70		-4.579E+00	3.298E+00	4.980E+00	3.919E-01	-0.920
		60.01		4.703E+00	6.141E+00	9.311E+00	7.901E-01	0.505
	+	86.54		2.899E-01	1.200E-01	2.022E-01	1.856E-02	1.433
		105.31	*	1.070E-01	1.205E-01	2.000E-01	1.461E-02	0.535
TB-160	+	86.79		7.647E-01	3.163E-01	5.296E-01	4.826E-02	1.444
		197.04		3.731E-01	6.031E-01	1.037E+00	5.727E-02	0.360
		215.65		4.954E-01	8.160E-01	1.399E+00	7.880E-02	0.354
		298.57		1.549E-01	1.327E-01	2.312E-01	1.352E-02	0.670
		879.36	*	-7.745E-02	1.787E-01	2.701E-01	1.874E-02	-0.287
		962.29		1.047E+00	5.957E-01	1.053E+00	7.241E-02	0.994
	+	966.15		5.623E-01	2.994E-01	5.449E-01	3.737E-02	1.032
		1177.93		8.808E-02	4.638E-01	7.911E-01	4.387E-02	0.111
		1271.85		1.831E-01	9.332E-01	1.587E+00	1.012E-01	0.115
HO-166M		80.57		-3.250E-02	3.300E-01	4.703E-01	4.088E-02	-0.069
		184.41		9.400E-02	4.650E-02	7.549E-02	4.110E-03	1.245
		280.46		-4.996E-02	9.793E-02	1.567E-01	9.162E-03	-0.319
		410.95		1.743E-01	2.980E-01	5.013E-01	2.736E-02	0.348
		711.68	*	5.116E-02	6.655E-02	1.179E-01	6.443E-03	0.434
		752.31		-2.947E-02	3.340E-01	5.474E-01	3.179E-02	-0.054
		810.29		-2.606E-02	6.790E-02	1.072E-01	6.766E-03	-0.243
TM-171		51.35		5.993E+00	4.034E+01	6.621E+01	5.544E+00	0.091
		52.39		2.373E+01	2.071E+01	3.537E+01	2.993E+00	0.671
		59.40		2.686E+01	3.370E+01	5.118E+01	4.354E+00	0.525
		66.72	*	-1.775E+01	3.727E+01	5.227E+01	4.349E+00	-0.340
LU-176	+	88.36		5.712E-01	2.363E-01	4.036E-01	3.692E-02	1.415
		201.83		-1.022E-02	3.309E-02	5.458E-02	3.030E-03	-0.187
		306.84	*	1.103E-02	3.393E-02	5.012E-02	2.927E-03	0.220
		401.10		-2.527E+00	7.649E+00	1.207E+01	6.556E-01	-0.209
LU-177		112.95		6.105E-01	1.693E+00	2.704E+00	1.795E-01	0.226
	+	208.36	*	2.090E+00	1.599E+00	1.932E+00	1.080E-01	1.082
LU-177M		52.97		2.252E+00	2.137E+00	3.635E+00	3.087E-01	0.620
		54.07		3.252E-01	1.110E+00	1.832E+00	1.562E-01	0.178
		61.30		6.429E-01	1.874E+00	2.768E+00	2.335E-01	0.232
		121.62		-1.548E-01	4.367E-01	6.801E-01	4.182E-02	-0.228
		147.16		1.784E-01	8.034E-01	1.216E+00	6.825E-02	0.147
		171.86		6.335E-02	5.235E-01	8.858E-01	4.756E-02	0.072
		218.09		-7.258E-01	9.487E-01	1.521E+00	8.587E-02	-0.477
	+	268.79		2.533E+00	1.217E+00	1.652E+00	9.636E-02	1.533
		319.02		-2.647E-01	3.042E-01	4.700E-01	2.733E-02	-0.563
		367.43		1.278E+00	1.087E+00	1.902E+00	1.063E-01	0.672
		413.65	*	-7.427E-02	2.135E-01	3.362E-01	1.837E-02	-0.221
HF-181		56.28		-1.517E+00	1.166E+00	1.765E+00	1.508E-01	-0.859
		57.53		-2.063E-02	5.934E-01	9.627E-01	8.215E-02	-0.021

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20		4.563E-01	1.216E+00	1.792E+00	1.494E-01	0.255
		133.02		6.756E-02	7.434E-02	1.226E-01	7.185E-03	0.551
		136.25		-9.742E-02	4.822E-01	8.117E-01	4.707E-02	-0.120
		345.85		1.234E-01	2.385E-01	3.746E-01	2.141E-02	0.329
		482.03	*	-3.195E-03	5.276E-02	8.281E-02	4.595E-03	-0.039
W-181		56.28		-6.028E-01	4.632E-01	7.010E-01	5.990E-02	-0.860
		57.53		-8.331E-03	2.358E-01	3.826E-01	3.265E-02	-0.022
		65.20	*	1.799E-01	4.795E-01	7.067E-01	5.891E-02	0.255
TA-182		67.75		1.650E-02	1.428E-01	2.073E-01	1.724E-02	0.080
		100.10		9.022E-02	1.944E-01	3.173E-01	2.424E-02	0.284
		152.43		-3.424E-01	3.803E-01	5.958E-01	3.295E-02	-0.575
		222.10		1.599E-01	3.883E-01	6.594E-01	3.736E-02	0.242
		1001.68		1.137E+00	2.736E+00	4.712E+00	3.153E-01	0.241
	+	1121.28		5.178E-01	2.720E-01	3.822E-01	2.267E-02	1.355
		1189.05		2.368E-01	4.300E-01	7.518E-01	4.241E-02	0.315
		1221.42	*	-4.000E-03	2.709E-01	4.530E-01	2.683E-02	-0.009
		1230.97		8.258E-02	6.352E-01	1.074E+00	6.450E-02	0.077
RE-183		57.98		2.987E-02	2.431E-01	3.788E-01	3.230E-02	0.079
		59.32		1.038E-01	1.368E-01	2.073E-01	1.764E-02	0.501
		67.20		-1.361E-01	2.607E-01	3.646E-01	3.032E-02	-0.373
		162.32	*	7.598E-02	1.235E-01	2.134E-01	1.149E-02	0.356
	+	208.81		2.134E+00	1.633E+00	1.978E+00	1.106E-01	1.079
		291.72		-4.261E-01	1.244E+00	1.747E+00	1.022E-01	-0.244
RE-184		57.98		1.110E-01	9.030E-01	1.407E+00	1.200E-01	0.079
		59.32		3.853E-01	5.077E-01	7.695E-01	6.548E-02	0.501
		67.20		-5.052E-01	9.679E-01	1.354E+00	1.126E-01	-0.373
		161.27		3.228E-01	4.020E-01	6.995E-01	3.779E-02	0.462
		216.55		3.494E-02	2.922E-01	4.900E-01	2.762E-02	0.071
		252.85	*	-9.442E-02	2.664E-01	4.328E-01	2.508E-02	-0.218
		318.01		5.778E-02	5.203E-01	8.585E-01	4.994E-02	0.067
		792.07		-2.123E+00	1.283E+00	1.782E+00	1.097E-01	-1.191
		903.28		-1.322E+00	1.279E+00	1.787E+00	1.267E-01	-0.740
		920.93		-3.278E-03	5.827E-01	9.496E-01	6.681E-02	-0.003
OS-185		59.72		4.063E-01	3.595E-01	5.560E-01	4.725E-02	0.731
		61.14		5.293E-02	2.051E-01	3.015E-01	2.545E-02	0.176
		69.30		1.956E-01	3.744E-01	5.549E-01	4.616E-02	0.353
		592.07		-1.813E+00	2.660E+00	4.179E+00	2.242E-01	-0.434
		646.12	*	1.562E-02	5.044E-02	8.622E-02	4.426E-03	0.181
		717.42		1.780E-01	1.034E+00	1.739E+00	9.586E-02	0.102
		874.81		-8.376E-02	7.087E-01	1.145E+00	7.897E-02	-0.073
		880.27		-5.226E-01	9.707E-01	1.499E+00	1.041E-01	-0.349
RE-188		155.03	*	1.732E-01	1.832E-01	3.211E-01	1.764E-02	0.539
		477.96		-4.010E+00	3.755E+00	5.463E+00	3.031E-01	-0.734
		633.10		-3.957E-01	3.106E+00	5.126E+00	2.664E-01	-0.077
W-188	+	63.58		8.054E+01	9.726E+01	1.094E+02	9.158E+00	0.736
		227.08		-1.731E+01	1.428E+01	2.226E+01	1.267E+00	-0.778
		290.67	*	-4.641E+00	9.854E+00	1.369E+01	8.009E-01	-0.339
IR-192	+	295.96		9.127E-01	1.721E-01	3.064E-01	1.820E-02	2.979
		308.46		1.644E-02	1.170E-01	1.935E-01	1.142E-02	0.085

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		316.51	*	5.312E-02	4.031E-02	7.108E-02	4.158E-03	0.747
		468.07		-1.100E-01	8.387E-02	1.199E-01	7.752E-03	-0.918
		604.41		6.332E-03	5.514E-01	8.038E-01	8.932E-02	0.008
		612.46		2.500E+00	1.071E+00	1.854E+00	1.333E-01	1.348
AU-195		65.12		1.039E-01	2.237E-01	3.311E-01	2.761E-02	0.314
		66.83		-7.124E-02	1.235E-01	1.721E-01	1.432E-02	-0.414
	+	75.70		1.466E+00	3.526E-01	5.346E-01	4.524E-02	2.742
		98.88	*	6.787E-02	2.516E-01	4.043E-01	3.138E-02	0.168
		129.76		1.680E+00	3.340E+00	5.408E+00	3.208E-01	0.311
TL-200		367.94	*	3.700E-04	3.340E+00	Half-Life too short		
		579.30		7.381E-05	3.340E+00	Half-Life too short		
		828.27		-6.337E-04	3.340E+00	Half-Life too short		
		1205.75		7.531E-04	3.340E+00	Half-Life too short		
TL-201		68.90		2.625E+00	4.893E+00	6.652E+00	5.533E-01	0.395
		70.82		1.165E+00	2.517E+00	3.715E+00	3.097E-01	0.314
		80.30		-1.945E+00	4.558E+00	6.369E+00	5.526E-01	-0.305
		135.34		-1.180E+01	2.043E+01	3.387E+01	1.970E+00	-0.349
		167.43	*	2.826E+00	5.645E+00	9.710E+00	5.189E-01	0.291
TL-202		68.90		2.981E-01	5.557E-01	7.555E-01	6.284E-02	0.395
		70.82		1.319E-01	2.851E-01	4.208E-01	3.508E-02	0.314
		80.30		-2.204E-01	5.164E-01	7.216E-01	6.261E-02	-0.305
		439.56	*	5.174E-02	7.743E-02	1.310E-01	7.225E-03	0.395
HG-203		70.83		6.121E-01	1.310E+00	1.931E+00	2.593E-01	0.317
		72.87		1.927E+00	7.568E-01	1.266E+00	1.651E-01	1.522
		82.60		6.764E-01	1.214E+00	1.991E+00	2.760E-01	0.340
		279.20	*	2.414E-02	4.643E-02	7.869E-02	4.880E-03	0.307
BI-207		72.80		5.117E-01	2.159E-01	3.722E-01	3.117E-02	1.375
	+	74.97		8.171E-01	1.966E-01	2.672E-01	2.255E-02	3.058
		84.90		3.110E-01	2.377E-01	3.564E-01	3.197E-02	0.873
		569.67		8.519E-03	3.546E-02	6.063E-02	3.294E-03	0.141
		1063.62	*	-9.732E-03	6.090E-02	9.645E-02	6.109E-03	-0.101
		1770.23		2.731E-01	5.593E-01	9.068E-01	5.375E-02	0.301
TL-207		81.07		-4.757E-01	2.870E-01	3.688E-01	3.217E-02	-1.290
		83.78		1.046E-01	1.622E-01	2.364E-01	2.102E-02	0.443
		94.90		4.811E-01	2.843E-01	4.408E-01	3.617E-02	1.092
		122.32		1.054E-01	2.038E+00	3.241E+00	2.262E-01	0.033
	+	144.24		1.374E+00	1.589E+00	1.361E+00	9.691E-02	1.009
		154.21		4.666E-01	4.275E-01	7.526E-01	5.096E-02	0.620
	+	269.46		5.966E-01	2.867E-01	4.151E-01	2.530E-02	1.437
		323.87	*	-3.042E-01	7.814E-01	1.241E+00	2.049E-01	-0.245
	+	338.28		5.036E+00	1.951E+00	2.750E+00	2.889E-01	1.831
		445.03		-3.726E-01	2.749E+00	4.377E+00	4.428E-01	-0.085
PO-209		260.50		-8.903E+00	1.108E+01	1.749E+01	1.017E+00	-0.509
		262.80		1.807E+00	3.033E+01	5.032E+01	2.929E+00	0.036
		896.60	*	2.525E+00	9.416E+00	1.579E+01	1.120E+00	0.160
BI-210		46.50	*	1.946E+00	4.846E+00	7.954E+00	6.300E-01	0.245
PB-210		46.50	*	1.946E+00	4.846E+00	7.954E+00	6.300E-01	0.245
PO-210		46.50	*	1.946E+00	4.845E+00	7.954E+00	5.461E-01	0.245
PB-211		404.84	*	4.757E-01	1.111E+00	1.789E+00	1.115E+00	0.266

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		427.08		2.098E+00	2.678E+00	4.045E+00	2.499E+00	0.519
		831.96		-4.832E-01	1.436E+00	2.223E+00	1.388E+00	-0.217
BI-212	+	727.18	*	8.524E-01	3.994E-01	6.622E-01	5.006E-02	1.287
		785.46		1.631E-01	2.314E+00	3.834E+00	2.337E-01	0.043
		1620.62		3.049E-01	1.460E+00	2.485E+00	1.602E-01	0.123
PO-215		81.07		-4.757E-01	2.870E-01	3.688E-01	3.217E-02	-1.290
		83.78		1.046E-01	1.622E-01	2.364E-01	2.102E-02	0.443
		94.90		4.811E-01	2.843E-01	4.408E-01	3.617E-02	1.092
		122.32		1.054E-01	2.038E+00	3.241E+00	2.262E-01	0.033
	+	144.24		1.374E+00	1.589E+00	1.361E+00	9.691E-02	1.009
		154.21		4.666E-01	4.275E-01	7.526E-01	5.096E-02	0.620
	+	269.46		5.966E-01	2.867E-01	4.151E-01	2.530E-02	1.437
		323.87	*	-3.042E-01	7.814E-01	1.241E+00	2.049E-01	-0.245
	+	338.28		5.036E+00	1.951E+00	2.750E+00	2.889E-01	1.831
		445.03		-3.726E-01	2.749E+00	4.377E+00	4.428E-01	-0.085
RN-219	+	271.23		7.654E-01	3.702E-01	5.279E-01	4.292E-02	1.450
		401.81	*	-1.569E-01	4.796E-01	7.566E-01	1.018E-01	-0.207
RN-220		549.76	*	-1.814E+01	2.857E+01	4.547E+01	2.492E+00	-0.399
RA-223		81.07		-4.757E-01	2.870E-01	3.688E-01	3.217E-02	-1.290
		83.78		1.046E-01	1.622E-01	2.364E-01	2.102E-02	0.443
		94.90		4.811E-01	2.843E-01	4.408E-01	3.617E-02	1.092
		122.32		1.054E-01	2.038E+00	3.241E+00	2.262E-01	0.033
	+	144.24		1.374E+00	1.589E+00	1.361E+00	9.691E-02	1.009
		154.21		4.666E-01	4.275E-01	7.526E-01	5.096E-02	0.620
	+	269.46		5.966E-01	2.867E-01	4.151E-01	2.530E-02	1.437
		323.87	*	-3.042E-01	7.814E-01	1.241E+00	2.049E-01	-0.245
	+	338.28		5.036E+00	1.951E+00	2.750E+00	2.889E-01	1.831
		445.03		-3.726E-01	2.749E+00	4.377E+00	4.428E-01	-0.085
AC-227		79.80		2.760E-01	1.955E+00	2.825E+00	6.079E-01	0.098
		236.00		-4.263E-02	2.789E-01	4.031E-01	4.198E-02	-0.106
		256.20	*	1.571E-01	4.507E-01	7.587E-01	1.059E-01	0.207
		286.10		1.751E-01	1.799E+00	2.979E+00	3.452E-01	0.059
	+	299.80		3.969E+00	2.191E+00	3.069E+00	5.003E-01	1.293
		304.40		-2.781E-01	2.522E+00	3.598E+00	6.228E-01	-0.077
		334.20		3.962E-01	2.859E+00	4.146E+00	7.596E-01	0.096
TH-227		79.80		2.760E-01	1.955E+00	2.825E+00	6.156E-01	0.098
	+	94.00		3.213E+00	3.891E+00	4.187E+00	9.069E-01	0.767
		236.00		-4.263E-02	2.789E-01	4.031E-01	3.633E-02	-0.106
		256.20	*	1.571E-01	4.509E-01	7.587E-01	1.282E-01	0.207
		286.10		1.751E-01	1.807E+00	2.979E+00	2.984E+00	0.059
	+	299.80		3.969E+00	2.191E+00	3.069E+00	5.003E-01	1.293
		304.40		-2.781E-01	2.522E+00	3.598E+00	6.228E-01	-0.077
		334.20		3.962E-01	2.859E+00	4.146E+00	7.596E-01	0.096
TH-229		85.43		4.075E-01	2.354E-01	3.584E-01	3.229E-02	1.137
	+	88.47		3.288E-01	1.360E-01	2.325E-01	2.122E-02	1.414
		100.00		7.192E-02	2.080E-01	3.353E-01	2.565E-02	0.214
		193.63	*	1.073E-01	5.555E-01	9.388E-01	5.164E-02	0.114
	+	210.97		1.694E+00	1.296E+00	1.541E+00	8.638E-02	1.099
PA-231		283.67	*	-9.340E-01	1.784E+00	2.842E+00	3.923E-01	-0.329

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	301.29		1.588E+00	8.538E-01	1.301E+00	1.363E-01	1.220
TH-231		81.07		-4.757E-01	2.870E-01	3.688E-01	3.217E-02	-1.290
		83.78		1.046E-01	1.622E-01	2.364E-01	2.102E-02	0.443
		94.90		4.811E-01	2.843E-01	4.408E-01	3.617E-02	1.092
		122.32		1.054E-01	2.038E+00	3.241E+00	2.262E-01	0.033
	+	144.24		1.374E+00	1.589E+00	1.361E+00	9.691E-02	1.009
		154.21		4.666E-01	4.275E-01	7.526E-01	5.096E-02	0.620
	+	269.46		5.966E-01	2.867E-01	4.151E-01	2.530E-02	1.437
		323.87	*	-3.042E-01	7.814E-01	1.241E+00	2.049E-01	-0.245
	+	338.28		5.036E+00	1.951E+00	2.750E+00	2.889E-01	1.831
		445.03		-3.726E-01	2.749E+00	4.377E+00	4.428E-01	-0.085
U-231		84.21		4.710E+00	5.483E+00	8.067E+00	7.197E-01	0.584
	+	92.29		2.533E+00	3.026E+00	3.659E+00	3.127E-01	0.692
		95.87	*	-1.535E-01	1.058E+00	1.492E+00	1.207E-01	-0.103
		108.00		-1.404E+00	1.949E+00	2.936E+00	2.048E-01	-0.478
PA-233	+	75.28		2.385E+01	6.488E+00	8.075E+00	1.232E+00	2.953
	+	86.59		4.715E+00	2.289E+00	3.285E+00	8.861E-01	1.435
	+	300.12		1.107E+00	6.023E-01	8.663E-01	1.166E-01	1.277
		311.98	*	-1.311E-02	7.955E-02	1.292E-01	7.996E-03	-0.101
		340.50		1.710E+00	1.026E+00	1.525E+00	3.500E-01	1.121
		398.62		-7.516E-01	2.470E+00	3.898E+00	1.005E+00	-0.193
		415.76		-7.362E-01	1.987E+00	3.112E+00	6.378E-01	-0.237
PA-234	+	63.00		2.368E+00	2.876E+00	3.245E+00	4.988E-01	0.730
		94.67		5.113E-01	2.135E-01	3.319E-01	4.028E-02	1.541
		98.44		5.543E-04	1.092E-01	1.655E-01	9.211E-02	0.003
		99.86		2.238E-01	5.287E-01	8.552E-01	6.553E-02	0.262
		111.00		-4.314E-02	2.136E-01	3.366E-01	3.650E-02	-0.128
		131.20		-1.353E-01	1.279E-01	1.915E-01	1.130E-02	-0.707
		152.70		-1.526E-01	3.528E-01	5.843E-01	9.180E-02	-0.261
	+	186.00		5.660E+00	2.948E+00	3.129E+00	9.540E-01	1.809
		226.40		-3.584E-01	4.513E-01	7.181E-01	8.261E-02	-0.499
		227.20		-6.046E-01	4.883E-01	7.601E-01	4.326E-02	-0.796
		248.90		5.429E-01	1.032E+00	1.554E+00	3.337E-01	0.349
		293.70		2.711E+00	1.051E+00	1.634E+00	2.630E-01	1.659
		369.80		-3.426E-01	1.042E+00	1.653E+00	3.431E-01	-0.207
		568.70		-4.066E-02	1.161E+00	1.944E+00	1.057E-01	-0.021
		569.50		3.172E-02	3.149E-01	5.328E-01	2.895E-02	0.060
		574.00		1.662E-01	1.712E+00	2.896E+00	1.570E-01	0.057
		699.00		-8.386E-01	8.811E-01	1.323E+00	2.360E-01	-0.634
		706.10		-7.999E-01	1.270E+00	1.906E+00	8.402E-01	-0.420
		733.00		-2.688E-02	5.114E-01	7.289E-01	1.547E-01	-0.037
		742.81		-2.759E-01	1.660E+00	2.685E+00	1.797E+00	-0.103
		796.30		2.469E+00	1.325E+00	2.221E+00	5.859E-01	1.112
		805.60		-1.330E-01	1.160E+00	1.885E+00	5.668E-01	-0.071
		819.60		1.714E+00	1.590E+00	2.660E+00	9.997E-01	0.645
		826.30		-9.850E-01	1.055E+00	1.401E+00	6.219E-01	-0.703
		831.60		-2.242E-01	7.320E-01	1.160E+00	3.398E-01	-0.193
		876.40		5.456E-01	1.150E+00	1.734E+00	1.780E+00	0.315
		880.51		-1.708E-01	3.459E-01	5.360E-01	3.723E-02	-0.319

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		883.24		2.083E-01	3.819E-01	6.150E-01	4.122E-01	0.339
		899.00		6.532E-01	1.088E+00	1.820E+00	7.907E-01	0.359
		925.00		9.846E-02	1.526E+00	2.504E+00	1.758E-01	0.039
		926.50		2.136E-03	2.143E-01	3.497E-01	8.664E-02	0.006
		946.00	*	1.012E-01	3.951E-01	6.586E-01	1.189E-01	0.154
		949.00		1.125E-01	6.175E-01	1.022E+00	7.082E-02	0.110
		980.50		-3.484E-01	9.863E-01	1.544E+00	1.049E-01	-0.226
		1394.10		-3.875E-01	1.421E+00	2.226E+00	1.444E+00	-0.174
PA-234M		766.41		3.841E+01	3.703E+01	3.876E+01	2.962E+01	0.991
		1001.03	*	6.447E+00	8.859E+00	1.564E+01	1.528E+00	0.412
NP-236		94.67		3.898E-01	1.583E-01	2.520E-01	2.075E-02	1.547
		98.44		4.157E-04	8.256E-02	1.251E-01	9.765E-03	0.003
		111.00		-3.263E-02	1.616E-01	2.546E-01	1.722E-02	-0.128
		160.31	*	5.321E-02	9.009E-02	1.556E-01	8.427E-03	0.342
NP-239		99.55		1.072E-01	1.757E-01	2.865E-01	2.205E-02	0.374
		117.00	*	-3.624E-02	2.180E-01	3.434E-01	2.197E-02	-0.106
	+	209.75		1.707E+00	1.306E+00	1.583E+00	8.862E-02	1.078
		228.18		-1.957E-01	2.517E-01	4.020E-01	2.290E-02	-0.487
		277.60		8.901E-02	2.058E-01	3.474E-01	2.031E-02	0.256
		334.30		2.153E-01	1.619E+00	2.347E+00	1.353E-01	0.092
AM-241		59.54	*	2.211E-01	1.922E-01	2.974E-01	2.718E-02	0.744
CM-243		99.55		1.103E-01	1.808E-01	2.948E-01	2.268E-02	0.374
		103.76	*	4.130E-02	1.079E-01	1.753E-01	1.281E-02	0.236
		117.00		-3.729E-02	2.243E-01	3.533E-01	2.260E-02	-0.106
	+	209.75		1.682E+00	1.287E+00	1.560E+00	8.735E-02	1.078
		228.18		-1.977E-01	2.543E-01	4.061E-01	2.313E-02	-0.487
		277.60		8.973E-02	2.075E-01	3.502E-01	2.047E-02	0.256
CM-247		278.00		4.970E-01	8.409E-01	1.431E+00	8.367E-02	0.347
		287.40		5.954E-01	1.438E+00	2.424E+00	1.418E-01	0.246
		402.60	*	-3.627E-02	4.308E-02	6.517E-02	3.542E-03	-0.556
CF-249		252.85		-3.563E-01	1.005E+00	1.633E+00	9.462E-02	-0.218
		333.44		-1.305E-01	2.232E-01	3.024E-01	1.745E-02	-0.431
		387.95	*	7.824E-04	4.671E-02	7.585E-02	4.123E-03	0.010
CF-251		176.60	*	-5.841E-04	1.415E-01	2.379E-01	1.284E-02	-0.002
		227.00		-5.194E-01	4.346E-01	6.783E-01	3.860E-02	-0.766
		285.00		-1.734E+00	2.020E+00	3.153E+00	1.845E-01	-0.550

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232424001      *
* Acquisition date :  7-JUL-2009 06:03:34 Detector SN#     :               *
* Detector ID        : GAM01               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.08     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232424001           Analyst initials: MXR1         *
* Batch Number       : 881219               Sample Quantity : 1.1650E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.650E+01	3.329E+00	5.368E-01	0.000E+00
CD-109	2.445E+00	9.913E-01	1.649E+00	0.000E+00
SN-126	2.408E-01	9.763E-02	1.621E-01	0.000E+00
CE-141	1.234E-01	1.398E-01	1.151E-01	0.000E+00
TL-208	5.124E-01	8.556E-02	6.639E-02	0.000E+00
BI-211	3.097E+00	5.465E-01	3.786E-01	0.000E+00
PB-212	1.551E+00	1.641E-01	1.033E-01	0.000E+00
PO-212	1.551E+00	1.641E-01	1.033E-01	0.000E+00
BI-214	1.009E+00	1.937E-01	1.286E-01	0.000E+00
PB-214	1.077E+00	1.979E-01	1.299E-01	0.000E+00
PO-214	1.077E+00	1.979E-01	1.299E-01	0.000E+00
PO-216	1.551E+00	1.641E-01	1.033E-01	0.000E+00
PO-218	1.077E+00	1.979E-01	1.299E-01	0.000E+00
RA-224	3.297E+00	1.525E+00	1.175E+00	0.000E+00
RA-226	1.009E+00	1.937E-01	1.286E-01	0.000E+00
AC-228	1.707E+00	3.572E-01	2.639E-01	0.000E+00
RA-228	1.707E+00	3.572E-01	2.639E-01	0.000E+00
TH-228	1.551E+00	1.641E-01	1.033E-01	0.000E+00
TH-230	1.009E+00	1.937E-01	1.285E-01	0.000E+00
TH-232	1.707E+00	3.572E-01	2.639E-01	0.000E+00
TH-234	2.031E+00	2.424E+00	2.438E+00	0.000E+00
U-234	1.009E+00	1.937E-01	1.285E-01	0.000E+00
U-235	4.239E-01	4.843E-01	3.935E-01	0.000E+00
NP-237	7.072E-01	3.204E-01	4.691E-01	0.000E+00
U-238	2.031E+00	2.424E+00	2.438E+00	0.000E+00
AM-243	4.553E-01	1.073E-01	1.001E-01	0.000E+00
ANH-511	1.391E-01	8.444E-02	5.159E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-3.094E-01	3.756E-01	5.758E-01	0.000E+00	NOT IDENT.
NA-22	9.293E-04	5.402E-02	9.198E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.852E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	5.647E-03	2.896E-02	5.027E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.449E-02	9.123E-02	0.000E+00	FAIL ABUN
SC-46	-5.948E-02	4.851E-02	7.039E-02	0.000E+00	FAIL ABUN
V-48	6.140E-02	8.582E-02	1.520E-01	0.000E+00	NOT IDENT.
CR-51	-4.172E-01	3.979E-01	6.249E-01	0.000E+00	NOT IDENT.
MN-52	6.055E-03	2.105E-01	3.561E-01	0.000E+00	NOT IDENT.
MN-54	-1.017E-02	4.330E-02	7.107E-02	0.000E+00	NOT IDENT.
CO-56	1.167E-02	4.681E-02	8.032E-02	0.000E+00	NOT IDENT.
CO-57	-1.275E-02	2.934E-02	4.747E-02	0.000E+00	NOT IDENT.
CO-58	-1.897E-02	4.252E-02	6.816E-02	0.000E+00	NOT IDENT.
FE-59	5.040E-03	1.214E-01	2.003E-01	0.000E+00	NOT IDENT.
CO-60	-2.574E-03	4.807E-02	8.089E-02	0.000E+00	NOT IDENT.
ZN-65	2.571E-02	1.285E-01	1.869E-01	0.000E+00	NOT IDENT.
GE-68	-2.524E-01	1.720E+00	2.791E+00	0.000E+00	NOT IDENT.
AS-73	6.306E-01	1.065E+00	1.869E+00	0.000E+00	NOT IDENT.
AS-74	8.431E-02	9.765E-02	1.787E-01	0.000E+00	NOT IDENT.
SE-75	4.522E-02	5.256E-02	8.419E-02	0.000E+00	NOT IDENT.
BR-77	9.548E-01	8.188E+00	1.356E+01	0.000E+00	FAIL ABUN
SR-82	-1.549E-01	4.633E-01	6.447E-01	0.000E+00	NOT IDENT.
RB-83	6.168E-03	7.946E-02	1.312E-01	0.000E+00	NOT IDENT.
RB-84	-9.763E-02	8.600E-02	1.267E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.842E+00	1.693E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.974E-02	8.558E-02	0.000E+00	NOT IDENT.
RB-86	-2.441E-01	1.061E+00	1.708E+00	0.000E+00	NOT IDENT.
Y-88	3.207E-03	3.139E-02	5.320E-02	0.000E+00	NOT IDENT.
ZR-88	1.251E-02	3.460E-02	5.929E-02	0.000E+00	NOT IDENT.
Y-91	-7.012E+00	2.312E+01	3.842E+01	0.000E+00	NOT IDENT.
NB-94	2.994E-02	3.748E-02	6.787E-02	0.000E+00	NOT IDENT.
NB-95	2.722E-02	5.249E-02	8.186E-02	0.000E+00	NOT IDENT.
NB-95M	-4.054E-02	1.462E-01	2.171E-01	0.000E+00	NOT IDENT.
ZR-95	3.507E-02	8.341E-02	1.461E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.015E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.832E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-4.644E-01	9.859E+00	1.662E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.026E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.323E-03	3.635E-02	6.160E-02	0.000E+00	NOT IDENT.
RH-102	3.447E-03	3.440E-02	5.722E-02	0.000E+00	NOT IDENT.
RU-103	-4.632E-03	4.551E-02	7.418E-02	0.000E+00	FAIL ABUN
RH-106	3.277E-01	3.803E-01	6.909E-01	0.000E+00	FAIL ABUN
RU-106	3.277E-01	3.788E-01	6.909E-01	0.000E+00	FAIL ABUN
AG-108M	2.910E-02	3.567E-02	6.301E-02	0.000E+00	NOT IDENT.
AG-110M	1.761E-02	4.084E-02	7.209E-02	0.000E+00	NOT IDENT.
IN-111	-6.609E-02	8.525E-01	1.459E+00	0.000E+00	NOT IDENT.
IN-113M	-1.806E-02	5.236E-02	8.538E-02	0.000E+00	NOT IDENT.
SN-113	-1.806E-02	5.236E-02	8.538E-02	0.000E+00	NOT IDENT.
IN-114M	7.382E-02	2.133E-01	3.341E-01	0.000E+00	NOT IDENT.
CD-115	1.080E+00	7.732E+00	1.354E+01	0.000E+00	NOT IDENT.
SN-117M	-4.368E-02	5.696E-02	9.683E-02	0.000E+00	NOT IDENT.
SB-122	7.341E-01	1.639E+00	2.920E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.142E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.249E-02	3.154E-02	5.449E-02	0.000E+00	NOT IDENT.
I-124	-5.242E-01	6.715E-01	1.003E+00	0.000E+00	NOT IDENT.
SB-124	-8.253E-02	9.278E-02	1.252E-01	0.000E+00	FAIL ABUN
SB-125	8.587E-02	1.056E-01	1.860E-01	0.000E+00	NOT IDENT.
TE-125M	-4.082E+00	1.060E+01	1.696E+01	0.000E+00	NOT IDENT.
I-126	2.745E-01	1.822E-01	3.482E-01	0.000E+00	NOT IDENT.
SB-126	4.509E-02	1.589E-01	2.693E-01	0.000E+00	FAIL ABUN
SB-127	1.070E-01	1.242E+00	2.130E+00	0.000E+00	NOT IDENT.
XE-127	-1.943E-02	5.304E-02	8.742E-02	0.000E+00	FAIL ABUN
I-131	-5.347E-02	1.172E-01	1.904E-01	0.000E+00	NOT IDENT.
TE-132	-4.452E-01	5.671E-01	9.341E-01	0.000E+00	NOT IDENT.
BA-133	-1.701E-02	5.455E-02	7.777E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.212E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.875E-02	1.152E-01	0.000E+00	NOT IDENT.
CS-135	1.545E-01	1.984E-01	3.142E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.319E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.098E-02	1.251E-01	1.933E-01	0.000E+00	FAIL ABUN
BA-137M	-5.408E-02	4.183E-02	6.343E-02	0.000E+00	NOT IDENT.
CS-137	-5.717E-02	4.422E-02	6.705E-02	0.000E+00	NOT IDENT.
CE-139	-1.267E-02	3.240E-02	5.584E-02	0.000E+00	NOT IDENT.
BA-140	-2.659E-02	2.609E-01	4.477E-01	0.000E+00	NOT IDENT.
LA-140	-4.764E-02	1.057E-01	1.645E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.990E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.885E-02	2.323E-01	3.855E-01	0.000E+00	NOT IDENT.
PM-144	2.899E-02	3.936E-02	7.088E-02	0.000E+00	NOT IDENT.

PR-144	1.963E+00	2.665E+00	4.799E+00	0.000E+00	NOT IDENT.
PM-146	-6.797E-03	4.808E-02	7.861E-02	0.000E+00	NOT IDENT.
ND-147	-1.207E-01	5.621E-01	9.568E-01	0.000E+00	NOT IDENT.
PM-149	1.182E+01	6.820E+01	1.173E+02	0.000E+00	NOT IDENT.
EU-152	-4.280E-02	1.293E-01	1.964E-01	0.000E+00	FAIL ABUN
GD-153	-6.398E-03	9.650E-02	1.429E-01	0.000E+00	NOT IDENT.
EU-154	-6.479E-03	1.500E-01	2.539E-01	0.000E+00	NOT IDENT.
EU-155	1.070E-01	1.181E-01	2.047E-01	0.000E+00	FAIL ABUN
TB-160	-7.745E-02	1.751E-01	2.706E-01	0.000E+00	FAIL ABUN
HO-166M	5.116E-02	6.522E-02	1.184E-01	0.000E+00	NOT IDENT.
TM-171	-1.775E+01	3.652E+01	5.374E+01	0.000E+00	NOT IDENT.
LU-176	1.103E-02	3.325E-02	5.075E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.567E+00	1.963E+00	0.000E+00	FAIL ABUN
LU-177M	-7.427E-02	2.092E-01	3.394E-01	0.000E+00	FAIL ABUN
HF-181	-3.195E-03	5.170E-02	8.347E-02	0.000E+00	NOT IDENT.
W-181	1.799E-01	4.699E-01	7.267E-01	0.000E+00	NOT IDENT.
TA-182	-4.000E-03	2.655E-01	4.523E-01	0.000E+00	FAIL ABUN
RE-183	7.598E-02	1.210E-01	2.174E-01	0.000E+00	FAIL ABUN
RE-184	-9.442E-02	2.611E-01	4.391E-01	0.000E+00	NOT IDENT.
OS-185	1.562E-02	4.943E-02	8.664E-02	0.000E+00	NOT IDENT.
RE-188	1.732E-01	1.795E-01	3.274E-01	0.000E+00	NOT IDENT.
W-188	-4.641E+00	9.657E+00	1.387E+01	0.000E+00	FAIL ABUN
IR-192	5.312E-02	3.950E-02	7.195E-02	0.000E+00	FAIL ABUN
AU-195	6.787E-02	2.466E-01	4.140E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.191E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.826E+00	5.532E+00	9.892E+00	0.000E+00	NOT IDENT.
TL-202	5.174E-02	7.588E-02	1.322E-01	0.000E+00	NOT IDENT.
HG-203	2.414E-02	4.550E-02	7.976E-02	0.000E+00	NOT IDENT.
BI-207	-9.732E-03	5.968E-02	9.642E-02	0.000E+00	FAIL ABUN
TL-207	-3.042E-01	7.658E-01	1.256E+00	0.000E+00	FAIL ABUN
PO-209	2.525E+00	9.228E+00	1.581E+01	0.000E+00	NOT IDENT.
BI-210	1.946E+00	4.749E+00	8.206E+00	0.000E+00	NOT IDENT.
PB-210	1.946E+00	4.749E+00	8.206E+00	0.000E+00	NOT IDENT.
PO-210	1.946E+00	4.748E+00	8.206E+00	0.000E+00	NOT IDENT.
PB-211	4.757E-01	1.088E+00	1.806E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.914E-01	6.646E-01	0.000E+00	FAIL ABUN
PO-215	-3.042E-01	7.658E-01	1.256E+00	0.000E+00	FAIL ABUN
RN-219	-1.569E-01	4.700E-01	7.641E-01	0.000E+00	FAIL ABUN
RN-220	-1.814E+01	2.800E+01	4.577E+01	0.000E+00	NOT IDENT.
RA-223	-3.042E-01	7.658E-01	1.256E+00	0.000E+00	FAIL ABUN
AC-227	1.571E-01	4.416E-01	7.696E-01	0.000E+00	FAIL ABUN
TH-227	1.571E-01	4.419E-01	7.696E-01	0.000E+00	FAIL ABUN
TH-229	1.073E-01	5.444E-01	9.550E-01	0.000E+00	FAIL ABUN
PA-231	-9.340E-01	1.749E+00	2.881E+00	0.000E+00	FAIL ABUN
TH-231	-3.042E-01	7.658E-01	1.256E+00	0.000E+00	FAIL ABUN
U-231	-1.535E-01	1.037E+00	1.528E+00	0.000E+00	FAIL ABUN
PA-233	-1.311E-02	7.796E-02	1.308E-01	0.000E+00	FAIL ABUN
PA-234	1.012E-01	3.872E-01	6.592E-01	0.000E+00	FAIL ABUN
PA-234M	6.447E+00	8.682E+00	1.565E+01	0.000E+00	NOT IDENT.
NP-236	5.321E-02	8.829E-02	1.586E-01	0.000E+00	NOT IDENT.
NP-239	-3.624E-02	2.137E-01	3.511E-01	0.000E+00	FAIL ABUN
AM-241	2.211E-01	1.883E-01	3.061E-01	0.000E+00	NOT IDENT.
CM-243	4.130E-02	1.058E-01	1.795E-01	0.000E+00	FAIL ABUN
CM-247	-3.627E-02	4.222E-02	6.581E-02	0.000E+00	NOT IDENT.
CF-249	7.824E-04	4.577E-02	7.663E-02	0.000E+00	NOT IDENT.
CF-251	-5.841E-04	1.387E-01	2.423E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:04:00.58

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232424001.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:03:34.
Sample ID         : G232424001           Sample quantity  : 1.16500E+02 GRAM
Detector name     : GAM01                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.08  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1165	10.67*	9.639E-01	3.650E+01	3.650E+01	9.31
CD-109	88.03	142	3.72*	5.142E+00	2.395E+00	2.445E+00	41.37
SN-126	64.28	65	9.60	2.720E+00	8.041E-01	8.041E-01	121.40
	86.94	142	8.90	5.142E+00	1.001E+00	1.001E+00	57.86
	87.57	142	37.00*	5.142E+00	2.408E-01	2.408E-01	41.37
CE-141	145.44	82	48.40*	5.927E+00	9.195E-02	1.234E-01	115.60
TL-208	277.35	------	6.80	3.972E+00	------ Line Not Found		------
	510.84	105	21.60	2.436E+00	6.439E-01	6.439E-01	62.51
	583.14	292	84.20*	2.181E+00	5.124E-01	5.124E-01	17.04
	860.37	------	12.46	1.552E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.875E+00	------ Line Not Found		------
	351.07	410	12.94*	3.294E+00	3.097E+00	3.097E+00	18.00
PB-212	74.81	380	10.70	4.076E+00	2.808E+00	2.808E+00	25.81
	77.11	497	18.00	4.315E+00	2.063E+00	2.063E+00	17.29
	87.30	142	8.00	5.142E+00	1.114E+00	1.114E+00	42.56
	238.63	954	44.60*	4.442E+00	1.551E+00	1.551E+00	10.80
	300.09	85	3.41	3.731E+00	2.142E+00	2.142E+00	53.39
PO-212	74.81	380	10.70	4.076E+00	2.808E+00	2.808E+00	25.81
	77.11	497	18.00	4.315E+00	2.063E+00	2.063E+00	17.29
	87.30	142	8.00	5.142E+00	1.114E+00	1.114E+00	42.56
	115.19	------	0.60	6.067E+00	------ Line Not Found		------
	238.63	954	44.60*	4.442E+00	1.551E+00	1.551E+00	10.80
	300.09	85	3.41	3.731E+00	2.142E+00	2.142E+00	53.39
BI-214	609.31	305	46.30*	2.101E+00	1.009E+00	1.009E+00	19.59
	768.36	21	5.04	1.716E+00	7.823E-01	7.823E-01	191.85
	934.06	------	3.21	1.440E+00	------ Line Not Found		------
	1120.29	63	15.10	1.218E+00	1.104E+00	1.104E+00	52.96
	1238.11	------	5.94	1.113E+00	------ Line Not Found		------
	1377.67	------	4.11	1.013E+00	------ Line Not Found		------
	1764.49	23	15.80	8.365E-01	5.558E-01	5.558E-01	71.54
PB-214	74.81	380	6.21	4.076E+00	4.838E+00	4.838E+00	25.17
	77.11	497	10.50	4.315E+00	3.536E+00	3.536E+00	18.89

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	142	4.67	5.142E+00	1.908E+00	1.908E+00	42.08
	241.98	178	7.49	4.402E+00	1.739E+00	1.739E+00	47.54
	295.21	273	19.20	3.781E+00	1.212E+00	1.212E+00	19.84
	351.92	410	37.20*	3.294E+00	1.077E+00	1.077E+00	18.74
PO-214	74.81	380	6.21	4.076E+00	4.838E+00	4.838E+00	25.17
	77.11	497	10.50	4.315E+00	3.536E+00	3.536E+00	18.89
	87.30	142	4.67	5.142E+00	1.908E+00	1.908E+00	42.08
	241.98	178	7.49	4.402E+00	1.739E+00	1.739E+00	47.54
	295.21	273	19.20	3.781E+00	1.212E+00	1.212E+00	19.84
	351.92	410	37.20*	3.294E+00	1.077E+00	1.077E+00	18.74
PO-216	74.81	380	10.70	4.076E+00	2.808E+00	2.808E+00	25.81
	77.11	497	18.00	4.315E+00	2.063E+00	2.063E+00	17.29
	87.30	142	8.00	5.142E+00	1.114E+00	1.114E+00	42.56
	238.63	954	44.60*	4.442E+00	1.551E+00	1.551E+00	10.80
	300.09	85	3.41	3.731E+00	2.142E+00	2.142E+00	53.39
PO-218	74.81	380	6.21	4.076E+00	4.838E+00	4.838E+00	25.17
	77.11	497	10.50	4.315E+00	3.536E+00	3.536E+00	18.89
	87.30	142	4.67	5.142E+00	1.908E+00	1.908E+00	42.08
	241.98	178	7.49	4.402E+00	1.739E+00	1.739E+00	47.54
	295.21	273	19.20	3.781E+00	1.212E+00	1.212E+00	19.84
	351.92	410	37.20*	3.294E+00	1.077E+00	1.077E+00	18.74
RA-224	240.98	178	3.95*	4.402E+00	3.297E+00	3.297E+00	47.21
RA-226	609.31	305	46.30*	2.101E+00	1.009E+00	1.009E+00	19.59
	768.36	21	5.04	1.716E+00	7.823E-01	7.823E-01	191.85
	934.06	------	3.21	1.440E+00	------ Line Not Found		------
	1120.29	63	15.10	1.218E+00	1.104E+00	1.104E+00	52.96
	1238.11	------	5.94	1.113E+00	------ Line Not Found		------
	1377.67	------	4.11	1.013E+00	------ Line Not Found		------
	1764.49	23	15.80	8.365E-01	5.558E-01	5.558E-01	71.54
AC-228	338.32	145	11.40	3.399E+00	1.206E+00	1.206E+00	55.25
	911.07	216	27.70*	1.472E+00	1.707E+00	1.707E+00	21.35
	969.11	118	16.60	1.392E+00	1.645E+00	1.645E+00	35.50
RA-228	338.32	145	11.40	3.399E+00	1.206E+00	1.206E+00	55.25
	911.07	216	27.70*	1.472E+00	1.707E+00	1.707E+00	21.35
	969.11	118	16.60	1.392E+00	1.645E+00	1.645E+00	35.50
TH-228	84.40	------	1.21	4.941E+00	------ Line Not Found		------
	238.60	954	44.60*	4.442E+00	1.551E+00	1.551E+00	10.80
	300.10	85	3.41	3.731E+00	2.142E+00	2.142E+00	79.09
TH-230	609.31	305	46.30*	2.101E+00	1.009E+00	1.009E+00	19.59
	768.36	21	5.04	1.716E+00	7.823E-01	7.823E-01	191.85
	934.06	------	3.21	1.440E+00	------ Line Not Found		------
	1120.29	63	15.10	1.218E+00	1.104E+00	1.104E+00	52.96
	1238.11	------	5.94	1.113E+00	------ Line Not Found		------
	1377.67	------	4.11	1.013E+00	------ Line Not Found		------
	1764.49	23	15.80	8.365E-01	5.558E-01	5.558E-01	71.54
TH-232	338.32	145	11.40	3.399E+00	1.206E+00	1.206E+00	37.74
	911.07	216	27.70*	1.472E+00	1.707E+00	1.707E+00	21.35
	969.11	118	16.60	1.392E+00	1.645E+00	1.645E+00	35.50
TH-234	63.29	65	3.80*	2.720E+00	2.031E+00	2.031E+00	121.78

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	92.38	77	5.41	5.483E+00	8.314E-01	8.314E-01	120.50
U-234	609.31	305	46.30*	2.101E+00	1.009E+00	1.009E+00	19.59
	768.36	21	5.04	1.716E+00	7.823E-01	7.823E-01	191.85
	934.06	------	3.21	1.440E+00	------ Line Not Found		------
	1120.29	63	15.10	1.218E+00	1.104E+00	1.104E+00	52.96
	1238.11	------	5.94	1.113E+00	------ Line Not Found		------
	1377.67	------	4.11	1.013E+00	------ Line Not Found		------
	1764.49	23	15.80	8.365E-01	5.558E-01	5.558E-01	71.54
U-235	89.95	------	2.70	5.310E+00	------ Line Not Found		------
	93.35	77	4.50	5.483E+00	9.995E-01	9.995E-01	122.39
	105.00	------	2.10	5.910E+00	------ Line Not Found		------
	143.76	82	10.50*	5.927E+00	4.239E-01	4.239E-01	116.58
	163.35	------	4.70	5.647E+00	------ Line Not Found		------
	185.71	185	54.00	5.257E+00	2.096E-01	2.096E-01	42.57
	205.31	------	4.70	4.943E+00	------ Line Not Found		------
NP-237	86.50	142	12.60*	5.142E+00	7.072E-01	7.072E-01	46.23
	95.87	------	2.60	5.609E+00	------ Line Not Found		------
U-238	63.29	65	3.80*	2.720E+00	2.031E+00	2.031E+00	121.78
	92.38	77	5.41	5.483E+00	8.314E-01	8.314E-01	119.45
AM-243	74.67	380	66.00*	4.076E+00	4.553E-01	4.553E-01	24.06
	86.72	142	0.34	5.142E+00	2.652E+01	2.652E+01	41.37
	117.66	------	0.55	6.083E+00	------ Line Not Found		------
	142.18	------	0.13	5.960E+00	------ Line Not Found		------
ANH-511	511.00	105	100.00*	2.436E+00	1.391E-01	1.391E-01	61.95

Flag: "*" = Keyline

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

Total number of lines in spectrum 27
Number of unidentified lines 1
Number of lines tentatively identified by NID 26 96.30%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.650E+01	3.650E+01	0.340E+01	9.31	
CD-109	464.00D	1.02	2.395E+00	2.445E+00	1.011E+00	41.37	
SN-126	1.00E+05Y	1.00	2.408E-01	2.408E-01	0.996E-01	41.37	
CE-141	32.50D	1.34	9.195E-02	1.234E-01	1.426E-01	115.60	
TL-208	1.41E+10Y	1.00	5.124E-01	5.124E-01	0.873E-01	17.04	
BI-211	7.04E+08Y	1.00	3.097E+00	3.097E+00	0.558E+00	18.00	
PB-212	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.167E+00	10.80	
PO-212	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.167E+00	10.80	
BI-214	1600.00Y	1.00	1.009E+00	1.009E+00	0.198E+00	19.59	
PB-214	1600.00Y	1.00	1.077E+00	1.077E+00	0.202E+00	18.74	
PO-214	1600.00Y	1.00	1.077E+00	1.077E+00	0.202E+00	18.74	
PO-216	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.167E+00	10.80	
PO-218	1600.00Y	1.00	1.077E+00	1.077E+00	0.202E+00	18.74	
RA-224	1.41E+10Y	1.00	3.297E+00	3.297E+00	1.556E+00	47.21	
RA-226	1600.00Y	1.00	1.009E+00	1.009E+00	0.198E+00	19.59	
AC-228	1.41E+10Y	1.00	1.707E+00	1.707E+00	0.364E+00	21.35	
RA-228	1.41E+10Y	1.00	1.707E+00	1.707E+00	0.364E+00	21.35	
TH-228	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.167E+00	10.80	
TH-230	4.47E+09Y	1.00	1.009E+00	1.009E+00	0.198E+00	19.59	
TH-232	1.41E+10Y	1.00	1.707E+00	1.707E+00	0.364E+00	21.35	
TH-234	4.47E+09Y	1.00	2.031E+00	2.031E+00	2.474E+00	121.78	
U-234	4.47E+09Y	1.00	1.009E+00	1.009E+00	0.198E+00	19.59	
U-235	7.04E+08Y	1.00	4.239E-01	4.239E-01	4.941E-01	116.58	
NP-237	2.14E+06Y	1.00	7.072E-01	7.072E-01	3.269E-01	46.23	
U-238	4.47E+09Y	1.00	2.031E+00	2.031E+00	2.474E+00	121.78	
AM-243	7380.00Y	1.00	4.553E-01	4.553E-01	1.095E-01	24.06	
ANH-511	1.00E+09Y	1.00	1.391E-01	1.391E-01	0.862E-01	61.95	
	Total Activity :		7.051E+01	7.060E+01			

Grand Total Activity : 7.051E+01 7.060E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	209.63	84	266	1.27	420.01	414	10	1.16E-02	76.3	4.87E+00	T
0	270.07	102	151	1.62	540.86	536	9	1.42E-02	47.7	4.05E+00	T
0	727.68	56	32	1.86	1455.86	1451	10	7.81E-03	46.2	1.80E+00	T
4	964.89	52	23	2.55	1930.08	1924	21	7.18E-03	52.8	1.40E+00	T
0	1731.25	10	12	1.39	3461.89	3454	10	1.35E-03	****	8.47E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:04:06.15

```
*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                DETECTOR DATA                                *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232424001.CNF;1   *
* Acquisition date  : 7-JUL-2009 06:03:34.  Detector SN#     :                *
* Detector ID       : GAM01                 Sensitivity      : 5.00000       *
* Geometry          : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:01.08          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                                 SAMPLE DATA                                 *
*                                                                             *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID           *
* Sample ID         : G232424001            Analyst initials: MXR1            *
* Batch Number      : 881219                Sample Quantity : 1.16500E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                   QC DATA                                   *
*                                                                             *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56.1MS Isotope      :                  *
* MSD ID           :                       MSD Isotope     :                  *
* LCS ID           : 1032-A                LCS Isotope     :                  *
*******************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.650E+01	3.397E+00	5.387E-01	3.829E-02	67.753
CD-109	2.445E+00	1.011E+00	1.608E+00	1.480E-01	1.520
SN-126	2.408E-01	9.962E-02	1.581E-01	1.451E-02	1.523
CE-141	1.234E-01	1.426E-01	1.128E-01	6.629E-03	1.094
TL-208	5.124E-01	8.731E-02	6.600E-02	4.182E-03	7.764
BI-211	3.097E+00	5.576E-01	3.744E-01	2.371E-02	8.273
PB-212	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
PO-212	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
BI-214	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
PB-214	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
PO-214	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
PO-216	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
PO-218	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
RA-224	3.297E+00	1.556E+00	1.158E+00	6.661E-02	2.847
RA-226	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
AC-228	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
RA-228	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
TH-228	1.551E+00	1.674E-01	1.017E-01	7.412E-03	15.244

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
TH-232	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
TH-234	2.031E+00	2.474E+00	2.370E+00	4.236E-01	0.857
U-234	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
U-235	4.239E-01	4.941E-01	3.857E-01	6.271E-02	1.099
NP-237	7.072E-01	3.269E-01	4.575E-01	1.032E-01	1.546
U-238	2.031E+00	2.474E+00	2.370E+00	4.236E-01	0.857
AM-243	4.553E-01	1.095E-01	9.747E-02	8.214E-03	4.671
ANH-511	1.391E-01	8.617E-02	5.121E-02	2.836E-03	2.716

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-3.094E-01		3.832E-01	5.712E-01	3.733E-02	-0.542
NA-22	9.293E-04		5.512E-02	9.217E-02	5.908E-03	0.010
NA-24	8.999E-02		9.450E-02	Half-Life too short		
AL-26	5.647E-03		2.955E-02	5.056E-02	2.915E-03	0.112
TI-44	3.806E-01	+	6.581E-02	8.887E-02	7.623E-03	4.283
SC-46	-5.948E-02		4.950E-02	7.027E-02	4.938E-03	-0.846
V-48	6.140E-02		8.757E-02	1.519E-01	1.030E-02	0.404
CR-51	-4.172E-01		4.060E-01	6.174E-01	3.996E-02	-0.676
MN-52	6.055E-03		2.148E-01	3.573E-01	2.444E-02	0.017
MN-54	-1.017E-02		4.419E-02	7.091E-02	4.632E-03	-0.143
CO-56	1.167E-02		4.776E-02	8.015E-02	5.322E-03	0.146
CO-57	-1.275E-02		2.993E-02	4.645E-02	2.852E-03	-0.275
CO-58	-1.897E-02		4.339E-02	6.798E-02	4.314E-03	-0.279
FE-59	5.040E-03		1.239E-01	2.004E-01	1.412E-02	0.025
CO-60	-2.574E-03		4.905E-02	8.110E-02	5.620E-03	-0.032
ZN-65	2.571E-02		1.311E-01	1.870E-01	1.119E-02	0.138
GE-68	-2.524E-01		1.756E+00	2.792E+00	1.743E-01	-0.090
AS-73	6.306E-01		1.087E+00	1.814E+00	1.544E-01	0.348
AS-74	8.431E-02		9.965E-02	1.777E-01	9.506E-03	0.475
SE-75	4.522E-02		5.363E-02	8.302E-02	4.885E-03	0.545
BR-77	9.548E-01		8.355E+00	1.347E+01	7.444E-01	0.071
SR-82	-1.549E-01		4.727E-01	6.428E-01	3.868E-02	-0.241
RB-83	6.168E-03		8.108E-02	1.302E-01	7.200E-03	0.047
RB-84	-9.763E-02		8.775E-02	1.265E-01	8.798E-03	-0.772
KR-85	2.113E+01		1.004E+01	1.681E+01	9.304E-01	1.257
SR-85	1.068E-01		5.076E-02	8.496E-02	4.703E-03	1.257
RB-86	-2.441E-01		1.083E+00	1.708E+00	1.068E-01	-0.143
Y-88	3.207E-03		3.203E-02	5.352E-02	3.029E-03	0.060
ZR-88	1.251E-02		3.531E-02	5.870E-02	3.173E-03	0.213
Y-91	-7.012E+00		2.359E+01	3.848E+01	2.224E+00	-0.182
NB-94	2.994E-02		3.825E-02	6.759E-02	3.642E-03	0.443
NB-95	2.722E-02		5.356E-02	8.161E-02	4.835E-03	0.334
NB-95M	-4.054E-02		1.492E-01	2.138E-01	1.598E-02	-0.190
ZR-95	3.507E-02		8.511E-02	1.456E-01	1.029E-02	0.241

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	6.831E-03		1.538E-02	Half-Life too short		
ZR-97	7.031E-01		2.976E-01	Half-Life too short		
MO-99	-4.644E-01		1.006E+01	1.657E+01	2.276E+00	-0.028
TC-99M	2.103E+08		5.233E+08	Half-Life too short		
RH-101	1.323E-03		3.709E-02	6.057E-02	3.348E-03	0.022
RH-102	3.447E-03		3.510E-02	5.676E-02	3.148E-03	0.061
RU-103	-4.632E-03		4.643E-02	7.362E-02	9.225E-03	-0.063
RH-106	3.277E-01		3.880E-01	6.872E-01	7.886E-02	0.477
RU-106	3.277E-01		3.866E-01	6.872E-01	3.607E-02	0.477
AG-108M	2.910E-02		3.640E-02	6.244E-02	3.763E-03	0.466
AG-110M	1.761E-02		4.168E-02	7.175E-02	3.944E-03	0.245
IN-111	-6.609E-02		8.699E-01	1.437E+00	8.292E-02	-0.046
IN-113M	-1.806E-02		5.343E-02	8.453E-02	4.917E-03	-0.214
SN-113	-1.806E-02		5.343E-02	8.453E-02	4.917E-03	-0.214
IN-114M	7.382E-02		2.176E-01	3.284E-01	1.800E-02	0.225
CD-115	1.080E+00		7.890E+00	1.344E+01	7.419E-01	0.080
SN-117M	-4.368E-02		5.812E-02	9.500E-02	5.169E-03	-0.460
SB-122	7.341E-01		1.673E+00	2.902E+00	1.581E-01	0.253
I-123	-4.523E-01		5.828E-01	Half-Life too short		
TE-123M	-1.249E-02		3.218E-02	5.346E-02	2.950E-03	-0.234
I-124	-5.242E-01		6.852E-01	9.978E-01	5.314E-02	-0.525
SB-124	-8.253E-02		9.467E-02	1.258E-01	8.415E-03	-0.656
SB-125	8.587E-02		1.078E-01	1.843E-01	1.061E-02	0.466
TE-125M	-4.082E+00		1.081E+01	1.658E+01	1.480E+00	-0.246
I-126	2.745E-01		1.859E-01	3.466E-01	1.763E-02	0.792
SB-126	4.509E-02		1.622E-01	2.683E-01	1.486E-02	0.168
SB-127	1.070E-01		1.267E+00	2.121E+00	1.826E-01	0.050
XE-127	-1.943E-02		5.412E-02	8.598E-02	4.778E-03	-0.226
I-131	-5.347E-02		1.196E-01	1.884E-01	1.185E-02	-0.284
TE-132	-4.452E-01		5.787E-01	9.198E-01	1.293E-01	-0.484
BA-133	-1.701E-02		5.567E-02	7.692E-02	8.840E-03	-0.221
I-133	6.291E-04		1.129E-03	Half-Life too short		
CS-134	1.328E-01		5.995E-02	1.149E-01	7.208E-03	1.156
CS-135	1.545E-01		2.025E-01	3.099E-01	2.380E-02	0.499
I-135	-6.170E+07		1.183E+08	Half-Life too short		
CS-136	-7.098E-02		1.277E-01	1.934E-01	1.337E-02	-0.367
BA-137M	-5.408E-02		4.269E-02	6.313E-02	3.188E-03	-0.857
CS-137	-5.717E-02		4.512E-02	6.674E-02	3.389E-03	-0.857
CE-139	-1.267E-02		3.306E-02	5.481E-02	2.927E-03	-0.231
BA-140	-2.659E-02		2.663E-01	4.447E-01	1.444E-01	-0.060
LA-140	-4.764E-02		1.079E-01	1.652E-01	1.077E-02	-0.288
CE-143	1.242E-04		4.587E-05	Half-Life too short		
CE-144	3.885E-02		2.370E-01	3.776E-01	5.370E-02	0.103
PM-144	2.899E-02		4.016E-02	7.058E-02	3.769E-03	0.411
PR-144	1.963E+00		2.720E+00	4.780E+00	2.550E-01	0.411
PM-146	-6.797E-03		4.906E-02	7.795E-02	6.582E-03	-0.087
ND-147	-1.207E-01		5.735E-01	9.502E-01	1.273E-01	-0.127
PM-149	1.182E+01		6.959E+01	1.157E+02	1.642E+01	0.102

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-4.280E-02		1.320E-01	1.942E-01	1.257E-02	-0.220
GD-153	-6.398E-03		9.847E-02	1.395E-01	1.104E-02	-0.046
EU-154	-6.479E-03		1.531E-01	2.544E-01	2.474E-02	-0.025
EU-155	1.070E-01		1.205E-01	2.000E-01	1.461E-02	0.535
TB-160	-7.745E-02		1.787E-01	2.701E-01	1.874E-02	-0.287
HO-166M	5.116E-02		6.655E-02	1.179E-01	6.443E-03	0.434
TM-171	-1.775E+01		3.727E+01	5.227E+01	4.349E+00	-0.340
LU-176	1.103E-02		3.393E-02	5.012E-02	2.927E-03	0.220
LU-177	2.090E+00	+	1.599E+00	1.932E+00	1.080E-01	1.082
LU-177M	-7.427E-02		2.135E-01	3.362E-01	1.837E-02	-0.221
HF-181	-3.195E-03		5.276E-02	8.281E-02	4.595E-03	-0.039
W-181	1.799E-01		4.795E-01	7.067E-01	5.891E-02	0.255
TA-182	-4.000E-03		2.709E-01	4.530E-01	2.683E-02	-0.009
RE-183	7.598E-02		1.235E-01	2.134E-01	1.149E-02	0.356
RE-184	-9.442E-02		2.664E-01	4.328E-01	2.508E-02	-0.218
OS-185	1.562E-02		5.044E-02	8.622E-02	4.426E-03	0.181
RE-188	1.732E-01		1.832E-01	3.211E-01	1.764E-02	0.539
W-188	-4.641E+00		9.854E+00	1.369E+01	8.009E-01	-0.339
IR-192	5.312E-02		4.031E-02	7.108E-02	4.158E-03	0.747
AU-195	6.787E-02		2.516E-01	4.043E-01	3.138E-02	0.168
TL-200	3.700E-04		1.118E-04	Half-Life too short		
TL-201	2.826E+00		5.645E+00	9.710E+00	5.189E-01	0.291
TL-202	5.174E-02		7.743E-02	1.310E-01	7.225E-03	0.395
HG-203	2.414E-02		4.643E-02	7.869E-02	4.880E-03	0.307
BI-207	-9.732E-03		6.090E-02	9.645E-02	6.109E-03	-0.101
TL-207	-3.042E-01		7.814E-01	1.241E+00	2.049E-01	-0.245
PO-209	2.525E+00		9.416E+00	1.579E+01	1.120E+00	0.160
BI-210	1.946E+00		4.846E+00	7.954E+00	6.300E-01	0.245
PB-210	1.946E+00		4.846E+00	7.954E+00	6.300E-01	0.245
PO-210	1.946E+00		4.845E+00	7.954E+00	5.461E-01	0.245
PB-211	4.757E-01		1.111E+00	1.789E+00	1.115E+00	0.266
BI-212	8.524E-01	+	3.994E-01	6.622E-01	5.006E-02	1.287
PO-215	-3.042E-01		7.814E-01	1.241E+00	2.049E-01	-0.245
RN-219	-1.569E-01		4.796E-01	7.566E-01	1.018E-01	-0.207
RN-220	-1.814E+01		2.857E+01	4.547E+01	2.492E+00	-0.399
RA-223	-3.042E-01		7.814E-01	1.241E+00	2.049E-01	-0.245
AC-227	1.571E-01		4.507E-01	7.587E-01	1.059E-01	0.207
TH-227	1.571E-01		4.509E-01	7.587E-01	1.282E-01	0.207
TH-229	1.073E-01		5.555E-01	9.388E-01	5.164E-02	0.114
PA-231	-9.340E-01		1.784E+00	2.842E+00	3.923E-01	-0.329
TH-231	-3.042E-01		7.814E-01	1.241E+00	2.049E-01	-0.245
U-231	-1.535E-01		1.058E+00	1.492E+00	1.207E-01	-0.103
PA-233	-1.311E-02		7.955E-02	1.292E-01	7.996E-03	-0.101
PA-234	1.012E-01		3.951E-01	6.586E-01	1.189E-01	0.154
PA-234M	6.447E+00		8.859E+00	1.564E+01	1.528E+00	0.412
NP-236	5.321E-02		9.009E-02	1.556E-01	8.427E-03	0.342
NP-239	-3.624E-02		2.180E-01	3.434E-01	2.197E-02	-0.106
AM-241	2.211E-01		1.922E-01	2.974E-01	2.718E-02	0.744

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.130E-02		1.079E-01	1.753E-01	1.281E-02	0.236
CM-247	-3.627E-02		4.308E-02	6.517E-02	3.542E-03	-0.556
CF-249	7.824E-04		4.671E-02	7.585E-02	4.123E-03	0.010
CF-251	-5.841E-04		1.415E-01	2.379E-01	1.284E-02	-0.002

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232424001           *
* Acquisition date  :  7-JUL-2009 06:03:34 Detector SN#     :               *
* Detector ID       : GAM01                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.08     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232424001           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.1650E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.650E+01	3.329E+00	2.686E-01	1.698E+00
CD-109	2.445E+00	9.913E-01	8.250E-01	5.057E-01
SN-126	2.408E-01	9.763E-02	8.111E-02	4.981E-02
CE-141	1.234E-01	1.398E-01	5.758E-02	7.132E-02
TL-208	5.124E-01	8.556E-02	3.322E-02	4.366E-02
BI-211	3.097E+00	5.465E-01	1.894E-01	2.788E-01
PB-212	1.551E+00	1.641E-01	5.167E-02	8.370E-02
PO-212	1.551E+00	1.641E-01	5.167E-02	8.370E-02
BI-214	1.009E+00	1.937E-01	6.431E-02	9.880E-02
PB-214	1.077E+00	1.979E-01	6.500E-02	1.010E-01
PO-214	1.077E+00	1.979E-01	6.500E-02	1.010E-01
PO-216	1.551E+00	1.641E-01	5.167E-02	8.370E-02
PO-218	1.077E+00	1.979E-01	6.500E-02	1.010E-01
RA-224	3.297E+00	1.525E+00	5.881E-01	7.781E-01
RA-226	1.009E+00	1.937E-01	6.431E-02	9.880E-02
AC-228	1.707E+00	3.572E-01	1.320E-01	1.822E-01
RA-228	1.707E+00	3.572E-01	1.320E-01	1.822E-01
TH-228	1.551E+00	1.641E-01	5.166E-02	8.370E-02
TH-230	1.009E+00	1.937E-01	6.431E-02	9.880E-02
TH-232	1.707E+00	3.572E-01	1.320E-01	1.822E-01
TH-234	2.031E+00	2.424E+00	1.220E+00	1.237E+00
U-234	1.009E+00	1.937E-01	6.431E-02	9.880E-02
U-235	4.239E-01	4.843E-01	1.969E-01	2.471E-01
NP-237	7.072E-01	3.204E-01	2.347E-01	1.635E-01
U-238	2.031E+00	2.424E+00	1.220E+00	1.237E+00
AM-243	4.553E-01	1.073E-01	5.008E-02	5.477E-02
ANH-511	1.391E-01	8.444E-02	2.581E-02	4.308E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-3.094E-01	3.756E-01	2.881E-01	1.916E-01	NOT IDENT.
NA-22	9.293E-04	5.402E-02	4.601E-02	2.756E-02	NOT IDENT.
NA-24	8.999E+04	1.852E+05	0.000E+00	9.450E+04	SHORT HLIF
AL-26	5.647E-03	2.896E-02	2.515E-02	1.477E-02	NOT IDENT.
TI-44	3.806E-01	6.449E-02	4.564E-02	3.291E-02	FAIL ABUN
SC-46	-5.948E-02	4.851E-02	3.521E-02	2.475E-02	FAIL ABUN
V-48	6.140E-02	8.582E-02	7.604E-02	4.379E-02	NOT IDENT.
CR-51	-4.172E-01	3.979E-01	3.126E-01	2.030E-01	NOT IDENT.
MN-52	6.055E-03	2.105E-01	1.782E-01	1.074E-01	NOT IDENT.
MN-54	-1.017E-02	4.330E-02	3.556E-02	2.209E-02	NOT IDENT.
CO-56	1.167E-02	4.681E-02	4.018E-02	2.388E-02	NOT IDENT.
CO-57	-1.275E-02	2.934E-02	2.375E-02	1.497E-02	NOT IDENT.
CO-58	-1.897E-02	4.252E-02	3.410E-02	2.170E-02	NOT IDENT.
FE-59	5.040E-03	1.214E-01	1.002E-01	6.195E-02	NOT IDENT.
CO-60	-2.574E-03	4.807E-02	4.047E-02	2.452E-02	NOT IDENT.
ZN-65	2.571E-02	1.285E-01	9.348E-02	6.554E-02	NOT IDENT.
GE-68	-2.524E-01	1.720E+00	1.396E+00	8.778E-01	NOT IDENT.
AS-73	6.306E-01	1.065E+00	9.351E-01	5.433E-01	NOT IDENT.
AS-74	8.431E-02	9.765E-02	8.940E-02	4.982E-02	NOT IDENT.
SE-75	4.522E-02	5.256E-02	4.212E-02	2.682E-02	NOT IDENT.
BR-77	9.548E-01	8.188E+00	6.785E+00	4.178E+00	FAIL ABUN
SR-82	-1.549E-01	4.633E-01	3.226E-01	2.364E-01	NOT IDENT.
RB-83	6.168E-03	7.946E-02	6.563E-02	4.054E-02	NOT IDENT.
RB-84	-9.763E-02	8.600E-02	6.339E-02	4.388E-02	NOT IDENT.
KR-85	2.113E+01	9.842E+00	8.471E+00	5.021E+00	NOT IDENT.
SR-85	1.068E-01	4.974E-02	4.281E-02	2.538E-02	NOT IDENT.
RB-86	-2.441E-01	1.061E+00	8.543E-01	5.414E-01	NOT IDENT.
Y-88	3.207E-03	3.139E-02	2.662E-02	1.601E-02	NOT IDENT.
ZR-88	1.251E-02	3.460E-02	2.966E-02	1.765E-02	NOT IDENT.
Y-91	-7.012E+00	2.312E+01	1.922E+01	1.179E+01	NOT IDENT.
NB-94	2.994E-02	3.748E-02	3.395E-02	1.912E-02	NOT IDENT.
NB-95	2.722E-02	5.249E-02	4.096E-02	2.678E-02	NOT IDENT.
NB-95M	-4.054E-02	1.462E-01	1.086E-01	7.458E-02	NOT IDENT.
ZR-95	3.507E-02	8.341E-02	7.308E-02	4.256E-02	NOT IDENT.
NB-97	6.831E+03	3.015E+04	0.000E+00	1.538E+04	SHORT HLIF
ZR-97	7.031E+05	5.832E+05	0.000E+00	2.976E+05	SHORT HLIF
MO-99	-4.644E-01	9.859E+00	8.317E+00	5.030E+00	NOT IDENT.
TC-99M	2.103E+14	1.026E+15	0.000E+00	5.233E+14	SHORT HLIF
RH-101	1.323E-03	3.635E-02	3.082E-02	1.855E-02	NOT IDENT.
RH-102	3.447E-03	3.440E-02	2.863E-02	1.755E-02	NOT IDENT.
RU-103	-4.632E-03	4.551E-02	3.711E-02	2.322E-02	FAIL ABUN
RH-106	3.277E-01	3.803E-01	3.456E-01	1.940E-01	FAIL ABUN
RU-106	3.277E-01	3.788E-01	3.456E-01	1.933E-01	FAIL ABUN
AG-108M	2.910E-02	3.567E-02	3.152E-02	1.820E-02	NOT IDENT.
AG-110M	1.761E-02	4.084E-02	3.607E-02	2.084E-02	NOT IDENT.
IN-111	-6.609E-02	8.525E-01	7.298E-01	4.350E-01	NOT IDENT.
IN-113M	-1.806E-02	5.236E-02	4.271E-02	2.672E-02	NOT IDENT.
SN-113	-1.806E-02	5.236E-02	4.271E-02	2.672E-02	NOT IDENT.
IN-114M	7.382E-02	2.133E-01	1.672E-01	1.088E-01	NOT IDENT.
CD-115	1.080E+00	7.732E+00	6.773E+00	3.945E+00	NOT IDENT.
SN-117M	-4.368E-02	5.696E-02	4.845E-02	2.906E-02	NOT IDENT.
SB-122	7.341E-01	1.639E+00	1.461E+00	8.363E-01	NOT IDENT.
I-123	-4.523E+05	1.142E+06	0.000E+00	5.828E+05	SHORT HLIF
TE-123M	-1.249E-02	3.154E-02	2.726E-02	1.609E-02	NOT IDENT.
I-124	-5.242E-01	6.715E-01	5.020E-01	3.426E-01	NOT IDENT.
SB-124	-8.253E-02	9.278E-02	6.263E-02	4.733E-02	FAIL ABUN
SB-125	8.587E-02	1.056E-01	9.307E-02	5.390E-02	NOT IDENT.
TE-125M	-4.082E+00	1.060E+01	8.487E+00	5.407E+00	NOT IDENT.
I-126	2.745E-01	1.822E-01	1.742E-01	9.295E-02	NOT IDENT.
SB-126	4.509E-02	1.589E-01	1.347E-01	8.108E-02	FAIL ABUN
SB-127	1.070E-01	1.242E+00	1.066E+00	6.337E-01	NOT IDENT.
XE-127	-1.943E-02	5.304E-02	4.374E-02	2.706E-02	FAIL ABUN
I-131	-5.347E-02	1.172E-01	9.526E-02	5.982E-02	NOT IDENT.
TE-132	-4.452E-01	5.671E-01	4.673E-01	2.893E-01	NOT IDENT.
BA-133	-1.701E-02	5.455E-02	3.891E-02	2.783E-02	NOT IDENT.
I-133	6.291E+02	2.212E+03	0.000E+00	1.129E+03	SHORT HLIF
CS-134	1.328E-01	5.875E-02	5.764E-02	2.997E-02	NOT IDENT.
CS-135	1.545E-01	1.984E-01	1.572E-01	1.012E-01	NOT IDENT.
I-135	-6.170E+13	2.319E+14	0.000E+00	1.183E+14	SHORT HLIF
CS-136	-7.098E-02	1.251E-01	9.673E-02	6.383E-02	FAIL ABUN
BA-137M	-5.408E-02	4.183E-02	3.173E-02	2.134E-02	NOT IDENT.
CS-137	-5.717E-02	4.422E-02	3.354E-02	2.256E-02	NOT IDENT.
CE-139	-1.267E-02	3.240E-02	2.794E-02	1.653E-02	NOT IDENT.
BA-140	-2.659E-02	2.609E-01	2.240E-01	1.331E-01	NOT IDENT.
LA-140	-4.764E-02	1.057E-01	8.230E-02	5.395E-02	NOT IDENT.
CE-143	1.242E+02	8.990E+01	0.000E+00	4.587E+01	SHORT HLIF
CE-144	3.885E-02	2.323E-01	1.929E-01	1.185E-01	NOT IDENT.
PM-144	2.899E-02	3.936E-02	3.546E-02	2.008E-02	NOT IDENT.

PR-144	1.963E+00	2.665E+00	2.401E+00	1.360E+00	NOT IDENT.
PM-146	-6.797E-03	4.808E-02	3.933E-02	2.453E-02	NOT IDENT.
ND-147	-1.207E-01	5.621E-01	4.787E-01	2.868E-01	NOT IDENT.
PM-149	1.182E+01	6.820E+01	5.866E+01	3.480E+01	NOT IDENT.
EU-152	-4.280E-02	1.293E-01	9.828E-02	6.598E-02	FAIL ABUN
GD-153	-6.398E-03	9.650E-02	7.151E-02	4.924E-02	NOT IDENT.
EU-154	-6.479E-03	1.500E-01	1.270E-01	7.654E-02	NOT IDENT.
EU-155	1.070E-01	1.181E-01	1.024E-01	6.025E-02	FAIL ABUN
TB-160	-7.745E-02	1.751E-01	1.354E-01	8.936E-02	FAIL ABUN
HO-166M	5.116E-02	6.522E-02	5.924E-02	3.328E-02	NOT IDENT.
TM-171	-1.775E+01	3.652E+01	2.689E+01	1.863E+01	NOT IDENT.
LU-176	1.103E-02	3.325E-02	2.539E-02	1.696E-02	FAIL ABUN
LU-177	2.090E+00	1.567E+00	9.823E-01	7.997E-01	FAIL ABUN
LU-177M	-7.427E-02	2.092E-01	1.698E-01	1.067E-01	FAIL ABUN
HF-181	-3.195E-03	5.170E-02	4.176E-02	2.638E-02	NOT IDENT.
W-181	1.799E-01	4.699E-01	3.636E-01	2.398E-01	NOT IDENT.
TA-182	-4.000E-03	2.655E-01	2.263E-01	1.355E-01	FAIL ABUN
RE-183	7.598E-02	1.210E-01	1.088E-01	6.175E-02	FAIL ABUN
RE-184	-9.442E-02	2.611E-01	2.197E-01	1.332E-01	NOT IDENT.
OS-185	1.562E-02	4.943E-02	4.335E-02	2.522E-02	NOT IDENT.
RE-188	1.732E-01	1.795E-01	1.638E-01	9.160E-02	NOT IDENT.
W-188	-4.641E+00	9.657E+00	6.938E+00	4.927E+00	FAIL ABUN
IR-192	5.312E-02	3.950E-02	3.600E-02	2.015E-02	FAIL ABUN
AU-195	6.787E-02	2.466E-01	2.071E-01	1.258E-01	FAIL ABUN
TL-200	3.700E+02	2.191E+02	0.000E+00	1.118E+02	SHORT HLIF
TL-201	2.826E+00	5.532E+00	4.949E+00	2.823E+00	NOT IDENT.
TL-202	5.174E-02	7.588E-02	6.613E-02	3.872E-02	NOT IDENT.
HG-203	2.414E-02	4.550E-02	3.990E-02	2.322E-02	NOT IDENT.
BI-207	-9.732E-03	5.968E-02	4.824E-02	3.045E-02	FAIL ABUN
TL-207	-3.042E-01	7.658E-01	6.282E-01	3.907E-01	FAIL ABUN
PO-209	2.525E+00	9.228E+00	7.910E+00	4.708E+00	NOT IDENT.
BI-210	1.946E+00	4.749E+00	4.105E+00	2.423E+00	NOT IDENT.
PB-210	1.946E+00	4.749E+00	4.105E+00	2.423E+00	NOT IDENT.
PO-210	1.946E+00	4.748E+00	4.105E+00	2.423E+00	NOT IDENT.
PB-211	4.757E-01	1.088E+00	9.037E-01	5.553E-01	NOT IDENT.
BI-212	8.524E-01	3.914E-01	3.325E-01	1.997E-01	FAIL ABUN
PO-215	-3.042E-01	7.658E-01	6.282E-01	3.907E-01	FAIL ABUN
RN-219	-1.569E-01	4.700E-01	3.823E-01	2.398E-01	FAIL ABUN
RN-220	-1.814E+01	2.800E+01	2.290E+01	1.428E+01	NOT IDENT.
RA-223	-3.042E-01	7.658E-01	6.282E-01	3.907E-01	FAIL ABUN
AC-227	1.571E-01	4.416E-01	3.850E-01	2.253E-01	FAIL ABUN
TH-227	1.571E-01	4.419E-01	3.850E-01	2.254E-01	FAIL ABUN
TH-229	1.073E-01	5.444E-01	4.778E-01	2.777E-01	FAIL ABUN
PA-231	-9.340E-01	1.749E+00	1.441E+00	8.921E-01	FAIL ABUN
TH-231	-3.042E-01	7.658E-01	6.282E-01	3.907E-01	FAIL ABUN
U-231	-1.535E-01	1.037E+00	7.645E-01	5.289E-01	FAIL ABUN
PA-233	-1.311E-02	7.796E-02	6.545E-02	3.978E-02	FAIL ABUN
PA-234	1.012E-01	3.872E-01	3.298E-01	1.975E-01	FAIL ABUN
PA-234M	6.447E+00	8.682E+00	7.828E+00	4.430E+00	NOT IDENT.
NP-236	5.321E-02	8.829E-02	7.934E-02	4.505E-02	NOT IDENT.
NP-239	-3.624E-02	2.137E-01	1.756E-01	1.090E-01	FAIL ABUN
AM-241	2.211E-01	1.883E-01	1.531E-01	9.609E-02	NOT IDENT.
CM-243	4.130E-02	1.058E-01	8.980E-02	5.396E-02	FAIL ABUN
CM-247	-3.627E-02	4.222E-02	3.293E-02	2.154E-02	NOT IDENT.
CF-249	7.824E-04	4.577E-02	3.834E-02	2.335E-02	NOT IDENT.
CF-251	-5.841E-04	1.387E-01	1.212E-01	7.076E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	207.8987
46.50	207.8987
46.50	207.8987
48.70	256.1854
49.72	242.2876
51.35	226.5355
52.39	208.3465
52.97	217.9243
53.15	218.0013
53.44	232.6662
54.07	238.1515
56.28	271.5349
56.28	271.5369
57.37	0.0000
57.53	230.3019
57.53	230.3030
57.60	230.3321
57.98	227.5613
57.98	227.5613
59.32	212.6854
59.32	212.6854
59.40	212.7168
59.54	197.0100
59.72	197.0749
60.01	209.7988
61.10	246.5654
61.14	246.5832
61.30	246.6541
63.00	266.4327
63.29	266.5689
63.29	266.5689
63.58	266.7051
64.28	292.4639
65.12	296.0742
65.20	296.1154
65.20	296.1154
66.05	317.2762
66.72	320.8314
66.83	327.2771
66.91	327.3225
67.20	327.4836
67.20	327.4836
67.75	305.4030
67.85	296.3931
68.90	290.5080
68.90	290.5080
69.30	293.3736
69.67	296.7633
70.82	303.7552
70.82	303.7552
70.83	303.7595
72.80	304.1997
72.87	304.2342
72.87	304.2342
74.67	305.1123
74.81	305.1799
74.81	305.1799
74.81	305.1799
74.81	305.1799
74.81	305.1799
74.81	305.1799
74.97	305.2576
75.28	305.4088
75.70	305.6103
77.11	306.2868
77.11	306.2868
77.11	306.2868

77.11	306.2868
77.11	306.2868
77.11	306.2868
78.38	318.8200
79.62	294.9825
79.80	288.5419
79.80	288.5419
80.11	288.6783
80.18	288.7094
80.30	326.2848
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80.57	308.4660
81.00	378.8922
81.07	396.8995
81.07	396.8995
81.07	396.8995
81.07	396.8995
82.60	311.0476
83.37	296.6521
83.78	311.5941
83.78	311.5941
83.78	311.5941
83.78	311.5941
84.21	298.6632
84.40	292.1820
84.90	280.8978
85.43	274.5399
86.29	383.5224
86.50	383.6397
86.54	390.2475
86.59	390.2765
86.72	390.3497
86.79	444.7465
86.94	444.8433
87.30	458.9229
87.30	458.9229
87.30	458.9229
87.30	458.9229
87.30	458.9229
87.30	458.9229
87.57	406.3310
87.88	372.8555
88.03	412.5404
88.36	359.9049
88.47	359.9615
89.95	413.6715
91.11	414.3486
92.29	346.4145
92.38	346.4575
92.38	346.4575
93.35	346.9255
94.00	237.9620
94.67	234.8490
94.67	234.8501
94.90	243.2550
94.90	243.2550
94.90	243.2550
94.90	243.2550
95.87	265.2665
95.87	265.2665
96.73	240.5226
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98.44	241.0752
98.88	227.8160
99.55	217.9597
99.55	217.9597
99.86	224.7592
100.00	224.8011
100.10	230.4246
103.18	271.7872
103.76	232.6539
105.00	224.0208
105.31	224.1098
108.00	270.0797
109.28	259.1963
111.00	264.2890
111.00	264.2890

111.76	269.0793
112.95	258.1033
115.19	274.7705
116.30	272.8561
117.00	246.8057
117.00	246.8057
117.66	241.2825
121.11	253.7518
121.62	252.7547
121.78	263.1436
122.06	263.2298
122.32	243.7620
122.32	243.7620
122.32	243.7620
122.32	243.7620
123.07	268.1429
127.23	253.2383
129.76	259.7610
131.20	301.9950
133.02	229.2802
133.54	245.7159
135.34	269.5376
136.00	254.8448
136.25	249.6577
136.48	249.7207
140.51	237.9554
140.51	0.0000
142.18	245.4309
142.65	232.8510
143.76	257.8503
144.24	257.9795
144.24	257.9795
144.24	257.9795
144.24	257.9795
145.22	258.2446
145.44	258.3026
147.16	252.3832
152.43	273.9091
152.70	256.6670
153.22	239.8613
154.21	216.8928
154.21	216.8928
154.21	216.8928
154.21	216.8928
155.03	221.5372
156.02	249.4763
158.56	274.3079
159.00	0.0000
159.00	268.1492
160.31	240.6565
161.27	238.1850
162.32	243.8260
162.64	255.6026
163.35	251.2750
163.89	263.1190
165.85	252.7823
167.43	223.3255
171.28	236.8419
171.86	220.6285
172.10	232.4824
176.55	223.4107
176.60	232.5412
181.06	202.1720
184.41	257.1487
185.71	235.3789
186.00	235.4395
190.27	206.7837
192.34	221.9531
193.63	210.1662
197.04	202.4241
198.01	212.8146
198.60	230.5852
200.40	200.2076
201.83	243.3354
202.84	239.9434
205.31	233.3849
208.36	219.3500
208.81	219.4303

209.75	196.7015
209.75	196.7015
210.97	216.4359
215.65	186.7051
216.55	195.3322
218.09	215.4130
222.10	191.4555
223.80	196.4567
226.40	207.3172
227.00	219.7824
227.08	219.7965
227.20	219.8159
228.16	203.7908
228.18	203.7941
228.18	203.7941
231.56	0.0000
235.69	202.2845
236.00	199.2656
236.00	199.2656
238.60	181.4182
238.63	181.4225
238.63	181.4225
238.63	181.4225
239.00	181.4730
240.98	181.7412
241.98	181.8767
241.98	181.8767
241.98	181.8767
244.69	182.2416
245.39	182.3353
247.94	148.4613
248.90	147.0169
249.79	170.3416
252.40	171.6328
252.85	173.6289
252.85	173.6289
254.15	0.0000
256.20	168.2121
256.20	168.2121
260.50	176.5286
260.90	172.6760
262.80	154.3475
264.65	126.7682
268.24	150.6188
268.79	141.2578
269.46	149.1750
269.46	149.1750
269.46	149.1750
269.46	149.1750
271.23	152.5027
273.65	160.6276
276.40	157.7734
277.35	148.0087
277.60	152.9684
277.60	152.9684
278.00	145.1114
278.60	149.1199
279.20	152.1460
279.53	143.2853
280.46	164.1383
281.68	163.2829
283.67	158.5474
284.30	164.5613
285.00	160.6701
285.90	145.8807
286.10	148.8762
286.10	148.8762
287.40	142.0508
288.45	0.0000
290.67	167.2438
290.80	167.2592
291.72	165.7652
293.26	0.0000
293.70	146.8294
295.21	145.7750
295.21	145.7750
295.21	145.7750
295.96	145.8463

296.50	145.8953
297.23	145.9644
298.57	146.0913
299.80	146.2072
299.80	146.2072
300.09	146.2339
300.09	146.2339
300.09	146.2339
300.10	146.2339
300.12	146.2361
301.29	146.3453
302.84	134.8512
303.76	134.9312
303.91	139.7629
304.40	147.8401
304.40	147.8401
304.84	147.8828
306.84	138.4126
308.46	147.0114
311.98	151.3733
316.51	110.3073
318.01	126.6155
319.02	145.9534
319.41	145.9885
320.08	135.9056
323.87	132.1542
323.87	132.1542
323.87	132.1542
323.87	132.1542
325.23	163.8031
328.77	120.3101
333.44	137.4146
334.20	114.5635
334.20	114.5635
334.30	114.5703
338.28	119.9689
338.28	119.9689
338.28	119.9689
338.28	119.9689
338.32	119.9707
338.32	119.9707
338.32	119.9707
340.50	159.3443
340.57	159.3514
344.27	144.0567
345.85	113.9781
350.59	0.0000
351.07	114.0454
351.92	110.5870
351.92	110.5870
351.92	110.5870
355.39	0.0000
356.01	111.0538
364.48	112.4182
366.43	110.4560
367.43	94.8782
367.94	0.0000
369.80	120.0590
374.96	93.1800
383.85	106.2553
387.95	103.3265
388.63	112.8581
391.69	114.0974
391.69	114.0974
392.90	95.1430
398.62	106.0333
400.65	94.4702
401.10	100.8636
401.81	104.0861
402.60	111.5673
404.84	91.4852
410.95	101.3796
411.60	103.5480
413.65	111.1379
414.70	102.6431
415.30	99.4667
415.76	104.8383
417.63	0.0000

418.52	95.3434
423.70	82.7043
427.08	74.2380
427.89	79.6491
432.53	96.0156
433.93	69.0928
439.47	83.3540
439.56	83.3575
439.89	69.2959
443.98	91.1329
444.90	92.2580
445.03	92.2645
445.03	92.2645
445.03	92.2645
445.03	92.2645
453.90	79.5786
463.38	71.1771
468.07	116.3289
473.00	80.2982
475.06	82.5771
475.35	69.3744
476.78	71.6234
477.59	94.7987
477.96	101.4308
482.03	83.9472
484.57	87.3622
487.03	83.0315
490.36	0.0000
492.35	67.6961
497.08	75.6243
507.63	0.0000
510.53	0.0000
510.84	69.3739
511.00	69.3796
511.85	69.4052
511.85	69.4052
513.99	69.9182
513.99	69.9182
520.41	71.9121
520.65	71.9199
527.90	68.5373
528.96	0.0000
529.64	62.2718
529.87	0.0000
531.02	72.2422
537.32	69.7192
543.00	66.2561
546.56	0.0000
549.76	72.8145
552.65	70.1685
555.20	52.9094
563.23	65.8986
563.90	68.6627
568.70	76.1367
569.32	73.4023
569.50	73.4082
569.67	71.5787
573.80	70.7795
574.00	70.7851
574.64	73.5605
578.91	66.0117
579.30	0.0000
583.14	65.5086
585.48	66.1849
591.81	65.7339
592.07	65.7409
593.00	73.1753
595.88	59.3484
600.56	69.6771
602.52	0.0000
602.71	87.1696
602.71	87.1696
603.60	67.7664
604.41	66.6801
604.70	75.9923
609.31	68.9812
609.31	68.9812
609.31	68.9812

609.31	68.9812
610.33	69.0083
612.46	71.5549
614.37	73.1640
618.01	77.1625
621.84	61.8202
621.84	61.8202
631.29	64.8627
633.02	61.1422
633.10	61.1438
634.78	60.2406
635.90	66.8589
636.97	57.4645
645.85	63.3261
646.12	62.3874
656.30	51.2354
657.75	63.6026
657.90	0.0000
661.65	84.6087
661.65	84.6087
664.57	0.0000
666.33	42.8522
666.33	42.8522
675.00	49.6729
677.61	63.1044
685.20	62.3165
692.80	68.2526
695.00	41.3676
696.49	56.7904
696.49	56.7904
697.00	57.7632
697.49	72.2168
698.33	81.8685
698.50	78.9831
699.00	82.8506
702.63	53.0530
706.10	71.4671
706.58	0.0000
706.67	75.3454
709.31	58.0107
711.68	45.4785
713.82	60.0368
717.42	57.2023
720.50	59.3118
721.93	0.0000
722.20	64.7412
722.78	72.8485
722.78	72.8485
722.89	72.8522
722.95	64.7575
723.30	64.7656
724.18	58.3066
727.18	60.3123
733.00	60.1054
735.90	53.6599
739.58	61.5404
742.81	61.6080
744.21	55.7656
747.13	60.7164
751.79	60.8103
752.31	61.8018
753.82	55.9438
755.35	53.0271
756.15	55.9869
756.87	56.9833
763.93	52.5195
765.79	52.5508
766.41	44.3496
766.84	44.3551
768.36	39.4463
768.36	39.4463
768.36	39.4463
768.36	39.4463
776.49	52.7344
778.00	61.3325
778.57	56.3974
778.89	56.4030
783.80	65.4119

785.46	70.4054
792.07	89.4331
795.84	41.7857
796.30	42.7869
801.93	53.8286
805.60	51.8946
810.29	51.9708
810.76	49.9792
815.85	44.0516
817.79	48.0855
818.51	56.1121
819.60	37.0867
826.30	58.2563
828.27	0.0000
831.60	54.3270
831.96	54.3322
834.83	58.4078
836.80	0.0000
846.75	50.5347
848.13	47.5221
856.28	0.0000
856.80	70.9639
860.37	54.8016
867.32	57.9658
867.82	52.8887
871.10	58.0312
873.19	55.0112
874.81	49.9415
875.33	0.0000
876.40	41.8068
879.36	51.0291
880.27	57.1676
880.51	54.1089
881.50	65.3578
883.24	43.9343
884.67	37.8202
889.25	64.4827
896.60	49.2340
898.02	45.1494
899.00	45.1623
903.28	62.8030
911.07	51.5002
911.07	51.5002
911.07	51.5002
919.63	50.4787
920.93	52.6772
925.00	51.7041
925.24	48.6053
926.50	46.5535
934.06	44.5789
934.06	44.5789
934.06	44.5789
934.06	44.5789
935.52	28.0033
937.48	36.3202
944.10	39.5066
946.00	50.9691
949.00	58.2996
962.29	24.3804
964.01	38.3299
966.15	47.0687
968.20	47.0951
969.11	47.1072
969.11	47.1072
969.11	47.1072
977.42	53.5089
980.50	57.7540
983.50	44.1390
989.30	48.4179
996.32	64.3270
1001.03	42.2344
1001.68	46.4664
1004.76	63.4146
1021.30	0.0000
1024.50	0.0000
1034.80	43.6766
1037.82	39.4462
1038.57	46.9176

1038.76	0.0000
1045.16	39.5203
1046.59	38.4680
1048.07	52.3783
1050.47	41.7136
1050.47	41.7136
1063.62	40.7813
1076.63	62.4491
1077.35	59.2297
1085.78	50.7224
1099.22	56.3062
1112.02	54.3115
1112.84	46.5632
1115.52	50.7340
1120.29	54.4214
1120.29	54.4214
1120.29	54.4214
1120.29	54.4214
1120.51	54.4263
1121.28	45.3634
1124.00	0.0000
1129.67	43.6367
1131.51	0.0000
1147.95	0.0000
1167.94	60.5537
1173.22	69.8151
1175.09	58.8177
1177.93	56.0979
1189.05	62.6986
1204.90	62.0028
1205.75	0.0000
1213.00	75.1003
1221.42	72.4585
1230.97	68.8902
1235.34	73.6189
1236.41	0.0000
1238.11	75.5288
1238.11	75.5288
1238.11	75.5288
1238.11	75.5288
1238.25	75.5321
1246.25	69.1281
1260.41	0.0000
1271.85	46.0372
1274.45	43.2429
1274.54	43.2448
1291.56	41.5186
1298.22	0.0000
1312.09	33.1742
1325.50	35.1708
1325.50	35.1708
1332.49	32.3675
1333.61	33.3266
1360.21	19.1512
1362.66	0.0000
1365.15	29.7159
1368.21	22.0613
1368.53	0.0000
1376.25	19.2155
1377.67	26.9097
1377.67	26.9097
1377.67	26.9097
1377.67	26.9097
1384.27	25.0225
1394.10	25.0732
1395.20	25.0785
1407.95	30.9466
1434.06	17.4998
1436.60	15.5632
1457.56	0.0000
1460.81	13.6838
1489.15	10.8120
1509.49	13.8149
1596.49	26.0815
1620.62	14.1065
1678.03	0.0000
1691.02	18.3677
1691.02	18.3677

1706.46	0.0000
1750.46	0.0000
1764.49	6.2012
1764.49	6.2012
1764.49	6.2012
1764.49	6.2012
1770.23	7.0940
1771.40	25.8687
1791.20	0.0000
1808.65	6.2476
1836.01	6.2761

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232424001

Total Uranium Activity	6.2396E+00	ug/g
Total Uranium Counting Unc.	7.2160E+00	ug/g
Total Uranium Tpu	3.6816E-06	ug/g
Total Uranium Mda	3.6293E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G232424001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM01            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :   0 02:00:00.00  *
*   ANALYSIS DATE:  7-JUL-2009 06:03:34.60    SAMPLE ALQT:  116.500 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.072E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.658E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.835E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.364E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:05:03.04

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433001.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:04:03.
Sample ID         : G232433001           Sample quantity  : 1.22390E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.37  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.32*	35	397	1.08	125.83	121	8	4.89E-03	104.0	
2	3	74.77	287	315	1.04	148.75	142	16	3.98E-02	11.4	9.81E-01
3	3	77.11	451	304	1.03	153.42	142	16	6.27E-02	7.9	
4	3	87.25	190	281	1.06	173.73	171	20	2.64E-02	15.9	1.89E+00
5	3	89.89	160	336	1.24	179.01	171	20	2.23E-02	21.0	
6	3	92.79*	112	349	1.25	184.80	171	20	1.56E-02	33.8	
7	0	128.99	63	345	1.02	257.24	254	8	8.68E-03	53.0	
8	0	186.13*	152	304	1.24	371.58	367	10	2.11E-02	25.0	
9	0	209.11*	91	203	0.69	417.56	414	8	1.27E-02	30.1	
10	0	238.53*	973	418	1.10	476.44	471	10	1.35E-01	5.2	
11	0	241.83	147	343	1.54	483.03	481	11	2.04E-02	27.1	
12	0	270.29	119	155	1.08	539.98	536	9	1.65E-02	21.0	
13	0	295.11	261	177	1.12	589.66	585	9	3.62E-02	11.1	
14	0	300.00	67	170	1.46	599.43	596	9	9.35E-03	36.9	
15	0	338.57	229	140	1.18	676.63	672	11	3.18E-02	12.0	
16	1	351.88*	505	88	1.28	703.25	698	25	7.01E-02	5.6	2.21E+00
17	1	357.71	52	92	1.44	714.93	698	25	7.21E-03	36.6	
18	0	462.80	70	107	1.37	925.21	921	11	9.76E-03	30.7	
19	0	511.12*	83	114	2.40	1021.92	1016	15	1.16E-02	35.4	
20	0	583.39*	326	124	1.52	1166.54	1159	16	4.53E-02	9.6	
21	0	609.29*	345	71	1.51	1218.38	1211	12	4.79E-02	7.5	
22	0	727.32	102	63	1.31	1454.58	1449	13	1.42E-02	18.7	
23	0	911.28*	210	111	1.96	1822.74	1815	19	2.92E-02	13.7	
24	0	969.43	140	51	1.23	1939.13	1932	13	1.94E-02	13.6	
25	0	1120.13*	59	75	2.56	2240.74	2232	15	8.22E-03	35.0	
26	0	1460.83*	1283	32	2.08	2922.66	2912	19	1.78E-01	3.0	
27	0	1587.44	26	10	1.45	3176.10	3169	13	3.66E-03	31.2	
28	0	1631.54*	25	6	1.38	3264.37	3259	12	3.48E-03	29.4	
29	0	1764.56*	50	4	1.62	3530.64	3524	14	6.90E-03	18.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:05:05

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:04:03
Sample ID : G232433001 Sample quantity : 122.39 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA2 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.37 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.524E+01	3.358E+00	5.997E-01	4.445E-02	58.769
CD-109	+	88.03	*	3.043E+00	1.029E+00	1.270E+00	1.501E-01	2.395
SN-126	+	64.28		4.400E-01	9.176E-01	8.856E-01	1.381E-01	0.497
	+	86.94		1.246E+00	6.570E-01	5.770E-01	2.429E-01	2.159
	+	87.57	*	2.997E-01	1.014E-01	1.259E-01	1.480E-02	2.381
TL-208		277.35		3.975E-01	3.989E-01	6.974E-01	8.891E-02	0.570
	+	510.84		4.535E-01	3.250E-01	2.516E-01	2.665E-02	1.803
	+	583.14	*	5.058E-01	1.044E-01	6.548E-02	4.808E-03	7.724
		860.37		2.056E-01	3.464E-01	5.913E-01	5.588E-02	0.348
BI-211		72.87		2.904E+00	3.144E+00	5.464E+00	5.533E-01	0.531
	+	351.07	*	3.456E+00	4.775E-01	3.389E-01	2.746E-02	10.199
PB-212	+	74.81		2.028E+00	5.409E-01	5.709E-01	7.943E-02	3.552
	+	77.11		1.781E+00	3.378E-01	3.199E-01	3.368E-02	5.568
	+	87.30		1.386E+00	4.889E-01	5.841E-01	9.002E-02	2.373
	+	238.63	*	1.452E+00	2.033E-01	1.133E-01	1.073E-02	12.820
	+	300.09		1.554E+00	1.158E+00	1.384E+00	1.473E-01	1.123
PO-212	+	74.81		2.028E+00	5.409E-01	5.709E-01	7.943E-02	3.552
	+	77.11		1.781E+00	3.378E-01	3.199E-01	3.368E-02	5.568
	+	87.30		1.386E+00	4.889E-01	5.841E-01	9.002E-02	2.373
		115.19		1.421E+00	3.793E+00	6.361E+00	4.281E-01	0.223
	+	238.63	*	1.452E+00	2.033E-01	1.133E-01	1.073E-02	12.820
	+	300.09		1.554E+00	1.158E+00	1.384E+00	1.473E-01	1.123
BI-214	+	609.31	*	1.009E+00	1.724E-01	1.096E-01	9.126E-03	9.204
		768.36		1.217E+00	8.801E-01	1.576E+00	1.528E-01	0.772
		934.06		4.470E-01	1.465E+00	2.399E+00	2.625E-01	0.186
	+	1120.29		9.114E-01	6.437E-01	6.205E-01	5.751E-02	1.469
		1238.11		1.101E+00	1.092E+00	1.934E+00	1.640E-01	0.569
		1377.67		1.529E+00	1.063E+00	2.023E+00	1.954E-01	0.755
	+	1764.49		1.049E+00	4.012E-01	3.858E-01	2.269E-02	2.718
PB-214	+	74.81		3.494E+00	9.106E-01	9.837E-01	1.249E-01	3.552
	+	77.11		3.054E+00	6.241E-01	5.484E-01	7.128E-02	5.568
	+	87.30		2.375E+00	8.238E-01	1.001E+00	1.404E-01	2.373
	+	241.98		1.317E+00	7.257E-01	7.194E-01	7.278E-02	1.831
	+	295.21		1.055E+00	2.613E-01	2.673E-01	2.924E-02	3.946

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.202E+00	1.776E-01	1.181E-01	1.136E-02	10.177
PO-214	+	74.81		3.494E+00	9.106E-01	9.837E-01	1.249E-01	3.552
	+	77.11		3.054E+00	6.241E-01	5.484E-01	7.128E-02	5.568
	+	87.30		2.375E+00	8.238E-01	1.001E+00	1.404E-01	2.373
	+	241.98		1.317E+00	7.257E-01	7.194E-01	7.278E-02	1.831
	+	295.21		1.055E+00	2.613E-01	2.673E-01	2.924E-02	3.946
	+	351.92	*	1.202E+00	1.776E-01	1.181E-01	1.136E-02	10.177
PO-216	+	74.81		2.028E+00	5.409E-01	5.709E-01	7.943E-02	3.552
	+	77.11		1.781E+00	3.378E-01	3.199E-01	3.368E-02	5.568
	+	87.30		1.386E+00	4.889E-01	5.841E-01	9.002E-02	2.373
	+	238.63	*	1.452E+00	2.033E-01	1.133E-01	1.073E-02	12.820
	+	300.09		1.554E+00	1.158E+00	1.384E+00	1.473E-01	1.123
PO-218	+	74.81		3.494E+00	9.106E-01	9.837E-01	1.249E-01	3.552
	+	77.11		3.054E+00	6.241E-01	5.484E-01	7.128E-02	5.568
	+	87.30		2.375E+00	8.238E-01	1.001E+00	1.404E-01	2.373
	+	241.98		1.317E+00	7.257E-01	7.194E-01	7.278E-02	1.831
	+	295.21		1.055E+00	2.613E-01	2.673E-01	2.924E-02	3.946
	+	351.92	*	1.202E+00	1.776E-01	1.181E-01	1.136E-02	10.177
RA-224	+	240.98	*	2.498E+00	1.369E+00	1.483E+00	1.246E-01	1.684
RA-226	+	609.31	*	1.009E+00	1.724E-01	1.096E-01	9.126E-03	9.204
		768.36		1.217E+00	8.801E-01	1.576E+00	1.528E-01	0.772
		934.06		4.470E-01	1.465E+00	2.399E+00	2.625E-01	0.186
	+	1120.29		9.114E-01	6.437E-01	6.205E-01	5.751E-02	1.469
		1238.11		1.101E+00	1.092E+00	1.934E+00	1.640E-01	0.569
		1377.67		1.529E+00	1.063E+00	2.023E+00	1.954E-01	0.755
	+	1764.49		1.049E+00	4.012E-01	3.858E-01	2.269E-02	2.718
AC-228	+	338.32		1.730E+00	8.238E-01	4.147E-01	1.706E-01	4.172
	+	911.07	*	1.459E+00	4.351E-01	2.397E-01	2.807E-02	6.086
	+	969.11		1.715E+00	6.133E-01	5.242E-01	1.223E-01	3.271
RA-228	+	338.32		1.730E+00	8.238E-01	4.147E-01	1.706E-01	4.172
	+	911.07	*	1.459E+00	4.351E-01	2.397E-01	2.807E-02	6.086
	+	969.11		1.715E+00	6.133E-01	5.242E-01	1.223E-01	3.271
TH-228		84.40		4.375E+00	2.785E+00	4.357E+00	6.567E-01	1.004
	+	238.60	*	1.452E+00	2.033E-01	1.132E-01	1.073E-02	12.821
	+	300.10		1.554E+00	1.471E+00	1.384E+00	8.208E-01	1.123
TH-230	+	609.31	*	1.009E+00	1.724E-01	1.096E-01	9.126E-03	9.204
		768.36		1.217E+00	8.801E-01	1.576E+00	1.528E-01	0.772
		934.06		4.470E-01	1.465E+00	2.399E+00	2.625E-01	0.186
	+	1120.29		9.114E-01	6.437E-01	6.205E-01	5.751E-02	1.469
		1238.11		1.101E+00	1.092E+00	1.934E+00	1.640E-01	0.569
		1377.67		1.529E+00	1.063E+00	2.023E+00	1.954E-01	0.755
	+	1764.49		1.049E+00	4.012E-01	3.858E-01	2.269E-02	2.718
TH-232	+	338.32		1.730E+00	4.372E-01	4.147E-01	3.309E-02	4.172
	+	911.07	*	1.459E+00	4.351E-01	2.397E-01	2.807E-02	6.086
	+	969.11		1.715E+00	6.133E-01	5.242E-01	1.223E-01	3.271
TH-234	+	63.29	*	1.112E+00	2.321E+00	2.522E+00	4.610E-01	0.441
	+	92.38		1.132E+00	7.959E-01	8.161E-01	1.561E-01	1.387
U-234	+	609.31	*	1.009E+00	1.724E-01	1.096E-01	9.126E-03	9.204
		768.36		1.217E+00	8.801E-01	1.576E+00	1.528E-01	0.772

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		4.470E-01	1.465E+00	2.399E+00	2.625E-01	0.186
	+	1120.29		9.114E-01	6.437E-01	6.205E-01	5.751E-02	1.469
		1238.11		1.101E+00	1.092E+00	1.934E+00	1.640E-01	0.569
		1377.67		1.529E+00	1.063E+00	2.023E+00	1.954E-01	0.755
	+	1764.49		1.049E+00	4.012E-01	3.858E-01	2.269E-02	2.718
NP-237	+	86.50	*	8.801E-01	3.487E-01	4.092E-01	9.691E-02	2.151
		95.87		-2.804E-01	1.081E+00	1.592E+00	3.992E-01	-0.176
U-238	+	63.29	*	1.112E+00	2.321E+00	2.522E+00	4.610E-01	0.441
	+	92.38		1.132E+00	7.753E-01	8.161E-01	8.673E-02	1.387
AM-243	+	74.67	*	3.287E-01	8.214E-02	9.292E-02	9.563E-03	3.538
	+	86.72		3.300E+01	1.116E+01	1.533E+01	1.786E+00	2.153
		117.66		-1.070E+00	3.959E+00	6.452E+00	4.141E-01	-0.166
		142.18		-6.718E+00	1.956E+01	3.055E+01	1.885E+00	-0.220
ANH-511	+	511.00	*	9.796E-02	6.972E-02	5.435E-02	3.555E-03	1.802

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.433E-01	3.301E-01	5.757E-01	4.232E-02	0.596
NA-22		1274.54	*	-2.189E-02	5.267E-02	8.292E-02	5.544E-03	-0.264
NA-24		1368.53	*	5.991E-02	5.267E-02	Half-Life too short		
AL-26		1129.67		-1.266E+00	2.047E+00	3.212E+00	2.031E-01	-0.394
		1808.65	*	2.560E-02	2.811E-02	5.553E-02	3.127E-03	0.461
TI-44		67.85		-2.618E-02	4.861E-02	8.060E-02	7.800E-03	-0.325
	+	78.38	*	3.287E-01	6.234E-02	7.498E-02	7.994E-03	4.383
SC-46		889.25	*	-1.182E-02	4.898E-02	7.767E-02	7.157E-03	-0.152
	+	1120.51		1.543E-01	1.085E-01	1.353E-01	8.767E-03	1.140
V-48		944.10		-7.649E-01	1.049E+00	1.567E+00	1.394E-01	-0.488
		983.50	*	-3.234E-02	8.038E-02	1.237E-01	1.046E-02	-0.261
		1312.09		-1.827E-02	8.917E-02	1.428E-01	1.016E-02	-0.128
CR-51		320.08	*	5.502E-01	3.957E-01	7.038E-01	6.275E-02	0.782
MN-52		744.21		-1.988E-01	2.399E-01	3.667E-01	2.699E-02	-0.542
		848.13		2.713E+00	6.306E+00	1.069E+01	9.267E-01	0.254
		935.52		-4.648E-02	2.731E-01	4.284E-01	3.847E-02	-0.109
		1246.25		-4.151E+00	7.118E+00	1.106E+01	7.022E-01	-0.375
		1333.61		-2.560E-01	4.532E+00	7.367E+00	5.422E-01	-0.035
		1434.06	*	1.931E-01	2.272E-01	4.125E-01	2.964E-02	0.468
MN-54		834.83	*	-8.485E-03	4.427E-02	7.101E-02	6.032E-03	-0.120
CO-56		846.75	*	6.005E-03	4.469E-02	7.372E-02	6.377E-03	0.081
		977.42		2.177E+00	3.580E+00	6.087E+00	5.190E-01	0.358
		1037.82		3.051E-01	3.760E-01	6.708E-01	5.544E-02	0.455
		1175.09		1.236E+00	2.828E+00	4.850E+00	2.693E-01	0.255
		1238.25		1.043E-01	1.087E-01	1.922E-01	1.267E-02	0.543
		1360.21		-1.804E-01	1.103E+00	1.763E+00	1.291E-01	-0.102
		1771.40		-7.438E-01	3.635E-01	4.070E-01	2.379E-02	-1.827
CO-57		122.06	*	1.935E-03	2.519E-02	4.163E-02	2.456E-03	0.046
		136.48		-5.343E-02	2.170E-01	3.509E-01	2.438E-02	-0.152
CO-58		810.76	*	-3.032E-02	4.195E-02	6.349E-02	5.211E-03	-0.478

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		-7.853E-01	3.025E+00	4.749E+00	2.936E-01	-0.165
		192.34		-1.241E-01	9.783E-01	1.556E+00	1.964E-01	-0.080
		1099.22	*	-4.646E-02	1.009E-01	1.605E-01	1.236E-02	-0.289
		1291.56		9.251E-03	1.451E-01	2.400E-01	1.989E-02	0.039
CO-60		1173.22		2.573E-02	5.852E-02	1.003E-01	5.551E-03	0.257
		1332.49	*	1.123E-02	4.276E-02	7.238E-02	5.328E-03	0.155
ZN-65		1115.52	*	3.342E-02	1.157E-01	1.721E-01	1.132E-02	0.194
GE-68		1077.35	*	-6.876E-01	1.407E+00	2.237E+00	1.606E-01	-0.307
AS-73		53.44	*	-1.735E-01	1.118E+00	1.902E+00	1.702E-01	-0.091
AS-74		595.88	*	3.747E-03	8.440E-02	1.420E-01	9.281E-03	0.026
		634.78		5.557E-01	3.771E-01	6.950E-01	4.495E-02	0.800
SE-75		66.05		1.263E+00	5.427E+00	8.396E+00	9.388E-01	0.150
		96.73		-2.633E-01	8.747E-01	1.285E+00	1.838E-01	-0.205
		121.11		2.565E-02	1.360E-01	2.259E-01	2.115E-02	0.114
		136.00		-3.414E-02	4.117E-02	6.474E-02	3.974E-03	-0.527
		198.60		-5.686E-01	1.964E+00	3.036E+00	2.587E-01	-0.187
		264.65	*	-3.502E-02	4.662E-02	7.245E-02	6.494E-03	-0.483
		279.53		-4.288E-02	1.238E-01	1.991E-01	1.899E-02	-0.215
		303.91		1.121E+00	2.386E+00	3.633E+00	4.220E-01	0.308
		400.65		-9.249E-02	2.678E-01	4.271E-01	4.013E-02	-0.217
BR-77	+	87.88		4.426E+02	1.497E+02	2.319E+02	2.737E+01	1.908
		200.40		2.550E+01	1.186E+02	1.915E+02	1.433E+01	0.133
	+	239.00		1.566E+02	2.078E+01	2.726E+01	2.277E+00	5.747
		249.79		-1.215E+00	4.598E+01	7.514E+01	6.459E+00	-0.016
		281.68		-2.642E+01	6.395E+01	1.048E+02	9.648E+00	-0.252
		297.23		4.801E+01	6.660E+01	7.681E+01	6.864E+00	0.625
		303.76		6.565E+01	1.376E+02	2.097E+02	1.847E+01	0.313
		439.47		7.186E+01	1.054E+02	1.796E+02	1.148E+01	0.400
		484.57		1.020E+02	1.562E+02	2.656E+02	1.727E+01	0.384
		520.65	*	1.965E+00	8.458E+00	1.380E+01	9.035E-01	0.142
		574.64		-2.216E+01	1.616E+02	2.620E+02	1.717E+01	-0.085
		578.91		4.135E+01	7.409E+01	1.143E+02	7.488E+00	0.362
		585.48		8.280E+02	1.793E+02	3.360E+02	2.199E+01	2.464
		755.35		1.461E+02	1.255E+02	2.256E+02	1.691E+01	0.648
		817.79		-5.077E+01	9.420E+01	1.451E+02	1.200E+01	-0.350
SR-82		698.33		5.151E-01	3.831E+01	6.350E+01	4.329E+00	0.008
		776.49	*	-2.214E-01	4.140E-01	6.462E-01	5.011E-02	-0.343
		1395.20		-6.489E-01	9.865E+00	1.591E+01	1.156E+00	-0.041
RB-83		520.41	*	3.269E-02	8.187E-02	1.352E-01	8.854E-03	0.242
		529.64		-7.276E-02	1.215E-01	1.845E-01	1.210E-02	-0.394
		552.65		-1.332E-01	2.043E-01	3.270E-01	2.145E-02	-0.407
RB-84		881.50	*	-4.046E-02	7.797E-02	1.197E-01	1.091E-02	-0.338
KR-85		513.99	*	4.463E+00	9.193E+00	1.350E+01	8.830E-01	0.331
SR-85		513.99	*	2.255E-02	4.646E-02	6.821E-02	4.463E-03	0.331
RB-86		1076.63	*	-2.955E-01	8.469E-01	1.366E+00	9.822E-02	-0.216
Y-88		898.02		-2.657E-02	5.017E-02	7.706E-02	7.222E-03	-0.345
		1836.01	*	-3.981E-03	3.533E-02	5.698E-02	3.125E-03	-0.070
ZR-88		392.90	*	-5.732E-03	3.206E-02	5.186E-02	3.224E-03	-0.111
Y-91		1204.90	*	-3.762E+00	2.318E+01	3.780E+01	2.223E+00	-0.100

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	-3.456E-03	4.051E-02	6.662E-02	4.575E-03	-0.052
		871.10		2.823E-02	3.792E-02	6.600E-02	5.921E-03	0.428
NB-95		765.79	*	3.250E-02	5.142E-02	8.663E-02	6.604E-03	0.375
NB-95M		235.69	*	1.831E-01	1.402E-01	2.250E-01	2.154E-02	0.814
ZR-95		724.18		2.843E-02	1.115E-01	1.645E-01	1.317E-02	0.173
		756.15	*	3.582E-02	8.251E-02	1.404E-01	1.193E-02	0.255
NB-97		657.90	*	-6.266E-03	8.251E-02	Half-Life too short		
		1024.50		1.887E+00	8.251E-02	Half-Life too short		
ZR-97		254.15		-4.683E-02	8.251E-02	Half-Life too short		
		355.39		2.389E-01	8.251E-02	Half-Life too short		
		507.63	*	5.326E-01	8.251E-02	Half-Life too short		
		602.52		-9.061E-01	8.251E-02	Half-Life too short		
		1021.30		-1.584E+00	8.251E-02	Half-Life too short		
		1147.95		-1.197E-01	8.251E-02	Half-Life too short		
		1362.66		9.632E-01	8.251E-02	Half-Life too short		
		1750.46		-1.242E+00	8.251E-02	Half-Life too short		
MO-99		140.51		-1.266E+01	1.987E+01	3.104E+01	8.389E+00	-0.408
		181.06		-5.442E+00	1.449E+01	2.018E+01	3.554E+00	-0.270
		366.43		9.710E+00	6.756E+01	1.123E+02	7.995E+00	0.086
		739.58	*	5.664E+00	9.158E+00	1.583E+01	2.291E+00	0.358
		778.00		4.373E+00	2.633E+01	4.385E+01	3.409E+00	0.100
TC-99M		140.51	*	-5.985E+08	2.633E+01	Half-Life too short		
RH-101		127.23		1.320E-02	3.756E-02	5.626E-02	3.335E-03	0.235
		198.01	*	3.015E-03	3.596E-02	5.669E-02	4.214E-03	0.053
		325.23		-1.498E-01	2.499E-01	4.008E-01	3.336E-02	-0.374
RH-102		418.52		-6.651E-02	3.060E-01	4.910E-01	3.104E-02	-0.135
		475.06	*	-1.235E-02	3.176E-02	4.965E-02	3.219E-03	-0.249
		631.29		3.727E-03	6.281E-02	1.053E-01	6.820E-03	0.035
		697.49		-6.298E-03	8.869E-02	1.461E-01	9.944E-03	-0.043
		766.84		2.724E-01	1.345E-01	2.453E-01	1.873E-02	1.110
		1046.59		6.250E-02	1.233E-01	2.162E-01	1.650E-02	0.289
		1112.84		-5.517E-02	3.003E-01	4.199E-01	2.776E-02	-0.131
RU-103		497.08	*	-1.477E-02	4.254E-02	6.633E-02	8.618E-03	-0.223
	+	610.33		1.064E+01	2.304E+00	2.885E+00	4.529E-01	3.687
RH-106	+	511.85		4.881E-01	3.474E-01	4.547E-01	2.974E-02	1.073
		621.84	*	-1.984E-02	3.559E-01	5.923E-01	7.164E-02	-0.033
		1050.47		-9.859E-01	2.460E+00	3.948E+00	2.992E-01	-0.250
RU-106	+	511.85		4.881E-01	3.474E-01	4.547E-01	2.974E-02	1.073
		621.84	*	-1.984E-02	3.559E-01	5.923E-01	3.847E-02	-0.033
		1050.47		-9.859E-01	2.460E+00	3.948E+00	2.992E-01	-0.250
AG-108M		433.93	*	-1.798E-02	3.798E-02	5.966E-02	4.075E-03	-0.301
		614.37		-1.124E-02	4.455E-02	6.289E-02	4.371E-03	-0.179
		722.95		-5.157E-02	5.426E-02	6.844E-02	5.141E-03	-0.754
AG-110M		657.75	*	-9.526E-03	3.939E-02	6.430E-02	4.341E-03	-0.148
		677.61		-1.280E-01	3.475E-01	5.595E-01	3.857E-02	-0.229
		706.67		1.379E-01	2.509E-01	4.313E-01	3.109E-02	0.320
		763.93		-2.132E-01	2.027E-01	3.043E-01	2.396E-02	-0.701
		884.67		7.190E-03	6.003E-02	9.851E-02	9.273E-03	0.073
		937.48		-8.389E-02	1.325E-01	1.999E-01	1.851E-02	-0.420

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1384.27		7.637E-02	1.966E-01	3.361E-01	2.544E-02	0.227
IN-111		171.28		5.549E-01	7.277E-01	1.218E+00	8.366E-02	0.456
		245.39	*	3.837E-01	8.438E-01	1.301E+00	1.105E-01	0.295
IN-113M		391.69	*	-3.094E-02	4.672E-02	7.289E-02	4.792E-03	-0.424
SN-113		391.69	*	-3.094E-02	4.672E-02	7.289E-02	4.792E-03	-0.424
IN-114M		190.27	*	-6.625E-02	2.085E-01	2.906E-01	2.111E-02	-0.228
CD-115		260.90		6.934E+01	8.505E+01	1.492E+02	1.319E+01	0.465
		492.35		9.558E+00	2.635E+01	4.363E+01	2.843E+00	0.219
		527.90	*	6.589E-01	7.867E+00	1.268E+01	8.313E-01	0.052
SN-117M		156.02		-2.571E-01	2.213E+00	3.571E+00	2.320E-01	-0.072
		158.56	*	2.012E-02	5.176E-02	8.547E-02	5.609E-03	0.235
SB-122		563.90	*	1.510E-01	1.637E+00	2.773E+00	1.819E-01	0.054
		692.80		1.893E+01	3.252E+01	5.641E+01	3.810E+00	0.336
I-123		159.00	*	1.632E-01	3.252E+01	Half-Life too short		
		528.96		-6.632E+00	3.252E+01	Half-Life too short		
TE-123M		159.00	*	4.506E-03	2.859E-02	4.669E-02	3.102E-03	0.097
I-124		602.71	*	-3.480E-01	6.185E-01	8.451E-01	5.514E-02	-0.412
		722.78		-4.350E+00	4.516E+00	5.685E+00	4.039E-01	-0.765
		1325.50		1.966E-01	3.074E+01	5.043E+01	3.669E+00	0.004
		1376.25		2.690E+01	2.581E+01	4.760E+01	3.474E+00	0.565
		1509.49		7.826E+00	1.365E+01	2.401E+01	1.677E+00	0.326
		1691.02		1.435E+00	3.048E+00	5.525E+00	3.460E-01	0.260
SB-124		602.71		-2.497E-02	4.437E-02	6.063E-02	3.957E-03	-0.412
		645.85		-1.348E-01	5.386E-01	8.790E-01	6.258E-02	-0.153
		709.31		-1.165E+00	3.237E+00	5.202E+00	3.613E-01	-0.224
		713.82		-9.928E-01	1.913E+00	3.026E+00	3.309E-01	-0.328
		722.78		-4.523E-01	4.696E-01	5.912E-01	4.333E-02	-0.765
	+	968.20		1.738E+01	4.943E+00	7.758E+00	6.697E-01	2.240
		1045.16		-3.973E-01	2.689E+00	4.437E+00	3.396E-01	-0.090
		1325.50		2.183E-02	3.415E+00	5.601E+00	4.076E-01	0.004
		1368.21		1.655E+00	1.810E+00	3.313E+00	4.201E-01	0.499
		1436.60		-4.523E-01	4.278E+00	6.852E+00	4.919E-01	-0.066
		1691.02	*	3.520E-02	7.477E-02	1.355E-01	9.112E-03	0.260
SB-125		427.89	*	4.853E-02	1.036E-01	1.742E-01	1.146E-02	0.279
	+	463.38		7.467E-01	4.611E-01	6.046E-01	4.435E-02	1.235
		600.56		4.385E-02	1.776E-01	2.962E-01	2.176E-02	0.148
		635.90		2.305E-02	3.006E-01	5.045E-01	3.717E-02	0.046
TE-125M		109.28	*	5.141E+00	9.064E+00	1.536E+01	1.449E+00	0.335
I-126		388.63		1.095E-03	2.025E-01	3.323E-01	2.102E-02	0.003
		666.33	*	-2.863E-02	1.961E-01	3.223E-01	2.080E-02	-0.089
		753.82		1.408E+00	1.525E+00	2.698E+00	2.017E-01	0.522
SB-126		223.80		-1.031E+00	4.208E+00	6.577E+00	5.270E-01	-0.157
		278.60		2.372E-01	2.626E+00	4.324E+00	3.990E-01	0.055
	+	296.50		9.733E+00	2.332E+00	3.473E+00	3.108E-01	2.802
		414.70		-3.402E-02	7.735E-02	1.223E-01	7.712E-03	-0.278
		415.30		-5.238E+00	6.450E+00	9.900E+00	6.246E-01	-0.529
		555.20		-1.720E+00	3.828E+00	6.228E+00	4.086E-01	-0.276
		573.80		-5.367E-01	1.096E+00	1.779E+00	1.166E-01	-0.302
		593.00		-2.762E-01	8.643E-01	1.391E+00	9.094E-02	-0.199

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		656.30		1.610E+00	3.490E+00	6.009E+00	3.855E-01	0.268
		666.33		-1.193E-02	8.168E-02	1.343E-01	8.663E-03	-0.089
		675.00		-1.089E+00	2.106E+00	3.350E+00	2.194E-01	-0.325
		695.00		-2.398E-02	8.170E-02	1.322E-01	8.961E-03	-0.181
		697.00		-7.806E-02	2.853E-01	4.624E-01	3.145E-02	-0.169
		720.50	*	3.722E-02	1.654E-01	2.539E-01	1.797E-02	0.147
		856.80		-1.314E-01	5.091E-01	8.085E-01	7.100E-02	-0.163
		989.30		2.624E-01	1.319E+00	2.165E+00	1.815E-01	0.121
		1034.80		6.793E+00	1.009E+01	1.782E+01	1.390E+00	0.381
		1213.00		1.928E+00	5.434E+00	9.048E+00	5.402E-01	0.213
SB-127		61.10		1.668E+01	5.504E+01	8.616E+01	9.480E+00	0.194
		252.40		4.110E+00	3.709E+00	5.911E+00	2.479E+00	0.695
		290.80		-9.731E+00	1.986E+01	2.814E+01	3.128E+00	-0.346
		411.60		1.857E+00	1.117E+01	1.843E+01	2.632E+00	0.101
		444.90		-2.493E+00	8.350E+00	1.324E+01	1.421E+00	-0.188
		473.00		-3.781E-02	1.376E+00	2.218E+00	2.476E-01	-0.017
		543.00		-6.734E-01	1.478E+01	2.352E+01	3.042E+00	-0.029
		603.60		-4.303E+00	1.026E+01	1.425E+01	1.535E+00	-0.302
		685.20	*	5.138E-01	1.200E+00	2.055E+00	1.961E-01	0.250
		698.50		4.089E+00	1.370E+01	2.317E+01	3.388E+00	0.176
		722.20		-2.307E+01	2.989E+01	3.860E+01	3.702E+00	-0.598
		783.80		2.981E+00	3.430E+00	5.979E+00	6.890E-01	0.499
XE-127		57.60		-6.404E+00	7.378E+00	1.212E+01	1.061E+00	-0.528
		145.22		2.502E-02	7.271E-01	1.187E+00	7.401E-02	0.021
		172.10		-1.467E-02	1.203E-01	1.928E-01	1.328E-02	-0.076
		202.84	*	2.222E-02	5.036E-02	8.207E-02	6.189E-03	0.271
		374.96		6.978E-02	2.012E-01	3.385E-01	2.311E-02	0.206
I-131		80.18		-7.182E-02	4.259E+00	6.434E+00	7.007E-01	-0.011
		284.30		-1.430E+00	1.401E+00	2.204E+00	2.110E-01	-0.649
		364.48	*	-5.637E-02	1.257E-01	1.849E-01	1.429E-02	-0.305
		636.97		-1.356E+00	1.534E+00	2.370E+00	1.679E-01	-0.572
		722.89		-7.755E+00	8.120E+00	1.024E+01	7.331E-01	-0.758
TE-132		49.72		-1.568E+01	2.385E+01	3.551E+01	3.740E+00	-0.441
		111.76		-1.321E+01	2.290E+01	3.610E+01	3.380E+00	-0.366
		116.30		5.797E-01	2.173E+01	3.591E+01	3.201E+00	0.016
		228.16	*	-2.710E-01	5.872E-01	9.030E-01	1.372E-01	-0.300
BA-133		53.15		-7.799E-01	4.956E+00	8.436E+00	7.551E-01	-0.092
		79.62		9.978E-01	1.321E+00	2.063E+00	3.415E-01	0.484
		81.00		-1.223E-01	1.074E-01	1.493E-01	2.576E-02	-0.819
		276.40		1.617E-01	3.902E-01	6.678E-01	9.876E-02	0.242
		302.84		4.482E-02	1.703E-01	2.553E-01	3.427E-02	0.176
		356.01	*	3.636E-02	4.752E-02	8.171E-02	1.019E-02	0.445
		383.85		-1.141E-01	3.232E-01	5.172E-01	5.825E-02	-0.221
I-133	+	510.53		3.347E-01	3.232E-01	Half-Life too short		
		529.87	*	-4.218E-04	3.232E-01	Half-Life too short		
		706.58		8.843E-02	3.232E-01	Half-Life too short		
		856.28		-9.219E-02	3.232E-01	Half-Life too short		
		875.33		3.688E-02	3.232E-01	Half-Life too short		
		1236.41		2.003E-01	3.232E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		1298.22		1.626E-02	3.232E-01	Half-Life too short		
CS-134		475.35		-9.140E-01	2.068E+00	3.217E+00	2.086E-01	-0.284
		563.23		-7.643E-02	4.116E-01	6.843E-01	4.562E-02	-0.112
		569.32		-6.701E-03	2.165E-01	3.635E-01	2.439E-02	-0.018
		604.70		1.939E-03	3.472E-02	5.095E-02	3.338E-03	0.038
		795.84	*	4.680E-02	5.227E-02	9.183E-02	7.405E-03	0.510
		801.93		3.170E-01	4.407E-01	7.662E-01	6.226E-02	0.414
		1038.57		1.749E+00	4.641E+00	8.022E+00	6.214E-01	0.218
		1167.94		9.203E-01	3.193E+00	5.417E+00	3.051E-01	0.170
		1365.15		3.202E-02	1.484E+00	2.433E+00	1.891E-01	0.013
CS-135		268.24	*	2.107E-01	1.742E-01	2.793E-01	2.876E-02	0.754
I-135		288.45		1.846E+08	1.742E-01	Half-Life too short		
		417.63		1.375E+07	1.742E-01	Half-Life too short		
		546.56		-1.190E+08	1.742E-01	Half-Life too short		
		836.80		5.754E+08	1.742E-01	Half-Life too short		
		1038.76		2.111E+08	1.742E-01	Half-Life too short		
		1124.00		3.842E+08	1.742E-01	Half-Life too short		
		1131.51		-2.257E+08	1.742E-01	Half-Life too short		
		1260.41	*	-8.728E+07	1.742E-01	Half-Life too short		
		1457.56		2.334E+10	1.742E-01	Half-Life too short		
		1678.03		-8.346E+07	1.742E-01	Half-Life too short		
		1706.46		6.257E+08	1.742E-01	Half-Life too short		
		1791.20		-2.898E+08	1.742E-01	Half-Life too short		
CS-136		66.91		-1.230E+00	8.998E-01	1.244E+00	1.990E-01	-0.988
	+	86.29		3.640E+00	1.279E+00	1.853E+00	2.780E-01	1.965
		153.22		5.634E-01	6.312E-01	1.065E+00	8.236E-02	0.529
		163.89		6.264E-01	1.109E+00	1.805E+00	1.443E-01	0.347
		176.55		2.666E-02	3.681E-01	5.947E-01	4.509E-02	0.045
		273.65		-3.253E-01	4.799E-01	6.735E-01	6.504E-02	-0.483
		340.57		2.480E-01	1.468E-01	2.383E-01	1.951E-02	1.041
		818.51		-6.365E-02	7.566E-02	1.127E-01	9.340E-03	-0.565
		1048.07	*	3.233E-02	1.078E-01	1.856E-01	1.489E-02	0.174
		1235.34		7.828E-02	7.223E-01	1.201E+00	1.229E-01	0.065
BA-137M		661.65	*	-3.135E-02	4.218E-02	6.615E-02	4.233E-03	-0.474
CS-137		661.65	*	-3.314E-02	4.459E-02	6.993E-02	4.491E-03	-0.474
CE-139		165.85	*	1.177E-02	3.225E-02	5.300E-02	3.587E-03	0.222
BA-140		162.64		-2.956E-01	7.774E-01	1.212E+00	8.865E-02	-0.244
		304.84		-2.703E-01	1.418E+00	2.048E+00	5.749E-01	-0.132
		423.70		7.035E-02	1.827E+00	2.985E+00	9.517E-01	0.024
		537.32	*	-9.974E-02	2.803E-01	4.316E-01	1.410E-01	-0.231
LA-140		328.77		1.493E-01	3.093E-01	5.263E-01	4.599E-02	0.284
		432.53		4.298E-01	2.220E+00	3.659E+00	2.535E-01	0.117
		487.03		6.820E-02	1.365E-01	2.288E-01	1.647E-02	0.298
		751.79		-2.067E+00	1.860E+00	2.748E+00	2.336E-01	-0.752
		815.85		1.588E-01	3.115E-01	5.346E-01	4.962E-02	0.297
		867.82		-2.127E-01	1.419E+00	2.271E+00	2.128E-01	-0.094
		919.63		-6.116E-01	3.523E+00	4.790E+00	5.302E-01	-0.128
		925.24		-4.106E-01	1.194E+00	1.858E+00	1.783E-01	-0.221
		1596.49	*	3.492E-02	8.887E-02	1.547E-01	1.033E-02	0.226

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CE-141		145.44	*	-1.906E-02	6.490E-02	1.044E-01	6.739E-03	-0.183
CE-143		57.37		-2.782E-04	6.490E-02	Half-Life too short		
		231.56		-5.360E-04	6.490E-02	Half-Life too short		
		293.26	*	2.480E-04	6.490E-02	Half-Life too short		
	+	350.59		1.377E-02	6.490E-02	Half-Life too short		
		490.36		1.510E-03	6.490E-02	Half-Life too short		
		664.57		6.274E-04	6.490E-02	Half-Life too short		
		721.93		-5.010E-04	6.490E-02	Half-Life too short		
CE-144		80.11		-1.867E-02	2.199E+00	3.325E+00	3.606E-01	-0.006
		133.54	*	2.531E-02	2.371E-01	3.492E-01	4.990E-02	0.072
PM-144		476.78		6.618E-02	7.104E-02	1.229E-01	9.249E-03	0.539
		618.01		-7.179E-03	3.344E-02	5.495E-02	3.744E-03	-0.131
		696.49	*	-1.849E-02	3.886E-02	6.188E-02	4.208E-03	-0.299
		778.57		-8.064E-02	2.552E+00	4.176E+00	3.250E-01	-0.019
PR-144		696.49	*	-1.252E+00	2.631E+00	4.190E+00	2.848E-01	-0.299
		1489.15		-6.247E+00	1.255E+01	1.850E+01	1.303E+00	-0.338
PM-146		453.90	*	-1.015E-03	5.069E-02	8.203E-02	7.432E-03	-0.012
		633.02		1.641E+00	1.657E+00	2.779E+00	1.027E+00	0.590
		735.90		-9.098E-02	1.641E-01	2.536E-01	7.159E-02	-0.359
		747.13		1.021E-01	1.036E-01	1.832E-01	2.440E-02	0.557
ND-147	+	91.11		7.715E-01	3.362E-01	5.016E-01	5.777E-02	1.538
		319.41		2.832E+00	3.347E+00	5.818E+00	4.925E-01	0.487
		439.89		5.420E+00	5.780E+00	1.002E+01	6.408E-01	0.541
		531.02	*	5.861E-02	5.908E-01	9.529E-01	1.321E-01	0.062
PM-149		285.90	*	2.211E+01	6.122E+01	1.045E+02	1.654E+01	0.212
EU-152		121.78		-9.911E-05	7.307E-02	1.203E-01	9.267E-03	-0.001
		244.69		2.153E-01	3.620E-01	5.630E-01	4.776E-02	0.382
		344.27	*	-1.134E-02	1.126E-01	1.621E-01	1.358E-02	-0.070
		443.98		-5.822E-02	1.044E+00	1.688E+00	1.081E-01	-0.034
		778.89		8.775E-02	2.874E-01	4.845E-01	3.772E-02	0.181
		867.32		-1.608E-01	9.174E-01	1.465E+00	1.307E-01	-0.110
		964.01		2.371E-01	4.178E-01	6.179E-01	5.363E-02	0.384
		1085.78		-2.591E-01	4.492E-01	7.065E-01	4.979E-02	-0.367
		1112.02		-8.339E-02	4.128E-01	5.753E-01	3.810E-02	-0.145
		1407.95		2.754E-02	1.997E-01	3.318E-01	2.402E-02	0.083
GD-153		69.67		6.325E-01	1.912E+00	2.962E+00	2.914E-01	0.214
		83.37		1.686E+01	1.620E+01	2.524E+01	2.833E+00	0.668
		97.43	*	-1.334E-02	9.254E-02	1.354E-01	1.287E-02	-0.099
		103.18		-1.897E-02	1.041E-01	1.715E-01	1.452E-02	-0.111
EU-154		123.07		-3.303E-02	5.303E-02	8.463E-02	8.008E-03	-0.390
		247.94		-5.505E-02	4.059E-01	6.003E-01	6.859E-02	-0.092
		591.81		3.610E-01	6.244E-01	1.071E+00	1.095E-01	0.337
		723.30		-7.349E-02	2.090E-01	2.857E-01	2.339E-02	-0.257
		756.87		5.001E-02	9.069E-01	1.498E+00	1.679E-01	0.033
		873.19		2.077E-01	3.447E-01	5.906E-01	7.391E-02	0.352
		996.32		1.511E-01	4.330E-01	7.185E-01	1.266E-01	0.210
		1004.76		1.087E-01	2.583E-01	4.482E-01	5.078E-02	0.243
		1274.45	*	-5.987E-02	1.474E-01	2.322E-01	2.301E-02	-0.258
EU-155		48.70		-3.817E+00	4.097E+00	6.001E+00	5.013E-01	-0.636

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		60.01		-1.023E+00	6.450E+00	9.865E+00	8.611E-01	-0.104
	+	86.54		3.608E-01	1.221E-01	1.857E-01	2.170E-02	1.943
		105.31	*	1.405E-02	1.103E-01	1.840E-01	1.515E-02	0.076
TB-160	+	86.79		9.517E-01	3.219E-01	4.976E-01	5.801E-02	1.913
		197.04		7.761E-02	6.068E-01	9.592E-01	7.110E-02	0.081
		215.65		1.032E-01	7.904E-01	1.265E+00	9.899E-02	0.082
	+	298.57		2.232E-01	1.658E-01	2.216E-01	1.974E-02	1.007
		879.36	*	-4.460E-02	1.534E-01	2.415E-01	2.193E-02	-0.185
		962.29		5.175E-01	7.306E-01	1.100E+00	9.563E-02	0.471
		966.15		6.831E-01	3.015E-01	5.091E-01	4.406E-02	1.342
		1177.93		-2.656E-01	4.427E-01	6.946E-01	3.879E-02	-0.382
		1271.85		-2.502E-01	8.321E-01	1.326E+00	8.808E-02	-0.189
HO-166M		80.57		-8.395E-02	2.842E-01	4.227E-01	4.607E-02	-0.199
		184.41		1.961E-02	4.521E-02	7.170E-02	5.119E-03	0.273
		280.46		-6.853E-02	9.840E-02	1.551E-01	1.430E-02	-0.442
		410.95		1.644E-01	2.855E-01	4.829E-01	3.038E-02	0.340
		711.68	*	-5.686E-02	7.217E-02	1.116E-01	7.785E-03	-0.509
		752.31		-1.274E-01	3.115E-01	4.941E-01	3.686E-02	-0.258
		810.29		-5.324E-02	6.514E-02	9.762E-02	7.985E-03	-0.545
TM-171		51.35		3.734E+01	4.377E+01	7.745E+01	6.885E+00	0.482
		52.39		8.772E+00	2.218E+01	3.861E+01	3.453E+00	0.227
		59.40		1.821E+01	3.418E+01	5.399E+01	4.663E+00	0.337
		66.72	*	-2.438E+01	3.334E+01	4.886E+01	4.677E+00	-0.499
LU-176	+	88.36		7.109E-01	2.404E-01	3.703E-01	4.337E-02	1.920
		201.83		-2.751E-03	3.145E-02	4.996E-02	3.756E-03	-0.055
		306.84	*	-6.316E-03	2.651E-02	4.360E-02	3.813E-03	-0.145
		401.10		6.462E-01	6.985E+00	1.150E+01	7.191E-01	0.056
LU-177		112.95		1.811E-01	1.478E+00	2.407E+00	1.691E-01	0.075
	+	208.36	*	2.092E+00	1.269E+00	1.779E+00	1.364E-01	1.176
LU-177M		52.97		-2.365E-01	2.246E+00	3.832E+00	3.430E-01	-0.062
		54.07		1.351E-01	1.134E+00	1.951E+00	1.743E-01	0.069
		61.30		4.722E-01	1.797E+00	2.808E+00	2.511E-01	0.168
		121.62		-1.284E-01	3.772E-01	6.111E-01	3.629E-02	-0.210
		147.16		-5.388E-01	6.849E-01	1.074E+00	6.743E-02	-0.502
		171.86		1.172E-01	4.895E-01	7.991E-01	5.499E-02	0.147
		218.09		-1.268E-01	9.220E-01	1.452E+00	1.145E-01	-0.087
	+	268.79		2.708E+00	1.162E+00	1.554E+00	1.401E-01	1.742
		319.02		1.475E-01	2.796E-01	4.787E-01	4.056E-02	0.308
		367.43		1.630E+00	9.857E-01	1.780E+00	1.261E-01	0.916
		413.65	*	7.301E-02	1.948E-01	3.259E-01	2.054E-02	0.224
HF-181		56.28		-2.876E-01	1.152E+00	1.949E+00	1.722E-01	-0.148
		57.53		-5.178E-01	6.250E-01	1.029E+00	9.007E-02	-0.503
		65.20		-5.430E-01	1.105E+00	1.645E+00	1.550E-01	-0.330
		133.02		6.469E-02	7.146E-02	1.102E-01	6.621E-03	0.587
		136.25		-1.432E-01	4.652E-01	7.503E-01	4.545E-02	-0.191
		345.85		3.097E-02	2.052E-01	3.184E-01	2.472E-02	0.097
		482.03	*	-6.997E-02	4.594E-02	6.404E-02	4.161E-03	-1.093
W-181		56.28		-1.145E-01	4.577E-01	7.739E-01	6.837E-02	-0.148
		57.53		-2.055E-01	2.484E-01	4.089E-01	3.581E-02	-0.503

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20	*	-2.141E-01	4.356E-01	6.485E-01	6.112E-02	-0.330
TA-182		67.75		-1.048E-01	1.161E-01	1.893E-01	1.831E-02	-0.553
		100.10		-6.734E-02	1.807E-01	2.959E-01	2.662E-02	-0.228
		152.43		5.922E-02	3.499E-01	5.731E-01	3.670E-02	0.103
		222.10		-1.149E-01	3.780E-01	5.889E-01	4.696E-02	-0.195
		1001.68		1.356E-02	2.627E+00	4.250E+00	3.499E-01	0.003
	+	1121.28		4.274E-01	3.005E-01	3.691E-01	2.387E-02	1.158
		1189.05		2.403E-01	4.051E-01	7.008E-01	3.998E-02	0.343
		1221.42	*	2.335E-02	2.326E-01	3.873E-01	2.349E-02	0.060
		1230.97		3.663E-01	5.875E-01	1.016E+00	6.272E-02	0.360
RE-183		57.98		-2.105E-01	2.521E-01	3.946E-01	3.444E-02	-0.533
		59.32		1.298E-01	1.370E-01	2.207E-01	1.907E-02	0.588
		67.20		-3.098E-01	2.210E-01	3.328E-01	3.201E-02	-0.931
		162.32	*	-6.836E-02	1.207E-01	1.865E-01	1.243E-02	-0.367
	+	208.81		2.136E+00	1.296E+00	1.815E+00	1.393E-01	1.177
		291.72		-2.579E-01	1.054E+00	1.523E+00	1.376E-01	-0.169
RE-184		57.98		-7.819E-01	9.364E-01	1.466E+00	1.279E-01	-0.533
		59.32		4.818E-01	5.083E-01	8.189E-01	7.077E-02	0.588
		67.20		-1.150E+00	8.207E-01	1.236E+00	1.189E-01	-0.931
		161.27		-1.448E-01	3.718E-01	5.906E-01	3.919E-02	-0.245
		216.55		-4.156E-02	2.861E-01	4.507E-01	3.537E-02	-0.092
		252.85	*	1.455E-01	2.234E-01	3.899E-01	3.378E-02	0.373
		318.01		-4.238E-01	4.796E-01	7.532E-01	6.401E-02	-0.563
		792.07		-6.524E-01	1.131E+00	1.758E+00	1.397E-01	-0.371
		903.28		6.964E-01	1.279E+00	1.997E+00	1.854E-01	0.349
		920.93		-4.037E-01	5.515E-01	7.602E-01	6.935E-02	-0.531
OS-185		59.72		-3.023E-03	3.797E-01	5.832E-01	5.059E-02	-0.005
		61.14		5.838E-02	1.979E-01	3.097E-01	2.762E-02	0.189
		69.30		2.752E-01	3.323E-01	5.264E-01	5.163E-02	0.523
		592.07		1.087E+00	2.603E+00	4.359E+00	2.850E-01	0.249
		646.12	*	-1.474E-02	4.674E-02	7.588E-02	4.888E-03	-0.194
		717.42		1.107E+00	1.044E+00	1.859E+00	1.309E-01	0.596
		874.81		2.229E-01	6.583E-01	1.105E+00	9.963E-02	0.202
		880.27		-2.097E-01	8.531E-01	1.349E+00	1.227E-01	-0.155
RE-188		155.03	*	-7.426E-02	1.776E-01	2.826E-01	1.828E-02	-0.263
		477.96		1.984E+00	3.279E+00	5.540E+00	3.596E-01	0.358
		633.10		3.253E+00	3.082E+00	5.539E+00	3.585E-01	0.587
W-188	+	63.58		4.407E+01	9.175E+01	1.142E+02	1.056E+01	0.386
		227.08		2.488E+00	1.391E+01	2.223E+01	1.797E+00	0.112
		290.67	*	-2.718E+00	8.575E+00	1.233E+01	1.116E+00	-0.220
IR-192	+	295.96		7.943E-01	1.905E-01	2.945E-01	2.656E-02	2.697
		308.46		7.179E-02	1.003E-01	1.737E-01	1.520E-02	0.413
		316.51	*	-4.609E-02	3.568E-02	5.420E-02	4.635E-03	-0.850
		468.07		1.818E-02	7.464E-02	1.084E-01	7.888E-03	0.168
		604.41		-1.621E-01	4.898E-01	6.850E-01	8.039E-02	-0.237
		612.46		8.221E-01	8.349E-01	1.334E+00	1.085E-01	0.616
AU-195		65.12		-7.986E-02	2.032E-01	3.044E-01	2.866E-02	-0.262
		66.83		-8.066E-02	1.096E-01	1.606E-01	1.539E-02	-0.502
	+	75.70		1.058E+00	2.645E-01	4.475E-01	4.650E-02	2.365

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	2.004E-01	2.370E-01	3.982E-01	3.674E-02	0.503
	+	129.76		3.948E+00	4.188E+00	5.304E+00	3.160E-01	0.744
TL-200		367.94	*	3.080E-04	4.188E+00	Half-Life too short		
		579.30		3.744E-04	4.188E+00	Half-Life too short		
		828.27		-2.148E-04	4.188E+00	Half-Life too short		
		1205.75		3.896E-04	4.188E+00	Half-Life too short		
TL-201		68.90		4.214E+00	3.925E+00	6.283E+00	6.140E-01	0.671
		70.82		1.746E+00	2.220E+00	3.504E+00	3.484E-01	0.498
		80.30		-2.349E+00	3.946E+00	5.768E+00	6.269E-01	-0.407
		135.34		-1.661E+01	1.939E+01	3.045E+01	1.840E+00	-0.545
		167.43	*	1.142E-01	5.456E+00	8.822E+00	5.995E-01	0.013
TL-202		68.90		4.786E-01	4.457E-01	7.136E-01	6.973E-02	0.671
		70.82		1.978E-01	2.514E-01	3.969E-01	3.946E-02	0.498
		80.30		-2.661E-01	4.471E-01	6.535E-01	7.102E-02	-0.407
		439.56	*	4.498E-02	7.049E-02	1.197E-01	7.655E-03	0.376
HG-203		70.83		9.073E-01	1.157E+00	1.821E+00	2.636E-01	0.498
		72.87		5.660E-01	6.154E-01	1.065E+00	1.516E-01	0.531
		82.60		-1.069E+00	1.106E+00	1.727E+00	2.668E-01	-0.619
		279.20	*	3.088E-03	4.557E-02	7.490E-02	7.092E-03	0.041
BI-207		72.80		1.316E-01	1.818E-01	3.145E-01	3.182E-02	0.419
	+	74.97		5.900E-01	1.474E-01	2.298E-01	2.371E-02	2.568
		84.90		1.551E-01	2.049E-01	3.155E-01	3.601E-02	0.492
		569.67		-4.080E-04	3.367E-02	5.661E-02	3.712E-03	-0.007
		1063.62	*	3.658E-02	6.219E-02	1.091E-01	8.062E-03	0.335
		1770.23		2.065E-01	5.493E-01	8.619E-01	5.042E-02	0.240
TL-207		81.07		-3.610E-01	2.395E-01	3.284E-01	3.597E-02	-1.099
		83.78		2.162E-01	1.387E-01	2.194E-01	2.473E-02	0.985
		94.90		2.532E-01	2.544E-01	3.987E-01	4.003E-02	0.635
		122.32		-6.146E-01	1.774E+00	2.873E+00	1.946E-01	-0.214
		144.24		5.744E-01	7.607E-01	1.243E+00	9.412E-02	0.462
		154.21		2.148E-01	4.137E-01	6.873E-01	5.195E-02	0.313
	+	269.46		6.378E-01	2.740E-01	3.807E-01	3.503E-02	1.675
		323.87	*	-5.563E-01	7.663E-01	1.212E+00	2.130E-01	-0.459
	+	338.28		7.225E+00	1.933E+00	2.631E+00	3.124E-01	2.746
		445.03		-6.956E-01	2.490E+00	3.953E+00	4.200E-01	-0.176
PO-209		260.50		1.078E+01	9.392E+00	1.672E+01	1.477E+00	0.644
		262.80		-5.993E+00	2.670E+01	4.445E+01	3.948E+00	-0.135
		896.60	*	-3.797E+00	8.872E+00	1.377E+01	1.282E+00	-0.276
BI-210		46.50	*	1.145E+00	6.388E+00	9.739E+00	7.848E-01	0.118
PB-210		46.50	*	1.145E+00	6.388E+00	9.739E+00	7.848E-01	0.118
PO-210		46.50	*	1.145E+00	6.388E+00	9.739E+00	6.840E-01	0.118
PB-211		404.84	*	9.800E-02	1.059E+00	1.739E+00	1.085E+00	0.056
		427.08		4.575E-01	2.320E+00	3.801E+00	2.352E+00	0.120
		831.96		-6.863E-01	1.450E+00	2.156E+00	1.350E+00	-0.318
BI-212	+	727.18	*	1.359E+00	5.229E-01	7.623E-01	6.692E-02	1.783
		785.46		2.161E+00	2.161E+00	3.805E+00	2.993E-01	0.568
		1620.62		8.366E-01	1.201E+00	2.242E+00	1.475E-01	0.373
PO-215		81.07		-3.610E-01	2.395E-01	3.284E-01	3.597E-02	-1.099
		83.78		2.162E-01	1.387E-01	2.194E-01	2.473E-02	0.985

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		94.90		2.532E-01	2.544E-01	3.987E-01	4.003E-02	0.635
		122.32		-6.146E-01	1.774E+00	2.873E+00	1.946E-01	-0.214
		144.24		5.744E-01	7.607E-01	1.243E+00	9.412E-02	0.462
		154.21		2.148E-01	4.137E-01	6.873E-01	5.195E-02	0.313
	+	269.46		6.378E-01	2.740E-01	3.807E-01	3.503E-02	1.675
		323.87	*	-5.563E-01	7.663E-01	1.212E+00	2.130E-01	-0.459
	+	338.28		7.225E+00	1.933E+00	2.631E+00	3.124E-01	2.746
		445.03		-6.956E-01	2.490E+00	3.953E+00	4.200E-01	-0.176
RN-219	+	271.23		8.183E-01	3.542E-01	4.901E-01	5.239E-02	1.670
		401.81	*	1.982E-01	4.295E-01	7.240E-01	9.996E-02	0.274
RN-220		549.76	*	2.164E+01	2.824E+01	4.802E+01	3.150E+00	0.451
RA-223		81.07		-3.610E-01	2.395E-01	3.284E-01	3.597E-02	-1.099
		83.78		2.162E-01	1.387E-01	2.194E-01	2.473E-02	0.985
		94.90		2.532E-01	2.544E-01	3.987E-01	4.003E-02	0.635
		122.32		-6.146E-01	1.774E+00	2.873E+00	1.946E-01	-0.214
		144.24		5.744E-01	7.607E-01	1.243E+00	9.412E-02	0.462
		154.21		2.148E-01	4.137E-01	6.873E-01	5.195E-02	0.313
	+	269.46		6.378E-01	2.740E-01	3.807E-01	3.503E-02	1.675
		323.87	*	-5.563E-01	7.663E-01	1.212E+00	2.130E-01	-0.459
	+	338.28		7.225E+00	1.933E+00	2.631E+00	3.124E-01	2.746
		445.03		-6.956E-01	2.490E+00	3.953E+00	4.200E-01	-0.176
AC-227		79.80		2.002E-01	1.721E+00	2.618E+00	5.883E-01	0.076
		236.00		5.974E-01	2.843E-01	4.620E-01	5.550E-02	1.293
		256.20	*	-5.824E-01	3.657E-01	5.404E-01	8.329E-02	-1.078
		286.10		5.303E-01	1.570E+00	2.678E+00	3.627E-01	0.198
	+	299.80		2.880E+00	2.184E+00	2.864E+00	5.047E-01	1.006
		304.40		4.368E-01	2.220E+00	3.310E+00	6.129E-01	0.132
		334.20		2.493E-01	2.789E+00	4.093E+00	7.851E-01	0.061
TH-227		79.80		2.002E-01	1.721E+00	2.618E+00	5.952E-01	0.076
	+	94.00		4.374E+00	3.121E+00	4.072E+00	9.150E-01	1.074
		236.00		5.974E-01	2.825E-01	4.620E-01	4.999E-02	1.293
		256.20	*	-5.824E-01	3.699E-01	5.404E-01	9.791E-02	-1.078
		286.10		5.303E-01	1.657E+00	2.678E+00	2.689E+00	0.198
	+	299.80		2.880E+00	2.184E+00	2.864E+00	5.047E-01	1.006
		304.40		4.368E-01	2.220E+00	3.310E+00	6.129E-01	0.132
		334.20		2.493E-01	2.789E+00	4.093E+00	7.851E-01	0.061
TH-229		85.43		6.812E-02	2.065E-01	3.124E-01	3.586E-02	0.218
	+	88.47		4.092E-01	1.384E-01	2.136E-01	2.495E-02	1.916
		100.00		-1.992E-02	1.926E-01	3.118E-01	2.812E-02	-0.064
		193.63	*	-2.049E-01	5.509E-01	8.645E-01	6.343E-02	-0.237
		210.97		-2.756E-02	9.248E-01	1.290E+00	9.963E-02	-0.021
PA-231		283.67	*	-1.116E+00	1.593E+00	2.550E+00	3.953E-01	-0.438
	+	301.29		1.152E+00	8.617E-01	1.138E+00	1.412E-01	1.012
TH-231		81.07		-3.610E-01	2.395E-01	3.284E-01	3.597E-02	-1.099
		83.78		2.162E-01	1.387E-01	2.194E-01	2.473E-02	0.985
		94.90		2.532E-01	2.544E-01	3.987E-01	4.003E-02	0.635
		122.32		-6.146E-01	1.774E+00	2.873E+00	1.946E-01	-0.214
		144.24		5.744E-01	7.607E-01	1.243E+00	9.412E-02	0.462
		154.21		2.148E-01	4.137E-01	6.873E-01	5.195E-02	0.313

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		6.378E-01	2.740E-01	3.807E-01	3.503E-02	1.675
		323.87	*	-5.563E-01	7.663E-01	1.212E+00	2.130E-01	-0.459
	+	338.28		7.225E+00	1.933E+00	2.631E+00	3.124E-01	2.746
		445.03		-6.956E-01	2.490E+00	3.953E+00	4.200E-01	-0.176
U-231		84.21		8.189E+00	4.672E+00	7.430E+00	8.415E-01	1.102
	+	92.29		3.449E+00	2.362E+00	3.701E+00	3.941E-01	0.932
		95.87	*	-2.537E-01	9.765E-01	1.440E+00	1.416E-01	-0.176
		108.00		8.994E-01	1.676E+00	2.838E+00	2.189E-01	0.317
PA-233	+	75.28		1.722E+01	4.826E+00	6.794E+00	1.113E+00	2.534
	+	86.59		5.867E+00	2.482E+00	3.031E+00	8.468E-01	1.936
	+	300.12		8.028E-01	6.044E-01	8.089E-01	1.216E-01	0.992
		311.98	*	-5.384E-02	6.717E-02	1.062E-01	9.428E-03	-0.507
		340.50		1.504E+00	8.393E-01	1.267E+00	2.988E-01	1.187
		398.62		-1.412E+00	2.257E+00	3.480E+00	9.035E-01	-0.406
		415.76		-1.773E+00	1.876E+00	2.794E+00	5.794E-01	-0.635
PA-234	+	63.00		1.296E+00	2.703E+00	3.456E+00	5.466E-01	0.375
		94.67		3.252E-01	1.909E-01	3.024E-01	4.073E-02	1.075
		98.44		7.312E-02	1.094E-01	1.637E-01	9.149E-02	0.447
		99.86		1.126E-02	4.904E-01	7.984E-01	7.220E-02	0.014
		111.00		-3.494E-01	1.961E-01	2.856E-01	3.192E-02	-1.223
		131.20		2.469E-02	1.235E-01	1.832E-01	1.095E-02	0.135
		152.70		-3.882E-02	3.427E-01	5.538E-01	8.885E-02	-0.070
	+	186.00		4.284E+00	2.516E+00	2.849E+00	8.787E-01	1.504
		226.40		1.555E-01	4.446E-01	7.167E-01	9.210E-02	0.217
		227.20		6.898E-02	4.755E-01	7.585E-01	6.136E-02	0.091
		248.90		-3.744E-01	8.896E-01	1.355E+00	3.034E-01	-0.276
	+	293.70		5.064E+00	1.432E+00	1.692E+00	2.960E-01	2.993
		369.80		-4.271E-01	9.184E-01	1.457E+00	3.087E-01	-0.293
		568.70		1.042E-02	1.113E+00	1.874E+00	1.229E-01	0.006
		569.50		-1.348E-02	2.996E-01	5.026E-01	3.295E-02	-0.027
		574.00		-8.577E-01	1.697E+00	2.751E+00	1.803E-01	-0.312
		699.00		4.563E-01	8.305E-01	1.424E+00	2.612E-01	0.320
		706.10		2.481E-01	1.270E+00	2.123E+00	9.401E-01	0.117
		733.00		-3.121E-01	4.612E-01	5.915E-01	1.283E-01	-0.528
		742.81		-1.476E+00	1.871E+00	2.405E+00	1.613E+00	-0.614
		796.30		1.232E+00	1.050E+00	1.802E+00	4.842E-01	0.683
		805.60		3.020E-01	1.098E+00	1.836E+00	5.601E-01	0.165
		819.60		-4.888E-01	1.348E+00	2.100E+00	7.971E-01	-0.233
		826.30		-1.581E-01	9.556E-01	1.532E+00	6.846E-01	-0.103
		831.60		-6.640E-01	7.566E-01	1.091E+00	3.250E-01	-0.609
		876.40		-1.767E-01	9.748E-01	1.527E+00	1.570E+00	-0.116
		880.51		-8.004E-02	3.144E-01	4.970E-01	4.521E-02	-0.161
		883.24		-3.579E-02	3.518E-01	5.642E-01	3.796E-01	-0.063
		899.00		-5.176E-01	1.055E+00	1.591E+00	6.976E-01	-0.325
		925.00		-5.216E-01	1.330E+00	2.058E+00	1.869E-01	-0.253
		926.50		-1.573E-02	1.996E-01	3.199E-01	8.137E-02	-0.049
		946.00	*	-6.783E-02	3.815E-01	6.047E-01	1.142E-01	-0.112
		949.00		1.255E-01	5.822E-01	9.569E-01	8.460E-02	0.131
		980.50		-2.019E-02	9.188E-01	1.474E+00	1.252E-01	-0.014

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		3.154E-01	1.126E+00	1.891E+00	1.228E+00	0.167
PA-234M		766.41		3.600E+01	3.464E+01	3.801E+01	2.910E+01	0.947
		1001.03	*	-1.831E+00	8.402E+00	1.331E+01	1.450E+00	-0.138
U-235	+	89.95		3.349E+00	1.761E+00	2.025E+00	6.418E-01	1.654
	+	93.35		1.361E+00	1.000E+00	1.406E+00	4.023E-01	0.968
		105.00		1.900E-01	1.076E+00	1.797E+00	5.340E-01	0.106
		143.76	*	1.666E-01	2.372E-01	3.850E-01	6.335E-02	0.433
		163.35		-5.785E-02	5.312E-01	8.395E-01	1.535E-01	-0.069
	+	185.71		1.587E-01	8.011E-02	1.052E-01	7.542E-03	1.508
		205.31		2.830E-02	6.459E-01	9.029E-01	1.683E-01	0.031
NP-236		94.67		2.489E-01	1.433E-01	2.297E-01	2.318E-02	1.084
		98.44		5.524E-02	7.685E-02	1.237E-01	1.152E-02	0.446
		111.00		-2.643E-01	1.466E-01	2.161E-01	1.574E-02	-1.223
		160.31	*	-9.113E-02	8.402E-02	1.285E-01	8.496E-03	-0.709
NP-239		99.55		6.315E-02	1.650E-01	2.726E-01	2.481E-02	0.232
		117.00	*	5.396E-03	1.978E-01	3.268E-01	2.125E-02	0.017
	+	209.75		1.708E+00	1.036E+00	1.414E+00	1.088E-01	1.208
		228.18		-1.204E-01	2.562E-01	3.945E-01	3.200E-02	-0.305
		277.60		3.374E-02	2.059E-01	3.403E-01	3.133E-02	0.099
		334.30		9.069E-02	1.577E+00	2.309E+00	1.868E-01	0.039
AM-241		59.54	*	-8.075E-06	2.030E-01	3.119E-01	2.889E-02	0.000
CM-243		99.55		6.498E-02	1.697E-01	2.805E-01	2.553E-02	0.232
		103.76	*	2.021E-02	9.479E-02	1.589E-01	1.330E-02	0.127
		117.00		5.551E-03	2.035E-01	3.362E-01	2.186E-02	0.017
	+	209.75		1.684E+00	1.022E+00	1.394E+00	1.073E-01	1.208
		228.18		-1.217E-01	2.588E-01	3.986E-01	3.233E-02	-0.305
		277.60		3.402E-02	2.076E-01	3.430E-01	3.158E-02	0.099
CM-247		278.00		1.521E-01	8.576E-01	1.418E+00	1.307E-01	0.107
		287.40		5.510E-01	1.289E+00	2.208E+00	2.012E-01	0.250
		402.60	*	-6.184E-03	4.006E-02	6.482E-02	4.056E-03	-0.095
CF-249		252.85		5.491E-01	8.429E-01	1.471E+00	1.275E-01	0.373
		333.44		-1.368E-02	2.149E-01	3.116E-01	2.528E-02	-0.044
		387.95	*	1.025E-02	4.324E-02	7.204E-02	4.577E-03	0.142
CF-251		176.60	*	8.024E-03	1.363E-01	2.201E-01	1.535E-02	0.036
		227.00		8.571E-02	4.235E-01	6.778E-01	5.479E-02	0.126
		285.00		-8.243E-01	1.818E+00	2.967E+00	2.715E-01	-0.278

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433001      *
* Acquisition date :  7-JUL-2009 06:04:03 Detector SN#     :                *
* Detector ID        : GAM02               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:02.37     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433001           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 1.2239E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.524E+01	3.291E+00	5.986E-01	0.000E+00
CD-109	3.043E+00	1.009E+00	1.314E+00	0.000E+00
SN-126	2.997E-01	9.934E-02	1.302E-01	0.000E+00
TL-208	5.058E-01	1.023E-01	6.616E-02	0.000E+00
BI-211	3.456E+00	4.679E-01	3.446E-01	0.000E+00
PB-212	1.452E+00	1.992E-01	1.157E-01	0.000E+00
PO-212	1.452E+00	1.992E-01	1.157E-01	0.000E+00
BI-214	1.009E+00	1.690E-01	1.107E-01	0.000E+00
PB-214	1.202E+00	1.740E-01	1.201E-01	0.000E+00
PO-214	1.202E+00	1.740E-01	1.201E-01	0.000E+00
PO-216	1.452E+00	1.992E-01	1.157E-01	0.000E+00
PO-218	1.202E+00	1.740E-01	1.201E-01	0.000E+00
RA-224	2.498E+00	1.342E+00	1.515E+00	0.000E+00
RA-226	1.009E+00	1.690E-01	1.107E-01	0.000E+00
AC-228	1.459E+00	4.264E-01	2.408E-01	0.000E+00
RA-228	1.459E+00	4.264E-01	2.408E-01	0.000E+00
TH-228	1.452E+00	1.992E-01	1.157E-01	0.000E+00
TH-230	1.009E+00	1.690E-01	1.107E-01	0.000E+00
TH-232	1.459E+00	4.264E-01	2.408E-01	0.000E+00
TH-234	1.112E+00	2.274E+00	2.620E+00	0.000E+00
U-234	1.009E+00	1.690E-01	1.107E-01	0.000E+00
NP-237	8.801E-01	3.417E-01	4.235E-01	0.000E+00
U-238	1.112E+00	2.274E+00	2.620E+00	0.000E+00
AM-243	3.287E-01	8.050E-02	9.633E-02	0.000E+00
ANH-511	9.796E-02	6.833E-02	5.501E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	3.433E-01	3.235E-01	5.831E-01	0.000E+00	NOT IDENT.
NA-22	-2.189E-02	5.162E-02	8.293E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	1.741E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.560E-02	2.755E-02	5.528E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.109E-02	7.769E-02	0.000E+00	FAIL ABUN
SC-46	-1.182E-02	4.800E-02	7.805E-02	0.000E+00	FAIL ABUN
V-48	-3.234E-02	7.877E-02	1.242E-01	0.000E+00	NOT IDENT.
CR-51	5.502E-01	3.878E-01	7.166E-01	0.000E+00	NOT IDENT.
MN-52	1.931E-01	2.226E-01	4.119E-01	0.000E+00	NOT IDENT.
MN-54	-8.485E-03	4.338E-02	7.141E-02	0.000E+00	NOT IDENT.
CO-56	6.005E-03	4.380E-02	7.412E-02	0.000E+00	NOT IDENT.
CO-57	1.935E-03	2.469E-02	4.289E-02	0.000E+00	NOT IDENT.
CO-58	-3.032E-02	4.112E-02	6.387E-02	0.000E+00	NOT IDENT.
FE-59	-4.646E-02	9.884E-02	1.609E-01	0.000E+00	NOT IDENT.
CO-60	1.123E-02	4.191E-02	7.234E-02	0.000E+00	NOT IDENT.
ZN-65	3.342E-02	1.134E-01	1.724E-01	0.000E+00	NOT IDENT.
GE-68	-6.876E-01	1.379E+00	2.242E+00	0.000E+00	NOT IDENT.
AS-73	-1.735E-01	1.095E+00	1.980E+00	0.000E+00	NOT IDENT.
AS-74	3.747E-03	8.271E-02	1.435E-01	0.000E+00	NOT IDENT.
SE-75	-3.502E-02	4.569E-02	7.395E-02	0.000E+00	NOT IDENT.
BR-77	1.965E+00	8.289E+00	1.396E+01	0.000E+00	FAIL ABUN
SR-82	-2.214E-01	4.058E-01	6.505E-01	0.000E+00	NOT IDENT.
RB-83	3.269E-02	8.023E-02	1.368E-01	0.000E+00	NOT IDENT.
RB-84	-4.046E-02	7.641E-02	1.203E-01	0.000E+00	NOT IDENT.
KR-85	4.463E+00	9.009E+00	1.366E+01	0.000E+00	NOT IDENT.
SR-85	2.255E-02	4.553E-02	6.902E-02	0.000E+00	NOT IDENT.
RB-86	-2.955E-01	8.300E-01	1.369E+00	0.000E+00	NOT IDENT.
Y-88	-3.981E-03	3.462E-02	5.672E-02	0.000E+00	NOT IDENT.
ZR-88	-5.732E-03	3.142E-02	5.267E-02	0.000E+00	NOT IDENT.
Y-91	-3.762E+00	2.272E+01	3.783E+01	0.000E+00	NOT IDENT.
NB-94	-3.456E-03	3.970E-02	6.714E-02	0.000E+00	NOT IDENT.
NB-95	3.250E-02	5.040E-02	8.722E-02	0.000E+00	NOT IDENT.
NB-95M	1.831E-01	1.374E-01	2.300E-01	0.000E+00	NOT IDENT.
ZR-95	3.582E-02	8.086E-02	1.414E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.827E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.537E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.664E+00	8.975E+00	1.594E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	9.197E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.015E-03	3.524E-02	5.807E-02	0.000E+00	NOT IDENT.
RH-102	-1.235E-02	3.113E-02	5.029E-02	0.000E+00	NOT IDENT.
RU-103	-1.477E-02	4.169E-02	6.715E-02	0.000E+00	FAIL ABUN
RH-106	-1.984E-02	3.488E-01	5.979E-01	0.000E+00	FAIL ABUN
RU-106	-1.984E-02	3.488E-01	5.979E-01	0.000E+00	FAIL ABUN
AG-108M	-1.798E-02	3.722E-02	6.050E-02	0.000E+00	NOT IDENT.
AG-110M	-9.526E-03	3.860E-02	6.486E-02	0.000E+00	NOT IDENT.
IN-111	3.837E-01	8.269E-01	1.329E+00	0.000E+00	NOT IDENT.
IN-113M	-3.094E-02	4.579E-02	7.402E-02	0.000E+00	NOT IDENT.
SN-113	-3.094E-02	4.579E-02	7.402E-02	0.000E+00	NOT IDENT.
IN-114M	-6.625E-02	2.043E-01	2.978E-01	0.000E+00	NOT IDENT.
CD-115	6.589E-01	7.710E+00	1.283E+01	0.000E+00	NOT IDENT.
SN-117M	2.012E-02	5.072E-02	8.779E-02	0.000E+00	NOT IDENT.
SB-122	1.510E-01	1.604E+00	2.803E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.015E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	4.506E-03	2.801E-02	4.795E-02	0.000E+00	NOT IDENT.
I-124	-3.480E-01	6.062E-01	8.535E-01	0.000E+00	NOT IDENT.
SB-124	3.520E-02	7.327E-02	1.350E-01	0.000E+00	FAIL ABUN
SB-125	4.853E-02	1.016E-01	1.767E-01	0.000E+00	FAIL ABUN
TE-125M	5.141E+00	8.882E+00	1.585E+01	0.000E+00	NOT IDENT.
I-126	-2.863E-02	1.922E-01	3.251E-01	0.000E+00	NOT IDENT.
SB-126	3.722E-02	1.621E-01	2.559E-01	0.000E+00	FAIL ABUN
SB-127	5.138E-01	1.176E+00	2.072E+00	0.000E+00	NOT IDENT.
XE-127	2.222E-02	4.935E-02	8.404E-02	0.000E+00	NOT IDENT.
I-131	-5.637E-02	1.232E-01	1.879E-01	0.000E+00	NOT IDENT.
TE-132	-2.710E-01	5.754E-01	9.233E-01	0.000E+00	NOT IDENT.
BA-133	3.636E-02	4.657E-02	8.308E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.282E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	4.680E-02	5.123E-02	9.241E-02	0.000E+00	NOT IDENT.
CS-135	2.107E-01	1.707E-01	2.850E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.383E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.233E-02	1.057E-01	1.861E-01	0.000E+00	FAIL ABUN
BA-137M	-3.135E-02	4.134E-02	6.672E-02	0.000E+00	NOT IDENT.
CS-137	-3.314E-02	4.370E-02	7.053E-02	0.000E+00	NOT IDENT.
CE-139	1.177E-02	3.161E-02	5.441E-02	0.000E+00	NOT IDENT.
BA-140	-9.974E-02	2.747E-01	4.365E-01	0.000E+00	NOT IDENT.
LA-140	3.492E-02	8.709E-02	1.543E-01	0.000E+00	NOT IDENT.
CE-141	-1.906E-02	6.360E-02	1.073E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.932E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	2.531E-02	2.323E-01	3.595E-01	0.000E+00	NOT IDENT.
PM-144	-1.849E-02	3.808E-02	6.238E-02	0.000E+00	NOT IDENT.
PR-144	-1.252E+00	2.579E+00	4.224E+00	0.000E+00	NOT IDENT.

PM-146	-1.015E-03	4.968E-02	8.314E-02	0.000E+00	NOT IDENT.
ND-147	5.861E-02	5.790E-01	9.640E-01	0.000E+00	FAIL ABUN
PM-149	2.211E+01	6.000E+01	1.065E+02	0.000E+00	NOT IDENT.
EU-152	-1.134E-02	1.104E-01	1.649E-01	0.000E+00	NOT IDENT.
GD-153	-1.334E-02	9.069E-02	1.399E-01	0.000E+00	NOT IDENT.
EU-154	-5.987E-02	1.445E-01	2.323E-01	0.000E+00	NOT IDENT.
EU-155	1.405E-02	1.081E-01	1.899E-01	0.000E+00	FAIL ABUN
TB-160	-4.460E-02	1.503E-01	2.427E-01	0.000E+00	FAIL ABUN
HO-166M	-5.686E-02	7.073E-02	1.125E-01	0.000E+00	NOT IDENT.
TM-171	-2.438E+01	3.268E+01	5.073E+01	0.000E+00	NOT IDENT.
LU-176	-6.316E-03	2.598E-02	4.442E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.244E+00	1.821E+00	0.000E+00	FAIL ABUN
LU-177M	7.301E-02	1.909E-01	3.308E-01	0.000E+00	FAIL ABUN
HF-181	-6.997E-02	4.502E-02	6.486E-02	0.000E+00	NOT IDENT.
W-181	-2.141E-01	4.269E-01	6.735E-01	0.000E+00	NOT IDENT.
TA-182	2.335E-02	2.279E-01	3.875E-01	0.000E+00	FAIL ABUN
RE-183	-6.836E-02	1.183E-01	1.915E-01	0.000E+00	FAIL ABUN
RE-184	1.455E-01	2.189E-01	3.981E-01	0.000E+00	NOT IDENT.
OS-185	-1.474E-02	4.580E-02	7.656E-02	0.000E+00	NOT IDENT.
RE-188	-7.426E-02	1.741E-01	2.903E-01	0.000E+00	NOT IDENT.
W-188	-2.718E+00	8.404E+00	1.257E+01	0.000E+00	FAIL ABUN
IR-192	-4.609E-02	3.497E-02	5.519E-02	0.000E+00	FAIL ABUN
AU-195	2.004E-01	2.323E-01	4.114E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.014E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.142E-01	5.346E+00	9.056E+00	0.000E+00	NOT IDENT.
TL-202	4.498E-02	6.908E-02	1.214E-01	0.000E+00	NOT IDENT.
HG-203	3.088E-03	4.466E-02	7.638E-02	0.000E+00	NOT IDENT.
BI-207	3.658E-02	6.095E-02	1.094E-01	0.000E+00	FAIL ABUN
TL-207	-5.563E-01	7.510E-01	1.234E+00	0.000E+00	FAIL ABUN
PO-209	-3.797E+00	8.695E+00	1.383E+01	0.000E+00	NOT IDENT.
BI-210	1.145E+00	6.260E+00	1.016E+01	0.000E+00	NOT IDENT.
PB-210	1.145E+00	6.260E+00	1.016E+01	0.000E+00	NOT IDENT.
PO-210	1.145E+00	6.260E+00	1.016E+01	0.000E+00	NOT IDENT.
PB-211	9.800E-02	1.038E+00	1.765E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.124E-01	7.680E-01	0.000E+00	FAIL ABUN
PO-215	-5.563E-01	7.510E-01	1.234E+00	0.000E+00	FAIL ABUN
RN-219	1.982E-01	4.209E-01	7.350E-01	0.000E+00	FAIL ABUN
RN-220	2.164E+01	2.768E+01	4.855E+01	0.000E+00	NOT IDENT.
RA-223	-5.563E-01	7.510E-01	1.234E+00	0.000E+00	FAIL ABUN
AC-227	-5.824E-01	3.584E-01	5.517E-01	0.000E+00	FAIL ABUN
TH-227	-5.824E-01	3.625E-01	5.517E-01	0.000E+00	FAIL ABUN
TH-229	-2.049E-01	5.399E-01	8.857E-01	0.000E+00	FAIL ABUN
PA-231	-1.116E+00	1.561E+00	2.600E+00	0.000E+00	FAIL ABUN
TH-231	-5.563E-01	7.510E-01	1.234E+00	0.000E+00	FAIL ABUN
U-231	-2.537E-01	9.569E-01	1.488E+00	0.000E+00	FAIL ABUN
PA-233	-5.384E-02	6.583E-02	1.081E-01	0.000E+00	FAIL ABUN
PA-234	-6.783E-02	3.739E-01	6.071E-01	0.000E+00	FAIL ABUN
PA-234M	-1.831E+00	8.234E+00	1.336E+01	0.000E+00	NOT IDENT.
U-235	1.666E-01	2.324E-01	3.960E-01	0.000E+00	FAIL ABUN
NP-236	-9.113E-02	8.234E-02	1.320E-01	0.000E+00	NOT IDENT.
NP-239	5.396E-03	1.939E-01	3.370E-01	0.000E+00	FAIL ABUN
AM-241	-8.075E-06	1.989E-01	3.243E-01	0.000E+00	NOT IDENT.
CM-243	2.021E-02	9.289E-02	1.641E-01	0.000E+00	FAIL ABUN
CM-247	-6.184E-03	3.926E-02	6.580E-02	0.000E+00	NOT IDENT.
CF-249	1.025E-02	4.237E-02	7.316E-02	0.000E+00	NOT IDENT.
CF-251	8.024E-03	1.336E-01	2.258E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:05:03.97

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433001.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:04:03.
Sample ID         : G232433001           Sample quantity  : 1.22390E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.37  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1283	10.67*	1.046E+00	3.524E+01	3.524E+01	9.53
CD-109	88.03	190	3.72*	5.256E+00	2.981E+00	3.043E+00	33.82
SN-126	64.28	35	9.60	2.557E+00	4.400E-01	4.400E-01	208.55
	86.94	190	8.90	5.256E+00	1.246E+00	1.246E+00	52.73
	87.57	190	37.00*	5.256E+00	2.997E-01	2.997E-01	33.82
TL-208	277.35	------	6.80	4.129E+00	------ Line Not Found		------
	510.84	83	21.60	2.608E+00	4.535E-01	4.535E-01	71.66
	583.14	326	84.20*	2.348E+00	5.058E-01	5.058E-01	20.64
	860.37	------	12.46	1.682E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.827E+00	------ Line Not Found		------
	351.07	505	12.94*	3.462E+00	3.456E+00	3.456E+00	13.82
PB-212	74.81	287	10.70	4.054E+00	2.028E+00	2.028E+00	26.68
	77.11	451	18.00	4.319E+00	1.781E+00	1.781E+00	18.97
	87.30	190	8.00	5.256E+00	1.386E+00	1.386E+00	35.27
	238.63	973	44.60*	4.607E+00	1.452E+00	1.452E+00	14.00
	300.09	67	3.41	3.897E+00	1.554E+00	1.554E+00	74.53
PO-212	74.81	287	10.70	4.054E+00	2.028E+00	2.028E+00	26.68
	77.11	451	18.00	4.319E+00	1.781E+00	1.781E+00	18.97
	87.30	190	8.00	5.256E+00	1.386E+00	1.386E+00	35.27
	115.19	------	0.60	6.304E+00	------ Line Not Found		------
	238.63	973	44.60*	4.607E+00	1.452E+00	1.452E+00	14.00
	300.09	67	3.41	3.897E+00	1.554E+00	1.554E+00	74.53
BI-214	609.31	345	46.30*	2.266E+00	1.009E+00	1.009E+00	17.09
	768.36	------	5.04	1.861E+00	------ Line Not Found		------
	934.06	------	3.21	1.561E+00	------ Line Not Found		------
	1120.29	59	15.10	1.320E+00	9.114E-01	9.114E-01	70.62
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.098E+00	------ Line Not Found		------
	1764.49	50	15.80	9.195E-01	1.049E+00	1.049E+00	38.26
PB-214	74.81	287	6.21	4.054E+00	3.494E+00	3.494E+00	26.06
	77.11	451	10.50	4.319E+00	3.053E+00	3.054E+00	20.44
	87.30	190	4.67	5.256E+00	2.375E+00	2.375E+00	34.69

Sample ID : G232433001 Acquisition date : 7-JUL-2009 06:04:03

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	147	7.49	4.562E+00	1.317E+00	1.317E+00	55.09
	295.21	261	19.20	3.945E+00	1.055E+00	1.055E+00	24.77
	351.92	505	37.20*	3.462E+00	1.202E+00	1.202E+00	14.77
PO-214	74.81	287	6.21	4.054E+00	3.494E+00	3.494E+00	26.06
	77.11	451	10.50	4.319E+00	3.053E+00	3.054E+00	20.44
	87.30	190	4.67	5.256E+00	2.375E+00	2.375E+00	34.69
	241.98	147	7.49	4.562E+00	1.317E+00	1.317E+00	55.09
	295.21	261	19.20	3.945E+00	1.055E+00	1.055E+00	24.77
	351.92	505	37.20*	3.462E+00	1.202E+00	1.202E+00	14.77
PO-216	74.81	287	10.70	4.054E+00	2.028E+00	2.028E+00	26.68
	77.11	451	18.00	4.319E+00	1.781E+00	1.781E+00	18.97
	87.30	190	8.00	5.256E+00	1.386E+00	1.386E+00	35.27
	238.63	973	44.60*	4.607E+00	1.452E+00	1.452E+00	14.00
	300.09	67	3.41	3.897E+00	1.554E+00	1.554E+00	74.53
PO-218	74.81	287	6.21	4.054E+00	3.494E+00	3.494E+00	26.06
	77.11	451	10.50	4.319E+00	3.053E+00	3.054E+00	20.44
	87.30	190	4.67	5.256E+00	2.375E+00	2.375E+00	34.69
	241.98	147	7.49	4.562E+00	1.317E+00	1.317E+00	55.09
	295.21	261	19.20	3.945E+00	1.055E+00	1.055E+00	24.77
	351.92	505	37.20*	3.462E+00	1.202E+00	1.202E+00	14.77
RA-224	240.98	147	3.95*	4.562E+00	2.498E+00	2.498E+00	54.81
RA-226	609.31	345	46.30*	2.266E+00	1.009E+00	1.009E+00	17.09
	768.36	------	5.04	1.861E+00	------	Line Not Found	------
	934.06	------	3.21	1.561E+00	------	Line Not Found	------
	1120.29	59	15.10	1.320E+00	9.114E-01	9.114E-01	70.62
	1238.11	------	5.94	1.205E+00	------	Line Not Found	------
	1377.67	------	4.11	1.098E+00	------	Line Not Found	------
	1764.49	50	15.80	9.195E-01	1.049E+00	1.049E+00	38.26
AC-228	338.32	229	11.40	3.563E+00	1.730E+00	1.730E+00	47.61
	911.07	210	27.70*	1.597E+00	1.459E+00	1.459E+00	29.82
	969.11	140	16.60	1.508E+00	1.715E+00	1.715E+00	35.77
RA-228	338.32	229	11.40	3.563E+00	1.730E+00	1.730E+00	47.61
	911.07	210	27.70*	1.597E+00	1.459E+00	1.459E+00	29.82
	969.11	140	16.60	1.508E+00	1.715E+00	1.715E+00	35.77
TH-228	84.40	------	1.21	5.028E+00	------	Line Not Found	------
	238.60	973	44.60*	4.607E+00	1.452E+00	1.452E+00	14.00
	300.10	67	3.41	3.897E+00	1.554E+00	1.554E+00	94.66
TH-230	609.31	345	46.30*	2.266E+00	1.009E+00	1.009E+00	17.09
	768.36	------	5.04	1.861E+00	------	Line Not Found	------
	934.06	------	3.21	1.561E+00	------	Line Not Found	------
	1120.29	59	15.10	1.320E+00	9.114E-01	9.114E-01	70.62
	1238.11	------	5.94	1.205E+00	------	Line Not Found	------
	1377.67	------	4.11	1.098E+00	------	Line Not Found	------
	1764.49	50	15.80	9.195E-01	1.049E+00	1.049E+00	38.26
TH-232	338.32	229	11.40	3.563E+00	1.730E+00	1.730E+00	25.27
	911.07	210	27.70*	1.597E+00	1.459E+00	1.459E+00	29.82
	969.11	140	16.60	1.508E+00	1.715E+00	1.715E+00	35.77
TH-234	63.29	35	3.80*	2.557E+00	1.112E+00	1.112E+00	208.77
	92.38	112	5.41	5.623E+00	1.132E+00	1.132E+00	70.31

Sample ID : G232433001 Acquisition date : 7-JUL-2009 06:04:03

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	345	46.30*	2.266E+00	1.009E+00	1.009E+00	17.09
	768.36	------	5.04	1.861E+00	------	Line Not Found	------
	934.06	------	3.21	1.561E+00	------	Line Not Found	------
	1120.29	59	15.10	1.320E+00	9.114E-01	9.114E-01	70.62
	1238.11	------	5.94	1.205E+00	------	Line Not Found	------
	1377.67	------	4.11	1.098E+00	------	Line Not Found	------
	1764.49	50	15.80	9.195E-01	1.049E+00	1.049E+00	38.26
NP-237	86.50	190	12.60*	5.256E+00	8.801E-01	8.801E-01	39.62
	95.87	------	2.60	5.787E+00	------	Line Not Found	------
U-238	63.29	35	3.80*	2.557E+00	1.112E+00	1.112E+00	208.77
	92.38	112	5.41	5.623E+00	1.132E+00	1.132E+00	68.49
AM-243	74.67	287	66.00*	4.054E+00	3.287E-01	3.287E-01	24.99
	86.72	190	0.34	5.256E+00	3.300E+01	3.300E+01	33.82
	117.66	------	0.55	6.322E+00	------	Line Not Found	------
	142.18	------	0.13	6.186E+00	------	Line Not Found	------
ANH-511	511.00	83	100.00*	2.608E+00	9.796E-02	9.796E-02	71.17

Flag: "*" = Keyline

Sample ID : G232433001 Acquisition date : 7-JUL-2009 06:04:03

Total number of lines in spectrum 29
Number of unidentified lines 3
Number of lines tentatively identified by NID 26 89.66%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.524E+01	3.524E+01	0.336E+01	9.53	
CD-109	464.00D	1.02	2.981E+00	3.043E+00	1.029E+00	33.82	
SN-126	1.00E+05Y	1.00	2.997E-01	2.997E-01	1.014E-01	33.82	
TL-208	1.41E+10Y	1.00	5.058E-01	5.058E-01	1.044E-01	20.64	
BI-211	7.04E+08Y	1.00	3.456E+00	3.456E+00	0.477E+00	13.82	
PB-212	1.41E+10Y	1.00	1.452E+00	1.452E+00	0.203E+00	14.00	
PO-212	1.41E+10Y	1.00	1.452E+00	1.452E+00	0.203E+00	14.00	
BI-214	1600.00Y	1.00	1.009E+00	1.009E+00	0.172E+00	17.09	
PB-214	1600.00Y	1.00	1.202E+00	1.202E+00	0.178E+00	14.77	
PO-214	1600.00Y	1.00	1.202E+00	1.202E+00	0.178E+00	14.77	
PO-216	1.41E+10Y	1.00	1.452E+00	1.452E+00	0.203E+00	14.00	
PO-218	1600.00Y	1.00	1.202E+00	1.202E+00	0.178E+00	14.77	
RA-224	1.41E+10Y	1.00	2.498E+00	2.498E+00	1.369E+00	54.81	
RA-226	1600.00Y	1.00	1.009E+00	1.009E+00	0.172E+00	17.09	
AC-228	1.41E+10Y	1.00	1.459E+00	1.459E+00	0.435E+00	29.82	
RA-228	1.41E+10Y	1.00	1.459E+00	1.459E+00	0.435E+00	29.82	
TH-228	1.41E+10Y	1.00	1.452E+00	1.452E+00	0.203E+00	14.00	
TH-230	4.47E+09Y	1.00	1.009E+00	1.009E+00	0.172E+00	17.09	
TH-232	1.41E+10Y	1.00	1.459E+00	1.459E+00	0.435E+00	29.82	
TH-234	4.47E+09Y	1.00	1.112E+00	1.112E+00	2.321E+00	208.77	
U-234	4.47E+09Y	1.00	1.009E+00	1.009E+00	0.172E+00	17.09	
NP-237	2.14E+06Y	1.00	8.801E-01	8.801E-01	3.487E-01	39.62	
U-238	4.47E+09Y	1.00	1.112E+00	1.112E+00	2.321E+00	208.77	
AM-243	7380.00Y	1.00	3.287E-01	3.287E-01	0.821E-01	24.99	
ANH-511	1.00E+09Y	1.00	9.796E-02	9.796E-02	6.972E-02	71.17	
	Total Activity :		6.634E+01	6.640E+01			

Grand Total Activity : 6.634E+01 6.640E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433001 Acquisition date : 7-JUL-2009 06:04:03

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	89.89	160	336	1.24	179.01	171	20	2.23E-02	41.9	5.44E+00	T
0	128.99	63	345	1.02	257.24	254	8	8.68E-03	****	6.32E+00	T
0	186.13	152	304	1.24	371.58	367	10	2.11E-02	50.0	5.44E+00	T
0	209.11	91	203	0.69	417.56	414	8	1.27E-02	60.2	5.05E+00	T
0	270.29	119	155	1.08	539.98	536	9	1.65E-02	42.0	4.21E+00	T
1	357.71	52	92	1.44	714.93	698	25	7.21E-03	73.1	3.42E+00	
0	462.80	70	107	1.37	925.21	921	11	9.76E-03	61.3	2.82E+00	T
0	727.32	102	63	1.31	1454.58	1449	13	1.42E-02	37.5	1.95E+00	T
0	1587.44	26	10	1.45	3176.10	3169	13	3.66E-03	62.5	9.83E-01	
0	1631.54	25	6	1.38	3264.37	3259	12	3.48E-03	58.8	9.65E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:05:09.02

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433001.CNF;1 *
* Acquisition date  : 7-JUL-2009 06:04:03.  Detector SN#     :             *
* Detector ID       : GAM02                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:02.37          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433001            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 1.22390E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 1-NOV-2008 14:03:38.86MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.524E+01	3.358E+00	5.997E-01	4.445E-02	58.769
CD-109	3.043E+00	1.029E+00	1.270E+00	1.501E-01	2.395
SN-126	2.997E-01	1.014E-01	1.259E-01	1.480E-02	2.381
TL-208	5.058E-01	1.044E-01	6.548E-02	4.808E-03	7.724
BI-211	3.456E+00	4.775E-01	3.389E-01	2.746E-02	10.199
PB-212	1.452E+00	2.033E-01	1.133E-01	1.073E-02	12.820
PO-212	1.452E+00	2.033E-01	1.133E-01	1.073E-02	12.820
BI-214	1.009E+00	1.724E-01	1.096E-01	9.126E-03	9.204
PB-214	1.202E+00	1.776E-01	1.181E-01	1.136E-02	10.177
PO-214	1.202E+00	1.776E-01	1.181E-01	1.136E-02	10.177
PO-216	1.452E+00	2.033E-01	1.133E-01	1.073E-02	12.820
PO-218	1.202E+00	1.776E-01	1.181E-01	1.136E-02	10.177
RA-224	2.498E+00	1.369E+00	1.483E+00	1.246E-01	1.684
RA-226	1.009E+00	1.724E-01	1.096E-01	9.126E-03	9.204
AC-228	1.459E+00	4.351E-01	2.397E-01	2.807E-02	6.086
RA-228	1.459E+00	4.351E-01	2.397E-01	2.807E-02	6.086
TH-228	1.452E+00	2.033E-01	1.132E-01	1.073E-02	12.821
TH-230	1.009E+00	1.724E-01	1.096E-01	9.126E-03	9.204

Sample ID : G232433001 Acquisition date : 7-JUL-2009 06:04:03

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.459E+00	4.351E-01	2.397E-01	2.807E-02	6.086
TH-234	1.112E+00	2.321E+00	2.522E+00	4.610E-01	0.441
U-234	1.009E+00	1.724E-01	1.096E-01	9.126E-03	9.204
NP-237	8.801E-01	3.487E-01	4.092E-01	9.691E-02	2.151
U-238	1.112E+00	2.321E+00	2.522E+00	4.610E-01	0.441
AM-243	3.287E-01	8.214E-02	9.292E-02	9.563E-03	3.538
ANH-511	9.796E-02	6.972E-02	5.435E-02	3.555E-03	1.802

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.433E-01		3.301E-01	5.757E-01	4.232E-02	0.596
NA-22	-2.189E-02		5.267E-02	8.292E-02	5.544E-03	-0.264
NA-24	5.991E-02		8.882E-02	Half-Life too short		
AL-26	2.560E-02		2.811E-02	5.553E-02	3.127E-03	0.461
TI-44	3.287E-01	+	6.234E-02	7.498E-02	7.994E-03	4.383
SC-46	-1.182E-02		4.898E-02	7.767E-02	7.157E-03	-0.152
V-48	-3.234E-02		8.038E-02	1.237E-01	1.046E-02	-0.261
CR-51	5.502E-01		3.957E-01	7.038E-01	6.275E-02	0.782
MN-52	1.931E-01		2.272E-01	4.125E-01	2.964E-02	0.468
MN-54	-8.485E-03		4.427E-02	7.101E-02	6.032E-03	-0.120
CO-56	6.005E-03		4.469E-02	7.372E-02	6.377E-03	0.081
CO-57	1.935E-03		2.519E-02	4.163E-02	2.456E-03	0.046
CO-58	-3.032E-02		4.195E-02	6.349E-02	5.211E-03	-0.478
FE-59	-4.646E-02		1.009E-01	1.605E-01	1.236E-02	-0.289
CO-60	1.123E-02		4.276E-02	7.238E-02	5.328E-03	0.155
ZN-65	3.342E-02		1.157E-01	1.721E-01	1.132E-02	0.194
GE-68	-6.876E-01		1.407E+00	2.237E+00	1.606E-01	-0.307
AS-73	-1.735E-01		1.118E+00	1.902E+00	1.702E-01	-0.091
AS-74	3.747E-03		8.440E-02	1.420E-01	9.281E-03	0.026
SE-75	-3.502E-02		4.662E-02	7.245E-02	6.494E-03	-0.483
BR-77	1.965E+00		8.458E+00	1.380E+01	9.035E-01	0.142
SR-82	-2.214E-01		4.140E-01	6.462E-01	5.011E-02	-0.343
RB-83	3.269E-02		8.187E-02	1.352E-01	8.854E-03	0.242
RB-84	-4.046E-02		7.797E-02	1.197E-01	1.091E-02	-0.338
KR-85	4.463E+00		9.193E+00	1.350E+01	8.830E-01	0.331
SR-85	2.255E-02		4.646E-02	6.821E-02	4.463E-03	0.331
RB-86	-2.955E-01		8.469E-01	1.366E+00	9.822E-02	-0.216
Y-88	-3.981E-03		3.533E-02	5.698E-02	3.125E-03	-0.070
ZR-88	-5.732E-03		3.206E-02	5.186E-02	3.224E-03	-0.111
Y-91	-3.762E+00		2.318E+01	3.780E+01	2.223E+00	-0.100
NB-94	-3.456E-03		4.051E-02	6.662E-02	4.575E-03	-0.052
NB-95	3.250E-02		5.142E-02	8.663E-02	6.604E-03	0.375
NB-95M	1.831E-01		1.402E-01	2.250E-01	2.154E-02	0.814
ZR-95	3.582E-02		8.251E-02	1.404E-01	1.193E-02	0.255
NB-97	-6.266E-03		1.442E-02	Half-Life too short		
ZR-97	5.326E-01		2.825E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	5.664E+00		9.158E+00	1.583E+01	2.291E+00	0.358
TC-99M	-5.985E+08		4.692E+08	Half-Life too short		
RH-101	3.015E-03		3.596E-02	5.669E-02	4.214E-03	0.053
RH-102	-1.235E-02		3.176E-02	4.965E-02	3.219E-03	-0.249
RU-103	-1.477E-02		4.254E-02	6.633E-02	8.618E-03	-0.223
RH-106	-1.984E-02		3.559E-01	5.923E-01	7.164E-02	-0.033
RU-106	-1.984E-02		3.559E-01	5.923E-01	3.847E-02	-0.033
AG-108M	-1.798E-02		3.798E-02	5.966E-02	4.075E-03	-0.301
AG-110M	-9.526E-03		3.939E-02	6.430E-02	4.341E-03	-0.148
IN-111	3.837E-01		8.438E-01	1.301E+00	1.105E-01	0.295
IN-113M	-3.094E-02		4.672E-02	7.289E-02	4.792E-03	-0.424
SN-113	-3.094E-02		4.672E-02	7.289E-02	4.792E-03	-0.424
IN-114M	-6.625E-02		2.085E-01	2.906E-01	2.111E-02	-0.228
CD-115	6.589E-01		7.867E+00	1.268E+01	8.313E-01	0.052
SN-117M	2.012E-02		5.176E-02	8.547E-02	5.609E-03	0.235
SB-122	1.510E-01		1.637E+00	2.773E+00	1.819E-01	0.054
I-123	1.632E-01		5.179E-01	Half-Life too short		
TE-123M	4.506E-03		2.859E-02	4.669E-02	3.102E-03	0.097
I-124	-3.480E-01		6.185E-01	8.451E-01	5.514E-02	-0.412
SB-124	3.520E-02		7.477E-02	1.355E-01	9.112E-03	0.260
SB-125	4.853E-02		1.036E-01	1.742E-01	1.146E-02	0.279
TE-125M	5.141E+00		9.064E+00	1.536E+01	1.449E+00	0.335
I-126	-2.863E-02		1.961E-01	3.223E-01	2.080E-02	-0.089
SB-126	3.722E-02		1.654E-01	2.539E-01	1.797E-02	0.147
SB-127	5.138E-01		1.200E+00	2.055E+00	1.961E-01	0.250
XE-127	2.222E-02		5.036E-02	8.207E-02	6.189E-03	0.271
I-131	-5.637E-02		1.257E-01	1.849E-01	1.429E-02	-0.305
TE-132	-2.710E-01		5.872E-01	9.030E-01	1.372E-01	-0.300
BA-133	3.636E-02		4.752E-02	8.171E-02	1.019E-02	0.445
I-133	-4.218E-04		1.165E-03	Half-Life too short		
CS-134	4.680E-02		5.227E-02	9.183E-02	7.405E-03	0.510
CS-135	2.107E-01		1.742E-01	2.793E-01	2.876E-02	0.754
I-135	-8.728E+07		1.216E+08	Half-Life too short		
CS-136	3.233E-02		1.078E-01	1.856E-01	1.489E-02	0.174
BA-137M	-3.135E-02		4.218E-02	6.615E-02	4.233E-03	-0.474
CS-137	-3.314E-02		4.459E-02	6.993E-02	4.491E-03	-0.474
CE-139	1.177E-02		3.225E-02	5.300E-02	3.587E-03	0.222
BA-140	-9.974E-02		2.803E-01	4.316E-01	1.410E-01	-0.231
LA-140	3.492E-02		8.887E-02	1.547E-01	1.033E-02	0.226
CE-141	-1.906E-02		6.490E-02	1.044E-01	6.739E-03	-0.183
CE-143	2.480E-04		5.068E-05	Half-Life too short		
CE-144	2.531E-02		2.371E-01	3.492E-01	4.990E-02	0.072
PM-144	-1.849E-02		3.886E-02	6.188E-02	4.208E-03	-0.299
PR-144	-1.252E+00		2.631E+00	4.190E+00	2.848E-01	-0.299
PM-146	-1.015E-03		5.069E-02	8.203E-02	7.432E-03	-0.012
ND-147	5.861E-02		5.908E-01	9.529E-01	1.321E-01	0.062
PM-149	2.211E+01		6.122E+01	1.045E+02	1.654E+01	0.212
EU-152	-1.134E-02		1.126E-01	1.621E-01	1.358E-02	-0.070

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-1.334E-02		9.254E-02	1.354E-01	1.287E-02	-0.099
EU-154	-5.987E-02		1.474E-01	2.322E-01	2.301E-02	-0.258
EU-155	1.405E-02		1.103E-01	1.840E-01	1.515E-02	0.076
TB-160	-4.460E-02		1.534E-01	2.415E-01	2.193E-02	-0.185
HO-166M	-5.686E-02		7.217E-02	1.116E-01	7.785E-03	-0.509
TM-171	-2.438E+01		3.334E+01	4.886E+01	4.677E+00	-0.499
LU-176	-6.316E-03		2.651E-02	4.360E-02	3.813E-03	-0.145
LU-177	2.092E+00	+	1.269E+00	1.779E+00	1.364E-01	1.176
LU-177M	7.301E-02		1.948E-01	3.259E-01	2.054E-02	0.224
HF-181	-6.997E-02		4.594E-02	6.404E-02	4.161E-03	-1.093
W-181	-2.141E-01		4.356E-01	6.485E-01	6.112E-02	-0.330
TA-182	2.335E-02		2.326E-01	3.873E-01	2.349E-02	0.060
RE-183	-6.836E-02		1.207E-01	1.865E-01	1.243E-02	-0.367
RE-184	1.455E-01		2.234E-01	3.899E-01	3.378E-02	0.373
OS-185	-1.474E-02		4.674E-02	7.588E-02	4.888E-03	-0.194
RE-188	-7.426E-02		1.776E-01	2.826E-01	1.828E-02	-0.263
W-188	-2.718E+00		8.575E+00	1.233E+01	1.116E+00	-0.220
IR-192	-4.609E-02		3.568E-02	5.420E-02	4.635E-03	-0.850
AU-195	2.004E-01		2.370E-01	3.982E-01	3.674E-02	0.503
TL-200	3.080E-04		1.028E-04	Half-Life too short		
TL-201	1.142E-01		5.456E+00	8.822E+00	5.995E-01	0.013
TL-202	4.498E-02		7.049E-02	1.197E-01	7.655E-03	0.376
HG-203	3.088E-03		4.557E-02	7.490E-02	7.092E-03	0.041
BI-207	3.658E-02		6.219E-02	1.091E-01	8.062E-03	0.335
TL-207	-5.563E-01		7.663E-01	1.212E+00	2.130E-01	-0.459
PO-209	-3.797E+00		8.872E+00	1.377E+01	1.282E+00	-0.276
BI-210	1.145E+00		6.388E+00	9.739E+00	7.848E-01	0.118
PB-210	1.145E+00		6.388E+00	9.739E+00	7.848E-01	0.118
PO-210	1.145E+00		6.388E+00	9.739E+00	6.840E-01	0.118
PB-211	9.800E-02		1.059E+00	1.739E+00	1.085E+00	0.056
BI-212	1.359E+00	+	5.229E-01	7.623E-01	6.692E-02	1.783
PO-215	-5.563E-01		7.663E-01	1.212E+00	2.130E-01	-0.459
RN-219	1.982E-01		4.295E-01	7.240E-01	9.996E-02	0.274
RN-220	2.164E+01		2.824E+01	4.802E+01	3.150E+00	0.451
RA-223	-5.563E-01		7.663E-01	1.212E+00	2.130E-01	-0.459
AC-227	-5.824E-01		3.657E-01	5.404E-01	8.329E-02	-1.078
TH-227	-5.824E-01		3.699E-01	5.404E-01	9.791E-02	-1.078
TH-229	-2.049E-01		5.509E-01	8.645E-01	6.343E-02	-0.237
PA-231	-1.116E+00		1.593E+00	2.550E+00	3.953E-01	-0.438
TH-231	-5.563E-01		7.663E-01	1.212E+00	2.130E-01	-0.459
U-231	-2.537E-01		9.765E-01	1.440E+00	1.416E-01	-0.176
PA-233	-5.384E-02		6.717E-02	1.062E-01	9.428E-03	-0.507
PA-234	-6.783E-02		3.815E-01	6.047E-01	1.142E-01	-0.112
PA-234M	-1.831E+00		8.402E+00	1.331E+01	1.450E+00	-0.138
U-235	1.666E-01		2.372E-01	3.850E-01	6.335E-02	0.433
NP-236	-9.113E-02		8.402E-02	1.285E-01	8.496E-03	-0.709
NP-239	5.396E-03		1.978E-01	3.268E-01	2.125E-02	0.017
AM-241	-8.075E-06		2.030E-01	3.119E-01	2.889E-02	0.000

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.021E-02		9.479E-02	1.589E-01	1.330E-02	0.127
CM-247	-6.184E-03		4.006E-02	6.482E-02	4.056E-03	-0.095
CF-249	1.025E-02		4.324E-02	7.204E-02	4.577E-03	0.142
CF-251	8.024E-03		1.363E-01	2.201E-01	1.535E-02	0.036

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433001           *
* Acquisition date  :  7-JUL-2009 06:04:03 Detector SN#     :               *
* Detector ID       : GAM02                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:02.37     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433001           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.2239E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.524E+01	3.291E+00	2.995E-01	1.679E+00
CD-109	3.043E+00	1.009E+00	6.576E-01	5.146E-01
SN-126	2.997E-01	9.934E-02	6.515E-02	5.069E-02
TL-208	5.058E-01	1.023E-01	3.310E-02	5.220E-02
BI-211	3.456E+00	4.679E-01	1.724E-01	2.387E-01
PB-212	1.452E+00	1.992E-01	5.790E-02	1.016E-01
PO-212	1.452E+00	1.992E-01	5.790E-02	1.016E-01
BI-214	1.009E+00	1.690E-01	5.537E-02	8.621E-02
PB-214	1.202E+00	1.740E-01	6.010E-02	8.878E-02
PO-214	1.202E+00	1.740E-01	6.010E-02	8.878E-02
PO-216	1.452E+00	1.992E-01	5.790E-02	1.016E-01
PO-218	1.202E+00	1.740E-01	6.010E-02	8.878E-02
RA-224	2.498E+00	1.342E+00	7.581E-01	6.845E-01
RA-226	1.009E+00	1.690E-01	5.537E-02	8.621E-02
AC-228	1.459E+00	4.264E-01	1.205E-01	2.175E-01
RA-228	1.459E+00	4.264E-01	1.205E-01	2.175E-01
TH-228	1.452E+00	1.992E-01	5.790E-02	1.016E-01
TH-230	1.009E+00	1.690E-01	5.537E-02	8.621E-02
TH-232	1.459E+00	4.264E-01	1.205E-01	2.175E-01
TH-234	1.112E+00	2.274E+00	1.311E+00	1.160E+00
U-234	1.009E+00	1.690E-01	5.537E-02	8.621E-02
NP-237	8.801E-01	3.417E-01	2.119E-01	1.744E-01
U-238	1.112E+00	2.274E+00	1.311E+00	1.160E+00
AM-243	3.287E-01	8.050E-02	4.819E-02	4.107E-02
ANH-511	9.796E-02	6.833E-02	2.752E-02	3.486E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	3.433E-01	3.235E-01	2.917E-01	1.650E-01 NOT IDENT.
NA-22	-2.189E-02	5.162E-02	4.149E-02	2.634E-02 NOT IDENT.

NA-24	5.991E+04	1.741E+05	0.000E+00	8.882E+04	SHORT HLIF
AL-26	2.560E-02	2.755E-02	2.766E-02	1.406E-02	NOT IDENT.
TI-44	3.287E-01	6.109E-02	3.887E-02	3.117E-02	FAIL ABUN
SC-46	-1.182E-02	4.800E-02	3.905E-02	2.449E-02	FAIL ABUN
V-48	-3.234E-02	7.877E-02	6.212E-02	4.019E-02	NOT IDENT.
CR-51	5.502E-01	3.878E-01	3.585E-01	1.979E-01	NOT IDENT.
MN-52	1.931E-01	2.226E-01	2.061E-01	1.136E-01	NOT IDENT.
MN-54	-8.485E-03	4.338E-02	3.572E-02	2.213E-02	NOT IDENT.
CO-56	6.005E-03	4.380E-02	3.708E-02	2.235E-02	NOT IDENT.
CO-57	1.935E-03	2.469E-02	2.146E-02	1.260E-02	NOT IDENT.
CO-58	-3.032E-02	4.112E-02	3.196E-02	2.098E-02	NOT IDENT.
FE-59	-4.646E-02	9.884E-02	8.048E-02	5.043E-02	NOT IDENT.
CO-60	1.123E-02	4.191E-02	3.619E-02	2.138E-02	NOT IDENT.
ZN-65	3.342E-02	1.134E-01	8.627E-02	5.785E-02	NOT IDENT.
GE-68	-6.876E-01	1.379E+00	1.122E+00	7.035E-01	NOT IDENT.
AS-73	-1.735E-01	1.095E+00	9.907E-01	5.589E-01	NOT IDENT.
AS-74	3.747E-03	8.271E-02	7.178E-02	4.220E-02	NOT IDENT.
SE-75	-3.502E-02	4.569E-02	3.699E-02	2.331E-02	NOT IDENT.
BR-77	1.965E+00	8.289E+00	6.984E+00	4.229E+00	FAIL ABUN
SR-82	-2.214E-01	4.058E-01	3.254E-01	2.070E-01	NOT IDENT.
RB-83	3.269E-02	8.023E-02	6.844E-02	4.093E-02	NOT IDENT.
RB-84	-4.046E-02	7.641E-02	6.020E-02	3.899E-02	NOT IDENT.
KR-85	4.463E+00	9.009E+00	6.832E+00	4.596E+00	NOT IDENT.
SR-85	2.255E-02	4.553E-02	3.453E-02	2.323E-02	NOT IDENT.
RB-86	-2.955E-01	8.300E-01	6.850E-01	4.235E-01	NOT IDENT.
Y-88	-3.981E-03	3.462E-02	2.837E-02	1.766E-02	NOT IDENT.
ZR-88	-5.732E-03	3.142E-02	2.635E-02	1.603E-02	NOT IDENT.
Y-91	-3.762E+00	2.272E+01	1.893E+01	1.159E+01	NOT IDENT.
NB-94	-3.456E-03	3.970E-02	3.359E-02	2.025E-02	NOT IDENT.
NB-95	3.250E-02	5.040E-02	4.364E-02	2.571E-02	NOT IDENT.
NB-95M	1.831E-01	1.374E-01	1.151E-01	7.012E-02	NOT IDENT.
ZR-95	3.582E-02	8.086E-02	7.074E-02	4.126E-02	NOT IDENT.
NB-97	-6.266E+03	2.827E+04	0.000E+00	1.442E+04	SHORT HLIF
ZR-97	5.326E+05	5.537E+05	0.000E+00	2.825E+05	SHORT HLIF
MO-99	5.664E+00	8.975E+00	7.975E+00	4.579E+00	NOT IDENT.
TC-99M	-5.985E+14	9.197E+14	0.000E+00	4.692E+14	SHORT HLIF
RH-101	3.015E-03	3.524E-02	2.905E-02	1.798E-02	NOT IDENT.
RH-102	-1.235E-02	3.113E-02	2.516E-02	1.588E-02	NOT IDENT.
RU-103	-1.477E-02	4.169E-02	3.360E-02	2.127E-02	FAIL ABUN
RH-106	-1.984E-02	3.488E-01	2.991E-01	1.780E-01	FAIL ABUN
RU-106	-1.984E-02	3.488E-01	2.991E-01	1.780E-01	FAIL ABUN
AG-108M	-1.798E-02	3.722E-02	3.027E-02	1.899E-02	NOT IDENT.
AG-110M	-9.526E-03	3.860E-02	3.245E-02	1.969E-02	NOT IDENT.
IN-111	3.837E-01	8.269E-01	6.648E-01	4.219E-01	NOT IDENT.
IN-113M	-3.094E-02	4.579E-02	3.703E-02	2.336E-02	NOT IDENT.
SN-113	-3.094E-02	4.579E-02	3.703E-02	2.336E-02	NOT IDENT.
IN-114M	-6.625E-02	2.043E-01	1.490E-01	1.042E-01	NOT IDENT.
CD-115	6.589E-01	7.710E+00	6.419E+00	3.934E+00	NOT IDENT.
SN-117M	2.012E-02	5.072E-02	4.392E-02	2.588E-02	NOT IDENT.
SB-122	1.510E-01	1.604E+00	1.403E+00	8.183E-01	NOT IDENT.
I-123	1.632E+05	1.015E+06	0.000E+00	5.179E+05	SHORT HLIF
TE-123M	4.506E-03	2.801E-02	2.399E-02	1.429E-02	NOT IDENT.
I-124	-3.480E-01	6.062E-01	4.270E-01	3.093E-01	NOT IDENT.
SB-124	3.520E-02	7.327E-02	6.756E-02	3.738E-02	FAIL ABUN
SB-125	4.853E-02	1.016E-01	8.838E-02	5.182E-02	FAIL ABUN
TE-125M	5.141E+00	8.882E+00	7.931E+00	4.532E+00	NOT IDENT.
I-126	-2.863E-02	1.922E-01	1.627E-01	9.804E-02	NOT IDENT.
SB-126	3.722E-02	1.621E-01	1.280E-01	8.271E-02	FAIL ABUN
SB-127	5.138E-01	1.176E+00	1.037E+00	5.998E-01	NOT IDENT.
XE-127	2.222E-02	4.935E-02	4.204E-02	2.518E-02	NOT IDENT.
I-131	-5.637E-02	1.232E-01	9.402E-02	6.284E-02	NOT IDENT.
TE-132	-2.710E-01	5.754E-01	4.619E-01	2.936E-01	NOT IDENT.
BA-133	3.636E-02	4.657E-02	4.157E-02	2.376E-02	NOT IDENT.
I-133	-4.218E+02	2.282E+03	0.000E+00	1.165E+03	SHORT HLIF
CS-134	4.680E-02	5.123E-02	4.623E-02	2.614E-02	NOT IDENT.
CS-135	2.107E-01	1.707E-01	1.426E-01	8.708E-02	NOT IDENT.
I-135	-8.728E+13	2.383E+14	0.000E+00	1.216E+14	SHORT HLIF
CS-136	3.233E-02	1.057E-01	9.312E-02	5.392E-02	FAIL ABUN
BA-137M	-3.135E-02	4.134E-02	3.338E-02	2.109E-02	NOT IDENT.
CS-137	-3.314E-02	4.370E-02	3.529E-02	2.229E-02	NOT IDENT.
CE-139	1.177E-02	3.161E-02	2.722E-02	1.613E-02	NOT IDENT.
BA-140	-9.974E-02	2.747E-01	2.184E-01	1.402E-01	NOT IDENT.
LA-140	3.492E-02	8.709E-02	7.718E-02	4.443E-02	NOT IDENT.
CE-141	-1.906E-02	6.360E-02	5.369E-02	3.245E-02	NOT IDENT.
CE-143	2.480E+02	9.932E+01	0.000E+00	5.068E+01	SHORT HLIF
CE-144	2.531E-02	2.323E-01	1.798E-01	1.185E-01	NOT IDENT.
PM-144	-1.849E-02	3.808E-02	3.121E-02	1.943E-02	NOT IDENT.
PR-144	-1.252E+00	2.579E+00	2.113E+00	1.316E+00	NOT IDENT.

PM-146	-1.015E-03	4.968E-02	4.160E-02	2.535E-02	NOT IDENT.
ND-147	5.861E-02	5.790E-01	4.823E-01	2.954E-01	FAIL ABUN
PM-149	2.211E+01	6.000E+01	5.330E+01	3.061E+01	NOT IDENT.
EU-152	-1.134E-02	1.104E-01	8.251E-02	5.630E-02	NOT IDENT.
GD-153	-1.334E-02	9.069E-02	6.999E-02	4.627E-02	NOT IDENT.
EU-154	-5.987E-02	1.445E-01	1.162E-01	7.371E-02	NOT IDENT.
EU-155	1.405E-02	1.081E-01	9.503E-02	5.513E-02	FAIL ABUN
TB-160	-4.460E-02	1.503E-01	1.214E-01	7.669E-02	FAIL ABUN
HO-166M	-5.686E-02	7.073E-02	5.628E-02	3.609E-02	NOT IDENT.
TM-171	-2.438E+01	3.268E+01	2.538E+01	1.667E+01	NOT IDENT.
LU-176	-6.316E-03	2.598E-02	2.222E-02	1.326E-02	FAIL ABUN
LU-177	2.092E+00	1.244E+00	9.113E-01	6.346E-01	FAIL ABUN
LU-177M	7.301E-02	1.909E-01	1.655E-01	9.740E-02	FAIL ABUN
HF-181	-6.997E-02	4.502E-02	3.245E-02	2.297E-02	NOT IDENT.
W-181	-2.141E-01	4.269E-01	3.369E-01	2.178E-01	NOT IDENT.
TA-182	2.335E-02	2.279E-01	1.939E-01	1.163E-01	FAIL ABUN
RE-183	-6.836E-02	1.183E-01	9.581E-02	6.036E-02	FAIL ABUN
RE-184	1.455E-01	2.189E-01	1.992E-01	1.117E-01	NOT IDENT.
OS-185	-1.474E-02	4.580E-02	3.830E-02	2.337E-02	NOT IDENT.
RE-188	-7.426E-02	1.741E-01	1.452E-01	8.881E-02	NOT IDENT.
W-188	-2.718E+00	8.404E+00	6.287E+00	4.288E+00	FAIL ABUN
IR-192	-4.609E-02	3.497E-02	2.761E-02	1.784E-02	FAIL ABUN
AU-195	2.004E-01	2.323E-01	2.058E-01	1.185E-01	FAIL ABUN
TL-200	3.080E+02	2.014E+02	0.000E+00	1.028E+02	SHORT HLIF
TL-201	1.142E-01	5.346E+00	4.531E+00	2.728E+00	NOT IDENT.
TL-202	4.498E-02	6.908E-02	6.075E-02	3.525E-02	NOT IDENT.
HG-203	3.088E-03	4.466E-02	3.822E-02	2.279E-02	NOT IDENT.
BI-207	3.658E-02	6.095E-02	5.474E-02	3.110E-02	FAIL ABUN
TL-207	-5.563E-01	7.510E-01	6.172E-01	3.832E-01	FAIL ABUN
PO-209	-3.797E+00	8.695E+00	6.919E+00	4.436E+00	NOT IDENT.
BI-210	1.145E+00	6.260E+00	5.081E+00	3.194E+00	NOT IDENT.
PB-210	1.145E+00	6.260E+00	5.081E+00	3.194E+00	NOT IDENT.
PO-210	1.145E+00	6.260E+00	5.081E+00	3.194E+00	NOT IDENT.
PB-211	9.800E-02	1.038E+00	8.831E-01	5.295E-01	NOT IDENT.
BI-212	1.359E+00	5.124E-01	3.842E-01	2.615E-01	FAIL ABUN
PO-215	-5.563E-01	7.510E-01	6.172E-01	3.832E-01	FAIL ABUN
RN-219	1.982E-01	4.209E-01	3.677E-01	2.148E-01	FAIL ABUN
RN-220	2.164E+01	2.768E+01	2.429E+01	1.412E+01	NOT IDENT.
RA-223	-5.563E-01	7.510E-01	6.172E-01	3.832E-01	FAIL ABUN
AC-227	-5.824E-01	3.584E-01	2.760E-01	1.829E-01	FAIL ABUN
TH-227	-5.824E-01	3.625E-01	2.760E-01	1.850E-01	FAIL ABUN
TH-229	-2.049E-01	5.399E-01	4.431E-01	2.755E-01	FAIL ABUN
PA-231	-1.116E+00	1.561E+00	1.301E+00	7.963E-01	FAIL ABUN
TH-231	-5.563E-01	7.510E-01	6.172E-01	3.832E-01	FAIL ABUN
U-231	-2.537E-01	9.569E-01	7.446E-01	4.882E-01	FAIL ABUN
PA-233	-5.384E-02	6.583E-02	5.410E-02	3.359E-02	FAIL ABUN
PA-234	-6.783E-02	3.739E-01	3.038E-01	1.907E-01	FAIL ABUN
PA-234M	-1.831E+00	8.234E+00	6.682E+00	4.201E+00	NOT IDENT.
U-235	1.666E-01	2.324E-01	1.981E-01	1.186E-01	FAIL ABUN
NP-236	-9.113E-02	8.234E-02	6.604E-02	4.201E-02	NOT IDENT.
NP-239	5.396E-03	1.939E-01	1.686E-01	9.891E-02	FAIL ABUN
AM-241	-8.075E-06	1.989E-01	1.622E-01	1.015E-01	NOT IDENT.
CM-243	2.021E-02	9.289E-02	8.208E-02	4.739E-02	FAIL ABUN
CM-247	-6.184E-03	3.926E-02	3.292E-02	2.003E-02	NOT IDENT.
CF-249	1.025E-02	4.237E-02	3.660E-02	2.162E-02	NOT IDENT.
CF-251	8.024E-03	1.336E-01	1.129E-01	6.815E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	207.2628
46.50	207.2628
46.50	207.2628
48.70	239.9815
49.72	237.0934
51.35	207.4683
52.39	224.9861
52.97	238.8796
53.15	239.0219
53.44	235.8819
54.07	228.7727
56.28	234.6606
56.28	234.6628
57.37	0.0000
57.53	267.1751
57.53	267.1767
57.60	267.2340
57.98	263.6195
57.98	263.6195
59.32	215.0180
59.32	215.0180
59.40	231.8129
59.54	255.1037
59.72	255.2442
60.01	256.7603
61.10	236.8981
61.14	236.9267
61.30	237.0405
63.00	294.2240
63.29	294.4753
63.29	294.4753
63.58	262.1237
64.28	257.4334
65.12	292.1193
65.20	292.1869
65.20	292.1869
66.05	253.4966
66.72	298.7203
66.83	298.8156
66.91	333.1164
67.20	322.5850
67.20	322.5850
67.75	309.7098
67.85	297.4760
68.90	246.2692
68.90	246.2692
69.30	261.1221
69.67	290.5820
70.82	270.1995
70.82	270.1995
70.83	270.2072
72.80	300.6394
72.87	300.6943
72.87	300.6943
74.67	302.1307
74.81	302.2404
74.81	302.2404
74.81	302.2404
74.81	302.2404
74.81	302.2404
74.81	302.2404
74.97	302.3672
75.28	302.6123
75.70	302.9431
77.11	304.0487
77.11	304.0487
77.11	304.0487

77.11	304.0487
77.11	304.0487
77.11	304.0487
78.38	271.5439
79.62	246.5178
79.80	279.3303
79.80	279.3303
80.11	279.5477
80.18	279.5962
80.30	309.6952
80.30	309.6952
80.57	290.7900
81.00	326.6338
81.07	345.8270
81.07	345.8270
81.07	345.8270
81.07	345.8270
82.60	318.3185
83.37	262.5536
83.78	249.0573
83.78	249.0573
83.78	249.0573
83.78	249.0573
84.21	234.1637
84.40	237.0275
84.90	270.4256
85.43	301.1621
86.29	352.9966
86.50	353.1736
86.54	354.5918
86.59	354.6328
86.72	354.7422
86.79	354.7988
86.94	354.9258
87.30	296.9489
87.30	296.9489
87.30	296.9489
87.30	296.9489
87.30	296.9489
87.30	296.9489
87.57	297.1366
87.88	297.3521
88.03	297.4566
88.36	297.6852
88.47	297.7619
89.95	298.7840
91.11	299.5791
92.29	300.3840
92.38	300.4444
92.38	300.4444
93.35	301.1008
94.00	301.5400
94.67	268.1181
94.67	268.1210
94.90	269.6706
94.90	269.6706
94.90	269.6706
94.90	269.6706
95.87	295.7177
95.87	295.7177
96.73	289.1894
97.43	275.4315
98.44	248.1466
98.44	248.1466
98.88	240.2167
99.55	249.1204
99.55	249.1204
99.86	254.0430
100.00	254.1191
100.10	275.1194
103.18	251.0394
103.76	234.0766
105.00	254.8749
105.31	259.8500
108.00	250.6349
109.28	233.8181
111.00	294.0049
111.00	294.0049

111.76	261.2975
112.95	252.1368
115.19	268.9411
116.30	267.5480
117.00	257.0719
117.00	257.0719
117.66	263.3116
121.11	231.2769
121.62	242.4251
121.78	229.5772
122.06	229.6958
122.32	245.7236
122.32	245.7236
122.32	245.7236
122.32	245.7236
123.07	258.0186
127.23	264.9950
129.76	275.2661
131.20	262.3193
133.02	217.5199
133.54	252.7336
135.34	273.8817
136.00	279.2903
136.25	259.0139
136.48	259.1160
140.51	282.4524
140.51	0.0000
142.18	258.5195
142.65	273.1492
143.76	237.5080
144.24	232.5256
144.24	232.5256
144.24	232.5256
144.24	232.5256
145.22	276.3731
145.44	276.4736
147.16	280.3601
152.43	248.1672
152.70	258.7490
153.22	223.3137
154.21	237.3087
154.21	237.3087
154.21	237.3087
154.21	237.3087
155.03	259.6912
156.02	249.5607
158.56	214.5930
159.00	0.0000
159.00	220.0267
160.31	263.9217
161.27	248.3822
162.32	251.9644
162.64	247.8303
163.35	247.0287
163.89	224.8508
165.85	244.7428
167.43	237.8126
171.28	192.8260
171.86	207.0039
172.10	218.9378
176.55	232.2687
176.60	232.2840
181.06	244.1098
184.41	228.7786
185.71	227.5328
186.00	227.6234
190.27	220.6384
192.34	218.4727
193.63	234.3958
197.04	218.7056
198.01	217.8635
198.60	229.2090
200.40	218.5339
201.83	231.2827
202.84	221.4627
205.31	219.9007
208.36	227.5317
208.81	200.4772

209.75	190.5039
209.75	190.5039
210.97	209.5294
215.65	197.5974
216.55	205.8160
218.09	205.0532
222.10	208.3385
223.80	214.5233
226.40	193.1974
227.00	195.6487
227.08	195.6676
227.20	195.6933
228.16	217.9373
228.18	217.9430
228.18	217.9430
231.56	0.0000
235.69	189.4252
236.00	195.1073
236.00	195.1073
238.60	266.0673
238.63	266.0766
238.63	266.0766
238.63	266.0766
239.00	352.0966
240.98	352.8778
241.98	296.7455
241.98	296.7455
241.98	296.7455
244.69	154.4867
245.39	156.0249
247.94	159.3047
248.90	167.3027
249.79	157.7922
252.40	123.2716
252.85	133.1624
252.85	133.1624
254.15	0.0000
256.20	161.4441
256.20	161.4441
260.50	122.5341
260.90	134.3037
262.80	152.6328
264.65	170.6368
268.24	129.3346
268.79	154.1244
269.46	155.6855
269.46	155.6855
269.46	155.6855
269.46	155.6855
271.23	153.0498
273.65	172.4223
276.40	163.0073
277.35	152.1624
277.60	156.7848
277.60	156.7848
278.00	157.7646
278.60	158.7769
279.20	152.4436
279.53	161.6807
280.46	168.2647
281.68	165.7068
283.67	158.6517
284.30	167.9812
285.00	154.2411
285.90	135.8880
286.10	135.9149
286.10	135.9149
287.40	140.7164
288.45	0.0000
290.67	156.0209
290.80	161.9858
291.72	147.2528
293.26	0.0000
293.70	146.0430
295.21	201.4717
295.21	201.4717
295.21	201.4717
295.96	179.2148

296.50	201.7189
297.23	201.8573
298.57	202.1144
299.80	202.3484
299.80	202.3484
300.09	166.1715
300.09	166.1715
300.09	166.1715
300.10	166.1715
300.12	166.1742
301.29	141.0918
302.84	141.2960
303.76	126.3732
303.91	126.3896
304.40	138.4896
304.40	138.4896
304.84	146.0755
306.84	145.2162
308.46	123.7120
311.98	144.0052
316.51	148.4042
318.01	149.5568
319.02	129.6686
319.41	126.8529
320.08	116.4302
323.87	173.3221
323.87	173.3221
323.87	173.3221
323.87	173.3221
325.23	166.8181
328.77	152.9128
333.44	151.4095
334.20	137.5936
334.20	137.5936
334.30	137.6067
338.28	139.6296
338.28	139.6296
338.28	139.6296
338.28	139.6296
338.32	139.6340
338.32	139.6340
338.32	139.6340
340.50	122.7952
340.57	125.9119
344.27	115.3919
345.85	110.6010
350.59	0.0000
351.07	113.6972
351.92	113.7769
351.92	113.7769
351.92	113.7769
355.39	0.0000
356.01	114.1609
364.48	132.1269
366.43	121.0860
367.43	89.3971
367.94	0.0000
369.80	118.4262
374.96	99.9252
383.85	114.7080
387.95	108.0057
388.63	108.0621
391.69	114.3880
391.69	114.3880
392.90	106.3875
398.62	113.9705
400.65	108.0299
401.10	99.9096
401.81	93.8432
402.60	111.2487
404.84	118.5895
410.95	118.0980
411.60	124.3197
413.65	105.9830
414.70	115.3325
415.30	120.5331
415.76	122.6352
417.63	0.0000

418.52	101.1956
423.70	90.1714
427.08	101.8177
427.89	98.7573
432.53	106.3813
433.93	115.8813
439.47	86.9856
439.56	88.0394
439.89	80.7210
443.98	94.6170
444.90	97.8319
445.03	97.8404
445.03	97.8404
445.03	97.8404
445.03	97.8404
453.90	105.8426
463.38	83.0833
468.07	73.5115
473.00	81.4684
475.06	92.3120
475.35	92.3290
476.78	69.8490
477.59	66.6602
477.96	77.4305
482.03	106.7465
484.57	65.8810
487.03	74.6380
490.36	0.0000
492.35	81.4030
497.08	83.8240
507.63	0.0000
510.53	0.0000
510.84	98.8172
511.00	98.8261
511.85	98.8783
511.85	98.8783
513.99	96.8066
513.99	96.8066
520.41	89.4540
520.65	92.7825
527.90	78.7656
528.96	0.0000
529.64	95.5060
529.87	0.0000
531.02	83.3588
537.32	90.3636
543.00	82.8300
546.56	0.0000
549.76	64.0519
552.65	83.7454
555.20	80.2608
563.23	96.9348
563.90	89.7236
568.70	89.0565
569.32	87.2695
569.50	87.2789
569.67	86.3790
573.80	97.5147
574.00	97.5252
574.64	90.1637
578.91	83.7779
579.30	0.0000
583.14	82.4480
585.48	62.6795
591.81	57.2715
592.07	58.3035
593.00	65.3942
595.88	63.6515
600.56	64.7363
602.52	0.0000
602.71	72.5272
602.71	72.5272
603.60	67.9300
604.41	71.0496
604.70	60.2472
609.31	65.0405
609.31	65.0405
609.31	65.0405

609.31	65.0405
610.33	63.5270
612.46	69.8035
614.37	72.9785
618.01	73.7414
621.84	79.5007
621.84	79.5007
631.29	79.8929
633.02	62.0893
633.10	62.0925
634.78	56.4961
635.90	73.4868
636.97	85.7835
645.85	73.8620
646.12	76.7127
656.30	71.3947
657.75	81.9247
657.90	0.0000
661.65	97.3557
661.65	97.3557
664.57	0.0000
666.33	87.0587
666.33	87.0587
675.00	82.6259
677.61	78.8830
685.20	67.5886
692.80	61.0512
695.00	82.4579
696.49	84.4575
696.49	84.4575
697.00	84.4788
697.49	83.5267
698.33	84.5319
698.50	78.7080
699.00	75.8120
702.63	90.5456
706.10	85.8172
706.58	0.0000
706.67	79.9880
709.31	86.9249
711.68	90.9316
713.82	86.1287
717.42	63.7241
720.50	70.1276
721.93	0.0000
722.20	81.8787
722.78	86.8151
722.78	86.8151
722.89	86.8194
722.95	86.8216
723.30	68.8140
724.18	65.5631
727.18	58.1041
733.00	67.4742
735.90	69.2122
739.58	57.4421
742.81	82.3232
744.21	84.3588
747.13	54.6576
751.79	84.6472
752.31	72.7131
753.82	54.8214
755.35	52.8628
756.15	67.8489
756.87	71.8629
763.93	101.1233
765.79	76.1540
766.41	61.1415
766.84	59.1469
768.36	70.2222
768.36	70.2222
768.36	70.2222
768.36	70.2222
776.49	71.4784
778.00	58.4291
778.57	63.4814
778.89	56.4361
783.80	66.6558

785.46	66.7025
792.07	77.0279
795.84	56.8490
796.30	50.7678
801.93	52.9242
805.60	55.0455
810.29	65.3672
810.76	62.3150
815.85	44.0215
817.79	55.3276
818.51	62.5176
819.60	56.3938
826.30	62.7201
828.27	0.0000
831.60	76.2529
831.96	69.0496
834.83	74.2904
836.80	0.0000
846.75	58.0617
848.13	49.7953
856.28	0.0000
856.80	66.6250
860.37	61.5078
867.32	54.3601
867.82	53.3246
871.10	43.9718
873.19	49.2467
874.81	50.3273
875.33	0.0000
876.40	56.6525
879.36	54.6178
880.27	53.5874
880.51	54.6432
881.50	59.9196
883.24	63.1172
884.67	59.9947
889.25	68.5356
896.60	63.4438
898.02	67.7109
899.00	68.7943
903.28	53.0054
911.07	55.2906
911.07	55.2906
911.07	55.2906
919.63	56.8919
920.93	60.0320
925.00	54.5125
925.24	54.5175
926.50	52.4046
934.06	57.9155
934.06	57.9155
934.06	57.9155
934.06	57.9155
935.52	62.2396
937.48	65.5065
944.10	68.8953
946.00	65.7120
949.00	65.7850
962.29	65.0215
964.01	72.2900
966.15	59.6863
968.20	115.8411
969.11	84.7355
969.11	84.7355
969.11	84.7355
977.42	51.2112
980.50	59.9938
983.50	58.9663
989.30	45.9570
996.32	50.4596
1001.03	59.3328
1001.68	59.3459
1004.76	57.7603
1021.30	0.0000
1024.50	0.0000
1034.80	52.8043
1037.82	51.0030
1038.57	53.7992

1038.76	0.0000
1045.16	51.1306
1046.59	41.8542
1048.07	43.7374
1050.47	50.2910
1050.47	50.2910
1063.62	50.5129
1076.63	54.4883
1077.35	56.3818
1085.78	56.5381
1099.22	56.7847
1112.02	55.3923
1112.84	58.6657
1115.52	53.8230
1120.29	75.1383
1120.29	75.1383
1120.29	75.1383
1120.29	75.1383
1120.51	75.1447
1121.28	76.7979
1124.00	0.0000
1129.67	67.8539
1131.51	0.0000
1147.95	0.0000
1167.94	66.7343
1173.22	67.8125
1175.09	64.9417
1177.93	73.7301
1189.05	70.0869
1204.90	73.3551
1205.75	0.0000
1213.00	62.7474
1221.42	65.8550
1230.97	68.0117
1235.34	90.7983
1236.41	0.0000
1238.11	62.2258
1238.11	62.2258
1238.11	62.2258
1238.11	62.2258
1238.25	62.2284
1246.25	62.3745
1260.41	0.0000
1271.85	50.8672
1274.45	53.8989
1274.54	53.9011
1291.56	45.1355
1298.22	0.0000
1312.09	41.3604
1325.50	32.4010
1325.50	32.4010
1332.49	28.4056
1333.61	29.4295
1360.21	29.6431
1362.66	0.0000
1365.15	31.7291
1368.21	17.4143
1368.53	0.0000
1376.25	20.5314
1377.67	18.4849
1377.67	18.4849
1377.67	18.4849
1377.67	18.4849
1384.27	29.8343
1394.10	16.5033
1395.20	18.5713
1407.95	24.8447
1434.06	18.7603
1436.60	26.0732
1457.56	0.0000
1460.81	22.0374
1489.15	21.1377
1509.49	18.0577
1596.49	18.0216
1620.62	10.2845
1678.03	0.0000
1691.02	9.5002
1691.02	9.5002

1706.46	0.0000
1750.46	0.0000
1764.49	15.4464
1764.49	15.4464
1764.49	15.4464
1764.49	15.4464
1770.23	10.1492
1771.40	43.5074
1791.20	0.0000
1808.65	4.8725
1836.01	11.7610

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433001

Total Uranium Activity	3.3841E+00	ug/g
Total Uranium Counting Unc.	6.7668E+00	ug/g
Total Uranium Tpu	3.4525E-06	ug/g
Total Uranium Mda	3.9002E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                  SAMPLE ID  : G232433001         *
*   ANALYST       : MXR1                    DETECTOR   : GAM02              *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00 COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE:  7-JUL-2009 06:04:03.57  SAMPLE ALQT:  122.390 GRAM      *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.935E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.532E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.778E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.339E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:06:03.48

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433002.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:04:36.
Sample ID         : G232433002           Sample quantity  : 1.21040E+02 GRAM
Detector name     : GAM04                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.04  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	2	74.84	237	277	0.98	149.72	146	15	3.30E-02	12.6	6.64E-01
2	2	77.14*	403	250	1.06	154.32	146	15	5.60E-02	8.2	
3	0	83.37	52	299	1.27	166.77	165	7	7.28E-03	56.2	
4	5	89.88	144	257	1.18	179.81	171	20	1.99E-02	20.5	9.40E+00
5	5	92.82*	173	334	1.53	185.69	171	20	2.40E-02	21.3	
6	0	185.88*	135	303	0.96	371.83	368	10	1.88E-02	26.3	
7	0	209.69	161	292	1.29	419.45	413	13	2.23E-02	23.4	
8	7	238.45*	953	115	1.14	476.98	473	16	1.32E-01	3.8	3.49E+00
9	7	241.54	324	172	2.03	483.15	473	16	4.50E-02	12.9	
10	0	269.97	98	156	2.12	540.02	536	11	1.37E-02	26.4	
11	0	294.95*	288	184	1.31	589.99	585	11	4.00E-02	11.0	
12	0	300.02	56	152	0.87	600.12	595	10	7.75E-03	43.8	
13	0	327.85	109	169	1.69	655.78	649	13	1.52E-02	26.3	
14	0	338.02	131	236	1.13	676.13	671	13	1.82E-02	25.6	
15	0	351.68*	526	128	1.14	703.45	697	13	7.31E-02	6.3	
16	0	463.16	62	86	1.41	926.41	918	11	8.58E-03	31.7	
17	0	510.62*	91	103	2.32	1021.33	1015	17	1.26E-02	32.1	
18	0	582.85*	265	99	1.31	1165.79	1160	14	3.68E-02	10.3	
19	0	608.89*	350	69	1.43	1217.88	1212	12	4.86E-02	7.3	
20	0	661.04*	87	57	1.39	1322.17	1315	12	1.21E-02	20.9	
21	0	726.85	71	41	1.18	1453.79	1449	11	9.88E-03	21.1	
22	0	794.45	60	27	1.34	1588.99	1582	14	8.28E-03	22.8	
23	0	910.50*	212	29	1.71	1821.06	1814	17	2.95E-02	9.2	
24	3	963.81	43	25	1.88	1927.67	1924	21	5.94E-03	22.3	1.97E+00
25	3	968.29	150	24	2.26	1936.64	1924	21	2.08E-02	11.3	
26	0	1119.60	99	43	2.06	2239.22	2231	17	1.37E-02	18.2	
27	0	1236.77*	53	36	2.35	2473.52	2467	13	7.34E-03	27.4	
28	0	1459.46*	766	4	2.07	2918.80	2911	18	1.06E-01	3.7	
29	0	1762.99*	82	0	2.88	3525.69	3518	14	1.13E-02	11.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:06:06

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:04:36
Sample ID : G232433002 Sample quantity : 121.04 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA4 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.04 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.070E+01	2.123E+00	4.646E-01	3.302E-02	44.558
BA-137M	+	661.65	*	1.358E-01	5.728E-02	5.994E-02	2.923E-03	2.266
CS-137	+	661.65	*	1.436E-01	6.055E-02	6.337E-02	3.109E-03	2.266
TL-208		277.35		4.392E-01	3.551E-01	6.323E-01	6.988E-02	0.695
	+	510.84		4.765E-01	3.099E-01	2.144E-01	2.152E-02	2.223
	+	583.14	*	3.970E-01	8.566E-02	5.459E-02	3.435E-03	7.271
		860.37		5.387E-01	3.180E-01	5.937E-01	4.952E-02	0.907
BI-211		72.87		7.707E-01	3.579E+00	5.467E+00	6.268E-01	0.141
	+	351.07	*	3.476E+00	4.996E-01	2.886E-01	1.950E-02	12.041
PB-212	+	74.81		1.890E+00	5.537E-01	5.926E-01	8.760E-02	3.189
	+	77.11		1.765E+00	3.540E-01	3.271E-01	3.753E-02	5.396
		87.30		1.440E+00	4.707E-01	7.240E-01	1.129E-01	1.988
	+	238.63	*	1.373E+00	1.521E-01	8.177E-02	6.567E-03	16.788
	+	300.09		1.242E+00	1.093E+00	1.026E+00	9.033E-02	1.211
PO-212	+	74.81		1.890E+00	5.537E-01	5.926E-01	8.760E-02	3.189
	+	77.11		1.765E+00	3.540E-01	3.271E-01	3.753E-02	5.396
		87.30		1.440E+00	4.707E-01	7.240E-01	1.129E-01	1.988
		115.19		1.228E-01	3.093E+00	5.108E+00	3.843E-01	0.024
	+	238.63	*	1.373E+00	1.521E-01	8.177E-02	6.567E-03	16.788
	+	300.09		1.242E+00	1.093E+00	1.026E+00	9.033E-02	1.211
PB-214	+	74.81		3.256E+00	9.358E-01	1.021E+00	1.393E-01	3.189
	+	77.11		3.026E+00	6.493E-01	5.608E-01	7.723E-02	5.396
		87.30		2.466E+00	7.909E-01	1.240E+00	1.766E-01	1.988
	+	241.98		2.801E+00	7.620E-01	4.926E-01	4.292E-02	5.687
	+	295.21		1.126E+00	2.671E-01	1.951E-01	1.772E-02	5.770
	+	351.92	*	1.209E+00	1.849E-01	1.006E-01	8.583E-03	12.015
PO-214	+	74.81		3.256E+00	9.358E-01	1.021E+00	1.393E-01	3.189
	+	77.11		3.026E+00	6.493E-01	5.608E-01	7.723E-02	5.396
		87.30		2.466E+00	7.909E-01	1.240E+00	1.766E-01	1.988
	+	241.98		2.801E+00	7.620E-01	4.926E-01	4.292E-02	5.687
	+	295.21		1.126E+00	2.671E-01	1.951E-01	1.772E-02	5.770
	+	351.92	*	1.209E+00	1.849E-01	1.006E-01	8.583E-03	12.015
PO-216	+	74.81		1.890E+00	5.537E-01	5.926E-01	8.760E-02	3.189
	+	77.11		1.765E+00	3.540E-01	3.271E-01	3.753E-02	5.396

Sample ID : G232433002 Acquisition date : 7-JUL-2009 06:04:36

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		87.30		1.440E+00	4.707E-01	7.240E-01	1.129E-01	1.988
	+	238.63	*	1.373E+00	1.521E-01	8.177E-02	6.567E-03	16.788
	+	300.09		1.242E+00	1.093E+00	1.026E+00	9.033E-02	1.211
PO-218	+	74.81		3.256E+00	9.358E-01	1.021E+00	1.393E-01	3.189
	+	77.11		3.026E+00	6.493E-01	5.608E-01	7.723E-02	5.396
		87.30		2.466E+00	7.909E-01	1.240E+00	1.766E-01	1.988
	+	241.98		2.801E+00	7.620E-01	4.926E-01	4.292E-02	5.687
	+	295.21		1.126E+00	2.671E-01	1.951E-01	1.772E-02	5.770
	+	351.92	*	1.209E+00	1.849E-01	1.006E-01	8.583E-03	12.015
RA-224	+	240.98	*	5.312E+00	1.414E+00	9.309E-01	6.206E-02	5.706
AC-228	+	338.32		9.535E-01	6.250E-01	3.765E-01	1.538E-01	2.533
	+	911.07	*	1.437E+00	3.080E-01	2.018E-01	2.200E-02	7.118
	+	969.11		1.793E+00	5.800E-01	3.517E-01	8.111E-02	5.097
RA-228	+	338.32		9.535E-01	6.250E-01	3.765E-01	1.538E-01	2.533
	+	911.07	*	1.437E+00	3.080E-01	2.018E-01	2.200E-02	7.118
	+	969.11		1.793E+00	5.800E-01	3.517E-01	8.111E-02	5.097
TH-228	+	84.40		2.896E+00	3.287E+00	3.367E+00	5.182E-01	0.860
	+	238.60	*	1.373E+00	1.521E-01	8.176E-02	6.567E-03	16.789
	+	300.10		1.242E+00	1.311E+00	1.026E+00	6.056E-01	1.211
TH-232	+	338.32		9.535E-01	4.926E-01	3.765E-01	2.367E-02	2.533
	+	911.07	*	1.437E+00	3.080E-01	2.018E-01	2.200E-02	7.118
	+	969.11		1.793E+00	5.800E-01	3.517E-01	8.111E-02	5.097
AM-243	+	74.67	*	3.064E-01	8.508E-02	9.654E-02	1.106E-02	3.173
		86.72		3.046E+01	1.082E+01	1.745E+01	2.081E+00	1.746
		117.66		-1.543E+00	3.409E+00	5.479E+00	4.000E-01	-0.282
		142.18		7.182E-01	1.610E+01	2.632E+01	1.722E+00	0.027
ANH-511	+	511.00	*	1.029E-01	6.639E-02	4.632E-02	2.590E-03	2.222

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.697E-01	2.949E-01	5.039E-01	3.338E-02	0.337
NA-22		1274.54	*	2.027E-03	4.091E-02	6.886E-02	4.502E-03	0.029
NA-24		1368.53	*	-1.263E-01	4.091E-02	Half-Life too short		
AL-26		1129.67		-5.503E-01	1.744E+00	2.714E+00	1.751E-01	-0.203
		1808.65	*	1.509E-03	2.598E-02	4.284E-02	2.541E-03	0.035
TI-44		67.85		-3.456E-02	4.956E-02	8.055E-02	9.367E-03	-0.429
	+	78.38	*	3.257E-01	6.533E-02	7.825E-02	8.998E-03	4.163
SC-46		889.25	*	-4.161E-03	3.924E-02	6.390E-02	5.168E-03	-0.065
	+	1120.51		2.521E-01	9.327E-02	1.294E-01	8.476E-03	1.948
V-48		944.10		-2.085E-01	8.499E-01	1.355E+00	1.083E-01	-0.154
		983.50	*	-2.892E-02	6.287E-02	9.680E-02	7.499E-03	-0.299
		1312.09		-5.908E-02	7.816E-02	1.180E-01	7.954E-03	-0.501
CR-51		320.08	*	-2.589E-01	3.228E-01	5.100E-01	3.591E-02	-0.508
MN-52		744.21		-1.759E-01	1.970E-01	3.003E-01	1.782E-02	-0.586
		848.13		-1.863E+00	5.442E+00	8.661E+00	6.444E-01	-0.215
		935.52		1.643E-02	2.169E-01	3.586E-01	2.884E-02	0.046
		1246.25		6.596E-01	5.594E+00	9.497E+00	6.045E-01	0.069

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1333.61		6.382E-02	3.724E+00	6.225E+00	4.265E-01	0.010
		1434.06	*	-2.321E-01	2.009E-01	2.670E-01	1.822E-02	-0.869
MN-54		834.83	*	-1.700E-02	3.466E-02	5.442E-02	3.938E-03	-0.312
CO-56		846.75	*	-2.118E-02	3.550E-02	5.466E-02	4.055E-03	-0.387
		977.42		3.089E-01	2.635E+00	4.369E+00	3.403E-01	0.071
		1037.82		-8.097E-02	2.726E-01	4.256E-01	3.350E-02	-0.190
		1175.09		5.544E-01	2.312E+00	3.818E+00	2.275E-01	0.145
	+	1238.25		2.231E-01	1.230E-01	1.715E-01	1.141E-02	1.301
		1360.21		-1.287E-01	9.167E-01	1.494E+00	1.024E-01	-0.086
		1771.40		1.676E-02	1.875E-01	3.122E-01	1.895E-02	0.054
CO-57		122.06	*	-1.585E-02	2.241E-02	3.541E-02	2.458E-03	-0.448
		136.48		3.451E-02	1.880E-01	3.102E-01	2.307E-02	0.111
CO-58		810.76	*	2.722E-02	3.680E-02	6.539E-02	4.514E-03	0.416
FE-59		142.65		9.376E-01	2.418E+00	4.017E+00	2.626E-01	0.233
		192.34		-1.002E-01	8.721E-01	1.390E+00	1.691E-01	-0.072
		1099.22	*	-1.804E-04	8.243E-02	1.334E-01	1.019E-02	-0.001
		1291.56		-9.829E-03	1.141E-01	1.887E-01	1.525E-02	-0.052
CO-60		1173.22		-2.673E-02	4.685E-02	7.042E-02	4.188E-03	-0.380
		1332.49	*	1.784E-02	3.468E-02	6.200E-02	4.248E-03	0.288
ZN-65		1115.52	*	-8.950E-04	1.037E-01	1.443E-01	9.547E-03	-0.006
GE-68		1077.35	*	1.072E-01	1.148E+00	1.884E+00	1.316E-01	0.057
AS-73		53.44	*	-9.188E-01	1.394E+00	2.283E+00	2.986E-01	-0.403
AS-74		595.88	*	7.608E-03	8.580E-02	1.388E-01	7.328E-03	0.055
		634.78		1.178E-01	3.095E-01	5.142E-01	2.601E-02	0.229
SE-75		66.05		-2.035E+00	5.476E+00	8.995E+00	1.181E+00	-0.226
		96.73		6.990E-02	7.940E-01	1.189E+00	1.724E-01	0.059
		121.11		-6.538E-02	1.194E-01	1.903E-01	1.910E-02	-0.344
		136.00		3.786E-03	3.539E-02	5.817E-02	3.899E-03	0.065
		198.60		2.620E-01	1.677E+00	2.692E+00	2.078E-01	0.097
		264.65	*	1.640E-02	4.055E-02	6.565E-02	4.416E-03	0.250
		279.53		7.499E-02	1.004E-01	1.760E-01	1.243E-02	0.426
		303.91		9.003E-01	1.888E+00	2.919E+00	2.922E-01	0.308
		400.65		1.043E-01	2.481E-01	4.211E-01	3.792E-02	0.248
BR-77		87.88		4.258E+02	1.395E+02	2.255E+02	2.710E+01	1.888
		200.40		-3.482E+00	1.008E+02	1.610E+02	1.051E+01	-0.022
	+	239.00		1.481E+02	1.500E+01	2.437E+01	1.624E+00	6.077
		249.79		1.212E+01	3.829E+01	6.616E+01	4.417E+00	0.183
		281.68		-7.631E+01	5.479E+01	8.414E+01	5.588E+00	-0.907
		297.23		6.615E+01	5.019E+01	6.359E+01	4.184E+00	1.040
		303.76		6.784E+00	1.127E+02	1.678E+02	1.098E+01	0.040
		439.47		-8.197E+01	9.234E+01	1.402E+02	7.950E+00	-0.585
		484.57		-5.313E+00	1.296E+02	2.103E+02	1.187E+01	-0.025
		520.65	*	-2.779E+00	6.826E+00	1.065E+01	5.930E-01	-0.261
		574.64		-9.375E+01	1.347E+02	2.017E+02	1.085E+01	-0.465
		578.91		5.958E+01	5.994E+01	9.484E+01	5.084E+00	0.628
		585.48		2.955E+02	1.241E+02	2.193E+02	1.169E+01	1.347
		755.35		2.580E+01	9.985E+01	1.707E+02	1.039E+01	0.151
		817.79		-1.156E+01	8.121E+01	1.325E+02	9.249E+00	-0.087
SR-82		698.33		-2.848E+01	3.088E+01	4.744E+01	2.530E+00	-0.600

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		776.49	*	-1.333E-01	3.454E-01	5.526E-01	3.527E-02	-0.241
		1395.20		-1.195E+01	1.100E+01	1.520E+01	1.041E+00	-0.786
RB-83		520.41	*	-3.782E-02	6.605E-02	1.013E-01	5.643E-03	-0.373
		529.64		-2.751E-02	1.059E-01	1.593E-01	8.833E-03	-0.173
		552.65		2.404E-02	1.695E-01	2.775E-01	1.517E-02	0.087
RB-84		881.50	*	2.700E-02	6.607E-02	1.135E-01	9.039E-03	0.238
KR-85		513.99	*	4.131E-01	7.562E+00	1.079E+01	6.028E-01	0.038
SR-85		513.99	*	2.088E-03	3.822E-02	5.455E-02	3.047E-03	0.038
RB-86		1076.63	*	1.682E-02	7.101E-01	1.155E+00	8.074E-02	0.015
Y-88		898.02		-1.342E-02	4.054E-02	6.427E-02	5.318E-03	-0.209
		1836.01	*	-9.454E-05	3.390E-02	5.494E-02	3.206E-03	-0.002
ZR-88		392.90	*	7.212E-03	2.837E-02	4.774E-02	2.687E-03	0.151
Y-91		1204.90	*	-4.354E+00	1.841E+01	2.875E+01	1.762E+00	-0.151
NB-94		702.63	*	9.041E-03	3.265E-02	5.598E-02	3.016E-03	0.162
		871.10		-1.024E-02	3.231E-02	5.139E-02	4.008E-03	-0.199
NB-95		765.79	*	2.865E-02	4.448E-02	7.772E-02	4.843E-03	0.369
NB-95M		235.69	*	1.240E-01	1.256E-01	1.894E-01	1.554E-02	0.655
ZR-95		724.18		9.361E-02	9.519E-02	1.551E-01	1.047E-02	0.603
		756.15	*	1.831E-02	6.166E-02	1.058E-01	7.706E-03	0.173
NB-97		657.90	*	3.216E-02	6.166E-02	Half-Life too short		
		1024.50		2.016E-01	6.166E-02	Half-Life too short		
ZR-97		254.15		-1.233E+00	6.166E-02	Half-Life too short		
		355.39		1.292E-01	6.166E-02	Half-Life too short		
		507.63	*	9.920E-01	6.166E-02	Half-Life too short		
		602.52		-4.421E-01	6.166E-02	Half-Life too short		
		1021.30		4.274E-01	6.166E-02	Half-Life too short		
		1147.95		1.667E-02	6.166E-02	Half-Life too short		
		1362.66		4.402E-02	6.166E-02	Half-Life too short		
		1750.46		-1.019E+00	6.166E-02	Half-Life too short		
MO-99		140.51		-2.232E+01	1.844E+01	2.601E+01	7.054E+00	-0.858
		181.06		4.078E+00	1.187E+01	1.854E+01	3.218E+00	0.220
		366.43		1.111E+01	5.568E+01	9.372E+01	5.602E+00	0.119
		739.58	*	1.874E+00	7.210E+00	1.235E+01	1.705E+00	0.152
		778.00		-3.493E+00	2.210E+01	3.618E+01	2.317E+00	-0.097
TC-99M		140.51	*	-1.056E+09	2.210E+01	Half-Life too short		
RH-101		127.23		1.349E-02	2.822E-02	4.737E-02	3.217E-03	0.285
		198.01	*	-1.939E-02	3.227E-02	4.965E-02	3.233E-03	-0.390
		325.23		2.000E-01	2.303E-01	3.640E-01	2.330E-02	0.549
RH-102		418.52		1.627E-01	2.719E-01	4.672E-01	2.645E-02	0.348
		475.06	*	3.075E-03	2.826E-02	4.651E-02	2.630E-03	0.066
		631.29		-4.078E-03	5.205E-02	8.244E-02	4.188E-03	-0.049
		697.49		-6.082E-02	7.346E-02	1.141E-01	6.072E-03	-0.533
		766.84		1.160E-01	1.166E-01	2.082E-01	1.301E-02	0.557
		1046.59		3.512E-02	1.046E-01	1.770E-01	1.285E-02	0.198
		1112.84		8.376E-02	2.539E-01	3.732E-01	2.475E-02	0.224
RU-103		497.08	*	-1.969E-02	3.531E-02	5.416E-02	6.804E-03	-0.364
	+	610.33		1.043E+01	2.197E+00	2.671E+00	4.062E-01	3.906
RH-106	+	511.85		5.128E-01	3.307E-01	3.865E-01	2.161E-02	1.327
		621.84	*	-6.155E-02	2.972E-01	4.647E-01	5.309E-02	-0.132

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1050.47		-1.478E-02	1.865E+00	3.027E+00	2.188E-01	-0.005
RU-106	+	511.85		5.128E-01	3.307E-01	3.865E-01	2.161E-02	1.327
		621.84	*	-6.155E-02	2.972E-01	4.647E-01	2.388E-02	-0.132
		1050.47		-1.478E-02	1.865E+00	3.027E+00	2.188E-01	-0.005
AG-108M		433.93	*	1.758E-02	3.087E-02	5.289E-02	3.268E-03	0.332
		614.37		7.298E-03	3.422E-02	4.942E-02	2.830E-03	0.148
		722.95		-1.282E-02	3.985E-02	5.521E-02	3.398E-03	-0.232
CD-109		88.03	*	3.016E+00	9.641E-01	1.558E+00	1.872E-01	1.936
AG-110M		657.75	*	3.844E-02	2.917E-02	5.091E-02	2.720E-03	0.755
		677.61		-7.205E-02	2.954E-01	4.857E-01	2.659E-02	-0.148
		706.67		1.270E-02	2.006E-01	3.379E-01	1.963E-02	0.038
		763.93		-1.016E-01	1.746E-01	2.767E-01	1.810E-02	-0.367
		884.67		3.132E-02	4.937E-02	8.647E-02	7.187E-03	0.362
		937.48		-1.344E-01	1.182E-01	1.694E-01	1.417E-02	-0.793
		1384.27		6.580E-02	1.484E-01	2.627E-01	1.879E-02	0.250
IN-111		171.28		2.997E-01	7.102E-01	1.161E+00	7.399E-02	0.258
		245.39	*	6.049E-01	6.599E-01	1.012E+00	6.756E-02	0.597
IN-113M		391.69	*	3.104E-02	4.065E-02	7.083E-02	4.268E-03	0.438
SN-113		391.69	*	3.104E-02	4.065E-02	7.083E-02	4.268E-03	0.438
IN-114M		190.27	*	1.441E-01	1.819E-01	2.749E-01	1.779E-02	0.524
CD-115		260.90		-4.244E+01	7.241E+01	1.182E+02	7.892E+00	-0.359
		492.35		2.419E+01	2.186E+01	3.890E+01	2.190E+00	0.622
		527.90	*	3.982E+00	6.848E+00	1.165E+01	6.465E-01	0.342
SN-117M		156.02		-2.337E+00	1.963E+00	2.977E+00	1.909E-01	-0.785
		158.56	*	-1.348E-02	4.537E-02	7.238E-02	4.629E-03	-0.186
SB-122		563.90	*	9.251E-02	1.332E+00	2.146E+00	1.164E-01	0.043
		692.80		-6.190E+00	2.933E+01	4.830E+01	2.542E+00	-0.128
I-123		159.00	*	5.225E-02	2.933E+01	Half-Life too short		
		528.96		1.477E+01	2.933E+01	Half-Life too short		
TE-123M		159.00	*	1.441E-03	2.498E-02	4.064E-02	2.627E-03	0.035
I-124		602.71	*	-1.300E-01	5.967E-01	8.104E-01	4.250E-02	-0.160
		722.78		-1.085E+00	3.318E+00	4.594E+00	2.595E-01	-0.236
		1325.50		-2.685E+01	2.501E+01	3.469E+01	2.363E+00	-0.774
		1376.25		4.615E+01	2.514E+01	5.035E+01	3.450E+00	0.917
		1509.49		2.100E+01	1.283E+01	2.585E+01	1.743E+00	0.812
		1691.02		2.335E+00	2.921E+00	5.536E+00	3.509E-01	0.422
SB-124		602.71		-9.329E-03	4.281E-02	5.813E-02	3.050E-03	-0.160
		645.85		5.926E-01	4.539E-01	8.470E-01	4.942E-02	0.700
		709.31		-2.476E-01	2.568E+00	4.265E+00	2.334E-01	-0.058
		713.82		2.871E-01	1.415E+00	2.415E+00	2.429E-01	0.119
		722.78		-1.128E-01	3.451E-01	4.777E-01	2.832E-02	-0.236
	+	968.20		1.817E+01	4.361E+00	7.160E+00	5.619E-01	2.538
		1045.16		1.576E+00	2.180E+00	3.855E+00	2.805E-01	0.409
		1325.50		-2.982E+00	2.778E+00	3.852E+00	2.625E-01	-0.774
		1368.21		-1.415E+00	1.647E+00	2.349E+00	2.917E-01	-0.602
		1436.60		4.401E-01	3.215E+00	5.454E+00	3.721E-01	0.081
		1691.02	*	5.726E-02	7.165E-02	1.358E-01	9.227E-03	0.422
SB-125		427.89	*	9.947E-03	8.505E-02	1.410E-01	8.348E-03	0.071
	+	463.38		6.340E-01	4.037E-01	5.516E-01	3.667E-02	1.149

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		600.56		-3.701E-02	1.800E-01	2.832E-01	1.768E-02	-0.131
		635.90		-1.009E-01	2.575E-01	3.936E-01	2.426E-02	-0.256
TE-125M		109.28	*	3.030E+00	8.427E+00	1.367E+01	1.356E+00	0.222
I-126		388.63		-1.192E-02	1.730E-01	2.846E-01	1.614E-02	-0.042
		666.33	*	1.721E-01	1.658E-01	2.746E-01	1.355E-02	0.627
		753.82		4.170E-01	1.183E+00	2.043E+00	1.239E-01	0.204
SB-126		223.80		-4.742E-01	3.563E+00	5.620E+00	3.722E-01	-0.084
		278.60		4.067E+00	2.156E+00	3.966E+00	2.637E-01	1.026
		296.50		7.522E+00	2.067E+00	3.054E+00	2.011E-01	2.463
		414.70		3.984E-06	6.857E-02	1.129E-01	6.388E-03	0.000
		415.30		9.687E-01	5.607E+00	9.348E+00	5.290E-01	0.104
		555.20		3.942E-01	3.292E+00	5.373E+00	2.933E-01	0.073
		573.80		-5.344E-01	9.015E-01	1.363E+00	7.340E-02	-0.392
		593.00		-6.197E-01	8.303E-01	1.230E+00	6.514E-02	-0.504
		656.30		-1.509E+00	2.843E+00	3.833E+00	1.884E-01	-0.394
		666.33		7.168E-02	6.906E-02	1.144E-01	5.643E-03	0.627
		675.00		5.660E-01	1.650E+00	2.860E+00	1.441E-01	0.198
		695.00		1.545E-02	6.598E-02	1.130E-01	5.975E-03	0.137
		697.00		-8.566E-02	2.344E-01	3.805E-01	2.023E-02	-0.225
		720.50	*	4.476E-02	1.237E-01	1.971E-01	1.107E-02	0.227
		856.80		-2.873E-01	4.717E-01	7.338E-01	5.558E-02	-0.391
		989.30		-4.294E-01	1.176E+00	1.838E+00	1.417E-01	-0.234
		1034.80		-5.038E+00	7.552E+00	1.119E+01	8.234E-01	-0.450
		1213.00		-3.559E-01	4.016E+00	6.375E+00	3.937E-01	-0.056
SN-126		64.28		9.419E-02	6.001E-01	1.012E+00	1.743E-01	0.093
		86.94		1.180E+00	6.290E-01	6.601E-01	2.784E-01	1.788
		87.57	*	2.984E-01	9.557E-02	1.545E-01	1.853E-02	1.932
SB-127		61.10		7.511E+00	5.518E+01	9.395E+01	1.286E+01	0.080
		252.40		1.026E+00	3.030E+00	5.187E+00	2.156E+00	0.198
		290.80		-1.128E+01	1.649E+01	2.294E+01	2.118E+00	-0.492
		411.60		-3.119E+00	9.429E+00	1.515E+01	2.122E+00	-0.206
		444.90		3.875E-01	7.360E+00	1.211E+01	1.249E+00	0.032
		473.00		3.235E-02	1.226E+00	2.005E+00	2.146E-01	0.016
		543.00		1.482E+00	1.154E+01	1.889E+01	2.348E+00	0.078
		603.60		-2.072E-02	9.859E+00	1.378E+01	1.384E+00	-0.002
		685.20	*	-7.213E-01	1.045E+00	1.646E+00	1.409E-01	-0.438
		698.50		-1.020E+01	1.126E+01	1.720E+01	2.406E+00	-0.593
		722.20		1.441E+00	2.162E+01	3.177E+01	2.723E+00	0.045
		783.80		1.384E+00	2.715E+00	4.718E+00	5.022E-01	0.293
XE-127		57.60		4.118E-01	8.565E+00	1.455E+01	1.822E+00	0.028
		145.22		-7.604E-02	6.372E-01	1.032E+00	6.717E-02	-0.074
		172.10		1.561E-02	1.181E-01	1.902E-01	1.213E-02	0.082
		202.84	*	-2.779E-02	4.316E-02	6.642E-02	4.342E-03	-0.418
		374.96		-1.585E-02	1.773E-01	2.918E-01	1.712E-02	-0.054
I-131		80.18		9.017E-01	5.226E+00	6.348E+00	7.358E-01	0.142
		284.30		-2.687E-01	1.143E+00	1.898E+00	1.366E-01	-0.142
		364.48	*	1.791E-02	9.490E-02	1.597E-01	1.061E-02	0.112
		636.97		-4.688E-01	1.242E+00	1.897E+00	1.104E-01	-0.247
		722.89		-1.986E+00	5.960E+00	8.243E+00	4.715E-01	-0.241

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TE-132		49.72		-1.211E+01	2.897E+01	4.825E+01	6.616E+00	-0.251
		111.76		4.647E-02	1.972E+01	3.255E+01	3.220E+00	0.001
		116.30		-2.820E+00	1.794E+01	2.932E+01	2.799E+00	-0.096
		228.16	*	9.523E-02	4.822E-01	7.751E-01	1.121E-01	0.123
BA-133		53.15		-1.733E+00	6.142E+00	1.029E+01	1.347E+00	-0.168
		79.62		-3.033E-02	1.464E+00	2.012E+00	3.430E-01	-0.015
		81.00		1.782E-02	1.240E-01	1.501E-01	2.652E-02	0.119
		276.40		3.592E-01	3.737E-01	6.181E-01	8.262E-02	0.581
		302.84		-3.490E-02	1.360E-01	1.963E-01	2.366E-02	-0.178
		356.01	*	2.317E-02	3.860E-02	6.005E-02	7.035E-03	0.386
		383.85		5.954E-02	2.783E-01	4.675E-01	5.068E-02	0.127
I-133	+	510.53		3.518E-01	2.783E-01	Half-Life too short		
		529.87	*	-1.122E-03	2.783E-01	Half-Life too short		
		706.58		8.466E-03	2.783E-01	Half-Life too short		
		856.28		-2.876E-01	2.783E-01	Half-Life too short		
		875.33		4.908E-03	2.783E-01	Half-Life too short		
	+	1236.41		5.496E-01	2.783E-01	Half-Life too short		
		1298.22		-2.202E-02	2.783E-01	Half-Life too short		
CS-134		475.35		6.492E-01	1.833E+00	3.076E+00	1.739E-01	0.211
		563.23		-2.502E-03	3.327E-01	5.320E-01	2.956E-02	-0.005
		569.32		6.748E-02	1.922E-01	3.192E-01	1.784E-02	0.211
		604.70		-2.361E-02	3.707E-02	4.733E-02	2.494E-03	-0.499
	+	795.84	*	1.298E-01	5.985E-02	8.331E-02	5.615E-03	1.558
		801.93		2.363E-01	3.788E-01	6.226E-01	4.239E-02	0.379
		1038.57		-1.447E+00	3.495E+00	5.370E+00	3.936E-01	-0.269
		1167.94		1.073E-01	2.322E+00	3.760E+00	2.260E-01	0.029
		1365.15		1.486E+00	1.081E+00	2.152E+00	1.580E-01	0.691
CS-135		268.24	*	1.388E-01	1.647E-01	2.605E-01	2.172E-02	0.533
I-135		288.45		-3.437E+08	1.647E-01	Half-Life too short		
		417.63		1.979E+08	1.647E-01	Half-Life too short		
		546.56		9.845E+07	1.647E-01	Half-Life too short		
		836.80		5.900E+08	1.647E-01	Half-Life too short		
		1038.76		-2.550E+08	1.647E-01	Half-Life too short		
		1124.00		8.329E+08	1.647E-01	Half-Life too short		
		1131.51		8.674E+07	1.647E-01	Half-Life too short		
		1260.41	*	8.147E+07	1.647E-01	Half-Life too short		
		1457.56		2.588E+10	1.647E-01	Half-Life too short		
		1678.03		1.089E+08	1.647E-01	Half-Life too short		
		1706.46		-3.126E+08	1.647E-01	Half-Life too short		
		1791.20		5.384E+07	1.647E-01	Half-Life too short		
CS-136		66.91		-4.482E-01	8.102E-01	1.314E+00	2.277E-01	-0.341
		86.29		4.328E+00	1.403E+00	1.897E+00	2.891E-01	2.282
		153.22		4.938E-03	5.836E-01	9.487E-01	7.344E-02	0.005
		163.89		5.096E-02	8.888E-01	1.444E+00	1.113E-01	0.035
		176.55		1.245E-02	3.182E-01	5.142E-01	3.628E-02	0.024
		273.65		-3.793E-01	4.239E-01	5.846E-01	4.314E-02	-0.649
		340.57		1.105E-01	1.236E-01	1.946E-01	1.285E-02	0.568
		818.51		-5.772E-02	6.269E-02	9.266E-02	6.486E-03	-0.623
		1048.07	*	2.576E-02	8.959E-02	1.509E-01	1.159E-02	0.171

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1235.34		1.390E+00	7.740E-01	1.132E+00	1.165E-01	1.227
CE-139		165.85	*	-7.733E-03	2.693E-02	4.288E-02	2.725E-03	-0.180
BA-140		162.64		3.868E-03	6.163E-01	9.986E-01	7.026E-02	0.004
		304.84		6.832E-01	1.109E+00	1.712E+00	4.701E-01	0.399
		423.70		-1.963E-01	1.658E+00	2.699E+00	8.571E-01	-0.073
		537.32	*	-8.595E-04	2.140E-01	3.459E-01	1.123E-01	-0.002
LA-140	+	328.77		9.131E-01	4.850E-01	5.360E-01	3.759E-02	1.703
		432.53		-2.835E-01	1.789E+00	2.899E+00	1.823E-01	-0.098
		487.03		-1.098E-01	1.145E-01	1.689E-01	1.085E-02	-0.650
		751.79		-1.893E+00	1.539E+00	2.244E+00	1.636E-01	-0.844
		815.85		1.167E-01	2.786E-01	4.816E-01	3.926E-02	0.242
		867.82		-4.255E-01	1.260E+00	2.002E+00	1.652E-01	-0.213
		919.63		1.959E+00	2.690E+00	4.531E+00	4.645E-01	0.432
		925.24		7.468E-02	1.015E+00	1.680E+00	1.456E-01	0.044
		1596.49	*	-2.927E-02	7.933E-02	1.217E-01	8.013E-03	-0.241
CE-141		145.44	*	-3.192E-02	5.890E-02	9.339E-02	6.269E-03	-0.342
CE-143		57.37		6.314E-04	5.890E-02	Half-Life too short		
		231.56		-5.361E-04	5.890E-02	Half-Life too short		
		293.26	*	3.808E-04	5.890E-02	Half-Life too short		
	+	350.59		1.385E-02	5.890E-02	Half-Life too short		
		490.36		-1.454E-04	5.890E-02	Half-Life too short		
		664.57		-6.968E-05	5.890E-02	Half-Life too short		
		721.93		4.242E-05	5.890E-02	Half-Life too short		
CE-144		80.11		4.614E-01	2.699E+00	3.278E+00	3.787E-01	0.141
		133.54	*	-1.263E-02	1.841E-01	3.002E-01	4.376E-02	-0.042
PM-144		476.78		3.125E-02	6.367E-02	1.080E-01	7.367E-03	0.289
		618.01		-1.235E-02	2.845E-02	4.332E-02	2.403E-03	-0.285
		696.49	*	4.783E-03	3.222E-02	5.472E-02	2.907E-03	0.087
		778.57		3.059E-01	2.096E+00	3.537E+00	2.269E-01	0.086
PR-144		696.49	*	3.239E-01	2.181E+00	3.705E+00	1.967E-01	0.087
		1489.15		5.238E-01	1.135E+01	1.890E+01	1.280E+00	0.028
PM-146		453.90	*	1.008E-02	4.152E-02	6.926E-02	5.912E-03	0.146
		633.02		1.142E+00	1.314E+00	2.182E+00	8.010E-01	0.523
		735.90		-5.349E-02	1.293E-01	2.051E-01	5.720E-02	-0.261
		747.13		9.586E-02	9.041E-02	1.635E-01	2.058E-02	0.586
ND-147	+	91.11		7.245E-01	3.093E-01	4.497E-01	5.273E-02	1.611
		319.41		-1.872E+00	2.754E+00	4.396E+00	2.834E-01	-0.426
		439.89		-1.830E+00	4.990E+00	7.932E+00	4.501E-01	-0.231
		531.02	*	-6.083E-01	5.384E-01	7.294E-01	9.783E-02	-0.834
PM-149		285.90	*	-1.150E+01	5.115E+01	8.490E+01	1.233E+01	-0.135
EU-152		121.78		-4.708E-02	6.524E-02	1.029E-01	8.773E-03	-0.457
		244.69		1.080E-01	3.099E-01	4.497E-01	3.000E-02	0.240
		344.27	*	-3.871E-02	1.023E-01	1.445E-01	1.000E-02	-0.268
		443.98		8.832E-01	8.934E-01	1.577E+00	8.943E-02	0.560
		778.89		2.844E-02	2.468E-01	4.151E-01	2.663E-02	0.069
		867.32		-1.090E-02	7.814E-01	1.287E+00	9.961E-02	-0.008
	+	964.01		5.888E-01	2.662E-01	5.768E-01	4.542E-02	1.021
		1085.78		-1.828E-01	3.427E-01	5.125E-01	3.538E-02	-0.357
		1112.02		-3.062E-02	3.922E-01	5.403E-01	3.588E-02	-0.057

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1407.95		1.573E-01	1.718E-01	3.218E-01	2.201E-02	0.489
GD-153		69.67		-5.501E-01	1.736E+00	2.880E+00	3.326E-01	-0.191
	+	83.37		1.657E+01	1.873E+01	2.546E+01	2.980E+00	0.651
		97.43	*	2.207E-02	8.161E-02	1.235E-01	1.212E-02	0.179
		103.18		-9.480E-02	9.160E-02	1.429E-01	1.271E-02	-0.664
EU-154		123.07		-1.393E-02	4.563E-02	7.374E-02	7.463E-03	-0.189
		247.94		-6.821E-02	3.226E-01	5.017E-01	5.066E-02	-0.136
		591.81		2.041E-01	5.608E-01	9.331E-01	8.851E-02	0.219
		723.30		-8.265E-02	1.751E-01	2.376E-01	1.654E-02	-0.348
		756.87		1.291E-01	6.730E-01	1.144E+00	1.180E-01	0.113
		873.19		3.225E-02	2.646E-01	4.425E-01	5.179E-02	0.073
		996.32		3.476E-02	3.397E-01	5.610E-01	9.715E-02	0.062
		1004.76		-1.091E-01	1.939E-01	2.929E-01	3.194E-02	-0.372
		1274.45	*	-2.532E-03	1.150E-01	1.919E-01	1.882E-02	-0.013
EU-155		48.70		-6.860E-01	5.149E+00	8.721E+00	1.005E+00	-0.079
		60.01		-6.372E+00	6.469E+00	1.035E+01	1.257E+00	-0.616
		86.54		4.497E-01	1.342E-01	1.898E-01	2.273E-02	2.370
		105.31	*	1.051E-01	9.587E-02	1.664E-01	1.450E-02	0.631
TB-160		86.79		8.938E-01	3.128E-01	5.044E-01	6.019E-02	1.772
		197.04		-5.281E-01	5.523E-01	8.323E-01	5.416E-02	-0.635
		215.65		6.173E-01	7.201E-01	1.153E+00	7.600E-02	0.536
	+	298.57		1.784E-01	1.566E-01	1.935E-01	1.272E-02	0.922
		879.36	*	-7.442E-02	1.321E-01	2.036E-01	1.615E-02	-0.365
		962.29		1.065E+00	5.958E-01	1.035E+00	8.163E-02	1.028
		966.15		1.127E+00	2.796E-01	5.507E-01	4.329E-02	2.046
		1177.93		1.881E-01	3.854E-01	6.516E-01	3.893E-02	0.289
		1271.85		1.139E-01	6.399E-01	1.094E+00	7.121E-02	0.104
HO-166M		80.57		-1.633E-01	3.634E-01	4.153E-01	4.806E-02	-0.393
	+	184.41		1.022E-01	5.415E-02	6.253E-02	4.027E-03	1.635
		280.46		-6.436E-02	8.019E-02	1.289E-01	8.565E-03	-0.499
		410.95		4.964E-02	2.447E-01	4.087E-01	2.311E-02	0.121
		711.68	*	-1.372E-03	5.621E-02	9.392E-02	5.169E-03	-0.015
		752.31		-2.007E-01	2.603E-01	4.008E-01	2.423E-02	-0.501
		810.29		3.734E-02	5.508E-02	9.747E-02	6.696E-03	0.383
TM-171		51.35		1.494E+01	5.668E+01	9.768E+01	1.265E+01	0.153
		52.39		1.745E+01	2.803E+01	4.896E+01	6.404E+00	0.356
		59.40		-6.718E-01	3.400E+01	5.753E+01	7.015E+00	-0.012
		66.72	*	-1.639E+01	3.138E+01	5.109E+01	5.973E+00	-0.321
LU-176		88.36		6.851E-01	2.225E-01	3.601E-01	4.292E-02	1.903
		201.83		-1.307E-02	2.641E-02	4.100E-02	2.678E-03	-0.319
		306.84	*	5.592E-03	2.105E-02	3.594E-02	2.347E-03	0.156
		401.10		3.639E+00	6.397E+00	1.098E+01	6.192E-01	0.332
LU-177		112.95		-1.166E+00	1.251E+00	1.959E+00	1.517E-01	-0.595
	+	208.36	*	3.573E+00	1.687E+00	1.688E+00	1.108E-01	2.117
LU-177M		52.97		-2.749E-01	2.793E+00	4.725E+00	6.187E-01	-0.058
		54.07		-3.302E-01	1.390E+00	2.333E+00	3.042E-01	-0.142
		61.30		4.386E-01	1.811E+00	3.097E+00	3.737E-01	0.142
		121.62		-1.702E-01	3.288E-01	5.252E-01	3.658E-02	-0.324
		147.16		3.072E-01	6.087E-01	1.015E+00	6.585E-02	0.303

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		171.86		4.795E-02	4.846E-01	7.795E-01	4.971E-02	0.062
		218.09		-4.560E-01	8.046E-01	1.236E+00	8.164E-02	-0.369
	+	268.79		2.159E+00	1.151E+00	1.373E+00	9.157E-02	1.573
		319.02		-5.896E-02	2.259E-01	3.713E-01	2.395E-02	-0.159
		367.43		1.548E-01	8.362E-01	1.406E+00	8.384E-02	0.110
		413.65	*	-7.540E-02	1.750E-01	2.792E-01	1.579E-02	-0.270
HF-181		56.28		1.814E-01	1.379E+00	2.354E+00	3.001E-01	0.077
		57.53		2.087E-01	7.227E-01	1.241E+00	1.556E-01	0.168
		65.20		-2.865E-01	1.092E+00	1.806E+00	2.128E-01	-0.159
		133.02		1.153E-02	5.686E-02	9.403E-02	6.275E-03	0.123
		136.25		8.356E-02	4.006E-01	6.618E-01	4.382E-02	0.126
		345.85		-7.709E-02	1.979E-01	2.790E-01	1.733E-02	-0.276
		482.03	*	6.535E-03	3.567E-02	5.913E-02	3.338E-03	0.111
W-181		56.28		7.186E-02	5.474E-01	9.347E-01	1.192E-01	0.077
		57.53		8.338E-02	2.873E-01	4.935E-01	6.185E-02	0.169
		65.20	*	-1.130E-01	4.306E-01	7.120E-01	8.392E-02	-0.159
TA-182		67.75		-8.019E-02	1.177E-01	1.914E-01	2.227E-02	-0.419
		100.10		6.218E-02	1.531E-01	2.589E-01	2.423E-02	0.240
		152.43		3.707E-02	3.092E-01	5.056E-01	3.257E-02	0.073
		222.10		1.485E-02	3.217E-01	5.133E-01	3.397E-02	0.029
		1001.68		7.463E-01	1.704E+00	2.932E+00	2.233E-01	0.255
		1121.28		3.818E-01	1.993E-01	3.351E-01	2.192E-02	1.139
		1189.05		-3.792E-02	3.263E-01	5.180E-01	3.128E-02	-0.073
		1221.42	*	1.336E-01	1.801E-01	3.240E-01	2.016E-02	0.412
		1230.97		2.540E-02	4.870E-01	7.109E-01	4.463E-02	0.036
RE-183		57.98		-1.343E-01	2.749E-01	4.539E-01	5.651E-02	-0.296
		59.32		8.371E-03	1.392E-01	2.364E-01	2.886E-02	0.035
		67.20		-7.277E-02	2.160E-01	3.551E-01	4.142E-02	-0.205
		162.32	*	-1.194E-02	9.587E-02	1.542E-01	9.828E-03	-0.077
	+	208.81		3.649E+00	1.723E+00	1.729E+00	1.135E-01	2.110
		291.72		-5.125E-01	9.413E-01	1.331E+00	8.794E-02	-0.385
RE-184		57.98		-4.987E-01	1.021E+00	1.686E+00	2.099E-01	-0.296
		59.32		3.106E-02	5.164E-01	8.772E-01	1.071E-01	0.035
		67.20		-2.702E-01	8.020E-01	1.319E+00	1.538E-01	-0.205
		161.27		-1.899E-01	3.150E-01	4.930E-01	3.145E-02	-0.385
		216.55		1.591E-01	2.499E-01	4.128E-01	2.723E-02	0.386
		252.85	*	-7.278E-02	2.115E-01	3.519E-01	2.350E-02	-0.207
		318.01		1.115E-01	4.000E-01	6.818E-01	4.401E-02	0.163
		792.07		4.899E-01	1.042E+00	1.599E+00	1.056E-01	0.306
		903.28		8.581E-01	1.083E+00	1.722E+00	1.413E-01	0.498
		920.93		1.046E-01	4.507E-01	7.582E-01	6.156E-02	0.138
OS-185		59.72		-2.958E-01	3.777E-01	6.120E-01	7.444E-02	-0.483
		61.14		3.127E-02	1.986E-01	3.384E-01	4.087E-02	0.092
		69.30		-4.308E-02	3.058E-01	5.117E-01	5.916E-02	-0.084
		592.07		9.530E-02	2.313E+00	3.728E+00	1.976E-01	0.026
		646.12	*	5.806E-02	3.860E-02	7.310E-02	3.644E-03	0.794
		717.42		-1.105E-01	7.634E-01	1.259E+00	7.024E-02	-0.088
		874.81		-4.715E-02	5.161E-01	8.418E-01	6.614E-02	-0.056
		880.27		8.023E-02	7.398E-01	1.233E+00	9.798E-02	0.065

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188		155.03	*	1.940E-01	1.537E-01	2.647E-01	1.700E-02	0.733
		477.96		5.475E-01	2.870E+00	4.755E+00	2.687E-01	0.115
		633.10		2.277E+00	2.487E+00	4.352E+00	2.206E-01	0.523
W-188		63.58		5.407E+01	6.283E+01	1.087E+02	1.294E+01	0.497
		227.08		2.861E+00	1.175E+01	1.894E+01	1.257E+00	0.151
		290.67	*	-4.813E+00	7.199E+00	1.004E+01	6.637E-01	-0.479
IR-192	+	295.96		8.474E-01	1.942E-01	2.744E-01	1.830E-02	3.088
		308.46		-8.137E-02	8.371E-02	1.309E-01	8.608E-03	-0.622
		316.51	*	1.447E-02	3.120E-02	5.377E-02	3.491E-03	0.269
		468.07		2.068E-02	6.481E-02	1.051E-01	6.900E-03	0.197
		604.41		-2.467E-01	4.881E-01	6.342E-01	7.022E-02	-0.389
		612.46		-2.297E-01	6.741E-01	8.921E-01	6.349E-02	-0.257
AU-195		65.12		-4.869E-02	2.006E-01	3.320E-01	3.915E-02	-0.147
		66.83		-4.924E-02	1.033E-01	1.686E-01	1.970E-02	-0.292
	+	75.70		9.863E-01	2.739E-01	4.765E-01	5.458E-02	2.070
		98.88	*	2.174E-01	2.033E-01	3.528E-01	3.374E-02	0.616
		129.76		-7.095E-01	2.570E+00	4.154E+00	2.798E-01	-0.171
TL-200		367.94	*	2.137E-05	2.570E+00	Half-Life too short		
		579.30		1.971E-03	2.570E+00	Half-Life too short		
		828.27		8.152E-04	2.570E+00	Half-Life too short		
		1205.75		-1.698E-04	2.570E+00	Half-Life too short		
TL-201		68.90		-2.334E+00	3.710E+00	6.053E+00	7.008E-01	-0.386
		70.82		5.614E-01	2.301E+00	3.527E+00	4.059E-01	0.159
		80.30		8.289E-01	4.689E+00	5.698E+00	6.587E-01	0.145
		135.34		-5.901E-01	1.700E+01	2.774E+01	1.841E+00	-0.021
		167.43	*	-4.780E-01	4.634E+00	7.452E+00	4.737E-01	-0.064
TL-202		68.90		-2.650E-01	4.213E-01	6.874E-01	7.959E-02	-0.386
		70.82		6.358E-02	2.605E-01	3.994E-01	4.597E-02	0.159
		80.30		9.390E-02	5.312E-01	6.455E-01	7.462E-02	0.145
		439.56	*	-5.337E-02	6.168E-02	9.384E-02	5.323E-03	-0.569
HG-203		70.83		2.963E-01	1.196E+00	1.833E+00	2.859E-01	0.162
		72.87		1.502E-01	6.977E-01	1.066E+00	1.621E-01	0.141
	+	82.60		1.212E+00	1.376E+00	1.783E+00	2.822E-01	0.680
		279.20	*	4.856E-02	3.748E-02	6.734E-02	4.688E-03	0.721
BI-207		72.80		3.402E-02	2.087E-01	3.180E-01	3.647E-02	0.107
	+	74.97		5.499E-01	1.527E-01	2.404E-01	2.754E-02	2.287
		84.90		4.638E-01	2.316E-01	3.181E-01	3.753E-02	1.458
		569.67		3.911E-03	3.042E-02	4.953E-02	2.675E-03	0.079
		1063.62	*	-6.550E-03	5.048E-02	8.063E-02	5.735E-03	-0.081
		1770.23		-6.567E-01	5.495E-01	6.707E-01	4.075E-02	-0.979
TL-207		81.07		4.660E-02	2.738E-01	3.323E-01	3.852E-02	0.140
	+	83.78		1.419E-01	1.604E-01	2.166E-01	2.540E-02	0.655
		94.90		1.226E-01	2.455E-01	3.696E-01	3.808E-02	0.332
		122.32		-1.045E+00	1.553E+00	2.458E+00	1.891E-01	-0.425
		144.24		3.899E-01	6.383E-01	1.070E+00	8.365E-02	0.365
		154.21		4.865E-01	3.614E-01	6.236E-01	4.703E-02	0.780
	+	269.46		5.086E-01	2.713E-01	3.360E-01	2.317E-02	1.514
		323.87	*	5.233E-01	6.638E-01	1.039E+00	1.739E-01	0.504
	+	338.28		3.982E+00	2.086E+00	2.387E+00	2.580E-01	1.668

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-4.322E-02	2.179E+00	3.565E+00	3.635E-01	-0.012
PO-209		260.50		-1.928E+00	8.330E+00	1.392E+01	9.294E-01	-0.139
		262.80		-1.982E+01	2.325E+01	3.729E+01	2.490E+00	-0.532
		896.60	*	-2.481E-01	7.332E+00	1.202E+01	9.866E-01	-0.021
BI-210		46.50	*	1.369E+00	8.462E+00	1.432E+01	1.248E+00	0.096
PB-210		46.50	*	1.369E+00	8.462E+00	1.432E+01	1.248E+00	0.096
PO-210		46.50	*	1.369E+00	8.462E+00	1.432E+01	1.112E+00	0.096
PB-211		404.84	*	-9.004E-01	1.096E+00	1.446E+00	9.011E-01	-0.623
		427.08		4.177E-01	1.906E+00	3.158E+00	1.952E+00	0.132
		831.96		-1.125E-01	1.082E+00	1.768E+00	1.105E+00	-0.064
BI-212	+	727.18	*	9.189E-01	3.943E-01	6.231E-01	4.763E-02	1.475
		785.46		4.132E-01	1.738E+00	2.952E+00	1.921E-01	0.140
		1620.62		8.031E-01	1.308E+00	2.363E+00	1.543E-01	0.340
BI-214	+	609.31	*	9.898E-01	1.615E-01	2.675E-01	1.966E-02	3.700
		768.36		7.855E-01	7.640E-01	1.367E+00	1.182E-01	0.575
		934.06		1.513E+00	1.121E+00	2.074E+00	2.112E-01	0.729
	+	1120.29		1.489E+00	5.598E-01	7.717E-01	7.189E-02	1.930
	+	1238.11		2.229E+00	1.235E+00	1.741E+00	1.484E-01	1.280
		1377.67		1.419E+00	1.050E+00	2.000E+00	1.865E-01	0.710
		1764.49		1.481E+00	4.198E-01	8.699E-01	5.303E-02	1.703
PO-215		81.07		4.660E-02	2.738E-01	3.323E-01	3.852E-02	0.140
	+	83.78		1.419E-01	1.604E-01	2.166E-01	2.540E-02	0.655
		94.90		1.226E-01	2.455E-01	3.696E-01	3.808E-02	0.332
		122.32		-1.045E+00	1.553E+00	2.458E+00	1.891E-01	-0.425
		144.24		3.899E-01	6.383E-01	1.070E+00	8.365E-02	0.365
		154.21		4.865E-01	3.614E-01	6.236E-01	4.703E-02	0.780
	+	269.46		5.086E-01	2.713E-01	3.360E-01	2.317E-02	1.514
		323.87	*	5.233E-01	6.638E-01	1.039E+00	1.739E-01	0.504
	+	338.28		3.982E+00	2.086E+00	2.387E+00	2.580E-01	1.668
		445.03		-4.322E-02	2.179E+00	3.565E+00	3.635E-01	-0.012
RN-219	+	271.23		6.525E-01	3.498E-01	4.102E-01	3.587E-02	1.591
		401.81	*	9.719E-02	3.975E-01	6.669E-01	9.030E-02	0.146
RN-220		549.76	*	-1.790E+01	2.284E+01	3.371E+01	1.847E+00	-0.531
RA-223		81.07		4.660E-02	2.738E-01	3.323E-01	3.852E-02	0.140
	+	83.78		1.419E-01	1.604E-01	2.166E-01	2.540E-02	0.655
		94.90		1.226E-01	2.455E-01	3.696E-01	3.808E-02	0.332
		122.32		-1.045E+00	1.553E+00	2.458E+00	1.891E-01	-0.425
		144.24		3.899E-01	6.383E-01	1.070E+00	8.365E-02	0.365
		154.21		4.865E-01	3.614E-01	6.236E-01	4.703E-02	0.780
	+	269.46		5.086E-01	2.713E-01	3.360E-01	2.317E-02	1.514
		323.87	*	5.233E-01	6.638E-01	1.039E+00	1.739E-01	0.504
	+	338.28		3.982E+00	2.086E+00	2.387E+00	2.580E-01	1.668
		445.03		-4.322E-02	2.179E+00	3.565E+00	3.635E-01	-0.012
RA-226	+	609.31	*	9.898E-01	1.615E-01	2.675E-01	1.966E-02	3.700
		768.36		7.855E-01	7.640E-01	1.367E+00	1.182E-01	0.575
		934.06		1.513E+00	1.121E+00	2.074E+00	2.112E-01	0.729
	+	1120.29		1.489E+00	5.598E-01	7.717E-01	7.189E-02	1.930
	+	1238.11		2.229E+00	1.235E+00	1.741E+00	1.484E-01	1.280
		1377.67		1.419E+00	1.050E+00	2.000E+00	1.865E-01	0.710

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1764.49		1.481E+00	4.198E-01	8.699E-01	5.303E-02	1.703
AC-227		79.80		2.585E-02	1.856E+00	2.557E+00	5.838E-01	0.010
		236.00		2.857E-01	2.533E-01	3.823E-01	4.187E-02	0.747
		256.20	*	2.621E-01	3.447E-01	6.049E-01	8.679E-02	0.433
		286.10		4.453E-01	1.278E+00	2.199E+00	2.638E-01	0.202
	+	299.80		2.302E+00	2.051E+00	2.461E+00	4.079E-01	0.935
		304.40		5.425E-01	1.771E+00	2.691E+00	4.726E-01	0.202
		334.20		-7.508E-01	2.751E+00	3.662E+00	6.777E-01	-0.205
TH-227		79.80		2.585E-02	1.856E+00	2.557E+00	5.904E-01	0.010
	+	94.00		6.988E+00	3.378E+00	3.448E+00	7.787E-01	2.027
		236.00		2.857E-01	2.528E-01	3.823E-01	3.681E-02	0.747
		256.20	*	2.621E-01	3.456E-01	6.049E-01	1.042E-01	0.433
		286.10		4.453E-01	1.353E+00	2.199E+00	2.204E+00	0.202
	+	299.80		2.302E+00	2.051E+00	2.461E+00	4.079E-01	0.935
		304.40		5.425E-01	1.771E+00	2.691E+00	4.726E-01	0.202
		334.20		-7.508E-01	2.751E+00	3.662E+00	6.777E-01	-0.205
TH-229		85.43		4.813E-01	2.281E-01	3.145E-01	3.722E-02	1.530
	+	88.47		3.133E-01	1.333E-01	2.063E-01	2.452E-02	1.519
		100.00		7.476E-02	1.608E-01	2.727E-01	2.557E-02	0.274
		193.63	*	-3.349E-01	4.912E-01	7.573E-01	4.915E-02	-0.442
	+	210.97		2.896E+00	1.367E+00	1.294E+00	8.504E-02	2.239
TH-230	+	609.31	*	9.898E-01	1.615E-01	2.675E-01	1.966E-02	3.700
		768.36		7.855E-01	7.639E-01	1.367E+00	1.182E-01	0.575
		934.06		1.513E+00	1.121E+00	2.074E+00	2.112E-01	0.729
	+	1120.29		1.489E+00	5.598E-01	7.717E-01	7.189E-02	1.930
	+	1238.11		2.228E+00	1.235E+00	1.741E+00	1.484E-01	1.280
		1377.67		1.419E+00	1.050E+00	2.000E+00	1.865E-01	0.710
		1764.49		1.481E+00	4.198E-01	8.699E-01	5.303E-02	1.703
PA-231		283.67	*	-1.629E-02	1.279E+00	2.154E+00	3.048E-01	-0.008
	+	301.29		9.209E-01	8.122E-01	9.211E-01	1.003E-01	1.000
TH-231		81.07		4.660E-02	2.738E-01	3.323E-01	3.852E-02	0.140
	+	83.78		1.419E-01	1.604E-01	2.166E-01	2.540E-02	0.655
		94.90		1.226E-01	2.455E-01	3.696E-01	3.808E-02	0.332
		122.32		-1.045E+00	1.553E+00	2.458E+00	1.891E-01	-0.425
		144.24		3.899E-01	6.383E-01	1.070E+00	8.365E-02	0.365
		154.21		4.865E-01	3.614E-01	6.236E-01	4.703E-02	0.780
	+	269.46		5.086E-01	2.713E-01	3.360E-01	2.317E-02	1.514
		323.87	*	5.233E-01	6.638E-01	1.039E+00	1.739E-01	0.504
	+	338.28		3.982E+00	2.086E+00	2.387E+00	2.580E-01	1.668
		445.03		-4.322E-02	2.179E+00	3.565E+00	3.635E-01	-0.012
U-231	+	84.21		4.878E+00	5.514E+00	7.244E+00	8.516E-01	0.673
	+	92.29		5.510E+00	2.425E+00	3.016E+00	3.282E-01	1.827
		95.87	*	-4.956E-01	9.021E-01	1.296E+00	1.311E-01	-0.382
		108.00		-1.993E+00	1.583E+00	2.355E+00	1.949E-01	-0.846
PA-233	+	75.28		1.605E+01	4.900E+00	7.171E+00	1.226E+00	2.238
		86.59		7.357E+00	2.874E+00	3.089E+00	8.667E-01	2.381
	+	300.12		6.418E-01	5.687E-01	6.851E-01	9.445E-02	0.937
		311.98	*	3.587E-02	5.822E-02	1.013E-01	6.908E-03	0.354
		340.50		6.975E-01	6.695E-01	1.038E+00	2.397E-01	0.672

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		398.62		-9.361E-01	1.980E+00	3.128E+00	8.076E-01	-0.299
		415.76		-4.000E-02	1.614E+00	2.652E+00	5.450E-01	-0.015
PA-234		63.00		1.142E-01	1.918E+00	3.223E+00	5.662E-01	0.035
		94.67		1.879E-01	1.768E-01	2.721E-01	3.718E-02	0.691
		98.44		6.195E-02	9.187E-02	1.460E-01	8.170E-02	0.424
		99.86		2.223E-01	4.092E-01	6.964E-01	6.545E-02	0.319
		111.00		1.539E-01	1.619E-01	2.782E-01	3.232E-02	0.553
		131.20		-3.680E-02	9.379E-02	1.505E-01	1.009E-02	-0.245
		152.70		5.652E-02	3.044E-01	4.990E-01	8.011E-02	0.113
	+	186.00		3.680E+00	2.240E+00	2.442E+00	7.492E-01	1.507
		226.40		-8.361E-02	3.786E-01	5.931E-01	7.116E-02	-0.141
		227.20		8.496E-02	4.015E-01	6.463E-01	4.288E-02	0.131
		248.90		-5.632E-01	7.720E-01	1.140E+00	2.479E-01	-0.494
	+	293.70		5.403E+00	1.479E+00	1.691E+00	2.770E-01	3.196
		369.80		1.223E-03	7.729E-01	1.282E+00	2.675E-01	0.001
		568.70		1.966E-01	9.706E-01	1.591E+00	8.602E-02	0.124
		569.50		1.110E-01	2.657E-01	4.437E-01	2.397E-02	0.250
		574.00		-4.237E-01	1.369E+00	2.134E+00	1.149E-01	-0.199
		699.00		-2.719E-01	6.545E-01	1.053E+00	1.879E-01	-0.258
		706.10		-1.434E-01	1.034E+00	1.709E+00	7.534E-01	-0.084
		733.00		1.245E-01	3.484E-01	5.323E-01	1.132E-01	0.234
		742.81		-5.772E-01	1.320E+00	2.013E+00	1.347E+00	-0.287
		796.30		9.491E-01	1.002E+00	1.579E+00	4.182E-01	0.601
		805.60		-8.366E-01	9.130E-01	1.297E+00	3.916E-01	-0.645
		819.60		-5.565E-01	1.097E+00	1.677E+00	6.321E-01	-0.332
		826.30		-5.701E-01	7.981E-01	1.148E+00	5.104E-01	-0.497
		831.60		-7.482E-02	5.577E-01	9.090E-01	2.678E-01	-0.082
		876.40		-1.271E-01	7.493E-01	1.191E+00	1.224E+00	-0.107
		880.51		3.645E-02	2.710E-01	4.530E-01	3.600E-02	0.080
		883.24		1.630E-01	3.107E-01	5.062E-01	3.399E-01	0.322
		899.00		-2.451E-01	8.160E-01	1.286E+00	5.613E-01	-0.191
		925.00		-5.821E-01	1.203E+00	1.869E+00	1.514E-01	-0.311
		926.50		9.736E-04	1.698E-01	2.788E-01	6.999E-02	0.003
		946.00	*	-6.785E-02	3.001E-01	4.789E-01	8.850E-02	-0.142
		949.00		1.235E-01	4.242E-01	7.176E-01	5.716E-02	0.172
		980.50		-1.660E-01	6.663E-01	1.054E+00	8.189E-02	-0.157
		1394.10		-8.587E-01	1.302E+00	1.733E+00	1.125E+00	-0.495
PA-234M		766.41		2.175E+01	2.467E+01	3.310E+01	2.530E+01	0.657
		1001.03	*	2.640E+00	5.670E+00	9.769E+00	1.019E+00	0.270
TH-234		63.29	*	4.954E-01	1.621E+00	2.748E+00	5.436E-01	0.180
	+	92.38		1.808E+00	8.461E-01	9.925E-01	1.911E-01	1.822
U-234	+	609.31	*	9.898E-01	1.615E-01	2.675E-01	1.966E-02	3.700
		768.36		7.855E-01	7.639E-01	1.367E+00	1.182E-01	0.575
		934.06		1.513E+00	1.121E+00	2.074E+00	2.112E-01	0.729
	+	1120.29		1.489E+00	5.598E-01	7.717E-01	7.189E-02	1.930
	+	1238.11		2.228E+00	1.235E+00	1.741E+00	1.484E-01	1.280
		1377.67		1.419E+00	1.050E+00	2.000E+00	1.865E-01	0.710
		1764.49		1.481E+00	4.198E-01	8.699E-01	5.303E-02	1.703
U-235	+	89.95		3.145E+00	1.631E+00	1.903E+00	6.046E-01	1.653

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	93.35		2.174E+00	1.119E+00	1.187E+00	3.407E-01	1.832
		105.00		1.263E+00	1.012E+00	1.656E+00	4.944E-01	0.763
		143.76	*	1.518E-01	1.964E-01	3.294E-01	5.460E-02	0.461
		163.35		1.939E-01	4.126E-01	6.830E-01	1.241E-01	0.284
	+	185.71		1.363E-01	7.220E-02	9.009E-02	5.809E-03	1.513
		205.31		2.083E-01	5.427E-01	7.920E-01	1.444E-01	0.263
NP-236		94.67		1.434E-01	1.335E-01	2.065E-01	2.138E-02	0.694
		98.44		4.686E-02	6.447E-02	1.104E-01	1.064E-02	0.424
		111.00		1.164E-01	1.220E-01	2.105E-01	1.672E-02	0.553
		160.31	*	-5.084E-03	6.994E-02	1.129E-01	7.209E-03	-0.045
NP-237		86.50	*	1.092E+00	3.971E-01	4.626E-01	1.102E-01	2.360
		95.87		-5.478E-01	1.005E+00	1.433E+00	3.610E-01	-0.382
U-238		63.29	*	4.954E-01	1.621E+00	2.748E+00	5.436E-01	0.180
	+	92.38		1.808E+00	7.958E-01	9.925E-01	1.078E-01	1.822
NP-239		99.55		1.181E-01	1.386E-01	2.388E-01	2.256E-02	0.495
		117.00	*	-8.922E-02	1.696E-01	2.716E-01	1.999E-02	-0.328
	+	209.75		2.918E+00	1.377E+00	1.402E+00	9.212E-02	2.081
		228.18		4.070E-02	2.107E-01	3.387E-01	2.248E-02	0.120
		277.60		2.506E-01	1.698E-01	3.072E-01	2.043E-02	0.816
		334.30		-4.985E-01	1.553E+00	2.060E+00	1.302E-01	-0.242
AM-241		59.54	*	-9.923E-02	1.985E-01	3.272E-01	4.130E-02	-0.303
CM-243		99.55		1.216E-01	1.426E-01	2.457E-01	2.322E-02	0.495
		103.76	*	5.907E-02	8.405E-02	1.439E-01	1.268E-02	0.411
		117.00		-9.178E-02	1.745E-01	2.794E-01	2.056E-02	-0.328
	+	209.75		2.876E+00	1.358E+00	1.382E+00	9.080E-02	2.081
		228.18		4.112E-02	2.129E-01	3.422E-01	2.271E-02	0.120
		277.60		2.526E-01	1.712E-01	3.097E-01	2.060E-02	0.816
CM-247		278.00		1.113E+00	7.141E-01	1.295E+00	8.614E-02	0.859
		287.40		7.049E-01	1.047E+00	1.836E+00	1.216E-01	0.384
		402.60	*	2.744E-02	3.573E-02	6.206E-02	3.503E-03	0.442
CF-249		252.85		-2.746E-01	7.979E-01	1.328E+00	8.869E-02	-0.207
		333.44		9.647E-02	2.537E-01	2.861E-01	1.811E-02	0.337
		387.95	*	-1.720E-02	3.788E-02	5.973E-02	3.394E-03	-0.288
CF-251		176.60	*	3.120E-03	1.178E-01	1.903E-01	1.218E-02	0.016
		227.00		-2.847E-02	3.654E-01	5.777E-01	3.832E-02	-0.049
		285.00		-3.082E-01	1.511E+00	2.513E+00	1.666E-01	-0.123

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433002      *
* Acquisition date :  7-JUL-2009 06:04:36 Detector SN#     :               *
* Detector ID        : GAM04                Sensitivity      : 5.000       *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000       *
* Elapsed real time:    0 02:00:01.04       Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433002           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 1.2104E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  5-MAY-2009 14:25:41 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.070E+01	2.081E+00	4.636E-01	0.000E+00
BA-137M	1.358E-01	5.613E-02	6.041E-02	0.000E+00
CS-137	1.436E-01	5.934E-02	6.386E-02	0.000E+00
TL-208	3.970E-01	8.395E-02	5.510E-02	0.000E+00
BI-211	3.476E+00	4.896E-01	2.932E-01	0.000E+00
PB-212	1.373E+00	1.490E-01	8.344E-02	0.000E+00
PO-212	1.373E+00	1.490E-01	8.344E-02	0.000E+00
PB-214	1.209E+00	1.812E-01	1.022E-01	0.000E+00
PO-214	1.209E+00	1.812E-01	1.022E-01	0.000E+00
PO-216	1.373E+00	1.490E-01	8.344E-02	0.000E+00
PO-218	1.209E+00	1.812E-01	1.022E-01	0.000E+00
RA-224	5.312E+00	1.386E+00	9.497E-01	0.000E+00
AC-228	1.437E+00	3.019E-01	2.026E-01	0.000E+00
RA-228	1.437E+00	3.019E-01	2.026E-01	0.000E+00
TH-228	1.373E+00	1.490E-01	8.343E-02	0.000E+00
TH-232	1.437E+00	3.019E-01	2.026E-01	0.000E+00
AM-243	3.064E-01	8.338E-02	9.988E-02	0.000E+00
ANH-511	1.029E-01	6.506E-02	4.683E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.697E-01	2.890E-01	5.098E-01	0.000E+00	NOT IDENT.
NA-22	2.027E-03	4.009E-02	6.883E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.462E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.509E-03	2.546E-02	4.263E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.402E-02	8.090E-02	0.000E+00	FAIL ABUN
SC-46	-4.161E-03	3.846E-02	6.416E-02	0.000E+00	FAIL ABUN
V-48	-2.892E-02	6.161E-02	9.707E-02	0.000E+00	NOT IDENT.
CR-51	-2.589E-01	3.164E-01	5.185E-01	0.000E+00	NOT IDENT.
MN-52	-2.321E-01	1.969E-01	2.665E-01	0.000E+00	NOT IDENT.

MN-54	-1.700E-02	3.397E-02	5.469E-02	0.000E+00	NOT IDENT.
CO-56	-2.118E-02	3.479E-02	5.492E-02	0.000E+00	FAIL ABUN
CO-57	-1.585E-02	2.196E-02	3.642E-02	0.000E+00	NOT IDENT.
CO-58	2.722E-02	3.607E-02	6.574E-02	0.000E+00	NOT IDENT.
FE-59	-1.804E-04	8.078E-02	1.336E-01	0.000E+00	NOT IDENT.
CO-60	1.784E-02	3.399E-02	6.194E-02	0.000E+00	NOT IDENT.
ZN-65	-8.950E-04	1.016E-01	1.445E-01	0.000E+00	NOT IDENT.
GE-68	1.072E-01	1.125E+00	1.887E+00	0.000E+00	NOT IDENT.
AS-73	-9.188E-01	1.366E+00	2.371E+00	0.000E+00	NOT IDENT.
AS-74	7.608E-03	8.409E-02	1.401E-01	0.000E+00	NOT IDENT.
SE-75	1.640E-02	3.974E-02	6.690E-02	0.000E+00	NOT IDENT.
BR-77	-2.779E+00	6.690E+00	1.076E+01	0.000E+00	FAIL ABUN
SR-82	-1.333E-01	3.385E-01	5.558E-01	0.000E+00	NOT IDENT.
RB-83	-3.782E-02	6.473E-02	1.024E-01	0.000E+00	NOT IDENT.
RB-84	2.700E-02	6.475E-02	1.140E-01	0.000E+00	NOT IDENT.
KR-85	4.131E-01	7.411E+00	1.091E+01	0.000E+00	NOT IDENT.
SR-85	2.088E-03	3.746E-02	5.514E-02	0.000E+00	NOT IDENT.
RB-86	1.682E-02	6.959E-01	1.157E+00	0.000E+00	NOT IDENT.
Y-88	-9.454E-05	3.322E-02	5.467E-02	0.000E+00	NOT IDENT.
ZR-88	7.212E-03	2.780E-02	4.842E-02	0.000E+00	NOT IDENT.
Y-91	-4.354E+00	1.804E+01	2.876E+01	0.000E+00	NOT IDENT.
NB-94	9.041E-03	3.200E-02	5.637E-02	0.000E+00	NOT IDENT.
NB-95	2.865E-02	4.359E-02	7.818E-02	0.000E+00	NOT IDENT.
NB-95M	1.240E-01	1.230E-01	1.933E-01	0.000E+00	NOT IDENT.
ZR-95	1.831E-02	6.043E-02	1.065E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.132E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.987E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.874E+00	7.066E+00	1.243E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	8.520E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.939E-02	3.162E-02	5.077E-02	0.000E+00	NOT IDENT.
RH-102	3.075E-03	2.770E-02	4.706E-02	0.000E+00	NOT IDENT.
RU-103	-1.969E-02	3.460E-02	5.477E-02	0.000E+00	FAIL ABUN
RH-106	-6.155E-02	2.913E-01	4.687E-01	0.000E+00	FAIL ABUN
RU-106	-6.155E-02	2.912E-01	4.687E-01	0.000E+00	FAIL ABUN
AG-108M	1.758E-02	3.025E-02	5.358E-02	0.000E+00	NOT IDENT.
CD-109	0.000E+00	9.448E-01	1.608E+00	0.000E+00	NOT IDENT.
AG-110M	3.844E-02	2.858E-02	5.131E-02	0.000E+00	NOT IDENT.
IN-111	6.049E-01	6.467E-01	1.033E+00	0.000E+00	NOT IDENT.
IN-113M	3.104E-02	3.983E-02	7.184E-02	0.000E+00	NOT IDENT.
SN-113	3.104E-02	3.983E-02	7.184E-02	0.000E+00	NOT IDENT.
IN-114M	1.441E-01	1.782E-01	2.813E-01	0.000E+00	NOT IDENT.
CD-115	3.982E+00	6.711E+00	1.177E+01	0.000E+00	NOT IDENT.
SN-117M	-1.348E-02	4.446E-02	7.421E-02	0.000E+00	NOT IDENT.
SB-122	9.251E-02	1.306E+00	2.167E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.875E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.441E-03	2.448E-02	4.167E-02	0.000E+00	NOT IDENT.
I-124	-1.300E-01	5.848E-01	8.177E-01	0.000E+00	NOT IDENT.
SB-124	5.726E-02	7.022E-02	1.353E-01	0.000E+00	FAIL ABUN
SB-125	9.947E-03	8.335E-02	1.429E-01	0.000E+00	FAIL ABUN
TE-125M	3.030E+00	8.259E+00	1.407E+01	0.000E+00	NOT IDENT.
I-126	1.721E-01	1.625E-01	2.767E-01	0.000E+00	NOT IDENT.
SB-126	4.476E-02	1.212E-01	1.984E-01	0.000E+00	NOT IDENT.
SN-126	0.000E+00	9.366E-02	1.595E-01	0.000E+00	NOT IDENT.
SB-127	-7.213E-01	1.025E+00	1.658E+00	0.000E+00	NOT IDENT.
XE-127	-2.779E-02	4.230E-02	6.791E-02	0.000E+00	NOT IDENT.
I-131	1.791E-02	9.300E-02	1.621E-01	0.000E+00	NOT IDENT.
TE-132	9.523E-02	4.726E-01	7.913E-01	0.000E+00	NOT IDENT.
BA-133	2.317E-02	3.783E-02	6.098E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.034E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.865E-02	8.377E-02	0.000E+00	FAIL ABUN
CS-135	1.388E-01	1.614E-01	2.654E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.658E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.576E-02	8.780E-02	1.512E-01	0.000E+00	FAIL ABUN
CE-139	-7.733E-03	2.639E-02	4.395E-02	0.000E+00	NOT IDENT.
BA-140	-8.595E-04	2.097E-01	3.494E-01	0.000E+00	NOT IDENT.
LA-140	-2.927E-02	7.774E-02	1.213E-01	0.000E+00	FAIL ABUN
CE-141	-3.192E-02	5.772E-02	9.586E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.117E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.263E-02	1.804E-01	3.084E-01	0.000E+00	NOT IDENT.
PM-144	4.783E-03	3.157E-02	5.511E-02	0.000E+00	NOT IDENT.
PR-144	3.239E-01	2.138E+00	3.732E+00	0.000E+00	NOT IDENT.
PM-146	1.008E-02	4.069E-02	7.012E-02	0.000E+00	NOT IDENT.
ND-147	-6.083E-01	5.276E-01	7.370E-01	0.000E+00	FAIL ABUN
PM-149	-1.150E+01	5.013E+01	8.644E+01	0.000E+00	NOT IDENT.
EU-152	-3.871E-02	1.003E-01	1.468E-01	0.000E+00	FAIL ABUN
GD-153	2.207E-02	7.998E-02	1.273E-01	0.000E+00	FAIL ABUN
EU-154	-2.532E-03	1.127E-01	1.918E-01	0.000E+00	NOT IDENT.
EU-155	1.051E-01	9.396E-02	1.715E-01	0.000E+00	NOT IDENT.

TB-160	-7.442E-02	1.294E-01	2.045E-01	0.000E+00	FAIL ABUN
HO-166M	-1.372E-03	5.509E-02	9.456E-02	0.000E+00	FAIL ABUN
TM-171	-1.639E+01	3.075E+01	5.292E+01	0.000E+00	NOT IDENT.
LU-176	5.592E-03	2.063E-02	3.657E-02	0.000E+00	NOT IDENT.
LU-177	0.000E+00	1.653E+00	1.725E+00	0.000E+00	FAIL ABUN
LU-177M	-7.540E-02	1.715E-01	2.830E-01	0.000E+00	FAIL ABUN
HF-181	6.535E-03	3.496E-02	5.982E-02	0.000E+00	NOT IDENT.
W-181	-1.130E-01	4.220E-01	7.377E-01	0.000E+00	NOT IDENT.
TA-182	1.336E-01	1.765E-01	3.240E-01	0.000E+00	NOT IDENT.
RE-183	-1.194E-02	9.395E-02	1.581E-01	0.000E+00	FAIL ABUN
RE-184	-7.278E-02	2.072E-01	3.589E-01	0.000E+00	NOT IDENT.
OS-185	5.806E-02	3.783E-02	7.369E-02	0.000E+00	NOT IDENT.
RE-188	1.940E-01	1.507E-01	2.715E-01	0.000E+00	NOT IDENT.
W-188	-4.813E+00	7.055E+00	1.022E+01	0.000E+00	NOT IDENT.
IR-192	1.447E-02	3.057E-02	5.468E-02	0.000E+00	FAIL ABUN
AU-195	2.174E-01	1.993E-01	3.638E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.731E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-4.780E-01	4.542E+00	7.636E+00	0.000E+00	NOT IDENT.
TL-202	-5.337E-02	6.045E-02	9.504E-02	0.000E+00	NOT IDENT.
HG-203	4.856E-02	3.673E-02	6.858E-02	0.000E+00	FAIL ABUN
BI-207	-6.550E-03	4.947E-02	8.078E-02	0.000E+00	FAIL ABUN
TL-207	5.233E-01	6.505E-01	1.056E+00	0.000E+00	FAIL ABUN
PO-209	-2.481E-01	7.186E+00	1.207E+01	0.000E+00	NOT IDENT.
BI-210	1.369E+00	8.293E+00	1.489E+01	0.000E+00	NOT IDENT.
PB-210	1.369E+00	8.293E+00	1.489E+01	0.000E+00	NOT IDENT.
PO-210	1.369E+00	8.293E+00	1.489E+01	0.000E+00	NOT IDENT.
PB-211	-9.004E-01	1.074E+00	1.466E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.864E-01	6.272E-01	0.000E+00	FAIL ABUN
BI-214	0.000E+00	1.583E-01	2.699E-01	0.000E+00	FAIL ABUN
PO-215	5.233E-01	6.505E-01	1.056E+00	0.000E+00	FAIL ABUN
RN-219	9.719E-02	3.896E-01	6.762E-01	0.000E+00	FAIL ABUN
RN-220	-1.790E+01	2.238E+01	3.405E+01	0.000E+00	NOT IDENT.
RA-223	5.233E-01	6.505E-01	1.056E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	1.583E-01	2.699E-01	0.000E+00	FAIL ABUN
AC-227	2.621E-01	3.378E-01	6.167E-01	0.000E+00	FAIL ABUN
TH-227	2.621E-01	3.387E-01	6.167E-01	0.000E+00	FAIL ABUN
TH-229	-3.349E-01	4.814E-01	7.747E-01	0.000E+00	FAIL ABUN
TH-230	0.000E+00	1.583E-01	2.699E-01	0.000E+00	FAIL ABUN
PA-231	-1.629E-02	1.253E+00	2.193E+00	0.000E+00	FAIL ABUN
TH-231	5.233E-01	6.505E-01	1.056E+00	0.000E+00	FAIL ABUN
U-231	-4.956E-01	8.841E-01	1.337E+00	0.000E+00	FAIL ABUN
PA-233	3.587E-02	5.705E-02	1.030E-01	0.000E+00	FAIL ABUN
PA-234	-6.785E-02	2.941E-01	4.805E-01	0.000E+00	FAIL ABUN
PA-234M	2.640E+00	5.557E+00	9.794E+00	0.000E+00	NOT IDENT.
TH-234	4.954E-01	1.588E+00	2.848E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	1.583E-01	2.699E-01	0.000E+00	FAIL ABUN
U-235	1.518E-01	1.924E-01	3.381E-01	0.000E+00	FAIL ABUN
NP-236	-5.084E-03	6.854E-02	1.158E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	3.891E-01	4.777E-01	0.000E+00	NOT IDENT.
U-238	4.954E-01	1.588E+00	2.848E+00	0.000E+00	FAIL ABUN
NP-239	-8.922E-02	1.662E-01	2.795E-01	0.000E+00	FAIL ABUN
AM-241	-9.923E-02	1.946E-01	3.394E-01	0.000E+00	NOT IDENT.
CM-243	5.907E-02	8.237E-02	1.483E-01	0.000E+00	FAIL ABUN
CM-247	2.744E-02	3.502E-02	6.293E-02	0.000E+00	NOT IDENT.
CF-249	-1.720E-02	3.712E-02	6.059E-02	0.000E+00	NOT IDENT.
CF-251	3.120E-03	1.155E-01	1.949E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:06:04.47

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433002.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:04:36.
Sample ID         : G232433002           Sample quantity  : 1.21040E+02 GRAM
Detector name     : GAM04                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.04  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*******************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	766	10.67*	1.075E+00	2.070E+01	2.070E+01	10.26
BA-137M	661.65	87	89.98*	2.210E+00	1.357E-01	1.358E-01	42.17
CS-137	661.65	87	85.12*	2.210E+00	1.435E-01	1.436E-01	42.17
TL-208	277.35	------	6.80	4.326E+00	------ Line Not Found		------
	510.84	91	21.60	2.731E+00	4.765E-01	4.765E-01	65.03
	583.14	265	84.20*	2.456E+00	3.970E-01	3.970E-01	21.58
	860.37	------	12.46	1.744E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.384E+00	------ Line Not Found		------
	351.07	526	12.94*	3.628E+00	3.476E+00	3.476E+00	14.37
PB-212	74.81	237	10.70	3.642E+00	1.890E+00	1.890E+00	29.30
	77.11	403	18.00	3.932E+00	1.765E+00	1.765E+00	20.06
	87.30	------	8.00	5.022E+00	------ Line Not Found		------
	238.63	953	44.60*	4.828E+00	1.373E+00	1.373E+00	11.08
	300.09	56	3.41	4.083E+00	1.242E+00	1.242E+00	87.96
PO-212	74.81	237	10.70	3.642E+00	1.890E+00	1.890E+00	29.30
	77.11	403	18.00	3.932E+00	1.765E+00	1.765E+00	20.06
	87.30	------	8.00	5.022E+00	------ Line Not Found		------
	115.19	------	0.60	6.408E+00	------ Line Not Found		------
	238.63	953	44.60*	4.828E+00	1.373E+00	1.373E+00	11.08
	300.09	56	3.41	4.083E+00	1.242E+00	1.242E+00	87.96
PB-214	74.81	237	6.21	3.642E+00	3.256E+00	3.256E+00	28.74
	77.11	403	10.50	3.932E+00	3.026E+00	3.026E+00	21.45
	87.30	------	4.67	5.022E+00	------ Line Not Found		------
	241.98	324	7.49	4.784E+00	2.801E+00	2.801E+00	27.20
	295.21	288	19.20	4.134E+00	1.126E+00	1.126E+00	23.73
	351.92	526	37.20*	3.628E+00	1.209E+00	1.209E+00	15.29
PO-214	74.81	237	6.21	3.642E+00	3.256E+00	3.256E+00	28.74
	77.11	403	10.50	3.932E+00	3.026E+00	3.026E+00	21.45
	87.30	------	4.67	5.022E+00	------ Line Not Found		------
	241.98	324	7.49	4.784E+00	2.801E+00	2.801E+00	27.20
	295.21	288	19.20	4.134E+00	1.126E+00	1.126E+00	23.73
	351.92	526	37.20*	3.628E+00	1.209E+00	1.209E+00	15.29

Sample ID : G232433002 Acquisition date : 7-JUL-2009 06:04:36

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-216	74.81	237	10.70	3.642E+00	1.890E+00	1.890E+00	29.30
	77.11	403	18.00	3.932E+00	1.765E+00	1.765E+00	20.06
	87.30	------	8.00	5.022E+00	------ Line Not Found		------
	238.63	953	44.60*	4.828E+00	1.373E+00	1.373E+00	11.08
	300.09	56	3.41	4.083E+00	1.242E+00	1.242E+00	87.96
PO-218	74.81	237	6.21	3.642E+00	3.256E+00	3.256E+00	28.74
	77.11	403	10.50	3.932E+00	3.026E+00	3.026E+00	21.45
	87.30	------	4.67	5.022E+00	------ Line Not Found		------
	241.98	324	7.49	4.784E+00	2.801E+00	2.801E+00	27.20
	295.21	288	19.20	4.134E+00	1.126E+00	1.126E+00	23.73
	351.92	526	37.20*	3.628E+00	1.209E+00	1.209E+00	15.29
RA-224	240.98	324	3.95*	4.784E+00	5.312E+00	5.312E+00	26.62
AC-228	338.32	131	11.40	3.737E+00	9.535E-01	9.535E-01	65.55
	911.07	212	27.70*	1.654E+00	1.437E+00	1.437E+00	21.44
	969.11	150	16.60	1.560E+00	1.793E+00	1.793E+00	32.35
RA-228	338.32	131	11.40	3.737E+00	9.535E-01	9.535E-01	65.55
	911.07	212	27.70*	1.654E+00	1.437E+00	1.437E+00	21.44
	969.11	150	16.60	1.560E+00	1.793E+00	1.793E+00	32.35
TH-228	84.40	52	1.21	4.639E+00	2.896E+00	2.896E+00	113.48
	238.60	953	44.60*	4.828E+00	1.373E+00	1.373E+00	11.08
	300.10	56	3.41	4.083E+00	1.242E+00	1.242E+00	105.56
TH-232	338.32	131	11.40	3.737E+00	9.535E-01	9.535E-01	51.66
	911.07	212	27.70*	1.654E+00	1.437E+00	1.437E+00	21.44
	969.11	150	16.60	1.560E+00	1.793E+00	1.793E+00	32.35
AM-243	74.67	237	66.00*	3.642E+00	3.064E-01	3.064E-01	27.77
	86.72	------	0.34	4.969E+00	------ Line Not Found		------
	117.66	------	0.55	6.445E+00	------ Line Not Found		------
	142.18	------	0.13	6.417E+00	------ Line Not Found		------
ANH-511	511.00	91	100.00*	2.731E+00	1.029E-01	1.029E-01	64.50

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232433002 Acquisition date : 7-JUL-2009 06:04:36

Total number of lines in spectrum 29
Number of unidentified lines 1
Number of lines tentatively identified by NID 28 96.55%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.070E+01	2.070E+01	0.212E+01	10.26	
BA-137M	30.17Y	1.00	1.357E-01	1.358E-01	0.573E-01	42.17	
CS-137	30.17Y	1.00	1.435E-01	1.436E-01	0.606E-01	42.17	
TL-208	1.41E+10Y	1.00	3.970E-01	3.970E-01	0.857E-01	21.58	
BI-211	7.04E+08Y	1.00	3.476E+00	3.476E+00	0.500E+00	14.37	
PB-212	1.41E+10Y	1.00	1.373E+00	1.373E+00	0.152E+00	11.08	
PO-212	1.41E+10Y	1.00	1.373E+00	1.373E+00	0.152E+00	11.08	
PB-214	1600.00Y	1.00	1.209E+00	1.209E+00	0.185E+00	15.29	
PO-214	1600.00Y	1.00	1.209E+00	1.209E+00	0.185E+00	15.29	
PO-216	1.41E+10Y	1.00	1.373E+00	1.373E+00	0.152E+00	11.08	
PO-218	1600.00Y	1.00	1.209E+00	1.209E+00	0.185E+00	15.29	
RA-224	1.41E+10Y	1.00	5.312E+00	5.312E+00	1.414E+00	26.62	
AC-228	1.41E+10Y	1.00	1.437E+00	1.437E+00	0.308E+00	21.44	
RA-228	1.41E+10Y	1.00	1.437E+00	1.437E+00	0.308E+00	21.44	
TH-228	1.41E+10Y	1.00	1.373E+00	1.373E+00	0.152E+00	11.08	
TH-232	1.41E+10Y	1.00	1.437E+00	1.437E+00	0.308E+00	21.44	
AM-243	7380.00Y	1.00	3.064E-01	3.064E-01	0.851E-01	27.77	
ANH-511	1.00E+09Y	1.00	1.029E-01	1.029E-01	0.664E-01	64.50	
		Total Activity :	4.400E+01	4.400E+01			

Grand Total Activity : 4.400E+01 4.400E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433002 Acquisition date : 7-JUL-2009 06:04:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.88	144	257	1.18	179.81	171	20	1.99E-02	41.0	5.24E+00	T
5	92.82	173	334	1.53	185.69	171	20	2.40E-02	42.7	5.47E+00	T
0	185.88	135	303	0.96	371.83	368	10	1.88E-02	52.6	5.70E+00	T
0	209.69	161	292	1.29	419.45	413	13	2.23E-02	46.7	5.28E+00	T
0	269.97	98	156	2.12	540.02	536	11	1.37E-02	52.9	4.41E+00	T
0	327.85	109	169	1.69	655.78	649	13	1.52E-02	52.7	3.82E+00	T
0	463.16	62	86	1.41	926.41	918	11	8.58E-03	63.3	2.95E+00	T
0	608.89	350	69	1.43	1217.88	1212	12	4.86E-02	14.6	2.37E+00	T
0	726.85	71	41	1.18	1453.79	1449	11	9.88E-03	42.2	2.03E+00	T
0	794.45	60	27	1.34	1588.99	1582	14	8.28E-03	45.6	1.88E+00	T
3	963.81	43	25	1.88	1927.67	1924	21	5.94E-03	44.5	1.57E+00	T
0	1119.60	99	43	2.06	2239.22	2231	17	1.37E-02	36.4	1.36E+00	T
0	1236.77	53	36	2.35	2473.52	2467	13	7.34E-03	54.7	1.24E+00	T
0	1762.99	82	0	2.88	3525.69	3518	14	1.13E-02	23.1	9.53E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:06:09.49

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433002.CNF;1 *
* Acquisition date  : 7-JUL-2009 06:04:36.  Detector SN#     :             *
* Detector ID       : GAM04                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.04          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433002            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 1.21040E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 5-MAY-2009 14:25:41.36MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.070E+01	2.123E+00	4.646E-01	3.302E-02	44.558
BA-137M	1.358E-01	5.728E-02	5.994E-02	2.923E-03	2.266
CS-137	1.436E-01	6.055E-02	6.337E-02	3.109E-03	2.266
TL-208	3.970E-01	8.566E-02	5.459E-02	3.435E-03	7.271
BI-211	3.476E+00	4.996E-01	2.886E-01	1.950E-02	12.041
PB-212	1.373E+00	1.521E-01	8.177E-02	6.567E-03	16.788
PO-212	1.373E+00	1.521E-01	8.177E-02	6.567E-03	16.788
PB-214	1.209E+00	1.849E-01	1.006E-01	8.583E-03	12.015
PO-214	1.209E+00	1.849E-01	1.006E-01	8.583E-03	12.015
PO-216	1.373E+00	1.521E-01	8.177E-02	6.567E-03	16.788
PO-218	1.209E+00	1.849E-01	1.006E-01	8.583E-03	12.015
RA-224	5.312E+00	1.414E+00	9.309E-01	6.206E-02	5.706
AC-228	1.437E+00	3.080E-01	2.018E-01	2.200E-02	7.118
RA-228	1.437E+00	3.080E-01	2.018E-01	2.200E-02	7.118
TH-228	1.373E+00	1.521E-01	8.176E-02	6.567E-03	16.789
TH-232	1.437E+00	3.080E-01	2.018E-01	2.200E-02	7.118
AM-243	3.064E-01	8.508E-02	9.654E-02	1.106E-02	3.173
ANH-511	1.029E-01	6.639E-02	4.632E-02	2.590E-03	2.222

Sample ID : G232433002 Acquisition date : 7-JUL-2009 06:04:36

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.697E-01		2.949E-01	5.039E-01	3.338E-02	0.337
NA-22	2.027E-03		4.091E-02	6.886E-02	4.502E-03	0.029
NA-24	-1.263E-01		7.460E-02	Half-Life too short		
AL-26	1.509E-03		2.598E-02	4.284E-02	2.541E-03	0.035
TI-44	3.257E-01	+	6.533E-02	7.825E-02	8.998E-03	4.163
SC-46	-4.161E-03		3.924E-02	6.390E-02	5.168E-03	-0.065
V-48	-2.892E-02		6.287E-02	9.680E-02	7.499E-03	-0.299
CR-51	-2.589E-01		3.228E-01	5.100E-01	3.591E-02	-0.508
MN-52	-2.321E-01		2.009E-01	2.670E-01	1.822E-02	-0.869
MN-54	-1.700E-02		3.466E-02	5.442E-02	3.938E-03	-0.312
CO-56	-2.118E-02		3.550E-02	5.466E-02	4.055E-03	-0.387
CO-57	-1.585E-02		2.241E-02	3.541E-02	2.458E-03	-0.448
CO-58	2.722E-02		3.680E-02	6.539E-02	4.514E-03	0.416
FE-59	-1.804E-04		8.243E-02	1.334E-01	1.019E-02	-0.001
CO-60	1.784E-02		3.468E-02	6.200E-02	4.248E-03	0.288
ZN-65	-8.950E-04		1.037E-01	1.443E-01	9.547E-03	-0.006
GE-68	1.072E-01		1.148E+00	1.884E+00	1.316E-01	0.057
AS-73	-9.188E-01		1.394E+00	2.283E+00	2.986E-01	-0.403
AS-74	7.608E-03		8.580E-02	1.388E-01	7.328E-03	0.055
SE-75	1.640E-02		4.055E-02	6.565E-02	4.416E-03	0.250
BR-77	-2.779E+00		6.826E+00	1.065E+01	5.930E-01	-0.261
SR-82	-1.333E-01		3.454E-01	5.526E-01	3.527E-02	-0.241
RB-83	-3.782E-02		6.605E-02	1.013E-01	5.643E-03	-0.373
RB-84	2.700E-02		6.607E-02	1.135E-01	9.039E-03	0.238
KR-85	4.131E-01		7.562E+00	1.079E+01	6.028E-01	0.038
SR-85	2.088E-03		3.822E-02	5.455E-02	3.047E-03	0.038
RB-86	1.682E-02		7.101E-01	1.155E+00	8.074E-02	0.015
Y-88	-9.454E-05		3.390E-02	5.494E-02	3.206E-03	-0.002
ZR-88	7.212E-03		2.837E-02	4.774E-02	2.687E-03	0.151
Y-91	-4.354E+00		1.841E+01	2.875E+01	1.762E+00	-0.151
NB-94	9.041E-03		3.265E-02	5.598E-02	3.016E-03	0.162
NB-95	2.865E-02		4.448E-02	7.772E-02	4.843E-03	0.369
NB-95M	1.240E-01		1.256E-01	1.894E-01	1.554E-02	0.655
ZR-95	1.831E-02		6.166E-02	1.058E-01	7.706E-03	0.173
NB-97	3.216E-02		1.088E-02	Half-Life too short		
ZR-97	9.920E-01		2.544E-01	Half-Life too short		
MO-99	1.874E+00		7.210E+00	1.235E+01	1.705E+00	0.152
TC-99M	-1.056E+09		4.347E+08	Half-Life too short		
RH-101	-1.939E-02		3.227E-02	4.965E-02	3.233E-03	-0.390
RH-102	3.075E-03		2.826E-02	4.651E-02	2.630E-03	0.066
RU-103	-1.969E-02		3.531E-02	5.416E-02	6.804E-03	-0.364
RH-106	-6.155E-02		2.972E-01	4.647E-01	5.309E-02	-0.132
RU-106	-6.155E-02		2.972E-01	4.647E-01	2.388E-02	-0.132
AG-108M	1.758E-02		3.087E-02	5.289E-02	3.268E-03	0.332
CD-109	3.016E+00		9.641E-01	1.558E+00	1.872E-01	1.936
AG-110M	3.844E-02		2.917E-02	5.091E-02	2.720E-03	0.755
IN-111	6.049E-01		6.599E-01	1.012E+00	6.756E-02	0.597
IN-113M	3.104E-02		4.065E-02	7.083E-02	4.268E-03	0.438

Sample ID : G232433002 Acquisition date : 7-JUL-2009 06:04:36

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113	3.104E-02		4.065E-02	7.083E-02	4.268E-03	0.438
IN-114M	1.441E-01		1.819E-01	2.749E-01	1.779E-02	0.524
CD-115	3.982E+00		6.848E+00	1.165E+01	6.465E-01	0.342
SN-117M	-1.348E-02		4.537E-02	7.238E-02	4.629E-03	-0.186
SB-122	9.251E-02		1.332E+00	2.146E+00	1.164E-01	0.043
I-123	5.225E-02		4.528E-01	Half-Life too short		
TE-123M	1.441E-03		2.498E-02	4.064E-02	2.627E-03	0.035
I-124	-1.300E-01		5.967E-01	8.104E-01	4.250E-02	-0.160
SB-124	5.726E-02		7.165E-02	1.358E-01	9.227E-03	0.422
SB-125	9.947E-03		8.505E-02	1.410E-01	8.348E-03	0.071
TE-125M	3.030E+00		8.427E+00	1.367E+01	1.356E+00	0.222
I-126	1.721E-01		1.658E-01	2.746E-01	1.355E-02	0.627
SB-126	4.476E-02		1.237E-01	1.971E-01	1.107E-02	0.227
SN-126	2.984E-01		9.557E-02	1.545E-01	1.853E-02	1.932
SB-127	-7.213E-01		1.045E+00	1.646E+00	1.409E-01	-0.438
XE-127	-2.779E-02		4.316E-02	6.642E-02	4.342E-03	-0.418
I-131	1.791E-02		9.490E-02	1.597E-01	1.061E-02	0.112
TE-132	9.523E-02		4.822E-01	7.751E-01	1.121E-01	0.123
BA-133	2.317E-02		3.860E-02	6.005E-02	7.035E-03	0.386
I-133	-1.122E-03		1.038E-03	Half-Life too short		
CS-134	1.298E-01	+	5.985E-02	8.331E-02	5.615E-03	1.558
CS-135	1.388E-01		1.647E-01	2.605E-01	2.172E-02	0.533
I-135	8.147E+07		8.460E+07	Half-Life too short		
CS-136	2.576E-02		8.959E-02	1.509E-01	1.159E-02	0.171
CE-139	-7.733E-03		2.693E-02	4.288E-02	2.725E-03	-0.180
BA-140	-8.595E-04		2.140E-01	3.459E-01	1.123E-01	-0.002
LA-140	-2.927E-02		7.933E-02	1.217E-01	8.013E-03	-0.241
CE-141	-3.192E-02		5.890E-02	9.339E-02	6.269E-03	-0.342
CE-143	3.808E-04		5.697E-05	Half-Life too short		
CE-144	-1.263E-02		1.841E-01	3.002E-01	4.376E-02	-0.042
PM-144	4.783E-03		3.222E-02	5.472E-02	2.907E-03	0.087
PR-144	3.239E-01		2.181E+00	3.705E+00	1.967E-01	0.087
PM-146	1.008E-02		4.152E-02	6.926E-02	5.912E-03	0.146
ND-147	-6.083E-01		5.384E-01	7.294E-01	9.783E-02	-0.834
PM-149	-1.150E+01		5.115E+01	8.490E+01	1.233E+01	-0.135
EU-152	-3.871E-02		1.023E-01	1.445E-01	1.000E-02	-0.268
GD-153	2.207E-02		8.161E-02	1.235E-01	1.212E-02	0.179
EU-154	-2.532E-03		1.150E-01	1.919E-01	1.882E-02	-0.013
EU-155	1.051E-01		9.587E-02	1.664E-01	1.450E-02	0.631
TB-160	-7.442E-02		1.321E-01	2.036E-01	1.615E-02	-0.365
HO-166M	-1.372E-03		5.621E-02	9.392E-02	5.169E-03	-0.015
TM-171	-1.639E+01		3.138E+01	5.109E+01	5.973E+00	-0.321
LU-176	5.592E-03		2.105E-02	3.594E-02	2.347E-03	0.156
LU-177	3.573E+00	+	1.687E+00	1.688E+00	1.108E-01	2.117
LU-177M	-7.540E-02		1.750E-01	2.792E-01	1.579E-02	-0.270
HF-181	6.535E-03		3.567E-02	5.913E-02	3.338E-03	0.111
W-181	-1.130E-01		4.306E-01	7.120E-01	8.392E-02	-0.159
TA-182	1.336E-01		1.801E-01	3.240E-01	2.016E-02	0.412

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183	-1.194E-02		9.587E-02	1.542E-01	9.828E-03	-0.077
RE-184	-7.278E-02		2.115E-01	3.519E-01	2.350E-02	-0.207
OS-185	5.806E-02		3.860E-02	7.310E-02	3.644E-03	0.794
RE-188	1.940E-01		1.537E-01	2.647E-01	1.700E-02	0.733
W-188	-4.813E+00		7.199E+00	1.004E+01	6.637E-01	-0.479
IR-192	1.447E-02		3.120E-02	5.377E-02	3.491E-03	0.269
AU-195	2.174E-01		2.033E-01	3.528E-01	3.374E-02	0.616
TL-200	2.137E-05		8.831E-05	Half-Life too short		
TL-201	-4.780E-01		4.634E+00	7.452E+00	4.737E-01	-0.064
TL-202	-5.337E-02		6.168E-02	9.384E-02	5.323E-03	-0.569
HG-203	4.856E-02		3.748E-02	6.734E-02	4.688E-03	0.721
BI-207	-6.550E-03		5.048E-02	8.063E-02	5.735E-03	-0.081
TL-207	5.233E-01		6.638E-01	1.039E+00	1.739E-01	0.504
PO-209	-2.481E-01		7.332E+00	1.202E+01	9.866E-01	-0.021
BI-210	1.369E+00		8.462E+00	1.432E+01	1.248E+00	0.096
PB-210	1.369E+00		8.462E+00	1.432E+01	1.248E+00	0.096
PO-210	1.369E+00		8.462E+00	1.432E+01	1.112E+00	0.096
PB-211	-9.004E-01		1.096E+00	1.446E+00	9.011E-01	-0.623
BI-212	9.189E-01	+	3.943E-01	6.231E-01	4.763E-02	1.475
BI-214	9.898E-01	+	1.615E-01	2.675E-01	1.966E-02	3.700
PO-215	5.233E-01		6.638E-01	1.039E+00	1.739E-01	0.504
RN-219	9.719E-02		3.975E-01	6.669E-01	9.030E-02	0.146
RN-220	-1.790E+01		2.284E+01	3.371E+01	1.847E+00	-0.531
RA-223	5.233E-01		6.638E-01	1.039E+00	1.739E-01	0.504
RA-226	9.898E-01	+	1.615E-01	2.675E-01	1.966E-02	3.700
AC-227	2.621E-01		3.447E-01	6.049E-01	8.679E-02	0.433
TH-227	2.621E-01		3.456E-01	6.049E-01	1.042E-01	0.433
TH-229	-3.349E-01		4.912E-01	7.573E-01	4.915E-02	-0.442
TH-230	9.898E-01	+	1.615E-01	2.675E-01	1.966E-02	3.700
PA-231	-1.629E-02		1.279E+00	2.154E+00	3.048E-01	-0.008
TH-231	5.233E-01		6.638E-01	1.039E+00	1.739E-01	0.504
U-231	-4.956E-01		9.021E-01	1.296E+00	1.311E-01	-0.382
PA-233	3.587E-02		5.822E-02	1.013E-01	6.908E-03	0.354
PA-234	-6.785E-02		3.001E-01	4.789E-01	8.850E-02	-0.142
PA-234M	2.640E+00		5.670E+00	9.769E+00	1.019E+00	0.270
TH-234	4.954E-01		1.621E+00	2.748E+00	5.436E-01	0.180
U-234	9.898E-01	+	1.615E-01	2.675E-01	1.966E-02	3.700
U-235	1.518E-01		1.964E-01	3.294E-01	5.460E-02	0.461
NP-236	-5.084E-03		6.994E-02	1.129E-01	7.209E-03	-0.045
NP-237	1.092E+00		3.971E-01	4.626E-01	1.102E-01	2.360
U-238	4.954E-01		1.621E+00	2.748E+00	5.436E-01	0.180
NP-239	-8.922E-02		1.696E-01	2.716E-01	1.999E-02	-0.328
AM-241	-9.923E-02		1.985E-01	3.272E-01	4.130E-02	-0.303
CM-243	5.907E-02		8.405E-02	1.439E-01	1.268E-02	0.411
CM-247	2.744E-02		3.573E-02	6.206E-02	3.503E-03	0.442
CF-249	-1.720E-02		3.788E-02	5.973E-02	3.394E-03	-0.288
CF-251	3.120E-03		1.178E-01	1.903E-01	1.218E-02	0.016

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433002           *
* Acquisition date  :  7-JUL-2009 06:04:36 Detector SN#     :               *
* Detector ID       : GAM04                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.04     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433002           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.2104E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  5-MAY-2009 14:25:41 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.070E+01	2.081E+00	2.319E-01	1.062E+00
BA-137M	1.358E-01	5.613E-02	3.022E-02	2.864E-02
CS-137	1.436E-01	5.934E-02	3.195E-02	3.028E-02
TL-208	3.970E-01	8.395E-02	2.757E-02	4.283E-02
BI-211	3.476E+00	4.896E-01	1.467E-01	2.498E-01
PB-212	1.373E+00	1.490E-01	4.174E-02	7.604E-02
PO-212	1.373E+00	1.490E-01	4.174E-02	7.604E-02
PB-214	1.209E+00	1.812E-01	5.112E-02	9.244E-02
PO-214	1.209E+00	1.812E-01	5.112E-02	9.244E-02
PO-216	1.373E+00	1.490E-01	4.174E-02	7.604E-02
PO-218	1.209E+00	1.812E-01	5.112E-02	9.244E-02
RA-224	5.312E+00	1.386E+00	4.751E-01	7.069E-01
AC-228	1.437E+00	3.019E-01	1.014E-01	1.540E-01
RA-228	1.437E+00	3.019E-01	1.014E-01	1.540E-01
TH-228	1.373E+00	1.490E-01	4.174E-02	7.604E-02
TH-232	1.437E+00	3.019E-01	1.014E-01	1.540E-01
AM-243	3.064E-01	8.338E-02	4.997E-02	4.254E-02
ANH-511	1.029E-01	6.506E-02	2.343E-02	3.319E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	1.697E-01	2.890E-01	2.551E-01	1.474E-01	NOT IDENT.
NA-22	2.027E-03	4.009E-02	3.444E-02	2.046E-02	NOT IDENT.
NA-24	-1.263E+05	1.462E+05	0.000E+00	7.460E+04	SHORT HLIF
AL-26	1.509E-03	2.546E-02	2.133E-02	1.299E-02	NOT IDENT.
TI-44	3.257E-01	6.402E-02	4.048E-02	3.267E-02	FAIL ABUN
SC-46	-4.161E-03	3.846E-02	3.210E-02	1.962E-02	FAIL ABUN
V-48	-2.892E-02	6.161E-02	4.857E-02	3.143E-02	NOT IDENT.
CR-51	-2.589E-01	3.164E-01	2.594E-01	1.614E-01	NOT IDENT.
MN-52	-2.321E-01	1.969E-01	1.333E-01	1.004E-01	NOT IDENT.

MN-54	-1.700E-02	3.397E-02	2.736E-02	1.733E-02	NOT IDENT.
CO-56	-2.118E-02	3.479E-02	2.747E-02	1.775E-02	FAIL ABUN
CO-57	-1.585E-02	2.196E-02	1.822E-02	1.120E-02	NOT IDENT.
CO-58	2.722E-02	3.607E-02	3.289E-02	1.840E-02	NOT IDENT.
FE-59	-1.804E-04	8.078E-02	6.683E-02	4.121E-02	NOT IDENT.
CO-60	1.784E-02	3.399E-02	3.099E-02	1.734E-02	NOT IDENT.
ZN-65	-8.950E-04	1.016E-01	7.230E-02	5.183E-02	NOT IDENT.
GE-68	1.072E-01	1.125E+00	9.440E-01	5.741E-01	NOT IDENT.
AS-73	-9.188E-01	1.366E+00	1.186E+00	6.969E-01	NOT IDENT.
AS-74	7.608E-03	8.409E-02	7.007E-02	4.290E-02	NOT IDENT.
SE-75	1.640E-02	3.974E-02	3.347E-02	2.028E-02	NOT IDENT.
BR-77	-2.779E+00	6.690E+00	5.385E+00	3.413E+00	FAIL ABUN
SR-82	-1.333E-01	3.385E-01	2.780E-01	1.727E-01	NOT IDENT.
RB-83	-3.782E-02	6.473E-02	5.124E-02	3.303E-02	NOT IDENT.
RB-84	2.700E-02	6.475E-02	5.703E-02	3.304E-02	NOT IDENT.
KR-85	4.131E-01	7.411E+00	5.458E+00	3.781E+00	NOT IDENT.
SR-85	2.088E-03	3.746E-02	2.759E-02	1.911E-02	NOT IDENT.
RB-86	1.682E-02	6.959E-01	5.787E-01	3.551E-01	NOT IDENT.
Y-88	-9.454E-05	3.322E-02	2.735E-02	1.695E-02	NOT IDENT.
ZR-88	7.212E-03	2.780E-02	2.422E-02	1.419E-02	NOT IDENT.
Y-91	-4.354E+00	1.804E+01	1.439E+01	9.204E+00	NOT IDENT.
NB-94	9.041E-03	3.200E-02	2.820E-02	1.633E-02	NOT IDENT.
NB-95	2.865E-02	4.359E-02	3.911E-02	2.224E-02	NOT IDENT.
NB-95M	1.240E-01	1.230E-01	9.670E-02	6.278E-02	NOT IDENT.
ZR-95	1.831E-02	6.043E-02	5.327E-02	3.083E-02	NOT IDENT.
NB-97	3.216E+04	2.132E+04	0.000E+00	1.088E+04	SHORT HLIF
ZR-97	9.920E+05	4.987E+05	0.000E+00	2.544E+05	SHORT HLIF
MO-99	1.874E+00	7.066E+00	6.216E+00	3.605E+00	NOT IDENT.
TC-99M	-1.056E+15	8.520E+14	0.000E+00	4.347E+14	SHORT HLIF
RH-101	-1.939E-02	3.162E-02	2.540E-02	1.613E-02	NOT IDENT.
RH-102	3.075E-03	2.770E-02	2.355E-02	1.413E-02	NOT IDENT.
RU-103	-1.969E-02	3.460E-02	2.740E-02	1.765E-02	FAIL ABUN
RH-106	-6.155E-02	2.913E-01	2.345E-01	1.486E-01	FAIL ABUN
RU-106	-6.155E-02	2.912E-01	2.345E-01	1.486E-01	FAIL ABUN
AG-108M	1.758E-02	3.025E-02	2.681E-02	1.543E-02	NOT IDENT.
CD-109	3.016E+00	9.448E-01	8.046E-01	4.821E-01	NOT IDENT.
AG-110M	3.844E-02	2.858E-02	2.567E-02	1.458E-02	NOT IDENT.
IN-111	6.049E-01	6.467E-01	5.166E-01	3.300E-01	NOT IDENT.
IN-113M	3.104E-02	3.983E-02	3.594E-02	2.032E-02	NOT IDENT.
SN-113	3.104E-02	3.983E-02	3.594E-02	2.032E-02	NOT IDENT.
IN-114M	1.441E-01	1.782E-01	1.407E-01	9.094E-02	NOT IDENT.
CD-115	3.982E+00	6.711E+00	5.891E+00	3.424E+00	NOT IDENT.
SN-117M	-1.348E-02	4.446E-02	3.713E-02	2.269E-02	NOT IDENT.
SB-122	9.251E-02	1.306E+00	1.084E+00	6.662E-01	NOT IDENT.
I-123	5.225E+04	8.875E+05	0.000E+00	4.528E+05	SHORT HLIF
TE-123M	1.441E-03	2.448E-02	2.085E-02	1.249E-02	NOT IDENT.
I-124	-1.300E-01	5.848E-01	4.091E-01	2.984E-01	NOT IDENT.
SB-124	5.726E-02	7.022E-02	6.767E-02	3.583E-02	FAIL ABUN
SB-125	9.947E-03	8.335E-02	7.149E-02	4.253E-02	FAIL ABUN
TE-125M	3.030E+00	8.259E+00	7.041E+00	4.214E+00	NOT IDENT.
I-126	1.721E-01	1.625E-01	1.384E-01	8.289E-02	NOT IDENT.
SB-126	4.476E-02	1.212E-01	9.927E-02	6.186E-02	NOT IDENT.
SN-126	2.984E-01	9.366E-02	7.981E-02	4.779E-02	NOT IDENT.
SB-127	-7.213E-01	1.025E+00	8.294E-01	5.227E-01	NOT IDENT.
XE-127	-2.779E-02	4.230E-02	3.397E-02	2.158E-02	NOT IDENT.
I-131	1.791E-02	9.300E-02	8.109E-02	4.745E-02	NOT IDENT.
TE-132	9.523E-02	4.726E-01	3.959E-01	2.411E-01	NOT IDENT.
BA-133	2.317E-02	3.783E-02	3.051E-02	1.930E-02	NOT IDENT.
I-133	-1.122E+03	2.034E+03	0.000E+00	1.038E+03	SHORT HLIF
CS-134	1.298E-01	5.865E-02	4.191E-02	2.993E-02	FAIL ABUN
CS-135	1.388E-01	1.614E-01	1.328E-01	8.233E-02	NOT IDENT.
I-135	8.147E+13	1.658E+14	0.000E+00	8.460E+13	SHORT HLIF
CS-136	2.576E-02	8.780E-02	7.565E-02	4.480E-02	FAIL ABUN
CE-139	-7.733E-03	2.639E-02	2.199E-02	1.346E-02	NOT IDENT.
BA-140	-8.595E-04	2.097E-01	1.748E-01	1.070E-01	NOT IDENT.
LA-140	-2.927E-02	7.774E-02	6.067E-02	3.967E-02	FAIL ABUN
CE-141	-3.192E-02	5.772E-02	4.796E-02	2.945E-02	NOT IDENT.
CE-143	3.808E+02	1.117E+02	0.000E+00	5.697E+01	SHORT HLIF
CE-144	-1.263E-02	1.804E-01	1.543E-01	9.205E-02	NOT IDENT.
PM-144	4.783E-03	3.157E-02	2.757E-02	1.611E-02	NOT IDENT.
PR-144	3.239E-01	2.138E+00	1.867E+00	1.091E+00	NOT IDENT.
PM-146	1.008E-02	4.069E-02	3.508E-02	2.076E-02	NOT IDENT.
ND-147	-6.083E-01	5.276E-01	3.687E-01	2.692E-01	FAIL ABUN
PM-149	-1.150E+01	5.013E+01	4.325E+01	2.557E+01	NOT IDENT.
EU-152	-3.871E-02	1.003E-01	7.344E-02	5.116E-02	FAIL ABUN
GD-153	2.207E-02	7.998E-02	6.371E-02	4.080E-02	FAIL ABUN
EU-154	-2.532E-03	1.127E-01	9.596E-02	5.748E-02	NOT IDENT.
EU-155	1.051E-01	9.396E-02	8.578E-02	4.794E-02	NOT IDENT.

TB-160	-7.442E-02	1.294E-01	1.023E-01	6.603E-02	FAIL ABUN
HO-166M	-1.372E-03	5.509E-02	4.731E-02	2.811E-02	FAIL ABUN
TM-171	-1.639E+01	3.075E+01	2.648E+01	1.569E+01	NOT IDENT.
LU-176	5.592E-03	2.063E-02	1.829E-02	1.053E-02	NOT IDENT.
LU-177	3.573E+00	1.653E+00	8.631E-01	8.434E-01	FAIL ABUN
LU-177M	-7.540E-02	1.715E-01	1.416E-01	8.751E-02	FAIL ABUN
HF-181	6.535E-03	3.496E-02	2.993E-02	1.784E-02	NOT IDENT.
W-181	-1.130E-01	4.220E-01	3.691E-01	2.153E-01	NOT IDENT.
TA-182	1.336E-01	1.765E-01	1.621E-01	9.005E-02	NOT IDENT.
RE-183	-1.194E-02	9.395E-02	7.909E-02	4.793E-02	FAIL ABUN
RE-184	-7.278E-02	2.072E-01	1.795E-01	1.057E-01	NOT IDENT.
OS-185	5.806E-02	3.783E-02	3.687E-02	1.930E-02	NOT IDENT.
RE-188	1.940E-01	1.507E-01	1.358E-01	7.687E-02	NOT IDENT.
W-188	-4.813E+00	7.055E+00	5.114E+00	3.599E+00	NOT IDENT.
IR-192	1.447E-02	3.057E-02	2.735E-02	1.560E-02	FAIL ABUN
AU-195	2.174E-01	1.993E-01	1.820E-01	1.017E-01	FAIL ABUN
TL-200	2.137E+01	1.731E+02	0.000E+00	8.831E+01	SHORT HLIF
TL-201	-4.780E-01	4.542E+00	3.820E+00	2.317E+00	NOT IDENT.
TL-202	-5.337E-02	6.045E-02	4.755E-02	3.084E-02	NOT IDENT.
HG-203	4.856E-02	3.673E-02	3.431E-02	1.874E-02	FAIL ABUN
BI-207	-6.550E-03	4.947E-02	4.042E-02	2.524E-02	FAIL ABUN
TL-207	5.233E-01	6.505E-01	5.284E-01	3.319E-01	FAIL ABUN
PO-209	-2.481E-01	7.186E+00	6.039E+00	3.666E+00	NOT IDENT.
BI-210	1.369E+00	8.293E+00	7.450E+00	4.231E+00	NOT IDENT.
PB-210	1.369E+00	8.293E+00	7.450E+00	4.231E+00	NOT IDENT.
PO-210	1.369E+00	8.293E+00	7.450E+00	4.231E+00	NOT IDENT.
PB-211	-9.004E-01	1.074E+00	7.333E-01	5.478E-01	NOT IDENT.
BI-212	9.189E-01	3.864E-01	3.138E-01	1.971E-01	FAIL ABUN
BI-214	9.898E-01	1.583E-01	1.350E-01	8.074E-02	FAIL ABUN
PO-215	5.233E-01	6.505E-01	5.284E-01	3.319E-01	FAIL ABUN
RN-219	9.719E-02	3.896E-01	3.383E-01	1.988E-01	FAIL ABUN
RN-220	-1.790E+01	2.238E+01	1.704E+01	1.142E+01	NOT IDENT.
RA-223	5.233E-01	6.505E-01	5.284E-01	3.319E-01	FAIL ABUN
RA-226	9.898E-01	1.583E-01	1.350E-01	8.074E-02	FAIL ABUN
AC-227	2.621E-01	3.378E-01	3.085E-01	1.723E-01	FAIL ABUN
TH-227	2.621E-01	3.387E-01	3.085E-01	1.728E-01	FAIL ABUN
TH-229	-3.349E-01	4.814E-01	3.876E-01	2.456E-01	FAIL ABUN
TH-230	9.898E-01	1.583E-01	1.350E-01	8.074E-02	FAIL ABUN
PA-231	-1.629E-02	1.253E+00	1.097E+00	6.394E-01	FAIL ABUN
TH-231	5.233E-01	6.505E-01	5.284E-01	3.319E-01	FAIL ABUN
U-231	-4.956E-01	8.841E-01	6.690E-01	4.511E-01	FAIL ABUN
PA-233	3.587E-02	5.705E-02	5.154E-02	2.911E-02	FAIL ABUN
PA-234	-6.785E-02	2.941E-01	2.404E-01	1.500E-01	FAIL ABUN
PA-234M	2.640E+00	5.557E+00	4.900E+00	2.835E+00	NOT IDENT.
TH-234	4.954E-01	1.588E+00	1.425E+00	8.104E-01	FAIL ABUN
U-234	9.898E-01	1.583E-01	1.350E-01	8.074E-02	FAIL ABUN
U-235	1.518E-01	1.924E-01	1.692E-01	9.818E-02	FAIL ABUN
NP-236	-5.084E-03	6.854E-02	5.792E-02	3.497E-02	NOT IDENT.
NP-237	1.092E+00	3.891E-01	2.390E-01	1.985E-01	NOT IDENT.
U-238	4.954E-01	1.588E+00	1.425E+00	8.104E-01	FAIL ABUN
NP-239	-8.922E-02	1.662E-01	1.398E-01	8.482E-02	FAIL ABUN
AM-241	-9.923E-02	1.946E-01	1.698E-01	9.926E-02	NOT IDENT.
CM-243	5.907E-02	8.237E-02	7.417E-02	4.203E-02	FAIL ABUN
CM-247	2.744E-02	3.502E-02	3.148E-02	1.787E-02	NOT IDENT.
CF-249	-1.720E-02	3.712E-02	3.031E-02	1.894E-02	NOT IDENT.
CF-251	3.120E-03	1.155E-01	9.749E-02	5.892E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	142.5295
46.50	142.5295
46.50	142.5295
48.70	164.9341
49.72	168.8677
51.35	158.3993
52.39	154.5196
52.97	169.5489
53.15	172.2429
53.44	180.2153
54.07	170.9328
56.28	167.5622
56.28	167.5636
57.37	0.0000
57.53	174.2767
57.53	174.2777
57.60	180.4714
57.98	184.1748
57.98	184.1748
59.32	169.7803
59.32	169.7803
59.40	169.8149
59.54	181.3775
59.72	192.9682
60.01	203.7406
61.10	182.0959
61.14	182.1141
61.30	182.1877
63.00	205.2704
63.29	200.9514
63.29	200.9514
63.58	185.9006
64.28	203.2283
65.12	216.2014
65.20	216.2430
65.20	216.2430
66.05	212.1885
66.72	208.0231
66.83	208.0784
66.91	212.6230
67.20	204.6542
67.20	204.6542
67.75	219.3635
67.85	219.4154
68.90	225.3840
68.90	225.3840
69.30	212.9090
69.67	224.8812
70.82	222.2907
70.82	222.2907
70.83	222.2957
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72.87	254.8347
74.67	255.8536
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74.81	255.9331
74.81	255.9331
74.97	256.0225
75.28	256.1970
75.70	256.4326
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77.11	257.2173
77.11	257.2173

77.11	257.2173
77.11	257.2173
77.11	257.2173
78.38	257.9183
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79.80	226.2431
79.80	226.2431
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80.18	217.1440
80.30	217.1982
80.30	217.1982
80.57	250.7561
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81.07	217.5481
81.07	217.5481
81.07	217.5481
81.07	217.5481
82.60	218.2396
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83.78	259.4350
83.78	259.4350
83.78	259.4350
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84.40	179.7275
84.90	179.9102
85.43	180.1016
86.29	180.4131
86.50	180.4883
86.54	180.5029
86.59	180.5205
86.72	244.0481
86.79	244.0811
86.94	244.1550
87.30	220.3212
87.30	220.3212
87.30	220.3212
87.30	220.3212
87.30	220.3212
87.30	220.3212
87.57	220.4390
87.88	220.5735
88.03	220.6390
88.36	220.7830
88.47	220.8306
89.95	221.4697
91.11	221.9672
92.29	222.4707
92.38	222.5088
92.38	222.5088
93.35	222.9194
94.00	220.3328
94.67	216.3102
94.67	216.3125
94.90	229.3042
94.90	229.3042
94.90	229.3042
94.90	229.3042
95.87	241.2065
95.87	241.2065
96.73	217.1454
97.43	208.7860
98.44	195.2283
98.44	195.2283
98.88	177.0979
99.55	172.4958
99.55	172.4958
99.86	174.5207
100.00	174.5649
100.10	174.5981
103.18	203.6896
103.76	167.9739
105.00	166.3938
105.31	170.3786
108.00	236.7085
109.28	184.2918
111.00	170.0831
111.00	170.0831

111.76	197.8624
112.95	214.0387
115.19	185.1320
116.30	187.4523
117.00	201.5669
117.00	201.5669
117.66	201.7827
121.11	194.9048
121.62	192.0615
121.78	200.1139
122.06	200.2024
122.32	199.2834
122.32	199.2834
122.32	199.2834
122.32	199.2834
123.07	191.4974
127.23	188.7001
129.76	218.8059
131.20	207.0983
133.02	190.3556
133.54	201.7101
135.34	205.3102
136.00	199.3739
136.25	191.2649
136.48	195.4212
140.51	231.5529
140.51	0.0000
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142.65	204.3869
143.76	202.6394
144.24	210.0190
144.24	210.0190
144.24	210.0190
144.24	210.0190
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145.44	245.6069
147.16	208.7984
152.43	206.1221
152.70	210.3851
153.22	221.0065
154.21	173.0533
154.21	173.0533
154.21	173.0533
154.21	173.0533
155.03	173.2446
156.02	229.1945
158.56	187.7688
159.00	0.0000
159.00	180.4890
160.31	179.7413
161.27	194.7869
162.32	183.3901
162.64	180.2843
163.35	166.6512
163.89	182.6992
165.85	193.8064
167.43	185.6591
171.28	192.9895
171.86	209.2227
172.10	209.2842
176.55	186.6898
176.60	186.7022
181.06	188.7938
184.41	222.2264
185.71	205.1106
186.00	205.1794
190.27	162.8766
192.34	186.9025
193.63	206.9962
197.04	203.3744
198.01	189.2126
198.60	158.3337
200.40	174.1846
201.83	183.3507
202.84	194.6800
205.31	174.0131
208.36	179.0674
208.81	179.1536

209.75	179.3359
209.75	179.3359
210.97	179.5703
215.65	147.5292
216.55	155.7975
218.09	176.4045
222.10	157.8356
223.80	164.9363
226.40	160.8138
227.00	162.0525
227.08	149.5112
227.20	149.5298
228.16	149.6751
228.18	149.6777
228.18	149.6777
231.56	0.0000
235.69	141.5956
236.00	162.3657
236.00	162.3657
238.60	148.9279
238.63	148.9319
238.63	148.9319
238.63	148.9319
239.00	148.9857
240.98	149.2730
241.98	149.4187
241.98	149.4187
241.98	149.4187
244.69	109.7444
245.39	83.6704
247.94	122.3174
248.90	139.9182
249.79	120.7816
252.40	125.4654
252.85	146.5850
252.85	146.5850
254.15	0.0000
256.20	122.3891
256.20	122.3891
260.50	126.4124
260.90	126.4582
262.80	135.5372
264.65	113.5801
268.24	132.4660
268.79	138.2321
269.46	139.7409
269.46	139.7409
269.46	139.7409
269.46	139.7409
271.23	131.2135
273.65	150.2813
276.40	129.1245
277.35	124.7449
277.60	119.3867
277.60	119.3867
278.00	121.2231
278.60	110.5059
279.20	117.7553
279.53	124.9825
280.46	152.9808
281.68	147.7366
283.67	103.7730
284.30	112.8597
285.00	112.9265
285.90	111.2060
286.10	96.7565
286.10	96.7565
287.40	95.9590
288.45	0.0000
290.67	124.9121
290.80	124.9247
291.72	132.2899
293.26	0.0000
293.70	101.9324
295.21	115.1826
295.21	115.1826
295.21	115.1826
295.96	116.7148

296.50	116.7656
297.23	116.8379
298.57	116.9668
299.80	98.0595
299.80	98.0595
300.09	98.0840
300.09	98.0840
300.09	98.0840
300.10	98.0840
300.12	98.0856
301.29	92.3190
302.84	104.1738
303.76	96.9117
303.91	85.1748
304.40	94.0234
304.40	94.0234
304.84	85.2399
306.84	92.9229
308.46	116.9967
311.98	97.9274
316.51	100.1376
318.01	98.3997
319.02	102.1935
319.41	114.3065
320.08	114.3666
323.87	91.0190
323.87	91.0190
323.87	91.0190
323.87	91.0190
325.23	100.0780
328.77	120.7603
333.44	116.4960
334.20	131.6046
334.20	131.6046
334.30	131.6132
338.28	123.5241
338.28	123.5241
338.28	123.5241
338.28	123.5241
338.32	123.5281
338.32	123.5281
338.32	123.5281
340.50	107.2974
340.57	107.3026
344.27	107.5990
345.85	107.7255
350.59	0.0000
351.07	88.5314
351.92	88.5867
351.92	88.5867
351.92	88.5867
355.39	0.0000
356.01	64.2018
364.48	88.4329
366.43	88.5551
367.43	88.6182
367.94	0.0000
369.80	86.8373
374.96	90.0569
383.85	85.7415
387.95	90.8671
388.63	86.9983
391.69	76.4040
391.69	76.4040
392.90	85.2888
398.62	95.4577
400.65	90.6594
401.10	84.7717
401.81	90.7296
402.60	83.8690
404.84	117.5909
410.95	99.2111
411.60	103.2240
413.65	104.3543
414.70	93.4865
415.30	87.5529
415.76	91.5592
417.63	0.0000

418.52	76.7674
423.70	83.0241
427.08	74.1795
427.89	76.2238
432.53	79.4641
433.93	71.4789
439.47	91.9289
439.56	91.9345
439.89	80.8386
443.98	62.8070
444.90	79.0605
445.03	79.0664
445.03	79.0664
445.03	79.0664
445.03	79.0664
453.90	74.3979
463.38	98.3936
468.07	72.8260
473.00	70.0918
475.06	74.3038
475.35	70.1873
476.78	66.1133
477.59	63.0440
477.96	69.2604
482.03	55.9528
484.57	56.0344
487.03	72.7397
490.36	0.0000
492.35	52.1141
497.08	65.8387
507.63	0.0000
510.53	0.0000
510.84	76.8747
511.00	76.8819
511.85	76.9176
511.85	76.9176
513.99	75.9529
513.99	75.9529
520.41	74.1016
520.65	73.0535
527.90	59.5205
528.96	0.0000
529.64	63.8324
529.87	0.0000
531.02	76.6538
537.32	55.5468
543.00	53.5706
546.56	0.0000
549.76	60.2109
552.65	49.5334
555.20	52.8326
563.23	56.2990
563.90	54.1519
568.70	64.0541
569.32	62.9897
569.50	61.9089
569.67	67.3452
573.80	66.3967
574.00	60.9612
574.64	70.7803
578.91	48.8879
579.30	0.0000
583.14	61.2380
585.48	43.7927
591.81	49.4206
592.07	54.9179
593.00	68.1304
595.88	63.8234
600.56	73.8947
602.52	0.0000
602.71	70.6602
602.71	70.6602
603.60	65.3895
604.41	70.7188
604.70	74.2649
609.31	56.4863
609.31	56.4863
609.31	56.4863

609.31	56.4863
610.33	51.4169
612.46	55.0189
614.37	39.0812
618.01	54.4969
621.84	55.7083
621.84	55.7083
631.29	54.8364
633.02	39.2009
633.10	39.2020
634.78	45.9586
635.90	57.1976
636.97	51.6152
645.85	40.5593
646.12	37.8605
656.30	46.7901
657.75	25.6757
657.90	0.0000
661.65	68.0841
661.65	68.0841
664.57	0.0000
666.33	40.9362
666.33	40.9362
675.00	47.4868
677.61	61.2553
685.20	67.8791
692.80	62.5813
695.00	53.4291
696.49	57.1510
696.49	57.1510
697.00	63.6178
697.49	71.0088
698.33	70.1107
698.50	70.1163
699.00	60.9034
702.63	60.0742
706.10	65.7166
706.58	0.0000
706.67	60.1774
709.31	57.4650
711.68	53.8114
713.82	45.5021
717.42	46.5015
720.50	41.2400
721.93	0.0000
722.20	41.9348
722.78	48.1600
722.78	48.1600
722.89	48.1613
722.95	48.1625
723.30	54.3856
724.18	45.0789
727.18	43.8904
733.00	35.8832
735.90	46.8604
739.58	41.2994
742.81	53.5725
744.21	63.9476
747.13	43.3103
751.79	66.0317
752.31	59.4409
753.82	39.6508
755.35	43.4541
756.15	41.5787
756.87	41.5905
763.93	77.7298
765.79	65.4557
766.41	58.8289
766.84	64.5336
768.36	60.7734
768.36	60.7734
768.36	60.7734
768.36	60.7734
776.49	53.3490
778.00	47.6611
778.57	44.8118
778.89	46.7247
783.80	47.7698

785.46	53.5363
792.07	44.7287
795.84	41.5951
796.30	41.6025
801.93	28.8640
805.60	49.1379
810.29	37.6432
810.76	38.6152
815.85	38.6904
817.79	41.6227
818.51	48.4119
819.60	41.6510
826.30	48.5535
828.27	0.0000
831.60	42.8119
831.96	42.8173
834.83	52.6052
836.80	0.0000
846.75	45.9879
848.13	46.9910
856.28	0.0000
856.80	65.7994
860.37	42.2840
867.32	41.4053
867.82	47.3285
871.10	43.4360
873.19	34.5770
874.81	36.5736
875.33	0.0000
876.40	36.5944
879.36	46.5341
880.27	40.6066
880.51	40.6106
881.50	38.6429
883.24	40.6497
884.67	38.6867
889.25	46.6982
896.60	43.8303
898.02	46.8428
899.00	44.8649
903.28	34.9470
911.07	41.0490
911.07	41.0490
911.07	41.0490
919.63	35.1453
920.93	41.1882
925.00	49.2943
925.24	39.2371
926.50	40.2607
934.06	30.2732
934.06	30.2732
934.06	30.2732
934.06	30.2732
935.52	45.4329
937.48	61.6270
944.10	45.5647
946.00	44.5801
949.00	36.5115
962.29	32.2589
964.01	44.1691
966.15	39.7798
968.20	39.8074
969.11	39.8188
969.11	39.8188
969.11	39.8188
977.42	32.7609
980.50	35.8690
983.50	40.0074
989.30	44.1936
996.32	35.0227
1001.03	28.8859
1001.68	27.8602
1004.76	39.2497
1021.30	0.0000
1024.50	0.0000
1034.80	38.5808
1037.82	33.3984
1038.57	35.4941

1038.76	0.0000
1045.16	26.1523
1046.59	30.3495
1048.07	29.3166
1050.47	26.1951
1050.47	26.1951
1063.62	37.8738
1076.63	34.8546
1077.35	32.7498
1085.78	32.8331
1099.22	34.0281
1112.02	48.0322
1112.84	37.3687
1115.52	44.5211
1120.29	44.9388
1120.29	44.9388
1120.29	44.9388
1120.29	44.9388
1120.51	44.9429
1121.28	46.3802
1124.00	0.0000
1129.67	46.1347
1131.51	0.0000
1147.95	0.0000
1167.94	35.7957
1173.22	51.0574
1175.09	43.4766
1177.93	44.5995
1189.05	50.1935
1204.90	46.0298
1205.75	0.0000
1213.00	39.5420
1221.42	35.7802
1230.97	40.9986
1235.34	42.6244
1236.41	0.0000
1238.11	34.7571
1238.11	34.7571
1238.11	34.7571
1238.11	34.7571
1238.25	34.7586
1246.25	36.0214
1260.41	0.0000
1271.85	28.8266
1274.45	32.5690
1274.54	31.6384
1291.56	30.8448
1298.22	0.0000
1312.09	38.5259
1325.50	30.1719
1325.50	30.1719
1332.49	17.9466
1333.61	20.7861
1360.21	21.8760
1362.66	0.0000
1365.15	9.5231
1368.21	26.6852
1368.53	0.0000
1376.25	14.3237
1377.67	20.0609
1377.67	20.0609
1377.67	20.0609
1377.67	20.0609
1384.27	17.2229
1394.10	26.8550
1395.20	31.6599
1407.95	14.4354
1434.06	28.0831
1436.60	14.5343
1457.56	0.0000
1460.81	13.6434
1489.15	15.6953
1509.49	9.8551
1596.49	19.0912
1620.62	13.1307
1678.03	0.0000
1691.02	7.1760
1691.02	7.1760

1706.46	0.0000
1750.46	0.0000
1764.49	7.1353
1764.49	7.1353
1764.49	7.1353
1764.49	7.1353
1770.23	22.9185
1771.40	7.2939
1791.20	0.0000
1808.65	7.3475
1836.01	10.5526

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433002

Total Uranium Activity	1.5441E+00	ug/g
Total Uranium Counting Unc.	4.7261E+00	ug/g
Total Uranium Tpu	2.4113E-06	ug/g
Total Uranium Mda	4.2398E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G232433002       *
*   ANALYST       : MXR1                      DETECTOR   : GAM04            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:04:36.58    SAMPLE ALQT:  121.040 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 7.604E+00
GROSS GAMMA ERROR (pCi/GRAM) : 1.172E+00
GROSS GAMMA MDA (pCi/GRAM) : 2.329E+00
GROSS GAMMA DLC (pCi/GRAM) : 1.115E+00

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:07:01.08

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433003.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:05:07.
Sample ID         : G232433003           Sample quantity  : 1.03260E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.66  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.45*	321	432	1.30	94.07	90	10	4.45E-02	14.6	
2	0	63.10*	195	592	1.19	127.36	123	10	2.70E-02	25.1	
3	1	73.05*	126	355	1.35	147.25	144	17	1.75E-02	25.7	4.15E+00
4	1	74.83*	613	403	1.20	150.81	144	17	8.52E-02	7.1	
5	1	77.05*	943	380	1.16	155.25	144	17	1.31E-01	5.0	
6	0	87.39	214	445	1.19	175.93	172	7	2.97E-02	17.7	
7	5	89.83	105	239	0.94	180.81	179	14	1.46E-02	22.4	2.09E+00
8	5	92.83*	447	523	1.76	186.80	179	14	6.21E-02	11.6	
9	0	129.01	135	279	1.06	259.13	255	9	1.87E-02	24.0	
10	0	186.02*	168	333	1.41	373.09	368	11	2.33E-02	23.1	
11	0	209.48	102	260	1.41	419.99	414	11	1.41E-02	32.4	
12	3	238.63*	1069	140	1.34	478.27	471	19	1.49E-01	3.7	1.26E+00
13	3	241.56	257	197	1.95	484.12	471	19	3.56E-02	17.0	
14	0	269.97	82	213	1.28	540.90	536	11	1.14E-02	36.1	
15	0	295.34	267	161	1.27	591.61	585	11	3.70E-02	11.0	
16	0	327.99	52	142	0.89	656.89	654	9	7.20E-03	43.7	
17	0	338.44*	213	153	1.46	677.77	672	14	2.95E-02	14.3	
18	0	351.84*	481	176	1.32	704.54	698	13	6.69E-02	7.4	
19	0	409.27	50	130	1.00	819.34	815	11	7.00E-03	45.9	
20	0	462.82	85	85	1.26	926.35	920	12	1.18E-02	24.5	
21	0	511.03*	60	181	1.71	1022.72	1014	19	8.37E-03	60.7	
22	0	583.14*	312	110	1.74	1166.82	1159	18	4.33E-02	9.8	
23	0	609.39*	301	105	1.43	1219.28	1212	14	4.17E-02	9.5	
24	0	661.54	115	101	1.86	1323.48	1316	13	1.60E-02	20.2	
25	0	727.11	106	62	1.82	1454.52	1449	14	1.48E-02	18.6	
26	0	860.78	48	29	1.72	1721.59	1717	10	6.64E-03	25.8	
27	0	911.05*	245	40	1.93	1822.03	1813	18	3.40E-02	8.9	
28	1	964.39	63	50	2.17	1928.60	1920	42	8.74E-03	25.1	1.42E+00
29	1	968.80	129	42	2.08	1937.40	1920	42	1.79E-02	13.3	
30	0	1124.64	213	48	4.66	2248.73	2233	40	2.96E-02	13.0	
31	0	1460.45*	870	7	2.01	2919.43	2912	16	1.21E-01	3.5	
32	0	1729.72	14	7	1.52	3457.11	3452	9	1.98E-03	42.1	
33	0	1764.16*	51	0	1.90	3525.88	3518	14	7.06E-03	15.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:07:03

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:05:07
Sample ID : G232433003 Sample quantity : 103.26 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.66 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.955E+01	2.763E+00	7.854E-01	4.884E-02	37.620
CD-109	+	88.03	*	2.711E+00	9.842E-01	1.295E+00	9.862E-02	2.093
SN-126	+	64.28		9.141E-01	4.790E-01	4.905E-01	7.309E-02	1.864
	+	86.94		1.110E+00	6.033E-01	5.999E-01	2.469E-01	1.850
	+	87.57	*	2.670E-01	9.694E-02	1.274E-01	9.700E-03	2.096
BA-137M	+	661.65	*	2.315E-01	9.476E-02	9.035E-02	5.941E-03	2.562
CS-137	+	661.65	*	2.447E-01	1.002E-01	9.551E-02	6.301E-03	2.562
TL-208		277.35		4.810E-01	4.844E-01	8.301E-01	1.065E-01	0.579
	+	510.84		3.990E-01	4.861E-01	2.914E-01	3.062E-02	1.369
	+	583.14	*	5.957E-01	1.250E-01	8.147E-02	5.995E-03	7.311
	+	860.37		8.782E-01	4.614E-01	6.483E-01	6.579E-02	1.355
BI-210	+	46.50	*	3.777E+00	1.143E+00	1.036E+00	8.085E-02	3.644
PB-210	+	46.50	*	3.777E+00	1.143E+00	1.036E+00	8.085E-02	3.644
PO-210	+	46.50	*	3.777E+00	1.133E+00	1.036E+00	6.971E-02	3.644
BI-211	+	72.87		4.481E+00	2.331E+00	3.638E+00	2.864E-01	1.232
	+	351.07	*	3.846E+00	6.444E-01	4.167E-01	3.302E-02	9.229
PB-212	+	74.81		2.592E+00	4.840E-01	4.174E-01	5.090E-02	6.210
	+	77.11		2.377E+00	3.014E-01	2.493E-01	1.941E-02	9.533
	+	87.30		1.235E+00	4.650E-01	6.826E-01	8.582E-02	1.809
	+	238.63	*	1.826E+00	2.388E-01	1.093E-01	1.179E-02	16.704
		300.09		2.342E+00	1.146E+00	1.870E+00	1.987E-01	1.253
PO-212	+	74.81		2.592E+00	4.840E-01	4.174E-01	5.090E-02	6.210
	+	77.11		2.377E+00	3.014E-01	2.493E-01	1.941E-02	9.533
	+	87.30		1.235E+00	4.650E-01	6.826E-01	8.582E-02	1.809
		115.19		3.410E+00	4.069E+00	6.912E+00	8.795E-01	0.493
	+	238.63	*	1.826E+00	2.388E-01	1.093E-01	1.179E-02	16.704
		300.09		2.342E+00	1.146E+00	1.870E+00	1.987E-01	1.253
PB-214	+	74.81		4.467E+00	7.942E-01	7.193E-01	7.753E-02	6.210
	+	77.11		4.075E+00	6.027E-01	4.274E-01	4.656E-02	9.533
	+	87.30		2.116E+00	7.852E-01	1.169E+00	1.267E-01	1.809
	+	241.98		2.634E+00	9.456E-01	6.586E-01	7.422E-02	3.999
	+	295.21		1.244E+00	3.066E-01	3.175E-01	3.472E-02	3.919
	+	351.92	*	1.338E+00	2.348E-01	1.453E-01	1.375E-02	9.208
PO-214	+	74.81		4.467E+00	7.942E-01	7.193E-01	7.753E-02	6.210

Sample ID : G232433003 Acquisition date : 7-JUL-2009 06:05:07

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		4.075E+00	6.027E-01	4.274E-01	4.656E-02	9.533
	+	87.30		2.116E+00	7.852E-01	1.169E+00	1.267E-01	1.809
	+	241.98		2.634E+00	9.456E-01	6.586E-01	7.422E-02	3.999
	+	295.21		1.244E+00	3.066E-01	3.175E-01	3.472E-02	3.919
	+	351.92	*	1.338E+00	2.348E-01	1.453E-01	1.375E-02	9.208
PO-216	+	74.81		2.592E+00	4.840E-01	4.174E-01	5.090E-02	6.210
	+	77.11		2.377E+00	3.014E-01	2.493E-01	1.941E-02	9.533
	+	87.30		1.235E+00	4.650E-01	6.826E-01	8.582E-02	1.809
	+	238.63	*	1.826E+00	2.388E-01	1.093E-01	1.179E-02	16.704
		300.09		2.342E+00	1.146E+00	1.870E+00	1.987E-01	1.253
PO-218	+	74.81		4.467E+00	7.942E-01	7.193E-01	7.753E-02	6.210
	+	77.11		4.075E+00	6.027E-01	4.274E-01	4.656E-02	9.533
	+	87.30		2.116E+00	7.852E-01	1.169E+00	1.267E-01	1.809
	+	241.98		2.634E+00	9.456E-01	6.586E-01	7.422E-02	3.999
	+	295.21		1.244E+00	3.066E-01	3.175E-01	3.472E-02	3.919
	+	351.92	*	1.338E+00	2.348E-01	1.453E-01	1.375E-02	9.208
RA-224	+	240.98	*	4.994E+00	1.771E+00	1.245E+00	1.218E-01	4.013
AC-228	+	338.32		1.868E+00	9.355E-01	4.915E-01	2.020E-01	3.800
	+	911.07	*	2.127E+00	4.621E-01	2.851E-01	3.529E-02	7.460
	+	969.11		1.973E+00	7.029E-01	5.404E-01	1.276E-01	3.651
RA-228	+	338.32		1.868E+00	9.355E-01	4.915E-01	2.020E-01	3.800
	+	911.07	*	2.127E+00	4.621E-01	2.851E-01	3.529E-02	7.460
	+	969.11		1.973E+00	7.029E-01	5.404E-01	1.276E-01	3.651
TH-228		84.40		2.724E+00	2.686E+00	4.055E+00	5.081E-01	0.672
	+	238.60	*	1.826E+00	2.388E-01	1.093E-01	1.179E-02	16.706
		300.10		2.339E+00	1.782E+00	1.869E+00	1.109E+00	1.251
TH-232	+	338.32		1.868E+00	5.541E-01	4.915E-01	3.854E-02	3.800
	+	911.07	*	2.127E+00	4.621E-01	2.851E-01	3.529E-02	7.460
	+	969.11		1.973E+00	7.029E-01	5.404E-01	1.276E-01	3.651
TH-234	+	63.29	*	2.309E+00	1.230E+00	1.167E+00	2.074E-01	1.978
	+	92.38		3.876E+00	1.136E+00	7.479E-01	1.343E-01	5.183
NP-237	+	86.50	*	7.841E-01	3.274E-01	3.942E-01	8.673E-02	1.989
		95.87		-3.318E-01	1.120E+00	1.609E+00	3.985E-01	-0.206
U-238	+	63.29	*	2.309E+00	1.230E+00	1.167E+00	2.074E-01	1.978
	+	92.38		3.876E+00	9.542E-01	7.479E-01	6.257E-02	5.183
AM-243	+	74.67	*	4.203E-01	6.794E-02	6.766E-02	5.299E-03	6.211
	+	86.72		2.940E+01	1.067E+01	1.533E+01	1.169E+00	1.919
		117.66		-1.858E+00	4.408E+00	7.145E+00	9.460E-01	-0.260
		142.18		-1.280E+01	2.149E+01	3.428E+01	4.260E+00	-0.374
ANH-511	+	511.00	*	8.619E-02	1.048E-01	6.296E-02	4.030E-03	1.369

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.598E-02	4.286E-01	7.056E-01	5.055E-02	0.023
NA-22		1274.54	*	-2.050E-02	6.228E-02	9.688E-02	5.643E-03	-0.212
NA-24		1368.53	*	1.271E-02	6.228E-02	Half-Life too short		
AL-26		1129.67		2.113E+00	2.453E+00	4.319E+00	2.893E-01	0.489

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1808.65	*	-5.330E-03	3.777E-02	5.983E-02	3.433E-03	-0.089
TI-44		67.85		8.152E-04	3.979E-02	4.993E-02	3.996E-03	0.016
	+	78.38	*	4.386E-01	5.561E-02	7.642E-02	5.929E-03	5.740
SC-46		889.25	*	1.809E-03	5.461E-02	9.090E-02	9.130E-03	0.020
		1120.51		2.840E-01	8.906E-02	1.738E-01	1.195E-02	1.634
V-48		944.10		-2.059E-01	1.108E+00	1.793E+00	1.734E-01	-0.115
		983.50	*	-2.521E-02	1.120E-01	1.530E-01	1.402E-02	-0.165
		1312.09		-5.113E-02	1.035E-01	1.559E-01	9.037E-03	-0.328
CR-51		320.08	*	-2.760E-01	4.598E-01	7.433E-01	6.573E-02	-0.371
MN-52		744.21		1.850E-01	2.809E-01	4.944E-01	3.839E-02	0.374
		848.13		2.473E+00	7.885E+00	1.346E+01	1.262E+00	0.184
		935.52		4.951E-01	3.273E-01	6.019E-01	5.884E-02	0.823
		1246.25		-1.590E+00	9.155E+00	1.457E+01	8.475E-01	-0.109
		1333.61		-1.497E+00	6.236E+00	9.737E+00	5.635E-01	-0.154
		1434.06	*	6.366E-02	2.441E-01	4.226E-01	2.475E-02	0.151
MN-54		834.83	*	-4.268E-02	5.300E-02	8.180E-02	7.494E-03	-0.522
CO-56		846.75	*	2.208E-02	5.252E-02	9.055E-02	8.468E-03	0.244
		977.42		3.035E-03	4.371E+00	7.196E+00	6.652E-01	0.000
		1037.82		-1.303E-01	3.973E-01	6.271E-01	5.532E-02	-0.208
		1175.09		-1.194E+00	3.092E+00	4.826E+00	2.800E-01	-0.247
		1238.25		1.536E-01	1.426E-01	2.495E-01	1.542E-02	0.616
		1360.21		3.244E-02	1.258E+00	2.111E+00	1.227E-01	0.015
		1771.40		-9.604E-01	4.108E-01	3.539E-01	2.043E-02	-2.714
CO-57		122.06	*	1.029E-02	2.942E-02	4.918E-02	6.977E-03	0.209
		136.48		9.136E-03	2.542E-01	4.183E-01	5.603E-02	0.022
CO-58		810.76	*	-2.131E-02	5.487E-02	8.824E-02	7.767E-03	-0.241
FE-59		142.65		7.979E-01	3.369E+00	5.447E+00	6.745E-01	0.146
		192.34		8.663E-01	1.245E+00	2.006E+00	2.877E-01	0.432
		1099.22	*	-6.004E-02	1.143E-01	1.752E-01	1.419E-02	-0.343
		1291.56		-7.302E-02	1.568E-01	2.376E-01	1.764E-02	-0.307
CO-60		1173.22		-2.984E-02	6.333E-02	9.800E-02	5.684E-03	-0.305
		1332.49	*	-1.086E-03	5.710E-02	9.180E-02	5.312E-03	-0.012
ZN-65		1115.52	*	-1.340E-01	1.558E-01	1.899E-01	1.327E-02	-0.706
GE-68		1077.35	*	-1.967E-01	1.934E+00	3.134E+00	2.407E-01	-0.063
AS-73		53.44	*	2.104E-02	2.757E-01	4.615E-01	3.474E-02	0.046
AS-74		595.88	*	7.911E-02	1.212E-01	2.066E-01	1.359E-02	0.383
		634.78		4.879E-03	4.313E-01	6.975E-01	4.597E-02	0.007
SE-75		66.05		1.068E+00	3.235E+00	4.860E+00	4.848E-01	0.220
		96.73		-8.359E-01	9.202E-01	1.271E+00	1.776E-01	-0.658
		121.11		2.227E-02	1.572E-01	2.609E-01	4.101E-02	0.085
		136.00		2.728E-03	4.786E-02	7.884E-02	1.028E-02	0.035
		198.60		2.592E+00	2.429E+00	3.977E+00	4.299E-01	0.652
		264.65	*	-4.108E-03	6.496E-02	9.001E-02	8.593E-03	-0.046
		279.53		6.696E-02	1.343E-01	2.316E-01	2.218E-02	0.289
		303.91		-3.887E+00	2.860E+00	4.413E+00	5.117E-01	-0.881
		400.65		3.248E-01	3.702E-01	6.418E-01	5.873E-02	0.506
BR-77	+	87.88		3.944E+02	1.432E+02	2.365E+02	1.800E+01	1.668
		200.40		1.665E+01	1.431E+02	2.329E+02	2.325E+01	0.071
	+	239.00		1.971E+02	2.420E+01	3.137E+01	3.075E+00	6.283

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		249.79		6.059E+00	5.532E+01	8.923E+01	8.652E+00	0.068
		281.68		-1.105E+02	7.615E+01	1.174E+02	1.084E+01	-0.941
		297.23		1.497E+02	6.432E+01	1.042E+02	9.299E+00	1.437
		303.76		-2.255E+02	1.641E+02	2.544E+02	2.234E+01	-0.887
		439.47		6.790E+01	1.273E+02	2.175E+02	1.326E+01	0.312
		484.57		2.592E+01	2.218E+02	3.669E+02	2.313E+01	0.071
		520.65	*	6.713E-02	9.333E+00	1.485E+01	9.549E-01	0.005
		574.64		-1.711E+02	2.255E+02	3.210E+02	2.104E+01	-0.533
		578.91		5.068E+01	8.931E+01	1.333E+02	8.743E+00	0.380
		585.48		1.099E+03	2.448E+02	4.411E+02	2.897E+01	2.490
		755.35		7.299E+01	1.517E+02	2.636E+02	2.090E+01	0.277
		817.79		1.021E+02	1.295E+02	2.293E+02	2.039E+01	0.445
SR-82		698.33		1.046E+01	4.576E+01	7.494E+01	5.316E+00	0.140
		776.49	*	2.430E-02	4.711E-01	7.905E-01	6.522E-02	0.031
		1395.20		-5.185E+00	1.410E+01	2.235E+01	1.304E+00	-0.232
RB-83		520.41	*	-7.158E-04	9.255E-02	1.424E-01	9.156E-03	-0.005
		529.64		8.495E-02	1.428E-01	2.437E-01	1.573E-02	0.349
		552.65		3.529E-02	2.571E-01	4.235E-01	2.758E-02	0.083
RB-84		881.50	*	7.384E-02	9.513E-02	1.683E-01	1.669E-02	0.439
KR-85		513.99	*	2.548E+01	1.156E+01	1.943E+01	1.245E+00	1.312
SR-85		513.99	*	1.288E-01	5.845E-02	9.819E-02	6.294E-03	1.312
RB-86		1076.63	*	4.235E-01	1.129E+00	1.911E+00	1.471E-01	0.222
Y-88		898.02		1.256E+02	5.789E-02	9.773E-02	9.992E-03	0.129
		1836.01	*	3.039E-02	5.338E-02	9.600E-02	5.492E-03	0.317
ZR-88		392.90	*	1.672E-02	4.273E-02	7.248E-02	4.221E-03	0.231
Y-91		1204.90	*	2.130E+01	2.591E+01	4.528E+01	2.631E+00	0.470
NB-94		702.63	*	-5.044E-03	4.934E-02	7.851E-02	5.618E-03	-0.064
		871.10		8.104E-03	5.009E-02	8.426E-02	8.212E-03	0.096
NB-95		765.79	*	1.505E-02	5.920E-02	1.008E-01	8.155E-03	0.149
NB-95M		235.69	*	4.232E-01	1.840E-01	2.877E-01	3.147E-02	1.471
ZR-95		724.18		2.959E-01	1.590E-01	2.685E-01	2.233E-02	1.102
		756.15	*	-3.540E-02	9.759E-02	1.583E-01	1.406E-02	-0.224
NB-97		657.90	*	2.254E-02	9.759E-02	Half-Life too short		
		1024.50		9.571E-02	9.759E-02	Half-Life too short		
ZR-97		254.15		6.416E-01	9.759E-02	Half-Life too short		
		355.39		1.451E-01	9.759E-02	Half-Life too short		
		507.63	*	1.064E+00	9.759E-02	Half-Life too short		
		602.52		-3.320E+00	9.759E-02	Half-Life too short		
		1021.30		1.104E+00	9.759E-02	Half-Life too short		
		1147.95		-1.963E-02	9.759E-02	Half-Life too short		
		1362.66		-5.863E-01	9.759E-02	Half-Life too short		
		1750.46		-4.569E-03	9.759E-02	Half-Life too short		
MO-99		140.51		-1.412E+01	2.328E+01	3.665E+01	1.069E+01	-0.385
		181.06		5.560E+00	1.579E+01	2.295E+01	4.352E+00	0.242
		366.43		6.405E+01	7.812E+01	1.362E+02	9.349E+00	0.470
		739.58	*	-1.032E+00	1.180E+01	1.963E+01	2.882E+00	-0.053
		778.00		7.912E-01	3.063E+01	5.127E+01	4.242E+00	0.015
TC-99M		140.51	*	-6.685E+08	3.063E+01	Half-Life too short		
RH-101		127.23		5.829E-02	4.385E-02	6.696E-02	9.218E-03	0.870

Sample ID : G232433003 Acquisition date : 7-JUL-2009 06:05:07

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		198.01	*	1.920E-02	4.477E-02	7.172E-02	7.162E-03	0.268
		325.23		3.309E-01	3.216E-01	5.039E-01	4.147E-02	0.657
RH-102		418.52		1.192E-01	3.748E-01	6.328E-01	3.784E-02	0.188
		475.06	*	-2.512E-02	4.083E-02	6.407E-02	4.013E-03	-0.392
		631.29		-3.162E-02	7.329E-02	1.136E-01	7.491E-03	-0.278
		697.49		2.547E-02	1.081E-01	1.772E-01	1.255E-02	0.144
		766.84		1.380E-01	1.507E-01	2.683E-01	2.174E-02	0.514
		1046.59		1.019E-01	1.716E-01	2.964E-01	2.432E-02	0.344
		1112.84		1.517E-01	3.506E-01	5.217E-01	3.666E-02	0.291
RU-103		497.08	*	4.992E-02	5.248E-02	9.148E-02	1.181E-02	0.546
	+	610.33		1.146E+01	2.832E+00	3.504E+00	5.513E-01	3.270
RH-106	+	511.85		4.294E-01	5.219E-01	5.940E-01	3.804E-02	0.723
		621.84	*	2.038E-01	4.573E-01	7.656E-01	9.301E-02	0.266
		1050.47		-1.147E+00	3.662E+00	5.827E+00	4.744E-01	-0.197
RU-106	+	511.85		4.294E-01	5.219E-01	5.940E-01	3.804E-02	0.723
		621.84	*	2.038E-01	4.569E-01	7.656E-01	5.047E-02	0.266
		1050.47		-1.147E+00	3.662E+00	5.827E+00	4.744E-01	-0.197
AG-108M		433.93	*	-6.305E-03	4.385E-02	7.166E-02	4.689E-03	-0.088
		614.37		1.574E-03	5.993E-02	8.395E-02	5.899E-03	0.019
		722.95		9.231E-02	6.383E-02	1.065E-01	8.347E-03	0.867
AG-110M		657.75	*	2.083E-02	6.024E-02	8.701E-02	6.014E-03	0.239
		677.61		8.227E-02	4.292E-01	7.024E-01	4.990E-02	0.117
		706.67		2.652E-01	3.178E-01	5.431E-01	4.071E-02	0.488
		763.93		-1.218E-01	2.333E-01	3.737E-01	3.110E-02	-0.326
		884.67		4.041E-03	6.913E-02	1.152E-01	1.176E-02	0.035
		937.48		-5.934E-02	1.650E-01	2.634E-01	2.641E-02	-0.225
		1384.27		-1.738E-01	2.352E-01	3.565E-01	2.204E-02	-0.487
IN-111		171.28		-5.400E-02	8.959E-01	1.455E+00	1.447E-01	-0.037
		245.39	*	1.818E-01	1.079E+00	1.529E+00	1.490E-01	0.119
IN-113M		391.69	*	1.170E-03	6.287E-02	1.044E-01	6.478E-03	0.011
SN-113		391.69	*	1.170E-03	6.287E-02	1.044E-01	6.478E-03	0.011
IN-114M		190.27	*	-8.323E-03	2.668E-01	3.776E-01	3.771E-02	-0.022
CD-115		260.90		3.668E+00	1.110E+02	1.778E+02	1.700E+01	0.021
		492.35		-2.028E+01	3.052E+01	4.728E+01	2.995E+00	-0.429
		527.90	*	6.553E-02	9.675E+00	1.581E+01	1.020E+00	0.004
SN-117M		156.02		6.862E-01	2.556E+00	4.227E+00	4.661E-01	0.162
		158.56	*	-8.508E-02	6.250E-02	9.453E-02	1.016E-02	-0.900
SB-122		563.90	*	1.721E+00	2.100E+00	3.618E+00	2.364E-01	0.476
		692.80		-3.833E+01	4.435E+01	6.556E+01	4.599E+00	-0.585
I-123		159.00	*	-1.582E+00	4.435E+01	Half-Life too short		
		528.96		2.590E+01	4.435E+01	Half-Life too short		
TE-123M		159.00	*	-4.362E-02	3.438E-02	5.232E-02	5.622E-03	-0.834
I-124		602.71	*	-8.358E-01	9.232E-01	1.158E+00	7.625E-02	-0.722
		722.78		7.074E+00	5.384E+00	8.875E+00	6.609E-01	0.797
		1325.50		-1.671E+01	4.391E+01	6.758E+01	3.913E+00	-0.247
		1376.25		2.726E+01	3.103E+01	5.727E+01	3.335E+00	0.476
		1509.49		1.594E+01	1.499E+01	2.881E+01	1.694E+00	0.553
		1691.02		2.897E+00	4.438E+00	8.109E+00	4.733E-01	0.357
SB-124		602.71		-5.995E-02	6.622E-02	8.308E-02	5.471E-03	-0.722

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		645.85		-6.866E-01	7.304E-01	1.079E+00	7.821E-02	-0.637
		709.31		3.164E+00	4.047E+00	7.158E+00	5.190E-01	0.442
		713.82		-2.174E-01	2.227E+00	3.709E+00	4.133E-01	-0.059
		722.78		7.356E-01	5.600E-01	9.228E-01	7.071E-02	0.797
	+	968.20		2.000E+01	5.651E+00	9.382E+00	8.789E-01	2.131
		1045.16		1.910E+00	3.443E+00	5.946E+00	4.893E-01	0.321
		1325.50		-1.856E+00	4.876E+00	7.505E+00	4.346E-01	-0.247
		1368.21		2.371E-01	2.145E+00	3.641E+00	4.326E-01	0.065
		1436.60		2.224E+00	4.268E+00	7.690E+00	4.504E-01	0.289
		1691.02	*	7.105E-02	1.089E-01	1.989E-01	1.259E-02	0.357
SB-125		427.89	*	2.685E-02	1.271E-01	2.127E-01	1.334E-02	0.126
	+	463.38		1.080E+00	5.357E-01	7.515E-01	5.351E-02	1.438
		600.56		6.040E-02	2.605E-01	4.185E-01	3.095E-02	0.144
		635.90		-2.693E-01	3.769E-01	5.681E-01	4.248E-02	-0.474
TE-125M		109.28	*	1.166E+00	1.045E+01	1.738E+01	2.234E+00	0.067
I-126		388.63		1.962E-01	2.661E-01	4.600E-01	2.738E-02	0.427
		666.33	*	2.939E-01	2.672E-01	4.189E-01	2.782E-02	0.702
		753.82		1.256E+00	1.851E+00	3.265E+00	2.582E-01	0.385
SB-126		223.80		2.436E+00	4.688E+00	7.743E+00	7.673E-01	0.315
		278.60		4.253E+00	2.884E+00	5.155E+00	4.789E-01	0.825
	+	296.50		1.148E+01	2.736E+00	4.014E+00	3.590E-01	2.860
		414.70		2.374E-02	1.027E-01	1.506E-01	8.972E-03	0.158
		415.30		9.476E-03	8.643E+00	1.240E+01	7.394E-01	0.001
		555.20		-6.665E-01	4.811E+00	7.741E+00	5.046E-01	-0.086
		573.80		-9.124E-01	1.436E+00	2.218E+00	1.453E-01	-0.411
		593.00		-7.532E-01	1.219E+00	1.811E+00	1.191E-01	-0.416
		656.30		3.161E+00	4.933E+00	7.393E+00	4.865E-01	0.428
		666.33		1.224E-01	1.113E-01	1.745E-01	1.159E-02	0.702
		675.00		5.176E-01	2.590E+00	4.242E+00	2.868E-01	0.122
		695.00		2.665E-02	9.910E-02	1.630E-01	1.148E-02	0.164
		697.00		1.164E-01	3.488E-01	5.763E-01	4.077E-02	0.202
		720.50	*	3.437E-02	2.121E-01	3.128E-01	2.320E-02	0.110
		856.80		3.804E-01	6.425E-01	9.918E-01	9.435E-02	0.384
		989.30		1.326E+00	1.566E+00	2.788E+00	2.532E-01	0.475
		1034.80		6.057E+00	1.129E+01	1.950E+01	1.637E+00	0.311
		1213.00		2.266E+00	6.683E+00	1.116E+01	6.487E-01	0.203
SB-127		61.10		5.152E+01	2.504E+01	3.964E+01	4.147E+00	1.300
		252.40		-3.689E+00	4.585E+00	6.555E+00	2.764E+00	-0.563
		290.80		-7.963E+00	2.316E+01	3.302E+01	3.673E+00	-0.241
		411.60		1.602E+01	1.513E+01	2.344E+01	3.313E+00	0.683
		444.90		-8.988E+00	9.594E+00	1.459E+01	1.541E+00	-0.616
		473.00		8.669E-01	1.777E+00	3.016E+00	3.327E-01	0.287
		543.00		-1.488E+00	1.842E+01	2.985E+01	3.850E+00	-0.050
		603.60		-1.033E+01	1.503E+01	1.929E+01	2.086E+00	-0.535
		685.20	*	-6.716E-01	1.492E+00	2.295E+00	2.229E-01	-0.293
		698.50		-3.557E+00	1.720E+01	2.712E+01	4.000E+00	-0.131
		722.20		2.357E+01	3.681E+01	5.697E+01	5.610E+00	0.414
		783.80		7.167E-01	3.741E+00	6.346E+00	7.540E-01	0.113
XE-127		57.60		-8.937E-01	2.619E+00	4.047E+00	3.258E-01	-0.221

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		145.22		1.966E-01	8.570E-01	1.384E+00	1.679E-01	0.142
		172.10		1.556E-02	1.460E-01	2.389E-01	2.376E-02	0.065
		202.84	*	-5.761E-02	6.325E-02	8.894E-02	8.877E-03	-0.648
		374.96		3.311E-01	2.566E-01	4.575E-01	2.986E-02	0.724
I-131		80.18		-4.915E+00	3.953E+00	5.469E+00	4.254E-01	-0.899
		284.30		4.157E-02	1.590E+00	2.683E+00	2.576E-01	0.015
		364.48	*	1.722E-01	1.381E-01	2.455E-01	1.840E-02	0.702
		636.97		-5.435E-01	1.850E+00	2.906E+00	2.092E-01	-0.187
		722.89		1.404E+01	9.570E+00	1.600E+01	1.200E+00	0.877
TE-132		49.72		-2.971E+00	4.001E+00	5.753E+00	5.344E-01	-0.516
		111.76		-2.853E+01	2.586E+01	4.046E+01	5.437E+00	-0.705
		116.30		3.401E+01	2.437E+01	4.165E+01	5.948E+00	0.817
		228.16	*	-1.927E-01	6.321E-01	9.990E-01	1.620E-01	-0.193
BA-133		53.15		-2.566E-01	1.178E+00	1.953E+00	1.463E-01	-0.131
		79.62		5.773E-01	1.248E+00	1.869E+00	2.756E-01	0.309
		81.00		-1.848E-01	1.023E-01	1.327E-01	2.044E-02	-1.393
		276.40		2.521E-01	5.169E-01	8.164E-01	1.215E-01	0.309
		302.84		-1.881E-01	1.942E-01	3.075E-01	4.123E-02	-0.612
		356.01	*	-1.106E-02	6.382E-02	9.105E-02	1.124E-02	-0.121
		383.85		-3.202E-01	3.990E-01	6.263E-01	6.931E-02	-0.511
I-133	+	510.53		2.947E-01	3.990E-01	Half-Life too short		
		529.87	*	2.100E-03	3.990E-01	Half-Life too short		
		706.58		1.811E-01	3.990E-01	Half-Life too short		
		856.28		6.526E-02	3.990E-01	Half-Life too short		
		875.33		-1.859E-02	3.990E-01	Half-Life too short		
		1236.41		3.714E-01	3.990E-01	Half-Life too short		
		1298.22		1.543E-01	3.990E-01	Half-Life too short		
CS-134		475.35		-1.749E+00	2.661E+00	4.161E+00	2.607E-01	-0.420
		563.23		1.875E-01	5.122E-01	8.562E-01	5.686E-02	0.219
		569.32		9.514E-02	2.966E-01	4.933E-01	3.304E-02	0.193
		604.70		-2.011E-02	5.373E-02	7.184E-02	4.751E-03	-0.280
		795.84	*	4.202E-02	6.056E-02	1.068E-01	9.196E-03	0.394
		801.93		4.667E-01	5.211E-01	9.339E-01	8.117E-02	0.500
		1038.57		-3.346E+00	5.184E+00	7.881E+00	6.570E-01	-0.425
		1167.94		1.243E+00	3.728E+00	6.153E+00	3.638E-01	0.202
		1365.15		1.394E-01	1.553E+00	2.629E+00	1.678E-01	0.053
CS-135		268.24	*	3.430E-01	2.488E-01	3.769E-01	4.032E-02	0.910
I-135		288.45		-1.548E+08	2.488E-01	Half-Life too short		
		417.63		-2.444E+08	2.488E-01	Half-Life too short		
		546.56		1.005E+07	2.488E-01	Half-Life too short		
		836.80		8.768E+08	2.488E-01	Half-Life too short		
		1038.76		-4.532E+08	2.488E-01	Half-Life too short		
	+	1124.00		2.050E+10	2.488E-01	Half-Life too short		
		1131.51		2.228E+08	2.488E-01	Half-Life too short		
		1260.41	*	1.274E+08	2.488E-01	Half-Life too short		
		1457.56		3.031E+10	2.488E-01	Half-Life too short		
		1678.03		3.615E+08	2.488E-01	Half-Life too short		
		1706.46		-5.938E+08	2.488E-01	Half-Life too short		
		1791.20		3.243E+07	2.488E-01	Half-Life too short		

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-136		66.91		-7.711E-02	5.161E-01	7.596E-01	1.148E-01	-0.102
	+	86.29		3.243E+00	1.217E+00	1.893E+00	2.311E-01	1.714
		153.22		9.793E-01	7.447E-01	1.272E+00	1.540E-01	0.770
		163.89		-1.195E-01	1.211E+00	1.967E+00	2.173E-01	-0.061
		176.55		4.153E-02	4.152E-01	6.788E-01	7.054E-02	0.061
		273.65		-6.692E-01	6.731E-01	8.596E-01	8.508E-02	-0.779
		340.57		4.962E-01	1.819E-01	3.074E-01	2.473E-02	1.614
		818.51		6.584E-02	9.880E-02	1.735E-01	1.546E-02	0.379
		1048.07	*	-1.426E-02	1.527E-01	2.480E-01	2.124E-02	-0.057
		1235.34		6.275E-01	8.996E-01	1.531E+00	1.530E-01	0.410
CE-139		165.85	*	-3.072E-03	3.640E-02	5.915E-02	5.872E-03	-0.052
BA-140		162.64		3.416E-01	8.260E-01	1.373E+00	1.472E-01	0.249
		304.84		-1.236E+00	1.621E+00	2.554E+00	7.168E-01	-0.484
		423.70		-8.577E-01	2.439E+00	3.913E+00	1.245E+00	-0.219
		537.32	*	-1.141E-01	3.482E-01	5.506E-01	1.798E-01	-0.207
LA-140	+	328.77		5.212E-01	4.574E-01	6.608E-01	5.709E-02	0.789
		432.53		-2.023E+00	2.673E+00	4.184E+00	2.779E-01	-0.484
		487.03		5.253E-02	1.793E-01	3.002E-01	2.108E-02	0.175
		751.79		-1.504E+00	2.284E+00	3.498E+00	3.105E-01	-0.430
		815.85		4.696E-01	4.353E-01	7.851E-01	7.717E-02	0.598
		867.82		-5.728E-02	2.005E+00	3.074E+00	3.105E-01	-0.019
		919.63		-1.331E+00	3.950E+00	5.575E+00	6.555E-01	-0.239
		925.24		2.413E-01	1.485E+00	2.491E+00	2.583E-01	0.097
		1596.49	*	-8.984E-02	1.139E-01	1.648E-01	9.687E-03	-0.545
CE-141		145.44	*	1.613E-02	7.798E-02	1.258E-01	1.538E-02	0.128
CE-143		57.37		-1.138E-04	7.798E-02	Half-Life too short		
		231.56		7.443E-04	7.798E-02	Half-Life too short		
		293.26	*	3.943E-04	7.798E-02	Half-Life too short		
	+	350.59		1.533E-02	7.798E-02	Half-Life too short		
		490.36		5.867E-04	7.798E-02	Half-Life too short		
		664.57		1.624E-03	7.798E-02	Half-Life too short		
		721.93		5.337E-04	7.798E-02	Half-Life too short		
CE-144		80.11		-2.431E+00	2.039E+00	2.831E+00	2.188E-01	-0.859
		133.54	*	6.833E-02	2.788E-01	4.076E-01	7.546E-02	0.168
PM-144		476.78		-6.357E-02	9.491E-02	1.482E-01	1.088E-02	-0.429
		618.01		1.210E-02	4.570E-02	7.552E-02	5.210E-03	0.160
		696.49	*	2.135E-02	4.794E-02	7.996E-02	5.653E-03	0.267
		778.57		-1.089E+00	2.889E+00	4.652E+00	3.854E-01	-0.234
PR-144		696.49	*	1.446E+00	3.246E+00	5.415E+00	3.826E-01	0.267
		1489.15		2.703E+00	1.479E+01	2.531E+01	1.487E+00	0.107
PM-146		453.90	*	4.143E-02	5.850E-02	1.008E-01	8.946E-03	0.411
		633.02		-6.180E-02	1.836E+00	2.957E+00	1.093E+00	-0.021
		735.90		1.144E-01	2.164E-01	3.593E-01	1.018E-01	0.318
		747.13		-1.782E-02	1.275E-01	2.110E-01	2.859E-02	-0.084
ND-147	+	91.11		4.164E-01	1.901E-01	5.294E-01	4.708E-02	0.787
		319.41		1.839E+00	3.792E+00	6.522E+00	5.473E-01	0.282
		439.89		2.953E+00	7.055E+00	1.197E+01	7.300E-01	0.247
		531.02	*	5.557E-01	7.305E-01	1.253E+00	1.732E-01	0.443
PM-149		285.90	*	3.223E+01	7.125E+01	1.226E+02	1.942E+01	0.263

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152		121.78		2.790E-02	8.547E-02	1.428E-01	2.135E-02	0.195
		244.69		3.025E-01	4.677E-01	6.854E-01	6.682E-02	0.441
		344.27	*	7.887E-02	1.532E-01	2.060E-01	1.694E-02	0.383
		443.98		-1.192E+00	1.203E+00	1.829E+00	1.119E-01	-0.652
		778.89		-2.291E-01	3.421E-01	5.348E-01	4.432E-02	-0.428
		867.32		-1.020E-01	1.344E+00	1.980E+00	1.917E-01	-0.052
	+	964.01		1.109E+00	5.668E-01	8.000E-01	7.537E-02	1.386
		1085.78		-3.579E-01	6.061E-01	9.326E-01	7.023E-02	-0.384
		1112.02		3.341E-01	4.696E-01	7.498E-01	5.281E-02	0.446
		1407.95		1.541E-01	2.056E-01	3.808E-01	2.225E-02	0.405
GD-153		69.67		-2.569E-01	1.260E+00	1.848E+00	1.470E-01	-0.139
		83.37		1.811E+01	1.635E+01	2.344E+01	1.799E+00	0.773
		97.43	*	-2.762E-02	9.415E-02	1.355E-01	1.256E-02	-0.204
		103.18		-2.081E-01	1.169E-01	1.771E-01	1.831E-02	-1.175
EU-154		123.07		5.425E-02	6.324E-02	1.038E-01	1.654E-02	0.523
		247.94		2.091E-02	4.921E-01	7.300E-01	8.994E-02	0.029
		591.81		-6.934E-01	9.198E-01	1.228E+00	1.259E-01	-0.565
		723.30		3.511E-01	2.641E-01	4.366E-01	3.707E-02	0.804
		756.87		1.895E-01	1.054E+00	1.788E+00	2.058E-01	0.106
		873.19		9.930E-02	4.372E-01	7.393E-01	9.675E-02	0.134
		996.32		-1.050E+00	5.575E-01	6.605E-01	1.185E-01	-1.590
		1004.76		-1.283E-01	2.969E-01	4.659E-01	5.505E-02	-0.275
		1274.45	*	-1.984E-03	1.692E-01	2.732E-01	2.554E-02	-0.007
EU-155		48.70		9.221E-01	6.122E-01	9.746E-01	6.792E-02	0.946
		60.01		7.535E-01	2.542E+00	3.831E+00	3.171E-01	0.197
	+	86.54		3.214E-01	1.168E-01	1.857E-01	1.435E-02	1.731
		105.31	*	4.935E-02	1.182E-01	1.989E-01	2.155E-02	0.248
TB-160	+	86.79		8.478E-01	3.078E-01	4.874E-01	3.717E-02	1.739
		197.04		-3.240E-01	7.650E-01	1.179E+00	1.178E-01	-0.275
		215.65		5.869E-01	9.461E-01	1.521E+00	1.513E-01	0.386
		298.57		2.155E-01	1.610E-01	2.559E-01	2.277E-02	0.842
		879.36	*	-4.487E-02	2.013E-01	3.187E-01	3.149E-02	-0.141
		962.29		1.034E+00	8.948E-01	1.427E+00	1.348E-01	0.725
		966.15		1.276E+00	3.754E-01	7.127E-01	6.695E-02	1.790
		1177.93		-1.994E-01	5.148E-01	8.046E-01	4.668E-02	-0.248
		1271.85		2.874E-01	9.437E-01	1.580E+00	9.182E-02	0.182
HO-166M		80.57		-5.230E-01	2.705E-01	3.595E-01	2.775E-02	-1.455
		184.41		1.503E-01	5.419E-02	8.562E-02	8.543E-03	1.755
		280.46		-8.137E-02	1.047E-01	1.689E-01	1.564E-02	-0.482
		410.95		5.951E-01	3.836E-01	6.203E-01	3.682E-02	0.959
		711.68	*	-2.356E-02	8.777E-02	1.444E-01	1.052E-02	-0.163
		752.31		-5.907E-02	3.756E-01	6.202E-01	4.890E-02	-0.095
		810.29		-2.206E-02	8.269E-02	1.345E-01	1.180E-02	-0.164
TM-171		51.35		-8.533E-01	9.616E+00	1.430E+01	1.041E+00	-0.060
		52.39		-1.776E-01	5.246E+00	8.170E+00	6.045E-01	-0.022
		59.40		-4.280E+00	1.344E+01	1.968E+01	1.631E+00	-0.217
		66.72	*	-9.428E-01	1.997E+01	2.954E+01	2.373E+00	-0.032
LU-176	+	88.36		6.333E-01	2.299E-01	3.876E-01	2.973E-02	1.634
		201.83		-2.894E-02	3.692E-02	5.731E-02	5.721E-03	-0.505

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		306.84	*	9.732E-03	3.208E-02	5.469E-02	4.763E-03	0.178
		401.10		6.888E+00	9.761E+00	1.680E+01	9.873E-01	0.410
LU-177		112.95		-1.553E+00	1.609E+00	2.540E+00	3.115E-01	-0.611
	+	208.36	*	2.673E+00	1.753E+00	2.144E+00	2.137E-01	1.247
LU-177M		52.97		-1.691E-01	5.219E-01	8.617E-01	6.437E-02	-0.196
		54.07		1.694E-01	2.959E-01	5.028E-01	3.823E-02	0.337
		61.30		2.069E+00	8.381E-01	1.349E+00	1.110E-01	1.534
		121.62		-1.453E-02	4.414E-01	7.274E-01	1.025E-01	-0.020
		147.16		-6.283E-01	7.976E-01	1.257E+00	1.501E-01	-0.500
		171.86		8.959E-02	6.013E-01	9.860E-01	9.806E-02	0.091
		218.09		1.025E-01	1.076E+00	1.743E+00	1.732E-01	0.059
	+	268.79		2.150E+00	1.565E+00	1.958E+00	1.850E-01	1.098
		319.02		1.180E-01	3.285E-01	5.611E-01	4.714E-02	0.210
		367.43		-5.540E-01	1.175E+00	1.898E+00	1.295E-01	-0.292
		413.65	*	6.746E-02	2.539E-01	3.737E-01	2.224E-02	0.181
HF-181		56.28		-1.627E-01	3.623E-01	6.021E-01	4.745E-02	-0.270
		57.53		-7.678E-02	2.204E-01	3.404E-01	2.738E-02	-0.226
		65.20		6.864E-01	6.318E-01	9.746E-01	7.879E-02	0.704
		133.02		-1.108E-02	8.822E-02	1.263E-01	1.676E-02	-0.088
		136.25		4.056E-02	5.472E-01	9.019E-01	1.171E-01	0.045
		345.85		-1.673E-01	3.596E-01	3.855E-01	2.928E-02	-0.434
		482.03	*	2.049E-02	5.896E-02	9.908E-02	6.235E-03	0.207
W-181		56.28		-6.452E-02	1.439E-01	2.392E-01	1.885E-02	-0.270
		57.53		-3.053E-02	8.759E-02	1.353E-01	1.088E-02	-0.226
		65.20	*	2.707E-01	2.491E-01	3.843E-01	3.107E-02	0.704
TA-182		67.75		-7.660E-03	8.570E-02	1.179E-01	9.438E-03	-0.065
		100.10		2.107E-01	1.892E-01	3.253E-01	3.175E-02	0.648
		152.43		1.156E-01	4.119E-01	6.818E-01	7.777E-02	0.170
		222.10		7.931E-02	4.310E-01	7.009E-01	6.951E-02	0.113
		1001.68		2.179E+00	2.732E+00	4.825E+00	4.295E-01	0.452
		1121.28		7.767E-01	2.459E-01	4.796E-01	3.292E-02	1.620
		1189.05		-4.890E-01	4.682E-01	6.831E-01	3.966E-02	-0.716
		1221.42	*	1.200E-01	2.691E-01	4.549E-01	2.645E-02	0.264
		1230.97		4.767E-01	7.131E-01	1.221E+00	7.100E-02	0.390
RE-183		57.98		-1.021E-02	9.254E-02	1.370E-01	1.110E-02	-0.075
		59.32		-1.848E-02	5.437E-02	7.955E-02	6.585E-03	-0.232
		67.20		-2.454E-02	1.413E-01	2.077E-01	1.666E-02	-0.118
		162.32	*	6.415E-02	1.287E-01	2.147E-01	2.218E-02	0.299
	+	208.81		2.729E+00	1.790E+00	2.176E+00	2.169E-01	1.254
		291.72		7.436E-02	1.257E+00	1.851E+00	1.674E-01	0.040
RE-184		57.98		-3.792E-02	3.437E-01	5.089E-01	4.122E-02	-0.075
		59.32		-6.857E-02	2.018E-01	2.952E-01	2.444E-02	-0.232
		67.20		-9.110E-02	5.246E-01	7.713E-01	6.187E-02	-0.118
		161.27		9.346E-02	4.156E-01	6.856E-01	7.165E-02	0.136
		216.55		6.658E-02	3.298E-01	5.374E-01	5.344E-02	0.124
		252.85	*	-2.401E-01	2.969E-01	4.514E-01	4.361E-02	-0.532
		318.01		2.618E-01	5.362E-01	9.234E-01	7.782E-02	0.284
		792.07		7.394E-01	1.348E+00	2.347E+00	1.993E-01	0.315
		903.28		1.081E+00	1.526E+00	2.379E+00	2.411E-01	0.455

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		920.93		-2.474E-01	6.140E-01	9.479E-01	9.425E-02	-0.261
OS-185		59.72		-3.764E-03	1.484E-01	2.204E-01	1.827E-02	-0.017
		61.14		1.937E-01	8.983E-02	1.437E-01	1.183E-02	1.347
		69.30		2.951E-03	2.382E-01	3.291E-01	2.620E-02	0.009
		592.07		-2.593E+00	3.764E+00	5.088E+00	3.345E-01	-0.510
		646.12	*	-6.139E-02	6.228E-02	9.155E-02	6.031E-03	-0.671
		717.42		-6.519E-01	1.197E+00	1.916E+00	1.412E-01	-0.340
		874.81		-1.462E-02	8.309E-01	1.375E+00	1.349E-01	-0.011
		880.27		-1.061E-01	1.111E+00	1.780E+00	1.762E-01	-0.060
RE-188		155.03	*	1.537E-01	2.071E-01	3.484E-01	3.879E-02	0.441
		477.96		1.821E+00	4.116E+00	6.970E+00	4.375E-01	0.261
		633.10		7.849E-02	3.679E+00	5.956E+00	3.926E-01	0.013
W-188	+	63.58		9.156E+01	4.659E+01	5.674E+01	4.619E+00	1.614
		227.08		-2.649E+00	1.549E+01	2.470E+01	2.443E+00	-0.107
		290.67	*	-3.344E+00	1.011E+01	1.445E+01	1.309E+00	-0.231
IR-192	+	295.96		9.368E-01	2.235E-01	3.285E-01	2.962E-02	2.851
		308.46		1.429E-02	1.193E-01	2.015E-01	1.756E-02	0.071
		316.51	*	-3.591E-04	4.232E-02	7.091E-02	6.018E-03	-0.005
		468.07		-6.603E-02	1.091E-01	1.459E-01	1.031E-02	-0.453
		604.41		-4.476E-01	7.371E-01	9.561E-01	1.125E-01	-0.468
		612.46		2.583E+00	1.235E+00	2.041E+00	1.672E-01	1.265
AU-195		65.12		1.470E-01	1.162E-01	1.802E-01	1.457E-02	0.816
		66.83		-4.619E-03	6.596E-02	9.744E-02	7.827E-03	-0.047
	+	75.70		1.353E+00	2.187E-01	4.368E-01	3.412E-02	3.097
		98.88	*	3.934E-01	2.541E-01	4.146E-01	3.954E-02	0.949
	+	129.76		9.214E+00	4.605E+00	6.199E+00	8.400E-01	1.486
TL-200		367.94	*	-1.852E-04	4.605E+00	Half-Life too short		
		579.30		1.711E-03	4.605E+00	Half-Life too short		
		828.27		-8.542E-04	4.605E+00	Half-Life too short		
		1205.75		8.038E-04	4.605E+00	Half-Life too short		
TL-201		68.90		6.331E-01	3.090E+00	3.917E+00	3.123E-01	0.162
		70.82		-1.425E-01	1.550E+00	2.283E+00	1.808E-01	-0.062
		80.30		-4.733E+00	3.552E+00	4.888E+00	3.776E-01	-0.968
		135.34		6.644E+00	2.261E+01	3.760E+01	4.910E+00	0.177
		167.43	*	2.469E+00	6.361E+00	1.054E+01	1.047E+00	0.234
TL-202		68.90		7.189E-02	3.509E-01	4.448E-01	3.546E-02	0.162
		70.82		-1.614E-02	1.755E-01	2.585E-01	2.048E-02	-0.062
		80.30		-5.361E-01	4.023E-01	5.537E-01	4.278E-02	-0.968
		439.56	*	4.367E-02	8.476E-02	1.447E-01	8.819E-03	0.302
HG-203		70.83		-7.292E-02	8.054E-01	1.186E+00	1.563E-01	-0.061
	+	72.87		8.733E-01	4.626E-01	8.993E-01	1.145E-01	0.971
		82.60		1.316E+00	1.274E+00	1.668E+00	2.198E-01	0.789
		279.20	*	5.797E-02	5.010E-02	8.864E-02	8.427E-03	0.654
BI-207	+	72.80		2.612E-01	1.359E-01	2.636E-01	2.076E-02	0.991
	+	74.97		7.543E-01	1.219E-01	2.114E-01	1.654E-02	3.568
		84.90		2.097E-01	2.056E-01	3.117E-01	2.385E-02	0.673
		569.67		4.247E-02	4.542E-02	7.867E-02	5.149E-03	0.540
		1063.62	*	5.525E-02	7.047E-02	1.244E-01	9.854E-03	0.444
		1770.23		-2.358E-01	5.611E-01	6.438E-01	3.719E-02	-0.366

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TL-207		81.07		-4.016E-01	2.196E-01	2.939E-01	2.267E-02	-1.366
		83.78		1.650E-01	1.310E-01	2.004E-01	1.537E-02	0.823
		94.90		6.776E-01	2.804E-01	4.449E-01	3.921E-02	1.523
		122.32		2.037E+00	2.017E+00	3.432E+00	5.000E-01	0.593
		144.24		2.439E-01	8.637E-01	1.398E+00	1.813E-01	0.174
		154.21		6.617E-01	4.857E-01	8.302E-01	9.873E-02	0.797
	+	269.46		5.064E-01	3.687E-01	4.614E-01	4.430E-02	1.098
		323.87	*	-1.441E-02	9.716E-01	1.414E+00	2.480E-01	-0.010
	+	338.28		7.800E+00	2.413E+00	3.020E+00	3.557E-01	2.583
		445.03		-2.465E+00	2.839E+00	4.344E+00	4.542E-01	-0.568
PO-209		260.50		-1.038E+00	1.257E+01	2.000E+01	1.914E+00	-0.052
		262.80		2.928E+01	3.485E+01	5.821E+01	5.551E+00	0.503
		896.60	*	-2.496E+00	1.078E+01	1.747E+01	1.776E+00	-0.143
PB-211		404.84	*	3.169E-02	1.507E+00	2.170E+00	1.353E+00	0.015
		427.08		2.632E+00	3.238E+00	4.902E+00	3.031E+00	0.537
		831.96		5.549E-01	1.680E+00	2.814E+00	1.765E+00	0.197
BI-212	+	727.18	*	1.769E+00	6.756E-01	9.590E-01	8.699E-02	1.844
		785.46		2.107E+00	2.350E+00	4.202E+00	3.525E-01	0.501
		1620.62		2.372E+00	1.679E+00	3.359E+00	1.971E-01	0.706
BI-214	+	609.31	*	1.087E+00	2.263E-01	3.362E-01	2.818E-02	3.233
		768.36		1.107E+00	1.016E+00	1.823E+00	1.836E-01	0.607
		934.06		1.282E+00	1.726E+00	3.020E+00	3.505E-01	0.424
		1120.29		1.637E+00	5.336E-01	1.018E+00	9.726E-02	1.608
		1238.11		1.579E+00	1.431E+00	2.502E+00	2.042E-01	0.631
		1377.67		8.173E-01	1.288E+00	2.310E+00	1.986E-01	0.354
	+	1764.49		1.357E+00	4.270E-01	9.543E-01	5.517E-02	1.422
PO-215		81.07		-4.016E-01	2.196E-01	2.939E-01	2.267E-02	-1.366
		83.78		1.650E-01	1.310E-01	2.004E-01	1.537E-02	0.823
		94.90		6.776E-01	2.804E-01	4.449E-01	3.921E-02	1.523
		122.32		2.037E+00	2.017E+00	3.432E+00	5.000E-01	0.593
		144.24		2.439E-01	8.637E-01	1.398E+00	1.813E-01	0.174
		154.21		6.617E-01	4.857E-01	8.302E-01	9.873E-02	0.797
	+	269.46		5.064E-01	3.687E-01	4.614E-01	4.430E-02	1.098
		323.87	*	-1.441E-02	9.716E-01	1.414E+00	2.480E-01	-0.010
	+	338.28		7.800E+00	2.413E+00	3.020E+00	3.557E-01	2.583
		445.03		-2.465E+00	2.839E+00	4.344E+00	4.542E-01	-0.568
RN-219	+	271.23		6.497E-01	4.743E-01	5.822E-01	6.394E-02	1.116
		401.81	*	2.437E-01	5.975E-01	1.012E+00	1.380E-01	0.241
RN-220		549.76	*	-9.442E+00	3.579E+01	5.705E+01	3.712E+00	-0.166
RA-223		81.07		-4.016E-01	2.196E-01	2.939E-01	2.267E-02	-1.366
		83.78		1.650E-01	1.310E-01	2.004E-01	1.537E-02	0.823
		94.90		6.776E-01	2.804E-01	4.449E-01	3.921E-02	1.523
		122.32		2.037E+00	2.017E+00	3.432E+00	5.000E-01	0.593
		144.24		2.439E-01	8.637E-01	1.398E+00	1.813E-01	0.174
		154.21		6.617E-01	4.857E-01	8.302E-01	9.873E-02	0.797
	+	269.46		5.064E-01	3.687E-01	4.614E-01	4.430E-02	1.098
		323.87	*	-1.441E-02	9.716E-01	1.414E+00	2.480E-01	-0.010
	+	338.28		7.800E+00	2.413E+00	3.020E+00	3.557E-01	2.583
		445.03		-2.465E+00	2.839E+00	4.344E+00	4.542E-01	-0.568

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	+	609.31	*	1.087E+00	2.263E-01	3.362E-01	2.818E-02	3.233
		768.36		1.107E+00	1.016E+00	1.823E+00	1.836E-01	0.607
		934.06		1.282E+00	1.726E+00	3.020E+00	3.505E-01	0.424
		1120.29		1.637E+00	5.336E-01	1.018E+00	9.726E-02	1.608
		1238.11		1.579E+00	1.431E+00	2.502E+00	2.042E-01	0.631
		1377.67		8.173E-01	1.288E+00	2.310E+00	1.986E-01	0.354
	+	1764.49		1.357E+00	4.270E-01	9.543E-01	5.517E-02	1.422
AC-227		79.80		6.417E-03	1.563E+00	2.302E+00	4.871E-01	0.003
		236.00		1.596E+00	4.190E-01	6.350E-01	8.332E-02	2.514
		256.20	*	1.083E-01	4.758E-01	7.713E-01	1.229E-01	0.140
		286.10		1.054E+00	1.828E+00	3.164E+00	4.290E-01	0.333
		299.80		4.672E+00	2.193E+00	3.444E+00	6.067E-01	1.356
		304.40		-2.379E+00	2.556E+00	4.026E+00	7.450E-01	-0.591
		334.20		2.931E+00	3.822E+00	4.788E+00	9.160E-01	0.612
TH-227		79.80		6.417E-03	1.563E+00	2.302E+00	4.935E-01	0.003
	+	94.00		1.498E+01	4.751E+00	4.331E+00	9.439E-01	3.458
		236.00		1.596E+00	4.107E-01	6.350E-01	7.645E-02	2.514
		256.20	*	1.083E-01	4.759E-01	7.713E-01	1.432E-01	0.140
		286.10		1.054E+00	2.108E+00	3.164E+00	3.178E+00	0.333
		299.80		4.672E+00	2.193E+00	3.444E+00	6.067E-01	1.356
		304.40		-2.379E+00	2.556E+00	4.026E+00	7.450E-01	-0.591
		334.20		2.931E+00	3.822E+00	4.788E+00	9.160E-01	0.612
TH-229		85.43		4.452E-01	2.133E-01	3.325E-01	2.542E-02	1.339
	+	88.47		3.646E-01	1.324E-01	2.229E-01	1.714E-02	1.636
		100.00		2.657E-01	1.976E-01	3.416E-01	3.328E-02	0.778
		193.63	*	-4.129E-01	6.804E-01	1.070E+00	1.069E-01	-0.386
	+	210.97		2.166E+00	1.421E+00	1.640E+00	1.634E-01	1.321
TH-230	+	609.31	*	1.087E+00	2.263E-01	3.362E-01	2.818E-02	3.233
		768.36		1.107E+00	1.016E+00	1.823E+00	1.836E-01	0.607
		934.06		1.282E+00	1.726E+00	3.020E+00	3.505E-01	0.424
		1120.29		1.637E+00	5.336E-01	1.018E+00	9.726E-02	1.608
		1238.11		1.579E+00	1.431E+00	2.502E+00	2.042E-01	0.631
		1377.67		8.172E-01	1.288E+00	2.310E+00	1.986E-01	0.354
	+	1764.49		1.357E+00	4.270E-01	9.543E-01	5.517E-02	1.422
PA-231		283.67	*	-1.352E+00	1.861E+00	2.992E+00	4.644E-01	-0.452
		301.29		1.008E+00	8.007E-01	1.344E+00	1.667E-01	0.750
TH-231		81.07		-4.016E-01	2.196E-01	2.939E-01	2.267E-02	-1.366
		83.78		1.650E-01	1.310E-01	2.004E-01	1.537E-02	0.823
		94.90		6.776E-01	2.804E-01	4.449E-01	3.921E-02	1.523
		122.32		2.037E+00	2.017E+00	3.432E+00	5.000E-01	0.593
		144.24		2.439E-01	8.637E-01	1.398E+00	1.813E-01	0.174
		154.21		6.617E-01	4.857E-01	8.302E-01	9.873E-02	0.797
	+	269.46		5.064E-01	3.687E-01	4.614E-01	4.430E-02	1.098
		323.87	*	-1.441E-02	9.716E-01	1.414E+00	2.480E-01	-0.010
	+	338.28		7.800E+00	2.413E+00	3.020E+00	3.557E-01	2.583
		445.03		-2.465E+00	2.839E+00	4.344E+00	4.542E-01	-0.568
U-231		84.21		4.540E+00	4.497E+00	6.822E+00	5.228E-01	0.665
	+	92.29		1.181E+01	2.908E+00	3.599E+00	3.006E-01	3.282
		95.87	*	-3.002E-01	1.011E+00	1.456E+00	1.308E-01	-0.206

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		108.00		8.083E-01	1.824E+00	3.070E+00	3.460E-01	0.263
PA-233	+	75.28		2.201E+01	4.525E+00	6.613E+00	9.862E-01	3.329
	+	86.59		5.227E+00	2.316E+00	3.015E+00	7.996E-01	1.734
		300.12		1.205E+00	6.056E-01	9.653E-01	1.450E-01	1.249
		311.98	*	2.210E-02	7.778E-02	1.325E-01	1.170E-02	0.167
		340.50		2.729E+00	1.132E+00	1.623E+00	3.822E-01	1.681
		398.62		1.070E+00	3.000E+00	5.055E+00	1.308E+00	0.212
		415.76		-6.824E-01	2.563E+00	3.579E+00	7.384E-01	-0.191
PA-234	+	63.00		2.692E+00	1.413E+00	1.671E+00	2.548E-01	1.611
		94.67		7.015E-01	2.182E-01	3.361E-01	4.204E-02	2.087
		98.44		1.369E-01	1.322E-01	1.678E-01	9.384E-02	0.816
		99.86		7.129E-01	5.019E-01	8.691E-01	8.445E-02	0.820
		111.00		-1.993E-02	2.059E-01	3.395E-01	4.951E-02	-0.059
		131.20		5.125E-02	1.450E-01	2.133E-01	2.864E-02	0.240
		152.70		3.377E-01	3.968E-01	6.649E-01	1.236E-01	0.508
	+	186.00		5.382E+00	3.017E+00	3.234E+00	1.022E+00	1.664
		226.40		-1.369E-01	5.008E-01	7.939E-01	1.117E-01	-0.172
		227.20		-9.997E-02	5.300E-01	8.442E-01	8.348E-02	-0.118
		248.90		3.776E-02	1.030E+00	1.655E+00	3.782E-01	0.023
		293.70		5.124E+00	1.435E+00	2.046E+00	3.579E-01	2.504
		369.80		-1.467E+00	1.147E+00	1.680E+00	3.545E-01	-0.873
		568.70		2.963E-01	1.507E+00	2.485E+00	1.626E-01	0.119
		569.50		3.005E-01	4.038E-01	6.911E-01	4.523E-02	0.435
		574.00		-1.261E+00	2.290E+00	3.453E+00	2.262E-01	-0.365
		699.00		-1.569E-01	1.033E+00	1.637E+00	3.019E-01	-0.096
		706.10		7.495E-01	1.672E+00	2.725E+00	1.208E+00	0.275
		733.00		-6.003E-01	6.210E-01	7.693E-01	1.679E-01	-0.780
		742.81		-1.259E-01	1.949E+00	3.244E+00	2.177E+00	-0.039
		796.30		1.568E-01	1.172E+00	1.977E+00	5.343E-01	0.079
		805.60		7.411E-01	1.377E+00	2.371E+00	7.271E-01	0.313
		819.60		2.265E-01	1.705E+00	2.869E+00	1.093E+00	0.079
		826.30		-5.684E-01	1.061E+00	1.617E+00	7.247E-01	-0.352
		831.60		3.717E-01	8.382E-01	1.437E+00	4.309E-01	0.259
		876.40		-3.841E-01	1.278E+00	1.957E+00	2.014E+00	-0.196
		880.51		1.647E-02	4.043E-01	6.560E-01	6.495E-02	0.025
		883.24		1.951E-01	4.145E-01	6.818E-01	4.596E-01	0.286
		899.00		6.360E-01	1.206E+00	2.038E+00	8.976E-01	0.312
		925.00		5.869E-01	1.646E+00	2.811E+00	2.782E-01	0.209
		926.50		2.016E-02	2.497E-01	4.157E-01	1.070E-01	0.048
		946.00	*	-1.523E-01	4.001E-01	6.320E-01	1.217E-01	-0.241
		949.00		2.753E-01	5.726E-01	9.903E-01	9.520E-02	0.278
		980.50		5.874E-01	1.159E+00	1.758E+00	1.617E-01	0.334
		1394.10		1.112E+00	1.664E+00	2.753E+00	1.783E+00	0.404
PA-234M		766.41		1.702E+01	2.742E+01	4.243E+01	3.251E+01	0.401
		1001.03	*	6.162E+00	8.810E+00	1.543E+01	1.759E+00	0.399
U-234	+	609.31	*	1.087E+00	2.263E-01	3.362E-01	2.818E-02	3.233
		768.36		1.107E+00	1.016E+00	1.823E+00	1.836E-01	0.607
		934.06		1.282E+00	1.726E+00	3.020E+00	3.505E-01	0.424
		1120.29		1.637E+00	5.336E-01	1.018E+00	9.726E-02	1.608

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.579E+00	1.431E+00	2.502E+00	2.042E-01	0.631
		1377.67		8.172E-01	1.288E+00	2.310E+00	1.986E-01	0.354
	+	1764.49		1.357E+00	4.270E-01	9.543E-01	5.517E-02	1.422
U-235	+	89.95		1.807E+00	9.815E-01	1.949E+00	5.978E-01	0.928
	+	93.35		4.660E+00	1.691E+00	1.412E+00	3.955E-01	3.300
		105.00		4.608E-01	1.173E+00	1.960E+00	5.978E-01	0.235
		143.76	*	2.264E-01	2.699E-01	4.413E-01	8.635E-02	0.513
		163.35		1.753E-01	5.690E-01	9.400E-01	1.866E-01	0.186
	+	185.71		1.993E-01	9.441E-02	1.191E-01	1.189E-02	1.674
		205.31		-5.337E-02	7.215E-01	1.014E+00	2.000E-01	-0.053
NP-236		94.67		5.353E-01	1.587E-01	2.552E-01	2.239E-02	2.097
		98.44		1.035E-01	8.206E-02	1.268E-01	1.199E-02	0.816
		111.00		-1.507E-02	1.558E-01	2.568E-01	3.048E-02	-0.059
		160.31	*	2.127E-02	9.253E-02	1.527E-01	1.612E-02	0.139
NP-239		99.55		2.431E-01	1.739E-01	2.923E-01	2.824E-02	0.832
		117.00	*	2.167E-01	2.187E-01	3.727E-01	4.883E-02	0.581
	+	209.75		2.182E+00	1.431E+00	1.719E+00	1.714E-01	1.269
		228.18		-8.424E-02	2.761E-01	4.367E-01	4.316E-02	-0.193
		277.60		2.717E-01	2.273E-01	4.024E-01	3.746E-02	0.675
		334.30		1.602E+00	2.144E+00	2.702E+00	2.152E-01	0.593
AM-241		59.54	*	-7.890E-03	7.818E-02	1.157E-01	1.035E-02	-0.068
CM-243		99.55		2.501E-01	1.789E-01	3.008E-01	2.905E-02	0.832
		103.76	*	-6.251E-02	1.056E-01	1.707E-01	1.784E-02	-0.366
		117.00		2.229E-01	2.250E-01	3.834E-01	5.023E-02	0.581
	+	209.75		2.151E+00	1.411E+00	1.695E+00	1.689E-01	1.269
		228.18		-8.511E-02	2.790E-01	4.412E-01	4.361E-02	-0.193
		277.60		2.739E-01	2.291E-01	4.057E-01	3.776E-02	0.675
CM-247		278.00		1.148E+00	9.451E-01	1.674E+00	1.557E-01	0.686
		287.40		-2.438E-01	1.524E+00	2.477E+00	2.262E-01	-0.098
		402.60	*	1.130E-02	5.669E-02	8.983E-02	5.286E-03	0.126
CF-249		252.85		-9.060E-01	1.120E+00	1.703E+00	1.646E-01	-0.532
		333.44		1.434E-01	3.337E-01	3.499E-01	2.795E-02	0.410
		387.95	*	2.798E-02	5.606E-02	9.569E-02	5.723E-03	0.292
CF-251		176.60	*	1.468E-02	1.538E-01	2.514E-01	2.504E-02	0.058
		227.00		-5.389E-02	4.711E-01	7.536E-01	7.453E-02	-0.072
		285.00		1.299E+00	2.098E+00	3.644E+00	3.343E-01	0.356

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433003      *
* Acquisition date :  7-JUL-2009 06:05:07 Detector SN#     :                *
* Detector ID        : GAM05                Sensitivity      : 5.000        *
* Geometry           : CAN                  Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.66       Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433003           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 1.0326E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope      :                *
* LCS DPM          :    0.000             LCS Isotope      :                *
* LCSD DPM         :    0.000             LCSD Isotope     :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.955E+01	2.708E+00	7.794E-01	0.000E+00
CD-109	2.711E+00	9.646E-01	1.300E+00	0.000E+00
SN-126	2.670E-01	9.500E-02	1.279E-01	0.000E+00
BA-137M	2.315E-01	9.286E-02	8.995E-02	0.000E+00
CS-137	2.447E-01	9.817E-02	9.509E-02	0.000E+00
TL-208	5.957E-01	1.225E-01	8.116E-02	0.000E+00
BI-210	3.777E+00	1.120E+00	1.043E+00	0.000E+00
PB-210	3.777E+00	1.120E+00	1.043E+00	0.000E+00
PO-210	3.777E+00	1.111E+00	1.043E+00	0.000E+00
BI-211	3.846E+00	6.315E-01	4.160E-01	0.000E+00
PB-212	1.826E+00	2.340E-01	1.093E-01	0.000E+00
PO-212	1.826E+00	2.340E-01	1.093E-01	0.000E+00
PB-214	1.338E+00	2.301E-01	1.450E-01	0.000E+00
PO-214	1.338E+00	2.301E-01	1.450E-01	0.000E+00
PO-216	1.826E+00	2.340E-01	1.093E-01	0.000E+00
PO-218	1.338E+00	2.301E-01	1.450E-01	0.000E+00
RA-224	4.994E+00	1.736E+00	1.244E+00	0.000E+00
AC-228	2.127E+00	4.529E-01	2.835E-01	0.000E+00
RA-228	2.127E+00	4.529E-01	2.835E-01	0.000E+00
TH-228	1.826E+00	2.340E-01	1.093E-01	0.000E+00
TH-232	2.127E+00	4.529E-01	2.835E-01	0.000E+00
TH-234	2.309E+00	1.206E+00	1.173E+00	0.000E+00
NP-237	7.841E-01	3.209E-01	3.958E-01	0.000E+00
U-238	2.309E+00	1.206E+00	1.173E+00	0.000E+00
AM-243	4.203E-01	6.658E-02	6.797E-02	0.000E+00
ANH-511	8.619E-02	1.027E-01	6.276E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
BE-7	1.598E-02		4.200E-01	7.035E-01	0.000E+00	NOT IDENT.

NA-22	-2.050E-02	6.103E-02	9.620E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.971E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-5.330E-03	3.701E-02	5.932E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.450E-02	7.675E-02	0.000E+00	FAIL ABUN
SC-46	1.809E-03	5.352E-02	9.039E-02	0.000E+00	NOT IDENT.
V-48	-2.521E-02	1.097E-01	1.521E-01	0.000E+00	NOT IDENT.
CR-51	-2.760E-01	4.506E-01	7.422E-01	0.000E+00	NOT IDENT.
MN-52	6.366E-02	2.392E-01	4.194E-01	0.000E+00	NOT IDENT.
MN-54	-4.268E-02	5.194E-02	8.136E-02	0.000E+00	NOT IDENT.
CO-56	2.208E-02	5.147E-02	9.006E-02	0.000E+00	NOT IDENT.
CO-57	1.029E-02	2.883E-02	4.930E-02	0.000E+00	NOT IDENT.
CO-58	-2.131E-02	5.377E-02	8.778E-02	0.000E+00	NOT IDENT.
FE-59	-6.004E-02	1.120E-01	1.740E-01	0.000E+00	NOT IDENT.
CO-60	-1.086E-03	5.596E-02	9.113E-02	0.000E+00	NOT IDENT.
ZN-65	-1.340E-01	1.527E-01	1.887E-01	0.000E+00	NOT IDENT.
GE-68	-1.967E-01	1.895E+00	3.113E+00	0.000E+00	NOT IDENT.
AS-73	2.104E-02	2.702E-01	4.642E-01	0.000E+00	NOT IDENT.
AS-74	7.911E-02	1.188E-01	2.058E-01	0.000E+00	NOT IDENT.
SE-75	-4.108E-03	6.366E-02	8.996E-02	0.000E+00	NOT IDENT.
BR-77	6.713E-02	9.146E+00	1.480E+01	0.000E+00	FAIL ABUN
SR-82	2.430E-02	4.617E-01	7.865E-01	0.000E+00	NOT IDENT.
RB-83	-7.158E-04	9.070E-02	1.419E-01	0.000E+00	NOT IDENT.
RB-84	7.384E-02	9.322E-02	1.674E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.133E+01	1.936E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.728E-02	9.786E-02	0.000E+00	NOT IDENT.
RB-86	4.235E-01	1.106E+00	1.899E+00	0.000E+00	NOT IDENT.
Y-88	3.039E-02	5.232E-02	9.517E-02	0.000E+00	NOT IDENT.
ZR-88	1.672E-02	4.187E-02	7.232E-02	0.000E+00	NOT IDENT.
Y-91	2.130E+01	2.540E+01	4.497E+01	0.000E+00	NOT IDENT.
NB-94	-5.044E-03	4.836E-02	7.815E-02	0.000E+00	NOT IDENT.
NB-95	1.505E-02	5.802E-02	1.003E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.803E-01	2.876E-01	0.000E+00	NOT IDENT.
ZR-95	-3.540E-02	9.564E-02	1.575E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.366E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.240E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.032E+00	1.157E+01	1.954E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.079E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.920E-02	4.388E-02	7.176E-02	0.000E+00	NOT IDENT.
RH-102	-2.512E-02	4.002E-02	6.387E-02	0.000E+00	NOT IDENT.
RU-103	4.992E-02	5.143E-02	9.119E-02	0.000E+00	FAIL ABUN
RH-106	2.038E-01	4.482E-01	7.624E-01	0.000E+00	FAIL ABUN
RU-106	2.038E-01	4.477E-01	7.624E-01	0.000E+00	FAIL ABUN
AG-108M	-6.305E-03	4.298E-02	7.147E-02	0.000E+00	NOT IDENT.
AG-110M	2.083E-02	5.904E-02	8.663E-02	0.000E+00	NOT IDENT.
IN-111	1.818E-01	1.057E+00	1.529E+00	0.000E+00	NOT IDENT.
IN-113M	1.170E-03	6.161E-02	1.042E-01	0.000E+00	NOT IDENT.
SN-113	1.170E-03	6.161E-02	1.042E-01	0.000E+00	NOT IDENT.
IN-114M	-8.323E-03	2.614E-01	3.779E-01	0.000E+00	NOT IDENT.
CD-115	6.553E-02	9.481E+00	1.575E+01	0.000E+00	NOT IDENT.
SN-117M	-8.508E-02	6.125E-02	9.467E-02	0.000E+00	NOT IDENT.
SB-122	1.721E+00	2.058E+00	3.604E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.222E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-4.362E-02	3.370E-02	5.240E-02	0.000E+00	NOT IDENT.
I-124	-8.358E-01	9.048E-01	1.154E+00	0.000E+00	NOT IDENT.
SB-124	7.105E-02	1.067E-01	1.972E-01	0.000E+00	FAIL ABUN
SB-125	2.685E-02	1.245E-01	2.122E-01	0.000E+00	FAIL ABUN
TE-125M	1.166E+00	1.024E+01	1.744E+01	0.000E+00	NOT IDENT.
I-126	2.939E-01	2.619E-01	4.171E-01	0.000E+00	NOT IDENT.
SB-126	3.437E-02	2.078E-01	3.114E-01	0.000E+00	FAIL ABUN
SB-127	-6.716E-01	1.462E+00	2.285E+00	0.000E+00	NOT IDENT.
XE-127	-5.761E-02	6.199E-02	8.898E-02	0.000E+00	NOT IDENT.
I-131	1.722E-01	1.354E-01	2.450E-01	0.000E+00	NOT IDENT.
TE-132	-1.927E-01	6.194E-01	9.990E-01	0.000E+00	NOT IDENT.
BA-133	-1.106E-02	6.254E-02	9.088E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.684E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	4.202E-02	5.935E-02	1.062E-01	0.000E+00	NOT IDENT.
CS-135	3.430E-01	2.438E-01	3.766E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.347E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.426E-02	1.496E-01	2.465E-01	0.000E+00	FAIL ABUN
CE-139	-3.072E-03	3.567E-02	5.922E-02	0.000E+00	NOT IDENT.
BA-140	-1.141E-01	3.413E-01	5.487E-01	0.000E+00	NOT IDENT.
LA-140	-8.984E-02	1.117E-01	1.635E-01	0.000E+00	FAIL ABUN
CE-141	1.613E-02	7.642E-02	1.261E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.369E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	6.833E-02	2.733E-01	4.085E-01	0.000E+00	NOT IDENT.
PM-144	2.135E-02	4.698E-02	7.960E-02	0.000E+00	NOT IDENT.
PR-144	1.446E+00	3.182E+00	5.390E+00	0.000E+00	NOT IDENT.
PM-146	4.143E-02	5.733E-02	1.005E-01	0.000E+00	NOT IDENT.

ND-147	5.557E-01	7.159E-01	1.249E+00	0.000E+00	FAIL ABUN
PM-149	3.223E+01	6.982E+01	1.225E+02	0.000E+00	NOT IDENT.
EU-152	7.887E-02	1.502E-01	2.057E-01	0.000E+00	FAIL ABUN
GD-153	-2.762E-02	9.227E-02	1.360E-01	0.000E+00	NOT IDENT.
EU-154	-1.984E-03	1.658E-01	2.712E-01	0.000E+00	NOT IDENT.
EU-155	4.935E-02	1.158E-01	1.996E-01	0.000E+00	FAIL ABUN
TB-160	-4.487E-02	1.973E-01	3.169E-01	0.000E+00	FAIL ABUN
HO-166M	-2.356E-02	8.602E-02	1.437E-01	0.000E+00	NOT IDENT.
TM-171	-9.428E-01	1.957E+01	2.968E+01	0.000E+00	NOT IDENT.
LU-176	9.732E-03	3.144E-02	5.462E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.718E+00	2.144E+00	0.000E+00	FAIL ABUN
LU-177M	6.746E-02	2.488E-01	3.728E-01	0.000E+00	FAIL ABUN
HF-181	2.049E-02	5.778E-02	9.877E-02	0.000E+00	NOT IDENT.
W-181	2.707E-01	2.442E-01	3.863E-01	0.000E+00	NOT IDENT.
TA-182	1.200E-01	2.637E-01	4.518E-01	0.000E+00	NOT IDENT.
RE-183	6.415E-02	1.262E-01	2.150E-01	0.000E+00	FAIL ABUN
RE-184	-2.401E-01	2.910E-01	4.512E-01	0.000E+00	NOT IDENT.
OS-185	-6.139E-02	6.104E-02	9.115E-02	0.000E+00	NOT IDENT.
RE-188	1.537E-01	2.030E-01	3.490E-01	0.000E+00	NOT IDENT.
W-188	-3.344E+00	9.912E+00	1.443E+01	0.000E+00	FAIL ABUN
IR-192	-3.591E-04	4.147E-02	7.082E-02	0.000E+00	FAIL ABUN
AU-195	3.934E-01	2.490E-01	4.161E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.466E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.469E+00	6.234E+00	1.056E+01	0.000E+00	NOT IDENT.
TL-202	4.367E-02	8.307E-02	1.443E-01	0.000E+00	NOT IDENT.
HG-203	5.797E-02	4.910E-02	8.856E-02	0.000E+00	FAIL ABUN
BI-207	5.525E-02	6.906E-02	1.236E-01	0.000E+00	FAIL ABUN
TL-207	-1.441E-02	9.522E-01	1.412E+00	0.000E+00	FAIL ABUN
PO-209	-2.496E+00	1.057E+01	1.737E+01	0.000E+00	NOT IDENT.
PB-211	3.169E-02	1.477E+00	2.165E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.621E-01	9.544E-01	0.000E+00	FAIL ABUN
BI-214	0.000E+00	2.218E-01	3.348E-01	0.000E+00	FAIL ABUN
PO-215	-1.441E-02	9.522E-01	1.412E+00	0.000E+00	FAIL ABUN
RN-219	2.437E-01	5.855E-01	1.009E+00	0.000E+00	FAIL ABUN
RN-220	-9.442E+00	3.507E+01	5.684E+01	0.000E+00	NOT IDENT.
RA-223	-1.441E-02	9.522E-01	1.412E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	2.218E-01	3.348E-01	0.000E+00	FAIL ABUN
AC-227	1.083E-01	4.663E-01	7.709E-01	0.000E+00	NOT IDENT.
TH-227	1.083E-01	4.664E-01	7.709E-01	0.000E+00	FAIL ABUN
TH-229	-4.129E-01	6.667E-01	1.071E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.218E-01	3.348E-01	0.000E+00	FAIL ABUN
PA-231	-1.352E+00	1.824E+00	2.989E+00	0.000E+00	NOT IDENT.
TH-231	-1.441E-02	9.522E-01	1.412E+00	0.000E+00	FAIL ABUN
U-231	-3.002E-01	9.907E-01	1.461E+00	0.000E+00	FAIL ABUN
PA-233	2.210E-02	7.622E-02	1.324E-01	0.000E+00	FAIL ABUN
PA-234	-1.523E-01	3.921E-01	6.283E-01	0.000E+00	FAIL ABUN
PA-234M	6.162E+00	8.634E+00	1.533E+01	0.000E+00	NOT IDENT.
U-234	0.000E+00	2.218E-01	3.348E-01	0.000E+00	FAIL ABUN
U-235	2.264E-01	2.645E-01	4.421E-01	0.000E+00	FAIL ABUN
NP-236	2.127E-02	9.068E-02	1.529E-01	0.000E+00	NOT IDENT.
NP-239	2.167E-01	2.143E-01	3.737E-01	0.000E+00	FAIL ABUN
AM-241	-7.890E-03	7.662E-02	1.164E-01	0.000E+00	NOT IDENT.
CM-243	-6.251E-02	1.035E-01	1.713E-01	0.000E+00	FAIL ABUN
CM-247	1.130E-02	5.556E-02	8.962E-02	0.000E+00	NOT IDENT.
CF-249	2.798E-02	5.494E-02	9.548E-02	0.000E+00	NOT IDENT.
CF-251	1.468E-02	1.507E-01	2.517E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:07:02.04

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433003.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:05:07.
Sample ID         : G232433003           Sample quantity  : 1.03260E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.66  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	870	10.67*	1.003E+00	2.955E+01	2.955E+01	9.35
CD-109	88.03	214	3.72*	7.856E+00	2.656E+00	2.711E+00	36.31
SN-126	64.28	195	9.60	8.064E+00	9.141E-01	9.141E-01	52.40
	86.94	214	8.90	7.856E+00	1.110E+00	1.110E+00	54.35
	87.57	214	37.00*	7.856E+00	2.670E-01	2.670E-01	36.31
BA-137M	661.65	115	89.98*	2.016E+00	2.313E-01	2.315E-01	40.94
CS-137	661.65	115	85.12*	2.016E+00	2.445E-01	2.447E-01	40.94
TL-208	277.35	------	6.80	4.261E+00	------ Line Not Found		------
	510.84	60	21.60	2.543E+00	3.990E-01	3.990E-01	121.83
	583.14	312	84.20*	2.259E+00	5.957E-01	5.957E-01	20.98
	860.37	48	12.46	1.589E+00	8.782E-01	8.782E-01	52.54
BI-210	46.50	321	4.05*	7.628E+00	3.772E+00	3.777E+00	30.27
PB-210	46.50	321	4.05*	7.628E+00	3.772E+00	3.777E+00	30.27
PO-210	46.50	321	4.05*	7.628E+00	3.772E+00	3.777E+00	30.01
BI-211	72.87	126	1.27	8.051E+00	4.481E+00	4.481E+00	52.02
	351.07	481	12.94*	3.516E+00	3.846E+00	3.846E+00	16.76
PB-212	74.81	613	10.70	8.036E+00	2.592E+00	2.592E+00	18.67
	77.11	943	18.00	8.013E+00	2.377E+00	2.377E+00	12.68
	87.30	214	8.00	7.856E+00	1.235E+00	1.235E+00	37.66
	238.63	1069	44.60*	4.773E+00	1.826E+00	1.826E+00	13.07
	300.09	------	3.41	4.005E+00	------ Line Not Found		------
PO-212	74.81	613	10.70	8.036E+00	2.592E+00	2.592E+00	18.67
	77.11	943	18.00	8.013E+00	2.377E+00	2.377E+00	12.68
	87.30	214	8.00	7.856E+00	1.235E+00	1.235E+00	37.66
	115.19	------	0.60	7.241E+00	------ Line Not Found		------
	238.63	1069	44.60*	4.773E+00	1.826E+00	1.826E+00	13.07
	300.09	------	3.41	4.005E+00	------ Line Not Found		------
PB-214	74.81	613	6.21	8.036E+00	4.467E+00	4.467E+00	17.78
	77.11	943	10.50	8.013E+00	4.075E+00	4.075E+00	14.79
	87.30	214	4.67	7.856E+00	2.115E+00	2.116E+00	37.11
	241.98	257	7.49	4.730E+00	2.634E+00	2.634E+00	35.90
	295.21	267	19.20	4.056E+00	1.244E+00	1.244E+00	24.64

Sample ID : G232433003 Acquisition date : 7-JUL-2009 06:05:07

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	481	37.20*	3.516E+00	1.338E+00	1.338E+00	17.55
PO-214	74.81	613	6.21	8.036E+00	4.467E+00	4.467E+00	17.78
	77.11	943	10.50	8.013E+00	4.075E+00	4.075E+00	14.79
	87.30	214	4.67	7.856E+00	2.115E+00	2.116E+00	37.11
	241.98	257	7.49	4.730E+00	2.634E+00	2.634E+00	35.90
	295.21	267	19.20	4.056E+00	1.244E+00	1.244E+00	24.64
	351.92	481	37.20*	3.516E+00	1.338E+00	1.338E+00	17.55
PO-216	74.81	613	10.70	8.036E+00	2.592E+00	2.592E+00	18.67
	77.11	943	18.00	8.013E+00	2.377E+00	2.377E+00	12.68
	87.30	214	8.00	7.856E+00	1.235E+00	1.235E+00	37.66
	238.63	1069	44.60*	4.773E+00	1.826E+00	1.826E+00	13.07
	300.09	------	3.41	4.005E+00	------ Line Not Found		------
PO-218	74.81	613	6.21	8.036E+00	4.467E+00	4.467E+00	17.78
	77.11	943	10.50	8.013E+00	4.075E+00	4.075E+00	14.79
	87.30	214	4.67	7.856E+00	2.115E+00	2.116E+00	37.11
	241.98	257	7.49	4.730E+00	2.634E+00	2.634E+00	35.90
	295.21	267	19.20	4.056E+00	1.244E+00	1.244E+00	24.64
	351.92	481	37.20*	3.516E+00	1.338E+00	1.338E+00	17.55
RA-224	240.98	257	3.95*	4.730E+00	4.994E+00	4.994E+00	35.46
AC-228	338.32	213	11.40	3.632E+00	1.868E+00	1.868E+00	50.08
	911.07	245	27.70*	1.510E+00	2.127E+00	2.127E+00	21.73
	969.11	129	16.60	1.430E+00	1.973E+00	1.973E+00	35.62
RA-228	338.32	213	11.40	3.632E+00	1.868E+00	1.868E+00	50.08
	911.07	245	27.70*	1.510E+00	2.127E+00	2.127E+00	21.73
	969.11	129	16.60	1.430E+00	1.973E+00	1.973E+00	35.62
TH-228	84.40	------	1.21	7.908E+00	------ Line Not Found		------
	238.60	1069	44.60*	4.773E+00	1.826E+00	1.826E+00	13.07
	300.10	------	3.41	4.005E+00	------ Line Not Found		------
TH-232	338.32	213	11.40	3.632E+00	1.868E+00	1.868E+00	29.66
	911.07	245	27.70*	1.510E+00	2.127E+00	2.127E+00	21.73
	969.11	129	16.60	1.430E+00	1.973E+00	1.973E+00	35.62
TH-234	63.29	195	3.80*	8.064E+00	2.309E+00	2.309E+00	53.28
	92.38	447	5.41	7.751E+00	3.876E+00	3.876E+00	29.30
NP-237	86.50	214	12.60*	7.856E+00	7.841E-01	7.841E-01	41.76
	95.87	------	2.60	7.687E+00	------ Line Not Found		------
U-238	63.29	195	3.80*	8.064E+00	2.309E+00	2.309E+00	53.28
	92.38	447	5.41	7.751E+00	3.876E+00	3.876E+00	24.62
AM-243	74.67	613	66.00*	8.036E+00	4.203E-01	4.203E-01	16.17
	86.72	214	0.34	7.856E+00	2.940E+01	2.940E+01	36.31
	117.66	------	0.55	7.181E+00	------ Line Not Found		------
	142.18	------	0.13	6.593E+00	------ Line Not Found		------
ANH-511	511.00	60	100.00*	2.543E+00	8.619E-02	8.619E-02	121.55

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232433003

Acquisition date : 7-JUL-2009 06:05:07

Total number of lines in spectrum 33
Number of unidentified lines 2
Number of lines tentatively identified by NID 31 93.94%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.955E+01	2.955E+01	0.276E+01	9.35	
CD-109	464.00D	1.02	2.656E+00	2.711E+00	0.984E+00	36.31	
SN-126	1.00E+05Y	1.00	2.670E-01	2.670E-01	0.969E-01	36.31	
BA-137M	30.17Y	1.00	2.313E-01	2.315E-01	0.948E-01	40.94	
CS-137	30.17Y	1.00	2.445E-01	2.447E-01	1.002E-01	40.94	
TL-208	1.41E+10Y	1.00	5.957E-01	5.957E-01	1.250E-01	20.98	
BI-210	22.26Y	1.00	3.772E+00	3.777E+00	1.143E+00	30.27	
PB-210	22.26Y	1.00	3.772E+00	3.777E+00	1.143E+00	30.27	
PO-210	22.26Y	1.00	3.772E+00	3.777E+00	1.133E+00	30.01	
BI-211	7.04E+08Y	1.00	3.846E+00	3.846E+00	0.644E+00	16.76	
PB-212	1.41E+10Y	1.00	1.826E+00	1.826E+00	0.239E+00	13.07	
PO-212	1.41E+10Y	1.00	1.826E+00	1.826E+00	0.239E+00	13.07	
PB-214	1600.00Y	1.00	1.338E+00	1.338E+00	0.235E+00	17.55	
PO-214	1600.00Y	1.00	1.338E+00	1.338E+00	0.235E+00	17.55	
PO-216	1.41E+10Y	1.00	1.826E+00	1.826E+00	0.239E+00	13.07	
PO-218	1600.00Y	1.00	1.338E+00	1.338E+00	0.235E+00	17.55	
RA-224	1.41E+10Y	1.00	4.994E+00	4.994E+00	1.771E+00	35.46	
AC-228	1.41E+10Y	1.00	2.127E+00	2.127E+00	0.462E+00	21.73	
RA-228	1.41E+10Y	1.00	2.127E+00	2.127E+00	0.462E+00	21.73	
TH-228	1.41E+10Y	1.00	1.826E+00	1.826E+00	0.239E+00	13.07	
TH-232	1.41E+10Y	1.00	2.127E+00	2.127E+00	0.462E+00	21.73	
TH-234	4.47E+09Y	1.00	2.309E+00	2.309E+00	1.230E+00	53.28	
NP-237	2.14E+06Y	1.00	7.841E-01	7.841E-01	3.274E-01	41.76	
U-238	4.47E+09Y	1.00	2.309E+00	2.309E+00	1.230E+00	53.28	
AM-243	7380.00Y	1.00	4.203E-01	4.203E-01	0.679E-01	16.17	
ANH-511	1.00E+09Y	1.00	8.619E-02	8.619E-02	10.48E-02	121.55	
			---	---			
	Total Activity :		7.731E+01	7.738E+01			

Grand Total Activity : 7.731E+01 7.738E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433003 Acquisition date : 7-JUL-2009 06:05:07

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.83	105	239	0.94	180.81	179	14	1.46E-02	44.8	7.81E+00	T
0	129.01	135	279	1.06	259.13	255	9	1.87E-02	48.1	6.91E+00	T
0	186.02	168	333	1.41	373.09	368	11	2.33E-02	46.3	5.66E+00	T
0	209.48	102	260	1.41	419.99	414	11	1.41E-02	64.8	5.23E+00	T
0	269.97	82	213	1.28	540.90	536	11	1.14E-02	72.2	4.35E+00	T
0	327.99	52	142	0.89	656.89	654	9	7.20E-03	87.3	3.73E+00	T
0	409.27	50	130	1.00	819.34	815	11	7.00E-03	91.8	3.09E+00	
0	462.82	85	85	1.26	926.35	920	12	1.18E-02	49.1	2.78E+00	T
0	609.39	301	105	1.43	1219.28	1212	14	4.17E-02	19.1	2.17E+00	T
0	727.11	106	62	1.82	1454.52	1449	14	1.48E-02	37.1	1.85E+00	T
1	964.39	63	50	2.17	1928.60	1920	42	8.74E-03	50.3	1.44E+00	T
0	1124.64	213	48	4.66	2248.73	2233	40	2.96E-02	25.9	1.25E+00	T
0	1729.72	14	7	1.52	3457.11	3452	9	1.98E-03	84.2	8.75E-01	
0	1764.16	51	0	1.90	3525.88	3518	14	7.06E-03	30.9	8.61E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:07:07.03

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433003.CNF;1 *
* Acquisition date  : 7-JUL-2009 06:05:07.  Detector SN#     :             *
* Detector ID       : GAM05                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.66          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433003            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 1.03260E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00.5MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.955E+01	2.763E+00	7.854E-01	4.884E-02	37.620
CD-109	2.711E+00	9.842E-01	1.295E+00	9.862E-02	2.093
SN-126	2.670E-01	9.694E-02	1.274E-01	9.700E-03	2.096
BA-137M	2.315E-01	9.476E-02	9.035E-02	5.941E-03	2.562
CS-137	2.447E-01	1.002E-01	9.551E-02	6.301E-03	2.562
TL-208	5.957E-01	1.250E-01	8.147E-02	5.995E-03	7.311
BI-210	3.777E+00	1.143E+00	1.036E+00	8.085E-02	3.644
PB-210	3.777E+00	1.143E+00	1.036E+00	8.085E-02	3.644
PO-210	3.777E+00	1.133E+00	1.036E+00	6.971E-02	3.644
BI-211	3.846E+00	6.444E-01	4.167E-01	3.302E-02	9.229
PB-212	1.826E+00	2.388E-01	1.093E-01	1.179E-02	16.704
PO-212	1.826E+00	2.388E-01	1.093E-01	1.179E-02	16.704
PB-214	1.338E+00	2.348E-01	1.453E-01	1.375E-02	9.208
PO-214	1.338E+00	2.348E-01	1.453E-01	1.375E-02	9.208
PO-216	1.826E+00	2.388E-01	1.093E-01	1.179E-02	16.704
PO-218	1.338E+00	2.348E-01	1.453E-01	1.375E-02	9.208
RA-224	4.994E+00	1.771E+00	1.245E+00	1.218E-01	4.013
AC-228	2.127E+00	4.621E-01	2.851E-01	3.529E-02	7.460

Sample ID : G232433003 Acquisition date : 7-JUL-2009 06:05:07

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	2.127E+00	4.621E-01	2.851E-01	3.529E-02	7.460
TH-228	1.826E+00	2.388E-01	1.093E-01	1.179E-02	16.706
TH-232	2.127E+00	4.621E-01	2.851E-01	3.529E-02	7.460
TH-234	2.309E+00	1.230E+00	1.167E+00	2.074E-01	1.978
NP-237	7.841E-01	3.274E-01	3.942E-01	8.673E-02	1.989
U-238	2.309E+00	1.230E+00	1.167E+00	2.074E-01	1.978
AM-243	4.203E-01	6.794E-02	6.766E-02	5.299E-03	6.211
ANH-511	8.619E-02	1.048E-01	6.296E-02	4.030E-03	1.369

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.598E-02		4.286E-01	7.056E-01	5.055E-02	0.023
NA-22	-2.050E-02		6.228E-02	9.688E-02	5.643E-03	-0.212
NA-24	1.271E-02		1.006E-01	Half-Life too short		
AL-26	-5.330E-03		3.777E-02	5.983E-02	3.433E-03	-0.089
TI-44	4.386E-01	+	5.561E-02	7.642E-02	5.929E-03	5.740
SC-46	1.809E-03		5.461E-02	9.090E-02	9.130E-03	0.020
V-48	-2.521E-02		1.120E-01	1.530E-01	1.402E-02	-0.165
CR-51	-2.760E-01		4.598E-01	7.433E-01	6.573E-02	-0.371
MN-52	6.366E-02		2.441E-01	4.226E-01	2.475E-02	0.151
MN-54	-4.268E-02		5.300E-02	8.180E-02	7.494E-03	-0.522
CO-56	2.208E-02		5.252E-02	9.055E-02	8.468E-03	0.244
CO-57	1.029E-02		2.942E-02	4.918E-02	6.977E-03	0.209
CO-58	-2.131E-02		5.487E-02	8.824E-02	7.767E-03	-0.241
FE-59	-6.004E-02		1.143E-01	1.752E-01	1.419E-02	-0.343
CO-60	-1.086E-03		5.710E-02	9.180E-02	5.312E-03	-0.012
ZN-65	-1.340E-01		1.558E-01	1.899E-01	1.327E-02	-0.706
GE-68	-1.967E-01		1.934E+00	3.134E+00	2.407E-01	-0.063
AS-73	2.104E-02		2.757E-01	4.615E-01	3.474E-02	0.046
AS-74	7.911E-02		1.212E-01	2.066E-01	1.359E-02	0.383
SE-75	-4.108E-03		6.496E-02	9.001E-02	8.593E-03	-0.046
BR-77	6.713E-02		9.333E+00	1.485E+01	9.549E-01	0.005
SR-82	2.430E-02		4.711E-01	7.905E-01	6.522E-02	0.031
RB-83	-7.158E-04		9.255E-02	1.424E-01	9.156E-03	-0.005
RB-84	7.384E-02		9.513E-02	1.683E-01	1.669E-02	0.439
KR-85	2.548E+01		1.156E+01	1.943E+01	1.245E+00	1.312
SR-85	1.288E-01		5.845E-02	9.819E-02	6.294E-03	1.312
RB-86	4.235E-01		1.129E+00	1.911E+00	1.471E-01	0.222
Y-88	3.039E-02		5.338E-02	9.600E-02	5.492E-03	0.317
ZR-88	1.672E-02		4.273E-02	7.248E-02	4.221E-03	0.231
Y-91	2.130E+01		2.591E+01	4.528E+01	2.631E+00	0.470
NB-94	-5.044E-03		4.934E-02	7.851E-02	5.618E-03	-0.064
NB-95	1.505E-02		5.920E-02	1.008E-01	8.155E-03	0.149
NB-95M	4.232E-01		1.840E-01	2.877E-01	3.147E-02	1.471
ZR-95	-3.540E-02		9.759E-02	1.583E-01	1.406E-02	-0.224
NB-97	2.254E-02		2.227E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1.064E+00		3.694E-01	Half-Life too short		
MO-99	-1.032E+00		1.180E+01	1.963E+01	2.882E+00	-0.053
TC-99M	-6.685E+08		5.507E+08	Half-Life too short		
RH-101	1.920E-02		4.477E-02	7.172E-02	7.162E-03	0.268
RH-102	-2.512E-02		4.083E-02	6.407E-02	4.013E-03	-0.392
RU-103	4.992E-02		5.248E-02	9.148E-02	1.181E-02	0.546
RH-106	2.038E-01		4.573E-01	7.656E-01	9.301E-02	0.266
RU-106	2.038E-01		4.569E-01	7.656E-01	5.047E-02	0.266
AG-108M	-6.305E-03		4.385E-02	7.166E-02	4.689E-03	-0.088
AG-110M	2.083E-02		6.024E-02	8.701E-02	6.014E-03	0.239
IN-111	1.818E-01		1.079E+00	1.529E+00	1.490E-01	0.119
IN-113M	1.170E-03		6.287E-02	1.044E-01	6.478E-03	0.011
SN-113	1.170E-03		6.287E-02	1.044E-01	6.478E-03	0.011
IN-114M	-8.323E-03		2.668E-01	3.776E-01	3.771E-02	-0.022
CD-115	6.553E-02		9.675E+00	1.581E+01	1.020E+00	0.004
SN-117M	-8.508E-02		6.250E-02	9.453E-02	1.016E-02	-0.900
SB-122	1.721E+00		2.100E+00	3.618E+00	2.364E-01	0.476
I-123	-1.582E+00		6.234E-01	Half-Life too short		
TE-123M	-4.362E-02		3.438E-02	5.232E-02	5.622E-03	-0.834
I-124	-8.358E-01		9.232E-01	1.158E+00	7.625E-02	-0.722
SB-124	7.105E-02		1.089E-01	1.989E-01	1.259E-02	0.357
SB-125	2.685E-02		1.271E-01	2.127E-01	1.334E-02	0.126
TE-125M	1.166E+00		1.045E+01	1.738E+01	2.234E+00	0.067
I-126	2.939E-01		2.672E-01	4.189E-01	2.782E-02	0.702
SB-126	3.437E-02		2.121E-01	3.128E-01	2.320E-02	0.110
SB-127	-6.716E-01		1.492E+00	2.295E+00	2.229E-01	-0.293
XE-127	-5.761E-02		6.325E-02	8.894E-02	8.877E-03	-0.648
I-131	1.722E-01		1.381E-01	2.455E-01	1.840E-02	0.702
TE-132	-1.927E-01		6.321E-01	9.990E-01	1.620E-01	-0.193
BA-133	-1.106E-02		6.382E-02	9.105E-02	1.124E-02	-0.121
I-133	2.100E-03		1.369E-03	Half-Life too short		
CS-134	4.202E-02		6.056E-02	1.068E-01	9.196E-03	0.394
CS-135	3.430E-01		2.488E-01	3.769E-01	4.032E-02	0.910
I-135	1.274E+08		1.198E+08	Half-Life too short		
CS-136	-1.426E-02		1.527E-01	2.480E-01	2.124E-02	-0.057
CE-139	-3.072E-03		3.640E-02	5.915E-02	5.872E-03	-0.052
BA-140	-1.141E-01		3.482E-01	5.506E-01	1.798E-01	-0.207
LA-140	-8.984E-02		1.139E-01	1.648E-01	9.687E-03	-0.545
CE-141	1.613E-02		7.798E-02	1.258E-01	1.538E-02	0.128
CE-143	3.943E-04		6.985E-05	Half-Life too short		
CE-144	6.833E-02		2.788E-01	4.076E-01	7.546E-02	0.168
PM-144	2.135E-02		4.794E-02	7.996E-02	5.653E-03	0.267
PR-144	1.446E+00		3.246E+00	5.415E+00	3.826E-01	0.267
PM-146	4.143E-02		5.850E-02	1.008E-01	8.946E-03	0.411
ND-147	5.557E-01		7.305E-01	1.253E+00	1.732E-01	0.443
PM-149	3.223E+01		7.125E+01	1.226E+02	1.942E+01	0.263
EU-152	7.887E-02		1.532E-01	2.060E-01	1.694E-02	0.383
GD-153	-2.762E-02		9.415E-02	1.355E-01	1.256E-02	-0.204

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154	-1.984E-03		1.692E-01	2.732E-01	2.554E-02	-0.007
EU-155	4.935E-02		1.182E-01	1.989E-01	2.155E-02	0.248
TB-160	-4.487E-02		2.013E-01	3.187E-01	3.149E-02	-0.141
HO-166M	-2.356E-02		8.777E-02	1.444E-01	1.052E-02	-0.163
TM-171	-9.428E-01		1.997E+01	2.954E+01	2.373E+00	-0.032
LU-176	9.732E-03		3.208E-02	5.469E-02	4.763E-03	0.178
LU-177	2.673E+00	+	1.753E+00	2.144E+00	2.137E-01	1.247
LU-177M	6.746E-02		2.539E-01	3.737E-01	2.224E-02	0.181
HF-181	2.049E-02		5.896E-02	9.908E-02	6.235E-03	0.207
W-181	2.707E-01		2.491E-01	3.843E-01	3.107E-02	0.704
TA-182	1.200E-01		2.691E-01	4.549E-01	2.645E-02	0.264
RE-183	6.415E-02		1.287E-01	2.147E-01	2.218E-02	0.299
RE-184	-2.401E-01		2.969E-01	4.514E-01	4.361E-02	-0.532
OS-185	-6.139E-02		6.228E-02	9.155E-02	6.031E-03	-0.671
RE-188	1.537E-01		2.071E-01	3.484E-01	3.879E-02	0.441
W-188	-3.344E+00		1.011E+01	1.445E+01	1.309E+00	-0.231
IR-192	-3.591E-04		4.232E-02	7.091E-02	6.018E-03	-0.005
AU-195	3.934E-01		2.541E-01	4.146E-01	3.954E-02	0.949
TL-200	-1.852E-04		1.258E-04	Half-Life too short		
TL-201	2.469E+00		6.361E+00	1.054E+01	1.047E+00	0.234
TL-202	4.367E-02		8.476E-02	1.447E-01	8.819E-03	0.302
HG-203	5.797E-02		5.010E-02	8.864E-02	8.427E-03	0.654
BI-207	5.525E-02		7.047E-02	1.244E-01	9.854E-03	0.444
TL-207	-1.441E-02		9.716E-01	1.414E+00	2.480E-01	-0.010
PO-209	-2.496E+00		1.078E+01	1.747E+01	1.776E+00	-0.143
PB-211	3.169E-02		1.507E+00	2.170E+00	1.353E+00	0.015
BI-212	1.769E+00	+	6.756E-01	9.590E-01	8.699E-02	1.844
BI-214	1.087E+00	+	2.263E-01	3.362E-01	2.818E-02	3.233
PO-215	-1.441E-02		9.716E-01	1.414E+00	2.480E-01	-0.010
RN-219	2.437E-01		5.975E-01	1.012E+00	1.380E-01	0.241
RN-220	-9.442E+00		3.579E+01	5.705E+01	3.712E+00	-0.166
RA-223	-1.441E-02		9.716E-01	1.414E+00	2.480E-01	-0.010
RA-226	1.087E+00	+	2.263E-01	3.362E-01	2.818E-02	3.233
AC-227	1.083E-01		4.758E-01	7.713E-01	1.229E-01	0.140
TH-227	1.083E-01		4.759E-01	7.713E-01	1.432E-01	0.140
TH-229	-4.129E-01		6.804E-01	1.070E+00	1.069E-01	-0.386
TH-230	1.087E+00	+	2.263E-01	3.362E-01	2.818E-02	3.233
PA-231	-1.352E+00		1.861E+00	2.992E+00	4.644E-01	-0.452
TH-231	-1.441E-02		9.716E-01	1.414E+00	2.480E-01	-0.010
U-231	-3.002E-01		1.011E+00	1.456E+00	1.308E-01	-0.206
PA-233	2.210E-02		7.778E-02	1.325E-01	1.170E-02	0.167
PA-234	-1.523E-01		4.001E-01	6.320E-01	1.217E-01	-0.241
PA-234M	6.162E+00		8.810E+00	1.543E+01	1.759E+00	0.399
U-234	1.087E+00	+	2.263E-01	3.362E-01	2.818E-02	3.233
U-235	2.264E-01		2.699E-01	4.413E-01	8.635E-02	0.513
NP-236	2.127E-02		9.253E-02	1.527E-01	1.612E-02	0.139
NP-239	2.167E-01		2.187E-01	3.727E-01	4.883E-02	0.581
AM-241	-7.890E-03		7.818E-02	1.157E-01	1.035E-02	-0.068

Sample ID : G232433003 Acquisition date : 7-JUL-2009 06:05:07

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-6.251E-02		1.056E-01	1.707E-01	1.784E-02	-0.366
CM-247	1.130E-02		5.669E-02	8.983E-02	5.286E-03	0.126
CF-249	2.798E-02		5.606E-02	9.569E-02	5.723E-03	0.292
CF-251	1.468E-02		1.538E-01	2.514E-01	2.504E-02	0.058

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433003           *
* Acquisition date  :  7-JUL-2009 06:05:07 Detector SN#     :               *
* Detector ID       : GAM05                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.66     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433003           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.0326E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.955E+01	2.708E+00	3.899E-01	1.382E+00
CD-109	2.711E+00	9.646E-01	6.505E-01	4.921E-01
SN-126	2.670E-01	9.500E-02	6.397E-02	4.847E-02
BA-137M	2.315E-01	9.286E-02	4.500E-02	4.738E-02
CS-137	2.447E-01	9.817E-02	4.757E-02	5.009E-02
TL-208	5.957E-01	1.225E-01	4.060E-02	6.249E-02
BI-210	3.777E+00	1.120E+00	5.219E-01	5.716E-01
PB-210	3.777E+00	1.120E+00	5.219E-01	5.716E-01
PO-210	3.777E+00	1.111E+00	5.219E-01	5.667E-01
BI-211	3.846E+00	6.315E-01	2.081E-01	3.222E-01
PB-212	1.826E+00	2.340E-01	5.469E-02	1.194E-01
PO-212	1.826E+00	2.340E-01	5.469E-02	1.194E-01
PB-214	1.338E+00	2.301E-01	7.256E-02	1.174E-01
PO-214	1.338E+00	2.301E-01	7.256E-02	1.174E-01
PO-216	1.826E+00	2.340E-01	5.469E-02	1.194E-01
PO-218	1.338E+00	2.301E-01	7.256E-02	1.174E-01
RA-224	4.994E+00	1.736E+00	6.225E-01	8.855E-01
AC-228	2.127E+00	4.529E-01	1.418E-01	2.311E-01
RA-228	2.127E+00	4.529E-01	1.418E-01	2.311E-01
TH-228	1.826E+00	2.340E-01	5.469E-02	1.194E-01
TH-232	2.127E+00	4.529E-01	1.418E-01	2.311E-01
TH-234	2.309E+00	1.206E+00	5.871E-01	6.152E-01
NP-237	7.841E-01	3.209E-01	1.980E-01	1.637E-01
U-238	2.309E+00	1.206E+00	5.871E-01	6.152E-01
AM-243	4.203E-01	6.658E-02	3.400E-02	3.397E-02
ANH-511	8.619E-02	1.027E-01	3.140E-02	5.238E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.598E-02	4.200E-01	3.519E-01	2.143E-01 NOT IDENT.

NA-22	-2.050E-02	6.103E-02	4.813E-02	3.114E-02	NOT IDENT.
NA-24	1.271E+04	1.971E+05	0.000E+00	1.006E+05	SHORT HLIF
AL-26	-5.330E-03	3.701E-02	2.968E-02	1.888E-02	NOT IDENT.
TI-44	4.386E-01	5.450E-02	3.840E-02	2.780E-02	FAIL ABUN
SC-46	1.809E-03	5.352E-02	4.522E-02	2.730E-02	NOT IDENT.
V-48	-2.521E-02	1.097E-01	7.611E-02	5.599E-02	NOT IDENT.
CR-51	-2.760E-01	4.506E-01	3.713E-01	2.299E-01	NOT IDENT.
MN-52	6.366E-02	2.392E-01	2.098E-01	1.220E-01	NOT IDENT.
MN-54	-4.268E-02	5.194E-02	4.071E-02	2.650E-02	NOT IDENT.
CO-56	2.208E-02	5.147E-02	4.506E-02	2.626E-02	NOT IDENT.
CO-57	1.029E-02	2.883E-02	2.467E-02	1.471E-02	NOT IDENT.
CO-58	-2.131E-02	5.377E-02	4.392E-02	2.744E-02	NOT IDENT.
FE-59	-6.004E-02	1.120E-01	8.706E-02	5.713E-02	NOT IDENT.
CO-60	-1.086E-03	5.596E-02	4.559E-02	2.855E-02	NOT IDENT.
ZN-65	-1.340E-01	1.527E-01	9.439E-02	7.792E-02	NOT IDENT.
GE-68	-1.967E-01	1.895E+00	1.558E+00	9.670E-01	NOT IDENT.
AS-73	2.104E-02	2.702E-01	2.323E-01	1.378E-01	NOT IDENT.
AS-74	7.911E-02	1.188E-01	1.030E-01	6.062E-02	NOT IDENT.
SE-75	-4.108E-03	6.366E-02	4.501E-02	3.248E-02	NOT IDENT.
BR-77	6.713E-02	9.146E+00	7.404E+00	4.666E+00	FAIL ABUN
SR-82	2.430E-02	4.617E-01	3.935E-01	2.355E-01	NOT IDENT.
RB-83	-7.158E-04	9.070E-02	7.100E-02	4.628E-02	NOT IDENT.
RB-84	7.384E-02	9.322E-02	8.375E-02	4.756E-02	NOT IDENT.
KR-85	2.548E+01	1.133E+01	9.686E+00	5.782E+00	NOT IDENT.
SR-85	1.288E-01	5.728E-02	4.896E-02	2.922E-02	NOT IDENT.
RB-86	4.235E-01	1.106E+00	9.502E-01	5.645E-01	NOT IDENT.
Y-88	3.039E-02	5.232E-02	4.761E-02	2.669E-02	NOT IDENT.
ZR-88	1.672E-02	4.187E-02	3.618E-02	2.136E-02	NOT IDENT.
Y-91	2.130E+01	2.540E+01	2.250E+01	1.296E+01	NOT IDENT.
NB-94	-5.044E-03	4.836E-02	3.910E-02	2.467E-02	NOT IDENT.
NB-95	1.505E-02	5.802E-02	5.019E-02	2.960E-02	NOT IDENT.
NB-95M	4.232E-01	1.803E-01	1.439E-01	9.200E-02	NOT IDENT.
ZR-95	-3.540E-02	9.564E-02	7.879E-02	4.880E-02	NOT IDENT.
NB-97	2.254E+04	4.366E+04	0.000E+00	2.227E+04	SHORT HLIF
ZR-97	1.064E+06	7.240E+05	0.000E+00	3.694E+05	SHORT HLIF
MO-99	-1.032E+00	1.157E+01	9.775E+00	5.902E+00	NOT IDENT.
TC-99M	-6.685E+14	1.079E+15	0.000E+00	5.507E+14	SHORT HLIF
RH-101	1.920E-02	4.388E-02	3.590E-02	2.239E-02	NOT IDENT.
RH-102	-2.512E-02	4.002E-02	3.196E-02	2.042E-02	NOT IDENT.
RU-103	4.992E-02	5.143E-02	4.562E-02	2.624E-02	FAIL ABUN
RH-106	2.038E-01	4.482E-01	3.814E-01	2.287E-01	FAIL ABUN
RU-106	2.038E-01	4.477E-01	3.814E-01	2.284E-01	FAIL ABUN
AG-108M	-6.305E-03	4.298E-02	3.576E-02	2.193E-02	NOT IDENT.
AG-110M	2.083E-02	5.904E-02	4.334E-02	3.012E-02	NOT IDENT.
IN-111	1.818E-01	1.057E+00	7.648E-01	5.394E-01	NOT IDENT.
IN-113M	1.170E-03	6.161E-02	5.213E-02	3.143E-02	NOT IDENT.
SN-113	1.170E-03	6.161E-02	5.213E-02	3.143E-02	NOT IDENT.
IN-114M	-8.323E-03	2.614E-01	1.891E-01	1.334E-01	NOT IDENT.
CD-115	6.553E-02	9.481E+00	7.881E+00	4.837E+00	NOT IDENT.
SN-117M	-8.508E-02	6.125E-02	4.736E-02	3.125E-02	NOT IDENT.
SB-122	1.721E+00	2.058E+00	1.803E+00	1.050E+00	NOT IDENT.
I-123	-1.582E+06	1.222E+06	0.000E+00	6.234E+05	SHORT HLIF
TE-123M	-4.362E-02	3.370E-02	2.622E-02	1.719E-02	NOT IDENT.
I-124	-8.358E-01	9.048E-01	5.771E-01	4.616E-01	NOT IDENT.
SB-124	7.105E-02	1.067E-01	9.868E-02	5.443E-02	FAIL ABUN
SB-125	2.685E-02	1.245E-01	1.061E-01	6.353E-02	FAIL ABUN
TE-125M	1.166E+00	1.024E+01	8.723E+00	5.227E+00	NOT IDENT.
I-126	2.939E-01	2.619E-01	2.087E-01	1.336E-01	NOT IDENT.
SB-126	3.437E-02	2.078E-01	1.558E-01	1.060E-01	FAIL ABUN
SB-127	-6.716E-01	1.462E+00	1.143E+00	7.459E-01	NOT IDENT.
XE-127	-5.761E-02	6.199E-02	4.452E-02	3.163E-02	NOT IDENT.
I-131	1.722E-01	1.354E-01	1.226E-01	6.906E-02	NOT IDENT.
TE-132	-1.927E-01	6.194E-01	4.998E-01	3.160E-01	NOT IDENT.
BA-133	-1.106E-02	6.254E-02	4.547E-02	3.191E-02	NOT IDENT.
I-133	2.100E+03	2.684E+03	0.000E+00	1.369E+03	SHORT HLIF
CS-134	4.202E-02	5.935E-02	5.315E-02	3.028E-02	NOT IDENT.
CS-135	3.430E-01	2.438E-01	1.884E-01	1.244E-01	NOT IDENT.
I-135	1.274E+14	2.347E+14	0.000E+00	1.198E+14	SHORT HLIF
CS-136	-1.426E-02	1.496E-01	1.233E-01	7.635E-02	FAIL ABUN
CE-139	-3.072E-03	3.567E-02	2.963E-02	1.820E-02	NOT IDENT.
BA-140	-1.141E-01	3.413E-01	2.745E-01	1.741E-01	NOT IDENT.
LA-140	-8.984E-02	1.117E-01	8.180E-02	5.697E-02	FAIL ABUN
CE-141	1.613E-02	7.642E-02	6.307E-02	3.899E-02	NOT IDENT.
CE-143	3.943E+02	1.369E+02	0.000E+00	6.985E+01	SHORT HLIF
CE-144	6.833E-02	2.733E-01	2.044E-01	1.394E-01	NOT IDENT.
PM-144	2.135E-02	4.698E-02	3.982E-02	2.397E-02	NOT IDENT.
PR-144	1.446E+00	3.182E+00	2.697E+00	1.623E+00	NOT IDENT.
PM-146	4.143E-02	5.733E-02	5.029E-02	2.925E-02	NOT IDENT.

ND-147	5.557E-01	7.159E-01	6.248E-01	3.652E-01	FAIL ABUN
PM-149	3.223E+01	6.982E+01	6.127E+01	3.562E+01	NOT IDENT.
EU-152	7.887E-02	1.502E-01	1.029E-01	7.661E-02	FAIL ABUN
GD-153	-2.762E-02	9.227E-02	6.802E-02	4.708E-02	NOT IDENT.
EU-154	-1.984E-03	1.658E-01	1.357E-01	8.460E-02	NOT IDENT.
EU-155	4.935E-02	1.158E-01	9.984E-02	5.910E-02	FAIL ABUN
TB-160	-4.487E-02	1.973E-01	1.586E-01	1.007E-01	FAIL ABUN
HO-166M	-2.356E-02	8.602E-02	7.188E-02	4.389E-02	NOT IDENT.
TM-171	-9.428E-01	1.957E+01	1.485E+01	9.987E+00	NOT IDENT.
LU-176	9.732E-03	3.144E-02	2.733E-02	1.604E-02	FAIL ABUN
LU-177	2.673E+00	1.718E+00	1.073E+00	8.765E-01	FAIL ABUN
LU-177M	6.746E-02	2.488E-01	1.865E-01	1.269E-01	FAIL ABUN
HF-181	2.049E-02	5.778E-02	4.941E-02	2.948E-02	NOT IDENT.
W-181	2.707E-01	2.442E-01	1.933E-01	1.246E-01	NOT IDENT.
TA-182	1.200E-01	2.637E-01	2.260E-01	1.346E-01	NOT IDENT.
RE-183	6.415E-02	1.262E-01	1.076E-01	6.437E-02	FAIL ABUN
RE-184	-2.401E-01	2.910E-01	2.257E-01	1.485E-01	NOT IDENT.
OS-185	-6.139E-02	6.104E-02	4.560E-02	3.114E-02	NOT IDENT.
RE-188	1.537E-01	2.030E-01	1.746E-01	1.036E-01	NOT IDENT.
W-188	-3.344E+00	9.912E+00	7.220E+00	5.057E+00	FAIL ABUN
IR-192	-3.591E-04	4.147E-02	3.543E-02	2.116E-02	FAIL ABUN
AU-195	3.934E-01	2.490E-01	2.082E-01	1.271E-01	FAIL ABUN
TL-200	-1.852E+02	2.466E+02	0.000E+00	1.258E+02	SHORT HLIF
TL-201	2.469E+00	6.234E+00	5.282E+00	3.180E+00	NOT IDENT.
TL-202	4.367E-02	8.307E-02	7.218E-02	4.238E-02	NOT IDENT.
HG-203	5.797E-02	4.910E-02	4.431E-02	2.505E-02	FAIL ABUN
BI-207	5.525E-02	6.906E-02	6.186E-02	3.524E-02	FAIL ABUN
TL-207	-1.441E-02	9.522E-01	7.065E-01	4.858E-01	FAIL ABUN
PO-209	-2.496E+00	1.057E+01	8.690E+00	5.392E+00	NOT IDENT.
PB-211	3.169E-02	1.477E+00	1.083E+00	7.536E-01	NOT IDENT.
BI-212	1.769E+00	6.621E-01	4.775E-01	3.378E-01	FAIL ABUN
BI-214	1.087E+00	2.218E-01	1.675E-01	1.132E-01	FAIL ABUN
PO-215	-1.441E-02	9.522E-01	7.065E-01	4.858E-01	FAIL ABUN
RN-219	2.437E-01	5.855E-01	5.049E-01	2.987E-01	FAIL ABUN
RN-220	-9.442E+00	3.507E+01	2.844E+01	1.789E+01	NOT IDENT.
RA-223	-1.441E-02	9.522E-01	7.065E-01	4.858E-01	FAIL ABUN
RA-226	1.087E+00	2.218E-01	1.675E-01	1.132E-01	FAIL ABUN
AC-227	1.083E-01	4.663E-01	3.857E-01	2.379E-01	NOT IDENT.
TH-227	1.083E-01	4.664E-01	3.857E-01	2.379E-01	FAIL ABUN
TH-229	-4.129E-01	6.667E-01	5.359E-01	3.402E-01	FAIL ABUN
TH-230	1.087E+00	2.218E-01	1.675E-01	1.131E-01	FAIL ABUN
PA-231	-1.352E+00	1.824E+00	1.496E+00	9.305E-01	NOT IDENT.
TH-231	-1.441E-02	9.522E-01	7.065E-01	4.858E-01	FAIL ABUN
U-231	-3.002E-01	9.907E-01	7.310E-01	5.054E-01	FAIL ABUN
PA-233	2.210E-02	7.622E-02	6.623E-02	3.889E-02	FAIL ABUN
PA-234	-1.523E-01	3.921E-01	3.144E-01	2.000E-01	FAIL ABUN
PA-234M	6.162E+00	8.634E+00	7.670E+00	4.405E+00	NOT IDENT.
U-234	1.087E+00	2.218E-01	1.675E-01	1.131E-01	FAIL ABUN
U-235	2.264E-01	2.645E-01	2.212E-01	1.350E-01	FAIL ABUN
NP-236	2.127E-02	9.068E-02	7.652E-02	4.627E-02	NOT IDENT.
NP-239	2.167E-01	2.143E-01	1.870E-01	1.093E-01	FAIL ABUN
AM-241	-7.890E-03	7.662E-02	5.821E-02	3.909E-02	NOT IDENT.
CM-243	-6.251E-02	1.035E-01	8.570E-02	5.278E-02	FAIL ABUN
CM-247	1.130E-02	5.556E-02	4.484E-02	2.835E-02	NOT IDENT.
CF-249	2.798E-02	5.494E-02	4.777E-02	2.803E-02	NOT IDENT.
CF-251	1.468E-02	1.507E-01	1.259E-01	7.691E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	358.1985
46.50	358.1985
46.50	358.1985
48.70	326.7563
49.72	384.1256
51.35	365.4595
52.39	368.1021
52.97	376.2418
53.15	376.3718
53.44	370.3352
54.07	352.9119
56.28	404.6198
56.28	404.6224
57.37	0.0000
57.53	392.0680
57.53	392.0697
57.60	392.1179
57.98	381.5909
57.98	381.5909
59.32	405.6140
59.32	405.6140
59.40	405.6723
59.54	395.6661
59.72	395.7940
60.01	385.8821
61.10	364.9094
61.14	364.9355
61.30	365.0386
63.00	447.6685
63.29	447.8932
63.29	447.8932
63.58	448.1170
64.28	505.2621
65.12	470.9912
65.20	471.0548
65.20	471.0548
66.05	455.6678
66.72	486.8824
66.83	486.9739
66.91	491.4266
67.20	491.6656
67.20	491.6656
67.75	486.9895
67.85	478.5256
68.90	474.4636
68.90	474.4636
69.30	482.7272
69.67	489.2665
70.82	485.7631
70.82	485.7631
70.83	485.7691
72.80	484.3505
72.87	484.4046
72.87	484.4046
74.67	450.7904
74.81	450.8889
74.81	450.8889
74.81	450.8889
74.81	450.8889
74.81	450.8889
74.81	450.8889
74.97	451.0022
75.28	451.2196
75.70	451.5131
77.11	452.4959
77.11	452.4959
77.11	452.4959

77.11	452.4959
77.11	452.4959
77.11	452.4959
78.38	437.9189
79.62	471.5698
79.80	471.6971
79.80	471.6971
80.11	509.2522
80.18	509.3042
80.30	509.3958
80.30	509.3958
80.57	548.4572
81.00	556.2835
81.07	556.3425
81.07	556.3425
81.07	556.3425
81.07	556.3425
82.60	429.6920
83.37	444.5558
83.78	436.9405
83.78	436.9405
83.78	436.9405
83.78	436.9405
84.21	443.2238
84.40	443.3463
84.90	476.7538
85.43	484.6430
86.29	548.5327
86.50	535.1304
86.54	535.1608
86.59	574.3975
86.72	574.5045
86.79	574.5602
86.94	616.9175
87.30	644.3963
87.30	644.3963
87.30	644.3963
87.30	644.3963
87.30	644.3963
87.30	644.3963
87.57	479.3312
87.88	479.5405
88.03	479.6432
88.36	479.8661
88.47	479.9397
89.95	749.8054
91.11	344.4030
92.29	344.9627
92.38	345.0056
92.38	345.0056
93.35	345.4629
94.00	335.1052
94.67	346.0780
94.67	346.0808
94.90	355.3378
94.90	355.3378
94.90	355.3378
94.90	355.3378
95.87	380.2341
95.87	380.2341
96.73	385.2582
97.43	358.0711
98.44	297.2579
98.44	297.2579
98.88	288.7418
99.55	299.2257
99.55	299.2257
99.86	293.5893
100.00	293.6430
100.10	302.3204
103.18	374.8256
103.76	333.6393
105.00	311.9513
105.31	307.2425
108.00	305.3689
109.28	326.2434
111.00	307.4715
111.00	307.4715

111.76	353.5298
112.95	332.5825
115.19	276.7558
116.30	266.3492
117.00	262.6491
117.00	262.6491
117.66	303.0662
121.11	278.6828
121.62	288.6991
121.78	271.9991
122.06	272.0865
122.32	244.5564
122.32	244.5564
122.32	244.5564
122.32	244.5564
123.07	262.8137
127.23	269.7178
129.76	299.1155
131.20	291.6227
133.02	293.7980
133.54	279.5856
135.34	282.1291
136.00	292.3409
136.25	288.4131
136.48	288.4834
140.51	315.8710
140.51	0.0000
142.18	308.3626
142.65	290.3643
143.76	271.5202
144.24	284.7840
144.24	284.7840
144.24	284.7840
144.24	284.7840
145.22	283.0484
145.44	287.1570
147.16	304.8810
152.43	272.8980
152.70	248.5255
153.22	234.3869
154.21	235.6369
154.21	235.6369
154.21	235.6369
154.21	235.6369
155.03	253.1824
156.02	256.4941
158.56	283.7648
159.00	0.0000
159.00	280.8107
160.31	227.8061
161.27	233.1516
162.32	231.3292
162.64	231.3995
163.35	241.8489
163.89	255.3583
165.85	256.8629
167.43	246.9118
171.28	250.9066
171.86	248.9667
172.10	249.0216
176.55	232.3217
176.60	232.3319
181.06	207.5305
184.41	224.9309
185.71	254.1746
186.00	254.2392
190.27	268.2562
192.34	239.0336
193.63	285.5237
197.04	265.1367
198.01	235.6328
198.60	217.6952
200.40	253.1201
201.83	265.1324
202.84	261.4453
205.31	227.2365
208.36	226.0871
208.81	210.9628

209.75	198.9063
209.75	198.9063
210.97	199.1003
215.65	198.1209
216.55	209.0378
218.09	215.7639
222.10	204.5356
223.80	195.0513
226.40	206.2991
227.00	197.7031
227.08	198.8020
227.20	198.8201
228.16	197.8781
228.18	197.8822
228.18	197.8822
231.56	0.0000
235.69	190.6941
236.00	188.9881
236.00	188.9881
238.60	189.5712
238.63	189.5751
238.63	189.5751
238.63	189.5751
239.00	189.6279
240.98	189.9038
241.98	190.0430
241.98	190.0430
241.98	190.0430
244.69	172.5874
245.39	176.1987
247.94	172.1104
248.90	171.1253
249.79	164.6069
252.40	187.0486
252.85	189.3235
252.85	189.3235
254.15	0.0000
256.20	160.9174
256.20	160.9174
260.50	178.1006
260.90	173.6957
262.80	157.2007
264.65	171.4664
268.24	177.2622
268.79	159.4156
269.46	145.1534
269.46	145.1534
269.46	145.1534
269.46	145.1534
271.23	188.3873
273.65	228.2310
276.40	181.3275
277.35	164.1401
277.60	159.4642
277.60	159.4642
278.00	159.5053
278.60	151.4563
279.20	153.3196
279.53	164.1777
280.46	181.4300
281.68	196.0311
283.67	165.5332
284.30	148.4068
285.00	137.6108
285.90	138.5984
286.10	135.8990
286.10	135.8990
287.40	153.1401
288.45	0.0000
290.67	162.0478
290.80	162.0609
291.72	151.5482
293.26	0.0000
293.70	159.3286
295.21	214.1621
295.21	214.1621
295.21	214.1621
295.96	246.1772

296.50	244.7428
297.23	219.0000
298.57	152.2135
299.80	131.0051
299.80	131.0051
300.09	140.1712
300.09	140.1712
300.09	140.1712
300.10	140.1721
300.12	140.1731
301.29	162.3869
302.84	201.4644
303.76	210.7426
303.91	210.7622
304.40	197.0772
304.40	197.0772
304.84	190.7141
306.84	151.4749
308.46	144.2763
311.98	128.9343
316.51	137.6031
318.01	120.1659
319.02	138.7390
319.41	129.5188
320.08	155.4861
323.87	149.9660
323.87	149.9660
323.87	149.9660
323.87	149.9660
325.23	131.5207
328.77	161.8782
333.44	116.6138
334.20	108.8879
334.20	108.8879
334.30	108.8936
338.28	145.0098
338.28	145.0098
338.28	145.0098
338.28	145.0098
338.32	145.0135
338.32	145.0135
338.32	145.0135
340.50	121.7782
340.57	121.7830
344.27	112.6553
345.85	147.2097
350.59	0.0000
351.07	126.2858
351.92	126.3480
351.92	126.3480
351.92	126.3480
355.39	0.0000
356.01	132.3096
364.48	110.1448
366.43	109.3132
367.43	130.2972
367.94	0.0000
369.80	141.8938
374.96	105.0479
383.85	135.2960
387.95	129.8205
388.63	125.0568
391.69	139.7112
391.69	139.7112
392.90	129.1942
398.62	132.4796
400.65	128.7463
401.10	132.6502
401.81	135.6045
402.60	139.2929
404.84	134.1995
410.95	103.8008
411.60	110.3257
413.65	100.6945
414.70	102.3737
415.30	107.2809
415.76	118.6859
417.63	0.0000

418.52	102.5698
423.70	121.4434
427.08	98.1018
427.89	111.8806
432.53	125.9063
433.93	107.2902
439.47	93.7626
439.56	93.7661
439.89	94.7684
443.98	102.8676
444.90	100.9342
445.03	98.9612
445.03	98.9612
445.03	98.9612
445.03	98.9612
453.90	90.4357
463.38	106.4779
468.07	121.7157
473.00	89.2379
475.06	111.4011
475.35	111.4160
476.78	113.4980
477.59	95.4534
477.96	89.4400
482.03	97.6595
484.57	103.8198
487.03	94.8526
490.36	0.0000
492.35	90.0212
497.08	71.9664
507.63	0.0000
510.53	0.0000
510.84	89.7365
511.00	89.7435
511.85	89.7762
511.85	89.7762
513.99	81.6899
513.99	81.6899
520.41	75.5163
520.65	77.3725
527.90	84.2322
528.96	0.0000
529.64	77.0984
529.87	0.0000
531.02	79.2013
537.32	96.9421
543.00	89.9354
546.56	0.0000
549.76	85.0049
552.65	72.6506
555.20	74.8055
563.23	85.4734
563.90	81.3249
568.70	98.1974
569.32	96.1328
569.50	86.7346
569.67	83.6055
573.80	104.6777
574.00	103.5243
574.64	108.6411
578.91	73.4231
579.30	0.0000
583.14	84.0527
585.48	70.1090
591.81	81.3277
592.07	82.8414
593.00	84.3789
595.88	72.8577
600.56	85.8023
602.52	0.0000
602.71	111.1652
602.71	111.1652
603.60	100.6105
604.41	98.8773
604.70	91.8252
609.31	79.6033
609.31	79.6033
609.31	79.6033

609.31	79.6033
610.33	69.0165
612.46	77.9292
614.37	76.2123
618.01	77.7372
621.84	73.5837
621.84	73.5837
631.29	71.7044
633.02	65.3248
633.10	65.3263
634.78	60.0100
635.90	79.3314
636.97	69.7100
645.85	90.3820
646.12	90.3902
656.30	63.0046
657.75	79.2469
657.90	0.0000
661.65	93.7866
661.65	93.7866
664.57	0.0000
666.33	59.6178
666.33	59.6178
675.00	67.4144
677.61	66.3881
685.20	73.1128
692.80	86.4352
695.00	66.7932
696.49	66.8275
696.49	66.8275
697.00	69.0308
697.49	71.2334
698.33	70.1578
698.50	81.1254
699.00	80.0434
702.63	81.2410
706.10	83.5351
706.58	0.0000
706.67	73.6575
709.31	74.2747
711.68	82.5934
713.82	72.5517
717.42	73.5596
720.50	69.4283
721.93	0.0000
722.20	66.3105
722.78	56.8489
722.78	56.8489
722.89	53.6930
722.95	53.6942
723.30	53.7001
724.18	66.3545
727.18	71.9570
733.00	80.8117
735.90	59.9537
739.58	72.2538
742.81	71.4042
744.21	59.3763
747.13	68.7201
751.79	73.4759
752.31	66.9756
753.82	55.8411
755.35	58.6626
756.15	71.7175
756.87	62.4172
763.93	83.1025
765.79	75.6788
766.41	69.1522
766.84	66.3574
768.36	64.5204
768.36	64.5204
768.36	64.5204
768.36	64.5204
776.49	55.3137
778.00	53.4642
778.57	57.2260
778.89	62.8616
783.80	59.2009

785.46	51.7102
792.07	59.3547
795.84	51.8792
796.30	57.5474
801.93	46.3083
805.60	52.9842
810.29	63.4832
810.76	66.3357
815.85	50.3043
817.79	53.1836
818.51	53.1950
819.60	55.1137
826.30	52.3693
828.27	0.0000
831.60	51.5006
831.96	55.3214
834.83	77.3267
836.80	0.0000
846.75	49.8196
848.13	52.7150
856.28	0.0000
856.80	44.4777
860.37	57.7173
867.32	60.7275
867.82	59.1297
871.10	57.8992
873.19	56.9690
874.81	56.9966
875.33	0.0000
876.40	61.8555
879.36	57.0722
880.27	54.1839
880.51	52.2532
881.50	45.4920
883.24	46.4834
884.67	53.2846
889.25	49.4747
896.60	60.2732
898.02	52.5168
899.00	48.6409
903.28	43.4125
911.07	49.7839
911.07	49.7839
911.07	49.7839
919.63	52.8398
920.93	51.2567
925.00	48.0190
925.24	50.9622
926.50	52.9409
934.06	55.0179
934.06	55.0179
934.06	55.0179
934.06	55.0179
935.52	46.1939
937.48	64.9043
944.10	47.2891
946.00	50.2706
949.00	39.4604
962.29	59.4061
964.01	57.4525
966.15	57.4855
968.20	57.5174
969.11	57.5315
969.11	57.5315
969.11	57.5315
977.42	57.6602
980.50	42.6418
983.50	54.6250
989.30	36.9006
996.32	67.9433
1001.03	42.0171
1001.68	42.0239
1004.76	55.0761
1021.30	0.0000
1024.50	0.0000
1034.80	41.3787
1037.82	44.4404
1038.57	50.5107

1038.76	0.0000
1045.16	44.5246
1046.59	49.6021
1048.07	58.7340
1050.47	66.8755
1050.47	66.8755
1063.62	37.6158
1076.63	52.0168
1077.35	61.2085
1085.78	63.3800
1099.22	46.1554
1112.02	40.1267
1112.84	44.1040
1115.52	67.0805
1120.29	45.3607
1120.29	45.3607
1120.29	45.3607
1120.29	45.3607
1120.51	45.3643
1121.28	45.3714
1124.00	0.0000
1129.67	45.4645
1131.51	0.0000
1147.95	0.0000
1167.94	50.0488
1173.22	58.4609
1175.09	56.3994
1177.93	60.6173
1189.05	76.4902
1204.90	47.3236
1205.75	0.0000
1213.00	65.3200
1221.42	51.7236
1230.97	62.4138
1235.34	80.4748
1236.41	0.0000
1238.11	73.1075
1238.11	73.1075
1238.11	73.1075
1238.11	73.1075
1238.25	73.1104
1246.25	60.5022
1260.41	0.0000
1271.85	36.2938
1274.45	41.6549
1274.54	46.9971
1291.56	37.5222
1298.22	0.0000
1312.09	37.6874
1325.50	45.3547
1325.50	45.3547
1332.49	34.6068
1333.61	36.7794
1360.21	25.1741
1362.66	0.0000
1365.15	23.3337
1368.21	22.4138
1368.53	0.0000
1376.25	21.5160
1377.67	25.2654
1377.67	25.2654
1377.67	25.2654
1377.67	25.2654
1384.27	38.4175
1394.10	17.8390
1395.20	28.1731
1407.95	14.1232
1434.06	17.9835
1436.60	14.2048
1457.56	0.0000
1460.81	24.7395
1489.15	16.2654
1509.49	11.5266
1596.49	27.3369
1620.62	8.8255
1678.03	0.0000
1691.02	11.9155
1691.02	11.9155

1706.46	0.0000
1750.46	0.0000
1764.49	1.7598
1764.49	1.7598
1764.49	1.7598
1764.49	1.7598
1770.23	8.8074
1771.40	37.2503
1791.20	0.0000
1808.65	10.1304
1836.01	12.2118

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433003

Total Uranium Activity	6.9747E+00	ug/g
Total Uranium Counting Unc.	3.5893E+00	ug/g
Total Uranium Tpu	1.8313E-06	ug/g
Total Uranium Mda	1.7495E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G232433003       *
*   ANALYST       : MXR1                      DETECTOR   : GAM05            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:05:07.60    SAMPLE ALQT:  103.260 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.060E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.589E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 4.521E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.197E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:07:57.09

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433004.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:05:37.
Sample ID         : G232433004           Sample quantity  : 1.37710E+02 GRAM
Detector name     : GAM06                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.42  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	75.03*	342	442	1.05	148.67	145	14	4.75E-02	11.2	7.23E-01
2	3	77.23*	649	431	1.12	153.09	145	14	9.01E-02	6.9	
3	5	87.27	264	288	1.22	173.16	170	20	3.67E-02	11.2	6.44E-01
4	5	89.98	161	455	1.27	178.59	170	20	2.24E-02	24.3	
5	5	93.03*	292	393	1.21	184.69	170	20	4.05E-02	13.2	
6	0	129.29	86	393	1.22	257.21	253	9	1.19E-02	43.2	
7	0	186.18*	155	335	1.12	371.01	367	9	2.15E-02	23.5	
8	0	209.21	150	300	1.58	417.07	413	10	2.08E-02	23.1	
9	4	238.72*	1283	175	1.19	476.11	467	21	1.78E-01	3.3	1.99E+00
10	4	241.72	285	215	1.55	482.12	467	21	3.96E-02	13.3	
11	0	269.89	105	278	1.64	538.46	533	13	1.46E-02	34.0	
12	0	277.84	79	162	1.25	554.37	551	9	1.09E-02	31.4	
13	0	295.25*	356	210	1.31	589.20	583	11	4.94E-02	9.7	
14	0	300.47	75	208	0.93	599.64	595	10	1.04E-02	37.8	
15	0	327.99	52	195	1.24	654.68	651	9	7.16E-03	50.9	
16	0	338.38	278	208	1.22	675.48	669	13	3.86E-02	12.3	
17	0	351.85*	617	214	1.32	702.42	695	15	8.58E-02	6.6	
18	0	511.19*	140	170	1.63	1021.21	1012	18	1.95E-02	25.4	
19	0	583.15*	353	91	1.60	1165.19	1160	11	4.90E-02	7.6	
20	0	609.24*	415	97	1.37	1217.39	1211	11	5.76E-02	6.9	
21	0	662.35	38	61	1.30	1323.66	1317	9	5.29E-03	40.3	
22	0	727.49	117	62	2.11	1454.00	1448	15	1.62E-02	17.8	
23	0	794.95	64	38	0.89	1589.01	1584	11	8.92E-03	22.5	
24	0	861.46	36	95	0.95	1722.11	1715	14	4.96E-03	61.8	
25	0	911.03*	278	59	1.48	1821.32	1816	13	3.86E-02	8.4	
26	0	968.98*	120	116	1.42	1937.31	1929	14	1.67E-02	21.4	
27	0	1120.05	117	111	2.04	2239.70	2231	20	1.62E-02	23.9	
28	0	1460.15*	1310	28	2.11	2920.56	2913	16	1.82E-01	2.9	
29	0	1764.01*	76	8	2.68	3529.03	3521	14	1.06E-02	14.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:07:59

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433004.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:05:37
Sample ID : G232433004 Sample quantity : 137.71 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA6 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.42 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.476E+01	3.066E+00	6.265E-01	4.144E-02	55.481
CD-109	+	88.03	*	3.831E+00	9.360E-01	1.474E+00	1.455E-01	2.599
SN-126		64.28		4.195E-01	6.315E-01	1.068E+00	1.643E-01	0.393
	+	86.94		1.569E+00	7.413E-01	6.622E-01	2.756E-01	2.369
	+	87.57	*	3.773E-01	9.219E-02	1.459E-01	1.436E-02	2.586
BA-137M	+	661.65	*	5.958E-02	4.815E-02	6.664E-02	3.291E-03	0.894
CS-137	+	661.65	*	6.298E-02	5.090E-02	7.045E-02	3.499E-03	0.894
HG-203		70.83		4.728E-01	1.385E+00	2.061E+00	2.846E-01	0.229
		72.87		1.718E+00	8.573E-01	1.307E+00	1.757E-01	1.315
		82.60		2.781E+00	1.807E+00	2.101E+00	3.000E-01	1.323
	+	279.20	*	8.752E-02	5.523E-02	7.498E-02	4.735E-03	1.167
TL-208	+	277.35		8.104E-01	5.161E-01	6.454E-01	6.873E-02	1.256
	+	510.84		7.364E-01	3.819E-01	2.410E-01	2.418E-02	3.056
	+	583.14	*	5.291E-01	8.715E-02	6.882E-02	4.349E-03	7.689
	+	860.37		5.078E-01	6.288E-01	6.390E-01	4.887E-02	0.795
BI-211		72.87		8.815E+00	4.309E+00	6.706E+00	6.021E-01	1.315
	+	351.07	*	4.013E+00	5.902E-01	3.853E-01	2.487E-02	10.417
PB-212	+	74.81		2.104E+00	5.438E-01	6.982E-01	9.076E-02	3.014
	+	77.11		2.253E+00	3.716E-01	3.750E-01	3.424E-02	6.007
	+	87.30		1.745E+00	4.607E-01	7.335E-01	1.028E-01	2.379
	+	238.63	*	1.798E+00	1.786E-01	1.017E-01	7.493E-03	17.685
	+	300.09		1.633E+00	1.242E+00	1.280E+00	1.071E-01	1.276
PO-212	+	74.81		2.104E+00	5.438E-01	6.982E-01	9.076E-02	3.014
	+	77.11		2.253E+00	3.716E-01	3.750E-01	3.424E-02	6.007
	+	87.30		1.745E+00	4.607E-01	7.335E-01	1.028E-01	2.379
		115.19		-2.612E+00	4.125E+00	6.633E+00	4.377E-01	-0.394
	+	238.63	*	1.798E+00	1.786E-01	1.017E-01	7.493E-03	17.685
	+	300.09		1.633E+00	1.242E+00	1.280E+00	1.071E-01	1.276
BI-214	+	609.31	*	1.175E+00	1.829E-01	1.228E-01	9.063E-03	9.564
		768.36		6.888E-01	9.092E-01	1.539E+00	1.294E-01	0.448
		934.06		1.104E+00	1.385E+00	2.441E+00	2.318E-01	0.452
	+	1120.29		1.740E+00	8.465E-01	5.764E-01	5.265E-02	3.018
		1238.11		1.155E+00	1.123E+00	1.965E+00	1.641E-01	0.588
		1377.67		1.850E+00	1.189E+00	2.234E+00	1.994E-01	0.828

Sample ID : G232433004 Acquisition date : 7-JUL-2009 06:05:37

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1764.49		1.566E+00	4.568E-01	3.044E-01	1.783E-02	5.144
PB-214	+	74.81		3.625E+00	9.139E-01	1.203E+00	1.406E-01	3.014
	+	77.11		3.862E+00	7.016E-01	6.429E-01	7.644E-02	6.007
	+	87.30		2.989E+00	7.659E-01	1.257E+00	1.569E-01	2.379
	+	241.98		2.400E+00	6.682E-01	6.122E-01	4.968E-02	3.920
	+	295.21		1.360E+00	2.892E-01	2.396E-01	2.071E-02	5.678
	+	351.92	*	1.396E+00	2.178E-01	1.343E-01	1.114E-02	10.395
PO-214	+	74.81		3.625E+00	9.139E-01	1.203E+00	1.406E-01	3.014
	+	77.11		3.862E+00	7.016E-01	6.429E-01	7.644E-02	6.007
	+	87.30		2.989E+00	7.659E-01	1.257E+00	1.569E-01	2.379
	+	241.98		2.400E+00	6.682E-01	6.122E-01	4.968E-02	3.920
	+	295.21		1.360E+00	2.892E-01	2.396E-01	2.071E-02	5.678
	+	351.92	*	1.396E+00	2.178E-01	1.343E-01	1.114E-02	10.395
PO-216	+	74.81		2.104E+00	5.438E-01	6.982E-01	9.076E-02	3.014
	+	77.11		2.253E+00	3.716E-01	3.750E-01	3.424E-02	6.007
	+	87.30		1.745E+00	4.607E-01	7.335E-01	1.028E-01	2.379
	+	238.63	*	1.798E+00	1.786E-01	1.017E-01	7.493E-03	17.685
	+	300.09		1.633E+00	1.242E+00	1.280E+00	1.071E-01	1.276
PO-218	+	74.81		3.625E+00	9.139E-01	1.203E+00	1.406E-01	3.014
	+	77.11		3.862E+00	7.016E-01	6.429E-01	7.644E-02	6.007
	+	87.30		2.989E+00	7.659E-01	1.257E+00	1.569E-01	2.379
	+	241.98		2.400E+00	6.682E-01	6.122E-01	4.968E-02	3.920
	+	295.21		1.360E+00	2.892E-01	2.396E-01	2.071E-02	5.678
	+	351.92	*	1.396E+00	2.178E-01	1.343E-01	1.114E-02	10.395
RA-224	+	240.98	*	4.550E+00	1.241E+00	1.157E+00	6.781E-02	3.933
RA-226	+	609.31	*	1.175E+00	1.829E-01	1.228E-01	9.063E-03	9.564
		768.36		6.888E-01	9.092E-01	1.539E+00	1.294E-01	0.448
		934.06		1.104E+00	1.385E+00	2.441E+00	2.318E-01	0.452
	+	1120.29		1.740E+00	8.465E-01	5.764E-01	5.265E-02	3.018
		1238.11		1.155E+00	1.123E+00	1.965E+00	1.641E-01	0.588
		1377.67		1.850E+00	1.189E+00	2.234E+00	1.994E-01	0.828
	+	1764.49		1.566E+00	4.568E-01	3.044E-01	1.783E-02	5.144
AC-228	+	338.32		1.991E+00	9.471E-01	4.148E-01	1.691E-01	4.800
	+	911.07	*	1.872E+00	3.675E-01	2.287E-01	2.337E-02	8.186
	+	969.11		1.431E+00	6.952E-01	3.832E-01	8.738E-02	3.735
RA-228	+	338.32		1.991E+00	9.471E-01	4.148E-01	1.691E-01	4.800
	+	911.07	*	1.872E+00	3.675E-01	2.287E-01	2.337E-02	8.186
	+	969.11		1.431E+00	6.952E-01	3.832E-01	8.738E-02	3.735
TH-228		84.40		1.849E+00	3.304E+00	4.878E+00	6.727E-01	0.379
	+	238.60	*	1.798E+00	1.786E-01	1.016E-01	7.492E-03	17.687
	+	300.10		1.633E+00	1.566E+00	1.280E+00	7.544E-01	1.276
TH-230	+	609.31	*	1.175E+00	1.829E-01	1.228E-01	9.063E-03	9.564
		768.36		6.888E-01	9.092E-01	1.539E+00	1.294E-01	0.448
		934.06		1.104E+00	1.385E+00	2.441E+00	2.318E-01	0.452
	+	1120.29		1.740E+00	8.465E-01	5.764E-01	5.265E-02	3.018
		1238.11		1.155E+00	1.123E+00	1.965E+00	1.640E-01	0.588
		1377.67		1.850E+00	1.189E+00	2.234E+00	1.994E-01	0.828
	+	1764.49		1.566E+00	4.568E-01	3.044E-01	1.783E-02	5.144
TH-232	+	338.32		1.991E+00	5.016E-01	4.148E-01	2.440E-02	4.800

Sample ID : G232433004 Acquisition date : 7-JUL-2009 06:05:37

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	911.07	*	1.872E+00	3.675E-01	2.287E-01	2.337E-02	8.186
	+	969.11		1.431E+00	6.952E-01	3.832E-01	8.738E-02	3.735
U-234	+	609.31	*	1.175E+00	1.829E-01	1.228E-01	9.063E-03	9.564
		768.36		6.888E-01	9.092E-01	1.539E+00	1.294E-01	0.448
		934.06		1.104E+00	1.385E+00	2.441E+00	2.318E-01	0.452
	+	1120.29		1.740E+00	8.465E-01	5.764E-01	5.265E-02	3.018
		1238.11		1.155E+00	1.123E+00	1.965E+00	1.640E-01	0.588
		1377.67		1.850E+00	1.189E+00	2.234E+00	1.994E-01	0.828
	+	1764.49		1.566E+00	4.568E-01	3.044E-01	1.783E-02	5.144
NP-237	+	86.50	*	1.108E+00	3.543E-01	4.574E-01	1.044E-01	2.422
		95.87		-3.552E-01	1.224E+00	1.752E+00	4.312E-01	-0.203
AM-243	+	74.67	*	3.411E-01	8.219E-02	1.136E-01	1.026E-02	3.003
	+	86.72		4.155E+01	1.015E+01	1.711E+01	1.671E+00	2.429
		117.66		-2.313E+00	4.333E+00	6.986E+00	4.479E-01	-0.331
		142.18		-5.037E+00	2.092E+01	3.334E+01	1.904E+00	-0.151
ANH-511	+	511.00	*	1.591E-01	8.141E-02	5.207E-02	2.911E-03	3.055

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.019E-01	3.604E-01	6.046E-01	3.994E-02	0.168
NA-22		1274.54	*	-6.759E-02	5.681E-02	8.140E-02	5.027E-03	-0.830
NA-24		1368.53	*	-8.736E-02	5.681E-02	Half-Life too short		
AL-26		1129.67		6.858E-01	2.174E+00	3.316E+00	2.065E-01	0.207
		1808.65	*	-2.575E-02	3.424E-02	4.791E-02	2.752E-03	-0.537
TI-44		67.85		-1.561E-02	5.533E-02	9.165E-02	8.179E-03	-0.170
	+	78.38	*	4.157E-01	6.856E-02	9.387E-02	8.628E-03	4.428
SC-46		889.25	*	1.335E-02	4.534E-02	7.740E-02	5.547E-03	0.172
	+	1120.51		2.945E-01	1.419E-01	1.520E-01	9.563E-03	1.937
V-48		944.10		-1.241E+00	9.762E-01	1.418E+00	1.012E-01	-0.875
		983.50	*	-2.316E-02	8.219E-02	1.328E-01	9.296E-03	-0.174
		1312.09		-5.568E-02	9.220E-02	1.396E-01	8.712E-03	-0.399
CR-51		320.08	*	-2.854E-01	3.918E-01	6.306E-01	4.154E-02	-0.453
MN-52		744.21		-1.042E-01	2.335E-01	3.600E-01	2.053E-02	-0.289
		848.13		1.464E+00	6.741E+00	1.146E+01	7.718E-01	0.128
		935.52		-2.154E-02	2.636E-01	4.350E-01	3.116E-02	-0.050
		1246.25		-2.884E-01	7.197E+00	1.170E+01	7.136E-01	-0.025
		1333.61		-6.510E+00	5.150E+00	6.995E+00	4.394E-01	-0.931
		1434.06	*	3.258E-02	2.049E-01	3.397E-01	2.138E-02	0.096
MN-54		834.83	*	6.448E-03	4.482E-02	7.573E-02	4.998E-03	0.085
CO-56		846.75	*	-9.742E-03	4.700E-02	7.723E-02	5.192E-03	-0.126
		977.42		2.444E+00	3.434E+00	5.933E+00	4.168E-01	0.412
		1037.82		-9.508E-02	3.750E-01	6.050E-01	4.441E-02	-0.157
		1175.09		1.390E+00	2.659E+00	4.552E+00	2.695E-01	0.305
		1238.25		1.122E-01	1.120E-01	1.959E-01	1.259E-02	0.573
		1360.21		1.936E-02	1.096E+00	1.783E+00	1.122E-01	0.011
		1771.40		-6.704E-01	3.306E-01	3.560E-01	2.079E-02	-1.883
CO-57		122.06	*	-1.931E-02	2.935E-02	4.704E-02	2.873E-03	-0.410

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-9.413E-02	2.369E-01	3.822E-01	2.568E-02	-0.246
CO-58		810.76	*	-3.552E-02	4.292E-02	6.662E-02	4.253E-03	-0.533
FE-59		142.65		8.442E-01	3.125E+00	5.075E+00	2.894E-01	0.166
		192.34		1.896E-01	1.092E+00	1.720E+00	2.013E-01	0.110
		1099.22	*	4.129E-02	1.098E-01	1.865E-01	1.368E-02	0.221
		1291.56		-7.028E-02	1.358E-01	2.077E-01	1.607E-02	-0.338
CO-60		1173.22		-6.442E-02	5.636E-02	8.266E-02	4.891E-03	-0.779
		1332.49	*	-4.017E-02	4.763E-02	6.928E-02	4.352E-03	-0.580
ZN-65		1115.52	*	9.078E-02	1.350E-01	2.047E-01	1.297E-02	0.443
GE-68		1077.35	*	9.032E-01	1.615E+00	2.781E+00	1.823E-01	0.325
AS-73		53.44	*	1.490E+00	1.160E+00	2.014E+00	1.842E-01	0.740
AS-74		595.88	*	-8.612E-02	9.649E-02	1.454E-01	7.730E-03	-0.592
		634.78		-4.476E-03	4.066E-01	6.591E-01	3.369E-02	-0.007
SE-75		66.05		-6.196E+00	5.880E+00	9.457E+00	1.012E+00	-0.655
		96.73		-2.485E-01	9.915E-01	1.424E+00	1.926E-01	-0.175
		121.11		8.790E-02	1.566E-01	2.626E-01	2.486E-02	0.335
		136.00		-7.012E-03	4.391E-02	7.152E-02	4.215E-03	-0.098
		198.60		1.667E+00	2.251E+00	3.658E+00	2.553E-01	0.456
		264.65	*	4.653E-03	5.944E-02	8.246E-02	4.947E-03	0.056
		279.53		3.549E-02	1.397E-01	2.087E-01	1.341E-02	0.170
		303.91		2.266E+00	2.615E+00	4.046E+00	3.902E-01	0.560
		400.65		-1.076E-01	2.871E-01	4.658E-01	4.173E-02	-0.231
BR-77	+	87.88		5.573E+02	1.362E+02	2.660E+02	2.625E+01	2.095
		200.40		5.452E-01	1.326E+02	2.144E+02	1.208E+01	0.003
	+	239.00		1.940E+02	1.719E+01	2.810E+01	1.644E+00	6.905
		249.79		-2.209E+01	5.128E+01	8.026E+01	4.732E+00	-0.275
		281.68		-7.911E+00	7.364E+01	1.074E+02	6.410E+00	-0.074
		297.23		2.457E+02	7.181E+01	9.553E+01	5.706E+00	2.571
		303.76		1.393E+02	1.510E+02	2.348E+02	1.402E+01	0.593
		439.47		-4.154E+01	1.108E+02	1.788E+02	1.006E+01	-0.232
		484.57		3.561E+01	1.815E+02	2.996E+02	1.685E+01	0.119
		520.65	*	-2.611E+00	7.789E+00	1.245E+01	6.934E-01	-0.210
		574.64		2.197E+01	1.608E+02	2.650E+02	1.433E+01	0.083
		578.91		-2.410E+01	7.741E+01	1.054E+02	5.685E+00	-0.229
		585.48		1.095E+03	2.077E+02	3.826E+02	2.052E+01	2.862
		755.35		-1.809E+01	1.323E+02	2.100E+02	1.220E+01	-0.086
		817.79		-1.566E+01	9.280E+01	1.529E+02	9.828E+00	-0.102
SR-82		698.33		5.945E+00	3.747E+01	6.125E+01	3.229E+00	0.097
		776.49	*	-3.641E-01	4.099E-01	6.371E-01	3.833E-02	-0.572
		1395.20		-3.367E+00	1.038E+01	1.591E+01	1.002E+00	-0.212
RB-83		520.41	*	-2.943E-02	7.549E-02	1.201E-01	6.692E-03	-0.245
		529.64		7.839E-02	1.134E-01	1.953E-01	1.084E-02	0.401
		552.65		5.363E-02	2.249E-01	3.742E-01	2.053E-02	0.143
RB-84		881.50	*	-4.325E-02	7.670E-02	1.212E-01	8.589E-03	-0.357
KR-85		513.99	*	2.119E+01	9.271E+00	1.569E+01	8.761E-01	1.351
SR-85		513.99	*	1.071E-01	4.686E-02	7.928E-02	4.428E-03	1.351
RB-86		1076.63	*	3.456E-01	9.731E-01	1.650E+00	1.082E-01	0.209
Y-88		898.02		-1.941E-03	5.068E-02	8.350E-02	6.105E-03	-0.023
		1836.01	*	-1.995E-02	3.249E-02	4.582E-02	2.604E-03	-0.435

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	-3.784E-02	3.379E-02	5.215E-02	2.894E-03	-0.726
Y-91		1204.90	*	-1.083E+01	2.259E+01	3.538E+01	2.122E+00	-0.306
NB-94		702.63	*	-1.071E-02	3.779E-02	5.948E-02	3.159E-03	-0.180
		871.10		1.721E-03	3.709E-02	6.213E-02	4.334E-03	0.028
NB-95		765.79	*	4.536E-02	5.223E-02	8.924E-02	5.275E-03	0.508
NB-95M		235.69	*	1.115E-01	1.663E-01	2.421E-01	1.830E-02	0.461
ZR-95		724.18		2.350E-02	1.364E-01	1.927E-01	1.275E-02	0.122
		756.15	*	-2.027E-02	8.362E-02	1.315E-01	9.264E-03	-0.154
NB-97		657.90	*	-2.296E-02	8.362E-02	Half-Life too short		
		1024.50		1.315E+00	8.362E-02	Half-Life too short		
ZR-97		254.15		1.299E-01	8.362E-02	Half-Life too short		
		355.39		1.247E+00	8.362E-02	Half-Life too short		
		507.63	*	8.617E-01	8.362E-02	Half-Life too short		
		602.52		-1.789E-01	8.362E-02	Half-Life too short		
		1021.30		-2.395E+00	8.362E-02	Half-Life too short		
		1147.95		3.609E-01	8.362E-02	Half-Life too short		
		1362.66		8.306E-01	8.362E-02	Half-Life too short		
		1750.46		-4.906E-01	8.362E-02	Half-Life too short		
MO-99		140.51		-1.220E+01	2.207E+01	3.454E+01	9.303E+00	-0.353
		181.06		-4.850E+00	1.571E+01	2.186E+01	3.725E+00	-0.222
		366.43		-2.127E+01	6.675E+01	1.092E+02	6.264E+00	-0.195
		739.58	*	4.145E+00	1.021E+01	1.695E+01	2.326E+00	0.245
		778.00		8.998E+00	2.646E+01	4.562E+01	2.751E+00	0.197
TC-99M		140.51	*	-5.782E+08	2.646E+01	Half-Life too short		
RH-101		127.23		3.025E-02	4.114E-02	6.144E-02	3.669E-03	0.492
		198.01	*	3.134E-03	4.160E-02	6.597E-02	3.705E-03	0.048
		325.23		2.306E-01	3.012E-01	4.616E-01	2.736E-02	0.500
RH-102		418.52		9.298E-02	3.269E-01	5.511E-01	3.087E-02	0.169
		475.06	*	-1.971E-02	3.396E-02	5.371E-02	3.024E-03	-0.367
		631.29		-4.309E-02	6.108E-02	9.301E-02	4.773E-03	-0.463
		697.49		-5.315E-02	8.962E-02	1.374E-01	7.235E-03	-0.387
		766.84		1.553E-01	1.348E-01	2.344E-01	1.388E-02	0.662
		1046.59		-1.392E-01	1.337E-01	1.977E-01	1.328E-02	-0.704
		1112.84		1.687E-01	3.123E-01	4.705E-01	2.982E-02	0.359
RU-103		497.08	*	-1.650E-02	4.534E-02	7.258E-02	9.116E-03	-0.227
	+	610.33		1.238E+01	2.537E+00	3.187E+00	4.850E-01	3.886
RH-106	+	511.85		7.925E-01	4.056E-01	5.022E-01	2.807E-02	1.578
		621.84	*	8.848E-02	3.402E-01	5.645E-01	6.462E-02	0.157
		1050.47		1.183E+00	2.658E+00	4.562E+00	3.057E-01	0.259
RU-106	+	511.85		7.925E-01	4.056E-01	5.022E-01	2.807E-02	1.578
		621.84	*	8.848E-02	3.400E-01	5.645E-01	2.927E-02	0.157
		1050.47		1.183E+00	2.658E+00	4.562E+00	3.057E-01	0.259
AG-108M		433.93	*	2.982E-04	3.856E-02	6.382E-02	3.914E-03	0.005
		614.37		4.423E-02	4.719E-02	7.317E-02	4.220E-03	0.605
		722.95		-4.669E-02	5.898E-02	7.405E-02	4.455E-03	-0.630
AG-110M		657.75	*	-3.138E-02	4.815E-02	6.207E-02	3.351E-03	-0.506
		677.61		-1.446E-01	3.604E-01	5.627E-01	3.086E-02	-0.257
		706.67		1.372E-01	2.399E-01	4.047E-01	2.316E-02	0.339
		763.93		-1.167E-02	2.046E-01	3.269E-01	2.041E-02	-0.036

Sample ID : G232433004 Acquisition date : 7-JUL-2009 06:05:37

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		1.974E-02	5.472E-02	9.408E-02	7.011E-03	0.210
		937.48		-9.199E-02	1.303E-01	2.026E-01	1.526E-02	-0.454
		1384.27		-1.282E-02	1.892E-01	3.039E-01	2.013E-02	-0.042
IN-111		171.28		-9.644E-01	8.416E-01	1.301E+00	7.071E-02	-0.742
		245.39	*	-8.031E-02	9.714E-01	1.350E+00	7.938E-02	-0.059
IN-113M		391.69	*	-1.982E-02	4.909E-02	7.959E-02	4.736E-03	-0.249
SN-113		391.69	*	-1.982E-02	4.909E-02	7.959E-02	4.736E-03	-0.249
IN-114M		190.27	*	-3.613E-02	2.295E-01	3.218E-01	1.791E-02	-0.112
CD-115		260.90		-1.878E+00	1.007E+02	1.609E+02	9.543E+00	-0.012
		492.35		2.822E+00	2.682E+01	4.442E+01	2.495E+00	0.064
		527.90	*	-5.353E+00	8.283E+00	1.292E+01	7.177E-01	-0.414
SN-117M		156.02		9.122E-01	2.499E+00	4.133E+00	2.283E-01	0.221
		158.56	*	-2.581E-02	5.970E-02	9.566E-02	5.255E-03	-0.270
SB-122		563.90	*	8.090E-01	1.623E+00	2.747E+00	1.497E-01	0.294
		692.80		-1.377E+00	3.678E+01	5.921E+01	3.091E+00	-0.023
I-123		159.00	*	-5.559E-01	3.678E+01	Half-Life too short		
		528.96		-3.665E+00	3.678E+01	Half-Life too short		
TE-123M		159.00	*	-1.532E-02	3.310E-02	5.296E-02	2.950E-03	-0.289
I-124		602.71	*	1.695E-01	6.927E-01	9.990E-01	5.280E-02	0.170
		722.78		-2.839E+00	4.830E+00	6.228E+00	3.425E-01	-0.456
		1325.50		-2.624E+01	3.335E+01	4.896E+01	3.069E+00	-0.536
		1376.25		4.836E+01	2.940E+01	5.593E+01	3.521E+00	0.865
		1509.49		1.787E+01	1.513E+01	2.808E+01	1.757E+00	0.636
		1691.02		8.191E-01	3.201E+00	5.564E+00	3.346E-01	0.147
SB-124		602.71		1.216E-02	4.968E-02	7.165E-02	3.789E-03	0.170
		645.85		4.028E-02	5.363E-01	8.749E-01	5.148E-02	0.046
		709.31		-8.673E-01	3.300E+00	5.207E+00	2.798E-01	-0.167
		713.82		-1.870E+00	2.062E+00	3.066E+00	3.066E-01	-0.610
		722.78		-2.952E-01	5.022E-01	6.476E-01	3.748E-02	-0.456
	+	968.20		1.451E+01	6.304E+00	8.282E+00	5.846E-01	1.751
		1045.16		-4.665E-01	2.691E+00	4.365E+00	2.937E-01	-0.107
		1325.50		-2.914E+00	3.703E+00	5.437E+00	3.408E-01	-0.536
		1368.21		-1.005E+00	1.897E+00	2.833E+00	3.434E-01	-0.355
		1436.60		6.141E-01	4.095E+00	6.766E+00	4.258E-01	0.091
		1691.02	*	2.009E-02	7.851E-02	1.365E-01	8.861E-03	0.147
SB-125		427.89	*	-1.168E-02	1.072E-01	1.763E-01	1.034E-02	-0.066
		463.38		6.083E-01	3.547E-01	6.316E-01	4.182E-02	0.963
		600.56		9.758E-02	1.990E-01	3.356E-01	2.107E-02	0.291
		635.90		1.684E-01	3.200E-01	5.403E-01	3.354E-02	0.312
TE-125M		109.28	*	-1.286E+01	1.099E+01	1.686E+01	1.532E+00	-0.763
I-126		388.63		4.648E-02	2.248E-01	3.780E-01	2.106E-02	0.123
		666.33	*	8.895E-02	2.157E-01	3.157E-01	1.572E-02	0.282
		753.82		7.225E-01	1.566E+00	2.617E+00	1.517E-01	0.276
SB-126		223.80		-2.880E-01	4.696E+00	7.539E+00	4.355E-01	-0.038
	+	278.60		4.965E+00	3.131E+00	4.589E+00	2.737E-01	1.082
	+	296.50		1.255E+01	2.550E+00	3.796E+00	2.268E-01	3.305
		414.70		-1.414E-01	8.485E-02	1.235E-01	6.912E-03	-1.145
		415.30		-8.050E+00	6.742E+00	1.011E+01	5.660E-01	-0.796
		555.20		1.938E-01	4.415E+00	7.238E+00	3.966E-01	0.027

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		573.80		1.172E-01	1.118E+00	1.829E+00	9.898E-02	0.064
		593.00		8.957E-02	9.380E-01	1.539E+00	8.206E-02	0.058
		656.30		-2.515E+00	4.413E+00	5.762E+00	2.867E-01	-0.436
		666.33		3.706E-02	8.984E-02	1.315E-01	6.549E-03	0.282
		675.00		1.140E+00	2.082E+00	3.519E+00	1.780E-01	0.324
		695.00		4.290E-02	8.403E-02	1.411E-01	7.396E-03	0.304
		697.00		-2.910E-01	3.026E-01	4.496E-01	2.364E-02	-0.647
		720.50	*	1.526E-01	1.733E-01	2.753E-01	1.508E-02	0.554
		856.80		2.970E-01	6.304E-01	9.530E-01	6.505E-02	0.312
		989.30		6.032E-01	1.416E+00	2.429E+00	1.695E-01	0.248
		1034.80		-5.174E+00	1.021E+01	1.608E+01	1.090E+00	-0.322
		1213.00		2.146E+00	5.619E+00	9.458E+00	5.692E-01	0.227
SB-127		61.10		-2.653E+01	5.621E+01	9.266E+01	1.034E+01	-0.286
		252.40		-7.193E-01	3.987E+00	6.307E+00	2.615E+00	-0.114
		290.80		-9.610E+00	2.129E+01	3.024E+01	2.659E+00	-0.318
		411.60		1.908E+01	1.129E+01	1.996E+01	2.791E+00	0.956
		444.90		2.127E+00	9.012E+00	1.511E+01	1.554E+00	0.141
		473.00		3.100E-01	1.518E+00	2.535E+00	2.710E-01	0.122
		543.00		1.623E+00	1.500E+01	2.473E+01	3.076E+00	0.066
		603.60		2.507E+00	1.202E+01	1.726E+01	1.738E+00	0.145
		685.20	*	-1.938E-01	1.214E+00	1.934E+00	1.655E-01	-0.100
		698.50		7.068E+00	1.325E+01	2.227E+01	3.111E+00	0.317
		722.20		-1.994E+01	3.351E+01	4.324E+01	3.664E+00	-0.461
		783.80		2.418E+00	3.233E+00	5.709E+00	5.941E-01	0.424
XE-127		57.60		-4.387E+00	7.769E+00	1.278E+01	1.176E+00	-0.343
		145.22		8.113E-01	7.814E-01	1.324E+00	7.505E-02	0.613
		172.10		-8.715E-02	1.348E-01	2.130E-01	1.159E-02	-0.409
		202.84	*	-3.852E-02	5.637E-02	8.501E-02	4.803E-03	-0.453
		374.96		9.058E-02	2.182E-01	3.719E-01	2.112E-02	0.244
I-131		80.18		-5.014E+00	5.256E+00	7.342E+00	6.853E-01	-0.683
		284.30		7.400E-02	1.596E+00	2.549E+00	1.680E-01	0.029
		364.48	*	-1.318E-01	1.150E-01	1.781E-01	1.143E-02	-0.740
		636.97		5.630E-01	1.634E+00	2.722E+00	1.595E-01	0.207
		722.89		-5.347E+00	8.665E+00	1.113E+01	6.200E-01	-0.480
TE-132		49.72		-2.898E+01	2.142E+01	3.407E+01	3.594E+00	-0.851
		111.76		6.911E+00	2.576E+01	4.287E+01	3.914E+00	0.161
		116.30		-2.520E+01	2.390E+01	3.764E+01	3.334E+00	-0.670
		228.16	*	1.765E-01	6.393E-01	1.040E+00	1.466E-01	0.170
BA-133		53.15		7.192E+00	5.114E+00	8.901E+00	8.125E-01	0.808
		79.62		1.663E+00	1.686E+00	2.541E+00	3.964E-01	0.654
		81.00		-1.772E-01	1.305E-01	1.749E-01	2.848E-02	-1.013
	+	276.40		8.006E-01	5.134E-01	7.415E-01	9.667E-02	1.080
		302.84		2.174E-01	1.874E-01	2.930E-01	3.440E-02	0.742
		356.01	*	1.413E-02	5.645E-02	8.349E-02	9.651E-03	0.169
		383.85		2.679E-01	3.658E-01	6.304E-01	6.791E-02	0.425
I-133	+	510.53		5.440E-01	3.658E-01	Half-Life too short		
		529.87	*	9.203E-04	3.658E-01	Half-Life too short		
		706.58		8.596E-02	3.658E-01	Half-Life too short		
		856.28		6.517E-02	3.658E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		875.33		1.009E-02	3.658E-01	Half-Life too short		
		1236.41		2.409E-01	3.658E-01	Half-Life too short		
		1298.22		1.160E-03	3.658E-01	Half-Life too short		
CS-134		475.35		-1.202E+00	2.225E+00	3.529E+00	1.987E-01	-0.340
		563.23		1.595E-01	4.021E-01	6.759E-01	3.772E-02	0.236
		569.32		-1.152E-01	2.255E-01	3.520E-01	1.976E-02	-0.327
		604.70		8.217E-03	4.463E-02	6.391E-02	3.394E-03	0.129
	+	795.84	*	1.396E-01	6.332E-02	1.018E-01	6.406E-03	1.372
		801.93		-2.064E-01	5.158E-01	7.421E-01	4.700E-02	-0.278
		1038.57		4.151E-02	4.608E+00	7.614E+00	5.147E-01	0.005
		1167.94		2.114E+00	3.004E+00	5.217E+00	3.107E-01	0.405
		1365.15		2.169E-01	1.368E+00	2.267E+00	1.546E-01	0.096
CS-135		268.24	*	1.799E-01	2.171E-01	3.187E-01	2.476E-02	0.565
I-135		288.45		3.239E+08	2.171E-01	Half-Life too short		
		417.63		-1.031E+09	2.171E-01	Half-Life too short		
		546.56		-1.880E+08	2.171E-01	Half-Life too short		
		836.80		1.004E+09	2.171E-01	Half-Life too short		
		1038.76		4.959E+07	2.171E-01	Half-Life too short		
		1124.00		4.343E+08	2.171E-01	Half-Life too short		
		1131.51		-1.891E+08	2.171E-01	Half-Life too short		
		1260.41	*	1.530E+08	2.171E-01	Half-Life too short		
		1457.56		3.848E+10	2.171E-01	Half-Life too short		
		1678.03		7.277E+07	2.171E-01	Half-Life too short		
		1706.46		-4.783E+08	2.171E-01	Half-Life too short		
		1791.20		-2.085E+08	2.171E-01	Half-Life too short		
CS-136		66.91		-5.982E-01	8.898E-01	1.449E+00	2.263E-01	-0.413
	+	86.29		4.583E+00	1.202E+00	2.181E+00	2.971E-01	2.101
		153.22		1.029E+00	7.191E-01	1.230E+00	8.647E-02	0.836
		163.89		-3.992E-01	1.140E+00	1.830E+00	1.273E-01	-0.218
		176.55		9.081E-02	3.928E-01	6.440E-01	4.009E-02	0.141
		273.65		1.811E-01	7.331E-01	7.519E-01	5.077E-02	0.241
		340.57		5.256E-01	1.668E-01	2.842E-01	1.772E-02	1.849
		818.51		-4.083E-02	7.201E-02	1.141E-01	7.351E-03	-0.358
		1048.07	*	-1.053E-01	1.168E-01	1.753E-01	1.258E-02	-0.600
		1235.34		5.925E-01	7.128E-01	1.230E+00	1.248E-01	0.482
CE-139		165.85	*	-1.199E-02	3.463E-02	5.558E-02	3.005E-03	-0.216
BA-140		162.64		-2.944E-01	8.043E-01	1.291E+00	8.013E-02	-0.228
		304.84		1.796E-01	1.506E+00	2.222E+00	6.073E-01	0.081
		423.70		-4.739E-01	2.088E+00	3.402E+00	1.080E+00	-0.139
		537.32	*	-4.059E-02	2.684E-01	4.338E-01	1.409E-01	-0.094
LA-140	+	328.77		4.227E-01	4.309E-01	6.172E-01	4.074E-02	0.685
		432.53		-4.689E-01	2.340E+00	3.825E+00	2.389E-01	-0.123
		487.03		-6.776E-02	1.500E-01	2.390E-01	1.532E-02	-0.283
		751.79		-2.452E-01	1.862E+00	2.957E+00	2.093E-01	-0.083
		815.85		2.323E-01	3.113E-01	5.545E-01	4.265E-02	0.419
		867.82		1.741E-01	1.603E+00	2.284E+00	1.713E-01	0.076
		919.63		-9.462E-01	2.910E+00	4.451E+00	4.246E-01	-0.213
		925.24		3.141E-01	1.233E+00	2.095E+00	1.641E-01	0.150
		1596.49	*	-2.991E-02	9.177E-02	1.460E-01	9.009E-03	-0.205

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CE-141		145.44	*	8.155E-02	7.035E-02	1.197E-01	7.062E-03	0.681
CE-143		57.37		-4.382E-04	7.035E-02	Half-Life too short		
		231.56		3.099E-04	7.035E-02	Half-Life too short		
		293.26	*	4.156E-04	7.035E-02	Half-Life too short		
	+	350.59		1.600E-02	7.035E-02	Half-Life too short		
		490.36		-1.735E-04	7.035E-02	Half-Life too short		
		664.57		5.416E-04	7.035E-02	Half-Life too short		
		721.93		-1.520E-04	7.035E-02	Half-Life too short		
CE-144		80.11		-2.503E+00	2.715E+00	3.799E+00	3.529E-01	-0.659
		133.54	*	2.000E-01	2.564E-01	3.819E-01	5.431E-02	0.524
PM-144		476.78		-5.606E-02	7.742E-02	1.210E-01	8.227E-03	-0.463
		618.01		-1.643E-02	3.539E-02	5.526E-02	3.090E-03	-0.297
		696.49	*	-4.597E-03	4.068E-02	6.506E-02	3.421E-03	-0.071
		778.57		1.009E+00	2.468E+00	4.279E+00	2.584E-01	0.236
PR-144		696.49	*	-3.113E-01	2.755E+00	4.405E+00	2.315E-01	-0.071
		1489.15		-5.782E+00	1.406E+01	2.120E+01	1.329E+00	-0.273
PM-146		453.90	*	5.109E-02	4.936E-02	8.656E-02	7.367E-03	0.590
		633.02		-4.721E-01	1.620E+00	2.551E+00	9.367E-01	-0.185
		735.90		3.219E-02	1.929E-01	2.856E-01	7.952E-02	0.113
		747.13		-6.527E-02	1.058E-01	1.599E-01	1.994E-02	-0.408
ND-147	+	91.11		7.045E-01	3.497E-01	5.499E-01	5.480E-02	1.281
		319.41		-1.975E+00	3.351E+00	5.441E+00	3.234E-01	-0.363
		439.89		-3.820E+00	6.220E+00	9.872E+00	5.556E-01	-0.387
		531.02	*	2.053E-01	5.782E-01	9.709E-01	1.303E-01	0.211
PM-149		285.90	*	2.076E+01	6.802E+01	1.161E+02	1.653E+01	0.179
EU-152		121.78		-4.339E-02	8.546E-02	1.378E-01	1.082E-02	-0.315
		244.69		2.482E-01	4.203E-01	6.118E-01	3.595E-02	0.406
		344.27	*	7.830E-02	1.467E-01	1.796E-01	1.183E-02	0.436
		443.98		5.012E-01	1.141E+00	1.936E+00	1.090E-01	0.259
		778.89		6.776E-02	2.812E-01	4.813E-01	2.907E-02	0.141
		867.32		-3.041E-01	1.069E+00	1.444E+00	1.001E-01	-0.211
		964.01		3.424E-01	4.283E-01	6.597E-01	4.666E-02	0.519
		1085.78		2.314E-01	5.289E-01	9.013E-01	5.863E-02	0.257
		1112.02		5.247E-01	4.105E-01	6.738E-01	4.275E-02	0.779
		1407.95		1.148E-01	2.065E-01	3.518E-01	2.216E-02	0.326
GD-153		69.67		-1.325E+00	2.158E+00	3.265E+00	2.914E-01	-0.406
		83.37		1.411E+01	2.031E+01	2.837E+01	2.696E+00	0.497
		97.43	*	-4.702E-03	1.024E-01	1.485E-01	1.242E-02	-0.032
		103.18		-4.508E-02	1.227E-01	2.001E-01	1.537E-02	-0.225
EU-154		123.07		1.512E-03	6.206E-02	9.868E-02	9.448E-03	0.015
		247.94		-4.240E-02	4.468E-01	6.566E-01	6.300E-02	-0.065
		591.81		-1.079E-01	6.784E-01	1.090E+00	1.037E-01	-0.099
		723.30		-1.747E-01	2.479E-01	3.150E-01	2.155E-02	-0.554
		756.87		-7.856E-02	9.082E-01	1.447E+00	1.469E-01	-0.054
		873.19		1.595E-02	3.244E-01	5.434E-01	6.066E-02	0.029
		996.32		-3.973E-01	4.336E-01	6.473E-01	1.102E-01	-0.614
		1004.76		-1.519E-01	2.402E-01	3.724E-01	3.888E-02	-0.408
		1274.45	*	-1.876E-01	1.595E-01	2.280E-01	2.182E-02	-0.823
EU-155		48.70		-6.504E-01	3.494E+00	5.846E+00	4.895E-01	-0.111

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		-4.105E+00	6.394E+00	1.048E+01	9.604E-01	-0.392
	+	86.54		4.542E-01	1.111E-01	2.152E-01	2.116E-02	2.110
		105.31	*	1.019E-02	1.242E-01	2.058E-01	1.561E-02	0.050
TB-160	+	86.79		1.198E+00	2.927E-01	5.609E-01	5.482E-02	2.136
		197.04		2.818E-01	6.904E-01	1.109E+00	6.221E-02	0.254
		215.65		-2.382E-01	9.393E-01	1.443E+00	8.269E-02	-0.165
		298.57		1.894E-01	2.045E-01	2.259E-01	1.349E-02	0.839
		879.36	*	1.354E-02	1.507E-01	2.533E-01	1.789E-02	0.053
		962.29		6.434E-01	7.075E-01	1.109E+00	7.853E-02	0.580
		966.15		1.269E+00	3.490E-01	6.248E-01	4.415E-02	2.031
		1177.93		1.847E-01	4.267E-01	7.250E-01	4.298E-02	0.255
		1271.85		7.111E-02	8.993E-01	1.477E+00	9.090E-02	0.048
HO-166M		80.57		-5.001E-01	3.553E-01	4.837E-01	4.506E-02	-1.034
		184.41		1.311E-01	4.687E-02	7.488E-02	4.136E-03	1.750
		280.46		-2.159E-02	1.060E-01	1.537E-01	9.171E-03	-0.141
		410.95		4.014E-01	2.871E-01	5.115E-01	2.858E-02	0.785
		711.68	*	2.462E-02	7.327E-02	1.213E-01	6.544E-03	0.203
		752.31		-2.434E-02	3.246E-01	5.182E-01	2.995E-02	-0.047
		810.29		-7.125E-02	6.636E-02	1.005E-01	6.385E-03	-0.709
TM-171		51.35		1.152E+01	4.346E+01	7.370E+01	6.609E+00	0.156
		52.39		2.314E+01	2.238E+01	3.870E+01	3.512E+00	0.598
		59.40		-2.331E+00	3.408E+01	5.701E+01	5.240E+00	-0.041
		66.72	*	-2.830E+01	3.469E+01	5.642E+01	5.040E+00	-0.502
LU-176	+	88.36		8.949E-01	2.187E-01	4.387E-01	4.303E-02	2.040
		201.83		-5.178E-02	3.560E-02	5.387E-02	3.040E-03	-0.961
		306.84	*	-1.353E-02	2.993E-02	4.625E-02	2.759E-03	-0.293
		401.10		-2.230E+00	7.704E+00	1.257E+01	7.002E-01	-0.177
LU-177		112.95		2.075E+00	1.625E+00	2.789E+00	1.890E-01	0.744
	+	208.36	*	3.226E+00	1.501E+00	1.996E+00	1.135E-01	1.616
LU-177M		52.97		3.190E+00	2.294E+00	3.994E+00	3.641E-01	0.799
		54.07		1.131E+00	1.183E+00	2.040E+00	1.871E-01	0.554
		61.30		-3.604E-01	1.856E+00	3.090E+00	2.809E-01	-0.117
		121.62		-1.485E-01	4.382E-01	7.115E-01	4.358E-02	-0.209
		147.16		-3.369E-01	7.513E-01	1.207E+00	6.806E-02	-0.279
		171.86		-6.960E-01	5.654E-01	8.703E-01	4.734E-02	-0.800
		218.09		7.839E-02	1.055E+00	1.705E+00	9.795E-02	0.046
	+	268.79		2.253E+00	1.536E+00	1.659E+00	9.871E-02	1.358
		319.02		-9.237E-02	2.815E-01	4.638E-01	2.757E-02	-0.199
		367.43		5.523E-01	9.840E-01	1.693E+00	9.700E-02	0.326
		413.65	*	-1.704E-01	2.086E-01	3.230E-01	1.807E-02	-0.528
HF-181		56.28		-1.049E+00	1.242E+00	2.021E+00	1.860E-01	-0.519
		57.53		-4.118E-01	6.582E-01	1.080E+00	9.941E-02	-0.381
		65.20		6.792E-01	1.124E+00	1.911E+00	1.711E-01	0.355
		133.02		2.247E-02	8.146E-02	1.188E-01	6.961E-03	0.189
		136.25		-8.049E-02	5.049E-01	8.223E-01	4.771E-02	-0.098
		345.85		7.091E-02	2.412E-01	3.400E-01	1.989E-02	0.209
		482.03	*	3.308E-03	4.899E-02	8.100E-02	4.558E-03	0.041
W-181		56.28		-4.877E-01	4.961E-01	8.026E-01	7.389E-02	-0.608
		57.53		-1.636E-01	2.616E-01	4.293E-01	3.951E-02	-0.381

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20	*	2.678E-01	4.430E-01	7.533E-01	6.748E-02	0.355
TA-182		67.75		-8.654E-02	1.330E-01	2.175E-01	1.941E-02	-0.398
		100.10		7.758E-02	2.038E-01	3.414E-01	2.740E-02	0.227
		152.43		3.015E-01	3.926E-01	6.587E-01	3.669E-02	0.458
		222.10		-5.024E-02	4.281E-01	6.858E-01	3.955E-02	-0.073
		1001.68		1.589E+00	2.336E+00	4.039E+00	2.798E-01	0.393
	+	1121.28		8.158E-01	3.932E-01	4.200E-01	2.640E-02	1.942
		1189.05		6.467E-02	4.033E-01	6.685E-01	3.983E-02	0.097
		1221.42	*	4.730E-02	2.596E-01	4.300E-01	2.597E-02	0.110
		1230.97		-1.632E-01	6.321E-01	1.012E+00	6.135E-02	-0.161
RE-183		57.98		-5.928E-02	2.552E-01	4.248E-01	3.909E-02	-0.140
		59.32		-1.249E-02	1.385E-01	2.316E-01	2.128E-02	-0.054
		67.20		-1.987E-01	2.420E-01	3.936E-01	3.514E-02	-0.505
		162.32	*	2.829E-02	1.228E-01	2.019E-01	1.100E-02	0.140
	+	208.81		3.294E+00	1.533E+00	2.063E+00	1.173E-01	1.597
		291.72		-9.367E-01	1.190E+00	1.650E+00	9.854E-02	-0.568
RE-184		57.98		-2.202E-01	9.478E-01	1.578E+00	1.452E-01	-0.140
		59.32		-4.633E-02	5.140E-01	8.593E-01	7.899E-02	-0.054
		67.20		-7.379E-01	8.987E-01	1.461E+00	1.305E-01	-0.505
		161.27		2.411E-01	4.006E-01	6.681E-01	3.648E-02	0.361
		216.55		2.102E-01	3.241E-01	5.363E-01	3.075E-02	0.392
		252.85	*	4.962E-02	2.676E-01	4.327E-01	2.555E-02	0.115
		318.01		-3.001E-01	4.806E-01	7.784E-01	4.628E-02	-0.386
		792.07		2.593E-01	1.284E+00	1.906E+00	1.176E-01	0.136
		903.28		-3.904E-01	1.294E+00	1.936E+00	1.403E-01	-0.202
		920.93		1.310E-02	4.836E-01	8.062E-01	5.809E-02	0.016
OS-185		59.72		-2.133E-01	3.789E-01	6.233E-01	5.720E-02	-0.342
		61.14		-8.414E-02	2.024E-01	3.346E-01	3.045E-02	-0.251
		69.30		-2.376E-01	3.654E-01	5.767E-01	5.147E-02	-0.412
		592.07		-6.033E-01	2.765E+00	4.422E+00	2.359E-01	-0.136
		646.12	*	1.632E-02	4.489E-02	7.509E-02	3.785E-03	0.217
		717.42		1.043E-02	1.127E+00	1.817E+00	9.902E-02	0.006
		874.81		9.348E-04	6.442E-01	1.075E+00	7.538E-02	0.001
		880.27		-5.558E-02	8.373E-01	1.387E+00	9.812E-02	-0.040
RE-188		155.03	*	1.572E-01	2.015E-01	3.379E-01	1.871E-02	0.465
		477.96		7.638E-01	3.469E+00	5.796E+00	3.263E-01	0.132
		633.10		-9.417E-01	3.213E+00	5.088E+00	2.606E-01	-0.185
W-188		63.58		3.143E+01	6.478E+01	1.095E+02	9.852E+00	0.287
		227.08		4.936E-02	1.553E+01	2.498E+01	1.447E+00	0.002
		290.67	*	-1.323E+00	9.132E+00	1.326E+01	7.922E-01	-0.100
IR-192	+	295.96		1.024E+00	2.083E-01	3.127E-01	1.896E-02	3.275
		308.46		-9.513E-02	1.076E-01	1.724E-01	1.039E-02	-0.552
		316.51	*	-1.275E-02	3.785E-02	6.238E-02	3.729E-03	-0.204
		468.07		-9.162E-02	8.290E-02	1.270E-01	8.306E-03	-0.722
		604.41		1.176E-01	5.971E-01	8.560E-01	9.495E-02	0.137
		612.46		2.094E+00	1.012E+00	1.668E+00	1.193E-01	1.255
AU-195		65.12		1.366E-01	2.064E-01	3.514E-01	3.148E-02	0.389
		66.83		-7.890E-02	1.139E-01	1.861E-01	1.662E-02	-0.424
	+	75.70		1.098E+00	2.646E-01	5.441E-01	4.935E-02	2.018

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	4.260E-02	2.815E-01	4.344E-01	3.551E-02	0.098
	+	129.76		5.037E+00	4.362E+00	5.710E+00	3.380E-01	0.882
TL-200		367.94	*	1.972E-04	4.362E+00	Half-Life too short		
		579.30		1.154E-04	4.362E+00	Half-Life too short		
		828.27		1.310E-03	4.362E+00	Half-Life too short		
		1205.75		5.250E-05	4.362E+00	Half-Life too short		
TL-201		68.90		-3.214E+00	4.235E+00	6.899E+00	6.156E-01	-0.466
		70.82		8.867E-01	2.663E+00	3.966E+00	3.545E-01	0.224
		80.30		-4.757E+00	4.715E+00	6.565E+00	6.106E-01	-0.724
		135.34		-1.546E+00	2.165E+01	3.417E+01	1.988E+00	-0.045
		167.43	*	3.931E+00	6.049E+00	1.009E+01	5.459E-01	0.390
TL-202		68.90		-3.650E-01	4.809E-01	7.833E-01	6.990E-02	-0.466
		70.82		1.004E-01	3.015E-01	4.490E-01	4.014E-02	0.224
		80.30		-5.388E-01	5.341E-01	7.437E-01	6.916E-02	-0.724
		439.56	*	-2.942E-02	7.380E-02	1.189E-01	6.688E-03	-0.247
BI-207		72.80		4.279E-01	2.503E-01	3.870E-01	3.474E-02	1.106
	+	74.97		6.122E-01	1.475E-01	2.688E-01	2.430E-02	2.278
		84.90		2.153E-01	2.482E-01	3.708E-01	3.566E-02	0.581
		569.67		-8.902E-03	3.528E-02	5.622E-02	3.052E-03	-0.158
		1063.62	*	-2.544E-03	6.212E-02	1.020E-01	6.764E-03	-0.025
		1770.23		-2.799E+00	8.386E-01	6.634E-01	3.875E-02	-4.220
TL-207		81.07		-3.585E-01	2.816E-01	3.863E-01	3.611E-02	-0.928
		83.78		1.470E-01	1.718E-01	2.415E-01	2.303E-02	0.609
		94.90		8.479E-01	3.134E-01	4.952E-01	4.312E-02	1.712
		122.32		-9.869E-01	2.049E+00	3.307E+00	2.299E-01	-0.298
		144.24		7.102E-01	8.014E-01	1.328E+00	9.476E-02	0.535
		154.21		4.898E-01	4.673E-01	7.903E-01	5.379E-02	0.620
	+	269.46		5.306E-01	3.619E-01	3.990E-01	2.476E-02	1.330
		323.87	*	2.083E-01	8.684E-01	1.288E+00	2.133E-01	0.162
	+	338.28		8.314E+00	2.219E+00	2.853E+00	3.018E-01	2.914
		445.03		1.119E+00	2.673E+00	4.529E+00	4.607E-01	0.247
PO-209		260.50		1.572E+00	1.126E+01	1.815E+01	1.076E+00	0.087
		262.80		-6.932E+00	3.250E+01	4.947E+01	2.937E+00	-0.140
		896.60	*	3.586E+00	9.032E+00	1.552E+01	1.124E+00	0.231
BI-210		46.50	*	-2.063E-01	5.313E+00	8.859E+00	7.294E-01	-0.023
PB-210		46.50	*	-2.063E-01	5.313E+00	8.859E+00	7.294E-01	-0.023
PO-210		46.50	*	-2.063E-01	5.313E+00	8.859E+00	6.399E-01	-0.023
PB-211		404.84	*	8.112E-02	1.096E+00	1.825E+00	1.138E+00	0.044
		427.08		-6.624E-01	2.455E+00	3.941E+00	2.436E+00	-0.168
		831.96		-9.370E-01	1.524E+00	2.227E+00	1.390E+00	-0.421
BI-212	+	727.18	*	1.507E+00	5.496E-01	7.585E-01	5.704E-02	1.988
		785.46		1.814E+00	1.991E+00	3.562E+00	2.174E-01	0.509
		1620.62		-2.210E-01	1.281E+00	2.073E+00	1.272E-01	-0.107
PO-215		81.07		-3.585E-01	2.816E-01	3.863E-01	3.611E-02	-0.928
		83.78		1.470E-01	1.718E-01	2.415E-01	2.303E-02	0.609
		94.90		8.479E-01	3.134E-01	4.952E-01	4.312E-02	1.712
		122.32		-9.869E-01	2.049E+00	3.307E+00	2.299E-01	-0.298
		144.24		7.102E-01	8.014E-01	1.328E+00	9.476E-02	0.535
		154.21		4.898E-01	4.673E-01	7.903E-01	5.379E-02	0.620

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.306E-01	3.619E-01	3.990E-01	2.476E-02	1.330
		323.87	*	2.083E-01	8.684E-01	1.288E+00	2.133E-01	0.162
	+	338.28		8.314E+00	2.219E+00	2.853E+00	3.018E-01	2.914
		445.03		1.119E+00	2.673E+00	4.529E+00	4.607E-01	0.247
RN-219	+	271.23		6.808E-01	4.658E-01	5.118E-01	4.204E-02	1.330
		401.81	*	-1.525E-01	4.760E-01	7.747E-01	1.047E-01	-0.197
RN-220		549.76	*	-1.133E+01	2.917E+01	4.624E+01	2.541E+00	-0.245
RA-223		81.07		-3.585E-01	2.816E-01	3.863E-01	3.611E-02	-0.928
		83.78		1.470E-01	1.718E-01	2.415E-01	2.303E-02	0.609
		94.90		8.479E-01	3.134E-01	4.952E-01	4.312E-02	1.712
		122.32		-9.869E-01	2.049E+00	3.307E+00	2.299E-01	-0.298
		144.24		7.102E-01	8.014E-01	1.328E+00	9.476E-02	0.535
		154.21		4.898E-01	4.673E-01	7.903E-01	5.379E-02	0.620
	+	269.46		5.306E-01	3.619E-01	3.990E-01	2.476E-02	1.330
		323.87	*	2.083E-01	8.684E-01	1.288E+00	2.133E-01	0.162
	+	338.28		8.314E+00	2.219E+00	2.853E+00	3.018E-01	2.914
		445.03		1.119E+00	2.673E+00	4.529E+00	4.607E-01	0.247
AC-227		79.80		2.753E-01	2.061E+00	3.034E+00	6.605E-01	0.091
		236.00		1.010E+00	3.541E-01	5.470E-01	5.729E-02	1.846
		256.20	*	7.070E-02	4.433E-01	7.152E-01	1.002E-01	0.099
		286.10		8.020E-01	1.762E+00	3.026E+00	3.525E-01	0.265
	+	299.80		3.026E+00	2.341E+00	3.054E+00	4.992E-01	0.991
		304.40		7.321E-01	2.388E+00	3.565E+00	6.187E-01	0.205
		334.20		-2.305E+00	3.944E+00	4.200E+00	7.713E-01	-0.549
TH-227		79.80		2.753E-01	2.061E+00	3.034E+00	6.688E-01	0.091
	+	94.00		1.036E+01	3.552E+00	4.502E+00	9.844E-01	2.302
		236.00		1.010E+00	3.502E-01	5.470E-01	4.968E-02	1.846
		256.20	*	7.070E-02	4.433E-01	7.152E-01	1.212E-01	0.099
		286.10		8.020E-01	1.934E+00	3.026E+00	3.032E+00	0.265
	+	299.80		3.026E+00	2.341E+00	3.054E+00	4.992E-01	0.991
		304.40		7.321E-01	2.388E+00	3.565E+00	6.187E-01	0.205
		334.20		-2.305E+00	3.944E+00	4.200E+00	7.713E-01	-0.549
TH-229		85.43		6.031E-01	2.536E-01	3.917E-01	3.784E-02	1.540
	+	88.47		5.152E-01	1.259E-01	2.526E-01	2.472E-02	2.039
		100.00		8.516E-02	2.134E-01	3.578E-01	2.876E-02	0.238
		193.63	*	-9.657E-03	6.027E-01	9.749E-01	5.447E-02	-0.010
		210.97		1.641E+00	1.031E+00	1.577E+00	8.993E-02	1.040
PA-231		283.67	*	1.138E-01	1.908E+00	2.942E+00	4.076E-01	0.039
	+	301.29		1.210E+00	9.243E-01	1.247E+00	1.315E-01	0.971
TH-231		81.07		-3.585E-01	2.816E-01	3.863E-01	3.611E-02	-0.928
		83.78		1.470E-01	1.718E-01	2.415E-01	2.303E-02	0.609
		94.90		8.479E-01	3.134E-01	4.952E-01	4.312E-02	1.712
		122.32		-9.869E-01	2.049E+00	3.307E+00	2.299E-01	-0.298
		144.24		7.102E-01	8.014E-01	1.328E+00	9.476E-02	0.535
		154.21		4.898E-01	4.673E-01	7.903E-01	5.379E-02	0.620
	+	269.46		5.306E-01	3.619E-01	3.990E-01	2.476E-02	1.330
		323.87	*	2.083E-01	8.684E-01	1.288E+00	2.133E-01	0.162
	+	338.28		8.314E+00	2.219E+00	2.853E+00	3.018E-01	2.914
		445.03		1.119E+00	2.673E+00	4.529E+00	4.607E-01	0.247

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		5.036E+00	5.507E+00	8.243E+00	7.886E-01	0.611
	+	92.29		8.171E+00	2.275E+00	3.705E+00	3.374E-01	2.205
		95.87	*	-3.214E-01	1.105E+00	1.585E+00	1.358E-01	-0.203
		108.00		-7.839E-01	1.932E+00	3.068E+00	2.211E-01	-0.255
PA-233	+	75.28		1.787E+01	4.867E+00	8.319E+00	1.297E+00	2.148
	+	86.59		7.387E+00	2.603E+00	3.492E+00	9.500E-01	2.115
	+	300.12		8.436E-01	6.481E-01	8.542E-01	1.154E-01	0.988
		311.98	*	2.343E-02	7.251E-02	1.237E-01	7.800E-03	0.189
		340.50		3.111E+00	1.113E+00	1.511E+00	3.474E-01	2.058
		398.62		-1.877E-01	2.326E+00	3.843E+00	9.916E-01	-0.049
		415.76		-2.851E+00	1.990E+00	2.792E+00	5.732E-01	-1.021
PA-234		63.00		1.333E+00	1.948E+00	3.296E+00	5.184E-01	0.404
		94.67		7.869E-01	2.435E-01	3.708E-01	4.629E-02	2.122
		98.44		4.478E-02	1.159E-01	1.766E-01	9.840E-02	0.254
		99.86		2.230E-01	5.414E-01	9.079E-01	7.314E-02	0.246
		111.00		7.988E-02	2.122E-01	3.544E-01	3.882E-02	0.225
		131.20		1.033E-01	1.393E-01	2.077E-01	1.223E-02	0.498
		152.70		3.160E-01	3.849E-01	6.423E-01	1.010E-01	0.492
	+	186.00		4.091E+00	2.292E+00	2.768E+00	8.443E-01	1.478
		226.40		2.145E-01	4.976E-01	8.145E-01	9.412E-02	0.263
		227.20		-1.518E-01	5.374E-01	8.536E-01	4.946E-02	-0.178
		248.90		-3.071E-01	9.293E-01	1.459E+00	3.139E-01	-0.210
		293.70		5.920E+00	1.439E+00	1.950E+00	3.149E-01	3.035
		369.80		-2.749E-01	9.573E-01	1.566E+00	3.257E-01	-0.176
		568.70		-7.863E-01	1.136E+00	1.745E+00	9.480E-02	-0.451
		569.50		-1.020E-01	3.114E-01	4.933E-01	2.678E-02	-0.207
		574.00		2.523E-01	1.720E+00	2.821E+00	1.526E-01	0.089
		699.00		3.016E-01	7.934E-01	1.318E+00	2.349E-01	0.229
		706.10		1.455E-01	1.218E+00	1.981E+00	8.729E-01	0.073
		733.00		-2.498E-01	4.772E-01	6.095E-01	1.292E-01	-0.410
		742.81		5.860E-01	1.671E+00	2.693E+00	1.802E+00	0.218
	+	796.30		2.717E+00	1.415E+00	1.966E+00	5.188E-01	1.382
		805.60		1.232E+00	1.181E+00	2.039E+00	6.133E-01	0.604
		819.60		-4.878E-01	1.246E+00	1.984E+00	7.458E-01	-0.246
		826.30		2.351E-01	8.584E-01	1.461E+00	6.484E-01	0.161
		831.60		-7.369E-01	7.574E-01	1.113E+00	3.262E-01	-0.662
		876.40		2.633E-01	9.553E-01	1.567E+00	1.609E+00	0.168
		880.51		-5.111E-02	3.081E-01	5.058E-01	3.578E-02	-0.101
		883.24		-2.060E-01	3.502E-01	5.050E-01	3.386E-01	-0.408
		899.00		-5.499E-02	1.037E+00	1.707E+00	7.419E-01	-0.032
		925.00		5.018E-01	1.350E+00	2.317E+00	1.667E-01	0.217
		926.50		6.920E-03	2.075E-01	3.458E-01	8.585E-02	0.020
		946.00	*	-1.315E-01	3.449E-01	5.512E-01	9.992E-02	-0.239
		949.00		5.002E-01	5.027E-01	9.047E-01	6.444E-02	0.553
		980.50		-2.450E-01	8.942E-01	1.446E+00	1.014E-01	-0.169
		1394.10		3.478E-01	1.150E+00	1.917E+00	1.243E+00	0.181
PA-234M		766.41		2.166E+01	2.710E+01	3.706E+01	2.832E+01	0.584
		1001.03	*	6.926E+00	7.488E+00	1.317E+01	1.309E+00	0.526
TH-234		63.29	*	9.715E-01	1.654E+00	2.791E+00	5.073E-01	0.348

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.681E+00	8.596E-01	1.208E+00	2.212E-01	2.220
U-235	+	89.95		3.058E+00	1.765E+00	2.172E+00	6.757E-01	1.408
	+	93.35		3.223E+00	1.243E+00	1.422E+00	4.000E-01	2.266
		105.00		2.099E-01	1.225E+00	2.033E+00	6.005E-01	0.103
		143.76	*	2.128E-01	2.509E-01	4.122E-01	6.704E-02	0.516
		163.35		-1.792E-01	5.442E-01	8.731E-01	1.560E-01	-0.205
	+	185.71		1.515E-01	7.171E-02	1.027E-01	5.685E-03	1.475
		205.31		8.837E-02	6.864E-01	9.723E-01	1.744E-01	0.091
NP-236		94.67		5.998E-01	1.770E-01	2.815E-01	2.460E-02	2.131
		98.44		3.381E-02	8.562E-02	1.335E-01	1.098E-02	0.253
		111.00		6.042E-02	1.604E-01	2.681E-01	1.861E-02	0.225
		160.31	*	-1.901E-02	9.178E-02	1.483E-01	8.117E-03	-0.128
U-238		63.29	*	9.715E-01	1.654E+00	2.791E+00	5.073E-01	0.348
	+	92.38		2.681E+00	7.465E-01	1.208E+00	1.098E-01	2.220
NP-239		99.55		7.447E-02	1.807E-01	3.031E-01	2.453E-02	0.246
		117.00	*	-2.198E-01	2.187E-01	3.457E-01	2.234E-02	-0.636
	+	209.75		2.634E+00	1.226E+00	1.647E+00	9.375E-02	1.599
		228.18		8.031E-02	2.794E-01	4.549E-01	2.639E-02	0.177
	+	277.60		3.908E-01	2.465E-01	3.647E-01	2.175E-02	1.072
		334.30		-7.217E-01	1.937E+00	2.380E+00	1.404E-01	-0.303
AM-241		59.54	*	-6.025E-03	1.981E-01	3.318E-01	3.244E-02	-0.018
CM-243		99.55		7.663E-02	1.860E-01	3.119E-01	2.524E-02	0.246
		103.76	*	2.072E-02	1.113E-01	1.851E-01	1.411E-02	0.112
		117.00		-2.262E-01	2.250E-01	3.557E-01	2.298E-02	-0.636
	+	209.75		2.596E+00	1.208E+00	1.623E+00	9.241E-02	1.599
		228.18		8.114E-02	2.823E-01	4.597E-01	2.666E-02	0.177
	+	277.60		3.940E-01	2.485E-01	3.676E-01	2.193E-02	1.072
CM-247	+	278.00		1.621E+00	1.022E+00	1.495E+00	8.918E-02	1.084
		287.40		3.200E-01	1.445E+00	2.398E+00	1.432E-01	0.133
		402.60	*	-4.224E-03	4.249E-02	7.014E-02	3.908E-03	-0.060
CF-249		252.85		1.872E-01	1.010E+00	1.633E+00	9.643E-02	0.115
		333.44		-2.627E-01	3.499E-01	3.045E-01	1.797E-02	-0.863
		387.95	*	-3.316E-03	4.752E-02	7.871E-02	4.390E-03	-0.042
CF-251		176.60	*	2.816E-02	1.453E-01	2.379E-01	1.302E-02	0.118
		227.00		2.032E-02	4.730E-01	7.624E-01	4.417E-02	0.027
		285.00		-8.960E-01	2.043E+00	3.280E+00	1.959E-01	-0.273

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433004      *
* Acquisition date :  7-JUL-2009 06:05:37 Detector SN#     :                *
* Detector ID        : GAM06              Sensitivity      : 5.000         *
* Geometry           : CAN                Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00    Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.42    Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232433004           Analyst initials: MXR1         *
* Batch Number       : 881219               Sample Quantity : 1.3771E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  4-FEB-2009 13:05:54 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.476E+01	3.005E+00	6.284E-01	0.000E+00
CD-109	3.831E+00	9.173E-01	1.560E+00	0.000E+00
SN-126	3.773E-01	9.034E-02	1.545E-01	0.000E+00
BA-137M	5.958E-02	4.719E-02	6.791E-02	0.000E+00
CS-137	6.298E-02	4.988E-02	7.179E-02	0.000E+00
HG-203	8.752E-02	5.413E-02	7.769E-02	0.000E+00
TL-208	5.291E-01	8.541E-02	7.030E-02	0.000E+00
BI-211	4.013E+00	5.784E-01	3.975E-01	0.000E+00
PB-212	1.798E+00	1.750E-01	1.056E-01	0.000E+00
PO-212	1.798E+00	1.750E-01	1.056E-01	0.000E+00
BI-214	1.175E+00	1.793E-01	1.254E-01	0.000E+00
PB-214	1.396E+00	2.135E-01	1.385E-01	0.000E+00
PO-214	1.396E+00	2.135E-01	1.385E-01	0.000E+00
PO-216	1.798E+00	1.750E-01	1.056E-01	0.000E+00
PO-218	1.396E+00	2.135E-01	1.385E-01	0.000E+00
RA-224	4.550E+00	1.216E+00	1.202E+00	0.000E+00
RA-226	1.175E+00	1.793E-01	1.254E-01	0.000E+00
AC-228	1.872E+00	3.602E-01	2.316E-01	0.000E+00
RA-228	1.872E+00	3.602E-01	2.316E-01	0.000E+00
TH-228	1.798E+00	1.750E-01	1.056E-01	0.000E+00
TH-230	1.175E+00	1.793E-01	1.254E-01	0.000E+00
TH-232	1.872E+00	3.602E-01	2.316E-01	0.000E+00
U-234	1.175E+00	1.793E-01	1.254E-01	0.000E+00
NP-237	1.108E+00	3.473E-01	4.844E-01	0.000E+00
AM-243	3.411E-01	8.055E-02	1.206E-01	0.000E+00
ANH-511	1.591E-01	7.978E-02	5.333E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
BE-7	1.019E-01		3.532E-01	6.201E-01	0.000E+00	NOT IDENT.

NA-22	-6.759E-02	5.567E-02	8.188E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.764E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.575E-02	3.356E-02	4.785E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.719E-02	9.958E-02	0.000E+00	FAIL ABUN
SC-46	1.335E-02	4.443E-02	7.841E-02	0.000E+00	FAIL ABUN
V-48	-2.316E-02	8.055E-02	1.342E-01	0.000E+00	NOT IDENT.
CR-51	-2.854E-01	3.840E-01	6.517E-01	0.000E+00	NOT IDENT.
MN-52	3.258E-02	2.008E-01	3.409E-01	0.000E+00	NOT IDENT.
MN-54	6.448E-03	4.392E-02	7.682E-02	0.000E+00	NOT IDENT.
CO-56	-9.742E-03	4.606E-02	7.832E-02	0.000E+00	NOT IDENT.
CO-57	-1.931E-02	2.876E-02	4.950E-02	0.000E+00	NOT IDENT.
CO-58	-3.552E-02	4.206E-02	6.761E-02	0.000E+00	NOT IDENT.
FE-59	4.129E-02	1.076E-01	1.882E-01	0.000E+00	NOT IDENT.
CO-60	-4.017E-02	4.667E-02	6.962E-02	0.000E+00	NOT IDENT.
ZN-65	9.078E-02	1.323E-01	2.065E-01	0.000E+00	NOT IDENT.
GE-68	9.032E-01	1.583E+00	2.806E+00	0.000E+00	NOT IDENT.
AS-73	1.490E+00	1.137E+00	2.152E+00	0.000E+00	NOT IDENT.
AS-74	-8.612E-02	9.456E-02	1.484E-01	0.000E+00	NOT IDENT.
SE-75	4.653E-03	5.825E-02	8.553E-02	0.000E+00	NOT IDENT.
BR-77	-2.611E+00	7.633E+00	1.274E+01	0.000E+00	FAIL ABUN
SR-82	-3.641E-01	4.017E-01	6.472E-01	0.000E+00	NOT IDENT.
RB-83	-2.943E-02	7.398E-02	1.230E-01	0.000E+00	NOT IDENT.
RB-84	-4.325E-02	7.516E-02	1.228E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.086E+00	1.606E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.592E-02	8.119E-02	0.000E+00	NOT IDENT.
RB-86	3.456E-01	9.536E-01	1.665E+00	0.000E+00	NOT IDENT.
Y-88	-1.995E-02	3.184E-02	4.575E-02	0.000E+00	NOT IDENT.
ZR-88	-3.784E-02	3.312E-02	5.368E-02	0.000E+00	NOT IDENT.
Y-91	-1.083E+01	2.213E+01	3.563E+01	0.000E+00	NOT IDENT.
NB-94	-1.071E-02	3.704E-02	6.054E-02	0.000E+00	NOT IDENT.
NB-95	4.536E-02	5.119E-02	9.068E-02	0.000E+00	NOT IDENT.
NB-95M	1.115E-01	1.630E-01	2.517E-01	0.000E+00	NOT IDENT.
ZR-95	-2.027E-02	8.195E-02	1.336E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.452E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.910E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.145E+00	1.001E+01	1.724E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.024E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.134E-03	4.077E-02	6.880E-02	0.000E+00	NOT IDENT.
RH-102	-1.971E-02	3.328E-02	5.508E-02	0.000E+00	NOT IDENT.
RU-103	-1.650E-02	4.443E-02	7.438E-02	0.000E+00	FAIL ABUN
RH-106	8.848E-02	3.334E-01	5.760E-01	0.000E+00	FAIL ABUN
RU-106	8.848E-02	3.332E-01	5.760E-01	0.000E+00	FAIL ABUN
AG-108M	2.982E-04	3.779E-02	6.557E-02	0.000E+00	NOT IDENT.
AG-110M	-3.138E-02	4.719E-02	6.326E-02	0.000E+00	NOT IDENT.
IN-111	-8.031E-02	9.520E-01	1.403E+00	0.000E+00	NOT IDENT.
IN-113M	-1.982E-02	4.811E-02	8.194E-02	0.000E+00	NOT IDENT.
SN-113	-1.982E-02	4.811E-02	8.194E-02	0.000E+00	NOT IDENT.
IN-114M	-3.613E-02	2.249E-01	3.359E-01	0.000E+00	NOT IDENT.
CD-115	-5.353E+00	8.117E+00	1.322E+01	0.000E+00	NOT IDENT.
SN-117M	-2.581E-02	5.851E-02	1.002E-01	0.000E+00	NOT IDENT.
SB-122	8.090E-01	1.590E+00	2.808E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.177E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.532E-02	3.244E-02	5.546E-02	0.000E+00	NOT IDENT.
I-124	1.695E-01	6.788E-01	1.020E+00	0.000E+00	NOT IDENT.
SB-124	2.009E-02	7.694E-02	1.365E-01	0.000E+00	FAIL ABUN
SB-125	-1.168E-02	1.051E-01	1.812E-01	0.000E+00	NOT IDENT.
TE-125M	-1.286E+01	1.077E+01	1.778E+01	0.000E+00	NOT IDENT.
I-126	8.895E-02	2.114E-01	3.216E-01	0.000E+00	NOT IDENT.
SB-126	1.526E-01	1.698E-01	2.800E-01	0.000E+00	FAIL ABUN
SB-127	-1.938E-01	1.190E+00	1.970E+00	0.000E+00	NOT IDENT.
XE-127	-3.852E-02	5.525E-02	8.862E-02	0.000E+00	NOT IDENT.
I-131	-1.318E-01	1.127E-01	1.836E-01	0.000E+00	NOT IDENT.
TE-132	1.765E-01	6.265E-01	1.082E+00	0.000E+00	NOT IDENT.
BA-133	1.413E-02	5.532E-02	8.611E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.195E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.205E-02	1.033E-01	0.000E+00	FAIL ABUN
CS-135	1.799E-01	2.127E-01	3.304E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.269E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.053E-01	1.144E-01	1.770E-01	0.000E+00	FAIL ABUN
CE-139	-1.199E-02	3.393E-02	5.816E-02	0.000E+00	NOT IDENT.
BA-140	-4.059E-02	2.630E-01	4.439E-01	0.000E+00	NOT IDENT.
LA-140	-2.991E-02	8.993E-02	1.462E-01	0.000E+00	FAIL ABUN
CE-141	8.155E-02	6.894E-02	1.255E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.332E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	2.000E-01	2.513E-01	4.012E-01	0.000E+00	NOT IDENT.
PM-144	-4.597E-03	3.987E-02	6.623E-02	0.000E+00	NOT IDENT.
PR-144	-3.113E-01	2.699E+00	4.485E+00	0.000E+00	NOT IDENT.
PM-146	5.109E-02	4.838E-02	8.886E-02	0.000E+00	NOT IDENT.

ND-147	2.053E-01	5.667E-01	9.936E-01	0.000E+00	FAIL ABUN
PM-149	2.076E+01	6.666E+01	1.202E+02	0.000E+00	NOT IDENT.
EU-152	7.830E-02	1.438E-01	1.854E-01	0.000E+00	NOT IDENT.
GD-153	-4.702E-03	1.003E-01	1.570E-01	0.000E+00	NOT IDENT.
EU-154	-1.876E-01	1.563E-01	2.293E-01	0.000E+00	NOT IDENT.
EU-155	1.019E-02	1.218E-01	2.172E-01	0.000E+00	FAIL ABUN
TB-160	1.354E-02	1.477E-01	2.566E-01	0.000E+00	FAIL ABUN
HO-166M	2.462E-02	7.181E-02	1.234E-01	0.000E+00	NOT IDENT.
TM-171	-2.830E+01	3.399E+01	6.003E+01	0.000E+00	NOT IDENT.
LU-176	-1.353E-02	2.933E-02	4.783E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.471E+00	2.080E+00	0.000E+00	FAIL ABUN
LU-177M	-1.704E-01	2.044E-01	3.322E-01	0.000E+00	FAIL ABUN
HF-181	3.308E-03	4.801E-02	8.305E-02	0.000E+00	NOT IDENT.
W-181	2.678E-01	4.342E-01	8.019E-01	0.000E+00	NOT IDENT.
TA-182	4.730E-02	2.544E-01	4.329E-01	0.000E+00	FAIL ABUN
RE-183	2.829E-02	1.203E-01	2.113E-01	0.000E+00	FAIL ABUN
RE-184	4.962E-02	2.623E-01	4.492E-01	0.000E+00	NOT IDENT.
OS-185	1.632E-02	4.399E-02	7.655E-02	0.000E+00	NOT IDENT.
RE-188	1.572E-01	1.974E-01	3.540E-01	0.000E+00	NOT IDENT.
W-188	-1.323E+00	8.949E+00	1.373E+01	0.000E+00	NOT IDENT.
IR-192	-1.275E-02	3.710E-02	6.448E-02	0.000E+00	FAIL ABUN
AU-195	4.260E-02	2.758E-01	4.589E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.043E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.931E+00	5.928E+00	1.055E+01	0.000E+00	NOT IDENT.
TL-202	-2.942E-02	7.233E-02	1.221E-01	0.000E+00	NOT IDENT.
BI-207	-2.544E-03	6.088E-02	1.030E-01	0.000E+00	FAIL ABUN
TL-207	2.083E-01	8.510E-01	1.330E+00	0.000E+00	FAIL ABUN
PO-209	3.586E+00	8.851E+00	1.572E+01	0.000E+00	NOT IDENT.
BI-210	-2.063E-01	5.207E+00	9.487E+00	0.000E+00	NOT IDENT.
PB-210	-2.063E-01	5.207E+00	9.487E+00	0.000E+00	NOT IDENT.
PO-210	-2.063E-01	5.207E+00	9.487E+00	0.000E+00	NOT IDENT.
PB-211	8.112E-02	1.074E+00	1.878E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.386E-01	7.715E-01	0.000E+00	FAIL ABUN
PO-215	2.083E-01	8.510E-01	1.330E+00	0.000E+00	FAIL ABUN
RN-219	-1.525E-01	4.665E-01	7.972E-01	0.000E+00	FAIL ABUN
RN-220	-1.133E+01	2.858E+01	4.729E+01	0.000E+00	NOT IDENT.
RA-223	2.083E-01	8.510E-01	1.330E+00	0.000E+00	FAIL ABUN
AC-227	7.070E-02	4.344E-01	7.423E-01	0.000E+00	FAIL ABUN
TH-227	7.070E-02	4.345E-01	7.423E-01	0.000E+00	FAIL ABUN
TH-229	-9.657E-03	5.906E-01	1.017E+00	0.000E+00	FAIL ABUN
PA-231	1.138E-01	1.870E+00	3.048E+00	0.000E+00	FAIL ABUN
TH-231	2.083E-01	8.510E-01	1.330E+00	0.000E+00	FAIL ABUN
U-231	-3.214E-01	1.083E+00	1.675E+00	0.000E+00	FAIL ABUN
PA-233	2.343E-02	7.106E-02	1.279E-01	0.000E+00	FAIL ABUN
PA-234	-1.315E-01	3.380E-01	5.577E-01	0.000E+00	FAIL ABUN
PA-234M	6.926E+00	7.339E+00	1.332E+01	0.000E+00	NOT IDENT.
TH-234	9.715E-01	1.621E+00	2.972E+00	0.000E+00	FAIL ABUN
U-235	2.128E-01	2.459E-01	4.324E-01	0.000E+00	FAIL ABUN
NP-236	-1.901E-02	8.994E-02	1.553E-01	0.000E+00	NOT IDENT.
U-238	9.715E-01	1.621E+00	2.972E+00	0.000E+00	FAIL ABUN
NP-239	-2.198E-01	2.143E-01	3.641E-01	0.000E+00	FAIL ABUN
AM-241	-6.025E-03	1.942E-01	3.538E-01	0.000E+00	NOT IDENT.
CM-243	2.072E-02	1.091E-01	1.954E-01	0.000E+00	FAIL ABUN
CM-247	-4.224E-03	4.164E-02	7.217E-02	0.000E+00	FAIL ABUN
CF-249	-3.316E-03	4.657E-02	8.105E-02	0.000E+00	NOT IDENT.
CF-251	2.816E-02	1.424E-01	2.486E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:07:58.03

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433004.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:05:37.
Sample ID         : G232433004           Sample quantity  : 1.37710E+02 GRAM
Detector name     : GAM06                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.42  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1310	10.67*	9.627E-01	3.476E+01	3.476E+01	8.82
CD-109	88.03	264	3.72*	5.162E+00	3.753E+00	3.831E+00	24.43
SN-126	64.28	------	9.60	2.881E+00	------ Line Not Found		------
	86.94	264	8.90	5.162E+00	1.569E+00	1.569E+00	47.26
	87.57	264	37.00*	5.162E+00	3.773E-01	3.773E-01	24.43
BA-137M	661.65	38	89.98*	1.937E+00	5.952E-02	5.958E-02	80.82
CS-137	661.65	38	85.12*	1.937E+00	6.292E-02	6.298E-02	80.83
HG-203	70.83	------	4.75	3.684E+00	------ Line Not Found		------
	72.87	------	8.00	3.913E+00	------ Line Not Found		------
	82.60	------	3.55	4.829E+00	------ Line Not Found		------
	279.20	79	77.30*	3.893E+00	7.129E-02	8.752E-02	63.11
TL-208	277.35	79	6.80	3.893E+00	8.104E-01	8.104E-01	63.69
	510.84	140	21.60	2.405E+00	7.364E-01	7.364E-01	51.85
	583.14	353	84.20*	2.157E+00	5.291E-01	5.291E-01	16.47
	860.37	36	12.46	1.537E+00	5.078E-01	5.078E-01	123.83
BI-211	72.87	------	1.27	3.913E+00	------ Line Not Found		------
	351.07	617	12.94*	3.241E+00	4.013E+00	4.013E+00	14.71
PB-212	74.81	342	10.70	4.142E+00	2.104E+00	2.104E+00	25.85
	77.11	649	18.00	4.361E+00	2.253E+00	2.253E+00	16.49
	87.30	264	8.00	5.162E+00	1.745E+00	1.745E+00	26.40
	238.63	1283	44.60*	4.363E+00	1.798E+00	1.798E+00	9.93
	300.09	75	3.41	3.666E+00	1.633E+00	1.633E+00	76.09
PO-212	74.81	342	10.70	4.142E+00	2.104E+00	2.104E+00	25.85
	77.11	649	18.00	4.361E+00	2.253E+00	2.253E+00	16.49
	87.30	264	8.00	5.162E+00	1.745E+00	1.745E+00	26.40
	115.19	------	0.60	6.030E+00	------ Line Not Found		------
	238.63	1283	44.60*	4.363E+00	1.798E+00	1.798E+00	9.93
	300.09	75	3.41	3.666E+00	1.633E+00	1.633E+00	76.09
BI-214	609.31	415	46.30*	2.080E+00	1.175E+00	1.175E+00	15.57
	768.36	------	5.04	1.702E+00	------ Line Not Found		------
	934.06	------	3.21	1.429E+00	------ Line Not Found		------
	1120.29	117	15.10	1.211E+00	1.740E+00	1.740E+00	48.66

Sample ID : G232433004 Acquisition date : 7-JUL-2009 06:05:37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1238.11	------	5.94	1.107E+00	------	Line Not Found	------
	1377.67	------	4.11	1.010E+00	------	Line Not Found	------
	1764.49	76	15.80	8.405E-01	1.566E+00	1.566E+00	29.17
PB-214	74.81	342	6.21	4.142E+00	3.625E+00	3.625E+00	25.21
	77.11	649	10.50	4.361E+00	3.862E+00	3.862E+00	18.17
	87.30	264	4.67	5.162E+00	2.989E+00	2.989E+00	25.62
	241.98	285	7.49	4.323E+00	2.400E+00	2.400E+00	27.85
	295.21	356	19.20	3.716E+00	1.360E+00	1.360E+00	21.26
	351.92	617	37.20*	3.241E+00	1.396E+00	1.396E+00	15.61
PO-214	74.81	342	6.21	4.142E+00	3.625E+00	3.625E+00	25.21
	77.11	649	10.50	4.361E+00	3.862E+00	3.862E+00	18.17
	87.30	264	4.67	5.162E+00	2.989E+00	2.989E+00	25.62
	241.98	285	7.49	4.323E+00	2.400E+00	2.400E+00	27.85
	295.21	356	19.20	3.716E+00	1.360E+00	1.360E+00	21.26
	351.92	617	37.20*	3.241E+00	1.396E+00	1.396E+00	15.61
PO-216	74.81	342	10.70	4.142E+00	2.104E+00	2.104E+00	25.85
	77.11	649	18.00	4.361E+00	2.253E+00	2.253E+00	16.49
	87.30	264	8.00	5.162E+00	1.745E+00	1.745E+00	26.40
	238.63	1283	44.60*	4.363E+00	1.798E+00	1.798E+00	9.93
	300.09	75	3.41	3.666E+00	1.633E+00	1.633E+00	76.09
PO-218	74.81	342	6.21	4.142E+00	3.625E+00	3.625E+00	25.21
	77.11	649	10.50	4.361E+00	3.862E+00	3.862E+00	18.17
	87.30	264	4.67	5.162E+00	2.989E+00	2.989E+00	25.62
	241.98	285	7.49	4.323E+00	2.400E+00	2.400E+00	27.85
	295.21	356	19.20	3.716E+00	1.360E+00	1.360E+00	21.26
	351.92	617	37.20*	3.241E+00	1.396E+00	1.396E+00	15.61
RA-224	240.98	285	3.95*	4.323E+00	4.550E+00	4.550E+00	27.28
RA-226	609.31	415	46.30*	2.080E+00	1.175E+00	1.175E+00	15.57
	768.36	------	5.04	1.702E+00	------	Line Not Found	------
	934.06	------	3.21	1.429E+00	------	Line Not Found	------
	1120.29	117	15.10	1.211E+00	1.740E+00	1.740E+00	48.66
	1238.11	------	5.94	1.107E+00	------	Line Not Found	------
	1377.67	------	4.11	1.010E+00	------	Line Not Found	------
	1764.49	76	15.80	8.405E-01	1.566E+00	1.566E+00	29.17
AC-228	338.32	278	11.40	3.342E+00	1.991E+00	1.991E+00	47.57
	911.07	278	27.70*	1.461E+00	1.872E+00	1.872E+00	19.63
	969.11	120	16.60	1.382E+00	1.431E+00	1.431E+00	48.57
RA-228	338.32	278	11.40	3.342E+00	1.991E+00	1.991E+00	47.57
	911.07	278	27.70*	1.461E+00	1.872E+00	1.872E+00	19.63
	969.11	120	16.60	1.382E+00	1.431E+00	1.431E+00	48.57
TH-228	84.40	------	1.21	4.965E+00	------	Line Not Found	------
	238.60	1283	44.60*	4.363E+00	1.798E+00	1.798E+00	9.93
	300.10	75	3.41	3.666E+00	1.633E+00	1.633E+00	95.89
TH-230	609.31	415	46.30*	2.080E+00	1.175E+00	1.175E+00	15.57
	768.36	------	5.04	1.702E+00	------	Line Not Found	------
	934.06	------	3.21	1.429E+00	------	Line Not Found	------
	1120.29	117	15.10	1.211E+00	1.740E+00	1.740E+00	48.66
	1238.11	------	5.94	1.107E+00	------	Line Not Found	------
	1377.67	------	4.11	1.010E+00	------	Line Not Found	------

Sample ID : G232433004 Acquisition date : 7-JUL-2009 06:05:37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	76	15.80	8.405E-01	1.566E+00	1.566E+00	29.17
TH-232	338.32	278	11.40	3.342E+00	1.991E+00	1.991E+00	25.20
	911.07	278	27.70*	1.461E+00	1.872E+00	1.872E+00	19.63
	969.11	120	16.60	1.382E+00	1.431E+00	1.431E+00	48.57
U-234	609.31	415	46.30*	2.080E+00	1.175E+00	1.175E+00	15.57
	768.36	------	5.04	1.702E+00	------ Line Not Found		------
	934.06	------	3.21	1.429E+00	------ Line Not Found		------
	1120.29	117	15.10	1.211E+00	1.740E+00	1.740E+00	48.66
	1238.11	------	5.94	1.107E+00	------ Line Not Found		------
	1377.67	------	4.11	1.010E+00	------ Line Not Found		------
	1764.49	76	15.80	8.405E-01	1.566E+00	1.566E+00	29.17
NP-237	86.50	264	12.60*	5.162E+00	1.108E+00	1.108E+00	31.98
	95.87	------	2.60	5.611E+00	------ Line Not Found		------
AM-243	74.67	342	66.00*	4.142E+00	3.411E-01	3.411E-01	24.10
	86.72	264	0.34	5.162E+00	4.155E+01	4.155E+01	24.43
	117.66	------	0.55	6.042E+00	------ Line Not Found		------
	142.18	------	0.13	5.887E+00	------ Line Not Found		------
ANH-511	511.00	140	100.00*	2.405E+00	1.591E-01	1.591E-01	51.18

Flag: "*" = Keyline

Sample ID : G232433004 Acquisition date : 7-JUL-2009 06:05:37

Total number of lines in spectrum 29
Number of unidentified lines 0
Number of lines tentatively identified by NID 29 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.476E+01	3.476E+01	0.307E+01	8.82	
CD-109	464.00D	1.02	3.753E+00	3.831E+00	0.936E+00	24.43	
SN-126	1.00E+05Y	1.00	3.773E-01	3.773E-01	0.922E-01	24.43	
BA-137M	30.17Y	1.00	5.952E-02	5.958E-02	4.815E-02	80.82	
CS-137	30.17Y	1.00	6.292E-02	6.298E-02	5.090E-02	80.83	
HG-203	46.60D	1.23	7.129E-02	8.752E-02	5.523E-02	63.11	
TL-208	1.41E+10Y	1.00	5.291E-01	5.291E-01	0.871E-01	16.47	
BI-211	7.04E+08Y	1.00	4.013E+00	4.013E+00	0.590E+00	14.71	
PB-212	1.41E+10Y	1.00	1.798E+00	1.798E+00	0.179E+00	9.93	
PO-212	1.41E+10Y	1.00	1.798E+00	1.798E+00	0.179E+00	9.93	
BI-214	1600.00Y	1.00	1.175E+00	1.175E+00	0.183E+00	15.57	
PB-214	1600.00Y	1.00	1.396E+00	1.396E+00	0.218E+00	15.61	
PO-214	1600.00Y	1.00	1.396E+00	1.396E+00	0.218E+00	15.61	
PO-216	1.41E+10Y	1.00	1.798E+00	1.798E+00	0.179E+00	9.93	
PO-218	1600.00Y	1.00	1.396E+00	1.396E+00	0.218E+00	15.61	
RA-224	1.41E+10Y	1.00	4.550E+00	4.550E+00	1.241E+00	27.28	
RA-226	1600.00Y	1.00	1.175E+00	1.175E+00	0.183E+00	15.57	
AC-228	1.41E+10Y	1.00	1.872E+00	1.872E+00	0.368E+00	19.63	
RA-228	1.41E+10Y	1.00	1.872E+00	1.872E+00	0.368E+00	19.63	
TH-228	1.41E+10Y	1.00	1.798E+00	1.798E+00	0.179E+00	9.93	
TH-230	4.47E+09Y	1.00	1.175E+00	1.175E+00	0.183E+00	15.57	
TH-232	1.41E+10Y	1.00	1.872E+00	1.872E+00	0.368E+00	19.63	
U-234	4.47E+09Y	1.00	1.175E+00	1.175E+00	0.183E+00	15.57	
NP-237	2.14E+06Y	1.00	1.108E+00	1.108E+00	0.354E+00	31.98	
AM-243	7380.00Y	1.00	3.411E-01	3.411E-01	0.822E-01	24.10	
ANH-511	1.00E+09Y	1.00	1.591E-01	1.591E-01	0.814E-01	51.18	
	Total Activity :		7.148E+01	7.157E+01			

Grand Total Activity : 7.148E+01 7.157E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433004 Acquisition date : 7-JUL-2009 06:05:37

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.98	161	455	1.27	178.59	170	20	2.24E-02	48.6	5.33E+00	T
5	93.03	292	393	1.21	184.69	170	20	4.05E-02	26.4	5.48E+00	T
0	129.29	86	393	1.22	257.21	253	9	1.19E-02	86.4	6.02E+00	T
0	186.18	155	335	1.12	371.01	367	9	2.15E-02	47.0	5.17E+00	T
0	209.21	150	300	1.58	417.07	413	10	2.08E-02	46.2	4.79E+00	T
0	269.89	105	278	1.64	538.46	533	13	1.46E-02	67.9	3.98E+00	T
0	327.99	52	195	1.24	654.68	651	9	7.16E-03	****	3.42E+00	T
0	727.49	117	62	2.11	1454.00	1448	15	1.62E-02	35.7	1.79E+00	T
0	794.95	64	38	0.89	1589.01	1584	11	8.92E-03	44.9	1.65E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:08:02.95

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                DETECTOR DATA                                *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433004.CNF;1   *
* Acquisition date  : 7-JUL-2009 06:05:37.  Detector SN#     :                *
* Detector ID       : GAM06                 Sensitivity      : 5.00000       *
* Geometry          : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:01.42          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                                 SAMPLE DATA                                 *
*                                                                             *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID           *
* Sample ID         : G232433004            Analyst initials: MXR1            *
* Batch Number      : 881219                Sample Quantity : 1.37710E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                   QC DATA                                   *
*                                                                             *
* CALIB. DATE/TIME : 4-FEB-2009 13:05:54.47MS Isotope      :                  *
* MSD ID           :                       MSD Isotope     :                  *
* LCS ID           : 1032-A                LCS Isotope     :                  *
*******************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.476E+01	3.066E+00	6.265E-01	4.144E-02	55.481
CD-109	3.831E+00	9.360E-01	1.474E+00	1.455E-01	2.599
SN-126	3.773E-01	9.219E-02	1.459E-01	1.436E-02	2.586
BA-137M	5.958E-02	4.815E-02	6.664E-02	3.291E-03	0.894
CS-137	6.298E-02	5.090E-02	7.045E-02	3.499E-03	0.894
HG-203	8.752E-02	5.523E-02	7.498E-02	4.735E-03	1.167
TL-208	5.291E-01	8.715E-02	6.882E-02	4.349E-03	7.689
BI-211	4.013E+00	5.902E-01	3.853E-01	2.487E-02	10.417
PB-212	1.798E+00	1.786E-01	1.017E-01	7.493E-03	17.685
PO-212	1.798E+00	1.786E-01	1.017E-01	7.493E-03	17.685
BI-214	1.175E+00	1.829E-01	1.228E-01	9.063E-03	9.564
PB-214	1.396E+00	2.178E-01	1.343E-01	1.114E-02	10.395
PO-214	1.396E+00	2.178E-01	1.343E-01	1.114E-02	10.395
PO-216	1.798E+00	1.786E-01	1.017E-01	7.493E-03	17.685
PO-218	1.396E+00	2.178E-01	1.343E-01	1.114E-02	10.395
RA-224	4.550E+00	1.241E+00	1.157E+00	6.781E-02	3.933
RA-226	1.175E+00	1.829E-01	1.228E-01	9.063E-03	9.564
AC-228	1.872E+00	3.675E-01	2.287E-01	2.337E-02	8.186

Sample ID : G232433004 Acquisition date : 7-JUL-2009 06:05:37

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.872E+00	3.675E-01	2.287E-01	2.337E-02	8.186
TH-228	1.798E+00	1.786E-01	1.016E-01	7.492E-03	17.687
TH-230	1.175E+00	1.829E-01	1.228E-01	9.063E-03	9.564
TH-232	1.872E+00	3.675E-01	2.287E-01	2.337E-02	8.186
U-234	1.175E+00	1.829E-01	1.228E-01	9.063E-03	9.564
NP-237	1.108E+00	3.543E-01	4.574E-01	1.044E-01	2.422
AM-243	3.411E-01	8.219E-02	1.136E-01	1.026E-02	3.003
ANH-511	1.591E-01	8.141E-02	5.207E-02	2.911E-03	3.055

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.019E-01		3.604E-01	6.046E-01	3.994E-02	0.168
NA-22	-6.759E-02		5.681E-02	8.140E-02	5.027E-03	-0.830
NA-24	-8.736E-02		9.001E-02	Half-Life too short		
AL-26	-2.575E-02		3.424E-02	4.791E-02	2.752E-03	-0.537
TI-44	4.157E-01	+	6.856E-02	9.387E-02	8.628E-03	4.428
SC-46	1.335E-02		4.534E-02	7.740E-02	5.547E-03	0.172
V-48	-2.316E-02		8.219E-02	1.328E-01	9.296E-03	-0.174
CR-51	-2.854E-01		3.918E-01	6.306E-01	4.154E-02	-0.453
MN-52	3.258E-02		2.049E-01	3.397E-01	2.138E-02	0.096
MN-54	6.448E-03		4.482E-02	7.573E-02	4.998E-03	0.085
CO-56	-9.742E-03		4.700E-02	7.723E-02	5.192E-03	-0.126
CO-57	-1.931E-02		2.935E-02	4.704E-02	2.873E-03	-0.410
CO-58	-3.552E-02		4.292E-02	6.662E-02	4.253E-03	-0.533
FE-59	4.129E-02		1.098E-01	1.865E-01	1.368E-02	0.221
CO-60	-4.017E-02		4.763E-02	6.928E-02	4.352E-03	-0.580
ZN-65	9.078E-02		1.350E-01	2.047E-01	1.297E-02	0.443
GE-68	9.032E-01		1.615E+00	2.781E+00	1.823E-01	0.325
AS-73	1.490E+00		1.160E+00	2.014E+00	1.842E-01	0.740
AS-74	-8.612E-02		9.649E-02	1.454E-01	7.730E-03	-0.592
SE-75	4.653E-03		5.944E-02	8.246E-02	4.947E-03	0.056
BR-77	-2.611E+00		7.789E+00	1.245E+01	6.934E-01	-0.210
SR-82	-3.641E-01		4.099E-01	6.371E-01	3.833E-02	-0.572
RB-83	-2.943E-02		7.549E-02	1.201E-01	6.692E-03	-0.245
RB-84	-4.325E-02		7.670E-02	1.212E-01	8.589E-03	-0.357
KR-85	2.119E+01		9.271E+00	1.569E+01	8.761E-01	1.351
SR-85	1.071E-01		4.686E-02	7.928E-02	4.428E-03	1.351
RB-86	3.456E-01		9.731E-01	1.650E+00	1.082E-01	0.209
Y-88	-1.995E-02		3.249E-02	4.582E-02	2.604E-03	-0.435
ZR-88	-3.784E-02		3.379E-02	5.215E-02	2.894E-03	-0.726
Y-91	-1.083E+01		2.259E+01	3.538E+01	2.122E+00	-0.306
NB-94	-1.071E-02		3.779E-02	5.948E-02	3.159E-03	-0.180
NB-95	4.536E-02		5.223E-02	8.924E-02	5.275E-03	0.508
NB-95M	1.115E-01		1.663E-01	2.421E-01	1.830E-02	0.461
ZR-95	-2.027E-02		8.362E-02	1.315E-01	9.264E-03	-0.154
NB-97	-2.296E-02		1.761E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	8.617E-01		3.015E-01	Half-Life too short		
MO-99	4.145E+00		1.021E+01	1.695E+01	2.326E+00	0.245
TC-99M	-5.782E+08		5.226E+08	Half-Life too short		
RH-101	3.134E-03		4.160E-02	6.597E-02	3.705E-03	0.048
RH-102	-1.971E-02		3.396E-02	5.371E-02	3.024E-03	-0.367
RU-103	-1.650E-02		4.534E-02	7.258E-02	9.116E-03	-0.227
RH-106	8.848E-02		3.402E-01	5.645E-01	6.462E-02	0.157
RU-106	8.848E-02		3.400E-01	5.645E-01	2.927E-02	0.157
AG-108M	2.982E-04		3.856E-02	6.382E-02	3.914E-03	0.005
AG-110M	-3.138E-02		4.815E-02	6.207E-02	3.351E-03	-0.506
IN-111	-8.031E-02		9.714E-01	1.350E+00	7.938E-02	-0.059
IN-113M	-1.982E-02		4.909E-02	7.959E-02	4.736E-03	-0.249
SN-113	-1.982E-02		4.909E-02	7.959E-02	4.736E-03	-0.249
IN-114M	-3.613E-02		2.295E-01	3.218E-01	1.791E-02	-0.112
CD-115	-5.353E+00		8.283E+00	1.292E+01	7.177E-01	-0.414
SN-117M	-2.581E-02		5.970E-02	9.566E-02	5.255E-03	-0.270
SB-122	8.090E-01		1.623E+00	2.747E+00	1.497E-01	0.294
I-123	-5.559E-01		6.004E-01	Half-Life too short		
TE-123M	-1.532E-02		3.310E-02	5.296E-02	2.950E-03	-0.289
I-124	1.695E-01		6.927E-01	9.990E-01	5.280E-02	0.170
SB-124	2.009E-02		7.851E-02	1.365E-01	8.861E-03	0.147
SB-125	-1.168E-02		1.072E-01	1.763E-01	1.034E-02	-0.066
TE-125M	-1.286E+01		1.099E+01	1.686E+01	1.532E+00	-0.763
I-126	8.895E-02		2.157E-01	3.157E-01	1.572E-02	0.282
SB-126	1.526E-01		1.733E-01	2.753E-01	1.508E-02	0.554
SB-127	-1.938E-01		1.214E+00	1.934E+00	1.655E-01	-0.100
XE-127	-3.852E-02		5.637E-02	8.501E-02	4.803E-03	-0.453
I-131	-1.318E-01		1.150E-01	1.781E-01	1.143E-02	-0.740
TE-132	1.765E-01		6.393E-01	1.040E+00	1.466E-01	0.170
BA-133	1.413E-02		5.645E-02	8.349E-02	9.651E-03	0.169
I-133	9.203E-04		1.120E-03	Half-Life too short		
CS-134	1.396E-01	+	6.332E-02	1.018E-01	6.406E-03	1.372
CS-135	1.799E-01		2.171E-01	3.187E-01	2.476E-02	0.565
I-135	1.530E+08		1.158E+08	Half-Life too short		
CS-136	-1.053E-01		1.168E-01	1.753E-01	1.258E-02	-0.600
CE-139	-1.199E-02		3.463E-02	5.558E-02	3.005E-03	-0.216
BA-140	-4.059E-02		2.684E-01	4.338E-01	1.409E-01	-0.094
LA-140	-2.991E-02		9.177E-02	1.460E-01	9.009E-03	-0.205
CE-141	8.155E-02		7.035E-02	1.197E-01	7.062E-03	0.681
CE-143	4.156E-04		6.795E-05	Half-Life too short		
CE-144	2.000E-01		2.564E-01	3.819E-01	5.431E-02	0.524
PM-144	-4.597E-03		4.068E-02	6.506E-02	3.421E-03	-0.071
PR-144	-3.113E-01		2.755E+00	4.405E+00	2.315E-01	-0.071
PM-146	5.109E-02		4.936E-02	8.656E-02	7.367E-03	0.590
ND-147	2.053E-01		5.782E-01	9.709E-01	1.303E-01	0.211
PM-149	2.076E+01		6.802E+01	1.161E+02	1.653E+01	0.179
EU-152	7.830E-02		1.467E-01	1.796E-01	1.183E-02	0.436
GD-153	-4.702E-03		1.024E-01	1.485E-01	1.242E-02	-0.032

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154	-1.876E-01		1.595E-01	2.280E-01	2.182E-02	-0.823
EU-155	1.019E-02		1.242E-01	2.058E-01	1.561E-02	0.050
TB-160	1.354E-02		1.507E-01	2.533E-01	1.789E-02	0.053
HO-166M	2.462E-02		7.327E-02	1.213E-01	6.544E-03	0.203
TM-171	-2.830E+01		3.469E+01	5.642E+01	5.040E+00	-0.502
LU-176	-1.353E-02		2.993E-02	4.625E-02	2.759E-03	-0.293
LU-177	3.226E+00	+	1.501E+00	1.996E+00	1.135E-01	1.616
LU-177M	-1.704E-01		2.086E-01	3.230E-01	1.807E-02	-0.528
HF-181	3.308E-03		4.899E-02	8.100E-02	4.558E-03	0.041
W-181	2.678E-01		4.430E-01	7.533E-01	6.748E-02	0.355
TA-182	4.730E-02		2.596E-01	4.300E-01	2.597E-02	0.110
RE-183	2.829E-02		1.228E-01	2.019E-01	1.100E-02	0.140
RE-184	4.962E-02		2.676E-01	4.327E-01	2.555E-02	0.115
OS-185	1.632E-02		4.489E-02	7.509E-02	3.785E-03	0.217
RE-188	1.572E-01		2.015E-01	3.379E-01	1.871E-02	0.465
W-188	-1.323E+00		9.132E+00	1.326E+01	7.922E-01	-0.100
IR-192	-1.275E-02		3.785E-02	6.238E-02	3.729E-03	-0.204
AU-195	4.260E-02		2.815E-01	4.344E-01	3.551E-02	0.098
TL-200	1.972E-04		1.042E-04	Half-Life too short		
TL-201	3.931E+00		6.049E+00	1.009E+01	5.459E-01	0.390
TL-202	-2.942E-02		7.380E-02	1.189E-01	6.688E-03	-0.247
BI-207	-2.544E-03		6.212E-02	1.020E-01	6.764E-03	-0.025
TL-207	2.083E-01		8.684E-01	1.288E+00	2.133E-01	0.162
PO-209	3.586E+00		9.032E+00	1.552E+01	1.124E+00	0.231
BI-210	-2.063E-01		5.313E+00	8.859E+00	7.294E-01	-0.023
PB-210	-2.063E-01		5.313E+00	8.859E+00	7.294E-01	-0.023
PO-210	-2.063E-01		5.313E+00	8.859E+00	6.399E-01	-0.023
PB-211	8.112E-02		1.096E+00	1.825E+00	1.138E+00	0.044
BI-212	1.507E+00	+	5.496E-01	7.585E-01	5.704E-02	1.988
PO-215	2.083E-01		8.684E-01	1.288E+00	2.133E-01	0.162
RN-219	-1.525E-01		4.760E-01	7.747E-01	1.047E-01	-0.197
RN-220	-1.133E+01		2.917E+01	4.624E+01	2.541E+00	-0.245
RA-223	2.083E-01		8.684E-01	1.288E+00	2.133E-01	0.162
AC-227	7.070E-02		4.433E-01	7.152E-01	1.002E-01	0.099
TH-227	7.070E-02		4.433E-01	7.152E-01	1.212E-01	0.099
TH-229	-9.657E-03		6.027E-01	9.749E-01	5.447E-02	-0.010
PA-231	1.138E-01		1.908E+00	2.942E+00	4.076E-01	0.039
TH-231	2.083E-01		8.684E-01	1.288E+00	2.133E-01	0.162
U-231	-3.214E-01		1.105E+00	1.585E+00	1.358E-01	-0.203
PA-233	2.343E-02		7.251E-02	1.237E-01	7.800E-03	0.189
PA-234	-1.315E-01		3.449E-01	5.512E-01	9.992E-02	-0.239
PA-234M	6.926E+00		7.488E+00	1.317E+01	1.309E+00	0.526
TH-234	9.715E-01		1.654E+00	2.791E+00	5.073E-01	0.348
U-235	2.128E-01		2.509E-01	4.122E-01	6.704E-02	0.516
NP-236	-1.901E-02		9.178E-02	1.483E-01	8.117E-03	-0.128
U-238	9.715E-01		1.654E+00	2.791E+00	5.073E-01	0.348
NP-239	-2.198E-01		2.187E-01	3.457E-01	2.234E-02	-0.636
AM-241	-6.025E-03		1.981E-01	3.318E-01	3.244E-02	-0.018

Sample ID : G232433004 Acquisition date : 7-JUL-2009 06:05:37

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.072E-02		1.113E-01	1.851E-01	1.411E-02	0.112
CM-247	-4.224E-03		4.249E-02	7.014E-02	3.908E-03	-0.060
CF-249	-3.316E-03		4.752E-02	7.871E-02	4.390E-03	-0.042
CF-251	2.816E-02		1.453E-01	2.379E-01	1.302E-02	0.118

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433004           *
* Acquisition date  :  7-JUL-2009 06:05:37 Detector SN#     :               *
* Detector ID       : GAM06                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.42      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433004           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.3771E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  4-FEB-2009 13:05:54 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.476E+01	3.005E+00	3.144E-01	1.533E+00
CD-109	3.831E+00	9.173E-01	7.805E-01	4.680E-01
SN-126	3.773E-01	9.034E-02	7.729E-02	4.609E-02
BA-137M	5.958E-02	4.719E-02	3.397E-02	2.408E-02
CS-137	6.298E-02	4.988E-02	3.591E-02	2.545E-02
HG-203	8.752E-02	5.413E-02	3.887E-02	2.762E-02
TL-208	5.291E-01	8.541E-02	3.517E-02	4.357E-02
BI-211	4.013E+00	5.784E-01	1.988E-01	2.951E-01
PB-212	1.798E+00	1.750E-01	5.285E-02	8.929E-02
PO-212	1.798E+00	1.750E-01	5.285E-02	8.929E-02
BI-214	1.175E+00	1.793E-01	6.272E-02	9.147E-02
PB-214	1.396E+00	2.135E-01	6.931E-02	1.089E-01
PO-214	1.396E+00	2.135E-01	6.931E-02	1.089E-01
PO-216	1.798E+00	1.750E-01	5.285E-02	8.929E-02
PO-218	1.396E+00	2.135E-01	6.931E-02	1.089E-01
RA-224	4.550E+00	1.216E+00	6.014E-01	6.205E-01
RA-226	1.175E+00	1.793E-01	6.272E-02	9.147E-02
AC-228	1.872E+00	3.602E-01	1.159E-01	1.838E-01
RA-228	1.872E+00	3.602E-01	1.159E-01	1.838E-01
TH-228	1.798E+00	1.750E-01	5.285E-02	8.929E-02
TH-230	1.175E+00	1.793E-01	6.272E-02	9.147E-02
TH-232	1.872E+00	3.602E-01	1.159E-01	1.838E-01
U-234	1.175E+00	1.793E-01	6.272E-02	9.147E-02
NP-237	1.108E+00	3.473E-01	2.424E-01	1.772E-01
AM-243	3.411E-01	8.055E-02	6.033E-02	4.110E-02
ANH-511	1.591E-01	7.978E-02	2.668E-02	4.071E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.019E-01	3.532E-01	3.102E-01	1.802E-01 NOT IDENT.

NA-22	-6.759E-02	5.567E-02	4.096E-02	2.840E-02	NOT IDENT.
NA-24	-8.736E+04	1.764E+05	0.000E+00	9.001E+04	SHORT HLIF
AL-26	-2.575E-02	3.356E-02	2.394E-02	1.712E-02	NOT IDENT.
TI-44	4.157E-01	6.719E-02	4.982E-02	3.428E-02	FAIL ABUN
SC-46	1.335E-02	4.443E-02	3.923E-02	2.267E-02	FAIL ABUN
V-48	-2.316E-02	8.055E-02	6.716E-02	4.109E-02	NOT IDENT.
CR-51	-2.854E-01	3.840E-01	3.260E-01	1.959E-01	NOT IDENT.
MN-52	3.258E-02	2.008E-01	1.705E-01	1.025E-01	NOT IDENT.
MN-54	6.448E-03	4.392E-02	3.843E-02	2.241E-02	NOT IDENT.
CO-56	-9.742E-03	4.606E-02	3.918E-02	2.350E-02	NOT IDENT.
CO-57	-1.931E-02	2.876E-02	2.476E-02	1.468E-02	NOT IDENT.
CO-58	-3.552E-02	4.206E-02	3.383E-02	2.146E-02	NOT IDENT.
FE-59	4.129E-02	1.076E-01	9.414E-02	5.492E-02	NOT IDENT.
CO-60	-4.017E-02	4.667E-02	3.483E-02	2.381E-02	NOT IDENT.
ZN-65	9.078E-02	1.323E-01	1.033E-01	6.751E-02	NOT IDENT.
GE-68	9.032E-01	1.583E+00	1.404E+00	8.076E-01	NOT IDENT.
AS-73	1.490E+00	1.137E+00	1.077E+00	5.800E-01	NOT IDENT.
AS-74	-8.612E-02	9.456E-02	7.426E-02	4.825E-02	NOT IDENT.
SE-75	4.653E-03	5.825E-02	4.279E-02	2.972E-02	NOT IDENT.
BR-77	-2.611E+00	7.633E+00	6.375E+00	3.894E+00	FAIL ABUN
SR-82	-3.641E-01	4.017E-01	3.238E-01	2.049E-01	NOT IDENT.
RB-83	-2.943E-02	7.398E-02	6.151E-02	3.775E-02	NOT IDENT.
RB-84	-4.325E-02	7.516E-02	6.145E-02	3.835E-02	NOT IDENT.
KR-85	2.119E+01	9.086E+00	8.037E+00	4.636E+00	NOT IDENT.
SR-85	1.071E-01	4.592E-02	4.062E-02	2.343E-02	NOT IDENT.
RB-86	3.456E-01	9.536E-01	8.330E-01	4.865E-01	NOT IDENT.
Y-88	-1.995E-02	3.184E-02	2.289E-02	1.625E-02	NOT IDENT.
ZR-88	-3.784E-02	3.312E-02	2.686E-02	1.690E-02	NOT IDENT.
Y-91	-1.083E+01	2.213E+01	1.782E+01	1.129E+01	NOT IDENT.
NB-94	-1.071E-02	3.704E-02	3.029E-02	1.890E-02	NOT IDENT.
NB-95	4.536E-02	5.119E-02	4.537E-02	2.612E-02	NOT IDENT.
NB-95M	1.115E-01	1.630E-01	1.259E-01	8.317E-02	NOT IDENT.
ZR-95	-2.027E-02	8.195E-02	6.684E-02	4.181E-02	NOT IDENT.
NB-97	-2.296E+04	3.452E+04	0.000E+00	1.761E+04	SHORT HLIF
ZR-97	8.617E+05	5.910E+05	0.000E+00	3.015E+05	SHORT HLIF
MO-99	4.145E+00	1.001E+01	8.623E+00	5.107E+00	NOT IDENT.
TC-99M	-5.782E+14	1.024E+15	0.000E+00	5.226E+14	SHORT HLIF
RH-101	3.134E-03	4.077E-02	3.442E-02	2.080E-02	NOT IDENT.
RH-102	-1.971E-02	3.328E-02	2.756E-02	1.698E-02	NOT IDENT.
RU-103	-1.650E-02	4.443E-02	3.721E-02	2.267E-02	FAIL ABUN
RH-106	8.848E-02	3.334E-01	2.882E-01	1.701E-01	FAIL ABUN
RU-106	8.848E-02	3.332E-01	2.882E-01	1.700E-01	FAIL ABUN
AG-108M	2.982E-04	3.779E-02	3.281E-02	1.928E-02	NOT IDENT.
AG-110M	-3.138E-02	4.719E-02	3.165E-02	2.408E-02	NOT IDENT.
IN-111	-8.031E-02	9.520E-01	7.017E-01	4.857E-01	NOT IDENT.
IN-113M	-1.982E-02	4.811E-02	4.099E-02	2.455E-02	NOT IDENT.
SN-113	-1.982E-02	4.811E-02	4.099E-02	2.455E-02	NOT IDENT.
IN-114M	-3.613E-02	2.249E-01	1.680E-01	1.147E-01	NOT IDENT.
CD-115	-5.353E+00	8.117E+00	6.615E+00	4.141E+00	NOT IDENT.
SN-117M	-2.581E-02	5.851E-02	5.012E-02	2.985E-02	NOT IDENT.
SB-122	8.090E-01	1.590E+00	1.405E+00	8.113E-01	NOT IDENT.
I-123	-5.559E+05	1.177E+06	0.000E+00	6.004E+05	SHORT HLIF
TE-123M	-1.532E-02	3.244E-02	2.775E-02	1.655E-02	NOT IDENT.
I-124	1.695E-01	6.788E-01	5.102E-01	3.463E-01	NOT IDENT.
SB-124	2.009E-02	7.694E-02	6.828E-02	3.926E-02	FAIL ABUN
SB-125	-1.168E-02	1.051E-01	9.065E-02	5.361E-02	NOT IDENT.
TE-125M	-1.286E+01	1.077E+01	8.897E+00	5.493E+00	NOT IDENT.
I-126	8.895E-02	2.114E-01	1.609E-01	1.078E-01	NOT IDENT.
SB-126	1.526E-01	1.698E-01	1.401E-01	8.665E-02	FAIL ABUN
SB-127	-1.938E-01	1.190E+00	9.856E-01	6.072E-01	NOT IDENT.
XE-127	-3.852E-02	5.525E-02	4.434E-02	2.819E-02	NOT IDENT.
I-131	-1.318E-01	1.127E-01	9.187E-02	5.749E-02	NOT IDENT.
TE-132	1.765E-01	6.265E-01	5.411E-01	3.196E-01	NOT IDENT.
BA-133	1.413E-02	5.532E-02	4.308E-02	2.822E-02	FAIL ABUN
I-133	9.203E+02	2.195E+03	0.000E+00	1.120E+03	SHORT HLIF
CS-134	1.396E-01	6.205E-02	5.170E-02	3.166E-02	FAIL ABUN
CS-135	1.799E-01	2.127E-01	1.653E-01	1.085E-01	NOT IDENT.
I-135	1.530E+14	2.269E+14	0.000E+00	1.158E+14	SHORT HLIF
CS-136	-1.053E-01	1.144E-01	8.858E-02	5.838E-02	FAIL ABUN
CE-139	-1.199E-02	3.393E-02	2.910E-02	1.731E-02	NOT IDENT.
BA-140	-4.059E-02	2.630E-01	2.221E-01	1.342E-01	NOT IDENT.
LA-140	-2.991E-02	8.993E-02	7.315E-02	4.588E-02	FAIL ABUN
CE-141	8.155E-02	6.894E-02	6.281E-02	3.518E-02	NOT IDENT.
CE-143	4.156E+02	1.332E+02	0.000E+00	6.795E+01	SHORT HLIF
CE-144	2.000E-01	2.513E-01	2.007E-01	1.282E-01	NOT IDENT.
PM-144	-4.597E-03	3.987E-02	3.313E-02	2.034E-02	NOT IDENT.
PR-144	-3.113E-01	2.699E+00	2.244E+00	1.377E+00	NOT IDENT.
PM-146	5.109E-02	4.838E-02	4.446E-02	2.468E-02	NOT IDENT.

ND-147	2.053E-01	5.667E-01	4.971E-01	2.891E-01	FAIL ABUN
PM-149	2.076E+01	6.666E+01	6.016E+01	3.401E+01	NOT IDENT.
EU-152	7.830E-02	1.438E-01	9.274E-02	7.336E-02	NOT IDENT.
GD-153	-4.702E-03	1.003E-01	7.853E-02	5.118E-02	NOT IDENT.
EU-154	-1.876E-01	1.563E-01	1.147E-01	7.974E-02	NOT IDENT.
EU-155	1.019E-02	1.218E-01	1.087E-01	6.212E-02	FAIL ABUN
TB-160	1.354E-02	1.477E-01	1.284E-01	7.534E-02	FAIL ABUN
HO-166M	2.462E-02	7.181E-02	6.175E-02	3.664E-02	NOT IDENT.
TM-171	-2.830E+01	3.399E+01	3.003E+01	1.734E+01	NOT IDENT.
LU-176	-1.353E-02	2.933E-02	2.393E-02	1.496E-02	FAIL ABUN
LU-177	3.226E+00	1.471E+00	1.040E+00	7.506E-01	FAIL ABUN
LU-177M	-1.704E-01	2.044E-01	1.662E-01	1.043E-01	FAIL ABUN
HF-181	3.308E-03	4.801E-02	4.155E-02	2.450E-02	NOT IDENT.
W-181	2.678E-01	4.342E-01	4.012E-01	2.215E-01	NOT IDENT.
TA-182	4.730E-02	2.544E-01	2.166E-01	1.298E-01	FAIL ABUN
RE-183	2.829E-02	1.203E-01	1.057E-01	6.140E-02	FAIL ABUN
RE-184	4.962E-02	2.623E-01	2.247E-01	1.338E-01	NOT IDENT.
OS-185	1.632E-02	4.399E-02	3.830E-02	2.245E-02	NOT IDENT.
RE-188	1.572E-01	1.974E-01	1.771E-01	1.007E-01	NOT IDENT.
W-188	-1.323E+00	8.949E+00	6.869E+00	4.566E+00	NOT IDENT.
IR-192	-1.275E-02	3.710E-02	3.226E-02	1.893E-02	FAIL ABUN
AU-195	4.260E-02	2.758E-01	2.296E-01	1.407E-01	FAIL ABUN
TL-200	1.972E+02	2.043E+02	0.000E+00	1.042E+02	SHORT HLIF
TL-201	3.931E+00	5.928E+00	5.279E+00	3.024E+00	NOT IDENT.
TL-202	-2.942E-02	7.233E-02	6.109E-02	3.690E-02	NOT IDENT.
BI-207	-2.544E-03	6.088E-02	5.152E-02	3.106E-02	FAIL ABUN
TL-207	2.083E-01	8.510E-01	6.656E-01	4.342E-01	FAIL ABUN
PO-209	3.586E+00	8.851E+00	7.864E+00	4.516E+00	NOT IDENT.
BI-210	-2.063E-01	5.207E+00	4.746E+00	2.657E+00	NOT IDENT.
PB-210	-2.063E-01	5.207E+00	4.746E+00	2.657E+00	NOT IDENT.
PO-210	-2.063E-01	5.207E+00	4.746E+00	2.657E+00	NOT IDENT.
PB-211	8.112E-02	1.074E+00	9.396E-01	5.482E-01	NOT IDENT.
BI-212	1.507E+00	5.386E-01	3.860E-01	2.748E-01	FAIL ABUN
PO-215	2.083E-01	8.510E-01	6.656E-01	4.342E-01	FAIL ABUN
RN-219	-1.525E-01	4.665E-01	3.988E-01	2.380E-01	FAIL ABUN
RN-220	-1.133E+01	2.858E+01	2.366E+01	1.458E+01	NOT IDENT.
RA-223	2.083E-01	8.510E-01	6.656E-01	4.342E-01	FAIL ABUN
AC-227	7.070E-02	4.344E-01	3.714E-01	2.216E-01	FAIL ABUN
TH-227	7.070E-02	4.345E-01	3.714E-01	2.217E-01	FAIL ABUN
TH-229	-9.657E-03	5.906E-01	5.089E-01	3.013E-01	FAIL ABUN
PA-231	1.138E-01	1.870E+00	1.525E+00	9.542E-01	FAIL ABUN
TH-231	2.083E-01	8.510E-01	6.656E-01	4.342E-01	FAIL ABUN
U-231	-3.214E-01	1.083E+00	8.381E-01	5.524E-01	FAIL ABUN
PA-233	2.343E-02	7.106E-02	6.397E-02	3.625E-02	FAIL ABUN
PA-234	-1.315E-01	3.380E-01	2.790E-01	1.724E-01	FAIL ABUN
PA-234M	6.926E+00	7.339E+00	6.662E+00	3.744E+00	NOT IDENT.
TH-234	9.715E-01	1.621E+00	1.487E+00	8.271E-01	FAIL ABUN
U-235	2.128E-01	2.459E-01	2.163E-01	1.255E-01	FAIL ABUN
NP-236	-1.901E-02	8.994E-02	7.770E-02	4.589E-02	NOT IDENT.
U-238	9.715E-01	1.621E+00	1.487E+00	8.271E-01	FAIL ABUN
NP-239	-2.198E-01	2.143E-01	1.822E-01	1.093E-01	FAIL ABUN
AM-241	-6.025E-03	1.942E-01	1.770E-01	9.907E-02	NOT IDENT.
CM-243	2.072E-02	1.091E-01	9.774E-02	5.564E-02	FAIL ABUN
CM-247	-4.224E-03	4.164E-02	3.610E-02	2.125E-02	FAIL ABUN
CF-249	-3.316E-03	4.657E-02	4.055E-02	2.376E-02	NOT IDENT.
CF-251	2.816E-02	1.424E-01	1.244E-01	7.265E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	402.0319
46.50	402.0319
46.50	402.0319
48.70	398.1862
49.72	457.0593
51.35	400.0367
52.39	386.1442
52.97	380.1278
53.15	383.8998
53.44	385.0018
54.07	393.6480
56.28	450.2141
56.28	458.4852
57.37	0.0000
57.53	450.2083
57.53	450.2102
57.60	446.5765
57.98	434.8720
57.98	434.8720
59.32	452.4206
59.32	452.4206
59.40	452.4777
59.54	452.5776
59.72	486.8906
60.01	488.0370
61.10	484.2395
61.14	484.2694
61.30	484.3901
63.00	458.7290
63.29	465.4352
63.29	465.4352
63.58	474.9348
64.28	472.6470
65.12	478.8324
65.20	478.8902
65.20	478.8902
66.05	542.9319
66.72	541.6016
66.83	536.0864
66.91	536.1500
67.20	548.5278
67.20	548.5278
67.75	532.1352
67.85	506.9589
68.90	545.2032
68.90	545.2032
69.30	540.9658
69.67	552.6888
70.82	512.5156
70.82	512.5156
70.83	512.5219
72.80	541.0790
72.87	530.5803
72.87	530.5803
74.67	589.3299
74.81	589.4442
74.81	589.4442
74.81	589.4442
74.81	589.4442
74.81	589.4442
74.81	589.4442
74.97	534.7748
75.28	535.0015
75.70	535.3103
77.11	536.3359
77.11	536.3359
77.11	536.3359

77.11	536.3359
77.11	536.3359
77.11	536.3359
78.38	460.1776
79.62	474.6308
79.80	474.7431
79.80	474.7431
80.11	525.1711
80.18	525.2195
80.30	525.3038
80.30	525.3038
80.57	555.9545
81.00	556.2686
81.07	548.6990
81.07	548.6990
81.07	548.6990
81.07	548.6990
82.60	393.2549
83.37	462.4388
83.78	451.2128
83.78	451.2128
83.78	451.2128
83.78	451.2128
84.21	449.9309
84.40	474.5323
84.90	484.0274
85.43	456.7635
86.29	489.4851
86.50	540.2633
86.54	540.2912
86.59	540.3256
86.72	540.4137
86.79	540.4609
86.94	571.2780
87.30	571.5345
87.30	571.5345
87.30	571.5345
87.30	571.5345
87.30	571.5345
87.30	571.5345
87.57	487.0077
87.88	487.1953
88.03	487.2862
88.36	487.4874
88.47	487.5551
89.95	488.4486
91.11	489.1429
92.29	489.8469
92.38	489.8991
92.38	489.8991
93.35	490.4735
94.00	377.9691
94.67	399.9740
94.67	399.9771
94.90	400.0858
94.90	400.0858
94.90	400.0858
94.90	400.0858
95.87	425.3873
95.87	425.3873
96.73	414.9435
97.43	402.8395
98.44	384.1099
98.44	384.1099
98.88	402.4838
99.55	384.9300
99.55	384.9300
99.86	385.0686
100.00	384.1554
100.10	384.2020
103.18	409.0387
103.76	376.9944
105.00	384.3841
105.31	384.5172
108.00	387.6333
109.28	420.6897
111.00	370.1498
111.00	370.1498

111.76	383.2962
112.95	344.2206
115.19	395.6073
116.30	399.0495
117.00	388.4152
117.00	388.4152
117.66	368.8021
121.11	343.1838
121.62	374.3048
121.78	374.3663
122.06	378.4680
122.32	378.5677
122.32	378.5677
122.32	378.5677
122.32	378.5677
123.07	359.8640
127.23	343.7035
129.76	349.3933
131.20	356.3355
133.02	332.7358
133.54	308.6637
135.34	343.4244
136.00	346.2426
136.25	346.3261
136.48	358.5563
140.51	378.2212
140.51	0.0000
142.18	377.7904
142.65	357.5797
143.76	342.6497
144.24	335.6592
144.24	335.6592
144.24	335.6592
144.24	335.6592
145.22	340.0450
145.44	332.9641
147.16	377.4739
152.43	345.3426
152.70	345.4259
153.22	323.9858
154.21	337.6494
154.21	337.6494
154.21	337.6494
154.21	337.6494
155.03	351.2868
156.02	354.6844
158.56	354.4358
159.00	0.0000
159.00	358.7042
160.31	339.4462
161.27	307.6159
162.32	317.2224
162.64	343.2327
163.35	341.3646
163.89	337.3680
165.85	347.2864
167.43	322.7574
171.28	351.9896
171.86	358.4291
172.10	331.3249
176.55	304.2044
176.60	304.2155
181.06	320.0428
184.41	309.0671
185.71	309.3821
186.00	280.0724
190.27	296.9061
192.34	288.8796
193.63	317.8677
197.04	300.5695
198.01	318.9216
198.60	298.7860
200.40	325.9031
201.83	379.7307
202.84	331.5383
205.31	286.5481
208.36	316.4207
208.81	335.4467

209.75	308.7759
209.75	308.7759
210.97	280.8347
215.65	314.8679
216.55	289.7390
218.09	309.5351
222.10	308.2351
223.80	308.5991
226.40	284.1147
227.00	291.8553
227.08	291.8716
227.20	304.9661
228.16	285.5471
228.18	285.5511
228.18	285.5511
231.56	0.0000
235.69	289.1971
236.00	289.2556
236.00	289.2556
238.60	243.6594
238.63	243.6644
238.63	243.6644
238.63	243.6644
239.00	243.7237
240.98	244.0438
241.98	244.2047
241.98	244.2047
241.98	244.2047
244.69	209.8159
245.39	216.9677
247.94	213.4983
248.90	213.2627
249.79	221.1243
252.40	220.3876
252.85	208.2656
252.85	208.2656
254.15	0.0000
256.20	209.8190
256.20	209.8190
260.50	208.1608
260.90	213.7822
262.80	212.7602
264.65	198.2093
268.24	216.5445
268.79	223.7793
269.46	208.1999
269.46	208.1999
269.46	208.1999
269.46	208.1999
271.23	197.2212
273.65	188.5334
276.40	211.3279
277.35	182.2055
277.60	182.2327
277.60	182.2327
278.00	188.0280
278.60	191.7962
279.20	208.6810
279.53	208.7206
280.46	198.3196
281.68	183.4294
283.67	199.9885
284.30	198.7734
285.00	208.8971
285.90	193.5352
286.10	193.5561
286.10	193.5561
287.40	197.1245
288.45	0.0000
290.67	193.4714
290.80	205.5799
291.72	217.7871
293.26	0.0000
293.70	193.8125
295.21	181.8555
295.21	181.8555
295.21	181.8555
295.96	181.9360

296.50	181.9922
297.23	182.0679
298.57	182.2070
299.80	159.5444
299.80	159.5444
300.09	159.5700
300.09	159.5700
300.09	159.5700
300.10	159.5700
300.12	159.5721
301.29	190.0940
302.84	171.9967
303.76	162.9490
303.91	162.9621
304.40	176.7188
304.40	176.7188
304.84	178.2850
306.84	191.0730
308.46	195.1399
311.98	167.9838
316.51	171.1668
318.01	165.7815
319.02	165.8716
319.41	172.3587
320.08	171.5005
323.87	175.5505
323.87	175.5505
323.87	175.5505
323.87	175.5505
325.23	181.8422
328.77	176.0144
333.44	208.9572
334.20	198.2031
334.20	198.2031
334.30	183.5024
338.28	155.4902
338.28	155.4902
338.28	155.4902
338.28	155.4902
338.32	155.4922
338.32	155.4922
338.32	155.4922
340.50	147.5929
340.57	155.3650
344.27	127.6462
345.85	134.6062
350.59	0.0000
351.07	163.0868
351.92	163.1569
351.92	163.1569
351.92	163.1569
355.39	0.0000
356.01	150.3418
364.48	157.5900
366.43	141.6870
367.43	121.9107
367.94	0.0000
369.80	142.8694
374.96	132.7983
383.85	144.8064
387.95	153.6831
388.63	147.0482
391.69	137.7000
391.69	137.7000
392.90	148.3039
398.62	130.4767
400.65	140.2042
401.10	144.0765
401.81	145.0850
402.60	140.3325
404.84	144.3274
410.95	120.6131
411.60	109.0673
413.65	145.8813
414.70	163.3495
415.30	141.1577
415.76	143.1221
417.63	0.0000

418.52	121.9994
423.70	136.8433
427.08	135.1076
427.89	129.3227
432.53	140.3086
433.93	126.7468
439.47	126.0789
439.56	126.0836
439.89	131.9678
443.98	119.4727
444.90	119.5219
445.03	115.6089
445.03	115.6089
445.03	115.6089
445.03	115.6089
453.90	96.3838
463.38	106.6487
468.07	156.3317
473.00	108.0726
475.06	121.0647
475.35	121.0796
476.78	120.1596
477.59	103.3119
477.96	104.3207
482.03	111.4627
484.57	102.6140
487.03	116.6786
490.36	0.0000
492.35	98.9420
497.08	99.1317
507.63	0.0000
510.53	0.0000
510.84	97.6643
511.00	97.6702
511.85	97.7033
511.85	97.7033
513.99	84.0083
513.99	84.0083
520.41	96.0112
520.65	96.0205
527.90	108.4524
528.96	0.0000
529.64	77.0836
529.87	0.0000
531.02	86.2576
537.32	91.5535
543.00	93.7901
546.56	0.0000
549.76	93.0084
552.65	89.0157
555.20	99.3421
563.23	85.2574
563.90	83.2228
568.70	95.7223
569.32	94.7133
569.50	91.6313
569.67	91.6378
573.80	87.6500
574.00	85.5958
574.64	90.7715
578.91	101.5887
579.30	0.0000
583.14	97.2611
585.48	89.7474
591.81	81.9953
592.07	84.0771
593.00	77.8766
595.88	95.6252
600.56	83.2910
602.52	0.0000
602.71	90.2996
602.71	90.2996
603.60	95.5383
604.41	97.3027
604.70	97.3141
609.31	87.0280
609.31	87.0280
609.31	87.0280

609.31	87.0280
610.33	81.8350
612.46	88.8661
614.37	68.0009
618.01	85.8938
621.84	69.2259
621.84	69.2259
631.29	85.2339
633.02	86.3362
633.10	86.3402
634.78	88.4953
635.90	77.9909
636.97	81.1809
645.85	69.7931
646.12	63.4526
656.30	99.0413
657.75	95.5481
657.90	0.0000
661.65	83.9780
661.65	83.9780
664.57	0.0000
666.33	72.7510
666.33	72.7510
675.00	68.3313
677.61	85.4863
685.20	77.1258
692.80	88.0519
695.00	77.3666
696.49	88.1540
696.49	88.1540
697.00	104.2963
697.49	92.4836
698.33	79.6006
698.50	70.9983
699.00	72.0855
702.63	81.8633
706.10	80.8740
706.58	0.0000
706.67	73.3391
709.31	89.5918
711.68	79.9348
713.82	104.8505
717.42	90.8988
720.50	69.6329
721.93	0.0000
722.20	99.3429
722.78	93.9411
722.78	93.9411
722.89	93.9453
722.95	99.3652
723.30	99.3764
724.18	99.4033
727.18	57.5262
733.00	70.6780
735.90	71.5172
739.58	76.2668
742.81	70.8890
744.21	76.3745
747.13	77.5332
751.79	74.3617
752.31	75.4671
753.82	64.5586
755.35	76.6309
756.15	78.8379
756.87	74.4746
763.93	91.0953
765.79	82.3590
766.41	81.2772
766.84	80.1877
768.36	86.8190
768.36	86.8190
768.36	86.8190
768.36	86.8190
776.49	81.7010
778.00	63.3693
778.57	60.6249
778.89	60.6302
783.80	67.1573

785.46	63.5083
792.07	67.9763
795.84	63.3036
796.30	61.7291
801.93	73.5204
805.60	54.6199
810.29	77.8682
810.76	73.2428
815.85	46.4233
817.79	55.7385
818.51	60.3953
819.60	53.9077
826.30	51.2156
828.27	0.0000
831.60	84.8645
831.96	81.1430
834.83	80.2733
836.80	0.0000
846.75	75.8568
848.13	66.5163
856.28	0.0000
856.80	75.6636
860.37	93.4631
867.32	58.1208
867.82	50.0550
871.10	54.6783
873.19	54.7089
874.81	57.5635
875.33	0.0000
876.40	52.8680
879.36	54.7998
880.27	55.7578
880.51	57.6517
881.50	65.2308
883.24	65.2603
884.67	52.9854
889.25	59.6816
896.60	63.5936
898.02	67.4162
899.00	68.3833
903.28	73.5305
911.07	53.3556
911.07	53.3556
911.07	53.3556
919.63	55.0020
920.93	51.5819
925.00	54.5044
925.24	58.3330
926.50	62.1779
934.06	59.4242
934.06	59.4242
934.06	59.4242
934.06	59.4242
935.52	71.9101
937.48	71.9467
944.10	73.0297
946.00	62.4887
949.00	46.1807
962.29	66.1942
964.01	82.7776
966.15	72.8842
968.20	73.4735
969.11	48.0727
969.11	48.0727
969.11	48.0727
977.42	49.6819
980.50	66.9097
983.50	67.9293
989.30	57.3363
996.32	70.0913
1001.03	42.8828
1001.68	47.7628
1004.76	62.4310
1021.30	0.0000
1024.50	0.0000
1034.80	69.7606
1037.82	64.8936
1038.57	59.0039

1038.76	0.0000
1045.16	53.1870
1046.59	67.9836
1048.07	66.0376
1050.47	51.2806
1050.47	51.2806
1063.62	59.3530
1076.63	65.4844
1077.35	63.5104
1085.78	67.6099
1099.22	59.8389
1112.02	42.8659
1112.84	58.3094
1115.52	72.0732
1120.29	69.1432
1120.29	69.1432
1120.29	69.1432
1120.29	69.1432
1120.51	69.1460
1121.28	69.1572
1124.00	0.0000
1129.67	54.2263
1131.51	0.0000
1147.95	0.0000
1167.94	56.7087
1173.22	84.1449
1175.09	58.8237
1177.93	59.8739
1189.05	78.3284
1204.90	76.5503
1205.75	0.0000
1213.00	76.6815
1221.42	85.0129
1230.97	95.4446
1235.34	82.1777
1236.41	0.0000
1238.11	76.0596
1238.11	76.0596
1238.11	76.0596
1238.11	76.0596
1238.25	76.0596
1246.25	60.7429
1260.41	0.0000
1271.85	57.9574
1274.45	73.5221
1274.54	73.5221
1291.56	46.7596
1298.22	0.0000
1312.09	50.0820
1325.50	47.0764
1325.50	47.0764
1332.49	47.1405
1333.61	50.2949
1360.21	29.4902
1362.66	0.0000
1365.15	27.4102
1368.21	31.6455
1368.53	0.0000
1376.25	24.2990
1377.67	25.3623
1377.67	25.3623
1377.67	25.3623
1377.67	25.3623
1384.27	32.8013
1394.10	18.0217
1395.20	23.3267
1407.95	21.2573
1434.06	20.2926
1436.60	23.5084
1457.56	0.0000
1460.81	25.7598
1489.15	26.9714
1509.49	19.4905
1596.49	26.3848
1620.62	17.9775
1678.03	0.0000
1691.02	12.4450
1691.02	12.4450

1706.46	0.0000
1750.46	0.0000
1764.49	10.1708
1764.49	10.1708
1764.49	10.1708
1764.49	10.1708
1770.23	67.8687
1771.40	38.7891
1791.20	0.0000
1808.65	17.5568
1836.01	12.7334

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433004

Total Uranium Activity	2.9887E+00	ug/g
Total Uranium Counting Unc.	4.8240E+00	ug/g
Total Uranium Tpu	2.4612E-06	ug/g
Total Uranium Mda	4.4243E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID   : G232433004      *
*   ANALYST       : MXR1                      DETECTOR    : GAM06           *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:05:37.35    SAMPLE ALQT:  137.710 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 9.941E+00
GROSS GAMMA ERROR (pCi/GRAM)	: 1.444E+00
GROSS GAMMA MDA (pCi/GRAM)	: 3.293E+00
GROSS GAMMA DLC (pCi/GRAM)	: 1.602E+00

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:08:53.01

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433005.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:06:19.
Sample ID         : G232433005           Sample quantity  : 7.74900E+01 GRAM
Detector name     : GAM08                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.94  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.05*	98	325	1.52	126.23	120	11	1.36E-02	38.4	
2	4	74.82*	181	255	1.15	149.75	144	14	2.52E-02	16.6	8.69E-01
3	4	77.19	333	204	0.92	154.49	144	14	4.63E-02	8.8	
4	0	86.91	82	274	1.07	173.91	172	7	1.14E-02	34.9	
5	0	92.86*	306	278	1.40	185.79	182	10	4.24E-02	12.4	
6	0	185.57*	190	215	1.61	370.98	366	11	2.64E-02	17.4	
7	4	238.47*	576	121	1.08	476.67	472	16	8.01E-02	5.2	2.87E+00
8	4	241.31	119	177	1.87	482.35	472	16	1.66E-02	29.2	
9	0	295.03*	149	108	1.33	589.68	585	8	2.06E-02	15.6	
10	0	338.27*	108	124	1.16	676.08	669	11	1.51E-02	22.7	
11	0	351.71*	318	111	1.53	702.94	697	12	4.42E-02	8.9	
12	0	510.94*	83	131	2.03	1021.15	1012	20	1.16E-02	39.7	
13	0	582.96*	191	89	1.54	1165.11	1156	17	2.66E-02	13.7	
14	0	608.98*	239	73	1.57	1217.13	1211	13	3.32E-02	10.1	
15	0	661.29	314	59	1.74	1321.71	1316	13	4.35E-02	7.6	
16	0	728.23	24	61	1.53	1455.53	1448	13	3.31E-03	70.9	
17	0	910.65*	135	26	1.28	1820.32	1814	13	1.87E-02	12.1	
18	0	969.07*	68	29	1.66	1937.16	1932	11	9.42E-03	20.8	
19	0	1120.76*	32	49	1.34	2240.60	2234	12	4.50E-03	47.5	
20	0	1460.36*	519	20	1.96	2920.17	2910	17	7.21E-02	4.9	
21	0	1764.08*	51	0	1.06	3528.25	3522	12	7.15E-03	16.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:08:55

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433005.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:06:19
Sample ID : G232433005 Sample quantity : 77.490 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA8 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.94 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.255E+01	2.905E+00	7.439E-01	6.304E-02	30.313
CD-109	+	88.03	*	1.987E+00	1.406E+00	2.101E+00	2.420E-01	0.946
SN-126	+	64.28		1.785E+00	1.403E+00	1.113E+00	1.845E-01	1.603
	+	86.94		8.136E-01	6.633E-01	7.639E-01	3.211E-01	1.065
	+	87.57	*	1.957E-01	1.385E-01	1.964E-01	2.256E-02	0.996
BA-137M	+	661.65	*	7.823E-01	1.251E-01	8.175E-02	4.224E-03	9.570
CS-137	+	661.65	*	8.270E-01	1.323E-01	8.641E-02	4.489E-03	9.570
TL-208		277.35		5.513E-01	5.169E-01	9.052E-01	9.670E-02	0.609
	+	510.84		7.004E-01	5.603E-01	3.005E-01	3.059E-02	2.330
	+	583.14	*	4.581E-01	1.292E-01	8.766E-02	5.718E-03	5.225
		860.37		6.613E-01	4.310E-01	8.057E-01	8.427E-02	0.821
BI-211		72.87		1.137E+00	4.930E+00	7.224E+00	7.687E-01	0.157
	+	351.07	*	3.358E+00	6.388E-01	4.559E-01	3.022E-02	7.365
PB-212	+	74.81		1.891E+00	6.827E-01	7.732E-01	1.097E-01	2.446
	+	77.11		1.944E+00	4.010E-01	4.248E-01	4.567E-02	4.576
	+	87.30		9.052E-01	6.470E-01	9.268E-01	1.409E-01	0.977
	+	238.63	*	1.334E+00	1.694E-01	1.313E-01	9.686E-03	10.160
		300.09		1.835E+00	1.189E+00	2.066E+00	1.743E-01	0.888
PO-212	+	74.81		1.891E+00	6.827E-01	7.732E-01	1.097E-01	2.446
	+	77.11		1.944E+00	4.010E-01	4.248E-01	4.567E-02	4.576
	+	87.30		9.052E-01	6.470E-01	9.268E-01	1.409E-01	0.977
		115.19		1.968E+00	4.680E+00	7.646E+00	5.270E-01	0.257
	+	238.63	*	1.334E+00	1.694E-01	1.313E-01	9.686E-03	10.160
		300.09		1.835E+00	1.189E+00	2.066E+00	1.743E-01	0.888
BI-214	+	609.31	*	1.079E+00	2.325E-01	1.662E-01	1.255E-02	6.491
		768.36		7.766E-01	1.125E+00	1.961E+00	1.881E-01	0.396
		934.06		1.818E+00	1.575E+00	2.865E+00	3.509E-01	0.634
	+	1120.29		7.857E-01	7.500E-01	6.990E-01	6.916E-02	1.124
		1238.11		6.577E-01	1.233E+00	2.166E+00	1.975E-01	0.304
		1377.67		8.205E-01	1.476E+00	2.660E+00	2.814E-01	0.308
	+	1764.49		1.710E+00	5.594E-01	2.928E-01	1.905E-02	5.840
PB-214	+	74.81		3.258E+00	1.162E+00	1.332E+00	1.731E-01	2.446
	+	77.11		3.332E+00	7.328E-01	7.283E-01	9.595E-02	4.576
	+	87.30		1.551E+00	1.104E+00	1.588E+00	2.193E-01	0.977

Sample ID : G232433005 Acquisition date : 7-JUL-2009 06:06:19

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		1.659E+00	9.799E-01	7.466E-01	6.065E-02	2.222
	+	295.21		9.304E-01	3.008E-01	3.242E-01	2.822E-02	2.870
	+	351.92	*	1.168E+00	2.304E-01	1.589E-01	1.340E-02	7.350
PO-214	+	74.81		3.258E+00	1.162E+00	1.332E+00	1.731E-01	2.446
	+	77.11		3.332E+00	7.328E-01	7.283E-01	9.595E-02	4.576
	+	87.30		1.551E+00	1.104E+00	1.588E+00	2.193E-01	0.977
	+	241.98		1.659E+00	9.799E-01	7.466E-01	6.065E-02	2.222
	+	295.21		9.304E-01	3.008E-01	3.242E-01	2.822E-02	2.870
	+	351.92	*	1.168E+00	2.304E-01	1.589E-01	1.340E-02	7.350
PO-216	+	74.81		1.891E+00	6.827E-01	7.732E-01	1.097E-01	2.446
	+	77.11		1.944E+00	4.010E-01	4.248E-01	4.567E-02	4.576
	+	87.30		9.052E-01	6.470E-01	9.268E-01	1.409E-01	0.977
	+	238.63	*	1.334E+00	1.694E-01	1.313E-01	9.686E-03	10.160
		300.09		1.835E+00	1.189E+00	2.066E+00	1.743E-01	0.888
PO-218	+	74.81		3.258E+00	1.162E+00	1.332E+00	1.731E-01	2.446
	+	77.11		3.332E+00	7.328E-01	7.283E-01	9.595E-02	4.576
	+	87.30		1.551E+00	1.104E+00	1.588E+00	2.193E-01	0.977
	+	241.98		1.659E+00	9.799E-01	7.466E-01	6.065E-02	2.222
	+	295.21		9.304E-01	3.008E-01	3.242E-01	2.822E-02	2.870
	+	351.92	*	1.168E+00	2.304E-01	1.589E-01	1.340E-02	7.350
RA-224	+	240.98	*	3.146E+00	1.850E+00	1.494E+00	8.773E-02	2.106
RA-226	+	609.31	*	1.079E+00	2.325E-01	1.662E-01	1.255E-02	6.491
		768.36		7.766E-01	1.125E+00	1.961E+00	1.881E-01	0.396
		934.06		1.818E+00	1.575E+00	2.865E+00	3.509E-01	0.634
	+	1120.29		7.857E-01	7.500E-01	6.990E-01	6.916E-02	1.124
		1238.11		6.577E-01	1.233E+00	2.166E+00	1.975E-01	0.304
		1377.67		8.205E-01	1.476E+00	2.660E+00	2.814E-01	0.308
	+	1764.49		1.710E+00	5.594E-01	2.928E-01	1.905E-02	5.840
AC-228	+	338.32		1.263E+00	7.703E-01	5.227E-01	2.133E-01	2.416
	+	911.07	*	1.463E+00	4.027E-01	2.619E-01	3.407E-02	5.587
	+	969.11		1.302E+00	6.242E-01	5.725E-01	1.369E-01	2.275
RA-228	+	338.32		1.263E+00	7.703E-01	5.227E-01	2.133E-01	2.416
	+	911.07	*	1.463E+00	4.027E-01	2.619E-01	3.407E-02	5.587
	+	969.11		1.302E+00	6.242E-01	5.725E-01	1.369E-01	2.275
TH-228		84.40		3.989E+00	3.714E+00	5.638E+00	8.435E-01	0.707
	+	238.60	*	1.334E+00	1.694E-01	1.312E-01	9.685E-03	10.161
		300.10		1.838E+00	1.602E+00	2.067E+00	1.219E+00	0.890
TH-230	+	609.31	*	1.079E+00	2.325E-01	1.662E-01	1.255E-02	6.491
		768.36		7.766E-01	1.125E+00	1.961E+00	1.881E-01	0.396
		934.06		1.818E+00	1.575E+00	2.865E+00	3.509E-01	0.634
	+	1120.29		7.857E-01	7.500E-01	6.990E-01	6.916E-02	1.124
		1238.11		6.577E-01	1.233E+00	2.166E+00	1.975E-01	0.304
		1377.67		8.205E-01	1.476E+00	2.660E+00	2.814E-01	0.308
	+	1764.49		1.710E+00	5.594E-01	2.928E-01	1.905E-02	5.840
TH-232	+	338.32		1.263E+00	5.777E-01	5.227E-01	3.160E-02	2.416
	+	911.07	*	1.463E+00	4.027E-01	2.619E-01	3.407E-02	5.587
	+	969.11		1.302E+00	6.242E-01	5.725E-01	1.369E-01	2.275
TH-234	+	63.29	*	4.509E+00	3.571E+00	2.989E+00	5.745E-01	1.509
	+	92.38		4.654E+00	1.455E+00	1.160E+00	2.207E-01	4.011

Sample ID : G232433005 Acquisition date : 7-JUL-2009 06:06:19

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.079E+00	2.325E-01	1.662E-01	1.255E-02	6.491
		768.36		7.766E-01	1.125E+00	1.961E+00	1.881E-01	0.396
		934.06		1.818E+00	1.575E+00	2.865E+00	3.509E-01	0.634
	+	1120.29		7.857E-01	7.500E-01	6.990E-01	6.916E-02	1.124
		1238.11		6.577E-01	1.233E+00	2.166E+00	1.975E-01	0.304
		1377.67		8.205E-01	1.476E+00	2.660E+00	2.814E-01	0.308
	+	1764.49		1.710E+00	5.594E-01	2.928E-01	1.905E-02	5.840
NP-237	+	86.50	*	5.747E-01	4.237E-01	5.426E-01	1.279E-01	1.059
		95.87		-7.199E-01	1.361E+00	1.850E+00	4.632E-01	-0.389
U-238	+	63.29	*	4.509E+00	3.571E+00	2.989E+00	5.745E-01	1.509
	+	92.38		4.654E+00	1.253E+00	1.160E+00	1.212E-01	4.011
AM-243	+	74.67	*	3.066E-01	1.069E-01	1.258E-01	1.343E-02	2.437
	+	86.72		2.155E+01	1.525E+01	2.029E+01	2.314E+00	1.062
		117.66		-2.914E+00	4.887E+00	7.487E+00	4.947E-01	-0.389
		142.18		2.122E+01	2.424E+01	4.022E+01	2.290E+00	0.528
ANH-511	+	511.00	*	1.513E-01	1.204E-01	6.494E-02	3.794E-03	2.330

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.898E-01	4.491E-01	6.898E-01	4.712E-02	-0.275
NA-22		1274.54	*	-2.886E-02	6.350E-02	9.951E-02	7.630E-03	-0.290
NA-24		1368.53	*	1.292E-01	6.350E-02	Half-Life too short		
AL-26		1129.67		3.349E-01	2.391E+00	4.078E+00	2.914E-01	0.082
		1808.65	*	4.202E-02	3.733E-02	7.832E-02	4.832E-03	0.537
TI-44		67.85		-4.903E-02	7.036E-02	1.043E-01	1.116E-02	-0.470
	+	78.38	*	3.587E-01	7.400E-02	1.090E-01	1.177E-02	3.292
SC-46		889.25	*	-4.636E-02	5.260E-02	7.502E-02	8.039E-03	-0.618
	+	1120.51		1.330E-01	1.266E-01	1.756E-01	1.290E-02	0.757
V-48		944.10		4.504E-01	1.168E+00	1.990E+00	2.072E-01	0.226
		983.50	*	4.776E-02	9.794E-02	1.681E-01	1.657E-02	0.284
		1312.09		1.012E-01	1.015E-01	1.916E-01	1.581E-02	0.528
CR-51		320.08	*	2.598E-01	4.954E-01	8.432E-01	5.652E-02	0.308
MN-52		744.21		1.783E-01	2.565E-01	4.564E-01	3.171E-02	0.391
		848.13		7.253E+00	8.242E+00	1.476E+01	1.412E+00	0.491
		935.52		-9.704E-02	2.868E-01	4.392E-01	4.622E-02	-0.221
		1246.25		5.591E+00	8.243E+00	1.482E+01	1.070E+00	0.377
		1333.61		-4.377E-01	5.689E+00	9.327E+00	8.002E-01	-0.047
		1434.06	*	6.586E-03	2.744E-01	4.551E-01	3.784E-02	0.014
MN-54		834.83	*	-3.702E-02	5.076E-02	7.577E-02	6.976E-03	-0.489
CO-56		846.75	*	-1.610E-02	5.703E-02	9.032E-02	8.605E-03	-0.178
		977.42		-3.616E-01	3.774E+00	6.077E+00	6.046E-01	-0.060
		1037.82		-4.109E-02	4.276E-01	6.810E-01	6.411E-02	-0.060
		1175.09		3.707E-01	3.251E+00	5.512E+00	3.397E-01	0.067
		1238.25		6.964E-02	1.239E-01	2.182E-01	1.614E-02	0.319
		1360.21		-6.413E-01	1.351E+00	2.054E+00	1.751E-01	-0.312
		1771.40		-3.285E-01	3.182E-01	3.562E-01	2.299E-02	-0.922
CO-57		122.06	*	1.529E-02	3.206E-02	5.253E-02	3.221E-03	0.291

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-3.417E-02	2.697E-01	4.238E-01	2.846E-02	-0.081
CO-58		810.76	*	3.055E-02	5.055E-02	8.888E-02	7.641E-03	0.344
FE-59		142.65		3.715E+00	3.713E+00	6.192E+00	3.522E-01	0.600
		192.34		5.553E-01	1.271E+00	2.179E+00	2.546E-01	0.255
		1099.22	*	2.300E-02	1.100E-01	1.824E-01	1.562E-02	0.126
		1291.56		7.622E-02	1.479E-01	2.646E-01	2.429E-02	0.288
CO-60		1173.22		7.738E-03	6.344E-02	1.077E-01	6.609E-03	0.072
		1332.49	*	-2.805E-02	5.487E-02	8.528E-02	7.318E-03	-0.329
ZN-65		1115.52	*	-4.642E-03	1.396E-01	1.917E-01	1.431E-02	-0.024
GE-68		1077.35	*	-9.157E-01	1.681E+00	2.484E+00	2.046E-01	-0.369
AS-73		53.44	*	-4.252E-01	1.463E+00	2.356E+00	2.656E-01	-0.180
AS-74		595.88	*	3.388E-02	1.230E-01	2.109E-01	1.171E-02	0.161
		634.78		1.246E-01	4.606E-01	7.884E-01	4.212E-02	0.158
SE-75		66.05		-3.952E+00	7.367E+00	1.027E+01	1.261E+00	-0.385
		96.73		-1.457E+00	1.172E+00	1.490E+00	2.123E-01	-0.977
		121.11		1.109E-02	1.766E-01	2.821E-01	2.681E-02	0.039
		136.00		-1.545E-02	5.107E-02	7.934E-02	4.674E-03	-0.195
		198.60		1.004E+00	2.463E+00	4.213E+00	2.929E-01	0.238
		264.65	*	-3.412E-02	5.441E-02	8.585E-02	5.184E-03	-0.397
		279.53		-1.104E-01	1.543E-01	2.427E-01	1.573E-02	-0.455
		303.91		-3.673E+00	3.124E+00	4.695E+00	4.556E-01	-0.782
		400.65		1.476E-01	3.554E-01	5.954E-01	5.445E-02	0.248
BR-77	+	87.88		2.891E+02	2.046E+02	3.005E+02	3.460E+01	0.962
		200.40		7.238E+01	1.484E+02	2.551E+02	1.429E+01	0.284
	+	239.00		1.439E+02	1.711E+01	3.244E+01	1.902E+00	4.438
		249.79		8.580E+00	6.318E+01	1.057E+02	6.259E+00	0.081
		281.68		-4.042E+01	8.420E+01	1.344E+02	8.109E+00	-0.301
		297.23		-9.962E-02	6.884E+01	9.941E+01	6.024E+00	-0.001
		303.76		-2.224E+02	1.789E+02	2.685E+02	1.629E+01	-0.828
		439.47		1.968E+02	1.293E+02	2.363E+02	1.395E+01	0.833
		484.57		3.621E+01	2.192E+02	3.569E+02	2.100E+01	0.101
		520.65	*	-3.722E+00	1.068E+01	1.645E+01	9.578E-01	-0.226
		574.64		-2.322E+02	2.168E+02	2.875E+02	1.624E+01	-0.808
		578.91		9.768E+01	8.818E+01	1.461E+02	8.226E+00	0.669
		585.48		4.519E+02	1.952E+02	3.498E+02	1.959E+01	1.292
		755.35		1.596E+01	1.573E+02	2.583E+02	1.862E+01	0.062
		817.79		-5.781E+01	1.264E+02	1.960E+02	1.716E+01	-0.295
SR-82		698.33		4.728E+00	4.442E+01	7.443E+01	4.411E+00	0.064
		776.49	*	8.639E-02	5.160E-01	8.649E-01	6.674E-02	0.100
		1395.20		-7.118E+00	1.387E+01	2.068E+01	1.744E+00	-0.344
RB-83		520.41	*	-4.908E-02	1.028E-01	1.561E-01	9.090E-03	-0.314
		529.64		-1.016E-01	1.368E-01	2.142E-01	1.242E-02	-0.474
		552.65		2.685E-02	2.695E-01	4.571E-01	2.619E-02	0.059
RB-84		881.50	*	4.540E-02	1.022E-01	1.751E-01	1.837E-02	0.259
KR-85		513.99	*	1.335E+01	1.199E+01	1.884E+01	1.099E+00	0.709
SR-85		513.99	*	6.747E-02	6.058E-02	9.520E-02	5.557E-03	0.709
RB-86		1076.63	*	-2.526E-01	9.953E-01	1.541E+00	1.272E-01	-0.164
Y-88		898.02		-4.126E-02	5.996E-02	8.907E-02	9.800E-03	-0.463
		1836.01	*	-2.813E-03	4.851E-02	7.741E-02	4.618E-03	-0.036

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	-3.543E-02	4.197E-02	6.286E-02	3.676E-03	-0.564
Y-91		1204.90	*	-2.518E+00	2.716E+01	4.496E+01	2.966E+00	-0.056
NB-94		702.63	*	-4.359E-03	4.756E-02	7.812E-02	4.702E-03	-0.056
		871.10		-6.607E-03	4.458E-02	7.140E-02	7.283E-03	-0.093
NB-95		765.79	*	8.921E-02	6.125E-02	1.137E-01	8.478E-03	0.785
NB-95M		235.69	*	1.673E-01	1.850E-01	2.887E-01	2.183E-02	0.580
ZR-95		724.18		4.888E-02	1.456E-01	2.188E-01	1.631E-02	0.223
		756.15	*	-8.959E-03	1.022E-01	1.647E-01	1.359E-02	-0.054
NB-97		657.90	*	-1.569E-03	1.022E-01	Half-Life too short		
		1024.50		2.982E+00	1.022E-01	Half-Life too short		
ZR-97		254.15		4.397E-02	1.022E-01	Half-Life too short		
		355.39		-4.604E-01	1.022E-01	Half-Life too short		
		507.63	*	1.854E+00	1.022E-01	Half-Life too short		
		602.52		-5.021E-01	1.022E-01	Half-Life too short		
		1021.30		2.627E+00	1.022E-01	Half-Life too short		
		1147.95		-1.114E+00	1.022E-01	Half-Life too short		
		1362.66		-1.793E+00	1.022E-01	Half-Life too short		
		1750.46		2.656E+00	1.022E-01	Half-Life too short		
MO-99		140.51		-1.188E+01	2.729E+01	4.094E+01	1.103E+01	-0.290
		181.06		-6.778E+00	1.795E+01	2.586E+01	4.402E+00	-0.262
		366.43		-2.630E+00	7.838E+01	1.272E+02	7.591E+00	-0.021
		739.58	*	-5.675E+00	1.025E+01	1.572E+01	2.240E+00	-0.361
		778.00		1.454E+01	3.399E+01	5.849E+01	4.535E+00	0.249
TC-99M		140.51	*	-5.638E+08	3.399E+01	Half-Life too short		
RH-101		127.23		2.946E-02	4.347E-02	7.167E-02	4.289E-03	0.411
		198.01	*	2.124E-02	4.556E-02	7.819E-02	4.365E-03	0.272
		325.23		-4.120E-01	3.121E-01	4.587E-01	2.781E-02	-0.898
RH-102		418.52		2.050E-01	4.113E-01	6.926E-01	4.079E-02	0.296
		475.06	*	-2.396E-02	4.153E-02	6.276E-02	3.700E-03	-0.382
		631.29		-4.901E-02	7.371E-02	1.145E-01	6.140E-03	-0.428
		697.49		1.190E-02	1.052E-01	1.764E-01	1.043E-02	0.067
		766.84		2.314E-01	1.653E-01	3.038E-01	2.274E-02	0.761
		1046.59		-2.262E-02	1.553E-01	2.454E-01	2.163E-02	-0.092
		1112.84		1.123E-01	3.098E-01	4.960E-01	3.725E-02	0.227
RU-103		497.08	*	-6.039E-03	5.564E-02	8.801E-02	1.116E-02	-0.069
	+	610.33		1.138E+01	2.881E+00	3.692E+00	5.649E-01	3.081
RH-106	+	511.85		7.537E-01	5.997E-01	6.842E-01	3.997E-02	1.102
		621.84	*	-1.034E-01	4.440E-01	7.247E-01	8.372E-02	-0.143
		1050.47		-1.593E+00	3.490E+00	5.290E+00	4.626E-01	-0.301
RU-106	+	511.85		7.537E-01	5.997E-01	6.842E-01	3.997E-02	1.102
		621.84	*	-1.034E-01	4.439E-01	7.247E-01	3.926E-02	-0.143
		1050.47		-1.593E+00	3.490E+00	5.290E+00	4.626E-01	-0.301
AG-108M		433.93	*	-3.628E-03	4.626E-02	7.407E-02	4.734E-03	-0.049
		614.37		3.089E-02	5.724E-02	8.920E-02	5.334E-03	0.346
		722.95		-4.916E-02	6.598E-02	8.364E-02	5.779E-03	-0.588
AG-110M		657.75	*	-2.487E-02	6.264E-02	8.593E-02	4.821E-03	-0.289
		677.61		2.501E-01	4.101E-01	7.229E-01	4.239E-02	0.346
		706.67		-1.225E-01	2.797E-01	4.419E-01	2.845E-02	-0.277
		763.93		-2.274E-01	2.531E-01	3.797E-01	2.922E-02	-0.599

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		4.481E-02	7.177E-02	1.254E-01	1.356E-02	0.357
		937.48		-2.780E-01	1.559E-01	1.818E-01	1.956E-02	-1.529
		1384.27		-1.827E-01	2.417E-01	3.498E-01	3.047E-02	-0.522
IN-111		171.28		8.079E-01	9.428E-01	1.658E+00	8.904E-02	0.487
		245.39	*	1.928E-01	1.162E+00	1.722E+00	1.016E-01	0.112
IN-113M		391.69	*	-4.036E-02	5.993E-02	9.124E-02	5.686E-03	-0.442
SN-113		391.69	*	-4.036E-02	5.993E-02	9.124E-02	5.686E-03	-0.442
IN-114M		190.27	*	2.593E-01	2.634E-01	4.176E-01	2.305E-02	0.621
CD-115		260.90		4.195E+00	1.104E+02	1.834E+02	1.094E+01	0.023
		492.35		-2.194E+01	3.211E+01	4.753E+01	2.793E+00	-0.462
		527.90	*	-8.989E+00	9.418E+00	1.443E+01	8.373E-01	-0.623
SN-117M		156.02		2.820E+00	2.580E+00	4.605E+00	2.522E-01	0.612
		158.56	*	-2.552E-02	6.546E-02	1.085E-01	5.904E-03	-0.235
SB-122		563.90	*	1.798E+00	1.984E+00	3.586E+00	2.040E-01	0.502
		692.80		-2.846E+01	4.194E+01	6.452E+01	3.748E+00	-0.441
I-123		159.00	*	-6.410E-01	4.194E+01	Half-Life too short		
		528.96		-1.237E+02	4.194E+01	Half-Life too short		
TE-123M		159.00	*	-1.766E-02	3.602E-02	5.939E-02	3.276E-03	-0.297
I-124		602.71	*	-9.491E-02	8.753E-01	1.257E+00	6.937E-02	-0.076
		722.78		-4.097E+00	5.498E+00	6.970E+00	4.503E-01	-0.588
		1325.50		5.295E+00	3.592E+01	6.105E+01	5.169E+00	0.087
		1376.25		-3.855E+00	3.917E+01	6.489E+01	5.505E+00	-0.059
		1509.49		-3.174E+00	1.640E+01	2.594E+01	2.081E+00	-0.122
		1691.02		2.602E+00	4.228E+00	7.859E+00	5.518E-01	0.331
SB-124		602.71		-6.807E-03	6.278E-02	9.012E-02	4.977E-03	-0.076
		645.85		-4.220E-01	6.794E-01	1.059E+00	6.442E-02	-0.398
		709.31		-3.006E-01	3.662E+00	6.012E+00	3.706E-01	-0.050
		713.82		-3.189E-01	2.209E+00	3.602E+00	3.775E-01	-0.089
		722.78		-4.259E-01	5.716E-01	7.246E-01	4.861E-02	-0.588
	+	968.20		1.320E+01	5.641E+00	9.114E+00	9.189E-01	1.448
		1045.16		-3.239E-01	3.314E+00	5.273E+00	4.661E-01	-0.061
		1325.50		5.880E-01	3.989E+00	6.778E+00	5.740E-01	0.087
		1368.21		1.260E+00	2.425E+00	4.339E+00	5.815E-01	0.290
		1436.60		-2.189E+00	5.517E+00	8.476E+00	7.039E-01	-0.258
		1691.02	*	6.382E-02	1.037E-01	1.927E-01	1.433E-02	0.331
SB-125		427.89	*	1.939E-02	1.316E-01	2.152E-01	1.321E-02	0.090
		463.38		4.313E-01	3.995E-01	6.996E-01	4.793E-02	0.616
		600.56		-8.688E-02	2.609E-01	4.242E-01	2.747E-02	-0.205
		635.90		7.522E-02	3.711E-01	6.310E-01	4.038E-02	0.119
TE-125M		109.28	*	-5.842E+00	1.321E+01	2.016E+01	1.917E+00	-0.290
I-126		388.63		1.408E-01	2.552E-01	4.334E-01	2.541E-02	0.325
		666.33	*	5.837E-02	2.448E-01	3.661E-01	1.926E-02	0.159
		753.82		1.650E+00	1.884E+00	3.384E+00	2.428E-01	0.487
SB-126		223.80		7.839E-01	5.086E+00	8.559E+00	4.938E-01	0.092
		278.60		1.818E+00	3.190E+00	5.454E+00	3.286E-01	0.333
	+	296.50		8.584E+00	2.723E+00	4.277E+00	2.592E-01	2.007
		414.70		-2.291E-02	1.041E-01	1.652E-01	9.722E-03	-0.139
		415.30		6.647E-01	8.653E+00	1.408E+01	8.285E-01	0.047
		555.20		3.418E-01	5.152E+00	8.711E+00	4.984E-01	0.039

---- Non-Identified Nuclides ----

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		573.80		-1.621E+00	1.333E+00	1.895E+00	1.071E-01	-0.855
		593.00		-2.757E-01	1.206E+00	1.976E+00	1.100E-01	-0.139
		656.30		-2.837E+00	5.486E+00	7.389E+00	3.845E-01	-0.384
		666.33		2.432E-02	1.020E-01	1.525E-01	8.023E-03	0.159
		675.00		-5.756E-01	2.445E+00	3.961E+00	2.153E-01	-0.145
		695.00		-1.092E-01	9.959E-02	1.457E-01	8.529E-03	-0.749
		697.00		-8.658E-02	3.359E-01	5.422E-01	3.198E-02	-0.160
		720.50	*	-5.248E-02	2.019E-01	2.927E-01	1.877E-02	-0.179
		856.80		1.041E-01	6.437E-01	1.072E+00	1.051E-01	0.097
		989.30		-5.535E-01	1.690E+00	2.617E+00	2.557E-01	-0.212
		1034.80		1.378E+01	1.174E+01	2.165E+01	1.954E+00	0.636
		1213.00		-3.558E+00	6.626E+00	1.045E+01	7.020E-01	-0.340
SB-127		61.10		6.569E+01	7.641E+01	1.168E+02	1.507E+01	0.563
		252.40		2.553E-01	4.700E+00	7.823E+00	3.243E+00	0.033
		290.80		1.875E+00	2.587E+01	3.767E+01	3.332E+00	0.050
		411.60		4.303E+00	1.367E+01	2.267E+01	3.198E+00	0.190
		444.90		-1.007E+01	1.106E+01	1.618E+01	1.689E+00	-0.622
		473.00		-5.334E-01	1.993E+00	3.118E+00	3.378E-01	-0.171
		543.00		-1.045E+01	1.840E+01	2.934E+01	3.682E+00	-0.356
		603.60		4.748E+00	1.477E+01	2.231E+01	2.274E+00	0.213
		685.20	*	-3.293E-01	1.475E+00	2.393E+00	2.120E-01	-0.138
		698.50		3.125E+00	1.623E+01	2.740E+01	3.899E+00	0.114
		722.20		-1.364E+01	3.636E+01	4.915E+01	4.484E+00	-0.278
		783.80		-3.933E-01	3.504E+00	5.687E+00	6.573E-01	-0.069
XE-127		57.60		-5.694E+00	1.062E+01	1.487E+01	1.694E+00	-0.383
		145.22		-6.644E-02	9.409E-01	1.480E+00	8.355E-02	-0.045
		172.10		5.328E-02	1.575E-01	2.701E-01	1.452E-02	0.197
		202.84	*	-3.673E-02	6.153E-02	9.972E-02	5.604E-03	-0.368
		374.96		7.619E-02	2.697E-01	4.486E-01	2.660E-02	0.170
I-131		80.18		-1.554E+00	6.134E+00	8.551E+00	9.354E-01	-0.182
		284.30		1.776E+00	1.837E+00	3.218E+00	2.140E-01	0.552
		364.48	*	7.723E-02	1.356E-01	2.314E-01	1.531E-02	0.334
		636.97		-4.177E-01	1.952E+00	3.188E+00	1.933E-01	-0.131
		722.89		-7.362E+00	9.880E+00	1.253E+01	8.172E-01	-0.588
TE-132		49.72		8.003E+00	2.837E+01	4.716E+01	5.641E+00	0.170
		111.76		-2.206E+01	3.091E+01	4.724E+01	4.469E+00	-0.467
		116.30		3.336E-01	2.644E+01	4.218E+01	3.815E+00	0.008
		228.16	*	-3.138E-01	7.051E-01	1.143E+00	1.611E-01	-0.275
BA-133		53.15		-3.068E+00	6.433E+00	1.024E+01	1.152E+00	-0.300
		79.62		-1.930E-02	1.936E+00	2.745E+00	4.558E-01	-0.007
		81.00		-1.015E-01	1.492E-01	2.006E-01	3.461E-02	-0.506
		276.40		2.460E-01	5.108E-01	8.678E-01	1.134E-01	0.283
		302.84		-1.297E-01	2.128E-01	3.349E-01	3.949E-02	-0.387
		356.01	*	-3.933E-02	7.418E-02	9.914E-02	1.156E-02	-0.397
		383.85		-6.952E-02	4.408E-01	7.067E-01	7.716E-02	-0.098
I-133	+	510.53		5.176E-01	4.408E-01	Half-Life too short		
		529.87	*	-1.916E-03	4.408E-01	Half-Life too short		
		706.58		-1.305E-01	4.408E-01	Half-Life too short		
		856.28		-2.909E-02	4.408E-01	Half-Life too short		

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		875.33		1.902E-02	4.408E-01	Half-Life too short		
		1236.41		6.695E-02	4.408E-01	Half-Life too short		
		1298.22		7.122E-02	4.408E-01	Half-Life too short		
CS-134		475.35		-7.770E-01	2.661E+00	4.143E+00	2.442E-01	-0.188
		563.23		3.447E-01	5.039E-01	8.942E-01	5.201E-02	0.386
		569.32		-3.966E-02	2.835E-01	4.411E-01	2.579E-02	-0.090
		604.70		4.582E-02	5.260E-02	8.451E-02	4.685E-03	0.542
		795.84	*	3.567E-02	6.484E-02	1.126E-01	9.306E-03	0.317
		801.93		7.726E-01	5.553E-01	1.020E+00	8.568E-02	0.757
		1038.57		-1.639E+00	5.139E+00	7.902E+00	7.079E-01	-0.207
		1167.94		-2.228E+00	3.584E+00	5.572E+00	3.489E-01	-0.400
		1365.15		7.328E-01	1.695E+00	3.003E+00	2.675E-01	0.244
CS-135		268.24	*	1.981E-01	2.134E-01	3.726E-01	2.908E-02	0.532
I-135		288.45		8.577E+06	2.134E-01	Half-Life too short		
		417.63		1.034E+09	2.134E-01	Half-Life too short		
		546.56		2.779E+08	2.134E-01	Half-Life too short		
		836.80		-8.342E+08	2.134E-01	Half-Life too short		
		1038.76		-3.238E+08	2.134E-01	Half-Life too short		
		1124.00		-8.730E+08	2.134E-01	Half-Life too short		
		1131.51		1.160E+08	2.134E-01	Half-Life too short		
		1260.41	*	-2.352E+08	2.134E-01	Half-Life too short		
		1457.56		2.031E+10	2.134E-01	Half-Life too short		
		1678.03		-2.090E+08	2.134E-01	Half-Life too short		
		1706.46		6.906E+08	2.134E-01	Half-Life too short		
		1791.20		-2.600E+08	2.134E-01	Half-Life too short		
CS-136		66.91		-9.788E-01	1.163E+00	1.573E+00	2.629E-01	-0.622
	+	86.29		2.377E+00	1.698E+00	2.459E+00	3.647E-01	0.967
		153.22		-5.147E-01	7.426E-01	1.211E+00	8.474E-02	-0.425
		163.89		1.698E-01	1.309E+00	2.227E+00	1.537E-01	0.076
		176.55		1.033E-01	4.683E-01	7.748E-01	4.782E-02	0.133
		273.65		-9.897E-01	5.949E-01	8.705E-01	5.918E-02	-1.137
		340.57		3.732E-02	1.869E-01	2.729E-01	1.744E-02	0.137
		818.51		5.413E-03	9.811E-02	1.620E-01	1.423E-02	0.033
		1048.07	*	7.366E-02	1.432E-01	2.462E-01	2.252E-02	0.299
		1235.34		1.608E-01	7.896E-01	1.344E+00	1.447E-01	0.120
CE-139		165.85	*	-7.541E-03	3.851E-02	6.440E-02	3.435E-03	-0.117
BA-140		162.64		1.594E-01	9.200E-01	1.569E+00	9.650E-02	0.102
		304.84		-1.386E+00	1.700E+00	2.562E+00	7.006E-01	-0.541
		423.70		-3.812E-01	2.461E+00	3.913E+00	1.244E+00	-0.097
		537.32	*	6.037E-02	3.284E-01	5.609E-01	1.824E-01	0.108
LA-140		328.77		5.363E-01	3.917E-01	6.973E-01	4.693E-02	0.769
		432.53		2.449E+00	2.581E+00	4.518E+00	2.936E-01	0.542
		487.03		6.494E-02	1.827E-01	3.026E-01	2.009E-02	0.215
		751.79		3.519E-01	2.038E+00	3.430E+00	2.818E-01	0.103
		815.85		-1.780E-01	4.119E-01	6.398E-01	6.200E-02	-0.278
		867.82		-8.380E-01	1.648E+00	2.501E+00	2.626E-01	-0.335
		919.63		8.319E-01	3.412E+00	5.734E+00	7.116E-01	0.145
		925.24		-5.011E-02	1.420E+00	2.300E+00	2.551E-01	-0.022
		1596.49	*	-1.665E-01	1.355E-01	1.702E-01	1.293E-02	-0.978

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CE-141		145.44	*	-2.014E-02	8.443E-02	1.315E-01	7.728E-03	-0.153
CE-143		57.37		-5.586E-04	8.443E-02	Half-Life too short		
		231.56		-2.223E-04	8.443E-02	Half-Life too short		
		293.26	*	2.998E-04	8.443E-02	Half-Life too short		
	+	350.59		1.339E-02	8.443E-02	Half-Life too short		
		490.36		-1.476E-04	8.443E-02	Half-Life too short		
		664.57		1.463E-03	8.443E-02	Half-Life too short		
		721.93		-6.976E-05	8.443E-02	Half-Life too short		
CE-144		80.11		-8.557E-01	3.164E+00	4.406E+00	4.802E-01	-0.194
		133.54	*	6.827E-03	2.673E-01	4.245E-01	6.037E-02	0.016
PM-144		476.78		-2.640E-02	9.413E-02	1.467E-01	1.030E-02	-0.180
		618.01		-1.092E-02	4.537E-02	7.410E-02	4.304E-03	-0.147
		696.49	*	-1.621E-02	4.601E-02	7.349E-02	4.329E-03	-0.221
		778.57		1.341E+00	3.215E+00	5.526E+00	4.294E-01	0.243
PR-144		696.49	*	-1.098E+00	3.116E+00	4.977E+00	2.930E-01	-0.221
		1489.15		-2.546E+00	1.782E+01	2.856E+01	2.316E+00	-0.089
PM-146		453.90	*	1.948E-02	5.889E-02	9.771E-02	8.494E-03	0.199
		633.02		-2.737E-01	1.901E+00	3.121E+00	1.147E+00	-0.088
		735.90		-1.130E-01	1.980E-01	3.011E-01	8.459E-02	-0.375
		747.13		3.904E-02	1.149E-01	1.970E-01	2.583E-02	0.198
ND-147		91.11		1.562E+00	5.328E-01	7.107E-01	8.043E-02	2.198
		319.41		6.034E-01	4.307E+00	7.135E+00	4.330E-01	0.085
		439.89		9.794E+00	7.401E+00	1.329E+01	7.852E-01	0.737
		531.02	*	8.710E-02	6.898E-01	1.175E+00	1.589E-01	0.074
PM-149		285.90	*	-2.789E+01	8.218E+01	1.322E+02	1.886E+01	-0.211
EU-152		121.78		2.483E-02	9.506E-02	1.537E-01	1.211E-02	0.162
		244.69		1.867E-01	4.968E-01	7.489E-01	4.413E-02	0.249
		344.27	*	7.730E-02	1.394E-01	2.368E-01	1.597E-02	0.326
		443.98		-6.264E-01	1.318E+00	2.024E+00	1.195E-01	-0.309
		778.89		2.768E-01	3.589E-01	6.394E-01	4.971E-02	0.433
		867.32		-2.147E-01	1.004E+00	1.590E+00	1.605E-01	-0.135
		964.01		4.700E-01	4.816E-01	7.705E-01	7.814E-02	0.610
		1085.78		-1.588E-01	5.479E-01	8.445E-01	6.814E-02	-0.188
		1112.02		-3.888E-02	4.170E-01	6.414E-01	4.829E-02	-0.061
		1407.95		9.719E-02	2.292E-01	4.076E-01	3.422E-02	0.238
GD-153		69.67		2.630E+00	2.635E+00	4.031E+00	4.293E-01	0.653
		83.37		2.344E+01	2.132E+01	3.261E+01	3.626E+00	0.719
		97.43	*	-8.561E-04	1.156E-01	1.651E-01	1.557E-02	-0.005
		103.18		1.544E-02	1.469E-01	2.367E-01	2.007E-02	0.065
EU-154		123.07		1.858E-02	6.886E-02	1.113E-01	1.067E-02	0.167
		247.94		-1.677E-01	5.035E-01	8.184E-01	7.863E-02	-0.205
		591.81		-8.464E-02	8.477E-01	1.406E+00	1.356E-01	-0.060
		723.30		-1.325E-01	2.679E-01	3.545E-01	2.709E-02	-0.374
		756.87		-5.209E-01	1.122E+00	1.730E+00	1.908E-01	-0.301
		873.19		1.590E-01	4.111E-01	7.027E-01	9.450E-02	0.226
		996.32		-1.607E-02	5.061E-01	8.159E-01	1.493E-01	-0.020
		1004.76		2.112E-01	3.024E-01	5.303E-01	6.537E-02	0.398
		1274.45	*	-7.858E-02	1.779E-01	2.791E-01	2.957E-02	-0.282
EU-155		48.70		-2.755E+00	5.188E+00	7.799E+00	7.607E-01	-0.353

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		3.495E+00	8.423E+00	1.260E+01	1.424E+00	0.277
	+	86.54		2.356E-01	1.668E-01	2.446E-01	2.801E-02	0.963
		105.31	*	6.675E-02	1.509E-01	2.472E-01	2.046E-02	0.270
TB-160	+	86.79		6.215E-01	4.399E-01	6.436E-01	7.344E-02	0.966
		197.04		4.871E-01	7.482E-01	1.296E+00	7.227E-02	0.376
		215.65		-7.456E-01	9.938E-01	1.588E+00	9.075E-02	-0.469
		298.57		1.627E-01	1.832E-01	2.843E-01	1.723E-02	0.572
		879.36	*	-1.010E-01	2.040E-01	3.128E-01	3.264E-02	-0.323
		962.29		1.278E+00	7.495E-01	1.358E+00	1.380E-01	0.941
		966.15		5.112E-01	3.768E-01	6.156E-01	6.225E-02	0.830
		1177.93		1.872E-01	5.304E-01	9.208E-01	5.713E-02	0.203
		1271.85		5.632E-01	9.769E-01	1.744E+00	1.328E-01	0.323
HO-166M		80.57		6.107E-03	3.989E-01	5.662E-01	6.187E-02	0.011
	+	184.41		2.303E-01	8.119E-02	1.043E-01	5.708E-03	2.209
		280.46		-1.754E-01	1.218E-01	1.808E-01	1.090E-02	-0.970
		410.95		3.504E-01	3.515E-01	6.130E-01	3.604E-02	0.572
		711.68	*	3.574E-02	8.050E-02	1.394E-01	8.666E-03	0.256
		752.31		1.595E-01	3.534E-01	6.127E-01	4.373E-02	0.260
		810.29		4.260E-02	7.776E-02	1.358E-01	1.163E-02	0.314
TM-171		51.35		1.280E+01	5.646E+01	9.357E+01	1.022E+01	0.137
		52.39		-1.004E+01	2.847E+01	4.569E+01	5.089E+00	-0.220
		59.40		6.616E+00	4.519E+01	6.650E+01	7.560E+00	0.099
		66.72	*	-5.164E+01	4.587E+01	6.100E+01	6.553E+00	-0.847
LU-176	+	88.36		4.642E-01	3.285E-01	4.933E-01	5.638E-02	0.941
		201.83		-2.448E-02	3.923E-02	6.354E-02	3.566E-03	-0.385
		306.84	*	-6.840E-03	3.270E-02	5.287E-02	3.208E-03	-0.129
		401.10		4.018E+00	9.301E+00	1.561E+01	9.155E-01	0.257
LU-177		112.95		-6.254E-01	1.921E+00	3.008E+00	2.154E-01	-0.208
		208.36	*	-5.862E-01	1.343E+00	2.148E+00	1.216E-01	-0.273
LU-177M		52.97		-1.747E+00	2.930E+00	4.633E+00	5.199E-01	-0.377
		54.07		1.199E+00	1.458E+00	2.479E+00	2.807E-01	0.484
		61.30		2.388E+00	2.299E+00	3.907E+00	4.357E-01	0.611
		121.62		1.523E-01	4.861E-01	7.886E-01	4.861E-02	0.193
		147.16		-6.794E-01	8.212E-01	1.335E+00	7.493E-02	-0.509
		171.86		3.500E-01	6.410E-01	1.111E+00	5.969E-02	0.315
		218.09		2.037E-01	1.131E+00	1.908E+00	1.093E-01	0.107
		268.79		1.829E+00	1.077E+00	1.956E+00	1.173E-01	0.935
		319.02		1.327E-01	3.697E-01	6.216E-01	3.771E-02	0.213
		367.43		-5.316E-01	1.190E+00	1.860E+00	1.109E-01	-0.286
		413.65	*	-1.702E-01	2.672E-01	4.093E-01	2.408E-02	-0.416
HF-181		56.28		-5.235E-01	1.521E+00	2.438E+00	2.779E-01	-0.215
		57.53		-4.927E-01	8.979E-01	1.255E+00	1.431E-01	-0.393
		65.20		6.415E-01	1.404E+00	2.101E+00	2.274E-01	0.305
		133.02		5.586E-02	8.432E-02	1.390E-01	8.144E-03	0.402
		136.25		-7.351E-02	5.799E-01	9.112E-01	5.283E-02	-0.081
		345.85		-1.677E-01	3.175E-01	4.289E-01	2.586E-02	-0.391
		482.03	*	4.963E-03	5.970E-02	9.645E-02	5.679E-03	0.051
W-181		56.28		-2.083E-01	6.041E-01	9.680E-01	1.104E-01	-0.215
		57.53		-1.960E-01	3.569E-01	4.988E-01	5.686E-02	-0.393

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		65.20	*	2.530E-01	5.538E-01	8.283E-01	8.966E-02	0.305
TA-182		67.75		-1.722E-01	1.818E-01	2.460E-01	2.633E-02	-0.700
		100.10		1.133E-01	2.509E-01	4.045E-01	3.626E-02	0.280
		152.43		-3.702E-01	4.078E-01	6.572E-01	3.636E-02	-0.563
		222.10		-1.553E-01	4.726E-01	7.740E-01	4.457E-02	-0.201
		1001.68		-9.316E-01	2.893E+00	4.486E+00	4.296E-01	-0.208
	+	1121.28		3.684E-01	3.508E-01	4.958E-01	3.634E-02	0.743
		1189.05		1.825E-01	3.852E-01	6.814E-01	4.337E-02	0.268
		1221.42	*	-9.317E-02	2.937E-01	4.744E-01	3.247E-02	-0.196
		1230.97		1.775E-02	6.867E-01	1.149E+00	8.032E-02	0.015
RE-183		57.98		-1.811E-02	3.449E-01	5.010E-01	5.708E-02	-0.036
		59.32		2.425E-02	1.837E-01	2.701E-01	3.072E-02	0.090
		67.20		-2.956E-01	3.184E-01	4.309E-01	4.620E-02	-0.686
		162.32	*	3.254E-02	1.410E-01	2.411E-01	1.298E-02	0.135
		208.81		-4.671E-01	1.374E+00	2.208E+00	1.251E-01	-0.212
		291.72		4.237E-02	1.452E+00	2.106E+00	1.274E-01	0.020
RE-184		57.98		-6.726E-02	1.281E+00	1.861E+00	2.120E-01	-0.036
		59.32		8.999E-02	6.818E-01	1.002E+00	1.140E-01	0.090
		67.20		-1.098E+00	1.182E+00	1.600E+00	1.715E-01	-0.686
		161.27		3.085E-02	4.541E-01	7.707E-01	4.161E-02	0.040
		216.55		-9.378E-02	3.465E-01	5.698E-01	3.260E-02	-0.165
		252.85	*	-4.703E-04	3.147E-01	5.220E-01	3.097E-02	-0.001
		318.01		-5.064E-01	6.487E-01	1.002E+00	6.082E-02	-0.505
		792.07		7.445E-01	1.404E+00	2.433E+00	1.971E-01	0.306
		903.28		3.454E-01	1.520E+00	2.325E+00	2.537E-01	0.149
		920.93		4.885E-02	6.028E-01	9.919E-01	1.062E-01	0.049
OS-185		59.72		1.269E-01	4.934E-01	7.313E-01	8.292E-02	0.174
		61.14		2.437E-01	2.748E-01	4.211E-01	4.704E-02	0.579
		69.30		5.076E-01	4.575E-01	7.048E-01	7.513E-02	0.720
		592.07		-9.842E-01	3.455E+00	5.631E+00	3.137E-01	-0.175
		646.12	*	-2.586E-02	5.802E-02	9.224E-02	4.863E-03	-0.280
		717.42		5.247E-01	1.219E+00	2.106E+00	1.336E-01	0.249
		874.81		3.696E-01	7.947E-01	1.371E+00	1.413E-01	0.270
		880.27		-1.208E-02	1.171E+00	1.911E+00	1.998E-01	-0.006
RE-188		155.03	*	2.351E-01	2.085E-01	3.725E-01	2.046E-02	0.631
		477.96		9.193E-01	4.212E+00	6.899E+00	4.065E-01	0.133
		633.10		1.754E-01	3.711E+00	6.219E+00	3.329E-01	0.028
W-188	+	63.58		1.788E+02	1.387E+02	1.409E+02	1.541E+01	1.269
		227.08		-4.685E+00	1.687E+01	2.767E+01	1.602E+00	-0.169
		290.67	*	4.608E-01	1.127E+01	1.636E+01	9.901E-01	0.028
IR-192	+	295.96		7.005E-01	2.223E-01	3.626E-01	2.228E-02	1.932
		308.46		9.417E-03	1.250E-01	2.066E-01	1.267E-02	0.046
		316.51	*	3.191E-03	4.938E-02	8.140E-02	4.963E-03	0.039
		468.07		1.566E-02	9.772E-02	1.591E-01	1.078E-02	0.098
		604.41		4.692E-01	7.385E-01	1.152E+00	1.291E-01	0.407
		612.46		2.986E-01	1.113E+00	1.670E+00	1.223E-01	0.179
AU-195		65.12		1.432E-01	2.588E-01	3.892E-01	4.215E-02	0.368
		66.83		-1.293E-01	1.485E-01	2.017E-01	2.166E-02	-0.641
	+	75.70		9.870E-01	3.442E-01	6.005E-01	6.425E-02	1.644

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	4.360E-03	3.171E-01	5.002E-01	4.588E-02	0.009
		129.76		1.704E+00	3.944E+00	6.410E+00	3.799E-01	0.266
TL-200		367.94	*	-9.692E-05	3.944E+00	Half-Life too short		
		579.30		2.180E-03	3.944E+00	Half-Life too short		
		828.27		-2.451E-04	3.944E+00	Half-Life too short		
		1205.75		3.422E-05	3.944E+00	Half-Life too short		
TL-201		68.90		1.285E+00	5.210E+00	8.164E+00	8.709E-01	0.157
		70.82		2.976E+00	3.119E+00	4.759E+00	5.062E-01	0.625
		80.30		-1.237E+00	5.514E+00	7.704E+00	8.405E-01	-0.161
		135.34		-6.313E+00	2.402E+01	3.742E+01	2.176E+00	-0.169
		167.43	*	-4.479E+00	6.871E+00	1.122E+01	5.989E-01	-0.399
TL-202		68.90		1.459E-01	5.915E-01	9.270E-01	9.888E-02	0.157
		70.82		3.370E-01	3.532E-01	5.388E-01	5.732E-02	0.625
		80.30		-1.401E-01	6.245E-01	8.725E-01	9.519E-02	-0.161
		439.56	*	1.319E-01	8.627E-02	1.577E-01	9.313E-03	0.836
HG-203		70.83		1.541E+00	1.628E+00	2.471E+00	3.698E-01	0.624
		72.87		2.216E-01	9.612E-01	1.408E+00	2.056E-01	0.157
		82.60		-6.502E-01	1.496E+00	2.236E+00	3.442E-01	-0.291
		279.20	*	6.116E-03	5.507E-02	9.159E-02	5.836E-03	0.067
BI-207		72.80		2.010E-02	2.862E-01	4.156E-01	4.422E-02	0.048
	+	74.97		5.503E-01	1.919E-01	2.928E-01	3.127E-02	1.879
		84.90		3.380E-01	2.748E-01	4.221E-01	4.746E-02	0.801
		569.67		-1.371E-03	4.404E-02	6.921E-02	3.923E-03	-0.020
		1063.62	*	-2.424E-02	7.617E-02	1.174E-01	9.981E-03	-0.206
		1770.23		-3.643E+00	1.194E+00	7.157E-01	4.626E-02	-5.090
TL-207		81.07		-2.367E-01	3.275E-01	4.406E-01	4.828E-02	-0.537
		83.78		1.570E-01	1.836E-01	2.774E-01	3.093E-02	0.566
		94.90		5.214E-01	3.278E-01	5.148E-01	5.104E-02	1.013
		122.32		1.385E+00	2.244E+00	3.704E+00	2.582E-01	0.374
		144.24		5.483E-01	9.423E-01	1.538E+00	1.095E-01	0.357
		154.21		1.913E-01	4.845E-01	8.373E-01	5.669E-02	0.228
		269.46		3.781E-01	2.597E-01	4.653E-01	2.909E-02	0.813
		323.87	*	-1.118E+00	9.428E-01	1.375E+00	2.285E-01	-0.813
	+	338.28		5.274E+00	2.457E+00	3.262E+00	3.480E-01	1.617
		445.03		-2.999E+00	3.293E+00	4.818E+00	4.976E-01	-0.622
PO-209		260.50		2.766E+00	1.229E+01	2.067E+01	1.233E+00	0.134
		262.80		-8.220E+00	3.374E+01	5.490E+01	3.280E+00	-0.150
		896.60	*	-1.182E-01	1.031E+01	1.678E+01	1.834E+00	-0.007
BI-210		46.50	*	9.965E-01	7.943E+00	1.243E+01	1.050E+00	0.080
PB-210		46.50	*	9.965E-01	7.943E+00	1.243E+01	1.050E+00	0.080
PO-210		46.50	*	9.965E-01	7.943E+00	1.243E+01	9.279E-01	0.080
PB-211		404.84	*	-5.646E-01	1.306E+00	1.954E+00	1.218E+00	-0.289
		427.08		-5.021E-01	3.095E+00	4.902E+00	3.030E+00	-0.102
		831.96		1.392E+00	1.852E+00	2.933E+00	1.840E+00	0.475
BI-212	+	727.18	*	4.931E-01	7.008E-01	8.386E-01	6.960E-02	0.588
		785.46		-1.338E-01	2.293E+00	3.748E+00	2.975E-01	-0.036
		1620.62		-2.372E+00	1.923E+00	2.237E+00	1.668E-01	-1.060
PO-215		81.07		-2.367E-01	3.275E-01	4.406E-01	4.828E-02	-0.537
		83.78		1.570E-01	1.836E-01	2.774E-01	3.093E-02	0.566

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		94.90		5.214E-01	3.278E-01	5.148E-01	5.104E-02	1.013
		122.32		1.385E+00	2.244E+00	3.704E+00	2.582E-01	0.374
		144.24		5.483E-01	9.423E-01	1.538E+00	1.095E-01	0.357
		154.21		1.913E-01	4.845E-01	8.373E-01	5.669E-02	0.228
		269.46		3.781E-01	2.597E-01	4.653E-01	2.909E-02	0.813
		323.87	*	-1.118E+00	9.428E-01	1.375E+00	2.285E-01	-0.813
	+	338.28		5.274E+00	2.457E+00	3.262E+00	3.480E-01	1.617
		445.03		-2.999E+00	3.293E+00	4.818E+00	4.976E-01	-0.622
RN-219		271.23		4.592E-01	3.314E-01	5.905E-01	4.873E-02	0.778
		401.81	*	-2.067E-02	5.636E-01	9.101E-01	1.241E-01	-0.023
RN-220		549.76	*	-1.577E+01	3.771E+01	6.112E+01	3.508E+00	-0.258
RA-223		81.07		-2.367E-01	3.275E-01	4.406E-01	4.828E-02	-0.537
		83.78		1.570E-01	1.836E-01	2.774E-01	3.093E-02	0.566
		94.90		5.214E-01	3.278E-01	5.148E-01	5.104E-02	1.013
		122.32		1.385E+00	2.244E+00	3.704E+00	2.582E-01	0.374
		144.24		5.483E-01	9.423E-01	1.538E+00	1.095E-01	0.357
		154.21		1.913E-01	4.845E-01	8.373E-01	5.669E-02	0.228
		269.46		3.781E-01	2.597E-01	4.653E-01	2.909E-02	0.813
		323.87	*	-1.118E+00	9.428E-01	1.375E+00	2.285E-01	-0.813
	+	338.28		5.274E+00	2.457E+00	3.262E+00	3.480E-01	1.617
		445.03		-2.999E+00	3.293E+00	4.818E+00	4.976E-01	-0.622
AC-227		79.80		-3.980E-01	2.440E+00	3.421E+00	7.699E-01	-0.116
		236.00		6.119E-01	3.715E-01	5.984E-01	6.270E-02	1.022
		256.20	*	-1.627E-01	5.166E-01	8.381E-01	1.175E-01	-0.194
		286.10		-1.207E+00	2.139E+00	3.382E+00	3.952E-01	-0.357
		299.80		3.172E+00	2.342E+00	3.833E+00	6.278E-01	0.828
		304.40		-2.913E+00	2.723E+00	4.060E+00	7.060E-01	-0.717
		334.20		4.949E-01	3.733E+00	5.420E+00	9.981E-01	0.091
TH-227		79.80		-3.980E-01	2.440E+00	3.421E+00	7.789E-01	-0.116
	+	94.00		1.798E+01	6.031E+00	5.652E+00	1.266E+00	3.182
		236.00		6.119E-01	3.701E-01	5.984E-01	5.438E-02	1.022
		256.20	*	-1.627E-01	5.168E-01	8.381E-01	1.421E-01	-0.194
		286.10		-1.207E+00	2.453E+00	3.382E+00	3.389E+00	-0.357
		299.80		3.172E+00	2.342E+00	3.833E+00	6.278E-01	0.828
		304.40		-2.913E+00	2.723E+00	4.060E+00	7.060E-01	-0.717
		334.20		4.949E-01	3.733E+00	5.420E+00	9.981E-01	0.091
TH-229	+	85.43		4.389E-01	3.106E-01	4.343E-01	4.902E-02	1.011
		88.47		2.008E-01	2.351E-01	2.832E-01	3.229E-02	0.709
		100.00		4.615E-02	2.652E-01	4.218E-01	3.789E-02	0.109
		193.63	*	-7.929E-02	6.816E-01	1.137E+00	6.310E-02	-0.070
		210.97		1.395E+00	1.025E+00	1.829E+00	1.039E-01	0.763
PA-231		283.67	*	1.882E+00	2.130E+00	3.694E+00	5.128E-01	0.509
		301.29		1.297E+00	8.535E-01	1.514E+00	1.605E-01	0.857
TH-231		81.07		-2.367E-01	3.275E-01	4.406E-01	4.828E-02	-0.537
		83.78		1.570E-01	1.836E-01	2.774E-01	3.093E-02	0.566
		94.90		5.214E-01	3.278E-01	5.148E-01	5.104E-02	1.013
		122.32		1.385E+00	2.244E+00	3.704E+00	2.582E-01	0.374
		144.24		5.483E-01	9.423E-01	1.538E+00	1.095E-01	0.357
		154.21		1.913E-01	4.845E-01	8.373E-01	5.669E-02	0.228

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		3.781E-01	2.597E-01	4.653E-01	2.909E-02	0.813
		323.87	*	-1.118E+00	9.428E-01	1.375E+00	2.285E-01	-0.813
	+	338.28		5.274E+00	2.457E+00	3.262E+00	3.480E-01	1.617
		445.03		-2.999E+00	3.293E+00	4.818E+00	4.976E-01	-0.622
U-231		84.21		7.684E+00	6.158E+00	9.483E+00	1.061E+00	0.810
	+	92.29		1.418E+01	3.818E+00	5.074E+00	5.311E-01	2.795
		95.87	*	-6.514E-01	1.222E+00	1.674E+00	1.627E-01	-0.389
		108.00		-1.501E+00	2.411E+00	3.648E+00	2.843E-01	-0.411
PA-233	+	75.28		1.606E+01	5.960E+00	9.013E+00	1.496E+00	1.782
	+	86.59		3.831E+00	2.881E+00	3.983E+00	1.109E+00	0.962
		300.12		9.535E-01	6.232E-01	1.068E+00	1.448E-01	0.892
		311.98	*	-2.160E-02	9.242E-02	1.418E-01	9.093E-03	-0.152
		340.50		2.986E-01	9.826E-01	1.445E+00	3.328E-01	0.207
		398.62		4.021E-01	3.010E+00	4.928E+00	1.275E+00	0.082
		415.76		-2.299E-01	2.489E+00	3.993E+00	8.231E-01	-0.058
PA-234	+	63.00		5.256E+00	4.134E+00	4.414E+00	7.473E-01	1.191
		94.67		5.911E-01	2.535E-01	3.997E-01	5.343E-02	1.479
		98.44		6.430E-02	1.377E-01	2.060E-01	1.152E-01	0.312
		99.86		3.212E-02	6.727E-01	1.063E+00	9.573E-02	0.030
		111.00		1.658E-01	2.518E-01	4.159E-01	4.679E-02	0.399
		131.20		-6.111E-02	1.474E-01	2.281E-01	1.345E-02	-0.268
		152.70		-4.196E-01	4.031E-01	6.364E-01	9.998E-02	-0.659
	+	186.00		8.292E+00	3.838E+00	3.933E+00	1.199E+00	2.108
		226.40		1.647E-01	5.404E-01	9.164E-01	1.059E-01	0.180
		227.20		-1.940E-01	5.757E-01	9.406E-01	5.448E-02	-0.206
		248.90		1.662E-01	1.146E+00	1.919E+00	4.128E-01	0.087
	+	293.70		4.466E+00	1.567E+00	2.234E+00	3.614E-01	1.999
		369.80		-3.540E-01	1.091E+00	1.719E+00	3.587E-01	-0.206
		568.70		-9.071E-02	1.427E+00	2.235E+00	1.267E-01	-0.041
		569.50		-1.217E-02	3.909E-01	6.142E-01	3.482E-02	-0.020
		574.00		-2.713E+00	2.176E+00	2.952E+00	1.668E-01	-0.919
		699.00		4.590E-01	9.885E-01	1.706E+00	3.076E-01	0.269
		706.10		-1.112E+00	1.534E+00	2.217E+00	9.794E-01	-0.502
		733.00		1.837E-01	5.857E-01	8.778E-01	1.889E-01	0.209
		742.81		1.111E+00	1.831E+00	2.978E+00	1.996E+00	0.373
		796.30		3.285E-01	1.298E+00	2.184E+00	5.881E-01	0.150
		805.60		-9.981E-01	1.386E+00	2.021E+00	6.183E-01	-0.494
		819.60		6.546E-01	1.834E+00	3.100E+00	1.180E+00	0.211
		826.30		-1.518E-01	1.174E+00	1.894E+00	8.486E-01	-0.080
		831.60		4.353E-01	8.796E-01	1.505E+00	4.515E-01	0.289
		876.40		-7.970E-02	1.198E+00	1.937E+00	1.995E+00	-0.041
		880.51		1.080E-01	4.184E-01	7.033E-01	7.361E-02	0.154
		883.24		2.862E-01	4.452E-01	7.108E-01	4.798E-01	0.403
		899.00		-4.409E-01	1.210E+00	1.858E+00	8.217E-01	-0.237
		925.00		-5.206E-01	1.639E+00	2.555E+00	2.722E-01	-0.204
		926.50		9.733E-02	2.388E-01	4.069E-01	1.059E-01	0.239
		946.00	*	-4.111E-01	4.669E-01	6.637E-01	1.303E-01	-0.619
		949.00		3.517E-01	6.767E-01	1.164E+00	1.204E-01	0.302
		980.50		-4.297E-01	1.076E+00	1.651E+00	1.635E-01	-0.260

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-1.407E+00	1.838E+00	2.190E+00	1.425E+00	-0.643
PA-234M		766.41		3.846E+01	3.931E+01	4.844E+01	3.708E+01	0.794
		1001.03	*	8.573E-01	9.587E+00	1.569E+01	1.873E+00	0.055
U-235		89.95		-3.091E-01	2.252E+00	2.503E+00	7.912E-01	-0.124
	+	93.35		5.595E+00	2.120E+00	1.967E+00	5.619E-01	2.844
		105.00		3.606E-01	1.491E+00	2.411E+00	7.167E-01	0.150
		143.76	*	2.875E-01	2.924E-01	4.823E-01	7.841E-02	0.596
		163.35		3.145E-02	6.232E-01	1.056E+00	1.885E-01	0.030
	+	185.71		3.071E-01	1.082E-01	1.465E-01	8.036E-03	2.096
		205.31		-3.460E-01	7.126E-01	1.142E+00	2.048E-01	-0.303
NP-236		94.67		4.522E-01	1.883E-01	3.037E-01	3.025E-02	1.489
		98.44		4.861E-02	1.006E-01	1.558E-01	1.441E-02	0.312
		111.00		1.254E-01	1.902E-01	3.146E-01	2.329E-02	0.399
		160.31	*	1.070E-02	1.030E-01	1.752E-01	9.483E-03	0.061
NP-239		99.55		-1.805E-03	2.228E-01	3.509E-01	3.179E-02	-0.005
		117.00	*	-2.036E-01	2.505E-01	3.785E-01	2.529E-02	-0.538
		209.75		1.280E+00	1.087E+00	1.879E+00	1.066E-01	0.681
		228.18		-1.379E-01	3.076E-01	4.992E-01	2.895E-02	-0.276
		277.60		3.738E-01	2.413E-01	4.360E-01	2.626E-02	0.857
		334.30		2.545E-01	2.113E+00	3.065E+00	1.855E-01	0.083
AM-241		59.54	*	4.505E-02	2.625E-01	3.869E-01	4.582E-02	0.116
CM-243		99.55		-1.857E-03	2.292E-01	3.610E-01	3.271E-02	-0.005
		103.76	*	6.320E-03	1.350E-01	2.168E-01	1.819E-02	0.029
		117.00		-2.094E-01	2.577E-01	3.894E-01	2.602E-02	-0.538
		209.75		1.262E+00	1.071E+00	1.852E+00	1.051E-01	0.681
		228.18		-1.393E-01	3.108E-01	5.044E-01	2.925E-02	-0.276
		277.60		3.768E-01	2.432E-01	4.395E-01	2.647E-02	0.857
CM-247		278.00		1.350E+00	1.009E+00	1.803E+00	1.086E-01	0.749
		287.40		-1.491E+00	1.729E+00	2.676E+00	1.617E-01	-0.557
		402.60	*	-1.599E-02	5.052E-02	7.952E-02	4.665E-03	-0.201
CF-249		252.85		-1.775E-03	1.187E+00	1.970E+00	1.169E-01	-0.001
		333.44		-3.790E-03	2.827E-01	4.048E-01	2.450E-02	-0.009
		387.95	*	3.906E-02	5.442E-02	9.355E-02	5.488E-03	0.418
CF-251		176.60	*	3.972E-02	1.736E-01	2.873E-01	1.555E-02	0.138
		227.00		-1.218E-01	5.145E-01	8.459E-01	4.898E-02	-0.144
		285.00		-2.175E-01	2.443E+00	4.006E+00	2.420E-01	-0.054

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433005      *
* Acquisition date :  7-JUL-2009 06:06:19 Detector SN#    :                 *
* Detector ID        : GAM08               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:02.94      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433005           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 7.7490E+01 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.255E+01	2.847E+00	7.322E-01	0.000E+00
CD-109	1.987E+00	1.378E+00	2.019E+00	0.000E+00
SN-126	1.957E-01	1.358E-01	1.887E-01	0.000E+00
BA-137M	7.823E-01	1.226E-01	7.993E-02	0.000E+00
CS-137	8.270E-01	1.296E-01	8.449E-02	0.000E+00
TL-208	4.581E-01	1.266E-01	8.562E-02	0.000E+00
BI-211	3.358E+00	6.260E-01	4.434E-01	0.000E+00
PB-212	1.334E+00	1.660E-01	1.272E-01	0.000E+00
PO-212	1.334E+00	1.660E-01	1.272E-01	0.000E+00
BI-214	1.079E+00	2.279E-01	1.624E-01	0.000E+00
PB-214	1.168E+00	2.258E-01	1.545E-01	0.000E+00
PO-214	1.168E+00	2.258E-01	1.545E-01	0.000E+00
PO-216	1.334E+00	1.660E-01	1.272E-01	0.000E+00
PO-218	1.168E+00	2.258E-01	1.545E-01	0.000E+00
RA-224	3.146E+00	1.813E+00	1.448E+00	0.000E+00
RA-226	1.079E+00	2.279E-01	1.624E-01	0.000E+00
AC-228	1.463E+00	3.946E-01	2.567E-01	0.000E+00
RA-228	1.463E+00	3.946E-01	2.567E-01	0.000E+00
TH-228	1.334E+00	1.660E-01	1.272E-01	0.000E+00
TH-230	1.079E+00	2.279E-01	1.624E-01	0.000E+00
TH-232	1.463E+00	3.946E-01	2.567E-01	0.000E+00
TH-234	4.509E+00	3.499E+00	2.864E+00	0.000E+00
U-234	1.079E+00	2.279E-01	1.624E-01	0.000E+00
NP-237	5.747E-01	4.152E-01	5.213E-01	0.000E+00
U-238	4.509E+00	3.499E+00	2.864E+00	0.000E+00
AM-243	3.066E-01	1.048E-01	1.207E-01	0.000E+00
ANH-511	1.513E-01	1.180E-01	6.335E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	-1.898E-01	4.401E-01	6.726E-01	0.000E+00	NOT IDENT.
NA-22	-2.886E-02	6.223E-02	9.783E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.263E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	4.202E-02	3.659E-02	7.722E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.252E-02	1.046E-01	0.000E+00	FAIL ABUN
SC-46	-4.636E-02	5.155E-02	7.354E-02	0.000E+00	FAIL ABUN
V-48	4.776E-02	9.598E-02	1.649E-01	0.000E+00	NOT IDENT.
CR-51	2.598E-01	4.855E-01	8.194E-01	0.000E+00	NOT IDENT.
MN-52	6.586E-03	2.690E-01	4.479E-01	0.000E+00	NOT IDENT.
MN-54	-3.702E-02	4.975E-02	7.423E-02	0.000E+00	NOT IDENT.
CO-56	-1.610E-02	5.589E-02	8.849E-02	0.000E+00	NOT IDENT.
CO-57	1.529E-02	3.142E-02	5.062E-02	0.000E+00	NOT IDENT.
CO-58	3.055E-02	4.954E-02	8.705E-02	0.000E+00	NOT IDENT.
FE-59	2.300E-02	1.078E-01	1.791E-01	0.000E+00	NOT IDENT.
CO-60	-2.805E-02	5.378E-02	8.388E-02	0.000E+00	NOT IDENT.
ZN-65	-4.642E-03	1.368E-01	1.883E-01	0.000E+00	NOT IDENT.
GE-68	-9.157E-01	1.648E+00	2.439E+00	0.000E+00	NOT IDENT.
AS-73	-4.252E-01	1.434E+00	2.254E+00	0.000E+00	NOT IDENT.
AS-74	3.388E-02	1.206E-01	2.060E-01	0.000E+00	NOT IDENT.
SE-75	-3.412E-02	5.332E-02	8.328E-02	0.000E+00	NOT IDENT.
BR-77	-3.722E+00	1.047E+01	1.605E+01	0.000E+00	FAIL ABUN
SR-82	8.639E-02	5.057E-01	8.468E-01	0.000E+00	NOT IDENT.
RB-83	-4.908E-02	1.008E-01	1.523E-01	0.000E+00	NOT IDENT.
RB-84	4.540E-02	1.001E-01	1.716E-01	0.000E+00	NOT IDENT.
KR-85	1.335E+01	1.175E+01	1.838E+01	0.000E+00	NOT IDENT.
SR-85	6.747E-02	5.937E-02	9.288E-02	0.000E+00	NOT IDENT.
RB-86	-2.526E-01	9.754E-01	1.513E+00	0.000E+00	NOT IDENT.
Y-88	-2.813E-03	4.754E-02	7.633E-02	0.000E+00	NOT IDENT.
ZR-88	-3.543E-02	4.113E-02	6.119E-02	0.000E+00	NOT IDENT.
Y-91	-2.518E+00	2.662E+01	4.418E+01	0.000E+00	NOT IDENT.
NB-94	-4.359E-03	4.661E-02	7.642E-02	0.000E+00	NOT IDENT.
NB-95	8.921E-02	6.002E-02	1.113E-01	0.000E+00	NOT IDENT.
NB-95M	1.673E-01	1.813E-01	2.798E-01	0.000E+00	NOT IDENT.
ZR-95	-8.959E-03	1.002E-01	1.612E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.618E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.502E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-5.675E+00	1.005E+01	1.538E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.269E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.124E-02	4.465E-02	7.567E-02	0.000E+00	NOT IDENT.
RH-102	-2.396E-02	4.070E-02	6.119E-02	0.000E+00	NOT IDENT.
RU-103	-6.039E-03	5.453E-02	8.584E-02	0.000E+00	FAIL ABUN
RH-106	-1.034E-01	4.351E-01	7.081E-01	0.000E+00	FAIL ABUN
RU-106	-1.034E-01	4.350E-01	7.081E-01	0.000E+00	FAIL ABUN
AG-108M	-3.628E-03	4.534E-02	7.217E-02	0.000E+00	NOT IDENT.
AG-110M	-2.487E-02	6.138E-02	8.401E-02	0.000E+00	NOT IDENT.
IN-111	1.928E-01	1.139E+00	1.670E+00	0.000E+00	NOT IDENT.
IN-113M	-4.036E-02	5.873E-02	8.881E-02	0.000E+00	NOT IDENT.
SN-113	-4.036E-02	5.873E-02	8.881E-02	0.000E+00	NOT IDENT.
IN-114M	2.593E-01	2.582E-01	4.039E-01	0.000E+00	NOT IDENT.
CD-115	-8.989E+00	9.230E+00	1.408E+01	0.000E+00	NOT IDENT.
SN-117M	-2.552E-02	6.415E-02	1.048E-01	0.000E+00	NOT IDENT.
SB-122	1.798E+00	1.945E+00	3.501E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.281E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.766E-02	3.530E-02	5.736E-02	0.000E+00	NOT IDENT.
I-124	-9.491E-02	8.578E-01	1.228E+00	0.000E+00	NOT IDENT.
SB-124	6.382E-02	1.016E-01	1.899E-01	0.000E+00	FAIL ABUN
SB-125	1.939E-02	1.290E-01	2.096E-01	0.000E+00	NOT IDENT.
TE-125M	-5.842E+00	1.294E+01	1.941E+01	0.000E+00	NOT IDENT.
I-126	5.837E-02	2.399E-01	3.580E-01	0.000E+00	NOT IDENT.
SB-126	-5.248E-02	1.979E-01	2.864E-01	0.000E+00	FAIL ABUN
SB-127	-3.293E-01	1.446E+00	2.340E+00	0.000E+00	NOT IDENT.
XE-127	-3.673E-02	6.030E-02	9.652E-02	0.000E+00	NOT IDENT.
I-131	7.723E-02	1.329E-01	2.251E-01	0.000E+00	NOT IDENT.
TE-132	-3.138E-01	6.910E-01	1.107E+00	0.000E+00	NOT IDENT.
BA-133	-3.933E-02	7.269E-02	9.643E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.646E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.567E-02	6.355E-02	1.103E-01	0.000E+00	NOT IDENT.
CS-135	1.981E-01	2.091E-01	3.615E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.492E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.366E-02	1.404E-01	2.417E-01	0.000E+00	FAIL ABUN
CE-139	-7.541E-03	3.774E-02	6.223E-02	0.000E+00	NOT IDENT.
BA-140	6.037E-02	3.218E-01	5.475E-01	0.000E+00	NOT IDENT.
LA-140	-1.665E-01	1.328E-01	1.677E-01	0.000E+00	NOT IDENT.
CE-141	-2.014E-02	8.274E-02	1.269E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.327E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	6.827E-03	2.620E-01	4.094E-01	0.000E+00	NOT IDENT.
PM-144	-1.621E-02	4.509E-02	7.189E-02	0.000E+00	NOT IDENT.
PR-144	-1.098E+00	3.053E+00	4.868E+00	0.000E+00	NOT IDENT.

PM-146	1.948E-02	5.771E-02	9.523E-02	0.000E+00	NOT IDENT.
ND-147	8.710E-02	6.761E-01	1.147E+00	0.000E+00	NOT IDENT.
PM-149	-2.789E+01	8.054E+01	1.283E+02	0.000E+00	NOT IDENT.
EU-152	7.730E-02	1.366E-01	2.302E-01	0.000E+00	NOT IDENT.
GD-153	-8.561E-04	1.133E-01	1.588E-01	0.000E+00	NOT IDENT.
EU-154	-7.858E-02	1.743E-01	2.744E-01	0.000E+00	NOT IDENT.
EU-155	6.675E-02	1.479E-01	2.379E-01	0.000E+00	FAIL ABUN
TB-160	-1.010E-01	1.999E-01	3.066E-01	0.000E+00	FAIL ABUN
HO-166M	3.574E-02	7.889E-02	1.364E-01	0.000E+00	FAIL ABUN
TM-171	-5.164E+01	4.496E+01	5.847E+01	0.000E+00	NOT IDENT.
LU-176	-6.840E-03	3.204E-02	5.136E-02	0.000E+00	FAIL ABUN
LU-177	-5.862E-01	1.316E+00	2.079E+00	0.000E+00	NOT IDENT.
LU-177M	-1.702E-01	2.619E-01	3.986E-01	0.000E+00	NOT IDENT.
HF-181	4.963E-03	5.851E-02	9.405E-02	0.000E+00	NOT IDENT.
W-181	2.530E-01	5.427E-01	7.939E-01	0.000E+00	NOT IDENT.
TA-182	-9.317E-02	2.878E-01	4.662E-01	0.000E+00	FAIL ABUN
RE-183	3.254E-02	1.382E-01	2.330E-01	0.000E+00	NOT IDENT.
RE-184	-4.703E-04	3.084E-01	5.062E-01	0.000E+00	NOT IDENT.
OS-185	-2.586E-02	5.685E-02	9.017E-02	0.000E+00	NOT IDENT.
RE-188	2.351E-01	2.043E-01	3.597E-01	0.000E+00	NOT IDENT.
W-188	4.608E-01	1.105E+01	1.589E+01	0.000E+00	FAIL ABUN
IR-192	3.191E-03	4.840E-02	7.909E-02	0.000E+00	FAIL ABUN
AU-195	4.360E-03	3.108E-01	4.811E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.391E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-4.479E+00	6.734E+00	1.084E+01	0.000E+00	NOT IDENT.
TL-202	1.319E-01	8.454E-02	1.537E-01	0.000E+00	NOT IDENT.
HG-203	6.116E-03	5.397E-02	8.889E-02	0.000E+00	NOT IDENT.
BI-207	-2.424E-02	7.465E-02	1.153E-01	0.000E+00	FAIL ABUN
TL-207	-1.118E+00	9.239E-01	1.337E+00	0.000E+00	FAIL ABUN
PO-209	-1.182E-01	1.010E+01	1.645E+01	0.000E+00	NOT IDENT.
BI-210	9.965E-01	7.785E+00	1.188E+01	0.000E+00	NOT IDENT.
PB-210	9.965E-01	7.785E+00	1.188E+01	0.000E+00	NOT IDENT.
PO-210	9.965E-01	7.784E+00	1.188E+01	0.000E+00	NOT IDENT.
PB-211	-5.646E-01	1.280E+00	1.902E+00	0.000E+00	NOT IDENT.
BI-212	4.931E-01	6.868E-01	8.206E-01	0.000E+00	FAIL ABUN
PO-215	-1.118E+00	9.239E-01	1.337E+00	0.000E+00	FAIL ABUN
RN-219	-2.067E-02	5.523E-01	8.860E-01	0.000E+00	NOT IDENT.
RN-220	-1.577E+01	3.696E+01	5.967E+01	0.000E+00	NOT IDENT.
RA-223	-1.118E+00	9.239E-01	1.337E+00	0.000E+00	FAIL ABUN
AC-227	-1.627E-01	5.062E-01	8.129E-01	0.000E+00	NOT IDENT.
TH-227	-1.627E-01	5.065E-01	8.129E-01	0.000E+00	FAIL ABUN
TH-229	-7.929E-02	6.680E-01	1.100E+00	0.000E+00	FAIL ABUN
PA-231	1.882E+00	2.088E+00	3.586E+00	0.000E+00	NOT IDENT.
TH-231	-1.118E+00	9.239E-01	1.337E+00	0.000E+00	FAIL ABUN
U-231	-6.514E-01	1.198E+00	1.610E+00	0.000E+00	FAIL ABUN
PA-233	-2.160E-02	9.058E-02	1.377E-01	0.000E+00	FAIL ABUN
PA-234	-4.111E-01	4.576E-01	6.509E-01	0.000E+00	FAIL ABUN
PA-234M	8.573E-01	9.395E+00	1.539E+01	0.000E+00	NOT IDENT.
U-235	2.875E-01	2.865E-01	4.654E-01	0.000E+00	FAIL ABUN
NP-236	1.070E-02	1.009E-01	1.692E-01	0.000E+00	NOT IDENT.
NP-239	-2.036E-01	2.455E-01	3.646E-01	0.000E+00	NOT IDENT.
AM-241	4.505E-02	2.572E-01	3.705E-01	0.000E+00	NOT IDENT.
CM-243	6.320E-03	1.323E-01	2.086E-01	0.000E+00	NOT IDENT.
CM-247	-1.599E-02	4.951E-02	7.742E-02	0.000E+00	NOT IDENT.
CF-249	3.906E-02	5.333E-02	9.106E-02	0.000E+00	NOT IDENT.
CF-251	3.972E-02	1.701E-01	2.778E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:08:53.97

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433005.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:06:19.
Sample ID         : G232433005           Sample quantity  : 7.74900E+01 GRAM
Detector name     : GAM08                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.94  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	519	10.67*	1.045E+00	2.255E+01	2.255E+01	12.88
CD-109	88.03	82	3.72*	5.500E+00	1.947E+00	1.987E+00	70.78
SN-126	64.28	98	9.60	2.766E+00	1.785E+00	1.785E+00	78.61
	86.94	82	8.90	5.500E+00	8.136E-01	8.136E-01	81.52
	87.57	82	37.00*	5.500E+00	1.957E-01	1.957E-01	70.78
BA-137M	661.65	314	89.98*	2.159E+00	7.816E-01	7.823E-01	15.98
CS-137	661.65	314	85.12*	2.159E+00	8.263E-01	8.270E-01	15.99
TL-208	277.35	------	6.80	4.216E+00	------ Line Not Found		------
	510.84	83	21.60	2.672E+00	7.004E-01	7.004E-01	80.01
	583.14	191	84.20*	2.402E+00	4.581E-01	4.581E-01	28.21
	860.37	------	12.46	1.702E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	4.110E+00	------ Line Not Found		------
	351.07	318	12.94*	3.546E+00	3.358E+00	3.358E+00	19.02
PB-212	74.81	181	10.70	4.345E+00	1.891E+00	1.891E+00	36.10
	77.11	333	18.00	4.614E+00	1.944E+00	1.944E+00	20.63
	87.30	82	8.00	5.500E+00	9.052E-01	9.052E-01	71.48
	238.63	576	44.60*	4.694E+00	1.334E+00	1.334E+00	12.70
	300.09	------	3.41	3.982E+00	------ Line Not Found		------
PO-212	74.81	181	10.70	4.345E+00	1.891E+00	1.891E+00	36.10
	77.11	333	18.00	4.614E+00	1.944E+00	1.944E+00	20.63
	87.30	82	8.00	5.500E+00	9.052E-01	9.052E-01	71.48
	115.19	------	0.60	6.485E+00	------ Line Not Found		------
	238.63	576	44.60*	4.694E+00	1.334E+00	1.334E+00	12.70
	300.09	------	3.41	3.982E+00	------ Line Not Found		------
BI-214	609.31	239	46.30*	2.316E+00	1.079E+00	1.079E+00	21.55
	768.36	------	5.04	1.890E+00	------ Line Not Found		------
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	32	15.10	1.322E+00	7.857E-01	7.857E-01	95.45
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.096E+00	------ Line Not Found		------
	1764.49	51	15.80	9.225E-01	1.710E+00	1.710E+00	32.72
PB-214	74.81	181	6.21	4.345E+00	3.258E+00	3.258E+00	35.65

Sample ID : G232433005 Acquisition date : 7-JUL-2009 06:06:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	333	10.50	4.614E+00	3.332E+00	3.332E+00	21.99
	87.30	82	4.67	5.500E+00	1.551E+00	1.551E+00	71.20
	241.98	119	7.49	4.655E+00	1.659E+00	1.659E+00	59.06
	295.21	149	19.20	4.032E+00	9.304E-01	9.304E-01	32.33
	351.92	318	37.20*	3.546E+00	1.168E+00	1.168E+00	19.73
PO-214	74.81	181	6.21	4.345E+00	3.258E+00	3.258E+00	35.65
	77.11	333	10.50	4.614E+00	3.332E+00	3.332E+00	21.99
	87.30	82	4.67	5.500E+00	1.551E+00	1.551E+00	71.20
	241.98	119	7.49	4.655E+00	1.659E+00	1.659E+00	59.06
	295.21	149	19.20	4.032E+00	9.304E-01	9.304E-01	32.33
	351.92	318	37.20*	3.546E+00	1.168E+00	1.168E+00	19.73
PO-216	74.81	181	10.70	4.345E+00	1.891E+00	1.891E+00	36.10
	77.11	333	18.00	4.614E+00	1.944E+00	1.944E+00	20.63
	87.30	82	8.00	5.500E+00	9.052E-01	9.052E-01	71.48
	238.63	576	44.60*	4.694E+00	1.334E+00	1.334E+00	12.70
	300.09	------	3.41	3.982E+00	------ Line Not Found		------
PO-218	74.81	181	6.21	4.345E+00	3.258E+00	3.258E+00	35.65
	77.11	333	10.50	4.614E+00	3.332E+00	3.332E+00	21.99
	87.30	82	4.67	5.500E+00	1.551E+00	1.551E+00	71.20
	241.98	119	7.49	4.655E+00	1.659E+00	1.659E+00	59.06
	295.21	149	19.20	4.032E+00	9.304E-01	9.304E-01	32.33
	351.92	318	37.20*	3.546E+00	1.168E+00	1.168E+00	19.73
RA-224	240.98	119	3.95*	4.655E+00	3.146E+00	3.146E+00	58.79
RA-226	609.31	239	46.30*	2.316E+00	1.079E+00	1.079E+00	21.55
	768.36	------	5.04	1.890E+00	------ Line Not Found		------
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	32	15.10	1.322E+00	7.857E-01	7.857E-01	95.45
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.096E+00	------ Line Not Found		------
	1764.49	51	15.80	9.225E-01	1.710E+00	1.710E+00	32.72
AC-228	338.32	108	11.40	3.649E+00	1.263E+00	1.263E+00	61.00
	911.07	135	27.70*	1.613E+00	1.463E+00	1.463E+00	27.52
	969.11	68	16.60	1.520E+00	1.302E+00	1.302E+00	47.93
RA-228	338.32	108	11.40	3.649E+00	1.263E+00	1.263E+00	61.00
	911.07	135	27.70*	1.613E+00	1.463E+00	1.463E+00	27.52
	969.11	68	16.60	1.520E+00	1.302E+00	1.302E+00	47.93
TH-228	84.40	------	1.21	5.304E+00	------ Line Not Found		------
	238.60	576	44.60*	4.694E+00	1.334E+00	1.334E+00	12.70
	300.10	------	3.41	3.982E+00	------ Line Not Found		------
TH-230	609.31	239	46.30*	2.316E+00	1.079E+00	1.079E+00	21.55
	768.36	------	5.04	1.890E+00	------ Line Not Found		------
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	32	15.10	1.322E+00	7.857E-01	7.857E-01	95.45
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.096E+00	------ Line Not Found		------
	1764.49	51	15.80	9.225E-01	1.710E+00	1.710E+00	32.72
TH-232	338.32	108	11.40	3.649E+00	1.263E+00	1.263E+00	45.74
	911.07	135	27.70*	1.613E+00	1.463E+00	1.463E+00	27.52
	969.11	68	16.60	1.520E+00	1.302E+00	1.302E+00	47.93

Sample ID : G232433005 Acquisition date : 7-JUL-2009 06:06:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	98	3.80*	2.766E+00	4.509E+00	4.509E+00	79.20
	92.38	306	5.41	5.880E+00	4.654E+00	4.654E+00	31.26
U-234	609.31	239	46.30*	2.316E+00	1.079E+00	1.079E+00	21.55
	768.36	------	5.04	1.890E+00	------	Line Not Found	------
	934.06	------	3.21	1.574E+00	------	Line Not Found	------
	1120.29	32	15.10	1.322E+00	7.857E-01	7.857E-01	95.45
	1238.11	------	5.94	1.205E+00	------	Line Not Found	------
	1377.67	------	4.11	1.096E+00	------	Line Not Found	------
	1764.49	51	15.80	9.225E-01	1.710E+00	1.710E+00	32.72
NP-237	86.50	82	12.60*	5.500E+00	5.747E-01	5.747E-01	73.72
	95.87	------	2.60	6.030E+00	------	Line Not Found	------
U-238	63.29	98	3.80*	2.766E+00	4.509E+00	4.509E+00	79.20
	92.38	306	5.41	5.880E+00	4.654E+00	4.654E+00	26.92
AM-243	74.67	181	66.00*	4.345E+00	3.066E-01	3.066E-01	34.87
	86.72	82	0.34	5.500E+00	2.155E+01	2.155E+01	70.78
	117.66	------	0.55	6.497E+00	------	Line Not Found	------
	142.18	------	0.13	6.311E+00	------	Line Not Found	------
ANH-511	511.00	83	100.00*	2.672E+00	1.513E-01	1.513E-01	79.57

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232433005

Acquisition date : 7-JUL-2009 06:06:19

Total number of lines in spectrum 21
Number of unidentified lines 0
Number of lines tentatively identified by NID 21 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.255E+01	2.255E+01	0.291E+01	12.88	
CD-109	464.00D	1.02	1.947E+00	1.987E+00	1.406E+00	70.78	
SN-126	1.00E+05Y	1.00	1.957E-01	1.957E-01	1.385E-01	70.78	
BA-137M	30.17Y	1.00	7.816E-01	7.823E-01	1.251E-01	15.98	
CS-137	30.17Y	1.00	8.263E-01	8.270E-01	1.323E-01	15.99	
TL-208	1.41E+10Y	1.00	4.581E-01	4.581E-01	1.292E-01	28.21	
BI-211	7.04E+08Y	1.00	3.358E+00	3.358E+00	0.639E+00	19.02	
PB-212	1.41E+10Y	1.00	1.334E+00	1.334E+00	0.169E+00	12.70	
PO-212	1.41E+10Y	1.00	1.334E+00	1.334E+00	0.169E+00	12.70	
BI-214	1600.00Y	1.00	1.079E+00	1.079E+00	0.233E+00	21.55	
PB-214	1600.00Y	1.00	1.168E+00	1.168E+00	0.230E+00	19.73	
PO-214	1600.00Y	1.00	1.168E+00	1.168E+00	0.230E+00	19.73	
PO-216	1.41E+10Y	1.00	1.334E+00	1.334E+00	0.169E+00	12.70	
PO-218	1600.00Y	1.00	1.168E+00	1.168E+00	0.230E+00	19.73	
RA-224	1.41E+10Y	1.00	3.146E+00	3.146E+00	1.850E+00	58.79	
RA-226	1600.00Y	1.00	1.079E+00	1.079E+00	0.233E+00	21.55	
AC-228	1.41E+10Y	1.00	1.463E+00	1.463E+00	0.403E+00	27.52	
RA-228	1.41E+10Y	1.00	1.463E+00	1.463E+00	0.403E+00	27.52	
TH-228	1.41E+10Y	1.00	1.334E+00	1.334E+00	0.169E+00	12.70	
TH-230	4.47E+09Y	1.00	1.079E+00	1.079E+00	0.233E+00	21.55	
TH-232	1.41E+10Y	1.00	1.463E+00	1.463E+00	0.403E+00	27.52	
TH-234	4.47E+09Y	1.00	4.509E+00	4.509E+00	3.571E+00	79.20	
U-234	4.47E+09Y	1.00	1.079E+00	1.079E+00	0.233E+00	21.55	
NP-237	2.14E+06Y	1.00	5.747E-01	5.747E-01	4.237E-01	73.72	
U-238	4.47E+09Y	1.00	4.509E+00	4.509E+00	3.571E+00	79.20	
AM-243	7380.00Y	1.00	3.066E-01	3.066E-01	1.069E-01	34.87	
ANH-511	1.00E+09Y	1.00	1.513E-01	1.513E-01	1.204E-01	79.57	
	Total Activity :		6.086E+01	6.090E+01			

Grand Total Activity : 6.086E+01 6.090E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433005 Acquisition date : 7-JUL-2009 06:06:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.57	190	215	1.61	370.98	366	11	2.64E-02	34.8	5.54E+00	T
0	728.23	24	61	1.53	1455.53	1448	13	3.31E-03	****	1.98E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:08:59.01

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                DETECTOR DATA                                *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433005.CNF;1   *
* Acquisition date  : 7-JUL-2009 06:06:19.  Detector SN#     :               *
* Detector ID       : GAM08                 Sensitivity      : 5.00000       *
* Geometry          : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:02.94          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                                SAMPLE DATA                                  *
*                                                                             *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID         : G232433005            Analyst initials: MXR1           *
* Batch Number      : 881219                Sample Quantity : 7.74900E+01 GRAM *
*******************************************************************************
*                                                                             *
*                                  QC DATA                                    *
*                                                                             *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06.7MS Isotope      :                  *
* MSD ID           :                      MSD Isotope     :                  *
* LCS ID           : 1032-A               LCS Isotope     :                  *
*******************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.255E+01	2.905E+00	7.439E-01	6.304E-02	30.313
CD-109	1.987E+00	1.406E+00	2.101E+00	2.420E-01	0.946
SN-126	1.957E-01	1.385E-01	1.964E-01	2.256E-02	0.996
BA-137M	7.823E-01	1.251E-01	8.175E-02	4.224E-03	9.570
CS-137	8.270E-01	1.323E-01	8.641E-02	4.489E-03	9.570
TL-208	4.581E-01	1.292E-01	8.766E-02	5.718E-03	5.225
BI-211	3.358E+00	6.388E-01	4.559E-01	3.022E-02	7.365
PB-212	1.334E+00	1.694E-01	1.313E-01	9.686E-03	10.160
PO-212	1.334E+00	1.694E-01	1.313E-01	9.686E-03	10.160
BI-214	1.079E+00	2.325E-01	1.662E-01	1.255E-02	6.491
PB-214	1.168E+00	2.304E-01	1.589E-01	1.340E-02	7.350
PO-214	1.168E+00	2.304E-01	1.589E-01	1.340E-02	7.350
PO-216	1.334E+00	1.694E-01	1.313E-01	9.686E-03	10.160
PO-218	1.168E+00	2.304E-01	1.589E-01	1.340E-02	7.350
RA-224	3.146E+00	1.850E+00	1.494E+00	8.773E-02	2.106
RA-226	1.079E+00	2.325E-01	1.662E-01	1.255E-02	6.491
AC-228	1.463E+00	4.027E-01	2.619E-01	3.407E-02	5.587
RA-228	1.463E+00	4.027E-01	2.619E-01	3.407E-02	5.587

Sample ID : G232433005 Acquisition date : 7-JUL-2009 06:06:19

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.334E+00	1.694E-01	1.312E-01	9.685E-03	10.161
TH-230	1.079E+00	2.325E-01	1.662E-01	1.255E-02	6.491
TH-232	1.463E+00	4.027E-01	2.619E-01	3.407E-02	5.587
TH-234	4.509E+00	3.571E+00	2.989E+00	5.745E-01	1.509
U-234	1.079E+00	2.325E-01	1.662E-01	1.255E-02	6.491
NP-237	5.747E-01	4.237E-01	5.426E-01	1.279E-01	1.059
U-238	4.509E+00	3.571E+00	2.989E+00	5.745E-01	1.509
AM-243	3.066E-01	1.069E-01	1.258E-01	1.343E-02	2.437
ANH-511	1.513E-01	1.204E-01	6.494E-02	3.794E-03	2.330

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.898E-01		4.491E-01	6.898E-01	4.712E-02	-0.275
NA-22	-2.886E-02		6.350E-02	9.951E-02	7.630E-03	-0.290
NA-24	1.292E-01		1.154E-01	Half-Life too short		
AL-26	4.202E-02		3.733E-02	7.832E-02	4.832E-03	0.537
TI-44	3.587E-01	+	7.400E-02	1.090E-01	1.177E-02	3.292
SC-46	-4.636E-02		5.260E-02	7.502E-02	8.039E-03	-0.618
V-48	4.776E-02		9.794E-02	1.681E-01	1.657E-02	0.284
CR-51	2.598E-01		4.954E-01	8.432E-01	5.652E-02	0.308
MN-52	6.586E-03		2.744E-01	4.551E-01	3.784E-02	0.014
MN-54	-3.702E-02		5.076E-02	7.577E-02	6.976E-03	-0.489
CO-56	-1.610E-02		5.703E-02	9.032E-02	8.605E-03	-0.178
CO-57	1.529E-02		3.206E-02	5.253E-02	3.221E-03	0.291
CO-58	3.055E-02		5.055E-02	8.888E-02	7.641E-03	0.344
FE-59	2.300E-02		1.100E-01	1.824E-01	1.562E-02	0.126
CO-60	-2.805E-02		5.487E-02	8.528E-02	7.318E-03	-0.329
ZN-65	-4.642E-03		1.396E-01	1.917E-01	1.431E-02	-0.024
GE-68	-9.157E-01		1.681E+00	2.484E+00	2.046E-01	-0.369
AS-73	-4.252E-01		1.463E+00	2.356E+00	2.656E-01	-0.180
AS-74	3.388E-02		1.230E-01	2.109E-01	1.171E-02	0.161
SE-75	-3.412E-02		5.441E-02	8.585E-02	5.184E-03	-0.397
BR-77	-3.722E+00		1.068E+01	1.645E+01	9.578E-01	-0.226
SR-82	8.639E-02		5.160E-01	8.649E-01	6.674E-02	0.100
RB-83	-4.908E-02		1.028E-01	1.561E-01	9.090E-03	-0.314
RB-84	4.540E-02		1.022E-01	1.751E-01	1.837E-02	0.259
KR-85	1.335E+01		1.199E+01	1.884E+01	1.099E+00	0.709
SR-85	6.747E-02		6.058E-02	9.520E-02	5.557E-03	0.709
RB-86	-2.526E-01		9.953E-01	1.541E+00	1.272E-01	-0.164
Y-88	-2.813E-03		4.851E-02	7.741E-02	4.618E-03	-0.036
ZR-88	-3.543E-02		4.197E-02	6.286E-02	3.676E-03	-0.564
Y-91	-2.518E+00		2.716E+01	4.496E+01	2.966E+00	-0.056
NB-94	-4.359E-03		4.756E-02	7.812E-02	4.702E-03	-0.056
NB-95	8.921E-02		6.125E-02	1.137E-01	8.478E-03	0.785
NB-95M	1.673E-01		1.850E-01	2.887E-01	2.183E-02	0.580
ZR-95	-8.959E-03		1.022E-01	1.647E-01	1.359E-02	-0.054

Sample ID : G232433005 Acquisition date : 7-JUL-2009 06:06:19

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-1.569E-03		2.356E-02	Half-Life too short		
ZR-97	1.854E+00		3.827E-01	Half-Life too short		
MO-99	-5.675E+00		1.025E+01	1.572E+01	2.240E+00	-0.361
TC-99M	-5.638E+08		6.472E+08	Half-Life too short		
RH-101	2.124E-02		4.556E-02	7.819E-02	4.365E-03	0.272
RH-102	-2.396E-02		4.153E-02	6.276E-02	3.700E-03	-0.382
RU-103	-6.039E-03		5.564E-02	8.801E-02	1.116E-02	-0.069
RH-106	-1.034E-01		4.440E-01	7.247E-01	8.372E-02	-0.143
RU-106	-1.034E-01		4.439E-01	7.247E-01	3.926E-02	-0.143
AG-108M	-3.628E-03		4.626E-02	7.407E-02	4.734E-03	-0.049
AG-110M	-2.487E-02		6.264E-02	8.593E-02	4.821E-03	-0.289
IN-111	1.928E-01		1.162E+00	1.722E+00	1.016E-01	0.112
IN-113M	-4.036E-02		5.993E-02	9.124E-02	5.686E-03	-0.442
SN-113	-4.036E-02		5.993E-02	9.124E-02	5.686E-03	-0.442
IN-114M	2.593E-01		2.634E-01	4.176E-01	2.305E-02	0.621
CD-115	-8.989E+00		9.418E+00	1.443E+01	8.373E-01	-0.623
SN-117M	-2.552E-02		6.546E-02	1.085E-01	5.904E-03	-0.235
SB-122	1.798E+00		1.984E+00	3.586E+00	2.040E-01	0.502
I-123	-6.410E-01		6.538E-01	Half-Life too short		
TE-123M	-1.766E-02		3.602E-02	5.939E-02	3.276E-03	-0.297
I-124	-9.491E-02		8.753E-01	1.257E+00	6.937E-02	-0.076
SB-124	6.382E-02		1.037E-01	1.927E-01	1.433E-02	0.331
SB-125	1.939E-02		1.316E-01	2.152E-01	1.321E-02	0.090
TE-125M	-5.842E+00		1.321E+01	2.016E+01	1.917E+00	-0.290
I-126	5.837E-02		2.448E-01	3.661E-01	1.926E-02	0.159
SB-126	-5.248E-02		2.019E-01	2.927E-01	1.877E-02	-0.179
SB-127	-3.293E-01		1.475E+00	2.393E+00	2.120E-01	-0.138
XE-127	-3.673E-02		6.153E-02	9.972E-02	5.604E-03	-0.368
I-131	7.723E-02		1.356E-01	2.314E-01	1.531E-02	0.334
TE-132	-3.138E-01		7.051E-01	1.143E+00	1.611E-01	-0.275
BA-133	-3.933E-02		7.418E-02	9.914E-02	1.156E-02	-0.397
I-133	-1.916E-03		1.350E-03	Half-Life too short		
CS-134	3.567E-02		6.484E-02	1.126E-01	9.306E-03	0.317
CS-135	1.981E-01		2.134E-01	3.726E-01	2.908E-02	0.532
I-135	-2.352E+08		1.271E+08	Half-Life too short		
CS-136	7.366E-02		1.432E-01	2.462E-01	2.252E-02	0.299
CE-139	-7.541E-03		3.851E-02	6.440E-02	3.435E-03	-0.117
BA-140	6.037E-02		3.284E-01	5.609E-01	1.824E-01	0.108
LA-140	-1.665E-01		1.355E-01	1.702E-01	1.293E-02	-0.978
CE-141	-2.014E-02		8.443E-02	1.315E-01	7.728E-03	-0.153
CE-143	2.998E-04		6.773E-05	Half-Life too short		
CE-144	6.827E-03		2.673E-01	4.245E-01	6.037E-02	0.016
PM-144	-1.621E-02		4.601E-02	7.349E-02	4.329E-03	-0.221
PR-144	-1.098E+00		3.116E+00	4.977E+00	2.930E-01	-0.221
PM-146	1.948E-02		5.889E-02	9.771E-02	8.494E-03	0.199
ND-147	8.710E-02		6.898E-01	1.175E+00	1.589E-01	0.074
PM-149	-2.789E+01		8.218E+01	1.322E+02	1.886E+01	-0.211
EU-152	7.730E-02		1.394E-01	2.368E-01	1.597E-02	0.326

Sample ID : G232433005 Acquisition date : 7-JUL-2009 06:06:19

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-8.561E-04		1.156E-01	1.651E-01	1.557E-02	-0.005
EU-154	-7.858E-02		1.779E-01	2.791E-01	2.957E-02	-0.282
EU-155	6.675E-02		1.509E-01	2.472E-01	2.046E-02	0.270
TB-160	-1.010E-01		2.040E-01	3.128E-01	3.264E-02	-0.323
HO-166M	3.574E-02		8.050E-02	1.394E-01	8.666E-03	0.256
TM-171	-5.164E+01		4.587E+01	6.100E+01	6.553E+00	-0.847
LU-176	-6.840E-03		3.270E-02	5.287E-02	3.208E-03	-0.129
LU-177	-5.862E-01		1.343E+00	2.148E+00	1.216E-01	-0.273
LU-177M	-1.702E-01		2.672E-01	4.093E-01	2.408E-02	-0.416
HF-181	4.963E-03		5.970E-02	9.645E-02	5.679E-03	0.051
W-181	2.530E-01		5.538E-01	8.283E-01	8.966E-02	0.305
TA-182	-9.317E-02		2.937E-01	4.744E-01	3.247E-02	-0.196
RE-183	3.254E-02		1.410E-01	2.411E-01	1.298E-02	0.135
RE-184	-4.703E-04		3.147E-01	5.220E-01	3.097E-02	-0.001
OS-185	-2.586E-02		5.802E-02	9.224E-02	4.863E-03	-0.280
RE-188	2.351E-01		2.085E-01	3.725E-01	2.046E-02	0.631
W-188	4.608E-01		1.127E+01	1.636E+01	9.901E-01	0.028
IR-192	3.191E-03		4.938E-02	8.140E-02	4.963E-03	0.039
AU-195	4.360E-03		3.171E-01	5.002E-01	4.588E-02	0.009
TL-200	-9.692E-05		1.220E-04	Half-Life too short		
TL-201	-4.479E+00		6.871E+00	1.122E+01	5.989E-01	-0.399
TL-202	1.319E-01		8.627E-02	1.577E-01	9.313E-03	0.836
HG-203	6.116E-03		5.507E-02	9.159E-02	5.836E-03	0.067
BI-207	-2.424E-02		7.617E-02	1.174E-01	9.981E-03	-0.206
TL-207	-1.118E+00		9.428E-01	1.375E+00	2.285E-01	-0.813
PO-209	-1.182E-01		1.031E+01	1.678E+01	1.834E+00	-0.007
BI-210	9.965E-01		7.943E+00	1.243E+01	1.050E+00	0.080
PB-210	9.965E-01		7.943E+00	1.243E+01	1.050E+00	0.080
PO-210	9.965E-01		7.943E+00	1.243E+01	9.279E-01	0.080
PB-211	-5.646E-01		1.306E+00	1.954E+00	1.218E+00	-0.289
BI-212	4.931E-01	+	7.008E-01	8.386E-01	6.960E-02	0.588
PO-215	-1.118E+00		9.428E-01	1.375E+00	2.285E-01	-0.813
RN-219	-2.067E-02		5.636E-01	9.101E-01	1.241E-01	-0.023
RN-220	-1.577E+01		3.771E+01	6.112E+01	3.508E+00	-0.258
RA-223	-1.118E+00		9.428E-01	1.375E+00	2.285E-01	-0.813
AC-227	-1.627E-01		5.166E-01	8.381E-01	1.175E-01	-0.194
TH-227	-1.627E-01		5.168E-01	8.381E-01	1.421E-01	-0.194
TH-229	-7.929E-02		6.816E-01	1.137E+00	6.310E-02	-0.070
PA-231	1.882E+00		2.130E+00	3.694E+00	5.128E-01	0.509
TH-231	-1.118E+00		9.428E-01	1.375E+00	2.285E-01	-0.813
U-231	-6.514E-01		1.222E+00	1.674E+00	1.627E-01	-0.389
PA-233	-2.160E-02		9.242E-02	1.418E-01	9.093E-03	-0.152
PA-234	-4.111E-01		4.669E-01	6.637E-01	1.303E-01	-0.619
PA-234M	8.573E-01		9.587E+00	1.569E+01	1.873E+00	0.055
U-235	2.875E-01		2.924E-01	4.823E-01	7.841E-02	0.596
NP-236	1.070E-02		1.030E-01	1.752E-01	9.483E-03	0.061
NP-239	-2.036E-01		2.505E-01	3.785E-01	2.529E-02	-0.538
AM-241	4.505E-02		2.625E-01	3.869E-01	4.582E-02	0.116

Sample ID : G232433005 Acquisition date : 7-JUL-2009 06:06:19

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	6.320E-03		1.350E-01	2.168E-01	1.819E-02	0.029
CM-247	-1.599E-02		5.052E-02	7.952E-02	4.665E-03	-0.201
CF-249	3.906E-02		5.442E-02	9.355E-02	5.488E-03	0.418
CF-251	3.972E-02		1.736E-01	2.873E-01	1.555E-02	0.138

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433005           *
* Acquisition date  :  7-JUL-2009 06:06:19 Detector SN#     :               *
* Detector ID       : GAM08                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:02.94     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433005           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 7.7490E+01 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.255E+01	2.847E+00	3.663E-01	1.453E+00
CD-109	1.987E+00	1.378E+00	1.010E+00	7.032E-01
SN-126	1.957E-01	1.358E-01	9.443E-02	6.926E-02
BA-137M	7.823E-01	1.226E-01	3.999E-02	6.253E-02
CS-137	8.270E-01	1.296E-01	4.227E-02	6.613E-02
TL-208	4.581E-01	1.266E-01	4.283E-02	6.461E-02
BI-211	3.358E+00	6.260E-01	2.218E-01	3.194E-01
PB-212	1.334E+00	1.660E-01	6.365E-02	8.471E-02
PO-212	1.334E+00	1.660E-01	6.365E-02	8.471E-02
BI-214	1.079E+00	2.279E-01	8.126E-02	1.163E-01
PB-214	1.168E+00	2.258E-01	7.732E-02	1.152E-01
PO-214	1.168E+00	2.258E-01	7.732E-02	1.152E-01
PO-216	1.334E+00	1.660E-01	6.365E-02	8.471E-02
PO-218	1.168E+00	2.258E-01	7.732E-02	1.152E-01
RA-224	3.146E+00	1.813E+00	7.244E-01	9.248E-01
RA-226	1.079E+00	2.279E-01	8.126E-02	1.163E-01
AC-228	1.463E+00	3.946E-01	1.284E-01	2.013E-01
RA-228	1.463E+00	3.946E-01	1.284E-01	2.013E-01
TH-228	1.334E+00	1.660E-01	6.365E-02	8.471E-02
TH-230	1.079E+00	2.279E-01	8.126E-02	1.163E-01
TH-232	1.463E+00	3.946E-01	1.284E-01	2.013E-01
TH-234	4.509E+00	3.499E+00	1.433E+00	1.785E+00
U-234	1.079E+00	2.279E-01	8.126E-02	1.163E-01
NP-237	5.747E-01	4.152E-01	2.608E-01	2.119E-01
U-238	4.509E+00	3.499E+00	1.433E+00	1.785E+00
AM-243	3.066E-01	1.048E-01	6.040E-02	5.346E-02
ANH-511	1.513E-01	1.180E-01	3.169E-02	6.019E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-1.898E-01	4.401E-01	3.365E-01	2.246E-01	NOT IDENT.
NA-22	-2.886E-02	6.223E-02	4.895E-02	3.175E-02	NOT IDENT.
NA-24	1.292E+05	2.263E+05	0.000E+00	1.154E+05	SHORT HLIF
AL-26	4.202E-02	3.659E-02	3.863E-02	1.867E-02	NOT IDENT.
TI-44	3.587E-01	7.252E-02	5.233E-02	3.700E-02	FAIL ABUN
SC-46	-4.636E-02	5.155E-02	3.679E-02	2.630E-02	FAIL ABUN
V-48	4.776E-02	9.598E-02	8.250E-02	4.897E-02	NOT IDENT.
CR-51	2.598E-01	4.855E-01	4.099E-01	2.477E-01	NOT IDENT.
MN-52	6.586E-03	2.690E-01	2.241E-01	1.372E-01	NOT IDENT.
MN-54	-3.702E-02	4.975E-02	3.713E-02	2.538E-02	NOT IDENT.
CO-56	-1.610E-02	5.589E-02	4.427E-02	2.852E-02	NOT IDENT.
CO-57	1.529E-02	3.142E-02	2.533E-02	1.603E-02	NOT IDENT.
CO-58	3.055E-02	4.954E-02	4.355E-02	2.528E-02	NOT IDENT.
FE-59	2.300E-02	1.078E-01	8.962E-02	5.498E-02	NOT IDENT.
CO-60	-2.805E-02	5.378E-02	4.196E-02	2.744E-02	NOT IDENT.
ZN-65	-4.642E-03	1.368E-01	9.420E-02	6.978E-02	NOT IDENT.
GE-68	-9.157E-01	1.648E+00	1.220E+00	8.407E-01	NOT IDENT.
AS-73	-4.252E-01	1.434E+00	1.128E+00	7.315E-01	NOT IDENT.
AS-74	3.388E-02	1.206E-01	1.031E-01	6.152E-02	NOT IDENT.
SE-75	-3.412E-02	5.332E-02	4.167E-02	2.720E-02	NOT IDENT.
BR-77	-3.722E+00	1.047E+01	8.031E+00	5.341E+00	FAIL ABUN
SR-82	8.639E-02	5.057E-01	4.237E-01	2.580E-01	NOT IDENT.
RB-83	-4.908E-02	1.008E-01	7.621E-02	5.141E-02	NOT IDENT.
RB-84	4.540E-02	1.001E-01	8.584E-02	5.109E-02	NOT IDENT.
KR-85	1.335E+01	1.175E+01	9.194E+00	5.993E+00	NOT IDENT.
SR-85	6.747E-02	5.937E-02	4.647E-02	3.029E-02	NOT IDENT.
RB-86	-2.526E-01	9.754E-01	7.571E-01	4.976E-01	NOT IDENT.
Y-88	-2.813E-03	4.754E-02	3.819E-02	2.426E-02	NOT IDENT.
ZR-88	-3.543E-02	4.113E-02	3.061E-02	2.099E-02	NOT IDENT.
Y-91	-2.518E+00	2.662E+01	2.210E+01	1.358E+01	NOT IDENT.
NB-94	-4.359E-03	4.661E-02	3.823E-02	2.378E-02	NOT IDENT.
NB-95	8.921E-02	6.002E-02	5.567E-02	3.062E-02	NOT IDENT.
NB-95M	1.673E-01	1.813E-01	1.400E-01	9.248E-02	NOT IDENT.
ZR-95	-8.959E-03	1.002E-01	8.066E-02	5.112E-02	NOT IDENT.
NB-97	-1.569E+03	4.618E+04	0.000E+00	2.356E+04	SHORT HLIF
ZR-97	1.854E+06	7.502E+05	0.000E+00	3.827E+05	SHORT HLIF
MO-99	-5.675E+00	1.005E+01	7.695E+00	5.126E+00	NOT IDENT.
TC-99M	-5.638E+14	1.269E+15	0.000E+00	6.472E+14	SHORT HLIF
RH-101	2.124E-02	4.465E-02	3.786E-02	2.278E-02	NOT IDENT.
RH-102	-2.396E-02	4.070E-02	3.062E-02	2.076E-02	NOT IDENT.
RU-103	-6.039E-03	5.453E-02	4.295E-02	2.782E-02	FAIL ABUN
RH-106	-1.034E-01	4.351E-01	3.543E-01	2.220E-01	FAIL ABUN
RU-106	-1.034E-01	4.350E-01	3.543E-01	2.219E-01	FAIL ABUN
AG-108M	-3.628E-03	4.534E-02	3.610E-02	2.313E-02	NOT IDENT.
AG-110M	-2.487E-02	6.138E-02	4.203E-02	3.132E-02	NOT IDENT.
IN-111	1.928E-01	1.139E+00	8.354E-01	5.812E-01	NOT IDENT.
IN-113M	-4.036E-02	5.873E-02	4.443E-02	2.996E-02	NOT IDENT.
SN-113	-4.036E-02	5.873E-02	4.443E-02	2.996E-02	NOT IDENT.
IN-114M	2.593E-01	2.582E-01	2.021E-01	1.317E-01	NOT IDENT.
CD-115	-8.989E+00	9.230E+00	7.043E+00	4.709E+00	NOT IDENT.
SN-117M	-2.552E-02	6.415E-02	5.245E-02	3.273E-02	NOT IDENT.
SB-122	1.798E+00	1.945E+00	1.752E+00	9.922E-01	NOT IDENT.
I-123	-6.410E+05	1.281E+06	0.000E+00	6.538E+05	SHORT HLIF
TE-123M	-1.766E-02	3.530E-02	2.870E-02	1.801E-02	NOT IDENT.
I-124	-9.491E-02	8.578E-01	6.142E-01	4.377E-01	NOT IDENT.
SB-124	6.382E-02	1.016E-01	9.502E-02	5.185E-02	FAIL ABUN
SB-125	1.939E-02	1.290E-01	1.049E-01	6.581E-02	NOT IDENT.
TE-125M	-5.842E+00	1.294E+01	9.712E+00	6.603E+00	NOT IDENT.
I-126	5.837E-02	2.399E-01	1.791E-01	1.224E-01	NOT IDENT.
SB-126	-5.248E-02	1.979E-01	1.433E-01	1.010E-01	FAIL ABUN
SB-127	-3.293E-01	1.446E+00	1.171E+00	7.377E-01	NOT IDENT.
XE-127	-3.673E-02	6.030E-02	4.829E-02	3.076E-02	NOT IDENT.
I-131	7.723E-02	1.329E-01	1.126E-01	6.781E-02	NOT IDENT.
TE-132	-3.138E-01	6.910E-01	5.539E-01	3.525E-01	NOT IDENT.
BA-133	-3.933E-02	7.269E-02	4.824E-02	3.709E-02	NOT IDENT.
I-133	-1.916E+03	2.646E+03	0.000E+00	1.350E+03	SHORT HLIF
CS-134	3.567E-02	6.355E-02	5.518E-02	3.242E-02	NOT IDENT.
CS-135	1.981E-01	2.091E-01	1.809E-01	1.067E-01	NOT IDENT.
I-135	-2.352E+14	2.492E+14	0.000E+00	1.271E+14	SHORT HLIF
CS-136	7.366E-02	1.404E-01	1.209E-01	7.161E-02	FAIL ABUN
CE-139	-7.541E-03	3.774E-02	3.113E-02	1.925E-02	NOT IDENT.
BA-140	6.037E-02	3.218E-01	2.739E-01	1.642E-01	NOT IDENT.
LA-140	-1.665E-01	1.328E-01	8.388E-02	6.775E-02	NOT IDENT.
CE-141	-2.014E-02	8.274E-02	6.347E-02	4.221E-02	NOT IDENT.
CE-143	2.998E+02	1.327E+02	0.000E+00	6.773E+01	SHORT HLIF
CE-144	6.827E-03	2.620E-01	2.048E-01	1.337E-01	NOT IDENT.
PM-144	-1.621E-02	4.509E-02	3.597E-02	2.301E-02	NOT IDENT.
PR-144	-1.098E+00	3.053E+00	2.435E+00	1.558E+00	NOT IDENT.

PM-146	1.948E-02	5.771E-02	4.764E-02	2.945E-02	NOT IDENT.
ND-147	8.710E-02	6.761E-01	5.738E-01	3.449E-01	NOT IDENT.
PM-149	-2.789E+01	8.054E+01	6.420E+01	4.109E+01	NOT IDENT.
EU-152	7.730E-02	1.366E-01	1.152E-01	6.968E-02	NOT IDENT.
GD-153	-8.561E-04	1.133E-01	7.947E-02	5.782E-02	NOT IDENT.
EU-154	-7.858E-02	1.743E-01	1.373E-01	8.893E-02	NOT IDENT.
EU-155	6.675E-02	1.479E-01	1.190E-01	7.547E-02	FAIL ABUN
TB-160	-1.010E-01	1.999E-01	1.534E-01	1.020E-01	FAIL ABUN
HO-166M	3.574E-02	7.889E-02	6.824E-02	4.025E-02	FAIL ABUN
TM-171	-5.164E+01	4.496E+01	2.925E+01	2.294E+01	NOT IDENT.
LU-176	-6.840E-03	3.204E-02	2.569E-02	1.635E-02	FAIL ABUN
LU-177	-5.862E-01	1.316E+00	1.040E+00	6.716E-01	NOT IDENT.
LU-177M	-1.702E-01	2.619E-01	1.994E-01	1.336E-01	NOT IDENT.
HF-181	4.963E-03	5.851E-02	4.705E-02	2.985E-02	NOT IDENT.
W-181	2.530E-01	5.427E-01	3.972E-01	2.769E-01	NOT IDENT.
TA-182	-9.317E-02	2.878E-01	2.332E-01	1.469E-01	FAIL ABUN
RE-183	3.254E-02	1.382E-01	1.165E-01	7.050E-02	NOT IDENT.
RE-184	-4.703E-04	3.084E-01	2.533E-01	1.573E-01	NOT IDENT.
OS-185	-2.586E-02	5.685E-02	4.511E-02	2.901E-02	NOT IDENT.
RE-188	2.351E-01	2.043E-01	1.800E-01	1.042E-01	NOT IDENT.
W-188	4.608E-01	1.105E+01	7.949E+00	5.636E+00	FAIL ABUN
IR-192	3.191E-03	4.840E-02	3.957E-02	2.469E-02	FAIL ABUN
AU-195	4.360E-03	3.108E-01	2.407E-01	1.586E-01	FAIL ABUN
TL-200	-9.692E+01	2.391E+02	0.000E+00	1.220E+02	SHORT HLIF
TL-201	-4.479E+00	6.734E+00	5.422E+00	3.436E+00	NOT IDENT.
TL-202	1.319E-01	8.454E-02	7.689E-02	4.313E-02	NOT IDENT.
HG-203	6.116E-03	5.397E-02	4.447E-02	2.753E-02	NOT IDENT.
BI-207	-2.424E-02	7.465E-02	5.767E-02	3.809E-02	FAIL ABUN
TL-207	-1.118E+00	9.239E-01	6.687E-01	4.714E-01	FAIL ABUN
PO-209	-1.182E-01	1.010E+01	8.231E+00	5.153E+00	NOT IDENT.
BI-210	9.965E-01	7.785E+00	5.943E+00	3.972E+00	NOT IDENT.
PB-210	9.965E-01	7.785E+00	5.943E+00	3.972E+00	NOT IDENT.
PO-210	9.965E-01	7.784E+00	5.943E+00	3.972E+00	NOT IDENT.
PB-211	-5.646E-01	1.280E+00	9.518E-01	6.529E-01	NOT IDENT.
BI-212	4.931E-01	6.868E-01	4.105E-01	3.504E-01	FAIL ABUN
PO-215	-1.118E+00	9.239E-01	6.687E-01	4.714E-01	FAIL ABUN
RN-219	-2.067E-02	5.523E-01	4.433E-01	2.818E-01	NOT IDENT.
RN-220	-1.577E+01	3.696E+01	2.985E+01	1.886E+01	NOT IDENT.
RA-223	-1.118E+00	9.239E-01	6.687E-01	4.714E-01	FAIL ABUN
AC-227	-1.627E-01	5.062E-01	4.067E-01	2.583E-01	NOT IDENT.
TH-227	-1.627E-01	5.065E-01	4.067E-01	2.584E-01	FAIL ABUN
TH-229	-7.929E-02	6.680E-01	5.505E-01	3.408E-01	FAIL ABUN
PA-231	1.882E+00	2.088E+00	1.794E+00	1.065E+00	NOT IDENT.
TH-231	-1.118E+00	9.239E-01	6.687E-01	4.714E-01	FAIL ABUN
U-231	-6.514E-01	1.198E+00	8.053E-01	6.112E-01	FAIL ABUN
PA-233	-2.160E-02	9.058E-02	6.891E-02	4.621E-02	FAIL ABUN
PA-234	-4.111E-01	4.576E-01	3.256E-01	2.335E-01	FAIL ABUN
PA-234M	8.573E-01	9.395E+00	7.700E+00	4.793E+00	NOT IDENT.
U-235	2.875E-01	2.865E-01	2.328E-01	1.462E-01	FAIL ABUN
NP-236	1.070E-02	1.009E-01	8.466E-02	5.150E-02	NOT IDENT.
NP-239	-2.036E-01	2.455E-01	1.824E-01	1.252E-01	NOT IDENT.
AM-241	4.505E-02	2.572E-01	1.854E-01	1.312E-01	NOT IDENT.
CM-243	6.320E-03	1.323E-01	1.044E-01	6.752E-02	NOT IDENT.
CM-247	-1.599E-02	4.951E-02	3.873E-02	2.526E-02	NOT IDENT.
CF-249	3.906E-02	5.333E-02	4.555E-02	2.721E-02	NOT IDENT.
CF-251	3.972E-02	1.701E-01	1.390E-01	8.679E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	179.6865
46.50	179.6865
46.50	179.6865
48.70	188.6407
49.72	181.9844
51.35	175.5214
52.39	188.1099
52.97	199.5370
53.15	194.5201
53.44	191.5806
54.07	161.2193
56.28	189.6206
56.28	189.6215
57.37	0.0000
57.53	195.7477
57.53	195.7482
57.60	195.7749
57.98	183.5806
57.98	183.5806
59.32	185.6108
59.32	185.6108
59.40	185.6401
59.54	185.6905
59.72	185.7555
60.01	187.4087
61.10	192.4586
61.14	192.4733
61.30	198.7432
63.00	199.3840
63.29	199.4924
63.29	199.4924
63.58	199.6006
64.28	195.1768
65.12	187.6609
65.20	187.6884
65.20	187.6884
66.05	213.0447
66.72	247.8092
66.83	236.8776
66.91	236.9121
67.20	246.4552
67.20	246.4552
67.75	260.8403
67.85	247.6869
68.90	226.7369
68.90	226.7369
69.30	201.6875
69.67	217.5875
70.82	219.6054
70.82	219.6054
70.83	219.6096
72.80	267.9203
72.87	267.9525
72.87	267.9525
74.67	254.4617
74.81	254.5215
74.81	254.5215
74.81	254.5215
74.81	254.5215
74.81	254.5215
74.81	254.5215
74.97	254.5898
75.28	254.7229
75.70	254.9023
77.11	244.3235
77.11	244.3235
77.11	244.3235

77.11	244.3235
77.11	244.3235
77.11	244.3235
78.38	211.2310
79.62	214.8650
79.80	214.9283
79.80	214.9283
80.11	221.4547
80.18	221.4799
80.30	221.5231
80.30	221.5231
80.57	208.7714
81.00	236.2361
81.07	236.2630
81.07	236.2630
81.07	236.2630
81.07	236.2630
82.60	238.4506
83.37	201.6392
83.78	213.0689
83.78	213.0689
83.78	213.0689
83.78	213.0689
84.21	195.4452
84.40	205.1978
84.90	205.3581
85.43	212.0005
86.29	226.8677
86.50	275.5717
86.54	275.5885
86.59	275.6093
86.72	275.6651
86.79	275.6936
86.94	275.7571
87.30	331.0922
87.30	331.0922
87.30	331.0922
87.30	331.0922
87.30	331.0922
87.30	331.0922
87.57	320.4047
87.88	359.5417
88.03	359.6245
88.36	302.3664
88.47	302.4174
89.95	303.0944
91.11	238.3260
92.29	361.9311
92.38	266.0323
92.38	266.0323
93.35	266.4133
94.00	266.6665
94.67	162.4529
94.67	162.4536
94.90	162.5080
94.90	162.5080
94.90	162.5080
94.90	162.5080
95.87	189.0369
95.87	189.0369
96.73	217.2513
97.43	181.2232
98.44	171.5851
98.44	171.5851
98.88	188.2011
99.55	189.4810
99.55	189.4810
99.86	191.7675
100.00	188.4985
100.10	178.6031
103.18	194.8696
103.76	192.8091
105.00	193.1357
105.31	187.6649
108.00	205.0637
109.28	193.1335
111.00	171.1943
111.00	171.1943

111.76	206.0856
112.95	189.5792
115.19	159.7522
116.30	156.5991
117.00	177.0354
117.00	177.0354
117.66	164.7698
121.11	155.2824
121.62	148.5757
121.78	148.6050
122.06	139.5780
122.32	139.6231
122.32	139.6231
122.32	139.6231
122.32	139.6231
123.07	157.9311
127.23	166.7247
129.76	182.1196
131.20	193.9037
133.02	149.4754
133.54	158.7708
135.34	157.9491
136.00	162.6841
136.25	155.8067
136.48	155.8479
140.51	185.5566
140.51	0.0000
142.18	163.8287
142.65	167.4023
143.76	160.6252
144.24	170.0274
144.24	170.0274
144.24	170.0274
144.24	170.0274
145.22	183.0357
145.44	183.0788
147.16	186.6383
152.43	170.9592
152.70	175.4155
153.22	164.9290
154.21	147.4450
154.21	147.4450
154.21	147.4450
154.21	147.4450
155.03	135.2010
156.02	131.8039
158.56	168.5201
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159.00	169.4828
160.31	162.6046
161.27	160.9877
162.32	162.0507
162.64	167.4475
163.35	170.2434
163.89	166.7694
165.85	167.1019
167.43	183.4774
171.28	142.8528
171.86	154.6205
172.10	161.8506
176.55	149.0088
176.60	149.0164
181.06	168.3402
184.41	157.2275
185.71	150.3130
186.00	150.3545
190.27	137.5932
192.34	157.6531
193.63	160.5925
197.04	150.9623
198.01	162.1493
198.60	162.2339
200.40	150.4932
201.83	174.7189
202.84	168.3978
205.31	161.3448
208.36	176.6493
208.81	174.8580

209.75	139.6271
209.75	139.6271
210.97	135.1144
215.65	158.1074
216.55	141.3747
218.09	136.8705
222.10	151.4387
223.80	138.4641
226.40	131.2086
227.00	139.7719
227.08	139.7820
227.20	139.7956
228.16	146.5211
228.18	146.5234
228.18	146.5234
231.56	0.0000
235.69	135.4284
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236.00	140.0282
238.60	148.7048
238.63	148.7077
238.63	148.7077
238.63	148.7077
239.00	148.7518
240.98	148.9827
241.98	133.0424
241.98	133.0424
241.98	133.0424
244.69	117.9993
245.39	121.1298
247.94	129.6256
248.90	122.0342
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252.85	115.6549
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256.20	118.8466
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260.90	100.8405
262.80	99.0413
264.65	101.1198
268.24	102.3612
268.79	91.6735
269.46	100.4995
269.46	100.4995
269.46	100.4995
269.46	100.4995
271.23	98.6744
273.65	154.6320
276.40	110.8085
277.35	100.0887
277.60	86.3672
277.60	86.3672
278.00	91.3000
278.60	110.0005
279.20	112.0117
279.53	132.6764
280.46	141.6138
281.68	118.1140
283.67	92.6517
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285.90	108.5901
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286.10	114.5291
287.40	120.5629
288.45	0.0000
290.67	104.5913
290.80	104.6010
291.72	109.4246
293.26	0.0000
293.70	109.5729
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295.21	123.9926
295.21	123.9926
295.96	155.8645

296.50	171.8323
297.23	173.5085
298.57	111.5283
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299.80	107.6342
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300.09	103.6683
300.09	103.6683
300.10	103.6699
300.12	103.6699
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302.84	127.8281
303.76	136.8997
303.91	136.9122
304.40	123.9622
304.40	123.9622
304.84	114.9982
306.84	90.1181
308.46	85.2023
311.98	89.4183
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319.02	93.8656
319.41	93.8898
320.08	83.8295
323.87	113.3945
323.87	113.3945
323.87	113.3945
323.87	113.3945
325.23	117.5452
328.77	85.3099
333.44	105.9313
334.20	99.4601
334.20	99.4601
334.30	99.4660
338.28	93.1733
338.28	93.1733
338.28	93.1733
338.28	93.1733
338.32	93.1761
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338.32	93.1761
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340.57	99.8532
344.27	85.1087
345.85	105.1031
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351.07	86.4904
351.92	86.5340
351.92	86.5340
351.92	86.5340
355.39	0.0000
356.01	89.2252
364.48	63.3102
366.43	68.5781
367.43	74.8564
367.94	0.0000
369.80	68.7131
374.96	74.1385
383.85	86.0590
387.95	64.1675
388.63	64.1926
391.69	79.0592
391.69	79.0592
392.90	83.3324
398.62	77.2473
400.65	69.9175
401.10	68.8750
401.81	72.0819
402.60	75.2945
404.84	75.3866
410.95	67.1134
411.60	74.5961
413.65	94.9482
414.70	84.3269
415.30	80.0835
415.76	83.3070
417.63	0.0000

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427.89	68.7930
432.53	50.6425
433.93	67.9315
439.47	43.2544
439.56	43.2562
439.89	48.6715
443.98	67.1985
444.90	78.0732
445.03	78.0787
445.03	78.0787
445.03	78.0787
445.03	78.0787
453.90	55.5532
463.38	58.0043
468.07	69.1072
473.00	73.6718
475.06	68.2420
475.35	62.7477
476.78	62.7908
477.59	66.1221
477.96	56.2132
482.03	60.7412
484.57	58.6036
487.03	56.4583
490.36	0.0000
492.35	59.9301
497.08	57.8383
507.63	0.0000
510.53	0.0000
510.84	59.3282
511.00	59.3326
511.85	59.3553
511.85	59.3553
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513.99	60.9829
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520.65	67.4652
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529.87	0.0000
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546.56	0.0000
549.76	65.6086
552.65	53.8289
555.20	55.7161
563.23	51.3256
563.90	45.8398
568.70	48.6886
569.32	50.5393
569.50	48.7054
569.67	48.7093
573.80	65.4688
574.00	67.9037
574.64	68.4150
578.91	43.0562
579.30	0.0000
583.14	61.9243
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591.81	52.8711
592.07	55.6597
593.00	56.6097
595.88	53.8893
600.56	67.9563
602.52	0.0000
602.71	63.6671
602.71	63.6671
603.60	59.0302
604.41	57.4948
604.70	49.7318
609.31	62.5917
609.31	62.5917
609.31	62.5917

609.31	62.5917
610.33	54.5180
612.46	57.6830
614.37	43.6851
618.01	57.1860
621.84	53.5168
621.84	53.5168
631.29	52.7748
633.02	49.0382
633.10	45.2672
634.78	44.3540
635.90	45.3176
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645.85	53.0742
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661.65	49.5815
664.57	0.0000
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666.33	39.7990
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695.00	55.0281
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696.49	49.2618
697.00	49.2705
697.49	47.3467
698.33	46.3957
698.50	46.3980
699.00	44.4727
702.63	52.2756
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713.82	45.6827
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722.78	53.6304
722.89	53.6317
722.95	53.6331
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724.18	45.5262
727.18	51.7604
733.00	39.1445
735.90	43.1020
739.58	38.2535
742.81	27.4948
744.21	29.4734
747.13	31.4695
751.79	34.4753
752.31	32.5110
753.82	33.5136
755.35	36.4896
756.15	41.4319
756.87	44.4023
763.93	66.2705
765.79	37.6094
766.41	41.5775
766.84	43.5639
768.36	53.4924
768.36	53.4924
768.36	53.4924
768.36	53.4924
776.49	40.7257
778.00	37.7653
778.57	37.7718
778.89	31.8117
783.80	34.8513

785.46	37.8590
792.07	39.9395
795.84	37.9898
796.30	42.9948
801.93	20.0347
805.60	43.1260
810.29	29.1296
810.76	28.1292
815.85	39.2447
817.79	41.2833
818.51	37.2638
819.60	37.2773
826.30	39.3771
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831.60	34.3868
831.96	29.3328
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836.80	0.0000
846.75	42.6819
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860.37	28.5756
867.32	27.6144
867.82	32.7328
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873.19	29.7137
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875.33	0.0000
876.40	35.8964
879.36	42.0881
880.27	40.0464
880.51	35.9417
881.50	34.9247
883.24	27.7495
884.67	30.8459
889.25	38.0966
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898.02	42.3263
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903.28	32.4967
911.07	26.9458
911.07	26.9458
911.07	26.9458
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925.00	34.3414
925.24	30.1810
926.50	27.0689
934.06	20.8682
934.06	20.8682
934.06	20.8682
934.06	20.8682
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937.48	47.0006
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946.00	46.0689
949.00	33.5344
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964.01	35.0814
966.15	43.8782
968.20	70.2458
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969.11	41.1052
969.11	41.1052
977.42	25.3547
980.50	37.0072
983.50	29.6311
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996.32	30.7990
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1001.68	37.2260
1004.76	26.6125
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1024.50	0.0000
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1037.82	30.0754
1038.57	29.0065

1038.76	0.0000
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1046.59	29.0698
1048.07	26.9263
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1050.47	38.7984
1063.62	34.6078
1076.63	28.2153
1077.35	31.4766
1085.78	30.4582
1099.22	21.8311
1112.02	26.7707
1112.84	24.6456
1115.52	31.0574
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1120.29	38.4111
1120.29	38.4111
1120.29	38.4111
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1131.51	0.0000
1147.95	0.0000
1167.94	41.6455
1173.22	34.2855
1175.09	37.0817
1177.93	36.1801
1189.05	25.1158
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1205.75	0.0000
1213.00	49.5840
1221.42	46.8709
1230.97	42.2791
1235.34	43.2635
1236.41	0.0000
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1238.11	37.6449
1238.11	37.6449
1238.11	37.6449
1238.25	37.6449
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1260.41	0.0000
1271.85	22.7637
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1274.54	33.2170
1291.56	16.1969
1298.22	0.0000
1312.09	14.3573
1325.50	17.2800
1325.50	17.2800
1332.49	19.2301
1333.61	19.2342
1360.21	20.3138
1362.66	0.0000
1365.15	14.5258
1368.21	14.5349
1368.53	0.0000
1376.25	21.3555
1377.67	13.5938
1377.67	13.5938
1377.67	13.5938
1377.67	13.5938
1384.27	25.2817
1394.10	20.4625
1395.20	17.5437
1407.95	11.7271
1434.06	14.7394
1436.60	19.6631
1457.56	0.0000
1460.81	13.5508
1489.15	15.9004
1509.49	13.9698
1596.49	26.3883
1620.62	17.3334
1678.03	0.0000
1691.02	6.1980
1691.02	6.1980

1706.46	0.0000
1750.46	0.0000
1764.49	3.5886
1764.49	3.5886
1764.49	3.5886
1764.49	3.5886
1770.23	51.3387
1771.40	12.5752
1791.20	0.0000
1808.65	2.1095
1836.01	8.4779

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433005

Total Uranium Activity	1.3546E+01	ug/g
Total Uranium Counting Unc.	1.0411E+01	ug/g
Total Uranium Tpu	5.3119E-06	ug/g
Total Uranium Mda	4.2634E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                        GEL Laboratories LLC                               *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                            GROSS GAMMA REPORT                             *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID   : G232433005      *
*   ANALYST       : MXR1                      DETECTOR    : GAM08           *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:06:19.80    SAMPLE ALQT:    77.490 GRAM   *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.904E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.313E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.704E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.295E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:39:14.07

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433006.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:38:46.
Sample ID         : G232433006           Sample quantity  : 9.28900E+01 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.54  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.77*	96	406	0.97	125.55	122	8	1.33E-02	38.9	
2	4	74.26	416	279	0.90	148.51	143	14	5.78E-02	7.7	8.17E-01
3	4	76.52*	667	257	0.85	153.03	143	14	9.26E-02	5.5	
4	0	82.59*	130	514	0.95	165.18	160	11	1.80E-02	35.3	
5	0	86.55	279	345	1.37	173.11	170	7	3.88E-02	12.5	
6	4	89.41	119	154	0.86	178.81	177	16	1.65E-02	16.0	2.31E+00
7	4	92.22*	294	322	1.22	184.43	177	16	4.09E-02	12.4	
8	0	127.95	63	340	0.71	255.89	254	9	8.71E-03	54.6	
9	0	185.30*	214	287	1.32	370.61	366	11	2.97E-02	17.6	
10	0	208.61	128	215	0.92	417.21	413	9	1.78E-02	22.5	
11	5	238.08*	1154	122	0.97	476.16	467	21	1.60E-01	3.4	1.55E+00
12	5	241.20*	278	185	1.74	482.40	467	21	3.86E-02	13.5	
13	0	294.67	283	189	1.16	589.33	584	9	3.93E-02	9.8	
14	0	299.08	75	178	0.80	598.16	594	11	1.05E-02	36.2	
15	0	328.15	77	155	1.38	656.31	652	11	1.07E-02	33.4	
16	0	337.82*	232	143	1.05	675.63	670	10	3.22E-02	11.9	
17	0	351.49*	572	131	1.10	702.98	697	12	7.94E-02	5.9	
18	0	462.92*	56	107	1.05	925.84	919	11	7.79E-03	39.1	
19	0	510.41*	158	125	2.02	1020.82	1013	17	2.19E-02	20.2	
20	0	582.86*	338	91	1.29	1165.73	1160	12	4.69E-02	8.1	
21	0	608.91*	378	107	1.35	1217.81	1212	13	5.25E-02	7.8	
22	0	661.82	64	64	1.17	1323.63	1317	10	8.87E-03	26.7	
23	0	727.67	58	83	1.17	1455.34	1449	13	8.08E-03	35.1	
24	0	769.61	91	70	7.24	1539.22	1529	22	1.27E-02	25.7	
25	0	795.07	44	60	0.78	1590.14	1583	12	6.11E-03	38.3	
26	0	860.54	40	35	0.73	1721.07	1717	10	5.56E-03	31.9	
27	0	910.94*	223	66	1.68	1821.87	1815	16	3.10E-02	10.7	
28	4	964.07	70	44	2.83	1928.14	1921	27	9.72E-03	27.3	2.10E+00
29	4	968.79*	95	40	1.36	1937.57	1921	27	1.32E-02	16.1	
30	0	1120.23	100	57	1.39	2240.46	2234	13	1.39E-02	18.6	
31	0	1238.38	43	68	2.17	2476.76	2471	14	6.03E-03	43.5	
32	0	1409.72	18	15	2.78	2819.45	2809	14	2.56E-03	49.1	
33	0	1460.64*	1059	15	1.77	2921.29	2911	20	1.47E-01	3.2	
34	0	1588.26	20	9	1.02	3176.52	3172	9	2.73E-03	35.7	
35	0	1593.22	10	15	1.04	3186.45	3181	10	1.39E-03	79.1	
36	0	1764.46*	59	12	1.87	3528.93	3522	12	8.14E-03	18.6	
37	0	1848.34	15	5	1.00	3696.68	3685	18	2.11E-03	41.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:39:16

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433006.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:38:46
Sample ID : G232433006 Sample quantity : 92.890 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA11 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.54 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.189E+01	2.966E+00	6.807E-01	4.563E-02	46.851
CD-109	+	88.03	*	1.871E+00	6.210E-01	1.490E+00	1.364E-01	1.256
SN-126		64.28		7.893E-01	6.220E-01	9.485E-01	1.350E-01	0.832
	+	86.94		1.838E+00	8.896E-01	5.943E-01	2.463E-01	3.093
	+	87.57	*	4.421E-01	1.175E-01	1.472E-01	1.341E-02	3.003
BA-137M	+	661.65	*	1.154E-01	6.212E-02	7.245E-02	5.120E-03	1.592
CS-137	+	661.65	*	1.220E-01	6.567E-02	7.659E-02	5.428E-03	1.592
TL-208		277.35		1.595E-01	5.131E-01	8.131E-01	9.534E-02	0.196
	+	510.84		9.582E-01	3.999E-01	2.836E-01	2.939E-02	3.379
	+	583.14	*	5.860E-01	1.041E-01	7.391E-02	5.477E-03	7.929
	+	860.37		6.535E-01	4.203E-01	5.704E-01	4.919E-02	1.146
BI-211	+	72.87		2.247E+01	3.861E+00	5.347E+00	4.028E-01	4.201
	+	351.07	*	4.330E+00	5.937E-01	3.927E-01	2.753E-02	11.025
PB-212	+	74.81		2.666E+00	5.217E-01	6.005E-01	7.277E-02	4.440
	+	77.11		2.445E+00	3.297E-01	3.102E-01	2.463E-02	7.883
	+	87.30		2.045E+00	5.806E-01	6.822E-01	9.214E-02	2.997
	+	238.63	*	1.904E+00	2.015E-01	1.069E-01	8.706E-03	17.823
	+	300.09		1.920E+00	1.400E+00	1.372E+00	1.303E-01	1.400
PO-212	+	74.81		2.666E+00	5.217E-01	6.005E-01	7.277E-02	4.440
	+	77.11		2.445E+00	3.297E-01	3.102E-01	2.463E-02	7.883
	+	87.30		2.045E+00	5.806E-01	6.822E-01	9.214E-02	2.997
		115.19		-1.078E+00	4.268E+00	6.957E+00	4.804E-01	-0.155
	+	238.63	*	1.904E+00	2.015E-01	1.069E-01	8.706E-03	17.823
	+	300.09		1.920E+00	1.400E+00	1.372E+00	1.303E-01	1.400
BI-214	+	609.31	*	1.236E+00	2.199E-01	1.392E-01	1.187E-02	8.883
	+	768.36		3.351E+00	1.756E+00	1.323E+00	1.275E-01	2.533
		934.06		1.317E+00	1.526E+00	2.708E+00	2.712E-01	0.487
	+	1120.29		1.704E+00	6.520E-01	5.770E-01	5.213E-02	2.952
	+	1238.11		2.047E+00	1.788E+00	1.931E+00	1.586E-01	1.060
		1377.67		1.736E+00	1.147E+00	2.198E+00	1.987E-01	0.790
	+	1764.49		1.370E+00	5.147E-01	4.277E-01	2.425E-02	3.203
PB-214	+	74.81		4.594E+00	8.599E-01	1.035E+00	1.107E-01	4.440
	+	77.11		4.191E+00	6.492E-01	5.317E-01	5.851E-02	7.883
	+	87.30		3.503E+00	9.693E-01	1.169E+00	1.392E-01	2.997

Sample ID : G232433006 Acquisition date : 7-JUL-2009 06:38:46

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.756E+00	7.820E-01	6.163E-01	5.471E-02	4.471
	+	295.21		1.264E+00	2.767E-01	2.430E-01	2.382E-02	5.200
	+	351.92	*	1.506E+00	2.210E-01	1.371E-01	1.196E-02	10.989
PO-214	+	74.81		4.594E+00	8.599E-01	1.035E+00	1.107E-01	4.440
	+	77.11		4.191E+00	6.492E-01	5.317E-01	5.851E-02	7.883
	+	87.30		3.503E+00	9.693E-01	1.169E+00	1.392E-01	2.997
	+	241.98		2.756E+00	7.820E-01	6.163E-01	5.471E-02	4.471
	+	295.21		1.264E+00	2.767E-01	2.430E-01	2.382E-02	5.200
	+	351.92	*	1.506E+00	2.210E-01	1.371E-01	1.196E-02	10.989
PO-216	+	74.81		2.666E+00	5.217E-01	6.005E-01	7.277E-02	4.440
	+	77.11		2.445E+00	3.297E-01	3.102E-01	2.463E-02	7.883
	+	87.30		2.045E+00	5.806E-01	6.822E-01	9.214E-02	2.997
	+	238.63	*	1.904E+00	2.015E-01	1.069E-01	8.706E-03	17.823
	+	300.09		1.920E+00	1.400E+00	1.372E+00	1.303E-01	1.400
PO-218	+	74.81		4.594E+00	8.599E-01	1.035E+00	1.107E-01	4.440
	+	77.11		4.191E+00	6.492E-01	5.317E-01	5.851E-02	7.883
	+	87.30		3.503E+00	9.693E-01	1.169E+00	1.392E-01	2.997
	+	241.98		2.756E+00	7.820E-01	6.163E-01	5.471E-02	4.471
	+	295.21		1.264E+00	2.767E-01	2.430E-01	2.382E-02	5.200
	+	351.92	*	1.506E+00	2.210E-01	1.371E-01	1.196E-02	10.989
RA-224	+	240.98	*	5.225E+00	1.454E+00	1.216E+00	8.337E-02	4.298
RA-226	+	609.31	*	1.236E+00	2.199E-01	1.392E-01	1.187E-02	8.883
	+	768.36		3.351E+00	1.756E+00	1.323E+00	1.275E-01	2.533
		934.06		1.317E+00	1.526E+00	2.708E+00	2.712E-01	0.487
	+	1120.29		1.704E+00	6.520E-01	5.770E-01	5.213E-02	2.952
	+	1238.11		2.047E+00	1.788E+00	1.931E+00	1.586E-01	1.060
		1377.67		1.736E+00	1.147E+00	2.198E+00	1.987E-01	0.790
	+	1764.49		1.370E+00	5.147E-01	4.277E-01	2.425E-02	3.203
AC-228	+	338.32		1.932E+00	9.152E-01	4.613E-01	1.887E-01	4.189
	+	911.07	*	1.722E+00	4.126E-01	2.761E-01	2.973E-02	6.235
	+	969.11		1.297E+00	5.129E-01	4.658E-01	1.070E-01	2.784
RA-228	+	338.32		1.932E+00	9.152E-01	4.613E-01	1.887E-01	4.189
	+	911.07	*	1.722E+00	4.126E-01	2.761E-01	2.973E-02	6.235
	+	969.11		1.297E+00	5.129E-01	4.658E-01	1.070E-01	2.784
TH-228		84.40		1.105E+01	4.462E+00	5.425E+00	7.168E-01	2.038
	+	238.60	*	1.904E+00	2.015E-01	1.068E-01	8.705E-03	17.825
	+	300.10		1.920E+00	1.794E+00	1.372E+00	8.110E-01	1.400
TH-230	+	609.31	*	1.236E+00	2.199E-01	1.392E-01	1.187E-02	8.883
	+	768.36		3.351E+00	1.756E+00	1.323E+00	1.275E-01	2.533
		934.06		1.317E+00	1.526E+00	2.708E+00	2.712E-01	0.487
	+	1120.29		1.704E+00	6.520E-01	5.770E-01	5.213E-02	2.952
	+	1238.11		2.047E+00	1.788E+00	1.931E+00	1.586E-01	1.060
		1377.67		1.736E+00	1.147E+00	2.198E+00	1.987E-01	0.790
	+	1764.49		1.370E+00	5.147E-01	4.277E-01	2.425E-02	3.203
TH-232	+	338.32		1.932E+00	4.791E-01	4.613E-01	3.107E-02	4.189
	+	911.07	*	1.722E+00	4.126E-01	2.761E-01	2.973E-02	6.235
	+	969.11		1.297E+00	5.129E-01	4.658E-01	1.070E-01	2.784
TH-234	+	63.29	*	2.313E+00	1.842E+00	2.214E+00	3.799E-01	1.045
	+	92.38		3.055E+00	9.373E-01	9.020E-01	1.632E-01	3.387

Sample ID : G232433006 Acquisition date : 7-JUL-2009 06:38:46

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.236E+00	2.199E-01	1.392E-01	1.187E-02	8.883
	+	768.36		3.351E+00	1.756E+00	1.323E+00	1.275E-01	2.533
		934.06		1.317E+00	1.526E+00	2.708E+00	2.712E-01	0.487
	+	1120.29		1.704E+00	6.520E-01	5.770E-01	5.213E-02	2.952
	+	1238.11		2.047E+00	1.788E+00	1.931E+00	1.586E-01	1.060
		1377.67		1.736E+00	1.147E+00	2.198E+00	1.987E-01	0.790
	+	1764.49		1.370E+00	5.147E-01	4.277E-01	2.425E-02	3.203
NP-237	+	86.50	*	1.298E+00	4.368E-01	5.185E-01	1.167E-01	2.504
		95.87		-1.019E+00	1.313E+00	1.798E+00	4.407E-01	-0.567
U-238	+	63.29	*	2.313E+00	1.842E+00	2.214E+00	3.799E-01	1.045
	+	92.38		3.055E+00	8.016E-01	9.020E-01	7.789E-02	3.387
AM-243	+	74.67	*	4.323E-01	7.430E-02	9.759E-02	7.515E-03	4.430
	+	86.72		4.869E+01	1.294E+01	1.577E+01	1.420E+00	3.088
		117.66		8.246E-01	4.574E+00	7.586E+00	5.137E-01	0.109
		142.18		-1.096E+01	2.246E+01	3.558E+01	2.107E+00	-0.308
ANH-511	+	511.00	*	2.070E-01	8.465E-02	6.127E-02	3.776E-03	3.378

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.126E-01	4.138E-01	6.940E-01	4.765E-02	0.162
NA-22		1274.54	*	-4.175E-02	5.144E-02	7.535E-02	4.619E-03	-0.554
NA-24		1368.53	*	6.607E-02	5.144E-02	Half-Life too short		
AL-26		1129.67		2.401E-01	2.100E+00	3.487E+00	2.104E-01	0.069
		1808.65	*	1.212E-02	3.247E-02	5.805E-02	3.202E-03	0.209
TI-44		67.85		-1.236E-02	5.568E-02	8.108E-02	5.750E-03	-0.152
		78.38	*	2.573E-01	6.255E-02	8.258E-02	6.664E-03	3.116
SC-46		889.25	*	3.980E-02	4.960E-02	8.823E-02	7.089E-03	0.451
	+	1120.51		2.884E-01	1.087E-01	1.632E-01	1.003E-02	1.767
V-48		944.10		-3.435E-01	1.031E+00	1.656E+00	1.287E-01	-0.207
		983.50	*	1.978E-02	8.357E-02	1.415E-01	1.059E-02	0.140
		1312.09		2.821E-02	9.556E-02	1.608E-01	1.021E-02	0.175
CR-51		320.08	*	2.965E-01	4.476E-01	7.761E-01	5.950E-02	0.382
MN-52		744.21		-1.385E-02	2.396E-01	3.831E-01	2.863E-02	-0.036
		848.13		1.257E-01	7.360E+00	1.231E+01	9.722E-01	0.010
		935.52		1.716E-01	2.825E-01	4.930E-01	3.861E-02	0.348
		1246.25		3.230E+00	8.327E+00	1.233E+01	7.326E-01	0.262
		1333.61		8.957E-01	5.516E+00	9.140E+00	5.923E-01	0.098
		1434.06	*	-2.796E-02	2.170E-01	3.430E-01	2.198E-02	-0.082
MN-54		834.83	*	5.938E-03	4.745E-02	8.013E-02	6.288E-03	0.074
CO-56		846.75	*	2.663E-02	5.058E-02	8.809E-02	6.951E-03	0.302
		977.42		4.102E-01	4.206E+00	6.078E+00	4.576E-01	0.068
		1037.82		-2.183E-01	3.751E-01	5.809E-01	4.397E-02	-0.376
		1175.09		1.162E+00	3.016E+00	5.107E+00	2.811E-01	0.227
	+	1238.25		2.049E-01	1.786E-01	2.226E-01	1.392E-02	0.920
		1360.21		8.194E-02	1.253E+00	2.051E+00	1.327E-01	0.040
		1771.40		1.603E-01	2.886E-01	4.853E-01	2.740E-02	0.330
CO-57		122.06	*	7.812E-03	3.077E-02	5.114E-02	3.354E-03	0.153

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-2.668E-01	2.619E-01	4.097E-01	2.855E-02	-0.651
CO-58		810.76	*	1.744E-02	4.626E-02	8.000E-02	6.223E-03	0.218
FE-59		142.65		-2.189E-01	3.368E+00	5.432E+00	3.210E-01	-0.040
		192.34		2.938E-01	1.182E+00	1.870E+00	2.206E-01	0.157
		1099.22	*	-1.221E-01	1.130E-01	1.645E-01	1.201E-02	-0.742
		1291.56		-4.361E-02	1.525E-01	2.401E-01	1.862E-02	-0.182
CO-60		1173.22		3.555E-03	6.268E-02	1.032E-01	5.669E-03	0.034
		1332.49	*	2.556E-03	5.221E-02	8.533E-02	5.530E-03	0.030
ZN-65		1115.52	*	3.220E-02	1.366E-01	2.026E-01	1.259E-02	0.159
GE-68		1077.35	*	-9.882E-02	1.616E+00	2.647E+00	1.752E-01	-0.037
AS-73		53.44	*	-3.746E-01	7.519E-01	1.220E+00	7.783E-02	-0.307
AS-74		595.88	*	-5.061E-02	1.160E-01	1.824E-01	1.222E-02	-0.278
		634.78		-2.902E-01	4.060E-01	6.136E-01	4.247E-02	-0.473
SE-75		66.05		-2.250E+00	5.688E+00	8.182E+00	7.446E-01	-0.275
		96.73		-8.265E-01	1.057E+00	1.454E+00	1.944E-01	-0.568
		121.11		-6.892E-03	1.645E-01	2.701E-01	2.633E-02	-0.026
		136.00		-3.130E-02	4.865E-02	7.751E-02	4.793E-03	-0.404
		198.60		2.242E+00	2.184E+00	3.691E+00	2.661E-01	0.607
		264.65	*	-5.577E-02	5.901E-02	8.909E-02	6.649E-03	-0.626
		279.53		-1.292E-01	1.392E-01	2.162E-01	1.756E-02	-0.598
		303.91		-1.216E-01	2.688E+00	3.920E+00	4.154E-01	-0.031
		400.65		1.989E-02	3.221E-01	5.370E-01	4.741E-02	0.037
BR-77	+	87.88		6.575E+02	1.747E+02	2.945E+02	2.694E+01	2.233
		200.40		-1.464E+02	1.425E+02	2.188E+02	1.300E+01	-0.669
	+	239.00		2.069E+02	1.983E+01	3.247E+01	2.211E+00	6.373
		249.79		-1.475E+01	5.680E+01	8.966E+01	6.334E+00	-0.165
		281.68		-9.908E+01	7.552E+01	1.182E+02	9.143E+00	-0.838
		297.23		1.800E+02	7.185E+01	9.261E+01	6.961E+00	1.944
		303.76		-5.800E+00	1.562E+02	2.279E+02	1.689E+01	-0.025
		439.47		8.801E+01	1.168E+02	2.029E+02	1.148E+01	0.434
		484.57		-3.207E+01	2.073E+02	3.375E+02	2.019E+01	-0.095
		520.65	*	-1.220E+01	9.092E+00	1.328E+01	8.270E-01	-0.918
		574.64		-2.647E+01	1.877E+02	3.030E+02	1.991E+01	-0.087
		578.91		-6.744E-02	8.950E+01	1.261E+02	8.320E+00	-0.001
		585.48		7.728E+02	2.094E+02	3.706E+02	2.460E+01	2.085
		755.35		5.215E+01	1.458E+02	2.417E+02	1.818E+01	0.216
		817.79		1.274E+01	1.140E+02	1.926E+02	1.499E+01	0.066
SR-82		698.33		2.136E+00	4.541E+01	7.355E+01	5.336E+00	0.029
		776.49	*	1.076E-01	4.628E-01	6.918E-01	5.268E-02	0.156
		1395.20		-5.846E+00	1.343E+01	2.037E+01	1.313E+00	-0.287
RB-83		520.41	*	-1.241E-01	8.747E-02	1.267E-01	7.887E-03	-0.980
		529.64		3.233E-02	1.252E-01	2.093E-01	1.316E-02	0.154
		552.65		-2.077E-01	2.418E-01	3.662E-01	2.357E-02	-0.567
RB-84		881.50	*	-5.170E-02	7.744E-02	1.199E-01	9.606E-03	-0.431
KR-85		513.99	*	1.829E+01	1.011E+01	1.670E+01	1.033E+00	1.095
SR-85		513.99	*	9.246E-02	5.110E-02	8.445E-02	5.222E-03	1.095
RB-86		1076.63	*	1.859E-01	9.840E-01	1.650E+00	1.093E-01	0.113
Y-88		898.02		3.759E-02	5.013E-02	8.901E-02	7.216E-03	0.422
		1836.01	*	-8.762E-03	4.544E-02	6.920E-02	3.757E-03	-0.127

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	-2.409E-02	3.759E-02	5.987E-02	3.171E-03	-0.402
Y-91		1204.90	*	-2.519E-01	2.466E+01	4.030E+01	2.292E+00	-0.006
NB-94		702.63	*	-3.729E-02	4.809E-02	7.270E-02	5.290E-03	-0.513
		871.10		-2.950E-02	4.143E-02	6.421E-02	5.121E-03	-0.459
NB-95		765.79	*	4.900E-02	6.281E-02	9.473E-02	7.170E-03	0.517
NB-95M		235.69	*	1.395E+00	2.256E-01	3.879E-01	3.208E-02	3.595
ZR-95		724.18		1.145E-01	1.440E-01	2.172E-01	1.789E-02	0.527
		756.15	*	7.537E-02	8.883E-02	1.533E-01	1.305E-02	0.492
NB-97		657.90	*	1.677E-02	8.883E-02	Half-Life too short		
		1024.50		3.271E+00	8.883E-02	Half-Life too short		
ZR-97		254.15		1.064E+00	8.883E-02	Half-Life too short		
		355.39		8.660E-01	8.883E-02	Half-Life too short		
		507.63	*	1.970E+00	8.883E-02	Half-Life too short		
		602.52		1.356E+00	8.883E-02	Half-Life too short		
		1021.30		3.191E+00	8.883E-02	Half-Life too short		
		1147.95		-3.237E-01	8.883E-02	Half-Life too short		
		1362.66		-1.464E-01	8.883E-02	Half-Life too short		
		1750.46		-9.010E-01	8.883E-02	Half-Life too short		
MO-99		140.51		-1.836E+01	2.381E+01	3.687E+01	9.949E+00	-0.498
		181.06		-3.793E+00	1.687E+01	2.357E+01	4.019E+00	-0.161
		366.43		-6.875E+01	7.241E+01	1.131E+02	6.826E+00	-0.608
		739.58	*	-9.776E+00	1.030E+01	1.480E+01	2.154E+00	-0.660
		778.00		-8.114E+00	3.142E+01	4.390E+01	3.346E+00	-0.185
TC-99M		140.51	*	-9.218E+08	3.142E+01	Half-Life too short		
RH-101	+	127.23		4.994E-02	5.462E-02	7.141E-02	4.549E-03	0.699
		198.01	*	1.781E-02	4.313E-02	6.862E-02	4.042E-03	0.260
		325.23		7.291E-02	3.160E-01	4.689E-01	3.290E-02	0.155
RH-102		418.52		5.270E-02	3.719E-01	6.217E-01	3.418E-02	0.085
		475.06	*	-1.046E-02	3.773E-02	6.094E-02	3.605E-03	-0.172
		631.29		4.969E-03	6.501E-02	1.062E-01	7.332E-03	0.047
		697.49		1.627E-02	1.046E-01	1.710E-01	1.239E-02	0.095
		766.84		1.658E-01	1.576E-01	2.445E-01	1.852E-02	0.678
		1046.59		2.300E-03	1.379E-01	2.279E-01	1.579E-02	0.010
		1112.84		2.292E-01	3.241E-01	5.012E-01	3.123E-02	0.457
RU-103		497.08	*	2.759E-02	5.104E-02	8.691E-02	1.110E-02	0.317
	+	610.33		1.304E+01	2.897E+00	3.488E+00	5.515E-01	3.738
RH-106	+	511.85		1.031E+00	4.217E-01	5.711E-01	3.523E-02	1.806
		621.84	*	2.258E-01	4.041E-01	6.849E-01	8.417E-02	0.330
		1050.47		-5.211E-01	2.882E+00	4.669E+00	3.217E-01	-0.112
RU-106	+	511.85		1.031E+00	4.217E-01	5.711E-01	3.523E-02	1.806
		621.84	*	2.258E-01	4.034E-01	6.849E-01	4.691E-02	0.330
		1050.47		-5.211E-01	2.882E+00	4.669E+00	3.217E-01	-0.112
AG-108M		433.93	*	-1.178E-02	3.959E-02	6.411E-02	3.929E-03	-0.184
		614.37		2.451E-02	5.748E-02	8.444E-02	6.105E-03	0.290
		722.95		-3.774E-02	6.344E-02	8.133E-02	6.316E-03	-0.464
AG-110M	-	657.75	*	2.026E-02	4.616E-02	6.821E-02	5.018E-03	0.297
		677.61		1.150E-01	3.721E-01	6.183E-01	4.601E-02	0.186
		706.67		1.845E-01	2.898E-01	4.900E-01	3.712E-02	0.377
		763.93		1.911E-02	2.252E-01	3.149E-01	2.468E-02	0.061

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		-2.162E-02	5.848E-02	9.387E-02	7.807E-03	-0.230
		937.48		-1.412E-01	1.418E-01	2.124E-01	1.733E-02	-0.665
		1384.27		-1.355E-02	1.846E-01	2.959E-01	2.004E-02	-0.046
IN-111		171.28		-4.442E-01	8.781E-01	1.393E+00	7.444E-02	-0.319
		245.39	*	-6.292E-02	1.060E+00	1.476E+00	1.027E-01	-0.043
IN-113M		391.69	*	-2.809E-02	5.424E-02	8.713E-02	4.976E-03	-0.322
SN-113		391.69	*	-2.809E-02	5.424E-02	8.713E-02	4.976E-03	-0.322
IN-114M		190.27	*	-1.911E-02	2.450E-01	3.451E-01	1.976E-02	-0.055
CD-115		260.90		-1.329E+01	1.070E+02	1.698E+02	1.244E+01	-0.078
		492.35		-3.005E+01	2.959E+01	4.472E+01	2.700E+00	-0.672
		527.90	*	-4.231E+00	8.886E+00	1.400E+01	8.788E-01	-0.302
SN-117M		156.02		-2.290E+00	2.649E+00	4.154E+00	2.297E-01	-0.551
		158.56	*	-1.976E-02	6.282E-02	1.010E-01	5.509E-03	-0.196
SB-122		563.90	*	1.566E+00	1.894E+00	3.277E+00	2.132E-01	0.478
		692.80		1.527E+01	4.133E+01	6.871E+01	4.965E+00	0.222
I-123		159.00	*	-3.589E-01	4.133E+01	Half-Life too short		
		528.96		5.534E+00	4.133E+01	Half-Life too short		
TE-123M		159.00	*	-9.608E-03	3.468E-02	5.583E-02	3.085E-03	-0.172
I-124		602.71	*	3.592E-01	7.034E-01	1.049E+00	7.068E-02	0.342
		722.78		-3.096E+00	5.310E+00	6.820E+00	5.029E-01	-0.454
		1325.50		3.027E+00	3.906E+01	6.309E+01	4.061E+00	0.048
		1376.25		4.532E+01	2.780E+01	5.431E+01	3.508E+00	0.834
		1509.49		2.621E+00	1.544E+01	2.553E+01	1.610E+00	0.103
		1691.02		1.373E+00	3.344E+00	5.997E+00	3.537E-01	0.229
SB-124		602.71		2.567E-02	5.027E-02	7.497E-02	5.053E-03	0.342
		645.85		1.147E-01	6.436E-01	1.059E+00	8.057E-02	0.108
		709.31		3.376E+00	3.737E+00	6.445E+00	4.710E-01	0.524
		713.82		-1.490E+00	2.136E+00	3.217E+00	3.587E-01	-0.463
		722.78		-3.208E-01	5.501E-01	7.066E-01	5.363E-02	-0.454
	+	968.20		1.315E+01	4.348E+00	8.704E+00	6.615E-01	1.510
		1045.16		-4.088E-01	3.000E+00	4.882E+00	3.389E-01	-0.084
		1325.50		3.349E-01	4.323E+00	6.982E+00	4.493E-01	0.048
		1368.21		2.577E-01	1.914E+00	3.168E+00	3.868E-01	0.081
		1436.60		2.507E+00	4.058E+00	7.218E+00	4.624E-01	0.347
		1691.02	*	3.355E-02	8.172E-02	1.465E-01	9.360E-03	0.229
SB-125		427.89	*	1.373E-02	1.139E-01	1.901E-01	1.108E-02	0.072
	+	463.38		6.635E-01	5.211E-01	6.812E-01	4.626E-02	0.974
		600.56		3.858E-02	2.203E-01	3.636E-01	2.735E-02	0.106
		635.90		-1.318E-01	3.316E-01	5.183E-01	4.030E-02	-0.254
TE-125M		109.28	*	2.886E+00	1.137E+01	1.893E+01	1.745E+00	0.152
I-126		388.63		4.998E-02	2.354E-01	3.965E-01	2.134E-02	0.126
		666.33	*	1.034E-01	2.347E-01	3.456E-01	2.450E-02	0.299
		753.82		2.504E-01	1.786E+00	2.905E+00	2.184E-01	0.086
SB-126		223.80		-1.750E+00	4.741E+00	7.485E+00	4.837E-01	-0.234
		278.60		9.035E-01	2.954E+00	4.901E+00	3.799E-01	0.184
		296.50		1.261E+01	2.865E+00	4.048E+00	3.047E-01	3.116
		414.70		4.502E-02	8.856E-02	1.514E-01	8.280E-03	0.297
		415.30		1.664E+00	7.487E+00	1.258E+01	6.886E-01	0.132
		555.20		5.883E+00	4.375E+00	7.893E+00	5.092E-01	0.745

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		573.80		1.829E-01	1.258E+00	2.074E+00	1.362E-01	0.088
		593.00		1.819E-02	1.149E+00	1.874E+00	1.252E-01	0.010
		656.30		-1.225E-01	4.283E+00	5.962E+00	4.196E-01	-0.021
		666.33		4.308E-02	9.778E-02	1.440E-01	1.021E-02	0.299
		675.00		8.149E-01	2.400E+00	3.991E+00	2.848E-01	0.204
		695.00		-6.777E-03	9.961E-02	1.599E-01	1.157E-02	-0.042
		697.00		-2.758E-02	3.449E-01	5.531E-01	4.009E-02	-0.050
		720.50	*	-5.250E-02	1.975E-01	2.791E-01	2.055E-02	-0.188
		856.80		6.798E-01	5.579E-01	9.300E-01	7.371E-02	0.731
		989.30		-3.677E-01	1.426E+00	2.299E+00	1.709E-01	-0.160
		1034.80		-5.407E-01	9.649E+00	1.584E+01	1.115E+00	-0.034
		1213.00		-3.616E+00	5.871E+00	9.065E+00	5.200E-01	-0.399
SB-127		61.10		9.550E+01	5.255E+01	8.286E+01	7.620E+00	1.153
		252.40		-1.939E+00	4.450E+00	6.833E+00	2.846E+00	-0.284
		290.80		-1.369E+01	2.399E+01	3.368E+01	3.363E+00	-0.407
		411.60		-9.784E+00	1.258E+01	1.974E+01	2.751E+00	-0.496
		444.90		-8.588E+00	8.869E+00	1.348E+01	1.393E+00	-0.637
		473.00		6.093E-01	1.596E+00	2.701E+00	2.928E-01	0.226
		543.00		-6.104E+00	1.618E+01	2.564E+01	3.294E+00	-0.238
		603.60		-5.132E+00	1.267E+01	1.693E+01	1.848E+00	-0.303
		685.20	*	6.049E-01	1.234E+00	2.085E+00	2.069E-01	0.290
		698.50		4.509E+00	1.618E+01	2.667E+01	3.956E+00	0.169
		722.20		-1.677E+00	3.457E+01	4.768E+01	4.674E+00	-0.035
		783.80		3.908E+00	3.358E+00	6.116E+00	6.968E-01	0.639
XE-127		57.60		2.731E+00	6.121E+00	9.720E+00	6.212E-01	0.281
		145.22		6.155E-01	8.270E-01	1.393E+00	8.129E-02	0.442
		172.10		-1.856E-01	1.454E-01	2.217E-01	1.188E-02	-0.837
		202.84	*	6.068E-03	6.233E-02	9.354E-02	5.608E-03	0.065
		374.96		-1.824E-01	2.381E-01	3.770E-01	2.184E-02	-0.484
I-131		80.18		7.571E+00	6.172E+00	7.253E+00	6.025E-01	1.044
		284.30		3.695E-01	1.647E+00	2.806E+00	2.299E-01	0.132
		364.48	*	1.304E-02	1.179E-01	1.981E-01	1.332E-02	0.066
		636.97		-6.019E-01	1.745E+00	2.745E+00	2.062E-01	-0.219
		722.89		-5.625E+00	9.521E+00	1.221E+01	9.072E-01	-0.461
TE-132		49.72		-8.767E+00	1.255E+01	2.051E+01	1.797E+00	-0.427
		111.76		6.866E+00	2.732E+01	4.549E+01	4.233E+00	0.151
		116.30		-1.509E+01	2.478E+01	3.970E+01	3.618E+00	-0.380
		228.16	*	3.908E-01	6.536E-01	1.079E+00	1.558E-01	0.362
BA-133		53.15		-1.379E+00	3.276E+00	5.332E+00	3.402E-01	-0.259
		79.62		1.269E+00	2.040E+00	2.276E+00	3.412E-01	0.558
		81.00		1.035E-01	1.555E-01	1.738E-01	2.734E-02	0.596
		276.40		5.067E-01	4.856E-01	8.103E-01	1.128E-01	0.625
		302.84		-6.477E-02	1.861E-01	2.645E-01	3.318E-02	-0.245
		356.01	*	3.705E-02	5.425E-02	8.347E-02	9.870E-03	0.444
		383.85		1.403E-01	3.748E-01	6.374E-01	6.839E-02	0.220
I-133	+	510.53		7.210E-01	3.748E-01	Half-Life too short		
		529.87	*	2.115E-03	3.748E-01	Half-Life too short		
		706.58		1.305E-01	3.748E-01	Half-Life too short		
		856.28		1.659E-01	3.748E-01	Half-Life too short		

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		875.33		1.276E-03	3.748E-01	Half-Life too short		
		1236.41		7.715E-02	3.748E-01	Half-Life too short		
		1298.22		-2.225E-03	3.748E-01	Half-Life too short		
CS-134		475.35		-2.696E-01	2.423E+00	3.959E+00	2.343E-01	-0.068
		563.23		6.442E-01	4.643E-01	8.313E-01	5.495E-02	0.775
		569.32		-1.028E-01	2.668E-01	4.119E-01	2.757E-02	-0.250
		604.70		-3.360E-02	4.802E-02	6.183E-02	4.191E-03	-0.543
	+	795.84	*	1.102E-01	8.481E-02	1.158E-01	8.991E-03	0.951
		801.93		-2.059E-01	5.135E-01	7.627E-01	5.929E-02	-0.270
		1038.57		-2.274E+00	4.622E+00	7.227E+00	5.062E-01	-0.315
		1167.94		-1.252E-01	3.465E+00	5.660E+00	3.148E-01	-0.022
		1365.15		4.569E-01	1.464E+00	2.480E+00	1.731E-01	0.184
CS-135		268.24	*	3.464E-01	2.171E-01	3.709E-01	3.344E-02	0.934
I-135		288.45		-1.423E+09	2.171E-01	Half-Life too short		
		417.63		1.649E+08	2.171E-01	Half-Life too short		
		546.56		3.132E+08	2.171E-01	Half-Life too short		
		836.80		6.608E+08	2.171E-01	Half-Life too short		
		1038.76		-3.178E+08	2.171E-01	Half-Life too short		
		1124.00		1.601E+09	2.171E-01	Half-Life too short		
		1131.51		-4.389E+07	2.171E-01	Half-Life too short		
		1260.41	*	7.024E+07	2.171E-01	Half-Life too short		
		1457.56		2.824E+10	2.171E-01	Half-Life too short		
		1678.03		-6.080E+07	2.171E-01	Half-Life too short		
		1706.46		5.079E+08	2.171E-01	Half-Life too short		
		1791.20		-1.554E+08	2.171E-01	Half-Life too short		
CS-136		66.91		-3.385E-01	8.817E-01	1.268E+00	1.851E-01	-0.267
	+	86.29		5.377E+00	1.518E+00	2.295E+00	3.001E-01	2.343
		153.22		1.212E+00	7.454E-01	1.293E+00	9.138E-02	0.937
		163.89		1.374E-01	1.232E+00	2.016E+00	1.383E-01	0.068
		176.55		2.446E-01	4.215E-01	7.024E-01	4.357E-02	0.348
		273.65		-1.257E+00	6.123E-01	8.582E-01	7.095E-02	-1.464
		340.57		2.325E-01	1.555E-01	2.512E-01	1.759E-02	0.926
		818.51		2.116E-02	8.596E-02	1.469E-01	1.145E-02	0.144
		1048.07	*	-3.258E-02	1.275E-01	2.051E-01	1.510E-02	-0.159
		1235.34		4.372E-01	9.178E-01	1.350E+00	1.354E-01	0.324
CE-139		165.85	*	-1.325E-02	3.690E-02	5.910E-02	3.101E-03	-0.224
BA-140		162.64		3.556E-01	8.664E-01	1.436E+00	8.785E-02	0.248
		304.84		-7.330E-01	1.605E+00	2.244E+00	6.210E-01	-0.327
		423.70		-5.197E-01	2.266E+00	3.687E+00	1.170E+00	-0.141
		537.32	*	3.195E-01	3.132E-01	5.236E-01	1.708E-01	0.610
LA-140	+	328.77		7.361E-01	4.943E-01	6.498E-01	4.896E-02	1.133
		432.53		-1.424E-01	2.285E+00	3.764E+00	2.345E-01	-0.038
		487.03		7.675E-02	1.646E-01	2.795E-01	1.885E-02	0.275
		751.79		-7.058E-02	2.016E+00	3.229E+00	2.761E-01	-0.022
		815.85		8.315E-02	3.792E-01	6.466E-01	5.731E-02	0.129
		867.82		1.450E-01	1.653E+00	2.586E+00	2.186E-01	0.056
		919.63		-2.698E+00	3.160E+00	4.289E+00	4.332E-01	-0.629
		925.24		0.000E+00	1.226E+00	2.038E+00	1.730E-01	0.000
		1596.49	*	6.817E-02	7.846E-02	1.397E-01	8.581E-03	0.488

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	1.576E-02	7.601E-02	1.254E-01	7.596E-03	0.126
CE-143		57.37		4.044E-04	7.601E-02	Half-Life too short		
		231.56		-5.998E-04	7.601E-02	Half-Life too short		
	+	293.26	*	6.124E-04	7.601E-02	Half-Life too short		
	+	350.59		1.747E-02	7.601E-02	Half-Life too short		
		490.36		-1.118E-03	7.601E-02	Half-Life too short		
		664.57		4.847E-04	7.601E-02	Half-Life too short		
		721.93		4.061E-04	7.601E-02	Half-Life too short		
CE-144		80.11		2.227E+00	3.329E+00	3.738E+00	3.084E-01	0.596
		133.54	*	1.650E-01	2.855E-01	4.228E-01	6.070E-02	0.390
PM-144		476.78		-3.320E-05	8.713E-02	1.435E-01	1.012E-02	0.000
		618.01		2.989E-04	4.315E-02	7.015E-02	4.998E-03	0.004
		696.49	*	1.434E-02	4.726E-02	7.808E-02	5.659E-03	0.184
		778.57		-1.415E+00	3.120E+00	4.247E+00	3.239E-01	-0.333
PR-144		696.49	*	9.709E-01	3.200E+00	5.287E+00	3.831E-01	0.184
		1489.15		-1.109E+01	1.604E+01	2.297E+01	1.456E+00	-0.483
PM-146		453.90	*	1.455E-02	5.478E-02	9.205E-02	7.915E-03	0.158
		633.02		-1.481E+00	1.736E+00	2.443E+00	9.042E-01	-0.606
		735.90		1.303E-01	1.875E-01	3.086E-01	8.723E-02	0.422
		747.13		3.683E-02	1.117E-01	1.850E-01	2.474E-02	0.199
ND-147	+	91.11		1.412E+00	3.740E-01	6.341E-01	6.010E-02	2.228
		319.41		2.724E+00	3.760E+00	6.542E+00	4.666E-01	0.416
		439.89		2.912E+00	6.638E+00	1.130E+01	6.397E-01	0.258
		531.02	*	1.319E-01	6.113E-01	1.018E+00	1.400E-01	0.130
PM-149		285.90	*	9.263E+01	7.614E+01	1.337E+02	2.010E+01	0.693
EU-152		121.78		1.747E-02	8.934E-02	1.481E-01	1.215E-02	0.118
		244.69		-1.409E-01	4.566E-01	6.230E-01	4.326E-02	-0.226
		344.27	*	-3.326E-02	1.288E-01	1.920E-01	1.393E-02	-0.173
		443.98		-8.462E-01	1.129E+00	1.759E+00	1.001E-01	-0.481
		778.89		-1.825E-01	3.595E-01	4.853E-01	3.700E-02	-0.376
		867.32		4.601E-01	1.059E+00	1.673E+00	1.332E-01	0.275
	+	964.01		1.096E+00	6.031E-01	7.810E-01	5.960E-02	1.403
		1085.78		-7.616E-02	5.250E-01	8.523E-01	5.566E-02	-0.089
		1112.02		1.080E-01	4.488E-01	7.016E-01	4.378E-02	0.154
		1407.95		9.900E-02	2.281E-01	3.910E-01	2.516E-02	0.253
GD-153		69.67		4.707E-01	1.988E+00	2.954E+00	2.141E-01	0.159
	+	83.37		3.731E+01	2.656E+01	2.881E+01	2.481E+00	1.295
		97.43	*	3.804E-02	1.079E-01	1.586E-01	1.290E-02	0.240
		103.18		-1.804E-02	1.306E-01	2.147E-01	1.647E-02	-0.084
EU-154		123.07		1.000E-02	6.581E-02	1.053E-01	1.038E-02	0.095
		247.94		1.537E-01	4.681E-01	7.378E-01	7.620E-02	0.208
		591.81		-8.106E-02	8.229E-01	1.330E+00	1.372E-01	-0.061
		723.30		-1.194E-01	2.677E-01	3.507E-01	2.953E-02	-0.341
		756.87		7.229E-01	9.804E-01	1.676E+00	1.880E-01	0.431
		873.19		-2.022E-01	3.679E-01	5.804E-01	6.850E-02	-0.348
		996.32		-2.871E-01	4.239E-01	6.454E-01	1.110E-01	-0.445
		1004.76		-4.204E-02	2.724E-01	4.440E-01	4.753E-02	-0.095
		1274.45	*	-1.123E-01	1.445E-01	2.124E-01	2.027E-02	-0.529
EU-155		48.70		-2.285E+00	2.092E+00	3.368E+00	2.141E-01	-0.678

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		-2.513E+00	5.497E+00	7.928E+00	5.116E-01	-0.317
	+	86.54		5.322E-01	1.416E-01	2.273E-01	2.061E-02	2.342
		105.31	*	1.188E-02	1.336E-01	2.215E-01	1.691E-02	0.054
TB-160	+	86.79		1.404E+00	3.732E-01	6.006E-01	5.414E-02	2.338
		197.04		9.589E-02	7.249E-01	1.139E+00	6.684E-02	0.084
		215.65		4.608E-01	9.248E-01	1.526E+00	9.582E-02	0.302
	+	298.57		2.759E-01	2.005E-01	2.557E-01	1.916E-02	1.079
		879.36	*	3.548E-02	1.582E-01	2.696E-01	2.157E-02	0.132
		962.29		1.850E+00	7.183E-01	1.312E+00	1.003E-01	1.410
		966.15		1.512E+00	3.545E-01	6.927E-01	5.275E-02	2.183
		1177.93		1.088E-01	4.732E-01	7.911E-01	4.369E-02	0.138
		1271.85		2.788E-01	8.564E-01	1.446E+00	8.821E-02	0.193
HO-166M		80.57		4.938E-01	4.084E-01	4.792E-01	3.978E-02	1.031
	+	184.41		1.861E-01	6.629E-02	9.181E-02	5.146E-03	2.027
		280.46		-1.294E-01	1.054E-01	1.661E-01	1.287E-02	-0.779
		410.95		-4.069E-02	3.167E-01	5.212E-01	2.835E-02	-0.078
		711.68	*	-6.950E-02	8.486E-02	1.271E-01	9.304E-03	-0.547
		752.31		-8.708E-02	3.581E-01	5.624E-01	4.223E-02	-0.155
		810.29		4.013E-03	7.183E-02	1.209E-01	9.373E-03	0.033
TM-171		51.35		-7.844E-01	2.636E+01	4.428E+01	2.825E+00	-0.018
		52.39		-6.889E+00	1.422E+01	2.309E+01	1.473E+00	-0.298
		59.40		-1.289E+01	2.950E+01	4.260E+01	2.730E+00	-0.303
		66.72	*	-3.999E+00	3.378E+01	4.925E+01	3.447E+00	-0.081
LU-176	+	88.36		4.369E-01	1.451E-01	4.479E-01	4.083E-02	0.976
		201.83		-5.290E-03	3.659E-02	5.873E-02	3.508E-03	-0.090
		306.84	*	1.303E-02	2.947E-02	4.950E-02	3.643E-03	0.263
		401.10		9.211E-01	8.379E+00	1.401E+01	7.511E-01	0.066
LU-177		112.95		-3.260E-01	1.735E+00	2.839E+00	1.997E-01	-0.115
	+	208.36	*	3.263E+00	1.479E+00	2.163E+00	1.323E-01	1.509
LU-177M		52.97		-1.138E+00	1.492E+00	2.396E+00	1.529E-01	-0.475
		54.07		-2.884E-01	7.917E-01	1.292E+00	8.244E-02	-0.223
	+	61.30		2.455E+00	1.917E+00	2.788E+00	1.829E-01	0.881
		121.62		-2.726E-02	4.587E-01	7.525E-01	4.942E-02	-0.036
		147.16		-1.276E-01	7.989E-01	1.297E+00	7.498E-02	-0.098
		171.86		-7.503E-01	5.983E-01	9.132E-01	4.890E-02	-0.822
		218.09		6.358E-01	1.067E+00	1.769E+00	1.120E-01	0.359
		268.79		2.049E+00	1.095E+00	1.893E+00	1.423E-01	1.082
		319.02		2.598E-01	3.161E-01	5.526E-01	3.945E-02	0.470
		367.43		-3.660E-01	1.076E+00	1.755E+00	1.054E-01	-0.209
		413.65	*	-4.758E-02	2.307E-01	3.778E-01	2.063E-02	-0.126
HF-181		56.28		3.947E-01	8.759E-01	1.494E+00	9.536E-02	0.264
		57.53		4.407E-01	5.077E-01	8.206E-01	5.244E-02	0.537
		65.20		-5.617E-01	1.089E+00	1.558E+00	1.071E-01	-0.360
		133.02		1.679E-02	9.141E-02	1.328E-01	8.220E-03	0.126
		136.25		-4.853E-01	5.605E-01	8.837E-01	5.385E-02	-0.549
		345.85		-8.946E-02	2.609E-01	3.681E-01	2.415E-02	-0.243
		482.03	*	1.426E-02	5.551E-02	9.294E-02	5.544E-03	0.153
W-181		56.28		1.571E-01	3.478E-01	5.931E-01	3.787E-02	0.265
		57.53		1.751E-01	2.018E-01	3.261E-01	2.084E-02	0.537

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		65.20	*	-2.214E-01	4.295E-01	6.144E-01	4.223E-02	-0.360
TA-182		67.75		-2.844E-02	1.318E-01	1.920E-01	1.360E-02	-0.148
		100.10		1.776E-01	2.229E-01	3.674E-01	2.905E-02	0.483
		152.43		3.717E-01	4.084E-01	6.918E-01	3.896E-02	0.537
		222.10		-4.362E-01	4.375E-01	6.670E-01	4.285E-02	-0.654
		1001.68		5.426E-01	2.529E+00	4.290E+00	3.146E-01	0.126
	+	1121.28		7.990E-01	3.012E-01	4.470E-01	2.742E-02	1.787
		1189.05		-3.029E-01	3.899E-01	5.891E-01	3.293E-02	-0.514
		1221.42	*	-2.105E-02	2.734E-01	4.439E-01	2.569E-02	-0.047
		1230.97		-3.375E-01	7.495E-01	1.038E+00	6.072E-02	-0.325
RE-183		57.98		5.660E-02	2.152E-01	3.223E-01	2.061E-02	0.176
		59.32		-4.850E-02	1.200E-01	1.735E-01	1.112E-02	-0.279
		67.20		-6.653E-02	2.365E-01	3.435E-01	2.418E-02	-0.194
		162.32	*	5.004E-02	1.328E-01	2.200E-01	1.176E-02	0.227
	+	208.81		3.325E+00	1.507E+00	2.229E+00	1.366E-01	1.492
		291.72		1.326E-01	1.344E+00	1.984E+00	1.508E-01	0.067
RE-184		57.98		2.102E-01	7.992E-01	1.197E+00	7.653E-02	0.176
		59.32		-1.800E-01	4.451E-01	6.439E-01	4.126E-02	-0.279
		67.20		-2.470E-01	8.780E-01	1.275E+00	8.975E-02	-0.194
		161.27		6.120E-02	4.370E-01	7.165E-01	3.854E-02	0.085
		216.55		1.895E-01	3.382E-01	5.593E-01	3.523E-02	0.339
		252.85	*	-1.482E-01	2.960E-01	4.602E-01	3.284E-02	-0.322
		318.01		7.615E-02	5.459E-01	9.227E-01	6.605E-02	0.083
		792.07		2.341E+00	1.383E+00	2.364E+00	1.816E-01	0.990
		903.28		-6.978E-01	1.378E+00	1.925E+00	1.546E-01	-0.363
		920.93		-4.167E-01	5.335E-01	7.898E-01	6.259E-02	-0.528
OS-185		59.72		-1.673E-01	3.233E-01	4.647E-01	2.988E-02	-0.360
		61.14		3.055E-01	1.898E-01	2.988E-01	1.956E-02	1.023
		69.30		1.259E-01	3.508E-01	5.243E-01	3.783E-02	0.240
		592.07		-1.016E+00	3.374E+00	5.366E+00	3.582E-01	-0.189
		646.12	*	2.560E-02	5.482E-02	9.227E-02	6.443E-03	0.277
		717.42		7.133E-01	1.133E+00	1.924E+00	1.414E-01	0.371
		874.81		2.768E-01	6.521E-01	1.133E+00	9.046E-02	0.244
		880.27		-4.478E-01	8.895E-01	1.406E+00	1.125E-01	-0.319
RE-188		155.03	*	1.323E-01	2.086E-01	3.493E-01	1.941E-02	0.379
		477.96		1.918E-01	4.013E+00	6.630E+00	3.936E-01	0.029
		633.10		-3.000E+00	3.288E+00	4.859E+00	3.359E-01	-0.617
W-188	+	63.58		9.172E+01	7.161E+01	1.001E+02	6.751E+00	0.916
		227.08		9.186E+00	1.599E+01	2.644E+01	1.729E+00	0.347
		290.67	*	-5.379E+00	1.045E+01	1.475E+01	1.123E+00	-0.365
IR-192	+	295.96		9.518E-01	1.999E-01	3.468E-01	2.638E-02	2.744
		308.46		5.734E-02	1.112E-01	1.919E-01	1.417E-02	0.299
		316.51	*	-9.951E-03	4.015E-02	6.639E-02	4.787E-03	-0.150
		468.07		-2.274E-02	8.833E-02	1.226E-01	8.268E-03	-0.185
		604.41		-4.971E-01	6.409E-01	8.134E-01	9.649E-02	-0.611
		612.46		4.443E-01	1.098E+00	1.604E+00	1.341E-01	0.277
AU-195		65.12		-1.053E-01	1.993E-01	2.850E-01	1.957E-02	-0.369
		66.83		-1.086E-02	1.114E-01	1.625E-01	1.139E-02	-0.067
	+	75.70		2.147E+00	2.895E-01	5.749E-01	4.484E-02	3.735

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	1.720E-01	3.125E-01	4.637E-01	3.714E-02	0.371
		129.76		2.668E+00	4.187E+00	6.225E+00	3.915E-01	0.429
TL-200		367.94	*	-3.213E-05	4.187E+00	Half-Life too short		
		579.30		7.238E-04	4.187E+00	Half-Life too short		
		828.27		1.110E-03	4.187E+00	Half-Life too short		
		1205.75		6.570E-04	4.187E+00	Half-Life too short		
TL-201		68.90		9.423E-01	4.186E+00	6.220E+00	4.467E-01	0.151
		70.82		2.699E-01	2.437E+00	3.599E+00	2.644E-01	0.075
		80.30		6.639E+00	5.559E+00	6.517E+00	5.391E-01	1.019
		135.34		-6.597E+00	2.353E+01	3.812E+01	2.333E+00	-0.173
		167.43	*	1.731E+00	6.404E+00	1.055E+01	5.558E-01	0.164
TL-202		68.90		1.066E-01	4.734E-01	7.035E-01	5.052E-02	0.151
		70.82		3.044E-02	2.748E-01	4.059E-01	2.982E-02	0.075
		80.30		7.491E-01	6.272E-01	7.353E-01	6.082E-02	1.019
		439.56	*	5.938E-02	7.754E-02	1.348E-01	7.627E-03	0.440
HG-203		70.83		1.452E-01	1.260E+00	1.861E+00	2.389E-01	0.078
	+	72.87		4.380E+00	8.710E-01	1.446E+00	1.811E-01	3.029
	+	82.60		2.730E+00	1.965E+00	2.158E+00	2.953E-01	1.265
		279.20	*	-6.917E-03	5.083E-02	8.244E-02	6.626E-03	-0.084
BI-207	+	72.80		1.310E+00	2.251E-01	4.270E-01	3.213E-02	3.068
	+	74.97		7.759E-01	1.334E-01	3.176E-01	2.455E-02	2.443
		84.90		1.144E+00	3.348E-01	4.321E-01	3.797E-02	2.647
		569.67		-1.957E-02	4.206E-02	6.456E-02	4.223E-03	-0.303
		1063.62	*	4.710E-03	6.926E-02	1.149E-01	7.768E-03	0.041
		1770.23		4.799E-01	5.649E-01	9.957E-01	5.627E-02	0.482
TL-207		81.07		2.320E-01	3.420E-01	3.841E-01	3.209E-02	0.604
	+	83.78		3.194E-01	2.274E-01	2.477E-01	2.144E-02	1.290
		94.90		5.515E-02	3.059E-01	4.493E-01	3.763E-02	0.123
		122.32		1.789E-01	2.157E+00	3.560E+00	2.616E-01	0.050
		144.24		2.909E-01	8.723E-01	1.429E+00	1.041E-01	0.204
		154.21		7.819E-01	4.862E-01	8.424E-01	5.756E-02	0.928
		269.46		4.868E-01	2.607E-01	4.501E-01	3.481E-02	1.082
		323.87	*	-1.604E-01	9.357E-01	1.346E+00	2.287E-01	-0.119
	+	338.28		8.069E+00	2.123E+00	3.137E+00	3.474E-01	2.573
		445.03		-2.494E+00	2.633E+00	4.012E+00	4.097E-01	-0.622
PO-209		260.50		-2.825E+00	1.203E+01	1.898E+01	1.389E+00	-0.149
		262.80		1.910E+01	3.360E+01	5.542E+01	4.086E+00	0.345
		896.60	*	6.045E+00	9.258E+00	1.630E+01	1.313E+00	0.371
BI-210		46.50	*	1.334E+00	2.974E+00	5.020E+00	3.721E-01	0.266
PB-210		46.50	*	1.334E+00	2.974E+00	5.020E+00	3.721E-01	0.266
PO-210		46.50	*	1.334E+00	2.973E+00	5.020E+00	3.148E-01	0.266
PB-211		404.84	*	-1.247E+00	1.459E+00	1.925E+00	1.200E+00	-0.648
		427.08		8.515E-01	2.599E+00	4.307E+00	2.661E+00	0.198
		831.96		5.772E-01	1.559E+00	2.616E+00	1.637E+00	0.221
BI-212	+	727.18	*	8.675E-01	6.132E-01	7.839E-01	7.034E-02	1.107
		785.46		1.614E+00	2.089E+00	3.721E+00	2.847E-01	0.434
		1620.62		7.945E-01	1.552E+00	2.783E+00	1.693E-01	0.286
PO-215		81.07		2.320E-01	3.420E-01	3.841E-01	3.209E-02	0.604
	+	83.78		3.194E-01	2.274E-01	2.477E-01	2.144E-02	1.290

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		5.515E-02	3.059E-01	4.493E-01	3.763E-02	0.123
		122.32		1.789E-01	2.157E+00	3.560E+00	2.616E-01	0.050
		144.24		2.909E-01	8.723E-01	1.429E+00	1.041E-01	0.204
		154.21		7.819E-01	4.862E-01	8.424E-01	5.756E-02	0.928
		269.46		4.868E-01	2.607E-01	4.501E-01	3.481E-02	1.082
		323.87	*	-1.604E-01	9.357E-01	1.346E+00	2.287E-01	-0.119
	+	338.28		8.069E+00	2.123E+00	3.137E+00	3.474E-01	2.573
		445.03		-2.494E+00	2.633E+00	4.012E+00	4.097E-01	-0.622
RN-219		271.23		3.988E-01	3.352E-01	5.634E-01	5.328E-02	0.708
		401.81	*	-1.432E-02	5.260E-01	8.719E-01	1.171E-01	-0.016
RN-220		549.76	*	-1.171E+01	3.165E+01	5.015E+01	3.218E+00	-0.234
RA-223		81.07		2.320E-01	3.420E-01	3.841E-01	3.209E-02	0.604
	+	83.78		3.194E-01	2.274E-01	2.477E-01	2.144E-02	1.290
		94.90		5.515E-02	3.059E-01	4.493E-01	3.763E-02	0.123
		122.32		1.789E-01	2.157E+00	3.560E+00	2.616E-01	0.050
		144.24		2.909E-01	8.723E-01	1.429E+00	1.041E-01	0.204
		154.21		7.819E-01	4.862E-01	8.424E-01	5.756E-02	0.928
		269.46		4.868E-01	2.607E-01	4.501E-01	3.481E-02	1.082
		323.87	*	-1.604E-01	9.357E-01	1.346E+00	2.287E-01	-0.119
	+	338.28		8.069E+00	2.123E+00	3.137E+00	3.474E-01	2.573
		445.03		-2.494E+00	2.633E+00	4.012E+00	4.097E-01	-0.622
AC-227		79.80		1.703E+00	2.605E+00	2.899E+00	6.189E-01	0.587
		236.00		4.863E+00	6.896E-01	9.154E-01	1.007E-01	5.313
		256.20	*	4.796E-02	4.789E-01	7.708E-01	1.126E-01	0.062
		286.10		1.907E+00	1.949E+00	3.412E+00	4.302E-01	0.559
	+	299.80		3.559E+00	2.643E+00	3.246E+00	5.503E-01	1.096
		304.40		-1.412E+00	2.532E+00	3.521E+00	6.302E-01	-0.401
		334.20		-4.954E-01	4.943E+00	4.822E+00	9.009E-01	-0.103
TH-227		79.80		1.703E+00	2.606E+00	2.899E+00	6.269E-01	0.587
		94.00		9.438E+00	3.368E+00	4.480E+00	9.729E-01	2.107
		236.00		4.863E+00	6.412E-01	9.154E-01	8.868E-02	5.313
		256.20	*	4.796E-02	4.790E-01	7.708E-01	1.344E-01	0.062
		286.10		1.907E+00	2.720E+00	3.412E+00	3.422E+00	0.559
	+	299.80		3.559E+00	2.643E+00	3.246E+00	5.503E-01	1.096
		304.40		-1.412E+00	2.532E+00	3.521E+00	6.302E-01	-0.401
		334.20		-4.954E-01	4.943E+00	4.822E+00	9.009E-01	-0.103
TH-229	+	85.43		9.915E-01	2.635E-01	4.400E-01	3.895E-02	2.253
	+	88.47		2.515E-01	8.350E-02	2.528E-01	2.301E-02	0.995
		100.00		1.995E-01	2.338E-01	3.861E-01	3.056E-02	0.517
		193.63	*	-3.066E-01	6.364E-01	1.006E+00	5.833E-02	-0.305
		210.97		4.377E-01	1.079E+00	1.561E+00	9.635E-02	0.280
PA-231		283.67	*	6.226E-01	1.897E+00	3.245E+00	4.765E-01	0.192
		301.29		9.158E-01	7.845E-01	1.234E+00	1.413E-01	0.742
TH-231		81.07		2.320E-01	3.420E-01	3.841E-01	3.209E-02	0.604
	+	83.78		3.194E-01	2.274E-01	2.477E-01	2.144E-02	1.290
		94.90		5.515E-02	3.059E-01	4.493E-01	3.763E-02	0.123
		122.32		1.789E-01	2.157E+00	3.560E+00	2.616E-01	0.050
		144.24		2.909E-01	8.723E-01	1.429E+00	1.041E-01	0.204
		154.21		7.819E-01	4.862E-01	8.424E-01	5.756E-02	0.928

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		4.868E-01	2.607E-01	4.501E-01	3.481E-02	1.082
		323.87	*	-1.604E-01	9.357E-01	1.346E+00	2.287E-01	-0.119
	+	338.28		8.069E+00	2.123E+00	3.137E+00	3.474E-01	2.573
		445.03		-2.494E+00	2.633E+00	4.012E+00	4.097E-01	-0.622
U-231		84.21		1.656E+01	7.235E+00	8.974E+00	7.814E-01	1.845
	+	92.29		9.346E+00	2.452E+00	4.040E+00	3.493E-01	2.313
		95.87	*	-9.259E-01	1.173E+00	1.633E+00	1.352E-01	-0.567
		108.00		-9.317E-01	2.072E+00	3.360E+00	2.464E-01	-0.277
PA-233	+	75.28		2.264E+01	4.839E+00	9.508E+00	1.415E+00	2.382
	+	86.59		8.656E+00	3.182E+00	3.697E+00	9.960E-01	2.341
	+	300.12		9.922E-01	7.312E-01	8.970E-01	1.277E-01	1.106
		311.98	*	-6.824E-02	7.257E-02	1.146E-01	8.662E-03	-0.596
		340.50		1.522E+00	8.938E-01	1.361E+00	3.159E-01	1.118
		398.62		-3.938E-01	2.633E+00	4.330E+00	1.115E+00	-0.091
		415.76		1.613E-01	2.142E+00	3.567E+00	7.312E-01	0.045
PA-234	+	63.00		2.696E+00	2.133E+00	2.968E+00	4.310E-01	0.908
		94.67		2.488E-01	2.183E-01	3.325E-01	4.073E-02	0.748
		98.44		6.158E-02	1.335E-01	1.909E-01	1.063E-01	0.323
		99.86		5.515E-01	5.938E-01	9.831E-01	7.793E-02	0.561
		111.00		1.054E-01	2.273E-01	3.811E-01	4.225E-02	0.276
		131.20		-3.302E-02	1.478E-01	2.098E-01	1.310E-02	-0.157
		152.70		4.447E-01	4.020E-01	6.771E-01	1.066E-01	0.657
	+	186.00		6.700E+00	3.120E+00	3.236E+00	9.877E-01	2.071
		226.40		6.595E-02	5.174E-01	8.376E-01	1.000E-01	0.079
		227.20		3.145E-01	5.474E-01	9.053E-01	5.920E-02	0.347
		248.90		3.698E-01	1.033E+00	1.683E+00	3.677E-01	0.220
	+	293.70		6.067E+00	1.565E+00	2.184E+00	3.669E-01	2.778
		369.80		2.074E-01	1.057E+00	1.781E+00	3.715E-01	0.116
		568.70		-6.691E-01	1.365E+00	2.090E+00	1.366E-01	-0.320
		569.50		-1.781E-01	3.730E-01	5.718E-01	3.740E-02	-0.311
		574.00		1.466E-01	1.970E+00	3.232E+00	2.122E-01	0.045
		699.00		1.592E-01	9.799E-01	1.601E+00	2.962E-01	0.099
		706.10		6.091E-01	1.505E+00	2.463E+00	1.093E+00	0.247
		733.00		-1.183E-01	5.448E-01	7.321E-01	1.593E-01	-0.162
		742.81		1.599E-01	1.597E+00	2.588E+00	1.736E+00	0.062
	+	796.30		2.143E+00	1.739E+00	2.250E+00	6.024E-01	0.953
		805.60		-2.064E-01	1.170E+00	1.927E+00	5.860E-01	-0.107
		819.60		1.371E+00	1.628E+00	2.775E+00	1.050E+00	0.494
		826.30		-8.037E-01	1.063E+00	1.550E+00	6.913E-01	-0.518
		831.60		-1.526E-01	7.801E-01	1.281E+00	3.794E-01	-0.119
		876.40		8.527E-01	1.299E+00	1.734E+00	1.782E+00	0.492
		880.51		-1.602E-01	3.284E-01	5.203E-01	4.165E-02	-0.308
		883.24		-1.925E-01	3.539E-01	5.163E-01	3.467E-01	-0.373
		899.00		3.752E-01	1.048E+00	1.780E+00	7.763E-01	0.211
		925.00		-4.319E-01	1.410E+00	2.272E+00	1.794E-01	-0.190
		926.50		2.759E-02	2.110E-01	3.549E-01	8.887E-02	0.078
		946.00	*	-3.006E-01	3.874E-01	5.886E-01	1.082E-01	-0.511
		949.00		6.222E-01	5.667E-01	1.028E+00	7.959E-02	0.605
		980.50		-1.160E+00	9.376E-01	1.352E+00	1.015E-01	-0.858

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		3.035E-01	1.347E+00	2.235E+00	1.449E+00	0.136
PA-234M		766.41		2.794E+01	3.312E+01	3.954E+01	3.027E+01	0.707
		1001.03	*	4.053E+00	8.247E+00	1.431E+01	1.463E+00	0.283
U-235	+	89.95		2.525E+00	1.123E+00	2.374E+00	7.344E-01	1.064
	+	93.35		3.673E+00	1.374E+00	1.566E+00	4.386E-01	2.345
		105.00		-2.716E-01	1.323E+00	2.165E+00	6.396E-01	-0.125
		143.76	*	1.391E-01	2.682E-01	4.412E-01	7.205E-02	0.315
		163.35		4.026E-01	5.843E-01	9.734E-01	1.736E-01	0.414
	+	185.71		2.481E-01	8.839E-02	1.211E-01	6.820E-03	2.049
		205.31		6.560E-01	7.240E-01	1.069E+00	1.931E-01	0.614
NP-236		94.67		1.920E-01	1.648E-01	2.526E-01	2.121E-02	0.760
		98.44		4.658E-02	9.761E-02	1.443E-01	1.162E-02	0.323
		111.00		7.970E-02	1.718E-01	2.883E-01	2.060E-02	0.276
		160.31	*	-1.593E-02	9.846E-02	1.593E-01	8.613E-03	-0.100
NP-239		99.55		2.114E-01	2.049E-01	3.280E-01	2.608E-02	0.645
		117.00	*	-6.485E-02	2.285E-01	3.717E-01	2.530E-02	-0.174
	+	209.75		2.658E+00	1.205E+00	1.772E+00	1.089E-01	1.500
		228.18		1.724E-01	2.836E-01	4.697E-01	3.082E-02	0.367
		277.60		6.282E-02	2.475E-01	3.912E-01	3.023E-02	0.161
		334.30		-3.271E-01	2.799E+00	2.724E+00	1.859E-01	-0.120
AM-241		59.54	*	-7.842E-02	1.716E-01	2.475E-01	1.790E-02	-0.317
CM-243		99.55		2.176E-01	2.108E-01	3.375E-01	2.684E-02	0.645
		103.76	*	6.263E-02	1.185E-01	1.997E-01	1.523E-02	0.314
		117.00		-6.671E-02	2.350E-01	3.823E-01	2.602E-02	-0.174
	+	209.75		2.620E+00	1.188E+00	1.747E+00	1.074E-01	1.500
		228.18		1.742E-01	2.865E-01	4.746E-01	3.114E-02	0.367
		277.60		6.333E-02	2.495E-01	3.944E-01	3.047E-02	0.161
CM-247		278.00		3.471E-01	9.723E-01	1.618E+00	1.252E-01	0.215
		287.40		2.708E-01	1.597E+00	2.646E+00	2.026E-01	0.102
		402.60	*	-1.175E-02	4.741E-02	7.752E-02	4.166E-03	-0.152
CF-249		252.85		-5.592E-01	1.117E+00	1.736E+00	1.239E-01	-0.322
		333.44		-1.486E-02	3.667E-01	3.611E-01	2.471E-02	-0.041
		387.95	*	3.057E-03	5.007E-02	8.358E-02	4.517E-03	0.037
CF-251		176.60	*	9.018E-02	1.559E-01	2.599E-01	1.416E-02	0.347
		227.00		2.751E-01	4.873E-01	8.054E-01	5.263E-02	0.342
		285.00		1.462E+00	2.144E+00	3.730E+00	2.869E-01	0.392

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433006      *
* Acquisition date :  7-JUL-2009 06:38:46 Detector SN#    :                 *
* Detector ID        : GAM11               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.54      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433006           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 9.2890E+01 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.189E+01	2.906E+00	6.733E-01	0.000E+00
CD-109	1.871E+00	6.086E-01	1.470E+00	0.000E+00
SN-126	4.421E-01	1.151E-01	1.453E-01	0.000E+00
BA-137M	1.154E-01	6.088E-02	7.162E-02	0.000E+00
CS-137	1.220E-01	6.436E-02	7.571E-02	0.000E+00
TL-208	5.860E-01	1.020E-01	7.305E-02	0.000E+00
BI-211	4.330E+00	5.819E-01	3.880E-01	0.000E+00
PB-212	1.904E+00	1.975E-01	1.055E-01	0.000E+00
PO-212	1.904E+00	1.975E-01	1.055E-01	0.000E+00
BI-214	1.236E+00	2.155E-01	1.375E-01	0.000E+00
PB-214	1.506E+00	2.166E-01	1.354E-01	0.000E+00
PO-214	1.506E+00	2.166E-01	1.354E-01	0.000E+00
PO-216	1.904E+00	1.975E-01	1.055E-01	0.000E+00
PO-218	1.506E+00	2.166E-01	1.354E-01	0.000E+00
RA-224	5.225E+00	1.425E+00	1.201E+00	0.000E+00
RA-226	1.236E+00	2.155E-01	1.375E-01	0.000E+00
AC-228	1.722E+00	4.043E-01	2.730E-01	0.000E+00
RA-228	1.722E+00	4.043E-01	2.730E-01	0.000E+00
TH-228	1.904E+00	1.975E-01	1.055E-01	0.000E+00
TH-230	1.236E+00	2.155E-01	1.375E-01	0.000E+00
TH-232	1.722E+00	4.043E-01	2.730E-01	0.000E+00
TH-234	2.313E+00	1.805E+00	2.184E+00	0.000E+00
U-234	1.236E+00	2.155E-01	1.375E-01	0.000E+00
NP-237	1.298E+00	4.281E-01	5.117E-01	0.000E+00
U-238	2.313E+00	1.805E+00	2.184E+00	0.000E+00
AM-243	4.323E-01	7.281E-02	9.629E-02	0.000E+00
ANH-511	2.070E-01	8.295E-02	6.055E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	1.126E-01	4.055E-01	6.858E-01	0.000E+00	NOT IDENT.
NA-22	-4.175E-02	5.041E-02	7.452E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.790E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.212E-02	3.182E-02	5.743E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.130E-02	8.149E-02	0.000E+00	NOT IDENT.
SC-46	3.980E-02	4.861E-02	8.724E-02	0.000E+00	FAIL ABUN
V-48	1.978E-02	8.190E-02	1.399E-01	0.000E+00	NOT IDENT.
CR-51	2.965E-01	4.386E-01	7.667E-01	0.000E+00	NOT IDENT.
MN-52	-2.796E-02	2.127E-01	3.392E-01	0.000E+00	NOT IDENT.
MN-54	5.938E-03	4.650E-02	7.922E-02	0.000E+00	NOT IDENT.
CO-56	2.663E-02	4.957E-02	8.709E-02	0.000E+00	FAIL ABUN
CO-57	7.812E-03	3.016E-02	5.048E-02	0.000E+00	NOT IDENT.
CO-58	1.744E-02	4.533E-02	7.909E-02	0.000E+00	NOT IDENT.
FE-59	-1.221E-01	1.108E-01	1.627E-01	0.000E+00	NOT IDENT.
CO-60	2.556E-03	5.117E-02	8.440E-02	0.000E+00	NOT IDENT.
ZN-65	3.220E-02	1.339E-01	2.003E-01	0.000E+00	NOT IDENT.
GE-68	-9.882E-02	1.584E+00	2.617E+00	0.000E+00	NOT IDENT.
AS-73	-3.746E-01	7.368E-01	1.203E+00	0.000E+00	NOT IDENT.
AS-74	-5.061E-02	1.137E-01	1.802E-01	0.000E+00	NOT IDENT.
SE-75	-5.577E-02	5.783E-02	8.799E-02	0.000E+00	NOT IDENT.
BR-77	-1.220E+01	8.911E+00	1.312E+01	0.000E+00	FAIL ABUN
SR-82	1.076E-01	4.536E-01	6.839E-01	0.000E+00	NOT IDENT.
RB-83	-1.241E-01	8.572E-02	1.252E-01	0.000E+00	NOT IDENT.
RB-84	-5.170E-02	7.589E-02	1.186E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.906E+00	1.651E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.008E-02	8.345E-02	0.000E+00	NOT IDENT.
RB-86	1.859E-01	9.643E-01	1.631E+00	0.000E+00	NOT IDENT.
Y-88	-8.762E-03	4.453E-02	6.845E-02	0.000E+00	NOT IDENT.
ZR-88	-2.409E-02	3.683E-02	5.916E-02	0.000E+00	NOT IDENT.
Y-91	-2.519E-01	2.417E+01	3.985E+01	0.000E+00	NOT IDENT.
NB-94	-3.729E-02	4.713E-02	7.187E-02	0.000E+00	NOT IDENT.
NB-95	4.900E-02	6.155E-02	9.365E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	2.211E-01	3.831E-01	0.000E+00	NOT IDENT.
ZR-95	7.537E-02	8.705E-02	1.516E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.397E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.533E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-9.776E+00	1.009E+01	1.463E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.170E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.781E-02	4.227E-02	6.776E-02	0.000E+00	FAIL ABUN
RH-102	-1.046E-02	3.698E-02	6.022E-02	0.000E+00	NOT IDENT.
RU-103	2.759E-02	5.002E-02	8.588E-02	0.000E+00	FAIL ABUN
RH-106	2.258E-01	3.960E-01	6.770E-01	0.000E+00	FAIL ABUN
RU-106	2.258E-01	3.953E-01	6.770E-01	0.000E+00	FAIL ABUN
AG-108M	-1.178E-02	3.880E-02	6.335E-02	0.000E+00	NOT IDENT.
AG-110M	2.026E-02	4.524E-02	6.742E-02	0.000E+00	NOT IDENT.
IN-111	-6.292E-02	1.039E+00	1.457E+00	0.000E+00	NOT IDENT.
IN-113M	-2.809E-02	5.315E-02	8.609E-02	0.000E+00	NOT IDENT.
SN-113	-2.809E-02	5.315E-02	8.609E-02	0.000E+00	NOT IDENT.
IN-114M	-1.911E-02	2.401E-01	3.408E-01	0.000E+00	NOT IDENT.
CD-115	-4.231E+00	8.709E+00	1.384E+01	0.000E+00	NOT IDENT.
SN-117M	-1.976E-02	6.156E-02	9.968E-02	0.000E+00	NOT IDENT.
SB-122	1.566E+00	1.856E+00	3.239E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.269E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-9.608E-03	3.398E-02	5.512E-02	0.000E+00	NOT IDENT.
I-124	3.592E-01	6.893E-01	1.037E+00	0.000E+00	NOT IDENT.
SB-124	3.355E-02	8.008E-02	1.450E-01	0.000E+00	FAIL ABUN
SB-125	1.373E-02	1.117E-01	1.879E-01	0.000E+00	FAIL ABUN
TE-125M	2.886E+00	1.114E+01	1.869E+01	0.000E+00	NOT IDENT.
I-126	1.034E-01	2.300E-01	3.416E-01	0.000E+00	NOT IDENT.
SB-126	-5.250E-02	1.935E-01	2.759E-01	0.000E+00	NOT IDENT.
SB-127	6.049E-01	1.209E+00	2.061E+00	0.000E+00	NOT IDENT.
XE-127	6.068E-03	6.108E-02	9.237E-02	0.000E+00	NOT IDENT.
I-131	1.304E-02	1.156E-01	1.957E-01	0.000E+00	NOT IDENT.
TE-132	3.908E-01	6.405E-01	1.066E+00	0.000E+00	NOT IDENT.
BA-133	3.705E-02	5.317E-02	8.247E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.354E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.102E-01	8.312E-02	1.145E-01	0.000E+00	FAIL ABUN
CS-135	3.464E-01	2.127E-01	3.663E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.366E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.258E-02	1.250E-01	2.028E-01	0.000E+00	FAIL ABUN
CE-139	-1.325E-02	3.616E-02	5.835E-02	0.000E+00	NOT IDENT.
BA-140	3.195E-01	3.070E-01	5.174E-01	0.000E+00	NOT IDENT.
LA-140	6.817E-02	7.689E-02	1.382E-01	0.000E+00	FAIL ABUN
CE-141	1.576E-02	7.449E-02	1.238E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.774E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.650E-01	2.798E-01	4.174E-01	0.000E+00	NOT IDENT.
PM-144	1.434E-02	4.631E-02	7.718E-02	0.000E+00	NOT IDENT.
PR-144	9.709E-01	3.136E+00	5.226E+00	0.000E+00	NOT IDENT.

PM-146	1.455E-02	5.369E-02	9.096E-02	0.000E+00	NOT IDENT.
ND-147	1.319E-01	5.991E-01	1.006E+00	0.000E+00	FAIL ABUN
PM-149	9.263E+01	7.462E+01	1.320E+02	0.000E+00	NOT IDENT.
EU-152	-3.326E-02	1.262E-01	1.897E-01	0.000E+00	FAIL ABUN
GD-153	3.804E-02	1.057E-01	1.565E-01	0.000E+00	FAIL ABUN
EU-154	-1.123E-01	1.416E-01	2.101E-01	0.000E+00	NOT IDENT.
EU-155	1.188E-02	1.310E-01	2.186E-01	0.000E+00	FAIL ABUN
TB-160	3.548E-02	1.551E-01	2.665E-01	0.000E+00	FAIL ABUN
HO-166M	-6.950E-02	8.316E-02	1.256E-01	0.000E+00	FAIL ABUN
TM-171	-3.999E+00	3.310E+01	4.859E+01	0.000E+00	NOT IDENT.
LU-176	1.303E-02	2.888E-02	4.890E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.450E+00	2.136E+00	0.000E+00	FAIL ABUN
LU-177M	-4.758E-02	2.261E-01	3.733E-01	0.000E+00	FAIL ABUN
HF-181	1.426E-02	5.440E-02	9.185E-02	0.000E+00	NOT IDENT.
W-181	-2.214E-01	4.209E-01	6.061E-01	0.000E+00	NOT IDENT.
TA-182	-2.105E-02	2.679E-01	4.390E-01	0.000E+00	FAIL ABUN
RE-183	5.004E-02	1.302E-01	2.172E-01	0.000E+00	FAIL ABUN
RE-184	-1.482E-01	2.901E-01	4.546E-01	0.000E+00	NOT IDENT.
OS-185	2.560E-02	5.373E-02	9.120E-02	0.000E+00	NOT IDENT.
RE-188	1.323E-01	2.044E-01	3.449E-01	0.000E+00	NOT IDENT.
W-188	-5.379E+00	1.024E+01	1.457E+01	0.000E+00	FAIL ABUN
IR-192	-9.951E-03	3.934E-02	6.558E-02	0.000E+00	FAIL ABUN
AU-195	1.720E-01	3.063E-01	4.577E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.306E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.731E+00	6.275E+00	1.041E+01	0.000E+00	NOT IDENT.
TL-202	5.938E-02	7.599E-02	1.332E-01	0.000E+00	NOT IDENT.
HG-203	-6.917E-03	4.981E-02	8.143E-02	0.000E+00	FAIL ABUN
BI-207	4.710E-03	6.788E-02	1.136E-01	0.000E+00	FAIL ABUN
TL-207	-1.604E-01	9.169E-01	1.330E+00	0.000E+00	FAIL ABUN
PO-209	6.045E+00	9.073E+00	1.611E+01	0.000E+00	NOT IDENT.
BI-210	1.334E+00	2.914E+00	4.951E+00	0.000E+00	NOT IDENT.
PB-210	1.334E+00	2.914E+00	4.951E+00	0.000E+00	NOT IDENT.
PO-210	1.334E+00	2.914E+00	4.951E+00	0.000E+00	NOT IDENT.
PB-211	-1.247E+00	1.430E+00	1.902E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.010E-01	7.749E-01	0.000E+00	FAIL ABUN
PO-215	-1.604E-01	9.169E-01	1.330E+00	0.000E+00	FAIL ABUN
RN-219	-1.432E-02	5.155E-01	8.615E-01	0.000E+00	NOT IDENT.
RN-220	-1.171E+01	3.102E+01	4.956E+01	0.000E+00	NOT IDENT.
RA-223	-1.604E-01	9.169E-01	1.330E+00	0.000E+00	FAIL ABUN
AC-227	4.796E-02	4.694E-01	7.614E-01	0.000E+00	FAIL ABUN
TH-227	4.796E-02	4.694E-01	7.614E-01	0.000E+00	FAIL ABUN
TH-229	-3.066E-01	6.237E-01	9.936E-01	0.000E+00	FAIL ABUN
PA-231	6.226E-01	1.859E+00	3.205E+00	0.000E+00	NOT IDENT.
TH-231	-1.604E-01	9.169E-01	1.330E+00	0.000E+00	FAIL ABUN
U-231	-9.259E-01	1.149E+00	1.612E+00	0.000E+00	FAIL ABUN
PA-233	-6.824E-02	7.112E-02	1.132E-01	0.000E+00	FAIL ABUN
PA-234	-3.006E-01	3.796E-01	5.820E-01	0.000E+00	FAIL ABUN
PA-234M	4.053E+00	8.082E+00	1.415E+01	0.000E+00	NOT IDENT.
U-235	1.391E-01	2.628E-01	4.356E-01	0.000E+00	FAIL ABUN
NP-236	-1.593E-02	9.650E-02	1.573E-01	0.000E+00	NOT IDENT.
NP-239	-6.485E-02	2.239E-01	3.669E-01	0.000E+00	FAIL ABUN
AM-241	-7.842E-02	1.682E-01	2.441E-01	0.000E+00	NOT IDENT.
CM-243	6.263E-02	1.162E-01	1.971E-01	0.000E+00	FAIL ABUN
CM-247	-1.175E-02	4.647E-02	7.659E-02	0.000E+00	NOT IDENT.
CF-249	3.057E-03	4.907E-02	8.258E-02	0.000E+00	NOT IDENT.
CF-251	9.018E-02	1.528E-01	2.566E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:39:15.03

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*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433006.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:38:46.
Sample ID         : G232433006           Sample quantity  : 9.28900E+01 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.54  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1059	10.67*	1.257E+00	3.189E+01	3.189E+01	9.30
CD-109	88.03	119	3.72*	7.061E+00	1.832E+00	1.871E+00	33.20
SN-126	64.28	------	9.60	4.631E+00	------ Line Not Found		------
	86.94	279	8.90	6.903E+00	1.838E+00	1.838E+00	48.40
	87.57	279	37.00*	6.903E+00	4.421E-01	4.421E-01	26.57
BA-137M	661.65	64	89.98*	2.488E+00	1.153E-01	1.154E-01	53.85
CS-137	661.65	64	85.12*	2.488E+00	1.219E-01	1.220E-01	53.85
TL-208	277.35	------	6.80	4.923E+00	------ Line Not Found		------
	510.84	158	21.60	3.081E+00	9.582E-01	9.582E-01	41.74
	583.14	338	84.20*	2.765E+00	5.860E-01	5.860E-01	17.76
	860.37	40	12.46	1.985E+00	6.535E-01	6.535E-01	64.32
BI-211	72.87	416	1.27	5.896E+00	2.247E+01	2.247E+01	17.19
	351.07	572	12.94*	4.125E+00	4.330E+00	4.330E+00	13.71
PB-212	74.81	416	10.70	5.896E+00	2.666E+00	2.666E+00	19.56
	77.11	667	18.00	6.125E+00	2.445E+00	2.445E+00	13.49
	87.30	279	8.00	6.903E+00	2.045E+00	2.045E+00	28.39
	238.63	1154	44.60*	5.489E+00	1.904E+00	1.904E+00	10.58
	300.09	75	3.41	4.658E+00	1.920E+00	1.920E+00	72.93
PO-212	74.81	416	10.70	5.896E+00	2.666E+00	2.666E+00	19.56
	77.11	667	18.00	6.125E+00	2.445E+00	2.445E+00	13.49
	87.30	279	8.00	6.903E+00	2.045E+00	2.045E+00	28.39
	115.19	------	0.60	7.604E+00	------ Line Not Found		------
	238.63	1154	44.60*	5.489E+00	1.904E+00	1.904E+00	10.58
	300.09	75	3.41	4.658E+00	1.920E+00	1.920E+00	72.93
BI-214	609.31	378	46.30*	2.667E+00	1.236E+00	1.236E+00	17.79
	768.36	91	5.04	2.188E+00	3.351E+00	3.351E+00	52.39
	934.06	------	3.21	1.847E+00	------ Line Not Found		------
	1120.29	100	15.10	1.574E+00	1.704E+00	1.704E+00	38.27
	1238.11	43	5.94	1.443E+00	2.047E+00	2.047E+00	87.34
	1377.67	------	4.11	1.318E+00	------ Line Not Found		------
	1764.49	59	15.80	1.095E+00	1.370E+00	1.370E+00	37.57
PB-214	74.81	416	6.21	5.896E+00	4.594E+00	4.594E+00	18.72

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	667	10.50	6.125E+00	4.191E+00	4.191E+00	15.49
	87.30	279	4.67	6.903E+00	3.503E+00	3.503E+00	27.67
	241.98	278	7.49	5.440E+00	2.756E+00	2.756E+00	28.38
	295.21	283	19.20	4.709E+00	1.264E+00	1.264E+00	21.89
	351.92	572	37.20*	4.125E+00	1.506E+00	1.506E+00	14.67
PO-214	74.81	416	6.21	5.896E+00	4.594E+00	4.594E+00	18.72
	77.11	667	10.50	6.125E+00	4.191E+00	4.191E+00	15.49
	87.30	279	4.67	6.903E+00	3.503E+00	3.503E+00	27.67
	241.98	278	7.49	5.440E+00	2.756E+00	2.756E+00	28.38
	295.21	283	19.20	4.709E+00	1.264E+00	1.264E+00	21.89
	351.92	572	37.20*	4.125E+00	1.506E+00	1.506E+00	14.67
PO-216	74.81	416	10.70	5.896E+00	2.666E+00	2.666E+00	19.56
	77.11	667	18.00	6.125E+00	2.445E+00	2.445E+00	13.49
	87.30	279	8.00	6.903E+00	2.045E+00	2.045E+00	28.39
	238.63	1154	44.60*	5.489E+00	1.904E+00	1.904E+00	10.58
	300.09	75	3.41	4.658E+00	1.920E+00	1.920E+00	72.93
PO-218	74.81	416	6.21	5.896E+00	4.594E+00	4.594E+00	18.72
	77.11	667	10.50	6.125E+00	4.191E+00	4.191E+00	15.49
	87.30	279	4.67	6.903E+00	3.503E+00	3.503E+00	27.67
	241.98	278	7.49	5.440E+00	2.756E+00	2.756E+00	28.38
	295.21	283	19.20	4.709E+00	1.264E+00	1.264E+00	21.89
	351.92	572	37.20*	4.125E+00	1.506E+00	1.506E+00	14.67
RA-224	240.98	278	3.95*	5.440E+00	5.225E+00	5.225E+00	27.82
RA-226	609.31	378	46.30*	2.667E+00	1.236E+00	1.236E+00	17.79
	768.36	91	5.04	2.188E+00	3.351E+00	3.351E+00	52.39
	934.06	------	3.21	1.847E+00	------ Line Not Found		------
	1120.29	100	15.10	1.574E+00	1.704E+00	1.704E+00	38.27
	1238.11	43	5.94	1.443E+00	2.047E+00	2.047E+00	87.34
	1377.67	------	4.11	1.318E+00	------ Line Not Found		------
	1764.49	59	15.80	1.095E+00	1.370E+00	1.370E+00	37.57
AC-228	338.32	232	11.40	4.251E+00	1.932E+00	1.932E+00	47.36
	911.07	223	27.70*	1.889E+00	1.722E+00	1.722E+00	23.96
	969.11	95	16.60	1.789E+00	1.297E+00	1.297E+00	39.55
RA-228	338.32	232	11.40	4.251E+00	1.932E+00	1.932E+00	47.36
	911.07	223	27.70*	1.889E+00	1.722E+00	1.722E+00	23.96
	969.11	95	16.60	1.789E+00	1.297E+00	1.297E+00	39.55
TH-228	84.40	------	1.21	6.767E+00	------ Line Not Found		------
	238.60	1154	44.60*	5.489E+00	1.904E+00	1.904E+00	10.58
	300.10	75	3.41	4.658E+00	1.920E+00	1.920E+00	93.40
TH-230	609.31	378	46.30*	2.667E+00	1.236E+00	1.236E+00	17.79
	768.36	91	5.04	2.188E+00	3.351E+00	3.351E+00	52.39
	934.06	------	3.21	1.847E+00	------ Line Not Found		------
	1120.29	100	15.10	1.574E+00	1.704E+00	1.704E+00	38.27
	1238.11	43	5.94	1.443E+00	2.047E+00	2.047E+00	87.34
	1377.67	------	4.11	1.318E+00	------ Line Not Found		------
	1764.49	59	15.80	1.095E+00	1.370E+00	1.370E+00	37.57
TH-232	338.32	232	11.40	4.251E+00	1.932E+00	1.932E+00	24.79
	911.07	223	27.70*	1.889E+00	1.722E+00	1.722E+00	23.96
	969.11	95	16.60	1.789E+00	1.297E+00	1.297E+00	39.55

Sample ID : G232433006 Acquisition date : 7-JUL-2009 06:38:46

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	96	3.80*	4.405E+00	2.313E+00	2.313E+00	79.66
	92.38	294	5.41	7.191E+00	3.055E+00	3.055E+00	30.68
U-234	609.31	378	46.30*	2.667E+00	1.236E+00	1.236E+00	17.79
	768.36	91	5.04	2.188E+00	3.351E+00	3.351E+00	52.39
	934.06	------	3.21	1.847E+00	------ Line Not Found		------
	1120.29	100	15.10	1.574E+00	1.704E+00	1.704E+00	38.27
	1238.11	43	5.94	1.443E+00	2.047E+00	2.047E+00	87.34
	1377.67	------	4.11	1.318E+00	------ Line Not Found		------
	1764.49	59	15.80	1.095E+00	1.370E+00	1.370E+00	37.57
NP-237	86.50	279	12.60*	6.903E+00	1.298E+00	1.298E+00	33.64
	95.87	------	2.60	7.329E+00	------ Line Not Found		------
U-238	63.29	96	3.80*	4.405E+00	2.313E+00	2.313E+00	79.66
	92.38	294	5.41	7.191E+00	3.055E+00	3.055E+00	26.24
AM-243	74.67	416	66.00*	5.896E+00	4.323E-01	4.323E-01	17.19
	86.72	279	0.34	6.903E+00	4.869E+01	4.869E+01	26.57
	117.66	------	0.55	7.600E+00	------ Line Not Found		------
	142.18	------	0.13	7.314E+00	------ Line Not Found		------
ANH-511	511.00	158	100.00*	3.081E+00	2.070E-01	2.070E-01	40.90

Flag: "*" = Keyline

Sample ID : G232433006 Acquisition date : 7-JUL-2009 06:38:46

Total number of lines in spectrum 37
Number of unidentified lines 4
Number of lines tentatively identified by NID 33 89.19%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.189E+01	3.189E+01	0.297E+01	9.30	
CD-109	464.00D	1.02	1.832E+00	1.871E+00	0.621E+00	33.20	
SN-126	1.00E+05Y	1.00	4.421E-01	4.421E-01	1.175E-01	26.57	
BA-137M	30.17Y	1.00	1.153E-01	1.154E-01	0.621E-01	53.85	
CS-137	30.17Y	1.00	1.219E-01	1.220E-01	0.657E-01	53.85	
TL-208	1.41E+10Y	1.00	5.860E-01	5.860E-01	1.041E-01	17.76	
BI-211	7.04E+08Y	1.00	4.330E+00	4.330E+00	0.594E+00	13.71	
PB-212	1.41E+10Y	1.00	1.904E+00	1.904E+00	0.202E+00	10.58	
PO-212	1.41E+10Y	1.00	1.904E+00	1.904E+00	0.202E+00	10.58	
BI-214	1600.00Y	1.00	1.236E+00	1.236E+00	0.220E+00	17.79	
PB-214	1600.00Y	1.00	1.506E+00	1.506E+00	0.221E+00	14.67	
PO-214	1600.00Y	1.00	1.506E+00	1.506E+00	0.221E+00	14.67	
PO-216	1.41E+10Y	1.00	1.904E+00	1.904E+00	0.202E+00	10.58	
PO-218	1600.00Y	1.00	1.506E+00	1.506E+00	0.221E+00	14.67	
RA-224	1.41E+10Y	1.00	5.225E+00	5.225E+00	1.454E+00	27.82	
RA-226	1600.00Y	1.00	1.236E+00	1.236E+00	0.220E+00	17.79	
AC-228	1.41E+10Y	1.00	1.722E+00	1.722E+00	0.413E+00	23.96	
RA-228	1.41E+10Y	1.00	1.722E+00	1.722E+00	0.413E+00	23.96	
TH-228	1.41E+10Y	1.00	1.904E+00	1.904E+00	0.202E+00	10.58	
TH-230	4.47E+09Y	1.00	1.236E+00	1.236E+00	0.220E+00	17.79	
TH-232	1.41E+10Y	1.00	1.722E+00	1.722E+00	0.413E+00	23.96	
TH-234	4.47E+09Y	1.00	2.313E+00	2.313E+00	1.842E+00	79.66	
U-234	4.47E+09Y	1.00	1.236E+00	1.236E+00	0.220E+00	17.79	
NP-237	2.14E+06Y	1.00	1.298E+00	1.298E+00	0.437E+00	33.64	
U-238	4.47E+09Y	1.00	2.313E+00	2.313E+00	1.842E+00	79.66	
AM-243	7380.00Y	1.00	4.323E-01	4.323E-01	0.743E-01	17.19	
ANH-511	1.00E+09Y	1.00	2.070E-01	2.070E-01	0.846E-01	40.90	
	Total Activity :		7.335E+01	7.339E+01			

Grand Total Activity : 7.335E+01 7.339E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433006 Acquisition date : 7-JUL-2009 06:38:46

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	82.59	130	514	0.95	165.18	160	11	1.80E-02	70.7	6.64E+00	T
0	127.95	63	340	0.71	255.89	254	9	8.71E-03	****	7.52E+00	T
0	185.30	214	287	1.32	370.61	366	11	2.97E-02	35.2	6.45E+00	T
0	208.61	128	215	0.92	417.21	413	9	1.78E-02	44.9	6.00E+00	T
0	328.15	77	155	1.38	656.31	652	11	1.07E-02	66.7	4.35E+00	T
0	462.92	56	107	1.05	925.84	919	11	7.79E-03	78.2	3.33E+00	T
0	727.67	58	83	1.17	1455.34	1449	13	8.08E-03	70.1	2.30E+00	T
0	795.07	44	60	0.78	1590.14	1583	12	6.11E-03	76.6	2.13E+00	T
4	964.07	70	44	2.83	1928.14	1921	27	9.72E-03	54.5	1.80E+00	T
0	1409.72	18	15	2.78	2819.45	2809	14	2.56E-03	98.1	1.29E+00	
0	1588.26	20	9	1.02	3176.52	3172	9	2.73E-03	71.5	1.18E+00	
0	1593.22	10	15	1.04	3186.45	3181	10	1.39E-03	****	1.18E+00	
0	1848.34	15	5	1.00	3696.68	3685	18	2.11E-03	83.3	1.06E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:39:20.97

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433006.CNF;1 *
* Acquisition date  : 7-JUL-2009 06:38:46.  Detector SN#     :             *
* Detector ID       : GAM11                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.54          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433006            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 9.28900E+01 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 1-NOV-2008 15:37:21.59MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.189E+01	2.966E+00	6.807E-01	4.563E-02	46.851
CD-109	1.871E+00	6.210E-01	1.490E+00	1.364E-01	1.256
SN-126	4.421E-01	1.175E-01	1.472E-01	1.341E-02	3.003
BA-137M	1.154E-01	6.212E-02	7.245E-02	5.120E-03	1.592
CS-137	1.220E-01	6.567E-02	7.659E-02	5.428E-03	1.592
TL-208	5.860E-01	1.041E-01	7.391E-02	5.477E-03	7.929
BI-211	4.330E+00	5.937E-01	3.927E-01	2.753E-02	11.025
PB-212	1.904E+00	2.015E-01	1.069E-01	8.706E-03	17.823
PO-212	1.904E+00	2.015E-01	1.069E-01	8.706E-03	17.823
BI-214	1.236E+00	2.199E-01	1.392E-01	1.187E-02	8.883
PB-214	1.506E+00	2.210E-01	1.371E-01	1.196E-02	10.989
PO-214	1.506E+00	2.210E-01	1.371E-01	1.196E-02	10.989
PO-216	1.904E+00	2.015E-01	1.069E-01	8.706E-03	17.823
PO-218	1.506E+00	2.210E-01	1.371E-01	1.196E-02	10.989
RA-224	5.225E+00	1.454E+00	1.216E+00	8.337E-02	4.298
RA-226	1.236E+00	2.199E-01	1.392E-01	1.187E-02	8.883
AC-228	1.722E+00	4.126E-01	2.761E-01	2.973E-02	6.235
RA-228	1.722E+00	4.126E-01	2.761E-01	2.973E-02	6.235

Sample ID : G232433006 Acquisition date : 7-JUL-2009 06:38:46

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.904E+00	2.015E-01	1.068E-01	8.705E-03	17.825
TH-230	1.236E+00	2.199E-01	1.392E-01	1.187E-02	8.883
TH-232	1.722E+00	4.126E-01	2.761E-01	2.973E-02	6.235
TH-234	2.313E+00	1.842E+00	2.214E+00	3.799E-01	1.045
U-234	1.236E+00	2.199E-01	1.392E-01	1.187E-02	8.883
NP-237	1.298E+00	4.368E-01	5.185E-01	1.167E-01	2.504
U-238	2.313E+00	1.842E+00	2.214E+00	3.799E-01	1.045
AM-243	4.323E-01	7.430E-02	9.759E-02	7.515E-03	4.430
ANH-511	2.070E-01	8.465E-02	6.127E-02	3.776E-03	3.378

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.126E-01		4.138E-01	6.940E-01	4.765E-02	0.162
NA-22	-4.175E-02		5.144E-02	7.535E-02	4.619E-03	-0.554
NA-24	6.607E-02		9.134E-02	Half-Life too short		
AL-26	1.212E-02		3.247E-02	5.805E-02	3.202E-03	0.209
TI-44	2.573E-01		6.255E-02	8.258E-02	6.664E-03	3.116
SC-46	3.980E-02		4.960E-02	8.823E-02	7.089E-03	0.451
V-48	1.978E-02		8.357E-02	1.415E-01	1.059E-02	0.140
CR-51	2.965E-01		4.476E-01	7.761E-01	5.950E-02	0.382
MN-52	-2.796E-02		2.170E-01	3.430E-01	2.198E-02	-0.082
MN-54	5.938E-03		4.745E-02	8.013E-02	6.288E-03	0.074
CO-56	2.663E-02		5.058E-02	8.809E-02	6.951E-03	0.302
CO-57	7.812E-03		3.077E-02	5.114E-02	3.354E-03	0.153
CO-58	1.744E-02		4.626E-02	8.000E-02	6.223E-03	0.218
FE-59	-1.221E-01		1.130E-01	1.645E-01	1.201E-02	-0.742
CO-60	2.556E-03		5.221E-02	8.533E-02	5.530E-03	0.030
ZN-65	3.220E-02		1.366E-01	2.026E-01	1.259E-02	0.159
GE-68	-9.882E-02		1.616E+00	2.647E+00	1.752E-01	-0.037
AS-73	-3.746E-01		7.519E-01	1.220E+00	7.783E-02	-0.307
AS-74	-5.061E-02		1.160E-01	1.824E-01	1.222E-02	-0.278
SE-75	-5.577E-02		5.901E-02	8.909E-02	6.649E-03	-0.626
BR-77	-1.220E+01		9.092E+00	1.328E+01	8.270E-01	-0.918
SR-82	1.076E-01		4.628E-01	6.918E-01	5.268E-02	0.156
RB-83	-1.241E-01		8.747E-02	1.267E-01	7.887E-03	-0.980
RB-84	-5.170E-02		7.744E-02	1.199E-01	9.606E-03	-0.431
KR-85	1.829E+01		1.011E+01	1.670E+01	1.033E+00	1.095
SR-85	9.246E-02		5.110E-02	8.445E-02	5.222E-03	1.095
RB-86	1.859E-01		9.840E-01	1.650E+00	1.093E-01	0.113
Y-88	-8.762E-03		4.544E-02	6.920E-02	3.757E-03	-0.127
ZR-88	-2.409E-02		3.759E-02	5.987E-02	3.171E-03	-0.402
Y-91	-2.519E-01		2.466E+01	4.030E+01	2.292E+00	-0.006
NB-94	-3.729E-02		4.809E-02	7.270E-02	5.290E-03	-0.513
NB-95	4.900E-02		6.281E-02	9.473E-02	7.170E-03	0.517
NB-95M	1.395E+00		2.256E-01	3.879E-01	3.208E-02	3.595
ZR-95	7.537E-02		8.883E-02	1.533E-01	1.305E-02	0.492

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	1.677E-02		1.733E-02	Half-Life too short		
ZR-97	1.970E+00		3.844E-01	Half-Life too short		
MO-99	-9.776E+00		1.030E+01	1.480E+01	2.154E+00	-0.660
TC-99M	-9.218E+08		5.970E+08	Half-Life too short		
RH-101	1.781E-02		4.313E-02	6.862E-02	4.042E-03	0.260
RH-102	-1.046E-02		3.773E-02	6.094E-02	3.605E-03	-0.172
RU-103	2.759E-02		5.104E-02	8.691E-02	1.110E-02	0.317
RH-106	2.258E-01		4.041E-01	6.849E-01	8.417E-02	0.330
RU-106	2.258E-01		4.034E-01	6.849E-01	4.691E-02	0.330
AG-108M	-1.178E-02		3.959E-02	6.411E-02	3.929E-03	-0.184
AG-110M	2.026E-02		4.616E-02	6.821E-02	5.018E-03	0.297
IN-111	-6.292E-02		1.060E+00	1.476E+00	1.027E-01	-0.043
IN-113M	-2.809E-02		5.424E-02	8.713E-02	4.976E-03	-0.322
SN-113	-2.809E-02		5.424E-02	8.713E-02	4.976E-03	-0.322
IN-114M	-1.911E-02		2.450E-01	3.451E-01	1.976E-02	-0.055
CD-115	-4.231E+00		8.886E+00	1.400E+01	8.788E-01	-0.302
SN-117M	-1.976E-02		6.282E-02	1.010E-01	5.509E-03	-0.196
SB-122	1.566E+00		1.894E+00	3.277E+00	2.132E-01	0.478
I-123	-3.589E-01		6.476E-01	Half-Life too short		
TE-123M	-9.608E-03		3.468E-02	5.583E-02	3.085E-03	-0.172
I-124	3.592E-01		7.034E-01	1.049E+00	7.068E-02	0.342
SB-124	3.355E-02		8.172E-02	1.465E-01	9.360E-03	0.229
SB-125	1.373E-02		1.139E-01	1.901E-01	1.108E-02	0.072
TE-125M	2.886E+00		1.137E+01	1.893E+01	1.745E+00	0.152
I-126	1.034E-01		2.347E-01	3.456E-01	2.450E-02	0.299
SB-126	-5.250E-02		1.975E-01	2.791E-01	2.055E-02	-0.188
SB-127	6.049E-01		1.234E+00	2.085E+00	2.069E-01	0.290
XE-127	6.068E-03		6.233E-02	9.354E-02	5.608E-03	0.065
I-131	1.304E-02		1.179E-01	1.981E-01	1.332E-02	0.066
TE-132	3.908E-01		6.536E-01	1.079E+00	1.558E-01	0.362
BA-133	3.705E-02		5.425E-02	8.347E-02	9.870E-03	0.444
I-133	2.115E-03		1.201E-03	Half-Life too short		
CS-134	1.102E-01	+	8.481E-02	1.158E-01	8.991E-03	0.951
CS-135	3.464E-01		2.171E-01	3.709E-01	3.344E-02	0.934
I-135	7.024E+07		1.207E+08	Half-Life too short		
CS-136	-3.258E-02		1.275E-01	2.051E-01	1.510E-02	-0.159
CE-139	-1.325E-02		3.690E-02	5.910E-02	3.101E-03	-0.224
BA-140	3.195E-01		3.132E-01	5.236E-01	1.708E-01	0.610
LA-140	6.817E-02		7.846E-02	1.397E-01	8.581E-03	0.488
CE-141	1.576E-02		7.601E-02	1.254E-01	7.596E-03	0.126
CE-143	6.124E-04	+	9.054E-05	Half-Life too short		
CE-144	1.650E-01		2.855E-01	4.228E-01	6.070E-02	0.390
PM-144	1.434E-02		4.726E-02	7.808E-02	5.659E-03	0.184
PR-144	9.709E-01		3.200E+00	5.287E+00	3.831E-01	0.184
PM-146	1.455E-02		5.478E-02	9.205E-02	7.915E-03	0.158
ND-147	1.319E-01		6.113E-01	1.018E+00	1.400E-01	0.130
PM-149	9.263E+01		7.614E+01	1.337E+02	2.010E+01	0.693
EU-152	-3.326E-02		1.288E-01	1.920E-01	1.393E-02	-0.173

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	3.804E-02		1.079E-01	1.586E-01	1.290E-02	0.240
EU-154	-1.123E-01		1.445E-01	2.124E-01	2.027E-02	-0.529
EU-155	1.188E-02		1.336E-01	2.215E-01	1.691E-02	0.054
TB-160	3.548E-02		1.582E-01	2.696E-01	2.157E-02	0.132
HO-166M	-6.950E-02		8.486E-02	1.271E-01	9.304E-03	-0.547
TM-171	-3.999E+00		3.378E+01	4.925E+01	3.447E+00	-0.081
LU-176	1.303E-02		2.947E-02	4.950E-02	3.643E-03	0.263
LU-177	3.263E+00	+	1.479E+00	2.163E+00	1.323E-01	1.509
LU-177M	-4.758E-02		2.307E-01	3.778E-01	2.063E-02	-0.126
HF-181	1.426E-02		5.551E-02	9.294E-02	5.544E-03	0.153
W-181	-2.214E-01		4.295E-01	6.144E-01	4.223E-02	-0.360
TA-182	-2.105E-02		2.734E-01	4.439E-01	2.569E-02	-0.047
RE-183	5.004E-02		1.328E-01	2.200E-01	1.176E-02	0.227
RE-184	-1.482E-01		2.960E-01	4.602E-01	3.284E-02	-0.322
OS-185	2.560E-02		5.482E-02	9.227E-02	6.443E-03	0.277
RE-188	1.323E-01		2.086E-01	3.493E-01	1.941E-02	0.379
W-188	-5.379E+00		1.045E+01	1.475E+01	1.123E+00	-0.365
IR-192	-9.951E-03		4.015E-02	6.639E-02	4.787E-03	-0.150
AU-195	1.720E-01		3.125E-01	4.637E-01	3.714E-02	0.371
TL-200	-3.213E-05		1.177E-04	Half-Life too short		
TL-201	1.731E+00		6.404E+00	1.055E+01	5.558E-01	0.164
TL-202	5.938E-02		7.754E-02	1.348E-01	7.627E-03	0.440
HG-203	-6.917E-03		5.083E-02	8.244E-02	6.626E-03	-0.084
BI-207	4.710E-03		6.926E-02	1.149E-01	7.768E-03	0.041
TL-207	-1.604E-01		9.357E-01	1.346E+00	2.287E-01	-0.119
PO-209	6.045E+00		9.258E+00	1.630E+01	1.313E+00	0.371
BI-210	1.334E+00		2.974E+00	5.020E+00	3.721E-01	0.266
PB-210	1.334E+00		2.974E+00	5.020E+00	3.721E-01	0.266
PO-210	1.334E+00		2.973E+00	5.020E+00	3.148E-01	0.266
PB-211	-1.247E+00		1.459E+00	1.925E+00	1.200E+00	-0.648
BI-212	8.675E-01	+	6.132E-01	7.839E-01	7.034E-02	1.107
PO-215	-1.604E-01		9.357E-01	1.346E+00	2.287E-01	-0.119
RN-219	-1.432E-02		5.260E-01	8.719E-01	1.171E-01	-0.016
RN-220	-1.171E+01		3.165E+01	5.015E+01	3.218E+00	-0.234
RA-223	-1.604E-01		9.357E-01	1.346E+00	2.287E-01	-0.119
AC-227	4.796E-02		4.789E-01	7.708E-01	1.126E-01	0.062
TH-227	4.796E-02		4.790E-01	7.708E-01	1.344E-01	0.062
TH-229	-3.066E-01		6.364E-01	1.006E+00	5.833E-02	-0.305
PA-231	6.226E-01		1.897E+00	3.245E+00	4.765E-01	0.192
TH-231	-1.604E-01		9.357E-01	1.346E+00	2.287E-01	-0.119
U-231	-9.259E-01		1.173E+00	1.633E+00	1.352E-01	-0.567
PA-233	-6.824E-02		7.257E-02	1.146E-01	8.662E-03	-0.596
PA-234	-3.006E-01		3.874E-01	5.886E-01	1.082E-01	-0.511
PA-234M	4.053E+00		8.247E+00	1.431E+01	1.463E+00	0.283
U-235	1.391E-01		2.682E-01	4.412E-01	7.205E-02	0.315
NP-236	-1.593E-02		9.846E-02	1.593E-01	8.613E-03	-0.100
NP-239	-6.485E-02		2.285E-01	3.717E-01	2.530E-02	-0.174
AM-241	-7.842E-02		1.716E-01	2.475E-01	1.790E-02	-0.317

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	6.263E-02		1.185E-01	1.997E-01	1.523E-02	0.314
CM-247	-1.175E-02		4.741E-02	7.752E-02	4.166E-03	-0.152
CF-249	3.057E-03		5.007E-02	8.358E-02	4.517E-03	0.037
CF-251	9.018E-02		1.559E-01	2.599E-01	1.416E-02	0.347

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                        GEL Laboratories LLC                               *
*                             2040 Savage Road                              *
*                           Charleston, SC 29414                            *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433006           *
* Acquisition date  :  7-JUL-2009 06:38:46 Detector SN#     :               *
* Detector ID       : GAM11                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.54      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433006           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 9.2890E+01 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.189E+01	2.906E+00	3.368E-01	1.483E+00
CD-109	1.871E+00	6.086E-01	7.355E-01	3.105E-01
SN-126	4.421E-01	1.151E-01	7.268E-02	5.875E-02
BA-137M	1.154E-01	6.088E-02	3.583E-02	3.106E-02
CS-137	1.220E-01	6.436E-02	3.788E-02	3.284E-02
TL-208	5.860E-01	1.020E-01	3.655E-02	5.205E-02
BI-211	4.330E+00	5.819E-01	1.941E-01	2.969E-01
PB-212	1.904E+00	1.975E-01	5.280E-02	1.008E-01
PO-212	1.904E+00	1.975E-01	5.280E-02	1.008E-01
BI-214	1.236E+00	2.155E-01	6.881E-02	1.100E-01
PB-214	1.506E+00	2.166E-01	6.774E-02	1.105E-01
PO-214	1.506E+00	2.166E-01	6.774E-02	1.105E-01
PO-216	1.904E+00	1.975E-01	5.280E-02	1.008E-01
PO-218	1.506E+00	2.166E-01	6.774E-02	1.105E-01
RA-224	5.225E+00	1.425E+00	6.007E-01	7.268E-01
RA-226	1.236E+00	2.155E-01	6.881E-02	1.100E-01
AC-228	1.722E+00	4.043E-01	1.366E-01	2.063E-01
RA-228	1.722E+00	4.043E-01	1.366E-01	2.063E-01
TH-228	1.904E+00	1.975E-01	5.279E-02	1.008E-01
TH-230	1.236E+00	2.155E-01	6.881E-02	1.100E-01
TH-232	1.722E+00	4.043E-01	1.366E-01	2.063E-01
TH-234	2.313E+00	1.805E+00	1.093E+00	9.211E-01
U-234	1.236E+00	2.155E-01	6.881E-02	1.100E-01
NP-237	1.298E+00	4.281E-01	2.560E-01	2.184E-01
U-238	2.313E+00	1.805E+00	1.093E+00	9.211E-01
AM-243	4.323E-01	7.281E-02	4.817E-02	3.715E-02
ANH-511	2.070E-01	8.295E-02	3.029E-02	4.232E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	1.126E-01	4.055E-01	3.431E-01	2.069E-01	NOT IDENT.
NA-22	-4.175E-02	5.041E-02	3.728E-02	2.572E-02	NOT IDENT.
NA-24	6.607E+04	1.790E+05	0.000E+00	9.134E+04	SHORT HLIF
AL-26	1.212E-02	3.182E-02	2.873E-02	1.623E-02	NOT IDENT.
TI-44	2.573E-01	6.130E-02	4.077E-02	3.128E-02	NOT IDENT.
SC-46	3.980E-02	4.861E-02	4.364E-02	2.480E-02	FAIL ABUN
V-48	1.978E-02	8.190E-02	7.001E-02	4.178E-02	NOT IDENT.
CR-51	2.965E-01	4.386E-01	3.836E-01	2.238E-01	NOT IDENT.
MN-52	-2.796E-02	2.127E-01	1.697E-01	1.085E-01	NOT IDENT.
MN-54	5.938E-03	4.650E-02	3.964E-02	2.373E-02	NOT IDENT.
CO-56	2.663E-02	4.957E-02	4.357E-02	2.529E-02	FAIL ABUN
CO-57	7.812E-03	3.016E-02	2.525E-02	1.539E-02	NOT IDENT.
CO-58	1.744E-02	4.533E-02	3.957E-02	2.313E-02	NOT IDENT.
FE-59	-1.221E-01	1.108E-01	8.139E-02	5.652E-02	NOT IDENT.
CO-60	2.556E-03	5.117E-02	4.222E-02	2.611E-02	NOT IDENT.
ZN-65	3.220E-02	1.339E-01	1.002E-01	6.830E-02	NOT IDENT.
GE-68	-9.882E-02	1.584E+00	1.309E+00	8.082E-01	NOT IDENT.
AS-73	-3.746E-01	7.368E-01	6.019E-01	3.759E-01	NOT IDENT.
AS-74	-5.061E-02	1.137E-01	9.017E-02	5.799E-02	NOT IDENT.
SE-75	-5.577E-02	5.783E-02	4.402E-02	2.950E-02	NOT IDENT.
BR-77	-1.220E+01	8.911E+00	6.565E+00	4.546E+00	FAIL ABUN
SR-82	1.076E-01	4.536E-01	3.421E-01	2.314E-01	NOT IDENT.
RB-83	-1.241E-01	8.572E-02	6.263E-02	4.374E-02	NOT IDENT.
RB-84	-5.170E-02	7.589E-02	5.932E-02	3.872E-02	NOT IDENT.
KR-85	1.829E+01	9.906E+00	8.259E+00	5.054E+00	NOT IDENT.
SR-85	9.246E-02	5.008E-02	4.175E-02	2.555E-02	NOT IDENT.
RB-86	1.859E-01	9.643E-01	8.161E-01	4.920E-01	NOT IDENT.
Y-88	-8.762E-03	4.453E-02	3.425E-02	2.272E-02	NOT IDENT.
ZR-88	-2.409E-02	3.683E-02	2.960E-02	1.879E-02	NOT IDENT.
Y-91	-2.519E-01	2.417E+01	1.994E+01	1.233E+01	NOT IDENT.
NB-94	-3.729E-02	4.713E-02	3.595E-02	2.405E-02	NOT IDENT.
NB-95	4.900E-02	6.155E-02	4.685E-02	3.140E-02	NOT IDENT.
NB-95M	1.395E+00	2.211E-01	1.917E-01	1.128E-01	NOT IDENT.
ZR-95	7.537E-02	8.705E-02	7.583E-02	4.442E-02	NOT IDENT.
NB-97	1.677E+04	3.397E+04	0.000E+00	1.733E+04	SHORT HLIF
ZR-97	1.970E+06	7.533E+05	0.000E+00	3.844E+05	SHORT HLIF
MO-99	-9.776E+00	1.009E+01	7.321E+00	5.149E+00	NOT IDENT.
TC-99M	-9.218E+14	1.170E+15	0.000E+00	5.970E+14	SHORT HLIF
RH-101	1.781E-02	4.227E-02	3.390E-02	2.157E-02	FAIL ABUN
RH-102	-1.046E-02	3.698E-02	3.013E-02	1.887E-02	NOT IDENT.
RU-103	2.759E-02	5.002E-02	4.297E-02	2.552E-02	FAIL ABUN
RH-106	2.258E-01	3.960E-01	3.387E-01	2.020E-01	FAIL ABUN
RU-106	2.258E-01	3.953E-01	3.387E-01	2.017E-01	FAIL ABUN
AG-108M	-1.178E-02	3.880E-02	3.169E-02	1.979E-02	NOT IDENT.
AG-110M	2.026E-02	4.524E-02	3.373E-02	2.308E-02	NOT IDENT.
IN-111	-6.292E-02	1.039E+00	7.291E-01	5.300E-01	NOT IDENT.
IN-113M	-2.809E-02	5.315E-02	4.307E-02	2.712E-02	NOT IDENT.
SN-113	-2.809E-02	5.315E-02	4.307E-02	2.712E-02	NOT IDENT.
IN-114M	-1.911E-02	2.401E-01	1.705E-01	1.225E-01	NOT IDENT.
CD-115	-4.231E+00	8.709E+00	6.924E+00	4.443E+00	NOT IDENT.
SN-117M	-1.976E-02	6.156E-02	4.987E-02	3.141E-02	NOT IDENT.
SB-122	1.566E+00	1.856E+00	1.620E+00	9.471E-01	NOT IDENT.
I-123	-3.589E+05	1.269E+06	0.000E+00	6.476E+05	SHORT HLIF
TE-123M	-9.608E-03	3.398E-02	2.758E-02	1.734E-02	NOT IDENT.
I-124	3.592E-01	6.893E-01	5.187E-01	3.517E-01	NOT IDENT.
SB-124	3.355E-02	8.008E-02	7.252E-02	4.086E-02	FAIL ABUN
SB-125	1.373E-02	1.117E-01	9.400E-02	5.697E-02	FAIL ABUN
TE-125M	2.886E+00	1.114E+01	9.350E+00	5.683E+00	NOT IDENT.
I-126	1.034E-01	2.300E-01	1.709E-01	1.174E-01	NOT IDENT.
SB-126	-5.250E-02	1.935E-01	1.380E-01	9.874E-02	NOT IDENT.
SB-127	6.049E-01	1.209E+00	1.031E+00	6.170E-01	NOT IDENT.
XE-127	6.068E-03	6.108E-02	4.621E-02	3.117E-02	NOT IDENT.
I-131	1.304E-02	1.156E-01	9.792E-02	5.897E-02	NOT IDENT.
TE-132	3.908E-01	6.405E-01	5.332E-01	3.268E-01	NOT IDENT.
BA-133	3.705E-02	5.317E-02	4.126E-02	2.713E-02	NOT IDENT.
I-133	2.115E+03	2.354E+03	0.000E+00	1.201E+03	SHORT HLIF
CS-134	1.102E-01	8.312E-02	5.727E-02	4.241E-02	FAIL ABUN
CS-135	3.464E-01	2.127E-01	1.833E-01	1.085E-01	NOT IDENT.
I-135	7.024E+13	2.366E+14	0.000E+00	1.207E+14	SHORT HLIF
CS-136	-3.258E-02	1.250E-01	1.015E-01	6.377E-02	FAIL ABUN
CE-139	-1.325E-02	3.616E-02	2.919E-02	1.845E-02	NOT IDENT.
BA-140	3.195E-01	3.070E-01	2.589E-01	1.566E-01	NOT IDENT.
LA-140	6.817E-02	7.689E-02	6.914E-02	3.923E-02	FAIL ABUN
CE-141	1.576E-02	7.449E-02	6.191E-02	3.800E-02	NOT IDENT.
CE-143	6.124E+02	1.774E+02	0.000E+00	9.054E+01	SHORT HLIF
CE-144	1.650E-01	2.798E-01	2.088E-01	1.428E-01	NOT IDENT.
PM-144	1.434E-02	4.631E-02	3.861E-02	2.363E-02	NOT IDENT.
PR-144	9.709E-01	3.136E+00	2.615E+00	1.600E+00	NOT IDENT.

PM-146	1.455E-02	5.369E-02	4.551E-02	2.739E-02	NOT IDENT.
ND-147	1.319E-01	5.991E-01	5.035E-01	3.056E-01	FAIL ABUN
PM-149	9.263E+01	7.462E+01	6.605E+01	3.807E+01	NOT IDENT.
EU-152	-3.326E-02	1.262E-01	9.492E-02	6.438E-02	FAIL ABUN
GD-153	3.804E-02	1.057E-01	7.831E-02	5.393E-02	FAIL ABUN
EU-154	-1.123E-01	1.416E-01	1.051E-01	7.225E-02	NOT IDENT.
EU-155	1.188E-02	1.310E-01	1.094E-01	6.681E-02	FAIL ABUN
TB-160	3.548E-02	1.551E-01	1.334E-01	7.912E-02	FAIL ABUN
HO-166M	-6.950E-02	8.316E-02	6.286E-02	4.243E-02	FAIL ABUN
TM-171	-3.999E+00	3.310E+01	2.431E+01	1.689E+01	NOT IDENT.
LU-176	1.303E-02	2.888E-02	2.446E-02	1.473E-02	FAIL ABUN
LU-177	3.263E+00	1.450E+00	1.069E+00	7.396E-01	FAIL ABUN
LU-177M	-4.758E-02	2.261E-01	1.867E-01	1.154E-01	FAIL ABUN
HF-181	1.426E-02	5.440E-02	4.595E-02	2.776E-02	NOT IDENT.
W-181	-2.214E-01	4.209E-01	3.032E-01	2.147E-01	NOT IDENT.
TA-182	-2.105E-02	2.679E-01	2.196E-01	1.367E-01	FAIL ABUN
RE-183	5.004E-02	1.302E-01	1.087E-01	6.642E-02	FAIL ABUN
RE-184	-1.482E-01	2.901E-01	2.274E-01	1.480E-01	NOT IDENT.
OS-185	2.560E-02	5.373E-02	4.563E-02	2.741E-02	NOT IDENT.
RE-188	1.323E-01	2.044E-01	1.725E-01	1.043E-01	NOT IDENT.
W-188	-5.379E+00	1.024E+01	7.290E+00	5.225E+00	FAIL ABUN
IR-192	-9.951E-03	3.934E-02	3.281E-02	2.007E-02	FAIL ABUN
AU-195	1.720E-01	3.063E-01	2.290E-01	1.563E-01	FAIL ABUN
TL-200	-3.213E+01	2.306E+02	0.000E+00	1.177E+02	SHORT HLIF
TL-201	1.731E+00	6.275E+00	5.209E+00	3.202E+00	NOT IDENT.
TL-202	5.938E-02	7.599E-02	6.665E-02	3.877E-02	NOT IDENT.
HG-203	-6.917E-03	4.981E-02	4.074E-02	2.541E-02	FAIL ABUN
BI-207	4.710E-03	6.788E-02	5.684E-02	3.463E-02	FAIL ABUN
TL-207	-1.604E-01	9.169E-01	6.652E-01	4.678E-01	FAIL ABUN
PO-209	6.045E+00	9.073E+00	8.062E+00	4.629E+00	NOT IDENT.
BI-210	1.334E+00	2.914E+00	2.477E+00	1.487E+00	NOT IDENT.
PB-210	1.334E+00	2.914E+00	2.477E+00	1.487E+00	NOT IDENT.
PO-210	1.334E+00	2.914E+00	2.477E+00	1.487E+00	NOT IDENT.
PB-211	-1.247E+00	1.430E+00	9.517E-01	7.296E-01	NOT IDENT.
BI-212	8.675E-01	6.010E-01	3.877E-01	3.066E-01	FAIL ABUN
PO-215	-1.604E-01	9.169E-01	6.652E-01	4.678E-01	FAIL ABUN
RN-219	-1.432E-02	5.155E-01	4.310E-01	2.630E-01	NOT IDENT.
RN-220	-1.171E+01	3.102E+01	2.479E+01	1.583E+01	NOT IDENT.
RA-223	-1.604E-01	9.169E-01	6.652E-01	4.678E-01	FAIL ABUN
AC-227	4.796E-02	4.694E-01	3.809E-01	2.395E-01	FAIL ABUN
TH-227	4.796E-02	4.694E-01	3.809E-01	2.395E-01	FAIL ABUN
TH-229	-3.066E-01	6.237E-01	4.971E-01	3.182E-01	FAIL ABUN
PA-231	6.226E-01	1.859E+00	1.603E+00	9.484E-01	NOT IDENT.
TH-231	-1.604E-01	9.169E-01	6.652E-01	4.678E-01	FAIL ABUN
U-231	-9.259E-01	1.149E+00	8.062E-01	5.864E-01	FAIL ABUN
PA-233	-6.824E-02	7.112E-02	5.663E-02	3.628E-02	FAIL ABUN
PA-234	-3.006E-01	3.796E-01	2.912E-01	1.937E-01	FAIL ABUN
PA-234M	4.053E+00	8.082E+00	7.080E+00	4.123E+00	NOT IDENT.
U-235	1.391E-01	2.628E-01	2.179E-01	1.341E-01	FAIL ABUN
NP-236	-1.593E-02	9.650E-02	7.870E-02	4.923E-02	NOT IDENT.
NP-239	-6.485E-02	2.239E-01	1.835E-01	1.142E-01	FAIL ABUN
AM-241	-7.842E-02	1.682E-01	1.221E-01	8.580E-02	NOT IDENT.
CM-243	6.263E-02	1.162E-01	9.860E-02	5.926E-02	FAIL ABUN
CM-247	-1.175E-02	4.647E-02	3.832E-02	2.371E-02	NOT IDENT.
CF-249	3.057E-03	4.907E-02	4.131E-02	2.504E-02	NOT IDENT.
CF-251	9.018E-02	1.528E-01	1.284E-01	7.797E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	285.4836
46.50	285.4836
46.50	285.4836
48.70	341.9453
49.72	320.7546
51.35	288.8605
52.39	303.9814
52.97	322.5557
53.15	305.2873
53.44	307.2654
54.07	312.1675
56.28	312.3889
56.28	312.3902
57.37	0.0000
57.53	300.7489
57.53	300.7495
57.60	322.8809
57.98	331.6772
57.98	331.6772
59.32	366.3631
59.32	366.3631
59.40	366.4092
59.54	366.4902
59.72	369.5511
60.01	369.7197
61.10	349.6103
61.14	367.4098
61.30	367.5013
63.00	390.0073
63.29	402.8135
63.29	402.8135
63.58	400.0176
64.28	403.4185
65.12	414.3615
65.20	414.4107
65.20	414.4107
66.05	413.4442
66.72	407.8754
66.83	407.9437
66.91	427.4202
67.20	432.0871
67.20	432.0871
67.75	427.9456
67.85	428.0085
68.90	407.6796
68.90	407.6796
69.30	407.9153
69.67	418.6379
70.82	437.3596
70.82	437.3596
70.83	437.3668
72.80	431.0493
72.87	431.0912
72.87	431.0912
74.67	414.4688
74.81	414.5491
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74.97	414.6395
75.28	414.8170
75.70	415.0547
77.11	337.3379
77.11	337.3379
77.11	337.3379

77.11	337.3379
77.11	337.3379
77.11	337.3379
78.38	337.9151
79.62	338.4732
79.80	338.5534
79.80	338.5534
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80.30	296.9061
80.30	296.9061
80.57	297.0120
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81.07	339.1210
81.07	339.1210
81.07	339.1210
81.07	339.1210
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83.37	321.0267
83.78	321.1972
83.78	321.1972
83.78	321.1972
83.78	321.1972
84.21	321.3754
84.40	321.4536
84.90	321.6586
85.43	321.8752
86.29	429.6353
86.50	575.5577
86.54	575.5852
86.59	510.3847
86.72	379.9738
86.79	380.0056
86.94	380.0781
87.30	407.1367
87.30	407.1367
87.30	407.1367
87.30	407.1367
87.30	407.1367
87.30	407.1367
87.57	407.2741
87.88	407.4326
88.03	407.5087
88.36	407.6753
88.47	407.7319
89.95	443.1613
91.11	348.8599
92.29	349.3606
92.38	349.3993
92.38	349.3993
93.35	349.8089
94.00	350.0821
94.67	339.5081
94.67	339.5101
94.90	370.6177
94.90	370.6177
94.90	370.6177
94.90	370.6177
95.87	380.3601
95.87	380.3601
96.73	360.5445
97.43	321.9568
98.44	328.5645
98.44	328.5658
98.88	317.8274
99.55	306.6411
99.55	306.6411
99.86	314.1777
100.00	314.2281
100.10	314.2662
103.18	342.4925
103.76	310.4035
105.00	343.1948
105.31	330.5620
108.00	352.2096
109.28	323.1478
111.00	306.9734
111.00	306.9734

111.76	311.1764
112.95	320.4763
115.19	299.4286
116.30	300.7715
117.00	292.0519
117.00	292.0519
117.66	280.3251
121.11	284.3194
121.62	287.4628
121.78	277.5260
122.06	277.6055
122.32	287.6671
122.32	287.6671
122.32	287.6671
122.32	287.6671
123.07	285.6020
127.23	301.9400
129.76	326.8468
131.20	303.1224
133.02	297.1964
133.54	274.7227
135.34	308.5858
136.00	310.8038
136.25	316.9545
136.48	323.1009
140.51	322.2966
140.51	0.0000
142.18	306.5046
142.65	293.3943
143.76	278.3987
144.24	286.6834
144.24	286.6834
144.24	286.6834
144.24	286.6834
145.22	271.6235
145.44	294.1479
147.16	293.5864
152.43	255.9207
152.70	250.8413
153.22	233.4720
154.21	237.7923
154.21	237.7923
154.21	237.7923
154.21	237.7923
155.03	264.7489
156.02	306.2201
158.56	272.7979
159.00	0.0000
159.00	272.9006
160.31	273.2087
161.27	266.1842
162.32	256.0548
162.64	261.3093
163.35	250.0537
163.89	265.7393
165.85	277.6171
167.43	258.2021
171.28	255.8937
171.86	285.2762
172.10	285.3324
176.55	237.0662
176.60	237.0748
181.06	256.0305
184.41	253.3301
185.71	228.2294
186.00	228.2822
190.27	237.5215
192.34	236.6837
193.63	260.4564
197.04	240.8785
198.01	234.6547
198.60	218.7509
200.40	285.2947
201.83	260.9943
202.84	248.3444
205.31	216.1949
208.36	248.2749
208.81	232.2290

209.75	215.1718
209.75	215.1718
210.97	239.4814
215.65	218.2436
216.55	224.8689
218.09	214.2905
222.10	247.4529
223.80	230.3595
226.40	225.3292
227.00	210.1764
227.08	209.0991
227.20	209.1167
228.16	202.7138
228.18	202.7166
228.18	202.7166
231.56	0.0000
235.69	192.7941
236.00	192.8344
236.00	192.8344
238.60	193.1687
238.63	193.1727
238.63	193.1727
238.63	193.1727
239.00	193.2197
240.98	193.4735
241.98	177.7610
241.98	177.7610
241.98	177.7610
244.69	192.1817
245.39	183.4498
247.94	176.6858
248.90	176.7957
249.79	190.1642
252.40	196.0204
252.85	196.0771
252.85	196.0771
254.15	0.0000
256.20	177.6221
256.20	177.6221
260.50	178.1030
260.90	173.6957
262.80	162.7529
264.65	216.5094
268.24	184.5525
268.79	182.3776
269.46	185.8103
269.46	185.8103
269.46	185.8103
269.46	185.8103
271.23	200.5802
273.65	287.2852
276.40	171.9826
277.35	182.2030
277.60	183.3551
277.60	183.3551
278.00	178.2242
278.60	174.6853
279.20	173.8484
279.53	193.7021
280.46	206.4299
281.68	203.8745
283.67	167.0849
284.30	168.0516
285.00	155.4656
285.90	150.1234
286.10	159.1842
286.10	159.1842
287.40	176.0017
288.45	0.0000
290.67	190.4458
290.80	190.4586
291.72	187.5364
293.26	0.0000
293.70	155.9564
295.21	136.3898
295.21	136.3898
295.21	136.3898
295.96	136.4502

296.50	136.4923
297.23	136.5491
298.57	100.2125
299.80	133.7116
299.80	133.7116
300.09	133.7331
300.09	133.7331
300.09	133.7331
300.10	133.7331
300.12	133.7349
301.29	147.5110
302.84	146.1191
303.76	138.5810
303.91	138.5921
304.40	156.9120
304.40	156.9120
304.84	153.9021
306.84	130.1771
308.46	130.0916
311.98	142.2795
316.51	139.8745
318.01	143.6754
319.02	132.6955
319.41	135.4887
320.08	139.2271
323.87	155.5296
323.87	155.5296
323.87	155.5296
323.87	155.5296
325.23	154.1016
328.77	164.8955
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334.20	157.9410
334.20	157.9410
334.30	157.9493
338.28	141.2118
338.28	141.2118
338.28	141.2118
338.28	141.2118
338.32	141.2137
338.32	141.2137
338.32	141.2137
340.50	118.0728
340.57	118.0759
344.27	137.4291
345.85	138.6533
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351.07	124.6567
351.92	125.0228
351.92	125.0228
351.92	125.0228
355.39	0.0000
356.01	95.5284
364.48	105.6877
366.43	131.2949
367.43	120.9641
367.94	0.0000
369.80	121.1063
374.96	134.6937
383.85	117.1773
387.95	124.0903
388.63	118.4009
391.69	126.2234
391.69	126.2234
392.90	129.1663
398.62	124.7188
400.65	123.8775
401.10	120.0623
401.81	126.8276
402.60	131.6802
404.84	153.9473
410.95	133.1552
411.60	144.7778
413.65	134.2863
414.70	111.1536
415.30	118.9190
415.76	121.8456
417.63	0.0000

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423.70	119.3725
427.08	102.0584
427.89	105.0126
432.53	97.4353
433.93	103.3448
439.47	86.9836
439.56	86.9868
439.89	96.7752
443.98	101.8443
444.90	99.9256
445.03	99.9319
445.03	99.9319
445.03	99.9319
445.03	99.9319
453.90	99.3319
463.38	83.9354
468.07	90.6976
473.00	85.2672
475.06	107.1708
475.35	101.2293
476.78	103.2751
477.59	101.3239
477.96	106.3064
482.03	103.4998
484.57	109.5851
487.03	91.7462
490.36	0.0000
492.35	102.9384
497.08	88.1160
507.63	0.0000
510.53	0.0000
510.84	100.6830
511.00	100.6891
511.85	100.7239
511.85	100.7239
513.99	78.9664
513.99	78.9664
520.41	109.1470
520.65	109.1575
527.90	90.2081
528.96	0.0000
529.64	75.0551
529.87	0.0000
531.02	73.0652
537.32	67.1376
543.00	86.6519
546.56	0.0000
549.76	81.7637
552.65	90.0367
555.20	56.3267
563.23	70.8749
563.90	79.1130
568.70	89.5446
569.32	86.4773
569.50	89.5722
569.67	89.5764
573.80	87.6500
574.00	90.7500
574.64	94.8975
578.91	96.4209
579.30	0.0000
583.14	83.8081
585.48	82.8438
591.81	89.2586
592.07	94.4569
593.00	88.2581
595.88	96.6623
600.56	80.1657
602.52	0.0000
602.71	65.9867
602.71	65.9867
603.60	85.1160
604.41	93.8276
604.70	93.8364
609.31	83.5449
609.31	83.5449
609.31	83.5449

609.31	83.5449
610.33	106.2089
612.46	99.3186
614.37	81.9498
618.01	89.0363
621.84	69.2243
621.84	69.2243
631.29	64.1885
633.02	74.7545
633.10	74.7563
634.78	73.7461
635.90	72.7195
636.97	76.9637
645.85	74.0212
646.12	69.7979
656.30	65.4365
657.75	56.6211
657.90	0.0000
661.65	74.4109
661.65	74.4109
664.57	0.0000
666.33	63.8789
666.33	63.8789
675.00	70.4650
677.61	60.9076
685.20	52.4872
692.80	77.3121
695.00	89.1865
696.49	83.8538
696.49	83.8538
697.00	90.3185
697.49	84.9559
698.33	89.2797
698.50	82.8314
699.00	86.0723
702.63	105.5582
706.10	86.2637
706.58	0.0000
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713.82	83.2299
717.42	61.6813
720.50	80.4629
721.93	0.0000
722.20	74.0547
722.78	84.9064
722.78	84.9064
722.89	84.9102
722.95	84.9121
723.30	84.9217
724.18	75.9080
727.18	66.2094
733.00	67.0520
735.90	50.7876
739.58	70.8176
742.81	53.4382
744.21	56.7341
747.13	55.6928
751.79	64.5183
752.31	71.0906
753.82	66.7470
755.35	63.4927
756.15	54.7485
756.87	55.8560
763.93	60.3630
765.79	67.7174
766.41	62.2379
766.84	62.2462
768.36	60.4423
768.36	60.4423
768.36	60.4423
768.36	60.4423
776.49	48.7846
778.00	55.1038
778.57	62.9855
778.89	62.9911
783.80	47.8370

785.46	53.3826
792.07	47.4254
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796.30	61.7278
801.93	53.0210
805.60	57.3959
810.29	57.4729
810.76	51.9178
815.85	58.4921
817.79	59.4531
818.51	55.7483
819.60	49.2594
826.30	65.1821
828.27	0.0000
831.60	65.2789
831.96	59.6901
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836.80	0.0000
846.75	58.0619
848.13	61.8320
856.28	0.0000
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860.37	56.3989
867.32	43.7915
867.82	50.2333
871.10	59.3906
873.19	59.4240
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875.33	0.0000
876.40	37.7620
879.36	44.4058
880.27	51.9776
880.51	52.9261
881.50	51.9944
883.24	52.0179
884.67	52.9842
889.25	48.3126
896.60	47.4579
898.02	44.6267
899.00	50.3366
903.28	61.3283
911.07	59.0710
911.07	59.0710
911.07	59.0710
919.63	50.9267
920.93	53.1439
925.00	51.6346
925.24	45.9004
926.50	47.8292
934.06	53.6724
934.06	53.6724
934.06	53.6724
934.06	53.6724
935.52	54.6517
937.48	68.1081
944.10	53.8102
946.00	63.4501
949.00	43.2944
962.29	33.0964
964.01	54.0802
966.15	54.1099
968.20	54.1372
969.11	54.1497
969.11	54.1497
969.11	54.1497
977.42	49.8319
980.50	65.9386
983.50	48.5209
989.30	50.5337
996.32	50.6204
1001.03	42.8819
1001.68	45.8124
1004.76	56.5769
1021.30	0.0000
1024.50	0.0000
1034.80	44.2145
1037.82	53.0947
1038.57	50.1533

1038.76	0.0000
1045.16	50.2322
1046.59	46.3077
1048.07	54.2078
1050.47	52.2668
1050.47	52.2668
1063.62	55.3962
1076.63	52.5859
1077.35	54.5793
1085.78	56.6730
1099.22	62.8308
1112.02	56.0114
1112.84	46.3046
1115.52	56.6267
1120.29	53.2531
1120.29	53.2531
1120.29	53.2531
1120.29	53.2531
1120.51	53.2553
1121.28	61.8549
1124.00	0.0000
1129.67	50.2075
1131.51	0.0000
1147.95	0.0000
1167.94	66.8325
1173.22	66.9104
1175.09	59.8378
1177.93	58.8591
1189.05	66.1214
1204.90	65.3229
1205.75	0.0000
1213.00	75.6591
1221.42	75.7946
1230.97	84.6686
1235.34	82.7647
1236.41	0.0000
1238.11	77.5248
1238.11	77.5248
1238.11	77.5248
1238.11	77.5248
1238.25	77.5279
1246.25	42.3583
1260.41	0.0000
1271.85	38.2933
1274.45	45.5612
1274.54	45.5630
1291.56	43.6406
1298.22	0.0000
1312.09	34.4301
1325.50	36.6136
1325.50	36.6136
1332.49	36.6648
1333.61	33.5286
1360.21	29.4902
1362.66	0.0000
1365.15	23.1924
1368.21	21.0970
1368.53	0.0000
1376.25	14.7907
1377.67	16.9082
1377.67	16.9082
1377.67	16.9082
1377.67	16.9082
1384.27	24.3364
1394.10	20.1411
1395.20	30.7488
1407.95	24.4450
1434.06	19.2246
1436.60	14.9593
1457.56	0.0000
1460.81	23.6131
1489.15	29.1292
1509.49	21.6553
1596.49	6.5959
1620.62	16.0845
1678.03	0.0000
1691.02	9.5728
1691.02	9.5728

1706.46	0.0000
1750.46	0.0000
1764.49	15.4983
1764.49	15.4983
1764.49	15.4983
1764.49	15.4983
1770.23	6.7866
1771.40	9.0505
1791.20	0.0000
1808.65	7.8030
1836.01	14.8556

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433006

Total Uranium Activity	6.9447E+00	ug/g
Total Uranium Counting Unc.	5.3724E+00	ug/g
Total Uranium Tpu	2.7410E-06	ug/g
Total Uranium Mda	3.2520E+00	ug/g

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*                                                                           *
*                          GEL Laboratories LLC                             *
*                            2040 SAVAGE ROAD                               *
*                           CHARLESTON ,SC 29417                            *
*                            GROSS GAMMA REPORT                             *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G232433006       *
*   ANALYST       : MXR1                      DETECTOR   : GAM11            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:38:46.48    SAMPLE ALQT:   92.890 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.070E+01
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.692E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 5.449E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 2.645E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:40:21.97

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433007.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:39:19.
Sample ID         : G232433007           Sample quantity  : 1.05820E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.44  0.0%
Energy tolerance  : 1.50000 keV          Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.49*	97	449	0.83	126.47	122	9	1.35E-02	41.7	
2	2	74.88*	343	365	0.84	149.25	145	12	4.76E-02	10.1	2.08E+00
3	2	77.15	617	348	0.92	153.79	145	12	8.57E-02	6.4	
4	5	84.22*	125	344	1.51	167.95	164	27	1.73E-02	26.7	7.61E-01
5	5	87.21	294	387	1.29	173.92	164	27	4.08E-02	13.0	
6	5	89.97	154	286	0.97	179.44	164	27	2.14E-02	19.0	
7	5	92.81*	262	377	1.28	185.12	164	27	3.64E-02	15.3	
8	0	129.20	34	236	0.92	257.96	255	6	4.76E-03	73.2	
9	0	186.18*	211	353	1.39	371.96	368	12	2.93E-02	19.7	
10	0	209.45*	84	267	0.99	418.52	415	10	1.16E-02	38.6	
11	4	238.73*	1193	155	1.14	477.11	472	17	1.66E-01	3.4	2.44E+00
12	4	241.69	265	228	1.66	483.03	472	17	3.69E-02	14.3	
13	0	270.18	87	312	1.49	540.03	535	15	1.21E-02	45.3	
14	0	295.24	387	204	1.16	590.18	584	12	5.38E-02	9.0	
15	0	300.14	99	141	1.31	599.98	596	9	1.38E-02	23.9	
16	0	328.39	53	163	1.13	656.51	651	9	7.31E-03	46.0	
17	0	338.50*	287	151	1.22	676.73	673	11	3.98E-02	10.3	
18	0	352.04*	624	106	1.34	703.82	699	10	8.67E-02	5.1	
19	0	409.48	78	87	1.46	818.74	814	9	1.08E-02	24.4	
20	0	511.46*	99	158	2.13	1022.79	1015	20	1.38E-02	36.3	
21	0	583.58*	377	86	1.51	1167.06	1161	11	5.24E-02	7.1	
22	0	609.58*	411	84	1.30	1219.08	1213	12	5.71E-02	6.8	
23	0	661.86	88	44	1.40	1323.66	1320	8	1.22E-02	16.9	
24	0	728.27	124	71	2.00	1456.52	1449	18	1.73E-02	18.3	
25	0	769.22	43	55	1.55	1538.43	1534	9	5.98E-03	34.8	
26	0	860.67	53	46	2.11	1721.37	1715	13	7.33E-03	29.8	
27	0	911.79*	261	59	1.53	1823.62	1817	16	3.63E-02	9.2	
28	2	965.10	46	38	2.20	1930.24	1922	23	6.41E-03	30.7	1.46E+00
29	2	969.44	167	21	1.96	1938.92	1922	23	2.31E-02	9.9	
30	0	1120.93	100	62	2.01	2241.92	2236	13	1.39E-02	18.4	
31	0	1378.25	29	25	1.10	2756.53	2750	13	3.99E-03	40.9	
32	0	1461.51*	1261	18	2.08	2923.03	2914	18	1.75E-01	2.9	
33	0	1765.31*	60	9	2.07	3530.51	3523	13	8.31E-03	17.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:40:24

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433007.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:39:19
Sample ID : G232433007 Sample quantity : 105.82 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA12 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.44 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.688E+01	3.410E+00	5.215E-01	3.718E-02	70.719
CD-109	+	88.03	*	5.064E+00	1.373E+00	1.341E+00	1.026E-01	3.776
SN-126	+	64.28		1.114E+00	9.410E-01	9.103E-01	1.278E-01	1.223
	+	86.94		2.074E+00	1.010E+00	5.555E-01	2.286E-01	3.733
	+	87.57	*	4.988E-01	1.352E-01	1.327E-01	1.012E-02	3.758
BA-137M	+	661.65	*	1.536E-01	5.294E-02	7.365E-02	4.775E-03	2.086
CS-137	+	661.65	*	1.624E-01	5.597E-02	7.786E-02	5.064E-03	2.086
TL-208		277.35		4.748E-01	4.603E-01	7.168E-01	7.507E-02	0.662
	+	510.84		5.838E-01	4.283E-01	2.637E-01	2.723E-02	2.214
	+	583.14	*	6.352E-01	1.011E-01	7.171E-02	5.130E-03	8.857
	+	860.37		8.372E-01	5.040E-01	5.122E-01	4.475E-02	1.635
BI-211		72.87		4.558E+00	3.886E+00	6.149E+00	4.126E-01	0.741
	+	351.07	*	4.549E+00	5.468E-01	3.437E-01	2.160E-02	13.236
PB-212	+	74.81		2.471E+00	5.729E-01	6.531E-01	7.549E-02	3.783
	+	77.11		2.516E+00	3.683E-01	3.706E-01	2.566E-02	6.788
	+	87.30		2.307E+00	6.665E-01	6.156E-01	7.732E-02	3.747
	+	238.63	*	1.894E+00	1.867E-01	9.561E-02	6.789E-03	19.807
	+	300.09		2.433E+00	1.180E+00	1.302E+00	1.063E-01	1.869
PO-212	+	74.81		2.471E+00	5.729E-01	6.531E-01	7.549E-02	3.783
	+	77.11		2.516E+00	3.683E-01	3.706E-01	2.566E-02	6.788
	+	87.30		2.307E+00	6.665E-01	6.156E-01	7.732E-02	3.747
		115.19		4.817E-01	3.842E+00	6.348E+00	4.027E-01	0.076
	+	238.63	*	1.894E+00	1.867E-01	9.561E-02	6.789E-03	19.807
	+	300.09		2.433E+00	1.180E+00	1.302E+00	1.063E-01	1.869
BI-214	+	609.31	*	1.305E+00	2.083E-01	1.414E-01	1.164E-02	9.231
	+	768.36		1.530E+00	1.076E+00	1.409E+00	1.331E-01	1.086
		934.06		1.408E+00	1.496E+00	2.610E+00	2.669E-01	0.540
	+	1120.29		1.658E+00	6.290E-01	5.384E-01	4.891E-02	3.080
		1238.11		1.449E+00	1.192E+00	2.129E+00	1.778E-01	0.681
	+	1377.67		2.082E+00	1.715E+00	1.870E+00	1.757E-01	1.114
	+	1764.49		1.357E+00	4.935E-01	4.145E-01	2.456E-02	3.275
PB-214	+	74.81		4.257E+00	9.569E-01	1.125E+00	1.132E-01	3.783
	+	77.11		4.313E+00	7.117E-01	6.354E-01	6.541E-02	6.788
	+	87.30		3.952E+00	1.114E+00	1.055E+00	1.142E-01	3.747

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.529E+00	7.523E-01	5.759E-01	4.532E-02	4.391
	+	295.21		1.663E+00	3.294E-01	2.292E-01	1.935E-02	7.256
	+	351.92	*	1.582E+00	2.073E-01	1.204E-01	9.834E-03	13.144
PO-214	+	74.81		4.257E+00	9.569E-01	1.125E+00	1.132E-01	3.783
	+	77.11		4.313E+00	7.117E-01	6.354E-01	6.541E-02	6.788
	+	87.30		3.952E+00	1.114E+00	1.055E+00	1.142E-01	3.747
	+	241.98		2.529E+00	7.523E-01	5.759E-01	4.532E-02	4.391
	+	295.21		1.663E+00	3.294E-01	2.292E-01	1.935E-02	7.256
	+	351.92	*	1.582E+00	2.073E-01	1.204E-01	9.834E-03	13.144
PO-216	+	74.81		2.471E+00	5.729E-01	6.531E-01	7.549E-02	3.783
	+	77.11		2.516E+00	3.683E-01	3.706E-01	2.566E-02	6.788
	+	87.30		2.307E+00	6.665E-01	6.156E-01	7.732E-02	3.747
	+	238.63	*	1.894E+00	1.867E-01	9.561E-02	6.789E-03	19.807
	+	300.09		2.433E+00	1.180E+00	1.302E+00	1.063E-01	1.869
PO-218	+	74.81		4.257E+00	9.569E-01	1.125E+00	1.132E-01	3.783
	+	77.11		4.313E+00	7.117E-01	6.354E-01	6.541E-02	6.788
	+	87.30		3.952E+00	1.114E+00	1.055E+00	1.142E-01	3.747
	+	241.98		2.529E+00	7.523E-01	5.759E-01	4.532E-02	4.391
	+	295.21		1.663E+00	3.294E-01	2.292E-01	1.935E-02	7.256
	+	351.92	*	1.582E+00	2.073E-01	1.204E-01	9.834E-03	13.144
RA-224	+	240.98	*	4.795E+00	1.401E+00	1.088E+00	6.003E-02	4.406
RA-226	+	609.31	*	1.305E+00	2.083E-01	1.414E-01	1.164E-02	9.231
	+	768.36		1.530E+00	1.076E+00	1.409E+00	1.331E-01	1.086
		934.06		1.408E+00	1.496E+00	2.610E+00	2.669E-01	0.540
	+	1120.29		1.658E+00	6.290E-01	5.384E-01	4.891E-02	3.080
		1238.11		1.449E+00	1.192E+00	2.129E+00	1.778E-01	0.681
	+	1377.67		2.082E+00	1.715E+00	1.870E+00	1.757E-01	1.114
	+	1764.49		1.357E+00	4.935E-01	4.145E-01	2.456E-02	3.275
AC-228	+	338.32		2.300E+00	1.050E+00	4.078E-01	1.662E-01	5.641
	+	911.07	*	1.961E+00	4.203E-01	2.446E-01	2.686E-02	8.017
	+	969.11		2.203E+00	6.685E-01	4.631E-01	1.068E-01	4.756
RA-228	+	338.32		2.300E+00	1.050E+00	4.078E-01	1.662E-01	5.641
	+	911.07	*	1.961E+00	4.203E-01	2.446E-01	2.686E-02	8.017
	+	969.11		2.203E+00	6.685E-01	4.631E-01	1.068E-01	4.756
TH-228	+	84.40		6.715E+00	3.685E+00	4.208E+00	5.203E-01	1.596
	+	238.60	*	1.894E+00	1.867E-01	9.560E-02	6.788E-03	19.809
	+	300.10		2.433E+00	1.846E+00	1.302E+00	7.671E-01	1.869
TH-230	+	609.31	*	1.305E+00	2.083E-01	1.414E-01	1.164E-02	9.231
	+	768.36		1.530E+00	1.076E+00	1.409E+00	1.331E-01	1.086
		934.06		1.408E+00	1.496E+00	2.610E+00	2.669E-01	0.540
	+	1120.29		1.658E+00	6.289E-01	5.384E-01	4.890E-02	3.080
		1238.11		1.449E+00	1.192E+00	2.128E+00	1.778E-01	0.681
	+	1377.67		2.082E+00	1.715E+00	1.870E+00	1.757E-01	1.114
	+	1764.49		1.357E+00	4.935E-01	4.145E-01	2.456E-02	3.275
TH-232	+	338.32		2.300E+00	4.899E-01	4.078E-01	2.310E-02	5.641
	+	911.07	*	1.961E+00	4.203E-01	2.446E-01	2.686E-02	8.017
	+	969.11		2.203E+00	6.685E-01	4.631E-01	1.068E-01	4.756
TH-234	+	63.29	*	2.814E+00	2.393E+00	2.295E+00	3.907E-01	1.226
	+	92.38		2.877E+00	1.014E+00	8.693E-01	1.520E-01	3.310

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.305E+00	2.083E-01	1.414E-01	1.164E-02	9.231
	+	768.36		1.530E+00	1.076E+00	1.409E+00	1.331E-01	1.086
		934.06		1.408E+00	1.496E+00	2.610E+00	2.669E-01	0.540
	+	1120.29		1.658E+00	6.289E-01	5.384E-01	4.890E-02	3.080
		1238.11		1.449E+00	1.192E+00	2.128E+00	1.778E-01	0.681
	+	1377.67		2.082E+00	1.715E+00	1.870E+00	1.757E-01	1.114
	+	1764.49		1.357E+00	4.935E-01	4.145E-01	2.456E-02	3.275
NP-237	+	86.50	*	1.465E+00	4.990E-01	3.942E-01	8.661E-02	3.715
		95.87		-4.866E-01	1.131E+00	1.630E+00	3.933E-01	-0.299
U-238	+	63.29	*	2.814E+00	2.393E+00	2.295E+00	3.907E-01	1.226
	+	92.38		2.877E+00	9.053E-01	8.693E-01	6.329E-02	3.310
AM-243	+	74.67	*	4.005E-01	8.501E-02	1.062E-01	7.216E-03	3.771
	+	86.72		5.492E+01	1.489E+01	1.475E+01	1.114E+00	3.724
		117.66		-1.727E+00	4.192E+00	6.743E+00	4.248E-01	-0.256
		142.18		7.250E-01	1.937E+01	3.150E+01	1.783E+00	0.023
ANH-511	+	511.00	*	1.261E-01	9.191E-02	5.698E-02	3.473E-03	2.213

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	5.615E-02	3.802E-01	6.192E-01	4.260E-02	0.091
NA-22		1274.54	*	-2.361E-02	5.685E-02	8.948E-02	5.762E-03	-0.264
NA-24		1368.53	*	5.359E-02	5.685E-02	Half-Life too short		
AL-26		1129.67		-1.766E+00	2.332E+00	3.518E+00	2.144E-01	-0.502
		1808.65	*	-1.960E-02	3.950E-02	5.919E-02	3.396E-03	-0.331
TI-44		67.85		-6.783E-03	5.603E-02	8.413E-02	5.476E-03	-0.081
	+	78.38	*	4.643E-01	6.795E-02	9.136E-02	6.390E-03	5.082
SC-46		889.25	*	-2.512E-02	4.863E-02	7.456E-02	6.179E-03	-0.337
	+	1120.51		2.807E-01	1.048E-01	1.628E-01	1.012E-02	1.724
V-48		944.10		-1.081E+00	1.077E+00	1.543E+00	1.239E-01	-0.701
		983.50	*	1.156E-03	7.383E-02	1.188E-01	9.151E-03	0.010
		1312.09		8.826E-04	9.637E-02	1.582E-01	1.073E-02	0.006
CR-51		320.08	*	2.241E-02	3.870E-01	6.439E-01	4.094E-02	0.035
MN-52		744.21		-6.100E-02	2.430E-01	3.907E-01	2.790E-02	-0.156
		848.13		-1.579E+00	7.481E+00	1.193E+01	9.504E-01	-0.132
		935.52		8.738E-02	2.924E-01	4.842E-01	3.920E-02	0.180
		1246.25		1.801E+00	8.014E+00	1.346E+01	8.294E-01	0.134
		1333.61		-1.052E+00	5.838E+00	9.364E+00	6.540E-01	-0.112
		1434.06	*	-6.285E-02	2.649E-01	4.167E-01	2.863E-02	-0.151
MN-54		834.83	*	9.035E-03	4.589E-02	7.604E-02	5.978E-03	0.119
CO-56		846.75	*	-9.088E-03	5.022E-02	8.033E-02	6.390E-03	-0.113
		977.42		-7.674E-01	3.738E+00	5.666E+00	4.395E-01	-0.135
		1037.82		9.949E-02	3.522E-01	6.054E-01	4.676E-02	0.164
		1175.09		2.050E+00	2.817E+00	4.952E+00	2.730E-01	0.414
		1238.25		1.505E-01	1.188E-01	2.133E-01	1.373E-02	0.706
		1360.21		-8.435E-01	1.112E+00	1.605E+00	1.117E-01	-0.526
		1771.40		-1.632E+00	4.784E-01	3.871E-01	2.283E-02	-4.215
CO-57		122.06	*	-1.002E-03	2.785E-02	4.553E-02	2.847E-03	-0.022

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		3.807E-02	2.339E-01	3.835E-01	2.579E-02	0.099
CO-58		810.76	*	-4.387E-02	5.051E-02	7.571E-02	5.826E-03	-0.579
FE-59		142.65		-6.953E-02	3.010E+00	4.807E+00	2.716E-01	-0.014
		192.34		8.366E-01	1.123E+00	1.671E+00	1.931E-01	0.501
		1099.22	*	5.165E-02	1.183E-01	2.041E-01	1.507E-02	0.253
		1291.56		-6.743E-02	1.414E-01	2.189E-01	1.763E-02	-0.308
CO-60		1173.22		-4.686E-03	5.870E-02	9.652E-02	5.305E-03	-0.049
		1332.49	*	-1.088E-02	5.078E-02	8.104E-02	5.660E-03	-0.134
ZN-65		1115.52	*	-1.595E-02	1.183E-01	1.661E-01	1.045E-02	-0.096
GE-68		1077.35	*	1.175E-01	1.462E+00	2.457E+00	1.657E-01	0.048
AS-73		53.44	*	3.538E-01	9.049E-01	1.538E+00	9.927E-02	0.230
AS-74		595.88	*	3.533E-02	1.042E-01	1.787E-01	1.137E-02	0.198
		634.78		-6.930E-02	3.874E-01	6.355E-01	4.096E-02	-0.109
SE-75		66.05		-1.099E+00	5.743E+00	8.603E+00	7.510E-01	-0.128
		96.73		-1.462E+00	9.870E-01	1.316E+00	1.666E-01	-1.111
		121.11		-4.534E-02	1.478E-01	2.385E-01	2.272E-02	-0.190
		136.00		2.068E-03	4.407E-02	7.188E-02	4.245E-03	0.029
		198.60		-2.450E-01	2.105E+00	3.261E+00	2.191E-01	-0.075
		264.65	*	-4.783E-03	5.253E-02	7.718E-02	4.375E-03	-0.062
		279.53		5.889E-02	1.215E-01	2.043E-01	1.252E-02	0.288
		303.91		1.345E+00	2.356E+00	3.614E+00	3.422E-01	0.372
		400.65		4.587E-02	3.014E-01	4.968E-01	4.440E-02	0.092
BR-77	+	87.88		7.418E+02	2.011E+02	2.742E+02	2.097E+01	2.705
		200.40		7.405E+01	1.294E+02	2.115E+02	1.122E+01	0.350
	+	239.00		2.058E+02	1.807E+01	2.993E+01	1.648E+00	6.875
		249.79		1.285E+01	4.876E+01	8.325E+01	4.623E+00	0.154
		281.68		-4.084E+01	6.688E+01	1.080E+02	6.101E+00	-0.378
		297.23		2.068E+02	6.666E+01	9.395E+01	5.333E+00	2.201
		303.76		8.461E+01	1.371E+02	2.112E+02	1.200E+01	0.401
		439.47		-7.473E+01	1.165E+02	1.795E+02	1.034E+01	-0.416
		484.57		-1.477E+01	1.802E+02	2.879E+02	1.722E+01	-0.051
		520.65	*	5.449E+00	8.950E+00	1.403E+01	8.601E-01	0.389
		574.64		-4.769E+01	1.658E+02	2.722E+02	1.718E+01	-0.175
		578.91		5.013E+01	7.537E+01	1.177E+02	7.439E+00	0.426
		585.48		1.303E+03	2.291E+02	4.291E+02	2.721E+01	3.036
		755.35		8.770E+01	1.416E+02	2.442E+02	1.766E+01	0.359
		817.79		-3.334E+01	1.035E+02	1.632E+02	1.261E+01	-0.204
SR-82		698.33		-2.149E+00	3.971E+01	6.536E+01	4.429E+00	-0.033
		776.49	*	-1.317E-02	4.404E-01	7.197E-01	5.326E-02	-0.018
		1395.20		-1.961E+00	1.200E+01	1.909E+01	1.321E+00	-0.103
RB-83		520.41	*	5.736E-02	9.017E-02	1.351E-01	8.285E-03	0.425
		529.64		-4.720E-02	1.244E-01	1.918E-01	1.183E-02	-0.246
		552.65		-1.132E-01	2.174E-01	3.507E-01	2.190E-02	-0.323
RB-84		881.50	*	-3.474E-02	8.886E-02	1.385E-01	1.140E-02	-0.251
KR-85		513.99	*	1.729E+01	9.481E+00	1.689E+01	1.032E+00	1.023
SR-85		513.99	*	8.739E-02	4.793E-02	8.540E-02	5.215E-03	1.023
RB-86		1076.63	*	1.033E-01	8.792E-01	1.483E+00	1.001E-01	0.070
Y-88		898.02		-1.413E-03	5.364E-02	8.660E-02	7.275E-03	-0.016
		1836.01	*	3.037E-02	4.767E-02	8.666E-02	4.878E-03	0.350

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	3.006E-03	3.519E-02	5.783E-02	3.172E-03	0.052
Y-91		1204.90	*	-1.186E+00	2.387E+01	3.927E+01	2.270E+00	-0.030
NB-94		702.63	*	-7.584E-03	4.071E-02	6.625E-02	4.512E-03	-0.114
		871.10		1.241E-02	4.107E-02	6.867E-02	5.594E-03	0.181
NB-95		765.79	*	3.313E-02	5.480E-02	8.354E-02	6.110E-03	0.397
NB-95M		235.69	*	-3.066E-02	1.378E-01	2.026E-01	1.478E-02	-0.151
ZR-95		724.18		2.471E-02	1.229E-01	1.798E-01	1.418E-02	0.137
		756.15	*	3.769E-02	8.686E-02	1.478E-01	1.221E-02	0.255
NB-97		657.90	*	1.667E-02	8.686E-02	Half-Life too short		
		1024.50		-1.241E+00	8.686E-02	Half-Life too short		
ZR-97		254.15		-1.433E-01	8.686E-02	Half-Life too short		
		355.39		4.985E-01	8.686E-02	Half-Life too short		
		507.63	*	9.561E-02	8.686E-02	Half-Life too short		
		602.52		-6.407E-02	8.686E-02	Half-Life too short		
		1021.30		5.017E-01	8.686E-02	Half-Life too short		
		1147.95		-1.131E-01	8.686E-02	Half-Life too short		
		1362.66		-9.463E-01	8.686E-02	Half-Life too short		
		1750.46		-1.045E+00	8.686E-02	Half-Life too short		
MO-99		140.51		-3.905E+00	2.150E+01	3.421E+01	9.211E+00	-0.114
		181.06		7.601E+00	1.373E+01	2.149E+01	3.642E+00	0.354
		366.43		5.560E+01	6.915E+01	1.194E+02	6.677E+00	0.466
		739.58	*	-5.021E+00	9.429E+00	1.468E+01	2.110E+00	-0.342
		778.00		3.067E+00	2.899E+01	4.796E+01	3.555E+00	0.064
TC-99M		140.51	*	-1.963E+08	2.899E+01	Half-Life too short		
RH-101		127.23		-2.387E-03	4.008E-02	5.829E-02	3.537E-03	-0.041
		198.01	*	1.703E-02	3.799E-02	6.058E-02	3.205E-03	0.281
		325.23		6.690E-02	2.789E-01	4.138E-01	2.351E-02	0.162
RH-102		418.52		1.480E-01	3.556E-01	5.944E-01	3.353E-02	0.249
		475.06	*	2.231E-02	3.437E-02	5.813E-02	3.452E-03	0.384
		631.29		1.126E-02	6.384E-02	1.079E-01	6.945E-03	0.104
		697.49		8.721E-03	9.412E-02	1.567E-01	1.061E-02	0.056
		766.84		1.613E-01	1.528E-01	2.417E-01	1.770E-02	0.667
		1046.59		8.970E-03	1.423E-01	2.361E-01	1.673E-02	0.038
		1112.84		-1.263E-01	2.832E-01	4.276E-01	2.699E-02	-0.295
RU-103		497.08	*	-2.714E-02	4.451E-02	6.727E-02	8.581E-03	-0.403
	+	610.33		1.376E+01	2.861E+00	3.448E+00	5.397E-01	3.992
RH-106	+	511.85		6.283E-01	4.579E-01	5.314E-01	3.241E-02	1.182
		621.84	*	2.312E-01	3.681E-01	6.425E-01	7.747E-02	0.360
		1050.47		8.200E-01	2.770E+00	4.757E+00	3.351E-01	0.172
RU-106	+	511.85		6.283E-01	4.579E-01	5.314E-01	3.241E-02	1.182
		621.84	*	2.312E-01	3.673E-01	6.425E-01	4.126E-02	0.360
		1050.47		8.200E-01	2.770E+00	4.757E+00	3.351E-01	0.172
AG-108M		433.93	*	-1.501E-02	3.662E-02	5.742E-02	3.578E-03	-0.261
		614.37		3.746E-02	5.129E-02	8.014E-02	5.494E-03	0.467
		722.95		-2.846E-03	5.654E-02	8.028E-02	5.930E-03	-0.035
AG-110M		657.75	*	2.509E-02	4.696E-02	7.180E-02	4.894E-03	0.349
		677.61		-2.530E-01	3.420E-01	5.275E-01	3.652E-02	-0.480
		706.67		2.669E-01	2.649E-01	4.691E-01	3.349E-02	0.569
		763.93		-8.928E-03	2.108E-01	2.978E-01	2.259E-02	-0.030

---- Non-Identified Nuclides ----

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		884.67		2.374E-02	6.505E-02	1.089E-01	9.306E-03	0.218
		937.48		4.875E-02	1.495E-01	2.482E-01	2.088E-02	0.196
		1384.27		-1.023E-01	2.490E-01	3.209E-01	2.322E-02	-0.319
IN-111		171.28		-1.009E+00	8.448E-01	1.271E+00	6.538E-02	-0.794
		245.39	*	-1.485E-01	9.189E-01	1.352E+00	7.483E-02	-0.110
IN-113M		391.69	*	-1.150E-02	5.181E-02	8.339E-02	4.909E-03	-0.138
SN-113		391.69	*	-1.150E-02	5.181E-02	8.339E-02	4.909E-03	-0.138
IN-114M		190.27	*	7.577E-02	2.217E-01	3.219E-01	1.689E-02	0.235
CD-115		260.90		3.233E+01	9.436E+01	1.613E+02	9.025E+00	0.200
		492.35		2.133E+01	2.628E+01	4.510E+01	2.714E+00	0.473
		527.90	*	-1.803E+00	8.251E+00	1.291E+01	7.955E-01	-0.140
SN-117M		156.02		-5.390E-01	2.328E+00	3.716E+00	1.984E-01	-0.145
		158.56	*	1.923E-02	5.643E-02	9.256E-02	4.890E-03	0.208
SB-122		563.90	*	2.224E+00	1.822E+00	3.298E+00	2.071E-01	0.674
		692.80		6.741E+00	3.897E+01	6.531E+01	4.396E+00	0.103
I-123		159.00	*	3.541E-01	3.897E+01	Half-Life too short		
		528.96		-3.608E+01	3.897E+01	Half-Life too short		
TE-123M		159.00	*	9.477E-03	3.052E-02	4.998E-02	2.678E-03	0.190
I-124		602.71	*	9.358E-02	6.570E-01	1.014E+00	6.471E-02	0.092
		722.78		-4.512E-01	4.714E+00	6.656E+00	4.640E-01	-0.068
		1325.50		-2.727E+01	3.321E+01	4.842E+01	3.349E+00	-0.563
		1376.25		5.018E+01	3.659E+01	6.207E+01	4.311E+00	0.809
		1509.49		1.656E+01	1.331E+01	2.573E+01	1.731E+00	0.644
		1691.02		2.410E+00	4.238E+00	7.639E+00	4.742E-01	0.315
SB-124		602.71		6.688E-03	4.695E-02	7.247E-02	4.626E-03	0.092
		645.85		-1.858E-01	5.696E-01	9.209E-01	6.573E-02	-0.202
		709.31		1.330E+00	3.512E+00	5.963E+00	4.093E-01	0.223
		713.82		1.290E-01	1.949E+00	3.233E+00	3.516E-01	0.040
		722.78		-4.675E-02	4.884E-01	6.895E-01	4.965E-02	-0.068
	+	968.20		2.233E+01	4.740E+00	8.785E+00	6.884E-01	2.542
		1045.16		1.489E+00	2.883E+00	5.050E+00	3.586E-01	0.295
		1325.50		-3.017E+00	3.674E+00	5.358E+00	3.706E-01	-0.563
		1368.21		7.145E-01	2.064E+00	3.457E+00	4.313E-01	0.207
		1436.60		2.730E+00	4.541E+00	7.998E+00	5.491E-01	0.341
		1691.02	*	5.889E-02	1.036E-01	1.867E-01	1.246E-02	0.315
SB-125		427.89	*	2.888E-02	1.046E-01	1.734E-01	1.031E-02	0.167
		463.38		3.893E-01	3.633E-01	6.259E-01	4.277E-02	0.622
		600.56		-1.674E-01	2.050E-01	3.205E-01	2.312E-02	-0.522
		635.90		-2.077E-01	3.198E-01	5.033E-01	3.700E-02	-0.413
TE-125M		109.28	*	2.799E+00	9.650E+00	1.611E+01	1.388E+00	0.174
I-126		388.63		1.105E-01	2.178E-01	3.683E-01	2.023E-02	0.300
		666.33	*	-3.858E-02	2.292E-01	3.236E-01	2.110E-02	-0.119
		753.82		1.927E+00	1.677E+00	3.009E+00	2.172E-01	0.641
SB-126		223.80		-2.054E+00	3.850E+00	6.357E+00	3.454E-01	-0.323
		278.60		3.667E+00	2.651E+00	4.534E+00	2.559E-01	0.809
	+	296.50		1.536E+01	2.888E+00	4.024E+00	2.283E-01	3.818
		414.70		-3.948E-02	9.072E-02	1.313E-01	7.376E-03	-0.301
		415.30		-6.258E+00	7.433E+00	1.091E+01	6.131E-01	-0.574
		555.20		-4.226E+00	4.116E+00	6.339E+00	3.964E-01	-0.667

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		573.80		-5.705E-01	1.137E+00	1.837E+00	1.159E-01	-0.311
		593.00		5.978E-01	1.036E+00	1.806E+00	1.149E-01	0.331
		656.30		-3.304E-01	4.220E+00	6.324E+00	4.095E-01	-0.052
		666.33		-1.607E-02	9.548E-02	1.348E-01	8.788E-03	-0.119
		675.00		-4.985E-01	2.089E+00	3.390E+00	2.234E-01	-0.147
		695.00		4.843E-02	9.048E-02	1.556E-01	1.050E-02	0.311
		697.00		1.880E-02	3.092E-01	5.136E-01	3.475E-02	0.037
		720.50	*	1.199E-01	1.730E-01	2.780E-01	1.933E-02	0.431
		856.80		-1.780E-01	5.948E-01	7.983E-01	6.413E-02	-0.223
		989.30		1.778E-01	1.316E+00	2.146E+00	1.642E-01	0.083
		1034.80		-3.498E+00	9.555E+00	1.540E+01	1.110E+00	-0.227
		1213.00		1.107E+00	5.588E+00	9.380E+00	5.492E-01	0.118
SB-127		61.10		1.125E+00	5.327E+01	8.123E+01	7.338E+00	0.014
		252.40		-3.864E+00	4.004E+00	5.831E+00	2.415E+00	-0.663
		290.80		-6.101E+00	2.034E+01	2.913E+01	2.503E+00	-0.209
		411.60		9.329E+00	1.292E+01	1.956E+01	2.738E+00	0.477
		444.90		9.679E+00	9.788E+00	1.683E+01	1.747E+00	0.575
		473.00		-1.051E+00	1.583E+00	2.407E+00	2.614E-01	-0.437
		543.00		-1.323E+01	1.467E+01	2.282E+01	2.913E+00	-0.580
		603.60		6.424E+00	1.154E+01	1.776E+01	1.900E+00	0.362
		685.20	*	-3.911E-01	1.225E+00	1.970E+00	1.882E-01	-0.199
		698.50		-1.837E-01	1.447E+01	2.390E+01	3.490E+00	-0.008
		722.20		1.269E+01	3.068E+01	4.602E+01	4.373E+00	0.276
		783.80		1.519E+00	3.311E+00	5.638E+00	6.354E-01	0.269
XE-127		57.60		3.471E-01	6.491E+00	1.104E+01	6.975E-01	0.031
		145.22		6.186E-01	7.445E-01	1.234E+00	6.893E-02	0.501
		172.10		-8.605E-02	1.356E-01	2.105E-01	1.084E-02	-0.409
		202.84	*	-4.882E-03	5.391E-02	8.520E-02	4.531E-03	-0.057
		374.96		5.671E-02	2.264E-01	3.773E-01	2.096E-02	0.150
I-131		80.18		7.816E+00	5.665E+00	7.491E+00	5.362E-01	1.043
		284.30		-9.418E-01	1.392E+00	2.229E+00	1.406E-01	-0.423
		364.48	*	8.976E-02	1.128E-01	1.952E-01	1.226E-02	0.460
		636.97		-2.642E-02	1.595E+00	2.652E+00	1.874E-01	-0.010
		722.89		-5.765E-01	8.474E+00	1.200E+01	8.438E-01	-0.048
TE-132		49.72		-2.978E+00	1.523E+01	2.577E+01	2.290E+00	-0.116
		111.76		2.902E-01	2.512E+01	4.042E+01	3.554E+00	0.007
		116.30		5.038E+00	2.246E+01	3.725E+01	3.251E+00	0.135
		228.16	*	1.481E-02	5.389E-01	9.142E-01	1.277E-01	0.016
BA-133		53.15		-3.944E-01	3.987E+00	6.646E+00	4.297E-01	-0.059
		79.62		4.949E-01	1.888E+00	2.300E+00	3.313E-01	0.215
		81.00		2.341E-02	1.256E-01	1.744E-01	2.638E-02	0.134
		276.40		2.743E-01	4.542E-01	6.974E-01	8.991E-02	0.393
		302.84		1.195E-01	1.620E-01	2.514E-01	2.916E-02	0.475
		356.01	*	8.231E-03	5.245E-02	7.657E-02	8.785E-03	0.107
		383.85		-2.151E-02	3.269E-01	5.324E-01	5.709E-02	-0.040
I-133	+	510.53		4.394E-01	3.269E-01	Half-Life too short		
		529.87	*	-1.067E-03	3.269E-01	Half-Life too short		
		706.58		1.801E-01	3.269E-01	Half-Life too short		
		856.28		-2.585E-01	3.269E-01	Half-Life too short		

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		875.33		-3.440E-02	3.269E-01	Half-Life too short		
		1236.41		2.891E-01	3.269E-01	Half-Life too short		
		1298.22		5.976E-02	3.269E-01	Half-Life too short		
CS-134		475.35		2.057E+00	2.222E+00	3.833E+00	2.277E-01	0.537
		563.23		6.378E-01	4.481E-01	8.197E-01	5.238E-02	0.778
		569.32		-1.398E-01	2.388E-01	3.784E-01	2.443E-02	-0.369
		604.70		4.049E-02	4.096E-02	6.588E-02	4.227E-03	0.615
		795.84	*	1.286E-01	6.118E-02	1.148E-01	8.750E-03	1.121
		801.93		-2.129E-01	4.899E-01	7.683E-01	5.882E-02	-0.277
		1038.57		8.935E-01	4.486E+00	7.650E+00	5.486E-01	0.117
		1167.94		1.146E+00	3.440E+00	5.852E+00	3.260E-01	0.196
		1365.15		-1.130E+00	1.434E+00	2.061E+00	1.533E-01	-0.548
CS-135		268.24	*	1.842E-01	1.934E-01	3.045E-01	2.290E-02	0.605
I-135		288.45		1.124E+09	1.934E-01	Half-Life too short		
		417.63		8.042E+08	1.934E-01	Half-Life too short		
		546.56		3.661E+08	1.934E-01	Half-Life too short		
		836.80		-1.594E+08	1.934E-01	Half-Life too short		
		1038.76		1.132E+08	1.934E-01	Half-Life too short		
		1124.00		3.854E+09	1.934E-01	Half-Life too short		
		1131.51		9.477E+07	1.934E-01	Half-Life too short		
		1260.41	*	2.417E+08	1.934E-01	Half-Life too short		
		1457.56		1.070E+10	1.934E-01	Half-Life too short		
		1678.03		2.368E+08	1.934E-01	Half-Life too short		
		1706.46		5.885E+08	1.934E-01	Half-Life too short		
		1791.20		-4.142E+08	1.934E-01	Half-Life too short		
CS-136		66.91		5.580E-02	8.713E-01	1.321E+00	1.896E-01	0.042
	+	86.29		6.066E+00	1.743E+00	2.231E+00	2.709E-01	2.719
		153.22		2.737E-01	6.920E-01	1.115E+00	7.698E-02	0.246
		163.89		-1.701E-02	1.115E+00	1.793E+00	1.211E-01	-0.009
		176.55		-2.096E-01	4.000E-01	6.237E-01	3.719E-02	-0.336
		273.65		-2.465E-01	5.058E-01	7.183E-01	4.645E-02	-0.343
		340.57		4.823E-01	1.663E-01	2.852E-01	1.721E-02	1.691
		818.51		-4.077E-02	7.969E-02	1.230E-01	9.517E-03	-0.332
		1048.07	*	7.010E-03	1.248E-01	2.070E-01	1.555E-02	0.034
		1235.34		-1.976E-01	7.273E-01	1.173E+00	1.189E-01	-0.169
CE-139		165.85	*	-3.669E-02	3.437E-02	5.226E-02	2.678E-03	-0.702
BA-140		162.64		1.882E-01	7.780E-01	1.268E+00	7.594E-02	0.148
		304.84		-2.561E-02	1.393E+00	2.035E+00	5.548E-01	-0.013
		423.70		-1.235E+00	2.201E+00	3.376E+00	1.072E+00	-0.366
		537.32	*	1.592E-01	2.831E-01	4.885E-01	1.592E-01	0.326
LA-140	+	328.77		4.855E-01	4.475E-01	6.048E-01	3.863E-02	0.803
		432.53		-6.417E-01	2.118E+00	3.352E+00	2.124E-01	-0.191
		487.03		-5.239E-03	1.432E-01	2.294E-01	1.545E-02	-0.023
		751.79		-1.596E+00	2.029E+00	3.099E+00	2.567E-01	-0.515
		815.85		-5.395E-02	3.556E-01	5.716E-01	5.034E-02	-0.094
		867.82		5.846E-01	1.718E+00	2.635E+00	2.267E-01	0.222
		919.63		1.201E+00	3.541E+00	5.183E+00	5.349E-01	0.232
		925.24		-7.597E-01	1.240E+00	1.861E+00	1.626E-01	-0.408
		1596.49	*	-8.548E-02	1.043E-01	1.541E-01	1.004E-02	-0.555

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	3.416E-02	6.586E-02	1.094E-01	6.369E-03	0.312
CE-143		57.37		-3.512E-05	6.586E-02	Half-Life too short		
		231.56		7.759E-05	6.586E-02	Half-Life too short		
		293.26	*	2.633E-04	6.586E-02	Half-Life too short		
	+	350.59		1.835E-02	6.586E-02	Half-Life too short		
		490.36		-3.037E-04	6.586E-02	Half-Life too short		
		664.57		1.214E-03	6.586E-02	Half-Life too short		
		721.93		4.596E-04	6.586E-02	Half-Life too short		
CE-144		80.11		4.070E+00	2.920E+00	3.864E+00	2.743E-01	1.053
		133.54	*	7.385E-02	2.260E-01	3.735E-01	5.317E-02	0.198
PM-144		476.78		4.680E-02	7.906E-02	1.331E-01	9.405E-03	0.352
		618.01		-2.476E-02	3.956E-02	6.285E-02	4.230E-03	-0.394
		696.49	*	3.991E-03	4.282E-02	7.130E-02	4.823E-03	0.056
		778.57		3.931E-01	2.671E+00	4.435E+00	3.290E-01	0.089
PR-144		696.49	*	2.702E-01	2.899E+00	4.828E+00	3.265E-01	0.056
		1489.15		-9.015E+00	1.414E+01	2.036E+01	1.379E+00	-0.443
PM-146		453.90	*	4.689E-04	5.307E-02	8.583E-02	7.421E-03	0.005
		633.02		9.550E-01	1.641E+00	2.798E+00	1.033E+00	0.341
		735.90		-3.117E-02	1.848E-01	2.568E-01	7.235E-02	-0.121
		747.13		2.558E-02	1.098E-01	1.842E-01	2.430E-02	0.139
ND-147	+	91.11		8.037E-01	3.125E-01	5.338E-01	4.377E-02	1.506
		319.41		7.552E-01	3.197E+00	5.380E+00	3.059E-01	0.140
		439.89		-6.059E+00	6.555E+00	9.867E+00	5.687E-01	-0.614
		531.02	*	8.622E-02	6.024E-01	9.736E-01	1.332E-01	0.089
PM-149		285.90	*	-8.980E+01	6.598E+01	9.920E+01	1.400E+01	-0.905
EU-152		121.78		-4.728E-03	8.117E-02	1.326E-01	1.055E-02	-0.036
		244.69		-3.262E-02	3.970E-01	5.876E-01	3.251E-02	-0.056
		344.27	*	2.982E-02	1.218E-01	1.802E-01	1.155E-02	0.166
		443.98		7.274E-01	1.234E+00	2.076E+00	1.201E-01	0.350
		778.89		3.471E-02	3.080E-01	5.099E-01	3.783E-02	0.068
		867.32		-3.402E-01	1.201E+00	1.615E+00	1.310E-01	-0.211
	+	964.01		7.018E-01	4.350E-01	6.723E-01	5.292E-02	1.044
		1085.78		5.207E-02	4.624E-01	7.793E-01	5.177E-02	0.067
		1112.02		8.797E-02	3.892E-01	6.476E-01	4.094E-02	0.136
		1407.95		5.059E-02	2.542E-01	4.263E-01	2.945E-02	0.119
GD-153		69.67		-8.755E-01	1.894E+00	2.987E+00	1.964E-01	-0.293
	+	83.37		3.842E+01	2.074E+01	2.875E+01	2.102E+00	1.336
		97.43	*	-1.198E-01	1.001E-01	1.369E-01	9.520E-03	-0.875
		103.18		-6.030E-02	1.130E-01	1.819E-01	1.216E-02	-0.331
EU-154		123.07		1.765E-02	5.654E-02	9.388E-02	9.071E-03	0.188
		247.94		5.873E-02	4.089E-01	6.722E-01	6.311E-02	0.087
		591.81		-3.258E-01	7.601E-01	1.231E+00	1.245E-01	-0.265
		723.30		6.912E-02	2.312E-01	3.422E-01	2.762E-02	0.202
		756.87		2.382E-01	9.577E-01	1.605E+00	1.770E-01	0.148
		873.19		-1.962E-01	3.596E-01	5.486E-01	6.543E-02	-0.358
		996.32		-3.454E-01	4.468E-01	6.887E-01	1.191E-01	-0.502
		1004.76		-1.059E-01	2.873E-01	4.669E-01	5.062E-02	-0.227
		1274.45	*	-6.740E-02	1.588E-01	2.496E-01	2.432E-02	-0.270
EU-155		48.70		-2.329E+00	2.469E+00	4.035E+00	2.636E-01	-0.577

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		60.01		-3.460E+00	5.989E+00	8.849E+00	5.560E-01	-0.391
	+	86.54		6.004E-01	1.629E-01	2.241E-01	1.713E-02	2.679
		105.31	*	1.073E-01	1.174E-01	2.012E-01	1.356E-02	0.533
TB-160	+	86.79		1.584E+00	4.294E-01	5.942E-01	4.492E-02	2.666
		197.04		-4.395E-01	6.493E-01	9.746E-01	5.150E-02	-0.451
		215.65		-7.735E-02	8.885E-01	1.328E+00	7.157E-02	-0.058
		298.57		2.108E-01	1.902E-01	2.308E-01	1.310E-02	0.914
		879.36	*	7.846E-02	1.674E-01	2.839E-01	2.331E-02	0.276
		962.29		4.793E-01	7.016E-01	1.062E+00	8.374E-02	0.451
	+	966.15		4.759E-01	2.950E-01	5.238E-01	4.114E-02	0.908
		1177.93		7.155E-02	4.463E-01	7.492E-01	4.150E-02	0.095
		1271.85		2.386E-01	8.765E-01	1.481E+00	9.480E-02	0.161
HO-166M		80.57		2.252E-01	3.937E-01	4.908E-01	3.498E-02	0.459
		184.41		4.938E-02	4.574E-02	7.145E-02	3.724E-03	0.691
		280.46		-6.414E-02	9.470E-02	1.524E-01	8.611E-03	-0.421
	+	410.95		7.387E-01	3.635E-01	5.377E-01	3.009E-02	1.374
		711.68	*	-2.540E-02	7.691E-02	1.235E-01	8.503E-03	-0.206
		752.31		-4.265E-02	3.359E-01	5.458E-01	3.933E-02	-0.078
		810.29		-5.156E-02	7.709E-02	1.181E-01	9.053E-03	-0.437
TM-171		51.35		1.239E+01	3.263E+01	5.647E+01	3.680E+00	0.219
		52.39		-4.604E+00	1.741E+01	2.934E+01	1.904E+00	-0.157
		59.40		7.974E+00	3.146E+01	4.862E+01	3.050E+00	0.164
		66.72	*	3.199E+00	3.363E+01	5.108E+01	3.306E+00	0.063
LU-176	+	88.36		1.183E+00	3.207E-01	4.254E-01	3.242E-02	2.781
		201.83		-1.980E-02	3.418E-02	5.264E-02	2.796E-03	-0.376
		306.84	*	-3.172E-02	2.740E-02	4.164E-02	2.366E-03	-0.762
		401.10		1.012E+00	7.997E+00	1.316E+01	7.285E-01	0.077
LU-177		112.95		-6.053E-01	1.594E+00	2.515E+00	1.607E-01	-0.241
	+	208.36	*	2.057E+00	1.593E+00	1.846E+00	9.874E-02	1.114
LU-177M		52.97		-1.040E-01	1.798E+00	3.003E+00	1.943E-01	-0.035
		54.07		2.838E-01	9.402E-01	1.592E+00	1.024E-01	0.178
		61.30		2.824E-01	1.750E+00	2.687E+00	1.697E-01	0.105
		121.62		-3.644E-02	4.134E-01	6.742E-01	4.210E-02	-0.054
		147.16		-1.262E-01	6.955E-01	1.117E+00	6.188E-02	-0.113
		171.86		-4.021E-01	5.551E-01	8.576E-01	4.414E-02	-0.469
		218.09		3.830E-01	9.602E-01	1.551E+00	8.381E-02	0.247
	+	268.79		2.106E+00	1.913E+00	1.637E+00	9.196E-02	1.287
		319.02		5.827E-02	2.692E-01	4.526E-01	2.573E-02	0.129
		367.43		6.177E-02	1.041E+00	1.717E+00	9.590E-02	0.036
		413.65	*	7.259E-02	2.231E-01	3.283E-01	1.842E-02	0.221
HF-181		56.28		-4.631E-01	9.814E-01	1.633E+00	1.039E-01	-0.284
		57.53		1.109E-02	5.474E-01	9.297E-01	5.877E-02	0.012
		65.20		-9.351E-02	1.131E+00	1.705E+00	1.096E-01	-0.055
		133.02		-1.261E-02	7.992E-02	1.151E-01	6.791E-03	-0.109
		136.25		8.610E-02	5.032E-01	8.254E-01	4.796E-02	0.104
		345.85		-3.599E-02	2.214E-01	3.337E-01	1.885E-02	-0.108
		482.03	*	3.066E-02	4.804E-02	8.122E-02	4.850E-03	0.378
W-181		56.28		-1.845E-01	3.896E-01	6.484E-01	4.124E-02	-0.284
		57.53		4.193E-03	2.175E-01	3.694E-01	2.335E-02	0.011

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		65.20	*	-3.686E-02	4.460E-01	6.723E-01	4.320E-02	-0.055
TA-182		67.75		-6.348E-03	1.330E-01	2.005E-01	1.305E-02	-0.032
		100.10		1.317E-01	1.950E-01	3.316E-01	2.260E-02	0.397
		152.43		2.478E-01	3.682E-01	6.141E-01	3.329E-02	0.403
		222.10		-1.486E-01	3.542E-01	5.887E-01	3.193E-02	-0.252
		1001.68		1.227E+00	2.666E+00	4.646E+00	3.502E-01	0.264
	+	1121.28		7.776E-01	2.904E-01	4.495E-01	2.789E-02	1.730
		1189.05		1.190E-01	3.848E-01	6.535E-01	3.685E-02	0.182
		1221.42	*	1.343E-01	2.477E-01	4.271E-01	2.534E-02	0.315
		1230.97		-6.244E-04	5.999E-01	9.890E-01	5.954E-02	-0.001
RE-183		57.98		1.409E-01	2.125E-01	3.695E-01	2.331E-02	0.381
		59.32		9.878E-02	1.246E-01	1.979E-01	1.242E-02	0.499
		67.20		5.079E-02	2.380E-01	3.634E-01	2.358E-02	0.140
		162.32	*	1.943E-02	1.213E-01	1.970E-01	1.024E-02	0.099
	+	208.81		2.096E+00	1.623E+00	1.878E+00	1.005E-01	1.116
		291.72		-2.251E-01	1.103E+00	1.593E+00	9.029E-02	-0.141
RE-184		57.98		5.231E-01	7.891E-01	1.372E+00	8.657E-02	0.381
		59.32		3.665E-01	4.625E-01	7.345E-01	4.608E-02	0.499
		67.20		1.886E-01	8.835E-01	1.349E+00	8.753E-02	0.140
		161.27		-1.055E-01	3.972E-01	6.316E-01	3.298E-02	-0.167
		216.55		2.924E-02	3.054E-01	4.855E-01	2.619E-02	0.060
		252.85	*	-2.758E-01	2.471E-01	3.899E-01	2.170E-02	-0.707
		318.01		-2.244E-01	4.868E-01	7.836E-01	4.454E-02	-0.286
		792.07		-1.101E+00	1.333E+00	2.029E+00	1.526E-01	-0.543
		903.28		3.342E-01	1.329E+00	2.143E+00	1.784E-01	0.156
		920.93		3.646E-01	5.423E-01	9.154E-01	7.509E-02	0.398
OS-185		59.72		-2.514E-02	3.464E-01	5.262E-01	3.302E-02	-0.048
		61.14		8.191E-03	1.911E-01	2.917E-01	1.842E-02	0.028
		69.30		-3.483E-01	3.289E-01	5.314E-01	3.487E-02	-0.655
		592.07		-8.212E-01	3.076E+00	5.049E+00	3.209E-01	-0.163
		646.12	*	-3.455E-02	4.957E-02	7.750E-02	5.008E-03	-0.446
		717.42		-2.259E-02	1.080E+00	1.778E+00	1.232E-01	-0.013
		874.81		-3.624E-01	7.219E-01	1.110E+00	9.077E-02	-0.326
		880.27		-1.602E-01	9.807E-01	1.565E+00	1.286E-01	-0.102
RE-188		155.03	*	-8.282E-02	1.908E-01	2.945E-01	1.579E-02	-0.281
		477.96		3.226E-01	3.665E+00	5.940E+00	3.535E-01	0.054
		633.10		1.905E+00	3.201E+00	5.582E+00	3.596E-01	0.341
W-188	+	63.58		1.116E+02	9.324E+01	1.063E+02	6.779E+00	1.050
		227.08		1.596E+00	1.294E+01	2.206E+01	1.202E+00	0.072
		290.67	*	1.421E-01	8.705E+00	1.280E+01	7.255E-01	0.011
IR-192	+	295.96		1.252E+00	2.357E-01	3.384E-01	1.952E-02	3.701
		308.46		3.174E-02	1.009E-01	1.710E-01	9.833E-03	0.186
		316.51	*	-1.055E-02	3.650E-02	5.943E-02	3.396E-03	-0.177
		468.07		3.189E-02	7.871E-02	1.307E-01	8.862E-03	0.244
		604.41		5.737E-01	5.470E-01	8.810E-01	1.027E-01	0.651
		612.46		2.525E+00	1.102E+00	1.877E+00	1.510E-01	1.345
AU-195		65.12		7.054E-02	2.036E-01	3.133E-01	2.012E-02	0.225
		66.83		1.605E-02	1.109E-01	1.689E-01	1.094E-02	0.095
	+	75.70		1.290E+00	2.737E-01	5.344E-01	3.659E-02	2.413

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	3.371E-01	2.523E-01	4.353E-01	2.993E-02	0.774
	+	129.76		2.385E+00	3.494E+00	5.432E+00	3.255E-01	0.439
TL-200		367.94	*	-8.653E-05	3.494E+00	Half-Life too short		
		579.30		5.311E-04	3.494E+00	Half-Life too short		
		828.27		3.866E-04	3.494E+00	Half-Life too short		
		1205.75		2.109E-04	3.494E+00	Half-Life too short		
TL-201		68.90		-3.355E+00	3.892E+00	6.339E+00	4.150E-01	-0.529
		70.82		-6.601E-02	2.507E+00	3.784E+00	2.505E-01	-0.017
		80.30		6.912E+00	5.101E+00	6.734E+00	4.788E-01	1.026
		135.34		-3.765E+00	2.102E+01	3.394E+01	1.980E+00	-0.111
		167.43	*	5.139E+00	5.787E+00	9.702E+00	4.973E-01	0.530
TL-202		68.90		-3.795E-01	4.402E-01	7.169E-01	4.693E-02	-0.529
		70.82		-7.445E-03	2.827E-01	4.268E-01	2.826E-02	-0.017
		80.30		7.798E-01	5.755E-01	7.598E-01	5.402E-02	1.026
		439.56	*	-5.004E-02	7.724E-02	1.189E-01	6.850E-03	-0.421
HG-203		70.83		-2.175E-02	1.296E+00	1.957E+00	2.434E-01	-0.011
		72.87		8.886E-01	7.628E-01	1.199E+00	1.444E-01	0.741
		82.60		4.747E-01	1.310E+00	1.996E+00	2.582E-01	0.238
		279.20	*	4.755E-02	4.574E-02	7.893E-02	4.747E-03	0.602
BI-207		72.80		2.437E-01	2.261E-01	3.566E-01	2.391E-02	0.683
	+	74.97		7.189E-01	1.526E-01	2.706E-01	1.842E-02	2.657
	+	84.90		4.988E-01	2.693E-01	3.779E-01	2.804E-02	1.320
		569.67		-2.045E-02	3.680E-02	5.841E-02	3.678E-03	-0.350
		1063.62	*	-4.910E-03	6.321E-02	1.048E-01	7.228E-03	-0.047
		1770.23		1.013E-02	6.359E-01	9.051E-01	5.342E-02	0.011
TL-207		81.07		3.880E-02	2.767E-01	3.831E-01	2.743E-02	0.101
	+	83.78		3.289E-01	1.776E-01	2.508E-01	1.841E-02	1.312
		94.90		4.039E-01	2.700E-01	4.316E-01	3.066E-02	0.936
		122.32		-2.559E-01	1.924E+00	3.130E+00	2.216E-01	-0.082
		144.24		2.304E-01	7.660E-01	1.241E+00	8.786E-02	0.186
		154.21		-1.196E-01	4.536E-01	7.076E-01	4.720E-02	-0.169
	+	269.46		4.959E-01	4.506E-01	4.039E-01	2.379E-02	1.228
		323.87	*	2.547E-01	8.320E-01	1.241E+00	2.044E-01	0.205
	+	338.28		9.606E+00	2.213E+00	3.077E+00	3.218E-01	3.122
		445.03		2.408E+00	2.936E+00	5.002E+00	5.133E-01	0.481
PO-209		260.50		3.914E+00	1.055E+01	1.807E+01	1.011E+00	0.217
		262.80		-6.432E+00	2.906E+01	4.822E+01	2.701E+00	-0.133
		896.60	*	2.217E+00	9.520E+00	1.575E+01	1.315E+00	0.141
BI-210		46.50	*	5.398E-01	3.644E+00	6.184E+00	4.658E-01	0.087
PB-210		46.50	*	5.398E-01	3.644E+00	6.184E+00	4.658E-01	0.087
PO-210		46.50	*	5.398E-01	3.644E+00	6.184E+00	3.966E-01	0.087
PB-211		404.84	*	6.759E-01	1.290E+00	1.833E+00	1.142E+00	0.369
		427.08		8.832E-01	2.439E+00	3.965E+00	2.450E+00	0.223
		831.96		-8.116E-01	1.645E+00	2.427E+00	1.518E+00	-0.334
BI-212	+	727.18	*	1.801E+00	6.784E-01	7.975E-01	6.904E-02	2.258
		785.46		3.012E-01	2.165E+00	3.588E+00	2.680E-01	0.084
		1620.62		7.171E-02	1.376E+00	2.319E+00	1.493E-01	0.031
PO-215		81.07		3.880E-02	2.767E-01	3.831E-01	2.743E-02	0.101
	+	83.78		3.289E-01	1.776E-01	2.508E-01	1.841E-02	1.312

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		4.039E-01	2.700E-01	4.316E-01	3.066E-02	0.936
		122.32		-2.559E-01	1.924E+00	3.130E+00	2.216E-01	-0.082
		144.24		2.304E-01	7.660E-01	1.241E+00	8.786E-02	0.186
		154.21		-1.196E-01	4.536E-01	7.076E-01	4.720E-02	-0.169
	+	269.46		4.959E-01	4.506E-01	4.039E-01	2.379E-02	1.228
		323.87	*	2.547E-01	8.320E-01	1.241E+00	2.044E-01	0.205
	+	338.28		9.606E+00	2.213E+00	3.077E+00	3.218E-01	3.122
		445.03		2.408E+00	2.936E+00	5.002E+00	5.133E-01	0.481
RN-219	+	271.23		6.362E-01	5.791E-01	5.327E-01	4.251E-02	1.194
		401.81	*	-2.507E-01	5.109E-01	8.044E-01	1.086E-01	-0.312
RN-220		549.76	*	1.429E+01	3.090E+01	5.371E+01	3.349E+00	0.266
RA-223		81.07		3.880E-02	2.767E-01	3.831E-01	2.743E-02	0.101
	+	83.78		3.289E-01	1.776E-01	2.508E-01	1.841E-02	1.312
		94.90		4.039E-01	2.700E-01	4.316E-01	3.066E-02	0.936
		122.32		-2.559E-01	1.924E+00	3.130E+00	2.216E-01	-0.082
		144.24		2.304E-01	7.660E-01	1.241E+00	8.786E-02	0.186
		154.21		-1.196E-01	4.536E-01	7.076E-01	4.720E-02	-0.169
	+	269.46		4.959E-01	4.506E-01	4.039E-01	2.379E-02	1.228
		323.87	*	2.547E-01	8.320E-01	1.241E+00	2.044E-01	0.205
	+	338.28		9.606E+00	2.213E+00	3.077E+00	3.218E-01	3.122
		445.03		2.408E+00	2.936E+00	5.002E+00	5.133E-01	0.481
AC-227		79.80		9.673E-01	2.411E+00	2.961E+00	6.198E-01	0.327
		236.00		9.440E-03	2.711E-01	4.055E-01	4.171E-02	0.023
		256.20	*	-1.073E-02	4.171E-01	7.006E-01	9.717E-02	-0.015
		286.10		-1.896E+00	1.662E+00	2.564E+00	2.946E-01	-0.739
	+	299.80		4.508E+00	2.277E+00	3.126E+00	5.077E-01	1.442
		304.40		1.333E+00	2.132E+00	3.271E+00	5.645E-01	0.407
		334.20		-2.036E+00	2.912E+00	3.931E+00	7.191E-01	-0.518
TH-227		79.80		9.673E-01	2.412E+00	2.961E+00	6.281E-01	0.327
	+	94.00		1.112E+01	4.145E+00	4.526E+00	9.614E-01	2.457
		236.00		9.440E-03	2.711E-01	4.055E-01	3.595E-02	0.023
		256.20	*	-1.073E-02	4.171E-01	7.006E-01	1.179E-01	-0.015
		286.10		-1.896E+00	2.514E+00	2.564E+00	2.568E+00	-0.739
	+	299.80		4.508E+00	2.277E+00	3.126E+00	5.077E-01	1.442
		304.40		1.333E+00	2.132E+00	3.271E+00	5.645E-01	0.407
		334.20		-2.036E+00	2.912E+00	3.931E+00	7.191E-01	-0.518
TH-229	+	85.43		4.924E-01	2.658E-01	3.785E-01	2.823E-02	1.301
	+	88.47		6.810E-01	1.846E-01	2.434E-01	1.852E-02	2.797
		100.00		8.259E-02	2.088E-01	3.480E-01	2.374E-02	0.237
		193.63	*	-9.397E-02	5.637E-01	8.898E-01	4.684E-02	-0.106
		210.97		1.046E+00	9.931E-01	1.494E+00	8.013E-02	0.700
PA-231		283.67	*	2.563E-01	1.599E+00	2.696E+00	3.699E-01	0.095
	+	301.29		1.803E+00	8.824E-01	1.201E+00	1.248E-01	1.501
TH-231		81.07		3.880E-02	2.767E-01	3.831E-01	2.743E-02	0.101
	+	83.78		3.289E-01	1.776E-01	2.508E-01	1.841E-02	1.312
		94.90		4.039E-01	2.700E-01	4.316E-01	3.066E-02	0.936
		122.32		-2.559E-01	1.924E+00	3.130E+00	2.216E-01	-0.082
		144.24		2.304E-01	7.660E-01	1.241E+00	8.786E-02	0.186
		154.21		-1.196E-01	4.536E-01	7.076E-01	4.720E-02	-0.169

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.959E-01	4.506E-01	4.039E-01	2.379E-02	1.228
		323.87	*	2.547E-01	8.320E-01	1.241E+00	2.044E-01	0.205
	+	338.28		9.606E+00	2.213E+00	3.077E+00	3.218E-01	3.122
		445.03		2.408E+00	2.936E+00	5.002E+00	5.133E-01	0.481
U-231	+	84.21		1.135E+01	6.129E+00	8.679E+00	6.397E-01	1.308
	+	92.29		8.803E+00	2.769E+00	3.945E+00	2.874E-01	2.232
		95.87	*	-4.420E-01	1.023E+00	1.481E+00	1.043E-01	-0.299
		108.00		-1.523E+00	1.778E+00	2.810E+00	1.831E-01	-0.542
PA-233	+	75.28		2.098E+01	5.189E+00	8.160E+00	1.176E+00	2.571
	+	86.59		9.764E+00	3.627E+00	3.656E+00	9.687E-01	2.671
	+	300.12		1.257E+00	6.241E-01	8.728E-01	1.168E-01	1.440
		311.98	*	1.687E-03	6.979E-02	1.161E-01	7.023E-03	0.015
		340.50		2.804E+00	1.079E+00	1.527E+00	3.503E-01	1.836
		398.62		-7.303E-01	2.553E+00	4.076E+00	1.051E+00	-0.179
		415.76		-1.601E+00	2.063E+00	3.132E+00	6.433E-01	-0.511
PA-234	+	63.00		3.280E+00	2.773E+00	3.174E+00	4.560E-01	1.033
		94.67		4.800E-01	2.065E-01	3.324E-01	3.793E-02	1.444
		98.44		1.207E-01	1.262E-01	1.767E-01	9.815E-02	0.683
		99.86		4.149E-01	5.246E-01	8.880E-01	6.063E-02	0.467
		111.00		-4.788E-03	1.972E-01	3.241E-01	3.449E-02	-0.015
		131.20		-2.882E-02	1.307E-01	1.880E-01	1.118E-02	-0.153
		152.70		2.140E-01	3.584E-01	5.935E-01	9.301E-02	0.361
	+	186.00		6.403E+00	3.188E+00	3.010E+00	9.166E-01	2.127
		226.40		1.530E-01	4.151E-01	7.153E-01	8.145E-02	0.214
		227.20		1.008E-03	4.456E-01	7.551E-01	4.116E-02	0.001
		248.90		8.565E-01	9.144E-01	1.581E+00	3.387E-01	0.542
		293.70		5.154E+00	1.312E+00	1.901E+00	3.048E-01	2.712
		369.80		-7.490E-02	9.873E-01	1.612E+00	3.347E-01	-0.046
		568.70		-1.524E+00	1.232E+00	1.850E+00	1.164E-01	-0.824
		569.50		-2.164E-01	3.291E-01	5.183E-01	3.263E-02	-0.417
		574.00		-7.712E-01	1.769E+00	2.873E+00	1.812E-01	-0.268
		699.00		4.027E-02	8.554E-01	1.419E+00	2.600E-01	0.028
		706.10		1.158E+00	1.414E+00	2.320E+00	1.027E+00	0.499
		733.00		7.711E-02	4.632E-01	6.756E-01	1.462E-01	0.114
		742.81		-8.881E-01	1.729E+00	2.536E+00	1.700E+00	-0.350
		796.30		2.427E+00	1.337E+00	2.217E+00	5.925E-01	1.095
		805.60		8.288E-01	1.322E+00	2.218E+00	6.738E-01	0.374
		819.60		1.878E-01	1.398E+00	2.309E+00	8.738E-01	0.081
		826.30		-8.635E-03	9.439E-01	1.537E+00	6.855E-01	-0.006
		831.60		-3.131E-03	7.838E-01	1.274E+00	3.775E-01	-0.002
		876.40		-4.096E-01	1.105E+00	1.588E+00	1.632E+00	-0.258
		880.51		-9.846E-02	3.644E-01	5.752E-01	4.728E-02	-0.171
		883.24		-8.405E-02	3.819E-01	5.992E-01	4.025E-01	-0.140
		899.00		-6.066E-01	1.129E+00	1.681E+00	7.338E-01	-0.361
		925.00		-5.344E-01	1.368E+00	2.111E+00	1.725E-01	-0.253
		926.50		-4.662E-02	1.976E-01	3.097E-01	7.781E-02	-0.151
		946.00	*	-9.096E-02	3.833E-01	6.020E-01	1.113E-01	-0.151
		949.00		5.457E-01	5.691E-01	9.987E-01	7.983E-02	0.546
		980.50		3.048E-02	8.741E-01	1.409E+00	1.089E-01	0.022

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-9.270E-01	1.514E+00	2.035E+00	1.321E+00	-0.455
PA-234M		766.41		2.007E+01	2.829E+01	3.700E+01	2.832E+01	0.542
		1001.03	*	7.672E-02	8.688E+00	1.463E+01	1.517E+00	0.005
U-235	+	89.95		3.484E+00	1.698E+00	2.143E+00	6.550E-01	1.625
	+	93.35		3.459E+00	1.427E+00	1.549E+00	4.278E-01	2.234
		105.00		1.237E+00	1.196E+00	1.971E+00	5.780E-01	0.628
		143.76	*	-1.129E-01	2.419E-01	3.770E-01	6.123E-02	-0.299
		163.35		-2.016E-01	5.418E-01	8.546E-01	1.520E-01	-0.236
	+	185.71		2.371E-01	9.423E-02	1.111E-01	5.798E-03	2.135
		205.31		4.691E-01	6.450E-01	9.489E-01	1.692E-01	0.494
NP-236		94.67		3.672E-01	1.534E-01	2.525E-01	1.798E-02	1.454
		98.44		9.117E-02	8.103E-02	1.336E-01	9.214E-03	0.683
		111.00		-3.622E-03	1.491E-01	2.452E-01	1.578E-02	-0.015
		160.31	*	5.262E-03	8.929E-02	1.444E-01	7.569E-03	0.036
NP-239		99.55		1.720E-01	1.767E-01	3.011E-01	2.060E-02	0.571
		117.00	*	-1.329E-01	2.062E-01	3.277E-01	2.068E-02	-0.406
	+	209.75		1.675E+00	1.298E+00	1.547E+00	8.288E-02	1.083
		228.18		-1.648E-02	2.355E-01	3.976E-01	2.169E-02	-0.041
		277.60		2.647E-01	2.200E-01	3.478E-01	1.962E-02	0.761
		334.30		-1.216E+00	1.635E+00	2.214E+00	1.255E-01	-0.549
AM-241		59.54	*	4.025E-02	1.826E-01	2.818E-01	2.002E-02	0.143
CM-243		99.55		1.769E-01	1.818E-01	3.098E-01	2.120E-02	0.571
		103.76	*	-1.757E-02	1.045E-01	1.712E-01	1.140E-02	-0.103
		117.00		-1.368E-01	2.121E-01	3.371E-01	2.127E-02	-0.406
	+	209.75		1.651E+00	1.279E+00	1.525E+00	8.170E-02	1.083
		228.18		-1.666E-02	2.379E-01	4.017E-01	2.191E-02	-0.041
		277.60		2.668E-01	2.218E-01	3.506E-01	1.978E-02	0.761
CM-247		278.00		1.160E+00	8.885E-01	1.469E+00	8.288E-02	0.790
		287.40		-3.095E-02	1.312E+00	2.187E+00	1.238E-01	-0.014
		402.60	*	-1.224E-02	4.465E-02	7.147E-02	3.963E-03	-0.171
CF-249		252.85		-1.041E+00	9.322E-01	1.471E+00	8.187E-02	-0.707
		333.44		-8.016E-02	2.292E-01	2.989E-01	1.695E-02	-0.268
		387.95	*	1.373E-02	4.591E-02	7.661E-02	4.211E-03	0.179
CF-251		176.60	*	-7.822E-02	1.480E-01	2.307E-01	1.193E-02	-0.339
		227.00		4.853E-02	3.935E-01	6.707E-01	3.655E-02	0.072
		285.00		-1.554E+00	1.838E+00	2.912E+00	1.647E-01	-0.534

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433007      *
* Acquisition date :  7-JUL-2009 06:39:19 Detector SN#    :                 *
* Detector ID        : GAM12                Sensitivity     : 5.000        *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000       *
* Elapsed real time:    0 02:00:01.44       Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433007           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 1.0582E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.688E+01	3.342E+00	5.179E-01	0.000E+00
CD-109	5.064E+00	1.345E+00	1.352E+00	0.000E+00
SN-126	4.988E-01	1.325E-01	1.338E-01	0.000E+00
BA-137M	1.536E-01	5.188E-02	7.346E-02	0.000E+00
CS-137	1.624E-01	5.485E-02	7.765E-02	0.000E+00
TL-208	6.352E-01	9.907E-02	7.157E-02	0.000E+00
BI-211	4.549E+00	5.358E-01	3.439E-01	0.000E+00
PB-212	1.894E+00	1.830E-01	9.588E-02	0.000E+00
PO-212	1.894E+00	1.830E-01	9.588E-02	0.000E+00
BI-214	1.305E+00	2.042E-01	1.411E-01	0.000E+00
PB-214	1.582E+00	2.032E-01	1.205E-01	0.000E+00
PO-214	1.582E+00	2.032E-01	1.205E-01	0.000E+00
PO-216	1.894E+00	1.830E-01	9.588E-02	0.000E+00
PO-218	1.582E+00	2.032E-01	1.205E-01	0.000E+00
RA-224	4.795E+00	1.373E+00	1.091E+00	0.000E+00
RA-226	1.305E+00	2.042E-01	1.411E-01	0.000E+00
AC-228	1.961E+00	4.119E-01	2.436E-01	0.000E+00
RA-228	1.961E+00	4.119E-01	2.436E-01	0.000E+00
TH-228	1.894E+00	1.830E-01	9.587E-02	0.000E+00
TH-230	1.305E+00	2.042E-01	1.411E-01	0.000E+00
TH-232	1.961E+00	4.119E-01	2.436E-01	0.000E+00
TH-234	2.814E+00	2.345E+00	2.317E+00	0.000E+00
U-234	1.305E+00	2.042E-01	1.411E-01	0.000E+00
NP-237	1.465E+00	4.890E-01	3.975E-01	0.000E+00
U-238	2.814E+00	2.345E+00	2.317E+00	0.000E+00
AM-243	4.005E-01	8.331E-02	1.072E-01	0.000E+00
ANH-511	1.261E-01	9.007E-02	5.691E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	5.615E-02	3.726E-01	6.186E-01	0.000E+00	NOT IDENT.
NA-22	-2.361E-02	5.571E-02	8.893E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.011E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.960E-02	3.871E-02	5.872E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.660E-02	9.216E-02	0.000E+00	FAIL ABUN
SC-46	-2.512E-02	4.766E-02	7.424E-02	0.000E+00	FAIL ABUN
V-48	1.156E-03	7.236E-02	1.182E-01	0.000E+00	NOT IDENT.
CR-51	2.241E-02	3.793E-01	6.447E-01	0.000E+00	NOT IDENT.
MN-52	-6.285E-02	2.596E-01	4.139E-01	0.000E+00	NOT IDENT.
MN-54	9.035E-03	4.497E-02	7.575E-02	0.000E+00	NOT IDENT.
CO-56	-9.088E-03	4.921E-02	8.001E-02	0.000E+00	NOT IDENT.
CO-57	-1.002E-03	2.729E-02	4.582E-02	0.000E+00	NOT IDENT.
CO-58	-4.387E-02	4.950E-02	7.543E-02	0.000E+00	NOT IDENT.
FE-59	5.165E-02	1.159E-01	2.030E-01	0.000E+00	NOT IDENT.
CO-60	-1.088E-02	4.977E-02	8.052E-02	0.000E+00	NOT IDENT.
ZN-65	-1.595E-02	1.159E-01	1.652E-01	0.000E+00	NOT IDENT.
GE-68	1.175E-01	1.432E+00	2.444E+00	0.000E+00	NOT IDENT.
AS-73	3.538E-01	8.868E-01	1.554E+00	0.000E+00	NOT IDENT.
AS-74	3.533E-02	1.021E-01	1.783E-01	0.000E+00	NOT IDENT.
SE-75	-4.783E-03	5.148E-02	7.735E-02	0.000E+00	NOT IDENT.
BR-77	5.449E+00	8.771E+00	1.401E+01	0.000E+00	FAIL ABUN
SR-82	-1.317E-02	4.316E-01	7.172E-01	0.000E+00	NOT IDENT.
RB-83	5.736E-02	8.837E-02	1.349E-01	0.000E+00	NOT IDENT.
RB-84	-3.474E-02	8.708E-02	1.380E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.292E+00	1.687E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.697E-02	8.529E-02	0.000E+00	NOT IDENT.
RB-86	1.033E-01	8.616E-01	1.476E+00	0.000E+00	NOT IDENT.
Y-88	3.037E-02	4.672E-02	8.596E-02	0.000E+00	NOT IDENT.
ZR-88	3.006E-03	3.449E-02	5.784E-02	0.000E+00	NOT IDENT.
Y-91	-1.186E+00	2.340E+01	3.904E+01	0.000E+00	NOT IDENT.
NB-94	-7.584E-03	3.990E-02	6.606E-02	0.000E+00	NOT IDENT.
NB-95	3.313E-02	5.371E-02	8.325E-02	0.000E+00	NOT IDENT.
NB-95M	-3.066E-02	1.351E-01	2.032E-01	0.000E+00	NOT IDENT.
ZR-95	3.769E-02	8.513E-02	1.473E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.429E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.970E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-5.021E+00	9.241E+00	1.463E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.059E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.703E-02	3.723E-02	6.081E-02	0.000E+00	NOT IDENT.
RH-102	2.231E-02	3.368E-02	5.808E-02	0.000E+00	NOT IDENT.
RU-103	-2.714E-02	4.362E-02	6.720E-02	0.000E+00	FAIL ABUN
RH-106	2.312E-01	3.607E-01	6.411E-01	0.000E+00	FAIL ABUN
RU-106	2.312E-01	3.600E-01	6.411E-01	0.000E+00	FAIL ABUN
AG-108M	-1.501E-02	3.588E-02	5.740E-02	0.000E+00	NOT IDENT.
AG-110M	2.509E-02	4.602E-02	7.162E-02	0.000E+00	NOT IDENT.
IN-111	-1.485E-01	9.005E-01	1.355E+00	0.000E+00	NOT IDENT.
IN-113M	-1.150E-02	5.078E-02	8.340E-02	0.000E+00	NOT IDENT.
SN-113	-1.150E-02	5.078E-02	8.340E-02	0.000E+00	NOT IDENT.
IN-114M	7.577E-02	2.173E-01	3.232E-01	0.000E+00	NOT IDENT.
CD-115	-1.803E+00	8.086E+00	1.290E+01	0.000E+00	NOT IDENT.
SN-117M	1.923E-02	5.531E-02	9.302E-02	0.000E+00	NOT IDENT.
SB-122	2.224E+00	1.786E+00	3.293E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.117E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	9.477E-03	2.990E-02	5.023E-02	0.000E+00	NOT IDENT.
I-124	9.358E-02	6.439E-01	1.012E+00	0.000E+00	NOT IDENT.
SB-124	5.889E-02	1.015E-01	1.853E-01	0.000E+00	FAIL ABUN
SB-125	2.888E-02	1.025E-01	1.733E-01	0.000E+00	NOT IDENT.
TE-125M	2.799E+00	9.457E+00	1.622E+01	0.000E+00	NOT IDENT.
I-126	-3.858E-02	2.246E-01	3.227E-01	0.000E+00	NOT IDENT.
SB-126	1.199E-01	1.695E-01	2.771E-01	0.000E+00	FAIL ABUN
SB-127	-3.911E-01	1.200E+00	1.964E+00	0.000E+00	NOT IDENT.
XE-127	-4.882E-03	5.283E-02	8.551E-02	0.000E+00	NOT IDENT.
I-131	8.976E-02	1.106E-01	1.953E-01	0.000E+00	NOT IDENT.
TE-132	1.481E-02	5.281E-01	9.169E-01	0.000E+00	NOT IDENT.
BA-133	8.231E-03	5.140E-02	7.662E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.409E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.995E-02	1.144E-01	0.000E+00	NOT IDENT.
CS-135	1.842E-01	1.895E-01	3.051E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.458E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.010E-03	1.223E-01	2.060E-01	0.000E+00	FAIL ABUN
CE-139	-3.669E-02	3.368E-02	5.251E-02	0.000E+00	NOT IDENT.
BA-140	1.592E-01	2.775E-01	4.878E-01	0.000E+00	NOT IDENT.
LA-140	-8.548E-02	1.022E-01	1.530E-01	0.000E+00	FAIL ABUN
CE-141	3.416E-02	6.455E-02	1.100E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.061E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	7.385E-02	2.215E-01	3.757E-01	0.000E+00	NOT IDENT.
PM-144	3.991E-03	4.196E-02	7.110E-02	0.000E+00	NOT IDENT.
PR-144	2.702E-01	2.841E+00	4.814E+00	0.000E+00	NOT IDENT.

PM-146	4.689E-04	5.201E-02	8.578E-02	0.000E+00	NOT IDENT.
ND-147	8.622E-02	5.903E-01	9.722E-01	0.000E+00	FAIL ABUN
PM-149	-8.980E+01	6.466E+01	9.938E+01	0.000E+00	NOT IDENT.
EU-152	2.982E-02	1.194E-01	1.804E-01	0.000E+00	FAIL ABUN
GD-153	-1.198E-01	9.808E-02	1.379E-01	0.000E+00	FAIL ABUN
EU-154	-6.740E-02	1.557E-01	2.481E-01	0.000E+00	NOT IDENT.
EU-155	1.073E-01	1.150E-01	2.026E-01	0.000E+00	FAIL ABUN
TB-160	7.846E-02	1.640E-01	2.827E-01	0.000E+00	FAIL ABUN
HO-166M	-2.540E-02	7.537E-02	1.232E-01	0.000E+00	FAIL ABUN
TM-171	3.199E+00	3.296E+01	5.157E+01	0.000E+00	NOT IDENT.
LU-176	-3.172E-02	2.685E-02	4.170E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.562E+00	1.852E+00	0.000E+00	FAIL ABUN
LU-177M	7.259E-02	2.187E-01	3.282E-01	0.000E+00	FAIL ABUN
HF-181	3.066E-02	4.708E-02	8.115E-02	0.000E+00	NOT IDENT.
W-181	-3.686E-02	4.370E-01	6.788E-01	0.000E+00	NOT IDENT.
TA-182	1.343E-01	2.428E-01	4.246E-01	0.000E+00	FAIL ABUN
RE-183	1.943E-02	1.189E-01	1.980E-01	0.000E+00	FAIL ABUN
RE-184	-2.758E-01	2.421E-01	3.909E-01	0.000E+00	NOT IDENT.
OS-185	-3.455E-02	4.858E-02	7.730E-02	0.000E+00	NOT IDENT.
RE-188	-8.282E-02	1.870E-01	2.960E-01	0.000E+00	NOT IDENT.
W-188	1.421E-01	8.531E+00	1.282E+01	0.000E+00	FAIL ABUN
IR-192	-1.055E-02	3.577E-02	5.951E-02	0.000E+00	FAIL ABUN
AU-195	3.371E-01	2.472E-01	4.386E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.245E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	5.139E+00	5.671E+00	9.747E+00	0.000E+00	NOT IDENT.
TL-202	-5.004E-02	7.570E-02	1.189E-01	0.000E+00	NOT IDENT.
HG-203	4.755E-02	4.482E-02	7.909E-02	0.000E+00	NOT IDENT.
BI-207	-4.910E-03	6.195E-02	1.042E-01	0.000E+00	FAIL ABUN
TL-207	2.547E-01	8.154E-01	1.242E+00	0.000E+00	FAIL ABUN
PO-209	2.217E+00	9.330E+00	1.569E+01	0.000E+00	NOT IDENT.
BI-210	5.398E-01	3.571E+00	6.255E+00	0.000E+00	NOT IDENT.
PB-210	5.398E-01	3.571E+00	6.255E+00	0.000E+00	NOT IDENT.
PO-210	5.398E-01	3.571E+00	6.255E+00	0.000E+00	NOT IDENT.
PB-211	6.759E-01	1.264E+00	1.833E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.649E-01	7.950E-01	0.000E+00	FAIL ABUN
PO-215	2.547E-01	8.154E-01	1.242E+00	0.000E+00	FAIL ABUN
RN-219	-2.507E-01	5.007E-01	8.044E-01	0.000E+00	FAIL ABUN
RN-220	1.429E+01	3.028E+01	5.362E+01	0.000E+00	NOT IDENT.
RA-223	2.547E-01	8.154E-01	1.242E+00	0.000E+00	FAIL ABUN
AC-227	-1.073E-02	4.087E-01	7.023E-01	0.000E+00	FAIL ABUN
TH-227	-1.073E-02	4.087E-01	7.023E-01	0.000E+00	FAIL ABUN
TH-229	-9.397E-02	5.524E-01	8.932E-01	0.000E+00	FAIL ABUN
PA-231	2.563E-01	1.567E+00	2.701E+00	0.000E+00	FAIL ABUN
TH-231	2.547E-01	8.154E-01	1.242E+00	0.000E+00	FAIL ABUN
U-231	-4.420E-01	1.002E+00	1.492E+00	0.000E+00	FAIL ABUN
PA-233	1.687E-03	6.840E-02	1.162E-01	0.000E+00	FAIL ABUN
PA-234	-9.096E-02	3.756E-01	5.992E-01	0.000E+00	FAIL ABUN
PA-234M	7.672E-02	8.514E+00	1.456E+01	0.000E+00	NOT IDENT.
U-235	-1.129E-01	2.370E-01	3.791E-01	0.000E+00	FAIL ABUN
NP-236	5.262E-03	8.750E-02	1.451E-01	0.000E+00	NOT IDENT.
NP-239	-1.329E-01	2.020E-01	3.298E-01	0.000E+00	FAIL ABUN
AM-241	4.025E-02	1.790E-01	2.846E-01	0.000E+00	NOT IDENT.
CM-243	-1.757E-02	1.024E-01	1.725E-01	0.000E+00	FAIL ABUN
CM-247	-1.224E-02	4.376E-02	7.147E-02	0.000E+00	NOT IDENT.
CF-249	1.373E-02	4.500E-02	7.662E-02	0.000E+00	NOT IDENT.
CF-251	-7.822E-02	1.450E-01	2.317E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:40:23.10

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433007.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:39:19.
Sample ID         : G232433007           Sample quantity  : 1.05820E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.44  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1261	10.67*	1.137E+00	3.688E+01	3.688E+01	9.25
CD-109	88.03	294	3.72*	5.651E+00	4.961E+00	5.064E+00	27.11
SN-126	64.28	97	9.60	3.233E+00	1.114E+00	1.114E+00	84.50
	86.94	294	8.90	5.651E+00	2.074E+00	2.074E+00	48.69
	87.57	294	37.00*	5.651E+00	4.988E-01	4.988E-01	27.11
BA-137M	661.65	88	89.98*	2.251E+00	1.535E-01	1.536E-01	34.46
CS-137	661.65	88	85.12*	2.251E+00	1.623E-01	1.624E-01	34.46
TL-208	277.35	------	6.80	4.505E+00	------ Line Not Found		------
	510.84	99	21.60	2.791E+00	5.838E-01	5.838E-01	73.36
	583.14	377	84.20*	2.503E+00	6.352E-01	6.352E-01	15.92
	860.37	53	12.46	1.794E+00	8.372E-01	8.372E-01	60.20
BI-211	72.87	------	1.27	4.387E+00	------ Line Not Found		------
	351.07	624	12.94*	3.760E+00	4.549E+00	4.549E+00	12.02
PB-212	74.81	343	10.70	4.602E+00	2.471E+00	2.471E+00	23.19
	77.11	617	18.00	4.830E+00	2.516E+00	2.516E+00	14.64
	87.30	294	8.00	5.651E+00	2.307E+00	2.307E+00	28.89
	238.63	1193	44.60*	5.012E+00	1.894E+00	1.894E+00	9.86
	300.09	99	3.41	4.248E+00	2.433E+00	2.433E+00	48.51
PO-212	74.81	343	10.70	4.602E+00	2.471E+00	2.471E+00	23.19
	77.11	617	18.00	4.830E+00	2.516E+00	2.516E+00	14.64
	87.30	294	8.00	5.651E+00	2.307E+00	2.307E+00	28.89
	115.19	------	0.60	6.604E+00	------ Line Not Found		------
	238.63	1193	44.60*	5.012E+00	1.894E+00	1.894E+00	9.86
	300.09	99	3.41	4.248E+00	2.433E+00	2.433E+00	48.51
BI-214	609.31	411	46.30*	2.413E+00	1.305E+00	1.305E+00	15.96
	768.36	43	5.04	1.979E+00	1.530E+00	1.530E+00	70.30
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	100	15.10	1.422E+00	1.658E+00	1.658E+00	37.93
	1238.11	------	5.94	1.305E+00	------ Line Not Found		------
	1377.67	29	4.11	1.192E+00	2.082E+00	2.082E+00	82.38
	1764.49	60	15.80	9.898E-01	1.357E+00	1.357E+00	36.36
PB-214	74.81	343	6.21	4.602E+00	4.257E+00	4.257E+00	22.48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	617	10.50	4.830E+00	4.313E+00	4.313E+00	16.50
	87.30	294	4.67	5.651E+00	3.952E+00	3.952E+00	28.18
	241.98	265	7.49	4.970E+00	2.529E+00	2.529E+00	29.75
	295.21	387	19.20	4.301E+00	1.663E+00	1.663E+00	19.81
	351.92	624	37.20*	3.760E+00	1.582E+00	1.582E+00	13.10
PO-214	74.81	343	6.21	4.602E+00	4.257E+00	4.257E+00	22.48
	77.11	617	10.50	4.830E+00	4.313E+00	4.313E+00	16.50
	87.30	294	4.67	5.651E+00	3.952E+00	3.952E+00	28.18
	241.98	265	7.49	4.970E+00	2.529E+00	2.529E+00	29.75
	295.21	387	19.20	4.301E+00	1.663E+00	1.663E+00	19.81
	351.92	624	37.20*	3.760E+00	1.582E+00	1.582E+00	13.10
PO-216	74.81	343	10.70	4.602E+00	2.471E+00	2.471E+00	23.19
	77.11	617	18.00	4.830E+00	2.516E+00	2.516E+00	14.64
	87.30	294	8.00	5.651E+00	2.307E+00	2.307E+00	28.89
	238.63	1193	44.60*	5.012E+00	1.894E+00	1.894E+00	9.86
	300.09	99	3.41	4.248E+00	2.433E+00	2.433E+00	48.51
PO-218	74.81	343	6.21	4.602E+00	4.257E+00	4.257E+00	22.48
	77.11	617	10.50	4.830E+00	4.313E+00	4.313E+00	16.50
	87.30	294	4.67	5.651E+00	3.952E+00	3.952E+00	28.18
	241.98	265	7.49	4.970E+00	2.529E+00	2.529E+00	29.75
	295.21	387	19.20	4.301E+00	1.663E+00	1.663E+00	19.81
	351.92	624	37.20*	3.760E+00	1.582E+00	1.582E+00	13.10
RA-224	240.98	265	3.95*	4.970E+00	4.795E+00	4.795E+00	29.22
RA-226	609.31	411	46.30*	2.413E+00	1.305E+00	1.305E+00	15.96
	768.36	43	5.04	1.979E+00	1.530E+00	1.530E+00	70.30
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	100	15.10	1.422E+00	1.658E+00	1.658E+00	37.93
	1238.11	------	5.94	1.305E+00	------ Line Not Found		------
	1377.67	29	4.11	1.192E+00	2.082E+00	2.082E+00	82.38
	1764.49	60	15.80	9.898E-01	1.357E+00	1.357E+00	36.36
AC-228	338.32	287	11.40	3.876E+00	2.300E+00	2.300E+00	45.63
	911.07	261	27.70*	1.705E+00	1.961E+00	1.961E+00	21.43
	969.11	167	16.60	1.616E+00	2.203E+00	2.203E+00	30.35
RA-228	338.32	287	11.40	3.876E+00	2.300E+00	2.300E+00	45.63
	911.07	261	27.70*	1.705E+00	1.961E+00	1.961E+00	21.43
	969.11	167	16.60	1.616E+00	2.203E+00	2.203E+00	30.35
TH-228	84.40	125	1.21	5.440E+00	6.715E+00	6.715E+00	54.88
	238.60	1193	44.60*	5.012E+00	1.894E+00	1.894E+00	9.86
	300.10	99	3.41	4.248E+00	2.433E+00	2.433E+00	75.89
TH-230	609.31	411	46.30*	2.413E+00	1.305E+00	1.305E+00	15.96
	768.36	43	5.04	1.979E+00	1.530E+00	1.530E+00	70.30
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	100	15.10	1.422E+00	1.658E+00	1.658E+00	37.93
	1238.11	------	5.94	1.305E+00	------ Line Not Found		------
	1377.67	29	4.11	1.192E+00	2.082E+00	2.082E+00	82.38
	1764.49	60	15.80	9.898E-01	1.357E+00	1.357E+00	36.36
TH-232	338.32	287	11.40	3.876E+00	2.300E+00	2.300E+00	21.30
	911.07	261	27.70*	1.705E+00	1.961E+00	1.961E+00	21.43
	969.11	167	16.60	1.616E+00	2.203E+00	2.203E+00	30.35

Sample ID : G232433007 Acquisition date : 7-JUL-2009 06:39:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	97	3.80*	3.233E+00	2.814E+00	2.814E+00	85.05
	92.38	262	5.41	5.979E+00	2.877E+00	2.877E+00	35.25
U-234	609.31	411	46.30*	2.413E+00	1.305E+00	1.305E+00	15.96
	768.36	43	5.04	1.979E+00	1.530E+00	1.530E+00	70.30
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	100	15.10	1.422E+00	1.658E+00	1.658E+00	37.93
	1238.11	------	5.94	1.305E+00	------ Line Not Found		------
	1377.67	29	4.11	1.192E+00	2.082E+00	2.082E+00	82.38
	1764.49	60	15.80	9.898E-01	1.357E+00	1.357E+00	36.36
NP-237	86.50	294	12.60*	5.651E+00	1.465E+00	1.465E+00	34.07
	95.87	------	2.60	6.124E+00	------ Line Not Found		------
U-238	63.29	97	3.80*	3.233E+00	2.814E+00	2.814E+00	85.05
	92.38	262	5.41	5.979E+00	2.877E+00	2.877E+00	31.46
AM-243	74.67	343	66.00*	4.602E+00	4.005E-01	4.005E-01	21.22
	86.72	294	0.34	5.651E+00	5.492E+01	5.492E+01	27.11
	117.66	------	0.55	6.624E+00	------ Line Not Found		------
	142.18	------	0.13	6.534E+00	------ Line Not Found		------
ANH-511	511.00	99	100.00*	2.791E+00	1.261E-01	1.261E-01	72.88

Flag: "*" = Keyline

Sample ID : G232433007 Acquisition date : 7-JUL-2009 06:39:19

Total number of lines in spectrum 33
Number of unidentified lines 0
Number of lines tentatively identified by NID 33 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.688E+01	3.688E+01	0.341E+01	9.25	
CD-109	464.00D	1.02	4.961E+00	5.064E+00	1.373E+00	27.11	
SN-126	1.00E+05Y	1.00	4.988E-01	4.988E-01	1.352E-01	27.11	
BA-137M	30.17Y	1.00	1.535E-01	1.536E-01	0.529E-01	34.46	
CS-137	30.17Y	1.00	1.623E-01	1.624E-01	0.560E-01	34.46	
TL-208	1.41E+10Y	1.00	6.352E-01	6.352E-01	1.011E-01	15.92	
BI-211	7.04E+08Y	1.00	4.549E+00	4.549E+00	0.547E+00	12.02	
PB-212	1.41E+10Y	1.00	1.894E+00	1.894E+00	0.187E+00	9.86	
PO-212	1.41E+10Y	1.00	1.894E+00	1.894E+00	0.187E+00	9.86	
BI-214	1600.00Y	1.00	1.305E+00	1.305E+00	0.208E+00	15.96	
PB-214	1600.00Y	1.00	1.582E+00	1.582E+00	0.207E+00	13.10	
PO-214	1600.00Y	1.00	1.582E+00	1.582E+00	0.207E+00	13.10	
PO-216	1.41E+10Y	1.00	1.894E+00	1.894E+00	0.187E+00	9.86	
PO-218	1600.00Y	1.00	1.582E+00	1.582E+00	0.207E+00	13.10	
RA-224	1.41E+10Y	1.00	4.795E+00	4.795E+00	1.401E+00	29.22	
RA-226	1600.00Y	1.00	1.305E+00	1.305E+00	0.208E+00	15.96	
AC-228	1.41E+10Y	1.00	1.961E+00	1.961E+00	0.420E+00	21.43	
RA-228	1.41E+10Y	1.00	1.961E+00	1.961E+00	0.420E+00	21.43	
TH-228	1.41E+10Y	1.00	1.894E+00	1.894E+00	0.187E+00	9.86	
TH-230	4.47E+09Y	1.00	1.305E+00	1.305E+00	0.208E+00	15.96	
TH-232	1.41E+10Y	1.00	1.961E+00	1.961E+00	0.420E+00	21.43	
TH-234	4.47E+09Y	1.00	2.814E+00	2.814E+00	2.393E+00	85.05	
U-234	4.47E+09Y	1.00	1.305E+00	1.305E+00	0.208E+00	15.96	
NP-237	2.14E+06Y	1.00	1.465E+00	1.465E+00	0.499E+00	34.07	
U-238	4.47E+09Y	1.00	2.814E+00	2.814E+00	2.393E+00	85.05	
AM-243	7380.00Y	1.00	4.005E-01	4.005E-01	0.850E-01	21.22	
ANH-511	1.00E+09Y	1.00	1.261E-01	1.261E-01	0.919E-01	72.88	
	Total Activity :		8.368E+01	8.378E+01			

Grand Total Activity : 8.368E+01 8.378E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433007 Acquisition date : 7-JUL-2009 06:39:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.97	154	286	0.97	179.44	164	27	2.14E-02	38.0	5.82E+00	T
0	129.20	34	236	0.92	257.96	255	6	4.76E-03	****	6.63E+00	T
0	186.18	211	353	1.39	371.96	368	12	2.93E-02	39.4	5.85E+00	T
0	209.45	84	267	0.99	418.52	415	10	1.16E-02	77.3	5.46E+00	T
0	270.18	87	312	1.49	540.03	535	15	1.21E-02	90.7	4.59E+00	T
0	328.39	53	163	1.13	656.51	651	9	7.31E-03	91.9	3.97E+00	T
0	409.48	78	87	1.46	818.74	814	9	1.08E-02	48.9	3.34E+00	T
0	728.27	124	71	2.00	1456.52	1449	18	1.73E-02	36.7	2.07E+00	T
2	965.10	46	38	2.20	1930.24	1922	23	6.41E-03	61.5	1.62E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:40:28.45

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433007.CNF;1 *
* Acquisition date  : 7-JUL-2009 06:39:19.  Detector SN#     :             *
* Detector ID       : GAM12                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.44          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID       *
* Sample ID         : G232433007            Analyst initials: MXR1        *
* Batch Number      : 881219                Sample Quantity : 1.05820E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24.5MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.688E+01	3.410E+00	5.215E-01	3.718E-02	70.719
CD-109	5.064E+00	1.373E+00	1.341E+00	1.026E-01	3.776
SN-126	4.988E-01	1.352E-01	1.327E-01	1.012E-02	3.758
BA-137M	1.536E-01	5.294E-02	7.365E-02	4.775E-03	2.086
CS-137	1.624E-01	5.597E-02	7.786E-02	5.064E-03	2.086
TL-208	6.352E-01	1.011E-01	7.171E-02	5.130E-03	8.857
BI-211	4.549E+00	5.468E-01	3.437E-01	2.160E-02	13.236
PB-212	1.894E+00	1.867E-01	9.561E-02	6.789E-03	19.807
PO-212	1.894E+00	1.867E-01	9.561E-02	6.789E-03	19.807
BI-214	1.305E+00	2.083E-01	1.414E-01	1.164E-02	9.231
PB-214	1.582E+00	2.073E-01	1.204E-01	9.834E-03	13.144
PO-214	1.582E+00	2.073E-01	1.204E-01	9.834E-03	13.144
PO-216	1.894E+00	1.867E-01	9.561E-02	6.789E-03	19.807
PO-218	1.582E+00	2.073E-01	1.204E-01	9.834E-03	13.144
RA-224	4.795E+00	1.401E+00	1.088E+00	6.003E-02	4.406
RA-226	1.305E+00	2.083E-01	1.414E-01	1.164E-02	9.231
AC-228	1.961E+00	4.203E-01	2.446E-01	2.686E-02	8.017
RA-228	1.961E+00	4.203E-01	2.446E-01	2.686E-02	8.017

Sample ID : G232433007 Acquisition date : 7-JUL-2009 06:39:19

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.894E+00	1.867E-01	9.560E-02	6.788E-03	19.809
TH-230	1.305E+00	2.083E-01	1.414E-01	1.164E-02	9.231
TH-232	1.961E+00	4.203E-01	2.446E-01	2.686E-02	8.017
TH-234	2.814E+00	2.393E+00	2.295E+00	3.907E-01	1.226
U-234	1.305E+00	2.083E-01	1.414E-01	1.164E-02	9.231
NP-237	1.465E+00	4.990E-01	3.942E-01	8.661E-02	3.715
U-238	2.814E+00	2.393E+00	2.295E+00	3.907E-01	1.226
AM-243	4.005E-01	8.501E-02	1.062E-01	7.216E-03	3.771
ANH-511	1.261E-01	9.191E-02	5.698E-02	3.473E-03	2.213

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	5.615E-02		3.802E-01	6.192E-01	4.260E-02	0.091
NA-22	-2.361E-02		5.685E-02	8.948E-02	5.762E-03	-0.264
NA-24	5.359E-02		1.026E-01	Half-Life too short		
AL-26	-1.960E-02		3.950E-02	5.919E-02	3.396E-03	-0.331
TI-44	4.643E-01	+	6.795E-02	9.136E-02	6.390E-03	5.082
SC-46	-2.512E-02		4.863E-02	7.456E-02	6.179E-03	-0.337
V-48	1.156E-03		7.383E-02	1.188E-01	9.151E-03	0.010
CR-51	2.241E-02		3.870E-01	6.439E-01	4.094E-02	0.035
MN-52	-6.285E-02		2.649E-01	4.167E-01	2.863E-02	-0.151
MN-54	9.035E-03		4.589E-02	7.604E-02	5.978E-03	0.119
CO-56	-9.088E-03		5.022E-02	8.033E-02	6.390E-03	-0.113
CO-57	-1.002E-03		2.785E-02	4.553E-02	2.847E-03	-0.022
CO-58	-4.387E-02		5.051E-02	7.571E-02	5.826E-03	-0.579
FE-59	5.165E-02		1.183E-01	2.041E-01	1.507E-02	0.253
CO-60	-1.088E-02		5.078E-02	8.104E-02	5.660E-03	-0.134
ZN-65	-1.595E-02		1.183E-01	1.661E-01	1.045E-02	-0.096
GE-68	1.175E-01		1.462E+00	2.457E+00	1.657E-01	0.048
AS-73	3.538E-01		9.049E-01	1.538E+00	9.927E-02	0.230
AS-74	3.533E-02		1.042E-01	1.787E-01	1.137E-02	0.198
SE-75	-4.783E-03		5.253E-02	7.718E-02	4.375E-03	-0.062
BR-77	5.449E+00		8.950E+00	1.403E+01	8.601E-01	0.389
SR-82	-1.317E-02		4.404E-01	7.197E-01	5.326E-02	-0.018
RB-83	5.736E-02		9.017E-02	1.351E-01	8.285E-03	0.425
RB-84	-3.474E-02		8.886E-02	1.385E-01	1.140E-02	-0.251
KR-85	1.729E+01		9.481E+00	1.689E+01	1.032E+00	1.023
SR-85	8.739E-02		4.793E-02	8.540E-02	5.215E-03	1.023
RB-86	1.033E-01		8.792E-01	1.483E+00	1.001E-01	0.070
Y-88	3.037E-02		4.767E-02	8.666E-02	4.878E-03	0.350
ZR-88	3.006E-03		3.519E-02	5.783E-02	3.172E-03	0.052
Y-91	-1.186E+00		2.387E+01	3.927E+01	2.270E+00	-0.030
NB-94	-7.584E-03		4.071E-02	6.625E-02	4.512E-03	-0.114
NB-95	3.313E-02		5.480E-02	8.354E-02	6.110E-03	0.397
NB-95M	-3.066E-02		1.378E-01	2.026E-01	1.478E-02	-0.151
ZR-95	3.769E-02		8.686E-02	1.478E-01	1.221E-02	0.255

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	1.667E-02		1.750E-02	Half-Life too short		
ZR-97	9.561E-02		3.046E-01	Half-Life too short		
MO-99	-5.021E+00		9.429E+00	1.468E+01	2.110E+00	-0.342
TC-99M	-1.963E+08		5.403E+08	Half-Life too short		
RH-101	1.703E-02		3.799E-02	6.058E-02	3.205E-03	0.281
RH-102	2.231E-02		3.437E-02	5.813E-02	3.452E-03	0.384
RU-103	-2.714E-02		4.451E-02	6.727E-02	8.581E-03	-0.403
RH-106	2.312E-01		3.681E-01	6.425E-01	7.747E-02	0.360
RU-106	2.312E-01		3.673E-01	6.425E-01	4.126E-02	0.360
AG-108M	-1.501E-02		3.662E-02	5.742E-02	3.578E-03	-0.261
AG-110M	2.509E-02		4.696E-02	7.180E-02	4.894E-03	0.349
IN-111	-1.485E-01		9.189E-01	1.352E+00	7.483E-02	-0.110
IN-113M	-1.150E-02		5.181E-02	8.339E-02	4.909E-03	-0.138
SN-113	-1.150E-02		5.181E-02	8.339E-02	4.909E-03	-0.138
IN-114M	7.577E-02		2.217E-01	3.219E-01	1.689E-02	0.235
CD-115	-1.803E+00		8.251E+00	1.291E+01	7.955E-01	-0.140
SN-117M	1.923E-02		5.643E-02	9.256E-02	4.890E-03	0.208
SB-122	2.224E+00		1.822E+00	3.298E+00	2.071E-01	0.674
I-123	3.541E-01		5.701E-01	Half-Life too short		
TE-123M	9.477E-03		3.052E-02	4.998E-02	2.678E-03	0.190
I-124	9.358E-02		6.570E-01	1.014E+00	6.471E-02	0.092
SB-124	5.889E-02		1.036E-01	1.867E-01	1.246E-02	0.315
SB-125	2.888E-02		1.046E-01	1.734E-01	1.031E-02	0.167
TE-125M	2.799E+00		9.650E+00	1.611E+01	1.388E+00	0.174
I-126	-3.858E-02		2.292E-01	3.236E-01	2.110E-02	-0.119
SB-126	1.199E-01		1.730E-01	2.780E-01	1.933E-02	0.431
SB-127	-3.911E-01		1.225E+00	1.970E+00	1.882E-01	-0.199
XE-127	-4.882E-03		5.391E-02	8.520E-02	4.531E-03	-0.057
I-131	8.976E-02		1.128E-01	1.952E-01	1.226E-02	0.460
TE-132	1.481E-02		5.389E-01	9.142E-01	1.277E-01	0.016
BA-133	8.231E-03		5.245E-02	7.657E-02	8.785E-03	0.107
I-133	-1.067E-03		1.229E-03	Half-Life too short		
CS-134	1.286E-01		6.118E-02	1.148E-01	8.750E-03	1.121
CS-135	1.842E-01		1.934E-01	3.045E-01	2.290E-02	0.605
I-135	2.417E+08		1.254E+08	Half-Life too short		
CS-136	7.010E-03		1.248E-01	2.070E-01	1.555E-02	0.034
CE-139	-3.669E-02		3.437E-02	5.226E-02	2.678E-03	-0.702
BA-140	1.592E-01		2.831E-01	4.885E-01	1.592E-01	0.326
LA-140	-8.548E-02		1.043E-01	1.541E-01	1.004E-02	-0.555
CE-141	3.416E-02		6.586E-02	1.094E-01	6.369E-03	0.312
CE-143	2.633E-04		5.415E-05	Half-Life too short		
CE-144	7.385E-02		2.260E-01	3.735E-01	5.317E-02	0.198
PM-144	3.991E-03		4.282E-02	7.130E-02	4.823E-03	0.056
PR-144	2.702E-01		2.899E+00	4.828E+00	3.265E-01	0.056
PM-146	4.689E-04		5.307E-02	8.583E-02	7.421E-03	0.005
ND-147	8.622E-02		6.024E-01	9.736E-01	1.332E-01	0.089
PM-149	-8.980E+01		6.598E+01	9.920E+01	1.400E+01	-0.905
EU-152	2.982E-02		1.218E-01	1.802E-01	1.155E-02	0.166

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-1.198E-01		1.001E-01	1.369E-01	9.520E-03	-0.875
EU-154	-6.740E-02		1.588E-01	2.496E-01	2.432E-02	-0.270
EU-155	1.073E-01		1.174E-01	2.012E-01	1.356E-02	0.533
TB-160	7.846E-02		1.674E-01	2.839E-01	2.331E-02	0.276
HO-166M	-2.540E-02		7.691E-02	1.235E-01	8.503E-03	-0.206
TM-171	3.199E+00		3.363E+01	5.108E+01	3.306E+00	0.063
LU-176	-3.172E-02		2.740E-02	4.164E-02	2.366E-03	-0.762
LU-177	2.057E+00	+	1.593E+00	1.846E+00	9.874E-02	1.114
LU-177M	7.259E-02		2.231E-01	3.283E-01	1.842E-02	0.221
HF-181	3.066E-02		4.804E-02	8.122E-02	4.850E-03	0.378
W-181	-3.686E-02		4.460E-01	6.723E-01	4.320E-02	-0.055
TA-182	1.343E-01		2.477E-01	4.271E-01	2.534E-02	0.315
RE-183	1.943E-02		1.213E-01	1.970E-01	1.024E-02	0.099
RE-184	-2.758E-01		2.471E-01	3.899E-01	2.170E-02	-0.707
OS-185	-3.455E-02		4.957E-02	7.750E-02	5.008E-03	-0.446
RE-188	-8.282E-02		1.908E-01	2.945E-01	1.579E-02	-0.281
W-188	1.421E-01		8.705E+00	1.280E+01	7.255E-01	0.011
IR-192	-1.055E-02		3.650E-02	5.943E-02	3.396E-03	-0.177
AU-195	3.371E-01		2.523E-01	4.353E-01	2.993E-02	0.774
TL-200	-8.653E-05		1.145E-04	Half-Life too short		
TL-201	5.139E+00		5.787E+00	9.702E+00	4.973E-01	0.530
TL-202	-5.004E-02		7.724E-02	1.189E-01	6.850E-03	-0.421
HG-203	4.755E-02		4.574E-02	7.893E-02	4.747E-03	0.602
BI-207	-4.910E-03		6.321E-02	1.048E-01	7.228E-03	-0.047
TL-207	2.547E-01		8.320E-01	1.241E+00	2.044E-01	0.205
PO-209	2.217E+00		9.520E+00	1.575E+01	1.315E+00	0.141
BI-210	5.398E-01		3.644E+00	6.184E+00	4.658E-01	0.087
PB-210	5.398E-01		3.644E+00	6.184E+00	4.658E-01	0.087
PO-210	5.398E-01		3.644E+00	6.184E+00	3.966E-01	0.087
PB-211	6.759E-01		1.290E+00	1.833E+00	1.142E+00	0.369
BI-212	1.801E+00	+	6.784E-01	7.975E-01	6.904E-02	2.258
PO-215	2.547E-01		8.320E-01	1.241E+00	2.044E-01	0.205
RN-219	-2.507E-01		5.109E-01	8.044E-01	1.086E-01	-0.312
RN-220	1.429E+01		3.090E+01	5.371E+01	3.349E+00	0.266
RA-223	2.547E-01		8.320E-01	1.241E+00	2.044E-01	0.205
AC-227	-1.073E-02		4.171E-01	7.006E-01	9.717E-02	-0.015
TH-227	-1.073E-02		4.171E-01	7.006E-01	1.179E-01	-0.015
TH-229	-9.397E-02		5.637E-01	8.898E-01	4.684E-02	-0.106
PA-231	2.563E-01		1.599E+00	2.696E+00	3.699E-01	0.095
TH-231	2.547E-01		8.320E-01	1.241E+00	2.044E-01	0.205
U-231	-4.420E-01		1.023E+00	1.481E+00	1.043E-01	-0.299
PA-233	1.687E-03		6.979E-02	1.161E-01	7.023E-03	0.015
PA-234	-9.096E-02		3.833E-01	6.020E-01	1.113E-01	-0.151
PA-234M	7.672E-02		8.688E+00	1.463E+01	1.517E+00	0.005
U-235	-1.129E-01		2.419E-01	3.770E-01	6.123E-02	-0.299
NP-236	5.262E-03		8.929E-02	1.444E-01	7.569E-03	0.036
NP-239	-1.329E-01		2.062E-01	3.277E-01	2.068E-02	-0.406
AM-241	4.025E-02		1.826E-01	2.818E-01	2.002E-02	0.143

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.757E-02		1.045E-01	1.712E-01	1.140E-02	-0.103
CM-247	-1.224E-02		4.465E-02	7.147E-02	3.963E-03	-0.171
CF-249	1.373E-02		4.591E-02	7.661E-02	4.211E-03	0.179
CF-251	-7.822E-02		1.480E-01	2.307E-01	1.193E-02	-0.339

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433007           *
* Acquisition date  :  7-JUL-2009 06:39:19 Detector SN#     :               *
* Detector ID       : GAM12                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.44      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433007           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.0582E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.688E+01	3.342E+00	2.591E-01	1.705E+00
CD-109	5.064E+00	1.345E+00	6.765E-01	6.864E-01
SN-126	4.988E-01	1.325E-01	6.694E-02	6.760E-02
BA-137M	1.536E-01	5.188E-02	3.675E-02	2.647E-02
CS-137	1.624E-01	5.485E-02	3.885E-02	2.798E-02
TL-208	6.352E-01	9.907E-02	3.581E-02	5.055E-02
BI-211	4.549E+00	5.358E-01	1.721E-01	2.734E-01
PB-212	1.894E+00	1.830E-01	4.797E-02	9.336E-02
PO-212	1.894E+00	1.830E-01	4.797E-02	9.336E-02
BI-214	1.305E+00	2.042E-01	7.057E-02	1.042E-01
PB-214	1.582E+00	2.032E-01	6.027E-02	1.037E-01
PO-214	1.582E+00	2.032E-01	6.027E-02	1.037E-01
PO-216	1.894E+00	1.830E-01	4.797E-02	9.336E-02
PO-218	1.582E+00	2.032E-01	6.027E-02	1.037E-01
RA-224	4.795E+00	1.373E+00	5.460E-01	7.005E-01
RA-226	1.305E+00	2.042E-01	7.057E-02	1.042E-01
AC-228	1.961E+00	4.119E-01	1.219E-01	2.102E-01
RA-228	1.961E+00	4.119E-01	1.219E-01	2.102E-01
TH-228	1.894E+00	1.830E-01	4.796E-02	9.336E-02
TH-230	1.305E+00	2.042E-01	7.057E-02	1.042E-01
TH-232	1.961E+00	4.119E-01	1.219E-01	2.102E-01
TH-234	2.814E+00	2.345E+00	1.159E+00	1.196E+00
U-234	1.305E+00	2.042E-01	7.057E-02	1.042E-01
NP-237	1.465E+00	4.890E-01	1.989E-01	2.495E-01
U-238	2.814E+00	2.345E+00	1.159E+00	1.196E+00
AM-243	4.005E-01	8.331E-02	5.361E-02	4.250E-02
ANH-511	1.261E-01	9.007E-02	2.847E-02	4.596E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	5.615E-02	3.726E-01	3.095E-01	1.901E-01	NOT IDENT.
NA-22	-2.361E-02	5.571E-02	4.449E-02	2.842E-02	NOT IDENT.
NA-24	5.359E+04	2.011E+05	0.000E+00	1.026E+05	SHORT HLIF
AL-26	-1.960E-02	3.871E-02	2.938E-02	1.975E-02	NOT IDENT.
TI-44	4.643E-01	6.660E-02	4.611E-02	3.398E-02	FAIL ABUN
SC-46	-2.512E-02	4.766E-02	3.714E-02	2.432E-02	FAIL ABUN
V-48	1.156E-03	7.236E-02	5.914E-02	3.692E-02	NOT IDENT.
CR-51	2.241E-02	3.793E-01	3.226E-01	1.935E-01	NOT IDENT.
MN-52	-6.285E-02	2.596E-01	2.071E-01	1.324E-01	NOT IDENT.
MN-54	9.035E-03	4.497E-02	3.790E-02	2.294E-02	NOT IDENT.
CO-56	-9.088E-03	4.921E-02	4.003E-02	2.511E-02	NOT IDENT.
CO-57	-1.002E-03	2.729E-02	2.292E-02	1.393E-02	NOT IDENT.
CO-58	-4.387E-02	4.950E-02	3.774E-02	2.525E-02	NOT IDENT.
FE-59	5.165E-02	1.159E-01	1.016E-01	5.913E-02	NOT IDENT.
CO-60	-1.088E-02	4.977E-02	4.028E-02	2.539E-02	NOT IDENT.
ZN-65	-1.595E-02	1.159E-01	8.264E-02	5.913E-02	NOT IDENT.
GE-68	1.175E-01	1.432E+00	1.223E+00	7.308E-01	NOT IDENT.
AS-73	3.538E-01	8.868E-01	7.775E-01	4.524E-01	NOT IDENT.
AS-74	3.533E-02	1.021E-01	8.921E-02	5.211E-02	NOT IDENT.
SE-75	-4.783E-03	5.148E-02	3.870E-02	2.627E-02	NOT IDENT.
BR-77	5.449E+00	8.771E+00	7.008E+00	4.475E+00	FAIL ABUN
SR-82	-1.317E-02	4.316E-01	3.588E-01	2.202E-01	NOT IDENT.
RB-83	5.736E-02	8.837E-02	6.751E-02	4.509E-02	NOT IDENT.
RB-84	-3.474E-02	8.708E-02	6.902E-02	4.443E-02	NOT IDENT.
KR-85	1.729E+01	9.292E+00	8.441E+00	4.741E+00	NOT IDENT.
SR-85	8.739E-02	4.697E-02	4.267E-02	2.397E-02	NOT IDENT.
RB-86	1.033E-01	8.616E-01	7.382E-01	4.396E-01	NOT IDENT.
Y-88	3.037E-02	4.672E-02	4.301E-02	2.383E-02	NOT IDENT.
ZR-88	3.006E-03	3.449E-02	2.894E-02	1.759E-02	NOT IDENT.
Y-91	-1.186E+00	2.340E+01	1.953E+01	1.194E+01	NOT IDENT.
NB-94	-7.584E-03	3.990E-02	3.305E-02	2.036E-02	NOT IDENT.
NB-95	3.313E-02	5.371E-02	4.165E-02	2.740E-02	NOT IDENT.
NB-95M	-3.066E-02	1.351E-01	1.017E-01	6.890E-02	NOT IDENT.
ZR-95	3.769E-02	8.513E-02	7.369E-02	4.343E-02	NOT IDENT.
NB-97	1.667E+04	3.429E+04	0.000E+00	1.750E+04	SHORT HLIF
ZR-97	9.561E+04	5.970E+05	0.000E+00	3.046E+05	SHORT HLIF
MO-99	-5.021E+00	9.241E+00	7.320E+00	4.715E+00	NOT IDENT.
TC-99M	-1.963E+14	1.059E+15	0.000E+00	5.403E+14	SHORT HLIF
RH-101	1.703E-02	3.723E-02	3.042E-02	1.900E-02	NOT IDENT.
RH-102	2.231E-02	3.368E-02	2.906E-02	1.719E-02	NOT IDENT.
RU-103	-2.714E-02	4.362E-02	3.362E-02	2.226E-02	FAIL ABUN
RH-106	2.312E-01	3.607E-01	3.207E-01	1.841E-01	FAIL ABUN
RU-106	2.312E-01	3.600E-01	3.207E-01	1.837E-01	FAIL ABUN
AG-108M	-1.501E-02	3.588E-02	2.872E-02	1.831E-02	NOT IDENT.
AG-110M	2.509E-02	4.602E-02	3.583E-02	2.348E-02	NOT IDENT.
IN-111	-1.485E-01	9.005E-01	6.781E-01	4.595E-01	NOT IDENT.
IN-113M	-1.150E-02	5.078E-02	4.172E-02	2.591E-02	NOT IDENT.
SN-113	-1.150E-02	5.078E-02	4.172E-02	2.591E-02	NOT IDENT.
IN-114M	7.577E-02	2.173E-01	1.617E-01	1.109E-01	NOT IDENT.
CD-115	-1.803E+00	8.086E+00	6.452E+00	4.125E+00	NOT IDENT.
SN-117M	1.923E-02	5.531E-02	4.654E-02	2.822E-02	NOT IDENT.
SB-122	2.224E+00	1.786E+00	1.647E+00	9.112E-01	NOT IDENT.
I-123	3.541E+05	1.117E+06	0.000E+00	5.701E+05	SHORT HLIF
TE-123M	9.477E-03	2.990E-02	2.513E-02	1.526E-02	NOT IDENT.
I-124	9.358E-02	6.439E-01	5.062E-01	3.285E-01	NOT IDENT.
SB-124	5.889E-02	1.015E-01	9.268E-02	5.178E-02	FAIL ABUN
SB-125	2.888E-02	1.025E-01	8.672E-02	5.232E-02	NOT IDENT.
TE-125M	2.799E+00	9.457E+00	8.113E+00	4.825E+00	NOT IDENT.
I-126	-3.858E-02	2.246E-01	1.614E-01	1.146E-01	NOT IDENT.
SB-126	1.199E-01	1.695E-01	1.386E-01	8.650E-02	FAIL ABUN
SB-127	-3.911E-01	1.200E+00	9.827E-01	6.124E-01	NOT IDENT.
XE-127	-4.882E-03	5.283E-02	4.278E-02	2.695E-02	NOT IDENT.
I-131	8.976E-02	1.106E-01	9.770E-02	5.642E-02	NOT IDENT.
TE-132	1.481E-02	5.281E-01	4.587E-01	2.694E-01	NOT IDENT.
BA-133	8.231E-03	5.140E-02	3.833E-02	2.623E-02	NOT IDENT.
I-133	-1.067E+03	2.409E+03	0.000E+00	1.229E+03	SHORT HLIF
CS-134	1.286E-01	5.995E-02	5.721E-02	3.059E-02	NOT IDENT.
CS-135	1.842E-01	1.895E-01	1.527E-01	9.670E-02	NOT IDENT.
I-135	2.417E+14	2.458E+14	0.000E+00	1.254E+14	SHORT HLIF
CS-136	7.010E-03	1.223E-01	1.030E-01	6.242E-02	FAIL ABUN
CE-139	-3.669E-02	3.368E-02	2.627E-02	1.718E-02	NOT IDENT.
BA-140	1.592E-01	2.775E-01	2.440E-01	1.416E-01	NOT IDENT.
LA-140	-8.548E-02	1.022E-01	7.655E-02	5.213E-02	FAIL ABUN
CE-141	3.416E-02	6.455E-02	5.503E-02	3.293E-02	NOT IDENT.
CE-143	2.633E+02	1.061E+02	0.000E+00	5.415E+01	SHORT HLIF
CE-144	7.385E-02	2.215E-01	1.880E-01	1.130E-01	NOT IDENT.
PM-144	3.991E-03	4.196E-02	3.557E-02	2.141E-02	NOT IDENT.
PR-144	2.702E-01	2.841E+00	2.409E+00	1.450E+00	NOT IDENT.

PM-146	4.689E-04	5.201E-02	4.291E-02	2.654E-02	NOT IDENT.
ND-147	8.622E-02	5.903E-01	4.864E-01	3.012E-01	FAIL ABUN.
PM-149	-8.980E+01	6.466E+01	4.972E+01	3.299E+01	NOT IDENT.
EU-152	2.982E-02	1.194E-01	9.023E-02	6.090E-02	FAIL ABUN
GD-153	-1.198E-01	9.808E-02	6.901E-02	5.004E-02	FAIL ABUN
EU-154	-6.740E-02	1.557E-01	1.241E-01	7.942E-02	NOT IDENT.
EU-155	1.073E-01	1.150E-01	1.014E-01	5.869E-02	FAIL ABUN
TB-160	7.846E-02	1.640E-01	1.415E-01	8.370E-02	FAIL ABUN
HO-166M	-2.540E-02	7.537E-02	6.161E-02	3.845E-02	FAIL ABUN
TM-171	3.199E+00	3.296E+01	2.580E+01	1.682E+01	NOT IDENT.
LU-176	-3.172E-02	2.685E-02	2.086E-02	1.370E-02	FAIL ABUN
LU-177	2.057E+00	1.562E+00	9.268E-01	7.967E-01	FAIL ABUN
LU-177M	7.259E-02	2.187E-01	1.642E-01	1.116E-01	FAIL ABUN
HF-181	3.066E-02	4.708E-02	4.060E-02	2.402E-02	NOT IDENT.
W-181	-3.686E-02	4.370E-01	3.396E-01	2.230E-01	NOT IDENT.
TA-182	1.343E-01	2.428E-01	2.124E-01	1.239E-01	FAIL ABUN
RE-183	1.943E-02	1.189E-01	9.903E-02	6.067E-02	FAIL ABUN
RE-184	-2.758E-01	2.421E-01	1.956E-01	1.235E-01	NOT IDENT.
OS-185	-3.455E-02	4.858E-02	3.867E-02	2.478E-02	NOT IDENT.
RE-188	-8.282E-02	1.870E-01	1.481E-01	9.539E-02	NOT IDENT.
W-188	1.421E-01	8.531E+00	6.415E+00	4.353E+00	FAIL ABUN
IR-192	-1.055E-02	3.577E-02	2.977E-02	1.825E-02	FAIL ABUN
AU-195	3.371E-01	2.472E-01	2.194E-01	1.261E-01	FAIL ABUN
TL-200	-8.653E+01	2.245E+02	0.000E+00	1.145E+02	SHORT HLIF
TL-201	5.139E+00	5.671E+00	4.877E+00	2.893E+00	NOT IDENT.
TL-202	-5.004E-02	7.570E-02	5.948E-02	3.862E-02	NOT IDENT.
HG-203	4.755E-02	4.482E-02	3.957E-02	2.287E-02	NOT IDENT.
BI-207	-4.910E-03	6.195E-02	5.215E-02	3.161E-02	FAIL ABUN
TL-207	2.547E-01	8.154E-01	6.214E-01	4.160E-01	FAIL ABUN
PO-209	2.217E+00	9.330E+00	7.849E+00	4.760E+00	NOT IDENT.
BI-210	5.398E-01	3.571E+00	3.129E+00	1.822E+00	NOT IDENT.
PB-210	5.398E-01	3.571E+00	3.129E+00	1.822E+00	NOT IDENT.
PO-210	5.398E-01	3.571E+00	3.129E+00	1.822E+00	NOT IDENT.
PB-211	6.759E-01	1.264E+00	9.169E-01	6.450E-01	NOT IDENT.
BI-212	1.801E+00	6.649E-01	3.977E-01	3.392E-01	FAIL ABUN
PO-215	2.547E-01	8.154E-01	6.214E-01	4.160E-01	FAIL ABUN
RN-219	-2.507E-01	5.007E-01	4.025E-01	2.554E-01	FAIL ABUN
RN-220	1.429E+01	3.028E+01	2.683E+01	1.545E+01	NOT IDENT.
RA-223	2.547E-01	8.154E-01	6.214E-01	4.160E-01	FAIL ABUN
AC-227	-1.073E-02	4.087E-01	3.514E-01	2.085E-01	FAIL ABUN
TH-227	-1.073E-02	4.087E-01	3.514E-01	2.085E-01	FAIL ABUN
TH-229	-9.397E-02	5.524E-01	4.469E-01	2.818E-01	FAIL ABUN
PA-231	2.563E-01	1.567E+00	1.351E+00	7.993E-01	FAIL ABUN
TH-231	2.547E-01	8.154E-01	6.214E-01	4.160E-01	FAIL ABUN
U-231	-4.420E-01	1.002E+00	7.464E-01	5.113E-01	FAIL ABUN
PA-233	1.687E-03	6.840E-02	5.815E-02	3.490E-02	FAIL ABUN
PA-234	-9.096E-02	3.756E-01	2.998E-01	1.916E-01	FAIL ABUN
PA-234M	7.672E-02	8.514E+00	7.282E+00	4.344E+00	NOT IDENT.
U-235	-1.129E-01	2.370E-01	1.896E-01	1.209E-01	FAIL ABUN
NP-236	5.262E-03	8.750E-02	7.257E-02	4.464E-02	NOT IDENT.
NP-239	-1.329E-01	2.020E-01	1.650E-01	1.031E-01	FAIL ABUN
AM-241	4.025E-02	1.790E-01	1.424E-01	9.132E-02	NOT IDENT.
CM-243	-1.757E-02	1.024E-01	8.628E-02	5.224E-02	FAIL ABUN
CM-247	-1.224E-02	4.376E-02	3.576E-02	2.232E-02	NOT IDENT.
CF-249	1.373E-02	4.500E-02	3.833E-02	2.296E-02	NOT IDENT.
CF-251	-7.822E-02	1.450E-01	1.159E-01	7.399E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                              2040 SAVAGE ROAD                             *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	202.3656
46.50	202.3656
46.50	202.3656
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49.72	230.2634
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52.39	257.3131
52.97	241.3529
53.15	241.4905
53.44	226.1176
54.07	231.7747
56.28	252.5884
56.28	252.5906
57.37	0.0000
57.53	264.9527
57.53	264.9543
57.60	265.0088
57.98	245.1049
57.98	245.1049
59.32	236.8194
59.32	236.8194
59.40	262.0178
59.54	262.1258
59.72	274.1852
60.01	296.9548
61.10	284.5963
61.14	284.6294
61.30	284.7600
63.00	287.0355
63.29	287.2697
63.29	287.2697
63.58	287.5043
64.28	312.6702
65.12	291.8785
65.20	313.4688
65.20	313.4688
66.05	303.4132
66.72	291.8073
66.83	291.8963
66.91	298.7189
67.20	300.3060
67.20	300.3060
67.75	308.8781
67.85	308.9634
68.90	359.6581
68.90	359.6581
69.30	375.4570
69.67	347.5024
70.82	364.6663
70.82	364.6663
70.83	364.6765
72.80	359.6723
72.87	359.7383
72.87	359.7383
74.67	378.8548
74.81	378.9890
74.81	378.9890
74.81	378.9890
74.81	378.9890
74.81	378.9890
74.81	378.9890
74.97	379.1409
75.28	379.4353
75.70	379.8334
77.11	381.1620
77.11	381.1620
77.11	381.1620

77.11	381.1620
77.11	381.1620
77.11	381.1620
78.38	332.6985
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79.80	304.5085
79.80	304.5085
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80.18	251.6583
80.30	251.7311
80.30	251.7311
80.57	296.6742
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81.07	313.8413
81.07	313.8413
81.07	313.8413
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83.78	282.9453
83.78	282.9453
83.78	282.9453
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84.40	283.3510
84.90	283.6787
85.43	284.0247
86.29	284.5819
86.50	284.7182
86.54	284.7442
86.59	284.7764
86.72	284.8606
86.79	284.9050
86.94	285.0030
87.30	285.2341
87.30	285.2341
87.30	285.2341
87.30	285.2341
87.30	285.2341
87.30	285.2341
87.57	285.4087
87.88	285.6077
88.03	285.7041
88.36	285.9154
88.47	285.9858
89.95	286.9274
91.11	287.6622
92.29	288.4032
92.38	288.4599
92.38	288.4599
93.35	289.0646
94.00	289.4688
94.67	239.8016
94.67	239.8041
94.90	239.9219
94.90	239.9219
94.90	239.9219
94.90	239.9219
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95.87	269.3816
96.73	319.2041
97.43	297.8750
98.44	229.4814
98.44	229.4827
98.88	225.4167
99.55	234.4849
99.55	234.4849
99.86	234.6345
100.00	248.3360
100.10	238.6485
103.18	248.9641
103.76	240.4217
105.00	213.4714
105.31	221.4775
108.00	257.2824
109.28	221.2170
111.00	231.9002
111.00	231.9002

111.76	234.2290
112.95	241.7489
115.19	228.7190
116.30	225.1689
117.00	240.5560
117.00	240.5560
117.66	242.8632
121.11	232.2147
121.62	231.4117
121.78	231.4778
122.06	230.5780
122.32	230.6843
122.32	230.6843
122.32	230.6843
122.32	230.6843
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129.76	254.7963
131.20	233.7486
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133.54	230.0057
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136.00	244.4689
136.25	238.3274
136.48	238.4159
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140.51	0.0000
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144.24	223.4924
144.24	223.4924
144.24	223.4924
145.22	199.5532
145.44	218.6341
147.16	228.7551
152.43	217.8021
152.70	218.9595
153.22	218.0615
154.21	238.7273
154.21	238.7273
154.21	238.7273
154.21	238.7273
155.03	233.6630
156.02	232.9355
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162.64	221.1183
163.35	247.3850
163.89	228.0319
165.85	264.6071
167.43	205.1775
171.28	260.0553
171.86	245.9889
172.10	246.0710
176.55	245.3689
176.60	245.3858
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184.41	212.7816
185.71	196.9204
186.00	196.9956
190.27	202.5934
192.34	179.4330
193.63	207.9864
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198.01	194.3615
198.60	216.1157
200.40	214.3208
201.83	246.6760
202.84	230.9754
205.31	189.2371
208.36	227.9244
208.81	200.4052

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209.75	187.9481
210.97	206.1201
215.65	200.6455
216.55	199.9265
218.09	183.9830
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223.80	187.2477
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227.08	172.0636
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228.16	176.6891
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228.18	180.2276
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236.00	202.4713
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238.63	168.0198
238.63	168.0198
239.00	168.0858
240.98	168.4473
241.98	168.6280
241.98	168.6280
241.98	168.6280
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245.39	171.4039
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248.90	149.0907
249.79	159.1791
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252.85	176.0197
252.85	176.0197
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256.20	163.8831
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260.90	153.6932
262.80	159.4903
264.65	148.4005
268.24	147.4585
268.79	153.4406
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269.46	142.1003
269.46	142.1003
269.46	142.1003
271.23	142.3494
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277.60	127.9817
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299.80	130.6776
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300.09	130.7133
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303.91	106.7620
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323.87	125.7280
323.87	125.7280
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334.20	140.9282
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338.28	119.4105
338.28	119.4105
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338.32	119.4161
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351.92	104.2662
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367.94	0.0000
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374.96	112.2347
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388.63	101.1405
391.69	115.7053
391.69	115.7053
392.90	107.6099
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445.03	99.9266
445.03	99.9266
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511.85	93.1452
511.85	93.1452
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513.99	93.2638
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520.65	69.8536
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568.70	99.8909
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569.50	88.0172
569.67	85.2735
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602.71	75.9954
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604.70	60.7264
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609.31	91.7769
609.31	91.7769

609.31	91.7769
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621.84	63.1511
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661.65	81.7191
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722.78	70.8986
722.89	70.9021
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756.15	63.2507
756.87	65.2793
763.93	60.4424
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768.36	72.6697
768.36	72.6697
768.36	72.6697
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778.57	56.7670
778.89	56.7752
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810.76	77.0544
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848.13	66.7484
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867.82	49.5472
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880.51	62.3130
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896.60	55.2563
898.02	60.6029
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903.28	59.1838
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911.07	49.1468
911.07	49.1468
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925.24	52.6271
926.50	45.1295
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934.06	50.6420
934.06	50.6420
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962.29	50.7956
964.01	56.6351
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968.20	56.7188
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969.11	56.7379
969.11	56.7379
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989.30	39.5587
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1021.30	0.0000
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1076.63	46.2007
1077.35	47.1537
1085.78	45.3906
1099.22	56.9824
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1112.84	58.3736
1115.52	52.3661
1120.29	49.1664
1120.29	49.1664
1120.29	49.1664
1120.29	49.1664
1120.51	49.1706
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1124.00	0.0000
1129.67	74.2651
1131.51	0.0000
1147.95	0.0000
1167.94	66.9364
1173.22	65.0998
1175.09	52.4993
1177.93	57.4083
1189.05	57.5980
1204.90	66.6968
1205.75	0.0000
1213.00	64.8882
1221.42	60.1189
1230.97	69.1797
1235.34	85.1007
1236.41	0.0000
1238.11	68.3318
1238.11	68.3318
1238.11	68.3318
1238.11	68.3318
1238.25	67.3442
1246.25	59.5581
1260.41	0.0000
1271.85	43.9928
1274.45	55.0313
1274.54	55.0336
1291.56	42.2239
1298.22	0.0000
1312.09	40.4411
1325.50	39.5745
1325.50	39.5745
1332.49	39.6490
1333.61	43.7279
1360.21	30.7251
1362.66	0.0000
1365.15	31.7909
1368.21	22.5801
1368.53	0.0000
1376.25	26.4478
1377.67	30.8667
1377.67	30.8667
1377.67	30.8667
1377.67	30.8667
1384.27	37.1045
1394.10	29.9664
1395.20	24.8066
1407.95	31.1108
1434.06	31.3184
1436.60	20.8919
1457.56	0.0000
1460.81	14.7132
1489.15	24.3420
1509.49	10.6360
1596.49	31.6390
1620.62	15.9073
1678.03	0.0000
1691.02	16.1593
1691.02	16.1593

1706.46	0.0000
1750.46	0.0000
1764.49	15.4509
1764.49	15.4509
1764.49	15.4509
1764.49	15.4509
1770.23	13.5356
1771.40	72.5307
1791.20	0.0000
1808.65	17.5430
1836.01	13.7217

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433007

Total Uranium Activity	8.3180E+00	ug/g
Total Uranium Counting Unc.	6.9771E+00	ug/g
Total Uranium Tpu	3.5597E-06	ug/g
Total Uranium Mda	3.4502E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G232433007       *
*   ANALYST       : MXR1                      DETECTOR   : GAM12            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:39:19.58    SAMPLE ALQT:  105.820 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 1.132E+01
GROSS GAMMA ERROR (pCi/GRAM) : 1.721E+00
GROSS GAMMA MDA (pCi/GRAM) : 3.435E+00
GROSS GAMMA DLC (pCi/GRAM) : 1.659E+00

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:41:20.33

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433008.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:39:50.
Sample ID         : G232433008           Sample quantity  : 1.08510E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.61  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	47.03*	114	437	1.04	93.83	90	8	1.59E-02	35.5	
2	0	63.63*	220	736	1.03	127.02	123	10	3.06E-02	25.9	
3	3	75.23*	532	536	0.98	150.23	144	16	7.39E-02	8.3	1.24E+00
4	3	77.50*	864	518	1.07	154.77	144	16	1.20E-01	5.5	
5	4	84.45*	129	455	1.09	168.67	165	29	1.79E-02	28.9	1.20E+00
6	4	87.67	321	495	1.28	175.11	165	29	4.46E-02	13.0	
7	4	90.26	177	414	1.17	180.29	165	29	2.46E-02	20.7	
8	4	93.13*	428	442	1.31	186.04	165	29	5.95E-02	11.6	
9	0	129.40	86	380	1.07	258.59	255	8	1.19E-02	40.7	
10	0	186.38*	212	422	1.18	372.59	367	11	2.95E-02	21.5	
11	0	209.78	97	335	1.05	419.41	415	10	1.35E-02	36.7	
12	7	239.10*	1150	202	1.22	478.05	470	19	1.60E-01	3.6	2.55E+00
13	7	242.14	257	242	1.92	484.14	470	19	3.57E-02	15.4	
14	0	271.43	75	274	0.98	542.73	537	11	1.04E-02	44.4	
15	0	295.69*	335	213	1.35	591.26	586	11	4.65E-02	10.3	
16	0	338.55*	200	195	1.21	677.01	673	10	2.78E-02	15.2	
17	0	352.36*	490	215	1.41	704.64	698	11	6.81E-02	7.5	
18	0	464.47	76	198	1.36	928.92	921	16	1.05E-02	43.2	
19	0	511.46*	158	215	1.82	1022.94	1015	18	2.19E-02	26.0	
20	0	583.75*	329	111	1.50	1167.55	1162	14	4.57E-02	9.1	
21	0	609.79*	344	158	1.25	1219.65	1213	14	4.78E-02	9.8	
22	0	662.33	143	143	1.65	1324.77	1317	13	1.98E-02	19.2	
23	0	727.88*	108	116	1.77	1455.92	1449	17	1.50E-02	25.0	
24	0	795.61	75	60	1.68	1591.42	1585	12	1.04E-02	23.7	
25	0	862.35	29	113	1.14	1724.95	1718	14	4.05E-03	78.3	
26	0	911.92*	208	73	1.17	1824.12	1818	12	2.89E-02	11.2	
27	0	969.87	112	166	1.47	1940.08	1930	17	1.56E-02	28.2	
28	0	1120.71	72	77	1.96	2241.88	2237	13	1.01E-02	27.4	
29	0	1461.43*	960	36	1.93	2923.64	2914	18	1.33E-01	3.6	
30	0	1765.30*	79	3	2.27	3531.71	3526	12	1.09E-02	13.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:41:23

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433008.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:39:50
Sample ID : G232433008 Sample quantity : 108.51 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.61 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.991E+01	2.811E+00	8.602E-01	5.259E-02	34.767
CD-109	+	88.03	*	4.212E+00	1.147E+00	1.160E+00	9.154E-02	3.631
SN-126	+	64.28		1.075E+00	5.803E-01	4.630E-01	7.209E-02	2.321
	+	86.94		1.724E+00	8.408E-01	4.734E-01	1.952E-01	3.642
	+	87.57	*	4.148E-01	1.129E-01	1.141E-01	9.025E-03	3.636
BA-137M	+	661.65	*	2.721E-01	1.069E-01	8.982E-02	7.326E-03	3.030
CS-137	+	661.65	*	2.877E-01	1.130E-01	9.495E-02	7.760E-03	3.030
TL-208		277.35		2.375E-01	5.254E-01	8.573E-01	1.004E-01	0.277
	+	510.84		9.975E-01	5.292E-01	2.914E-01	3.167E-02	3.423
	+	583.14	*	5.994E-01	1.199E-01	8.750E-02	7.243E-03	6.850
		860.37		8.170E-01	5.672E-01	9.152E-01	7.716E-02	0.893
BI-210	+	46.50	*	1.337E+00	9.566E-01	9.676E-01	7.887E-02	1.382
PB-210	+	46.50	*	1.337E+00	9.566E-01	9.676E-01	7.887E-02	1.382
PO-210	+	46.50	*	1.337E+00	9.551E-01	9.676E-01	6.898E-02	1.382
BI-211		72.87		3.151E-01	2.549E+00	3.871E+00	3.385E-01	0.081
	+	351.07	*	3.754E+00	6.272E-01	4.709E-01	3.432E-02	7.973
PB-212	+	74.81		2.339E+00	4.881E-01	4.417E-01	5.618E-02	5.297
	+	77.11		2.262E+00	3.140E-01	2.640E-01	2.243E-02	8.568
	+	87.30		1.918E+00	5.564E-01	5.273E-01	6.728E-02	3.638
	+	238.63	*	1.895E+00	2.206E-01	1.141E-01	1.037E-02	16.603
		300.09		1.476E+00	1.192E+00	1.847E+00	1.757E-01	0.799
PO-212	+	74.81		2.339E+00	4.881E-01	4.417E-01	5.618E-02	5.297
	+	77.11		2.262E+00	3.140E-01	2.640E-01	2.243E-02	8.568
	+	87.30		1.918E+00	5.564E-01	5.273E-01	6.728E-02	3.638
		115.19		1.227E+00	4.120E+00	6.824E+00	7.913E-01	0.180
	+	238.63	*	1.895E+00	2.206E-01	1.141E-01	1.037E-02	16.603
		300.09		1.476E+00	1.192E+00	1.847E+00	1.757E-01	0.799
BI-214	+	609.31	*	1.185E+00	2.563E-01	1.622E-01	1.517E-02	7.304
		768.36		1.191E+00	1.228E+00	2.164E+00	2.169E-01	0.550
		934.06		2.365E+00	1.938E+00	3.448E+00	3.323E-01	0.686
	+	1120.29		1.289E+00	7.143E-01	7.146E-01	6.393E-02	1.803
		1238.11		8.116E-01	1.242E+00	2.167E+00	1.734E-01	0.374
		1377.67		1.178E+00	1.349E+00	2.430E+00	2.072E-01	0.485
	+	1764.49		1.914E+00	5.351E-01	5.298E-01	3.009E-02	3.613

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-214	+	74.81		4.031E+00	8.090E-01	7.610E-01	8.655E-02	5.297
	+	77.11		3.878E+00	6.140E-01	4.526E-01	5.165E-02	8.568
	+	87.30		3.286E+00	9.298E-01	9.032E-01	9.986E-02	3.638
	+	241.98		2.542E+00	8.188E-01	6.877E-01	6.658E-02	3.696
	+	295.21		1.498E+00	3.422E-01	2.924E-01	2.864E-02	5.125
	+	351.92	*	1.306E+00	2.286E-01	1.642E-01	1.470E-02	7.954
PO-214	+	74.81		4.031E+00	8.090E-01	7.610E-01	8.655E-02	5.297
	+	77.11		3.878E+00	6.140E-01	4.526E-01	5.165E-02	8.568
	+	87.30		3.286E+00	9.298E-01	9.032E-01	9.986E-02	3.638
	+	241.98		2.542E+00	8.188E-01	6.877E-01	6.658E-02	3.696
	+	295.21		1.498E+00	3.422E-01	2.924E-01	2.864E-02	5.125
	+	351.92	*	1.306E+00	2.286E-01	1.642E-01	1.470E-02	7.954
PO-216	+	74.81		2.339E+00	4.881E-01	4.417E-01	5.618E-02	5.297
	+	77.11		2.262E+00	3.140E-01	2.640E-01	2.243E-02	8.568
	+	87.30		1.918E+00	5.564E-01	5.273E-01	6.728E-02	3.638
	+	238.63	*	1.895E+00	2.206E-01	1.141E-01	1.037E-02	16.603
		300.09		1.476E+00	1.192E+00	1.847E+00	1.757E-01	0.799
PO-218	+	74.81		4.031E+00	8.090E-01	7.610E-01	8.655E-02	5.297
	+	77.11		3.878E+00	6.140E-01	4.526E-01	5.165E-02	8.568
	+	87.30		3.286E+00	9.298E-01	9.032E-01	9.986E-02	3.638
	+	241.98		2.542E+00	8.188E-01	6.877E-01	6.658E-02	3.696
	+	295.21		1.498E+00	3.422E-01	2.924E-01	2.864E-02	5.125
	+	351.92	*	1.306E+00	2.286E-01	1.642E-01	1.470E-02	7.954
RA-224	+	240.98	*	4.820E+00	1.529E+00	1.299E+00	1.026E-01	3.709
RA-226	+	609.31	*	1.185E+00	2.563E-01	1.622E-01	1.517E-02	7.304
		768.36		1.191E+00	1.228E+00	2.164E+00	2.169E-01	0.550
		934.06		2.365E+00	1.938E+00	3.448E+00	3.323E-01	0.686
	+	1120.29		1.289E+00	7.143E-01	7.146E-01	6.393E-02	1.803
		1238.11		8.116E-01	1.242E+00	2.167E+00	1.734E-01	0.374
		1377.67		1.178E+00	1.349E+00	2.430E+00	2.072E-01	0.485
	+	1764.49		1.914E+00	5.351E-01	5.298E-01	3.009E-02	3.613
AC-228	+	338.32		1.681E+00	8.572E-01	4.968E-01	2.034E-01	3.384
	+	911.07	*	1.700E+00	4.190E-01	3.517E-01	3.652E-02	4.834
	+	969.11		1.610E+00	9.804E-01	6.520E-01	1.489E-01	2.469
RA-228	+	338.32		1.681E+00	8.572E-01	4.968E-01	2.034E-01	3.384
	+	911.07	*	1.700E+00	4.190E-01	3.517E-01	3.652E-02	4.834
	+	969.11		1.610E+00	9.804E-01	6.520E-01	1.489E-01	2.469
TH-228	+	84.40		5.074E+00	3.003E+00	3.457E+00	4.423E-01	1.468
	+	238.60	*	1.895E+00	2.206E-01	1.141E-01	1.037E-02	16.605
		300.10		1.475E+00	1.471E+00	1.847E+00	1.092E+00	0.798
TH-230	+	609.31	*	1.185E+00	2.563E-01	1.622E-01	1.517E-02	7.304
		768.36		1.191E+00	1.228E+00	2.164E+00	2.169E-01	0.550
		934.06		2.365E+00	1.938E+00	3.448E+00	3.323E-01	0.686
	+	1120.29		1.289E+00	7.143E-01	7.146E-01	6.393E-02	1.803
		1238.11		8.116E-01	1.242E+00	2.167E+00	1.734E-01	0.374
		1377.67		1.178E+00	1.349E+00	2.430E+00	2.072E-01	0.485
	+	1764.49		1.914E+00	5.351E-01	5.298E-01	3.009E-02	3.613
TH-232	+	338.32		1.681E+00	5.239E-01	4.968E-01	3.459E-02	3.384
	+	911.07	*	1.700E+00	4.190E-01	3.517E-01	3.652E-02	4.834

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	969.11		1.610E+00	9.804E-01	6.520E-01	1.489E-01	2.469
TH-234	+	63.29	*	2.715E+00	1.489E+00	1.168E+00	2.143E-01	2.325
	+	92.38		3.816E+00	1.124E+00	7.919E-01	1.425E-01	4.819
U-234	+	609.31	*	1.185E+00	2.563E-01	1.622E-01	1.517E-02	7.304
		768.36		1.191E+00	1.228E+00	2.164E+00	2.169E-01	0.550
		934.06		2.365E+00	1.938E+00	3.448E+00	3.323E-01	0.686
	+	1120.29		1.289E+00	7.143E-01	7.146E-01	6.393E-02	1.803
		1238.11		8.116E-01	1.242E+00	2.167E+00	1.734E-01	0.374
		1377.67		1.178E+00	1.349E+00	2.430E+00	2.072E-01	0.485
	+	1764.49		1.914E+00	5.351E-01	5.298E-01	3.009E-02	3.613
NP-237	+	86.50	*	1.218E+00	4.161E-01	3.340E-01	7.388E-02	3.647
		95.87		1.010E+00	1.067E+00	1.616E+00	3.996E-01	0.625
U-238	+	63.29	*	2.715E+00	1.489E+00	1.168E+00	2.143E-01	2.325
	+	92.38		3.816E+00	9.461E-01	7.919E-01	6.685E-02	4.819
AM-243	+	74.67	*	3.793E-01	7.075E-02	7.158E-02	6.183E-03	5.298
	+	86.72		4.568E+01	1.243E+01	1.253E+01	9.971E-01	3.645
		117.66		-2.212E+00	4.478E+00	7.153E+00	8.560E-01	-0.309
		142.18		-2.012E+01	2.325E+01	3.602E+01	3.817E+00	-0.559
ANH-511	+	511.00	*	2.155E-01	1.129E-01	6.296E-02	4.393E-03	3.422

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.804E-02	4.588E-01	7.687E-01	5.780E-02	0.023
NA-22		1274.54	*	-1.046E-02	6.550E-02	1.074E-01	6.060E-03	-0.097
NA-24		1368.53	*	-1.125E-01	6.550E-02	Half-Life too short		
AL-26		1129.67		-8.479E-01	3.047E+00	4.425E+00	2.623E-01	-0.192
		1808.65	*	2.154E-02	4.169E-02	7.541E-02	4.255E-03	0.286
TI-44		67.85		-2.735E-02	3.387E-02	4.913E-02	4.448E-03	-0.557
	+	78.38	*	4.174E-01	5.794E-02	7.777E-02	6.550E-03	5.367
SC-46		889.25	*	-4.548E-02	6.295E-02	9.810E-02	7.429E-03	-0.464
	+	1120.51		2.182E-01	1.201E-01	1.695E-01	1.019E-02	1.287
V-48		944.10		4.473E-01	1.363E+00	2.301E+00	1.680E-01	0.194
		983.50	*	-6.045E-03	9.964E-02	1.625E-01	1.150E-02	-0.037
		1312.09		-6.956E-02	1.173E-01	1.832E-01	1.039E-02	-0.380
CR-51		320.08	*	-1.250E-01	4.740E-01	7.628E-01	5.937E-02	-0.164
MN-52		744.21		-2.273E-02	3.171E-01	5.067E-01	4.114E-02	-0.045
		848.13		4.931E+00	9.119E+00	1.521E+01	1.184E+00	0.324
		935.52		5.067E-01	3.493E-01	6.337E-01	4.655E-02	0.800
		1246.25		7.392E+00	9.526E+00	1.678E+01	9.390E-01	0.441
		1333.61		-2.317E+00	6.865E+00	1.065E+01	6.058E-01	-0.218
		1434.06	*	-1.524E-01	2.991E-01	4.599E-01	2.643E-02	-0.331
MN-54		834.83	*	1.208E-02	5.952E-02	1.005E-01	7.885E-03	0.120
CO-56		846.75	*	7.352E-03	6.070E-02	1.019E-01	7.939E-03	0.072
		977.42		1.243E+00	4.917E+00	7.425E+00	5.280E-01	0.167
		1037.82		-5.020E-01	5.306E-01	7.964E-01	5.801E-02	-0.630
		1175.09		2.220E-01	3.312E+00	5.371E+00	2.954E-01	0.041
		1238.25		7.060E-02	1.249E-01	2.167E-01	1.293E-02	0.326

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1360.21		7.352E-01	1.432E+00	2.499E+00	1.426E-01	0.294
		1771.40		2.486E-01	3.386E-01	5.698E-01	3.233E-02	0.436
CO-57		122.06	*	-4.891E-03	3.111E-02	4.919E-02	6.222E-03	-0.099
		136.48		7.778E-03	2.652E-01	4.297E-01	5.029E-02	0.018
CO-58		810.76	*	5.687E-02	6.228E-02	1.103E-01	8.783E-03	0.516
FE-59		142.65		-4.415E+00	3.675E+00	5.512E+00	5.813E-01	-0.801
		192.34		-1.910E-01	1.157E+00	1.886E+00	2.448E-01	-0.101
		1099.22	*	7.371E-02	1.365E-01	2.318E-01	1.656E-02	0.318
		1291.56		-2.509E-01	1.715E-01	2.391E-01	1.746E-02	-1.050
CO-60		1173.22		-3.676E-02	6.839E-02	1.048E-01	5.762E-03	-0.351
		1332.49	*	-1.310E-02	6.203E-02	9.743E-02	5.542E-03	-0.134
ZN-65		1115.52	*	1.791E-02	1.542E-01	2.169E-01	1.317E-02	0.083
GE-68		1077.35	*	1.024E+00	1.912E+00	3.252E+00	2.079E-01	0.315
AS-73		53.44	*	1.954E-01	2.825E-01	4.773E-01	4.032E-02	0.409
AS-74		595.88	*	7.418E-02	1.289E-01	2.195E-01	1.686E-02	0.338
		634.78		-8.459E-01	5.345E-01	7.597E-01	6.054E-02	-1.113
SE-75		66.05		-4.704E-01	3.238E+00	4.851E+00	5.284E-01	-0.097
		96.73		-1.486E-01	8.608E-01	1.264E+00	1.754E-01	-0.118
		121.11		2.368E-02	1.668E-01	2.673E-01	3.853E-02	0.089
		136.00		1.508E-02	4.899E-02	8.030E-02	9.072E-03	0.188
		198.60		-5.987E-01	2.274E+00	3.738E+00	3.340E-01	-0.160
		264.65	*	-1.386E-03	5.964E-02	9.388E-02	7.354E-03	-0.015
		279.53		7.082E-02	1.433E-01	2.421E-01	1.948E-02	0.293
		303.91		-3.037E+00	2.846E+00	4.377E+00	4.650E-01	-0.694
		400.65		-8.270E-02	3.576E-01	5.648E-01	5.191E-02	-0.146
BR-77	+	87.88		6.170E+02	1.680E+02	2.297E+02	1.813E+01	2.686
		200.40		2.805E+01	1.355E+02	2.311E+02	1.831E+01	0.121
	+	239.00		2.059E+02	2.212E+01	3.107E+01	2.454E+00	6.628
		249.79		-1.979E+01	5.633E+01	9.220E+01	7.250E+00	-0.215
		281.68		-7.487E+01	8.046E+01	1.262E+02	9.675E+00	-0.593
		297.23		2.079E+02	7.061E+01	1.144E+02	8.605E+00	1.817
		303.76		-2.401E+02	1.684E+02	2.542E+02	1.894E+01	-0.945
		439.47		9.344E+01	1.253E+02	2.203E+02	1.392E+01	0.424
		484.57		4.289E+01	2.230E+02	3.768E+02	2.540E+01	0.114
		520.65	*	1.490E+01	1.059E+01	1.866E+01	1.318E+00	0.799
		574.64		3.339E+01	2.149E+02	3.573E+02	2.684E+01	0.093
		578.91		-3.160E+01	1.003E+02	1.384E+02	1.045E+01	-0.228
		585.48		1.510E+03	2.773E+02	4.916E+02	3.736E+01	3.072
		755.35		2.015E+02	1.786E+02	3.103E+02	2.512E+01	0.649
		817.79		-1.528E+02	1.454E+02	2.224E+02	1.761E+01	-0.687
SR-82		698.33		3.757E+01	5.250E+01	8.899E+01	7.266E+00	0.422
		776.49	*	-5.481E-01	6.083E-01	9.550E-01	7.686E-02	-0.574
		1395.20		-1.425E+01	1.702E+01	2.537E+01	1.454E+00	-0.562
RB-83		520.41	*	1.597E-01	1.046E-01	1.813E-01	1.280E-02	0.881
		529.64		-1.180E-01	1.472E-01	2.298E-01	1.641E-02	-0.514
		552.65		-2.436E-01	2.807E-01	4.335E-01	3.179E-02	-0.562
RB-84		881.50	*	-8.792E-02	1.138E-01	1.710E-01	1.303E-02	-0.514
KR-85		513.99	*	4.466E+01	1.346E+01	2.334E+01	1.635E+00	1.913
SR-85		513.99	*	2.258E-01	6.805E-02	1.180E-01	8.266E-03	1.913

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86		1076.63	*	6.149E-01	1.157E+00	1.967E+00	1.258E-01	0.313
Y-88		898.02		-2.569E-02	6.620E-02	1.061E-01	8.034E-03	-0.242
		1836.01	*	2.190E-03	5.148E-02	8.595E-02	4.840E-03	0.025
ZR-88		392.90	*	1.104E-02	4.299E-02	7.019E-02	4.111E-03	0.157
Y-91		1204.90	*	1.882E+01	3.018E+01	5.255E+01	2.913E+00	0.358
NB-94		702.63	*	-1.428E-03	5.810E-02	9.373E-02	7.651E-03	-0.015
		871.10		-7.964E-04	5.860E-02	9.500E-02	7.289E-03	-0.008
NB-95		765.79	*	2.271E-03	6.753E-02	1.135E-01	9.169E-03	0.020
NB-95M		235.69	*	8.079E-03	1.666E-01	2.462E-01	2.277E-02	0.033
ZR-95		724.18		2.109E-02	1.627E-01	2.291E-01	2.046E-02	0.092
		756.15	*	-1.569E-02	1.149E-01	1.824E-01	1.645E-02	-0.086
NB-97		657.90	*	-3.324E-02	1.149E-01	Half-Life too short		
		1024.50		6.482E+00	1.149E-01	Half-Life too short		
ZR-97		254.15		-1.313E-01	1.149E-01	Half-Life too short		
		355.39		2.861E-01	1.149E-01	Half-Life too short		
		507.63	*	1.318E-01	1.149E-01	Half-Life too short		
		602.52		3.716E+00	1.149E-01	Half-Life too short		
		1021.30		-2.476E-02	1.149E-01	Half-Life too short		
		1147.95		-3.399E-01	1.149E-01	Half-Life too short		
		1362.66		2.341E+00	1.149E-01	Half-Life too short		
		1750.46		2.940E-01	1.149E-01	Half-Life too short		
MO-99		140.51		-7.139E+00	2.370E+01	3.766E+01	1.071E+01	-0.190
		181.06		-1.700E+01	1.782E+01	2.316E+01	4.158E+00	-0.734
		366.43		2.818E+01	8.314E+01	1.372E+02	8.822E+00	0.205
		739.58	*	-4.078E+00	1.394E+01	2.190E+01	3.266E+00	-0.186
		778.00		-1.593E+01	4.013E+01	6.543E+01	5.264E+00	-0.243
TC-99M		140.51	*	-3.592E+08	4.013E+01	Half-Life too short		
RH-101		127.23		2.425E-02	4.185E-02	6.260E-02	7.602E-03	0.387
		198.01	*	2.198E-02	4.189E-02	7.099E-02	5.621E-03	0.310
		325.23		-3.657E-01	3.199E-01	4.889E-01	3.505E-02	-0.748
RH-102		418.52		-4.682E-02	4.499E-01	7.142E-01	4.366E-02	-0.066
		475.06	*	-1.880E-03	4.290E-02	7.157E-02	4.762E-03	-0.026
		631.29		1.501E-02	8.673E-02	1.432E-01	1.138E-02	0.105
		697.49		9.025E-02	1.219E-01	2.070E-01	1.690E-02	0.436
		766.84		1.024E-01	1.791E-01	3.102E-01	2.504E-02	0.330
		1046.59		-2.045E-01	1.874E-01	2.756E-01	1.829E-02	-0.742
		1112.84		-3.139E-02	3.516E-01	5.377E-01	3.271E-02	-0.058
RU-103		497.08	*	-5.303E-02	5.576E-02	8.621E-02	1.135E-02	-0.615
	+	610.33		1.250E+01	3.174E+00	3.715E+00	6.045E-01	3.363
RH-106	+	511.85		1.073E+00	5.625E-01	6.404E-01	4.474E-02	1.676
		621.84	*	-6.292E-03	4.816E-01	7.863E-01	1.013E-01	-0.008
		1050.47		-7.327E-01	3.558E+00	5.692E+00	3.761E-01	-0.129
RU-106	+	511.85		1.073E+00	5.625E-01	6.404E-01	4.474E-02	1.676
		621.84	*	-6.292E-03	4.816E-01	7.863E-01	6.192E-02	-0.008
		1050.47		-7.327E-01	3.558E+00	5.692E+00	3.761E-01	-0.129
AG-108M		433.93	*	-3.415E-02	4.385E-02	7.024E-02	4.725E-03	-0.486
		614.37		3.114E-02	6.476E-02	9.600E-02	7.863E-03	0.324
		722.95		-9.563E-03	7.258E-02	9.931E-02	8.445E-03	-0.096
AG-110M		657.75	*	-4.452E-02	6.471E-02	8.416E-02	7.070E-03	-0.529

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		677.61		-2.188E-01	4.949E-01	7.757E-01	6.532E-02	-0.282
		706.67		7.752E-03	3.591E-01	5.808E-01	4.885E-02	0.013
		763.93		-1.576E-01	2.577E-01	4.144E-01	3.456E-02	-0.380
		884.67		7.763E-02	7.580E-02	1.352E-01	1.069E-02	0.574
		937.48		4.628E-02	1.785E-01	2.999E-01	2.309E-02	0.154
		1384.27		-3.057E-01	2.697E-01	3.900E-01	2.372E-02	-0.784
IN-111		171.28		6.812E-01	9.183E-01	1.511E+00	1.186E-01	0.451
		245.39	*	4.041E-01	1.029E+00	1.550E+00	1.221E-01	0.261
IN-113M		391.69	*	8.107E-04	6.422E-02	1.033E-01	6.436E-03	0.008
SN-113		391.69	*	8.107E-04	6.422E-02	1.033E-01	6.436E-03	0.008
IN-114M		190.27	*	7.107E-02	2.549E-01	3.639E-01	2.876E-02	0.195
CD-115		260.90		-4.660E+01	1.153E+02	1.878E+02	1.467E+01	-0.248
		492.35		3.525E+01	3.303E+01	5.867E+01	3.997E+00	0.601
		527.90	*	-2.362E+00	9.639E+00	1.570E+01	1.118E+00	-0.150
SN-117M		156.02		1.195E+00	2.643E+00	4.321E+00	3.904E-01	0.277
		158.56	*	-2.695E-02	6.330E-02	9.924E-02	8.666E-03	-0.272
SB-122		563.90	*	6.388E-01	2.090E+00	3.517E+00	2.612E-01	0.182
		692.80		-3.044E+01	4.842E+01	7.453E+01	6.086E+00	-0.408
I-123		159.00	*	-1.382E+00	4.842E+01	Half-Life too short		
		528.96		-8.539E+01	4.842E+01	Half-Life too short		
TE-123M		159.00	*	-3.696E-02	3.504E-02	5.301E-02	4.628E-03	-0.697
I-124		602.71	*	8.865E-01	9.212E-01	1.420E+00	1.098E-01	0.624
		722.78		-6.716E-01	6.020E+00	8.255E+00	6.726E-01	-0.081
		1325.50		-1.674E+01	4.336E+01	6.905E+01	3.923E+00	-0.242
		1376.25		2.716E+01	3.304E+01	5.942E+01	3.398E+00	0.457
		1509.49		-4.421E+00	2.084E+01	3.324E+01	1.916E+00	-0.133
		1691.02		-5.080E-01	4.894E+00	7.779E+00	4.455E-01	-0.065
SB-124		602.71		6.335E-02	6.583E-02	1.015E-01	7.846E-03	0.624
		645.85		-1.774E-01	7.309E-01	1.168E+00	1.004E-01	-0.152
		709.31		-6.219E-01	4.691E+00	7.505E+00	6.123E-01	-0.083
		713.82		1.526E+00	2.603E+00	4.370E+00	5.117E-01	0.349
		722.78		-6.958E-02	6.236E-01	8.552E-01	7.136E-02	-0.081
		968.20		1.907E+01	5.396E+00	1.018E+01	7.292E-01	1.874
		1045.16		-1.336E+00	4.018E+00	6.368E+00	4.233E-01	-0.210
		1325.50		-1.852E+00	4.797E+00	7.639E+00	4.340E-01	-0.242
		1368.21		-9.015E-01	2.325E+00	3.645E+00	4.312E-01	-0.247
		1436.60		-3.366E+00	5.492E+00	8.311E+00	4.777E-01	-0.405
		1691.02	*	-1.241E-02	1.196E-01	1.901E-01	1.184E-02	-0.065
SB-125		427.89	*	9.323E-02	1.257E-01	2.206E-01	1.420E-02	0.423
	+	463.38		9.287E-01	8.049E-01	7.562E-01	5.605E-02	1.228
		600.56		3.112E-01	2.745E-01	4.804E-01	4.045E-02	0.648
		635.90		-2.469E-01	4.152E-01	6.460E-01	5.636E-02	-0.382
TE-125M		109.28	*	6.354E+00	1.041E+01	1.747E+01	2.122E+00	0.364
I-126		388.63		6.726E-02	2.767E-01	4.515E-01	2.674E-02	0.149
		666.33	*	3.847E-02	3.156E-01	4.479E-01	3.654E-02	0.086
		753.82		2.688E+00	2.206E+00	3.851E+00	3.119E-01	0.698
SB-126		223.80		-6.024E-01	4.550E+00	7.596E+00	6.021E-01	-0.079
		278.60		2.021E+00	3.074E+00	5.228E+00	4.022E-01	0.386
	+	296.50		1.384E+01	3.041E+00	4.302E+00	3.239E-01	3.217

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		414.70		-1.459E-03	1.098E-01	1.755E-01	1.066E-02	-0.008
		415.30		2.952E+00	9.051E+00	1.475E+01	8.971E-01	0.200
		555.20		2.517E-01	5.378E+00	8.905E+00	6.550E-01	0.028
		573.80		1.544E-01	1.448E+00	2.400E+00	1.802E-01	0.064
		593.00		1.367E-01	1.274E+00	2.107E+00	1.613E-01	0.065
		656.30		-1.309E+00	5.758E+00	7.897E+00	6.412E-01	-0.166
		666.33		1.603E-02	1.315E-01	1.866E-01	1.522E-02	0.086
		675.00		4.214E-01	3.004E+00	4.922E+00	4.018E-01	0.086
		695.00		-9.993E-02	1.160E-01	1.751E-01	1.430E-02	-0.571
		697.00		2.144E-01	3.948E-01	6.625E-01	5.409E-02	0.324
		720.50	*	-7.509E-02	2.476E-01	3.325E-01	2.710E-02	-0.226
		856.80		8.115E-01	7.336E-01	1.175E+00	9.101E-02	0.691
		989.30		-3.139E-02	1.689E+00	2.764E+00	1.945E-01	-0.011
		1034.80		2.029E+00	1.325E+01	2.191E+01	1.473E+00	0.093
		1213.00		-1.675E+00	6.946E+00	1.140E+01	6.333E-01	-0.147
SB-127		61.10		-3.468E+00	2.366E+01	3.592E+01	4.127E+00	-0.097
		252.40		2.853E-01	4.371E+00	7.297E+00	3.049E+00	0.039
		290.80		-4.857E+00	2.399E+01	3.413E+01	3.402E+00	-0.142
		411.60		-2.336E+01	1.576E+01	2.190E+01	3.106E+00	-1.067
		444.90		-2.065E+00	1.097E+01	1.824E+01	1.955E+00	-0.113
		473.00		-2.993E-01	1.973E+00	3.184E+00	3.584E-01	-0.094
		543.00		-4.594E+00	1.926E+01	3.132E+01	4.167E+00	-0.147
		603.60		5.484E+00	1.583E+01	2.316E+01	2.676E+00	0.237
		685.20	*	-9.702E-01	1.822E+00	2.835E+00	3.020E-01	-0.342
		698.50		1.086E+01	1.930E+01	3.231E+01	4.943E+00	0.336
		722.20		2.371E+00	3.978E+01	5.565E+01	5.787E+00	0.043
		783.80		2.760E-01	4.503E+00	7.572E+00	8.825E-01	0.036
XE-127		57.60		-7.967E-01	2.455E+00	4.133E+00	3.820E-01	-0.193
		145.22		6.997E-01	9.121E-01	1.490E+00	1.529E-01	0.470
		172.10		8.713E-02	1.486E-01	2.429E-01	1.907E-02	0.359
		202.84	*	-4.618E-02	5.696E-02	9.298E-02	7.368E-03	-0.497
		374.96		-8.507E-02	2.548E-01	4.017E-01	2.509E-02	-0.212
I-131		80.18		-6.038E+00	5.181E+00	5.718E+00	4.784E-01	-1.056
		284.30		-4.755E-01	1.727E+00	2.808E+00	2.285E-01	-0.169
		364.48	*	-2.460E-03	1.403E-01	2.266E-01	1.602E-02	-0.011
		636.97		7.571E-01	2.054E+00	3.439E+00	2.921E-01	0.220
		722.89		-1.638E+00	1.088E+01	1.485E+01	1.217E+00	-0.110
TE-132		49.72		-2.477E+00	3.650E+00	5.452E+00	5.344E-01	-0.454
		111.76		-4.438E+01	2.809E+01	4.106E+01	5.180E+00	-1.081
		116.30		-2.114E+01	2.482E+01	3.890E+01	5.139E+00	-0.543
		228.16	*	1.752E-01	6.334E-01	1.074E+00	1.622E-01	0.163
BA-133		53.15		5.547E-01	1.198E+00	2.011E+00	1.687E-01	0.276
		79.62		-8.720E-01	1.429E+00	1.893E+00	2.854E-01	-0.461
		81.00		-1.378E-01	1.271E-01	1.395E-01	2.189E-02	-0.988
		276.40		7.541E-01	5.537E-01	8.608E-01	1.199E-01	0.876
		302.84		-5.632E-02	2.010E-01	3.252E-01	4.087E-02	-0.173
		356.01	*	-2.014E-02	7.512E-02	1.071E-01	1.286E-02	-0.188
		383.85		-5.504E-02	4.490E-01	7.175E-01	7.893E-02	-0.077
I-133	+	510.53		7.510E-01	4.490E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		529.87	*	-1.780E-03	4.490E-01	Half-Life too short		
		706.58		2.327E-02	4.490E-01	Half-Life too short		
		856.28		3.326E-01	4.490E-01	Half-Life too short		
		875.33		8.585E-02	4.490E-01	Half-Life too short		
		1236.41		3.973E-02	4.490E-01	Half-Life too short		
		1298.22		2.086E-01	4.490E-01	Half-Life too short		
CS-134		475.35		1.247E-01	2.758E+00	4.625E+00	3.079E-01	0.027
		563.23		1.647E-01	5.159E-01	8.687E-01	6.529E-02	0.190
		569.32		7.543E-02	2.812E-01	4.716E-01	3.586E-02	0.160
		604.70		3.322E-02	5.543E-02	8.308E-02	6.456E-03	0.400
	+	795.84	*	1.990E-01	9.557E-02	1.410E-01	1.136E-02	1.412
		801.93		-5.325E-03	7.934E-01	1.138E+00	9.130E-02	-0.005
		1038.57		-2.375E+00	6.683E+00	1.059E+01	7.094E-01	-0.224
		1167.94		1.915E+00	3.672E+00	6.198E+00	3.440E-01	0.309
		1365.15		4.365E-01	1.760E+00	2.990E+00	1.880E-01	0.146
CS-135		268.24	*	2.305E-03	2.237E-01	3.260E-01	3.011E-02	0.007
I-135		288.45		-2.206E+07	2.237E-01	Half-Life too short		
		417.63		6.119E+08	2.237E-01	Half-Life too short		
		546.56		-9.448E+07	2.237E-01	Half-Life too short		
		836.80		-2.560E+07	2.237E-01	Half-Life too short		
		1038.76		-1.344E+08	2.237E-01	Half-Life too short		
		1124.00		2.499E+09	2.237E-01	Half-Life too short		
		1131.51		2.228E+08	2.237E-01	Half-Life too short		
		1260.41	*	-1.882E+08	2.237E-01	Half-Life too short		
		1457.56		1.611E+10	2.237E-01	Half-Life too short		
		1678.03		-3.334E+08	2.237E-01	Half-Life too short		
		1706.46		-4.205E+08	2.237E-01	Half-Life too short		
		1791.20		-8.070E+08	2.237E-01	Half-Life too short		
CS-136		66.91		-2.338E-01	5.070E-01	7.469E-01	1.174E-01	-0.313
	+	86.29		5.044E+00	1.455E+00	1.726E+00	2.145E-01	2.923
		153.22		4.277E-01	7.678E-01	1.261E+00	1.299E-01	0.339
		163.89		-1.020E-01	1.323E+00	2.066E+00	1.897E-01	-0.049
		176.55		-5.953E-02	4.231E-01	6.674E-01	5.612E-02	-0.089
		273.65		-3.878E-02	6.450E-01	9.337E-01	7.803E-02	-0.042
		340.57		5.485E-01	2.163E-01	3.493E-01	2.527E-02	1.570
		818.51		-1.058E-02	1.074E-01	1.778E-01	1.408E-02	-0.059
		1048.07	*	-1.806E-01	1.634E-01	2.396E-01	1.700E-02	-0.754
		1235.34		-1.738E-01	7.681E-01	1.259E+00	1.241E-01	-0.138
CE-139		165.85	*	7.986E-03	3.823E-02	6.160E-02	4.829E-03	0.130
BA-140		162.64		1.878E-01	9.213E-01	1.458E+00	1.277E-01	0.129
		304.84		-7.938E-01	1.593E+00	2.519E+00	6.975E-01	-0.315
		423.70		-3.397E-01	2.492E+00	3.936E+00	1.254E+00	-0.086
		537.32	*	1.286E-01	3.634E-01	6.111E-01	2.004E-01	0.210
LA-140		328.77		4.443E-01	3.839E-01	6.602E-01	5.080E-02	0.673
		432.53		-5.988E-01	2.603E+00	4.325E+00	2.949E-01	-0.138
		487.03		-9.177E-02	1.791E-01	2.887E-01	2.145E-02	-0.318
		751.79		-2.534E-01	2.678E+00	4.269E+00	3.875E-01	-0.059
		815.85		-8.060E-02	4.689E-01	7.722E-01	6.945E-02	-0.104
		867.82		-2.507E+00	2.628E+00	3.353E+00	2.749E-01	-0.748

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		2.231E+00	4.603E+00	7.534E+00	7.312E-01	0.296
		925.24		-7.288E-01	1.782E+00	2.845E+00	2.282E-01	-0.256
		1596.49	*	-4.001E-02	1.255E-01	1.953E-01	1.125E-02	-0.205
CE-141		145.44	*	7.297E-02	7.940E-02	1.322E-01	1.371E-02	0.552
CE-143		57.37		-7.512E-05	7.940E-02	Half-Life too short		
		231.56		-5.940E-04	7.940E-02	Half-Life too short		
		293.26	*	1.598E-04	7.940E-02	Half-Life too short		
		350.59		1.171E-02	7.940E-02	Half-Life too short		
		490.36		-1.265E-03	7.940E-02	Half-Life too short		
		664.57		3.087E-03	7.940E-02	Half-Life too short		
		721.93		1.439E-04	7.940E-02	Half-Life too short		
CE-144		80.11		-3.132E+00	2.665E+00	2.938E+00	2.446E-01	-1.066
		133.54	*	-1.575E-01	3.015E-01	4.129E-01	7.156E-02	-0.381
PM-144		476.78		-4.716E-03	9.876E-02	1.647E-01	1.265E-02	-0.029
		618.01		-4.258E-02	4.965E-02	7.341E-02	5.951E-03	-0.580
		696.49	*	-3.509E-03	5.499E-02	8.854E-02	7.231E-03	-0.040
		778.57		1.237E-01	3.616E+00	6.072E+00	4.886E-01	0.020
PR-144		696.49	*	-2.376E-01	3.724E+00	5.995E+00	4.895E-01	-0.040
		1489.15		4.784E-01	1.829E+01	3.005E+01	1.732E+00	0.016
PM-146		453.90	*	4.000E-02	6.448E-02	1.118E-01	1.014E-02	0.358
		633.02		-6.663E-01	2.146E+00	3.399E+00	1.265E+00	-0.196
		735.90		2.973E-01	2.867E-01	4.241E-01	1.207E-01	0.701
		747.13		-7.729E-02	1.465E-01	2.246E-01	3.084E-02	-0.344
ND-147	+	91.11		7.255E-01	3.067E-01	4.784E-01	4.314E-02	1.517
		319.41		-1.093E+00	4.014E+00	6.458E+00	4.685E-01	-0.169
		439.89		2.829E+00	6.965E+00	1.201E+01	7.595E-01	0.236
		531.02	*	1.573E-01	7.132E-01	1.199E+00	1.697E-01	0.131
PM-149		285.90	*	1.151E+01	7.618E+01	1.266E+02	1.901E+01	0.091
EU-152		121.78		-9.431E-04	9.099E-02	1.449E-01	1.960E-02	-0.007
		244.69		4.480E-01	4.491E-01	7.003E-01	5.520E-02	0.640
		344.27	*	-1.484E-02	1.618E-01	2.283E-01	1.712E-02	-0.065
		443.98		-1.018E+00	1.356E+00	2.177E+00	1.385E-01	-0.468
		778.89		-5.109E-02	4.197E-01	6.973E-01	5.608E-02	-0.073
		867.32		-1.268E+00	1.660E+00	2.170E+00	1.669E-01	-0.584
		964.01		3.565E-01	5.915E-01	8.804E-01	6.331E-02	0.405
		1085.78		4.789E-01	6.278E-01	1.085E+00	6.858E-02	0.441
		1112.02		3.328E-02	4.818E-01	7.684E-01	4.679E-02	0.043
		1407.95		5.373E-02	2.875E-01	4.829E-01	2.770E-02	0.111
GD-153		69.67		-6.138E-01	1.283E+00	1.878E+00	1.679E-01	-0.327
	+	83.37		2.903E+01	1.694E+01	2.307E+01	1.878E+00	1.258
		97.43	*	-2.974E-02	9.067E-02	1.319E-01	1.201E-02	-0.225
		103.18		-1.201E-01	1.173E-01	1.844E-01	1.821E-02	-0.651
EU-154		123.07		-4.918E-02	6.451E-02	9.863E-02	1.438E-02	-0.499
		247.94		5.932E-03	4.575E-01	7.379E-01	8.061E-02	0.008
		591.81		-1.897E-02	9.652E-01	1.491E+00	1.636E-01	-0.013
		723.30		-1.312E-02	3.051E-01	4.217E-01	3.838E-02	-0.031
		756.87		-2.800E-01	1.246E+00	1.964E+00	2.279E-01	-0.143
		873.19		1.748E-01	5.001E-01	8.497E-01	9.848E-02	0.206
		996.32		-3.010E-01	5.777E-01	9.003E-01	1.534E-01	-0.334

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		1.446E-01	3.489E-01	5.894E-01	6.161E-02	0.245
		1274.45	*	-2.772E-02	1.832E-01	3.006E-01	2.776E-02	-0.092
EU-155		48.70		-1.470E-02	5.483E-01	8.483E-01	6.402E-02	-0.017
		60.01		1.798E-01	2.526E+00	3.877E+00	3.711E-01	0.046
	+	86.54		4.993E-01	1.361E-01	1.760E-01	1.419E-02	2.836
		105.31	*	1.232E-01	1.198E-01	2.042E-01	2.095E-02	0.603
TB-160	+	86.79		1.317E+00	3.586E-01	4.713E-01	3.748E-02	2.795
		197.04		4.792E-01	6.822E-01	1.185E+00	9.384E-02	0.404
		215.65		5.713E-01	8.934E-01	1.499E+00	1.189E-01	0.381
		298.57		1.030E-01	1.732E-01	2.593E-01	1.947E-02	0.397
		879.36	*	-2.193E-01	2.269E-01	3.466E-01	2.644E-02	-0.633
		962.29		1.066E-01	1.076E+00	1.533E+00	1.104E-01	0.070
		966.15		5.502E-01	4.176E-01	6.542E-01	4.696E-02	0.841
		1177.93		2.634E-01	5.299E-01	8.914E-01	4.906E-02	0.296
		1271.85		-1.364E-01	1.024E+00	1.682E+00	9.462E-02	-0.081
HO-166M		80.57		-6.628E-02	3.225E-01	3.823E-01	3.172E-02	-0.173
		184.41		1.791E-01	5.324E-02	8.565E-02	6.758E-03	2.092
		280.46		-8.790E-02	1.128E-01	1.787E-01	1.372E-02	-0.492
		410.95		-2.347E-01	3.716E-01	5.712E-01	3.449E-02	-0.411
		711.68	*	-1.415E-02	1.020E-01	1.630E-01	1.329E-02	-0.087
		752.31		9.211E-02	4.551E-01	7.418E-01	6.011E-02	0.124
		810.29		-1.568E-03	9.695E-02	1.617E-01	1.284E-02	-0.010
TM-171		51.35		-3.189E+00	8.650E+00	1.396E+01	1.124E+00	-0.228
		52.39		2.031E-01	4.979E+00	8.250E+00	6.804E-01	0.025
		59.40		1.379E+01	1.296E+01	2.067E+01	1.982E+00	0.667
		66.72	*	-1.032E+01	1.956E+01	2.877E+01	2.626E+00	-0.359
LU-176	+	88.36		9.838E-01	2.678E-01	3.661E-01	2.904E-02	2.687
		201.83		-3.559E-02	3.615E-02	5.856E-02	4.640E-03	-0.608
		306.84	*	-2.670E-02	3.287E-02	5.137E-02	3.809E-03	-0.520
		401.10		-4.876E+00	9.414E+00	1.458E+01	8.658E-01	-0.335
LU-177		112.95		1.980E-01	1.731E+00	2.773E+00	3.124E-01	0.071
	+	208.36	*	2.482E+00	1.834E+00	2.109E+00	1.672E-01	1.177
LU-177M		52.97		6.662E-02	5.360E-01	8.907E-01	7.444E-02	0.075
		54.07		2.326E-01	3.021E-01	5.109E-01	4.377E-02	0.455
		61.30		2.007E-01	7.735E-01	1.195E+00	1.133E-01	0.168
		121.62		-7.837E-03	4.637E-01	7.383E-01	9.282E-02	-0.011
		147.16		-1.010E+00	8.521E-01	1.292E+00	1.299E-01	-0.781
		171.86		3.737E-01	6.113E-01	1.000E+00	7.855E-02	0.374
		218.09		3.760E-01	1.029E+00	1.758E+00	1.394E-01	0.214
		268.79		5.875E-01	1.163E+00	1.748E+00	1.357E-01	0.336
		319.02		-2.614E-01	3.447E-01	5.382E-01	3.906E-02	-0.486
		367.43		4.739E-01	1.236E+00	2.045E+00	1.311E-01	0.232
		413.65	*	-3.611E-02	2.759E-01	4.288E-01	2.601E-02	-0.084
HF-181		56.28		-5.202E-01	3.597E-01	5.780E-01	5.195E-02	-0.900
		57.53		-4.705E-02	2.051E-01	3.465E-01	3.197E-02	-0.136
		65.20		1.171E+00	6.657E-01	1.058E+00	9.759E-02	1.106
		133.02		-2.608E-02	9.353E-02	1.304E-01	1.507E-02	-0.200
		136.25		1.904E-01	5.645E-01	9.262E-01	1.040E-01	0.206
		345.85		-2.833E-01	3.199E-01	4.224E-01	2.886E-02	-0.671

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		482.03	*	1.883E-02	6.286E-02	1.068E-01	7.176E-03	0.176
W-181		56.28		-2.066E-01	1.429E-01	2.295E-01	2.063E-02	-0.900
		57.53		-1.881E-02	8.148E-02	1.376E-01	1.270E-02	-0.137
		65.20	*	4.614E-01	2.624E-01	4.171E-01	3.847E-02	1.106
TA-182		67.75		-5.824E-02	8.009E-02	1.167E-01	1.057E-02	-0.499
		100.10		1.363E-01	1.959E-01	3.229E-01	3.054E-02	0.422
		152.43		-3.369E-01	4.208E-01	6.493E-01	6.138E-02	-0.519
		222.10		2.146E-01	4.182E-01	7.177E-01	5.690E-02	0.299
		1001.68		7.539E-01	3.579E+00	5.847E+00	4.068E-01	0.129
	+	1121.28		6.044E-01	3.326E-01	4.719E-01	2.834E-02	1.281
		1189.05		-3.523E-02	4.480E-01	7.451E-01	4.113E-02	-0.047
		1221.42	*	-1.589E-01	2.922E-01	4.674E-01	2.601E-02	-0.340
		1230.97		-1.367E-02	6.710E-01	1.118E+00	6.233E-02	-0.012
RE-183		57.98		3.671E-02	8.289E-02	1.430E-01	1.332E-02	0.257
		59.32		5.435E-02	5.240E-02	8.352E-02	7.995E-03	0.651
		67.20		-7.365E-02	1.393E-01	2.050E-01	1.864E-02	-0.359
		162.32	*	2.952E-03	1.439E-01	2.260E-01	1.870E-02	0.013
	+	208.81		2.529E+00	1.868E+00	2.200E+00	1.745E-01	1.150
		291.72		-4.834E-01	1.336E+00	1.877E+00	1.423E-01	-0.257
RE-184		57.98		1.363E-01	3.078E-01	5.310E-01	4.946E-02	0.257
		59.32		2.017E-01	1.944E-01	3.099E-01	2.967E-02	0.651
		67.20		-2.734E-01	5.173E-01	7.609E-01	6.920E-02	-0.359
		161.27		-2.295E-01	4.527E-01	7.064E-01	5.937E-02	-0.325
		216.55		2.090E-01	3.171E-01	5.481E-01	4.347E-02	0.381
		252.85	*	-3.811E-02	2.996E-01	4.956E-01	3.890E-02	-0.077
		318.01		8.469E-02	5.857E-01	9.655E-01	7.020E-02	0.088
		792.07		-1.977E+00	1.821E+00	2.317E+00	1.854E-01	-0.853
		903.28		3.653E-01	1.678E+00	2.696E+00	2.021E-01	0.135
		920.93		2.973E-01	7.649E-01	1.298E+00	9.628E-02	0.229
OS-185		59.72		3.347E-02	1.478E-01	2.284E-01	2.191E-02	0.147
		61.14		-1.005E-02	8.502E-02	1.293E-01	1.227E-02	-0.078
		69.30		-1.452E-01	2.133E-01	3.285E-01	2.945E-02	-0.442
		592.07		3.305E-01	3.930E+00	6.123E+00	4.684E-01	0.054
		646.12	*	6.225E-04	6.261E-02	1.020E-01	8.213E-03	0.006
		717.42		6.131E-01	1.424E+00	2.369E+00	1.931E-01	0.259
		874.81		9.609E-01	9.472E-01	1.682E+00	1.287E-01	0.571
		880.27		-7.224E-01	1.233E+00	1.946E+00	1.484E-01	-0.371
RE-188		155.03	*	1.520E-01	2.119E-01	3.501E-01	3.204E-02	0.434
		477.96		1.787E-02	4.503E+00	7.529E+00	5.030E-01	0.002
		633.10		-1.593E+00	4.237E+00	6.717E+00	5.345E-01	-0.237
W-188	+	63.58		1.077E+02	5.656E+01	6.986E+01	6.518E+00	1.541
		227.08		1.917E+00	1.548E+01	2.610E+01	2.068E+00	0.073
		290.67	*	3.826E-01	1.031E+01	1.494E+01	1.134E+00	0.026
IR-192	+	295.96		1.128E+00	2.481E-01	3.527E-01	2.682E-02	3.200
		308.46		-4.154E-02	1.261E-01	2.029E-01	1.511E-02	-0.205
		316.51	*	2.988E-02	4.470E-02	7.577E-02	5.543E-03	0.394
		468.07		1.071E-02	1.080E-01	1.587E-01	1.171E-02	0.067
		604.41		5.394E-01	7.488E-01	1.131E+00	1.409E-01	0.477
		612.46		6.865E+00	1.550E+00	2.684E+00	2.469E-01	2.558

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195	+	65.12		3.748E-01	1.969E-01	1.990E-01	1.837E-02	1.883
		66.83		-3.167E-02	6.472E-02	9.538E-02	8.697E-03	-0.332
	+	75.70		1.221E+00	2.278E-01	3.718E-01	3.189E-02	3.284
		98.88	*	2.053E-01	2.683E-01	4.051E-01	3.765E-02	0.507
	+	129.76		5.897E+00	4.853E+00	6.256E+00	7.438E-01	0.943
TL-200		367.94	*	2.027E-04	4.853E+00	Half-Life too short		
		579.30		-1.243E-03	4.853E+00	Half-Life too short		
		828.27		1.782E-05	4.853E+00	Half-Life too short		
		1205.75		1.308E-03	4.853E+00	Half-Life too short		
TL-201		68.90		-2.388E+00	2.477E+00	3.843E+00	3.454E-01	-0.621
		70.82		9.050E-01	1.592E+00	2.429E+00	2.154E-01	0.373
		80.30		-5.371E+00	4.681E+00	5.174E+00	4.301E-01	-1.038
		135.34		1.087E+01	2.343E+01	3.864E+01	4.373E+00	0.281
		167.43	*	5.646E-01	6.496E+00	1.040E+01	8.154E-01	0.054
TL-202		68.90		-2.701E-01	2.802E-01	4.346E-01	3.906E-02	-0.621
		70.82		1.021E-01	1.795E-01	2.739E-01	2.429E-02	0.373
		80.30		-6.060E-01	5.281E-01	5.837E-01	4.852E-02	-1.038
		439.56	*	4.335E-02	8.415E-02	1.460E-01	9.224E-03	0.297
HG-203		70.83		4.671E-01	8.244E-01	1.256E+00	1.728E-01	0.372
		72.87		6.144E-02	4.970E-01	7.548E-01	1.003E-01	0.081
		82.60		-3.255E-01	1.167E+00	1.575E+00	2.123E-01	-0.207
		279.20	*	5.446E-02	5.254E-02	9.081E-02	7.230E-03	0.600
BI-207		72.80		1.594E-02	1.485E-01	2.254E-01	1.972E-02	0.071
	+	74.97		6.808E-01	1.270E-01	1.923E-01	1.658E-02	3.540
	+	84.90		3.769E-01	2.199E-01	3.129E-01	2.521E-02	1.205
		569.67		5.323E-03	4.344E-02	7.215E-02	5.392E-03	0.074
		1063.62	*	2.063E-02	8.436E-02	1.401E-01	9.114E-03	0.147
		1770.23		1.804E+00	7.695E-01	1.597E+00	9.065E-02	1.129
TL-207		81.07		-3.134E-01	2.778E-01	3.073E-01	2.541E-02	-1.020
	+	83.78		2.486E-01	1.450E-01	2.019E-01	1.639E-02	1.231
		94.90		1.052E+00	2.843E-01	4.969E-01	4.357E-02	2.117
		122.32		-1.072E+00	2.164E+00	3.364E+00	4.395E-01	-0.319
		144.24		1.320E+00	9.176E-01	1.523E+00	1.712E-01	0.866
		154.21		3.660E-01	4.914E-01	8.127E-01	8.170E-02	0.450
		269.46		3.383E-01	2.792E-01	4.357E-01	3.467E-02	0.776
		323.87	*	-7.622E-01	9.156E-01	1.411E+00	2.406E-01	-0.540
	+	338.28		7.021E+00	2.273E+00	3.149E+00	3.532E-01	2.230
		445.03		6.734E-01	3.199E+00	5.443E+00	5.771E-01	0.124
PO-209		260.50		-3.806E+00	1.277E+01	2.090E+01	1.633E+00	-0.182
		262.80		-1.720E+01	3.581E+01	5.690E+01	4.438E+00	-0.302
		896.60	*	-1.143E+00	1.206E+01	1.981E+01	1.492E+00	-0.058
PB-211		404.84	*	-8.404E-01	1.503E+00	2.174E+00	1.356E+00	-0.387
		427.08		-1.009E-01	2.981E+00	4.743E+00	2.934E+00	-0.021
		831.96		-1.309E+00	2.082E+00	3.029E+00	1.895E+00	-0.432
BI-212	+	727.18	*	1.707E+00	8.686E-01	9.816E-01	9.423E-02	1.739
		785.46		2.701E+00	2.780E+00	4.937E+00	3.962E-01	0.547
		1620.62		2.574E-02	1.543E+00	2.512E+00	1.446E-01	0.010
PO-215		81.07		-3.134E-01	2.778E-01	3.073E-01	2.541E-02	-1.020
	+	83.78		2.486E-01	1.450E-01	2.019E-01	1.639E-02	1.231

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		1.052E+00	2.843E-01	4.969E-01	4.357E-02	2.117
		122.32		-1.072E+00	2.164E+00	3.364E+00	4.395E-01	-0.319
		144.24		1.320E+00	9.176E-01	1.523E+00	1.712E-01	0.866
		154.21		3.660E-01	4.914E-01	8.127E-01	8.170E-02	0.450
		269.46		3.383E-01	2.792E-01	4.357E-01	3.467E-02	0.776
		323.87	*	-7.622E-01	9.156E-01	1.411E+00	2.406E-01	-0.540
	+	338.28		7.021E+00	2.273E+00	3.149E+00	3.532E-01	2.230
		445.03		6.734E-01	3.199E+00	5.443E+00	5.771E-01	0.124
RN-219	+	271.23		5.686E-01	5.083E-01	5.867E-01	5.629E-02	0.969
		401.81	*	-2.494E-01	5.910E-01	9.204E-01	1.258E-01	-0.271
RN-220		549.76	*	9.181E+00	3.681E+01	6.185E+01	4.522E+00	0.148
RA-223		81.07		-3.134E-01	2.778E-01	3.073E-01	2.541E-02	-1.020
	+	83.78		2.486E-01	1.450E-01	2.019E-01	1.639E-02	1.231
		94.90		1.052E+00	2.843E-01	4.969E-01	4.357E-02	2.117
		122.32		-1.072E+00	2.164E+00	3.364E+00	4.395E-01	-0.319
		144.24		1.320E+00	9.176E-01	1.523E+00	1.712E-01	0.866
		154.21		3.660E-01	4.914E-01	8.127E-01	8.170E-02	0.450
		269.46		3.383E-01	2.792E-01	4.357E-01	3.467E-02	0.776
		323.87	*	-7.622E-01	9.156E-01	1.411E+00	2.406E-01	-0.540
	+	338.28		7.021E+00	2.273E+00	3.149E+00	3.532E-01	2.230
		445.03		6.734E-01	3.199E+00	5.443E+00	5.771E-01	0.124
AC-227		79.80		-2.307E+00	1.846E+00	2.279E+00	4.875E-01	-1.012
		236.00		-1.481E-04	3.116E-01	4.590E-01	5.395E-02	0.000
		256.20	*	2.047E-01	5.186E-01	8.761E-01	1.307E-01	0.234
		286.10		3.987E-01	1.949E+00	3.247E+00	4.084E-01	0.123
		299.80		2.480E+00	2.255E+00	3.428E+00	5.814E-01	0.724
		304.40		-2.329E+00	2.591E+00	3.995E+00	7.158E-01	-0.583
		334.20		1.106E+00	3.296E+00	4.818E+00	9.038E-01	0.230
TH-227		79.80		-2.307E+00	1.848E+00	2.279E+00	4.938E-01	-1.012
	+	94.00		1.475E+01	4.697E+00	5.323E+00	1.160E+00	2.770
		236.00		-1.481E-04	3.116E-01	4.590E-01	4.834E-02	0.000
		256.20	*	2.047E-01	5.189E-01	8.761E-01	1.551E-01	0.234
		286.10		3.987E-01	1.989E+00	3.247E+00	3.256E+00	0.123
		299.80		2.480E+00	2.255E+00	3.428E+00	5.814E-01	0.724
		304.40		-2.329E+00	2.591E+00	3.995E+00	7.158E-01	-0.583
		334.20		1.106E+00	3.296E+00	4.818E+00	9.038E-01	0.230
TH-229	+	85.43		3.721E-01	2.171E-01	3.032E-01	2.434E-02	1.227
	+	88.47		5.663E-01	1.542E-01	2.099E-01	1.668E-02	2.698
		100.00		1.549E-01	2.053E-01	3.392E-01	3.204E-02	0.456
		193.63	*	-3.311E-01	6.051E-01	1.002E+00	7.929E-02	-0.330
	+	210.97		2.007E+00	1.483E+00	1.705E+00	1.352E-01	1.177
PA-231		283.67	*	-4.927E-01	1.962E+00	3.192E+00	4.678E-01	-0.154
		301.29		1.813E+00	8.716E-01	1.394E+00	1.599E-01	1.300
TH-231		81.07		-3.134E-01	2.778E-01	3.073E-01	2.541E-02	-1.020
	+	83.78		2.486E-01	1.450E-01	2.019E-01	1.639E-02	1.231
		94.90		1.052E+00	2.843E-01	4.969E-01	4.357E-02	2.117
		122.32		-1.072E+00	2.164E+00	3.364E+00	4.395E-01	-0.319
		144.24		1.320E+00	9.176E-01	1.523E+00	1.712E-01	0.866
		154.21		3.660E-01	4.914E-01	8.127E-01	8.170E-02	0.450

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		3.383E-01	2.792E-01	4.357E-01	3.467E-02	0.776
		323.87	*	-7.622E-01	9.156E-01	1.411E+00	2.406E-01	-0.540
	+	338.28		7.021E+00	2.273E+00	3.149E+00	3.532E-01	2.230
		445.03		6.734E-01	3.199E+00	5.443E+00	5.771E-01	0.124
U-231	+	84.21		8.580E+00	5.006E+00	7.131E+00	5.772E-01	1.203
	+	92.29		1.168E+01	2.895E+00	4.214E+00	3.552E-01	2.771
		95.87	*	9.179E-01	9.463E-01	1.468E+00	1.305E-01	0.625
		108.00		-3.565E-01	1.884E+00	3.073E+00	3.242E-01	-0.116
PA-233	+	75.28		1.987E+01	4.483E+00	5.714E+00	8.765E-01	3.477
	+	86.59		8.120E+00	3.023E+00	2.871E+00	7.643E-01	2.828
		300.12		7.610E-01	6.214E-01	9.542E-01	1.360E-01	0.798
		311.98	*	3.814E-03	8.842E-02	1.451E-01	1.108E-02	0.026
		340.50		3.034E+00	1.319E+00	1.841E+00	4.284E-01	1.648
		398.62		-3.174E-01	2.874E+00	4.576E+00	1.184E+00	-0.069
		415.76		1.710E+00	2.600E+00	4.282E+00	8.850E-01	0.399
PA-234	+	63.00		3.164E+00	1.712E+00	1.988E+00	3.167E-01	1.592
		94.67		1.154E+00	2.500E-01	3.904E-01	4.874E-02	2.956
		98.44		-1.656E-02	1.105E-01	1.592E-01	8.895E-02	-0.104
		99.86		4.208E-01	5.214E-01	8.630E-01	8.134E-02	0.488
		111.00		-2.445E-01	2.199E-01	3.403E-01	4.720E-02	-0.718
		131.20		1.990E-02	1.544E-01	2.208E-01	2.594E-02	0.090
		152.70		-2.964E-01	4.143E-01	6.387E-01	1.116E-01	-0.464
	+	186.00		6.657E+00	3.532E+00	3.735E+00	1.159E+00	1.782
		226.40		1.585E-02	4.867E-01	8.178E-01	1.044E-01	0.019
		227.20		1.702E-01	5.275E-01	8.970E-01	7.107E-02	0.190
		248.90		-4.308E-01	1.013E+00	1.645E+00	3.642E-01	-0.262
		293.70		3.057E+00	1.200E+00	1.811E+00	3.043E-01	1.688
		369.80		9.121E-01	1.120E+00	1.878E+00	3.941E-01	0.486
		568.70		-1.831E-01	1.414E+00	2.308E+00	1.723E-01	-0.079
		569.50		7.505E-02	3.875E-01	6.466E-01	4.832E-02	0.116
		574.00		2.998E-01	2.245E+00	3.728E+00	2.799E-01	0.080
		699.00		1.190E-02	1.222E+00	1.946E+00	3.674E-01	0.006
		706.10		1.429E+00	1.886E+00	3.022E+00	1.345E+00	0.473
		733.00		-4.242E-01	7.326E-01	9.431E-01	2.076E-01	-0.450
		742.81		-1.615E+00	2.456E+00	3.333E+00	2.238E+00	-0.485
	+	796.30		3.873E+00	2.108E+00	2.804E+00	7.531E-01	1.381
		805.60		1.498E+00	1.729E+00	2.949E+00	8.986E-01	0.508
		819.60		2.064E+00	2.009E+00	3.344E+00	1.266E+00	0.617
		826.30		-3.611E-01	1.317E+00	2.135E+00	9.522E-01	-0.169
		831.60		-6.340E-01	1.017E+00	1.588E+00	4.706E-01	-0.399
		876.40		6.292E-01	1.505E+00	2.331E+00	2.394E+00	0.270
		880.51		-2.552E-01	4.509E-01	7.130E-01	5.435E-02	-0.358
		883.24		-2.940E-02	4.718E-01	7.525E-01	5.049E-01	-0.039
		899.00		-2.356E-01	1.389E+00	2.262E+00	9.841E-01	-0.104
		925.00		-3.798E-01	1.954E+00	3.174E+00	2.348E-01	-0.120
		926.50		-1.204E-01	2.924E-01	4.643E-01	1.155E-01	-0.259
		946.00	*	6.862E-01	5.113E-01	9.001E-01	1.637E-01	0.762
		949.00		7.479E-01	7.615E-01	1.339E+00	9.744E-02	0.558
		980.50		-6.396E-01	1.101E+00	1.709E+00	1.212E-01	-0.374

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-7.374E-01	1.925E+00	2.938E+00	1.903E+00	-0.251
PA-234M		766.41		8.149E+00	2.914E+01	4.857E+01	3.721E+01	0.168
		1001.03	*	-2.921E+00	1.152E+01	1.815E+01	1.807E+00	-0.161
U-235	+	89.95		3.145E+00	1.619E+00	1.898E+00	5.831E-01	1.657
	+	93.35		4.588E+00	1.671E+00	1.745E+00	4.889E-01	2.628
		105.00		1.147E+00	1.215E+00	1.992E+00	6.039E-01	0.576
		143.76	*	2.138E-01	2.892E-01	4.692E-01	8.662E-02	0.456
		163.35		8.754E-02	6.238E-01	9.840E-01	1.857E-01	0.089
	+	185.71		2.465E-01	1.079E-01	1.383E-01	1.092E-02	1.783
		205.31		-3.318E-01	7.563E-01	1.085E+00	2.038E-01	-0.306
NP-236		94.67		8.828E-01	1.733E-01	2.968E-01	2.593E-02	2.975
		98.44		-1.260E-02	8.328E-02	1.203E-01	1.111E-02	-0.105
		111.00		-1.849E-01	1.656E-01	2.574E-01	2.827E-02	-0.718
		160.31	*	-4.944E-02	9.989E-02	1.560E-01	1.329E-02	-0.317
NP-239		99.55		2.067E-01	1.801E-01	2.901E-01	2.722E-02	0.712
		117.00	*	-1.734E-01	2.231E-01	3.512E-01	4.167E-02	-0.494
	+	209.75		2.022E+00	1.494E+00	1.764E+00	1.399E-01	1.146
		228.18		5.756E-02	2.761E-01	4.672E-01	3.701E-02	0.123
		277.60		1.625E-01	2.513E-01	4.142E-01	3.189E-02	0.392
		334.30		2.778E-01	1.888E+00	2.723E+00	1.914E-01	0.102
AM-241		59.54	*	8.441E-02	7.609E-02	1.214E-01	1.235E-02	0.695
CM-243		99.55		2.127E-01	1.853E-01	2.985E-01	2.801E-02	0.712
		103.76	*	-8.175E-02	1.081E-01	1.722E-01	1.715E-02	-0.475
		117.00		-1.784E-01	2.295E-01	3.612E-01	4.287E-02	-0.494
	+	209.75		1.993E+00	1.472E+00	1.739E+00	1.379E-01	1.146
		228.18		5.815E-02	2.790E-01	4.720E-01	3.739E-02	0.123
		277.60		1.638E-01	2.534E-01	4.175E-01	3.215E-02	0.392
CM-247		278.00		5.583E-01	1.013E+00	1.715E+00	1.320E-01	0.326
		287.40		3.696E-01	1.595E+00	2.660E+00	2.026E-01	0.139
		402.60	*	2.024E-02	5.255E-02	8.630E-02	5.139E-03	0.235
CF-249		252.85		-1.438E-01	1.130E+00	1.870E+00	1.468E-01	-0.077
		333.44		1.419E-01	2.440E-01	3.640E-01	2.563E-02	0.390
		387.95	*	4.022E-02	5.852E-02	9.789E-02	5.813E-03	0.411
CF-251		176.60	*	-7.658E-03	1.557E-01	2.468E-01	1.942E-02	-0.031
		227.00		3.432E-02	4.694E-01	7.900E-01	6.260E-02	0.043
		285.00		-4.057E-01	2.284E+00	3.733E+00	2.851E-01	-0.109

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433008      *
* Acquisition date :  7-JUL-2009 06:39:50 Detector SN#     :                *
* Detector ID        : GAM13               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.61      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433008           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 1.0851E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope      :                *
* LCS DPM          :    0.000             LCS Isotope      :                *
* LCSD DPM         :    0.000             LCSD Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.991E+01	2.755E+00	8.551E-01	0.000E+00
CD-109	4.212E+00	1.124E+00	1.174E+00	0.000E+00
SN-126	4.148E-01	1.107E-01	1.155E-01	0.000E+00
BA-137M	2.721E-01	1.048E-01	8.975E-02	0.000E+00
CS-137	2.877E-01	1.108E-01	9.487E-02	0.000E+00
TL-208	5.994E-01	1.175E-01	8.751E-02	0.000E+00
BI-210	1.337E+00	9.375E-01	9.836E-01	0.000E+00
PB-210	1.337E+00	9.375E-01	9.836E-01	0.000E+00
PO-210	1.337E+00	9.360E-01	9.836E-01	0.000E+00
BI-211	3.754E+00	6.147E-01	4.725E-01	0.000E+00
PB-212	1.895E+00	2.161E-01	1.148E-01	0.000E+00
PO-212	1.895E+00	2.161E-01	1.148E-01	0.000E+00
BI-214	1.185E+00	2.512E-01	1.622E-01	0.000E+00
PB-214	1.306E+00	2.240E-01	1.647E-01	0.000E+00
PO-214	1.306E+00	2.240E-01	1.647E-01	0.000E+00
PO-216	1.895E+00	2.161E-01	1.148E-01	0.000E+00
PO-218	1.306E+00	2.240E-01	1.647E-01	0.000E+00
RA-224	4.820E+00	1.498E+00	1.307E+00	0.000E+00
RA-226	1.185E+00	2.512E-01	1.622E-01	0.000E+00
AC-228	1.700E+00	4.106E-01	3.507E-01	0.000E+00
RA-228	1.700E+00	4.106E-01	3.507E-01	0.000E+00
TH-228	1.895E+00	2.161E-01	1.148E-01	0.000E+00
TH-230	1.185E+00	2.512E-01	1.622E-01	0.000E+00
TH-232	1.700E+00	4.106E-01	3.507E-01	0.000E+00
TH-234	2.715E+00	1.459E+00	1.185E+00	0.000E+00
U-234	1.185E+00	2.512E-01	1.622E-01	0.000E+00
NP-237	1.218E+00	4.078E-01	3.382E-01	0.000E+00
U-238	2.715E+00	1.459E+00	1.185E+00	0.000E+00
AM-243	3.793E-01	6.933E-02	7.255E-02	0.000E+00
ANH-511	2.155E-01	1.106E-01	6.301E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM	)	
BE-7	1.804E-02	4.496E-01	7.698E-01	0.000E+00	NOT IDENT.
NA-22	-1.046E-02	6.419E-02	1.068E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.178E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.154E-02	4.086E-02	7.485E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.678E-02	7.879E-02	0.000E+00	FAIL ABUN
SC-46	-4.548E-02	6.169E-02	9.784E-02	0.000E+00	FAIL ABUN
V-48	-6.045E-03	9.764E-02	1.620E-01	0.000E+00	NOT IDENT.
CR-51	-1.250E-01	4.645E-01	7.659E-01	0.000E+00	NOT IDENT.
MN-52	-1.524E-01	2.931E-01	4.572E-01	0.000E+00	NOT IDENT.
MN-54	1.208E-02	5.833E-02	1.003E-01	0.000E+00	NOT IDENT.
CO-56	7.352E-03	5.949E-02	1.016E-01	0.000E+00	NOT IDENT.
CO-57	-4.891E-03	3.049E-02	4.970E-02	0.000E+00	NOT IDENT.
CO-58	5.687E-02	6.104E-02	1.100E-01	0.000E+00	NOT IDENT.
FE-59	7.371E-02	1.338E-01	2.309E-01	0.000E+00	NOT IDENT.
CO-60	-1.310E-02	6.079E-02	9.690E-02	0.000E+00	NOT IDENT.
ZN-65	1.791E-02	1.512E-01	2.160E-01	0.000E+00	NOT IDENT.
GE-68	1.024E+00	1.874E+00	3.239E+00	0.000E+00	NOT IDENT.
AS-73	1.954E-01	2.769E-01	4.848E-01	0.000E+00	NOT IDENT.
AS-74	7.418E-02	1.263E-01	2.195E-01	0.000E+00	NOT IDENT.
SE-75	-1.386E-03	5.844E-02	9.437E-02	0.000E+00	NOT IDENT.
BR-77	1.490E+01	1.038E+01	1.867E+01	0.000E+00	FAIL ABUN
SR-82	-5.481E-01	5.962E-01	9.532E-01	0.000E+00	NOT IDENT.
RB-83	1.597E-01	1.025E-01	1.815E-01	0.000E+00	NOT IDENT.
RB-84	-8.792E-02	1.115E-01	1.706E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.319E+01	2.336E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	6.669E-02	1.181E-01	0.000E+00	NOT IDENT.
RB-86	6.149E-01	1.133E+00	1.959E+00	0.000E+00	NOT IDENT.
Y-88	2.190E-03	5.045E-02	8.530E-02	0.000E+00	NOT IDENT.
ZR-88	1.104E-02	4.213E-02	7.037E-02	0.000E+00	NOT IDENT.
Y-91	1.882E+01	2.957E+01	5.230E+01	0.000E+00	NOT IDENT.
NB-94	-1.428E-03	5.694E-02	9.362E-02	0.000E+00	NOT IDENT.
NB-95	2.271E-03	6.618E-02	1.133E-01	0.000E+00	NOT IDENT.
NB-95M	8.079E-03	1.633E-01	2.477E-01	0.000E+00	NOT IDENT.
ZR-95	-1.569E-02	1.126E-01	1.821E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.750E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.744E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-4.078E+00	1.366E+01	2.187E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.169E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.198E-02	4.105E-02	7.150E-02	0.000E+00	NOT IDENT.
RH-102	-1.880E-03	4.205E-02	7.167E-02	0.000E+00	NOT IDENT.
RU-103	-5.303E-02	5.465E-02	8.631E-02	0.000E+00	FAIL ABUN
RH-106	-6.292E-03	4.720E-01	7.860E-01	0.000E+00	FAIL ABUN
RU-106	-6.292E-03	4.720E-01	7.860E-01	0.000E+00	FAIL ABUN
AG-108M	-3.415E-02	4.297E-02	7.038E-02	0.000E+00	NOT IDENT.
AG-110M	-4.452E-02	6.342E-02	8.410E-02	0.000E+00	NOT IDENT.
IN-111	4.041E-01	1.008E+00	1.559E+00	0.000E+00	NOT IDENT.
IN-113M	8.107E-04	6.294E-02	1.036E-01	0.000E+00	NOT IDENT.
SN-113	8.107E-04	6.294E-02	1.036E-01	0.000E+00	NOT IDENT.
IN-114M	7.107E-02	2.498E-01	3.666E-01	0.000E+00	NOT IDENT.
CD-115	-2.362E+00	9.446E+00	1.571E+01	0.000E+00	NOT IDENT.
SN-117M	-2.695E-02	6.203E-02	1.001E-01	0.000E+00	NOT IDENT.
SB-122	6.388E-01	2.048E+00	3.518E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.284E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-3.696E-02	3.434E-02	5.346E-02	0.000E+00	NOT IDENT.
I-124	8.865E-01	9.028E-01	1.420E+00	0.000E+00	NOT IDENT.
SB-124	-1.241E-02	1.172E-01	1.888E-01	0.000E+00	NOT IDENT.
SB-125	9.323E-02	1.232E-01	2.211E-01	0.000E+00	FAIL ABUN
TE-125M	6.354E+00	1.021E+01	1.767E+01	0.000E+00	NOT IDENT.
I-126	3.847E-02	3.093E-01	4.475E-01	0.000E+00	NOT IDENT.
SB-126	-7.509E-02	2.426E-01	3.320E-01	0.000E+00	FAIL ABUN
SB-127	-9.702E-01	1.785E+00	2.832E+00	0.000E+00	NOT IDENT.
XE-127	-4.618E-02	5.582E-02	9.363E-02	0.000E+00	NOT IDENT.
I-131	-2.460E-03	1.375E-01	2.273E-01	0.000E+00	NOT IDENT.
TE-132	1.752E-01	6.208E-01	1.081E+00	0.000E+00	NOT IDENT.
BA-133	-2.014E-02	7.362E-02	1.074E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.863E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	9.366E-02	1.407E-01	0.000E+00	FAIL ABUN
CS-135	2.305E-03	2.192E-01	3.276E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.820E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.806E-01	1.601E-01	2.387E-01	0.000E+00	FAIL ABUN
CE-139	7.986E-03	3.746E-02	6.211E-02	0.000E+00	NOT IDENT.
BA-140	1.286E-01	3.561E-01	6.114E-01	0.000E+00	NOT IDENT.
LA-140	-4.001E-02	1.229E-01	1.940E-01	0.000E+00	NOT IDENT.
CE-141	7.297E-02	7.782E-02	1.334E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.003E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-1.575E-01	2.954E-01	4.169E-01	0.000E+00	NOT IDENT.
PM-144	-3.509E-03	5.390E-02	8.844E-02	0.000E+00	NOT IDENT.
PR-144	-2.376E-01	3.650E+00	5.989E+00	0.000E+00	NOT IDENT.
PM-146	4.000E-02	6.319E-02	1.120E-01	0.000E+00	NOT IDENT.
ND-147	1.573E-01	6.989E-01	1.200E+00	0.000E+00	FAIL ABUN
PM-149	1.151E+01	7.465E+01	1.272E+02	0.000E+00	NOT IDENT.
EU-152	-1.484E-02	1.586E-01	2.291E-01	0.000E+00	NOT IDENT.
GD-153	-2.974E-02	8.885E-02	1.335E-01	0.000E+00	FAIL ABUN
EU-154	-2.772E-02	1.796E-01	2.990E-01	0.000E+00	NOT IDENT.
EU-155	1.232E-01	1.174E-01	2.065E-01	0.000E+00	FAIL ABUN
TB-160	-2.193E-01	2.224E-01	3.457E-01	0.000E+00	FAIL ABUN
HO-166M	-1.415E-02	9.994E-02	1.628E-01	0.000E+00	NOT IDENT.
TM-171	-1.032E+01	1.917E+01	2.918E+01	0.000E+00	NOT IDENT.
LU-176	-2.670E-02	3.222E-02	5.159E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.797E+00	2.123E+00	0.000E+00	FAIL ABUN
LU-177M	-3.611E-02	2.704E-01	4.298E-01	0.000E+00	NOT IDENT.
HF-181	1.883E-02	6.160E-02	1.069E-01	0.000E+00	NOT IDENT.
W-181	0.000E+00	2.572E-01	4.231E-01	0.000E+00	NOT IDENT.
TA-182	-1.589E-01	2.863E-01	4.651E-01	0.000E+00	FAIL ABUN
RE-183	2.952E-03	1.410E-01	2.279E-01	0.000E+00	FAIL ABUN
RE-184	-3.811E-02	2.936E-01	4.983E-01	0.000E+00	NOT IDENT.
OS-185	6.225E-04	6.136E-02	1.020E-01	0.000E+00	NOT IDENT.
RE-188	1.520E-01	2.077E-01	3.532E-01	0.000E+00	NOT IDENT.
W-188	3.826E-01	1.011E+01	1.501E+01	0.000E+00	FAIL ABUN
IR-192	2.988E-02	4.381E-02	7.608E-02	0.000E+00	FAIL ABUN
AU-195	2.053E-01	2.629E-01	4.099E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.657E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	5.646E-01	6.366E+00	1.049E+01	0.000E+00	NOT IDENT.
TL-202	4.335E-02	8.247E-02	1.463E-01	0.000E+00	NOT IDENT.
HG-203	5.446E-02	5.149E-02	9.125E-02	0.000E+00	NOT IDENT.
BI-207	2.063E-02	8.267E-02	1.396E-01	0.000E+00	FAIL ABUN
TL-207	-7.622E-01	8.973E-01	1.417E+00	0.000E+00	FAIL ABUN
PO-209	-1.143E+00	1.182E+01	1.976E+01	0.000E+00	NOT IDENT.
PB-211	-8.404E-01	1.472E+00	2.179E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	8.512E-01	9.802E-01	0.000E+00	FAIL ABUN
PO-215	-7.622E-01	8.973E-01	1.417E+00	0.000E+00	FAIL ABUN
RN-219	-2.494E-01	5.792E-01	9.227E-01	0.000E+00	FAIL ABUN
RN-220	9.181E+00	3.607E+01	6.188E+01	0.000E+00	NOT IDENT.
RA-223	-7.622E-01	8.973E-01	1.417E+00	0.000E+00	FAIL ABUN
AC-227	2.047E-01	5.082E-01	8.808E-01	0.000E+00	NOT IDENT.
TH-227	2.047E-01	5.086E-01	8.808E-01	0.000E+00	FAIL ABUN
TH-229	-3.311E-01	5.930E-01	1.010E+00	0.000E+00	FAIL ABUN
PA-231	-4.927E-01	1.922E+00	3.207E+00	0.000E+00	NOT IDENT.
TH-231	-7.622E-01	8.973E-01	1.417E+00	0.000E+00	FAIL ABUN
U-231	9.179E-01	9.274E-01	1.485E+00	0.000E+00	FAIL ABUN
PA-233	3.814E-03	8.665E-02	1.457E-01	0.000E+00	FAIL ABUN
PA-234	6.862E-01	5.010E-01	8.973E-01	0.000E+00	FAIL ABUN
PA-234M	-2.921E+00	1.129E+01	1.809E+01	0.000E+00	NOT IDENT.
U-235	2.138E-01	2.834E-01	4.735E-01	0.000E+00	FAIL ABUN
NP-236	-4.944E-02	9.789E-02	1.573E-01	0.000E+00	NOT IDENT.
NP-239	-1.734E-01	2.187E-01	3.549E-01	0.000E+00	FAIL ABUN
AM-241	8.441E-02	7.457E-02	1.233E-01	0.000E+00	NOT IDENT.
CM-243	-8.175E-02	1.059E-01	1.742E-01	0.000E+00	FAIL ABUN
CM-247	2.024E-02	5.150E-02	8.651E-02	0.000E+00	NOT IDENT.
CF-249	4.022E-02	5.735E-02	9.816E-02	0.000E+00	NOT IDENT.
CF-251	-7.658E-03	1.526E-01	2.487E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:41:21.35

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433008.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:39:50.
Sample ID         : G232433008           Sample quantity  : 1.08510E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.61  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	960	10.67*	1.041E+00	2.991E+01	2.991E+01	9.40
CD-109	88.03	321	3.72*	7.242E+00	4.126E+00	4.212E+00	27.22
SN-126	64.28	220	9.60	7.391E+00	1.075E+00	1.075E+00	54.01
	86.94	321	8.90	7.242E+00	1.724E+00	1.724E+00	48.76
	87.57	321	37.00*	7.242E+00	4.148E-01	4.148E-01	27.22
BA-137M	661.65	143	89.98*	2.016E+00	2.719E-01	2.721E-01	39.29
CS-137	661.65	143	85.12*	2.016E+00	2.874E-01	2.877E-01	39.29
TL-208	277.35	------	6.80	4.225E+00	------ Line Not Found		------
	510.84	158	21.60	2.534E+00	9.975E-01	9.975E-01	53.06
	583.14	329	84.20*	2.254E+00	5.994E-01	5.994E-01	20.01
	860.37	------	12.46	1.606E+00	------ Line Not Found		------
BI-210	46.50	114	4.05*	7.302E+00	1.336E+00	1.337E+00	71.52
PB-210	46.50	114	4.05*	7.302E+00	1.336E+00	1.337E+00	71.52
PO-210	46.50	114	4.05*	7.302E+00	1.336E+00	1.337E+00	71.41
BI-211	72.87	------	1.27	7.369E+00	------ Line Not Found		------
	351.07	490	12.94*	3.493E+00	3.754E+00	3.754E+00	16.71
PB-212	74.81	532	10.70	7.356E+00	2.339E+00	2.339E+00	20.86
	77.11	864	18.00	7.340E+00	2.262E+00	2.262E+00	13.88
	87.30	321	8.00	7.242E+00	1.918E+00	1.918E+00	29.00
	238.63	1150	44.60*	4.707E+00	1.895E+00	1.895E+00	11.64
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PO-212	74.81	532	10.70	7.356E+00	2.339E+00	2.339E+00	20.86
	77.11	864	18.00	7.340E+00	2.262E+00	2.262E+00	13.88
	87.30	321	8.00	7.242E+00	1.918E+00	1.918E+00	29.00
	115.19	------	0.60	6.822E+00	------ Line Not Found		------
	238.63	1150	44.60*	4.707E+00	1.895E+00	1.895E+00	11.64
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
BI-214	609.31	344	46.30*	2.169E+00	1.185E+00	1.185E+00	21.63
	768.36	------	5.04	1.770E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	72	15.10	1.287E+00	1.289E+00	1.289E+00	55.43
	1238.11	------	5.94	1.187E+00	------ Line Not Found		------

Sample ID : G232433008 Acquisition date : 7-JUL-2009 06:39:50

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	79	15.80	8.984E-01	1.914E+00	1.914E+00	27.95
PB-214	74.81	532	6.21	7.356E+00	4.031E+00	4.031E+00	20.07
	77.11	864	10.50	7.340E+00	3.878E+00	3.878E+00	15.83
	87.30	321	4.67	7.242E+00	3.286E+00	3.286E+00	28.29
	241.98	257	7.49	4.665E+00	2.542E+00	2.542E+00	32.21
	295.21	335	19.20	4.022E+00	1.498E+00	1.498E+00	22.84
	351.92	490	37.20*	3.493E+00	1.306E+00	1.306E+00	17.50
PO-214	74.81	532	6.21	7.356E+00	4.031E+00	4.031E+00	20.07
	77.11	864	10.50	7.340E+00	3.878E+00	3.878E+00	15.83
	87.30	321	4.67	7.242E+00	3.286E+00	3.286E+00	28.29
	241.98	257	7.49	4.665E+00	2.542E+00	2.542E+00	32.21
	295.21	335	19.20	4.022E+00	1.498E+00	1.498E+00	22.84
	351.92	490	37.20*	3.493E+00	1.306E+00	1.306E+00	17.50
PO-216	74.81	532	10.70	7.356E+00	2.339E+00	2.339E+00	20.86
	77.11	864	18.00	7.340E+00	2.262E+00	2.262E+00	13.88
	87.30	321	8.00	7.242E+00	1.918E+00	1.918E+00	29.00
	238.63	1150	44.60*	4.707E+00	1.895E+00	1.895E+00	11.64
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PO-218	74.81	532	6.21	7.356E+00	4.031E+00	4.031E+00	20.07
	77.11	864	10.50	7.340E+00	3.878E+00	3.878E+00	15.83
	87.30	321	4.67	7.242E+00	3.286E+00	3.286E+00	28.29
	241.98	257	7.49	4.665E+00	2.542E+00	2.542E+00	32.21
	295.21	335	19.20	4.022E+00	1.498E+00	1.498E+00	22.84
	351.92	490	37.20*	3.493E+00	1.306E+00	1.306E+00	17.50
RA-224	240.98	257	3.95*	4.665E+00	4.820E+00	4.820E+00	31.72
RA-226	609.31	344	46.30*	2.169E+00	1.185E+00	1.185E+00	21.63
	768.36	------	5.04	1.770E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	72	15.10	1.287E+00	1.289E+00	1.289E+00	55.43
	1238.11	------	5.94	1.187E+00	------ Line Not Found		------
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	79	15.80	8.984E-01	1.914E+00	1.914E+00	27.95
AC-228	338.32	200	11.40	3.610E+00	1.681E+00	1.681E+00	50.98
	911.07	208	27.70*	1.528E+00	1.700E+00	1.700E+00	24.65
	969.11	112	16.60	1.451E+00	1.610E+00	1.610E+00	60.91
RA-228	338.32	200	11.40	3.610E+00	1.681E+00	1.681E+00	50.98
	911.07	208	27.70*	1.528E+00	1.700E+00	1.700E+00	24.65
	969.11	112	16.60	1.451E+00	1.610E+00	1.610E+00	60.91
TH-228	84.40	129	1.21	7.277E+00	5.074E+00	5.074E+00	59.18
	238.60	1150	44.60*	4.707E+00	1.895E+00	1.895E+00	11.64
	300.10	------	3.41	3.976E+00	------ Line Not Found		------
TH-230	609.31	344	46.30*	2.169E+00	1.185E+00	1.185E+00	21.63
	768.36	------	5.04	1.770E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	72	15.10	1.287E+00	1.289E+00	1.289E+00	55.43
	1238.11	------	5.94	1.187E+00	------ Line Not Found		------
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	79	15.80	8.984E-01	1.914E+00	1.914E+00	27.95

Sample ID : G232433008 Acquisition date : 7-JUL-2009 06:39:50

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-232	338.32	200	11.40	3.610E+00	1.681E+00	1.681E+00	31.16
	911.07	208	27.70*	1.528E+00	1.700E+00	1.700E+00	24.65
	969.11	112	16.60	1.451E+00	1.610E+00	1.610E+00	60.91
TH-234	63.29	220	3.80*	7.391E+00	2.715E+00	2.715E+00	54.86
	92.38	428	5.41	7.173E+00	3.816E+00	3.816E+00	29.45
U-234	609.31	344	46.30*	2.169E+00	1.185E+00	1.185E+00	21.63
	768.36	------	5.04	1.770E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	72	15.10	1.287E+00	1.289E+00	1.289E+00	55.43
	1238.11	------	5.94	1.187E+00	------ Line Not Found		------
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	79	15.80	8.984E-01	1.914E+00	1.914E+00	27.95
NP-237	86.50	321	12.60*	7.242E+00	1.218E+00	1.218E+00	34.16
	95.87	------	2.60	7.135E+00	------ Line Not Found		------
U-238	63.29	220	3.80*	7.391E+00	2.715E+00	2.715E+00	54.86
	92.38	428	5.41	7.173E+00	3.816E+00	3.816E+00	24.79
AM-243	74.67	532	66.00*	7.356E+00	3.793E-01	3.793E-01	18.65
	86.72	321	0.34	7.242E+00	4.568E+01	4.568E+01	27.22
	117.66	------	0.55	6.778E+00	------ Line Not Found		------
	142.18	------	0.13	6.323E+00	------ Line Not Found		------
ANH-511	511.00	158	100.00*	2.534E+00	2.155E-01	2.155E-01	52.40

Flag: "*" = Keyline

Sample ID : G232433008 Acquisition date : 7-JUL-2009 06:39:50

Total number of lines in spectrum 30
Number of unidentified lines 1
Number of lines tentatively identified by NID 29 96.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.991E+01	2.991E+01	0.281E+01	9.40	
CD-109	464.00D	1.02	4.126E+00	4.212E+00	1.147E+00	27.22	
SN-126	1.00E+05Y	1.00	4.148E-01	4.148E-01	1.129E-01	27.22	
BA-137M	30.17Y	1.00	2.719E-01	2.721E-01	1.069E-01	39.29	
CS-137	30.17Y	1.00	2.874E-01	2.877E-01	1.130E-01	39.29	
TL-208	1.41E+10Y	1.00	5.994E-01	5.994E-01	1.199E-01	20.01	
BI-210	22.26Y	1.00	1.336E+00	1.337E+00	0.957E+00	71.52	
PB-210	22.26Y	1.00	1.336E+00	1.337E+00	0.957E+00	71.52	
PO-210	22.26Y	1.00	1.336E+00	1.337E+00	0.955E+00	71.41	
BI-211	7.04E+08Y	1.00	3.754E+00	3.754E+00	0.627E+00	16.71	
PB-212	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.221E+00	11.64	
PO-212	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.221E+00	11.64	
BI-214	1600.00Y	1.00	1.185E+00	1.185E+00	0.256E+00	21.63	
PB-214	1600.00Y	1.00	1.306E+00	1.306E+00	0.229E+00	17.50	
PO-214	1600.00Y	1.00	1.306E+00	1.306E+00	0.229E+00	17.50	
PO-216	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.221E+00	11.64	
PO-218	1600.00Y	1.00	1.306E+00	1.306E+00	0.229E+00	17.50	
RA-224	1.41E+10Y	1.00	4.820E+00	4.820E+00	1.529E+00	31.72	
RA-226	1600.00Y	1.00	1.185E+00	1.185E+00	0.256E+00	21.63	
AC-228	1.41E+10Y	1.00	1.700E+00	1.700E+00	0.419E+00	24.65	
RA-228	1.41E+10Y	1.00	1.700E+00	1.700E+00	0.419E+00	24.65	
TH-228	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.221E+00	11.64	
TH-230	4.47E+09Y	1.00	1.185E+00	1.185E+00	0.256E+00	21.63	
TH-232	1.41E+10Y	1.00	1.700E+00	1.700E+00	0.419E+00	24.65	
TH-234	4.47E+09Y	1.00	2.715E+00	2.715E+00	1.489E+00	54.86	
U-234	4.47E+09Y	1.00	1.185E+00	1.185E+00	0.256E+00	21.63	
NP-237	2.14E+06Y	1.00	1.218E+00	1.218E+00	0.416E+00	34.16	
U-238	4.47E+09Y	1.00	2.715E+00	2.715E+00	1.489E+00	54.86	
AM-243	7380.00Y	1.00	3.793E-01	3.793E-01	0.707E-01	18.65	
ANH-511	1.00E+09Y	1.00	2.155E-01	2.155E-01	1.129E-01	52.40	
	Total Activity :		7.677E+01	7.686E+01			

Grand Total Activity : 7.677E+01 7.686E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433008 Acquisition date : 7-JUL-2009 06:39:50

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	90.26	177	414	1.17	180.29	165	29	2.46E-02	41.3	7.21E+00	T
0	129.40	86	380	1.07	258.59	255	8	1.19E-02	81.4	6.56E+00	T
0	186.38	212	422	1.18	372.59	367	11	2.95E-02	43.1	5.52E+00	T
0	209.78	97	335	1.05	419.41	415	10	1.35E-02	73.4	5.14E+00	T
0	271.43	75	274	0.98	542.73	537	11	1.04E-02	88.9	4.29E+00	T
0	464.47	76	198	1.36	928.92	921	16	1.05E-02	86.3	2.76E+00	T
0	727.88	108	116	1.77	1455.92	1449	17	1.50E-02	50.0	1.86E+00	T
0	795.61	75	60	1.68	1591.42	1585	12	1.04E-02	47.3	1.72E+00	T
0	862.35	29	113	1.14	1724.95	1718	14	4.05E-03	****	1.60E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:41:26.44

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433008.CNF;1 *
* Acquisition date  : 7-JUL-2009 06:39:50.  Detector SN#     :             *
* Detector ID       : GAM13                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.61          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433008            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 1.08510E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 2-FEB-2009 10:41:22.03MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.991E+01	2.811E+00	8.602E-01	5.259E-02	34.767
CD-109	4.212E+00	1.147E+00	1.160E+00	9.154E-02	3.631
SN-126	4.148E-01	1.129E-01	1.141E-01	9.025E-03	3.636
BA-137M	2.721E-01	1.069E-01	8.982E-02	7.326E-03	3.030
CS-137	2.877E-01	1.130E-01	9.495E-02	7.760E-03	3.030
TL-208	5.994E-01	1.199E-01	8.750E-02	7.243E-03	6.850
BI-210	1.337E+00	9.566E-01	9.676E-01	7.887E-02	1.382
PB-210	1.337E+00	9.566E-01	9.676E-01	7.887E-02	1.382
PO-210	1.337E+00	9.551E-01	9.676E-01	6.898E-02	1.382
BI-211	3.754E+00	6.272E-01	4.709E-01	3.432E-02	7.973
PB-212	1.895E+00	2.206E-01	1.141E-01	1.037E-02	16.603
PO-212	1.895E+00	2.206E-01	1.141E-01	1.037E-02	16.603
BI-214	1.185E+00	2.563E-01	1.622E-01	1.517E-02	7.304
PB-214	1.306E+00	2.286E-01	1.642E-01	1.470E-02	7.954
PO-214	1.306E+00	2.286E-01	1.642E-01	1.470E-02	7.954
PO-216	1.895E+00	2.206E-01	1.141E-01	1.037E-02	16.603
PO-218	1.306E+00	2.286E-01	1.642E-01	1.470E-02	7.954
RA-224	4.820E+00	1.529E+00	1.299E+00	1.026E-01	3.709

Sample ID : G232433008 Acquisition date : 7-JUL-2009 06:39:50

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	1.185E+00	2.563E-01	1.622E-01	1.517E-02	7.304
AC-228	1.700E+00	4.190E-01	3.517E-01	3.652E-02	4.834
RA-228	1.700E+00	4.190E-01	3.517E-01	3.652E-02	4.834
TH-228	1.895E+00	2.206E-01	1.141E-01	1.037E-02	16.605
TH-230	1.185E+00	2.563E-01	1.622E-01	1.517E-02	7.304
TH-232	1.700E+00	4.190E-01	3.517E-01	3.652E-02	4.834
TH-234	2.715E+00	1.489E+00	1.168E+00	2.143E-01	2.325
U-234	1.185E+00	2.563E-01	1.622E-01	1.517E-02	7.304
NP-237	1.218E+00	4.161E-01	3.340E-01	7.388E-02	3.647
U-238	2.715E+00	1.489E+00	1.168E+00	2.143E-01	2.325
AM-243	3.793E-01	7.075E-02	7.158E-02	6.183E-03	5.298
ANH-511	2.155E-01	1.129E-01	6.296E-02	4.393E-03	3.422

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.804E-02		4.588E-01	7.687E-01	5.780E-02	0.023
NA-22	-1.046E-02		6.550E-02	1.074E-01	6.060E-03	-0.097
NA-24	-1.125E-01		1.111E-01	Half-Life too short		
AL-26	2.154E-02		4.169E-02	7.541E-02	4.255E-03	0.286
TI-44	4.174E-01	+	5.794E-02	7.777E-02	6.550E-03	5.367
SC-46	-4.548E-02		6.295E-02	9.810E-02	7.429E-03	-0.464
V-48	-6.045E-03		9.964E-02	1.625E-01	1.150E-02	-0.037
CR-51	-1.250E-01		4.740E-01	7.628E-01	5.937E-02	-0.164
MN-52	-1.524E-01		2.991E-01	4.599E-01	2.643E-02	-0.331
MN-54	1.208E-02		5.952E-02	1.005E-01	7.885E-03	0.120
CO-56	7.352E-03		6.070E-02	1.019E-01	7.939E-03	0.072
CO-57	-4.891E-03		3.111E-02	4.919E-02	6.222E-03	-0.099
CO-58	5.687E-02		6.228E-02	1.103E-01	8.783E-03	0.516
FE-59	7.371E-02		1.365E-01	2.318E-01	1.656E-02	0.318
CO-60	-1.310E-02		6.203E-02	9.743E-02	5.542E-03	-0.134
ZN-65	1.791E-02		1.542E-01	2.169E-01	1.317E-02	0.083
GE-68	1.024E+00		1.912E+00	3.252E+00	2.079E-01	0.315
AS-73	1.954E-01		2.825E-01	4.773E-01	4.032E-02	0.409
AS-74	7.418E-02		1.289E-01	2.195E-01	1.686E-02	0.338
SE-75	-1.386E-03		5.964E-02	9.388E-02	7.354E-03	-0.015
BR-77	1.490E+01		1.059E+01	1.866E+01	1.318E+00	0.799
SR-82	-5.481E-01		6.083E-01	9.550E-01	7.686E-02	-0.574
RB-83	1.597E-01		1.046E-01	1.813E-01	1.280E-02	0.881
RB-84	-8.792E-02		1.138E-01	1.710E-01	1.303E-02	-0.514
KR-85	4.466E+01		1.346E+01	2.334E+01	1.635E+00	1.913
SR-85	2.258E-01		6.805E-02	1.180E-01	8.266E-03	1.913
RB-86	6.149E-01		1.157E+00	1.967E+00	1.258E-01	0.313
Y-88	2.190E-03		5.148E-02	8.595E-02	4.840E-03	0.025
ZR-88	1.104E-02		4.299E-02	7.019E-02	4.111E-03	0.157
Y-91	1.882E+01		3.018E+01	5.255E+01	2.913E+00	0.358
NB-94	-1.428E-03		5.810E-02	9.373E-02	7.651E-03	-0.015

Sample ID : G232433008 Acquisition date : 7-JUL-2009 06:39:50

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	2.271E-03		6.753E-02	1.135E-01	9.169E-03	0.020
NB-95M	8.079E-03		1.666E-01	2.462E-01	2.277E-02	0.033
ZR-95	-1.569E-02		1.149E-01	1.824E-01	1.645E-02	-0.086
NB-97	-3.324E-02		2.423E-02	Half-Life too short		
ZR-97	1.318E-01		3.951E-01	Half-Life too short		
MO-99	-4.078E+00		1.394E+01	2.190E+01	3.266E+00	-0.186
TC-99M	-3.592E+08		5.962E+08	Half-Life too short		
RH-101	2.198E-02		4.189E-02	7.099E-02	5.621E-03	0.310
RH-102	-1.880E-03		4.290E-02	7.157E-02	4.762E-03	-0.026
RU-103	-5.303E-02		5.576E-02	8.621E-02	1.135E-02	-0.615
RH-106	-6.292E-03		4.816E-01	7.863E-01	1.013E-01	-0.008
RU-106	-6.292E-03		4.816E-01	7.863E-01	6.192E-02	-0.008
AG-108M	-3.415E-02		4.385E-02	7.024E-02	4.725E-03	-0.486
AG-110M	-4.452E-02		6.471E-02	8.416E-02	7.070E-03	-0.529
IN-111	4.041E-01		1.029E+00	1.550E+00	1.221E-01	0.261
IN-113M	8.107E-04		6.422E-02	1.033E-01	6.436E-03	0.008
SN-113	8.107E-04		6.422E-02	1.033E-01	6.436E-03	0.008
IN-114M	7.107E-02		2.549E-01	3.639E-01	2.876E-02	0.195
CD-115	-2.362E+00		9.639E+00	1.570E+01	1.118E+00	-0.150
SN-117M	-2.695E-02		6.330E-02	9.924E-02	8.666E-03	-0.272
SB-122	6.388E-01		2.090E+00	3.517E+00	2.612E-01	0.182
I-123	-1.382E+00		6.550E-01	Half-Life too short		
TE-123M	-3.696E-02		3.504E-02	5.301E-02	4.628E-03	-0.697
I-124	8.865E-01		9.212E-01	1.420E+00	1.098E-01	0.624
SB-124	-1.241E-02		1.196E-01	1.901E-01	1.184E-02	-0.065
SB-125	9.323E-02		1.257E-01	2.206E-01	1.420E-02	0.423
TE-125M	6.354E+00		1.041E+01	1.747E+01	2.122E+00	0.364
I-126	3.847E-02		3.156E-01	4.479E-01	3.654E-02	0.086
SB-126	-7.509E-02		2.476E-01	3.325E-01	2.710E-02	-0.226
SB-127	-9.702E-01		1.822E+00	2.835E+00	3.020E-01	-0.342
XE-127	-4.618E-02		5.696E-02	9.298E-02	7.368E-03	-0.497
I-131	-2.460E-03		1.403E-01	2.266E-01	1.602E-02	-0.011
TE-132	1.752E-01		6.334E-01	1.074E+00	1.622E-01	0.163
BA-133	-2.014E-02		7.512E-02	1.071E-01	1.286E-02	-0.188
I-133	-1.780E-03		1.461E-03	Half-Life too short		
CS-134	1.990E-01	+	9.557E-02	1.410E-01	1.136E-02	1.412
CS-135	2.305E-03		2.237E-01	3.260E-01	3.011E-02	0.007
I-135	-1.882E+08		1.439E+08	Half-Life too short		
CS-136	-1.806E-01		1.634E-01	2.396E-01	1.700E-02	-0.754
CE-139	7.986E-03		3.823E-02	6.160E-02	4.829E-03	0.130
BA-140	1.286E-01		3.634E-01	6.111E-01	2.004E-01	0.210
LA-140	-4.001E-02		1.255E-01	1.953E-01	1.125E-02	-0.205
CE-141	7.297E-02		7.940E-02	1.322E-01	1.371E-02	0.552
CE-143	1.598E-04		5.119E-05	Half-Life too short		
CE-144	-1.575E-01		3.015E-01	4.129E-01	7.156E-02	-0.381
PM-144	-3.509E-03		5.499E-02	8.854E-02	7.231E-03	-0.040
PR-144	-2.376E-01		3.724E+00	5.995E+00	4.895E-01	-0.040
PM-146	4.000E-02		6.448E-02	1.118E-01	1.014E-02	0.358

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	1.573E-01		7.132E-01	1.199E+00	1.697E-01	0.131
PM-149	1.151E+01		7.618E+01	1.266E+02	1.901E+01	0.091
EU-152	-1.484E-02		1.618E-01	2.283E-01	1.712E-02	-0.065
GD-153	-2.974E-02		9.067E-02	1.319E-01	1.201E-02	-0.225
EU-154	-2.772E-02		1.832E-01	3.006E-01	2.776E-02	-0.092
EU-155	1.232E-01		1.198E-01	2.042E-01	2.095E-02	0.603
TB-160	-2.193E-01		2.269E-01	3.466E-01	2.644E-02	-0.633
HO-166M	-1.415E-02		1.020E-01	1.630E-01	1.329E-02	-0.087
TM-171	-1.032E+01		1.956E+01	2.877E+01	2.626E+00	-0.359
LU-176	-2.670E-02		3.287E-02	5.137E-02	3.809E-03	-0.520
LU-177	2.482E+00	+	1.834E+00	2.109E+00	1.672E-01	1.177
LU-177M	-3.611E-02		2.759E-01	4.288E-01	2.601E-02	-0.084
HF-181	1.883E-02		6.286E-02	1.068E-01	7.176E-03	0.176
W-181	4.614E-01		2.624E-01	4.171E-01	3.847E-02	1.106
TA-182	-1.589E-01		2.922E-01	4.674E-01	2.601E-02	-0.340
RE-183	2.952E-03		1.439E-01	2.260E-01	1.870E-02	0.013
RE-184	-3.811E-02		2.996E-01	4.956E-01	3.890E-02	-0.077
OS-185	6.225E-04		6.261E-02	1.020E-01	8.213E-03	0.006
RE-188	1.520E-01		2.119E-01	3.501E-01	3.204E-02	0.434
W-188	3.826E-01		1.031E+01	1.494E+01	1.134E+00	0.026
IR-192	2.988E-02		4.470E-02	7.577E-02	5.543E-03	0.394
AU-195	2.053E-01		2.683E-01	4.051E-01	3.765E-02	0.507
TL-200	2.027E-04		1.355E-04	Half-Life too short		
TL-201	5.646E-01		6.496E+00	1.040E+01	8.154E-01	0.054
TL-202	4.335E-02		8.415E-02	1.460E-01	9.224E-03	0.297
HG-203	5.446E-02		5.254E-02	9.081E-02	7.230E-03	0.600
BI-207	2.063E-02		8.436E-02	1.401E-01	9.114E-03	0.147
TL-207	-7.622E-01		9.156E-01	1.411E+00	2.406E-01	-0.540
PO-209	-1.143E+00		1.206E+01	1.981E+01	1.492E+00	-0.058
PB-211	-8.404E-01		1.503E+00	2.174E+00	1.356E+00	-0.387
BI-212	1.707E+00	+	8.686E-01	9.816E-01	9.423E-02	1.739
PO-215	-7.622E-01		9.156E-01	1.411E+00	2.406E-01	-0.540
RN-219	-2.494E-01		5.910E-01	9.204E-01	1.258E-01	-0.271
RN-220	9.181E+00		3.681E+01	6.185E+01	4.522E+00	0.148
RA-223	-7.622E-01		9.156E-01	1.411E+00	2.406E-01	-0.540
AC-227	2.047E-01		5.186E-01	8.761E-01	1.307E-01	0.234
TH-227	2.047E-01		5.189E-01	8.761E-01	1.551E-01	0.234
TH-229	-3.311E-01		6.051E-01	1.002E+00	7.929E-02	-0.330
PA-231	-4.927E-01		1.962E+00	3.192E+00	4.678E-01	-0.154
TH-231	-7.622E-01		9.156E-01	1.411E+00	2.406E-01	-0.540
U-231	9.179E-01		9.463E-01	1.468E+00	1.305E-01	0.625
PA-233	3.814E-03		8.842E-02	1.451E-01	1.108E-02	0.026
PA-234	6.862E-01		5.113E-01	9.001E-01	1.637E-01	0.762
PA-234M	-2.921E+00		1.152E+01	1.815E+01	1.807E+00	-0.161
U-235	2.138E-01		2.892E-01	4.692E-01	8.662E-02	0.456
NP-236	-4.944E-02		9.989E-02	1.560E-01	1.329E-02	-0.317
NP-239	-1.734E-01		2.231E-01	3.512E-01	4.167E-02	-0.494
AM-241	8.441E-02		7.609E-02	1.214E-01	1.235E-02	0.695

Sample ID : G232433008 Acquisition date : 7-JUL-2009 06:39:50

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-8.175E-02		1.081E-01	1.722E-01	1.715E-02	-0.475
CM-247	2.024E-02		5.255E-02	8.630E-02	5.139E-03	0.235
CF-249	4.022E-02		5.852E-02	9.789E-02	5.813E-03	0.411
CF-251	-7.658E-03		1.557E-01	2.468E-01	1.942E-02	-0.031

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433008           *
* Acquisition date  :  7-JUL-2009 06:39:50 Detector SN#     :               *
* Detector ID       : GAM13                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.61      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433008           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.0851E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.991E+01	2.755E+00	4.278E-01	1.406E+00
CD-109	4.212E+00	1.124E+00	5.876E-01	5.733E-01
SN-126	4.148E-01	1.107E-01	5.779E-02	5.646E-02
BA-137M	2.721E-01	1.048E-01	4.490E-02	5.346E-02
CS-137	2.877E-01	1.108E-01	4.747E-02	5.652E-02
TL-208	5.994E-01	1.175E-01	4.378E-02	5.997E-02
BI-210	1.337E+00	9.375E-01	4.921E-01	4.783E-01
PB-210	1.337E+00	9.375E-01	4.921E-01	4.783E-01
PO-210	1.337E+00	9.360E-01	4.921E-01	4.776E-01
BI-211	3.754E+00	6.147E-01	2.364E-01	3.136E-01
PB-212	1.895E+00	2.161E-01	5.744E-02	1.103E-01
PO-212	1.895E+00	2.161E-01	5.744E-02	1.103E-01
BI-214	1.185E+00	2.512E-01	8.115E-02	1.282E-01
PB-214	1.306E+00	2.240E-01	8.242E-02	1.143E-01
PO-214	1.306E+00	2.240E-01	8.242E-02	1.143E-01
PO-216	1.895E+00	2.161E-01	5.744E-02	1.103E-01
PO-218	1.306E+00	2.240E-01	8.242E-02	1.143E-01
RA-224	4.820E+00	1.498E+00	6.539E-01	7.645E-01
RA-226	1.185E+00	2.512E-01	8.115E-02	1.282E-01
AC-228	1.700E+00	4.106E-01	1.754E-01	2.095E-01
RA-228	1.700E+00	4.106E-01	1.754E-01	2.095E-01
TH-228	1.895E+00	2.161E-01	5.743E-02	1.103E-01
TH-230	1.185E+00	2.512E-01	8.114E-02	1.282E-01
TH-232	1.700E+00	4.106E-01	1.754E-01	2.095E-01
TH-234	2.715E+00	1.459E+00	5.927E-01	7.446E-01
U-234	1.185E+00	2.512E-01	8.114E-02	1.282E-01
NP-237	1.218E+00	4.078E-01	1.692E-01	2.080E-01
U-238	2.715E+00	1.459E+00	5.927E-01	7.446E-01
AM-243	3.793E-01	6.933E-02	3.630E-02	3.537E-02
ANH-511	2.155E-01	1.106E-01	3.153E-02	5.645E-02

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	1.804E-02	4.496E-01	3.851E-01	2.294E-01	NOT IDENT.
NA-22	-1.046E-02	6.419E-02	5.344E-02	3.275E-02	NOT IDENT.
NA-24	-1.125E+05	2.178E+05	0.000E+00	1.111E+05	SHORT HLIF
AL-26	2.154E-02	4.086E-02	3.745E-02	2.085E-02	NOT IDENT.
TI-44	4.174E-01	5.678E-02	3.942E-02	2.897E-02	FAIL ABUN
SC-46	-4.548E-02	6.169E-02	4.895E-02	3.147E-02	FAIL ABUN
V-48	-6.045E-03	9.764E-02	8.104E-02	4.982E-02	NOT IDENT.
CR-51	-1.250E-01	4.645E-01	3.832E-01	2.370E-01	NOT IDENT.
MN-52	-1.524E-01	2.931E-01	2.288E-01	1.495E-01	NOT IDENT.
MN-54	1.208E-02	5.833E-02	5.016E-02	2.976E-02	NOT IDENT.
CO-56	7.352E-03	5.949E-02	5.084E-02	3.035E-02	NOT IDENT.
CO-57	-4.891E-03	3.049E-02	2.486E-02	1.555E-02	NOT IDENT.
CO-58	5.687E-02	6.104E-02	5.505E-02	3.114E-02	NOT IDENT.
FE-59	7.371E-02	1.338E-01	1.155E-01	6.826E-02	NOT IDENT.
CO-60	-1.310E-02	6.079E-02	4.848E-02	3.102E-02	NOT IDENT.
ZN-65	1.791E-02	1.512E-01	1.081E-01	7.712E-02	NOT IDENT.
GE-68	1.024E+00	1.874E+00	1.621E+00	9.559E-01	NOT IDENT.
AS-73	1.954E-01	2.769E-01	2.425E-01	1.413E-01	NOT IDENT.
AS-74	7.418E-02	1.263E-01	1.098E-01	6.443E-02	NOT IDENT.
SE-75	-1.386E-03	5.844E-02	4.721E-02	2.982E-02	NOT IDENT.
BR-77	1.490E+01	1.038E+01	9.342E+00	5.295E+00	FAIL ABUN
SR-82	-5.481E-01	5.962E-01	4.769E-01	3.042E-01	NOT IDENT.
RB-83	1.597E-01	1.025E-01	9.078E-02	5.229E-02	NOT IDENT.
RB-84	-8.792E-02	1.115E-01	8.534E-02	5.691E-02	NOT IDENT.
KR-85	4.466E+01	1.319E+01	1.169E+01	6.730E+00	NOT IDENT.
SR-85	2.258E-01	6.669E-02	5.909E-02	3.403E-02	NOT IDENT.
RB-86	6.149E-01	1.133E+00	9.801E-01	5.783E-01	NOT IDENT.
Y-88	2.190E-03	5.045E-02	4.268E-02	2.574E-02	NOT IDENT.
ZR-88	1.104E-02	4.213E-02	3.521E-02	2.150E-02	NOT IDENT.
Y-91	1.882E+01	2.957E+01	2.617E+01	1.509E+01	NOT IDENT.
NB-94	-1.428E-03	5.694E-02	4.684E-02	2.905E-02	NOT IDENT.
NB-95	2.271E-03	6.618E-02	5.671E-02	3.376E-02	NOT IDENT.
NB-95M	8.079E-03	1.633E-01	1.239E-01	8.330E-02	NOT IDENT.
ZR-95	-1.569E-02	1.126E-01	9.110E-02	5.744E-02	NOT IDENT.
NB-97	-3.324E+04	4.750E+04	0.000E+00	2.423E+04	SHORT HLIF
ZR-97	1.318E+05	7.744E+05	0.000E+00	3.951E+05	SHORT HLIF
MO-99	-4.078E+00	1.366E+01	1.094E+01	6.971E+00	NOT IDENT.
TC-99M	-3.592E+14	1.169E+15	0.000E+00	5.962E+14	SHORT HLIF
RH-101	2.198E-02	4.105E-02	3.577E-02	2.094E-02	NOT IDENT.
RH-102	-1.880E-03	4.205E-02	3.585E-02	2.145E-02	NOT IDENT.
RU-103	-5.303E-02	5.465E-02	4.318E-02	2.788E-02	FAIL ABUN
RH-106	-6.292E-03	4.720E-01	3.932E-01	2.408E-01	FAIL ABUN
RU-106	-6.292E-03	4.720E-01	3.932E-01	2.408E-01	FAIL ABUN
AG-108M	-3.415E-02	4.297E-02	3.521E-02	2.193E-02	NOT IDENT.
AG-110M	-4.452E-02	6.342E-02	4.207E-02	3.236E-02	NOT IDENT.
IN-111	4.041E-01	1.008E+00	7.799E-01	5.144E-01	NOT IDENT.
IN-113M	8.107E-04	6.294E-02	5.182E-02	3.211E-02	NOT IDENT.
SN-113	8.107E-04	6.294E-02	5.182E-02	3.211E-02	NOT IDENT.
IN-114M	7.107E-02	2.498E-01	1.834E-01	1.274E-01	NOT IDENT.
CD-115	-2.362E+00	9.446E+00	7.858E+00	4.820E+00	NOT IDENT.
SN-117M	-2.695E-02	6.203E-02	5.008E-02	3.165E-02	NOT IDENT.
SB-122	6.388E-01	2.048E+00	1.760E+00	1.045E+00	NOT IDENT.
I-123	-1.382E+06	1.284E+06	0.000E+00	6.550E+05	SHORT HLIF
TE-123M	-3.696E-02	3.434E-02	2.675E-02	1.752E-02	NOT IDENT.
I-124	8.865E-01	9.028E-01	7.102E-01	4.606E-01	NOT IDENT.
SB-124	-1.241E-02	1.172E-01	9.444E-02	5.979E-02	NOT IDENT.
SB-125	9.323E-02	1.232E-01	1.106E-01	6.285E-02	FAIL ABUN
TE-125M	6.354E+00	1.021E+01	8.838E+00	5.207E+00	NOT IDENT.
I-126	3.847E-02	3.093E-01	2.239E-01	1.578E-01	NOT IDENT.
SB-126	-7.509E-02	2.426E-01	1.661E-01	1.238E-01	FAIL ABUN
SB-127	-9.702E-01	1.785E+00	1.417E+00	9.109E-01	NOT IDENT.
XE-127	-4.618E-02	5.582E-02	4.684E-02	2.848E-02	NOT IDENT.
I-131	-2.460E-03	1.375E-01	1.137E-01	7.014E-02	NOT IDENT.
TE-132	1.752E-01	6.208E-01	5.408E-01	3.167E-01	NOT IDENT.
BA-133	-2.014E-02	7.362E-02	5.375E-02	3.756E-02	NOT IDENT.
I-133	-1.780E+03	2.863E+03	0.000E+00	1.461E+03	SHORT HLIF
CS-134	1.990E-01	9.366E-02	7.038E-02	4.779E-02	FAIL ABUN
CS-135	2.305E-03	2.192E-01	1.639E-01	1.119E-01	NOT IDENT.
I-135	-1.882E+14	2.820E+14	0.000E+00	1.439E+14	SHORT HLIF
CS-136	-1.806E-01	1.601E-01	1.194E-01	8.171E-02	FAIL ABUN
CE-139	7.986E-03	3.746E-02	3.107E-02	1.911E-02	NOT IDENT.
BA-140	1.286E-01	3.561E-01	3.059E-01	1.817E-01	NOT IDENT.
LA-140	-4.001E-02	1.229E-01	9.704E-02	6.273E-02	NOT IDENT.
CE-141	7.297E-02	7.782E-02	6.675E-02	3.970E-02	NOT IDENT.
CE-143	1.598E+02	1.003E+02	0.000E+00	5.119E+01	SHORT HLIF

CE-144	-1.575E-01	2.954E-01	2.086E-01	1.507E-01	NOT IDENT.
PM-144	-3.509E-03	5.390E-02	4.424E-02	2.750E-02	NOT IDENT.
PR-144	-2.376E-01	3.650E+00	2.996E+00	1.862E+00	NOT IDENT.
PM-146	4.000E-02	6.319E-02	5.602E-02	3.224E-02	NOT IDENT.
ND-147	1.573E-01	6.989E-01	6.004E-01	3.566E-01	FAIL ABUN
PM-149	1.151E+01	7.465E+01	6.363E+01	3.809E+01	NOT IDENT.
EU-152	-1.484E-02	1.586E-01	1.146E-01	8.091E-02	NOT IDENT.
GD-153	-2.974E-02	8.885E-02	6.678E-02	4.533E-02	FAIL ABUN
EU-154	-2.772E-02	1.796E-01	1.496E-01	9.162E-02	NOT IDENT.
EU-155	1.232E-01	1.174E-01	1.033E-01	5.992E-02	FAIL ABUN
TB-160	-2.193E-01	2.224E-01	1.730E-01	1.135E-01	FAIL ABUN
HO-166M	-1.415E-02	9.994E-02	8.143E-02	5.099E-02	NOT IDENT.
TM-171	-1.032E+01	1.917E+01	1.460E+01	9.780E+00	NOT IDENT.
LU-176	-2.670E-02	3.222E-02	2.581E-02	1.644E-02	FAIL ABUN
LU-177	2.482E+00	1.797E+00	1.062E+00	9.169E-01	FAIL ABUN
LU-177M	-3.611E-02	2.704E-01	2.150E-01	1.380E-01	NOT IDENT.
HF-181	1.883E-02	6.160E-02	5.350E-02	3.143E-02	NOT IDENT.
W-181	4.614E-01	2.572E-01	2.117E-01	1.312E-01	NOT IDENT.
TA-182	-1.589E-01	2.863E-01	2.327E-01	1.461E-01	FAIL ABUN
RE-183	2.952E-03	1.410E-01	1.140E-01	7.196E-02	FAIL ABUN
RE-184	-3.811E-02	2.936E-01	2.493E-01	1.498E-01	NOT IDENT.
OS-185	6.225E-04	6.136E-02	5.102E-02	3.130E-02	NOT IDENT.
RE-188	1.520E-01	2.077E-01	1.767E-01	1.060E-01	NOT IDENT.
W-188	3.826E-01	1.011E+01	7.510E+00	5.156E+00	FAIL ABUN
IR-192	2.988E-02	4.381E-02	3.806E-02	2.235E-02	FAIL ABUN
AU-195	2.053E-01	2.629E-01	2.051E-01	1.341E-01	FAIL ABUN
TL-200	2.027E+02	2.657E+02	0.000E+00	1.355E+02	SHORT HLIF
TL-201	5.646E-01	6.366E+00	5.248E+00	3.248E+00	NOT IDENT.
TL-202	4.335E-02	8.247E-02	7.317E-02	4.207E-02	NOT IDENT.
HG-203	5.446E-02	5.149E-02	4.565E-02	2.627E-02	NOT IDENT.
BI-207	2.063E-02	8.267E-02	6.983E-02	4.218E-02	FAIL ABUN
TL-207	-7.622E-01	8.973E-01	7.087E-01	4.578E-01	FAIL ABUN
PO-209	-1.143E+00	1.182E+01	9.884E+00	6.032E+00	NOT IDENT.
PB-211	-8.404E-01	1.472E+00	1.090E+00	7.513E-01	NOT IDENT.
BI-212	1.707E+00	8.512E-01	4.904E-01	4.343E-01	FAIL ABUN
PO-215	-7.622E-01	8.973E-01	7.087E-01	4.578E-01	FAIL ABUN
RN-219	-2.494E-01	5.792E-01	4.616E-01	2.955E-01	FAIL ABUN
RN-220	9.181E+00	3.607E+01	3.096E+01	1.840E+01	NOT IDENT.
RA-223	-7.622E-01	8.973E-01	7.087E-01	4.578E-01	FAIL ABUN
AC-227	2.047E-01	5.082E-01	4.407E-01	2.593E-01	NOT IDENT.
TH-227	2.047E-01	5.086E-01	4.407E-01	2.595E-01	FAIL ABUN
TH-229	-3.311E-01	5.930E-01	5.051E-01	3.025E-01	FAIL ABUN
PA-231	-4.927E-01	1.922E+00	1.604E+00	9.808E-01	NOT IDENT.
TH-231	-7.622E-01	8.973E-01	7.087E-01	4.578E-01	FAIL ABUN
U-231	9.179E-01	9.274E-01	7.430E-01	4.731E-01	FAIL ABUN
PA-233	3.814E-03	8.665E-02	7.291E-02	4.421E-02	FAIL ABUN
PA-234	6.862E-01	5.010E-01	4.489E-01	2.556E-01	FAIL ABUN
PA-234M	-2.921E+00	1.129E+01	9.049E+00	5.759E+00	NOT IDENT.
U-235	2.138E-01	2.834E-01	2.369E-01	1.446E-01	FAIL ABUN
NP-236	-4.944E-02	9.789E-02	7.870E-02	4.995E-02	NOT IDENT.
NP-239	-1.734E-01	2.187E-01	1.775E-01	1.116E-01	FAIL ABUN
AM-241	8.441E-02	7.457E-02	6.166E-02	3.805E-02	NOT IDENT.
CM-243	-8.175E-02	1.059E-01	8.713E-02	5.405E-02	FAIL ABUN
CM-247	2.024E-02	5.150E-02	4.328E-02	2.628E-02	NOT IDENT.
CF-249	4.022E-02	5.735E-02	4.911E-02	2.926E-02	NOT IDENT.
CF-251	-7.658E-03	1.526E-01	1.244E-01	7.786E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	315.2695
46.50	315.2695
46.50	315.2695
48.70	313.2076
49.72	332.1441
51.35	351.5726
52.39	338.2798
52.97	342.4520
53.15	326.5371
53.44	326.9072
54.07	317.4671
56.28	406.2120
56.28	406.2168
57.37	0.0000
57.53	373.5286
57.53	373.5319
57.60	381.4091
57.98	359.4258
57.98	359.4258
59.32	335.5135
59.32	335.5135
59.40	335.6106
59.54	335.7802
59.72	381.7574
60.01	382.1562
61.10	387.5859
61.14	387.6410
61.30	370.7683
63.00	415.3070
63.29	415.7238
63.29	415.7238
63.58	416.1407
64.28	417.1414
65.12	448.9768
65.20	449.0983
65.20	449.0983
66.05	427.6660
66.72	436.6573
66.83	436.8214
66.91	436.9358
67.20	444.0641
67.20	444.0641
67.75	460.9978
67.85	461.1523
68.90	492.1482
68.90	492.1482
69.30	466.8495
69.67	463.8960
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70.83	435.7569
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74.97	467.5519
75.28	467.9929
75.70	468.5921
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77.11	470.5894
77.11	470.5894

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77.11	470.5894
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79.80	494.8102
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80.30	497.3929
80.57	416.6844
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81.07	498.5051
81.07	498.5051
81.07	498.5051
81.07	498.5051
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83.78	357.4947
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83.78	357.4947
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84.90	358.6196
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86.50	360.2141
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86.72	360.4306
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86.94	360.6490
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87.30	361.0046
87.30	361.0046
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87.30	361.0046
87.30	361.0046
87.57	361.2714
87.88	361.5767
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88.47	362.1566
89.95	363.6003
91.11	364.7252
92.29	365.8617
92.38	365.9487
92.38	365.9487
93.35	366.8764
94.00	367.4949
94.67	368.1269
94.67	368.1327
94.90	368.3492
94.90	368.3492
94.90	368.3492
94.90	368.3492
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95.87	292.9829
96.73	319.9219
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98.44	309.5618
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99.55	273.0517
99.86	286.6103
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100.10	285.8004
103.18	347.3277
103.76	335.9222
105.00	282.2594
105.31	282.4674
108.00	325.3009
109.28	295.1484
111.00	353.7672
111.00	353.7672

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117.00	308.4990
117.00	308.4990
117.66	302.8080
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121.78	275.5814
122.06	275.7457
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122.32	284.1644
122.32	284.1644
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131.20	317.3197
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136.25	293.4072
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144.24	255.8290
144.24	255.8290
144.24	255.8290
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152.70	309.1575
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154.21	259.4238
154.21	259.4238
154.21	259.4238
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163.89	271.6471
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171.86	245.8225
172.10	245.9174
176.55	245.4093
176.60	240.8629
181.06	289.7062
184.41	246.1512
185.71	276.7522
186.00	276.8762
190.27	246.6166
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193.63	261.9254
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198.01	244.1595
198.60	264.7343
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208.36	303.1168
208.81	291.8075

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209.75	251.8893
210.97	198.9713
215.65	206.2702
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218.09	223.8571
222.10	216.8335
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227.08	224.7141
227.20	218.2999
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228.18	219.5025
228.18	219.5025
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236.00	242.9679
236.00	242.9679
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238.63	222.4659
238.63	222.4659
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241.98	223.4028
241.98	223.4028
241.98	223.4028
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245.39	184.0038
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252.85	211.1771
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256.20	219.6653
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262.80	208.8678
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268.24	196.8190
268.79	203.1492
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269.46	195.5430
269.46	195.5430
269.46	195.5430
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277.60	206.9700
277.60	206.9700
278.00	210.5613
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279.53	196.2036
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281.68	214.3709
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284.30	187.3763
285.00	187.5212
285.90	169.9214
286.10	169.9581
286.10	169.9581
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290.80	179.5654
291.72	187.6966
293.26	0.0000
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295.21	197.5770
295.21	197.5770
295.96	197.7341

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299.80	190.9142
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300.09	184.5531
300.09	184.5531
300.10	184.5559
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303.91	212.4778
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304.40	209.5647
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319.02	178.9547
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323.87	194.2026
323.87	194.2026
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334.20	144.4740
334.30	151.1320
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338.28	161.7077
338.28	161.7077
338.28	161.7077
338.32	161.7148
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338.32	161.7148
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351.92	176.2347
351.92	176.2347
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366.43	135.7940
367.43	133.7738
367.94	0.0000
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374.96	133.5853
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388.63	148.2457
391.69	149.7225
391.69	149.7225
392.90	136.7474
398.62	133.0047
400.65	142.0346
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401.81	149.8872
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445.03	124.0701
445.03	124.0701
445.03	124.0701
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468.07	126.8254
473.00	129.3471
475.06	129.6423
475.35	124.0706
476.78	128.8680
477.59	124.2703
477.96	129.9104
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510.53	0.0000
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511.00	98.4931
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511.85	98.5503
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513.99	110.1898
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520.65	89.8265
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537.32	108.0028
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546.56	0.0000
549.76	94.1531
552.65	112.0100
555.20	102.3496
563.23	98.9087
563.90	97.9583
568.70	102.2205
569.32	98.2870
569.50	98.2991
569.67	98.3087
573.80	108.5130
574.00	108.5263
574.64	110.5610
578.91	116.5072
579.30	0.0000
583.14	106.7943
585.48	93.5749
591.81	99.3817
592.07	99.3961
593.00	98.6962
595.88	94.8308
600.56	99.1389
602.52	0.0000
602.71	99.6009
602.71	99.6009
603.60	111.4771
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604.70	98.0260
609.31	102.6965
609.31	102.6965
609.31	102.6965

609.31	102.6965
610.33	102.7581
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614.37	95.1790
618.01	113.5444
621.84	99.3421
621.84	99.3421
631.29	102.9639
633.02	103.0640
633.10	103.0688
634.78	124.8315
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636.97	86.7665
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646.12	89.2838
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657.75	116.6720
657.90	0.0000
661.65	102.6105
661.65	102.6105
664.57	0.0000
666.33	110.2167
666.33	110.2167
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685.20	120.8689
692.80	109.6412
695.00	119.3555
696.49	107.7169
696.49	107.7169
697.00	97.0785
697.49	94.9688
698.33	97.1452
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702.63	125.1780
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717.42	91.6282
720.50	102.5657
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722.20	86.4453
722.78	91.8751
722.78	91.8751
722.89	93.6808
722.95	93.6851
723.30	93.6999
724.18	95.5449
727.18	83.4104
733.00	110.4508
735.90	77.9707
739.58	104.6320
742.81	102.6151
744.21	88.4850
747.13	97.3611
751.79	101.9685
752.31	95.4133
753.82	75.7282
755.35	74.6854
756.15	97.7892
756.87	95.6235
763.93	113.9618
765.79	114.9826
766.41	117.7786
766.84	115.0411
768.36	113.2830
768.36	113.2830
768.36	113.2830
768.36	113.2830
776.49	117.4166
778.00	108.2474
778.57	93.4690
778.89	96.2601
783.80	98.3377

785.46	83.5583
792.07	113.3519
795.84	99.1563
796.30	95.9766
801.93	94.6218
805.60	87.1497
810.29	93.9107
810.76	77.0235
815.85	84.7321
817.79	100.8263
818.51	82.0068
819.60	61.2985
826.30	88.9148
828.27	0.0000
831.60	100.5007
831.96	99.5697
834.83	93.9988
836.80	0.0000
846.75	80.1753
848.13	66.8540
856.28	0.0000
856.80	60.8064
860.37	82.2963
867.32	104.0032
867.82	108.9810
871.10	88.3887
873.19	83.0256
874.81	69.5581
875.33	0.0000
876.40	76.3721
879.36	96.7957
880.27	87.1490
880.51	87.1582
881.50	89.1306
883.24	76.5923
884.67	60.1470
889.25	90.3946
896.60	82.8729
898.02	85.8480
899.00	87.8339
903.28	80.9503
911.07	85.7512
911.07	85.7512
911.07	85.7512
919.63	80.3134
920.93	81.7352
925.00	84.8295
925.24	90.7572
926.50	87.8411
934.06	73.2593
934.06	73.2593
934.06	73.2593
934.06	73.2593
935.52	63.3971
937.48	77.3256
944.10	73.5544
946.00	63.6615
949.00	74.6933
962.29	116.7019
964.01	109.9107
966.15	108.2834
968.20	95.3247
969.11	95.3595
969.11	95.3595
969.11	95.3595
977.42	63.4422
980.50	71.5821
983.50	64.6003
989.30	59.6854
996.32	79.1172
1001.03	73.1602
1001.68	69.1137
1004.76	74.2817
1021.30	0.0000
1024.50	0.0000
1034.80	70.9990
1037.82	95.8003
1038.57	88.6140

1038.76	0.0000
1045.16	81.5973
1046.59	88.8730
1048.07	87.8880
1050.47	70.3713
1050.47	70.3713
1063.62	70.7033
1076.63	60.5866
1077.35	60.6007
1085.78	60.7825
1099.22	61.0680
1112.02	65.7620
1112.84	68.5494
1115.52	68.9757
1120.29	74.5442
1120.29	74.5442
1120.29	74.5442
1120.29	74.5442
1120.51	74.5499
1121.28	79.5715
1124.00	0.0000
1129.67	85.1172
1131.51	0.0000
1147.95	0.0000
1167.94	60.3499
1173.22	77.7275
1175.09	68.0526
1177.93	62.7106
1189.05	74.4085
1204.90	85.0745
1205.75	0.0000
1213.00	95.6037
1221.42	89.2812
1230.97	77.2983
1235.34	84.0118
1236.41	0.0000
1238.11	73.6908
1238.11	73.6908
1238.11	73.6908
1238.11	73.6908
1238.25	75.5859
1246.25	68.1956
1260.41	0.0000
1271.85	58.2342
1274.45	62.1027
1274.54	62.1050
1291.56	64.3478
1298.22	0.0000
1312.09	59.9111
1325.50	54.3281
1325.50	54.3281
1332.49	46.6641
1333.61	49.5966
1360.21	33.3205
1362.66	0.0000
1365.15	33.3680
1368.21	34.3787
1368.53	0.0000
1376.25	29.5354
1377.67	30.5329
1377.67	30.5329
1377.67	30.5329
1377.67	30.5329
1384.27	60.1937
1394.10	44.5276
1395.20	50.4806
1407.95	40.7283
1434.06	38.0212
1436.60	38.0477
1457.56	0.0000
1460.81	35.2759
1489.15	30.4667
1509.49	41.8623
1596.49	33.4074
1620.62	16.8036
1678.03	0.0000
1691.02	22.4326
1691.02	22.4326

1706.46	0.0000
1750.46	0.0000
1764.49	21.8685
1764.49	21.8685
1764.49	21.8685
1764.49	21.8685
1770.23	5.0775
1771.40	10.1579
1791.20	0.0000
1808.65	11.5236
1836.01	17.3903

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433008

Total Uranium Activity	8.1747E+00	ug/g
Total Uranium Counting Unc.	4.3438E+00	ug/g
Total Uranium Tpu	2.2162E-06	ug/g
Total Uranium Mda	1.7668E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID   : G232433008      *
*   ANALYST       : MXR1                      DETECTOR    : GAM13           *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME  :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:39:50.51    SAMPLE ALQT:  108.510 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.008E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.633E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.498E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.697E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:40:53.33

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433009.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:40:18.
Sample ID         : G232433009           Sample quantity  : 5.86600E+01 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 03:00:00.00         Elapsed real time: 0 03:00:01.34  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.67*	12	384	1.02	93.11	90	9	1.13E-03	306.2	
2	0	63.38*	328	487	1.17	126.49	122	10	3.03E-02	14.3	
3	2	74.92*	435	472	1.58	149.55	144	15	4.03E-02	11.0	1.48E+00
4	2	77.16	585	424	1.36	154.03	144	15	5.41E-02	7.8	
5	1	84.27*	135	441	1.43	168.22	164	30	1.25E-02	29.0	5.49E+00
6	1	87.29*	237	413	1.46	174.27	164	30	2.20E-02	17.1	
7	1	92.67*	689	346	1.47	185.02	164	30	6.38E-02	7.0	
8	0	185.67*	254	250	1.47	370.85	366	9	2.35E-02	13.7	
9	3	238.45*	889	187	1.26	476.32	471	16	8.24E-02	4.6	1.46E+00
10	3	241.30	253	184	1.98	482.01	471	16	2.34E-02	15.0	
11	0	294.97	284	190	1.60	589.28	583	11	2.63E-02	11.1	
12	0	299.85	63	151	1.36	599.03	595	10	5.87E-03	38.5	
13	0	337.84	158	189	1.02	674.97	670	12	1.46E-02	19.0	
14	0	351.58*	455	168	1.61	702.42	697	14	4.21E-02	7.9	
15	0	463.93	62	161	2.74	927.00	915	16	5.75E-03	47.3	
16	0	510.80*	76	176	2.15	1020.69	1014	18	7.05E-03	50.6	
17	0	567.85*	110	81	1.17	1134.75	1128	12	1.02E-02	20.3	
18	0	583.07*	311	95	1.77	1165.18	1160	15	2.88E-02	9.0	
19	0	608.95*	337	88	1.64	1216.92	1210	15	3.12E-02	8.4	
20	0	661.30	203	103	1.69	1321.58	1316	14	1.88E-02	12.5	
21	0	727.15	65	52	1.24	1453.26	1449	9	5.98E-03	23.2	
22	0	794.66	43	38	1.53	1588.25	1583	9	3.96E-03	30.2	
23	0	860.60	31	59	1.54	1720.14	1715	12	2.91E-03	51.5	
24	0	911.21*	193	63	2.26	1821.36	1814	19	1.78E-02	12.6	
25	0	969.63*	84	86	1.75	1938.20	1932	16	7.76E-03	28.6	
26	0	1120.90*	80	54	1.11	2240.79	2231	19	7.43E-03	26.0	
27	0	1378.01	30	23	1.54	2755.24	2750	14	2.80E-03	37.2	
28	0	1408.08	31	10	1.17	2815.43	2811	13	2.83E-03	27.9	
29	0	1460.70*	745	49	2.24	2920.73	2912	21	6.90E-02	4.4	
30	0	1729.42	16	8	0.63	3458.63	3454	8	1.48E-03	39.5	
31	0	1763.81	73	9	2.88	3527.49	3518	17	6.71E-03	14.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 09:40:56

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433009.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:40:18
Sample ID : G232433009 Sample quantity : 58.660 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA14 Detector geometry: CAN
Elapsed live time: 0 03:00:00.00 Elapsed real time: 0 03:00:01.34 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.459E+01	2.819E+00	7.007E-01	5.088E-02	35.100
CD-109	+	88.03	*	3.941E+00	1.392E+00	1.548E+00	1.354E-01	2.546
SN-126	+	64.28		3.137E+00	1.000E+00	9.016E-01	1.285E-01	3.479
	+	86.94		1.614E+00	8.666E-01	6.390E-01	2.643E-01	2.525
	+	87.57	*	3.882E-01	1.371E-01	1.530E-01	1.331E-02	2.537
BA-137M	+	661.65	*	3.909E-01	1.006E-01	8.102E-02	4.817E-03	4.825
CS-137	+	661.65	*	4.132E-01	1.064E-01	8.564E-02	5.113E-03	4.825
TL-208		277.35		5.942E-01	4.950E-01	8.712E-01	9.213E-02	0.682
	+	510.84		4.867E-01	4.947E-01	2.904E-01	2.961E-02	1.676
	+	583.14	*	5.718E-01	1.106E-01	7.350E-02	5.027E-03	7.779
	+	860.37		5.528E-01	5.714E-01	5.358E-01	5.041E-02	1.032
BI-210	+	46.50	*	6.926E-01	4.242E+00	5.005E+00	3.711E-01	0.138
PB-210	+	46.50	*	6.926E-01	4.242E+00	5.005E+00	3.711E-01	0.138
PO-210	+	46.50	*	6.926E-01	4.242E+00	5.005E+00	3.140E-01	0.138
BI-211		72.87		1.173E+01	4.299E+00	6.691E+00	4.931E-01	1.753
	+	351.07	*	3.587E+00	6.099E-01	4.444E-01	2.816E-02	8.072
PB-212	+	74.81		2.846E+00	7.127E-01	6.433E-01	7.714E-02	4.425
	+	77.11		2.197E+00	3.822E-01	3.693E-01	2.844E-02	5.948
	+	87.30		1.795E+00	6.591E-01	7.089E-01	9.384E-02	2.532
	+	238.63	*	1.527E+00	1.799E-01	1.163E-01	8.468E-03	13.138
	+	300.09		1.679E+00	1.301E+00	1.573E+00	1.301E-01	1.067
PO-212	+	74.81		2.846E+00	7.127E-01	6.433E-01	7.714E-02	4.425
	+	77.11		2.197E+00	3.822E-01	3.693E-01	2.844E-02	5.948
	+	87.30		1.795E+00	6.591E-01	7.089E-01	9.384E-02	2.532
		115.19		-8.127E-01	4.730E+00	7.680E+00	5.589E-01	-0.106
	+	238.63	*	1.527E+00	1.799E-01	1.163E-01	8.468E-03	13.138
	+	300.09		1.679E+00	1.301E+00	1.573E+00	1.301E-01	1.067
BI-214	+	609.31	*	1.170E+00	2.181E-01	1.506E-01	1.192E-02	7.770
		768.36		7.528E-01	1.048E+00	1.779E+00	1.690E-01	0.423
		934.06		3.176E-01	1.443E+00	2.458E+00	2.699E-01	0.129
	+	1120.29		1.488E+00	7.865E-01	6.034E-01	5.590E-02	2.467
		1238.11		1.816E+00	1.254E+00	2.279E+00	1.914E-01	0.797
	+	1377.67		2.470E+00	1.853E+00	1.747E+00	1.659E-01	1.414
	+	1764.49		1.848E+00	5.629E-01	4.552E-01	2.730E-02	4.061

Sample ID : G232433009 Acquisition date : 7-JUL-2009 06:40:18

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-214	+	74.81		4.905E+00	1.196E+00	1.108E+00	1.170E-01	4.425
	+	77.11		3.766E+00	7.153E-01	6.331E-01	6.858E-02	5.948
	+	87.30		3.075E+00	1.112E+00	1.214E+00	1.409E-01	2.532
	+	241.98		2.606E+00	8.074E-01	6.641E-01	5.335E-02	3.924
	+	295.21		1.319E+00	3.144E-01	2.664E-01	2.277E-02	4.953
	+	351.92	*	1.248E+00	2.219E-01	1.549E-01	1.271E-02	8.055
PO-214	+	74.81		4.905E+00	1.196E+00	1.108E+00	1.170E-01	4.425
	+	77.11		3.766E+00	7.153E-01	6.331E-01	6.858E-02	5.948
	+	87.30		3.075E+00	1.112E+00	1.214E+00	1.409E-01	2.532
	+	241.98		2.606E+00	8.074E-01	6.641E-01	5.335E-02	3.924
	+	295.21		1.319E+00	3.144E-01	2.664E-01	2.277E-02	4.953
	+	351.92	*	1.248E+00	2.219E-01	1.549E-01	1.271E-02	8.055
PO-216	+	74.81		2.846E+00	7.127E-01	6.433E-01	7.714E-02	4.425
	+	77.11		2.197E+00	3.822E-01	3.693E-01	2.844E-02	5.948
	+	87.30		1.795E+00	6.591E-01	7.089E-01	9.384E-02	2.532
	+	238.63	*	1.527E+00	1.799E-01	1.163E-01	8.468E-03	13.138
	+	300.09		1.679E+00	1.301E+00	1.573E+00	1.301E-01	1.067
PO-218	+	74.81		4.905E+00	1.196E+00	1.108E+00	1.170E-01	4.425
	+	77.11		3.766E+00	7.153E-01	6.331E-01	6.858E-02	5.948
	+	87.30		3.075E+00	1.112E+00	1.214E+00	1.409E-01	2.532
	+	241.98		2.606E+00	8.074E-01	6.641E-01	5.335E-02	3.924
	+	295.21		1.319E+00	3.144E-01	2.664E-01	2.277E-02	4.953
	+	351.92	*	1.248E+00	2.219E-01	1.549E-01	1.271E-02	8.055
RA-224	+	240.98	*	4.942E+00	1.506E+00	1.322E+00	7.602E-02	3.737
RA-226	+	609.31	*	1.170E+00	2.181E-01	1.506E-01	1.192E-02	7.770
		768.36		7.528E-01	1.048E+00	1.779E+00	1.690E-01	0.423
		934.06		3.176E-01	1.443E+00	2.458E+00	2.699E-01	0.129
	+	1120.29		1.488E+00	7.865E-01	6.034E-01	5.590E-02	2.467
		1238.11		1.816E+00	1.254E+00	2.279E+00	1.914E-01	0.797
	+	1377.67		2.470E+00	1.853E+00	1.747E+00	1.659E-01	1.414
	+	1764.49		1.848E+00	5.629E-01	4.552E-01	2.730E-02	4.061
AC-228	+	338.32		1.372E+00	7.651E-01	4.745E-01	1.934E-01	2.891
	+	911.07	*	1.609E+00	4.478E-01	2.630E-01	3.089E-02	6.116
	+	969.11		1.237E+00	7.640E-01	7.579E-01	1.770E-01	1.633
RA-228	+	338.32		1.372E+00	7.651E-01	4.745E-01	1.934E-01	2.891
	+	911.07	*	1.609E+00	4.478E-01	2.630E-01	3.089E-02	6.116
	+	969.11		1.237E+00	7.640E-01	7.579E-01	1.770E-01	1.633
TH-228	+	84.40		6.926E+00	4.117E+00	4.799E+00	6.229E-01	1.443
	+	238.60	*	1.527E+00	1.799E-01	1.162E-01	8.467E-03	13.139
	+	300.10		1.679E+00	1.628E+00	1.573E+00	9.271E-01	1.067
TH-230	+	609.31	*	1.170E+00	2.181E-01	1.506E-01	1.192E-02	7.770
		768.36		7.528E-01	1.048E+00	1.779E+00	1.690E-01	0.423
		934.06		3.176E-01	1.443E+00	2.458E+00	2.699E-01	0.129
	+	1120.29		1.488E+00	7.865E-01	6.034E-01	5.590E-02	2.467
		1238.11		1.816E+00	1.254E+00	2.279E+00	1.914E-01	0.797
	+	1377.67		2.470E+00	1.853E+00	1.746E+00	1.659E-01	1.414
	+	1764.49		1.848E+00	5.629E-01	4.552E-01	2.730E-02	4.061
TH-232	+	338.32		1.372E+00	5.282E-01	4.745E-01	2.726E-02	2.891
	+	911.07	*	1.609E+00	4.478E-01	2.630E-01	3.089E-02	6.116

Sample ID : G232433009 Acquisition date : 7-JUL-2009 06:40:18

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	969.11		1.237E+00	7.640E-01	7.579E-01	1.770E-01	1.633
TH-234	+	63.29	*	7.924E+00	2.640E+00	2.356E+00	4.050E-01	3.363
	+	92.38		7.428E+00	1.687E+00	1.016E+00	1.825E-01	7.312
U-234	+	609.31	*	1.170E+00	2.181E-01	1.506E-01	1.192E-02	7.770
		768.36		7.528E-01	1.048E+00	1.779E+00	1.690E-01	0.423
		934.06		3.176E-01	1.443E+00	2.458E+00	2.699E-01	0.129
	+	1120.29		1.488E+00	7.865E-01	6.034E-01	5.590E-02	2.467
		1238.11		1.816E+00	1.254E+00	2.279E+00	1.914E-01	0.797
	+	1377.67		2.470E+00	1.853E+00	1.746E+00	1.659E-01	1.414
	+	1764.49		1.848E+00	5.629E-01	4.552E-01	2.730E-02	4.061
NP-237	+	86.50	*	1.140E+00	4.663E-01	4.529E-01	1.012E-01	2.517
		95.87		3.889E-01	1.377E+00	2.008E+00	4.913E-01	0.194
U-238	+	63.29	*	7.924E+00	2.640E+00	2.356E+00	4.050E-01	3.363
	+	92.38		7.428E+00	1.205E+00	1.016E+00	8.499E-02	7.312
AM-243	+	74.67	*	4.615E-01	1.072E-01	1.045E-01	7.844E-03	4.415
	+	86.72		4.274E+01	1.510E+01	1.695E+01	1.460E+00	2.521
		117.66		-1.782E+00	4.850E+00	7.800E+00	5.623E-01	-0.228
		142.18		2.775E+01	2.288E+01	3.895E+01	2.449E+00	0.712
ANH-511	+	511.00	*	1.051E-01	1.065E-01	6.275E-02	3.687E-03	1.675

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.245E-01	4.332E-01	6.873E-01	4.632E-02	-0.327
NA-22		1274.54	*	-1.124E-02	5.292E-02	8.454E-02	5.523E-03	-0.133
NA-24		1368.53	*	1.378E-01	5.292E-02	Half-Life too short		
AL-26		1129.67		1.395E+00	2.375E+00	3.788E+00	2.392E-01	0.368
		1808.65	*	1.398E-02	3.818E-02	6.826E-02	3.957E-03	0.205
TI-44		67.85		2.939E-02	5.720E-02	8.515E-02	5.993E-03	0.345
	+	78.38	*	4.053E-01	7.053E-02	9.818E-02	7.666E-03	4.129
SC-46		889.25	*	2.712E-02	5.186E-02	9.071E-02	8.382E-03	0.299
	+	1120.51		2.520E-01	1.321E-01	1.586E-01	1.027E-02	1.590
V-48		944.10		2.687E-01	1.214E+00	2.063E+00	1.843E-01	0.130
		983.50	*	4.845E-02	8.804E-02	1.541E-01	1.308E-02	0.314
		1312.09		-1.809E-02	9.371E-02	1.495E-01	1.033E-02	-0.121
CR-51		320.08	*	1.947E-02	4.711E-01	7.902E-01	5.106E-02	0.025
MN-52		744.21		1.642E-01	2.641E-01	4.506E-01	3.180E-02	0.364
		848.13		-2.921E+00	7.453E+00	1.204E+01	1.035E+00	-0.243
		935.52		5.364E-03	2.854E-01	4.770E-01	4.305E-02	0.011
		1246.25		-4.918E+00	8.794E+00	1.367E+01	8.515E-01	-0.360
		1333.61		-1.147E+00	5.948E+00	9.498E+00	6.768E-01	-0.121
		1434.06	*	-1.555E-01	2.873E-01	4.310E-01	3.021E-02	-0.361
MN-54		834.83	*	-1.430E-02	5.176E-02	8.495E-02	7.125E-03	-0.168
CO-56		846.75	*	-4.559E-02	5.115E-02	7.848E-02	6.727E-03	-0.581
		977.42		8.340E-01	4.453E+00	6.554E+00	5.613E-01	0.127
		1037.82		-8.512E-02	4.080E-01	6.629E-01	5.492E-02	-0.128
		1175.09		1.678E+00	3.095E+00	5.349E+00	2.956E-01	0.314
		1238.25		1.971E-01	1.240E-01	2.282E-01	1.482E-02	0.864

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1360.21		1.056E+00	1.307E+00	2.357E+00	1.674E-01	0.448
		1771.40		-6.533E-01	4.039E-01	5.001E-01	2.985E-02	-1.306
CO-57		122.06	*	1.625E-03	3.069E-02	5.022E-02	3.573E-03	0.032
		136.48		-3.677E-01	2.682E-01	4.076E-01	2.992E-02	-0.902
CO-58		810.76	*	-3.205E-02	5.095E-02	7.622E-02	6.133E-03	-0.421
FE-59		142.65		8.146E-01	3.760E+00	5.811E+00	3.644E-01	0.140
		192.34		-2.746E-01	1.215E+00	1.935E+00	2.259E-01	-0.142
		1099.22	*	-2.764E-03	1.170E-01	1.932E-01	1.487E-02	-0.014
		1291.56		9.813E-02	1.695E-01	2.945E-01	2.397E-02	0.333
CO-60		1173.22		3.789E-03	6.466E-02	1.071E-01	5.901E-03	0.035
		1332.49	*	1.368E-02	5.411E-02	9.125E-02	6.503E-03	0.150
ZN-65		1115.52	*	-5.320E-02	1.326E-01	1.770E-01	1.164E-02	-0.300
GE-68		1077.35	*	1.725E+00	1.591E+00	2.909E+00	2.091E-01	0.593
AS-73		53.44	*	8.458E-03	8.080E-01	1.344E+00	8.763E-02	0.006
AS-74		595.88	*	9.332E-02	1.148E-01	1.990E-01	1.190E-02	0.469
		634.78		-8.371E-03	5.055E-01	8.208E-01	4.903E-02	-0.010
SE-75		66.05		3.468E+00	5.904E+00	8.816E+00	8.017E-01	0.393
		96.73		4.912E-01	1.077E+00	1.586E+00	2.106E-01	0.310
		121.11		4.477E-04	1.663E-01	2.717E-01	2.749E-02	0.002
		136.00		-5.751E-02	5.033E-02	7.755E-02	5.122E-03	-0.742
		198.60		-1.357E+00	2.262E+00	3.529E+00	2.443E-01	-0.384
		264.65	*	-8.503E-02	5.384E-02	8.277E-02	4.860E-03	-1.027
		279.53		2.982E-02	1.423E-01	2.417E-01	1.522E-02	0.123
		303.91		-8.606E-01	3.064E+00	4.375E+00	4.182E-01	-0.197
		400.65		1.004E-01	3.462E-01	5.842E-01	5.203E-02	0.172
BR-77	+	87.88		5.809E+02	2.052E+02	2.982E+02	2.605E+01	1.948
		200.40		1.820E+00	1.445E+02	2.325E+02	1.293E+01	0.008
	+	239.00		1.670E+02	1.819E+01	3.135E+01	1.800E+00	5.327
		249.79		-2.167E+01	5.939E+01	9.280E+01	5.360E+00	-0.234
		281.68		-4.015E+01	7.919E+01	1.297E+02	7.565E+00	-0.310
		297.23		2.047E+02	7.588E+01	9.931E+01	5.793E+00	2.061
		303.76		-2.269E+01	1.779E+02	2.571E+02	1.498E+01	-0.088
		439.47		1.302E+01	1.306E+02	2.174E+02	1.229E+01	0.060
		484.57		-4.167E+01	2.142E+02	3.478E+02	2.020E+01	-0.120
		520.65	*	-4.245E+00	1.015E+01	1.510E+01	8.902E-01	-0.281
		574.64		-5.386E+00	1.922E+02	2.950E+02	1.761E+01	-0.018
		578.91		-4.635E+01	8.838E+01	1.170E+02	6.990E+00	-0.396
		585.48		9.685E+02	2.173E+02	4.017E+02	2.401E+01	2.411
		755.35		3.829E+01	1.542E+02	2.541E+02	1.833E+01	0.151
		817.79		-5.858E+00	1.218E+02	1.946E+02	1.582E+01	-0.030
SR-82		698.33		-1.093E+00	4.697E+01	7.587E+01	4.876E+00	-0.014
		776.49	*	-8.133E-02	5.367E-01	8.521E-01	6.406E-02	-0.095
		1395.20		-3.697E+00	1.418E+01	2.226E+01	1.573E+00	-0.166
RB-83		520.41	*	-3.750E-02	9.771E-02	1.459E-01	8.601E-03	-0.257
		529.64		-5.045E-02	1.439E-01	2.297E-01	1.358E-02	-0.220
		552.65		1.522E-01	2.572E-01	4.401E-01	2.618E-02	0.346
RB-84		881.50	*	-1.818E-02	9.109E-02	1.496E-01	1.364E-02	-0.121
KR-85		513.99	*	1.978E+01	1.116E+01	1.829E+01	1.076E+00	1.081
SR-85		513.99	*	1.000E-01	5.642E-02	9.250E-02	5.441E-03	1.081

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86		1076.63	*	8.488E-01	9.307E-01	1.682E+00	1.211E-01	0.505
Y-88		898.02		5.658E-02	5.624E-02	1.017E-01	9.581E-03	0.556
		1836.01	*	5.917E-03	5.181E-02	8.799E-02	4.997E-03	0.067
ZR-88		392.90	*	-2.789E-02	4.028E-02	6.394E-02	3.482E-03	-0.436
Y-91		1204.90	*	1.234E+00	2.576E+01	4.257E+01	2.477E+00	0.029
NB-94		702.63	*	4.855E-03	4.755E-02	7.755E-02	5.030E-03	0.063
		871.10		-1.413E-02	4.691E-02	7.643E-02	6.842E-03	-0.185
NB-95		765.79	*	8.461E-02	5.939E-02	1.060E-01	7.804E-03	0.798
NB-95M		235.69	*	5.552E-01	2.071E-01	3.273E-01	2.447E-02	1.696
ZR-95		724.18		1.501E-01	1.497E-01	2.314E-01	1.783E-02	0.649
		756.15	*	4.602E-02	9.833E-02	1.649E-01	1.360E-02	0.279
NB-97		657.90	*	5.444E-02	9.833E-02	Half-Life too short		
		1024.50		-2.205E-01	9.833E-02	Half-Life too short		
ZR-97		254.15		1.527E+00	9.833E-02	Half-Life too short		
		355.39		-3.287E-01	9.833E-02	Half-Life too short		
		507.63	*	2.404E+00	9.833E-02	Half-Life too short		
		602.52		1.168E+00	9.833E-02	Half-Life too short		
		1021.30		4.002E-01	9.833E-02	Half-Life too short		
		1147.95		-1.425E+00	9.833E-02	Half-Life too short		
		1362.66		-3.009E-02	9.833E-02	Half-Life too short		
		1750.46		2.631E+00	9.833E-02	Half-Life too short		
MO-99		140.51		-3.053E+00	2.456E+01	3.971E+01	1.075E+01	-0.077
		181.06		-1.490E+01	1.779E+01	2.338E+01	3.981E+00	-0.637
		366.43		2.532E+01	7.671E+01	1.303E+02	7.313E+00	0.194
		739.58	*	-2.627E+00	1.127E+01	1.777E+01	2.546E+00	-0.148
		778.00		9.978E+00	3.478E+01	5.740E+01	4.328E+00	0.174
TC-99M		140.51	*	-1.616E+08	3.478E+01	Half-Life too short		
RH-101		127.23		2.502E-02	3.915E-02	6.555E-02	4.510E-03	0.382
		198.01	*	-2.579E-02	4.129E-02	6.433E-02	3.569E-03	-0.401
		325.23		-1.523E-01	2.964E-01	4.821E-01	2.790E-02	-0.316
RH-102		418.52		3.072E-01	3.982E-01	6.895E-01	3.838E-02	0.446
		475.06	*	2.145E-02	3.861E-02	6.603E-02	3.816E-03	0.325
		631.29		1.328E-01	7.886E-02	1.437E-01	8.588E-03	0.924
		697.49		-4.888E-02	1.120E-01	1.748E-01	1.122E-02	-0.280
		766.84		1.992E-01	1.573E-01	2.770E-01	2.044E-02	0.719
		1046.59		-3.543E-02	1.529E-01	2.478E-01	1.896E-02	-0.143
		1112.84		2.090E-01	3.143E-01	4.909E-01	3.244E-02	0.426
RU-103		497.08	*	-2.514E-03	5.114E-02	8.378E-02	1.061E-02	-0.030
	+	610.33		1.235E+01	2.828E+00	3.464E+00	5.366E-01	3.564
RH-106	+	511.85		5.238E-01	5.306E-01	6.150E-01	3.614E-02	0.852
		621.84	*	1.118E-01	3.742E-01	6.258E-01	7.401E-02	0.179
		1050.47		-1.748E+00	3.057E+00	4.770E+00	3.623E-01	-0.366
RU-106	+	511.85		5.238E-01	5.306E-01	6.150E-01	3.614E-02	0.852
		621.84	*	1.118E-01	3.741E-01	6.258E-01	3.742E-02	0.179
		1050.47		-1.748E+00	3.057E+00	4.770E+00	3.623E-01	-0.366
AG-108M		433.93	*	4.224E-03	4.570E-02	7.601E-02	4.669E-03	0.056
		614.37		-2.982E-03	5.610E-02	7.841E-02	5.065E-03	-0.038
		722.95		4.151E-02	5.996E-02	9.094E-02	6.536E-03	0.456
AG-110M		657.75	*	5.257E-02	5.120E-02	8.059E-02	5.091E-03	0.652

---- Non-Identified Nuclides ----

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		677.61		-3.105E-01	3.955E-01	5.919E-01	3.841E-02	-0.525
		706.67		9.963E-02	2.917E-01	4.849E-01	3.322E-02	0.205
		763.93		-1.369E-01	2.474E-01	3.800E-01	2.896E-02	-0.360
		884.67		-4.058E-02	6.589E-02	1.037E-01	9.777E-03	-0.391
		937.48		-1.553E-01	1.445E-01	2.140E-01	1.991E-02	-0.726
		1384.27		-2.262E-01	2.665E-01	3.244E-01	2.392E-02	-0.697
IN-111		171.28		-6.492E-01	9.362E-01	1.462E+00	7.888E-02	-0.444
		245.39	*	2.700E-01	1.103E+00	1.565E+00	9.019E-02	0.172
IN-113M		391.69	*	-4.022E-02	5.882E-02	9.345E-02	5.468E-03	-0.430
SN-113		391.69	*	-4.022E-02	5.882E-02	9.345E-02	5.468E-03	-0.430
IN-114M		190.27	*	6.282E-03	2.668E-01	3.759E-01	2.069E-02	0.017
CD-115		260.90		6.392E+01	1.059E+02	1.837E+02	1.066E+01	0.348
		492.35		-7.343E+00	3.112E+01	5.027E+01	2.930E+00	-0.146
		527.90	*	-6.552E+00	9.748E+00	1.514E+01	8.950E-01	-0.433
SN-117M		156.02		9.114E-01	2.680E+00	4.410E+00	2.539E-01	0.207
		158.56	*	6.062E-02	6.250E-02	1.057E-01	5.981E-03	0.573
SB-122		563.90	*	8.316E-01	2.243E+00	3.301E+00	1.968E-01	0.252
		692.80		3.417E+01	4.397E+01	7.551E+01	4.798E+00	0.453
I-123		159.00	*	4.373E-01	4.397E+01	Half-Life too short		
		528.96		-1.062E+02	4.397E+01	Half-Life too short		
TE-123M		159.00	*	1.140E-02	3.467E-02	5.704E-02	3.262E-03	0.200
I-124		602.71	*	3.499E-01	8.276E-01	1.219E+00	7.292E-02	0.287
		722.78		4.105E+00	4.936E+00	7.617E+00	5.149E-01	0.539
		1325.50		-2.009E+01	3.897E+01	5.964E+01	4.206E+00	-0.337
		1376.25		6.396E+01	3.808E+01	6.791E+01	4.813E+00	0.942
		1509.49		1.199E+01	1.865E+01	3.284E+01	2.253E+00	0.365
		1691.02		4.678E-02	3.840E+00	6.208E+00	3.911E-01	0.008
SB-124		602.71		2.492E-02	5.895E-02	8.683E-02	5.196E-03	0.287
		645.85		-7.644E-02	7.059E-01	1.137E+00	7.603E-02	-0.067
		709.31		1.947E-01	3.845E+00	6.244E+00	4.106E-01	0.031
		713.82		1.101E-01	2.161E+00	3.509E+00	3.758E-01	0.031
		722.78		4.239E-01	5.098E-01	7.865E-01	5.502E-02	0.539
	+	968.20		1.255E+01	7.253E+00	8.599E+00	7.457E-01	1.459
		1045.16		1.670E+00	3.139E+00	5.478E+00	4.204E-01	0.305
		1325.50		-2.216E+00	4.297E+00	6.577E+00	4.639E-01	-0.337
		1368.21		1.612E+00	2.387E+00	4.225E+00	5.305E-01	0.382
		1436.60		-1.984E+00	4.809E+00	7.314E+00	5.123E-01	-0.271
		1691.02	*	1.139E-03	9.353E-02	1.512E-01	1.022E-02	0.008
SB-125		427.89	*	4.410E-02	1.225E-01	2.073E-01	1.215E-02	0.213
	+	463.38		7.718E-01	7.323E-01	7.307E-01	4.905E-02	1.056
		600.56		-8.416E-02	2.565E-01	3.958E-01	2.718E-02	-0.213
		635.90		-2.316E-02	4.018E-01	6.503E-01	4.512E-02	-0.036
TE-125M		109.28	*	-1.051E+01	1.279E+01	2.023E+01	1.898E+00	-0.519
I-126		388.63		4.722E-02	2.511E-01	4.219E-01	2.304E-02	0.112
		666.33	*	7.900E-02	2.766E-01	3.998E-01	2.401E-02	0.198
		753.82		4.108E-01	1.768E+00	2.914E+00	2.096E-01	0.141
SB-126		223.80		-1.198E+00	4.804E+00	7.596E+00	4.314E-01	-0.158
		278.60		3.476E+00	2.997E+00	5.297E+00	3.088E-01	0.656
		296.50		1.155E+01	2.864E+00	4.042E+00	2.358E-01	2.858

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		414.70		-8.841E-02	9.462E-02	1.472E-01	8.168E-03	-0.601
		415.30		-9.052E+00	8.036E+00	1.234E+01	6.851E-01	-0.734
		555.20		-1.871E+00	5.038E+00	8.002E+00	4.762E-01	-0.234
		573.80		9.880E-02	1.347E+00	2.010E+00	1.200E-01	0.049
		593.00		-2.363E-01	1.134E+00	1.817E+00	1.087E-01	-0.130
		656.30		-1.742E+00	4.771E+00	6.372E+00	3.793E-01	-0.273
		666.33		3.291E-02	1.152E-01	1.665E-01	1.000E-02	0.198
		675.00		1.216E+00	2.422E+00	4.098E+00	2.508E-01	0.297
		695.00		3.133E-02	1.052E-01	1.742E-01	1.112E-02	0.180
		697.00		-2.051E-02	3.594E-01	5.790E-01	3.711E-02	-0.035
		720.50	*	-7.222E-02	1.880E-01	2.737E-01	1.842E-02	-0.264
		856.80		1.857E-01	5.838E-01	8.823E-01	7.700E-02	0.211
		989.30		4.523E-01	1.506E+00	2.579E+00	2.172E-01	0.175
		1034.80		8.528E+00	1.065E+01	1.904E+01	1.489E+00	0.448
		1213.00		7.491E-01	5.731E+00	9.544E+00	5.629E-01	0.078
SB-127		61.10		1.065E+02	5.715E+01	8.898E+01	8.285E+00	1.197
		252.40		-1.117E-01	4.492E+00	7.157E+00	2.966E+00	-0.016
		290.80		-4.180E+00	2.398E+01	3.459E+01	3.015E+00	-0.121
		411.60		-6.595E+00	1.302E+01	2.085E+01	2.914E+00	-0.316
		444.90		-9.659E-02	9.990E+00	1.649E+01	1.703E+00	-0.006
		473.00		-3.114E-01	1.806E+00	2.940E+00	3.169E-01	-0.106
		543.00		8.016E+00	1.716E+01	2.907E+01	3.674E+00	0.276
		603.60		1.717E+01	1.272E+01	2.052E+01	2.148E+00	0.837
		685.20	*	1.470E+00	1.367E+00	2.417E+00	2.242E-01	0.608
		698.50		-5.510E-01	1.710E+01	2.760E+01	3.989E+00	-0.020
		722.20		2.222E+01	3.386E+01	5.113E+01	4.782E+00	0.435
		783.80		-3.622E-01	3.933E+00	6.273E+00	7.142E-01	-0.058
XE-127		57.60		-6.912E-01	6.915E+00	1.027E+01	6.764E-01	-0.067
		145.22		-1.407E-02	8.764E-01	1.423E+00	8.782E-02	-0.010
		172.10		1.148E-02	1.493E-01	2.423E-01	1.308E-02	0.047
		202.84	*	6.449E-02	5.978E-02	1.008E-01	5.620E-03	0.640
		374.96		1.014E-01	2.554E-01	4.347E-01	2.417E-02	0.233
I-131		80.18		2.145E+00	7.588E+00	8.118E+00	6.508E-01	0.264
		284.30		-5.063E-01	1.637E+00	2.706E+00	1.750E-01	-0.187
		364.48	*	-6.178E-02	1.318E-01	2.131E-01	1.343E-02	-0.290
		636.97		-6.785E-01	2.033E+00	3.217E+00	2.135E-01	-0.211
		722.89		7.426E+00	8.846E+00	1.366E+01	9.316E-01	0.544
TE-132		49.72		-1.202E+01	1.632E+01	2.217E+01	1.956E+00	-0.542
		111.76		2.351E+01	3.080E+01	5.170E+01	4.926E+00	0.455
		116.30		-2.237E+01	2.778E+01	4.379E+01	4.127E+00	-0.511
		228.16	*	-3.553E-01	7.319E-01	1.055E+00	1.484E-01	-0.337
BA-133		53.15		6.713E-01	3.659E+00	5.926E+00	3.861E-01	0.113
		79.62		3.192E+00	2.505E+00	2.833E+00	4.204E-01	1.126
		81.00		1.139E-02	1.806E-01	1.897E-01	2.954E-02	0.060
		276.40		5.845E-01	4.896E-01	8.582E-01	1.114E-01	0.681
		302.84		3.950E-03	2.058E-01	3.008E-01	3.510E-02	0.013
		356.01	*	-2.039E-02	6.213E-02	8.733E-02	1.004E-02	-0.233
		383.85		2.142E-01	3.970E-01	6.800E-01	7.285E-02	0.315
I-133	+	510.53		3.726E-01	3.970E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		529.87	*	-5.329E-04	3.970E-01	Half-Life too short		
		706.58		4.704E-02	3.970E-01	Half-Life too short		
		856.28		-1.056E-01	3.970E-01	Half-Life too short		
		875.33		-1.246E-02	3.970E-01	Half-Life too short		
		1236.41		4.477E-01	3.970E-01	Half-Life too short		
		1298.22		-7.842E-02	3.970E-01	Half-Life too short		
CS-134		475.35		1.084E+00	2.550E+00	4.324E+00	2.499E-01	0.251
		563.23		-4.055E-01	5.681E-01	7.375E-01	4.483E-02	-0.550
	+	569.32		1.091E+00	4.488E-01	6.048E-01	3.710E-02	1.804
		604.70		2.175E-02	4.917E-02	7.270E-02	4.372E-03	0.299
	+	795.84	*	1.149E-01	7.005E-02	1.208E-01	9.507E-03	0.951
		801.93		1.047E-01	5.684E-01	9.284E-01	7.376E-02	0.113
		1038.57		-3.183E+00	5.131E+00	7.963E+00	6.186E-01	-0.400
		1167.94		-6.618E-01	3.726E+00	6.047E+00	3.392E-01	-0.109
		1365.15		-1.222E+00	1.832E+00	2.729E+00	2.066E-01	-0.448
CS-135		268.24	*	3.372E-01	1.992E-01	3.587E-01	2.751E-02	0.940
I-135		288.45		-5.893E+08	1.992E-01	Half-Life too short		
		417.63		8.662E+08	1.992E-01	Half-Life too short		
		546.56		-2.466E+07	1.992E-01	Half-Life too short		
		836.80		5.406E+08	1.992E-01	Half-Life too short		
		1038.76		-6.929E+08	1.992E-01	Half-Life too short		
		1124.00		-6.571E+08	1.992E-01	Half-Life too short		
		1131.51		2.393E+07	1.992E-01	Half-Life too short		
		1260.41	*	-1.291E+08	1.992E-01	Half-Life too short		
		1457.56		2.131E+10	1.992E-01	Half-Life too short		
		1678.03		-3.951E+07	1.992E-01	Half-Life too short		
		1706.46		3.634E+08	1.992E-01	Half-Life too short		
		1791.20		1.454E+08	1.992E-01	Half-Life too short		
CS-136		66.91		3.297E-01	8.869E-01	1.311E+00	1.912E-01	0.251
	+	86.29		4.726E+00	1.729E+00	2.430E+00	3.113E-01	1.945
		153.22		2.583E-01	7.780E-01	1.280E+00	9.312E-02	0.202
		163.89		3.942E-01	1.317E+00	2.061E+00	1.436E-01	0.191
		176.55		2.034E-01	4.383E-01	7.232E-01	4.471E-02	0.281
		273.65		-1.147E+00	5.732E-01	8.665E-01	5.749E-02	-1.324
		340.57		2.952E-01	1.674E-01	2.738E-01	1.672E-02	1.078
		818.51		-5.979E-02	9.650E-02	1.448E-01	1.180E-02	-0.413
		1048.07	*	-1.070E-01	1.362E-01	2.074E-01	1.668E-02	-0.516
		1235.34		3.809E-01	7.787E-01	1.329E+00	1.352E-01	0.287
CE-139		165.85	*	2.234E-02	3.716E-02	6.178E-02	3.317E-03	0.362
BA-140		162.64		-3.808E-01	9.138E-01	1.379E+00	8.622E-02	-0.276
		304.84		9.145E-01	1.690E+00	2.542E+00	6.939E-01	0.360
		423.70		-1.070E+00	2.428E+00	3.867E+00	1.227E+00	-0.277
		537.32	*	-9.313E-03	3.190E-01	5.214E-01	1.697E-01	-0.018
LA-140		328.77		6.099E-01	3.658E-01	6.583E-01	4.263E-02	0.927
		432.53		2.634E-01	2.565E+00	4.271E+00	2.669E-01	0.062
		487.03		1.135E-01	1.719E-01	2.956E-01	1.945E-02	0.384
		751.79		-2.227E+00	2.180E+00	3.152E+00	2.600E-01	-0.707
		815.85		2.103E-02	4.019E-01	6.486E-01	5.934E-02	0.032
		867.82		3.144E-01	1.897E+00	2.910E+00	2.718E-01	0.108

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		919.63		-2.324E-01	3.630E+00	5.174E+00	5.747E-01	-0.045
		925.24		-3.139E-01	1.332E+00	2.171E+00	2.093E-01	-0.145
		1596.49	*	-2.158E-03	1.308E-01	2.112E-01	1.400E-02	-0.010
CE-141		145.44	*	9.121E-03	7.816E-02	1.276E-01	8.144E-03	0.071
CE-143		57.37		-3.034E-04	7.816E-02	Half-Life too short		
		231.56		9.201E-04	7.816E-02	Half-Life too short		
		293.26	*	5.935E-04	7.816E-02	Half-Life too short		
	+	350.59		1.463E-02	7.816E-02	Half-Life too short		
		490.36		-1.520E-03	7.816E-02	Half-Life too short		
		664.57		1.954E-03	7.816E-02	Half-Life too short		
		721.93		7.810E-04	7.816E-02	Half-Life too short		
CE-144		80.11		1.390E+00	3.907E+00	4.204E+00	3.347E-01	0.331
		133.54	*	7.001E-02	2.593E-01	4.270E-01	6.216E-02	0.164
PM-144		476.78		-2.533E-02	9.141E-02	1.476E-01	1.023E-02	-0.172
		618.01		1.079E-02	4.040E-02	6.727E-02	4.251E-03	0.160
		696.49	*	-1.558E-03	4.968E-02	8.021E-02	5.138E-03	-0.019
		778.57		1.287E+00	3.261E+00	5.430E+00	4.100E-01	0.237
PR-144		696.49	*	-1.055E-01	3.364E+00	5.431E+00	3.478E-01	-0.019
		1489.15		-4.974E+00	1.308E+01	1.958E+01	1.352E+00	-0.254
PM-146		453.90	*	8.170E-03	6.440E-02	9.761E-02	8.356E-03	0.084
		633.02		-4.623E-01	2.147E+00	3.425E+00	1.262E+00	-0.135
		735.90		2.182E-01	2.024E-01	3.437E-01	9.672E-02	0.635
		747.13		7.410E-02	1.240E-01	2.102E-01	2.766E-02	0.353
ND-147		91.11		2.801E+00	4.868E-01	7.776E-01	7.147E-02	3.603
		319.41		-1.460E+00	3.988E+00	6.539E+00	3.795E-01	-0.223
		439.89		-7.044E-01	7.223E+00	1.186E+01	6.711E-01	-0.059
		531.02	*	4.128E-01	6.997E-01	1.194E+00	1.620E-01	0.346
PM-149		285.90	*	2.885E+01	7.345E+01	1.258E+02	1.785E+01	0.229
EU-152		121.78		3.730E-02	8.900E-02	1.480E-01	1.280E-02	0.252
		244.69		2.909E-01	4.746E-01	6.915E-01	3.983E-02	0.421
		344.27	*	-8.692E-02	1.667E-01	1.994E-01	1.290E-02	-0.436
		443.98		1.582E-02	1.247E+00	2.062E+00	1.169E-01	0.008
		778.89		1.489E-01	3.773E-01	6.283E-01	4.745E-02	0.237
		867.32		-6.384E-02	1.290E+00	1.852E+00	1.647E-01	-0.034
		964.01		8.396E-01	4.683E-01	7.946E-01	6.928E-02	1.057
		1085.78		2.356E-02	4.433E-01	7.384E-01	5.210E-02	0.032
		1112.02		1.955E-02	4.713E-01	6.740E-01	4.463E-02	0.029
	+	1407.95		5.050E-01	2.844E-01	4.886E-01	3.444E-02	1.034
GD-153		69.67		-2.981E-01	2.235E+00	3.004E+00	2.148E-01	-0.099
	+	83.37		3.964E+01	2.323E+01	3.190E+01	2.638E+00	1.242
		97.43	*	1.167E-01	1.091E-01	1.657E-01	1.329E-02	0.704
		103.18		-8.657E-02	1.347E-01	2.149E-01	1.658E-02	-0.403
EU-154		123.07		-1.707E-02	6.233E-02	1.004E-01	1.028E-02	-0.170
		247.94		5.749E-02	4.678E-01	7.522E-01	7.163E-02	0.076
		591.81		-4.366E-01	9.079E-01	1.271E+00	1.256E-01	-0.344
		723.30		1.988E-01	2.527E-01	3.869E-01	3.053E-02	0.514
		756.87		6.193E-01	1.053E+00	1.784E+00	1.966E-01	0.347
		873.19		1.541E-01	3.972E-01	6.873E-01	8.594E-02	0.224
		996.32		-7.157E-01	5.385E-01	7.571E-01	1.335E-01	-0.945

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		-1.934E-01	3.107E-01	4.862E-01	5.519E-02	-0.398
		1274.45	*	-2.982E-02	1.481E-01	2.370E-01	2.323E-02	-0.126
EU-155		48.70		-1.927E+00	2.695E+00	3.679E+00	2.358E-01	-0.524
		60.01		1.470E+00	6.201E+00	8.938E+00	5.942E-01	0.164
	+	86.54		4.673E-01	1.652E-01	2.375E-01	2.061E-02	1.968
		105.31	*	4.076E-03	1.397E-01	2.291E-01	1.774E-02	0.018
TB-160	+	86.79		1.233E+00	4.356E-01	6.239E-01	5.376E-02	1.976
		197.04		-3.623E-01	7.425E-01	1.103E+00	6.110E-02	-0.329
		215.65		-7.200E-03	9.489E-01	1.522E+00	8.586E-02	-0.005
	+	298.57		2.413E-01	1.863E-01	2.467E-01	1.439E-02	0.978
		879.36	*	1.310E-02	1.827E-01	3.077E-01	2.795E-02	0.043
		962.29		3.303E-01	8.431E-01	1.309E+00	1.144E-01	0.252
		966.15		1.142E+00	3.766E-01	6.693E-01	5.819E-02	1.706
		1177.93		-5.542E-01	5.089E-01	7.223E-01	4.011E-02	-0.767
		1271.85		1.108E-01	8.865E-01	1.475E+00	9.579E-02	0.075
HO-166M		80.57		3.286E-02	4.990E-01	5.244E-01	4.197E-02	0.063
	+	184.41		2.304E-01	6.431E-02	9.791E-02	5.355E-03	2.353
		280.46		-5.700E-02	1.110E-01	1.819E-01	1.061E-02	-0.313
		410.95		2.198E-01	3.273E-01	5.640E-01	3.120E-02	0.390
		711.68	*	-2.964E-02	8.548E-02	1.340E-01	8.855E-03	-0.221
		752.31		-3.485E-01	3.741E-01	5.472E-01	3.924E-02	-0.637
		810.29		-4.772E-02	7.857E-02	1.179E-01	9.455E-03	-0.405
TM-171		51.35		3.003E+01	3.247E+01	4.972E+01	3.224E+00	0.604
		52.39		6.468E+00	1.658E+01	2.602E+01	1.692E+00	0.249
		59.40		4.253E+00	3.314E+01	4.751E+01	3.148E+00	0.090
		66.72	*	1.215E+01	3.442E+01	5.091E+01	3.550E+00	0.239
LU-176	+	88.36		9.206E-01	3.252E-01	4.793E-01	4.176E-02	1.921
		201.83		-7.913E-03	3.770E-02	6.002E-02	3.343E-03	-0.132
		306.84	*	1.013E-02	3.327E-02	5.370E-02	3.127E-03	0.189
		401.10		4.767E+00	9.017E+00	1.543E+01	8.462E-01	0.309
LU-177		112.95		9.714E-01	1.946E+00	3.242E+00	2.381E-01	0.300
		208.36	*	-1.684E-01	1.281E+00	2.046E+00	1.147E-01	-0.082
LU-177M		52.97		4.327E-01	1.648E+00	2.678E+00	1.744E-01	0.162
		54.07		-2.262E-02	8.425E-01	1.399E+00	9.136E-02	-0.016
		61.30		4.998E+00	1.910E+00	3.054E+00	2.047E-01	1.637
		121.62		1.837E-01	4.535E-01	7.537E-01	5.360E-02	0.244
		147.16		-3.614E-01	8.301E-01	1.322E+00	8.060E-02	-0.273
		171.86		1.468E-02	6.121E-01	9.907E-01	5.346E-02	0.015
		218.09		5.235E-01	1.079E+00	1.773E+00	1.002E-01	0.295
		268.79		2.269E+00	1.013E+00	1.863E+00	1.084E-01	1.218
		319.02		-1.745E-01	3.371E-01	5.480E-01	3.180E-02	-0.319
		367.43		2.746E-01	1.152E+00	1.945E+00	1.090E-01	0.141
		413.65	*	-2.202E-01	2.393E-01	3.732E-01	2.069E-02	-0.590
HF-181		56.28		-9.048E-01	9.609E-01	1.539E+00	1.010E-01	-0.588
		57.53		-7.668E-02	5.830E-01	8.646E-01	5.693E-02	-0.089
		65.20		3.072E+00	1.253E+00	1.983E+00	1.366E-01	1.549
		133.02		-3.272E-02	8.393E-02	1.344E-01	8.930E-03	-0.243
		136.25		-6.365E-01	5.725E-01	8.831E-01	5.755E-02	-0.721
		345.85		1.227E-01	2.804E-01	4.001E-01	2.287E-02	0.307

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	-2.462E-02	5.799E-02	9.264E-02	5.373E-03	-0.266
W-181		56.28		-3.589E-01	3.815E-01	6.111E-01	4.010E-02	-0.587
		57.53		-3.068E-02	2.316E-01	3.434E-01	2.261E-02	-0.089
		65.20	*	1.211E+00	4.939E-01	7.815E-01	5.385E-02	1.549
TA-182		67.75		2.893E-02	1.371E-01	2.014E-01	1.416E-02	0.144
		100.10		1.158E-01	2.382E-01	3.701E-01	2.912E-02	0.313
		152.43		1.295E-01	4.254E-01	6.993E-01	4.123E-02	0.185
		222.10		1.653E-01	4.339E-01	7.093E-01	4.023E-02	0.233
		1001.68		2.377E+00	3.155E+00	5.389E+00	4.454E-01	0.441
	+	1121.28		6.981E-01	3.660E-01	4.377E-01	2.829E-02	1.595
		1189.05		-1.855E-01	4.196E-01	6.617E-01	3.747E-02	-0.280
		1221.42	*	-5.782E-02	2.559E-01	4.117E-01	2.462E-02	-0.140
		1230.97		-4.603E-01	6.270E-01	9.573E-01	5.818E-02	-0.481
RE-183		57.98		4.213E-02	2.401E-01	3.448E-01	2.273E-02	0.122
		59.32		1.859E-02	1.347E-01	1.932E-01	1.279E-02	0.096
		67.20		6.167E-02	2.422E-01	3.566E-01	2.496E-02	0.173
		162.32	*	-1.254E-01	1.428E-01	2.103E-01	1.158E-02	-0.596
		208.81		4.561E-01	1.287E+00	2.101E+00	1.178E-01	0.217
		291.72		7.497E-01	1.316E+00	2.003E+00	1.169E-01	0.374
RE-184		57.98		1.564E-01	8.915E-01	1.280E+00	8.441E-02	0.122
		59.32		6.898E-02	4.996E-01	7.167E-01	4.747E-02	0.096
		67.20		2.289E-01	8.992E-01	1.324E+00	9.265E-02	0.173
		161.27		-6.174E-01	4.430E-01	6.671E-01	3.702E-02	-0.926
		216.55		7.816E-02	3.422E-01	5.553E-01	3.135E-02	0.141
		252.85	*	-1.459E-02	3.076E-01	4.895E-01	2.832E-02	-0.030
		318.01		-2.102E-01	5.849E-01	9.598E-01	5.571E-02	-0.219
		792.07		2.000E-01	1.566E+00	2.205E+00	1.708E-01	0.091
		903.28		-8.392E-01	1.534E+00	2.146E+00	2.004E-01	-0.391
		920.93		-2.299E-03	6.007E-01	8.996E-01	8.249E-02	-0.003
OS-185		59.72		6.753E-02	3.634E-01	5.224E-01	3.467E-02	0.129
		61.14		4.139E-01	2.039E-01	3.212E-01	2.151E-02	1.289
		69.30		-1.043E-01	4.418E-01	5.330E-01	3.798E-02	-0.196
		592.07		-1.130E+00	3.446E+00	5.120E+00	3.061E-01	-0.221
		646.12	*	-1.706E-02	6.190E-02	9.832E-02	5.864E-03	-0.173
		717.42		-8.965E-01	1.165E+00	1.740E+00	1.163E-01	-0.515
		874.81		1.487E-01	7.967E-01	1.355E+00	1.221E-01	0.110
		880.27		-3.507E-01	1.025E+00	1.660E+00	1.510E-01	-0.211
RE-188		155.03	*	-1.008E-02	2.163E-01	3.500E-01	2.028E-02	-0.029
		477.96		-1.466E+00	4.155E+00	6.674E+00	3.863E-01	-0.220
		633.10		-8.256E-01	4.279E+00	6.858E+00	4.097E-01	-0.120
W-188	+	63.58		3.143E+02	9.221E+01	1.220E+02	8.308E+00	2.576
		227.08		-9.817E+00	1.612E+01	2.496E+01	1.421E+00	-0.393
		290.67	*	-2.011E+00	1.038E+01	1.495E+01	8.725E-01	-0.134
IR-192	+	295.96		9.936E-01	2.287E-01	3.385E-01	2.005E-02	2.935
		308.46		-1.052E-02	1.204E-01	2.008E-01	1.182E-02	-0.052
		316.51	*	5.464E-04	4.409E-02	7.387E-02	4.311E-03	0.007
		468.07		3.011E-02	9.860E-02	1.452E-01	9.651E-03	0.207
		604.41		2.623E-01	6.560E-01	9.650E-01	1.104E-01	0.272
		612.46		1.357E+00	1.097E+00	1.733E+00	1.337E-01	0.783

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		6.304E-01	2.320E-01	3.692E-01	2.542E-02	1.707
		66.83		4.082E-02	1.135E-01	1.678E-01	1.171E-02	0.243
	+	75.70		1.486E+00	3.452E-01	5.653E-01	4.288E-02	2.629
		98.88	*	2.244E-01	3.178E-01	4.744E-01	3.764E-02	0.473
		129.76		2.827E+00	3.598E+00	6.047E+00	4.097E-01	0.468
TL-200		367.94	*	1.043E-05	3.598E+00	Half-Life too short		
		579.30		3.956E-04	3.598E+00	Half-Life too short		
		828.27		-5.020E-04	3.598E+00	Half-Life too short		
		1205.75		5.598E-04	3.598E+00	Half-Life too short		
TL-201		68.90		-2.510E+00	4.848E+00	6.374E+00	4.527E-01	-0.394
		70.82		-6.297E-01	2.530E+00	3.632E+00	2.624E-01	-0.173
		80.30		1.073E+00	6.843E+00	7.247E+00	5.782E-01	0.148
		135.34		-1.131E+01	2.359E+01	3.757E+01	2.462E+00	-0.301
		167.43	*	-2.946E+00	6.726E+00	1.066E+01	5.726E-01	-0.276
TL-202		68.90		-2.829E-01	5.462E-01	7.182E-01	5.101E-02	-0.394
		70.82		-7.076E-02	2.843E-01	4.081E-01	2.949E-02	-0.173
		80.30		1.206E-01	7.692E-01	8.146E-01	6.499E-02	0.148
		439.56	*	1.017E-02	8.630E-02	1.438E-01	8.129E-03	0.071
HG-203		70.83		-3.216E-01	1.303E+00	1.869E+00	2.387E-01	-0.172
		72.87		2.287E+00	8.691E-01	1.305E+00	1.621E-01	1.753
		82.60		1.576E+00	1.807E+00	2.307E+00	3.110E-01	0.683
		279.20	*	2.123E-02	5.274E-02	9.033E-02	5.589E-03	0.235
BI-207		72.80		6.003E-01	2.493E-01	3.852E-01	2.837E-02	1.558
	+	74.97		8.283E-01	1.924E-01	2.880E-01	2.168E-02	2.876
	+	84.90		5.146E-01	3.016E-01	4.320E-01	3.638E-02	1.191
		569.67		1.199E-01	5.416E-02	9.107E-02	5.434E-03	1.317
		1063.62	*	1.312E-02	7.300E-02	1.230E-01	9.103E-03	0.107
		1770.23		-2.000E-01	7.458E-01	9.903E-01	5.915E-02	-0.202
TL-207		81.07		2.996E-02	3.988E-01	4.194E-01	3.375E-02	0.071
	+	83.78		3.393E-01	1.988E-01	2.734E-01	2.272E-02	1.241
		94.90		1.275E+00	3.526E-01	6.143E-01	5.027E-02	2.076
		122.32		-3.961E-01	2.107E+00	3.410E+00	2.676E-01	-0.116
		144.24		-2.217E-02	9.656E-01	1.476E+00	1.117E-01	-0.015
		154.21		8.097E-02	4.996E-01	8.161E-01	5.742E-02	0.099
		269.46		5.110E-01	2.395E-01	4.383E-01	2.665E-02	1.166
		323.87	*	-1.237E+00	9.051E-01	1.363E+00	2.250E-01	-0.907
	+	338.28		5.729E+00	2.262E+00	2.948E+00	3.096E-01	1.943
		445.03		5.340E-02	2.957E+00	4.891E+00	4.988E-01	0.011
PO-209		260.50		7.604E+00	1.190E+01	2.067E+01	1.199E+00	0.368
		262.80		-8.567E+00	3.204E+01	5.324E+01	3.092E+00	-0.161
		896.60	*	3.051E+00	1.014E+01	1.740E+01	1.628E+00	0.175
PB-211		404.84	*	-1.859E-01	1.294E+00	2.120E+00	1.321E+00	-0.088
		427.08		7.146E-02	2.753E+00	4.563E+00	2.820E+00	0.016
		831.96		-4.733E-01	1.602E+00	2.574E+00	1.612E+00	-0.184
BI-212	+	727.18	*	1.029E+00	4.843E-01	8.413E-01	7.157E-02	1.223
		785.46		1.304E+00	2.368E+00	3.998E+00	3.058E-01	0.326
		1620.62		1.061E+00	1.909E+00	3.340E+00	2.188E-01	0.318
PO-215		81.07		2.996E-02	3.988E-01	4.194E-01	3.375E-02	0.071
	+	83.78		3.393E-01	1.988E-01	2.734E-01	2.272E-02	1.241

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		1.275E+00	3.526E-01	6.143E-01	5.027E-02	2.076
		122.32		-3.961E-01	2.107E+00	3.410E+00	2.676E-01	-0.116
		144.24		-2.217E-02	9.656E-01	1.476E+00	1.117E-01	-0.015
		154.21		8.097E-02	4.996E-01	8.161E-01	5.742E-02	0.099
		269.46		5.110E-01	2.395E-01	4.383E-01	2.665E-02	1.166
		323.87	*	-1.237E+00	9.051E-01	1.363E+00	2.250E-01	-0.907
	+	338.28		5.729E+00	2.262E+00	2.948E+00	3.096E-01	1.943
		445.03		5.340E-02	2.957E+00	4.891E+00	4.988E-01	0.011
RN-219		271.23		3.622E-01	3.121E-01	5.505E-01	4.470E-02	0.658
		401.81	*	-2.778E-02	5.582E-01	9.233E-01	1.244E-01	-0.030
RN-220		549.76	*	-7.808E+00	3.386E+01	5.438E+01	3.233E+00	-0.144
RA-223		81.07		2.996E-02	3.988E-01	4.194E-01	3.375E-02	0.071
	+	83.78		3.393E-01	1.988E-01	2.734E-01	2.272E-02	1.241
		94.90		1.275E+00	3.526E-01	6.143E-01	5.027E-02	2.076
		122.32		-3.961E-01	2.107E+00	3.410E+00	2.676E-01	-0.116
		144.24		-2.217E-02	9.656E-01	1.476E+00	1.117E-01	-0.015
		154.21		8.097E-02	4.996E-01	8.161E-01	5.742E-02	0.099
		269.46		5.110E-01	2.395E-01	4.383E-01	2.665E-02	1.166
		323.87	*	-1.237E+00	9.051E-01	1.363E+00	2.250E-01	-0.907
	+	338.28		5.729E+00	2.262E+00	2.948E+00	3.096E-01	1.943
		445.03		5.340E-02	2.957E+00	4.891E+00	4.988E-01	0.011
AC-227		79.80		2.294E+00	3.123E+00	3.419E+00	7.261E-01	0.671
		236.00		2.122E+00	4.756E-01	7.343E-01	7.647E-02	2.890
		256.20	*	5.443E-03	4.803E-01	8.106E-01	1.131E-01	0.007
		286.10		5.785E-01	1.850E+00	3.159E+00	3.657E-01	0.183
	+	299.80		3.112E+00	2.450E+00	3.262E+00	5.316E-01	0.954
		304.40		-1.461E-01	2.668E+00	3.877E+00	6.710E-01	-0.038
		334.20		-1.481E+00	3.382E+00	4.725E+00	8.656E-01	-0.314
TH-227		79.80		2.294E+00	3.124E+00	3.419E+00	7.357E-01	0.671
	+	94.00		2.871E+01	7.393E+00	6.326E+00	1.368E+00	4.538
		236.00		2.122E+00	4.625E-01	7.343E-01	6.618E-02	2.890
		256.20	*	5.443E-03	4.803E-01	8.106E-01	1.370E-01	0.007
		286.10		5.785E-01	1.938E+00	3.159E+00	3.164E+00	0.183
	+	299.80		3.112E+00	2.450E+00	3.262E+00	5.316E-01	0.954
		304.40		-1.461E-01	2.668E+00	3.877E+00	6.710E-01	-0.038
		334.20		-1.481E+00	3.382E+00	4.725E+00	8.656E-01	-0.314
TH-229	+	85.43		5.079E-01	2.977E-01	4.517E-01	3.829E-02	1.124
	+	88.47		5.300E-01	1.872E-01	2.757E-01	2.399E-02	1.922
		100.00		1.258E-01	2.494E-01	3.877E-01	3.053E-02	0.325
		193.63	*	8.777E-02	6.526E-01	1.058E+00	5.842E-02	0.083
		210.97		1.337E+00	9.795E-01	1.669E+00	9.377E-02	0.801
PA-231		283.67	*	-1.213E+00	1.931E+00	3.127E+00	4.313E-01	-0.388
	+	301.29		1.245E+00	9.674E-01	1.293E+00	1.354E-01	0.962
TH-231		81.07		2.996E-02	3.988E-01	4.194E-01	3.375E-02	0.071
	+	83.78		3.393E-01	1.988E-01	2.734E-01	2.272E-02	1.241
		94.90		1.275E+00	3.526E-01	6.143E-01	5.027E-02	2.076
		122.32		-3.961E-01	2.107E+00	3.410E+00	2.676E-01	-0.116
		144.24		-2.217E-02	9.656E-01	1.476E+00	1.117E-01	-0.015
		154.21		8.097E-02	4.996E-01	8.161E-01	5.742E-02	0.099

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		5.110E-01	2.395E-01	4.383E-01	2.665E-02	1.166
		323.87	*	-1.237E+00	9.051E-01	1.363E+00	2.250E-01	-0.907
	+	338.28		5.729E+00	2.262E+00	2.948E+00	3.096E-01	1.943
		445.03		5.340E-02	2.957E+00	4.891E+00	4.988E-01	0.011
U-231	+	84.21		1.175E+01	6.888E+00	9.535E+00	7.964E-01	1.233
	+	92.29		2.281E+01	3.700E+00	5.387E+00	4.510E-01	4.234
		95.87	*	3.546E-01	1.253E+00	1.831E+00	1.486E-01	0.194
		108.00		-2.541E-01	2.207E+00	3.599E+00	2.704E-01	-0.071
PA-233	+	75.28		2.417E+01	6.399E+00	8.808E+00	1.301E+00	2.744
	+	86.59		7.599E+00	3.306E+00	3.859E+00	1.035E+00	1.969
	+	300.12		8.675E-01	6.782E-01	9.042E-01	1.216E-01	0.959
		311.98	*	-5.874E-02	8.220E-02	1.321E-01	8.156E-03	-0.445
		340.50		1.655E+00	9.506E-01	1.443E+00	3.313E-01	1.147
		398.62		-1.176E-01	2.817E+00	4.662E+00	1.202E+00	-0.025
		415.76		-1.045E+00	2.263E+00	3.624E+00	7.436E-01	-0.288
PA-234	+	63.00		9.237E+00	2.960E+00	3.658E+00	5.325E-01	2.525
		94.67		1.402E+00	3.064E-01	4.811E-01	5.828E-02	2.914
		98.44		7.775E-02	1.360E-01	1.917E-01	1.068E-01	0.406
		99.86		1.277E-01	6.766E-01	9.834E-01	7.750E-02	0.130
		111.00		2.602E-01	2.526E-01	4.266E-01	4.802E-02	0.610
		131.20		9.414E-02	1.357E-01	2.272E-01	1.526E-02	0.414
		152.70		2.790E-01	4.113E-01	6.835E-01	1.083E-01	0.408
	+	186.00		8.293E+00	3.398E+00	3.656E+00	1.115E+00	2.268
		226.40		-2.056E-01	5.162E-01	8.085E-01	9.302E-02	-0.254
		227.20		-3.360E-01	5.518E-01	8.542E-01	4.864E-02	-0.393
		248.90		-4.544E-01	1.085E+00	1.684E+00	3.618E-01	-0.270
	+	293.70		6.332E+00	1.739E+00	2.191E+00	3.526E-01	2.890
		369.80		1.196E-01	1.095E+00	1.834E+00	3.808E-01	0.065
	+	568.70		5.541E+00	2.278E+00	3.220E+00	1.921E-01	1.721
		569.50		1.238E+00	4.775E-01	8.227E-01	4.908E-02	1.505
		574.00		6.106E-02	2.075E+00	3.083E+00	1.840E-01	0.020
		699.00		-3.400E-02	1.022E+00	1.649E+00	3.000E-01	-0.021
		706.10		4.846E-01	1.505E+00	2.473E+00	1.094E+00	0.196
		733.00		-3.894E-01	5.719E-01	7.567E-01	1.633E-01	-0.515
		742.81		-1.405E+00	2.107E+00	2.825E+00	1.894E+00	-0.497
		796.30		1.386E+00	1.586E+00	2.360E+00	6.325E-01	0.587
		805.60		4.979E-01	1.343E+00	2.221E+00	6.767E-01	0.224
		819.60		1.813E-01	1.671E+00	2.708E+00	1.027E+00	0.067
		826.30		-5.170E-01	1.095E+00	1.719E+00	7.681E-01	-0.301
		831.60		-2.723E-01	8.164E-01	1.324E+00	3.940E-01	-0.206
		876.40		-2.606E-01	1.181E+00	1.887E+00	1.941E+00	-0.138
		880.51		-1.347E-01	3.798E-01	6.149E-01	5.596E-02	-0.219
		883.24		-2.109E-01	3.976E-01	5.875E-01	3.953E-01	-0.359
		899.00		1.170E+00	1.268E+00	2.103E+00	9.227E-01	0.556
		925.00		-2.305E-01	1.469E+00	2.413E+00	2.203E-01	-0.096
		926.50		8.934E-03	2.163E-01	3.626E-01	9.228E-02	0.025
		946.00	*	-2.955E-02	4.531E-01	7.515E-01	1.420E-01	-0.039
		949.00		2.048E-01	6.475E-01	1.108E+00	9.845E-02	0.185
		980.50		-9.238E-02	1.001E+00	1.651E+00	1.408E-01	-0.056

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-3.711E-01	1.549E+00	2.405E+00	1.561E+00	-0.154
PA-234M		766.41		3.076E+01	3.425E+01	4.391E+01	3.361E+01	0.701
		1001.03	*	8.461E+00	1.015E+01	1.741E+01	1.901E+00	0.486
U-235		89.95		5.016E+00	2.099E+00	2.577E+00	7.948E-01	1.946
	+	93.35		8.931E+00	2.788E+00	2.058E+00	5.747E-01	4.340
		105.00		3.040E-01	1.383E+00	2.281E+00	6.747E-01	0.133
		143.76	*	3.756E-02	2.975E-01	4.576E-01	7.534E-02	0.082
		163.35		-2.127E-02	6.205E-01	9.552E-01	1.708E-01	-0.022
	+	185.71		3.071E-01	8.574E-02	1.345E-01	7.367E-03	2.283
		205.31		-4.260E-01	7.131E-01	1.108E+00	1.985E-01	-0.385
NP-236		94.67		1.071E+00	2.127E-01	3.656E-01	2.998E-02	2.930
		98.44		5.875E-02	9.756E-02	1.449E-01	1.154E-02	0.405
		111.00		1.968E-01	1.903E-01	3.227E-01	2.390E-02	0.610
		160.31	*	-1.585E-01	1.009E-01	1.505E-01	8.408E-03	-1.053
NP-239		99.55		6.175E-02	2.264E-01	3.305E-01	2.610E-02	0.187
		117.00	*	-1.163E-01	2.480E-01	3.973E-01	2.871E-02	-0.293
		209.75		1.012E+00	1.004E+00	1.685E+00	9.457E-02	0.601
		228.18		-1.505E-01	3.164E-01	4.574E-01	2.607E-02	-0.329
		277.60		2.959E-01	2.381E-01	4.219E-01	2.459E-02	0.701
		334.30		-8.057E-01	1.912E+00	2.684E+00	1.546E-01	-0.300
AM-241		59.54	*	2.742E-02	1.930E-01	2.768E-01	2.055E-02	0.099
CM-243		99.55		6.354E-02	2.329E-01	3.400E-01	2.686E-02	0.187
		103.76	*	6.256E-02	1.237E-01	2.067E-01	1.589E-02	0.303
		117.00		-1.196E-01	2.552E-01	4.087E-01	2.953E-02	-0.293
		209.75		9.979E-01	9.896E-01	1.661E+00	9.321E-02	0.601
		228.18		-1.521E-01	3.197E-01	4.622E-01	2.634E-02	-0.329
		277.60		2.983E-01	2.400E-01	4.253E-01	2.479E-02	0.701
CM-247		278.00		1.197E+00	9.890E-01	1.750E+00	1.020E-01	0.684
		287.40		-6.612E-01	1.593E+00	2.462E+00	1.436E-01	-0.269
		402.60	*	-1.250E-02	5.055E-02	8.261E-02	4.538E-03	-0.151
CF-249		252.85		-5.504E-02	1.161E+00	1.847E+00	1.068E-01	-0.030
		333.44		-1.301E-01	2.538E-01	3.536E-01	2.038E-02	-0.368
		387.95	*	-2.136E-02	5.423E-02	8.795E-02	4.809E-03	-0.243
CF-251		176.60	*	7.304E-02	1.619E-01	2.670E-01	1.448E-02	0.274
		227.00		-2.985E-01	4.902E-01	7.588E-01	4.320E-02	-0.393
		285.00		3.247E-01	2.106E+00	3.568E+00	2.082E-01	0.091

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433009      *
* Acquisition date :  7-JUL-2009 06:40:18 Detector SN#     :                *
* Detector ID        : GAM14               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 03:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 03:00:01.34     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433009           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 5.8660E+01 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  6-MAR-2009 11:43:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.459E+01	2.763E+00	6.855E-01	0.000E+00
CD-109	3.941E+00	1.364E+00	1.437E+00	0.000E+00
SN-126	3.882E-01	1.344E-01	1.420E-01	0.000E+00
BA-137M	3.909E-01	9.860E-02	7.814E-02	0.000E+00
CS-137	4.132E-01	1.043E-01	8.260E-02	0.000E+00
TL-208	5.718E-01	1.084E-01	7.073E-02	0.000E+00
BI-210	6.926E-01	4.157E+00	4.587E+00	0.000E+00
PB-210	6.926E-01	4.157E+00	4.587E+00	0.000E+00
PO-210	6.926E-01	4.157E+00	4.587E+00	0.000E+00
BI-211	3.587E+00	5.977E-01	4.236E-01	0.000E+00
PB-212	1.527E+00	1.763E-01	1.100E-01	0.000E+00
PO-212	1.527E+00	1.763E-01	1.100E-01	0.000E+00
BI-214	1.170E+00	2.137E-01	1.451E-01	0.000E+00
PB-214	1.248E+00	2.175E-01	1.477E-01	0.000E+00
PO-214	1.248E+00	2.175E-01	1.477E-01	0.000E+00
PO-216	1.527E+00	1.763E-01	1.100E-01	0.000E+00
PO-218	1.248E+00	2.175E-01	1.477E-01	0.000E+00
RA-224	4.942E+00	1.475E+00	1.252E+00	0.000E+00
RA-226	1.170E+00	2.137E-01	1.451E-01	0.000E+00
AC-228	1.609E+00	4.389E-01	2.552E-01	0.000E+00
RA-228	1.609E+00	4.389E-01	2.552E-01	0.000E+00
TH-228	1.527E+00	1.763E-01	1.100E-01	0.000E+00
TH-230	1.170E+00	2.137E-01	1.450E-01	0.000E+00
TH-232	1.609E+00	4.389E-01	2.552E-01	0.000E+00
TH-234	7.924E+00	2.587E+00	2.173E+00	0.000E+00
U-234	1.170E+00	2.137E-01	1.450E-01	0.000E+00
NP-237	1.140E+00	4.570E-01	4.202E-01	0.000E+00
U-238	7.924E+00	2.587E+00	2.173E+00	0.000E+00
AM-243	4.615E-01	1.051E-01	9.671E-02	0.000E+00
ANH-511	1.051E-01	1.044E-01	6.023E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-2.245E-01	4.246E-01	6.589E-01	0.000E+00	NOT IDENT.
NA-22	-1.124E-02	5.186E-02	8.251E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.370E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.398E-02	3.742E-02	6.703E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.912E-02	9.093E-02	0.000E+00	FAIL ABUN
SC-46	2.712E-02	5.083E-02	8.795E-02	0.000E+00	FAIL ABUN
V-48	4.845E-02	8.628E-02	1.497E-01	0.000E+00	NOT IDENT.
CR-51	1.947E-02	4.617E-01	7.520E-01	0.000E+00	NOT IDENT.
MN-52	-1.555E-01	2.816E-01	4.215E-01	0.000E+00	NOT IDENT.
MN-54	-1.430E-02	5.073E-02	8.227E-02	0.000E+00	NOT IDENT.
CO-56	-4.559E-02	5.012E-02	7.603E-02	0.000E+00	NOT IDENT.
CO-57	1.625E-03	3.007E-02	4.692E-02	0.000E+00	NOT IDENT.
CO-58	-3.205E-02	4.993E-02	7.378E-02	0.000E+00	NOT IDENT.
FE-59	-2.764E-03	1.147E-01	1.880E-01	0.000E+00	NOT IDENT.
CO-60	1.368E-02	5.303E-02	8.912E-02	0.000E+00	NOT IDENT.
ZN-65	-5.320E-02	1.299E-01	1.724E-01	0.000E+00	NOT IDENT.
GE-68	1.725E+00	1.559E+00	2.830E+00	0.000E+00	NOT IDENT.
AS-73	8.458E-03	7.918E-01	1.236E+00	0.000E+00	NOT IDENT.
AS-74	9.332E-02	1.125E-01	1.915E-01	0.000E+00	NOT IDENT.
SE-75	-8.503E-02	5.276E-02	7.849E-02	0.000E+00	NOT IDENT.
BR-77	-4.245E+00	9.944E+00	1.450E+01	0.000E+00	FAIL ABUN
SR-82	-8.133E-02	5.260E-01	8.242E-01	0.000E+00	NOT IDENT.
RB-83	-3.750E-02	9.576E-02	1.401E-01	0.000E+00	NOT IDENT.
RB-84	-1.818E-02	8.927E-02	1.451E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.093E+01	1.756E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.529E-02	8.880E-02	0.000E+00	NOT IDENT.
RB-86	8.488E-01	9.121E-01	1.637E+00	0.000E+00	NOT IDENT.
Y-88	5.917E-03	5.077E-02	8.642E-02	0.000E+00	NOT IDENT.
ZR-88	-2.789E-02	3.948E-02	6.108E-02	0.000E+00	NOT IDENT.
Y-91	1.234E+00	2.524E+01	4.151E+01	0.000E+00	NOT IDENT.
NB-94	4.855E-03	4.660E-02	7.488E-02	0.000E+00	NOT IDENT.
NB-95	8.461E-02	5.820E-02	1.025E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	2.029E-01	3.097E-01	0.000E+00	NOT IDENT.
ZR-95	4.602E-02	9.636E-02	1.594E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.893E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.149E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.627E+00	1.104E+01	1.718E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.274E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.579E-02	4.047E-02	6.066E-02	0.000E+00	NOT IDENT.
RH-102	2.145E-02	3.783E-02	6.330E-02	0.000E+00	NOT IDENT.
RU-103	-2.514E-03	5.012E-02	8.038E-02	0.000E+00	FAIL ABUN
RH-106	1.118E-01	3.667E-01	6.028E-01	0.000E+00	FAIL ABUN
RU-106	1.118E-01	3.666E-01	6.028E-01	0.000E+00	FAIL ABUN
AG-108M	4.224E-03	4.478E-02	7.274E-02	0.000E+00	NOT IDENT.
AG-110M	5.257E-02	5.018E-02	7.772E-02	0.000E+00	NOT IDENT.
IN-111	2.700E-01	1.081E+00	1.482E+00	0.000E+00	NOT IDENT.
IN-113M	-4.022E-02	5.764E-02	8.926E-02	0.000E+00	NOT IDENT.
SN-113	-4.022E-02	5.764E-02	8.926E-02	0.000E+00	NOT IDENT.
IN-114M	6.282E-03	2.614E-01	3.542E-01	0.000E+00	NOT IDENT.
CD-115	-6.552E+00	9.553E+00	1.455E+01	0.000E+00	NOT IDENT.
SN-117M	6.062E-02	6.125E-02	9.928E-02	0.000E+00	NOT IDENT.
SB-122	8.316E-01	2.199E+00	3.175E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.304E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.140E-02	3.398E-02	5.356E-02	0.000E+00	NOT IDENT.
I-124	3.499E-01	8.110E-01	1.174E+00	0.000E+00	NOT IDENT.
SB-124	1.139E-03	9.166E-02	1.483E-01	0.000E+00	FAIL ABUN
SB-125	4.410E-02	1.200E-01	1.984E-01	0.000E+00	FAIL ABUN
TE-125M	-1.051E+01	1.253E+01	1.886E+01	0.000E+00	NOT IDENT.
I-126	7.900E-02	2.711E-01	3.856E-01	0.000E+00	NOT IDENT.
SB-126	-7.222E-02	1.842E-01	2.644E-01	0.000E+00	NOT IDENT.
SB-127	1.470E+00	1.340E+00	2.333E+00	0.000E+00	NOT IDENT.
XE-127	6.449E-02	5.858E-02	9.511E-02	0.000E+00	NOT IDENT.
I-131	-6.178E-02	1.292E-01	2.032E-01	0.000E+00	NOT IDENT.
TE-132	-3.553E-01	7.172E-01	9.978E-01	0.000E+00	NOT IDENT.
BA-133	-2.039E-02	6.089E-02	8.326E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.816E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.149E-01	6.865E-02	1.169E-01	0.000E+00	FAIL ABUN
CS-135	3.372E-01	1.952E-01	3.402E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.855E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.070E-01	1.335E-01	2.017E-01	0.000E+00	FAIL ABUN
CE-139	2.234E-02	3.642E-02	5.806E-02	0.000E+00	NOT IDENT.
BA-140	-9.313E-03	3.126E-01	5.010E-01	0.000E+00	NOT IDENT.
LA-140	-2.158E-03	1.282E-01	2.069E-01	0.000E+00	NOT IDENT.
CE-141	9.121E-03	7.660E-02	1.196E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.700E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	7.001E-02	2.542E-01	3.996E-01	0.000E+00	NOT IDENT.
PM-144	-1.558E-03	4.869E-02	7.743E-02	0.000E+00	NOT IDENT.
PR-144	-1.055E-01	3.297E+00	5.243E+00	0.000E+00	NOT IDENT.
PM-146	8.170E-03	6.312E-02	9.349E-02	0.000E+00	NOT IDENT.
ND-147	4.128E-01	6.857E-01	1.147E+00	0.000E+00	NOT IDENT.
PM-149	2.885E+01	7.199E+01	1.195E+02	0.000E+00	NOT IDENT.
EU-152	-8.692E-02	1.633E-01	1.900E-01	0.000E+00	FAIL ABUN
GD-153	1.167E-01	1.069E-01	1.541E-01	0.000E+00	FAIL ABUN
EU-154	-2.982E-02	1.452E-01	2.312E-01	0.000E+00	NOT IDENT.
EU-155	4.076E-03	1.369E-01	2.135E-01	0.000E+00	FAIL ABUN
TB-160	1.310E-02	1.790E-01	2.983E-01	0.000E+00	FAIL ABUN
HO-166M	-2.964E-02	8.377E-02	1.294E-01	0.000E+00	FAIL ABUN
TM-171	1.215E+01	3.373E+01	4.700E+01	0.000E+00	NOT IDENT.
LU-176	1.013E-02	3.260E-02	5.106E-02	0.000E+00	FAIL ABUN
LU-177	-1.684E-01	1.256E+00	1.931E+00	0.000E+00	NOT IDENT.
LU-177M	-2.202E-01	2.346E-01	3.568E-01	0.000E+00	NOT IDENT.
HF-181	-2.462E-02	5.683E-02	8.883E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	4.840E-01	7.212E-01	0.000E+00	NOT IDENT.
TA-182	-5.782E-02	2.508E-01	4.015E-01	0.000E+00	FAIL ABUN
RE-183	-1.254E-01	1.399E-01	1.975E-01	0.000E+00	NOT IDENT.
RE-184	-1.459E-02	3.015E-01	4.638E-01	0.000E+00	NOT IDENT.
OS-185	-1.706E-02	6.066E-02	9.479E-02	0.000E+00	NOT IDENT.
RE-188	-1.008E-02	2.119E-01	3.285E-01	0.000E+00	NOT IDENT.
W-188	-2.011E+00	1.017E+01	1.420E+01	0.000E+00	FAIL ABUN
IR-192	5.464E-04	4.321E-02	7.027E-02	0.000E+00	FAIL ABUN
AU-195	2.244E-01	3.115E-01	4.414E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.485E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.946E+00	6.592E+00	1.002E+01	0.000E+00	NOT IDENT.
TL-202	1.017E-02	8.458E-02	1.376E-01	0.000E+00	NOT IDENT.
HG-203	2.123E-02	5.169E-02	8.574E-02	0.000E+00	NOT IDENT.
BI-207	1.312E-02	7.154E-02	1.197E-01	0.000E+00	FAIL ABUN
TL-207	-1.237E+00	8.870E-01	1.297E+00	0.000E+00	FAIL ABUN
PO-209	3.051E+00	9.936E+00	1.687E+01	0.000E+00	NOT IDENT.
PB-211	-1.859E-01	1.268E+00	2.026E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.747E-01	8.128E-01	0.000E+00	FAIL ABUN
PO-215	-1.237E+00	8.870E-01	1.297E+00	0.000E+00	FAIL ABUN
RN-219	-2.778E-02	5.470E-01	8.823E-01	0.000E+00	NOT IDENT.
RN-220	-7.808E+00	3.318E+01	5.227E+01	0.000E+00	NOT IDENT.
RA-223	-1.237E+00	8.870E-01	1.297E+00	0.000E+00	FAIL ABUN
AC-227	5.443E-03	4.707E-01	7.681E-01	0.000E+00	FAIL ABUN
TH-227	5.443E-03	4.707E-01	7.681E-01	0.000E+00	FAIL ABUN
TH-229	8.777E-02	6.396E-01	9.970E-01	0.000E+00	FAIL ABUN
PA-231	-1.213E+00	1.893E+00	2.969E+00	0.000E+00	FAIL ABUN
TH-231	-1.237E+00	8.870E-01	1.297E+00	0.000E+00	FAIL ABUN
U-231	3.546E-01	1.228E+00	1.702E+00	0.000E+00	FAIL ABUN
PA-233	-5.874E-02	8.056E-02	1.256E-01	0.000E+00	FAIL ABUN
PA-234	-2.955E-02	4.441E-01	7.294E-01	0.000E+00	FAIL ABUN
PA-234M	8.461E+00	9.952E+00	1.692E+01	0.000E+00	NOT IDENT.
U-235	3.756E-02	2.915E-01	4.289E-01	0.000E+00	FAIL ABUN
NP-236	-1.585E-01	9.886E-02	1.413E-01	0.000E+00	NOT IDENT.
NP-239	-1.163E-01	2.431E-01	3.708E-01	0.000E+00	NOT IDENT.
AM-241	2.742E-02	1.891E-01	2.550E-01	0.000E+00	NOT IDENT.
CM-243	6.256E-02	1.212E-01	1.925E-01	0.000E+00	NOT IDENT.
CM-247	-1.250E-02	4.954E-02	7.895E-02	0.000E+00	NOT IDENT.
CF-249	-2.136E-02	5.314E-02	8.399E-02	0.000E+00	NOT IDENT.
CF-251	7.304E-02	1.587E-01	2.512E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:40:54.32

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433009.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:40:18.
Sample ID         : G232433009           Sample quantity  : 5.86600E+01 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 03:00:00.00         Elapsed real time: 0 03:00:01.34  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	745	10.67*	1.211E+00	2.459E+01	2.459E+01	11.46
CD-109	88.03	237	3.72*	7.053E+00	3.861E+00	3.941E+00	35.32
SN-126	64.28	328	9.60	4.640E+00	3.137E+00	3.137E+00	31.89
	86.94	237	8.90	7.053E+00	1.614E+00	1.614E+00	53.70
	87.57	237	37.00*	7.053E+00	3.882E-01	3.882E-01	35.32
BA-137M	661.65	203	89.98*	2.470E+00	3.905E-01	3.909E-01	25.74
CS-137	661.65	203	85.12*	2.470E+00	4.128E-01	4.132E-01	25.75
TL-208	277.35	------	6.80	5.002E+00	------ Line Not Found		------
	510.84	76	21.60	3.089E+00	4.867E-01	4.867E-01	101.64
	583.14	311	84.20*	2.759E+00	5.718E-01	5.718E-01	19.34
	860.37	31	12.46	1.944E+00	5.528E-01	5.528E-01	103.37
BI-210	46.50	12	4.05*	1.859E+00	6.917E-01	6.926E-01	612.51
PB-210	46.50	12	4.05*	1.859E+00	6.917E-01	6.926E-01	612.51
PO-210	46.50	12	4.05*	1.859E+00	6.917E-01	6.926E-01	612.49
BI-211	72.87	------	1.27	5.875E+00	------ Line Not Found		------
	351.07	455	12.94*	4.180E+00	3.587E+00	3.587E+00	17.00
PB-212	74.81	435	10.70	6.092E+00	2.846E+00	2.846E+00	25.04
	77.11	585	18.00	6.310E+00	2.197E+00	2.197E+00	17.40
	87.30	237	8.00	7.053E+00	1.795E+00	1.795E+00	36.71
	238.63	889	44.60*	5.570E+00	1.527E+00	1.527E+00	11.78
	300.09	63	3.41	4.721E+00	1.679E+00	1.679E+00	77.46
PO-212	74.81	435	10.70	6.092E+00	2.846E+00	2.846E+00	25.04
	77.11	585	18.00	6.310E+00	2.197E+00	2.197E+00	17.40
	87.30	237	8.00	7.053E+00	1.795E+00	1.795E+00	36.71
	115.19	------	0.60	7.689E+00	------ Line Not Found		------
	238.63	889	44.60*	5.570E+00	1.527E+00	1.527E+00	11.78
	300.09	63	3.41	4.721E+00	1.679E+00	1.679E+00	77.46
BI-214	609.31	337	46.30*	2.656E+00	1.170E+00	1.170E+00	18.63
	768.36	------	5.04	2.157E+00	------ Line Not Found		------
	934.06	------	3.21	1.802E+00	------ Line Not Found		------
	1120.29	80	15.10	1.523E+00	1.488E+00	1.488E+00	52.84
	1238.11	------	5.94	1.393E+00	------ Line Not Found		------

Sample ID : G232433009 Acquisition date : 7-JUL-2009 06:40:18

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	30	4.11	1.270E+00	2.470E+00	2.470E+00	75.02
	1764.49	73	15.80	1.059E+00	1.848E+00	1.848E+00	30.45
PB-214	74.81	435	6.21	6.092E+00	4.905E+00	4.905E+00	24.38
	77.11	585	10.50	6.310E+00	3.766E+00	3.766E+00	18.99
	87.30	237	4.67	7.053E+00	3.075E+00	3.075E+00	36.16
	241.98	253	7.49	5.525E+00	2.606E+00	2.606E+00	30.98
	295.21	284	19.20	4.779E+00	1.319E+00	1.319E+00	23.83
	351.92	455	37.20*	4.180E+00	1.248E+00	1.248E+00	17.78
PO-214	74.81	435	6.21	6.092E+00	4.905E+00	4.905E+00	24.38
	77.11	585	10.50	6.310E+00	3.766E+00	3.766E+00	18.99
	87.30	237	4.67	7.053E+00	3.075E+00	3.075E+00	36.16
	241.98	253	7.49	5.525E+00	2.606E+00	2.606E+00	30.98
	295.21	284	19.20	4.779E+00	1.319E+00	1.319E+00	23.83
	351.92	455	37.20*	4.180E+00	1.248E+00	1.248E+00	17.78
PO-216	74.81	435	10.70	6.092E+00	2.846E+00	2.846E+00	25.04
	77.11	585	18.00	6.310E+00	2.197E+00	2.197E+00	17.40
	87.30	237	8.00	7.053E+00	1.795E+00	1.795E+00	36.71
	238.63	889	44.60*	5.570E+00	1.527E+00	1.527E+00	11.78
	300.09	63	3.41	4.721E+00	1.679E+00	1.679E+00	77.46
PO-218	74.81	435	6.21	6.092E+00	4.905E+00	4.905E+00	24.38
	77.11	585	10.50	6.310E+00	3.766E+00	3.766E+00	18.99
	87.30	237	4.67	7.053E+00	3.075E+00	3.075E+00	36.16
	241.98	253	7.49	5.525E+00	2.606E+00	2.606E+00	30.98
	295.21	284	19.20	4.779E+00	1.319E+00	1.319E+00	23.83
	351.92	455	37.20*	4.180E+00	1.248E+00	1.248E+00	17.78
RA-224	240.98	253	3.95*	5.525E+00	4.942E+00	4.942E+00	30.47
RA-226	609.31	337	46.30*	2.656E+00	1.170E+00	1.170E+00	18.63
	768.36	------	5.04	2.157E+00	------ Line Not Found		------
	934.06	------	3.21	1.802E+00	------ Line Not Found		------
	1120.29	80	15.10	1.523E+00	1.488E+00	1.488E+00	52.84
	1238.11	------	5.94	1.393E+00	------ Line Not Found		------
	1377.67	30	4.11	1.270E+00	2.470E+00	2.470E+00	75.02
	1764.49	73	15.80	1.059E+00	1.848E+00	1.848E+00	30.45
AC-228	338.32	158	11.40	4.311E+00	1.372E+00	1.372E+00	55.77
	911.07	193	27.70*	1.844E+00	1.609E+00	1.609E+00	27.83
	969.11	84	16.60	1.741E+00	1.237E+00	1.237E+00	61.74
RA-228	338.32	158	11.40	4.311E+00	1.372E+00	1.372E+00	55.77
	911.07	193	27.70*	1.844E+00	1.609E+00	1.609E+00	27.83
	969.11	84	16.60	1.741E+00	1.237E+00	1.237E+00	61.74
TH-228	84.40	135	1.21	6.869E+00	6.926E+00	6.926E+00	59.44
	238.60	889	44.60*	5.570E+00	1.527E+00	1.527E+00	11.78
	300.10	63	3.41	4.721E+00	1.679E+00	1.679E+00	96.98
TH-230	609.31	337	46.30*	2.656E+00	1.170E+00	1.170E+00	18.63
	768.36	------	5.04	2.157E+00	------ Line Not Found		------
	934.06	------	3.21	1.802E+00	------ Line Not Found		------
	1120.29	80	15.10	1.523E+00	1.488E+00	1.488E+00	52.84
	1238.11	------	5.94	1.393E+00	------ Line Not Found		------
	1377.67	30	4.11	1.270E+00	2.470E+00	2.470E+00	75.02
	1764.49	73	15.80	1.059E+00	1.848E+00	1.848E+00	30.45

Sample ID : G232433009 Acquisition date : 7-JUL-2009 06:40:18

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-232	338.32	158	11.40	4.311E+00	1.372E+00	1.372E+00	38.50
	911.07	193	27.70*	1.844E+00	1.609E+00	1.609E+00	27.83
	969.11	84	16.60	1.741E+00	1.237E+00	1.237E+00	61.74
TH-234	63.29	328	3.80*	4.640E+00	7.924E+00	7.924E+00	33.31
	92.38	689	5.41	7.310E+00	7.428E+00	7.428E+00	22.71
U-234	609.31	337	46.30*	2.656E+00	1.170E+00	1.170E+00	18.63
	768.36	------	5.04	2.157E+00	------	Line Not Found	------
	934.06	------	3.21	1.802E+00	------	Line Not Found	------
	1120.29	80	15.10	1.523E+00	1.488E+00	1.488E+00	52.84
	1238.11	------	5.94	1.393E+00	------	Line Not Found	------
	1377.67	30	4.11	1.270E+00	2.470E+00	2.470E+00	75.02
	1764.49	73	15.80	1.059E+00	1.848E+00	1.848E+00	30.45
NP-237	86.50	237	12.60*	7.053E+00	1.140E+00	1.140E+00	40.91
	95.87	------	2.60	7.425E+00	------	Line Not Found	------
U-238	63.29	328	3.80*	4.640E+00	7.924E+00	7.924E+00	33.31
	92.38	689	5.41	7.310E+00	7.428E+00	7.428E+00	16.22
AM-243	74.67	435	66.00*	6.092E+00	4.615E-01	4.615E-01	23.23
	86.72	237	0.34	7.053E+00	4.274E+01	4.274E+01	35.32
	117.66	------	0.55	7.685E+00	------	Line Not Found	------
	142.18	------	0.13	7.399E+00	------	Line Not Found	------
ANH-511	511.00	76	100.00*	3.089E+00	1.051E-01	1.051E-01	101.30

Flag: "*" = Keyline

Sample ID : G232433009 Acquisition date : 7-JUL-2009 06:40:18

Total number of lines in spectrum 31
Number of unidentified lines 1
Number of lines tentatively identified by NID 30 96.77%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.459E+01	2.459E+01	0.282E+01	11.46	
CD-109	464.00D	1.02	3.861E+00	3.941E+00	1.392E+00	35.32	
SN-126	1.00E+05Y	1.00	3.882E-01	3.882E-01	1.371E-01	35.32	
BA-137M	30.17Y	1.00	3.905E-01	3.909E-01	1.006E-01	25.74	
CS-137	30.17Y	1.00	4.128E-01	4.132E-01	1.064E-01	25.75	
TL-208	1.41E+10Y	1.00	5.718E-01	5.718E-01	1.106E-01	19.34	
BI-210	22.26Y	1.00	6.917E-01	6.926E-01	42.42E-01	612.51	
PB-210	22.26Y	1.00	6.917E-01	6.926E-01	42.42E-01	612.51	
PO-210	22.26Y	1.00	6.917E-01	6.926E-01	42.42E-01	612.49	
BI-211	7.04E+08Y	1.00	3.587E+00	3.587E+00	0.610E+00	17.00	
PB-212	1.41E+10Y	1.00	1.527E+00	1.527E+00	0.180E+00	11.78	
PO-212	1.41E+10Y	1.00	1.527E+00	1.527E+00	0.180E+00	11.78	
BI-214	1600.00Y	1.00	1.170E+00	1.170E+00	0.218E+00	18.63	
PB-214	1600.00Y	1.00	1.248E+00	1.248E+00	0.222E+00	17.78	
PO-214	1600.00Y	1.00	1.248E+00	1.248E+00	0.222E+00	17.78	
PO-216	1.41E+10Y	1.00	1.527E+00	1.527E+00	0.180E+00	11.78	
PO-218	1600.00Y	1.00	1.248E+00	1.248E+00	0.222E+00	17.78	
RA-224	1.41E+10Y	1.00	4.942E+00	4.942E+00	1.506E+00	30.47	
RA-226	1600.00Y	1.00	1.170E+00	1.170E+00	0.218E+00	18.63	
AC-228	1.41E+10Y	1.00	1.609E+00	1.609E+00	0.448E+00	27.83	
RA-228	1.41E+10Y	1.00	1.609E+00	1.609E+00	0.448E+00	27.83	
TH-228	1.41E+10Y	1.00	1.527E+00	1.527E+00	0.180E+00	11.78	
TH-230	4.47E+09Y	1.00	1.170E+00	1.170E+00	0.218E+00	18.63	
TH-232	1.41E+10Y	1.00	1.609E+00	1.609E+00	0.448E+00	27.83	
TH-234	4.47E+09Y	1.00	7.924E+00	7.924E+00	2.640E+00	33.31	
U-234	4.47E+09Y	1.00	1.170E+00	1.170E+00	0.218E+00	18.63	
NP-237	2.14E+06Y	1.00	1.140E+00	1.140E+00	0.466E+00	40.91	
U-238	4.47E+09Y	1.00	7.924E+00	7.924E+00	2.640E+00	33.31	
AM-243	7380.00Y	1.00	4.615E-01	4.615E-01	1.072E-01	23.23	
ANH-511	1.00E+09Y	1.00	1.051E-01	1.051E-01	1.065E-01	101.30	
	Total Activity :		7.774E+01	7.782E+01			

Grand Total Activity : 7.774E+01 7.782E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433009 Acquisition date : 7-JUL-2009 06:40:18

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.67	254	250	1.47	370.85	366	9	2.35E-02	27.4	6.53E+00	T
0	463.93	62	161	2.74	927.00	915	16	5.75E-03	94.6	3.35E+00	T
0	567.85	110	81	1.17	1134.75	1128	12	1.02E-02	40.7	2.82E+00	T
0	727.15	65	52	1.24	1453.26	1449	9	5.98E-03	46.3	2.27E+00	T
0	794.66	43	38	1.53	1588.25	1583	9	3.96E-03	60.5	2.09E+00	T
0	1408.08	31	10	1.17	2815.43	2811	13	2.83E-03	55.9	1.25E+00	T
0	1729.42	16	8	0.63	3458.63	3454	8	1.48E-03	79.1	1.07E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:40:59.69

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433009.CNF;1 *
* Acquisition date  : 7-JUL-2009 06:40:18.  Detector SN#     :             *
* Detector ID       : GAM14                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 03:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 03:00:01.34          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433009            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 5.86600E+01 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 6-MAR-2009 11:43:06.61MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.459E+01	2.819E+00	7.007E-01	5.088E-02	35.100
CD-109	3.941E+00	1.392E+00	1.548E+00	1.354E-01	2.546
SN-126	3.882E-01	1.371E-01	1.530E-01	1.331E-02	2.537
BA-137M	3.909E-01	1.006E-01	8.102E-02	4.817E-03	4.825
CS-137	4.132E-01	1.064E-01	8.564E-02	5.113E-03	4.825
TL-208	5.718E-01	1.106E-01	7.350E-02	5.027E-03	7.779
BI-210	6.926E-01	4.242E+00	5.005E+00	3.711E-01	0.138
PB-210	6.926E-01	4.242E+00	5.005E+00	3.711E-01	0.138
PO-210	6.926E-01	4.242E+00	5.005E+00	3.140E-01	0.138
BI-211	3.587E+00	6.099E-01	4.444E-01	2.816E-02	8.072
PB-212	1.527E+00	1.799E-01	1.163E-01	8.468E-03	13.138
PO-212	1.527E+00	1.799E-01	1.163E-01	8.468E-03	13.138
BI-214	1.170E+00	2.181E-01	1.506E-01	1.192E-02	7.770
PB-214	1.248E+00	2.219E-01	1.549E-01	1.271E-02	8.055
PO-214	1.248E+00	2.219E-01	1.549E-01	1.271E-02	8.055
PO-216	1.527E+00	1.799E-01	1.163E-01	8.468E-03	13.138
PO-218	1.248E+00	2.219E-01	1.549E-01	1.271E-02	8.055
RA-224	4.942E+00	1.506E+00	1.322E+00	7.602E-02	3.737

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	1.170E+00	2.181E-01	1.506E-01	1.192E-02	7.770
AC-228	1.609E+00	4.478E-01	2.630E-01	3.089E-02	6.116
RA-228	1.609E+00	4.478E-01	2.630E-01	3.089E-02	6.116
TH-228	1.527E+00	1.799E-01	1.162E-01	8.467E-03	13.139
TH-230	1.170E+00	2.181E-01	1.506E-01	1.192E-02	7.770
TH-232	1.609E+00	4.478E-01	2.630E-01	3.089E-02	6.116
TH-234	7.924E+00	2.640E+00	2.356E+00	4.050E-01	3.363
U-234	1.170E+00	2.181E-01	1.506E-01	1.192E-02	7.770
NP-237	1.140E+00	4.663E-01	4.529E-01	1.012E-01	2.517
U-238	7.924E+00	2.640E+00	2.356E+00	4.050E-01	3.363
AM-243	4.615E-01	1.072E-01	1.045E-01	7.844E-03	4.415
ANH-511	1.051E-01	1.065E-01	6.275E-02	3.687E-03	1.675

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.245E-01		4.332E-01	6.873E-01	4.632E-02	-0.327
NA-22	-1.124E-02		5.292E-02	8.454E-02	5.523E-03	-0.133
NA-24	1.378E-01		1.209E-01	Half-Life too short		
AL-26	1.398E-02		3.818E-02	6.826E-02	3.957E-03	0.205
TI-44	4.053E-01	+	7.053E-02	9.818E-02	7.666E-03	4.129
SC-46	2.712E-02		5.186E-02	9.071E-02	8.382E-03	0.299
V-48	4.845E-02		8.804E-02	1.541E-01	1.308E-02	0.314
CR-51	1.947E-02		4.711E-01	7.902E-01	5.106E-02	0.025
MN-52	-1.555E-01		2.873E-01	4.310E-01	3.021E-02	-0.361
MN-54	-1.430E-02		5.176E-02	8.495E-02	7.125E-03	-0.168
CO-56	-4.559E-02		5.115E-02	7.848E-02	6.727E-03	-0.581
CO-57	1.625E-03		3.069E-02	5.022E-02	3.573E-03	0.032
CO-58	-3.205E-02		5.095E-02	7.622E-02	6.133E-03	-0.421
FE-59	-2.764E-03		1.170E-01	1.932E-01	1.487E-02	-0.014
CO-60	1.368E-02		5.411E-02	9.125E-02	6.503E-03	0.150
ZN-65	-5.320E-02		1.326E-01	1.770E-01	1.164E-02	-0.300
GE-68	1.725E+00		1.591E+00	2.909E+00	2.091E-01	0.593
AS-73	8.458E-03		8.080E-01	1.344E+00	8.763E-02	0.006
AS-74	9.332E-02		1.148E-01	1.990E-01	1.190E-02	0.469
SE-75	-8.503E-02		5.384E-02	8.277E-02	4.860E-03	-1.027
BR-77	-4.245E+00		1.015E+01	1.510E+01	8.902E-01	-0.281
SR-82	-8.133E-02		5.367E-01	8.521E-01	6.406E-02	-0.095
RB-83	-3.750E-02		9.771E-02	1.459E-01	8.601E-03	-0.257
RB-84	-1.818E-02		9.109E-02	1.496E-01	1.364E-02	-0.121
KR-85	1.978E+01		1.116E+01	1.829E+01	1.076E+00	1.081
SR-85	1.000E-01		5.642E-02	9.250E-02	5.441E-03	1.081
RB-86	8.488E-01		9.307E-01	1.682E+00	1.211E-01	0.505
Y-88	5.917E-03		5.181E-02	8.799E-02	4.997E-03	0.067
ZR-88	-2.789E-02		4.028E-02	6.394E-02	3.482E-03	-0.436
Y-91	1.234E+00		2.576E+01	4.257E+01	2.477E+00	0.029
NB-94	4.855E-03		4.755E-02	7.755E-02	5.030E-03	0.063

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	8.461E-02		5.939E-02	1.060E-01	7.804E-03	0.798
NB-95M	5.552E-01		2.071E-01	3.273E-01	2.447E-02	1.696
ZR-95	4.602E-02		9.833E-02	1.649E-01	1.360E-02	0.279
NB-97	5.444E-02		1.986E-02	Half-Life too short		
ZR-97	2.404E+00		4.158E-01	Half-Life too short		
MO-99	-2.627E+00		1.127E+01	1.777E+01	2.546E+00	-0.148
TC-99M	-1.616E+08		6.498E+08	Half-Life too short		
RH-101	-2.579E-02		4.129E-02	6.433E-02	3.569E-03	-0.401
RH-102	2.145E-02		3.861E-02	6.603E-02	3.816E-03	0.325
RU-103	-2.514E-03		5.114E-02	8.378E-02	1.061E-02	-0.030
RH-106	1.118E-01		3.742E-01	6.258E-01	7.401E-02	0.179
RU-106	1.118E-01		3.741E-01	6.258E-01	3.742E-02	0.179
AG-108M	4.224E-03		4.570E-02	7.601E-02	4.669E-03	0.056
AG-110M	5.257E-02		5.120E-02	8.059E-02	5.091E-03	0.652
IN-111	2.700E-01		1.103E+00	1.565E+00	9.019E-02	0.172
IN-113M	-4.022E-02		5.882E-02	9.345E-02	5.468E-03	-0.430
SN-113	-4.022E-02		5.882E-02	9.345E-02	5.468E-03	-0.430
IN-114M	6.282E-03		2.668E-01	3.759E-01	2.069E-02	0.017
CD-115	-6.552E+00		9.748E+00	1.514E+01	8.950E-01	-0.433
SN-117M	6.062E-02		6.250E-02	1.057E-01	5.981E-03	0.573
SB-122	8.316E-01		2.243E+00	3.301E+00	1.968E-01	0.252
I-123	4.373E-01		6.652E-01	Half-Life too short		
TE-123M	1.140E-02		3.467E-02	5.704E-02	3.262E-03	0.200
I-124	3.499E-01		8.276E-01	1.219E+00	7.292E-02	0.287
SB-124	1.139E-03		9.353E-02	1.512E-01	1.022E-02	0.008
SB-125	4.410E-02		1.225E-01	2.073E-01	1.215E-02	0.213
TE-125M	-1.051E+01		1.279E+01	2.023E+01	1.898E+00	-0.519
I-126	7.900E-02		2.766E-01	3.998E-01	2.401E-02	0.198
SB-126	-7.222E-02		1.880E-01	2.737E-01	1.842E-02	-0.264
SB-127	1.470E+00		1.367E+00	2.417E+00	2.242E-01	0.608
XE-127	6.449E-02		5.978E-02	1.008E-01	5.620E-03	0.640
I-131	-6.178E-02		1.318E-01	2.131E-01	1.343E-02	-0.290
TE-132	-3.553E-01		7.319E-01	1.055E+00	1.484E-01	-0.337
BA-133	-2.039E-02		6.213E-02	8.733E-02	1.004E-02	-0.233
I-133	-5.329E-04		1.437E-03	Half-Life too short		
CS-134	1.149E-01	+	7.005E-02	1.208E-01	9.507E-03	0.951
CS-135	3.372E-01		1.992E-01	3.587E-01	2.751E-02	0.940
I-135	-1.291E+08		1.457E+08	Half-Life too short		
CS-136	-1.070E-01		1.362E-01	2.074E-01	1.668E-02	-0.516
CE-139	2.234E-02		3.716E-02	6.178E-02	3.317E-03	0.362
BA-140	-9.313E-03		3.190E-01	5.214E-01	1.697E-01	-0.018
LA-140	-2.158E-03		1.308E-01	2.112E-01	1.400E-02	-0.010
CE-141	9.121E-03		7.816E-02	1.276E-01	8.144E-03	0.071
CE-143	5.935E-04		8.672E-05	Half-Life too short		
CE-144	7.001E-02		2.593E-01	4.270E-01	6.216E-02	0.164
PM-144	-1.558E-03		4.968E-02	8.021E-02	5.138E-03	-0.019
PR-144	-1.055E-01		3.364E+00	5.431E+00	3.478E-01	-0.019
PM-146	8.170E-03		6.440E-02	9.761E-02	8.356E-03	0.084

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	4.128E-01		6.997E-01	1.194E+00	1.620E-01	0.346
PM-149	2.885E+01		7.345E+01	1.258E+02	1.785E+01	0.229
EU-152	-8.692E-02		1.667E-01	1.994E-01	1.290E-02	-0.436
GD-153	1.167E-01		1.091E-01	1.657E-01	1.329E-02	0.704
EU-154	-2.982E-02		1.481E-01	2.370E-01	2.323E-02	-0.126
EU-155	4.076E-03		1.397E-01	2.291E-01	1.774E-02	0.018
TB-160	1.310E-02		1.827E-01	3.077E-01	2.795E-02	0.043
HO-166M	-2.964E-02		8.548E-02	1.340E-01	8.855E-03	-0.221
TM-171	1.215E+01		3.442E+01	5.091E+01	3.550E+00	0.239
LU-176	1.013E-02		3.327E-02	5.370E-02	3.127E-03	0.189
LU-177	-1.684E-01		1.281E+00	2.046E+00	1.147E-01	-0.082
LU-177M	-2.202E-01		2.393E-01	3.732E-01	2.069E-02	-0.590
HF-181	-2.462E-02		5.799E-02	9.264E-02	5.373E-03	-0.266
W-181	1.211E+00		4.939E-01	7.815E-01	5.385E-02	1.549
TA-182	-5.782E-02		2.559E-01	4.117E-01	2.462E-02	-0.140
RE-183	-1.254E-01		1.428E-01	2.103E-01	1.158E-02	-0.596
RE-184	-1.459E-02		3.076E-01	4.895E-01	2.832E-02	-0.030
OS-185	-1.706E-02		6.190E-02	9.832E-02	5.864E-03	-0.173
RE-188	-1.008E-02		2.163E-01	3.500E-01	2.028E-02	-0.029
W-188	-2.011E+00		1.038E+01	1.495E+01	8.725E-01	-0.134
IR-192	5.464E-04		4.409E-02	7.387E-02	4.311E-03	0.007
AU-195	2.244E-01		3.178E-01	4.744E-01	3.764E-02	0.473
TL-200	1.043E-05		1.268E-04	Half-Life too short		
TL-201	-2.946E+00		6.726E+00	1.066E+01	5.726E-01	-0.276
TL-202	1.017E-02		8.630E-02	1.438E-01	8.129E-03	0.071
HG-203	2.123E-02		5.274E-02	9.033E-02	5.589E-03	0.235
BI-207	1.312E-02		7.300E-02	1.230E-01	9.103E-03	0.107
TL-207	-1.237E+00		9.051E-01	1.363E+00	2.250E-01	-0.907
PO-209	3.051E+00		1.014E+01	1.740E+01	1.628E+00	0.175
PB-211	-1.859E-01		1.294E+00	2.120E+00	1.321E+00	-0.088
BI-212	1.029E+00	+	4.843E-01	8.413E-01	7.157E-02	1.223
PO-215	-1.237E+00		9.051E-01	1.363E+00	2.250E-01	-0.907
RN-219	-2.778E-02		5.582E-01	9.233E-01	1.244E-01	-0.030
RN-220	-7.808E+00		3.386E+01	5.438E+01	3.233E+00	-0.144
RA-223	-1.237E+00		9.051E-01	1.363E+00	2.250E-01	-0.907
AC-227	5.443E-03		4.803E-01	8.106E-01	1.131E-01	0.007
TH-227	5.443E-03		4.803E-01	8.106E-01	1.370E-01	0.007
TH-229	8.777E-02		6.526E-01	1.058E+00	5.842E-02	0.083
PA-231	-1.213E+00		1.931E+00	3.127E+00	4.313E-01	-0.388
TH-231	-1.237E+00		9.051E-01	1.363E+00	2.250E-01	-0.907
U-231	3.546E-01		1.253E+00	1.831E+00	1.486E-01	0.194
PA-233	-5.874E-02		8.220E-02	1.321E-01	8.156E-03	-0.445
PA-234	-2.955E-02		4.531E-01	7.515E-01	1.420E-01	-0.039
PA-234M	8.461E+00		1.015E+01	1.741E+01	1.901E+00	0.486
U-235	3.756E-02		2.975E-01	4.576E-01	7.534E-02	0.082
NP-236	-1.585E-01		1.009E-01	1.505E-01	8.408E-03	-1.053
NP-239	-1.163E-01		2.480E-01	3.973E-01	2.871E-02	-0.293
AM-241	2.742E-02		1.930E-01	2.768E-01	2.055E-02	0.099

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	6.256E-02		1.237E-01	2.067E-01	1.589E-02	0.303
CM-247	-1.250E-02		5.055E-02	8.261E-02	4.538E-03	-0.151
CF-249	-2.136E-02		5.423E-02	8.795E-02	4.809E-03	-0.243
CF-251	7.304E-02		1.619E-01	2.670E-01	1.448E-02	0.274

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433009           *
* Acquisition date  :  7-JUL-2009 06:40:18 Detector SN#     :               *
* Detector ID       : GAM14                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 03:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 03:00:01.34     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433009           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 5.8660E+01 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  6-MAR-2009 11:43:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.459E+01	2.763E+00	3.429E-01	1.410E+00
CD-109	3.941E+00	1.364E+00	7.191E-01	6.961E-01
SN-126	3.882E-01	1.344E-01	7.104E-02	6.856E-02
BA-137M	3.909E-01	9.860E-02	3.909E-02	5.031E-02
CS-137	4.132E-01	1.043E-01	4.132E-02	5.319E-02
TL-208	5.718E-01	1.084E-01	3.538E-02	5.530E-02
BI-210	6.926E-01	4.157E+00	2.295E+00	2.121E+00
PB-210	6.926E-01	4.157E+00	2.295E+00	2.121E+00
PO-210	6.926E-01	4.157E+00	2.295E+00	2.121E+00
BI-211	3.587E+00	5.977E-01	2.119E-01	3.049E-01
PB-212	1.527E+00	1.763E-01	5.504E-02	8.996E-02
PO-212	1.527E+00	1.763E-01	5.504E-02	8.996E-02
BI-214	1.170E+00	2.137E-01	7.257E-02	1.090E-01
PB-214	1.248E+00	2.175E-01	7.388E-02	1.110E-01
PO-214	1.248E+00	2.175E-01	7.388E-02	1.110E-01
PO-216	1.527E+00	1.763E-01	5.504E-02	8.996E-02
PO-218	1.248E+00	2.175E-01	7.388E-02	1.110E-01
RA-224	4.942E+00	1.475E+00	6.262E-01	7.528E-01
RA-226	1.170E+00	2.137E-01	7.257E-02	1.090E-01
AC-228	1.609E+00	4.389E-01	1.277E-01	2.239E-01
RA-228	1.609E+00	4.389E-01	1.277E-01	2.239E-01
TH-228	1.527E+00	1.763E-01	5.504E-02	8.996E-02
TH-230	1.170E+00	2.137E-01	7.257E-02	1.090E-01
TH-232	1.609E+00	4.389E-01	1.277E-01	2.239E-01
TH-234	7.924E+00	2.587E+00	1.087E+00	1.320E+00
U-234	1.170E+00	2.137E-01	7.257E-02	1.090E-01
NP-237	1.140E+00	4.570E-01	2.102E-01	2.331E-01
U-238	7.924E+00	2.587E+00	1.087E+00	1.320E+00
AM-243	4.615E-01	1.051E-01	4.839E-02	5.360E-02
ANH-511	1.051E-01	1.044E-01	3.014E-02	5.324E-02

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-2.245E-01	4.246E-01	3.297E-01	2.166E-01	NOT IDENT.
NA-22	-1.124E-02	5.186E-02	4.128E-02	2.646E-02	NOT IDENT.
NA-24	1.378E+05	2.370E+05	0.000E+00	1.209E+05	SHORT HLIF
AL-26	1.398E-02	3.742E-02	3.353E-02	1.909E-02	NOT IDENT.
TI-44	4.053E-01	6.912E-02	4.549E-02	3.526E-02	FAIL ABUN
SC-46	2.712E-02	5.083E-02	4.400E-02	2.593E-02	FAIL ABUN
V-48	4.845E-02	8.628E-02	7.487E-02	4.402E-02	NOT IDENT.
CR-51	1.947E-02	4.617E-01	3.762E-01	2.356E-01	NOT IDENT.
MN-52	-1.555E-01	2.816E-01	2.109E-01	1.437E-01	NOT IDENT.
MN-54	-1.430E-02	5.073E-02	4.116E-02	2.588E-02	NOT IDENT.
CO-56	-4.559E-02	5.012E-02	3.804E-02	2.557E-02	NOT IDENT.
CO-57	1.625E-03	3.007E-02	2.347E-02	1.534E-02	NOT IDENT.
CO-58	-3.205E-02	4.993E-02	3.691E-02	2.548E-02	NOT IDENT.
FE-59	-2.764E-03	1.147E-01	9.406E-02	5.852E-02	NOT IDENT.
CO-60	1.368E-02	5.303E-02	4.459E-02	2.706E-02	NOT IDENT.
ZN-65	-5.320E-02	1.299E-01	8.623E-02	6.629E-02	NOT IDENT.
GE-68	1.725E+00	1.559E+00	1.416E+00	7.956E-01	NOT IDENT.
AS-73	8.458E-03	7.918E-01	6.181E-01	4.040E-01	NOT IDENT.
AS-74	9.332E-02	1.125E-01	9.583E-02	5.740E-02	NOT IDENT.
SE-75	-8.503E-02	5.276E-02	3.927E-02	2.692E-02	NOT IDENT.
BR-77	-4.245E+00	9.944E+00	7.254E+00	5.074E+00	FAIL ABUN
SR-82	-8.133E-02	5.260E-01	4.123E-01	2.683E-01	NOT IDENT.
RB-83	-3.750E-02	9.576E-02	7.009E-02	4.886E-02	NOT IDENT.
RB-84	-1.818E-02	8.927E-02	7.258E-02	4.555E-02	NOT IDENT.
KR-85	1.978E+01	1.093E+01	8.786E+00	5.578E+00	NOT IDENT.
SR-85	1.000E-01	5.529E-02	4.443E-02	2.821E-02	NOT IDENT.
RB-86	8.488E-01	9.121E-01	8.190E-01	4.654E-01	NOT IDENT.
Y-88	5.917E-03	5.077E-02	4.324E-02	2.590E-02	NOT IDENT.
ZR-88	-2.789E-02	3.948E-02	3.056E-02	2.014E-02	NOT IDENT.
Y-91	1.234E+00	2.524E+01	2.077E+01	1.288E+01	NOT IDENT.
NB-94	4.855E-03	4.660E-02	3.746E-02	2.377E-02	NOT IDENT.
NB-95	8.461E-02	5.820E-02	5.127E-02	2.969E-02	NOT IDENT.
NB-95M	5.552E-01	2.029E-01	1.549E-01	1.035E-01	NOT IDENT.
ZR-95	4.602E-02	9.636E-02	7.976E-02	4.916E-02	NOT IDENT.
NB-97	5.444E+04	3.893E+04	0.000E+00	1.986E+04	SHORT HLIF
ZR-97	2.404E+06	8.149E+05	0.000E+00	4.158E+05	SHORT HLIF
MO-99	-2.627E+00	1.104E+01	8.593E+00	5.635E+00	NOT IDENT.
TC-99M	-1.616E+14	1.274E+15	0.000E+00	6.498E+14	SHORT HLIF
RH-101	-2.579E-02	4.047E-02	3.035E-02	2.065E-02	NOT IDENT.
RH-102	2.145E-02	3.783E-02	3.167E-02	1.930E-02	NOT IDENT.
RU-103	-2.514E-03	5.012E-02	4.021E-02	2.557E-02	FAIL ABUN
RH-106	1.118E-01	3.667E-01	3.016E-01	1.871E-01	FAIL ABUN
RU-106	1.118E-01	3.666E-01	3.016E-01	1.870E-01	FAIL ABUN
AG-108M	4.224E-03	4.478E-02	3.639E-02	2.285E-02	NOT IDENT.
AG-110M	5.257E-02	5.018E-02	3.888E-02	2.560E-02	NOT IDENT.
IN-111	2.700E-01	1.081E+00	7.414E-01	5.516E-01	NOT IDENT.
IN-113M	-4.022E-02	5.764E-02	4.466E-02	2.941E-02	NOT IDENT.
SN-113	-4.022E-02	5.764E-02	4.466E-02	2.941E-02	NOT IDENT.
IN-114M	6.282E-03	2.614E-01	1.772E-01	1.334E-01	NOT IDENT.
CD-115	-6.552E+00	9.553E+00	7.277E+00	4.874E+00	NOT IDENT.
SN-117M	6.062E-02	6.125E-02	4.967E-02	3.125E-02	NOT IDENT.
SB-122	8.316E-01	2.199E+00	1.588E+00	1.122E+00	NOT IDENT.
I-123	4.373E+05	1.304E+06	0.000E+00	6.652E+05	SHORT HLIF
TE-123M	1.140E-02	3.398E-02	2.680E-02	1.734E-02	NOT IDENT.
I-124	3.499E-01	8.110E-01	5.872E-01	4.138E-01	NOT IDENT.
SB-124	1.139E-03	9.166E-02	7.419E-02	4.677E-02	FAIL ABUN
SB-125	4.410E-02	1.200E-01	9.924E-02	6.123E-02	FAIL ABUN
TE-125M	-1.051E+01	1.253E+01	9.434E+00	6.393E+00	NOT IDENT.
I-126	7.900E-02	2.711E-01	1.929E-01	1.383E-01	NOT IDENT.
SB-126	-7.222E-02	1.842E-01	1.323E-01	9.400E-02	NOT IDENT.
SB-127	1.470E+00	1.340E+00	1.167E+00	6.836E-01	NOT IDENT.
XE-127	6.449E-02	5.858E-02	4.758E-02	2.989E-02	NOT IDENT.
I-131	-6.178E-02	1.292E-01	1.017E-01	6.592E-02	NOT IDENT.
TE-132	-3.553E-01	7.172E-01	4.992E-01	3.659E-01	NOT IDENT.
BA-133	-2.039E-02	6.089E-02	4.166E-02	3.107E-02	NOT IDENT.
I-133	-5.329E+02	2.816E+03	0.000E+00	1.437E+03	SHORT HLIF
CS-134	1.149E-01	6.865E-02	5.848E-02	3.502E-02	FAIL ABUN
CS-135	3.372E-01	1.952E-01	1.702E-01	9.959E-02	NOT IDENT.
I-135	-1.291E+14	2.855E+14	0.000E+00	1.457E+14	SHORT HLIF
CS-136	-1.070E-01	1.335E-01	1.009E-01	6.810E-02	FAIL ABUN
CE-139	2.234E-02	3.642E-02	2.905E-02	1.858E-02	NOT IDENT.
BA-140	-9.313E-03	3.126E-01	2.506E-01	1.595E-01	NOT IDENT.
LA-140	-2.158E-03	1.282E-01	1.035E-01	6.541E-02	NOT IDENT.
CE-141	9.121E-03	7.660E-02	5.986E-02	3.908E-02	NOT IDENT.
CE-143	5.935E+02	1.700E+02	0.000E+00	8.672E+01	SHORT HLIF

CE-144	7.001E-02	2.542E-01	1.999E-01	1.297E-01	NOT IDENT.
PM-144	-1.558E-03	4.869E-02	3.874E-02	2.484E-02	NOT IDENT.
PR-144	-1.055E-01	3.297E+00	2.623E+00	1.682E+00	NOT IDENT.
PM-146	8.170E-03	6.312E-02	4.677E-02	3.220E-02	NOT IDENT.
ND-147	4.128E-01	6.857E-01	5.736E-01	3.499E-01	NOT IDENT.
PM-149	2.885E+01	7.199E+01	5.977E+01	3.673E+01	NOT IDENT.
EU-152	-8.692E-02	1.633E-01	9.505E-02	8.334E-02	FAIL ABUN
GD-153	1.167E-01	1.069E-01	7.710E-02	5.456E-02	FAIL ABUN
EU-154	-2.982E-02	1.452E-01	1.157E-01	7.406E-02	NOT IDENT.
EU-155	4.076E-03	1.369E-01	1.068E-01	6.983E-02	FAIL ABUN
TB-160	1.310E-02	1.790E-01	1.493E-01	9.133E-02	FAIL ABUN
HO-166M	-2.964E-02	8.377E-02	6.475E-02	4.274E-02	FAIL ABUN
TM-171	1.215E+01	3.373E+01	2.351E+01	1.721E+01	NOT IDENT.
LU-176	1.013E-02	3.260E-02	2.554E-02	1.663E-02	FAIL ABUN
LU-177	-1.684E-01	1.256E+00	9.663E-01	6.407E-01	NOT IDENT.
LU-177M	-2.202E-01	2.346E-01	1.785E-01	1.197E-01	NOT IDENT.
HF-181	-2.462E-02	5.683E-02	4.444E-02	2.900E-02	NOT IDENT.
W-181	1.211E+00	4.840E-01	3.608E-01	2.470E-01	NOT IDENT.
TA-182	-5.782E-02	2.508E-01	2.009E-01	1.280E-01	FAIL ABUN
RE-183	-1.254E-01	1.399E-01	9.881E-02	7.138E-02	NOT IDENT.
RE-184	-1.459E-02	3.015E-01	2.320E-01	1.538E-01	NOT IDENT.
OS-185	-1.706E-02	6.066E-02	4.742E-02	3.095E-02	NOT IDENT.
RE-188	-1.008E-02	2.119E-01	1.643E-01	1.081E-01	NOT IDENT.
W-188	-2.011E+00	1.017E+01	7.106E+00	5.189E+00	FAIL ABUN
IR-192	5.464E-04	4.321E-02	3.516E-02	2.204E-02	FAIL ABUN
AU-195	2.244E-01	3.115E-01	2.208E-01	1.589E-01	FAIL ABUN
TL-200	1.043E+01	2.485E+02	0.000E+00	1.268E+02	SHORT HLIF
TL-201	-2.946E+00	6.592E+00	5.012E+00	3.363E+00	NOT IDENT.
TL-202	1.017E-02	8.458E-02	6.885E-02	4.315E-02	NOT IDENT.
HG-203	2.123E-02	5.169E-02	4.289E-02	2.637E-02	NOT IDENT.
BI-207	1.312E-02	7.154E-02	5.987E-02	3.650E-02	FAIL ABUN
TL-207	-1.237E+00	8.870E-01	6.490E-01	4.525E-01	FAIL ABUN
PO-209	3.051E+00	9.936E+00	8.440E+00	5.069E+00	NOT IDENT.
PB-211	-1.859E-01	1.268E+00	1.014E+00	6.471E-01	NOT IDENT.
BI-212	1.029E+00	4.747E-01	4.066E-01	2.422E-01	FAIL ABUN
PO-215	-1.237E+00	8.870E-01	6.490E-01	4.525E-01	FAIL ABUN
RN-219	-2.778E-02	5.470E-01	4.414E-01	2.791E-01	NOT IDENT.
RN-220	-7.808E+00	3.318E+01	2.615E+01	1.693E+01	NOT IDENT.
RA-223	-1.237E+00	8.870E-01	6.490E-01	4.525E-01	FAIL ABUN
AC-227	5.443E-03	4.707E-01	3.843E-01	2.402E-01	FAIL ABUN
TH-227	5.443E-03	4.707E-01	3.843E-01	2.402E-01	FAIL ABUN
TH-229	8.777E-02	6.396E-01	4.988E-01	3.263E-01	FAIL ABUN
PA-231	-1.213E+00	1.893E+00	1.485E+00	9.656E-01	FAIL ABUN
TH-231	-1.237E+00	8.870E-01	6.490E-01	4.525E-01	FAIL ABUN
U-231	3.546E-01	1.228E+00	8.517E-01	6.265E-01	FAIL ABUN
PA-233	-5.874E-02	8.056E-02	6.286E-02	4.110E-02	FAIL ABUN
PA-234	-2.955E-02	4.441E-01	3.649E-01	2.266E-01	FAIL ABUN
PA-234M	8.461E+00	9.952E+00	8.465E+00	5.077E+00	NOT IDENT.
U-235	3.756E-02	2.915E-01	2.146E-01	1.487E-01	FAIL ABUN
NP-236	-1.585E-01	9.886E-02	7.070E-02	5.044E-02	NOT IDENT.
NP-239	-1.163E-01	2.431E-01	1.855E-01	1.240E-01	NOT IDENT.
AM-241	2.742E-02	1.891E-01	1.276E-01	9.648E-02	NOT IDENT.
CM-243	6.256E-02	1.212E-01	9.630E-02	6.184E-02	NOT IDENT.
CM-247	-1.250E-02	4.954E-02	3.950E-02	2.528E-02	NOT IDENT.
CF-249	-2.136E-02	5.314E-02	4.202E-02	2.711E-02	NOT IDENT.
CF-251	7.304E-02	1.587E-01	1.257E-01	8.096E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	349.1365
46.50	349.1365
46.50	349.1365
48.70	377.5927
49.72	364.4941
51.35	307.5118
52.39	340.4961
52.97	346.5897
53.15	346.6784
53.44	347.3659
54.07	349.5837
56.28	397.5994
56.28	397.6010
57.37	0.0000
57.53	355.7308
57.53	355.7322
57.60	355.7647
57.98	347.2405
57.98	347.2405
59.32	374.0300
59.32	374.0300
59.40	374.0693
59.54	374.1390
59.72	374.2280
60.01	377.4531
61.10	385.7071
61.14	385.7277
61.30	385.8078
63.00	435.9553
63.29	436.1174
63.29	436.1174
63.58	436.2791
64.28	433.7629
65.12	429.5715
65.20	429.6142
65.20	429.6142
66.05	403.6776
66.72	396.2445
66.83	396.2990
66.91	396.3379
67.20	405.8093
67.20	405.8093
67.75	416.9752
67.85	398.3547
68.90	451.8400
68.90	451.8400
69.30	439.0692
69.67	432.7697
70.82	438.8344
70.82	438.8344
70.83	438.8395
72.80	408.5612
72.87	400.7672
72.87	400.7672
74.67	445.1449
74.81	445.2177
74.81	445.2177
74.81	445.2177
74.81	445.2177
74.81	445.2177
74.81	445.2177
74.97	445.3008
75.28	445.4601
75.70	445.6766
77.11	446.3971
77.11	446.3971
77.11	446.3971

77.11	446.3971
77.11	446.3971
77.11	446.3971
78.38	450.9800
79.62	437.8027
79.80	437.8907
79.80	437.8907
80.11	430.1505
80.18	430.1838
80.30	430.2420
80.30	430.2420
80.57	430.3701
81.00	430.5763
81.07	430.6096
81.07	430.6096
81.07	430.6096
81.07	430.6096
82.60	443.2063
83.37	461.3994
83.78	456.4564
83.78	456.4564
83.78	456.4564
83.78	456.4564
84.21	405.3335
84.40	405.4162
84.90	405.6346
85.43	405.8671
86.29	406.2400
86.50	406.3305
86.54	406.3477
86.59	406.3695
86.72	406.4257
86.79	406.4553
86.94	406.5208
87.30	406.6768
87.30	406.6768
87.30	406.6768
87.30	406.6768
87.30	406.6768
87.30	406.6768
87.57	406.7923
87.88	406.9265
88.03	406.9904
88.36	407.1324
88.47	407.1792
89.95	407.8096
91.11	408.2995
92.29	408.7956
92.38	408.8346
92.38	408.8346
93.35	409.2387
94.00	409.5086
94.67	409.7848
94.67	409.7863
94.90	409.8815
94.90	409.8815
94.90	409.8815
94.90	409.8815
95.87	364.3389
95.87	364.3389
96.73	324.4921
97.43	290.9599
98.44	304.1234
98.44	304.1234
98.88	304.2555
99.55	323.7862
99.55	323.7862
99.86	323.8843
100.00	306.2010
100.10	306.2324
103.18	341.4968
103.76	306.3046
105.00	327.9205
105.31	328.0169
108.00	350.1616
109.28	397.3227
111.00	324.6731
111.00	324.6731

111.76	339.1584
112.95	343.6039
115.19	329.9961
116.30	341.5746
117.00	315.1812
117.00	315.1812
117.66	297.9591
121.11	261.8910
121.62	243.5121
121.78	243.5456
122.06	253.8839
122.32	253.9405
122.32	253.9405
122.32	253.9405
122.32	253.9405
123.07	257.1917
127.23	258.1067
129.76	277.2787
131.20	278.6479
133.02	308.1144
133.54	273.9963
135.34	282.7142
136.00	311.9843
136.25	304.7672
136.48	314.1874
140.51	304.7674
140.51	0.0000
142.18	269.6371
142.65	278.1014
143.76	278.3450
144.24	282.6357
144.24	282.6357
144.24	282.6357
144.24	282.6357
145.22	295.4253
145.44	283.9492
147.16	293.7701
152.43	266.5155
152.70	252.8723
153.22	263.5117
154.21	263.7081
154.21	263.7081
154.21	263.7081
154.21	263.7081
155.03	274.4250
156.02	257.7291
158.56	216.9429
159.00	0.0000
159.00	235.0095
160.31	290.3369
161.27	280.9964
162.32	256.8056
162.64	242.0047
163.35	236.8201
163.89	230.5393
165.85	235.1194
167.43	272.6641
171.28	265.9341
171.86	245.7420
172.10	245.7841
176.55	235.8263
176.60	235.8347
181.06	263.2227
184.41	229.3341
185.71	274.4050
186.00	260.6501
190.27	254.4650
192.34	255.6781
193.63	237.4611
197.04	246.6810
198.01	245.7478
198.60	250.1920
200.40	243.9456
201.83	255.0681
202.84	222.5102
205.31	289.4960
208.36	280.1992
208.81	261.6652

209.75	232.2405
209.75	232.2405
210.97	213.7782
215.65	220.9893
216.55	217.8103
218.09	202.5991
222.10	197.5703
223.80	214.3440
226.40	215.7806
227.00	218.0719
227.08	218.0825
227.20	218.0975
228.16	212.6821
228.18	212.6836
228.18	212.6836
231.56	0.0000
235.69	240.3188
236.00	249.2639
236.00	249.2639
238.60	211.7438
238.63	211.7481
238.63	211.7481
238.63	211.7481
239.00	211.7931
240.98	212.0322
241.98	191.1606
241.98	191.1606
241.98	191.1606
244.69	175.3497
245.39	175.4178
247.94	178.1338
248.90	193.9215
249.79	190.6534
252.40	180.8204
252.85	186.4828
252.85	186.4828
254.15	0.0000
256.20	185.4748
256.20	185.4748
260.50	162.4438
260.90	158.8684
262.80	167.1639
264.65	198.9883
268.24	154.9625
268.79	149.5695
269.46	152.3423
269.46	152.3423
269.46	152.3423
269.46	152.3423
271.23	177.9001
273.65	264.4612
276.40	175.6507
277.35	175.7379
277.60	175.7615
277.60	175.7615
278.00	176.7077
278.60	172.2087
279.20	187.7562
279.53	190.5211
280.46	197.9092
281.68	189.8203
283.67	176.3127
284.30	161.7480
285.00	147.1778
285.90	144.5029
286.10	144.5164
286.10	144.5164
287.40	161.3165
288.45	0.0000
290.67	168.0772
290.80	168.0884
291.72	157.4652
293.26	0.0000
293.70	151.4991
295.21	151.6139
295.21	151.6139
295.21	151.6139
295.96	137.8821

296.50	137.9187
297.23	137.9700
298.57	138.0615
299.80	158.1001
299.80	158.1001
300.09	162.7287
300.09	162.7287
300.09	162.7287
300.10	162.7287
300.12	162.7309
301.29	139.7825
302.84	158.3369
303.76	164.5600
303.91	169.1850
304.40	153.8411
304.40	153.8411
304.84	140.0269
306.84	146.7081
308.46	151.6800
311.98	163.0557
316.51	150.4116
318.01	160.7388
319.02	163.6057
319.41	159.9167
320.08	153.4568
323.87	190.9988
323.87	190.9988
323.87	190.9988
323.87	190.9988
325.23	178.0693
328.77	139.1418
333.44	165.3339
334.20	159.1509
334.20	159.1509
334.30	159.1592
338.28	137.8771
338.28	137.8771
338.28	137.8771
338.28	137.8771
338.32	137.8789
338.32	137.8789
338.32	137.8789
340.50	122.0543
340.57	122.0591
344.27	150.4785
345.85	120.4688
350.59	0.0000
351.07	147.1641
351.92	147.2193
351.92	147.2193
351.92	147.2193
355.39	0.0000
356.01	130.7851
364.48	130.0045
366.43	113.9692
367.43	117.8197
367.94	0.0000
369.80	120.7926
374.96	122.9673
383.85	117.6893
387.95	140.8953
388.63	123.6775
391.69	138.2344
391.69	138.2344
392.90	136.3820
398.62	129.0028
400.65	127.1821
401.10	120.4605
401.81	131.0992
402.60	136.9263
404.84	138.9814
410.95	117.0710
411.60	137.4256
413.65	143.3497
414.70	138.5644
415.30	146.3513
415.76	131.8380
417.63	0.0000

418.52	114.5142
423.70	126.4183
427.08	113.9265
427.89	107.1453
432.53	109.2902
433.93	119.1123
439.47	108.6044
439.56	108.6085
439.89	112.5363
443.98	101.9319
444.90	100.9870
445.03	100.9921
445.03	100.9921
445.03	100.9921
445.03	100.9921
453.90	105.4073
463.38	125.0555
468.07	95.6023
473.00	107.0046
475.06	90.2291
475.35	94.2045
476.78	107.1523
477.59	112.1462
477.96	109.1836
482.03	112.3255
484.57	105.4643
487.03	87.6326
490.36	0.0000
492.35	91.7900
497.08	87.9463
507.63	0.0000
510.53	0.0000
510.84	95.4007
511.00	95.4053
511.85	95.4343
511.85	95.4343
513.99	88.8029
513.99	88.8029
520.41	95.7167
520.65	95.7236
527.90	98.9905
528.96	0.0000
529.64	98.0373
529.87	0.0000
531.02	80.8945
537.32	85.1197
543.00	76.1444
546.56	0.0000
549.76	82.4199
552.65	73.3307
555.20	91.7402
563.23	98.7954
563.90	80.0756
568.70	63.1361
569.32	75.0951
569.50	75.1004
569.67	81.9316
573.80	74.7159
574.00	74.7213
574.64	76.9336
578.91	89.0238
579.30	0.0000
583.14	74.0566
585.48	65.1904
591.81	83.9832
592.07	78.6496
593.00	79.4457
595.88	69.1903
600.56	98.8239
602.52	0.0000
602.71	82.7910
602.71	82.7910
603.60	56.9349
604.41	75.9329
604.70	75.9383
609.31	87.1090
609.31	87.1090
609.31	87.1090

609.31	87.1090
610.33	74.3419
612.46	77.8510
614.37	74.4346
618.01	66.5453
621.84	55.1725
621.84	55.1725
631.29	62.6367
633.02	100.2727
633.10	100.2750
634.78	90.9188
635.90	89.9032
636.97	92.0240
645.85	82.8304
646.12	89.1296
656.30	75.3725
657.75	56.1146
657.90	0.0000
661.65	82.1609
661.65	82.1609
664.57	0.0000
666.33	80.8669
666.33	80.8669
675.00	61.3305
677.61	73.0160
685.20	49.8434
692.80	71.2055
695.00	82.9474
696.49	86.1752
696.49	86.1752
697.00	86.1871
697.49	93.6482
698.33	85.1543
698.50	85.1582
699.00	85.1699
702.63	80.9931
706.10	77.8726
706.58	0.0000
706.67	74.6843
709.31	76.8744
711.68	80.1288
713.82	67.3482
717.42	72.7646
720.50	70.9519
721.93	0.0000
722.20	55.3600
722.78	51.7967
722.78	51.7967
722.89	51.7979
722.95	55.3714
723.30	55.3764
724.18	69.6846
727.18	65.4499
733.00	75.2244
735.90	47.3215
739.58	66.7454
742.81	75.4226
744.21	52.8162
747.13	57.1723
751.79	76.6838
752.31	75.6157
753.82	56.1933
755.35	62.7026
756.15	63.7981
756.87	58.4020
763.93	94.2684
765.79	61.7913
766.41	68.3079
766.84	69.4000
768.36	75.9353
768.36	75.9353
768.36	75.9353
768.36	75.9353
776.49	75.0106
778.00	65.2515
778.57	64.1740
778.89	64.1783
783.80	68.6171

785.46	57.7501
792.07	65.4888
795.84	74.6562
796.30	67.3802
801.93	65.6543
805.60	53.6667
810.29	61.4072
810.76	60.3174
815.85	53.8055
817.79	54.9304
818.51	64.8294
819.60	53.8569
826.30	61.4698
828.27	0.0000
831.60	63.3876
831.96	63.3932
834.83	75.3902
836.80	0.0000
846.75	66.3911
848.13	59.0339
856.28	0.0000
856.80	42.7845
860.37	42.8213
867.32	57.1917
867.82	52.8287
871.10	61.2184
873.19	50.1130
874.81	55.7019
875.33	0.0000
876.40	60.3675
879.36	52.9748
880.27	57.6343
880.51	59.4961
881.50	56.7209
883.24	56.7444
884.67	60.4865
889.25	48.4411
896.60	53.1917
898.02	45.7411
899.00	47.6185
903.28	65.8915
911.07	45.8807
911.07	45.8807
911.07	45.8807
919.63	43.4249
920.93	42.2314
925.00	46.9676
925.24	48.8494
926.50	44.1648
934.06	47.0652
934.06	47.0652
934.06	47.0652
934.06	47.0652
935.52	53.6718
937.48	62.1744
944.10	57.5505
946.00	67.0132
949.00	58.5589
962.29	72.4705
964.01	51.9866
966.15	56.8884
968.20	121.9587
969.11	121.9822
969.11	121.9822
969.11	121.9822
977.42	47.2535
980.50	53.2645
983.50	42.8302
989.30	42.8842
996.32	73.4924
1001.03	46.8158
1001.68	49.6895
1004.76	67.8900
1021.30	0.0000
1024.50	0.0000
1034.80	37.5321
1037.82	50.0745
1038.57	53.9355

1038.76	0.0000
1045.16	40.5081
1046.59	51.1324
1048.07	57.9053
1050.47	54.0723
1050.47	54.0723
1063.62	51.3157
1076.63	33.0081
1077.35	33.9832
1085.78	33.0703
1099.22	47.7898
1112.02	46.9355
1112.84	36.8841
1115.52	53.6786
1120.29	48.9726
1120.29	48.9726
1120.29	48.9726
1120.29	48.9726
1120.51	48.9746
1121.28	48.9827
1124.00	0.0000
1129.67	39.7419
1131.51	0.0000
1147.95	0.0000
1167.94	67.2308
1173.22	60.3720
1175.09	51.4837
1177.93	64.3890
1189.05	61.5509
1204.90	59.7437
1205.75	0.0000
1213.00	53.8528
1221.42	57.9339
1230.97	67.0436
1235.34	67.0981
1236.41	0.0000
1238.11	55.1097
1238.11	55.1097
1238.11	55.1097
1238.11	55.1097
1238.25	52.1037
1246.25	64.2240
1260.41	0.0000
1271.85	36.2959
1274.45	36.3135
1274.54	36.3135
1291.56	37.4381
1298.22	0.0000
1312.09	31.4831
1325.50	39.7014
1325.50	39.7014
1332.49	31.5966
1333.61	35.6807
1360.21	21.5084
1362.66	0.0000
1365.15	38.9540
1368.21	23.5896
1368.53	0.0000
1376.25	19.3674
1377.67	21.1331
1377.67	21.1331
1377.67	21.1331
1377.67	21.1331
1384.27	26.4467
1394.10	25.7548
1395.20	27.8207
1407.95	35.4046
1434.06	31.1157
1436.60	24.9023
1457.56	0.0000
1460.81	20.8358
1489.15	15.6995
1509.49	23.1020
1596.49	29.8081
1620.62	19.2334
1678.03	0.0000
1691.02	11.8786
1691.02	11.8786

1706.46	0.0000
1750.46	0.0000
1764.49	14.7349
1764.49	14.7349
1764.49	14.7349
1764.49	14.7349
1770.23	16.3855
1771.40	35.5852
1791.20	0.0000
1808.65	9.4141
1836.01	16.0650

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433009

Total Uranium Activity	2.3592E+01	ug/g
Total Uranium Counting Unc.	7.6980E+00	ug/g
Total Uranium Tpu	3.9276E-06	ug/g
Total Uranium Mda	3.2354E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID   : G232433009      *
*   ANALYST       : MXR1                      DETECTOR    : GAM14           *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME  :    0 03:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:40:18.98    SAMPLE ALQT:   58.660 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY	(pCi/GRAM)	: 9.696E+00
GROSS GAMMA ERROR	(pCi/GRAM)	: 1.885E+00
GROSS GAMMA MDA	(pCi/GRAM)	: 4.911E+00
GROSS GAMMA DLC	(pCi/GRAM)	: 2.385E+00

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:42:21.34

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433010.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:40:53.
Sample ID         : G232433010           Sample quantity  : 7.80300E+01 GRAM
Detector name     : GAM15                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.02  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.54*	122	421	1.41	127.58	120	15	1.69E-02	38.5	
2	3	74.91*	178	274	1.16	150.31	144	19	2.47E-02	17.8	1.47E+00
3	3	77.19*	347	315	1.35	154.87	144	19	4.82E-02	11.0	
4	0	87.11	129	328	1.08	174.70	172	8	1.79E-02	25.7	
5	0	93.43*	164	500	1.39	187.33	181	13	2.27E-02	31.2	
6	0	143.81*	57	224	1.53	288.05	284	9	7.93E-03	50.0	
7	0	186.15*	204	361	1.40	372.69	365	16	2.83E-02	22.7	
8	0	209.29	110	165	1.62	418.96	415	9	1.53E-02	23.0	
9	2	238.73*	818	137	1.43	477.81	471	19	1.14E-01	4.7	1.26E+00
10	2	241.67	207	157	1.73	483.68	471	19	2.87E-02	17.4	
11	0	270.39	78	151	1.83	541.09	535	11	1.08E-02	32.5	
12	0	278.01	40	167	1.51	556.34	550	11	5.58E-03	64.3	
13	0	295.52*	235	189	1.40	591.34	584	13	3.26E-02	14.0	
14	0	328.04	34	155	0.64	656.35	653	12	4.71E-03	76.2	
15	0	338.65*	176	167	1.55	677.56	672	14	2.45E-02	17.8	
16	0	352.12*	367	126	1.47	704.48	699	13	5.10E-02	8.5	
17	0	511.04*	61	123	1.92	1022.22	1016	15	8.52E-03	48.1	
18	0	583.20*	258	33	1.79	1166.49	1161	12	3.59E-02	8.2	
19	0	609.25*	328	76	1.43	1218.58	1211	13	4.55E-02	8.0	
20	0	661.73	74	70	0.81	1323.49	1318	12	1.03E-02	25.3	
21	0	727.83	53	81	1.21	1455.66	1449	14	7.38E-03	38.3	
22	0	861.75*	19	53	1.47	1723.43	1715	14	2.59E-03	88.2	
23	0	911.33*	159	54	1.94	1822.56	1815	18	2.21E-02	13.9	
24	1	964.42	49	48	2.18	1928.72	1923	24	6.80E-03	27.2	1.76E+00
25	1	968.76*	102	36	2.17	1937.40	1923	24	1.42E-02	16.9	
26	0	1120.31*	76	50	1.71	2240.44	2236	15	1.06E-02	23.6	
27	0	1378.20*	14	22	2.07	2756.14	2749	10	1.92E-03	73.6	
28	0	1460.69*	629	17	1.87	2921.11	2913	18	8.73E-02	4.3	
29	0	1587.92	31	7	1.29	3175.54	3170	13	4.24E-03	25.0	
30	0	1764.42	67	0	3.43	3528.54	3519	17	9.31E-03	12.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:42:24

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433010.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:40:53
Sample ID : G232433010 Sample quantity : 78.030 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA15 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.02 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.838E+01	3.282E+00	9.776E-01	7.473E-02	29.031
CD-109	+	88.03	*	3.833E+00	2.016E+00	2.973E+00	3.437E-01	1.289
SN-126	+	64.28		3.326E+00	2.624E+00	1.832E+00	3.140E-01	1.815
	+	86.94		1.569E+00	1.041E+00	9.871E-01	4.151E-01	1.590
	+	87.57	*	3.775E-01	1.985E-01	2.623E-01	3.026E-02	1.439
BA-137M	+	661.65	*	1.960E-01	9.983E-02	9.987E-02	5.025E-03	1.963
CS-137	+	661.65	*	2.072E-01	1.055E-01	1.056E-01	5.341E-03	1.963
HG-203		70.83		1.780E+00	2.512E+00	3.546E+00	5.458E-01	0.502
		72.87		2.399E+00	1.438E+00	2.206E+00	3.305E-01	1.087
		82.60		4.259E-03	3.181E+00	3.319E+00	5.154E-01	0.001
	+	279.20	*	8.120E-02	1.047E-01	1.095E-01	7.887E-03	0.741
TL-208	+	277.35		7.515E-01	9.708E-01	1.052E+00	1.178E-01	0.715
	+	510.84		5.554E-01	5.372E-01	3.859E-01	3.885E-02	1.439
	+	583.14	*	6.621E-01	1.159E-01	9.371E-02	5.966E-03	7.066
	+	860.37		4.478E-01	7.912E-01	8.113E-01	6.974E-02	0.552
BI-211		72.87		1.230E+01	7.274E+00	1.132E+01	1.262E+00	1.087
	+	351.07	*	4.265E+00	7.827E-01	5.806E-01	3.989E-02	7.345
PB-212	+	74.81		2.474E+00	9.493E-01	1.087E+00	1.578E-01	2.276
	+	77.11		2.657E+00	6.531E-01	5.988E-01	6.650E-02	4.437
	+	87.30		1.746E+00	9.347E-01	1.237E+00	1.886E-01	1.412
	+	238.63	*	2.094E+00	2.621E-01	1.576E-01	1.304E-02	13.287
		300.09		2.473E+00	1.513E+00	2.450E+00	2.197E-01	1.010
PO-212	+	74.81		2.474E+00	9.493E-01	1.087E+00	1.578E-01	2.276
	+	77.11		2.657E+00	6.531E-01	5.988E-01	6.650E-02	4.437
	+	87.30		1.746E+00	9.347E-01	1.237E+00	1.886E-01	1.412
		115.19		2.438E+00	6.305E+00	1.047E+01	8.010E-01	0.233
	+	238.63	*	2.094E+00	2.621E-01	1.576E-01	1.304E-02	13.287
		300.09		2.473E+00	1.513E+00	2.450E+00	2.197E-01	1.010
BI-214	+	609.31	*	1.580E+00	2.792E-01	1.922E-01	1.427E-02	8.219
		768.36		1.332E+00	1.338E+00	2.386E+00	2.099E-01	0.558
		934.06		2.372E+00	2.093E+00	3.784E+00	3.925E-01	0.627
	+	1120.29		1.920E+00	9.231E-01	7.629E-01	7.038E-02	2.517
		1238.11		2.205E+00	1.647E+00	2.961E+00	2.548E-01	0.745
	+	1377.67		1.542E+00	2.273E+00	2.182E+00	2.141E-01	0.707

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1764.49		2.314E+00	5.835E-01	3.665E-01	2.281E-02	6.314
PB-214	+	74.81		4.263E+00	1.618E+00	1.873E+00	2.502E-01	2.276
	+	77.11		4.555E+00	1.172E+00	1.027E+00	1.382E-01	4.437
	+	87.30		2.991E+00	1.590E+00	2.118E+00	2.936E-01	1.412
	+	241.98		3.180E+00	1.140E+00	9.486E-01	8.479E-02	3.353
	+	295.21		1.625E+00	4.779E-01	4.050E-01	3.746E-02	4.013
	+	351.92	*	1.483E+00	2.831E-01	1.964E-01	1.693E-02	7.555
PO-214	+	74.81		4.263E+00	1.618E+00	1.873E+00	2.502E-01	2.276
	+	77.11		4.555E+00	1.172E+00	1.027E+00	1.382E-01	4.437
	+	87.30		2.991E+00	1.590E+00	2.118E+00	2.936E-01	1.412
	+	241.98		3.180E+00	1.140E+00	9.486E-01	8.479E-02	3.353
	+	295.21		1.625E+00	4.779E-01	4.050E-01	3.746E-02	4.013
	+	351.92	*	1.483E+00	2.831E-01	1.964E-01	1.693E-02	7.555
PO-216	+	74.81		2.474E+00	9.493E-01	1.087E+00	1.578E-01	2.276
	+	77.11		2.657E+00	6.531E-01	5.988E-01	6.650E-02	4.437
	+	87.30		1.746E+00	9.347E-01	1.237E+00	1.886E-01	1.412
	+	238.63	*	2.094E+00	2.621E-01	1.576E-01	1.304E-02	13.287
		300.09		2.473E+00	1.513E+00	2.450E+00	2.197E-01	1.010
PO-218	+	74.81		4.263E+00	1.618E+00	1.873E+00	2.502E-01	2.276
	+	77.11		4.555E+00	1.172E+00	1.027E+00	1.382E-01	4.437
	+	87.30		2.991E+00	1.590E+00	2.118E+00	2.936E-01	1.412
	+	241.98		3.180E+00	1.140E+00	9.486E-01	8.479E-02	3.353
	+	295.21		1.625E+00	4.779E-01	4.050E-01	3.746E-02	4.013
	+	351.92	*	1.483E+00	2.831E-01	1.964E-01	1.693E-02	7.555
RA-224	+	240.98	*	6.031E+00	2.135E+00	1.793E+00	1.248E-01	3.364
RA-226	+	609.31	*	1.580E+00	2.792E-01	1.922E-01	1.427E-02	8.219
		768.36		1.332E+00	1.338E+00	2.386E+00	2.099E-01	0.558
		934.06		2.372E+00	2.093E+00	3.784E+00	3.925E-01	0.627
	+	1120.29		1.920E+00	9.231E-01	7.629E-01	7.038E-02	2.517
		1238.11		2.205E+00	1.647E+00	2.961E+00	2.548E-01	0.745
	+	1377.67		1.542E+00	2.273E+00	2.182E+00	2.141E-01	0.707
	+	1764.49		2.314E+00	5.835E-01	3.665E-01	2.281E-02	6.314
AC-228	+	338.32		2.260E+00	1.226E+00	6.212E-01	2.538E-01	3.639
	+	911.07	*	1.802E+00	5.402E-01	3.615E-01	4.019E-02	4.985
	+	969.11		2.051E+00	8.394E-01	5.798E-01	1.341E-01	3.538
RA-228	+	338.32		2.260E+00	1.226E+00	6.212E-01	2.538E-01	3.639
	+	911.07	*	1.802E+00	5.402E-01	3.615E-01	4.019E-02	4.985
	+	969.11		2.051E+00	8.394E-01	5.798E-01	1.341E-01	3.538
TH-228		84.40		1.532E+00	6.268E+00	7.771E+00	1.170E+00	0.197
	+	238.60	*	2.094E+00	2.621E-01	1.576E-01	1.304E-02	13.288
		300.10		2.475E+00	2.092E+00	2.450E+00	1.446E+00	1.010
TH-230	+	609.31	*	1.580E+00	2.792E-01	1.922E-01	1.427E-02	8.219
		768.36		1.332E+00	1.338E+00	2.386E+00	2.099E-01	0.558
		934.06		2.372E+00	2.093E+00	3.783E+00	3.925E-01	0.627
	+	1120.29		1.920E+00	9.231E-01	7.629E-01	7.038E-02	2.517
		1238.11		2.205E+00	1.647E+00	2.961E+00	2.548E-01	0.745
	+	1377.67		1.542E+00	2.273E+00	2.182E+00	2.141E-01	0.707
	+	1764.49		2.314E+00	5.835E-01	3.665E-01	2.281E-02	6.314
TH-232	+	338.32		2.260E+00	8.192E-01	6.212E-01	3.999E-02	3.639

Sample ID : G232433010 Acquisition date : 7-JUL-2009 06:40:53

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	911.07	*	1.802E+00	5.402E-01	3.615E-01	4.019E-02	4.985
	+	969.11		2.051E+00	8.394E-01	5.798E-01	1.341E-01	3.538
TH-234	+	63.29	*	8.401E+00	6.678E+00	4.937E+00	9.743E-01	1.702
	+	92.38		2.971E+00	1.936E+00	1.471E+00	2.803E-01	2.020
U-234	+	609.31	*	1.580E+00	2.792E-01	1.922E-01	1.427E-02	8.219
		768.36		1.332E+00	1.338E+00	2.386E+00	2.099E-01	0.558
		934.06		2.372E+00	2.093E+00	3.783E+00	3.925E-01	0.627
	+	1120.29		1.920E+00	9.231E-01	7.629E-01	7.038E-02	2.517
		1238.11		2.205E+00	1.647E+00	2.961E+00	2.548E-01	0.745
	+	1377.67		1.542E+00	2.273E+00	2.182E+00	2.141E-01	0.707
	+	1764.49		2.314E+00	5.835E-01	3.665E-01	2.281E-02	6.314
U-235		89.95		-3.775E+00	3.855E+00	3.468E+00	1.097E+00	-1.089
	+	93.35		3.572E+00	2.450E+00	1.747E+00	4.994E-01	2.045
		105.00		1.711E+00	1.896E+00	3.117E+00	9.301E-01	0.549
	+	143.76	*	4.658E-01	4.722E-01	5.754E-01	9.601E-02	0.810
		163.35		2.637E-01	8.109E-01	1.328E+00	2.428E-01	0.199
	+	185.71		3.655E-01	1.678E-01	1.231E-01	8.313E-03	2.969
		205.31		5.838E-01	1.029E+00	1.476E+00	2.709E-01	0.395
NP-237	+	86.50	*	1.109E+00	6.263E-01	6.840E-01	1.615E-01	1.621
		95.87		-3.767E-01	2.003E+00	2.846E+00	7.142E-01	-0.132
U-238	+	63.29	*	8.401E+00	6.678E+00	4.937E+00	9.743E-01	1.702
	+	92.38		2.971E+00	1.878E+00	1.471E+00	1.547E-01	2.020
AM-243	+	74.67	*	4.011E-01	1.493E-01	1.771E-01	1.968E-02	2.264
	+	86.72		4.157E+01	2.186E+01	2.625E+01	3.013E+00	1.584
		117.66		-5.656E+00	6.607E+00	1.031E+01	7.700E-01	-0.549
		142.18		-1.020E+00	3.598E+01	5.017E+01	3.418E+00	-0.020
ANH-511	+	511.00	*	1.200E-01	1.156E-01	8.337E-02	4.708E-03	1.439

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	5.741E-01	5.884E-01	1.027E+00	6.844E-02	0.559
NA-22		1274.54	*	1.503E-02	7.545E-02	1.251E-01	8.585E-03	0.120
NA-24		1368.53	*	-6.599E-03	7.545E-02	Half-Life too short		
AL-26		1129.67		-7.352E-01	3.211E+00	4.518E+00	2.846E-01	-0.163
		1808.65	*	-1.664E-02	4.281E-02	6.293E-02	3.765E-03	-0.264
TI-44		67.85		-5.650E-02	1.202E-01	1.571E-01	1.792E-02	-0.360
	+	78.38	*	4.903E-01	1.205E-01	1.600E-01	1.779E-02	3.064
SC-46		889.25	*	-7.228E-02	6.581E-02	9.543E-02	8.004E-03	-0.757
	+	1120.51		3.251E-01	1.548E-01	2.165E-01	1.390E-02	1.501
V-48		944.10		-3.612E-02	1.294E+00	2.128E+00	1.749E-01	-0.017
		983.50	*	6.048E-02	1.054E-01	1.845E-01	1.458E-02	0.328
		1312.09		6.902E-03	1.208E-01	1.969E-01	1.437E-02	0.035
CR-51		320.08	*	2.904E-01	6.561E-01	1.119E+00	8.072E-02	0.259
MN-52		744.21		5.305E-02	3.312E-01	5.616E-01	3.445E-02	0.094
		848.13		-1.412E+00	9.707E+00	1.588E+01	1.224E+00	-0.089
		935.52		5.299E-01	3.775E-01	7.002E-01	5.800E-02	0.757
		1246.25		-3.442E+00	1.097E+01	1.717E+01	1.120E+00	-0.200

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1333.61		1.268E+00	6.043E+00	1.010E+01	7.625E-01	0.125
		1434.06	*	8.710E-02	3.241E-01	5.629E-01	4.173E-02	0.155
MN-54		834.83	*	-3.303E-02	6.372E-02	1.007E-01	7.546E-03	-0.328
CO-56		846.75	*	7.160E-03	6.719E-02	1.126E-01	8.656E-03	0.064
		977.42		-1.033E-01	5.028E+00	7.380E+00	5.869E-01	-0.014
		1037.82		2.875E-02	5.173E-01	8.537E-01	6.756E-02	0.034
		1175.09		8.215E-01	3.542E+00	5.917E+00	3.382E-01	0.139
		1238.25		2.215E-01	1.646E-01	2.967E-01	2.005E-02	0.747
		1360.21		1.586E+00	1.478E+00	2.787E+00	2.097E-01	0.569
		1771.40		-1.343E+00	5.194E-01	3.703E-01	2.291E-02	-3.627
CO-57		122.06	*	-1.627E-02	4.175E-02	6.666E-02	4.793E-03	-0.244
		136.48		-1.988E-01	3.581E-01	5.651E-01	4.337E-02	-0.352
CO-58		810.76	*	1.031E-02	6.516E-02	1.100E-01	7.859E-03	0.094
FE-59	+	142.65		5.886E+00	5.899E+00	7.780E+00	5.297E-01	0.756
		192.34		-1.194E-01	1.878E+00	2.617E+00	3.226E-01	-0.046
		1099.22	*	-1.518E-01	1.424E-01	2.004E-01	1.516E-02	-0.758
		1291.56		6.293E-02	2.257E-01	3.768E-01	3.179E-02	0.167
CO-60		1173.22		-4.296E-02	7.080E-02	1.066E-01	6.073E-03	-0.403
		1332.49	*	-4.179E-02	5.966E-02	8.457E-02	6.383E-03	-0.494
ZN-65		1115.52	*	2.810E-02	1.706E-01	2.449E-01	1.591E-02	0.115
GE-68		1077.35	*	-1.292E+00	2.235E+00	3.425E+00	2.380E-01	-0.377
AS-73		53.44	*	-1.092E+00	3.079E+00	5.038E+00	6.885E-01	-0.217
AS-74		595.88	*	9.968E-02	1.499E-01	2.561E-01	1.377E-02	0.389
		634.78		-3.580E-01	5.968E-01	8.974E-01	4.654E-02	-0.399
SE-75		66.05		-1.249E+00	1.210E+01	1.747E+01	2.265E+00	-0.072
		96.73		2.010E-01	1.518E+00	2.202E+00	3.158E-01	0.091
		121.11		-7.156E-02	2.271E-01	3.642E-01	3.714E-02	-0.196
		136.00		-1.559E-02	6.700E-02	1.076E-01	7.490E-03	-0.145
		198.60		5.735E-01	3.099E+00	5.016E+00	4.004E-01	0.114
		264.65	*	-4.906E-02	8.682E-02	1.208E-01	8.450E-03	-0.406
		279.53		2.833E-01	2.106E-01	3.369E-01	2.458E-02	0.841
		303.91		-5.349E+00	3.774E+00	5.706E+00	5.792E-01	-0.937
		400.65		-9.686E-02	4.517E-01	7.332E-01	6.621E-02	-0.132
BR-77	+	87.88		5.616E+02	2.954E+02	4.353E+02	5.033E+01	1.290
		200.40		1.375E+02	1.898E+02	3.157E+02	2.157E+01	0.436
	+	239.00		2.276E+02	2.660E+01	4.300E+01	2.992E+00	5.292
		249.79		1.043E+01	8.181E+01	1.383E+02	9.632E+00	0.075
		281.68		1.305E+01	1.186E+02	1.742E+02	1.200E+01	0.075
		297.23		2.549E+02	9.239E+01	1.530E+02	1.041E+01	1.666
		303.76		-3.205E+02	2.175E+02	3.295E+02	2.227E+01	-0.973
		439.47		3.464E+01	1.763E+02	2.934E+02	1.676E+01	0.118
		484.57		-3.720E-01	2.699E+02	4.408E+02	2.508E+01	-0.001
		520.65	*	6.929E+00	1.264E+01	2.146E+01	1.207E+00	0.323
		574.64		3.781E+01	2.367E+02	3.887E+02	2.123E+01	0.097
		578.91		-3.135E+01	1.108E+02	1.488E+02	8.105E+00	-0.211
		585.48		1.483E+03	3.029E+02	5.704E+02	3.092E+01	2.600
		755.35		5.422E+01	1.815E+02	3.114E+02	1.960E+01	0.174
		817.79		-2.356E+01	1.388E+02	2.267E+02	1.638E+01	-0.104
SR-82		698.33		3.303E+01	5.377E+01	9.464E+01	5.210E+00	0.349

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		776.49	*	-3.161E-02	6.437E-01	1.069E+00	7.055E-02	-0.030
		1395.20		-8.435E+00	1.661E+01	2.556E+01	1.912E+00	-0.330
RB-83		520.41	*	5.768E-02	1.213E-01	2.050E-01	1.154E-02	0.281
		529.64		1.194E-01	1.781E-01	3.057E-01	1.714E-02	0.391
		552.65		-1.315E-01	3.395E-01	5.316E-01	2.944E-02	-0.247
RB-84		881.50	*	-1.288E-02	1.117E-01	1.827E-01	1.509E-02	-0.070
KR-85		513.99	*	5.092E+01	1.552E+01	2.787E+01	1.572E+00	1.827
SR-85		513.99	*	2.574E-01	7.845E-02	1.409E-01	7.949E-03	1.827
RB-86		1076.63	*	-8.806E-02	1.288E+00	2.092E+00	1.456E-01	-0.042
Y-88		898.02		1.700E-02	6.798E-02	1.153E-01	9.894E-03	0.147
		1836.01	*	6.253E-02	5.239E-02	1.073E-01	6.268E-03	0.583
ZR-88		392.90	*	-1.333E-02	5.699E-02	9.256E-02	5.249E-03	-0.144
Y-91		1204.90	*	1.091E+01	3.219E+01	5.411E+01	3.272E+00	0.202
NB-94		702.63	*	-7.521E-03	5.635E-02	9.342E-02	5.196E-03	-0.081
		871.10		3.660E-02	6.149E-02	1.074E-01	8.681E-03	0.341
NB-95		765.79	*	9.374E-02	7.801E-02	1.412E-01	9.096E-03	0.664
NB-95M		235.69	*	4.838E-01	2.408E-01	3.929E-01	3.319E-02	1.231
ZR-95		724.18		3.480E-03	1.884E-01	2.726E-01	1.882E-02	0.013
		756.15	*	1.090E-01	1.139E-01	2.058E-01	1.535E-02	0.530
NB-97		657.90	*	2.463E-02	1.139E-01	Half-Life too short		
		1024.50		-3.883E+00	1.139E-01	Half-Life too short		
ZR-97		254.15		1.418E+00	1.139E-01	Half-Life too short		
		355.39		2.642E-01	1.139E-01	Half-Life too short		
		507.63	*	1.532E+00	1.139E-01	Half-Life too short		
		602.52		-1.440E+00	1.139E-01	Half-Life too short		
		1021.30		4.019E+00	1.139E-01	Half-Life too short		
		1147.95		1.551E+00	1.139E-01	Half-Life too short		
		1362.66		1.624E-01	1.139E-01	Half-Life too short		
		1750.46		3.492E-01	1.139E-01	Half-Life too short		
MO-99		140.51		5.829E+00	3.593E+01	5.111E+01	1.389E+01	0.114
		181.06		-1.576E+00	2.456E+01	3.432E+01	5.998E+00	-0.046
		366.43		-7.216E+01	1.058E+02	1.666E+02	1.012E+01	-0.433
		739.58	*	1.804E+00	1.377E+01	2.329E+01	3.237E+00	0.077
		778.00		3.310E-01	4.213E+01	7.030E+01	4.657E+00	0.005
TC-99M		140.51	*	2.938E+08	4.213E+01	Half-Life too short		
RH-101		127.23		3.087E-02	5.755E-02	9.583E-02	6.752E-03	0.322
		198.01	*	2.920E-03	5.678E-02	9.127E-02	6.226E-03	0.032
		325.23		-4.727E-02	4.600E-01	6.587E-01	4.331E-02	-0.072
RH-102		418.52		2.121E-02	5.358E-01	8.657E-01	4.938E-02	0.024
		475.06	*	1.379E-02	5.479E-02	9.121E-02	5.199E-03	0.151
		631.29		-1.687E-02	9.879E-02	1.567E-01	8.154E-03	-0.108
		697.49		-1.801E-02	1.255E-01	2.079E-01	1.142E-02	-0.087
		766.84		2.864E-01	1.986E-01	3.645E-01	2.355E-02	0.786
		1046.59		4.701E-02	2.186E-01	3.658E-01	2.667E-02	0.129
		1112.84		8.893E-02	3.990E-01	6.209E-01	4.047E-02	0.143
RU-103		497.08	*	-3.858E-02	6.736E-02	1.041E-01	1.311E-02	-0.370
	+	610.33		1.666E+01	3.686E+00	4.708E+00	7.175E-01	3.539
RH-106	+	511.85		5.977E-01	5.759E-01	7.905E-01	4.462E-02	0.756
		621.84	*	2.516E-01	5.779E-01	9.660E-01	1.109E-01	0.260

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1050.47		2.688E+00	4.088E+00	7.142E+00	5.177E-01	0.376
RU-106	+	511.85		5.977E-01	5.759E-01	7.905E-01	4.462E-02	0.756
		621.84	*	2.516E-01	5.774E-01	9.660E-01	5.075E-02	0.260
		1050.47		2.688E+00	4.088E+00	7.142E+00	5.177E-01	0.376
AG-108M		433.93	*	-4.030E-03	5.589E-02	9.126E-02	5.674E-03	-0.044
		614.37		5.412E-03	7.805E-02	1.095E-01	6.379E-03	0.049
		722.95		-3.521E-02	8.258E-02	1.129E-01	7.142E-03	-0.312
AG-110M		657.75	*	2.895E-02	7.118E-02	1.037E-01	5.685E-03	0.279
		677.61		6.260E-02	5.431E-01	8.809E-01	4.955E-02	0.071
		706.67		-2.297E-01	3.519E-01	5.567E-01	3.326E-02	-0.413
		763.93		-1.172E-01	3.138E-01	5.087E-01	3.429E-02	-0.230
		884.67		3.630E-02	8.168E-02	1.413E-01	1.214E-02	0.257
		937.48		1.191E-03	1.900E-01	3.138E-01	2.696E-02	0.004
		1384.27		2.169E-02	2.590E-01	4.035E-01	3.136E-02	0.054
IN-111		171.28		-2.306E-01	1.248E+00	1.991E+00	1.329E-01	-0.116
		245.39	*	-8.069E-01	1.476E+00	2.069E+00	1.441E-01	-0.390
IN-113M		391.69	*	1.641E-02	8.284E-02	1.384E-01	8.394E-03	0.119
SN-113		391.69	*	1.641E-02	8.284E-02	1.384E-01	8.394E-03	0.119
IN-114M		190.27	*	2.132E-01	3.440E-01	5.036E-01	3.415E-02	0.423
CD-115		260.90		1.184E+02	1.518E+02	2.645E+02	1.839E+01	0.448
		492.35		4.760E+00	4.146E+01	6.830E+01	3.879E+00	0.070
		527.90	*	1.522E+00	1.288E+01	2.095E+01	1.175E+00	0.073
SN-117M		156.02		3.506E+00	3.898E+00	6.548E+00	4.388E-01	0.535
		158.56	*	-4.963E-02	9.377E-02	1.476E-01	9.867E-03	-0.336
SB-122		563.90	*	2.513E+00	2.470E+00	4.344E+00	2.390E-01	0.579
		692.80		-2.466E+01	4.707E+01	7.508E+01	4.078E+00	-0.328
I-123		159.00	*	-1.142E+00	4.707E+01	Half-Life too short		
		528.96		5.661E+01	4.707E+01	Half-Life too short		
TE-123M		159.00	*	-3.051E-02	5.154E-02	8.083E-02	5.457E-03	-0.377
I-124		602.71	*	1.006E-01	1.081E+00	1.522E+00	8.139E-02	0.066
		722.78		-3.124E+00	6.895E+00	9.392E+00	5.481E-01	-0.333
		1325.50		-1.990E+01	4.504E+01	6.772E+01	5.053E+00	-0.294
		1376.25		6.385E+01	4.847E+01	8.951E+01	6.717E+00	0.713
		1509.49		2.687E+01	2.324E+01	4.429E+01	3.208E+00	0.607
		1691.02		-1.885E+00	6.202E+00	9.716E+00	6.395E-01	-0.194
SB-124		602.71		7.186E-03	7.725E-02	1.088E-01	5.818E-03	0.066
		645.85		5.558E-01	8.094E-01	1.389E+00	8.270E-02	0.400
		709.31		6.647E+00	4.392E+00	8.255E+00	4.666E-01	0.805
		713.82		-3.530E+00	2.678E+00	3.896E+00	3.959E-01	-0.906
		722.78		-3.236E-01	7.143E-01	9.729E-01	5.942E-02	-0.333
	+	968.20		2.079E+01	7.216E+00	1.153E+01	9.257E-01	1.804
		1045.16		1.671E+00	4.745E+00	8.035E+00	5.870E-01	0.208
		1325.50		-2.202E+00	4.983E+00	7.492E+00	5.591E-01	-0.294
		1368.21		-4.774E-01	2.571E+00	3.897E+00	4.987E-01	-0.122
		1436.60		-4.381E+00	5.770E+00	8.373E+00	6.204E-01	-0.523
		1691.02	*	-4.606E-02	1.515E-01	2.374E-01	1.667E-02	-0.194
SB-125		427.89	*	2.028E-02	1.600E-01	2.654E-01	1.582E-02	0.076
		463.38		3.400E-01	4.875E-01	8.373E-01	5.598E-02	0.406
		600.56		-3.621E-01	3.465E-01	4.690E-01	2.968E-02	-0.772

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		635.90		7.563E-02	4.738E-01	7.684E-01	4.819E-02	0.098
TE-125M		109.28	*	-2.164E+01	1.674E+01	2.552E+01	2.535E+00	-0.848
I-126		388.63		2.959E-01	3.501E-01	6.082E-01	3.480E-02	0.487
		666.33	*	-9.225E-02	3.529E-01	4.713E-01	2.399E-02	-0.196
		753.82		-3.284E-01	2.250E+00	3.707E+00	2.325E-01	-0.089
SB-126		223.80		2.276E-01	6.555E+00	1.048E+01	7.260E-01	0.022
	+	278.60		4.610E+00	5.942E+00	7.143E+00	4.929E-01	0.645
	+	296.50		1.502E+01	4.314E+00	5.784E+00	3.938E-01	2.596
		414.70		1.604E-02	1.290E-01	2.139E-01	1.220E-02	0.075
		415.30		1.762E+00	1.043E+01	1.736E+01	9.901E-01	0.101
		555.20		1.350E+00	6.145E+00	1.016E+01	5.622E-01	0.133
		573.80		-3.402E-01	1.666E+00	2.649E+00	1.448E-01	-0.128
		593.00		-9.994E-01	1.501E+00	2.275E+00	1.226E-01	-0.439
		656.30		2.388E+00	6.185E+00	9.006E+00	4.560E-01	0.265
		666.33		-3.843E-02	1.470E-01	1.963E-01	9.993E-03	-0.196
		675.00		-2.065E-02	3.360E+00	5.390E+00	2.803E-01	-0.004
		695.00		-2.905E-02	1.157E-01	1.898E-01	1.036E-02	-0.153
		697.00		-5.903E-02	4.112E-01	6.813E-01	3.739E-02	-0.087
		720.50	*	2.669E-01	2.452E-01	4.017E-01	2.332E-02	0.664
		856.80		-1.119E-01	7.858E-01	1.096E+00	8.606E-02	-0.102
		989.30		-1.928E+00	1.811E+00	2.562E+00	2.011E-01	-0.753
		1034.80		-1.180E+01	1.388E+01	2.045E+01	1.516E+00	-0.577
		1213.00		8.948E-02	6.898E+00	1.122E+01	6.888E-01	0.008
SB-127		61.10		6.868E+01	1.361E+02	2.039E+02	2.797E+01	0.337
		252.40		3.940E+00	6.518E+00	1.092E+01	4.545E+00	0.361
		290.80		-1.271E+01	3.155E+01	4.419E+01	4.159E+00	-0.288
		411.60		6.452E+00	1.746E+01	2.940E+01	4.126E+00	0.219
		444.90		2.660E+00	1.426E+01	2.369E+01	2.449E+00	0.112
		473.00		-1.504E+00	2.525E+00	3.938E+00	4.228E-01	-0.382
		543.00		8.704E+00	2.486E+01	4.143E+01	5.165E+00	0.210
		603.60		1.433E+01	1.748E+01	2.670E+01	2.699E+00	0.537
		685.20	*	3.404E-01	1.705E+00	2.913E+00	2.526E-01	0.117
		698.50		1.581E+01	1.971E+01	3.498E+01	4.918E+00	0.452
		722.20		-2.137E+01	4.702E+01	6.406E+01	5.574E+00	-0.334
		783.80		4.186E+00	5.274E+00	9.305E+00	1.004E+00	0.450
XE-127		57.60		1.266E+01	2.002E+01	3.032E+01	3.862E+00	0.417
	+	145.22		1.501E+00	1.504E+00	2.068E+00	1.403E-01	0.726
		172.10		-1.249E-01	2.053E-01	3.200E-01	2.137E-02	-0.390
		202.84	*	-6.682E-02	8.221E-02	1.257E-01	8.605E-03	-0.532
		374.96		-3.116E-02	3.453E-01	5.672E-01	3.372E-02	-0.055
I-131		80.18		-4.364E+00	8.972E+00	1.261E+01	1.411E+00	-0.346
		284.30		1.237E+00	2.347E+00	3.838E+00	2.848E-01	0.322
		364.48	*	-1.203E-01	1.865E-01	2.951E-01	1.987E-02	-0.408
		636.97		1.419E+00	2.231E+00	3.816E+00	2.263E-01	0.372
		722.89		-5.397E+00	1.238E+01	1.691E+01	9.983E-01	-0.319
TE-132		49.72		-9.093E+00	6.629E+01	1.098E+02	1.620E+01	-0.083
		111.76		2.559E+01	3.994E+01	6.699E+01	6.666E+00	0.382
		116.30		-2.520E+01	3.702E+01	5.836E+01	5.642E+00	-0.432
		228.16	*	-4.530E-01	8.288E-01	1.353E+00	1.976E-01	-0.335

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BA-133		53.15		1.133E+00	1.364E+01	2.279E+01	3.125E+00	0.050
		79.62		3.269E+00	2.986E+00	4.498E+00	7.550E-01	0.727
		81.00		-3.732E-01	2.262E-01	2.824E-01	4.914E-02	-1.322
		276.40		7.873E-01	9.182E-01	1.155E+00	1.559E-01	0.682
		302.84		-1.513E-01	2.643E-01	4.132E-01	5.027E-02	-0.366
		356.01	*	-4.506E-02	8.894E-02	1.215E-01	1.431E-02	-0.371
		383.85		-3.702E-01	5.169E-01	8.068E-01	8.772E-02	-0.459
I-133	+	510.53		4.184E-01	5.169E-01	Half-Life too short		
		529.87	*	2.611E-03	5.169E-01	Half-Life too short		
		706.58		-1.562E-01	5.169E-01	Half-Life too short		
		856.28		-1.144E-01	5.169E-01	Half-Life too short		
		875.33		-1.384E-02	5.169E-01	Half-Life too short		
		1236.41		4.563E-01	5.169E-01	Half-Life too short		
		1298.22		-4.408E-02	5.169E-01	Half-Life too short		
CS-134		475.35		1.308E+00	3.591E+00	6.024E+00	3.433E-01	0.217
		563.23		6.636E-01	6.103E-01	1.078E+00	6.071E-02	0.616
		569.32		-1.410E-01	3.274E-01	5.092E-01	2.884E-02	-0.277
		604.70		9.442E-02	6.298E-02	1.032E-01	5.545E-03	0.915
		795.84	*	6.242E-02	8.068E-02	1.429E-01	9.955E-03	0.437
		801.93		1.166E-01	6.855E-01	1.158E+00	8.158E-02	0.101
		1038.57		1.048E+00	6.747E+00	1.125E+01	8.295E-01	0.093
		1167.94		2.137E+00	3.701E+00	6.443E+00	3.719E-01	0.332
		1365.15		-7.109E-01	1.873E+00	2.810E+00	2.238E-01	-0.253
CS-135		268.24	*	4.078E-01	3.033E-01	4.843E-01	4.140E-02	0.842
I-135		288.45		-1.715E+09	3.033E-01	Half-Life too short		
		417.63		-5.178E+08	3.033E-01	Half-Life too short		
		546.56		2.881E+08	3.033E-01	Half-Life too short		
		836.80		9.102E+08	3.033E-01	Half-Life too short		
		1038.76		2.101E+08	3.033E-01	Half-Life too short		
		1124.00		1.466E+09	3.033E-01	Half-Life too short		
		1131.51		-9.505E+07	3.033E-01	Half-Life too short		
		1260.41	*	9.119E+07	3.033E-01	Half-Life too short		
		1457.56		2.636E+10	3.033E-01	Half-Life too short		
		1678.03		-5.349E+07	3.033E-01	Half-Life too short		
		1706.46		7.617E+07	3.033E-01	Half-Life too short		
		1791.20		-2.173E+08	3.033E-01	Half-Life too short		
CS-136		66.91		-1.833E+00	1.838E+00	2.463E+00	4.237E-01	-0.744
	+	86.29		4.591E+00	2.454E+00	3.598E+00	5.360E-01	1.276
		153.22		1.297E+00	1.108E+00	1.881E+00	1.501E-01	0.690
		163.89		-1.637E-01	1.712E+00	2.750E+00	2.187E-01	-0.060
		176.55		1.785E-01	6.078E-01	9.927E-01	7.278E-02	0.180
		273.65		2.455E-01	1.142E+00	1.158E+00	8.815E-02	0.212
		340.57		7.742E-01	2.584E-01	4.445E-01	2.997E-02	1.742
		818.51		1.309E-02	1.064E-01	1.792E-01	1.299E-02	0.073
		1048.07	*	6.061E-02	1.920E-01	3.242E-01	2.497E-02	0.187
		1235.34		5.976E-01	1.003E+00	1.711E+00	1.770E-01	0.349
CE-139		165.85	*	-2.008E-02	5.142E-02	8.127E-02	5.405E-03	-0.247
BA-140		162.64		2.816E-02	1.208E+00	1.952E+00	1.425E-01	0.014
		304.84		-2.206E+00	2.184E+00	3.280E+00	9.022E-01	-0.673

---- Non-Identified Nuclides ----

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		423.70		-4.830E-01	3.153E+00	5.119E+00	1.626E+00	-0.094
		537.32	*	1.086E-01	4.131E-01	6.839E-01	2.222E-01	0.159
LA-140	+	328.77		4.999E-01	7.622E-01	8.601E-01	6.163E-02	0.581
		432.53		9.302E-01	3.301E+00	5.534E+00	3.502E-01	0.168
		487.03		1.148E-01	2.186E-01	3.718E-01	2.404E-02	0.309
		751.79		-2.382E+00	2.521E+00	3.805E+00	2.840E-01	-0.626
		815.85		-2.106E-01	4.673E-01	7.390E-01	6.179E-02	-0.285
		867.82		-1.031E+00	2.884E+00	3.914E+00	3.334E-01	-0.263
		919.63		-4.486E+00	5.367E+00	6.296E+00	6.589E-01	-0.713
		925.24		1.414E+00	1.929E+00	3.397E+00	3.028E-01	0.416
		1596.49	*	-2.428E-02	1.367E-01	1.988E-01	1.386E-02	-0.122
CE-141		145.44	*	1.186E-01	1.241E-01	1.860E-01	1.299E-02	0.638
CE-143		57.37		2.763E-04	1.241E-01	Half-Life too short		
		231.56		1.279E-03	1.241E-01	Half-Life too short		
		293.26	*	7.048E-04	1.241E-01	Half-Life too short		
		350.59		1.535E-02	1.241E-01	Half-Life too short		
		490.36		-2.290E-03	1.241E-01	Half-Life too short		
		664.57		8.832E-04	1.241E-01	Half-Life too short		
		721.93		-8.685E-05	1.241E-01	Half-Life too short		
CE-144		80.11		-1.781E+00	4.638E+00	6.561E+00	7.320E-01	-0.271
		133.54	*	-2.033E-01	3.665E-01	5.782E-01	8.498E-02	-0.352
PM-144		476.78		1.387E-01	1.264E-01	2.221E-01	1.523E-02	0.625
		618.01		-1.138E-02	5.924E-02	9.396E-02	5.312E-03	-0.121
		696.49	*	-3.760E-03	5.511E-02	9.189E-02	5.040E-03	-0.041
		778.57		-5.360E-01	4.040E+00	6.657E+00	4.417E-01	-0.081
PR-144		696.49	*	-2.546E-01	3.732E+00	6.222E+00	3.410E-01	-0.041
		1489.15		4.160E+00	2.116E+01	3.628E+01	2.647E+00	0.115
PM-146		453.90	*	1.005E-02	8.048E-02	1.330E-01	1.139E-02	0.076
		633.02		-3.900E-01	2.417E+00	3.826E+00	1.405E+00	-0.102
		735.90		-4.048E-02	2.718E-01	4.146E-01	1.158E-01	-0.098
		747.13		7.430E-02	1.462E-01	2.552E-01	3.238E-02	0.291
ND-147		91.11		3.150E-01	8.569E-01	9.158E-01	1.042E-01	0.344
		319.41		4.720E+00	5.371E+00	9.388E+00	6.228E-01	0.503
		439.89		2.020E+00	9.808E+00	1.633E+01	9.335E-01	0.124
		531.02	*	5.072E-01	8.788E-01	1.495E+00	2.009E-01	0.339
PM-149		285.90	*	1.366E+01	9.922E+01	1.672E+02	2.448E+01	0.082
EU-152		121.78		-5.144E-02	1.226E-01	1.955E-01	1.705E-02	-0.263
		244.69		-2.602E-02	6.594E-01	9.632E-01	6.706E-02	-0.027
		344.27	*	4.390E-03	2.009E-01	2.736E-01	1.928E-02	0.016
		443.98		-4.111E-01	1.803E+00	2.909E+00	1.663E-01	-0.141
		778.89		7.155E-04	4.695E-01	7.830E-01	5.196E-02	0.001
		867.32		6.506E-01	1.748E+00	2.615E+00	2.098E-01	0.249
	+	964.01		1.127E+00	6.202E-01	9.890E-01	7.975E-02	1.140
		1085.78		-8.056E-02	7.215E-01	1.166E+00	7.988E-02	-0.069
		1112.02		1.949E-01	5.406E-01	8.990E-01	5.869E-02	0.217
		1407.95		3.366E-01	3.241E-01	6.095E-01	4.546E-02	0.552
GD-153		69.67		1.539E+00	5.237E+00	5.677E+00	6.408E-01	0.271
		83.37		1.442E+01	4.162E+01	4.522E+01	5.101E+00	0.319
		97.43	*	5.520E-02	1.530E-01	2.250E-01	2.159E-02	0.245

---- Non-Identified Nuclides ----

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		103.18		-1.675E-01	1.863E-01	2.913E-01	2.563E-02	-0.575
EU-154		123.07		-5.984E-02	8.826E-02	1.386E-01	1.427E-02	-0.432
		247.94		-2.352E-01	7.123E-01	1.066E+00	1.097E-01	-0.221
		591.81		-6.606E-01	1.050E+00	1.592E+00	1.518E-01	-0.415
		723.30		-5.541E-02	3.314E-01	4.682E-01	3.332E-02	-0.118
		756.87		1.860E+00	1.278E+00	2.378E+00	2.483E-01	0.782
		873.19		2.209E-01	5.228E-01	9.002E-01	1.071E-01	0.245
		996.32		-4.647E-01	6.286E-01	9.399E-01	1.633E-01	-0.494
		1004.76		-2.300E-01	3.983E-01	6.155E-01	6.759E-02	-0.374
		1274.45	*	4.418E-02	2.112E-01	3.505E-01	3.514E-02	0.126
EU-155		48.70		-1.116E+01	1.171E+01	1.854E+01	2.385E+00	-0.602
		60.01		-6.189E+00	1.591E+01	2.265E+01	2.769E+00	-0.273
	+	86.54		4.544E-01	2.391E-01	3.563E-01	4.109E-02	1.276
		105.31	*	1.819E-01	1.889E-01	3.217E-01	2.786E-02	0.565
TB-160	+	86.79		1.199E+00	6.306E-01	9.298E-01	1.068E-01	1.290
		197.04		3.619E-01	9.463E-01	1.548E+00	1.055E-01	0.234
		215.65		-5.077E-01	1.443E+00	2.177E+00	1.502E-01	-0.233
		298.57		3.218E-01	2.275E-01	3.632E-01	2.468E-02	0.886
		879.36	*	-9.322E-02	2.238E-01	3.536E-01	2.907E-02	-0.264
		962.29		1.135E+00	1.050E+00	1.684E+00	1.360E-01	0.674
		966.15		1.722E+00	4.500E-01	8.874E-01	7.140E-02	1.941
		1177.93		4.502E-01	5.594E-01	9.920E-01	5.701E-02	0.454
		1271.85		-3.287E-01	1.288E+00	2.022E+00	1.379E-01	-0.163
HO-166M		80.57		-9.846E-01	6.141E-01	7.925E-01	8.852E-02	-1.242
		184.41		1.687E-01	7.201E-02	1.259E-01	8.495E-03	1.340
		280.46		1.129E-01	1.671E-01	2.559E-01	1.764E-02	0.441
		410.95		4.335E-01	4.398E-01	7.696E-01	4.384E-02	0.563
		711.68	*	1.127E-02	1.002E-01	1.695E-01	9.634E-03	0.066
		752.31		-4.153E-01	4.410E-01	6.674E-01	4.171E-02	-0.622
		810.29		5.675E-03	1.011E-01	1.691E-01	1.202E-02	0.034
TM-171		51.35		1.356E+02	1.258E+02	2.173E+02	3.001E+01	0.624
		52.39		6.337E+01	6.206E+01	1.069E+02	1.475E+01	0.593
		59.40		2.840E+01	8.239E+01	1.228E+02	1.511E+01	0.231
		66.72	*	-6.541E+01	7.153E+01	9.740E+01	1.120E+01	-0.672
LU-176	+	88.36		8.954E-01	4.709E-01	7.030E-01	8.066E-02	1.274
		201.83		-2.834E-02	5.192E-02	8.071E-02	5.521E-03	-0.351
		306.84	*	-1.375E-02	4.244E-02	6.932E-02	4.670E-03	-0.198
		401.10		-6.326E+00	1.186E+01	1.881E+01	1.069E+00	-0.336
LU-177		112.95		3.228E+00	2.523E+00	4.335E+00	3.393E-01	0.745
	+	208.36	*	4.369E+00	2.030E+00	3.002E+00	2.063E-01	1.455
LU-177M		52.97		3.684E+00	6.152E+00	1.048E+01	1.439E+00	0.352
		54.07		-3.060E+00	3.086E+00	4.857E+00	6.584E-01	-0.630
		61.30		3.399E+00	4.470E+00	6.782E+00	8.187E-01	0.501
		121.62		-2.188E-01	6.274E-01	1.004E+00	7.236E-02	-0.218
		147.16		1.309E-01	1.241E+00	1.770E+00	1.197E-01	0.074
		171.86		-2.087E-01	8.361E-01	1.329E+00	8.877E-02	-0.157
		218.09		8.503E-01	1.589E+00	2.608E+00	1.802E-01	0.326
		268.79		2.698E+00	1.583E+00	2.574E+00	1.785E-01	1.048
		319.02		3.031E-01	4.603E-01	7.949E-01	5.274E-02	0.381

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		367.43		-9.287E-01	1.590E+00	2.524E+00	1.529E-01	-0.368
		413.65	*	-1.836E-01	3.246E-01	5.132E-01	2.925E-02	-0.358
HF-181		56.28		-1.496E+00	3.241E+00	4.861E+00	6.348E-01	-0.308
		57.53		1.331E+00	1.675E+00	2.558E+00	3.262E-01	0.520
		65.20		2.808E+00	2.465E+00	3.787E+00	4.407E-01	0.742
		133.02		-7.669E-02	1.158E-01	1.822E-01	1.263E-02	-0.421
		136.25		-5.122E-01	7.787E-01	1.223E+00	8.420E-02	-0.419
		345.85		-7.552E-02	5.588E-01	5.246E-01	3.330E-02	-0.144
		482.03	*	-7.846E-02	7.676E-02	1.150E-01	6.549E-03	-0.682
W-181		56.28		-5.940E-01	1.287E+00	1.930E+00	2.520E-01	-0.308
		57.53		5.282E-01	6.655E-01	1.016E+00	1.296E-01	0.520
		65.20	*	1.107E+00	9.718E-01	1.493E+00	1.737E-01	0.742
TA-182		67.75		-2.135E-01	2.899E-01	3.712E-01	4.238E-02	-0.575
		100.10		9.252E-03	3.221E-01	5.108E-01	4.698E-02	0.018
		152.43		1.950E-01	6.005E-01	9.861E-01	6.632E-02	0.198
		222.10		-5.801E-01	6.309E-01	9.522E-01	6.592E-02	-0.609
		1001.68		1.862E+00	3.577E+00	6.261E+00	4.844E-01	0.297
	+	1121.28		9.005E-01	4.288E-01	6.096E-01	3.908E-02	1.477
		1189.05		6.581E-01	5.126E-01	9.414E-01	5.526E-02	0.699
		1221.42	*	-7.461E-02	3.220E-01	5.095E-01	3.177E-02	-0.146
		1230.97		-6.171E-01	8.475E-01	1.272E+00	8.071E-02	-0.485
RE-183		57.98		7.316E-01	6.441E-01	9.987E-01	1.263E-01	0.733
		59.32		1.057E-01	3.354E-01	4.991E-01	6.151E-02	0.212
		67.20		-5.599E-01	4.967E-01	6.646E-01	7.616E-02	-0.842
		162.32	*	1.068E-02	1.876E-01	3.037E-01	2.024E-02	0.035
	+	208.81		4.451E+00	2.068E+00	3.082E+00	2.119E-01	1.444
		291.72		1.885E-01	1.693E+00	2.483E+00	1.698E-01	0.076
RE-184		57.98		2.717E+00	2.392E+00	3.709E+00	4.689E-01	0.733
		59.32		3.923E-01	1.244E+00	1.852E+00	2.282E-01	0.212
		67.20		-2.079E+00	1.844E+00	2.467E+00	2.827E-01	-0.842
		161.27		-7.144E-02	6.214E-01	9.977E-01	6.656E-02	-0.072
		216.55		-2.229E-02	4.890E-01	7.792E-01	5.380E-02	-0.029
		252.85	*	2.691E-01	4.236E-01	7.330E-01	5.103E-02	0.367
		318.01		4.719E-01	7.983E-01	1.374E+00	9.128E-02	0.343
		792.07		-3.474E-01	1.802E+00	2.954E+00	2.018E-01	-0.118
		903.28		-1.604E+00	1.943E+00	2.541E+00	2.161E-01	-0.631
		920.93		-6.827E-01	9.099E-01	1.201E+00	1.007E-01	-0.568
OS-185		59.72		-5.071E-02	9.234E-01	1.343E+00	1.647E-01	-0.038
		61.14		2.716E-01	4.879E-01	7.334E-01	8.869E-02	0.370
		69.30		3.809E-02	9.554E-01	1.008E+00	1.140E-01	0.038
		592.07		-4.645E+00	4.419E+00	6.431E+00	3.468E-01	-0.722
		646.12	*	3.564E-02	7.016E-02	1.184E-01	6.068E-03	0.301
		717.42		2.547E-02	1.482E+00	2.485E+00	1.432E-01	0.010
		874.81		2.436E-01	1.007E+00	1.708E+00	1.391E-01	0.143
		880.27		-7.934E-01	1.307E+00	2.024E+00	1.667E-01	-0.392
RE-188		155.03	*	2.469E-01	3.132E-01	5.237E-01	3.513E-02	0.471
		477.96		5.259E+00	5.638E+00	9.822E+00	5.596E-01	0.535
		633.10		-9.121E-01	4.802E+00	7.593E+00	3.945E-01	-0.120
W-188	+	63.58		3.332E+02	2.596E+02	2.364E+02	2.791E+01	1.409

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		227.08		7.579E-01	2.009E+01	3.394E+01	2.354E+00	0.022
		290.67	*	-5.987E+00	1.369E+01	1.911E+01	1.308E+00	-0.313
IR-192	+	295.96		1.224E+00	3.519E-01	4.719E-01	3.252E-02	2.594
		308.46		1.249E-02	1.595E-01	2.671E-01	1.811E-02	0.047
		316.51	*	-3.096E-02	6.047E-02	9.746E-02	6.513E-03	-0.318
		468.07		-1.277E-01	1.223E-01	1.838E-01	1.214E-02	-0.695
		604.41		1.248E+00	8.496E-01	1.376E+00	1.531E-01	0.906
		612.46		3.398E+00	1.636E+00	2.705E+00	1.947E-01	1.256
AU-195		65.12		5.729E-01	4.555E-01	7.025E-01	8.182E-02	0.815
		66.83		-2.270E-01	2.346E-01	3.180E-01	3.654E-02	-0.714
	+	75.70		1.291E+00	4.806E-01	9.248E-01	1.027E-01	1.396
		98.88	*	5.665E-01	4.326E-01	6.698E-01	6.278E-02	0.846
		129.76		6.171E+00	5.167E+00	8.808E+00	6.159E-01	0.701
TL-200		367.94	*	-1.355E-04	5.167E+00	Half-Life too short		
		579.30		-3.215E-04	5.167E+00	Half-Life too short		
		828.27		2.274E-03	5.167E+00	Half-Life too short		
		1205.75		1.301E-03	5.167E+00	Half-Life too short		
TL-201		68.90		1.018E+00	1.132E+01	1.202E+01	1.362E+00	0.085
		70.82		3.441E+00	4.849E+00	6.863E+00	7.706E-01	0.501
		80.30		-5.331E+00	8.038E+00	1.116E+01	1.245E+00	-0.478
		135.34		4.517E+00	3.228E+01	5.278E+01	3.641E+00	0.086
		167.43	*	2.002E+00	8.757E+00	1.429E+01	9.509E-01	0.140
TL-202		68.90		1.152E-01	1.280E+00	1.359E+00	1.540E-01	0.085
		70.82		3.880E-01	5.468E-01	7.739E-01	8.689E-02	0.501
		80.30		-6.013E-01	9.066E-01	1.258E+00	1.405E-01	-0.478
		439.56	*	1.994E-02	1.167E-01	1.938E-01	1.107E-02	0.103
BI-207		72.80		6.279E-01	4.202E-01	6.504E-01	7.254E-02	0.965
	+	74.97		7.199E-01	2.679E-01	4.669E-01	5.187E-02	1.542
		84.90		3.596E-01	4.261E-01	5.984E-01	6.800E-02	0.601
		569.67		-9.141E-03	5.058E-02	8.056E-02	4.416E-03	-0.113
		1063.62	*	2.098E-02	9.820E-02	1.642E-01	1.167E-02	0.128
		1770.23		2.395E-01	5.658E-01	9.459E-01	5.858E-02	0.253
TL-207		81.07		-7.535E-01	4.819E-01	6.233E-01	6.972E-02	-1.209
		83.78		-3.582E-02	3.681E-01	3.824E-01	4.322E-02	-0.094
	+	94.90		1.435E+00	9.071E-01	8.192E-01	8.215E-02	1.752
		122.32		-1.682E+00	2.936E+00	4.641E+00	3.674E-01	-0.362
	+	144.24		1.510E+00	1.514E+00	2.050E+00	1.650E-01	0.736
		154.21		7.883E-01	7.210E-01	1.220E+00	9.498E-02	0.646
	+	269.46		7.158E-01	4.686E-01	6.058E-01	4.333E-02	1.181
		323.87	*	2.764E-01	1.374E+00	2.018E+00	3.391E-01	0.137
	+	338.28		9.438E+00	3.520E+00	4.254E+00	4.635E-01	2.219
		445.03		7.886E-01	4.226E+00	7.022E+00	7.177E-01	0.112
PO-209		260.50		2.021E+01	1.698E+01	3.013E+01	2.095E+00	0.671
		262.80		-4.509E+01	4.992E+01	7.433E+01	5.164E+00	-0.607
		896.60	*	8.069E+00	1.247E+01	2.193E+01	1.867E+00	0.368
BI-210		46.50	*	-8.724E+00	1.977E+01	3.148E+01	3.270E+00	-0.277
PB-210		46.50	*	-8.724E+00	1.977E+01	3.148E+01	3.270E+00	-0.277
PO-210		46.50	*	-8.724E+00	1.976E+01	3.148E+01	3.024E+00	-0.277
PB-211		404.84	*	-1.392E-01	1.678E+00	2.745E+00	1.711E+00	-0.051

---- Non-Identified Nuclides ----

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		427.08		9.301E-01	3.633E+00	6.005E+00	3.711E+00	0.155
		831.96		-5.204E-01	2.003E+00	3.199E+00	2.000E+00	-0.163
BI-212	+	727.18	*	1.162E+00	8.955E-01	1.078E+00	8.391E-02	1.078
		785.46		3.839E+00	3.226E+00	5.861E+00	3.947E-01	0.655
		1620.62		-8.342E-01	2.133E+00	3.287E+00	2.261E-01	-0.254
PO-215		81.07		-7.535E-01	4.819E-01	6.233E-01	6.972E-02	-1.209
		83.78		-3.582E-02	3.681E-01	3.824E-01	4.322E-02	-0.094
	+	94.90		1.435E+00	9.071E-01	8.192E-01	8.215E-02	1.752
		122.32		-1.682E+00	2.936E+00	4.641E+00	3.674E-01	-0.362
	+	144.24		1.510E+00	1.514E+00	2.050E+00	1.650E-01	0.736
		154.21		7.883E-01	7.210E-01	1.220E+00	9.498E-02	0.646
	+	269.46		7.158E-01	4.686E-01	6.058E-01	4.333E-02	1.181
		323.87	*	2.764E-01	1.374E+00	2.018E+00	3.391E-01	0.137
	+	338.28		9.438E+00	3.520E+00	4.254E+00	4.635E-01	2.219
		445.03		7.886E-01	4.226E+00	7.022E+00	7.177E-01	0.112
RN-219	+	271.23		9.184E-01	6.032E-01	7.777E-01	6.957E-02	1.181
		401.81	*	-2.963E-01	7.209E-01	1.151E+00	1.561E-01	-0.257
RN-220		549.76	*	-1.821E+01	4.667E+01	7.317E+01	4.060E+00	-0.249
RA-223		81.07		-7.535E-01	4.819E-01	6.233E-01	6.972E-02	-1.209
		83.78		-3.582E-02	3.681E-01	3.824E-01	4.322E-02	-0.094
	+	94.90		1.435E+00	9.071E-01	8.192E-01	8.215E-02	1.752
		122.32		-1.682E+00	2.936E+00	4.641E+00	3.674E-01	-0.362
	+	144.24		1.510E+00	1.514E+00	2.050E+00	1.650E-01	0.736
		154.21		7.883E-01	7.210E-01	1.220E+00	9.498E-02	0.646
	+	269.46		7.158E-01	4.686E-01	6.058E-01	4.333E-02	1.181
		323.87	*	2.764E-01	1.374E+00	2.018E+00	3.391E-01	0.137
	+	338.28		9.438E+00	3.520E+00	4.254E+00	4.635E-01	2.219
		445.03		7.886E-01	4.226E+00	7.022E+00	7.177E-01	0.112
AC-227		79.80		2.235E+00	3.684E+00	5.458E+00	1.235E+00	0.409
		236.00		1.961E+00	5.371E-01	8.773E-01	9.769E-02	2.236
		256.20	*	-1.300E-01	7.102E-01	1.181E+00	1.710E-01	-0.110
		286.10		3.802E-01	2.522E+00	4.253E+00	5.160E-01	0.089
		299.80		4.680E+00	2.885E+00	4.554E+00	7.587E-01	1.028
		304.40		-3.544E+00	3.357E+00	5.149E+00	9.083E-01	-0.688
		334.20		-5.927E-01	6.752E+00	6.416E+00	1.191E+00	-0.092
TH-227		79.80		2.235E+00	3.685E+00	5.458E+00	1.250E+00	0.409
	+	94.00		1.148E+01	7.611E+00	7.706E+00	1.730E+00	1.490
		236.00		1.961E+00	5.272E-01	8.773E-01	8.630E-02	2.236
		256.20	*	-1.300E-01	7.103E-01	1.181E+00	2.047E-01	-0.110
		286.10		3.802E-01	2.550E+00	4.253E+00	4.263E+00	0.089
		299.80		4.680E+00	2.885E+00	4.554E+00	7.587E-01	1.028
		304.40		-3.544E+00	3.357E+00	5.149E+00	9.083E-01	-0.688
		334.20		-5.927E-01	6.752E+00	6.416E+00	1.191E+00	-0.092
TH-229		85.43		8.469E-01	4.118E-01	6.362E-01	7.250E-02	1.331
	+	88.47		5.154E-01	2.711E-01	4.056E-01	4.642E-02	1.271
		100.00		-1.213E-02	3.537E-01	5.355E-01	4.933E-02	-0.023
		193.63	*	1.036E+00	9.263E-01	1.469E+00	9.986E-02	0.706
		210.97		1.527E+00	1.620E+00	2.399E+00	1.651E-01	0.636
PA-231		283.67	*	1.186E+00	2.831E+00	4.437E+00	6.331E-01	0.267

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		301.29		1.897E+00	1.130E+00	1.824E+00	2.010E-01	1.040
TH-231		81.07		-7.535E-01	4.819E-01	6.233E-01	6.972E-02	-1.209
		83.78		-3.582E-02	3.681E-01	3.824E-01	4.322E-02	-0.094
	+	94.90		1.435E+00	9.071E-01	8.192E-01	8.215E-02	1.752
		122.32		-1.682E+00	2.936E+00	4.641E+00	3.674E-01	-0.362
	+	144.24		1.510E+00	1.514E+00	2.050E+00	1.650E-01	0.736
		154.21		7.883E-01	7.210E-01	1.220E+00	9.498E-02	0.646
	+	269.46		7.158E-01	4.686E-01	6.058E-01	4.333E-02	1.181
		323.87	*	2.764E-01	1.374E+00	2.018E+00	3.391E-01	0.137
	+	338.28		9.438E+00	3.520E+00	4.254E+00	4.635E-01	2.219
		445.03		7.886E-01	4.226E+00	7.022E+00	7.177E-01	0.112
U-231		84.21		2.236E+00	1.063E+01	1.315E+01	1.489E+00	0.170
	+	92.29		9.090E+00	5.746E+00	6.378E+00	6.722E-01	1.425
		95.87	*	-3.423E-01	1.818E+00	2.586E+00	2.548E-01	-0.132
		108.00		-8.892E-01	2.885E+00	4.649E+00	3.846E-01	-0.191
PA-233	+	75.28		2.101E+01	8.261E+00	1.433E+01	2.417E+00	1.466
	+	86.59		7.391E+00	4.316E+00	5.781E+00	1.611E+00	1.278
		300.12		1.280E+00	7.938E-01	1.266E+00	1.759E-01	1.011
		311.98	*	6.991E-02	1.077E-01	1.864E-01	1.307E-02	0.375
		340.50		4.256E+00	1.653E+00	2.347E+00	5.429E-01	1.813
		398.62		-5.785E-01	3.692E+00	6.014E+00	1.553E+00	-0.096
		415.76		-1.029E+00	3.078E+00	4.831E+00	9.932E-01	-0.213
PA-234	+	63.00		9.793E+00	7.733E+00	7.424E+00	1.301E+00	1.319
	+	94.67		1.024E+00	6.535E-01	6.191E-01	8.327E-02	1.654
		98.44		2.031E-01	2.118E-01	2.757E-01	1.542E-01	0.737
		99.86		2.121E-01	8.814E-01	1.355E+00	1.251E-01	0.157
		111.00		-1.582E-02	3.323E-01	5.420E-01	6.314E-02	-0.029
		131.20		-6.649E-02	1.955E-01	3.131E-01	2.181E-02	-0.212
		152.70		3.153E-01	5.881E-01	9.715E-01	1.571E-01	0.325
	+	186.00		9.868E+00	5.412E+00	4.745E+00	1.459E+00	2.080
		226.40		6.545E-03	6.408E-01	1.081E+00	1.316E-01	0.006
		227.20		4.922E-02	6.890E-01	1.166E+00	8.089E-02	0.042
		248.90		2.574E-01	1.510E+00	2.494E+00	5.445E-01	0.103
		293.70		8.208E+00	2.035E+00	2.908E+00	4.792E-01	2.823
		369.80		1.727E-01	1.516E+00	2.525E+00	5.275E-01	0.068
		568.70		-1.126E+00	1.666E+00	2.528E+00	1.386E-01	-0.446
		569.50		3.104E-02	4.366E-01	7.119E-01	3.902E-02	0.044
		574.00		-4.659E-01	2.583E+00	4.116E+00	2.249E-01	-0.113
		699.00		1.052E+00	1.190E+00	2.112E+00	3.778E-01	0.498
		706.10		-1.238E+00	1.873E+00	2.830E+00	1.248E+00	-0.437
		733.00		1.862E-01	7.366E-01	1.095E+00	2.333E-01	0.170
		742.81		5.555E-01	2.284E+00	3.851E+00	2.578E+00	0.144
		796.30		9.764E-01	1.592E+00	2.753E+00	7.309E-01	0.355
		805.60		6.891E-01	1.795E+00	3.067E+00	9.274E-01	0.225
		819.60		2.243E-01	1.945E+00	3.269E+00	1.234E+00	0.069
		826.30		-1.472E-01	1.344E+00	2.207E+00	9.825E-01	-0.067
		831.60		-2.857E-01	1.015E+00	1.633E+00	4.823E-01	-0.175
		876.40		-9.514E-01	1.713E+00	2.162E+00	2.222E+00	-0.440
		880.51		-3.102E-01	4.850E-01	7.491E-01	6.173E-02	-0.414

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		883.24		6.792E-01	6.529E-01	8.843E-01	5.941E-01	0.768
		899.00		-7.562E-02	1.384E+00	2.276E+00	9.945E-01	-0.033
		925.00		1.376E+00	2.133E+00	3.733E+00	3.121E-01	0.369
		926.50		2.767E-01	3.284E-01	5.725E-01	1.442E-01	0.483
		946.00	*	-4.916E-02	5.099E-01	8.322E-01	1.546E-01	-0.059
		949.00		1.138E-01	7.801E-01	1.305E+00	1.068E-01	0.087
		980.50		1.410E-01	1.170E+00	1.951E+00	1.547E-01	0.072
		1394.10		-5.061E-01	1.873E+00	2.954E+00	1.919E+00	-0.171
PA-234M		766.41		5.644E+01	5.338E+01	5.922E+01	4.529E+01	0.953
		1001.03	*	-3.551E+00	1.218E+01	1.975E+01	2.077E+00	-0.180
NP-236	+	94.67		7.764E-01	4.908E-01	4.701E-01	4.734E-02	1.652
		98.44		1.535E-01	1.359E-01	2.084E-01	1.967E-02	0.737
		111.00		-1.196E-02	2.514E-01	4.099E-01	3.277E-02	-0.029
		160.31	*	-1.005E-01	1.421E-01	2.213E-01	1.477E-02	-0.454
NP-239		99.55		6.315E-02	2.942E-01	4.517E-01	4.190E-02	0.140
		117.00	*	-2.878E-01	3.406E-01	5.326E-01	4.004E-02	-0.540
	+	209.75		3.558E+00	1.653E+00	2.476E+00	1.703E-01	1.437
		228.18		-2.023E-01	3.592E-01	5.872E-01	4.075E-02	-0.345
	+	277.60		3.624E-01	4.671E-01	5.597E-01	3.865E-02	0.647
		334.30		-3.162E-01	3.826E+00	3.640E+00	2.359E-01	-0.087
AM-241		59.54	*	-4.863E-02	4.941E-01	7.169E-01	9.124E-02	-0.068
CM-243		99.55		6.498E-02	3.027E-01	4.647E-01	4.311E-02	0.140
		103.76	*	2.970E-02	1.698E-01	2.803E-01	2.447E-02	0.106
		117.00		-2.960E-01	3.504E-01	5.479E-01	4.119E-02	-0.540
	+	209.75		3.507E+00	1.630E+00	2.441E+00	1.679E-01	1.437
		228.18		-2.044E-01	3.629E-01	5.932E-01	4.117E-02	-0.345
	+	277.60		3.654E-01	4.709E-01	5.643E-01	3.896E-02	0.647
CM-247	+	278.00		1.503E+00	1.937E+00	2.310E+00	1.594E-01	0.651
		287.40		-8.067E-02	2.130E+00	3.354E+00	2.301E-01	-0.024
		402.60	*	-2.139E-02	6.461E-02	1.039E-01	5.911E-03	-0.206
CF-249		252.85		1.015E+00	1.598E+00	2.766E+00	1.925E-01	0.367
		333.44		-6.807E-02	4.991E-01	4.701E-01	3.051E-02	-0.145
		387.95	*	2.779E-02	7.335E-02	1.240E-01	7.109E-03	0.224
CF-251		176.60	*	6.815E-02	2.250E-01	3.677E-01	2.465E-02	0.185
		227.00		8.676E-03	6.100E-01	1.029E+00	7.141E-02	0.008
		285.00		4.948E-01	2.909E+00	4.912E+00	3.376E-01	0.101

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433010      *
* Acquisition date :  7-JUL-2009 06:40:53 Detector SN#     :                *
* Detector ID        : GAM15              Sensitivity      : 5.000         *
* Geometry           : CAN                Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.02     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433010           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 7.8030E+01 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 16-FEB-2009 10:54:12 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.838E+01	3.216E+00	9.623E-01	0.000E+00
CD-109	3.833E+00	1.976E+00	2.859E+00	0.000E+00
SN-126	3.775E-01	1.946E-01	2.522E-01	0.000E+00
BA-137M	1.960E-01	9.784E-02	9.769E-02	0.000E+00
CS-137	2.072E-01	1.034E-01	1.033E-01	0.000E+00
HG-203	8.120E-02	1.026E-01	1.064E-01	0.000E+00
TL-208	6.621E-01	1.136E-01	9.156E-02	0.000E+00
BI-211	4.265E+00	7.671E-01	5.650E-01	0.000E+00
PB-212	2.094E+00	2.569E-01	1.528E-01	0.000E+00
PO-212	2.094E+00	2.569E-01	1.528E-01	0.000E+00
BI-214	1.580E+00	2.736E-01	1.879E-01	0.000E+00
PB-214	1.483E+00	2.774E-01	1.911E-01	0.000E+00
PO-214	1.483E+00	2.774E-01	1.911E-01	0.000E+00
PO-216	2.094E+00	2.569E-01	1.528E-01	0.000E+00
PO-218	1.483E+00	2.774E-01	1.911E-01	0.000E+00
RA-224	6.031E+00	2.092E+00	1.739E+00	0.000E+00
RA-226	1.580E+00	2.736E-01	1.879E-01	0.000E+00
AC-228	1.802E+00	5.294E-01	3.545E-01	0.000E+00
RA-228	1.802E+00	5.294E-01	3.545E-01	0.000E+00
TH-228	2.094E+00	2.569E-01	1.528E-01	0.000E+00
TH-230	1.580E+00	2.736E-01	1.879E-01	0.000E+00
TH-232	1.802E+00	5.294E-01	3.545E-01	0.000E+00
TH-234	8.401E+00	6.544E+00	4.735E+00	0.000E+00
U-234	1.580E+00	2.736E-01	1.879E-01	0.000E+00
U-235	4.658E-01	4.628E-01	5.558E-01	0.000E+00
NP-237	1.109E+00	6.137E-01	6.578E-01	0.000E+00
U-238	8.401E+00	6.544E+00	4.735E+00	0.000E+00
AM-243	4.011E-01	1.463E-01	1.701E-01	0.000E+00
ANH-511	1.200E-01	1.133E-01	8.138E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line Activity	K.L. Act error	MDA

Nuclide	(pCi/GRAM	) Ided	(pCi/GRAM	)	
BE-7	5.741E-01	5.766E-01	1.002E+00	0.000E+00	NOT IDENT.
NA-22	1.503E-02	7.394E-02	1.230E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.508E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.664E-02	4.196E-02	6.205E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	1.181E-01	1.538E-01	0.000E+00	FAIL ABUN
SC-46	-7.228E-02	6.449E-02	9.356E-02	0.000E+00	FAIL ABUN
V-48	6.048E-02	1.033E-01	1.811E-01	0.000E+00	NOT IDENT.
CR-51	2.904E-01	6.430E-01	1.088E+00	0.000E+00	NOT IDENT.
MN-52	8.710E-02	3.176E-01	5.540E-01	0.000E+00	NOT IDENT.
MN-54	-3.303E-02	6.245E-02	9.867E-02	0.000E+00	NOT IDENT.
CO-56	7.160E-03	6.584E-02	1.104E-01	0.000E+00	NOT IDENT.
CO-57	-1.627E-02	4.092E-02	6.430E-02	0.000E+00	NOT IDENT.
CO-58	1.031E-02	6.386E-02	1.078E-01	0.000E+00	NOT IDENT.
FE-59	-1.518E-01	1.395E-01	1.968E-01	0.000E+00	FAIL ABUN
CO-60	-4.179E-02	5.847E-02	8.319E-02	0.000E+00	NOT IDENT.
ZN-65	2.810E-02	1.671E-01	2.405E-01	0.000E+00	NOT IDENT.
GE-68	-1.292E+00	2.190E+00	3.363E+00	0.000E+00	NOT IDENT.
AS-73	-1.092E+00	3.017E+00	4.826E+00	0.000E+00	NOT IDENT.
AS-74	9.968E-02	1.469E-01	2.503E-01	0.000E+00	NOT IDENT.
SE-75	-4.906E-02	8.508E-02	1.173E-01	0.000E+00	NOT IDENT.
BR-77	6.929E+00	1.238E+01	2.095E+01	0.000E+00	FAIL ABUN
SR-82	-3.161E-02	6.308E-01	1.047E+00	0.000E+00	NOT IDENT.
RB-83	5.768E-02	1.189E-01	2.001E-01	0.000E+00	NOT IDENT.
RB-84	-1.288E-02	1.095E-01	1.792E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.521E+01	2.721E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	7.688E-02	1.375E-01	0.000E+00	NOT IDENT.
RB-86	-8.806E-02	1.263E+00	2.055E+00	0.000E+00	NOT IDENT.
Y-88	6.253E-02	5.134E-02	1.058E-01	0.000E+00	NOT IDENT.
ZR-88	-1.333E-02	5.585E-02	9.015E-02	0.000E+00	NOT IDENT.
Y-91	1.091E+01	3.154E+01	5.318E+01	0.000E+00	NOT IDENT.
NB-94	-7.521E-03	5.522E-02	9.142E-02	0.000E+00	NOT IDENT.
NB-95	9.374E-02	7.645E-02	1.382E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	2.360E-01	3.810E-01	0.000E+00	NOT IDENT.
ZR-95	1.090E-01	1.116E-01	2.016E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	5.249E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	9.739E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.804E+00	1.350E+01	2.280E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.775E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.920E-03	5.564E-02	8.839E-02	0.000E+00	NOT IDENT.
RH-102	1.379E-02	5.370E-02	8.897E-02	0.000E+00	NOT IDENT.
RU-103	-3.858E-02	6.602E-02	1.016E-01	0.000E+00	FAIL ABUN
RH-106	2.516E-01	5.664E-01	9.443E-01	0.000E+00	FAIL ABUN
RU-106	2.516E-01	5.658E-01	9.443E-01	0.000E+00	FAIL ABUN
AG-108M	-4.030E-03	5.478E-02	8.895E-02	0.000E+00	NOT IDENT.
AG-110M	2.895E-02	6.976E-02	1.015E-01	0.000E+00	NOT IDENT.
IN-111	-8.069E-01	1.446E+00	2.008E+00	0.000E+00	NOT IDENT.
IN-113M	1.641E-02	8.118E-02	1.348E-01	0.000E+00	NOT IDENT.
SN-113	1.641E-02	8.118E-02	1.348E-01	0.000E+00	NOT IDENT.
IN-114M	2.132E-01	3.371E-01	4.876E-01	0.000E+00	NOT IDENT.
CD-115	1.522E+00	1.263E+01	2.045E+01	0.000E+00	NOT IDENT.
SN-117M	-4.963E-02	9.189E-02	1.426E-01	0.000E+00	NOT IDENT.
SB-122	2.513E+00	2.421E+00	4.244E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.890E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-3.051E-02	5.051E-02	7.814E-02	0.000E+00	NOT IDENT.
I-124	1.006E-01	1.059E+00	1.488E+00	0.000E+00	NOT IDENT.
SB-124	-4.606E-02	1.485E-01	2.340E-01	0.000E+00	FAIL ABUN
SB-125	2.028E-02	1.568E-01	2.587E-01	0.000E+00	NOT IDENT.
TE-125M	-2.164E+01	1.640E+01	2.459E+01	0.000E+00	NOT IDENT.
I-126	-9.225E-02	3.459E-01	4.610E-01	0.000E+00	NOT IDENT.
SB-126	2.669E-01	2.403E-01	3.932E-01	0.000E+00	FAIL ABUN
SB-127	3.404E-01	1.671E+00	2.850E+00	0.000E+00	NOT IDENT.
XE-127	-6.682E-02	8.057E-02	1.217E-01	0.000E+00	FAIL ABUN
I-131	-1.203E-01	1.828E-01	2.873E-01	0.000E+00	NOT IDENT.
TE-132	-4.530E-01	8.122E-01	1.311E+00	0.000E+00	NOT IDENT.
BA-133	-4.506E-02	8.716E-02	1.182E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.468E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.242E-02	7.906E-02	1.399E-01	0.000E+00	NOT IDENT.
CS-135	4.078E-01	2.972E-01	4.702E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.104E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.061E-02	1.881E-01	3.183E-01	0.000E+00	FAIL ABUN
CE-139	-2.008E-02	5.039E-02	7.859E-02	0.000E+00	NOT IDENT.
BA-140	1.086E-01	4.048E-01	6.678E-01	0.000E+00	NOT IDENT.
LA-140	-2.428E-02	1.340E-01	1.959E-01	0.000E+00	FAIL ABUN
CE-141	1.186E-01	1.216E-01	1.797E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.072E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.033E-01	3.592E-01	5.581E-01	0.000E+00	NOT IDENT.

PM-144	-3.760E-03	5.401E-02	8.992E-02	0.000E+00	NOT IDENT.
PR-144	-2.546E-01	3.657E+00	6.089E+00	0.000E+00	NOT IDENT.
PM-146	1.005E-02	7.887E-02	1.297E-01	0.000E+00	NOT IDENT.
ND-147	5.072E-01	8.612E-01	1.459E+00	0.000E+00	NOT IDENT.
PM-149	1.366E+01	9.723E+01	1.624E+02	0.000E+00	NOT IDENT.
EU-152	4.390E-03	1.969E-01	2.662E-01	0.000E+00	FAIL ABUN
GD-153	5.520E-02	1.499E-01	2.166E-01	0.000E+00	NOT IDENT.
EU-154	4.418E-02	2.070E-01	3.446E-01	0.000E+00	NOT IDENT.
EU-155	1.819E-01	1.852E-01	3.099E-01	0.000E+00	FAIL ABUN
TB-160	-9.322E-02	2.193E-01	3.467E-01	0.000E+00	FAIL ABUN
HO-166M	1.127E-02	9.820E-02	1.659E-01	0.000E+00	NOT IDENT.
TM-171	-6.541E+01	7.010E+01	9.346E+01	0.000E+00	NOT IDENT.
LU-176	-1.375E-02	4.159E-02	6.737E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.989E+00	2.909E+00	0.000E+00	FAIL ABUN
LU-177M	-1.836E-01	3.181E-01	5.000E-01	0.000E+00	NOT IDENT.
HF-181	-7.846E-02	7.523E-02	1.122E-01	0.000E+00	NOT IDENT.
W-181	1.107E+00	9.523E-01	1.432E+00	0.000E+00	NOT IDENT.
TA-182	-7.461E-02	3.156E-01	5.009E-01	0.000E+00	FAIL ABUN
RE-183	1.068E-02	1.838E-01	2.936E-01	0.000E+00	FAIL ABUN
RE-184	2.691E-01	4.151E-01	7.113E-01	0.000E+00	NOT IDENT.
OS-185	3.564E-02	6.875E-02	1.158E-01	0.000E+00	NOT IDENT.
RE-188	2.469E-01	3.069E-01	5.062E-01	0.000E+00	NOT IDENT.
W-188	-5.987E+00	1.342E+01	1.857E+01	0.000E+00	FAIL ABUN
IR-192	-3.096E-02	5.926E-02	9.475E-02	0.000E+00	FAIL ABUN
AU-195	5.665E-01	4.240E-01	6.448E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.345E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.002E+00	8.582E+00	1.382E+01	0.000E+00	NOT IDENT.
TL-202	1.994E-02	1.143E-01	1.889E-01	0.000E+00	NOT IDENT.
BI-207	2.098E-02	9.623E-02	1.612E-01	0.000E+00	FAIL ABUN
TL-207	2.764E-01	1.347E+00	1.962E+00	0.000E+00	FAIL ABUN
PO-209	8.069E+00	1.222E+01	2.151E+01	0.000E+00	NOT IDENT.
BI-210	-8.724E+00	1.937E+01	3.011E+01	0.000E+00	NOT IDENT.
PB-210	-8.724E+00	1.937E+01	3.011E+01	0.000E+00	NOT IDENT.
PO-210	-8.724E+00	1.937E+01	3.011E+01	0.000E+00	NOT IDENT.
PB-211	-1.392E-01	1.645E+00	2.674E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	8.776E-01	1.055E+00	0.000E+00	FAIL ABUN
PO-215	2.764E-01	1.347E+00	1.962E+00	0.000E+00	FAIL ABUN
RN-219	-2.963E-01	7.065E-01	1.122E+00	0.000E+00	FAIL ABUN
RN-220	-1.821E+01	4.574E+01	7.146E+01	0.000E+00	NOT IDENT.
RA-223	2.764E-01	1.347E+00	1.962E+00	0.000E+00	FAIL ABUN
AC-227	-1.300E-01	6.960E-01	1.146E+00	0.000E+00	NOT IDENT.
TH-227	-1.300E-01	6.961E-01	1.146E+00	0.000E+00	FAIL ABUN
TH-229	1.036E+00	9.078E-01	1.422E+00	0.000E+00	FAIL ABUN
PA-231	1.186E+00	2.775E+00	4.310E+00	0.000E+00	NOT IDENT.
TH-231	2.764E-01	1.347E+00	1.962E+00	0.000E+00	FAIL ABUN
U-231	-3.423E-01	1.781E+00	2.489E+00	0.000E+00	FAIL ABUN
PA-233	6.991E-02	1.056E-01	1.812E-01	0.000E+00	FAIL ABUN
PA-234	-4.916E-02	4.997E-01	8.164E-01	0.000E+00	FAIL ABUN
PA-234M	-3.551E+00	1.194E+01	1.938E+01	0.000E+00	NOT IDENT.
NP-236	-1.005E-01	1.393E-01	2.139E-01	0.000E+00	FAIL ABUN
NP-239	-2.878E-01	3.338E-01	5.135E-01	0.000E+00	FAIL ABUN
AM-241	-4.863E-02	4.842E-01	6.873E-01	0.000E+00	NOT IDENT.
CM-243	2.970E-02	1.664E-01	2.700E-01	0.000E+00	FAIL ABUN
CM-247	-2.139E-02	6.332E-02	1.013E-01	0.000E+00	FAIL ABUN
CF-249	2.779E-02	7.188E-02	1.207E-01	0.000E+00	NOT IDENT.
CF-251	6.815E-02	2.205E-01	3.557E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:42:22.28

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433010.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:40:53.
Sample ID         : G232433010           Sample quantity  : 7.80300E+01 GRAM
Detector name     : GAM15                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.02  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	629	10.67*	9.988E-01	2.838E+01	2.838E+01	11.56
CD-109	88.03	129	3.72*	4.446E+00	3.755E+00	3.833E+00	52.59
SN-126	64.28	122	9.60	1.839E+00	3.326E+00	3.326E+00	78.90
	86.94	129	8.90	4.446E+00	1.569E+00	1.569E+00	66.35
	87.57	129	37.00*	4.446E+00	3.775E-01	3.775E-01	52.59
BA-137M	661.65	74	89.98*	2.018E+00	1.959E-01	1.960E-01	50.93
CS-137	661.65	74	85.12*	2.018E+00	2.071E-01	2.072E-01	50.93
HG-203	70.83	------	4.75	2.745E+00	------	Line Not Found	------
	72.87	------	8.00	2.992E+00	------	Line Not Found	------
	82.60	------	3.55	4.048E+00	------	Line Not Found	------
	279.20	40	77.30*	3.782E+00	6.611E-02	8.120E-02	128.90
TL-208	277.35	40	6.80	3.782E+00	7.515E-01	7.515E-01	129.19
	510.84	61	21.60	2.459E+00	5.554E-01	5.554E-01	96.72
	583.14	258	84.20*	2.229E+00	6.621E-01	6.621E-01	17.51
	860.37	19	12.46	1.611E+00	4.478E-01	4.478E-01	176.69
BI-211	72.87	------	1.27	2.992E+00	------	Line Not Found	------
	351.07	367	12.94*	3.201E+00	4.265E+00	4.265E+00	18.35
PB-212	74.81	178	10.70	3.233E+00	2.474E+00	2.474E+00	38.37
	77.11	347	18.00	3.491E+00	2.657E+00	2.657E+00	24.58
	87.30	129	8.00	4.446E+00	1.746E+00	1.746E+00	53.53
	238.63	818	44.60*	4.212E+00	2.094E+00	2.094E+00	12.52
	300.09	------	3.41	3.583E+00	------	Line Not Found	------
PO-212	74.81	178	10.70	3.233E+00	2.474E+00	2.474E+00	38.37
	77.11	347	18.00	3.491E+00	2.657E+00	2.657E+00	24.58
	87.30	129	8.00	4.446E+00	1.746E+00	1.746E+00	53.53
	115.19	------	0.60	5.666E+00	------	Line Not Found	------
	238.63	818	44.60*	4.212E+00	2.094E+00	2.094E+00	12.52
	300.09	------	3.41	3.583E+00	------	Line Not Found	------
BI-214	609.31	328	46.30*	2.155E+00	1.580E+00	1.580E+00	17.67
	768.36	------	5.04	1.782E+00	------	Line Not Found	------
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	76	15.10	1.263E+00	1.920E+00	1.920E+00	48.07

Sample ID : G232433010 Acquisition date : 7-JUL-2009 06:40:53

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1238.11	------	5.94	1.152E+00	------ Line Not Found		------
	1377.67	14	4.11	1.048E+00	1.542E+00	1.542E+00	147.46
	1764.49	67	15.80	8.815E-01	2.314E+00	2.314E+00	25.21
PB-214	74.81	178	6.21	3.233E+00	4.263E+00	4.263E+00	37.94
	77.11	347	10.50	3.491E+00	4.554E+00	4.555E+00	25.74
	87.30	129	4.67	4.446E+00	2.991E+00	2.991E+00	53.15
	241.98	207	7.49	4.176E+00	3.180E+00	3.180E+00	35.85
	295.21	235	19.20	3.622E+00	1.625E+00	1.625E+00	29.40
	351.92	367	37.20*	3.201E+00	1.483E+00	1.483E+00	19.08
PO-214	74.81	178	6.21	3.233E+00	4.263E+00	4.263E+00	37.94
	77.11	347	10.50	3.491E+00	4.554E+00	4.555E+00	25.74
	87.30	129	4.67	4.446E+00	2.991E+00	2.991E+00	53.15
	241.98	207	7.49	4.176E+00	3.180E+00	3.180E+00	35.85
	295.21	235	19.20	3.622E+00	1.625E+00	1.625E+00	29.40
	351.92	367	37.20*	3.201E+00	1.483E+00	1.483E+00	19.08
PO-216	74.81	178	10.70	3.233E+00	2.474E+00	2.474E+00	38.37
	77.11	347	18.00	3.491E+00	2.657E+00	2.657E+00	24.58
	87.30	129	8.00	4.446E+00	1.746E+00	1.746E+00	53.53
	238.63	818	44.60*	4.212E+00	2.094E+00	2.094E+00	12.52
	300.09	------	3.41	3.583E+00	------ Line Not Found		------
PO-218	74.81	178	6.21	3.233E+00	4.263E+00	4.263E+00	37.94
	77.11	347	10.50	3.491E+00	4.554E+00	4.555E+00	25.74
	87.30	129	4.67	4.446E+00	2.991E+00	2.991E+00	53.15
	241.98	207	7.49	4.176E+00	3.180E+00	3.180E+00	35.85
	295.21	235	19.20	3.622E+00	1.625E+00	1.625E+00	29.40
	351.92	367	37.20*	3.201E+00	1.483E+00	1.483E+00	19.08
RA-224	240.98	207	3.95*	4.176E+00	6.031E+00	6.031E+00	35.40
RA-226	609.31	328	46.30*	2.155E+00	1.580E+00	1.580E+00	17.67
	768.36	------	5.04	1.782E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	76	15.10	1.263E+00	1.920E+00	1.920E+00	48.07
	1238.11	------	5.94	1.152E+00	------ Line Not Found		------
	1377.67	14	4.11	1.048E+00	1.542E+00	1.542E+00	147.46
	1764.49	67	15.80	8.815E-01	2.314E+00	2.314E+00	25.21
AC-228	338.32	176	11.40	3.290E+00	2.260E+00	2.260E+00	54.24
	911.07	159	27.70*	1.531E+00	1.802E+00	1.802E+00	29.97
	969.11	102	16.60	1.447E+00	2.051E+00	2.051E+00	40.92
RA-228	338.32	176	11.40	3.290E+00	2.260E+00	2.260E+00	54.24
	911.07	159	27.70*	1.531E+00	1.802E+00	1.802E+00	29.97
	969.11	102	16.60	1.447E+00	2.051E+00	2.051E+00	40.92
TH-228	84.40	------	1.21	4.214E+00	------ Line Not Found		------
	238.60	818	44.60*	4.212E+00	2.094E+00	2.094E+00	12.52
	300.10	------	3.41	3.583E+00	------ Line Not Found		------
TH-230	609.31	328	46.30*	2.155E+00	1.580E+00	1.580E+00	17.67
	768.36	------	5.04	1.782E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	76	15.10	1.263E+00	1.920E+00	1.920E+00	48.07
	1238.11	------	5.94	1.152E+00	------ Line Not Found		------
	1377.67	14	4.11	1.048E+00	1.542E+00	1.542E+00	147.46

Sample ID : G232433010 Acquisition date : 7-JUL-2009 06:40:53

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	67	15.80	8.815E-01	2.314E+00	2.314E+00	25.21
TH-232	338.32	176	11.40	3.290E+00	2.260E+00	2.260E+00	36.24
	911.07	159	27.70*	1.531E+00	1.802E+00	1.802E+00	29.97
	969.11	102	16.60	1.447E+00	2.051E+00	2.051E+00	40.92
TH-234	63.29	122	3.80*	1.839E+00	8.401E+00	8.401E+00	79.49
	92.38	164	5.41	4.898E+00	2.971E+00	2.971E+00	65.18
U-234	609.31	328	46.30*	2.155E+00	1.580E+00	1.580E+00	17.67
	768.36	------	5.04	1.782E+00	------	Line Not Found	------
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	76	15.10	1.263E+00	1.920E+00	1.920E+00	48.07
	1238.11	------	5.94	1.152E+00	------	Line Not Found	------
	1377.67	14	4.11	1.048E+00	1.542E+00	1.542E+00	147.46
	1764.49	67	15.80	8.815E-01	2.314E+00	2.314E+00	25.21
U-235	89.95	------	2.70	4.664E+00	------	Line Not Found	------
	93.35	164	4.50	4.898E+00	3.572E+00	3.572E+00	68.61
	105.00	------	2.10	5.437E+00	------	Line Not Found	------
	143.76	57	10.50*	5.619E+00	4.658E-01	4.658E-01	101.37
	163.35	------	4.70	5.342E+00	------	Line Not Found	------
	185.71	204	54.00	4.971E+00	3.655E-01	3.655E-01	45.92
	205.31	------	4.70	4.671E+00	------	Line Not Found	------
NP-237	86.50	129	12.60*	4.446E+00	1.109E+00	1.109E+00	56.49
	95.87	------	2.60	5.041E+00	------	Line Not Found	------
U-238	63.29	122	3.80*	1.839E+00	8.401E+00	8.401E+00	79.49
	92.38	164	5.41	4.898E+00	2.971E+00	2.971E+00	63.21
AM-243	74.67	178	66.00*	3.233E+00	4.011E-01	4.011E-01	37.21
	86.72	129	0.34	4.446E+00	4.157E+01	4.157E+01	52.59
	117.66	------	0.55	5.694E+00	------	Line Not Found	------
	142.18	------	0.13	5.637E+00	------	Line Not Found	------
ANH-511	511.00	61	100.00*	2.459E+00	1.200E-01	1.200E-01	96.36

Flag: "*" = Keyline

Sample ID : G232433010 Acquisition date : 7-JUL-2009 06:40:53

Total number of lines in spectrum 30
Number of unidentified lines 1
Number of lines tentatively identified by NID 29 96.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.838E+01	2.838E+01	0.328E+01	11.56	
CD-109	464.00D	1.02	3.755E+00	3.833E+00	2.016E+00	52.59	
SN-126	1.00E+05Y	1.00	3.775E-01	3.775E-01	1.985E-01	52.59	
BA-137M	30.17Y	1.00	1.959E-01	1.960E-01	0.998E-01	50.93	
CS-137	30.17Y	1.00	2.071E-01	2.072E-01	1.055E-01	50.93	
HG-203	46.60D	1.23	6.611E-02	8.120E-02	10.47E-02	128.90	
TL-208	1.41E+10Y	1.00	6.621E-01	6.621E-01	1.159E-01	17.51	
BI-211	7.04E+08Y	1.00	4.265E+00	4.265E+00	0.783E+00	18.35	
PB-212	1.41E+10Y	1.00	2.094E+00	2.094E+00	0.262E+00	12.52	
PO-212	1.41E+10Y	1.00	2.094E+00	2.094E+00	0.262E+00	12.52	
BI-214	1600.00Y	1.00	1.580E+00	1.580E+00	0.279E+00	17.67	
PB-214	1600.00Y	1.00	1.483E+00	1.483E+00	0.283E+00	19.08	
PO-214	1600.00Y	1.00	1.483E+00	1.483E+00	0.283E+00	19.08	
PO-216	1.41E+10Y	1.00	2.094E+00	2.094E+00	0.262E+00	12.52	
PO-218	1600.00Y	1.00	1.483E+00	1.483E+00	0.283E+00	19.08	
RA-224	1.41E+10Y	1.00	6.031E+00	6.031E+00	2.135E+00	35.40	
RA-226	1600.00Y	1.00	1.580E+00	1.580E+00	0.279E+00	17.67	
AC-228	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.540E+00	29.97	
RA-228	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.540E+00	29.97	
TH-228	1.41E+10Y	1.00	2.094E+00	2.094E+00	0.262E+00	12.52	
TH-230	4.47E+09Y	1.00	1.580E+00	1.580E+00	0.279E+00	17.67	
TH-232	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.540E+00	29.97	
TH-234	4.47E+09Y	1.00	8.401E+00	8.401E+00	6.678E+00	79.49	
U-234	4.47E+09Y	1.00	1.580E+00	1.580E+00	0.279E+00	17.67	
U-235	7.04E+08Y	1.00	4.658E-01	4.658E-01	4.722E-01	101.37	
NP-237	2.14E+06Y	1.00	1.109E+00	1.109E+00	0.626E+00	56.49	
U-238	4.47E+09Y	1.00	8.401E+00	8.401E+00	6.678E+00	79.49	
AM-243	7380.00Y	1.00	4.011E-01	4.011E-01	1.493E-01	37.21	
ANH-511	1.00E+09Y	1.00	1.200E-01	1.200E-01	1.156E-01	96.36	
	Total Activity :		8.739E+01	8.748E+01			

Grand Total Activity : 8.739E+01 8.748E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433010 Acquisition date : 7-JUL-2009 06:40:53

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	209.29	110	165	1.62	418.96	415	9	1.53E-02	46.0	4.61E+00	T
0	270.39	78	151	1.83	541.09	535	11	1.08E-02	65.1	3.86E+00	T
0	328.04	34	155	0.64	656.35	653	12	4.71E-03	****	3.36E+00	T
0	727.83	53	81	1.21	1455.66	1449	14	7.38E-03	76.7	1.87E+00	T
1	964.42	49	48	2.18	1928.72	1923	24	6.80E-03	54.4	1.45E+00	T
0	1587.92	31	7	1.29	3175.54	3170	13	4.24E-03	50.0	9.39E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:42:27.30

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433010.CNF;1 *
* Acquisition date  : 7-JUL-2009 06:40:53.  Detector SN#     :             *
* Detector ID       : GAM15                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.02          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433010            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 7.80300E+01 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-FEB-2009 10:54:12.9MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.838E+01	3.282E+00	9.776E-01	7.473E-02	29.031
CD-109	3.833E+00	2.016E+00	2.973E+00	3.437E-01	1.289
SN-126	3.775E-01	1.985E-01	2.623E-01	3.026E-02	1.439
BA-137M	1.960E-01	9.983E-02	9.987E-02	5.025E-03	1.963
CS-137	2.072E-01	1.055E-01	1.056E-01	5.341E-03	1.963
HG-203	8.120E-02	1.047E-01	1.095E-01	7.887E-03	0.741
TL-208	6.621E-01	1.159E-01	9.371E-02	5.966E-03	7.066
BI-211	4.265E+00	7.827E-01	5.806E-01	3.989E-02	7.345
PB-212	2.094E+00	2.621E-01	1.576E-01	1.304E-02	13.287
PO-212	2.094E+00	2.621E-01	1.576E-01	1.304E-02	13.287
BI-214	1.580E+00	2.792E-01	1.922E-01	1.427E-02	8.219
PB-214	1.483E+00	2.831E-01	1.964E-01	1.693E-02	7.555
PO-214	1.483E+00	2.831E-01	1.964E-01	1.693E-02	7.555
PO-216	2.094E+00	2.621E-01	1.576E-01	1.304E-02	13.287
PO-218	1.483E+00	2.831E-01	1.964E-01	1.693E-02	7.555
RA-224	6.031E+00	2.135E+00	1.793E+00	1.248E-01	3.364
RA-226	1.580E+00	2.792E-01	1.922E-01	1.427E-02	8.219
AC-228	1.802E+00	5.402E-01	3.615E-01	4.019E-02	4.985

Sample ID : G232433010 Acquisition date : 7-JUL-2009 06:40:53

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.802E+00	5.402E-01	3.615E-01	4.019E-02	4.985
TH-228	2.094E+00	2.621E-01	1.576E-01	1.304E-02	13.288
TH-230	1.580E+00	2.792E-01	1.922E-01	1.427E-02	8.219
TH-232	1.802E+00	5.402E-01	3.615E-01	4.019E-02	4.985
TH-234	8.401E+00	6.678E+00	4.937E+00	9.743E-01	1.702
U-234	1.580E+00	2.792E-01	1.922E-01	1.427E-02	8.219
U-235	4.658E-01	4.722E-01	5.754E-01	9.601E-02	0.810
NP-237	1.109E+00	6.263E-01	6.840E-01	1.615E-01	1.621
U-238	8.401E+00	6.678E+00	4.937E+00	9.743E-01	1.702
AM-243	4.011E-01	1.493E-01	1.771E-01	1.968E-02	2.264
ANH-511	1.200E-01	1.156E-01	8.337E-02	4.708E-03	1.439

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	5.741E-01		5.884E-01	1.027E+00	6.844E-02	0.559
NA-22	1.503E-02		7.545E-02	1.251E-01	8.585E-03	0.120
NA-24	-6.599E-03		1.280E-01	Half-Life too short		
AL-26	-1.664E-02		4.281E-02	6.293E-02	3.765E-03	-0.264
TI-44	4.903E-01	+	1.205E-01	1.600E-01	1.779E-02	3.064
SC-46	-7.228E-02		6.581E-02	9.543E-02	8.004E-03	-0.757
V-48	6.048E-02		1.054E-01	1.845E-01	1.458E-02	0.328
CR-51	2.904E-01		6.561E-01	1.119E+00	8.072E-02	0.259
MN-52	8.710E-02		3.241E-01	5.629E-01	4.173E-02	0.155
MN-54	-3.303E-02		6.372E-02	1.007E-01	7.546E-03	-0.328
CO-56	7.160E-03		6.719E-02	1.126E-01	8.656E-03	0.064
CO-57	-1.627E-02		4.175E-02	6.666E-02	4.793E-03	-0.244
CO-58	1.031E-02		6.516E-02	1.100E-01	7.859E-03	0.094
FE-59	-1.518E-01		1.424E-01	2.004E-01	1.516E-02	-0.758
CO-60	-4.179E-02		5.966E-02	8.457E-02	6.383E-03	-0.494
ZN-65	2.810E-02		1.706E-01	2.449E-01	1.591E-02	0.115
GE-68	-1.292E+00		2.235E+00	3.425E+00	2.380E-01	-0.377
AS-73	-1.092E+00		3.079E+00	5.038E+00	6.885E-01	-0.217
AS-74	9.968E-02		1.499E-01	2.561E-01	1.377E-02	0.389
SE-75	-4.906E-02		8.682E-02	1.208E-01	8.450E-03	-0.406
BR-77	6.929E+00		1.264E+01	2.146E+01	1.207E+00	0.323
SR-82	-3.161E-02		6.437E-01	1.069E+00	7.055E-02	-0.030
RB-83	5.768E-02		1.213E-01	2.050E-01	1.154E-02	0.281
RB-84	-1.288E-02		1.117E-01	1.827E-01	1.509E-02	-0.070
KR-85	5.092E+01		1.552E+01	2.787E+01	1.572E+00	1.827
SR-85	2.574E-01		7.845E-02	1.409E-01	7.949E-03	1.827
RB-86	-8.806E-02		1.288E+00	2.092E+00	1.456E-01	-0.042
Y-88	6.253E-02		5.239E-02	1.073E-01	6.268E-03	0.583
ZR-88	-1.333E-02		5.699E-02	9.256E-02	5.249E-03	-0.144
Y-91	1.091E+01		3.219E+01	5.411E+01	3.272E+00	0.202
NB-94	-7.521E-03		5.635E-02	9.342E-02	5.196E-03	-0.081
NB-95	9.374E-02		7.801E-02	1.412E-01	9.096E-03	0.664

Sample ID : G232433010 Acquisition date : 7-JUL-2009 06:40:53

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	4.838E-01		2.408E-01	3.929E-01	3.319E-02	1.231
ZR-95	1.090E-01		1.139E-01	2.058E-01	1.535E-02	0.530
NB-97	2.463E-02		2.678E-02	Half-Life too short		
ZR-97	1.532E+00		4.969E-01	Half-Life too short		
MO-99	1.804E+00		1.377E+01	2.329E+01	3.237E+00	0.077
TC-99M	2.938E+08		9.055E+08	Half-Life too short		
RH-101	2.920E-03		5.678E-02	9.127E-02	6.226E-03	0.032
RH-102	1.379E-02		5.479E-02	9.121E-02	5.199E-03	0.151
RU-103	-3.858E-02		6.736E-02	1.041E-01	1.311E-02	-0.370
RH-106	2.516E-01		5.779E-01	9.660E-01	1.109E-01	0.260
RU-106	2.516E-01		5.774E-01	9.660E-01	5.075E-02	0.260
AG-108M	-4.030E-03		5.589E-02	9.126E-02	5.674E-03	-0.044
AG-110M	2.895E-02		7.118E-02	1.037E-01	5.685E-03	0.279
IN-111	-8.069E-01		1.476E+00	2.069E+00	1.441E-01	-0.390
IN-113M	1.641E-02		8.284E-02	1.384E-01	8.394E-03	0.119
SN-113	1.641E-02		8.284E-02	1.384E-01	8.394E-03	0.119
IN-114M	2.132E-01		3.440E-01	5.036E-01	3.415E-02	0.423
CD-115	1.522E+00		1.288E+01	2.095E+01	1.175E+00	0.073
SN-117M	-4.963E-02		9.377E-02	1.476E-01	9.867E-03	-0.336
SB-122	2.513E+00		2.470E+00	4.344E+00	2.390E-01	0.579
I-123	-1.142E+00		9.644E-01	Half-Life too short		
TE-123M	-3.051E-02		5.154E-02	8.083E-02	5.457E-03	-0.377
I-124	1.006E-01		1.081E+00	1.522E+00	8.139E-02	0.066
SB-124	-4.606E-02		1.515E-01	2.374E-01	1.667E-02	-0.194
SB-125	2.028E-02		1.600E-01	2.654E-01	1.582E-02	0.076
TE-125M	-2.164E+01		1.674E+01	2.552E+01	2.535E+00	-0.848
I-126	-9.225E-02		3.529E-01	4.713E-01	2.399E-02	-0.196
SB-126	2.669E-01		2.452E-01	4.017E-01	2.332E-02	0.664
SB-127	3.404E-01		1.705E+00	2.913E+00	2.526E-01	0.117
XE-127	-6.682E-02		8.221E-02	1.257E-01	8.605E-03	-0.532
I-131	-1.203E-01		1.865E-01	2.951E-01	1.987E-02	-0.408
TE-132	-4.530E-01		8.288E-01	1.353E+00	1.976E-01	-0.335
BA-133	-4.506E-02		8.894E-02	1.215E-01	1.431E-02	-0.371
I-133	2.611E-03		1.769E-03	Half-Life too short		
CS-134	6.242E-02		8.068E-02	1.429E-01	9.955E-03	0.437
CS-135	4.078E-01		3.033E-01	4.843E-01	4.140E-02	0.842
I-135	9.119E+07		1.584E+08	Half-Life too short		
CS-136	6.061E-02		1.920E-01	3.242E-01	2.497E-02	0.187
CE-139	-2.008E-02		5.142E-02	8.127E-02	5.405E-03	-0.247
BA-140	1.086E-01		4.131E-01	6.839E-01	2.222E-01	0.159
LA-140	-2.428E-02		1.367E-01	1.988E-01	1.386E-02	-0.122
CE-141	1.186E-01		1.241E-01	1.860E-01	1.299E-02	0.638
CE-143	7.048E-04		1.057E-04	Half-Life too short		
CE-144	-2.033E-01		3.665E-01	5.782E-01	8.498E-02	-0.352
PM-144	-3.760E-03		5.511E-02	9.189E-02	5.040E-03	-0.041
PR-144	-2.546E-01		3.732E+00	6.222E+00	3.410E-01	-0.041
PM-146	1.005E-02		8.048E-02	1.330E-01	1.139E-02	0.076
ND-147	5.072E-01		8.788E-01	1.495E+00	2.009E-01	0.339

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	1.366E+01		9.922E+01	1.672E+02	2.448E+01	0.082
EU-152	4.390E-03		2.009E-01	2.736E-01	1.928E-02	0.016
GD-153	5.520E-02		1.530E-01	2.250E-01	2.159E-02	0.245
EU-154	4.418E-02		2.112E-01	3.505E-01	3.514E-02	0.126
EU-155	1.819E-01		1.889E-01	3.217E-01	2.786E-02	0.565
TB-160	-9.322E-02		2.238E-01	3.536E-01	2.907E-02	-0.264
HO-166M	1.127E-02		1.002E-01	1.695E-01	9.634E-03	0.066
TM-171	-6.541E+01		7.153E+01	9.740E+01	1.120E+01	-0.672
LU-176	-1.375E-02		4.244E-02	6.932E-02	4.670E-03	-0.198
LU-177	4.369E+00	+	2.030E+00	3.002E+00	2.063E-01	1.455
LU-177M	-1.836E-01		3.246E-01	5.132E-01	2.925E-02	-0.358
HF-181	-7.846E-02		7.676E-02	1.150E-01	6.549E-03	-0.682
W-181	1.107E+00		9.718E-01	1.493E+00	1.737E-01	0.742
TA-182	-7.461E-02		3.220E-01	5.095E-01	3.177E-02	-0.146
RE-183	1.068E-02		1.876E-01	3.037E-01	2.024E-02	0.035
RE-184	2.691E-01		4.236E-01	7.330E-01	5.103E-02	0.367
OS-185	3.564E-02		7.016E-02	1.184E-01	6.068E-03	0.301
RE-188	2.469E-01		3.132E-01	5.237E-01	3.513E-02	0.471
W-188	-5.987E+00		1.369E+01	1.911E+01	1.308E+00	-0.313
IR-192	-3.096E-02		6.047E-02	9.746E-02	6.513E-03	-0.318
AU-195	5.665E-01		4.326E-01	6.698E-01	6.278E-02	0.846
TL-200	-1.355E-04		1.707E-04	Half-Life too short		
TL-201	2.002E+00		8.757E+00	1.429E+01	9.509E-01	0.140
TL-202	1.994E-02		1.167E-01	1.938E-01	1.107E-02	0.103
BI-207	2.098E-02		9.820E-02	1.642E-01	1.167E-02	0.128
TL-207	2.764E-01		1.374E+00	2.018E+00	3.391E-01	0.137
PO-209	8.069E+00		1.247E+01	2.193E+01	1.867E+00	0.368
BI-210	-8.724E+00		1.977E+01	3.148E+01	3.270E+00	-0.277
PB-210	-8.724E+00		1.977E+01	3.148E+01	3.270E+00	-0.277
PO-210	-8.724E+00		1.976E+01	3.148E+01	3.024E+00	-0.277
PB-211	-1.392E-01		1.678E+00	2.745E+00	1.711E+00	-0.051
BI-212	1.162E+00	+	8.955E-01	1.078E+00	8.391E-02	1.078
PO-215	2.764E-01		1.374E+00	2.018E+00	3.391E-01	0.137
RN-219	-2.963E-01		7.209E-01	1.151E+00	1.561E-01	-0.257
RN-220	-1.821E+01		4.667E+01	7.317E+01	4.060E+00	-0.249
RA-223	2.764E-01		1.374E+00	2.018E+00	3.391E-01	0.137
AC-227	-1.300E-01		7.102E-01	1.181E+00	1.710E-01	-0.110
TH-227	-1.300E-01		7.103E-01	1.181E+00	2.047E-01	-0.110
TH-229	1.036E+00		9.263E-01	1.469E+00	9.986E-02	0.706
PA-231	1.186E+00		2.831E+00	4.437E+00	6.331E-01	0.267
TH-231	2.764E-01		1.374E+00	2.018E+00	3.391E-01	0.137
U-231	-3.423E-01		1.818E+00	2.586E+00	2.548E-01	-0.132
PA-233	6.991E-02		1.077E-01	1.864E-01	1.307E-02	0.375
PA-234	-4.916E-02		5.099E-01	8.322E-01	1.546E-01	-0.059
PA-234M	-3.551E+00		1.218E+01	1.975E+01	2.077E+00	-0.180
NP-236	-1.005E-01		1.421E-01	2.213E-01	1.477E-02	-0.454
NP-239	-2.878E-01		3.406E-01	5.326E-01	4.004E-02	-0.540
AM-241	-4.863E-02		4.941E-01	7.169E-01	9.124E-02	-0.068

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.970E-02		1.698E-01	2.803E-01	2.447E-02	0.106
CM-247	-2.139E-02		6.461E-02	1.039E-01	5.911E-03	-0.206
CF-249	2.779E-02		7.335E-02	1.240E-01	7.109E-03	0.224
CF-251	6.815E-02		2.250E-01	3.677E-01	2.465E-02	0.185

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433010           *
* Acquisition date  :  7-JUL-2009 06:40:53 Detector SN#     :               *
* Detector ID       : GAM15                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.02      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433010           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 7.8030E+01 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 16-FEB-2009 10:54:12 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.838E+01	3.216E+00	4.815E-01	1.641E+00
CD-109	3.833E+00	1.976E+00	1.430E+00	1.008E+00
SN-126	3.775E-01	1.946E-01	1.262E-01	9.927E-02
BA-137M	1.960E-01	9.784E-02	4.887E-02	4.992E-02
CS-137	2.072E-01	1.034E-01	5.166E-02	5.277E-02
HG-203	8.120E-02	1.026E-01	5.321E-02	5.233E-02
TL-208	6.621E-01	1.136E-01	4.581E-02	5.796E-02
BI-211	4.265E+00	7.671E-01	2.826E-01	3.914E-01
PB-212	2.094E+00	2.569E-01	7.647E-02	1.311E-01
PO-212	2.094E+00	2.569E-01	7.647E-02	1.311E-01
BI-214	1.580E+00	2.736E-01	9.399E-02	1.396E-01
PB-214	1.483E+00	2.774E-01	9.559E-02	1.415E-01
PO-214	1.483E+00	2.774E-01	9.559E-02	1.415E-01
PO-216	2.094E+00	2.569E-01	7.647E-02	1.311E-01
PO-218	1.483E+00	2.774E-01	9.559E-02	1.415E-01
RA-224	6.031E+00	2.092E+00	8.701E-01	1.068E+00
RA-226	1.580E+00	2.736E-01	9.399E-02	1.396E-01
AC-228	1.802E+00	5.294E-01	1.774E-01	2.701E-01
RA-228	1.802E+00	5.294E-01	1.774E-01	2.701E-01
TH-228	2.094E+00	2.569E-01	7.646E-02	1.311E-01
TH-230	1.580E+00	2.736E-01	9.399E-02	1.396E-01
TH-232	1.802E+00	5.294E-01	1.774E-01	2.701E-01
TH-234	8.401E+00	6.544E+00	2.369E+00	3.339E+00
U-234	1.580E+00	2.736E-01	9.399E-02	1.396E-01
U-235	4.658E-01	4.628E-01	2.781E-01	2.361E-01
NP-237	1.109E+00	6.137E-01	3.291E-01	3.131E-01
U-238	8.401E+00	6.544E+00	2.369E+00	3.339E+00
AM-243	4.011E-01	1.463E-01	8.512E-02	7.463E-02
ANH-511	1.200E-01	1.133E-01	4.071E-02	5.780E-02

---- Non-Identified Nuclides ----

Key-Line Activity	K.L Act error	DLC	TPU

Nuclide	(pCi/GRAM)		(pCi/GRAM)		
BE-7	5.741E-01	5.766E-01	5.013E-01	2.942E-01	NOT IDENT.
NA-22	1.503E-02	7.394E-02	6.154E-02	3.773E-02	NOT IDENT.
NA-24	-6.599E+03	2.508E+05	0.000E+00	1.280E+05	SHORT HLIF
AL-26	-1.664E-02	4.196E-02	3.105E-02	2.141E-02	NOT IDENT.
TI-44	4.903E-01	1.181E-01	7.693E-02	6.026E-02	FAIL ABUN
SC-46	-7.228E-02	6.449E-02	4.681E-02	3.290E-02	FAIL ABUN
V-48	6.048E-02	1.033E-01	9.059E-02	5.272E-02	NOT IDENT.
CR-51	2.904E-01	6.430E-01	5.445E-01	3.281E-01	NOT IDENT.
MN-52	8.710E-02	3.176E-01	2.772E-01	1.620E-01	NOT IDENT.
MN-54	-3.303E-02	6.245E-02	4.936E-02	3.186E-02	NOT IDENT.
CO-56	7.160E-03	6.584E-02	5.522E-02	3.359E-02	NOT IDENT.
CO-57	-1.627E-02	4.092E-02	3.217E-02	2.088E-02	NOT IDENT.
CO-58	1.031E-02	6.386E-02	5.393E-02	3.258E-02	NOT IDENT.
FE-59	-1.518E-01	1.395E-01	9.847E-02	7.118E-02	FAIL ABUN
CO-60	-4.179E-02	5.847E-02	4.162E-02	2.983E-02	NOT IDENT.
ZN-65	2.810E-02	1.671E-01	1.203E-01	8.528E-02	NOT IDENT.
GE-68	-1.292E+00	2.190E+00	1.683E+00	1.118E+00	NOT IDENT.
AS-73	-1.092E+00	3.017E+00	2.414E+00	1.539E+00	NOT IDENT.
AS-74	9.968E-02	1.469E-01	1.252E-01	7.494E-02	NOT IDENT.
SE-75	-4.906E-02	8.508E-02	5.868E-02	4.341E-02	NOT IDENT.
BR-77	6.929E+00	1.238E+01	1.048E+01	6.318E+00	FAIL ABUN
SR-82	-3.161E-02	6.308E-01	5.237E-01	3.218E-01	NOT IDENT.
RB-83	5.768E-02	1.189E-01	1.001E-01	6.067E-02	NOT IDENT.
RB-84	-1.288E-02	1.095E-01	8.964E-02	5.586E-02	NOT IDENT.
KR-85	5.092E+01	1.521E+01	1.361E+01	7.759E+00	NOT IDENT.
SR-85	2.574E-01	7.688E-02	6.881E-02	3.923E-02	NOT IDENT.
RB-86	-8.806E-02	1.263E+00	1.028E+00	6.442E-01	NOT IDENT.
Y-88	6.253E-02	5.134E-02	5.294E-02	2.620E-02	NOT IDENT.
ZR-88	-1.333E-02	5.585E-02	4.510E-02	2.850E-02	NOT IDENT.
Y-91	1.091E+01	3.154E+01	2.661E+01	1.609E+01	NOT IDENT.
NB-94	-7.521E-03	5.522E-02	4.574E-02	2.817E-02	NOT IDENT.
NB-95	9.374E-02	7.645E-02	6.916E-02	3.901E-02	NOT IDENT.
NB-95M	4.838E-01	2.360E-01	1.906E-01	1.204E-01	NOT IDENT.
ZR-95	1.090E-01	1.116E-01	1.008E-01	5.695E-02	NOT IDENT.
NB-97	2.463E+04	5.249E+04	0.000E+00	2.678E+04	SHORT HLIF
ZR-97	1.532E+06	9.739E+05	0.000E+00	4.969E+05	SHORT HLIF
MO-99	1.804E+00	1.350E+01	1.141E+01	6.886E+00	NOT IDENT.
TC-99M	2.938E+14	1.775E+15	0.000E+00	9.055E+14	SHORT HLIF
RH-101	2.920E-03	5.564E-02	4.422E-02	2.839E-02	NOT IDENT.
RH-102	1.379E-02	5.370E-02	4.451E-02	2.740E-02	NOT IDENT.
RU-103	-3.858E-02	6.602E-02	5.084E-02	3.368E-02	FAIL ABUN
RH-106	2.516E-01	5.664E-01	4.725E-01	2.890E-01	FAIL ABUN
RU-106	2.516E-01	5.658E-01	4.725E-01	2.887E-01	FAIL ABUN
AG-108M	-4.030E-03	5.478E-02	4.450E-02	2.795E-02	NOT IDENT.
AG-110M	2.895E-02	6.976E-02	5.076E-02	3.559E-02	NOT IDENT.
IN-111	-8.069E-01	1.446E+00	1.004E+00	7.380E-01	NOT IDENT.
IN-113M	1.641E-02	8.118E-02	6.742E-02	4.142E-02	NOT IDENT.
SN-113	1.641E-02	8.118E-02	6.742E-02	4.142E-02	NOT IDENT.
IN-114M	2.132E-01	3.371E-01	2.439E-01	1.720E-01	NOT IDENT.
CD-115	1.522E+00	1.263E+01	1.023E+01	6.441E+00	NOT IDENT.
SN-117M	-4.963E-02	9.189E-02	7.136E-02	4.688E-02	NOT IDENT.
SB-122	2.513E+00	2.421E+00	2.123E+00	1.235E+00	NOT IDENT.
I-123	-1.142E+06	1.890E+06	0.000E+00	9.644E+05	SHORT HLIF
TE-123M	-3.051E-02	5.051E-02	3.909E-02	2.577E-02	NOT IDENT.
I-124	1.006E-01	1.059E+00	7.444E-01	5.405E-01	NOT IDENT.
SB-124	-4.606E-02	1.485E-01	1.170E-01	7.576E-02	FAIL ABUN
SB-125	2.028E-02	1.568E-01	1.294E-01	8.002E-02	NOT IDENT.
TE-125M	-2.164E+01	1.640E+01	1.230E+01	8.368E+00	NOT IDENT.
I-126	-9.225E-02	3.459E-01	2.306E-01	1.765E-01	NOT IDENT.
SB-126	2.669E-01	2.403E-01	1.967E-01	1.226E-01	FAIL ABUN
SB-127	3.404E-01	1.671E+00	1.426E+00	8.527E-01	NOT IDENT.
XE-127	-6.682E-02	8.057E-02	6.091E-02	4.110E-02	FAIL ABUN
I-131	-1.203E-01	1.828E-01	1.437E-01	9.327E-02	NOT IDENT.
TE-132	-4.530E-01	8.122E-01	6.561E-01	4.144E-01	NOT IDENT.
BA-133	-4.506E-02	8.716E-02	5.916E-02	4.447E-02	NOT IDENT.
I-133	2.611E+03	3.468E+03	0.000E+00	1.769E+03	SHORT HLIF
CS-134	6.242E-02	7.906E-02	7.001E-02	4.034E-02	NOT IDENT.
CS-135	4.078E-01	2.972E-01	2.352E-01	1.516E-01	NOT IDENT.
I-135	9.119E+13	3.104E+14	0.000E+00	1.584E+14	SHORT HLIF
CS-136	6.061E-02	1.881E-01	1.592E-01	9.598E-02	FAIL ABUN
CE-139	-2.008E-02	5.039E-02	3.932E-02	2.571E-02	NOT IDENT.
BA-140	1.086E-01	4.048E-01	3.341E-01	2.065E-01	NOT IDENT.
LA-140	-2.428E-02	1.340E-01	9.799E-02	6.836E-02	FAIL ABUN
CE-141	1.186E-01	1.216E-01	8.990E-02	6.204E-02	NOT IDENT.
CE-143	7.048E+02	2.072E+02	0.000E+00	1.057E+02	SHORT HLIF
CE-144	-2.033E-01	3.592E-01	2.792E-01	1.833E-01	NOT IDENT.

PM-144	-3.760E-03	5.401E-02	4.498E-02	2.756E-02	NOT IDENT.
PR-144	-2.546E-01	3.657E+00	3.046E+00	1.866E+00	NOT IDENT.
PM-146	1.005E-02	7.887E-02	6.490E-02	4.024E-02	NOT IDENT.
ND-147	5.072E-01	8.612E-01	7.302E-01	4.394E-01	NOT IDENT.
PM-149	1.366E+01	9.723E+01	8.125E+01	4.961E+01	NOT IDENT.
EU-152	4.390E-03	1.969E-01	1.332E-01	1.005E-01	FAIL ABUN
GD-153	5.520E-02	1.499E-01	1.084E-01	7.648E-02	NOT IDENT.
EU-154	4.418E-02	2.070E-01	1.724E-01	1.056E-01	NOT IDENT.
EU-155	1.819E-01	1.852E-01	1.550E-01	9.447E-02	FAIL ABUN
TB-160	-9.322E-02	2.193E-01	1.734E-01	1.119E-01	FAIL ABUN
HO-166M	1.127E-02	9.820E-02	8.299E-02	5.010E-02	NOT IDENT.
TM-171	-6.541E+01	7.010E+01	4.676E+01	3.577E+01	NOT IDENT.
LU-176	-1.375E-02	4.159E-02	3.371E-02	2.122E-02	FAIL ABUN
LU-177	4.369E+00	1.989E+00	1.455E+00	1.015E+00	FAIL ABUN
LU-177M	-1.836E-01	3.181E-01	2.502E-01	1.623E-01	NOT IDENT.
HF-181	-7.846E-02	7.523E-02	5.615E-02	3.838E-02	NOT IDENT.
W-181	1.107E+00	9.523E-01	7.165E-01	4.859E-01	NOT IDENT.
TA-182	-7.461E-02	3.156E-01	2.506E-01	1.610E-01	FAIL ABUN
RE-183	1.068E-02	1.838E-01	1.469E-01	9.378E-02	FAIL ABUN
RE-184	2.691E-01	4.151E-01	3.559E-01	2.118E-01	NOT IDENT.
OS-185	3.564E-02	6.875E-02	5.795E-02	3.508E-02	NOT IDENT.
RE-188	2.469E-01	3.069E-01	2.532E-01	1.566E-01	NOT IDENT.
W-188	-5.987E+00	1.342E+01	9.291E+00	6.845E+00	FAIL ABUN
IR-192	-3.096E-02	5.926E-02	4.740E-02	3.023E-02	FAIL ABUN
AU-195	5.665E-01	4.240E-01	3.226E-01	2.163E-01	FAIL ABUN
TL-200	-1.355E+02	3.345E+02	0.000E+00	1.707E+02	SHORT HLIF
TL-201	2.002E+00	8.582E+00	6.913E+00	4.378E+00	NOT IDENT.
TL-202	1.994E-02	1.143E-01	9.451E-02	5.833E-02	NOT IDENT.
BI-207	2.098E-02	9.623E-02	8.067E-02	4.910E-02	FAIL ABUN
TL-207	2.764E-01	1.347E+00	9.815E-01	6.871E-01	FAIL ABUN
PO-209	8.069E+00	1.222E+01	1.076E+01	6.236E+00	NOT IDENT.
BI-210	-8.724E+00	1.937E+01	1.507E+01	9.884E+00	NOT IDENT.
PB-210	-8.724E+00	1.937E+01	1.507E+01	9.884E+00	NOT IDENT.
PO-210	-8.724E+00	1.937E+01	1.507E+01	9.882E+00	NOT IDENT.
PB-211	-1.392E-01	1.645E+00	1.338E+00	8.391E-01	NOT IDENT.
BI-212	1.162E+00	8.776E-01	5.278E-01	4.478E-01	FAIL ABUN
PO-215	2.764E-01	1.347E+00	9.815E-01	6.871E-01	FAIL ABUN
RN-219	-2.963E-01	7.065E-01	5.611E-01	3.605E-01	FAIL ABUN
RN-220	-1.821E+01	4.574E+01	3.575E+01	2.334E+01	NOT IDENT.
RA-223	2.764E-01	1.347E+00	9.815E-01	6.871E-01	FAIL ABUN
AC-227	-1.300E-01	6.960E-01	5.735E-01	3.551E-01	NOT IDENT.
TH-227	-1.300E-01	6.961E-01	5.735E-01	3.552E-01	FAIL ABUN
TH-229	1.036E+00	9.078E-01	7.115E-01	4.632E-01	FAIL ABUN
PA-231	1.186E+00	2.775E+00	2.156E+00	1.416E+00	NOT IDENT.
TH-231	2.764E-01	1.347E+00	9.815E-01	6.871E-01	FAIL ABUN
U-231	-3.423E-01	1.781E+00	1.245E+00	9.089E-01	FAIL ABUN
PA-233	6.991E-02	1.056E-01	9.067E-02	5.385E-02	FAIL ABUN
PA-234	-4.916E-02	4.997E-01	4.084E-01	2.550E-01	FAIL ABUN
PA-234M	-3.551E+00	1.194E+01	9.695E+00	6.091E+00	NOT IDENT.
NP-236	-1.005E-01	1.393E-01	1.070E-01	7.107E-02	FAIL ABUN
NP-239	-2.878E-01	3.338E-01	2.569E-01	1.703E-01	FAIL ABUN
AM-241	-4.863E-02	4.842E-01	3.439E-01	2.470E-01	NOT IDENT.
CM-243	2.970E-02	1.664E-01	1.351E-01	8.490E-02	FAIL ABUN
CM-247	-2.139E-02	6.332E-02	5.066E-02	3.231E-02	FAIL ABUN
CF-249	2.779E-02	7.188E-02	6.041E-02	3.668E-02	NOT IDENT.
CF-251	6.815E-02	2.205E-01	1.780E-01	1.125E-01	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	228.3497
46.50	228.3497
46.50	228.3497
48.70	249.0363
49.72	236.2409
51.35	199.9346
52.39	207.8726
52.97	219.4718
53.15	235.6929
53.44	245.3123
54.07	256.0330
56.28	247.0671
56.28	247.0681
57.37	0.0000
57.53	205.1883
57.53	205.1891
57.60	214.3994
57.98	196.1379
57.98	196.1379
59.32	224.1823
59.32	224.1823
59.40	224.2099
59.54	250.3697
59.72	250.4389
60.01	270.5318
61.10	249.4231
61.14	249.4379
61.30	249.4977
63.00	229.6721
63.29	229.7699
63.29	229.7699
63.58	229.8682
64.28	230.1040
65.12	229.2236
65.20	229.2500
65.20	229.2500
66.05	241.9381
66.72	263.9026
66.83	263.9451
66.91	263.9752
67.20	271.8513
67.20	271.8513
67.75	260.4030
67.85	260.4398
68.90	245.2536
68.90	245.2536
69.30	257.0763
69.67	245.5179
70.82	243.9566
70.82	243.9566
70.83	243.9604
72.80	272.4060
72.87	272.4315
72.87	272.4315
74.67	280.5472
74.81	280.5995
74.81	280.5995
74.81	280.5995
74.81	280.5995
74.81	280.5995
74.81	280.5995
74.97	280.6595
75.28	280.7752
75.70	280.9312
77.11	281.4527
77.11	281.4527
77.11	281.4527

77.11	281.4527
77.11	281.4527
77.11	281.4527
78.38	281.9185
79.62	303.3012
79.80	303.3715
79.80	303.3715
80.11	319.2991
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80.30	319.3768
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81.07	352.9250
81.07	352.9250
81.07	352.9250
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83.78	301.7247
83.78	301.7247
83.78	301.7247
83.78	301.7247
84.21	283.3491
84.40	283.4155
84.90	278.2910
85.43	268.9250
86.29	286.7311
86.50	286.8047
86.54	302.7534
86.59	302.7719
86.72	302.8195
86.79	302.8450
86.94	302.9006
87.30	389.1595
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87.30	389.1595
87.30	389.1595
87.30	389.1595
87.57	378.1180
87.88	378.2598
88.03	478.8977
88.36	479.0881
88.47	479.1522
89.95	480.0018
91.11	480.6647
92.29	295.2176
92.38	295.2490
92.38	295.2490
93.35	295.5837
94.00	295.8083
94.67	265.4673
94.67	265.4683
94.90	265.5388
94.90	265.5388
94.90	265.5388
94.90	265.5388
95.87	288.3917
95.87	288.3917
96.73	241.9075
97.43	222.7314
98.44	206.8281
98.44	206.8281
98.88	195.6140
99.55	230.5458
99.55	230.5458
99.86	230.6258
100.00	244.1504
100.10	240.5172
103.18	262.9481
103.76	233.6543
105.00	212.6077
105.31	217.7666
108.00	250.0347
109.28	291.2524
111.00	257.9957
111.00	257.9957

111.76	240.7830
112.95	222.6149
115.19	237.5253
116.30	261.4714
117.00	263.7183
117.00	263.7183
117.66	248.4320
121.11	219.2946
121.62	218.3713
121.78	218.4059
122.06	214.3247
122.32	223.7000
122.32	223.7000
122.32	223.7000
122.32	223.7000
123.07	234.2298
127.23	249.7495
129.76	244.0971
131.20	283.0787
133.02	269.9619
133.54	262.7656
135.34	228.6013
136.00	233.9874
136.25	247.6855
136.48	240.3896
140.51	202.2935
140.51	0.0000
142.18	246.4944
142.65	246.5987
143.76	230.3593
144.24	231.7260
144.24	231.7260
144.24	231.7260
144.24	231.7260
145.22	225.1567
145.44	231.9735
147.16	218.7599
152.43	241.6984
152.70	239.6255
153.22	223.7498
154.21	228.2044
154.21	228.2044
154.21	228.2044
154.21	228.2044
155.03	243.3041
156.02	236.0332
158.56	256.8768
159.00	0.0000
159.00	256.9702
160.31	247.6052
161.27	228.4933
162.32	217.9549
162.64	218.0137
163.35	208.4695
163.89	217.1633
165.85	225.0491
167.43	200.5405
171.28	208.7334
171.86	214.2407
172.10	225.1038
176.55	209.6066
176.60	209.6139
181.06	221.4594
184.41	218.5318
185.71	218.7485
186.00	218.7958
190.27	180.8686
192.34	207.5285
193.63	165.7705
197.04	187.5108
198.01	197.5785
198.60	197.6618
200.40	178.0186
201.83	224.6889
202.84	225.9592
205.31	168.6598
208.36	195.7119
208.81	215.3511

209.75	209.2610
209.75	209.2610
210.97	210.3301
215.65	219.7016
216.55	204.6589
218.09	195.9190
222.10	211.0482
223.80	174.2023
226.40	160.3206
227.00	159.4837
227.08	159.4923
227.20	159.5042
228.16	168.6241
228.18	168.6264
228.18	168.6264
231.56	0.0000
235.69	166.1380
236.00	167.6822
236.00	167.6822
238.60	175.2278
238.63	175.2314
238.63	175.2314
238.63	175.2314
239.00	175.2726
240.98	175.4964
241.98	175.6083
241.98	175.6083
241.98	175.6083
244.69	179.2543
245.39	170.2148
247.94	178.7529
248.90	168.5611
249.79	173.7357
252.40	166.6915
252.85	163.0736
252.85	163.0736
254.15	0.0000
256.20	184.5264
256.20	184.5264
260.50	136.2288
260.90	143.6278
262.80	171.6765
264.65	158.4103
268.24	127.9262
268.79	134.1356
269.46	143.9592
269.46	143.9592
269.46	143.9592
269.46	143.9592
271.23	138.9624
273.65	134.5233
276.40	139.3872
277.35	146.6956
277.60	146.7168
277.60	146.7168
278.00	144.1678
278.60	142.6681
279.20	134.9622
279.53	122.5744
280.46	133.5072
281.68	136.7087
283.67	125.3126
284.30	120.1908
285.00	125.1425
285.90	123.3375
286.10	122.4175
286.10	122.4175
287.40	123.9114
288.45	0.0000
290.67	134.2910
290.80	134.3015
291.72	121.8718
293.26	0.0000
293.70	109.4946
295.21	158.7449
295.21	158.7449
295.21	158.7449
295.96	202.0375

296.50	194.2672
297.23	191.2108
298.57	134.8894
299.80	116.1459
299.80	116.1459
300.09	116.1655
300.09	116.1655
300.09	116.1655
300.10	116.1655
300.12	116.1670
301.29	114.6714
302.84	156.1703
303.76	169.8816
303.91	169.8970
304.40	156.7233
304.40	156.7233
304.84	156.7618
306.84	129.5178
308.46	117.3308
311.98	106.1785
316.51	135.8989
318.01	119.8384
319.02	118.9514
319.41	111.3614
320.08	127.5879
323.87	133.5691
323.87	133.5691
323.87	133.5691
323.87	133.5691
325.23	140.0298
328.77	125.3039
333.44	124.6489
334.20	124.6981
334.20	124.6981
334.30	124.7045
338.28	108.6190
338.28	108.6190
338.28	108.6190
338.28	108.6190
338.32	108.6218
338.32	108.6218
338.32	108.6218
340.50	109.0626
340.57	109.0667
344.27	109.9143
345.85	115.7915
350.59	0.0000
351.07	116.0962
351.92	109.3694
351.92	109.3694
351.92	109.3694
355.39	0.0000
356.01	124.4623
364.48	122.7085
366.43	115.0270
367.43	115.0831
367.94	0.0000
369.80	106.4267
374.96	110.6054
383.85	109.1071
387.95	108.3309
388.63	101.4698
391.69	114.4396
391.69	114.4396
392.90	120.4258
398.62	104.9079
400.65	107.9768
401.10	111.9627
401.81	107.0429
402.60	106.0909
404.84	109.1755
410.95	93.5536
411.60	104.5309
413.65	119.5737
414.70	106.6695
415.30	99.7180
415.76	104.7257
417.63	0.0000

418.52	98.8622
423.70	99.0882
427.08	88.2095
427.89	89.2434
432.53	83.3951
433.93	86.4609
439.47	93.7220
439.56	93.7254
439.89	94.7470
443.98	105.0093
444.90	95.9590
445.03	95.9648
445.03	95.9648
445.03	95.9648
445.03	95.9648
453.90	95.3104
463.38	83.4714
468.07	112.1901
473.00	107.3071
475.06	92.0544
475.35	91.0425
476.78	79.8367
477.59	79.8624
477.96	79.8748
482.03	103.5965
484.57	80.0871
487.03	69.8884
490.36	0.0000
492.35	76.2158
497.08	80.4861
507.63	0.0000
510.53	0.0000
510.84	84.0306
511.00	84.0360
511.85	84.0637
511.85	84.0637
513.99	62.3203
513.99	62.3203
520.41	71.8452
520.65	71.8520
527.90	72.0491
528.96	0.0000
529.64	62.6924
529.87	0.0000
531.02	62.7246
537.32	67.0641
543.00	81.9076
546.56	0.0000
549.76	80.0060
552.65	74.8221
555.20	62.2338
563.23	57.1258
563.90	57.1390
568.70	75.2572
569.32	72.0939
569.50	61.4947
569.67	67.8609
573.80	73.2704
574.00	73.2754
574.64	64.7946
578.91	69.1482
579.30	0.0000
583.14	61.7935
585.48	58.6456
591.81	71.5997
592.07	82.2919
593.00	75.9055
595.88	60.9981
600.56	93.7891
602.52	0.0000
602.71	75.0876
602.71	75.0876
603.60	60.8032
604.41	51.8763
604.70	51.8816
609.31	73.4650
609.31	73.4650
609.31	73.4650

609.31	73.4650
610.33	77.0767
612.46	77.1309
614.37	71.7969
618.01	78.7138
621.84	65.8594
621.84	65.8594
631.29	70.4003
633.02	65.0229
633.10	65.0244
634.78	67.2297
635.90	57.4913
636.97	47.7458
645.85	47.8854
646.12	51.1550
656.30	58.2409
657.75	61.9100
657.90	0.0000
661.65	65.6338
661.65	65.6338
664.57	0.0000
666.33	73.0355
666.33	73.0355
675.00	67.0121
677.61	61.5713
685.20	53.2682
692.80	58.9193
695.00	62.6446
696.49	60.8303
696.49	60.8303
697.00	65.4488
697.49	64.5369
698.33	56.2530
698.50	54.4122
699.00	53.4983
702.63	67.4098
706.10	75.8006
706.58	0.0000
706.67	73.0403
709.31	40.7138
711.68	58.3370
713.82	73.1994
717.42	59.3659
720.50	44.5664
721.93	0.0000
722.20	73.2531
722.78	71.6732
722.78	71.6732
722.89	71.6764
722.95	71.6779
723.30	63.7207
724.18	73.2981
727.18	61.4023
733.00	57.5156
735.90	59.6966
739.58	54.1602
742.81	52.3428
744.21	52.3644
747.13	45.8577
751.79	59.9779
752.31	61.8616
753.82	56.2634
755.35	49.7209
756.15	43.1643
756.87	38.4809
763.93	85.5847
765.79	63.9880
766.41	54.5874
766.84	60.2422
768.36	66.8601
768.36	66.8601
768.36	66.8601
768.36	66.8601
776.49	61.3541
778.00	58.5476
778.57	62.3342
778.89	61.3964
783.80	60.5365

785.46	53.9408
792.07	71.1075
795.84	53.1494
796.30	55.0547
801.93	55.1420
805.60	55.1987
810.29	52.4118
810.76	49.5604
815.85	46.7669
817.79	42.9721
818.51	40.1150
819.60	42.0378
826.30	47.8587
828.27	0.0000
831.60	51.7621
831.96	52.7262
834.83	63.3212
836.80	0.0000
846.75	51.0127
848.13	51.0321
856.28	0.0000
856.80	44.6707
860.37	53.1313
867.32	51.4313
867.82	64.7134
871.10	46.5010
873.19	45.5571
874.81	46.5459
875.33	0.0000
876.40	52.3861
879.36	46.6016
880.27	52.4399
880.51	54.3856
881.50	44.6851
883.24	29.1559
884.67	39.8614
889.25	56.4565
896.60	39.0096
898.02	41.9502
899.00	44.8891
903.28	58.6145
911.07	46.9854
911.07	46.9854
911.07	46.9854
919.63	50.4513
920.93	54.9541
925.00	44.2053
925.24	44.2081
926.50	43.2391
934.06	42.3369
934.06	42.3369
934.06	42.3369
934.06	42.3369
935.52	35.4580
937.48	47.2998
944.10	36.5205
946.00	45.4254
949.00	46.4473
962.29	47.5918
964.01	42.5101
966.15	38.7048
968.20	38.7239
969.11	38.7326
969.11	38.7326
969.11	38.7326
977.42	35.8257
980.50	36.8479
983.50	31.8919
989.30	43.9123
996.32	50.9844
1001.03	49.0399
1001.68	36.0352
1004.76	59.1008
1021.30	0.0000
1024.50	0.0000
1034.80	48.4219
1037.82	40.3809
1038.57	42.4067

1038.76	0.0000
1045.16	51.5728
1046.59	50.5778
1048.07	49.5822
1050.47	39.4856
1050.47	39.4856
1063.62	48.7441
1076.63	42.7776
1077.35	51.9525
1085.78	47.9677
1099.22	46.0657
1112.02	39.1963
1112.84	39.7019
1115.52	42.2679
1120.29	42.3131
1120.29	42.3131
1120.29	42.3131
1120.29	42.3131
1120.51	35.2623
1121.28	39.0885
1124.00	0.0000
1129.67	44.8293
1131.51	0.0000
1147.95	0.0000
1167.94	29.0937
1173.22	43.6902
1175.09	37.4634
1177.93	31.2378
1189.05	32.3547
1204.90	46.0750
1205.75	0.0000
1213.00	41.9564
1221.42	48.3341
1230.97	64.2193
1235.34	56.9004
1236.41	0.0000
1238.11	50.6074
1238.11	50.6074
1238.11	50.6074
1238.11	50.6074
1238.25	50.6094
1246.25	50.6914
1260.41	0.0000
1271.85	43.5225
1274.45	35.0477
1274.54	35.0477
1291.56	37.2986
1298.22	0.0000
1312.09	25.6787
1325.50	27.8905
1325.50	27.8905
1332.49	25.7803
1333.61	17.1908
1360.21	11.8786
1362.66	0.0000
1365.15	20.5369
1368.21	17.6973
1368.53	0.0000
1376.25	19.4963
1377.67	17.6442
1377.67	17.6442
1377.67	17.6442
1377.67	17.6442
1384.27	18.2239
1394.10	21.4245
1395.20	23.2928
1407.95	18.6782
1434.06	17.8291
1436.60	22.5318
1457.56	0.0000
1460.81	21.6868
1489.15	18.9537
1509.49	16.1687
1596.49	16.2182
1620.62	18.4155
1678.03	0.0000
1691.02	19.6087
1691.02	19.6087

1706.46	0.0000
1750.46	0.0000
1764.49	5.2073
1764.49	5.2073
1764.49	5.2073
1764.49	5.2073
1770.23	3.4746
1771.40	37.7310
1791.20	0.0000
1808.65	8.9874
1836.01	4.0110

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433010

Total Uranium Activity	2.5210E+01	ug/g
Total Uranium Counting Unc.	1.9471E+01	ug/g
Total Uranium Tpu	9.9341E-06	ug/g
Total Uranium Mda	7.0486E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G232433010       *
*   ANALYST       : MXR1                      DETECTOR   : GAM15            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:40:53.30    SAMPLE ALQT:   78.030 GRAM    *
*                                                                           *
*****************************************************************************
```

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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.090E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 2.239E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 4.978E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 2.397E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:43:18.00

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433011.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:41:33.
Sample ID         : G232433011           Sample quantity  : 1.21420E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.15  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.48*	92	514	0.92	126.97	123	8	1.28E-02	44.7	
2	5	74.98	511	540	1.13	149.96	145	22	7.10E-02	8.6	2.67E+00
3	5	77.31*	708	375	0.80	154.63	145	22	9.83E-02	5.7	
4	0	84.28*	120	369	1.59	168.55	166	6	1.66E-02	27.5	
5	0	87.36*	236	532	1.09	174.72	172	7	3.28E-02	17.5	
6	1	90.00	137	377	1.16	180.00	178	13	1.90E-02	21.9	4.11E+00
7	1	93.10*	298	511	1.32	186.20	178	13	4.14E-02	15.2	
8	0	128.90*	88	417	1.27	257.81	254	9	1.23E-02	43.5	
9	0	186.10*	205	331	1.27	372.20	368	9	2.85E-02	18.1	
10	0	209.31	185	304	1.11	418.62	414	10	2.57E-02	19.1	
11	4	238.71*	1563	174	0.99	477.42	469	20	2.17E-01	2.9	1.76E+00
12	4	241.57	412	261	1.87	483.14	469	20	5.72E-02	11.5	
13	0	270.13	157	214	1.92	540.25	535	11	2.18E-02	19.8	
14	0	295.36*	411	256	1.20	590.72	585	11	5.71E-02	9.1	
15	0	300.07	151	159	1.28	600.14	596	9	2.10E-02	17.1	
16	0	327.71	154	207	3.06	655.43	649	15	2.14E-02	22.0	
17	0	338.38	258	195	1.05	676.77	671	10	3.58E-02	11.9	
18	0	351.95*	744	248	1.15	703.89	698	13	1.03E-01	5.8	
19	0	409.58	55	138	1.23	819.16	814	10	7.64E-03	42.4	
20	0	463.10	100	123	1.49	926.21	920	11	1.39E-02	23.8	
21	0	510.68*	118	206	1.75	1021.36	1013	18	1.63E-02	32.7	
22	0	583.18*	418	126	1.32	1166.36	1161	10	5.80E-02	7.0	
23	0	609.36*	530	108	1.24	1218.71	1214	12	7.36E-02	6.0	
24	0	727.46	108	62	1.40	1454.91	1452	10	1.50E-02	16.7	
25	0	795.40	31	74	1.27	1590.79	1585	12	4.28E-03	58.2	
26	0	860.47	51	65	0.96	1720.93	1716	11	7.06E-03	33.5	
27	0	911.00*	341	71	1.78	1822.00	1812	15	4.73E-02	7.8	
28	2	964.09	76	49	2.34	1928.19	1923	32	1.05E-02	20.6	1.33E+00
29	2	968.89*	152	56	1.92	1937.77	1923	32	2.11E-02	13.2	
30	0	1119.97*	122	48	2.15	2239.95	2234	12	1.69E-02	15.4	
31	0	1377.74	28	40	1.17	2755.49	2751	14	3.93E-03	50.3	
32	0	1460.37*	1609	23	1.75	2920.74	2913	18	2.24E-01	2.6	
33	0	1620.19	22	8	0.67	3240.38	3235	11	3.06E-03	32.9	
34	0	1630.11*	16	10	1.76	3260.22	3255	10	2.25E-03	47.0	
35	0	1729.50	20	8	1.82	3458.99	3449	14	2.78E-03	36.2	
36	0	1764.11*	95	23	1.36	3528.21	3520	15	1.32E-02	15.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:43:21

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433011.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:41:33
Sample ID : G232433011 Sample quantity : 121.42 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.15 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.796E+01	3.758E+00	5.451E-01	4.589E-02	69.646
CD-109	+	88.03	*	3.203E+00	1.154E+00	1.451E+00	1.251E-01	2.208
SN-126	+	64.28		8.587E-01	7.770E-01	9.258E-01	1.341E-01	0.928
	+	86.94		1.312E+00	7.105E-01	6.225E-01	2.574E-01	2.107
	+	87.57	*	3.155E-01	1.137E-01	1.555E-01	1.335E-02	2.029
TL-208		277.35		4.199E-01	4.266E-01	7.088E-01	7.396E-02	0.592
	+	510.84		5.379E-01	3.560E-01	2.357E-01	2.403E-02	2.282
	+	583.14	*	5.462E-01	8.507E-02	6.399E-02	4.407E-03	8.536
	+	860.37		6.337E-01	4.289E-01	4.736E-01	4.524E-02	1.338
BI-211		72.87		8.466E+00	3.976E+00	6.226E+00	4.725E-01	1.360
	+	351.07	*	4.265E+00	5.606E-01	3.408E-01	2.116E-02	12.516
BI-212	+	727.18	*	1.223E+00	4.216E-01	5.651E-01	4.874E-02	2.165
		785.46		3.017E-01	1.912E+00	3.244E+00	2.529E-01	0.093
	+	1620.62		2.183E+00	1.446E+00	1.917E+00	1.406E-01	1.139
PB-212	+	74.81		2.916E+00	6.153E-01	6.486E-01	7.847E-02	4.495
	+	77.11		2.279E+00	3.139E-01	3.668E-01	2.865E-02	6.215
	+	87.30		1.459E+00	5.457E-01	6.897E-01	9.082E-02	2.116
	+	238.63	*	1.977E+00	1.808E-01	9.420E-02	6.645E-03	20.985
	+	300.09		2.935E+00	1.030E+00	1.201E+00	9.743E-02	2.443
PO-212	+	74.81		2.916E+00	6.153E-01	6.486E-01	7.847E-02	4.495
	+	77.11		2.279E+00	3.139E-01	3.668E-01	2.865E-02	6.215
	+	87.30		1.459E+00	5.457E-01	6.897E-01	9.082E-02	2.116
		115.19		2.975E+00	3.907E+00	6.603E+00	4.225E-01	0.451
	+	238.63	*	1.977E+00	1.808E-01	9.420E-02	6.645E-03	20.985
	+	300.09		2.935E+00	1.030E+00	1.201E+00	9.743E-02	2.443
BI-214	+	609.31	*	1.307E+00	1.874E-01	1.163E-01	9.279E-03	11.242
		768.36		2.922E-01	9.077E-01	1.487E+00	1.430E-01	0.196
		934.06		4.207E-01	1.235E+00	2.106E+00	2.338E-01	0.200
	+	1120.29		1.601E+00	5.137E-01	4.819E-01	4.487E-02	3.323
		1238.11		2.740E+00	1.023E+00	1.933E+00	1.707E-01	1.417
	+	1377.67		1.653E+00	1.671E+00	1.033E+00	1.091E-01	1.600
	+	1764.49		1.732E+00	5.416E-01	1.910E-01	1.208E-02	9.071
PB-214	+	74.81		5.024E+00	1.021E+00	1.118E+00	1.193E-01	4.495
	+	77.11		3.908E+00	6.149E-01	6.288E-01	6.861E-02	6.215

Sample ID : G232433011 Acquisition date : 7-JUL-2009 06:41:33

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.500E+00	9.212E-01	1.182E+00	1.362E-01	2.116
	+	241.98		3.128E+00	7.572E-01	5.668E-01	4.436E-02	5.519
	+	295.21		1.399E+00	2.809E-01	2.271E-01	1.905E-02	6.163
	+	351.92	*	1.484E+00	2.098E-01	1.215E-01	9.851E-03	12.215
PO-214	+	74.81		5.024E+00	1.021E+00	1.118E+00	1.193E-01	4.495
	+	77.11		3.908E+00	6.149E-01	6.288E-01	6.861E-02	6.215
	+	87.30		2.500E+00	9.212E-01	1.182E+00	1.362E-01	2.116
	+	241.98		3.128E+00	7.572E-01	5.668E-01	4.436E-02	5.519
	+	295.21		1.399E+00	2.809E-01	2.271E-01	1.905E-02	6.163
	+	351.92	*	1.484E+00	2.098E-01	1.215E-01	9.851E-03	12.215
PO-216	+	74.81		2.916E+00	6.153E-01	6.486E-01	7.847E-02	4.495
	+	77.11		2.279E+00	3.139E-01	3.668E-01	2.865E-02	6.215
	+	87.30		1.459E+00	5.457E-01	6.897E-01	9.082E-02	2.116
	+	238.63	*	1.977E+00	1.808E-01	9.420E-02	6.645E-03	20.985
	+	300.09		2.935E+00	1.030E+00	1.201E+00	9.743E-02	2.443
PO-218	+	74.81		5.024E+00	1.021E+00	1.118E+00	1.193E-01	4.495
	+	77.11		3.908E+00	6.149E-01	6.288E-01	6.861E-02	6.215
	+	87.30		2.500E+00	9.212E-01	1.182E+00	1.362E-01	2.116
	+	241.98		3.128E+00	7.572E-01	5.668E-01	4.436E-02	5.519
	+	295.21		1.399E+00	2.809E-01	2.271E-01	1.905E-02	6.163
	+	351.92	*	1.484E+00	2.098E-01	1.215E-01	9.851E-03	12.215
RA-224	+	240.98	*	5.931E+00	1.397E+00	1.071E+00	5.845E-02	5.536
RA-226	+	609.31	*	1.307E+00	1.874E-01	1.163E-01	9.279E-03	11.242
		768.36		2.922E-01	9.077E-01	1.487E+00	1.430E-01	0.196
		934.06		4.207E-01	1.235E+00	2.106E+00	2.338E-01	0.200
	+	1120.29		1.601E+00	5.137E-01	4.819E-01	4.487E-02	3.323
		1238.11		2.740E+00	1.023E+00	1.933E+00	1.707E-01	1.417
	+	1377.67		1.653E+00	1.671E+00	1.033E+00	1.091E-01	1.600
	+	1764.49		1.732E+00	5.416E-01	1.910E-01	1.208E-02	9.071
AC-228	+	338.32		1.630E+00	7.689E-01	3.823E-01	1.557E-01	4.263
	+	911.07	*	2.015E+00	3.959E-01	2.332E-01	2.768E-02	8.640
	+	969.11		1.590E+00	5.616E-01	4.224E-01	9.886E-02	3.765
RA-228	+	338.32		1.630E+00	7.689E-01	3.823E-01	1.557E-01	4.263
	+	911.07	*	2.015E+00	3.959E-01	2.332E-01	2.768E-02	8.640
	+	969.11		1.590E+00	5.616E-01	4.224E-01	9.886E-02	3.765
TH-228	+	84.40		5.082E+00	2.874E+00	4.280E+00	5.540E-01	1.187
	+	238.60	*	1.977E+00	1.808E-01	9.419E-02	6.645E-03	20.987
	+	300.10		2.935E+00	1.999E+00	1.201E+00	7.078E-01	2.443
TH-230	+	609.31	*	1.307E+00	1.874E-01	1.163E-01	9.278E-03	11.242
		768.36		2.922E-01	9.077E-01	1.487E+00	1.430E-01	0.196
		934.06		4.207E-01	1.235E+00	2.106E+00	2.338E-01	0.200
	+	1120.29		1.601E+00	5.137E-01	4.819E-01	4.487E-02	3.323
		1238.11		2.740E+00	1.023E+00	1.933E+00	1.707E-01	1.417
	+	1377.67		1.653E+00	1.671E+00	1.033E+00	1.091E-01	1.600
	+	1764.49		1.732E+00	5.416E-01	1.910E-01	1.208E-02	9.071
TH-232	+	338.32		1.630E+00	3.983E-01	3.823E-01	2.133E-02	4.263
	+	911.07	*	2.015E+00	3.959E-01	2.332E-01	2.768E-02	8.640
	+	969.11		1.590E+00	5.616E-01	4.224E-01	9.886E-02	3.765
TH-234	+	63.29	*	2.169E+00	1.974E+00	2.427E+00	4.221E-01	0.894

Sample ID : G232433011 Acquisition date : 7-JUL-2009 06:41:33

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.572E+00	9.049E-01	8.345E-01	1.488E-01	3.082
U-234	+	609.31	*	1.307E+00	1.874E-01	1.163E-01	9.278E-03	11.242
		768.36		2.922E-01	9.077E-01	1.487E+00	1.430E-01	0.196
		934.06		4.207E-01	1.235E+00	2.106E+00	2.338E-01	0.200
	+	1120.29		1.601E+00	5.137E-01	4.819E-01	4.487E-02	3.323
		1238.11		2.740E+00	1.023E+00	1.933E+00	1.707E-01	1.417
	+	1377.67		1.653E+00	1.671E+00	1.033E+00	1.091E-01	1.600
	+	1764.49		1.732E+00	5.416E-01	1.910E-01	1.208E-02	9.071
NP-237	+	86.50	*	9.264E-01	3.847E-01	4.051E-01	9.040E-02	2.287
		95.87		2.659E-01	1.165E+00	1.710E+00	4.160E-01	0.155
U-238	+	63.29	*	2.169E+00	1.974E+00	2.427E+00	4.221E-01	0.894
	+	92.38		2.572E+00	8.073E-01	8.345E-01	6.730E-02	3.082
AM-243	+	74.67	*	4.727E-01	8.944E-02	1.055E-01	8.098E-03	4.481
	+	86.72		3.474E+01	1.252E+01	1.515E+01	1.290E+00	2.293
		117.66		-9.597E-01	4.169E+00	6.806E+00	4.278E-01	-0.141
		142.18		3.777E-01	1.981E+01	3.243E+01	1.804E+00	0.012
ANH-511	+	511.00	*	1.162E-01	7.629E-02	5.093E-02	2.991E-03	2.281

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.920E-01	3.240E-01	4.999E-01	3.361E-02	-0.584
NA-22		1274.54	*	2.274E-02	5.085E-02	8.617E-02	6.405E-03	0.264
NA-24		1368.53	*	9.977E-02	5.085E-02	Half-Life too short		
AL-26		1129.67		1.059E+00	1.953E+00	3.346E+00	2.133E-01	0.316
		1808.65	*	-7.621E-03	3.108E-02	4.903E-02	2.928E-03	-0.155
TI-44		67.85		-2.799E-02	5.957E-02	8.538E-02	6.316E-03	-0.328
	+	78.38	*	4.206E-01	5.792E-02	9.590E-02	7.566E-03	4.386
SC-46		889.25	*	-2.571E-02	4.431E-02	7.035E-02	6.612E-03	-0.366
	+	1120.51		2.711E-01	8.510E-02	1.395E-01	9.121E-03	1.944
V-48		944.10		-6.218E-01	9.765E-01	1.449E+00	1.316E-01	-0.429
		983.50	*	-6.574E-03	7.258E-02	1.193E-01	1.028E-02	-0.055
		1312.09		-2.053E-02	7.910E-02	1.248E-01	1.019E-02	-0.165
CR-51		320.08	*	1.158E-01	4.135E-01	6.541E-01	4.110E-02	0.177
MN-52		744.21		-1.560E-01	2.224E-01	3.358E-01	2.419E-02	-0.464
		848.13		9.206E-01	5.649E+00	9.566E+00	8.366E-01	0.096
		935.52		2.339E-01	2.452E-01	4.348E-01	3.988E-02	0.538
		1246.25		1.055E+00	7.182E+00	1.186E+01	8.158E-01	0.089
		1333.61		-1.328E+00	4.583E+00	7.187E+00	6.166E-01	-0.185
		1434.06	*	-1.079E-02	1.812E-01	2.902E-01	2.399E-02	-0.037
MN-54		834.83	*	4.739E-03	4.074E-02	6.868E-02	5.865E-03	0.069
CO-56		846.75	*	1.573E-02	3.758E-02	6.497E-02	5.668E-03	0.242
		977.42		-1.013E+00	3.766E+00	5.185E+00	4.509E-01	-0.195
		1037.82		5.107E-01	3.597E-01	6.552E-01	5.494E-02	0.779
		1175.09		1.271E+00	2.707E+00	4.503E+00	2.509E-01	0.282
		1238.25		2.845E-01	1.000E-01	1.925E-01	1.356E-02	1.478
		1360.21		5.877E-01	1.062E+00	1.835E+00	1.562E-01	0.320
		1771.40		-6.829E-01	2.815E-01	2.444E-01	1.533E-02	-2.795

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	1.536E-02	2.734E-02	4.587E-02	2.805E-03	0.335
		136.48		6.908E-02	2.316E-01	3.836E-01	2.545E-02	0.180
CO-58		810.76	*	-3.338E-02	4.280E-02	6.730E-02	5.515E-03	-0.496
FE-59		142.65		8.006E-01	3.032E+00	4.960E+00	2.755E-01	0.161
		192.34		-1.110E+00	1.097E+00	1.625E+00	1.873E-01	-0.683
		1099.22	*	-1.195E-02	1.039E-01	1.692E-01	1.314E-02	-0.071
		1291.56		2.459E-02	1.389E-01	2.299E-01	2.077E-02	0.107
CO-60		1173.22		5.676E-02	5.369E-02	9.311E-02	5.157E-03	0.610
		1332.49	*	-3.569E-03	4.188E-02	6.737E-02	5.780E-03	-0.053
ZN-65		1115.52	*	1.584E-02	1.107E-01	1.589E-01	1.056E-02	0.100
GE-68		1077.35	*	5.608E-01	1.456E+00	2.472E+00	1.799E-01	0.227
AS-73		53.44	*	-1.623E-01	9.736E-01	1.627E+00	1.201E-01	-0.100
AS-74		595.88	*	1.215E-02	1.006E-01	1.650E-01	9.984E-03	0.074
		634.78		-3.296E-01	3.711E-01	5.597E-01	3.406E-02	-0.589
SE-75		66.05		-5.608E-01	6.135E+00	8.946E+00	8.420E-01	-0.063
		96.73		-6.558E-01	9.379E-01	1.312E+00	1.708E-01	-0.500
		121.11		5.755E-02	1.462E-01	2.438E-01	2.305E-02	0.236
		136.00		6.809E-03	4.309E-02	7.103E-02	4.119E-03	0.096
		198.60		-3.802E-01	2.020E+00	3.242E+00	2.164E-01	-0.117
		264.65	*	2.671E-02	5.398E-02	7.781E-02	4.359E-03	0.343
		279.53		2.166E-02	1.228E-01	2.058E-01	1.248E-02	0.105
		303.91		3.141E-01	2.345E+00	3.465E+00	3.265E-01	0.091
		400.65		-3.743E-02	2.725E-01	4.491E-01	3.988E-02	-0.083
BR-77	+	87.88		4.694E+02	1.692E+02	2.677E+02	2.307E+01	1.754
		200.40		8.691E+01	1.224E+02	2.035E+02	1.068E+01	0.427
	+	239.00		2.149E+02	1.713E+01	2.853E+01	1.554E+00	7.531
		249.79		4.293E+01	4.755E+01	7.953E+01	4.367E+00	0.540
		281.68		1.420E+01	6.628E+01	1.127E+02	6.289E+00	0.126
		297.23		3.143E+02	6.675E+01	9.479E+01	5.307E+00	3.316
		303.76		1.443E+01	1.361E+02	2.007E+02	1.125E+01	0.072
		439.47		2.334E+01	1.015E+02	1.701E+02	9.561E+00	0.137
		484.57		-2.136E+02	1.610E+02	2.397E+02	1.388E+01	-0.891
		520.65	*	-2.905E+00	7.519E+00	1.200E+01	7.079E-01	-0.242
		574.64		9.779E+01	1.543E+02	2.622E+02	1.578E+01	0.373
		578.91		8.395E+00	7.203E+01	1.027E+02	6.187E+00	0.082
		585.48		1.292E+03	2.125E+02	3.842E+02	2.319E+01	3.363
		755.35		1.530E+02	1.235E+02	2.170E+02	1.598E+01	0.705
		817.79		-7.683E+00	9.841E+01	1.638E+02	1.356E+01	-0.047
SR-82		698.33		1.042E+01	3.677E+01	6.055E+01	3.981E+00	0.172
		776.49	*	-5.390E-01	4.079E-01	6.152E-01	4.716E-02	-0.876
		1395.20		2.077E+00	1.190E+01	1.969E+01	1.655E+00	0.105
RB-83		520.41	*	-2.923E-02	7.257E-02	1.157E-01	6.824E-03	-0.253
		529.64		1.238E-02	1.128E-01	1.862E-01	1.103E-02	0.066
		552.65		1.735E-01	2.033E-01	3.518E-01	2.103E-02	0.493
RB-84		881.50	*	3.489E-02	7.627E-02	1.315E-01	1.219E-02	0.265
KR-85		513.99	*	9.525E+00	9.002E+00	1.387E+01	8.160E-01	0.687
SR-85		513.99	*	4.816E-02	4.551E-02	7.013E-02	4.125E-03	0.687
RB-86		1076.63	*	1.254E+00	8.534E-01	1.564E+00	1.140E-01	0.802
Y-88		898.02		-3.005E-02	4.601E-02	7.245E-02	6.940E-03	-0.415

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	2.131E-02	3.302E-02	6.092E-02	3.507E-03	0.350
ZR-88		392.90	*	-7.713E-03	3.229E-02	5.296E-02	2.861E-03	-0.146
Y-91		1204.90	*	-1.804E+00	2.315E+01	3.764E+01	2.299E+00	-0.048
NB-94		702.63	*	-2.249E-02	3.777E-02	5.814E-02	3.856E-03	-0.387
		871.10		-1.322E-02	3.389E-02	5.453E-02	4.967E-03	-0.242
NB-95		765.79	*	6.729E-02	5.006E-02	8.734E-02	6.560E-03	0.770
NB-95M		235.69	*	1.523E-01	1.548E-01	2.287E-01	1.658E-02	0.666
ZR-95		724.18		1.859E-01	1.149E-01	1.848E-01	1.447E-02	1.006
		756.15	*	3.565E-02	7.629E-02	1.271E-01	1.065E-02	0.280
NB-97		657.90	*	9.347E-03	7.629E-02	Half-Life too short		
		1024.50		-3.613E+00	7.629E-02	Half-Life too short		
ZR-97		254.15		-1.295E+00	7.629E-02	Half-Life too short		
		355.39		-1.509E-02	7.629E-02	Half-Life too short		
		507.63	*	8.806E-01	7.629E-02	Half-Life too short		
		602.52		-1.081E+00	7.629E-02	Half-Life too short		
		1021.30		7.209E-01	7.629E-02	Half-Life too short		
		1147.95		-1.262E+00	7.629E-02	Half-Life too short		
		1362.66		1.823E+00	7.629E-02	Half-Life too short		
		1750.46		1.341E-01	7.629E-02	Half-Life too short		
MO-99		140.51		-2.372E+01	2.244E+01	3.334E+01	8.970E+00	-0.712
		181.06		-3.159E+00	1.496E+01	2.096E+01	3.548E+00	-0.151
		366.43		1.309E+01	6.301E+01	1.062E+02	5.849E+00	0.123
		739.58	*	9.299E-02	9.348E+00	1.505E+01	2.166E+00	0.006
		778.00		-2.248E+01	2.677E+01	4.210E+01	3.237E+00	-0.534
TC-99M		140.51	*	-1.197E+09	2.677E+01	Half-Life too short		
RH-101		127.23		4.738E-02	4.040E-02	6.137E-02	3.646E-03	0.772
		198.01	*	-7.292E-03	3.758E-02	6.032E-02	3.157E-03	-0.121
		325.23		1.351E-01	2.677E-01	4.036E-01	2.259E-02	0.335
RH-102		418.52		-3.433E-01	3.065E-01	4.731E-01	2.615E-02	-0.726
		475.06	*	5.414E-03	2.864E-02	4.779E-02	2.752E-03	0.113
		631.29		5.166E-02	6.064E-02	1.043E-01	6.344E-03	0.495
		697.49		7.514E-02	8.475E-02	1.453E-01	9.540E-03	0.517
		766.84		7.346E-02	1.344E-01	2.234E-01	1.682E-02	0.329
		1046.59		-5.620E-02	1.335E-01	2.116E-01	1.641E-02	-0.266
		1112.84		-3.626E-03	2.935E-01	4.135E-01	2.761E-02	-0.009
RU-103		497.08	*	-9.719E-03	4.087E-02	6.605E-02	8.362E-03	-0.147
	+	610.33		1.379E+01	2.697E+00	3.082E+00	4.784E-01	4.473
RH-106	+	511.85		5.789E-01	3.801E-01	4.374E-01	2.570E-02	1.324
		621.84	*	9.442E-04	3.462E-01	5.624E-01	6.679E-02	0.002
		1050.47		1.481E-01	2.652E+00	4.396E+00	3.384E-01	0.034
RU-106	+	511.85		5.789E-01	3.801E-01	4.374E-01	2.570E-02	1.324
		621.84	*	9.442E-04	3.462E-01	5.624E-01	3.418E-02	0.002
		1050.47		1.481E-01	2.652E+00	4.396E+00	3.384E-01	0.034
AG-108M		433.93	*	-2.558E-02	3.357E-02	5.279E-02	3.226E-03	-0.485
		614.37		1.263E-02	4.338E-02	6.284E-02	4.111E-03	0.201
		722.95		4.721E-02	4.880E-02	7.500E-02	5.494E-03	0.629
AG-110M		657.75	*	1.529E-02	3.775E-02	6.295E-02	4.062E-03	0.243
		677.61		-5.099E-02	3.543E-01	5.568E-01	3.691E-02	-0.092
		706.67		-6.755E-02	2.366E-01	3.734E-01	2.610E-02	-0.181

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		-1.678E-02	2.009E-01	3.207E-01	2.490E-02	-0.052
		884.67		1.081E-02	5.594E-02	9.459E-02	9.064E-03	0.114
		937.48		-5.254E-03	1.194E-01	1.975E-01	1.866E-02	-0.027
		1384.27		4.827E-02	1.917E-01	2.784E-01	2.418E-02	0.173
IN-111		171.28		4.599E-01	7.690E-01	1.280E+00	6.505E-02	0.359
		245.39	*	-7.206E-01	8.943E-01	1.176E+00	6.435E-02	-0.613
IN-113M		391.69	*	-3.628E-02	4.741E-02	7.539E-02	4.381E-03	-0.481
SN-113		391.69	*	-3.628E-02	4.741E-02	7.539E-02	4.381E-03	-0.481
IN-114M		190.27	*	6.060E-02	2.237E-01	3.216E-01	1.669E-02	0.188
CD-115		260.90		-7.959E+01	9.682E+01	1.483E+02	8.196E+00	-0.537
		492.35		-8.642E+00	2.521E+01	4.050E+01	2.356E+00	-0.213
		527.90	*	4.695E+00	7.530E+00	1.285E+01	7.608E-01	0.365
SN-117M		156.02		1.712E+00	2.356E+00	3.944E+00	2.075E-01	0.434
		158.56	*	-4.086E-02	5.755E-02	9.122E-02	4.751E-03	-0.448
SB-122		563.90	*	6.370E-01	1.609E+00	2.696E+00	1.617E-01	0.236
		692.80		8.549E+00	3.455E+01	5.679E+01	3.692E+00	0.151
I-123		159.00	*	-6.824E-01	3.455E+01	Half-Life too short		
		528.96		4.225E+01	3.455E+01	Half-Life too short		
TE-123M		159.00	*	-1.823E-02	3.137E-02	4.998E-02	2.642E-03	-0.365
I-124		602.71	*	-1.417E-01	6.200E-01	8.945E-01	5.419E-02	-0.158
		722.78		4.318E+00	4.108E+00	6.361E+00	4.393E-01	0.679
		1325.50		8.130E+00	2.810E+01	4.724E+01	3.986E+00	0.172
	+	1376.25		4.148E+01	4.185E+01	5.386E+01	4.558E+00	0.770
		1509.49		1.286E+01	1.255E+01	2.309E+01	1.835E+00	0.557
		1691.02		-3.694E+00	3.000E+00	3.736E+00	2.566E-01	-0.989
SB-124		602.71		-1.012E-02	4.430E-02	6.391E-02	3.873E-03	-0.158
		645.85		-5.315E-02	5.599E-01	9.011E-01	6.131E-02	-0.059
		709.31		3.333E+00	2.961E+00	5.166E+00	3.473E-01	0.645
		713.82		-9.416E-01	1.698E+00	2.603E+00	2.811E-01	-0.362
		722.78		4.472E-01	4.256E-01	6.588E-01	4.702E-02	0.679
	+	968.20		1.612E+01	4.493E+00	7.410E+00	6.526E-01	2.176
		1045.16		-2.225E+00	2.807E+00	4.288E+00	3.336E-01	-0.519
		1325.50		8.993E-01	3.108E+00	5.226E+00	4.410E-01	0.172
		1368.21		9.674E-01	1.472E+00	2.618E+00	3.506E-01	0.370
		1436.60		-9.124E-01	3.345E+00	5.159E+00	4.260E-01	-0.177
		1691.02	*	-9.024E-02	7.332E-02	9.126E-02	6.656E-03	-0.989
SB-125		427.89	*	5.210E-02	9.318E-02	1.594E-01	9.287E-03	0.327
	+	463.38		8.901E-01	4.273E-01	5.921E-01	3.962E-02	1.503
		600.56		-4.986E-02	1.925E-01	3.075E-01	2.131E-02	-0.162
		635.90		-3.625E-01	3.044E-01	4.468E-01	3.145E-02	-0.811
TE-125M		109.28	*	1.085E+00	1.037E+01	1.717E+01	1.509E+00	0.063
I-126		388.63		8.916E-02	1.968E-01	3.353E-01	1.815E-02	0.266
		666.33	*	9.740E-02	1.841E-01	3.093E-01	1.903E-02	0.315
		753.82		1.272E+00	1.515E+00	2.591E+00	1.902E-01	0.491
SB-126		223.80		5.217E-01	4.219E+00	6.827E+00	3.670E-01	0.076
		278.60		5.287E-01	2.573E+00	4.319E+00	2.407E-01	0.122
	+	296.50		1.293E+01	2.466E+00	3.705E+00	2.074E-01	3.489
		414.70		6.398E-02	8.817E-02	1.339E-01	7.379E-03	0.478
		415.30		2.918E+00	6.980E+00	1.083E+01	5.969E-01	0.270

---- Non-Identified Nuclides ----

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		555.20		-1.537E+00	4.000E+00	6.268E+00	3.749E-01	-0.245
		573.80		3.639E-02	1.049E+00	1.715E+00	1.032E-01	0.021
		593.00		3.088E-01	1.008E+00	1.675E+00	1.013E-01	0.184
		656.30		2.924E+00	3.309E+00	5.706E+00	3.477E-01	0.513
		666.33		4.058E-02	7.670E-02	1.288E-01	7.929E-03	0.315
		675.00		-4.966E-01	2.165E+00	3.383E+00	2.120E-01	-0.147
		695.00		-2.924E-02	8.783E-02	1.326E-01	8.658E-03	-0.221
		697.00		6.848E-02	2.809E-01	4.613E-01	3.024E-02	0.148
		720.50	*	1.277E-01	1.402E-01	2.417E-01	1.662E-02	0.528
		856.80		2.617E-01	4.771E-01	7.326E-01	6.506E-02	0.357
		989.30		-4.254E-01	1.260E+00	2.022E+00	1.729E-01	-0.210
		1034.80		-7.991E-01	1.011E+01	1.659E+01	1.316E+00	-0.048
		1213.00		-4.271E+00	5.428E+00	8.336E+00	5.214E-01	-0.512
SB-127		61.10		4.902E+01	5.676E+01	8.663E+01	8.416E+00	0.566
		252.40		-3.018E-01	3.788E+00	6.039E+00	2.500E+00	-0.050
		290.80		-2.051E+00	1.955E+01	2.848E+01	2.434E+00	-0.072
		411.60		1.066E+01	1.242E+01	1.889E+01	2.636E+00	0.564
		444.90		-8.866E-01	8.143E+00	1.337E+01	1.377E+00	-0.066
		473.00		-3.949E-01	1.335E+00	2.154E+00	2.318E-01	-0.183
		543.00		9.478E+00	1.355E+01	2.317E+01	2.929E+00	0.409
		603.60		3.217E+00	1.059E+01	1.534E+01	1.612E+00	0.210
		685.20	*	1.335E-01	1.167E+00	1.902E+00	1.782E-01	0.070
		698.50		4.567E+00	1.328E+01	2.195E+01	3.186E+00	0.208
		722.20		5.012E+01	2.633E+01	4.391E+01	4.151E+00	1.141
		783.80		2.866E+00	3.104E+00	5.504E+00	6.319E-01	0.521
XE-127		57.60		-4.053E+00	7.294E+00	1.160E+01	8.440E-01	-0.349
		145.22		9.523E-01	7.638E-01	1.301E+00	7.147E-02	0.732
		172.10		-2.517E-02	1.251E-01	2.017E-01	1.026E-02	-0.125
		202.84	*	-3.588E-02	5.293E-02	7.993E-02	4.206E-03	-0.449
		374.96		1.524E-01	1.990E-01	3.450E-01	1.888E-02	0.442
I-131		80.18		-6.083E+00	5.214E+00	7.230E+00	5.826E-01	-0.841
		284.30		-9.775E-01	1.418E+00	2.313E+00	1.443E-01	-0.423
		364.48	*	-5.463E-02	1.082E-01	1.754E-01	1.088E-02	-0.311
		636.97		-1.448E+00	1.535E+00	2.305E+00	1.553E-01	-0.628
		722.89		7.317E+00	7.339E+00	1.131E+01	7.877E-01	0.647
TE-132		49.72		-1.859E+01	1.783E+01	2.880E+01	2.733E+00	-0.646
		111.76		3.138E+00	2.519E+01	4.171E+01	3.715E+00	0.075
		116.30		-7.918E+00	2.276E+01	3.700E+01	3.235E+00	-0.214
		228.16	*	-2.028E-01	5.826E-01	9.214E-01	1.285E-01	-0.220
BA-133		53.15		-2.181E+00	4.284E+00	7.071E+00	5.226E-01	-0.308
		79.62		-1.693E-03	1.690E+00	2.474E+00	3.679E-01	-0.001
		81.00		-1.538E-01	1.259E-01	1.715E-01	2.673E-02	-0.897
		276.40		4.952E-01	4.474E-01	6.946E-01	8.933E-02	0.713
		302.84		9.446E-02	1.668E-01	2.529E-01	2.924E-02	0.373
		356.01	*	-1.916E-03	5.295E-02	7.665E-02	8.762E-03	-0.025
		383.85		-3.307E-02	3.137E-01	5.189E-01	5.543E-02	-0.064
I-133	+	510.53		4.054E-01	3.137E-01	Half-Life too short		
		529.87	*	-5.644E-04	3.137E-01	Half-Life too short		
		706.58		-4.992E-02	3.137E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		856.28		1.837E-01	3.137E-01	Half-Life too short		
		875.33		-3.630E-02	3.137E-01	Half-Life too short		
		1236.41		4.007E-01	3.137E-01	Half-Life too short		
		1298.22		-1.471E-01	3.137E-01	Half-Life too short		
CS-134		475.35		-1.915E-01	1.887E+00	3.087E+00	1.778E-01	-0.062
		563.23		2.861E-01	3.911E-01	6.690E-01	4.091E-02	0.428
		569.32		-3.773E-02	2.123E-01	3.423E-01	2.114E-02	-0.110
		604.70		-1.029E-02	3.954E-02	5.403E-02	3.291E-03	-0.191
	+	795.84	*	5.865E-02	6.840E-02	8.991E-02	7.208E-03	0.652
		801.93		-5.164E-01	5.089E-01	6.578E-01	5.324E-02	-0.785
		1038.57		6.627E+00	4.513E+00	8.253E+00	6.500E-01	0.803
		1167.94		-1.252E+00	2.949E+00	4.665E+00	2.633E-01	-0.268
		1365.15		-7.104E-01	1.255E+00	1.873E+00	1.666E-01	-0.379
CS-135		268.24	*	2.619E-01	1.989E-01	2.996E-01	2.238E-02	0.874
I-135		288.45		7.092E+07	1.989E-01	Half-Life too short		
		417.63		-9.333E+08	1.989E-01	Half-Life too short		
		546.56		-1.926E+08	1.989E-01	Half-Life too short		
		836.80		5.598E+08	1.989E-01	Half-Life too short		
		1038.76		9.105E+08	1.989E-01	Half-Life too short		
		1124.00		5.814E+08	1.989E-01	Half-Life too short		
		1131.51		1.534E+08	1.989E-01	Half-Life too short		
		1260.41	*	2.739E+07	1.989E-01	Half-Life too short		
		1457.56		4.217E+10	1.989E-01	Half-Life too short		
		1678.03		7.927E+07	1.989E-01	Half-Life too short		
		1706.46		5.107E+06	1.989E-01	Half-Life too short		
		1791.20		1.104E+08	1.989E-01	Half-Life too short		
CS-136		66.91		-2.192E-02	9.238E-01	1.350E+00	1.995E-01	-0.016
	+	86.29		3.837E+00	1.430E+00	2.208E+00	2.817E-01	1.738
		153.22		3.832E-01	6.855E-01	1.141E+00	7.808E-02	0.336
		163.89		1.273E+00	1.123E+00	1.874E+00	1.255E-01	0.679
		176.55		9.245E-02	3.730E-01	6.118E-01	3.616E-02	0.151
		273.65		-7.948E-01	5.642E-01	7.062E-01	4.523E-02	-1.125
		340.57		5.334E-01	1.544E-01	2.646E-01	1.575E-02	2.016
		818.51		-5.138E-03	7.429E-02	1.237E-01	1.026E-02	-0.042
		1048.07	*	9.118E-02	1.096E-01	1.932E-01	1.572E-02	0.472
		1235.34		2.710E-01	6.603E-01	1.108E+00	1.165E-01	0.245
BA-137M		661.65	*	-4.016E-02	3.998E-02	5.969E-02	3.638E-03	-0.673
CS-137		661.65	*	-4.246E-02	4.227E-02	6.310E-02	3.860E-03	-0.673
CE-139		165.85	*	-2.757E-03	3.321E-02	5.390E-02	2.726E-03	-0.051
BA-140		162.64		-5.697E-02	8.026E-01	1.285E+00	7.620E-02	-0.044
		304.84		6.836E-01	1.349E+00	2.026E+00	5.520E-01	0.337
		423.70		1.104E-01	1.751E+00	2.911E+00	9.238E-01	0.038
		537.32	*	-2.313E-02	2.578E-01	4.192E-01	1.364E-01	-0.055
LA-140	+	328.77		1.117E+00	4.973E-01	5.321E-01	3.359E-02	2.099
		432.53		-1.056E+00	1.989E+00	3.181E+00	1.978E-01	-0.332
		487.03		-3.275E-02	1.328E-01	2.149E-01	1.411E-02	-0.152
		751.79		-1.320E-01	1.777E+00	2.837E+00	2.377E-01	-0.047
		815.85		-4.318E-02	3.288E-01	5.450E-01	5.059E-02	-0.079
		867.82		6.922E-01	1.376E+00	2.239E+00	2.125E-01	0.309

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		919.63		-2.851E-01	2.868E+00	4.730E+00	5.314E-01	-0.060
		925.24		1.030E-01	1.168E+00	1.955E+00	1.913E-01	0.053
		1596.49	*	-5.727E-02	8.519E-02	1.287E-01	9.628E-03	-0.445
CE-141		145.44	*	9.154E-02	6.854E-02	1.170E-01	6.710E-03	0.782
CE-143		57.37		-1.216E-05	6.854E-02	Half-Life too short		
		231.56		4.902E-04	6.854E-02	Half-Life too short		
		293.26	*	4.841E-04	6.854E-02	Half-Life too short		
	+	350.59		1.722E-02	6.854E-02	Half-Life too short		
		490.36		1.501E-03	6.854E-02	Half-Life too short		
		664.57		5.532E-04	6.854E-02	Half-Life too short		
		721.93		1.398E-03	6.854E-02	Half-Life too short		
CE-144		80.11		-2.917E+00	2.690E+00	3.746E+00	2.998E-01	-0.779
		133.54	*	-4.541E-02	2.548E-01	3.628E-01	5.147E-02	-0.125
PM-144		476.78		-4.652E-02	6.896E-02	1.083E-01	7.486E-03	-0.430
		618.01		2.451E-03	3.270E-02	5.344E-02	3.424E-03	0.046
		696.49	*	8.340E-03	3.931E-02	6.441E-02	4.221E-03	0.129
		778.57		-6.409E-01	2.444E+00	4.023E+00	3.097E-01	-0.159
PR-144		696.49	*	5.647E-01	2.662E+00	4.362E+00	2.857E-01	0.129
		1489.15		-1.539E+00	1.096E+01	1.723E+01	1.385E+00	-0.089
PM-146		453.90	*	4.687E-02	4.638E-02	8.090E-02	6.910E-03	0.579
		633.02		6.840E-01	1.548E+00	2.560E+00	9.439E-01	0.267
		735.90		-1.206E-02	1.722E-01	2.676E-01	7.541E-02	-0.045
		747.13		6.126E-03	9.592E-02	1.550E-01	2.052E-02	0.040
ND-147	+	91.11		5.615E-01	2.509E-01	5.348E-01	4.791E-02	1.050
		319.41		1.018E+00	3.317E+00	5.529E+00	3.098E-01	0.184
		439.89		2.565E+00	5.650E+00	9.591E+00	5.395E-01	0.267
		531.02	*	-3.107E-01	5.672E-01	8.919E-01	1.211E-01	-0.348
PM-149		285.90	*	-6.826E+01	6.343E+01	1.003E+02	1.413E+01	-0.681
EU-152		121.78		4.470E-02	7.962E-02	1.336E-01	1.049E-02	0.335
		244.69		3.031E-01	3.850E-01	5.671E-01	3.102E-02	0.534
		344.27	*	-1.294E-01	1.109E-01	1.547E-01	9.795E-03	-0.836
		443.98		7.504E-01	1.014E+00	1.749E+00	9.865E-02	0.429
		778.89		-5.274E-02	2.845E-01	4.710E-01	3.627E-02	-0.112
		867.32		3.150E-01	9.179E-01	1.427E+00	1.291E-01	0.221
	+	964.01		9.120E-01	3.848E-01	6.468E-01	5.728E-02	1.410
		1085.78		5.497E-01	4.458E-01	8.058E-01	5.752E-02	0.682
		1112.02		-6.023E-02	3.885E-01	5.818E-01	3.893E-02	-0.104
		1407.95		1.783E-01	2.102E-01	3.724E-01	3.114E-02	0.479
GD-153		69.67		-5.421E-01	2.082E+00	3.027E+00	2.257E-01	-0.179
	+	83.37		2.908E+01	1.619E+01	2.828E+01	2.330E+00	1.028
		97.43	*	-5.621E-02	9.709E-02	1.371E-01	1.035E-02	-0.410
		103.18		-1.006E-01	1.187E-01	1.901E-01	1.348E-02	-0.529
EU-154		123.07		-2.930E-03	5.844E-02	9.264E-02	8.871E-03	-0.032
		247.94		-3.690E-01	4.210E-01	5.858E-01	5.478E-02	-0.630
		591.81		6.173E-01	7.077E-01	1.215E+00	1.205E-01	0.508
		723.30		1.857E-01	2.055E-01	3.137E-01	2.515E-02	0.592
		756.87		1.034E-01	8.475E-01	1.375E+00	1.529E-01	0.075
		873.19		-4.784E-02	2.860E-01	4.696E-01	5.925E-02	-0.102
		996.32		-3.862E-01	4.288E-01	6.476E-01	1.145E-01	-0.596

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		-2.803E-01	2.562E-01	3.850E-01	4.404E-02	-0.728
		1274.45	*	6.126E-02	1.420E-01	2.402E-01	2.504E-02	0.255
EU-155		48.70		8.704E-02	2.941E+00	4.956E+00	3.595E-01	0.018
		60.01		3.226E+00	6.312E+00	9.526E+00	6.894E-01	0.339
	+	86.54		3.798E-01	1.369E-01	2.165E-01	1.859E-02	1.754
		105.31	*	2.301E-02	1.222E-01	2.032E-01	1.438E-02	0.113
TB-160	+	86.79		1.002E+00	3.611E-01	5.661E-01	4.823E-02	1.770
		197.04		7.613E-02	6.242E-01	1.015E+00	5.305E-02	0.075
		215.65		7.875E-01	8.674E-01	1.403E+00	7.484E-02	0.561
	+	298.57		4.216E-01	1.460E-01	2.254E-01	1.262E-02	1.871
		879.36	*	1.366E-03	1.522E-01	2.539E-01	2.346E-02	0.005
		962.29		1.488E+00	6.837E-01	1.164E+00	1.033E-01	1.278
		966.15		1.158E+00	2.964E-01	5.597E-01	4.943E-02	2.069
		1177.93		-3.201E-01	4.376E-01	6.747E-01	3.793E-02	-0.474
		1271.85		3.852E-02	8.434E-01	1.380E+00	1.017E-01	0.028
HO-166M		80.57		-4.065E-01	3.444E-01	4.771E-01	3.833E-02	-0.852
		184.41		1.509E-01	4.353E-02	7.113E-02	3.667E-03	2.121
		280.46		-3.445E-02	9.591E-02	1.571E-01	8.763E-03	-0.219
	+	410.95		4.081E-01	3.466E-01	4.898E-01	2.690E-02	0.833
		711.68	*	6.710E-03	6.610E-02	1.074E-01	7.255E-03	0.062
		752.31		-1.720E-01	3.159E-01	4.850E-01	3.550E-02	-0.355
		810.29		-4.013E-02	6.497E-02	1.036E-01	8.460E-03	-0.387
TM-171		51.35		-1.957E+01	3.604E+01	5.943E+01	4.394E+00	-0.329
		52.39		-1.581E+01	1.891E+01	3.083E+01	2.281E+00	-0.513
		59.40		9.687E+00	3.460E+01	5.172E+01	3.740E+00	0.187
		66.72	*	6.755E-01	3.591E+01	5.259E+01	3.874E+00	0.013
LU-176	+	88.36		7.483E-01	2.697E-01	4.398E-01	3.772E-02	1.701
		201.83		-1.997E-02	3.202E-02	5.039E-02	2.649E-03	-0.396
		306.84	*	-3.586E-03	2.604E-02	4.232E-02	2.372E-03	-0.085
		401.10		1.439E-01	7.175E+00	1.193E+01	6.493E-01	0.012
LU-177		112.95		-1.314E+00	1.598E+00	2.555E+00	1.663E-01	-0.514
	+	208.36	*	3.637E+00	1.400E+00	1.898E+00	1.005E-01	1.917
LU-177M		52.97		-8.525E-01	1.924E+00	3.184E+00	2.354E-01	-0.268
		54.07		9.478E-01	1.010E+00	1.744E+00	1.286E-01	0.543
		61.30		1.404E+00	1.896E+00	2.883E+00	2.092E-01	0.487
		121.62		2.292E-01	4.048E-01	6.795E-01	4.157E-02	0.337
		147.16		-6.639E-01	7.348E-01	1.160E+00	6.325E-02	-0.572
		171.86		-7.437E-02	5.153E-01	8.328E-01	4.234E-02	-0.089
		218.09		-2.726E-01	9.765E-01	1.555E+00	8.313E-02	-0.175
	+	268.79		3.006E+00	1.199E+00	1.552E+00	8.615E-02	1.937
		319.02		9.138E-02	2.701E-01	4.603E-01	2.578E-02	0.199
		367.43		8.472E-01	9.453E-01	1.649E+00	9.070E-02	0.514
		413.65	*	2.797E-01	2.141E-01	3.386E-01	1.864E-02	0.826
HF-181		56.28		1.797E-01	1.099E+00	1.854E+00	1.356E-01	0.097
		57.53		-1.632E-01	6.117E-01	9.832E-01	7.157E-02	-0.166
		65.20		1.225E+00	1.224E+00	1.860E+00	1.363E-01	0.659
		133.02		-3.258E-02	8.017E-02	1.128E-01	6.524E-03	-0.289
		136.25		9.941E-02	4.964E-01	8.194E-01	4.673E-02	0.121
		345.85		-1.101E-01	2.203E-01	3.079E-01	1.713E-02	-0.358

---- Non-Identified Nuclides ----

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		482.03	*	4.358E-02	4.158E-02	7.307E-02	4.226E-03	0.596
W-181		56.28		7.135E-02	4.362E-01	7.359E-01	5.383E-02	0.097
		57.53		-6.450E-02	2.431E-01	3.907E-01	2.844E-02	-0.165
		65.20	*	4.827E-01	4.824E-01	7.331E-01	5.372E-02	0.659
TA-182		67.75		-6.239E-02	1.412E-01	2.027E-01	1.499E-02	-0.308
		100.10		9.422E-02	1.926E-01	3.238E-01	2.371E-02	0.291
		152.43		7.618E-02	3.720E-01	6.119E-01	3.267E-02	0.124
		222.10		3.146E-01	3.844E-01	6.399E-01	3.435E-02	0.492
		1001.68		5.434E-01	2.324E+00	3.972E+00	3.332E-01	0.137
	+	1121.28		7.510E-01	2.357E-01	3.825E-01	2.496E-02	1.963
		1189.05		1.371E-01	3.722E-01	6.261E-01	3.644E-02	0.219
		1221.42	*	1.531E-02	2.438E-01	4.002E-01	2.565E-02	0.038
		1230.97		-7.909E-01	5.836E-01	8.507E-01	5.605E-02	-0.930
RE-183		57.98		-1.882E-01	2.494E-01	3.762E-01	2.734E-02	-0.500
		59.32		3.771E-02	1.406E-01	2.102E-01	1:520E-02	0.179
		67.20		-5.109E-02	2.518E-01	3.653E-01	2.695E-02	-0.140
		162.32	*	-3.815E-02	1.244E-01	1.975E-01	1.013E-02	-0.193
	+	208.81		3.705E+00	1.426E+00	1.955E+00	1.036E-01	1.895
		291.72		-6.021E-01	1.097E+00	1.551E+00	8.673E-02	-0.388
RE-184		57.98		-6.988E-01	9.263E-01	1.397E+00	1.015E-01	-0.500
		59.32		1.399E-01	5.219E-01	7.799E-01	5.641E-02	0.179
		67.20		-1.897E-01	9.348E-01	1.356E+00	1.001E-01	-0.140
		161.27		-1.954E-01	3.929E-01	6.278E-01	3.234E-02	-0.311
		216.55		1.660E-01	3.037E-01	5.003E-01	2.671E-02	0.332
		252.85	*	7.795E-02	2.508E-01	4.078E-01	2.244E-02	0.191
		318.01		-4.057E-02	4.720E-01	7.884E-01	4.417E-02	-0.051
		792.07		6.070E-01	1.128E+00	1.728E+00	1.364E-01	0.351
		903.28		-7.878E-03	1.305E+00	1.869E+00	1.775E-01	-0.004
		920.93		1.399E-01	5.016E-01	8.522E-01	7.945E-02	0.164
OS-185		59.72		1.888E-01	3.733E-01	5.633E-01	4.074E-02	0.335
		61.14		1.066E-01	2.067E-01	3.116E-01	2.260E-02	0.342
		69.30		-2.158E-01	3.531E-01	5.345E-01	3.979E-02	-0.404
		592.07		3.128E+00	2.833E+00	4.942E+00	2.987E-01	0.633
		646.12	*	6.242E-03	4.740E-02	7.757E-02	4.725E-03	0.080
		717.42		-7.899E-01	9.634E-01	1.408E+00	9.617E-02	-0.561
		874.81		-2.949E-01	5.751E-01	9.138E-01	8.376E-02	-0.323
		880.27		-3.590E-02	8.475E-01	1.408E+00	1.303E-01	-0.025
RE-188		155.03	*	1.072E-01	1.895E-01	3.155E-01	1.667E-02	0.340
		477.96		-8.342E-01	2.996E+00	4.838E+00	2.791E-01	-0.172
		633.10		1.365E+00	3.049E+00	5.108E+00	3.108E-01	0.267
W-188	+	63.58		8.603E+01	7.710E+01	1.077E+02	7.856E+00	0.799
		227.08		-8.280E+00	1.408E+01	2.204E+01	1.188E+00	-0.376
		290.67	*	-3.568E-01	8.522E+00	1.247E+01	6.972E-01	-0.029
IR-192	+	295.96		1.054E+00	2.013E-01	2.991E-01	1.703E-02	3.523
		308.46		-4.440E-02	1.003E-01	1.648E-01	9.347E-03	-0.269
		316.51	*	-3.415E-02	3.728E-02	5.974E-02	3.365E-03	-0.572
		468.07		8.265E-02	7.844E-02	1.221E-01	8.097E-03	0.677
		604.41		-1.082E-01	5.304E-01	7.293E-01	8.376E-02	-0.148
		612.46		2.235E+00	9.431E-01	1.564E+00	1.217E-01	1.430

---- Non-Identified Nuclides ----

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AU-195		65.12		2.542E-01	2.252E-01	3.435E-01	2.517E-02	0.740
		66.83		4.087E-03	1.182E-01	1.733E-01	1.277E-02	0.024
	+	75.70		1.522E+00	2.880E-01	5.405E-01	4.178E-02	2.816
		98.88	*	8.163E-02	2.501E-01	4.050E-01	3.006E-02	0.202
	+	129.76		4.879E+00	4.250E+00	5.602E+00	3.289E-01	0.871
TL-200		367.94	*	1.543E-04	4.250E+00	Half-Life too short		
		579.30		3.731E-04	4.250E+00	Half-Life too short		
		828.27		-4.803E-04	4.250E+00	Half-Life too short		
		1205.75		1.016E-03	4.250E+00	Half-Life too short		
TL-201		68.90		-3.103E+00	4.493E+00	6.409E+00	4.762E-01	-0.484
		70.82		-1.018E-01	2.508E+00	3.680E+00	2.760E-01	-0.028
		80.30		-5.528E+00	4.699E+00	6.512E+00	5.220E-01	-0.849
		135.34		2.655E+00	2.057E+01	3.387E+01	1.939E+00	0.078
		167.43	*	-7.980E-01	5.849E+00	9.336E+00	4.725E-01	-0.085
TL-202		68.90		-3.509E-01	5.080E-01	7.246E-01	5.385E-02	-0.484
		70.82		-1.148E-02	2.828E-01	4.149E-01	3.112E-02	-0.028
		80.30		-6.235E-01	5.300E-01	7.345E-01	5.888E-02	-0.849
		439.56	*	1.887E-02	6.748E-02	1.134E-01	6.377E-03	0.166
HG-203		70.83		-5.120E-02	1.296E+00	1.902E+00	2.458E-01	-0.027
		72.87		1.651E+00	7.926E-01	1.214E+00	1.524E-01	1.360
		82.60		2.499E+00	1.743E+00	2.015E+00	2.715E-01	1.240
		279.20	*	1.230E-02	4.538E-02	7.636E-02	4.540E-03	0.161
BI-207		72.80		4.541E-01	2.307E-01	3.601E-01	2.731E-02	1.261
	+	74.97		8.484E-01	1.605E-01	2.597E-01	1.998E-02	3.267
	+	84.90		3.775E-01	2.102E-01	3.680E-01	3.077E-02	1.026
		569.67		5.175E-03	3.281E-02	5.412E-02	3.252E-03	0.096
		1063.62	*	-6.175E-02	6.072E-02	9.100E-02	6.821E-03	-0.679
		1770.23		-8.056E-02	3.863E-01	5.028E-01	3.158E-02	-0.160
TL-207		81.07		-3.445E-01	2.741E-01	3.780E-01	3.050E-02	-0.911
	+	83.78		2.490E-01	1.386E-01	2.399E-01	1.985E-02	1.038
		94.90		1.126E+00	3.037E-01	4.898E-01	3.817E-02	2.298
		122.32		6.091E-01	1.913E+00	3.183E+00	2.215E-01	0.191
		144.24		4.656E-01	7.799E-01	1.289E+00	9.035E-02	0.361
		154.21		2.468E-01	4.468E-01	7.433E-01	4.910E-02	0.332
	+	269.46		7.078E-01	2.827E-01	3.787E-01	2.206E-02	1.869
		323.87	*	-1.350E-01	7.930E-01	1.143E+00	1.879E-01	-0.118
	+	338.28		6.806E+00	1.768E+00	2.585E+00	2.692E-01	2.633
		445.03		-3.612E-01	2.408E+00	3.942E+00	4.013E-01	-0.092
PO-209		260.50		-9.454E+00	1.081E+01	1.650E+01	9.122E-01	-0.573
		262.80		-1.240E+01	2.936E+01	4.590E+01	2.540E+00	-0.270
		896.60	*	-4.756E+00	8.346E+00	1.324E+01	1.261E+00	-0.359
BI-210		46.50	*	3.355E+00	4.416E+00	7.537E+00	5.953E-01	0.445
PB-210		46.50	*	3.355E+00	4.416E+00	7.537E+00	5.953E-01	0.445
PO-210		46.50	*	3.355E+00	4.414E+00	7.537E+00	5.154E-01	0.445
PB-211		404.84	*	-3.459E-01	1.164E+00	1.608E+00	1.002E+00	-0.215
		427.08		6.050E-01	2.108E+00	3.496E+00	2.160E+00	0.173
		831.96		-6.928E-01	1.403E+00	2.146E+00	1.345E+00	-0.323
PO-215		81.07		-3.445E-01	2.741E-01	3.780E-01	3.050E-02	-0.911
	+	83.78		2.490E-01	1.386E-01	2.399E-01	1.985E-02	1.038

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		1.126E+00	3.037E-01	4.898E-01	3.817E-02	2.298
		122.32		6.091E-01	1.913E+00	3.183E+00	2.215E-01	0.191
		144.24		4.656E-01	7.799E-01	1.289E+00	9.035E-02	0.361
		154.21		2.468E-01	4.468E-01	7.433E-01	4.910E-02	0.332
	+	269.46		7.078E-01	2.827E-01	3.787E-01	2.206E-02	1.869
		323.87	*	-1.350E-01	7.930E-01	1.143E+00	1.879E-01	-0.118
	+	338.28		6.806E+00	1.768E+00	2.585E+00	2.692E-01	2.633
		445.03		-3.612E-01	2.408E+00	3.942E+00	4.013E-01	-0.092
RN-219	+	271.23		9.082E-01	3.659E-01	4.767E-01	3.781E-02	1.905
		401.81	*	1.700E-01	4.274E-01	7.244E-01	9.750E-02	0.235
RN-220		549.76	*	2.043E+00	2.672E+01	4.393E+01	2.623E+00	0.046
RA-223		81.07		-3.445E-01	2.741E-01	3.780E-01	3.050E-02	-0.911
	+	83.78		2.490E-01	1.386E-01	2.399E-01	1.985E-02	1.038
		94.90		1.126E+00	3.037E-01	4.898E-01	3.817E-02	2.298
		122.32		6.091E-01	1.913E+00	3.183E+00	2.215E-01	0.191
		144.24		4.656E-01	7.799E-01	1.289E+00	9.035E-02	0.361
		154.21		2.468E-01	4.468E-01	7.433E-01	4.910E-02	0.332
	+	269.46		7.078E-01	2.827E-01	3.787E-01	2.206E-02	1.869
		323.87	*	-1.350E-01	7.930E-01	1.143E+00	1.879E-01	-0.118
	+	338.28		6.806E+00	1.768E+00	2.585E+00	2.692E-01	2.633
		445.03		-3.612E-01	2.408E+00	3.942E+00	4.013E-01	-0.092
AC-227		79.80		-1.118E+00	2.127E+00	3.029E+00	6.438E-01	-0.369
		236.00		7.761E-01	3.200E-01	4.905E-01	5.029E-02	1.582
		256.20	*	1.924E-01	4.239E-01	6.922E-01	9.582E-02	0.278
		286.10		-7.020E-01	1.562E+00	2.574E+00	2.948E-01	-0.273
	+	299.80		5.439E+00	2.057E+00	2.945E+00	4.775E-01	1.847
		304.40		1.121E+00	2.087E+00	3.159E+00	5.443E-01	0.355
		334.20		2.395E+00	3.595E+00	3.852E+00	7.036E-01	0.622
TH-227		79.80		-1.118E+00	2.127E+00	3.029E+00	6.523E-01	-0.369
	+	94.00		9.938E+00	3.699E+00	4.479E+00	9.628E-01	2.219
		236.00		7.761E-01	3.174E-01	4.905E-01	4.330E-02	1.582
		256.20	*	1.924E-01	4.243E-01	6.922E-01	1.163E-01	0.278
		286.10		-7.020E-01	1.711E+00	2.574E+00	2.578E+00	-0.273
	+	299.80		5.439E+00	2.057E+00	2.945E+00	4.775E-01	1.847
		304.40		1.121E+00	2.087E+00	3.159E+00	5.443E-01	0.355
		334.20		2.395E+00	3.595E+00	3.852E+00	7.036E-01	0.622
TH-229	+	85.43		3.727E-01	2.075E-01	3.859E-01	3.244E-02	0.966
	+	88.47		4.307E-01	1.552E-01	2.535E-01	2.170E-02	1.699
		100.00		9.714E-02	2.015E-01	3.387E-01	2.483E-02	0.287
		193.63	*	1.194E-01	5.696E-01	9.297E-01	4.843E-02	0.128
		210.97		1.646E+00	1.013E+00	1.543E+00	8.190E-02	1.067
PA-231		283.67	*	-5.889E-01	1.625E+00	2.691E+00	3.684E-01	-0.219
	+	301.29		2.176E+00	7.765E-01	1.151E+00	1.190E-01	1.890
TH-231		81.07		-3.445E-01	2.741E-01	3.780E-01	3.050E-02	-0.911
	+	83.78		2.490E-01	1.386E-01	2.399E-01	1.985E-02	1.038
		94.90		1.126E+00	3.037E-01	4.898E-01	3.817E-02	2.298
		122.32		6.091E-01	1.913E+00	3.183E+00	2.215E-01	0.191
		144.24		4.656E-01	7.799E-01	1.289E+00	9.035E-02	0.361
		154.21		2.468E-01	4.468E-01	7.433E-01	4.910E-02	0.332

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		7.078E-01	2.827E-01	3.787E-01	2.206E-02	1.869
		323.87	*	-1.350E-01	7.930E-01	1.143E+00	1.879E-01	-0.118
	+	338.28		6.806E+00	1.768E+00	2.585E+00	2.692E-01	2.633
		445.03		-3.612E-01	2.408E+00	3.942E+00	4.013E-01	-0.092
U-231	+	84.21		8.596E+00	4.786E+00	8.249E+00	6.852E-01	1.042
	+	92.29		7.870E+00	2.470E+00	3.677E+00	2.969E-01	2.140
		95.87	*	2.416E-01	1.057E+00	1.554E+00	1.196E-01	0.155
		108.00		-4.775E-03	1.853E+00	3.059E+00	2.074E-01	-0.002
PA-233	+	75.28		2.476E+01	5.642E+00	8.056E+00	1.197E+00	3.074
	+	86.59		6.176E+00	2.723E+00	3.512E+00	9.407E-01	1.758
	+	300.12		1.516E+00	5.562E-01	8.209E-01	1.096E-01	1.847
		311.98	*	4.358E-02	6.918E-02	1.194E-01	7.136E-03	0.365
		340.50		2.981E+00	1.048E+00	1.403E+00	3.214E-01	2.125
		398.62		-1.226E+00	2.252E+00	3.589E+00	9.251E-01	-0.341
		415.76		3.220E-01	1.922E+00	3.038E+00	6.231E-01	0.106
PA-234	+	63.00		2.529E+00	2.290E+00	3.222E+00	4.768E-01	0.785
		94.67		1.027E+00	2.445E-01	3.672E-01	4.355E-02	2.795
		98.44		1.145E-02	1.066E-01	1.640E-01	9.122E-02	0.070
		99.86		2.410E-01	5.101E-01	8.571E-01	6.293E-02	0.281
		111.00		1.408E-01	2.043E-01	3.441E-01	3.698E-02	0.409
		131.20		2.588E-02	1.334E-01	1.927E-01	1.124E-02	0.134
		152.70		1.186E-01	3.617E-01	5.969E-01	9.337E-02	0.199
	+	186.00		4.972E+00	2.354E+00	2.703E+00	8.229E-01	1.839
		226.40		-2.511E-01	4.514E-01	7.068E-01	8.029E-02	-0.355
		227.20		-2.835E-01	4.819E-01	7.544E-01	4.069E-02	-0.376
		248.90		8.718E-02	8.669E-01	1.396E+00	2.988E-01	0.062
		293.70		6.734E+00	1.459E+00	1.872E+00	2.997E-01	3.598
		369.80		7.816E-02	9.070E-01	1.518E+00	3.149E-01	0.051
		568.70		-3.758E-01	1.095E+00	1.745E+00	1.048E-01	-0.215
		569.50		3.259E-02	2.902E-01	4.773E-01	2.868E-02	0.068
		574.00		3.736E-01	1.629E+00	2.699E+00	1.624E-01	0.138
		699.00		6.086E-02	8.018E-01	1.301E+00	2.374E-01	0.047
		706.10		-1.408E-03	1.171E+00	1.889E+00	8.360E-01	-0.001
		733.00		-6.291E-02	4.682E-01	6.385E-01	1.381E-01	-0.099
		742.81		-7.751E-01	1.596E+00	2.323E+00	1.558E+00	-0.334
	+	796.30		1.141E+00	1.363E+00	1.761E+00	4.727E-01	0.648
		805.60		8.712E-01	1.106E+00	1.903E+00	5.807E-01	0.458
		819.60		-2.362E-01	1.374E+00	2.265E+00	8.599E-01	-0.104
		826.30		-4.808E-01	9.364E-01	1.464E+00	6.542E-01	-0.329
		831.60		-2.903E-01	6.940E-01	1.116E+00	3.325E-01	-0.260
		876.40		-6.216E-01	1.063E+00	1.325E+00	1.363E+00	-0.469
		880.51		-7.598E-04	3.105E-01	5.175E-01	4.791E-02	-0.001
		883.24		3.582E-01	4.017E-01	5.802E-01	3.906E-01	0.617
		899.00		-1.058E-01	9.363E-01	1.543E+00	6.775E-01	-0.069
		925.00		-5.681E-03	1.285E+00	2.136E+00	1.983E-01	-0.003
		926.50		6.899E-02	1.874E-01	3.197E-01	8.153E-02	0.216
		946.00	*	-2.636E-01	3.576E-01	5.230E-01	9.921E-02	-0.504
		949.00		3.169E-01	4.909E-01	8.554E-01	7.721E-02	0.371
		980.50		5.342E-01	8.807E-01	1.350E+00	1.169E-01	0.396

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		9.141E-01	1.442E+00	2.307E+00	1.501E+00	0.396
PA-234M		766.41		1.943E+01	2.578E+01	3.590E+01	2.748E+01	0.541
		1001.03	*	1.141E+00	7.841E+00	1.330E+01	1.464E+00	0.086
U-235	+	89.95		2.434E+00	1.302E+00	2.156E+00	6.636E-01	1.129
	+	93.35		3.092E+00	1.273E+00	1.411E+00	3.926E-01	2.191
		105.00		7.685E-01	1.210E+00	2.007E+00	5.903E-01	0.383
		143.76	*	6.485E-02	2.423E-01	3.961E-01	6.421E-02	0.164
		163.35		3.566E-01	5.352E-01	8.747E-01	1.554E-01	0.408
	+	185.71		1.842E-01	6.745E-02	1.000E-01	5.164E-03	1.841
		205.31		-7.371E-02	6.394E-01	8.958E-01	1.596E-01	-0.082
NP-236		94.67		7.814E-01	1.721E-01	2.788E-01	2.179E-02	2.803
		98.44		8.624E-03	8.046E-02	1.240E-01	9.249E-03	0.070
		111.00		1.065E-01	1.543E-01	2.603E-01	1.720E-02	0.409
		160.31	*	-5.494E-02	8.836E-02	1.405E-01	7.265E-03	-0.391
NP-239		99.55		3.150E-02	1.716E-01	2.856E-01	2.104E-02	0.110
		117.00	*	-1.454E-02	2.115E-01	3.474E-01	2.194E-02	-0.042
	+	209.75		2.962E+00	1.140E+00	1.574E+00	8.347E-02	1.881
		228.18		-8.574E-02	2.532E-01	4.010E-01	2.164E-02	-0.214
		277.60		1.989E-01	2.059E-01	3.429E-01	1.910E-02	0.580
		334.30		1.399E+00	2.025E+00	2.190E+00	1.223E-01	0.639
AM-241		59.54	*	3.932E-02	2.018E-01	3.005E-01	2.394E-02	0.131
CM-243		99.55		3.241E-02	1.765E-01	2.939E-01	2.165E-02	0.110
		103.76	*	2.086E-02	1.088E-01	1.809E-01	1.275E-02	0.115
		117.00		-1.496E-02	2.176E-01	3.574E-01	2.257E-02	-0.042
	+	209.75		2.920E+00	1.124E+00	1.552E+00	8.228E-02	1.881
		228.18		-8.663E-02	2.558E-01	4.051E-01	2.187E-02	-0.214
		277.60		2.005E-01	2.075E-01	3.457E-01	1.926E-02	0.580
CM-247		278.00		2.544E-01	8.424E-01	1.420E+00	7.909E-02	0.179
		287.40		-4.976E-01	1.265E+00	2.092E+00	1.169E-01	-0.238
		402.60	*	9.193E-03	4.011E-02	6.382E-02	3.479E-03	0.144
CF-249		252.85		2.941E-01	9.463E-01	1.539E+00	8.465E-02	0.191
		333.44		-1.370E-02	2.861E-01	2.780E-01	1.553E-02	-0.049
		387.95	*	2.331E-02	4.157E-02	7.122E-02	3.857E-03	0.327
CF-251		176.60	*	3.873E-02	1.382E-01	2.270E-01	1.160E-02	0.171
		227.00		-2.367E-01	4.271E-01	6.697E-01	3.611E-02	-0.353
		285.00		-1.752E+00	1.819E+00	2.924E+00	1.633E-01	-0.599

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433011      *
* Acquisition date :  7-JUL-2009 06:41:33 Detector SN#     :               *
* Detector ID        : GAM16               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:02.15      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433011           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 1.2142E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.796E+01	3.683E+00	5.440E-01	0.000E+00
CD-109	3.203E+00	1.131E+00	1.499E+00	0.000E+00
SN-126	3.155E-01	1.114E-01	1.606E-01	0.000E+00
TL-208	5.462E-01	8.337E-02	6.460E-02	0.000E+00
BI-211	4.265E+00	5.494E-01	3.462E-01	0.000E+00
BI-212	1.223E+00	4.131E-01	5.690E-01	0.000E+00
PB-212	1.977E+00	1.772E-01	9.616E-02	0.000E+00
PO-212	1.977E+00	1.772E-01	9.616E-02	0.000E+00
BI-214	1.307E+00	1.836E-01	1.173E-01	0.000E+00
PB-214	1.484E+00	2.056E-01	1.234E-01	0.000E+00
PO-214	1.484E+00	2.056E-01	1.234E-01	0.000E+00
PO-216	1.977E+00	1.772E-01	9.616E-02	0.000E+00
PO-218	1.484E+00	2.056E-01	1.234E-01	0.000E+00
RA-224	5.931E+00	1.369E+00	1.094E+00	0.000E+00
RA-226	1.307E+00	1.836E-01	1.173E-01	0.000E+00
AC-228	2.015E+00	3.880E-01	2.341E-01	0.000E+00
RA-228	2.015E+00	3.880E-01	2.341E-01	0.000E+00
TH-228	1.977E+00	1.772E-01	9.615E-02	0.000E+00
TH-230	1.307E+00	1.836E-01	1.173E-01	0.000E+00
TH-232	2.015E+00	3.880E-01	2.341E-01	0.000E+00
TH-234	2.169E+00	1.935E+00	2.518E+00	0.000E+00
U-234	1.307E+00	1.836E-01	1.173E-01	0.000E+00
NP-237	9.264E-01	3.770E-01	4.186E-01	0.000E+00
U-238	2.169E+00	1.935E+00	2.518E+00	0.000E+00
AM-243	4.727E-01	8.765E-02	1.092E-01	0.000E+00
ANH-511	1.162E-01	7.476E-02	5.150E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	
BE-7	-2.920E-01		3.175E-01	5.059E-01	0.000E+00 NOT IDENT.

NA-22	2.274E-02	4.983E-02	8.615E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.374E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-7.621E-03	3.045E-02	4.880E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.676E-02	9.922E-02	0.000E+00	FAIL ABUN
SC-46	-2.571E-02	4.343E-02	7.065E-02	0.000E+00	FAIL ABUN
V-48	-6.574E-03	7.113E-02	1.196E-01	0.000E+00	NOT IDENT.
CR-51	1.158E-01	4.052E-01	6.653E-01	0.000E+00	NOT IDENT.
MN-52	-1.079E-02	1.776E-01	2.897E-01	0.000E+00	NOT IDENT.
MN-54	4.739E-03	3.993E-02	6.903E-02	0.000E+00	NOT IDENT.
CO-56	1.573E-02	3.683E-02	6.529E-02	0.000E+00	NOT IDENT.
CO-57	1.536E-02	2.679E-02	4.720E-02	0.000E+00	NOT IDENT.
CO-58	-3.338E-02	4.194E-02	6.767E-02	0.000E+00	NOT IDENT.
FE-59	-1.195E-02	1.018E-01	1.695E-01	0.000E+00	NOT IDENT.
CO-60	-3.569E-03	4.104E-02	6.731E-02	0.000E+00	NOT IDENT.
ZN-65	1.584E-02	1.085E-01	1.592E-01	0.000E+00	NOT IDENT.
GE-68	5.608E-01	1.427E+00	2.477E+00	0.000E+00	NOT IDENT.
AS-73	-1.623E-01	9.541E-01	1.690E+00	0.000E+00	NOT IDENT.
AS-74	1.215E-02	9.855E-02	1.666E-01	0.000E+00	NOT IDENT.
SE-75	2.671E-02	5.290E-02	7.933E-02	0.000E+00	NOT IDENT.
BR-77	-2.905E+00	7.369E+00	1.213E+01	0.000E+00	FAIL ABUN
SR-82	-5.390E-01	3.998E-01	6.189E-01	0.000E+00	NOT IDENT.
RB-83	-2.923E-02	7.112E-02	1.169E-01	0.000E+00	NOT IDENT.
RB-84	3.489E-02	7.474E-02	1.321E-01	0.000E+00	NOT IDENT.
KR-85	9.525E+00	8.822E+00	1.403E+01	0.000E+00	NOT IDENT.
SR-85	4.816E-02	4.460E-02	7.092E-02	0.000E+00	NOT IDENT.
RB-86	1.254E+00	8.363E-01	1.567E+00	0.000E+00	NOT IDENT.
Y-88	2.131E-02	3.236E-02	6.062E-02	0.000E+00	NOT IDENT.
ZR-88	-7.713E-03	3.165E-02	5.373E-02	0.000E+00	NOT IDENT.
Y-91	-1.804E+00	2.268E+01	3.766E+01	0.000E+00	NOT IDENT.
NB-94	-2.249E-02	3.701E-02	5.856E-02	0.000E+00	NOT IDENT.
NB-95	6.729E-02	4.906E-02	8.788E-02	0.000E+00	NOT IDENT.
NB-95M	1.523E-01	1.517E-01	2.334E-01	0.000E+00	NOT IDENT.
ZR-95	3.565E-02	7.476E-02	1.279E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.759E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.032E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	9.299E-02	9.161E+00	1.515E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.107E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-7.292E-03	3.683E-02	6.171E-02	0.000E+00	NOT IDENT.
RH-102	5.414E-03	2.807E-02	4.837E-02	0.000E+00	NOT IDENT.
RU-103	-9.719E-03	4.006E-02	6.682E-02	0.000E+00	FAIL ABUN
RH-106	9.442E-04	3.392E-01	5.674E-01	0.000E+00	FAIL ABUN
RU-106	9.442E-04	3.392E-01	5.674E-01	0.000E+00	FAIL ABUN
AG-108M	-2.558E-02	3.290E-02	5.349E-02	0.000E+00	NOT IDENT.
AG-110M	1.529E-02	3.700E-02	6.346E-02	0.000E+00	NOT IDENT.
IN-111	-7.206E-01	8.765E-01	1.200E+00	0.000E+00	NOT IDENT.
IN-113M	-3.628E-02	4.646E-02	7.649E-02	0.000E+00	NOT IDENT.
SN-113	-3.628E-02	4.646E-02	7.649E-02	0.000E+00	NOT IDENT.
IN-114M	6.060E-02	2.193E-01	3.292E-01	0.000E+00	NOT IDENT.
CD-115	4.695E+00	7.380E+00	1.299E+01	0.000E+00	NOT IDENT.
SN-117M	-4.086E-02	5.640E-02	9.358E-02	0.000E+00	NOT IDENT.
SB-122	6.370E-01	1.577E+00	2.723E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.151E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.823E-02	3.074E-02	5.127E-02	0.000E+00	NOT IDENT.
I-124	-1.417E-01	6.076E-01	9.027E-01	0.000E+00	FAIL ABUN
SB-124	-9.024E-02	7.186E-02	9.091E-02	0.000E+00	FAIL ABUN
SB-125	5.210E-02	9.131E-02	1.616E-01	0.000E+00	FAIL ABUN
TE-125M	1.085E+00	1.016E+01	1.769E+01	0.000E+00	NOT IDENT.
I-126	9.740E-02	1.804E-01	3.117E-01	0.000E+00	NOT IDENT.
SB-126	1.277E-01	1.374E-01	2.434E-01	0.000E+00	FAIL ABUN
SB-127	1.335E-01	1.144E+00	1.917E+00	0.000E+00	NOT IDENT.
XE-127	-3.588E-02	5.187E-02	8.175E-02	0.000E+00	NOT IDENT.
I-131	-5.463E-02	1.060E-01	1.781E-01	0.000E+00	NOT IDENT.
TE-132	-2.028E-01	5.710E-01	9.411E-01	0.000E+00	NOT IDENT.
BA-133	-1.916E-03	5.189E-02	7.786E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.231E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.865E-02	6.703E-02	9.042E-02	0.000E+00	FAIL ABUN
CS-135	2.619E-01	1.949E-01	3.054E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.086E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	9.118E-02	1.074E-01	1.936E-01	0.000E+00	FAIL ABUN
BA-137M	-4.016E-02	3.918E-02	6.017E-02	0.000E+00	NOT IDENT.
CS-137	-4.246E-02	4.142E-02	6.360E-02	0.000E+00	NOT IDENT.
CE-139	-2.757E-03	3.255E-02	5.526E-02	0.000E+00	NOT IDENT.
BA-140	-2.313E-02	2.526E-01	4.237E-01	0.000E+00	NOT IDENT.
LA-140	-5.727E-02	8.348E-02	1.283E-01	0.000E+00	FAIL ABUN
CE-141	9.154E-02	6.717E-02	1.202E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.386E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-4.541E-02	2.497E-01	3.729E-01	0.000E+00	NOT IDENT.
PM-144	8.340E-03	3.853E-02	6.489E-02	0.000E+00	NOT IDENT.

PR-144	5.647E-01	2.609E+00	4.394E+00	0.000E+00	NOT IDENT.
PM-146	4.687E-02	4.546E-02	8.193E-02	0.000E+00	NOT IDENT.
ND-147	-3.107E-01	5.559E-01	9.015E-01	0.000E+00	FAIL ABUN
PM-149	-6.826E+01	6.216E+01	1.022E+02	0.000E+00	NOT IDENT.
EU-152	-1.294E-01	1.087E-01	1.572E-01	0.000E+00	FAIL ABUN
GD-153	-5.621E-02	9.515E-02	1.415E-01	0.000E+00	FAIL ABUN
EU-154	6.126E-02	1.391E-01	2.401E-01	0.000E+00	NOT IDENT.
EU-155	2.301E-02	1.198E-01	2.095E-01	0.000E+00	FAIL ABUN
TB-160	1.366E-03	1.491E-01	2.550E-01	0.000E+00	FAIL ABUN
HO-166M	6.710E-03	6.478E-02	1.082E-01	0.000E+00	FAIL ABUN
TM-171	6.755E-01	3.519E+01	5.452E+01	0.000E+00	NOT IDENT.
LU-176	-3.586E-03	2.552E-02	4.307E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.372E+00	1.940E+00	0.000E+00	FAIL ABUN
LU-177M	2.797E-01	2.098E-01	3.433E-01	0.000E+00	FAIL ABUN
HF-181	4.358E-02	4.075E-02	7.394E-02	0.000E+00	NOT IDENT.
W-181	4.827E-01	4.728E-01	7.600E-01	0.000E+00	NOT IDENT.
TA-182	1.531E-02	2.389E-01	4.003E-01	0.000E+00	FAIL ABUN
RE-183	-3.815E-02	1.219E-01	2.025E-01	0.000E+00	FAIL ABUN
RE-184	7.795E-02	2.458E-01	4.160E-01	0.000E+00	NOT IDENT.
OS-185	6.242E-03	4.645E-02	7.822E-02	0.000E+00	NOT IDENT.
RE-188	1.072E-01	1.857E-01	3.238E-01	0.000E+00	NOT IDENT.
W-188	-3.568E-01	8.351E+00	1.270E+01	0.000E+00	FAIL ABUN
IR-192	-3.415E-02	3.654E-02	6.077E-02	0.000E+00	FAIL ABUN
AU-195	8.163E-02	2.451E-01	4.178E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.016E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-7.980E-01	5.732E+00	9.572E+00	0.000E+00	NOT IDENT.
TL-202	1.887E-02	6.613E-02	1.149E-01	0.000E+00	NOT IDENT.
HG-203	1.230E-02	4.447E-02	7.780E-02	0.000E+00	NOT IDENT.
BI-207	-6.175E-02	5.951E-02	9.118E-02	0.000E+00	FAIL ABUN
TL-207	-1.350E-01	7.771E-01	1.162E+00	0.000E+00	FAIL ABUN
PO-209	-4.756E+00	8.179E+00	1.330E+01	0.000E+00	NOT IDENT.
BI-210	3.355E+00	4.328E+00	7.846E+00	0.000E+00	NOT IDENT.
PB-210	3.355E+00	4.328E+00	7.846E+00	0.000E+00	NOT IDENT.
PO-210	3.355E+00	4.326E+00	7.846E+00	0.000E+00	NOT IDENT.
PB-211	-3.459E-01	1.141E+00	1.631E+00	0.000E+00	NOT IDENT.
PO-215	-1.350E-01	7.771E-01	1.162E+00	0.000E+00	FAIL ABUN
RN-219	1.700E-01	4.188E-01	7.348E-01	0.000E+00	FAIL ABUN
RN-220	2.043E+00	2.619E+01	4.439E+01	0.000E+00	NOT IDENT.
RA-223	-1.350E-01	7.771E-01	1.162E+00	0.000E+00	FAIL ABUN
AC-227	1.924E-01	4.155E-01	7.060E-01	0.000E+00	FAIL ABUN
TH-227	1.924E-01	4.158E-01	7.060E-01	0.000E+00	FAIL ABUN
TH-229	1.194E-01	5.582E-01	9.515E-01	0.000E+00	FAIL ABUN
PA-231	-5.889E-01	1.593E+00	2.741E+00	0.000E+00	FAIL ABUN
TH-231	-1.350E-01	7.771E-01	1.162E+00	0.000E+00	FAIL ABUN
U-231	2.416E-01	1.036E+00	1.604E+00	0.000E+00	FAIL ABUN
PA-233	4.358E-02	6.780E-02	1.215E-01	0.000E+00	FAIL ABUN
PA-234	-2.636E-01	3.505E-01	5.248E-01	0.000E+00	FAIL ABUN
PA-234M	1.141E+00	7.684E+00	1.333E+01	0.000E+00	NOT IDENT.
U-235	6.485E-02	2.375E-01	4.069E-01	0.000E+00	FAIL ABUN
NP-236	-5.494E-02	8.660E-02	1.441E-01	0.000E+00	NOT IDENT.
NP-239	-1.454E-02	2.073E-01	3.577E-01	0.000E+00	FAIL ABUN
AM-241	3.932E-02	1.977E-01	3.119E-01	0.000E+00	NOT IDENT.
CM-243	2.086E-02	1.066E-01	1.865E-01	0.000E+00	FAIL ABUN
CM-247	9.193E-03	3.931E-02	6.473E-02	0.000E+00	NOT IDENT.
CF-249	2.331E-02	4.074E-02	7.227E-02	0.000E+00	NOT IDENT.
CF-251	3.873E-02	1.354E-01	2.325E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:43:19.01

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433011.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:41:33.
Sample ID         : G232433011           Sample quantity  : 1.21420E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.15  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1609	10.67*	1.228E+00	3.796E+01	3.796E+01	9.90
CD-109	88.03	236	3.72*	6.258E+00	3.138E+00	3.203E+00	36.04
SN-126	64.28	92	9.60	3.468E+00	8.587E-01	8.587E-01	90.49
	86.94	236	8.90	6.258E+00	1.312E+00	1.312E+00	54.17
	87.57	236	37.00*	6.258E+00	3.155E-01	3.155E-01	36.04
TL-208	277.35	------	6.80	4.948E+00	------ Line Not Found		------
	510.84	118	21.60	3.130E+00	5.379E-01	5.379E-01	66.19
	583.14	418	84.20*	2.807E+00	5.462E-01	5.462E-01	15.57
	860.37	51	12.46	1.990E+00	6.337E-01	6.337E-01	67.69
BI-211	72.87	------	1.27	4.802E+00	------ Line Not Found		------
	351.07	744	12.94*	4.167E+00	4.265E+00	4.265E+00	13.14
BI-212	727.18	108	11.80*	2.319E+00	1.223E+00	1.223E+00	34.46
	785.46	------	1.97	2.164E+00	------ Line Not Found		------
	1620.62	22	2.75	1.135E+00	2.183E+00	2.183E+00	66.25
PB-212	74.81	511	10.70	5.062E+00	2.916E+00	2.916E+00	21.10
	77.11	708	18.00	5.331E+00	2.279E+00	2.279E+00	13.77
	87.30	236	8.00	6.258E+00	1.459E+00	1.459E+00	37.40
	238.63	1563	44.60*	5.482E+00	1.977E+00	1.977E+00	9.15
	300.09	151	3.41	4.679E+00	2.935E+00	2.935E+00	35.11
PO-212	74.81	511	10.70	5.062E+00	2.916E+00	2.916E+00	21.10
	77.11	708	18.00	5.331E+00	2.279E+00	2.279E+00	13.77
	87.30	236	8.00	6.258E+00	1.459E+00	1.459E+00	37.40
	115.19	------	0.60	7.278E+00	------ Line Not Found		------
	238.63	1563	44.60*	5.482E+00	1.977E+00	1.977E+00	9.15
	300.09	151	3.41	4.679E+00	2.935E+00	2.935E+00	35.11
BI-214	609.31	530	46.30*	2.705E+00	1.307E+00	1.307E+00	14.33
	768.36	------	5.04	2.208E+00	------ Line Not Found		------
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	122	15.10	1.554E+00	1.601E+00	1.601E+00	32.08
	1238.11	------	5.94	1.417E+00	------ Line Not Found		------
	1377.67	28	4.11	1.289E+00	1.653E+00	1.653E+00	101.07
	1764.49	95	15.80	1.075E+00	1.732E+00	1.732E+00	31.26

Sample ID : G232433011 Acquisition date : 7-JUL-2009 06:41:33

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	511	6.21	5.062E+00	5.024E+00	5.024E+00	20.32
	77.11	708	10.50	5.331E+00	3.908E+00	3.908E+00	15.74
	87.30	236	4.67	6.258E+00	2.500E+00	2.500E+00	36.85
	241.98	412	7.49	5.439E+00	3.128E+00	3.128E+00	24.21
	295.21	411	19.20	4.732E+00	1.399E+00	1.399E+00	20.07
	351.92	744	37.20*	4.167E+00	1.484E+00	1.484E+00	14.14
PO-214	74.81	511	6.21	5.062E+00	5.024E+00	5.024E+00	20.32
	77.11	708	10.50	5.331E+00	3.908E+00	3.908E+00	15.74
	87.30	236	4.67	6.258E+00	2.500E+00	2.500E+00	36.85
	241.98	412	7.49	5.439E+00	3.128E+00	3.128E+00	24.21
	295.21	411	19.20	4.732E+00	1.399E+00	1.399E+00	20.07
	351.92	744	37.20*	4.167E+00	1.484E+00	1.484E+00	14.14
PO-216	74.81	511	10.70	5.062E+00	2.916E+00	2.916E+00	21.10
	77.11	708	18.00	5.331E+00	2.279E+00	2.279E+00	13.77
	87.30	236	8.00	6.258E+00	1.459E+00	1.459E+00	37.40
	238.63	1563	44.60*	5.482E+00	1.977E+00	1.977E+00	9.15
	300.09	151	3.41	4.679E+00	2.935E+00	2.935E+00	35.11
PO-218	74.81	511	6.21	5.062E+00	5.024E+00	5.024E+00	20.32
	77.11	708	10.50	5.331E+00	3.908E+00	3.908E+00	15.74
	87.30	236	4.67	6.258E+00	2.500E+00	2.500E+00	36.85
	241.98	412	7.49	5.439E+00	3.128E+00	3.128E+00	24.21
	295.21	411	19.20	4.732E+00	1.399E+00	1.399E+00	20.07
	351.92	744	37.20*	4.167E+00	1.484E+00	1.484E+00	14.14
RA-224	240.98	412	3.95*	5.439E+00	5.931E+00	5.931E+00	23.55
RA-226	609.31	530	46.30*	2.705E+00	1.307E+00	1.307E+00	14.33
	768.36	------	5.04	2.208E+00	------ Line Not Found		------
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	122	15.10	1.554E+00	1.601E+00	1.601E+00	32.08
	1238.11	------	5.94	1.417E+00	------ Line Not Found		------
	1377.67	28	4.11	1.289E+00	1.653E+00	1.653E+00	101.07
	1764.49	95	15.80	1.075E+00	1.732E+00	1.732E+00	31.26
AC-228	338.32	258	11.40	4.289E+00	1.630E+00	1.630E+00	47.17
	911.07	341	27.70*	1.887E+00	2.015E+00	2.015E+00	19.65
	969.11	152	16.60	1.781E+00	1.590E+00	1.590E+00	35.31
RA-228	338.32	258	11.40	4.289E+00	1.630E+00	1.630E+00	47.17
	911.07	341	27.70*	1.887E+00	2.015E+00	2.015E+00	19.65
	969.11	152	16.60	1.781E+00	1.590E+00	1.590E+00	35.31
TH-228	84.40	120	1.21	6.012E+00	5.082E+00	5.082E+00	56.55
	238.60	1563	44.60*	5.482E+00	1.977E+00	1.977E+00	9.15
	300.10	151	3.41	4.679E+00	2.935E+00	2.935E+00	68.10
TH-230	609.31	530	46.30*	2.705E+00	1.307E+00	1.307E+00	14.33
	768.36	------	5.04	2.208E+00	------ Line Not Found		------
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	122	15.10	1.554E+00	1.601E+00	1.601E+00	32.08
	1238.11	------	5.94	1.417E+00	------ Line Not Found		------
	1377.67	28	4.11	1.289E+00	1.653E+00	1.653E+00	101.07
	1764.49	95	15.80	1.075E+00	1.732E+00	1.732E+00	31.26
TH-232	338.32	258	11.40	4.289E+00	1.630E+00	1.630E+00	24.44
	911.07	341	27.70*	1.887E+00	2.015E+00	2.015E+00	19.65

Sample ID : G232433011 Acquisition date : 7-JUL-2009 06:41:33

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	152	16.60	1.781E+00	1.590E+00	1.590E+00	35.31
TH-234	63.29	92	3.80*	3.468E+00	2.169E+00	2.169E+00	91.00
	92.38	298	5.41	6.630E+00	2.572E+00	2.572E+00	35.18
U-234	609.31	530	46.30*	2.705E+00	1.307E+00	1.307E+00	14.33
	768.36	------	5.04	2.208E+00	------	Line Not Found	------
	934.06	------	3.21	1.843E+00	------	Line Not Found	------
	1120.29	122	15.10	1.554E+00	1.601E+00	1.601E+00	32.08
	1238.11	------	5.94	1.417E+00	------	Line Not Found	------
	1377.67	28	4.11	1.289E+00	1.653E+00	1.653E+00	101.07
	1764.49	95	15.80	1.075E+00	1.732E+00	1.732E+00	31.26
NP-237	86.50	236	12.60*	6.258E+00	9.264E-01	9.264E-01	41.53
	95.87	------	2.60	6.774E+00	------	Line Not Found	------
U-238	63.29	92	3.80*	3.468E+00	2.169E+00	2.169E+00	91.00
	92.38	298	5.41	6.630E+00	2.572E+00	2.572E+00	31.39
AM-243	74.67	511	66.00*	5.062E+00	4.727E-01	4.727E-01	18.92
	86.72	236	0.34	6.258E+00	3.474E+01	3.474E+01	36.04
	117.66	------	0.55	7.296E+00	------	Line Not Found	------
	142.18	------	0.13	7.157E+00	------	Line Not Found	------
ANH-511	511.00	118	100.00*	3.130E+00	1.162E-01	1.162E-01	65.66

Flag: "*" = Keyline

Sample ID : G232433011 Acquisition date : 7-JUL-2009 06:41:33

Total number of lines in spectrum 36
Number of unidentified lines 2
Number of lines tentatively identified by NID 34 94.44%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.796E+01	3.796E+01	0.376E+01	9.90	
CD-109	464.00D	1.02	3.138E+00	3.203E+00	1.154E+00	36.04	
SN-126	1.00E+05Y	1.00	3.155E-01	3.155E-01	1.137E-01	36.04	
TL-208	1.41E+10Y	1.00	5.462E-01	5.462E-01	0.851E-01	15.57	
BI-211	7.04E+08Y	1.00	4.265E+00	4.265E+00	0.561E+00	13.14	
BI-212	1.41E+10Y	1.00	1.223E+00	1.223E+00	0.422E+00	34.46	
PB-212	1.41E+10Y	1.00	1.977E+00	1.977E+00	0.181E+00	9.15	
PO-212	1.41E+10Y	1.00	1.977E+00	1.977E+00	0.181E+00	9.15	
BI-214	1600.00Y	1.00	1.307E+00	1.307E+00	0.187E+00	14.33	
PB-214	1600.00Y	1.00	1.484E+00	1.484E+00	0.210E+00	14.14	
PO-214	1600.00Y	1.00	1.484E+00	1.484E+00	0.210E+00	14.14	
PO-216	1.41E+10Y	1.00	1.977E+00	1.977E+00	0.181E+00	9.15	
PO-218	1600.00Y	1.00	1.484E+00	1.484E+00	0.210E+00	14.14	
RA-224	1.41E+10Y	1.00	5.931E+00	5.931E+00	1.397E+00	23.55	
RA-226	1600.00Y	1.00	1.307E+00	1.307E+00	0.187E+00	14.33	
AC-228	1.41E+10Y	1.00	2.015E+00	2.015E+00	0.396E+00	19.65	
RA-228	1.41E+10Y	1.00	2.015E+00	2.015E+00	0.396E+00	19.65	
TH-228	1.41E+10Y	1.00	1.977E+00	1.977E+00	0.181E+00	9.15	
TH-230	4.47E+09Y	1.00	1.307E+00	1.307E+00	0.187E+00	14.33	
TH-232	1.41E+10Y	1.00	2.015E+00	2.015E+00	0.396E+00	19.65	
TH-234	4.47E+09Y	1.00	2.169E+00	2.169E+00	1.974E+00	91.00	
U-234	4.47E+09Y	1.00	1.307E+00	1.307E+00	0.187E+00	14.33	
NP-237	2.14E+06Y	1.00	9.264E-01	9.264E-01	3.847E-01	41.53	
U-238	4.47E+09Y	1.00	2.169E+00	2.169E+00	1.974E+00	91.00	
AM-243	7380.00Y	1.00	4.727E-01	4.727E-01	0.894E-01	18.92	
ANH-511	1.00E+09Y	1.00	1.162E-01	1.162E-01	0.763E-01	65.66	
	Total Activity :		8.287E+01	8.294E+01			

Grand Total Activity : 8.287E+01 8.294E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433011 Acquisition date : 7-JUL-2009 06:41:33

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	90.00	137	377	1.16	180.00	178	13	1.90E-02	43.8	6.44E+00	T
0	128.90	88	417	1.27	257.81	254	9	1.23E-02	86.9	7.29E+00	T
0	186.10	205	331	1.27	372.20	368	9	2.85E-02	36.3	6.39E+00	T
0	209.31	185	304	1.11	418.62	414	10	2.57E-02	38.1	5.96E+00	T
0	270.13	157	214	1.92	540.25	535	11	2.18E-02	39.5	5.04E+00	T
0	327.71	154	207	3.06	655.43	649	15	2.14E-02	44.1	4.39E+00	T
0	409.58	55	138	1.23	819.16	814	10	7.64E-03	84.8	3.72E+00	T
0	463.10	100	123	1.49	926.21	920	11	1.39E-02	47.5	3.38E+00	T
0	795.40	31	74	1.27	1590.79	1585	12	4.28E-03	****	2.14E+00	T
2	964.09	76	49	2.34	1928.19	1923	32	1.05E-02	41.3	1.79E+00	T
0	1630.11	16	10	1.76	3260.22	3255	10	2.25E-03	94.0	1.13E+00	
0	1729.50	20	8	1.82	3458.99	3449	14	2.78E-03	72.5	1.09E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:43:24.63

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433011.CNF;1 *
* Acquisition date  : 7-JUL-2009 06:41:33.  Detector SN#     :             *
* Detector ID       : GAM16                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:02.15          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433011            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 1.21420E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09.0MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.796E+01	3.758E+00	5.451E-01	4.589E-02	69.646
CD-109	3.203E+00	1.154E+00	1.451E+00	1.251E-01	2.208
SN-126	3.155E-01	1.137E-01	1.555E-01	1.335E-02	2.029
TL-208	5.462E-01	8.507E-02	6.399E-02	4.407E-03	8.536
BI-211	4.265E+00	5.606E-01	3.408E-01	2.116E-02	12.516
BI-212	1.223E+00	4.216E-01	5.651E-01	4.874E-02	2.165
PB-212	1.977E+00	1.808E-01	9.420E-02	6.645E-03	20.985
PO-212	1.977E+00	1.808E-01	9.420E-02	6.645E-03	20.985
BI-214	1.307E+00	1.874E-01	1.163E-01	9.279E-03	11.242
PB-214	1.484E+00	2.098E-01	1.215E-01	9.851E-03	12.215
PO-214	1.484E+00	2.098E-01	1.215E-01	9.851E-03	12.215
PO-216	1.977E+00	1.808E-01	9.420E-02	6.645E-03	20.985
PO-218	1.484E+00	2.098E-01	1.215E-01	9.851E-03	12.215
RA-224	5.931E+00	1.397E+00	1.071E+00	5.845E-02	5.536
RA-226	1.307E+00	1.874E-01	1.163E-01	9.279E-03	11.242
AC-228	2.015E+00	3.959E-01	2.332E-01	2.768E-02	8.640
RA-228	2.015E+00	3.959E-01	2.332E-01	2.768E-02	8.640
TH-228	1.977E+00	1.808E-01	9.419E-02	6.645E-03	20.987

Sample ID : G232433011 Acquisition date : 7-JUL-2009 06:41:33

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.307E+00	1.874E-01	1.163E-01	9.278E-03	11.242
TH-232	2.015E+00	3.959E-01	2.332E-01	2.768E-02	8.640
TH-234	2.169E+00	1.974E+00	2.427E+00	4.221E-01	0.894
U-234	1.307E+00	1.874E-01	1.163E-01	9.278E-03	11.242
NP-237	9.264E-01	3.847E-01	4.051E-01	9.040E-02	2.287
U-238	2.169E+00	1.974E+00	2.427E+00	4.221E-01	0.894
AM-243	4.727E-01	8.944E-02	1.055E-01	8.098E-03	4.481
ANH-511	1.162E-01	7.629E-02	5.093E-02	2.991E-03	2.281

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.920E-01		3.240E-01	4.999E-01	3.361E-02	-0.584
NA-22	2.274E-02		5.085E-02	8.617E-02	6.405E-03	0.264
NA-24	9.977E-02		7.009E-02	Half-Life too short		
AL-26	-7.621E-03		3.108E-02	4.903E-02	2.928E-03	-0.155
TI-44	4.206E-01	+	5.792E-02	9.590E-02	7.566E-03	4.386
SC-46	-2.571E-02		4.431E-02	7.035E-02	6.612E-03	-0.366
V-48	-6.574E-03		7.258E-02	1.193E-01	1.028E-02	-0.055
CR-51	1.158E-01		4.135E-01	6.541E-01	4.110E-02	0.177
MN-52	-1.079E-02		1.812E-01	2.902E-01	2.399E-02	-0.037
MN-54	4.739E-03		4.074E-02	6.868E-02	5.865E-03	0.069
CO-56	1.573E-02		3.758E-02	6.497E-02	5.668E-03	0.242
CO-57	1.536E-02		2.734E-02	4.587E-02	2.805E-03	0.335
CO-58	-3.338E-02		4.280E-02	6.730E-02	5.515E-03	-0.496
FE-59	-1.195E-02		1.039E-01	1.692E-01	1.314E-02	-0.071
CO-60	-3.569E-03		4.188E-02	6.737E-02	5.780E-03	-0.053
ZN-65	1.584E-02		1.107E-01	1.589E-01	1.056E-02	0.100
GE-68	5.608E-01		1.456E+00	2.472E+00	1.799E-01	0.227
AS-73	-1.623E-01		9.736E-01	1.627E+00	1.201E-01	-0.100
AS-74	1.215E-02		1.006E-01	1.650E-01	9.984E-03	0.074
SE-75	2.671E-02		5.398E-02	7.781E-02	4.359E-03	0.343
BR-77	-2.905E+00		7.519E+00	1.200E+01	7.079E-01	-0.242
SR-82	-5.390E-01		4.079E-01	6.152E-01	4.716E-02	-0.876
RB-83	-2.923E-02		7.257E-02	1.157E-01	6.824E-03	-0.253
RB-84	3.489E-02		7.627E-02	1.315E-01	1.219E-02	0.265
KR-85	9.525E+00		9.002E+00	1.387E+01	8.160E-01	0.687
SR-85	4.816E-02		4.551E-02	7.013E-02	4.125E-03	0.687
RB-86	1.254E+00		8.534E-01	1.564E+00	1.140E-01	0.802
Y-88	2.131E-02		3.302E-02	6.092E-02	3.507E-03	0.350
ZR-88	-7.713E-03		3.229E-02	5.296E-02	2.861E-03	-0.146
Y-91	-1.804E+00		2.315E+01	3.764E+01	2.299E+00	-0.048
NB-94	-2.249E-02		3.777E-02	5.814E-02	3.856E-03	-0.387
NB-95	6.729E-02		5.006E-02	8.734E-02	6.560E-03	0.770
NB-95M	1.523E-01		1.548E-01	2.287E-01	1.658E-02	0.666
ZR-95	3.565E-02		7.629E-02	1.271E-01	1.065E-02	0.280
NB-97	9.347E-03		1.408E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	8.806E-01		3.078E-01	Half-Life too short		
MO-99	9.299E-02		9.348E+00	1.505E+01	2.166E+00	0.006
TC-99M	-1.197E+09		5.646E+08	Half-Life too short		
RH-101	-7.292E-03		3.758E-02	6.032E-02	3.157E-03	-0.121
RH-102	5.414E-03		2.864E-02	4.779E-02	2.752E-03	0.113
RU-103	-9.719E-03		4.087E-02	6.605E-02	8.362E-03	-0.147
RH-106	9.442E-04		3.462E-01	5.624E-01	6.679E-02	0.002
RU-106	9.442E-04		3.462E-01	5.624E-01	3.418E-02	0.002
AG-108M	-2.558E-02		3.357E-02	5.279E-02	3.226E-03	-0.485
AG-110M	1.529E-02		3.775E-02	6.295E-02	4.062E-03	0.243
IN-111	-7.206E-01		8.943E-01	1.176E+00	6.435E-02	-0.613
IN-113M	-3.628E-02		4.741E-02	7.539E-02	4.381E-03	-0.481
SN-113	-3.628E-02		4.741E-02	7.539E-02	4.381E-03	-0.481
IN-114M	6.060E-02		2.237E-01	3.216E-01	1.669E-02	0.188
CD-115	4.695E+00		7.530E+00	1.285E+01	7.608E-01	0.365
SN-117M	-4.086E-02		5.755E-02	9.122E-02	4.751E-03	-0.448
SB-122	6.370E-01		1.609E+00	2.696E+00	1.617E-01	0.236
I-123	-6.824E-01		5.873E-01	Half-Life too short		
TE-123M	-1.823E-02		3.137E-02	4.998E-02	2.642E-03	-0.365
I-124	-1.417E-01		6.200E-01	8.945E-01	5.419E-02	-0.158
SB-124	-9.024E-02		7.332E-02	9.126E-02	6.656E-03	-0.989
SB-125	5.210E-02		9.318E-02	1.594E-01	9.287E-03	0.327
TE-125M	1.085E+00		1.037E+01	1.717E+01	1.509E+00	0.063
I-126	9.740E-02		1.841E-01	3.093E-01	1.903E-02	0.315
SB-126	1.277E-01		1.402E-01	2.417E-01	1.662E-02	0.528
SB-127	1.335E-01		1.167E+00	1.902E+00	1.782E-01	0.070
XE-127	-3.588E-02		5.293E-02	7.993E-02	4.206E-03	-0.449
I-131	-5.463E-02		1.082E-01	1.754E-01	1.088E-02	-0.311
TE-132	-2.028E-01		5.826E-01	9.214E-01	1.285E-01	-0.220
BA-133	-1.916E-03		5.295E-02	7.665E-02	8.762E-03	-0.025
I-133	-5.644E-04		1.138E-03	Half-Life too short		
CS-134	5.865E-02	+	6.840E-02	8.991E-02	7.208E-03	0.652
CS-135	2.619E-01		1.989E-01	2.996E-01	2.238E-02	0.874
I-135	2.739E+07		1.064E+08	Half-Life too short		
CS-136	9.118E-02		1.096E-01	1.932E-01	1.572E-02	0.472
BA-137M	-4.016E-02		3.998E-02	5.969E-02	3.638E-03	-0.673
CS-137	-4.246E-02		4.227E-02	6.310E-02	3.860E-03	-0.673
CE-139	-2.757E-03		3.321E-02	5.390E-02	2.726E-03	-0.051
BA-140	-2.313E-02		2.578E-01	4.192E-01	1.364E-01	-0.055
LA-140	-5.727E-02		8.519E-02	1.287E-01	9.628E-03	-0.445
CE-141	9.154E-02		6.854E-02	1.170E-01	6.710E-03	0.782
CE-143	4.841E-04		7.070E-05	Half-Life too short		
CE-144	-4.541E-02		2.548E-01	3.628E-01	5.147E-02	-0.125
PM-144	8.340E-03		3.931E-02	6.441E-02	4.221E-03	0.129
PR-144	5.647E-01		2.662E+00	4.362E+00	2.857E-01	0.129
PM-146	4.687E-02		4.638E-02	8.090E-02	6.910E-03	0.579
ND-147	-3.107E-01		5.672E-01	8.919E-01	1.211E-01	-0.348
PM-149	-6.826E+01		6.343E+01	1.003E+02	1.413E+01	-0.681

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-1.294E-01		1.109E-01	1.547E-01	9.795E-03	-0.836
GD-153	-5.621E-02		9.709E-02	1.371E-01	1.035E-02	-0.410
EU-154	6.126E-02		1.420E-01	2.402E-01	2.504E-02	0.255
EU-155	2.301E-02		1.222E-01	2.032E-01	1.438E-02	0.113
TB-160	1.366E-03		1.522E-01	2.539E-01	2.346E-02	0.005
HO-166M	6.710E-03		6.610E-02	1.074E-01	7.255E-03	0.062
TM-171	6.755E-01		3.591E+01	5.259E+01	3.874E+00	0.013
LU-176	-3.586E-03		2.604E-02	4.232E-02	2.372E-03	-0.085
LU-177	3.637E+00	+	1.400E+00	1.898E+00	1.005E-01	1.917
LU-177M	2.797E-01		2.141E-01	3.386E-01	1.864E-02	0.826
HF-181	4.358E-02		4.158E-02	7.307E-02	4.226E-03	0.596
W-181	4.827E-01		4.824E-01	7.331E-01	5.372E-02	0.659
TA-182	1.531E-02		2.438E-01	4.002E-01	2.565E-02	0.038
RE-183	-3.815E-02		1.244E-01	1.975E-01	1.013E-02	-0.193
RE-184	7.795E-02		2.508E-01	4.078E-01	2.244E-02	0.191
OS-185	6.242E-03		4.740E-02	7.757E-02	4.725E-03	0.080
RE-188	1.072E-01		1.895E-01	3.155E-01	1.667E-02	0.340
W-188	-3.568E-01		8.522E+00	1.247E+01	6.972E-01	-0.029
IR-192	-3.415E-02		3.728E-02	5.974E-02	3.365E-03	-0.572
AU-195	8.163E-02		2.501E-01	4.050E-01	3.006E-02	0.202
TL-200	1.543E-04		1.029E-04	Half-Life too short		
TL-201	-7.980E-01		5.849E+00	9.336E+00	4.725E-01	-0.085
TL-202	1.887E-02		6.748E-02	1.134E-01	6.377E-03	0.166
HG-203	1.230E-02		4.538E-02	7.636E-02	4.540E-03	0.161
BI-207	-6.175E-02		6.072E-02	9.100E-02	6.821E-03	-0.679
TL-207	-1.350E-01		7.930E-01	1.143E+00	1.879E-01	-0.118
PO-209	-4.756E+00		8.346E+00	1.324E+01	1.261E+00	-0.359
BI-210	3.355E+00		4.416E+00	7.537E+00	5.953E-01	0.445
PB-210	3.355E+00		4.416E+00	7.537E+00	5.953E-01	0.445
PO-210	3.355E+00		4.414E+00	7.537E+00	5.154E-01	0.445
PB-211	-3.459E-01		1.164E+00	1.608E+00	1.002E+00	-0.215
PO-215	-1.350E-01		7.930E-01	1.143E+00	1.879E-01	-0.118
RN-219	1.700E-01		4.274E-01	7.244E-01	9.750E-02	0.235
RN-220	2.043E+00		2.672E+01	4.393E+01	2.623E+00	0.046
RA-223	-1.350E-01		7.930E-01	1.143E+00	1.879E-01	-0.118
AC-227	1.924E-01		4.239E-01	6.922E-01	9.582E-02	0.278
TH-227	1.924E-01		4.243E-01	6.922E-01	1.163E-01	0.278
TH-229	1.194E-01		5.696E-01	9.297E-01	4.843E-02	0.128
PA-231	-5.889E-01		1.625E+00	2.691E+00	3.684E-01	-0.219
TH-231	-1.350E-01		7.930E-01	1.143E+00	1.879E-01	-0.118
U-231	2.416E-01		1.057E+00	1.554E+00	1.196E-01	0.155
PA-233	4.358E-02		6.918E-02	1.194E-01	7.136E-03	0.365
PA-234	-2.636E-01		3.576E-01	5.230E-01	9.921E-02	-0.504
PA-234M	1.141E+00		7.841E+00	1.330E+01	1.464E+00	0.086
U-235	6.485E-02		2.423E-01	3.961E-01	6.421E-02	0.164
NP-236	-5.494E-02		8.836E-02	1.405E-01	7.265E-03	-0.391
NP-239	-1.454E-02		2.115E-01	3.474E-01	2.194E-02	-0.042
AM-241	3.932E-02		2.018E-01	3.005E-01	2.394E-02	0.131

Sample ID : G232433011 Acquisition date : 7-JUL-2009 06:41:33

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.086E-02		1.088E-01	1.809E-01	1.275E-02	0.115
CM-247	9.193E-03		4.011E-02	6.382E-02	3.479E-03	0.144
CF-249	2.331E-02		4.157E-02	7.122E-02	3.857E-03	0.327
CF-251	3.873E-02		1.382E-01	2.270E-01	1.160E-02	0.171

VAX/VMS Nuclide Identification Report Generated

```
*******************************************************************************
*                          GEL Laboratories LLC                               *
*                              2040 Savage Road                               *
*                            Charleston, SC 29414                             *
*******************************************************************************
*                                                                             *
*                              DETECTOR DATA                                  *
*                                                                             *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433011             *
* Acquisition date  :  7-JUL-2009 06:41:33 Detector SN#     :                 *
* Detector ID       : GAM16                Sensitivity      : 5.000           *
* Geometry          : CAN                  Energy tolerance: 1.500            *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000           *
* Elapsed real time:    0 02:00:02.15      Half life ratio : 8.000            *
*******************************************************************************
*                                                                             *
*                               SAMPLE DATA                                   *
*                                                                             *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID            *
* Sample ID         : G232433011           Analyst initials: MXR1             *
* Batch Number      : 881219               Sample Quantity : 1.2142E+02 GRAM  *
* Recovery          :    1.00000           Carrier Weight :    0.00000        *
*******************************************************************************
*                                                                             *
*                                 QC DATA                                     *
*                                                                             *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :                   *
* MSD DPM          :    0.000             MSD Isotope     :                   *
* LCS DPM          :    0.000             LCS Isotope     :                   *
* LCSD DPM         :    0.000             LCSD Isotope    :                   *
*******************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.796E+01	3.683E+00	2.722E-01	1.879E+00
CD-109	3.203E+00	1.131E+00	7.501E-01	5.772E-01
SN-126	3.155E-01	1.114E-01	8.036E-02	5.685E-02
TL-208	5.462E-01	8.337E-02	3.232E-02	4.254E-02
BI-211	4.265E+00	5.494E-01	1.732E-01	2.803E-01
BI-212	1.223E+00	4.131E-01	2.846E-01	2.108E-01
PB-212	1.977E+00	1.772E-01	4.811E-02	9.040E-02
PO-212	1.977E+00	1.772E-01	4.811E-02	9.040E-02
BI-214	1.307E+00	1.836E-01	5.871E-02	9.369E-02
PB-214	1.484E+00	2.056E-01	6.174E-02	1.049E-01
PO-214	1.484E+00	2.056E-01	6.174E-02	1.049E-01
PO-216	1.977E+00	1.772E-01	4.811E-02	9.040E-02
PO-218	1.484E+00	2.056E-01	6.174E-02	1.049E-01
RA-224	5.931E+00	1.369E+00	5.471E-01	6.983E-01
RA-226	1.307E+00	1.836E-01	5.871E-02	9.369E-02
AC-228	2.015E+00	3.880E-01	1.171E-01	1.980E-01
RA-228	2.015E+00	3.880E-01	1.171E-01	1.980E-01
TH-228	1.977E+00	1.772E-01	4.810E-02	9.040E-02
TH-230	1.307E+00	1.836E-01	5.871E-02	9.369E-02
TH-232	2.015E+00	3.880E-01	1.171E-01	1.980E-01
TH-234	2.169E+00	1.935E+00	1.260E+00	9.871E-01
U-234	1.307E+00	1.836E-01	5.871E-02	9.369E-02
NP-237	9.264E-01	3.770E-01	2.094E-01	1.924E-01
U-238	2.169E+00	1.935E+00	1.260E+00	9.871E-01
AM-243	4.727E-01	8.765E-02	5.463E-02	4.472E-02
ANH-511	1.162E-01	7.476E-02	2.577E-02	3.815E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-2.920E-01	3.175E-01	2.531E-01	1.620E-01 NOT IDENT.

NA-22	2.274E-02	4.983E-02	4.310E-02	2.543E-02	NOT IDENT.
NA-24	9.977E+04	1.374E+05	0.000E+00	7.009E+04	SHORT HLIF
AL-26	-7.621E-03	3.045E-02	2.442E-02	1.554E-02	NOT IDENT.
TI-44	4.206E-01	5.676E-02	4.964E-02	2.896E-02	FAIL ABUN
SC-46	-2.571E-02	4.343E-02	3.535E-02	2.216E-02	FAIL ABUN
V-48	-6.574E-03	7.113E-02	5.985E-02	3.629E-02	NOT IDENT.
CR-51	1.158E-01	4.052E-01	3.328E-01	2.067E-01	NOT IDENT.
MN-52	-1.079E-02	1.776E-01	1.449E-01	9.062E-02	NOT IDENT.
MN-54	4.739E-03	3.993E-02	3.454E-02	2.037E-02	NOT IDENT.
CO-56	1.573E-02	3.683E-02	3.267E-02	1.879E-02	NOT IDENT.
CO-57	1.536E-02	2.679E-02	2.362E-02	1.367E-02	NOT IDENT.
CO-58	-3.338E-02	4.194E-02	3.385E-02	2.140E-02	NOT IDENT.
FE-59	-1.195E-02	1.018E-01	8.480E-02	5.193E-02	NOT IDENT.
CO-60	-3.569E-03	4.104E-02	3.367E-02	2.094E-02	NOT IDENT.
ZN-65	1.584E-02	1.085E-01	7.963E-02	5.535E-02	NOT IDENT.
GE-68	5.608E-01	1.427E+00	1.239E+00	7.280E-01	NOT IDENT.
AS-73	-1.623E-01	9.541E-01	8.457E-01	4.868E-01	NOT IDENT.
AS-74	1.215E-02	9.855E-02	8.334E-02	5.028E-02	NOT IDENT.
SE-75	2.671E-02	5.290E-02	3.969E-02	2.699E-02	NOT IDENT.
BR-77	-2.905E+00	7.369E+00	6.069E+00	3.759E+00	FAIL ABUN
SR-82	-5.390E-01	3.998E-01	3.096E-01	2.040E-01	NOT IDENT.
RB-83	-2.923E-02	7.112E-02	5.850E-02	3.628E-02	NOT IDENT.
RB-84	3.489E-02	7.474E-02	6.607E-02	3.813E-02	NOT IDENT.
KR-85	9.525E+00	8.822E+00	7.018E+00	4.501E+00	NOT IDENT.
SR-85	4.816E-02	4.460E-02	3.548E-02	2.276E-02	NOT IDENT.
RB-86	1.254E+00	8.363E-01	7.840E-01	4.267E-01	NOT IDENT.
Y-88	2.131E-02	3.236E-02	3.033E-02	1.651E-02	NOT IDENT.
ZR-88	-7.713E-03	3.165E-02	2.688E-02	1.615E-02	NOT IDENT.
Y-91	-1.804E+00	2.268E+01	1.884E+01	1.157E+01	NOT IDENT.
NB-94	-2.249E-02	3.701E-02	2.930E-02	1.888E-02	NOT IDENT.
NB-95	6.729E-02	4.906E-02	4.396E-02	2.503E-02	NOT IDENT.
NB-95M	1.523E-01	1.517E-01	1.168E-01	7.742E-02	NOT IDENT.
ZR-95	3.565E-02	7.476E-02	6.401E-02	3.814E-02	NOT IDENT.
NB-97	9.347E+03	2.759E+04	0.000E+00	1.408E+04	SHORT HLIF
ZR-97	8.806E+05	6.032E+05	0.000E+00	3.078E+05	SHORT HLIF
MO-99	9.299E-02	9.161E+00	7.578E+00	4.674E+00	NOT IDENT.
TC-99M	-1.197E+15	1.107E+15	0.000E+00	5.646E+14	SHORT HLIF
RH-101	-7.292E-03	3.683E-02	3.087E-02	1.879E-02	NOT IDENT.
RH-102	5.414E-03	2.807E-02	2.420E-02	1.432E-02	NOT IDENT.
RU-103	-9.719E-03	4.006E-02	3.343E-02	2.044E-02	FAIL ABUN
RH-106	9.442E-04	3.392E-01	2.838E-01	1.731E-01	FAIL ABUN
RU-106	9.442E-04	3.392E-01	2.838E-01	1.731E-01	FAIL ABUN
AG-108M	-2.558E-02	3.290E-02	2.676E-02	1.678E-02	NOT IDENT.
AG-110M	1.529E-02	3.700E-02	3.175E-02	1.888E-02	NOT IDENT.
IN-111	-7.206E-01	8.765E-01	6.002E-01	4.472E-01	NOT IDENT.
IN-113M	-3.628E-02	4.646E-02	3.827E-02	2.371E-02	NOT IDENT.
SN-113	-3.628E-02	4.646E-02	3.827E-02	2.371E-02	NOT IDENT.
IN-114M	6.060E-02	2.193E-01	1.647E-01	1.119E-01	NOT IDENT.
CD-115	4.695E+00	7.380E+00	6.500E+00	3.765E+00	NOT IDENT.
SN-117M	-4.086E-02	5.640E-02	4.682E-02	2.877E-02	NOT IDENT.
SB-122	6.370E-01	1.577E+00	1.362E+00	8.045E-01	NOT IDENT.
I-123	-6.824E+05	1.151E+06	0.000E+00	5.873E+05	SHORT HLIF
TE-123M	-1.823E-02	3.074E-02	2.565E-02	1.569E-02	NOT IDENT.
I-124	-1.417E-01	6.076E-01	4.516E-01	3.100E-01	FAIL ABUN
SB-124	-9.024E-02	7.186E-02	4.548E-02	3.666E-02	FAIL ABUN
SB-125	5.210E-02	9.131E-02	8.083E-02	4.659E-02	FAIL ABUN
TE-125M	1.085E+00	1.016E+01	8.852E+00	5.185E+00	NOT IDENT.
I-126	9.740E-02	1.804E-01	1.560E-01	9.205E-02	NOT IDENT.
SB-126	1.277E-01	1.374E-01	1.218E-01	7.009E-02	FAIL ABUN
SB-127	1.335E-01	1.144E+00	9.589E-01	5.836E-01	NOT IDENT.
XE-127	-3.588E-02	5.187E-02	4.090E-02	2.647E-02	NOT IDENT.
I-131	-5.463E-02	1.060E-01	8.911E-02	5.410E-02	NOT IDENT.
TE-132	-2.028E-01	5.710E-01	4.708E-01	2.913E-01	NOT IDENT.
BA-133	-1.916E-03	5.189E-02	3.895E-02	2.648E-02	NOT IDENT.
I-133	-5.644E+02	2.231E+03	0.000E+00	1.138E+03	SHORT HLIF
CS-134	5.865E-02	6.703E-02	4.524E-02	3.420E-02	FAIL ABUN
CS-135	2.619E-01	1.949E-01	1.528E-01	9.944E-02	NOT IDENT.
I-135	2.739E+13	2.086E+14	0.000E+00	1.064E+14	SHORT HLIF
CS-136	9.118E-02	1.074E-01	9.685E-02	5.480E-02	FAIL ABUN
BA-137M	-4.016E-02	3.918E-02	3.010E-02	1.999E-02	NOT IDENT.
CS-137	-4.246E-02	4.142E-02	3.182E-02	2.113E-02	NOT IDENT.
CE-139	-2.757E-03	3.255E-02	2.765E-02	1.661E-02	NOT IDENT.
BA-140	-2.313E-02	2.526E-01	2.120E-01	1.289E-01	NOT IDENT.
LA-140	-5.727E-02	8.348E-02	6.418E-02	4.259E-02	FAIL ABUN
CE-141	9.154E-02	6.717E-02	6.013E-02	3.427E-02	NOT IDENT.
CE-143	4.841E+02	1.386E+02	0.000E+00	7.070E+01	SHORT HLIF
CE-144	-4.541E-02	2.497E-01	1.866E-01	1.274E-01	NOT IDENT.
PM-144	8.340E-03	3.853E-02	3.246E-02	1.966E-02	NOT IDENT.

PR-144	5.647E-01	2.609E+00	2.198E+00	1.331E+00	NOT IDENT.
PM-146	4.687E-02	4.546E-02	4.099E-02	2.319E-02	NOT IDENT.
ND-147	-3.107E-01	5.559E-01	4.510E-01	2.836E-01	FAIL ABUN
PM-149	-6.826E+01	6.216E+01	5.111E+01	3.172E+01	NOT IDENT.
EU-152	-1.294E-01	1.087E-01	7.863E-02	5.546E-02	FAIL ABUN
GD-153	-5.621E-02	9.515E-02	7.077E-02	4.855E-02	FAIL ABUN
EU-154	6.126E-02	1.391E-01	1.201E-01	7.099E-02	NOT IDENT.
EU-155	2.301E-02	1.198E-01	1.048E-01	6.112E-02	FAIL ABUN
TB-160	1.366E-03	1.491E-01	1.276E-01	7.609E-02	FAIL ABUN
HO-166M	6.710E-03	6.478E-02	5.412E-02	3.305E-02	FAIL ABUN
TM-171	6.755E-01	3.519E+01	2.727E+01	1.796E+01	NOT IDENT.
LU-176	-3.586E-03	2.552E-02	2.155E-02	1.302E-02	FAIL ABUN
LU-177	3.637E+00	1.372E+00	9.708E-01	6.999E-01	FAIL ABUN
LU-177M	2.797E-01	2.098E-01	1.718E-01	1.070E-01	FAIL ABUN
HF-181	4.358E-02	4.075E-02	3.699E-02	2.079E-02	NOT IDENT.
W-181	4.827E-01	4.728E-01	3.802E-01	2.412E-01	NOT IDENT.
TA-182	1.531E-02	2.389E-01	2.003E-01	1.219E-01	FAIL ABUN
RE-183	-3.815E-02	1.219E-01	1.013E-01	6.222E-02	FAIL ABUN
RE-184	7.795E-02	2.458E-01	2.081E-01	1.254E-01	NOT IDENT.
OS-185	6.242E-03	4.645E-02	3.913E-02	2.370E-02	NOT IDENT.
RE-188	1.072E-01	1.857E-01	1.620E-01	9.476E-02	NOT IDENT.
W-188	-3.568E-01	8.351E+00	6.352E+00	4.261E+00	FAIL ABUN
IR-192	-3.415E-02	3.654E-02	3.040E-02	1.864E-02	FAIL ABUN
AU-195	8.163E-02	2.451E-01	2.090E-01	1.251E-01	FAIL ABUN
TL-200	1.543E+02	2.016E+02	0.000E+00	1.029E+02	SHORT HLIF
TL-201	-7.980E-01	5.732E+00	4.789E+00	2.925E+00	NOT IDENT.
TL-202	1.887E-02	6.613E-02	5.750E-02	3.374E-02	NOT IDENT.
HG-203	1.230E-02	4.447E-02	3.892E-02	2.269E-02	NOT IDENT.
BI-207	-6.175E-02	5.951E-02	4.562E-02	3.036E-02	FAIL ABUN
TL-207	-1.350E-01	7.771E-01	5.813E-01	3.965E-01	FAIL ABUN
PO-209	-4.756E+00	8.179E+00	6.654E+00	4.173E+00	NOT IDENT.
BI-210	3.355E+00	4.328E+00	3.925E+00	2.208E+00	NOT IDENT.
PB-210	3.355E+00	4.328E+00	3.925E+00	2.208E+00	NOT IDENT.
PO-210	3.355E+00	4.326E+00	3.925E+00	2.207E+00	NOT IDENT.
PB-211	-3.459E-01	1.141E+00	8.160E-01	5.820E-01	NOT IDENT.
PO-215	-1.350E-01	7.771E-01	5.813E-01	3.965E-01	FAIL ABUN
RN-219	1.700E-01	4.188E-01	3.676E-01	2.137E-01	FAIL ABUN
RN-220	2.043E+00	2.619E+01	2.221E+01	1.336E+01	NOT IDENT.
RA-223	-1.350E-01	7.771E-01	5.813E-01	3.965E-01	FAIL ABUN
AC-227	1.924E-01	4.155E-01	3.532E-01	2.120E-01	FAIL ABUN
TH-227	1.924E-01	4.158E-01	3.532E-01	2.122E-01	FAIL ABUN
TH-229	1.194E-01	5.582E-01	4.760E-01	2.848E-01	FAIL ABUN
PA-231	-5.889E-01	1.593E+00	1.371E+00	8.125E-01	FAIL ABUN
TH-231	-1.350E-01	7.771E-01	5.813E-01	3.965E-01	FAIL ABUN
U-231	2.416E-01	1.036E+00	8.024E-01	5.283E-01	FAIL ABUN
PA-233	4.358E-02	6.780E-02	6.079E-02	3.459E-02	FAIL ABUN
PA-234	-2.636E-01	3.505E-01	2.626E-01	1.788E-01	FAIL ABUN
PA-234M	1.141E+00	7.684E+00	6.671E+00	3.920E+00	NOT IDENT.
U-235	6.485E-02	2.375E-01	2.036E-01	1.212E-01	FAIL ABUN
NP-236	-5.494E-02	8.660E-02	7.209E-02	4.418E-02	NOT IDENT.
NP-239	-1.454E-02	2.073E-01	1.790E-01	1.057E-01	FAIL ABUN
AM-241	3.932E-02	1.977E-01	1.561E-01	1.009E-01	NOT IDENT.
CM-243	2.086E-02	1.066E-01	9.332E-02	5.438E-02	FAIL ABUN
CM-247	9.193E-03	3.931E-02	3.238E-02	2.006E-02	NOT IDENT.
CF-249	2.331E-02	4.074E-02	3.616E-02	2.079E-02	NOT IDENT.
CF-251	3.873E-02	1.354E-01	1.163E-01	6.910E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	358.6613
46.50	358.6613
46.50	358.6613
48.70	376.4120
49.72	417.0718
51.35	384.5399
52.39	414.4371
52.97	403.8799
53.15	408.5732
53.44	395.9699
54.07	369.8407
56.28	418.0498
56.28	418.0515
57.37	0.0000
57.53	446.1255
57.53	446.1265
57.60	460.9077
57.98	460.6628
57.98	460.6628
59.32	438.7494
59.32	438.7494
59.40	438.8046
59.54	444.8127
59.72	424.2447
60.01	424.4382
61.10	426.6431
61.14	453.3363
61.30	453.4493
63.00	483.7948
63.29	486.7950
63.29	486.7950
63.58	484.2221
64.28	492.7362
65.12	496.3395
65.20	496.3984
65.20	496.3984
66.05	500.0137
66.72	490.0481
66.83	490.1302
66.91	494.6716
67.20	506.8427
67.20	506.8427
67.75	522.2134
67.85	522.2901
68.90	553.0654
68.90	553.0654
69.30	548.6361
69.67	537.1770
70.82	541.0635
70.82	541.0635
70.83	541.0723
72.80	530.5223
72.87	530.5739
72.87	530.5739
74.67	592.3449
74.81	592.4598
74.81	592.4598
74.81	592.4598
74.81	592.4598
74.81	592.4598
74.81	592.4598
74.97	592.5890
75.28	592.8426
75.70	593.1823
77.11	594.3212
77.11	594.3212
77.11	594.3212

77.11	594.3212
77.11	594.3212
77.11	594.3212
78.38	595.3381
79.62	596.3214
79.80	596.4626
79.80	596.4626
80.11	596.7090
80.18	596.7640
80.30	596.8574
80.30	596.8574
80.57	597.0703
81.00	597.4077
81.07	597.4626
81.07	597.4626
81.07	597.4626
81.07	597.4626
82.60	427.6118
83.37	577.0838
83.78	577.3902
83.78	577.3902
83.78	577.3902
83.78	577.3902
84.21	638.9249
84.40	470.6999
84.90	482.4879
85.43	482.8129
86.29	483.3397
86.50	483.4685
86.54	483.4915
86.59	483.5223
86.72	483.6031
86.79	483.6434
86.94	575.8759
87.30	576.1368
87.30	576.1368
87.30	576.1368
87.30	576.1368
87.30	576.1368
87.30	576.1368
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87.88	538.1186
88.03	538.2190
88.36	653.8188
88.47	653.9096
89.95	655.1080
91.11	427.5850
92.29	428.1987
92.38	428.2460
92.38	428.2460
93.35	374.5742
94.00	362.4743
94.67	375.1643
94.67	375.1665
94.90	384.5741
94.90	384.5741
94.90	384.5741
94.90	384.5741
95.87	423.8298
95.87	423.8298
96.73	428.9236
97.43	423.0543
98.44	391.8897
98.44	391.8913
98.88	386.1558
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99.55	399.5429
99.86	385.0626
100.00	385.1244
100.10	385.1711
103.18	445.2402
103.76	407.3434
105.00	397.1254
105.31	417.8617
108.00	418.1259
109.28	419.6980
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111.00	378.0413

111.76	414.9019
112.95	439.1712
115.19	362.8837
116.30	389.1169
117.00	386.4224
117.00	386.4224
117.66	378.7371
121.11	344.1761
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121.78	340.4185
122.06	340.5161
122.32	353.5908
122.32	353.5908
122.32	353.5908
122.32	353.5908
123.07	364.4282
127.23	366.1826
129.76	363.8788
131.20	374.0660
133.02	384.4171
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135.34	370.3030
136.00	372.5596
136.25	372.6494
136.48	372.7308
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140.51	0.0000
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142.65	387.1175
143.76	392.6135
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144.24	376.4632
144.24	376.4632
144.24	376.4632
145.22	368.6319
145.44	359.5142
147.16	427.5928
152.43	375.1448
152.70	372.1498
153.22	368.2070
154.21	373.6736
154.21	373.6736
154.21	373.6736
154.21	373.6736
155.03	366.7339
156.02	354.6791
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159.00	377.3057
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161.27	374.9365
162.32	375.2707
162.64	369.1512
163.35	334.0966
163.89	318.6795
165.85	365.9971
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171.28	298.7167
171.86	323.9400
172.10	324.0038
176.55	322.0324
176.60	322.0441
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184.41	297.2406
185.71	346.5706
186.00	345.5938
190.27	325.7438
192.34	372.6251
193.63	332.7464
197.04	344.2644
198.01	361.5815
198.60	355.3369
200.40	309.8707
201.83	349.7751
202.84	349.8842
205.31	319.1449
208.36	328.4538
208.81	332.0015

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209.75	309.8474
210.97	329.0717
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216.55	311.3569
218.09	330.0940
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223.80	297.7288
226.40	308.0587
227.00	303.8301
227.08	306.0253
227.20	306.0510
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228.18	300.8053
231.56	0.0000
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236.00	310.2880
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238.63	256.8319
238.63	256.8319
239.00	256.8944
240.98	257.2318
241.98	257.4014
241.98	257.4014
241.98	257.4014
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245.39	236.3680
247.94	247.3601
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249.79	203.4315
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252.85	223.7717
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256.20	230.9087
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260.90	258.3167
262.80	236.3262
264.65	208.9204
268.24	216.5416
268.79	214.8252
269.46	236.4044
269.46	236.4044
269.46	236.4044
269.46	236.4044
271.23	229.4906
273.65	303.4449
276.40	217.3200
277.35	229.4409
277.60	231.7249
277.60	231.7249
278.00	238.5323
278.60	237.7160
279.20	236.0015
279.53	237.8481
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281.68	234.5459
283.67	227.5967
284.30	234.9109
285.00	229.5829
285.90	233.3243
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286.10	209.8337
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290.80	210.1091
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293.26	0.0000
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295.21	206.1001
295.21	206.1001
295.96	172.8369

296.50	172.8903
297.23	172.9622
298.57	173.0944
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299.80	192.9701
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300.09	177.8042
300.09	177.8042
300.10	177.8042
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304.40	166.0525
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306.84	189.1636
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311.98	188.1761
316.51	221.7747
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319.02	180.6133
319.41	181.5733
320.08	183.2542
323.87	194.0270
323.87	194.0270
323.87	194.0270
323.87	194.0270
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334.20	139.3597
334.30	139.3671
338.28	169.1438
338.28	169.1438
338.28	169.1438
338.28	169.1438
338.32	169.1460
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338.32	169.1460
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340.57	166.2384
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351.92	171.5938
351.92	171.5938
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364.48	167.0243
366.43	151.1309
367.43	139.8647
367.94	0.0000
369.80	158.9520
374.96	136.5908
383.85	153.3784
387.95	141.2721
388.63	141.3172
391.69	172.1228
391.69	172.1228
392.90	158.8267
398.62	164.0531
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401.10	156.5612
401.81	139.3182
402.60	139.3696
404.84	160.3617
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411.60	156.0383
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417.63	0.0000

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427.89	116.6807
432.53	137.3838
433.93	137.4681
439.47	126.0773
439.56	126.0821
439.89	124.1459
443.98	118.4920
444.90	132.2545
445.03	132.2628
445.03	132.2628
445.03	132.2628
445.03	132.2628
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463.38	133.3092
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477.96	109.2870
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484.57	133.4946
487.03	116.6772
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497.08	112.1477
507.63	0.0000
510.53	0.0000
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511.00	122.8407
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511.85	122.8831
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513.99	127.6903
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563.90	108.9088
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569.32	113.2441
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569.67	106.0503
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591.81	100.6754
592.07	95.4949
593.00	115.2546
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602.71	110.1431
603.60	95.5383
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604.70	106.0004
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609.31	102.6906
609.31	102.6906

609.31	102.6906
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618.01	89.0363
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621.84	98.5921
631.29	87.3385
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634.78	108.5121
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636.97	111.7555
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661.65	117.9944
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666.33	91.5598
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677.61	98.3070
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692.80	96.6401
695.00	106.3791
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696.49	103.2047
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697.49	87.1066
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722.78	70.4542
722.89	70.4574
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724.18	74.1006
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744.21	92.7384
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752.31	99.5268
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756.15	76.6479
756.87	82.1411
763.93	115.2385
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766.84	116.4370
768.36	121.9835
768.36	121.9835
768.36	121.9835
768.36	121.9835
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810.76	92.7104
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818.51	76.1893
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880.51	73.7185
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889.25	85.2576
896.60	82.5767
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911.07	71.8652
911.07	71.8652
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925.24	69.8068
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934.06	67.0905
934.06	67.0905
934.06	67.0905
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949.00	62.5363
962.29	62.8832
964.01	64.5652
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968.20	75.4054
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969.11	75.4229
969.11	75.4229
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983.50	65.9884
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1050.47	71.0039
1063.62	84.0835
1076.63	50.6016
1077.35	68.4722
1085.78	51.7017
1099.22	74.7986
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1112.84	72.0293
1115.52	66.9224
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1120.29	61.8424
1120.29	61.8424
1120.29	61.8424
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1147.95	0.0000
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1175.09	72.0083
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1230.97	118.0229
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1238.11	53.4452
1238.11	53.4452
1238.11	53.4452
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1274.54	56.9537
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1298.22	0.0000
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1325.50	33.4753
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1362.66	0.0000
1365.15	34.7886
1368.21	16.8776
1368.53	0.0000
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1377.67	14.4927
1377.67	14.4927
1377.67	14.4927
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1395.20	33.9297
1407.95	30.8219
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1457.56	0.0000
1460.81	24.6864
1489.15	19.4194
1509.49	17.3242
1596.49	31.0952
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1678.03	0.0000
1691.02	22.0173
1691.02	22.0173

1706.46	0.0000
1750.46	0.0000
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1764.49	5.0854
1764.49	5.0854
1764.49	5.0854
1770.23	8.4833
1771.40	38.7877
1791.20	0.0000
1808.65	15.6060
1836.01	9.7949

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433011

Total Uranium Activity	6.4838E+00	ug/g
Total Uranium Counting Unc.	5.7566E+00	ug/g
Total Uranium Tpu	2.9371E-06	ug/g
Total Uranium Mda	3.7484E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G232433011       *
*   ANALYST       : MXR1                      DETECTOR   : GAM16            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:41:33.29    SAMPLE ALQT:  121.420 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.118E+01
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.556E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 4.336E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 2.111E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:04:16.29

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433012.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:03:41.
Sample ID         : G232433012           Sample quantity  : 7.59000E+01 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 03:00:00.00         Elapsed real time: 0 03:00:11.78  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.85*	507	488	0.87	94.91	91	9	4.69E-02	9.6	
2	0	63.51*	343	408	0.91	128.20	125	7	3.18E-02	11.8	
3	6	75.11*	449	347	0.90	151.38	145	15	4.16E-02	8.2	1.61E+00
4	6	77.34*	687	328	0.88	155.84	145	15	6.36E-02	5.8	
5	3	84.37*	82	459	1.24	169.90	165	29	7.64E-03	43.9	3.12E+00
6	3	87.42*	224	365	1.06	175.99	165	29	2.07E-02	14.9	
7	3	90.14*	171	337	0.94	181.43	165	29	1.58E-02	19.1	
8	3	92.86*	568	301	1.08	186.86	165	29	5.26E-02	7.1	
9	0	144.13*	61	292	1.21	289.33	285	9	5.69E-03	54.7	
10	0	186.12*	230	230	1.36	373.24	369	9	2.13E-02	15.0	
11	0	209.23	56	256	1.01	419.43	415	9	5.19E-03	53.1	
12	5	238.80*	827	171	0.95	478.53	473	17	7.66E-02	4.5	9.80E-01
13	5	241.84*	193	261	1.85	484.61	473	17	1.79E-02	22.0	
14	0	270.45	67	238	1.11	541.79	537	11	6.24E-03	46.1	
15	0	278.16	34	156	0.99	557.19	553	8	3.12E-03	66.6	
16	0	295.31*	243	183	1.22	591.46	587	10	2.25E-02	12.5	
17	0	300.44	64	157	1.12	601.73	597	9	5.95E-03	37.4	
18	0	328.34	72	98	1.76	657.49	653	9	6.65E-03	27.8	
19	0	338.42*	145	157	1.32	677.64	673	9	1.34E-02	18.2	
20	0	351.97*	360	201	1.23	704.71	698	13	3.33E-02	10.1	
21	0	510.71*	107	107	1.99	1022.02	1015	14	9.92E-03	28.1	
22	0	583.04*	206	66	1.40	1166.59	1161	11	1.90E-02	11.4	
23	0	609.17*	328	74	1.39	1218.81	1212	14	3.04E-02	8.2	
24	0	661.55	1290	68	1.36	1323.53	1316	14	1.19E-01	3.1	
25	0	726.67*	51	46	1.84	1453.70	1446	12	4.71E-03	32.4	
26	0	768.37	32	62	1.24	1537.07	1531	11	2.97E-03	51.1	
27	0	911.16*	141	65	1.47	1822.52	1816	12	1.30E-02	14.8	
28	0	969.84*	72	70	1.82	1939.84	1931	15	6.63E-03	29.9	
29	0	1119.97	81	36	1.35	2240.01	2236	11	7.46E-03	18.2	
30	0	1376.94	27	9	1.60	2753.83	2747	13	2.52E-03	30.3	
31	0	1460.12*	683	20	2.06	2920.16	2910	19	6.33E-02	4.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:04:19

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433012.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:03:41
Sample ID : G232433012 Sample quantity : 75.900 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA17 Detector geometry: CAN
Elapsed live time: 0 03:00:00.00 Elapsed real time: 0 03:00:11.78 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.644E+01	2.745E+00	7.687E-01	4.726E-02	34.397
CD-109	+	88.03	*	3.079E+00	9.504E-01	1.348E+00	1.086E-01	2.284
SN-126	+	64.28		1.771E+00	4.999E-01	5.438E-01	8.343E-02	3.257
	+	86.94		1.261E+00	6.415E-01	5.507E-01	2.272E-01	2.289
	+	87.57	*	3.033E-01	9.360E-02	1.326E-01	1.070E-02	2.286
BA-137M	+	661.65	*	2.926E+00	2.842E-01	8.134E-02	6.125E-03	35.971
CS-137	+	661.65	*	3.093E+00	3.009E-01	8.598E-02	6.491E-03	35.971
CE-141	+	145.44	*	9.890E-02	1.087E-01	1.334E-01	1.247E-02	0.742
HG-203		70.83		2.274E-02	9.232E-01	1.358E+00	1.849E-01	0.017
		72.87		1.199E+00	5.967E-01	9.127E-01	1.201E-01	1.314
		82.60		5.074E-01	1.368E+00	1.896E+00	2.558E-01	0.268
	+	279.20	*	4.838E-02	6.453E-02	9.110E-02	7.028E-03	0.531
TL-208	+	277.35		4.476E-01	5.982E-01	8.505E-01	9.817E-02	0.526
	+	510.84		7.887E-01	4.512E-01	3.700E-01	3.970E-02	2.132
	+	583.14	*	4.413E-01	1.065E-01	8.390E-02	6.652E-03	5.260
		860.37		1.008E-01	4.532E-01	7.710E-01	6.291E-02	0.131
BI-210	+	46.50	*	6.299E+00	1.310E+00	1.194E+00	9.557E-02	5.274
PB-210	+	46.50	*	6.299E+00	1.310E+00	1.194E+00	9.557E-02	5.274
PO-210	+	46.50	*	6.299E+00	1.286E+00	1.194E+00	8.311E-02	5.274
BI-211		72.87		6.148E+00	2.996E+00	4.678E+00	4.000E-01	1.314
	+	351.07	*	3.100E+00	6.627E-01	4.895E-01	3.517E-02	6.332
PB-212	+	74.81		2.083E+00	4.306E-01	4.993E-01	6.301E-02	4.171
	+	77.11		1.896E+00	2.707E-01	2.977E-01	2.500E-02	6.368
	+	87.30		1.403E+00	4.551E-01	6.131E-01	7.879E-02	2.288
	+	238.63	*	1.481E+00	1.864E-01	1.247E-01	1.094E-02	11.871
	+	300.09		1.820E+00	1.371E+00	1.717E+00	1.606E-01	1.060
PO-212	+	74.81		2.083E+00	4.306E-01	4.993E-01	6.301E-02	4.171
	+	77.11		1.896E+00	2.707E-01	2.977E-01	2.500E-02	6.368
	+	87.30		1.403E+00	4.551E-01	6.131E-01	7.879E-02	2.288
		115.19		1.144E-01	4.349E+00	7.174E+00	7.465E-01	0.016
	+	238.63	*	1.481E+00	1.864E-01	1.247E-01	1.094E-02	11.871
	+	300.09		1.820E+00	1.371E+00	1.717E+00	1.606E-01	1.060
PB-214	+	74.81		3.589E+00	7.133E-01	8.604E-01	9.687E-02	4.171
	+	77.11		3.250E+00	5.260E-01	5.103E-01	5.786E-02	6.368

Sample ID : G232433012 Acquisition date : 7-JUL-2009 07:03:41

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.403E+00	7.644E-01	1.050E+00	1.172E-01	2.288
	+	241.98		2.083E+00	9.357E-01	7.516E-01	7.064E-02	2.771
	+	295.21		1.206E+00	3.237E-01	3.056E-01	2.942E-02	3.945
	+	351.92	*	1.078E+00	2.373E-01	1.707E-01	1.514E-02	6.317
PO-214	+	74.81		3.589E+00	7.133E-01	8.604E-01	9.687E-02	4.171
	+	77.11		3.250E+00	5.260E-01	5.103E-01	5.786E-02	6.368
	+	87.30		2.403E+00	7.644E-01	1.050E+00	1.172E-01	2.288
	+	241.98		2.083E+00	9.357E-01	7.516E-01	7.064E-02	2.771
	+	295.21		1.206E+00	3.237E-01	3.056E-01	2.942E-02	3.945
	+	351.92	*	1.078E+00	2.373E-01	1.707E-01	1.514E-02	6.317
PO-216	+	74.81		2.083E+00	4.306E-01	4.993E-01	6.301E-02	4.171
	+	77.11		1.896E+00	2.707E-01	2.977E-01	2.500E-02	6.368
	+	87.30		1.403E+00	4.551E-01	6.131E-01	7.879E-02	2.288
	+	238.63	*	1.481E+00	1.864E-01	1.247E-01	1.094E-02	11.871
	+	300.09		1.820E+00	1.371E+00	1.717E+00	1.606E-01	1.060
PO-218	+	74.81		3.589E+00	7.133E-01	8.604E-01	9.687E-02	4.171
	+	77.11		3.250E+00	5.260E-01	5.103E-01	5.786E-02	6.368
	+	87.30		2.403E+00	7.644E-01	1.050E+00	1.172E-01	2.288
	+	241.98		2.083E+00	9.357E-01	7.516E-01	7.064E-02	2.771
	+	295.21		1.206E+00	3.237E-01	3.056E-01	2.942E-02	3.945
	+	351.92	*	1.078E+00	2.373E-01	1.707E-01	1.514E-02	6.317
RA-224	+	240.98	*	3.949E+00	1.760E+00	1.420E+00	1.071E-01	2.781
AC-228	+	338.32		1.367E+00	7.494E-01	5.740E-01	2.349E-01	2.382
	+	911.07	*	1.391E+00	4.352E-01	3.669E-01	3.754E-02	3.790
	+	969.11		1.249E+00	7.999E-01	6.174E-01	1.407E-01	2.024
RA-228	+	338.32		1.367E+00	7.494E-01	5.740E-01	2.349E-01	2.382
	+	911.07	*	1.391E+00	4.352E-01	3.669E-01	3.754E-02	3.790
	+	969.11		1.249E+00	7.999E-01	6.174E-01	1.407E-01	2.024
TH-228	+	84.40		3.406E+00	3.022E+00	4.031E+00	5.177E-01	0.845
	+	238.60	*	1.481E+00	1.864E-01	1.247E-01	1.094E-02	11.873
	+	300.10		1.820E+00	1.734E+00	1.718E+00	1.015E+00	1.060
TH-232	+	338.32		1.367E+00	5.072E-01	5.740E-01	3.920E-02	2.382
	+	911.07	*	1.391E+00	4.352E-01	3.669E-01	3.754E-02	3.790
	+	969.11		1.249E+00	7.999E-01	6.174E-01	1.407E-01	2.024
TH-234	+	63.29	*	4.474E+00	1.335E+00	1.441E+00	2.615E-01	3.104
	+	92.38		5.310E+00	1.218E+00	9.165E-01	1.648E-01	5.794
U-235	+	89.95		3.189E+00	1.564E+00	1.827E+00	5.616E-01	1.746
	+	93.35		6.384E+00	2.004E+00	1.104E+00	3.090E-01	5.781
		105.00		-5.249E-01	1.268E+00	2.045E+00	6.156E-01	-0.257
	+	143.76	*	3.392E-01	3.763E-01	4.496E-01	8.038E-02	0.754
		163.35		2.149E-01	6.537E-01	1.077E+00	2.007E-01	0.199
	+	185.71		2.843E-01	8.793E-02	8.872E-02	6.572E-03	3.204
		205.31		-6.655E-01	8.692E-01	1.122E+00	2.086E-01	-0.593
NP-237	+	86.50	*	8.905E-01	3.306E-01	3.887E-01	8.615E-02	2.291
		95.87		-6.015E-02	1.272E+00	1.847E+00	4.555E-01	-0.033
U-238	+	63.29	*	4.474E+00	1.335E+00	1.441E+00	2.615E-01	3.104
	+	92.38		5.310E+00	8.787E-01	9.165E-01	7.693E-02	5.794
AM-243	+	74.67	*	3.377E-01	6.228E-02	8.094E-02	6.867E-03	4.172
	+	86.72		3.339E+01	1.031E+01	1.458E+01	1.180E+00	2.290

Sample ID : G232433012 Acquisition date : 7-JUL-2009 07:03:41

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		-2.081E+00	4.744E+00	7.664E+00	8.159E-01	-0.272
		142.18		3.083E+01	2.688E+01	4.073E+01	3.862E+00	0.757
ANH-511	+	511.00	*	1.704E-01	9.641E-02	7.995E-02	5.403E-03	2.131

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	5.450E-01	5.756E-01	9.975E-01	7.355E-02	0.546
NA-22		1274.54	*	-2.776E-02	6.141E-02	9.423E-02	5.340E-03	-0.295
NA-24		1368.53	*	-1.057E-01	6.141E-02	Half-Life too short		
AL-26		1129.67		3.788E-01	2.788E+00	4.533E+00	2.678E-01	0.084
		1808.65	*	2.923E-02	4.611E-02	8.586E-02	4.909E-03	0.340
TI-44		67.85		-2.558E-02	4.177E-02	5.553E-02	4.856E-03	-0.461
	+	78.38	*	3.498E-01	4.996E-02	8.252E-02	6.894E-03	4.239
SC-46		889.25	*	-1.194E-02	5.343E-02	8.688E-02	6.368E-03	-0.137
	+	1120.51		2.970E-01	1.096E-01	1.880E-01	1.125E-02	1.580
V-48		944.10		-2.134E-01	1.228E+00	2.002E+00	1.425E-01	-0.107
		983.50	*	3.828E-02	1.095E-01	1.872E-01	1.296E-02	0.204
		1312.09		-7.522E-02	1.089E-01	1.597E-01	9.090E-03	-0.471
CR-51		320.08	*	7.111E-02	5.380E-01	9.084E-01	6.928E-02	0.078
MN-52		744.21		-7.039E-02	3.152E-01	4.956E-01	3.776E-02	-0.142
		848.13		2.684E+00	8.950E+00	1.535E+01	1.146E+00	0.175
		935.52		2.650E-01	3.413E-01	6.057E-01	4.333E-02	0.437
		1246.25		-1.717E+00	9.774E+00	1.567E+01	8.807E-01	-0.110
		1333.61		3.905E-01	6.670E+00	1.092E+01	6.238E-01	0.036
		1434.06	*	4.586E-02	3.151E-01	5.208E-01	3.010E-02	0.088
MN-54		834.83	*	-2.761E-02	5.705E-02	9.133E-02	6.851E-03	-0.302
CO-56		846.75	*	2.690E-02	6.052E-02	1.050E-01	7.847E-03	0.256
		977.42		4.474E-01	4.832E+00	7.507E+00	5.221E-01	0.060
		1037.82		6.044E-02	4.162E-01	6.987E-01	5.024E-02	0.087
		1175.09		1.136E+00	3.439E+00	5.818E+00	3.213E-01	0.195
		1238.25		5.973E-02	1.382E-01	2.342E-01	1.402E-02	0.255
		1360.21		4.414E-01	1.345E+00	2.294E+00	1.315E-01	0.192
		1771.40		-6.079E-01	4.741E-01	6.190E-01	3.556E-02	-0.982
CO-57		122.06	*	1.138E-02	3.210E-02	5.352E-02	5.938E-03	0.213
		136.48		-1.133E-01	2.737E-01	4.360E-01	4.586E-02	-0.260
CO-58		810.76	*	-8.836E-04	5.566E-02	9.310E-02	7.055E-03	-0.009
FE-59	+	142.65		4.289E+00	4.712E+00	6.232E+00	5.884E-01	0.688
		192.34		-2.450E-01	1.322E+00	2.046E+00	2.598E-01	-0.120
		1099.22	*	-1.142E-03	1.550E-01	2.548E-01	1.810E-02	-0.004
		1291.56		-3.257E-02	1.877E-01	2.993E-01	2.191E-02	-0.109
CO-60		1173.22		1.343E-02	6.938E-02	1.159E-01	6.396E-03	0.116
		1332.49	*	-9.829E-03	6.027E-02	9.580E-02	5.471E-03	-0.103
ZN-65		1115.52	*	1.287E-01	1.693E-01	2.665E-01	1.610E-02	0.483
GE-68		1077.35	*	1.033E+00	1.950E+00	3.380E+00	2.138E-01	0.306
AS-73		53.44	*	4.297E-01	3.203E-01	5.573E-01	4.522E-02	0.771
AS-74		595.88	*	-3.552E-02	1.451E-01	2.318E-01	1.683E-02	-0.153
		634.78		-3.844E-01	5.677E-01	8.679E-01	6.452E-02	-0.443

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05		-4.294E-01	3.745E+00	5.439E+00	5.766E-01	-0.079
		96.73		-8.103E-01	1.038E+00	1.443E+00	1.978E-01	-0.562
		121.11		1.560E-01	1.709E-01	2.895E-01	3.802E-02	0.539
		136.00		-2.383E-02	5.131E-02	8.157E-02	8.193E-03	-0.292
		198.60		-5.845E-01	2.588E+00	4.144E+00	3.537E-01	-0.141
		264.65	*	5.223E-03	6.816E-02	9.556E-02	7.209E-03	0.055
	+	279.53		1.309E-01	1.745E-01	2.726E-01	2.127E-02	0.480
		303.91		-3.920E-01	3.350E+00	4.862E+00	5.097E-01	-0.081
		400.65		1.800E-01	4.246E-01	7.208E-01	6.590E-02	0.250
BR-77	+	87.88		4.560E+02	1.407E+02	2.485E+02	2.002E+01	1.835
		200.40		1.847E+02	1.570E+02	2.659E+02	1.986E+01	0.695
	+	239.00		1.626E+02	1.913E+01	3.146E+01	2.373E+00	5.170
		249.79		3.309E+01	6.503E+01	1.070E+02	8.058E+00	0.309
		281.68		3.887E+01	9.873E+01	1.489E+02	1.105E+01	0.261
		297.23		2.441E+02	9.122E+01	1.157E+02	8.453E+00	2.110
		303.76		-3.008E+01	1.963E+02	2.842E+02	2.060E+01	-0.106
		439.47		2.954E+01	1.645E+02	2.749E+02	1.706E+01	0.107
		484.57		3.439E+00	2.569E+02	4.231E+02	2.779E+01	0.008
		520.65	*	-3.172E+00	1.114E+01	1.788E+01	1.220E+00	-0.177
		574.64		1.116E+01	2.255E+02	3.693E+02	2.641E+01	0.030
		578.91		5.992E+01	9.991E+01	1.504E+02	1.079E+01	0.398
		585.48		8.880E+02	2.546E+02	4.477E+02	3.227E+01	1.983
		755.35		5.898E+01	1.655E+02	2.755E+02	2.098E+01	0.214
		817.79		3.906E+01	1.351E+02	2.322E+02	1.751E+01	0.168
SR-82		698.33		-1.860E+01	5.099E+01	7.957E+01	6.042E+00	-0.234
		776.49	*	-2.963E-01	5.491E-01	8.773E-01	6.669E-02	-0.338
		1395.20		-8.610E+00	1.708E+01	2.560E+01	1.474E+00	-0.336
RB-83		520.41	*	9.794E-03	1.054E-01	1.740E-01	1.187E-02	0.056
		529.64		8.892E-02	1.668E-01	2.837E-01	1.953E-02	0.313
		552.65		1.390E-01	3.153E-01	5.323E-01	3.740E-02	0.261
RB-84		881.50	*	4.287E-02	1.023E-01	1.773E-01	1.305E-02	0.242
KR-85		513.99	*	2.237E+01	1.306E+01	2.125E+01	1.441E+00	1.053
SR-85		513.99	*	1.132E-01	6.606E-02	1.075E-01	7.287E-03	1.053
RB-86		1076.63	*	-3.297E-01	1.229E+00	1.971E+00	1.248E-01	-0.167
Y-88		898.02		-1.750E-02	6.507E-02	1.056E-01	7.758E-03	-0.166
		1836.01	*	1.675E-02	3.653E-02	6.811E-02	3.889E-03	0.246
ZR-88		392.90	*	-6.294E-02	5.051E-02	7.501E-02	4.341E-03	-0.839
Y-91		1204.90	*	1.636E+01	2.869E+01	4.946E+01	2.753E+00	0.331
NB-94		702.63	*	-1.855E-02	5.632E-02	8.834E-02	6.711E-03	-0.210
		871.10		3.675E-02	5.363E-02	9.487E-02	7.016E-03	0.387
NB-95		765.79	*	-2.058E-02	8.876E-02	1.199E-01	9.127E-03	-0.172
NB-95M		235.69	*	3.724E-02	1.935E-01	2.747E-01	2.456E-02	0.136
ZR-95		724.18		3.557E-02	1.685E-01	2.400E-01	2.027E-02	0.148
		756.15	*	3.077E-02	1.068E-01	1.764E-01	1.516E-02	0.174
NB-97		657.90	*	8.755E-02	1.068E-01	Half-Life too short		
		1024.50		-2.646E+00	1.068E-01	Half-Life too short		
ZR-97		254.15		2.523E-01	1.068E-01	Half-Life too short		
		355.39		6.257E-01	1.068E-01	Half-Life too short		
		507.63	*	2.058E+00	1.068E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		602.52		-3.305E-02	1.068E-01	Half-Life too short		
		1021.30		1.640E+00	1.068E-01	Half-Life too short		
		1147.95		-2.304E+00	1.068E-01	Half-Life too short		
		1362.66		-1.359E-01	1.068E-01	Half-Life too short		
		1750.46		-4.572E-01	1.068E-01	Half-Life too short		
MO-99		140.51		-1.536E+01	2.922E+01	3.962E+01	1.110E+01	-0.388
		181.06		-1.516E+01	1.930E+01	2.578E+01	4.573E+00	-0.588
		366.43		5.512E+01	9.513E+01	1.635E+02	1.036E+01	0.337
		739.58	*	-6.529E+00	1.349E+01	2.064E+01	3.022E+00	-0.316
		778.00		-1.986E+00	3.627E+01	6.061E+01	4.607E+00	-0.033
TC-99M		140.51	*	-8.468E+08	3.627E+01	Half-Life too short		
RH-101		127.23		3.162E-02	4.103E-02	6.922E-02	7.402E-03	0.457
		198.01	*	1.234E-02	4.650E-02	7.608E-02	5.676E-03	0.162
		325.23		8.519E-02	3.497E-01	5.197E-01	3.644E-02	0.164
RH-102		418.52		2.644E-01	4.982E-01	8.491E-01	5.114E-02	0.311
		475.06	*	-1.059E-04	5.459E-02	8.993E-02	5.840E-03	-0.001
		631.29		4.316E-02	8.308E-02	1.409E-01	1.045E-02	0.306
		697.49		-6.305E-02	1.248E-01	1.926E-01	1.462E-02	-0.327
		766.84		1.714E-01	2.119E-01	3.196E-01	2.432E-02	0.536
		1046.59		6.326E-02	1.575E-01	2.716E-01	1.777E-02	0.233
		1112.84		-9.090E-02	4.166E-01	6.186E-01	3.742E-02	-0.147
RU-103		497.08	*	-2.047E-02	6.244E-02	1.001E-01	1.308E-02	-0.204
	+	610.33		1.409E+01	3.235E+00	3.969E+00	6.372E-01	3.550
RH-106	+	511.85		8.489E-01	4.804E-01	6.837E-01	4.625E-02	1.242
		621.84	*	-2.299E-01	4.826E-01	7.492E-01	9.435E-02	-0.307
		1050.47		-2.472E+00	3.232E+00	4.845E+00	3.157E-01	-0.510
RU-106	+	511.85		8.489E-01	4.804E-01	6.837E-01	4.625E-02	1.242
		621.84	*	-2.299E-01	4.820E-01	7.492E-01	5.529E-02	-0.307
		1050.47		-2.472E+00	3.232E+00	4.845E+00	3.157E-01	-0.510
AG-108M		433.93	*	4.142E-03	5.498E-02	9.138E-02	6.057E-03	0.045
		614.37		-1.621E-02	6.610E-02	8.996E-02	6.965E-03	-0.180
		722.95		-1.886E-02	7.357E-02	9.858E-02	7.880E-03	-0.191
AG-110M		657.75	*	7.418E-02	6.486E-02	1.022E-01	7.979E-03	0.726
		677.61		4.203E-02	4.897E-01	7.977E-01	6.252E-02	0.053
		706.67		1.455E-01	3.683E-01	6.120E-01	4.817E-02	0.238
		763.93		1.313E-02	3.132E-01	4.374E-01	3.450E-02	0.030
		884.67		-3.460E-03	6.911E-02	1.146E-01	8.789E-03	-0.030
		937.48		-1.228E-01	1.743E-01	2.694E-01	2.025E-02	-0.456
		1384.27		8.455E-02	2.393E-01	3.722E-01	2.274E-02	0.227
IN-111		171.28		7.507E-01	1.001E+00	1.679E+00	1.231E-01	0.447
		245.39	*	-3.489E-01	1.240E+00	1.698E+00	1.280E-01	-0.205
IN-113M		391.69	*	5.729E-05	6.846E-02	1.138E-01	7.019E-03	0.001
SN-113		391.69	*	5.729E-05	6.846E-02	1.138E-01	7.019E-03	0.001
IN-114M		190.27	*	1.642E-01	2.601E-01	3.833E-01	2.847E-02	0.428
CD-115		260.90		1.392E+01	1.157E+02	1.864E+02	1.400E+01	0.075
		492.35		4.586E+00	3.987E+01	6.607E+01	4.378E+00	0.069
		527.90	*	2.570E+00	1.153E+01	1.920E+01	1.320E+00	0.134
SN-117M		156.02		-1.224E-01	2.776E+00	4.521E+00	3.733E-01	-0.027
		158.56	*	-9.485E-02	6.920E-02	1.053E-01	8.445E-03	-0.900

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-122		563.90	*	1.605E+00	2.420E+00	4.136E+00	2.933E-01	0.388
		692.80		4.528E+01	4.832E+01	8.414E+01	6.383E+00	0.538
I-123		159.00	*	-1.117E+00	4.832E+01	Half-Life too short		
		528.96		1.112E+02	4.832E+01	Half-Life too short		
TE-123M		159.00	*	-2.852E-02	3.726E-02	5.858E-02	4.706E-03	-0.487
I-124		602.71	*	-3.307E-01	1.043E+00	1.416E+00	1.033E-01	-0.234
		722.78		-1.433E+00	6.204E+00	8.344E+00	6.352E-01	-0.172
		1325.50		9.639E+00	4.303E+01	7.198E+01	4.106E+00	0.134
	+	1376.25		6.553E+01	3.987E+01	6.763E+01	3.885E+00	0.969
		1509.49		1.908E+00	1.777E+01	2.917E+01	1.693E+00	0.065
		1691.02		-2.706E+00	5.045E+00	7.551E+00	4.370E-01	-0.358
SB-124		602.71		-2.349E-02	7.408E-02	1.006E-01	7.339E-03	-0.234
		645.85		3.007E-01	7.906E-01	1.322E+00	1.067E-01	0.227
		709.31		-8.546E-01	4.962E+00	7.893E+00	6.002E-01	-0.108
		713.82		-5.918E-01	2.850E+00	4.515E+00	5.118E-01	-0.131
		722.78		-1.476E-01	6.390E-01	8.594E-01	6.723E-02	-0.172
		968.20		1.204E+01	5.112E+00	9.374E+00	6.564E-01	1.284
		1045.16		-3.730E-01	3.318E+00	5.405E+00	3.542E-01	-0.069
		1325.50		1.060E+00	4.734E+00	7.918E+00	4.517E-01	0.134
		1368.21		-7.842E-01	2.488E+00	3.476E+00	4.117E-01	-0.226
		1436.60		3.410E-03	5.972E+00	9.657E+00	5.582E-01	0.000
		1691.02	*	-6.574E-02	1.226E-01	1.834E-01	1.153E-02	-0.358
SB-125		427.89	*	-2.226E-02	1.536E-01	2.522E-01	1.599E-02	-0.088
		463.38		3.899E-01	5.196E-01	8.898E-01	6.483E-02	0.438
		600.56		2.521E-01	3.069E-01	5.157E-01	4.139E-02	0.489
		635.90		-3.256E-02	4.494E-01	7.248E-01	5.968E-02	-0.045
TE-125M		109.28	*	-1.555E+00	1.124E+01	1.845E+01	2.098E+00	-0.084
I-126		388.63		2.283E-01	2.958E-01	5.127E-01	3.000E-02	0.445
		666.33	*	2.486E-02	2.835E-01	4.004E-01	3.019E-02	0.062
		753.82		-8.041E-01	2.059E+00	3.174E+00	2.418E-01	-0.253
SB-126		223.80		1.220E+00	5.178E+00	8.432E+00	6.352E-01	0.145
	+	278.60		2.751E+00	3.669E+00	5.485E+00	4.078E-01	0.502
	+	296.50		1.116E+01	2.914E+00	4.290E+00	3.137E-01	2.602
		414.70		2.377E-02	1.147E-01	1.925E-01	1.152E-02	0.124
		415.30		5.575E+00	9.438E+00	1.617E+01	9.690E-01	0.345
		555.20		3.708E+00	5.882E+00	1.006E+01	7.085E-01	0.369
		573.80		-1.120E+00	1.607E+00	2.480E+00	1.773E-01	-0.451
		593.00		-4.610E-01	1.373E+00	2.174E+00	1.576E-01	-0.212
		656.30		-1.642E+00	5.490E+00	7.369E+00	5.536E-01	-0.223
		666.33		1.036E-02	1.181E-01	1.668E-01	1.258E-02	0.062
		675.00		-2.704E-01	2.940E+00	4.715E+00	3.564E-01	-0.057
		695.00		-5.582E-02	1.151E-01	1.777E-01	1.348E-02	-0.314
		697.00		-1.950E-01	4.021E-01	6.211E-01	4.715E-02	-0.314
		720.50	*	-2.189E-01	2.638E-01	3.263E-01	2.484E-02	-0.671
		856.80		1.806E-01	6.848E-01	1.169E+00	8.702E-02	0.154
		989.30		-4.467E-01	1.775E+00	2.863E+00	1.973E-01	-0.156
		1034.80		-4.261E+00	1.185E+01	1.877E+01	1.243E+00	-0.227
		1213.00		2.489E+00	7.045E+00	1.189E+01	6.631E-01	0.209
SB-127		61.10		2.390E+01	2.998E+01	4.554E+01	5.064E+00	0.525

---- Non-Identified Nuclides ----

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		252.40		-1.757E+00	5.028E+00	7.815E+00	3.261E+00	-0.225
		290.80		1.152E+01	2.568E+01	3.887E+01	3.811E+00	0.296
		411.60		-1.033E+00	1.544E+01	2.551E+01	3.610E+00	-0.040
		444.90		3.359E+00	1.373E+01	2.300E+01	2.451E+00	0.146
		473.00		-1.281E+00	2.523E+00	4.031E+00	4.505E-01	-0.318
		543.00		7.154E+00	2.173E+01	3.637E+01	4.786E+00	0.197
		603.60		-1.529E+01	1.791E+01	2.272E+01	2.562E+00	-0.673
		685.20	*	-5.669E-01	1.711E+00	2.679E+00	2.737E-01	-0.212
		698.50		-6.904E+00	1.864E+01	2.903E+01	4.358E+00	-0.238
		722.20		-3.069E+01	4.484E+01	5.659E+01	5.658E+00	-0.542
		783.80		2.917E+00	4.585E+00	8.053E+00	9.156E-01	0.362
XE-127		57.60		-2.229E+00	3.034E+00	4.967E+00	4.370E-01	-0.449
	+	145.22		1.094E+00	1.202E+00	1.530E+00	1.411E-01	0.715
		172.10		9.135E-02	1.626E-01	2.706E-01	1.986E-02	0.338
		202.84	*	-6.258E-02	6.835E-02	1.015E-01	7.592E-03	-0.616
		374.96		2.515E-02	3.114E-01	5.211E-01	3.210E-02	0.048
I-131		80.18		-3.286E+00	6.508E+00	6.637E+00	5.537E-01	-0.495
		284.30		3.627E-01	1.922E+00	3.188E+00	2.521E-01	0.114
		364.48	*	-1.124E-01	1.606E-01	2.571E-01	1.795E-02	-0.437
		636.97		5.465E-01	2.307E+00	3.814E+00	3.046E-01	0.143
		722.89		-2.741E+00	1.108E+01	1.487E+01	1.140E+00	-0.184
TE-132		49.72		-3.751E+00	4.709E+00	6.714E+00	6.461E-01	-0.559
		111.76		3.911E+00	2.744E+01	4.550E+01	5.344E+00	0.086
		116.30		-1.980E+01	2.615E+01	4.158E+01	5.039E+00	-0.476
		228.16	*	-8.941E-02	7.293E-01	1.166E+00	1.738E-01	-0.077
BA-133		53.15		1.659E+00	1.368E+00	2.374E+00	1.915E-01	0.699
		79.62		3.261E+00	1.967E+00	2.276E+00	3.426E-01	1.433
		81.00		-1.100E-01	1.573E-01	1.570E-01	2.463E-02	-0.701
		276.40		1.557E-01	8.759E-01	8.892E-01	1.225E-01	0.175
		302.84		2.362E-02	2.344E-01	3.456E-01	4.302E-02	0.068
		356.01	*	6.270E-03	7.765E-02	1.134E-01	1.355E-02	0.055
		383.85		-1.146E-01	4.817E-01	7.908E-01	8.667E-02	-0.145
I-133	+	510.53		6.117E-01	4.817E-01	Half-Life too short		
		529.87	*	1.930E-03	4.817E-01	Half-Life too short		
		706.58		1.036E-01	4.817E-01	Half-Life too short		
		856.28		-1.303E-01	4.817E-01	Half-Life too short		
		875.33		-1.664E-02	4.817E-01	Half-Life too short		
		1236.41		2.527E-01	4.817E-01	Half-Life too short		
		1298.22		-8.285E-02	4.817E-01	Half-Life too short		
CS-134		475.35		2.319E-01	3.581E+00	5.922E+00	3.847E-01	0.039
		563.23		5.912E-01	5.747E-01	1.007E+00	7.235E-02	0.587
		569.32		9.486E-02	3.247E-01	5.412E-01	3.931E-02	0.175
		604.70		-5.540E-03	6.070E-02	8.445E-02	6.190E-03	-0.066
		795.84	*	7.556E-02	7.105E-02	1.288E-01	9.857E-03	0.586
		801.93		-4.222E-01	6.467E-01	1.020E+00	7.779E-02	-0.414
		1038.57		2.573E+00	5.312E+00	9.243E+00	6.097E-01	0.278
		1167.94		-3.364E-01	4.026E+00	6.547E+00	3.645E-01	-0.051
		1365.15		-6.443E-01	1.696E+00	2.577E+00	1.626E-01	-0.250
CS-135		268.24	*	3.399E-01	2.614E-01	3.956E-01	3.560E-02	0.859

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-135		288.45		-1.010E+09	2.614E-01	Half-Life too short		
		417.63		-9.998E+08	2.614E-01	Half-Life too short		
		546.56		-6.217E+07	2.614E-01	Half-Life too short		
		836.80		-2.206E+08	2.614E-01	Half-Life too short		
		1038.76		6.180E+08	2.614E-01	Half-Life too short		
		1124.00		-1.177E+09	2.614E-01	Half-Life too short		
		1131.51		-1.415E+08	2.614E-01	Half-Life too short		
		1260.41	*	-1.883E+08	2.614E-01	Half-Life too short		
		1457.56		3.517E+10	2.614E-01	Half-Life too short		
		1678.03		-2.549E+08	2.614E-01	Half-Life too short		
		1706.46		-1.984E+07	2.614E-01	Half-Life too short		
		1791.20		1.612E+08	2.614E-01	Half-Life too short		
CS-136		66.91		-2.030E-01	5.946E-01	8.539E-01	1.326E-01	-0.238
	+	86.29		3.695E+00	1.194E+00	2.072E+00	2.592E-01	1.783
		153.22		6.008E-01	8.133E-01	1.365E+00	1.302E-01	0.440
		163.89		2.297E-01	1.372E+00	2.250E+00	1.952E-01	0.102
		176.55		3.039E-01	4.682E-01	7.811E-01	6.201E-02	0.389
		273.65		-1.119E-01	9.694E-01	9.471E-01	7.680E-02	-0.118
		340.57		4.398E-01	2.148E-01	3.499E-01	2.487E-02	1.257
		818.51		1.107E-01	1.030E-01	1.884E-01	1.422E-02	0.588
		1048.07	*	4.268E-02	1.332E-01	2.280E-01	1.598E-02	0.187
		1235.34		6.924E-01	8.595E-01	1.503E+00	1.484E-01	0.461
CE-139		165.85	*	8.473E-03	4.035E-02	6.627E-02	4.847E-03	0.128
BA-140		162.64		5.831E-01	9.690E-01	1.616E+00	1.324E-01	0.361
		304.84		-6.185E-01	1.975E+00	2.815E+00	7.778E-01	-0.220
		423.70		1.163E+00	3.069E+00	5.154E+00	1.641E+00	0.226
		537.32	*	1.847E-01	3.901E-01	6.532E-01	2.139E-01	0.283
LA-140	+	328.77		7.770E-01	4.356E-01	6.602E-01	4.988E-02	1.177
		432.53		8.467E-01	3.222E+00	5.414E+00	3.639E-01	0.156
		487.03		3.156E-02	2.134E-01	3.545E-01	2.577E-02	0.089
		751.79		-1.077E+00	2.266E+00	3.450E+00	2.982E-01	-0.312
		815.85		-2.493E-01	4.348E-01	6.861E-01	5.943E-02	-0.363
		867.82		9.608E-01	1.986E+00	3.458E+00	2.744E-01	0.278
		919.63		2.267E+00	4.046E+00	7.073E+00	6.753E-01	0.321
		925.24		-2.022E+00	1.612E+00	2.311E+00	1.811E-01	-0.875
		1596.49	*	8.960E-03	1.120E-01	1.894E-01	1.101E-02	0.047
CE-143		57.37		-3.478E-04	1.120E-01	Half-Life too short		
		231.56		-3.906E-04	1.120E-01	Half-Life too short		
		293.26	*	3.797E-04	1.120E-01	Half-Life too short		
	+	350.59		1.275E-02	1.120E-01	Half-Life too short		
		490.36		5.173E-04	1.120E-01	Half-Life too short		
		664.57		1.442E-02	1.120E-01	Half-Life too short		
		721.93		-7.868E-04	1.120E-01	Half-Life too short		
CE-144		80.11		-1.586E+00	3.339E+00	3.414E+00	2.832E-01	-0.465
		133.54	*	-6.993E-02	2.683E-01	4.350E-01	7.174E-02	-0.161
PM-144		476.78		1.148E-01	1.235E-01	2.137E-01	1.612E-02	0.537
		618.01		3.907E-02	4.748E-02	8.240E-02	6.296E-03	0.474
		696.49	*	-2.845E-02	5.491E-02	8.450E-02	6.416E-03	-0.337
		778.57		2.367E+00	3.360E+00	5.974E+00	4.541E-01	0.396

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144		696.49	*	-1.926E+00	3.718E+00	5.722E+00	4.343E-01	-0.337
		1489.15		-2.251E+01	1.688E+01	1.926E+01	1.117E+00	-1.169
PM-146		453.90	*	2.468E-02	7.822E-02	1.314E-01	1.181E-02	0.188
		633.02		5.389E-01	2.186E+00	3.607E+00	1.339E+00	0.149
		735.90		-1.252E-02	2.490E-01	3.989E-01	1.129E-01	-0.031
		747.13		2.801E-02	1.331E-01	2.185E-01	2.939E-02	0.128
ND-147	+	91.11		7.374E-01	2.894E-01	6.485E-01	5.857E-02	1.137
		319.41		1.804E+00	4.608E+00	7.877E+00	5.581E-01	0.229
		439.89		3.085E+00	9.016E+00	1.521E+01	9.445E-01	0.203
		531.02	*	1.752E-01	8.420E-01	1.400E+00	1.963E-01	0.125
PM-149		285.90	*	-6.027E+01	8.585E+01	1.388E+02	2.068E+01	-0.434
EU-152		121.78		4.166E-02	9.379E-02	1.568E-01	1.899E-02	0.266
		244.69		2.262E-01	5.356E-01	7.712E-01	5.816E-02	0.293
		344.27	*	-5.633E-02	1.686E-01	2.387E-01	1.762E-02	-0.236
		443.98		6.980E-01	1.680E+00	2.841E+00	1.774E-01	0.246
		778.89		3.479E-01	3.961E-01	7.125E-01	5.414E-02	0.488
		867.32		7.152E-01	1.291E+00	2.261E+00	1.675E-01	0.316
		964.01		2.911E-01	5.136E-01	7.842E-01	5.507E-02	0.371
		1085.78		-9.178E-02	5.954E-01	9.641E-01	6.038E-02	-0.095
		1112.02		-3.162E-01	5.481E-01	8.296E-01	5.024E-02	-0.381
		1407.95		1.131E-01	2.730E-01	4.687E-01	2.703E-02	0.241
GD-153		69.67		-2.044E-01	1.432E+00	2.093E+00	1.815E-01	-0.098
	+	83.37		1.949E+01	1.719E+01	2.635E+01	2.158E+00	0.740
		97.43	*	-7.904E-03	1.046E-01	1.516E-01	1.335E-02	-0.052
		103.18		-1.586E-01	1.264E-01	1.974E-01	1.835E-02	-0.804
EU-154		123.07		-2.222E-02	6.685E-02	1.084E-01	1.438E-02	-0.205
		247.94		1.548E-01	5.527E-01	8.322E-01	8.894E-02	0.186
		591.81		-2.761E-02	9.433E-01	1.533E+00	1.639E-01	-0.018
		723.30		-5.448E-02	3.009E-01	4.072E-01	3.514E-02	-0.134
		756.87		-2.723E-01	1.244E+00	1.957E+00	2.206E-01	-0.139
		873.19		-3.076E-01	4.861E-01	7.616E-01	8.690E-02	-0.404
		996.32		-3.091E-01	5.360E-01	8.274E-01	1.405E-01	-0.374
		1004.76		-2.080E-01	3.375E-01	5.229E-01	5.421E-02	-0.398
		1274.45	*	-7.945E-02	1.715E-01	2.626E-01	2.429E-02	-0.303
EU-155		48.70		3.009E+00	7.928E-01	1.305E+00	9.561E-02	2.306
		60.01		4.605E+00	3.134E+00	4.832E+00	4.391E-01	0.953
	+	86.54		3.650E-01	1.128E-01	2.016E-01	1.651E-02	1.810
		105.31	*	-1.343E-02	1.283E-01	2.111E-01	2.023E-02	-0.064
TB-160	+	86.79		9.635E-01	2.974E-01	5.257E-01	4.252E-02	1.833
		197.04		7.053E-01	7.805E-01	1.309E+00	9.765E-02	0.539
		215.65		-1.006E+00	9.891E-01	1.507E+00	1.133E-01	-0.667
		298.57		2.070E-01	2.549E-01	2.791E-01	2.036E-02	0.742
		879.36	*	5.088E-02	2.050E-01	3.500E-01	2.578E-02	0.145
		962.29		8.309E-01	8.829E-01	1.411E+00	9.918E-02	0.589
		966.15		8.214E-01	4.148E-01	7.031E-01	4.931E-02	1.168
		1177.93		-3.212E-01	5.407E-01	8.299E-01	4.586E-02	-0.387
		1271.85		7.209E-02	9.597E-01	1.580E+00	8.925E-02	0.046
HO-166M		80.57		-2.868E-01	4.307E-01	4.331E-01	3.587E-02	-0.662
		184.41		1.462E-01	6.070E-02	9.637E-02	7.133E-03	1.517

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		280.46		4.562E-02	1.344E-01	2.021E-01	1.501E-02	0.226
		410.95		2.164E-01	3.833E-01	6.561E-01	3.906E-02	0.330
		711.68	*	4.986E-03	1.079E-01	1.746E-01	1.328E-02	0.029
		752.31		-1.390E-01	3.977E-01	6.151E-01	4.685E-02	-0.226
		810.29		2.438E-02	8.354E-02	1.438E-01	1.086E-02	0.170
TM-171		51.35		-6.599E+00	1.143E+01	1.650E+01	1.282E+00	-0.400
		52.39		3.786E+00	6.093E+00	9.733E+00	7.728E-01	0.389
		59.40		2.950E+01	1.659E+01	2.578E+01	2.345E+00	1.144
		66.72	*	-9.480E-01	2.258E+01	3.289E+01	2.891E+00	-0.029
LU-176	+	88.36		7.192E-01	2.220E-01	4.143E-01	3.348E-02	1.736
		201.83		-1.023E-02	4.125E-02	6.594E-02	4.929E-03	-0.155
		306.84	*	1.466E-02	3.713E-02	6.205E-02	4.480E-03	0.236
		401.10		-2.473E-02	1.134E+01	1.883E+01	1.104E+00	-0.001
LU-177		112.95		-2.847E-01	1.735E+00	2.842E+00	2.896E-01	-0.100
	+	208.36	*	1.541E+00	1.640E+00	2.225E+00	1.668E-01	0.692
LU-177M		52.97		6.380E-01	6.262E-01	1.051E+00	8.443E-02	0.607
		54.07		4.371E-01	3.461E-01	6.009E-01	4.938E-02	0.727
		61.30		9.161E-01	9.852E-01	1.505E+00	1.358E-01	0.609
		121.62		4.033E-01	4.731E-01	8.017E-01	8.853E-02	0.503
		147.16		6.041E-01	9.391E-01	1.394E+00	1.262E-01	0.433
		171.86		3.886E-01	6.686E-01	1.113E+00	8.169E-02	0.349
		218.09		-7.596E-01	1.115E+00	1.731E+00	1.302E-01	-0.439
		268.79		2.209E+00	1.331E+00	2.055E+00	1.537E-01	1.075
		319.02		2.576E-01	3.887E-01	6.726E-01	4.767E-02	0.383
		367.43		1.250E+00	1.400E+00	2.444E+00	1.544E-01	0.511
		413.65	*	-3.264E-01	2.877E-01	4.443E-01	2.657E-02	-0.735
HF-181		56.28		-8.768E-01	4.509E-01	7.008E-01	6.013E-02	-1.251
		57.53		-1.932E-01	2.552E-01	4.173E-01	3.667E-02	-0.463
		65.20		3.189E+00	8.205E-01	1.295E+00	1.146E-01	2.463
		133.02		-8.013E-02	8.695E-02	1.368E-01	1.400E-02	-0.586
		136.25		-2.437E-01	5.887E-01	9.380E-01	9.355E-02	-0.260
		345.85		-1.897E-01	3.307E-01	4.592E-01	3.081E-02	-0.413
		482.03	*	-8.493E-02	7.317E-02	1.111E-01	7.274E-03	-0.765
W-181		56.28		-3.478E-01	1.790E-01	2.782E-01	2.387E-02	-1.250
		57.53		-7.680E-02	1.013E-01	1.657E-01	1.456E-02	-0.463
		65.20	*	1.256E+00	3.233E-01	5.101E-01	4.518E-02	2.463
TA-182		67.75		-8.949E-02	9.389E-02	1.310E-01	1.146E-02	-0.683
		100.10		3.890E-01	2.167E-01	3.668E-01	3.313E-02	1.061
		152.43		6.519E-02	4.480E-01	7.359E-01	6.317E-02	0.089
		222.10		9.243E-02	4.661E-01	7.580E-01	5.708E-02	0.122
		1001.68		2.688E+00	3.016E+00	5.410E+00	3.691E-01	0.497
	+	1121.28		8.226E-01	3.037E-01	5.195E-01	3.107E-02	1.583
		1189.05		-1.488E-02	4.889E-01	7.981E-01	4.424E-02	-0.019
		1221.42	*	-2.463E-01	2.914E-01	4.336E-01	2.423E-02	-0.568
		1230.97		-1.615E-01	7.382E-01	1.181E+00	6.615E-02	-0.137
RE-183		57.98		1.992E-03	1.049E-01	1.704E-01	1.509E-02	0.012
		59.32		1.189E-01	6.717E-02	1.044E-01	9.479E-03	1.139
		67.20		-3.666E-03	1.600E-01	2.331E-01	2.045E-02	-0.016
		162.32	*	6.323E-02	1.488E-01	2.466E-01	1.889E-02	0.256

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	+	208.81		1.564E+00	1.665E+00	2.256E+00	1.692E-01	0.693
		291.72		5.291E-01	1.426E+00	2.146E+00	1.577E-01	0.247
RE-184		57.98		7.397E-03	3.895E-01	6.325E-01	5.604E-02	0.012
		59.32		4.410E-01	2.492E-01	3.872E-01	3.516E-02	1.139
		67.20		-1.361E-02	5.937E-01	8.652E-01	7.589E-02	-0.016
		161.27		4.211E-01	4.723E-01	7.971E-01	6.185E-02	0.528
		216.55		-7.910E-02	3.419E-01	5.445E-01	4.094E-02	-0.145
		252.85	*	-3.280E-01	3.475E-01	5.272E-01	3.970E-02	-0.622
		318.01		5.536E-01	6.576E-01	1.148E+00	8.150E-02	0.482
		792.07		2.610E-02	1.510E+00	2.537E+00	1.924E-01	0.010
		903.28		5.643E-01	1.627E+00	2.612E+00	1.901E-01	0.216
		920.93		7.854E-02	6.895E-01	1.159E+00	8.361E-02	0.068
OS-185		59.72		3.214E-01	1.829E-01	2.841E-01	2.586E-02	1.131
		61.14		8.815E-02	1.069E-01	1.627E-01	1.470E-02	0.542
		69.30		-1.835E-01	2.546E-01	3.623E-01	3.148E-02	-0.506
		592.07		-8.013E-01	3.786E+00	6.055E+00	4.386E-01	-0.132
		646.12	*	1.085E-02	6.786E-02	1.115E-01	8.337E-03	0.097
		717.42		2.274E-01	1.560E+00	2.478E+00	1.886E-01	0.092
		874.81		-7.362E-02	9.313E-01	1.542E+00	1.139E-01	-0.048
		880.27		7.636E-01	1.129E+00	2.003E+00	1.475E-01	0.381
RE-188		155.03	*	1.534E-01	2.208E-01	3.704E-01	3.091E-02	0.414
		477.96		6.505E+00	5.480E+00	9.619E+00	6.268E-01	0.676
		633.10		9.903E-01	4.338E+00	7.177E+00	5.330E-01	0.138
W-188	+	63.58		1.775E+02	4.492E+01	7.114E+01	6.350E+00	2.495
		227.08		-8.803E+00	1.762E+01	2.762E+01	2.082E+00	-0.319
		290.67	*	5.545E+00	1.112E+01	1.689E+01	1.243E+00	0.328
IR-192	+	295.96		9.082E-01	2.373E-01	3.511E-01	2.595E-02	2.586
		308.46		1.158E-01	1.382E-01	2.414E-01	1.752E-02	0.480
		316.51	*	1.307E-02	4.993E-02	8.490E-02	6.062E-03	0.154
		468.07		-8.995E-02	1.221E-01	1.925E-01	1.395E-02	-0.467
		604.41		-3.168E-01	8.439E-01	1.136E+00	1.385E-01	-0.279
		612.46		5.904E-01	1.346E+00	1.973E+00	1.738E-01	0.299
AU-195		65.12		6.420E-01	1.531E-01	2.412E-01	2.137E-02	2.662
		66.83		-2.726E-02	7.585E-02	1.089E-01	9.574E-03	-0.250
	+	75.70		1.087E+00	2.005E-01	4.445E-01	3.755E-02	2.446
		98.88	*	3.948E-01	2.975E-01	4.584E-01	4.093E-02	0.861
		129.76		1.699E+00	3.760E+00	6.273E+00	6.584E-01	0.271
TL-200		367.94	*	1.933E-04	3.760E+00	Half-Life too short		
		579.30		1.651E-03	3.760E+00	Half-Life too short		
		828.27		7.271E-05	3.760E+00	Half-Life too short		
		1205.75		1.141E-03	3.760E+00	Half-Life too short		
TL-201		68.90		-3.100E+00	3.291E+00	4.289E+00	3.733E-01	-0.723
		70.82		2.434E-02	1.799E+00	2.646E+00	2.283E-01	0.009
		80.30		-3.281E+00	5.905E+00	5.996E+00	4.971E-01	-0.547
		135.34		-4.634E+00	2.441E+01	3.970E+01	3.989E+00	-0.117
		167.43	*	-4.532E+00	7.203E+00	1.139E+01	8.334E-01	-0.398
TL-202		68.90		-3.484E-01	3.698E-01	4.819E-01	4.194E-02	-0.723
		70.82		2.727E-03	2.016E-01	2.966E-01	2.559E-02	0.009
		80.30		-3.678E-01	6.619E-01	6.721E-01	5.572E-02	-0.547

---- Non-Identified Nuclides ----

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		439.56	*	3.733E-02	1.073E-01	1.810E-01	1.123E-02	0.206
BI-207		72.80		2.854E-01	1.718E-01	2.661E-01	2.276E-02	1.072
	+	74.97		6.061E-01	1.118E-01	2.103E-01	1.782E-02	2.882
	+	84.90		2.531E-01	2.231E-01	3.470E-01	2.827E-02	0.729
		569.67		2.515E-02	5.038E-02	8.516E-02	6.067E-03	0.295
		1063.62	*	-1.232E-02	7.765E-02	1.258E-01	8.084E-03	-0.098
		1770.23		-2.058E+00	1.069E+00	1.239E+00	7.117E-02	-1.662
TL-207		81.07		-2.455E-01	3.461E-01	3.467E-01	2.865E-02	-0.708
	+	83.78		1.669E-01	1.471E-01	2.248E-01	1.838E-02	0.742
		94.90		1.622E+00	3.565E-01	5.699E-01	4.900E-02	2.845
		122.32		8.697E-01	2.217E+00	3.702E+00	4.284E-01	0.235
	+	144.24		1.099E+00	1.209E+00	1.563E+00	1.603E-01	0.703
		154.21		5.399E-01	5.131E-01	8.709E-01	8.099E-02	0.620
	+	269.46		4.373E-01	4.044E-01	4.893E-01	3.760E-02	0.894
		323.87	*	-4.077E-01	1.097E+00	1.552E+00	2.637E-01	-0.263
	+	338.28		5.709E+00	2.177E+00	3.270E+00	3.640E-01	1.746
		445.03		9.232E-01	4.066E+00	6.805E+00	7.166E-01	0.136
PO-209		260.50		-2.202E+00	1.313E+01	2.079E+01	1.562E+00	-0.106
		262.80		-3.589E+01	3.731E+01	5.612E+01	4.211E+00	-0.639
		896.60	*	-2.674E+00	1.164E+01	1.896E+01	1.384E+00	-0.141
PB-211		404.84	*	-4.936E-01	1.564E+00	2.501E+00	1.559E+00	-0.197
		427.08		-4.307E+00	4.420E+00	5.422E+00	3.353E+00	-0.794
		831.96		4.538E-01	1.814E+00	3.066E+00	1.917E+00	0.148
BI-212	+	727.18	*	9.601E-01	6.281E-01	8.595E-01	7.871E-02	1.117
		785.46		1.343E+00	2.822E+00	4.907E+00	3.726E-01	0.274
		1620.62		8.092E-01	1.979E+00	3.503E+00	2.035E-01	0.231
BI-214	+	609.31	*	1.335E+00	2.498E-01	3.787E-01	3.398E-02	3.526
	+	768.36		1.491E+00	1.530E+00	2.063E+00	1.993E-01	0.723
		934.06		8.663E-01	1.842E+00	3.186E+00	3.024E-01	0.272
	+	1120.29		1.754E+00	6.577E-01	1.106E+00	9.874E-02	1.586
		1238.11		4.785E-01	1.395E+00	2.354E+00	1.887E-01	0.203
	+	1377.67		2.595E+00	1.587E+00	2.575E+00	2.201E-01	1.008
		1764.49		1.705E+00	5.542E-01	1.173E+00	6.746E-02	1.453
PO-215		81.07		-2.455E-01	3.461E-01	3.467E-01	2.865E-02	-0.708
	+	83.78		1.669E-01	1.471E-01	2.248E-01	1.838E-02	0.742
		94.90		1.622E+00	3.565E-01	5.699E-01	4.900E-02	2.845
		122.32		8.697E-01	2.217E+00	3.702E+00	4.284E-01	0.235
	+	144.24		1.099E+00	1.209E+00	1.563E+00	1.603E-01	0.703
		154.21		5.399E-01	5.131E-01	8.709E-01	8.099E-02	0.620
	+	269.46		4.373E-01	4.044E-01	4.893E-01	3.760E-02	0.894
		323.87	*	-4.077E-01	1.097E+00	1.552E+00	2.637E-01	-0.263
	+	338.28		5.709E+00	2.177E+00	3.270E+00	3.640E-01	1.746
		445.03		9.232E-01	4.066E+00	6.805E+00	7.166E-01	0.136
RN-219	+	271.23		5.611E-01	5.197E-01	6.270E-01	5.877E-02	0.895
		401.81	*	-3.804E-01	6.984E-01	1.122E+00	1.530E-01	-0.339
RN-220		549.76	*	-2.271E+01	4.186E+01	6.553E+01	4.593E+00	-0.347
RA-223		81.07		-2.455E-01	3.461E-01	3.467E-01	2.865E-02	-0.708
	+	83.78		1.669E-01	1.471E-01	2.248E-01	1.838E-02	0.742
		94.90		1.622E+00	3.565E-01	5.699E-01	4.900E-02	2.845

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		8.697E-01	2.217E+00	3.702E+00	4.284E-01	0.235
	+	144.24		1.099E+00	1.209E+00	1.563E+00	1.603E-01	0.703
		154.21		5.399E-01	5.131E-01	8.709E-01	8.099E-02	0.620
	+	269.46		4.373E-01	4.044E-01	4.893E-01	3.760E-02	0.894
		323.87	*	-4.077E-01	1.097E+00	1.552E+00	2.637E-01	-0.263
	+	338.28		5.709E+00	2.177E+00	3.270E+00	3.640E-01	1.746
		445.03		9.232E-01	4.066E+00	6.805E+00	7.166E-01	0.136
RA-226	+	609.31	*	1.335E+00	2.498E-01	3.787E-01	3.398E-02	3.526
	+	768.36		1.491E+00	1.530E+00	2.063E+00	1.993E-01	0.723
		934.06		8.663E-01	1.842E+00	3.186E+00	3.024E-01	0.272
	+	1120.29		1.754E+00	6.577E-01	1.106E+00	9.874E-02	1.586
		1238.11		4.785E-01	1.395E+00	2.354E+00	1.887E-01	0.203
	+	1377.67		2.595E+00	1.587E+00	2.575E+00	2.201E-01	1.008
		1764.49		1.705E+00	5.542E-01	1.173E+00	6.746E-02	1.453
AC-227		79.80		5.097E-01	2.614E+00	2.811E+00	6.009E-01	0.181
		236.00		3.959E-01	3.810E-01	5.645E-01	6.498E-02	0.701
		256.20	*	6.454E-03	5.349E-01	8.570E-01	1.265E-01	0.008
		286.10		-1.747E+00	2.146E+00	3.449E+00	4.289E-01	-0.506
	+	299.80		3.374E+00	2.584E+00	3.655E+00	6.167E-01	0.923
		304.40		-9.361E-01	3.084E+00	4.409E+00	7.862E-01	-0.212
		334.20		1.121E+00	4.164E+00	5.451E+00	1.020E+00	0.206
TH-227		79.80		5.097E-01	2.614E+00	2.811E+00	6.087E-01	0.181
	+	94.00		2.052E+01	5.327E+00	5.669E+00	1.232E+00	3.620
		236.00		3.959E-01	3.805E-01	5.645E-01	5.792E-02	0.701
		256.20	*	6.454E-03	5.349E-01	8.570E-01	1.505E-01	0.008
		286.10		-1.747E+00	2.761E+00	3.449E+00	3.459E+00	-0.506
	+	299.80		3.374E+00	2.584E+00	3.655E+00	6.167E-01	0.923
		304.40		-9.361E-01	3.084E+00	4.409E+00	7.862E-01	-0.212
		334.20		1.121E+00	4.164E+00	5.451E+00	1.020E+00	0.206
TH-229	+	85.43		2.498E-01	2.202E-01	3.627E-01	2.948E-02	0.689
	+	88.47		4.140E-01	1.278E-01	2.404E-01	1.944E-02	1.722
		100.00		4.084E-01	2.267E-01	3.837E-01	3.462E-02	1.065
		193.63	*	-1.747E-01	7.042E-01	1.127E+00	8.389E-02	-0.155
		210.97		1.961E+00	1.194E+00	1.840E+00	1.381E-01	1.066
TH-230	+	609.31	*	1.335E+00	2.498E-01	3.787E-01	3.398E-02	3.526
	+	768.36		1.491E+00	1.530E+00	2.063E+00	1.993E-01	0.723
		934.06		8.663E-01	1.842E+00	3.186E+00	3.024E-01	0.272
	+	1120.29		1.754E+00	6.577E-01	1.106E+00	9.874E-02	1.586
		1238.11		4.785E-01	1.395E+00	2.354E+00	1.887E-01	0.203
	+	1377.67		2.595E+00	1.587E+00	2.575E+00	2.201E-01	1.008
		1764.49		1.705E+00	5.542E-01	1.173E+00	6.746E-02	1.453
PA-231		283.67	*	1.917E+00	2.262E+00	3.751E+00	5.449E-01	0.511
	+	301.29		1.350E+00	1.020E+00	1.470E+00	1.666E-01	0.918
TH-231		81.07		-2.455E-01	3.461E-01	3.467E-01	2.865E-02	-0.708
	+	83.78		1.669E-01	1.471E-01	2.248E-01	1.838E-02	0.742
		94.90		1.622E+00	3.565E-01	5.699E-01	4.900E-02	2.845
		122.32		8.697E-01	2.217E+00	3.702E+00	4.284E-01	0.235
	+	144.24		1.099E+00	1.209E+00	1.563E+00	1.603E-01	0.703
		154.21		5.399E-01	5.131E-01	8.709E-01	8.099E-02	0.620

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.373E-01	4.044E-01	4.893E-01	3.760E-02	0.894
		323.87	*	-4.077E-01	1.097E+00	1.552E+00	2.637E-01	-0.263
	+	338.28		5.709E+00	2.177E+00	3.270E+00	3.640E-01	1.746
		445.03		9.232E-01	4.066E+00	6.805E+00	7.166E-01	0.136
U-231	+	84.21		5.796E+00	5.110E+00	7.805E+00	6.373E-01	0.743
	+	92.29		1.635E+01	2.705E+00	4.640E+00	3.891E-01	3.523
		95.87	*	-5.498E-02	1.163E+00	1.689E+00	1.465E-01	-0.033
		108.00		3.614E-01	2.004E+00	3.331E+00	3.240E-01	0.109
PA-233	+	75.28		1.769E+01	3.961E+00	6.460E+00	9.857E-01	2.738
	+	86.59		5.937E+00	2.373E+00	3.269E+00	8.714E-01	1.816
	+	300.12		9.406E-01	7.152E-01	1.016E+00	1.436E-01	0.926
		311.98	*	-4.954E-02	9.174E-02	1.495E-01	1.116E-02	-0.331
		340.50		2.237E+00	1.244E+00	1.848E+00	4.294E-01	1.211
		398.62		2.493E+00	3.518E+00	5.968E+00	1.544E+00	0.418
		415.76		6.668E-01	2.745E+00	4.607E+00	9.511E-01	0.145
PA-234	+	63.00		5.216E+00	1.481E+00	2.086E+00	3.272E-01	2.501
		94.67		1.681E+00	3.196E-01	4.429E-01	5.481E-02	3.795
		98.44		1.153E-01	1.373E-01	1.848E-01	1.032E-01	0.624
		99.86		1.039E+00	5.737E-01	9.712E-01	8.752E-02	1.070
		111.00		1.052E-02	2.242E-01	3.706E-01	4.859E-02	0.028
		131.20		6.991E-02	1.401E-01	2.341E-01	2.430E-02	0.299
		152.70		1.828E-01	4.393E-01	7.277E-01	1.238E-01	0.251
	+	186.00		7.676E+00	3.307E+00	3.594E+00	1.111E+00	2.136
		226.40		6.025E-02	5.605E-01	9.066E-01	1.135E-01	0.066
		227.20		-1.476E-01	5.955E-01	9.460E-01	7.131E-02	-0.156
		248.90		-1.733E-01	1.197E+00	1.903E+00	4.190E-01	-0.091
		293.70		5.270E+00	1.502E+00	2.194E+00	3.663E-01	2.403
		369.80		9.220E-02	1.345E+00	2.251E+00	4.718E-01	0.041
		568.70		5.264E-01	1.624E+00	2.713E+00	1.932E-01	0.194
		569.50		1.549E-01	4.516E-01	7.552E-01	5.380E-02	0.205
		574.00		-1.429E+00	2.476E+00	3.861E+00	2.760E-01	-0.370
		699.00		-6.823E-01	1.143E+00	1.736E+00	3.236E-01	-0.393
		706.10		9.304E-01	1.861E+00	3.046E+00	1.352E+00	0.305
		733.00		3.720E-01	6.929E-01	1.070E+00	2.335E-01	0.348
		742.81		-6.976E-01	2.129E+00	3.226E+00	2.165E+00	-0.216
		796.30		1.824E+00	1.464E+00	2.557E+00	6.836E-01	0.713
		805.60		6.540E-01	1.576E+00	2.712E+00	8.236E-01	0.241
		819.60		1.513E+00	1.920E+00	3.297E+00	1.246E+00	0.459
		826.30		-6.353E-01	1.314E+00	2.050E+00	9.131E-01	-0.310
		831.60		1.203E-01	9.484E-01	1.603E+00	4.736E-01	0.075
		876.40		8.972E-02	1.296E+00	2.170E+00	2.229E+00	0.041
		880.51		1.545E-01	4.197E-01	7.243E-01	5.333E-02	0.213
		883.24		-3.157E-02	4.143E-01	6.843E-01	4.590E-01	-0.046
		899.00		3.967E-01	1.315E+00	2.233E+00	9.706E-01	0.178
		925.00		-2.652E+00	1.829E+00	2.560E+00	1.842E-01	-1.036
		926.50		-1.159E-01	2.664E-01	4.208E-01	1.045E-01	-0.275
		946.00	*	1.831E-01	4.317E-01	7.461E-01	1.352E-01	0.245
		949.00		3.207E-01	6.481E-01	1.129E+00	8.009E-02	0.284
		980.50		3.107E-01	1.207E+00	2.048E+00	1.421E-01	0.152

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-3.755E-01	1.776E+00	2.755E+00	1.785E+00	-0.136
PA-234M		766.41		1.878E+01	3.798E+01	5.170E+01	3.959E+01	0.363
		1001.03	*	4.180E+00	9.840E+00	1.695E+01	1.671E+00	0.247
U-234	+	609.31	*	1.335E+00	2.498E-01	3.787E-01	3.398E-02	3.526
	+	768.36		1.491E+00	1.530E+00	2.063E+00	1.993E-01	0.723
		934.06		8.663E-01	1.842E+00	3.186E+00	3.024E-01	0.272
	+	1120.29		1.754E+00	6.577E-01	1.106E+00	9.874E-02	1.586
		1238.11		4.785E-01	1.395E+00	2.354E+00	1.887E-01	0.203
	+	1377.67		2.595E+00	1.587E+00	2.575E+00	2.201E-01	1.008
		1764.49		1.705E+00	5.542E-01	1.173E+00	6.746E-02	1.453
NP-236		94.67		1.282E+00	2.145E-01	3.365E-01	2.887E-02	3.810
		98.44		8.714E-02	9.200E-02	1.397E-01	1.242E-02	0.624
		111.00		7.956E-03	1.696E-01	2.803E-01	2.805E-02	0.028
		160.31	*	3.318E-02	1.064E-01	1.758E-01	1.380E-02	0.189
NP-239		99.55		3.469E-01	1.978E-01	3.233E-01	2.905E-02	1.073
		117.00	*	-8.934E-02	2.383E-01	3.862E-01	4.087E-02	-0.231
	+	209.75		1.250E+00	1.330E+00	1.865E+00	1.399E-01	0.670
		228.18		-3.858E-02	3.146E-01	5.030E-01	3.792E-02	-0.077
	+	277.60		2.158E-01	2.879E-01	4.330E-01	3.221E-02	0.499
		334.30		6.562E-01	2.358E+00	3.093E+00	2.130E-01	0.212
AM-241		59.54	*	1.781E-01	9.710E-02	1.508E-01	1.464E-02	1.181
CM-243		99.55		3.569E-01	2.035E-01	3.326E-01	2.989E-02	1.073
		103.76	*	-6.986E-02	1.147E-01	1.848E-01	1.728E-02	-0.378
		117.00		-9.190E-02	2.451E-01	3.973E-01	4.204E-02	-0.231
	+	209.75		1.232E+00	1.311E+00	1.839E+00	1.379E-01	0.670
		228.18		-3.898E-02	3.179E-01	5.082E-01	3.831E-02	-0.077
	+	277.60		2.176E-01	2.902E-01	4.365E-01	3.247E-02	0.499
CM-247	+	278.00		8.951E-01	1.194E+00	1.781E+00	1.325E-01	0.503
		287.40		-5.036E-01	1.699E+00	2.820E+00	2.081E-01	-0.179
		402.60	*	-2.190E-02	6.208E-02	1.011E-01	5.942E-03	-0.217
CF-249		252.85		-1.237E+00	1.311E+00	1.989E+00	1.498E-01	-0.622
		333.44		3.178E-02	4.036E-01	4.000E-01	2.760E-02	0.079
		387.95	*	4.177E-02	6.239E-02	1.076E-01	6.311E-03	0.388
CF-251		176.60	*	1.185E-01	1.732E-01	2.893E-01	2.130E-02	0.409
		227.00		-2.536E-01	5.363E-01	8.419E-01	6.346E-02	-0.301
		285.00		2.541E-01	2.466E+00	4.176E+00	3.089E-01	0.061

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433012      *
* Acquisition date :  7-JUL-2009 07:03:41 Detector SN#    :                 *
* Detector ID        : GAM17               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 03:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 03:00:11.78      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433012           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 7.5900E+01 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.644E+01	2.690E+00	7.562E-01	0.000E+00
CD-109	3.079E+00	9.314E-01	1.292E+00	0.000E+00
SN-126	3.033E-01	9.173E-02	1.271E-01	0.000E+00
BA-137M	2.926E+00	2.785E-01	7.944E-02	0.000E+00
CS-137	3.093E+00	2.948E-01	8.397E-02	0.000E+00
CE-141	9.890E-02	1.065E-01	1.284E-01	0.000E+00
HG-203	4.838E-02	6.324E-02	8.826E-02	0.000E+00
TL-208	4.413E-01	1.044E-01	8.184E-02	0.000E+00
BI-210	6.299E+00	1.283E+00	1.137E+00	0.000E+00
PB-210	6.299E+00	1.283E+00	1.137E+00	0.000E+00
PO-210	6.299E+00	1.260E+00	1.137E+00	0.000E+00
BI-211	3.100E+00	6.494E-01	4.753E-01	0.000E+00
PB-212	1.481E+00	1.826E-01	1.206E-01	0.000E+00
PO-212	1.481E+00	1.826E-01	1.206E-01	0.000E+00
PB-214	1.078E+00	2.325E-01	1.657E-01	0.000E+00
PO-214	1.078E+00	2.325E-01	1.657E-01	0.000E+00
PO-216	1.481E+00	1.826E-01	1.206E-01	0.000E+00
PO-218	1.078E+00	2.325E-01	1.657E-01	0.000E+00
RA-224	3.949E+00	1.725E+00	1.374E+00	0.000E+00
AC-228	1.391E+00	4.265E-01	3.594E-01	0.000E+00
RA-228	1.391E+00	4.265E-01	3.594E-01	0.000E+00
TH-228	1.481E+00	1.826E-01	1.206E-01	0.000E+00
TH-232	1.391E+00	4.265E-01	3.594E-01	0.000E+00
TH-234	4.474E+00	1.308E+00	1.377E+00	0.000E+00
U-235	3.392E-01	3.687E-01	4.329E-01	0.000E+00
NP-237	8.905E-01	3.240E-01	3.724E-01	0.000E+00
U-238	4.474E+00	1.308E+00	1.377E+00	0.000E+00
AM-243	3.377E-01	6.103E-02	7.743E-02	0.000E+00
ANH-511	1.704E-01	9.448E-02	7.789E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line Activity	K.L. Act error	MDA

Nuclide	(pCi/GRAM	) Ided	(pCi/GRAM	)	
BE-7	5.450E-01	5.641E-01	9.712E-01	0.000E+00	NOT IDENT.
NA-22	-2.776E-02	6.018E-02	9.258E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.600E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.923E-02	4.519E-02	8.463E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.896E-02	7.899E-02	0.000E+00	FAIL ABUN
SC-46	-1.194E-02	5.236E-02	8.508E-02	0.000E+00	FAIL ABUN
V-48	3.828E-02	1.073E-01	1.835E-01	0.000E+00	NOT IDENT.
CR-51	7.111E-02	5.273E-01	8.812E-01	0.000E+00	NOT IDENT.
MN-52	4.586E-02	3.088E-01	5.123E-01	0.000E+00	NOT IDENT.
MN-54	-2.761E-02	5.591E-02	8.938E-02	0.000E+00	NOT IDENT.
CO-56	2.690E-02	5.931E-02	1.028E-01	0.000E+00	NOT IDENT.
CO-57	1.138E-02	3.146E-02	5.145E-02	0.000E+00	NOT IDENT.
CO-58	-8.836E-04	5.455E-02	9.109E-02	0.000E+00	NOT IDENT.
FE-59	-1.142E-03	1.519E-01	2.501E-01	0.000E+00	FAIL ABUN
CO-60	-9.829E-03	5.907E-02	9.416E-02	0.000E+00	NOT IDENT.
ZN-65	1.287E-01	1.659E-01	2.615E-01	0.000E+00	NOT IDENT.
GE-68	1.033E+00	1.911E+00	3.315E+00	0.000E+00	NOT IDENT.
AS-73	4.297E-01	3.139E-01	5.314E-01	0.000E+00	NOT IDENT.
AS-74	-3.552E-02	1.422E-01	2.262E-01	0.000E+00	NOT IDENT.
SE-75	5.223E-03	6.679E-02	9.253E-02	0.000E+00	FAIL ABUN
BR-77	-3.172E+00	1.092E+01	1.742E+01	0.000E+00	FAIL ABUN
SR-82	-2.963E-01	5.381E-01	8.580E-01	0.000E+00	NOT IDENT.
RB-83	9.794E-03	1.032E-01	1.695E-01	0.000E+00	NOT IDENT.
RB-84	4.287E-02	1.003E-01	1.736E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.280E+01	2.071E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	6.474E-02	1.047E-01	0.000E+00	NOT IDENT.
RB-86	-3.297E-01	1.205E+00	1.934E+00	0.000E+00	NOT IDENT.
Y-88	1.675E-02	3.579E-02	6.715E-02	0.000E+00	NOT IDENT.
ZR-88	-6.294E-02	4.950E-02	7.290E-02	0.000E+00	NOT IDENT.
Y-91	1.636E+01	2.812E+01	4.857E+01	0.000E+00	NOT IDENT.
NB-94	-1.855E-02	5.519E-02	8.632E-02	0.000E+00	NOT IDENT.
NB-95	-2.058E-02	8.699E-02	1.173E-01	0.000E+00	NOT IDENT.
NB-95M	3.724E-02	1.897E-01	2.657E-01	0.000E+00	NOT IDENT.
ZR-95	3.077E-02	1.047E-01	1.725E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	5.156E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	9.849E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-6.529E+00	1.322E+01	2.018E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.578E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.234E-02	4.557E-02	7.346E-02	0.000E+00	NOT IDENT.
RH-102	-1.059E-04	5.350E-02	8.755E-02	0.000E+00	NOT IDENT.
RU-103	-2.047E-02	6.119E-02	9.752E-02	0.000E+00	FAIL ABUN
RH-106	-2.299E-01	4.729E-01	7.312E-01	0.000E+00	FAIL ABUN
RU-106	-2.299E-01	4.724E-01	7.312E-01	0.000E+00	FAIL ABUN
AG-108M	4.142E-03	5.388E-02	8.890E-02	0.000E+00	NOT IDENT.
AG-110M	7.418E-02	6.356E-02	9.977E-02	0.000E+00	NOT IDENT.
IN-111	-3.489E-01	1.215E+00	1.643E+00	0.000E+00	NOT IDENT.
IN-113M	5.729E-05	6.709E-02	1.106E-01	0.000E+00	NOT IDENT.
SN-113	5.729E-05	6.709E-02	1.106E-01	0.000E+00	NOT IDENT.
IN-114M	1.642E-01	2.549E-01	3.700E-01	0.000E+00	NOT IDENT.
CD-115	2.570E+00	1.130E+01	1.871E+01	0.000E+00	NOT IDENT.
SN-117M	-9.485E-02	6.781E-02	1.015E-01	0.000E+00	NOT IDENT.
SB-122	1.605E+00	2.371E+00	4.034E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.430E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.852E-02	3.651E-02	5.645E-02	0.000E+00	NOT IDENT.
I-124	-3.307E-01	1.022E+00	1.381E+00	0.000E+00	FAIL ABUN
SB-124	-6.574E-02	1.201E-01	1.807E-01	0.000E+00	NOT IDENT.
SB-125	-2.226E-02	1.506E-01	2.453E-01	0.000E+00	NOT IDENT.
TE-125M	-1.555E+00	1.102E+01	1.772E+01	0.000E+00	NOT IDENT.
I-126	2.486E-02	2.778E-01	3.911E-01	0.000E+00	NOT IDENT.
SB-126	-2.189E-01	2.585E-01	3.189E-01	0.000E+00	FAIL ABUN
SB-127	-5.669E-01	1.676E+00	2.617E+00	0.000E+00	NOT IDENT.
XE-127	-6.258E-02	6.699E-02	9.805E-02	0.000E+00	FAIL ABUN
I-131	-1.124E-01	1.574E-01	2.497E-01	0.000E+00	NOT IDENT.
TE-132	-8.941E-02	7.147E-01	1.127E+00	0.000E+00	NOT IDENT.
BA-133	6.270E-03	7.610E-02	1.101E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.354E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.556E-02	6.963E-02	1.261E-01	0.000E+00	NOT IDENT.
CS-135	3.399E-01	2.561E-01	3.831E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.979E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.268E-02	1.305E-01	2.236E-01	0.000E+00	FAIL ABUN
CE-139	8.473E-03	3.954E-02	6.389E-02	0.000E+00	NOT IDENT.
BA-140	1.847E-01	3.823E-01	6.367E-01	0.000E+00	NOT IDENT.
LA-140	8.960E-03	1.098E-01	1.864E-01	0.000E+00	FAIL ABUN
CE-143	0.000E+00	1.430E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-6.993E-02	2.629E-01	4.185E-01	0.000E+00	NOT IDENT.
PM-144	-2.845E-02	5.381E-02	8.257E-02	0.000E+00	NOT IDENT.

PR-144	-1.926E+00	3.644E+00	5.591E+00	0.000E+00	NOT IDENT.
PM-146	2.468E-02	7.666E-02	1.279E-01	0.000E+00	NOT IDENT.
ND-147	1.752E-01	8.252E-01	1.364E+00	0.000E+00	FAIL ABUN
PM-149	-6.027E+01	8.413E+01	1.345E+02	0.000E+00	NOT IDENT.
EU-152	-5.633E-02	1.652E-01	2.317E-01	0.000E+00	NOT IDENT.
GD-153	-7.904E-03	1.025E-01	1.454E-01	0.000E+00	FAIL ABUN
EU-154	-7.945E-02	1.681E-01	2.580E-01	0.000E+00	NOT IDENT.
EU-155	-1.343E-02	1.257E-01	2.027E-01	0.000E+00	FAIL ABUN
TB-160	5.088E-02	2.009E-01	3.427E-01	0.000E+00	FAIL ABUN
HO-166M	4.986E-03	1.057E-01	1.706E-01	0.000E+00	NOT IDENT.
TM-171	-9.480E-01	2.213E+01	3.143E+01	0.000E+00	NOT IDENT.
LU-176	1.466E-02	3.639E-02	6.017E-02	0.000E+00	FAIL ABUN
LU-177	1.541E+00	1.607E+00	2.150E+00	0.000E+00	FAIL ABUN
LU-177M	-3.264E-01	2.819E-01	4.320E-01	0.000E+00	NOT IDENT.
HF-181	-8.493E-02	7.171E-02	1.082E-01	0.000E+00	NOT IDENT.
W-181	0.000E+00	3.169E-01	4.874E-01	0.000E+00	NOT IDENT.
TA-182	-2.463E-01	2.855E-01	4.259E-01	0.000E+00	FAIL ABUN
RE-183	6.323E-02	1.458E-01	2.377E-01	0.000E+00	FAIL ABUN
RE-184	-3.280E-01	3.405E-01	5.103E-01	0.000E+00	NOT IDENT.
OS-185	1.085E-02	6.650E-02	1.089E-01	0.000E+00	NOT IDENT.
RE-188	1.534E-01	2.164E-01	3.568E-01	0.000E+00	NOT IDENT.
W-188	5.545E+00	1.090E+01	1.637E+01	0.000E+00	FAIL ABUN
IR-192	1.307E-02	4.893E-02	8.234E-02	0.000E+00	FAIL ABUN
AU-195	3.948E-01	2.915E-01	4.398E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.110E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-4.532E+00	7.059E+00	1.099E+01	0.000E+00	NOT IDENT.
TL-202	3.733E-02	1.051E-01	1.761E-01	0.000E+00	NOT IDENT.
BI-207	-1.232E-02	7.609E-02	1.234E-01	0.000E+00	FAIL ABUN
TL-207	-4.077E-01	1.075E+00	1.506E+00	0.000E+00	FAIL ABUN
PO-209	-2.674E+00	1.141E+01	1.857E+01	0.000E+00	NOT IDENT.
PB-211	-4.936E-01	1.533E+00	2.431E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.156E-01	8.402E-01	0.000E+00	FAIL ABUN
BI-214	0.000E+00	2.448E-01	3.696E-01	0.000E+00	FAIL ABUN
PO-215	-4.077E-01	1.075E+00	1.506E+00	0.000E+00	FAIL ABUN
RN-219	-3.804E-01	6.844E-01	1.091E+00	0.000E+00	FAIL ABUN
RN-220	-2.271E+01	4.102E+01	6.389E+01	0.000E+00	NOT IDENT.
RA-223	-4.077E-01	1.075E+00	1.506E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	2.448E-01	3.696E-01	0.000E+00	FAIL ABUN
AC-227	6.454E-03	5.242E-01	8.295E-01	0.000E+00	FAIL ABUN
TH-227	6.454E-03	5.242E-01	8.295E-01	0.000E+00	FAIL ABUN
TH-229	-1.747E-01	6.901E-01	1.088E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.448E-01	3.696E-01	0.000E+00	FAIL ABUN
PA-231	1.917E+00	2.217E+00	3.634E+00	0.000E+00	FAIL ABUN
TH-231	-4.077E-01	1.075E+00	1.506E+00	0.000E+00	FAIL ABUN
U-231	-5.498E-02	1.140E+00	1.619E+00	0.000E+00	FAIL ABUN
PA-233	-4.954E-02	8.990E-02	1.450E-01	0.000E+00	FAIL ABUN
PA-234	1.831E-01	4.231E-01	7.310E-01	0.000E+00	FAIL ABUN
PA-234M	4.180E+00	9.643E+00	1.661E+01	0.000E+00	NOT IDENT.
U-234	0.000E+00	2.448E-01	3.696E-01	0.000E+00	FAIL ABUN
NP-236	3.318E-02	1.043E-01	1.694E-01	0.000E+00	NOT IDENT.
NP-239	-8.934E-02	2.335E-01	3.711E-01	0.000E+00	FAIL ABUN
AM-241	0.000E+00	9.516E-02	1.440E-01	0.000E+00	NOT IDENT.
CM-243	-6.986E-02	1.124E-01	1.774E-01	0.000E+00	FAIL ABUN
CM-247	-2.190E-02	6.084E-02	9.827E-02	0.000E+00	FAIL ABUN
CF-249	4.177E-02	6.115E-02	1.045E-01	0.000E+00	NOT IDENT.
CF-251	1.185E-01	1.697E-01	2.791E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:04:17.23

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433012.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:03:41.
Sample ID         : G232433012           Sample quantity  : 7.59000E+01 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 03:00:00.00         Elapsed real time: 0 03:00:11.78  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	683	10.67*	7.984E-01	2.644E+01	2.644E+01	10.38
CD-109	88.03	224	3.72*	6.573E+00	3.016E+00	3.079E+00	30.87
SN-126	64.28	343	9.60	6.650E+00	1.771E+00	1.771E+00	28.22
	86.94	224	8.90	6.573E+00	1.261E+00	1.261E+00	50.88
	87.57	224	37.00*	6.573E+00	3.033E-01	3.033E-01	30.87
BA-137M	661.65	1290	89.98*	1.617E+00	2.923E+00	2.926E+00	9.71
CS-137	661.65	1290	85.12*	1.617E+00	3.090E+00	3.093E+00	9.73
CE-141	145.44	61	48.40*	5.690E+00	7.360E-02	9.890E-02	109.87
HG-203	70.83	------	4.75	6.658E+00	------	Line Not Found	------
	72.87	------	8.00	6.655E+00	------	Line Not Found	------
	82.60	------	3.55	6.611E+00	------	Line Not Found	------
	279.20	34	77.30*	3.646E+00	3.937E-02	4.838E-02	133.38
TL-208	277.35	34	6.80	3.646E+00	4.476E-01	4.476E-01	133.66
	510.84	107	21.60	2.073E+00	7.887E-01	7.887E-01	57.20
	583.14	206	84.20*	1.824E+00	4.413E-01	4.413E-01	24.14
	860.37	------	12.46	1.267E+00	------	Line Not Found	------
BI-210	46.50	507	4.05*	6.560E+00	6.291E+00	6.299E+00	20.79
PB-210	46.50	507	4.05*	6.560E+00	6.291E+00	6.299E+00	20.79
PO-210	46.50	507	4.05*	6.560E+00	6.291E+00	6.299E+00	20.41
BI-211	72.87	------	1.27	6.655E+00	------	Line Not Found	------
	351.07	360	12.94*	2.956E+00	3.100E+00	3.100E+00	21.38
PB-212	74.81	449	10.70	6.649E+00	2.083E+00	2.083E+00	20.68
	77.11	687	18.00	6.641E+00	1.896E+00	1.896E+00	14.28
	87.30	224	8.00	6.573E+00	1.403E+00	1.403E+00	32.45
	238.63	827	44.60*	4.131E+00	1.481E+00	1.481E+00	12.59
	300.09	64	3.41	3.410E+00	1.820E+00	1.820E+00	75.30
PO-212	74.81	449	10.70	6.649E+00	2.083E+00	2.083E+00	20.68
	77.11	687	18.00	6.641E+00	1.896E+00	1.896E+00	14.28
	87.30	224	8.00	6.573E+00	1.403E+00	1.403E+00	32.45
	115.19	------	0.60	6.204E+00	------	Line Not Found	------
	238.63	827	44.60*	4.131E+00	1.481E+00	1.481E+00	12.59
	300.09	64	3.41	3.410E+00	1.820E+00	1.820E+00	75.30

Sample ID : G232433012 Acquisition date : 7-JUL-2009 07:03:41

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	449	6.21	6.649E+00	3.589E+00	3.589E+00	19.88
	77.11	687	10.50	6.641E+00	3.250E+00	3.250E+00	16.19
	87.30	224	4.67	6.573E+00	2.403E+00	2.403E+00	31.81
	241.98	193	7.49	4.090E+00	2.083E+00	2.083E+00	44.93
	295.21	243	19.20	3.462E+00	1.206E+00	1.206E+00	26.85
	351.92	360	37.20*	2.956E+00	1.078E+00	1.078E+00	22.00
PO-214	74.81	449	6.21	6.649E+00	3.589E+00	3.589E+00	19.88
	77.11	687	10.50	6.641E+00	3.250E+00	3.250E+00	16.19
	87.30	224	4.67	6.573E+00	2.403E+00	2.403E+00	31.81
	241.98	193	7.49	4.090E+00	2.083E+00	2.083E+00	44.93
	295.21	243	19.20	3.462E+00	1.206E+00	1.206E+00	26.85
	351.92	360	37.20*	2.956E+00	1.078E+00	1.078E+00	22.00
PO-216	74.81	449	10.70	6.649E+00	2.083E+00	2.083E+00	20.68
	77.11	687	18.00	6.641E+00	1.896E+00	1.896E+00	14.28
	87.30	224	8.00	6.573E+00	1.403E+00	1.403E+00	32.45
	238.63	827	44.60*	4.131E+00	1.481E+00	1.481E+00	12.59
	300.09	64	3.41	3.410E+00	1.820E+00	1.820E+00	75.30
PO-218	74.81	449	6.21	6.649E+00	3.589E+00	3.589E+00	19.88
	77.11	687	10.50	6.641E+00	3.250E+00	3.250E+00	16.19
	87.30	224	4.67	6.573E+00	2.403E+00	2.403E+00	31.81
	241.98	193	7.49	4.090E+00	2.083E+00	2.083E+00	44.93
	295.21	243	19.20	3.462E+00	1.206E+00	1.206E+00	26.85
	351.92	360	37.20*	2.956E+00	1.078E+00	1.078E+00	22.00
RA-224	240.98	193	3.95*	4.090E+00	3.949E+00	3.949E+00	44.58
AC-228	338.32	145	11.40	3.064E+00	1.367E+00	1.367E+00	54.81
	911.07	141	27.70*	1.203E+00	1.391E+00	1.391E+00	31.30
	969.11	72	16.60	1.138E+00	1.249E+00	1.249E+00	64.02
RA-228	338.32	145	11.40	3.064E+00	1.367E+00	1.367E+00	54.81
	911.07	141	27.70*	1.203E+00	1.391E+00	1.391E+00	31.30
	969.11	72	16.60	1.138E+00	1.249E+00	1.249E+00	64.02
TH-228	84.40	82	1.21	6.598E+00	3.406E+00	3.406E+00	88.72
	238.60	827	44.60*	4.131E+00	1.481E+00	1.481E+00	12.59
	300.10	64	3.41	3.410E+00	1.820E+00	1.820E+00	95.26
TH-232	338.32	145	11.40	3.064E+00	1.367E+00	1.367E+00	37.10
	911.07	141	27.70*	1.203E+00	1.391E+00	1.391E+00	31.30
	969.11	72	16.60	1.138E+00	1.249E+00	1.249E+00	64.02
TH-234	63.29	343	3.80*	6.650E+00	4.474E+00	4.474E+00	29.83
	92.38	568	5.41	6.518E+00	5.310E+00	5.310E+00	22.95
U-235	89.95	171	2.70	6.547E+00	3.189E+00	3.189E+00	49.05
	93.35	568	4.50	6.518E+00	6.384E+00	6.384E+00	31.38
	105.00	------	2.10	6.362E+00	------ Line Not Found		------
	143.76	61	10.50*	5.690E+00	3.392E-01	3.392E-01	110.91
	163.35	------	4.70	5.337E+00	------ Line Not Found		------
	185.71	230	54.00	4.936E+00	2.843E-01	2.843E-01	30.93
	205.31	------	4.70	4.621E+00	------ Line Not Found		------
NP-237	86.50	224	12.60*	6.573E+00	8.905E-01	8.905E-01	37.13
	95.87	------	2.60	6.484E+00	------ Line Not Found		------
U-238	63.29	343	3.80*	6.650E+00	4.474E+00	4.474E+00	29.83
	92.38	568	5.41	6.518E+00	5.310E+00	5.310E+00	16.55

Sample ID : G232433012 Acquisition date : 7-JUL-2009 07:03:41

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	449	66.00*	6.649E+00	3.377E-01	3.377E-01	18.44
	86.72	224	0.34	6.573E+00	3.339E+01	3.339E+01	30.87
	117.66	------	0.55	6.163E+00	------ Line Not Found		------
	142.18	------	0.13	5.726E+00	------ Line Not Found		------
ANH-511	511.00	107	100.00*	2.073E+00	1.704E-01	1.704E-01	56.59

Flag: "*" = Keyline

Sample ID : G232433012 Acquisition date : 7-JUL-2009 07:03:41

Total number of lines in spectrum 31
Number of unidentified lines 0
Number of lines tentatively identified by NID 31 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.644E+01	2.644E+01	0.274E+01	10.38	
CD-109	464.00D	1.02	3.016E+00	3.079E+00	0.950E+00	30.87	
SN-126	1.00E+05Y	1.00	3.033E-01	3.033E-01	0.936E-01	30.87	
BA-137M	30.17Y	1.00	2.923E+00	2.926E+00	0.284E+00	9.71	
CS-137	30.17Y	1.00	3.090E+00	3.093E+00	0.301E+00	9.73	
CE-141	32.50D	1.34	7.360E-02	9.890E-02	10.87E-02	109.87	
HG-203	46.60D	1.23	3.937E-02	4.838E-02	6.453E-02	133.38	
TL-208	1.41E+10Y	1.00	4.413E-01	4.413E-01	1.065E-01	24.14	
BI-210	22.26Y	1.00	6.291E+00	6.299E+00	1.310E+00	20.79	
PB-210	22.26Y	1.00	6.291E+00	6.299E+00	1.310E+00	20.79	
PO-210	22.26Y	1.00	6.291E+00	6.299E+00	1.286E+00	20.41	
BI-211	7.04E+08Y	1.00	3.100E+00	3.100E+00	0.663E+00	21.38	
PB-212	1.41E+10Y	1.00	1.481E+00	1.481E+00	0.186E+00	12.59	
PO-212	1.41E+10Y	1.00	1.481E+00	1.481E+00	0.186E+00	12.59	
PB-214	1600.00Y	1.00	1.078E+00	1.078E+00	0.237E+00	22.00	
PO-214	1600.00Y	1.00	1.078E+00	1.078E+00	0.237E+00	22.00	
PO-216	1.41E+10Y	1.00	1.481E+00	1.481E+00	0.186E+00	12.59	
PO-218	1600.00Y	1.00	1.078E+00	1.078E+00	0.237E+00	22.00	
RA-224	1.41E+10Y	1.00	3.949E+00	3.949E+00	1.760E+00	44.58	
AC-228	1.41E+10Y	1.00	1.391E+00	1.391E+00	0.435E+00	31.30	
RA-228	1.41E+10Y	1.00	1.391E+00	1.391E+00	0.435E+00	31.30	
TH-228	1.41E+10Y	1.00	1.481E+00	1.481E+00	0.186E+00	12.59	
TH-232	1.41E+10Y	1.00	1.391E+00	1.391E+00	0.435E+00	31.30	
TH-234	4.47E+09Y	1.00	4.474E+00	4.474E+00	1.335E+00	29.83	
U-235	7.04E+08Y	1.00	3.392E-01	3.392E-01	3.763E-01	110.91	
NP-237	2.14E+06Y	1.00	8.905E-01	8.905E-01	3.306E-01	37.13	
U-238	4.47E+09Y	1.00	4.474E+00	4.474E+00	1.335E+00	29.83	
AM-243	7380.00Y	1.00	3.377E-01	3.377E-01	0.623E-01	18.44	
ANH-511	1.00E+09Y	1.00	1.704E-01	1.704E-01	0.964E-01	56.59	
	Total Activity :		8.627E+01	8.639E+01			

Grand Total Activity : 8.627E+01 8.639E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433012 Acquisition date : 7-JUL-2009 07:03:41

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	209.23	56	256	1.01	419.43	415	9	5.19E-03	****	4.56E+00	T
0	270.45	67	238	1.11	541.79	537	11	6.24E-03	92.2	3.73E+00	T
0	328.34	72	98	1.76	657.49	653	9	6.65E-03	55.5	3.15E+00	T
0	609.17	328	74	1.39	1218.81	1212	14	3.04E-02	16.4	1.75E+00	T
0	726.67	51	46	1.84	1453.70	1446	12	4.71E-03	64.8	1.48E+00	T
0	768.37	32	62	1.24	1537.07	1531	11	2.97E-03	****	1.41E+00	T
0	1119.97	81	36	1.35	2240.01	2236	11	7.46E-03	36.4	1.00E+00	T
0	1376.94	27	9	1.60	2753.83	2747	13	2.52E-03	60.6	8.40E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:04:22.47

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433012.CNF;1 *
* Acquisition date  : 7-JUL-2009 07:03:41.  Detector SN#     :             *
* Detector ID       : GAM17                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 03:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 03:00:11.78          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433012            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 7.59000E+01 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14.8MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.644E+01	2.745E+00	7.687E-01	4.726E-02	34.397
CD-109	3.079E+00	9.504E-01	1.348E+00	1.086E-01	2.284
SN-126	3.033E-01	9.360E-02	1.326E-01	1.070E-02	2.286
BA-137M	2.926E+00	2.842E-01	8.134E-02	6.125E-03	35.971
CS-137	3.093E+00	3.009E-01	8.598E-02	6.491E-03	35.971
CE-141	9.890E-02	1.087E-01	1.334E-01	1.247E-02	0.742
HG-203	4.838E-02	6.453E-02	9.110E-02	7.028E-03	0.531
TL-208	4.413E-01	1.065E-01	8.390E-02	6.652E-03	5.260
BI-210	6.299E+00	1.310E+00	1.194E+00	9.557E-02	5.274
PB-210	6.299E+00	1.310E+00	1.194E+00	9.557E-02	5.274
PO-210	6.299E+00	1.286E+00	1.194E+00	8.311E-02	5.274
BI-211	3.100E+00	6.627E-01	4.895E-01	3.517E-02	6.332
PB-212	1.481E+00	1.864E-01	1.247E-01	1.094E-02	11.871
PO-212	1.481E+00	1.864E-01	1.247E-01	1.094E-02	11.871
PB-214	1.078E+00	2.373E-01	1.707E-01	1.514E-02	6.317
PO-214	1.078E+00	2.373E-01	1.707E-01	1.514E-02	6.317
PO-216	1.481E+00	1.864E-01	1.247E-01	1.094E-02	11.871
PO-218	1.078E+00	2.373E-01	1.707E-01	1.514E-02	6.317

Sample ID : G232433012 Acquisition date : 7-JUL-2009 07:03:41

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-224	3.949E+00	1.760E+00	1.420E+00	1.071E-01	2.781
AC-228	1.391E+00	4.352E-01	3.669E-01	3.754E-02	3.790
RA-228	1.391E+00	4.352E-01	3.669E-01	3.754E-02	3.790
TH-228	1.481E+00	1.864E-01	1.247E-01	1.094E-02	11.873
TH-232	1.391E+00	4.352E-01	3.669E-01	3.754E-02	3.790
TH-234	4.474E+00	1.335E+00	1.441E+00	2.615E-01	3.104
U-235	3.392E-01	3.763E-01	4.496E-01	8.038E-02	0.754
NP-237	8.905E-01	3.306E-01	3.887E-01	8.615E-02	2.291
U-238	4.474E+00	1.335E+00	1.441E+00	2.615E-01	3.104
AM-243	3.377E-01	6.228E-02	8.094E-02	6.867E-03	4.172
ANH-511	1.704E-01	9.641E-02	7.995E-02	5.403E-03	2.131

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	5.450E-01		5.756E-01	9.975E-01	7.355E-02	0.546
NA-22	-2.776E-02		6.141E-02	9.423E-02	5.340E-03	-0.295
NA-24	-1.057E-01		1.326E-01	Half-Life too short		
AL-26	2.923E-02		4.611E-02	8.586E-02	4.909E-03	0.340
TI-44	3.498E-01	+	4.996E-02	8.252E-02	6.894E-03	4.239
SC-46	-1.194E-02		5.343E-02	8.688E-02	6.368E-03	-0.137
V-48	3.828E-02		1.095E-01	1.872E-01	1.296E-02	0.204
CR-51	7.111E-02		5.380E-01	9.084E-01	6.928E-02	0.078
MN-52	4.586E-02		3.151E-01	5.208E-01	3.010E-02	0.088
MN-54	-2.761E-02		5.705E-02	9.133E-02	6.851E-03	-0.302
CO-56	2.690E-02		6.052E-02	1.050E-01	7.847E-03	0.256
CO-57	1.138E-02		3.210E-02	5.352E-02	5.938E-03	0.213
CO-58	-8.836E-04		5.566E-02	9.310E-02	7.055E-03	-0.009
FE-59	-1.142E-03		1.550E-01	2.548E-01	1.810E-02	-0.004
CO-60	-9.829E-03		6.027E-02	9.580E-02	5.471E-03	-0.103
ZN-65	1.287E-01		1.693E-01	2.665E-01	1.610E-02	0.483
GE-68	1.033E+00		1.950E+00	3.380E+00	2.138E-01	0.306
AS-73	4.297E-01		3.203E-01	5.573E-01	4.522E-02	0.771
AS-74	-3.552E-02		1.451E-01	2.318E-01	1.683E-02	-0.153
SE-75	5.223E-03		6.816E-02	9.556E-02	7.209E-03	0.055
BR-77	-3.172E+00		1.114E+01	1.788E+01	1.220E+00	-0.177
SR-82	-2.963E-01		5.491E-01	8.773E-01	6.669E-02	-0.338
RB-83	9.794E-03		1.054E-01	1.740E-01	1.187E-02	0.056
RB-84	4.287E-02		1.023E-01	1.773E-01	1.305E-02	0.242
KR-85	2.237E+01		1.306E+01	2.125E+01	1.441E+00	1.053
SR-85	1.132E-01		6.606E-02	1.075E-01	7.287E-03	1.053
RB-86	-3.297E-01		1.229E+00	1.971E+00	1.248E-01	-0.167
Y-88	1.675E-02		3.653E-02	6.811E-02	3.889E-03	0.246
ZR-88	-6.294E-02		5.051E-02	7.501E-02	4.341E-03	-0.839
Y-91	1.636E+01		2.869E+01	4.946E+01	2.753E+00	0.331
NB-94	-1.855E-02		5.632E-02	8.834E-02	6.711E-03	-0.210
NB-95	-2.058E-02		8.876E-02	1.199E-01	9.127E-03	-0.172

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	3.724E-02		1.935E-01	2.747E-01	2.456E-02	0.136
ZR-95	3.077E-02		1.068E-01	1.764E-01	1.516E-02	0.174
NB-97	8.755E-02		2.631E-02	Half-Life too short		
ZR-97	2.058E+00		5.025E-01	Half-Life too short		
MO-99	-6.529E+00		1.349E+01	2.064E+01	3.022E+00	-0.316
TC-99M	-8.468E+08		8.050E+08	Half-Life too short		
RH-101	1.234E-02		4.650E-02	7.608E-02	5.676E-03	0.162
RH-102	-1.059E-04		5.459E-02	8.993E-02	5.840E-03	-0.001
RU-103	-2.047E-02		6.244E-02	1.001E-01	1.308E-02	-0.204
RH-106	-2.299E-01		4.826E-01	7.492E-01	9.435E-02	-0.307
RU-106	-2.299E-01		4.820E-01	7.492E-01	5.529E-02	-0.307
AG-108M	4.142E-03		5.498E-02	9.138E-02	6.057E-03	0.045
AG-110M	7.418E-02		6.486E-02	1.022E-01	7.979E-03	0.726
IN-111	-3.489E-01		1.240E+00	1.698E+00	1.280E-01	-0.205
IN-113M	5.729E-05		6.846E-02	1.138E-01	7.019E-03	0.001
SN-113	5.729E-05		6.846E-02	1.138E-01	7.019E-03	0.001
IN-114M	1.642E-01		2.601E-01	3.833E-01	2.847E-02	0.428
CD-115	2.570E+00		1.153E+01	1.920E+01	1.320E+00	0.134
SN-117M	-9.485E-02		6.920E-02	1.053E-01	8.445E-03	-0.900
SB-122	1.605E+00		2.420E+00	4.136E+00	2.933E-01	0.388
I-123	-1.117E+00		7.297E-01	Half-Life too short		
TE-123M	-2.852E-02		3.726E-02	5.858E-02	4.706E-03	-0.487
I-124	-3.307E-01		1.043E+00	1.416E+00	1.033E-01	-0.234
SB-124	-6.574E-02		1.226E-01	1.834E-01	1.153E-02	-0.358
SB-125	-2.226E-02		1.536E-01	2.522E-01	1.599E-02	-0.088
TE-125M	-1.555E+00		1.124E+01	1.845E+01	2.098E+00	-0.084
I-126	2.486E-02		2.835E-01	4.004E-01	3.019E-02	0.062
SB-126	-2.189E-01		2.638E-01	3.263E-01	2.484E-02	-0.671
SB-127	-5.669E-01		1.711E+00	2.679E+00	2.737E-01	-0.212
XE-127	-6.258E-02		6.835E-02	1.015E-01	7.592E-03	-0.616
I-131	-1.124E-01		1.606E-01	2.571E-01	1.795E-02	-0.437
TE-132	-8.941E-02		7.293E-01	1.166E+00	1.738E-01	-0.077
BA-133	6.270E-03		7.765E-02	1.134E-01	1.355E-02	0.055
I-133	1.930E-03		1.711E-03	Half-Life too short		
CS-134	7.556E-02		7.105E-02	1.288E-01	9.857E-03	0.586
CS-135	3.399E-01		2.614E-01	3.956E-01	3.560E-02	0.859
I-135	-1.883E+08		1.520E+08	Half-Life too short		
CS-136	4.268E-02		1.332E-01	2.280E-01	1.598E-02	0.187
CE-139	8.473E-03		4.035E-02	6.627E-02	4.847E-03	0.128
BA-140	1.847E-01		3.901E-01	6.532E-01	2.139E-01	0.283
LA-140	8.960E-03		1.120E-01	1.894E-01	1.101E-02	0.047
CE-143	3.797E-04		7.294E-05	Half-Life too short		
CE-144	-6.993E-02		2.683E-01	4.350E-01	7.174E-02	-0.161
PM-144	-2.845E-02		5.491E-02	8.450E-02	6.416E-03	-0.337
PR-144	-1.926E+00		3.718E+00	5.722E+00	4.343E-01	-0.337
PM-146	2.468E-02		7.822E-02	1.314E-01	1.181E-02	0.188
ND-147	1.752E-01		8.420E-01	1.400E+00	1.963E-01	0.125
PM-149	-6.027E+01		8.585E+01	1.388E+02	2.068E+01	-0.434

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-5.633E-02		1.686E-01	2.387E-01	1.762E-02	-0.236
GD-153	-7.904E-03		1.046E-01	1.516E-01	1.335E-02	-0.052
EU-154	-7.945E-02		1.715E-01	2.626E-01	2.429E-02	-0.303
EU-155	-1.343E-02		1.283E-01	2.111E-01	2.023E-02	-0.064
TB-160	5.088E-02		2.050E-01	3.500E-01	2.578E-02	0.145
HO-166M	4.986E-03		1.079E-01	1.746E-01	1.328E-02	0.029
TM-171	-9.480E-01		2.258E+01	3.289E+01	2.891E+00	-0.029
LU-176	1.466E-02		3.713E-02	6.205E-02	4.480E-03	0.236
LU-177	1.541E+00	+	1.640E+00	2.225E+00	1.668E-01	0.692
LU-177M	-3.264E-01		2.877E-01	4.443E-01	2.657E-02	-0.735
HF-181	-8.493E-02		7.317E-02	1.111E-01	7.274E-03	-0.765
W-181	1.256E+00		3.233E-01	5.101E-01	4.518E-02	2.463
TA-182	-2.463E-01		2.914E-01	4.336E-01	2.423E-02	-0.568
RE-183	6.323E-02		1.488E-01	2.466E-01	1.889E-02	0.256
RE-184	-3.280E-01		3.475E-01	5.272E-01	3.970E-02	-0.622
OS-185	1.085E-02		6.786E-02	1.115E-01	8.337E-03	0.097
RE-188	1.534E-01		2.208E-01	3.704E-01	3.091E-02	0.414
W-188	5.545E+00		1.112E+01	1.689E+01	1.243E+00	0.328
IR-192	1.307E-02		4.993E-02	8.490E-02	6.062E-03	0.154
AU-195	3.948E-01		2.975E-01	4.584E-01	4.093E-02	0.861
TL-200	1.933E-04		1.587E-04	Half-Life too short		
TL-201	-4.532E+00		7.203E+00	1.139E+01	8.334E-01	-0.398
TL-202	3.733E-02		1.073E-01	1.810E-01	1.123E-02	0.206
BI-207	-1.232E-02		7.765E-02	1.258E-01	8.084E-03	-0.098
TL-207	-4.077E-01		1.097E+00	1.552E+00	2.637E-01	-0.263
PO-209	-2.674E+00		1.164E+01	1.896E+01	1.384E+00	-0.141
PB-211	-4.936E-01		1.564E+00	2.501E+00	1.559E+00	-0.197
BI-212	9.601E-01	+	6.281E-01	8.595E-01	7.871E-02	1.117
BI-214	1.335E+00	+	2.498E-01	3.787E-01	3.398E-02	3.526
PO-215	-4.077E-01		1.097E+00	1.552E+00	2.637E-01	-0.263
RN-219	-3.804E-01		6.984E-01	1.122E+00	1.530E-01	-0.339
RN-220	-2.271E+01		4.186E+01	6.553E+01	4.593E+00	-0.347
RA-223	-4.077E-01		1.097E+00	1.552E+00	2.637E-01	-0.263
RA-226	1.335E+00	+	2.498E-01	3.787E-01	3.398E-02	3.526
AC-227	6.454E-03		5.349E-01	8.570E-01	1.265E-01	0.008
TH-227	6.454E-03		5.349E-01	8.570E-01	1.505E-01	0.008
TH-229	-1.747E-01		7.042E-01	1.127E+00	8.389E-02	-0.155
TH-230	1.335E+00	+	2.498E-01	3.787E-01	3.398E-02	3.526
PA-231	1.917E+00		2.262E+00	3.751E+00	5.449E-01	0.511
TH-231	-4.077E-01		1.097E+00	1.552E+00	2.637E-01	-0.263
U-231	-5.498E-02		1.163E+00	1.689E+00	1.465E-01	-0.033
PA-233	-4.954E-02		9.174E-02	1.495E-01	1.116E-02	-0.331
PA-234	1.831E-01		4.317E-01	7.461E-01	1.352E-01	0.245
PA-234M	4.180E+00		9.840E+00	1.695E+01	1.671E+00	0.247
U-234	1.335E+00	+	2.498E-01	3.787E-01	3.398E-02	3.526
NP-236	3.318E-02		1.064E-01	1.758E-01	1.380E-02	0.189
NP-239	-8.934E-02		2.383E-01	3.862E-01	4.087E-02	-0.231
AM-241	1.781E-01		9.710E-02	1.508E-01	1.464E-02	1.181

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-6.986E-02		1.147E-01	1.848E-01	1.728E-02	-0.378
CM-247	-2.190E-02		6.208E-02	1.011E-01	5.942E-03	-0.217
CF-249	4.177E-02		6.239E-02	1.076E-01	6.311E-03	0.388
CF-251	1.185E-01		1.732E-01	2.893E-01	2.130E-02	0.409

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433012           *
* Acquisition date :  7-JUL-2009 07:03:41 Detector SN#    :                 *
* Detector ID       : GAM17               Sensitivity     : 5.000           *
* Geometry          : CAN                 Energy tolerance: 1.500           *
* Elapsed live time:    0 03:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 03:00:11.78     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433012           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 7.5900E+01 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.644E+01	2.690E+00	3.783E-01	1.372E+00
CD-109	3.079E+00	9.314E-01	6.462E-01	4.752E-01
SN-126	3.033E-01	9.173E-02	6.358E-02	4.680E-02
BA-137M	2.926E+00	2.785E-01	3.974E-02	1.421E-01
CS-137	3.093E+00	2.948E-01	4.201E-02	1.504E-01
CE-141	9.890E-02	1.065E-01	6.425E-02	5.433E-02
HG-203	4.838E-02	6.324E-02	4.416E-02	3.227E-02
TL-208	4.413E-01	1.044E-01	4.095E-02	5.326E-02
BI-210	6.299E+00	1.283E+00	5.690E-01	6.548E-01
PB-210	6.299E+00	1.283E+00	5.690E-01	6.548E-01
PO-210	6.299E+00	1.260E+00	5.690E-01	6.429E-01
BI-211	3.100E+00	6.494E-01	2.378E-01	3.313E-01
PB-212	1.481E+00	1.826E-01	6.036E-02	9.318E-02
PO-212	1.481E+00	1.826E-01	6.036E-02	9.318E-02
PB-214	1.078E+00	2.325E-01	8.292E-02	1.186E-01
PO-214	1.078E+00	2.325E-01	8.292E-02	1.186E-01
PO-216	1.481E+00	1.826E-01	6.036E-02	9.318E-02
PO-218	1.078E+00	2.325E-01	8.292E-02	1.186E-01
RA-224	3.949E+00	1.725E+00	6.874E-01	8.802E-01
AC-228	1.391E+00	4.265E-01	1.798E-01	2.176E-01
RA-228	1.391E+00	4.265E-01	1.798E-01	2.176E-01
TH-228	1.481E+00	1.826E-01	6.035E-02	9.318E-02
TH-232	1.391E+00	4.265E-01	1.798E-01	2.176E-01
TH-234	4.474E+00	1.308E+00	6.888E-01	6.673E-01
U-235	3.392E-01	3.687E-01	2.166E-01	1.881E-01
NP-237	8.905E-01	3.240E-01	1.863E-01	1.653E-01
U-238	4.474E+00	1.308E+00	6.888E-01	6.673E-01
AM-243	3.377E-01	6.103E-02	3.874E-02	3.114E-02
ANH-511	1.704E-01	9.448E-02	3.897E-02	4.821E-02

---- Non-Identified Nuclides ----

Key-Line Activity	K.L Act error	DLC	TPU

Nuclide	(pCi/GRAM)		(pCi/GRAM)		
BE-7	5.450E-01	5.641E-01	4.859E-01	2.878E-01	NOT IDENT.
NA-22	-2.776E-02	6.018E-02	4.632E-02	3.071E-02	NOT IDENT.
NA-24	-1.057E+05	2.600E+05	0.000E+00	1.326E+05	SHORT HLIF
AL-26	2.923E-02	4.519E-02	4.234E-02	2.305E-02	NOT IDENT.
TI-44	3.498E-01	4.896E-02	3.952E-02	2.498E-02	FAIL ABUN
SC-46	-1.194E-02	5.236E-02	4.257E-02	2.672E-02	FAIL ABUN
V-48	3.828E-02	1.073E-01	9.181E-02	5.474E-02	NOT IDENT.
CR-51	7.111E-02	5.273E-01	4.409E-01	2.690E-01	NOT IDENT.
MN-52	4.586E-02	3.088E-01	2.563E-01	1.576E-01	NOT IDENT.
MN-54	-2.761E-02	5.591E-02	4.472E-02	2.853E-02	NOT IDENT.
CO-56	2.690E-02	5.931E-02	5.143E-02	3.026E-02	NOT IDENT.
CO-57	1.138E-02	3.146E-02	2.574E-02	1.605E-02	NOT IDENT.
CO-58	-8.836E-04	5.455E-02	4.557E-02	2.783E-02	NOT IDENT.
FE-59	-1.142E-03	1.519E-01	1.251E-01	7.749E-02	FAIL ABUN
CO-60	-9.829E-03	5.907E-02	4.711E-02	3.014E-02	NOT IDENT.
ZN-65	1.287E-01	1.659E-01	1.308E-01	8.463E-02	NOT IDENT.
GE-68	1.033E+00	1.911E+00	1.659E+00	9.751E-01	NOT IDENT.
AS-73	4.297E-01	3.139E-01	2.659E-01	1.601E-01	NOT IDENT.
AS-74	-3.552E-02	1.422E-01	1.132E-01	7.255E-02	NOT IDENT.
SE-75	5.223E-03	6.679E-02	4.629E-02	3.408E-02	FAIL ABUN
BR-77	-3.172E+00	1.092E+01	8.715E+00	5.571E+00	FAIL ABUN
SR-82	-2.963E-01	5.381E-01	4.293E-01	2.745E-01	NOT IDENT.
RB-83	9.794E-03	1.032E-01	8.482E-02	5.268E-02	NOT IDENT.
RB-84	4.287E-02	1.003E-01	8.686E-02	5.115E-02	NOT IDENT.
KR-85	2.237E+01	1.280E+01	1.036E+01	6.531E+00	NOT IDENT.
SR-85	1.132E-01	6.474E-02	5.240E-02	3.303E-02	NOT IDENT.
RB-86	-3.297E-01	1.205E+00	9.675E-01	6.147E-01	NOT IDENT.
Y-88	1.675E-02	3.579E-02	3.359E-02	1.826E-02	NOT IDENT.
ZR-88	-6.294E-02	4.950E-02	3.647E-02	2.526E-02	NOT IDENT.
Y-91	1.636E+01	2.812E+01	2.430E+01	1.435E+01	NOT IDENT.
NB-94	-1.855E-02	5.519E-02	4.319E-02	2.816E-02	NOT IDENT.
NB-95	-2.058E-02	8.699E-02	5.868E-02	4.438E-02	NOT IDENT.
NB-95M	3.724E-02	1.897E-01	1.329E-01	9.677E-02	NOT IDENT.
ZR-95	3.077E-02	1.047E-01	8.630E-02	5.340E-02	NOT IDENT.
NB-97	8.755E+04	5.156E+04	0.000E+00	2.631E+04	SHORT HLIF
ZR-97	2.058E+06	9.849E+05	0.000E+00	5.025E+05	SHORT HLIF
MO-99	-6.529E+00	1.322E+01	1.010E+01	6.747E+00	NOT IDENT.
TC-99M	-8.468E+14	1.578E+15	0.000E+00	8.050E+14	SHORT HLIF
RH-101	1.234E-02	4.557E-02	3.675E-02	2.325E-02	NOT IDENT.
RH-102	-1.059E-04	5.350E-02	4.380E-02	2.729E-02	NOT IDENT.
RU-103	-2.047E-02	6.119E-02	4.879E-02	3.122E-02	FAIL ABUN
RH-106	-2.299E-01	4.729E-01	3.658E-01	2.413E-01	FAIL ABUN
RU-106	-2.299E-01	4.724E-01	3.658E-01	2.410E-01	FAIL ABUN
AG-108M	4.142E-03	5.388E-02	4.447E-02	2.749E-02	NOT IDENT.
AG-110M	7.418E-02	6.356E-02	4.991E-02	3.243E-02	NOT IDENT.
IN-111	-3.489E-01	1.215E+00	8.221E-01	6.201E-01	NOT IDENT.
IN-113M	5.729E-05	6.709E-02	5.535E-02	3.423E-02	NOT IDENT.
SN-113	5.729E-05	6.709E-02	5.535E-02	3.423E-02	NOT IDENT.
IN-114M	1.642E-01	2.549E-01	1.851E-01	1.300E-01	NOT IDENT.
CD-115	2.570E+00	1.130E+01	9.362E+00	5.765E+00	NOT IDENT.
SN-117M	-9.485E-02	6.781E-02	5.078E-02	3.460E-02	NOT IDENT.
SB-122	1.605E+00	2.371E+00	2.018E+00	1.210E+00	NOT IDENT.
I-123	-1.117E+06	1.430E+06	0.000E+00	7.297E+05	SHORT HLIF
TE-123M	-2.852E-02	3.651E-02	2.824E-02	1.863E-02	NOT IDENT.
I-124	-3.307E-01	1.022E+00	6.911E-01	5.213E-01	FAIL ABUN
SB-124	-6.574E-02	1.201E-01	9.040E-02	6.129E-02	NOT IDENT.
SB-125	-2.226E-02	1.506E-01	1.227E-01	7.681E-02	NOT IDENT.
TE-125M	-1.555E+00	1.102E+01	8.866E+00	5.621E+00	NOT IDENT.
I-126	2.486E-02	2.778E-01	1.956E-01	1.417E-01	NOT IDENT.
SB-126	-2.189E-01	2.585E-01	1.595E-01	1.319E-01	FAIL ABUN
SB-127	-5.669E-01	1.676E+00	1.309E+00	8.553E-01	NOT IDENT.
XE-127	-6.258E-02	6.699E-02	4.905E-02	3.418E-02	FAIL ABUN
I-131	-1.124E-01	1.574E-01	1.249E-01	8.031E-02	NOT IDENT.
TE-132	-8.941E-02	7.147E-01	5.639E-01	3.646E-01	NOT IDENT.
BA-133	6.270E-03	7.610E-02	5.509E-02	3.882E-02	NOT IDENT.
I-133	1.930E+03	3.354E+03	0.000E+00	1.711E+03	SHORT HLIF
CS-134	7.556E-02	6.963E-02	6.306E-02	3.552E-02	NOT IDENT.
CS-135	3.399E-01	2.561E-01	1.917E-01	1.307E-01	NOT IDENT.
I-135	-1.883E+14	2.979E+14	0.000E+00	1.520E+14	SHORT HLIF
CS-136	4.268E-02	1.305E-01	1.119E-01	6.660E-02	FAIL ABUN
CE-139	8.473E-03	3.954E-02	3.196E-02	2.017E-02	NOT IDENT.
BA-140	1.847E-01	3.823E-01	3.186E-01	1.951E-01	NOT IDENT.
LA-140	8.960E-03	1.098E-01	9.327E-02	5.600E-02	FAIL ABUN
CE-143	3.797E+02	1.430E+02	0.000E+00	7.294E+01	SHORT HLIF
CE-144	-6.993E-02	2.629E-01	2.094E-01	1.342E-01	NOT IDENT.
PM-144	-2.845E-02	5.381E-02	4.131E-02	2.745E-02	NOT IDENT.

PR-144	-1.926E+00	3.644E+00	2.797E+00	1.859E+00	NOT IDENT.
PM-146	2.468E-02	7.666E-02	6.398E-02	3.911E-02	NOT IDENT.
ND-147	1.752E-01	8.252E-01	6.825E-01	4.210E-01	FAIL ABUN
PM-149	-6.027E+01	8.413E+01	6.731E+01	4.293E+01	NOT IDENT.
EU-152	-5.633E-02	1.652E-01	1.159E-01	8.428E-02	NOT IDENT.
GD-153	-7.904E-03	1.025E-01	7.276E-02	5.231E-02	FAIL ABUN
EU-154	-7.945E-02	1.681E-01	1.291E-01	8.576E-02	NOT IDENT.
EU-155	-1.343E-02	1.257E-01	1.014E-01	6.415E-02	FAIL ABUN
TB-160	5.088E-02	2.009E-01	1.715E-01	1.025E-01	FAIL ABUN
HO-166M	4.986E-03	1.057E-01	8.536E-02	5.394E-02	NOT IDENT.
TM-171	-9.480E-01	2.213E+01	1.572E+01	1.129E+01	NOT IDENT.
LU-176	1.466E-02	3.639E-02	3.010E-02	1.857E-02	FAIL ABUN
LU-177	1.541E+00	1.607E+00	1.076E+00	8.199E-01	FAIL ABUN
LU-177M	-3.264E-01	2.819E-01	2.162E-01	1.438E-01	NOT IDENT.
HF-181	-8.493E-02	7.171E-02	5.412E-02	3.659E-02	NOT IDENT.
W-181	1.256E+00	3.169E-01	2.438E-01	1.617E-01	NOT IDENT.
TA-182	-2.463E-01	2.855E-01	2.131E-01	1.457E-01	FAIL ABUN
RE-183	6.323E-02	1.458E-01	1.189E-01	7.440E-02	FAIL ABUN
RE-184	-3.280E-01	3.405E-01	2.553E-01	1.737E-01	NOT IDENT.
OS-185	1.085E-02	6.650E-02	5.447E-02	3.393E-02	NOT IDENT.
RE-188	1.534E-01	2.164E-01	1.785E-01	1.104E-01	NOT IDENT.
W-188	5.545E+00	1.090E+01	8.191E+00	5.560E+00	FAIL ABUN
IR-192	1.307E-02	4.893E-02	4.120E-02	2.497E-02	FAIL ABUN
AU-195	3.948E-01	2.915E-01	2.200E-01	1.487E-01	FAIL ABUN
TL-200	1.933E+02	3.110E+02	0.000E+00	1.587E+02	SHORT HLIF
TL-201	-4.532E+00	7.059E+00	5.496E+00	3.602E+00	NOT IDENT.
TL-202	3.733E-02	1.051E-01	8.812E-02	5.364E-02	NOT IDENT.
BI-207	-1.232E-02	7.609E-02	6.175E-02	3.882E-02	FAIL ABUN
TL-207	-4.077E-01	1.075E+00	7.535E-01	5.485E-01	FAIL ABUN
PO-209	-2.674E+00	1.141E+01	9.292E+00	5.820E+00	NOT IDENT.
PB-211	-4.936E-01	1.533E+00	1.216E+00	7.822E-01	NOT IDENT.
BI-212	9.601E-01	6.156E-01	4.203E-01	3.141E-01	FAIL ABUN
BI-214	1.335E+00	2.448E-01	1.849E-01	1.249E-01	FAIL ABUN
PO-215	-4.077E-01	1.075E+00	7.535E-01	5.485E-01	FAIL ABUN
RN-219	-3.804E-01	6.844E-01	5.458E-01	3.492E-01	FAIL ABUN
RN-220	-2.271E+01	4.102E+01	3.196E+01	2.093E+01	NOT IDENT.
RA-223	-4.077E-01	1.075E+00	7.535E-01	5.485E-01	FAIL ABUN
RA-226	1.335E+00	2.448E-01	1.849E-01	1.249E-01	FAIL ABUN
AC-227	6.454E-03	5.242E-01	4.150E-01	2.675E-01	FAIL ABUN
TH-227	6.454E-03	5.242E-01	4.150E-01	2.675E-01	FAIL ABUN
TH-229	-1.747E-01	6.901E-01	5.444E-01	3.521E-01	FAIL ABUN
TH-230	1.335E+00	2.448E-01	1.849E-01	1.249E-01	FAIL ABUN
PA-231	1.917E+00	2.217E+00	1.818E+00	1.131E+00	FAIL ABUN
TH-231	-4.077E-01	1.075E+00	7.535E-01	5.485E-01	FAIL ABUN
U-231	-5.498E-02	1.140E+00	8.102E-01	5.814E-01	FAIL ABUN
PA-233	-4.954E-02	8.990E-02	7.256E-02	4.587E-02	FAIL ABUN
PA-234	1.831E-01	4.231E-01	3.657E-01	2.159E-01	FAIL ABUN
PA-234M	4.180E+00	9.643E+00	8.312E+00	4.920E+00	NOT IDENT.
U-234	1.335E+00	2.448E-01	1.849E-01	1.249E-01	FAIL ABUN
NP-236	3.318E-02	1.043E-01	8.474E-02	5.321E-02	NOT IDENT.
NP-239	-8.934E-02	2.335E-01	1.857E-01	1.191E-01	FAIL ABUN
AM-241	1.781E-01	9.516E-02	7.204E-02	4.855E-02	NOT IDENT.
CM-243	-6.986E-02	1.124E-01	8.875E-02	5.736E-02	FAIL ABUN
CM-247	-2.190E-02	6.084E-02	4.916E-02	3.104E-02	FAIL ABUN
CF-249	4.177E-02	6.115E-02	5.230E-02	3.120E-02	NOT IDENT.
CF-251	1.185E-01	1.697E-01	1.396E-01	8.658E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	426.9859
46.50	426.9859
46.50	426.9859
48.70	379.9224
49.72	443.0738
51.35	448.7017
52.39	422.0158
52.97	410.0837
53.15	404.5985
53.44	402.0549
54.07	407.0540
56.28	550.8408
56.28	550.8431
57.37	0.0000
57.53	511.4840
57.53	511.4850
57.60	511.5413
57.98	480.8167
57.98	480.8167
59.32	414.7863
59.32	414.7863
59.40	414.8386
59.54	410.5005
59.72	410.6176
60.01	421.1482
61.10	478.1155
61.14	478.1451
61.30	478.2643
63.00	558.5696
63.29	564.3867
63.29	564.3867
63.58	532.1317
64.28	513.1728
65.12	457.2265
65.20	457.2809
65.20	457.2809
66.05	486.1964
66.72	482.1993
66.83	507.6613
66.91	507.7214
67.20	484.0344
67.20	484.0344
67.75	544.2294
67.85	538.3290
68.90	546.6401
68.90	546.6401
69.30	536.4647
69.67	514.2634
70.82	518.1128
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70.83	518.1191
72.80	507.5137
72.87	507.5631
72.87	507.5631
74.67	536.9560
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74.81	537.0602
74.81	537.0602
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77.11	538.7467
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77.11	538.7467

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77.11	538.7467
77.11	538.7467
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80.11	570.3804
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80.30	570.5246
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81.07	571.1037
81.07	571.1037
81.07	571.1037
82.60	528.3715
83.37	543.7887
83.78	440.3438
83.78	440.3438
83.78	440.3438
83.78	440.3438
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84.40	440.6937
84.90	440.9769
85.43	441.2740
86.29	441.7542
86.50	441.8720
86.54	441.8948
86.59	441.9212
86.72	441.9951
86.79	442.0320
86.94	442.1164
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88.36	442.9025
88.47	442.9641
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91.11	444.4078
92.29	445.0462
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92.38	445.0937
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94.00	445.9642
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94.67	348.5371
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94.90	373.4250
94.90	373.4250
94.90	373.4250
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95.87	415.7386
96.73	417.7167
97.43	374.5429
98.44	332.9735
98.44	332.9748
98.88	317.5771
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99.55	298.6094
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100.00	299.5067
100.10	299.5430
103.18	373.5117
103.76	343.4255
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105.31	330.3023
108.00	324.4069
109.28	337.6602
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111.00	317.5805

111.76	317.8409
112.95	321.2125
115.19	304.1460
116.30	329.2986
117.00	316.6368
117.00	316.6368
117.66	312.8827
121.11	271.1367
121.62	272.2762
121.78	290.2751
122.06	290.3584
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122.32	286.4427
122.32	286.4427
122.32	286.4427
123.07	316.6263
127.23	294.8821
129.76	326.7903
131.20	315.1683
133.02	353.0468
133.54	316.8939
135.34	302.2758
136.00	296.3978
136.25	293.4327
136.48	293.4980
140.51	307.2104
140.51	0.0000
142.18	294.6641
142.65	298.0496
143.76	307.7303
144.24	322.1381
144.24	322.1381
144.24	322.1381
144.24	322.1381
145.22	315.0810
145.44	315.1446
147.16	266.5742
152.43	299.8797
152.70	297.8965
153.22	276.4519
154.21	254.0630
154.21	254.0630
154.21	254.0630
154.21	254.0630
155.03	266.5998
156.02	284.3439
158.56	319.0452
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159.00	294.3759
160.31	276.0954
161.27	260.7998
162.32	287.9643
162.64	288.0428
163.35	294.4372
163.89	293.5343
165.85	283.6307
167.43	308.9754
171.28	260.9120
171.86	273.5656
172.10	273.6196
176.55	257.8409
176.60	257.8522
181.06	297.9054
184.41	254.8180
185.71	238.6077
186.00	235.4948
190.27	222.0764
192.34	270.4571
193.63	275.1243
197.04	259.8587
198.01	277.1010
198.60	303.8780
200.40	244.4971
201.83	292.8538
202.84	306.8254
205.31	291.4612
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208.81	277.1662

209.75	225.3226
209.75	225.3226
210.97	227.2424
215.65	247.2191
216.55	214.9705
218.09	228.1814
222.10	219.0619
223.80	223.6638
226.40	228.4154
227.00	241.5676
227.08	241.5812
227.20	230.7169
228.16	230.8690
228.18	230.8722
228.18	230.8722
231.56	0.0000
235.69	248.6837
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236.00	253.9907
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238.63	224.8256
238.63	224.8256
238.63	224.8256
239.00	224.8803
240.98	225.1744
241.98	225.3230
241.98	225.3230
241.98	225.3230
244.69	211.4092
245.39	213.2684
247.94	192.7301
248.90	213.0919
249.79	191.1194
252.40	209.1456
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252.85	235.7704
254.15	0.0000
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256.20	188.5756
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260.90	162.4321
262.80	196.0422
264.65	167.7198
268.24	178.8208
268.79	178.8794
269.46	184.3237
269.46	184.3237
269.46	184.3237
269.46	184.3237
271.23	189.8968
273.65	201.8381
276.40	202.1732
277.35	190.0870
277.60	203.4427
277.60	203.4427
278.00	203.4924
278.60	205.1388
279.20	184.5125
279.53	184.5475
280.46	181.6477
281.68	181.7806
283.67	163.5697
284.30	178.5529
285.00	181.5355
285.90	195.1857
286.10	194.3057
286.10	194.3057
287.40	180.8887
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290.80	160.1020
291.72	167.7443
293.26	0.0000
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295.21	175.6544
295.21	175.6544
295.96	168.1553

296.50	168.2073
297.23	168.2773
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299.80	163.9709
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300.09	170.0713
300.09	170.0713
300.10	170.0736
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302.84	179.4631
303.76	174.9918
303.91	175.0058
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304.40	184.1882
304.84	185.7551
306.84	168.6906
308.46	156.5364
311.98	173.3530
316.51	162.7527
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319.02	164.8190
319.41	169.4588
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323.87	172.3317
323.87	172.3317
323.87	172.3317
323.87	172.3317
325.23	149.3621
328.77	155.8172
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334.20	148.5332
334.30	148.5410
338.28	171.1815
338.28	171.1815
338.28	171.1815
338.28	171.1815
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338.32	171.1838
338.32	171.1838
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340.57	169.2126
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351.92	149.9102
351.92	149.9102
355.39	0.0000
356.01	164.3060
364.48	163.1230
366.43	140.6297
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367.94	0.0000
369.80	152.2091
374.96	157.3353
383.85	157.0642
387.95	133.5298
388.63	129.7578
391.69	140.4575
391.69	140.4575
392.90	165.3953
398.62	143.7927
400.65	152.5659
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401.81	173.7706
402.60	168.0722
404.84	161.5175
410.95	131.1225
411.60	146.5932
413.65	167.9678
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415.30	131.3848
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417.63	0.0000

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433.93	136.3872
439.47	132.8142
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443.98	137.9690
444.90	143.8974
445.03	145.8643
445.03	145.8643
445.03	145.8643
445.03	145.8643
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487.03	111.6021
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511.85	93.9349
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513.99	92.3353
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555.20	78.7953
563.23	76.9775
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569.50	92.5862
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579.30	0.0000
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602.71	104.1089
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604.70	90.2912
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609.31	68.8714
609.31	68.8714

609.31	68.8714
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614.37	76.6580
618.01	59.6593
621.84	75.4594
621.84	75.4594
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634.78	90.5310
635.90	81.0869
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661.65	59.4809
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696.49	80.5646
697.00	81.6518
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722.78	68.5951
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722.95	68.5982
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768.36	53.0734
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768.36	53.0734
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911.07	63.6484
911.07	63.6484
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934.06	51.7148
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949.00	39.4143
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969.11	57.9724
969.11	57.9724
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1076.63	54.5278
1077.35	42.6378
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1112.84	63.9740
1115.52	44.5805
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1120.29	70.0883
1120.29	70.0883
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1173.22	48.6230
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1236.41	0.0000
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1238.11	56.4838
1238.11	56.4838
1238.11	56.4838
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1274.54	37.2495
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1298.22	0.0000
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1325.50	29.2681
1332.49	31.4014
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1365.15	23.1745
1368.21	21.0799
1368.53	0.0000
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1377.67	12.6709
1377.67	12.6709
1377.67	12.6709
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1395.20	30.7240
1407.95	21.2402
1434.06	22.4108
1436.60	24.5573
1457.56	0.0000
1460.81	18.2320
1489.15	23.7161
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1596.49	16.0063
1620.62	16.0721
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1691.02	18.1743
1691.02	18.1743

1706.46	0.0000
1750.46	0.0000
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1764.49	11.6145
1764.49	11.6145
1764.49	11.6145
1770.23	42.6250
1771.40	31.0056
1791.20	0.0000
1808.65	7.7969
1836.01	3.9149

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433012

Total Uranium Activity	1.3468E+01	ug/g
Total Uranium Counting Unc.	3.8946E+00	ug/g
Total Uranium Tpu	1.9870E-06	ug/g
Total Uranium Mda	2.0516E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G232433012       *
*   ANALYST       : MXR1                      DETECTOR   : GAM17            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 03:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 07:03:41.47    SAMPLE ALQT:   75.900 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.134E+01
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.729E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 4.445E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 2.165E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:04:57.46

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433013.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:04:28.
Sample ID         : G232433013           Sample quantity  : 1.05650E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.71  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.51*	57	444	1.31	126.14	123	8	7.85E-03	67.4	
2	3	74.93*	372	385	1.24	148.98	142	20	5.17E-02	10.7	2.08E+00
3	3	77.20*	610	319	1.03	153.52	142	20	8.48E-02	6.5	
4	0	87.26	195	384	1.17	173.62	171	6	2.71E-02	17.4	
5	4	90.05	109	250	1.05	179.21	177	13	1.51E-02	22.0	8.79E-01
6	4	93.10*	300	453	1.51	185.30	177	13	4.17E-02	14.9	
7	0	185.97*	182	410	1.17	370.98	366	11	2.53E-02	23.6	
8	0	209.68	169	294	1.35	418.39	414	10	2.35E-02	20.5	
9	3	238.75*	1468	236	1.25	476.51	469	24	2.04E-01	3.3	1.21E+00
10	3	241.68	349	259	1.68	482.37	469	24	4.84E-02	13.1	
11	0	270.24	128	271	1.64	539.46	534	11	1.78E-02	26.3	
12	0	295.34*	443	269	1.31	589.64	584	12	6.15E-02	9.0	
13	0	300.50	122	220	1.50	599.95	595	11	1.70E-02	25.3	
14	0	327.76	39	193	1.15	654.46	652	8	5.48E-03	62.7	
15	0	338.65*	345	252	1.15	676.23	671	12	4.79E-02	10.9	
16	0	352.12*	760	259	1.43	703.17	698	11	1.06E-01	5.6	
17	0	409.24	30	130	1.42	817.38	815	9	4.10E-03	72.5	
18	0	463.23	95	132	1.43	925.33	921	10	1.33E-02	24.8	
19	0	511.16*	170	170	1.50	1021.15	1013	16	2.36E-02	22.0	
20	0	583.35*	536	127	1.28	1165.49	1158	14	7.45E-02	6.3	
21	0	609.44*	572	221	1.64	1217.66	1211	16	7.94E-02	7.3	
22	0	661.54	132	179	1.87	1321.83	1316	15	1.83E-02	23.7	
23	0	727.91	88	121	2.03	1454.54	1449	11	1.22E-02	26.8	
24	0	768.83	82	81	1.29	1536.36	1530	13	1.14E-02	25.2	
25	0	795.55	50	78	1.54	1589.79	1585	10	6.95E-03	36.5	
26	0	860.55*	74	100	1.74	1719.77	1711	14	1.03E-02	31.6	
27	0	911.64*	338	129	1.78	1821.92	1814	18	4.69E-02	9.9	
28	0	969.61	179	168	1.90	1937.84	1930	13	2.49E-02	16.8	
29	0	1120.55	150	91	1.41	2239.67	2233	15	2.08E-02	16.1	
30	0	1378.74	35	56	1.34	2755.98	2748	15	4.89E-03	49.4	
31	0	1461.14*	2040	51	2.06	2920.77	2910	19	2.83E-01	2.4	
32	0	1730.73	29	23	1.68	3459.90	3455	11	4.07E-03	37.4	
33	0	1765.69	133	36	1.60	3529.83	3523	20	1.85E-02	15.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 09:05:00

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433013.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:04:28
Sample ID : G232433013 Sample quantity : 105.65 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.71 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.589E+01	3.212E+00	4.763E-01	3.614E-02	75.354
CD-109	+	88.03	*	2.958E+00	1.062E+00	1.400E+00	1.294E-01	2.113
SN-126	+	64.28		6.717E-01	9.114E-01	1.005E+00	1.486E-01	0.668
	+	86.94		1.211E+00	6.550E-01	6.263E-01	2.597E-01	1.934
	+	87.57	*	2.913E-01	1.046E-01	1.441E-01	1.328E-02	2.021
BA-137M	+	661.65	*	1.450E-01	6.957E-02	5.361E-02	4.087E-03	2.705
CS-137	+	661.65	*	1.533E-01	7.355E-02	5.667E-02	4.331E-03	2.705
TL-208		277.35		5.467E-01	3.725E-01	6.401E-01	6.722E-02	0.854
	+	510.84		6.485E-01	2.940E-01	1.921E-01	2.042E-02	3.376
	+	583.14	*	5.754E-01	8.588E-02	5.664E-02	4.440E-03	10.160
	+	860.37		7.271E-01	4.667E-01	4.939E-01	5.525E-02	1.472
BI-211		72.87		5.101E+00	3.355E+00	5.801E+00	4.790E-01	0.879
	+	351.07	*	3.829E+00	4.943E-01	2.932E-01	1.882E-02	13.062
PB-212	+	74.81		2.510E+00	6.245E-01	5.821E-01	7.296E-02	4.312
	+	77.11		2.296E+00	3.558E-01	3.256E-01	2.760E-02	7.052
	+	87.30		1.347E+00	5.022E-01	6.691E-01	9.088E-02	2.014
	+	238.63	*	1.722E+00	1.666E-01	8.375E-02	5.983E-03	20.562
	+	300.09		2.130E+00	1.091E+00	1.076E+00	8.838E-02	1.979
PO-212	+	74.81		2.510E+00	6.245E-01	5.821E-01	7.296E-02	4.312
	+	77.11		2.296E+00	3.558E-01	3.256E-01	2.760E-02	7.052
	+	87.30		1.347E+00	5.022E-01	6.691E-01	9.088E-02	2.014
		115.19		2.730E+00	3.658E+00	6.073E+00	3.826E-01	0.449
	+	238.63	*	1.722E+00	1.666E-01	8.375E-02	5.983E-03	20.562
	+	300.09		2.130E+00	1.091E+00	1.076E+00	8.838E-02	1.979
BI-214	+	609.31	*	1.151E+00	1.979E-01	1.017E-01	9.085E-03	11.321
	+	768.36		1.810E+00	9.336E-01	1.065E+00	1.166E-01	1.700
		934.06		8.520E-01	1.092E+00	1.873E+00	2.327E-01	0.455
	+	1120.29		1.509E+00	5.061E-01	4.852E-01	4.646E-02	3.109
		1238.11		1.069E+00	9.199E-01	1.610E+00	1.374E-01	0.664
	+	1377.67		1.540E+00	1.529E+00	1.285E+00	1.259E-01	1.199
	+	1764.49		1.770E+00	5.540E-01	3.584E-01	2.179E-02	4.937
PB-214	+	74.81		4.325E+00	1.047E+00	1.003E+00	1.120E-01	4.312
	+	77.11		3.937E+00	6.797E-01	5.583E-01	6.362E-02	7.052
	+	87.30		2.308E+00	8.476E-01	1.146E+00	1.375E-01	2.014

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.450E+00	6.728E-01	5.035E-01	3.981E-02	4.866
	+	295.21		1.357E+00	2.694E-01	1.952E-01	1.656E-02	6.955
	+	351.92	*	1.332E+00	1.855E-01	1.072E-01	8.868E-03	12.427
PO-214	+	74.81		4.325E+00	1.047E+00	1.003E+00	1.120E-01	4.312
	+	77.11		3.937E+00	6.797E-01	5.583E-01	6.362E-02	7.052
	+	87.30		2.308E+00	8.476E-01	1.146E+00	1.375E-01	2.014
	+	241.98		2.450E+00	6.728E-01	5.035E-01	3.981E-02	4.866
	+	295.21		1.357E+00	2.694E-01	1.952E-01	1.656E-02	6.955
	+	351.92	*	1.332E+00	1.855E-01	1.072E-01	8.868E-03	12.427
PO-216	+	74.81		2.510E+00	6.245E-01	5.821E-01	7.296E-02	4.312
	+	77.11		2.296E+00	3.558E-01	3.256E-01	2.760E-02	7.052
	+	87.30		1.347E+00	5.022E-01	6.691E-01	9.088E-02	2.014
	+	238.63	*	1.722E+00	1.666E-01	8.375E-02	5.983E-03	20.562
	+	300.09		2.130E+00	1.091E+00	1.076E+00	8.838E-02	1.979
PO-218	+	74.81		4.325E+00	1.047E+00	1.003E+00	1.120E-01	4.312
	+	77.11		3.937E+00	6.797E-01	5.583E-01	6.362E-02	7.052
	+	87.30		2.308E+00	8.476E-01	1.146E+00	1.375E-01	2.014
	+	241.98		2.450E+00	6.728E-01	5.035E-01	3.981E-02	4.866
	+	295.21		1.357E+00	2.694E-01	1.952E-01	1.656E-02	6.955
	+	351.92	*	1.332E+00	1.855E-01	1.072E-01	8.868E-03	12.427
RA-224	+	240.98	*	4.646E+00	1.249E+00	9.520E-01	5.303E-02	4.880
RA-226	+	609.31	*	1.151E+00	1.979E-01	1.017E-01	9.085E-03	11.321
	+	768.36		1.810E+00	9.336E-01	1.065E+00	1.166E-01	1.700
		934.06		8.520E-01	1.092E+00	1.873E+00	2.327E-01	0.455
	+	1120.29		1.509E+00	5.061E-01	4.852E-01	4.646E-02	3.109
		1238.11		1.069E+00	9.199E-01	1.610E+00	1.374E-01	0.664
	+	1377.67		1.540E+00	1.529E+00	1.285E+00	1.259E-01	1.199
	+	1764.49		1.770E+00	5.540E-01	3.584E-01	2.179E-02	4.937
AC-228	+	338.32		1.927E+00	8.913E-01	3.525E-01	1.437E-01	5.467
	+	911.07	*	1.559E+00	3.707E-01	2.148E-01	2.846E-02	7.255
	+	969.11		1.455E+00	6.002E-01	4.438E-01	1.063E-01	3.279
RA-228	+	338.32		1.927E+00	8.913E-01	3.525E-01	1.437E-01	5.467
	+	911.07	*	1.559E+00	3.707E-01	2.148E-01	2.846E-02	7.255
	+	969.11		1.455E+00	6.002E-01	4.438E-01	1.063E-01	3.279
TH-228		84.40		4.138E+00	3.077E+00	4.683E+00	6.259E-01	0.884
	+	238.60	*	1.722E+00	1.666E-01	8.375E-02	5.983E-03	20.564
	+	300.10		2.130E+00	1.654E+00	1.076E+00	6.344E-01	1.979
TH-230	+	609.31	*	1.151E+00	1.979E-01	1.017E-01	9.085E-03	11.321
	+	768.36		1.810E+00	9.336E-01	1.065E+00	1.166E-01	1.700
		934.06		8.520E-01	1.092E+00	1.873E+00	2.327E-01	0.455
	+	1120.29		1.509E+00	5.061E-01	4.852E-01	4.646E-02	3.109
		1238.11		1.069E+00	9.199E-01	1.610E+00	1.374E-01	0.664
	+	1377.67		1.540E+00	1.529E+00	1.285E+00	1.259E-01	1.199
	+	1764.49		1.770E+00	5.540E-01	3.584E-01	2.179E-02	4.937
TH-232	+	338.32		1.927E+00	4.358E-01	3.525E-01	2.039E-02	5.467
	+	911.07	*	1.559E+00	3.707E-01	2.148E-01	2.846E-02	7.255
	+	969.11		1.455E+00	6.002E-01	4.438E-01	1.063E-01	3.279
TH-234	+	63.29	*	1.697E+00	2.308E+00	2.554E+00	4.502E-01	0.664
	+	92.38		2.828E+00	9.848E-01	7.678E-01	1.384E-01	3.683

Sample ID : G232433013 Acquisition date : 7-JUL-2009 07:04:28

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.151E+00	1.979E-01	1.017E-01	9.085E-03	11.321
	+	768.36		1.810E+00	9.336E-01	1.065E+00	1.166E-01	1.700
		934.06		8.520E-01	1.092E+00	1.873E+00	2.327E-01	0.455
	+	1120.29		1.509E+00	5.061E-01	4.852E-01	4.646E-02	3.109
		1238.11		1.069E+00	9.199E-01	1.610E+00	1.374E-01	0.664
	+	1377.67		1.540E+00	1.529E+00	1.285E+00	1.259E-01	1.199
	+	1764.49		1.770E+00	5.540E-01	3.584E-01	2.179E-02	4.937
NP-237	+	86.50	*	8.554E-01	3.542E-01	4.467E-01	1.008E-01	1.915
		95.87		3.374E-01	1.014E+00	1.498E+00	3.660E-01	0.225
U-238	+	63.29	*	1.697E+00	2.308E+00	2.554E+00	4.502E-01	0.664
	+	92.38		2.828E+00	8.762E-01	7.678E-01	6.526E-02	3.683
AM-243	+	74.67	*	4.069E-01	9.382E-02	9.474E-02	7.906E-03	4.295
	+	86.72		3.208E+01	1.152E+01	1.664E+01	1.522E+00	1.928
		117.66		-1.699E+00	3.961E+00	6.249E+00	3.844E-01	-0.272
		142.18		3.610E+00	1.889E+01	3.024E+01	1.666E+00	0.119
ANH-511	+	511.00	*	1.401E-01	6.243E-02	4.150E-02	2.741E-03	3.375

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.150E-01	2.996E-01	5.052E-01	3.661E-02	0.228
NA-22		1274.54	*	1.418E-02	4.239E-02	7.145E-02	4.862E-03	0.198
NA-24		1368.53	*	-7.305E-02	4.239E-02	Half-Life too short		
AL-26		1129.67		-4.959E-01	1.826E+00	2.705E+00	1.806E-01	-0.183
		1808.65	*	3.454E-03	2.551E-02	4.279E-02	2.498E-03	0.081
TI-44		67.85		1.679E-02	5.932E-02	8.955E-02	7.201E-03	0.188
	+	78.38	*	4.238E-01	6.566E-02	8.828E-02	7.549E-03	4.800
SC-46		889.25	*	2.915E-02	3.786E-02	6.519E-02	7.271E-03	0.447
	+	1120.51		2.555E-01	8.401E-02	1.204E-01	8.321E-03	2.121
V-48		944.10		-4.207E-01	8.147E-01	1.266E+00	1.340E-01	-0.332
		983.50	*	-1.868E-02	6.316E-02	9.964E-02	9.855E-03	-0.187
		1312.09		3.976E-02	7.128E-02	1.225E-01	8.923E-03	0.325
CR-51		320.08	*	1.601E-01	3.392E-01	5.605E-01	3.609E-02	0.286
MN-52		744.21		-5.797E-03	1.776E-01	2.943E-01	2.595E-02	-0.020
		848.13		3.896E-01	5.436E+00	8.970E+00	9.384E-01	0.043
		935.52		2.407E-01	2.070E-01	3.633E-01	3.897E-02	0.662
		1246.25		-4.917E+00	6.640E+00	1.037E+01	6.666E-01	-0.474
		1333.61		1.838E-01	4.230E+00	6.944E+00	5.246E-01	0.026
		1434.06	*	-5.290E-02	1.728E-01	2.695E-01	1.986E-02	-0.196
MN-54		834.83	*	1.248E-02	3.626E-02	6.095E-02	6.243E-03	0.205
CO-56		846.75	*	1.687E-02	3.649E-02	6.189E-02	6.461E-03	0.273
		977.42		-1.417E+00	2.949E+00	4.335E+00	4.336E-01	-0.327
		1037.82		-3.456E-02	2.842E-01	4.713E-01	4.367E-02	-0.073
		1175.09		2.714E-01	2.142E+00	3.576E+00	1.984E-01	0.076
		1238.25		1.047E-01	9.179E-02	1.608E-01	1.072E-02	0.651
		1360.21		-4.830E-01	9.414E-01	1.452E+00	1.091E-01	-0.333
		1771.40		-4.813E-02	2.486E-01	3.317E-01	2.005E-02	-0.145
CO-57		122.06	*	1.429E-02	2.607E-02	4.281E-02	2.536E-03	0.334

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-1.373E-01	2.090E-01	3.225E-01	2.111E-02	-0.426
CO-58		810.76	*	-2.937E-02	3.667E-02	5.664E-02	5.592E-03	-0.519
FE-59		142.65		-1.871E-01	2.902E+00	4.546E+00	2.501E-01	-0.041
		192.34		-8.271E-02	9.302E-01	1.499E+00	1.739E-01	-0.055
		1099.22	*	-4.665E-02	8.925E-02	1.429E-01	1.176E-02	-0.326
		1291.56		2.993E-02	1.171E-01	1.961E-01	1.648E-02	0.153
CO-60		1173.22		2.415E-02	4.364E-02	7.497E-02	4.143E-03	0.322
		1332.49	*	-6.630E-03	3.865E-02	6.217E-02	4.697E-03	-0.107
ZN-65		1115.52	*	8.619E-02	9.511E-02	1.478E-01	1.041E-02	0.583
GE-68		1077.35	*	3.778E-02	1.186E+00	1.940E+00	1.541E-01	0.019
AS-73		53.44	*	-1.842E-01	1.169E+00	1.899E+00	1.506E-01	-0.097
AS-74		595.88	*	-4.202E-03	8.327E-02	1.343E-01	9.648E-03	-0.031
		634.78		3.273E-01	3.178E-01	5.471E-01	4.073E-02	0.598
SE-75		66.05		-1.783E+00	6.297E+00	9.218E+00	9.129E-01	-0.193
		96.73		-4.987E-01	8.534E-01	1.195E+00	1.576E-01	-0.417
		121.11		5.738E-03	1.396E-01	2.244E-01	2.095E-02	0.026
		136.00		-2.141E-02	3.888E-02	6.032E-02	3.435E-03	-0.355
		198.60		-1.560E+00	1.740E+00	2.773E+00	1.882E-01	-0.563
		264.65	*	-6.551E-02	4.664E-02	5.960E-02	3.408E-03	-1.099
		279.53		9.980E-02	1.037E-01	1.763E-01	1.089E-02	0.566
		303.91		1.325E-01	2.168E+00	3.078E+00	2.928E-01	0.043
		400.65		7.557E-03	2.389E-01	4.004E-01	3.648E-02	0.019
BR-77	+	87.88		4.355E+02	1.563E+02	2.502E+02	2.312E+01	1.741
		200.40		6.131E+01	1.050E+02	1.791E+02	9.648E+00	0.342
	+	239.00		1.881E+02	1.612E+01	2.536E+01	1.411E+00	7.415
		249.79		-1.005E+01	4.468E+01	6.697E+01	3.754E+00	-0.150
		281.68		-1.359E+02	6.056E+01	8.619E+01	4.919E+00	-1.576
		297.23		2.363E+02	5.882E+01	8.185E+01	4.699E+00	2.887
		303.76		4.324E+00	1.264E+02	1.791E+02	1.030E+01	0.024
		439.47		3.889E+01	9.097E+01	1.547E+02	9.428E+00	0.251
		484.57		-1.455E+02	1.477E+02	2.279E+02	1.463E+01	-0.638
		520.65	*	-1.309E+00	6.331E+00	1.022E+01	6.818E-01	-0.128
		574.64		-1.013E+02	1.468E+02	2.205E+02	1.552E+01	-0.459
		578.91		1.559E+01	6.627E+01	9.475E+01	6.699E+00	0.165
		585.48		1.286E+03	2.003E+02	3.464E+02	2.464E+01	3.712
		755.35		4.989E+00	1.011E+02	1.683E+02	1.513E+01	0.030
		817.79		-2.299E+01	8.363E+01	1.348E+02	1.343E+01	-0.171
SR-82		698.33		-9.435E-01	3.215E+01	5.221E+01	4.251E+00	-0.018
		776.49	*	4.626E-02	3.680E-01	5.703E-01	5.311E-02	0.081
		1395.20		-7.135E+00	9.713E+00	1.443E+01	1.075E+00	-0.495
RB-83		520.41	*	-1.649E-02	6.064E-02	9.742E-02	6.498E-03	-0.169
		529.64		-4.260E-02	9.462E-02	1.499E-01	1.009E-02	-0.284
		552.65		8.031E-03	1.837E-01	3.002E-01	2.069E-02	0.027
RB-84		881.50	*	-5.933E-02	7.367E-02	1.065E-01	1.174E-02	-0.557
KR-85		513.99	*	2.488E+01	7.927E+00	1.362E+01	9.024E-01	1.827
SR-85		513.99	*	1.258E-01	4.008E-02	6.888E-02	4.563E-03	1.827
RB-86		1076.63	*	1.293E-02	7.135E-01	1.165E+00	9.276E-02	0.011
Y-88		898.02		-1.610E-02	4.291E-02	6.812E-02	7.722E-03	-0.236
		1836.01	*	1.170E-02	2.958E-02	5.144E-02	2.930E-03	0.227

Sample ID : G232433013 Acquisition date : 7-JUL-2009 07:04:28

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	-1.671E-02	2.865E-02	4.651E-02	2.675E-03	-0.359
Y-91		1204.90	*	-4.215E+00	1.815E+01	2.947E+01	1.743E+00	-0.143
NB-94		702.63	*	1.074E-02	3.103E-02	5.289E-02	4.339E-03	0.203
		871.10		-3.629E-02	3.451E-02	5.162E-02	5.599E-03	-0.703
NB-95		765.79	*	4.242E-02	4.342E-02	6.735E-02	6.161E-03	0.630
NB-95M		235.69	*	4.122E-02	1.324E-01	1.949E-01	1.430E-02	0.211
ZR-95		724.18		5.886E-02	1.025E-01	1.542E-01	1.430E-02	0.382
		756.15	*	-3.755E-02	6.376E-02	1.011E-01	9.950E-03	-0.371
NB-97		657.90	*	-1.695E-03	6.376E-02	Half-Life too short		
		1024.50		5.835E-01	6.376E-02	Half-Life too short		
ZR-97		254.15		-3.854E-01	6.376E-02	Half-Life too short		
		355.39		1.368E+00	6.376E-02	Half-Life too short		
		507.63	*	6.377E-01	6.376E-02	Half-Life too short		
		602.52		-7.967E-01	6.376E-02	Half-Life too short		
		1021.30		-2.036E+00	6.376E-02	Half-Life too short		
		1147.95		-1.214E+00	6.376E-02	Half-Life too short		
		1362.66		-3.495E-01	6.376E-02	Half-Life too short		
		1750.46		5.311E-01	6.376E-02	Half-Life too short		
MO-99		140.51		2.348E+00	2.077E+01	3.276E+01	8.810E+00	0.072
		181.06		5.220E+00	1.228E+01	1.858E+01	3.155E+00	0.281
		366.43		6.938E+00	5.572E+01	9.446E+01	5.457E+00	0.073
		739.58	*	-1.639E+00	7.423E+00	1.213E+01	1.851E+00	-0.135
		778.00		-1.105E+01	2.321E+01	3.708E+01	3.462E+00	-0.298
TC-99M		140.51	*	1.233E+08	2.321E+01	Half-Life too short		
RH-101		127.23		9.731E-03	3.305E-02	5.354E-02	3.093E-03	0.182
		198.01	*	-3.693E-02	3.303E-02	5.225E-02	2.809E-03	-0.707
		325.23		-1.006E-01	2.493E-01	3.392E-01	1.960E-02	-0.297
RH-102		418.52		2.662E-02	2.624E-01	4.400E-01	2.615E-02	0.061
		475.06	*	-1.370E-02	2.799E-02	4.482E-02	2.846E-03	-0.306
		631.29		-4.565E-03	5.054E-02	8.080E-02	5.997E-03	-0.057
		697.49		3.477E-02	7.467E-02	1.249E-01	1.015E-02	0.278
		766.84		1.351E-01	1.161E-01	1.818E-01	1.666E-02	0.743
		1046.59		8.048E-02	1.121E-01	1.965E-01	1.695E-02	0.410
		1112.84		2.291E-01	2.391E-01	3.744E-01	2.658E-02	0.612
RU-103		497.08	*	2.149E-02	3.715E-02	6.307E-02	8.189E-03	0.341
	+	610.33		1.215E+01	2.641E+00	2.714E+00	4.352E-01	4.475
RH-106	+	511.85		6.980E-01	3.111E-01	4.318E-01	2.854E-02	1.616
		621.84	*	-4.499E-02	2.986E-01	4.760E-01	5.989E-02	-0.095
		1050.47		-1.371E+00	2.280E+00	3.643E+00	3.112E-01	-0.376
RU-106	+	511.85		6.980E-01	3.111E-01	4.318E-01	2.854E-02	1.616
		621.84	*	-4.499E-02	2.986E-01	4.760E-01	3.503E-02	-0.095
		1050.47		-1.371E+00	2.280E+00	3.643E+00	3.112E-01	-0.376
AG-108M		433.93	*	-6.550E-03	3.108E-02	5.105E-02	3.335E-03	-0.128
		614.37		-2.056E-03	4.334E-02	6.002E-02	4.625E-03	-0.034
		722.95		-2.120E-02	4.636E-02	6.361E-02	5.626E-03	-0.333
AG-110M		657.75	*	-5.488E-03	3.702E-02	5.291E-02	4.173E-03	-0.104
		677.61		-2.050E-01	2.712E-01	4.295E-01	3.484E-02	-0.477
		706.67		-3.850E-02	1.937E-01	3.190E-01	2.715E-02	-0.121
		763.93		2.504E-02	1.654E-01	2.394E-01	2.239E-02	0.105

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		3.536E-03	4.814E-02	7.914E-02	8.937E-03	0.045
		937.48		4.142E-02	1.053E-01	1.763E-01	1.930E-02	0.235
		1384.27		-1.198E-02	1.772E-01	2.429E-01	1.883E-02	-0.049
IN-111		171.28		3.440E-01	6.657E-01	1.145E+00	6.024E-02	0.300
		245.39	*	2.019E-01	8.021E-01	1.136E+00	6.348E-02	0.178
IN-113M		391.69	*	-3.982E-02	4.208E-02	6.690E-02	4.104E-03	-0.595
SN-113		391.69	*	-3.982E-02	4.208E-02	6.690E-02	4.104E-03	-0.595
IN-114M		190.27	*	-1.579E-01	1.958E-01	2.755E-01	1.471E-02	-0.573
CD-115		260.90		6.916E+01	7.913E+01	1.350E+02	7.620E+00	0.512
		492.35		-2.106E+01	2.295E+01	3.551E+01	2.299E+00	-0.593
		527.90	*	-3.692E+00	6.638E+00	1.044E+01	7.018E-01	-0.354
SN-117M		156.02		-9.478E-01	1.934E+00	3.216E+00	1.718E-01	-0.295
		158.56	*	2.051E-02	4.771E-02	8.037E-02	4.271E-03	0.255
SB-122		563.90	*	1.345E+00	1.430E+00	2.456E+00	1.711E-01	0.548
		692.80		-1.014E+01	2.936E+01	4.799E+01	3.869E+00	-0.211
I-123		159.00	*	3.608E-01	2.936E+01	Half-Life too short		
		528.96		-1.272E+01	2.936E+01	Half-Life too short		
TE-123M		159.00	*	9.446E-03	2.639E-02	4.433E-02	2.392E-03	0.213
I-124		602.71	*	-3.595E-01	5.852E-01	7.660E-01	5.539E-02	-0.469
		722.78		-1.815E+00	3.887E+00	5.329E+00	4.529E-01	-0.341
		1325.50		-1.113E+01	2.674E+01	4.197E+01	3.132E+00	-0.265
		1376.25		6.535E+01	2.749E+01	4.908E+01	3.675E+00	1.332
		1509.49		1.343E+01	1.179E+01	2.184E+01	1.565E+00	0.615
		1691.02		5.408E-01	2.779E+00	4.716E+00	3.041E-01	0.115
SB-124		602.71		-2.563E-02	4.171E-02	5.460E-02	3.949E-03	-0.469
		645.85		3.775E-03	4.468E-01	7.181E-01	5.821E-02	0.005
		709.31		-1.786E+00	2.633E+00	4.196E+00	3.483E-01	-0.426
		713.82		1.700E-02	1.594E+00	2.659E+00	3.153E-01	0.006
		722.78		-1.875E-01	4.016E-01	5.506E-01	4.783E-02	-0.341
	+	968.20		1.476E+01	5.177E+00	7.244E+00	7.367E-01	2.037
		1045.16		2.906E-01	2.426E+00	4.092E+00	3.543E-01	0.071
		1325.50		-1.229E+00	2.951E+00	4.632E+00	3.456E-01	-0.265
		1368.21		-7.149E-01	1.743E+00	2.592E+00	3.315E-01	-0.276
		1436.60		-2.575E+00	3.406E+00	5.000E+00	3.682E-01	-0.515
		1691.02	*	1.318E-02	6.774E-02	1.149E-01	7.929E-03	0.115
SB-125		427.89	*	3.726E-02	8.584E-02	1.462E-01	9.138E-03	0.255
	+	463.38		7.196E-01	3.600E-01	5.240E-01	3.756E-02	1.373
		600.56		3.892E-02	1.618E-01	2.660E-01	2.118E-02	0.146
		635.90		1.341E-01	2.522E-01	4.210E-01	3.473E-02	0.318
TE-125M		109.28	*	4.935E-01	9.558E+00	1.548E+01	1.360E+00	0.032
I-126		388.63		1.423E-01	1.781E-01	3.105E-01	1.785E-02	0.458
		666.33	*	-3.081E-02	1.839E-01	2.621E-01	2.015E-02	-0.118
		753.82		8.287E-01	1.235E+00	2.140E+00	1.918E-01	0.387
SB-126		223.80		1.282E+00	3.642E+00	6.115E+00	3.361E-01	0.210
		278.60		4.555E+00	2.257E+00	3.989E+00	2.273E-01	1.142
	+	296.50		1.255E+01	2.364E+00	3.295E+00	1.891E-01	3.809
		414.70		-2.801E-02	7.158E-02	1.004E-01	5.937E-03	-0.279
		415.30		-2.288E+00	6.005E+00	8.430E+00	4.990E-01	-0.271
		555.20		1.737E+00	3.361E+00	5.662E+00	3.912E-01	0.307

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		573.80		-1.710E-01	9.679E-01	1.554E+00	1.093E-01	-0.110
		593.00		-3.169E-01	8.374E-01	1.320E+00	9.460E-02	-0.240
		656.30		-1.256E+00	3.369E+00	4.713E+00	3.576E-01	-0.266
		666.33		-1.284E-02	7.661E-02	1.092E-01	8.393E-03	-0.118
		675.00		-1.361E+00	1.647E+00	2.598E+00	2.028E-01	-0.524
		695.00		-3.912E-02	6.965E-02	1.122E-01	9.084E-03	-0.349
		697.00		7.476E-02	2.397E-01	3.971E-01	3.226E-02	0.188
		720.50	*	-4.699E-02	1.399E-01	2.104E-01	1.781E-02	-0.223
		856.80		2.653E-01	4.688E-01	6.984E-01	7.408E-02	0.380
		989.30		5.840E-01	1.070E+00	1.810E+00	1.770E-01	0.323
		1034.80		6.183E-01	7.636E+00	1.239E+01	1.100E+00	0.050
		1213.00		2.607E+00	4.172E+00	7.172E+00	4.312E-01	0.363
SB-127		61.10		1.342E+00	5.984E+01	8.983E+01	9.044E+00	0.015
		252.40		1.068E+00	3.279E+00	5.415E+00	2.243E+00	0.197
		290.80		-1.345E+01	1.881E+01	2.528E+01	2.185E+00	-0.532
		411.60		7.374E+00	9.672E+00	1.481E+01	2.091E+00	0.498
		444.90		1.587E+00	7.157E+00	1.202E+01	1.272E+00	0.132
		473.00		2.780E-02	1.262E+00	2.085E+00	2.313E-01	0.013
		543.00		9.539E+00	1.219E+01	2.079E+01	2.720E+00	0.459
		603.60		-5.131E-01	9.488E+00	1.315E+01	1.477E+00	-0.039
		685.20	*	-4.591E-01	1.064E+00	1.731E+00	1.816E-01	-0.265
		698.50		3.686E-01	1.128E+01	1.888E+01	2.887E+00	0.020
		722.20		-8.126E+00	2.555E+01	3.552E+01	3.792E+00	-0.229
		783.80		1.523E+00	2.744E+00	4.689E+00	5.938E-01	0.325
XE-127		57.60		-6.241E+00	7.388E+00	1.191E+01	9.183E-01	-0.524
		145.22		5.154E-02	6.970E-01	1.096E+00	5.989E-02	0.047
		172.10		7.418E-02	1.074E-01	1.857E-01	9.779E-03	0.399
		202.84	*	-2.450E-02	4.338E-02	7.061E-02	3.812E-03	-0.347
		374.96		7.494E-02	1.684E-01	2.899E-01	1.672E-02	0.258
I-131		80.18		2.538E+00	4.625E+00	6.994E+00	6.091E-01	0.363
		284.30		-2.107E-01	1.296E+00	2.090E+00	1.329E-01	-0.101
		364.48	*	3.721E-02	9.326E-02	1.604E-01	1.033E-02	0.232
		636.97		8.877E-01	1.260E+00	2.129E+00	1.703E-01	0.417
		722.89		-3.209E+00	6.965E+00	9.555E+00	8.166E-01	-0.336
TE-132		49.72		6.175E+00	2.250E+01	3.837E+01	3.776E+00	0.161
		111.76		-7.980E+00	2.327E+01	3.698E+01	3.284E+00	-0.216
		116.30		-6.574E+00	2.157E+01	3.424E+01	2.967E+00	-0.192
		228.16	*	-1.887E-01	5.084E-01	8.259E-01	1.156E-01	-0.229
BA-133		53.15		-1.305E+00	5.135E+00	8.312E+00	6.596E-01	-0.157
		79.62		4.849E-01	1.340E+00	2.234E+00	3.402E-01	0.217
		81.00		-1.183E-01	1.181E-01	1.631E-01	2.598E-02	-0.725
		276.40		4.199E-01	3.872E-01	6.359E-01	8.214E-02	0.660
		302.84		4.040E-02	1.532E-01	2.208E-01	2.568E-02	0.183
		356.01	*	2.510E-02	4.655E-02	6.752E-02	7.800E-03	0.372
		383.85		-5.543E-02	2.717E-01	4.509E-01	4.891E-02	-0.123
I-133	+	510.53		4.950E-01	2.717E-01	Half-Life too short		
		529.87	*	-6.399E-04	2.717E-01	Half-Life too short		
		706.58		-2.572E-02	2.717E-01	Half-Life too short		
		856.28		1.321E-01	2.717E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		875.33		3.890E-02	2.717E-01	Half-Life too short		
		1236.41		2.195E-01	2.717E-01	Half-Life too short		
		1298.22		9.613E-02	2.717E-01	Half-Life too short		
CS-134		475.35		-6.860E-01	1.835E+00	2.960E+00	1.880E-01	-0.232
		563.23		2.896E-01	3.454E-01	5.904E-01	4.171E-02	0.491
		569.32		2.782E-02	1.963E-01	3.186E-01	2.277E-02	0.087
		604.70		-1.671E-03	3.500E-02	4.854E-02	3.529E-03	-0.034
	+	795.84	*	7.542E-02	5.557E-02	8.330E-02	8.057E-03	0.905
		801.93		-1.153E-01	4.530E-01	6.622E-01	6.460E-02	-0.174
		1038.57		-1.355E+00	3.631E+00	5.904E+00	5.195E-01	-0.229
		1167.94		7.622E-01	2.400E+00	4.063E+00	2.304E-01	0.188
		1365.15		1.507E+00	1.150E+00	2.114E+00	1.681E-01	0.713
CS-135		268.24	*	3.057E-01	1.601E-01	2.563E-01	1.937E-02	1.193
I-135		288.45		4.779E+08	1.601E-01	Half-Life too short		
		417.63		-2.055E+08	1.601E-01	Half-Life too short		
		546.56		4.077E+08	1.601E-01	Half-Life too short		
		836.80		4.475E+08	1.601E-01	Half-Life too short		
		1038.76		-2.916E+08	1.601E-01	Half-Life too short		
		1124.00		4.222E+09	1.601E-01	Half-Life too short		
		1131.51		1.303E+08	1.601E-01	Half-Life too short		
		1260.41	*	1.210E+08	1.601E-01	Half-Life too short		
		1457.56		2.940E+10	1.601E-01	Half-Life too short		
		1678.03		5.762E+07	1.601E-01	Half-Life too short		
		1706.46		6.163E+08	1.601E-01	Half-Life too short		
		1791.20		-5.999E+07	1.601E-01	Half-Life too short		
CS-136		66.91		1.380E-01	9.439E-01	1.410E+00	2.129E-01	0.098
	+	86.29		3.546E+00	1.317E+00	2.042E+00	2.692E-01	1.736
		153.22		4.034E-01	5.690E-01	9.903E-01	6.815E-02	0.407
		163.89		2.274E-01	9.310E-01	1.556E+00	1.063E-01	0.146
		176.55		-2.486E-01	3.183E-01	5.180E-01	3.138E-02	-0.480
		273.65		-5.829E-01	4.969E-01	6.542E-01	4.260E-02	-0.891
		340.57		6.357E-01	1.435E-01	2.474E-01	1.522E-02	2.569
		818.51		-1.355E-02	6.573E-02	1.066E-01	1.064E-02	-0.127
		1048.07	*	4.733E-02	9.816E-02	1.696E-01	1.520E-02	0.279
		1235.34		2.447E-01	5.769E-01	9.730E-01	1.000E-01	0.252
CE-139		165.85	*	1.713E-02	2.692E-02	4.659E-02	2.446E-03	0.368
BA-140		162.64		-1.836E-01	6.523E-01	1.068E+00	6.475E-02	-0.172
		304.84		-1.357E-02	1.253E+00	1.769E+00	4.826E-01	-0.008
		423.70		-8.432E-01	1.716E+00	2.746E+00	8.738E-01	-0.307
		537.32	*	1.236E-01	2.340E-01	3.892E-01	1.273E-01	0.318
LA-140	+	328.77		2.547E-01	3.197E-01	4.868E-01	3.154E-02	0.523
		432.53		7.683E-01	1.811E+00	3.082E+00	2.043E-01	0.249
		487.03		1.388E-01	1.182E-01	2.078E-01	1.482E-02	0.668
		751.79		4.134E-02	1.405E+00	2.336E+00	2.295E-01	0.018
		815.85		2.282E-02	2.789E-01	4.623E-01	4.997E-02	0.049
		867.82		1.737E-01	1.360E+00	2.085E+00	2.327E-01	0.083
		919.63		1.709E+00	2.882E+00	4.279E+00	5.406E-01	0.399
		925.24		-3.257E-01	1.038E+00	1.648E+00	1.866E-01	-0.198
		1596.49	*	-3.764E-02	7.506E-02	1.173E-01	8.049E-03	-0.321

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	8.466E-03	6.104E-02	9.737E-02	5.558E-03	0.087
CE-143		57.37		-3.947E-04	6.104E-02	Half-Life too short		
		231.56		-2.571E-05	6.104E-02	Half-Life too short		
		293.26	*	3.370E-04	6.104E-02	Half-Life too short		
		350.59		1.627E-02	6.104E-02	Half-Life too short		
		490.36		6.569E-05	6.104E-02	Half-Life too short		
		664.57		1.289E-03	6.104E-02	Half-Life too short		
		721.93		-2.111E-04	6.104E-02	Half-Life too short		
CE-144		80.11		1.289E+00	2.379E+00	3.597E+00	3.114E-01	0.358
		133.54	*	-4.272E-02	2.015E-01	3.180E-01	4.496E-02	-0.134
PM-144		476.78		1.954E-02	6.430E-02	1.079E-01	8.007E-03	0.181
		618.01		-2.181E-02	3.579E-02	4.881E-02	3.715E-03	-0.447
		696.49	*	4.917E-03	3.285E-02	5.387E-02	4.373E-03	0.091
		778.57		-9.452E-01	2.181E+00	3.497E+00	3.269E-01	-0.270
PR-144		696.49	*	3.329E-01	2.224E+00	3.648E+00	2.961E-01	0.091
		1489.15		-4.479E+00	1.030E+01	1.563E+01	1.129E+00	-0.287
PM-146		453.90	*	3.027E-02	4.163E-02	7.161E-02	6.370E-03	0.423
		633.02		-5.054E-01	1.332E+00	2.062E+00	7.653E-01	-0.245
		735.90		-8.088E-02	1.417E-01	2.176E-01	6.229E-02	-0.372
		747.13		-6.073E-02	8.245E-02	1.288E-01	1.827E-02	-0.472
ND-147	+	91.11		4.926E-01	2.214E-01	4.789E-01	4.504E-02	1.029
		319.41		-1.272E+00	2.899E+00	4.552E+00	2.629E-01	-0.279
		439.89		1.358E+00	4.913E+00	8.287E+00	5.056E-01	0.164
		531.02	*	-3.436E-01	4.742E-01	7.325E-01	1.022E-01	-0.469
PM-149		285.90	*	5.399E+01	5.925E+01	9.983E+01	1.411E+01	0.541
EU-152		121.78		2.888E-02	7.625E-02	1.243E-01	9.582E-03	0.232
		244.69		-1.101E-01	3.217E-01	4.979E-01	2.781E-02	-0.221
		344.27	*	6.839E-02	9.826E-02	1.452E-01	9.473E-03	0.471
		443.98		-1.085E-02	8.968E-01	1.487E+00	9.113E-02	-0.007
		778.89		-1.192E-01	2.493E-01	3.982E-01	3.723E-02	-0.299
		867.32		2.648E-01	8.923E-01	1.344E+00	1.449E-01	0.197
		964.01		5.023E-01	3.691E-01	5.678E-01	5.816E-02	0.885
		1085.78		-2.585E-01	3.666E-01	5.762E-01	4.465E-02	-0.449
		1112.02		1.312E-01	3.264E-01	5.146E-01	3.664E-02	0.255
		1407.95		2.014E-01	1.882E-01	3.358E-01	2.494E-02	0.600
GD-153		69.67		-1.290E+00	2.113E+00	3.044E+00	2.470E-01	-0.424
		83.37		1.337E+01	2.189E+01	2.655E+01	2.358E+00	0.504
		97.43	*	-8.102E-02	9.195E-02	1.266E-01	9.901E-03	-0.640
		103.18		-1.700E-01	1.121E-01	1.689E-01	1.218E-02	-1.006
EU-154		123.07		2.937E-02	5.223E-02	8.575E-02	8.109E-03	0.343
		247.94		-4.562E-01	3.954E-01	5.210E-01	4.908E-02	-0.876
		591.81		4.593E-03	5.887E-01	9.537E-01	1.014E-01	0.005
		723.30		-2.286E-02	1.895E-01	2.687E-01	2.533E-02	-0.085
		756.87		-4.179E-01	7.077E-01	1.121E+00	1.375E-01	-0.373
		873.19		-2.808E-02	2.920E-01	4.746E-01	6.610E-02	-0.059
		996.32		-1.466E-01	3.753E-01	5.868E-01	1.073E-01	-0.250
		1004.76		-1.758E-01	2.182E-01	3.283E-01	4.037E-02	-0.535
		1274.45	*	5.239E-02	1.180E-01	2.005E-01	2.003E-02	0.261
EU-155		48.70		-5.378E-01	3.864E+00	6.491E+00	4.923E-01	-0.083

---- Non-Identified Nuclides ----

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		60.01		7.097E+00	6.540E+00	1.035E+01	7.895E-01	0.686
	+	86.54		3.507E-01	1.260E-01	2.029E-01	1.868E-02	1.729
		105.31	*	1.547E-01	1.156E-01	1.964E-01	1.404E-02	0.787
TB-160	+	86.79		9.254E-01	3.322E-01	5.355E-01	4.899E-02	1.728
		197.04		-6.498E-01	5.506E-01	8.683E-01	4.663E-02	-0.748
		215.65		8.332E-02	7.491E-01	1.159E+00	6.328E-02	0.072
		298.57		2.172E-01	1.633E-01	1.919E-01	1.102E-02	1.132
		879.36	*	6.566E-02	1.344E-01	2.275E-01	2.499E-02	0.289
		962.29		1.126E+00	6.041E-01	9.712E-01	9.977E-02	1.160
		966.15		9.266E-01	3.101E-01	4.996E-01	5.098E-02	1.855
		1177.93		-1.721E-02	3.481E-01	5.739E-01	3.204E-02	-0.030
		1271.85		-1.024E-01	7.090E-01	1.151E+00	7.779E-02	-0.089
HO-166M		80.57		-5.600E-02	3.126E-01	4.562E-01	3.963E-02	-0.123
		184.41		1.113E-01	3.757E-02	6.270E-02	3.331E-03	1.775
		280.46		-1.167E-01	8.452E-02	1.277E-01	7.282E-03	-0.914
		410.95		2.240E-01	2.485E-01	3.856E-01	2.270E-02	0.581
		711.68	*	9.971E-03	5.930E-02	9.989E-02	8.326E-03	0.100
		752.31		-2.447E-02	2.430E-01	4.003E-01	3.579E-02	-0.061
		810.29		-3.959E-02	5.625E-02	8.768E-02	8.633E-03	-0.452
TM-171		51.35		-9.717E+00	4.481E+01	7.505E+01	5.948E+00	-0.129
		52.39		2.867E+00	2.240E+01	3.801E+01	3.020E+00	0.075
		59.40		2.427E+01	3.571E+01	5.550E+01	4.214E+00	0.437
		66.72	*	-1.331E+00	3.703E+01	5.486E+01	4.387E+00	-0.024
LU-176	+	88.36		6.909E-01	2.481E-01	3.920E-01	3.600E-02	1.762
		201.83		-9.198E-03	2.728E-02	4.486E-02	2.419E-03	-0.205
		306.84	*	-1.480E-03	2.583E-02	3.841E-02	2.211E-03	-0.039
		401.10		-8.541E-02	6.347E+00	1.061E+01	6.167E-01	-0.008
LU-177		112.95		-5.992E-01	1.488E+00	2.357E+00	1.519E-01	-0.254
	+	208.36	*	3.145E+00	1.304E+00	1.678E+00	9.101E-02	1.874
LU-177M		52.97		-4.675E-01	2.326E+00	3.775E+00	2.997E-01	-0.124
		54.07		-4.271E-01	1.183E+00	1.903E+00	1.505E-01	-0.224
		61.30		-1.131E-01	1.938E+00	2.896E+00	2.238E-01	-0.039
		121.62		1.323E-01	3.882E-01	6.323E-01	3.751E-02	0.209
		147.16		-1.652E-01	6.400E-01	1.001E+00	5.450E-02	-0.165
		171.86		1.951E-01	4.421E-01	7.579E-01	3.990E-02	0.257
		218.09		1.960E-01	8.237E-01	1.362E+00	7.449E-02	0.144
	+	268.79		2.245E+00	1.187E+00	1.398E+00	7.926E-02	1.606
		319.02		-1.517E-01	2.428E-01	3.769E-01	2.176E-02	-0.402
		367.43		5.576E-01	8.251E-01	1.437E+00	8.296E-02	0.388
		413.65	*	-3.802E-02	1.724E-01	2.453E-01	1.449E-02	-0.155
HF-181		56.28		-2.069E-01	1.146E+00	1.907E+00	1.486E-01	-0.108
		57.53		-3.823E-01	6.184E-01	1.008E+00	7.774E-02	-0.379
		65.20		-7.509E-01	1.245E+00	1.794E+00	1.423E-01	-0.419
		133.02		-1.756E-02	6.390E-02	1.006E-01	5.693E-03	-0.174
		136.25		-5.012E-01	4.594E-01	6.938E-01	3.885E-02	-0.722
		345.85		-2.162E-01	2.069E-01	2.626E-01	1.519E-02	-0.823
		482.03	*	-2.404E-02	3.919E-02	6.209E-02	3.974E-03	-0.387
W-181		56.28		-8.239E-02	4.548E-01	7.570E-01	5.897E-02	-0.109
		57.53		-1.518E-01	2.457E-01	4.005E-01	3.089E-02	-0.379

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		65.20	*	-2.959E-01	4.907E-01	7.071E-01	5.609E-02	-0.419
TA-182		67.75		1.642E-02	1.426E-01	2.126E-01	1.709E-02	0.077
		100.10		1.991E-01	1.791E-01	3.037E-01	2.283E-02	0.655
		152.43		1.736E-01	3.347E-01	5.411E-01	2.911E-02	0.321
		222.10		-2.043E-01	3.316E-01	5.345E-01	2.933E-02	-0.382
		1001.68		3.265E-01	2.094E+00	3.385E+00	3.231E-01	0.096
	+	1121.28		7.076E-01	2.327E-01	3.348E-01	2.307E-02	2.113
		1189.05		4.805E-02	3.048E-01	5.092E-01	2.911E-02	0.094
		1221.42	*	-5.964E-02	1.907E-01	3.076E-01	1.882E-02	-0.194
		1230.97		-2.046E-02	4.857E-01	7.981E-01	4.977E-02	-0.026
RE-183		57.98		-9.446E-02	2.426E-01	3.997E-01	3.070E-02	-0.236
		59.32		9.247E-02	1.451E-01	2.251E-01	1.710E-02	0.411
		67.20		2.732E-02	2.571E-01	3.834E-01	3.073E-02	0.071
		162.32	*	-4.450E-02	1.011E-01	1.644E-01	8.678E-03	-0.271
	+	208.81		3.199E+00	1.326E+00	1.706E+00	9.255E-02	1.876
		291.72		-6.781E-01	1.029E+00	1.391E+00	7.972E-02	-0.487
RE-184		57.98		-3.508E-01	9.008E-01	1.484E+00	1.140E-01	-0.236
		59.32		3.431E-01	5.383E-01	8.352E-01	6.345E-02	0.411
		67.20		1.014E-01	9.544E-01	1.423E+00	1.141E-01	0.071
		161.27		-3.111E-01	3.240E-01	5.268E-01	2.786E-02	-0.591
		216.55		1.166E-01	2.505E-01	4.236E-01	2.314E-02	0.275
		252.85	*	2.525E-02	2.198E-01	3.626E-01	2.037E-02	0.070
		318.01		-2.160E-01	4.226E-01	6.607E-01	3.814E-02	-0.327
		792.07		-7.703E-01	1.192E+00	1.587E+00	1.517E-01	-0.485
		903.28		3.102E-01	1.169E+00	1.745E+00	1.959E-01	0.178
		920.93		-3.254E-01	5.220E-01	7.093E-01	7.773E-02	-0.459
OS-185		59.72		3.039E-01	3.906E-01	6.095E-01	4.636E-02	0.499
		61.14		3.272E-05	2.135E-01	3.201E-01	2.470E-02	0.000
		69.30		-2.690E-01	3.784E-01	5.424E-01	4.394E-02	-0.496
		592.07		2.717E-01	2.386E+00	3.893E+00	2.787E-01	0.070
		646.12	*	-1.013E-02	3.901E-02	6.140E-02	4.618E-03	-0.165
		717.42		1.577E-01	8.653E-01	1.458E+00	1.228E-01	0.108
		874.81		4.109E-01	5.695E-01	9.785E-01	1.067E-01	0.420
		880.27		-5.922E-01	8.258E-01	1.202E+00	1.322E-01	-0.493
RE-188		155.03	*	-6.466E-02	1.572E-01	2.625E-01	1.405E-02	-0.246
		477.96		1.367E+00	2.847E+00	4.827E+00	3.076E-01	0.283
		633.10		-8.578E-01	2.615E+00	4.106E+00	3.052E-01	-0.209
W-188	+	63.58		6.731E+01	9.094E+01	1.103E+02	8.669E+00	0.610
		227.08		7.648E+00	1.197E+01	2.033E+01	1.120E+00	0.376
		290.67	*	-5.745E+00	8.149E+00	1.098E+01	6.288E-01	-0.523
IR-192	+	295.96		1.022E+00	1.928E-01	2.732E-01	1.593E-02	3.742
		308.46		4.771E-02	8.973E-02	1.491E-01	8.686E-03	0.320
		316.51	*	-1.891E-02	3.281E-02	5.020E-02	2.911E-03	-0.377
		468.07		-1.497E-02	7.092E-02	9.975E-02	7.108E-03	-0.150
		604.41		-5.935E-02	4.660E-01	6.411E-01	7.790E-02	-0.093
		612.46		4.831E+00	1.040E+00	1.756E+00	1.541E-01	2.751
AU-195		65.12		-1.255E-01	2.285E-01	3.303E-01	2.619E-02	-0.380
		66.83		1.539E-02	1.210E-01	1.807E-01	1.446E-02	0.085
	+	75.70		1.310E+00	3.021E-01	4.999E-01	4.198E-02	2.621

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		98.88	*	2.733E-01	2.270E-01	3.863E-01	2.956E-02	0.707
		129.76		1.682E+00	3.014E+00	4.925E+00	2.818E-01	0.342
TL-200		367.94	*	1.225E-04	3.014E+00	Half-Life too short		
		579.30		6.162E-04	3.014E+00	Half-Life too short		
		828.27		2.251E-04	3.014E+00	Half-Life too short		
		1205.75		-3.420E-04	3.014E+00	Half-Life too short		
TL-201		68.90		-7.126E-01	4.463E+00	6.588E+00	5.326E-01	-0.108
		70.82		-2.253E+00	2.516E+00	3.563E+00	2.909E-01	-0.632
		80.30		-4.199E-01	4.296E+00	6.297E+00	5.460E-01	-0.067
		135.34		-1.349E+01	1.865E+01	2.869E+01	1.611E+00	-0.470
		167.43	*	-5.159E+00	4.746E+00	7.648E+00	4.015E-01	-0.675
TL-202		68.90		-8.035E-02	5.032E-01	7.429E-01	6.006E-02	-0.108
		70.82		-2.533E-01	2.829E-01	4.006E-01	3.271E-02	-0.632
		80.30		-4.723E-02	4.832E-01	7.083E-01	6.141E-02	-0.067
		439.56	*	2.310E-02	5.992E-02	1.017E-01	6.197E-03	0.227
HG-203		70.83		-1.153E+00	1.301E+00	1.835E+00	2.445E-01	-0.628
		72.87		9.949E-01	6.618E-01	1.131E+00	1.467E-01	0.879
		82.60		-7.351E-01	1.312E+00	1.871E+00	2.596E-01	-0.393
		279.20	*	6.124E-02	3.892E-02	6.775E-02	4.109E-03	0.904
BI-207		72.80		2.504E-01	1.938E-01	3.335E-01	2.753E-02	0.751
	+	74.97		7.304E-01	1.684E-01	2.505E-01	2.095E-02	2.915
		84.90		3.006E-01	2.258E-01	3.463E-01	3.116E-02	0.868
		569.67		1.056E-02	3.067E-02	5.039E-02	3.531E-03	0.210
		1063.62	*	1.643E-02	5.082E-02	8.679E-02	7.165E-03	0.189
		1770.23		2.473E-01	7.230E-01	9.218E-01	5.577E-02	0.268
TL-207		81.07		-2.644E-01	2.582E-01	3.593E-01	3.134E-02	-0.736
		83.78		2.131E-01	1.610E-01	2.296E-01	2.047E-02	0.928
		94.90		6.300E-01	2.590E-01	4.166E-01	3.391E-02	1.512
		122.32		8.589E-01	1.803E+00	2.951E+00	2.004E-01	0.291
		144.24		2.230E-01	7.221E-01	1.147E+00	8.007E-02	0.194
		154.21		1.129E-01	3.663E-01	6.287E-01	4.184E-02	0.180
	+	269.46		5.285E-01	2.796E-01	3.438E-01	2.043E-02	1.537
		323.87	*	3.565E-01	7.103E-01	1.033E+00	1.705E-01	0.345
	+	338.28		8.046E+00	1.952E+00	2.500E+00	2.631E-01	3.218
		445.03		3.243E-01	2.114E+00	3.537E+00	3.701E-01	0.092
PO-209		260.50		5.468E+00	8.965E+00	1.511E+01	8.525E-01	0.362
		262.80		-6.581E+00	2.416E+01	3.895E+01	2.201E+00	-0.169
		896.60	*	-1.814E+00	7.582E+00	1.216E+01	1.372E+00	-0.149
BI-210		46.50	*	-8.629E+00	6.201E+00	9.879E+00	7.643E-01	-0.874
PB-210		46.50	*	-8.629E+00	6.201E+00	9.879E+00	7.643E-01	-0.874
PO-210		46.50	*	-8.629E+00	6.192E+00	9.879E+00	6.571E-01	-0.874
PB-211		404.84	*	-4.732E-02	9.945E-01	1.440E+00	8.977E-01	-0.033
		427.08		-5.449E-02	1.930E+00	3.208E+00	1.983E+00	-0.017
		831.96		-1.006E+00	1.331E+00	1.807E+00	1.136E+00	-0.557
BI-212	+	727.18	*	7.907E-01	4.305E-01	6.196E-01	6.171E-02	1.276
		785.46		4.047E+00	1.700E+00	3.160E+00	2.987E-01	1.281
		1620.62		7.143E-01	1.141E+00	2.032E+00	1.374E-01	0.352
PO-215		81.07		-2.644E-01	2.582E-01	3.593E-01	3.134E-02	-0.736
		83.78		2.131E-01	1.610E-01	2.296E-01	2.047E-02	0.928

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		6.300E-01	2.590E-01	4.166E-01	3.391E-02	1.512
		122.32		8.589E-01	1.803E+00	2.951E+00	2.004E-01	0.291
		144.24		2.230E-01	7.221E-01	1.147E+00	8.007E-02	0.194
		154.21		1.129E-01	3.663E-01	6.287E-01	4.184E-02	0.180
	+	269.46		5.285E-01	2.796E-01	3.438E-01	2.043E-02	1.537
		323.87	*	3.565E-01	7.103E-01	1.033E+00	1.705E-01	0.345
	+	338.28		8.046E+00	1.952E+00	2.500E+00	2.631E-01	3.218
		445.03		3.243E-01	2.114E+00	3.537E+00	3.701E-01	0.092
RN-219	+	271.23		6.781E-01	3.606E-01	4.535E-01	3.636E-02	1.495
		401.81	*	-4.315E-02	3.891E-01	6.469E-01	8.807E-02	-0.067
RN-220		549.76	*	-1.313E+01	2.509E+01	3.944E+01	2.710E+00	-0.333
RA-223		81.07		-2.644E-01	2.582E-01	3.593E-01	3.134E-02	-0.736
		83.78		2.131E-01	1.610E-01	2.296E-01	2.047E-02	0.928
		94.90		6.300E-01	2.590E-01	4.166E-01	3.391E-02	1.512
		122.32		8.589E-01	1.803E+00	2.951E+00	2.004E-01	0.291
		144.24		2.230E-01	7.221E-01	1.147E+00	8.007E-02	0.194
		154.21		1.129E-01	3.663E-01	6.287E-01	4.184E-02	0.180
	+	269.46		5.285E-01	2.796E-01	3.438E-01	2.043E-02	1.537
		323.87	*	3.565E-01	7.103E-01	1.033E+00	1.705E-01	0.345
	+	338.28		8.046E+00	1.952E+00	2.500E+00	2.631E-01	3.218
		445.03		3.243E-01	2.114E+00	3.537E+00	3.701E-01	0.092
AC-227		79.80		9.453E-01	1.859E+00	2.793E+00	6.008E-01	0.338
		236.00		5.305E-01	2.714E-01	4.240E-01	4.374E-02	1.251
		256.20	*	-6.383E-03	3.657E-01	5.989E-01	8.318E-02	-0.011
		286.10		1.442E+00	1.503E+00	2.543E+00	2.929E-01	0.567
	+	299.80		3.948E+00	2.096E+00	2.547E+00	4.142E-01	1.550
		304.40		3.553E-01	1.952E+00	2.796E+00	4.832E-01	0.127
		334.20		3.850E-01	2.841E+00	3.735E+00	6.846E-01	0.103
TH-227		79.80		9.453E-01	1.859E+00	2.793E+00	6.085E-01	0.338
	+	94.00		1.093E+01	4.030E+00	4.098E+00	8.868E-01	2.667
		236.00		5.305E-01	2.700E-01	4.240E-01	3.773E-02	1.251
		256.20	*	-6.383E-03	3.657E-01	5.989E-01	1.009E-01	-0.011
		286.10		1.442E+00	2.078E+00	2.543E+00	2.547E+00	0.567
	+	299.80		3.948E+00	2.096E+00	2.547E+00	4.142E-01	1.550
		304.40		3.553E-01	1.952E+00	2.796E+00	4.832E-01	0.127
		334.20		3.850E-01	2.841E+00	3.735E+00	6.846E-01	0.103
TH-229		85.43		2.644E-01	2.295E-01	3.492E-01	3.157E-02	0.757
	+	88.47		3.977E-01	1.428E-01	2.246E-01	2.057E-02	1.771
		100.00		2.123E-01	1.877E-01	3.184E-01	2.397E-02	0.667
		193.63	*	5.923E-01	4.918E-01	8.585E-01	4.597E-02	0.690
	+	210.97		2.538E+00	1.052E+00	1.300E+00	7.068E-02	1.952
PA-231		283.67	*	-6.007E-01	1.469E+00	2.335E+00	3.209E-01	-0.257
	+	301.29		1.579E+00	8.149E-01	1.028E+00	1.072E-01	1.536
TH-231		81.07		-2.644E-01	2.582E-01	3.593E-01	3.134E-02	-0.736
		83.78		2.131E-01	1.610E-01	2.296E-01	2.047E-02	0.928
		94.90		6.300E-01	2.590E-01	4.166E-01	3.391E-02	1.512
		122.32		8.589E-01	1.803E+00	2.951E+00	2.004E-01	0.291
		144.24		2.230E-01	7.221E-01	1.147E+00	8.007E-02	0.194
		154.21		1.129E-01	3.663E-01	6.287E-01	4.184E-02	0.180

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.285E-01	2.796E-01	3.438E-01	2.043E-02	1.537
		323.87	*	3.565E-01	7.103E-01	1.033E+00	1.705E-01	0.345
	+	338.28		8.046E+00	1.952E+00	2.500E+00	2.631E-01	3.218
		445.03		3.243E-01	2.114E+00	3.537E+00	3.701E-01	0.092
U-231		84.21		7.073E+00	5.188E+00	7.971E+00	7.130E-01	0.887
	+	92.29		8.676E+00	2.688E+00	3.454E+00	2.941E-01	2.512
		95.87	*	3.074E-01	9.207E-01	1.365E+00	1.094E-01	0.225
		108.00		-1.943E+00	1.792E+00	2.760E+00	1.877E-01	-0.704
PA-233	+	75.28		2.132E+01	5.611E+00	7.491E+00	1.140E+00	2.846
	+	86.59		5.703E+00	2.508E+00	3.302E+00	8.912E-01	1.727
	+	300.12		1.101E+00	5.755E-01	7.111E-01	9.538E-02	1.548
		311.98	*	-2.207E-02	6.123E-02	9.682E-02	5.931E-03	-0.228
		340.50		3.555E+00	1.094E+00	1.316E+00	3.022E-01	2.702
		398.62		1.136E-01	2.013E+00	3.378E+00	8.734E-01	0.034
		415.76		-7.130E-01	1.652E+00	2.417E+00	4.985E-01	-0.295
PA-234	+	63.00		1.978E+00	2.685E+00	3.328E+00	5.017E-01	0.594
		94.67		6.066E-01	2.008E-01	3.154E-01	3.815E-02	1.923
		98.44		3.099E-02	9.493E-02	1.540E-01	8.570E-02	0.201
		99.86		5.514E-01	4.760E-01	8.083E-01	6.098E-02	0.682
		111.00		3.181E-02	1.913E-01	3.110E-01	3.337E-02	0.102
		131.20		-2.015E-02	1.084E-01	1.717E-01	9.775E-03	-0.117
		152.70		2.552E-01	3.235E-01	5.257E-01	8.231E-02	0.485
	+	186.00		4.231E+00	2.375E+00	2.485E+00	7.572E-01	1.702
		226.40		4.336E-01	3.892E-01	6.686E-01	7.633E-02	0.648
		227.20		7.497E-02	4.130E-01	6.882E-01	3.793E-02	0.109
		248.90		-3.342E-01	8.656E-01	1.209E+00	2.591E-01	-0.276
		293.70		5.216E+00	1.233E+00	1.635E+00	2.625E-01	3.190
		369.80		-2.810E-01	7.584E-01	1.247E+00	2.596E-01	-0.225
		568.70		-2.030E-01	9.980E-01	1.585E+00	1.109E-01	-0.128
		569.50		8.276E-02	2.715E-01	4.450E-01	3.118E-02	0.186
		574.00		-2.641E-01	1.485E+00	2.384E+00	1.677E-01	-0.111
		699.00		2.099E-02	6.771E-01	1.133E+00	2.138E-01	0.019
		706.10		-2.107E-01	9.778E-01	1.602E+00	7.131E-01	-0.132
		733.00		4.402E-03	4.016E-01	5.757E-01	1.279E-01	0.008
		742.81		2.936E-01	1.212E+00	2.021E+00	1.359E+00	0.145
	+	796.30		1.467E+00	1.145E+00	1.613E+00	4.418E-01	0.910
		805.60		6.838E-01	9.992E-01	1.686E+00	5.226E-01	0.406
		819.60		-1.793E-01	1.147E+00	1.863E+00	7.147E-01	-0.096
		826.30		1.785E-02	7.754E-01	1.278E+00	5.757E-01	0.014
		831.60		-4.127E-01	6.176E-01	9.460E-01	2.870E-01	-0.436
		876.40		4.553E-01	9.430E-01	1.394E+00	1.436E+00	0.327
		880.51		-1.981E-01	2.998E-01	4.383E-01	4.823E-02	-0.452
		883.24		-1.318E-01	2.949E-01	4.432E-01	2.995E-01	-0.297
		899.00		-1.833E-04	8.734E-01	1.426E+00	6.320E-01	0.000
		925.00		-1.196E-01	1.135E+00	1.833E+00	1.997E-01	-0.065
		926.50		-2.127E-02	1.687E-01	2.718E-01	7.103E-02	-0.078
		946.00	*	7.077E-02	2.955E-01	4.885E-01	9.636E-02	0.145
		949.00		2.387E-01	4.462E-01	7.526E-01	7.904E-02	0.317
		980.50		5.951E-01	6.710E-01	1.163E+00	1.156E-01	0.512

---- Non-Identified Nuclides ----

Nuclide	Line Jded	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-8.432E-01	1.259E+00	1.692E+00	1.099E+00	-0.498
PA-234M		766.41		2.544E+01	2.668E+01	2.920E+01	2.241E+01	0.871
		1001.03	*	5.706E-02	6.820E+00	1.090E+01	1.300E+00	0.005
U-235	+	89.95		2.133E+00	1.145E+00	1.989E+00	6.152E-01	1.073
	+	93.35		3.400E+00	1.390E+00	1.359E+00	3.797E-01	2.503
		105.00		1.758E+00	1.231E+00	1.924E+00	5.662E-01	0.914
		143.76	*	3.857E-02	2.237E-01	3.535E-01	5.726E-02	0.109
		163.35		7.857E-03	4.458E-01	7.392E-01	1.317E-01	0.011
	+	185.71		1.567E-01	7.434E-02	9.169E-02	4.876E-03	1.709
		205.31		-8.961E-02	5.459E-01	7.919E-01	1.414E-01	-0.113
NP-236		94.67		4.631E-01	1.468E-01	2.396E-01	1.958E-02	1.933
		98.44		2.337E-02	7.059E-02	1.164E-01	8.964E-03	0.201
		111.00		2.406E-02	1.447E-01	2.353E-01	1.547E-02	0.102
		160.31	*	-2.788E-02	7.421E-02	1.210E-01	6.410E-03	-0.230
NP-239		99.55		1.674E-01	1.593E-01	2.696E-01	2.043E-02	0.621
		117.00	*	-1.493E-01	1.990E-01	3.093E-01	1.914E-02	-0.483
	+	209.75		2.557E+00	1.060E+00	1.392E+00	7.558E-02	1.837
		228.18		-8.275E-02	2.200E-01	3.577E-01	1.973E-02	-0.231
		277.60		2.980E-01	1.800E-01	3.137E-01	1.787E-02	0.950
		334.30		1.311E-01	1.606E+00	2.102E+00	1.216E-01	0.062
AM-241		59.54	*	1.565E-01	2.079E-01	3.240E-01	2.687E-02	0.483
CM-243		99.55		1.723E-01	1.639E-01	2.774E-01	2.102E-02	0.621
		103.76	*	-1.360E-02	1.023E-01	1.649E-01	1.181E-02	-0.082
		117.00		-1.535E-01	2.047E-01	3.181E-01	1.969E-02	-0.483
	+	209.75		2.521E+00	1.045E+00	1.372E+00	7.450E-02	1.837
		228.18		-8.360E-02	2.223E-01	3.615E-01	1.994E-02	-0.231
		277.60		3.004E-01	1.814E-01	3.162E-01	1.801E-02	0.950
CM-247		278.00		1.258E+00	7.450E-01	1.300E+00	7.407E-02	0.967
		287.40		2.980E-01	1.230E+00	2.021E+00	1.156E-01	0.147
		402.60	*	1.254E-02	3.493E-02	5.948E-02	3.465E-03	0.211
CF-249		252.85		9.525E-02	8.293E-01	1.368E+00	7.684E-02	0.070
		333.44		-2.543E-01	3.032E-01	2.715E-01	1.570E-02	-0.937
		387.95	*	2.062E-02	3.660E-02	6.316E-02	3.631E-03	0.326
CF-251		176.60	*	-9.397E-02	1.176E-01	1.912E-01	1.010E-02	-0.491
		227.00		2.657E-01	3.656E-01	6.228E-01	3.432E-02	0.427
		285.00		6.839E-01	1.686E+00	2.796E+00	1.598E-01	0.245

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433013      *
* Acquisition date :  7-JUL-2009 07:04:28 Detector SN#    :                 *
* Detector ID        : GAM18               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.71      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433013           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 1.0565E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.589E+01	3.148E+00	4.730E-01	0.000E+00
CD-109	2.958E+00	1.041E+00	1.411E+00	0.000E+00
SN-126	2.913E-01	1.025E-01	1.452E-01	0.000E+00
BA-137M	1.450E-01	6.818E-02	5.346E-02	0.000E+00
CS-137	1.533E-01	7.208E-02	5.652E-02	0.000E+00
TL-208	5.754E-01	8.416E-02	5.652E-02	0.000E+00
BI-211	3.829E+00	4.844E-01	2.933E-01	0.000E+00
PB-212	1.722E+00	1.633E-01	8.397E-02	0.000E+00
PO-212	1.722E+00	1.633E-01	8.397E-02	0.000E+00
BI-214	1.151E+00	1.940E-01	1.015E-01	0.000E+00
PB-214	1.332E+00	1.818E-01	1.073E-01	0.000E+00
PO-214	1.332E+00	1.818E-01	1.073E-01	0.000E+00
PO-216	1.722E+00	1.633E-01	8.397E-02	0.000E+00
PO-218	1.332E+00	1.818E-01	1.073E-01	0.000E+00
RA-224	4.646E+00	1.224E+00	9.544E-01	0.000E+00
RA-226	1.151E+00	1.940E-01	1.015E-01	0.000E+00
AC-228	1.559E+00	3.633E-01	2.139E-01	0.000E+00
RA-228	1.559E+00	3.633E-01	2.139E-01	0.000E+00
TH-228	1.722E+00	1.633E-01	8.397E-02	0.000E+00
TH-230	1.151E+00	1.940E-01	1.015E-01	0.000E+00
TH-232	1.559E+00	3.633E-01	2.139E-01	0.000E+00
TH-234	1.697E+00	2.262E+00	2.578E+00	0.000E+00
U-234	1.151E+00	1.940E-01	1.015E-01	0.000E+00
NP-237	8.554E-01	3.472E-01	4.502E-01	0.000E+00
U-238	1.697E+00	2.262E+00	2.578E+00	0.000E+00
AM-243	4.069E-01	9.195E-02	9.556E-02	0.000E+00
ANH-511	1.401E-01	6.118E-02	4.144E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	1.150E-01	2.936E-01	5.047E-01	0.000E+00	NOT IDENT.
NA-22	1.418E-02	4.154E-02	7.101E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.744E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.454E-03	2.500E-02	4.244E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.434E-02	8.903E-02	0.000E+00	FAIL ABUN
SC-46	2.915E-02	3.711E-02	6.491E-02	0.000E+00	FAIL ABUN
V-48	-1.868E-02	6.190E-02	9.916E-02	0.000E+00	NOT IDENT.
CR-51	1.601E-01	3.324E-01	5.611E-01	0.000E+00	NOT IDENT.
MN-52	-5.290E-02	1.694E-01	2.677E-01	0.000E+00	NOT IDENT.
MN-54	1.248E-02	3.554E-02	6.071E-02	0.000E+00	NOT IDENT.
CO-56	1.687E-02	3.576E-02	6.164E-02	0.000E+00	NOT IDENT.
CO-57	1.429E-02	2.555E-02	4.308E-02	0.000E+00	NOT IDENT.
CO-58	-2.937E-02	3.594E-02	5.643E-02	0.000E+00	NOT IDENT.
FE-59	-4.665E-02	8.746E-02	1.422E-01	0.000E+00	NOT IDENT.
CO-60	-6.630E-03	3.788E-02	6.177E-02	0.000E+00	NOT IDENT.
ZN-65	8.619E-02	9.321E-02	1.470E-01	0.000E+00	NOT IDENT.
GE-68	3.778E-02	1.163E+00	1.929E+00	0.000E+00	NOT IDENT.
AS-73	-1.842E-01	1.145E+00	1.919E+00	0.000E+00	NOT IDENT.
AS-74	-4.202E-03	8.160E-02	1.340E-01	0.000E+00	NOT IDENT.
SE-75	-6.551E-02	4.571E-02	5.972E-02	0.000E+00	NOT IDENT.
BR-77	-1.309E+00	6.205E+00	1.020E+01	0.000E+00	FAIL ABUN
SR-82	4.626E-02	3.607E-01	5.683E-01	0.000E+00	NOT IDENT.
RB-83	-1.649E-02	5.943E-02	9.728E-02	0.000E+00	NOT IDENT.
RB-84	-5.933E-02	7.220E-02	1.060E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.768E+00	1.360E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.928E-02	6.878E-02	0.000E+00	NOT IDENT.
RB-86	1.293E-02	6.992E-01	1.159E+00	0.000E+00	NOT IDENT.
Y-88	1.170E-02	2.899E-02	5.102E-02	0.000E+00	NOT IDENT.
ZR-88	-1.671E-02	2.808E-02	4.651E-02	0.000E+00	NOT IDENT.
Y-91	-4.215E+00	1.778E+01	2.930E+01	0.000E+00	NOT IDENT.
NB-94	1.074E-02	3.041E-02	5.272E-02	0.000E+00	NOT IDENT.
NB-95	4.242E-02	4.255E-02	6.712E-02	0.000E+00	NOT IDENT.
NB-95M	4.122E-02	1.297E-01	1.955E-01	0.000E+00	NOT IDENT.
ZR-95	-3.755E-02	6.248E-02	1.008E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.777E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.314E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.639E+00	7.275E+00	1.209E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.069E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.693E-02	3.237E-02	5.244E-02	0.000E+00	NOT IDENT.
RH-102	-1.370E-02	2.743E-02	4.477E-02	0.000E+00	NOT IDENT.
RU-103	2.149E-02	3.641E-02	6.299E-02	0.000E+00	FAIL ABUN
RH-106	-4.499E-02	2.926E-01	4.749E-01	0.000E+00	FAIL ABUN
RU-106	-4.499E-02	2.926E-01	4.749E-01	0.000E+00	FAIL ABUN
AG-108M	-6.550E-03	3.046E-02	5.102E-02	0.000E+00	NOT IDENT.
AG-110M	-5.488E-03	3.628E-02	5.276E-02	0.000E+00	NOT IDENT.
IN-111	2.019E-01	7.860E-01	1.139E+00	0.000E+00	NOT IDENT.
IN-113M	-3.982E-02	4.124E-02	6.690E-02	0.000E+00	NOT IDENT.
SN-113	-3.982E-02	4.124E-02	6.690E-02	0.000E+00	NOT IDENT.
IN-114M	-1.579E-01	1.919E-01	2.765E-01	0.000E+00	NOT IDENT.
CD-115	-3.692E+00	6.505E+00	1.043E+01	0.000E+00	NOT IDENT.
SN-117M	2.051E-02	4.676E-02	8.075E-02	0.000E+00	NOT IDENT.
SB-122	1.345E+00	1.401E+00	2.451E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	9.879E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	9.446E-03	2.586E-02	4.454E-02	0.000E+00	NOT IDENT.
I-124	-3.595E-01	5.735E-01	7.643E-01	0.000E+00	NOT IDENT.
SB-124	1.318E-02	6.638E-02	1.140E-01	0.000E+00	FAIL ABUN
SB-125	3.726E-02	8.412E-02	1.462E-01	0.000E+00	FAIL ABUN
TE-125M	4.935E-01	9.367E+00	1.558E+01	0.000E+00	NOT IDENT.
I-126	-3.081E-02	1.802E-01	2.613E-01	0.000E+00	NOT IDENT.
SB-126	-4.699E-02	1.371E-01	2.097E-01	0.000E+00	FAIL ABUN
SB-127	-4.591E-01	1.043E+00	1.726E+00	0.000E+00	NOT IDENT.
XE-127	-2.450E-02	4.251E-02	7.086E-02	0.000E+00	NOT IDENT.
I-131	3.721E-02	9.139E-02	1.604E-01	0.000E+00	NOT IDENT.
TE-132	-1.887E-01	4.982E-01	8.282E-01	0.000E+00	NOT IDENT.
BA-133	2.510E-02	4.562E-02	6.755E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.845E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.542E-02	5.446E-02	8.299E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.569E-01	2.568E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.116E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.733E-02	9.620E-02	1.687E-01	0.000E+00	FAIL ABUN
CE-139	1.713E-02	2.639E-02	4.680E-02	0.000E+00	NOT IDENT.
BA-140	1.236E-01	2.293E-01	3.885E-01	0.000E+00	NOT IDENT.
LA-140	-3.764E-02	7.356E-02	1.165E-01	0.000E+00	FAIL ABUN
CE-141	8.466E-03	5.982E-02	9.788E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.086E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-4.272E-02	1.974E-01	3.198E-01	0.000E+00	NOT IDENT.
PM-144	4.917E-03	3.219E-02	5.371E-02	0.000E+00	NOT IDENT.
PR-144	3.329E-01	2.180E+00	3.637E+00	0.000E+00	NOT IDENT.

PM-146	3.027E-02	4.080E-02	7.155E-02	0.000E+00	NOT IDENT.
ND-147	-3.436E-01	4.647E-01	7.314E-01	0.000E+00	FAIL ABUN
PM-149	5.399E+01	5.806E+01	1.000E+02	0.000E+00	NOT IDENT.
EU-152	6.839E-02	9.630E-02	1.453E-01	0.000E+00	NOT IDENT.
GD-153	-8.102E-02	9.011E-02	1.276E-01	0.000E+00	NOT IDENT.
EU-154	5.239E-02	1.157E-01	1.993E-01	0.000E+00	NOT IDENT.
EU-155	1.547E-01	1.133E-01	1.978E-01	0.000E+00	FAIL ABUN
TB-160	6.566E-02	1.317E-01	2.265E-01	0.000E+00	FAIL ABUN
HO-166M	9.971E-03	5.812E-02	9.958E-02	0.000E+00	NOT IDENT.
TM-171	-1.331E+00	3.629E+01	5.537E+01	0.000E+00	NOT IDENT.
LU-176	-1.480E-03	2.531E-02	3.846E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.278E+00	1.683E+00	0.000E+00	FAIL ABUN
LU-177M	-3.802E-02	1.689E-01	2.452E-01	0.000E+00	FAIL ABUN
HF-181	-2.404E-02	3.841E-02	6.203E-02	0.000E+00	NOT IDENT.
W-181	-2.959E-01	4.809E-01	7.137E-01	0.000E+00	NOT IDENT.
TA-182	-5.964E-02	1.869E-01	3.058E-01	0.000E+00	FAIL ABUN
RE-183	-4.450E-02	9.903E-02	1.652E-01	0.000E+00	FAIL ABUN
RE-184	2.525E-02	2.154E-01	3.634E-01	0.000E+00	NOT IDENT.
OS-185	-1.013E-02	3.823E-02	6.124E-02	0.000E+00	NOT IDENT.
RE-188	-6.466E-02	1.540E-01	2.638E-01	0.000E+00	NOT IDENT.
W-188	-5.745E+00	7.986E+00	1.099E+01	0.000E+00	FAIL ABUN
IR-192	-1.891E-02	3.216E-02	5.025E-02	0.000E+00	FAIL ABUN
AU-195	2.733E-01	2.225E-01	3.891E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.761E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-5.159E+00	4.651E+00	7.683E+00	0.000E+00	NOT IDENT.
TL-202	2.310E-02	5.872E-02	1.016E-01	0.000E+00	NOT IDENT.
HG-203	6.124E-02	3.814E-02	6.787E-02	0.000E+00	NOT IDENT.
BI-207	1.643E-02	4.980E-02	8.634E-02	0.000E+00	FAIL ABUN
TL-207	3.565E-01	6.961E-01	1.034E+00	0.000E+00	FAIL ABUN
PO-209	-1.814E+00	7.430E+00	1.211E+01	0.000E+00	NOT IDENT.
BI-210	-8.629E+00	6.077E+00	9.988E+00	0.000E+00	NOT IDENT.
PB-210	-8.629E+00	6.077E+00	9.988E+00	0.000E+00	NOT IDENT.
PO-210	-8.629E+00	6.068E+00	9.988E+00	0.000E+00	NOT IDENT.
PB-211	-4.732E-02	9.746E-01	1.440E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.219E-01	6.176E-01	0.000E+00	FAIL ABUN
PO-215	3.565E-01	6.961E-01	1.034E+00	0.000E+00	FAIL ABUN
RN-219	-4.315E-02	3.813E-01	6.469E-01	0.000E+00	FAIL ABUN
RN-220	-1.313E+01	2.458E+01	3.937E+01	0.000E+00	NOT IDENT.
RA-223	3.565E-01	6.961E-01	1.034E+00	0.000E+00	FAIL ABUN
AC-227	-6.383E-03	3.584E-01	6.002E-01	0.000E+00	FAIL ABUN
TH-227	-6.383E-03	3.584E-01	6.002E-01	0.000E+00	FAIL ABUN
TH-229	5.923E-01	4.819E-01	8.617E-01	0.000E+00	FAIL ABUN
PA-231	-6.007E-01	1.440E+00	2.339E+00	0.000E+00	FAIL ABUN
TH-231	3.565E-01	6.961E-01	1.034E+00	0.000E+00	FAIL ABUN
U-231	3.074E-01	9.023E-01	1.375E+00	0.000E+00	FAIL ABUN
PA-233	-2.207E-02	6.001E-02	9.693E-02	0.000E+00	FAIL ABUN
PA-234	7.077E-02	2.896E-01	4.862E-01	0.000E+00	FAIL ABUN
PA-234M	5.706E-02	6.683E+00	1.085E+01	0.000E+00	NOT IDENT.
U-235	3.857E-02	2.193E-01	3.554E-01	0.000E+00	FAIL ABUN
NP-236	-2.788E-02	7.273E-02	1.216E-01	0.000E+00	NOT IDENT.
NP-239	-1.493E-01	1.950E-01	3.112E-01	0.000E+00	FAIL ABUN
AM-241	1.565E-01	2.037E-01	3.272E-01	0.000E+00	NOT IDENT.
CM-243	-1.360E-02	1.002E-01	1.661E-01	0.000E+00	FAIL ABUN
CM-247	1.254E-02	3.423E-02	5.948E-02	0.000E+00	NOT IDENT.
CF-249	2.062E-02	3.587E-02	6.316E-02	0.000E+00	NOT IDENT.
CF-251	-9.397E-02	1.152E-01	1.920E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:04:58.43

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433013.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:04:28.
Sample ID         : G232433013           Sample quantity  : 1.05650E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.71  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	2040	10.67*	1.892E+00	3.589E+01	3.589E+01	8.95
CD-109	88.03	195	3.72*	6.443E+00	2.897E+00	2.958E+00	35.90
SN-126	64.28	57	9.60	3.116E+00	6.717E-01	6.717E-01	135.69
	86.94	195	8.90	6.443E+00	1.211E+00	1.211E+00	54.09
	87.57	195	37.00*	6.443E+00	2.913E-01	2.913E-01	35.90
BA-137M	661.65	132	89.98*	3.588E+00	1.449E-01	1.450E-01	47.97
CS-137	661.65	132	85.12*	3.588E+00	1.532E-01	1.533E-01	47.97
TL-208	277.35	------	6.80	6.258E+00	------ Line Not Found		------
	510.84	170	21.60	4.308E+00	6.485E-01	6.485E-01	45.34
	583.14	536	84.20*	3.933E+00	5.754E-01	5.754E-01	14.92
	860.37	74	12.46	2.914E+00	7.271E-01	7.271E-01	64.18
BI-211	72.87	------	1.27	4.622E+00	------ Line Not Found		------
	351.07	760	12.94*	5.449E+00	3.829E+00	3.829E+00	12.91
PB-212	74.81	372	10.70	4.927E+00	2.510E+00	2.510E+00	24.88
	77.11	610	18.00	5.247E+00	2.296E+00	2.296E+00	15.49
	87.30	195	8.00	6.443E+00	1.347E+00	1.347E+00	37.27
	238.63	1468	44.60*	6.792E+00	1.722E+00	1.722E+00	9.68
	300.09	122	3.41	5.980E+00	2.130E+00	2.130E+00	51.21
PO-212	74.81	372	10.70	4.927E+00	2.510E+00	2.510E+00	24.88
	77.11	610	18.00	5.247E+00	2.296E+00	2.296E+00	15.49
	87.30	195	8.00	6.443E+00	1.347E+00	1.347E+00	37.27
	115.19	------	0.60	8.058E+00	------ Line Not Found		------
	238.63	1468	44.60*	6.792E+00	1.722E+00	1.722E+00	9.68
	300.09	122	3.41	5.980E+00	2.130E+00	2.130E+00	51.21
BI-214	609.31	572	46.30*	3.811E+00	1.151E+00	1.151E+00	17.19
	768.36	82	5.04	3.194E+00	1.810E+00	1.810E+00	51.57
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	150	15.10	2.333E+00	1.509E+00	1.509E+00	33.55
	1238.11	------	5.94	2.148E+00	------ Line Not Found		------
	1377.67	35	4.11	1.974E+00	1.540E+00	1.540E+00	99.28
	1764.49	133	15.80	1.694E+00	1.770E+00	1.770E+00	31.31
PB-214	74.81	372	6.21	4.927E+00	4.325E+00	4.325E+00	24.22

Sample ID : G232433013 Acquisition date : 7-JUL-2009 07:04:28

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	610	10.50	5.247E+00	3.937E+00	3.937E+00	17.27
	87.30	195	4.67	6.443E+00	2.308E+00	2.308E+00	36.72
	241.98	349	7.49	6.748E+00	2.450E+00	2.450E+00	27.46
	295.21	443	19.20	6.039E+00	1.357E+00	1.357E+00	19.85
	351.92	760	37.20*	5.449E+00	1.332E+00	1.332E+00	13.92
PO-214	74.81	372	6.21	4.927E+00	4.325E+00	4.325E+00	24.22
	77.11	610	10.50	5.247E+00	3.937E+00	3.937E+00	17.27
	87.30	195	4.67	6.443E+00	2.308E+00	2.308E+00	36.72
	241.98	349	7.49	6.748E+00	2.450E+00	2.450E+00	27.46
	295.21	443	19.20	6.039E+00	1.357E+00	1.357E+00	19.85
	351.92	760	37.20*	5.449E+00	1.332E+00	1.332E+00	13.92
PO-216	74.81	372	10.70	4.927E+00	2.510E+00	2.510E+00	24.88
	77.11	610	18.00	5.247E+00	2.296E+00	2.296E+00	15.49
	87.30	195	8.00	6.443E+00	1.347E+00	1.347E+00	37.27
	238.63	1468	44.60*	6.792E+00	1.722E+00	1.722E+00	9.68
	300.09	122	3.41	5.980E+00	2.130E+00	2.130E+00	51.21
PO-218	74.81	372	6.21	4.927E+00	4.325E+00	4.325E+00	24.22
	77.11	610	10.50	5.247E+00	3.937E+00	3.937E+00	17.27
	87.30	195	4.67	6.443E+00	2.308E+00	2.308E+00	36.72
	241.98	349	7.49	6.748E+00	2.450E+00	2.450E+00	27.46
	295.21	443	19.20	6.039E+00	1.357E+00	1.357E+00	19.85
	351.92	760	37.20*	5.449E+00	1.332E+00	1.332E+00	13.92
RA-224	240.98	349	3.95*	6.748E+00	4.646E+00	4.646E+00	26.88
RA-226	609.31	572	46.30*	3.811E+00	1.151E+00	1.151E+00	17.19
	768.36	82	5.04	3.194E+00	1.810E+00	1.810E+00	51.57
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	150	15.10	2.333E+00	1.509E+00	1.509E+00	33.55
	1238.11	------	5.94	2.148E+00	------ Line Not Found		------
	1377.67	35	4.11	1.974E+00	1.540E+00	1.540E+00	99.28
	1764.49	133	15.80	1.694E+00	1.770E+00	1.770E+00	31.31
AC-228	338.32	345	11.40	5.577E+00	1.927E+00	1.927E+00	46.26
	911.07	338	27.70*	2.778E+00	1.559E+00	1.559E+00	23.79
	969.11	179	16.60	2.637E+00	1.455E+00	1.455E+00	41.25
RA-228	338.32	345	11.40	5.577E+00	1.927E+00	1.927E+00	46.26
	911.07	338	27.70*	2.778E+00	1.559E+00	1.559E+00	23.79
	969.11	179	16.60	2.637E+00	1.455E+00	1.455E+00	41.25
TH-228	84.40	------	1.21	6.141E+00	------ Line Not Found		------
	238.60	1468	44.60*	6.792E+00	1.722E+00	1.722E+00	9.68
	300.10	122	3.41	5.980E+00	2.130E+00	2.130E+00	77.64
TH-230	609.31	572	46.30*	3.811E+00	1.151E+00	1.151E+00	17.19
	768.36	82	5.04	3.194E+00	1.810E+00	1.810E+00	51.57
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	150	15.10	2.333E+00	1.509E+00	1.509E+00	33.55
	1238.11	------	5.94	2.148E+00	------ Line Not Found		------
	1377.67	35	4.11	1.974E+00	1.540E+00	1.540E+00	99.28
	1764.49	133	15.80	1.694E+00	1.770E+00	1.770E+00	31.31
TH-232	338.32	345	11.40	5.577E+00	1.927E+00	1.927E+00	22.62
	911.07	338	27.70*	2.778E+00	1.559E+00	1.559E+00	23.79
	969.11	179	16.60	2.637E+00	1.455E+00	1.455E+00	41.25

Sample ID : G232433013 Acquisition date : 7-JUL-2009 07:04:28

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	57	3.80*	3.116E+00	1.697E+00	1.697E+00	136.04
	92.38	300	5.41	6.970E+00	2.828E+00	2.828E+00	34.82
U-234	609.31	572	46.30*	3.811E+00	1.151E+00	1.151E+00	17.19
	768.36	82	5.04	3.194E+00	1.810E+00	1.810E+00	51.57
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	150	15.10	2.333E+00	1.509E+00	1.509E+00	33.55
	1238.11	------	5.94	2.148E+00	------ Line Not Found		------
	1377.67	35	4.11	1.974E+00	1.540E+00	1.540E+00	99.28
	1764.49	133	15.80	1.694E+00	1.770E+00	1.770E+00	31.31
NP-237	86.50	195	12.60*	6.443E+00	8.554E-01	8.554E-01	41.41
	95.87	------	2.60	7.180E+00	------ Line Not Found		------
U-238	63.29	57	3.80*	3.116E+00	1.697E+00	1.697E+00	136.04
	92.38	300	5.41	6.970E+00	2.828E+00	2.828E+00	30.98
AM-243	74.67	372	66.00*	4.927E+00	4.069E-01	4.069E-01	23.06
	86.72	195	0.34	6.443E+00	3.208E+01	3.208E+01	35.90
	117.66	------	0.55	8.112E+00	------ Line Not Found		------
	142.18	------	0.13	8.232E+00	------ Line Not Found		------
ANH-511	511.00	170	100.00*	4.308E+00	1.401E-01	1.401E-01	44.57

Flag: "*" = Keyline

Sample ID : G232433013 Acquisition date : 7-JUL-2009 07:04:28

Total number of lines in spectrum 33
Number of unidentified lines 2
Number of lines tentatively identified by NID 31 93.94%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.589E+01	3.589E+01	0.321E+01	8.95	
CD-109	464.00D	1.02	2.897E+00	2.958E+00	1.062E+00	35.90	
SN-126	1.00E+05Y	1.00	2.913E-01	2.913E-01	1.046E-01	35.90	
BA-137M	30.17Y	1.00	1.449E-01	1.450E-01	0.696E-01	47.97	
CS-137	30.17Y	1.00	1.532E-01	1.533E-01	0.735E-01	47.97	
TL-208	1.41E+10Y	1.00	5.754E-01	5.754E-01	0.859E-01	14.92	
BI-211	7.04E+08Y	1.00	3.829E+00	3.829E+00	0.494E+00	12.91	
PB-212	1.41E+10Y	1.00	1.722E+00	1.722E+00	0.167E+00	9.68	
PO-212	1.41E+10Y	1.00	1.722E+00	1.722E+00	0.167E+00	9.68	
BI-214	1600.00Y	1.00	1.151E+00	1.151E+00	0.198E+00	17.19	
PB-214	1600.00Y	1.00	1.332E+00	1.332E+00	0.185E+00	13.92	
PO-214	1600.00Y	1.00	1.332E+00	1.332E+00	0.185E+00	13.92	
PO-216	1.41E+10Y	1.00	1.722E+00	1.722E+00	0.167E+00	9.68	
PO-218	1600.00Y	1.00	1.332E+00	1.332E+00	0.185E+00	13.92	
RA-224	1.41E+10Y	1.00	4.646E+00	4.646E+00	1.249E+00	26.88	
RA-226	1600.00Y	1.00	1.151E+00	1.151E+00	0.198E+00	17.19	
AC-228	1.41E+10Y	1.00	1.559E+00	1.559E+00	0.371E+00	23.79	
RA-228	1.41E+10Y	1.00	1.559E+00	1.559E+00	0.371E+00	23.79	
TH-228	1.41E+10Y	1.00	1.722E+00	1.722E+00	0.167E+00	9.68	
TH-230	4.47E+09Y	1.00	1.151E+00	1.151E+00	0.198E+00	17.19	
TH-232	1.41E+10Y	1.00	1.559E+00	1.559E+00	0.371E+00	23.79	
TH-234	4.47E+09Y	1.00	1.697E+00	1.697E+00	2.308E+00	136.04	
U-234	4.47E+09Y	1.00	1.151E+00	1.151E+00	0.198E+00	17.19	
NP-237	2.14E+06Y	1.00	8.554E-01	8.554E-01	3.542E-01	41.41	
U-238	4.47E+09Y	1.00	1.697E+00	1.697E+00	2.308E+00	136.04	
AM-243	7380.00Y	1.00	4.069E-01	4.069E-01	0.938E-01	23.06	
ANH-511	1.00E+09Y	1.00	1.401E-01	1.401E-01	0.624E-01	44.57	
	Total Activity :		7.339E+01	7.345E+01			

Grand Total Activity : 7.339E+01 7.345E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433013 Acquisition date : 7-JUL-2009 07:04:28

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	90.05	109	250	1.05	179.21	177	13	1.51E-02	43.9	6.71E+00	T
0	185.97	182	410	1.17	370.98	366	11	2.53E-02	47.1	7.65E+00	T
0	209.68	169	294	1.35	418.39	414	10	2.35E-02	41.1	7.25E+00	T
0	270.24	128	271	1.64	539.46	534	11	1.78E-02	52.6	6.35E+00	T
0	327.76	39	193	1.15	654.46	652	8	5.48E-03	****	5.69E+00	T
0	409.24	30	130	1.42	817.38	815	9	4.10E-03	****	4.97E+00	
0	463.23	95	132	1.43	925.33	921	10	1.33E-02	49.5	4.60E+00	T
0	727.91	88	121	2.03	1454.54	1449	11	1.22E-02	53.5	3.33E+00	T
0	795.55	50	78	1.54	1589.79	1585	10	6.95E-03	73.1	3.11E+00	T
0	1730.73	29	23	1.68	3459.90	3455	11	4.07E-03	74.8	1.71E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:05:03.58

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433013.CNF;1 *
* Acquisition date  : 7-JUL-2009 07:04:28.  Detector SN#     :             *
* Detector ID       : GAM18                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.71          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433013            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 1.05650E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS Isotope      :                *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.589E+01	3.212E+00	4.763E-01	3.614E-02	75.354
CD-109	2.958E+00	1.062E+00	1.400E+00	1.294E-01	2.113
SN-126	2.913E-01	1.046E-01	1.441E-01	1.328E-02	2.021
BA-137M	1.450E-01	6.957E-02	5.361E-02	4.087E-03	2.705
CS-137	1.533E-01	7.355E-02	5.667E-02	4.331E-03	2.705
TL-208	5.754E-01	8.588E-02	5.664E-02	4.440E-03	10.160
BI-211	3.829E+00	4.943E-01	2.932E-01	1.882E-02	13.062
PB-212	1.722E+00	1.666E-01	8.375E-02	5.983E-03	20.562
PO-212	1.722E+00	1.666E-01	8.375E-02	5.983E-03	20.562
BI-214	1.151E+00	1.979E-01	1.017E-01	9.085E-03	11.321
PB-214	1.332E+00	1.855E-01	1.072E-01	8.868E-03	12.427
PO-214	1.332E+00	1.855E-01	1.072E-01	8.868E-03	12.427
PO-216	1.722E+00	1.666E-01	8.375E-02	5.983E-03	20.562
PO-218	1.332E+00	1.855E-01	1.072E-01	8.868E-03	12.427
RA-224	4.646E+00	1.249E+00	9.520E-01	5.303E-02	4.880
RA-226	1.151E+00	1.979E-01	1.017E-01	9.085E-03	11.321
AC-228	1.559E+00	3.707E-01	2.148E-01	2.846E-02	7.255
RA-228	1.559E+00	3.707E-01	2.148E-01	2.846E-02	7.255

Sample ID : G232433013 Acquisition date : 7-JUL-2009 07:04:28

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.722E+00	1.666E-01	8.375E-02	5.983E-03	20.564
TH-230	1.151E+00	1.979E-01	1.017E-01	9.085E-03	11.321
TH-232	1.559E+00	3.707E-01	2.148E-01	2.846E-02	7.255
TH-234	1.697E+00	2.308E+00	2.554E+00	4.502E-01	0.664
U-234	1.151E+00	1.979E-01	1.017E-01	9.085E-03	11.321
NP-237	8.554E-01	3.542E-01	4.467E-01	1.008E-01	1.915
U-238	1.697E+00	2.308E+00	2.554E+00	4.502E-01	0.664
AM-243	4.069E-01	9.382E-02	9.474E-02	7.906E-03	4.295
ANH-511	1.401E-01	6.243E-02	4.150E-02	2.741E-03	3.375

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.150E-01		2.996E-01	5.052E-01	3.661E-02	0.228
NA-22	1.418E-02		4.239E-02	7.145E-02	4.862E-03	0.198
NA-24	-7.305E-02		8.900E-02	Half-Life too short		
AL-26	3.454E-03		2.551E-02	4.279E-02	2.498E-03	0.081
TI-44	4.238E-01	+	6.566E-02	8.828E-02	7.549E-03	4.800
SC-46	2.915E-02		3.786E-02	6.519E-02	7.271E-03	0.447
V-48	-1.868E-02		6.316E-02	9.964E-02	9.855E-03	-0.187
CR-51	1.601E-01		3.392E-01	5.605E-01	3.609E-02	0.286
MN-52	-5.290E-02		1.728E-01	2.695E-01	1.986E-02	-0.196
MN-54	1.248E-02		3.626E-02	6.095E-02	6.243E-03	0.205
CO-56	1.687E-02		3.649E-02	6.189E-02	6.461E-03	0.273
CO-57	1.429E-02		2.607E-02	4.281E-02	2.536E-03	0.334
CO-58	-2.937E-02		3.667E-02	5.664E-02	5.592E-03	-0.519
FE-59	-4.665E-02		8.925E-02	1.429E-01	1.176E-02	-0.326
CO-60	-6.630E-03		3.865E-02	6.217E-02	4.697E-03	-0.107
ZN-65	8.619E-02		9.511E-02	1.478E-01	1.041E-02	0.583
GE-68	3.778E-02		1.186E+00	1.940E+00	1.541E-01	0.019
AS-73	-1.842E-01		1.169E+00	1.899E+00	1.506E-01	-0.097
AS-74	-4.202E-03		8.327E-02	1.343E-01	9.648E-03	-0.031
SE-75	-6.551E-02		4.664E-02	5.960E-02	3.408E-03	-1.099
BR-77	-1.309E+00		6.331E+00	1.022E+01	6.818E-01	-0.128
SR-82	4.626E-02		3.680E-01	5.703E-01	5.311E-02	0.081
RB-83	-1.649E-02		6.064E-02	9.742E-02	6.498E-03	-0.169
RB-84	-5.933E-02		7.367E-02	1.065E-01	1.174E-02	-0.557
KR-85	2.488E+01		7.927E+00	1.362E+01	9.024E-01	1.827
SR-85	1.258E-01		4.008E-02	6.888E-02	4.563E-03	1.827
RB-86	1.293E-02		7.135E-01	1.165E+00	9.276E-02	0.011
Y-88	1.170E-02		2.958E-02	5.144E-02	2.930E-03	0.227
ZR-88	-1.671E-02		2.865E-02	4.651E-02	2.675E-03	-0.359
Y-91	-4.215E+00		1.815E+01	2.947E+01	1.743E+00	-0.143
NB-94	1.074E-02		3.103E-02	5.289E-02	4.339E-03	0.203
NB-95	4.242E-02		4.342E-02	6.735E-02	6.161E-03	0.630
NB-95M	4.122E-02		1.324E-01	1.949E-01	1.430E-02	0.211
ZR-95	-3.755E-02		6.376E-02	1.011E-01	9.950E-03	-0.371

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-1.695E-03		1.417E-02	Half-Life too short		
ZR-97	6.377E-01		2.711E-01	Half-Life too short		
MO-99	-1.639E+00		7.423E+00	1.213E+01	1.851E+00	-0.135
TC-99M	1.233E+08		5.454E+08	Half-Life too short		
RH-101	-3.693E-02		3.303E-02	5.225E-02	2.809E-03	-0.707
RH-102	-1.370E-02		2.799E-02	4.482E-02	2.846E-03	-0.306
RU-103	2.149E-02		3.715E-02	6.307E-02	8.189E-03	0.341
RH-106	-4.499E-02		2.986E-01	4.760E-01	5.989E-02	-0.095
RU-106	-4.499E-02		2.986E-01	4.760E-01	3.503E-02	-0.095
AG-108M	-6.550E-03		3.108E-02	5.105E-02	3.335E-03	-0.128
AG-110M	-5.488E-03		3.702E-02	5.291E-02	4.173E-03	-0.104
IN-111	2.019E-01		8.021E-01	1.136E+00	6.348E-02	0.178
IN-113M	-3.982E-02		4.208E-02	6.690E-02	4.104E-03	-0.595
SN-113	-3.982E-02		4.208E-02	6.690E-02	4.104E-03	-0.595
IN-114M	-1.579E-01		1.958E-01	2.755E-01	1.471E-02	-0.573
CD-115	-3.692E+00		6.638E+00	1.044E+01	7.018E-01	-0.354
SN-117M	2.051E-02		4.771E-02	8.037E-02	4.271E-03	0.255
SB-122	1.345E+00		1.430E+00	2.456E+00	1.711E-01	0.548
I-123	3.608E-01		5.040E-01	Half-Life too short		
TE-123M	9.446E-03		2.639E-02	4.433E-02	2.392E-03	0.213
I-124	-3.595E-01		5.852E-01	7.660E-01	5.539E-02	-0.469
SB-124	1.318E-02		6.774E-02	1.149E-01	7.929E-03	0.115
SB-125	3.726E-02		8.584E-02	1.462E-01	9.138E-03	0.255
TE-125M	4.935E-01		9.558E+00	1.548E+01	1.360E+00	0.032
I-126	-3.081E-02		1.839E-01	2.621E-01	2.015E-02	-0.118
SB-126	-4.699E-02		1.399E-01	2.104E-01	1.781E-02	-0.223
SB-127	-4.591E-01		1.064E+00	1.731E+00	1.816E-01	-0.265
XE-127	-2.450E-02		4.338E-02	7.061E-02	3.812E-03	-0.347
I-131	3.721E-02		9.326E-02	1.604E-01	1.033E-02	0.232
TE-132	-1.887E-01		5.084E-01	8.259E-01	1.156E-01	-0.229
BA-133	2.510E-02		4.655E-02	6.752E-02	7.800E-03	0.372
I-133	-6.399E-04		9.414E-04	Half-Life too short		
CS-134	7.542E-02	+	5.557E-02	8.330E-02	8.057E-03	0.905
CS-135	3.057E-01		1.601E-01	2.563E-01	1.937E-02	1.193
I-135	1.210E+08		1.080E+08	Half-Life too short		
CS-136	4.733E-02		9.816E-02	1.696E-01	1.520E-02	0.279
CE-139	1.713E-02		2.692E-02	4.659E-02	2.446E-03	0.368
BA-140	1.236E-01		2.340E-01	3.892E-01	1.273E-01	0.318
LA-140	-3.764E-02		7.506E-02	1.173E-01	8.049E-03	-0.321
CE-141	8.466E-03		6.104E-02	9.737E-02	5.558E-03	0.087
CE-143	3.370E-04		5.542E-05	Half-Life too short		
CE-144	-4.272E-02		2.015E-01	3.180E-01	4.496E-02	-0.134
PM-144	4.917E-03		3.285E-02	5.387E-02	4.373E-03	0.091
PR-144	3.329E-01		2.224E+00	3.648E+00	2.961E-01	0.091
PM-146	3.027E-02		4.163E-02	7.161E-02	6.370E-03	0.423
ND-147	-3.436E-01		4.742E-01	7.325E-01	1.022E-01	-0.469
PM-149	5.399E+01		5.925E+01	9.983E+01	1.411E+01	0.541
EU-152	6.839E-02		9.826E-02	1.452E-01	9.473E-03	0.471

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-8.102E-02		9.195E-02	1.266E-01	9.901E-03	-0.640
EU-154	5.239E-02		1.180E-01	2.005E-01	2.003E-02	0.261
EU-155	1.547E-01		1.156E-01	1.964E-01	1.404E-02	0.787
TB-160	6.566E-02		1.344E-01	2.275E-01	2.499E-02	0.289
HO-166M	9.971E-03		5.930E-02	9.989E-02	8.326E-03	0.100
TM-171	-1.331E+00		3.703E+01	5.486E+01	4.387E+00	-0.024
LU-176	-1.480E-03		2.583E-02	3.841E-02	2.211E-03	-0.039
LU-177	3.145E+00	+	1.304E+00	1.678E+00	9.101E-02	1.874
LU-177M	-3.802E-02		1.724E-01	2.453E-01	1.449E-02	-0.155
HF-181	-2.404E-02		3.919E-02	6.209E-02	3.974E-03	-0.387
W-181	-2.959E-01		4.907E-01	7.071E-01	5.609E-02	-0.419
TA-182	-5.964E-02		1.907E-01	3.076E-01	1.882E-02	-0.194
RE-183	-4.450E-02		1.011E-01	1.644E-01	8.678E-03	-0.271
RE-184	2.525E-02		2.198E-01	3.626E-01	2.037E-02	0.070
OS-185	-1.013E-02		3.901E-02	6.140E-02	4.618E-03	-0.165
RE-188	-6.466E-02		1.572E-01	2.625E-01	1.405E-02	-0.246
W-188	-5.745E+00		8.149E+00	1.098E+01	6.288E-01	-0.523
IR-192	-1.891E-02		3.281E-02	5.020E-02	2.911E-03	-0.377
AU-195	2.733E-01		2.270E-01	3.863E-01	2.956E-02	0.707
TL-200	1.225E-04		8.987E-05	Half-Life too short		
TL-201	-5.159E+00		4.746E+00	7.648E+00	4.015E-01	-0.675
TL-202	2.310E-02		5.992E-02	1.017E-01	6.197E-03	0.227
HG-203	6.124E-02		3.892E-02	6.775E-02	4.109E-03	0.904
BI-207	1.643E-02		5.082E-02	8.679E-02	7.165E-03	0.189
TL-207	3.565E-01		7.103E-01	1.033E+00	1.705E-01	0.345
PO-209	-1.814E+00		7.582E+00	1.216E+01	1.372E+00	-0.149
BI-210	-8.629E+00		6.201E+00	9.879E+00	7.643E-01	-0.874
PB-210	-8.629E+00		6.201E+00	9.879E+00	7.643E-01	-0.874
PO-210	-8.629E+00		6.192E+00	9.879E+00	6.571E-01	-0.874
PB-211	-4.732E-02		9.945E-01	1.440E+00	8.977E-01	-0.033
BI-212	7.907E-01	+	4.305E-01	6.196E-01	6.171E-02	1.276
PO-215	3.565E-01		7.103E-01	1.033E+00	1.705E-01	0.345
RN-219	-4.315E-02		3.891E-01	6.469E-01	8.807E-02	-0.067
RN-220	-1.313E+01		2.509E+01	3.944E+01	2.710E+00	-0.333
RA-223	3.565E-01		7.103E-01	1.033E+00	1.705E-01	0.345
AC-227	-6.383E-03		3.657E-01	5.989E-01	8.318E-02	-0.011
TH-227	-6.383E-03		3.657E-01	5.989E-01	1.009E-01	-0.011
TH-229	5.923E-01		4.918E-01	8.585E-01	4.597E-02	0.690
PA-231	-6.007E-01		1.469E+00	2.335E+00	3.209E-01	-0.257
TH-231	3.565E-01		7.103E-01	1.033E+00	1.705E-01	0.345
U-231	3.074E-01		9.207E-01	1.365E+00	1.094E-01	0.225
PA-233	-2.207E-02		6.123E-02	9.682E-02	5.931E-03	-0.228
PA-234	7.077E-02		2.955E-01	4.885E-01	9.636E-02	0.145
PA-234M	5.706E-02		6.820E+00	1.090E+01	1.300E+00	0.005
U-235	3.857E-02		2.237E-01	3.535E-01	5.726E-02	0.109
NP-236	-2.788E-02		7.421E-02	1.210E-01	6.410E-03	-0.230
NP-239	-1.493E-01		1.990E-01	3.093E-01	1.914E-02	-0.483
AM-241	1.565E-01		2.079E-01	3.240E-01	2.687E-02	0.483

Sample ID : G232433013 Acquisition date : 7-JUL-2009 07:04:28

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.360E-02		1.023E-01	1.649E-01	1.181E-02	-0.082
CM-247	1.254E-02		3.493E-02	5.948E-02	3.465E-03	0.211
CF-249	2.062E-02		3.660E-02	6.316E-02	3.631E-03	0.326
CF-251	-9.397E-02		1.176E-01	1.912E-01	1.010E-02	-0.491

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433013           *
* Acquisition date  :  7-JUL-2009 07:04:28 Detector SN#     :               *
* Detector ID       : GAM18                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.71      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433013           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.0565E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.589E+01	3.148E+00	2.366E-01	1.606E+00
CD-109	2.958E+00	1.041E+00	7.058E-01	5.310E-01
SN-126	2.913E-01	1.025E-01	7.267E-02	5.230E-02
BA-137M	1.450E-01	6.818E-02	2.675E-02	3.478E-02
CS-137	1.533E-01	7.208E-02	2.828E-02	3.677E-02
TL-208	5.754E-01	8.416E-02	2.828E-02	4.294E-02
BI-211	3.829E+00	4.844E-01	1.468E-01	2.471E-01
PB-212	1.722E+00	1.633E-01	4.201E-02	8.332E-02
PO-212	1.722E+00	1.633E-01	4.201E-02	8.332E-02
BI-214	1.151E+00	1.940E-01	5.076E-02	9.897E-02
PB-214	1.332E+00	1.818E-01	5.366E-02	9.273E-02
PO-214	1.332E+00	1.818E-01	5.366E-02	9.273E-02
PO-216	1.722E+00	1.633E-01	4.201E-02	8.332E-02
PO-218	1.332E+00	1.818E-01	5.366E-02	9.273E-02
RA-224	4.646E+00	1.224E+00	4.775E-01	6.244E-01
RA-226	1.151E+00	1.940E-01	5.076E-02	9.897E-02
AC-228	1.559E+00	3.633E-01	1.070E-01	1.854E-01
RA-228	1.559E+00	3.633E-01	1.070E-01	1.854E-01
TH-228	1.722E+00	1.633E-01	4.201E-02	8.332E-02
TH-230	1.151E+00	1.940E-01	5.076E-02	9.897E-02
TH-232	1.559E+00	3.633E-01	1.070E-01	1.854E-01
TH-234	1.697E+00	2.262E+00	1.290E+00	1.154E+00
U-234	1.151E+00	1.940E-01	5.076E-02	9.897E-02
NP-237	8.554E-01	3.472E-01	2.252E-01	1.771E-01
U-238	1.697E+00	2.262E+00	1.290E+00	1.154E+00
AM-243	4.069E-01	9.195E-02	4.781E-02	4.691E-02
ANH-511	1.401E-01	6.118E-02	2.073E-02	3.122E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	1.150E-01	2.936E-01	2.525E-01	1.498E-01	NOT IDENT.
NA-22	1.418E-02	4.154E-02	3.553E-02	2.119E-02	NOT IDENT.
NA-24	-7.305E+04	1.744E+05	0.000E+00	8.900E+04	SHORT HLIF
AL-26	3.454E-03	2.500E-02	2.123E-02	1.275E-02	NOT IDENT.
TI-44	4.238E-01	6.434E-02	4.454E-02	3.283E-02	FAIL ABUN
SC-46	2.915E-02	3.711E-02	3.247E-02	1.893E-02	FAIL ABUN
V-48	-1.868E-02	6.190E-02	4.961E-02	3.158E-02	NOT IDENT.
CR-51	1.601E-01	3.324E-01	2.807E-01	1.696E-01	NOT IDENT.
MN-52	-5.290E-02	1.694E-01	1.339E-01	8.642E-02	NOT IDENT.
MN-54	1.248E-02	3.554E-02	3.037E-02	1.813E-02	NOT IDENT.
CO-56	1.687E-02	3.576E-02	3.084E-02	1.825E-02	NOT IDENT.
CO-57	1.429E-02	2.555E-02	2.155E-02	1.303E-02	NOT IDENT.
CO-58	-2.937E-02	3.594E-02	2.823E-02	1.834E-02	NOT IDENT.
FE-59	-4.665E-02	8.746E-02	7.112E-02	4.462E-02	NOT IDENT.
CO-60	-6.630E-03	3.788E-02	3.090E-02	1.933E-02	NOT IDENT.
ZN-65	8.619E-02	9.321E-02	7.356E-02	4.755E-02	NOT IDENT.
GE-68	3.778E-02	1.163E+00	9.653E-01	5.931E-01	NOT IDENT.
AS-73	-1.842E-01	1.145E+00	9.601E-01	5.843E-01	NOT IDENT.
AS-74	-4.202E-03	8.160E-02	6.703E-02	4.164E-02	NOT IDENT.
SE-75	-6.551E-02	4.571E-02	2.988E-02	2.332E-02	NOT IDENT.
BR-77	-1.309E+00	6.205E+00	5.105E+00	3.166E+00	FAIL ABUN
SR-82	4.626E-02	3.607E-01	2.843E-01	1.840E-01	NOT IDENT.
RB-83	-1.649E-02	5.943E-02	4.867E-02	3.032E-02	NOT IDENT.
RB-84	-5.933E-02	7.220E-02	5.305E-02	3.683E-02	NOT IDENT.
KR-85	2.488E+01	7.768E+00	6.805E+00	3.963E+00	NOT IDENT.
SR-85	1.258E-01	3.928E-02	3.441E-02	2.004E-02	NOT IDENT.
RB-86	1.293E-02	6.992E-01	5.799E-01	3.568E-01	NOT IDENT.
Y-88	1.170E-02	2.899E-02	2.552E-02	1.479E-02	NOT IDENT.
ZR-88	-1.671E-02	2.808E-02	2.327E-02	1.433E-02	NOT IDENT.
Y-91	-4.215E+00	1.778E+01	1.466E+01	9.074E+00	NOT IDENT.
NB-94	1.074E-02	3.041E-02	2.638E-02	1.551E-02	NOT IDENT.
NB-95	4.242E-02	4.255E-02	3.358E-02	2.171E-02	NOT IDENT.
NB-95M	4.122E-02	1.297E-01	9.779E-02	6.618E-02	NOT IDENT.
ZR-95	-3.755E-02	6.248E-02	5.041E-02	3.188E-02	NOT IDENT.
NB-97	-1.695E+03	2.777E+04	0.000E+00	1.417E+04	SHORT HLIF
ZR-97	6.377E+05	5.314E+05	0.000E+00	2.711E+05	SHORT HLIF
MO-99	-1.639E+00	7.275E+00	6.050E+00	3.711E+00	NOT IDENT.
TC-99M	1.233E+14	1.069E+15	0.000E+00	5.454E+14	SHORT HLIF
RH-101	-3.693E-02	3.237E-02	2.624E-02	1.652E-02	NOT IDENT.
RH-102	-1.370E-02	2.743E-02	2.240E-02	1.400E-02	NOT IDENT.
RU-103	2.149E-02	3.641E-02	3.151E-02	1.857E-02	FAIL ABUN
RH-106	-4.499E-02	2.926E-01	2.376E-01	1.493E-01	FAIL ABUN
RU-106	-4.499E-02	2.926E-01	2.376E-01	1.493E-01	FAIL ABUN
AG-108M	-6.550E-03	3.046E-02	2.553E-02	1.554E-02	NOT IDENT.
AG-110M	-5.488E-03	3.628E-02	2.640E-02	1.851E-02	NOT IDENT.
IN-111	2.019E-01	7.860E-01	5.697E-01	4.010E-01	NOT IDENT.
IN-113M	-3.982E-02	4.124E-02	3.347E-02	2.104E-02	NOT IDENT.
SN-113	-3.982E-02	4.124E-02	3.347E-02	2.104E-02	NOT IDENT.
IN-114M	-1.579E-01	1.919E-01	1.384E-01	9.790E-02	NOT IDENT.
CD-115	-3.692E+00	6.505E+00	5.216E+00	3.319E+00	NOT IDENT.
SN-117M	2.051E-02	4.676E-02	4.040E-02	2.386E-02	NOT IDENT.
SB-122	1.345E+00	1.401E+00	1.226E+00	7.150E-01	NOT IDENT.
I-123	3.608E+05	9.879E+05	0.000E+00	5.040E+05	SHORT HLIF
TE-123M	9.446E-03	2.586E-02	2.228E-02	1.319E-02	NOT IDENT.
I-124	-3.595E-01	5.735E-01	3.824E-01	2.926E-01	NOT IDENT.
SB-124	1.318E-02	6.638E-02	5.705E-02	3.387E-02	FAIL ABUN
SB-125	3.726E-02	8.412E-02	7.313E-02	4.292E-02	FAIL ABUN
TE-125M	4.935E-01	9.367E+00	7.796E+00	4.779E+00	NOT IDENT.
I-126	-3.081E-02	1.802E-01	1.307E-01	9.195E-02	NOT IDENT.
SB-126	-4.699E-02	1.371E-01	1.049E-01	6.995E-02	FAIL ABUN
SB-127	-4.591E-01	1.043E+00	8.634E-01	5.319E-01	NOT IDENT.
XE-127	-2.450E-02	4.251E-02	3.545E-02	2.169E-02	NOT IDENT.
I-131	3.721E-02	9.139E-02	8.026E-02	4.663E-02	NOT IDENT.
TE-132	-1.887E-01	4.982E-01	4.144E-01	2.542E-01	NOT IDENT.
BA-133	2.510E-02	4.562E-02	3.380E-02	2.327E-02	NOT IDENT.
I-133	-6.399E+02	1.845E+03	0.000E+00	9.414E+02	SHORT HLIF
CS-134	7.542E-02	5.446E-02	4.152E-02	2.779E-02	FAIL ABUN
CS-135	3.057E-01	1.569E-01	1.285E-01	8.006E-02	NOT IDENT.
I-135	1.210E+14	2.116E+14	0.000E+00	1.080E+14	SHORT HLIF
CS-136	4.733E-02	9.620E-02	8.439E-02	4.908E-02	FAIL ABUN
CE-139	1.713E-02	2.639E-02	2.341E-02	1.346E-02	NOT IDENT.
BA-140	1.236E-01	2.293E-01	1.944E-01	1.170E-01	NOT IDENT.
LA-140	-3.764E-02	7.356E-02	5.826E-02	3.753E-02	FAIL ABUN
CE-141	8.466E-03	5.982E-02	4.897E-02	3.052E-02	NOT IDENT.
CE-143	3.370E+02	1.086E+02	0.000E+00	5.542E+01	SHORT HLIF
CE-144	-4.272E-02	1.974E-01	1.600E-01	1.007E-01	NOT IDENT.
PM-144	4.917E-03	3.219E-02	2.687E-02	1.642E-02	NOT IDENT.
PR-144	3.329E-01	2.180E+00	1.820E+00	1.112E+00	NOT IDENT.

PM-146	3.027E-02	4.080E-02	3.580E-02	2.081E-02	NOT IDENT.
ND-147	-3.436E-01	4.647E-01	3.659E-01	2.371E-01	FAIL ABUN
PM-149	5.399E+01	5.806E+01	5.003E+01	2.962E+01	NOT IDENT.
EU-152	6.839E-02	9.630E-02	7.268E-02	4.913E-02	NOT IDENT.
GD-153	-8.102E-02	9.011E-02	6.381E-02	4.597E-02	NOT IDENT.
EU-154	5.239E-02	1.157E-01	9.970E-02	5.902E-02	NOT IDENT.
EU-155	1.547E-01	1.133E-01	9.895E-02	5.780E-02	FAIL ABUN
TB-160	6.566E-02	1.317E-01	1.133E-01	6.719E-02	FAIL ABUN
HO-166M	9.971E-03	5.812E-02	4.982E-02	2.965E-02	NOT IDENT.
TM-171	-1.331E+00	3.629E+01	2.770E+01	1.852E+01	NOT IDENT.
LU-176	-1.480E-03	2.531E-02	1.924E-02	1.291E-02	FAIL ABUN
LU-177	3.145E+00	1.278E+00	8.422E-01	6.518E-01	FAIL ABUN
LU-177M	-3.802E-02	1.689E-01	1.227E-01	8.618E-02	FAIL ABUN
HF-181	-2.404E-02	3.841E-02	3.103E-02	1.960E-02	NOT IDENT.
W-181	-2.959E-01	4.809E-01	3.571E-01	2.454E-01	NOT IDENT.
TA-182	-5.964E-02	1.869E-01	1.530E-01	9.535E-02	FAIL ABUN
RE-183	-4.450E-02	9.903E-02	8.263E-02	5.053E-02	FAIL ABUN
RE-184	2.525E-02	2.154E-01	1.818E-01	1.099E-01	NOT IDENT.
OS-185	-1.013E-02	3.823E-02	3.064E-02	1.950E-02	NOT IDENT.
RE-188	-6.466E-02	1.540E-01	1.320E-01	7.859E-02	NOT IDENT.
W-188	-5.745E+00	7.986E+00	5.501E+00	4.075E+00	FAIL ABUN
IR-192	-1.891E-02	3.216E-02	2.514E-02	1.641E-02	FAIL ABUN
AU-195	2.733E-01	2.225E-01	1.947E-01	1.135E-01	FAIL ABUN
TL-200	1.225E+02	1.761E+02	0.000E+00	8.987E+01	SHORT HLIF
TL-201	-5.159E+00	4.651E+00	3.844E+00	2.373E+00	NOT IDENT.
TL-202	2.310E-02	5.872E-02	5.083E-02	2.996E-02	NOT IDENT.
HG-203	6.124E-02	3.814E-02	3.395E-02	1.946E-02	NOT IDENT.
BI-207	1.643E-02	4.980E-02	4.319E-02	2.541E-02	FAIL ABUN
TL-207	3.565E-01	6.961E-01	5.172E-01	3.552E-01	FAIL ABUN
PO-209	-1.814E+00	7.430E+00	6.057E+00	3.791E+00	NOT IDENT.
BI-210	-8.629E+00	6.077E+00	4.997E+00	3.101E+00	NOT IDENT.
PB-210	-8.629E+00	6.077E+00	4.997E+00	3.101E+00	NOT IDENT.
PO-210	-8.629E+00	6.068E+00	4.997E+00	3.096E+00	NOT IDENT.
PB-211	-4.732E-02	9.746E-01	7.202E-01	4.973E-01	NOT IDENT.
BI-212	7.907E-01	4.219E-01	3.090E-01	2.153E-01	FAIL ABUN
PO-215	3.565E-01	6.961E-01	5.172E-01	3.552E-01	FAIL ABUN
RN-219	-4.315E-02	3.813E-01	3.236E-01	1.945E-01	FAIL ABUN
RN-220	-1.313E+01	2.458E+01	1.970E+01	1.254E+01	NOT IDENT.
RA-223	3.565E-01	6.961E-01	5.172E-01	3.552E-01	FAIL ABUN
AC-227	-6.383E-03	3.584E-01	3.003E-01	1.829E-01	FAIL ABUN
TH-227	-6.383E-03	3.584E-01	3.003E-01	1.829E-01	FAIL ABUN
TH-229	5.923E-01	4.819E-01	4.311E-01	2.459E-01	FAIL ABUN
PA-231	-6.007E-01	1.440E+00	1.170E+00	7.346E-01	FAIL ABUN
TH-231	3.565E-01	6.961E-01	5.172E-01	3.552E-01	FAIL ABUN
U-231	3.074E-01	9.023E-01	6.879E-01	4.604E-01	FAIL ABUN
PA-233	-2.207E-02	6.001E-02	4.850E-02	3.062E-02	FAIL ABUN
PA-234	7.077E-02	2.896E-01	2.432E-01	1.477E-01	FAIL ABUN
PA-234M	5.706E-02	6.683E+00	5.428E+00	3.410E+00	NOT IDENT.
U-235	3.857E-02	2.193E-01	1.778E-01	1.119E-01	FAIL ABUN
NP-236	-2.788E-02	7.273E-02	6.082E-02	3.711E-02	NOT IDENT.
NP-239	-1.493E-01	1.950E-01	1.557E-01	9.949E-02	FAIL ABUN
AM-241	1.565E-01	2.037E-01	1.637E-01	1.039E-01	NOT IDENT.
CM-243	-1.360E-02	1.002E-01	8.308E-02	5.114E-02	FAIL ABUN
CM-247	1.254E-02	3.423E-02	2.976E-02	1.747E-02	NOT IDENT.
CF-249	2.062E-02	3.587E-02	3.160E-02	1.830E-02	NOT IDENT.
CF-251	-9.397E-02	1.152E-01	9.607E-02	5.878E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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46.50	335.8100
46.50	335.8100
46.50	335.8100
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49.72	259.4544
51.35	256.6094
52.39	246.7587
52.97	251.8533
53.15	252.0259
53.44	250.4825
54.07	251.9921
56.28	243.9370
56.28	243.9397
57.37	0.0000
57.53	270.9402
57.53	270.9417
57.60	281.1824
57.98	271.3783
57.98	271.3783
59.32	261.0399
59.32	261.0399
59.40	261.1133
59.54	261.2417
59.72	262.8044
60.01	251.8767
61.10	300.5889
61.14	300.6306
61.30	300.7963
63.00	316.6816
63.29	327.3687
63.29	327.3687
63.58	327.6872
64.28	359.2180
65.12	357.3708
65.20	357.4651
65.20	357.4651
66.05	339.8970
66.72	336.3423
66.83	327.8737
66.91	327.9575
67.20	335.4324
67.20	335.4324
67.75	336.0251
67.85	347.6258
68.90	360.3192
68.90	360.3192
69.30	355.0026
69.67	352.5297
70.82	359.5936
70.82	359.5936
70.83	359.6049
72.80	340.3923
72.87	340.4653
72.87	340.4653
74.67	342.3167
74.81	342.4600
74.81	342.4600
74.81	342.4600
74.81	342.4600
74.81	342.4600
74.81	342.4600
74.97	342.6229
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77.11	344.7911
77.11	344.7911

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77.11	344.7911
77.11	344.7911
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80.30	363.8759
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81.07	410.9999
81.07	410.9999
81.07	410.9999
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83.78	331.2874
83.78	331.2874
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85.43	385.7237
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86.50	470.2742
86.54	470.3239
86.59	470.3877
86.72	467.5151
86.79	467.5997
86.94	467.7900
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87.30	436.3157
87.30	436.3157
87.30	436.3157
87.30	436.3157
87.30	436.3157
87.57	436.6288
87.88	405.0132
88.03	405.1755
88.36	405.5287
88.47	405.6464
89.95	407.2253
91.11	300.9654
92.29	301.8806
92.38	301.9508
92.38	301.9508
93.35	302.6970
94.00	258.3358
94.67	261.8667
94.67	261.8706
94.90	262.0214
94.90	262.0214
94.90	262.0214
94.90	262.0214
95.87	268.8738
95.87	268.8738
96.73	303.7160
97.43	332.3217
98.44	286.7437
98.44	286.7437
98.88	259.9120
99.55	265.5626
99.55	265.5626
99.86	261.5764
100.00	261.6653
100.10	261.7302
103.18	354.3545
103.76	314.7076
105.00	275.3732
105.31	288.2917
108.00	362.5989
109.28	311.2448
111.00	302.7863
111.00	302.7863

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115.19	280.6663
116.30	308.4980
117.00	320.9292
117.00	320.9292
117.66	310.4895
121.11	290.8129
121.62	285.6300
121.78	285.7252
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122.32	279.4442
122.32	279.4442
122.32	279.4442
122.32	279.4442
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142.65	343.4418
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144.24	311.1494
144.24	311.1494
144.24	311.1494
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145.44	296.8743
147.16	296.6438
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152.70	270.4377
153.22	274.7692
154.21	283.1327
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154.21	283.1327
154.21	283.1327
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162.64	273.8895
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163.89	261.0940
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167.43	297.5771
171.28	253.4385
171.86	258.1881
172.10	251.0615
176.55	291.9446
176.60	291.9667
181.06	250.5822
184.41	266.5950
185.71	272.0994
186.00	272.2187
190.27	317.9776
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208.81	285.2960

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209.75	271.1512
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216.55	254.3844
218.09	253.9425
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223.80	261.6917
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227.20	256.0053
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228.18	276.8724
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236.00	289.3062
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238.63	235.9300
238.63	235.9300
239.00	236.0371
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241.98	236.9033
241.98	236.9033
241.98	236.9033
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252.85	216.8224
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260.90	181.2022
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264.65	229.0107
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268.79	177.4960
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269.46	211.7554
269.46	211.7554
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308.46	171.4258
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323.87	170.5717
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334.20	206.5372
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338.28	184.1699
338.28	184.1699
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351.92	173.0931
351.92	173.0931
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391.69	186.7760
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439.89	133.5041
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445.03	136.9107
445.03	136.9107
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513.99	104.5619
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569.67	117.3922
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602.71	135.3843
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609.31	118.0164
609.31	118.0164

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621.84	111.2933
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661.65	109.5143
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696.49	110.5842
697.00	109.6756
697.49	110.6418
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768.36	107.7458
768.36	107.7458
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911.07	100.1931
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934.06	77.1420
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969.11	138.4439
969.11	138.4439
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1099.22	101.6112
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1120.29	107.1250
1120.29	107.1250
1120.29	107.1250
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1238.11	116.2532
1238.11	116.2532
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1325.50	62.2212
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1362.66	0.0000
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1368.21	53.0073
1368.53	0.0000
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1377.67	39.8629
1377.67	39.8629
1377.67	39.8629
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1457.56	0.0000
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1489.15	33.0845
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1596.49	41.2678
1620.62	26.0664
1678.03	0.0000
1691.02	22.5817
1691.02	22.5817

1706.46	0.0000
1750.46	0.0000
1764.49	33.7283
1764.49	33.7283
1764.49	33.7283
1764.49	33.7283
1770.23	19.5520
1771.40	24.8912
1791.20	0.0000
1808.65	17.1432
1836.01	17.2464

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433013

Total Uranium Activity	5.0659E+00	ug/g
Total Uranium Counting Unc.	6.7306E+00	ug/g
Total Uranium Tpu	3.4340E-06	ug/g
Total Uranium Mda	3.8379E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G232433013       *
*   ANALYST       : MXR1                      DETECTOR   : GAM18            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 07:04:28.25    SAMPLE ALQT:  105.650 GRAM    *
*                                                                           *
*****************************************************************************


         GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.018E+01
         GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.463E+00
         GROSS GAMMA MDA     (pCi/GRAM  )  : 2.539E+00
         GROSS GAMMA DLC     (pCi/GRAM  )  : 1.228E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:06:00.85

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433014.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:05:32.
Sample ID         : G232433014           Sample quantity  : 8.03600E+01 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.37  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.62*	64	360	1.47	92.61	89	9	8.95E-03	56.0	
2	0	63.20*	108	469	1.28	125.77	122	9	1.50E-02	38.9	
3	1	74.89*	353	465	1.27	149.15	142	22	4.90E-02	12.0	3.35E+00
4	1	77.25*	591	402	1.28	153.86	142	22	8.20E-02	7.6	
5	0	87.24	175	471	1.28	173.84	171	7	2.43E-02	21.8	
6	0	93.12*	208	692	0.99	185.60	180	10	2.88E-02	26.4	
7	0	143.50*	56	305	1.26	286.34	283	9	7.81E-03	59.3	
8	0	186.14*	329	379	1.58	371.60	365	15	4.57E-02	14.6	
9	2	238.83*	1139	172	1.32	476.98	469	22	1.58E-01	3.8	1.39E+00
10	2	241.76	311	191	1.81	482.83	469	22	4.32E-02	14.2	
11	0	295.24	398	224	1.51	589.78	584	13	5.53E-02	9.2	
12	0	329.22	103	261	1.75	657.75	651	17	1.43E-02	37.3	
13	0	338.52*	211	202	1.63	676.33	671	12	2.93E-02	15.4	
14	0	351.99*	521	273	1.61	703.28	697	15	7.24E-02	8.3	
15	0	511.41*	83	153	2.29	1022.13	1014	18	1.16E-02	44.0	
16	0	583.40*	401	124	1.43	1166.13	1158	16	5.57E-02	8.2	
17	0	609.79*	428	139	1.48	1218.93	1212	14	5.94E-02	7.9	
18	0	661.94	373	101	2.13	1323.25	1316	13	5.18E-02	7.6	
19	0	727.85	123	66	2.45	1455.11	1449	14	1.71E-02	16.7	
20	0	862.27	67	101	1.95	1724.05	1715	20	9.30E-03	38.6	
21	0	903.09	34	44	0.88	1805.73	1800	11	4.70E-03	42.5	
22	0	911.95*	273	84	2.10	1823.45	1814	20	3.79E-02	10.5	
23	0	969.89*	129	95	1.90	1939.40	1933	14	1.79E-02	19.5	
24	0	1120.70	84	86	1.71	2241.19	2231	19	1.17E-02	28.4	
25	0	1378.57	49	25	0.71	2757.31	2748	18	6.78E-03	28.6	
26	0	1461.54*	1422	59	2.98	2923.39	2913	23	1.98E-01	3.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 09:06:03

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433014.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:05:32
Sample ID : G232433014 Sample quantity : 80.360 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.37 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.142E+01	2.909E+00	7.046E-01	4.904E-02	44.601
CD-109	+	88.03	*	2.830E+00	1.257E+00	1.884E+00	1.683E-01	1.502
SN-126	+	64.28		1.091E+00	8.638E-01	8.818E-01	1.272E-01	1.237
	+	86.94		1.159E+00	6.961E-01	7.245E-01	3.000E-01	1.599
	+	87.57	*	2.787E-01	1.238E-01	1.716E-01	1.527E-02	1.624
BA-137M	+	661.65	*	5.185E-01	8.760E-02	5.963E-02	4.424E-03	8.695
CS-137	+	661.65	*	5.481E-01	9.265E-02	6.303E-02	4.689E-03	8.695
TL-208		277.35		-2.172E-03	4.016E-01	6.705E-01	7.007E-02	-0.003
	+	510.84		3.980E-01	3.526E-01	2.454E-01	2.590E-02	1.622
	+	583.14	*	5.398E-01	9.765E-02	5.927E-02	4.563E-03	9.108
		860.37		5.834E-01	3.910E-01	6.333E-01	6.606E-02	0.921
BI-210	+	46.50	*	4.520E+00	5.073E+00	5.362E+00	4.054E-01	0.843
PB-210	+	46.50	*	4.520E+00	5.073E+00	5.362E+00	4.054E-01	0.843
PO-210	+	46.50	*	4.520E+00	5.070E+00	5.362E+00	3.456E-01	0.843
BI-211		72.87		6.085E+00	3.719E+00	6.191E+00	4.738E-01	0.983
	+	351.07	*	3.257E+00	5.766E-01	3.692E-01	2.342E-02	8.821
PB-212	+	74.81		2.316E+00	6.237E-01	6.334E-01	7.705E-02	3.657
	+	77.11		2.205E+00	3.786E-01	3.618E-01	2.878E-02	6.094
	+	87.30		1.289E+00	5.869E-01	7.967E-01	1.065E-01	1.618
	+	238.63	*	1.659E+00	1.721E-01	1.010E-01	7.138E-03	16.433
		300.09		1.737E+00	1.051E+00	1.624E+00	1.323E-01	1.069
PO-212	+	74.81		2.316E+00	6.237E-01	6.334E-01	7.705E-02	3.657
	+	77.11		2.205E+00	3.786E-01	3.618E-01	2.878E-02	6.094
	+	87.30		1.289E+00	5.869E-01	7.967E-01	1.065E-01	1.618
		115.19		-5.067E-01	4.157E+00	6.897E+00	4.477E-01	-0.073
	+	238.63	*	1.659E+00	1.721E-01	1.010E-01	7.138E-03	16.433
		300.09		1.737E+00	1.051E+00	1.624E+00	1.323E-01	1.069
PB-214	+	74.81		3.991E+00	1.050E+00	1.091E+00	1.173E-01	3.657
	+	77.11		3.780E+00	7.101E-01	6.202E-01	6.832E-02	6.094
	+	87.30		2.208E+00	9.955E-01	1.365E+00	1.604E-01	1.618
	+	241.98		2.713E+00	7.978E-01	6.067E-01	4.757E-02	4.472
	+	295.21		1.513E+00	3.069E-01	2.717E-01	2.288E-02	5.567
	+	351.92	*	1.133E+00	2.091E-01	1.308E-01	1.074E-02	8.663
PO-214	+	74.81		3.991E+00	1.050E+00	1.091E+00	1.173E-01	3.657

Sample ID : G232433014 Acquisition date : 7-JUL-2009 07:05:32

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		3.780E+00	7.101E-01	6.202E-01	6.832E-02	6.094
	+	87.30		2.208E+00	9.955E-01	1.365E+00	1.604E-01	1.618
	+	241.98		2.713E+00	7.978E-01	6.067E-01	4.757E-02	4.472
	+	295.21		1.513E+00	3.069E-01	2.717E-01	2.288E-02	5.567
	+	351.92	*	1.133E+00	2.091E-01	1.308E-01	1.074E-02	8.663
PO-216	+	74.81		2.316E+00	6.237E-01	6.334E-01	7.705E-02	3.657
	+	77.11		2.205E+00	3.786E-01	3.618E-01	2.878E-02	6.094
	+	87.30		1.289E+00	5.869E-01	7.967E-01	1.065E-01	1.618
	+	238.63	*	1.659E+00	1.721E-01	1.010E-01	7.138E-03	16.433
		300.09		1.737E+00	1.051E+00	1.624E+00	1.323E-01	1.069
PO-218	+	74.81		3.991E+00	1.050E+00	1.091E+00	1.173E-01	3.657
	+	77.11		3.780E+00	7.101E-01	6.202E-01	6.832E-02	6.094
	+	87.30		2.208E+00	9.955E-01	1.365E+00	1.604E-01	1.618
	+	241.98		2.713E+00	7.978E-01	6.067E-01	4.757E-02	4.472
	+	295.21		1.513E+00	3.069E-01	2.717E-01	2.288E-02	5.567
	+	351.92	*	1.133E+00	2.091E-01	1.308E-01	1.074E-02	8.663
RA-224	+	240.98	*	5.145E+00	1.485E+00	1.147E+00	6.283E-02	4.485
AC-228	+	338.32		1.463E+00	7.483E-01	4.288E-01	1.747E-01	3.413
	+	911.07	*	1.604E+00	3.930E-01	2.059E-01	2.576E-02	7.791
	+	969.11		1.333E+00	6.077E-01	5.091E-01	1.204E-01	2.619
RA-228	+	338.32		1.463E+00	7.483E-01	4.288E-01	1.747E-01	3.413
	+	911.07	*	1.604E+00	3.930E-01	2.059E-01	2.576E-02	7.791
	+	969.11		1.333E+00	6.077E-01	5.091E-01	1.204E-01	2.619
TH-228		84.40		3.051E+00	4.304E+00	4.990E+00	6.544E-01	0.612
	+	238.60	*	1.659E+00	1.721E-01	1.009E-01	7.138E-03	16.435
		300.10		1.736E+00	1.459E+00	1.624E+00	9.570E-01	1.069
TH-232	+	338.32		1.463E+00	4.597E-01	4.288E-01	2.443E-02	3.413
	+	911.07	*	1.604E+00	3.930E-01	2.059E-01	2.576E-02	7.791
	+	969.11		1.333E+00	6.077E-01	5.091E-01	1.204E-01	2.619
TH-234	+	63.29	*	2.756E+00	2.198E+00	2.206E+00	3.824E-01	1.249
	+	92.38		2.150E+00	1.200E+00	9.889E-01	1.776E-01	2.175
U-235		89.95		-1.893E+00	2.359E+00	2.340E+00	7.224E-01	-0.809
	+	93.35		2.585E+00	1.545E+00	9.880E-01	2.758E-01	2.617
		105.00		1.129E+00	1.300E+00	2.175E+00	6.406E-01	0.519
	+	143.76	*	2.824E-01	3.383E-01	3.883E-01	6.300E-02	0.727
		163.35		1.878E-01	5.829E-01	9.508E-01	1.691E-01	0.197
	+	185.71		3.512E-01	1.040E-01	8.115E-02	4.232E-03	4.327
		205.31		-4.608E-01	6.319E-01	9.759E-01	1.740E-01	-0.472
NP-237	+	86.50	*	8.184E-01	4.008E-01	4.763E-01	1.068E-01	1.718
		95.87		-4.404E-01	1.211E+00	1.756E+00	4.288E-01	-0.251
U-238	+	63.29	*	2.756E+00	2.198E+00	2.206E+00	3.824E-01	1.249
	+	92.38		2.150E+00	1.150E+00	9.889E-01	8.273E-02	2.175
AM-243	+	74.67	*	3.755E-01	9.484E-02	1.030E-01	8.005E-03	3.647
	+	86.72		3.069E+01	1.363E+01	1.782E+01	1.570E+00	1.722
		117.66		-1.499E-01	4.432E+00	7.372E+00	4.678E-01	-0.020
	+	142.18		2.372E+01	2.819E+01	3.372E+01	1.889E+00	0.704
ANH-511	+	511.00	*	8.597E-02	7.582E-02	5.301E-02	3.437E-03	1.622

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.375E-01	3.650E-01	6.106E-01	4.368E-02	0.389

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22		1274.54	*	1.019E-02	5.240E-02	8.851E-02	5.632E-03	0.115
NA-24		1368.53	*	1.918E-01	5.240E-02	Half-Life too short		
AL-26		1129.67		-6.463E-01	2.253E+00	3.129E+00	2.062E-01	-0.207
		1808.65	*	2.999E-03	3.004E-02	5.066E-02	2.883E-03	0.059
TI-44		67.85		-7.690E-02	6.124E-02	8.065E-02	5.935E-03	-0.954
	+	78.38	*	4.068E-01	6.986E-02	9.217E-02	7.424E-03	4.414
SC-46		889.25	*	-7.843E-03	4.061E-02	6.632E-02	6.800E-03	-0.118
	+	1120.51		1.833E-01	1.050E-01	1.242E-01	8.421E-03	1.477
V-48		944.10		-6.658E-01	9.283E-01	1.436E+00	1.406E-01	-0.464
		983.50	*	-1.543E-02	7.534E-02	1.219E-01	1.126E-02	-0.127
		1312.09		-5.710E-02	7.944E-02	1.219E-01	8.068E-03	-0.468
CR-51		320.08	*	-6.041E-02	4.108E-01	6.743E-01	4.286E-02	-0.090
MN-52		744.21		1.271E-01	2.233E-01	3.781E-01	3.176E-02	0.336
		848.13		-4.147E+00	6.153E+00	9.679E+00	9.400E-01	-0.428
		935.52		6.367E-02	2.377E-01	4.013E-01	3.976E-02	0.159
		1246.25		-4.642E+00	7.398E+00	1.176E+01	7.234E-01	-0.395
		1333.61		-1.972E+00	4.234E+00	6.640E+00	4.490E-01	-0.297
		1434.06	*	1.577E-01	2.165E-01	3.857E-01	2.577E-02	0.409
MN-54		834.83	*	1.699E-02	4.186E-02	7.180E-02	6.849E-03	0.237
CO-56		846.75	*	-2.051E-02	4.280E-02	6.864E-02	6.654E-03	-0.299
		977.42		-8.504E-01	4.045E+00	5.544E+00	5.169E-01	-0.153
		1037.82		1.896E-01	3.248E-01	5.593E-01	4.937E-02	0.339
		1175.09		-2.734E-01	2.439E+00	3.915E+00	2.212E-01	-0.070
		1238.25		1.059E-01	1.012E-01	1.798E-01	1.158E-02	0.589
		1360.21		-7.722E-01	1.154E+00	1.775E+00	1.198E-01	-0.435
		1771.40		-9.572E-01	3.947E-01	4.814E-01	2.808E-02	-1.988
CO-57		122.06	*	1.768E-03	3.010E-02	5.015E-02	3.067E-03	0.035
		136.48		-2.778E-01	2.445E-01	3.833E-01	2.553E-02	-0.725
CO-58		810.76	*	-2.370E-02	4.349E-02	6.976E-02	6.453E-03	-0.340
FE-59	+	142.65		3.569E+00	4.241E+00	5.382E+00	3.011E-01	0.663
		192.34		-5.573E-01	1.246E+00	1.708E+00	1.973E-01	-0.326
		1099.22	*	-2.522E-02	9.401E-02	1.494E-01	1.201E-02	-0.169
		1291.56		-2.653E-03	1.271E-01	2.108E-01	1.677E-02	-0.013
CO-60		1173.22		-6.276E-03	5.005E-02	8.027E-02	4.524E-03	-0.078
		1332.49	*	-1.150E-02	3.854E-02	6.169E-02	4.172E-03	-0.186
ZN-65		1115.52	*	3.915E-02	1.186E-01	1.707E-01	1.177E-02	0.229
GE-68		1077.35	*	2.161E-01	1.439E+00	2.380E+00	1.818E-01	0.091
AS-73		53.44	*	9.833E-01	9.085E-01	1.468E+00	1.020E-01	0.670
AS-74		595.88	*	-3.605E-02	1.001E-01	1.614E-01	1.134E-02	-0.223
		634.78		-2.351E-01	3.745E-01	5.864E-01	4.257E-02	-0.401
SE-75		66.05		-1.056E+00	5.988E+00	8.396E+00	7.853E-01	-0.126
		96.73		-5.683E-01	9.795E-01	1.404E+00	1.851E-01	-0.405
		121.11		-6.441E-02	1.612E-01	2.635E-01	2.493E-02	-0.244
		136.00		-3.482E-02	4.549E-02	7.268E-02	4.237E-03	-0.479
		198.60		1.299E+00	2.360E+00	3.746E+00	2.513E-01	0.347
		264.65	*	-4.578E-02	4.890E-02	7.812E-02	4.394E-03	-0.586
		279.53		-3.145E-02	1.133E-01	1.864E-01	1.135E-02	-0.169
		303.91		-4.092E+00	2.421E+00	3.620E+00	3.423E-01	-1.130
		400.65		-9.430E-03	2.877E-01	4.673E-01	4.236E-02	-0.020

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BR-77	+	87.88		4.167E+02	1.851E+02	2.895E+02	2.584E+01	1.439
		200.40		1.298E+02	1.351E+02	2.268E+02	1.200E+01	0.572
	+	239.00		1.812E+02	1.695E+01	2.867E+01	1.568E+00	6.320
		249.79		-2.167E+01	5.187E+01	8.049E+01	4.436E+00	-0.269
		281.68		-5.887E+01	6.493E+01	1.031E+02	5.783E+00	-0.571
		297.23		2.399E+02	6.146E+01	1.033E+02	5.831E+00	2.323
		303.76		-2.283E+02	1.407E+02	2.133E+02	1.207E+01	-1.070
		439.47		-8.643E+00	1.099E+02	1.767E+02	1.061E+01	-0.049
		484.57		-7.761E+01	1.793E+02	2.931E+02	1.850E+01	-0.265
		520.65	*	2.628E+00	8.617E+00	1.365E+01	8.938E-01	0.192
		574.64		-8.617E+00	1.677E+02	2.564E+02	1.767E+01	-0.034
		578.91		6.014E+01	7.180E+01	1.103E+02	7.631E+00	0.545
		585.48		1.467E+03	2.244E+02	4.027E+02	2.802E+01	3.642
		755.35		5.963E+01	1.341E+02	2.241E+02	1.913E+01	0.266
		817.79		-4.086E+01	9.543E+01	1.540E+02	1.435E+01	-0.265
SR-82		698.33		-8.770E+00	3.709E+01	5.945E+01	4.666E+00	-0.148
		776.49	*	-3.624E-01	4.358E-01	6.565E-01	5.777E-02	-0.552
		1395.20		-1.543E+01	1.139E+01	1.554E+01	1.045E+00	-0.993
RB-83		520.41	*	2.041E-02	8.256E-02	1.303E-01	8.527E-03	0.157
		529.64		-8.974E-02	1.087E-01	1.705E-01	1.126E-02	-0.526
		552.65		-6.079E-02	2.159E-01	3.520E-01	2.376E-02	-0.173
RB-84		881.50	*	2.630E-02	7.774E-02	1.325E-01	1.345E-02	0.198
KR-85		513.99	*	3.907E+01	1.079E+01	1.878E+01	1.221E+00	2.081
SR-85		513.99	*	1.976E-01	5.455E-02	9.494E-02	6.174E-03	2.081
RB-86		1076.63	*	3.981E-01	8.508E-01	1.444E+00	1.105E-01	0.276
Y-88		898.02		3.167E-02	5.303E-02	8.031E-02	8.355E-03	0.394
		1836.01	*	4.019E-02	3.580E-02	6.879E-02	3.849E-03	0.584
ZR-88		392.90	*	4.408E-03	3.440E-02	5.650E-02	3.210E-03	0.078
Y-91		1204.90	*	9.523E+00	2.201E+01	3.676E+01	2.154E+00	0.259
NB-94		702.63	*	7.365E-03	3.833E-02	6.332E-02	5.001E-03	0.116
		871.10		2.784E-03	4.594E-02	6.585E-02	6.593E-03	0.042
NB-95		765.79	*	4.378E-02	5.394E-02	9.155E-02	7.933E-03	0.478
NB-95M		235.69	*	1.568E-01	1.736E-01	2.541E-01	1.846E-02	0.617
ZR-95		724.18		1.890E-01	1.159E-01	1.866E-01	1.668E-02	1.013
		756.15	*	6.103E-02	8.144E-02	1.389E-01	1.310E-02	0.439
NB-97		657.90	*	7.641E-02	8.144E-02	Half-Life too short		
		1024.50		8.993E-01	8.144E-02	Half-Life too short		
ZR-97		254.15		-8.235E-01	8.144E-02	Half-Life too short		
		355.39		2.034E+00	8.144E-02	Half-Life too short		
		507.63	*	9.449E-01	8.144E-02	Half-Life too short		
		602.52		1.148E+00	8.144E-02	Half-Life too short		
		1021.30		2.160E+00	8.144E-02	Half-Life too short		
		1147.95		-2.536E+00	8.144E-02	Half-Life too short		
		1362.66		8.943E-02	8.144E-02	Half-Life too short		
		1750.46		-1.616E-01	8.144E-02	Half-Life too short		
MO-99		140.51		2.070E+01	2.494E+01	3.645E+01	9.809E+00	0.568
		181.06		-3.832E+00	1.607E+01	2.246E+01	3.806E+00	-0.171
		366.43		5.205E-01	6.999E+01	1.100E+02	6.269E+00	0.005
		739.58	*	-2.884E+00	8.773E+00	1.383E+01	2.078E+00	-0.209

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		778.00		-1.624E+01	2.889E+01	4.457E+01	3.930E+00	-0.364
TC-99M		140.51	*	1.089E+09	2.889E+01	Half-Life too short		
RH-101		127.23		6.692E-03	3.919E-02	6.541E-02	3.896E-03	0.102
		198.01	*	1.230E-02	4.362E-02	6.852E-02	3.615E-03	0.180
		325.23		1.044E-01	2.784E-01	4.102E-01	2.333E-02	0.254
RH-102		418.52		-5.778E-02	3.149E-01	5.046E-01	2.958E-02	-0.115
		475.06	*	-2.073E-02	3.391E-02	5.212E-02	3.256E-03	-0.398
		631.29		2.105E-02	5.974E-02	1.007E-01	7.289E-03	0.209
		697.49		1.968E-02	8.570E-02	1.421E-01	1.113E-02	0.139
		766.84		2.363E-01	1.398E-01	2.471E-01	2.145E-02	0.956
		1046.59		2.282E-02	1.300E-01	2.161E-01	1.772E-02	0.106
		1112.84		-2.221E-02	2.909E-01	3.992E-01	2.770E-02	-0.056
RU-103		497.08	*	-3.575E-02	4.424E-02	6.996E-02	9.044E-03	-0.511
	+	610.33		1.143E+01	2.571E+00	2.965E+00	4.731E-01	3.855
RH-106	+	511.85		4.283E-01	3.778E-01	5.048E-01	3.275E-02	0.849
		621.84	*	1.889E-01	3.581E-01	6.096E-01	7.606E-02	0.310
		1050.47		2.356E+00	2.644E+00	4.631E+00	3.766E-01	0.509
RU-106	+	511.85		4.283E-01	3.778E-01	5.048E-01	3.275E-02	0.849
		621.84	*	1.889E-01	3.576E-01	6.096E-01	4.378E-02	0.310
		1050.47		2.356E+00	2.644E+00	4.631E+00	3.766E-01	0.509
AG-108M		433.93	*	-3.499E-02	3.777E-02	5.724E-02	3.693E-03	-0.611
		614.37		1.273E-02	4.924E-02	7.146E-02	5.389E-03	0.178
		722.95		4.254E-02	4.923E-02	7.506E-02	6.379E-03	0.567
AG-110M		657.75	*	8.709E-02	4.567E-02	7.530E-02	5.793E-03	1.157
		677.61		1.782E-01	3.266E-01	5.556E-01	4.377E-02	0.321
		706.67		7.560E-02	2.423E-01	4.032E-01	3.308E-02	0.188
		763.93		-1.148E-01	2.081E-01	3.237E-01	2.876E-02	-0.355
		884.67		-5.138E-03	5.378E-02	8.866E-02	9.245E-03	-0.058
		937.48		5.181E-02	1.206E-01	2.062E-01	2.094E-02	0.251
		1384.27		-6.625E-02	1.983E-01	2.617E-01	1.843E-02	-0.253
IN-111		171.28		3.635E-01	8.851E-01	1.467E+00	7.547E-02	0.248
		245.39	*	-1.433E-01	9.025E-01	1.309E+00	7.192E-02	-0.109
IN-113M		391.69	*	9.652E-03	4.915E-02	8.107E-02	4.921E-03	0.119
SN-113		391.69	*	9.652E-03	4.915E-02	8.107E-02	4.921E-03	0.119
IN-114M		190.27	*	1.160E-01	2.289E-01	3.344E-01	1.751E-02	0.347
CD-115		260.90		-5.666E+01	9.857E+01	1.608E+02	8.923E+00	-0.352
		492.35		-1.481E+00	2.693E+01	4.499E+01	2.862E+00	-0.033
		527.90	*	-3.041E+00	7.593E+00	1.232E+01	8.119E-01	-0.247
SN-117M		156.02		1.076E+00	2.573E+00	4.287E+00	2.280E-01	0.251
		158.56	*	-2.051E-02	6.310E-02	1.019E-01	5.368E-03	-0.201
SB-122		563.90	*	7.154E-01	1.526E+00	2.612E+00	1.782E-01	0.274
		692.80		-1.415E+01	3.559E+01	5.640E+01	4.389E+00	-0.251
I-123		159.00	*	4.125E-01	3.559E+01	Half-Life too short		
		528.96		-5.106E+01	3.559E+01	Half-Life too short		
TE-123M		159.00	*	1.079E-02	3.407E-02	5.650E-02	3.019E-03	0.191
I-124		602.71	*	4.133E-01	7.387E-01	1.098E+00	7.756E-02	0.376
		722.78		3.325E+00	4.112E+00	6.240E+00	5.080E-01	0.533
		1325.50		-1.100E+01	2.838E+01	4.506E+01	3.025E+00	-0.244
		1376.25		3.069E+01	3.575E+01	5.565E+01	3.751E+00	0.551

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1509.49		1.131E+01	1.440E+01	2.562E+01	1.683E+00	0.442
		1691.02		9.260E-01	3.803E+00	6.369E+00	3.891E-01	0.145
SB-124		602.71		2.945E-02	5.264E-02	7.825E-02	5.529E-03	0.376
		645.85		-1.369E-01	5.501E-01	8.864E-01	7.027E-02	-0.154
		709.31		1.151E+00	3.140E+00	5.245E+00	4.185E-01	0.219
		713.82		-1.140E-01	1.757E+00	2.847E+00	3.309E-01	-0.040
		722.78		3.435E-01	4.248E-01	6.447E-01	5.375E-02	0.533
		968.20		1.798E+01	4.577E+00	7.845E+00	7.421E-01	2.291
		1045.16		-8.724E-01	2.663E+00	4.234E+00	3.483E-01	-0.206
		1325.50		-1.214E+00	3.131E+00	4.972E+00	3.338E-01	-0.244
		1368.21		2.127E+00	2.259E+00	3.753E+00	4.639E-01	0.567
		1436.60		-4.439E-01	4.225E+00	6.873E+00	4.591E-01	-0.065
		1691.02	*	2.256E-02	9.267E-02	1.552E-01	1.022E-02	0.145
SB-125		427.89	*	9.169E-02	1.092E-01	1.855E-01	1.144E-02	0.494
		463.38		6.786E-01	3.465E-01	6.138E-01	4.347E-02	1.106
		600.56		1.107E-01	2.172E-01	3.619E-01	2.829E-02	0.306
		635.90		-3.622E-02	2.954E-01	4.811E-01	3.887E-02	-0.075
TE-125M		109.28	*	-1.407E+01	1.162E+01	1.781E+01	1.588E+00	-0.790
I-126		388.63		-3.795E-02	2.181E-01	3.393E-01	1.926E-02	-0.112
		666.33	*	1.018E-01	2.152E-01	3.168E-01	2.368E-02	0.321
		753.82		1.203E+00	1.573E+00	2.690E+00	2.291E-01	0.447
SB-126		223.80		-4.950E+00	4.541E+00	6.717E+00	3.629E-01	-0.737
		278.60		5.913E-01	2.403E+00	4.061E+00	2.275E-01	0.146
	+	296.50		1.399E+01	2.700E+00	3.819E+00	2.156E-01	3.663
		414.70		-3.939E-02	8.023E-02	1.262E-01	7.364E-03	-0.312
		415.30		-2.458E-01	6.396E+00	1.035E+01	6.046E-01	-0.024
		555.20		-2.430E+00	4.146E+00	6.410E+00	4.338E-01	-0.379
		573.80		-1.051E-01	1.107E+00	1.738E+00	1.197E-01	-0.060
		593.00		1.223E-01	9.596E-01	1.566E+00	1.097E-01	0.078
		656.30		2.307E+00	3.859E+00	5.769E+00	4.262E-01	0.400
		666.33		4.241E-02	8.967E-02	1.320E-01	9.864E-03	0.321
		675.00		-1.045E-01	2.006E+00	3.269E+00	2.476E-01	-0.032
		695.00		1.937E-02	8.065E-02	1.338E-01	1.045E-02	0.145
		697.00		1.839E-01	2.778E-01	4.738E-01	3.711E-02	0.388
		720.50	*	1.474E-01	1.590E-01	2.445E-01	1.983E-02	0.603
		856.80		5.292E-01	4.704E-01	7.618E-01	7.484E-02	0.695
		989.30		-5.257E-01	1.286E+00	2.039E+00	1.865E-01	-0.258
		1034.80		8.098E+00	8.856E+00	1.563E+01	1.314E+00	0.518
		1213.00		-4.277E+00	5.483E+00	8.331E+00	4.928E-01	-0.513
SB-127		61.10		-2.921E+01	5.613E+01	7.759E+01	7.436E+00	-0.377
		252.40		-8.490E-01	3.895E+00	6.453E+00	2.672E+00	-0.132
		290.80		-1.234E+00	2.067E+01	2.976E+01	2.553E+00	-0.041
		411.60		2.823E+00	1.087E+01	1.791E+01	2.523E+00	0.158
		444.90		5.224E+00	9.057E+00	1.512E+01	1.592E+00	0.345
		473.00		-1.394E+00	1.480E+00	2.202E+00	2.429E-01	-0.633
		543.00		1.293E+00	1.417E+01	2.372E+01	3.085E+00	0.055
		603.60		7.769E-01	1.287E+01	1.835E+01	2.041E+00	0.042
		685.20	*	9.130E-01	1.186E+00	2.040E+00	2.101E-01	0.447
		698.50		-4.530E+00	1.356E+01	2.156E+01	3.264E+00	-0.210

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.20		6.365E+00	2.813E+01	4.018E+01	4.176E+00	0.158
		783.80		3.988E-01	3.554E+00	5.784E+00	7.097E-01	0.069
XE-127		57.60		6.129E+00	6.405E+00	1.067E+01	7.458E-01	0.574
		145.22		2.692E-01	9.648E-01	1.403E+00	7.769E-02	0.192
		172.10		7.092E-03	1.425E-01	2.326E-01	1.197E-02	0.030
		202.84	*	-9.884E-02	5.591E-02	8.236E-02	4.366E-03	-1.200
		374.96		6.644E-02	2.139E-01	3.561E-01	2.027E-02	0.187
I-131		80.18		-2.851E+00	4.474E+00	7.428E+00	6.129E-01	-0.384
		284.30		-4.652E-01	1.432E+00	2.348E+00	1.473E-01	-0.198
		364.48	*	3.267E-02	1.177E-01	1.881E-01	1.198E-02	0.174
		636.97		-4.328E-02	1.468E+00	2.407E+00	1.884E-01	-0.018
		722.89		6.227E+00	7.385E+00	1.124E+01	9.207E-01	0.554
TE-132		49.72		-2.018E+01	1.676E+01	2.220E+01	2.021E+00	-0.909
		111.76		1.072E+01	2.699E+01	4.523E+01	4.076E+00	0.237
		116.30		-2.294E+01	2.477E+01	3.961E+01	3.488E+00	-0.579
		228.16	*	3.448E-01	5.964E-01	9.788E-01	1.366E-01	0.352
BA-133		53.15		5.404E+00	3.934E+00	6.422E+00	4.458E-01	0.842
		79.62		1.182E-01	1.565E+00	2.478E+00	3.709E-01	0.048
		81.00		-1.729E-01	1.266E-01	1.736E-01	2.725E-02	-0.996
		276.40		1.351E-01	4.087E-01	6.927E-01	8.918E-02	0.195
		302.84		2.490E-02	1.779E-01	2.810E-01	3.256E-02	0.089
		356.01	*	1.643E-02	5.642E-02	8.200E-02	9.438E-03	0.200
		383.85		-1.382E-01	3.255E-01	5.167E-01	5.585E-02	-0.267
I-133	+	510.53		3.040E-01	3.255E-01	Half-Life too short		
		529.87	*	-1.547E-03	3.255E-01	Half-Life too short		
		706.58		8.623E-02	3.255E-01	Half-Life too short		
		856.28		2.234E-01	3.255E-01	Half-Life too short		
		875.33		9.705E-03	3.255E-01	Half-Life too short		
		1236.41		1.522E-01	3.255E-01	Half-Life too short		
		1298.22		2.352E-02	3.255E-01	Half-Life too short		
CS-134		475.35		-9.911E-01	2.170E+00	3.372E+00	2.107E-01	-0.294
		563.23		1.019E-01	3.747E-01	6.332E-01	4.383E-02	0.161
		569.32		-6.450E-02	2.235E-01	3.552E-01	2.488E-02	-0.182
		604.70		1.742E-02	4.645E-02	6.797E-02	4.828E-03	0.256
		795.84	*	6.574E-02	6.096E-02	1.048E-01	9.539E-03	0.627
		801.93		1.508E-01	5.450E-01	8.774E-01	8.041E-02	0.172
		1038.57		-1.074E+00	4.243E+00	6.796E+00	5.670E-01	-0.158
		1167.94		6.360E-01	2.848E+00	4.704E+00	2.707E-01	0.135
		1365.15		8.173E-01	1.457E+00	2.539E+00	1.839E-01	0.322
CS-135		268.24	*	2.293E-01	1.865E-01	3.270E-01	2.449E-02	0.701
I-135		288.45		1.814E+09	1.865E-01	Half-Life too short		
		417.63		-3.302E+08	1.865E-01	Half-Life too short		
		546.56		1.562E+08	1.865E-01	Half-Life too short		
		836.80		6.134E+08	1.865E-01	Half-Life too short		
		1038.76		-1.551E+08	1.865E-01	Half-Life too short		
		1124.00		3.051E+09	1.865E-01	Half-Life too short		
		1131.51		1.324E+07	1.865E-01	Half-Life too short		
		1260.41	*	-1.287E+08	1.865E-01	Half-Life too short		
		1457.56		2.537E+10	1.865E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1678.03		-5.865E+07	1.865E-01	Half-Life too short		
		1706.46		1.659E+08	1.865E-01	Half-Life too short		
		1791.20		3.753E+08	1.865E-01	Half-Life too short		
CS-136		66.91		-6.145E-01	9.396E-01	1.277E+00	1.884E-01	-0.481
	+	86.29		3.392E+00	1.541E+00	2.299E+00	2.976E-01	1.476
		153.22		6.896E-01	7.383E-01	1.254E+00	8.635E-02	0.550
		163.89		8.123E-01	1.221E+00	2.020E+00	1.364E-01	0.402
		176.55		2.410E-02	4.065E-01	6.629E-01	3.951E-02	0.036
		273.65		-7.359E-01	4.978E-01	7.735E-01	4.973E-02	-0.951
		340.57		5.499E-01	1.764E-01	2.918E-01	1.771E-02	1.885
		818.51		-1.952E-02	7.302E-02	1.195E-01	1.115E-02	-0.163
		1048.07	*	6.943E-02	1.144E-01	1.966E-01	1.683E-02	0.353
		1235.34		1.805E-01	6.266E-01	1.065E+00	1.080E-01	0.170
CE-139		165.85	*	-3.480E-02	3.621E-02	5.665E-02	2.903E-03	-0.614
BA-140		162.64		1.557E-01	8.617E-01	1.400E+00	8.376E-02	0.111
		304.84		-2.460E+00	1.493E+00	1.997E+00	5.444E-01	-1.232
		423.70		1.785E-02	2.062E+00	3.343E+00	1.063E+00	0.005
		537.32	*	-4.073E-02	2.519E-01	4.142E-01	1.354E-01	-0.098
LA-140	+	328.77		8.233E-01	6.166E-01	5.722E-01	3.661E-02	1.439
		432.53		-1.402E-01	2.233E+00	3.599E+00	2.357E-01	-0.039
		487.03		6.786E-03	1.463E-01	2.461E-01	1.731E-02	0.028
		751.79		-5.384E-01	1.868E+00	2.959E+00	2.790E-01	-0.182
		815.85		6.105E-02	3.194E-01	5.421E-01	5.542E-02	0.113
		867.82		-3.125E-01	1.779E+00	2.485E+00	2.576E-01	-0.126
		919.63		-2.718E+00	3.241E+00	4.047E+00	4.810E-01	-0.672
		925.24		2.701E-01	1.156E+00	1.949E+00	2.048E-01	0.139
		1596.49	*	-9.080E-02	9.594E-02	1.374E-01	8.769E-03	-0.661
CE-141		145.44	*	3.839E-02	8.410E-02	1.244E-01	7.188E-03	0.309
CE-143		57.37		5.923E-04	8.410E-02	Half-Life too short		
		231.56		-9.313E-04	8.410E-02	Half-Life too short		
		293.26	*	4.035E-04	8.410E-02	Half-Life too short		
	+	350.59		1.326E-02	8.410E-02	Half-Life too short		
		490.36		1.823E-03	8.410E-02	Half-Life too short		
		664.57		6.128E-03	8.410E-02	Half-Life too short		
		721.93		-1.152E-04	8.410E-02	Half-Life too short		
CE-144		80.11		-1.344E+00	2.304E+00	3.834E+00	3.143E-01	-0.350
		133.54	*	-1.787E-02	2.389E-01	3.938E-01	5.593E-02	-0.045
PM-144		476.78		6.861E-02	7.603E-02	1.292E-01	9.470E-03	0.531
		618.01		-1.137E-02	3.917E-02	5.828E-02	4.338E-03	-0.195
		696.49	*	3.135E-02	3.739E-02	6.455E-02	5.053E-03	0.486
		778.57		-6.510E-01	2.643E+00	4.187E+00	3.696E-01	-0.155
PR-144		696.49	*	2.123E+00	2.532E+00	4.371E+00	3.421E-01	0.486
		1489.15		-8.821E+00	1.164E+01	1.689E+01	1.115E+00	-0.522
PM-146		453.90	*	1.066E-02	5.171E-02	8.441E-02	7.453E-03	0.126
		633.02		3.245E-01	1.491E+00	2.483E+00	9.206E-01	0.131
		735.90		-4.607E-02	1.724E-01	2.413E-01	6.878E-02	-0.191
		747.13		-3.038E-02	1.025E-01	1.622E-01	2.259E-02	-0.187
ND-147		91.11		9.719E-01	5.384E-01	6.414E-01	5.927E-02	1.515
		319.41		-9.489E-01	3.558E+00	5.804E+00	3.299E-01	-0.163

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		439.89		-5.607E-01	6.077E+00	9.758E+00	5.866E-01	-0.057
		531.02	*	-2.535E-01	5.390E-01	8.674E-01	1.205E-01	-0.292
PM-149		285.90	*	-2.291E+01	6.647E+01	1.087E+02	1.533E+01	-0.211
EU-152		121.78		1.596E-02	8.665E-02	1.451E-01	1.140E-02	0.110
		244.69		5.297E-01	3.888E-01	6.198E-01	3.403E-02	0.855
		344.27	*	4.086E-02	1.419E-01	1.818E-01	1.173E-02	0.225
		443.98		7.928E-01	1.127E+00	1.897E+00	1.145E-01	0.418
		778.89		-1.801E-01	3.147E-01	4.852E-01	4.284E-02	-0.371
		867.32		-2.744E-01	1.145E+00	1.588E+00	1.582E-01	-0.173
		964.01		3.352E-01	3.799E-01	5.820E-01	5.540E-02	0.576
		1085.78		5.322E-01	4.602E-01	8.189E-01	6.123E-02	0.650
		1112.02		1.949E-01	3.969E-01	5.844E-01	4.066E-02	0.334
		1407.95		2.991E-02	2.126E-01	3.557E-01	2.387E-02	0.084
GD-153		69.67		6.851E-03	2.136E+00	3.020E+00	2.253E-01	0.002
		83.37		1.755E+01	2.405E+01	2.807E+01	2.382E+00	0.625
		97.43	*	-2.967E-02	1.019E-01	1.487E-01	1.163E-02	-0.200
		103.18		-5.679E-02	1.252E-01	2.063E-01	1.510E-02	-0.275
EU-154		123.07		3.934E-02	6.111E-02	1.039E-01	9.954E-03	0.378
		247.94		-1.735E-01	4.444E-01	6.331E-01	5.929E-02	-0.274
		591.81		2.143E-02	7.211E-01	1.107E+00	1.166E-01	0.019
		723.30		1.804E-01	2.105E-01	3.201E-01	2.913E-02	0.564
		756.87		4.692E-01	9.040E-01	1.518E+00	1.811E-01	0.309
		873.19		1.356E-01	3.667E-01	5.913E-01	7.853E-02	0.229
		996.32		-4.805E-01	4.478E-01	6.586E-01	1.184E-01	-0.730
		1004.76		1.585E-01	2.666E-01	4.561E-01	5.406E-02	0.347
		1274.45	*	2.521E-02	1.462E-01	2.465E-01	2.390E-02	0.102
EU-155		48.70		2.764E-01	2.708E+00	3.928E+00	2.650E-01	0.070
		60.01		-2.313E+00	6.034E+00	8.356E+00	5.874E-01	-0.277
	+	86.54		3.355E-01	1.491E-01	2.267E-01	2.012E-02	1.480
		105.31	*	6.982E-02	1.279E-01	2.183E-01	1.589E-02	0.320
TB-160	+	86.79		8.853E-01	3.932E-01	5.975E-01	5.268E-02	1.482
		197.04		-5.372E-02	7.332E-01	1.135E+00	5.981E-02	-0.047
		215.65		-3.521E-01	8.537E-01	1.343E+00	7.202E-02	-0.262
		298.57		2.982E-01	1.495E-01	2.413E-01	1.363E-02	1.236
		879.36	*	-1.881E-02	1.598E-01	2.633E-01	2.665E-02	-0.071
		962.29		3.436E-01	6.462E-01	9.632E-01	9.193E-02	0.357
		966.15		8.288E-01	3.149E-01	5.253E-01	4.984E-02	1.578
		1177.93		-2.354E-01	4.070E-01	6.267E-01	3.553E-02	-0.376
		1271.85		4.350E-01	8.289E-01	1.436E+00	9.091E-02	0.303
HO-166M		80.57		-3.883E-01	3.410E-01	4.829E-01	3.977E-02	-0.804
		184.41		1.910E-01	5.139E-02	8.474E-02	4.413E-03	2.254
		280.46		-7.045E-02	8.903E-02	1.423E-01	7.981E-03	-0.495
		410.95		1.372E-01	2.750E-01	4.598E-01	2.671E-02	0.298
		711.68	*	-1.554E-02	6.831E-02	1.093E-01	8.753E-03	-0.142
		752.31		1.181E-02	3.177E-01	5.164E-01	4.389E-02	0.023
		810.29		-5.562E-02	6.489E-02	1.011E-01	9.327E-03	-0.550
TM-171		51.35		-4.786E+01	3.686E+01	4.869E+01	3.359E+00	-0.983
		52.39		1.309E+01	1.716E+01	2.739E+01	1.897E+00	0.478
		59.40		1.550E+01	3.191E+01	4.641E+01	3.254E+00	0.334

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		66.72	*	-1.456E+01	3.592E+01	4.971E+01	3.631E+00	-0.293
LU-176	+	88.36		6.610E-01	2.936E-01	4.669E-01	4.149E-02	1.416
		201.83		-6.027E-02	3.584E-02	5.320E-02	2.817E-03	-1.133
		306.84	*	-1.329E-02	2.618E-02	4.219E-02	2.390E-03	-0.315
		401.10		-2.502E+00	7.858E+00	1.228E+01	7.046E-01	-0.204
LU-177		112.95		3.622E-01	1.722E+00	2.866E+00	1.900E-01	0.126
		208.36	*	9.555E-01	1.175E+00	1.953E+00	1.041E-01	0.489
LU-177M		52.97		2.246E+00	1.761E+00	2.865E+00	1.988E-01	0.784
		54.07		3.979E-01	9.479E-01	1.492E+00	1.038E-01	0.267
		61.30		6.542E-01	1.804E+00	2.618E+00	1.853E-01	0.250
		121.62		5.710E-02	4.416E-01	7.379E-01	4.520E-02	0.077
		147.16		3.236E-01	8.315E-01	1.227E+00	6.747E-02	0.264
		171.86		1.271E-01	5.852E-01	9.624E-01	4.953E-02	0.132
		218.09		-4.261E-01	9.886E-01	1.552E+00	8.343E-02	-0.275
		268.79		1.549E+00	9.249E-01	1.650E+00	9.201E-02	0.938
		319.02		-4.926E-02	2.950E-01	4.838E-01	2.748E-02	-0.102
		367.43		3.407E-01	9.934E-01	1.660E+00	9.455E-02	0.205
		413.65	*	-1.548E-01	2.004E-01	3.093E-01	1.802E-02	-0.501
HF-181		56.28		-9.393E-01	1.026E+00	1.580E+00	1.103E-01	-0.594
		57.53		5.147E-01	5.407E-01	9.005E-01	6.294E-02	0.572
		65.20		9.639E-01	1.190E+00	1.751E+00	1.267E-01	0.550
		133.02		-7.455E-02	7.777E-02	1.235E-01	7.177E-03	-0.604
		136.25		-5.470E-01	5.274E-01	8.320E-01	4.771E-02	-0.658
		345.85		-1.163E-01	2.897E-01	3.454E-01	1.968E-02	-0.337
		482.03	*	5.384E-03	4.772E-02	8.063E-02	5.074E-03	0.067
W-181		56.28		-3.722E-01	4.072E-01	6.273E-01	4.378E-02	-0.593
		57.53		2.045E-01	2.148E-01	3.577E-01	2.501E-02	0.572
		65.20	*	3.799E-01	4.690E-01	6.903E-01	4.992E-02	0.550
TA-182		67.75		-2.020E-01	1.467E-01	1.916E-01	1.409E-02	-1.054
		100.10		9.843E-02	2.056E-01	3.511E-01	2.660E-02	0.280
		152.43		8.108E-02	4.012E-01	6.639E-01	3.579E-02	0.122
		222.10		-4.105E-02	4.004E-01	6.383E-01	3.443E-02	-0.064
		1001.68		2.265E+00	2.615E+00	4.463E+00	3.996E-01	0.508
	+	1121.28		5.079E-01	2.909E-01	3.368E-01	2.279E-02	1.508
		1189.05		-9.581E-02	3.515E-01	5.562E-01	3.196E-02	-0.172
		1221.42	*	8.023E-02	2.294E-01	3.920E-01	2.342E-02	0.205
		1230.97		-2.333E-01	5.456E-01	8.834E-01	5.338E-02	-0.264
RE-183		57.98		1.593E-01	2.233E-01	3.521E-01	2.463E-02	0.452
		59.32		6.792E-02	1.299E-01	1.893E-01	1.327E-02	0.359
		67.20		-1.554E-01	2.542E-01	3.476E-01	2.547E-02	-0.447
		162.32	*	3.182E-02	1.334E-01	2.172E-01	1.128E-02	0.146
		208.81		1.618E+00	1.201E+00	2.035E+00	1.085E-01	0.795
		291.72		2.537E-01	1.140E+00	1.674E+00	9.435E-02	0.152
RE-184		57.98		5.915E-01	8.292E-01	1.307E+00	9.144E-02	0.452
		59.32		2.520E-01	4.819E-01	7.023E-01	4.923E-02	0.359
		67.20		-5.768E-01	9.435E-01	1.290E+00	9.454E-02	-0.447
		161.27		-6.049E-02	4.316E-01	7.018E-01	3.659E-02	-0.086
		216.55		-2.703E-01	3.075E-01	4.715E-01	2.531E-02	-0.573
		252.85	*	-1.115E-01	2.588E-01	4.261E-01	2.353E-02	-0.262

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		318.01		-6.967E-02	5.143E-01	8.450E-01	4.799E-02	-0.082
		792.07		-4.692E-01	1.295E+00	2.037E+00	1.832E-01	-0.230
	+	903.28		1.512E+00	1.295E+00	1.934E+00	1.994E-01	0.782
		920.93		-2.215E-01	5.653E-01	7.588E-01	7.660E-02	-0.292
OS-185		59.72		4.850E-02	3.489E-01	4.979E-01	3.495E-02	0.097
		61.14		-8.916E-02	2.009E-01	2.791E-01	1.974E-02	-0.319
		69.30		1.470E-01	3.708E-01	5.349E-01	3.978E-02	0.275
		592.07		5.256E-01	2.805E+00	4.489E+00	3.141E-01	0.117
		646.12	*	-2.720E-03	4.622E-02	7.554E-02	5.535E-03	-0.036
		717.42		-1.005E+00	1.004E+00	1.500E+00	1.211E-01	-0.670
		874.81		1.946E-01	6.780E-01	1.151E+00	1.158E-01	0.169
		880.27		-3.138E-01	8.934E-01	1.444E+00	1.463E-01	-0.217
RE-188		155.03	*	1.459E-01	2.024E-01	3.414E-01	1.822E-02	0.427
		477.96		2.459E+00	3.552E+00	5.956E+00	3.732E-01	0.413
		633.10		-2.410E-01	3.030E+00	4.953E+00	3.590E-01	-0.049
W-188	+	63.58		1.093E+02	8.547E+01	1.086E+02	7.779E+00	1.007
		227.08		1.167E+01	1.447E+01	2.406E+01	1.303E+00	0.485
		290.67	*	-7.506E-01	8.950E+00	1.287E+01	7.247E-01	-0.058
IR-192	+	295.96		1.139E+00	2.202E-01	3.136E-01	1.800E-02	3.633
		308.46		-3.741E-02	9.944E-02	1.614E-01	9.252E-03	-0.232
		316.51	*	1.788E-02	3.889E-02	6.588E-02	3.760E-03	0.271
		468.07		-6.338E-02	8.038E-02	1.225E-01	8.619E-03	-0.517
		604.41		1.252E-01	6.306E-01	9.092E-01	1.096E-01	0.138
		612.46		7.608E+00	1.381E+00	2.357E+00	2.034E-01	3.228
AU-195		65.12		2.158E-01	2.192E-01	3.249E-01	2.349E-02	0.664
		66.83		-4.821E-02	1.183E-01	1.637E-01	1.196E-02	-0.294
	+	75.70		1.209E+00	3.054E-01	5.213E-01	4.092E-02	2.319
		98.88	*	-1.514E-02	2.683E-01	4.353E-01	3.346E-02	-0.035
		129.76		6.051E+00	3.471E+00	6.088E+00	3.586E-01	0.994
TL-200		367.94	*	7.090E-05	3.471E+00	Half-Life too short		
		579.30		2.555E-03	3.471E+00	Half-Life too short		
		828.27		-6.187E-04	3.471E+00	Half-Life too short		
		1205.75		6.579E-04	3.471E+00	Half-Life too short		
TL-201		68.90		7.224E-02	4.461E+00	6.314E+00	4.682E-01	0.011
		70.82		9.959E-01	2.605E+00	3.747E+00	2.820E-01	0.266
		80.30		-2.946E+00	4.032E+00	6.670E+00	5.479E-01	-0.442
		135.34		-1.523E+01	2.186E+01	3.504E+01	2.017E+00	-0.435
		167.43	*	-4.608E+00	6.308E+00	9.966E+00	5.109E-01	-0.462
TL-202		68.90		8.144E-03	5.029E-01	7.119E-01	5.279E-02	0.011
		70.82		1.120E-01	2.929E-01	4.213E-01	3.170E-02	0.266
		80.30		-3.313E-01	4.535E-01	7.502E-01	6.162E-02	-0.442
		439.56	*	-5.302E-03	7.262E-02	1.168E-01	7.014E-03	-0.045
HG-203		70.83		5.215E-01	1.343E+00	1.931E+00	2.498E-01	0.270
		72.87		1.187E+00	7.349E-01	1.207E+00	1.520E-01	0.983
		82.60		2.375E-01	1.595E+00	2.045E+00	2.784E-01	0.116
		279.20	*	1.188E-03	4.209E-02	7.036E-02	4.204E-03	0.017
BI-207		72.80		3.166E-01	2.156E-01	3.575E-01	2.735E-02	0.885
	+	74.97		6.740E-01	1.702E-01	2.593E-01	2.021E-02	2.600
		84.90		2.382E-01	2.816E-01	3.758E-01	3.243E-02	0.634

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		569.67		-6.028E-03	3.487E-02	5.586E-02	3.831E-03	-0.108
		1063.62	*	2.465E-02	5.909E-02	9.998E-02	7.893E-03	0.246
		1770.23		-7.469E-01	7.970E-01	1.205E+00	7.035E-02	-0.620
TL-207		81.07		-3.782E-01	2.748E-01	3.837E-01	3.177E-02	-0.986
		83.78		1.944E-01	2.063E-01	2.442E-01	2.081E-02	0.796
		94.90		8.076E-01	3.099E-01	5.036E-01	4.070E-02	1.604
		122.32		1.386E-01	2.093E+00	3.487E+00	2.426E-01	0.040
	+	144.24		9.153E-01	1.088E+00	1.416E+00	9.967E-02	0.647
		154.21		5.733E-01	4.794E-01	8.211E-01	5.460E-02	0.698
		269.46		4.235E-01	2.222E-01	3.987E-01	2.332E-02	1.062
		323.87	*	1.442E-01	8.252E-01	1.198E+00	1.974E-01	0.120
	+	338.28		6.111E+00	1.993E+00	2.668E+00	2.795E-01	2.290
		445.03		1.987E+00	2.653E+00	4.472E+00	4.655E-01	0.444
PO-209		260.50		-4.374E+00	1.094E+01	1.801E+01	9.992E-01	-0.243
		262.80		-1.564E+01	2.989E+01	4.883E+01	2.713E+00	-0.320
		896.60	*	4.259E+00	9.164E+00	1.373E+01	1.421E+00	0.310
PB-211		404.84	*	4.275E-02	1.058E+00	1.724E+00	1.075E+00	0.025
		427.08		1.689E+00	2.646E+00	4.101E+00	2.536E+00	0.412
		831.96		-6.642E-01	1.392E+00	2.135E+00	1.341E+00	-0.311
BI-212	+	727.18	*	1.404E+00	4.884E-01	7.009E-01	6.758E-02	2.004
		785.46		2.028E+00	2.121E+00	3.646E+00	3.249E-01	0.556
		1620.62		2.951E-01	1.412E+00	2.362E+00	1.492E-01	0.125
BI-214	+	609.31	*	1.083E+00	1.964E-01	2.819E-01	2.479E-02	3.844
		768.36		2.027E+00	9.296E-01	1.666E+00	1.756E-01	1.217
		934.06		1.722E-01	1.259E+00	2.105E+00	2.467E-01	0.082
	+	1120.29		1.083E+00	6.244E-01	7.363E-01	6.982E-02	1.471
		1238.11		1.058E+00	1.012E+00	1.795E+00	1.501E-01	0.589
	+	1377.67		2.695E+00	1.564E+00	2.176E+00	2.011E-01	1.239
		1764.49		1.338E+00	3.650E-01	7.628E-01	4.469E-02	1.753
PO-215		81.07		-3.782E-01	2.748E-01	3.837E-01	3.177E-02	-0.986
		83.78		1.944E-01	2.063E-01	2.442E-01	2.081E-02	0.796
		94.90		8.076E-01	3.099E-01	5.036E-01	4.070E-02	1.604
		122.32		1.386E-01	2.093E+00	3.487E+00	2.426E-01	0.040
	+	144.24		9.153E-01	1.088E+00	1.416E+00	9.967E-02	0.647
		154.21		5.733E-01	4.794E-01	8.211E-01	5.460E-02	0.698
		269.46		4.235E-01	2.222E-01	3.987E-01	2.332E-02	1.062
		323.87	*	1.442E-01	8.252E-01	1.198E+00	1.974E-01	0.120
	+	338.28		6.111E+00	1.993E+00	2.668E+00	2.795E-01	2.290
		445.03		1.987E+00	2.653E+00	4.472E+00	4.655E-01	0.444
RN-219		271.23		5.581E-01	2.875E-01	5.138E-01	4.085E-02	1.086
		401.81	*	-1.486E-01	4.849E-01	7.575E-01	1.029E-01	-0.196
RN-220		549.76	*	1.405E+01	2.878E+01	4.934E+01	3.322E+00	0.285
RA-223		81.07		-3.782E-01	2.748E-01	3.837E-01	3.177E-02	-0.986
		83.78		1.944E-01	2.063E-01	2.442E-01	2.081E-02	0.796
		94.90		8.076E-01	3.099E-01	5.036E-01	4.070E-02	1.604
		122.32		1.386E-01	2.093E+00	3.487E+00	2.426E-01	0.040
	+	144.24		9.153E-01	1.088E+00	1.416E+00	9.967E-02	0.647
		154.21		5.733E-01	4.794E-01	8.211E-01	5.460E-02	0.698
		269.46		4.235E-01	2.222E-01	3.987E-01	2.332E-02	1.062

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		323.87	*	1.442E-01	8.252E-01	1.198E+00	1.974E-01	0.120
	+	338.28		6.111E+00	1.993E+00	2.668E+00	2.795E-01	2.290
		445.03		1.987E+00	2.653E+00	4.472E+00	4.655E-01	0.444
RA-226	+	609.31	*	1.083E+00	1.964E-01	2.819E-01	2.479E-02	3.844
		768.36		2.027E+00	9.296E-01	1.666E+00	1.756E-01	1.217
		934.06		1.722E-01	1.259E+00	2.105E+00	2.467E-01	0.082
	+	1120.29		1.083E+00	6.244E-01	7.363E-01	6.982E-02	1.471
		1238.11		1.058E+00	1.012E+00	1.795E+00	1.501E-01	0.589
	+	1377.67		2.695E+00	1.564E+00	2.176E+00	2.011E-01	1.239
		1764.49		1.338E+00	3.650E-01	7.628E-01	4.469E-02	1.753
AC-227		79.80		-5.448E-01	1.809E+00	3.036E+00	6.475E-01	-0.179
		236.00		1.096E+00	3.574E-01	5.549E-01	5.697E-02	1.975
		256.20	*	1.930E-01	4.410E-01	7.533E-01	1.043E-01	0.256
		286.10		-6.039E-01	1.692E+00	2.768E+00	3.175E-01	-0.218
		299.80		3.395E+00	2.013E+00	3.034E+00	4.925E-01	1.119
		304.40		-4.579E+00	2.298E+00	3.187E+00	5.497E-01	-1.437
		334.20		-7.567E-01	4.650E+00	4.328E+00	7.921E-01	-0.175
TH-227		79.80		-5.448E-01	1.809E+00	3.036E+00	6.559E-01	-0.179
	+	94.00		8.310E+00	4.745E+00	5.184E+00	1.120E+00	1.603
		236.00		1.096E+00	3.528E-01	5.549E-01	4.906E-02	1.975
		256.20	*	1.930E-01	4.414E-01	7.533E-01	1.266E-01	0.256
		286.10		-6.039E-01	1.796E+00	2.768E+00	2.772E+00	-0.218
		299.80		3.395E+00	2.013E+00	3.034E+00	4.925E-01	1.119
		304.40		-4.579E+00	2.298E+00	3.187E+00	5.497E-01	-1.437
		334.20		-7.567E-01	4.650E+00	4.328E+00	7.921E-01	-0.175
TH-229		85.43		4.540E-01	2.640E-01	3.943E-01	3.423E-02	1.151
	+	88.47		3.805E-01	1.690E-01	2.676E-01	2.374E-02	1.422
		100.00		1.148E-01	2.156E-01	3.688E-01	2.798E-02	0.311
		193.63	*	1.049E-02	6.400E-01	9.569E-01	5.028E-02	0.011
		210.97		1.537E+00	9.345E-01	1.602E+00	8.554E-02	0.960
TH-230	+	609.31	*	1.083E+00	1.964E-01	2.819E-01	2.479E-02	3.844
		768.36		2.027E+00	9.296E-01	1.666E+00	1.756E-01	1.217
		934.06		1.722E-01	1.259E+00	2.105E+00	2.467E-01	0.082
	+	1120.29		1.083E+00	6.243E-01	7.363E-01	6.982E-02	1.471
		1238.11		1.058E+00	1.012E+00	1.795E+00	1.501E-01	0.589
	+	1377.67		2.695E+00	1.564E+00	2.176E+00	2.011E-01	1.239
		1764.49		1.338E+00	3.650E-01	7.628E-01	4.468E-02	1.753
PA-231		283.67	*	-1.577E-01	1.602E+00	2.657E+00	3.642E-01	-0.059
		301.29		1.381E+00	7.579E-01	1.176E+00	1.219E-01	1.175
TH-231		81.07		-3.782E-01	2.748E-01	3.837E-01	3.177E-02	-0.986
		83.78		1.944E-01	2.063E-01	2.442E-01	2.081E-02	0.796
		94.90		8.076E-01	3.099E-01	5.036E-01	4.070E-02	1.604
		122.32		1.386E-01	2.093E+00	3.487E+00	2.426E-01	0.040
	+	144.24		9.153E-01	1.088E+00	1.416E+00	9.967E-02	0.647
		154.21		5.733E-01	4.794E-01	8.211E-01	5.460E-02	0.698
		269.46		4.235E-01	2.222E-01	3.987E-01	2.332E-02	1.062
		323.87	*	1.442E-01	8.252E-01	1.198E+00	1.974E-01	0.120
	+	338.28		6.111E+00	1.993E+00	2.668E+00	2.795E-01	2.290
		445.03		1.987E+00	2.653E+00	4.472E+00	4.655E-01	0.444

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		8.564E+00	7.009E+00	8.454E+00	7.240E-01	1.013
	+	92.29		6.598E+00	3.529E+00	4.470E+00	3.745E-01	1.476
		95.87	*	-4.013E-01	1.099E+00	1.600E+00	1.277E-01	-0.251
		108.00		-2.124E-01	1.933E+00	3.220E+00	2.239E-01	-0.066
PA-233	+	75.28		1.967E+01	5.560E+00	7.906E+00	1.179E+00	2.488
	+	86.59		5.456E+00	2.792E+00	3.686E+00	9.906E-01	1.480
		300.12		8.955E-01	5.511E-01	8.390E-01	1.122E-01	1.067
		311.98	*	-1.489E-02	6.858E-02	1.123E-01	6.779E-03	-0.133
		340.50		2.977E+00	1.134E+00	1.532E+00	3.514E-01	1.944
		398.62		-3.448E-01	2.385E+00	3.847E+00	9.939E-01	-0.090
		415.76		-2.910E-01	1.811E+00	2.906E+00	5.987E-01	-0.100
PA-234	+	63.00		3.213E+00	2.546E+00	3.260E+00	4.802E-01	0.986
		94.67		1.048E+00	2.546E-01	3.939E-01	4.748E-02	2.660
		98.44		-3.780E-02	1.107E-01	1.743E-01	9.699E-02	-0.217
		99.86		2.926E-01	5.482E-01	9.379E-01	7.126E-02	0.312
		111.00		-3.424E-02	2.290E-01	3.673E-01	3.980E-02	-0.093
		131.20		-1.766E-02	1.302E-01	2.144E-01	1.255E-02	-0.082
		152.70		2.031E-01	3.900E-01	6.513E-01	1.020E-01	0.312
	+	186.00		9.481E+00	3.997E+00	3.277E+00	9.979E-01	2.893
		226.40		3.478E-01	4.544E-01	7.526E-01	8.558E-02	0.462
		227.20		3.994E-01	4.952E-01	8.234E-01	4.460E-02	0.485
		248.90		-4.697E-01	9.855E-01	1.458E+00	3.122E-01	-0.322
		293.70		5.627E+00	1.367E+00	1.887E+00	3.025E-01	2.981
		369.80		-7.219E-01	9.645E-01	1.488E+00	3.094E-01	-0.485
		568.70		-6.747E-01	1.144E+00	1.781E+00	1.220E-01	-0.379
		569.50		-5.355E-02	3.094E-01	4.957E-01	3.399E-02	-0.108
		574.00		-1.657E-01	1.712E+00	2.687E+00	1.850E-01	-0.062
		699.00		-4.339E-01	8.264E-01	1.291E+00	2.420E-01	-0.336
		706.10		2.639E-01	1.241E+00	2.042E+00	9.081E-01	0.129
		733.00		3.084E-01	4.257E-01	6.382E-01	1.408E-01	0.483
		742.81		1.497E+00	1.754E+00	2.526E+00	1.697E+00	0.593
		796.30		1.531E+00	1.247E+00	2.058E+00	5.597E-01	0.744
		805.60		6.490E-01	1.269E+00	2.095E+00	6.455E-01	0.310
		819.60		-2.830E-01	1.312E+00	2.150E+00	8.211E-01	-0.132
		826.30		1.489E-01	8.721E-01	1.473E+00	6.613E-01	0.101
		831.60		-5.643E-01	7.099E-01	1.080E+00	3.252E-01	-0.522
		876.40		4.519E-01	1.074E+00	1.667E+00	1.715E+00	0.271
		880.51		-1.439E-01	3.259E-01	5.228E-01	5.299E-02	-0.275
		883.24		1.048E-01	3.274E-01	5.448E-01	3.674E-01	0.192
		899.00		8.316E-01	1.115E+00	1.633E+00	7.198E-01	0.509
		925.00		2.413E-01	1.285E+00	2.159E+00	2.169E-01	0.112
		926.50		2.175E-01	1.973E-01	3.421E-01	8.822E-02	0.636
		946.00	*	-1.353E-01	3.273E-01	5.199E-01	1.004E-01	-0.260
		949.00		2.862E-01	4.827E-01	8.348E-01	8.121E-02	0.343
		980.50		7.918E-01	8.155E-01	1.444E+00	1.340E-01	0.548
		1394.10		-3.711E-01	1.284E+00	2.010E+00	1.304E+00	-0.185
PA-234M		766.41		3.690E+01	3.569E+01	3.892E+01	2.985E+01	0.948
		1001.03	*	6.989E+00	8.372E+00	1.424E+01	1.630E+00	0.491
U-234	+	609.31	*	1.083E+00	1.964E-01	2.819E-01	2.479E-02	3.844

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		768.36		2.027E+00	9.296E-01	1.666E+00	1.756E-01	1.217
		934.06		1.722E-01	1.259E+00	2.105E+00	2.467E-01	0.082
	+	1120.29		1.083E+00	6.243E-01	7.363E-01	6.982E-02	1.471
		1238.11		1.058E+00	1.012E+00	1.795E+00	1.501E-01	0.589
	+	1377.67		2.695E+00	1.564E+00	2.176E+00	2.011E-01	1.239
		1764.49		1.338E+00	3.650E-01	7.628E-01	4.468E-02	1.753
NP-236		94.67		8.000E-01	1.799E-01	2.993E-01	2.427E-02	2.673
		98.44		-2.862E-02	8.221E-02	1.317E-01	1.018E-02	-0.217
		111.00		-2.590E-02	1.732E-01	2.779E-01	1.876E-02	-0.093
		160.31	*	-1.528E-02	9.649E-02	1.568E-01	8.206E-03	-0.097
NP-239		99.55		1.002E-01	1.820E-01	3.116E-01	2.376E-02	0.322
		117.00	*	-9.901E-02	2.221E-01	3.631E-01	2.318E-02	-0.273
		209.75		1.505E+00	9.598E-01	1.639E+00	8.744E-02	0.918
		228.18		1.484E-01	2.577E-01	4.239E-01	2.298E-02	0.350
		277.60		-2.720E-02	1.929E-01	3.200E-01	1.792E-02	-0.085
		334.30		-4.209E-01	2.634E+00	2.454E+00	1.397E-01	-0.172
AM-241		59.54	*	4.738E-02	1.865E-01	2.678E-01	2.081E-02	0.177
CM-243		99.55		1.031E-01	1.872E-01	3.206E-01	2.445E-02	0.322
		103.76	*	1.722E-02	1.158E-01	1.951E-01	1.419E-02	0.088
		117.00		-1.019E-01	2.284E-01	3.736E-01	2.385E-02	-0.273
		209.75		1.483E+00	9.461E-01	1.615E+00	8.619E-02	0.918
		228.18		1.500E-01	2.603E-01	4.283E-01	2.322E-02	0.350
		277.60		-2.742E-02	1.945E-01	3.226E-01	1.806E-02	-0.085
CM-247		278.00		9.531E-02	7.882E-01	1.324E+00	7.416E-02	0.072
		287.40		1.633E+00	1.380E+00	2.375E+00	1.336E-01	0.688
		402.60	*	-1.441E-02	4.340E-02	6.772E-02	3.894E-03	-0.213
CF-249		252.85		-4.205E-01	9.765E-01	1.607E+00	8.876E-02	-0.262
		333.44		-3.818E-02	3.448E-01	3.237E-01	1.843E-02	-0.118
		387.95	*	-2.412E-02	4.562E-02	6.926E-02	3.933E-03	-0.348
CF-251		176.60	*	1.433E-02	1.505E-01	2.458E-01	1.271E-02	0.058
		227.00		3.548E-01	4.399E-01	7.315E-01	3.962E-02	0.485
		285.00		-1.100E+00	1.911E+00	3.090E+00	1.736E-01	-0.356

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433014      *
* Acquisition date :  7-JUL-2009 07:05:32 Detector SN#    :                 *
* Detector ID        : GAM22              Sensitivity     : 5.000          *
* Geometry           : CAN                Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.37     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232433014           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 8.0360E+01 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.142E+01	2.851E+00	6.941E-01	0.000E+00
CD-109	2.830E+00	1.232E+00	1.820E+00	0.000E+00
SN-126	2.787E-01	1.213E-01	1.658E-01	0.000E+00
BA-137M	5.185E-01	8.585E-02	5.842E-02	0.000E+00
CS-137	5.481E-01	9.079E-02	6.176E-02	0.000E+00
TL-208	5.398E-01	9.570E-02	5.802E-02	0.000E+00
BI-210	4.520E+00	4.972E+00	5.155E+00	0.000E+00
PB-210	4.520E+00	4.972E+00	5.155E+00	0.000E+00
PO-210	4.520E+00	4.968E+00	5.155E+00	0.000E+00
BI-211	3.257E+00	5.651E-01	3.602E-01	0.000E+00
PB-212	1.659E+00	1.687E-01	9.820E-02	0.000E+00
PO-212	1.659E+00	1.687E-01	9.820E-02	0.000E+00
PB-214	1.133E+00	2.049E-01	1.276E-01	0.000E+00
PO-214	1.133E+00	2.049E-01	1.276E-01	0.000E+00
PO-216	1.659E+00	1.687E-01	9.820E-02	0.000E+00
PO-218	1.133E+00	2.049E-01	1.276E-01	0.000E+00
RA-224	5.145E+00	1.455E+00	1.116E+00	0.000E+00
AC-228	1.604E+00	3.852E-01	2.022E-01	0.000E+00
RA-228	1.604E+00	3.852E-01	2.022E-01	0.000E+00
TH-228	1.659E+00	1.687E-01	9.819E-02	0.000E+00
TH-232	1.604E+00	3.852E-01	2.022E-01	0.000E+00
TH-234	2.756E+00	2.154E+00	2.126E+00	0.000E+00
U-235	2.824E-01	3.316E-01	3.764E-01	0.000E+00
NP-237	8.184E-01	3.928E-01	4.599E-01	0.000E+00
U-238	2.756E+00	2.154E+00	2.126E+00	0.000E+00
AM-243	3.755E-01	9.294E-02	9.932E-02	0.000E+00
ANH-511	8.597E-02	7.431E-02	5.184E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	2.375E-01	3.577E-01	5.969E-01	0.000E+00	NOT IDENT.
NA-22	1.019E-02	5.135E-02	8.711E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.235E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.999E-03	2.943E-02	4.998E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.847E-02	8.895E-02	0.000E+00	FAIL ABUN
SC-46	-7.843E-03	3.979E-02	6.512E-02	0.000E+00	FAIL ABUN
V-48	-1.543E-02	7.384E-02	1.198E-01	0.000E+00	NOT IDENT.
CR-51	-6.041E-02	4.026E-01	6.573E-01	0.000E+00	NOT IDENT.
MN-52	1.577E-01	2.121E-01	3.799E-01	0.000E+00	NOT IDENT.
MN-54	1.699E-02	4.102E-02	7.046E-02	0.000E+00	NOT IDENT.
CO-56	-2.051E-02	4.194E-02	6.737E-02	0.000E+00	NOT IDENT.
CO-57	1.768E-03	2.950E-02	4.855E-02	0.000E+00	NOT IDENT.
CO-58	-2.370E-02	4.262E-02	6.844E-02	0.000E+00	NOT IDENT.
FE-59	-2.522E-02	9.213E-02	1.469E-01	0.000E+00	FAIL ABUN
CO-60	-1.150E-02	3.777E-02	6.074E-02	0.000E+00	NOT IDENT.
ZN-65	3.915E-02	1.162E-01	1.679E-01	0.000E+00	NOT IDENT.
GE-68	2.161E-01	1.410E+00	2.339E+00	0.000E+00	NOT IDENT.
AS-73	9.833E-01	8.903E-01	1.412E+00	0.000E+00	NOT IDENT.
AS-74	-3.605E-02	9.811E-02	1.581E-01	0.000E+00	NOT IDENT.
SE-75	-4.578E-02	4.793E-02	7.604E-02	0.000E+00	NOT IDENT.
BR-77	2.628E+00	8.445E+00	1.336E+01	0.000E+00	FAIL ABUN
SR-82	-3.624E-01	4.271E-01	6.440E-01	0.000E+00	NOT IDENT.
RB-83	2.041E-02	8.091E-02	1.274E-01	0.000E+00	NOT IDENT.
RB-84	2.630E-02	7.619E-02	1.301E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.057E+01	1.836E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.346E-02	9.285E-02	0.000E+00	NOT IDENT.
RB-86	3.981E-01	8.337E-01	1.420E+00	0.000E+00	NOT IDENT.
Y-88	4.019E-02	3.509E-02	6.787E-02	0.000E+00	NOT IDENT.
ZR-88	4.408E-03	3.372E-02	5.515E-02	0.000E+00	NOT IDENT.
Y-91	9.523E+00	2.157E+01	3.617E+01	0.000E+00	NOT IDENT.
NB-94	7.365E-03	3.756E-02	6.206E-02	0.000E+00	NOT IDENT.
NB-95	4.378E-02	5.286E-02	8.979E-02	0.000E+00	NOT IDENT.
NB-95M	1.568E-01	1.701E-01	2.471E-01	0.000E+00	NOT IDENT.
ZR-95	6.103E-02	7.981E-02	1.363E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.478E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.553E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.884E+00	8.598E+00	1.356E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.284E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.230E-02	4.274E-02	6.656E-02	0.000E+00	NOT IDENT.
RH-102	-2.073E-02	3.323E-02	5.095E-02	0.000E+00	NOT IDENT.
RU-103	-3.575E-02	4.336E-02	6.841E-02	0.000E+00	FAIL ABUN
RH-106	1.889E-01	3.510E-01	5.970E-01	0.000E+00	FAIL ABUN
RU-106	1.889E-01	3.505E-01	5.970E-01	0.000E+00	FAIL ABUN
AG-108M	-3.499E-02	3.701E-02	5.591E-02	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	4.476E-02	7.377E-02	0.000E+00	NOT IDENT.
IN-111	-1.433E-01	8.844E-01	1.274E+00	0.000E+00	NOT IDENT.
IN-113M	9.652E-03	4.817E-02	7.914E-02	0.000E+00	NOT IDENT.
SN-113	9.652E-03	4.817E-02	7.914E-02	0.000E+00	NOT IDENT.
IN-114M	1.160E-01	2.243E-01	3.247E-01	0.000E+00	NOT IDENT.
CD-115	-3.041E+00	7.442E+00	1.205E+01	0.000E+00	NOT IDENT.
SN-117M	-2.051E-02	6.184E-02	9.886E-02	0.000E+00	NOT IDENT.
SB-122	7.154E-01	1.496E+00	2.556E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.277E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.079E-02	3.339E-02	5.480E-02	0.000E+00	NOT IDENT.
I-124	4.133E-01	7.239E-01	1.075E+00	0.000E+00	NOT IDENT.
SB-124	2.256E-02	9.082E-02	1.531E-01	0.000E+00	NOT IDENT.
SB-125	9.169E-02	1.071E-01	1.812E-01	0.000E+00	NOT IDENT.
TE-125M	-1.407E+01	1.139E+01	1.723E+01	0.000E+00	NOT IDENT.
I-126	1.018E-01	2.109E-01	3.104E-01	0.000E+00	NOT IDENT.
SB-126	1.474E-01	1.559E-01	2.397E-01	0.000E+00	FAIL ABUN
SB-127	9.130E-01	1.162E+00	2.000E+00	0.000E+00	NOT IDENT.
XE-127	-9.884E-02	5.479E-02	8.002E-02	0.000E+00	NOT IDENT.
I-131	3.267E-02	1.154E-01	1.835E-01	0.000E+00	NOT IDENT.
TE-132	3.448E-01	5.845E-01	9.518E-01	0.000E+00	NOT IDENT.
BA-133	1.643E-02	5.529E-02	7.999E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.146E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.574E-02	5.974E-02	1.028E-01	0.000E+00	NOT IDENT.
CS-135	2.293E-01	1.828E-01	3.184E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.223E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.943E-02	1.121E-01	1.932E-01	0.000E+00	FAIL ABUN
CE-139	-3.480E-02	3.549E-02	5.496E-02	0.000E+00	NOT IDENT.
BA-140	-4.073E-02	2.468E-01	4.052E-01	0.000E+00	NOT IDENT.
LA-140	-9.080E-02	9.402E-02	1.355E-01	0.000E+00	FAIL ABUN
CE-141	3.839E-02	8.242E-02	1.206E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.290E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.787E-02	2.341E-01	3.815E-01	0.000E+00	NOT IDENT.
PM-144	3.135E-02	3.664E-02	6.326E-02	0.000E+00	NOT IDENT.
PR-144	2.123E+00	2.481E+00	4.284E+00	0.000E+00	NOT IDENT.

PM-146	1.066E-02	5.067E-02	8.248E-02	0.000E+00	NOT IDENT.
ND-147	-2.535E-01	5.282E-01	8.485E-01	0.000E+00	NOT IDENT.
PM-149	-2.291E+01	6.514E+01	1.059E+02	0.000E+00	NOT IDENT.
EU-152	4.086E-02	1.390E-01	1.773E-01	0.000E+00	NOT IDENT.
GD-153	-2.967E-02	9.982E-02	1.437E-01	0.000E+00	NOT IDENT.
EU-154	2.521E-02	1.433E-01	2.426E-01	0.000E+00	NOT IDENT.
EU-155	6.982E-02	1.253E-01	2.111E-01	0.000E+00	FAIL ABUN
TB-160	-1.881E-02	1.566E-01	2.585E-01	0.000E+00	FAIL ABUN
HO-166M	-1.554E-02	6.695E-02	1.072E-01	0.000E+00	NOT IDENT.
TM-171	-1.456E+01	3.520E+01	4.792E+01	0.000E+00	NOT IDENT.
LU-176	-1.329E-02	2.566E-02	4.111E-02	0.000E+00	FAIL ABUN
LU-177	9.555E-01	1.151E+00	1.898E+00	0.000E+00	NOT IDENT.
LU-177M	-1.548E-01	1.963E-01	3.020E-01	0.000E+00	NOT IDENT.
HF-181	5.384E-03	4.676E-02	7.882E-02	0.000E+00	NOT IDENT.
W-181	3.799E-01	4.596E-01	6.652E-01	0.000E+00	NOT IDENT.
TA-182	8.023E-02	2.248E-01	3.857E-01	0.000E+00	FAIL ABUN
RE-183	3.182E-02	1.307E-01	2.107E-01	0.000E+00	NOT IDENT.
RE-184	-1.115E-01	2.536E-01	4.146E-01	0.000E+00	FAIL ABUN
OS-185	-2.720E-03	4.530E-02	7.399E-02	0.000E+00	NOT IDENT.
RE-188	1.459E-01	1.984E-01	3.310E-01	0.000E+00	NOT IDENT.
W-188	-7.506E-01	8.771E+00	1.253E+01	0.000E+00	FAIL ABUN
IR-192	1.788E-02	3.811E-02	6.421E-02	0.000E+00	FAIL ABUN
AU-195	-1.514E-02	2.630E-01	4.207E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.116E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-4.608E+00	6.182E+00	9.670E+00	0.000E+00	NOT IDENT.
TL-202	-5.302E-03	7.117E-02	1.141E-01	0.000E+00	NOT IDENT.
HG-203	1.188E-03	4.124E-02	6.852E-02	0.000E+00	NOT IDENT.
BI-207	2.465E-02	5.790E-02	9.828E-02	0.000E+00	FAIL ABUN
TL-207	1.442E-01	8.087E-01	1.168E+00	0.000E+00	FAIL ABUN
PO-209	4.259E+00	8.981E+00	1.348E+01	0.000E+00	NOT IDENT.
PB-211	4.275E-02	1.037E+00	1.684E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.786E-01	6.871E-01	0.000E+00	FAIL ABUN
BI-214	0.000E+00	1.925E-01	2.760E-01	0.000E+00	FAIL ABUN
PO-215	1.442E-01	8.087E-01	1.168E+00	0.000E+00	FAIL ABUN
RN-219	-1.486E-01	4.752E-01	7.396E-01	0.000E+00	NOT IDENT.
RN-220	1.405E+01	2.821E+01	4.828E+01	0.000E+00	NOT IDENT.
RA-223	1.442E-01	8.087E-01	1.168E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	1.925E-01	2.760E-01	0.000E+00	FAIL ABUN
AC-227	1.930E-01	4.321E-01	7.331E-01	0.000E+00	NOT IDENT.
TH-227	1.930E-01	4.325E-01	7.331E-01	0.000E+00	FAIL ABUN
TH-229	1.049E-02	6.272E-01	9.294E-01	0.000E+00	FAIL ABUN
TH-230	0.000E+00	1.925E-01	2.760E-01	0.000E+00	FAIL ABUN
PA-231	-1.577E-01	1.570E+00	2.588E+00	0.000E+00	NOT IDENT.
TH-231	1.442E-01	8.087E-01	1.168E+00	0.000E+00	FAIL ABUN
U-231	-4.013E-01	1.077E+00	1.546E+00	0.000E+00	FAIL ABUN
PA-233	-1.489E-02	6.721E-02	1.094E-01	0.000E+00	FAIL ABUN
PA-234	-1.353E-01	3.207E-01	5.107E-01	0.000E+00	FAIL ABUN
PA-234M	6.989E+00	8.204E+00	1.400E+01	0.000E+00	NOT IDENT.
U-234	0.000E+00	1.925E-01	2.760E-01	0.000E+00	FAIL ABUN
NP-236	-1.528E-02	9.456E-02	1.521E-01	0.000E+00	NOT IDENT.
NP-239	-9.901E-02	2.176E-01	3.515E-01	0.000E+00	NOT IDENT.
AM-241	4.738E-02	1.827E-01	2.579E-01	0.000E+00	NOT IDENT.
CM-243	1.722E-02	1.134E-01	1.887E-01	0.000E+00	NOT IDENT.
CM-247	-1.441E-02	4.253E-02	6.611E-02	0.000E+00	NOT IDENT.
CF-249	-2.412E-02	4.471E-02	6.760E-02	0.000E+00	NOT IDENT.
CF-251	1.433E-02	1.475E-01	2.386E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:06:01.76

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433014.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:05:32.
Sample ID         : G232433014           Sample quantity  : 8.03600E+01 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.37  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1422	10.67*	1.981E+00	3.142E+01	3.142E+01	9.26
CD-109	88.03	175	3.72*	7.938E+00	2.772E+00	2.830E+00	44.42
SN-126	64.28	108	9.60	4.805E+00	1.091E+00	1.091E+00	79.17
	86.94	175	8.90	7.938E+00	1.159E+00	1.159E+00	60.08
	87.57	175	37.00*	7.938E+00	2.787E-01	2.787E-01	44.42
BA-137M	661.65	373	89.98*	3.738E+00	5.180E-01	5.185E-01	16.90
CS-137	661.65	373	85.12*	3.738E+00	5.476E-01	5.481E-01	16.90
TL-208	277.35	------	6.80	6.634E+00	------ Line Not Found		------
	510.84	83	21.60	4.530E+00	3.980E-01	3.980E-01	88.59
	583.14	401	84.20*	4.118E+00	5.398E-01	5.398E-01	18.09
	860.37	------	12.46	3.015E+00	------ Line Not Found		------
BI-210	46.50	64	4.05*	1.646E+00	4.514E+00	4.520E+00	112.24
PB-210	46.50	64	4.05*	1.646E+00	4.514E+00	4.520E+00	112.24
PO-210	46.50	64	4.05*	1.646E+00	4.514E+00	4.520E+00	112.18
BI-211	72.87	------	1.27	6.380E+00	------ Line Not Found		------
	351.07	521	12.94*	5.777E+00	3.257E+00	3.257E+00	17.70
PB-212	74.81	353	10.70	6.656E+00	2.316E+00	2.316E+00	26.93
	77.11	591	18.00	6.953E+00	2.205E+00	2.205E+00	17.17
	87.30	175	8.00	7.938E+00	1.289E+00	1.289E+00	45.53
	238.63	1139	44.60*	7.192E+00	1.659E+00	1.659E+00	10.37
	300.09	------	3.41	6.345E+00	------ Line Not Found		------
PO-212	74.81	353	10.70	6.656E+00	2.316E+00	2.316E+00	26.93
	77.11	591	18.00	6.953E+00	2.205E+00	2.205E+00	17.17
	87.30	175	8.00	7.938E+00	1.289E+00	1.289E+00	45.53
	115.19	------	0.60	8.992E+00	------ Line Not Found		------
	238.63	1139	44.60*	7.192E+00	1.659E+00	1.659E+00	10.37
	300.09	------	3.41	6.345E+00	------ Line Not Found		------
PB-214	74.81	353	6.21	6.656E+00	3.991E+00	3.991E+00	26.32
	77.11	591	10.50	6.953E+00	3.780E+00	3.780E+00	18.79
	87.30	175	4.67	7.938E+00	2.208E+00	2.208E+00	45.08
	241.98	311	7.49	7.146E+00	2.713E+00	2.713E+00	29.40
	295.21	398	19.20	6.404E+00	1.513E+00	1.513E+00	20.29

Sample ID : G232433014 Acquisition date : 7-JUL-2009 07:05:32

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	521	37.20*	5.777E+00	1.133E+00	1.133E+00	18.46
PO-214	74.81	353	6.21	6.656E+00	3.991E+00	3.991E+00	26.32
	77.11	591	10.50	6.953E+00	3.780E+00	3.780E+00	18.79
	87.30	175	4.67	7.938E+00	2.208E+00	2.208E+00	45.08
	241.98	311	7.49	7.146E+00	2.713E+00	2.713E+00	29.40
	295.21	398	19.20	6.404E+00	1.513E+00	1.513E+00	20.29
	351.92	521	37.20*	5.777E+00	1.133E+00	1.133E+00	18.46
PO-216	74.81	353	10.70	6.656E+00	2.316E+00	2.316E+00	26.93
	77.11	591	18.00	6.953E+00	2.205E+00	2.205E+00	17.17
	87.30	175	8.00	7.938E+00	1.289E+00	1.289E+00	45.53
	238.63	1139	44.60*	7.192E+00	1.659E+00	1.659E+00	10.37
	300.09	------	3.41	6.345E+00	------ Line Not Found		------
PO-218	74.81	353	6.21	6.656E+00	3.991E+00	3.991E+00	26.32
	77.11	591	10.50	6.953E+00	3.780E+00	3.780E+00	18.79
	87.30	175	4.67	7.938E+00	2.208E+00	2.208E+00	45.08
	241.98	311	7.49	7.146E+00	2.713E+00	2.713E+00	29.40
	295.21	398	19.20	6.404E+00	1.513E+00	1.513E+00	20.29
	351.92	521	37.20*	5.777E+00	1.133E+00	1.133E+00	18.46
RA-224	240.98	311	3.95*	7.146E+00	5.145E+00	5.145E+00	28.86
AC-228	338.32	211	11.40	5.914E+00	1.463E+00	1.463E+00	51.14
	911.07	273	27.70*	2.869E+00	1.604E+00	1.604E+00	24.50
	969.11	129	16.60	2.723E+00	1.333E+00	1.333E+00	45.58
RA-228	338.32	211	11.40	5.914E+00	1.463E+00	1.463E+00	51.14
	911.07	273	27.70*	2.869E+00	1.604E+00	1.604E+00	24.50
	969.11	129	16.60	2.723E+00	1.333E+00	1.333E+00	45.58
TH-228	84.40	------	1.21	7.701E+00	------ Line Not Found		------
	238.60	1139	44.60*	7.192E+00	1.659E+00	1.659E+00	10.37
	300.10	------	3.41	6.345E+00	------ Line Not Found		------
TH-232	338.32	211	11.40	5.914E+00	1.463E+00	1.463E+00	31.41
	911.07	273	27.70*	2.869E+00	1.604E+00	1.604E+00	24.50
	969.11	129	16.60	2.723E+00	1.333E+00	1.333E+00	45.58
TH-234	63.29	108	3.80*	4.805E+00	2.756E+00	2.756E+00	79.75
	92.38	208	5.41	8.335E+00	2.150E+00	2.150E+00	55.80
U-235	89.95	------	2.70	8.136E+00	------ Line Not Found		------
	93.35	208	4.50	8.335E+00	2.585E+00	2.585E+00	59.77
	105.00	------	2.10	8.820E+00	------ Line Not Found		------
	143.76	56	10.50*	8.854E+00	2.824E-01	2.824E-01	119.80
	163.35	------	4.70	8.532E+00	------ Line Not Found		------
	185.71	329	54.00	8.109E+00	3.512E-01	3.512E-01	29.62
	205.31	------	4.70	7.757E+00	------ Line Not Found		------
NP-237	86.50	175	12.60*	7.938E+00	8.184E-01	8.184E-01	48.98
	95.87	------	2.60	8.481E+00	------ Line Not Found		------
U-238	63.29	108	3.80*	4.805E+00	2.756E+00	2.756E+00	79.75
	92.38	208	5.41	8.335E+00	2.150E+00	2.150E+00	53.49
AM-243	74.67	353	66.00*	6.656E+00	3.755E-01	3.755E-01	25.26
	86.72	175	0.34	7.938E+00	3.069E+01	3.069E+01	44.42
	117.66	------	0.55	9.009E+00	------ Line Not Found		------
	142.18	56	0.13	8.854E+00	2.372E+01	2.372E+01	118.82
ANH-511	511.00	83	100.00*	4.530E+00	8.597E-02	8.597E-02	88.20

Sample ID : G232433014 Acquisition date : 7-JUL-2009 07:05:32

Flag: "*" = Keyline

Sample ID : G232433014 Acquisition date : 7-JUL-2009 07:05:32

Total number of lines in spectrum 26
Number of unidentified lines 1
Number of lines tentatively identified by NID 25 96.15%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.142E+01	3.142E+01	0.291E+01	9.26	
CD-109	464.00D	1.02	2.772E+00	2.830E+00	1.257E+00	44.42	
SN-126	1.00E+05Y	1.00	2.787E-01	2.787E-01	1.238E-01	44.42	
BA-137M	30.17Y	1.00	5.180E-01	5.185E-01	0.876E-01	16.90	
CS-137	30.17Y	1.00	5.476E-01	5.481E-01	0.926E-01	16.90	
TL-208	1.41E+10Y	1.00	5.398E-01	5.398E-01	0.976E-01	18.09	
BI-210	22.26Y	1.00	4.514E+00	4.520E+00	5.073E+00	112.24	
PB-210	22.26Y	1.00	4.514E+00	4.520E+00	5.073E+00	112.24	
PO-210	22.26Y	1.00	4.514E+00	4.520E+00	5.070E+00	112.18	
BI-211	7.04E+08Y	1.00	3.257E+00	3.257E+00	0.577E+00	17.70	
PB-212	1.41E+10Y	1.00	1.659E+00	1.659E+00	0.172E+00	10.37	
PO-212	1.41E+10Y	1.00	1.659E+00	1.659E+00	0.172E+00	10.37	
PB-214	1600.00Y	1.00	1.133E+00	1.133E+00	0.209E+00	18.46	
PO-214	1600.00Y	1.00	1.133E+00	1.133E+00	0.209E+00	18.46	
PO-216	1.41E+10Y	1.00	1.659E+00	1.659E+00	0.172E+00	10.37	
PO-218	1600.00Y	1.00	1.133E+00	1.133E+00	0.209E+00	18.46	
RA-224	1.41E+10Y	1.00	5.145E+00	5.145E+00	1.485E+00	28.86	
AC-228	1.41E+10Y	1.00	1.604E+00	1.604E+00	0.393E+00	24.50	
RA-228	1.41E+10Y	1.00	1.604E+00	1.604E+00	0.393E+00	24.50	
TH-228	1.41E+10Y	1.00	1.659E+00	1.659E+00	0.172E+00	10.37	
TH-232	1.41E+10Y	1.00	1.604E+00	1.604E+00	0.393E+00	24.50	
TH-234	4.47E+09Y	1.00	2.756E+00	2.756E+00	2.198E+00	79.75	
U-235	7.04E+08Y	1.00	2.824E-01	2.824E-01	3.383E-01	119.80	
NP-237	2.14E+06Y	1.00	8.184E-01	8.184E-01	4.008E-01	48.98	
U-238	4.47E+09Y	1.00	2.756E+00	2.756E+00	2.198E+00	79.75	
AM-243	7380.00Y	1.00	3.755E-01	3.755E-01	0.948E-01	25.26	
ANH-511	1.00E+09Y	1.00	8.597E-02	8.597E-02	7.582E-02	88.20	
	Total Activity :		7.995E+01	8.002E+01			

Grand Total Activity : 7.995E+01 8.002E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433014 Acquisition date : 7-JUL-2009 07:05:32

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	329.22	103	261	1.75	657.75	651	17	1.43E-02	74.6	6.01E+00	T
0	609.79	428	139	1.48	1218.93	1212	14	5.94E-02	15.8	3.98E+00	T
0	727.85	123	66	2.45	1455.11	1449	14	1.71E-02	33.4	3.47E+00	T
0	862.27	67	101	1.95	1724.05	1715	20	9.30E-03	77.2	3.01E+00	
0	903.09	34	44	0.88	1805.73	1800	11	4.70E-03	85.0	2.89E+00	T
0	1120.70	84	86	1.71	2241.19	2231	19	1.17E-02	56.9	2.41E+00	T
0	1378.57	49	25	0.71	2757.31	2748	18	6.78E-03	57.3	2.06E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:06:06.83

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433014.CNF;1 *
* Acquisition date  : 7-JUL-2009 07:05:32.  Detector SN#     :             *
* Detector ID       : GAM22                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.37          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433014            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 8.03600E+01 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45.3MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.142E+01	2.909E+00	7.046E-01	4.904E-02	44.601
CD-109	2.830E+00	1.257E+00	1.884E+00	1.683E-01	1.502
SN-126	2.787E-01	1.238E-01	1.716E-01	1.527E-02	1.624
BA-137M	5.185E-01	8.760E-02	5.963E-02	4.424E-03	8.695
CS-137	5.481E-01	9.265E-02	6.303E-02	4.689E-03	8.695
TL-208	5.398E-01	9.765E-02	5.927E-02	4.563E-03	9.108
BI-210	4.520E+00	5.073E+00	5.362E+00	4.054E-01	0.843
PB-210	4.520E+00	5.073E+00	5.362E+00	4.054E-01	0.843
PO-210	4.520E+00	5.070E+00	5.362E+00	3.456E-01	0.843
BI-211	3.257E+00	5.766E-01	3.692E-01	2.342E-02	8.821
PB-212	1.659E+00	1.721E-01	1.010E-01	7.138E-03	16.433
PO-212	1.659E+00	1.721E-01	1.010E-01	7.138E-03	16.433
PB-214	1.133E+00	2.091E-01	1.308E-01	1.074E-02	8.663
PO-214	1.133E+00	2.091E-01	1.308E-01	1.074E-02	8.663
PO-216	1.659E+00	1.721E-01	1.010E-01	7.138E-03	16.433
PO-218	1.133E+00	2.091E-01	1.308E-01	1.074E-02	8.663
RA-224	5.145E+00	1.485E+00	1.147E+00	6.283E-02	4.485
AC-228	1.604E+00	3.930E-01	2.059E-01	2.576E-02	7.791

Sample ID : G232433014 Acquisition date : 7-JUL-2009 07:05:32

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.604E+00	3.930E-01	2.059E-01	2.576E-02	7.791
TH-228	1.659E+00	1.721E-01	1.009E-01	7.138E-03	16.435
TH-232	1.604E+00	3.930E-01	2.059E-01	2.576E-02	7.791
TH-234	2.756E+00	2.198E+00	2.206E+00	3.824E-01	1.249
U-235	2.824E-01	3.383E-01	3.883E-01	6.300E-02	0.727
NP-237	8.184E-01	4.008E-01	4.763E-01	1.068E-01	1.718
U-238	2.756E+00	2.198E+00	2.206E+00	3.824E-01	1.249
AM-243	3.755E-01	9.484E-02	1.030E-01	8.005E-03	3.647
ANH-511	8.597E-02	7.582E-02	5.301E-02	3.437E-03	1.622

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.375E-01		3.650E-01	6.106E-01	4.368E-02	0.389
NA-22	1.019E-02		5.240E-02	8.851E-02	5.632E-03	0.115
NA-24	1.918E-01		1.140E-01	Half-Life too short		
AL-26	2.999E-03		3.004E-02	5.066E-02	2.883E-03	0.059
TI-44	4.068E-01	+	6.986E-02	9.217E-02	7.424E-03	4.414
SC-46	-7.843E-03		4.061E-02	6.632E-02	6.800E-03	-0.118
V-48	-1.543E-02		7.534E-02	1.219E-01	1.126E-02	-0.127
CR-51	-6.041E-02		4.108E-01	6.743E-01	4.286E-02	-0.090
MN-52	1.577E-01		2.165E-01	3.857E-01	2.577E-02	0.409
MN-54	1.699E-02		4.186E-02	7.180E-02	6.849E-03	0.237
CO-56	-2.051E-02		4.280E-02	6.864E-02	6.654E-03	-0.299
CO-57	1.768E-03		3.010E-02	5.015E-02	3.067E-03	0.035
CO-58	-2.370E-02		4.349E-02	6.976E-02	6.453E-03	-0.340
FE-59	-2.522E-02		9.401E-02	1.494E-01	1.201E-02	-0.169
CO-60	-1.150E-02		3.854E-02	6.169E-02	4.172E-03	-0.186
ZN-65	3.915E-02		1.186E-01	1.707E-01	1.177E-02	0.229
GE-68	2.161E-01		1.439E+00	2.380E+00	1.818E-01	0.091
AS-73	9.833E-01		9.085E-01	1.468E+00	1.020E-01	0.670
AS-74	-3.605E-02		1.001E-01	1.614E-01	1.134E-02	-0.223
SE-75	-4.578E-02		4.890E-02	7.812E-02	4.394E-03	-0.586
BR-77	2.628E+00		8.617E+00	1.365E+01	8.938E-01	0.192
SR-82	-3.624E-01		4.358E-01	6.565E-01	5.777E-02	-0.552
RB-83	2.041E-02		8.256E-02	1.303E-01	8.527E-03	0.157
RB-84	2.630E-02		7.774E-02	1.325E-01	1.345E-02	0.198
KR-85	3.907E+01		1.079E+01	1.878E+01	1.221E+00	2.081
SR-85	1.976E-01		5.455E-02	9.494E-02	6.174E-03	2.081
RB-86	3.981E-01		8.508E-01	1.444E+00	1.105E-01	0.276
Y-88	4.019E-02		3.580E-02	6.879E-02	3.849E-03	0.584
ZR-88	4.408E-03		3.440E-02	5.650E-02	3.210E-03	0.078
Y-91	9.523E+00		2.201E+01	3.676E+01	2.154E+00	0.259
NB-94	7.365E-03		3.833E-02	6.332E-02	5.001E-03	0.116
NB-95	4.378E-02		5.394E-02	9.155E-02	7.933E-03	0.478
NB-95M	1.568E-01		1.736E-01	2.541E-01	1.846E-02	0.617
ZR-95	6.103E-02		8.144E-02	1.389E-01	1.310E-02	0.439

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	7.641E-02		1.774E-02	Half-Life too short		
ZR-97	9.449E-01		3.343E-01	Half-Life too short		
MO-99	-2.884E+00		8.773E+00	1.383E+01	2.078E+00	-0.209
TC-99M	1.089E+09		6.551E+08	Half-Life too short		
RH-101	1.230E-02		4.362E-02	6.852E-02	3.615E-03	0.180
RH-102	-2.073E-02		3.391E-02	5.212E-02	3.256E-03	-0.398
RU-103	-3.575E-02		4.424E-02	6.996E-02	9.044E-03	-0.511
RH-106	1.889E-01		3.581E-01	6.096E-01	7.606E-02	0.310
RU-106	1.889E-01		3.576E-01	6.096E-01	4.378E-02	0.310
AG-108M	-3.499E-02		3.777E-02	5.724E-02	3.693E-03	-0.611
AG-110M	8.709E-02		4.567E-02	7.530E-02	5.793E-03	1.157
IN-111	-1.433E-01		9.025E-01	1.309E+00	7.192E-02	-0.109
IN-113M	9.652E-03		4.915E-02	8.107E-02	4.921E-03	0.119
SN-113	9.652E-03		4.915E-02	8.107E-02	4.921E-03	0.119
IN-114M	1.160E-01		2.289E-01	3.344E-01	1.751E-02	0.347
CD-115	-3.041E+00		7.593E+00	1.232E+01	8.119E-01	-0.247
SN-117M	-2.051E-02		6.310E-02	1.019E-01	5.368E-03	-0.201
SB-122	7.154E-01		1.526E+00	2.612E+00	1.782E-01	0.274
I-123	4.125E-01		6.513E-01	Half-Life too short		
TE-123M	1.079E-02		3.407E-02	5.650E-02	3.019E-03	0.191
I-124	4.133E-01		7.387E-01	1.098E+00	7.756E-02	0.376
SB-124	2.256E-02		9.267E-02	1.552E-01	1.022E-02	0.145
SB-125	9.169E-02		1.092E-01	1.855E-01	1.144E-02	0.494
TE-125M	-1.407E+01		1.162E+01	1.781E+01	1.588E+00	-0.790
I-126	1.018E-01		2.152E-01	3.168E-01	2.368E-02	0.321
SB-126	1.474E-01		1.590E-01	2.445E-01	1.983E-02	0.603
SB-127	9.130E-01		1.186E+00	2.040E+00	2.101E-01	0.447
XE-127	-9.884E-02		5.591E-02	8.236E-02	4.366E-03	-1.200
I-131	3.267E-02		1.177E-01	1.881E-01	1.198E-02	0.174
TE-132	3.448E-01		5.964E-01	9.788E-01	1.366E-01	0.352
BA-133	1.643E-02		5.642E-02	8.200E-02	9.438E-03	0.200
I-133	-1.547E-03		1.095E-03	Half-Life too short		
CS-134	6.574E-02		6.096E-02	1.048E-01	9.539E-03	0.627
CS-135	2.293E-01		1.865E-01	3.270E-01	2.449E-02	0.701
I-135	-1.287E+08		1.134E+08	Half-Life too short		
CS-136	6.943E-02		1.144E-01	1.966E-01	1.683E-02	0.353
CE-139	-3.480E-02		3.621E-02	5.665E-02	2.903E-03	-0.614
BA-140	-4.073E-02		2.519E-01	4.142E-01	1.354E-01	-0.098
LA-140	-9.080E-02		9.594E-02	1.374E-01	8.769E-03	-0.661
CE-141	3.839E-02		8.410E-02	1.244E-01	7.188E-03	0.309
CE-143	4.035E-04		6.582E-05	Half-Life too short		
CE-144	-1.787E-02		2.389E-01	3.938E-01	5.593E-02	-0.045
PM-144	3.135E-02		3.739E-02	6.455E-02	5.053E-03	0.486
PR-144	2.123E+00		2.532E+00	4.371E+00	3.421E-01	0.486
PM-146	1.066E-02		5.171E-02	8.441E-02	7.453E-03	0.126
ND-147	-2.535E-01		5.390E-01	8.674E-01	1.205E-01	-0.292
PM-149	-2.291E+01		6.647E+01	1.087E+02	1.533E+01	-0.211
EU-152	4.086E-02		1.419E-01	1.818E-01	1.173E-02	0.225

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-2.967E-02		1.019E-01	1.487E-01	1.163E-02	-0.200
EU-154	2.521E-02		1.462E-01	2.465E-01	2.390E-02	0.102
EU-155	6.982E-02		1.279E-01	2.183E-01	1.589E-02	0.320
TB-160	-1.881E-02		1.598E-01	2.633E-01	2.665E-02	-0.071
HO-166M	-1.554E-02		6.831E-02	1.093E-01	8.753E-03	-0.142
TM-171	-1.456E+01		3.592E+01	4.971E+01	3.631E+00	-0.293
LU-176	-1.329E-02		2.618E-02	4.219E-02	2.390E-03	-0.315
LU-177	9.555E-01		1.175E+00	1.953E+00	1.041E-01	0.489
LU-177M	-1.548E-01		2.004E-01	3.093E-01	1.802E-02	-0.501
HF-181	5.384E-03		4.772E-02	8.063E-02	5.074E-03	0.067
W-181	3.799E-01		4.690E-01	6.903E-01	4.992E-02	0.550
TA-182	8.023E-02		2.294E-01	3.920E-01	2.342E-02	0.205
RE-183	3.182E-02		1.334E-01	2.172E-01	1.128E-02	0.146
RE-184	-1.115E-01		2.588E-01	4.261E-01	2.353E-02	-0.262
OS-185	-2.720E-03		4.622E-02	7.554E-02	5.535E-03	-0.036
RE-188	1.459E-01		2.024E-01	3.414E-01	1.822E-02	0.427
W-188	-7.506E-01		8.950E+00	1.287E+01	7.247E-01	-0.058
IR-192	1.788E-02		3.889E-02	6.588E-02	3.760E-03	0.271
AU-195	-1.514E-02		2.683E-01	4.353E-01	3.346E-02	-0.035
TL-200	7.090E-05		1.080E-04	Half-Life too short		
TL-201	-4.608E+00		6.308E+00	9.966E+00	5.109E-01	-0.462
TL-202	-5.302E-03		7.262E-02	1.168E-01	7.014E-03	-0.045
HG-203	1.188E-03		4.209E-02	7.036E-02	4.204E-03	0.017
BI-207	2.465E-02		5.909E-02	9.998E-02	7.893E-03	0.246
TL-207	1.442E-01		8.252E-01	1.198E+00	1.974E-01	0.120
PO-209	4.259E+00		9.164E+00	1.373E+01	1.421E+00	0.310
PB-211	4.275E-02		1.058E+00	1.724E+00	1.075E+00	0.025
BI-212	1.404E+00	+	4.884E-01	7.009E-01	6.758E-02	2.004
BI-214	1.083E+00	+	1.964E-01	2.819E-01	2.479E-02	3.844
PO-215	1.442E-01		8.252E-01	1.198E+00	1.974E-01	0.120
RN-219	-1.486E-01		4.849E-01	7.575E-01	1.029E-01	-0.196
RN-220	1.405E+01		2.878E+01	4.934E+01	3.322E+00	0.285
RA-223	1.442E-01		8.252E-01	1.198E+00	1.974E-01	0.120
RA-226	1.083E+00	+	1.964E-01	2.819E-01	2.479E-02	3.844
AC-227	1.930E-01		4.410E-01	7.533E-01	1.043E-01	0.256
TH-227	1.930E-01		4.414E-01	7.533E-01	1.266E-01	0.256
TH-229	1.049E-02		6.400E-01	9.569E-01	5.028E-02	0.011
TH-230	1.083E+00	+	1.964E-01	2.819E-01	2.479E-02	3.844
PA-231	-1.577E-01		1.602E+00	2.657E+00	3.642E-01	-0.059
TH-231	1.442E-01		8.252E-01	1.198E+00	1.974E-01	0.120
U-231	-4.013E-01		1.099E+00	1.600E+00	1.277E-01	-0.251
PA-233	-1.489E-02		6.858E-02	1.123E-01	6.779E-03	-0.133
PA-234	-1.353E-01		3.273E-01	5.199E-01	1.004E-01	-0.260
PA-234M	6.989E+00		8.372E+00	1.424E+01	1.630E+00	0.491
U-234	1.083E+00	+	1.964E-01	2.819E-01	2.479E-02	3.844
NP-236	-1.528E-02		9.649E-02	1.568E-01	8.206E-03	-0.097
NP-239	-9.901E-02		2.221E-01	3.631E-01	2.318E-02	-0.273
AM-241	4.738E-02		1.865E-01	2.678E-01	2.081E-02	0.177

Sample ID : G232433014 Acquisition date : 7-JUL-2009 07:05:32

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.722E-02		1.158E-01	1.951E-01	1.419E-02	0.088
CM-247	-1.441E-02		4.340E-02	6.772E-02	3.894E-03	-0.213
CF-249	-2.412E-02		4.562E-02	6.926E-02	3.933E-03	-0.348
CF-251	1.433E-02		1.505E-01	2.458E-01	1.271E-02	0.058

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433014           *
* Acquisition date  :  7-JUL-2009 07:05:32 Detector SN#     :               *
* Detector ID       : GAM22                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.37      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433014           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 8.0360E+01 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.142E+01	2.851E+00	3.473E-01	1.454E+00
CD-109	2.830E+00	1.232E+00	9.103E-01	6.285E-01
SN-126	2.787E-01	1.213E-01	8.293E-02	6.190E-02
BA-137M	5.185E-01	8.585E-02	2.923E-02	4.380E-02
CS-137	5.481E-01	9.079E-02	3.090E-02	4.632E-02
TL-208	5.398E-01	9.570E-02	2.903E-02	4.882E-02
BI-210	4.520E+00	4.972E+00	2.579E+00	2.537E+00
PB-210	4.520E+00	4.972E+00	2.579E+00	2.537E+00
PO-210	4.520E+00	4.968E+00	2.579E+00	2.535E+00
BI-211	3.257E+00	5.651E-01	1.802E-01	2.883E-01
PB-212	1.659E+00	1.687E-01	4.913E-02	8.606E-02
PO-212	1.659E+00	1.687E-01	4.913E-02	8.606E-02
PB-214	1.133E+00	2.049E-01	6.382E-02	1.046E-01
PO-214	1.133E+00	2.049E-01	6.382E-02	1.046E-01
PO-216	1.659E+00	1.687E-01	4.913E-02	8.606E-02
PO-218	1.133E+00	2.049E-01	6.382E-02	1.046E-01
RA-224	5.145E+00	1.455E+00	5.584E-01	7.425E-01
AC-228	1.604E+00	3.852E-01	1.012E-01	1.965E-01
RA-228	1.604E+00	3.852E-01	1.012E-01	1.965E-01
TH-228	1.659E+00	1.687E-01	4.913E-02	8.606E-02
TH-232	1.604E+00	3.852E-01	1.012E-01	1.965E-01
TH-234	2.756E+00	2.154E+00	1.063E+00	1.099E+00
U-235	2.824E-01	3.316E-01	1.883E-01	1.692E-01
NP-237	8.184E-01	3.928E-01	2.301E-01	2.004E-01
U-238	2.756E+00	2.154E+00	1.063E+00	1.099E+00
AM-243	3.755E-01	9.294E-02	4.969E-02	4.742E-02
ANH-511	8.597E-02	7.431E-02	2.594E-02	3.791E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	2.375E-01	3.577E-01	2.986E-01	1.825E-01	NOT IDENT.
NA-22	1.019E-02	5.135E-02	4.358E-02	2.620E-02	NOT IDENT.
NA-24	1.918E+05	2.235E+05	0.000E+00	1.140E+05	SHORT HLIF
AL-26	2.999E-03	2.943E-02	2.501E-02	1.502E-02	NOT IDENT.
TI-44	4.068E-01	6.847E-02	4.450E-02	3.493E-02	FAIL ABUN
SC-46	-7.843E-03	3.979E-02	3.258E-02	2.030E-02	FAIL ABUN
V-48	-1.543E-02	7.384E-02	5.992E-02	3.767E-02	NOT IDENT.
CR-51	-6.041E-02	4.026E-01	3.288E-01	2.054E-01	NOT IDENT.
MN-52	1.577E-01	2.121E-01	1.901E-01	1.082E-01	NOT IDENT.
MN-54	1.699E-02	4.102E-02	3.525E-02	2.093E-02	NOT IDENT.
CO-56	-2.051E-02	4.194E-02	3.370E-02	2.140E-02	NOT IDENT.
CO-57	1.768E-03	2.950E-02	2.429E-02	1.505E-02	NOT IDENT.
CO-58	-2.370E-02	4.262E-02	3.424E-02	2.175E-02	NOT IDENT.
FE-59	-2.522E-02	9.213E-02	7.351E-02	4.700E-02	FAIL ABUN
CO-60	-1.150E-02	3.777E-02	3.039E-02	1.927E-02	NOT IDENT.
ZN-65	3.915E-02	1.162E-01	8.399E-02	5.931E-02	NOT IDENT.
GE-68	2.161E-01	1.410E+00	1.170E+00	7.193E-01	NOT IDENT.
AS-73	9.833E-01	8.903E-01	7.066E-01	4.542E-01	NOT IDENT.
AS-74	-3.605E-02	9.811E-02	7.908E-02	5.006E-02	NOT IDENT.
SE-75	-4.578E-02	4.793E-02	3.804E-02	2.445E-02	NOT IDENT.
BR-77	2.628E+00	8.445E+00	6.682E+00	4.309E+00	FAIL ABUN
SR-82	-3.624E-01	4.271E-01	3.222E-01	2.179E-01	NOT IDENT.
RB-83	2.041E-02	8.091E-02	6.376E-02	4.128E-02	NOT IDENT.
RB-84	2.630E-02	7.619E-02	6.506E-02	3.887E-02	NOT IDENT.
KR-85	3.907E+01	1.057E+01	9.187E+00	5.394E+00	NOT IDENT.
SR-85	1.976E-01	5.346E-02	4.645E-02	2.727E-02	NOT IDENT.
RB-86	3.981E-01	8.337E-01	7.102E-01	4.254E-01	NOT IDENT.
Y-88	4.019E-02	3.509E-02	3.396E-02	1.790E-02	NOT IDENT.
ZR-88	4.408E-03	3.372E-02	2.759E-02	1.720E-02	NOT IDENT.
Y-91	9.523E+00	2.157E+01	1.809E+01	1.100E+01	NOT IDENT.
NB-94	7.365E-03	3.756E-02	3.105E-02	1.916E-02	NOT IDENT.
NB-95	4.378E-02	5.286E-02	4.492E-02	2.697E-02	NOT IDENT.
NB-95M	1.568E-01	1.701E-01	1.236E-01	8.681E-02	NOT IDENT.
ZR-95	6.103E-02	7.981E-02	6.817E-02	4.072E-02	NOT IDENT.
NB-97	7.641E+04	3.478E+04	0.000E+00	1.774E+04	SHORT HLIF
ZR-97	9.449E+05	6.553E+05	0.000E+00	3.343E+05	SHORT HLIF
MO-99	-2.884E+00	8.598E+00	6.782E+00	4.387E+00	NOT IDENT.
TC-99M	1.089E+15	1.284E+15	0.000E+00	6.551E+14	SHORT HLIF
RH-101	1.230E-02	4.274E-02	3.330E-02	2.181E-02	NOT IDENT.
RH-102	-2.073E-02	3.323E-02	2.549E-02	1.695E-02	NOT IDENT.
RU-103	-3.575E-02	4.336E-02	3.422E-02	2.212E-02	FAIL ABUN
RH-106	1.889E-01	3.510E-01	2.987E-01	1.791E-01	FAIL ABUN
RU-106	1.889E-01	3.505E-01	2.987E-01	1.788E-01	FAIL ABUN
AG-108M	-3.499E-02	3.701E-02	2.797E-02	1.888E-02	NOT IDENT.
AG-110M	8.709E-02	4.476E-02	3.691E-02	2.284E-02	NOT IDENT.
IN-111	-1.433E-01	8.844E-01	6.372E-01	4.512E-01	NOT IDENT.
IN-113M	9.652E-03	4.817E-02	3.959E-02	2.458E-02	NOT IDENT.
SN-113	9.652E-03	4.817E-02	3.959E-02	2.458E-02	NOT IDENT.
IN-114M	1.160E-01	2.243E-01	1.625E-01	1.144E-01	NOT IDENT.
CD-115	-3.041E+00	7.442E+00	6.027E+00	3.797E+00	NOT IDENT.
SN-117M	-2.051E-02	6.184E-02	4.946E-02	3.155E-02	NOT IDENT.
SB-122	7.154E-01	1.496E+00	1.279E+00	7.632E-01	NOT IDENT.
I-123	4.125E+05	1.277E+06	0.000E+00	6.513E+05	SHORT HLIF
TE-123M	1.079E-02	3.339E-02	2.742E-02	1.703E-02	NOT IDENT.
I-124	4.133E-01	7.239E-01	5.378E-01	3.693E-01	NOT IDENT.
SB-124	2.256E-02	9.082E-02	7.657E-02	4.633E-02	NOT IDENT.
SB-125	9.169E-02	1.071E-01	9.065E-02	5.462E-02	NOT IDENT.
TE-125M	-1.407E+01	1.139E+01	8.620E+00	5.811E+00	NOT IDENT.
I-126	1.018E-01	2.109E-01	1.553E-01	1.076E-01	NOT IDENT.
SB-126	1.474E-01	1.559E-01	1.199E-01	7.952E-02	FAIL ABUN
SB-127	9.130E-01	1.162E+00	1.000E+00	5.929E-01	NOT IDENT.
XE-127	-9.884E-02	5.479E-02	4.004E-02	2.795E-02	NOT IDENT.
I-131	3.267E-02	1.154E-01	9.181E-02	5.887E-02	NOT IDENT.
TE-132	3.448E-01	5.845E-01	4.762E-01	2.982E-01	NOT IDENT.
BA-133	1.643E-02	5.529E-02	4.002E-02	2.821E-02	NOT IDENT.
I-133	-1.547E+03	2.146E+03	0.000E+00	1.095E+03	SHORT HLIF
CS-134	6.574E-02	5.974E-02	5.144E-02	3.048E-02	NOT IDENT.
CS-135	2.293E-01	1.828E-01	1.593E-01	9.325E-02	NOT IDENT.
I-135	-1.287E+14	2.223E+14	0.000E+00	1.134E+14	SHORT HLIF
CS-136	6.943E-02	1.121E-01	9.666E-02	5.722E-02	FAIL ABUN
CE-139	-3.480E-02	3.549E-02	2.750E-02	1.811E-02	NOT IDENT.
BA-140	-4.073E-02	2.468E-01	2.027E-01	1.259E-01	NOT IDENT.
LA-140	-9.080E-02	9.402E-02	6.778E-02	4.797E-02	FAIL ABUN
CE-141	3.839E-02	8.242E-02	6.034E-02	4.205E-02	NOT IDENT.
CE-143	4.035E+02	1.290E+02	0.000E+00	6.582E+01	SHORT HLIF
CE-144	-1.787E-02	2.341E-01	1.909E-01	1.194E-01	NOT IDENT.
PM-144	3.135E-02	3.664E-02	3.165E-02	1.869E-02	NOT IDENT.
PR-144	2.123E+00	2.481E+00	2.143E+00	1.266E+00	NOT IDENT.

PM-146	1.066E-02	5.067E-02	4.127E-02	2.585E-02	NOT IDENT.
ND-147	-2.535E-01	5.282E-01	4.245E-01	2.695E-01	NOT IDENT.
PM-149	-2.291E+01	6.514E+01	5.298E+01	3.323E+01	NOT IDENT.
EU-152	4.086E-02	1.390E-01	8.871E-02	7.093E-02	NOT IDENT.
GD-153	-2.967E-02	9.982E-02	7.190E-02	5.093E-02	NOT IDENT.
EU-154	2.521E-02	1.433E-01	1.214E-01	7.310E-02	NOT IDENT.
EU-155	6.982E-02	1.253E-01	1.056E-01	6.393E-02	FAIL ABUN
TB-160	-1.881E-02	1.566E-01	1.293E-01	7.990E-02	FAIL ABUN
HO-166M	-1.554E-02	6.695E-02	5.361E-02	3.416E-02	NOT IDENT.
TM-171	-1.456E+01	3.520E+01	2.397E+01	1.796E+01	NOT IDENT.
LU-176	-1.329E-02	2.566E-02	2.057E-02	1.309E-02	FAIL ABUN
LU-177	9.555E-01	1.151E+00	9.495E-01	5.873E-01	NOT IDENT.
LU-177M	-1.548E-01	1.963E-01	1.511E-01	1.002E-01	NOT IDENT.
HF-181	5.384E-03	4.676E-02	3.944E-02	2.386E-02	NOT IDENT.
W-181	3.799E-01	4.596E-01	3.328E-01	2.345E-01	NOT IDENT.
TA-182	8.023E-02	2.248E-01	1.930E-01	1.147E-01	FAIL ABUN
RE-183	3.182E-02	1.307E-01	1.054E-01	6.670E-02	NOT IDENT.
RE-184	-1.115E-01	2.536E-01	2.074E-01	1.294E-01	FAIL ABUN
OS-185	-2.720E-03	4.530E-02	3.702E-02	2.311E-02	NOT IDENT.
RE-188	1.459E-01	1.984E-01	1.656E-01	1.012E-01	NOT IDENT.
W-188	-7.506E-01	8.771E+00	6.270E+00	4.475E+00	FAIL ABUN
IR-192	1.788E-02	3.811E-02	3.212E-02	1.945E-02	FAIL ABUN
AU-195	-1.514E-02	2.630E-01	2.105E-01	1.342E-01	FAIL ABUN
TL-200	7.090E+01	2.116E+02	0.000E+00	1.080E+02	SHORT HLIF
TL-201	-4.608E+00	6.182E+00	4.838E+00	3.154E+00	NOT IDENT.
TL-202	-5.302E-03	7.117E-02	5.708E-02	3.631E-02	NOT IDENT.
HG-203	1.188E-03	4.124E-02	3.428E-02	2.104E-02	NOT IDENT.
BI-207	2.465E-02	5.790E-02	4.917E-02	2.954E-02	FAIL ABUN
TL-207	1.442E-01	8.087E-01	5.844E-01	4.126E-01	FAIL ABUN
PO-209	4.259E+00	8.981E+00	6.744E+00	4.582E+00	NOT IDENT.
PB-211	4.275E-02	1.037E+00	8.423E-01	5.291E-01	NOT IDENT.
BI-212	1.404E+00	4.786E-01	3.438E-01	2.442E-01	FAIL ABUN
BI-214	1.083E+00	1.925E-01	1.381E-01	9.820E-02	FAIL ABUN
PO-215	1.442E-01	8.087E-01	5.844E-01	4.126E-01	FAIL ABUN
RN-219	-1.486E-01	4.752E-01	3.700E-01	2.425E-01	NOT IDENT.
RN-220	1.405E+01	2.821E+01	2.415E+01	1.439E+01	NOT IDENT.
RA-223	1.442E-01	8.087E-01	5.844E-01	4.126E-01	FAIL ABUN
RA-226	1.083E+00	1.925E-01	1.381E-01	9.820E-02	FAIL ABUN
AC-227	1.930E-01	4.321E-01	3.668E-01	2.205E-01	NOT IDENT.
TH-227	1.930E-01	4.325E-01	3.668E-01	2.207E-01	FAIL ABUN
TH-229	1.049E-02	6.272E-01	4.650E-01	3.200E-01	FAIL ABUN
TH-230	1.083E+00	1.925E-01	1.381E-01	9.820E-02	FAIL ABUN
PA-231	-1.577E-01	1.570E+00	1.295E+00	8.010E-01	NOT IDENT.
TH-231	1.442E-01	8.087E-01	5.844E-01	4.126E-01	FAIL ABUN
U-231	-4.013E-01	1.077E+00	7.736E-01	5.495E-01	FAIL ABUN
PA-233	-1.489E-02	6.721E-02	5.473E-02	3.429E-02	FAIL ABUN
PA-234	-1.353E-01	3.207E-01	2.555E-01	1.636E-01	FAIL ABUN
PA-234M	6.989E+00	8.204E+00	7.002E+00	4.186E+00	NOT IDENT.
U-234	1.083E+00	1.925E-01	1.381E-01	9.820E-02	FAIL ABUN
NP-236	-1.528E-02	9.456E-02	7.611E-02	4.824E-02	NOT IDENT.
NP-239	-9.901E-02	2.176E-01	1.758E-01	1.110E-01	NOT IDENT.
AM-241	4.738E-02	1.827E-01	1.290E-01	9.323E-02	NOT IDENT.
CM-243	1.722E-02	1.134E-01	9.439E-02	5.788E-02	NOT IDENT.
CM-247	-1.441E-02	4.253E-02	3.308E-02	2.170E-02	NOT IDENT.
CF-249	-2.412E-02	4.471E-02	3.382E-02	2.281E-02	NOT IDENT.
CF-251	1.433E-02	1.475E-01	1.194E-01	7.525E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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46.50	263.6275
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52.97	246.7602
53.15	246.9049
53.44	260.1440
54.07	283.4821
56.28	348.9083
56.28	348.9119
57.37	0.0000
57.53	292.0719
57.53	292.0740
57.60	292.1349
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57.98	300.8322
59.32	299.7412
59.32	299.7412
59.40	299.8137
59.54	308.2257
59.72	308.3924
60.01	333.5526
61.10	376.2566
61.14	376.3014
61.30	346.4940
63.00	345.9868
63.29	346.2769
63.29	346.2769
63.58	346.5666
64.28	379.7482
65.12	367.1815
65.20	367.2646
65.20	367.2646
66.05	368.1444
66.72	384.0583
66.83	384.1778
66.91	401.1924
67.20	401.5142
67.20	401.5142
67.75	446.2384
67.85	451.4544
68.90	388.0742
68.90	388.0742
69.30	379.9772
69.67	411.0617
70.82	410.6195
70.82	410.6195
70.83	410.6305
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72.87	427.7620
72.87	427.7620
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74.81	429.9210
74.81	429.9210
74.81	429.9210
74.81	429.9210
74.81	429.9210
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77.11	432.4442
77.11	432.4442

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77.11	432.4442
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81.07	466.4414
81.07	466.4414
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83.78	349.9971
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86.50	473.9254
86.54	473.9701
86.59	474.0250
86.72	474.1673
86.79	474.2425
86.94	552.0527
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87.30	543.2459
87.30	543.2459
87.30	543.2459
87.30	543.2459
87.30	543.2459
87.57	542.1564
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88.03	639.1378
88.36	646.7679
88.47	646.9308
89.95	649.1127
91.11	604.0679
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92.38	417.0749
92.38	417.0749
93.35	291.9766
94.00	288.0520
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94.67	278.3274
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94.90	316.1758
94.90	316.1758
94.90	316.1758
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95.87	338.6435
96.73	333.4491
97.43	326.6553
98.44	324.6453
98.44	324.6453
98.88	321.8131
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99.55	304.8731
99.86	308.7371
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100.10	306.1454
103.18	338.5465
103.76	321.4019
105.00	299.0662
105.31	306.6659
108.00	314.8442
109.28	353.9304
111.00	308.2744
111.00	308.2744

111.76	295.5925
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115.19	301.3223
116.30	326.5658
117.00	300.4573
117.00	300.4573
117.66	288.4918
121.11	303.7088
121.62	283.9165
121.78	283.0430
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122.32	293.8496
122.32	293.8496
122.32	293.8496
122.32	293.8496
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136.48	314.9386
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140.51	0.0000
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142.65	313.9987
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144.24	271.8800
144.24	271.8800
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145.44	305.8571
147.16	263.5690
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152.70	290.0347
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154.21	276.5775
154.21	276.5775
155.03	281.9800
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163.35	277.3309
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167.43	311.9278
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171.86	282.8289
172.10	287.0701
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176.60	271.1560
181.06	271.9848
184.41	283.3380
185.71	268.2046
186.00	268.3092
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198.60	249.1232
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209.75	272.2054
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218.09	250.7509
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227.20	210.0785
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228.18	211.4278
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236.00	256.8624
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238.63	222.4839
238.63	222.4839
238.63	222.4839
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241.98	223.3056
241.98	223.3056
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252.85	215.8700
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256.20	211.1251
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260.90	222.3043
262.80	211.6489
264.65	219.4594
268.24	211.8964
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269.46	200.0613
269.46	200.0613
269.46	200.0613
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277.60	195.1219
277.60	195.1219
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279.53	184.2142
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323.87	161.5638
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338.28	177.2051
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391.69	138.6087
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445.03	121.4226
445.03	121.4226
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513.99	121.9275
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602.71	124.8311
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609.31	121.4585
609.31	121.4585

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614.37	105.2305
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621.84	95.4180
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661.65	85.1826
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666.33	92.3489
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696.49	83.5296
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722.78	71.5806
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768.36	91.6147
768.36	91.6147
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1120.29	76.9242
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1238.11	89.5438
1238.11	89.5438
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1274.54	72.3865
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1325.50	45.4036
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1365.15	41.9869
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1368.53	0.0000
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1377.67	41.1464
1377.67	41.1464
1377.67	41.1464
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1407.95	44.4370
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1457.56	0.0000
1460.81	47.0430
1489.15	30.2399
1509.49	31.4049
1596.49	45.5093
1620.62	28.0819
1678.03	0.0000
1691.02	26.4175
1691.02	26.4175

1706.46	0.0000
1750.46	0.0000
1764.49	19.0880
1764.49	19.0880
1764.49	19.0880
1764.49	19.0880
1770.23	66.8896
1771.40	81.2439
1791.20	0.0000
1808.65	16.3765
1836.01	12.5945

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433014

Total Uranium Activity	8.3309E+00	ug/g
Total Uranium Counting Unc.	6.4111E+00	ug/g
Total Uranium Tpu	3.2710E-06	ug/g
Total Uranium Mda	3.1650E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID   : G232433014      *
*   ANALYST       : MXR1                      DETECTOR    : GAM22           *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME  :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 07:05:32.71    SAMPLE ALQT:   80.360 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.398E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.453E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.507E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.212E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:07:00.10

```
*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433015.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:06:11.
Sample ID         : G232433015           Sample quantity  : 1.22280E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.54  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*******************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.17*	41	342	0.64	126.51	123	8	5.66E-03	81.5	
2	4	74.88*	318	216	0.86	149.94	144	17	4.42E-02	9.0	1.93E+00
3	4	77.18*	501	199	0.91	154.53	144	17	6.96E-02	6.3	
4	0	87.28	200	202	1.18	174.75	172	6	2.78E-02	13.3	
5	6	89.93	149	96	0.90	180.05	178	15	2.06E-02	11.1	2.23E+00
6	6	92.84*	284	266	1.42	185.87	178	15	3.94E-02	12.8	
7	0	129.23	55	171	0.98	258.66	255	7	7.68E-03	41.5	
8	0	186.10*	154	272	1.29	372.43	366	11	2.14E-02	22.9	
9	0	238.79*	829	255	0.99	477.84	473	8	1.15E-01	4.9	
10	0	241.67	153	213	1.36	483.60	482	8	2.13E-02	19.2	
11	0	270.43	111	112	0.84	541.14	537	9	1.53E-02	19.7	
12	0	295.19*	313	154	1.12	590.67	585	12	4.35E-02	9.8	
13	0	300.04	80	115	0.87	600.37	596	9	1.11E-02	26.7	
14	0	338.59	154	135	1.24	677.50	672	10	2.14E-02	16.2	
15	0	351.96*	539	104	1.14	704.25	698	11	7.48E-02	5.7	
16	0	462.82	32	72	0.85	926.05	923	8	4.49E-03	48.3	
17	0	511.38*	134	88	2.11	1023.20	1014	20	1.86E-02	22.1	
18	0	583.62*	238	77	1.26	1167.75	1161	13	3.30E-02	10.3	
19	0	609.57	371	52	1.32	1219.67	1213	13	5.16E-02	6.6	
20	0	662.10	111	88	1.73	1324.77	1319	16	1.55E-02	20.8	
21	0	727.28	121	49	2.01	1455.21	1447	15	1.68E-02	15.5	
22	0	796.08	46	53	1.52	1592.88	1585	15	6.37E-03	38.4	
23	0	911.37	196	55	1.88	1823.59	1815	17	2.72E-02	11.3	
24	0	970.30	88	80	2.36	1941.51	1932	15	1.22E-02	25.2	
25	0	1121.29	88	47	1.99	2243.69	2237	16	1.23E-02	20.5	
26	0	1239.77	68	54	0.91	2480.83	2471	22	9.49E-03	30.2	
27	0	1378.63	24	20	1.25	2758.77	2753	13	3.26E-03	43.9	
28	0	1461.20*	691	37	2.05	2924.04	2913	21	9.59E-02	4.4	
29	0	1765.27	76	0	1.69	3532.74	3524	18	1.06E-02	11.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 09:07:03

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433015.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:06:11
Sample ID : G232433015 Sample quantity : 122.28 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA23 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:03.54 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	1.994E+01	2.307E+00	6.233E-01	4.663E-02	31.984
CD-109	+	88.03	*	3.229E+00	9.113E-01	9.209E-01	8.990E-02	3.506
SN-126	+	64.28		5.067E-01	8.293E-01	7.617E-01	1.159E-01	0.665
	+	86.94		1.322E+00	6.521E-01	4.361E-01	1.814E-01	3.032
	+	87.57	*	3.180E-01	8.975E-02	9.120E-02	8.874E-03	3.487
BA-137M	+	661.65	*	1.864E-01	7.805E-02	6.364E-02	3.251E-03	2.929
CS-137	+	661.65	*	1.970E-01	8.252E-02	6.728E-02	3.455E-03	2.929
TL-208		277.35		2.168E-01	3.591E-01	6.275E-01	6.630E-02	0.345
	+	510.84		7.485E-01	3.397E-01	1.953E-01	1.983E-02	3.834
	+	583.14	*	3.813E-01	8.205E-02	6.067E-02	3.939E-03	6.285
		860.37		4.575E-01	3.559E-01	6.336E-01	5.727E-02	0.722
BI-211		72.87		2.139E+00	2.714E+00	4.496E+00	3.966E-01	0.476
	+	351.07	*	3.718E+00	4.909E-01	2.940E-01	1.915E-02	12.647
PB-212	+	74.81		2.247E+00	4.988E-01	4.679E-01	6.036E-02	4.803
	+	77.11		1.979E+00	3.054E-01	2.630E-01	2.366E-02	7.525
	+	87.30		1.471E+00	4.404E-01	4.830E-01	6.731E-02	3.045
	+	238.63	*	1.232E+00	1.495E-01	1.153E-01	8.291E-03	10.687
	+	300.09		1.840E+00	9.956E-01	1.088E+00	9.036E-02	1.691
PO-212	+	74.81		2.247E+00	4.988E-01	4.679E-01	6.036E-02	4.803
	+	77.11		1.979E+00	3.054E-01	2.630E-01	2.366E-02	7.525
	+	87.30		1.471E+00	4.404E-01	4.830E-01	6.731E-02	3.045
		115.19		2.256E+00	2.887E+00	5.096E+00	3.251E-01	0.443
	+	238.63	*	1.232E+00	1.495E-01	1.153E-01	8.291E-03	10.687
	+	300.09		1.840E+00	9.956E-01	1.088E+00	9.036E-02	1.691
BI-214	+	609.31	*	1.123E+00	1.697E-01	1.148E-01	8.628E-03	9.788
		768.36		2.237E-01	7.802E-01	1.301E+00	1.172E-01	0.172
		934.06		1.214E+00	1.204E+00	2.190E+00	2.362E-01	0.554
	+	1120.29		1.430E+00	5.999E-01	4.333E-01	4.027E-02	3.300
		1238.11		1.713E+00	1.056E+00	1.929E+00	1.644E-01	0.888
	+	1377.67		1.679E+00	1.483E+00	1.425E+00	1.377E-01	1.179
	+	1764.49		1.690E+00	4.017E-01	2.822E-01	1.754E-02	5.989
PB-214	+	74.81		3.872E+00	8.307E-01	8.063E-01	9.331E-02	4.803
	+	77.11		3.392E+00	5.838E-01	4.508E-01	5.315E-02	7.525
	+	87.30		2.520E+00	7.371E-01	8.274E-01	1.026E-01	3.045

Sample ID : G232433015 Acquisition date : 7-JUL-2009 07:06:11

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		1.367E+00	5.354E-01	6.118E-01	4.866E-02	2.235
	+	295.21		1.270E+00	2.713E-01	1.834E-01	1.572E-02	6.923
	+	351.92	*	1.293E+00	1.836E-01	1.025E-01	8.556E-03	12.617
PO-214	+	74.81		3.872E+00	8.307E-01	8.063E-01	9.331E-02	4.803
	+	77.11		3.392E+00	5.838E-01	4.508E-01	5.315E-02	7.525
	+	87.30		2.520E+00	7.371E-01	8.274E-01	1.026E-01	3.045
	+	241.98		1.367E+00	5.354E-01	6.118E-01	4.866E-02	2.235
	+	295.21		1.270E+00	2.713E-01	1.834E-01	1.572E-02	6.923
	+	351.92	*	1.293E+00	1.836E-01	1.025E-01	8.556E-03	12.617
PO-216	+	74.81		2.247E+00	4.988E-01	4.679E-01	6.036E-02	4.803
	+	77.11		1.979E+00	3.054E-01	2.630E-01	2.366E-02	7.525
	+	87.30		1.471E+00	4.404E-01	4.830E-01	6.731E-02	3.045
	+	238.63	*	1.232E+00	1.495E-01	1.153E-01	8.291E-03	10.687
	+	300.09		1.840E+00	9.956E-01	1.088E+00	9.036E-02	1.691
PO-218	+	74.81		3.872E+00	8.307E-01	8.063E-01	9.331E-02	4.803
	+	77.11		3.392E+00	5.838E-01	4.508E-01	5.315E-02	7.525
	+	87.30		2.520E+00	7.371E-01	8.274E-01	1.026E-01	3.045
	+	241.98		1.367E+00	5.354E-01	6.118E-01	4.866E-02	2.235
	+	295.21		1.270E+00	2.713E-01	1.834E-01	1.572E-02	6.923
	+	351.92	*	1.293E+00	1.836E-01	1.025E-01	8.556E-03	12.617
RA-224	+	240.98	*	2.593E+00	1.005E+00	1.165E+00	6.562E-02	2.226
RA-226	+	609.31	*	1.123E+00	1.697E-01	1.148E-01	8.628E-03	9.788
		768.36		2.237E-01	7.802E-01	1.301E+00	1.172E-01	0.172
		934.06		1.214E+00	1.204E+00	2.190E+00	2.362E-01	0.554
	+	1120.29		1.430E+00	5.999E-01	4.333E-01	4.027E-02	3.300
		1238.11		1.713E+00	1.056E+00	1.929E+00	1.644E-01	0.888
	+	1377.67		1.679E+00	1.483E+00	1.425E+00	1.377E-01	1.179
	+	1764.49		1.690E+00	4.017E-01	2.822E-01	1.754E-02	5.989
AC-228	+	338.32		1.171E+00	6.103E-01	3.647E-01	1.487E-01	3.210
	+	911.07	*	1.422E+00	3.599E-01	2.356E-01	2.718E-02	6.036
	+	969.11		1.129E+00	6.277E-01	4.417E-01	1.028E-01	2.556
RA-228	+	338.32		1.171E+00	6.103E-01	3.647E-01	1.487E-01	3.210
	+	911.07	*	1.422E+00	3.599E-01	2.356E-01	2.718E-02	6.036
	+	969.11		1.129E+00	6.277E-01	4.417E-01	1.028E-01	2.556
TH-228		84.40		3.163E+00	2.364E+00	3.643E+00	4.995E-01	0.868
	+	238.60	*	1.232E+00	1.495E-01	1.153E-01	8.290E-03	10.688
	+	300.10		1.840E+00	1.464E+00	1.088E+00	6.414E-01	1.691
TH-230	+	609.31	*	1.123E+00	1.697E-01	1.148E-01	8.628E-03	9.788
		768.36		2.237E-01	7.801E-01	1.301E+00	1.172E-01	0.172
		934.06		1.214E+00	1.204E+00	2.190E+00	2.362E-01	0.554
	+	1120.29		1.430E+00	5.999E-01	4.333E-01	4.027E-02	3.300
		1238.11		1.713E+00	1.056E+00	1.929E+00	1.644E-01	0.888
	+	1377.67		1.679E+00	1.483E+00	1.425E+00	1.377E-01	1.179
	+	1764.49		1.690E+00	4.017E-01	2.822E-01	1.754E-02	5.989
TH-232	+	338.32		1.171E+00	3.865E-01	3.647E-01	2.154E-02	3.210
	+	911.07	*	1.422E+00	3.599E-01	2.356E-01	2.718E-02	6.036
	+	969.11		1.129E+00	6.277E-01	4.417E-01	1.028E-01	2.556
TH-234	+	63.29	*	1.280E+00	2.099E+00	1.862E+00	3.355E-01	0.687
	+	92.38		2.875E+00	9.019E-01	5.698E-01	1.039E-01	5.046

Sample ID : G232433015 Acquisition date : 7-JUL-2009 07:06:11

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.123E+00	1.697E-01	1.148E-01	8.628E-03	9.788
		768.36		2.237E-01	7.801E-01	1.301E+00	1.172E-01	0.172
		934.06		1.214E+00	1.204E+00	2.190E+00	2.362E-01	0.554
	+	1120.29		1.430E+00	5.999E-01	4.333E-01	4.027E-02	3.300
		1238.11		1.713E+00	1.056E+00	1.929E+00	1.644E-01	0.888
	+	1377.67		1.679E+00	1.483E+00	1.425E+00	1.377E-01	1.179
	+	1764.49		1.690E+00	4.017E-01	2.822E-01	1.754E-02	5.989
NP-237	+	86.50	*	9.339E-01	3.265E-01	3.389E-01	7.719E-02	2.755
		95.87		1.787E-01	8.273E-01	1.206E+00	2.961E-01	0.148
U-238	+	63.29	*	1.280E+00	2.099E+00	1.862E+00	3.355E-01	0.687
	+	92.38		2.875E+00	7.775E-01	5.698E-01	5.091E-02	5.046
AM-243	+	74.67	*	3.644E-01	7.335E-02	7.614E-02	6.766E-03	4.785
	+	86.72		3.502E+01	9.883E+00	1.267E+01	1.224E+00	2.763
		117.66		-9.485E-01	3.163E+00	5.301E+00	3.283E-01	-0.179
		142.18		-1.782E+01	1.489E+01	2.340E+01	1.274E+00	-0.761
ANH-511	+	511.00	*	1.617E-01	7.212E-02	4.219E-02	2.451E-03	3.832

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.234E-02	3.326E-01	5.393E-01	3.665E-02	0.041
NA-22		1274.54	*	-3.487E-02	5.348E-02	7.962E-02	5.347E-03	-0.438
NA-24		1368.53	*	-7.205E-02	5.348E-02	Half-Life too short		
AL-26		1129.67		9.902E-01	2.211E+00	3.305E+00	2.106E-01	0.300
		1808.65	*	-1.892E-02	3.359E-02	4.929E-02	2.962E-03	-0.384
TI-44		67.85		-1.423E-03	4.204E-02	6.748E-02	5.876E-03	-0.021
	+	78.38	*	3.651E-01	5.635E-02	6.803E-02	6.166E-03	5.367
SC-46		889.25	*	-8.068E-03	3.816E-02	6.246E-02	5.581E-03	-0.129
	+	1120.51		2.421E-01	1.003E-01	1.390E-01	9.055E-03	1.742
V-48		944.10		9.243E-02	9.310E-01	1.566E+00	1.364E-01	0.059
		983.50	*	-4.954E-02	6.912E-02	1.050E-01	8.733E-03	-0.472
		1312.09		1.766E-02	7.480E-02	1.288E-01	9.164E-03	0.137
CR-51		320.08	*	-1.107E-01	3.302E-01	5.407E-01	3.546E-02	-0.205
MN-52		744.21		-1.320E-01	2.049E-01	3.106E-01	1.978E-02	-0.425
		848.13		-6.931E+00	6.215E+00	8.630E+00	7.043E-01	-0.803
		935.52		1.059E-01	2.276E-01	3.965E-01	3.486E-02	0.267
		1246.25		-4.486E-01	7.883E+00	1.079E+01	6.906E-01	-0.042
		1333.61		-9.902E-01	4.738E+00	7.695E+00	5.649E-01	-0.129
		1434.06	*	1.081E-01	1.948E-01	3.510E-01	2.540E-02	0.308
MN-54		834.83	*	2.359E-02	4.126E-02	7.013E-02	5.553E-03	0.336
CO-56		846.75	*	-6.285E-02	4.512E-02	6.081E-02	4.947E-03	-1.034
		977.42		2.197E+00	3.150E+00	5.309E+00	4.451E-01	0.414
		1037.82		-1.306E-02	3.534E-01	5.739E-01	4.704E-02	-0.023
		1175.09		1.577E-01	2.488E+00	4.075E+00	2.307E-01	0.039
		1238.25		1.766E-01	1.058E-01	1.945E-01	1.293E-02	0.908
		1360.21		-3.400E-01	1.012E+00	1.600E+00	1.172E-01	-0.212
		1771.40		-4.345E-03	3.130E-01	4.280E-01	2.648E-02	-0.010
CO-57		122.06	*	1.386E-02	2.038E-02	3.572E-02	2.106E-03	0.388

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-3.638E-02	1.702E-01	2.830E-01	1.841E-02	-0.129
CO-58		810.76	*	-5.715E-02	3.966E-02	5.227E-02	3.927E-03	-1.093
FE-59		142.65		-1.002E+00	2.294E+00	3.735E+00	2.031E-01	-0.268
		192.34		3.597E-01	8.034E-01	1.345E+00	1.556E-01	0.267
		1099.22	*	-6.860E-02	9.585E-02	1.438E-01	1.108E-02	-0.477
		1291.56		-4.488E-02	1.314E-01	2.112E-01	1.753E-02	-0.213
CO-60		1173.22		-1.471E-02	5.021E-02	7.913E-02	4.464E-03	-0.186
		1332.49	*	-1.351E-02	4.280E-02	6.848E-02	5.027E-03	-0.197
ZN-65		1115.52	*	-3.564E-02	1.124E-01	1.497E-01	9.885E-03	-0.238
GE-68		1077.35	*	1.111E+00	1.287E+00	2.310E+00	1.654E-01	0.481
AS-73		53.44	*	-1.263E-01	8.598E-01	1.391E+00	1.228E-01	-0.091
AS-74		595.88	*	-3.420E-02	8.337E-02	1.339E-01	7.383E-03	-0.255
		634.78		-3.384E-02	3.334E-01	5.474E-01	2.898E-02	-0.062
SE-75		66.05		-8.150E-01	4.834E+00	7.151E+00	7.505E-01	-0.114
		96.73		-7.160E-01	7.171E-01	9.362E-01	1.255E-01	-0.765
		121.11		-1.204E-02	1.108E-01	1.870E-01	1.744E-02	-0.064
		136.00		-4.016E-03	3.248E-02	5.431E-02	3.067E-03	-0.074
		198.60		8.832E-01	1.682E+00	2.806E+00	1.894E-01	0.315
		264.65	*	3.397E-02	3.946E-02	6.646E-02	3.869E-03	0.511
		279.53		4.117E-02	1.036E-01	1.794E-01	1.128E-02	0.229
		303.91		-1.339E+00	2.141E+00	2.992E+00	2.870E-01	-0.448
		400.65		-2.175E-01	2.623E-01	4.025E-01	3.663E-02	-0.540
BR-77	+	87.88		4.755E+02	1.342E+02	2.020E+02	1.971E+01	2.354
		200.40		-7.105E+01	1.082E+02	1.695E+02	9.068E+00	-0.419
	+	239.00		1.346E+02	1.518E+01	2.480E+01	1.394E+00	5.429
		249.79		-2.706E+01	4.265E+01	6.496E+01	3.693E+00	-0.417
		281.68		-5.771E+01	5.844E+01	9.325E+01	5.435E+00	-0.619
		297.23		1.872E+02	4.760E+01	7.676E+01	4.508E+00	2.439
		303.76		-9.605E+01	1.255E+02	1.731E+02	1.019E+01	-0.555
		439.47		4.595E+01	9.087E+01	1.542E+02	9.022E+00	0.298
		484.57		-5.047E+01	1.605E+02	2.510E+02	1.468E+01	-0.201
		520.65	*	-6.106E+00	7.777E+00	1.098E+01	6.353E-01	-0.556
		574.64		-1.553E+01	1.455E+02	2.415E+02	1.355E+01	-0.064
		578.91		2.255E+01	6.786E+01	1.025E+02	5.735E+00	0.220
		585.48		7.873E+02	1.800E+02	3.410E+02	1.898E+01	2.309
		755.35		6.007E+01	1.132E+02	1.943E+02	1.272E+01	0.309
		817.79		8.700E+01	9.236E+01	1.642E+02	1.250E+01	0.530
SR-82		698.33		-2.632E+01	3.090E+01	4.612E+01	2.605E+00	-0.571
		776.49	*	-5.091E-02	3.747E-01	5.995E-01	4.136E-02	-0.085
		1395.20		2.865E+00	1.258E+01	2.149E+01	1.566E+00	0.133
RB-83		520.41	*	-6.728E-02	7.411E-02	1.029E-01	5.955E-03	-0.654
		529.64		-8.025E-02	1.158E-01	1.729E-01	9.968E-03	-0.464
		552.65		6.551E-04	1.889E-01	3.175E-01	1.809E-02	0.002
RB-84		881.50	*	3.296E-02	7.258E-02	1.269E-01	1.115E-02	0.260
KR-85		513.99	*	1.785E+01	7.655E+00	1.429E+01	8.292E-01	1.249
SR-85		513.99	*	9.025E-02	3.871E-02	7.226E-02	4.193E-03	1.249
RB-86		1076.63	*	5.495E-01	7.850E-01	1.388E+00	9.944E-02	0.396
Y-88		898.02		-1.446E-02	4.430E-02	7.172E-02	6.558E-03	-0.202
		1836.01	*	1.446E-02	3.218E-02	5.894E-02	3.471E-03	0.245

Sample ID : G232433015 Acquisition date : 7-JUL-2009 07:06:11

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	-2.386E-02	2.816E-02	4.300E-02	2.482E-03	-0.555
Y-91		1204.90	*	1.025E+01	2.186E+01	3.707E+01	2.212E+00	0.276
NB-94		702.63	*	3.468E-02	3.526E-02	6.272E-02	3.584E-03	0.553
		871.10		9.185E-03	3.538E-02	6.091E-02	5.231E-03	0.151
NB-95		765.79	*	1.709E-02	4.480E-02	7.537E-02	5.065E-03	0.227
NB-95M		235.69	*	-8.833E-02	1.268E-01	1.705E-01	1.258E-02	-0.518
ZR-95		724.18		-9.867E-03	1.211E-01	1.696E-01	1.199E-02	-0.058
		756.15	*	4.131E-02	7.222E-02	1.242E-01	9.528E-03	0.333
NB-97		657.90	*	1.633E-02	7.222E-02	Half-Life too short		
		1024.50		-2.835E+00	7.222E-02	Half-Life too short		
ZR-97		254.15		6.614E-01	7.222E-02	Half-Life too short		
		355.39		-3.164E-01	7.222E-02	Half-Life too short		
		507.63	*	1.245E-01	7.222E-02	Half-Life too short		
		602.52		1.225E+00	7.222E-02	Half-Life too short		
		1021.30		3.046E-01	7.222E-02	Half-Life too short		
		1147.95		-5.634E-01	7.222E-02	Half-Life too short		
		1362.66		9.947E-01	7.222E-02	Half-Life too short		
		1750.46		1.364E+00	7.222E-02	Half-Life too short		
MO-99		140.51		7.061E-02	1.576E+01	2.588E+01	6.957E+00	0.003
		181.06		1.871E+00	1.170E+01	1.739E+01	2.947E+00	0.108
		366.43		2.914E+01	5.750E+01	9.865E+01	5.781E+00	0.295
		739.58	*	-1.228E+00	8.372E+00	1.345E+01	1.882E+00	-0.091
		778.00		-3.039E+01	2.600E+01	3.668E+01	2.540E+00	-0.828
TC-99M		140.51	*	3.720E+06	2.600E+01	Half-Life too short		
RH-101		127.23		-1.304E-02	2.725E-02	4.003E-02	2.299E-03	-0.326
		198.01	*	-7.104E-03	3.109E-02	4.986E-02	2.658E-03	-0.142
		325.23		-2.512E-01	2.199E-01	3.407E-01	2.013E-02	-0.737
RH-102		418.52		-1.640E-01	2.762E-01	4.286E-01	2.497E-02	-0.383
		475.06	*	-3.801E-03	3.011E-02	4.805E-02	2.813E-03	-0.079
		631.29		-4.030E-04	5.213E-02	8.640E-02	4.593E-03	-0.005
		697.49		-7.720E-02	7.512E-02	1.102E-01	6.210E-03	-0.701
		766.84		1.063E-01	1.114E-01	1.967E-01	1.325E-02	0.541
		1046.59		-3.995E-02	1.365E-01	2.183E-01	1.653E-02	-0.183
		1112.84		6.599E-02	2.549E-01	3.995E-01	2.650E-02	0.165
RU-103		497.08	*	-3.066E-02	4.218E-02	6.295E-02	7.969E-03	-0.487
	+	610.33		1.185E+01	2.387E+00	2.956E+00	4.518E-01	4.010
RH-106	+	511.85		8.056E-01	3.593E-01	4.542E-01	2.638E-02	1.773
		621.84	*	3.073E-02	3.092E-01	5.184E-01	5.978E-02	0.059
		1050.47		5.372E-01	2.794E+00	4.685E+00	3.525E-01	0.115
RU-106	+	511.85		8.056E-01	3.593E-01	4.542E-01	2.638E-02	1.773
		621.84	*	3.073E-02	3.092E-01	5.184E-01	2.785E-02	0.059
		1050.47		5.372E-01	2.794E+00	4.685E+00	3.524E-01	0.115
AG-108M		433.93	*	-7.747E-03	2.900E-02	4.603E-02	2.918E-03	-0.168
		614.37		8.223E-03	3.434E-02	5.146E-02	3.057E-03	0.160
		722.95		2.007E-02	4.824E-02	7.210E-02	4.688E-03	0.278
AG-110M		657.75	*	1.647E-02	3.890E-02	5.888E-02	3.272E-03	0.280
		677.61		1.112E-02	3.269E-01	5.399E-01	3.090E-02	0.021
		706.67		-8.162E-02	2.318E-01	3.682E-01	2.255E-02	-0.222
		763.93		-3.698E-02	1.802E-01	2.875E-01	2.012E-02	-0.129

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		-3.086E-02	5.119E-02	8.027E-02	7.318E-03	-0.384
		937.48		-7.239E-02	1.204E-01	1.880E-01	1.707E-02	-0.385
		1384.27		4.465E-02	1.836E-01	2.752E-01	2.087E-02	0.162
IN-111		171.28		6.259E-02	5.882E-01	9.769E-01	5.012E-02	0.064
		245.39	*	-6.063E-02	8.297E-01	1.172E+00	6.633E-02	-0.052
IN-113M		391.69	*	2.266E-02	4.193E-02	7.175E-02	4.420E-03	0.316
SN-113		391.69	*	2.266E-02	4.193E-02	7.175E-02	4.420E-03	0.316
IN-114M		190.27	*	2.054E-02	1.741E-01	2.567E-01	1.353E-02	0.080
CD-115		260.90		-2.002E+01	7.886E+01	1.229E+02	7.056E+00	-0.163
		492.35		-9.705E+00	2.347E+01	3.621E+01	2.114E+00	-0.268
		527.90	*	-2.619E+00	7.956E+00	1.232E+01	7.108E-01	-0.213
SN-117M		156.02		-1.177E+00	1.801E+00	2.890E+00	1.513E-01	-0.407
		158.56	*	7.508E-03	4.194E-02	7.037E-02	3.657E-03	0.107
SB-122		563.90	*	1.353E-01	1.640E+00	2.742E+00	1.551E-01	0.049
		692.80		1.166E+01	2.959E+01	5.050E+01	2.810E+00	0.231
I-123		159.00	*	6.326E-02	2.959E+01	Half-Life too short		
		528.96		-7.303E+01	2.959E+01	Half-Life too short		
TE-123M		159.00	*	1.653E-03	2.325E-02	3.877E-02	2.046E-03	0.043
I-124		602.71	*	3.022E-01	6.467E-01	9.847E-01	5.397E-02	0.307
		722.78		1.594E+00	4.040E+00	6.023E+00	3.629E-01	0.265
		1325.50		-5.407E+00	2.637E+01	4.269E+01	3.101E+00	-0.127
		1376.25		4.381E+01	3.002E+01	5.355E+01	3.913E+00	0.818
		1509.49		7.815E+00	1.380E+01	2.462E+01	1.746E+00	0.317
		1691.02		3.254E+00	3.042E+00	6.036E+00	3.940E-01	0.539
SB-124		602.71		2.154E-02	4.609E-02	7.017E-02	3.847E-03	0.307
		645.85		-1.802E-01	4.941E-01	7.891E-01	4.763E-02	-0.228
		709.31		5.725E-01	2.850E+00	4.759E+00	2.768E-01	0.120
		713.82		5.328E-01	1.493E+00	2.536E+00	2.602E-01	0.210
		722.78		1.647E-01	4.173E-01	6.222E-01	3.913E-02	0.265
		968.20		1.285E+01	3.889E+00	7.493E+00	6.354E-01	1.715
		1045.16		-2.872E-01	2.807E+00	4.577E+00	3.475E-01	-0.063
		1325.50		-5.966E-01	2.909E+00	4.710E+00	3.421E-01	-0.127
		1368.21		-2.284E-01	1.826E+00	2.984E+00	3.784E-01	-0.077
		1436.60		-1.817E+00	3.675E+00	5.559E+00	4.020E-01	-0.327
		1691.02	*	7.928E-02	7.414E-02	1.471E-01	1.025E-02	0.539
SB-125		427.89	*	-3.437E-02	8.619E-02	1.356E-01	8.248E-03	-0.254
	+	463.38		3.506E-01	3.398E-01	5.398E-01	3.677E-02	0.650
		600.56		-2.961E-02	1.891E-01	3.113E-01	2.006E-02	-0.095
		635.90		5.433E-02	2.658E-01	4.489E-01	2.854E-02	0.121
TE-125M		109.28	*	-1.239E+00	7.210E+00	1.223E+01	1.090E+00	-0.101
I-126		388.63		1.492E-01	1.864E-01	3.242E-01	1.875E-02	0.460
		666.33	*	1.128E-01	1.987E-01	3.044E-01	1.575E-02	0.371
		753.82		-2.374E-01	1.464E+00	2.347E+00	1.531E-01	-0.101
SB-126		223.80		-1.321E+00	3.309E+00	5.193E+00	2.868E-01	-0.254
		278.60		4.028E+00	2.164E+00	4.007E+00	2.331E-01	1.005
	+	296.50		1.174E+01	2.399E+00	3.418E+00	2.007E-01	3.436
		414.70		-1.431E-03	6.707E-02	1.095E-01	6.373E-03	-0.013
		415.30		-1.163E+00	5.622E+00	9.038E+00	5.261E-01	-0.129
		555.20		-8.278E-01	3.630E+00	5.979E+00	3.401E-01	-0.138

---- Non-Identified Nuclides ----

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		573.80		1.495E-01	9.493E-01	1.610E+00	9.044E-02	0.093
		593.00		-2.790E-01	7.791E-01	1.255E+00	6.938E-02	-0.222
		656.30		7.804E-01	3.536E+00	5.216E+00	2.685E-01	0.150
		666.33		4.700E-02	8.277E-02	1.268E-01	6.562E-03	0.371
		675.00		7.369E-01	1.988E+00	3.381E+00	1.793E-01	0.218
		695.00		1.477E-02	6.729E-02	1.130E-01	6.324E-03	0.131
		697.00		-3.393E-01	2.479E-01	3.484E-01	1.961E-02	-0.974
		720.50	*	1.019E-01	1.466E-01	2.281E-01	1.366E-02	0.447
		856.80		-8.703E-01	5.659E-01	7.636E-01	6.353E-02	-1.140
		989.30		9.374E-01	1.258E+00	2.241E+00	1.850E-01	0.418
		1034.80		-2.293E+00	9.394E+00	1.510E+01	1.166E+00	-0.152
		1213.00		-1.138E+00	5.145E+00	8.160E+00	4.937E-01	-0.139
SB-127		61.10		6.615E-01	4.476E+01	6.696E+01	7.253E+00	0.010
		252.40		1.321E+00	3.153E+00	5.098E+00	2.112E+00	0.259
		290.80		-7.562E+00	1.506E+01	2.133E+01	1.862E+00	-0.354
		411.60		2.002E+00	9.676E+00	1.607E+01	2.264E+00	0.125
		444.90		-1.509E-01	7.293E+00	1.182E+01	1.232E+00	-0.013
		473.00		-3.955E-01	1.315E+00	2.064E+00	2.234E-01	-0.192
		543.00		1.094E+00	1.369E+01	2.318E+01	2.907E+00	0.047
		603.60		3.515E+00	1.083E+01	1.625E+01	1.655E+00	0.216
		685.20	*	2.390E-01	1.132E+00	1.897E+00	1.661E-01	0.126
		698.50		-1.352E+01	1.179E+01	1.681E+01	2.373E+00	-0.805
		722.20		1.014E+01	2.633E+01	3.926E+01	3.469E+00	0.258
		783.80		1.845E+00	3.028E+00	5.193E+00	5.708E-01	0.355
XE-127		57.60		-1.508E+00	5.882E+00	9.407E+00	8.240E-01	-0.160
		145.22		2.156E-01	5.896E-01	9.970E-01	5.379E-02	0.216
		172.10		-6.707E-03	9.530E-02	1.566E-01	8.042E-03	-0.043
		202.84	*	1.755E-03	4.300E-02	7.009E-02	3.762E-03	0.025
		374.96		-3.448E-02	1.822E-01	2.966E-01	1.730E-02	-0.116
I-131		80.18		3.376E+00	3.546E+00	5.501E+00	5.069E-01	0.614
		284.30		5.704E-01	1.233E+00	2.144E+00	1.387E-01	0.266
		364.48	*	4.338E-02	9.407E-02	1.611E-01	1.051E-02	0.269
		636.97		-5.035E-01	1.414E+00	2.266E+00	1.364E-01	-0.222
		722.89		3.088E+00	7.255E+00	1.086E+01	6.615E-01	0.284
TE-132		49.72		1.455E+01	1.675E+01	2.880E+01	2.975E+00	0.505
		111.76		7.389E+00	1.760E+01	3.064E+01	2.750E+00	0.241
		116.30		1.422E+01	1.714E+01	3.025E+01	2.635E+00	0.470
		228.16	*	5.594E-02	4.826E-01	7.819E-01	1.095E-01	0.072
BA-133		53.15		-2.172E+00	3.855E+00	6.072E+00	5.356E-01	-0.358
		79.62		6.411E-01	1.143E+00	1.728E+00	2.682E-01	0.371
		81.00		2.386E-02	8.331E-02	1.239E-01	2.008E-02	0.193
		276.40		1.800E-01	3.493E-01	6.080E-01	7.885E-02	0.296
		302.84		-4.714E-02	1.469E-01	2.119E-01	2.479E-02	-0.222
		356.01	*	-7.566E-04	4.808E-02	6.867E-02	7.967E-03	-0.011
		383.85		-1.556E-01	2.806E-01	4.412E-01	4.797E-02	-0.353
I-133	+	510.53		5.719E-01	2.806E-01	Half-Life too short		
		529.87	*	-1.553E-03	2.806E-01	Half-Life too short		
		706.58		-5.628E-02	2.806E-01	Half-Life too short		
		856.28		-2.715E-01	2.806E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		875.33		-2.951E-01	2.806E-01	Half-Life too short		
		1236.41		2.934E-01	2.806E-01	Half-Life too short		
		1298.22		-6.052E-02	2.806E-01	Half-Life too short		
CS-134		475.35		-2.125E-01	1.957E+00	3.127E+00	1.830E-01	-0.068
		563.23		9.394E-02	4.054E-01	6.849E-01	3.961E-02	0.137
		569.32		-3.349E-02	2.082E-01	3.215E-01	1.869E-02	-0.104
		604.70		2.144E-02	3.942E-02	6.051E-02	3.331E-03	0.354
	+	795.84	*	1.073E-01	8.278E-02	9.770E-02	7.135E-03	1.098
		801.93		-2.474E-01	4.836E-01	6.198E-01	4.581E-02	-0.399
		1038.57		-2.238E+00	4.519E+00	6.978E+00	5.356E-01	-0.321
		1167.94		2.150E+00	2.730E+00	4.806E+00	2.755E-01	0.447
		1365.15		9.239E-01	1.274E+00	2.330E+00	1.812E-01	0.397
CS-135		268.24	*	-5.465E-02	1.685E-01	2.297E-01	1.755E-02	-0.238
I-135		288.45		1.627E+07	1.685E-01	Half-Life too short		
		417.63		-1.035E+08	1.685E-01	Half-Life too short		
		546.56		-7.932E+07	1.685E-01	Half-Life too short		
		836.80		5.003E+08	1.685E-01	Half-Life too short		
		1038.76		-2.926E+08	1.685E-01	Half-Life too short		
		1124.00		2.430E+09	1.685E-01	Half-Life too short		
		1131.51		1.301E+08	1.685E-01	Half-Life too short		
		1260.41	*	-2.467E+06	1.685E-01	Half-Life too short		
		1457.56		1.327E+10	1.685E-01	Half-Life too short		
		1678.03		3.697E+08	1.685E-01	Half-Life too short		
		1706.46		4.471E+08	1.685E-01	Half-Life too short		
		1791.20		5.643E+07	1.685E-01	Half-Life too short		
CS-136		66.91		-7.745E-01	7.646E-01	1.052E+00	1.629E-01	-0.736
	+	86.29		3.871E+00	1.153E+00	1.569E+00	2.125E-01	2.467
		153.22		4.063E-01	5.179E-01	8.959E-01	6.097E-02	0.453
		163.89		6.353E-01	8.499E-01	1.462E+00	9.824E-02	0.435
		176.55		7.899E-02	2.889E-01	4.830E-01	2.879E-02	0.164
		273.65		-1.686E-01	4.403E-01	5.948E-01	3.933E-02	-0.283
		340.57		2.524E-01	1.322E-01	2.220E-01	1.390E-02	1.137
		818.51		6.934E-02	6.822E-02	1.225E-01	9.348E-03	0.566
		1048.07	*	-1.194E-02	1.199E-01	1.956E-01	1.558E-02	-0.061
		1235.34		7.677E-01	7.175E-01	1.129E+00	1.160E-01	0.680
CE-139		165.85	*	-1.314E-02	2.558E-02	4.115E-02	2.098E-03	-0.319
BA-140		162.64		3.719E-01	5.896E-01	1.010E+00	6.001E-02	0.368
		304.84		1.451E-01	1.228E+00	1.841E+00	5.029E-01	0.079
		423.70		9.736E-01	1.660E+00	2.795E+00	8.886E-01	0.348
		537.32	*	-8.930E-02	2.474E-01	4.019E-01	1.307E-01	-0.222
LA-140		328.77		5.202E-01	2.790E-01	5.116E-01	3.374E-02	1.017
		432.53		4.175E-01	1.731E+00	2.880E+00	1.857E-01	0.145
		487.03		4.184E-03	1.252E-01	2.022E-01	1.335E-02	0.021
		751.79		-2.515E-01	1.659E+00	2.660E+00	2.041E-01	-0.095
		815.85		-1.527E-01	3.118E-01	4.746E-01	4.125E-02	-0.322
		867.82		-2.621E-01	1.448E+00	2.277E+00	2.046E-01	-0.115
		919.63		8.467E-01	2.731E+00	4.280E+00	4.665E-01	0.198
		925.24		2.490E-03	9.324E-01	1.556E+00	1.464E-01	0.002
		1596.49	*	3.557E-03	8.944E-02	1.473E-01	1.011E-02	0.024

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	-1.302E-03	5.291E-02	8.780E-02	4.952E-03	-0.015
CE-143		57.37		-2.828E-04	5.291E-02	Half-Life too short		
		231.56		4.866E-04	5.291E-02	Half-Life too short		
		293.26	*	1.577E-04	5.291E-02	Half-Life too short		
	+	350.59		1.514E-02	5.291E-02	Half-Life too short		
		490.36		-6.494E-04	5.291E-02	Half-Life too short		
		664.57		1.058E-03	5.291E-02	Half-Life too short		
		721.93		5.893E-04	5.291E-02	Half-Life too short		
CE-144		80.11		1.724E+00	1.823E+00	2.828E+00	2.592E-01	0.610
		133.54	*	1.316E-02	1.675E-01	2.818E-01	3.979E-02	0.047
PM-144		476.78		5.215E-03	7.119E-02	1.155E-01	8.071E-03	0.045
		618.01		-1.626E-03	2.952E-02	4.881E-02	2.816E-03	-0.033
		696.49	*	-3.269E-02	3.298E-02	4.846E-02	2.726E-03	-0.675
		778.57		-1.713E+00	2.418E+00	3.623E+00	2.513E-01	-0.473
PR-144		696.49	*	-2.214E+00	2.233E+00	3.282E+00	1.845E-01	-0.675
		1489.15		6.189E-01	1.182E+01	1.967E+01	1.404E+00	0.031
PM-146		453.90	*	-1.593E-02	4.627E-02	7.286E-02	6.310E-03	-0.219
		633.02		-1.089E+00	1.401E+00	2.048E+00	7.526E-01	-0.532
		735.90		-4.860E-02	1.591E-01	2.510E-01	7.023E-02	-0.194
		747.13		-1.527E-02	9.322E-02	1.494E-01	1.912E-02	-0.102
ND-147	+	91.11		7.203E-01	1.755E-01	3.814E-01	3.750E-02	1.888
		319.41		-1.474E+00	2.735E+00	4.410E+00	2.605E-01	-0.334
		439.89		2.654E+00	5.093E+00	8.647E+00	5.061E-01	0.307
		531.02	*	3.886E-02	5.264E-01	8.929E-01	1.206E-01	0.044
PM-149		285.90	*	8.411E+00	5.537E+01	9.455E+01	1.341E+01	0.089
EU-152		121.78		2.624E-02	5.979E-02	1.036E-01	7.965E-03	0.253
		244.69		-7.137E-02	3.548E-01	4.957E-01	2.804E-02	-0.144
		344.27	*	4.344E-02	9.256E-02	1.543E-01	1.023E-02	0.282
		443.98		-3.612E-01	9.379E-01	1.472E+00	8.617E-02	-0.245
		778.89		-1.383E-01	2.768E-01	4.251E-01	2.950E-02	-0.325
		867.32		-4.936E-01	9.167E-01	1.379E+00	1.174E-01	-0.358
		964.01		1.045E-01	3.822E-01	5.652E-01	4.816E-02	0.185
		1085.78		6.760E-02	4.650E-01	7.745E-01	5.450E-02	0.087
		1112.02		2.136E-01	3.402E-01	5.834E-01	3.878E-02	0.366
		1407.95		6.455E-02	2.046E-01	3.535E-01	2.571E-02	0.183
GD-153		69.67		-6.367E-02	1.568E+00	2.311E+00	2.019E-01	-0.028
		83.37		2.220E+00	1.289E+01	2.022E+01	1.898E+00	0.110
		97.43	*	-8.980E-02	7.688E-02	9.956E-02	8.134E-03	-0.902
		103.18		-3.148E-03	9.066E-02	1.403E-01	1.048E-02	-0.022
EU-154		123.07		1.517E-02	4.221E-02	7.281E-02	6.872E-03	0.208
		247.94		3.450E-02	3.447E-01	5.539E-01	5.243E-02	0.062
		591.81		-1.852E-01	5.706E-01	9.226E-01	8.875E-02	-0.201
		723.30		2.290E-02	2.028E-01	2.915E-01	2.120E-02	0.079
		756.87		4.642E-01	7.906E-01	1.361E+00	1.442E-01	0.341
		873.19		-8.350E-02	3.111E-01	5.078E-01	6.220E-02	-0.164
		996.32		-1.763E-01	3.952E-01	6.210E-01	1.090E-01	-0.284
		1004.76		2.142E-02	2.397E-01	4.002E-01	4.501E-02	0.054
		1274.45	*	-9.466E-02	1.499E-01	2.236E-01	2.220E-02	-0.423
EU-155		48.70		1.603E+00	2.902E+00	4.918E+00	3.967E-01	0.326

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		60.01		-6.149E-01	5.039E+00	7.474E+00	6.491E-01	-0.082
	+	86.54		3.828E-01	1.081E-01	1.632E-01	1.586E-02	2.346
		105.31	*	6.007E-02	8.417E-02	1.491E-01	1.100E-02	0.403
TB-160	+	86.79		1.010E+00	2.851E-01	4.407E-01	4.258E-02	2.292
		197.04		-2.047E-01	5.105E-01	8.107E-01	4.316E-02	-0.252
		215.65		1.871E-01	6.677E-01	1.098E+00	5.999E-02	0.170
	+	298.57		2.644E-01	1.422E-01	1.872E-01	1.100E-02	1.412
		879.36	*	1.060E-01	1.481E-01	2.646E-01	2.314E-02	0.401
		962.29		1.337E-01	6.342E-01	9.335E-01	7.971E-02	0.143
		966.15		5.497E-01	2.922E-01	4.943E-01	4.201E-02	1.112
		1177.93		1.641E-01	3.826E-01	6.510E-01	3.704E-02	0.252
		1271.85		-2.275E-01	7.992E-01	1.244E+00	8.303E-02	-0.183
HO-166M		80.57		1.475E-01	2.348E-01	3.571E-01	3.284E-02	0.413
		184.41		2.147E-02	3.241E-02	5.551E-02	2.901E-03	0.387
		280.46		-9.089E-02	8.371E-02	1.331E-01	7.753E-03	-0.683
		410.95		2.140E-01	2.530E-01	4.383E-01	2.548E-02	0.488
		711.68	*	-1.720E-03	6.094E-02	9.958E-02	5.828E-03	-0.017
		752.31		-2.864E-01	2.935E-01	4.287E-01	2.786E-02	-0.668
		810.29		-6.160E-02	5.927E-02	8.331E-02	6.231E-03	-0.739
TM-171		51.35		-1.603E+01	3.328E+01	5.281E+01	4.591E+00	-0.303
		52.39		-1.301E+01	1.664E+01	2.578E+01	2.264E+00	-0.505
		59.40		1.853E+01	2.678E+01	4.206E+01	3.654E+00	0.441
		66.72	*	-2.481E+01	2.946E+01	4.148E+01	3.607E+00	-0.598
LU-176	+	88.36		7.543E-01	2.129E-01	3.001E-01	2.909E-02	2.514
		201.83		5.954E-03	2.667E-02	4.392E-02	2.354E-03	0.136
		306.84	*	2.757E-02	2.300E-02	4.144E-02	2.442E-03	0.665
		401.10		-7.382E+00	6.856E+00	1.031E+01	5.970E-01	-0.716
LU-177		112.95		-8.133E-01	1.124E+00	1.847E+00	1.211E-01	-0.440
		208.36	*	8.683E-01	9.486E-01	1.607E+00	8.695E-02	0.540
LU-177M		52.97		-1.025E+00	1.732E+00	2.723E+00	2.400E-01	-0.376
		54.07		5.890E-01	8.992E-01	1.522E+00	1.345E-01	0.387
		61.30		2.093E-01	1.445E+00	2.181E+00	1.894E-01	0.096
		121.62		1.282E-01	3.045E-01	5.274E-01	3.117E-02	0.243
		147.16		2.538E-01	5.413E-01	9.260E-01	4.967E-02	0.274
		171.86		-5.180E-03	3.928E-01	6.477E-01	3.325E-02	-0.008
		218.09		2.110E-01	7.533E-01	1.238E+00	6.786E-02	0.170
		268.79		7.279E-01	8.801E-01	1.325E+00	7.654E-02	0.550
		319.02		-1.724E-01	2.325E-01	3.693E-01	2.181E-02	-0.467
		367.43		7.125E-01	8.290E-01	1.458E+00	8.539E-02	0.489
		413.65	*	-1.460E-01	1.765E-01	2.696E-01	1.569E-02	-0.541
HF-181		56.28		-8.376E-01	9.568E-01	1.469E+00	1.294E-01	-0.570
		57.53		-1.660E-01	4.952E-01	7.879E-01	6.904E-02	-0.211
		65.20		-4.807E-01	9.675E-01	1.387E+00	1.205E-01	-0.347
		133.02		-6.149E-03	5.517E-02	8.799E-02	4.939E-03	-0.070
		136.25		-1.486E-01	3.712E-01	6.114E-01	3.393E-02	-0.243
		345.85		-4.034E-02	1.940E-01	2.779E-01	1.639E-02	-0.145
		482.03	*	2.961E-03	4.462E-02	7.229E-02	4.228E-03	0.041
W-181		56.28		-3.327E-01	3.798E-01	5.832E-01	5.136E-02	-0.570
		57.53		-6.639E-02	1.967E-01	3.129E-01	2.742E-02	-0.212

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		65.20	*	-1.895E-01	3.813E-01	5.467E-01	4.750E-02	-0.347
TA-182		67.75		-1.178E-03	9.946E-02	1.599E-01	1.392E-02	-0.007
		100.10		1.160E-01	1.608E-01	2.563E-01	2.006E-02	0.453
		152.43		-2.540E-02	2.802E-01	4.648E-01	2.457E-02	-0.055
		222.10		-1.817E-01	3.061E-01	4.745E-01	2.615E-02	-0.383
		1001.68		1.836E+00	2.209E+00	3.943E+00	3.202E-01	0.466
	+	1121.28		6.706E-01	2.779E-01	3.866E-01	2.514E-02	1.735
		1189.05		-1.003E-01	3.143E-01	4.891E-01	2.838E-02	-0.205
		1221.42	*	-8.923E-02	2.172E-01	3.365E-01	2.066E-02	-0.265
		1230.97		-2.277E-02	6.121E-01	8.426E-01	5.256E-02	-0.027
RE-183		57.98		6.567E-02	1.907E-01	3.159E-01	2.762E-02	0.208
		59.32		8.047E-02	1.093E-01	1.721E-01	1.496E-02	0.468
		67.20		-1.046E-01	1.990E-01	2.866E-01	2.494E-02	-0.365
		162.32	*	4.311E-02	9.076E-02	1.543E-01	7.936E-03	0.279
		208.81		1.302E+00	9.542E-01	1.649E+00	8.926E-02	0.790
		291.72		-3.722E-01	8.262E-01	1.177E+00	6.898E-02	-0.316
RE-184		57.98		2.438E-01	7.080E-01	1.173E+00	1.026E-01	0.208
		59.32		2.985E-01	4.054E-01	6.385E-01	5.549E-02	0.468
		67.20		-3.884E-01	7.386E-01	1.064E+00	9.256E-02	-0.365
		161.27		-1.757E-01	2.964E-01	4.756E-01	2.453E-02	-0.370
		216.55		1.319E-02	2.387E-01	3.872E-01	2.118E-02	0.034
		252.85	*	2.972E-02	2.153E-01	3.463E-01	1.975E-02	0.086
		318.01		-1.840E-01	4.076E-01	6.622E-01	3.910E-02	-0.278
		792.07		-1.637E-01	1.187E+00	1.626E+00	1.165E-01	-0.101
		903.28		8.249E-01	1.228E+00	1.932E+00	1.751E-01	0.427
		920.93		1.152E-01	4.364E-01	7.354E-01	6.559E-02	0.157
OS-185		59.72		1.274E-01	2.896E-01	4.474E-01	3.885E-02	0.285
		61.14		2.688E-03	1.599E-01	2.391E-01	2.077E-02	0.011
		69.30		-3.989E-02	2.640E-01	4.194E-01	3.662E-02	-0.095
		592.07		-3.816E-01	2.238E+00	3.673E+00	2.033E-01	-0.104
		646.12	*	-4.131E-02	4.502E-02	6.812E-02	3.555E-03	-0.606
		717.42		-3.868E-01	8.684E-01	1.355E+00	8.049E-02	-0.286
		874.81		-4.057E-01	6.418E-01	1.009E+00	8.739E-02	-0.402
		880.27		7.606E-01	8.142E-01	1.482E+00	1.299E-01	0.513
RE-188		155.03	*	8.251E-02	1.428E-01	2.446E-01	1.283E-02	0.337
		477.96		-7.040E-01	3.239E+00	5.126E+00	3.000E-01	-0.137
		633.10		-2.429E+00	2.707E+00	4.087E+00	2.168E-01	-0.594
W-188	+	63.58		5.077E+01	8.286E+01	9.118E+01	7.919E+00	0.557
		227.08		6.410E+00	1.165E+01	1.938E+01	1.075E+00	0.331
		290.67	*	-2.815E+00	6.556E+00	9.367E+00	5.485E-01	-0.301
IR-192	+	295.96		9.564E-01	1.957E-01	2.868E-01	1.709E-02	3.335
		308.46		-4.070E-02	8.650E-02	1.409E-01	8.394E-03	-0.289
		316.51	*	5.632E-03	3.132E-02	5.316E-02	3.153E-03	0.106
		468.07		1.295E-02	7.339E-02	1.058E-01	7.129E-03	0.122
		604.41		2.517E-01	5.249E-01	8.000E-01	8.949E-02	0.315
		612.46		1.923E+00	8.152E-01	1.453E+00	1.060E-01	1.323
AU-195		65.12		-8.937E-02	1.772E-01	2.540E-01	2.206E-02	-0.352
		66.83		-9.694E-02	9.734E-02	1.354E-01	1.178E-02	-0.716
	+	75.70		1.173E+00	2.362E-01	3.941E-01	3.519E-02	2.977

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	1.539E-01	2.032E-01	3.248E-01	2.591E-02	0.474
	+	129.76		3.491E+00	2.904E+00	4.056E+00	2.305E-01	0.861
TL-200		367.94	*	1.839E-05	2.904E+00	Half-Life too short		
		579.30		5.960E-04	2.904E+00	Half-Life too short		
		828.27		6.665E-04	2.904E+00	Half-Life too short		
		1205.75		6.758E-04	2.904E+00	Half-Life too short		
TL-201		68.90		-2.014E+00	3.202E+00	4.947E+00	4.315E-01	-0.407
		70.82		2.330E-02	1.929E+00	2.849E+00	2.496E-01	0.008
		80.30		3.087E+00	3.205E+00	4.975E+00	4.566E-01	0.620
		135.34		5.947E+00	1.522E+01	2.612E+01	1.454E+00	0.228
		167.43	*	1.494E+00	4.430E+00	7.458E+00	3.807E-01	0.200
TL-202		68.90		-2.270E-01	3.609E-01	5.577E-01	4.865E-02	-0.407
		70.82		2.619E-03	2.169E-01	3.202E-01	2.806E-02	0.008
		80.30		3.471E-01	3.605E-01	5.595E-01	5.135E-02	0.620
		439.56	*	3.126E-02	6.008E-02	1.021E-01	5.972E-03	0.306
HG-203		70.83		1.330E-02	9.932E-01	1.467E+00	2.009E-01	0.009
		72.87		4.171E-01	5.309E-01	8.769E-01	1.169E-01	0.476
		82.60		-8.691E-01	9.242E-01	1.369E+00	1.944E-01	-0.635
		279.20	*	4.050E-02	3.807E-02	6.809E-02	4.206E-03	0.595
BI-207		72.80		1.162E-01	1.581E-01	2.614E-01	2.305E-02	0.444
	+	74.97		6.540E-01	1.317E-01	2.160E-01	1.922E-02	3.028
		84.90		1.369E-01	1.742E-01	2.629E-01	2.499E-02	0.521
		569.67		-5.231E-03	3.251E-02	5.019E-02	2.828E-03	-0.104
		1063.62	*	3.734E-02	5.560E-02	9.796E-02	7.197E-03	0.381
		1770.23		7.352E-02	7.818E-01	1.074E+00	6.651E-02	0.068
TL-207		81.07		3.776E-02	1.846E-01	2.730E-01	2.519E-02	0.138
		83.78		9.086E-02	1.175E-01	1.774E-01	1.671E-02	0.512
		94.90		2.505E-01	2.013E-01	3.142E-01	2.681E-02	0.797
		122.32		9.833E-01	1.416E+00	2.482E+00	1.679E-01	0.396
		144.24		3.986E-01	5.922E-01	1.015E+00	7.031E-02	0.393
		154.21		2.941E-01	3.381E-01	5.867E-01	3.856E-02	0.501
	+	269.46		5.910E-01	2.359E-01	3.287E-01	1.987E-02	1.798
		323.87	*	-6.706E-01	6.356E-01	9.732E-01	1.611E-01	-0.689
	+	338.28		4.888E+00	1.670E+00	2.373E+00	2.514E-01	2.059
		445.03		-1.822E-01	2.177E+00	3.509E+00	3.615E-01	-0.052
PO-209		260.50		-4.210E+00	8.850E+00	1.356E+01	7.782E-01	-0.311
		262.80		-2.410E+01	2.505E+01	3.681E+01	2.118E+00	-0.655
		896.60	*	-1.915E+00	8.105E+00	1.325E+01	1.203E+00	-0.145
BI-210		46.50	*	-3.213E+00	4.506E+00	6.903E+00	5.375E-01	-0.465
PB-210		46.50	*	-3.213E+00	4.506E+00	6.903E+00	5.375E-01	-0.465
PO-210		46.50	*	-3.213E+00	4.504E+00	6.903E+00	4.631E-01	-0.465
PB-211		404.84	*	2.445E-01	1.006E+00	1.658E+00	1.033E+00	0.148
		427.08		-7.786E-01	1.925E+00	2.924E+00	1.808E+00	-0.266
		831.96		-1.156E+00	1.484E+00	1.881E+00	1.177E+00	-0.615
BI-212	+	727.18	*	1.680E+00	5.378E-01	7.900E-01	6.270E-02	2.127
		785.46		1.857E+00	1.834E+00	3.261E+00	2.299E-01	0.570
		1620.62		2.119E+00	1.421E+00	2.854E+00	1.936E-01	0.743
PO-215		81.07		3.776E-02	1.846E-01	2.730E-01	2.519E-02	0.138
		83.78		9.086E-02	1.175E-01	1.774E-01	1.671E-02	0.512

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		2.505E-01	2.013E-01	3.142E-01	2.681E-02	0.797
		122.32		9.833E-01	1.416E+00	2.482E+00	1.679E-01	0.396
		144.24		3.986E-01	5.922E-01	1.015E+00	7.031E-02	0.393
		154.21		2.941E-01	3.381E-01	5.867E-01	3.856E-02	0.501
	+	269.46		5.910E-01	2.359E-01	3.287E-01	1.987E-02	1.798
		323.87	*	-6.706E-01	6.356E-01	9.732E-01	1.611E-01	-0.689
	+	338.28		4.888E+00	1.670E+00	2.373E+00	2.514E-01	2.059
		445.03		-1.822E-01	2.177E+00	3.509E+00	3.615E-01	-0.052
RN-219	+	271.23		7.583E-01	3.054E-01	4.340E-01	3.514E-02	1.747
		401.81	*	-1.949E-01	4.237E-01	6.700E-01	9.114E-02	-0.291
RN-220		549.76	*	-1.860E+01	2.633E+01	4.162E+01	2.375E+00	-0.447
RA-223		81.07		3.776E-02	1.846E-01	2.730E-01	2.519E-02	0.138
		83.78		9.086E-02	1.175E-01	1.774E-01	1.671E-02	0.512
		94.90		2.505E-01	2.013E-01	3.142E-01	2.681E-02	0.797
		122.32		9.833E-01	1.416E+00	2.482E+00	1.679E-01	0.396
		144.24		3.986E-01	5.922E-01	1.015E+00	7.031E-02	0.393
		154.21		2.941E-01	3.381E-01	5.867E-01	3.856E-02	0.501
	+	269.46		5.910E-01	2.359E-01	3.287E-01	1.987E-02	1.798
		323.87	*	-6.706E-01	6.356E-01	9.732E-01	1.611E-01	-0.689
	+	338.28		4.888E+00	1.670E+00	2.373E+00	2.514E-01	2.059
		445.03		-1.822E-01	2.177E+00	3.509E+00	3.615E-01	-0.052
AC-227		79.80		8.966E-01	1.460E+00	2.204E+00	4.786E-01	0.407
		236.00		1.224E-02	2.276E-01	3.264E-01	3.376E-02	0.037
		256.20	*	-3.104E-02	3.584E-01	5.668E-01	7.894E-02	-0.055
		286.10		9.930E-02	1.396E+00	2.373E+00	2.748E-01	0.042
	+	299.80		3.410E+00	1.906E+00	2.610E+00	4.257E-01	1.307
		304.40		-5.849E-01	1.972E+00	2.848E+00	4.935E-01	-0.205
		334.20		-1.108E+00	2.547E+00	3.584E+00	6.584E-01	-0.309
TH-227		79.80		8.966E-01	1.460E+00	2.204E+00	4.846E-01	0.407
	+	94.00		1.111E+01	3.737E+00	3.394E+00	7.397E-01	3.274
		236.00		1.224E-02	2.276E-01	3.264E-01	2.915E-02	0.037
		256.20	*	-3.104E-02	3.584E-01	5.668E-01	9.563E-02	-0.055
		286.10		9.930E-02	1.400E+00	2.373E+00	2.377E+00	0.042
	+	299.80		3.410E+00	1.906E+00	2.610E+00	4.257E-01	1.307
		304.40		-5.849E-01	1.972E+00	2.848E+00	4.935E-01	-0.205
		334.20		-1.108E+00	2.547E+00	3.584E+00	6.584E-01	-0.309
TH-229		85.43		-3.006E-02	1.770E-01	2.516E-01	2.402E-02	-0.119
	+	88.47		4.342E-01	1.225E-01	1.687E-01	1.631E-02	2.574
		100.00		1.352E-01	1.690E-01	2.705E-01	2.121E-02	0.500
		193.63	*	1.281E-01	4.327E-01	7.189E-01	3.808E-02	0.178
		210.97		6.777E-01	7.225E-01	1.228E+00	6.666E-02	0.552
PA-231		283.67	*	5.973E-01	1.435E+00	2.485E+00	3.428E-01	0.240
	+	301.29		1.364E+00	7.432E-01	1.014E+00	1.064E-01	1.346
TH-231		81.07		3.776E-02	1.846E-01	2.730E-01	2.519E-02	0.138
		83.78		9.086E-02	1.175E-01	1.774E-01	1.671E-02	0.512
		94.90		2.505E-01	2.013E-01	3.142E-01	2.681E-02	0.797
		122.32		9.833E-01	1.416E+00	2.482E+00	1.679E-01	0.396
		144.24		3.986E-01	5.922E-01	1.015E+00	7.031E-02	0.393
		154.21		2.941E-01	3.381E-01	5.867E-01	3.856E-02	0.501

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.910E-01	2.359E-01	3.287E-01	1.987E-02	1.798
		323.87	*	-6.706E-01	6.356E-01	9.732E-01	1.611E-01	-0.689
	+	338.28		4.888E+00	1.670E+00	2.373E+00	2.514E-01	2.059
		445.03		-1.822E-01	2.177E+00	3.509E+00	3.615E-01	-0.052
U-231		84.21		6.025E+00	3.946E+00	6.193E+00	5.853E-01	0.973
	+	92.29		8.822E+00	2.386E+00	3.081E+00	2.758E-01	2.864
		95.87	*	1.628E-01	7.529E-01	1.099E+00	9.217E-02	0.148
		108.00		-1.147E+00	1.290E+00	2.106E+00	1.472E-01	-0.545
PA-233	+	75.28		1.909E+01	4.543E+00	6.295E+00	9.766E-01	3.032
	+	86.59		6.226E+00	2.364E+00	2.667E+00	7.245E-01	2.334
	+	300.12		9.506E-01	5.242E-01	7.252E-01	9.769E-02	1.311
		311.98	*	1.743E-02	5.706E-02	9.778E-02	6.113E-03	0.178
		340.50		1.434E+00	7.641E-01	1.176E+00	2.704E-01	1.220
		398.62		4.334E-01	1.960E+00	3.269E+00	8.451E-01	0.133
		415.76		8.116E-01	1.558E+00	2.640E+00	5.437E-01	0.307
PA-234	+	63.00		1.492E+00	2.443E+00	2.728E+00	4.238E-01	0.547
		94.67		3.109E-01	1.541E-01	2.454E-01	3.034E-02	1.267
		98.44		5.921E-02	8.895E-02	1.320E-01	7.351E-02	0.449
		99.86		3.725E-01	4.311E-01	6.923E-01	5.438E-02	0.538
		111.00		1.255E-01	1.439E-01	2.552E-01	2.761E-02	0.492
		131.20		-7.628E-02	9.362E-02	1.336E-01	7.551E-03	-0.571
		152.70		6.448E-02	2.718E-01	4.583E-01	7.161E-02	0.141
	+	186.00		4.318E+00	2.374E+00	2.449E+00	7.460E-01	1.763
		226.40		1.377E-01	3.674E-01	6.048E-01	6.914E-02	0.228
		227.20		2.302E-01	3.996E-01	6.654E-01	3.690E-02	0.346
		248.90		1.559E-01	7.702E-01	1.245E+00	2.671E-01	0.125
	+	293.70		6.095E+00	1.545E+00	1.517E+00	2.443E-01	4.019
		369.80		-6.889E-01	8.128E-01	1.234E+00	2.571E-01	-0.558
		568.70		-1.317E-01	1.072E+00	1.665E+00	9.388E-02	-0.079
		569.50		-4.641E-02	2.885E-01	4.454E-01	2.510E-02	-0.104
		574.00		1.046E-01	1.478E+00	2.489E+00	1.398E-01	0.042
		699.00		-5.595E-01	6.874E-01	1.021E+00	1.831E-01	-0.548
		706.10		6.010E-02	1.158E+00	1.908E+00	8.419E-01	0.032
		733.00		1.480E-01	4.477E-01	6.601E-01	1.411E-01	0.224
		742.81		-1.603E-01	1.322E+00	2.121E+00	1.420E+00	-0.076
	+	796.30		2.088E+00	1.697E+00	1.903E+00	5.070E-01	1.097
		805.60		5.371E-01	1.068E+00	1.801E+00	5.463E-01	0.298
		819.60		3.764E-01	1.307E+00	2.164E+00	8.184E-01	0.174
		826.30		6.897E-01	8.902E-01	1.459E+00	6.507E-01	0.473
		831.60		-5.413E-01	6.810E-01	9.683E-01	2.869E-01	-0.559
		876.40		-3.781E-01	9.830E-01	1.452E+00	1.493E+00	-0.260
		880.51		3.007E-01	2.999E-01	5.484E-01	4.808E-02	0.548
		883.24		-9.264E-02	3.065E-01	4.874E-01	3.277E-01	-0.190
		899.00		1.317E-01	9.209E-01	1.559E+00	6.831E-01	0.084
		925.00		6.529E-02	1.016E+00	1.709E+00	1.518E-01	0.038
		926.50		-1.084E-01	1.646E-01	2.485E-01	6.304E-02	-0.436
		946.00	*	-9.921E-02	3.278E-01	5.280E-01	9.925E-02	-0.188
		949.00		3.860E-01	4.701E-01	8.445E-01	7.320E-02	0.457
		980.50		-2.296E-01	7.525E-01	1.205E+00	1.006E-01	-0.190

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		1.408E-01	1.362E+00	2.287E+00	1.485E+00	0.062
PA-234M		766.41		1.677E+01	2.168E+01	3.098E+01	2.369E+01	0.541
		1001.03	*	3.553E+00	7.232E+00	1.253E+01	1.354E+00	0.284
U-235	+	89.95		3.118E+00	1.191E+00	1.688E+00	5.246E-01	1.847
	+	93.35		3.456E+00	1.313E+00	1.236E+00	3.470E-01	2.796
		105.00		5.892E-01	8.429E-01	1.463E+00	4.314E-01	0.403
		143.76	*	8.030E-02	1.840E-01	3.116E-01	5.040E-02	0.258
		163.35		4.149E-01	4.045E-01	6.953E-01	1.236E-01	0.597
	+	185.71		1.599E-01	7.369E-02	9.085E-02	4.757E-03	1.760
		205.31		-1.658E-01	4.867E-01	7.744E-01	1.383E-01	-0.214
NP-236		94.67		2.381E-01	1.151E-01	1.865E-01	1.597E-02	1.277
		98.44		4.475E-02	6.255E-02	9.976E-02	8.017E-03	0.449
		111.00		9.494E-02	1.086E-01	1.931E-01	1.297E-02	0.492
		160.31	*	-4.658E-02	6.610E-02	1.054E-01	5.449E-03	-0.442
NP-239		99.55		1.376E-01	1.446E-01	2.333E-01	1.842E-02	0.590
		117.00	*	-9.936E-02	1.561E-01	2.572E-01	1.605E-02	-0.386
		209.75		1.110E+00	7.574E-01	1.315E+00	7.127E-02	0.844
		228.18		2.687E-02	2.092E-01	3.393E-01	1.884E-02	0.079
		277.60		1.668E-01	1.723E-01	3.067E-01	1.783E-02	0.544
		334.30		-6.341E-01	1.439E+00	2.030E+00	1.199E-01	-0.312
AM-241		59.54	*	9.487E-02	1.547E-01	2.417E-01	2.249E-02	0.393
CM-243		99.55		1.416E-01	1.488E-01	2.400E-01	1.895E-02	0.590
		103.76	*	-3.192E-02	7.653E-02	1.287E-01	9.536E-03	-0.248
		117.00		-1.022E-01	1.606E-01	2.646E-01	1.651E-02	-0.386
		209.75		1.094E+00	7.465E-01	1.296E+00	7.025E-02	0.844
		228.18		2.715E-02	2.114E-01	3.428E-01	1.903E-02	0.079
		277.60		1.682E-01	1.737E-01	3.092E-01	1.798E-02	0.544
CM-247		278.00		1.101E+00	7.136E-01	1.303E+00	7.577E-02	0.845
		287.40		3.604E-02	1.079E+00	1.830E+00	1.070E-01	0.020
		402.60	*	2.941E-02	3.735E-02	6.467E-02	3.749E-03	0.455
CF-249		252.85		1.121E-01	8.122E-01	1.307E+00	7.450E-02	0.086
		333.44		-1.497E-01	1.903E-01	2.594E-01	1.533E-02	-0.577
		387.95	*	2.326E-02	3.910E-02	6.712E-02	3.884E-03	0.346
CF-251		176.60	*	2.858E-02	1.068E-01	1.785E-01	9.223E-03	0.160
		227.00		1.882E-01	3.539E-01	5.880E-01	3.260E-02	0.320
		285.00		1.180E+00	1.602E+00	2.827E+00	1.650E-01	0.417

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433015      *
* Acquisition date :  7-JUL-2009 07:06:11 Detector SN#     :               *
* Detector ID        : GAM23               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:03.54     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232433015           Analyst initials: MXR1         *
* Batch Number       : 881219               Sample Quantity : 1.2228E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	1.994E+01	2.261E+00	6.223E-01	0.000E+00
CD-109	3.229E+00	8.931E-01	9.527E-01	0.000E+00
SN-126	3.180E-01	8.795E-02	9.435E-02	0.000E+00
BA-137M	1.864E-01	7.649E-02	6.419E-02	0.000E+00
CS-137	1.970E-01	8.087E-02	6.785E-02	0.000E+00
TL-208	3.813E-01	8.041E-02	6.129E-02	0.000E+00
BI-211	3.718E+00	4.810E-01	2.989E-01	0.000E+00
PB-212	1.232E+00	1.466E-01	1.178E-01	0.000E+00
PO-212	1.232E+00	1.466E-01	1.178E-01	0.000E+00
BI-214	1.123E+00	1.664E-01	1.159E-01	0.000E+00
PB-214	1.293E+00	1.799E-01	1.042E-01	0.000E+00
PO-214	1.293E+00	1.799E-01	1.042E-01	0.000E+00
PO-216	1.232E+00	1.466E-01	1.178E-01	0.000E+00
PO-218	1.293E+00	1.799E-01	1.042E-01	0.000E+00
RA-224	2.593E+00	9.846E-01	1.190E+00	0.000E+00
RA-226	1.123E+00	1.664E-01	1.159E-01	0.000E+00
AC-228	1.422E+00	3.527E-01	2.366E-01	0.000E+00
RA-228	1.422E+00	3.527E-01	2.366E-01	0.000E+00
TH-228	1.232E+00	1.466E-01	1.178E-01	0.000E+00
TH-230	1.123E+00	1.663E-01	1.159E-01	0.000E+00
TH-232	1.422E+00	3.527E-01	2.366E-01	0.000E+00
TH-234	1.280E+00	2.057E+00	1.934E+00	0.000E+00
U-234	1.123E+00	1.663E-01	1.159E-01	0.000E+00
NP-237	9.339E-01	3.200E-01	3.507E-01	0.000E+00
U-238	1.280E+00	2.057E+00	1.934E+00	0.000E+00
AM-243	3.644E-01	7.189E-02	7.892E-02	0.000E+00
ANH-511	1.617E-01	7.068E-02	4.269E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	2.234E-02	3.259E-01	5.463E-01	0.000E+00	NOT IDENT.
NA-22	-3.487E-02	5.241E-02	7.963E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.810E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.892E-02	3.292E-02	4.907E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.522E-02	7.047E-02	0.000E+00	FAIL ABUN
SC-46	-8.068E-03	3.740E-02	6.276E-02	0.000E+00	FAIL ABUN
V-48	-4.954E-02	6.774E-02	1.053E-01	0.000E+00	NOT IDENT.
CR-51	-1.107E-01	3.236E-01	5.505E-01	0.000E+00	NOT IDENT.
MN-52	1.081E-01	1.909E-01	3.505E-01	0.000E+00	NOT IDENT.
MN-54	2.359E-02	4.044E-02	7.052E-02	0.000E+00	NOT IDENT.
CO-56	-6.285E-02	4.422E-02	6.114E-02	0.000E+00	NOT IDENT.
CO-57	1.386E-02	1.997E-02	3.680E-02	0.000E+00	NOT IDENT.
CO-58	-5.715E-02	3.887E-02	5.259E-02	0.000E+00	NOT IDENT.
FE-59	-6.860E-02	9.393E-02	1.441E-01	0.000E+00	NOT IDENT.
CO-60	-1.351E-02	4.194E-02	6.844E-02	0.000E+00	NOT IDENT.
ZN-65	-3.564E-02	1.101E-01	1.499E-01	0.000E+00	NOT IDENT.
GE-68	1.111E+00	1.261E+00	2.316E+00	0.000E+00	NOT IDENT.
AS-73	-1.263E-01	8.426E-01	1.448E+00	0.000E+00	NOT IDENT.
AS-74	-3.420E-02	8.171E-02	1.352E-01	0.000E+00	NOT IDENT.
SE-75	3.397E-02	3.867E-02	6.782E-02	0.000E+00	NOT IDENT.
BR-77	-6.106E+00	7.622E+00	1.110E+01	0.000E+00	FAIL ABUN
SR-82	-5.091E-02	3.672E-01	6.035E-01	0.000E+00	NOT IDENT.
RB-83	-6.728E-02	7.263E-02	1.041E-01	0.000E+00	NOT IDENT.
RB-84	3.296E-02	7.112E-02	1.275E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.502E+00	1.446E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.793E-02	7.312E-02	0.000E+00	NOT IDENT.
RB-86	5.495E-01	7.693E-01	1.391E+00	0.000E+00	NOT IDENT.
Y-88	1.446E-02	3.154E-02	5.866E-02	0.000E+00	NOT IDENT.
ZR-88	-2.386E-02	2.760E-02	4.366E-02	0.000E+00	NOT IDENT.
Y-91	1.025E+01	2.143E+01	3.710E+01	0.000E+00	NOT IDENT.
NB-94	3.468E-02	3.455E-02	6.321E-02	0.000E+00	NOT IDENT.
NB-95	1.709E-02	4.391E-02	7.588E-02	0.000E+00	NOT IDENT.
NB-95M	-8.833E-02	1.243E-01	1.742E-01	0.000E+00	NOT IDENT.
ZR-95	4.131E-02	7.077E-02	1.250E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.938E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.445E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.228E+00	8.205E+00	1.355E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	8.138E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-7.104E-03	3.047E-02	5.107E-02	0.000E+00	NOT IDENT.
RH-102	-3.801E-03	2.951E-02	4.867E-02	0.000E+00	NOT IDENT.
RU-103	-3.066E-02	4.133E-02	6.373E-02	0.000E+00	FAIL ABUN
RH-106	3.073E-02	3.031E-01	5.233E-01	0.000E+00	FAIL ABUN
RU-106	3.073E-02	3.030E-01	5.233E-01	0.000E+00	FAIL ABUN
AG-108M	-7.747E-03	2.842E-02	4.668E-02	0.000E+00	NOT IDENT.
AG-110M	1.647E-02	3.812E-02	5.939E-02	0.000E+00	NOT IDENT.
IN-111	-6.063E-02	8.131E-01	1.197E+00	0.000E+00	NOT IDENT.
IN-113M	2.266E-02	4.109E-02	7.285E-02	0.000E+00	NOT IDENT.
SN-113	2.266E-02	4.109E-02	7.285E-02	0.000E+00	NOT IDENT.
IN-114M	2.054E-02	1.706E-01	2.630E-01	0.000E+00	NOT IDENT.
CD-115	-2.619E+00	7.797E+00	1.246E+01	0.000E+00	NOT IDENT.
SN-117M	7.508E-03	4.110E-02	7.227E-02	0.000E+00	NOT IDENT.
SB-122	1.353E-01	1.607E+00	2.771E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.716E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.653E-03	2.278E-02	3.981E-02	0.000E+00	NOT IDENT.
I-124	3.022E-01	6.338E-01	9.944E-01	0.000E+00	NOT IDENT.
SB-124	7.928E-02	7.266E-02	1.465E-01	0.000E+00	NOT IDENT.
SB-125	-3.437E-02	8.447E-02	1.375E-01	0.000E+00	FAIL ABUN
TE-125M	-1.239E+00	7.066E+00	1.262E+01	0.000E+00	NOT IDENT.
I-126	1.128E-01	1.947E-01	3.070E-01	0.000E+00	NOT IDENT.
SB-126	1.019E-01	1.436E-01	2.298E-01	0.000E+00	FAIL ABUN
SB-127	2.390E-01	1.109E+00	1.913E+00	0.000E+00	NOT IDENT.
XE-127	1.755E-03	4.214E-02	7.176E-02	0.000E+00	NOT IDENT.
I-131	4.338E-02	9.219E-02	1.638E-01	0.000E+00	NOT IDENT.
TE-132	5.594E-02	4.730E-01	7.994E-01	0.000E+00	NOT IDENT.
BA-133	-7.566E-04	4.712E-02	6.981E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.294E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	8.113E-02	9.831E-02	0.000E+00	FAIL ABUN
CS-135	-5.465E-02	1.651E-01	2.343E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.213E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.194E-02	1.175E-01	1.961E-01	0.000E+00	FAIL ABUN
CE-139	-1.314E-02	2.507E-02	4.223E-02	0.000E+00	NOT IDENT.
BA-140	-8.930E-02	2.424E-01	4.064E-01	0.000E+00	NOT IDENT.
LA-140	3.557E-03	8.765E-02	1.469E-01	0.000E+00	NOT IDENT.
CE-141	-1.302E-03	5.185E-02	9.027E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.477E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.316E-02	1.642E-01	2.900E-01	0.000E+00	NOT IDENT.
PM-144	-3.269E-02	3.232E-02	4.885E-02	0.000E+00	NOT IDENT.
PR-144	-2.214E+00	2.188E+00	3.308E+00	0.000E+00	NOT IDENT.

PM-146	-1.593E-02	4.534E-02	7.384E-02	0.000E+00	NOT IDENT.
ND-147	3.886E-02	5.159E-01	9.032E-01	0.000E+00	FAIL ABUN
PM-149	8.411E+00	5.426E+01	9.639E+01	0.000E+00	NOT IDENT.
EU-152	4.344E-02	9.071E-02	1.569E-01	0.000E+00	NOT IDENT.
GD-153	-8.980E-02	7.535E-02	1.029E-01	0.000E+00	NOT IDENT.
EU-154	-9.466E-02	1.469E-01	2.236E-01	0.000E+00	NOT IDENT.
EU-155	6.007E-02	8.249E-02	1.539E-01	0.000E+00	FAIL ABUN
TB-160	1.060E-01	1.451E-01	2.659E-01	0.000E+00	FAIL ABUN
HO-166M	-1.720E-03	5.972E-02	1.003E-01	0.000E+00	NOT IDENT.
TM-171	-2.481E+01	2.887E+01	4.305E+01	0.000E+00	NOT IDENT.
LU-176	2.757E-02	2.254E-02	4.221E-02	0.000E+00	FAIL ABUN
LU-177	8.683E-01	9.297E-01	1.645E+00	0.000E+00	NOT IDENT.
LU-177M	-1.460E-01	1.730E-01	2.736E-01	0.000E+00	NOT IDENT.
HF-181	2.961E-03	4.373E-02	7.320E-02	0.000E+00	NOT IDENT.
W-181	-1.895E-01	3.737E-01	5.677E-01	0.000E+00	NOT IDENT.
TA-182	-8.923E-02	2.128E-01	3.367E-01	0.000E+00	FAIL ABUN
RE-183	4.311E-02	8.894E-02	1.584E-01	0.000E+00	NOT IDENT.
RE-184	2.972E-02	2.110E-01	3.536E-01	0.000E+00	NOT IDENT.
OS-185	-4.131E-02	4.412E-02	6.873E-02	0.000E+00	NOT IDENT.
RE-188	8.251E-02	1.399E-01	2.512E-01	0.000E+00	NOT IDENT.
W-188	-2.815E+00	6.424E+00	9.547E+00	0.000E+00	FAIL ABUN
IR-192	5.632E-03	3.069E-02	5.412E-02	0.000E+00	FAIL ABUN
AU-195	1.539E-01	1.992E-01	3.355E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.811E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.494E+00	4.341E+00	7.655E+00	0.000E+00	NOT IDENT.
TL-202	3.126E-02	5.888E-02	1.035E-01	0.000E+00	NOT IDENT.
HG-203	4.050E-02	3.731E-02	6.944E-02	0.000E+00	NOT IDENT.
BI-207	3.734E-02	5.449E-02	9.819E-02	0.000E+00	FAIL ABUN
TL-207	-6.706E-01	6.229E-01	9.906E-01	0.000E+00	FAIL ABUN
PO-209	-1.915E+00	7.943E+00	1.331E+01	0.000E+00	NOT IDENT.
BI-210	-3.213E+00	4.416E+00	7.196E+00	0.000E+00	NOT IDENT.
PB-210	-3.213E+00	4.416E+00	7.196E+00	0.000E+00	NOT IDENT.
PO-210	-3.213E+00	4.414E+00	7.196E+00	0.000E+00	NOT IDENT.
PB-211	2.445E-01	9.856E-01	1.682E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.270E-01	7.958E-01	0.000E+00	FAIL ABUN
PO-215	-6.706E-01	6.229E-01	9.906E-01	0.000E+00	FAIL ABUN
RN-219	-1.949E-01	4.152E-01	6.801E-01	0.000E+00	FAIL ABUN
RN-220	-1.860E+01	2.580E+01	4.208E+01	0.000E+00	NOT IDENT.
RA-223	-6.706E-01	6.229E-01	9.906E-01	0.000E+00	FAIL ABUN
AC-227	-3.104E-02	3.513E-01	5.786E-01	0.000E+00	FAIL ABUN
TH-227	-3.104E-02	3.513E-01	5.786E-01	0.000E+00	FAIL ABUN
TH-229	1.281E-01	4.240E-01	7.365E-01	0.000E+00	FAIL ABUN
PA-231	5.973E-01	1.407E+00	2.534E+00	0.000E+00	FAIL ABUN
TH-231	-6.706E-01	6.229E-01	9.906E-01	0.000E+00	FAIL ABUN
U-231	1.628E-01	7.378E-01	1.135E+00	0.000E+00	FAIL ABUN
PA-233	1.743E-02	5.591E-02	9.957E-02	0.000E+00	FAIL ABUN
PA-234	-9.921E-02	3.213E-01	5.301E-01	0.000E+00	FAIL ABUN
PA-234M	3.553E+00	7.088E+00	1.257E+01	0.000E+00	NOT IDENT.
U-235	8.030E-02	1.803E-01	3.204E-01	0.000E+00	FAIL ABUN
NP-236	-4.658E-02	6.478E-02	1.082E-01	0.000E+00	NOT IDENT.
NP-239	-9.936E-02	1.530E-01	2.651E-01	0.000E+00	NOT IDENT.
AM-241	9.487E-02	1.516E-01	2.512E-01	0.000E+00	NOT IDENT.
CM-243	-3.192E-02	7.499E-02	1.329E-01	0.000E+00	NOT IDENT.
CM-247	2.941E-02	3.660E-02	6.565E-02	0.000E+00	NOT IDENT.
CF-249	2.326E-02	3.832E-02	6.816E-02	0.000E+00	NOT IDENT.
CF-251	2.858E-02	1.047E-01	1.830E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:07:01.20

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433015.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 07:06:11.
Sample ID         : G232433015           Sample quantity  : 1.22280E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.54  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	691	10.67*	9.965E-01	1.994E+01	1.994E+01	11.57
CD-109	88.03	200	3.72*	5.231E+00	3.163E+00	3.229E+00	28.22
SN-126	64.28	41	9.60	2.573E+00	5.067E-01	5.067E-01	163.68
	86.94	200	8.90	5.231E+00	1.322E+00	1.322E+00	49.32
	87.57	200	37.00*	5.231E+00	3.180E-01	3.180E-01	28.22
BA-137M	661.65	111	89.98*	2.039E+00	1.862E-01	1.864E-01	41.87
CS-137	661.65	111	85.12*	2.039E+00	1.969E-01	1.970E-01	41.88
TL-208	277.35	------	6.80	4.140E+00	------ Line Not Found		------
	510.84	134	21.60	2.542E+00	7.485E-01	7.485E-01	45.38
	583.14	238	84.20*	2.274E+00	3.813E-01	3.813E-01	21.52
	860.37	------	12.46	1.609E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.829E+00	------ Line Not Found		------
	351.07	539	12.94*	3.438E+00	3.718E+00	3.718E+00	13.20
PB-212	74.81	318	10.70	4.064E+00	2.247E+00	2.247E+00	22.20
	77.11	501	18.00	4.317E+00	1.979E+00	1.979E+00	15.43
	87.30	200	8.00	5.231E+00	1.471E+00	1.471E+00	29.94
	238.63	829	44.60*	4.632E+00	1.232E+00	1.232E+00	12.13
	300.09	80	3.41	3.896E+00	1.840E+00	1.840E+00	54.11
PO-212	74.81	318	10.70	4.064E+00	2.247E+00	2.247E+00	22.20
	77.11	501	18.00	4.317E+00	1.979E+00	1.979E+00	15.43
	87.30	200	8.00	5.231E+00	1.471E+00	1.471E+00	29.94
	115.19	------	0.60	6.293E+00	------ Line Not Found		------
	238.63	829	44.60*	4.632E+00	1.232E+00	1.232E+00	12.13
	300.09	80	3.41	3.896E+00	1.840E+00	1.840E+00	54.11
BI-214	609.31	371	46.30*	2.191E+00	1.123E+00	1.123E+00	15.11
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	------	3.21	1.491E+00	------ Line Not Found		------
	1120.29	88	15.10	1.257E+00	1.430E+00	1.430E+00	41.96
	1238.11	------	5.94	1.148E+00	------ Line Not Found		------
	1377.67	24	4.11	1.045E+00	1.679E+00	1.679E+00	88.31
	1764.49	76	15.80	8.738E-01	1.690E+00	1.690E+00	23.77
PB-214	74.81	318	6.21	4.064E+00	3.872E+00	3.872E+00	21.45

Sample ID : G232433015 Acquisition date : 7-JUL-2009 07:06:11

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	501	10.50	4.317E+00	3.392E+00	3.392E+00	17.21
	87.30	200	4.67	5.231E+00	2.520E+00	2.520E+00	29.26
	241.98	153	7.49	4.591E+00	1.367E+00	1.367E+00	39.15
	295.21	313	19.20	3.946E+00	1.270E+00	1.270E+00	21.37
	351.92	539	37.20*	3.438E+00	1.293E+00	1.293E+00	14.20
PO-214	74.81	318	6.21	4.064E+00	3.872E+00	3.872E+00	21.45
	77.11	501	10.50	4.317E+00	3.392E+00	3.392E+00	17.21
	87.30	200	4.67	5.231E+00	2.520E+00	2.520E+00	29.26
	241.98	153	7.49	4.591E+00	1.367E+00	1.367E+00	39.15
	295.21	313	19.20	3.946E+00	1.270E+00	1.270E+00	21.37
	351.92	539	37.20*	3.438E+00	1.293E+00	1.293E+00	14.20
PO-216	74.81	318	10.70	4.064E+00	2.247E+00	2.247E+00	22.20
	77.11	501	18.00	4.317E+00	1.979E+00	1.979E+00	15.43
	87.30	200	8.00	5.231E+00	1.471E+00	1.471E+00	29.94
	238.63	829	44.60*	4.632E+00	1.232E+00	1.232E+00	12.13
	300.09	80	3.41	3.896E+00	1.840E+00	1.840E+00	54.11
PO-218	74.81	318	6.21	4.064E+00	3.872E+00	3.872E+00	21.45
	77.11	501	10.50	4.317E+00	3.392E+00	3.392E+00	17.21
	87.30	200	4.67	5.231E+00	2.520E+00	2.520E+00	29.26
	241.98	153	7.49	4.591E+00	1.367E+00	1.367E+00	39.15
	295.21	313	19.20	3.946E+00	1.270E+00	1.270E+00	21.37
	351.92	539	37.20*	3.438E+00	1.293E+00	1.293E+00	14.20
RA-224	240.98	153	3.95*	4.591E+00	2.593E+00	2.593E+00	38.75
RA-226	609.31	371	46.30*	2.191E+00	1.123E+00	1.123E+00	15.11
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	------	3.21	1.491E+00	------ Line Not Found		------
	1120.29	88	15.10	1.257E+00	1.430E+00	1.430E+00	41.96
	1238.11	------	5.94	1.148E+00	------ Line Not Found		------
	1377.67	24	4.11	1.045E+00	1.679E+00	1.679E+00	88.31
	1764.49	76	15.80	8.738E-01	1.690E+00	1.690E+00	23.77
AC-228	338.32	154	11.40	3.545E+00	1.171E+00	1.171E+00	52.14
	911.07	196	27.70*	1.525E+00	1.422E+00	1.422E+00	25.31
	969.11	88	16.60	1.438E+00	1.129E+00	1.129E+00	55.60
RA-228	338.32	154	11.40	3.545E+00	1.171E+00	1.171E+00	52.14
	911.07	196	27.70*	1.525E+00	1.422E+00	1.422E+00	25.31
	969.11	88	16.60	1.438E+00	1.129E+00	1.129E+00	55.60
TH-228	84.40	------	1.21	5.004E+00	------ Line Not Found		------
	238.60	829	44.60*	4.632E+00	1.232E+00	1.232E+00	12.13
	300.10	80	3.41	3.896E+00	1.840E+00	1.840E+00	79.58
TH-230	609.31	371	46.30*	2.191E+00	1.123E+00	1.123E+00	15.11
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	------	3.21	1.491E+00	------ Line Not Found		------
	1120.29	88	15.10	1.257E+00	1.430E+00	1.430E+00	41.96
	1238.11	------	5.94	1.148E+00	------ Line Not Found		------
	1377.67	24	4.11	1.045E+00	1.679E+00	1.679E+00	88.31
	1764.49	76	15.80	8.738E-01	1.690E+00	1.690E+00	23.77
TH-232	338.32	154	11.40	3.545E+00	1.171E+00	1.171E+00	33.02
	911.07	196	27.70*	1.525E+00	1.422E+00	1.422E+00	25.31
	969.11	88	16.60	1.438E+00	1.129E+00	1.129E+00	55.60

Sample ID : G232433015 Acquisition date : 7-JUL-2009 07:06:11

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	41	3.80*	2.573E+00	1.280E+00	1.280E+00	163.97
	92.38	284	5.41	5.596E+00	2.875E+00	2.875E+00	31.37
U-234	609.31	371	46.30*	2.191E+00	1.123E+00	1.123E+00	15.11
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	------	3.21	1.491E+00	------ Line Not Found		------
	1120.29	88	15.10	1.257E+00	1.430E+00	1.430E+00	41.96
	1238.11	------	5.94	1.148E+00	------ Line Not Found		------
	1377.67	24	4.11	1.045E+00	1.679E+00	1.679E+00	88.31
	1764.49	76	15.80	8.738E-01	1.690E+00	1.690E+00	23.77
NP-237	86.50	200	12.60*	5.231E+00	9.339E-01	9.339E-01	34.96
	95.87	------	2.60	5.757E+00	------ Line Not Found		------
U-238	63.29	41	3.80*	2.573E+00	1.280E+00	1.280E+00	163.97
	92.38	284	5.41	5.596E+00	2.875E+00	2.875E+00	27.04
AM-243	74.67	318	66.00*	4.064E+00	3.644E-01	3.644E-01	20.13
	86.72	200	0.34	5.231E+00	3.502E+01	3.502E+01	28.22
	117.66	------	0.55	6.314E+00	------ Line Not Found		------
	142.18	------	0.13	6.209E+00	------ Line Not Found		------
ANH-511	511.00	134	100.00*	2.542E+00	1.617E-01	1.617E-01	44.61

Flag: "*" = Keyline

Sample ID : G232433015 Acquisition date : 7-JUL-2009 07:06:11

Total number of lines in spectrum 29
Number of unidentified lines 1
Number of lines tentatively identified by NID 28 96.55%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.994E+01	1.994E+01	0.231E+01	11.57	
CD-109	464.00D	1.02	3.163E+00	3.229E+00	0.911E+00	28.22	
SN-126	1.00E+05Y	1.00	3.180E-01	3.180E-01	0.897E-01	28.22	
BA-137M	30.17Y	1.00	1.862E-01	1.864E-01	0.781E-01	41.87	
CS-137	30.17Y	1.00	1.969E-01	1.970E-01	0.825E-01	41.88	
TL-208	1.41E+10Y	1.00	3.813E-01	3.813E-01	0.820E-01	21.52	
BI-211	7.04E+08Y	1.00	3.718E+00	3.718E+00	0.491E+00	13.20	
PB-212	1.41E+10Y	1.00	1.232E+00	1.232E+00	0.150E+00	12.13	
PO-212	1.41E+10Y	1.00	1.232E+00	1.232E+00	0.150E+00	12.13	
BI-214	1600.00Y	1.00	1.123E+00	1.123E+00	0.170E+00	15.11	
PB-214	1600.00Y	1.00	1.293E+00	1.293E+00	0.184E+00	14.20	
PO-214	1600.00Y	1.00	1.293E+00	1.293E+00	0.184E+00	14.20	
PO-216	1.41E+10Y	1.00	1.232E+00	1.232E+00	0.150E+00	12.13	
PO-218	1600.00Y	1.00	1.293E+00	1.293E+00	0.184E+00	14.20	
RA-224	1.41E+10Y	1.00	2.593E+00	2.593E+00	1.005E+00	38.75	
RA-226	1600.00Y	1.00	1.123E+00	1.123E+00	0.170E+00	15.11	
AC-228	1.41E+10Y	1.00	1.422E+00	1.422E+00	0.360E+00	25.31	
RA-228	1.41E+10Y	1.00	1.422E+00	1.422E+00	0.360E+00	25.31	
TH-228	1.41E+10Y	1.00	1.232E+00	1.232E+00	0.150E+00	12.13	
TH-230	4.47E+09Y	1.00	1.123E+00	1.123E+00	0.170E+00	15.11	
TH-232	1.41E+10Y	1.00	1.422E+00	1.422E+00	0.360E+00	25.31	
TH-234	4.47E+09Y	1.00	1.280E+00	1.280E+00	2.099E+00	163.97	
U-234	4.47E+09Y	1.00	1.123E+00	1.123E+00	0.170E+00	15.11	
NP-237	2.14E+06Y	1.00	9.339E-01	9.339E-01	3.265E-01	34.96	
U-238	4.47E+09Y	1.00	1.280E+00	1.280E+00	2.099E+00	163.97	
AM-243	7380.00Y	1.00	3.644E-01	3.644E-01	0.734E-01	20.13	
ANH-511	1.00E+09Y	1.00	1.617E-01	1.617E-01	0.721E-01	44.61	
	Total Activity :		5.208E+01	5.215E+01			

Grand Total Activity : 5.208E+01 5.215E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232433015 Acquisition date : 7-JUL-2009 07:06:11

It.	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
6	89.93	149	96	0.90	180.05	178	15	2.06E-02	22.2	5.42E+00	T
0	129.23	55	171	0.98	258.66	255	7	7.68E-03	83.0	6.32E+00	T
0	186.10	154	272	1.29	372.43	366	11	2.14E-02	45.8	5.48E+00	T
0	270.43	111	112	0.84	541.14	537	9	1.53E-02	39.5	4.22E+00	T
0	462.82	32	72	0.85	926.05	923	8	4.49E-03	96.7	2.76E+00	T
0	727.28	121	49	2.01	1455.21	1447	15	1.68E-02	31.0	1.88E+00	T
0	796.08	46	53	1.52	1592.88	1585	15	6.37E-03	76.8	1.73E+00	T
0	1239.77	68	54	0.91	2480.83	2471	22	9.49E-03	60.3	1.15E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:07:06.39

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232433015.CNF;1 *
* Acquisition date  : 7-JUL-2009 07:06:11.  Detector SN#     :             *
* Detector ID       : GAM23                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:03.54          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232433015            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 1.22280E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 2-JUN-2009 11:17:00.62MS Isotope      :                *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.994E+01	2.307E+00	6.233E-01	4.663E-02	31.984
CD-109	3.229E+00	9.113E-01	9.209E-01	8.990E-02	3.506
SN-126	3.180E-01	8.975E-02	9.120E-02	8.874E-03	3.487
BA-137M	1.864E-01	7.805E-02	6.364E-02	3.251E-03	2.929
CS-137	1.970E-01	8.252E-02	6.728E-02	3.455E-03	2.929
TL-208	3.813E-01	8.205E-02	6.067E-02	3.939E-03	6.285
BI-211	3.718E+00	4.909E-01	2.940E-01	1.915E-02	12.647
PB-212	1.232E+00	1.495E-01	1.153E-01	8.291E-03	10.687
PO-212	1.232E+00	1.495E-01	1.153E-01	8.291E-03	10.687
BI-214	1.123E+00	1.697E-01	1.148E-01	8.628E-03	9.788
PB-214	1.293E+00	1.836E-01	1.025E-01	8.556E-03	12.617
PO-214	1.293E+00	1.836E-01	1.025E-01	8.556E-03	12.617
PO-216	1.232E+00	1.495E-01	1.153E-01	8.291E-03	10.687
PO-218	1.293E+00	1.836E-01	1.025E-01	8.556E-03	12.617
RA-224	2.593E+00	1.005E+00	1.165E+00	6.562E-02	2.226
RA-226	1.123E+00	1.697E-01	1.148E-01	8.628E-03	9.788
AC-228	1.422E+00	3.599E-01	2.356E-01	2.718E-02	6.036
RA-228	1.422E+00	3.599E-01	2.356E-01	2.718E-02	6.036

Sample ID : G232433015 Acquisition date : 7-JUL-2009 07:06:11

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.232E+00	1.495E-01	1.153E-01	8.290E-03	10.688
TH-230	1.123E+00	1.697E-01	1.148E-01	8.628E-03	9.788
TH-232	1.422E+00	3.599E-01	2.356E-01	2.718E-02	6.036
TH-234	1.280E+00	2.099E+00	1.862E+00	3.355E-01	0.687
U-234	1.123E+00	1.697E-01	1.148E-01	8.628E-03	9.788
NP-237	9.339E-01	3.265E-01	3.389E-01	7.719E-02	2.755
U-238	1.280E+00	2.099E+00	1.862E+00	3.355E-01	0.687
AM-243	3.644E-01	7.335E-02	7.614E-02	6.766E-03	4.785
ANH-511	1.617E-01	7.212E-02	4.219E-02	2.451E-03	3.832

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.234E-02		3.326E-01	5.393E-01	3.665E-02	0.041
NA-22	-3.487E-02		5.348E-02	7.962E-02	5.347E-03	-0.438
NA-24	-7.205E-02		9.233E-02	Half-Life too short		
AL-26	-1.892E-02		3.359E-02	4.929E-02	2.962E-03	-0.384
TI-44	3.651E-01	+	5.635E-02	6.803E-02	6.166E-03	5.367
SC-46	-8.068E-03		3.816E-02	6.246E-02	5.581E-03	-0.129
V-48	-4.954E-02		6.912E-02	1.050E-01	8.733E-03	-0.472
CR-51	-1.107E-01		3.302E-01	5.407E-01	3.546E-02	-0.205
MN-52	1.081E-01		1.948E-01	3.510E-01	2.540E-02	0.308
MN-54	2.359E-02		4.126E-02	7.013E-02	5.553E-03	0.336
CO-56	-6.285E-02		4.512E-02	6.081E-02	4.947E-03	-1.034
CO-57	1.386E-02		2.038E-02	3.572E-02	2.106E-03	0.388
CO-58	-5.715E-02		3.966E-02	5.227E-02	3.927E-03	-1.093
FE-59	-6.860E-02		9.585E-02	1.438E-01	1.108E-02	-0.477
CO-60	-1.351E-02		4.280E-02	6.848E-02	5.027E-03	-0.197
ZN-65	-3.564E-02		1.124E-01	1.497E-01	9.885E-03	-0.238
GE-68	1.111E+00		1.287E+00	2.310E+00	1.654E-01	0.481
AS-73	-1.263E-01		8.598E-01	1.391E+00	1.228E-01	-0.091
AS-74	-3.420E-02		8.337E-02	1.339E-01	7.383E-03	-0.255
SE-75	3.397E-02		3.946E-02	6.646E-02	3.869E-03	0.511
BR-77	-6.106E+00		7.777E+00	1.098E+01	6.353E-01	-0.556
SR-82	-5.091E-02		3.747E-01	5.995E-01	4.136E-02	-0.085
RB-83	-6.728E-02		7.411E-02	1.029E-01	5.955E-03	-0.654
RB-84	3.296E-02		7.258E-02	1.269E-01	1.115E-02	0.260
KR-85	1.785E+01		7.655E+00	1.429E+01	8.292E-01	1.249
SR-85	9.025E-02		3.871E-02	7.226E-02	4.193E-03	1.249
RB-86	5.495E-01		7.850E-01	1.388E+00	9.944E-02	0.396
Y-88	1.446E-02		3.218E-02	5.894E-02	3.471E-03	0.245
ZR-88	-2.386E-02		2.816E-02	4.300E-02	2.482E-03	-0.555
Y-91	1.025E+01		2.186E+01	3.707E+01	2.212E+00	0.276
NB-94	3.468E-02		3.526E-02	6.272E-02	3.584E-03	0.553
NB-95	1.709E-02		4.480E-02	7.537E-02	5.065E-03	0.227
NB-95M	-8.833E-02		1.268E-01	1.705E-01	1.258E-02	-0.518
ZR-95	4.131E-02		7.222E-02	1.242E-01	9.528E-03	0.333

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	1.633E-02		1.499E-02	Half-Life too short		
ZR-97	1.245E-01		2.778E-01	Half-Life too short		
MO-99	-1.228E+00		8.372E+00	1.345E+01	1.882E+00	-0.091
TC-99M	3.720E+06		4.152E+08	Half-Life too short		
RH-101	-7.104E-03		3.109E-02	4.986E-02	2.658E-03	-0.142
RH-102	-3.801E-03		3.011E-02	4.805E-02	2.813E-03	-0.079
RU-103	-3.066E-02		4.218E-02	6.295E-02	7.969E-03	-0.487
RH-106	3.073E-02		3.092E-01	5.184E-01	5.978E-02	0.059
RU-106	3.073E-02		3.092E-01	5.184E-01	2.785E-02	0.059
AG-108M	-7.747E-03		2.900E-02	4.603E-02	2.918E-03	-0.168
AG-110M	1.647E-02		3.890E-02	5.888E-02	3.272E-03	0.280
IN-111	-6.063E-02		8.297E-01	1.172E+00	6.633E-02	-0.052
IN-113M	2.266E-02		4.193E-02	7.175E-02	4.420E-03	0.316
SN-113	2.266E-02		4.193E-02	7.175E-02	4.420E-03	0.316
IN-114M	2.054E-02		1.741E-01	2.567E-01	1.353E-02	0.080
CD-115	-2.619E+00		7.956E+00	1.232E+01	7.108E-01	-0.213
SN-117M	7.508E-03		4.194E-02	7.037E-02	3.657E-03	0.107
SB-122	1.353E-01		1.640E+00	2.742E+00	1.551E-01	0.049
I-123	6.326E-02		4.447E-01	Half-Life too short		
TE-123M	1.653E-03		2.325E-02	3.877E-02	2.046E-03	0.043
I-124	3.022E-01		6.467E-01	9.847E-01	5.397E-02	0.307
SB-124	7.928E-02		7.414E-02	1.471E-01	1.025E-02	0.539
SB-125	-3.437E-02		8.619E-02	1.356E-01	8.248E-03	-0.254
TE-125M	-1.239E+00		7.210E+00	1.223E+01	1.090E+00	-0.101
I-126	1.128E-01		1.987E-01	3.044E-01	1.575E-02	0.371
SB-126	1.019E-01		1.466E-01	2.281E-01	1.366E-02	0.447
SB-127	2.390E-01		1.132E+00	1.897E+00	1.661E-01	0.126
XE-127	1.755E-03		4.300E-02	7.009E-02	3.762E-03	0.025
I-131	4.338E-02		9.407E-02	1.611E-01	1.051E-02	0.269
TE-132	5.594E-02		4.826E-01	7.819E-01	1.095E-01	0.072
BA-133	-7.566E-04		4.808E-02	6.867E-02	7.967E-03	-0.011
I-133	-1.553E-03		1.171E-03	Half-Life too short		
CS-134	1.073E-01	+	8.278E-02	9.770E-02	7.135E-03	1.098
CS-135	-5.465E-02		1.685E-01	2.297E-01	1.755E-02	-0.238
I-135	-2.467E+06		1.129E+08	Half-Life too short		
CS-136	-1.194E-02		1.199E-01	1.956E-01	1.558E-02	-0.061
CE-139	-1.314E-02		2.558E-02	4.115E-02	2.098E-03	-0.319
BA-140	-8.930E-02		2.474E-01	4.019E-01	1.307E-01	-0.222
LA-140	3.557E-03		8.944E-02	1.473E-01	1.011E-02	0.024
CE-141	-1.302E-03		5.291E-02	8.780E-02	4.952E-03	-0.015
CE-143	1.577E-04		3.815E-05	Half-Life too short		
CE-144	1.316E-02		1.675E-01	2.818E-01	3.979E-02	0.047
PM-144	-3.269E-02		3.298E-02	4.846E-02	2.726E-03	-0.675
PR-144	-2.214E+00		2.233E+00	3.282E+00	1.845E-01	-0.675
PM-146	-1.593E-02		4.627E-02	7.286E-02	6.310E-03	-0.219
ND-147	3.886E-02		5.264E-01	8.929E-01	1.206E-01	0.044
PM-149	8.411E+00		5.537E+01	9.455E+01	1.341E+01	0.089
EU-152	4.344E-02		9.256E-02	1.543E-01	1.023E-02	0.282

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-8.980E-02		7.688E-02	9.956E-02	8.134E-03	-0.902
EU-154	-9.466E-02		1.499E-01	2.236E-01	2.220E-02	-0.423
EU-155	6.007E-02		8.417E-02	1.491E-01	1.100E-02	0.403
TB-160	1.060E-01		1.481E-01	2.646E-01	2.314E-02	0.401
HO-166M	-1.720E-03		6.094E-02	9.958E-02	5.828E-03	-0.017
TM-171	-2.481E+01		2.946E+01	4.148E+01	3.607E+00	-0.598
LU-176	2.757E-02		2.300E-02	4.144E-02	2.442E-03	0.665
LU-177	8.683E-01		9.486E-01	1.607E+00	8.695E-02	0.540
LU-177M	-1.460E-01		1.765E-01	2.696E-01	1.569E-02	-0.541
HF-181	2.961E-03		4.462E-02	7.229E-02	4.228E-03	0.041
W-181	-1.895E-01		3.813E-01	5.467E-01	4.750E-02	-0.347
TA-182	-8.923E-02		2.172E-01	3.365E-01	2.066E-02	-0.265
RE-183	4.311E-02		9.076E-02	1.543E-01	7.936E-03	0.279
RE-184	2.972E-02		2.153E-01	3.463E-01	1.975E-02	0.086
OS-185	-4.131E-02		4.502E-02	6.812E-02	3.555E-03	-0.606
RE-188	8.251E-02		1.428E-01	2.446E-01	1.283E-02	0.337
W-188	-2.815E+00		6.556E+00	9.367E+00	5.485E-01	-0.301
IR-192	5.632E-03		3.132E-02	5.316E-02	3.153E-03	0.106
AU-195	1.539E-01		2.032E-01	3.248E-01	2.591E-02	0.474
TL-200	1.839E-05		9.242E-05	Half-Life too short		
TL-201	1.494E+00		4.430E+00	7.458E+00	3.807E-01	0.200
TL-202	3.126E-02		6.008E-02	1.021E-01	5.972E-03	0.306
HG-203	4.050E-02		3.807E-02	6.809E-02	4.206E-03	0.595
BI-207	3.734E-02		5.560E-02	9.796E-02	7.197E-03	0.381
TL-207	-6.706E-01		6.356E-01	9.732E-01	1.611E-01	-0.689
PO-209	-1.915E+00		8.105E+00	1.325E+01	1.203E+00	-0.145
BI-210	-3.213E+00		4.506E+00	6.903E+00	5.375E-01	-0.465
PB-210	-3.213E+00		4.506E+00	6.903E+00	5.375E-01	-0.465
PO-210	-3.213E+00		4.504E+00	6.903E+00	4.631E-01	-0.465
PB-211	2.445E-01		1.006E+00	1.658E+00	1.033E+00	0.148
BI-212	1.680E+00	+	5.378E-01	7.900E-01	6.270E-02	2.127
PO-215	-6.706E-01		6.356E-01	9.732E-01	1.611E-01	-0.689
RN-219	-1.949E-01		4.237E-01	6.700E-01	9.114E-02	-0.291
RN-220	-1.860E+01		2.633E+01	4.162E+01	2.375E+00	-0.447
RA-223	-6.706E-01		6.356E-01	9.732E-01	1.611E-01	-0.689
AC-227	-3.104E-02		3.584E-01	5.668E-01	7.894E-02	-0.055
TH-227	-3.104E-02		3.584E-01	5.668E-01	9.563E-02	-0.055
TH-229	1.281E-01		4.327E-01	7.189E-01	3.808E-02	0.178
PA-231	5.973E-01		1.435E+00	2.485E+00	3.428E-01	0.240
TH-231	-6.706E-01		6.356E-01	9.732E-01	1.611E-01	-0.689
U-231	1.628E-01		7.529E-01	1.099E+00	9.217E-02	0.148
PA-233	1.743E-02		5.706E-02	9.778E-02	6.113E-03	0.178
PA-234	-9.921E-02		3.278E-01	5.280E-01	9.925E-02	-0.188
PA-234M	3.553E+00		7.232E+00	1.253E+01	1.354E+00	0.284
U-235	8.030E-02		1.840E-01	3.116E-01	5.040E-02	0.258
NP-236	-4.658E-02		6.610E-02	1.054E-01	5.449E-03	-0.442
NP-239	-9.936E-02		1.561E-01	2.572E-01	1.605E-02	-0.386
AM-241	9.487E-02		1.547E-01	2.417E-01	2.249E-02	0.393

Sample ID : G232433015 Acquisition date : 7-JUL-2009 07:06:11

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.192E-02		7.653E-02	1.287E-01	9.536E-03	-0.248
CM-247	2.941E-02		3.735E-02	6.467E-02	3.749E-03	0.455
CF-249	2.326E-02		3.910E-02	6.712E-02	3.884E-03	0.346
CF-251	2.858E-02		1.068E-01	1.785E-01	9.223E-03	0.160

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232433015           *
* Acquisition date  :  7-JUL-2009 07:06:11 Detector SN#     :               *
* Detector ID       : GAM23                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:03.54      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232433015           Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.2228E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	1.994E+01	2.261E+00	3.113E-01	1.154E+00
CD-109	3.229E+00	8.931E-01	4.766E-01	4.557E-01
SN-126	3.180E-01	8.795E-02	4.720E-02	4.487E-02
BA-137M	1.864E-01	7.649E-02	3.211E-02	3.903E-02
CS-137	1.970E-01	8.087E-02	3.395E-02	4.126E-02
TL-208	3.813E-01	8.041E-02	3.067E-02	4.102E-02
BI-211	3.718E+00	4.810E-01	1.495E-01	2.454E-01
PB-212	1.232E+00	1.466E-01	5.895E-02	7.477E-02
PO-212	1.232E+00	1.466E-01	5.895E-02	7.477E-02
BI-214	1.123E+00	1.664E-01	5.798E-02	8.487E-02
PB-214	1.293E+00	1.799E-01	5.214E-02	9.180E-02
PO-214	1.293E+00	1.799E-01	5.214E-02	9.180E-02
PO-216	1.232E+00	1.466E-01	5.895E-02	7.477E-02
PO-218	1.293E+00	1.799E-01	5.214E-02	9.180E-02
RA-224	2.593E+00	9.846E-01	5.952E-01	5.023E-01
RA-226	1.123E+00	1.664E-01	5.798E-02	8.487E-02
AC-228	1.422E+00	3.527E-01	1.184E-01	1.799E-01
RA-228	1.422E+00	3.527E-01	1.184E-01	1.799E-01
TH-228	1.232E+00	1.466E-01	5.894E-02	7.477E-02
TH-230	1.123E+00	1.663E-01	5.798E-02	8.487E-02
TH-232	1.422E+00	3.527E-01	1.184E-01	1.799E-01
TH-234	1.280E+00	2.057E+00	9.675E-01	1.049E+00
U-234	1.123E+00	1.663E-01	5.798E-02	8.487E-02
NP-237	9.339E-01	3.200E-01	1.754E-01	1.632E-01
U-238	1.280E+00	2.057E+00	9.675E-01	1.049E+00
AM-243	3.644E-01	7.189E-02	3.949E-02	3.668E-02
ANH-511	1.617E-01	7.068E-02	2.136E-02	3.606E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	2.234E-02	3.259E-01	2.733E-01	1.663E-01	NOT IDENT.
NA-22	-3.487E-02	5.241E-02	3.984E-02	2.674E-02	NOT IDENT.
NA-24	-7.205E+04	1.810E+05	0.000E+00	9.233E+04	SHORT HLIF
AL-26	-1.892E-02	3.292E-02	2.455E-02	1.679E-02	NOT IDENT.
TI-44	3.651E-01	5.522E-02	3.526E-02	2.818E-02	FAIL ABUN
SC-46	-8.068E-03	3.740E-02	3.140E-02	1.908E-02	FAIL ABUN
V-48	-4.954E-02	6.774E-02	5.270E-02	3.456E-02	NOT IDENT.
CR-51	-1.107E-01	3.236E-01	2.754E-01	1.651E-01	NOT IDENT.
MN-52	1.081E-01	1.909E-01	1.754E-01	9.738E-02	NOT IDENT.
MN-54	2.359E-02	4.044E-02	3.528E-02	2.063E-02	NOT IDENT.
CO-56	-6.285E-02	4.422E-02	3.059E-02	2.256E-02	NOT IDENT.
CO-57	1.386E-02	1.997E-02	1.841E-02	1.019E-02	NOT IDENT.
CO-58	-5.715E-02	3.887E-02	2.631E-02	1.983E-02	NOT IDENT.
FE-59	-6.860E-02	9.393E-02	7.208E-02	4.792E-02	NOT IDENT.
CO-60	-1.351E-02	4.194E-02	3.424E-02	2.140E-02	NOT IDENT.
ZN-65	-3.564E-02	1.101E-01	7.501E-02	5.618E-02	NOT IDENT.
GE-68	1.111E+00	1.261E+00	1.159E+00	6.433E-01	NOT IDENT.
AS-73	-1.263E-01	8.426E-01	7.245E-01	4.299E-01	NOT IDENT.
AS-74	-3.420E-02	8.171E-02	6.764E-02	4.169E-02	NOT IDENT.
SE-75	3.397E-02	3.867E-02	3.393E-02	1.973E-02	NOT IDENT.
BR-77	-6.106E+00	7.622E+00	5.555E+00	3.889E+00	FAIL ABUN
SR-82	-5.091E-02	3.672E-01	3.019E-01	1.873E-01	NOT IDENT.
RB-83	-6.728E-02	7.263E-02	5.207E-02	3.706E-02	NOT IDENT.
RB-84	3.296E-02	7.112E-02	6.380E-02	3.629E-02	NOT IDENT.
KR-85	1.785E+01	7.502E+00	7.234E+00	3.827E+00	NOT IDENT.
SR-85	9.025E-02	3.793E-02	3.658E-02	1.935E-02	NOT IDENT.
RB-86	5.495E-01	7.693E-01	6.957E-01	3.925E-01	NOT IDENT.
Y-88	1.446E-02	3.154E-02	2.935E-02	1.609E-02	NOT IDENT.
ZR-88	-2.386E-02	2.760E-02	2.184E-02	1.408E-02	NOT IDENT.
Y-91	1.025E+01	2.143E+01	1.856E+01	1.093E+01	NOT IDENT.
NB-94	3.468E-02	3.455E-02	3.162E-02	1.763E-02	NOT IDENT.
NB-95	1.709E-02	4.391E-02	3.796E-02	2.240E-02	NOT IDENT.
NB-95M	-8.833E-02	1.243E-01	8.717E-02	6.341E-02	NOT IDENT.
ZR-95	4.131E-02	7.077E-02	6.256E-02	3.611E-02	NOT IDENT.
NB-97	1.633E+04	2.938E+04	0.000E+00	1.499E+04	SHORT HLIF
ZR-97	1.245E+05	5.445E+05	0.000E+00	2.778E+05	SHORT HLIF
MO-99	-1.228E+00	8.205E+00	6.778E+00	4.186E+00	NOT IDENT.
TC-99M	3.720E+12	8.138E+14	0.000E+00	4.152E+14	SHORT HLIF
RH-101	-7.104E-03	3.047E-02	2.555E-02	1.554E-02	NOT IDENT.
RH-102	-3.801E-03	2.951E-02	2.435E-02	1.506E-02	NOT IDENT.
RU-103	-3.066E-02	4.133E-02	3.188E-02	2.109E-02	FAIL ABUN
RH-106	3.073E-02	3.031E-01	2.618E-01	1.546E-01	FAIL ABUN
RU-106	3.073E-02	3.030E-01	2.618E-01	1.546E-01	FAIL ABUN
AG-108M	-7.747E-03	2.842E-02	2.335E-02	1.450E-02	NOT IDENT.
AG-110M	1.647E-02	3.812E-02	2.971E-02	1.945E-02	NOT IDENT.
IN-111	-6.063E-02	8.131E-01	5.988E-01	4.149E-01	NOT IDENT.
IN-113M	2.266E-02	4.109E-02	3.645E-02	2.096E-02	NOT IDENT.
SN-113	2.266E-02	4.109E-02	3.645E-02	2.096E-02	NOT IDENT.
IN-114M	2.054E-02	1.706E-01	1.316E-01	8.705E-02	NOT IDENT.
CD-115	-2.619E+00	7.797E+00	6.233E+00	3.978E+00	NOT IDENT.
SN-117M	7.508E-03	4.110E-02	3.615E-02	2.097E-02	NOT IDENT.
SB-122	1.353E-01	1.607E+00	1.386E+00	8.201E-01	NOT IDENT.
I-123	6.326E+04	8.716E+05	0.000E+00	4.447E+05	SHORT HLIF
TE-123M	1.653E-03	2.278E-02	1.992E-02	1.162E-02	NOT IDENT.
I-124	3.022E-01	6.338E-01	4.975E-01	3.234E-01	NOT IDENT.
SB-124	7.928E-02	7.266E-02	7.331E-02	3.707E-02	NOT IDENT.
SB-125	-3.437E-02	8.447E-02	6.880E-02	4.310E-02	FAIL ABUN
TE-125M	-1.239E+00	7.066E+00	6.312E+00	3.605E+00	NOT IDENT.
I-126	1.128E-01	1.947E-01	1.536E-01	9.934E-02	NOT IDENT.
SB-126	1.019E-01	1.436E-01	1.150E-01	7.328E-02	FAIL ABUN
SB-127	2.390E-01	1.109E+00	9.570E-01	5.658E-01	NOT IDENT.
XE-127	1.755E-03	4.214E-02	3.590E-02	2.150E-02	NOT IDENT.
I-131	4.338E-02	9.219E-02	8.193E-02	4.703E-02	NOT IDENT.
TE-132	5.594E-02	4.730E-01	3.999E-01	2.413E-01	NOT IDENT.
BA-133	-7.566E-04	4.712E-02	3.493E-02	2.404E-02	NOT IDENT.
I-133	-1.553E+03	2.294E+03	0.000E+00	1.171E+03	SHORT HLIF
CS-134	1.073E-01	8.113E-02	4.918E-02	4.139E-02	FAIL ABUN
CS-135	-5.465E-02	1.651E-01	1.172E-01	8.424E-02	NOT IDENT.
I-135	-2.467E+12	2.213E+14	0.000E+00	1.129E+14	SHORT HLIF
CS-136	-1.194E-02	1.175E-01	9.810E-02	5.996E-02	FAIL ABUN
CE-139	-1.314E-02	2.507E-02	2.113E-02	1.279E-02	NOT IDENT.
BA-140	-8.930E-02	2.424E-01	2.033E-01	1.237E-01	NOT IDENT.
LA-140	3.557E-03	8.765E-02	7.349E-02	4.472E-02	NOT IDENT.
CE-141	-1.302E-03	5.185E-02	4.516E-02	2.646E-02	NOT IDENT.
CE-143	1.577E+02	7.477E+01	0.000E+00	3.815E+01	SHORT HLIF
CE-144	1.316E-02	1.642E-01	1.451E-01	8.377E-02	NOT IDENT.
PM-144	-3.269E-02	3.232E-02	2.444E-02	1.649E-02	NOT IDENT.
PR-144	-2.214E+00	2.188E+00	1.655E+00	1.117E+00	NOT IDENT.

PM-146	-1.593E-02	4.534E-02	3.694E-02	2.313E-02	NOT IDENT.
ND-147	3.886E-02	5.159E-01	4.519E-01	2.632E-01	FAIL ABUN
PM-149	8.411E+00	5.426E+01	4.822E+01	2.768E+01	NOT IDENT.
EU-152	4.344E-02	9.071E-02	7.850E-02	4.628E-02	NOT IDENT.
GD-153	-8.980E-02	7.535E-02	5.147E-02	3.844E-02	NOT IDENT.
EU-154	-9.466E-02	1.469E-01	1.119E-01	7.496E-02	NOT IDENT.
EU-155	6.007E-02	8.249E-02	7.700E-02	4.209E-02	FAIL ABUN
TB-160	1.060E-01	1.451E-01	1.330E-01	7.403E-02	FAIL ABUN
HO-166M	-1.720E-03	5.972E-02	5.020E-02	3.047E-02	NOT IDENT.
TM-171	-2.481E+01	2.887E+01	2.154E+01	1.473E+01	NOT IDENT.
LU-176	2.757E-02	2.254E-02	2.112E-02	1.150E-02	FAIL ABUN
LU-177	8.683E-01	9.297E-01	8.230E-01	4.743E-01	NOT IDENT.
LU-177M	-1.460E-01	1.730E-01	1.369E-01	8.824E-02	NOT IDENT.
HF-181	2.961E-03	4.373E-02	3.662E-02	2.231E-02	NOT IDENT.
W-181	-1.895E-01	3.737E-01	2.840E-01	1.907E-01	NOT IDENT.
TA-182	-8.923E-02	2.128E-01	1.685E-01	1.086E-01	FAIL ABUN
RE-183	4.311E-02	8.894E-02	7.925E-02	4.538E-02	NOT IDENT.
RE-184	2.972E-02	2.110E-01	1.769E-01	1.076E-01	NOT IDENT.
OS-185	-4.131E-02	4.412E-02	3.438E-02	2.251E-02	NOT IDENT.
RE-188	8.251E-02	1.399E-01	1.257E-01	7.138E-02	NOT IDENT.
W-188	-2.815E+00	6.424E+00	4.776E+00	3.278E+00	FAIL ABUN
IR-192	5.632E-03	3.069E-02	2.708E-02	1.566E-02	FAIL ABUN
AU-195	1.539E-01	1.992E-01	1.678E-01	1.016E-01	FAIL ABUN
TL-200	1.839E+01	1.811E+02	0.000E+00	9.242E+01	SHORT HLIF
TL-201	1.494E+00	4.341E+00	3.830E+00	2.215E+00	NOT IDENT.
TL-202	3.126E-02	5.888E-02	5.177E-02	3.004E-02	NOT IDENT.
HG-203	4.050E-02	3.731E-02	3.474E-02	1.903E-02	NOT IDENT.
BI-207	3.734E-02	5.449E-02	4.913E-02	2.780E-02	FAIL ABUN
TL-207	-6.706E-01	6.229E-01	4.956E-01	3.178E-01	FAIL ABUN
PO-209	-1.915E+00	7.943E+00	6.660E+00	4.053E+00	NOT IDENT.
BI-210	-3.213E+00	4.416E+00	3.600E+00	2.253E+00	NOT IDENT.
PB-210	-3.213E+00	4.416E+00	3.600E+00	2.253E+00	NOT IDENT.
PO-210	-3.213E+00	4.414E+00	3.600E+00	2.252E+00	NOT IDENT.
PB-211	2.445E-01	9.856E-01	8.417E-01	5.029E-01	NOT IDENT.
BI-212	1.680E+00	5.270E-01	3.981E-01	2.689E-01	FAIL ABUN
PO-215	-6.706E-01	6.229E-01	4.956E-01	3.178E-01	FAIL ABUN
RN-219	-1.949E-01	4.152E-01	3.402E-01	2.118E-01	FAIL ABUN
RN-220	-1.860E+01	2.580E+01	2.105E+01	1.317E+01	NOT IDENT.
RA-223	-6.706E-01	6.229E-01	4.956E-01	3.178E-01	FAIL ABUN
AC-227	-3.104E-02	3.513E-01	2.895E-01	1.792E-01	FAIL ABUN
TH-227	-3.104E-02	3.513E-01	2.895E-01	1.792E-01	FAIL ABUN
TH-229	1.281E-01	4.240E-01	3.684E-01	2.163E-01	FAIL ABUN
PA-231	5.973E-01	1.407E+00	1.268E+00	7.176E-01	FAIL ABUN
TH-231	-6.706E-01	6.229E-01	4.956E-01	3.178E-01	FAIL ABUN
U-231	1.628E-01	7.378E-01	5.681E-01	3.764E-01	FAIL ABUN
PA-233	1.743E-02	5.591E-02	4.982E-02	2.853E-02	FAIL ABUN
PA-234	-9.921E-02	3.213E-01	2.652E-01	1.639E-01	FAIL ABUN
PA-234M	3.553E+00	7.088E+00	6.289E+00	3.616E+00	NOT IDENT.
U-235	8.030E-02	1.803E-01	1.603E-01	9.199E-02	FAIL ABUN
NP-236	-4.658E-02	6.478E-02	5.412E-02	3.305E-02	NOT IDENT.
NP-239	-9.936E-02	1.530E-01	1.326E-01	7.807E-02	NOT IDENT.
AM-241	9.487E-02	1.516E-01	1.257E-01	7.734E-02	NOT IDENT.
CM-243	-3.192E-02	7.499E-02	6.647E-02	3.826E-02	NOT IDENT.
CM-247	2.941E-02	3.660E-02	3.284E-02	1.868E-02	NOT IDENT.
CF-249	2.326E-02	3.832E-02	3.410E-02	1.955E-02	NOT IDENT.
CF-251	2.858E-02	1.047E-01	9.157E-02	5.339E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	143.2698
46.50	143.2698
46.50	143.2698
48.70	134.0629
49.72	122.7474
51.35	141.0913
52.39	143.9131
52.97	149.4703
53.15	150.6354
53.44	138.5472
54.07	131.7910
56.28	166.5881
56.28	166.5906
57.37	0.0000
57.53	155.0504
57.53	155.0521
57.60	155.1035
57.98	140.6922
57.98	140.6922
59.32	136.6727
59.32	136.6727
59.40	136.7250
59.54	136.8162
59.72	139.7570
60.01	158.3266
61.10	159.1400
61.14	159.1697
61.30	155.0221
63.00	164.4827
63.29	164.7004
63.29	164.7004
63.58	164.9166
64.28	194.6328
65.12	208.3887
65.20	208.4619
65.20	208.4619
66.05	185.9961
66.72	212.7726
66.83	217.2507
66.91	217.3265
67.20	197.1538
67.20	197.1538
67.75	176.7620
67.85	177.9377
68.90	209.6303
68.90	209.6303
69.30	200.0388
69.67	190.3913
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70.82	201.6882
70.83	201.6965
72.80	200.7209
72.87	200.7768
72.87	200.7768
74.67	202.2367
74.81	202.3487
74.81	202.3487
74.81	202.3487
74.81	202.3487
74.81	202.3487
74.81	202.3487
74.97	202.4785
75.28	202.7270
75.70	203.0643
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77.11	204.1869
77.11	204.1869

77.11	204.1869
77.11	204.1869
77.11	204.1869
78.38	205.1893
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79.80	173.6462
79.80	173.6462
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80.18	160.0456
80.30	160.1175
80.30	160.1175
80.57	167.9862
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81.07	171.3881
81.07	171.3881
81.07	171.3881
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83.37	198.5404
83.78	184.0233
83.78	184.0233
83.78	184.0233
83.78	184.0233
84.21	157.7570
84.40	165.6811
84.90	181.6382
85.43	216.4982
86.29	250.2086
86.50	239.3709
86.54	239.4050
86.59	239.4467
86.72	239.5580
86.79	239.6152
86.94	200.3121
87.30	200.5666
87.30	200.5666
87.30	200.5666
87.30	200.5666
87.30	200.5666
87.30	200.5666
87.57	154.1241
87.88	154.2917
88.03	154.3720
88.36	154.5496
88.47	154.6091
89.95	143.4476
91.11	144.0161
92.29	144.5920
92.38	144.6350
92.38	144.6350
93.35	145.1056
94.00	145.4187
94.67	145.7382
94.67	145.7410
94.90	145.8508
94.90	145.8508
94.90	145.8508
94.90	145.8508
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95.87	151.1912
96.73	185.8519
97.43	200.9748
98.44	153.6779
98.44	153.6789
98.88	153.8944
99.55	155.4553
99.55	155.4553
99.86	155.6072
100.00	154.4399
100.10	154.4905
103.18	162.2124
103.76	172.5011
105.00	148.0582
105.31	148.1968
108.00	178.9332
109.28	168.5945
111.00	143.0454
111.00	143.0454

111.76	156.1589
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115.19	155.1022
116.30	156.4482
117.00	181.8669
117.00	181.8669
117.66	179.5963
121.11	167.2785
121.62	154.3527
121.78	154.4189
122.06	147.5101
122.32	147.6118
122.32	147.6118
122.32	147.6118
122.32	147.6118
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127.23	161.5432
129.76	153.1875
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133.54	158.2662
135.34	156.2459
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136.25	177.5340
136.48	169.4348
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140.51	0.0000
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142.65	184.8958
143.76	170.5478
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144.24	163.3153
144.24	163.3153
144.24	163.3153
145.22	169.2661
145.44	174.0056
147.16	165.3523
152.43	173.0015
152.70	166.4842
153.22	158.1526
154.21	159.4465
154.21	159.4465
154.21	159.4465
154.21	159.4465
155.03	160.6862
156.02	184.8549
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159.00	155.3604
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163.35	144.2180
163.89	152.1321
165.85	178.0501
167.43	157.1561
171.28	139.7003
171.86	144.7869
172.10	144.8571
176.55	147.1358
176.60	147.1509
181.06	159.4626
184.41	168.5595
185.71	168.9723
186.00	169.0658
190.27	157.6575
192.34	145.4538
193.63	142.7145
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198.01	170.7487
198.60	155.3879
200.40	195.3763
201.83	169.8215
202.84	176.3838
205.31	185.5273
208.36	190.7143
208.81	176.0988

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209.75	170.0422
210.97	165.1025
215.65	145.0658
216.55	147.4182
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222.10	148.7602
223.80	141.5995
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227.00	136.8922
227.08	136.9102
227.20	136.9358
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228.18	143.6781
228.18	143.6781
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236.00	148.7411
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238.63	278.7653
238.63	278.7653
238.63	278.7653
239.00	219.1527
240.98	219.8093
241.98	216.8042
241.98	216.8042
241.98	216.8042
244.69	147.3546
245.39	142.4790
247.94	128.9936
248.90	122.4365
249.79	136.0918
252.40	108.3838
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252.85	118.6217
254.15	0.0000
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256.20	123.7344
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260.90	115.4189
262.80	130.6227
264.65	95.3473
268.24	131.6084
268.79	126.5091
269.46	100.6061
269.46	100.6061
269.46	100.6061
269.46	100.6061
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273.65	127.3468
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277.35	133.2389
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277.60	125.3912
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285.90	113.4707
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286.10	113.5000
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295.21	94.7348
295.96	94.8234

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298.57	64.8644
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299.80	115.4922
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300.09	102.5357
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303.76	120.4108
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304.40	117.6023
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319.41	102.5602
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323.87	125.3883
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334.20	121.8065
334.30	121.8204
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338.28	106.6944
338.28	106.6944
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338.32	106.6996
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351.92	84.3463
351.92	84.3463
351.92	84.3463
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356.01	93.9603
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366.43	79.8166
367.43	70.1554
367.94	0.0000
369.80	95.7256
374.96	87.3962
383.85	88.1865
387.95	81.5833
388.63	78.6516
391.69	75.8945
391.69	75.8945
392.90	88.9823
398.62	76.4094
400.65	107.7870
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401.81	101.8569
402.60	81.7490
404.84	100.1315
410.95	85.4535
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439.89	63.7207
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445.03	70.3062
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445.03	70.3062
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511.85	56.5486
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513.99	56.6423
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520.65	77.8244
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529.64	83.1732
529.87	0.0000
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546.56	0.0000
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569.32	64.7859
569.50	64.7944
569.67	64.8013
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579.30	0.0000
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602.71	69.4447
603.60	69.4858
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604.70	66.3770
609.31	66.5803
609.31	66.5803
609.31	66.5803

609.31	66.5803
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614.37	36.5823
618.01	51.6573
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621.84	53.7045
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657.90	0.0000
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661.65	66.8744
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666.33	54.2454
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677.61	59.5825
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696.49	61.2591
696.49	61.2591
697.00	69.3150
697.49	64.3109
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698.50	65.3539
699.00	59.3385
702.63	50.3931
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706.58	0.0000
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713.82	40.5762
717.42	52.8582
720.50	40.7314
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722.78	50.9802
722.78	50.9802
722.89	50.9839
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724.18	73.1311
727.18	62.3522
733.00	49.5664
735.90	57.5217
739.58	49.4051
742.81	45.3696
744.21	54.6925
747.13	50.6461
751.79	52.8478
752.31	64.2645
753.82	56.0184
755.35	42.5685
756.15	44.6639
756.87	43.6427
763.93	64.6716
765.79	57.4277
766.41	45.9572
766.84	48.0574
768.36	60.6437
768.36	60.6437
768.36	60.6437
768.36	60.6437
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778.00	63.0586
778.57	57.8212
778.89	54.6774
783.80	47.4401

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792.07	52.9395
795.84	35.0093
796.30	35.0174
801.93	53.2117
805.60	30.9208
810.29	51.3035
810.76	56.6606
815.85	48.2333
817.79	33.2599
818.51	30.0521
819.60	41.8812
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831.60	56.1806
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836.80	0.0000
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848.13	56.6414
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860.37	49.3099
867.32	51.6748
867.82	49.4868
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873.19	46.8579
874.81	56.0892
875.33	0.0000
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879.36	39.6240
880.27	35.9539
880.51	35.9579
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883.24	47.0831
884.67	48.9618
889.25	40.7353
896.60	50.1658
898.02	50.1987
899.00	47.4317
903.28	41.5354
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911.07	48.6326
911.07	48.6326
919.63	32.3922
920.93	32.7955
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934.06	34.9668
934.06	34.9668
934.06	34.9668
934.06	34.9668
935.52	40.6633
937.48	53.0036
944.10	45.5664
946.00	48.4548
949.00	35.2001
962.29	50.8540
964.01	60.7431
966.15	57.5134
968.20	54.6865
969.11	54.7073
969.11	54.7073
969.11	54.7073
977.42	29.5393
980.50	41.4743
983.50	45.3907
989.30	34.8530
996.32	47.5804
1001.03	42.8103
1001.68	38.9290
1004.76	46.7754
1021.30	0.0000
1024.50	0.0000
1034.80	48.3480
1037.82	40.5045
1038.57	46.4454

1038.76	0.0000
1045.16	48.5514
1046.59	53.5364
1048.07	51.5853
1050.47	50.6431
1050.47	50.6431
1063.62	33.9391
1076.63	32.1081
1077.35	30.1099
1085.78	46.3219
1099.22	47.5756
1112.02	35.5114
1112.84	39.3464
1115.52	48.8945
1120.29	33.2381
1120.29	33.2381
1120.29	33.2381
1120.29	33.2381
1120.51	33.2407
1121.28	34.7083
1124.00	0.0000
1129.67	42.1339
1131.51	0.0000
1147.95	0.0000
1167.94	37.3945
1173.22	49.9551
1175.09	46.8640
1177.93	39.6158
1189.05	41.8685
1204.90	50.5273
1205.75	0.0000
1213.00	59.1172
1221.42	55.0575
1230.97	52.8133
1235.34	47.4206
1236.41	0.0000
1238.11	46.8592
1238.11	46.8592
1238.11	46.8592
1238.11	46.8592
1238.25	46.8610
1246.25	43.9386
1260.41	0.0000
1271.85	40.9378
1274.45	50.6776
1274.54	50.6795
1291.56	38.1108
1298.22	0.0000
1312.09	24.3324
1325.50	23.4985
1325.50	23.4985
1332.49	31.0894
1333.61	31.0998
1360.21	24.7123
1362.66	0.0000
1365.15	17.1355
1368.21	23.8220
1368.53	0.0000
1376.25	16.7175
1377.67	18.3980
1377.67	18.3980
1377.67	18.3980
1377.67	18.3980
1384.27	18.4356
1394.10	24.9762
1395.20	25.9463
1407.95	23.1537
1434.06	13.6143
1436.60	20.4368
1457.56	0.0000
1460.81	21.5657
1489.15	14.8268
1509.49	16.9028
1596.49	18.3390
1620.62	8.2042
1678.03	0.0000
1691.02	5.2237
1691.02	5.2237

1706.46	0.0000
1750.46	0.0000
1764.49	7.4507
1764.49	7.4507
1764.49	7.4507
1764.49	7.4507
1770.23	13.0575
1771.40	13.0613
1791.20	0.0000
1808.65	14.1225
1836.01	6.6341

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232433015

Total Uranium Activity	3.8451E+00	ug/g
Total Uranium Counting Unc.	6.1195E+00	ug/g
Total Uranium Tpu	3.1222E-06	ug/g
Total Uranium Mda	2.8794E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G232433015       *
*   ANALYST       : MXR1                      DETECTOR   : GAM23            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 07:06:11.35    SAMPLE ALQT:  122.280 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.699E+00
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.173E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 2.305E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 1.099E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:12:11.88

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871423.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:11:44.
Sample ID         : G1201871423          Sample quantity  : 1.37710E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.56  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.29*	23	150	1.03	125.78	121	11	3.13E-03	117.8	
2	0	92.53*	15	172	1.16	184.28	179	10	2.07E-03	208.3	
3	0	143.63*	40	83	0.71	286.54	283	7	5.60E-03	48.2	
4	0	185.75*	26	138	1.26	370.83	366	10	3.55E-03	104.9	
5	0	511.04*	3	52	2.77	1021.75	1015	15	3.67E-04	824.9	
6	0	609.39*	13	31	1.45	1218.58	1213	11	1.77E-03	98.9	
7	0	1460.60*	8	3	1.40	2922.20	2914	15	1.11E-03	89.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:12:14

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871423.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:11:44
Sample ID : G1201871423 Sample quantity : 137.71 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA2 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.56 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	1.959E-01	3.499E-01	4.568E-01	3.386E-02	0.429
TH-234	+	63.29	*	6.338E-01	1.497E+00	1.155E+00	2.111E-01	0.549
	+	92.38		1.337E-01	5.577E-01	4.341E-01	8.302E-02	0.308
U-235		89.95		9.130E-02	5.859E-01	8.909E-01	2.824E-01	0.102
	+	93.35		1.608E-01	6.714E-01	5.350E-01	1.531E-01	0.300
		105.00		-5.032E-01	5.791E-01	8.657E-01	2.572E-01	-0.581
	+	143.76	*	1.696E-01	1.657E-01	1.840E-01	3.027E-02	0.922
		163.35		-2.128E-01	3.027E-01	4.376E-01	8.005E-02	-0.486
	+	185.71		2.368E-02	4.973E-02	4.333E-02	3.105E-03	0.547
		205.31		-3.554E-02	3.385E-01	5.022E-01	9.360E-02	-0.071
U-238	+	63.29	*	6.338E-01	1.497E+00	1.155E+00	2.111E-01	0.549
	+	92.38		1.337E-01	5.573E-01	4.341E-01	4.614E-02	0.308
ANH-511	+	511.00	*	2.762E-03	4.556E-02	3.220E-02	2.106E-03	0.086

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.623E-02	1.892E-01	3.122E-01	2.295E-02	0.116
NA-22		1274.54	*	1.611E-03	1.906E-02	3.199E-02	2.139E-03	0.050
NA-24		1368.53	*	-5.633E-05	1.906E-02	Half-Life too short		
AL-26		1129.67		-4.332E-01	8.886E-01	1.341E+00	8.482E-02	-0.323
		1808.65	*	1.551E-02	2.462E-02	4.643E-02	2.615E-03	0.334
TI-44		67.85		-4.884E-03	2.536E-02	3.797E-02	3.674E-03	-0.129
		78.38	*	-4.926E-03	1.660E-02	2.737E-02	2.917E-03	-0.180
SC-46		889.25	*	-1.073E-03	2.261E-02	3.638E-02	3.352E-03	-0.029
		1120.51		-1.345E-02	2.959E-02	4.760E-02	3.085E-03	-0.283
V-48		944.10		2.904E-01	3.997E-01	7.184E-01	6.389E-02	0.404
		983.50	*	4.934E-02	2.839E-02	5.868E-02	4.962E-03	0.841
		1312.09		1.180E-02	3.420E-02	5.980E-02	4.256E-03	0.197
CR-51		320.08	*	7.057E-02	1.756E-01	3.032E-01	2.703E-02	0.233
MN-52		744.21		-3.811E-02	5.235E-02	7.611E-02	5.602E-03	-0.501
		848.13		-1.349E+00	1.634E+00	2.293E+00	1.987E-01	-0.588
		935.52		-2.060E-03	5.982E-02	9.179E-02	8.243E-03	-0.022

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1246.25		9.519E-01	1.112E+00	2.175E+00	1.380E-01	0.438
		1333.61		-1.172E-01	1.104E+00	1.765E+00	1.299E-01	-0.066
		1434.06	*	-1.834E-03	6.166E-02	9.967E-02	7.161E-03	-0.018
MN-54		834.83	*	-1.068E-02	2.016E-02	2.986E-02	2.536E-03	-0.358
CO-56		846.75	*	-1.470E-02	2.323E-02	3.395E-02	2.936E-03	-0.433
		977.42		-4.363E-01	1.466E+00	2.210E+00	1.885E-01	-0.197
		1037.82		7.878E-02	1.838E-01	3.265E-01	2.698E-02	0.241
		1175.09		-5.658E-01	8.861E-01	1.243E+00	6.902E-02	-0.455
		1238.25		-1.852E-02	3.414E-02	5.028E-02	3.316E-03	-0.368
		1360.21		-2.993E-01	5.457E-01	7.713E-01	5.649E-02	-0.388
		1771.40		-1.751E-01	1.646E-01	1.901E-01	1.111E-02	-0.921
CO-57		122.06	*	-5.960E-05	1.250E-02	2.057E-02	1.214E-03	-0.003
		136.48		1.637E-02	1.178E-01	1.946E-01	1.353E-02	0.084
CO-58		810.76	*	-2.890E-03	2.247E-02	3.602E-02	2.957E-03	-0.080
FE-59	+	142.65		1.939E+00	1.872E+00	2.713E+00	1.677E-01	0.715
		192.34		-3.584E-01	5.301E-01	7.999E-01	1.010E-01	-0.448
		1099.22	*	3.732E-02	4.653E-02	8.701E-02	6.697E-03	0.429
		1291.56		3.878E-03	4.986E-02	8.345E-02	6.915E-03	0.046
CO-60		1173.22		-1.148E-02	1.813E-02	2.524E-02	1.397E-03	-0.455
		1332.49	*	4.525E-03	2.179E-02	3.732E-02	2.747E-03	0.121
ZN-65		1115.52	*	-3.686E-02	5.202E-02	7.661E-02	5.039E-03	-0.481
GE-68		1077.35	*	4.267E-01	6.411E-01	1.191E+00	8.550E-02	0.358
AS-73		53.44	*	5.673E-01	5.483E-01	1.001E+00	8.958E-02	0.567
AS-74		595.88	*	2.517E-02	4.455E-02	7.911E-02	5.169E-03	0.318
		634.78		-6.195E-02	1.538E-01	2.426E-01	1.569E-02	-0.255
SE-75		66.05		5.239E-01	2.541E+00	3.961E+00	4.429E-01	0.132
		96.73		8.111E-02	4.519E-01	6.863E-01	9.817E-02	0.118
		121.11		-2.452E-03	6.442E-02	1.058E-01	9.900E-03	-0.023
		136.00		9.158E-03	2.179E-02	3.670E-02	2.253E-03	0.250
		198.60		1.212E-01	1.075E+00	1.659E+00	1.413E-01	0.073
		264.65	*	1.334E-02	2.430E-02	4.271E-02	3.829E-03	0.312
		279.53		-8.538E-03	7.743E-02	1.230E-01	1.173E-02	-0.069
		303.91		-1.645E-01	1.192E+00	1.964E+00	2.282E-01	-0.084
		400.65		-4.045E-02	1.433E-01	2.268E-01	2.131E-02	-0.178
BR-77		87.88		4.287E+00	9.312E+00	1.458E+01	1.721E+00	0.294
		200.40		2.287E+00	9.884E+00	1.608E+01	1.204E+00	0.142
		239.00		-2.645E-01	6.326E-01	1.029E+00	8.600E-02	-0.257
		249.79		-4.629E+00	4.309E+00	6.656E+00	5.721E-01	-0.695
		281.68		-3.930E+00	6.063E+00	9.638E+00	8.870E-01	-0.408
		297.23		1.089E-01	3.245E+00	5.440E+00	4.862E-01	0.020
		303.76		-1.676E+00	1.098E+01	1.808E+01	1.592E+00	-0.093
		439.47		-1.595E+00	9.225E+00	1.468E+01	9.385E-01	-0.109
		484.57		-5.853E+00	1.487E+01	2.275E+01	1.480E+00	-0.257
		520.65	*	5.884E-01	7.066E-01	1.245E+00	8.156E-02	0.472
		574.64		-9.586E+00	1.323E+01	2.030E+01	1.330E+00	-0.472
		578.91		1.038E+00	5.385E+00	9.246E+00	6.056E-01	0.112
		585.48		6.920E-01	1.053E+01	1.780E+01	1.165E+00	0.039
		755.35		7.308E+00	9.625E+00	1.757E+01	1.317E+00	0.416
		817.79		1.088E+00	8.424E+00	1.404E+01	1.162E+00	0.078

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SR-82		698.33		5.588E+00	1.606E+01	2.779E+01	1.894E+00	0.201
		776.49	*	2.001E-02	1.781E-01	2.972E-01	2.305E-02	0.067
		1395.20		4.253E-01	5.343E+00	8.875E+00	6.448E-01	0.048
RB-83		520.41	*	3.147E-02	4.258E-02	7.429E-02	4.865E-03	0.424
		529.64		2.414E-02	6.596E-02	1.103E-01	7.232E-03	0.219
		552.65		3.245E-02	9.895E-02	1.739E-01	1.141E-02	0.187
RB-84		881.50	*	1.702E-03	3.386E-02	5.546E-02	5.052E-03	0.031
KR-85		513.99	*	1.028E+01	5.245E+00	9.344E+00	6.114E-01	1.100
SR-85		513.99	*	4.857E-02	2.478E-02	4.415E-02	2.889E-03	1.100
RB-86		1076.63	*	2.725E-02	3.172E-01	5.375E-01	3.864E-02	0.051
Y-88		898.02		7.787E-03	2.492E-02	4.234E-02	3.968E-03	0.184
		1836.01	*	-1.220E-02	2.361E-02	3.321E-02	1.821E-03	-0.367
ZR-88		392.90	*	-1.979E-03	1.687E-02	2.727E-02	1.695E-03	-0.073
Y-91		1204.90	*	-1.554E+00	8.362E+00	1.333E+01	7.839E-01	-0.117
NB-94		702.63	*	-1.782E-02	2.134E-02	3.139E-02	2.156E-03	-0.568
		871.10		-1.108E-02	2.244E-02	3.356E-02	3.011E-03	-0.330
NB-95		765.79	*	2.702E-02	2.627E-02	4.599E-02	3.506E-03	0.588
NB-95M		235.69	*	-6.551E-02	6.366E-02	9.939E-02	9.512E-03	-0.659
ZR-95		724.18		-2.373E-02	5.574E-02	8.707E-02	6.972E-03	-0.273
		756.15	*	2.261E-02	3.666E-02	6.571E-02	5.581E-03	0.344
NB-97		657.90	*	-1.606E-06	3.666E-02	Half-Life too short		
		1024.50		-9.312E-04	3.666E-02	Half-Life too short		
ZR-97		254.15		1.774E-03	3.666E-02	Half-Life too short		
		355.39		-1.111E-03	3.666E-02	Half-Life too short		
		507.63	*	5.287E-04	3.666E-02	Half-Life too short		
		602.52		-1.194E-03	3.666E-02	Half-Life too short		
		1021.30		7.471E-04	3.666E-02	Half-Life too short		
		1147.95		3.176E-04	3.666E-02	Half-Life too short		
		1362.66		4.745E-04	3.666E-02	Half-Life too short		
		1750.46		5.766E-04	3.666E-02	Half-Life too short		
MO-99		140.51		-2.006E-01	2.411E+00	3.488E+00	9.426E-01	-0.058
		181.06		2.467E-01	1.519E+00	2.212E+00	3.896E-01	0.112
		366.43		-3.678E+00	7.880E+00	1.238E+01	8.813E-01	-0.297
		739.58	*	9.843E-01	9.265E-01	1.740E+00	2.520E-01	0.566
		778.00		1.925E+00	2.727E+00	4.938E+00	3.839E-01	0.390
TC-99M		140.51	*	-9.642E-01	2.727E+00	Half-Life too short		
RH-101		127.23		6.313E-03	1.796E-02	3.022E-02	1.791E-03	0.209
		198.01	*	-7.348E-03	2.112E-02	3.143E-02	2.336E-03	-0.234
		325.23		4.561E-02	1.223E-01	2.105E-01	1.752E-02	0.217
RH-102		418.52		9.166E-02	1.813E-01	3.114E-01	1.968E-02	0.294
		475.06	*	1.059E-02	1.911E-02	3.278E-02	2.126E-03	0.323
		631.29		2.750E-02	3.280E-02	6.024E-02	3.901E-03	0.456
		697.49		2.557E-02	4.454E-02	7.917E-02	5.390E-03	0.323
		766.84		2.494E-02	7.184E-02	1.166E-01	8.906E-03	0.214
		1046.59		2.310E-02	6.195E-02	1.101E-01	8.404E-03	0.210
		1112.84		1.304E-02	1.170E-01	1.985E-01	1.312E-02	0.066
RU-103		497.08	*	7.189E-03	2.351E-02	3.916E-02	5.088E-03	0.184
	+	610.33		3.118E-01	6.183E-01	8.515E-01	1.337E-01	0.366
RH-106	+	511.85		1.359E-02	2.243E-01	3.124E-01	2.043E-02	0.044

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		621.84	*	8.930E-02	2.153E-01	3.755E-01	4.542E-02	0.238
		1050.47		-4.969E-01	1.209E+00	1.869E+00	1.416E-01	-0.266
RU-106	+	511.85		1.359E-02	2.243E-01	3.124E-01	2.043E-02	0.044
		621.84	*	8.930E-02	2.152E-01	3.755E-01	2.439E-02	0.238
		1050.47		-4.969E-01	1.209E+00	1.869E+00	1.416E-01	-0.266
AG-108M		433.93	*	-2.695E-03	1.894E-02	3.024E-02	2.066E-03	-0.089
		614.37		1.206E-02	2.635E-02	4.127E-02	2.868E-03	0.292
		722.95		-1.663E-02	2.796E-02	4.273E-02	3.210E-03	-0.389
CD-109		88.03	*	6.468E-02	4.205E-01	6.411E-01	7.573E-02	0.101
AG-110M		657.75	*	-1.189E-03	2.156E-02	3.563E-02	2.405E-03	-0.033
		677.61		1.382E-01	1.722E-01	3.160E-01	2.179E-02	0.437
		706.67		1.291E-01	1.333E-01	2.447E-01	1.764E-02	0.527
		763.93		5.816E-02	9.711E-02	1.721E-01	1.355E-02	0.338
		884.67		-1.275E-02	2.873E-02	4.290E-02	4.038E-03	-0.297
		937.48		-3.779E-02	6.006E-02	8.460E-02	7.835E-03	-0.447
		1384.27		-1.311E-02	1.023E-01	1.625E-01	1.230E-02	-0.081
IN-111		171.28		-2.464E-02	9.200E-02	1.453E-01	9.985E-03	-0.170
		245.39	*	3.736E-02	9.711E-02	1.688E-01	1.434E-02	0.221
IN-113M		391.69	*	-1.936E-02	2.637E-02	3.967E-02	2.608E-03	-0.488
SN-113		391.69	*	-1.936E-02	2.637E-02	3.967E-02	2.608E-03	-0.488
IN-114M		190.27	*	5.360E-02	1.128E-01	1.685E-01	1.224E-02	0.318
CD-115		260.90		-8.604E-01	6.836E+00	1.141E+01	1.009E+00	-0.075
		492.35		7.401E-01	2.047E+00	3.441E+00	2.242E-01	0.215
		527.90	*	3.576E-01	6.462E-01	1.103E+00	7.232E-02	0.324
SN-117M		156.02		-3.562E-01	8.827E-01	1.388E+00	9.015E-02	-0.257
		158.56	*	-8.652E-03	2.191E-02	3.444E-02	2.260E-03	-0.251
SB-122		563.90	*	-6.955E-02	1.565E-01	2.485E-01	1.630E-02	-0.280
		692.80		-2.130E+00	3.354E+00	5.036E+00	3.402E-01	-0.423
I-123		159.00	*	-7.973E-05	3.354E+00	Half-Life too short		
		528.96		1.444E-02	3.354E+00	Half-Life too short		
TE-123M		159.00	*	-7.149E-03	1.628E-02	2.549E-02	1.694E-03	-0.280
I-124		602.71	*	-4.791E-02	1.379E-01	1.995E-01	1.302E-02	-0.240
		722.78		-5.222E-01	8.108E-01	1.231E+00	8.748E-02	-0.424
		1325.50		-2.564E+00	5.740E+00	8.492E+00	6.180E-01	-0.302
		1376.25		2.842E+00	4.902E+00	8.956E+00	6.537E-01	0.317
		1509.49		-1.444E+00	2.599E+00	3.558E+00	2.485E-01	-0.406
		1691.02		-5.253E-01	6.550E-01	8.047E-01	5.039E-02	-0.653
SB-124		602.71		-9.244E-03	2.661E-02	3.849E-02	2.512E-03	-0.240
		645.85		-4.021E-02	2.990E-01	4.901E-01	3.489E-02	-0.082
		709.31		-1.023E+00	1.722E+00	2.636E+00	1.831E-01	-0.388
		713.82		6.130E-02	9.172E-01	1.529E+00	1.673E-01	0.040
		722.78		-1.460E-01	2.268E-01	3.444E-01	2.524E-02	-0.424
		968.20		-3.419E-02	1.423E+00	2.157E+00	1.861E-01	-0.016
		1045.16		4.416E-01	1.295E+00	2.285E+00	1.749E-01	0.193
		1325.50		-7.658E-01	1.715E+00	2.537E+00	1.846E-01	-0.302
		1368.21		-5.776E-01	9.973E-01	1.402E+00	1.777E-01	-0.412
		1436.60		0.000E+00	2.483E+00	4.038E+00	2.899E-01	0.000
		1691.02	*	-3.465E-02	4.322E-02	5.308E-02	3.569E-03	-0.653
SB-125		427.89	*	-1.343E-02	6.103E-02	9.699E-02	6.382E-03	-0.138

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		463.38		-9.436E-02	1.709E-01	2.577E-01	1.891E-02	-0.366
		600.56		1.221E-02	1.161E-01	1.967E-01	1.445E-02	0.062
		635.90		-7.679E-02	1.562E-01	2.427E-01	1.788E-02	-0.316
TE-125M		109.28	*	-8.148E-01	4.958E+00	8.121E+00	7.650E-01	-0.100
I-126		388.63		7.195E-02	8.396E-02	1.493E-01	9.446E-03	0.482
		666.33	*	-3.413E-02	7.550E-02	1.184E-01	7.636E-03	-0.288
		753.82		8.161E-02	5.916E-01	9.921E-01	7.418E-02	0.082
SB-126		223.80		6.160E-02	1.591E+00	2.530E+00	2.027E-01	0.024
		278.60		-3.750E-01	1.183E+00	1.852E+00	1.709E-01	-0.203
		296.50		3.151E-01	5.261E-01	9.209E-01	8.242E-02	0.342
		414.70		-1.894E-02	2.970E-02	4.484E-02	2.828E-03	-0.422
		415.30		-2.893E-01	2.463E+00	3.966E+00	2.502E-01	-0.073
		555.20		-9.526E-01	1.443E+00	2.220E+00	1.457E-01	-0.429
		573.80		-4.860E-01	4.171E-01	5.998E-01	3.931E-02	-0.810
		593.00		-3.704E-01	4.128E-01	6.041E-01	3.949E-02	-0.613
		656.30		-9.363E-01	1.410E+00	2.151E+00	1.380E-01	-0.435
		666.33		-1.401E-02	3.099E-02	4.858E-02	3.134E-03	-0.288
		675.00		-5.240E-01	8.154E-01	1.238E+00	8.110E-02	-0.423
		695.00		3.528E-03	2.810E-02	4.736E-02	3.211E-03	0.074
		697.00		6.422E-02	1.005E-01	1.801E-01	1.225E-02	0.357
		720.50	*	3.040E-02	6.046E-02	1.059E-01	7.498E-03	0.287
		856.80		-1.717E-01	1.950E-01	2.718E-01	2.387E-02	-0.632
		989.30		-5.816E-02	5.453E-01	8.606E-01	7.217E-02	-0.068
		1034.80		-6.730E-01	3.440E+00	5.583E+00	4.354E-01	-0.121
		1213.00		-7.986E-01	1.751E+00	2.423E+00	1.446E-01	-0.330
SN-126	+	64.28		2.509E-01	5.922E-01	5.925E-01	9.240E-02	0.423
		86.94		-6.722E-02	1.742E-01	2.669E-01	1.123E-01	-0.252
		87.57	*	1.294E-02	4.218E-02	6.519E-02	7.667E-03	0.199
SB-127		61.10		-6.408E+00	9.436E+00	1.373E+01	1.312E+00	-0.467
		252.40		1.411E-01	6.680E-01	1.142E+00	4.749E-01	0.124
		290.80		-8.705E-01	3.077E+00	5.023E+00	4.867E-01	-0.173
		411.60		-1.837E+00	1.861E+00	2.667E+00	3.521E-01	-0.689
		444.90		-1.300E+00	1.548E+00	2.250E+00	2.081E-01	-0.578
		473.00		-2.661E-02	2.880E-01	4.604E-01	4.484E-02	-0.058
		543.00		-9.331E-01	2.490E+00	3.756E+00	4.406E-01	-0.248
		603.60		-7.358E-01	2.093E+00	2.893E+00	2.688E-01	-0.254
		685.20	*	3.772E-02	1.872E-01	3.193E-01	2.502E-02	0.118
		698.50		1.331E+00	2.154E+00	3.842E+00	5.213E-01	0.346
		722.20		-8.103E-01	4.776E+00	7.718E+00	6.092E-01	-0.105
		783.80		-2.040E-01	5.282E-01	8.150E-01	8.275E-02	-0.250
XE-127		57.60		1.135E+00	3.234E+00	5.657E+00	4.951E-01	0.201
		145.22		4.958E-01	3.769E-01	6.143E-01	3.831E-02	0.807
		172.10		-4.216E-02	6.330E-02	9.667E-02	6.657E-03	-0.436
		202.84	*	-2.600E-02	2.430E-02	3.503E-02	2.642E-03	-0.742
		374.96		-5.146E-03	1.018E-01	1.666E-01	1.137E-02	-0.031
I-131		80.18		-4.738E-01	1.104E+00	1.800E+00	1.955E-01	-0.263
		284.30		-9.820E-02	4.761E-01	7.845E-01	7.490E-02	-0.125
		364.48	*	2.987E-02	3.820E-02	6.747E-02	5.190E-03	0.443
		636.97		-3.437E-01	4.917E-01	7.444E-01	5.242E-02	-0.462

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.89		-1.433E+00	2.409E+00	3.681E+00	2.622E-01	-0.389
TE-132		49.72		-1.156E+00	3.168E+00	4.737E+00	4.372E-01	-0.244
		111.76		8.257E-01	3.462E+00	5.550E+00	4.367E-01	0.149
		116.30		-6.280E-01	2.821E+00	4.579E+00	3.357E-01	-0.137
		228.16	*	-7.498E-02	8.273E-02	1.188E-01	1.702E-02	-0.631
BA-133		53.15		2.110E+00	2.596E+00	4.677E+00	4.186E-01	0.451
		79.62		-4.479E-01	6.067E-01	9.589E-01	1.587E-01	-0.467
		81.00		-1.722E-02	4.643E-02	7.590E-02	1.309E-02	-0.227
		276.40		-1.296E-01	2.439E-01	3.925E-01	5.804E-02	-0.330
		302.84		4.371E-03	8.598E-02	1.442E-01	1.935E-02	0.030
		356.01	*	-2.969E-02	2.785E-02	4.067E-02	5.073E-03	-0.730
		383.85		-5.226E-02	1.891E-01	3.013E-01	3.394E-02	-0.173
I-133	+	510.53		5.596E-05	1.891E-01	Half-Life too short		
		529.87	*	6.869E-06	1.891E-01	Half-Life too short		
		706.58		5.252E-04	1.891E-01	Half-Life too short		
		856.28		-5.369E-04	1.891E-01	Half-Life too short		
		875.33		9.397E-05	1.891E-01	Half-Life too short		
		1236.41		2.240E-04	1.891E-01	Half-Life too short		
		1298.22		2.747E-04	1.891E-01	Half-Life too short		
CS-134		475.35		6.433E-01	1.258E+00	2.147E+00	1.393E-01	0.300
		563.23		-1.027E-01	2.036E-01	3.212E-01	2.141E-02	-0.320
		569.32		4.592E-02	1.167E-01	2.051E-01	1.376E-02	0.224
		604.70		-4.691E-03	2.295E-02	3.229E-02	2.116E-03	-0.145
		795.84	*	1.080E-02	2.575E-02	4.482E-02	3.615E-03	0.241
		801.93		1.108E-01	2.468E-01	4.292E-01	3.487E-02	0.258
		1038.57		8.584E-01	2.348E+00	4.144E+00	3.211E-01	0.207
		1167.94		8.207E-01	1.079E+00	2.059E+00	1.160E-01	0.399
		1365.15		1.142E-01	6.919E-01	1.175E+00	9.136E-02	0.097
CS-135		268.24	*	-7.630E-02	9.398E-02	1.473E-01	1.517E-02	-0.518
I-135		288.45		-7.776E+00	9.398E-02	Half-Life too short		
		417.63		3.913E+01	9.398E-02	Half-Life too short		
		546.56		1.064E+00	9.398E-02	Half-Life too short		
		836.80		-2.443E+01	9.398E-02	Half-Life too short		
		1038.76		1.048E+01	9.398E-02	Half-Life too short		
		1124.00		-4.657E+01	9.398E-02	Half-Life too short		
		1131.51		-7.460E+00	9.398E-02	Half-Life too short		
		1260.41	*	-2.804E+00	9.398E-02	Half-Life too short		
		1457.56		4.484E+01	9.398E-02	Half-Life too short		
		1678.03		9.716E+00	9.398E-02	Half-Life too short		
		1706.46		-3.100E+01	9.398E-02	Half-Life too short		
		1791.20		-2.775E+01	9.398E-02	Half-Life too short		
CS-136		66.91		9.824E-03	2.811E-01	4.308E-01	6.891E-02	0.023
		86.29		-1.467E-01	3.454E-01	5.615E-01	8.424E-02	-0.261
		153.22		7.682E-02	2.448E-01	4.070E-01	3.145E-02	0.189
		163.89		-5.318E-01	4.536E-01	6.307E-01	5.040E-02	-0.843
		176.55		3.252E-02	1.455E-01	2.383E-01	1.806E-02	0.136
		273.65		2.872E-02	1.869E-01	3.178E-01	3.068E-02	0.090
		340.57		3.304E-02	4.646E-02	8.198E-02	6.708E-03	0.403
		818.51		-1.064E-02	3.082E-02	4.761E-02	3.945E-03	-0.223

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1048.07	*	-1.769E-02	4.013E-02	6.196E-02	4.968E-03	-0.286
		1235.34		1.058E-02	1.446E-01	2.425E-01	2.481E-02	0.044
BA-137M		661.65	*	9.717E-03	2.201E-02	3.854E-02	2.467E-03	0.252
CS-137		661.65	*	1.027E-02	2.327E-02	4.074E-02	2.617E-03	0.252
CE-139		165.85	*	-2.109E-02	1.729E-02	2.516E-02	1.703E-03	-0.838
BA-140		162.64		-4.334E-02	3.146E-01	4.811E-01	3.518E-02	-0.090
		304.84		-1.379E-01	5.160E-01	8.386E-01	2.355E-01	-0.164
		423.70		-3.735E-01	7.922E-01	1.206E+00	3.846E-01	-0.310
		537.32	*	7.402E-02	1.042E-01	1.781E-01	5.816E-02	0.416
LA-140		328.77		3.992E-02	1.068E-01	1.836E-01	1.605E-02	0.217
		432.53		-5.664E-02	8.107E-01	1.308E+00	9.058E-02	-0.043
		487.03		3.676E-02	5.693E-02	9.879E-02	7.111E-03	0.372
		751.79		4.326E-02	6.652E-01	1.105E+00	9.394E-02	0.039
		815.85		1.002E-01	1.264E-01	2.306E-01	2.140E-02	0.434
		867.82		2.163E-01	5.850E-01	1.003E+00	9.400E-02	0.216
		919.63		1.761E-01	1.089E+00	1.810E+00	2.003E-01	0.097
		925.24		5.250E-02	4.804E-01	7.901E-01	7.583E-02	0.066
		1596.49	*	-1.244E-02	4.424E-02	7.012E-02	4.684E-03	-0.177
CE-141		145.44	*	2.675E-02	3.240E-02	5.094E-02	3.289E-03	0.525
CE-143		57.37		8.337E-02	1.309E+01	2.237E+01	2.206E+00	0.004
		231.56		1.957E+01	3.114E+01	5.099E+01	1.602E+01	0.384
		293.26	*	4.940E-01	1.479E+00	2.538E+00	5.470E-01	0.195
		350.59		6.393E+00	2.077E+01	3.511E+01	1.078E+01	0.182
		490.36		-1.264E+01	3.758E+01	5.767E+01	1.789E+01	-0.219
		664.57		3.410E+00	1.612E+01	2.743E+01	8.710E+00	0.124
		721.93		-1.220E+00	1.815E+01	2.972E+01	8.533E+00	-0.041
CE-144		80.11		-4.448E-01	9.736E-01	1.583E+00	1.717E-01	-0.281
		133.54	*	-3.965E-02	1.179E-01	1.882E-01	2.689E-02	-0.211
PM-144		476.78		1.208E-02	4.301E-02	7.171E-02	5.395E-03	0.168
		618.01		-9.445E-03	2.069E-02	3.275E-02	2.230E-03	-0.288
		696.49	*	4.969E-03	1.967E-02	3.367E-02	2.289E-03	0.148
		778.57		9.354E-01	1.319E+00	2.383E+00	1.855E-01	0.392
PR-144		696.49	*	3.353E-01	1.328E+00	2.272E+00	1.544E-01	0.148
		1489.15		5.570E+00	7.428E+00	1.415E+01	9.965E-01	0.394
PM-146		453.90	*	3.326E-03	2.701E-02	4.441E-02	4.024E-03	0.075
		633.02		-2.991E-01	8.319E-01	1.310E+00	4.839E-01	-0.228
		735.90		-5.276E-02	9.103E-02	1.352E-01	3.815E-02	-0.390
		747.13		-4.514E-03	5.050E-02	8.197E-02	1.092E-02	-0.055
ND-147	+	91.11		4.118E-02	1.716E-01	1.927E-01	2.219E-02	0.214
		319.41		-2.750E-01	1.223E+00	1.991E+00	1.686E-01	-0.138
		439.89		3.881E-01	2.097E+00	3.483E+00	2.227E-01	0.111
		531.02	*	1.084E-02	2.283E-01	3.675E-01	5.095E-02	0.029
PM-149		285.90	*	1.942E+00	4.923E+00	8.500E+00	1.344E+00	0.228
EU-152		121.78		6.605E-03	3.752E-02	6.263E-02	4.824E-03	0.105
		244.69		6.551E-02	2.018E-01	3.492E-01	2.962E-02	0.188
		344.27	*	-5.941E-02	6.066E-02	9.028E-02	7.560E-03	-0.658
		443.98		-6.350E-01	6.309E-01	8.998E-01	5.765E-02	-0.706
		778.89		9.235E-02	1.588E-01	2.818E-01	2.194E-02	0.328
		867.32		8.014E-02	5.258E-01	8.748E-01	7.804E-02	0.092

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		964.01		-9.017E-04	1.637E-01	2.633E-01	2.285E-02	-0.003
		1085.78		1.016E-01	2.160E-01	3.887E-01	2.739E-02	0.261
		1112.02		7.323E-02	1.659E-01	2.969E-01	1.967E-02	0.247
		1407.95		1.356E-02	1.256E-01	2.091E-01	1.514E-02	0.065
GD-153		69.67		2.420E-02	7.947E-01	1.349E+00	1.327E-01	0.018
		83.37		-2.733E+00	7.940E+00	1.223E+01	1.372E+00	-0.224
		97.43	*	-3.473E-03	4.730E-02	7.128E-02	6.778E-03	-0.049
		103.18		4.262E-02	5.318E-02	9.328E-02	7.895E-03	0.457
EU-154		123.07		5.140E-03	2.658E-02	4.440E-02	4.201E-03	0.116
		247.94		-3.094E-02	2.180E-01	3.648E-01	4.168E-02	-0.085
		591.81		-3.751E-01	4.128E-01	6.172E-01	6.314E-02	-0.608
		723.30		-7.726E-02	1.175E-01	1.780E-01	1.458E-02	-0.434
		756.87		2.947E-02	4.372E-01	7.265E-01	8.142E-02	0.041
		873.19		3.662E-02	1.836E-01	3.078E-01	3.851E-02	0.119
		996.32		-4.170E-01	2.774E-01	3.154E-01	5.555E-02	-1.322
		1004.76		-3.308E-02	1.306E-01	2.110E-01	2.390E-02	-0.157
		1274.45	*	5.695E-03	5.374E-02	9.064E-02	8.980E-03	0.063
EU-155		48.70		-4.832E-01	2.186E+00	3.323E+00	2.776E-01	-0.145
		60.01		-2.150E+00	3.290E+00	4.799E+00	4.188E-01	-0.448
		86.54		-1.636E-02	4.728E-02	7.735E-02	9.042E-03	-0.212
		105.31	*	-5.828E-02	5.775E-02	8.829E-02	7.268E-03	-0.660
TB-160		86.79		-4.965E-02	1.237E-01	1.918E-01	2.235E-02	-0.259
		197.04		-1.466E-01	3.402E-01	5.036E-01	3.733E-02	-0.291
		215.65		-1.002E-01	4.159E-01	6.465E-01	5.061E-02	-0.155
		298.57		2.203E-04	6.263E-02	1.047E-01	9.329E-03	0.002
		879.36	*	-1.240E-02	7.979E-02	1.262E-01	1.146E-02	-0.098
		962.29		8.973E-02	2.720E-01	4.619E-01	4.017E-02	0.194
		966.15		2.176E-02	1.081E-01	1.795E-01	1.554E-02	0.121
		1177.93		4.298E-02	1.437E-01	2.531E-01	1.413E-02	0.170
		1271.85		4.171E-02	2.940E-01	4.999E-01	3.320E-02	0.083
HO-166M		80.57		-6.077E-02	1.278E-01	2.075E-01	2.261E-02	-0.293
	+	184.41		1.776E-02	3.730E-02	4.592E-02	3.278E-03	0.387
		280.46		-3.154E-02	6.274E-02	9.643E-02	8.892E-03	-0.327
		410.95		-5.653E-02	1.487E-01	2.325E-01	1.463E-02	-0.243
		711.68	*	-6.302E-03	3.967E-02	6.426E-02	4.481E-03	-0.098
		752.31		1.613E-02	1.631E-01	2.722E-01	2.030E-02	0.059
		810.29		-1.236E-02	3.782E-02	5.881E-02	4.810E-03	-0.210
TM-171		51.35		-9.647E+00	2.289E+01	3.808E+01	3.385E+00	-0.253
		52.39		8.277E+00	1.177E+01	2.108E+01	1.885E+00	0.393
		59.40		6.001E+00	1.747E+01	2.769E+01	2.392E+00	0.217
		66.72	*	-1.427E-01	1.552E+01	2.369E+01	2.267E+00	-0.006
LU-176		88.36		8.212E-03	1.019E-01	1.543E-01	1.807E-02	0.053
		201.83		-2.195E-03	1.654E-02	2.608E-02	1.961E-03	-0.084
		306.84	*	7.477E-03	1.526E-02	2.651E-02	2.318E-03	0.282
		401.10		-4.453E-01	4.038E+00	6.526E+00	4.080E-01	-0.068
LU-177		112.95		1.524E-01	4.431E-01	7.148E-01	5.020E-02	0.213
		208.36	*	1.626E-01	3.181E-01	5.031E-01	3.856E-02	0.323
LU-177M		52.97		9.630E-01	1.146E+00	2.068E+00	1.851E-01	0.466
		54.07		3.844E-01	5.732E-01	1.025E+00	9.155E-02	0.375

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		61.30		-5.688E-01	9.570E-01	1.405E+00	1.257E-01	-0.405
		121.62		6.642E-02	1.866E-01	3.158E-01	1.875E-02	0.210
		147.16		-7.050E-02	4.101E-01	5.862E-01	3.681E-02	-0.120
		171.86		-2.279E-01	2.882E-01	4.355E-01	2.997E-02	-0.523
		218.09		1.870E-01	4.909E-01	8.050E-01	6.346E-02	0.232
		268.79		-2.944E-01	4.487E-01	7.133E-01	6.430E-02	-0.413
		319.02		3.395E-02	1.479E-01	2.512E-01	2.129E-02	0.135
		367.43		1.217E-01	5.691E-01	9.564E-01	6.778E-02	0.127
		413.65	*	-1.020E-01	1.015E-01	1.452E-01	9.154E-03	-0.702
HF-181		56.28		-3.472E-01	5.342E-01	8.682E-01	7.669E-02	-0.400
		57.53		8.503E-02	2.772E-01	4.835E-01	4.233E-02	0.176
		65.20		8.750E-02	4.847E-01	7.538E-01	7.104E-02	0.116
		133.02		-3.540E-02	3.462E-02	5.247E-02	3.151E-03	-0.675
		136.25		5.495E-02	2.335E-01	3.883E-01	2.353E-02	0.142
		345.85		-7.058E-03	9.941E-02	1.633E-01	1.268E-02	-0.043
		482.03	*	-1.341E-02	2.218E-02	3.276E-02	2.129E-03	-0.409
W-181		56.28		-1.475E-01	2.271E-01	3.691E-01	3.260E-02	-0.400
		57.53		3.602E-02	1.179E-01	2.057E-01	1.801E-02	0.175
		65.20	*	3.693E-02	2.046E-01	3.182E-01	2.998E-02	0.116
TA-182		67.75		-1.264E-03	5.711E-02	8.699E-02	8.410E-03	-0.015
		100.10		-4.275E-02	9.249E-02	1.487E-01	1.338E-02	-0.287
		152.43		-5.762E-02	1.840E-01	2.918E-01	1.869E-02	-0.197
		222.10		-1.213E-01	1.977E-01	2.951E-01	2.353E-02	-0.411
		1001.68		-7.097E-02	1.404E+00	2.279E+00	1.877E-01	-0.031
		1121.28		-1.599E-02	8.301E-02	1.388E-01	8.977E-03	-0.115
		1189.05		-5.537E-03	1.214E-01	1.989E-01	1.135E-02	-0.028
		1221.42	*	5.043E-02	9.016E-02	1.637E-01	9.928E-03	0.308
		1230.97		8.362E-02	1.629E-01	3.009E-01	1.858E-02	0.278
RE-183		57.98		9.585E-02	1.168E-01	2.029E-01	1.771E-02	0.472
		59.32		3.699E-02	6.552E-02	1.060E-01	9.157E-03	0.349
		67.20		8.339E-03	1.004E-01	1.546E-01	1.487E-02	0.054
		162.32	*	2.617E-02	6.412E-02	1.021E-01	6.803E-03	0.256
		208.81		5.939E-02	5.914E-01	9.061E-01	6.954E-02	0.066
		291.72		-2.977E-01	5.062E-01	8.023E-01	7.250E-02	-0.371
RE-184		57.98		3.695E-01	4.504E-01	7.822E-01	6.827E-02	0.472
		59.32		1.425E-01	2.524E-01	4.081E-01	3.527E-02	0.349
		67.20		3.213E-02	3.869E-01	5.957E-01	5.730E-02	0.054
		161.27		-2.103E-03	2.062E-01	3.337E-01	2.215E-02	-0.006
		216.55		1.950E-02	1.525E-01	2.450E-01	1.923E-02	0.080
		252.85	*	7.365E-02	1.405E-01	2.462E-01	2.133E-02	0.299
		318.01		-4.541E-02	2.653E-01	4.343E-01	3.691E-02	-0.105
		792.07		-2.187E-01	5.438E-01	8.338E-01	6.628E-02	-0.262
		903.28		-3.872E-01	5.435E-01	7.581E-01	7.040E-02	-0.511
		920.93		-1.037E-01	2.759E-01	4.172E-01	3.807E-02	-0.248
OS-185		59.72		3.139E-02	1.781E-01	2.783E-01	2.414E-02	0.113
		61.14		-6.804E-02	1.027E-01	1.498E-01	1.336E-02	-0.454
		69.30		-5.302E-02	1.380E-01	2.273E-01	2.229E-02	-0.233
		592.07		-1.796E+00	1.677E+00	2.404E+00	1.572E-01	-0.747
		646.12	*	-9.904E-03	2.625E-02	4.169E-02	2.686E-03	-0.238

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		717.42		1.289E-01	5.529E-01	9.400E-01	6.619E-02	0.137
		874.81		1.906E-01	3.516E-01	6.176E-01	5.571E-02	0.309
		880.27		-2.834E-01	4.556E-01	6.593E-01	5.995E-02	-0.430
RE-188		155.03	*	-3.811E-02	9.181E-02	1.443E-01	9.335E-03	-0.264
		477.96		1.943E-01	1.785E+00	2.920E+00	1.895E-01	0.067
		633.10		-5.610E-01	1.547E+00	2.457E+00	1.590E-01	-0.228
W-188	+	63.58		2.357E+01	5.556E+01	6.081E+01	5.624E+00	0.388
		227.08		-2.499E-01	7.162E+00	1.130E+01	9.137E-01	-0.022
		290.67	*	-3.619E-01	3.945E+00	6.551E+00	5.932E-01	-0.055
IR-192		295.96		2.679E-02	5.745E-02	9.963E-02	8.986E-03	0.269
		308.46		-2.768E-03	5.519E-02	9.162E-02	8.021E-03	-0.030
		316.51	*	1.704E-03	2.019E-02	3.386E-02	2.896E-03	0.050
		468.07		1.481E-02	4.044E-02	6.806E-02	4.951E-03	0.218
		604.41		-1.381E-01	3.021E-01	4.063E-01	4.768E-02	-0.340
		612.46		7.939E-02	4.608E-01	6.893E-01	5.604E-02	0.115
AU-195		65.12		2.343E-02	9.678E-02	1.513E-01	1.425E-02	0.155
		66.83		-1.700E-03	5.003E-02	7.618E-02	7.300E-03	-0.022
		75.70		-1.356E-02	8.487E-02	1.417E-01	1.472E-02	-0.096
		98.88	*	-3.355E-02	1.311E-01	2.024E-01	1.867E-02	-0.166
		129.76		4.254E-01	1.590E+00	2.657E+00	1.583E-01	0.160
TL-200		367.94	*	5.269E-01	2.065E+00	3.484E+00	2.463E-01	0.151
		579.30		-1.136E+01	1.550E+01	2.385E+01	1.562E+00	-0.476
		828.27		-8.119E-01	1.655E+01	2.674E+01	2.249E+00	-0.030
		1205.75		-9.930E-01	8.302E+00	1.340E+01	7.895E-01	-0.074
TL-201		68.90		-2.309E-01	4.243E-01	6.557E-01	6.408E-02	-0.352
		70.82		2.705E-02	2.270E-01	3.873E-01	3.850E-02	0.070
		80.30		-2.549E-01	4.086E-01	6.558E-01	7.127E-02	-0.389
		135.34		1.058E+00	2.527E+00	4.255E+00	2.571E-01	0.249
		167.43	*	7.838E-01	7.061E-01	1.231E+00	8.367E-02	0.637
TL-202		68.90		-7.851E-02	1.443E-01	2.229E-01	2.178E-02	-0.352
		70.82		9.172E-03	7.696E-02	1.313E-01	1.305E-02	0.070
		80.30		-8.645E-02	1.386E-01	2.224E-01	2.417E-02	-0.389
		439.56	*	-1.259E-05	2.717E-02	4.414E-02	2.822E-03	0.000
HG-203		70.83		5.393E-02	4.615E-01	7.872E-01	1.140E-01	0.069
		72.87		5.549E-02	2.626E-01	4.500E-01	6.404E-02	0.123
		82.60		-3.092E-01	5.365E-01	8.071E-01	1.246E-01	-0.383
		279.20	*	-2.057E-03	2.715E-02	4.328E-02	4.099E-03	-0.048
BI-207		72.80		-5.149E-03	8.768E-02	1.476E-01	1.494E-02	-0.035
		74.97		-4.024E-03	4.899E-02	8.223E-02	8.487E-03	-0.049
		84.90		-5.359E-02	1.006E-01	1.521E-01	1.736E-02	-0.352
		569.67		9.485E-03	1.811E-02	3.226E-02	2.115E-03	0.294
		1063.62	*	5.003E-03	3.170E-02	5.425E-02	4.007E-03	0.092
		1770.23		-2.881E-01	3.287E-01	4.039E-01	2.363E-02	-0.713
TL-207		81.07		-3.046E-03	1.004E-01	1.685E-01	1.845E-02	-0.018
		83.78		-1.118E-02	6.803E-02	1.060E-01	1.194E-02	-0.106
		94.90		5.156E-02	1.335E-01	2.065E-01	2.073E-02	0.250
		122.32		-3.437E-01	9.182E-01	1.466E+00	9.932E-02	-0.234
	+	144.24		5.496E-01	5.311E-01	7.165E-01	5.424E-02	0.767
		154.21		7.744E-02	2.181E-01	3.637E-01	2.749E-02	0.213

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		269.46		-2.285E-02	1.129E-01	1.870E-01	1.720E-02	-0.122
		323.87	*	-9.747E-02	3.634E-01	5.867E-01	1.031E-01	-0.166
		338.28		-3.047E-02	5.443E-01	8.966E-01	1.065E-01	-0.034
		445.03		-1.249E+00	1.462E+00	2.117E+00	2.250E-01	-0.590
TL-208		277.35		7.531E-02	2.394E-01	4.110E-01	5.240E-02	0.183
	+	510.84		1.279E-02	2.109E-01	3.038E-01	3.218E-02	0.042
		583.14	*	-7.461E-03	2.512E-02	3.980E-02	2.923E-03	-0.187
		860.37		6.801E-02	1.718E-01	2.962E-01	2.799E-02	0.230
PO-209		260.50		3.247E-01	5.631E+00	9.540E+00	8.427E-01	0.034
		262.80		-3.242E+00	1.573E+01	2.606E+01	2.315E+00	-0.124
		896.60	*	2.740E+00	4.672E+00	8.251E+00	7.684E-01	0.332
BI-210		46.50	*	1.278E+00	3.759E+00	5.613E+00	4.523E-01	0.228
PB-210		46.50	*	1.278E+00	3.759E+00	5.613E+00	4.523E-01	0.228
PO-210		46.50	*	1.278E+00	3.759E+00	5.613E+00	3.942E-01	0.228
BI-211		72.87		3.132E-01	1.482E+00	2.540E+00	2.572E-01	0.123
		351.07	*	-4.029E-03	1.453E-01	2.261E-01	1.832E-02	-0.018
PB-211		404.84	*	6.734E-02	6.028E-01	9.943E-01	6.203E-01	0.068
		427.08		-1.717E-01	1.339E+00	2.142E+00	1.325E+00	-0.080
		831.96		3.744E-01	6.752E-01	1.136E+00	7.114E-01	0.330
BI-212		727.18	*	6.771E-02	1.717E-01	2.980E-01	2.616E-02	0.227
		785.46		-3.526E-01	1.030E+00	1.600E+00	1.259E-01	-0.220
		1620.62		4.358E-01	6.943E-01	1.345E+00	8.852E-02	0.324
PB-212		74.81		-1.997E-02	1.687E-01	2.825E-01	3.930E-02	-0.071
		77.11		4.585E-02	9.319E-02	1.620E-01	1.706E-02	0.283
		87.30		-5.030E-02	2.039E-01	2.999E-01	4.621E-02	-0.168
		238.63	*	-6.895E-03	3.737E-02	6.175E-02	5.850E-03	-0.112
		300.09		-5.650E-02	4.575E-01	7.562E-01	8.049E-02	-0.075
PO-212		74.81		-1.997E-02	1.687E-01	2.825E-01	3.930E-02	-0.071
		77.11		4.585E-02	9.319E-02	1.620E-01	1.706E-02	0.283
		87.30		-5.030E-02	2.039E-01	2.999E-01	4.621E-02	-0.168
		115.19		-1.453E+00	1.951E+00	3.040E+00	2.046E-01	-0.478
		238.63	*	-6.895E-03	3.737E-02	6.175E-02	5.850E-03	-0.112
		300.09		-5.650E-02	4.575E-01	7.562E-01	8.049E-02	-0.075
BI-214	+	609.31	*	3.311E-02	6.552E-02	8.953E-02	7.454E-03	0.370
		768.36		1.273E-01	4.297E-01	7.334E-01	7.111E-02	0.174
		934.06		3.220E-01	7.207E-01	1.199E+00	1.312E-01	0.269
		1120.29		-4.429E-02	1.787E-01	2.967E-01	2.750E-02	-0.149
		1238.11		-1.957E-01	3.610E-01	5.314E-01	4.505E-02	-0.368
		1377.67		3.146E-01	5.920E-01	1.068E+00	1.031E-01	0.295
		1764.49		-1.977E-01	1.667E-01	2.468E-01	1.451E-02	-0.801
PB-214		74.81		-3.442E-02	2.907E-01	4.867E-01	6.177E-02	-0.071
		77.11		7.859E-02	1.599E-01	2.778E-01	3.611E-02	0.283
		87.30		-8.617E-02	3.493E-01	5.137E-01	7.209E-02	-0.168
		241.98		-1.144E-01	2.146E-01	3.501E-01	3.542E-02	-0.327
		295.21		1.448E-02	8.103E-02	1.375E-01	1.503E-02	0.105
		351.92	*	3.487E-02	5.034E-02	8.320E-02	8.002E-03	0.419
PO-214		74.81		-3.442E-02	2.907E-01	4.867E-01	6.177E-02	-0.071
		77.11		7.859E-02	1.599E-01	2.778E-01	3.611E-02	0.283
		87.30		-8.617E-02	3.493E-01	5.137E-01	7.209E-02	-0.168

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		241.98		-1.144E-01	2.146E-01	3.501E-01	3.542E-02	-0.327
		295.21		1.448E-02	8.103E-02	1.375E-01	1.503E-02	0.105
		351.92	*	3.487E-02	5.034E-02	8.320E-02	8.002E-03	0.419
PO-215		81.07		-3.046E-03	1.004E-01	1.685E-01	1.845E-02	-0.018
		83.78		-1.118E-02	6.803E-02	1.060E-01	1.194E-02	-0.106
		94.90		5.156E-02	1.335E-01	2.065E-01	2.073E-02	0.250
		122.32		-3.437E-01	9.182E-01	1.466E+00	9.932E-02	-0.234
	+	144.24		5.496E-01	5.311E-01	7.165E-01	5.424E-02	0.767
		154.21		7.744E-02	2.181E-01	3.637E-01	2.749E-02	0.213
		269.46		-2.285E-02	1.129E-01	1.870E-01	1.720E-02	-0.122
		323.87	*	-9.747E-02	3.634E-01	5.867E-01	1.031E-01	-0.166
		338.28		-3.047E-02	5.443E-01	8.966E-01	1.065E-01	-0.034
		445.03		-1.249E+00	1.462E+00	2.117E+00	2.250E-01	-0.590
PO-216		74.81		-1.997E-02	1.687E-01	2.825E-01	3.930E-02	-0.071
		77.11		4.585E-02	9.319E-02	1.620E-01	1.706E-02	0.283
		87.30		-5.030E-02	2.039E-01	2.999E-01	4.621E-02	-0.168
		238.63	*	-6.895E-03	3.737E-02	6.175E-02	5.850E-03	-0.112
		300.09		-5.650E-02	4.575E-01	7.562E-01	8.049E-02	-0.075
PO-218		74.81		-3.442E-02	2.907E-01	4.867E-01	6.177E-02	-0.071
		77.11		7.859E-02	1.599E-01	2.778E-01	3.611E-02	0.283
		87.30		-8.617E-02	3.493E-01	5.137E-01	7.209E-02	-0.168
		241.98		-1.144E-01	2.146E-01	3.501E-01	3.542E-02	-0.327
		295.21		1.448E-02	8.103E-02	1.375E-01	1.503E-02	0.105
		351.92	*	3.487E-02	5.034E-02	8.320E-02	8.002E-03	0.419
RN-219		271.23		1.884E-01	1.430E-01	2.619E-01	2.799E-02	0.720
		401.81	*	1.591E-01	2.401E-01	4.199E-01	5.796E-02	0.379
RN-220		549.76	*	-4.296E+00	1.530E+01	2.337E+01	1.533E+00	-0.184
RA-223		81.07		-3.046E-03	1.004E-01	1.685E-01	1.845E-02	-0.018
		83.78		-1.118E-02	6.803E-02	1.060E-01	1.194E-02	-0.106
		94.90		5.156E-02	1.335E-01	2.065E-01	2.073E-02	0.250
		122.32		-3.437E-01	9.182E-01	1.466E+00	9.932E-02	-0.234
	+	144.24		5.496E-01	5.311E-01	7.165E-01	5.424E-02	0.767
		154.21		7.744E-02	2.181E-01	3.637E-01	2.749E-02	0.213
		269.46		-2.285E-02	1.129E-01	1.870E-01	1.720E-02	-0.122
		323.87	*	-9.747E-02	3.634E-01	5.867E-01	1.031E-01	-0.166
		338.28		-3.047E-02	5.443E-01	8.966E-01	1.065E-01	-0.034
		445.03		-1.249E+00	1.462E+00	2.117E+00	2.250E-01	-0.590
RA-224		240.98	*	-2.031E-01	3.948E-01	6.448E-01	5.416E-02	-0.315
RA-226	+	609.31	*	3.311E-02	6.552E-02	8.953E-02	7.454E-03	0.370
		768.36		1.273E-01	4.297E-01	7.334E-01	7.111E-02	0.174
		934.06		3.220E-01	7.207E-01	1.199E+00	1.312E-01	0.269
		1120.29		-4.429E-02	1.787E-01	2.967E-01	2.750E-02	-0.149
		1238.11		-1.957E-01	3.610E-01	5.314E-01	4.505E-02	-0.368
		1377.67		3.146E-01	5.920E-01	1.068E+00	1.031E-01	0.295
		1764.49		-1.977E-01	1.667E-01	2.468E-01	1.451E-02	-0.801
AC-227		79.80		-4.705E-01	7.708E-01	1.228E+00	2.760E-01	-0.383
		236.00		-1.656E-01	1.295E-01	1.965E-01	2.360E-02	-0.843
		256.20	*	-3.683E-03	2.375E-01	4.005E-01	6.173E-02	-0.009
		286.10		4.737E-01	9.531E-01	1.658E+00	2.245E-01	0.286

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		299.80		1.184E-01	8.300E-01	1.403E+00	2.473E-01	0.084
		304.40		-3.716E-01	1.162E+00	1.882E+00	3.485E-01	-0.198
		334.20		1.625E-01	1.182E+00	1.988E+00	3.812E-01	0.082
TH-227		79.80		-4.705E-01	7.710E-01	1.228E+00	2.792E-01	-0.383
	+	94.00		5.167E-01	2.156E+00	2.296E+00	5.160E-01	0.225
		236.00		-1.656E-01	1.292E-01	1.965E-01	2.126E-02	-0.843
		256.20	*	-3.683E-03	2.375E-01	4.005E-01	7.256E-02	-0.009
		286.10		4.737E-01	1.063E+00	1.658E+00	1.664E+00	0.286
		299.80		1.184E-01	8.300E-01	1.403E+00	2.473E-01	0.084
		304.40		-3.716E-01	1.162E+00	1.882E+00	3.485E-01	-0.198
		334.20		1.625E-01	1.182E+00	1.988E+00	3.812E-01	0.082
AC-228		338.32		-7.832E-03	1.303E-01	2.145E-01	8.825E-02	-0.037
		911.07	*	1.173E-02	8.685E-02	1.394E-01	1.632E-02	0.084
		969.11		2.333E-02	1.445E-01	2.249E-01	5.249E-02	0.104
RA-228		338.32		-7.832E-03	1.303E-01	2.145E-01	8.825E-02	-0.037
		911.07	*	1.173E-02	8.685E-02	1.394E-01	1.632E-02	0.084
		969.11		2.333E-02	1.445E-01	2.249E-01	5.249E-02	0.104
TH-228		84.40		-9.080E-01	1.404E+00	2.108E+00	3.177E-01	-0.431
		238.60	*	-6.975E-03	3.736E-02	6.172E-02	5.847E-03	-0.113
		300.10		-5.609E-02	4.587E-01	7.564E-01	4.487E-01	-0.074
TH-229		85.43		-8.729E-02	1.011E-01	1.492E-01	1.713E-02	-0.585
		88.47		6.366E-03	5.867E-02	8.906E-02	1.040E-02	0.071
		100.00		-6.571E-02	1.090E-01	1.630E-01	1.470E-02	-0.403
		193.63	*	-8.556E-02	3.136E-01	4.908E-01	3.601E-02	-0.174
		210.97		-3.147E-02	4.909E-01	7.395E-01	5.711E-02	-0.043
TH-230	+	609.31	*	3.311E-02	6.551E-02	8.953E-02	7.454E-03	0.370
		768.36		1.273E-01	4.297E-01	7.334E-01	7.111E-02	0.174
		934.06		3.220E-01	7.207E-01	1.199E+00	1.312E-01	0.269
		1120.29		-4.429E-02	1.787E-01	2.967E-01	2.750E-02	-0.149
		1238.11		-1.957E-01	3.610E-01	5.314E-01	4.505E-02	-0.368
		1377.67		3.146E-01	5.920E-01	1.068E+00	1.031E-01	0.295
		1764.49		-1.977E-01	1.667E-01	2.468E-01	1.451E-02	-0.801
PA-231		283.67	*	-4.692E-01	9.617E-01	1.543E+00	2.393E-01	-0.304
		301.29		7.532E-02	3.336E-01	5.676E-01	7.046E-02	0.133
TH-231		81.07		-3.046E-03	1.004E-01	1.685E-01	1.845E-02	-0.018
		83.78		-1.118E-02	6.803E-02	1.060E-01	1.194E-02	-0.106
		94.90		5.156E-02	1.335E-01	2.065E-01	2.073E-02	0.250
		122.32		-3.437E-01	9.182E-01	1.466E+00	9.932E-02	-0.234
	+	144.24		5.496E-01	5.311E-01	7.165E-01	5.424E-02	0.767
		154.21		7.744E-02	2.181E-01	3.637E-01	2.749E-02	0.213
		269.46		-2.285E-02	1.129E-01	1.870E-01	1.720E-02	-0.122
		323.87	*	-9.747E-02	3.634E-01	5.867E-01	1.031E-01	-0.166
		338.28		-3.047E-02	5.443E-01	8.966E-01	1.065E-01	-0.034
		445.03		-1.249E+00	1.462E+00	2.117E+00	2.250E-01	-0.590
U-231		84.21		-2.041E-01	8.048E-01	1.245E+00	1.410E-01	-0.164
	+	92.29		1.414E-01	5.894E-01	8.192E-01	8.724E-02	0.173
		95.87	*	-3.685E-02	1.823E-01	2.678E-01	2.633E-02	-0.138
		108.00		2.541E-01	3.120E-01	5.450E-01	4.203E-02	0.466
TH-232		338.32		-7.832E-03	1.303E-01	2.145E-01	1.712E-02	-0.037

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		911.07	*	1.173E-02	8.685E-02	1.394E-01	1.632E-02	0.084
		969.11		2.333E-02	1.445E-01	2.249E-01	5.249E-02	0.104
PA-233		75.28		-6.880E-02	1.442E+00	2.426E+00	3.974E-01	-0.028
		86.59		-2.667E-01	7.733E-01	1.260E+00	3.520E-01	-0.212
		300.12		-2.856E-02	2.365E-01	3.909E-01	5.874E-02	-0.073
		311.98	*	-1.115E-02	4.172E-02	6.790E-02	6.030E-03	-0.164
		340.50		2.642E-01	3.435E-01	6.007E-01	1.417E-01	0.440
		398.62		-1.881E-01	1.198E+00	1.923E+00	4.992E-01	-0.098
		415.76		5.173E-01	1.007E+00	1.727E+00	3.581E-01	0.300
PA-234	+	63.00		7.387E-01	1.744E+00	1.979E+00	3.130E-01	0.373
		94.67		6.647E-02	9.693E-02	1.531E-01	2.061E-02	0.434
		98.44		-1.640E-02	5.609E-02	8.532E-02	4.770E-02	-0.192
		99.86		-1.507E-01	2.771E-01	4.167E-01	3.768E-02	-0.362
		111.00		-3.551E-02	1.172E-01	1.816E-01	2.030E-02	-0.196
		131.20		1.058E-02	6.029E-02	1.001E-01	5.983E-03	0.106
		152.70		-7.204E-02	1.850E-01	2.911E-01	4.670E-02	-0.247
	+	186.00		6.395E-01	1.356E+00	1.863E+00	5.746E-01	0.343
		226.40		1.175E-01	2.443E-01	4.025E-01	5.172E-02	0.292
		227.20		-9.140E-03	2.615E-01	4.125E-01	3.337E-02	-0.022
		248.90		-3.906E-01	5.046E-01	7.891E-01	1.767E-01	-0.495
		293.70		1.375E-01	3.800E-01	6.536E-01	1.143E-01	0.210
		369.80		4.561E-02	5.365E-01	8.905E-01	1.887E-01	0.051
		568.70		3.019E-01	6.126E-01	1.086E+00	7.120E-02	0.278
		569.50		6.399E-02	1.627E-01	2.859E-01	1.874E-02	0.224
		574.00		-1.101E+00	9.224E-01	1.320E+00	8.647E-02	-0.834
		699.00		3.530E-01	4.212E-01	7.634E-01	1.400E-01	0.462
		706.10		6.227E-01	7.377E-01	1.251E+00	5.539E-01	0.498
		733.00		1.445E-01	2.055E-01	3.702E-01	8.030E-02	0.390
		742.81		6.455E-02	7.743E-01	1.290E+00	8.650E-01	0.050
		796.30		2.250E-01	5.216E-01	9.028E-01	2.425E-01	0.249
		805.60		-2.628E-01	6.254E-01	9.492E-01	2.896E-01	-0.277
		819.60		-1.660E-01	7.169E-01	1.121E+00	4.255E-01	-0.148
		826.30		-2.242E-01	4.263E-01	6.033E-01	2.697E-01	-0.372
		831.60		2.787E-01	3.326E-01	6.017E-01	1.793E-01	0.463
		876.40		4.205E-01	6.596E-01	9.173E-01	9.434E-01	0.458
		880.51		-1.104E-01	1.742E-01	2.514E-01	2.287E-02	-0.439
		883.24		2.460E-02	1.625E-01	2.694E-01	1.813E-01	0.091
		899.00		3.473E-01	5.114E-01	8.838E-01	3.876E-01	0.393
		925.00		2.771E-02	7.522E-01	1.223E+00	1.111E-01	0.023
		926.50		5.340E-02	1.116E-01	1.927E-01	4.902E-02	0.277
		946.00	*	9.780E-02	1.977E-01	3.420E-01	6.458E-02	0.286
		949.00		-1.120E-01	2.888E-01	4.351E-01	3.847E-02	-0.257
		980.50		-2.058E-01	4.488E-01	6.598E-01	5.602E-02	-0.312
		1394.10		-1.063E-01	7.203E-01	1.129E+00	7.327E-01	-0.094
PA-234M		766.41		7.563E+00	1.301E+01	1.962E+01	1.503E+01	0.385
		1001.03	*	-1.490E+00	4.877E+00	7.624E+00	8.303E-01	-0.195
U-234	+	609.31	*	3.311E-02	6.551E-02	8.953E-02	7.454E-03	0.370
		768.36		1.273E-01	4.297E-01	7.334E-01	7.111E-02	0.174
		934.06		3.220E-01	7.207E-01	1.199E+00	1.312E-01	0.269

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1120.29		-4.429E-02	1.787E-01	2.967E-01	2.750E-02	-0.149
		1238.11		-1.957E-01	3.610E-01	5.314E-01	4.505E-02	-0.368
		1377.67		3.146E-01	5.920E-01	1.068E+00	1.031E-01	0.295
		1764.49		-1.977E-01	1.667E-01	2.468E-01	1.451E-02	-0.801
NP-236		94.67		5.085E-02	7.341E-02	1.162E-01	1.173E-02	0.438
		98.44		-1.241E-02	4.185E-02	6.450E-02	6.005E-03	-0.192
		111.00		-2.686E-02	8.861E-02	1.374E-01	1.001E-02	-0.196
		160.31	*	-6.883E-03	4.798E-02	7.689E-02	5.082E-03	-0.090
NP-237		86.50	*	-5.135E-02	1.170E-01	1.893E-01	4.483E-02	-0.271
		95.87		-1.174E-01	5.812E-01	8.528E-01	2.139E-01	-0.138
NP-239		99.55		-3.431E-02	9.158E-02	1.394E-01	1.269E-02	-0.246
		117.00	*	4.829E-02	9.687E-02	1.660E-01	1.079E-02	0.291
		209.75		-3.899E-01	5.069E-01	7.186E-01	5.530E-02	-0.543
		228.18		-1.276E-01	1.407E-01	2.034E-01	1.650E-02	-0.627
		277.60		-6.186E-02	1.315E-01	2.031E-01	1.870E-02	-0.305
		334.30		9.963E-02	6.703E-01	1.129E+00	9.132E-02	0.088
AM-241		59.54	*	3.236E-02	1.009E-01	1.597E-01	1.479E-02	0.203
AM-243		74.67	*	-2.618E-03	2.763E-02	4.634E-02	4.770E-03	-0.056
		86.72		-1.498E+00	4.326E+00	7.076E+00	8.242E-01	-0.212
		117.66		-3.818E-03	1.899E+00	3.132E+00	2.010E-01	-0.001
	+	142.18		1.425E+01	1.375E+01	1.805E+01	1.114E+00	0.789
CM-243		99.55		-3.529E-02	9.419E-02	1.434E-01	1.305E-02	-0.246
		103.76	*	1.788E-02	5.090E-02	8.665E-02	7.251E-03	0.206
		117.00		4.965E-02	9.961E-02	1.707E-01	1.109E-02	0.291
		209.75		-3.842E-01	4.994E-01	7.080E-01	5.448E-02	-0.543
		228.18		-1.288E-01	1.421E-01	2.054E-01	1.666E-02	-0.627
		277.60		-6.234E-02	1.325E-01	2.047E-01	1.884E-02	-0.305
CM-247		278.00		-2.409E-01	5.494E-01	8.518E-01	7.849E-02	-0.283
		287.40		4.497E-01	7.331E-01	1.289E+00	1.175E-01	0.349
		402.60	*	4.345E-03	2.279E-02	3.803E-02	2.380E-03	0.114
CF-249		252.85		2.853E-01	5.442E-01	9.537E-01	8.262E-02	0.299
		333.44		-5.428E-02	9.244E-02	1.436E-01	1.165E-02	-0.378
		387.95	*	2.169E-02	2.545E-02	4.516E-02	2.869E-03	0.480
CF-251		176.60	*	1.579E-02	7.549E-02	1.235E-01	8.618E-03	0.128
		227.00		-8.091E-03	2.323E-01	3.664E-01	2.962E-02	-0.022
		285.00		2.479E-01	1.065E+00	1.819E+00	1.664E-01	0.136

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871423      *
* Acquisition date :  7-JUL-2009 08:11:44 Detector SN#    :                 *
* Detector ID       : GAM02               Sensitivity     : 5.000           *
* Geometry          : CAN                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:01.56     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871423          Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.3771E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	1.959E-01	3.429E-01	4.582E-01	0.000E+00
TH-234	6.338E-01	1.467E+00	1.230E+00	0.000E+00
U-235	1.696E-01	1.624E-01	1.930E-01	0.000E+00
U-238	6.338E-01	1.467E+00	1.230E+00	0.000E+00
ANH-511	2.762E-03	4.465E-02	3.298E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	3.623E-02	1.854E-01	3.201E-01	0.000E+00	NOT IDENT.
NA-22	1.611E-03	1.868E-02	3.218E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.306E+01	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.551E-02	2.413E-02	4.637E-02	0.000E+00	NOT IDENT.
TI-44	-4.926E-03	1.626E-02	2.903E-02	0.000E+00	NOT IDENT.
SC-46	-1.073E-03	2.215E-02	3.686E-02	0.000E+00	NOT IDENT.
V-48	4.934E-02	2.783E-02	5.933E-02	0.000E+00	NOT IDENT.
CR-51	7.057E-02	1.721E-01	3.133E-01	0.000E+00	NOT IDENT.
MN-52	-1.834E-03	6.043E-02	1.000E-01	0.000E+00	NOT IDENT.
MN-54	-1.068E-02	1.976E-02	3.028E-02	0.000E+00	NOT IDENT.
CO-56	-1.470E-02	2.277E-02	3.442E-02	0.000E+00	NOT IDENT.
CO-57	-5.960E-05	1.225E-02	2.165E-02	0.000E+00	NOT IDENT.
CO-58	-2.890E-03	2.202E-02	3.656E-02	0.000E+00	NOT IDENT.
FE-59	3.732E-02	4.560E-02	8.778E-02	0.000E+00	FAIL ABUN
CO-60	4.525E-03	2.135E-02	3.751E-02	0.000E+00	NOT IDENT.
ZN-65	-3.686E-02	5.097E-02	7.727E-02	0.000E+00	NOT IDENT.
GE-68	4.267E-01	6.283E-01	1.202E+00	0.000E+00	NOT IDENT.
AS-73	5.673E-01	5.374E-01	1.069E+00	0.000E+00	NOT IDENT.
AS-74	2.517E-02	4.366E-02	8.078E-02	0.000E+00	NOT IDENT.
SE-75	1.334E-02	2.382E-02	4.430E-02	0.000E+00	NOT IDENT.
BR-77	5.884E-01	6.925E-01	1.275E+00	0.000E+00	NOT IDENT.
SR-82	2.001E-02	1.745E-01	3.019E-01	0.000E+00	NOT IDENT.

RB-83	3.147E-02	4.173E-02	7.606E-02	0.000E+00	NOT IDENT.
RB-84	1.702E-03	3.319E-02	5.620E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	5.140E+00	9.569E+00	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.429E-02	4.521E-02	0.000E+00	NOT IDENT.
RB-86	2.725E-02	3.108E-01	5.424E-01	0.000E+00	NOT IDENT.
Y-88	-1.220E-02	2.313E-02	3.316E-02	0.000E+00	NOT IDENT.
ZR-88	-1.979E-03	1.653E-02	2.808E-02	0.000E+00	NOT IDENT.
Y-91	-1.554E+00	8.194E+00	1.342E+01	0.000E+00	NOT IDENT.
NB-94	-1.782E-02	2.091E-02	3.195E-02	0.000E+00	NOT IDENT.
NB-95	2.702E-02	2.574E-02	4.673E-02	0.000E+00	NOT IDENT.
NB-95M	-6.551E-02	6.239E-02	1.033E-01	0.000E+00	NOT IDENT.
ZR-95	2.261E-02	3.593E-02	6.678E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.855E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.401E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	9.843E-01	9.080E-01	1.770E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.136E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-7.348E-03	2.070E-02	3.277E-02	0.000E+00	NOT IDENT.
RH-102	1.059E-02	1.873E-02	3.363E-02	0.000E+00	NOT IDENT.
RU-103	7.189E-03	2.304E-02	4.013E-02	0.000E+00	FAIL ABUN
RH-106	8.930E-02	2.110E-01	3.831E-01	0.000E+00	FAIL ABUN
RU-106	8.930E-02	2.109E-01	3.831E-01	0.000E+00	FAIL ABUN
AG-108M	-2.695E-03	1.856E-02	3.107E-02	0.000E+00	NOT IDENT.
CD-109	6.468E-02	4.121E-01	6.787E-01	0.000E+00	NOT IDENT.
AG-110M	-1.189E-03	2.113E-02	3.631E-02	0.000E+00	NOT IDENT.
IN-111	3.736E-02	9.517E-02	1.753E-01	0.000E+00	NOT IDENT.
IN-113M	-1.936E-02	2.584E-02	4.084E-02	0.000E+00	NOT IDENT.
SN-113	-1.936E-02	2.584E-02	4.084E-02	0.000E+00	NOT IDENT.
IN-114M	5.360E-02	1.106E-01	1.759E-01	0.000E+00	NOT IDENT.
CD-115	3.576E-01	6.333E-01	1.129E+00	0.000E+00	NOT IDENT.
SN-117M	-8.652E-03	2.147E-02	3.607E-02	0.000E+00	NOT IDENT.
SB-122	-6.955E-02	1.533E-01	2.540E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.779E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-7.149E-03	1.595E-02	2.670E-02	0.000E+00	NOT IDENT.
I-124	-4.791E-02	1.352E-01	2.036E-01	0.000E+00	NOT IDENT.
SB-124	-3.465E-02	4.236E-02	5.309E-02	0.000E+00	NOT IDENT.
SB-125	-1.343E-02	5.981E-02	9.968E-02	0.000E+00	NOT IDENT.
TE-125M	-8.148E-01	4.858E+00	8.563E+00	0.000E+00	NOT IDENT.
I-126	-3.413E-02	7.399E-02	1.206E-01	0.000E+00	NOT IDENT.
SB-126	3.040E-02	5.925E-02	1.078E-01	0.000E+00	NOT IDENT.
SN-126	1.294E-02	4.134E-02	6.902E-02	0.000E+00	FAIL ABUN
SB-127	3.772E-02	1.834E-01	3.252E-01	0.000E+00	NOT IDENT.
XE-127	-2.600E-02	2.382E-02	3.652E-02	0.000E+00	NOT IDENT.
I-131	2.987E-02	3.743E-02	6.955E-02	0.000E+00	NOT IDENT.
TE-132	-7.498E-02	8.108E-02	1.236E-01	0.000E+00	NOT IDENT.
BA-133	-2.969E-02	2.730E-02	4.194E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.460E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.080E-02	2.523E-02	4.551E-02	0.000E+00	NOT IDENT.
CS-135	-7.630E-02	9.211E-02	1.527E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	8.429E+06	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.769E-02	3.932E-02	6.257E-02	0.000E+00	NOT IDENT.
BA-137M	9.717E-03	2.157E-02	3.928E-02	0.000E+00	NOT IDENT.
CS-137	1.027E-02	2.280E-02	4.152E-02	0.000E+00	NOT IDENT.
CE-139	-2.109E-02	1.695E-02	2.633E-02	0.000E+00	NOT IDENT.
BA-140	7.402E-02	1.021E-01	1.822E-01	0.000E+00	NOT IDENT.
LA-140	-1.244E-02	4.335E-02	7.021E-02	0.000E+00	NOT IDENT.
CE-141	2.675E-02	3.176E-02	5.343E-02	0.000E+00	NOT IDENT.
CE-143	4.940E-01	1.450E+00	2.628E+00	0.000E+00	NOT IDENT.
CE-144	-3.965E-02	1.155E-01	1.977E-01	0.000E+00	NOT IDENT.
PM-144	4.969E-03	1.928E-02	3.428E-02	0.000E+00	NOT IDENT.
PR-144	3.353E-01	1.301E+00	2.313E+00	0.000E+00	NOT IDENT.
PM-146	3.326E-03	2.647E-02	4.559E-02	0.000E+00	NOT IDENT.
ND-147	1.084E-02	2.238E-01	3.762E-01	0.000E+00	FAIL ABUN
PM-149	1.942E+00	4.825E+00	8.804E+00	0.000E+00	NOT IDENT.
EU-152	-5.941E-02	5.945E-02	9.317E-02	0.000E+00	NOT IDENT.
GD-153	-3.473E-03	4.635E-02	7.532E-02	0.000E+00	NOT IDENT.
EU-154	5.695E-03	5.266E-02	9.116E-02	0.000E+00	NOT IDENT.
EU-155	-5.828E-02	5.660E-02	9.316E-02	0.000E+00	NOT IDENT.
TB-160	-1.240E-02	7.819E-02	1.279E-01	0.000E+00	NOT IDENT.
HO-166M	-6.302E-03	3.887E-02	6.539E-02	0.000E+00	FAIL ABUN
TM-171	-1.427E-01	1.521E+01	2.520E+01	0.000E+00	NOT IDENT.
LU-176	7.477E-03	1.496E-02	2.742E-02	0.000E+00	NOT IDENT.
LU-177	1.626E-01	3.118E-01	5.241E-01	0.000E+00	NOT IDENT.
LU-177M	-1.020E-01	9.950E-02	1.494E-01	0.000E+00	NOT IDENT.
HF-181	-1.341E-02	2.174E-02	3.359E-02	0.000E+00	NOT IDENT.
W-181	3.693E-02	2.005E-01	3.387E-01	0.000E+00	NOT IDENT.
TA-182	5.043E-02	8.835E-02	1.648E-01	0.000E+00	NOT IDENT.
RE-183	2.617E-02	6.284E-02	1.068E-01	0.000E+00	NOT IDENT.
RE-184	7.365E-02	1.377E-01	2.556E-01	0.000E+00	NOT IDENT.

OS-185	-9.904E-03	2.572E-02	4.251E-02	0.000E+00	NOT IDENT.
RE-188	-3.811E-02	8.997E-02	1.512E-01	0.000E+00	NOT IDENT.
W-188	-3.619E-01	3.866E+00	6.783E+00	0.000E+00	FAIL ABUN
IR-192	1.704E-03	1.979E-02	3.500E-02	0.000E+00	NOT IDENT.
AU-195	-3.355E-02	1.285E-01	2.138E-01	0.000E+00	NOT IDENT.
TL-200	5.269E-01	2.023E+00	3.591E+00	0.000E+00	NOT IDENT.
TL-201	7.838E-01	6.920E-01	1.288E+00	0.000E+00	NOT IDENT.
TL-202	-1.259E-05	2.663E-02	4.534E-02	0.000E+00	NOT IDENT.
HG-203	-2.057E-03	2.661E-02	4.485E-02	0.000E+00	NOT IDENT.
BI-207	5.003E-03	3.106E-02	5.476E-02	0.000E+00	NOT IDENT.
TL-207	-9.747E-02	3.561E-01	6.062E-01	0.000E+00	FAIL ABUN
TL-208	-7.461E-03	2.462E-02	4.066E-02	0.000E+00	FAIL ABUN
PO-209	2.740E+00	4.578E+00	8.357E+00	0.000E+00	NOT IDENT.
BI-210	1.278E+00	3.684E+00	6.010E+00	0.000E+00	NOT IDENT.
PB-210	1.278E+00	3.684E+00	6.010E+00	0.000E+00	NOT IDENT.
PO-210	1.278E+00	3.684E+00	6.010E+00	0.000E+00	NOT IDENT.
BI-211	-4.029E-03	1.423E-01	2.333E-01	0.000E+00	NOT IDENT.
PB-211	6.734E-02	5.907E-01	1.023E+00	0.000E+00	NOT IDENT.
BI-212	6.771E-02	1.683E-01	3.031E-01	0.000E+00	NOT IDENT.
PB-212	-6.895E-03	3.662E-02	6.417E-02	0.000E+00	NOT IDENT.
PO-212	-6.895E-03	3.662E-02	6.417E-02	0.000E+00	NOT IDENT.
BI-214	3.311E-02	6.421E-02	9.138E-02	0.000E+00	FAIL ABUN
PB-214	3.487E-02	4.934E-02	8.583E-02	0.000E+00	NOT IDENT.
PO-214	3.487E-02	4.934E-02	8.583E-02	0.000E+00	NOT IDENT.
PO-215	-9.747E-02	3.561E-01	6.062E-01	0.000E+00	FAIL ABUN
PO-216	-6.895E-03	3.662E-02	6.417E-02	0.000E+00	NOT IDENT.
PO-218	3.487E-02	4.934E-02	8.583E-02	0.000E+00	NOT IDENT.
RN-219	1.591E-01	2.353E-01	4.320E-01	0.000E+00	NOT IDENT.
RN-220	-4.296E+00	1.499E+01	2.390E+01	0.000E+00	NOT IDENT.
RA-223	-9.747E-02	3.561E-01	6.062E-01	0.000E+00	FAIL ABUN
RA-224	-2.031E-01	3.869E-01	6.700E-01	0.000E+00	NOT IDENT.
RA-226	3.311E-02	6.421E-02	9.138E-02	0.000E+00	FAIL ABUN
AC-227	-3.683E-03	2.328E-01	4.156E-01	0.000E+00	NOT IDENT.
TH-227	-3.683E-03	2.328E-01	4.156E-01	0.000E+00	FAIL ABUN
AC-228	1.173E-02	8.512E-02	1.412E-01	0.000E+00	NOT IDENT.
RA-228	1.173E-02	8.512E-02	1.412E-01	0.000E+00	NOT IDENT.
TH-228	-6.975E-03	3.661E-02	6.414E-02	0.000E+00	NOT IDENT.
TH-229	-8.556E-02	3.073E-01	5.120E-01	0.000E+00	NOT IDENT.
TH-230	3.311E-02	6.420E-02	9.138E-02	0.000E+00	FAIL ABUN
PA-231	-4.692E-01	9.425E-01	1.599E+00	0.000E+00	NOT IDENT.
TH-231	-9.747E-02	3.561E-01	6.062E-01	0.000E+00	FAIL ABUN
U-231	-3.685E-02	1.787E-01	2.831E-01	0.000E+00	FAIL ABUN
TH-232	1.173E-02	8.512E-02	1.412E-01	0.000E+00	NOT IDENT.
PA-233	-1.115E-02	4.089E-02	7.021E-02	0.000E+00	NOT IDENT.
PA-234	9.780E-02	1.938E-01	3.461E-01	0.000E+00	FAIL ABUN
PA-234M	-1.490E+00	4.780E+00	7.705E+00	0.000E+00	NOT IDENT.
U-234	3.311E-02	6.420E-02	9.138E-02	0.000E+00	FAIL ABUN
NP-236	-6.883E-03	4.702E-02	8.050E-02	0.000E+00	NOT IDENT.
NP-237	-5.135E-02	1.147E-01	2.005E-01	0.000E+00	NOT IDENT.
NP-239	4.829E-02	9.494E-02	1.748E-01	0.000E+00	NOT IDENT.
AM-241	3.236E-02	9.891E-02	1.703E-01	0.000E+00	NOT IDENT.
AM-243	-2.618E-03	2.707E-02	4.921E-02	0.000E+00	FAIL ABUN
CM-243	1.788E-02	4.988E-02	9.146E-02	0.000E+00	NOT IDENT.
CM-247	4.345E-03	2.233E-02	3.913E-02	0.000E+00	NOT IDENT.
CF-249	2.169E-02	2.494E-02	4.650E-02	0.000E+00	NOT IDENT.
CF-251	1.579E-02	7.398E-02	1.291E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:12:12.91

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871423.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:11:44.
Sample ID         : G1201871423          Sample quantity  : 1.37710E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.56  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	8	10.67*	1.046E+00	1.959E-01	1.959E-01	178.59
TH-234	63.29	23	3.80*	2.554E+00	6.338E-01	6.338E-01	236.25
	92.38	15	5.41	5.608E+00	1.337E-01	1.337E-01	417.09
U-235	89.95	------	2.70	5.447E+00	------	Line Not Found	------
	93.35	15	4.50	5.608E+00	1.608E-01	1.608E-01	417.64
	105.00	------	2.10	6.127E+00	------	Line Not Found	------
	143.76	40	10.50*	6.167E+00	1.696E-01	1.696E-01	97.72
	163.35	------	4.70	5.849E+00	------	Line Not Found	------
	185.71	26	54.00	5.447E+00	2.368E-02	2.368E-02	209.98
	205.31	------	4.70	5.110E+00	------	Line Not Found	------
U-238	63.29	23	3.80*	2.554E+00	6.338E-01	6.338E-01	236.25
	92.38	15	5.41	5.608E+00	1.337E-01	1.337E-01	416.79
ANH-511	511.00	3	100.00*	2.608E+00	2.762E-03	2.762E-03	1649.75

Flag: "*" = Keyline

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

Total number of lines in spectrum	7	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	7	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.959E-01	1.959E-01	3.499E-01	178.59	
TH-234	4.47E+09Y	1.00	6.338E-01	6.338E-01	14.97E-01	236.25	
U-235	7.04E+08Y	1.00	1.696E-01	1.696E-01	1.657E-01	97.72	
U-238	4.47E+09Y	1.00	6.338E-01	6.338E-01	14.97E-01	236.25	
ANH-511	1.00E+09Y	1.00	2.762E-03	2.762E-03	45.56E-03	1649.75	
		Total Activity :	1.636E+00	1.636E+00			
		Grand Total Activity :	1.636E+00	1.636E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	609.39	13	31	1.45	1218.58	1213	11	1.77E-03	****	2.27E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:12:17.99

```
*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                DETECTOR DATA                                *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871423.CNF;1  *
* Acquisition date  : 7-JUL-2009 08:11:44.  Detector SN#     :                *
* Detector ID       : GAM02                 Sensitivity      : 5.00000       *
* Geometry          : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:01.56          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                                 SAMPLE DATA                                 *
*                                                                             *
* Sample date       : 30-JUN-2009 00:00:00  Nuclide Library : SOLID           *
* Sample ID         : G1201871423           Analyst initials: MXR1            *
* Batch Number      : 881219                Sample Quantity : 1.37710E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                   QC DATA                                   *
*                                                                             *
* CALIB. DATE/TIME : 1-NOV-2008 14:03:38.86MS Isotope      :                  *
* MSD ID           :                       MSD Isotope     :                  *
* LCS ID           : 1032-A                LCS Isotope     :                  *
*******************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.959E-01	3.499E-01	4.568E-01	3.386E-02	0.429
TH-234	6.338E-01	1.497E+00	1.155E+00	2.111E-01	0.549
U-235	1.696E-01	1.657E-01	1.840E-01	3.027E-02	0.922
U-238	6.338E-01	1.497E+00	1.155E+00	2.111E-01	0.549
ANH-511	2.762E-03	4.556E-02	3.220E-02	2.106E-03	0.086

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.623E-02		1.892E-01	3.122E-01	2.295E-02	0.116
NA-22	1.611E-03		1.906E-02	3.199E-02	2.139E-03	0.050
NA-24	-5.633E-05		4.238E-05	Half-Life too short		
AL-26	1.551E-02		2.462E-02	4.643E-02	2.615E-03	0.334
TI-44	-4.926E-03		1.660E-02	2.737E-02	2.917E-03	-0.180
SC-46	-1.073E-03		2.261E-02	3.638E-02	3.352E-03	-0.029
V-48	4.934E-02		2.839E-02	5.868E-02	4.962E-03	0.841

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CR-51	7.057E-02		1.756E-01	3.032E-01	2.703E-02	0.233
MN-52	-1.834E-03		6.166E-02	9.967E-02	7.161E-03	-0.018
MN-54	-1.068E-02		2.016E-02	2.986E-02	2.536E-03	-0.358
CO-56	-1.470E-02		2.323E-02	3.395E-02	2.936E-03	-0.433
CO-57	-5.960E-05		1.250E-02	2.057E-02	1.214E-03	-0.003
CO-58	-2.890E-03		2.247E-02	3.602E-02	2.957E-03	-0.080
FE-59	3.732E-02		4.653E-02	8.701E-02	6.697E-03	0.429
CO-60	4.525E-03		2.179E-02	3.732E-02	2.747E-03	0.121
ZN-65	-3.686E-02		5.202E-02	7.661E-02	5.039E-03	-0.481
GE-68	4.267E-01		6.411E-01	1.191E+00	8.550E-02	0.358
AS-73	5.673E-01		5.483E-01	1.001E+00	8.958E-02	0.567
AS-74	2.517E-02		4.455E-02	7.911E-02	5.169E-03	0.318
SE-75	1.334E-02		2.430E-02	4.271E-02	3.829E-03	0.312
BR-77	5.884E-01		7.066E-01	1.245E+00	8.156E-02	0.472
SR-82	2.001E-02		1.781E-01	2.972E-01	2.305E-02	0.067
RB-83	3.147E-02		4.258E-02	7.429E-02	4.865E-03	0.424
RB-84	1.702E-03		3.386E-02	5.546E-02	5.052E-03	0.031
KR-85	1.028E+01		5.245E+00	9.344E+00	6.114E-01	1.100
SR-85	4.857E-02		2.478E-02	4.415E-02	2.889E-03	1.100
RB-86	2.725E-02		3.172E-01	5.375E-01	3.864E-02	0.051
Y-88	-1.220E-02		2.361E-02	3.321E-02	1.821E-03	-0.367
ZR-88	-1.979E-03		1.687E-02	2.727E-02	1.695E-03	-0.073
Y-91	-1.554E+00		8.362E+00	1.333E+01	7.839E-01	-0.117
NB-94	-1.782E-02		2.134E-02	3.139E-02	2.156E-03	-0.568
NB-95	2.702E-02		2.627E-02	4.599E-02	3.506E-03	0.588
NB-95M	-6.551E-02		6.366E-02	9.939E-02	9.512E-03	-0.659
ZR-95	2.261E-02		3.666E-02	6.571E-02	5.581E-03	0.344
NB-97	-1.606E-06		1.456E-05	Half-Life too short		
ZR-97	5.287E-04		3.266E-04	Half-Life too short		
MO-99	9.843E-01		9.265E-01	1.740E+00	2.520E-01	0.566
TC-99M	-9.642E-01		5.793E+00	Half-Life too short		
RH-101	-7.348E-03		2.112E-02	3.143E-02	2.336E-03	-0.234
RH-102	1.059E-02		1.911E-02	3.278E-02	2.126E-03	0.323
RU-103	7.189E-03		2.351E-02	3.916E-02	5.088E-03	0.184
RH-106	8.930E-02		2.153E-01	3.755E-01	4.542E-02	0.238
RU-106	8.930E-02		2.152E-01	3.755E-01	2.439E-02	0.238
AG-108M	-2.695E-03		1.894E-02	3.024E-02	2.066E-03	-0.089
CD-109	6.468E-02		4.205E-01	6.411E-01	7.573E-02	0.101
AG-110M	-1.189E-03		2.156E-02	3.563E-02	2.405E-03	-0.033
IN-111	3.736E-02		9.711E-02	1.688E-01	1.434E-02	0.221
IN-113M	-1.936E-02		2.637E-02	3.967E-02	2.608E-03	-0.488
SN-113	-1.936E-02		2.637E-02	3.967E-02	2.608E-03	-0.488
IN-114M	5.360E-02		1.128E-01	1.685E-01	1.224E-02	0.318
CD-115	3.576E-01		6.462E-01	1.103E+00	7.232E-02	0.324
SN-117M	-8.652E-03		2.191E-02	3.444E-02	2.260E-03	-0.251
SB-122	-6.955E-02		1.565E-01	2.485E-01	1.630E-02	-0.280
I-123	-7.973E-05		9.077E-05	Half-Life too short		
TE-123M	-7.149E-03		1.628E-02	2.549E-02	1.694E-03	-0.280

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-124	-4.791E-02		1.379E-01	1.995E-01	1.302E-02	-0.240
SB-124	-3.465E-02		4.322E-02	5.308E-02	3.569E-03	-0.653
SB-125	-1.343E-02		6.103E-02	9.699E-02	6.382E-03	-0.138
TE-125M	-8.148E-01		4.958E+00	8.121E+00	7.650E-01	-0.100
I-126	-3.413E-02		7.550E-02	1.184E-01	7.636E-03	-0.288
SB-126	3.040E-02		6.046E-02	1.059E-01	7.498E-03	0.287
SN-126	1.294E-02		4.218E-02	6.519E-02	7.667E-03	0.199
SB-127	3.772E-02		1.872E-01	3.193E-01	2.502E-02	0.118
XE-127	-2.600E-02		2.430E-02	3.503E-02	2.642E-03	-0.742
I-131	2.987E-02		3.820E-02	6.747E-02	5.190E-03	0.443
TE-132	-7.498E-02		8.273E-02	1.188E-01	1.702E-02	-0.631
BA-133	-2.969E-02		2.785E-02	4.067E-02	5.073E-03	-0.730
I-133	6.869E-06		3.806E-06	Half-Life too short		
CS-134	1.080E-02		2.575E-02	4.482E-02	3.615E-03	0.241
CS-135	-7.630E-02		9.398E-02	1.473E-01	1.517E-02	-0.518
I-135	-2.804E+00		4.301E+00	Half-Life too short		
CS-136	-1.769E-02		4.013E-02	6.196E-02	4.968E-03	-0.286
BA-137M	9.717E-03		2.201E-02	3.854E-02	2.467E-03	0.252
CS-137	1.027E-02		2.327E-02	4.074E-02	2.617E-03	0.252
CE-139	-2.109E-02		1.729E-02	2.516E-02	1.703E-03	-0.838
BA-140	7.402E-02		1.042E-01	1.781E-01	5.816E-02	0.416
LA-140	-1.244E-02		4.424E-02	7.012E-02	4.684E-03	-0.177
CE-141	2.675E-02		3.240E-02	5.094E-02	3.289E-03	0.525
CE-143	4.940E-01		1.479E+00	2.538E+00	5.470E-01	0.195
CE-144	-3.965E-02		1.179E-01	1.882E-01	2.689E-02	-0.211
PM-144	4.969E-03		1.967E-02	3.367E-02	2.289E-03	0.148
PR-144	3.353E-01		1.328E+00	2.272E+00	1.544E-01	0.148
PM-146	3.326E-03		2.701E-02	4.441E-02	4.024E-03	0.075
ND-147	1.084E-02		2.283E-01	3.675E-01	5.095E-02	0.029
PM-149	1.942E+00		4.923E+00	8.500E+00	1.344E+00	0.228
EU-152	-5.941E-02		6.066E-02	9.028E-02	7.560E-03	-0.658
GD-153	-3.473E-03		4.730E-02	7.128E-02	6.778E-03	-0.049
EU-154	5.695E-03		5.374E-02	9.064E-02	8.980E-03	0.063
EU-155	-5.828E-02		5.775E-02	8.829E-02	7.268E-03	-0.660
TB-160	-1.240E-02		7.979E-02	1.262E-01	1.146E-02	-0.098
HO-166M	-6.302E-03		3.967E-02	6.426E-02	4.481E-03	-0.098
TM-171	-1.427E-01		1.552E+01	2.369E+01	2.267E+00	-0.006
LU-176	7.477E-03		1.526E-02	2.651E-02	2.318E-03	0.282
LU-177	1.626E-01		3.181E-01	5.031E-01	3.856E-02	0.323
LU-177M	-1.020E-01		1.015E-01	1.452E-01	9.154E-03	-0.702
HF-181	-1.341E-02		2.218E-02	3.276E-02	2.129E-03	-0.409
W-181	3.693E-02		2.046E-01	3.182E-01	2.998E-02	0.116
TA-182	5.043E-02		9.016E-02	1.637E-01	9.928E-03	0.308
RE-183	2.617E-02		6.412E-02	1.021E-01	6.803E-03	0.256
RE-184	7.365E-02		1.405E-01	2.462E-01	2.133E-02	0.299
OS-185	-9.904E-03		2.625E-02	4.169E-02	2.686E-03	-0.238
RE-188	-3.811E-02		9.181E-02	1.443E-01	9.335E-03	-0.264
W-188	-3.619E-01		3.945E+00	6.551E+00	5.932E-01	-0.055

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IR-192	1.704E-03		2.019E-02	3.386E-02	2.896E-03	0.050
AU-195	-3.355E-02		1.311E-01	2.024E-01	1.867E-02	-0.166
TL-200	5.269E-01		2.065E+00	3.484E+00	2.463E-01	0.151
TL-201	7.838E-01		7.061E-01	1.231E+00	8.367E-02	0.637
TL-202	-1.259E-05		2.717E-02	4.414E-02	2.822E-03	0.000
HG-203	-2.057E-03		2.715E-02	4.328E-02	4.099E-03	-0.048
BI-207	5.003E-03		3.170E-02	5.425E-02	4.007E-03	0.092
TL-207	-9.747E-02		3.634E-01	5.867E-01	1.031E-01	-0.166
TL-208	-7.461E-03		2.512E-02	3.980E-02	2.923E-03	-0.187
PO-209	2.740E+00		4.672E+00	8.251E+00	7.684E-01	0.332
BI-210	1.278E+00		3.759E+00	5.613E+00	4.523E-01	0.228
PB-210	1.278E+00		3.759E+00	5.613E+00	4.523E-01	0.228
PO-210	1.278E+00		3.759E+00	5.613E+00	3.942E-01	0.228
BI-211	-4.029E-03		1.453E-01	2.261E-01	1.832E-02	-0.018
PB-211	6.734E-02		6.028E-01	9.943E-01	6.203E-01	0.068
BI-212	6.771E-02		1.717E-01	2.980E-01	2.616E-02	0.227
PB-212	-6.895E-03		3.737E-02	6.175E-02	5.850E-03	-0.112
PO-212	-6.895E-03		3.737E-02	6.175E-02	5.850E-03	-0.112
BI-214	3.311E-02	+	6.552E-02	8.953E-02	7.454E-03	0.370
PB-214	3.487E-02		5.034E-02	8.320E-02	8.002E-03	0.419
PO-214	3.487E-02		5.034E-02	8.320E-02	8.002E-03	0.419
PO-215	-9.747E-02		3.634E-01	5.867E-01	1.031E-01	-0.166
PO-216	-6.895E-03		3.737E-02	6.175E-02	5.850E-03	-0.112
PO-218	3.487E-02		5.034E-02	8.320E-02	8.002E-03	0.419
RN-219	1.591E-01		2.401E-01	4.199E-01	5.796E-02	0.379
RN-220	-4.296E+00		1.530E+01	2.337E+01	1.533E+00	-0.184
RA-223	-9.747E-02		3.634E-01	5.867E-01	1.031E-01	-0.166
RA-224	-2.031E-01		3.948E-01	6.448E-01	5.416E-02	-0.315
RA-226	3.311E-02	+	6.552E-02	8.953E-02	7.454E-03	0.370
AC-227	-3.683E-03		2.375E-01	4.005E-01	6.173E-02	-0.009
TH-227	-3.683E-03		2.375E-01	4.005E-01	7.256E-02	-0.009
AC-228	1.173E-02		8.685E-02	1.394E-01	1.632E-02	0.084
RA-228	1.173E-02		8.685E-02	1.394E-01	1.632E-02	0.084
TH-228	-6.975E-03		3.736E-02	6.172E-02	5.847E-03	-0.113
TH-229	-8.556E-02		3.136E-01	4.908E-01	3.601E-02	-0.174
TH-230	3.311E-02	+	6.551E-02	8.953E-02	7.454E-03	0.370
PA-231	-4.692E-01		9.617E-01	1.543E+00	2.393E-01	-0.304
TH-231	-9.747E-02		3.634E-01	5.867E-01	1.031E-01	-0.166
U-231	-3.685E-02		1.823E-01	2.678E-01	2.633E-02	-0.138
TH-232	1.173E-02		8.685E-02	1.394E-01	1.632E-02	0.084
PA-233	-1.115E-02		4.172E-02	6.790E-02	6.030E-03	-0.164
PA-234	9.780E-02		1.977E-01	3.420E-01	6.458E-02	0.286
PA-234M	-1.490E+00		4.877E+00	7.624E+00	8.303E-01	-0.195
U-234	3.311E-02	+	6.551E-02	8.953E-02	7.454E-03	0.370
NP-236	-6.883E-03		4.798E-02	7.689E-02	5.082E-03	-0.090
NP-237	-5.135E-02		1.170E-01	1.893E-01	4.483E-02	-0.271
NP-239	4.829E-02		9.687E-02	1.660E-01	1.079E-02	0.291
AM-241	3.236E-02		1.009E-01	1.597E-01	1.479E-02	0.203

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	-2.618E-03		2.763E-02	4.634E-02	4.770E-03	-0.056
CM-243	1.788E-02		5.090E-02	8.665E-02	7.251E-03	0.206
CM-247	4.345E-03		2.279E-02	3.803E-02	2.380E-03	0.114
CF-249	2.169E-02		2.545E-02	4.516E-02	2.869E-03	0.480
CF-251	1.579E-02		7.549E-02	1.235E-01	8.618E-03	0.128

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871423          *
* Acquisition date  :  7-JUL-2009 08:11:44 Detector SN#    :                *
* Detector ID       : GAM02                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.56      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871423          Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.3771E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	1.959E-01	3.429E-01	2.292E-01	1.750E-01
TH-234	6.338E-01	1.467E+00	6.153E-01	7.486E-01
U-235	1.696E-01	1.624E-01	9.657E-02	8.287E-02
U-238	6.338E-01	1.467E+00	6.153E-01	7.486E-01
ANH-511	2.762E-03	4.465E-02	1.650E-02	2.278E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	3.623E-02	1.854E-01	1.602E-01	9.458E-02	NOT IDENT.
NA-22	1.611E-03	1.868E-02	1.610E-02	9.530E-03	NOT IDENT.
NA-24	-5.633E+01	8.306E+01	0.000E+00	4.238E+01	SHORT HLIF
AL-26	1.551E-02	2.413E-02	2.320E-02	1.231E-02	NOT IDENT.
TI-44	-4.926E-03	1.626E-02	1.452E-02	8.298E-03	NOT IDENT.
SC-46	-1.073E-03	2.215E-02	1.844E-02	1.130E-02	NOT IDENT.
V-48	4.934E-02	2.783E-02	2.968E-02	1.420E-02	NOT IDENT.
CR-51	7.057E-02	1.721E-01	1.567E-01	8.782E-02	NOT IDENT.
MN-52	-1.834E-03	6.043E-02	5.003E-02	3.083E-02	NOT IDENT.
MN-54	-1.068E-02	1.976E-02	1.515E-02	1.008E-02	NOT IDENT.
CO-56	-1.470E-02	2.277E-02	1.722E-02	1.162E-02	NOT IDENT.
CO-57	-5.960E-05	1.225E-02	1.083E-02	6.251E-03	NOT IDENT.
CO-58	-2.890E-03	2.202E-02	1.829E-02	1.124E-02	NOT IDENT.
FE-59	3.732E-02	4.560E-02	4.392E-02	2.327E-02	FAIL ABUN
CO-60	4.525E-03	2.135E-02	1.877E-02	1.090E-02	NOT IDENT.
ZN-65	-3.686E-02	5.097E-02	3.866E-02	2.601E-02	NOT IDENT.
GE-68	4.267E-01	6.283E-01	6.013E-01	3.206E-01	NOT IDENT.
AS-73	5.673E-01	5.374E-01	5.350E-01	2.742E-01	NOT IDENT.
AS-74	2.517E-02	4.366E-02	4.042E-02	2.227E-02	NOT IDENT.
SE-75	1.334E-02	2.382E-02	2.216E-02	1.215E-02	NOT IDENT.
BR-77	5.884E-01	6.925E-01	6.379E-01	3.533E-01	NOT IDENT.
SR-82	2.001E-02	1.745E-01	1.511E-01	8.904E-02	NOT IDENT.

RB-83	3.147E-02	4.173E-02	3.805E-02	2.129E-02	NOT IDENT.
RB-84	1.702E-03	3.319E-02	2.812E-02	1.693E-02	NOT IDENT.
KR-85	1.028E+01	5.140E+00	4.787E+00	2.622E+00	NOT IDENT.
SR-85	4.857E-02	2.429E-02	2.262E-02	1.239E-02	NOT IDENT.
RB-86	2.725E-02	3.108E-01	2.714E-01	1.586E-01	NOT IDENT.
Y-88	-1.220E-02	2.313E-02	1.659E-02	1.180E-02	NOT IDENT.
ZR-88	-1.979E-03	1.653E-02	1.405E-02	8.434E-03	NOT IDENT.
Y-91	-1.554E+00	8.194E+00	6.716E+00	4.181E+00	NOT IDENT.
NB-94	-1.782E-02	2.091E-02	1.599E-02	1.067E-02	NOT IDENT.
NB-95	2.702E-02	2.574E-02	2.338E-02	1.313E-02	NOT IDENT.
NB-95M	-6.551E-02	6.239E-02	5.169E-02	3.183E-02	NOT IDENT.
ZR-95	2.261E-02	3.593E-02	3.341E-02	1.833E-02	NOT IDENT.
NB-97	-1.606E+00	2.855E+01	0.000E+00	1.456E+01	SHORT HLIF
ZR-97	5.287E+02	6.401E+02	0.000E+00	3.266E+02	SHORT HLIF
MO-99	9.843E-01	9.080E-01	8.854E-01	4.633E-01	NOT IDENT.
TC-99M	-9.642E+05	1.136E+07	0.000E+00	5.793E+06	SHORT HLIF
RH-101	-7.348E-03	2.070E-02	1.640E-02	1.056E-02	NOT IDENT.
RH-102	1.059E-02	1.873E-02	1.682E-02	9.556E-03	NOT IDENT.
RU-103	7.189E-03	2.304E-02	2.008E-02	1.175E-02	FAIL ABUN
RH-106	8.930E-02	2.110E-01	1.917E-01	1.077E-01	FAIL ABUN
RU-106	8.930E-02	2.109E-01	1.917E-01	1.076E-01	FAIL ABUN
AG-108M	-2.695E-03	1.856E-02	1.555E-02	9.468E-03	NOT IDENT.
CD-109	6.468E-02	4.121E-01	3.396E-01	2.102E-01	NOT IDENT.
AG-110M	-1.189E-03	2.113E-02	1.817E-02	1.078E-02	NOT IDENT.
IN-111	3.736E-02	9.517E-02	8.770E-02	4.855E-02	NOT IDENT.
IN-113M	-1.936E-02	2.584E-02	2.043E-02	1.318E-02	NOT IDENT.
SN-113	-1.936E-02	2.584E-02	2.043E-02	1.318E-02	NOT IDENT.
IN-114M	5.360E-02	1.106E-01	8.801E-02	5.641E-02	NOT IDENT.
CD-115	3.576E-01	6.333E-01	5.651E-01	3.231E-01	NOT IDENT.
SN-117M	-8.652E-03	2.147E-02	1.804E-02	1.095E-02	NOT IDENT.
SB-122	-6.955E-02	1.533E-01	1.271E-01	7.824E-02	NOT IDENT.
I-123	-7.973E+01	1.779E+02	0.000E+00	9.077E+01	SHORT HLIF
TE-123M	-7.149E-03	1.595E-02	1.336E-02	8.138E-03	NOT IDENT.
I-124	-4.791E-02	1.352E-01	1.019E-01	6.897E-02	NOT IDENT.
SB-124	-3.465E-02	4.236E-02	2.656E-02	2.161E-02	NOT IDENT.
SB-125	-1.343E-02	5.981E-02	4.987E-02	3.051E-02	NOT IDENT.
TE-125M	-8.148E-01	4.858E+00	4.284E+00	2.479E+00	NOT IDENT.
I-126	-3.413E-02	7.399E-02	6.033E-02	3.775E-02	NOT IDENT.
SB-126	3.040E-02	5.925E-02	5.392E-02	3.023E-02	NOT IDENT.
SN-126	1.294E-02	4.134E-02	3.453E-02	2.109E-02	FAIL ABUN
SB-127	3.772E-02	1.834E-01	1.627E-01	9.359E-02	NOT IDENT.
XE-127	-2.600E-02	2.382E-02	1.827E-02	1.215E-02	NOT IDENT.
I-131	2.987E-02	3.743E-02	3.480E-02	1.910E-02	NOT IDENT.
TE-132	-7.498E-02	8.108E-02	6.183E-02	4.137E-02	NOT IDENT.
BA-133	-2.969E-02	2.730E-02	2.098E-02	1.393E-02	NOT IDENT.
I-133	6.869E+00	7.460E+00	0.000E+00	3.806E+00	SHORT HLIF
CS-134	1.080E-02	2.523E-02	2.277E-02	1.287E-02	NOT IDENT.
CS-135	-7.630E-02	9.211E-02	7.640E-02	4.699E-02	NOT IDENT.
I-135	-2.804E+06	8.429E+06	0.000E+00	4.301E+06	SHORT HLIF
CS-136	-1.769E-02	3.932E-02	3.130E-02	2.006E-02	NOT IDENT.
BA-137M	9.717E-03	2.157E-02	1.965E-02	1.100E-02	NOT IDENT.
CS-137	1.027E-02	2.280E-02	2.077E-02	1.163E-02	NOT IDENT.
CE-139	-2.109E-02	1.695E-02	1.317E-02	8.647E-03	NOT IDENT.
BA-140	7.402E-02	1.021E-01	9.115E-02	5.208E-02	NOT IDENT.
LA-140	-1.244E-02	4.335E-02	3.512E-02	2.212E-02	NOT IDENT.
CE-141	2.675E-02	3.176E-02	2.673E-02	1.620E-02	NOT IDENT.
CE-143	4.940E-01	1.450E+00	1.315E+00	7.397E-01	NOT IDENT.
CE-144	-3.965E-02	1.155E-01	9.890E-02	5.893E-02	NOT IDENT.
PM-144	4.969E-03	1.928E-02	1.715E-02	9.836E-03	NOT IDENT.
PR-144	3.353E-01	1.301E+00	1.157E+00	6.638E-01	NOT IDENT.
PM-146	3.326E-03	2.647E-02	2.281E-02	1.351E-02	NOT IDENT.
ND-147	1.084E-02	2.238E-01	1.882E-01	1.142E-01	FAIL ABUN
PM-149	1.942E+00	4.825E+00	4.405E+00	2.462E+00	NOT IDENT.
EU-152	-5.941E-02	5.945E-02	4.661E-02	3.033E-02	NOT IDENT.
GD-153	-3.473E-03	4.635E-02	3.768E-02	2.365E-02	NOT IDENT.
EU-154	5.695E-03	5.266E-02	4.561E-02	2.687E-02	NOT IDENT.
EU-155	-5.828E-02	5.660E-02	4.661E-02	2.888E-02	NOT IDENT.
TB-160	-1.240E-02	7.819E-02	6.398E-02	3.989E-02	NOT IDENT.
HO-166M	-6.302E-03	3.887E-02	3.271E-02	1.983E-02	FAIL ABUN
TM-171	-1.427E-01	1.521E+01	1.261E+01	7.759E+00	NOT IDENT.
LU-176	7.477E-03	1.496E-02	1.372E-02	7.632E-03	NOT IDENT.
LU-177	1.626E-01	3.118E-01	2.622E-01	1.591E-01	NOT IDENT.
LU-177M	-1.020E-01	9.950E-02	7.472E-02	5.076E-02	NOT IDENT.
HF-181	-1.341E-02	2.174E-02	1.681E-02	1.109E-02	NOT IDENT.
W-181	3.693E-02	2.005E-01	1.694E-01	1.023E-01	NOT IDENT.
TA-182	5.043E-02	8.835E-02	8.244E-02	4.508E-02	NOT IDENT.
RE-183	2.617E-02	6.284E-02	5.345E-02	3.206E-02	NOT IDENT.
RE-184	7.365E-02	1.377E-01	1.279E-01	7.024E-02	NOT IDENT.

OS-185	-9.904E-03	2.572E-02	2.127E-02	1.312E-02	NOT IDENT.
RE-188	-3.811E-02	8.997E-02	7.562E-02	4.590E-02	NOT IDENT.
W-188	-3.619E-01	3.866E+00	3.394E+00	1.972E+00	FAIL ABUN
IR-192	1.704E-03	1.979E-02	1.751E-02	1.010E-02	NOT IDENT.
AU-195	-3.355E-02	1.285E-01	1.070E-01	6.555E-02	NOT IDENT.
TL-200	5.269E-01	2.023E+00	1.797E+00	1.032E+00	NOT IDENT.
TL-201	7.838E-01	6.920E-01	6.444E-01	3.531E-01	NOT IDENT.
TL-202	-1.259E-05	2.663E-02	2.268E-02	1.359E-02	NOT IDENT.
HG-203	-2.057E-03	2.661E-02	2.244E-02	1.357E-02	NOT IDENT.
BI-207	5.003E-03	3.106E-02	2.740E-02	1.585E-02	NOT IDENT.
TL-207	-9.747E-02	3.561E-01	3.033E-01	1.817E-01	FAIL ABUN
TL-208	-7.461E-03	2.462E-02	2.034E-02	1.256E-02	FAIL ABUN
PO-209	2.740E+00	4.578E+00	4.181E+00	2.336E+00	NOT IDENT.
BI-210	1.278E+00	3.684E+00	3.007E+00	1.880E+00	NOT IDENT.
PB-210	1.278E+00	3.684E+00	3.007E+00	1.880E+00	NOT IDENT.
PO-210	1.278E+00	3.684E+00	3.007E+00	1.879E+00	NOT IDENT.
BI-211	-4.029E-03	1.423E-01	1.167E-01	7.263E-02	NOT IDENT.
PB-211	6.734E-02	5.907E-01	5.118E-01	3.014E-01	NOT IDENT.
BI-212	6.771E-02	1.683E-01	1.517E-01	8.587E-02	NOT IDENT.
PB-212	-6.895E-03	3.662E-02	3.210E-02	1.868E-02	NOT IDENT.
PO-212	-6.895E-03	3.662E-02	3.210E-02	1.868E-02	NOT IDENT.
BI-214	3.311E-02	6.421E-02	4.572E-02	3.276E-02	FAIL ABUN
PB-214	3.487E-02	4.934E-02	4.294E-02	2.517E-02	NOT IDENT.
PO-214	3.487E-02	4.934E-02	4.294E-02	2.517E-02	NOT IDENT.
PO-215	-9.747E-02	3.561E-01	3.033E-01	1.817E-01	FAIL ABUN
PO-216	-6.895E-03	3.662E-02	3.210E-02	1.868E-02	NOT IDENT.
PO-218	3.487E-02	4.934E-02	4.294E-02	2.517E-02	NOT IDENT.
RN-219	1.591E-01	2.353E-01	2.161E-01	1.201E-01	NOT IDENT.
RN-220	-4.296E+00	1.499E+01	1.196E+01	7.651E+00	NOT IDENT.
RA-223	-9.747E-02	3.561E-01	3.033E-01	1.817E-01	FAIL ABUN
RA-224	-2.031E-01	3.869E-01	3.352E-01	1.974E-01	NOT IDENT.
RA-226	3.311E-02	6.421E-02	4.572E-02	3.276E-02	FAIL ABUN
AC-227	-3.683E-03	2.328E-01	2.079E-01	1.188E-01	NOT IDENT.
TH-227	-3.683E-03	2.328E-01	2.079E-01	1.188E-01	FAIL ABUN
AC-228	1.173E-02	8.512E-02	7.063E-02	4.343E-02	NOT IDENT.
RA-228	1.173E-02	8.512E-02	7.063E-02	4.343E-02	NOT IDENT.
TH-228	-6.975E-03	3.661E-02	3.209E-02	1.868E-02	NOT IDENT.
TH-229	-8.556E-02	3.073E-01	2.562E-01	1.568E-01	NOT IDENT.
TH-230	3.311E-02	6.420E-02	4.572E-02	3.276E-02	FAIL ABUN
PA-231	-4.692E-01	9.425E-01	7.998E-01	4.809E-01	NOT IDENT.
TH-231	-9.747E-02	3.561E-01	3.033E-01	1.817E-01	FAIL ABUN
U-231	-3.685E-02	1.787E-01	1.416E-01	9.116E-02	FAIL ABUN
TH-232	1.173E-02	8.512E-02	7.063E-02	4.343E-02	NOT IDENT.
PA-233	-1.115E-02	4.089E-02	3.512E-02	2.086E-02	NOT IDENT.
PA-234	9.780E-02	1.938E-01	1.731E-01	9.886E-02	FAIL ABUN
PA-234M	-1.490E+00	4.780E+00	3.855E+00	2.439E+00	NOT IDENT.
U-234	3.311E-02	6.420E-02	4.572E-02	3.276E-02	FAIL ABUN
NP-236	-6.883E-03	4.702E-02	4.028E-02	2.399E-02	NOT IDENT.
NP-237	-5.135E-02	1.147E-01	1.003E-01	5.850E-02	NOT IDENT.
NP-239	4.829E-02	9.494E-02	8.744E-02	4.844E-02	NOT IDENT.
AM-241	3.236E-02	9.891E-02	8.519E-02	5.046E-02	NOT IDENT.
AM-243	-2.618E-03	2.707E-02	2.462E-02	1.381E-02	FAIL ABUN
CM-243	1.788E-02	4.988E-02	4.576E-02	2.545E-02	NOT IDENT.
CM-247	4.345E-03	2.233E-02	1.958E-02	1.140E-02	NOT IDENT.
CF-249	2.169E-02	2.494E-02	2.326E-02	1.272E-02	NOT IDENT.
CF-251	1.579E-02	7.398E-02	6.459E-02	3.775E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	76.4899
46.50	76.4899
46.50	76.4899
48.70	83.3096
49.72	81.1109
51.35	85.3297
52.39	74.7155
52.97	70.6545
53.15	70.6966
53.44	64.8675
54.07	70.0669
56.28	85.0220
56.28	85.0227
57.37	76.7849
57.53	72.5555
57.53	72.5560
57.60	72.5715
57.98	65.6484
57.98	65.6484
59.32	70.8143
59.32	70.8143
59.40	77.2710
59.54	76.0158
59.72	76.0576
60.01	87.7372
61.10	95.7949
61.14	95.8064
61.30	95.8524
63.00	78.1126
63.29	78.1793
63.29	78.1793
63.58	78.2459
64.28	78.4061
65.12	82.5270
65.20	82.5461
65.20	82.5461
66.05	74.8669
66.72	78.9569
66.83	78.9821
66.91	76.3666
67.20	76.4294
67.20	76.4294
67.75	77.8674
67.85	81.8499
68.90	91.0931
68.90	91.0931
69.30	88.3662
69.67	83.1498
70.82	86.0734
70.82	86.0734
70.83	86.0759
72.80	95.4552
72.87	89.2268
72.87	89.2268
74.67	97.7218
74.81	96.8604
74.81	96.8604
74.81	96.8604
74.81	96.8604
74.81	96.8604
74.81	96.8604
74.97	96.9011
75.28	99.6735
75.70	99.7825
77.11	85.7111
77.11	85.7111
77.11	85.7111

77.11	85.7111
77.11	85.7111
77.11	85.7111
78.38	95.9455
79.62	97.1543
79.80	95.3811
79.80	95.3811
80.11	94.5462
80.18	94.5626
80.30	100.9579
80.30	100.9579
80.57	96.4749
81.00	96.5779
81.07	88.3932
81.07	88.3932
81.07	88.3932
81.07	88.3932
82.60	93.3003
83.37	94.3910
83.78	88.9818
83.78	88.9818
83.78	88.9818
83.78	88.9818
84.21	89.9923
84.40	101.0583
84.90	92.9013
85.43	104.0713
86.29	107.9754
86.50	108.0296
86.54	105.2694
86.59	105.2816
86.72	105.3141
86.79	107.5484
86.94	107.5869
87.30	106.8461
87.30	106.8461
87.30	106.8461
87.30	106.8461
87.30	106.8461
87.30	106.8461
87.57	91.6403
87.88	84.7592
88.03	93.1289
88.36	100.1558
88.47	100.1816
89.95	101.9216
91.11	107.3258
92.29	107.6142
92.38	107.6358
92.38	107.6358
93.35	115.3751
94.00	102.8618
94.67	95.9581
94.67	95.9591
94.90	97.4203
94.90	97.4203
94.90	97.4203
94.90	97.4203
95.87	108.9486
95.87	108.9486
96.73	100.6492
97.43	91.9998
98.44	98.6516
98.44	98.6516
98.88	95.8968
99.55	91.2808
99.55	91.2808
99.86	96.0987
100.00	96.1274
100.10	101.8608
103.18	73.7787
103.76	82.5024
105.00	100.9882
105.31	104.9024
108.00	84.1901
109.28	111.5730
111.00	112.9290
111.00	112.9290

111.76	95.5491
112.95	92.8411
115.19	103.0614
116.30	90.4942
117.00	71.9013
117.00	71.9013
117.66	74.9501
121.11	72.4601
121.62	72.5288
121.78	74.5380
122.06	74.5766
122.32	85.5556
122.32	85.5556
122.32	85.5556
122.32	85.5556
123.07	75.7120
127.23	94.3543
129.76	100.8301
131.20	98.0538
133.02	122.7035
133.54	107.5894
135.34	95.7059
136.00	93.7763
136.25	95.8555
136.48	95.8933
140.51	104.7642
140.51	0.0000
142.18	101.9659
142.65	102.0444
143.76	88.2910
144.24	75.9584
144.24	75.9584
144.24	75.9584
144.24	75.9584
145.22	79.1856
145.44	79.2144
147.16	102.7987
152.43	99.4763
152.70	99.5188
153.22	87.0190
154.21	82.9531
154.21	82.9531
154.21	82.9531
154.21	82.9531
155.03	101.9840
156.02	101.0879
158.56	102.5395
159.00	0.0000
159.00	104.7242
160.31	101.7529
161.27	98.7160
162.32	73.3567
162.64	84.0283
163.35	91.5710
163.89	98.0392
165.85	114.3558
167.43	78.1996
171.28	101.2606
171.86	108.8927
172.10	105.6941
176.55	87.9148
176.60	87.9206
181.06	81.9160
184.41	93.8157
185.71	101.1257
186.00	101.1659
190.27	89.5825
192.34	106.4639
193.63	96.6466
197.04	98.1943
198.01	93.8489
198.60	81.6208
200.40	79.5688
201.83	81.9594
202.84	100.0517
205.31	84.5772
208.36	79.2399
208.81	84.9480

209.75	97.5199
209.75	97.5199
210.97	81.7676
215.65	82.2371
216.55	75.4659
218.09	72.1696
222.10	82.8750
223.80	77.2745
226.40	70.5691
227.00	76.4072
227.08	76.4146
227.20	76.4246
228.16	90.4208
228.18	90.4232
228.18	90.4232
231.56	67.5003
235.69	96.4665
236.00	100.8873
236.00	100.8873
238.60	72.1479
238.63	72.1504
238.63	72.1504
238.63	72.1504
239.00	79.2217
240.98	97.9236
241.98	103.3310
241.98	103.3310
241.98	103.3310
244.69	78.8378
245.39	76.2394
247.94	75.5630
248.90	83.6513
249.79	91.7485
252.40	73.2483
252.85	69.7092
252.85	69.7092
254.15	0.0000
256.20	76.2375
256.20	76.2375
260.50	64.8710
260.90	67.6025
262.80	67.7364
264.65	56.1033
268.24	80.8342
268.79	76.3352
269.46	76.3878
269.46	76.3878
269.46	76.3878
269.46	76.3878
271.23	53.7496
273.65	76.7133
276.40	91.5771
277.35	75.1646
277.60	70.5990
277.60	70.5990
278.00	71.5444
278.60	70.6695
279.20	67.0385
279.53	66.1421
280.46	68.0415
281.68	83.7740
283.67	73.7915
284.30	69.2230
285.00	60.9576
285.90	60.0865
286.10	60.0984
286.10	60.0984
287.40	53.6944
288.45	0.0000
290.67	60.3652
290.80	64.0884
291.72	67.8627
293.26	57.7220
293.70	58.6780
295.21	63.4263
295.21	63.4263
295.21	63.4263
295.96	59.7383

296.50	58.8347
297.23	65.4167
298.57	66.4357
299.80	59.9551
299.80	59.9551
300.09	65.5940
300.09	65.5940
300.09	65.5940
300.10	65.5940
300.12	65.5951
301.29	59.1010
302.84	60.1260
303.76	60.1777
303.91	60.1855
304.40	66.7987
304.40	66.7987
304.84	64.9433
306.84	53.7489
308.46	59.4951
311.98	67.2656
316.51	58.0299
318.01	57.1555
319.02	49.5792
319.41	56.2731
320.08	44.8542
323.87	48.8366
323.87	48.8366
323.87	48.8366
323.87	48.8366
325.23	44.1013
328.77	45.2006
333.44	51.1780
334.20	39.6161
334.20	39.6161
334.30	39.6199
338.28	48.4825
338.28	48.4825
338.28	48.4825
338.28	48.4825
338.32	48.4840
338.32	48.4840
338.32	48.4840
340.50	41.7737
340.57	42.7479
344.27	64.3232
345.85	48.7946
350.59	55.8458
351.07	56.8486
351.92	47.0801
351.92	47.0801
351.92	47.0801
355.39	0.0000
356.01	65.9378
364.48	43.6019
366.43	58.5580
367.43	49.6651
367.94	47.6982
369.80	47.7686
374.96	43.9671
383.85	50.3105
387.95	40.3760
388.63	38.3772
391.69	52.6387
391.69	52.6387
392.90	41.5418
398.62	39.6861
400.65	42.8043
401.10	43.8379
401.81	33.6611
402.60	42.8665
404.84	48.0492
410.95	47.2392
411.60	53.4266
413.65	49.3901
414.70	47.3687
415.30	42.2381
415.76	36.0692
417.63	0.0000

418.52	39.2391
423.70	46.6404
427.08	45.7141
427.89	48.8589
432.53	37.5463
433.93	35.4952
439.47	40.8728
439.56	37.7312
439.89	33.5464
443.98	52.5650
444.90	48.3900
445.03	48.3942
445.03	48.3942
445.03	48.3942
445.03	48.3942
453.90	37.0449
463.38	44.7372
468.07	38.4653
473.00	46.0940
475.06	35.4220
475.35	36.5022
476.78	36.5364
477.59	37.6308
477.96	35.4890
482.03	36.6604
484.57	38.8806
487.03	30.2879
490.36	41.1926
492.35	32.5612
497.08	35.9246
507.63	0.0000
510.53	0.0000
510.84	43.9188
511.00	43.9227
511.85	43.9459
511.85	43.9459
513.99	26.4018
513.99	26.4018
520.41	29.8180
520.65	28.7184
527.90	32.1719
528.96	0.0000
529.64	33.3160
529.87	0.0000
531.02	35.5664
537.32	23.4276
543.00	32.4604
546.56	0.0000
549.76	29.2167
552.65	22.5122
555.20	32.4650
563.23	33.5195
563.90	31.7205
568.70	29.9884
569.32	29.0898
569.50	29.0930
569.67	27.2776
573.80	43.7449
574.00	43.7496
574.64	39.2060
578.91	31.9879
579.30	42.9644
583.14	32.0631
585.48	34.8559
591.81	45.1013
592.07	46.0291
593.00	42.3681
595.88	32.2870
600.56	37.9170
602.52	0.0000
602.71	37.0352
602.71	37.0352
603.60	32.4211
604.41	40.1584
604.70	35.5304
609.31	36.2369
609.31	36.2369
609.31	36.2369

609.31	36.2369
610.33	43.3843
612.46	34.1261
614.37	27.9492
618.01	39.2043
621.84	33.6709
621.84	33.6709
631.29	21.6181
633.02	30.1039
633.10	30.1055
634.78	29.1896
635.90	29.2063
636.97	34.8790
645.85	33.1432
646.12	35.0416
656.30	38.0771
657.75	31.4362
657.90	0.0000
661.65	26.7251
661.65	26.7251
664.57	29.6316
666.33	35.3975
666.33	35.3975
675.00	34.5876
677.61	18.2778
685.20	21.2421
692.80	29.0720
695.00	23.2822
696.49	24.2694
696.49	24.2694
697.00	21.3625
697.49	22.3385
698.33	24.2908
698.50	21.3775
699.00	20.4109
702.63	37.9707
706.10	25.3551
706.58	0.0000
706.67	24.3866
709.31	39.0674
711.68	32.2660
713.82	26.4259
717.42	28.4308
720.50	26.5083
721.93	33.4023
722.20	33.4065
722.78	40.2953
722.78	40.2953
722.89	39.3145
722.95	39.3154
723.30	40.3053
724.18	36.3876
727.18	23.6355
733.00	15.7988
735.90	28.6736
739.58	13.8653
742.81	20.8288
744.21	26.7963
747.13	20.8693
751.79	22.9045
752.31	22.9096
753.82	23.9221
755.35	15.9586
756.15	16.9622
756.87	20.9600
763.93	22.0269
765.79	20.0405
766.41	24.0557
766.84	26.0647
768.36	25.0793
768.36	25.0793
768.36	25.0793
768.36	25.0793
776.49	21.1415
778.00	16.1184
778.57	17.1299
778.89	19.1480
783.80	26.2583

785.46	25.2661
792.07	24.3246
795.84	18.2729
796.30	19.2918
801.93	21.3732
805.60	26.5034
810.29	26.5554
810.76	23.4958
815.85	15.3563
817.79	20.4917
818.51	24.5971
819.60	20.5068
826.30	17.4794
828.27	13.3774
831.60	11.3349
831.96	13.3977
834.83	22.6999
836.80	0.0000
846.75	26.9572
848.13	28.0099
856.28	0.0000
856.80	30.1895
860.37	18.7651
867.32	20.9077
867.82	19.8660
871.10	26.1737
873.19	18.8604
874.81	17.8243
875.33	0.0000
876.40	13.6386
879.36	21.0068
880.27	24.1668
880.51	24.1691
881.50	16.8195
883.24	15.7793
884.67	21.0508
889.25	20.0335
896.60	16.9184
898.02	19.0437
899.00	13.7589
903.28	21.2021
911.07	15.9492
911.07	15.9492
911.07	15.9492
919.63	17.0676
920.93	22.4120
925.00	20.3086
925.24	20.3104
926.50	17.1117
934.06	10.7251
934.06	10.7251
934.06	10.7251
934.06	10.7251
935.52	12.8771
937.48	19.3298
944.10	15.0708
946.00	18.3132
949.00	23.7257
962.29	17.3391
964.01	20.6027
966.15	20.6189
968.20	18.4622
969.11	15.2089
969.11	15.2089
969.11	15.2089
977.42	15.2544
980.50	20.7251
983.50	5.4598
989.30	21.8843
996.32	37.2962
1001.03	20.8763
1001.68	17.5840
1004.76	22.0039
1021.30	0.0000
1024.50	0.0000
1034.80	19.4542
1037.82	17.6192
1038.57	16.6963

1038.76	0.0000
1045.16	14.8743
1046.59	13.0213
1048.07	18.6117
1050.47	16.7637
1050.47	16.7637
1063.62	17.7731
1076.63	14.0918
1077.35	10.3367
1085.78	12.2499
1099.22	12.3033
1112.02	12.3547
1112.84	14.2590
1115.52	24.7368
1120.29	16.1983
1120.29	16.1983
1120.29	16.1983
1120.29	16.1983
1120.51	19.0584
1121.28	17.1570
1124.00	0.0000
1129.67	17.2024
1131.51	0.0000
1147.95	0.0000
1167.94	6.7701
1173.22	11.6250
1175.09	12.6006
1177.93	8.7312
1189.05	9.7343
1204.90	14.6710
1205.75	13.6964
1213.00	16.6673
1221.42	10.8120
1230.97	5.9141
1235.34	8.8824
1236.41	0.0000
1238.11	7.9017
1238.11	7.9017
1238.11	7.9017
1238.11	7.9017
1238.25	7.9020
1246.25	4.9504
1260.41	0.0000
1271.85	7.9792
1274.45	7.9850
1274.54	7.9854
1291.56	8.0241
1298.22	0.0000
1312.09	11.0967
1325.50	14.1755
1325.50	14.1755
1332.49	9.1304
1333.61	11.1629
1360.21	12.2661
1362.66	0.0000
1365.15	8.1882
1368.21	13.3169
1368.53	0.0000
1376.25	8.2126
1377.67	9.2424
1377.67	9.2424
1377.67	9.2424
1377.67	9.2424
1384.27	12.3452
1394.10	10.3145
1395.20	9.2856
1407.95	12.4224
1434.06	11.4646
1436.60	12.5151
1457.56	0.0000
1460.81	16.1907
1489.15	5.2844
1509.49	10.6222
1596.49	14.8750
1620.62	3.7398
1678.03	0.0000
1691.02	8.5502
1691.02	8.5502

1706.46	0.0000
1750.46	0.0000
1764.49	3.8616
1764.49	3.8616
1764.49	3.8616
1764.49	3.8616
1770.23	10.6325
1771.40	12.5688
1791.20	0.0000
1808.65	5.8470
1836.01	8.8208

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871423

Total Uranium Activity	1.9639E+00	ug/g
Total Uranium Counting Unc.	4.3660E+00	ug/g
Total Uranium Tpu	2.2275E-06	ug/g
Total Uranium Mda	1.8310E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G1201871423      *
*   ANALYST       : MXR1                      DETECTOR   : GAM02            *
*   SAMPLE DATE   : 30-JUN-2009 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:11:44.37    SAMPLE ALQT:  137.710 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.009E-01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.634E-01
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.224E-01
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.513E-01
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:27:52.32

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871424.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:27:26.
Sample ID         : G1201871424          Sample quantity  : 1.19460E+02 GRAM
Detector name     : GAM04                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.19  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	4	74.90	300	354	1.32	149.84	145	14	4.16E-02	12.6	7.00E-01
2	4	77.09*	401	253	0.94	154.22	145	14	5.57E-02	8.4	
3	0	87.34	156	315	1.40	174.72	171	7	2.16E-02	20.6	
4	5	89.92	121	165	1.00	179.88	178	12	1.68E-02	17.3	1.82E+00
5	5	92.81*	153	338	1.53	185.66	178	12	2.13E-02	24.2	
6	0	185.90*	132	278	1.07	371.87	367	10	1.83E-02	26.0	
7	0	209.42	75	246	1.03	418.91	414	9	1.04E-02	39.7	
8	4	238.45*	999	134	1.06	476.97	472	17	1.39E-01	3.7	1.25E+00
9	4	241.32	251	190	1.69	482.71	472	17	3.49E-02	14.2	
10	0	269.63	128	206	1.36	539.34	532	13	1.77E-02	24.9	
11	0	277.08	35	113	1.12	554.23	551	6	4.89E-03	50.8	
12	1	294.92*	302	106	1.34	589.92	584	24	4.20E-02	8.5	2.25E+00
13	1	299.98	73	93	1.34	600.03	584	24	1.01E-02	26.9	
14	0	337.98	175	170	1.03	676.04	672	10	2.43E-02	15.8	
15	0	351.68*	454	166	1.27	703.44	697	13	6.31E-02	7.6	
16	0	462.86	65	101	1.80	925.82	920	13	9.01E-03	34.2	
17	0	510.20*	127	137	2.04	1020.50	1013	16	1.76E-02	25.1	
18	0	582.70*	292	116	1.44	1165.50	1159	14	4.06E-02	9.9	
19	0	608.84*	350	87	1.25	1217.77	1212	11	4.86E-02	7.5	
20	0	727.00	51	100	1.21	1454.08	1447	14	7.05E-03	43.8	
21	0	859.92	32	48	1.33	1719.92	1715	9	4.41E-03	43.5	
22	0	910.52*	196	67	2.17	1821.10	1813	15	2.72E-02	11.8	
23	4	963.55	59	33	2.49	1927.16	1921	21	8.15E-03	29.0	1.64E+00
24	4	968.08	142	61	1.94	1936.21	1921	21	1.97E-02	13.4	
25	0	1119.38	137	53	1.80	2238.78	2230	19	1.91E-02	15.2	
26	0	1459.47*	1366	9	1.97	2918.83	2909	19	1.90E-01	2.8	
27	0	1588.76	42	5	4.75	3177.34	3167	19	5.85E-03	19.8	
28	0	1762.78*	73	0	1.70	3525.29	3519	15	1.01E-02	12.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:27:55

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871424.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:27:26
Sample ID : G1201871424 Sample quantity : 119.46 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA4 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.19 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.740E+01	3.371E+00	4.172E-01	2.965E-02	89.633
CD-109	+	88.03	*	2.671E+00	1.145E+00	1.230E+00	1.478E-01	2.172
SN-126		64.28		5.422E-01	6.467E-01	1.110E+00	1.913E-01	0.488
	+	86.94		1.093E+00	6.444E-01	5.732E-01	2.418E-01	1.907
	+	87.57	*	2.630E-01	1.127E-01	1.220E-01	1.463E-02	2.156
CS-135	+	268.24	*	5.674E-01	2.865E-01	2.443E-01	2.036E-02	2.323
TL-208	+	277.35		3.754E-01	3.835E-01	6.295E-01	6.956E-02	0.596
	+	510.84		6.734E-01	3.449E-01	2.216E-01	2.224E-02	3.038
	+	583.14	*	4.443E-01	9.241E-02	6.272E-02	3.947E-03	7.083
	+	860.37		4.592E-01	4.017E-01	4.793E-01	3.998E-02	0.958
BI-211		72.87		2.563E+00	3.745E+00	5.843E+00	6.699E-01	0.439
	+	351.07	*	3.041E+00	5.086E-01	3.078E-01	2.079E-02	9.882
PB-212	+	74.81		2.411E+00	7.033E-01	5.994E-01	8.860E-02	4.023
	+	77.11		1.785E+00	3.629E-01	3.309E-01	3.796E-02	5.395
	+	87.30		1.216E+00	5.353E-01	6.338E-01	9.886E-02	1.919
	+	238.63	*	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
	+	300.09		1.646E+00	8.963E-01	1.123E+00	9.884E-02	1.466
PO-212	+	74.81		2.411E+00	7.033E-01	5.994E-01	8.860E-02	4.023
	+	77.11		1.785E+00	3.629E-01	3.309E-01	3.796E-02	5.395
	+	87.30		1.216E+00	5.353E-01	6.338E-01	9.886E-02	1.919
		115.19		3.020E-01	3.321E+00	5.497E+00	4.137E-01	0.055
	+	238.63	*	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
	+	300.09		1.646E+00	8.963E-01	1.123E+00	9.884E-02	1.466
PB-214	+	74.81		4.154E+00	1.189E+00	1.033E+00	1.409E-01	4.023
	+	77.11		3.060E+00	6.644E-01	5.672E-01	7.811E-02	5.395
	+	87.30		2.084E+00	9.074E-01	1.086E+00	1.546E-01	1.919
	+	241.98		2.204E+00	6.538E-01	5.593E-01	4.873E-02	3.940
	+	295.21		1.197E+00	2.301E-01	1.966E-01	1.785E-02	6.090
	+	351.92	*	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
PO-214	+	74.81		4.154E+00	1.189E+00	1.033E+00	1.409E-01	4.023
	+	77.11		3.060E+00	6.644E-01	5.672E-01	7.811E-02	5.395
	+	87.30		2.084E+00	9.074E-01	1.086E+00	1.546E-01	1.919
	+	241.98		2.204E+00	6.538E-01	5.593E-01	4.873E-02	3.940
	+	295.21		1.197E+00	2.301E-01	1.966E-01	1.785E-02	6.090

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
PO-216	+	74.81		2.411E+00	7.033E-01	5.994E-01	8.860E-02	4.023
	+	77.11		1.785E+00	3.629E-01	3.309E-01	3.796E-02	5.395
	+	87.30		1.216E+00	5.353E-01	6.338E-01	9.886E-02	1.919
	+	238.63	*	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
	+	300.09		1.646E+00	8.963E-01	1.123E+00	9.884E-02	1.466
PO-218	+	74.81		4.154E+00	1.189E+00	1.033E+00	1.409E-01	4.023
	+	77.11		3.060E+00	6.644E-01	5.672E-01	7.811E-02	5.395
	+	87.30		2.084E+00	9.074E-01	1.086E+00	1.546E-01	1.919
	+	241.98		2.204E+00	6.538E-01	5.593E-01	4.873E-02	3.940
	+	295.21		1.197E+00	2.301E-01	1.966E-01	1.785E-02	6.090
	+	351.92	*	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
RA-224	+	240.98	*	4.179E+00	1.217E+00	1.057E+00	7.046E-02	3.954
AC-228	+	338.32		1.293E+00	6.671E-01	3.771E-01	1.540E-01	3.429
	+	911.07	*	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
	+	969.11		1.718E+00	6.084E-01	3.609E-01	8.323E-02	4.760
RA-228	+	338.32		1.293E+00	6.671E-01	3.771E-01	1.540E-01	3.429
	+	911.07	*	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
	+	969.11		1.718E+00	6.084E-01	3.609E-01	8.323E-02	4.760
TH-228		84.40		8.737E-01	2.766E+00	4.215E+00	6.487E-01	0.207
	+	238.60	*	1.458E+00	1.593E-01	9.284E-02	7.456E-03	15.706
	+	300.10		1.646E+00	1.314E+00	1.123E+00	6.626E-01	1.466
TH-232	+	338.32		1.293E+00	4.157E-01	3.771E-01	2.370E-02	3.429
	+	911.07	*	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
	+	969.11		1.718E+00	6.084E-01	3.609E-01	8.323E-02	4.760
NP-237	+	86.50	*	7.723E-01	3.674E-01	4.052E-01	9.654E-02	1.906
		95.87		-6.221E-01	1.027E+00	1.456E+00	3.667E-01	-0.427
AM-243	+	74.67	*	3.909E-01	1.080E-01	9.765E-02	1.118E-02	4.003
	+	86.72		2.896E+01	1.241E+01	1.524E+01	1.818E+00	1.900
		117.66		-5.861E+00	3.786E+00	5.727E+00	4.180E-01	-1.023
		142.18		-4.303E+00	1.749E+01	2.820E+01	1.845E+00	-0.153
ANH-511	+	511.00	*	1.455E-01	7.352E-02	4.789E-02	2.678E-03	3.038

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-8.768E-02	3.348E-01	5.346E-01	3.541E-02	-0.164
NA-22		1274.54	*	3.539E-04	5.290E-02	8.858E-02	5.791E-03	0.004
NA-24		1368.53	*	4.069E-02	5.290E-02	Half-Life too short		
AL-26		1129.67		1.625E+00	1.948E+00	3.400E+00	2.193E-01	0.478
		1808.65	*	-1.486E-02	2.582E-02	3.474E-02	2.060E-03	-0.428
TI-44		67.85		-1.671E-02	5.313E-02	8.826E-02	1.026E-02	-0.189
	+	78.38	*	3.294E-01	6.697E-02	7.860E-02	9.038E-03	4.191
SC-46		889.25	*	-2.648E-03	4.287E-02	7.017E-02	5.675E-03	-0.038
	+	1120.51		3.567E-01	1.111E-01	1.449E-01	9.492E-03	2.461
V-48		944.10		-4.860E-01	9.345E-01	1.448E+00	1.158E-01	-0.336
		983.50	*	-1.340E-02	7.330E-02	1.174E-01	9.096E-03	-0.114
		1312.09		1.323E-02	7.593E-02	1.295E-01	8.723E-03	0.102

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CR-51		320.08	*	1.050E-01	3.269E-01	5.585E-01	3.933E-02	0.188
MN-52		744.21		1.921E-01	2.035E-01	3.671E-01	2.179E-02	0.523
		848.13		1.693E+00	6.186E+00	1.048E+01	7.800E-01	0.161
		935.52		-5.931E-02	2.268E-01	3.617E-01	2.909E-02	-0.164
		1246.25		3.233E-02	7.795E+00	1.307E+01	8.320E-01	0.002
		1333.61		3.216E+00	4.516E+00	8.166E+00	5.596E-01	0.394
		1434.06	*	-9.802E-02	1.828E-01	2.736E-01	1.867E-02	-0.358
MN-54		834.83	*	2.022E-02	4.007E-02	6.914E-02	5.003E-03	0.292
CO-56		846.75	*	2.258E-02	4.138E-02	7.180E-02	5.326E-03	0.315
		977.42		1.068E-01	2.768E+00	4.544E+00	3.539E-01	0.024
		1037.82		9.124E-02	3.378E-01	5.649E-01	4.446E-02	0.162
		1175.09		-1.761E+00	2.671E+00	4.009E+00	2.388E-01	-0.439
		1238.25		1.373E-01	1.143E-01	2.065E-01	1.374E-02	0.665
		1360.21		2.642E-01	1.028E+00	1.770E+00	1.213E-01	0.149
		1771.40		3.803E-02	2.302E-01	3.877E-01	2.354E-02	0.098
CO-57		122.06	*	-1.840E-02	2.547E-02	4.038E-02	2.803E-03	-0.456
		136.48		-2.284E-02	1.983E-01	3.223E-01	2.397E-02	-0.071
CO-58		810.76	*	2.005E-02	4.175E-02	7.215E-02	4.981E-03	0.278
FE-59		142.65		-9.060E-02	2.623E+00	4.272E+00	2.792E-01	-0.021
		192.34		-4.419E-01	9.059E-01	1.412E+00	1.717E-01	-0.313
		1099.22	*	-7.812E-02	1.046E-01	1.557E-01	1.190E-02	-0.502
		1291.56		-4.810E-02	1.329E-01	2.133E-01	1.724E-02	-0.225
CO-60		1173.22		1.545E-02	5.465E-02	9.032E-02	5.371E-03	0.171
		1332.49	*	5.877E-02	4.048E-02	7.869E-02	5.392E-03	0.747
ZN-65		1115.52	*	1.559E-01	9.842E-02	1.698E-01	1.123E-02	0.918
GE-68		1077.35	*	7.004E-02	1.438E+00	2.344E+00	1.637E-01	0.030
AS-73		53.44	*	1.389E+00	1.480E+00	2.605E+00	3.408E-01	0.533
AS-74		595.88	*	1.034E-01	1.006E-01	1.742E-01	9.195E-03	0.594
		634.78		-1.979E-01	3.802E-01	5.775E-01	2.921E-02	-0.343
SE-75		66.05		-3.816E+00	5.948E+00	9.653E+00	1.267E+00	-0.395
		96.73		-3.070E-01	8.494E-01	1.236E+00	1.792E-01	-0.248
		121.11		4.586E-02	1.354E-01	2.260E-01	2.268E-02	0.203
		136.00		4.991E-03	3.692E-02	6.076E-02	4.072E-03	0.082
		198.60		-1.132E+00	1.861E+00	2.868E+00	2.213E-01	-0.395
		264.65	*	2.858E-02	4.539E-02	7.111E-02	4.783E-03	0.402
		279.53		1.252E-01	1.110E-01	1.793E-01	1.266E-02	0.698
		303.91		-3.027E-01	2.071E+00	3.024E+00	3.028E-01	-0.100
		400.65		1.959E-02	2.490E-01	4.131E-01	3.719E-02	0.047
BR-77	+	87.88		3.998E+02	1.713E+02	2.382E+02	2.862E+01	1.679
		200.40		1.342E+02	1.115E+02	1.893E+02	1.235E+01	0.709
	+	239.00		1.619E+02	1.613E+01	2.635E+01	1.756E+00	6.145
		249.79		2.905E+01	4.261E+01	7.486E+01	4.999E+00	0.388
		281.68		-5.002E+01	6.115E+01	9.444E+01	6.271E+00	-0.530
		297.23		8.173E+01	3.674E+01	6.800E+01	4.474E+00	1.202
		303.76		2.228E+01	1.203E+02	1.810E+02	1.185E+01	0.123
		439.47		3.816E+01	9.924E+01	1.674E+02	9.498E+00	0.228
		484.57		-3.270E+00	1.690E+02	2.749E+02	1.551E+01	-0.012
		520.65	*	-3.109E+00	6.586E+00	1.017E+01	5.664E-01	-0.306
		574.64		5.358E+01	1.485E+02	2.465E+02	1.326E+01	0.217

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		578.91		-2.174E+00	7.409E+01	1.036E+02	5.553E+00	-0.021
		585.48		1.102E+02	1.573E+02	2.359E+02	1.258E+01	0.467
		755.35		-1.918E+01	1.250E+02	2.057E+02	1.252E+01	-0.093
		817.79		7.799E+01	9.442E+01	1.684E+02	1.175E+01	0.463
SR-82		698.33		2.063E+00	3.499E+01	5.893E+01	3.142E+00	0.035
		776.49	*	-1.988E-01	3.958E-01	6.291E-01	4.015E-02	-0.316
		1395.20		-4.596E+00	1.179E+01	1.854E+01	1.269E+00	-0.248
RB-83		520.41	*	-2.004E-02	6.146E-02	9.635E-02	5.366E-03	-0.208
		529.64		3.932E-02	1.127E-01	1.802E-01	9.988E-03	0.218
		552.65		1.095E-01	1.950E-01	3.304E-01	1.807E-02	0.331
RB-84		881.50	*	-1.877E-02	6.982E-02	1.118E-01	8.901E-03	-0.168
KR-85		513.99	*	9.406E+00	7.963E+00	1.269E+01	7.089E-01	0.741
SR-85		513.99	*	4.759E-02	4.029E-02	6.421E-02	3.587E-03	0.741
RB-86		1076.63	*	-2.122E-01	8.750E-01	1.383E+00	9.668E-02	-0.153
Y-88		898.02		-1.487E-02	4.049E-02	6.389E-02	5.286E-03	-0.233
		1836.01	*	-6.665E-03	2.473E-02	3.653E-02	2.132E-03	-0.182
ZR-88		392.90	*	-1.405E-02	3.060E-02	4.891E-02	2.752E-03	-0.287
Y-91		1204.90	*	7.853E+00	2.277E+01	3.773E+01	2.312E+00	0.208
NB-94		702.63	*	-4.604E-03	3.469E-02	5.753E-02	3.099E-03	-0.080
		871.10		-4.299E-03	3.379E-02	5.497E-02	4.287E-03	-0.078
NB-95		765.79	*	1.883E-02	4.241E-02	7.321E-02	4.563E-03	0.257
NB-95M		235.69	*	1.141E-01	1.326E-01	1.979E-01	1.624E-02	0.576
ZR-95		724.18		7.106E-02	1.100E-01	1.715E-01	1.157E-02	0.414
		756.15	*	-6.217E-04	7.347E-02	1.224E-01	8.913E-03	-0.005
NB-97		657.90	*	-1.564E-03	7.347E-02	Half-Life too short		
		1024.50		-1.083E+00	7.347E-02	Half-Life too short		
ZR-97		254.15		-1.215E+00	7.347E-02	Half-Life too short		
		355.39		2.445E-01	7.347E-02	Half-Life too short		
		507.63	*	1.043E+00	7.347E-02	Half-Life too short		
		602.52		-9.553E-01	7.347E-02	Half-Life too short		
		1021.30		1.219E+00	7.347E-02	Half-Life too short		
		1147.95		-9.216E-01	7.347E-02	Half-Life too short		
		1362.66		-6.876E-02	7.347E-02	Half-Life too short		
		1750.46		1.418E+00	7.347E-02	Half-Life too short		
MO-99		140.51		1.057E+01	1.905E+01	3.099E+01	8.404E+00	0.341
		181.06		-3.997E+00	1.322E+01	1.852E+01	3.215E+00	-0.216
		366.43		-5.628E+00	5.929E+01	9.774E+01	5.842E+00	-0.058
		739.58	*	-9.020E+00	8.637E+00	1.286E+01	1.776E+00	-0.702
		778.00		3.095E-02	2.514E+01	4.183E+01	2.679E+00	0.001
TC-99M		140.51	*	6.417E+08	2.514E+01	Half-Life too short		
RH-101		127.23		1.508E-03	3.146E-02	5.172E-02	3.513E-03	0.029
		198.01	*	-1.684E-02	3.388E-02	5.253E-02	3.421E-03	-0.321
		325.23		-2.210E-01	2.235E-01	3.508E-01	2.245E-02	-0.630
RH-102		418.52		-7.190E-02	2.999E-01	4.850E-01	2.746E-02	-0.148
		475.06	*	1.428E-02	3.010E-02	5.088E-02	2.877E-03	0.281
		631.29		7.011E-02	6.034E-02	1.060E-01	5.383E-03	0.662
		697.49		3.742E-03	8.219E-02	1.383E-01	7.360E-03	0.027
		766.84		2.722E-02	1.149E-01	1.949E-01	1.217E-02	0.140
		1046.59		3.414E-02	1.299E-01	2.168E-01	1.574E-02	0.158

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1112.84		-1.950E-01	2.866E-01	3.557E-01	2.358E-02	-0.548
RU-103		497.08	*	1.027E-02	3.723E-02	6.199E-02	7.789E-03	0.166
	+	610.33		1.058E+01	2.260E+00	2.774E+00	4.218E-01	3.814
RH-106		511.85		3.552E-01	2.387E-01	4.483E-01	2.506E-02	0.792
		621.84	*	-1.365E-01	3.474E-01	5.347E-01	6.108E-02	-0.255
		1050.47		-1.035E+00	2.815E+00	4.407E+00	3.186E-01	-0.235
RU-106		511.85		3.552E-01	2.387E-01	4.483E-01	2.506E-02	0.792
		621.84	*	-1.365E-01	3.471E-01	5.347E-01	2.747E-02	-0.255
		1050.47		-1.035E+00	2.815E+00	4.407E+00	3.186E-01	-0.235
AG-108M		433.93	*	-1.465E-02	3.323E-02	5.267E-02	3.254E-03	-0.278
		614.37		-6.906E-03	4.645E-02	6.360E-02	3.642E-03	-0.109
		722.95		-2.180E-02	4.726E-02	6.471E-02	3.982E-03	-0.337
AG-110M		657.75	*	3.981E-04	3.714E-02	6.259E-02	3.344E-03	0.006
		677.61		-1.543E-02	2.882E-01	4.820E-01	2.638E-02	-0.032
		706.67		1.474E-01	2.126E-01	3.756E-01	2.182E-02	0.392
		763.93		-2.006E-01	1.725E-01	2.573E-01	1.683E-02	-0.780
		884.67		3.315E-02	5.074E-02	8.894E-02	7.393E-03	0.373
		937.48		-1.573E-01	1.179E-01	1.636E-01	1.369E-02	-0.961
		1384.27		-2.200E-02	1.394E-01	2.255E-01	1.613E-02	-0.098
IN-111		171.28		3.693E-01	7.233E-01	1.187E+00	7.569E-02	0.311
		245.39	*	9.929E-02	8.360E-01	1.186E+00	7.912E-02	0.084
IN-113M		391.69	*	-3.336E-03	4.356E-02	7.160E-02	4.314E-03	-0.047
SN-113		391.69	*	-3.336E-03	4.356E-02	7.160E-02	4.314E-03	-0.047
IN-114M		190.27	*	2.476E-01	1.879E-01	2.931E-01	1.897E-02	0.845
CD-115		260.90		-7.753E+01	7.917E+01	1.261E+02	8.421E+00	-0.615
		492.35		-1.342E+01	2.312E+01	3.558E+01	2.003E+00	-0.377
		527.90	*	3.338E+00	7.313E+00	1.231E+01	6.828E-01	0.271
SN-117M		156.02		9.699E-01	2.044E+00	3.395E+00	2.178E-01	0.286
		158.56	*	-2.062E-02	5.072E-02	8.056E-02	5.153E-03	-0.256
SB-122		563.90	*	-1.204E+00	1.482E+00	2.185E+00	1.185E-01	-0.551
		692.80		-6.531E+00	3.228E+01	5.326E+01	2.803E+00	-0.123
I-123		159.00	*	-4.323E-01	3.228E+01	Half-Life too short		
		528.96		3.602E+01	3.228E+01	Half-Life too short		
TE-123M		159.00	*	-1.052E-02	2.763E-02	4.393E-02	2.840E-03	-0.240
I-124		602.71	*	-2.930E-01	6.719E-01	8.896E-01	4.665E-02	-0.329
		722.78		-1.850E+00	4.002E+00	5.480E+00	3.095E-01	-0.338
		1325.50		-2.504E+01	3.093E+01	4.632E+01	3.156E+00	-0.541
		1376.25		3.440E+01	2.576E+01	4.945E+01	3.388E+00	0.696
		1509.49		1.596E+01	1.324E+01	2.551E+01	1.720E+00	0.626
		1691.02		-1.434E+00	3.037E+00	4.425E+00	2.805E-01	-0.324
SB-124		602.71		-2.070E-02	4.747E-02	6.284E-02	3.297E-03	-0.329
		645.85		1.250E-01	5.152E-01	8.850E-01	5.164E-02	0.141
		709.31		-3.387E-02	2.811E+00	4.703E+00	2.574E-01	-0.007
		713.82		1.375E+00	1.639E+00	2.924E+00	2.941E-01	0.470
		722.78		-1.895E-01	4.099E-01	5.611E-01	3.327E-02	-0.338
	+	968.20		1.743E+01	4.880E+00	8.007E+00	6.284E-01	2.177
		1045.16		7.487E-01	2.759E+00	4.608E+00	3.352E-01	0.162
		1325.50		-2.739E+00	3.383E+00	5.066E+00	3.452E-01	-0.541
		1368.21		6.300E-01	1.721E+00	3.007E+00	3.734E-01	0.210

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1436.60		-2.264E+00	3.075E+00	4.329E+00	2.953E-01	-0.523
		1691.02	*	-3.463E-02	7.337E-02	1.069E-01	7.263E-03	-0.324
SB-125		427.89	*	-2.565E-02	9.307E-02	1.497E-01	8.862E-03	-0.171
	+	463.38		6.745E-01	4.640E-01	5.567E-01	3.700E-02	1.212
		600.56		2.357E-02	1.914E-01	3.101E-01	1.936E-02	0.076
		635.90		-3.447E-01	3.064E-01	4.355E-01	2.685E-02	-0.791
TE-125M		109.28	*	1.877E+00	9.140E+00	1.477E+01	1.465E+00	0.127
I-126		388.63		2.998E-02	1.853E-01	3.098E-01	1.757E-02	0.097
		666.33	*	2.280E-02	1.732E-01	2.945E-01	1.453E-02	0.077
		753.82		1.245E+00	1.467E+00	2.613E+00	1.585E-01	0.476
SB-126		223.80		-4.779E-01	3.840E+00	6.063E+00	4.016E-01	-0.079
		278.60		3.805E+00	2.490E+00	4.100E+00	2.726E-01	0.928
		296.50		8.078E+00	1.662E+00	3.152E+00	2.075E-01	2.563
		414.70		7.597E-03	7.079E-02	1.174E-01	6.645E-03	0.065
		415.30		3.051E+00	5.867E+00	1.001E+01	5.665E-01	0.305
		555.20		-1.172E+00	3.721E+00	5.825E+00	3.179E-01	-0.201
		573.80		-9.162E-01	1.029E+00	1.521E+00	8.186E-02	-0.603
		593.00		-7.493E-01	9.862E-01	1.477E+00	7.820E-02	-0.507
		656.30		8.708E-01	3.184E+00	5.478E+00	2.693E-01	0.159
		666.33		9.502E-03	7.218E-02	1.227E-01	6.052E-03	0.077
		675.00		-8.734E-01	1.744E+00	2.798E+00	1.410E-01	-0.312
		695.00		4.962E-02	7.750E-02	1.362E-01	7.204E-03	0.364
		697.00		1.649E-03	2.592E-01	4.349E-01	2.312E-02	0.004
		720.50	*	2.155E-02	1.577E-01	2.332E-01	1.311E-02	0.092
		856.80		2.839E-02	5.473E-01	7.890E-01	5.976E-02	0.036
		989.30		1.125E+00	1.334E+00	2.353E+00	1.814E-01	0.478
		1034.80		-7.549E+00	9.395E+00	1.392E+01	1.025E+00	-0.542
		1213.00		1.374E+00	5.828E+00	9.540E+00	5.891E-01	0.144
SB-127		61.10		-3.435E+01	6.163E+01	1.014E+02	1.390E+01	-0.339
		252.40		-7.374E-01	3.347E+00	5.590E+00	2.324E+00	-0.132
		290.80		3.287E+00	1.764E+01	2.658E+01	2.463E+00	0.124
		411.60		-6.732E+00	9.900E+00	1.544E+01	2.167E+00	-0.436
		444.90		4.113E+00	7.313E+00	1.251E+01	1.293E+00	0.329
		473.00		-6.325E-01	1.415E+00	2.225E+00	2.387E-01	-0.284
		543.00		5.054E-01	1.293E+01	2.096E+01	2.611E+00	0.024
		603.60		-1.181E+01	1.184E+01	1.447E+01	1.458E+00	-0.816
		685.20	*	-6.028E-01	1.015E+00	1.608E+00	1.383E-01	-0.375
		698.50		-9.489E-01	1.295E+01	2.159E+01	3.025E+00	-0.044
		722.20		-7.587E+00	2.671E+01	3.746E+01	3.223E+00	-0.203
		783.80		1.580E+00	2.841E+00	4.952E+00	5.285E-01	0.319
XE-127		57.60		-8.389E+00	8.661E+00	1.387E+01	1.737E+00	-0.605
		145.22		6.403E-01	6.429E-01	1.095E+00	7.127E-02	0.585
		172.10		6.075E-02	1.165E-01	1.912E-01	1.220E-02	0.318
		202.84	*	-1.486E-02	4.550E-02	7.146E-02	4.671E-03	-0.208
		374.96		2.866E-02	1.945E-01	3.255E-01	1.909E-02	0.088
I-131		80.18		9.690E-01	4.330E+00	6.593E+00	7.642E-01	0.147
		284.30		1.231E-01	1.237E+00	2.098E+00	1.509E-01	0.059
		364.48	*	-4.317E-03	1.023E-01	1.694E-01	1.125E-02	-0.025
		636.97		7.874E-01	1.482E+00	2.481E+00	1.443E-01	0.317

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.89		-3.428E+00	7.127E+00	9.730E+00	5.566E-01	-0.352
TE-132		49.72		2.814E+01	3.183E+01	5.606E+01	7.696E+00	0.502
		111.76		-2.841E+00	2.169E+01	3.558E+01	3.530E+00	-0.080
		116.30		-1.106E+01	1.992E+01	3.188E+01	3.052E+00	-0.347
		228.16	*	2.277E-01	5.232E-01	8.509E-01	1.232E-01	0.268
BA-133		53.15		3.669E+00	6.599E+00	1.148E+01	1.502E+00	0.320
		79.62		2.720E-01	1.373E+00	2.087E+00	3.558E-01	0.130
		81.00		-3.780E-02	1.054E-01	1.547E-01	2.734E-02	-0.244
	+	276.40		3.709E-01	3.799E-01	6.441E-01	8.611E-02	0.576
		302.84		9.363E-02	1.394E-01	2.180E-01	2.627E-02	0.429
		356.01	*	-1.057E-02	4.600E-02	6.572E-02	7.698E-03	-0.161
		383.85		1.025E-01	3.045E-01	5.150E-01	5.583E-02	0.199
I-133	+	510.53		5.383E-01	3.045E-01	Half-Life too short		
		529.87	*	-2.424E-04	3.045E-01	Half-Life too short		
		706.58		1.075E-01	3.045E-01	Half-Life too short		
		856.28		-1.913E-02	3.045E-01	Half-Life too short		
		875.33		2.275E-02	3.045E-01	Half-Life too short		
		1236.41		2.766E-01	3.045E-01	Half-Life too short		
		1298.22		-3.402E-02	3.045E-01	Half-Life too short		
CS-134		475.35		1.068E+00	1.965E+00	3.339E+00	1.888E-01	0.320
		563.23		-1.553E-01	3.592E-01	5.517E-01	3.066E-02	-0.282
		569.32		1.375E-01	1.880E-01	3.228E-01	1.804E-02	0.426
		604.70		-2.563E-02	4.118E-02	5.313E-02	2.800E-03	-0.482
		795.84	*	5.289E-02	4.697E-02	8.536E-02	5.753E-03	0.620
		801.93		2.099E-01	4.483E-01	7.544E-01	5.137E-02	0.278
		1038.57		1.584E+00	4.296E+00	7.252E+00	5.316E-01	0.218
		1167.94		-1.398E+00	3.088E+00	4.752E+00	2.856E-01	-0.294
		1365.15		-3.372E-01	1.308E+00	2.099E+00	1.541E-01	-0.161
I-135		288.45		-4.885E+08	1.308E+00	Half-Life too short		
		417.63		-7.939E+08	1.308E+00	Half-Life too short		
		546.56		2.292E+08	1.308E+00	Half-Life too short		
		836.80		2.501E+08	1.308E+00	Half-Life too short		
		1038.76		2.020E+08	1.308E+00	Half-Life too short		
		1124.00		-5.924E+08	1.308E+00	Half-Life too short		
		1131.51		3.222E+07	1.308E+00	Half-Life too short		
		1260.41	*	1.501E+08	1.308E+00	Half-Life too short		
		1457.56		6.162E+10	1.308E+00	Half-Life too short		
		1678.03		-4.930E+08	1.308E+00	Half-Life too short		
		1706.46		-2.568E+08	1.308E+00	Half-Life too short		
		1791.20		1.090E+08	1.308E+00	Half-Life too short		
CS-136		66.91		-4.289E-01	8.680E-01	1.416E+00	2.454E-01	-0.303
	+	86.29		3.211E+00	1.410E+00	1.928E+00	2.938E-01	1.666
		153.22		-3.637E-01	5.876E-01	9.237E-01	7.150E-02	-0.394
		163.89		-9.900E-01	9.279E-01	1.409E+00	1.086E-01	-0.703
		176.55		-1.007E-01	3.342E-01	5.300E-01	3.739E-02	-0.190
		273.65		1.722E-01	5.566E-01	6.325E-01	4.667E-02	0.272
		340.57		1.287E-01	1.245E-01	1.982E-01	1.309E-02	0.649
		818.51		5.198E-02	7.123E-02	1.260E-01	8.821E-03	0.412
		1048.07	*	-1.198E-02	1.175E-01	1.889E-01	1.451E-02	-0.063

---- Non-Identified Nuclides ----

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		1235.34		5.883E-01	7.141E-01	1.255E+00	1.291E-01	0.469
BA-137M		661.65	*	-1.774E-02	3.943E-02	6.598E-02	3.218E-03	-0.269
CS-137		661.65	*	-1.876E-02	4.168E-02	6.975E-02	3.422E-03	-0.269
CE-139		165.85	*	-5.650E-03	2.663E-02	4.257E-02	2.705E-03	-0.133
BA-140		162.64		9.360E-02	6.488E-01	1.059E+00	7.449E-02	0.088
		304.84		-1.961E-01	1.177E+00	1.713E+00	4.703E-01	-0.114
		423.70		-1.129E+00	1.908E+00	2.947E+00	9.360E-01	-0.383
		537.32	*	-1.283E-01	2.479E-01	3.762E-01	1.222E-01	-0.341
LA-140		328.77		2.036E-01	2.974E-01	5.143E-01	3.606E-02	0.396
		432.53		9.819E-01	1.900E+00	3.240E+00	2.038E-01	0.303
		487.03		4.118E-02	1.320E-01	2.202E-01	1.415E-02	0.187
		751.79		-1.831E-01	1.737E+00	2.871E+00	2.094E-01	-0.064
		815.85		-6.930E-02	3.330E-01	5.415E-01	4.413E-02	-0.128
		867.82		-9.389E-01	1.274E+00	1.926E+00	1.590E-01	-0.487
		919.63		-5.645E-01	2.723E+00	4.372E+00	4.482E-01	-0.129
		925.24		1.676E-01	1.057E+00	1.765E+00	1.530E-01	0.095
		1596.49	*	-2.800E-02	8.565E-02	1.091E-01	7.186E-03	-0.257
CE-141		145.44	*	4.700E-02	5.817E-02	9.830E-02	6.599E-03	0.478
CE-143		57.37		-6.613E-04	5.817E-02	Half-Life too short		
		231.56		-1.636E-03	5.817E-02	Half-Life too short		
		293.26	*	3.200E-04	5.817E-02	Half-Life too short		
	+	350.59		1.275E-02	5.817E-02	Half-Life too short		
		490.36		4.793E-05	5.817E-02	Half-Life too short		
		664.57		-7.672E-05	5.817E-02	Half-Life too short		
		721.93		-9.146E-07	5.817E-02	Half-Life too short		
CE-144		80.11		5.248E-01	2.219E+00	3.381E+00	3.907E-01	0.155
		133.54	*	-1.493E-01	2.009E-01	3.150E-01	4.592E-02	-0.474
PM-144		476.78		-2.244E-02	6.998E-02	1.112E-01	7.581E-03	-0.202
		618.01		-2.175E-03	3.331E-02	5.296E-02	2.938E-03	-0.041
		696.49	*	1.980E-02	3.525E-02	6.170E-02	3.278E-03	0.321
		778.57		-1.773E-01	2.265E+00	3.740E+00	2.399E-01	-0.047
PR-144		696.49	*	1.341E+00	2.387E+00	4.178E+00	2.218E-01	0.321
		1489.15		-3.289E+00	9.179E+00	1.392E+01	9.423E-01	-0.236
PM-146		453.90	*	2.899E-02	4.519E-02	7.734E-02	6.602E-03	0.375
		633.02		-1.484E-02	1.566E+00	2.498E+00	9.173E-01	-0.006
		735.90		8.990E-02	1.546E-01	2.676E-01	7.463E-02	0.336
		747.13		-4.692E-02	9.564E-02	1.523E-01	1.917E-02	-0.308
ND-147	+	91.11		6.231E-01	2.285E-01	4.490E-01	5.265E-02	1.388
		319.41		1.088E+00	2.755E+00	4.730E+00	3.049E-01	0.230
		439.89		-4.459E+00	5.629E+00	8.665E+00	4.917E-01	-0.515
		531.02	*	9.398E-02	5.687E-01	8.956E-01	1.201E-01	0.105
PM-149		285.90	*	3.726E+01	5.744E+01	9.999E+01	1.453E+01	0.373
EU-152		121.78		-4.879E-02	7.438E-02	1.183E-01	1.008E-02	-0.412
		244.69		1.728E-01	3.427E-01	5.024E-01	3.352E-02	0.344
		344.27	*	-5.044E-02	9.688E-02	1.500E-01	1.038E-02	-0.336
		443.98		3.715E-01	9.283E-01	1.569E+00	8.900E-02	0.237
		778.89		-8.242E-03	2.609E-01	4.327E-01	2.776E-02	-0.019
		867.32		-7.175E-01	8.100E-01	1.200E+00	9.288E-02	-0.598
	+	964.01		8.186E-01	4.792E-01	6.443E-01	5.074E-02	1.270

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1085.78		1.532E-01	4.468E-01	7.497E-01	5.176E-02	0.204
		1112.02		-2.176E-01	4.110E-01	5.254E-01	3.488E-02	-0.414
		1407.95		2.042E-01	1.926E-01	3.626E-01	2.480E-02	0.563
GD-153		69.67		-1.283E-01	1.914E+00	3.069E+00	3.544E-01	-0.042
		83.37		9.017E+00	1.569E+01	2.425E+01	2.839E+00	0.372
		97.43	*	4.342E-02	8.064E-02	1.312E-01	1.287E-02	0.331
		103.18		-5.469E-02	1.027E-01	1.658E-01	1.475E-02	-0.330
EU-154		123.07		-3.529E-02	5.212E-02	8.270E-02	8.371E-03	-0.427
		247.94		-3.910E-01	3.715E-01	5.427E-01	5.479E-02	-0.720
		591.81		-1.115E+00	7.292E-01	1.001E+00	9.492E-02	-1.115
		723.30		-9.743E-02	2.044E-01	2.798E-01	1.948E-02	-0.348
		756.87		9.923E-02	8.079E-01	1.361E+00	1.404E-01	0.073
		873.19		1.434E-01	3.020E-01	5.213E-01	6.100E-02	0.275
		996.32		-3.025E-01	4.230E-01	6.342E-01	1.098E-01	-0.477
		1004.76		-5.185E-01	2.265E-01	2.476E-01	2.699E-02	-2.094
		1274.45	*	4.847E-02	1.447E-01	2.496E-01	2.449E-02	0.194
EU-155		48.70		2.872E+00	5.467E+00	9.535E+00	1.099E+00	0.301
		60.01		1.067E+00	6.707E+00	1.144E+01	1.389E+00	0.093
	+	86.54		3.166E-01	1.357E-01	1.919E-01	2.298E-02	1.650
		105.31	*	6.015E-02	1.069E-01	1.812E-01	1.579E-02	0.332
TB-160	+	86.79		8.359E-01	3.583E-01	5.142E-01	6.135E-02	1.626
		197.04		-4.126E-01	5.699E-01	8.722E-01	5.675E-02	-0.473
		215.65		1.248E-01	7.676E-01	1.234E+00	8.138E-02	0.101
	+	298.57		2.366E-01	1.281E-01	1.965E-01	1.292E-02	1.204
		879.36	*	-2.923E-04	1.403E-01	2.312E-01	1.834E-02	-0.001
	+	962.29		1.493E+00	8.742E-01	1.095E+00	8.634E-02	1.364
		966.15		1.346E+00	3.176E-01	6.160E-01	4.842E-02	2.184
		1177.93		-4.815E-02	4.220E-01	6.712E-01	4.010E-02	-0.072
		1271.85		-3.183E-03	8.359E-01	1.398E+00	9.105E-02	-0.002
HO-166M		80.57		-1.644E-02	2.850E-01	4.269E-01	4.939E-02	-0.039
	+	184.41		1.008E-01	5.288E-02	6.094E-02	3.925E-03	1.654
		280.46		7.154E-02	8.692E-02	1.377E-01	9.150E-03	0.519
		410.95		-3.929E-02	2.416E-01	3.933E-01	2.224E-02	-0.100
		711.68	*	-5.120E-02	6.446E-02	1.007E-01	5.541E-03	-0.509
		752.31		1.255E-01	2.967E-01	5.119E-01	3.095E-02	0.245
		810.29		3.539E-02	6.513E-02	1.130E-01	7.765E-03	0.313
TM-171		51.35		-2.354E+01	6.094E+01	1.017E+02	1.317E+01	-0.231
		52.39		-1.270E+01	3.054E+01	5.087E+01	6.654E+00	-0.250
		59.40		1.626E+01	3.588E+01	6.197E+01	7.557E+00	0.262
		66.72	*	-1.839E+01	3.376E+01	5.504E+01	6.435E+00	-0.334
LU-176	+	88.36		6.238E-01	2.673E-01	3.698E-01	4.407E-02	1.687
		201.83		-1.124E-02	2.866E-02	4.487E-02	2.931E-03	-0.250
		306.84	*	-1.368E-02	2.491E-02	3.710E-02	2.422E-03	-0.369
		401.10		4.083E+00	6.407E+00	1.105E+01	6.233E-01	0.370
LU-177		112.95		4.758E-01	1.335E+00	2.239E+00	1.734E-01	0.213
	+	208.36	*	1.694E+00	1.351E+00	1.684E+00	1.105E-01	1.006
LU-177M		52.97		-1.063E-01	3.052E+00	5.181E+00	6.784E-01	-0.021
		54.07		1.320E+00	1.481E+00	2.604E+00	3.395E-01	0.507
		61.30		-1.003E+00	1.979E+00	3.266E+00	3.940E-01	-0.307

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		121.62		-1.104E-01	3.749E-01	6.077E-01	4.232E-02	-0.182
		147.16		-5.778E-01	6.196E-01	9.599E-01	6.228E-02	-0.602
		171.86		2.440E-01	4.778E-01	7.842E-01	5.001E-02	0.311
		218.09		-2.163E-01	8.937E-01	1.404E+00	9.273E-02	-0.154
	+	268.79		2.835E+00	1.425E+00	1.510E+00	1.007E-01	1.878
		319.02		1.291E-01	2.330E-01	4.039E-01	2.604E-02	0.320
		367.43		-1.926E-01	8.748E-01	1.429E+00	8.522E-02	-0.135
		413.65	*	-6.420E-03	1.743E-01	2.862E-01	1.619E-02	-0.022
HF-181		56.28		-8.669E-01	1.427E+00	2.342E+00	2.986E-01	-0.370
		57.53		-6.780E-01	7.307E-01	1.174E+00	1.471E-01	-0.578
		65.20		-4.447E-01	1.175E+00	1.935E+00	2.281E-01	-0.230
		133.02		-3.732E-02	6.305E-02	1.002E-01	6.687E-03	-0.372
		136.25		-1.413E-02	4.266E-01	6.963E-01	4.610E-02	-0.020
		345.85		5.710E-02	1.927E-01	2.905E-01	1.805E-02	0.197
		482.03	*	5.423E-03	4.400E-02	7.237E-02	4.086E-03	0.075
W-181		56.28		-3.446E-01	5.661E-01	9.290E-01	1.184E-01	-0.371
		57.53		-2.690E-01	2.902E-01	4.661E-01	5.841E-02	-0.577
		65.20	*	-1.752E-01	4.627E-01	7.622E-01	8.984E-02	-0.230
TA-182		67.75		-3.966E-02	1.261E-01	2.095E-01	2.438E-02	-0.189
		100.10		-2.656E-03	1.709E-01	2.832E-01	2.651E-02	-0.009
		152.43		-3.211E-01	3.172E-01	4.876E-01	3.141E-02	-0.658
		222.10		-5.074E-02	3.551E-01	5.604E-01	3.709E-02	-0.091
		1001.68		2.999E+00	2.121E+00	3.923E+00	2.989E-01	0.765
		1121.28		6.166E-01	1.967E-01	3.789E-01	2.478E-02	1.628
		1189.05		9.500E-02	3.644E-01	6.006E-01	3.626E-02	0.158
		1221.42	*	-1.710E-01	2.274E-01	3.573E-01	2.223E-02	-0.479
		1230.97		-4.633E-01	5.999E-01	9.467E-01	5.943E-02	-0.489
RE-183		57.98		-3.024E-01	2.869E-01	4.572E-01	5.692E-02	-0.661
		59.32		6.193E-02	1.460E-01	2.520E-01	3.076E-02	0.246
		67.20		-9.642E-02	2.326E-01	3.817E-01	4.452E-02	-0.253
		162.32	*	2.951E-02	1.005E-01	1.653E-01	1.053E-02	0.179
	+	208.81		1.714E+00	1.367E+00	1.720E+00	1.129E-01	0.996
		291.72		6.712E-02	9.653E-01	1.441E+00	9.517E-02	0.047
RE-184		57.98		-1.123E+00	1.065E+00	1.697E+00	2.113E-01	-0.661
		59.32		2.297E-01	5.417E-01	9.346E-01	1.141E-01	0.246
		67.20		-3.578E-01	8.632E-01	1.416E+00	1.652E-01	-0.253
		161.27		1.192E-01	3.250E-01	5.367E-01	3.424E-02	0.222
		216.55		6.431E-03	2.817E-01	4.495E-01	2.965E-02	0.014
		252.85	*	-1.190E-01	2.235E-01	3.683E-01	2.460E-02	-0.323
		318.01		4.039E-02	4.076E-01	6.868E-01	4.434E-02	0.059
		792.07		-5.345E-01	9.948E-01	1.569E+00	1.037E-01	-0.341
		903.28		4.879E-01	1.125E+00	1.706E+00	1.400E-01	0.286
		920.93		1.829E-02	4.579E-01	7.552E-01	6.132E-02	0.024
OS-185		59.72		2.168E-01	3.922E-01	6.797E-01	8.268E-02	0.319
		61.14		-1.192E-01	2.177E-01	3.586E-01	4.330E-02	-0.332
		69.30		-1.063E-01	3.280E-01	5.443E-01	6.294E-02	-0.195
		592.07		-4.343E+00	2.959E+00	4.131E+00	2.189E-01	-1.051
		646.12	*	4.902E-03	4.413E-02	7.506E-02	3.742E-03	0.065
		717.42		2.597E-01	9.399E-01	1.608E+00	8.971E-02	0.161

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		874.81		3.306E-01	5.994E-01	1.042E+00	8.185E-02	0.317
		880.27		2.158E-01	7.736E-01	1.312E+00	1.042E-01	0.165
RE-188		155.03	*	2.068E-01	1.605E-01	2.762E-01	1.774E-02	0.749
		477.96		-1.032E+00	3.226E+00	5.127E+00	2.897E-01	-0.201
		633.10		-1.695E-01	3.116E+00	4.950E+00	2.509E-01	-0.034
W-188		63.58		5.461E+01	6.747E+01	1.164E+02	1.385E+01	0.469
		227.08		-6.033E+00	1.277E+01	1.970E+01	1.307E+00	-0.306
		290.67	*	1.071E+00	7.552E+00	1.134E+01	7.496E-01	0.094
IR-192	+	295.96		9.022E-01	1.642E-01	2.796E-01	1.864E-02	3.226
		308.46		-4.040E-03	9.013E-02	1.508E-01	9.917E-03	-0.027
		316.51	*	-2.132E-02	3.120E-02	4.981E-02	3.234E-03	-0.428
		468.07		-3.597E-02	7.492E-02	1.011E-01	6.642E-03	-0.356
		604.41		-6.685E-01	5.807E-01	6.920E-01	7.662E-02	-0.966
		612.46		5.603E-02	8.021E-01	1.129E+00	8.038E-02	0.050
AU-195		65.12		-7.834E-02	2.155E-01	3.552E-01	4.188E-02	-0.221
		66.83		-5.868E-02	1.110E-01	1.811E-01	2.116E-02	-0.324
	+	75.70		1.259E+00	3.479E-01	5.017E-01	5.747E-02	2.509
		98.88	*	1.288E-01	2.228E-01	3.787E-01	3.621E-02	0.340
		129.76		3.501E+00	2.879E+00	4.950E+00	3.335E-01	0.707
TL-200		367.94	*	-1.387E-05	2.879E+00	Half-Life too short		
		579.30		3.757E-04	2.879E+00	Half-Life too short		
		828.27		9.322E-04	2.879E+00	Half-Life too short		
		1205.75		5.447E-04	2.879E+00	Half-Life too short		
TL-201		68.90		-1.553E+00	4.040E+00	6.685E+00	7.741E-01	-0.232
		70.82		8.852E-01	2.462E+00	3.795E+00	4.368E-01	0.233
		80.30		7.806E-01	3.935E+00	5.983E+00	6.917E-01	0.130
		135.34		1.499E+01	1.797E+01	3.052E+01	2.025E+00	0.491
		167.43	*	3.478E+00	4.661E+00	7.840E+00	4.984E-01	0.444
TL-202		68.90		-1.734E-01	4.511E-01	7.464E-01	8.643E-02	-0.232
		70.82		9.856E-02	2.741E-01	4.225E-01	4.863E-02	0.233
		80.30		8.694E-02	4.383E-01	6.664E-01	7.704E-02	0.130
		439.56	*	1.999E-02	6.429E-02	1.079E-01	6.121E-03	0.185
HG-203		70.83		4.560E-01	1.253E+00	1.931E+00	3.012E-01	0.236
		72.87		5.003E-01	7.328E-01	1.141E+00	1.735E-01	0.439
		82.60		-8.020E-01	1.120E+00	1.714E+00	2.714E-01	-0.468
		279.20	*	4.779E-02	4.245E-02	6.840E-02	4.762E-03	0.699
BI-207		72.80		1.328E-01	2.181E-01	3.393E-01	3.890E-02	0.391
	+	74.97		7.016E-01	1.939E-01	2.550E-01	2.921E-02	2.751
		84.90		1.385E-01	2.058E-01	3.188E-01	3.761E-02	0.434
		569.67		2.627E-03	3.022E-02	4.903E-02	2.648E-03	0.054
		1063.62	*	-8.746E-03	6.033E-02	9.644E-02	6.859E-03	-0.091
		1770.23		2.061E-02	4.923E-01	8.078E-01	4.908E-02	0.026
TL-207		81.07		-7.464E-02	2.325E-01	3.426E-01	3.971E-02	-0.218
		83.78		1.781E-01	1.323E-01	2.109E-01	2.474E-02	0.844
		94.90		-1.984E-02	2.483E-01	3.617E-01	3.727E-02	-0.055
		122.32		-1.312E+00	1.765E+00	2.795E+00	2.150E-01	-0.469
		144.24		3.322E-01	6.730E-01	1.121E+00	8.768E-02	0.296
		154.21		3.814E-01	3.704E-01	6.307E-01	4.756E-02	0.605
	+	269.46		6.675E-01	3.357E-01	3.627E-01	2.502E-02	1.840

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		323.87	*	-6.717E-01	6.506E-01	1.001E+00	1.675E-01	-0.671
	+	338.28		5.399E+00	1.800E+00	2.520E+00	2.724E-01	2.143
		445.03		1.111E+00	2.131E+00	3.635E+00	3.707E-01	0.306
PO-209		260.50		-6.461E+00	8.756E+00	1.419E+01	9.473E-01	-0.455
		262.80		-1.193E+01	2.626E+01	3.999E+01	2.670E+00	-0.298
		896.60	*	1.297E+00	7.254E+00	1.217E+01	9.985E-01	0.107
BI-210		46.50	*	-6.088E+00	9.384E+00	1.529E+01	1.333E+00	-0.398
PB-210		46.50	*	-6.088E+00	9.384E+00	1.529E+01	1.333E+00	-0.398
PO-210		46.50	*	-6.088E+00	9.381E+00	1.529E+01	1.188E+00	-0.398
PB-211		404.84	*	-1.887E-01	9.429E-01	1.521E+00	9.477E-01	-0.124
		427.08		-2.158E-01	2.095E+00	3.409E+00	2.107E+00	-0.063
		831.96		-2.971E-01	1.373E+00	2.209E+00	1.380E+00	-0.135
BI-212	+	727.18	*	6.645E-01	5.843E-01	6.735E-01	5.148E-02	0.987
		785.46		-3.313E-01	1.809E+00	2.958E+00	1.926E-01	-0.112
		1620.62		1.057E+00	1.202E+00	2.278E+00	1.487E-01	0.464
BI-214	+	609.31	*	1.002E+00	1.673E-01	2.757E-01	2.026E-02	3.634
		768.36		1.667E-01	7.832E-01	1.326E+00	1.146E-01	0.126
		934.06		1.208E+00	1.188E+00	2.134E+00	2.172E-01	0.566
	+	1120.29		2.106E+00	6.706E-01	8.587E-01	8.000E-02	2.452
		1238.11		1.347E+00	1.141E+00	2.055E+00	1.752E-01	0.655
		1377.67		1.300E+00	9.760E-01	1.878E+00	1.751E-01	0.693
		1764.49		1.220E+00	4.146E-01	8.267E-01	5.040E-02	1.475
PO-215		81.07		-7.464E-02	2.325E-01	3.426E-01	3.971E-02	-0.218
		83.78		1.781E-01	1.323E-01	2.109E-01	2.474E-02	0.844
		94.90		-1.984E-02	2.483E-01	3.617E-01	3.727E-02	-0.055
		122.32		-1.312E+00	1.765E+00	2.795E+00	2.150E-01	-0.469
		144.24		3.322E-01	6.730E-01	1.121E+00	8.768E-02	0.296
		154.21		3.814E-01	3.704E-01	6.307E-01	4.756E-02	0.605
	+	269.46		6.675E-01	3.357E-01	3.627E-01	2.502E-02	1.840
		323.87	*	-6.717E-01	6.506E-01	1.001E+00	1.675E-01	-0.671
	+	338.28		5.399E+00	1.800E+00	2.520E+00	2.724E-01	2.143
		445.03		1.111E+00	2.131E+00	3.635E+00	3.707E-01	0.306
RN-219		271.23		2.239E-01	2.659E-01	4.192E-01	3.666E-02	0.534
		401.81	*	1.746E-01	4.046E-01	6.867E-01	9.298E-02	0.254
RN-220		549.76	*	1.117E+01	2.621E+01	4.390E+01	2.405E+00	0.254
RA-223		81.07		-7.464E-02	2.325E-01	3.426E-01	3.971E-02	-0.218
		83.78		1.781E-01	1.323E-01	2.109E-01	2.474E-02	0.844
		94.90		-1.984E-02	2.483E-01	3.617E-01	3.727E-02	-0.055
		122.32		-1.312E+00	1.765E+00	2.795E+00	2.150E-01	-0.469
		144.24		3.322E-01	6.730E-01	1.121E+00	8.768E-02	0.296
		154.21		3.814E-01	3.704E-01	6.307E-01	4.756E-02	0.605
	+	269.46		6.675E-01	3.357E-01	3.627E-01	2.502E-02	1.840
		323.87	*	-6.717E-01	6.506E-01	1.001E+00	1.675E-01	-0.671
	+	338.28		5.399E+00	1.800E+00	2.520E+00	2.724E-01	2.143
		445.03		1.111E+00	2.131E+00	3.635E+00	3.707E-01	0.306
RA-226	+	609.31	*	1.002E+00	1.673E-01	2.757E-01	2.026E-02	3.634
		768.36		1.667E-01	7.832E-01	1.326E+00	1.146E-01	0.126
		934.06		1.208E+00	1.188E+00	2.134E+00	2.172E-01	0.566
	+	1120.29		2.106E+00	6.706E-01	8.587E-01	8.000E-02	2.452

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.347E+00	1.141E+00	2.055E+00	1.752E-01	0.655
		1377.67		1.300E+00	9.760E-01	1.878E+00	1.751E-01	0.693
		1764.49		1.220E+00	4.146E-01	8.267E-01	5.040E-02	1.475
AC-227		79.80		3.294E-01	1.738E+00	2.640E+00	6.027E-01	0.125
		236.00		2.590E-01	2.685E-01	4.006E-01	4.388E-02	0.646
		256.20	*	3.426E-01	3.662E-01	6.452E-01	9.258E-02	0.531
		286.10		5.468E-01	1.448E+00	2.490E+00	2.987E-01	0.220
	+	299.80		3.050E+00	1.715E+00	2.516E+00	4.170E-01	1.212
		304.40		-4.940E-01	1.834E+00	2.642E+00	4.639E-01	-0.187
		334.20		-1.685E+00	2.843E+00	3.956E+00	7.321E-01	-0.426
TH-227		79.80		3.294E-01	1.738E+00	2.640E+00	6.095E-01	0.125
	+	94.00		6.282E+00	3.355E+00	3.395E+00	7.668E-01	1.850
		236.00		2.590E-01	2.682E-01	4.006E-01	3.858E-02	0.646
		256.20	*	3.426E-01	3.677E-01	6.452E-01	1.111E-01	0.531
		286.10		5.468E-01	1.547E+00	2.490E+00	2.496E+00	0.220
	+	299.80		3.050E+00	1.715E+00	2.516E+00	4.170E-01	1.212
		304.40		-4.940E-01	1.834E+00	2.642E+00	4.639E-01	-0.187
		334.20		-1.685E+00	2.843E+00	3.956E+00	7.321E-01	-0.426
TH-229		85.43		1.925E-01	2.071E-01	3.235E-01	3.829E-02	0.595
	+	88.47		3.591E-01	1.539E-01	2.119E-01	2.519E-02	1.695
		100.00		2.567E-03	1.791E-01	2.972E-01	2.787E-02	0.009
		193.63	*	-5.977E-01	4.944E-01	7.360E-01	4.776E-02	-0.812
		210.97		6.545E-02	8.697E-01	1.241E+00	8.158E-02	0.053
TH-230	+	609.31	*	1.002E+00	1.673E-01	2.757E-01	2.026E-02	3.634
		768.36		1.667E-01	7.832E-01	1.325E+00	1.146E-01	0.126
		934.06		1.208E+00	1.188E+00	2.134E+00	2.172E-01	0.566
	+	1120.29		2.105E+00	6.706E-01	8.587E-01	8.000E-02	2.452
		1238.11		1.347E+00	1.141E+00	2.055E+00	1.752E-01	0.655
		1377.67		1.300E+00	9.760E-01	1.878E+00	1.751E-01	0.693
		1764.49		1.220E+00	4.146E-01	8.267E-01	5.040E-02	1.475
PA-231		283.67	*	-9.027E-01	1.430E+00	2.309E+00	3.268E-01	-0.391
	+	301.29		1.220E+00	6.690E-01	9.706E-01	1.057E-01	1.257
TH-231		81.07		-7.464E-02	2.325E-01	3.426E-01	3.971E-02	-0.218
		83.78		1.781E-01	1.323E-01	2.109E-01	2.474E-02	0.844
		94.90		-1.984E-02	2.483E-01	3.617E-01	3.727E-02	-0.055
		122.32		-1.312E+00	1.765E+00	2.795E+00	2.150E-01	-0.469
		144.24		3.322E-01	6.730E-01	1.121E+00	8.768E-02	0.296
		154.21		3.814E-01	3.704E-01	6.307E-01	4.756E-02	0.605
	+	269.46		6.675E-01	3.357E-01	3.627E-01	2.502E-02	1.840
		323.87	*	-6.717E-01	6.506E-01	1.001E+00	1.675E-01	-0.671
	+	338.28		5.399E+00	1.800E+00	2.520E+00	2.724E-01	2.143
		445.03		1.111E+00	2.131E+00	3.635E+00	3.707E-01	0.306
U-231		84.21		1.267E+00	4.741E+00	7.212E+00	8.478E-01	0.176
	+	92.29		5.035E+00	2.494E+00	3.021E+00	3.287E-01	1.667
		95.87	*	-5.721E-01	9.355E-01	1.339E+00	1.354E-01	-0.427
		108.00		-1.015E+00	1.701E+00	2.648E+00	2.192E-01	-0.383
PA-233	+	75.28		2.048E+01	6.227E+00	7.535E+00	1.289E+00	2.717
	+	86.59		5.149E+00	2.565E+00	3.125E+00	8.767E-01	1.648
	+	300.12		8.504E-01	4.718E-01	6.991E-01	9.637E-02	1.216

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		311.98	*	1.563E-02	6.272E-02	1.067E-01	7.275E-03	0.146
		340.50		8.194E-01	6.796E-01	1.057E+00	2.441E-01	0.775
		398.62		-6.382E-01	2.075E+00	3.338E+00	8.619E-01	-0.191
		415.76		1.290E+00	1.675E+00	2.873E+00	5.903E-01	0.449
PA-234		63.00		2.193E-01	2.052E+00	3.457E+00	6.072E-01	0.063
		94.67		5.904E-02	1.771E-01	2.642E-01	3.610E-02	0.223
		98.44		9.133E-02	1.037E-01	1.566E-01	8.760E-02	0.583
		99.86		2.474E-02	4.545E-01	7.558E-01	7.104E-02	0.033
		111.00		-7.986E-03	1.757E-01	2.895E-01	3.362E-02	-0.028
		131.20		-6.030E-02	1.070E-01	1.706E-01	1.144E-02	-0.354
		152.70		-3.221E-01	3.199E-01	4.867E-01	7.814E-02	-0.662
	+	186.00		3.629E+00	2.193E+00	2.357E+00	7.233E-01	1.540
		226.40		-1.250E-01	4.059E-01	6.329E-01	7.594E-02	-0.197
		227.20		-1.826E-01	4.379E-01	6.783E-01	4.500E-02	-0.269
		248.90		-3.025E-01	8.343E-01	1.282E+00	2.788E-01	-0.236
	+	293.70		5.747E+00	1.354E+00	1.713E+00	2.808E-01	3.354
		369.80		1.529E-01	8.248E-01	1.385E+00	2.889E-01	0.110
		568.70		9.592E-01	9.355E-01	1.647E+00	8.903E-02	0.582
		569.50		8.310E-02	2.667E-01	4.415E-01	2.385E-02	0.188
		574.00		-1.003E+00	1.561E+00	2.363E+00	1.272E-01	-0.424
		699.00		1.588E-01	7.611E-01	1.296E+00	2.311E-01	0.123
		706.10		4.366E-01	1.078E+00	1.835E+00	8.092E-01	0.238
		733.00		-6.114E-02	4.645E-01	6.640E-01	1.412E-01	-0.092
		742.81		5.425E-01	1.426E+00	2.381E+00	1.594E+00	0.228
		796.30		9.875E-01	9.448E-01	1.650E+00	4.372E-01	0.598
		805.60		-7.515E-02	1.082E+00	1.784E+00	5.385E-01	-0.042
		819.60		5.039E-02	1.213E+00	2.019E+00	7.609E-01	0.025
		826.30		3.256E-01	8.961E-01	1.514E+00	6.732E-01	0.215
		831.60		-5.038E-01	7.507E-01	1.147E+00	3.380E-01	-0.439
		876.40		3.678E-01	9.323E-01	1.467E+00	1.507E+00	0.251
		880.51		9.319E-02	2.839E-01	4.836E-01	3.843E-02	0.193
		883.24		-5.563E-02	3.055E-01	4.903E-01	3.292E-01	-0.113
		899.00		-6.459E-01	9.074E-01	1.305E+00	5.693E-01	-0.495
		925.00		1.929E-01	1.177E+00	1.966E+00	1.592E-01	0.098
		926.50		-1.983E-02	1.762E-01	2.855E-01	7.166E-02	-0.069
		946.00	*	-1.120E-03	3.381E-01	5.538E-01	1.023E-01	-0.002
		949.00		1.076E-01	5.143E-01	8.591E-01	6.843E-02	0.125
		980.50		-1.832E-02	7.502E-01	1.222E+00	9.495E-02	-0.015
		1394.10		3.716E-03	1.246E+00	2.071E+00	1.343E+00	0.002
PA-234M		766.41		9.008E+00	1.901E+01	3.072E+01	2.348E+01	0.293
		1001.03	*	9.086E+00	7.155E+00	1.300E+01	1.356E+00	0.699
TH-234		63.29	*	5.417E-01	1.734E+00	2.941E+00	5.819E-01	0.184
	+	92.38		1.626E+00	8.456E-01	9.792E-01	1.885E-01	1.660
U-234	+	609.31	*	1.002E+00	1.673E-01	2.757E-01	2.026E-02	3.634
		768.36		1.667E-01	7.832E-01	1.325E+00	1.146E-01	0.126
		934.06		1.208E+00	1.188E+00	2.134E+00	2.172E-01	0.566
	+	1120.29		2.105E+00	6.706E-01	8.587E-01	8.000E-02	2.452
		1238.11		1.347E+00	1.141E+00	2.055E+00	1.752E-01	0.655
		1377.67		1.300E+00	9.760E-01	1.878E+00	1.751E-01	0.693

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1764.49		1.220E+00	4.146E-01	8.267E-01	5.040E-02	1.475
U-235	+	89.95		2.688E+00	1.264E+00	1.931E+00	6.134E-01	1.392
	+	93.35		1.954E+00	1.099E+00	1.143E+00	3.281E-01	1.710
		105.00		1.309E+00	1.101E+00	1.801E+00	5.377E-01	0.727
		143.76	*	3.717E-02	2.039E-01	3.351E-01	5.555E-02	0.111
		163.35		7.807E-03	4.279E-01	6.935E-01	1.260E-01	0.011
	+	185.71		1.344E-01	7.050E-02	8.728E-02	5.628E-03	1.540
		205.31		-1.917E-02	5.558E-01	7.883E-01	1.438E-01	-0.024
NP-236		94.67		4.535E-02	1.343E-01	2.005E-01	2.076E-02	0.226
		98.44		6.906E-02	6.857E-02	1.184E-01	1.141E-02	0.583
		111.00		-6.041E-03	1.329E-01	2.190E-01	1.739E-02	-0.028
		160.31	*	8.572E-02	7.546E-02	1.290E-01	8.237E-03	0.664
U-238		63.29	*	5.417E-01	1.734E+00	2.941E+00	5.819E-01	0.184
	+	92.38		1.626E+00	8.052E-01	9.792E-01	1.063E-01	1.660
NP-239		99.55		4.340E-02	1.529E-01	2.569E-01	2.428E-02	0.169
		117.00	*	-2.203E-01	1.833E-01	2.828E-01	2.081E-02	-0.779
	+	209.75		1.369E+00	1.092E+00	1.393E+00	9.151E-02	0.983
		228.18		9.723E-02	2.236E-01	3.642E-01	2.417E-02	0.267
	+	277.60		1.811E-01	1.843E-01	3.203E-01	2.131E-02	0.565
		334.30		-9.962E-01	1.600E+00	2.234E+00	1.412E-01	-0.446
AM-241		59.54	*	1.091E-01	2.091E-01	3.619E-01	4.569E-02	0.301
CM-243		99.55		4.466E-02	1.573E-01	2.643E-01	2.498E-02	0.169
		103.76	*	-1.053E-02	9.502E-02	1.566E-01	1.380E-02	-0.067
		117.00		-2.267E-01	1.886E-01	2.910E-01	2.141E-02	-0.779
	+	209.75		1.350E+00	1.076E+00	1.373E+00	9.020E-02	0.983
		228.18		9.824E-02	2.259E-01	3.680E-01	2.442E-02	0.267
	+	277.60		1.825E-01	1.858E-01	3.229E-01	2.148E-02	0.565
CM-247	+	278.00		7.509E-01	7.642E-01	1.370E+00	9.108E-02	0.548
		287.40		-2.396E-01	1.152E+00	1.916E+00	1.268E-01	-0.125
		402.60	*	-4.710E-03	3.607E-02	5.893E-02	3.326E-03	-0.080
CF-249		252.85		-4.490E-01	8.429E-01	1.389E+00	9.278E-02	-0.323
		333.44		3.064E-02	2.047E-01	3.043E-01	1.927E-02	0.101
		387.95	*	-1.547E-02	4.009E-02	6.372E-02	3.620E-03	-0.243
CF-251		176.60	*	-3.712E-02	1.232E-01	1.954E-01	1.250E-02	-0.190
		227.00		-2.665E-01	3.914E-01	5.960E-01	3.954E-02	-0.447
		285.00		5.330E-01	1.594E+00	2.740E+00	1.816E-01	0.195

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871424    *
* Acquisition date :  7-JUL-2009 08:27:26 Detector SN#    :                *
* Detector ID        : GAM04               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.19      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201871424          Analyst initials: MXR1         *
* Batch Number       : 881219               Sample Quantity : 1.1946E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  5-MAY-2009 14:25:41 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.740E+01	3.303E+00	4.162E-01	0.000E+00
CD-109	2.671E+00	1.122E+00	1.266E+00	0.000E+00
SN-126	2.630E-01	1.105E-01	1.257E-01	0.000E+00
CS-135	5.674E-01	2.808E-01	2.485E-01	0.000E+00
TL-208	4.443E-01	9.056E-02	6.324E-02	0.000E+00
BI-211	3.041E+00	4.984E-01	3.121E-01	0.000E+00
PB-212	1.458E+00	1.561E-01	9.457E-02	0.000E+00
PO-212	1.458E+00	1.561E-01	9.457E-02	0.000E+00
PB-214	1.058E+00	1.816E-01	1.088E-01	0.000E+00
PO-214	1.058E+00	1.816E-01	1.088E-01	0.000E+00
PO-216	1.458E+00	1.561E-01	9.457E-02	0.000E+00
PO-218	1.058E+00	1.816E-01	1.088E-01	0.000E+00
RA-224	4.179E+00	1.193E+00	1.076E+00	0.000E+00
AC-228	1.344E+00	3.419E-01	2.287E-01	0.000E+00
RA-228	1.344E+00	3.419E-01	2.287E-01	0.000E+00
TH-228	1.458E+00	1.561E-01	9.456E-02	0.000E+00
TH-232	1.344E+00	3.419E-01	2.287E-01	0.000E+00
NP-237	7.723E-01	3.600E-01	4.174E-01	0.000E+00
AM-243	3.909E-01	1.059E-01	1.008E-01	0.000E+00
ANH-511	1.455E-01	7.205E-02	4.835E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-8.768E-02	3.281E-01	5.402E-01	0.000E+00	NOT IDENT.
NA-22	3.539E-04	5.184E-02	8.849E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.810E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.486E-02	2.531E-02	3.456E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.563E-02	8.106E-02	0.000E+00	FAIL ABUN
SC-46	-2.648E-03	4.201E-02	7.040E-02	0.000E+00	FAIL ABUN
V-48	-1.340E-02	7.183E-02	1.177E-01	0.000E+00	NOT IDENT.

CR-51	1.050E-01	3.204E-01	5.670E-01	0.000E+00	NOT IDENT.
MN-52	-9.802E-02	1.792E-01	2.729E-01	0.000E+00	NOT IDENT.
MN-54	2.022E-02	3.927E-02	6.941E-02	0.000E+00	NOT IDENT.
CO-56	2.258E-02	4.055E-02	7.207E-02	0.000E+00	NOT IDENT.
CO-57	-1.840E-02	2.496E-02	4.144E-02	0.000E+00	NOT IDENT.
CO-58	2.005E-02	4.091E-02	7.247E-02	0.000E+00	NOT IDENT.
FE-59	-7.812E-02	1.025E-01	1.558E-01	0.000E+00	NOT IDENT.
CO-60	5.877E-02	3.967E-02	7.857E-02	0.000E+00	NOT IDENT.
ZN-65	1.559E-01	9.645E-02	1.699E-01	0.000E+00	NOT IDENT.
GE-68	7.004E-02	1.410E+00	2.346E+00	0.000E+00	NOT IDENT.
AS-73	1.389E+00	1.450E+00	2.698E+00	0.000E+00	NOT IDENT.
AS-74	1.034E-01	9.855E-02	1.755E-01	0.000E+00	NOT IDENT.
SE-75	2.858E-02	4.449E-02	7.234E-02	0.000E+00	NOT IDENT.
BR-77	-3.109E+00	6.454E+00	1.027E+01	0.000E+00	FAIL ABUN
SR-82	-1.988E-01	3.879E-01	6.321E-01	0.000E+00	NOT IDENT.
RB-83	-2.004E-02	6.023E-02	9.727E-02	0.000E+00	NOT IDENT.
RB-84	-1.877E-02	6.842E-02	1.121E-01	0.000E+00	NOT IDENT.
KR-85	9.406E+00	7.804E+00	1.281E+01	0.000E+00	NOT IDENT.
SR-85	4.759E-02	3.948E-02	6.483E-02	0.000E+00	NOT IDENT.
RB-86	-2.122E-01	8.575E-01	1.384E+00	0.000E+00	NOT IDENT.
Y-88	-6.665E-03	2.423E-02	3.634E-02	0.000E+00	NOT IDENT.
ZR-88	-1.405E-02	2.999E-02	4.953E-02	0.000E+00	NOT IDENT.
Y-91	7.853E+00	2.232E+01	3.771E+01	0.000E+00	NOT IDENT.
NB-94	-4.604E-03	3.400E-02	5.787E-02	0.000E+00	NOT IDENT.
NB-95	1.883E-02	4.156E-02	7.357E-02	0.000E+00	NOT IDENT.
NB-95M	1.141E-01	1.300E-01	2.016E-01	0.000E+00	NOT IDENT.
ZR-95	-6.217E-04	7.201E-02	1.230E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.918E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.742E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-9.020E+00	8.464E+00	1.293E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.133E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.684E-02	3.320E-02	5.361E-02	0.000E+00	NOT IDENT.
RH-102	1.428E-02	2.950E-02	5.142E-02	0.000E+00	NOT IDENT.
RU-103	1.027E-02	3.649E-02	6.261E-02	0.000E+00	FAIL ABUN
RH-106	-1.365E-01	3.404E-01	5.387E-01	0.000E+00	NOT IDENT.
RU-106	-1.365E-01	3.401E-01	5.387E-01	0.000E+00	NOT IDENT.
AG-108M	-1.465E-02	3.256E-02	5.328E-02	0.000E+00	NOT IDENT.
AG-110M	3.981E-04	3.640E-02	6.302E-02	0.000E+00	NOT IDENT.
IN-111	9.929E-02	8.193E-01	1.207E+00	0.000E+00	NOT IDENT.
IN-113M	-3.336E-03	4.269E-02	7.251E-02	0.000E+00	NOT IDENT.
SN-113	-3.336E-03	4.269E-02	7.251E-02	0.000E+00	NOT IDENT.
IN-114M	2.476E-01	1.842E-01	2.993E-01	0.000E+00	NOT IDENT.
CD-115	3.338E+00	7.166E+00	1.242E+01	0.000E+00	NOT IDENT.
SN-117M	-2.062E-02	4.971E-02	8.243E-02	0.000E+00	NOT IDENT.
SB-122	-1.204E+00	1.452E+00	2.203E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.112E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.052E-02	2.708E-02	4.495E-02	0.000E+00	NOT IDENT.
I-124	-2.930E-01	6.585E-01	8.965E-01	0.000E+00	NOT IDENT.
SB-124	-3.463E-02	7.190E-02	1.064E-01	0.000E+00	FAIL ABUN
SB-125	-2.565E-02	9.121E-02	1.515E-01	0.000E+00	FAIL ABUN
TE-125M	1.877E+00	8.957E+00	1.518E+01	0.000E+00	NOT IDENT.
I-126	2.280E-02	1.698E-01	2.964E-01	0.000E+00	NOT IDENT.
SB-126	2.155E-02	1.545E-01	2.346E-01	0.000E+00	NOT IDENT.
SB-127	-6.028E-01	9.949E-01	1.618E+00	0.000E+00	NOT IDENT.
XE-127	-1.486E-02	4.459E-02	7.292E-02	0.000E+00	NOT IDENT.
I-131	-4.317E-03	1.003E-01	1.717E-01	0.000E+00	NOT IDENT.
TE-132	2.277E-01	5.127E-01	8.671E-01	0.000E+00	NOT IDENT.
BA-133	-1.057E-02	4.508E-02	6.663E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.364E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.289E-02	4.603E-02	8.575E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.622E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.198E-02	1.151E-01	1.892E-01	0.000E+00	FAIL ABUN
BA-137M	-1.774E-02	3.864E-02	6.642E-02	0.000E+00	NOT IDENT.
CS-137	-1.876E-02	4.084E-02	7.021E-02	0.000E+00	NOT IDENT.
CE-139	-5.650E-03	2.610E-02	4.354E-02	0.000E+00	NOT IDENT.
BA-140	-1.283E-01	2.430E-01	3.796E-01	0.000E+00	NOT IDENT.
LA-140	-2.800E-02	8.394E-02	1.087E-01	0.000E+00	NOT IDENT.
CE-141	4.700E-02	5.701E-02	1.007E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.108E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.493E-01	1.969E-01	3.230E-01	0.000E+00	NOT IDENT.
PM-144	1.980E-02	3.454E-02	6.207E-02	0.000E+00	NOT IDENT.
PR-144	1.341E+00	2.339E+00	4.204E+00	0.000E+00	NOT IDENT.
PM-146	2.899E-02	4.428E-02	7.820E-02	0.000E+00	NOT IDENT.
ND-147	9.398E-02	5.574E-01	9.038E-01	0.000E+00	FAIL ABUN
PM-149	3.726E+01	5.629E+01	1.016E+02	0.000E+00	NOT IDENT.
EU-152	-5.044E-02	9.494E-02	1.522E-01	0.000E+00	FAIL ABUN
GD-153	4.342E-02	7.903E-02	1.349E-01	0.000E+00	NOT IDENT.
EU-154	4.847E-02	1.418E-01	2.494E-01	0.000E+00	NOT IDENT.

EU-155	6.015E-02	1.048E-01	1.862E-01	0.000E+00	FAIL ABUN
TB-160	-2.923E-04	1.375E-01	2.320E-01	0.000E+00	FAIL ABUN
HO-166M	-5.120E-02	6.317E-02	1.013E-01	0.000E+00	FAIL ABUN
TM-171	-1.839E+01	3.309E+01	5.686E+01	0.000E+00	NOT IDENT.
LU-176	-1.368E-02	2.441E-02	3.769E-02	0.000E+00	FAIL ABUN
LU-177	1.694E+00	1.324E+00	1.718E+00	0.000E+00	FAIL ABUN
LU-177M	-6.420E-03	1.708E-01	2.897E-01	0.000E+00	FAIL ABUN
HF-181	5.423E-03	4.312E-02	7.313E-02	0.000E+00	NOT IDENT.
W-181	-1.752E-01	4.535E-01	7.877E-01	0.000E+00	NOT IDENT.
TA-182	-1.710E-01	2.228E-01	3.571E-01	0.000E+00	NOT IDENT.
RE-183	2.951E-02	9.848E-02	1.691E-01	0.000E+00	FAIL ABUN
RE-184	-1.190E-01	2.190E-01	3.749E-01	0.000E+00	NOT IDENT.
OS-185	4.902E-03	4.325E-02	7.558E-02	0.000E+00	NOT IDENT.
RE-188	2.068E-01	1.573E-01	2.827E-01	0.000E+00	NOT IDENT.
W-188	1.071E+00	7.401E+00	1.153E+01	0.000E+00	NOT IDENT.
IR-192	-2.132E-02	3.058E-02	5.057E-02	0.000E+00	FAIL ABUN
AU-195	1.288E-01	2.184E-01	3.896E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.911E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.478E+00	4.568E+00	8.018E+00	0.000E+00	NOT IDENT.
TL-202	1.999E-02	6.300E-02	1.091E-01	0.000E+00	NOT IDENT.
HG-203	4.779E-02	4.160E-02	6.955E-02	0.000E+00	NOT IDENT.
BI-207	-8.746E-03	5.912E-02	9.655E-02	0.000E+00	FAIL ABUN
TL-207	-6.717E-01	6.376E-01	1.016E+00	0.000E+00	FAIL ABUN
PO-209	1.297E+00	7.109E+00	1.221E+01	0.000E+00	NOT IDENT.
BI-210	-6.088E+00	9.196E+00	1.586E+01	0.000E+00	NOT IDENT.
PB-210	-6.088E+00	9.196E+00	1.586E+01	0.000E+00	NOT IDENT.
PO-210	-6.088E+00	9.193E+00	1.586E+01	0.000E+00	NOT IDENT.
PB-211	-1.887E-01	9.240E-01	1.539E+00	0.000E+00	NOT IDENT.
BI-212	6.645E-01	5.726E-01	6.773E-01	0.000E+00	FAIL ABUN
BI-214	0.000E+00	1.640E-01	2.778E-01	0.000E+00	FAIL ABUN
PO-215	-6.717E-01	6.376E-01	1.016E+00	0.000E+00	FAIL ABUN
RN-219	1.746E-01	3.965E-01	6.953E-01	0.000E+00	NOT IDENT.
RN-220	1.117E+01	2.568E+01	4.428E+01	0.000E+00	NOT IDENT.
RA-223	-6.717E-01	6.376E-01	1.016E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	1.640E-01	2.778E-01	0.000E+00	FAIL ABUN
AC-227	3.426E-01	3.589E-01	6.567E-01	0.000E+00	FAIL ABUN
TH-227	3.426E-01	3.603E-01	6.567E-01	0.000E+00	FAIL ABUN
TH-229	-5.977E-01	4.845E-01	7.514E-01	0.000E+00	FAIL ABUN
TH-230	0.000E+00	1.640E-01	2.778E-01	0.000E+00	FAIL ABUN
PA-231	-9.027E-01	1.401E+00	2.348E+00	0.000E+00	FAIL ABUN
TH-231	-6.717E-01	6.376E-01	1.016E+00	0.000E+00	FAIL ABUN
U-231	-5.721E-01	9.168E-01	1.378E+00	0.000E+00	FAIL ABUN
PA-233	1.563E-02	6.146E-02	1.083E-01	0.000E+00	FAIL ABUN
PA-234	-1.120E-03	3.313E-01	5.552E-01	0.000E+00	FAIL ABUN
PA-234M	9.086E+00	7.012E+00	1.302E+01	0.000E+00	NOT IDENT.
TH-234	5.417E-01	1.700E+00	3.041E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	1.640E-01	2.778E-01	0.000E+00	FAIL ABUN
U-235	3.717E-02	1.998E-01	3.433E-01	0.000E+00	FAIL ABUN
NP-236	8.572E-02	7.395E-02	1.320E-01	0.000E+00	NOT IDENT.
U-238	5.417E-01	1.700E+00	3.041E+00	0.000E+00	FAIL ABUN
NP-239	-2.203E-01	1.796E-01	2.904E-01	0.000E+00	FAIL ABUN
AM-241	1.091E-01	2.049E-01	3.744E-01	0.000E+00	NOT IDENT.
CM-243	-1.053E-02	9.312E-02	1.610E-01	0.000E+00	FAIL ABUN
CM-247	-4.710E-03	3.534E-02	5.966E-02	0.000E+00	FAIL ABUN
CF-249	-1.547E-02	3.929E-02	6.454E-02	0.000E+00	NOT IDENT.
CF-251	-3.712E-02	1.207E-01	1.997E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:27:53.35

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871424.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:27:26.
Sample ID         : G1201871424          Sample quantity  : 1.19460E+02 GRAM
Detector name     : GAM04                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.19  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1366	10.67*	1.075E+00	3.740E+01	3.740E+01	9.01
CD-109	88.03	156	3.72*	5.025E+00	2.616E+00	2.671E+00	42.86
SN-126	64.28	------	9.60	2.203E+00	------	Line Not Found	------
	86.94	156	8.90	5.025E+00	1.093E+00	1.093E+00	58.93
	87.57	156	37.00*	5.025E+00	2.630E-01	2.630E-01	42.86
CS-135	268.24	128	16.00*	4.417E+00	5.674E-01	5.674E-01	50.51
TL-208	277.35	35	6.80	4.329E+00	3.754E-01	3.754E-01	102.15
	510.84	127	21.60	2.733E+00	6.734E-01	6.734E-01	51.22
	583.14	292	84.20*	2.456E+00	4.443E-01	4.443E-01	20.80
	860.37	32	12.46	1.745E+00	4.592E-01	4.592E-01	87.47
BI-211	72.87	------	1.27	3.384E+00	------	Line Not Found	------
	351.07	454	12.94*	3.628E+00	3.041E+00	3.041E+00	16.72
PB-212	74.81	300	10.70	3.650E+00	2.411E+00	2.411E+00	29.17
	77.11	401	18.00	3.926E+00	1.785E+00	1.785E+00	20.33
	87.30	156	8.00	5.025E+00	1.216E+00	1.216E+00	44.01
	238.63	999	44.60*	4.828E+00	1.458E+00	1.458E+00	10.92
	300.09	73	3.41	4.083E+00	1.646E+00	1.646E+00	54.45
PO-212	74.81	300	10.70	3.650E+00	2.411E+00	2.411E+00	29.17
	77.11	401	18.00	3.926E+00	1.785E+00	1.785E+00	20.33
	87.30	156	8.00	5.025E+00	1.216E+00	1.216E+00	44.01
	115.19	------	0.60	6.408E+00	------	Line Not Found	------
	238.63	999	44.60*	4.828E+00	1.458E+00	1.458E+00	10.92
	300.09	73	3.41	4.083E+00	1.646E+00	1.646E+00	54.45
PB-214	74.81	300	6.21	3.650E+00	4.154E+00	4.154E+00	28.61
	77.11	401	10.50	3.926E+00	3.060E+00	3.060E+00	21.71
	87.30	156	4.67	5.025E+00	2.084E+00	2.084E+00	43.54
	241.98	251	7.49	4.787E+00	2.204E+00	2.204E+00	29.67
	295.21	302	19.20	4.135E+00	1.197E+00	1.197E+00	19.22
	351.92	454	37.20*	3.628E+00	1.058E+00	1.058E+00	17.52
PO-214	74.81	300	6.21	3.650E+00	4.154E+00	4.154E+00	28.61
	77.11	401	10.50	3.926E+00	3.060E+00	3.060E+00	21.71
	87.30	156	4.67	5.025E+00	2.084E+00	2.084E+00	43.54

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	251	7.49	4.787E+00	2.204E+00	2.204E+00	29.67
	295.21	302	19.20	4.135E+00	1.197E+00	1.197E+00	19.22
	351.92	454	37.20*	3.628E+00	1.058E+00	1.058E+00	17.52
PO-216	74.81	300	10.70	3.650E+00	2.411E+00	2.411E+00	29.17
	77.11	401	18.00	3.926E+00	1.785E+00	1.785E+00	20.33
	87.30	156	8.00	5.025E+00	1.216E+00	1.216E+00	44.01
	238.63	999	44.60*	4.828E+00	1.458E+00	1.458E+00	10.92
	300.09	73	3.41	4.083E+00	1.646E+00	1.646E+00	54.45
PO-218	74.81	300	6.21	3.650E+00	4.154E+00	4.154E+00	28.61
	77.11	401	10.50	3.926E+00	3.060E+00	3.060E+00	21.71
	87.30	156	4.67	5.025E+00	2.084E+00	2.084E+00	43.54
	241.98	251	7.49	4.787E+00	2.204E+00	2.204E+00	29.67
	295.21	302	19.20	4.135E+00	1.197E+00	1.197E+00	19.22
	351.92	454	37.20*	3.628E+00	1.058E+00	1.058E+00	17.52
RA-224	240.98	251	3.95*	4.787E+00	4.179E+00	4.179E+00	29.13
AC-228	338.32	175	11.40	3.737E+00	1.293E+00	1.293E+00	51.59
	911.07	196	27.70*	1.654E+00	1.344E+00	1.344E+00	25.95
	969.11	142	16.60	1.560E+00	1.718E+00	1.718E+00	35.41
RA-228	338.32	175	11.40	3.737E+00	1.293E+00	1.293E+00	51.59
	911.07	196	27.70*	1.654E+00	1.344E+00	1.344E+00	25.95
	969.11	142	16.60	1.560E+00	1.718E+00	1.718E+00	35.41
TH-228	84.40	------	1.21	4.745E+00	------ Line Not Found		------
	238.60	999	44.60*	4.828E+00	1.458E+00	1.458E+00	10.92
	300.10	73	3.41	4.083E+00	1.646E+00	1.646E+00	79.82
TH-232	338.32	175	11.40	3.737E+00	1.293E+00	1.293E+00	32.15
	911.07	196	27.70*	1.654E+00	1.344E+00	1.344E+00	25.95
	969.11	142	16.60	1.560E+00	1.718E+00	1.718E+00	35.41
NP-237	86.50	156	12.60*	5.025E+00	7.723E-01	7.723E-01	47.57
	95.87	------	2.60	5.678E+00	------ Line Not Found		------
AM-243	74.67	300	66.00*	3.650E+00	3.909E-01	3.909E-01	27.63
	86.72	156	0.34	5.025E+00	2.896E+01	2.896E+01	42.86
	117.66	------	0.55	6.445E+00	------ Line Not Found		------
	142.18	------	0.13	6.417E+00	------ Line Not Found		------
ANH-511	511.00	127	100.00*	2.733E+00	1.455E-01	1.455E-01	50.54

Flag: "*" = Keyline

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

Total number of lines in spectrum 28
Number of unidentified lines 2
Number of lines tentatively identified by NID 26 92.86%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.740E+01	3.740E+01	0.337E+01	9.01	
CD-109	464.00D	1.02	2.616E+00	2.671E+00	1.145E+00	42.86	
SN-126	1.00E+05Y	1.00	2.630E-01	2.630E-01	1.127E-01	42.86	
CS-135	2.30E+06Y	1.00	5.674E-01	5.674E-01	2.865E-01	50.51	
TL-208	1.41E+10Y	1.00	4.443E-01	4.443E-01	0.924E-01	20.80	
BI-211	7.04E+08Y	1.00	3.041E+00	3.041E+00	0.509E+00	16.72	
PB-212	1.41E+10Y	1.00	1.458E+00	1.458E+00	0.159E+00	10.92	
PO-212	1.41E+10Y	1.00	1.458E+00	1.458E+00	0.159E+00	10.92	
PB-214	1600.00Y	1.00	1.058E+00	1.058E+00	0.185E+00	17.52	
PO-214	1600.00Y	1.00	1.058E+00	1.058E+00	0.185E+00	17.52	
PO-216	1.41E+10Y	1.00	1.458E+00	1.458E+00	0.159E+00	10.92	
PO-218	1600.00Y	1.00	1.058E+00	1.058E+00	0.185E+00	17.52	
RA-224	1.41E+10Y	1.00	4.179E+00	4.179E+00	1.217E+00	29.13	
AC-228	1.41E+10Y	1.00	1.344E+00	1.344E+00	0.349E+00	25.95	
RA-228	1.41E+10Y	1.00	1.344E+00	1.344E+00	0.349E+00	25.95	
TH-228	1.41E+10Y	1.00	1.458E+00	1.458E+00	0.159E+00	10.92	
TH-232	1.41E+10Y	1.00	1.344E+00	1.344E+00	0.349E+00	25.95	
NP-237	2.14E+06Y	1.00	7.723E-01	7.723E-01	3.674E-01	47.57	
AM-243	7380.00Y	1.00	3.909E-01	3.909E-01	1.080E-01	27.63	
ANH-511	1.00E+09Y	1.00	1.455E-01	1.455E-01	0.735E-01	50.54	
	Total Activity :		6.286E+01	6.291E+01			

Grand Total Activity : 6.286E+01 6.291E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.92	121	165	1.00	179.88	178	12	1.68E-02	34.7	5.25E+00	T
5	92.81	153	338	1.53	185.66	178	12	2.13E-02	48.3	5.47E+00	T
0	185.90	132	278	1.07	371.87	367	10	1.83E-02	52.1	5.70E+00	T
0	209.42	75	246	1.03	418.91	414	9	1.04E-02	79.5	5.28E+00	T
0	462.86	65	101	1.80	925.82	920	13	9.01E-03	68.5	2.95E+00	T
0	608.84	350	87	1.25	1217.77	1212	11	4.86E-02	15.0	2.37E+00	T
0	727.00	51	100	1.21	1454.08	1447	14	7.05E-03	87.6	2.03E+00	T
4	963.55	59	33	2.49	1927.16	1921	21	8.15E-03	58.0	1.57E+00	T
0	1119.38	137	53	1.80	2238.78	2230	19	1.91E-02	30.5	1.36E+00	T
0	1588.76	42	5	4.75	3177.34	3167	19	5.85E-03	39.6	1.01E+00	
0	1762.78	73	0	1.70	3525.29	3519	15	1.01E-02	24.6	9.53E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:27:59.20

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                            *
*                                DETECTOR DATA                               *
*                                                                            *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871424.CNF;1 *
* Acquisition date  : 7-JUL-2009 08:27:26.  Detector SN#     :              *
* Detector ID       : GAM04                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.19          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                            *
*                                SAMPLE DATA                                 *
*                                                                            *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID         *
* Sample ID         : G1201871424           Analyst initials: MXR1          *
* Batch Number      : 881219                Sample Quantity : 1.19460E+02 GRAM *
*****************************************************************************
*                                                                            *
*                                  QC DATA                                   *
*                                                                            *
* CALIB. DATE/TIME : 5-MAY-2009 14:25:41.36MS Isotope      :                 *
* MSD ID           :                      MSD Isotope     :                 *
* LCS ID           : 1032-A               LCS Isotope     :                 *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.740E+01	3.371E+00	4.172E-01	2.965E-02	89.633
CD-109	2.671E+00	1.145E+00	1.230E+00	1.478E-01	2.172
SN-126	2.630E-01	1.127E-01	1.220E-01	1.463E-02	2.156
CS-135	5.674E-01	2.865E-01	2.443E-01	2.036E-02	2.323
TL-208	4.443E-01	9.241E-02	6.272E-02	3.947E-03	7.083
BI-211	3.041E+00	5.086E-01	3.078E-01	2.079E-02	9.882
PB-212	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
PO-212	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
PB-214	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
PO-214	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
PO-216	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
PO-218	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
RA-224	4.179E+00	1.217E+00	1.057E+00	7.046E-02	3.954
AC-228	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
RA-228	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
TH-228	1.458E+00	1.593E-01	9.284E-02	7.456E-03	15.706
TH-232	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
NP-237	7.723E-01	3.674E-01	4.052E-01	9.654E-02	1.906

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	3.909E-01	1.080E-01	9.765E-02	1.118E-02	4.003
ANH-511	1.455E-01	7.352E-02	4.789E-02	2.678E-03	3.038

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-8.768E-02		3.348E-01	5.346E-01	3.541E-02	-0.164
NA-22	3.539E-04		5.290E-02	8.858E-02	5.791E-03	0.004
NA-24	4.069E-02		9.236E-02	Half-Life too short		
AL-26	-1.486E-02		2.582E-02	3.474E-02	2.060E-03	-0.428
TI-44	3.294E-01	+	6.697E-02	7.860E-02	9.038E-03	4.191
SC-46	-2.648E-03		4.287E-02	7.017E-02	5.675E-03	-0.038
V-48	-1.340E-02		7.330E-02	1.174E-01	9.096E-03	-0.114
CR-51	1.050E-01		3.269E-01	5.585E-01	3.933E-02	0.188
MN-52	-9.802E-02		1.828E-01	2.736E-01	1.867E-02	-0.358
MN-54	2.022E-02		4.007E-02	6.914E-02	5.003E-03	0.292
CO-56	2.258E-02		4.138E-02	7.180E-02	5.326E-03	0.315
CO-57	-1.840E-02		2.547E-02	4.038E-02	2.803E-03	-0.456
CO-58	2.005E-02		4.175E-02	7.215E-02	4.981E-03	0.278
FE-59	-7.812E-02		1.046E-01	1.557E-01	1.190E-02	-0.502
CO-60	5.877E-02		4.048E-02	7.869E-02	5.392E-03	0.747
ZN-65	1.559E-01		9.842E-02	1.698E-01	1.123E-02	0.918
GE-68	7.004E-02		1.438E+00	2.344E+00	1.637E-01	0.030
AS-73	1.389E+00		1.480E+00	2.605E+00	3.408E-01	0.533
AS-74	1.034E-01		1.006E-01	1.742E-01	9.195E-03	0.594
SE-75	2.858E-02		4.539E-02	7.111E-02	4.783E-03	0.402
BR-77	-3.109E+00		6.586E+00	1.017E+01	5.664E-01	-0.306
SR-82	-1.988E-01		3.958E-01	6.291E-01	4.015E-02	-0.316
RB-83	-2.004E-02		6.146E-02	9.635E-02	5.366E-03	-0.208
RB-84	-1.877E-02		6.982E-02	1.118E-01	8.901E-03	-0.168
KR-85	9.406E+00		7.963E+00	1.269E+01	7.089E-01	0.741
SR-85	4.759E-02		4.029E-02	6.421E-02	3.587E-03	0.741
RB-86	-2.122E-01		8.750E-01	1.383E+00	9.668E-02	-0.153
Y-88	-6.665E-03		2.473E-02	3.653E-02	2.132E-03	-0.182
ZR-88	-1.405E-02		3.060E-02	4.891E-02	2.752E-03	-0.287
Y-91	7.853E+00		2.277E+01	3.773E+01	2.312E+00	0.208
NB-94	-4.604E-03		3.469E-02	5.753E-02	3.099E-03	-0.080
NB-95	1.883E-02		4.241E-02	7.321E-02	4.563E-03	0.257
NB-95M	1.141E-01		1.326E-01	1.979E-01	1.624E-02	0.576
ZR-95	-6.217E-04		7.347E-02	1.224E-01	8.913E-03	-0.005
NB-97	-1.564E-03		1.489E-02	Half-Life too short		
ZR-97	1.043E+00		2.930E-01	Half-Life too short		
MO-99	-9.020E+00		8.637E+00	1.286E+01	1.776E+00	-0.702
TC-99M	6.417E+08		5.779E+08	Half-Life too short		
RH-101	-1.684E-02		3.388E-02	5.253E-02	3.421E-03	-0.321
RH-102	1.428E-02		3.010E-02	5.088E-02	2.877E-03	0.281
RU-103	1.027E-02		3.723E-02	6.199E-02	7.789E-03	0.166

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-106	-1.365E-01		3.474E-01	5.347E-01	6.108E-02	-0.255
RU-106	-1.365E-01		3.471E-01	5.347E-01	2.747E-02	-0.255
AG-108M	-1.465E-02		3.323E-02	5.267E-02	3.254E-03	-0.278
AG-110M	3.981E-04		3.714E-02	6.259E-02	3.344E-03	0.006
IN-111	9.929E-02		8.360E-01	1.186E+00	7.912E-02	0.084
IN-113M	-3.336E-03		4.356E-02	7.160E-02	4.314E-03	-0.047
SN-113	-3.336E-03		4.356E-02	7.160E-02	4.314E-03	-0.047
IN-114M	2.476E-01		1.879E-01	2.931E-01	1.897E-02	0.845
CD-115	3.338E+00		7.313E+00	1.231E+01	6.828E-01	0.271
SN-117M	-2.062E-02		5.072E-02	8.056E-02	5.153E-03	-0.256
SB-122	-1.204E+00		1.482E+00	2.185E+00	1.185E-01	-0.551
I-123	-4.323E-01		5.675E-01	Half-Life too short		
TE-123M	-1.052E-02		2.763E-02	4.393E-02	2.840E-03	-0.240
I-124	-2.930E-01		6.719E-01	8.896E-01	4.665E-02	-0.329
SB-124	-3.463E-02		7.337E-02	1.069E-01	7.263E-03	-0.324
SB-125	-2.565E-02		9.307E-02	1.497E-01	8.862E-03	-0.171
TE-125M	1.877E+00		9.140E+00	1.477E+01	1.465E+00	0.127
I-126	2.280E-02		1.732E-01	2.945E-01	1.453E-02	0.077
SB-126	2.155E-02		1.577E-01	2.332E-01	1.311E-02	0.092
SB-127	-6.028E-01		1.015E+00	1.608E+00	1.383E-01	-0.375
XE-127	-1.486E-02		4.550E-02	7.146E-02	4.671E-03	-0.208
I-131	-4.317E-03		1.023E-01	1.694E-01	1.125E-02	-0.025
TE-132	2.277E-01		5.232E-01	8.509E-01	1.232E-01	0.268
BA-133	-1.057E-02		4.600E-02	6.572E-02	7.698E-03	-0.161
I-133	-2.424E-04		1.206E-03	Half-Life too short		
CS-134	5.289E-02		4.697E-02	8.536E-02	5.753E-03	0.620
I-135	1.501E+08		1.338E+08	Half-Life too short		
CS-136	-1.198E-02		1.175E-01	1.889E-01	1.451E-02	-0.063
BA-137M	-1.774E-02		3.943E-02	6.598E-02	3.218E-03	-0.269
CS-137	-1.876E-02		4.168E-02	6.975E-02	3.422E-03	-0.269
CE-139	-5.650E-03		2.663E-02	4.257E-02	2.705E-03	-0.133
BA-140	-1.283E-01		2.479E-01	3.762E-01	1.222E-01	-0.341
LA-140	-2.800E-02		8.565E-02	1.091E-01	7.186E-03	-0.257
CE-141	4.700E-02		5.817E-02	9.830E-02	6.599E-03	0.478
CE-143	3.200E-04		5.654E-05	Half-Life too short		
CE-144	-1.493E-01		2.009E-01	3.150E-01	4.592E-02	-0.474
PM-144	1.980E-02		3.525E-02	6.170E-02	3.278E-03	0.321
PR-144	1.341E+00		2.387E+00	4.178E+00	2.218E-01	0.321
PM-146	2.899E-02		4.519E-02	7.734E-02	6.602E-03	0.375
ND-147	9.398E-02		5.687E-01	8.956E-01	1.201E-01	0.105
PM-149	3.726E+01		5.744E+01	9.999E+01	1.453E+01	0.373
EU-152	-5.044E-02		9.688E-02	1.500E-01	1.038E-02	-0.336
GD-153	4.342E-02		8.064E-02	1.312E-01	1.287E-02	0.331
EU-154	4.847E-02		1.447E-01	2.496E-01	2.449E-02	0.194
EU-155	6.015E-02		1.069E-01	1.812E-01	1.579E-02	0.332
TB-160	-2.923E-04		1.403E-01	2.312E-01	1.834E-02	-0.001
HO-166M	-5.120E-02		6.446E-02	1.007E-01	5.541E-03	-0.509
TM-171	-1.839E+01		3.376E+01	5.504E+01	6.435E+00	-0.334

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-176	-1.368E-02		2.491E-02	3.710E-02	2.422E-03	-0.369
LU-177	1.694E+00	+	1.351E+00	1.684E+00	1.105E-01	1.006
LU-177M	-6.420E-03		1.743E-01	2.862E-01	1.619E-02	-0.022
HF-181	5.423E-03		4.400E-02	7.237E-02	4.086E-03	0.075
W-181	-1.752E-01		4.627E-01	7.622E-01	8.984E-02	-0.230
TA-182	-1.710E-01		2.274E-01	3.573E-01	2.223E-02	-0.479
RE-183	2.951E-02		1.005E-01	1.653E-01	1.053E-02	0.179
RE-184	-1.190E-01		2.235E-01	3.683E-01	2.460E-02	-0.323
OS-185	4.902E-03		4.413E-02	7.506E-02	3.742E-03	0.065
RE-188	2.068E-01		1.605E-01	2.762E-01	1.774E-02	0.749
W-188	1.071E+00		7.552E+00	1.134E+01	7.496E-01	0.094
IR-192	-2.132E-02		3.120E-02	4.981E-02	3.234E-03	-0.428
AU-195	1.288E-01		2.228E-01	3.787E-01	3.621E-02	0.340
TL-200	-1.387E-05		9.750E-05	Half-Life too short		
TL-201	3.478E+00		4.661E+00	7.840E+00	4.984E-01	0.444
TL-202	1.999E-02		6.429E-02	1.079E-01	6.121E-03	0.185
HG-203	4.779E-02		4.245E-02	6.840E-02	4.762E-03	0.699
BI-207	-8.746E-03		6.033E-02	9.644E-02	6.859E-03	-0.091
TL-207	-6.717E-01		6.506E-01	1.001E+00	1.675E-01	-0.671
PO-209	1.297E+00		7.254E+00	1.217E+01	9.985E-01	0.107
BI-210	-6.088E+00		9.384E+00	1.529E+01	1.333E+00	-0.398
PB-210	-6.088E+00		9.384E+00	1.529E+01	1.333E+00	-0.398
PO-210	-6.088E+00		9.381E+00	1.529E+01	1.188E+00	-0.398
PB-211	-1.887E-01		9.429E-01	1.521E+00	9.477E-01	-0.124
BI-212	6.645E-01	+	5.843E-01	6.735E-01	5.148E-02	0.987
BI-214	1.002E+00	+	1.673E-01	2.757E-01	2.026E-02	3.634
PO-215	-6.717E-01		6.506E-01	1.001E+00	1.675E-01	-0.671
RN-219	1.746E-01		4.046E-01	6.867E-01	9.298E-02	0.254
RN-220	1.117E+01		2.621E+01	4.390E+01	2.405E+00	0.254
RA-223	-6.717E-01		6.506E-01	1.001E+00	1.675E-01	-0.671
RA-226	1.002E+00	+	1.673E-01	2.757E-01	2.026E-02	3.634
AC-227	3.426E-01		3.662E-01	6.452E-01	9.258E-02	0.531
TH-227	3.426E-01		3.677E-01	6.452E-01	1.111E-01	0.531
TH-229	-5.977E-01		4.944E-01	7.360E-01	4.776E-02	-0.812
TH-230	1.002E+00	+	1.673E-01	2.757E-01	2.026E-02	3.634
PA-231	-9.027E-01		1.430E+00	2.309E+00	3.268E-01	-0.391
TH-231	-6.717E-01		6.506E-01	1.001E+00	1.675E-01	-0.671
U-231	-5.721E-01		9.355E-01	1.339E+00	1.354E-01	-0.427
PA-233	1.563E-02		6.272E-02	1.067E-01	7.275E-03	0.146
PA-234	-1.120E-03		3.381E-01	5.538E-01	1.023E-01	-0.002
PA-234M	9.086E+00		7.155E+00	1.300E+01	1.356E+00	0.699
TH-234	5.417E-01		1.734E+00	2.941E+00	5.819E-01	0.184
U-234	1.002E+00	+	1.673E-01	2.757E-01	2.026E-02	3.634
U-235	3.717E-02		2.039E-01	3.351E-01	5.555E-02	0.111
NP-236	8.572E-02		7.546E-02	1.290E-01	8.237E-03	0.664
U-238	5.417E-01		1.734E+00	2.941E+00	5.819E-01	0.184
NP-239	-2.203E-01		1.833E-01	2.828E-01	2.081E-02	-0.779
AM-241	1.091E-01		2.091E-01	3.619E-01	4.569E-02	0.301

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.053E-02		9.502E-02	1.566E-01	1.380E-02	-0.067
CM-247	-4.710E-03		3.607E-02	5.893E-02	3.326E-03	-0.080
CF-249	-1.547E-02		4.009E-02	6.372E-02	3.620E-03	-0.243
CF-251	-3.712E-02		1.232E-01	1.954E-01	1.250E-02	-0.190

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871424          *
* Acquisition date  :  7-JUL-2009 08:27:26 Detector SN#    :                *
* Detector ID       : GAM04                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.19      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871424          Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.1946E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  5-MAY-2009 14:25:41 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.740E+01	3.303E+00	2.082E-01	1.685E+00
CD-109	2.671E+00	1.122E+00	6.336E-01	5.723E-01
SN-126	2.630E-01	1.105E-01	6.287E-02	5.636E-02
CS-135	5.674E-01	2.808E-01	1.243E-01	1.433E-01
TL-208	4.443E-01	9.056E-02	3.164E-02	4.621E-02
BI-211	3.041E+00	4.984E-01	1.562E-01	2.543E-01
PB-212	1.458E+00	1.561E-01	4.731E-02	7.963E-02
PO-212	1.458E+00	1.561E-01	4.731E-02	7.963E-02
PB-214	1.058E+00	1.816E-01	5.443E-02	9.267E-02
PO-214	1.058E+00	1.816E-01	5.443E-02	9.267E-02
PO-216	1.458E+00	1.561E-01	4.731E-02	7.963E-02
PO-218	1.058E+00	1.816E-01	5.443E-02	9.267E-02
RA-224	4.179E+00	1.193E+00	5.385E-01	6.087E-01
AC-228	1.344E+00	3.419E-01	1.144E-01	1.744E-01
RA-228	1.344E+00	3.419E-01	1.144E-01	1.744E-01
TH-228	1.458E+00	1.561E-01	4.731E-02	7.963E-02
TH-232	1.344E+00	3.419E-01	1.144E-01	1.744E-01
NP-237	7.723E-01	3.600E-01	2.088E-01	1.837E-01
AM-243	3.909E-01	1.059E-01	5.041E-02	5.401E-02
ANH-511	1.455E-01	7.205E-02	2.419E-02	3.676E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-8.768E-02	3.281E-01	2.703E-01	1.674E-01	NOT IDENT.
NA-22	3.539E-04	5.184E-02	4.427E-02	2.645E-02	NOT IDENT.
NA-24	4.069E+04	1.810E+05	0.000E+00	9.236E+04	SHORT HLIF
AL-26	-1.486E-02	2.531E-02	1.729E-02	1.291E-02	NOT IDENT.
TI-44	3.294E-01	6.563E-02	4.055E-02	3.348E-02	FAIL ABUN
SC-46	-2.648E-03	4.201E-02	3.522E-02	2.143E-02	FAIL ABUN
V-48	-1.340E-02	7.183E-02	5.886E-02	3.665E-02	NOT IDENT.

CR-51	1.050E-01	3.204E-01	2.837E-01	1.635E-01	NOT IDENT.
MN-52	-9.802E-02	1.792E-01	1.365E-01	9.141E-02	NOT IDENT.
MN-54	2.022E-02	3.927E-02	3.473E-02	2.003E-02	NOT IDENT.
CO-56	2.258E-02	4.055E-02	3.606E-02	2.069E-02	NOT IDENT.
CO-57	-1.840E-02	2.496E-02	2.073E-02	1.273E-02	NOT IDENT.
CO-58	2.005E-02	4.091E-02	3.625E-02	2.087E-02	NOT IDENT.
FE-59	-7.812E-02	1.025E-01	7.794E-02	5.231E-02	NOT IDENT.
CO-60	5.877E-02	3.967E-02	3.931E-02	2.024E-02	NOT IDENT.
ZN-65	1.559E-01	9.645E-02	8.498E-02	4.921E-02	NOT IDENT.
GE-68	7.004E-02	1.410E+00	1.174E+00	7.192E-01	NOT IDENT.
AS-73	1.389E+00	1.450E+00	1.350E+00	7.399E-01	NOT IDENT.
AS-74	1.034E-01	9.855E-02	8.782E-02	5.028E-02	NOT IDENT.
SE-75	2.858E-02	4.449E-02	3.619E-02	2.270E-02	NOT IDENT.
BR-77	-3.109E+00	6.454E+00	5.137E+00	3.293E+00	FAIL ABUN
SR-82	-1.988E-01	3.879E-01	3.163E-01	1.979E-01	NOT IDENT.
RB-83	-2.004E-02	6.023E-02	4.866E-02	3.073E-02	NOT IDENT.
RB-84	-1.877E-02	6.842E-02	5.610E-02	3.491E-02	NOT IDENT.
KR-85	9.406E+00	7.804E+00	6.411E+00	3.981E+00	NOT IDENT.
SR-85	4.759E-02	3.948E-02	3.244E-02	2.014E-02	NOT IDENT.
RB-86	-2.122E-01	8.575E-01	6.925E-01	4.375E-01	NOT IDENT.
Y-88	-6.665E-03	2.423E-02	1.818E-02	1.236E-02	NOT IDENT.
ZR-88	-1.405E-02	2.999E-02	2.478E-02	1.530E-02	NOT IDENT.
Y-91	7.853E+00	2.232E+01	1.887E+01	1.139E+01	NOT IDENT.
NB-94	-4.604E-03	3.400E-02	2.895E-02	1.735E-02	NOT IDENT.
NB-95	1.883E-02	4.156E-02	3.681E-02	2.121E-02	NOT IDENT.
NB-95M	1.141E-01	1.300E-01	1.009E-01	6.631E-02	NOT IDENT.
ZR-95	-6.217E-04	7.201E-02	6.155E-02	3.674E-02	NOT IDENT.
NB-97	-1.564E+03	2.918E+04	0.000E+00	1.489E+04	SHORT HLIF
ZR-97	1.043E+06	5.742E+05	0.000E+00	2.930E+05	SHORT HLIF
MO-99	-9.020E+00	8.464E+00	6.467E+00	4.319E+00	NOT IDENT.
TC-99M	6.417E+14	1.133E+15	0.000E+00	5.779E+14	SHORT HLIF
RH-101	-1.684E-02	3.320E-02	2.682E-02	1.694E-02	NOT IDENT.
RH-102	1.428E-02	2.950E-02	2.573E-02	1.505E-02	NOT IDENT.
RU-103	1.027E-02	3.649E-02	3.133E-02	1.862E-02	FAIL ABUN
RH-106	-1.365E-01	3.404E-01	2.695E-01	1.737E-01	NOT IDENT.
RU-106	-1.365E-01	3.401E-01	2.695E-01	1.735E-01	NOT IDENT.
AG-108M	-1.465E-02	3.256E-02	2.666E-02	1.661E-02	NOT IDENT.
AG-110M	3.981E-04	3.640E-02	3.153E-02	1.857E-02	NOT IDENT.
IN-111	9.929E-02	8.193E-01	6.041E-01	4.180E-01	NOT IDENT.
IN-113M	-3.336E-03	4.269E-02	3.628E-02	2.178E-02	NOT IDENT.
SN-113	-3.336E-03	4.269E-02	3.628E-02	2.178E-02	NOT IDENT.
IN-114M	2.476E-01	1.842E-01	1.497E-01	9.397E-02	NOT IDENT.
CD-115	3.338E+00	7.166E+00	6.214E+00	3.656E+00	NOT IDENT.
SN-117M	-2.062E-02	4.971E-02	4.124E-02	2.536E-02	NOT IDENT.
SB-122	-1.204E+00	1.452E+00	1.102E+00	7.409E-01	NOT IDENT.
I-123	-4.323E+05	1.112E+06	0.000E+00	5.675E+05	SHORT HLIF
TE-123M	-1.052E-02	2.708E-02	2.249E-02	1.382E-02	NOT IDENT.
I-124	-2.930E-01	6.585E-01	4.485E-01	3.360E-01	NOT IDENT.
SB-124	-3.463E-02	7.190E-02	5.324E-02	3.668E-02	FAIL ABUN
SB-125	-2.565E-02	9.121E-02	7.578E-02	4.653E-02	FAIL ABUN
TE-125M	1.877E+00	8.957E+00	7.594E+00	4.570E+00	NOT IDENT.
I-126	2.280E-02	1.698E-01	1.483E-01	8.662E-02	NOT IDENT.
SB-126	2.155E-02	1.545E-01	1.174E-01	7.883E-02	NOT IDENT.
SB-127	-6.028E-01	9.949E-01	8.096E-01	5.076E-01	NOT IDENT.
XE-127	-1.486E-02	4.459E-02	3.648E-02	2.275E-02	NOT IDENT.
I-131	-4.317E-03	1.003E-01	8.588E-02	5.115E-02	NOT IDENT.
TE-132	2.277E-01	5.127E-01	4.338E-01	2.616E-01	NOT IDENT.
BA-133	-1.057E-02	4.508E-02	3.334E-02	2.300E-02	FAIL ABUN
I-133	-2.424E+02	2.364E+03	0.000E+00	1.206E+03	SHORT HLIF
CS-134	5.289E-02	4.603E-02	4.290E-02	2.348E-02	NOT IDENT.
I-135	1.501E+14	2.622E+14	0.000E+00	1.338E+14	SHORT HLIF
CS-136	-1.198E-02	1.151E-01	9.465E-02	5.875E-02	FAIL ABUN
BA-137M	-1.774E-02	3.864E-02	3.323E-02	1.971E-02	NOT IDENT.
CS-137	-1.876E-02	4.084E-02	3.513E-02	2.084E-02	NOT IDENT.
CE-139	-5.650E-03	2.610E-02	2.178E-02	1.331E-02	NOT IDENT.
BA-140	-1.283E-01	2.430E-01	1.899E-01	1.240E-01	NOT IDENT.
LA-140	-2.800E-02	8.394E-02	5.439E-02	4.283E-02	NOT IDENT.
CE-141	4.700E-02	5.701E-02	5.037E-02	2.908E-02	NOT IDENT.
CE-143	3.200E+02	1.108E+02	0.000E+00	5.654E+01	SHORT HLIF
CE-144	-1.493E-01	1.969E-01	1.616E-01	1.004E-01	NOT IDENT.
PM-144	1.980E-02	3.454E-02	3.106E-02	1.762E-02	NOT IDENT.
PR-144	1.341E+00	2.339E+00	2.103E+00	1.193E+00	NOT IDENT.
PM-146	2.899E-02	4.428E-02	3.912E-02	2.259E-02	NOT IDENT.
ND-147	9.398E-02	5.574E-01	4.522E-01	2.844E-01	FAIL ABUN
PM-149	3.726E+01	5.629E+01	5.085E+01	2.872E+01	NOT IDENT.
EU-152	-5.044E-02	9.494E-02	7.612E-02	4.844E-02	FAIL ABUN
GD-153	4.342E-02	7.903E-02	6.751E-02	4.032E-02	NOT IDENT.
EU-154	4.847E-02	1.418E-01	1.248E-01	7.236E-02	NOT IDENT.

EU-155	6.015E-02	1.048E-01	9.318E-02	5.346E-02	FAIL ABUN
TB-160	-2.923E-04	1.375E-01	1.161E-01	7.017E-02	FAIL ABUN
HO-166M	-5.120E-02	6.317E-02	5.066E-02	3.223E-02	FAIL ABUN
TM-171	-1.839E+01	3.309E+01	2.845E+01	1.688E+01	NOT IDENT.
LU-176	-1.368E-02	2.441E-02	1.885E-02	1.245E-02	FAIL ABUN
LU-177	1.694E+00	1.324E+00	8.593E-01	6.753E-01	FAIL ABUN
LU-177M	-6.420E-03	1.708E-01	1.449E-01	8.714E-02	FAIL ABUN
HF-181	5.423E-03	4.312E-02	3.658E-02	2.200E-02	NOT IDENT.
W-181	-1.752E-01	4.535E-01	3.941E-01	2.314E-01	NOT IDENT.
TA-182	-1.710E-01	2.228E-01	1.787E-01	1.137E-01	NOT IDENT.
RE-183	2.951E-02	9.848E-02	8.458E-02	5.024E-02	FAIL ABUN
RE-184	-1.190E-01	2.190E-01	1.876E-01	1.117E-01	NOT IDENT.
OS-185	4.902E-03	4.325E-02	3.781E-02	2.207E-02	NOT IDENT.
RE-188	2.068E-01	1.573E-01	1.415E-01	8.026E-02	NOT IDENT.
W-188	1.071E+00	7.401E+00	5.767E+00	3.776E+00	NOT IDENT.
IR-192	-2.132E-02	3.058E-02	2.530E-02	1.560E-02	FAIL ABUN
AU-195	1.288E-01	2.184E-01	1.949E-01	1.114E-01	FAIL ABUN
TL-200	-1.387E+01	1.911E+02	0.000E+00	9.750E+01	SHORT HLIF
TL-201	3.478E+00	4.568E+00	4.011E+00	2.330E+00	NOT IDENT.
TL-202	1.999E-02	6.300E-02	5.460E-02	3.214E-02	NOT IDENT.
HG-203	4.779E-02	4.160E-02	3.479E-02	2.123E-02	NOT IDENT.
BI-207	-8.746E-03	5.912E-02	4.830E-02	3.016E-02	FAIL ABUN
TL-207	-6.717E-01	6.376E-01	5.082E-01	3.253E-01	FAIL ABUN
PO-209	1.297E+00	7.109E+00	6.106E+00	3.627E+00	NOT IDENT.
BI-210	-6.088E+00	9.196E+00	7.935E+00	4.692E+00	NOT IDENT.
PB-210	-6.088E+00	9.196E+00	7.935E+00	4.692E+00	NOT IDENT.
PO-210	-6.088E+00	9.193E+00	7.935E+00	4.690E+00	NOT IDENT.
PB-211	-1.887E-01	9.240E-01	7.702E-01	4.714E-01	NOT IDENT.
BI-212	6.645E-01	5.726E-01	3.388E-01	2.921E-01	FAIL ABUN
BI-214	1.002E+00	1.640E-01	1.390E-01	8.367E-02	FAIL ABUN
PO-215	-6.717E-01	6.376E-01	5.082E-01	3.253E-01	FAIL ABUN
RN-219	1.746E-01	3.965E-01	3.479E-01	2.023E-01	NOT IDENT.
RN-220	1.117E+01	2.568E+01	2.216E+01	1.310E+01	NOT IDENT.
RA-223	-6.717E-01	6.376E-01	5.082E-01	3.253E-01	FAIL ABUN
RA-226	1.002E+00	1.640E-01	1.390E-01	8.367E-02	FAIL ABUN
AC-227	3.426E-01	3.589E-01	3.285E-01	1.831E-01	FAIL ABUN
TH-227	3.426E-01	3.603E-01	3.285E-01	1.838E-01	FAIL ABUN
TH-229	-5.977E-01	4.845E-01	3.759E-01	2.472E-01	FAIL ABUN
TH-230	1.002E+00	1.640E-01	1.390E-01	8.367E-02	FAIL ABUN
PA-231	-9.027E-01	1.401E+00	1.175E+00	7.148E-01	FAIL ABUN
TH-231	-6.717E-01	6.376E-01	5.082E-01	3.253E-01	FAIL ABUN
U-231	-5.721E-01	9.168E-01	6.892E-01	4.678E-01	FAIL ABUN
PA-233	1.563E-02	6.146E-02	5.420E-02	3.136E-02	FAIL ABUN
PA-234	-1.120E-03	3.313E-01	2.778E-01	1.690E-01	FAIL ABUN
PA-234M	9.086E+00	7.012E+00	6.516E+00	3.578E+00	NOT IDENT.
TH-234	5.417E-01	1.700E+00	1.521E+00	8.671E-01	FAIL ABUN
U-234	1.002E+00	1.640E-01	1.390E-01	8.367E-02	FAIL ABUN
U-235	3.717E-02	1.998E-01	1.718E-01	1.020E-01	FAIL ABUN
NP-236	8.572E-02	7.395E-02	6.604E-02	3.773E-02	NOT IDENT.
U-238	5.417E-01	1.700E+00	1.521E+00	8.671E-01	FAIL ABUN
NP-239	-2.203E-01	1.796E-01	1.453E-01	9.166E-02	FAIL ABUN
AM-241	1.091E-01	2.049E-01	1.873E-01	1.045E-01	NOT IDENT.
CM-243	-1.053E-02	9.312E-02	8.053E-02	4.751E-02	FAIL ABUN
CM-247	-4.710E-03	3.534E-02	2.985E-02	1.803E-02	FAIL ABUN
CF-249	-1.547E-02	3.929E-02	3.229E-02	2.005E-02	NOT IDENT.
CF-251	-3.712E-02	1.207E-01	9.990E-02	6.159E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	191.1772
46.50	191.1772
46.50	191.1772
48.70	167.5112
49.72	161.9751
51.35	191.2910
52.39	201.3964
52.97	195.6333
53.15	175.7226
53.44	163.6738
54.07	163.9559
56.28	187.7398
56.28	187.7414
57.37	0.0000
57.53	194.5210
57.53	194.5221
57.60	196.3177
57.98	203.5616
57.98	203.5616
59.32	174.2016
59.32	174.2016
59.40	174.2372
59.54	175.1841
59.72	176.1498
60.01	192.2248
61.10	227.3978
61.14	227.4206
61.30	227.5124
63.00	229.3674
63.29	225.9587
63.29	225.9587
63.58	212.7132
64.28	211.2858
65.12	246.7028
65.20	246.7504
65.20	246.7504
66.05	249.9509
66.72	235.9397
66.83	236.0023
66.91	235.1467
67.20	233.5042
67.20	233.5042
67.75	237.4181
67.85	237.4742
68.90	243.4871
68.90	243.4871
69.30	241.9008
69.67	237.2134
70.82	234.5644
70.82	234.5644
70.83	234.5697
72.80	260.2744
72.87	260.3150
72.87	260.3150
74.67	254.9366
74.81	255.0157
74.81	255.0157
74.81	255.0157
74.81	255.0157
74.81	255.0157
74.81	255.0157
74.97	255.1048
75.28	255.2787
75.70	255.5135
77.11	256.2954
77.11	256.2954
77.11	256.2954

77.11	256.2954
77.11	256.2954
77.11	256.2954
78.38	234.3452
79.62	226.6209
79.80	226.7067
79.80	226.7067
80.11	224.0712
80.18	224.1037
80.30	224.1596
80.30	224.1596
80.57	232.6459
81.00	250.9813
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81.07	251.0170
81.07	251.0170
81.07	251.0170
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83.78	213.1574
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83.78	213.1574
83.78	213.1574
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84.40	258.3583
84.90	255.8098
85.43	264.5242
86.29	298.8092
86.50	298.9337
86.54	298.9580
86.59	298.9871
86.72	303.2968
86.79	303.3378
86.94	303.4297
87.30	303.6478
87.30	303.6478
87.30	303.6478
87.30	303.6478
87.30	303.6478
87.30	303.6478
87.57	243.0482
87.88	243.1964
88.03	243.2686
88.36	243.4274
88.47	243.4799
89.95	332.2046
91.11	219.1215
92.29	219.6185
92.38	219.6561
92.38	219.6561
93.35	220.0614
94.00	231.7787
94.67	230.6354
94.67	230.6379
94.90	240.7694
94.90	240.7694
94.90	240.7694
94.90	240.7694
95.87	245.5137
95.87	245.5137
96.73	250.2206
97.43	218.8653
98.44	208.6923
98.44	208.6923
98.88	221.3724
99.55	219.7153
99.55	219.7153
99.86	221.7667
100.00	221.8228
100.10	221.8649
103.18	237.6378
103.76	229.1436
105.00	198.5049
105.31	221.9790
108.00	245.5117
109.28	217.6212
111.00	220.2231
111.00	220.2231

111.76	226.4098
112.95	206.1479
115.19	206.9122
116.30	223.1575
117.00	241.2845
117.00	241.2845
117.66	262.4169
121.11	223.8906
121.62	237.0759
121.78	250.1424
122.06	250.2531
122.32	250.3560
122.32	250.3560
122.32	250.3560
122.32	250.3560
123.07	249.6484
127.23	239.1547
129.76	230.9618
131.20	264.9640
133.02	244.3066
133.54	245.5158
135.34	195.0957
136.00	210.6207
136.25	215.8122
136.48	217.9304
140.51	210.9704
140.51	0.0000
142.18	250.6729
142.65	243.6127
143.76	229.5201
144.24	230.7106
144.24	230.7106
144.24	230.7106
144.24	230.7106
145.22	199.9481
145.44	204.1542
147.16	239.9623
152.43	233.3261
152.70	245.9726
153.22	228.3385
154.21	184.5902
154.21	184.5902
154.21	184.5902
154.21	184.5902
155.03	183.7443
156.02	206.0648
158.56	227.8542
159.00	0.0000
159.00	223.7641
160.31	178.6840
161.27	183.1420
162.32	187.6304
162.64	189.8288
163.35	184.6962
163.89	212.4410
165.85	183.1577
167.43	158.9840
171.28	183.3400
171.86	188.8369
172.10	188.8924
176.55	205.0351
176.60	205.0486
181.06	201.8141
184.41	200.9842
185.71	206.2016
186.00	206.2708
190.27	159.5861
192.34	202.2944
193.63	213.6025
197.04	206.6903
198.01	202.4907
198.60	210.3734
200.40	170.8563
201.83	207.7974
202.84	203.5797
205.31	185.7255
208.36	179.6270
208.81	178.0339

209.75	188.3027
209.75	188.3027
210.97	208.7505
215.65	195.1266
216.55	206.6010
218.09	204.6745
222.10	190.7654
223.80	184.2737
226.40	181.3432
227.00	191.7241
227.08	184.8917
227.20	184.9147
228.16	159.9581
228.18	159.9609
228.18	159.9609
231.56	0.0000
235.69	157.1366
236.00	183.0933
236.00	183.0933
238.60	187.0258
238.63	187.0307
238.63	187.0307
238.63	187.0307
239.00	187.0983
240.98	187.4592
241.98	187.6421
241.98	187.6421
241.98	187.6421
244.69	128.9061
245.39	139.4507
247.94	170.0794
248.90	155.0760
249.79	131.2843
252.40	156.1737
252.85	162.3845
252.85	162.3845
254.15	0.0000
256.20	131.1940
256.20	131.1940
260.50	144.0924
260.90	144.1447
262.80	138.1948
264.65	122.0986
268.24	140.6561
268.79	140.7260
269.46	140.8104
269.46	140.8104
269.46	140.8104
269.46	140.8104
271.23	145.6737
273.65	118.0781
276.40	143.4717
277.35	160.6428
277.60	140.7506
277.60	140.7506
278.00	123.5578
278.60	120.7479
279.20	119.3733
279.53	110.7758
280.46	112.3059
281.68	148.2514
283.67	135.3561
284.30	120.9856
285.00	113.8299
285.90	113.0142
286.10	121.1717
286.10	121.1717
287.40	128.5488
288.45	0.0000
290.67	122.0071
290.80	122.0194
291.72	126.4750
293.26	0.0000
293.70	113.7638
295.21	113.9069
295.21	113.9069
295.21	113.9069
295.96	113.9793

296.50	114.0289
297.23	114.0995
298.57	114.2254
299.80	114.3417
299.80	114.3417
300.09	114.3703
300.09	114.3703
300.09	114.3703
300.10	114.3703
300.12	114.3723
301.29	114.4829
302.84	93.9031
303.76	99.8484
303.91	108.6712
304.40	105.7764
304.40	105.7764
304.84	105.8150
306.84	121.4438
308.46	116.9967
311.98	117.3281
316.51	114.0456
318.01	102.1129
319.02	93.8322
319.41	94.7908
320.08	97.6300
323.87	137.0880
323.87	137.0880
323.87	137.0880
323.87	137.0880
325.23	148.4366
328.77	144.1635
333.44	142.8015
334.20	160.9336
334.20	160.9336
334.30	160.9441
338.28	120.6953
338.28	120.6953
338.28	120.6953
338.28	120.6953
338.32	120.6992
338.32	120.6992
338.32	120.6992
340.50	102.7637
340.57	102.7687
344.27	115.8259
345.85	91.0356
350.59	0.0000
351.07	98.0509
351.92	98.1122
351.92	98.1122
351.92	98.1122
355.39	0.0000
356.01	100.8885
364.48	101.8901
366.43	97.2180
367.43	100.1771
367.94	0.0000
369.80	93.5913
374.96	101.6771
383.85	98.4078
387.95	98.6837
388.63	92.8633
391.69	97.9538
391.69	97.9538
392.90	106.8561
398.62	100.3782
400.65	93.6156
401.10	81.8146
401.81	88.7572
402.60	95.7094
404.84	102.7686
410.95	99.2111
411.60	111.1643
413.65	95.4097
414.70	94.4810
415.30	87.5529
415.76	82.6023
417.63	0.0000

418.52	103.6858
423.70	109.0316
427.08	93.2256
427.89	94.2768
432.53	77.4523
433.93	94.6340
439.47	80.8167
439.56	80.8215
439.89	104.0797
443.98	73.9501
444.90	66.8973
445.03	66.9023
445.03	66.9023
445.03	66.9023
445.03	66.9023
453.90	80.5128
463.38	68.6705
468.07	87.1563
473.00	93.7993
475.06	77.3998
475.35	76.3802
476.78	88.8397
477.59	90.9487
477.96	92.0026
482.03	83.9292
484.57	87.1646
487.03	75.8571
490.36	0.0000
492.35	72.9597
497.08	61.6585
507.63	0.0000
510.53	0.0000
510.84	80.0339
511.00	80.0414
511.85	80.0786
511.85	80.0786
513.99	69.2015
513.99	69.2015
520.41	60.3398
520.65	63.5248
527.90	63.7720
528.96	0.0000
529.64	63.8324
529.87	0.0000
531.02	68.1367
537.32	75.8427
543.00	64.2847
546.56	0.0000
549.76	62.3613
552.65	59.2247
555.20	70.0841
563.23	69.2910
563.90	72.5636
568.70	48.8548
569.32	54.3015
569.50	61.9089
569.67	65.1727
573.80	85.9892
574.00	80.5558
574.64	66.4246
578.91	82.0618
579.30	0.0000
583.14	78.7346
585.48	92.8406
591.81	105.4307
592.07	106.5407
593.00	91.2068
595.88	72.6266
600.56	77.2034
602.52	0.0000
602.71	86.5587
602.71	86.5587
603.60	98.9680
604.41	102.5422
604.70	88.4106
609.31	83.2896
609.31	83.2896
609.31	83.2896

609.31	83.2896
610.33	62.0549
612.46	70.9922
614.37	74.6095
618.01	67.8431
621.84	75.7633
621.84	75.7633
631.29	57.0746
633.02	73.9217
633.10	73.9237
634.78	78.4659
635.90	86.3571
636.97	59.4697
645.85	65.7962
646.12	67.6080
656.30	64.2987
657.75	74.3085
657.90	0.0000
661.65	68.9919
661.65	68.9919
664.57	0.0000
666.33	68.2269
666.33	68.2269
675.00	60.2717
677.61	54.8555
685.20	59.6235
692.80	69.9437
695.00	66.3258
696.49	61.7599
696.49	61.7599
697.00	70.0718
697.49	74.6976
698.33	73.8008
698.50	76.5744
699.00	71.9767
702.63	71.1648
706.10	61.0887
706.58	0.0000
706.67	58.3258
709.31	65.8067
711.68	77.9338
713.82	52.0023
717.42	63.2420
720.50	62.0817
721.93	0.0000
722.20	63.6788
722.78	66.8026
722.78	66.8026
722.89	66.8043
722.95	66.8061
723.30	71.4782
724.18	63.7322
727.18	64.4348
733.00	68.6462
735.90	52.4836
739.58	68.5195
742.81	52.6326
744.21	45.1395
747.13	65.9070
751.79	66.9750
752.31	60.3844
753.82	53.8118
755.35	68.0150
756.15	61.4231
756.87	59.5501
763.93	80.5736
765.79	59.7639
766.41	61.6754
766.84	70.2277
768.36	73.1180
768.36	73.1180
768.36	73.1180
768.36	73.1180
776.49	68.5916
778.00	55.2869
778.57	53.3928
778.89	52.4460
783.80	48.7252

785.46	61.1844
792.07	63.2591
795.84	45.1147
796.30	45.1228
801.93	50.9931
805.60	60.6998
810.29	54.0518
810.76	52.1306
815.85	60.9374
817.79	41.6227
818.51	42.6024
819.60	45.5255
826.30	51.4667
828.27	0.0000
831.60	78.8128
831.96	67.1453
834.83	56.5019
836.80	0.0000
846.75	47.9449
848.13	50.9069
856.28	0.0000
856.80	57.2880
860.37	50.8064
867.32	51.2637
867.82	50.2865
871.10	44.4232
873.19	40.5045
874.81	41.5160
875.33	0.0000
876.40	41.5396
879.36	45.5440
880.27	41.5970
880.51	41.6011
881.50	48.5514
883.24	50.5642
884.67	39.6787
889.25	53.6533
896.60	39.8457
898.02	45.8461
899.00	53.8378
903.28	39.9395
911.07	51.0610
911.07	51.0610
911.07	51.0610
919.63	48.1992
920.93	43.1974
925.00	40.2402
925.24	40.2432
926.50	43.2803
934.06	37.3369
934.06	37.3369
934.06	37.3369
934.06	37.3369
935.52	50.4810
937.48	61.6270
944.10	55.6902
946.00	52.6855
949.00	53.7531
962.29	52.6329
964.01	53.0029
966.15	53.0397
968.20	47.6328
969.11	40.8398
969.11	40.8398
969.11	40.8398
977.42	35.8323
980.50	42.0180
983.50	49.2398
989.30	42.1381
996.32	60.7746
1001.03	37.1391
1001.68	33.0195
1004.76	65.0718
1021.30	0.0000
1024.50	0.0000
1034.80	57.3499
1037.82	43.8354
1038.57	43.8457

1038.76	0.0000
1045.16	47.0742
1046.59	47.0940
1048.07	53.3981
1050.47	61.8204
1050.47	61.8204
1063.62	52.6025
1076.63	53.8663
1077.35	50.7094
1085.78	44.4835
1099.22	60.6126
1112.02	55.1481
1112.84	55.1632
1115.52	26.7126
1120.29	39.5889
1120.29	39.5889
1120.29	39.5889
1120.29	39.5889
1120.51	39.5925
1121.28	39.6016
1124.00	0.0000
1129.67	43.9889
1131.51	0.0000
1147.95	0.0000
1167.94	67.2524
1173.22	57.5754
1175.09	66.3018
1177.93	58.7408
1189.05	56.7404
1204.90	61.3730
1205.75	0.0000
1213.00	75.7888
1221.42	75.2301
1230.97	91.9840
1235.34	79.1973
1236.41	0.0000
1238.11	72.8056
1238.11	72.8056
1238.11	72.8056
1238.11	72.8056
1238.25	72.8088
1246.25	68.3482
1260.41	0.0000
1271.85	50.2141
1274.45	46.5271
1274.54	52.1104
1291.56	42.9958
1298.22	0.0000
1312.09	28.1897
1325.50	39.6006
1325.50	39.6006
1332.49	17.0021
1333.61	23.6206
1360.21	23.7783
1362.66	0.0000
1365.15	27.6170
1368.21	20.0139
1368.53	0.0000
1376.25	18.1434
1377.67	16.2398
1377.67	16.2398
1377.67	16.2398
1377.67	16.2398
1384.27	18.1797
1394.10	23.9777
1395.20	29.7411
1407.95	17.3225
1434.06	19.3677
1436.60	17.4412
1457.56	0.0000
1460.81	10.7198
1489.15	11.7715
1509.49	12.8117
1596.49	15.5027
1620.62	9.0905
1678.03	0.0000
1691.02	13.3269
1691.02	13.3269

1706.46	0.0000
1750.46	0.0000
1764.49	10.7030
1764.49	10.7030
1764.49	10.7030
1764.49	10.7030
1770.23	12.5010
1771.40	10.4199
1791.20	0.0000
1808.65	9.4468
1836.01	6.3315

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871424

Total Uranium Activity	1.6286E+00	ug/g
Total Uranium Counting Unc.	5.0571E+00	ug/g
Total Uranium Tpu	2.5801E-06	ug/g
Total Uranium Mda	4.5262E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G1201871424      *
*   ANALYST       : MXR1                      DETECTOR   : GAM04            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:27:26.76    SAMPLE ALQT:  119.460 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.355E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.347E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.402E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.152E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:19:45.58

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871425.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:19:11.
Sample ID         : G1201871425          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.96  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	7	49.57	404	1153	1.91	100.31	96	35	1.12E-01	15.2	1.68E+01
2	7	51.67	300	1493	1.99	104.50	96	35	8.34E-02	26.2	
3	7	53.59*	396	1581	2.20	108.35	96	35	1.10E-01	21.2	
4	7	59.45	9289	767	1.29	120.07	96	35	2.58E+00	1.2	
5	1	74.80*	314	607	1.36	150.75	146	15	8.71E-02	15.3	2.46E+00
6	1	77.05*	488	547	1.13	155.25	146	15	1.36E-01	9.3	
7	0	88.02	3200	755	1.25	177.17	172	12	8.89E-01	2.5	
8	0	93.56*	210	508	1.63	188.27	184	12	5.84E-02	23.2	
9	0	122.14	488	315	1.24	245.40	241	9	1.35E-01	8.0	
10	0	136.04	102	345	1.28	273.18	268	10	2.83E-02	35.5	
11	0	186.14*	196	394	3.05	373.34	368	13	5.45E-02	22.2	
12	0	209.04	69	255	0.94	419.11	414	8	1.91E-02	42.1	
13	0	238.61*	622	360	1.18	478.23	474	10	1.73E-01	7.0	
14	0	295.22	203	231	1.25	591.38	585	12	5.64E-02	16.5	
15	0	338.26*	127	187	1.57	677.40	673	10	3.53E-02	22.2	
16	0	351.73*	245	325	1.41	704.32	699	14	6.81E-02	16.9	
17	0	510.31*	38	192	0.93	1021.28	1015	12	1.06E-02	78.9	
18	0	583.20*	190	119	1.91	1166.95	1159	14	5.29E-02	14.2	
19	0	609.29*	233	145	1.98	1219.08	1211	19	6.47E-02	14.0	
20	0	661.51	2234	141	1.73	1323.44	1317	15	6.20E-01	2.4	
21	0	860.66	32	77	1.43	1721.36	1716	10	8.95E-03	54.0	
22	0	910.94*	119	134	2.01	1821.81	1816	12	3.31E-02	21.6	
23	0	968.46	121	176	1.54	1936.73	1928	16	3.35E-02	26.6	
24	0	1172.88	1824	77	1.93	2345.08	2334	21	5.07E-01	2.6	
25	0	1332.23	1624	32	2.00	2663.35	2656	17	4.51E-01	2.6	
26	0	1764.43*	29	11	1.79	3526.42	3518	15	8.08E-03	32.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 09:19:48

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871425.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:19:11
Sample ID : G1201871425 Sample quantity : 151.73 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.96 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	4.065E-01	8.695E-02	6.862E-02	9.736E-03	5.924
	+	136.48		7.201E-01	5.200E-01	5.584E-01	7.480E-02	1.289
CO-60	+	1173.22		7.485E+00	5.873E-01	1.511E-01	8.764E-03	49.542
	+	1332.49	*	7.436E+00	5.797E-01	1.172E-01	6.779E-03	63.471
AS-73	+	53.44	*	2.561E+00	1.103E+00	8.428E-01	6.344E-02	3.039
CD-109	+	88.03	*	5.485E+01	4.980E+00	1.950E+00	1.485E-01	28.131
SN-126		64.28		-6.833E-01	5.176E-01	7.185E-01	1.071E-01	-0.951
	+	86.94		2.267E+01	9.400E+00	8.313E-01	3.422E-01	27.276
	+	87.57	*	5.454E+00	4.952E-01	1.936E-01	1.474E-02	28.170
BA-137M	+	661.65	*	6.096E+00	4.970E-01	1.320E-01	8.683E-03	46.170
CS-137	+	661.65	*	6.444E+00	5.265E-01	1.396E-01	9.209E-03	46.170
TM-171	+	51.35		6.572E+01	3.480E+01	2.847E+01	2.072E+00	2.308
	+	52.39		3.665E+01	1.941E+01	1.583E+01	1.171E+00	2.316
	+	59.40		2.707E+03	2.332E+02	3.815E+01	3.162E+00	70.966
		66.72	*	4.256E+00	3.067E+01	4.568E+01	3.670E+00	0.093
TL-208		277.35		2.611E-02	7.204E-01	1.217E+00	1.561E-01	0.021
	+	510.84		3.436E-01	5.435E-01	5.513E-01	5.792E-02	0.623
	+	583.14	*	4.954E-01	1.458E-01	1.221E-01	8.985E-03	4.057
	+	860.37		8.050E-01	8.734E-01	1.200E+00	1.218E-01	0.671
BI-211		72.87		4.420E+00	4.004E+00	6.120E+00	4.818E-01	0.722
	+	351.07	*	2.666E+00	9.233E-01	7.044E-01	5.582E-02	3.784
PB-212	+	74.81		1.805E+00	5.930E-01	6.793E-01	8.282E-02	2.658
	+	77.11		1.674E+00	3.375E-01	4.057E-01	3.158E-02	4.125
	+	87.30		2.523E+01	3.407E+00	8.947E-01	1.125E-01	28.193
	+	238.63	*	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
		300.09		2.067E+00	1.689E+00	2.642E+00	2.809E-01	0.782
PO-212	+	74.81		1.805E+00	5.930E-01	6.793E-01	8.282E-02	2.658
	+	77.11		1.674E+00	3.375E-01	4.057E-01	3.158E-02	4.125
	+	87.30		2.523E+01	3.407E+00	8.947E-01	1.125E-01	28.193
		115.19		-9.700E-01	5.664E+00	9.297E+00	1.183E+00	-0.104
	+	238.63	*	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
		300.09		2.067E+00	1.689E+00	2.642E+00	2.809E-01	0.782
PB-214	+	74.81		3.111E+00	1.006E+00	1.170E+00	1.261E-01	2.658
	+	77.11		2.869E+00	6.185E-01	6.955E-01	7.575E-02	4.125

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		4.321E+01	5.147E+00	1.533E+00	1.661E-01	28.193
		241.98		1.614E+00	8.273E-01	1.260E+00	1.420E-01	1.281
	+	295.21		1.290E+00	4.492E-01	4.449E-01	4.864E-02	2.899
	+	351.92	*	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
PO-214	+	74.81		3.111E+00	1.006E+00	1.170E+00	1.261E-01	2.658
	+	77.11		2.869E+00	6.185E-01	6.955E-01	7.575E-02	4.125
	+	87.30		4.321E+01	5.147E+00	1.533E+00	1.661E-01	28.193
		241.98		1.614E+00	8.273E-01	1.260E+00	1.420E-01	1.281
	+	295.21		1.290E+00	4.492E-01	4.449E-01	4.864E-02	2.899
	+	351.92	*	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
PO-216	+	74.81		1.805E+00	5.930E-01	6.793E-01	8.282E-02	2.658
	+	77.11		1.674E+00	3.375E-01	4.057E-01	3.158E-02	4.125
	+	87.30		2.523E+01	3.407E+00	8.947E-01	1.125E-01	28.193
	+	238.63	*	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
		300.09		2.067E+00	1.689E+00	2.642E+00	2.809E-01	0.782
PO-218	+	74.81		3.111E+00	1.006E+00	1.170E+00	1.261E-01	2.658
	+	77.11		2.869E+00	6.185E-01	6.955E-01	7.575E-02	4.125
	+	87.30		4.321E+01	5.147E+00	1.533E+00	1.661E-01	28.193
		241.98		1.614E+00	8.273E-01	1.260E+00	1.420E-01	1.281
	+	295.21		1.290E+00	4.492E-01	4.449E-01	4.864E-02	2.899
	+	351.92	*	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
AC-228	+	338.32		1.517E+00	9.177E-01	7.898E-01	3.246E-01	1.921
	+	911.07	*	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124
	+	969.11		2.515E+00	1.466E+00	1.012E+00	2.389E-01	2.486
RA-228	+	338.32		1.517E+00	9.177E-01	7.898E-01	3.246E-01	1.921
	+	911.07	*	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124
	+	969.11		2.515E+00	1.466E+00	1.012E+00	2.389E-01	2.486
TH-228		84.40		-1.741E+00	4.155E+00	6.002E+00	7.521E-01	-0.290
	+	238.60	*	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.163
		300.10		2.072E+00	2.077E+00	2.643E+00	1.568E+00	0.784
TH-232	+	338.32		1.517E+00	6.837E-01	7.898E-01	6.192E-02	1.921
	+	911.07	*	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124
	+	969.11		2.515E+00	1.466E+00	1.012E+00	2.389E-01	2.486
AM-241	+	59.54	*	1.595E+01	1.473E+00	2.247E-01	2.010E-02	70.973
AM-243	+	74.67	*	2.927E-01	9.217E-02	1.101E-01	8.623E-03	2.659
	+	86.72		6.006E+02	5.453E+01	2.201E+01	1.678E+00	27.294
		117.66		-7.067E-01	7.075E+00	1.020E+01	1.351E+00	-0.069
		142.18		1.558E+01	3.033E+01	4.909E+01	6.101E+00	0.317
ANH-511	+	511.00	*	7.421E-02	1.172E-01	1.137E-01	7.280E-03	0.652

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	9.321E-01	7.314E-01	1.275E+00	9.133E-02	0.731
NA-22		1274.54	*	-6.415E-02	7.381E-02	1.051E-01	6.119E-03	-0.611
NA-24		1368.53	*	2.476E-06	7.381E-02	Half-Life too short		
AL-26		1129.67		-8.450E-01	3.939E+00	6.305E+00	4.224E-01	-0.134
		1808.65	*	9.822E-03	5.256E-02	8.970E-02	5.147E-03	0.110

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40		1460.81	*	8.505E-01	6.696E-01	1.313E+00	8.167E-02	0.648
TI-44		67.85		4.457E-02	5.018E-02	8.033E-02	6.428E-03	0.555
	+	78.38	*	3.087E-01	6.226E-02	9.457E-02	7.338E-03	3.265
SC-46		889.25	*	-6.909E-02	1.106E-01	1.762E-01	1.770E-02	-0.392
		1120.51		1.504E-01	1.216E-01	2.144E-01	1.475E-02	0.702
V-48		944.10		-1.661E+00	2.061E+00	3.229E+00	3.123E-01	-0.514
		983.50	*	1.525E-01	1.497E-01	2.611E-01	2.391E-02	0.584
		1312.09		1.354E-02	8.713E-02	1.440E-01	8.346E-03	0.094
CR-51		320.08	*	-2.875E-01	6.133E-01	1.003E+00	8.873E-02	-0.287
MN-52		744.21		-1.305E-01	2.059E-01	3.291E-01	2.555E-02	-0.397
		848.13		-4.247E-02	6.747E+00	1.120E+01	1.050E+00	-0.004
		935.52		1.643E-01	3.086E-01	5.239E-01	5.121E-02	0.314
		1246.25		-1.728E+00	3.456E+00	5.137E+00	2.987E-01	-0.336
	+	1333.61		3.646E+02	2.843E+01	4.202E+01	2.432E+00	8.678
		1434.06	*	2.247E-02	1.355E-01	2.321E-01	1.359E-02	0.097
MN-54		834.83	*	-9.222E-03	1.004E-01	1.661E-01	1.522E-02	-0.056
CO-56		846.75	*	1.848E-03	9.716E-02	1.616E-01	1.512E-02	0.011
		977.42		-3.471E+00	8.011E+00	1.249E+01	1.154E+00	-0.278
		1037.82		-1.222E-01	7.765E-01	1.259E+00	1.110E-01	-0.097
		1175.09		3.039E+02	2.376E+01	3.607E+01	2.092E+00	8.426
		1238.25		1.537E-02	1.088E-01	1.795E-01	1.109E-02	0.086
		1360.21		3.844E-01	1.515E+00	2.624E+00	1.524E-01	0.147
		1771.40		-9.165E-01	5.013E-01	5.245E-01	3.029E-02	-1.747
CO-58		810.76	*	-1.732E-02	9.136E-02	1.503E-01	1.323E-02	-0.115
FE-59		142.65		1.368E+00	4.038E+00	6.682E+00	8.274E-01	0.205
		192.34		-1.199E+00	1.876E+00	2.546E+00	3.651E-01	-0.471
		1099.22	*	-4.212E-02	2.127E-01	3.424E-01	2.773E-02	-0.123
		1291.56		-1.039E-01	1.577E-01	2.264E-01	1.682E-02	-0.459
ZN-65		1115.52	*	-1.907E-01	2.408E-01	3.707E-01	2.590E-02	-0.514
GE-68		1077.35	*	-9.552E-01	3.495E+00	5.607E+00	4.306E-01	-0.170
AS-74		595.88	*	8.842E-02	1.445E-01	2.443E-01	1.607E-02	0.362
		634.78		-1.109E-01	5.994E-01	9.549E-01	6.294E-02	-0.116
SE-75		66.05		-1.269E+00	4.904E+00	7.195E+00	7.178E-01	-0.176
		96.73		-2.830E-01	1.137E+00	1.640E+00	2.290E-01	-0.173
	+	121.11		2.132E+00	4.809E-01	5.558E-01	8.735E-02	3.835
	+	136.00		1.320E-01	9.525E-02	1.165E-01	1.520E-02	1.133
		198.60		-3.601E+00	3.358E+00	5.141E+00	5.557E-01	-0.700
		264.65	*	-1.290E-02	8.649E-02	1.372E-01	1.310E-02	-0.094
		279.53		2.785E-02	2.001E-01	3.394E-01	3.250E-02	0.082
		303.91		-4.069E+00	4.124E+00	6.573E+00	7.622E-01	-0.619
		400.65		2.222E-01	5.507E-01	9.305E-01	8.515E-02	0.239
BR-77	+	87.88		1.236E+03	1.122E+02	1.081E+02	8.226E+00	11.436
		200.40		-7.287E+00	3.259E+01	5.223E+01	5.215E+00	-0.140
	+	239.00		2.392E+01	4.087E+00	5.555E+00	5.445E-01	4.307
		249.79		4.782E+00	1.320E+01	2.154E+01	2.088E+00	0.222
		281.68		2.202E+00	1.813E+01	3.072E+01	2.837E+00	0.072
		297.23		2.275E+01	1.352E+01	2.140E+01	1.911E+00	1.063
		303.76		-3.711E+01	3.779E+01	6.043E+01	5.307E+00	-0.614
		439.47		-6.264E-01	3.628E+01	5.979E+01	3.645E+00	-0.010

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		484.57		-1.647E+01	5.562E+01	8.967E+01	5.652E+00	-0.184
		520.65	*	-3.100E-01	2.552E+00	4.140E+00	2.662E-01	-0.075
		574.64		-3.157E+01	5.345E+01	7.794E+01	5.107E+00	-0.405
		578.91		-3.738E+00	2.154E+01	2.966E+01	1.946E+00	-0.126
		585.48		1.222E+02	5.073E+01	8.368E+01	5.496E+00	1.460
		755.35		1.035E+01	4.071E+01	6.921E+01	5.489E+00	0.150
		817.79		-4.302E-01	3.574E+01	5.947E+01	5.287E+00	-0.007
SR-82		698.33		-8.277E+01	6.635E+01	9.638E+01	6.837E+00	-0.859
		776.49	*	5.880E-02	7.062E-01	1.186E+00	9.788E-02	0.050
		1395.20		-9.330E-01	1.253E+01	2.066E+01	1.206E+00	-0.045
RB-83		520.41	*	7.316E-03	1.530E-01	2.508E-01	1.613E-02	0.029
		529.64		-7.842E-02	2.331E-01	3.725E-01	2.405E-02	-0.211
		552.65		-7.824E-02	4.289E-01	6.901E-01	4.494E-02	-0.113
RB-84		881.50	*	-4.565E-02	1.685E-01	2.743E-01	2.720E-02	-0.166
KR-85		513.99	*	2.245E+01	1.850E+01	2.861E+01	1.834E+00	0.785
SR-85		513.99	*	1.061E-01	8.738E-02	1.351E-01	8.663E-03	0.785
RB-86		1076.63	*	-6.211E-01	1.672E+00	2.662E+00	2.048E-01	-0.233
Y-88		898.02		-7.249E-02	1.225E-01	1.953E-01	1.997E-02	-0.371
		1836.01	*	4.324E-03	6.037E-02	1.003E-01	5.739E-03	0.043
ZR-88		392.90	*	2.093E-02	6.758E-02	1.138E-01	6.625E-03	0.184
Y-91		1204.90	*	5.657E+00	2.892E+01	4.795E+01	2.786E+00	0.118
NB-94		702.63	*	1.575E-03	7.800E-02	1.254E-01	8.972E-03	0.013
		871.10		-2.442E-03	9.791E-02	1.621E-01	1.580E-02	-0.015
NB-95		765.79	*	5.738E-02	9.313E-02	1.613E-01	1.304E-02	0.356
NB-95M		235.69	*	3.098E-01	2.542E-01	3.791E-01	4.147E-02	0.817
ZR-95		724.18		-3.142E-02	1.991E-01	3.306E-01	2.750E-02	-0.095
		756.15	*	1.477E-01	1.554E-01	2.746E-01	2.440E-02	0.538
NB-97		657.90	*	8.506E-04	1.554E-01	Half-Life too short		
		1024.50		1.969E-03	1.554E-01	Half-Life too short		
ZR-97		254.15		7.321E-04	1.554E-01	Half-Life too short		
		355.39		1.174E-03	1.554E-01	Half-Life too short		
		507.63	*	1.764E-03	1.554E-01	Half-Life too short		
		602.52		-2.366E-03	1.554E-01	Half-Life too short		
		1021.30		2.100E-04	1.554E-01	Half-Life too short		
		1147.95		-2.117E-03	1.554E-01	Half-Life too short		
		1362.66		-4.004E-03	1.554E-01	Half-Life too short		
		1750.46		3.001E-03	1.554E-01	Half-Life too short		
MO-99		140.51		1.779E+00	6.956E+00	1.013E+01	2.956E+00	0.176
		181.06		3.097E+00	4.710E+00	6.920E+00	1.312E+00	0.448
		366.43		5.090E+00	2.514E+01	4.227E+01	2.901E+00	0.120
		739.58	*	1.591E+00	3.787E+00	6.507E+00	9.552E-01	0.244
		778.00		-1.509E-01	1.111E+01	1.853E+01	1.534E+00	-0.008
TC-99M		140.51	*	8.236E+00	1.111E+01	Half-Life too short		
RH-101		127.23		1.489E-02	5.767E-02	8.902E-02	1.226E-02	0.167
		198.01	*	-4.003E-02	6.281E-02	9.851E-02	9.838E-03	-0.406
		325.23		2.658E-01	4.562E-01	7.829E-01	6.444E-02	0.340
RH-102		418.52		-3.293E-01	6.897E-01	1.113E+00	6.654E-02	-0.296
		475.06	*	-7.389E-02	7.592E-02	1.181E-01	7.399E-03	-0.626
		631.29		-1.029E-01	1.259E-01	1.908E-01	1.258E-02	-0.539

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		697.49		-8.309E-02	1.844E-01	2.864E-01	2.028E-02	-0.290
		766.84		2.204E-01	2.526E-01	4.433E-01	3.593E-02	0.497
		1046.59		1.865E-01	3.273E-01	5.562E-01	4.564E-02	0.335
		1112.84		-2.461E-01	6.078E-01	9.630E-01	6.767E-02	-0.256
RU-103		497.08	*	3.230E-02	8.352E-02	1.398E-01	1.804E-02	0.231
	+	610.33		1.080E+01	3.477E+00	3.731E+00	5.870E-01	2.894
RH-106		511.85		3.096E-01	4.569E-01	7.426E-01	4.755E-02	0.417
		621.84	*	-1.586E-01	7.168E-01	1.140E+00	1.385E-01	-0.139
		1050.47		-3.480E+00	6.569E+00	1.036E+01	8.437E-01	-0.336
RU-106		511.85		3.096E-01	4.569E-01	7.426E-01	4.755E-02	0.417
		621.84	*	-1.586E-01	7.166E-01	1.140E+00	7.518E-02	-0.139
		1050.47		-3.480E+00	6.569E+00	1.036E+01	8.437E-01	-0.336
AG-108M		433.93	*	-2.576E-03	8.313E-02	1.370E-01	8.964E-03	-0.019
		614.37		1.974E-02	9.732E-02	1.387E-01	9.744E-03	0.142
		722.95		-7.597E-02	9.955E-02	1.588E-01	1.245E-02	-0.478
AG-110M		657.75	*	4.596E-01	1.123E-01	1.982E-01	1.370E-02	2.319
		677.61		4.396E-02	7.075E-01	1.144E+00	8.124E-02	0.038
		706.67		-2.916E-01	4.971E-01	7.632E-01	5.721E-02	-0.382
		763.93		-4.249E-01	4.010E-01	6.238E-01	5.190E-02	-0.681
		884.67		4.769E-02	1.378E-01	2.332E-01	2.381E-02	0.205
		937.48		4.121E-01	3.457E-01	6.045E-01	6.062E-02	0.682
		1384.27		4.108E-02	2.277E-01	3.914E-01	2.419E-02	0.105
IN-111		171.28		-4.834E-02	2.635E-01	4.257E-01	4.233E-02	-0.114
		245.39	*	-4.238E-01	3.524E-01	5.082E-01	4.951E-02	-0.834
IN-113M		391.69	*	7.611E-02	9.864E-02	1.695E-01	1.051E-02	0.449
SN-113		391.69	*	7.611E-02	9.864E-02	1.695E-01	1.051E-02	0.449
IN-114M		190.27	*	2.003E-01	3.422E-01	5.016E-01	5.009E-02	0.399
CD-115		260.90		5.929E-01	2.278E+01	3.648E+01	3.488E+00	0.016
		492.35		9.970E-01	7.537E+00	1.245E+01	7.887E-01	0.080
		527.90	*	-2.707E-01	2.217E+00	3.593E+00	2.318E-01	-0.075
SN-117M		156.02		2.371E+00	2.601E+00	4.395E+00	4.846E-01	0.540
		158.56	*	-4.257E-02	6.447E-02	1.021E-01	1.097E-02	-0.417
SB-122		563.90	*	2.884E-02	6.371E-01	1.039E+00	6.792E-02	0.028
		692.80		3.575E+00	1.398E+01	2.287E+01	1.604E+00	0.156
I-123		159.00	*	-1.162E-04	1.398E+01	Half-Life too short		
		528.96		-1.468E-02	1.398E+01	Half-Life too short		
TE-123M		159.00	*	-1.062E-02	4.661E-02	7.538E-02	8.100E-03	-0.141
I-124		602.71	*	-5.812E-02	4.624E-01	6.385E-01	4.204E-02	-0.091
		722.78		-2.742E+00	2.887E+00	4.548E+00	3.387E-01	-0.603
		1325.50		-2.373E+00	2.183E+01	2.944E+01	1.705E+00	-0.081
		1376.25		1.094E+01	1.246E+01	2.335E+01	1.359E+00	0.469
		1509.49		2.013E+00	7.573E+00	1.307E+01	7.681E-01	0.154
		1691.02		5.743E-01	1.861E+00	3.247E+00	1.895E-01	0.177
SB-124		602.71		-1.124E-02	8.944E-02	1.235E-01	8.133E-03	-0.091
		645.85		7.086E-01	1.109E+00	1.865E+00	1.352E-01	0.380
		709.31		2.373E+00	5.769E+00	9.935E+00	7.204E-01	0.239
		713.82		-1.685E+00	3.547E+00	5.766E+00	6.425E-01	-0.292
		722.78		-7.687E-01	8.094E-01	1.275E+00	9.770E-02	-0.603
	+	968.20		2.367E+01	1.280E+01	1.380E+01	1.293E+00	1.715

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1045.16		-9.982E-01	6.564E+00	1.065E+01	8.762E-01	-0.094
		1325.50		-7.104E-01	6.536E+00	8.815E+00	5.104E-01	-0.081
		1368.21		-9.890E-02	2.356E+00	3.911E+00	4.647E-01	-0.025
		1436.60		2.786E+00	5.241E+00	9.477E+00	5.551E-01	0.294
		1691.02	*	3.798E-02	1.230E-01	2.147E-01	1.359E-02	0.177
SB-125		427.89	*	1.032E-01	2.279E-01	3.845E-01	2.411E-02	0.268
		463.38		6.765E-01	7.283E-01	1.247E+00	8.879E-02	0.542
		600.56		1.185E-01	4.201E-01	6.551E-01	4.844E-02	0.181
		635.90		-3.133E-02	6.247E-01	1.005E+00	7.519E-02	-0.031
TE-125M		109.28	*	-6.671E+00	1.278E+01	2.068E+01	2.655E+00	-0.323
I-126		388.63		-7.551E-02	3.116E-01	5.110E-01	3.041E-02	-0.148
		666.33	*	-3.988E-02	3.186E-01	4.364E-01	2.898E-02	-0.091
		753.82		-1.820E-01	2.248E+00	3.741E+00	2.958E-01	-0.049
SB-126		223.80		-3.534E+00	5.335E+00	8.322E+00	8.247E-01	-0.425
		278.60		1.827E+00	3.073E+00	5.304E+00	4.927E-01	0.345
	+	296.50		8.307E+00	2.846E+00	3.614E+00	3.232E-01	2.298
		414.70		1.714E-02	1.143E-01	1.905E-01	1.135E-02	0.090
		415.30		6.983E-02	9.415E+00	1.558E+01	9.288E-01	0.004
		555.20		-1.836E+00	6.078E+00	9.701E+00	6.323E-01	-0.189
		573.80		4.100E-02	1.556E+00	2.533E+00	1.659E-01	0.016
		593.00		-1.592E+00	1.306E+00	1.915E+00	1.259E-01	-0.831
		656.30		-2.050E+00	5.873E+00	7.859E+00	5.171E-01	-0.261
		666.33		-1.637E-02	1.308E-01	1.791E-01	1.190E-02	-0.091
		675.00		-4.133E-01	3.015E+00	4.802E+00	3.247E-01	-0.086
		695.00		7.798E-02	1.166E-01	1.961E-01	1.382E-02	0.398
		697.00		-3.469E-02	4.138E-01	6.606E-01	4.673E-02	-0.053
		720.50	*	-7.017E-03	2.216E-01	3.711E-01	2.752E-02	-0.019
		856.80		-3.151E-02	9.006E-01	1.283E+00	1.220E-01	-0.025
		989.30		-1.698E+00	2.406E+00	3.764E+00	3.418E-01	-0.451
		1034.80		-4.062E+00	1.589E+01	2.558E+01	2.148E+00	-0.159
		1213.00		-2.015E-01	4.475E+00	7.219E+00	4.196E-01	-0.028
SB-127		61.10		8.730E+02	8.248E+01	5.947E+01	5.308E+00	14.681
		252.40		-1.628E+00	2.216E+00	3.243E+00	1.356E+00	-0.502
		290.80		-1.478E+00	1.146E+01	1.665E+01	1.614E+00	-0.089
		411.60		-3.092E+00	6.883E+00	1.111E+01	1.449E+00	-0.278
		444.90		-1.418E+00	5.869E+00	9.550E+00	8.641E-01	-0.148
		473.00		-3.144E-01	1.065E+00	1.722E+00	1.651E-01	-0.183
		543.00		-2.697E+00	9.342E+00	1.493E+01	1.746E+00	-0.181
		603.60		-2.665E+00	7.209E+00	9.701E+00	9.054E-01	-0.275
		685.20	*	-2.918E-01	7.929E-01	1.239E+00	9.959E-02	-0.236
		698.50		-8.199E+00	8.913E+00	1.323E+01	1.813E+00	-0.620
		722.20		-1.164E+01	1.741E+01	2.796E+01	2.292E+00	-0.416
		783.80		1.098E-01	2.076E+00	3.477E+00	3.670E-01	0.032
XE-127		57.60		2.543E+02	2.219E+01	1.868E+01	1.504E+00	13.611
		145.22		-7.477E-01	1.014E+00	1.597E+00	1.938E-01	-0.468
		172.10		-1.833E-01	1.867E-01	2.894E-01	2.879E-02	-0.633
		202.84	*	5.994E-02	8.567E-02	1.323E-01	1.320E-02	0.453
		374.96		5.006E-02	3.754E-01	6.283E-01	4.100E-02	0.080
I-131		80.18		1.339E+00	3.504E+00	5.232E+00	4.050E-01	0.256

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		284.30		-1.975E-01	1.502E+00	2.515E+00	2.408E-01	-0.079
		364.48	*	1.083E-01	1.244E-01	2.158E-01	1.610E-02	0.502
		636.97		3.928E-01	1.856E+00	3.042E+00	2.178E-01	0.129
		722.89		-6.604E+00	8.560E+00	1.365E+01	1.019E+00	-0.484
TE-132	+	49.72		9.410E+00	2.960E+00	4.109E+00	3.196E-01	2.290
		111.76		-1.912E+00	8.679E+00	1.423E+01	1.771E+00	-0.134
		116.30		3.824E+00	8.982E+00	1.402E+01	1.871E+00	0.273
		228.16	*	7.492E-04	2.651E-01	4.268E-01	6.571E-02	0.002
BA-133	+	53.15		1.158E+01	4.988E+00	5.187E+00	3.886E-01	2.233
		79.62		2.437E+00	1.926E+00	2.921E+00	4.306E-01	0.834
		81.00		-2.964E-02	1.492E-01	2.178E-01	3.355E-02	-0.136
		276.40		-1.189E-01	7.061E-01	1.182E+00	1.759E-01	-0.101
		302.84		-1.520E-01	2.878E-01	4.707E-01	6.311E-02	-0.323
		356.01	*	6.431E-02	1.022E-01	1.543E-01	1.905E-02	0.417
		383.85		-3.645E-01	6.754E-01	1.089E+00	1.206E-01	-0.335
I-133	+	510.53		1.485E-03	6.754E-01	Half-Life too short		
		529.87	*	-1.390E-06	6.754E-01	Half-Life too short		
		706.58		-1.158E-03	6.754E-01	Half-Life too short		
		856.28		3.103E-04	6.754E-01	Half-Life too short		
		875.33		3.451E-05	6.754E-01	Half-Life too short		
		1236.41		6.822E-04	6.754E-01	Half-Life too short		
		1298.22		6.545E-04	6.754E-01	Half-Life too short		
CS-134		475.35		-3.946E+00	4.994E+00	7.858E+00	4.924E-01	-0.502
		563.23		-4.623E-03	8.116E-01	1.320E+00	8.766E-02	-0.004
		569.32		2.268E-01	4.566E-01	7.653E-01	5.126E-02	0.296
		604.70		-1.521E-02	8.104E-02	1.111E-01	7.347E-03	-0.137
		795.84	*	1.409E-01	1.255E-01	2.214E-01	1.906E-02	0.637
		801.93		1.156E-01	1.021E+00	1.714E+00	1.490E-01	0.067
		1038.57		-6.223E+00	1.056E+01	1.656E+01	1.380E+00	-0.376
		1167.94		1.573E+00	7.146E+00	1.023E+01	6.049E-01	0.154
		1365.15		-1.382E-01	1.878E+00	3.104E+00	1.981E-01	-0.045
CS-135		268.24	*	2.307E-01	3.332E-01	5.480E-01	5.863E-02	0.421
I-135		288.45		4.604E+01	3.332E-01	Half-Life too short		
		417.63		-3.197E+01	3.332E-01	Half-Life too short		
		546.56		-2.470E+01	3.332E-01	Half-Life too short		
		836.80		8.711E+01	3.332E-01	Half-Life too short		
		1038.76		-8.431E+01	3.332E-01	Half-Life too short		
		1124.00		-3.437E+02	3.332E-01	Half-Life too short		
		1131.51		2.918E+01	3.332E-01	Half-Life too short		
		1260.41	*	9.126E+00	3.332E-01	Half-Life too short		
		1457.56		2.486E+01	3.332E-01	Half-Life too short		
		1678.03		8.550E-01	3.332E-01	Half-Life too short		
		1706.46		1.277E+01	3.332E-01	Half-Life too short		
		1791.20		5.300E+00	3.332E-01	Half-Life too short		
CS-136		66.91		-1.222E-01	5.764E-01	8.469E-01	1.280E-01	-0.144
		86.29		2.892E+01	3.937E+00	3.474E+00	4.240E-01	8.326
		153.22		-5.467E-01	7.611E-01	1.203E+00	1.457E-01	-0.454
		163.89		-4.406E-02	1.269E+00	2.069E+00	2.284E-01	-0.021
		176.55		3.820E-01	4.251E-01	7.163E-01	7.442E-02	0.533

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		273.65		-8.427E-01	6.477E-01	9.599E-01	9.496E-02	-0.878
		340.57		2.693E-01	1.955E-01	3.073E-01	2.471E-02	0.876
		818.51		3.181E-02	1.284E-01	2.172E-01	1.934E-02	0.146
		1048.07	*	1.572E-01	2.036E-01	3.501E-01	2.997E-02	0.449
		1235.34		-1.094E-02	5.168E-01	8.350E-01	8.342E-02	-0.013
CE-139		165.85	*	6.566E-02	5.313E-02	9.032E-02	8.968E-03	0.727
BA-140		162.64		-5.902E-01	8.886E-01	1.406E+00	1.508E-01	-0.420
		304.84		-1.517E+00	1.759E+00	2.750E+00	7.719E-01	-0.552
		423.70		-3.624E-01	3.070E+00	5.040E+00	1.604E+00	-0.072
		537.32	*	-1.722E-01	4.032E-01	6.335E-01	2.068E-01	-0.272
LA-140		328.77		3.001E-02	3.972E-01	6.670E-01	5.763E-02	0.045
		432.53		1.844E+00	3.375E+00	5.717E+00	3.797E-01	0.323
		487.03		-1.271E-02	2.094E-01	3.423E-01	2.404E-02	-0.037
		751.79		-3.432E-01	2.586E+00	4.272E+00	3.792E-01	-0.080
		815.85		-1.845E-01	5.487E-01	8.930E-01	8.778E-02	-0.207
		867.82		1.661E+00	2.603E+00	4.303E+00	4.346E-01	0.386
		919.63		3.998E+00	6.000E+00	1.006E+01	1.183E+00	0.397
		925.24		8.240E-01	2.401E+00	4.042E+00	4.192E-01	0.204
		1596.49	*	7.041E-03	9.879E-02	1.653E-01	9.713E-03	0.043
CE-141		145.44	*	-7.833E-02	8.994E-02	1.405E-01	1.718E-02	-0.557
CE-143		57.37		6.658E+02	6.783E+01	6.234E+01	5.734E+00	10.681
		231.56		-5.332E+01	1.013E+02	1.566E+02	4.996E+01	-0.340
		293.26	*	1.159E+01	6.394E+00	9.607E+00	2.070E+00	1.206
	+	350.59		4.162E+02	1.897E+02	1.697E+02	5.206E+01	2.452
		490.36		1.582E+01	1.339E+02	2.210E+02	6.848E+01	0.072
		664.57		1.442E+03	4.747E+02	2.608E+02	8.291E+01	5.530
		721.93		-4.808E+01	6.609E+01	1.034E+02	2.977E+01	-0.465
CE-144		80.11		1.149E+00	3.094E+00	4.618E+00	3.569E-01	0.249
		133.54	*	-2.861E-01	4.095E-01	5.631E-01	1.043E-01	-0.508
PM-144		476.78		1.832E-01	1.695E-01	2.928E-01	2.149E-02	0.626
		618.01		4.845E-02	8.179E-02	1.208E-01	8.333E-03	0.401
		696.49	*	2.805E-02	8.130E-02	1.337E-01	9.448E-03	0.210
		778.57		-6.013E-01	5.185E+00	8.589E+00	7.115E-01	-0.070
PR-144		696.49	*	1.893E+00	5.486E+00	9.022E+00	6.375E-01	0.210
		1489.15		4.110E+00	1.632E+01	2.845E+01	1.671E+00	0.144
PM-146		453.90	*	2.801E-02	1.079E-01	1.799E-01	1.597E-02	0.156
		633.02		-2.141E+00	3.267E+00	4.863E+00	1.797E+00	-0.440
		735.90		-6.306E-03	3.568E-01	5.971E-01	1.691E-01	-0.011
		747.13		2.334E-01	2.001E-01	3.577E-01	4.849E-02	0.652
ND-147		91.11		5.544E-01	3.432E-01	4.142E-01	3.684E-02	1.338
		319.41		-1.631E+00	4.097E+00	6.730E+00	5.647E-01	-0.242
		439.89		-1.328E+00	8.799E+00	1.440E+01	8.782E-01	-0.092
		531.02	*	3.954E-04	7.999E-01	1.306E+00	1.804E-01	0.000
PM-149		285.90	*	-6.283E-02	1.558E+01	2.623E+01	4.153E+00	-0.002
EU-152	+	121.78		1.202E+00	2.639E-01	3.173E-01	4.746E-02	3.789
		244.69		-5.664E-01	7.634E-01	1.080E+00	1.053E-01	-0.524
		344.27	*	1.010E-01	2.291E-01	3.427E-01	2.818E-02	0.295
		443.98		-3.134E-01	2.388E+00	3.910E+00	2.392E-01	-0.080
		778.89		-1.048E-01	6.133E-01	1.012E+00	8.388E-02	-0.104

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		867.32		-7.849E-02	2.462E+00	3.777E+00	3.658E-01	-0.021
		964.01		7.300E-01	1.026E+00	1.529E+00	1.440E-01	0.477
		1085.78		3.828E-01	1.155E+00	1.930E+00	1.453E-01	0.198
		1112.02		-3.905E-01	8.700E-01	1.374E+00	9.678E-02	-0.284
		1407.95		2.071E-01	2.649E-01	4.951E-01	2.893E-02	0.418
GD-153		69.67		1.541E-01	1.966E+00	2.918E+00	2.320E-01	0.053
		83.37		2.190E+00	2.443E+01	3.364E+01	2.582E+00	0.065
		97.43	*	4.989E-02	1.172E-01	1.752E-01	1.624E-02	0.285
		103.18		-1.345E-02	1.543E-01	2.551E-01	2.638E-02	-0.053
EU-154	+	123.07		8.436E-01	1.909E-01	2.200E-01	3.506E-02	3.835
		247.94		-1.164E-01	7.262E-01	1.155E+00	1.423E-01	-0.101
		591.81		-1.289E+00	1.341E+00	2.007E+00	2.058E-01	-0.642
		723.30		-2.982E-01	4.168E-01	6.673E-01	5.665E-02	-0.447
		756.87		1.758E+00	1.858E+00	3.275E+00	3.768E-01	0.537
		873.19		1.434E-01	8.557E-01	1.433E+00	1.876E-01	0.100
		996.32		-3.955E-01	1.055E+00	1.689E+00	3.030E-01	-0.234
		1004.76		4.149E-01	5.806E-01	9.969E-01	1.178E-01	0.416
		1274.45	*	-1.329E-01	2.028E-01	2.979E-01	2.785E-02	-0.446
EU-155	+	48.70		5.606E+00	1.754E+00	2.325E+00	1.620E-01	2.411
	+	60.01		5.172E+02	4.455E+01	2.529E+01	2.094E+00	20.452
	+	86.54		6.549E+00	6.001E-01	5.177E-01	4.001E-02	12.651
		105.31	*	8.369E-02	1.622E-01	2.738E-01	2.966E-02	0.306
TB-160	+	86.79		1.628E+01	1.479E+00	1.370E+00	1.045E-01	11.889
		197.04		2.719E-01	9.838E-01	1.608E+00	1.606E-01	0.169
		215.65		3.189E-02	1.339E+00	2.163E+00	2.152E-01	0.015
		298.57		1.752E-01	2.339E-01	3.576E-01	3.182E-02	0.490
		879.36	*	2.964E-02	3.637E-01	6.047E-01	5.975E-02	0.049
		962.29		1.204E+00	1.780E+00	2.645E+00	2.498E-01	0.455
		966.15		9.892E-01	7.066E-01	1.090E+00	1.024E-01	0.907
		1177.93		6.230E-01	7.765E-01	1.196E+00	6.938E-02	0.521
		1271.85		7.774E-01	9.648E-01	1.736E+00	1.009E-01	0.448
HO-166M		80.57		1.441E-04	4.106E-01	6.044E-01	4.667E-02	0.000
		184.41		8.824E-02	7.230E-02	1.097E-01	1.095E-02	0.804
		280.46		-2.363E-02	1.665E-01	2.789E-01	2.582E-02	-0.085
		410.95		-1.437E-01	5.561E-01	9.084E-01	5.392E-02	-0.158
		711.68	*	2.001E-02	1.387E-01	2.351E-01	1.713E-02	0.085
		752.31		-1.326E-02	6.308E-01	1.054E+00	8.312E-02	-0.013
		810.29		3.007E-02	1.471E-01	2.484E-01	2.179E-02	0.121
LU-176	+	88.36		1.294E+01	1.175E+00	1.131E+00	8.678E-02	11.435
		201.83		1.090E-02	5.654E-02	9.221E-02	9.205E-03	0.118
		306.84	*	1.419E-02	5.035E-02	8.559E-02	7.454E-03	0.166
		401.10		2.336E+00	1.520E+01	2.539E+01	1.492E+00	0.092
LU-177		112.95		2.792E-01	1.121E+00	1.871E+00	2.295E-01	0.149
	+	208.36	*	1.261E+00	1.070E+00	1.575E+00	1.571E-01	0.800
LU-177M	+	52.97		5.011E+00	2.158E+00	2.249E+00	1.680E-01	2.228
	+	54.07		2.839E+00	1.223E+00	1.272E+00	9.672E-02	2.233
		61.30		6.570E+01	5.940E+00	5.340E+00	4.393E-01	12.303
	+	121.62		5.969E+00	1.277E+00	1.573E+00	2.216E-01	3.794
		147.16		-4.534E-01	1.055E+00	1.695E+00	2.025E-01	-0.267

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		171.86		-7.354E-01	8.467E-01	1.321E+00	1.314E-01	-0.557
		218.09		-1.603E-01	1.646E+00	2.643E+00	2.627E-01	-0.061
		268.79		2.397E+00	1.615E+00	2.731E+00	2.581E-01	0.878
		319.02		-2.510E-01	5.061E-01	8.272E-01	6.949E-02	-0.303
		367.43		7.634E-01	1.878E+00	3.188E+00	2.175E-01	0.239
		413.65	*	1.091E-01	3.915E-01	6.568E-01	3.909E-02	0.166
HF-181		56.28		6.225E+00	9.161E-01	1.491E+00	1.175E-01	4.175
		57.53		1.960E+01	1.726E+00	1.530E+00	1.230E-01	12.809
		65.20		-7.208E-01	8.624E-01	1.235E+00	9.988E-02	-0.583
		133.02		-1.490E-01	1.200E-01	1.590E-01	2.109E-02	-0.938
	+	136.25		1.418E+00	1.023E+00	1.246E+00	1.617E-01	1.138
		345.85		-8.562E-02	4.073E-01	5.823E-01	4.424E-02	-0.147
		482.03	*	-6.177E-02	9.331E-02	1.474E-01	9.277E-03	-0.419
W-181		56.28		2.649E+00	3.897E-01	6.342E-01	4.999E-02	4.177
		57.53		8.311E+00	7.321E-01	6.500E-01	5.228E-02	12.785
		65.20	*	-3.043E-01	3.641E-01	5.216E-01	4.216E-02	-0.583
TA-182		67.75		8.264E-02	1.142E-01	1.821E-01	1.458E-02	0.454
		100.10		-6.100E-02	2.629E-01	4.003E-01	3.907E-02	-0.152
		152.43		-7.037E-02	5.435E-01	8.844E-01	1.009E-01	-0.080
		222.10		-2.505E-01	6.661E-01	1.054E+00	1.046E-01	-0.238
		1001.68		-1.043E+00	5.319E+00	8.627E+00	7.680E-01	-0.121
		1121.28		3.206E-01	3.343E-01	5.809E-01	3.987E-02	0.552
		1189.05		2.670E-01	4.906E-01	8.445E-01	4.904E-02	0.316
		1221.42	*	-3.200E-01	2.645E-01	3.535E-01	2.055E-02	-0.905
		1230.97		-2.441E-01	6.490E-01	1.000E+00	5.816E-02	-0.244
RE-183	+	57.98		1.800E+01	1.551E+00	7.984E-01	6.468E-02	22.552
	+	59.32		1.035E+01	8.914E-01	5.135E-01	4.251E-02	20.153
		67.20		-5.312E-02	2.097E-01	3.077E-01	2.469E-02	-0.173
		162.32	*	-1.431E-01	1.826E-01	2.872E-01	2.968E-02	-0.498
	+	208.81		2.347E+00	1.992E+00	2.928E+00	2.919E-01	0.802
		291.72		-1.191E-01	1.868E+00	2.727E+00	2.466E-01	-0.044
RE-184	+	57.98		6.941E+01	5.979E+00	3.078E+00	2.493E-01	22.552
	+	59.32		3.987E+01	3.434E+00	1.978E+00	1.637E-01	20.153
		67.20		-2.047E-01	8.083E-01	1.186E+00	9.514E-02	-0.173
		161.27		-5.139E-01	6.049E-01	9.473E-01	9.900E-02	-0.542
		216.55		-1.254E-01	5.077E-01	8.097E-01	8.051E-02	-0.155
		252.85	*	-4.365E-01	4.556E-01	6.909E-01	6.675E-02	-0.632
		318.01		-1.109E-01	8.622E-01	1.436E+00	1.210E-01	-0.077
		792.07		7.919E-01	2.551E+00	4.332E+00	3.678E-01	0.183
		903.28		-2.372E+00	3.100E+00	4.463E+00	4.523E-01	-0.531
		920.93		-4.017E-01	1.429E+00	2.322E+00	2.309E-01	-0.173
OS-185	+	59.72		2.879E+01	2.480E+00	1.418E+00	1.176E-01	20.303
		61.14		9.040E+00	7.985E-01	6.351E-01	5.228E-02	14.235
		69.30		3.477E-01	3.138E-01	5.048E-01	4.019E-02	0.689
		592.07		-5.318E+00	5.167E+00	7.709E+00	5.068E-01	-0.690
		646.12	*	5.543E-02	9.692E-02	1.624E-01	1.070E-02	0.341
		717.42		3.978E-01	2.009E+00	3.413E+00	2.515E-01	0.117
		874.81		9.164E-02	1.584E+00	2.637E+00	2.586E-01	0.035
		880.27		-7.307E-01	2.090E+00	3.377E+00	3.342E-01	-0.216

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188		155.03	*	2.560E-01	2.705E-01	4.575E-01	5.093E-02	0.560
		477.96		7.851E+00	7.214E+00	1.248E+01	7.835E-01	0.629
		633.10		-3.820E+00	5.961E+00	9.164E+00	6.041E-01	-0.417
W-188		63.58		-6.303E+01	4.730E+01	6.658E+01	5.419E+00	-0.947
		227.08		1.973E+01	2.351E+01	3.913E+01	3.870E+00	0.504
		290.67	*	-3.031E+00	1.488E+01	2.151E+01	1.950E+00	-0.141
IR-192	+	295.96		9.142E-01	3.134E-01	3.999E-01	3.605E-02	2.286
		308.46		8.813E-02	1.818E-01	3.116E-01	2.715E-02	0.283
		316.51	*	4.568E-02	6.399E-02	1.107E-01	9.396E-03	0.413
		468.07		-1.034E-02	1.635E-01	2.679E-01	1.893E-02	-0.039
		604.41		-3.010E-01	1.045E+00	1.417E+00	1.668E-01	-0.212
		612.46		1.516E+00	1.752E+00	2.630E+00	2.155E-01	0.576
AU-195		65.12		-1.383E-01	1.709E-01	2.451E-01	1.982E-02	-0.564
		66.83		1.636E-02	9.961E-02	1.485E-01	1.193E-02	0.110
	+	75.70		9.196E-01	2.896E-01	4.848E-01	3.787E-02	1.897
		98.88	*	7.955E-02	3.417E-01	5.054E-01	4.820E-02	0.157
		129.76		6.016E+00	5.063E+00	8.049E+00	1.091E+00	0.747
TL-200		367.94	*	3.016E+00	6.811E+00	1.159E+01	7.882E-01	0.260
		579.30		3.927E+00	5.894E+01	8.322E+01	5.459E+00	0.047
		828.27		-1.116E+01	9.302E+01	1.536E+02	1.391E+01	-0.073
		1205.75		1.435E+01	2.827E+01	4.845E+01	2.815E+00	0.296
TL-201		68.90		1.249E+00	8.913E-01	1.444E+00	1.151E-01	0.865
		70.82		-3.178E-01	5.712E-01	8.266E-01	6.548E-02	-0.384
		80.30		5.088E-01	1.271E+00	1.899E+00	1.467E-01	0.268
	+	135.34		1.513E+01	1.091E+01	1.338E+01	1.747E+00	1.131
		167.43	*	2.414E+00	2.225E+00	3.765E+00	3.738E-01	0.641
TL-202		68.90		4.257E-01	3.038E-01	4.923E-01	3.925E-02	0.865
		70.82		-1.080E-01	1.942E-01	2.810E-01	2.226E-02	-0.384
		80.30		1.730E-01	4.323E-01	6.457E-01	4.988E-02	0.268
		439.56	*	-3.918E-03	1.095E-01	1.802E-01	1.099E-02	-0.022
HG-203		70.83		-6.529E-01	1.168E+00	1.686E+00	2.222E-01	-0.387
		72.87		7.829E-01	7.135E-01	1.084E+00	1.380E-01	0.722
		82.60		3.506E-01	1.825E+00	2.291E+00	3.020E-01	0.153
		279.20	*	9.709E-03	6.997E-02	1.187E-01	1.128E-02	0.082
BI-207		72.80		2.259E-01	2.323E-01	3.539E-01	2.787E-02	0.638
	+	74.97		5.251E-01	1.654E-01	2.506E-01	1.961E-02	2.095
		84.90		2.528E-01	3.112E-01	4.700E-01	3.597E-02	0.538
		569.67		2.939E-02	7.216E-02	1.203E-01	7.872E-03	0.244
		1063.62	*	6.047E-02	1.501E-01	2.523E-01	1.998E-02	0.240
		1770.23		-1.697E-01	8.784E-01	1.146E+00	6.618E-02	-0.148
TL-207		81.07		-6.925E-02	3.298E-01	4.815E-01	3.713E-02	-0.144
		83.78		-9.884E-02	2.003E-01	2.886E-01	2.214E-02	-0.342
	+	94.90		1.201E+00	5.661E-01	5.699E-01	5.023E-02	2.106
	+	122.32		2.867E+01	6.206E+00	7.528E+00	1.097E+00	3.808
		144.24		4.334E-01	1.130E+00	1.871E+00	2.427E-01	0.232
		154.21		1.055E-01	6.811E-01	1.121E+00	1.333E-01	0.094
		269.46		4.443E-01	3.988E-01	6.657E-01	6.393E-02	0.667
		323.87	*	7.628E-01	1.361E+00	2.326E+00	4.080E-01	0.328
	+	338.28		6.335E+00	2.909E+00	4.077E+00	4.802E-01	1.554

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-2.550E+00	5.592E+00	8.987E+00	9.397E-01	-0.284
PO-209		260.50		7.958E-01	1.910E+01	3.061E+01	2.928E+00	0.026
		262.80		-1.253E+01	5.454E+01	8.616E+01	8.216E+00	-0.145
		896.60	*	5.259E+00	2.269E+01	3.806E+01	3.869E+00	0.138
BI-210		46.50	*	2.199E+00	1.402E+00	2.270E+00	1.771E-01	0.969
PB-210		46.50	*	2.199E+00	1.402E+00	2.270E+00	1.771E-01	0.969
PO-210		46.50	*	2.199E+00	1.399E+00	2.270E+00	1.527E-01	0.969
PB-211		404.84	*	-1.318E+00	2.272E+00	3.398E+00	2.119E+00	-0.388
		427.08		-2.894E-01	5.101E+00	8.397E+00	5.192E+00	-0.034
		831.96		-6.435E-01	3.336E+00	5.444E+00	3.415E+00	-0.118
BI-212		727.18	*	5.698E-01	6.800E-01	1.194E+00	1.083E-01	0.477
		785.46		1.555E+00	4.197E+00	7.170E+00	6.014E-01	0.217
		1620.62		1.930E+00	1.972E+00	3.822E+00	2.243E-01	0.505
BI-214	+	609.31	*	1.147E+00	3.363E-01	3.990E-01	3.344E-02	2.876
		768.36		1.513E+00	1.698E+00	2.978E+00	3.000E-01	0.508
		934.06		6.692E-01	3.678E+00	6.133E+00	7.118E-01	0.109
		1120.29		9.234E-01	7.588E-01	1.333E+00	1.273E-01	0.693
		1238.11		1.827E-01	1.152E+00	1.905E+00	1.555E-01	0.096
		1377.67		1.025E+00	1.411E+00	2.600E+00	2.235E-01	0.394
	+	1764.49		1.058E+00	6.816E-01	1.124E+00	6.495E-02	0.942
PO-215		81.07		-6.925E-02	3.298E-01	4.815E-01	3.713E-02	-0.144
		83.78		-9.884E-02	2.003E-01	2.886E-01	2.214E-02	-0.342
	+	94.90		1.201E+00	5.661E-01	5.699E-01	5.023E-02	2.106
	+	122.32		2.867E+01	6.206E+00	7.528E+00	1.097E+00	3.808
		144.24		4.334E-01	1.130E+00	1.871E+00	2.427E-01	0.232
		154.21		1.055E-01	6.811E-01	1.121E+00	1.333E-01	0.094
		269.46		4.443E-01	3.988E-01	6.657E-01	6.393E-02	0.667
		323.87	*	7.628E-01	1.361E+00	2.326E+00	4.080E-01	0.328
	+	338.28		6.335E+00	2.909E+00	4.077E+00	4.802E-01	1.554
		445.03		-2.550E+00	5.592E+00	8.987E+00	9.397E-01	-0.284
RN-219		271.23		4.596E-01	5.137E-01	8.500E-01	9.335E-02	0.541
		401.81	*	-7.704E-02	9.307E-01	1.536E+00	2.095E-01	-0.050
RN-220		549.76	*	4.294E+00	5.912E+01	9.678E+01	6.297E+00	0.044
RA-223		81.07		-6.925E-02	3.298E-01	4.815E-01	3.713E-02	-0.144
		83.78		-9.884E-02	2.003E-01	2.886E-01	2.214E-02	-0.342
	+	94.90		1.201E+00	5.661E-01	5.699E-01	5.023E-02	2.106
	+	122.32		2.867E+01	6.206E+00	7.528E+00	1.097E+00	3.808
		144.24		4.334E-01	1.130E+00	1.871E+00	2.427E-01	0.232
		154.21		1.055E-01	6.811E-01	1.121E+00	1.333E-01	0.094
		269.46		4.443E-01	3.988E-01	6.657E-01	6.393E-02	0.667
		323.87	*	7.628E-01	1.361E+00	2.326E+00	4.080E-01	0.328
	+	338.28		6.335E+00	2.909E+00	4.077E+00	4.802E-01	1.554
		445.03		-2.550E+00	5.592E+00	8.987E+00	9.397E-01	-0.284
RA-224		240.98	*	8.072E+00	1.944E+00	3.021E+00	2.956E-01	2.672
RA-226	+	609.31	*	1.147E+00	3.363E-01	3.990E-01	3.344E-02	2.876
		768.36		1.513E+00	1.698E+00	2.978E+00	3.000E-01	0.508
		934.06		6.692E-01	3.678E+00	6.133E+00	7.118E-01	0.109
		1120.29		9.234E-01	7.588E-01	1.333E+00	1.273E-01	0.693
		1238.11		1.827E-01	1.152E+00	1.905E+00	1.555E-01	0.096

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		1.025E+00	1.411E+00	2.600E+00	2.235E-01	0.394
	+	1764.49		1.058E+00	6.816E-01	1.124E+00	6.495E-02	0.942
AC-227		79.80		2.716E+00	2.468E+00	3.686E+00	7.800E-01	0.737
		236.00		1.248E+00	5.540E-01	8.392E-01	1.101E-01	1.487
		256.20	*	8.432E-01	7.585E-01	1.263E+00	2.012E-01	0.668
		286.10		-5.585E-01	3.007E+00	5.020E+00	6.806E-01	-0.111
		299.80		3.151E+00	3.175E+00	4.868E+00	8.575E-01	0.647
		304.40		-4.314E+00	3.950E+00	6.170E+00	1.142E+00	-0.699
		334.20		3.538E+00	5.304E+00	8.000E+00	1.530E+00	0.442
TH-227		79.80		2.716E+00	2.470E+00	3.686E+00	7.903E-01	0.737
	+	94.00		9.604E+00	4.919E+00	4.949E+00	1.079E+00	1.941
		236.00		1.248E+00	5.502E-01	8.392E-01	1.010E-01	1.487
		256.20	*	8.432E-01	7.627E-01	1.263E+00	2.344E-01	0.668
		286.10		-5.585E-01	3.058E+00	5.020E+00	5.041E+00	-0.111
		299.80		3.151E+00	3.175E+00	4.868E+00	8.575E-01	0.647
		304.40		-4.314E+00	3.950E+00	6.170E+00	1.142E+00	-0.699
		334.20		3.538E+00	5.304E+00	8.000E+00	1.530E+00	0.442
TH-229		85.43		1.399E+00	3.508E-01	5.568E-01	4.256E-02	2.512
	+	88.47		7.447E+00	6.761E-01	6.504E-01	5.001E-02	11.450
		100.00		-9.602E-02	3.029E-01	4.345E-01	4.233E-02	-0.221
		193.63	*	2.167E-01	1.003E+00	1.584E+00	1.582E-01	0.137
		210.97		6.452E-01	1.654E+00	2.386E+00	2.377E-01	0.270
TH-230	+	609.31	*	1.147E+00	3.363E-01	3.990E-01	3.344E-02	2.876
		768.36		1.513E+00	1.698E+00	2.978E+00	3.000E-01	0.508
		934.06		6.692E-01	3.677E+00	6.133E+00	7.118E-01	0.109
		1120.29		9.234E-01	7.588E-01	1.333E+00	1.273E-01	0.693
		1238.11		1.827E-01	1.152E+00	1.905E+00	1.555E-01	0.096
		1377.67		1.025E+00	1.411E+00	2.600E+00	2.235E-01	0.394
	+	1764.49		1.058E+00	6.816E-01	1.124E+00	6.495E-02	0.942
PA-231		283.67	*	4.274E-01	2.988E+00	5.064E+00	7.860E-01	0.084
		301.29		1.611E+00	1.225E+00	1.989E+00	2.465E-01	0.810
TH-231		81.07		-6.925E-02	3.298E-01	4.815E-01	3.713E-02	-0.144
		83.78		-9.884E-02	2.003E-01	2.886E-01	2.214E-02	-0.342
	+	94.90		1.201E+00	5.661E-01	5.699E-01	5.023E-02	2.106
	+	122.32		2.867E+01	6.206E+00	7.528E+00	1.097E+00	3.808
		144.24		4.334E-01	1.130E+00	1.871E+00	2.427E-01	0.232
		154.21		1.055E-01	6.811E-01	1.121E+00	1.333E-01	0.094
		269.46		4.443E-01	3.988E-01	6.657E-01	6.393E-02	0.667
		323.87	*	7.628E-01	1.361E+00	2.326E+00	4.080E-01	0.328
	+	338.28		6.335E+00	2.909E+00	4.077E+00	4.802E-01	1.554
		445.03		-2.550E+00	5.592E+00	8.987E+00	9.397E-01	-0.284
U-231		84.21		-1.444E+00	2.410E+00	3.457E+00	2.649E-01	-0.418
	+	92.29		2.622E+00	1.236E+00	1.393E+00	1.164E-01	1.882
		95.87	*	1.824E-01	4.523E-01	6.749E-01	6.065E-02	0.270
		108.00		-8.583E-01	8.668E-01	1.371E+00	1.545E-01	-0.626
PA-233	+	75.28		1.533E+01	5.206E+00	7.693E+00	1.147E+00	1.993
	+	86.59		1.068E+02	2.880E+01	8.552E+00	2.268E+00	12.486
		300.12		1.076E+00	8.804E-01	1.366E+00	2.052E-01	0.787
		311.98	*	-5.171E-02	1.277E-01	2.100E-01	1.854E-02	-0.246

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		340.50		2.117E+00	1.511E+00	2.268E+00	5.339E-01	0.934
		398.62		1.257E+00	4.760E+00	7.977E+00	2.064E+00	0.158
		415.76		3.804E-02	3.875E+00	6.413E+00	1.323E+00	0.006
PA-234		63.00		-7.616E-01	1.437E+00	2.093E+00	3.192E-01	-0.364
	+	94.67		8.564E-01	4.110E-01	4.206E-01	5.261E-02	2.036
		98.44		9.707E-03	1.434E-01	2.101E-01	1.175E-01	0.046
		99.86		-2.615E-01	7.654E-01	1.096E+00	1.065E-01	-0.238
		111.00		5.784E-02	2.807E-01	4.682E-01	6.829E-02	0.124
		131.20		-3.480E-02	2.104E-01	3.009E-01	4.040E-02	-0.116
		152.70		-1.086E-01	5.504E-01	8.926E-01	1.660E-01	-0.122
	+	186.00		8.582E+00	4.671E+00	4.356E+00	1.377E+00	1.970
		226.40		8.109E-01	8.039E-01	1.339E+00	1.884E-01	0.606
		227.20		7.289E-01	8.589E-01	1.430E+00	1.414E-01	0.510
		248.90		6.386E-01	1.606E+00	2.615E+00	5.977E-01	0.244
		293.70		4.129E+00	1.723E+00	2.624E+00	4.590E-01	1.574
		369.80		-1.833E+00	1.925E+00	2.983E+00	6.295E-01	-0.615
		568.70		1.454E-01	2.323E+00	3.792E+00	2.481E-01	0.038
		569.50		3.124E-01	6.387E-01	1.070E+00	7.002E-02	0.292
		574.00		-5.911E-01	3.573E+00	5.582E+00	3.657E-01	-0.106
		699.00		-1.091E+00	1.720E+00	2.617E+00	4.827E-01	-0.417
		706.10		-4.903E-01	2.462E+00	3.877E+00	1.719E+00	-0.126
		733.00		-2.310E-01	8.949E-01	1.473E+00	3.214E-01	-0.157
		742.81		-1.595E+00	3.279E+00	5.006E+00	3.360E+00	-0.319
		796.30		3.070E+00	2.553E+00	4.315E+00	1.166E+00	0.712
		805.60		-3.869E-01	2.574E+00	4.244E+00	1.302E+00	-0.091
		819.60		6.845E-01	3.306E+00	5.559E+00	2.118E+00	0.123
		826.30		-1.480E+00	2.363E+00	3.620E+00	1.622E+00	-0.409
		831.60		5.249E-02	1.701E+00	2.834E+00	8.498E-01	0.019
		876.40		1.572E-01	2.442E+00	4.055E+00	4.173E+00	0.039
		880.51		-2.669E-01	7.981E-01	1.291E+00	1.278E-01	-0.207
		883.24		-1.643E-01	8.265E-01	1.340E+00	9.033E-01	-0.123
		899.00		2.780E-01	2.474E+00	4.119E+00	1.814E+00	0.067
		925.00		1.309E+00	3.793E+00	6.387E+00	6.321E-01	0.205
		926.50		1.397E-01	5.731E-01	9.579E-01	2.465E-01	0.146
		946.00	*	6.488E-01	9.620E-01	1.635E+00	3.149E-01	0.397
		949.00		2.721E-01	1.420E+00	2.368E+00	2.276E-01	0.115
		980.50		1.350E-01	2.150E+00	3.554E+00	3.270E-01	0.038
		1394.10		4.807E-01	1.667E+00	2.871E+00	1.860E+00	0.167
PA-234M		766.41		2.785E+01	4.638E+01	7.161E+01	5.487E+01	0.389
		1001.03	*	-4.339E+00	1.796E+01	2.903E+01	3.311E+00	-0.149
TH-234		63.29	*	-6.440E-01	1.234E+00	1.797E+00	3.193E-01	-0.358
	+	92.38		2.485E+00	1.237E+00	1.317E+00	2.366E-01	1.887
U-234	+	609.31	*	1.147E+00	3.363E-01	3.990E-01	3.344E-02	2.876
		768.36		1.513E+00	1.698E+00	2.978E+00	3.000E-01	0.508
		934.06		6.692E-01	3.677E+00	6.133E+00	7.118E-01	0.109
		1120.29		9.234E-01	7.588E-01	1.333E+00	1.273E-01	0.693
		1238.11		1.827E-01	1.152E+00	1.905E+00	1.555E-01	0.096
		1377.67		1.025E+00	1.411E+00	2.600E+00	2.235E-01	0.394
	+	1764.49		1.058E+00	6.816E-01	1.124E+00	6.495E-02	0.942

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-235		89.95		3.403E+01	1.080E+01	4.715E+00	1.446E+00	7.218
	+	93.35		2.988E+00	1.619E+00	1.564E+00	4.378E-01	1.911
		105.00		9.106E-01	1.622E+00	2.707E+00	8.258E-01	0.336
		143.76	*	1.641E-01	3.502E-01	5.805E-01	1.136E-01	0.283
		163.35		-4.449E-01	8.495E-01	1.348E+00	2.676E-01	-0.330
	+	185.71		3.178E-01	1.444E-01	1.593E-01	1.590E-02	1.995
		205.31		-2.473E-02	1.158E+00	1.633E+00	3.222E-01	-0.015
NP-236	+	94.67		6.496E-01	3.063E-01	3.192E-01	2.800E-02	2.035
		98.44		7.372E-03	1.083E-01	1.588E-01	1.502E-02	0.046
		111.00		4.375E-02	2.123E-01	3.542E-01	4.204E-02	0.124
		160.31	*	-2.205E-02	1.385E-01	2.246E-01	2.372E-02	-0.098
NP-237		86.50	*	1.148E+01	2.599E+00	1.252E+00	2.755E-01	9.162
		95.87		5.822E-01	1.450E+00	2.155E+00	5.336E-01	0.270
U-238		63.29	*	-6.440E-01	1.234E+00	1.797E+00	3.193E-01	-0.358
	+	92.38		2.485E+00	1.172E+00	1.317E+00	1.102E-01	1.887
NP-239		99.55		-3.625E-02	2.535E-01	3.673E-01	3.548E-02	-0.099
		117.00	*	1.221E-01	3.456E-01	5.108E-01	6.692E-02	0.239
	+	209.75		2.000E+00	1.697E+00	2.492E+00	2.484E-01	0.803
		228.18		-5.952E-04	4.549E-01	7.320E-01	7.234E-02	-0.001
		277.60		8.387E-02	3.458E-01	5.890E-01	5.483E-02	0.142
		334.30		1.965E+00	2.983E+00	4.527E+00	3.605E-01	0.434
CM-243		99.55		-3.728E-02	2.607E-01	3.777E-01	3.649E-02	-0.099
		103.76	*	1.805E-01	1.461E-01	2.514E-01	2.628E-02	0.718
		117.00		1.256E-01	3.554E-01	5.252E-01	6.881E-02	0.239
	+	209.75		1.971E+00	1.672E+00	2.456E+00	2.448E-01	0.803
		228.18		-6.011E-04	4.594E-01	7.392E-01	7.306E-02	-0.001
		277.60		8.451E-02	3.485E-01	5.935E-01	5.524E-02	0.142
CM-247		278.00		1.843E-01	1.428E+00	2.421E+00	2.252E-01	0.076
		287.40		1.947E-01	2.429E+00	4.001E+00	3.653E-01	0.049
		402.60	*	3.919E-02	8.311E-02	1.409E-01	8.292E-03	0.278
CF-249		252.85		-1.691E+00	1.765E+00	2.676E+00	2.586E-01	-0.632
		333.44		7.464E-02	3.980E-01	5.861E-01	4.683E-02	0.127
		387.95	*	-4.038E-02	9.084E-02	1.474E-01	8.817E-03	-0.274
CF-251		176.60	*	1.938E-01	2.207E-01	3.717E-01	3.702E-02	0.521
		227.00		5.687E-01	7.665E-01	1.271E+00	1.257E-01	0.447
		285.00		-4.060E-02	3.438E+00	5.788E+00	5.311E-01	-0.007

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871425    *
* Acquisition date :  7-JUL-2009 08:19:11 Detector SN#     :               *
* Detector ID        : GAM05               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 01:00:01.96      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 30-JUN-2009 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201871425          Analyst initials: MXR1         *
* Batch Number       : 881219               Sample Quantity : 1.5173E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	4.065E-01	8.521E-02	7.356E-02	0.000E+00
CO-60	7.436E+00	5.681E-01	1.183E-01	0.000E+00
AS-73	2.561E+00	1.081E+00	9.208E-01	0.000E+00
CD-109	5.485E+01	4.881E+00	2.106E+00	0.000E+00
SN-126	5.454E+00	4.853E-01	2.092E-01	0.000E+00
BA-137M	6.096E+00	4.870E-01	1.358E-01	0.000E+00
CS-137	6.444E+00	5.159E-01	1.435E-01	0.000E+00
TM-171	4.256E+00	3.006E+01	4.965E+01	0.000E+00
TL-208	4.954E-01	1.429E-01	1.260E-01	0.000E+00
BI-211	2.666E+00	9.049E-01	7.361E-01	0.000E+00
PB-212	1.445E+00	2.501E-01	2.128E-01	0.000E+00
PO-212	1.445E+00	2.501E-01	2.128E-01	0.000E+00
PB-214	9.273E-01	3.183E-01	2.461E-01	0.000E+00
PO-214	9.273E-01	3.183E-01	2.461E-01	0.000E+00
PO-216	1.445E+00	2.501E-01	2.128E-01	0.000E+00
PO-218	9.273E-01	3.183E-01	2.461E-01	0.000E+00
AC-228	1.409E+00	6.206E-01	6.766E-01	0.000E+00
RA-228	1.409E+00	6.206E-01	6.766E-01	0.000E+00
TH-228	1.445E+00	2.501E-01	2.128E-01	0.000E+00
TH-232	1.409E+00	6.206E-01	6.766E-01	0.000E+00
AM-241	1.595E+01	1.444E+00	2.449E-01	0.000E+00
AM-243	2.927E-01	9.033E-02	1.194E-01	0.000E+00
ANH-511	7.421E-02	1.149E-01	1.177E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	9.321E-01	7.167E-01	1.322E+00	0.000E+00	NOT IDENT.
NA-22	-6.415E-02	7.234E-02	1.062E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.900E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	9.822E-03	5.151E-02	8.984E-02	0.000E+00	NOT IDENT.

K-40	8.505E-01	6.562E-01	1.323E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.102E-02	1.024E-01	0.000E+00	FAIL ABUN
SC-46	-6.909E-02	1.084E-01	1.799E-01	0.000E+00	NOT IDENT.
V-48	1.525E-01	1.467E-01	2.657E-01	0.000E+00	NOT IDENT.
CR-51	-2.875E-01	6.011E-01	1.051E+00	0.000E+00	NOT IDENT.
MN-52	2.247E-02	1.328E-01	2.339E-01	0.000E+00	FAIL ABUN
MN-54	-9.222E-03	9.841E-02	1.698E-01	0.000E+00	NOT IDENT.
CO-56	1.848E-03	9.522E-02	1.652E-01	0.000E+00	NOT IDENT.
CO-58	-1.732E-02	8.954E-02	1.537E-01	0.000E+00	NOT IDENT.
FE-59	-4.212E-02	2.085E-01	3.475E-01	0.000E+00	NOT IDENT.
ZN-65	-1.907E-01	2.360E-01	3.761E-01	0.000E+00	NOT IDENT.
GE-68	-9.552E-01	3.425E+00	5.694E+00	0.000E+00	NOT IDENT.
AS-74	8.842E-02	1.416E-01	2.519E-01	0.000E+00	NOT IDENT.
SE-75	-1.290E-02	8.476E-02	1.443E-01	0.000E+00	FAIL ABUN
BR-77	-3.100E-01	2.501E+00	4.284E+00	0.000E+00	FAIL ABUN
SR-82	5.880E-02	6.921E-01	1.215E+00	0.000E+00	NOT IDENT.
RB-83	7.316E-03	1.500E-01	2.595E-01	0.000E+00	NOT IDENT.
RB-84	-4.565E-02	1.651E-01	2.801E-01	0.000E+00	NOT IDENT.
KR-85	2.245E+01	1.813E+01	2.961E+01	0.000E+00	NOT IDENT.
SR-85	1.061E-01	8.563E-02	1.399E-01	0.000E+00	NOT IDENT.
RB-86	-6.211E-01	1.638E+00	2.704E+00	0.000E+00	NOT IDENT.
Y-88	4.324E-03	5.917E-02	1.004E-01	0.000E+00	NOT IDENT.
ZR-88	2.093E-02	6.623E-02	1.185E-01	0.000E+00	NOT IDENT.
Y-91	5.657E+00	2.834E+01	4.855E+01	0.000E+00	NOT IDENT.
NB-94	1.575E-03	7.644E-02	1.288E-01	0.000E+00	NOT IDENT.
NB-95	5.738E-02	9.127E-02	1.652E-01	0.000E+00	NOT IDENT.
NB-95M	3.098E-01	2.491E-01	4.000E-01	0.000E+00	NOT IDENT.
ZR-95	1.477E-01	1.523E-01	2.815E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.612E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.080E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.591E+00	3.712E+00	6.673E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.150E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-4.003E-02	6.155E-02	1.044E-01	0.000E+00	NOT IDENT.
RH-102	-7.389E-02	7.441E-02	1.225E-01	0.000E+00	NOT IDENT.
RU-103	3.230E-02	8.185E-02	1.448E-01	0.000E+00	FAIL ABUN
RH-106	-1.586E-01	7.025E-01	1.175E+00	0.000E+00	NOT IDENT.
RU-106	-1.586E-01	7.023E-01	1.175E+00	0.000E+00	NOT IDENT.
AG-108M	-2.576E-03	8.147E-02	1.424E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	1.101E-01	2.038E-01	0.000E+00	NOT IDENT.
IN-111	-4.238E-01	3.454E-01	5.357E-01	0.000E+00	NOT IDENT.
IN-113M	7.611E-02	9.667E-02	1.766E-01	0.000E+00	NOT IDENT.
SN-113	7.611E-02	9.667E-02	1.766E-01	0.000E+00	NOT IDENT.
IN-114M	2.003E-01	3.354E-01	5.321E-01	0.000E+00	NOT IDENT.
CD-115	-2.707E-01	2.173E+00	3.716E+00	0.000E+00	NOT IDENT.
SN-117M	-4.257E-02	6.318E-02	1.087E-01	0.000E+00	NOT IDENT.
SB-122	2.884E-02	6.243E-01	1.073E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.997E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.062E-02	4.568E-02	8.029E-02	0.000E+00	NOT IDENT.
I-124	-5.812E-02	4.532E-01	6.582E-01	0.000E+00	NOT IDENT.
SB-124	3.798E-02	1.206E-01	2.155E-01	0.000E+00	FAIL ABUN
SB-125	1.032E-01	2.233E-01	3.998E-01	0.000E+00	NOT IDENT.
TE-125M	-6.671E+00	1.252E+01	2.222E+01	0.000E+00	NOT IDENT.
I-126	-3.988E-02	3.123E-01	4.487E-01	0.000E+00	NOT IDENT.
SB-126	-7.017E-03	2.172E-01	3.808E-01	0.000E+00	FAIL ABUN
SB-127	-2.918E-01	7.770E-01	1.273E+00	0.000E+00	NOT IDENT.
XE-127	5.994E-02	8.395E-02	1.401E-01	0.000E+00	NOT IDENT.
I-131	1.083E-01	1.219E-01	2.253E-01	0.000E+00	NOT IDENT.
TE-132	7.492E-04	2.598E-01	4.507E-01	0.000E+00	FAIL ABUN
BA-133	6.431E-02	1.001E-01	1.611E-01	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.714E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.409E-01	1.230E-01	2.266E-01	0.000E+00	NOT IDENT.
CS-135	2.307E-01	3.266E-01	5.764E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.418E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.572E-01	1.995E-01	3.558E-01	0.000E+00	NOT IDENT.
CE-139	6.566E-02	5.207E-02	9.612E-02	0.000E+00	NOT IDENT.
BA-140	-1.722E-01	3.952E-01	6.550E-01	0.000E+00	NOT IDENT.
LA-140	7.041E-03	9.681E-02	1.661E-01	0.000E+00	NOT IDENT.
CE-141	-7.833E-02	8.814E-02	1.500E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	6.266E+00	1.008E+01	0.000E+00	FAIL ABUN
CE-144	-2.861E-01	4.013E-01	6.023E-01	0.000E+00	NOT IDENT.
PM-144	2.805E-02	7.967E-02	1.373E-01	0.000E+00	NOT IDENT.
PR-144	1.893E+00	5.377E+00	9.266E+00	0.000E+00	NOT IDENT.
PM-146	2.801E-02	1.057E-01	1.868E-01	0.000E+00	NOT IDENT.
ND-147	3.954E-04	7.839E-01	1.350E+00	0.000E+00	NOT IDENT.
PM-149	-6.283E-02	1.527E+01	2.755E+01	0.000E+00	NOT IDENT.
EU-152	1.010E-01	2.245E-01	3.582E-01	0.000E+00	FAIL ABUN
GD-153	4.989E-02	1.149E-01	1.888E-01	0.000E+00	NOT IDENT.
EU-154	-1.329E-01	1.988E-01	3.012E-01	0.000E+00	FAIL ABUN

EU-155	8.369E-02	1.590E-01	2.945E-01	0.000E+00	FAIL ABUN
TB-160	2.964E-02	3.564E-01	6.174E-01	0.000E+00	FAIL ABUN
HO-166M	2.001E-02	1.360E-01	2.413E-01	0.000E+00	NOT IDENT.
LU-176	1.419E-02	4.934E-02	8.973E-02	0.000E+00	FAIL ABUN
LU-177	1.261E+00	1.049E+00	1.667E+00	0.000E+00	FAIL ABUN
LU-177M	1.091E-01	3.837E-01	6.835E-01	0.000E+00	FAIL ABUN
HF-181	-6.177E-02	9.145E-02	1.528E-01	0.000E+00	FAIL ABUN
W-181	-3.043E-01	3.568E-01	5.673E-01	0.000E+00	NOT IDENT.
TA-182	-3.200E-01	2.592E-01	3.578E-01	0.000E+00	NOT IDENT.
RE-183	-1.431E-01	1.790E-01	3.058E-01	0.000E+00	FAIL ABUN
RE-184	-4.365E-01	4.465E-01	7.278E-01	0.000E+00	FAIL ABUN
OS-185	5.543E-02	9.498E-02	1.672E-01	0.000E+00	FAIL ABUN
RE-188	2.560E-01	2.651E-01	4.876E-01	0.000E+00	NOT IDENT.
W-188	-3.031E+00	1.458E+01	2.258E+01	0.000E+00	NOT IDENT.
IR-192	4.568E-02	6.271E-02	1.160E-01	0.000E+00	FAIL ABUN
AU-195	7.955E-02	3.349E-01	5.445E-01	0.000E+00	FAIL ABUN
TL-200	3.016E+00	6.675E+00	1.209E+01	0.000E+00	NOT IDENT.
TL-201	2.414E+00	2.181E+00	4.006E+00	0.000E+00	FAIL ABUN
TL-202	-3.918E-03	1.073E-01	1.873E-01	0.000E+00	NOT IDENT.
HG-203	9.709E-03	6.857E-02	1.247E-01	0.000E+00	NOT IDENT.
BI-207	6.047E-02	1.471E-01	2.563E-01	0.000E+00	FAIL ABUN
TL-207	7.628E-01	1.334E+00	2.436E+00	0.000E+00	FAIL ABUN
PO-209	5.259E+00	2.223E+01	3.883E+01	0.000E+00	NOT IDENT.
BI-210	2.199E+00	1.374E+00	2.488E+00	0.000E+00	NOT IDENT.
PB-210	2.199E+00	1.374E+00	2.488E+00	0.000E+00	NOT IDENT.
PO-210	2.199E+00	1.371E+00	2.488E+00	0.000E+00	NOT IDENT.
PB-211	-1.318E+00	2.227E+00	3.538E+00	0.000E+00	NOT IDENT.
BI-212	5.698E-01	6.664E-01	1.225E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	3.296E-01	4.112E-01	0.000E+00	FAIL ABUN
PO-215	7.628E-01	1.334E+00	2.436E+00	0.000E+00	FAIL ABUN
RN-219	-7.704E-02	9.120E-01	1.599E+00	0.000E+00	NOT IDENT.
RN-220	4.294E+00	5.794E+01	1.000E+02	0.000E+00	NOT IDENT.
RA-223	7.628E-01	1.334E+00	2.436E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.905E+00	3.186E+00	0.000E+00	NOT IDENT.
RA-226	0.000E+00	3.296E-01	4.112E-01	0.000E+00	FAIL ABUN
AC-227	8.432E-01	7.433E-01	1.330E+00	0.000E+00	NOT IDENT.
TH-227	8.432E-01	7.475E-01	1.330E+00	0.000E+00	FAIL ABUN
TH-229	2.167E-01	9.825E-01	1.679E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	3.296E-01	4.112E-01	0.000E+00	FAIL ABUN
PA-231	4.274E-01	2.928E+00	5.320E+00	0.000E+00	NOT IDENT.
TH-231	7.628E-01	1.334E+00	2.436E+00	0.000E+00	FAIL ABUN
U-231	1.824E-01	4.432E-01	7.275E-01	0.000E+00	FAIL ABUN
PA-233	-5.171E-02	1.252E-01	2.200E-01	0.000E+00	FAIL ABUN
PA-234	6.488E-01	9.427E-01	1.666E+00	0.000E+00	FAIL ABUN
PA-234M	-4.339E+00	1.760E+01	2.954E+01	0.000E+00	NOT IDENT.
TH-234	-6.440E-01	1.210E+00	1.955E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	3.296E-01	4.112E-01	0.000E+00	FAIL ABUN
U-235	1.641E-01	3.432E-01	6.198E-01	0.000E+00	FAIL ABUN
NP-236	-2.205E-02	1.357E-01	2.392E-01	0.000E+00	FAIL ABUN
NP-237	0.000E+00	2.547E+00	1.353E+00	0.000E+00	NOT IDENT.
U-238	-6.440E-01	1.210E+00	1.955E+00	0.000E+00	FAIL ABUN
NP-239	1.221E-01	3.387E-01	5.480E-01	0.000E+00	FAIL ABUN
CM-243	1.805E-01	1.431E-01	2.705E-01	0.000E+00	FAIL ABUN
CM-247	3.919E-02	8.145E-02	1.467E-01	0.000E+00	NOT IDENT.
CF-249	-4.038E-02	8.902E-02	1.537E-01	0.000E+00	NOT IDENT.
CF-251	1.938E-01	2.163E-01	3.949E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:19:46.65

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871425.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:19:11.
Sample ID         : G1201871425          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.96  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	488	85.51*	7.072E+00	3.989E-01	4.065E-01	21.39
	136.48	102	10.60	6.738E+00	7.066E-01	7.201E-01	72.22
CO-60	1173.22	1824	100.00	1.209E+00	7.466E+00	7.485E+00	7.85
	1332.49	1624	100.00*	1.084E+00	7.416E+00	7.436E+00	7.80
AS-73	53.44	396	10.30*	7.910E+00	2.403E+00	2.561E+00	43.07
CD-109	88.03	3200	3.72*	7.845E+00	5.425E+01	5.485E+01	9.08
SN-126	64.28	------	9.60	8.070E+00	------	Line Not Found	------
	86.94	3200	8.90	7.845E+00	2.267E+01	2.267E+01	41.46
	87.57	3200	37.00*	7.845E+00	5.454E+00	5.454E+00	9.08
BA-137M	661.65	2234	89.98*	2.016E+00	6.094E+00	6.096E+00	8.15
CS-137	661.65	2234	85.12*	2.016E+00	6.442E+00	6.444E+00	8.17
TM-171	51.35	300	0.29	7.851E+00	6.525E+01	6.572E+01	52.95
	52.39	300	0.52	7.851E+00	3.639E+01	3.665E+01	52.95
	59.40	9289	0.21	8.029E+00	2.688E+03	2.707E+03	8.61
	66.72	------	0.16*	8.075E+00	------	Line Not Found	------
TL-208	277.35	------	6.80	4.261E+00	------	Line Not Found	------
	510.84	38	21.60	2.546E+00	3.436E-01	3.436E-01	158.18
	583.14	190	84.20*	2.259E+00	4.954E-01	4.954E-01	29.43
	860.37	32	12.46	1.589E+00	8.050E-01	8.050E-01	108.50
BI-211	72.87	------	1.27	8.052E+00	------	Line Not Found	------
	351.07	245	12.94*	3.517E+00	2.666E+00	2.666E+00	34.64
PB-212	74.81	314	10.70	8.036E+00	1.805E+00	1.805E+00	32.85
	77.11	488	18.00	8.013E+00	1.674E+00	1.674E+00	20.17
	87.30	3200	8.00	7.845E+00	2.523E+01	2.523E+01	13.51
	238.63	622	44.60*	4.773E+00	1.445E+00	1.445E+00	17.66
	300.09	------	3.41	4.005E+00	------	Line Not Found	------
PO-212	74.81	314	10.70	8.036E+00	1.805E+00	1.805E+00	32.85
	77.11	488	18.00	8.013E+00	1.674E+00	1.674E+00	20.17
	87.30	3200	8.00	7.845E+00	2.523E+01	2.523E+01	13.51
	115.19	------	0.60	7.241E+00	------	Line Not Found	------
	238.63	622	44.60*	4.773E+00	1.445E+00	1.445E+00	17.66
	300.09	------	3.41	4.005E+00	------	Line Not Found	------

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	314	6.21	8.036E+00	3.111E+00	3.111E+00	32.35
	77.11	488	10.50	8.013E+00	2.869E+00	2.869E+00	21.56
	87.30	3200	4.67	7.845E+00	4.321E+01	4.321E+01	11.91
	241.98	------	7.49	4.724E+00	------ Line Not Found		------
	295.21	203	19.20	4.057E+00	1.290E+00	1.290E+00	34.83
	351.92	245	37.20*	3.517E+00	9.273E-01	9.273E-01	35.03
PO-214	74.81	314	6.21	8.036E+00	3.111E+00	3.111E+00	32.35
	77.11	488	10.50	8.013E+00	2.869E+00	2.869E+00	21.56
	87.30	3200	4.67	7.845E+00	4.321E+01	4.321E+01	11.91
	241.98	------	7.49	4.724E+00	------ Line Not Found		------
	295.21	203	19.20	4.057E+00	1.290E+00	1.290E+00	34.83
	351.92	245	37.20*	3.517E+00	9.273E-01	9.273E-01	35.03
PO-216	74.81	314	10.70	8.036E+00	1.805E+00	1.805E+00	32.85
	77.11	488	18.00	8.013E+00	1.674E+00	1.674E+00	20.17
	87.30	3200	8.00	7.845E+00	2.523E+01	2.523E+01	13.51
	238.63	622	44.60*	4.773E+00	1.445E+00	1.445E+00	17.66
	300.09	------	3.41	4.005E+00	------ Line Not Found		------
PO-218	74.81	314	6.21	8.036E+00	3.111E+00	3.111E+00	32.35
	77.11	488	10.50	8.013E+00	2.869E+00	2.869E+00	21.56
	87.30	3200	4.67	7.845E+00	4.321E+01	4.321E+01	11.91
	241.98	------	7.49	4.724E+00	------ Line Not Found		------
	295.21	203	19.20	4.057E+00	1.290E+00	1.290E+00	34.83
	351.92	245	37.20*	3.517E+00	9.273E-01	9.273E-01	35.03
AC-228	338.32	127	11.40	3.633E+00	1.517E+00	1.517E+00	60.49
	911.07	119	27.70*	1.510E+00	1.409E+00	1.409E+00	44.95
	969.11	121	16.60	1.430E+00	2.515E+00	2.515E+00	58.27
RA-228	338.32	127	11.40	3.633E+00	1.517E+00	1.517E+00	60.49
	911.07	119	27.70*	1.510E+00	1.409E+00	1.409E+00	44.95
	969.11	121	16.60	1.430E+00	2.515E+00	2.515E+00	58.27
TH-228	84.40	------	1.21	7.908E+00	------ Line Not Found		------
	238.60	622	44.60*	4.773E+00	1.445E+00	1.445E+00	17.66
	300.10	------	3.41	4.005E+00	------ Line Not Found		------
TH-232	338.32	127	11.40	3.633E+00	1.517E+00	1.517E+00	45.07
	911.07	119	27.70*	1.510E+00	1.409E+00	1.409E+00	44.95
	969.11	121	16.60	1.430E+00	2.515E+00	2.515E+00	58.27
AM-241	59.54	9289	35.90*	8.029E+00	1.595E+01	1.595E+01	9.24
AM-243	74.67	314	66.00*	8.036E+00	2.927E-01	2.927E-01	31.49
	86.72	3200	0.34	7.845E+00	6.006E+02	6.006E+02	9.08
	117.66	------	0.55	7.181E+00	------ Line Not Found		------
	142.18	------	0.13	6.593E+00	------ Line Not Found		------
ANH-511	511.00	38	100.00*	2.546E+00	7.421E-02	7.421E-02	157.96

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

Total number of lines in spectrum 26
Number of unidentified lines 0
Number of lines tentatively identified by NID 26 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	3.989E-01	4.065E-01	0.870E-01	21.39	
CO-60	5.27Y	1.00	7.416E+00	7.436E+00	0.580E+00	7.80	
AS-73	80.30D	1.07	2.403E+00	2.561E+00	1.103E+00	43.07	
CD-109	464.00D	1.01	5.425E+01	5.485E+01	0.498E+01	9.08	
SN-126	1.00E+05Y	1.00	5.454E+00	5.454E+00	0.495E+00	9.08	
BA-137M	30.17Y	1.00	6.094E+00	6.096E+00	0.497E+00	8.15	
CS-137	30.17Y	1.00	6.442E+00	6.444E+00	0.526E+00	8.17	
TM-171	1.92Y	1.01	3.639E+01	3.665E+01	1.941E+01	52.95	K
TL-208	1.41E+10Y	1.00	4.954E-01	4.954E-01	1.458E-01	29.43	
BI-211	7.04E+08Y	1.00	2.666E+00	2.666E+00	0.923E+00	34.64	
PB-212	1.41E+10Y	1.00	1.445E+00	1.445E+00	0.255E+00	17.66	
PO-212	1.41E+10Y	1.00	1.445E+00	1.445E+00	0.255E+00	17.66	
PB-214	1600.00Y	1.00	9.273E-01	9.273E-01	3.248E-01	35.03	
PO-214	1600.00Y	1.00	9.273E-01	9.273E-01	3.248E-01	35.03	
PO-216	1.41E+10Y	1.00	1.445E+00	1.445E+00	0.255E+00	17.66	
PO-218	1600.00Y	1.00	9.273E-01	9.273E-01	3.248E-01	35.03	
AC-228	1.41E+10Y	1.00	1.409E+00	1.409E+00	0.633E+00	44.95	
RA-228	1.41E+10Y	1.00	1.409E+00	1.409E+00	0.633E+00	44.95	
TH-228	1.41E+10Y	1.00	1.445E+00	1.445E+00	0.255E+00	17.66	
TH-232	1.41E+10Y	1.00	1.409E+00	1.409E+00	0.633E+00	44.95	
AM-241	432.20Y	1.00	1.595E+01	1.595E+01	0.147E+01	9.24	
AM-243	7380.00Y	1.00	2.927E-01	2.927E-01	0.922E-01	31.49	
ANH-511	1.00E+09Y	1.00	7.421E-02	7.421E-02	11.72E-02	157.96	
			---	---			
	Total Activity :		1.511E+02	1.522E+02			

Grand Total Activity : 1.511E+02 1.522E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
7	49.57	404	1153	1.91	100.31	96	35	1.12E-01	30.5	7.77E+00	T
0	93.56	210	508	1.63	188.27	184	12	5.84E-02	46.4	7.74E+00	T
0	186.14	196	394	3.05	373.34	368	13	5.45E-02	44.3	5.65E+00	T
0	209.04	69	255	0.94	419.11	414	8	1.91E-02	84.3	5.24E+00	T
0	609.29	233	145	1.98	1219.08	1211	19	6.47E-02	28.1	2.17E+00	T
0	1764.43	29	11	1.79	3526.42	3518	15	8.08E-03	64.2	8.61E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:19:51.60

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871425.CNF;1  *
* Acquisition date : 7-JUL-2009 08:19:11.  Detector SN#     :               *
* Detector ID      : GAM05                 Sensitivity      : 5.00000       *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 01:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 01:00:01.96         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-JUN-2009 00:00:00  Nuclide Library : SOLID          *
* Sample ID        : G1201871425           Analyst initials: MXR1           *
* Batch Number     : 881219                Sample Quantity : 1.51730E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00.5MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	4.065E-01	8.695E-02	6.862E-02	9.736E-03	5.924
CO-60	7.436E+00	5.797E-01	1.172E-01	6.779E-03	63.471
AS-73	2.561E+00	1.103E+00	8.428E-01	6.344E-02	3.039
CD-109	5.485E+01	4.980E+00	1.950E+00	1.485E-01	28.131
SN-126	5.454E+00	4.952E-01	1.936E-01	1.474E-02	28.170
BA-137M	6.096E+00	4.970E-01	1.320E-01	8.683E-03	46.170
CS-137	6.444E+00	5.265E-01	1.396E-01	9.209E-03	46.170
TM-171	3.665E+01	1.941E+01	4.568E+01	3.670E+00	0.802
TL-208	4.954E-01	1.458E-01	1.221E-01	8.985E-03	4.057
BI-211	2.666E+00	9.233E-01	7.044E-01	5.582E-02	3.784
PB-212	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
PO-212	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
PB-214	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
PO-214	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
PO-216	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
PO-218	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
AC-228	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124
RA-228	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.163
TH-232	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124
AM-241	1.595E+01	1.473E+00	2.247E-01	2.010E-02	70.973
AM-243	2.927E-01	9.217E-02	1.101E-01	8.623E-03	2.659
ANH-511	7.421E-02	1.172E-01	1.137E-01	7.280E-03	0.652

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	9.321E-01		7.314E-01	1.275E+00	9.133E-02	0.731
NA-22	-6.415E-02		7.381E-02	1.051E-01	6.119E-03	-0.611
NA-24	2.476E-06		9.695E-05	Half-Life too short		
AL-26	9.822E-03		5.256E-02	8.970E-02	5.147E-03	0.110
K-40	8.505E-01		6.696E-01	1.313E+00	8.167E-02	0.648
TI-44	3.087E-01	+	6.226E-02	9.457E-02	7.338E-03	3.265
SC-46	-6.909E-02		1.106E-01	1.762E-01	1.770E-02	-0.392
V-48	1.525E-01		1.497E-01	2.611E-01	2.391E-02	0.584
CR-51	-2.875E-01		6.133E-01	1.003E+00	8.873E-02	-0.287
MN-52	2.247E-02		1.355E-01	2.321E-01	1.359E-02	0.097
MN-54	-9.222E-03		1.004E-01	1.661E-01	1.522E-02	-0.056
CO-56	1.848E-03		9.716E-02	1.616E-01	1.512E-02	0.011
CO-58	-1.732E-02		9.136E-02	1.503E-01	1.323E-02	-0.115
FE-59	-4.212E-02		2.127E-01	3.424E-01	2.773E-02	-0.123
ZN-65	-1.907E-01		2.408E-01	3.707E-01	2.590E-02	-0.514
GE-68	-9.552E-01		3.495E+00	5.607E+00	4.306E-01	-0.170
AS-74	8.842E-02		1.445E-01	2.443E-01	1.607E-02	0.362
SE-75	-1.290E-02		8.649E-02	1.372E-01	1.310E-02	-0.094
BR-77	-3.100E-01		2.552E+00	4.140E+00	2.662E-01	-0.075
SR-82	5.880E-02		7.062E-01	1.186E+00	9.788E-02	0.050
RB-83	7.316E-03		1.530E-01	2.508E-01	1.613E-02	0.029
RB-84	-4.565E-02		1.685E-01	2.743E-01	2.720E-02	-0.166
KR-85	2.245E+01		1.850E+01	2.861E+01	1.834E+00	0.785
SR-85	1.061E-01		8.738E-02	1.351E-01	8.663E-03	0.785
RB-86	-6.211E-01		1.672E+00	2.662E+00	2.048E-01	-0.233
Y-88	4.324E-03		6.037E-02	1.003E-01	5.739E-03	0.043
ZR-88	2.093E-02		6.758E-02	1.138E-01	6.625E-03	0.184
Y-91	5.657E+00		2.892E+01	4.795E+01	2.786E+00	0.118
NB-94	1.575E-03		7.800E-02	1.254E-01	8.972E-03	0.013
NB-95	5.738E-02		9.313E-02	1.613E-01	1.304E-02	0.356
NB-95M	3.098E-01		2.542E-01	3.791E-01	4.147E-02	0.817
ZR-95	1.477E-01		1.554E-01	2.746E-01	2.440E-02	0.538
NB-97	8.506E-04		8.223E-05	Half-Life too short		
ZR-97	1.764E-03		1.061E-03	Half-Life too short		
MO-99	1.591E+00		3.787E+00	6.507E+00	9.552E-01	0.244
TC-99M	8.236E+00		1.607E+01	Half-Life too short		
RH-101	-4.003E-02		6.281E-02	9.851E-02	9.838E-03	-0.406
RH-102	-7.389E-02		7.592E-02	1.181E-01	7.399E-03	-0.626

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RU-103	3.230E-02		8.352E-02	1.398E-01	1.804E-02	0.231
RH-106	-1.586E-01		7.168E-01	1.140E+00	1.385E-01	-0.139
RU-106	-1.586E-01		7.166E-01	1.140E+00	7.518E-02	-0.139
AG-108M	-2.576E-03		8.313E-02	1.370E-01	8.964E-03	-0.019
AG-110M	4.596E-01		1.123E-01	1.982E-01	1.370E-02	2.319
IN-111	-4.238E-01		3.524E-01	5.082E-01	4.951E-02	-0.834
IN-113M	7.611E-02		9.864E-02	1.695E-01	1.051E-02	0.449
SN-113	7.611E-02		9.864E-02	1.695E-01	1.051E-02	0.449
IN-114M	2.003E-01		3.422E-01	5.016E-01	5.009E-02	0.399
CD-115	-2.707E-01		2.217E+00	3.593E+00	2.318E-01	-0.075
SN-117M	-4.257E-02		6.447E-02	1.021E-01	1.097E-02	-0.417
SB-122	2.884E-02		6.371E-01	1.039E+00	6.792E-02	0.028
I-123	-1.162E-04		2.549E-04	Half-Life too short		
TE-123M	-1.062E-02		4.661E-02	7.538E-02	8.100E-03	-0.141
I-124	-5.812E-02		4.624E-01	6.385E-01	4.204E-02	-0.091
SB-124	3.798E-02		1.230E-01	2.147E-01	1.359E-02	0.177
SB-125	1.032E-01		2.279E-01	3.845E-01	2.411E-02	0.268
TE-125M	-6.671E+00		1.278E+01	2.068E+01	2.655E+00	-0.323
I-126	-3.988E-02		3.186E-01	4.364E-01	2.898E-02	-0.091
SB-126	-7.017E-03		2.216E-01	3.711E-01	2.752E-02	-0.019
SB-127	-2.918E-01		7.929E-01	1.239E+00	9.959E-02	-0.236
XE-127	5.994E-02		8.567E-02	1.323E-01	1.320E-02	0.453
I-131	1.083E-01		1.244E-01	2.158E-01	1.610E-02	0.502
TE-132	7.492E-04		2.651E-01	4.268E-01	6.571E-02	0.002
BA-133	6.431E-02		1.022E-01	1.543E-01	1.905E-02	0.417
I-133	-1.390E-06		1.385E-05	Half-Life too short		
CS-134	1.409E-01		1.255E-01	2.214E-01	1.906E-02	0.637
CS-135	2.307E-01		3.332E-01	5.480E-01	5.863E-02	0.421
I-135	9.126E+00		1.234E+01	Half-Life too short		
CS-136	1.572E-01		2.036E-01	3.501E-01	2.997E-02	0.449
CE-139	6.566E-02		5.313E-02	9.032E-02	8.968E-03	0.727
BA-140	-1.722E-01		4.032E-01	6.335E-01	2.068E-01	-0.272
LA-140	7.041E-03		9.879E-02	1.653E-01	9.713E-03	0.043
CE-141	-7.833E-02		8.994E-02	1.405E-01	1.718E-02	-0.557
CE-143	1.159E+01		6.394E+00	9.607E+00	2.070E+00	1.206
CE-144	-2.861E-01		4.095E-01	5.631E-01	1.043E-01	-0.508
PM-144	2.805E-02		8.130E-02	1.337E-01	9.448E-03	0.210
PR-144	1.893E+00		5.486E+00	9.022E+00	6.375E-01	0.210
PM-146	2.801E-02		1.079E-01	1.799E-01	1.597E-02	0.156
ND-147	3.954E-04		7.999E-01	1.306E+00	1.804E-01	0.000
PM-149	-6.283E-02		1.558E+01	2.623E+01	4.153E+00	-0.002
EU-152	1.010E-01		2.291E-01	3.427E-01	2.818E-02	0.295
GD-153	4.989E-02		1.172E-01	1.752E-01	1.624E-02	0.285
EU-154	-1.329E-01		2.028E-01	2.979E-01	2.785E-02	-0.446
EU-155	8.369E-02		1.622E-01	2.738E-01	2.966E-02	0.306
TB-160	2.964E-02		3.637E-01	6.047E-01	5.975E-02	0.049
HO-166M	2.001E-02		1.387E-01	2.351E-01	1.713E-02	0.085
LU-176	1.419E-02		5.035E-02	8.559E-02	7.454E-03	0.166

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	1.261E+00	+	1.070E+00	1.575E+00	1.571E-01	0.800
LU-177M	1.091E-01		3.915E-01	6.568E-01	3.909E-02	0.166
HF-181	-6.177E-02		9.331E-02	1.474E-01	9.277E-03	-0.419
W-181	-3.043E-01		3.641E-01	5.216E-01	4.216E-02	-0.583
TA-182	-3.200E-01		2.645E-01	3.535E-01	2.055E-02	-0.905
RE-183	-1.431E-01		1.826E-01	2.872E-01	2.968E-02	-0.498
RE-184	-4.365E-01		4.556E-01	6.909E-01	6.675E-02	-0.632
OS-185	5.543E-02		9.692E-02	1.624E-01	1.070E-02	0.341
RE-188	2.560E-01		2.705E-01	4.575E-01	5.093E-02	0.560
W-188	-3.031E+00		1.488E+01	2.151E+01	1.950E+00	-0.141
IR-192	4.568E-02		6.399E-02	1.107E-01	9.396E-03	0.413
AU-195	7.955E-02		3.417E-01	5.054E-01	4.820E-02	0.157
TL-200	3.016E+00		6.811E+00	1.159E+01	7.882E-01	0.260
TL-201	2.414E+00		2.225E+00	3.765E+00	3.738E-01	0.641
TL-202	-3.918E-03		1.095E-01	1.802E-01	1.099E-02	-0.022
HG-203	9.709E-03		6.997E-02	1.187E-01	1.128E-02	0.082
BI-207	6.047E-02		1.501E-01	2.523E-01	1.998E-02	0.240
TL-207	7.628E-01		1.361E+00	2.326E+00	4.080E-01	0.328
PO-209	5.259E+00		2.269E+01	3.806E+01	3.869E+00	0.138
BI-210	2.199E+00		1.402E+00	2.270E+00	1.771E-01	0.969
PB-210	2.199E+00		1.402E+00	2.270E+00	1.771E-01	0.969
PO-210	2.199E+00		1.399E+00	2.270E+00	1.527E-01	0.969
PB-211	-1.318E+00		2.272E+00	3.398E+00	2.119E+00	-0.388
BI-212	5.698E-01		6.800E-01	1.194E+00	1.083E-01	0.477
BI-214	1.147E+00	+	3.363E-01	3.990E-01	3.344E-02	2.876
PO-215	7.628E-01		1.361E+00	2.326E+00	4.080E-01	0.328
RN-219	-7.704E-02		9.307E-01	1.536E+00	2.095E-01	-0.050
RN-220	4.294E+00		5.912E+01	9.678E+01	6.297E+00	0.044
RA-223	7.628E-01		1.361E+00	2.326E+00	4.080E-01	0.328
RA-224	8.072E+00		1.944E+00	3.021E+00	2.956E-01	2.672
RA-226	1.147E+00	+	3.363E-01	3.990E-01	3.344E-02	2.876
AC-227	8.432E-01		7.585E-01	1.263E+00	2.012E-01	0.668
TH-227	8.432E-01		7.627E-01	1.263E+00	2.344E-01	0.668
TH-229	2.167E-01		1.003E+00	1.584E+00	1.582E-01	0.137
TH-230	1.147E+00	+	3.363E-01	3.990E-01	3.344E-02	2.876
PA-231	4.274E-01		2.988E+00	5.064E+00	7.860E-01	0.084
TH-231	7.628E-01		1.361E+00	2.326E+00	4.080E-01	0.328
U-231	1.824E-01		4.523E-01	6.749E-01	6.065E-02	0.270
PA-233	-5.171E-02		1.277E-01	2.100E-01	1.854E-02	-0.246
PA-234	6.488E-01		9.620E-01	1.635E+00	3.149E-01	0.397
PA-234M	-4.339E+00		1.796E+01	2.903E+01	3.311E+00	-0.149
TH-234	-6.440E-01		1.234E+00	1.797E+00	3.193E-01	-0.358
U-234	1.147E+00	+	3.363E-01	3.990E-01	3.344E-02	2.876
U-235	1.641E-01		3.502E-01	5.805E-01	1.136E-01	0.283
NP-236	-2.205E-02		1.385E-01	2.246E-01	2.372E-02	-0.098
NP-237	1.148E+01		2.599E+00	1.252E+00	2.755E-01	9.162
U-238	-6.440E-01		1.234E+00	1.797E+00	3.193E-01	-0.358
NP-239	1.221E-01		3.456E-01	5.108E-01	6.692E-02	0.239

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.805E-01		1.461E-01	2.514E-01	2.628E-02	0.718
CM-247	3.919E-02		8.311E-02	1.409E-01	8.292E-03	0.278
CF-249	-4.038E-02		9.084E-02	1.474E-01	8.817E-03	-0.274
CF-251	1.938E-01		2.207E-01	3.717E-01	3.702E-02	0.521

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871425          *
* Acquisition date  :  7-JUL-2009 08:19:11 Detector SN#     :               *
* Detector ID       : GAM05                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 01:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 01:00:01.96     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871425          Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.5173E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	4.065E-01	8.521E-02	3.680E-02	4.348E-02
CO-60	7.436E+00	5.681E-01	5.919E-02	2.899E-01
AS-73	2.561E+00	1.081E+00	4.607E-01	5.514E-01
CD-109	5.485E+01	4.881E+00	1.054E+00	2.490E+00
SN-126	5.454E+00	4.853E-01	1.046E-01	2.476E-01
BA-137M	6.096E+00	4.870E-01	6.794E-02	2.485E-01
CS-137	6.444E+00	5.159E-01	7.182E-02	2.632E-01
TM-171	4.256E+00	3.006E+01	2.484E+01	1.533E+01
TL-208	4.954E-01	1.429E-01	6.303E-02	7.290E-02
BI-211	2.666E+00	9.049E-01	3.683E-01	4.617E-01
PB-212	1.445E+00	2.501E-01	1.065E-01	1.276E-01
PO-212	1.445E+00	2.501E-01	1.065E-01	1.276E-01
PB-214	9.273E-01	3.183E-01	1.231E-01	1.624E-01
PO-214	9.273E-01	3.183E-01	1.231E-01	1.624E-01
PO-216	1.445E+00	2.501E-01	1.065E-01	1.276E-01
PO-218	9.273E-01	3.183E-01	1.231E-01	1.624E-01
AC-228	1.409E+00	6.206E-01	3.385E-01	3.166E-01
RA-228	1.409E+00	6.206E-01	3.385E-01	3.166E-01
TH-228	1.445E+00	2.501E-01	1.065E-01	1.276E-01
TH-232	1.409E+00	6.206E-01	3.385E-01	3.166E-01
AM-241	1.595E+01	1.444E+00	1.225E-01	7.367E-01
AM-243	2.927E-01	9.033E-02	5.972E-02	4.609E-02
ANH-511	7.421E-02	1.149E-01	5.891E-02	5.862E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	9.321E-01	7.167E-01	6.615E-01	3.657E-01	NOT IDENT.
NA-22	-6.415E-02	7.234E-02	5.314E-02	3.691E-02	NOT IDENT.
NA-24	2.476E+00	1.900E+02	0.000E+00	9.695E+01	SHORT HLIF
AL-26	9.822E-03	5.151E-02	4.495E-02	2.628E-02	NOT IDENT.

K-40	8.505E-01	6.562E-01	6.618E-01	3.348E-01	NOT IDENT.
TI-44	3.087E-01	6.102E-02	5.124E-02	3.113E-02	FAIL ABUN
SC-46	-6.909E-02	1.084E-01	8.999E-02	5.528E-02	NOT IDENT.
V-48	1.525E-01	1.467E-01	1.329E-01	7.487E-02	NOT IDENT.
CR-51	-2.875E-01	6.011E-01	5.257E-01	3.067E-01	NOT IDENT.
MN-52	2.247E-02	1.328E-01	1.170E-01	6.777E-02	FAIL ABUN
MN-54	-9.222E-03	9.841E-02	8.495E-02	5.021E-02	NOT IDENT.
CO-56	1.848E-03	9.522E-02	8.264E-02	4.858E-02	NOT IDENT.
CO-58	-1.732E-02	8.954E-02	7.691E-02	4.568E-02	NOT IDENT.
FE-59	-4.212E-02	2.085E-01	1.738E-01	1.064E-01	NOT IDENT.
ZN-65	-1.907E-01	2.360E-01	1.881E-01	1.204E-01	NOT IDENT.
GE-68	-9.552E-01	3.425E+00	2.849E+00	1.747E+00	NOT IDENT.
AS-74	8.842E-02	1.416E-01	1.260E-01	7.225E-02	NOT IDENT.
SE-75	-1.290E-02	8.476E-02	7.221E-02	4.325E-02	FAIL ABUN
BR-77	-3.100E-01	2.501E+00	2.143E+00	1.276E+00	FAIL ABUN
SR-82	5.880E-02	6.921E-01	6.079E-01	3.531E-01	NOT IDENT.
RB-83	7.316E-03	1.500E-01	1.298E-01	7.651E-02	NOT IDENT.
RB-84	-4.565E-02	1.651E-01	1.401E-01	8.424E-02	NOT IDENT.
KR-85	2.245E+01	1.813E+01	1.481E+01	9.249E+00	NOT IDENT.
SR-85	1.061E-01	8.563E-02	6.998E-02	4.369E-02	NOT IDENT.
RB-86	-6.211E-01	1.638E+00	1.353E+00	8.359E-01	NOT IDENT.
Y-88	4.324E-03	5.917E-02	5.024E-02	3.019E-02	NOT IDENT.
ZR-88	2.093E-02	6.623E-02	5.930E-02	3.379E-02	NOT IDENT.
Y-91	5.657E+00	2.834E+01	2.429E+01	1.446E+01	NOT IDENT.
NB-94	1.575E-03	7.644E-02	6.441E-02	3.900E-02	NOT IDENT.
NB-95	5.738E-02	9.127E-02	8.266E-02	4.657E-02	NOT IDENT.
NB-95M	3.098E-01	2.491E-01	2.001E-01	1.271E-01	NOT IDENT.
ZR-95	1.477E-01	1.523E-01	1.408E-01	7.768E-02	NOT IDENT.
NB-97	8.506E+02	1.612E+02	0.000E+00	8.223E+01	SHORT HLIF
ZR-97	1.764E+03	2.080E+03	0.000E+00	1.061E+03	SHORT HLIF
MO-99	1.591E+00	3.712E+00	3.338E+00	1.894E+00	NOT IDENT.
TC-99M	8.236E+06	3.150E+07	0.000E+00	1.607E+07	SHORT HLIF
RH-101	-4.003E-02	6.155E-02	5.222E-02	3.141E-02	NOT IDENT.
RH-102	-7.389E-02	7.441E-02	6.128E-02	3.796E-02	NOT IDENT.
RU-103	3.230E-02	8.185E-02	7.243E-02	4.176E-02	FAIL ABUN
RH-106	-1.586E-01	7.025E-01	5.877E-01	3.584E-01	NOT IDENT.
RU-106	-1.586E-01	7.023E-01	5.877E-01	3.583E-01	NOT IDENT.
AG-108M	-2.576E-03	8.147E-02	7.124E-02	4.156E-02	NOT IDENT.
AG-110M	4.596E-01	1.101E-01	1.020E-01	5.616E-02	NOT IDENT.
IN-111	-4.238E-01	3.454E-01	2.680E-01	1.762E-01	NOT IDENT.
IN-113M	7.611E-02	9.667E-02	8.837E-02	4.932E-02	NOT IDENT.
SN-113	7.611E-02	9.667E-02	8.837E-02	4.932E-02	NOT IDENT.
IN-114M	2.003E-01	3.354E-01	2.662E-01	1.711E-01	NOT IDENT.
CD-115	-2.707E-01	2.173E+00	1.859E+00	1.109E+00	NOT IDENT.
SN-117M	-4.257E-02	6.318E-02	5.440E-02	3.223E-02	NOT IDENT.
SB-122	2.884E-02	6.243E-01	5.370E-01	3.185E-01	NOT IDENT.
I-123	-1.162E+02	4.997E+02	0.000E+00	2.549E+02	SHORT HLIF
TE-123M	-1.062E-02	4.568E-02	4.017E-02	2.331E-02	NOT IDENT.
I-124	-5.812E-02	4.532E-01	3.293E-01	2.312E-01	NOT IDENT.
SB-124	3.798E-02	1.206E-01	1.078E-01	6.152E-02	FAIL ABUN
SB-125	1.032E-01	2.233E-01	2.000E-01	1.139E-01	NOT IDENT.
TE-125M	-6.671E+00	1.252E+01	1.112E+01	6.390E+00	NOT IDENT.
I-126	-3.988E-02	3.123E-01	2.245E-01	1.593E-01	NOT IDENT.
SB-126	-7.017E-03	2.172E-01	1.905E-01	1.108E-01	FAIL ABUN
SB-127	-2.918E-01	7.770E-01	6.370E-01	3.965E-01	NOT IDENT.
XE-127	5.994E-02	8.395E-02	7.008E-02	4.283E-02	NOT IDENT.
I-131	1.083E-01	1.219E-01	1.127E-01	6.220E-02	NOT IDENT.
TE-132	7.492E-04	2.598E-01	2.255E-01	1.326E-01	FAIL ABUN
BA-133	6.431E-02	1.001E-01	8.062E-02	5.108E-02	FAIL ABUN
I-133	-1.390E+00	2.714E+01	0.000E+00	1.385E+01	SHORT HLIF
CS-134	1.409E-01	1.230E-01	1.134E-01	6.273E-02	NOT IDENT.
CS-135	2.307E-01	3.266E-01	2.884E-01	1.666E-01	NOT IDENT.
I-135	9.126E+06	2.418E+07	0.000E+00	1.234E+07	SHORT HLIF
CS-136	1.572E-01	1.995E-01	1.780E-01	1.018E-01	NOT IDENT.
CE-139	6.566E-02	5.207E-02	4.809E-02	2.657E-02	NOT IDENT.
BA-140	-1.722E-01	3.952E-01	3.277E-01	2.016E-01	NOT IDENT.
LA-140	7.041E-03	9.681E-02	8.310E-02	4.939E-02	NOT IDENT.
CE-141	-7.833E-02	8.814E-02	7.504E-02	4.497E-02	NOT IDENT.
CE-143	1.159E+01	6.266E+00	5.045E+00	3.197E+00	FAIL ABUN
CE-144	-2.861E-01	4.013E-01	3.013E-01	2.048E-01	NOT IDENT.
PM-144	2.805E-02	7.967E-02	6.869E-02	4.065E-02	NOT IDENT.
PR-144	1.893E+00	5.377E+00	4.636E+00	2.743E+00	NOT IDENT.
PM-146	2.801E-02	1.057E-01	9.346E-02	5.393E-02	NOT IDENT.
ND-147	3.954E-04	7.839E-01	6.756E-01	3.999E-01	NOT IDENT.
PM-149	-6.283E-02	1.527E+01	1.378E+01	7.790E+00	NOT IDENT.
EU-152	1.010E-01	2.245E-01	1.792E-01	1.145E-01	FAIL ABUN
GD-153	4.989E-02	1.149E-01	9.445E-02	5.862E-02	NOT IDENT.
EU-154	-1.329E-01	1.988E-01	1.507E-01	1.014E-01	FAIL ABUN

EU-155	8.369E-02	1.590E-01	1.473E-01	8.110E-02	FAIL ABUN
TB-160	2.964E-02	3.564E-01	3.089E-01	1.819E-01	FAIL ABUN
HO-166M	2.001E-02	1.360E-01	1.207E-01	6.937E-02	NOT IDENT.
LU-176	1.419E-02	4.934E-02	4.489E-02	2.517E-02	FAIL ABUN
LU-177	1.261E+00	1.049E+00	8.342E-01	5.350E-01	FAIL ABUN
LU-177M	1.091E-01	3.837E-01	3.420E-01	1.958E-01	FAIL ABUN
HF-181	-6.177E-02	9.145E-02	7.645E-02	4.666E-02	FAIL ABUN
W-181	-3.043E-01	3.568E-01	2.838E-01	1.820E-01	NOT IDENT.
TA-182	-3.200E-01	2.592E-01	1.790E-01	1.323E-01	NOT IDENT.
RE-183	-1.431E-01	1.790E-01	1.530E-01	9.131E-02	FAIL ABUN
RE-184	-4.365E-01	4.465E-01	3.641E-01	2.278E-01	FAIL ABUN
OS-185	5.543E-02	9.498E-02	8.363E-02	4.846E-02	FAIL ABUN
RE-188	2.560E-01	2.651E-01	2.439E-01	1.352E-01	NOT IDENT.
W-188	-3.031E+00	1.458E+01	1.130E+01	7.438E+00	NOT IDENT.
IR-192	4.568E-02	6.271E-02	5.802E-02	3.199E-02	FAIL ABUN
AU-195	7.955E-02	3.349E-01	2.724E-01	1.709E-01	FAIL ABUN
TL-200	3.016E+00	6.675E+00	6.050E+00	3.406E+00	NOT IDENT.
TL-201	2.414E+00	2.181E+00	2.004E+00	1.113E+00	FAIL ABUN
TL-202	-3.918E-03	1.073E-01	9.369E-02	5.473E-02	NOT IDENT.
HG-203	9.709E-03	6.857E-02	6.238E-02	3.498E-02	NOT IDENT.
BI-207	6.047E-02	1.471E-01	1.282E-01	7.505E-02	FAIL ABUN
TL-207	7.628E-01	1.334E+00	1.219E+00	6.805E-01	FAIL ABUN
PO-209	5.259E+00	2.223E+01	1.943E+01	1.134E+01	NOT IDENT.
BI-210	2.199E+00	1.374E+00	1.245E+00	7.008E-01	NOT IDENT.
PB-210	2.199E+00	1.374E+00	1.245E+00	7.008E-01	NOT IDENT.
PO-210	2.199E+00	1.371E+00	1.245E+00	6.995E-01	NOT IDENT.
PB-211	-1.318E+00	2.227E+00	1.770E+00	1.136E+00	NOT IDENT.
BI-212	5.698E-01	6.664E-01	6.131E-01	3.400E-01	NOT IDENT.
BI-214	1.147E+00	3.296E-01	2.057E-01	1.681E-01	FAIL ABUN
PO-215	7.628E-01	1.334E+00	1.219E+00	6.805E-01	FAIL ABUN
RN-219	-7.704E-02	9.120E-01	8.001E-01	4.653E-01	NOT IDENT.
RN-220	4.294E+00	5.794E+01	5.003E+01	2.956E+01	NOT IDENT.
RA-223	7.628E-01	1.334E+00	1.219E+00	6.805E-01	FAIL ABUN
RA-224	8.072E+00	1.905E+00	1.594E+00	9.718E-01	NOT IDENT.
RA-226	1.147E+00	3.296E-01	2.057E-01	1.681E-01	FAIL ABUN
AC-227	8.432E-01	7.433E-01	6.652E-01	3.792E-01	NOT IDENT.
TH-227	8.432E-01	7.475E-01	6.652E-01	3.814E-01	FAIL ABUN
TH-229	2.167E-01	9.825E-01	8.402E-01	5.013E-01	FAIL ABUN
TH-230	1.147E+00	3.296E-01	2.057E-01	1.681E-01	FAIL ABUN
PA-231	4.274E-01	2.928E+00	2.661E+00	1.494E+00	NOT IDENT.
TH-231	7.628E-01	1.334E+00	1.219E+00	6.805E-01	FAIL ABUN
U-231	1.824E-01	4.432E-01	3.640E-01	2.261E-01	FAIL ABUN
PA-233	-5.171E-02	1.252E-01	1.101E-01	6.386E-02	FAIL ABUN
PA-234	6.488E-01	9.427E-01	8.335E-01	4.810E-01	FAIL ABUN
PA-234M	-4.339E+00	1.760E+01	1.478E+01	8.980E+00	NOT IDENT.
TH-234	-6.440E-01	1.210E+00	9.783E-01	6.171E-01	FAIL ABUN
U-234	1.147E+00	3.296E-01	2.057E-01	1.681E-01	FAIL ABUN
U-235	1.641E-01	3.432E-01	3.101E-01	1.751E-01	FAIL ABUN
NP-236	-2.205E-02	1.357E-01	1.197E-01	6.925E-02	FAIL ABUN
NP-237	1.148E+01	2.547E+00	6.771E-01	1.300E+00	NOT IDENT.
U-238	-6.440E-01	1.210E+00	9.783E-01	6.171E-01	FAIL ABUN
NP-239	1.221E-01	3.387E-01	2.742E-01	1.728E-01	FAIL ABUN
CM-243	1.805E-01	1.431E-01	1.354E-01	7.303E-02	FAIL ABUN
CM-247	3.919E-02	8.145E-02	7.341E-02	4.155E-02	NOT IDENT.
CF-249	-4.038E-02	8.902E-02	7.688E-02	4.542E-02	NOT IDENT.
CF-251	1.938E-01	2.163E-01	1.976E-01	1.103E-01	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	661.8311
46.50	661.8311
46.50	661.8311
48.70	918.0296
49.72	777.8190
51.35	780.3343
52.39	781.9202
52.97	782.7969
53.15	783.0673
53.44	783.5044
54.07	784.4473
56.28	787.7078
56.28	787.7128
57.37	789.3004
57.53	789.5315
57.53	789.5349
57.60	789.6320
57.98	790.1813
57.98	790.1813
59.32	792.1021
59.32	792.1021
59.40	792.2159
59.54	792.4152
59.72	792.6714
60.01	793.0817
61.10	794.6191
61.14	794.6760
61.30	794.9004
63.00	588.4161
63.29	588.7115
63.29	588.7115
63.58	650.0878
64.28	668.3438
65.12	651.8052
65.20	651.8932
65.20	651.8932
66.05	629.4641
66.72	621.3965
66.83	621.5132
66.91	652.3104
67.20	665.7971
67.20	665.7971
67.75	613.9241
67.85	604.2606
68.90	568.6227
68.90	568.6227
69.30	592.2432
69.67	656.7632
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70.83	678.6047
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72.87	640.9500
72.87	640.9500
74.67	644.2509
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74.81	644.3915
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74.81	644.3915
74.81	644.3915
74.97	644.5535
75.28	644.8641
75.70	645.2836
77.11	646.6882
77.11	646.6882
77.11	646.6882

77.11	646.6882
77.11	646.6882
77.11	646.6882
78.38	607.7242
79.62	565.5853
79.80	565.7380
79.80	565.7380
80.11	603.3369
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80.30	603.5071
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81.00	632.5482
81.07	632.6153
81.07	632.6153
81.07	632.6153
81.07	632.6153
82.60	614.5596
83.37	609.6230
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83.78	635.1403
83.78	635.1403
84.21	650.5624
84.40	650.7421
84.90	619.6295
85.43	618.5971
86.29	614.8389
86.50	615.0231
86.54	615.0580
86.59	639.2245
86.72	639.3436
86.79	639.4057
86.94	639.5428
87.30	597.6134
87.30	597.6134
87.30	597.6134
87.30	597.6134
87.30	597.6134
87.30	597.6134
87.57	597.8430
87.88	598.1040
88.03	598.2321
88.36	598.5101
88.47	598.6019
89.95	416.5585
91.11	417.2282
92.29	417.9063
92.38	417.9584
92.38	417.9584
93.35	339.3754
94.00	339.6748
94.67	339.9797
94.67	339.9824
94.90	340.0872
94.90	340.0872
94.90	340.0872
94.90	340.0872
95.87	326.7876
95.87	326.7876
96.73	333.2789
97.43	295.3322
98.44	309.5159
98.44	309.5159
98.88	302.0290
99.55	326.8466
99.55	326.8466
99.86	334.6534
100.00	334.7146
100.10	330.1531
103.18	333.3925
103.76	293.1397
105.00	312.9171
105.31	311.1071
108.00	344.1459
109.28	321.3886
111.00	300.6604
111.00	300.6604

111.76	316.5212
112.95	302.3477
115.19	318.8071
116.30	293.7675
117.00	294.7942
117.00	294.7942
117.66	316.9935
121.11	313.5428
121.62	310.5732
121.78	313.3903
122.06	313.4910
122.32	317.1344
122.32	317.1344
122.32	317.1344
122.32	317.1344
123.07	290.5614
127.23	317.3151
129.76	294.3424
131.20	344.2104
133.02	378.4247
133.54	353.0766
135.34	293.1341
136.00	293.3420
136.25	288.4131
136.48	288.4834
140.51	286.4970
140.51	0.0000
142.18	283.3135
142.65	287.3396
143.76	274.5483
144.24	274.6853
144.24	274.6853
144.24	274.6853
144.24	274.6853
145.22	310.3423
145.44	309.4015
147.16	297.7907
152.43	287.1539
152.70	290.2859
153.22	316.9319
154.21	287.6606
154.21	287.6606
154.21	287.6606
154.21	287.6606
155.03	259.3078
156.02	258.5378
158.56	300.1555
159.00	0.0000
159.00	279.7859
160.31	285.2707
161.27	305.0486
162.32	316.6639
162.64	316.7603
163.35	309.7724
163.89	296.5452
165.85	277.4945
167.43	285.1367
171.28	275.7899
171.86	303.9468
172.10	304.0139
176.55	238.5725
176.60	238.5830
181.06	246.0240
184.41	290.3959
185.71	305.6397
186.00	305.7174
190.27	271.6305
192.34	326.1964
193.63	292.4730
197.04	277.8633
198.01	306.7472
198.60	327.0738
200.40	309.4872
201.83	310.9183
202.84	292.7051
205.31	314.3723
208.36	305.0891
208.81	291.2786

209.75	282.9271
209.75	282.9271
210.97	288.3521
215.65	276.7232
216.55	293.0840
218.09	293.4388
222.10	298.6870
223.80	309.9148
226.40	250.8163
227.00	260.7074
227.08	255.2921
227.20	255.3154
228.16	281.5957
228.18	281.6017
228.18	281.6017
231.56	287.7731
235.69	265.9221
236.00	267.7332
236.00	267.7332
238.60	348.4603
238.63	348.4676
238.63	348.4676
238.63	348.4676
239.00	348.5646
240.98	298.5770
241.98	260.1283
241.98	260.1283
241.98	260.1283
244.69	311.1270
245.39	317.1577
247.94	242.7197
248.90	215.2867
249.79	209.9014
252.40	240.1748
252.85	253.5385
252.85	253.5385
254.15	0.0000
256.20	196.4303
256.20	196.4303
260.50	219.2863
260.90	216.0062
262.80	234.1287
264.65	234.4267
268.24	245.0784
268.79	221.6593
269.46	240.8022
269.46	240.8022
269.46	240.8022
269.46	240.8022
271.23	245.5763
273.65	301.0134
276.40	235.8544
277.35	233.2992
277.60	226.1329
277.60	226.1329
278.00	226.1911
278.60	217.2677
279.20	223.6662
279.53	221.9105
280.46	231.9776
281.68	220.4221
283.67	211.6655
284.30	219.8954
285.00	216.3749
285.90	213.7857
286.10	218.3445
286.10	218.3445
287.40	204.5226
288.45	0.0000
290.67	212.0251
290.80	212.0422
291.72	207.6211
293.26	206.3104
293.70	209.4033
295.21	226.9207
295.21	226.9207
295.21	226.9207
295.96	259.8538

296.50	261.4644
297.23	241.8125
298.57	213.0990
299.80	196.5077
299.80	196.5077
300.09	188.9264
300.09	188.9264
300.09	188.9264
300.10	188.9277
300.12	188.9290
301.29	192.1198
302.84	230.7683
303.76	246.4772
303.91	246.5001
304.40	252.0755
304.40	252.0755
304.84	240.2264
306.84	202.8846
308.46	196.6569
311.98	202.6111
316.51	176.3905
318.01	191.3411
319.02	206.2587
319.41	203.5295
320.08	201.7618
323.87	195.7288
323.87	195.7288
323.87	195.7288
323.87	195.7288
325.23	201.4588
328.77	216.7679
333.44	202.1305
334.20	185.1095
334.20	185.1095
334.30	185.1192
338.28	202.0781
338.28	202.0781
338.28	202.0781
338.28	202.0781
338.32	202.0834
338.32	202.0834
338.32	202.0834
340.50	187.3511
340.57	187.3584
344.27	179.9355
345.85	198.8897
350.59	208.8488
351.07	194.7692
351.92	179.1501
351.92	179.1501
351.92	179.1501
355.39	0.0000
356.01	168.5372
364.48	157.6210
366.43	171.0989
367.43	171.1934
367.94	168.3855
369.80	209.5076
374.96	184.3112
383.85	201.5046
387.95	204.8279
388.63	207.7866
391.69	184.9969
391.69	184.9969
392.90	197.6478
398.62	183.7308
400.65	178.1152
401.10	186.8721
401.81	188.8777
402.60	176.3569
404.84	202.7545
410.95	195.5996
411.60	200.5332
413.65	182.2246
414.70	189.1476
415.30	187.2539
415.76	189.2471
417.63	0.0000

418.52	207.0934
423.70	203.7115
427.08	202.0897
427.89	192.3561
432.53	186.8921
433.93	204.7373
439.47	189.4992
439.56	189.5063
439.89	193.4854
443.98	193.8658
444.90	187.0251
445.03	192.9743
445.03	192.9743
445.03	192.9743
445.03	192.9743
453.90	180.8714
463.38	200.6442
468.07	209.0842
473.00	194.5186
475.06	211.7624
475.35	211.7907
476.78	161.7095
477.59	152.7255
477.96	158.7811
482.03	183.2375
484.57	157.2416
487.03	147.3242
490.36	148.5558
492.35	144.6409
497.08	139.8783
507.63	0.0000
510.53	0.0000
510.84	173.3546
511.00	158.0709
511.85	159.8289
511.85	159.8289
513.99	136.1499
513.99	136.1499
520.41	138.2333
520.65	142.3427
527.90	132.5116
528.96	0.0000
529.64	140.8331
529.87	0.0000
531.02	131.6594
537.32	140.2566
543.00	129.2175
546.56	0.0000
549.76	119.2142
552.65	126.6197
555.20	134.0265
563.23	124.0406
563.90	124.0726
568.70	128.4924
569.32	122.2559
569.50	123.3094
569.67	125.4082
573.80	124.5665
574.00	129.1146
574.64	136.1287
578.91	108.3865
579.30	104.9072
583.14	101.9139
585.48	117.4327
591.81	115.9673
592.07	117.0324
593.00	120.2399
595.88	93.9758
600.56	113.7175
602.52	0.0000
602.71	116.4587
602.71	116.4587
603.60	121.7916
604.41	116.5339
604.70	111.2498
609.31	107.1991
609.31	107.1991
609.31	107.1991

609.31	107.1991
610.33	107.2410
612.46	118.6649
614.37	106.3428
618.01	99.3900
621.84	110.9088
621.84	110.9088
631.29	118.7939
633.02	114.5861
633.10	114.5887
634.78	106.0890
635.90	107.2046
636.97	106.1736
645.85	104.3697
646.12	104.3792
656.30	113.4082
657.75	86.4512
657.90	0.0000
661.65	108.2153
661.65	108.2153
664.57	90.2730
666.33	110.2026
666.33	110.2026
675.00	106.5583
677.61	103.3914
685.20	110.2148
692.80	107.2234
695.00	97.4524
696.49	109.5532
696.49	109.5532
697.00	115.0514
697.49	123.8365
698.33	135.9308
698.50	127.1695
699.00	124.9992
702.63	107.5895
706.10	111.0137
706.58	0.0000
706.67	124.2283
709.31	101.7839
711.68	104.6183
713.82	120.3072
717.42	109.4199
720.50	115.9768
721.93	130.7676
722.20	130.7791
722.78	140.0168
722.78	140.0168
722.89	134.4957
722.95	134.4987
723.30	134.5135
724.18	120.7283
727.18	103.3229
733.00	114.6152
735.90	109.1750
739.58	94.4857
742.81	103.8607
744.21	104.8363
747.13	71.5060
751.79	99.5179
752.31	99.5332
753.82	102.3753
755.35	102.4268
756.15	91.2769
756.87	93.1600
763.93	142.8616
765.79	111.1824
766.41	112.1387
766.84	105.6110
768.36	104.7288
768.36	104.7288
768.36	104.7288
768.36	104.7288
776.49	95.6271
778.00	97.5487
778.57	96.6275
778.89	99.4526
783.80	102.4270

785.46	101.5400
792.07	129.0730
795.84	119.7937
796.30	114.1514
801.93	116.2434
805.60	116.3760
810.29	100.4360
810.76	108.0323
815.85	113.8965
817.79	109.2163
818.51	105.4401
819.60	111.1776
826.30	133.3036
828.27	120.9978
831.60	126.8441
831.96	132.5805
834.83	137.4697
836.80	0.0000
846.75	112.0941
848.13	109.2639
856.28	0.0000
856.80	108.7232
860.37	106.7770
867.32	116.9566
867.82	104.1196
871.10	123.5182
873.19	120.6970
874.81	121.7216
875.33	0.0000
876.40	125.6439
879.36	115.1118
880.27	124.8165
880.51	123.8594
881.50	123.8932
883.24	123.9557
884.67	114.3197
889.25	141.6335
896.60	134.1564
898.02	153.6604
899.00	128.4121
903.28	146.7492
911.07	145.4472
911.07	145.4472
911.07	145.4472
919.63	136.6364
920.93	157.5967
925.00	142.0972
925.24	143.0861
926.50	148.0385
934.06	153.2642
934.06	153.2642
934.06	153.2642
934.06	153.2642
935.52	143.4960
937.48	126.8584
944.10	161.5710
946.00	132.0835
949.00	143.0441
962.29	162.9425
964.01	157.9236
966.15	169.9079
968.20	145.7768
969.11	108.8281
969.11	108.8281
969.11	108.8281
977.42	118.2124
980.50	117.4070
983.50	103.5599
989.30	128.6536
996.32	119.8999
1001.03	114.0464
1001.68	114.0649
1004.76	94.1301
1021.30	0.0000
1024.50	0.0000
1034.80	105.9698
1037.82	97.9709
1038.57	109.1030

1038.76	0.0000
1045.16	116.3710
1046.59	102.2411
1048.07	97.2148
1050.47	120.5785
1050.47	120.5785
1063.62	104.7141
1076.63	112.1932
1077.35	113.2357
1085.78	107.3370
1099.22	97.4392
1112.02	114.2068
1112.84	112.1712
1115.52	124.5991
1120.29	85.5667
1120.29	85.5667
1120.29	85.5667
1120.29	85.5667
1120.51	85.5735
1121.28	85.5870
1124.00	0.0000
1129.67	78.5296
1131.51	0.0000
1147.95	0.0000
1167.94	84.0105
1173.22	62.6367
1175.09	50.1328
1177.93	50.1660
1189.05	36.6734
1204.90	42.0654
1205.75	36.8144
1213.00	34.7671
1221.42	41.1677
1230.97	37.0251
1235.34	31.7664
1236.41	0.0000
1238.11	29.6668
1238.11	29.6668
1238.11	29.6668
1238.11	29.6668
1238.25	29.6680
1246.25	25.4746
1260.41	0.0000
1271.85	19.2144
1274.45	37.3826
1274.54	40.5884
1291.56	26.8016
1298.22	0.0000
1312.09	21.5356
1325.50	35.1731
1325.50	35.1731
1332.49	30.2809
1333.61	20.3986
1360.21	20.5122
1362.66	0.0000
1365.15	19.6003
1368.21	17.7442
1368.53	0.0000
1376.25	14.9676
1377.67	14.9721
1377.67	14.9721
1377.67	14.9721
1377.67	14.9721
1384.27	15.9292
1394.10	13.1445
1395.20	15.9648
1407.95	12.2401
1434.06	15.1440
1436.60	13.2578
1457.56	0.0000
1460.81	14.2728
1489.15	10.5247
1509.49	19.2111
1596.49	17.5737
1620.62	7.8449
1678.03	0.0000
1691.02	10.9225
1691.02	10.9225

1706.46	0.0000
1750.46	0.0000
1764.49	7.0391
1764.49	7.0391
1764.49	7.0391
1764.49	7.0391
1770.23	10.5688
1771.40	31.2098
1791.20	0.0000
1808.65	9.1174
1836.01	11.1941

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871425

Total Uranium Activity	-1.8399E+00	ug/g
Total Uranium Counting Unc.	3.6020E+00	ug/g
Total Uranium Tpu	1.8377E-06	ug/g
Total Uranium Mda	2.9140E+00	ug/g

```
*******************************************************************************
*                                                                             *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                              *
*                             CHARLESTON ,SC 29417                            *
*                              GROSS GAMMA REPORT                             *
*                                                                             *
*                                                                             *
*******************************************************************************
*                                                                             *
*   BATCH ID      : 881219                    SAMPLE ID   : G1201871425       *
*   ANALYST       : MXR1                      DETECTOR    : GAM05             *
*   SAMPLE DATE   : 30-JUN-2009 00:00:00.00   COUNT TIME :    0 01:00:00.00   *
*   ANALYSIS DATE:  7-JUL-2009 08:19:11.42    SAMPLE ALQT:  151.730 GRAM      *
*                                                                             *
*******************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 3.359E+01
GROSS GAMMA ERROR  (pCi/GRAM  )   : 3.093E+00
GROSS GAMMA MDA    (pCi/GRAM  )   : 6.180E+00
GROSS GAMMA DLC    (pCi/GRAM  )   : 3.029E+00
```

Radiochemistry Batch Checklist, Rev 9

Batch# 883013 Product: H^3 Date: 7-16-09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature]

Secondary Review Performed By: [signature] 7/16/09

LANL 7-20-09

Tritium Que Sheet

14-JUL-09

Batch #: 883013 **Analyst:** KXK2 **First Client Due Date** 20-JUL-09 **Internal Due Date:** 09-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** ——— **Expiration Date:** ——— **Vol:** ———

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.2

Prep Date: 7/9/09 **Initials:** KXK2 **Pipet ID:** 29709168 **Witness:** DRS 7/9/09 copied: KKG 7/14/09

Total Moisture KKG 7/14/09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Dist Vol (mL)
232424001-1	CAMO-09-10463	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-2	1	KKG 7/14/09	424.12	406.73	17.39
232426001-1	CAMO-09-7143	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-3	2		566.45	525.10	41.35
232426002-1	CAMO-09-7144	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-4	3		630.82	565.85	64.97
232433002-1	CAMO-09-6006	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-5	4		515.56	456.79	58.77
232433003-1	CAMO-09-6008	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	3-2	5		466.00	358.35	107.65
232433004-1	CAMO-09-6009	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-7	6		608.39	504.96	103.43
232433005-1	CAMO-09-6034	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-8	7		311.60	242.11	69.49
232433006-1	CAMO-09-6043	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-9	8		475.72	438.61	37.11
232433007-1	CAMO-09-6045	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-10	9		551.95	507.79	44.16
232433008-1	CAMO-09-6041	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-11	10		590.28	560.18	30.10
232433009-1	CAMO-09-6040	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-1	11		277.16	201.77	75.39
232433010-1	CAMO-09-6044	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-2	12		342.53	299.03	43.50
232433011-1	CAMO-09-6035	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-3	13		519.46	499.20	20.26
232433012-1	CAMO-09-6038	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-4	14		328.63	245.82	82.81
232433013-1	CAMO-09-6039	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-5	15		542.95	493.54	49.41
232433014-1	CAMO-09-6042	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-6	16		381.48	313.96	67.52
232433015-1	CAMO-09-6049	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-7	17		531.50	470.38	61.12
1201875577-1	MB for batch 883013	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	18-8	18		40.00	0	40.00
1201875578-1	CAMO-09-6008(232433003DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	23-JUN-09	10	3-3	5		466.00	358.35	107.65
1201875579-1	LCS for batch 883013	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	3-1	19		40.00	0	40.00

Bkg Rack #: _____

dailies ✓

Comments: _____

Bkg prepared with dead water? Yes/No

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656*

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Econscint Ultra)*

Data Reviewed By: _____

GEL Laboratories LLC, Radiochemistry Division

DATE	7/9/2009	INITIALS	KXK2		BATCH NUMBER	883013

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232424001	424.12	0.041	17.39	406.73	10	701
232426001	566.45	0.073	41.35	525.10	10	32
232426002	630.82	0.103	64.97	565.85	10	614
KKG #4109 [redacted]						>1mL collected
232433002	515.56	0.114	58.77	456.79	10	106
232433003	466.00	0.231	107.65	358.35	10	601
232433004	608.39	0.170	103.43	504.96	10	5
232433005	311.60	0.223	69.49	242.11	10	532
232433006	475.72	0.078	37.11	438.61	10	24
232433007	551.95	0.080	44.16	507.79	10	306
232433008	590.28	0.051	30.10	560.18	10	1707
232433009	277.16	0.272	75.39	201.77	10	45
232433010	342.53	0.127	43.50	299.03	10	10
232433011	519.46	0.039	20.26	499.20	10	1603
232433012	328.63	0.252	82.81	245.82	10	761
232433013	542.95	0.091	49.41	493.54	10	23
232433014	381.48	0.177	67.52	313.96	10	610
232433015	531.5	0.115	61.12	470.38	10	1201
MB	40	1	40.00	0.00	10	912
LCS	40	1	40.00	0.00	10	101

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.5

Batch : 883013
Analyst : KXK2
Prep Date : 7/9/2009

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL Ecoscint Ultra

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1.0 ml Stdev : +/- 0.005480 ml
Pipet, 5.0 ml Stdev : +/- 0.025729 ml

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2545.86
LCS Volume Added: 0.20

Procedure Code : LSC_VH3S
Parmname : Tritium
Required MDC : 250 pCi/L
Halflife of Tritium : 12.28 years

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232424001.1	424.12	0.0174	0.0100	2.5729E-05	406.73	4.10%	1	6/23/2009 12:00
2	232426001.1	566.45	0.0414	0.0100	2.5729E-05	525.10	7.30%	2	6/23/2009 12:00
3	232426002.1	630.82	0.0650	0.0100	2.5729E-05	565.85	10.30%	3	6/23/2009 12:00
4	232433002.1	515.56	0.0588	0.0100	2.5729E-05	456.79	11.40%	4	6/23/2009 12:00
5	232433003.1	466.00	0.1077	0.0100	2.5729E-05	358.35	23.10%	5	6/23/2009 12:00
6	232433004.1	606.39	0.1034	0.0100	2.5729E-05	504.96	17.00%	6	6/23/2009 12:00
7	232433005.1	311.60	0.0695	0.0100	2.5729E-05	242.11	22.30%	7	6/23/2009 12:00
8	232433006.1	475.72	0.0371	0.0100	2.5729E-05	438.61	7.80%	8	6/23/2009 12:00
9	232433007.1	551.95	0.0442	0.0100	2.5729E-05	507.79	8.00%	9	6/23/2009 12:00
10	232433008.1	590.28	0.0301	0.0100	2.5729E-05	560.18	5.10%	10	6/23/2009 12:00
11	232433009.1	277.16	0.0754	0.0100	2.5729E-05	201.77	27.20%	11	6/23/2009 12:00
12	232433010.1	342.53	0.0435	0.0100	2.5729E-05	299.03	12.70%	12	6/23/2009 12:00
13	232433011.1	519.46	0.0203	0.0100	2.5729E-05	499.20	3.90%	13	6/23/2009 12:00
14	232433012.1	328.63	0.0828	0.0100	2.5729E-05	245.82	25.20%	14	6/23/2009 12:00
15	232433013.1	542.95	0.0494	0.0100	2.5729E-05	493.54	9.10%	15	6/23/2009 12:00
16	232433014.1	381.48	0.0675	0.0100	2.5729E-05	313.96	17.70%	16	6/23/2009 12:00
17	232433015.1	531.50	0.0611	0.0100	2.5729E-05	470.38	11.50%	17	6/23/2009 12:00
18	1201875577.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	18	7/9/2009 0:00
19	1201875578.1	466.00	0.1077	0.0100	2.5729E-05	358.35	23.10%	5	6/23/2009 12:00
20	1201875579.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	19	7/9/2009 0:00

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	40-2	95	118.8	8.34	2.51	95	7/14/2009 14:42	0.997	LSCRED	8/6/2008	8/31/2009	0.2312	0.00792	40-1	7/14/2009 13:03
2	40-3	95	118.7	8.03	2.51	95	7/14/2009 16:21	0.997	LSCRED	8/6/2008	8/31/2009	0.2313	0.00792	40-1	7/14/2009 13:03
3	40-4	95	116.4	13.47	2.51	95	7/14/2009 18:00	0.997	LSCRED	8/6/2008	8/31/2009	0.2328	0.00792	40-1	7/14/2009 13:03
4	40-5	95	117.7	5.37	2.51	95	7/14/2009 19:39	0.997	LSCRED	8/6/2008	8/31/2009	0.2320	0.00792	40-1	7/14/2009 13:03
5	3-2	95	122.4	3.78	3.18	95	7/16/2009 10:37	0.996	LSCBLUE	8/6/2008	8/31/2009	0.2345	0.00792	3-1	7/16/2009 8:59
6	40-7	95	117.1	4.58	2.51	95	7/14/2009 22:56	0.997	LSCRED	8/6/2008	8/31/2009	0.2324	0.00792	40-1	7/14/2009 13:03
7	40-8	95	118.1	4.66	2.51	95	7/15/2009 0:35	0.997	LSCRED	8/6/2008	8/31/2009	0.2317	0.00792	40-1	7/14/2009 13:03
8	40-9	95	118.2	4.13	2.51	95	7/15/2009 2:14	0.997	LSCRED	8/6/2008	8/31/2009	0.2316	0.00792	40-1	7/14/2009 13:03
9	40-10	95	119	3.86	2.51	95	7/15/2009 3:52	0.997	LSCRED	8/6/2008	8/31/2009	0.2311	0.00792	40-1	7/14/2009 13:03
10	40-11	95	120.2	3.77	2.51	95	7/15/2009 5:31	0.997	LSCRED	8/6/2008	8/31/2009	0.2303	0.00792	40-1	7/14/2009 13:03
11	18-1	30	117	2.7	2.51	95	7/15/2009 8:35	0.997	LSCRED	8/6/2008	8/31/2009	0.2324	0.00792	40-1	7/14/2009 13:03
12	18-2	30	118.8	3.4	2.51	95	7/15/2009 9:07	0.997	LSCRED	8/6/2008	8/31/2009	0.2312	0.00792	40-1	7/14/2009 13:03
13	18-3	30	116.2	3.5	2.51	95	7/15/2009 9:39	0.997	LSCRED	8/6/2008	8/31/2009	0.2329	0.00792	40-1	7/14/2009 13:03
14	18-4	30	112.3	3.67	2.51	95	7/15/2009 10:11	0.997	LSCRED	8/6/2008	8/31/2009	0.2350	0.00792	40-1	7/14/2009 13:03
15	18-5	30	111.3	2.83	2.51	95	7/15/2009 10:43	0.997	LSCRED	8/6/2008	8/31/2009	0.2354	0.00792	40-1	7/14/2009 13:03
16	18-6	30	115.6	3.1	2.51	95	7/15/2009 11:14	0.997	LSCRED	8/6/2008	8/31/2009	0.2333	0.00792	40-1	7/14/2009 13:03
17	18-7	30	119	2.57	2.51	95	7/15/2009 11:46	0.997	LSCRED	8/6/2008	8/31/2009	0.2311	0.00792	40-1	7/14/2009 13:03
18	18-8	30	115.3	3.07	2.51	95	7/15/2009 12:18	0.999	LSCRED	8/6/2008	8/31/2009	0.2334	0.00792	40-1	7/14/2009 13:03
19	3-3	95	122	3.97	3.18	95	7/16/2009 12:15	0.996	LSCBLUE	8/6/2008	8/31/2009	0.2351	0.00792	3-1	7/16/2009 8:59
20	3-1	15	113.8	30.33	2.51	95	7/15/2009 13:22	0.999	LSCRED	8/6/2008	8/31/2009	0.2342	0.00792	40-1	7/14/2009 13:03

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

* - RPD changed to 0% due to activity below MDC for 1201875578.1

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	104.6748	73.9013	250	153.9741	**1139.3695**	0.059	5.830	0.338	66.0464	103.2435		SAMPLE				
2	104.6450	73.8802	250	153.9303	**1078.4783**	0.061	5.520	0.333	65.0775	99.3836		SAMPLE				
3	103.9810	73.4114	250	152.9535	**2127.7392**	0.038	10.980	0.410	79.6222	168.2275		SAMPLE				
4	104.3471	73.6700	250	153.4922	**557.1866**	0.101	2.860	0.288	56.1094	68.2219		SAMPLE				
5	116.2343	82.0624	250	170.2133	**115.6812**	0.451	0.600	0.271	52.1861	52.8043		SAMPLE				
6	104.1773	73.5501	250	153.2424	**402.6221**	0.132	2.070	0.273	53.1360	60.0813		SAMPLE				
7	104.4685	73.7556	250	153.6707	**419.3511**	0.128	2.150	0.275	53.5842	61.0271		SAMPLE				
8	104.4995	73.7776	250	153.7163	**316.0700**	0.163	1.620	0.264	51.5811	56.0621		SAMPLE				
9	104.7460	73.9516	250	154.0789	**264.0129**	0.192	1.350	0.259	50.6407	53.8757		SAMPLE				
10	105.1350	74.2262	250	154.6511	**247.3272**	0.204	1.260	0.257	50.4884	53.3271		SAMPLE				
11	150.3353	106.1380	250	231.7223	**38.9479**	1.796	0.190	0.341	66.3516	66.4015		SAMPLE				
12	151.1024	106.6796	250	232.9046	**173.9546**	0.420	0.890	0.374	73.0683	74.0659		SAMPLE				
13	150.0207	105.9159	250	231.2374	**192.1149**	0.382	0.990	0.378	73.4053	74.6148		SAMPLE				
14	148.7074	104.9887	250	229.2131	**223.1338**	0.333	1.160	0.386	74.1895	75.7997		SAMPLE				
15	148.4321	104.7944	250	228.7888	**61.4402**	1.086	0.320	0.347	66.7197	66.8568		SAMPLE				
16	149.7958	105.7571	250	230.8907	**114.3211**	0.611	0.590	0.360	69.7968	70.2494		SAMPLE				
17	151.1950	106.7449	250	233.0473	**11.7345**	5.580	0.060	0.335	65.4773	65.4824		SAMPLE				
18	149.3287	105.4274	250	230.1708	**108.1698**	0.641	0.560	0.359	69.3105	69.7187		MB				
19	115.9395	81.8543	250	169.7816	**151.9273**	0.347	0.790	0.274	52.7594	53.8100	232433003.1	DUP	0.0%	0.1700		
20	197.4244	139.3834	250	317.2657	**5355.2083**	0.052	27.820	1.431	275.5046	463.6966		LCS			5733.9171	93.4%

ID = TRITIUM 16 JUL 2009 09:12

USER: 3 COMMENT:BLUE

PRESET TIME :	95.00						
DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	:EDIT
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0	RWM LIST	: OFF
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 20.0 - 270.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 990.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	3-1	95.00	122.5	3.18	11.98	36.87	3.39	0.70	97.64
2	3-2	95.00	122.4	3.78	11.07	39.47	3.28	0.98	195.90
3	3-3	95.00	122.0	3.97	10.66	38.29	3.33	0.75	294.08

Sample Count Start Time:	16 Jul 2009 08:59:31		
Data Capture Date	16 Jul 2009 10:34:40		
User Filename	S03071603-1A.XLS		
	U03071603-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	BLUE		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	3-1	95.00
H#, Total Counts:	122.5	3511	
Start, End, X-Axis:	0	990	Channel Number

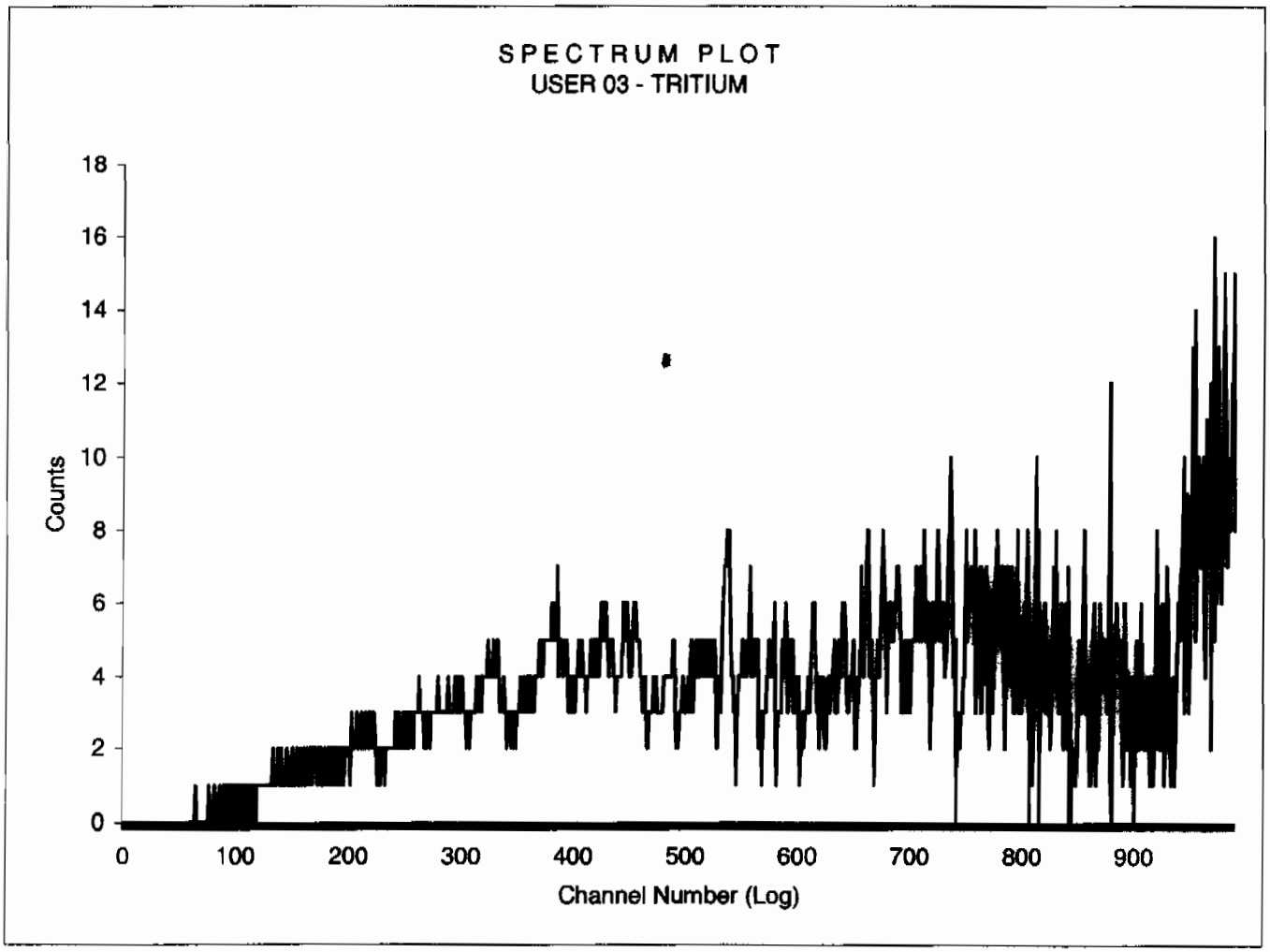

Sample Count Start Time:	16 Jul 2009 10:37:47		
Data Capture Date	16 Jul 2009 12:12:56		
User Filename	S03071603-2A.XLS		
	U03071603-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	BLUE		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	3-2	95.00
H#, Total Counts:	122.4	3750	
Start, End, X-Axis:	0	990	Channel Number

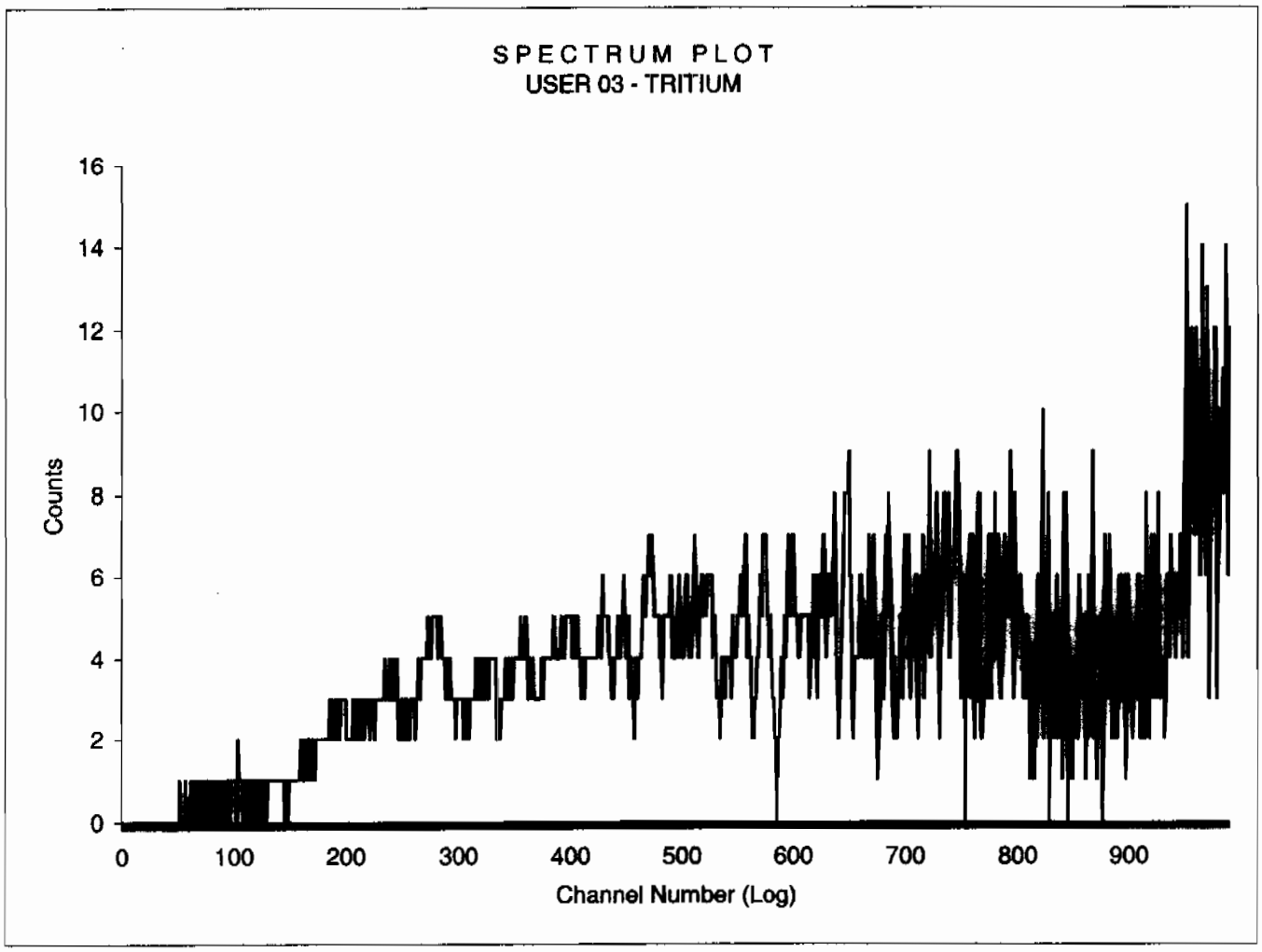

Sample Count Start Time:	16 Jul 2009 12:15:58		
Data Capture Date	16 Jul 2009 13:51:06		
User Filename	S03071603-3A.XLS		
	U03071603-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	BLUE		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	3-3	95.00
H#, Total Counts:	122.0	3638	
Start, End, X-Axis:	0	990	Channel Number

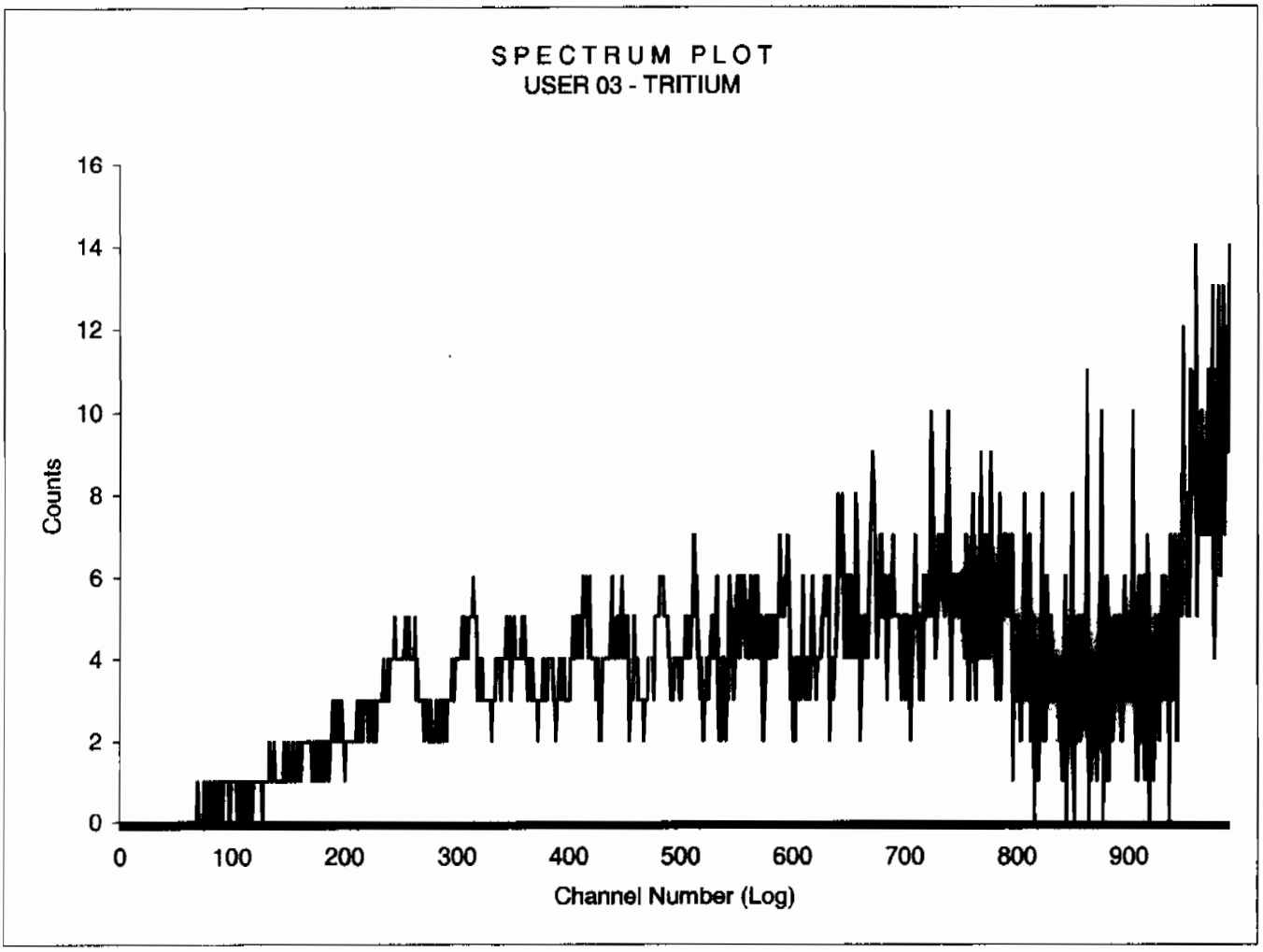

Filename: 2:48 PMab

Instrument Type	LS 6000
Data Capture Date	14 Jul 2009 13:00:15
User Filename	C:\LSCCAPTURE\BROWN\USER03\UN071401.BSF
User Number	3
User Id	TRITIUM
User Comments	RED
Scintillator Choice:	LIQUID

Sam	Rack	Time	H#	Raw CPM1	Raw CPM2	CPM Iso1	%Err1	CPM Iso2	%Err2	LumEx	ElTime
1	40-1	95.00	118.6	5.98	45.49	2.51	20.04	41.98	3.30	7.21	98.65
2	40-2	95.00	118.8	10.44	55.31	8.34	7.95	53.19	2.87	3.66	197.52
3	40-3	95.00	118.7	10.08	60.15	8.03	8.11	58.06	2.74	3.34	296.38
4	40-4	95.00	116.4	15.21	69.19	13.47	5.94	67.43	2.53	2.44	395.16
5	40-5	95.00	117.7	7.19	56.38	5.37	10.25	54.54	2.83	3.14	493.94
6	40-6	95.00	117.2	7.87	54.39	5.04	11.05	52.02	2.91	4.14	592.87
7	40-7	95.00	117.1	5.96	51.75	4.58	10.94	50.36	2.93	2.56	691.50
8	40-8	95.00	118.1	5.96	51.28	4.66	10.74	49.99	2.94	2.43	790.15
9	40-9	95.00	118.2	5.92	50.83	4.13	12.10	49.02	2.98	3.37	888.92
10	40-10	95.00	119.0	5.13	48.85	3.86	12.03	47.58	3.01	2.46	987.54
11	40-11	95.00	120.2	4.99	47.59	3.77	12.16	46.36	3.05	2.47	1086.16
12	40-12	0.05	117.2	0.00	20.00	0.00	0.00	20.00	200.00	16.74	1087.08
13	18-1	0.05	120.4	0.00	100.00	0.00	0.00	100.00	89.44	8.88	1088.14
14	18-2	0.05	118.3	0.00	60.00	0.00	0.00	60.00	115.47	11.68	1089.07
15	18-3	0.05	113.5	0.00	20.00	0.00	0.00	20.00	200.00	47.00	1089.97
16	18-4	0.05	112.9	0.00	60.00	0.00	0.00	60.00	115.47	14.30	1090.87
17	18-5	0.05	117.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1091.77
18	18-6	0.05	120.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1092.68
19	18-7	0.05	117.1	20.00	60.00	20.00	200.00	60.00	115.47	12.32	1093.58
20	18-8	0.05	117.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1094.50
21	18-9	0.05	116.3	20.00	20.00	20.00	200.00	20.00	200.00	36.35	1095.40

2-16-09

7/14/09

7/14/09

Filename: 2:58 PMab

Instrument Type	LS 6000
Data Capture Date	15 Jul 2009 08:34:26
User Filename	C:\LSCCAPTURE\BROWN\USER03\UN071501.BSF
User Number	3
User Id	TRITIUM
User Comments	RED
Scintillator Choice:	LIQUID

Sam	Rack	Time	H#	Raw CPM1	Raw CPM2	CPM Iso1	%Err1	CPM Iso2	%Err2	LumEx
1	18-1	30.00	117.0	3.93	41.53	2.70	26.83	40.30	5.84	2.80
2	18-2	30.00	118.8	4.57	43.13	3.40	22.95	41.97	5.71	2.66
3	18-3	30.00	116.2	5.03	44.53	3.50	23.41	43.00	5.67	3.36
4	18-4	30.00	112.3	4.73	45.07	3.67	21.67	44.00	5.57	2.35
5	18-5	30.00	111.3	3.97	40.47	2.83	25.67	39.33	5.91	2.75
6	18-6	30.00	115.6	4.70	45.37	3.10	25.54	43.77	5.62	3.48
7	18-7	30.00	119.0	4.40	44.37	2.57	29.85	42.53	5.72	4.04
8	18-8	30.00	115.3	4.13	42.63	3.07	24.21	41.57	5.74	2.48
~~9~~	~~18-9~~	~~30.00~~	~~116.0~~	~~4.13~~	~~42.67~~	~~2.53~~	~~29.31~~	~~41.07~~	~~5.81~~	~~3.70~~

7/16/09

Filename: 2:59 PMab

Instrument Type	LS 6000
Data Capture Date	15 Jul 2009 13:21:52
User Filename	C:\LSCCAPTURE\BROWN\USER02\UN071501.BSF
User Number	2
User Id	TRITIUM
User Comments	RED
Scintillator Choice:	LIQUID

Sam	Rack	Time	H#	Raw CPM1	Raw CPM2	CPM Iso1	%Err1	CPM Iso2	%Err2	LumEx
1	3-1	15.00	113.8	31.60	82.00	30.33	9.57	80.73	5.79	1.59

Sample Count Start Time:	14 Jul 2009 13:03:54		
Data Capture Date	14 Jul 2009 14:39:20		
User Filename	S03071440-1A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	40-1	95.00
H#, Total Counts:	118.6	3988	
Start, End, X-Axis:	0	990	Channel Number

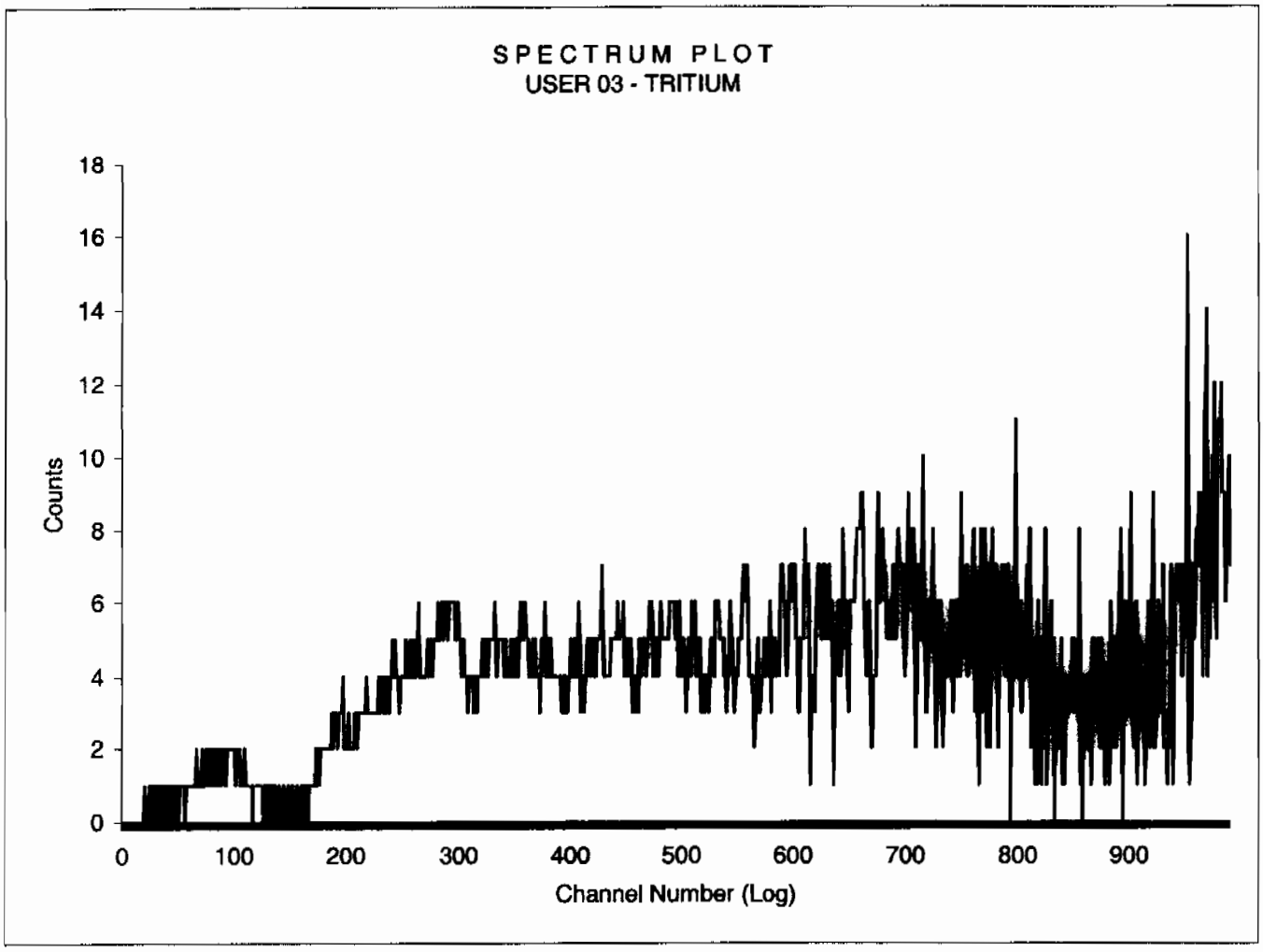

Sample Count Start Time:	14 Jul 2009 14:42:46		
Data Capture Date	14 Jul 2009 16:18:42		
User Filename	S03071440-2A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	40-2	95.00
H#, Total Counts:	118.8	5053	
Start, End, X-Axis:	0	990	Channel Number

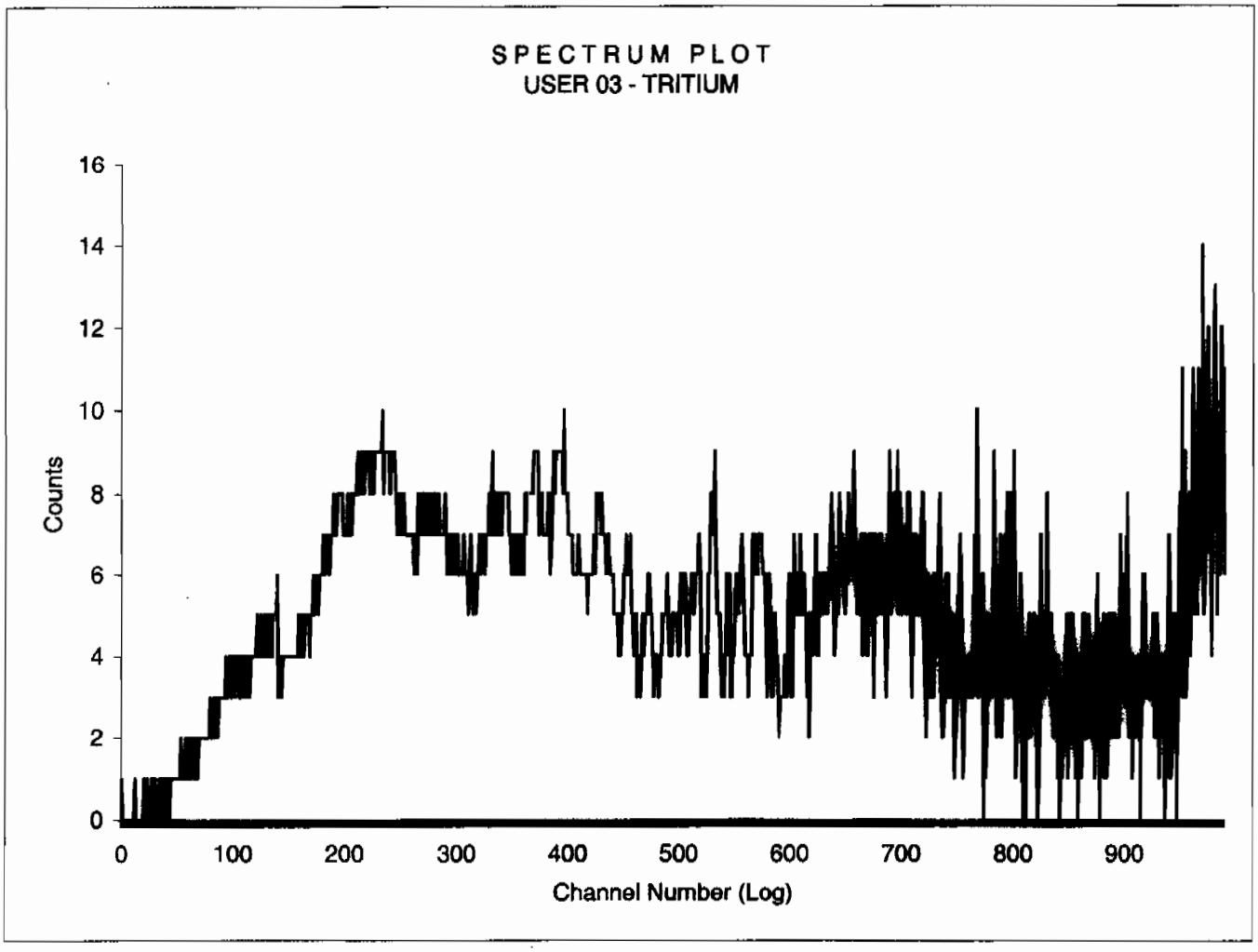

Sample Count Start Time:	14 Jul 2009 16:21:38		
Data Capture Date	14 Jul 2009 17:57:04		
User Filename	S03071440-3A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	40-3	95.00
H#, Total Counts:	118.7	5516	
Start, End, X-Axis:	0	990	Channel Number

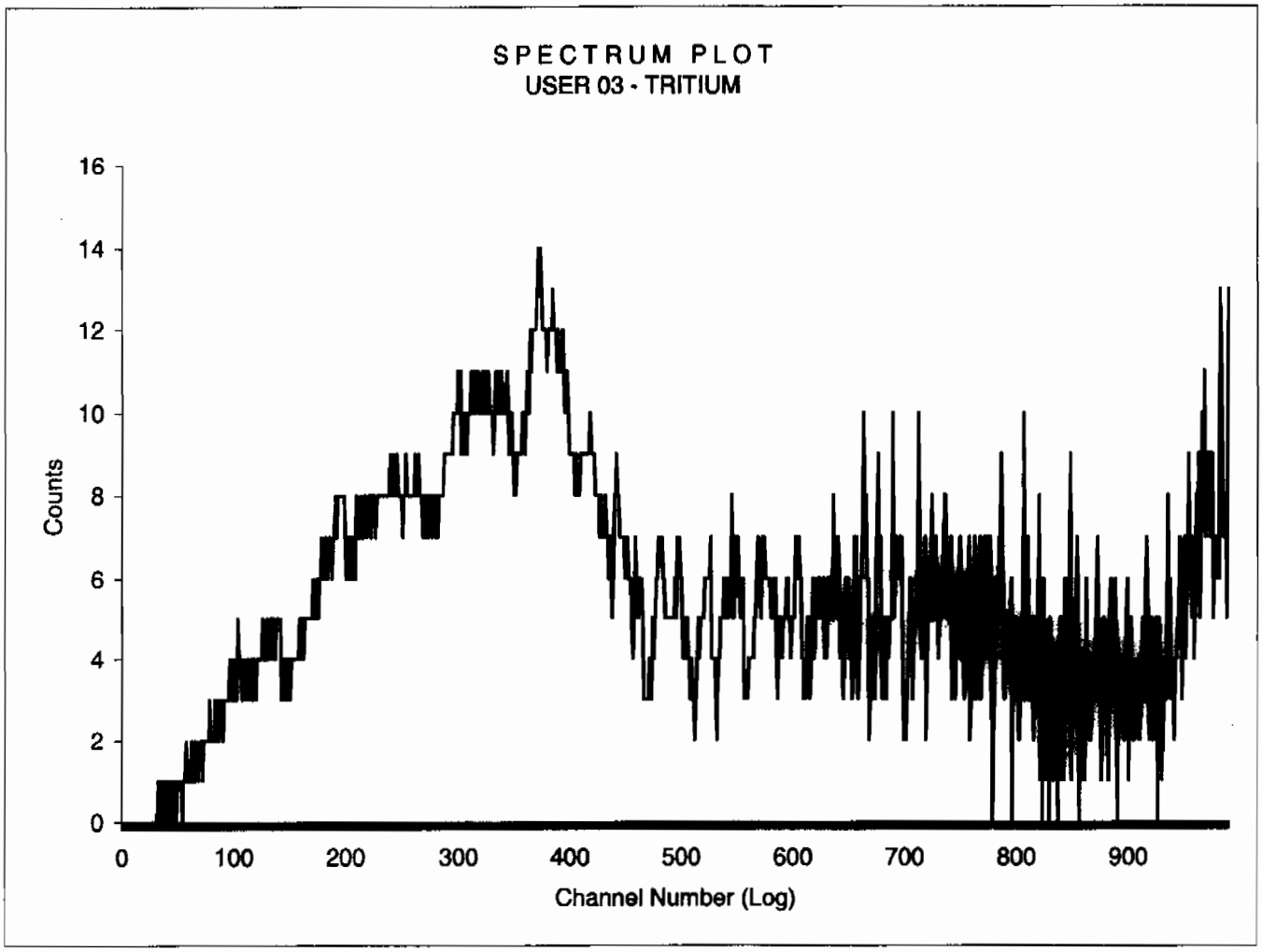

Sample Count Start Time:	14 Jul 2009 18:00:25		
Data Capture Date	14 Jul 2009 19:35:51		
User Filename	S03071440-4A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	40-4	95.00
H#, Total Counts:	116.4	6374	
Start, End, X-Axis:	0	990	Channel Number

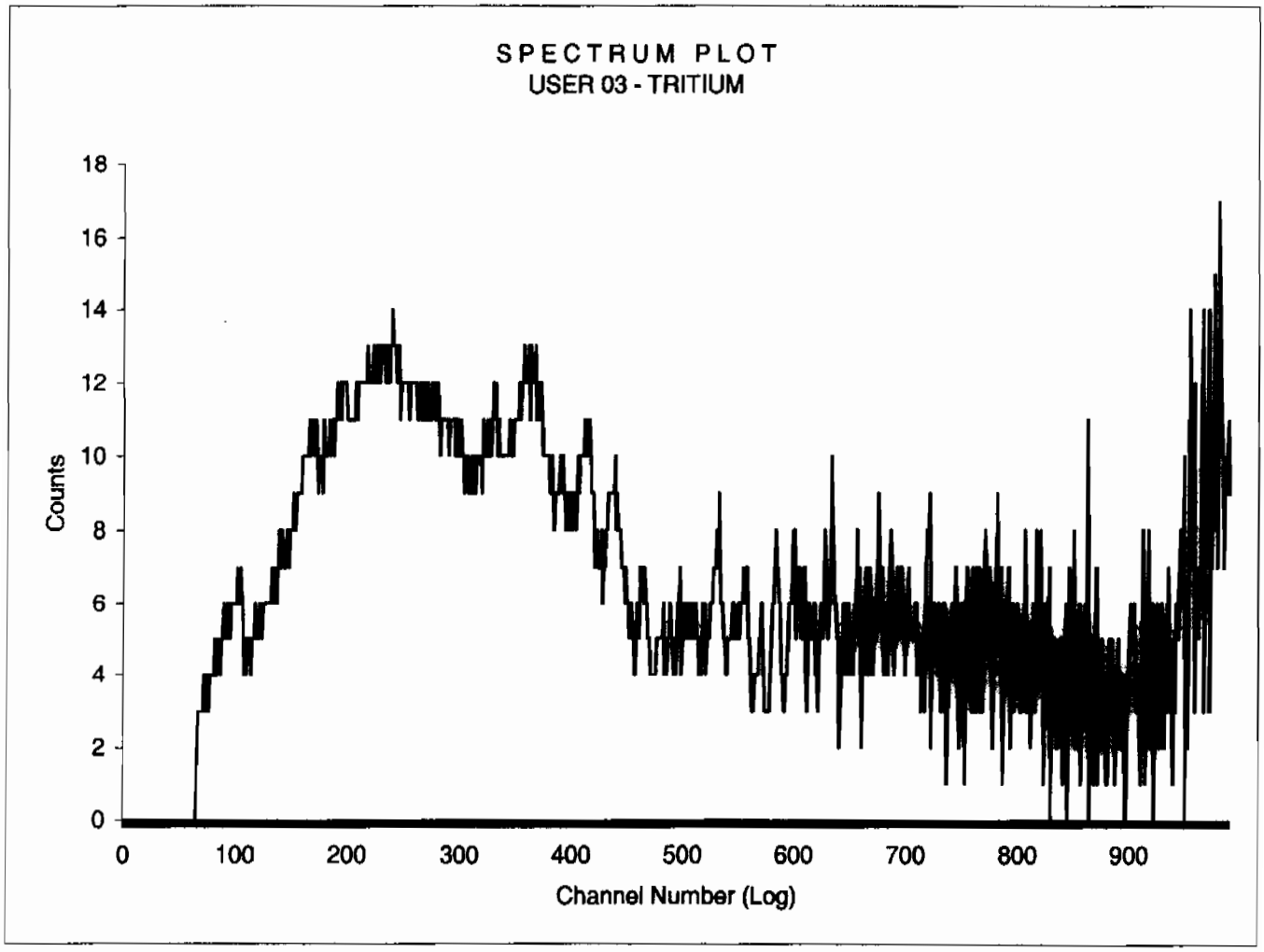

Sample Count Start Time:	14 Jul 2009 19:39:11		
Data Capture Date	14 Jul 2009 21:14:38		
User Filename	S03071440-5A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	40-5	95.00
H#, Total Counts:	117.7	5181	
Start, End, X-Axis:	0	990	Channel Number

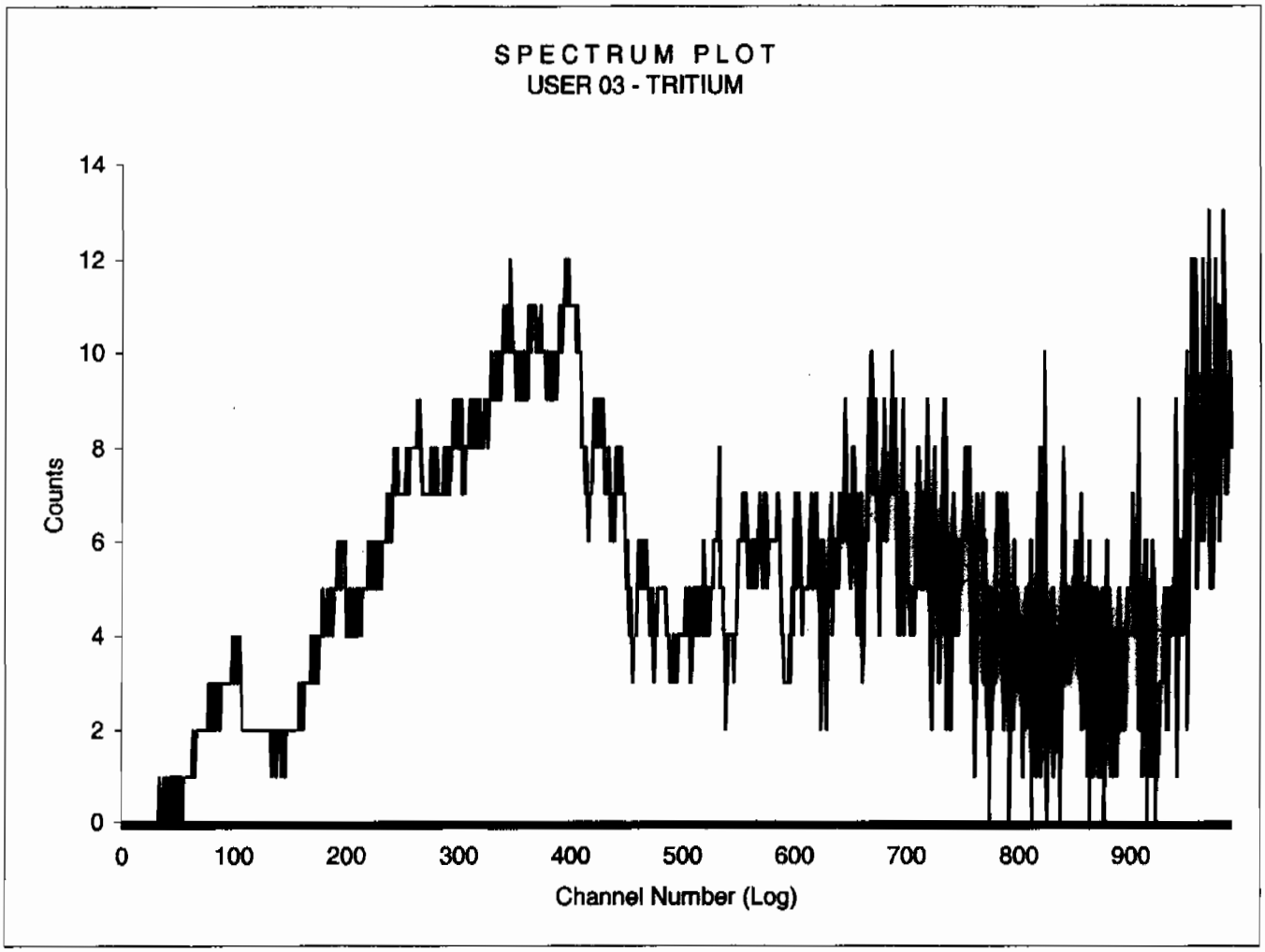

Sample Count Start Time:	14 Jul 2009 22:56:45		
Data Capture Date	15 Jul 2009 00:32:12		
User Filename	S03071540-7A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	40-7	95.00
H#, Total Counts:	117.1	4784	
Start, End, X-Axis:	0	990	Channel Number

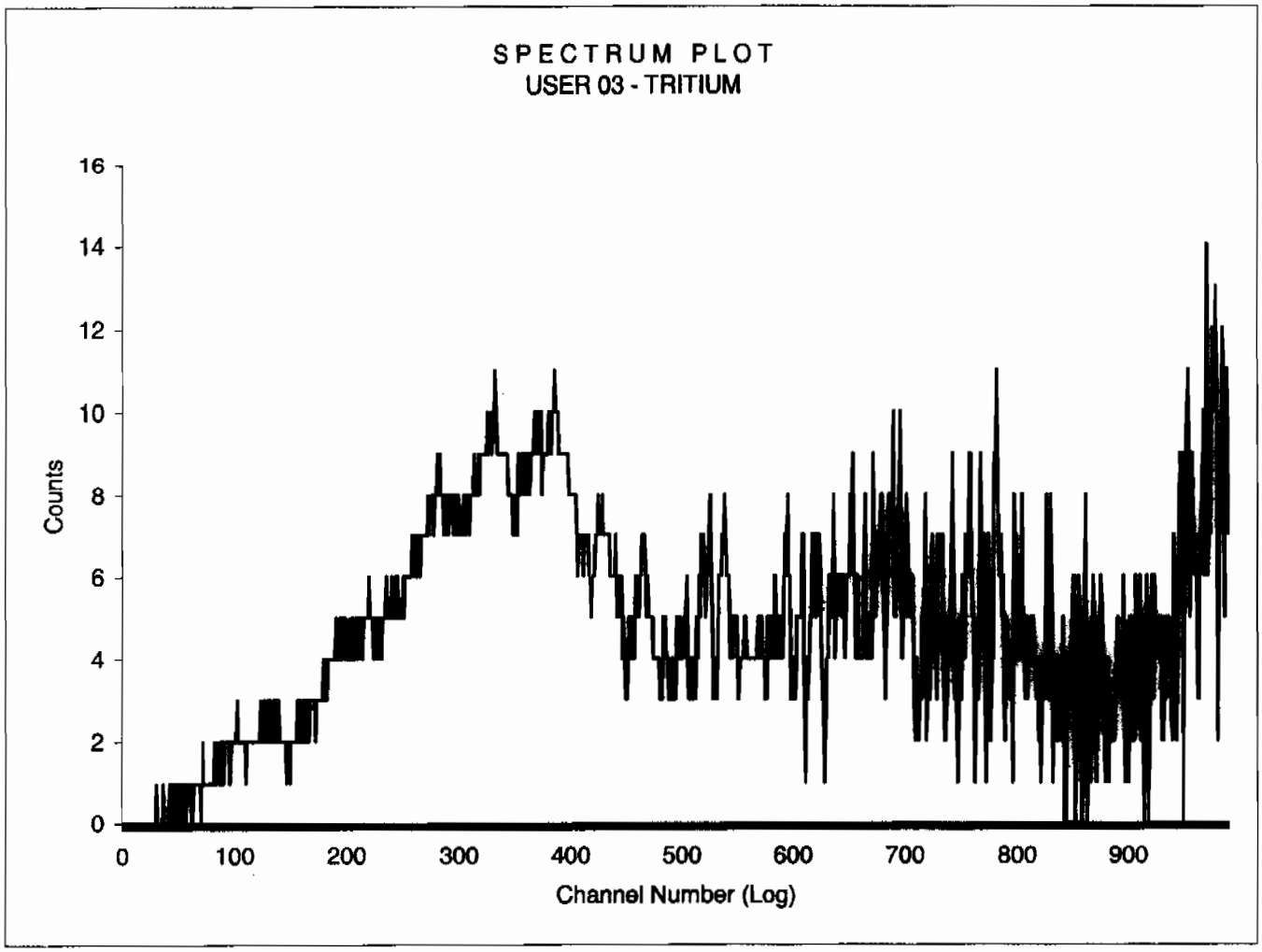

Sample Count Start Time:	15 Jul 2009 00:35:24		
Data Capture Date	15 Jul 2009 02:10:50		
User Filename	S03071540-8A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	40-8	95.00
H#, Total Counts:	118.1	4749	
Start, End, X-Axis:	0	990	Channel Number

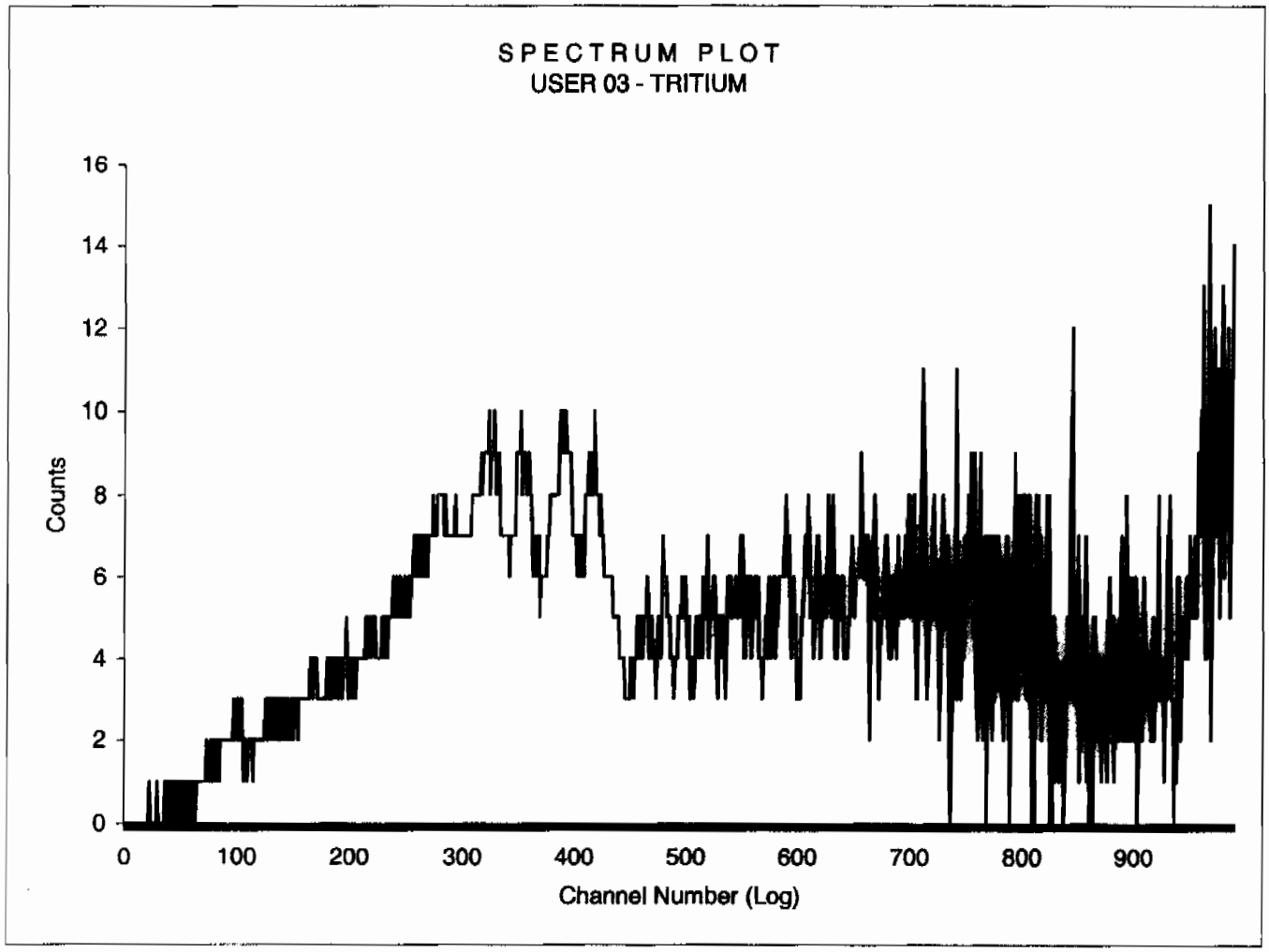

Sample Count Start Time:	15 Jul 2009 02:14:10		
Data Capture Date	15 Jul 2009 03:49:37		
User Filename	S03071540-9A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	40-9	95.00
H#, Total Counts:	118.2	4657	
Start, End, X-Axis:	0	990	Channel Number

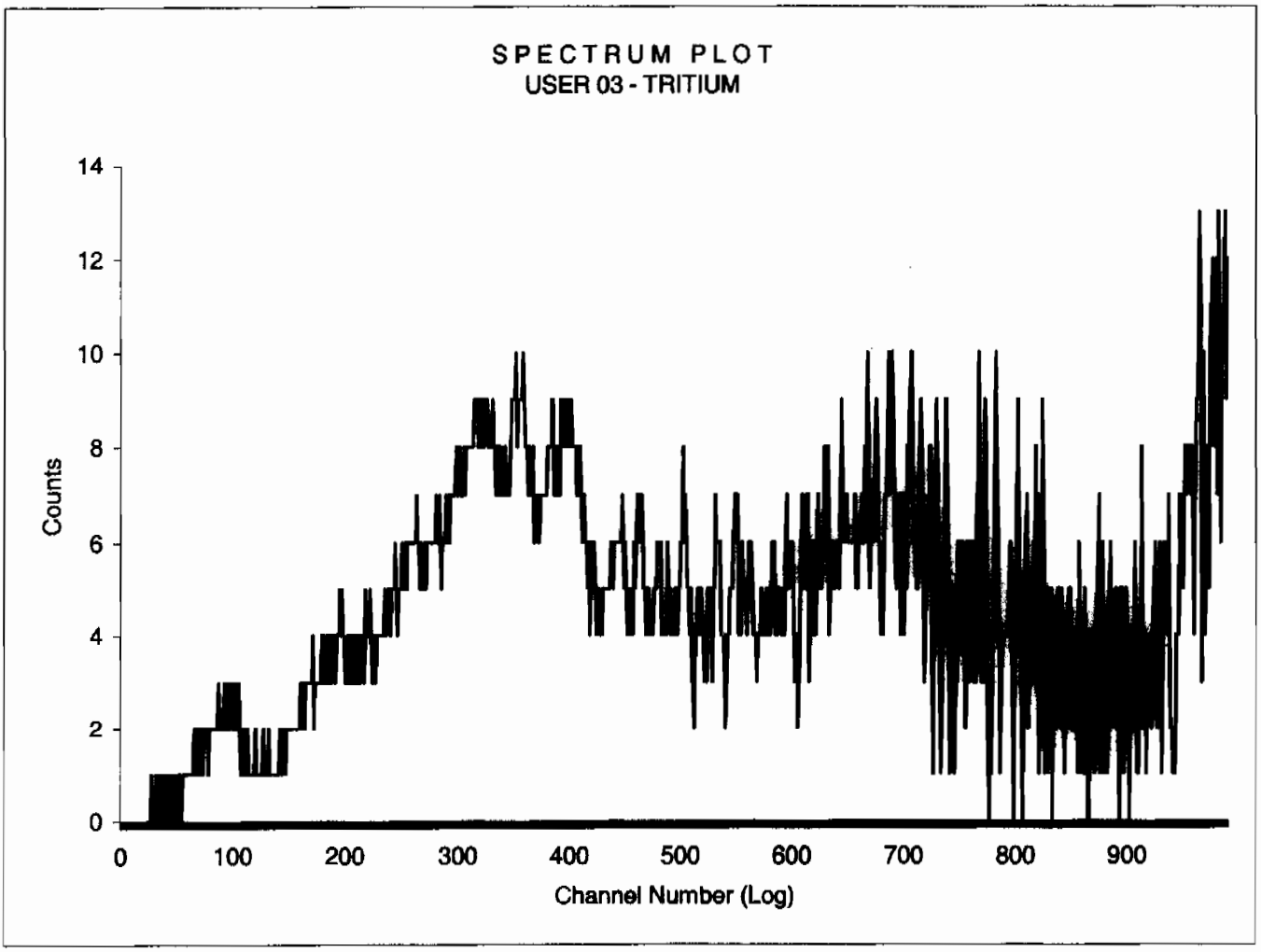

Sample Count Start Time:	15 Jul 2009 03:52:47		
Data Capture Date	15 Jul 2009 05:28:14		
User Filename	S03071540-10A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	40-10	95.00
H#, Total Counts:	119.0	4520	
Start, End, X-Axis:	0	990	Channel Number

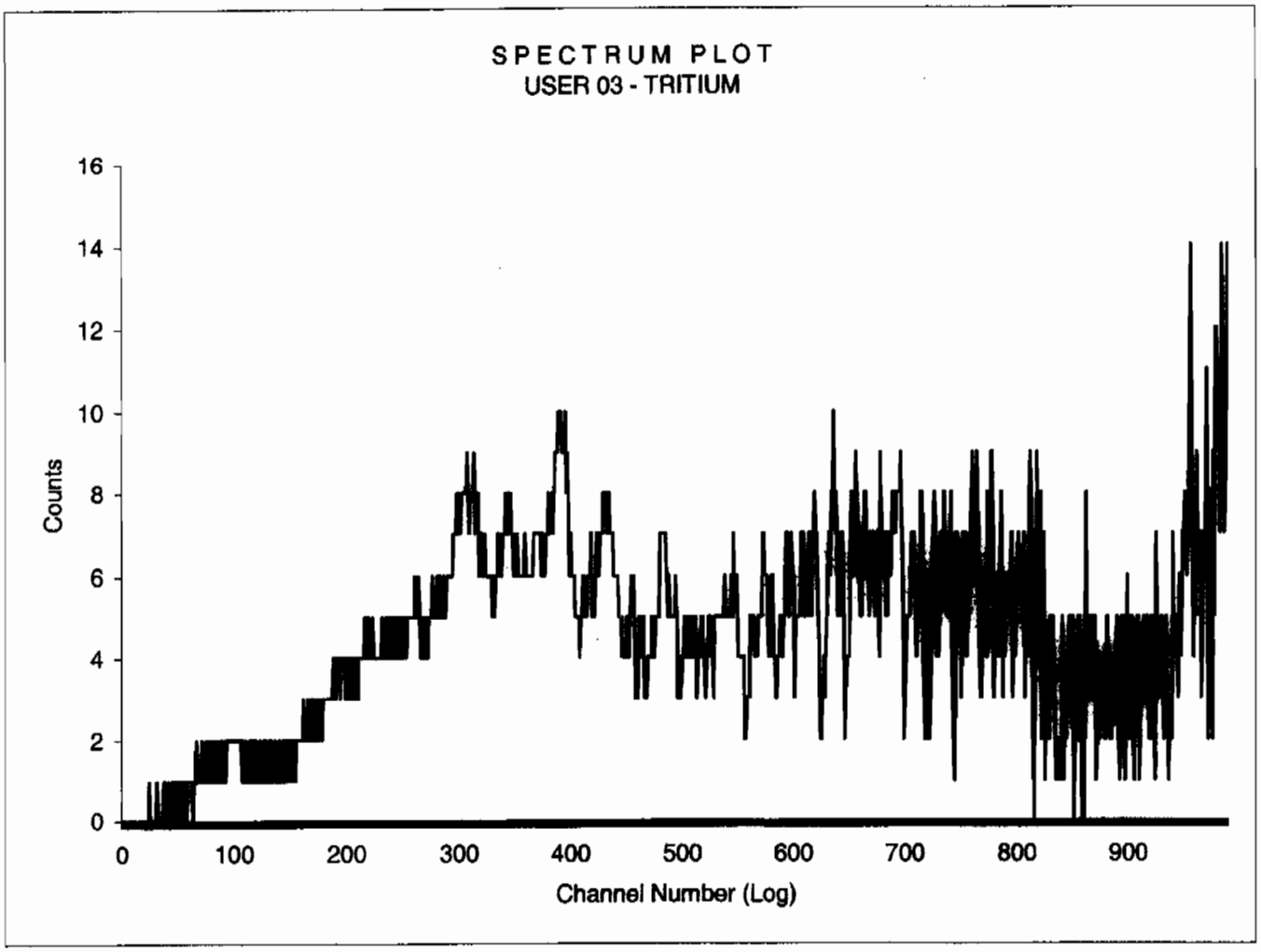

Sample Count Start Time:	15 Jul 2009 05:31:25		
Data Capture Date	15 Jul 2009 07:06:57		
User Filename	S03071540-11A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	40-11	95.00
H#, Total Counts:	120.2	4404	
Start, End, X-Axis:	0	990	Channel Number

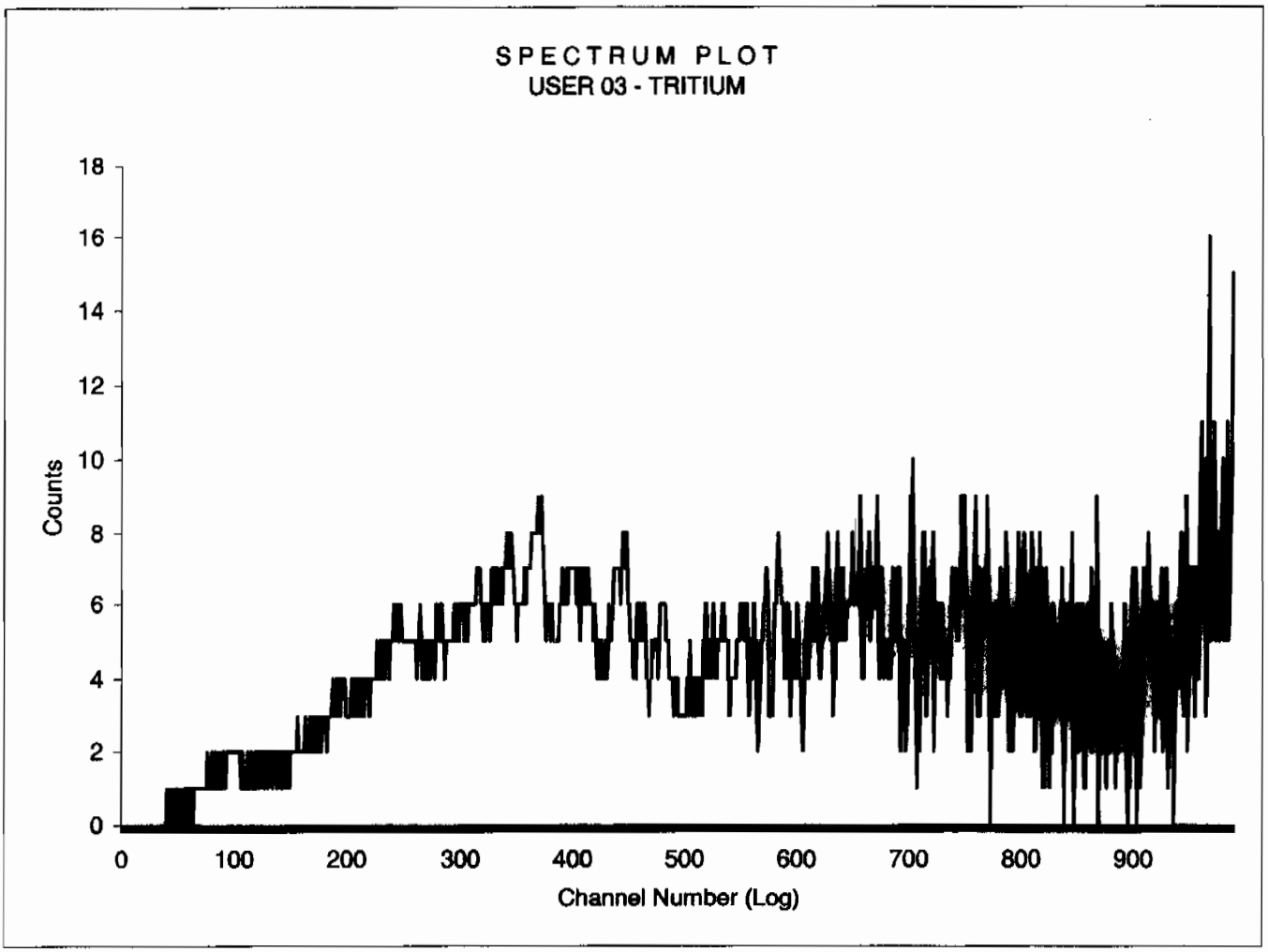

Sample Count Start Time:	15 Jul 2009 08:35:45		
Data Capture Date	15 Jul 2009 09:06:09		
User Filename	S03071518-1B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	18-1	30.00
H#, Total Counts:	117.0	1209	
Start, End, X-Axis:	0	990	Channel Number

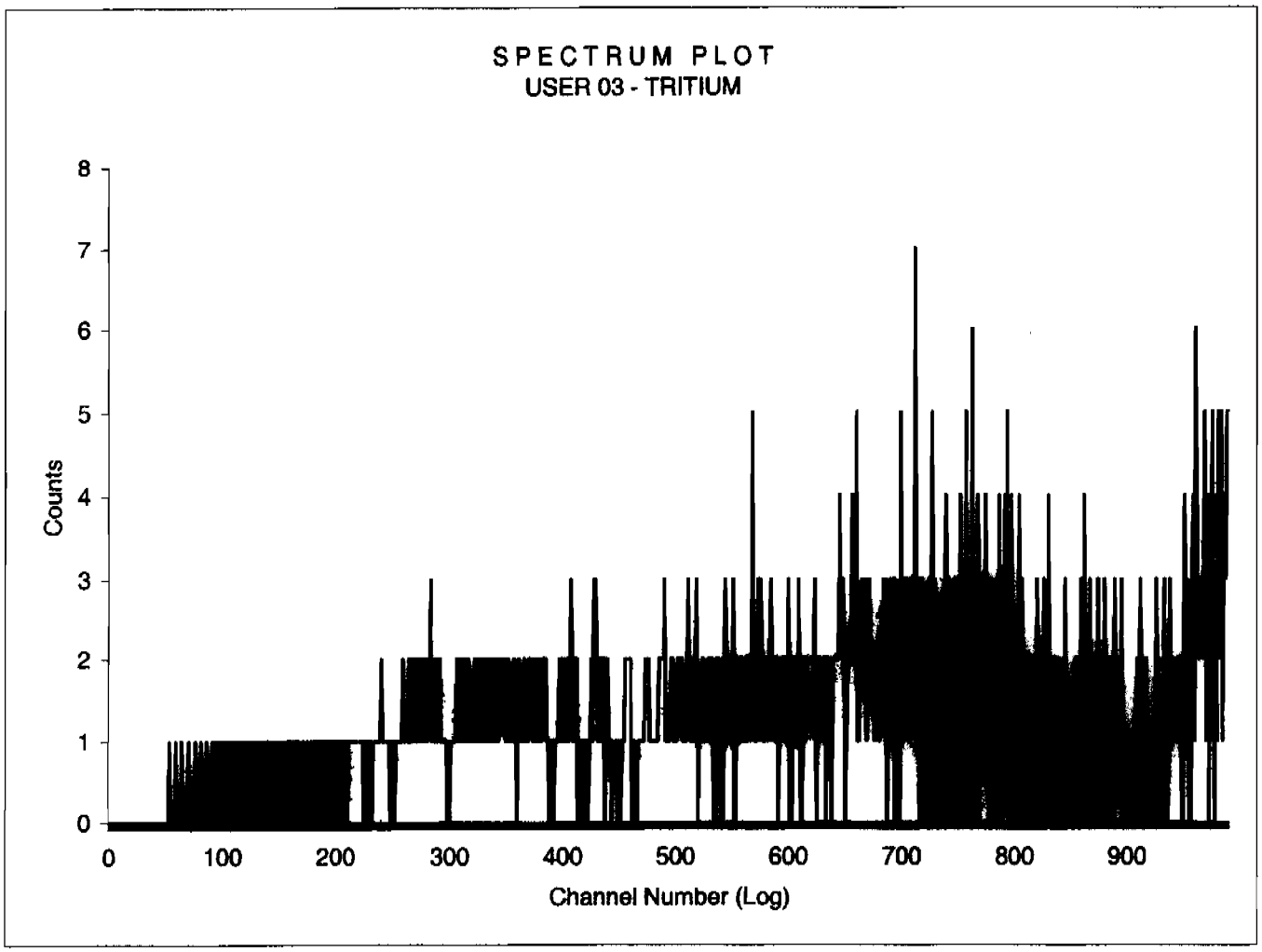

Sample Count Start Time:	15 Jul 2009 09:07:34		
Data Capture Date	15 Jul 2009 09:37:59		
User Filename	S03071518-2B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	18-2	30.00
H#, Total Counts:	118.8	1259	
Start, End, X-Axis:	0	990	Channel Number

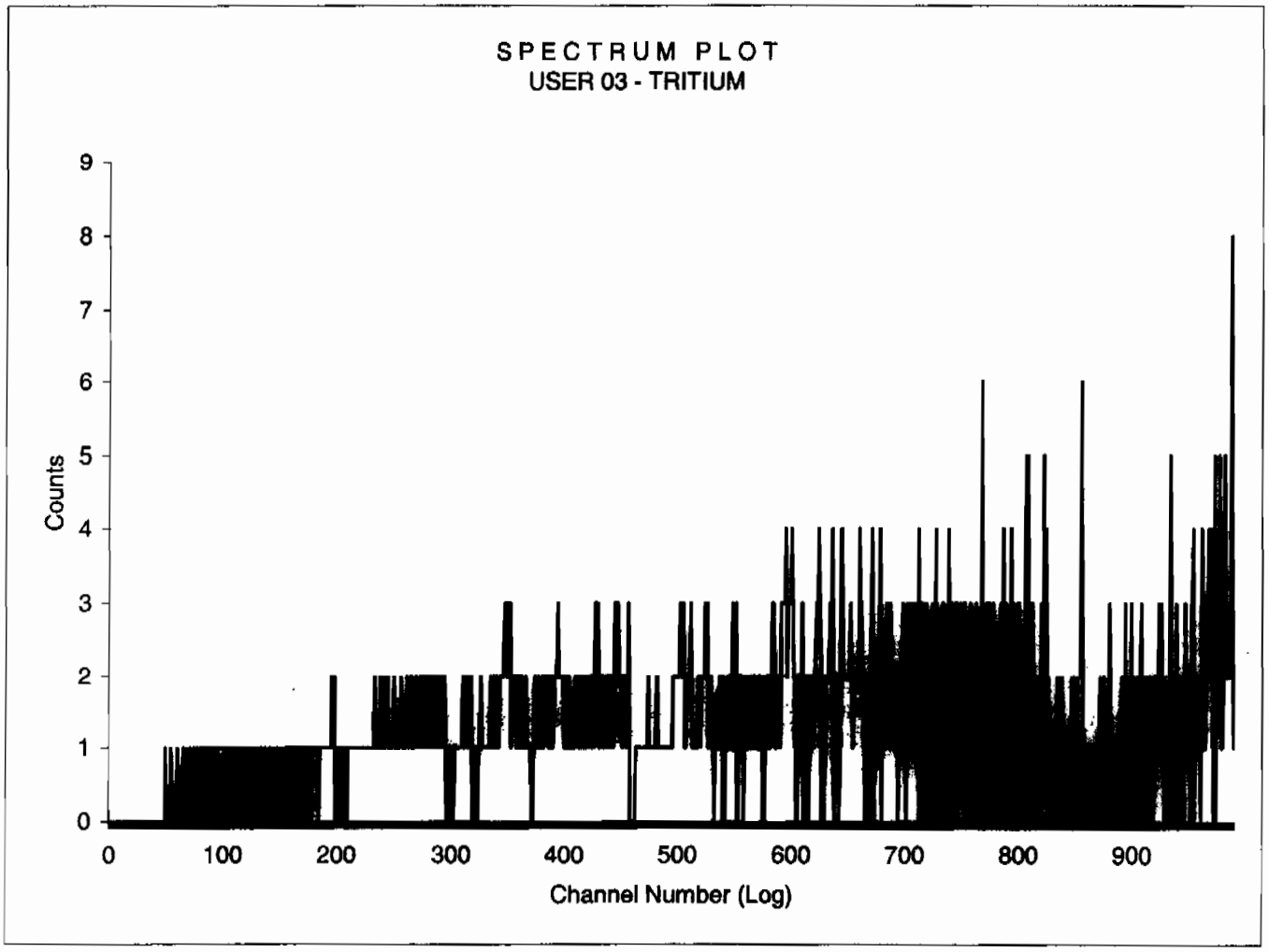

Sample Count Start Time:	15 Jul 2009 09:39:25		
Data Capture Date	15 Jul 2009 10:09:50		
User Filename	S03071518-3B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	18-3	30.00
H#, Total Counts:	116.2	1290	
Start, End, X-Axis:	0	990	Channel Number

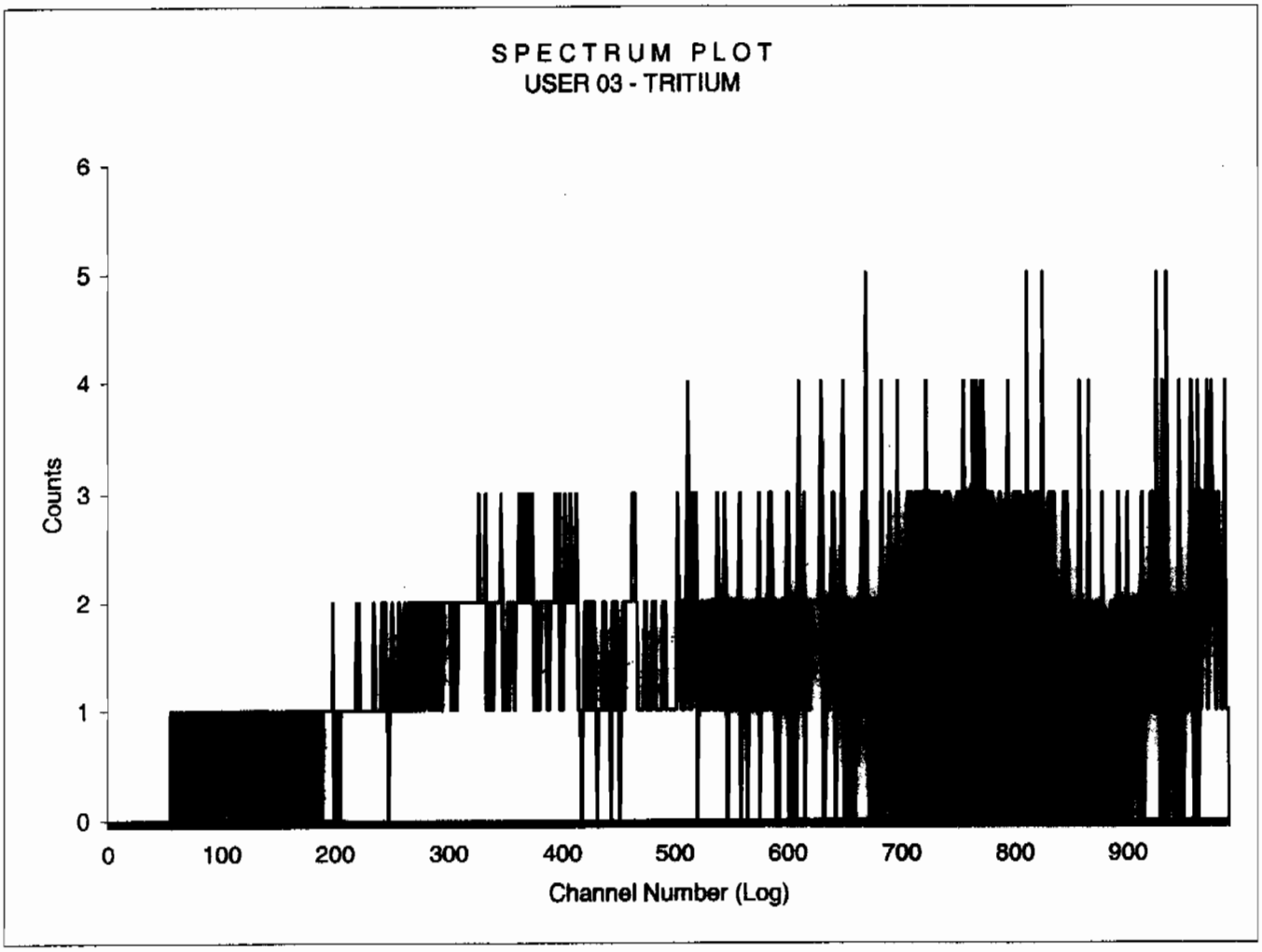

Sample Count Start Time:	15 Jul 2009 10:11:14		
Data Capture Date	15 Jul 2009 10:41:39		
User Filename	S03071518-4B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	18-4	30.00
H#, Total Counts:	112.3	1320	
Start, End, X-Axis:	0	990	Channel Number

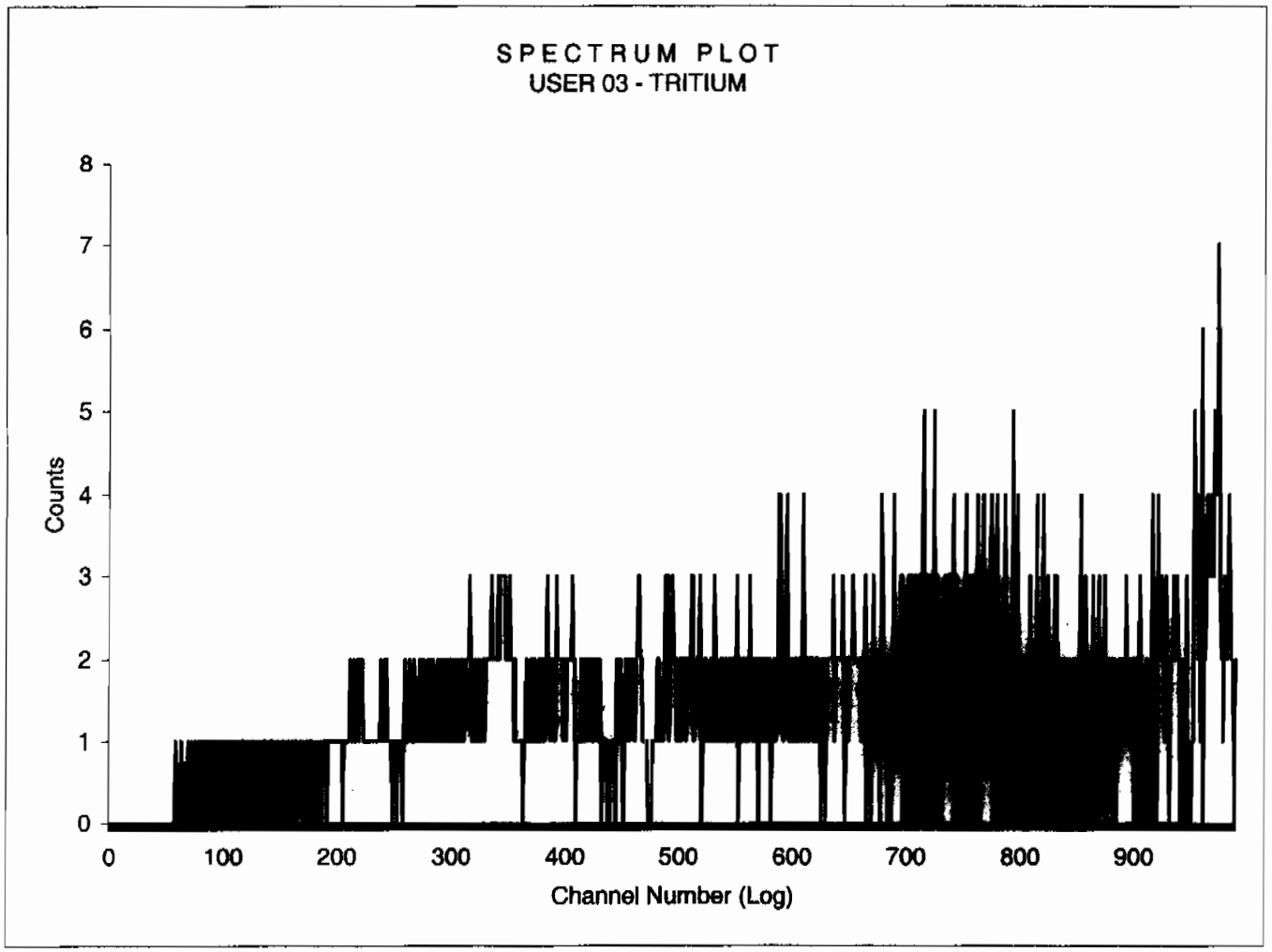

Sample Count Start Time:	15 Jul 2009 10:43:04		
Data Capture Date	15 Jul 2009 11:13:28		
User Filename	S03071518-5B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	18-5	30.00
H#, Total Counts:	111.3	1180	
Start, End, X-Axis:	0	990	Channel Number

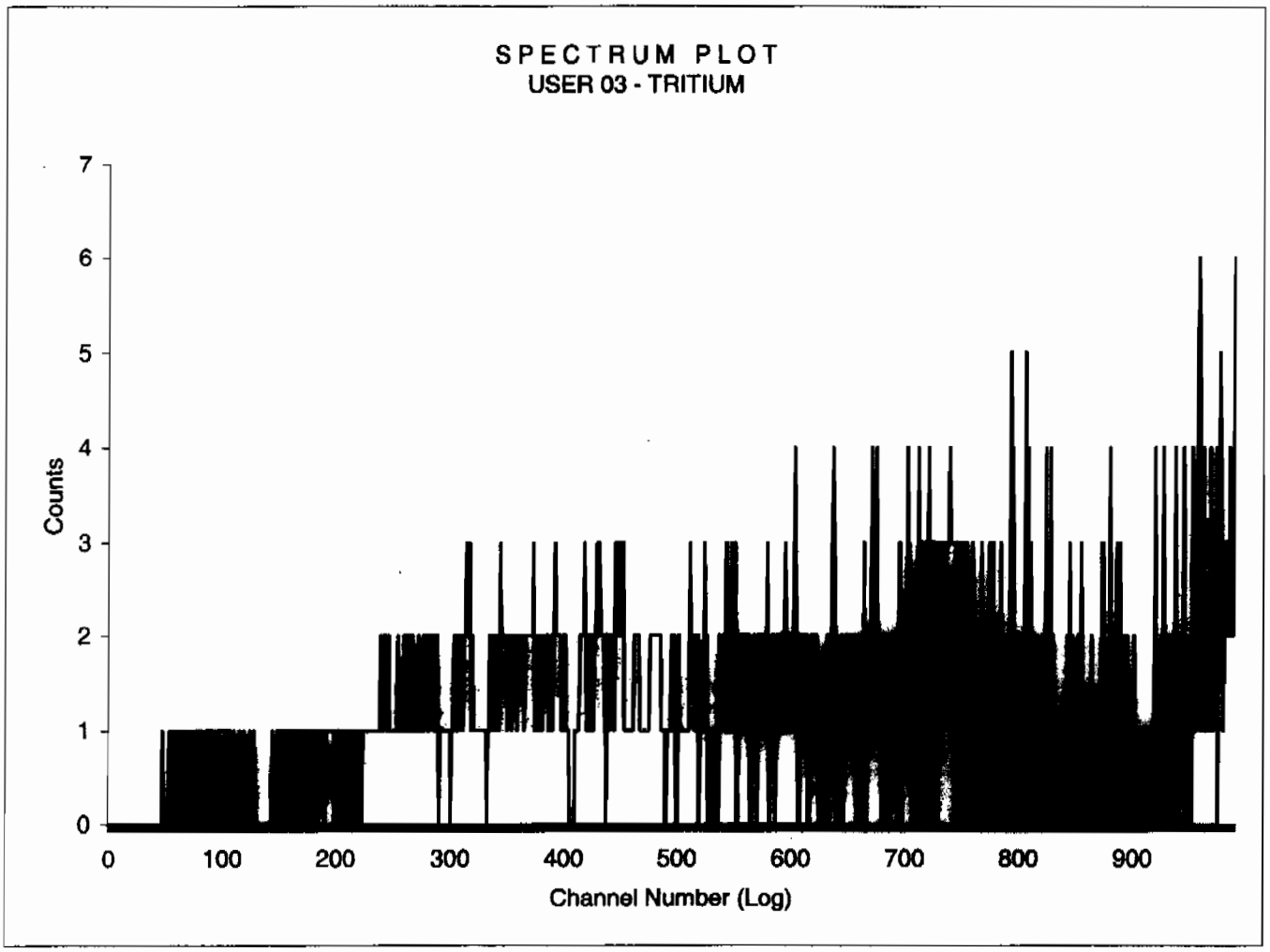

Sample Count Start Time:	15 Jul 2009 11:14:55		
Data Capture Date	15 Jul 2009 11:45:21		
User Filename	S03071518-6B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	18-6	30.00
H#, Total Counts:	115.6	1313	
Start, End, X-Axis:	0	990	Channel Number

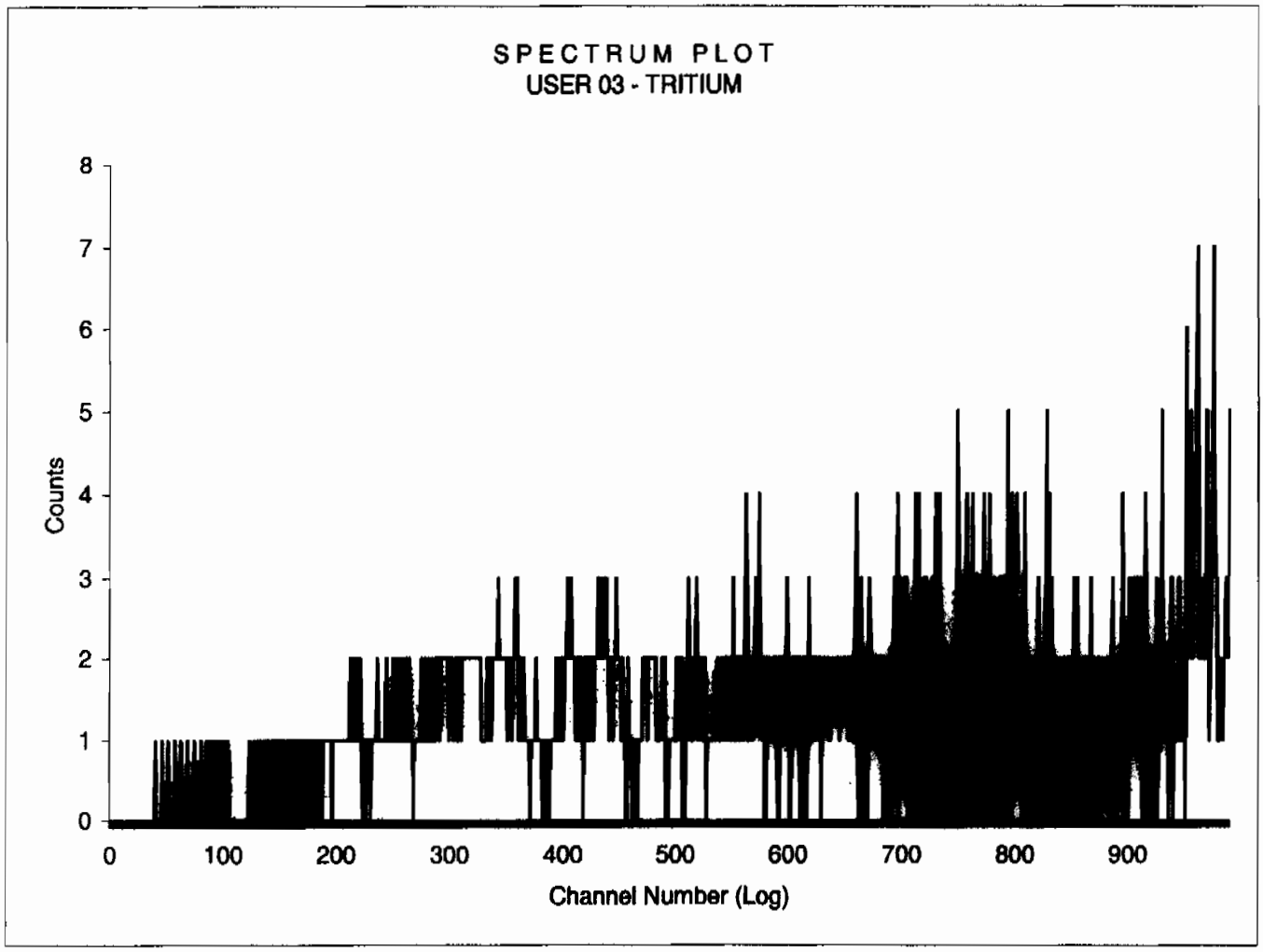

Sample Count Start Time:	15 Jul 2009 11:46:50		
Data Capture Date	15 Jul 2009 12:17:15		
User Filename	S03071518-7B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	18-7	30.00
H#, Total Counts:	119.0	1276	
Start, End, X-Axis:	0	990	Channel Number

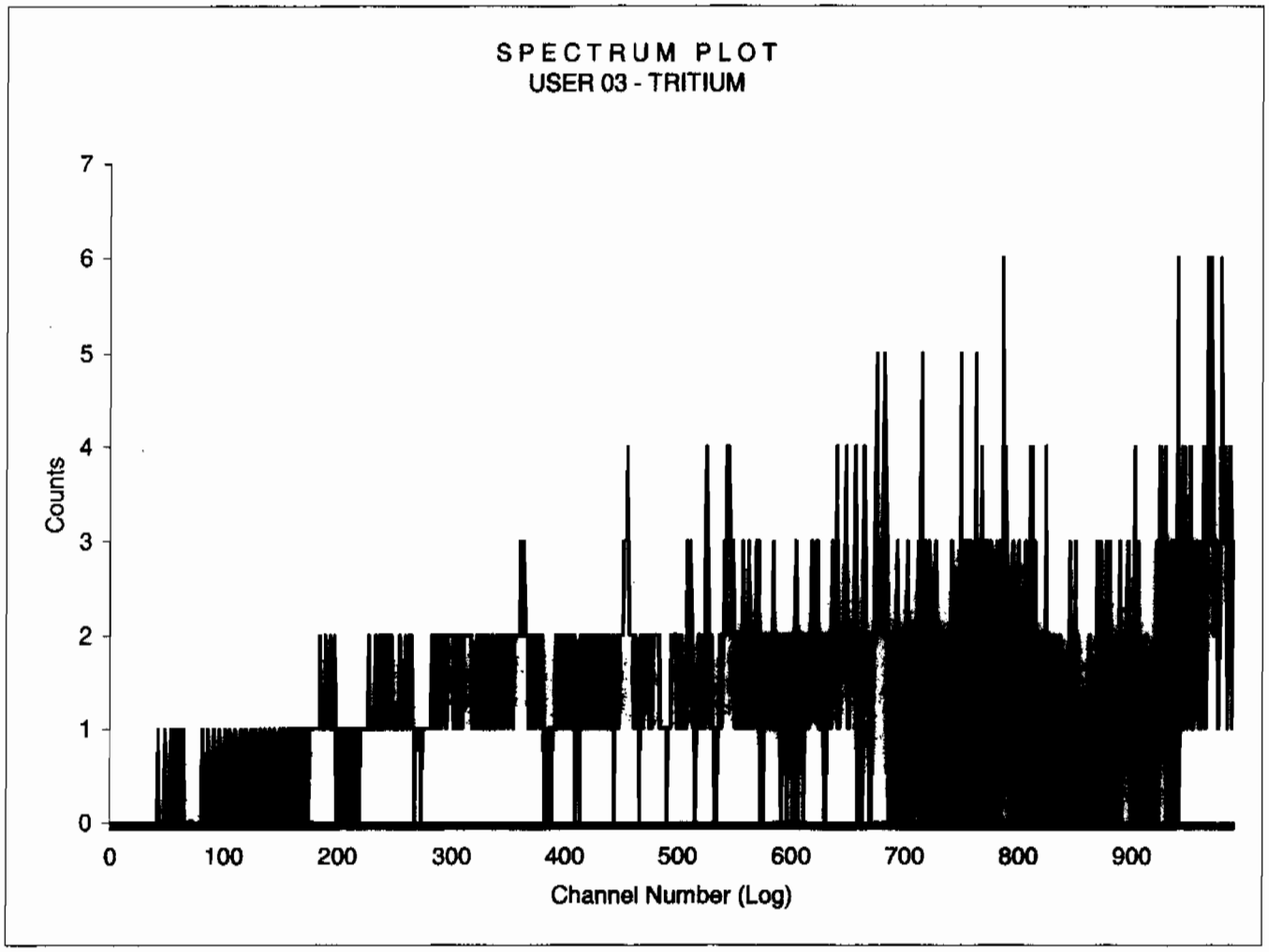

Sample Count Start Time:	15 Jul 2009 12:18:37		
Data Capture Date	15 Jul 2009 12:49:03		
User Filename	S03071518-8B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	18-8	30.00
H#, Total Counts:	115.3	1247	
Start, End, X-Axis:	0	990	Channel Number

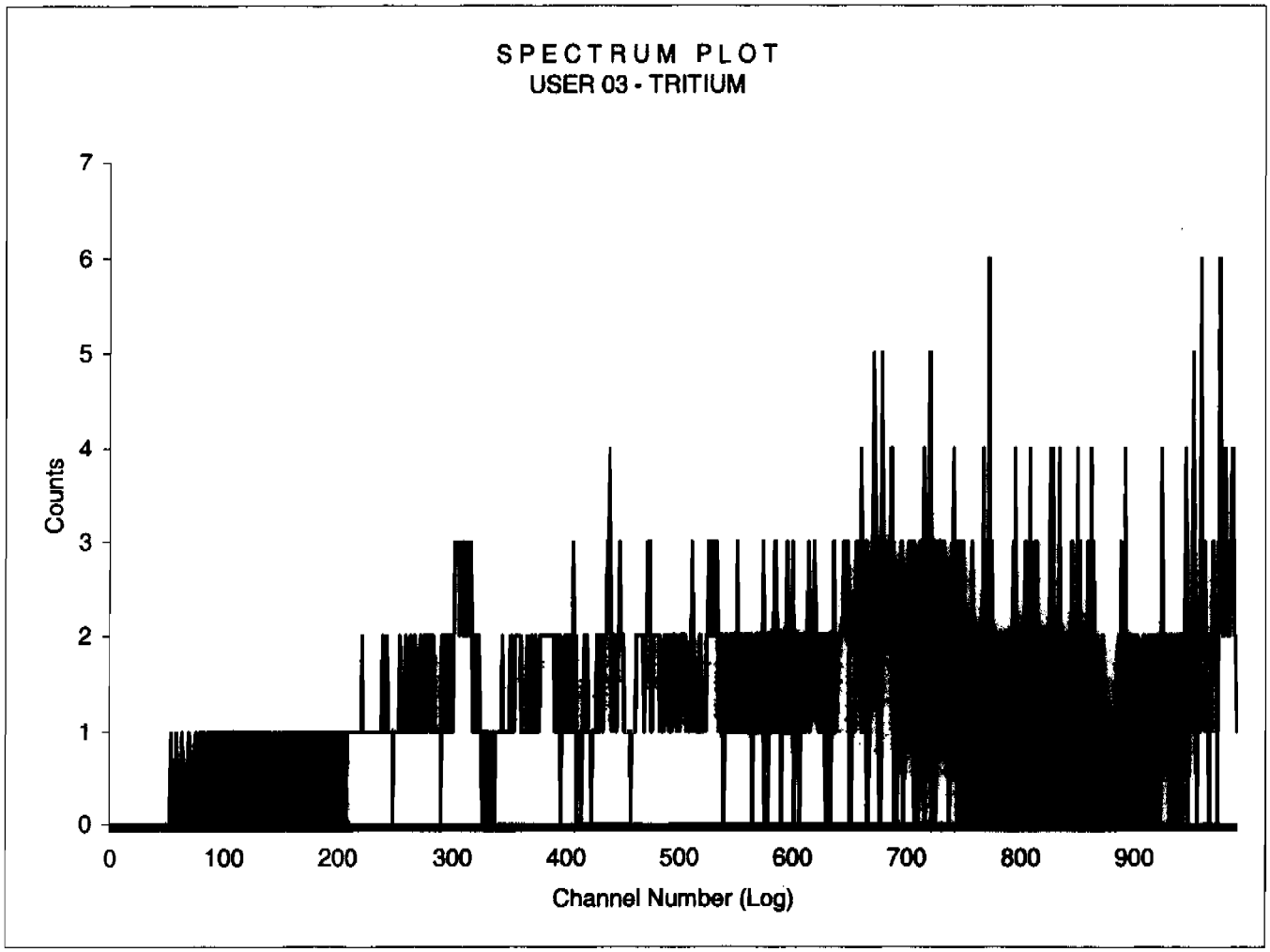

Sample Count Start Time:	15 Jul 2009 13:22:45		
Data Capture Date	15 Jul 2009 13:37:30		
User Filename	S02071503-1A.XLS		
	U02071503-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	3-1	15.00
H#, Total Counts:	113.8	1211	
Start, End, X-Axis:	0	990	Channel Number

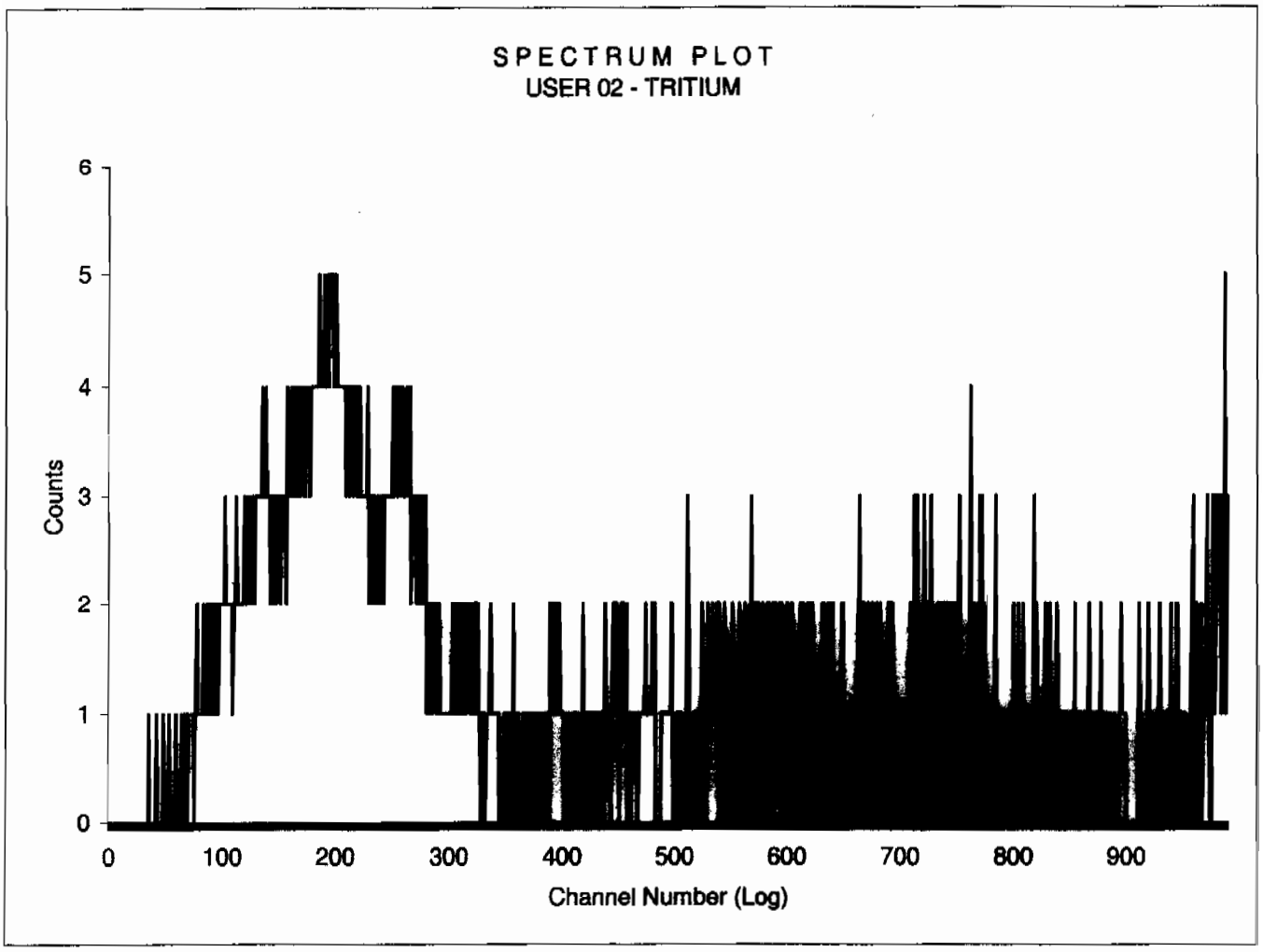

Radiochemistry Batch Checklist, Rev 9

Batch# 883039 Product: H3 Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		~~N/A~~ NCR 712814
Batch non-conformances second reviewed and disposition verified to be completed.	✓		~~N/A~~ HCM 7/17/09
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Dana Marie Hunt

Secondary Review Performed By: Heather G. McCarty 7/17/09

LANL 7/23/09

Tritium Que Sheet

VACUUM

17-JUL-09

Batch #: 883039 **Analyst:** KXK2 **First Client Due Date** 20-JUL-09 **Internal Due Date:** 09-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** NA **Expiration Date:** NA **Vol:** NA

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.1

Prep Date: 7/13/09 **Initials:** KXKZ **Pipet ID:** 29709168 **Witness:** EXKZ 7/14/09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	TOTAL MOISTURE Dist Vol (mL)
232433001-1	CAMO-09-6007	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	35-1	21		6226.41	6200.10	26.31 *
232746001-1	CAMO-09-9956	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-2	1		390.82	336.11	54.71
232746002-1	CAMO-09-9950	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-3	2		479.50	429.15	50.35
232746003-1	CAMO-09-9952	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-4	3		383.54	343.65	39.89
232746004-1	CAMO-09-9958	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-5	4		504.96	453.45	51.51
232746005-1	CAMO-09-9957	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-6	5		395.05	355.15	39.90
232746006-1	CAMO-09-9951	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-7	6		471.75	424.10	47.65
232746007-1	CAMO-09-10031	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-8	7		641.44	569.60	71.84
232746008-1	CAMO-09-9990	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-9	8		682.54	548.76	133.78
232754001-1	CAMO-09-6615	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	54-10	9		321.59	298.44	23.15
232754002-1	CAMO-09-6614	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	54-11	10		431.06	389.25	41.81
232754003-1	CAMO-09-6613	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	54-12	11		454.58	410.49	44.09
232758002-1	CAMO-09-9962	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	27-1	12		634.14	537.12	97.02
232758003-1	CAMO-09-9964	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	27-2	13		572.53	493.52	79.01
232758004-1	CAMO-09-9963	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	27-3	14		706.07	588.16	117.91
232758005-1	CAMO-09-10032	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	27-4	15		646.69	550.33	96.36
232851001-1	CAMO-09-7145	SAMPLE		.25 pCi/mL	SOIL	LANL010	01-JUL-09	10	27-5	16		566.54	487.22	79.32
232851002-1	CAMO-09-7146	SAMPLE		.25 pCi/mL	SOIL	LANL010	01-JUL-09	10	27-6	17		547.42	494.32	53.10
1201875658-1	MB for batch 883039	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	27-7	18		20	0	20
1201875659-1	CAMO-09-7145(232851001DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	01-JUL-09	10	27-8	19		566.54	487.22	79.32
1201875660-1	LCS for batch 883039	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	28-1	20		20	0	20

7/17/09

Bkg Rack #: 54-1

* 30-1

Comments:

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656*

GEL Laboratories LLC, Radiochemistry Division

Bkg prepared with dead water? Yes/No

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Econscint Ultra)*

Data Reviewed By: 7/17/09

Alecia G. McCarty 7/17/09

DATE	7/13/2009	INITIALS	KXK2		BATCH NUMBER	883039

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232433001	626.41	0.042	26.31	600.10	10	82
232746001	390.82	0.140	54.71	336.11	10	912
232746002	479.50	0.105	50.35	429.15	10	706
232746003	383.54	0.104	39.89	343.65	10	801
232746004	504.96	0.102	51.51	453.45	10	98
232746005	395.05	0.101	39.90	355.15	10	102
232746006	471.75	0.101	47.65	424.10	10	610
232746007	641.44	0.112	71.84	569.60	10	151
232746008	682.54	0.196	133.78	548.76	10	206
232754001	321.59	0.072	23.15	298.44	10	306
232754002	431.06	0.097	41.81	389.25	10	701
232754003	454.58	0.097	44.09	410.49	10	48
232758002	634.14	0.153	97.02	537.12	10	1707
232758003	572.53	0.138	79.01	493.52	10	73
232758004	706.07	0.167	117.91	588.16	10	136
232758005	646.69	0.149	96.36	550.33	10	8
232851001	566.54	0.140	79.32	487.22	10	914
232851002	547.42	0.097	53.10	494.32	10	24
MB	20	1	20.00	0.00	10	6101
LCS	20	1	20.00	0.00	10	413

AHM
7/17/09

T883039π

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.5

Batch : 883039
Analyst : KXK2
Prep Date : 7/13/2009

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2544.29
LCS Volume Added: 0.10

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL Ecoscint Ultra

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1.0 ml Stdev : +/- 0.005480 ml
Pipet, 5.0 ml Stdev : +/- 0.025729 ml

Procedure Code : LSC_VH3S
Parmname : Tritium
Required MDC : 250 pCi/L
Halflife of Tritium : 12.28 years

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232433001.1	626.41	0.0263	0.0100	2.5729E-05	600.10	4.20%	21	6/23/2009 12:00
2	232746001.1	390.82	0.0547	0.0100	2.5729E-05	336.11	14.00%	1	6/29/2009 12:00
3	232746002.1	479.50	0.0504	0.0100	2.5729E-05	429.15	10.50%	2	6/29/2009 12:00
4	232746003.1	383.54	0.0399	0.0100	2.5729E-05	343.65	10.40%	3	6/29/2009 12:00
5	232746004.1	504.96	0.0515	0.0100	2.5729E-05	453.45	10.20%	4	6/29/2009 12:00
6	232746005.1	395.05	0.0399	0.0100	2.5729E-05	355.15	10.10%	5	6/29/2009 12:00
7	232746006.1	471.75	0.0477	0.0100	2.5729E-05	424.10	10.10%	6	6/29/2009 12:00
8	232746007.1	641.44	0.0718	0.0100	2.5729E-05	569.60	11.20%	7	6/29/2009 12:00
9	232746008.1	682.54	0.1338	0.0100	2.5729E-05	548.76	19.60%	8	6/29/2009 12:00
10	232754001.1	321.59	0.0232	0.0100	2.5729E-05	298.44	7.20%	9	6/30/2009 12:00
11	232754002.1	431.06	0.0418	0.0100	2.5729E-05	389.25	9.70%	10	6/30/2009 12:00
12	232754003.1	454.58	0.0441	0.0100	2.5729E-05	410.49	9.70%	11	6/30/2009 12:00
13	232758002.1	634.14	0.0970	0.0100	2.5729E-05	537.12	15.30%	12	6/30/2009 12:00
14	232758003.1	572.53	0.0790	0.0100	2.5729E-05	493.52	13.80%	13	6/30/2009 12:00
15	232758004.1	706.07	0.1179	0.0100	2.5729E-05	588.16	16.70%	14	6/30/2009 12:00
16	232758005.1	646.69	0.0964	0.0100	2.5729E-05	550.33	14.90%	15	6/30/2009 12:00
17	232851001.1	566.54	0.0793	0.0100	2.5729E-05	487.22	14.00%	16	7/1/2009 12:00
18	232851002.1	547.42	0.0531	0.0100	2.5729E-05	494.32	9.70%	17	7/1/2009 12:00
19	1201875658.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	18	7/13/2009 0:00
20	1201875659.1	566.54	0.0793	0.0100	2.5729E-05	487.22	14.00%	19	7/1/2009 12:00
21	1201875660.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	20	7/13/2009 0:00

AKW
7/17/09

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	35-1	35.25	119.5	5.36	3.40	120	7/17/2009 11:56	0.996	LSCBROWN	8/6/2008	8/31/2009	0.2363	0.00792	30-1	7/16/2009 15:30
2	54-2	95	132.6	7.17	5.89	95	7/16/2009 0:24	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2583	0.00792	54-1	7/15/2009 22:46
3	54-3	95	131.3	6.91	5.89	95	7/16/2009 2:03	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2606	0.00792	54-1	7/15/2009 22:46
4	54-4	95	129.5	7.43	5.89	95	7/16/2009 3:41	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2638	0.00792	54-1	7/15/2009 22:46
5	54-5	54.05	130.5	7.92	5.89	95	7/16/2009 6:44	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2621	0.00792	54-1	7/15/2009 22:46
6	54-6	55	127.2	8.55	5.89	95	7/16/2009 8:11	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2679	0.00792	54-1	7/15/2009 22:46
7	54-7	55	126.7	6.15	5.89	95	7/16/2009 9:08	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2687	0.00792	54-1	7/15/2009 22:46
8	54-8	55	127.2	6.67	5.89	95	7/16/2009 10:06	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2679	0.00792	54-1	7/15/2009 22:46
9	54-9	55	127.6	6.55	5.89	95	7/16/2009 11:03	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2672	0.00792	54-1	7/15/2009 22:46
10	54-10	55	130.6	6.35	5.89	95	7/16/2009 12:00	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2619	0.00792	54-1	7/15/2009 22:46
11	54-11	55	126.3	5.91	5.89	95	7/16/2009 12:58	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2694	0.00792	54-1	7/15/2009 22:46
12	54-12	55	130	5.96	5.89	95	7/16/2009 13:55	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2630	0.00792	54-1	7/15/2009 22:46
13	27-1	55	126.1	5.78	5.89	95	7/16/2009 14:52	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2698	0.00792	54-1	7/15/2009 22:46
14	27-2	55	127.1	6.58	5.89	95	7/16/2009 15:50	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2680	0.00792	54-1	7/15/2009 22:46
15	27-3	55	126.2	6.67	5.89	95	7/16/2009 16:47	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2696	0.00792	54-1	7/15/2009 22:46
16	27-4	55	125.6	5.67	5.89	95	7/16/2009 17:44	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2706	0.00792	54-1	7/15/2009 22:46
17	27-5	55	128.6	9.93	5.89	95	7/16/2009 18:42	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2654	0.00792	54-1	7/15/2009 22:46
18	27-6	55	127.5	8.22	5.89	95	7/16/2009 19:39	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2673	0.00792	54-1	7/15/2009 22:46
19	27-7	55	128.9	5.76	5.89	95	7/16/2009 20:36	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2649	0.00792	54-1	7/15/2009 22:46
20	27-8	55	127.6	11.8	5.89	95	7/16/2009 21:33	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2672	0.00792	54-1	7/15/2009 22:46
21	28-1	15	126.7	47.6	5.89	95	7/16/2009 7:54	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2687	0.00792	54-1	7/15/2009 22:46

HGW
7/17/09

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	157.4882	111.1725	250	238.6270	**374.9750**	0.217	1.960	0.425	81.2555	85.3493		SAMPLE				
2	143.4304	101.2631	250	206.0466	**223.7611**	0.290	1.280	0.371	64.8163	66.6635		SAMPLE				
3	142.1582	100.3649	250	206.2012	**176.7279**	0.360	1.020	0.367	63.5967	64.7788		SAMPLE				
4	140.4447	99.1552	250	203.7159	**263.6085**	0.243	1.540	0.374	64.0957	66.6734		SAMPLE				
5	166.0279	117.2171	250	243.9993	**349.8301**	0.225	2.030	0.457	78.6949	82.3804		SAMPLE				
6	161.5436	114.0511	250	237.2990	**448.4926**	0.176	2.660	0.466	78.6245	84.6022		SAMPLE				
7	161.0224	113.6832	250	236.5334	**43.6962**	1.604	0.260	0.417	70.0677	70.1338		SAMPLE				
8	161.5456	114.0526	250	237.3019	**131.5145**	0.549	0.780	0.428	72.1818	72.7607		SAMPLE				
9	161.9678	114.3506	250	237.9222	**111.5723**	0.645	0.660	0.426	71.9384	72.3569		SAMPLE				
10	165.2031	116.6348	250	242.6747	**79.3158**	0.916	0.460	0.421	72.6350	72.8447		SAMPLE				
11	160.5873	113.3760	250	235.8942	**3.3522**	20.582	0.020	0.412	68.9956	68.9960		SAMPLE				
12	164.5389	116.1659	250	241.6990	**12.0213**	5.896	0.070	0.413	70.8828	70.8878		SAMPLE				
13	160.3833	113.2320	250	235.5946	**-18.4135**	3.716	-0.110	0.409	68.4257	68.4261		SAMPLE				
14	161.4218	113.9851	250	237.1201	**116.2508**	0.618	0.690	0.426	71.8038	72.2588		SAMPLE				
15	160.4681	113.3060	250	235.7486	**130.6536**	0.549	0.780	0.428	71.7094	72.2844		SAMPLE				
16	159.8747	112.8729	250	234.8475	**-36.7102**	1.847	-0.220	0.406	67.7993	67.7996		SAMPLE				
17	162.9922	115.0739	250	239.4269	**687.2775**	0.122	4.040	0.492	83.7613	96.4913		SAMPLE				
18	161.8211	114.2471	250	237.7067	**393.5275**	0.198	2.330	0.460	77.6654	82.3597		SAMPLE				
19	163.0280	115.0992	250	239.4795	**-22.1202**	3.141	-0.130	0.408	69.4783	69.4787		MB				
20	161.9287	114.3230	250	237.8647	**998.8384**	0.089	5.910	0.526	88.8773	112.8658	232851001.1	DUP	37.0%	0.7441		
21	263.4888	186.0254	250	405.5928	**6995.1968**	0.044	41.710	1.799	301.6611	573.0282		LCS			5730.3738	122.1%

AGW
7/17/09

Filename: 12:38 PMab

Instrument Type	LS 6000
Data Capture Date	16 Jul 2009 15:25:05
User Filename	C:\LSCCAPTURE\RED\USER07\UN071601.BSF

User Number	7
User Id	TRITIUM
User Comments	BROWN

Scintillator Choice: LIQUID

	Sa	Rack	Time	H#	Raw CPM1	CPM Iso1	%Err1	LumEx	ElTime
BKG	1	30-1	120.00	111.0	8.52	3.40	15.68	10.66	125.14

ID: TRITIUM 17 JUL 2009 12:08

USER: 7 COMMENT:BROWN

PRESET TIME :	120.00						
DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STI
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0		
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 0.0 - 240.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	LUMEX %	ELAPSED TIME
1	35-1	35.25	119.5	**5.36**	30.26	27.26	37.59

ID:TRITIUM 15 JUL 2009 22:36
USER: 4 COMMENT:SILVER
PRESET TIME : 95.00
DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD
COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT
TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF
SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0
LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	54-1	95.00	129.3	5.89	8.92	45.91	3.05	1.51	97.83
2	54-2	95.00	132.6	7.17	8.24	46.59	3.04	2.45	196.37
3	54-3	95.00	131.3	6.91	8.13	44.87	3.08	1.34	294.69
4	54-4	95.00	129.5	7.43	7.73	44.94	3.07	0.99	392.93
~~5~~	~~54-5~~	~~10.72~~	~~134.0~~	~~7.47~~	~~22.91~~	~~47.13~~	~~0.94~~	~~1.17~~	~~404.90~~
6	54-6	SAMPLE TERMINATED:							
7	54-7	SAMPLE TERMINATED:							
8	54-8	SAMPLE TERMINATED:							
9	54-9	SAMPLE TERMINATED:							
10	54-10	SAMPLE TERMINATED:							
11	54-11	SAMPLE TERMINATED:							
12	54-12	SAMPLE TERMINATED:							

7/17/09

QP

INSTRUMENT CALIBRATION: Maxi 16 JUL 2009 05:23
Calibration successful

QP

Calibrating Auto DPM
Counting Standard for 14C
Calibration Complete: 14C
Counting Standard for 3H
Calibration Complete: 3H
Calibration Successful

QPQP

ID:TRITIUM 16 JUL 2009 06:35

USER: 4 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
5	54-5	54.05	130.5	7.92	9.97	47.31	3.98	1.12	55.87
6	54-6	0.05	126.7	0.00	0.00	80.00	100.00	1.71	56.70
7	54-7	0.05	127.2	20.00	200.00	20.00	200.00	4.95	57.62
8	54-8	0.05	127.4	0.00	0.00	40.00	141.42	3.07	58.50
9	54-9	0.05	127.7	20.00	200.00	80.00	100.00	1.22	59.38
10	54-10	0.05	131.1	20.00	200.00	40.00	141.42	3.22	60.27
11	54-11	0.05	127.6	0.00	0.00	20.00	200.00	5.78	61.18
12	54-12	0.05	131.7	0.00	0.00	80.00	100.00	1.18	62.07
13	27-1	0.05	125.8	0.00	0.00	60.00	115.47	1.99	63.07
14	27-2	0.05	127.4	0.00	0.00	20.00	200.00	7.75	63.97
15	27-3	0.05	125.5	20.00	200.00	80.00	100.00	1.62	64.87
16	27-4	0.05	125.2	0.00	0.00	20.00	200.00	5.49	65.77
17	27-5	0.05	128.6	0.00	0.00	20.00	200.00	9.48	66.68
18	27-6	0.05	128.4	0.00	0.00	20.00	200.00	6.03	67.57
19	27-7	0.05	128.0	40.00	141.42	40.00	141.42	3.70	68.47
~~20~~	~~27-8~~	~~0.05~~	~~127.5~~	~~0.00~~	~~0.00~~	~~40.00~~	~~141.42~~	~~3.90~~	~~69.37~~

MG 7/17/09

QPQP

ID:TRITIUM 15 JUL 2000 00:00

USER: 4 COMMENT:SILVER

PRESET TIME : 55.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
6	54-6	55.00	127.2	8.55	9.50	47.44	3.94	1.17	56.86
7	54-7	55.00	126.7	6.15	11.23	43.96	4.09	0.99	114.15
8	54-8	55.00	127.2	6.67	10.73	43.38	4.11	1.00	171.43
9	54-9	55.00	127.6	6.55	11.01	44.93	4.05	1.46	228.81
10	54-10	55.00	130.6	6.35	11.24	43.96	4.10	1.57	286.19
11	54-11	55.00	126.3	5.91	11.48	44.00	4.08	1.05	343.48
12	54-12	55.00	130.0	5.96	11.42	43.04	4.13	1.10	400.81
13	27-1	55.00	126.1	5.78	11.56	43.55	4.10	0.93	458.20
14	27-2	55.00	127.1	6.58	10.80	44.07	4.08	0.90	515.46
15	27-3	55.00	126.2	6.67	10.67	46.13	3.98	0.73	572.72
16	27-4	55.00	125.6	5.67	11.61	44.93	4.04	0.74	630.01
17	27-5	55.00	128.6	9.93	8.71	49.38	3.85	0.85	687.31
18	27-6	55.00	127.5	8.22	9.54	47.31	3.93	0.61	744.56
19	27-7	55.00	128.9	5.76	11.43	43.78	4.08	0.53	801.79
20	27-8	55.00	127.6	11.80	7.96	51.96	3.75	0.73	859.08

QPQP

Filename: 3:43 PMab

Instrument Type	LS 6000
Data Capture Date	16 Jul 2009 07:53:15
User Filename	C:\LSCCAPTURE\SILVER\USER03\UN071601.BSF

User Number	3
User Id	TRITIUM
User Comments	SILVER

Scintillator Choice:	LIQUID

Sam	Rack	Time	H#	Raw CPM1	Raw CPM2	CPM Iso1	%Err1	CPM Iso2	%Err2	LumEx	ElTime
1	28-1	15.00	126.7	48.00	87.67	47.60	7.52	87.27	5.54	0.62	15.83

Sample Count Start Time:	16 Jul 2009 15:30:13		
Data Capture Date	16 Jul 2009 17:30:21		
User Filename	S07071630-1A.XLS		
	U07071630-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	30-1	120.00
H#, Total Counts:	111.0	4520	
Start, End, X-Axis:	0	990	Channel Number

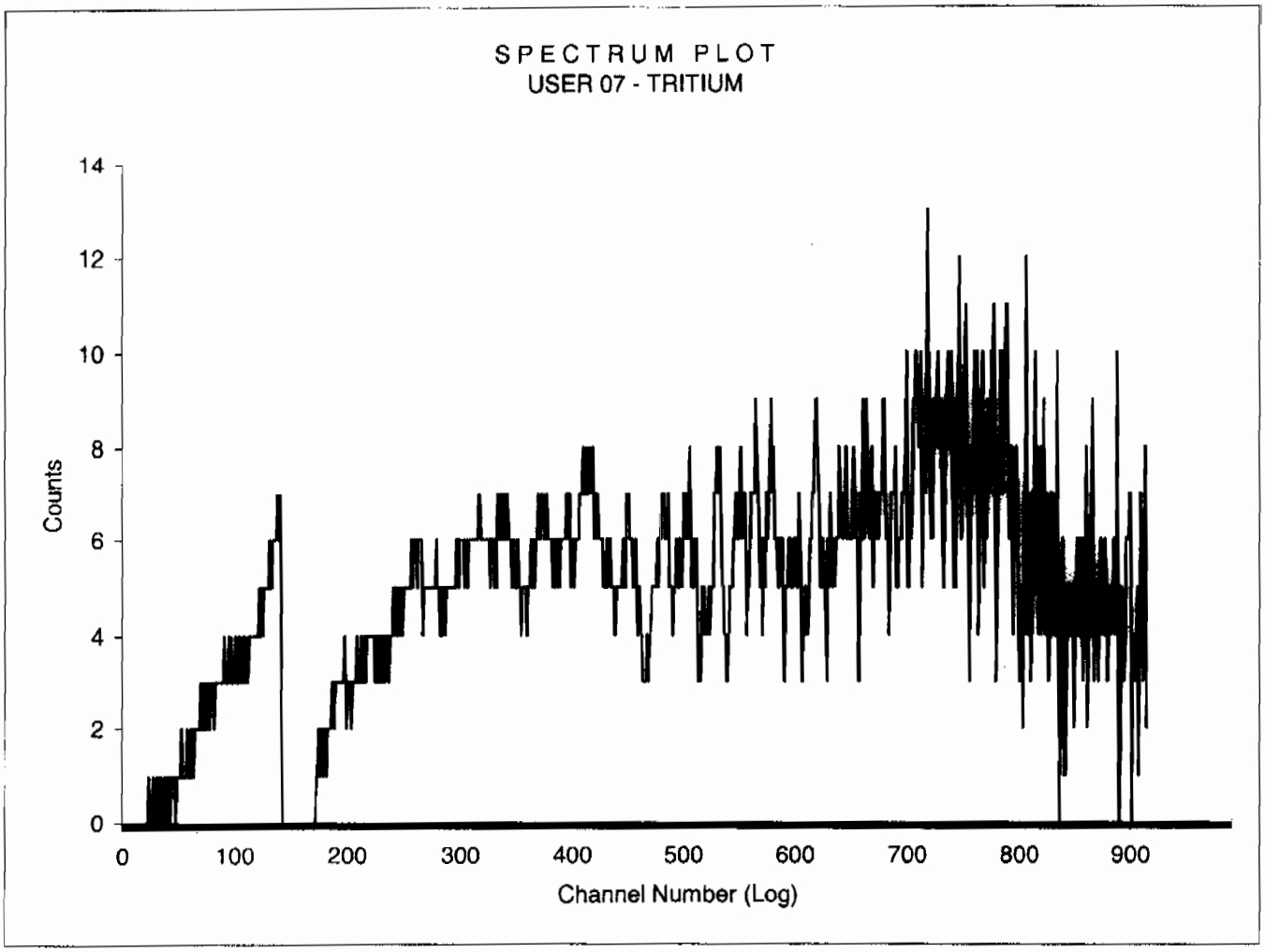

Sample Count Start Time:	15 Jul 2009 22:46:15		
Data Capture Date	16 Jul 2009 00:21:38		
User Filename	S04071654-1A.XLS		
	U04071554-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	54-1	95.00
H#, Total Counts:	129.3	4044	
Start, End, X-Axis:	0	990	Channel Number

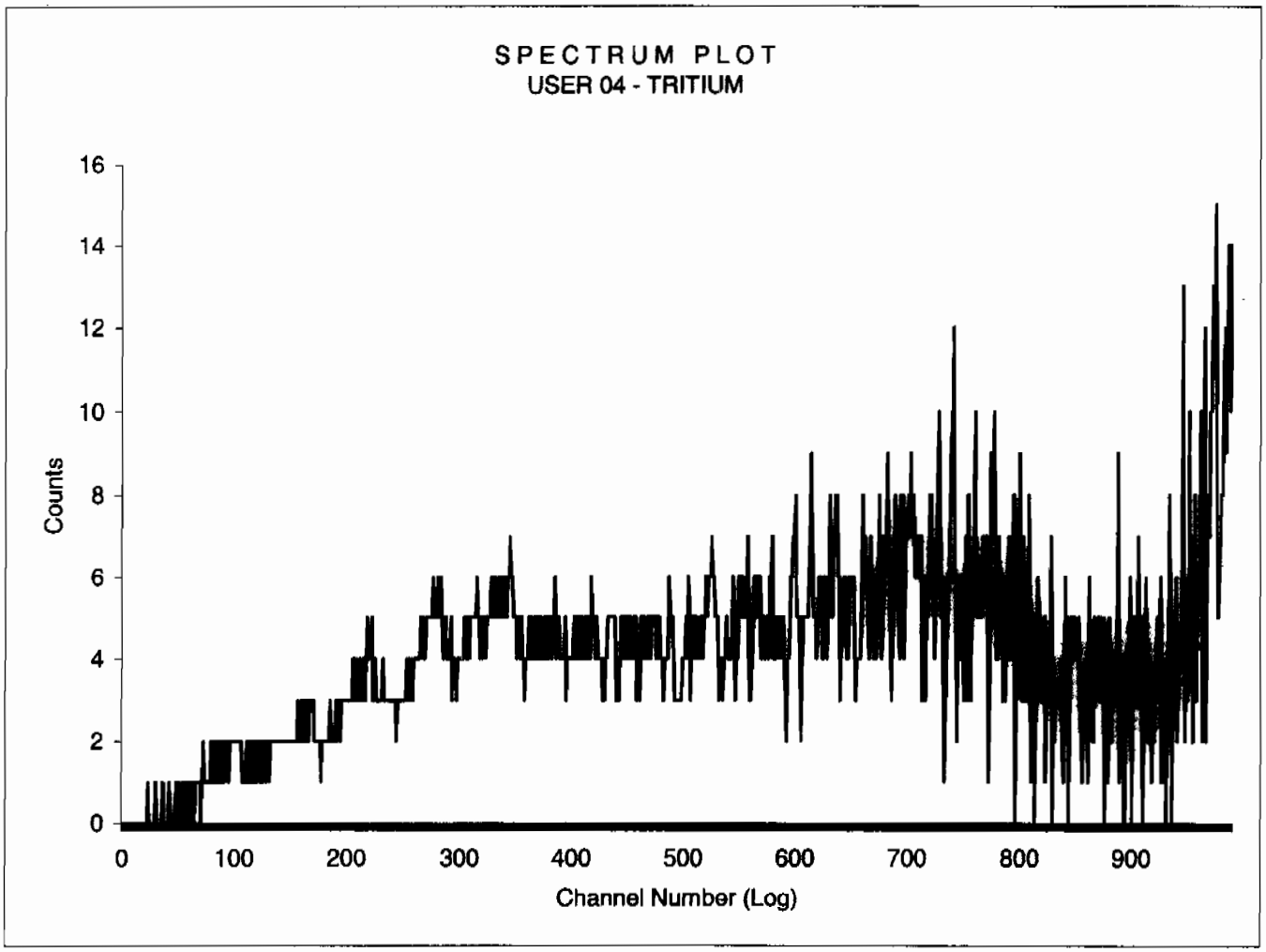

Sample Count Start Time:	17 Jul 2009 11:56:08		
Data Capture Date	17 Jul 2009 12:31:47		
User Filename	S07071735-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	35-1	35.25
H#, Total Counts:	119.5	1521	
Start, End, X-Axis:	0	990	Channel Number

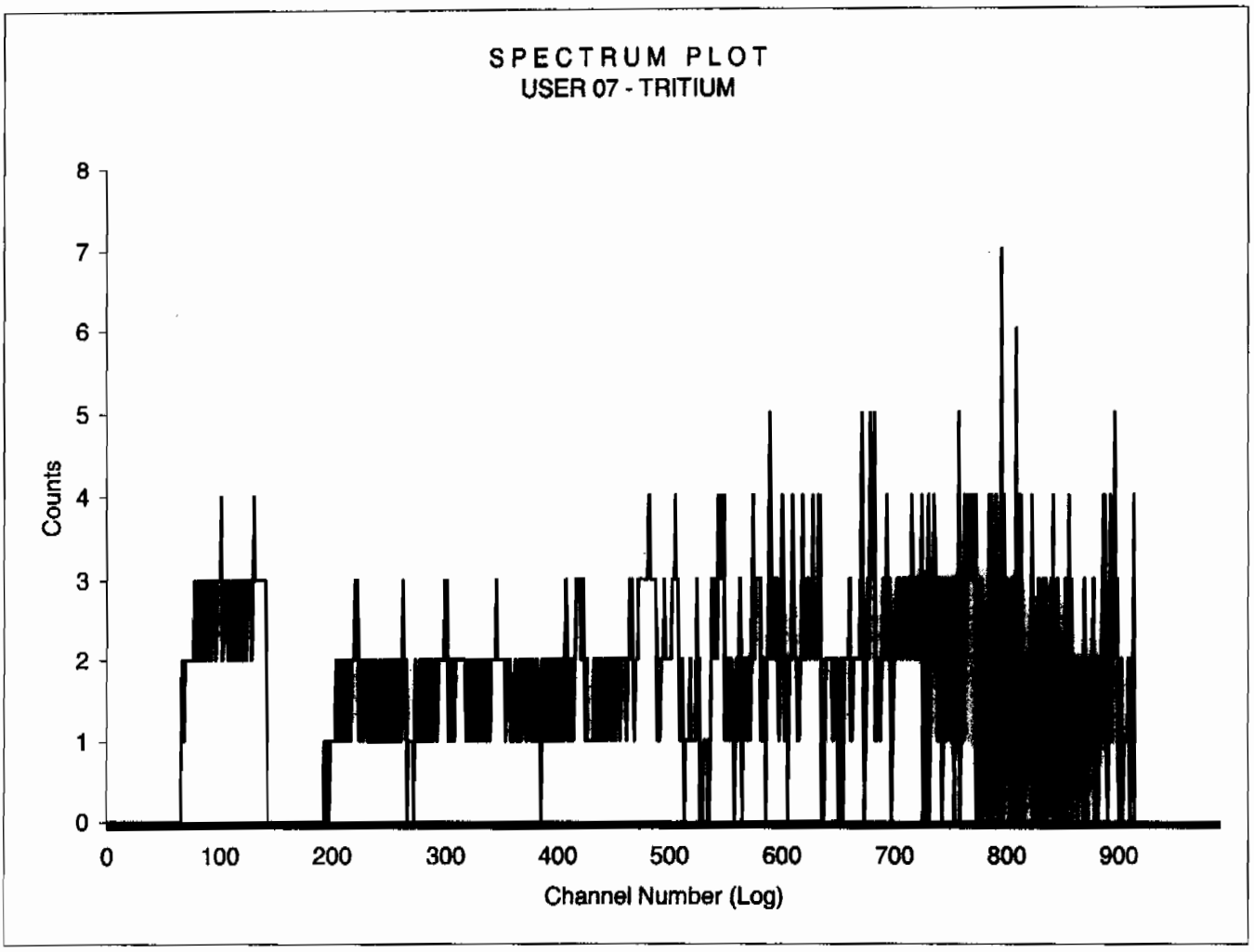

Sample Count Start Time:	16 Jul 2009 00:24:47		
Data Capture Date	16 Jul 2009 02:00:11		
User Filename	S04071654-2A.XLS		
	U04071554-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	54-2	95.00
H#, Total Counts:	132.6	4185	
Start, End, X-Axis:	0	990	Channel Number

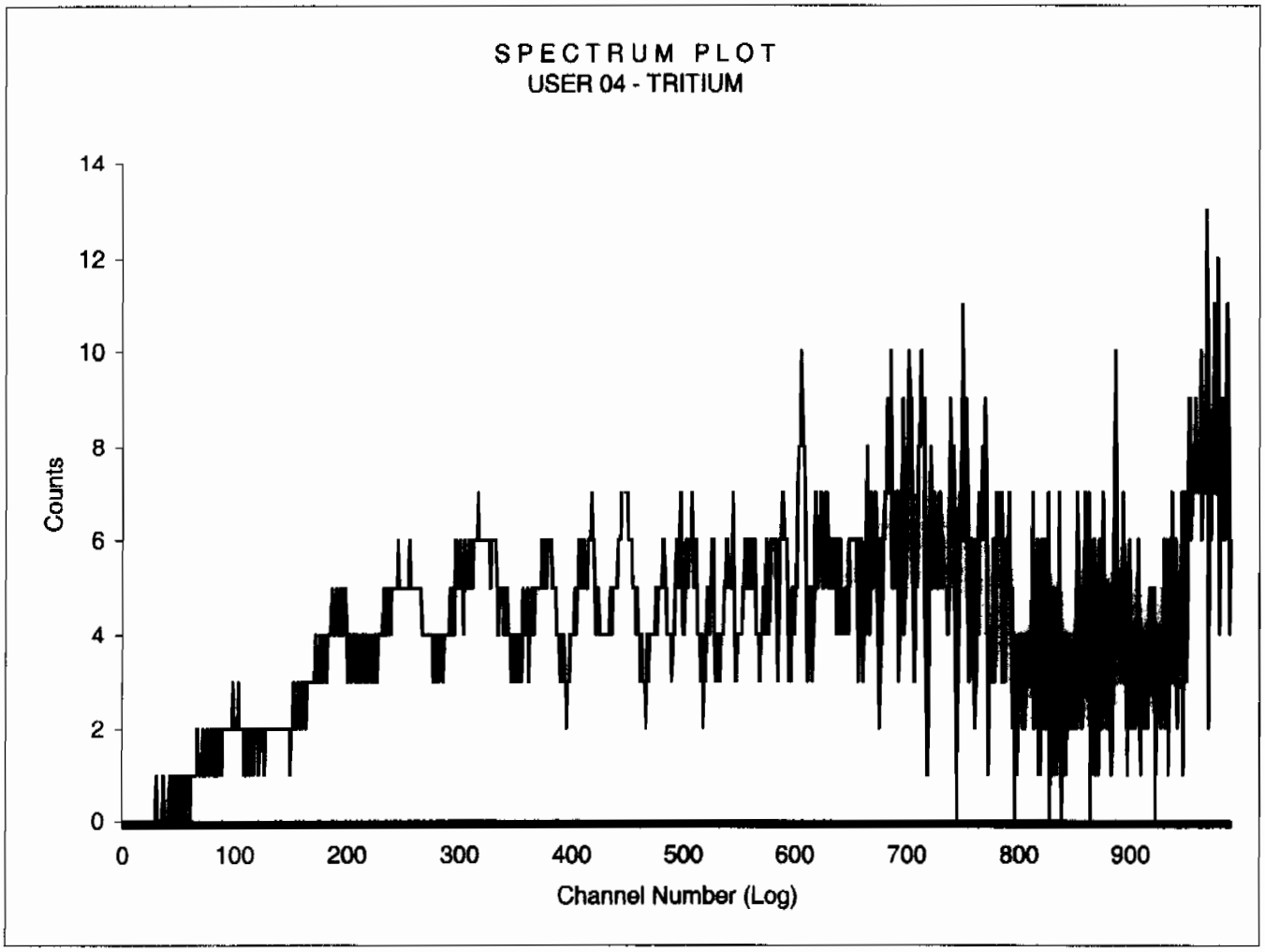

Sample Count Start Time:	16 Jul 2009 02:03:06		
Data Capture Date	16 Jul 2009 03:38:30		
User Filename	S04071654-3A.XLS		
	U04071554-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	54-3	95.00
H#, Total Counts:	131.3	3961	
Start, End, X-Axis:	0	990	Channel Number

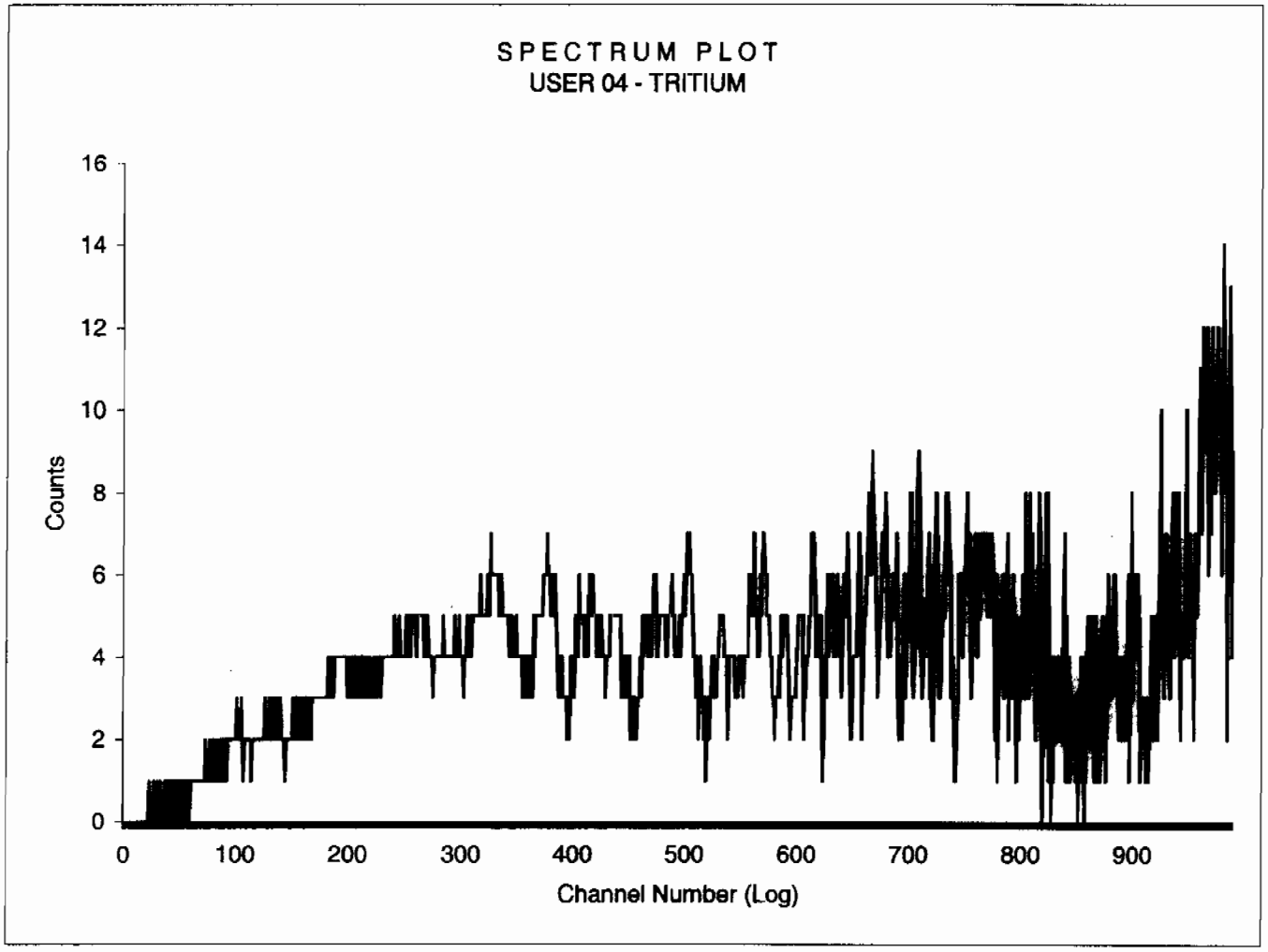

Sample Count Start Time:	16 Jul 2009 03:41:21		
Data Capture Date	16 Jul 2009 05:16:45		
User Filename	S04071654-4A.XLS		
	U04071554-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	54-4	95.00
H#, Total Counts:	129.5	3954	
Start, End, X-Axis:	0	990	Channel Number

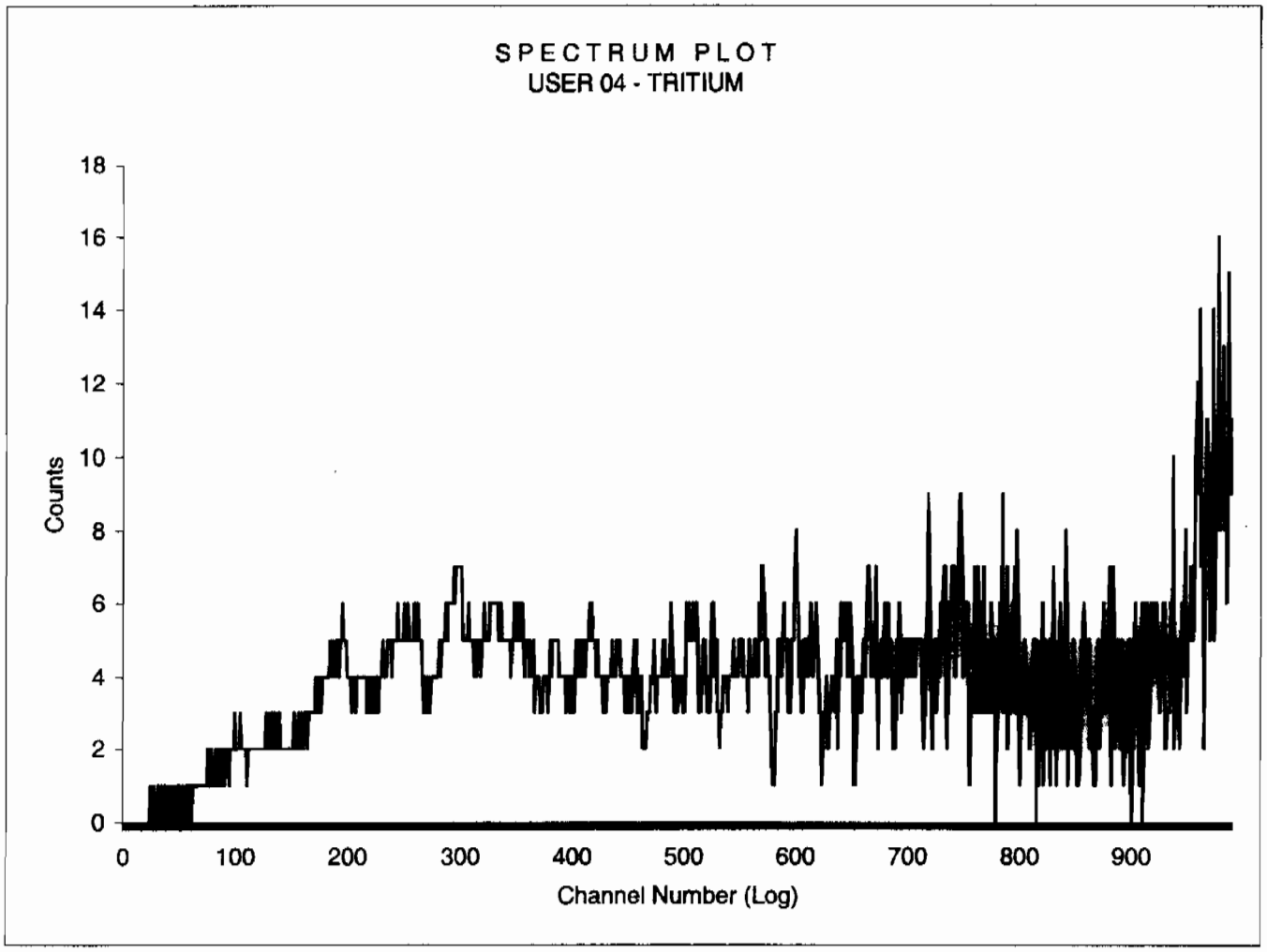

Sample Count Start Time:	16 Jul 2009 06:44:41		
Data Capture Date	16 Jul 2009 07:39:10		
User Filename	S04071654-5B.XLS		
	U04071654-5A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	54-5	54.05
H#, Total Counts:	130.5	2396	
Start, End, X-Axis:	0	990	Channel Number

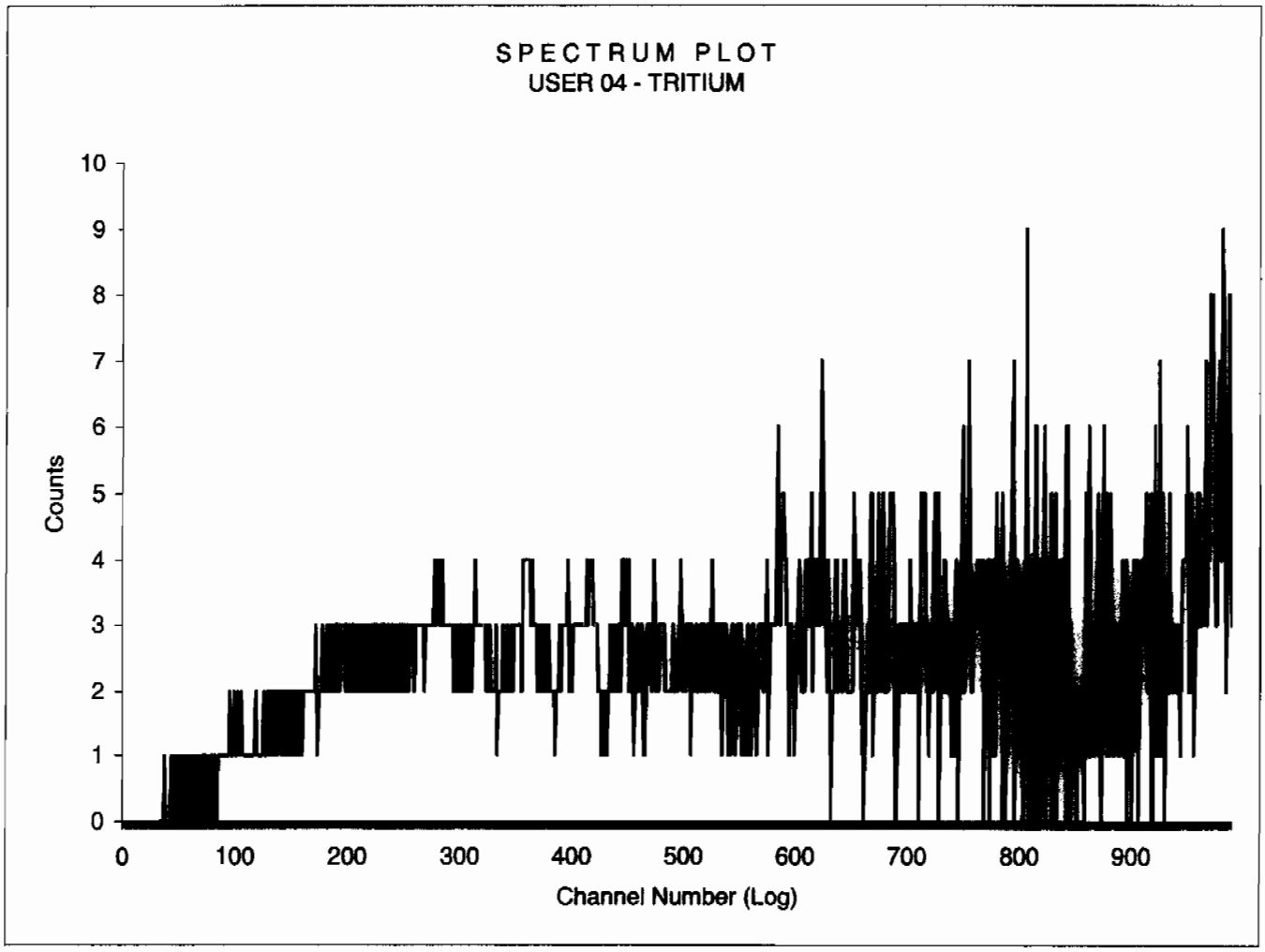

Sample Count Start Time:	16 Jul 2009 08:11:33		
Data Capture Date	16 Jul 2009 09:06:57		
User Filename	S04071654-6B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	54-6	55.00
H#, Total Counts:	127.2	2434	
Start, End, X-Axis:	0	990	Channel Number

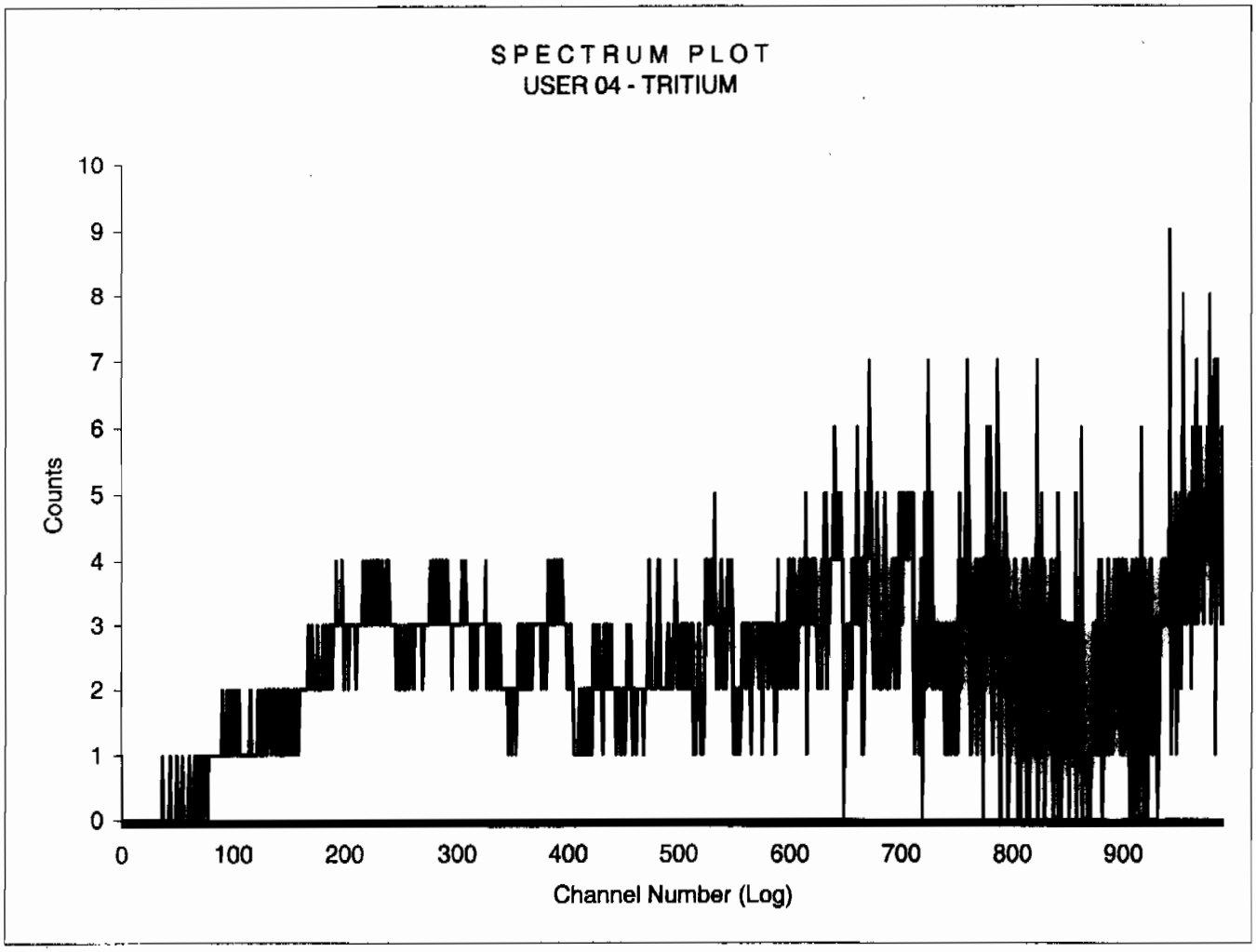

Sample Count Start Time:	16 Jul 2009 09:08:50		
Data Capture Date	16 Jul 2009 10:04:14		
User Filename	S04071654-7B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	54-7	55.00
H#, Total Counts:	126.7	2228	
Start, End, X-Axis:	0	990	Channel Number

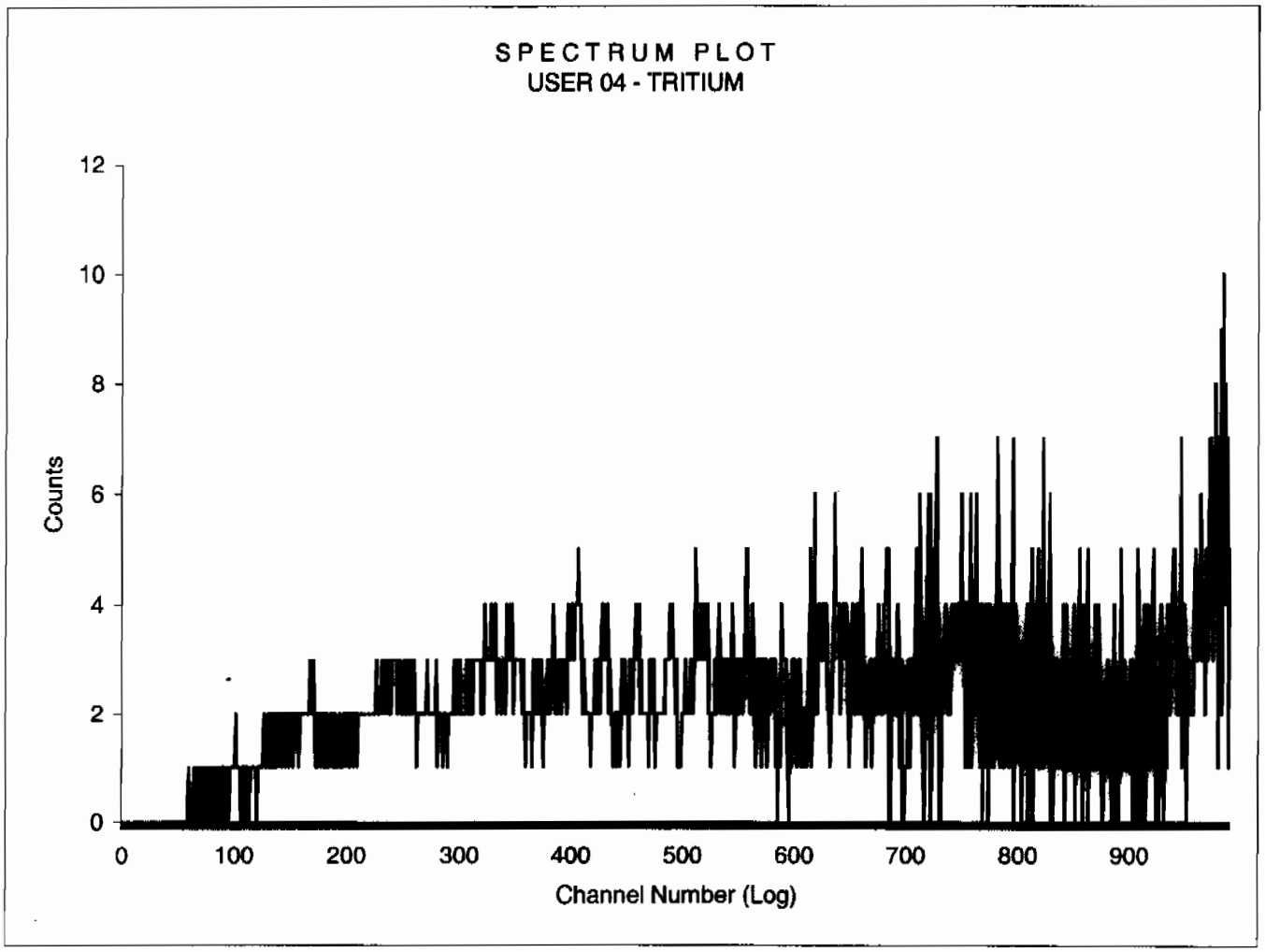

Sample Count Start Time:	16 Jul 2009 10:06:07		
Data Capture Date	16 Jul 2009 11:01:41		
User Filename	S04071654-8B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	54-8	55.00
H#, Total Counts:	127.2	2196	
Start, End, X-Axis:	0	990	Channel Number

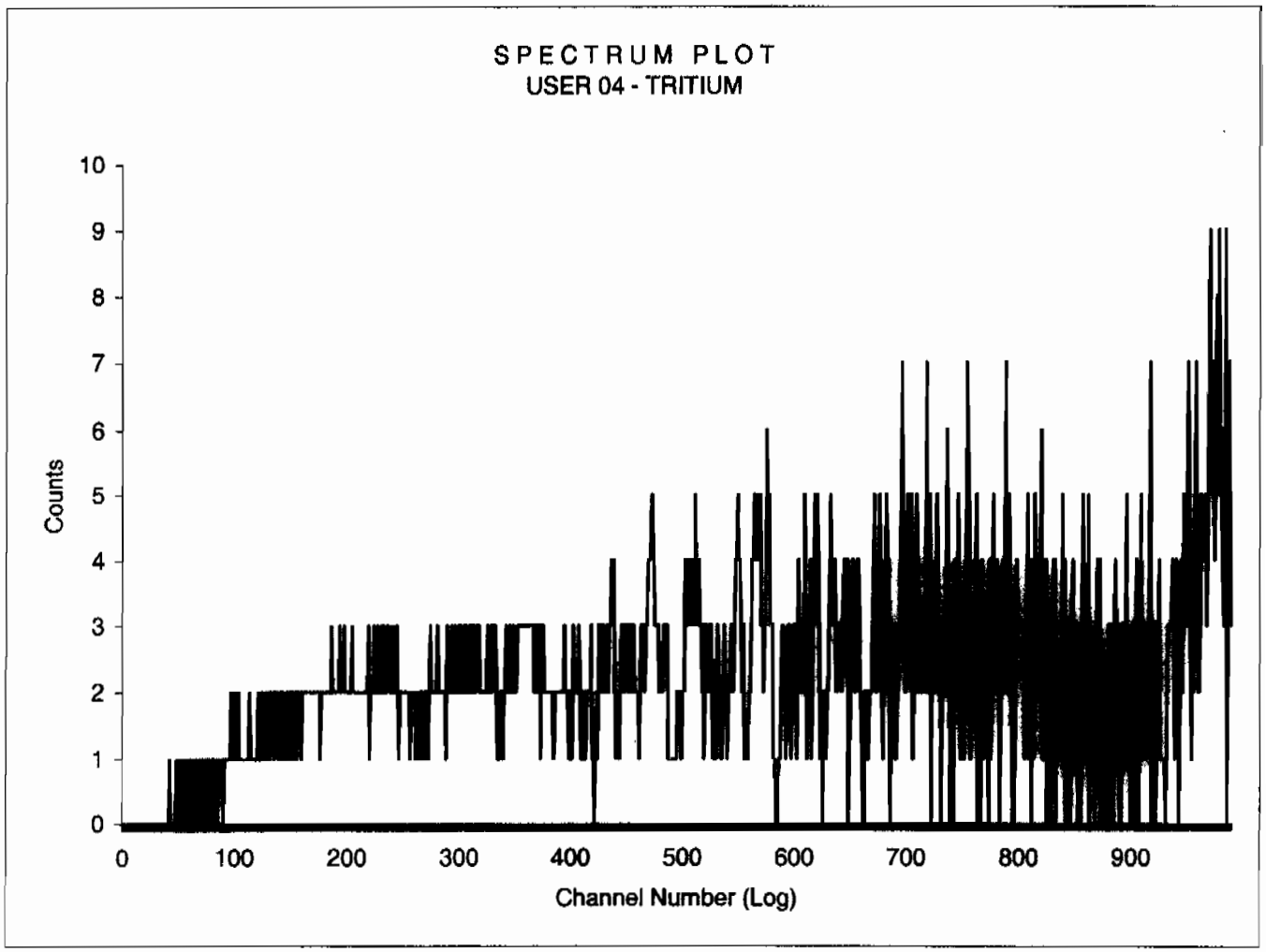

Sample Count Start Time:	16 Jul 2009 11:03:30		
Data Capture Date	16 Jul 2009 11:58:53		
User Filename	S04071654-9B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	54-9	55.00
H#, Total Counts:	127.6	2330	
Start, End, X-Axis:	0	990	Channel Number

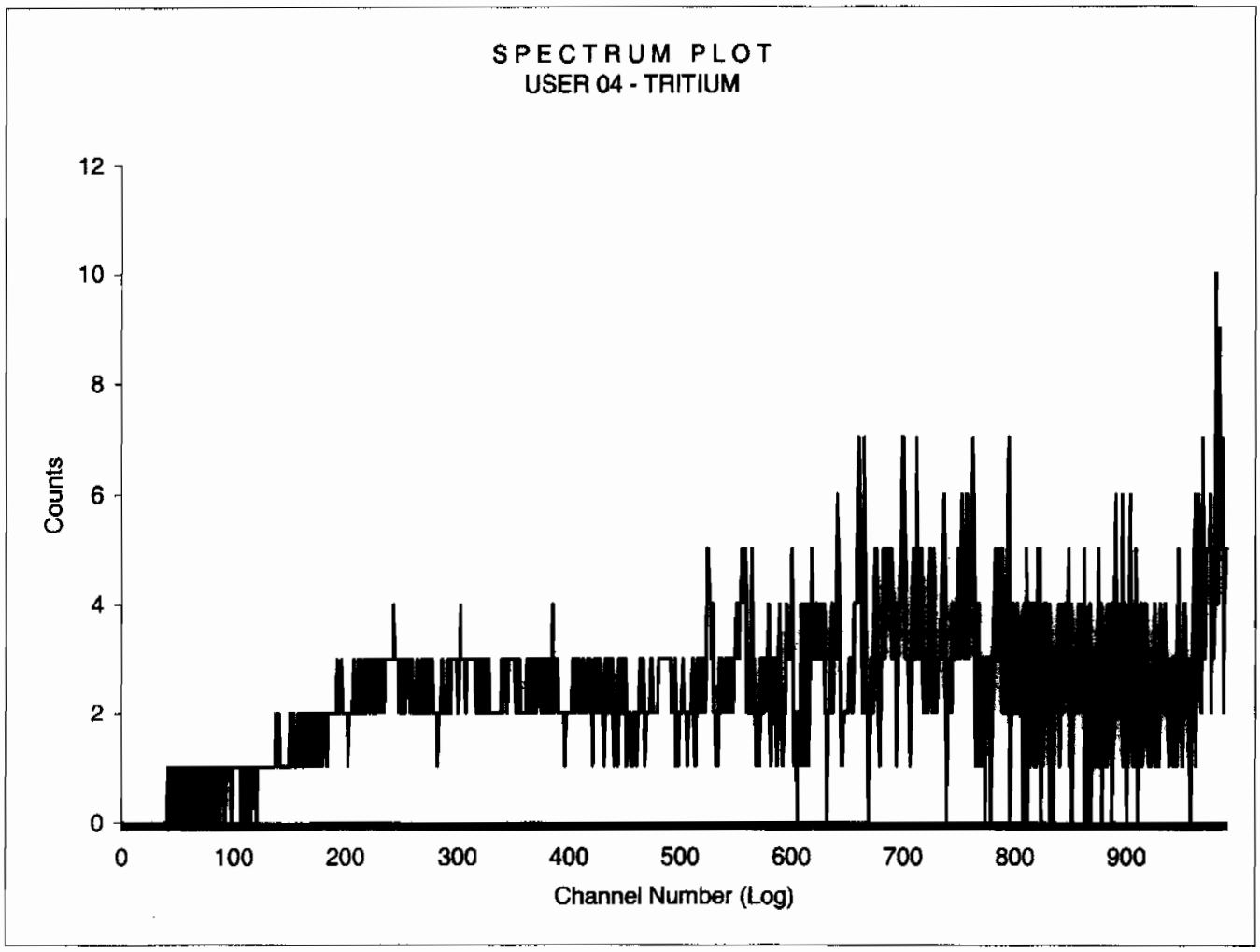

Sample Count Start Time:	16 Jul 2009 12:00:52		
Data Capture Date	16 Jul 2009 12:56:16		
User Filename	S04071654-10B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	54-10	55.00
H#, Total Counts:	130.6	2259	
Start, End, X-Axis:	0	990	Channel Number

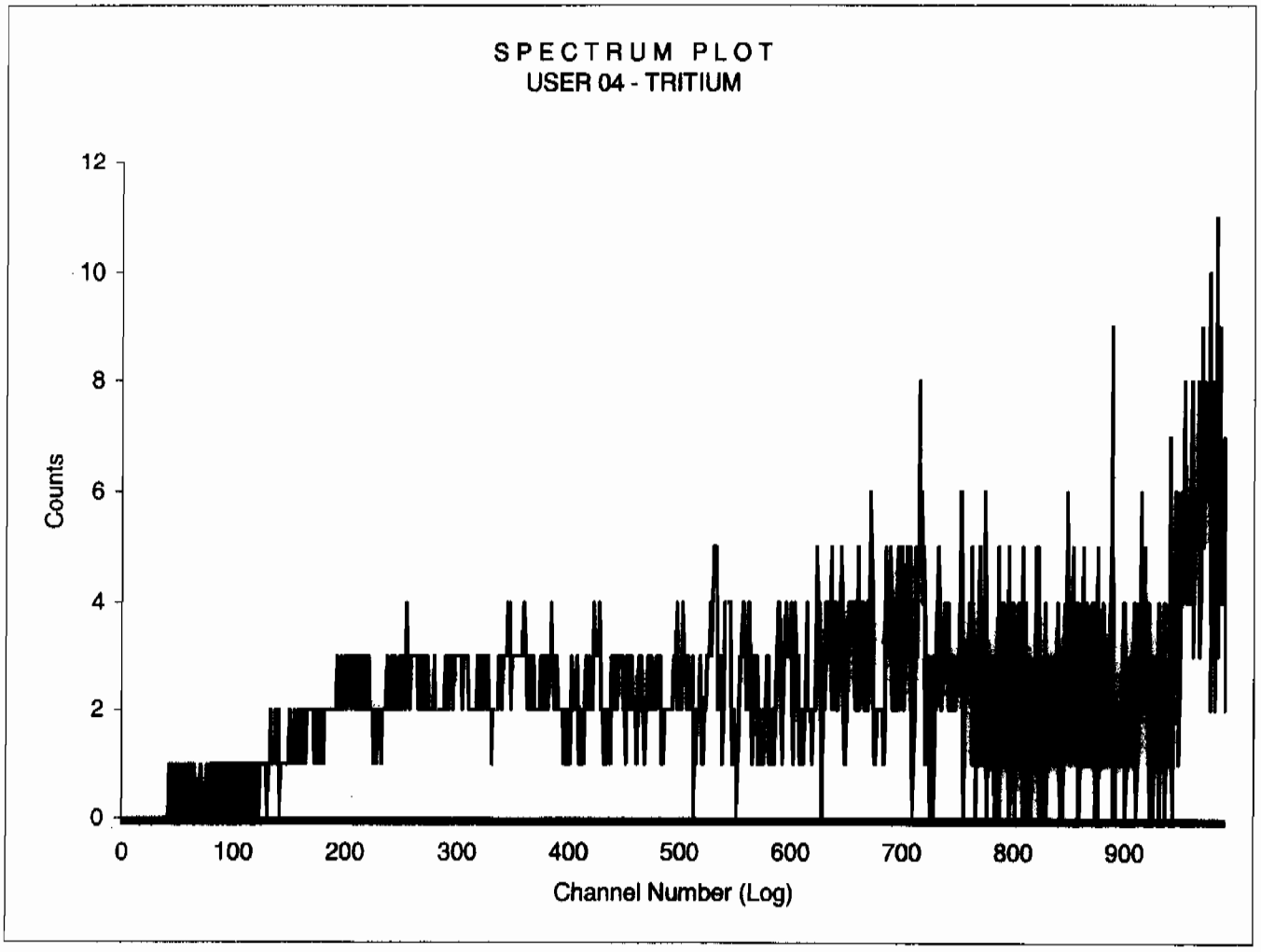

Sample Count Start Time:	16 Jul 2009 12:58:10		
Data Capture Date	16 Jul 2009 13:53:34		
User Filename	S04071654-11B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	54-11	55.00
H#, Total Counts:	126.3	2268	
Start, End, X-Axis:	0	990	Channel Number

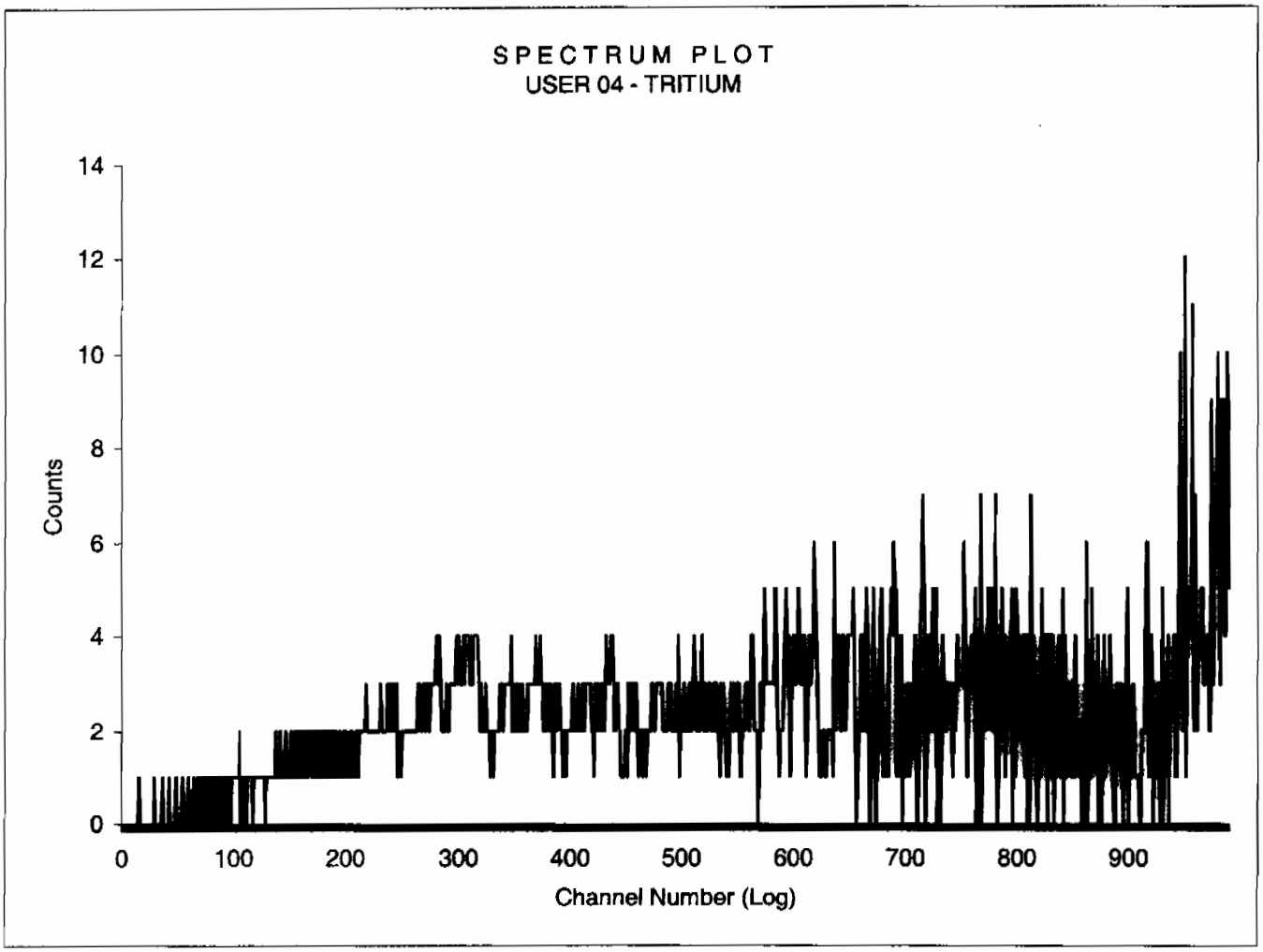

Sample Count Start Time:	16 Jul 2009 13:55:30		
Data Capture Date	16 Jul 2009 14:50:53		
User Filename	S04071654-12B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	12	54-12	55.00
H#, Total Counts:	130.0	2211	
Start, End, X-Axis:	0	990	Channel Number

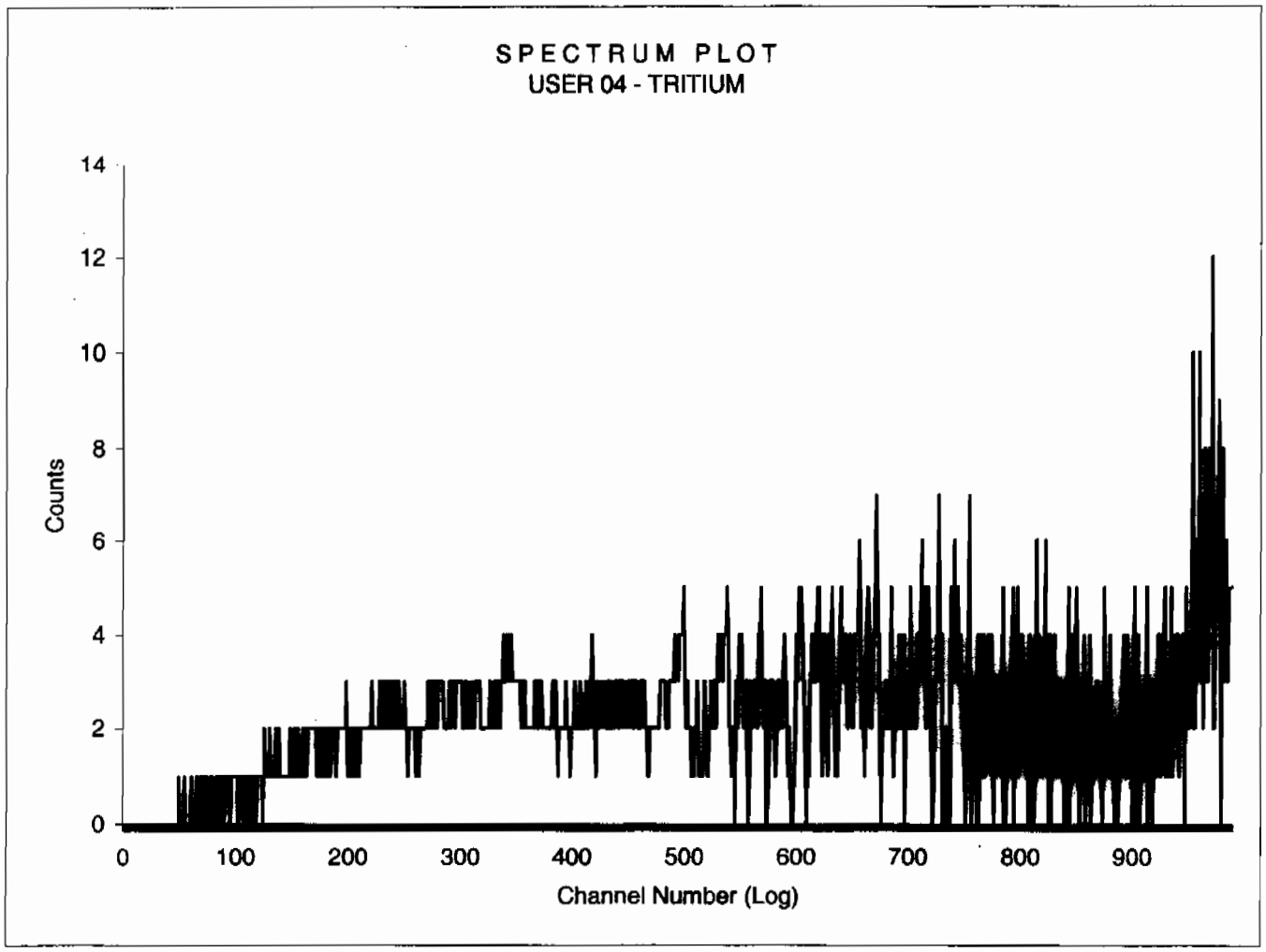

Sample Count Start Time:	16 Jul 2009 14:52:53		
Data Capture Date	16 Jul 2009 15:48:16		
User Filename	S04071627-1B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	13	27-1	55.00
H#, Total Counts:	126.1	2221	
Start, End, X-Axis:	0	990	Channel Number

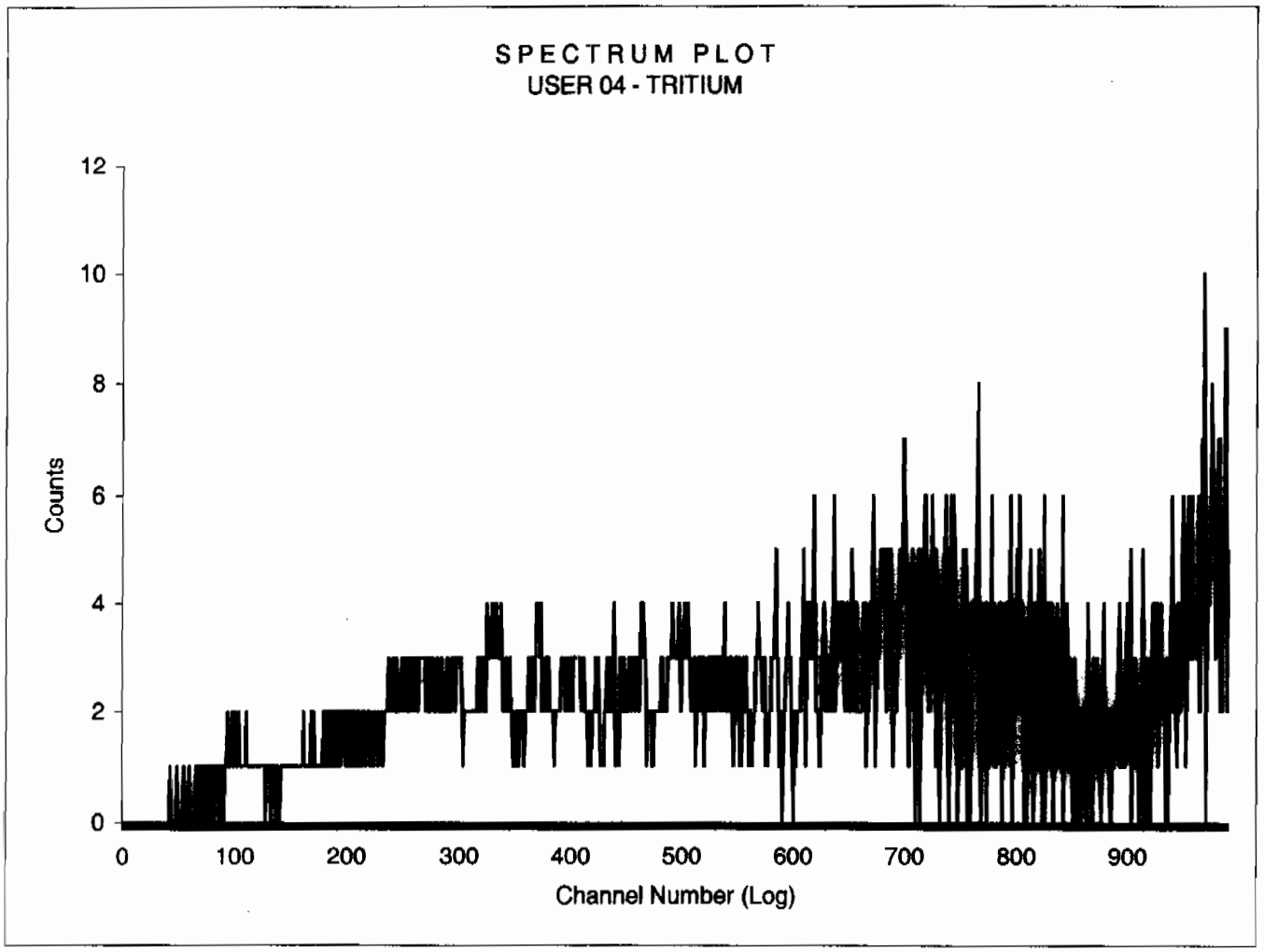

Sample Count Start Time:	16 Jul 2009 15:50:09		
Data Capture Date	16 Jul 2009 16:45:33		
User Filename	S04071627-2B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	14	27-2	55.00
H#, Total Counts:	127.1	2266	
Start, End, X-Axis:	0	990	Channel Number

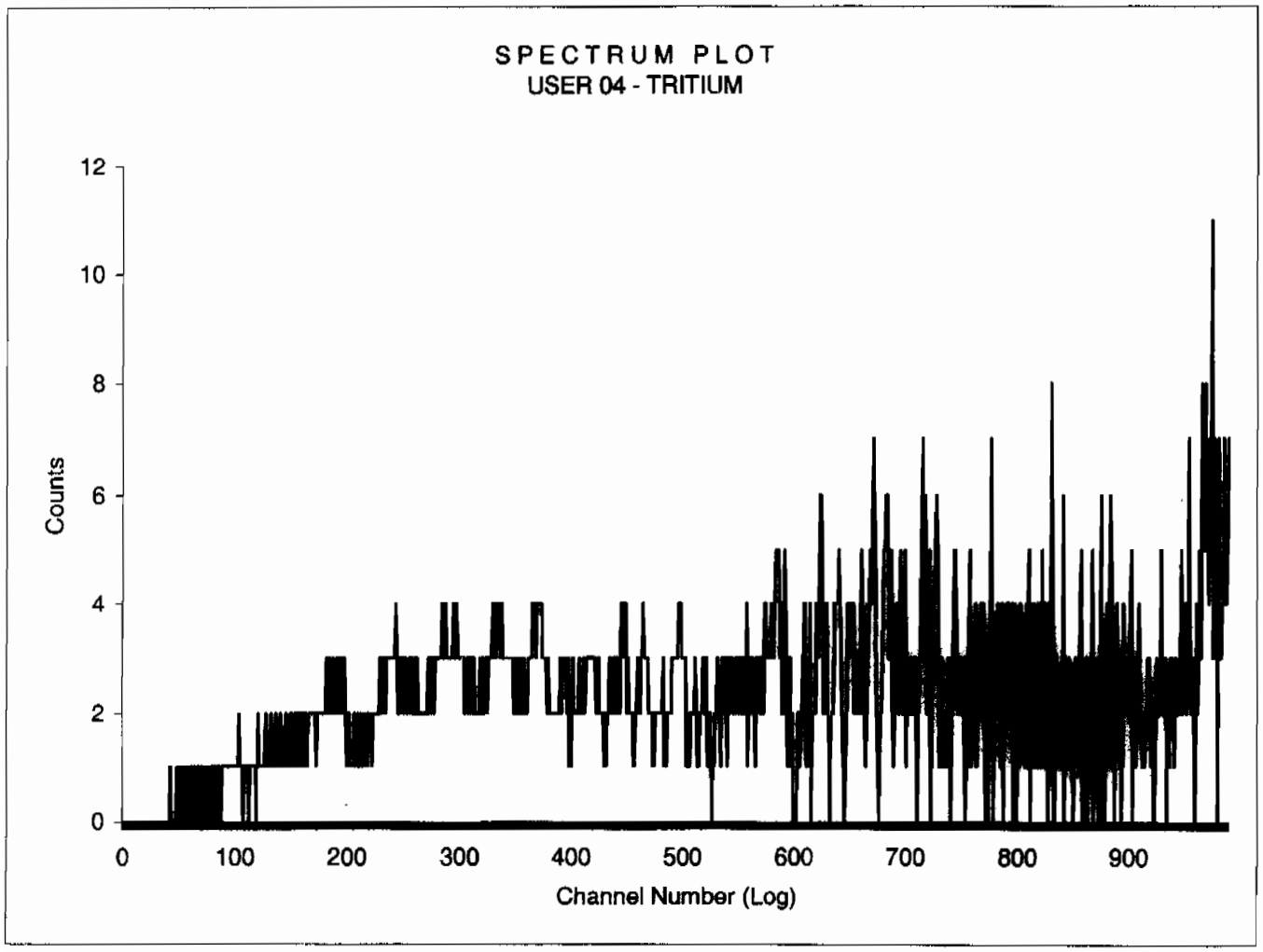

Sample Count Start Time:	16 Jul 2009 16:47:24		
Data Capture Date	16 Jul 2009 17:42:49		
User Filename	S04071627-3B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	15	27-3	55.00
H#, Total Counts:	126.2	2358	
Start, End, X-Axis:	0	990	Channel Number

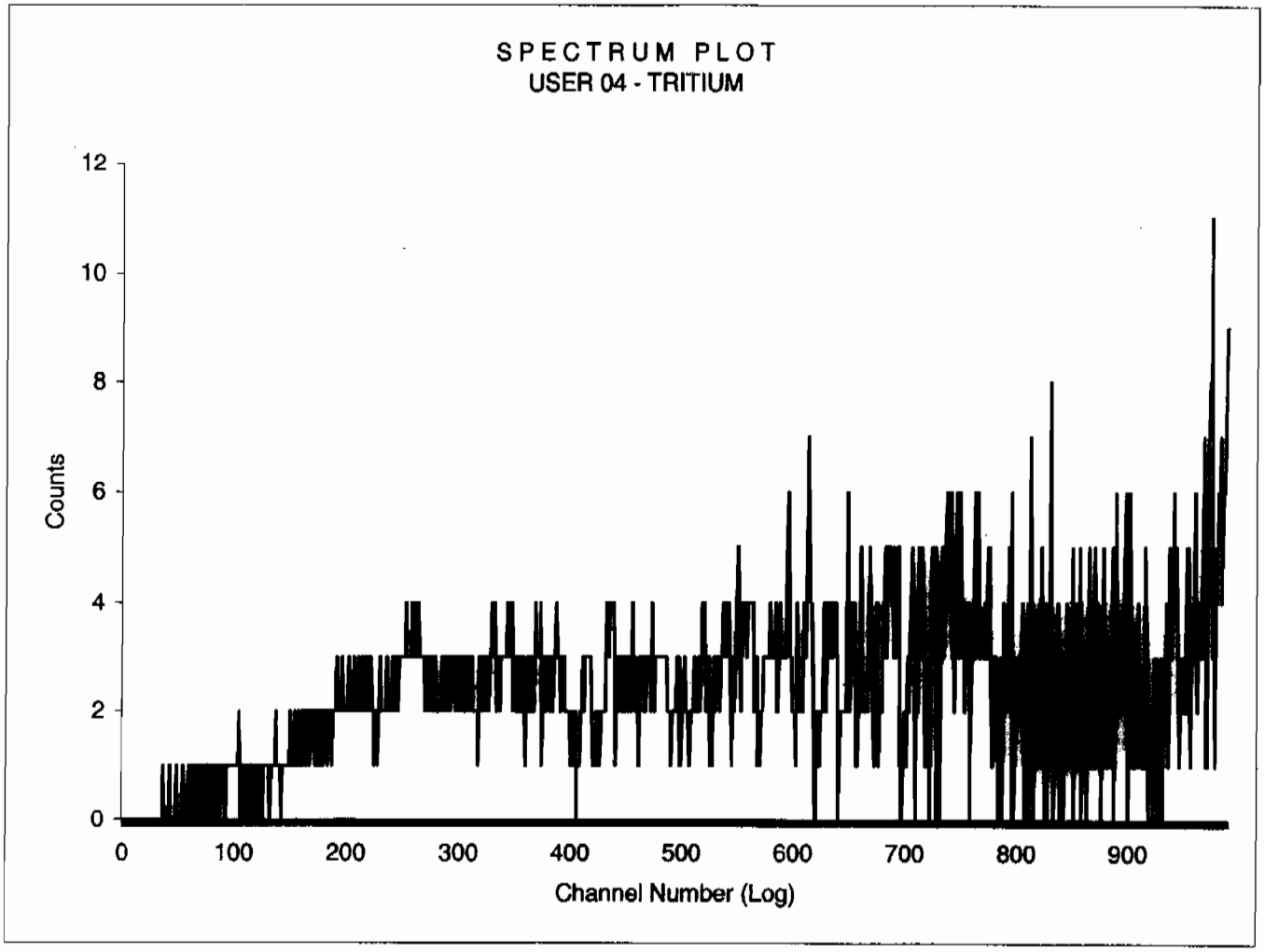

Sample Count Start Time:	16 Jul 2009 17:44:42		
Data Capture Date	16 Jul 2009 18:40:06		
User Filename	S04071627-4B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	16	27-4	55.00
H#, Total Counts:	125.6	2265	
Start, End, X-Axis:	0	990	Channel Number

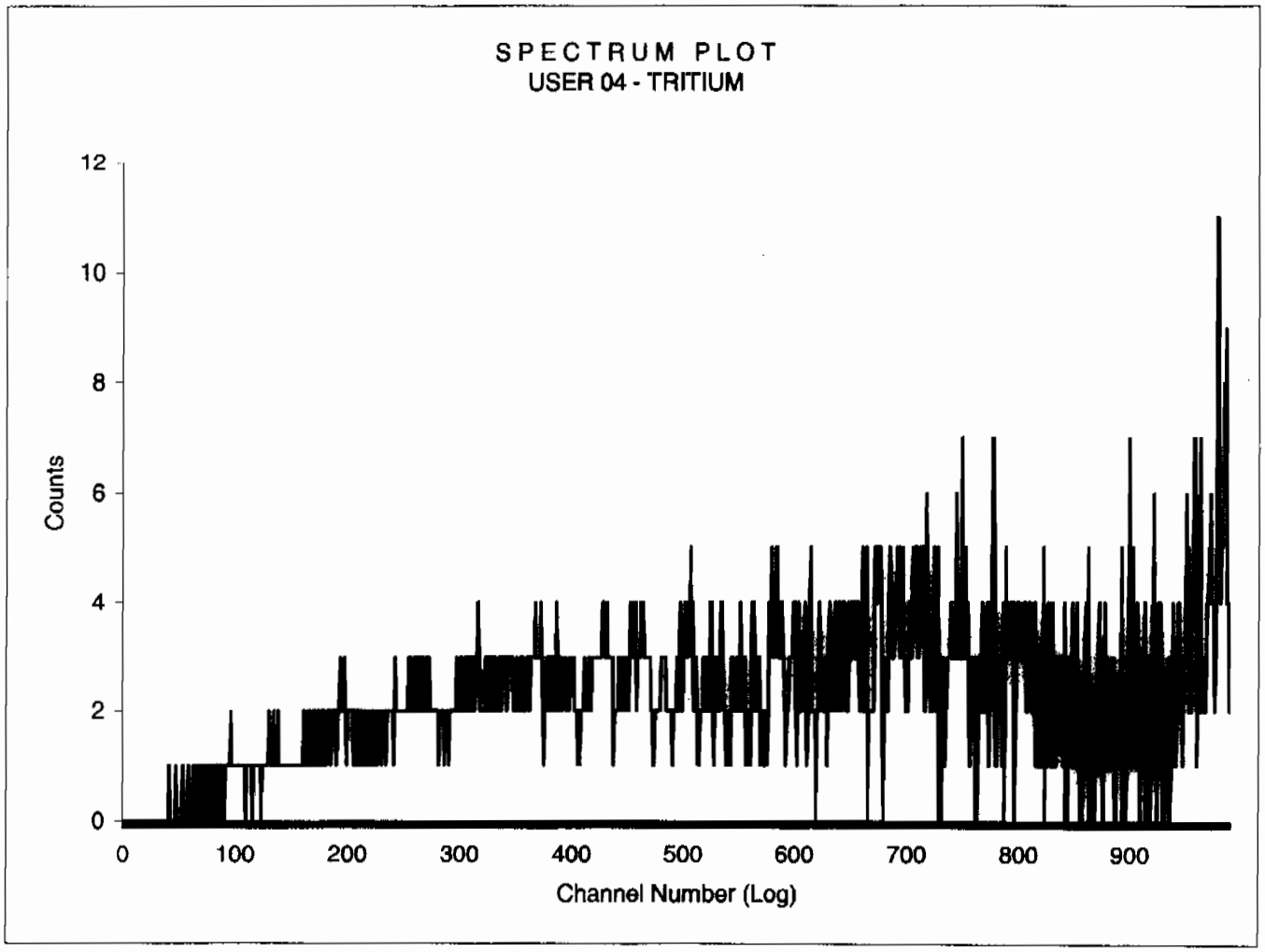

Sample Count Start Time:	16 Jul 2009 18:42:00		
Data Capture Date	16 Jul 2009 19:37:24		
User Filename	S04071627-5B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	17	27-5	55.00
H#, Total Counts:	128.6	2518	
Start, End, X-Axis:	0	990	Channel Number

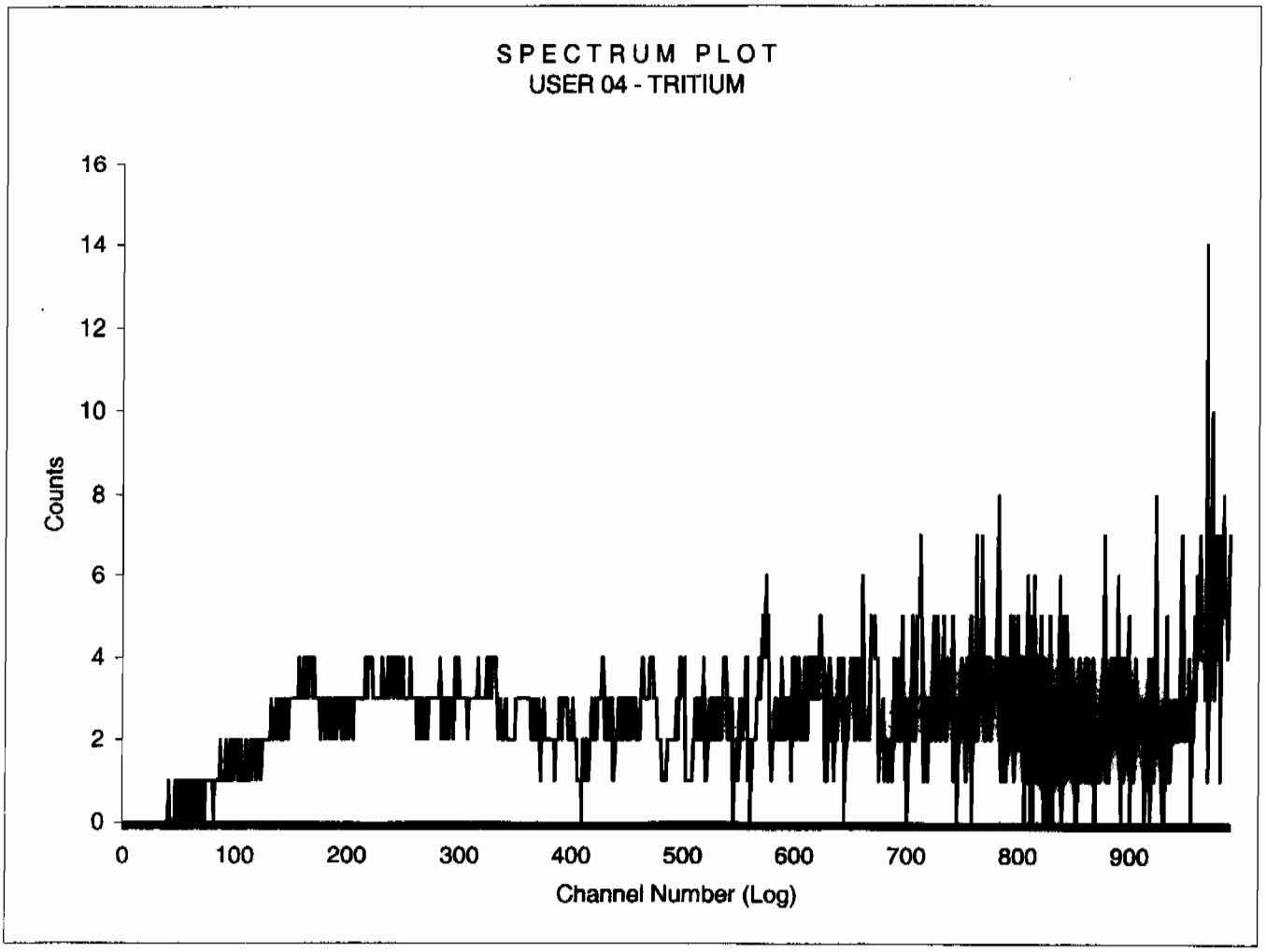

Sample Count Start Time:	16 Jul 2009 19:39:15		
Data Capture Date	16 Jul 2009 20:34:39		
User Filename	S04071627-6B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	18	27-6	55.00
H#, Total Counts:	127.5	2404	
Start, End, X-Axis:	0	990	Channel Number

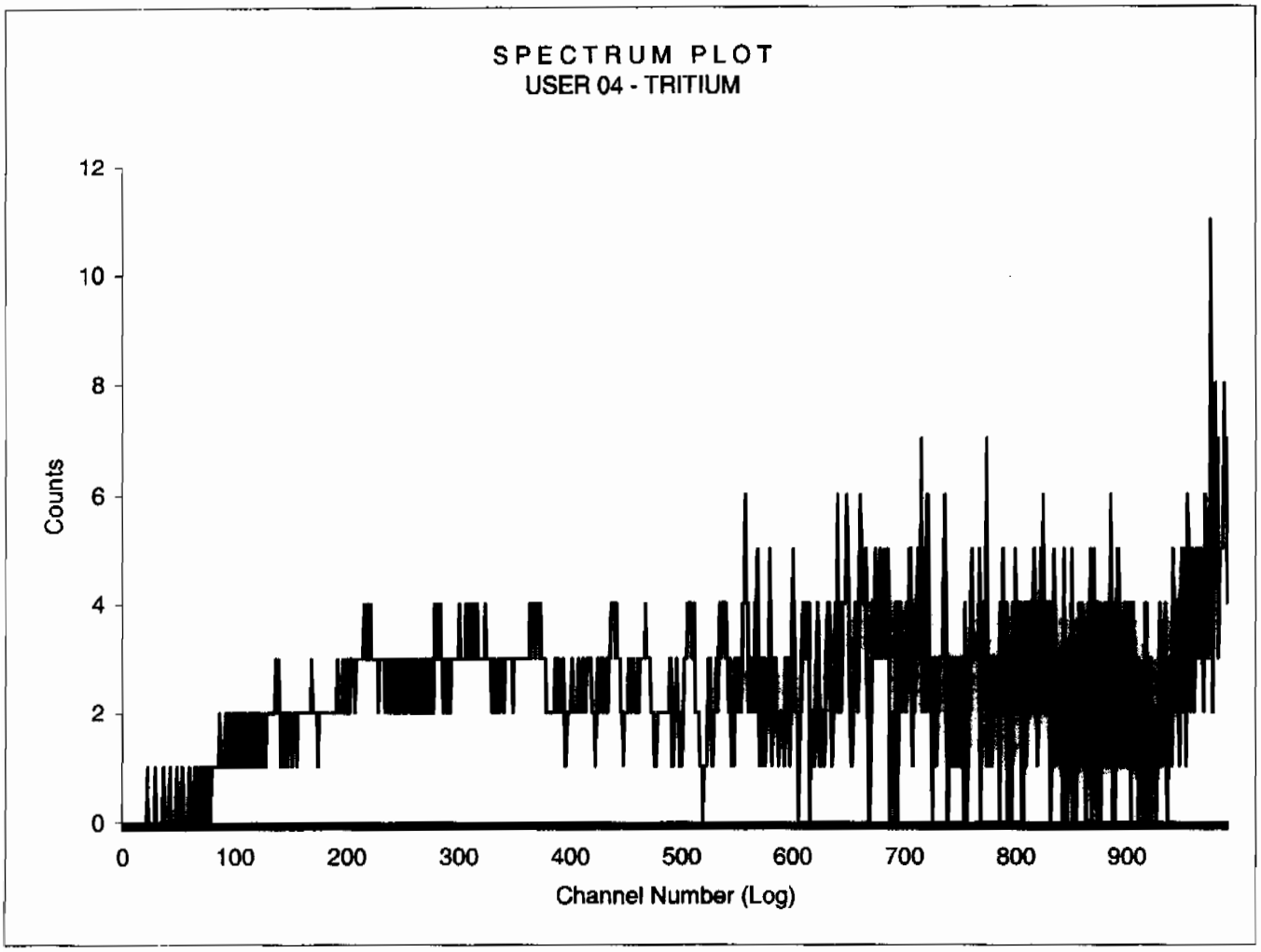

Sample Count Start Time:	16 Jul 2009 20:36:28		
Data Capture Date	16 Jul 2009 21:31:53		
User Filename	S04071627-7B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	19	27-7	55.00
H#, Total Counts:	128.9	2210	
Start, End, X-Axis:	0	990	Channel Number

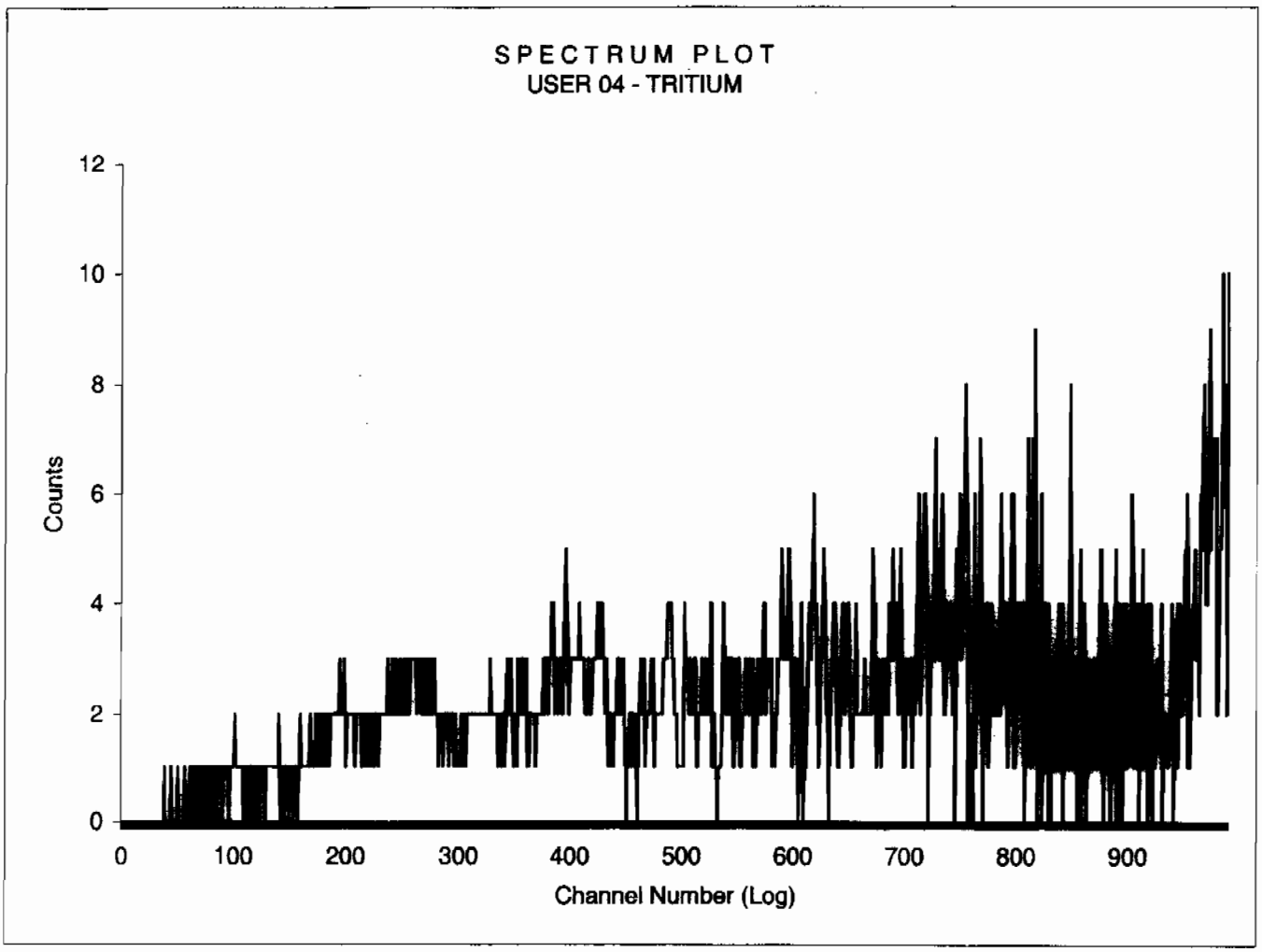

Sample Count Start Time:	16 Jul 2009 21:33:46		
Data Capture Date	16 Jul 2009 22:29:10		
User Filename	S04071627-8B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	20	27-8	55.00
H#, Total Counts:	127.6	2671	
Start, End, X-Axis:	0	990	Channel Number

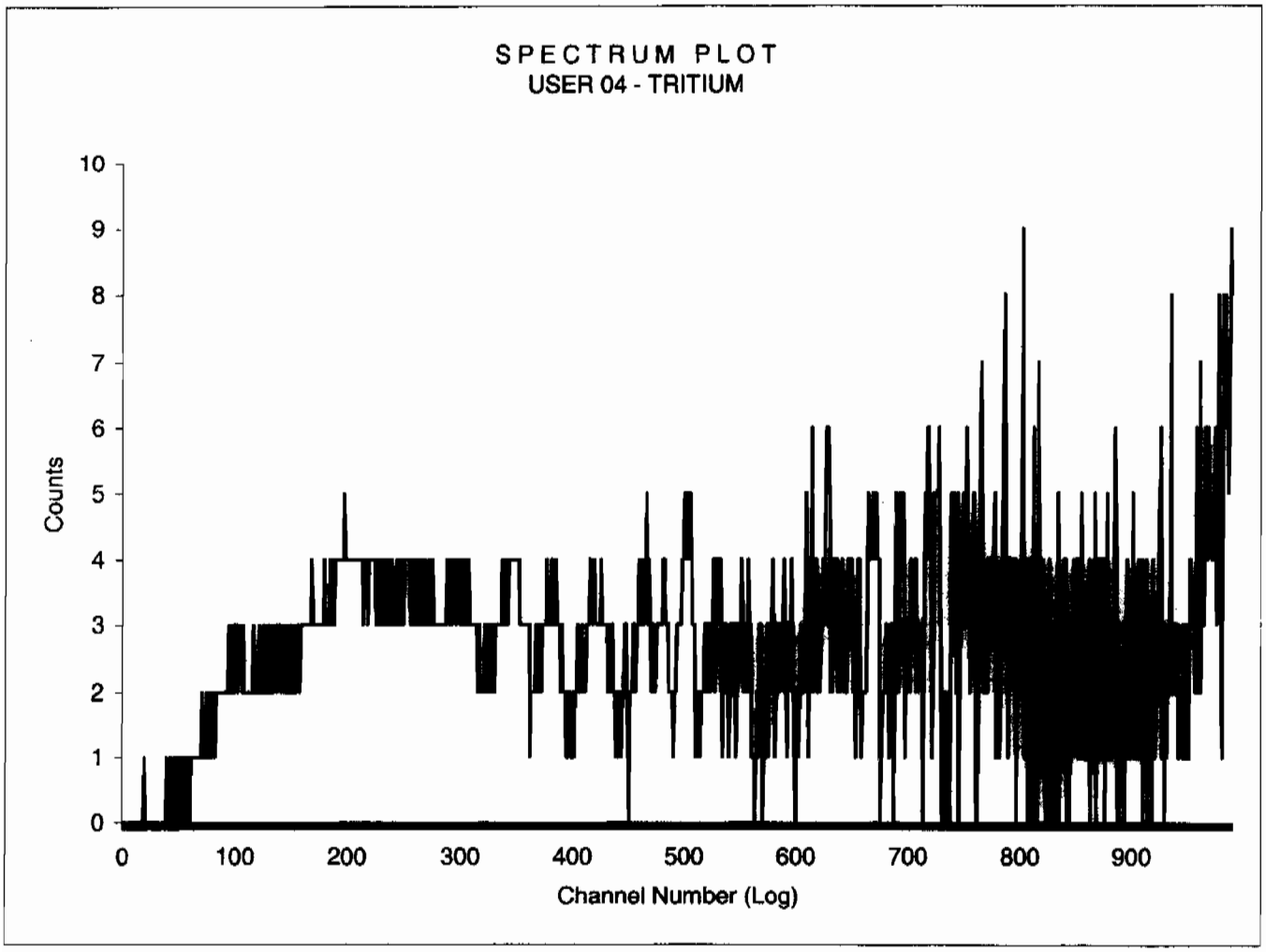

Sample Count Start Time:	16 Jul 2009 07:53:50		
Data Capture Date	16 Jul 2009 08:09:14		
User Filename	S03071628-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	28-1	15.00
H#, Total Counts:	126.7	1251	
Start, End, X-Axis:	0	990	Channel Number

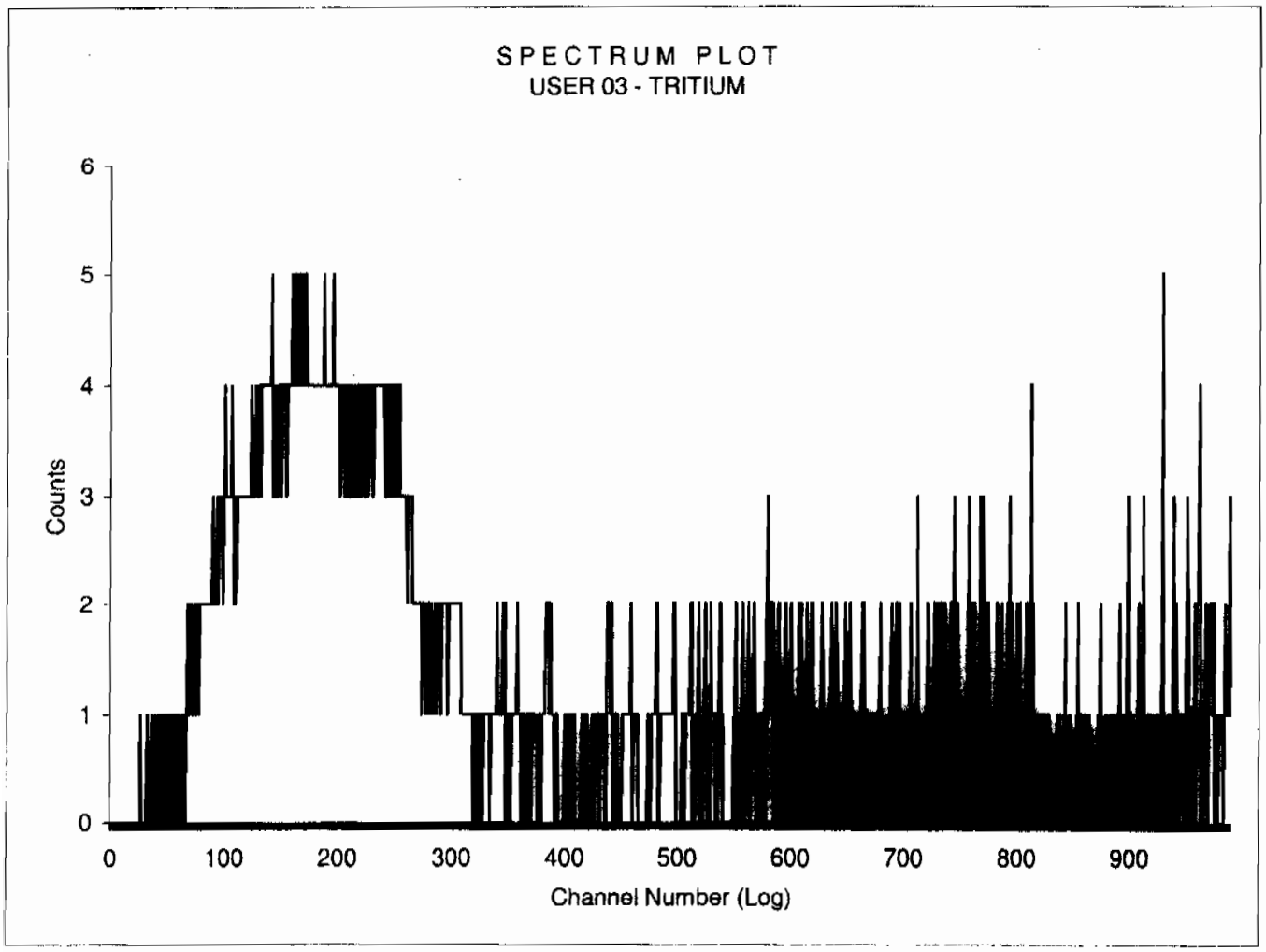

BACKGROUND AND EFFICIENCY DATA

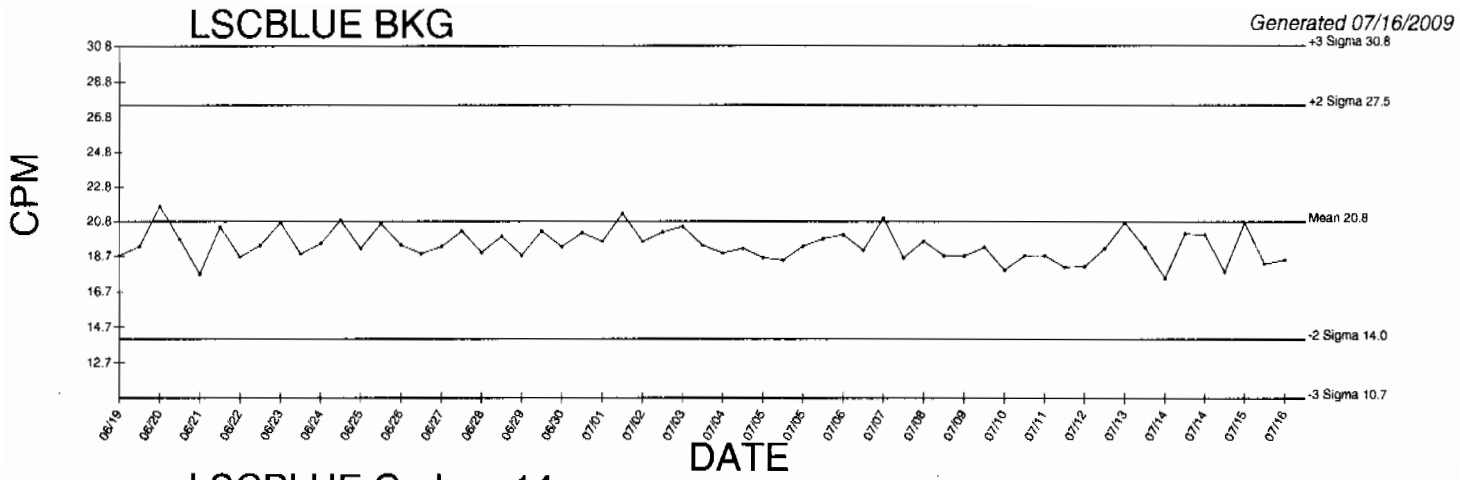

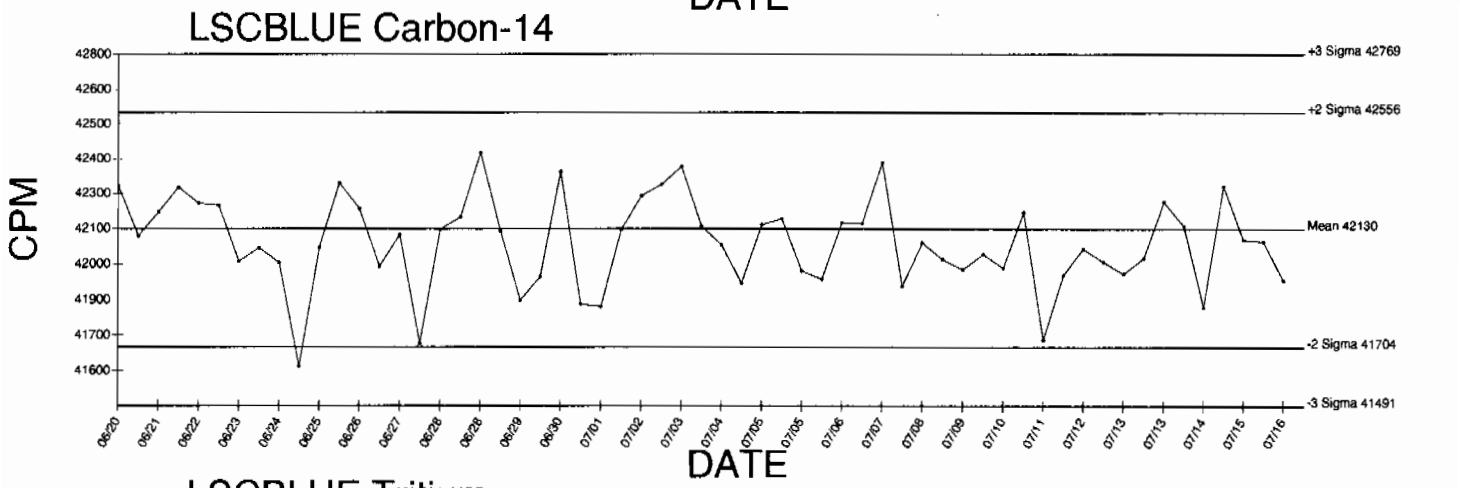

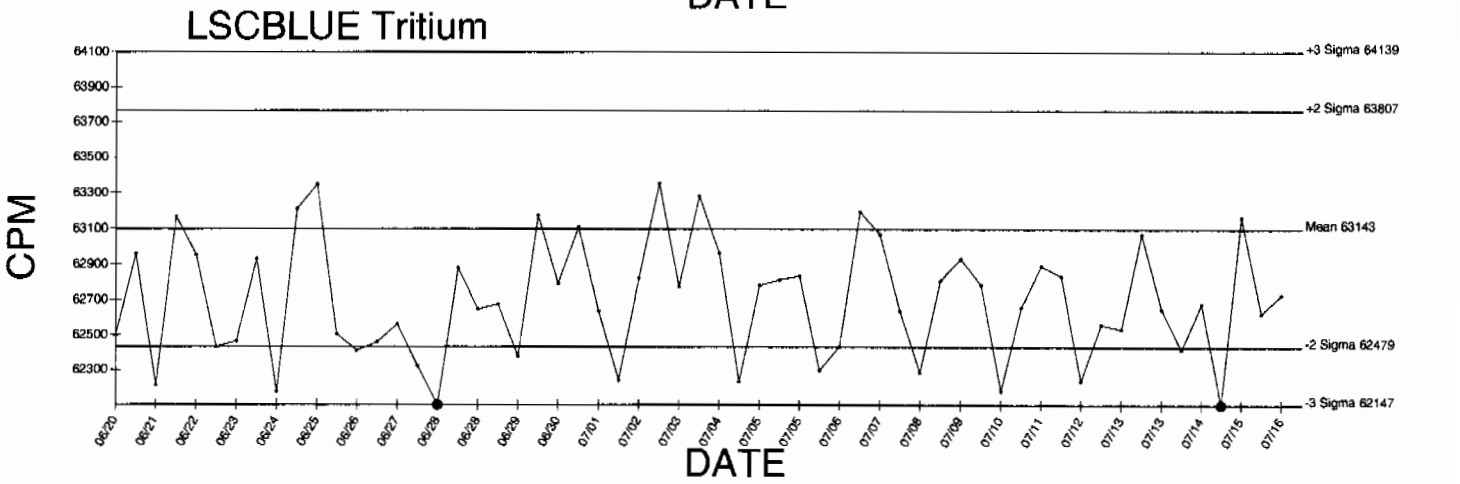

● Denotes Outlier

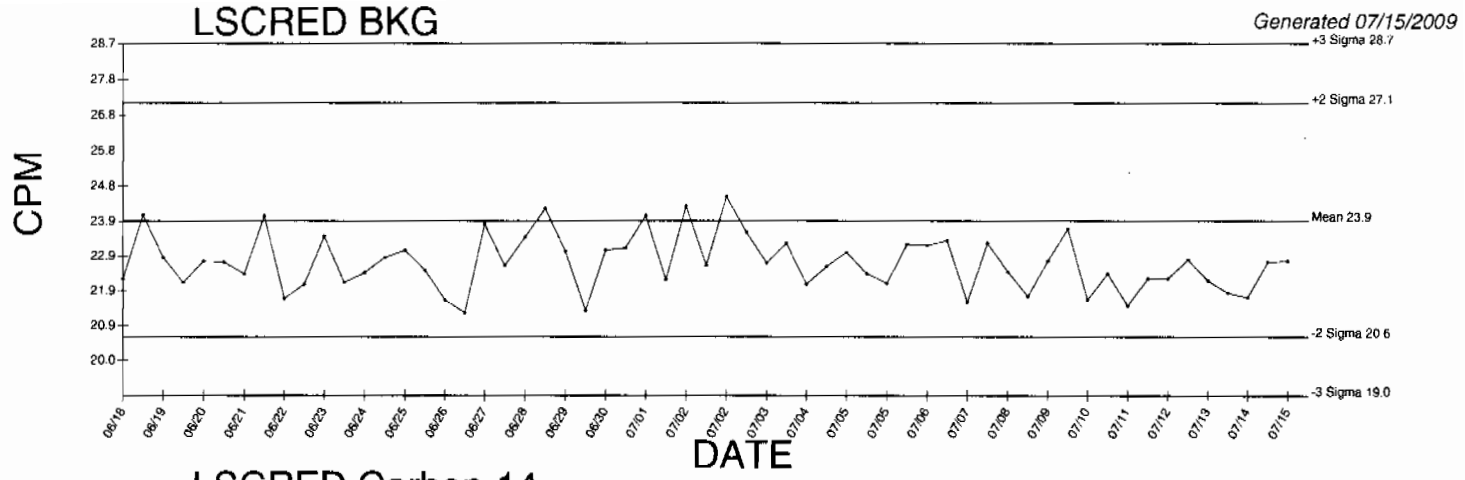

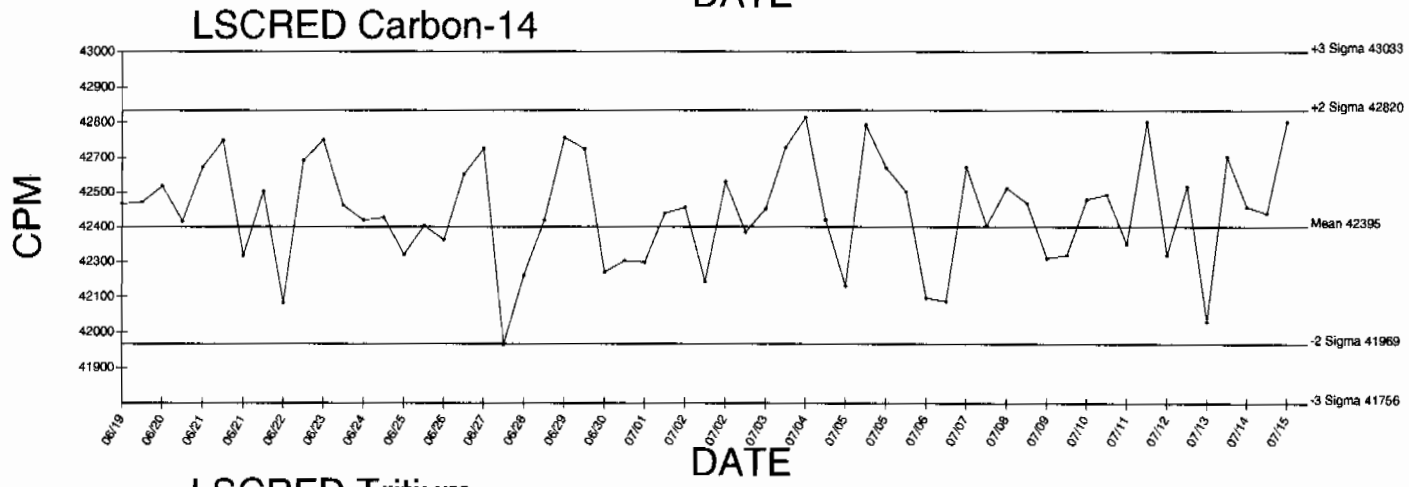

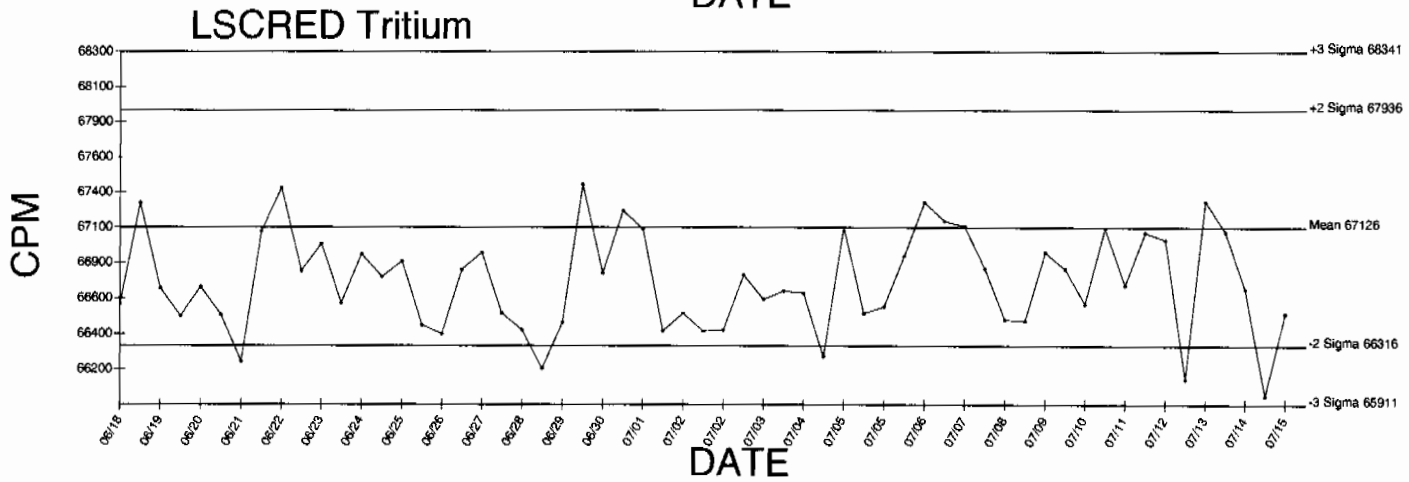

● Denotes Outlier

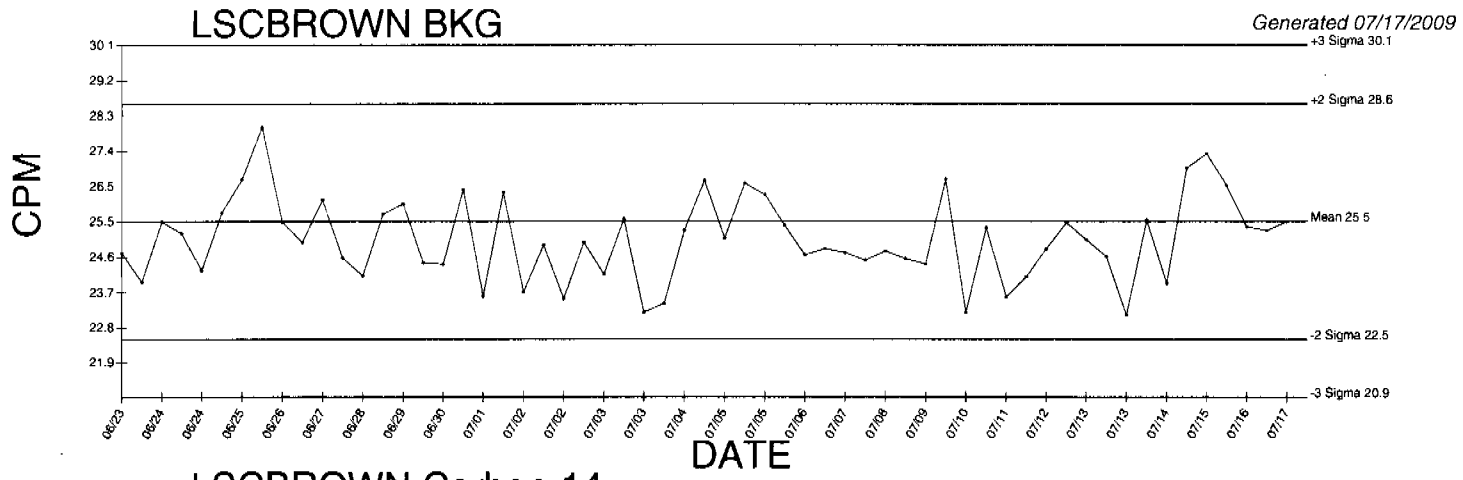

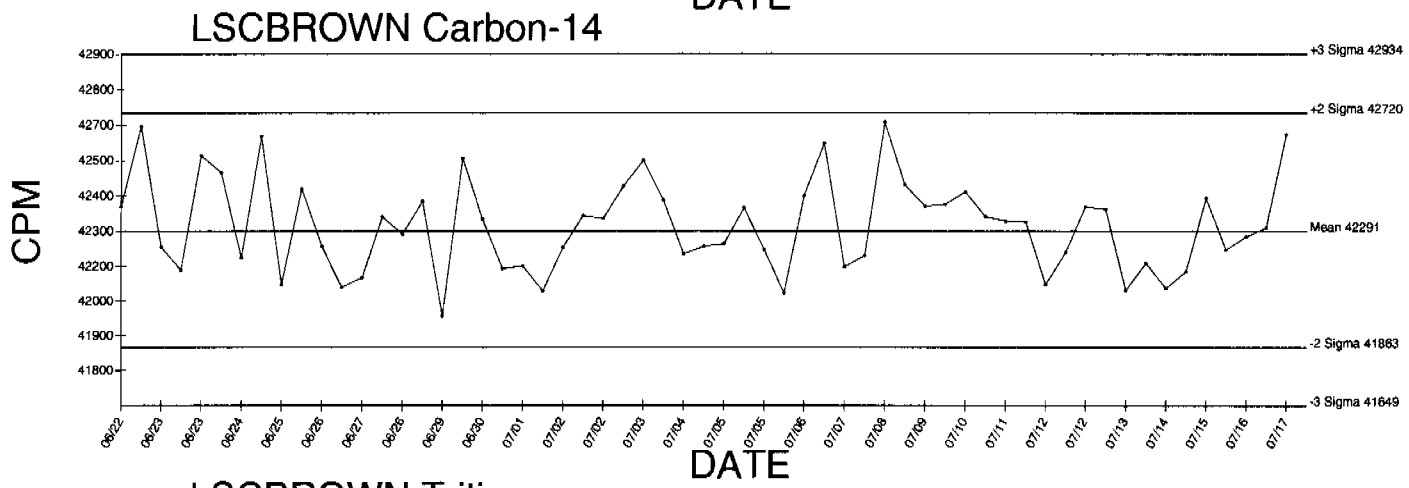

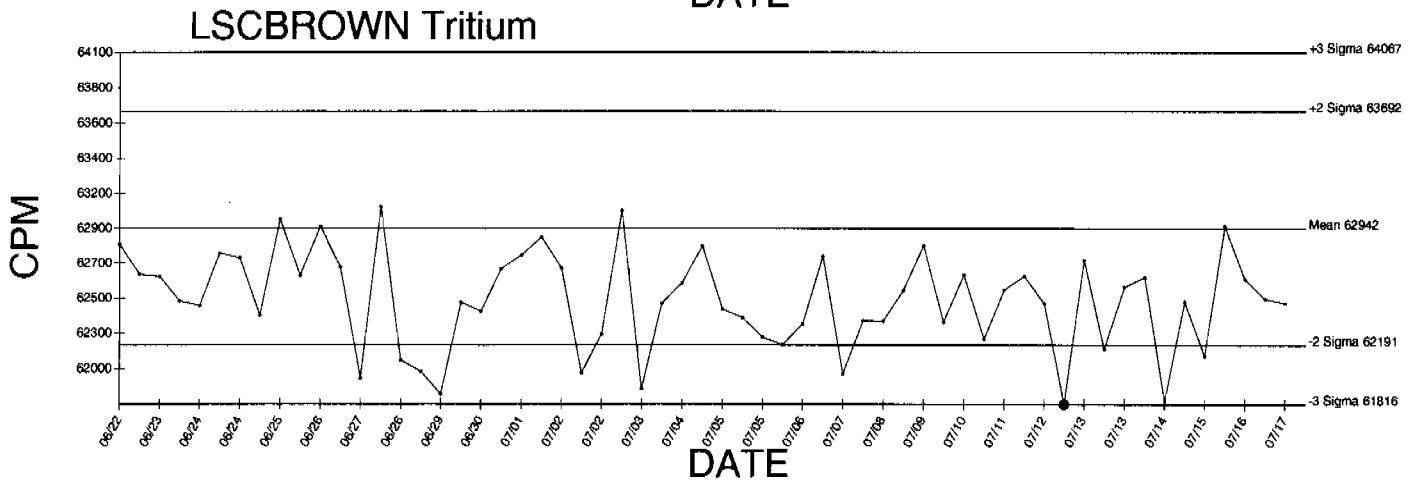

● Denotes Outlier

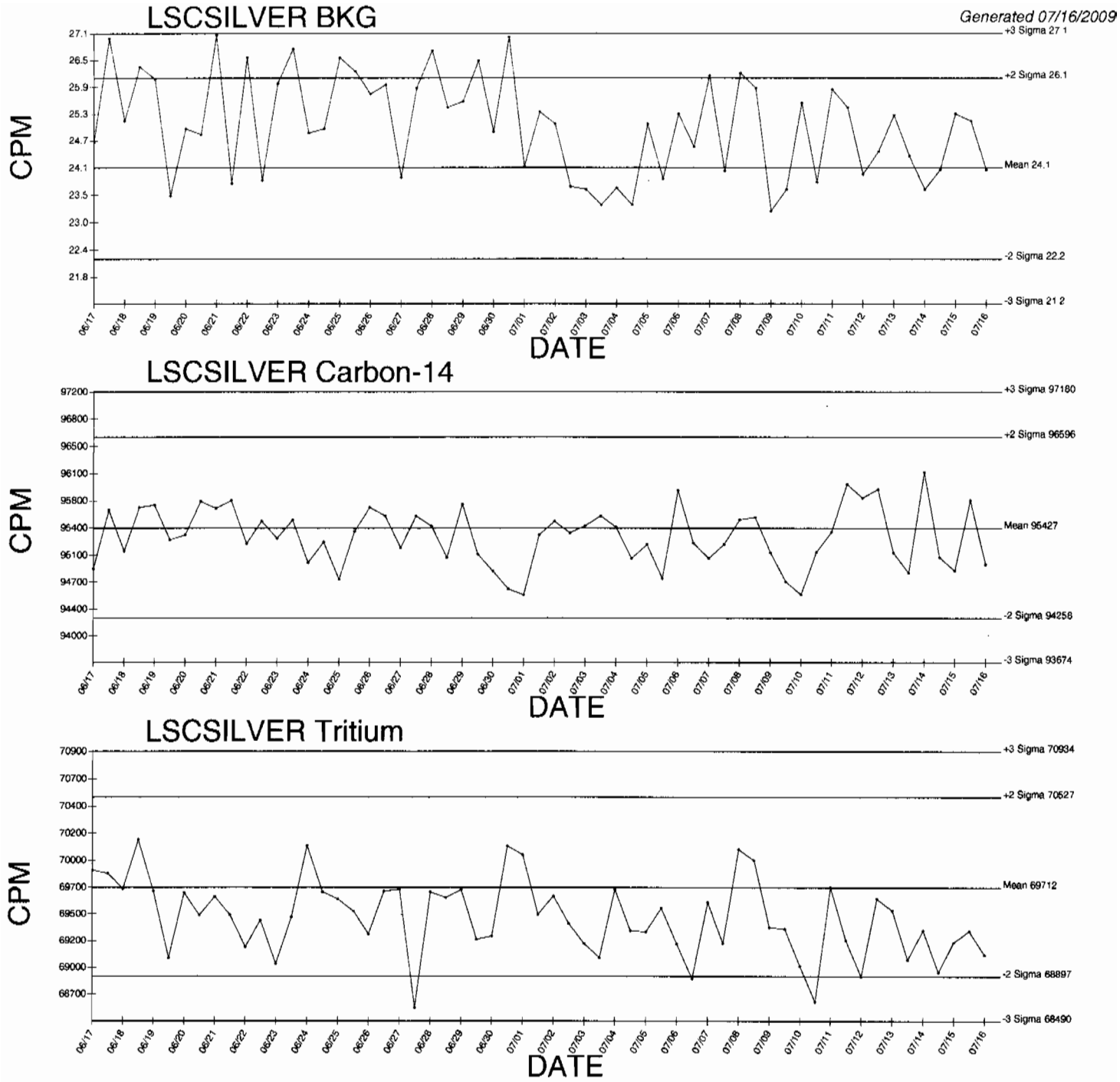

● Denotes Outlier

QA filename : DKA100:[ENV_ALPHA.QA.W]W138.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:41 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.247085 through 0.267085

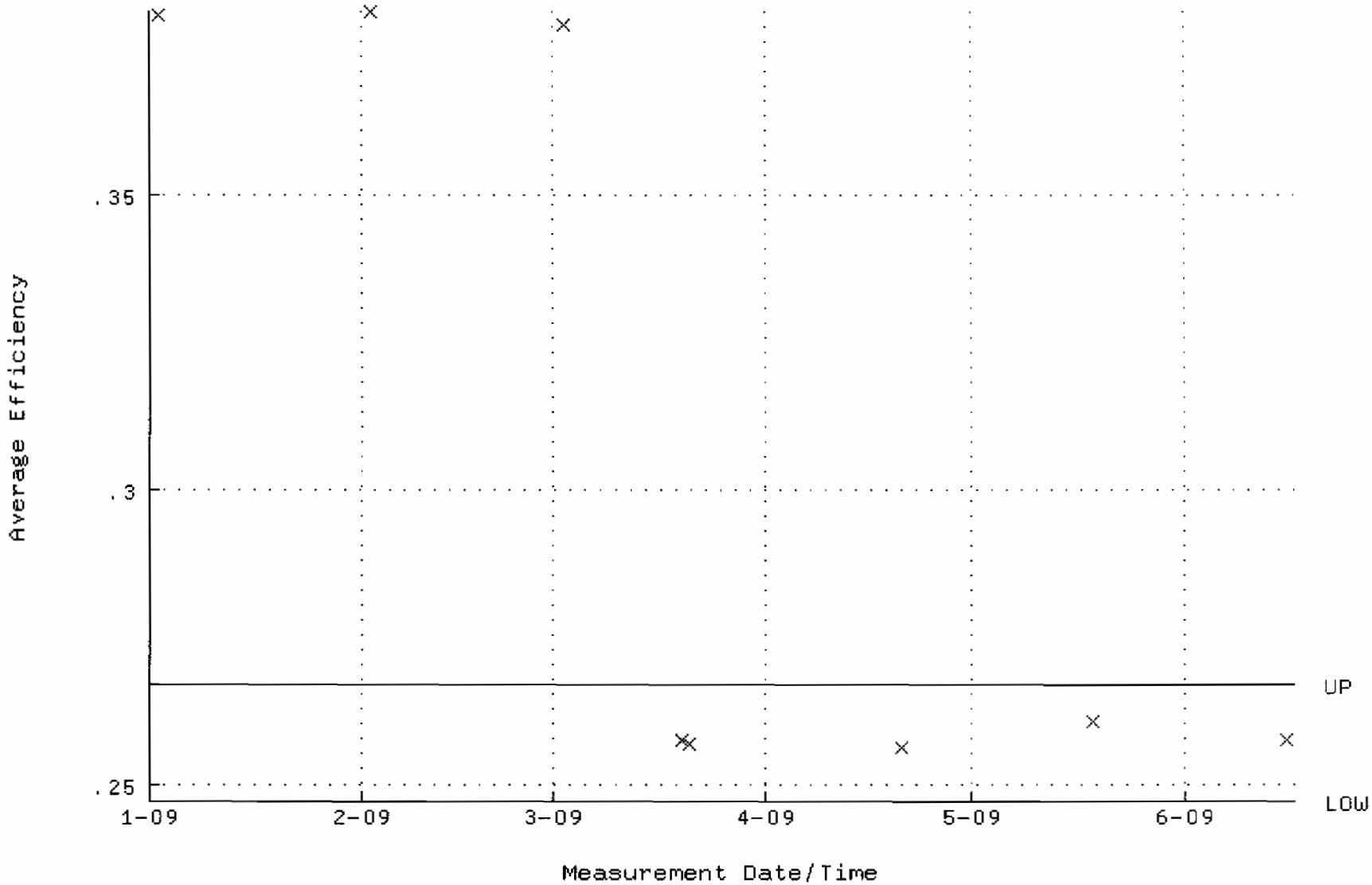

QA filename : DKA100:[ENV_ALPHA.QA.W]W138.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:41 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 82.8399 through 91.5599

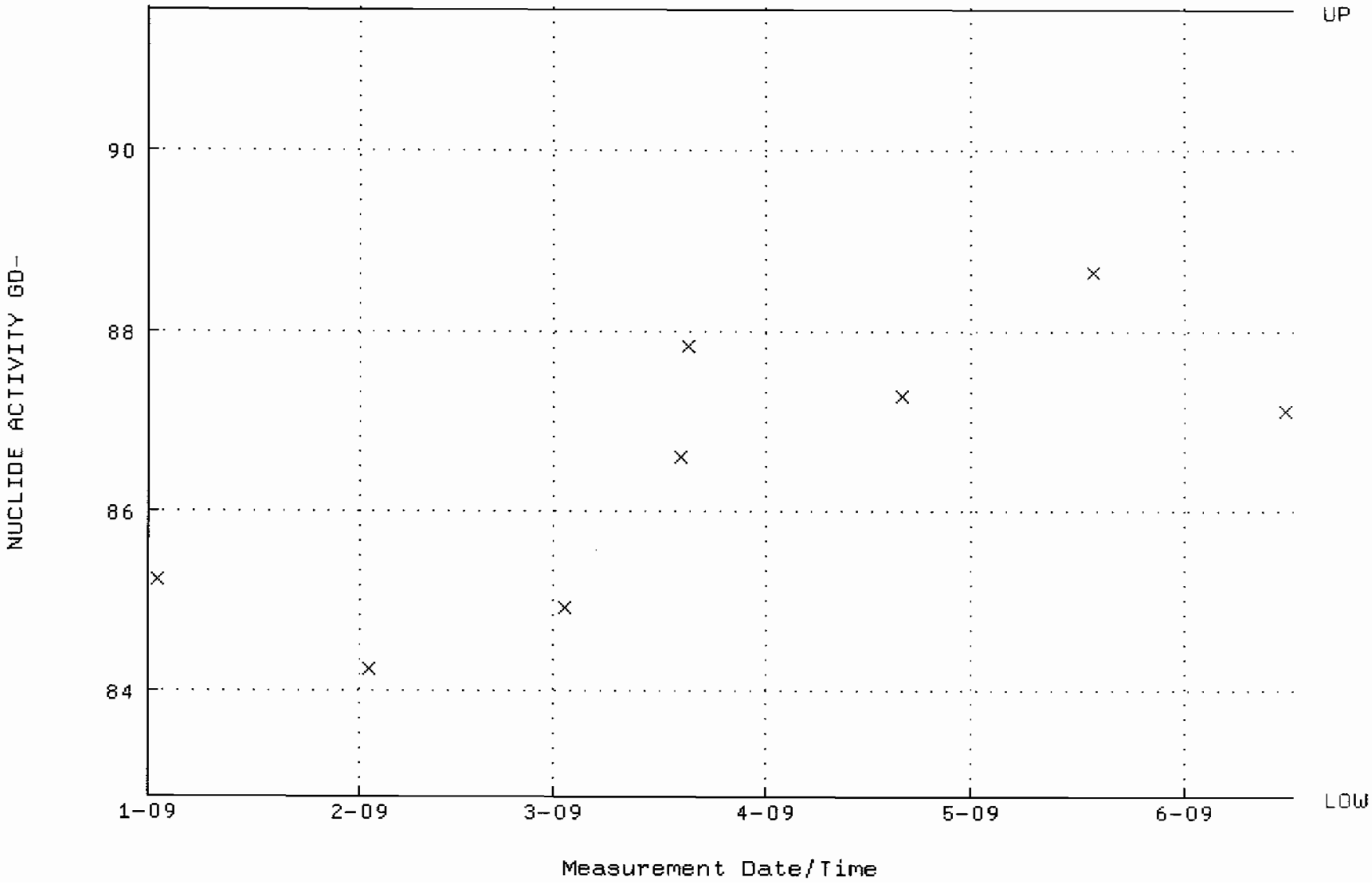

QA filename : DKA100:[ENV_ALPHA.QA.B]B138.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:35 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

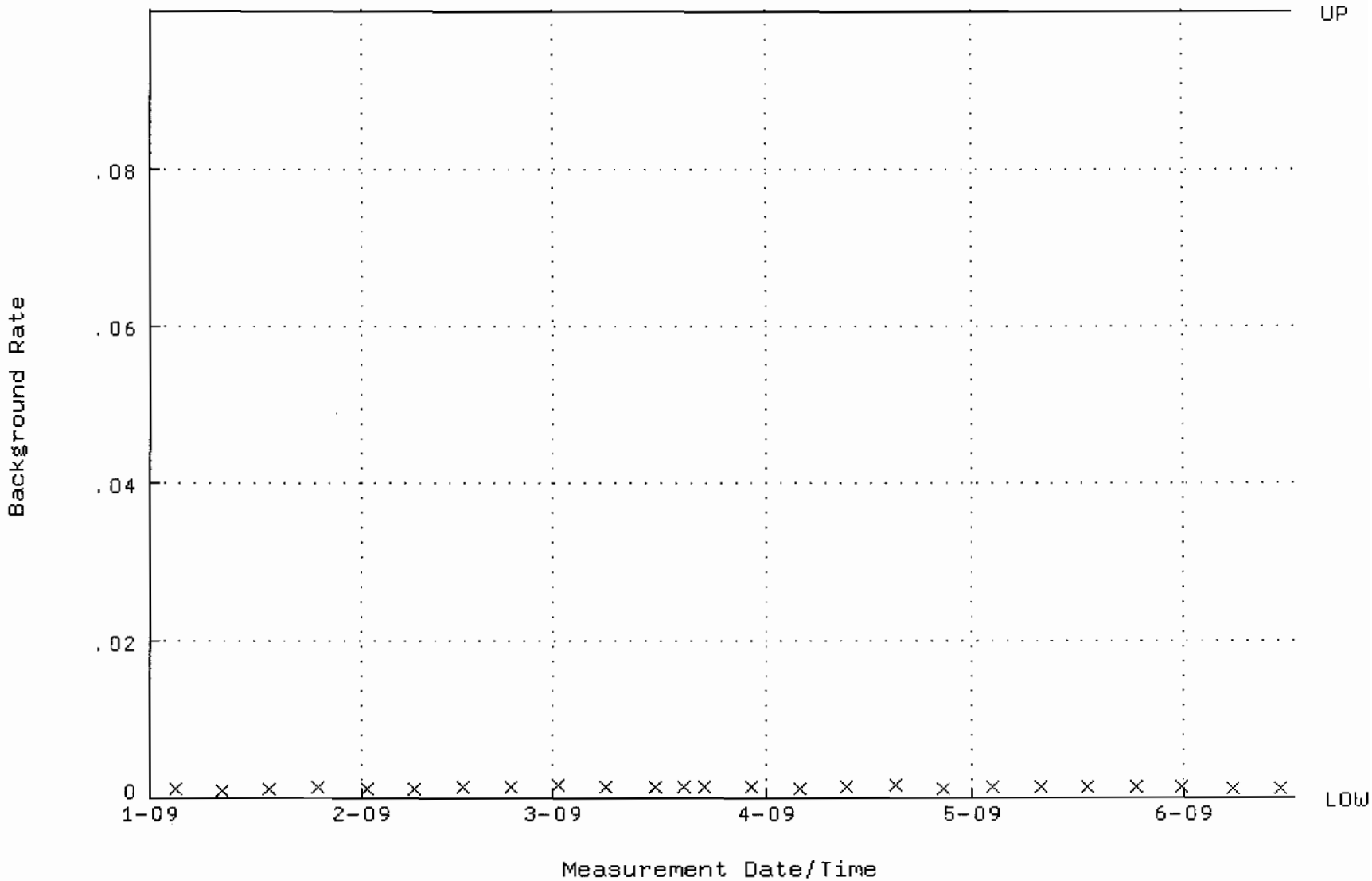

QA filename : DKA100:[ENV_ALPHA.QA.W]W139.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:47 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.240299 through 0.260299

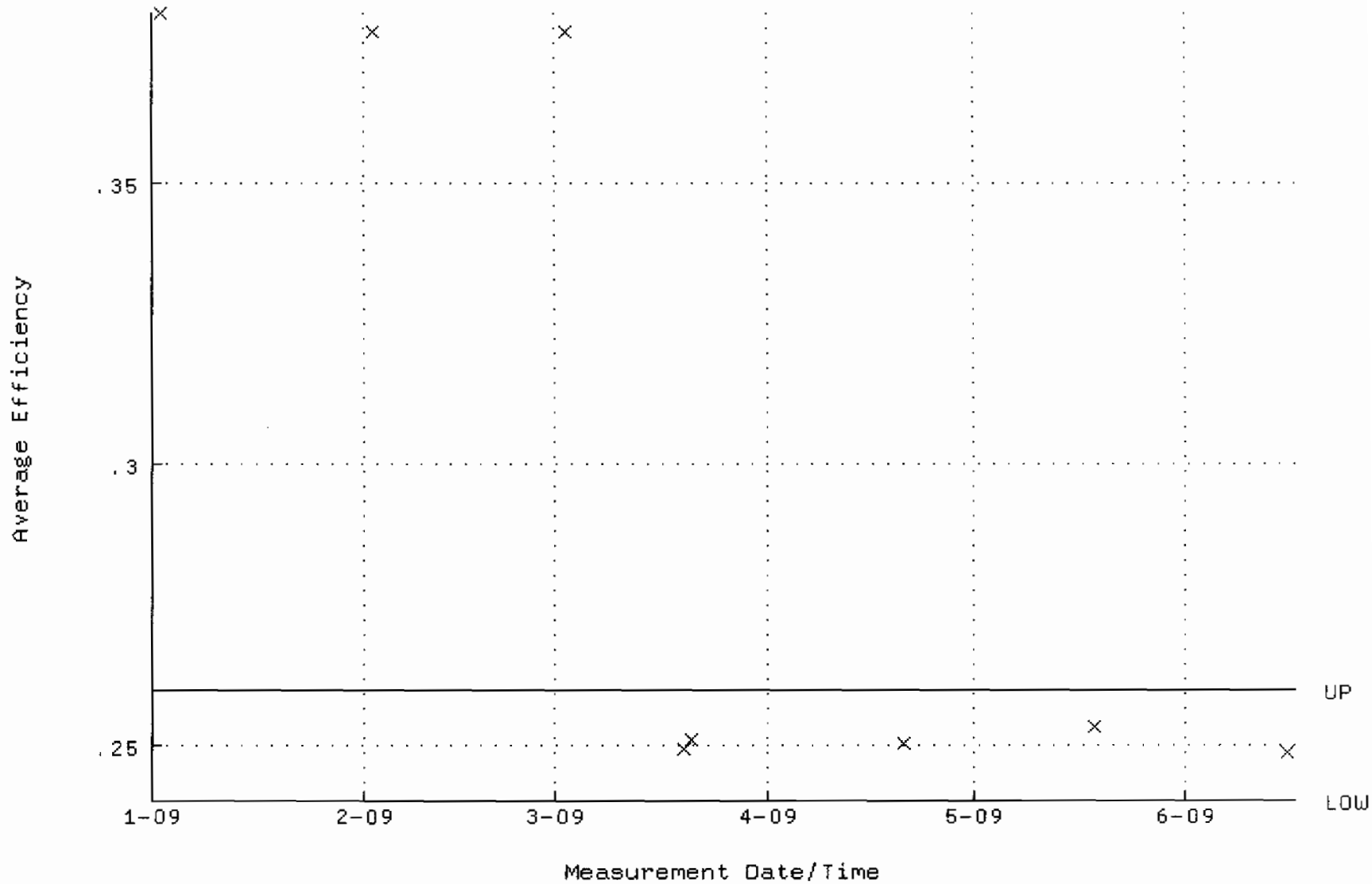

QA filename : DKA100:[ENV_ALPHA.QA.W]W139.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:47 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 85.8145 through 94.8477

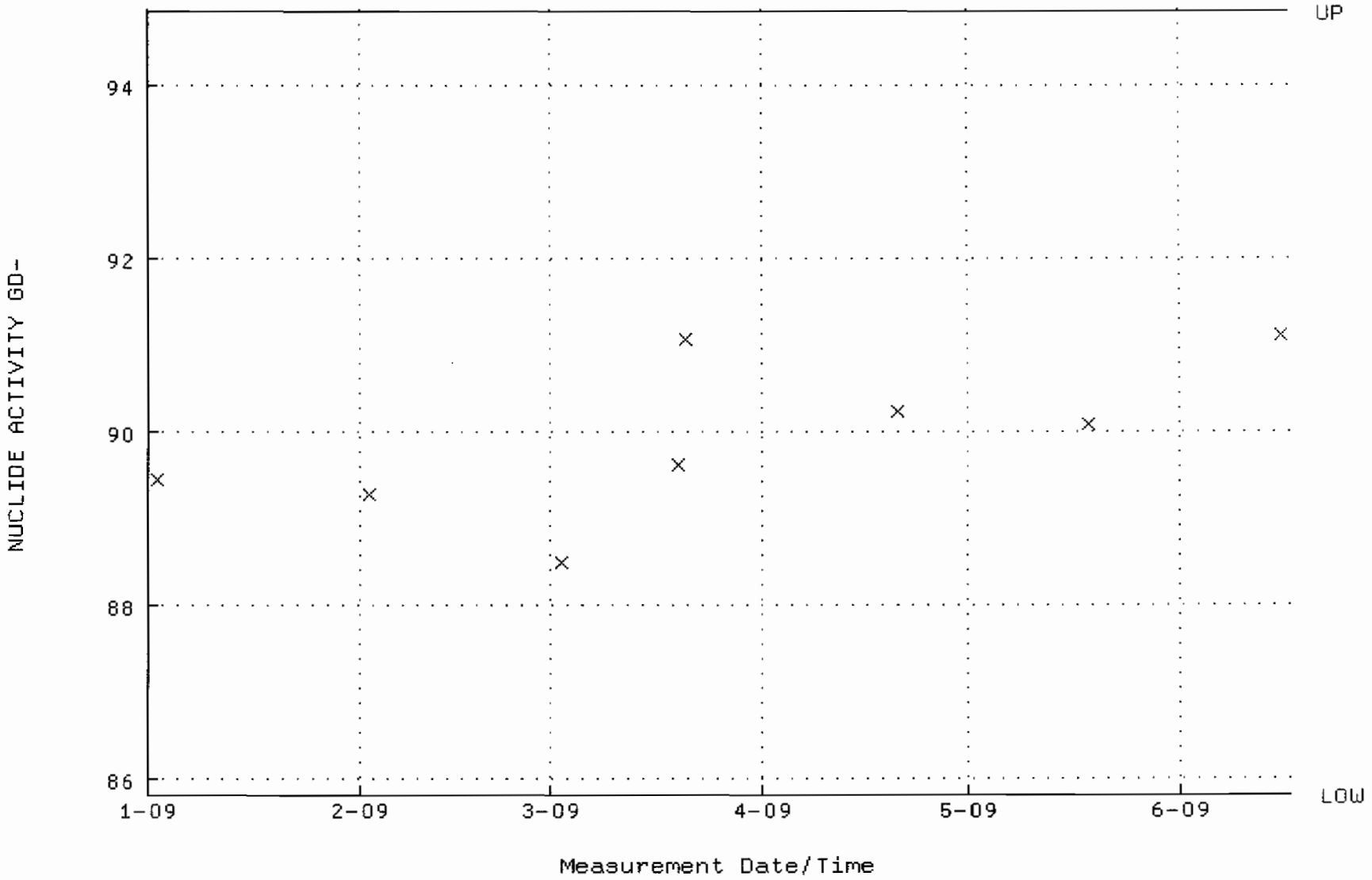

QA filename : DKA100:[ENV_ALPHA.QA.B]B139.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:39 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

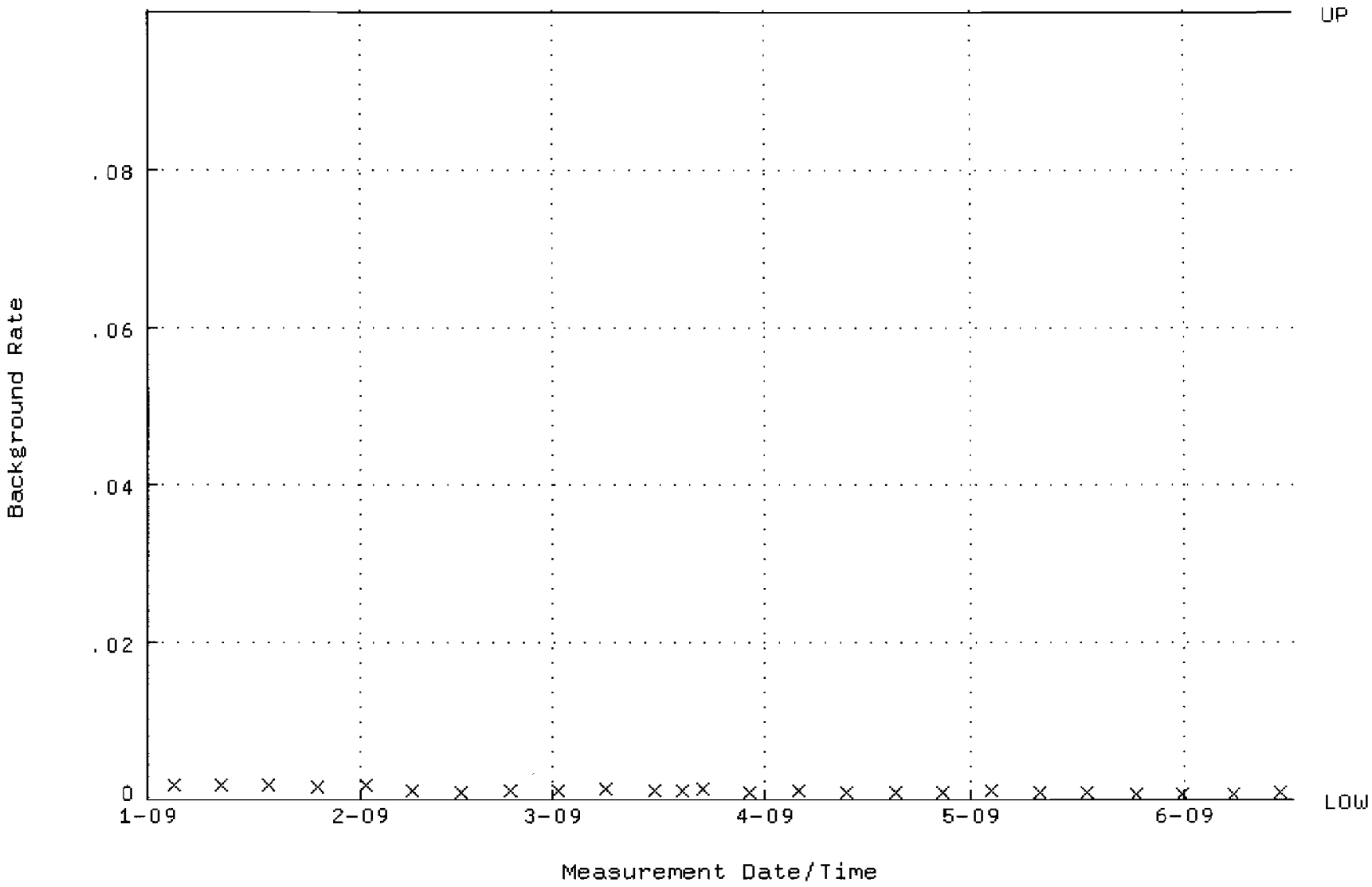

QA filename : DKA100:[ENV_ALPHA.QA.W]W140.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:52 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.246178 through 0.266178

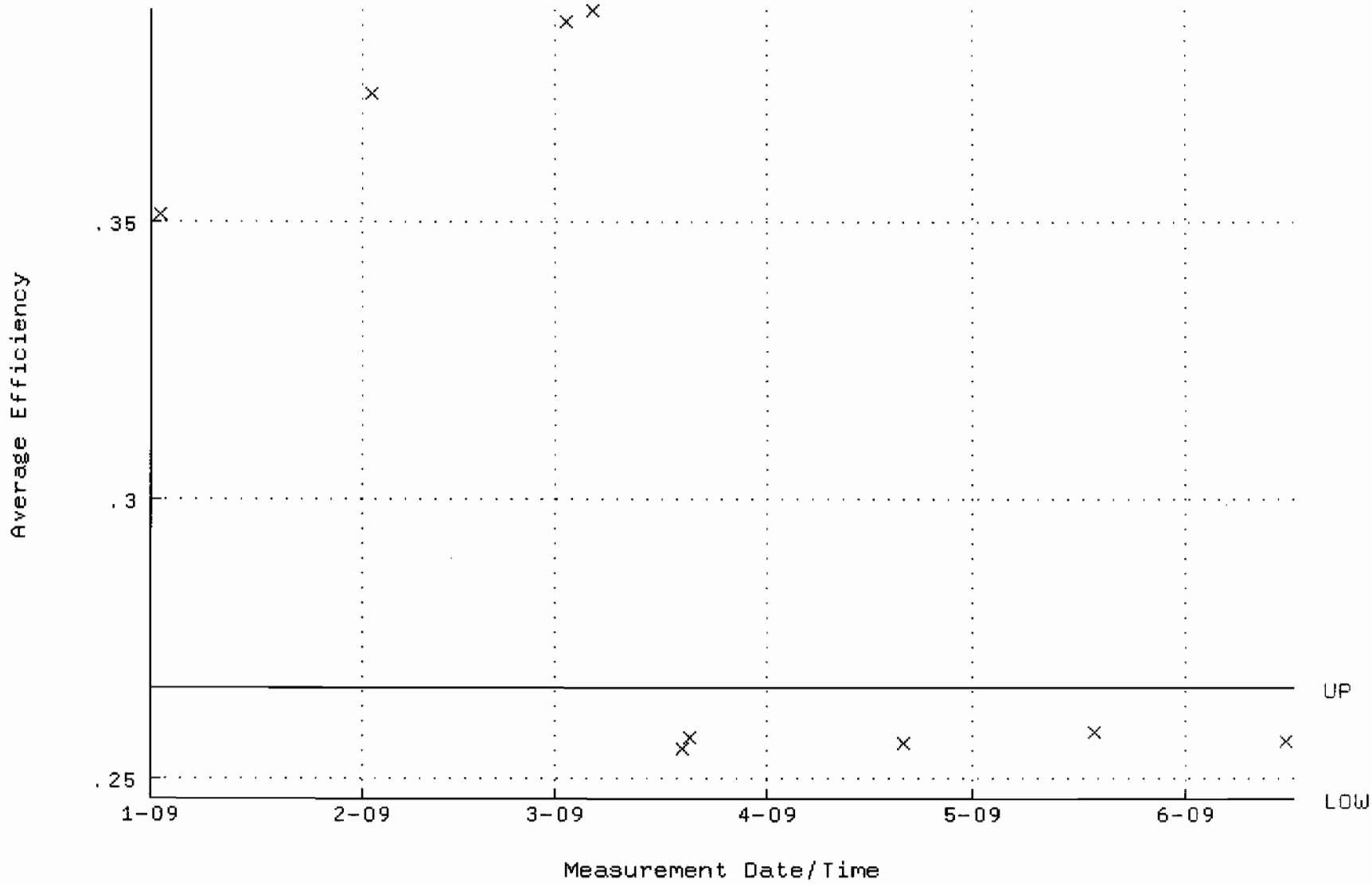

QA filename : DKA100:[ENV_ALPHA.QA.W]W140.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:52 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 83.8171 through 92.6399

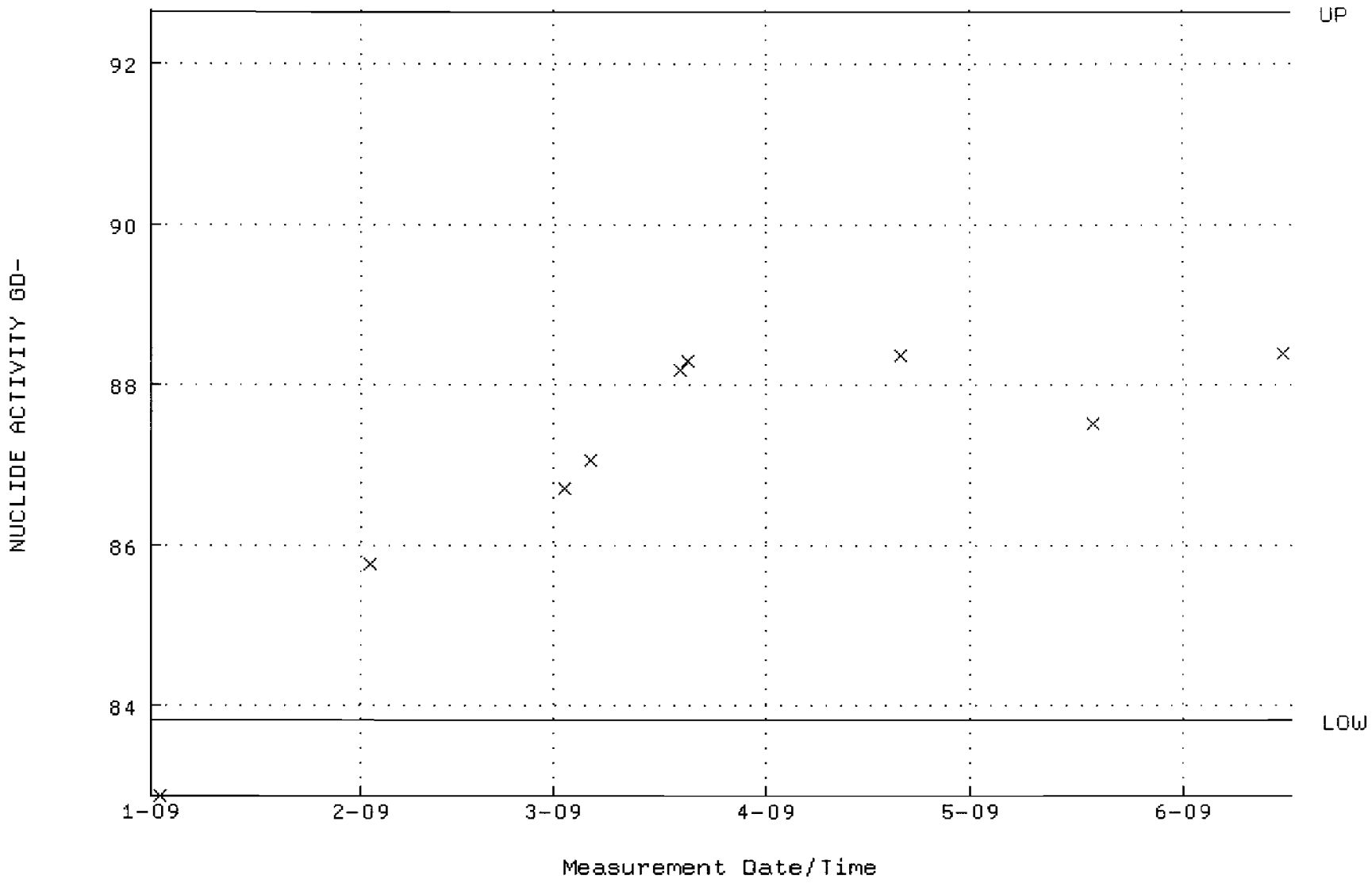

QA filename : DKA100:[ENV_ALPHA.QA.B]B140.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:43 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

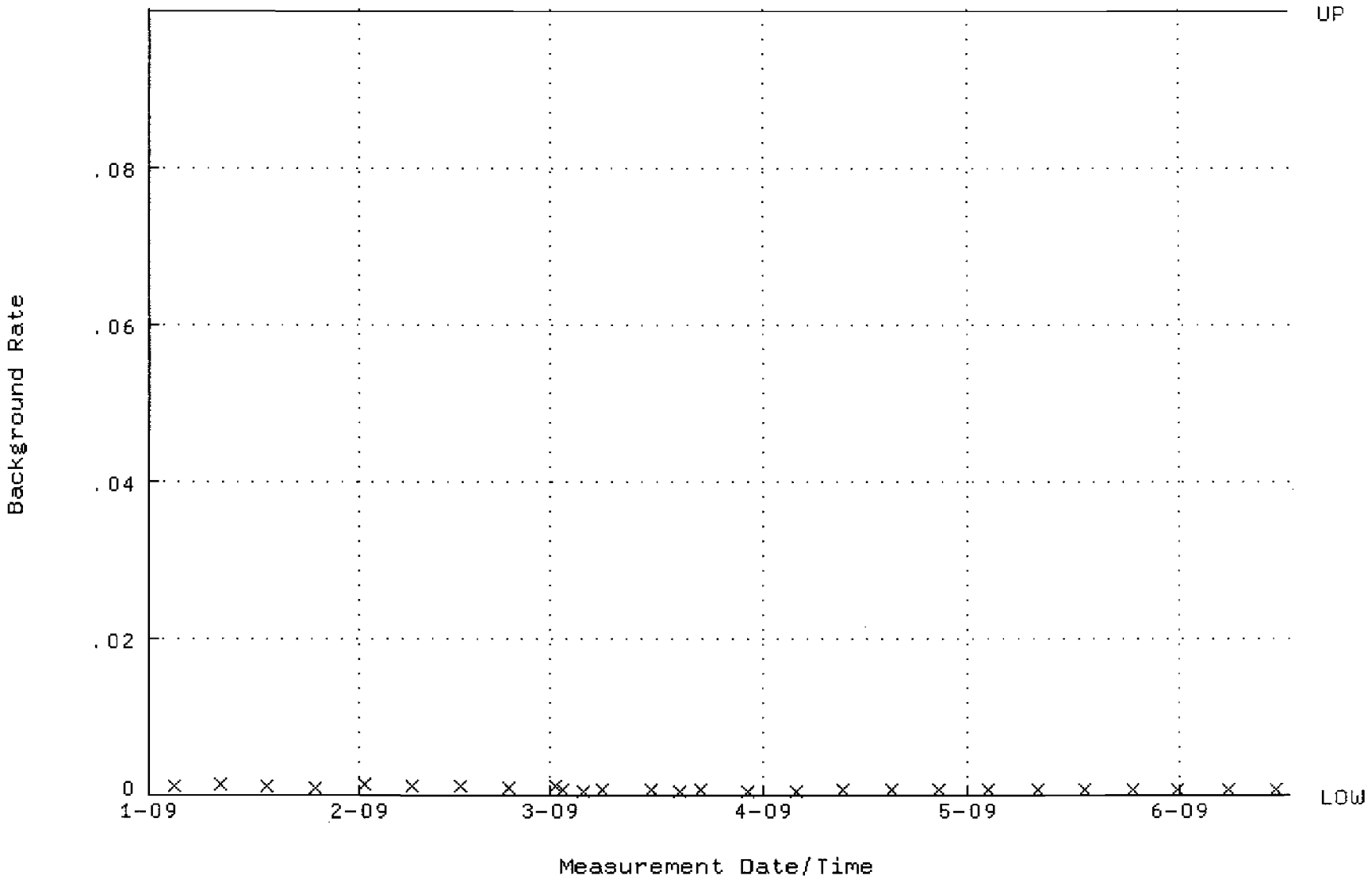

QA filename : DKA100:[ENV_ALPHA.QA.W]W141.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:56 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.247845 through 0.267845

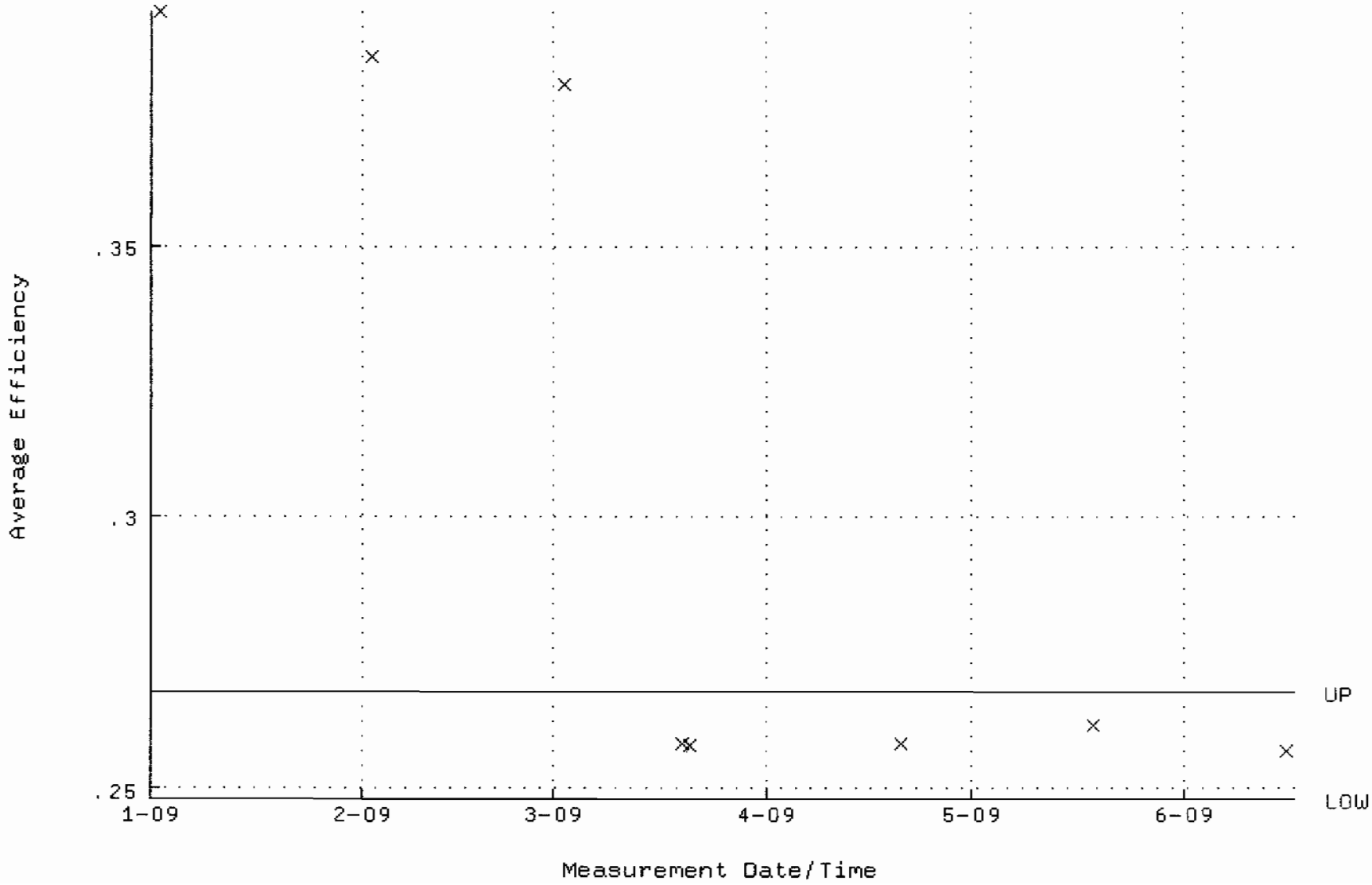

QA filename : DKA100:[ENV_ALPHA.QA.W]W141.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:56 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 80.8595 through 89.3711

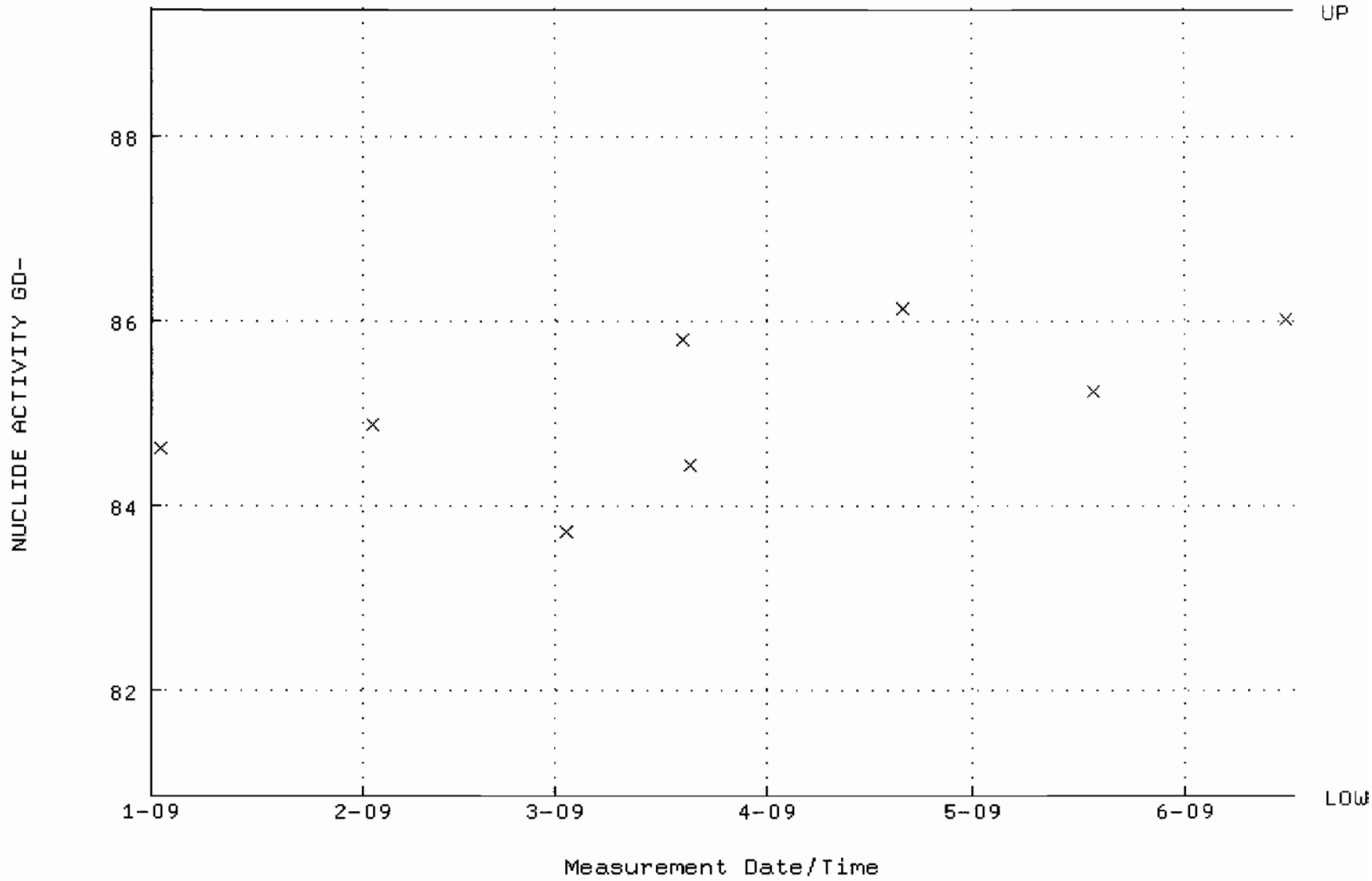

QA filename : DKA100:[ENV_ALPHA.QA.B]B141.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:47 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

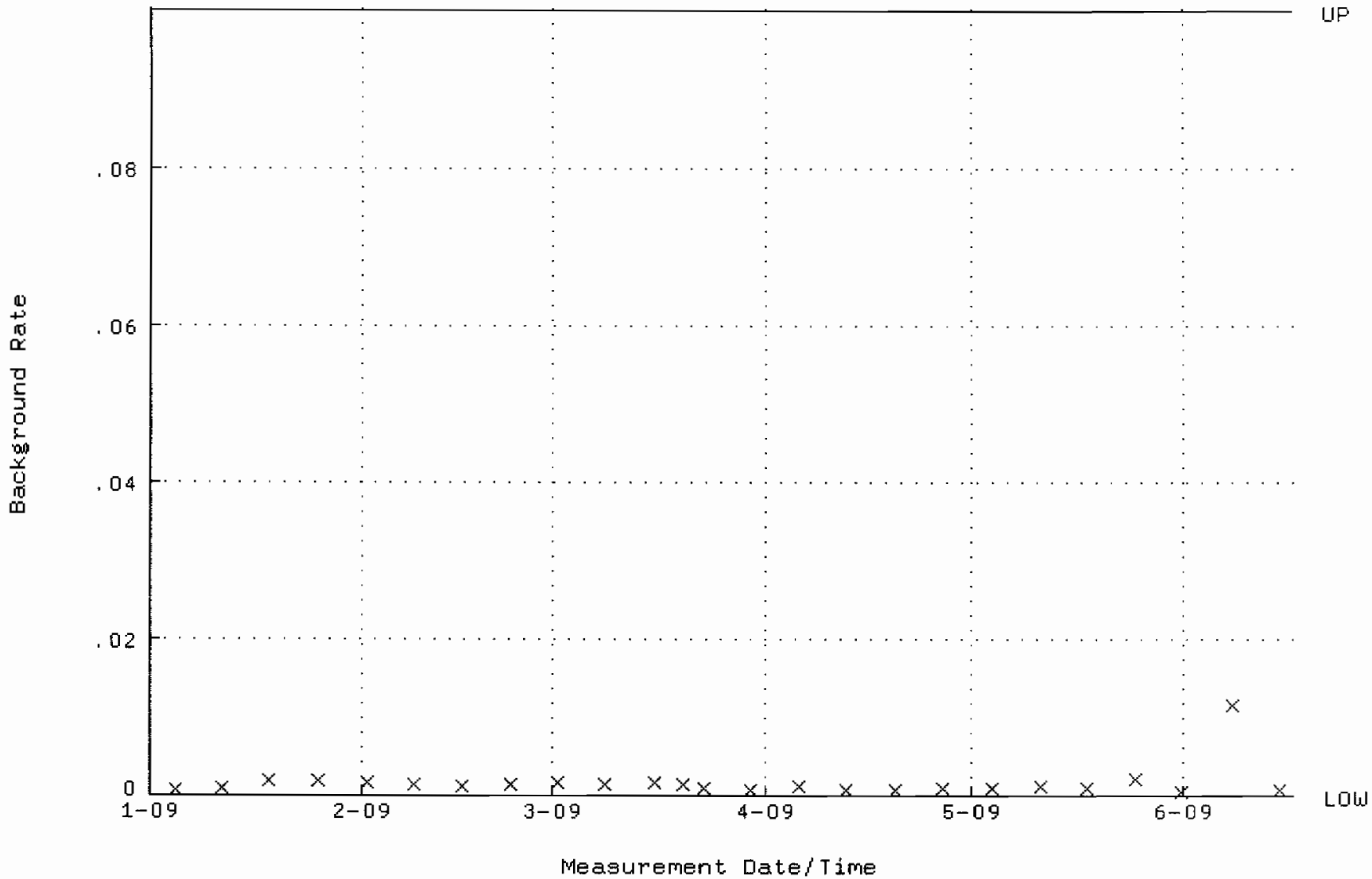

QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:02 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.252182 through 0.272182

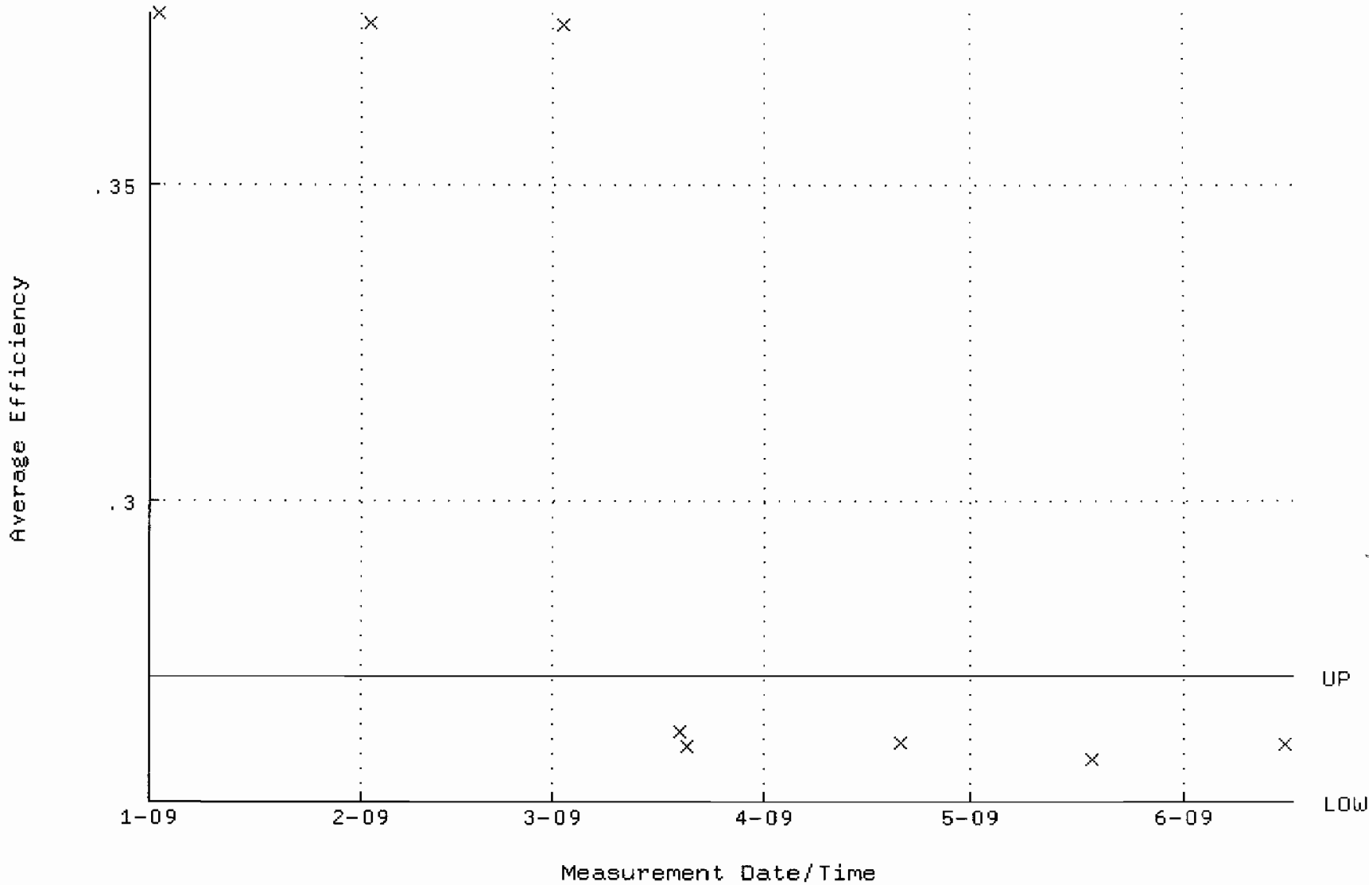

QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:02 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 81.0245 through 89.5533

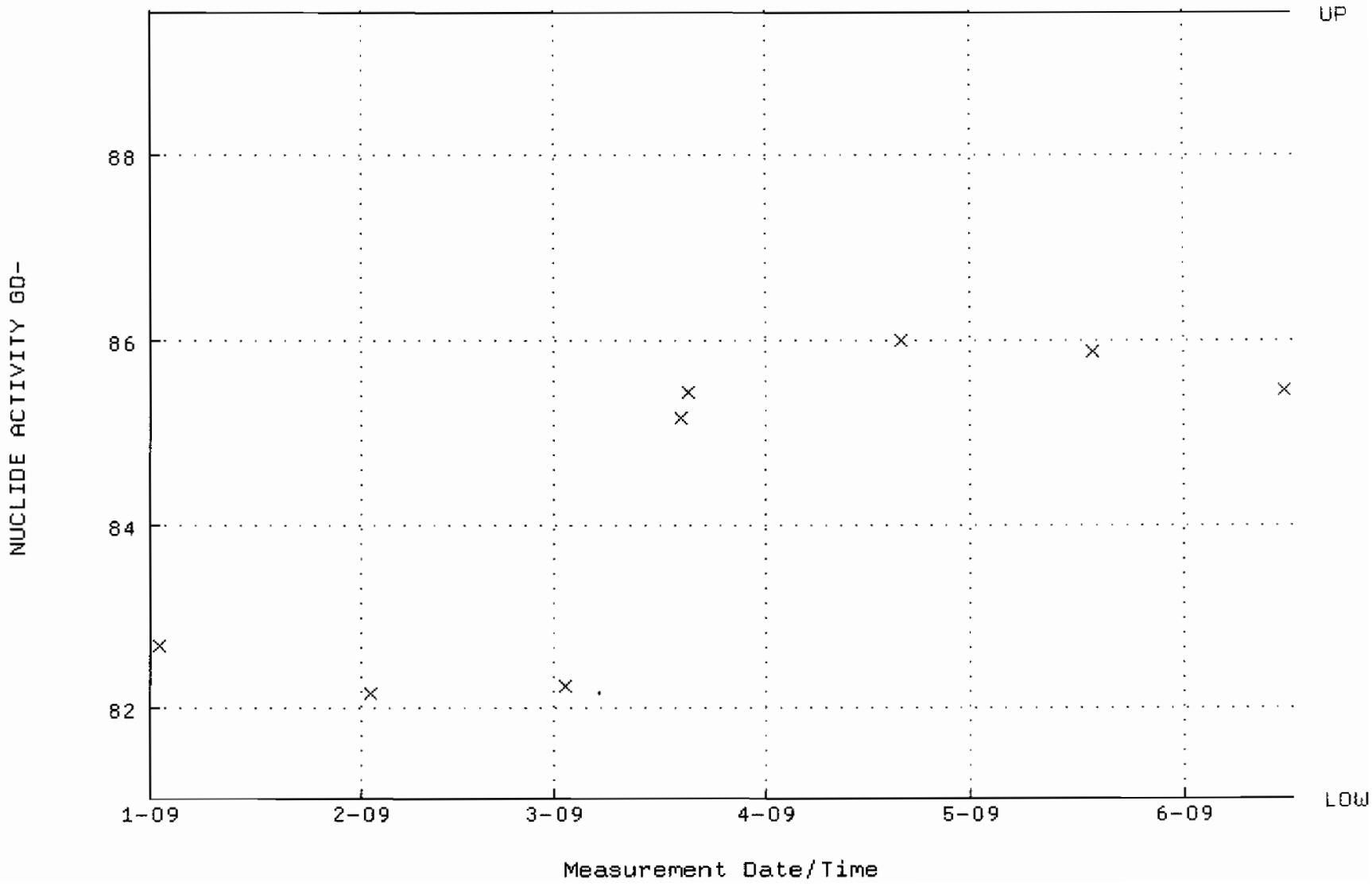

QA filename : OKA100:[ENV_ALPHA.QA.B]B142.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

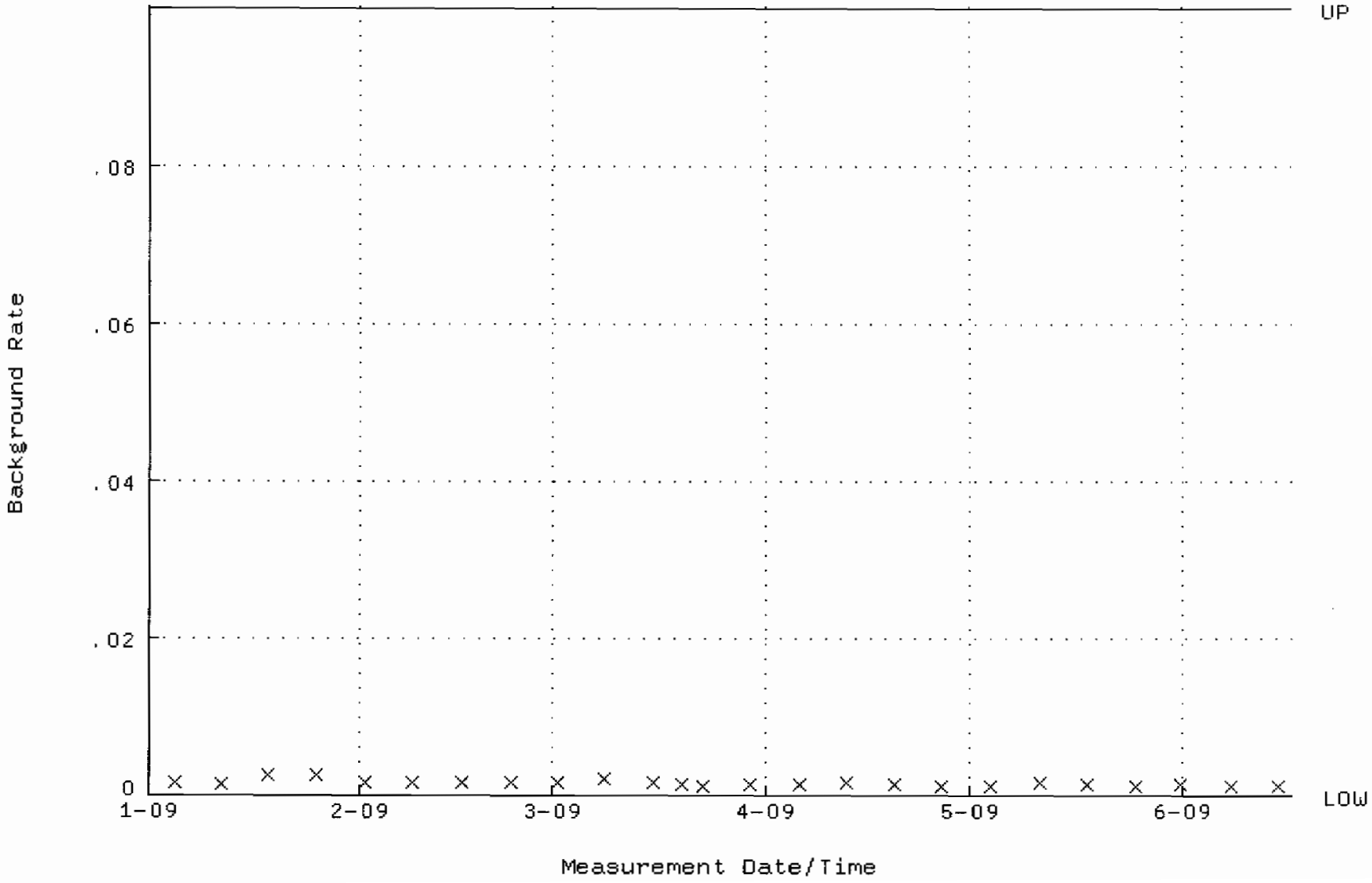

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:11 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.237963 through 0.257963

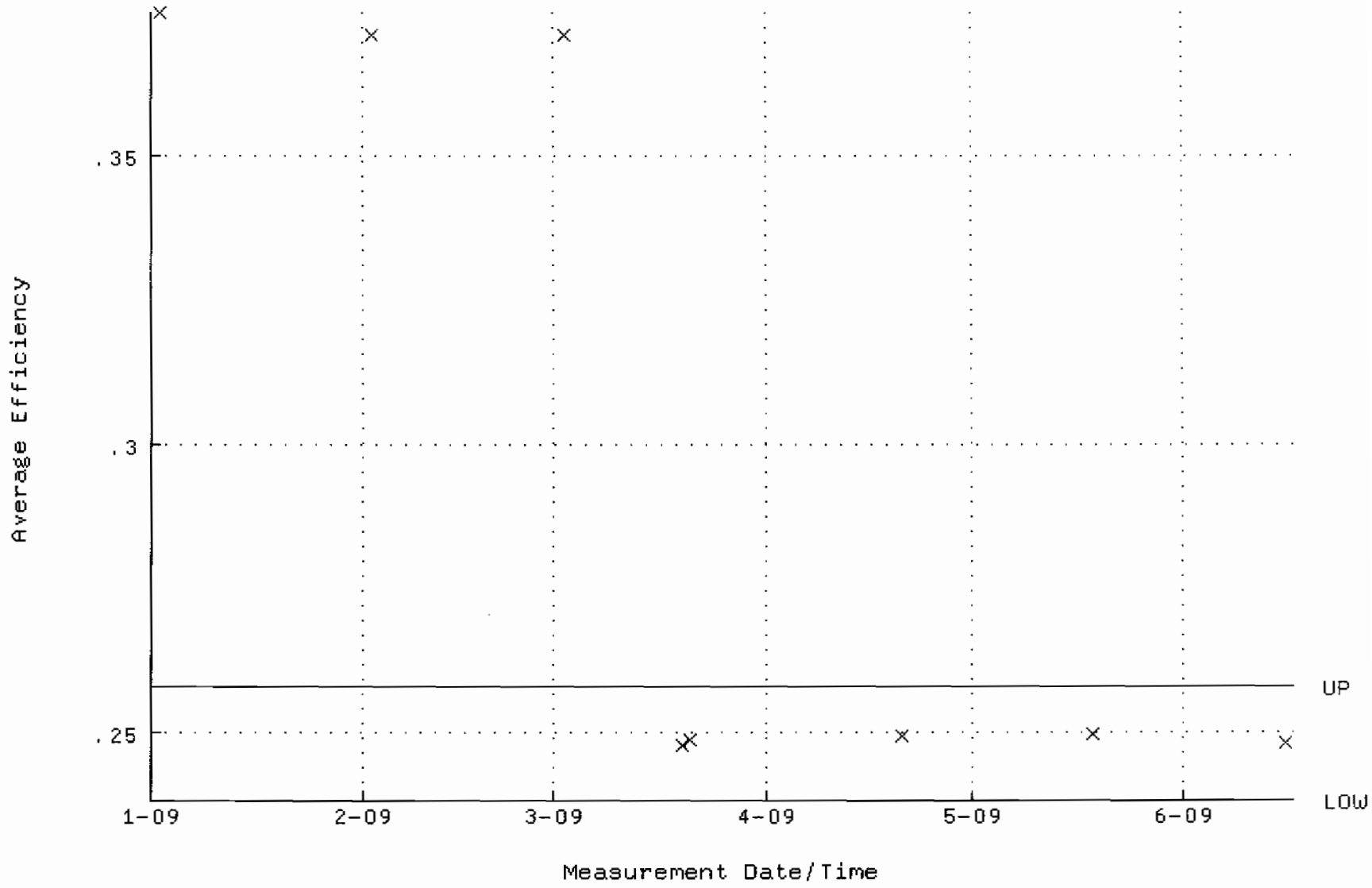

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:11 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.6507 through 93.5613

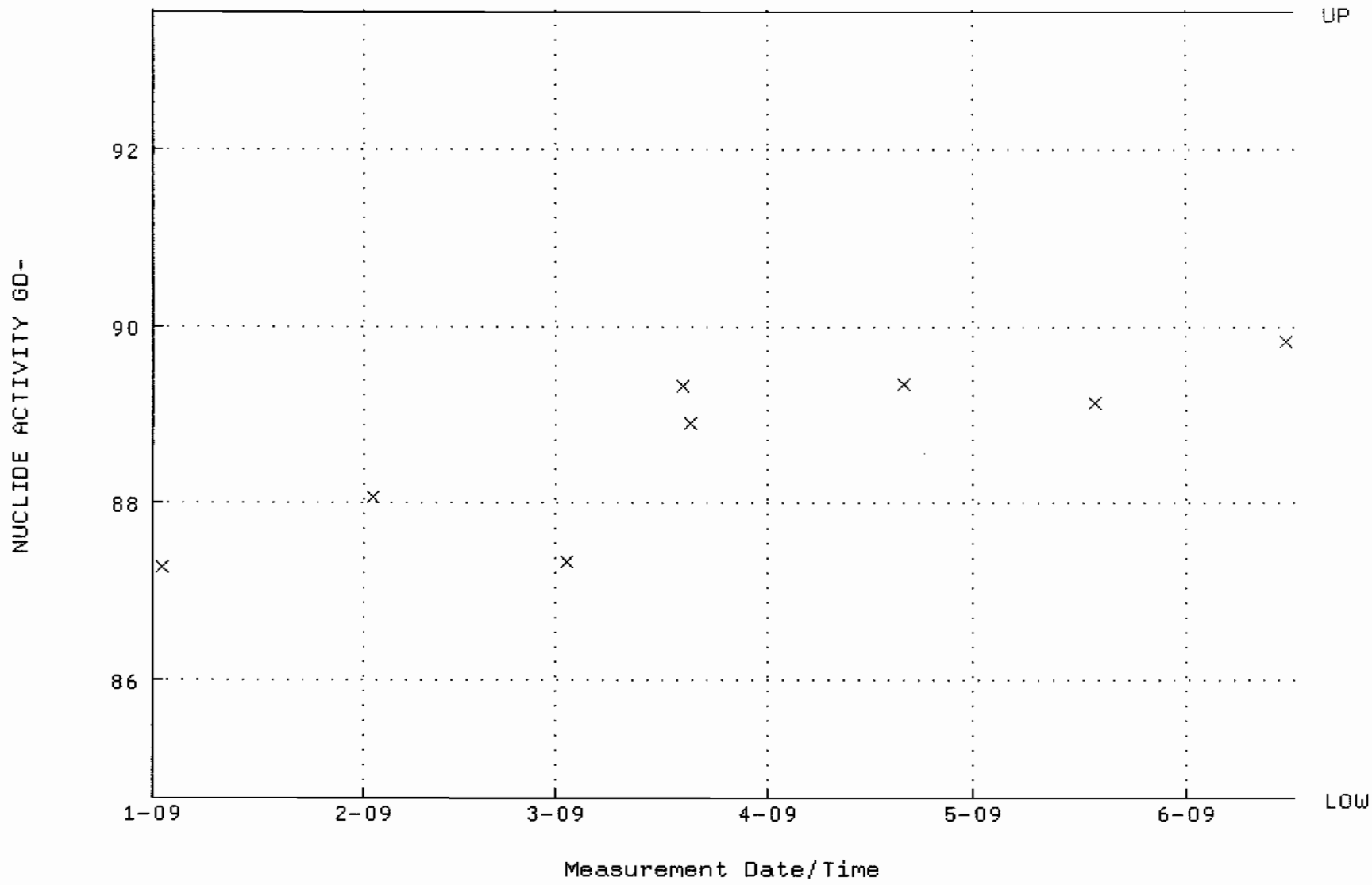

QA filename : DKA100:[ENV_ALPHA.QA.B]B144.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:00 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

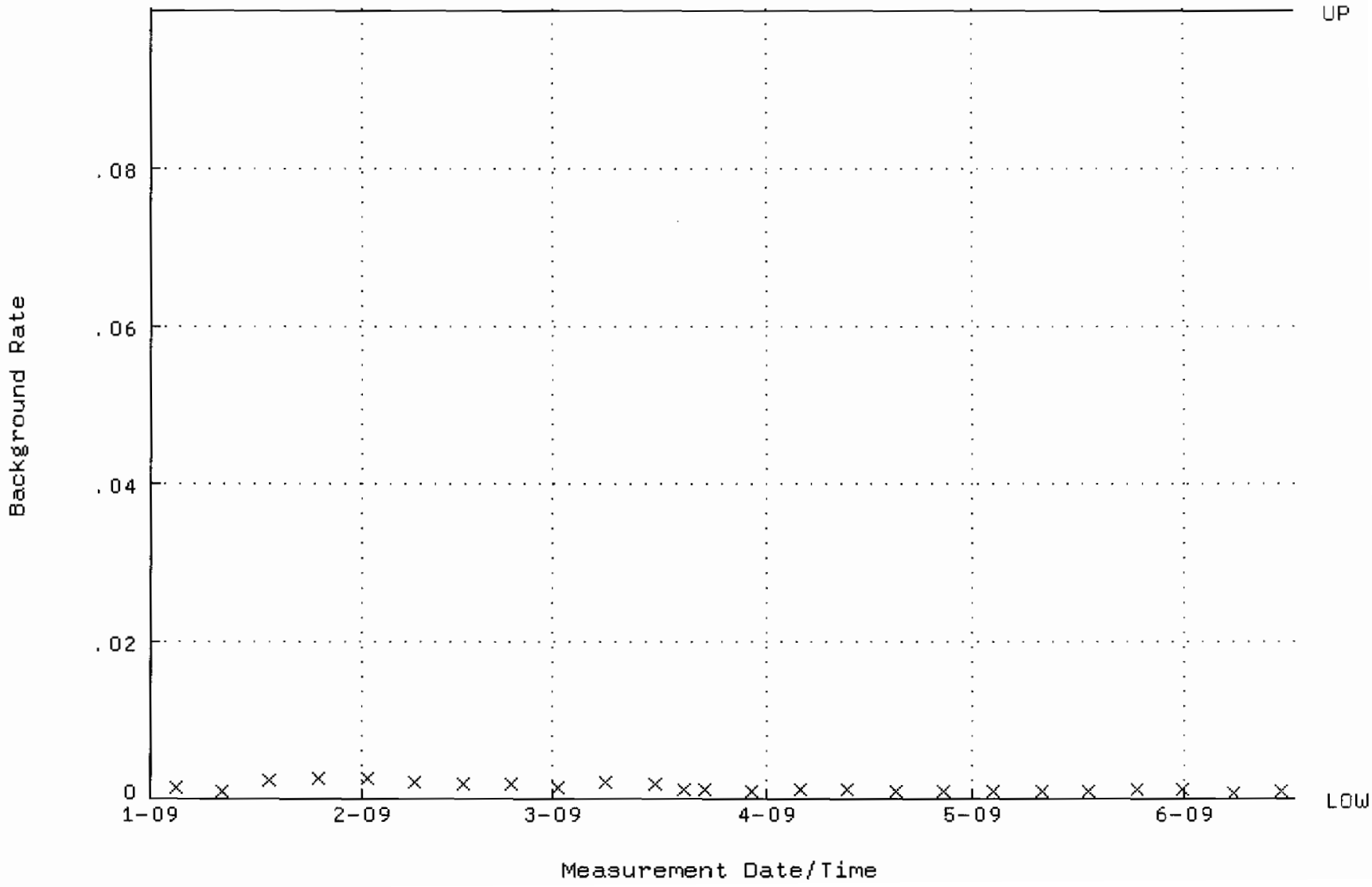

QA filename : DKA100:[ENV_ALPHA.QA.W]W145.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:15 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.239850 through 0.259850

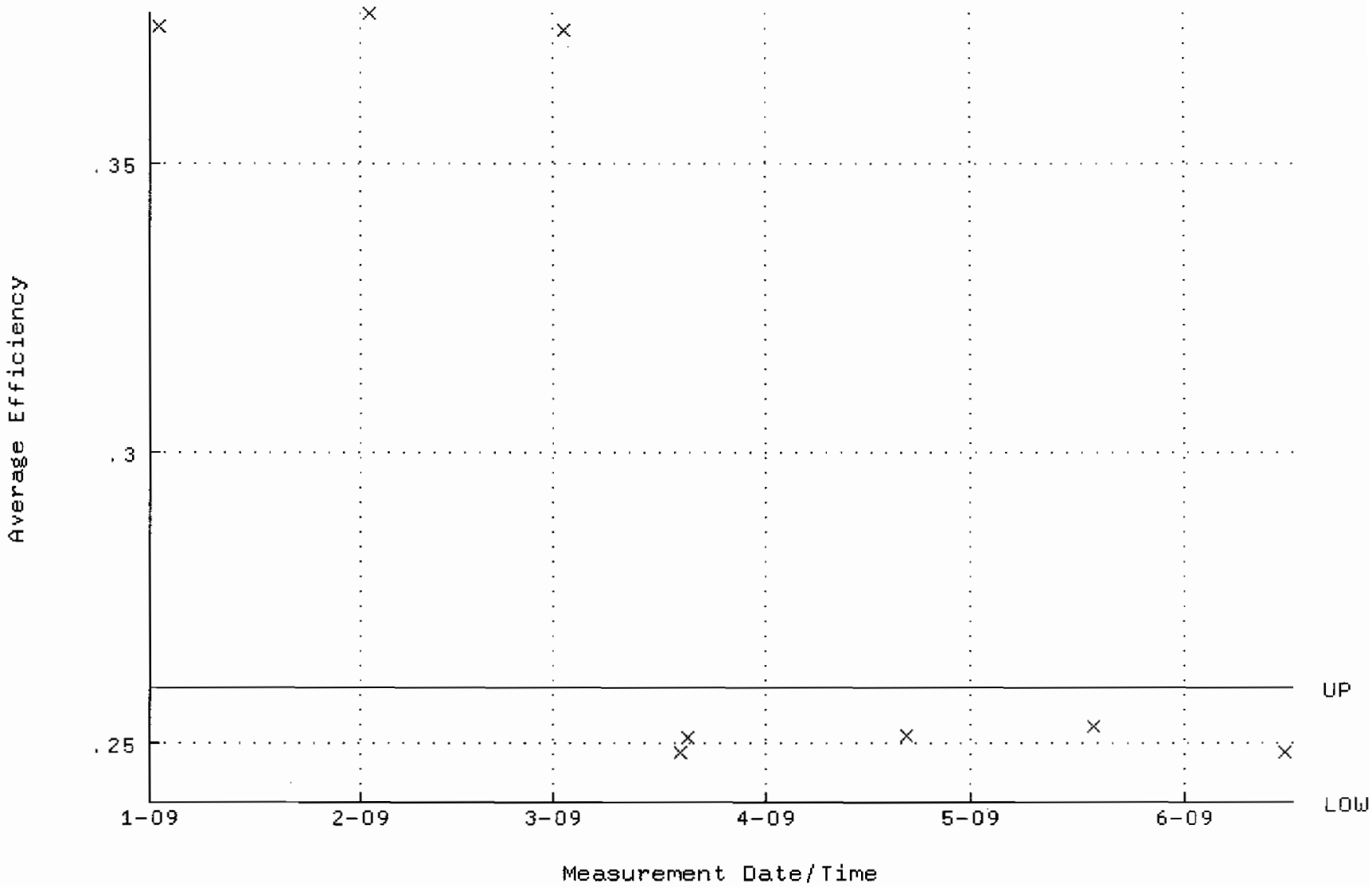

QA filename : DKA100:[ENV_ALPHA.QA.W]W145.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:15 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.9354 through 93.8760

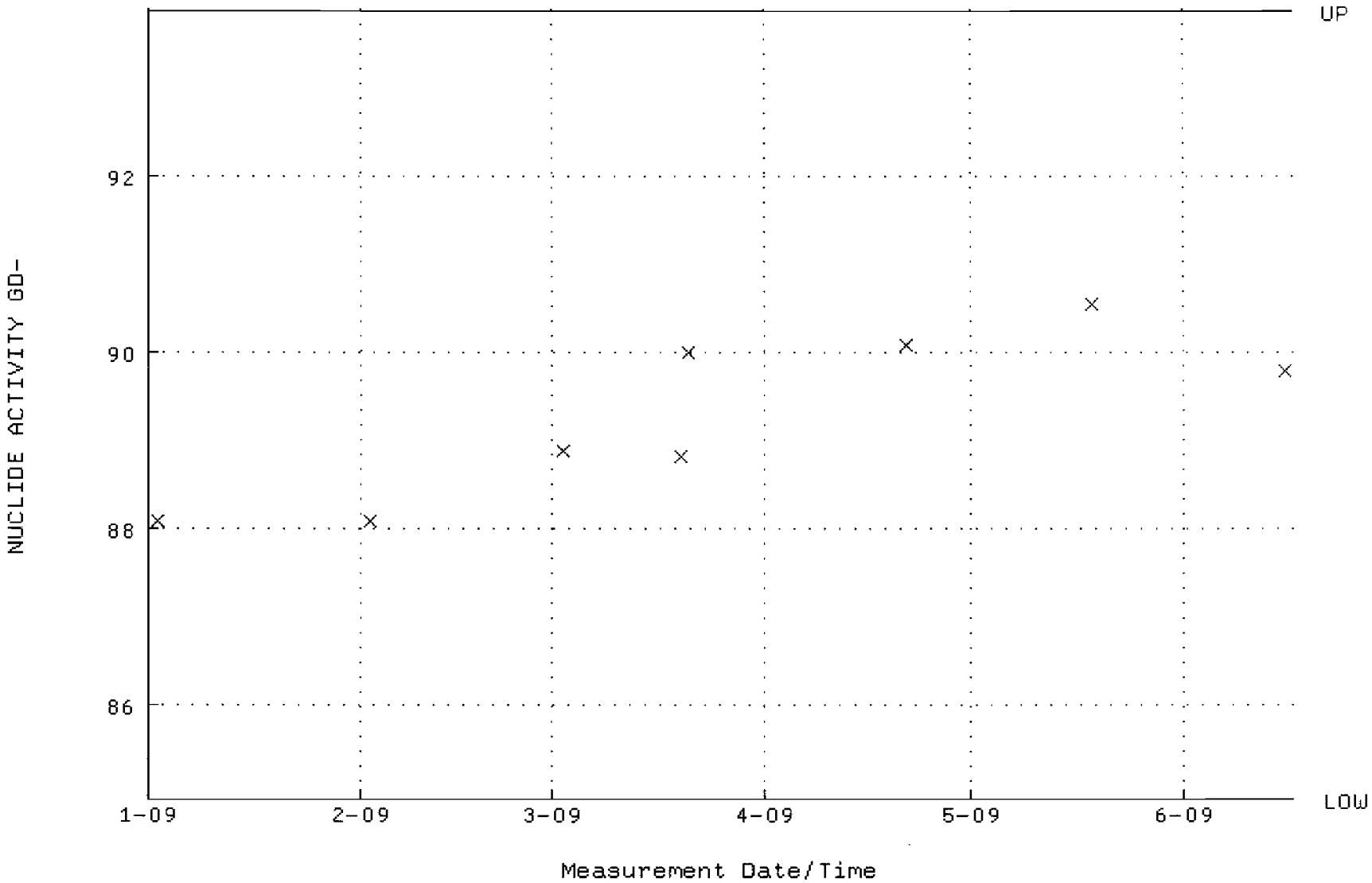

QA filename : DKA100:[ENV_ALPHA.QA.B]B145.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:04 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

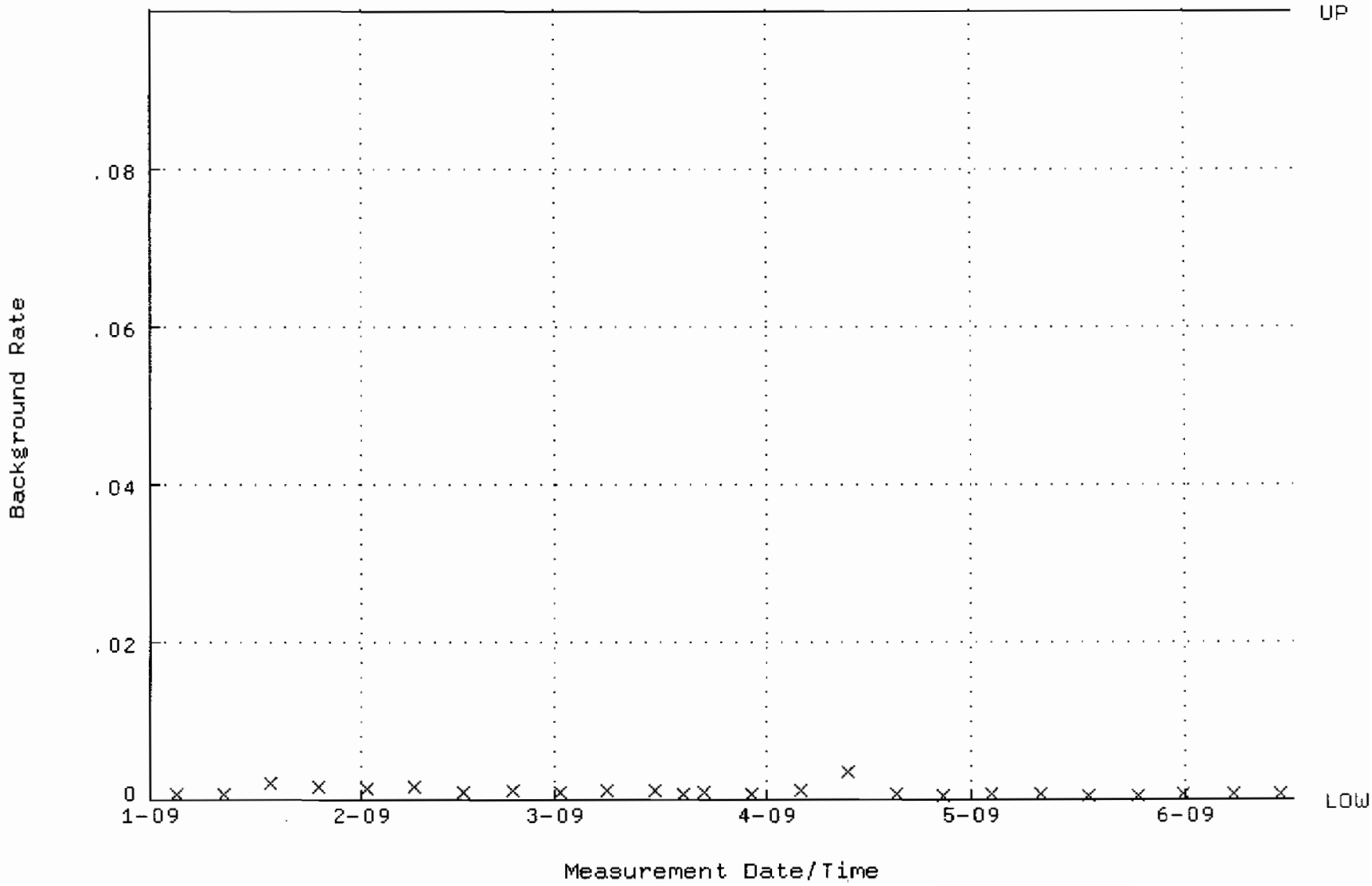

QA filename : DKA100:[ENV_ALPHA.QA.W]W146.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:19 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.241831 through 0.261831

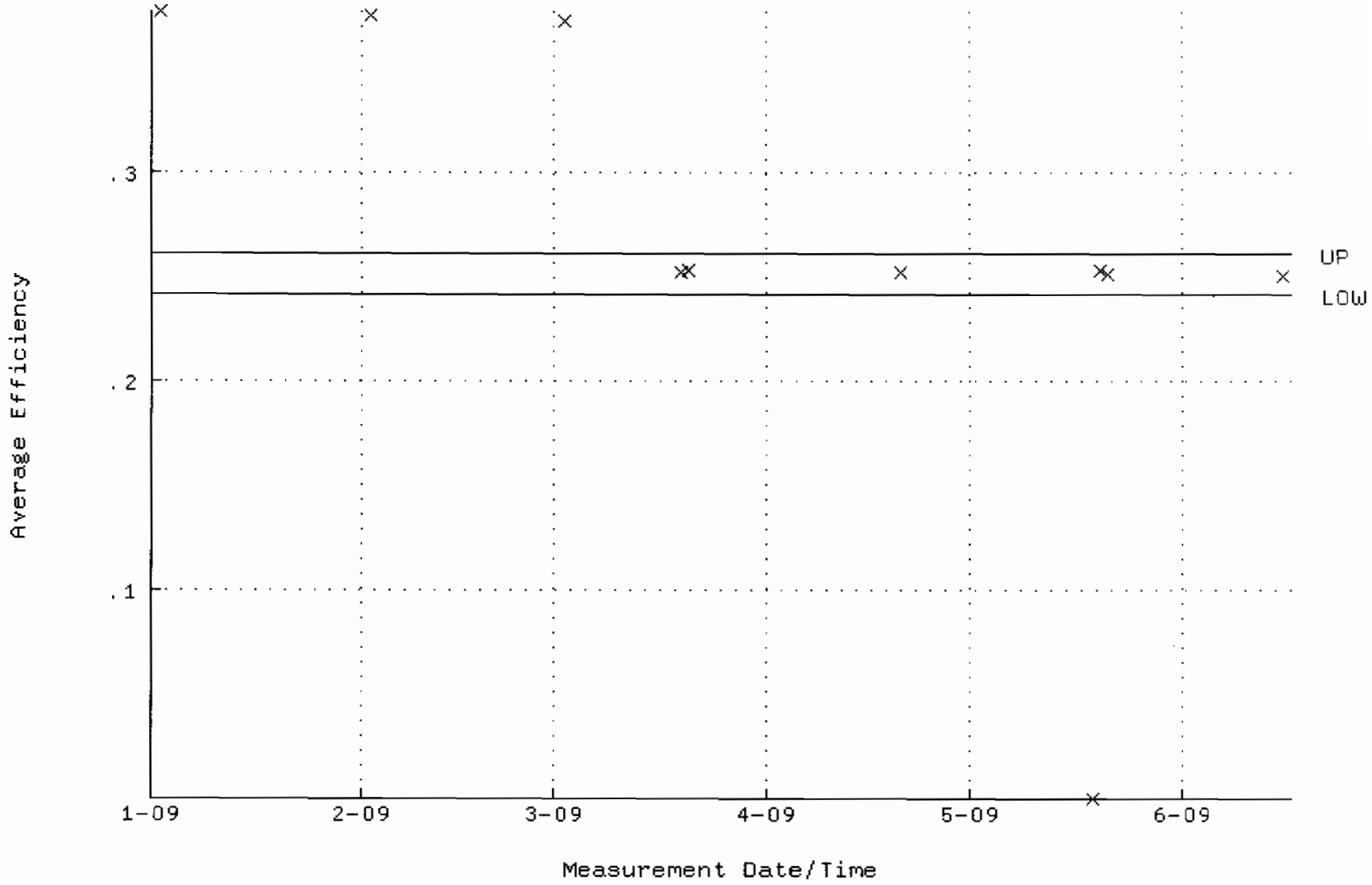

QA filename : DKA100:[ENV_ALPHA.QA.W]W146.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:19 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.8578 through 93.7902

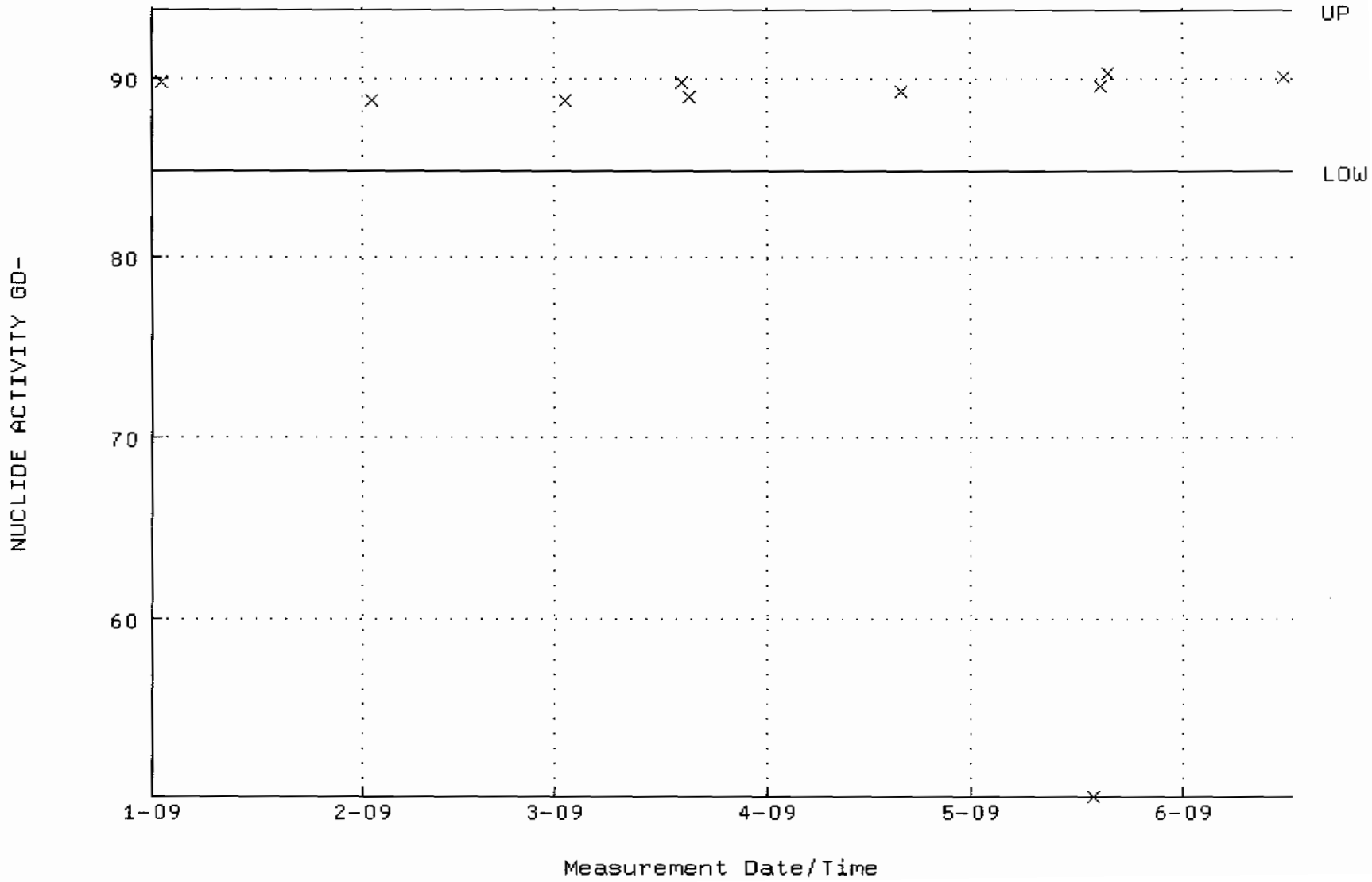

QA filename : DKA100:[ENV_ALPHA.QA.B]B146.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:09 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

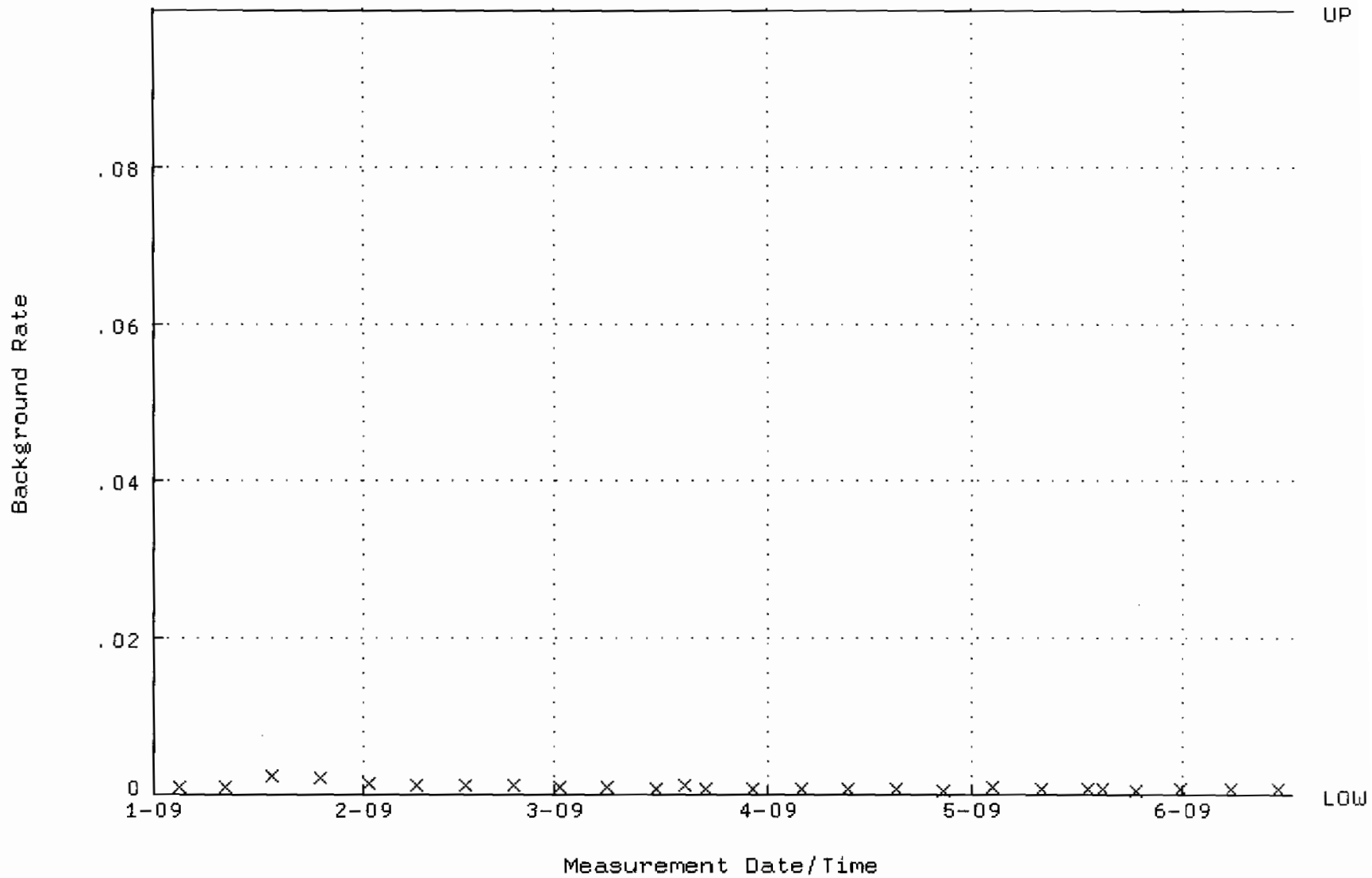

QA filename : DKA100:[ENV_ALPHA.QA.W]W147.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:24 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.237046 through 0.257046

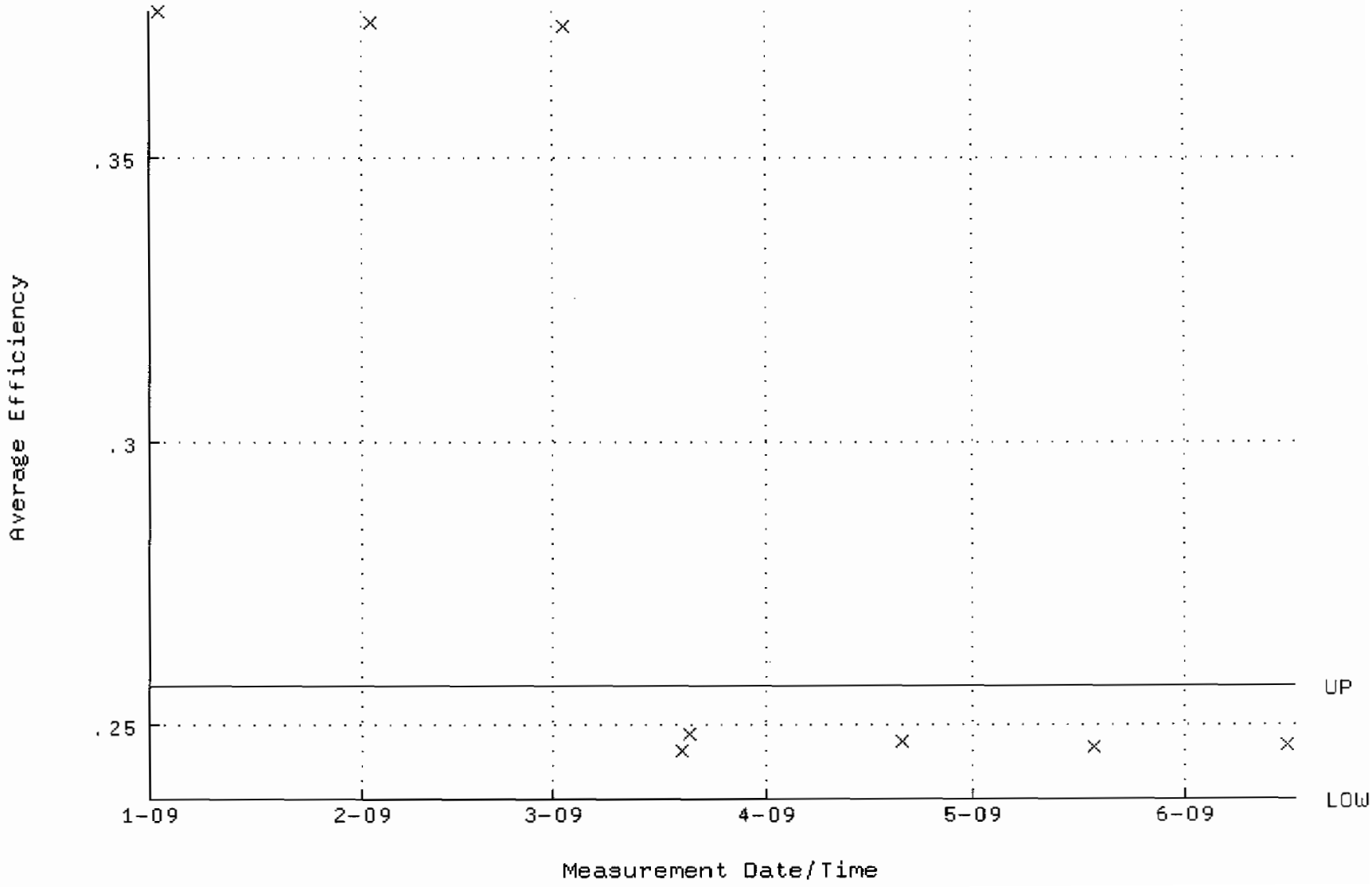

QA filename : DKA100:[ENV_ALPHA.QA.W]W147.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:24 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.9777 through 93.9227

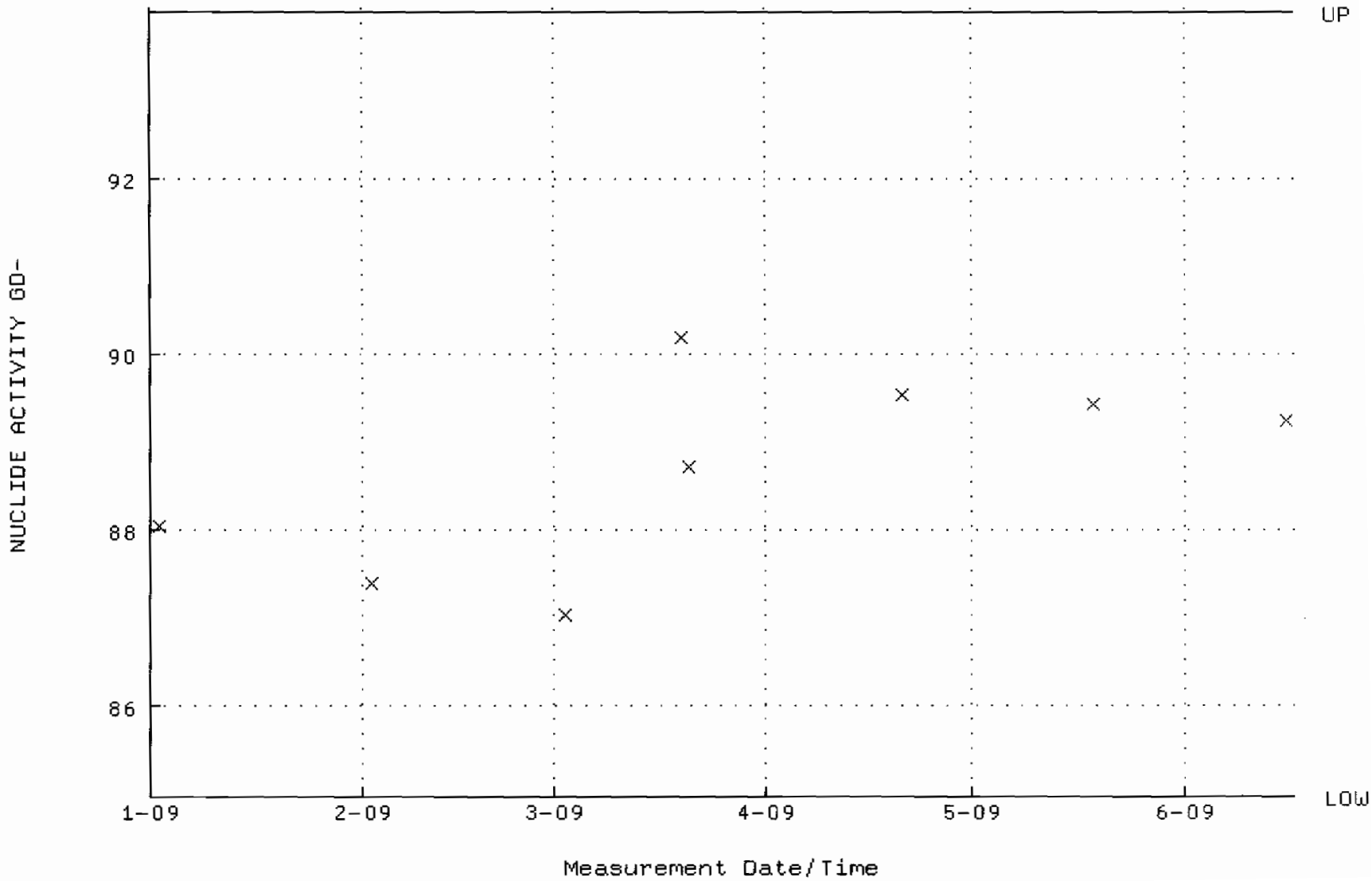

QA filename : DKA100:[ENV_ALPHA.QA.B]B147.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:13 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

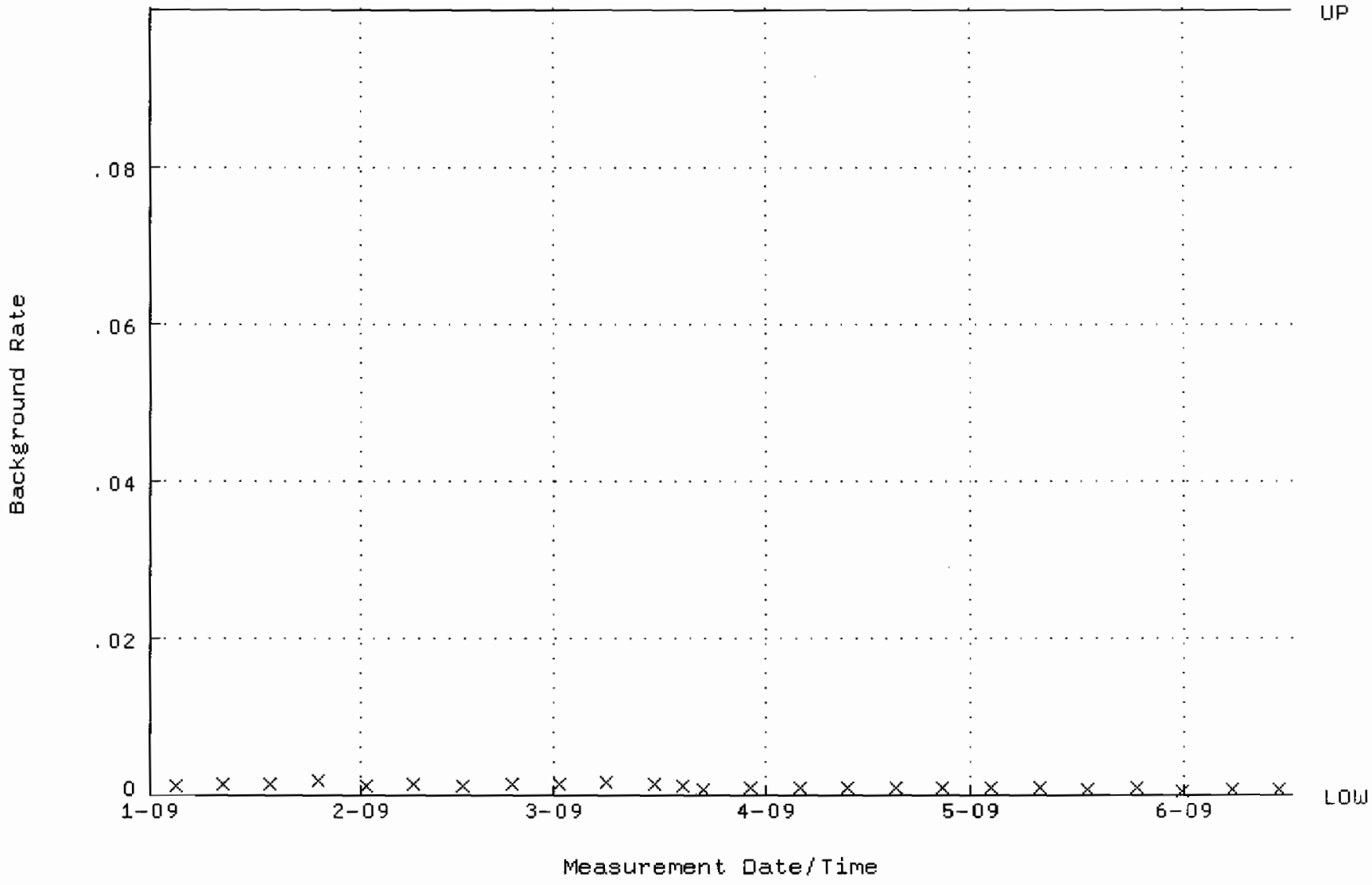

QA filename : DKA100:[ENV_ALPHA.QA.W]W148.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:28 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.237934 through 0.257934

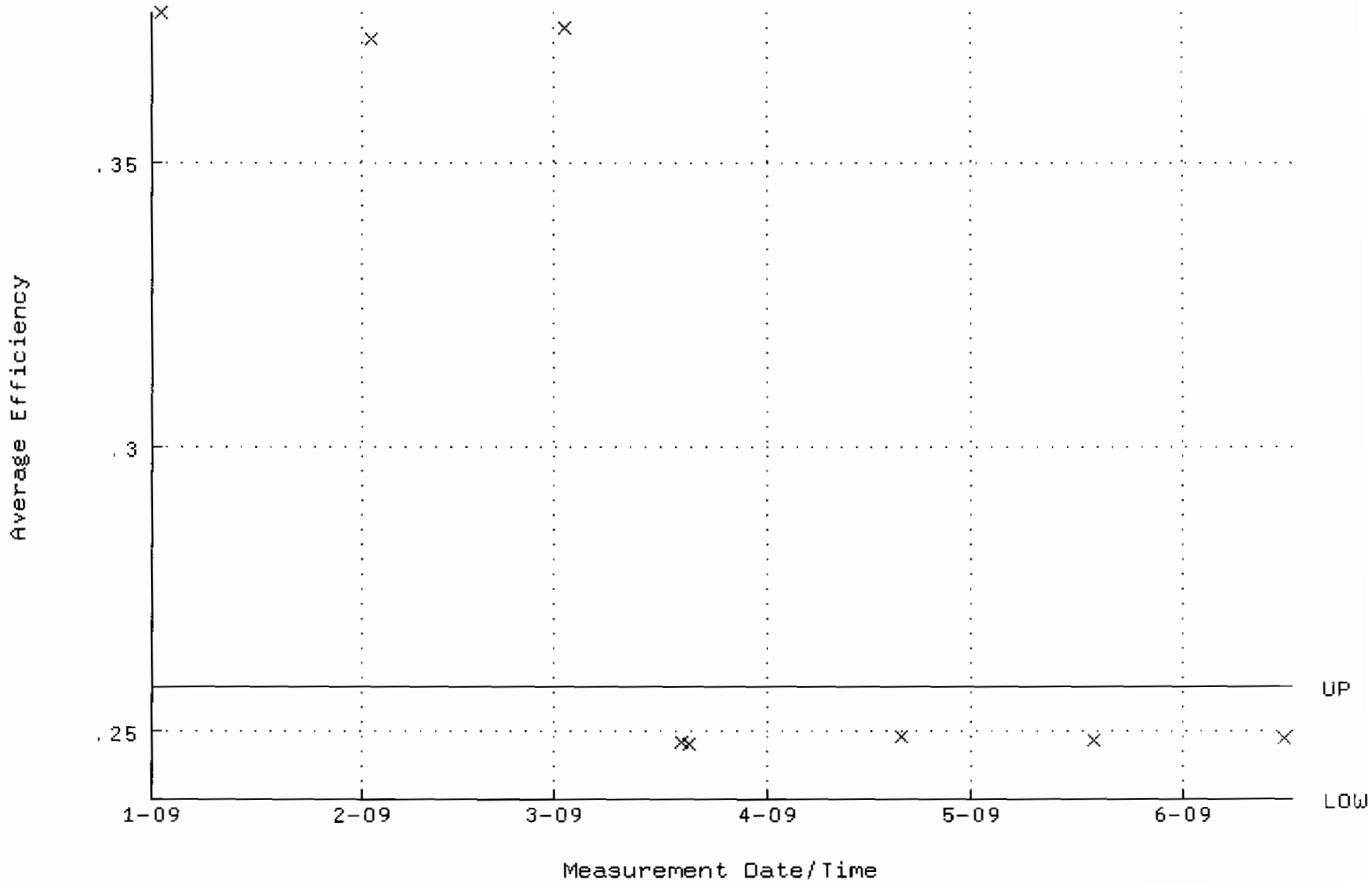

QA filename : DKA100:[ENV_ALPHA.QA.W]W148.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:28 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 85.0831 through 94.0393

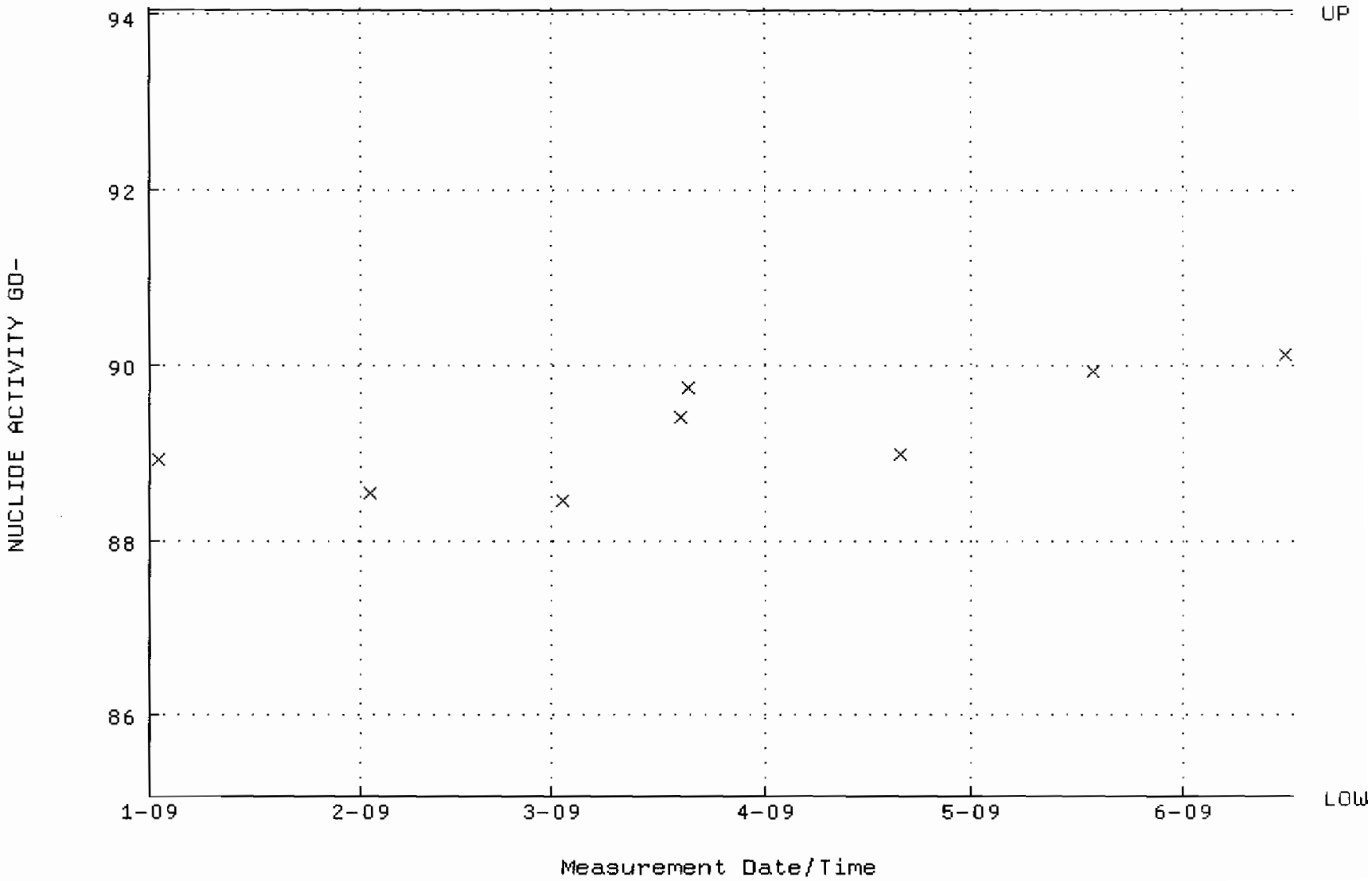

QA filename : DKA100:[ENV_ALPHA.QA.B]B148.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:17 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

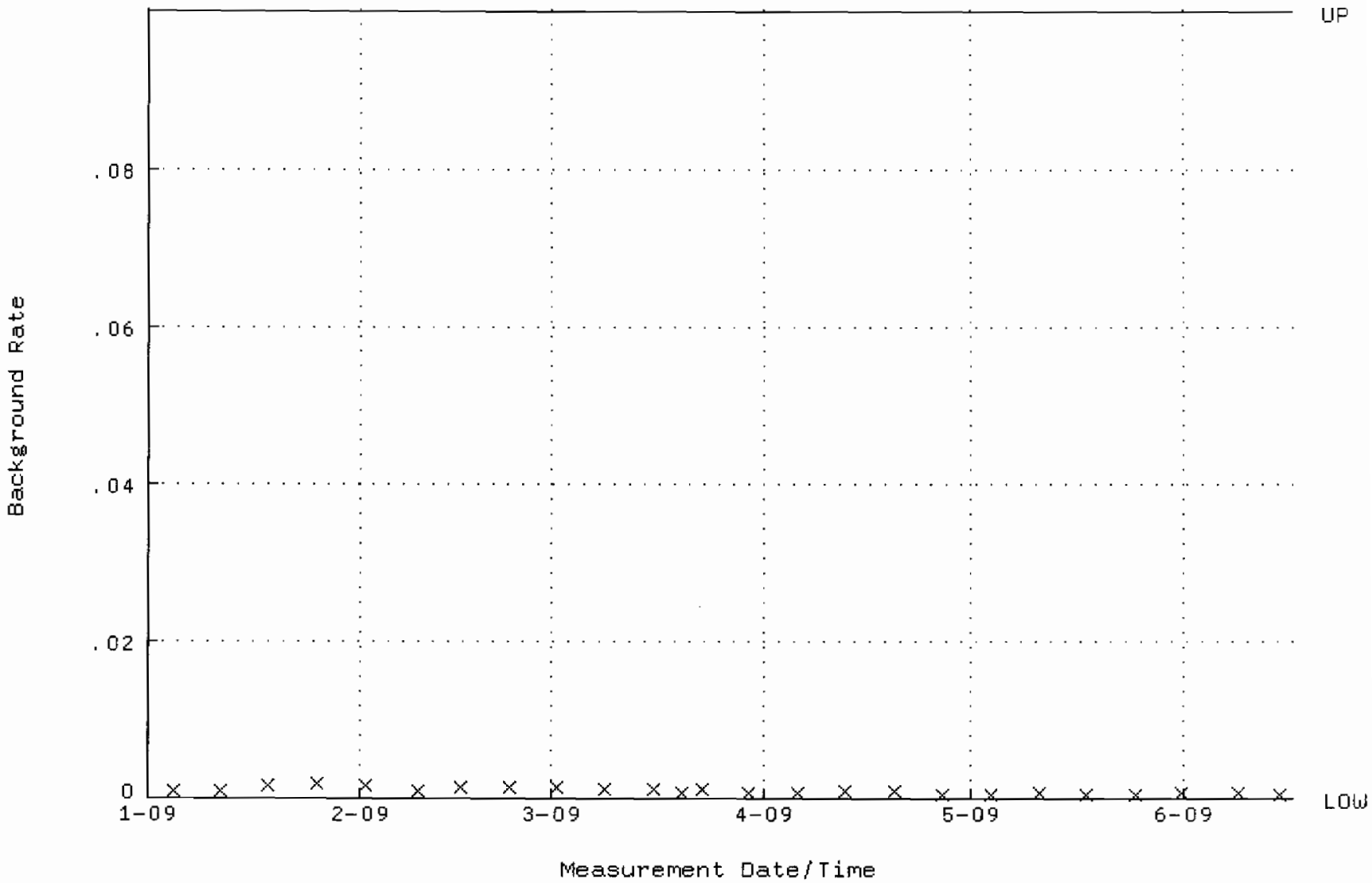

QA filename : DKA100:[ENV_ALPHA.QA.W]W149.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:32 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.242495 through 0.262495

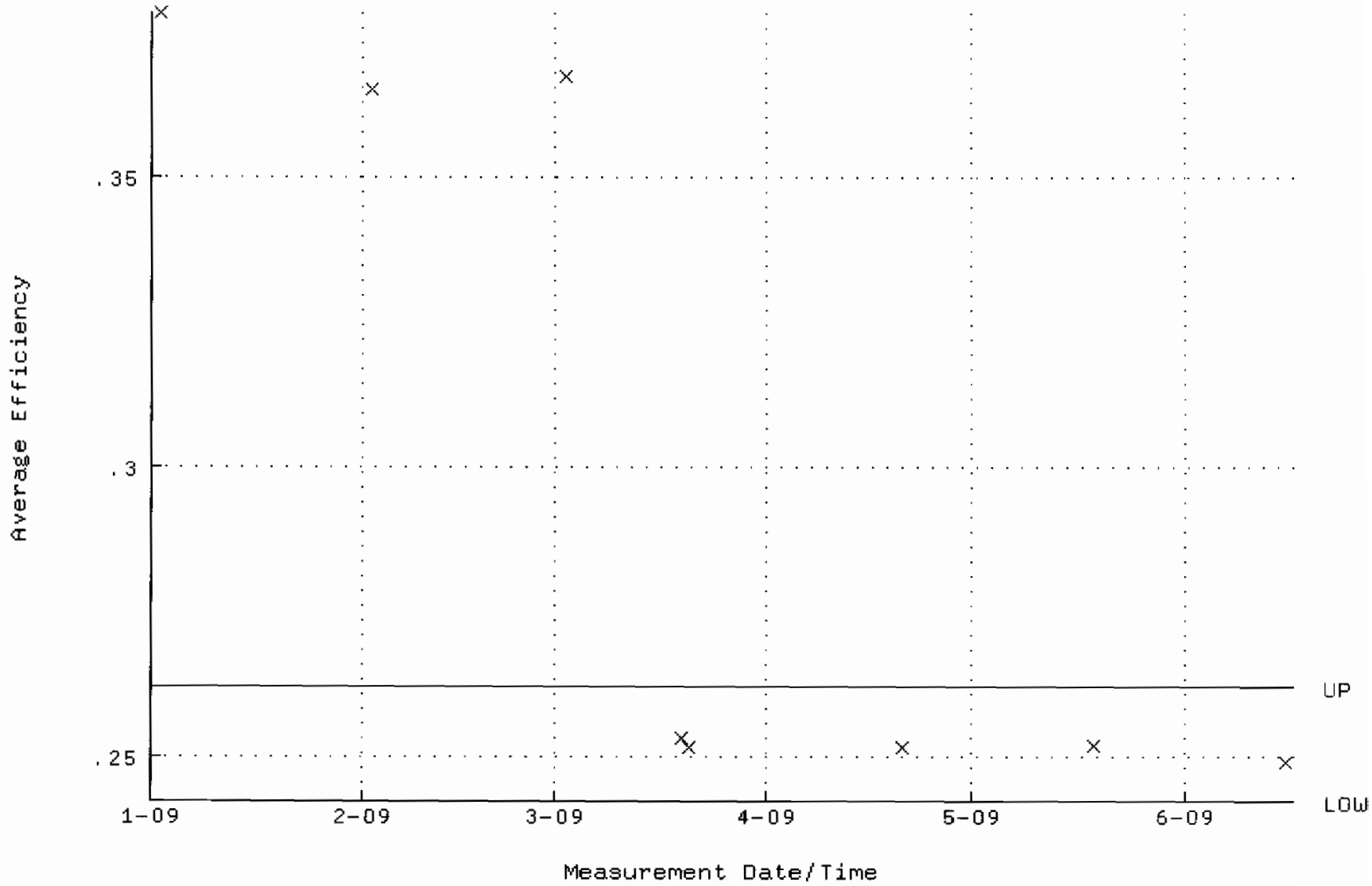

QA filename : DKA100:[ENV_ALPHA.QA.W]W149.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:32 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.8126 through 93.7402

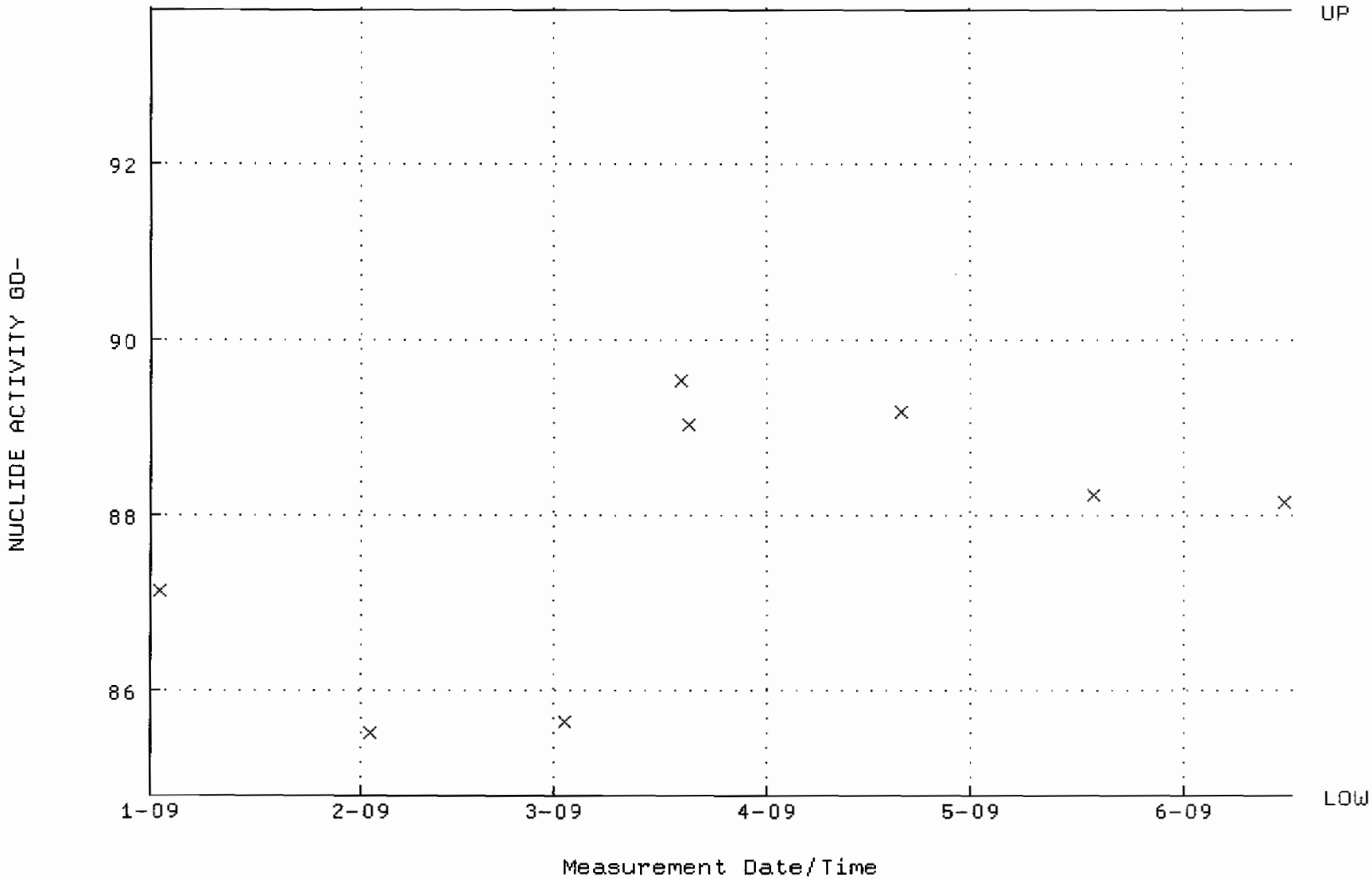

QA filename : DKA100:[ENV_ALPHA.QA.B]B149.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:21 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

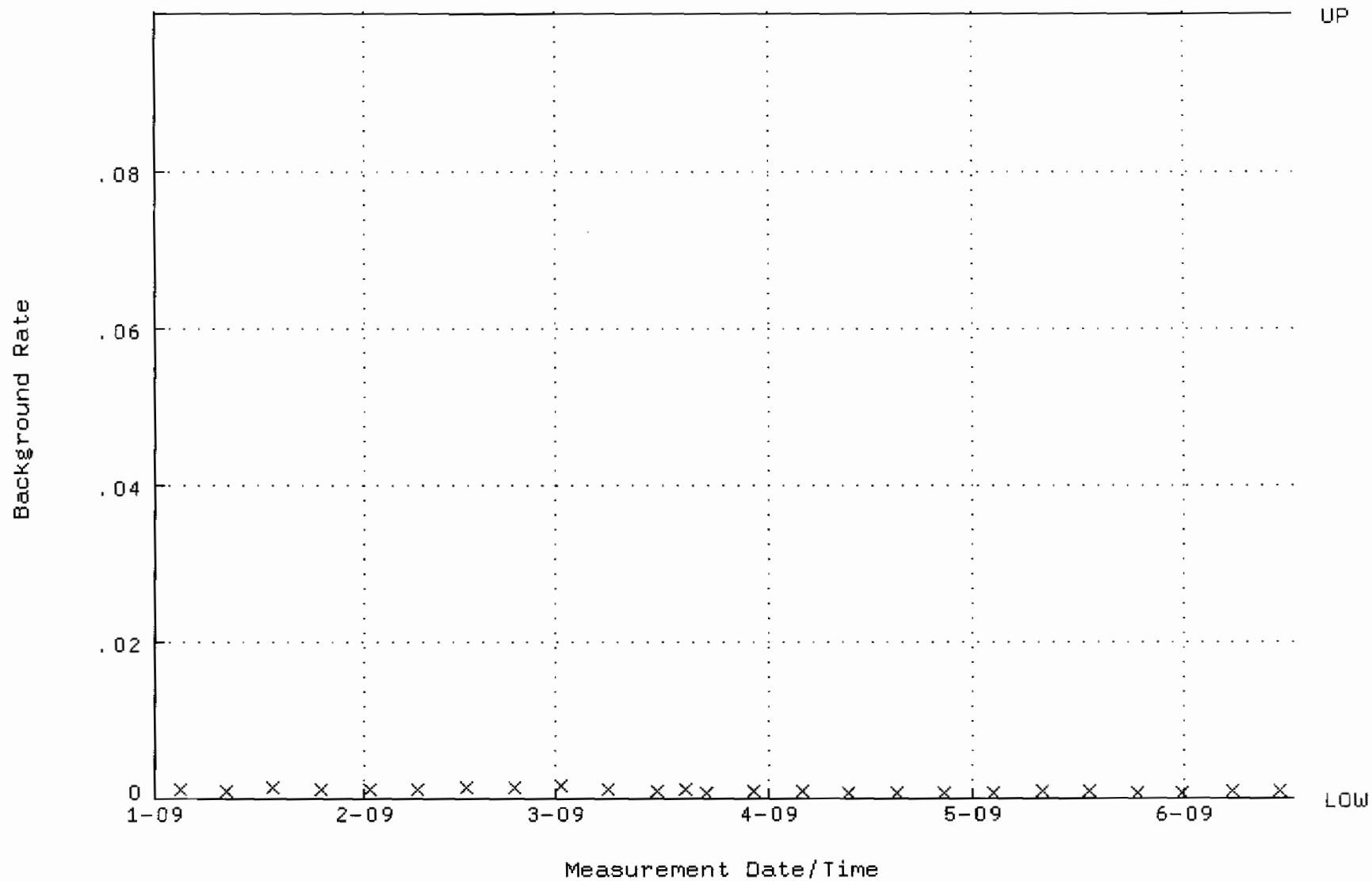

QA filename : DKA100:[ENV_ALPHA.QA.W]W150.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:37 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.238314 through 0.258314

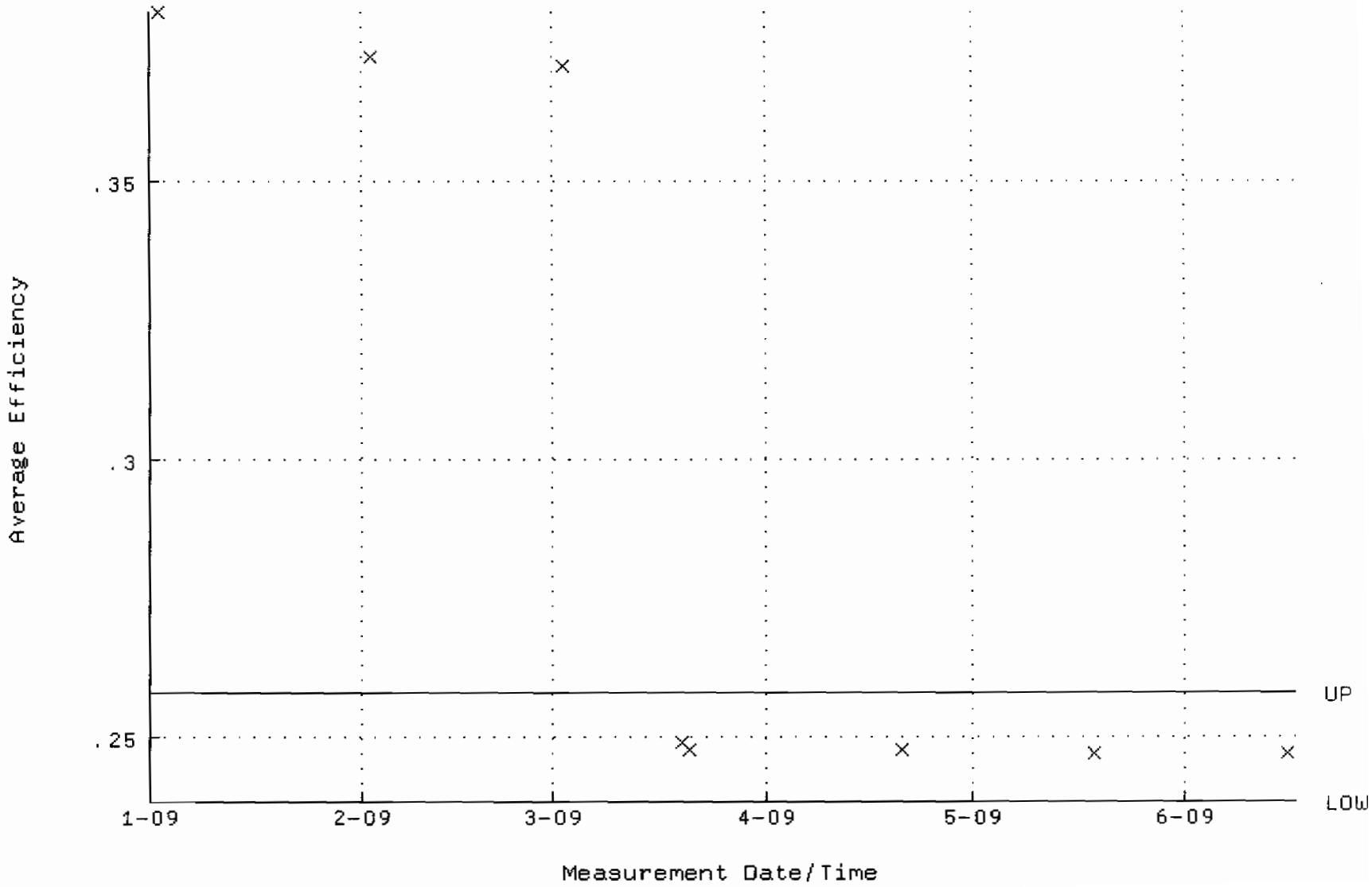

QA filename : DKA100:[ENV_ALPHA.QA.W]W150.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:37 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.4039 through 93.2885

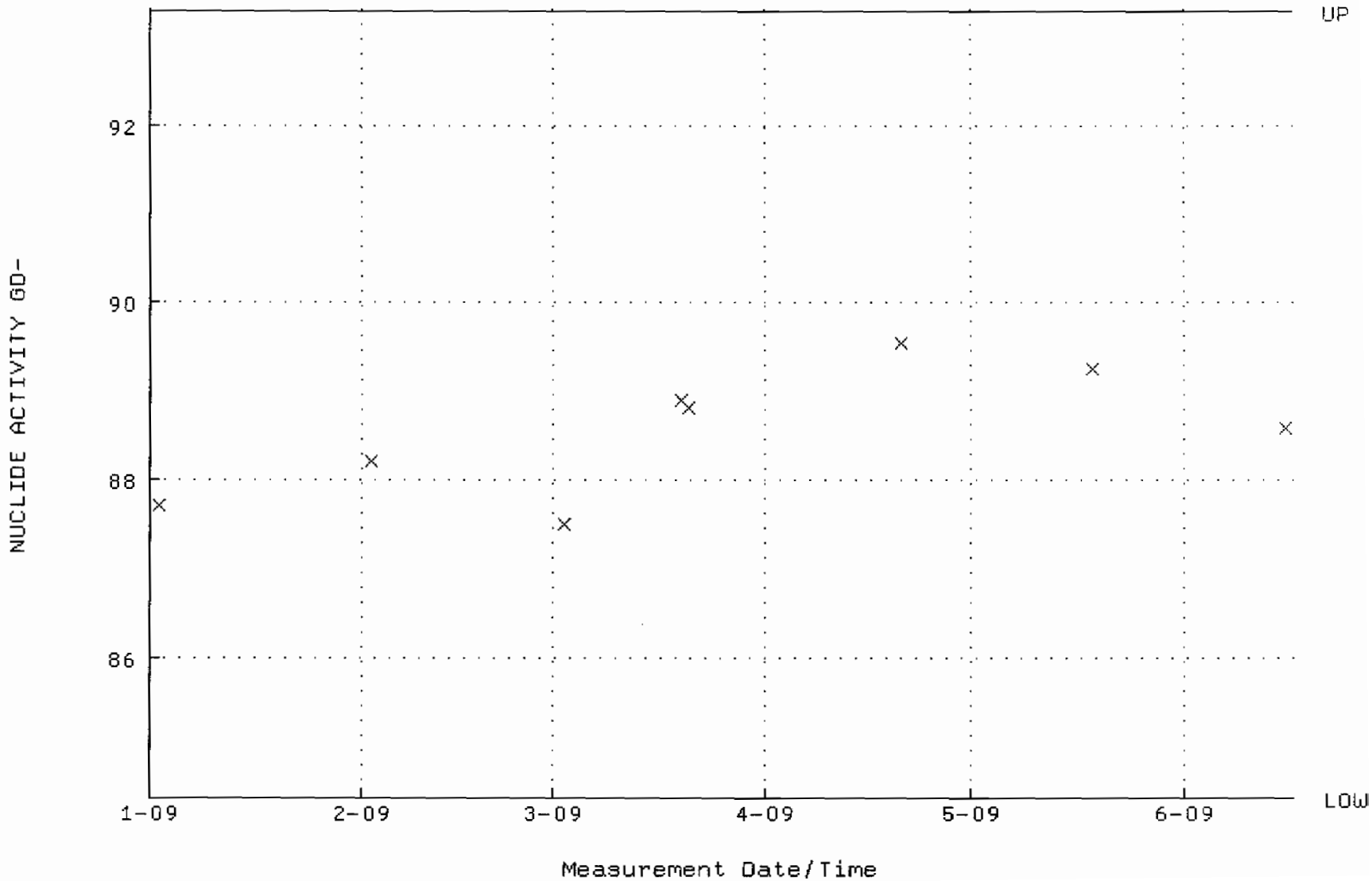

QA filename : DKA100:[ENV_ALPHA.QA.B]B150.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:24 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

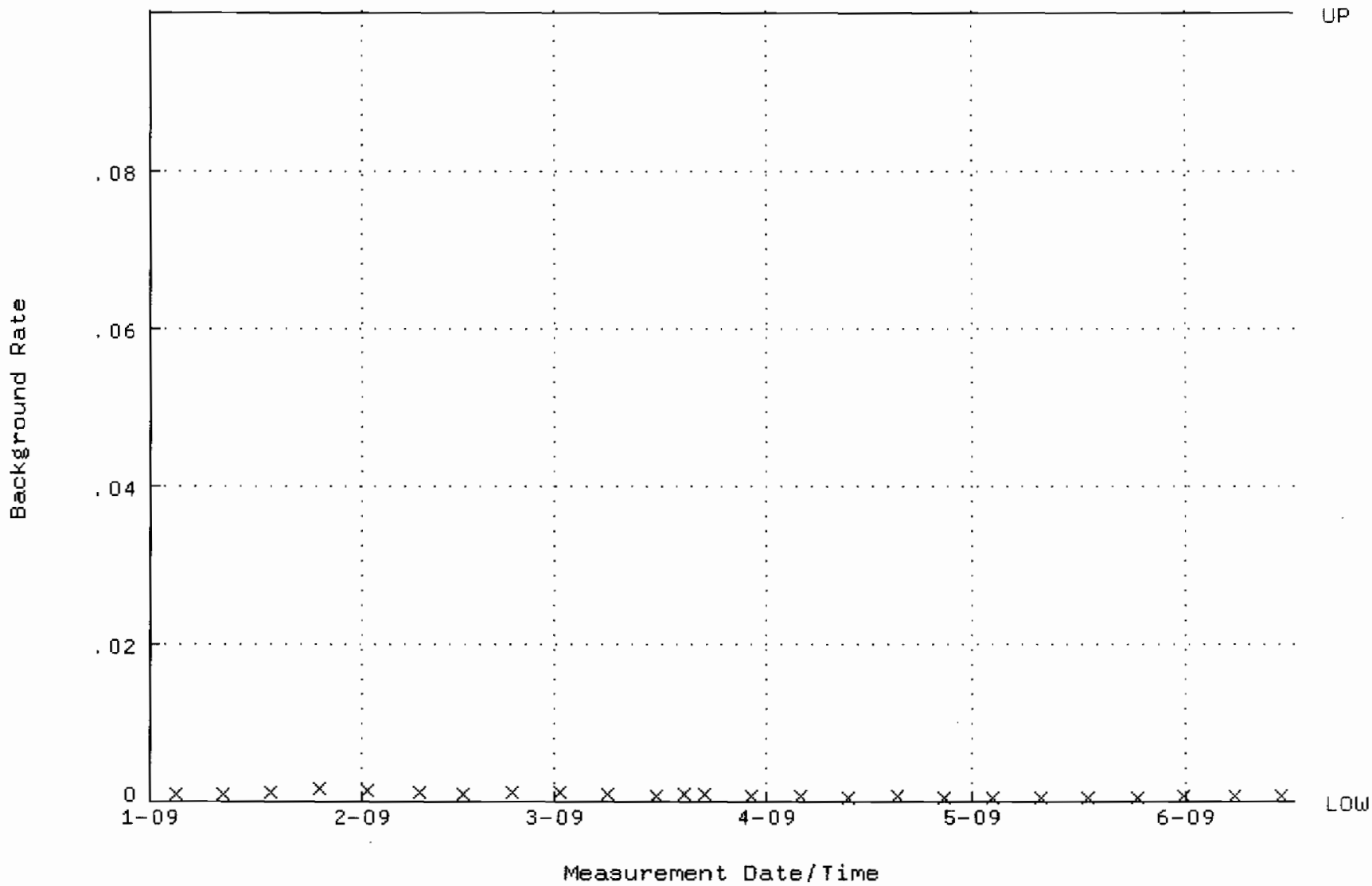

QA filename : DKA100:[ENV_ALPHA.QA.W]W151.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:42 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.233693 through 0.253693

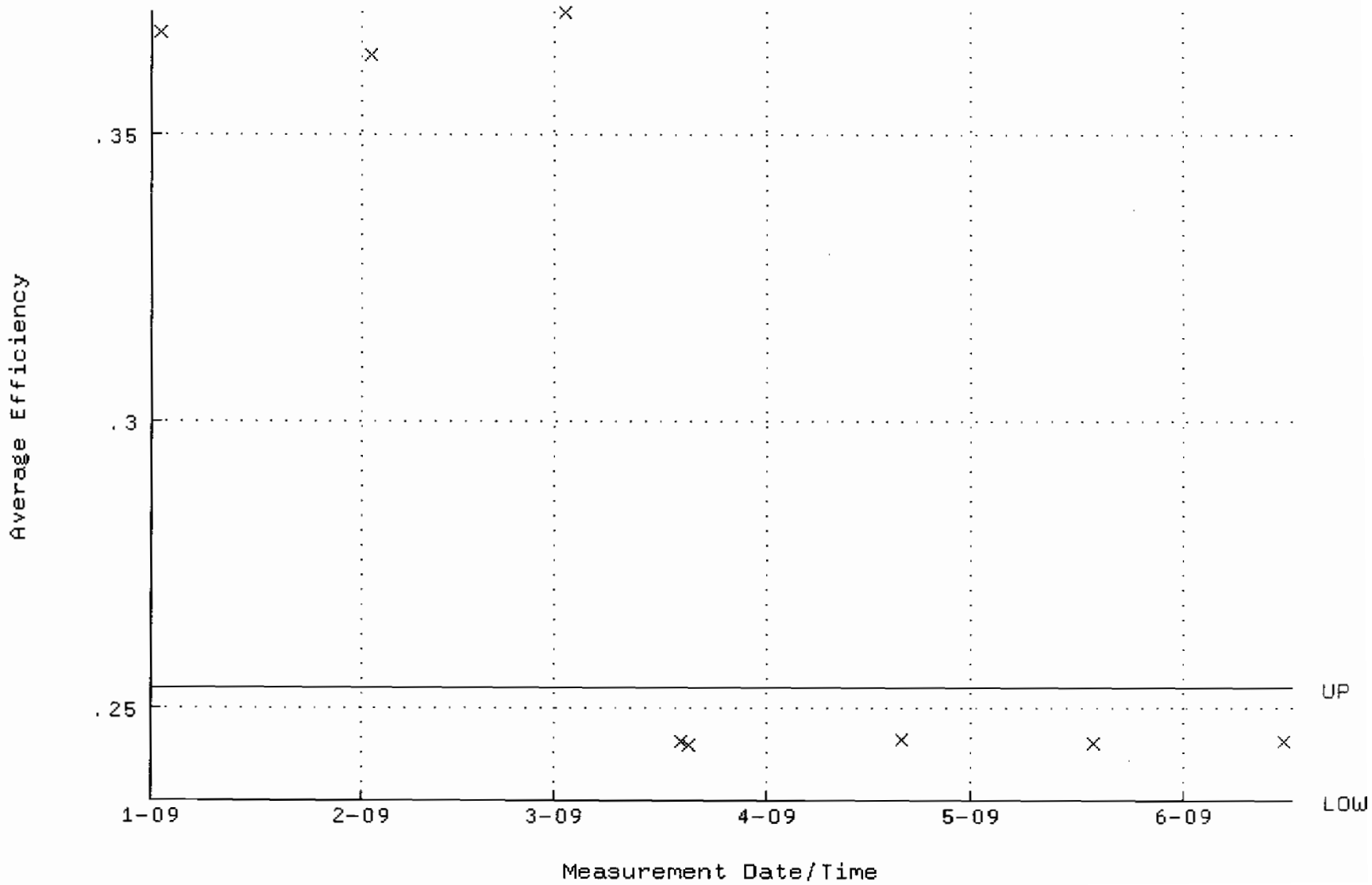

QA filename : DKA100:[ENV_ALPHA.QA.W]W151.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:42 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 86.5749 through 95.6881

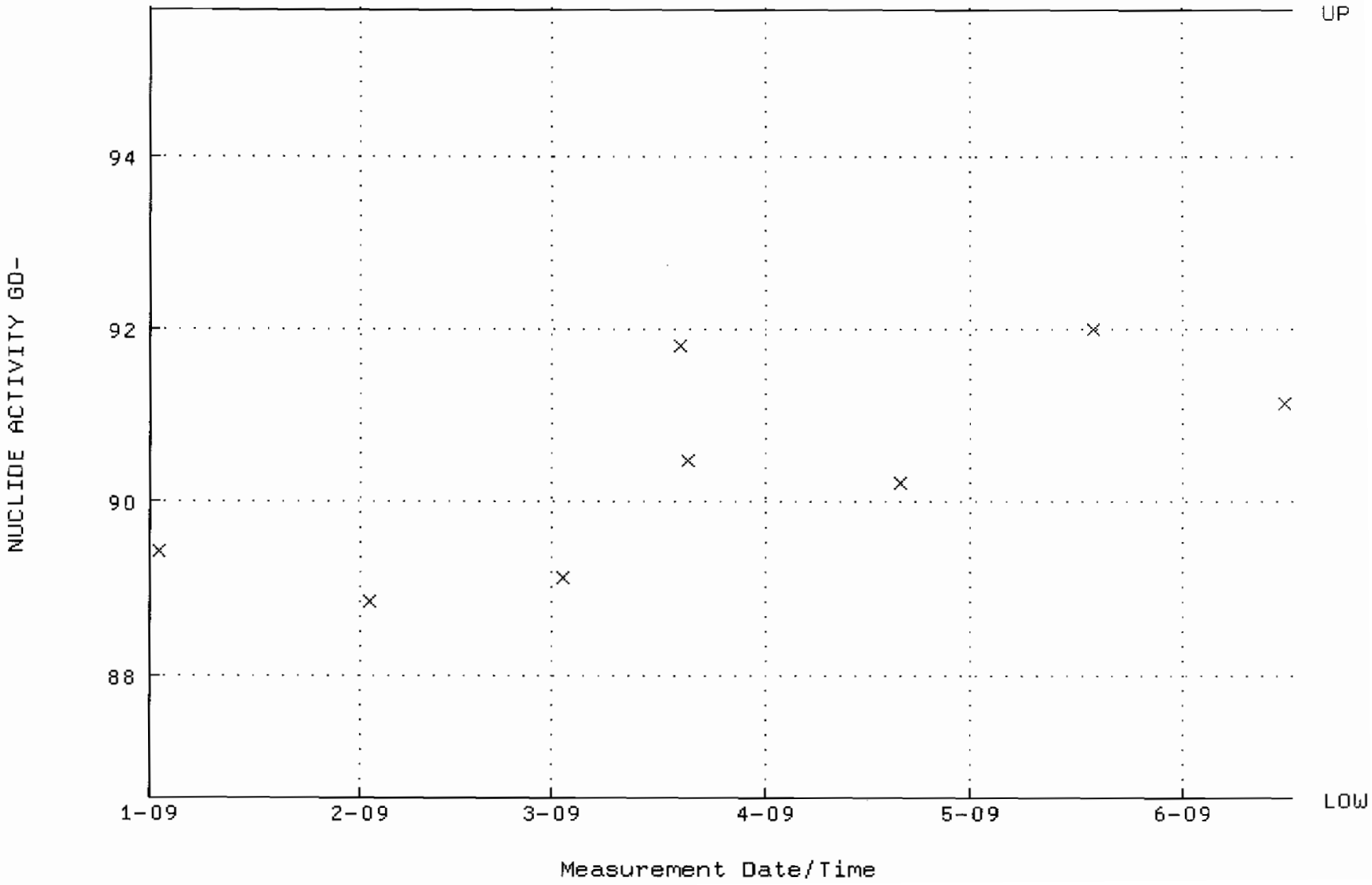

QA filename : DKA100:[ENV_ALPHA.QA.B]B151.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:28 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

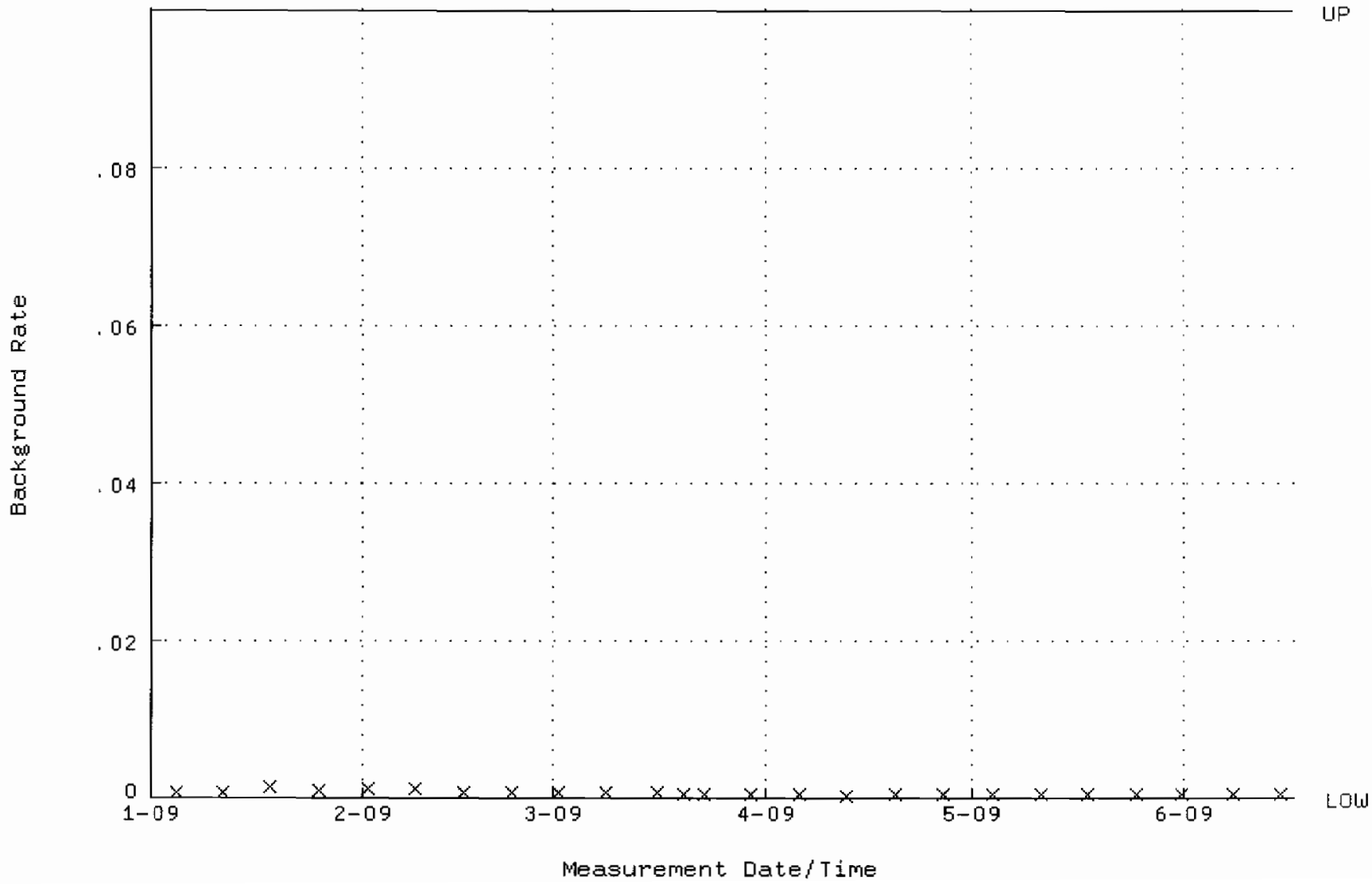

QA filename : DKA100:[ENV_ALPHA.QA.W]W152.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:46 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.238479 through 0.258479

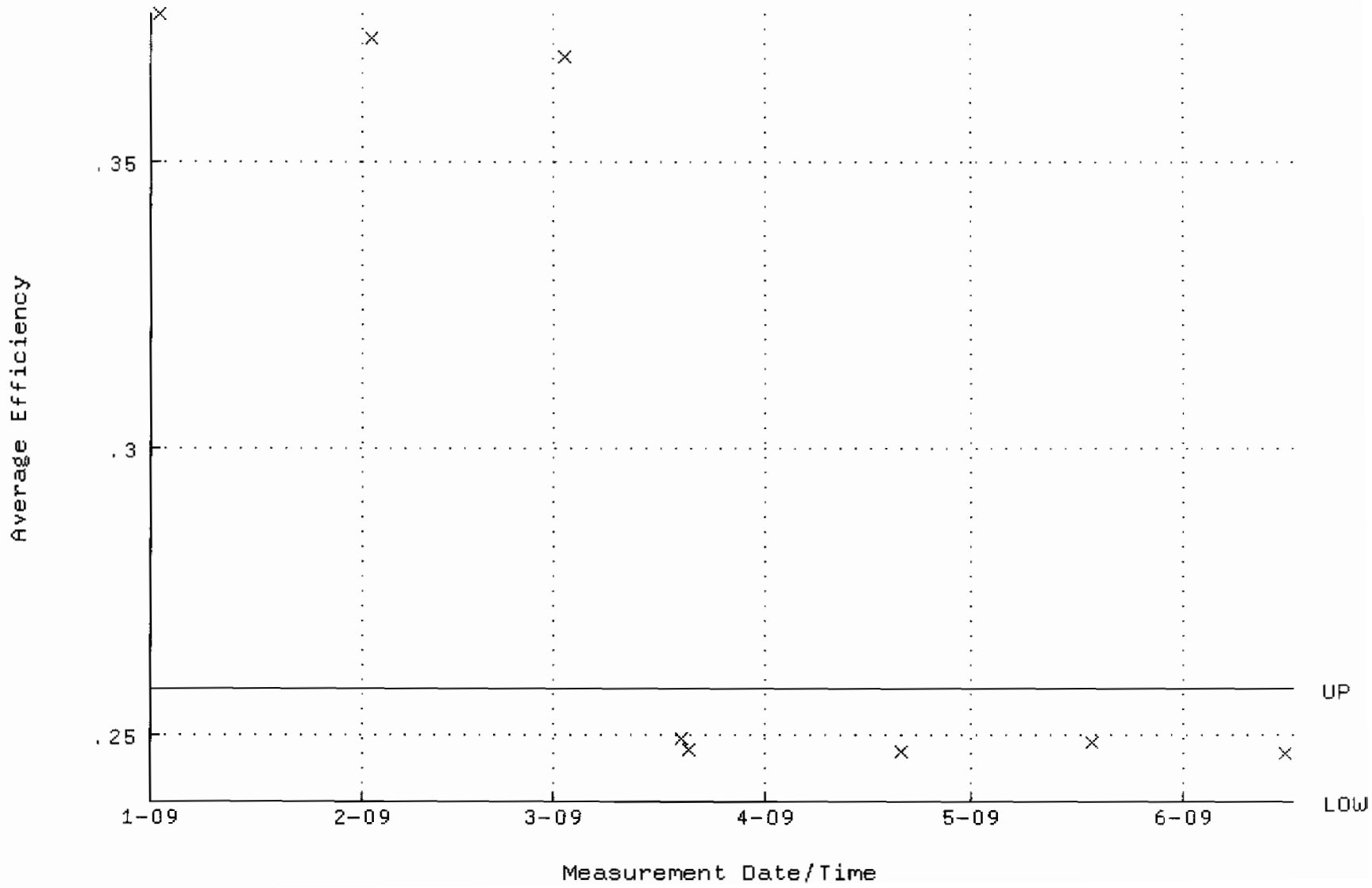

QA filename : DKA100:[ENV_ALPHA.QA.W]W152.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:46 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 83.7180 through 92.5304

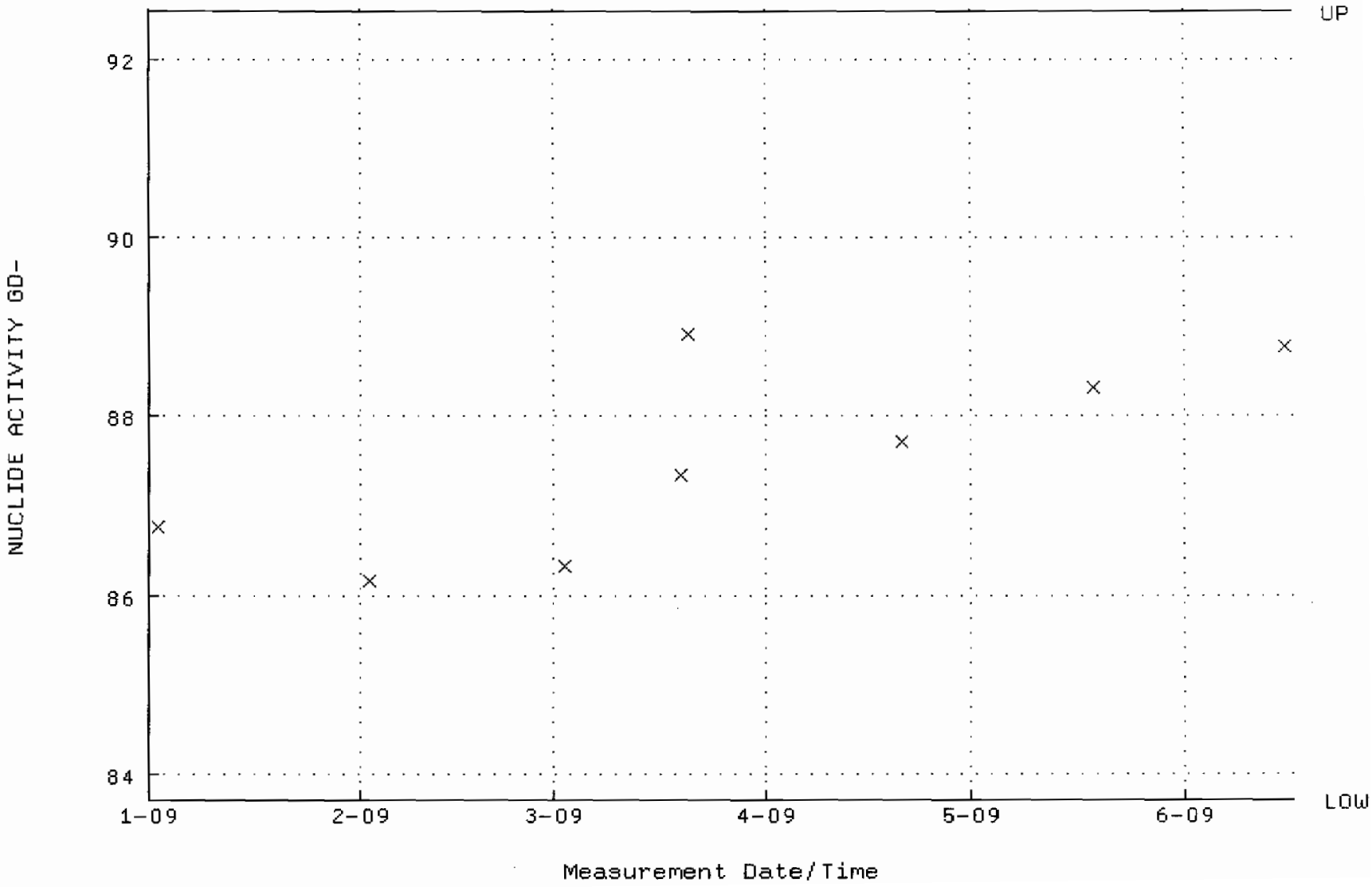

QA filename : DKA100:[ENV_ALPHA.QA.B]B152.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:32 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

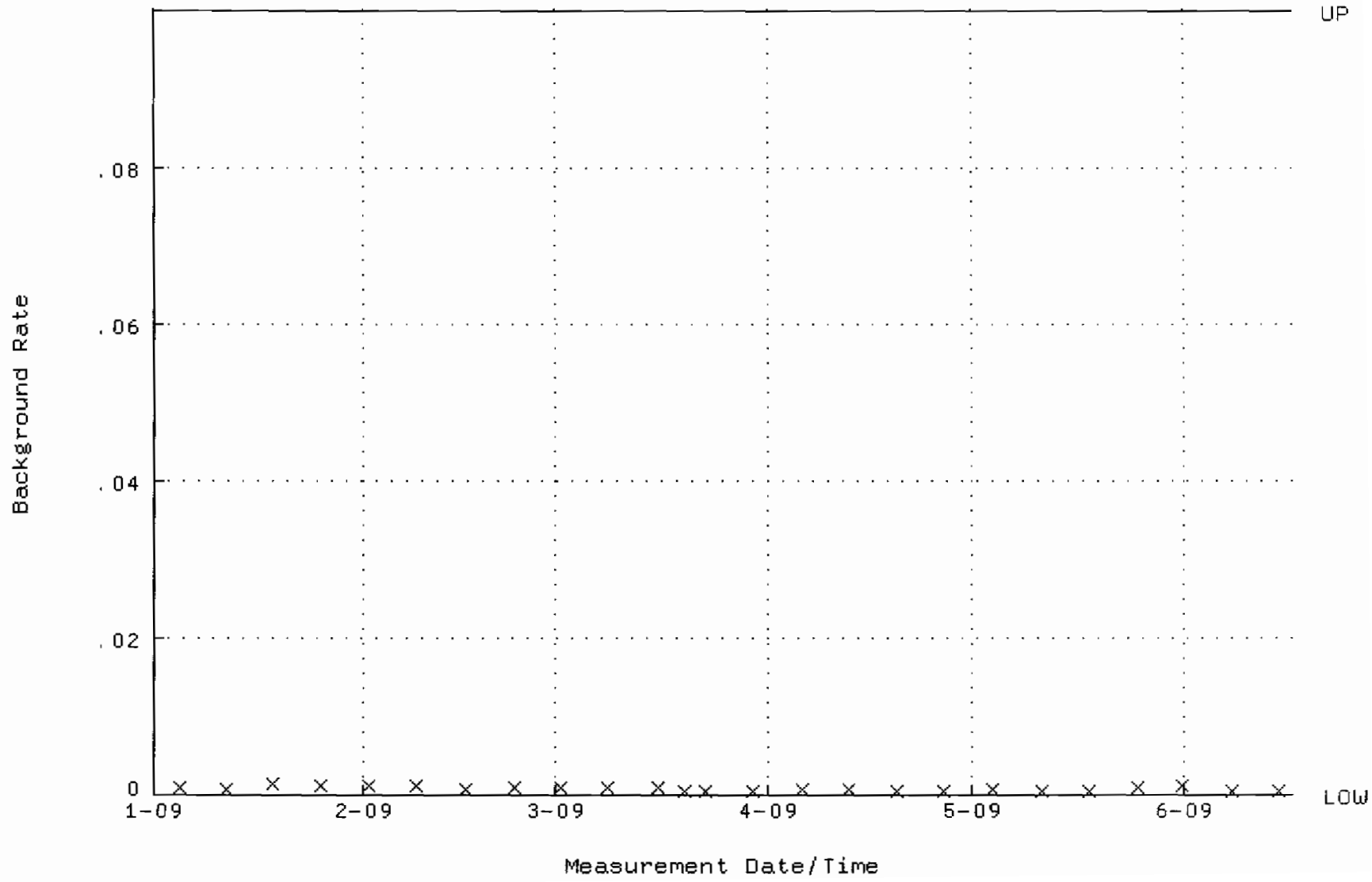

QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.244738 through 0.264738

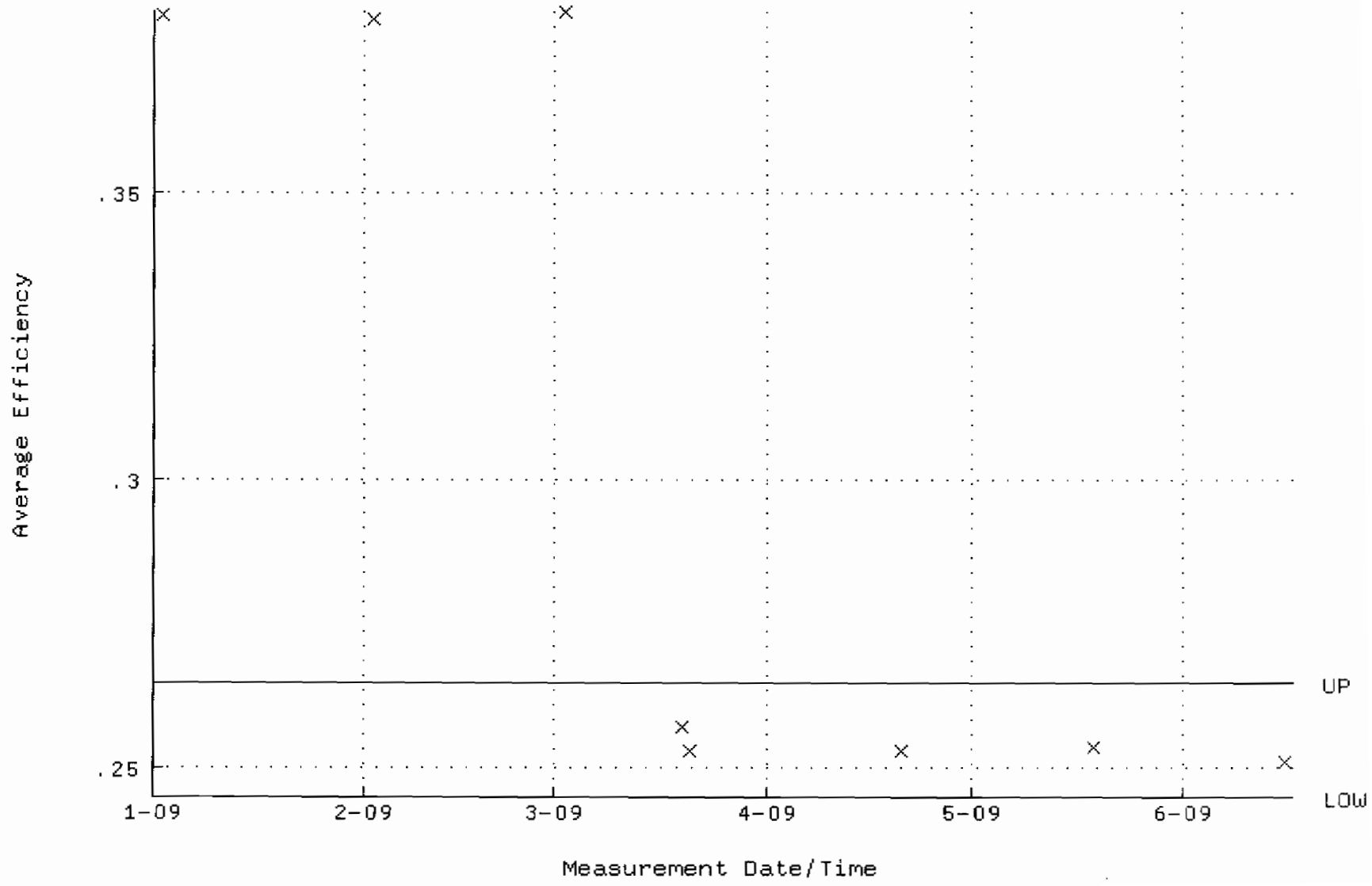

QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 81.3634 through 89.9280

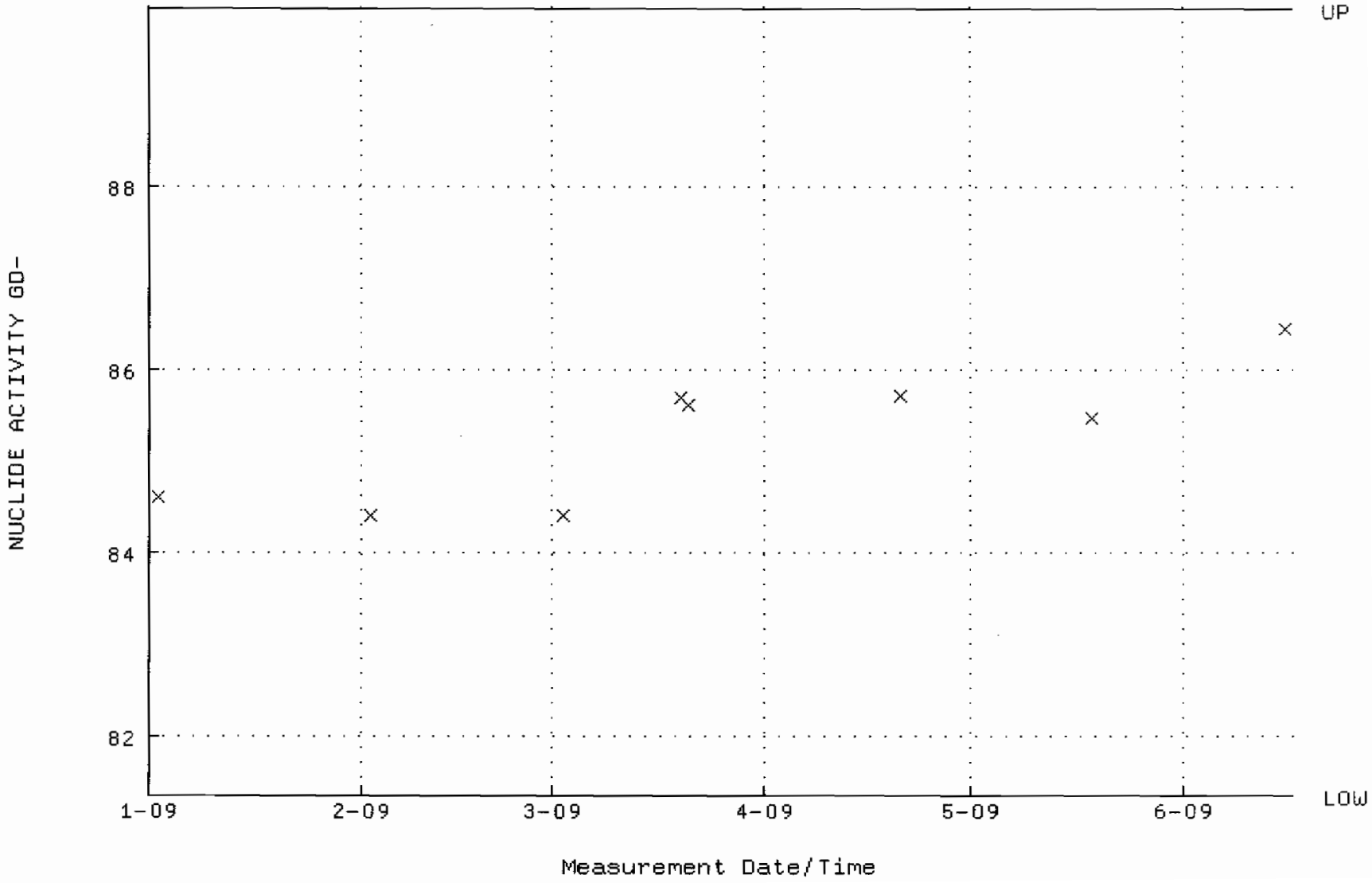

QA filename : DKA100:[ENV_ALPHA.QA.B]B153.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:36 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

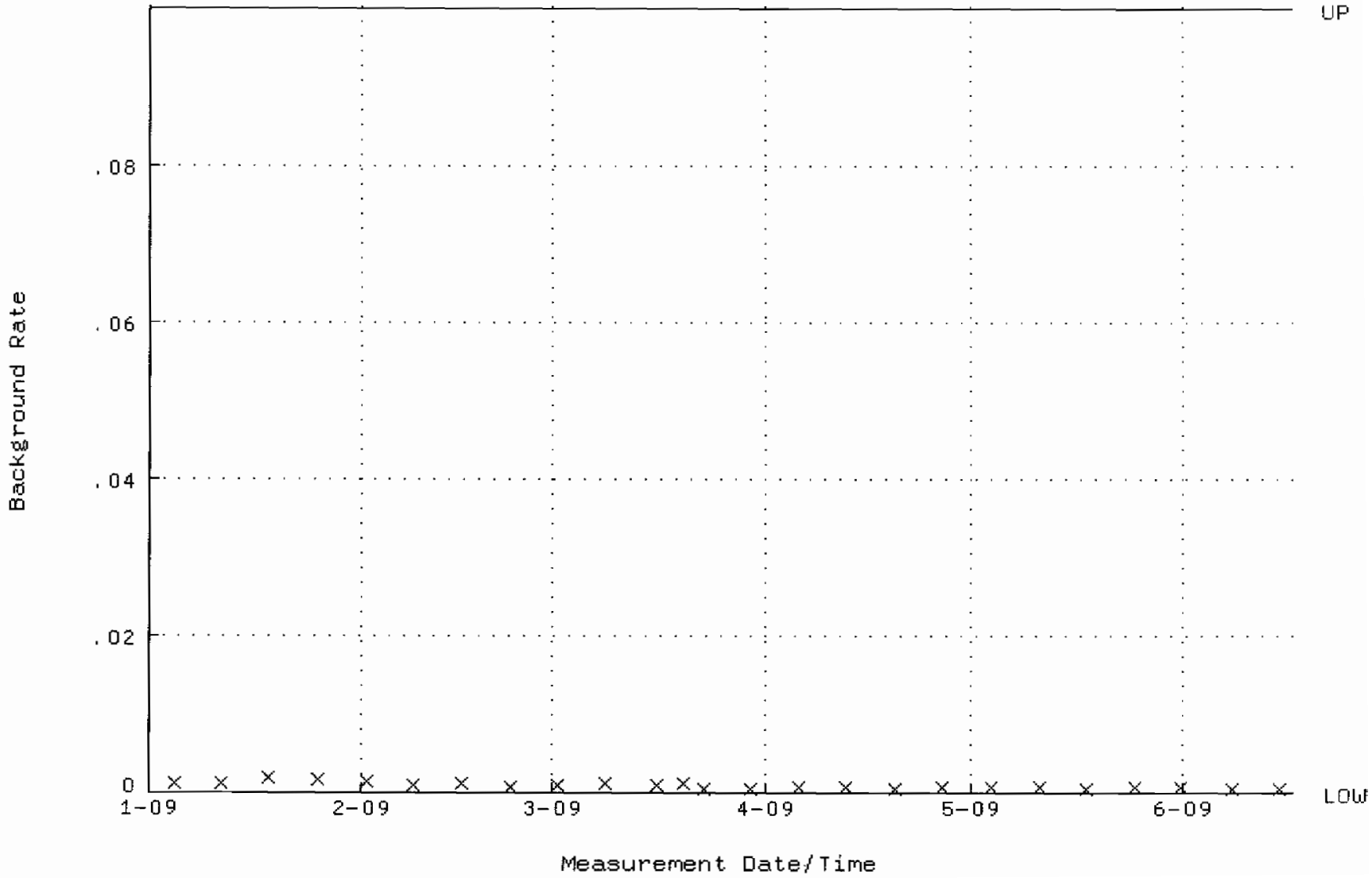

QA filename : DKA100:[ENV_ALPHA.QA.W]W154.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:56 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.251386 through 0.271386

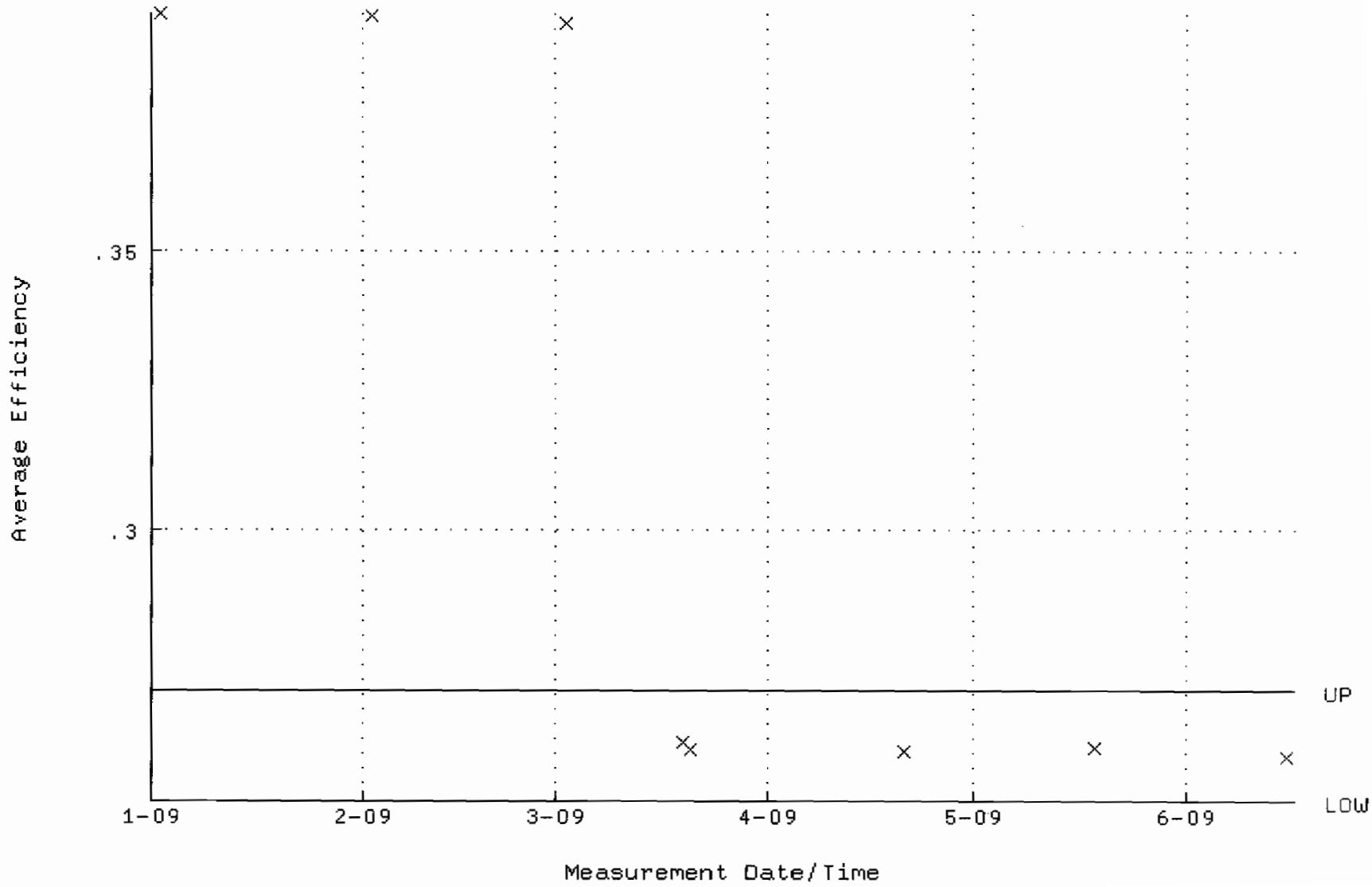

QA filename : DKA100:[ENV_ALPHA.QA.W]W154.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:56 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 79.9003 through 88.3109

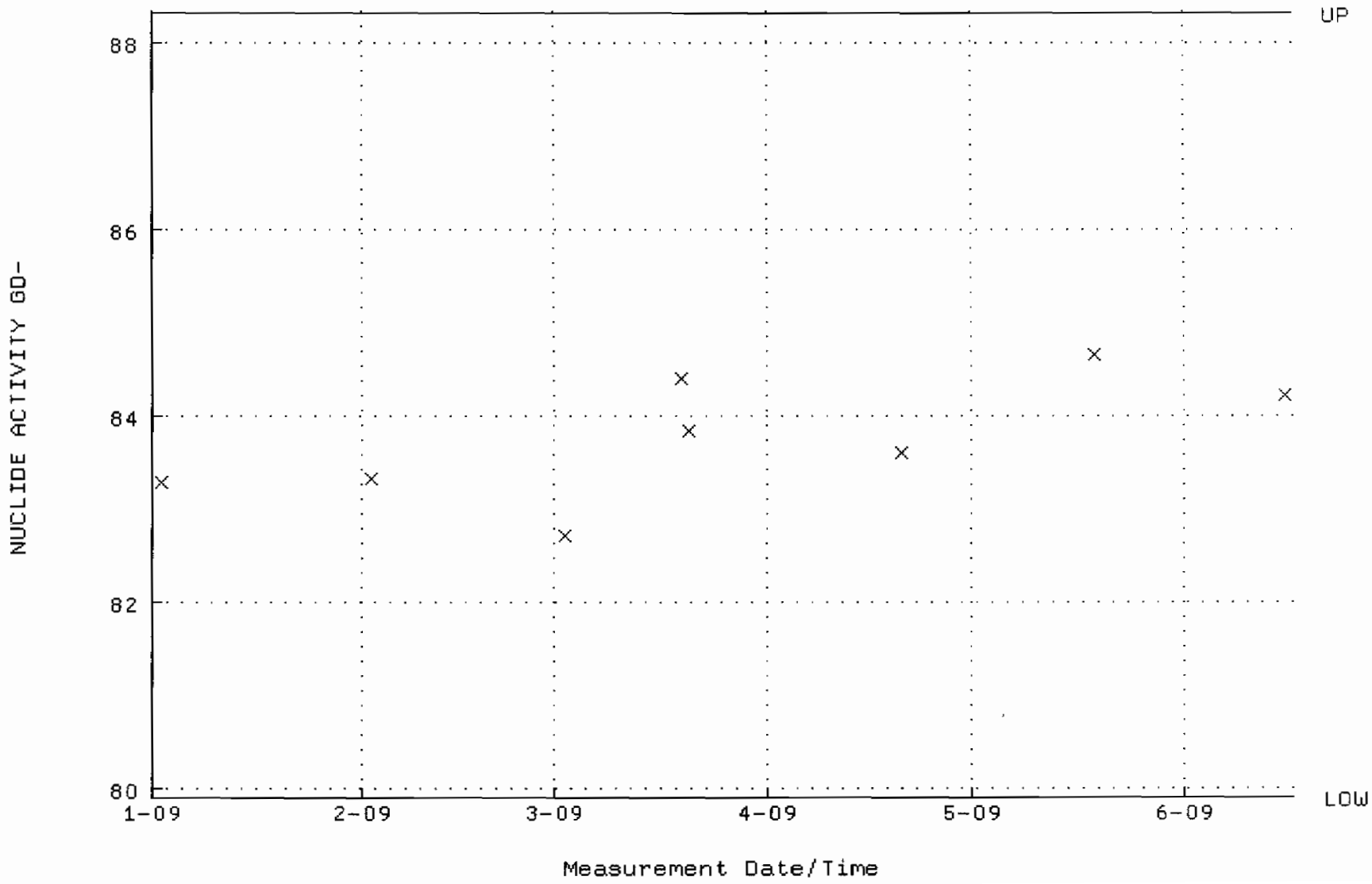

QA filename : DKA100:[ENV_ALPHA.QA.B]B154.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:40 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

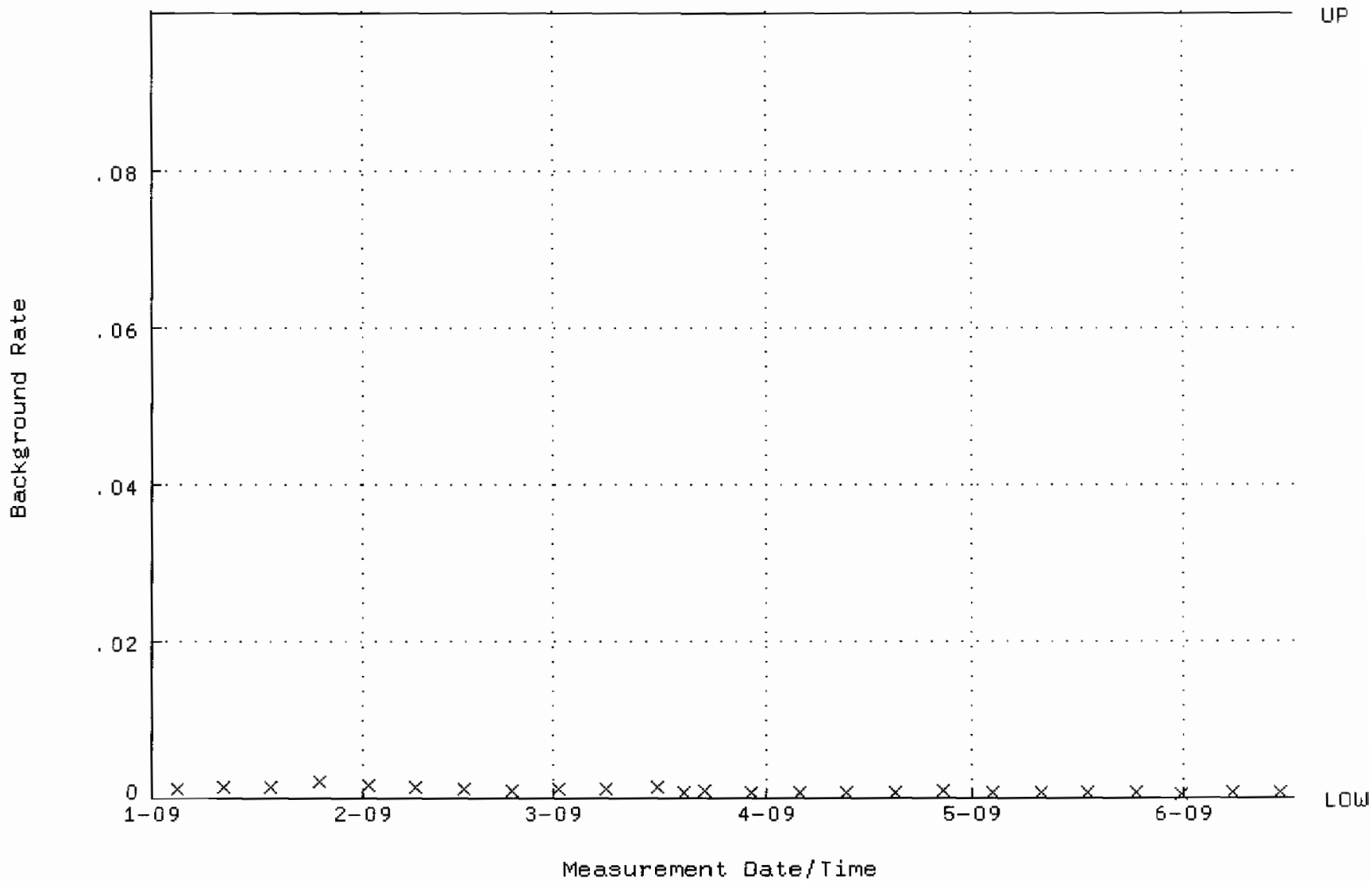

QA filename : DKA100:[ENV_ALPHA.QA.W]W155.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:01 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.247241 through 0.267241

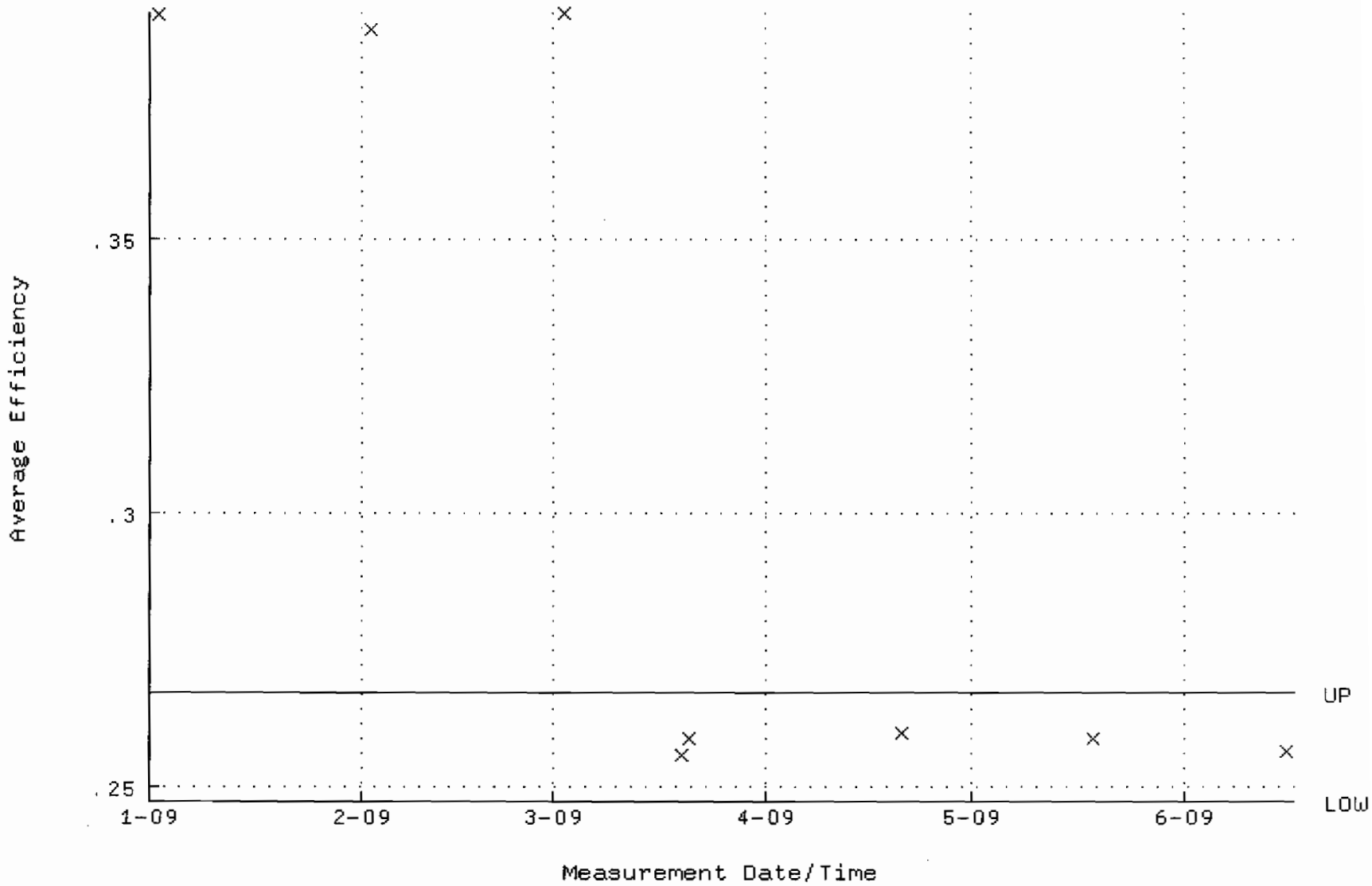

QA filename : DKA100:[ENV_ALPHA.QA.W]W155.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:01 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 83.6873 through 92.4965

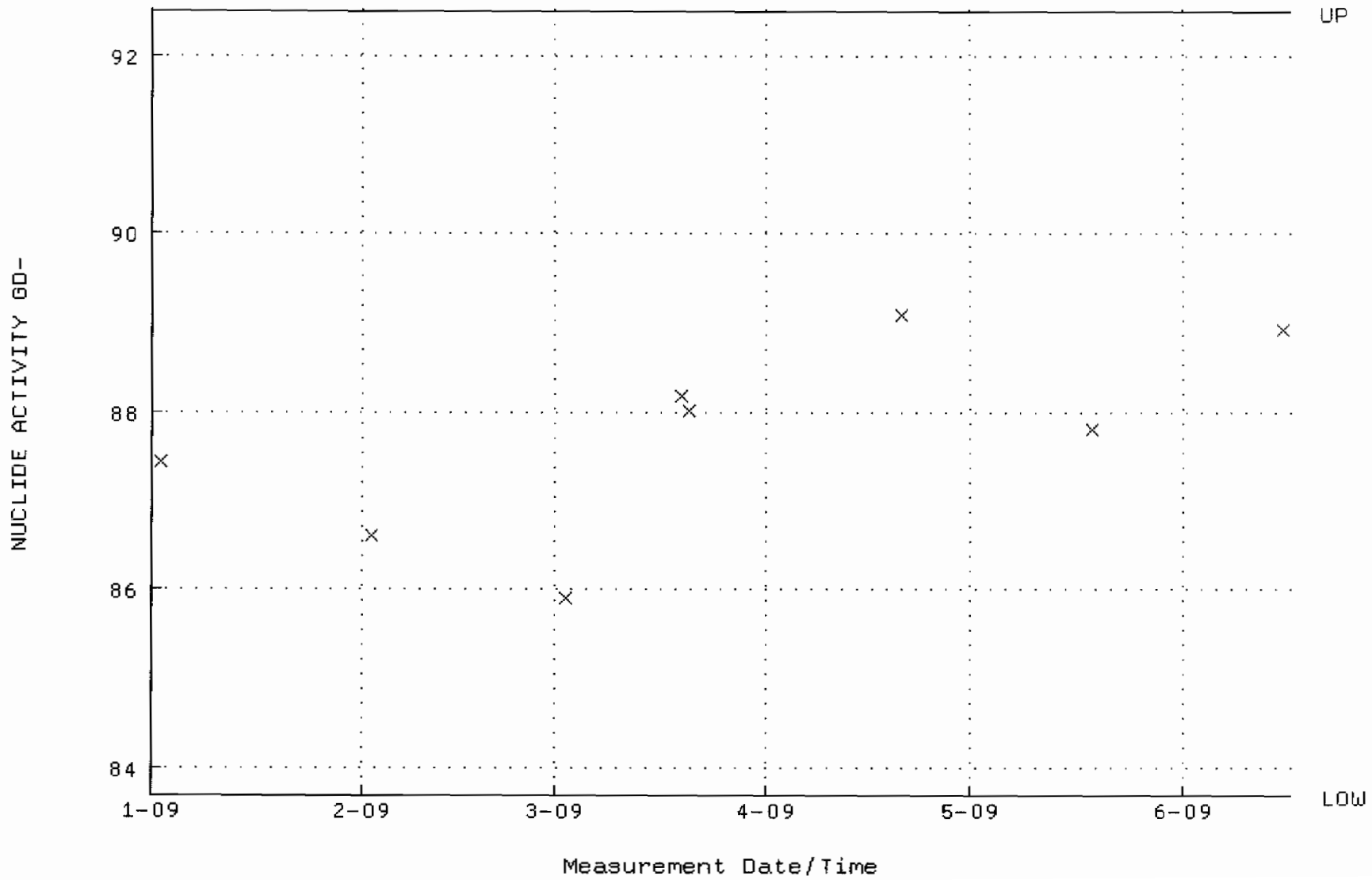

QA filename : DKA100:[ENV_ALPHA.QA.B]B155.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:44 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

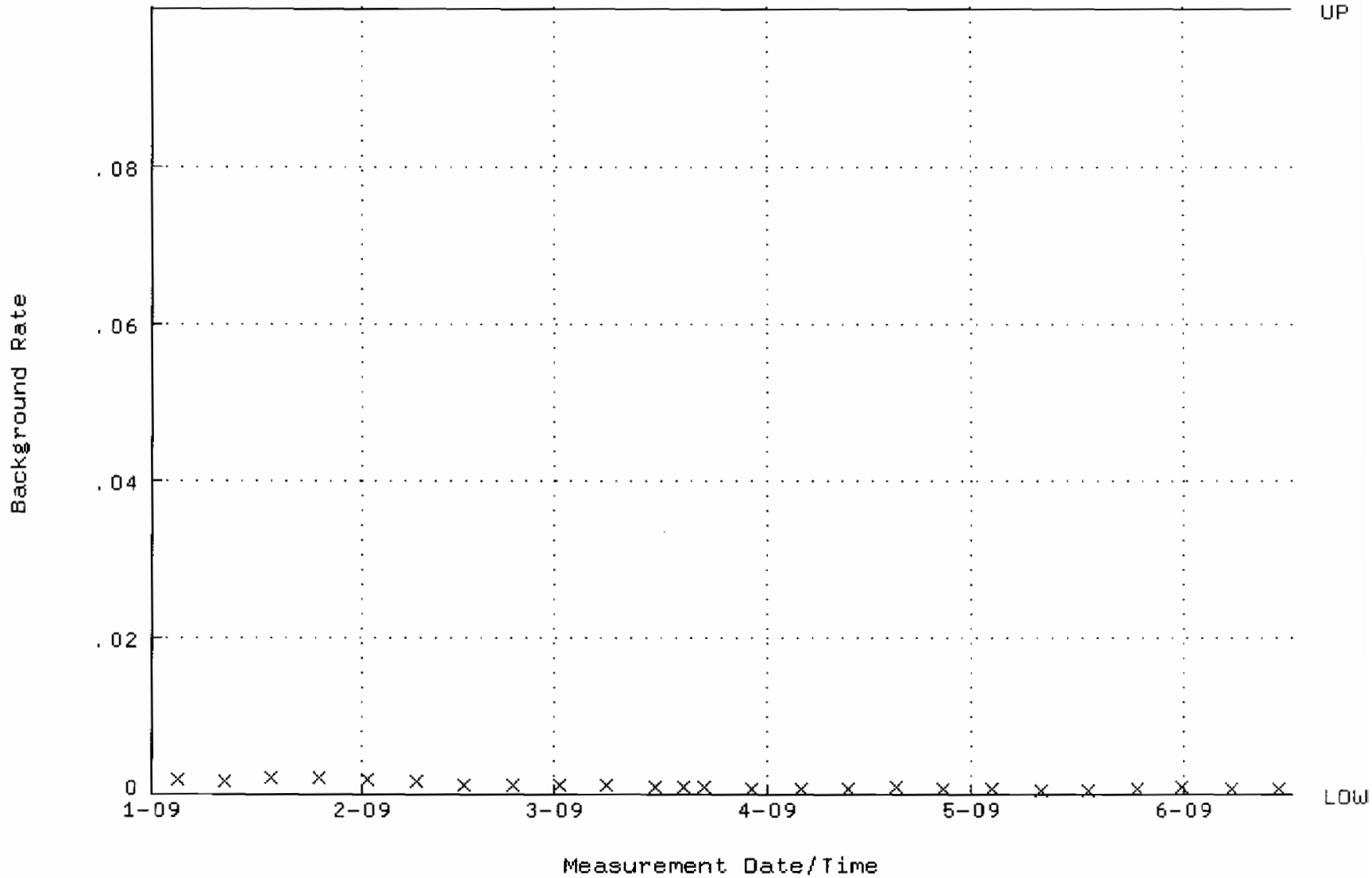

QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:06 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.241250 through 0.261250

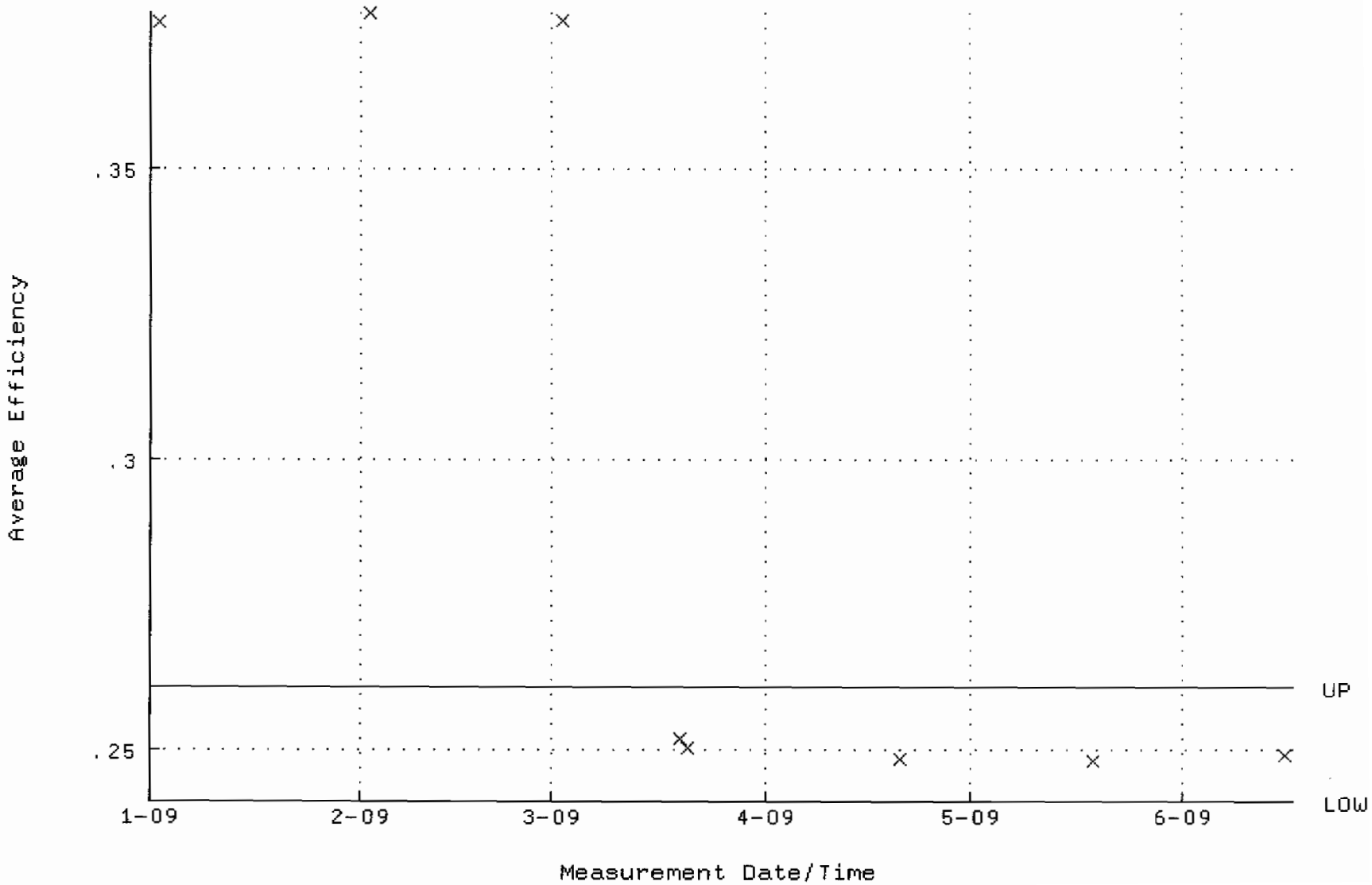

QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:06 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 82.7847 through 91.4989

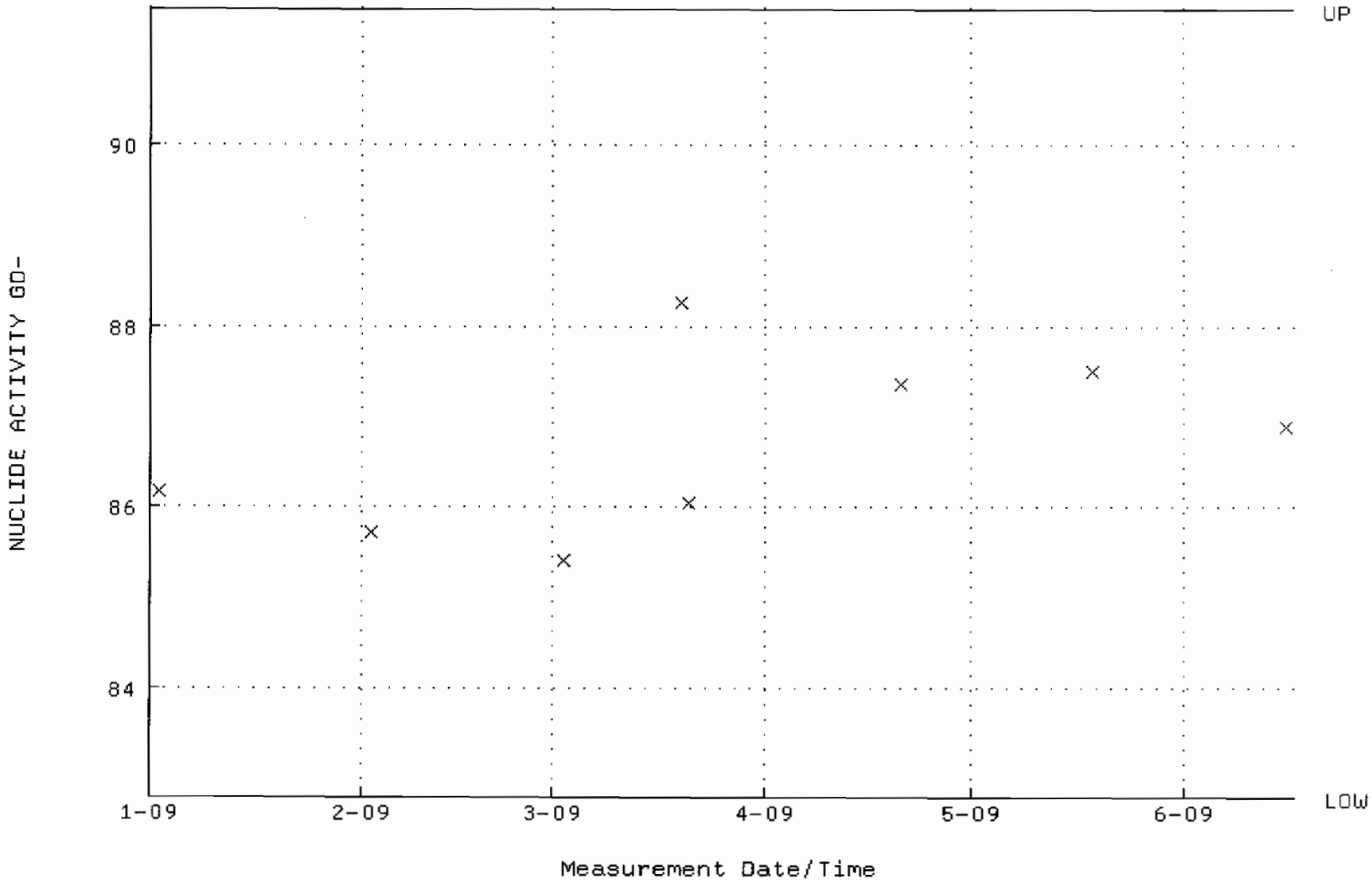

QA filename : DKA100:[ENV_ALPHA.QA.B]B156.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:47 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

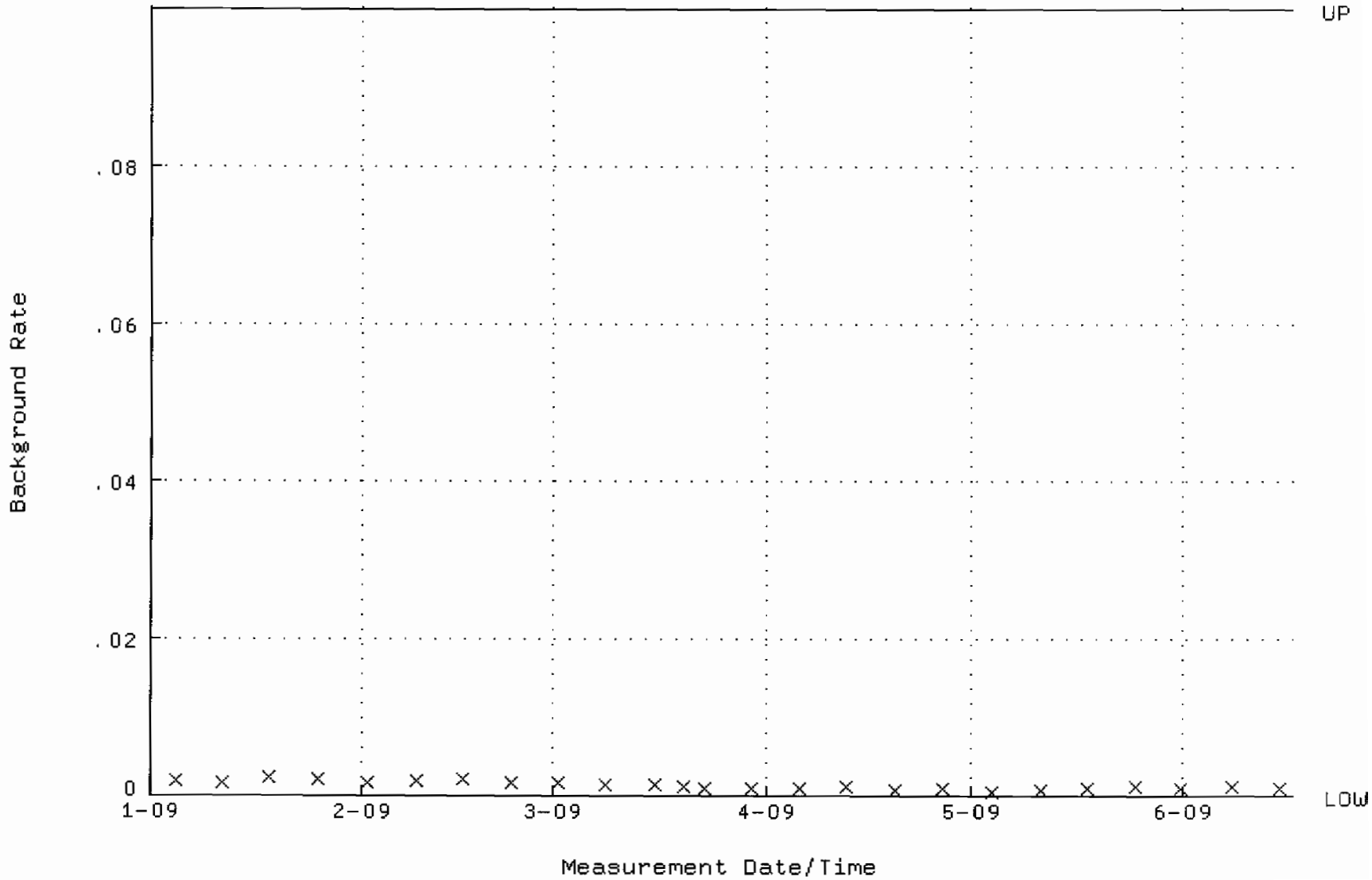

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01_2LMB.QAF;1
Parameter Name : PSCENTRO-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

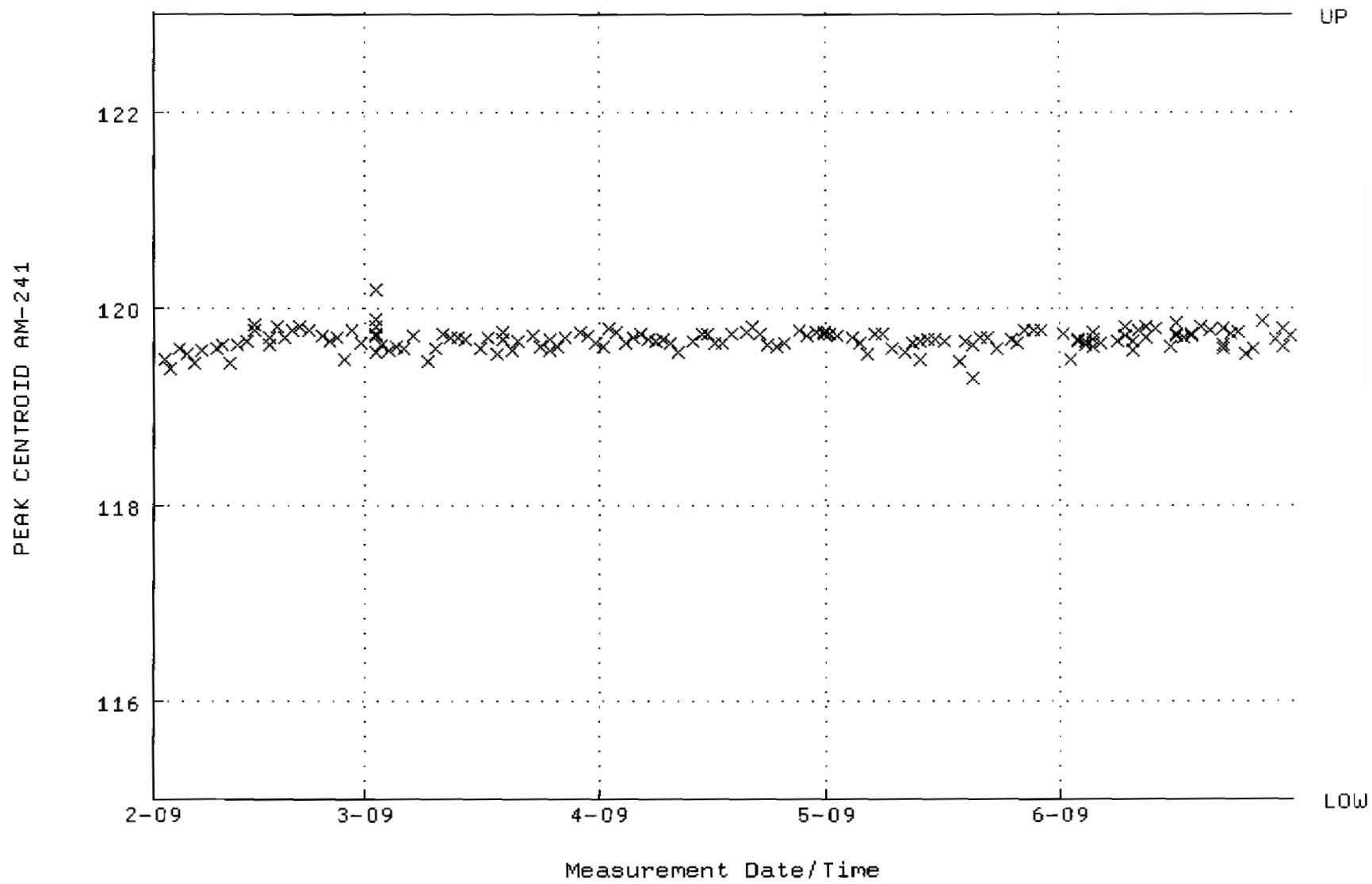

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM01.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:08:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.59940 through 1.87060

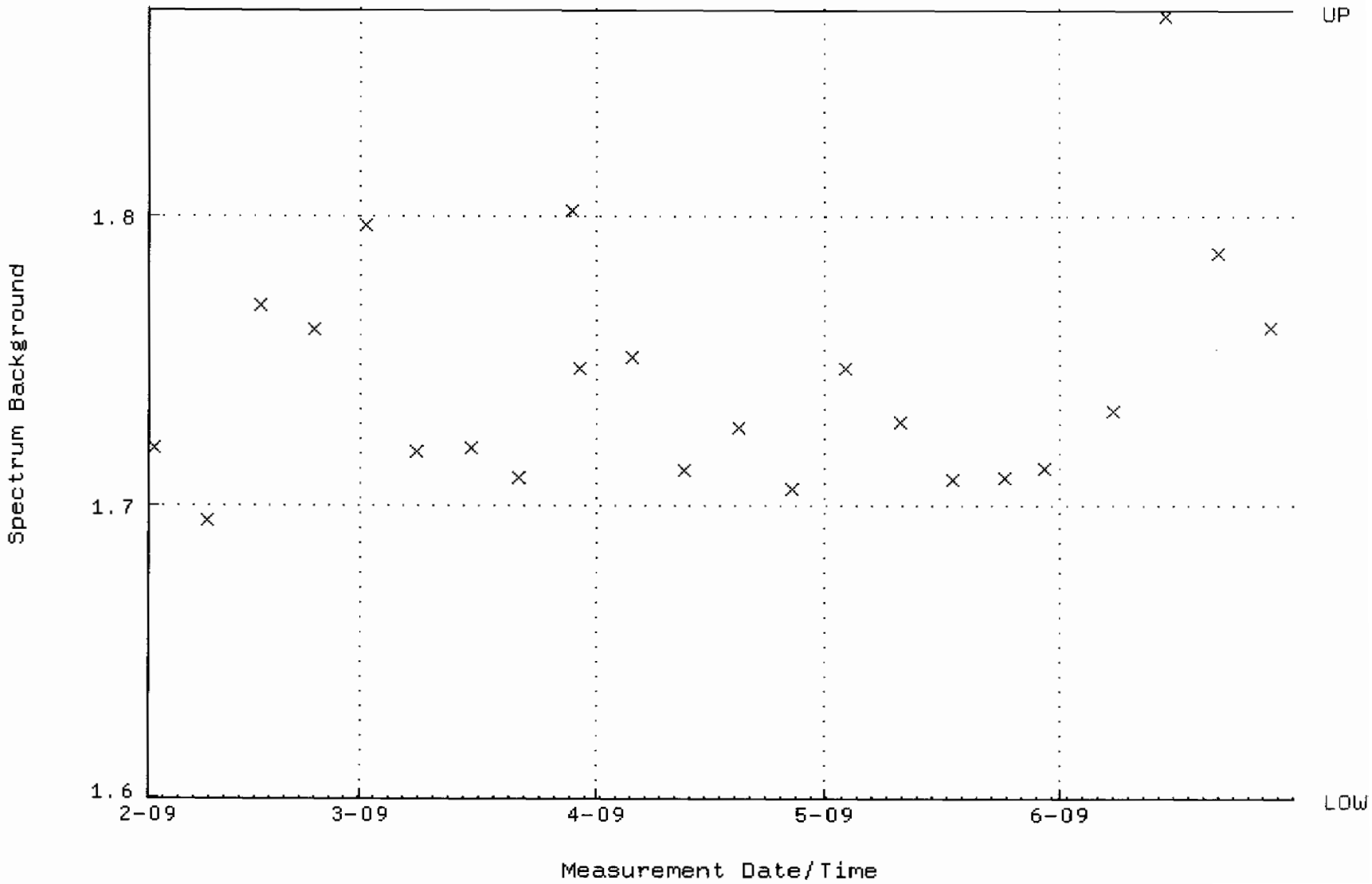

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM02_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:44 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

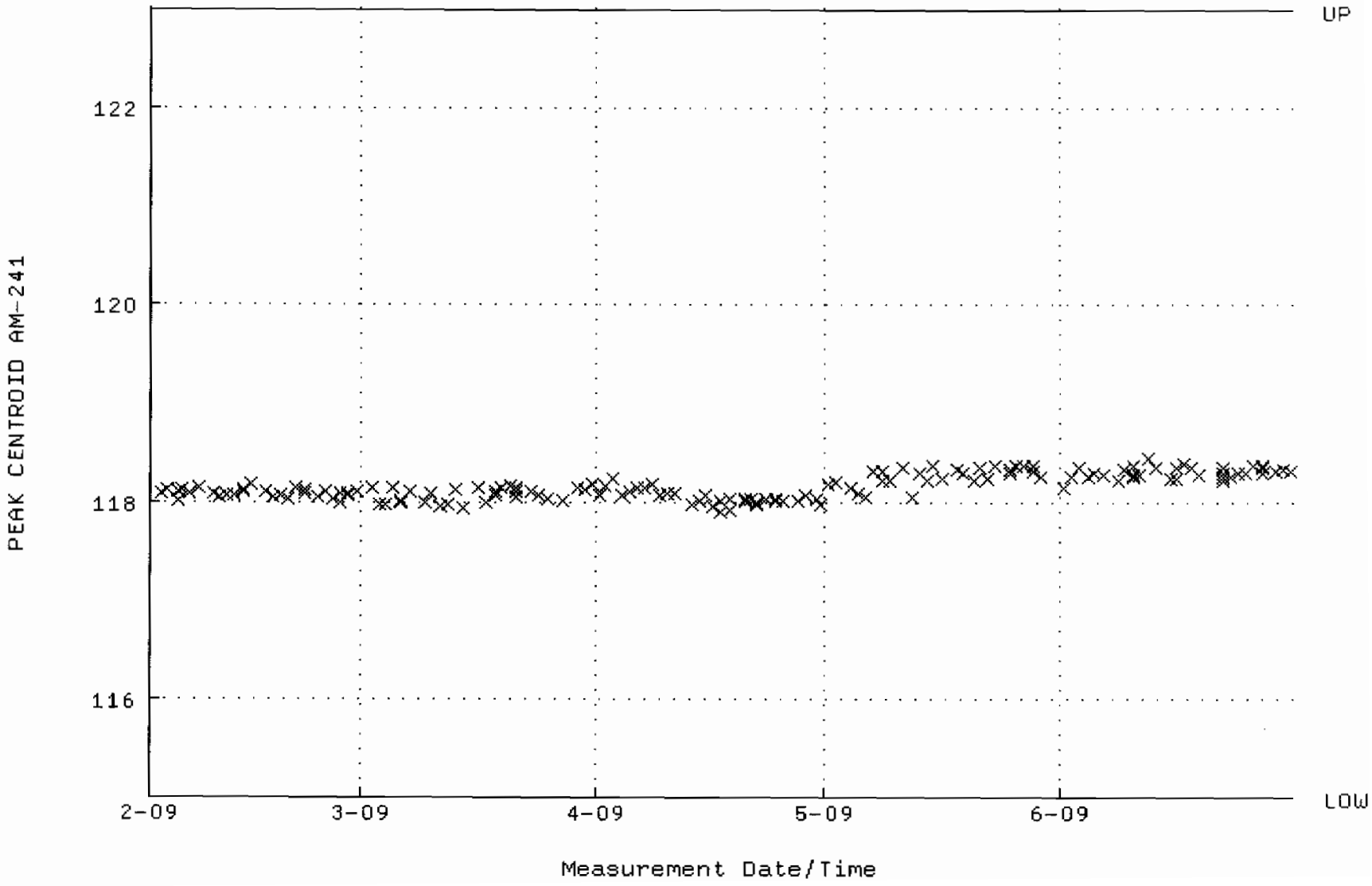

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM02.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.93670 through 2.08210

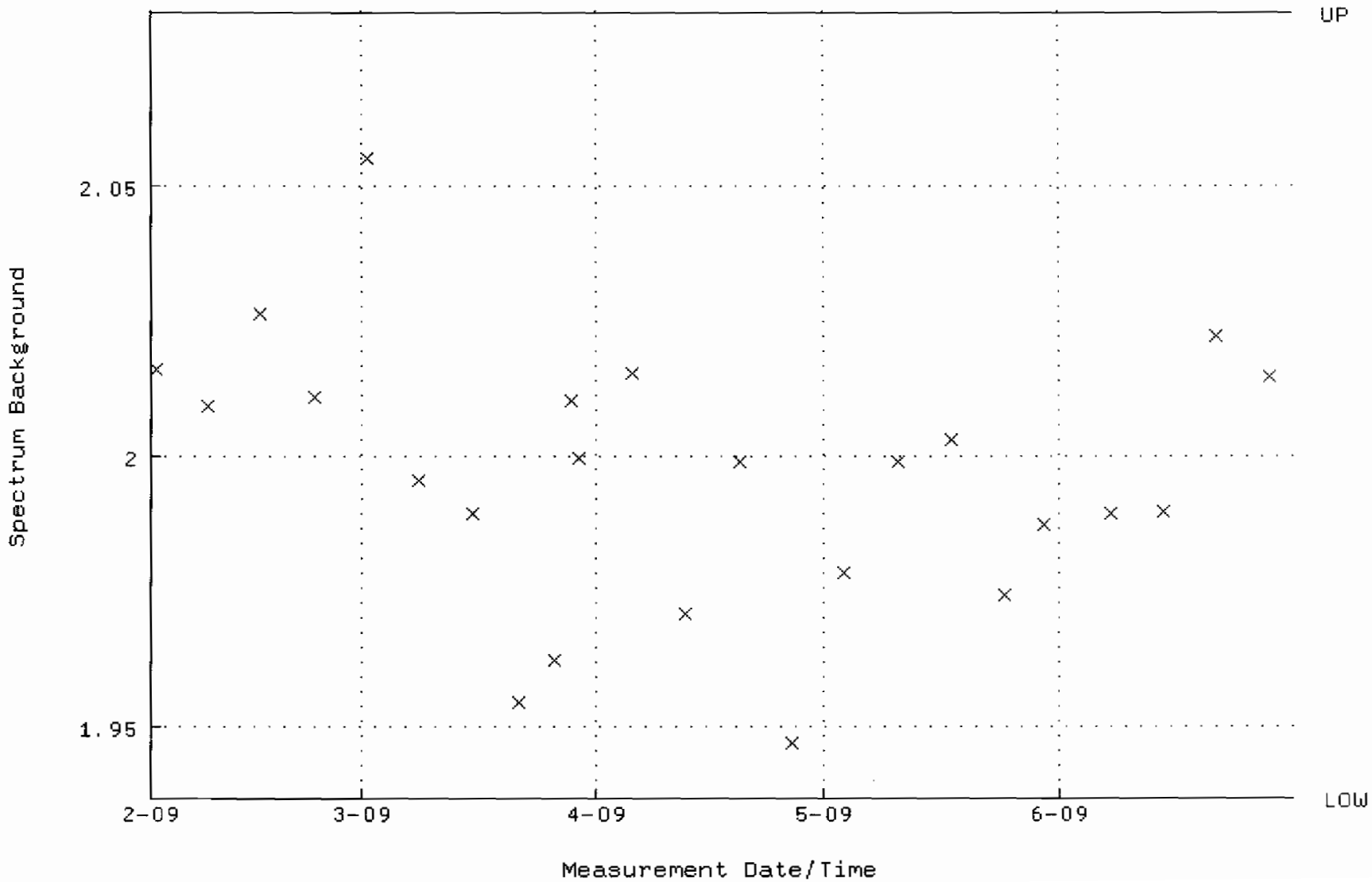

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM04_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:53 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

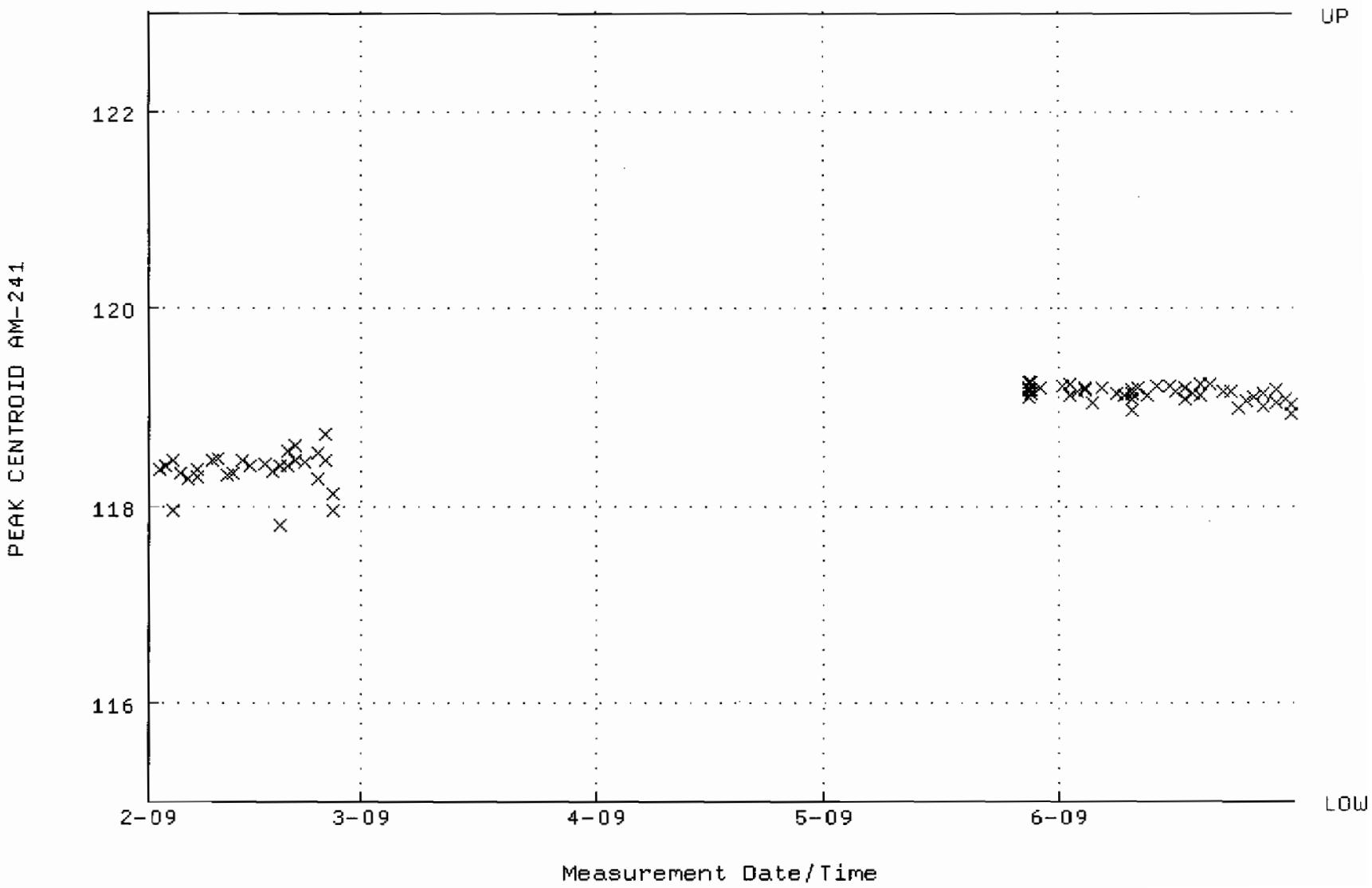

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM04.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:38 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.22211 through 1.49369

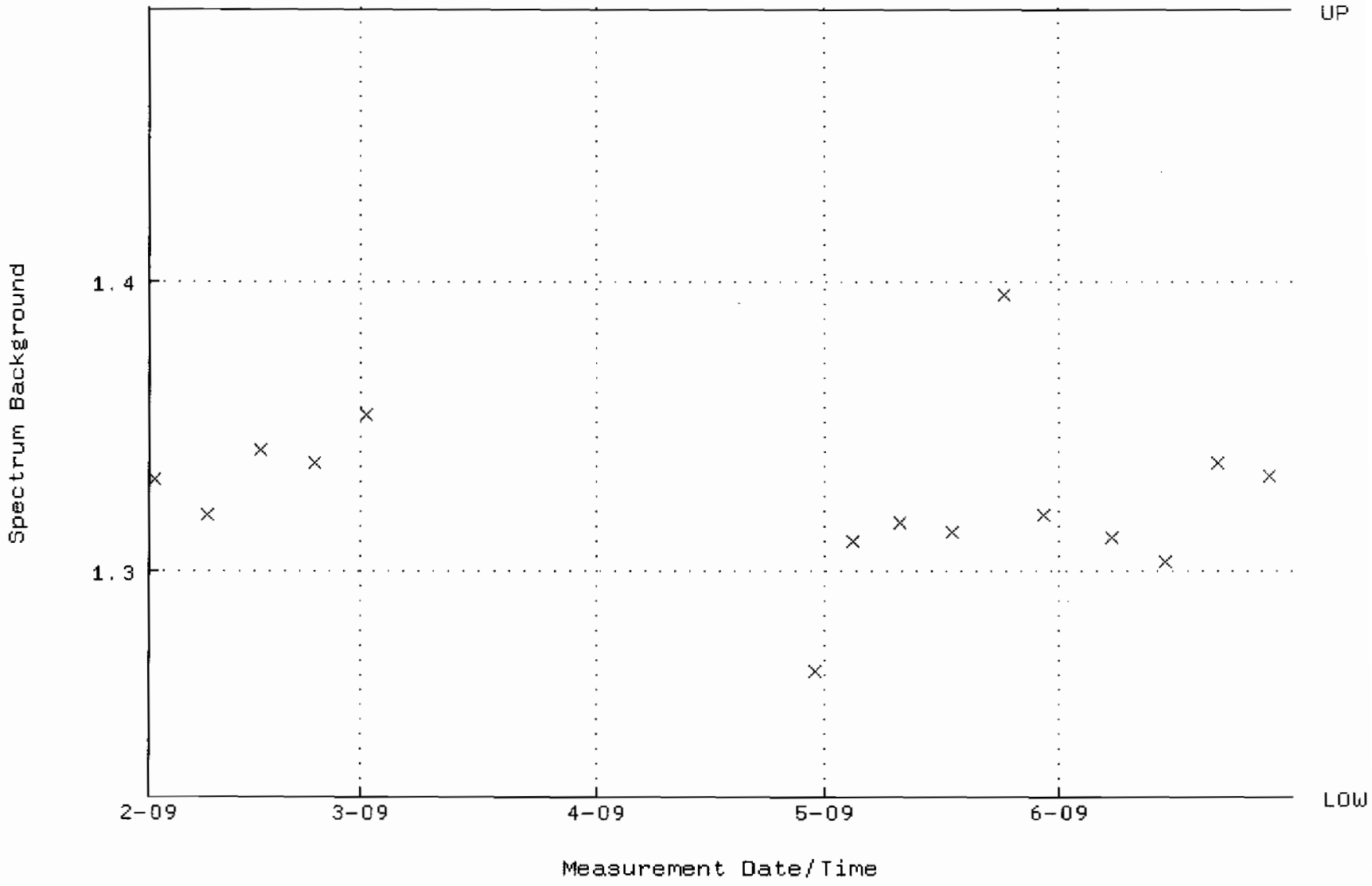

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:01 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

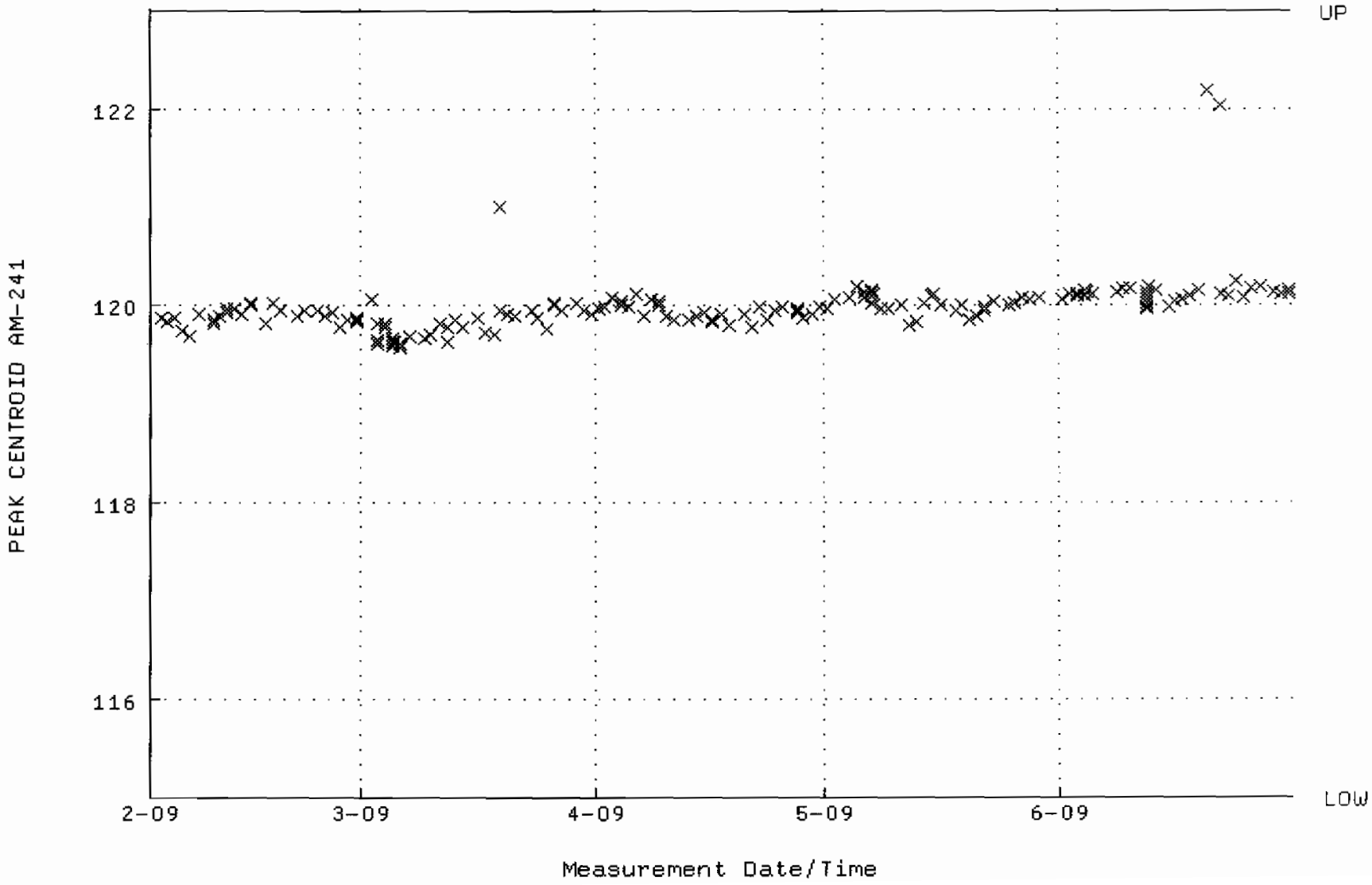

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM05.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.60580 through 1.72440

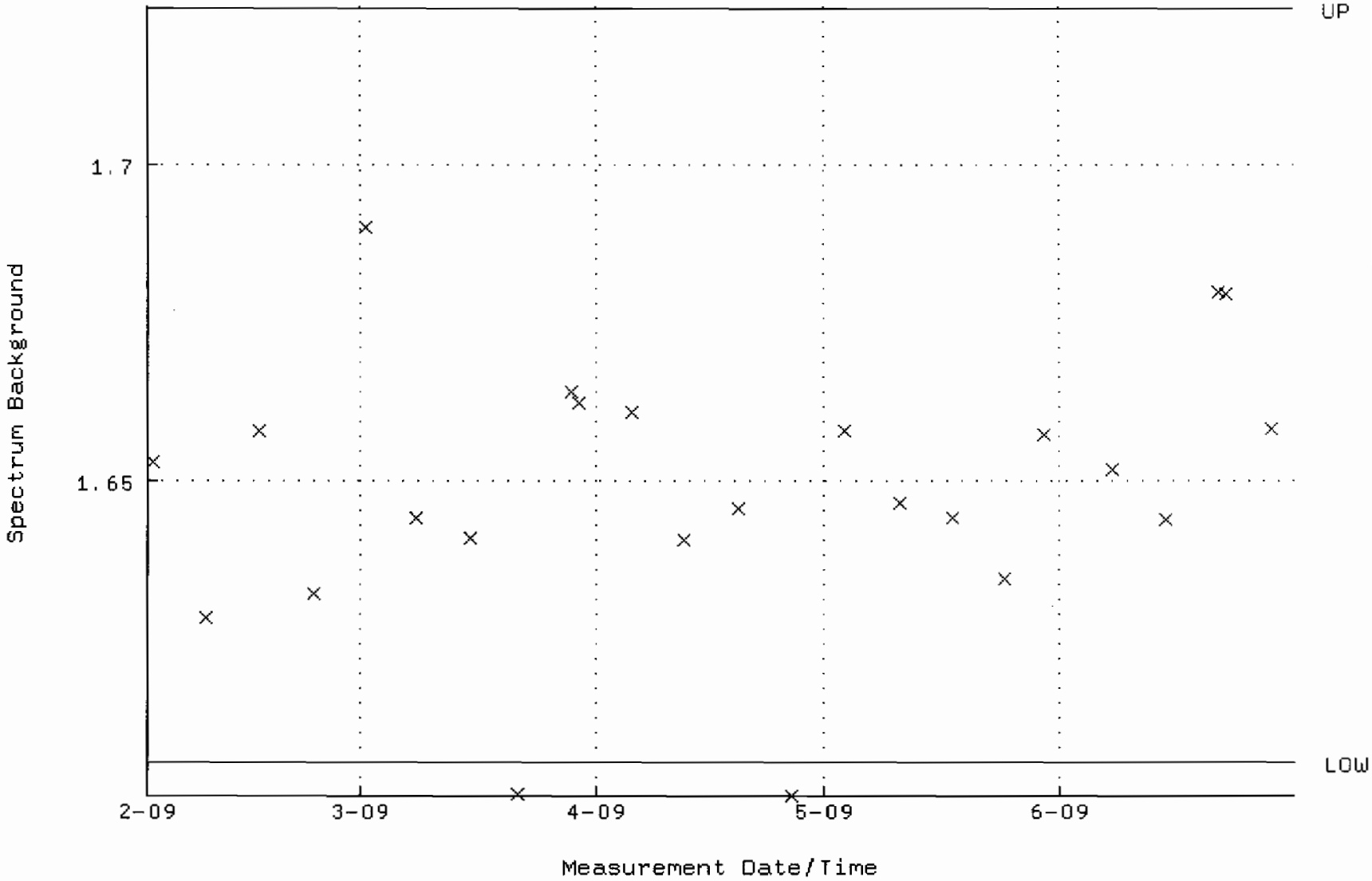

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM06_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 5-FEB-2009 05:58:08 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

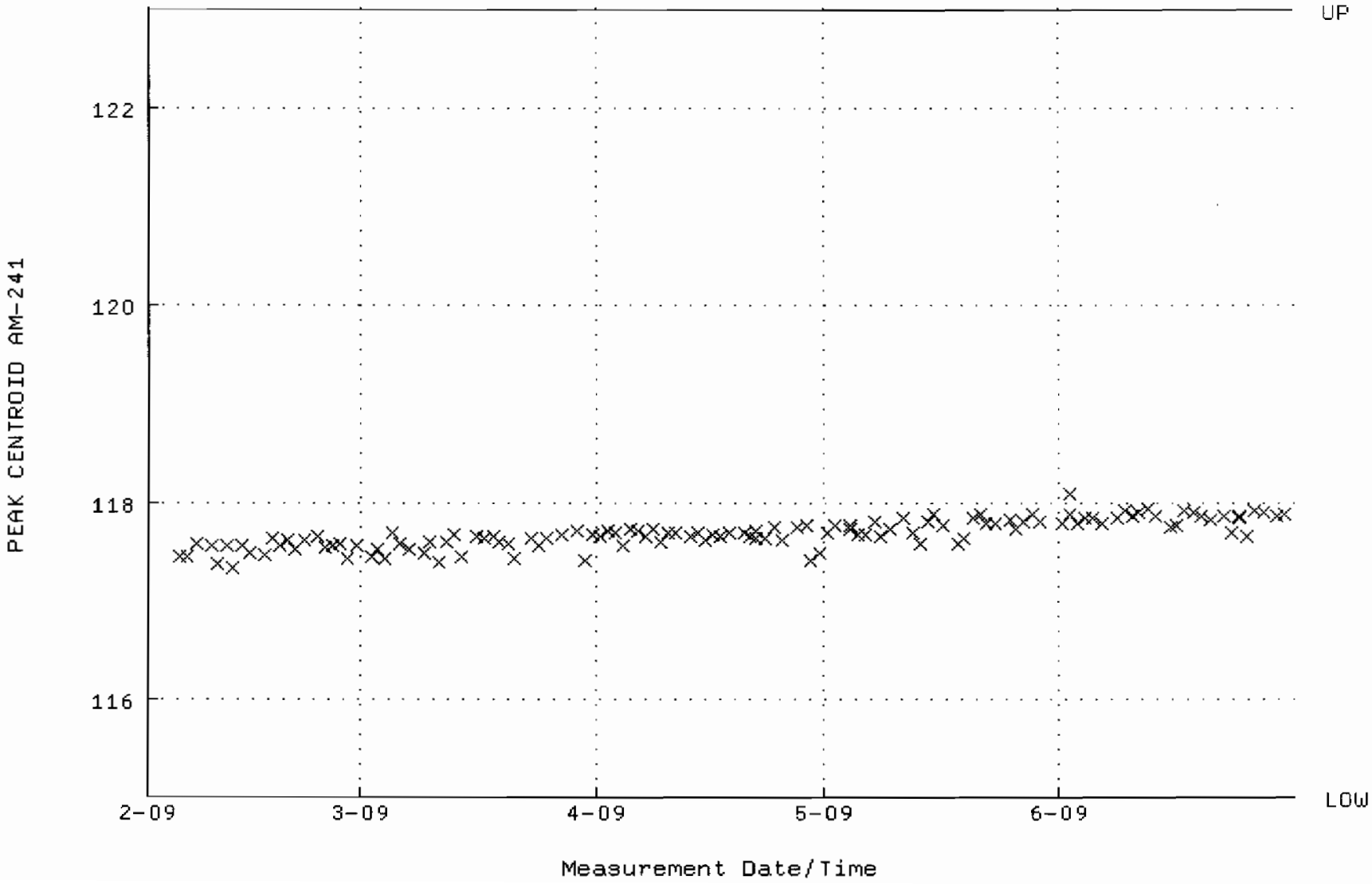

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM06.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.51800 through 1.70270

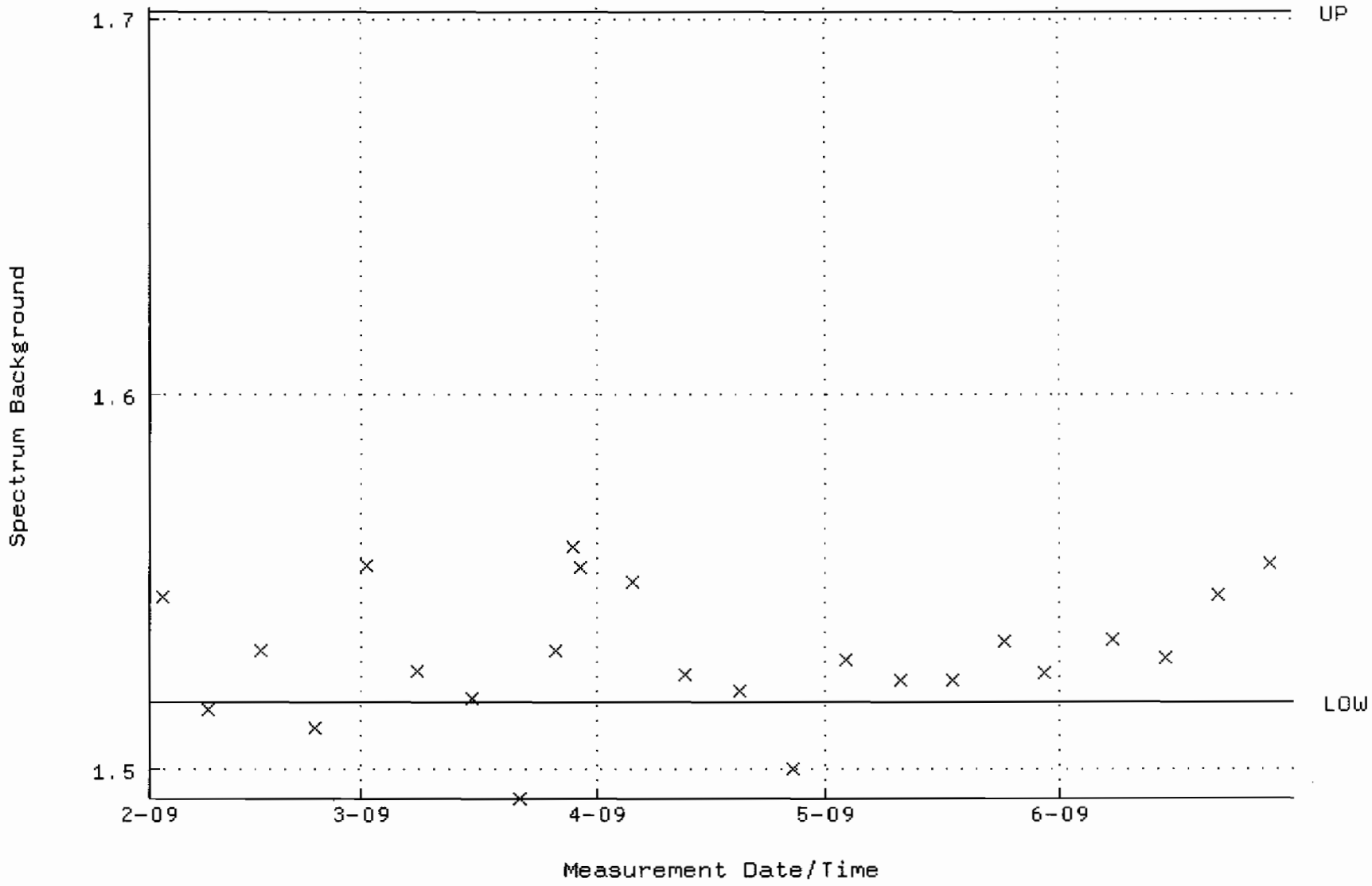

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM08_2LMB.QAF;1
Parameter Name : PSCENTRO-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-FEB-2009 12:14:25 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

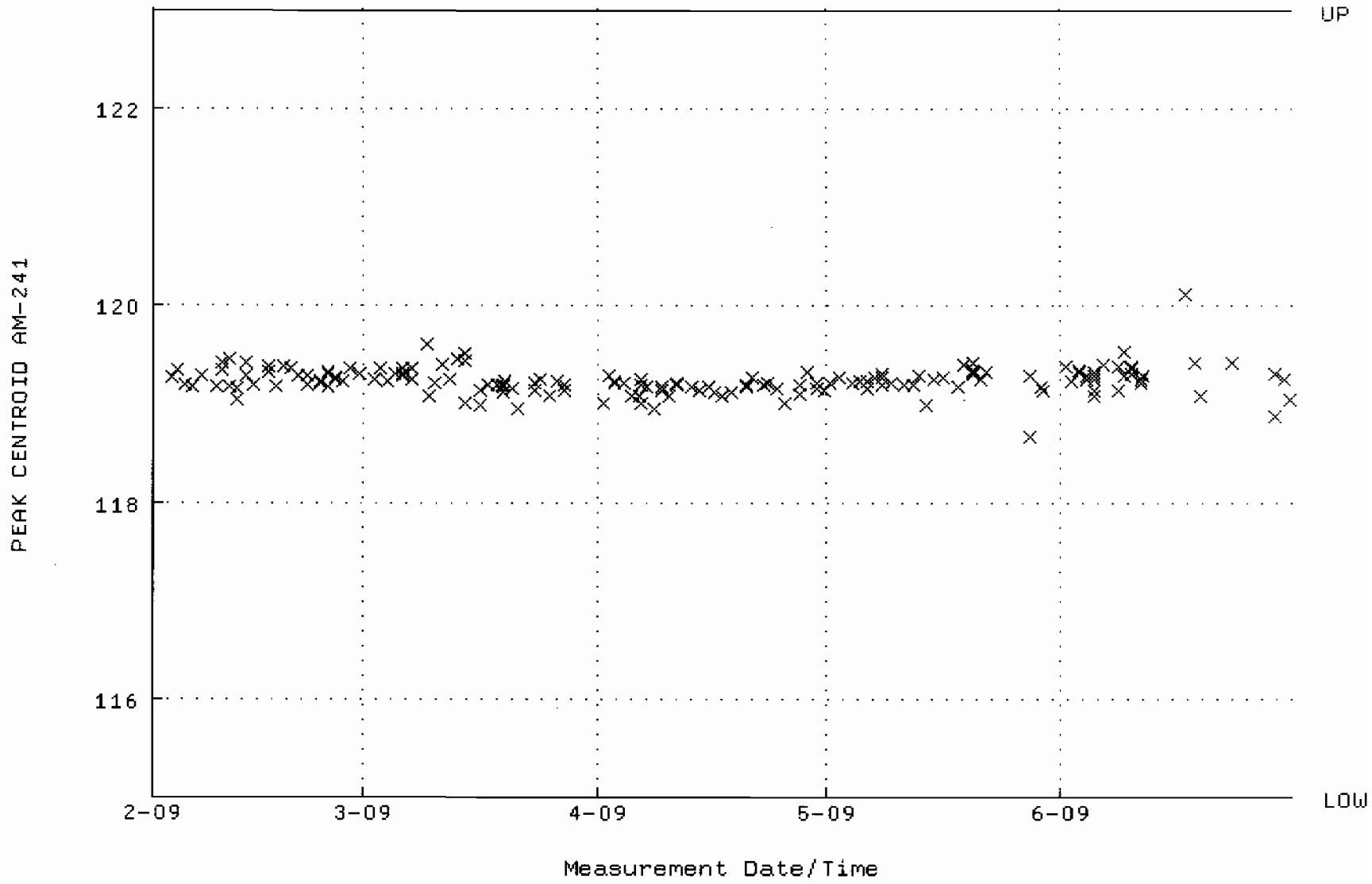

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM08.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.31400 through 1.60600

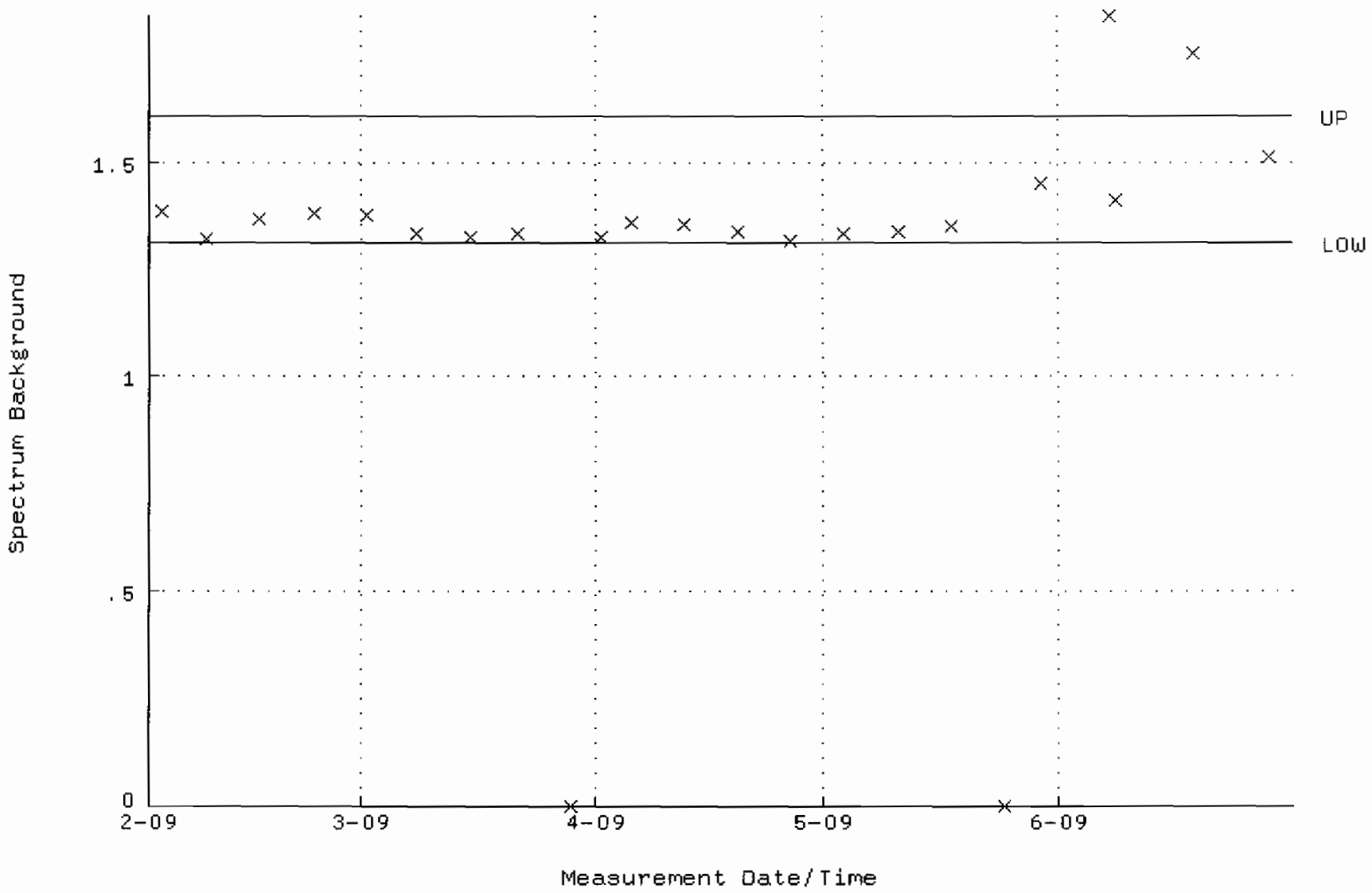

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:41 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

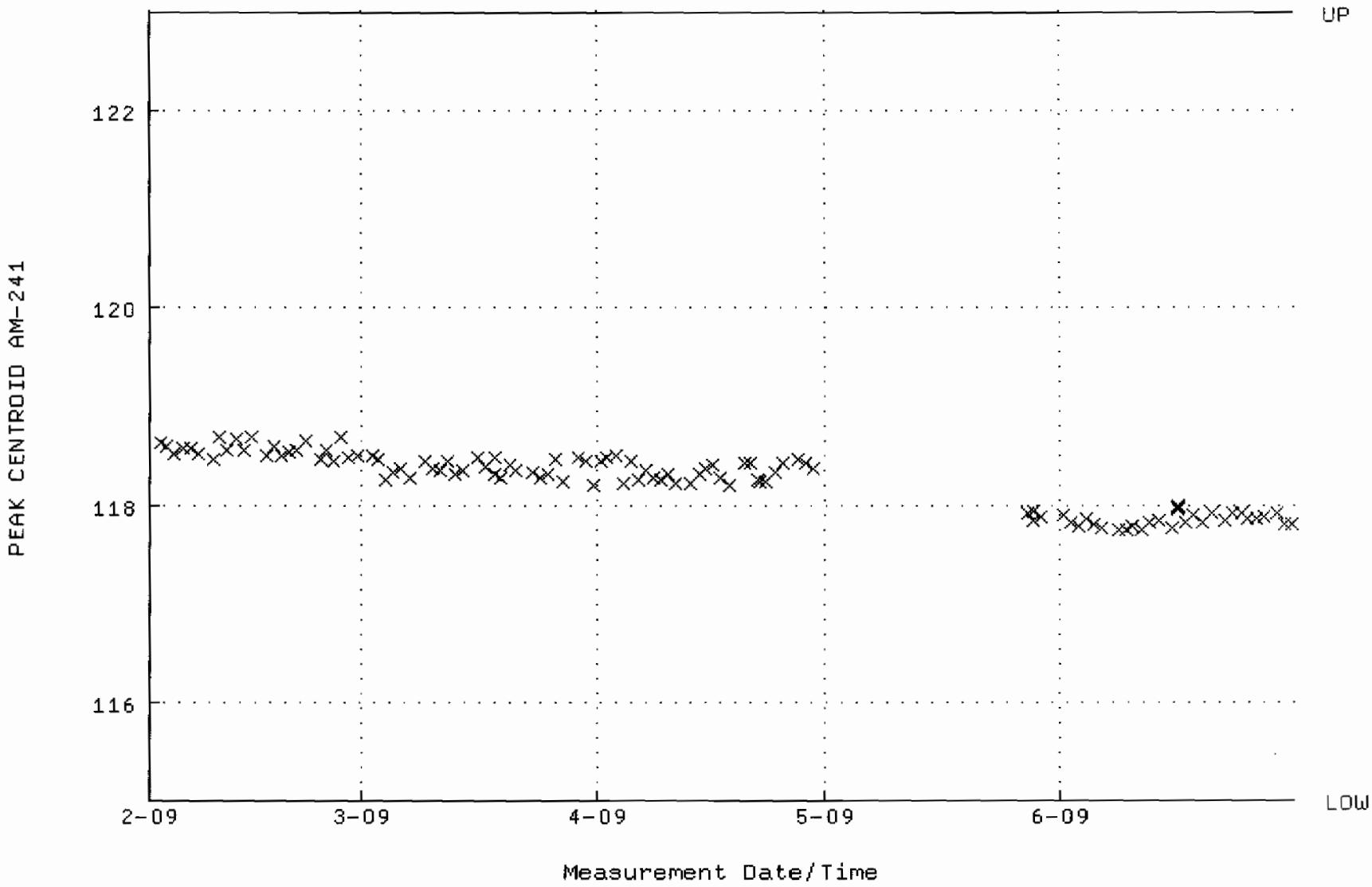

QA filename : OKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM11.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:39 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.47699 through 1.80520

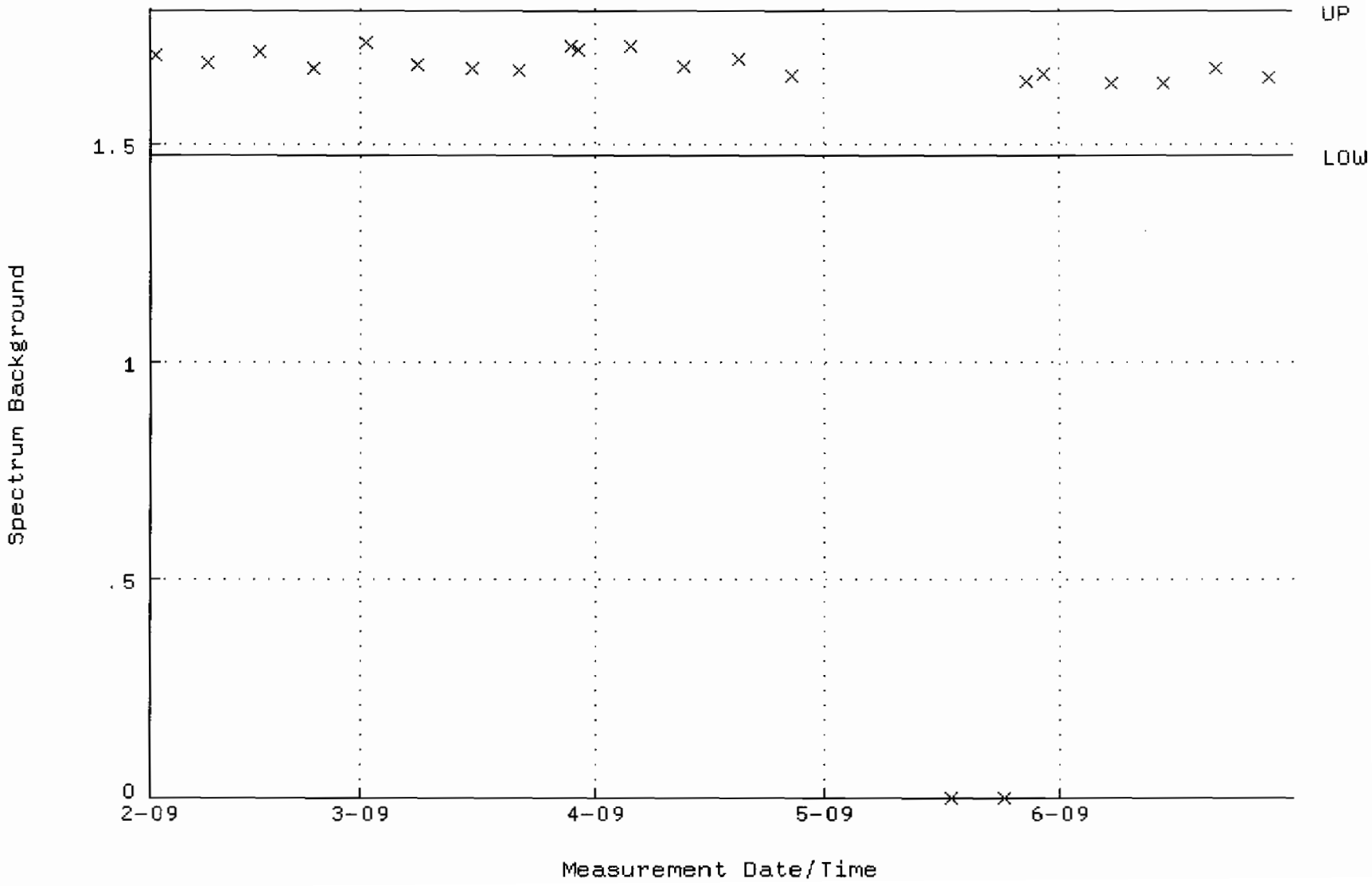

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM12_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:49 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

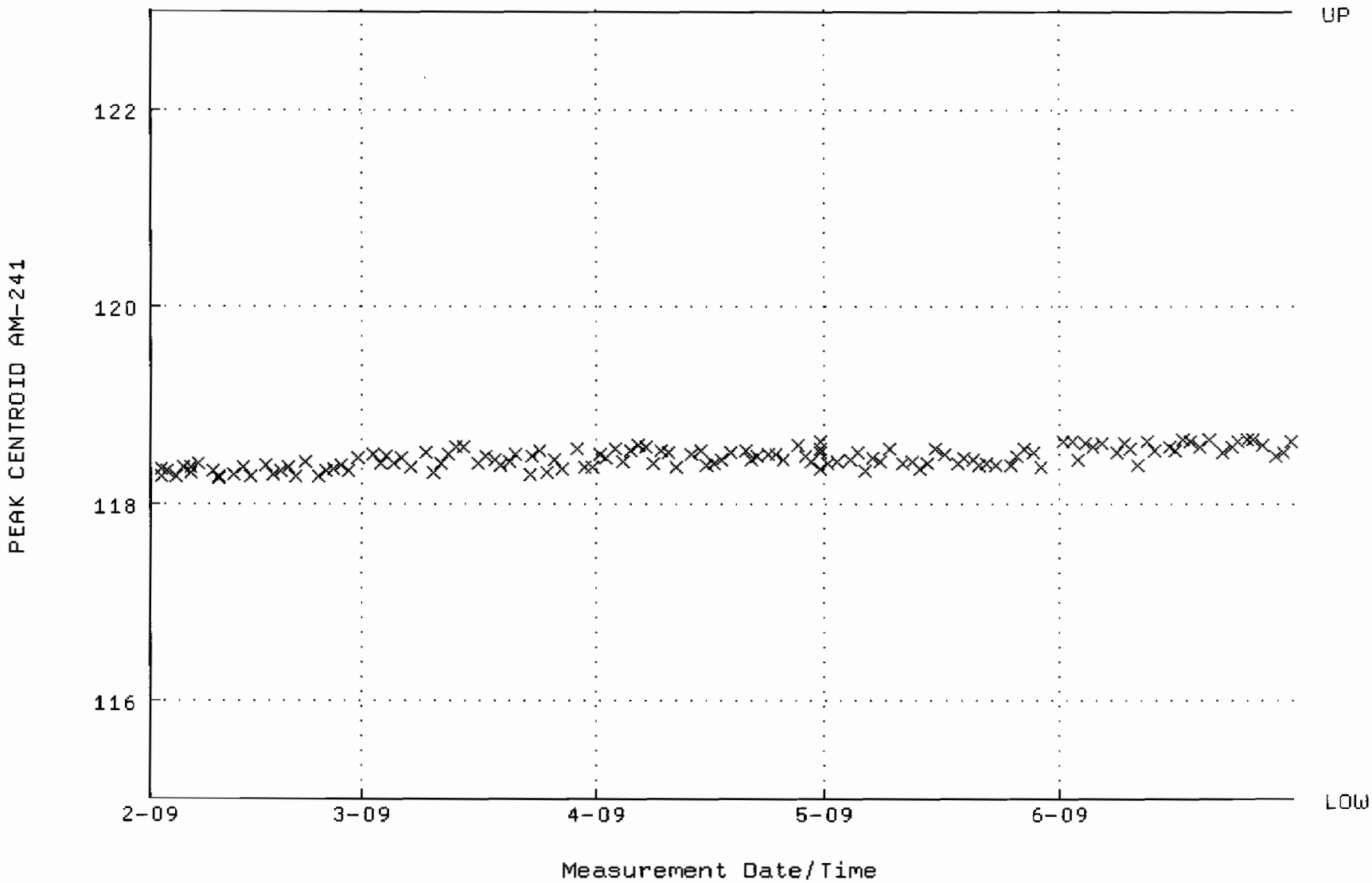

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM12.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:52 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.40364 through 1.71556

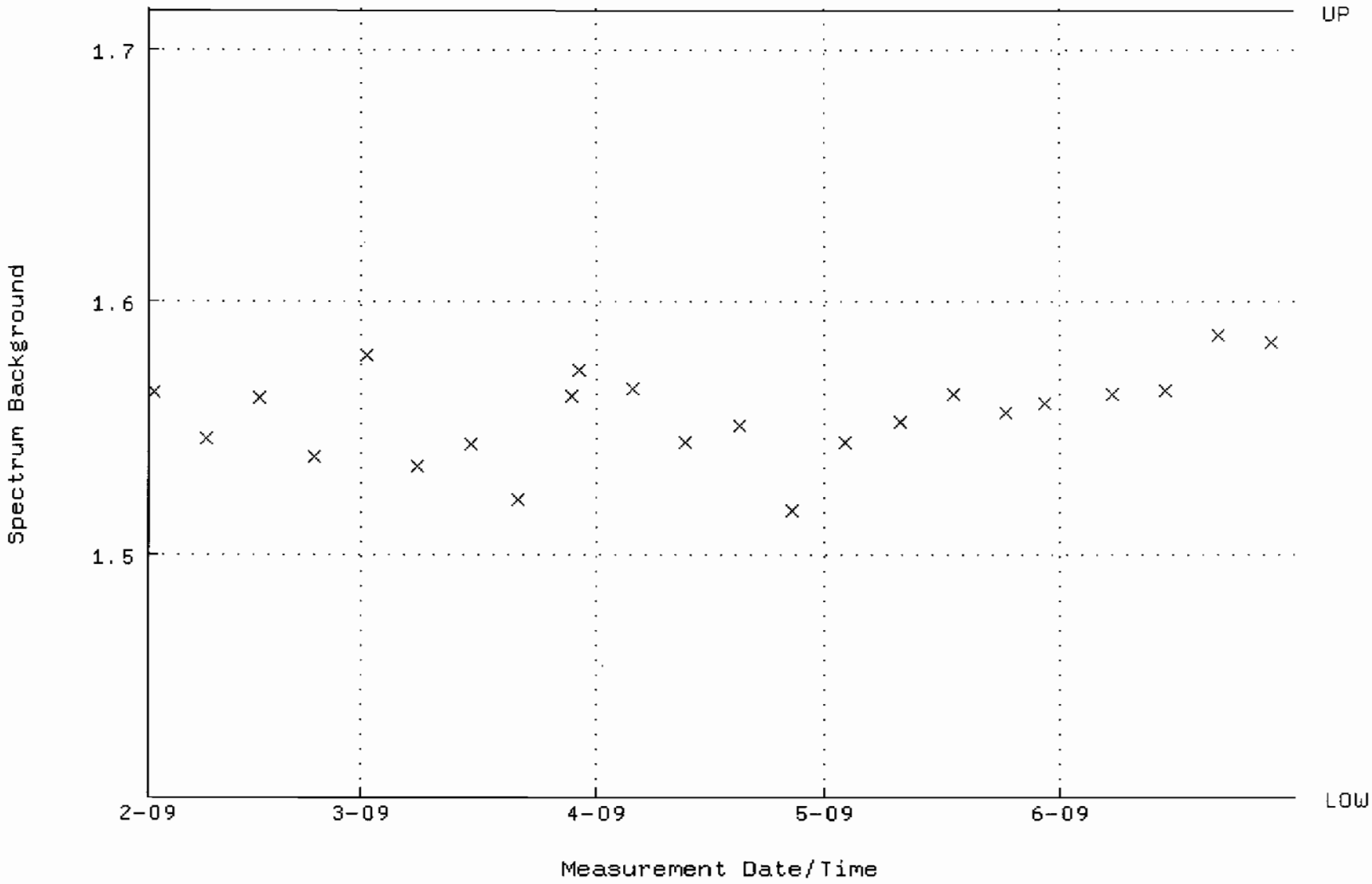

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-FEB-2009 16:33:12 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

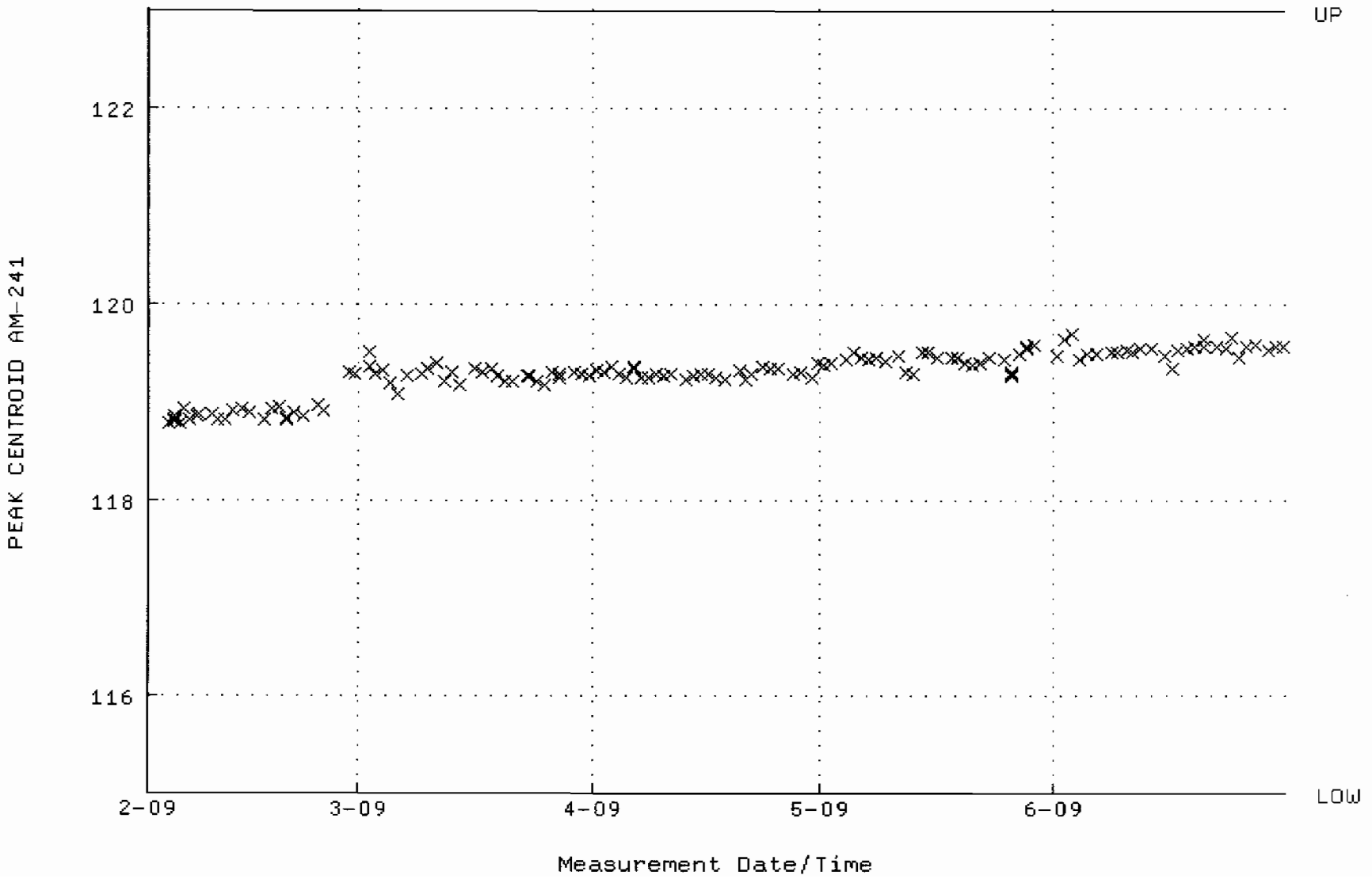

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM13.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:24 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.98827 through 3.65233

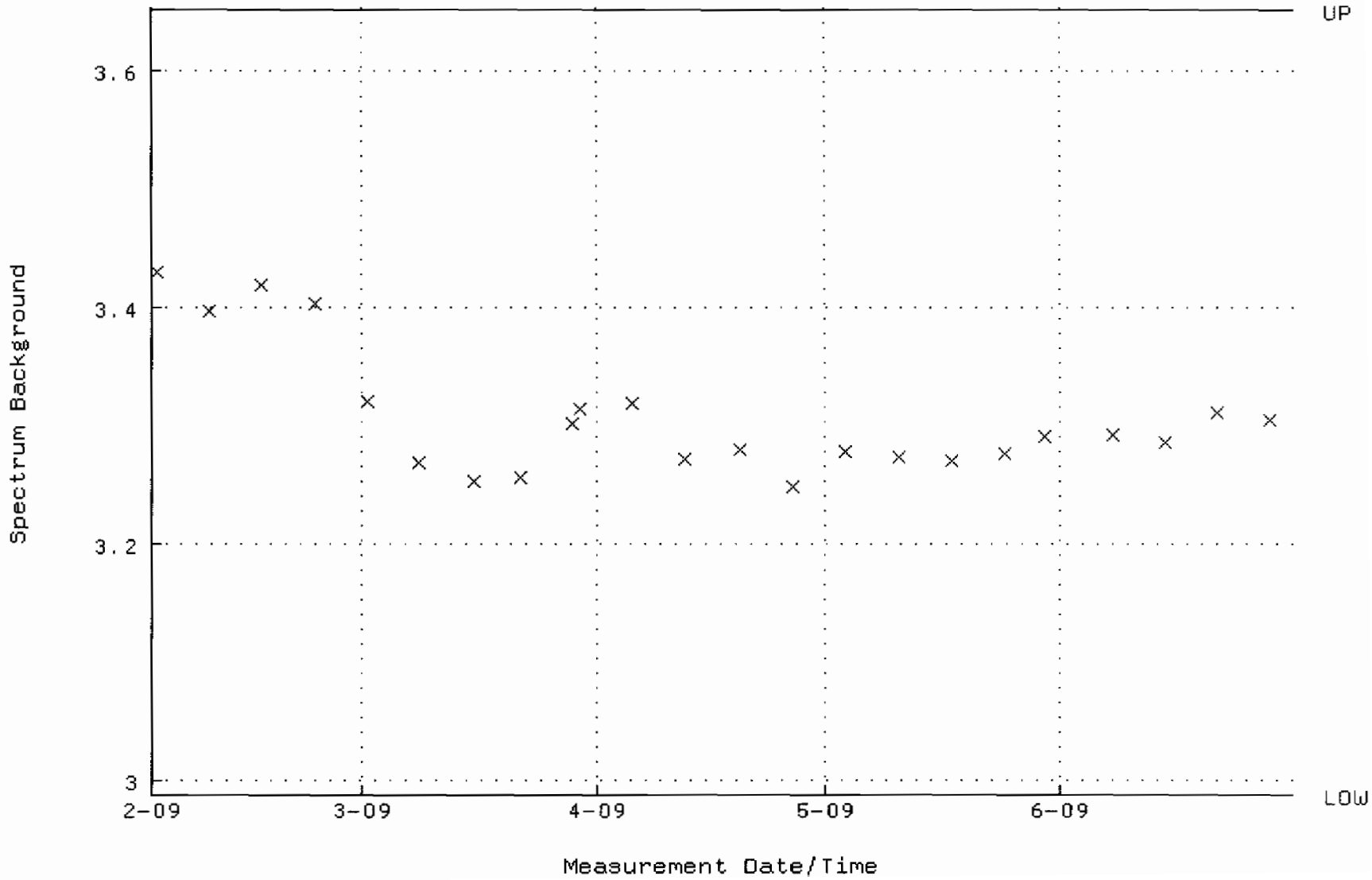

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM14_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:24 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

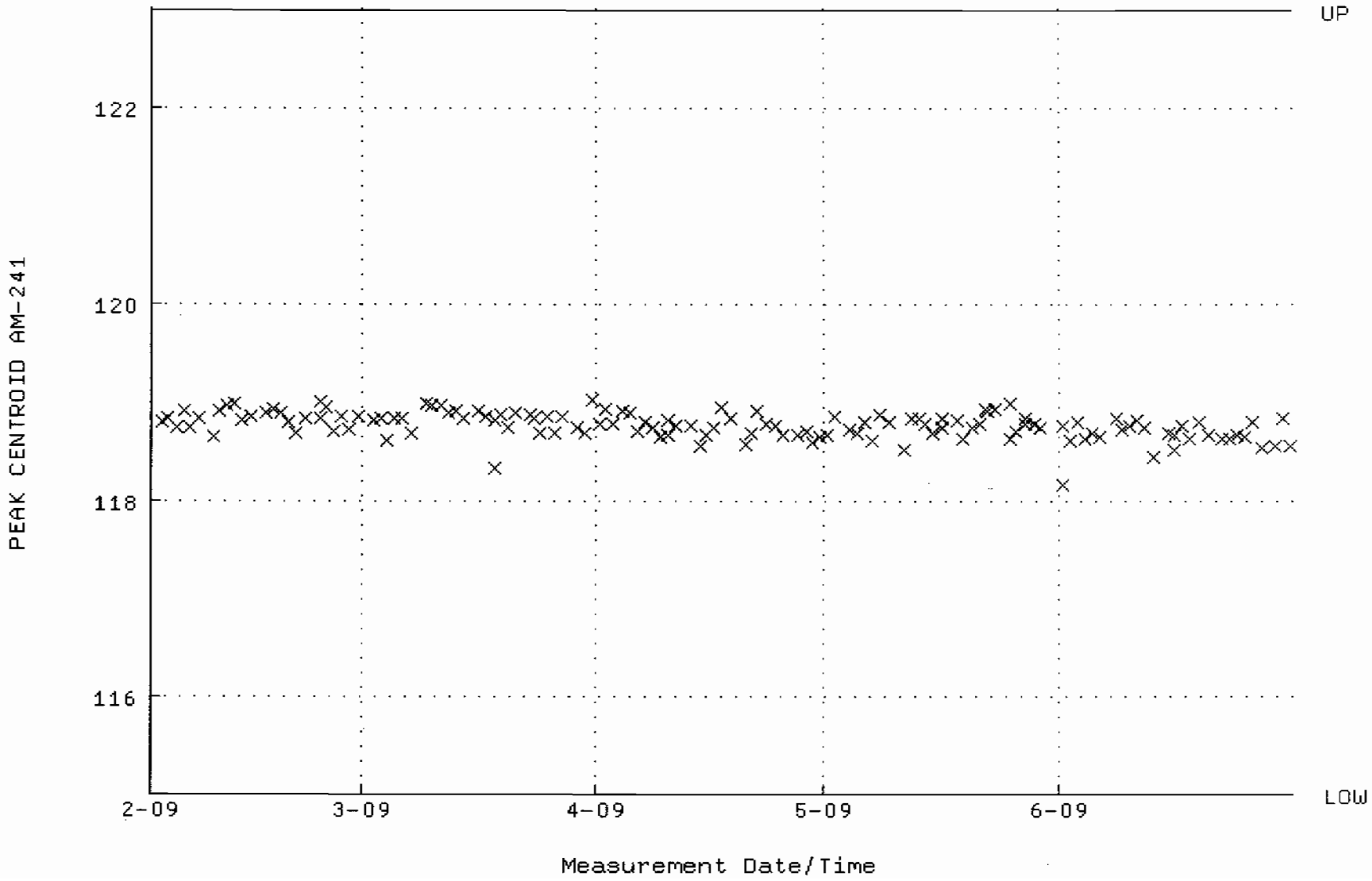

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM14.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:40 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.34064 through 1.63856

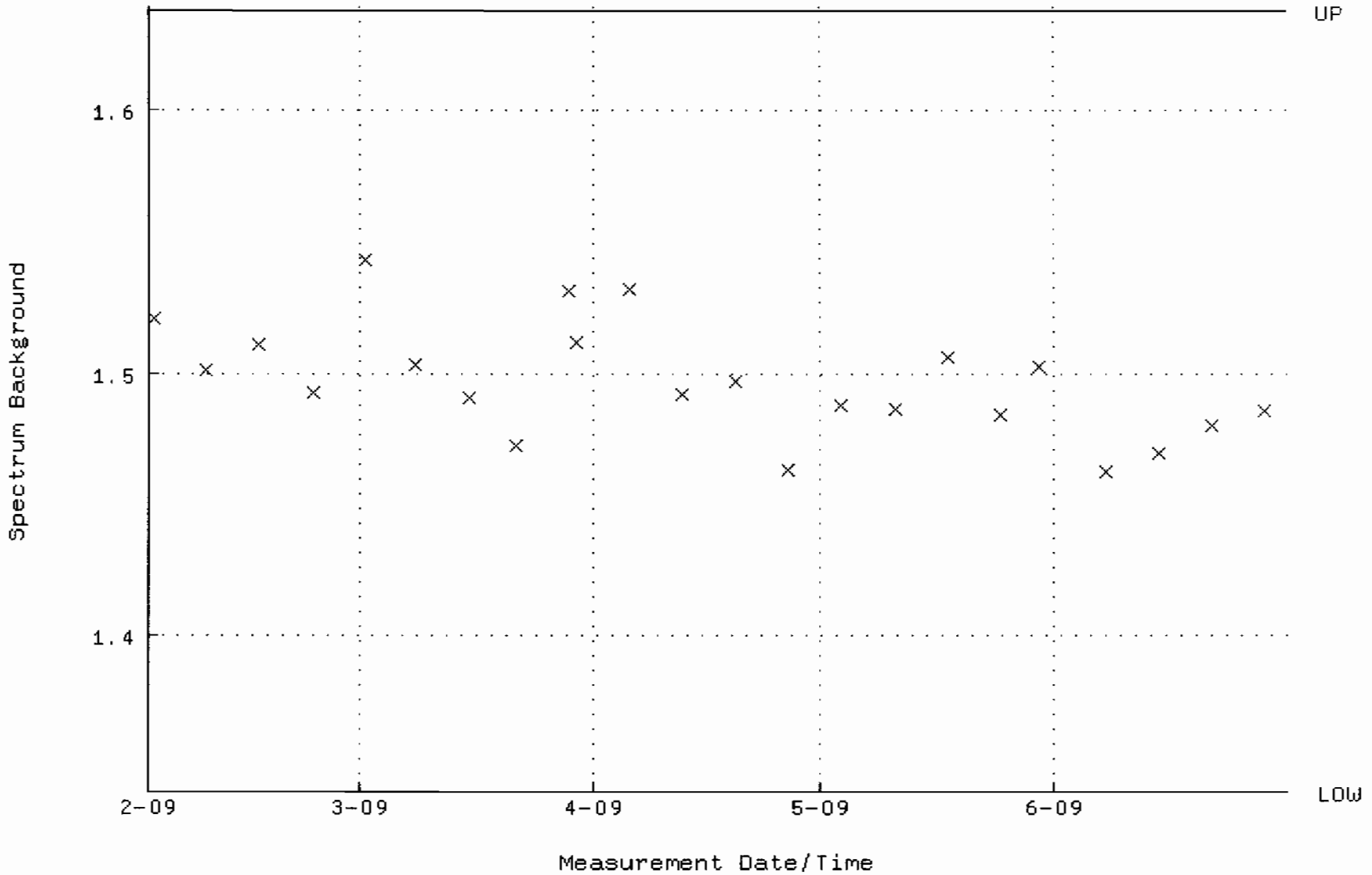

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM15_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:28:58 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

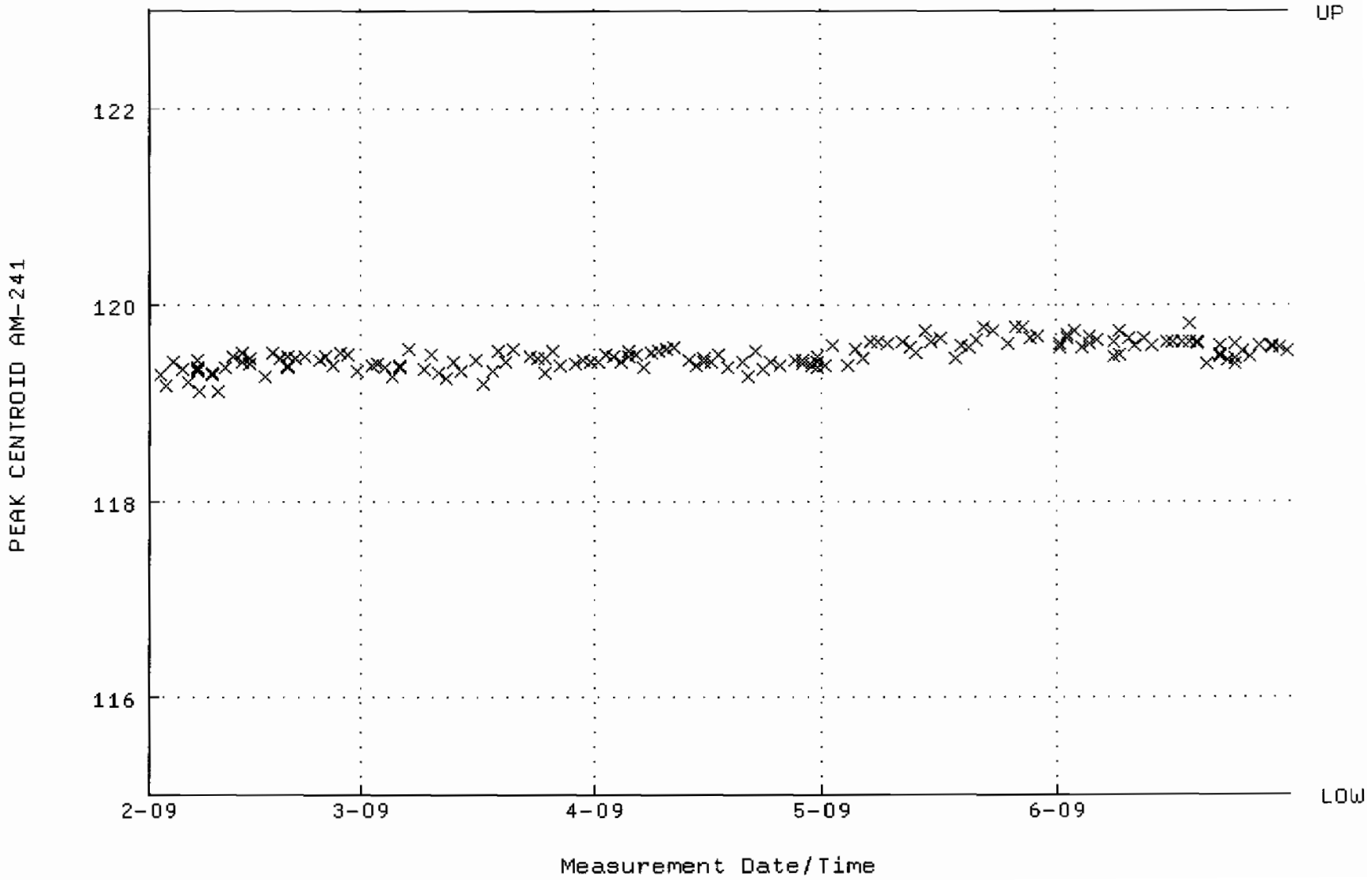

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM15.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:53 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.53342 through 1.87418

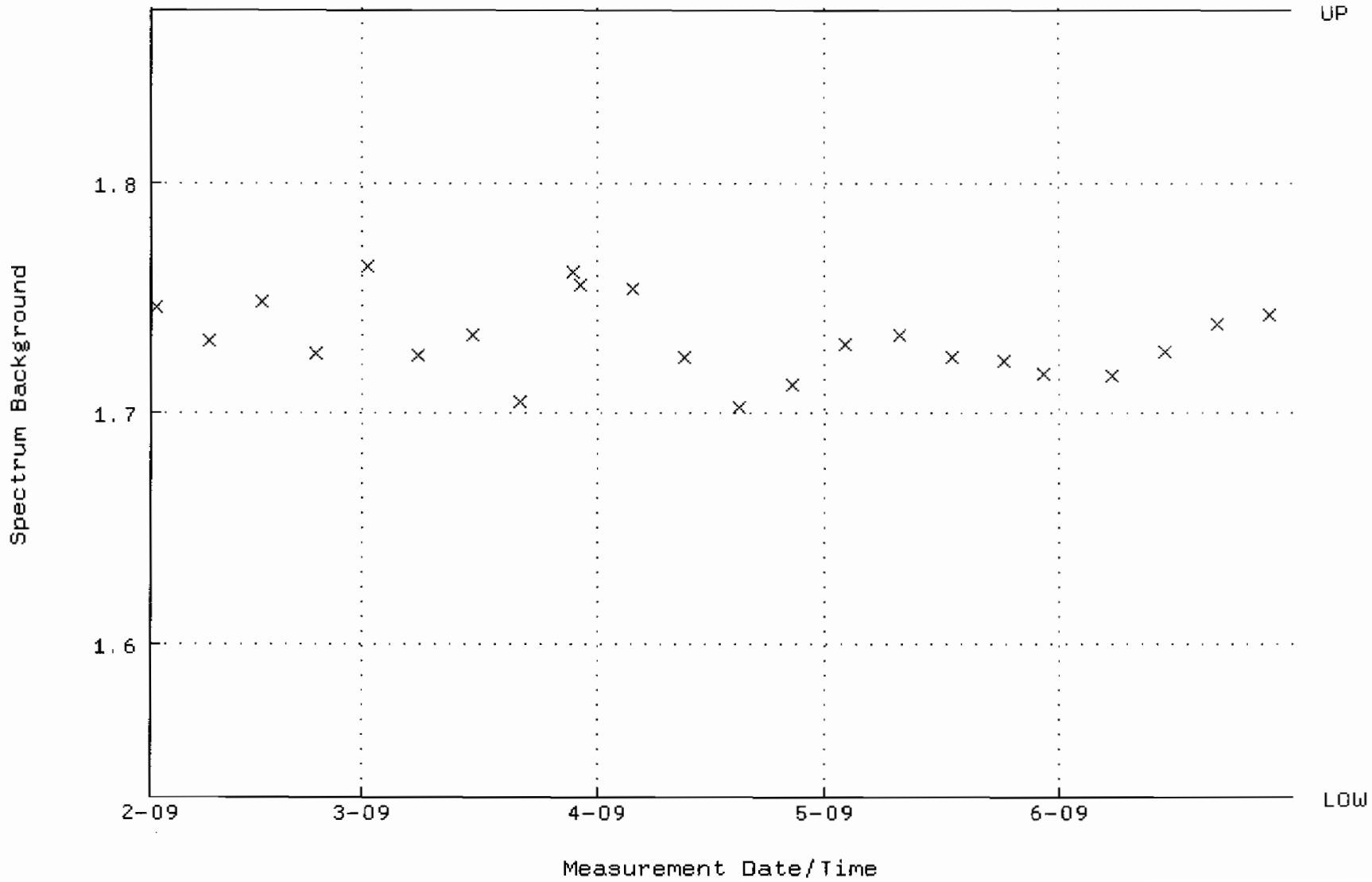

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

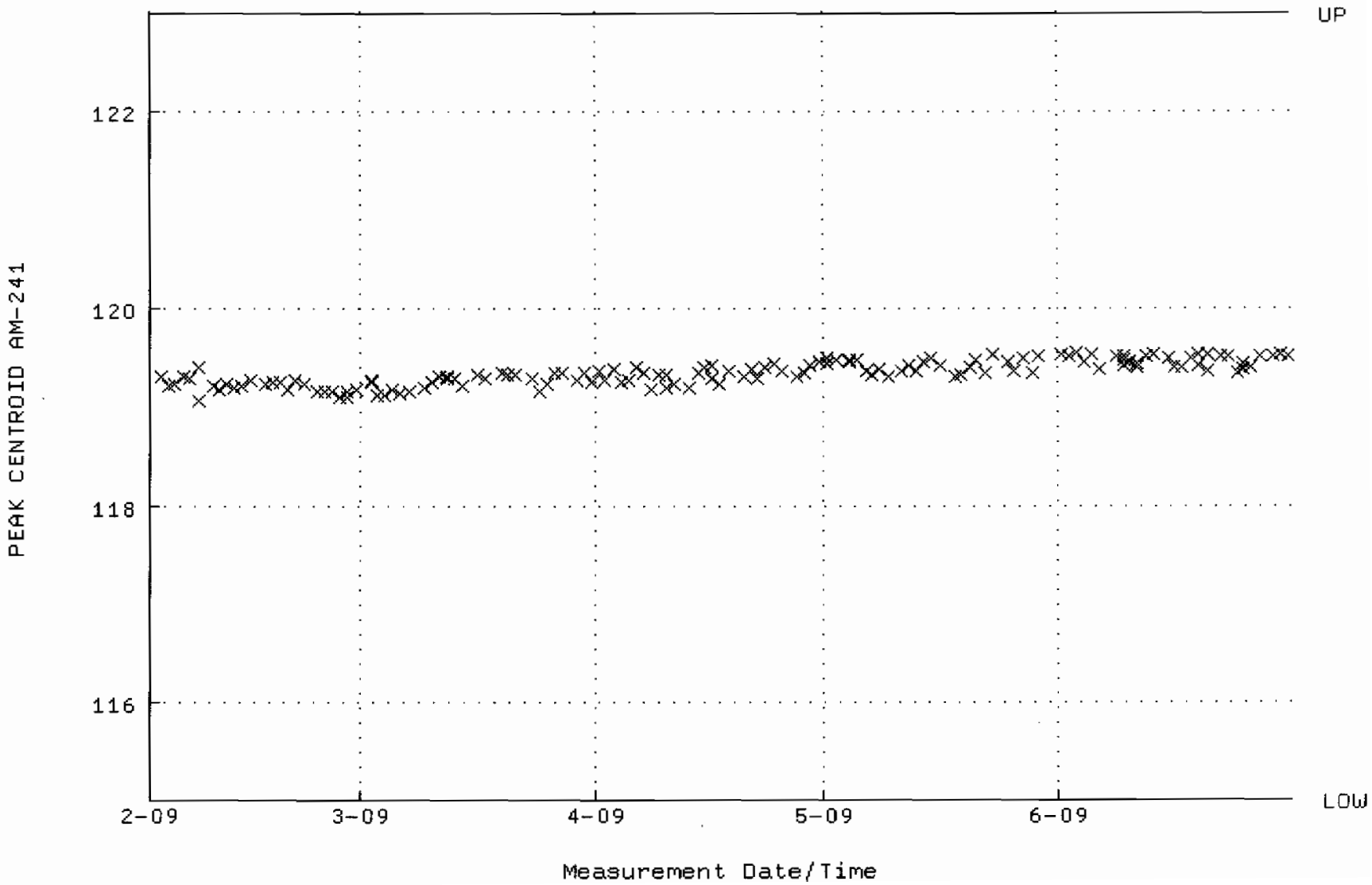

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM16.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:06 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.55150 through 1.89585

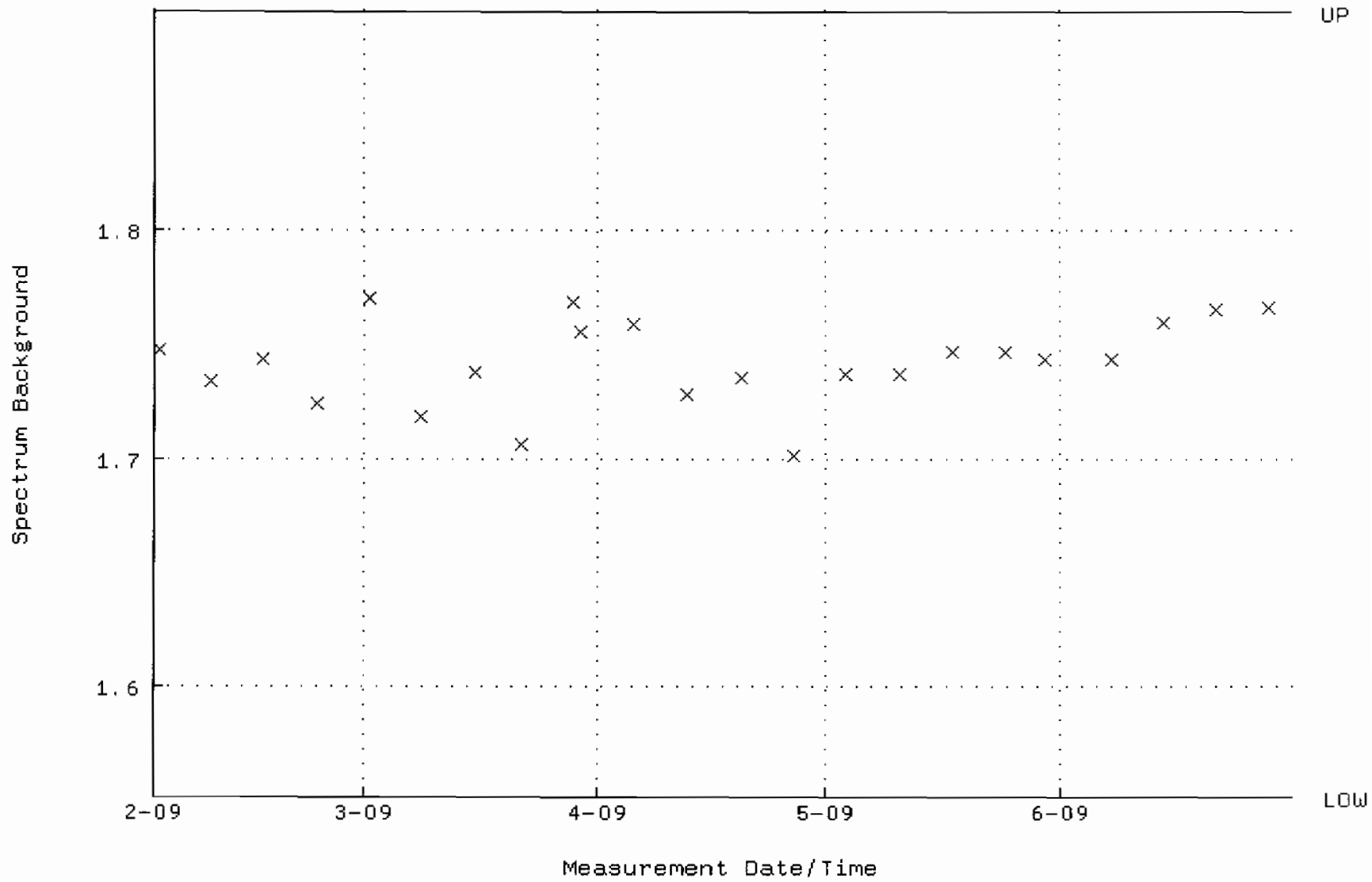

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:14:08 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

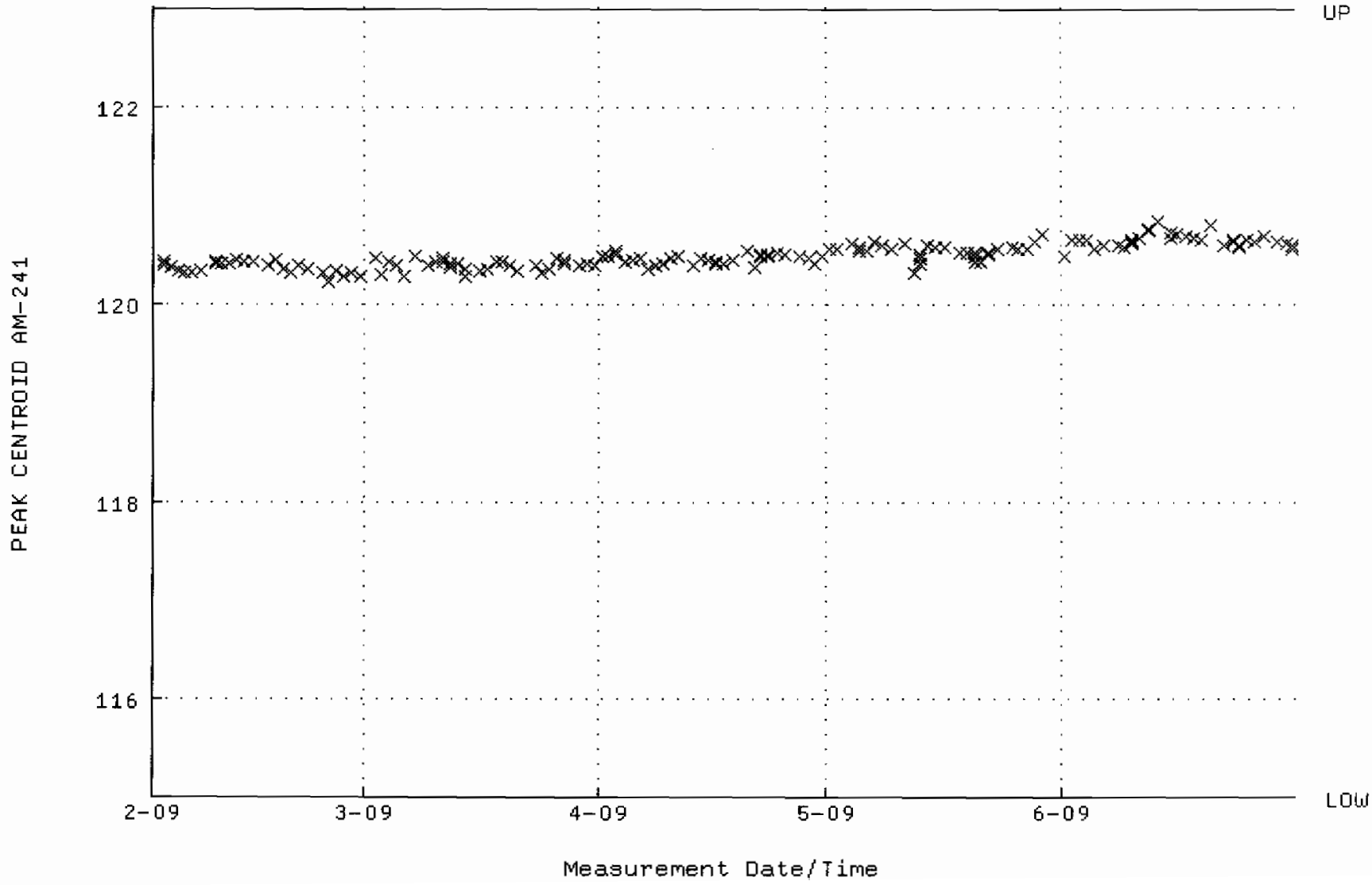

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM17.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.31148 through 1.60292

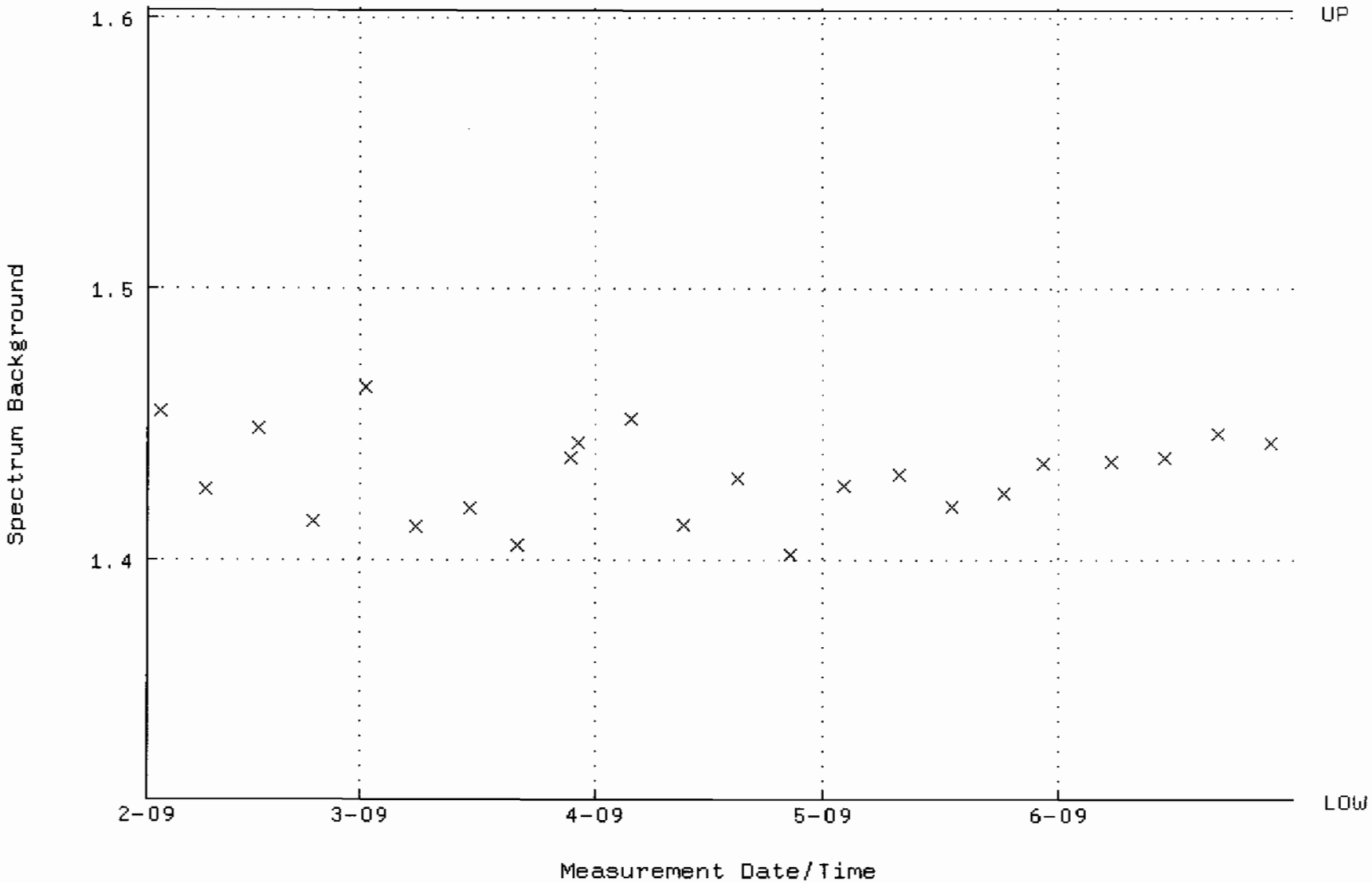

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:24:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

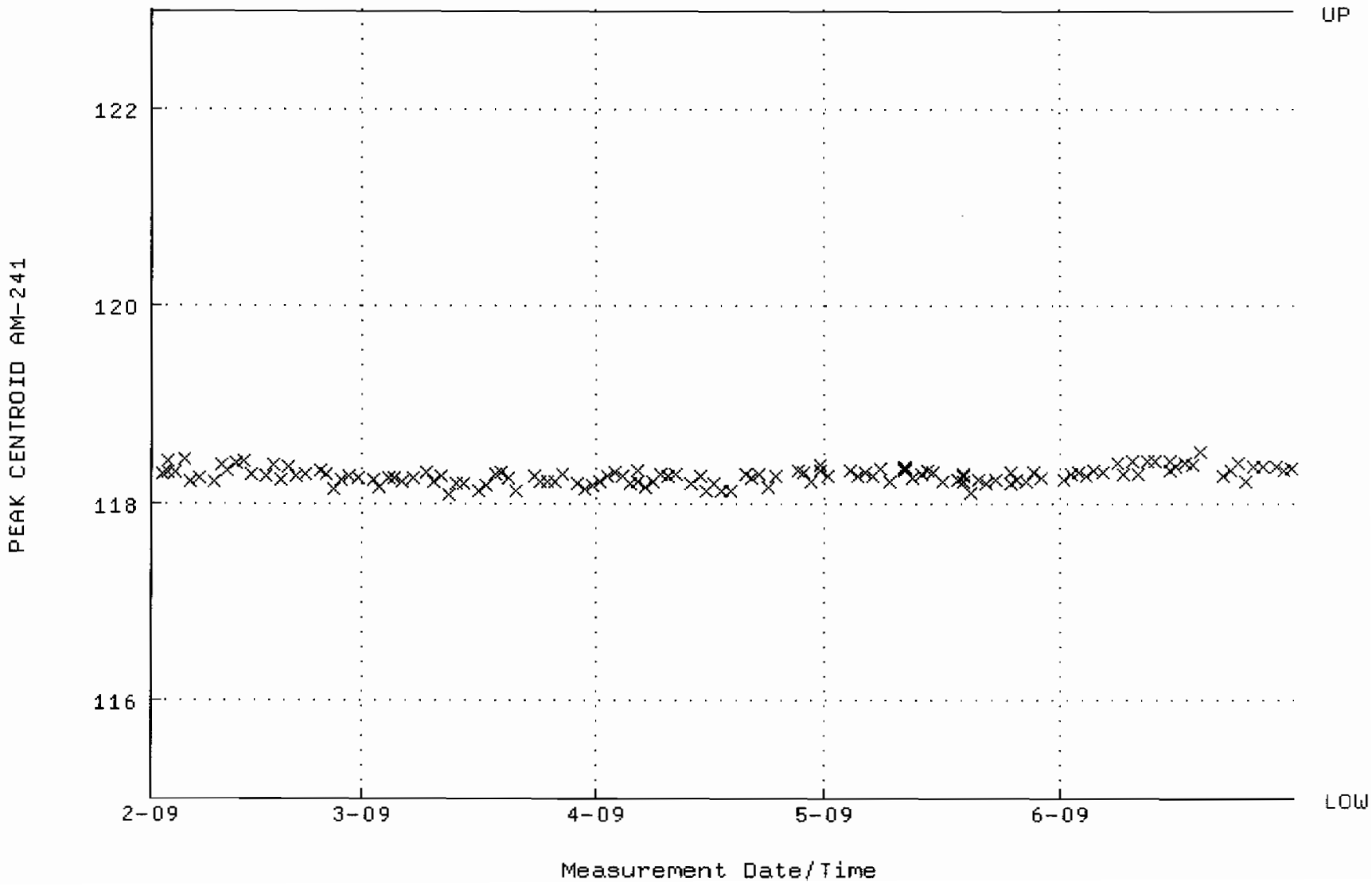

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.22710 through 2.72210

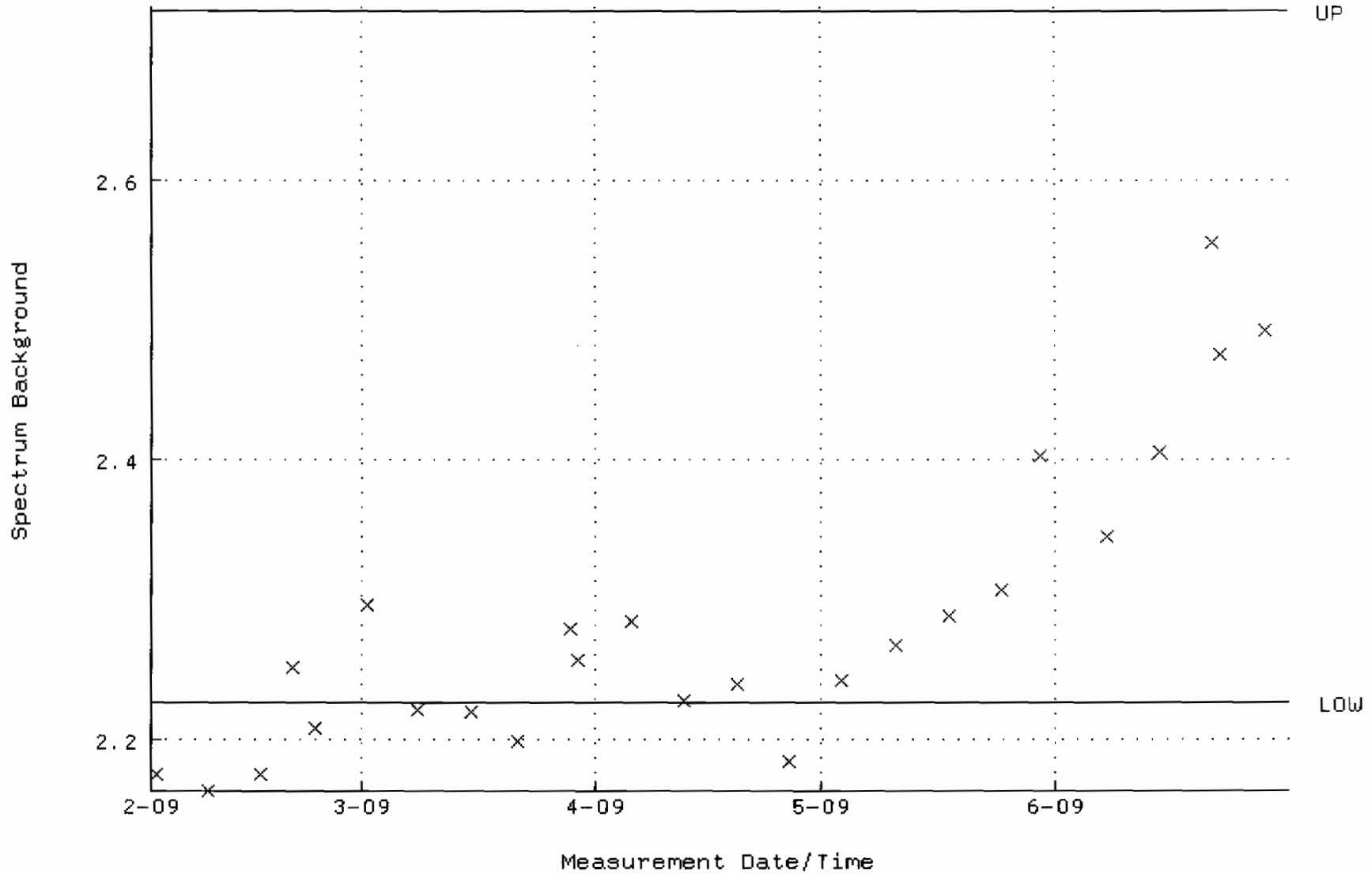

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

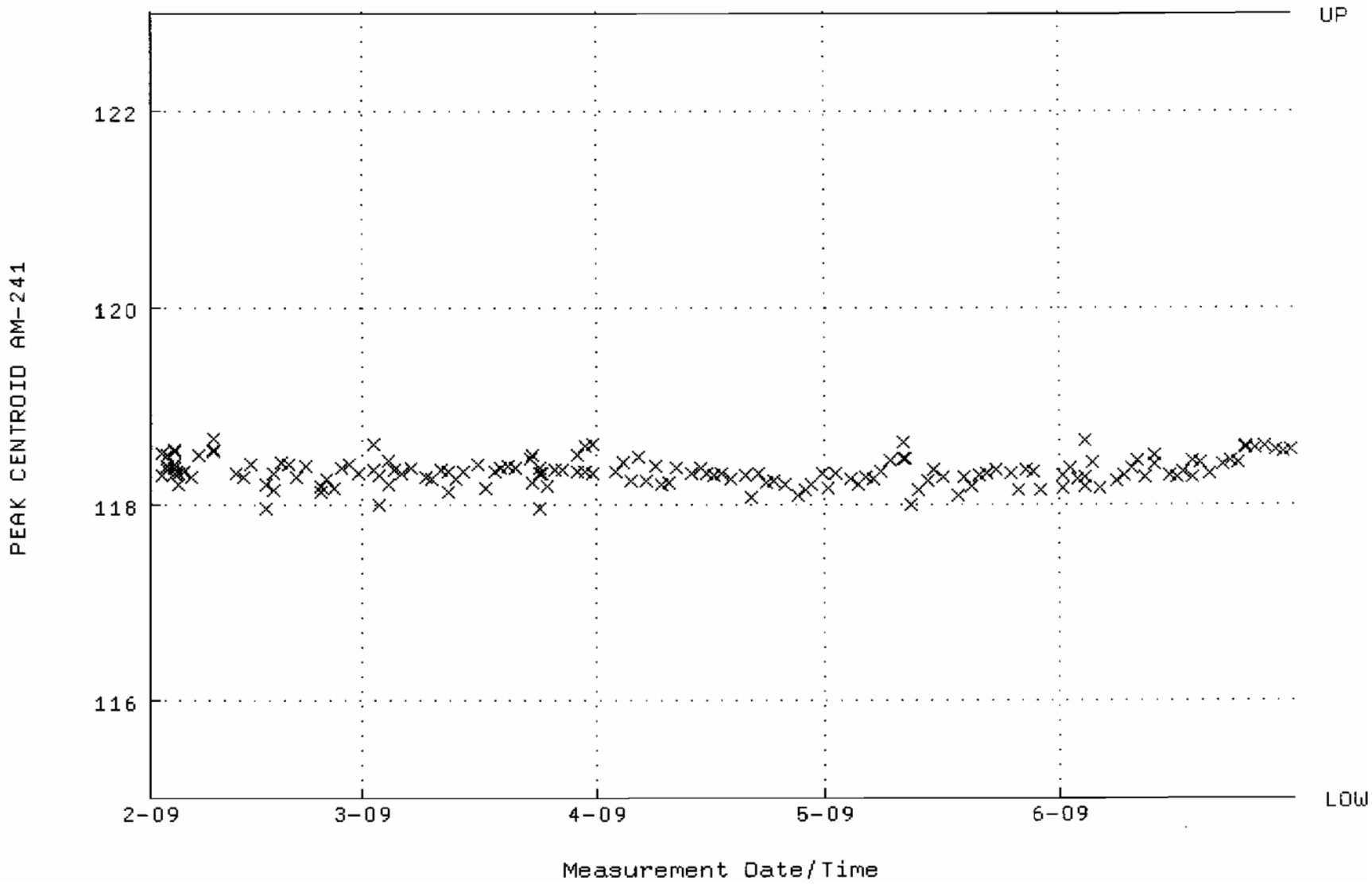

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM22.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.23300 through 2.45570

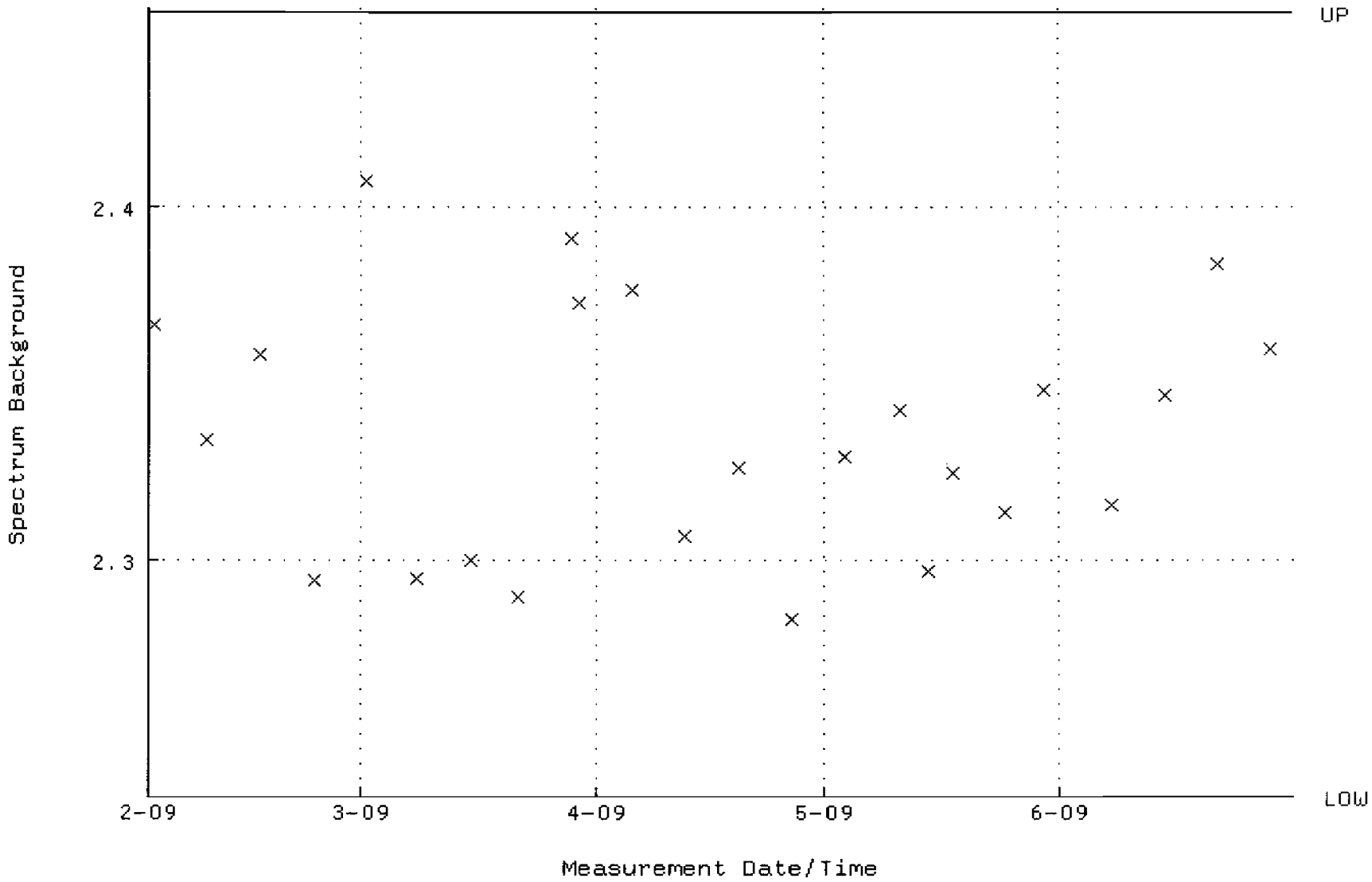

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:29:05 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

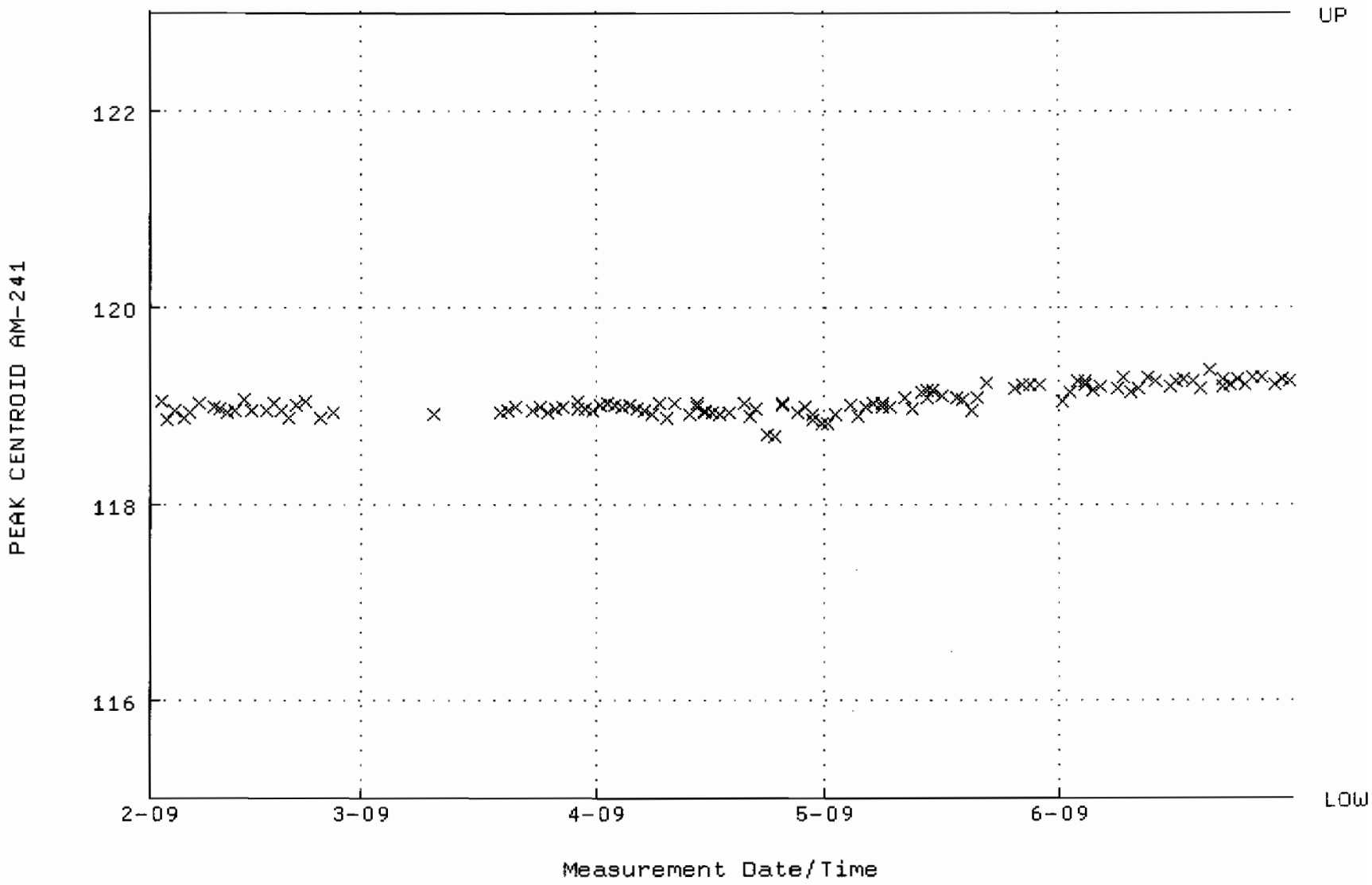

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM23.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.26405 through 1.54495

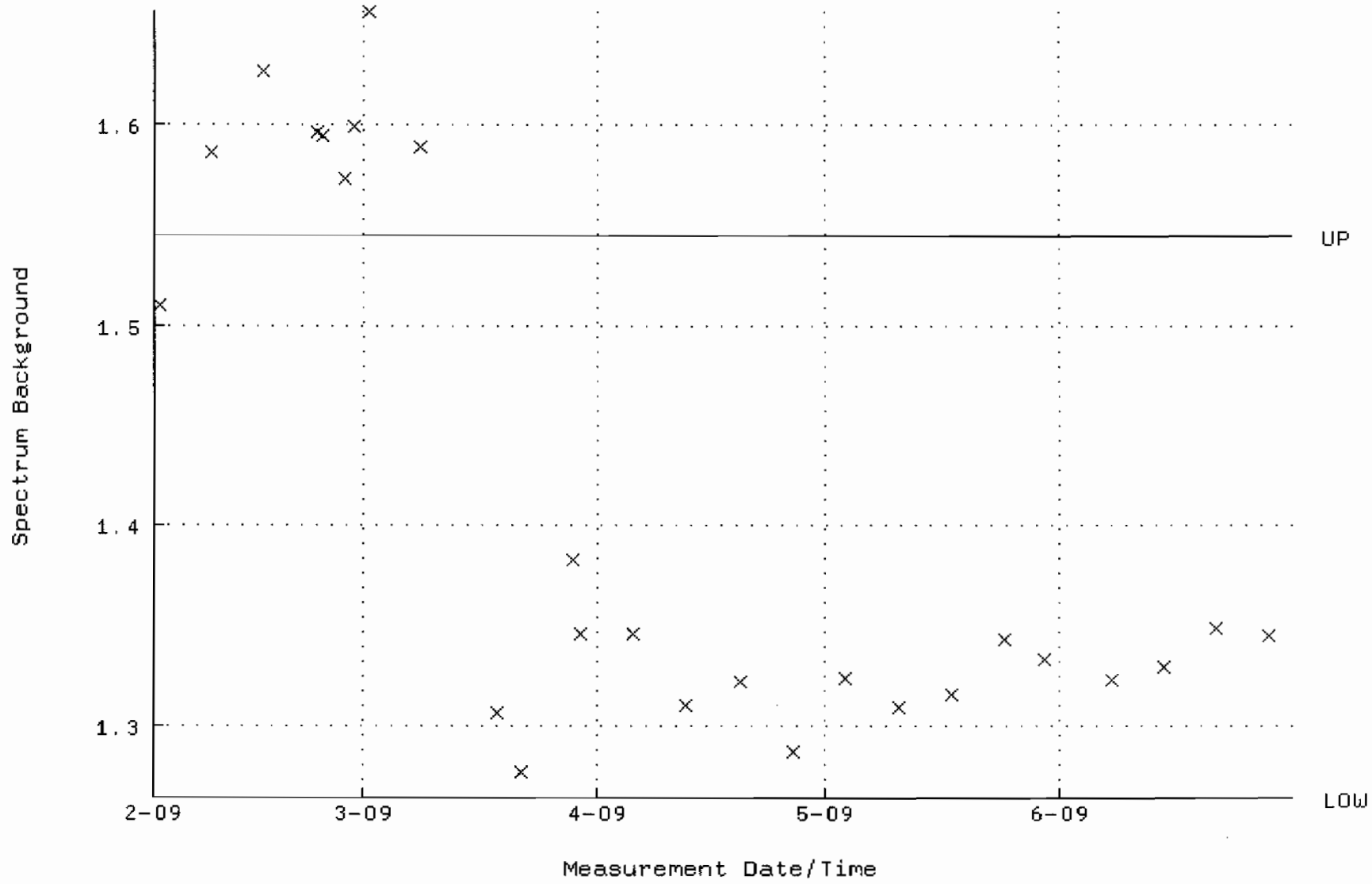

STANDARDS DATA

Amersham International plc
Amersham Laboratories

0134

NAMAS
CALIBRATION
No. 0146

[redacted]

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

RC-5-024-061

W.F. Case

Amersham
The Health Science Group

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

[illegible] 4/9/09
Amanda L. [illegible] 4/9/09

ANALYTICS
Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-0

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318

Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info

Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info

Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David Dry 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

	Isotope	Result	
	Mixed Gamma N1	440.7	pCi/L
	Mixed Gamma N2	461.1	pCi/L
	Mixed Gamma N3	467.4	pCi/L
Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**
Certificate Value =	444.3738739	pCi/L	
Lower Limit =	428.4865624	pCi/L	
Upper Limit =	484.3134376	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	27.91343762		
10 % of Mean =	45.64000000		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David [illegible] 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr 12/4/2008	**Isotope**	**Result** **pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L		**Rule 3 (Pass/Fail)**
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

12/4/08
Amanda L. Fehr
12/4/08

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATE 4/14/2000 Scott C Neff 12/1/04

Angela D. Johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–225	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	[illegible]	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01 -> 0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: [illegible]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2460A
Case No.: 10204 13
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID (LAB USE)
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

Sample Tracking (LAB USE)
Date Entered (mm/dd/yy)
Entered by
QC Initials

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well decontaminated rad materials being sent to GEL on behalf of Hack Mintzer
Please list as separate report.

Abnormal Conditions on Receipt (LAB USE)

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DEP	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. [illegible]	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

End of Certificate

RECEIVED 12/15/08
RC-S-OE

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

Analyst: D. Roy	**Serial #**	**Value**		**Uncertainty**	
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L
Mean Value (Counting) =	2.407	pCi/L		**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L			**Rule 3 (Pass/Fail)**
Target =	2.397	pCi/L			
Lower Limit =	2.259244371	pCi/L			
Upper Limit =	2.554088963	pCi/L			
Rule 1 Pass/Fail	**Pass**				
Two sigma =	0.147422296				
10 % of Mean =	0.240666667				
Rule 2 (Pass/Fail)	**Pass**				

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09
1/5/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 881219**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status		Geometry	Calibration Date
232424001	SAMPLE	MXR1	GAM01	07-JUL-09 06:03	DONE	CAN		30-JAN-09 00:00
232433001	SAMPLE	MXR1	GAM02	07-JUL-09 06:04	DONE	CAN		01-NOV-08 00:00
232433002	SAMPLE	MXR1	GAM04	07-JUL-09 06:04	DONE	CAN		05-MAY-09 00:00
232433003	SAMPLE	MXR1	GAM05	07-JUL-09 06:05	DONE	CAN		11-JUN-09 00:00
232433004	SAMPLE	MXR1	GAM06	07-JUL-09 06:05	DONE	CAN		04-FEB-09 00:00
232433005	SAMPLE	MXR1	GAM08	07-JUL-09 06:06	DONE	CAN		30-JAN-09 00:00
232433006	SAMPLE	MXR1	GAM11	07-JUL-09 06:38	DONE	CAN		01-NOV-08 00:00
232433007	SAMPLE	MXR1	GAM12	07-JUL-09 06:39	DONE	CAN		10-FEB-09 00:00
232433008	SAMPLE	MXR1	GAM13	07-JUL-09 06:39	DONE	CAN		02-FEB-09 00:00
232433009	SAMPLE	MXR1	GAM14	07-JUL-09 06:40	DONE	CAN		06-MAR-09 00:00
232433010	SAMPLE	MXR1	GAM15	07-JUL-09 06:40	DONE	CAN		16-FEB-09 00:00
232433011	SAMPLE	MXR1	GAM16	07-JUL-09 06:41	DONE	CAN		13-NOV-08 00:00
232433012	SAMPLE	MXR1	GAM17	07-JUL-09 07:03	DONE	CAN		27-JAN-09 00:00
232433013	SAMPLE	MXR1	GAM18	07-JUL-09 07:04	DONE	CAN		23-APR-09 00:00
232433014	SAMPLE	MXR1	GAM22	07-JUL-09 07:05	DONE	CAN		18-FEB-09 00:00
232433015	SAMPLE	MXR1	GAM23	07-JUL-09 07:06	DONE	CAN		02-JUN-09 00:00
1201871423	MB	MXR1	GAM02	07-JUL-09 08:11	DONE	CAN		01-NOV-08 00:00
1201871425	LCS	MXR1	GAM05	07-JUL-09 08:19	DONE	CAN		11-JUN-09 00:00
1201871424	DUP	MXR1	GAM04	07-JUL-09 08:27	DONE	CAN		05-MAY-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882536**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232433001	SAMPLE	HAKB	1138	11-JUL-09 15:44	DONE		
232433002	SAMPLE	HAKB	1139	11-JUL-09 15:44	DONE		
232433003	SAMPLE	HAKB	1140	11-JUL-09 15:44	DONE		
232433004	SAMPLE	HAKB	1141	11-JUL-09 15:44	DONE		
232433005	SAMPLE	HAKB	1142	11-JUL-09 15:44	DONE		
232433006	SAMPLE	HAKB	1144	11-JUL-09 15:44	DONE		
232433007	SAMPLE	HAKB	1145	11-JUL-09 15:44	DONE		
232433008	SAMPLE	HAKB	1146	11-JUL-09 15:44	DONE		
232433009	SAMPLE	HAKB	1147	11-JUL-09 15:44	DONE		
232433010	SAMPLE	HAKB	1148	11-JUL-09 15:44	DONE		
232433011	SAMPLE	HAKB	1149	11-JUL-09 15:44	DONE		
232433012	SAMPLE	HAKB	1150	11-JUL-09 15:44	DONE		
232433013	SAMPLE	HAKB	1151	11-JUL-09 15:44	DONE		
232433014	SAMPLE	HAKB	1152	11-JUL-09 15:44	DONE		
232433015	SAMPLE	HAKB	1153	11-JUL-09 15:44	DONE		
1201874417	MB	HAKB	1154	11-JUL-09 15:44	DONE		
1201874418	DUP	HAKB	1155	11-JUL-09 15:44	DONE		
1201874419	LCS	HAKB	1156	11-JUL-09 15:44	DONE		

Instrument Run Log

Instrument Type: LSC **Batch ID: 883013**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232424001	SAMPLE	KXK2	LSCRED	14-JUL-09 14:42	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232426001	SAMPLE	KXK2	LSCRED	14-JUL-09 16:21	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232426002	SAMPLE	KXK2	LSCRED	14-JUL-09 18:00	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433002	SAMPLE	KXK2	LSCRED	14-JUL-09 19:39	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433004	SAMPLE	KXK2	LSCRED	14-JUL-09 22:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433005	SAMPLE	KXK2	LSCRED	15-JUL-09 00:35	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433006	SAMPLE	KXK2	LSCRED	15-JUL-09 02:14	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433007	SAMPLE	KXK2	LSCRED	15-JUL-09 03:52	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433008	SAMPLE	KXK2	LSCRED	15-JUL-09 05:31	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433009	SAMPLE	KXK2	LSCRED	15-JUL-09 08:35	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433010	SAMPLE	KXK2	LSCRED	15-JUL-09 09:07	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433011	SAMPLE	KXK2	LSCRED	15-JUL-09 09:39	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433012	SAMPLE	KXK2	LSCRED	15-JUL-09 10:11	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433013	SAMPLE	KXK2	LSCRED	15-JUL-09 10:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433014	SAMPLE	KXK2	LSCRED	15-JUL-09 11:14	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433015	SAMPLE	KXK2	LSCRED	15-JUL-09 11:46	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875577	MB	KXK2	LSCRED	15-JUL-09 12:18	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875579	LCS	KXK2	LSCRED	15-JUL-09 13:22	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433003	SAMPLE	KXK2	LSCBLUE	16-JUL-09 10:37	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875578	DUP	KXK2	LSCBLUE	16-JUL-09 12:15	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Instrument Run Log

Instrument Type: LSC **Batch ID: 883039**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232746001	SAMPLE	KXK2	LSCSILVER	16-JUL-09 00:24	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746002	SAMPLE	KXK2	LSCSILVER	16-JUL-09 02:03	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746003	SAMPLE	KXK2	LSCSILVER	16-JUL-09 03:41	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746004	SAMPLE	KXK2	LSCSILVER	16-JUL-09 06:44	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875660	LCS	KXK2	LSCSILVER	16-JUL-09 07:54	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746005	SAMPLE	KXK2	LSCSILVER	16-JUL-09 08:11	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746006	SAMPLE	KXK2	LSCSILVER	16-JUL-09 09:08	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746007	SAMPLE	KXK2	LSCSILVER	16-JUL-09 10:06	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746008	SAMPLE	KXK2	LSCSILVER	16-JUL-09 11:03	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232754001	SAMPLE	KXK2	LSCSILVER	16-JUL-09 12:00	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232754002	SAMPLE	KXK2	LSCSILVER	16-JUL-09 12:58	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232754003	SAMPLE	KXK2	LSCSILVER	16-JUL-09 13:55	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232758002	SAMPLE	KXK2	LSCSILVER	16-JUL-09 14:52	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232758003	SAMPLE	KXK2	LSCSILVER	16-JUL-09 15:50	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232758004	SAMPLE	KXK2	LSCSILVER	16-JUL-09 16:47	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232758005	SAMPLE	KXK2	LSCSILVER	16-JUL-09 17:44	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232851001	SAMPLE	KXK2	LSCSILVER	16-JUL-09 18:42	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232851002	SAMPLE	KXK2	LSCSILVER	16-JUL-09 19:39	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875658	MB	KXK2	LSCSILVER	16-JUL-09 20:36	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875659	DUP	KXK2	LSCSILVER	16-JUL-09 21:33	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433001	SAMPLE	KXK2	LSCBROWN	17-JUL-09 11:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2478

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	EPA:353.2	1	CAMO-09-6054	W	6/23/2009	
	SW-846:6010B	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:6020	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	

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REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:6850	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:7196A	1	CAMO-09-6006	R	6/23/2009	

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REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7196A	1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	SW-846:7471A	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	

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REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7471A	1	CAMO-09-6049	R	6/23/2009	
	SW-846:9012A	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:9045C	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	

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REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9045C	1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

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Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2478

REQUEST NUMBER: 09-2478

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	POLY	METALS+7196	Ice	R
CAMO-09-6007	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6006	1	POLY	METALS+7196	Ice	R
CAMO-09-6006	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6008	1	POLY	METALS+7196	Ice	R
CAMO-09-6008	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6009	1	POLY	METALS+7196	Ice	R
CAMO-09-6009	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6034	1	POLY	METALS+7196	Ice	R
CAMO-09-6034	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6043	1	POLY	METALS+7196	Ice	R
CAMO-09-6043	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6045	1	POLY	METALS+7196	Ice	R
CAMO-09-6045	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6041	1	POLY	METALS+7196	Ice	R
CAMO-09-6041	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6040	1	POLY	METALS+7196	Ice	R
CAMO-09-6040	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6044	1	POLY	METALS+7196	Ice	R
CAMO-09-6044	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6035	1	POLY	METALS+7196	Ice	R
CAMO-09-6035	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6038	1	POLY	METALS+7196	Ice	R
CAMO-09-6038	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6039	1	POLY	METALS+7196	Ice	R
CAMO-09-6039	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6042	1	POLY	METALS+7196	Ice	R
CAMO-09-6042	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6049	1	POLY	METALS+7196	Ice	R
CAMO-09-6049	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6054	1	POLY	METALS-GEL	Nitric Acid	W

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2478

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6054	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-6054	1	POLY	SW-846:6850	Ice	W
CAMO-09-6054	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:		**Date**	**Time**	**Received By:**		**Date**	**Time**
		6/25/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		**Date**	**Time**	**Remarks:**
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6006

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	AIIN
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	03 - 049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604950	ok	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Light brown dry Loamy → sand soil, some root material & tuff fragments

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)- ~~04~~ 07 AH 6.16.09 above drainage (5) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 929 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name)	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	1509

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6007

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	ok
TIME COLLECTED (HH:MM)		1253	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604950	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	1.0.	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	2.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan, indurated tuff

FTB: CAMO-09-6059

SAMPLE COMMENTS: Interface @ 1.0' bgs

LOCATION DESC: 03-049(a) 07 AG 6.17.09, above drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ ∅ dpm

β/γ ≤ 920 dpm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name)	6/23/09
(Signature)	1505	(Signature)	1505

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6008

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		0850	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	AG 6.23.09 ok 03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604951	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~	AG 6.23.09	~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	~~Reg~~ 15 Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sediment from wetland, moist → wet, brown, w/ cobbles

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) - 04 ~~05~~ AG 6.17.09, drainage ⑥ of Sigma, in wetland

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 343 dpm

PID Ambient Reading = 0.0 / 5.7 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 1505	(Printed Name) [signature] (Signature)	6/23/09 1509

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6009

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	ok
TIME COLLECTED (HH:MM)		0908	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	6.23.09 ~~ok~~ 03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604951		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	6.25.09 ~~Rush~~ 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/tan moist indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a) 04 ~~05~~ 6.17.09

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq$ 23 dpm

$\beta/\gamma \leq$ 520 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{3.2}$ ppm

COLLECTED BY (PRINT) A. Gonzales **REVIEWED BY (PRINT)** Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature) [signature]	6.23.09 1505	(Printed Name) [signature] (Signature)	6/23/09 1505

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6034

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		1020	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604981	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.23.09	N	
1	AG 6.26.09 Rec'd 15-Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Moist, light brown loamy sediment

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) 06, drainage (S) of Sigmas

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 29 dpm

β/γ ≤ 656 dpm

PID Ambient Reading = 0.0 / 5.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 15.05	(Printed Name) (Signature) [signature]	6/23/09 1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6035

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	ok
TIME COLLECTED (HH:MM)		1032	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604981	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Aug 6.2009 15 Res Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan/Pink highly indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-06, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α: 17 dpm

β/γ: 452 dpm

PID Ambient / Reading = 0.0 / 4.3 ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature)	6.23.09 15.05	(Printed Name) (Signature)	6/23/09
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6038

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Milk
TIME COLLECTED (HH:MM)		0945	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604983	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~	~~Rec 6.23.09~~	~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ ACG 6.23.09	N	
1	Rec 15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: light brown, moist, loamy soil

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-09, in drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 704 dpm

PID ambient / Reading = 0.0 / 4.3 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.23.09	(Printed Name)	6/23/09
(Signature)	1509	(Signature)	1509
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6039

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		AG 6.22.09 0950 0954	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604983	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA **COMPOSITE TIME INTERVAL:** NA **WATER FLOWING:** YES / (NO) / NA

BOREHOLE: YES / (NO) / NA **BOREHOLE DECLINATION:** NA **BOREHOLE DIRECTION:** NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	AG 6.23.09 ~~Reg~~ 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Highly indurated tan tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 493 dpm

PID Ambient Reading = 0.0 / 6.7 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Alisa Martz	6/23/09
(Signature)	1505	(Signature)	305
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6040

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		0925	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604984	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.23.09	N	
1	AG 6.23.09 ~~Rush~~ 15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Brown moist sediment w/ some root material, light & loamy

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) · 10, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 622 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{8.2}$ ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09 1505	(Printed Name)	6/23/09 1505
(Signature)		(Signature)	
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6041

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	ok
TIME COLLECTED (HH:MM)		0936	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604984	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	AG 6.29.09 15 Rush Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan/gray indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a) - 10, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 622 dpm

PID Ambient Reading = 0.0 / 2.4 ppm

COLLECTED BY (PRINT) A. Gaumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gaumas	6.23.09	(Printed Name)	6/23/09
(Signature)	1505	(Signature)	1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6042

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2006	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1355	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604985	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AGG.23.2009	N	
1	15-Day	8270C	250 ML AMBER GLASS	Ice	Y	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sediment, brown → light brown eroded tuff & duff

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)- 11

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

β/γ 343 dpm

PID Ambient Reading: 0.0 / 5.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Melissa Martinez	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	3:01
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6043

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604985	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/gray/tan weathered tuff → indurated tuff

FTB: CAMO-09-6060

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-11

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 1331 dpm

PID ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Sherri Sherwood	6/23/09
(Signature) [signature]	1505	(Signature) Sherri Sherwood	3:25
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6044

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	SED
TIME COLLECTED (HH:MM)		1405	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604986	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~	~~15-Day~~	~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Eroded tuff sediment tan/brown with duff material

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-12, in drainage (5) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 1419 dpm

PID Ambient Reading = 0.0 / 2.1 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.23.09	(Printed Name)	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	1500
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6045

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	qbt3
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604986	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Pink/gray indurated tuff

FR: CAMO-09-6054

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a) 12, in drainage below Sigma (S)

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 23$ dpm

$\beta/\gamma \leq 1324$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature) [signature]	6.23.09 1505	(Printed Name) (Signature) [signature]	6/23/09 1509
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6049

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	AIR
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	UNK	MO-604960	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: QC Sample of CAMO-09-6006

~~Light brown, Loamy~~ → Sand soil, some root material & tuff material

OK AG 6.23.09

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-07

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 929 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Luna

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09 15.05	(Printed Name)	6/23/09 1509
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6054

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1430	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604786	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~7196A~~	~~250 ML POLY~~	~~Ice~~ AG 6.23.09	N	
~~2~~		~~8290~~	~~1 LITER AMBER GLASS~~	~~Ice~~ AG 3/31/09	N	
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-6045

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-12

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gouveia

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gouveia (Signature)	6.23.09 1505	(Printed Name) (Signature)	6/23/09 1505
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6059

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1253	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604980	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / (NA)		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / (NA)

BOREHOLE: YES / NO / (NA) BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
AG 6.23.09 ~~2~~ 1	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6007
tan indurated tuff

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-07

FIELD SCREENING/MEASUREMENT RESULTS: NA

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 1505	(Printed Name) Sherri Sherwood (Signature) [signature]	6/23/09 3:30
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY** (Printed Name) (Signature)	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6060

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	mo-604985	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:		
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA	NA	

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
AG 6.23.09 1	~~2~~ Reg	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6043

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-11

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature) [signature]	6.23.09 1505	(Printed Name) Sherri Sherwood (Signature) [signature]	6/23/09 3:30
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6006
Sample Collection Date: 06/23/09 12:45
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-001
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	36.36	71.52	133.66	71.66	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	38.24	15.97	19.98	16.64		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	18.87	7.43	1.68	7.46		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.14	0.15	0.11	0.15		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.02	0.05	0.08	0.05	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.24	0.20	0.07	0.20		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.20	0.13	11.20	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.28	0.53	0.19	0.53		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.32	0.77	0.20	0.78		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.63	1.32	0.35	1.32		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	0.76	1.07	1.03	1.08	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.02	0.13	0.08	0.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.19

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6007
Sample Collection Date: 06/23/09 12:53
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-002
Date Received: 06/24/09 00:00
Report Date: 06/24/09 16:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	MDU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	40.27	70.68	127.53	70.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	24.88	14.72	20.61	15.04		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	31.24	11.09	2.24	11.12		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.09	0.10	0.15	0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.20	0.22	0.11	0.22	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.00	-0.04	0.09	-0.04	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	15.25	0.17	15.25	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.34	0.59	0.19	0.59		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	3.44	1.88	0.20	1.88		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.55	1.03	0.45	1.03		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	4.27	4.99	2.02	5.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.03	0.12	0.07	0.12	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.32

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6008	ARS Sample ID:	ARS2-09-00074-003
Sample Collection Date:	06/23/09 08:50	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-5.36	40.13	128.32	40.13	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	44.77	17.27	21.30	18.12		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	22.94	8.55	1.81	8.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	11.82	0.12	11.82	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	15.46	0.07	15.46	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.99	0.87	0.14	0.58	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.32	0.51	0.16	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-228	1.84	0.70	0.32	0.90		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.76	1.01	0.33	1.01		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.02	2.64	1.32	2.68		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.54	0.62	0.21	0.62		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 3.34

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30656 NELAP Certificate # E87556

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6009	ARS Sample ID:	ARS2-09-00074-004
Sample Collection Date:	06/23/09 09:08	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	43.37	74.66	133.72	74.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	49.40	17.43	20.15	18.45		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.06	0.11	0.09	0.11	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	25.46	8.08	1.48	8.11		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	0.67	0.10	0.67	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.07	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.10	0.13	0.06	0.13		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.50	0.48	0.17	0.48	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.40	0.50	0.16	0.50		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.30	0.52	0.28	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	-0.06	86.23	0.19	86.23	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.27	3.20	1.19	3.42		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.04	0.09	0.04	0.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.89

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6034	ARS Sample ID:	ARS2-09-00074-005
Sample Collection Date:	06/23/09 10:20	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.11	87.03	133.66	87.47	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	39.92	16.41	19.96	17.12		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.18	0.26	0.15	0.26	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.31	-19.95	4.04	-19.95	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	15.47	0.16	15.47	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.13	0.11	0.13	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.70	0.41	0.10	0.41		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.26	0.38	0.18	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.32	0.64	0.19	0.64		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.66	0.66	0.54	0.66		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.99	0.87	0.40	0.87		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	7.19	4.21	1.68	4.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.10	0.42	0.20	0.42	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.43

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6035
Sample Collection Date: 06/23/09 10:32
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-006
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	111.18	99.15	127.53	100.00	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	32.01	16.15	20.61	16.62		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	1.12	7.61	4.21	7.61	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO 60	0.00	11.98	0.13	11.98	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	15.68	0.08	15.68	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	63.35	0.14	63.35	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.36	0.55	0.18	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.69	0.68	0.48	0.68		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.19	1.05	0.53	1.06		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.93	3.27	1.41	3.34		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.10	0.32	0.15	0.32	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.47

Quality Assurance Review

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LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6038	ARS Sample ID:	ARS2-09-00074-007
Sample Collection Date:	06/23/09 09:45	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 10:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	53.28	77.58	128.32	77.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	48.71	18.23	21.30	19.16		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.65	-28.61	4.37	-28.61	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	14.10	0.14	14.16	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	1.24	0.52	0.09	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.67	0.42	0.17	0.42	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.42	0.58	0.17	0.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.46	0.32	0.43	0.32	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.35	1.09	0.22	1.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.46	3.13	1.47	3.23		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.48	0.41	0.12	0.41		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.50

Quality Assurance Review

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6039	ARS Sample ID:	ARS2-09-00074-008
Sample Collection Date:	06/23/09 09:54	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	76.84	87.88	133.72	88.39	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	42.51	16.81	20.15	17.69		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	1.00	9.18	5.09	9.16	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	13.72	0.14	13.72	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.23	0.21	0.10	0.21	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.51	0.33	0.09	0.33		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	14.27	0.16	14.27	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.60	0.58	0.16	0.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	2.57	0.99	0.37	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.23	0.37	0.29	0.37	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	4.86	4.48	1.88	4.61		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.00	-0.10	0.14	-0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.87

Quality Assurance Review

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ARS Sample Delivery Group: ARS2-09-00074

Client Sample ID: CAMO-09-6040

Sample Collection Date: 06/23/09 09:25

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-09-00074-009

Date Received: 06/24/09 00:00

Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	90.02	93.81	133.66	94.46	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	35.56	16.05	19.98	16.63		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.15	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.11	-15.37	3.52	-15.37	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.20	0.21	0.13	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.28	0.20	0.11	0.20	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.16	0.20	0.09	0.20		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.53	0.58	0.17	0.58	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.21	0.59	0.21	0.59		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.00	1.00	0.40	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.74	1.00	0.40	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.88	2.91	1.43	2.97		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.57	0.57	0.21	0.57		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 3.28

Quality Assurance Review

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6041	ARS Sample ID:	ARS2-09-00074-010
Sample Collection Date:	06/23/09 09:36	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	YPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	57.98	78.78	127.83	79.10	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	31.92	15.72	20.61	16.20		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	0.24	4.79	2.06	4.79	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.14	0.21	0.12	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.11	0.15	0.09	0.15	SE	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	37.23	0.08	37.23	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	12.46	0.14	12.46	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.39	0.49	0.11	0.50		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.58	0.30	0.82	0.39		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.38	0.49	0.21	0.49		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	6.65	3.88	1.44	4.16		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.28	0.27	0.12	0.27		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.65

Quality Assurance Review

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6042	ARS Sample ID:	ARS2-09-00074-011
Sample Collection Date:	06/23/09 13:55	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	14.17	55.49	128.32	55.52	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	39.84	16.88	21.30	17.57		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-0.91	-13.77	2.91	-13.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.15	0.21	0.13	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.51	0.31	0.08	0.31		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.50	0.38	0.14	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.46	0.54	0.16	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.32	0.71	0.33	0.71	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.90	0.96	0.19	0.96		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.11	4.22	1.59	4.36		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.42	0.34	0.12	0.34		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.02

Quality Assurance Review

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LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6043	ARS Sample ID:	ARS2-09-00074-012
Sample Collection Date:	06/23/09 14:00	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	9.94	58.52	133.72	58.53	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	42.67	16.45	20.15	17.26		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-2.18	-39.09	4.20	-39.09	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	10.77	0.11	10.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.22	0.08	0.22	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.20	0.18	0.07	0.18		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.20	0.13	11.20	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.51	0.52	0.16	0.53		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.09	0.01	0.20	0.82		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.80	1.04	0.23	1.04		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.71	2.93	1.27	3.05		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.31	0.23	0.07	0.23		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.80

Quality Assurance Review

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074

Client Sample ID: CAMO-09-6044

Sample Collection Date: 06/23/09 14:05

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-09-00074-013

Date Received: 06/24/09 00:00

Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	LLD	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	36.21	71.59	133.66	71.73	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	58.06	18.08	19.98	19.43		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	28.36	10.23	2.10	10.26		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	13.72	0.14	13.72	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.13	0.10	0.13	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.04	0.18	0.10	0.18	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.24	0.30	0.16	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.55	0.56	0.13	0.56		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	-0.10	137.77	0.37	137.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.06	0.70	0.26	0.70		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.86	3.02	1.45	3.08		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.16	0.26	0.12	0.26		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.59

Quality Assurance Review

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ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6045
Sample Collection Date: 06/23/09 14:10
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-014
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	93.40	92.88	127.83	93.88	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	46.96	17.64	20.61	18.56		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.07	0.14	0.11	0.14	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	29.56	9.50	1.76	9.54		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.02	0.06	0.12	0.09	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.22	0.08	0.22	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.03	0.13	0.09	0.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.96	0.13	11.96	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.18	0.52	0.19	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-228	2.21	0.85	0.34	0.86		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.09	1.00	0.29	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.42	3.28	1.43	3.38		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.08	0.27	0.14	0.27	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.16

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6049	ARS Sample ID:	ARS2-09-00074-015
Sample Collection Date:	06/23/09 12:45	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	14.17	55.49	128.32	55.52	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	27.37	15.33	21.30	15.69		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.18	0.21	0.10	0.21	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-2.13	-31.44	3.63	-31.44	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	10.13	0.10	10.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.14	0.07	0.14	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.26	0.21	0.06	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.89	0.51	0.12	0.51	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.58	0.46	0.10	0.49		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	-0.12	101.60	0.27	101.64	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.86	0.86	0.42	0.86		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.93	3.29	1.15	3.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.02	0.10	0.06	0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.15

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-6006 → 6009
6034 → 6035
6038 → 6045
6049
10463
7143
7144

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-6059
6060
6054
10468
9118
9119

Reason: QC of Samples

Print Last Name Gomez Signature [signature] Date 6.23.09

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2478 VALIDATION DATE: 08/03/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: David Schwent ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

2. For the soil and water batches in this RN, the MS %R and MSD %R calculations were performed incorrectly. The parent sample results were < the MDL and, thus, results of 0 µg/kg 0 µg/L, respectively, should have been used to calculate the %Rs. The laboratory subtracted the parent sample concentrations. The MS %Rs, MSD %Rs, and MS/MSD RPDs were still within QC acceptance limits when calculated correctly.

3. It should be noted that the MS/MSD analyses for the water batch were performed on a LANL sample from another RN and that the raw data for the parent sample was not included in the data package. No sample data were qualified as a result.

DATA VALIDATION COVER SHEET

5121-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

Reviewed by: JEJ Level: 1 Date: 8/5/09

VALIDATOR'S SIGNATURE: David Schmoll DATE: 08/03/09

Form 5121-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☒	☐	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☒	☐	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☒	☐	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☒	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6007

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 95.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	0.522	ug/kg	U	1	07-JUL-09 13:02	per0707018a
	Perchlorate-O(18)			5.10	ug/kg		1	07-JUL-09 13:02	per0707018a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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DJS
08/03/09

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6006

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429002

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.564	2.26	0.564	ug/kg	U	1	07-JUL-09 13:25	per0707021a
	Perchlorate-O(18)			5.20	ug/kg		1	07-JUL-09 13:25	per0707021a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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08/03/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6008

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429003

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 77

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.65	2.6	0.650	ug/kg	U	1	07-JUL-09 13:56	per0707025a
	Perchlorate-O(18)			6.17	ug/kg		1	07-JUL-09 13:56	per0707025a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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08/03/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6009

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429004

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 83

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.602	2.41	0.602	ug/kg	U	1	07-JUL-09 14:04	per0707026a
	Perchlorate-O(18)			5.74	ug/kg		1	07-JUL-09 14:04	per0707026a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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08/03/09

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO–09–6034

Date Received: 26–JUN–09

GEL Job No (SDG): 09–2478

GEL Sample ID: 232429005

Date Filtered: 30–JUN–09

Injection Volume (uL): 20

%Solids: 78

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.644	2.58	0.644	ug/kg	U	1	07–JUL–09 14:12	per0707027a
	Perchlorate–O(18)			6.56	ug/kg		1	07–JUL–09 14:12	per0707027a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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08/03/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6043

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429006

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 92.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	07-JUL-09 14:20	per0707028a
	Perchlorate-O(18)			5.23	ug/kg		1	07-JUL-09 14:20	per0707028a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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08/03/09

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6045

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429007

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 92

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	07-JUL-09 14:28	per0707029a
	Perchlorate-O(18)			5.10	ug/kg		1	07-JUL-09 14:28	per0707029a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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DJS
08/03/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-5041

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429008

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 94.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.527	2.11	0.527	ug/kg	U	1	07-JUL-09 14:35	per0707030a
	Perchlorate-O(18)			5.03	ug/kg		1	07-JUL-09 14:35	per0707030a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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08/03/09

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6040

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429009

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 73

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.687	2.75	0.921	ug/kg	J	1	07-JUL-09 14:43	per0707031a
	Perchlorate-O(18)			7.03	ug/kg		1	07-JUL-09 14:43	per0707031a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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DJS
08/03/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6044

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429010

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 87

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.573	2.29	1.60	ug/kg	J	1	07-JUL-09 14:51	per0707032a
	Perchlorate-O(18)			5.83	ug/kg		1	07-JUL-09 14:51	per0707032a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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DJS
08/03/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6035

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429011

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 96

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.521	2.08	0.521	ug/kg	U	1	07-JUL-09 14:59	per0707033a
	Perchlorate-O(18)			4.99	ug/kg		1	07-JUL-09 14:59	per0707033a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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08/03/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6038

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429012

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 75

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.669	2.67	0.669	ug/kg	U	1	07-JUL-09 15:06	per0707034a
	Perchlorate-O(18)			6.22	ug/kg		1	07-JUL-09 15:06	per0707034a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9039

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429013

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 90.9

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.55	2.2	0.550	ug/kg	U	1	07-JUL-09 15:37	per0707038a
	Perchlorate-O(18)			5.25	ug/kg		1	07-JUL-09 15:37	per0707038a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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08/03/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6042

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429014

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 82

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.608	2.43	0.608	ug/kg	U	1	07-JUL-09 15:45	per0707039a
	Perchlorate-O(18)			5.74	ug/kg		1	07-JUL-09 15:45	per0707039a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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08/03/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6049

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429015

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 88

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.565	2.26	0.565	ug/kg	U	1	07-JUL-09 15:53	per0707040a
	Perchlorate-O(18)			5.19	ug/kg		1	07-JUL-09 15:53	per0707040a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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08/03/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-6054

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478-1

GEL Sample ID: 232432001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:37	per0630062a
	Perchlorate Isotope Ratio						1	30-JUN-09 18:37	per0630062a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:37	per0630062a
	Perchlorate-O(18)			0.439	ug/L		1	30-JUN-09 18:37	per0630062a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

DJS
08/03/09

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DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2478 VALIDATION DATE: 08/04/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: David Schwent ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☒ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB associated with the water sample, Sb was detected. The Sb result of sample CAMO-09-6054 was an ND and, thus, was not qualified.

2. In the ICB and/or the CCBs associated with the soil samples, Sb and Tl were detected. The Tl results of samples -6009, -6035, and -9039 were NDs and, thus, were not qualified. All other associated sample results were detects ≤5X the greatest calibration blank concentrations and, thus, were qualified U,I4b. In a CCB associated with the water sample, Tl was detected. The Tl result of sample -6054 was an ND and, thus, was not qualified.

3. In the FR blank, sample -6054, associated with all the soil samples, K, Na, and Ca were detected. The K result of sample -6035 and all Na sample results, except the Na result of sample -6007, were detects ≤5X the FR blank concentrations and, thus, were qualified U,I4d. All other K sample results, the Na result of sample -6007, and all Ca sample results were detects >5X the FR blank concentrations and, thus, were not qualified.

DATA VALIDATION COVER SHEET

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Data Validation Cover Sheet

4. The soil MS %Rs of Ca, As, Se, and Tl were < the laboratory LAL but ≥10%. All Ca and As sample results, and the Se result of sample -6040, were detects and, thus, were qualified J-,I6a. All Se and Tl sample results, except the Se result of sample -6040, were NDs or were qualified NDs and, thus were qualified UJ,I6a. In addition, the soil MS %R of Mn was > the laboratory UAL and the soil MS %R of Fe was <10%. However, the parent sample concentrations were >4X the spike concentrations. Based on professional judgment, no sample data were qualified. The water MS %R of Tl was < the laboratory LAL but ≥10%. The Tl result of sample -6054 was an ND and, thus, was qualified UJ,I6a.

5. It should be noted that the matrix QC analyses for all the metals batches associated with the water sample in this RN were performed on LANL samples from other RNs and that the raw data for the parent samples of ICP and ICP-MS batches were not included in the data package. No sample data were qualified as a result.

6. Results > the MDLs but < the PQLs were "J" flagged by the laboratory and, thus, were not further qualified J,I1.

Reviewed by: JEJ Level: 1 Date: 8/5/09

VALIDATOR'S SIGNATURE: David Schwartz DATE: 08/04/09

Form 5118-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☐	☒	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☒	☐	☐	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☒	☐	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☐	☒	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429001 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6007 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.7

CAS No.	Analyte		Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum		5160000	ug/Kg	*	6830	20100	20100	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-36-0	Antimony	U,I4b	917	ug/Kg	J	331	1000	1000	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-38-2	Arsenic	J-,I6a	1230	ug/kg	N	204	1020	1020	2	MS	RMJ	07/03/09 12:15	090702-2	880941
7440-39-3	Barium		45800	ug/Kg	*N	100	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-41-7	Beryllium		401	ug/kg		20.4	102	102	2	MS	RMJ	07/04/09 00:28	090703-4	880941
7440-43-9	Cadmium		157	ug/Kg	J	100	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-70-2	Calcium	J-,I6a	1180000	ug/Kg	*N	8040	25100	25100	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-47-3	Chromium		7010	ug/Kg		151	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-48-4	Cobalt		1780	ug/Kg		151	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-50-8	Copper		2730	ug/Kg		301	1000	1000	1	P	HSC	07/02/09 10:47	070209-1	880928
7439-89-6	Iron		12000000	ug/Kg		8040	25100	25100	1	P	HSC	07/02/09 10:47	070209-1	880928
7439-92-1	Lead		6190	ug/Kg		251	1000	1000	1	P	HSC	07/02/09 10:47	070209-1	880928
7439-95-4	Magnesium		927000	ug/Kg		8540	30100	30100	1	P	HSC	07/02/09 10:47	070209-1	880928
7439-96-5	Manganese		234000	ug/Kg		201	1000	1000	1	P	HSC	07/02/09 10:47	070209-1	880928
7439-97-6	Mercury		18.4	ug/kg		3.85	11.3	11.3	1	AV	JXL1	07/13/09 10:08	071309S2-6	880997
7440-02-0	Nickel		3820	ug/kg		102	408	408	2	MS	RMJ	07/03/09 12:15	090702-2	880941
7440-09-7	Potassium		566000	ug/Kg		6430	25100	25100	1	P	HSC	07/02/09 10:47	070209-1	880928
7782-49-2	Selenium	UJ,I6a	1020	ug/kg	UN	510	1020	1020	2	MS	RMJ	07/03/09 12:15	090702-2	880941
7440-22-4	Silver		456	ug/Kg	J	100	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-23-5	Sodium		220000	ug/Kg		7030	25100	25100	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-28-0	Thallium	U,I4b	109	ug/kg	JN	61.2	204	204	2	MS	RMJ	07/03/09 12:15	090702-2	880941
7440-62-2	Vanadium		11100	ug/Kg		100	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-66-6	Zinc		39300	ug/Kg		331	1000	1000	1	P	HSC	07/02/09 10:47	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.52	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.512	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.553	g	30	mL	07/10/09	AXG2

DJS
08/04/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429002 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6006 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7780000	ug/Kg	*	7540	22200	22200	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-36-0	Antimony U,I4b	1370	ug/Kg		366	1110	1110	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-38-2	Arsenic J-,I6a	2730	ug/kg	N	220	1100	1100	2	MS	RMJ	07/03/09 12:45	090702-2	880941
7440-39-3	Barium	114000	ug/Kg	*N	111	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-41-7	Beryllium	808	ug/kg		22	110	110	2	MS	RMJ	07/04/09 00:41	090703-4	880941
7440-43-9	Cadmium	554	ug/Kg	U	111	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-70-2	Calcium J-,I6a	2090000	ug/Kg	*N	8870	27700	27700	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-47-3	Chromium	8230	ug/Kg		166	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-48-4	Cobalt	8120	ug/Kg		166	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-50-8	Copper	6000	ug/Kg		333	1110	1110	1	P	HSC	07/02/09 11:09	070209-1	880928
7439-89-6	Iron	12000000	ug/Kg		8870	27700	27700	1	P	HSC	07/02/09 11:09	070209-1	880928
7439-92-1	Lead	18900	ug/Kg		277	1110	1110	1	P	HSC	07/02/09 11:09	070209-1	880928
7439-95-4	Magnesium	1630000	ug/Kg		9430	33300	33300	1	P	HSC	07/02/09 11:09	070209-1	880928
7439-96-5	Manganese	535000	ug/Kg		222	1110	1110	1	P	HSC	07/02/09 11:09	070209-1	880928
7439-97-6	Mercury	15	ug/kg		4.29	12.6	12.6	1	AV	JXL1	07/13/09 10:22	071309S2-6	880997
7440-02-0	Nickel	8110	ug/kg		110	441	441	2	MS	RMJ	07/03/09 12:45	090702-2	880941
7440-09-7	Potassium	1100000	ug/Kg		7100	27700	27700	1	P	HSC	07/02/09 11:09	070209-1	880928
7782-49-2	Selenium UJ,I6a	1100	ug/kg	UN	551	1100	1100	2	MS	RMJ	07/03/09 12:45	090702-2	880941
7440-22-4	Silver	465	ug/Kg	J	111	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-23-5	Sodium U,I4d	83400	ug/Kg		7760	27700	27700	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-28-0	Thallium U,I4b	239	ug/kg	N	66.1	220	220	2	MS	RMJ	07/03/09 12:45	090702-2	880941
7440-62-2	Vanadium	26200	ug/Kg		111	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-66-6	Zinc	20600	ug/Kg		366	1110	1110	1	P	HSC	07/02/09 11:09	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.509	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.512	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.537	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429003 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6008 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 77

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2170000	ug/Kg	*	8490	25000	25000	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-36-0	Antimony U,I4b	1070	ug/Kg	J	412	1250	1250	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-38-2	Arsenic J-,I6a	933	ug/kg	JN	256	1280	1280	2	MS	RMJ	07/03/09 12:51	090702-2	880941
7440-39-3	Barium	39500	ug/Kg	*N	125	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-41-7	Beryllium	525	ug/kg		25.6	128	128	2	MS	RMJ	07/04/09 00:49	090703-4	880941
7440-43-9	Cadmium	205	ug/Kg	J	125	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-70-2	Calcium J-,I6a	1550000	ug/Kg	*N	9990	31200	31200	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-47-3	Chromium	30200	ug/Kg		187	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-48-4	Cobalt	1660	ug/Kg		187	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-50-8	Copper	38600	ug/Kg		375	1250	1250	1	P	HSC	07/02/09 11:12	070209-1	880928
7439-89-6	Iron	8080000	ug/Kg		9990	31200	31200	1	P	HSC	07/02/09 11:12	070209-1	880928
7439-92-1	Lead	17500	ug/Kg		312	1250	1250	1	P	HSC	07/02/09 11:12	070209-1	880928
7439-95-4	Magnesium	542000	ug/Kg		10600	37500	37500	1	P	HSC	07/02/09 11:12	070209-1	880928
7439-96-5	Manganese	429000	ug/Kg		250	1250	1250	1	P	HSC	07/02/09 11:12	070209-1	880928
7439-97-6	Mercury	14.1	ug/kg	J	5.25	15.5	15.5	1	AV	JXL1	07/13/09 10:24	071309S2-6	880997
7440-02-0	Nickel	12500	ug/kg		128	511	511	2	MS	RMJ	07/03/09 12:51	090702-2	880941
7440-09-7	Potassium	417000	ug/Kg		7990	31200	31200	1	P	HSC	07/02/09 11:12	070209-1	880928
7782-49-2	Selenium UJ,I6a	1280	ug/kg	UN	639	1280	1280	2	MS	RMJ	07/03/09 12:51	090702-2	880941
7440-22-4	Silver	331	ug/Kg	J	125	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-23-5	Sodium U,I4d	77300	ug/Kg		8740	31200	31200	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-28-0	Thallium U,I4b	89.2	ug/kg	JN	76.7	256	256	2	MS	RMJ	07/03/09 12:51	090702-2	880941
7440-62-2	Vanadium	5810	ug/Kg		125	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-66-6	Zinc	105000	ug/Kg		412	1250	1250	1	P	HSC	07/02/09 11:12	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.521	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.509	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.505	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429004 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6009 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 83

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1750000	ug/Kg	*	8000	23500	23500	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-36-0	Antimony U,I4b	837	ug/Kg	J	388	1180	1180	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-38-2	Arsenic J-,I6a	716	ug/kg	JN	230	1150	1150	2	MS	RMJ	07/03/09 12:57	090702-2	880941
7440-39-3	Barium	27300	ug/Kg	*N	118	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-41-7	Beryllium	653	ug/kg		23	115	115	2	MS	RMJ	07/04/09 00:52	090703-4	880941
7440-43-9	Cadmium	145	ug/Kg	J	118	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-70-2	Calcium J-,I6a	777000	ug/Kg	*N	9410	29400	29400	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-47-3	Chromium	15900	ug/Kg		177	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-48-4	Cobalt	1150	ug/Kg		177	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-50-8	Copper	13600	ug/Kg		353	1180	1180	1	P	HSC	07/02/09 11:15	070209-1	880928
7439-89-6	Iron	7870000	ug/Kg		9410	29400	29400	1	P	HSC	07/02/09 11:15	070209-1	880928
7439-92-1	Lead	9210	ug/Kg		294	1180	1180	1	P	HSC	07/02/09 11:15	070209-1	880928
7439-95-4	Magnesium	307000	ug/Kg		10000	35300	35300	1	P	HSC	07/02/09 11:15	070209-1	880928
7439-96-5	Manganese	417000	ug/Kg		235	1180	1180	1	P	HSC	07/02/09 11:15	070209-1	880928
7439-97-6	Mercury	12.6	ug/kg	U	4.28	12.6	12.6	1	AV	JXL1	07/13/09 10:26	071309S2-6	880997
7440-02-0	Nickel	6240	ug/kg		115	459	459	2	MS	RMJ	07/03/09 12:57	090702-2	880941
7440-09-7	Potassium	235000	ug/Kg		7530	29400	29400	1	P	HSC	07/02/09 11:15	070209-1	880928
7782-49-2	Selenium UJ,I6a	1150	ug/kg	UN	574	1150	1150	2	MS	RMJ	07/03/09 12:57	090702-2	880941
7440-22-4	Silver	298	ug/Kg	J	118	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-23-5	Sodium U,I4d	74300	ug/Kg		8240	29400	29400	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-28-0	Thallium UJ,I6a	230	ug/kg	UN	68.9	230	230	2	MS	RMJ	07/03/09 12:57	090702-2	880941
7440-62-2	Vanadium	5140	ug/Kg		118	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-66-6	Zinc	75600	ug/Kg		388	1180	1180	1	P	HSC	07/02/09 11:15	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.512	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.525	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.574	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429005 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6034 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 78

CAS No.	Analyte		Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum		5450000	ug/Kg	*	8760	25800	25800	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-36-0	Antimony	U,I4b	4180	ug/Kg		425	1290	1290	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-38-2	Arsenic	J-,I6a	2070	ug/kg	N	255	1270	1270	2	MS	RMJ	07/03/09 13:14	090702-2	880941
7440-39-3	Barium		97300	ug/Kg	*N	129	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-41-7	Beryllium		806	ug/kg		25.5	127	127	2	MS	RMJ	07/04/09 00:54	090703-4	880941
7440-43-9	Cadmium		483	ug/Kg	J	129	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-70-2	Calcium	J-,I6a	7890000	ug/Kg	*N	10300	32200	32200	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-47-3	Chromium		449000	ug/Kg		193	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-48-4	Cobalt		3410	ug/Kg		193	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-50-8	Copper		107000	ug/Kg		387	1290	1290	1	P	HSC	07/02/09 11:19	070209-1	880928
7439-89-6	Iron		10100000	ug/Kg		10300	32200	32200	1	P	HSC	07/02/09 11:19	070209-1	880928
7439-92-1	Lead		39900	ug/Kg		322	1290	1290	1	P	HSC	07/02/09 11:19	070209-1	880928
7439-95-4	Magnesium		2050000	ug/Kg		11000	38700	38700	1	P	HSC	07/02/09 11:19	070209-1	880928
7439-96-5	Manganese		328000	ug/Kg		258	1290	1290	1	P	HSC	07/02/09 11:19	070209-1	880928
7439-97-6	Mercury		28	ug/kg		4.96	14.6	14.6	1	AV	JXL1	07/13/09 10:28	071309S2-6	880997
7440-02-0	Nickel		22200	ug/kg		127	509	509	2	MS	RMJ	07/03/09 13:14	090702-2	880941
7440-09-7	Potassium		1130000	ug/Kg		8250	32200	32200	1	P	HSC	07/02/09 11:19	070209-1	880928
7782-49-2	Selenium	UJ,I6a	1270	ug/kg	UN	637	1270	1270	2	MS	RMJ	07/03/09 13:14	090702-2	880941
7440-22-4	Silver		515	ug/Kg	J	129	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-23-5	Sodium	U,I4d	111000	ug/Kg		9020	32200	32200	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-28-0	Thallium	U,I4b	293	ug/kg	N	76.4	255	255	2	MS	RMJ	07/03/09 13:14	090702-2	880941
7440-62-2	Vanadium		22700	ug/Kg		129	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-66-6	Zinc		272000	ug/Kg		425	1290	1290	1	P	HSC	07/02/09 11:19	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.506	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.53	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429006 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6043 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 92.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2200000	ug/Kg	*	7230	21300	21300	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-36-0	Antimony U,I4b	2330	ug/Kg		351	1060	1060	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-38-2	Arsenic J-,I6a	1140	ug/kg	N	216	1080	1080	2	MS	RMJ	07/03/09 13:20	090702-2	880941
7440-39-3	Barium	32200	ug/Kg	*N	106	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-41-7	Beryllium	464	ug/kg		21.6	108	108	2	MS	RMJ	07/04/09 00:57	090703-4	880941
7440-43-9	Cadmium	290	ug/Kg	J	106	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-70-2	Calcium J-,I6a	1270000	ug/Kg	*N	8510	26600	26600	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-47-3	Chromium	165000	ug/Kg		160	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-48-4	Cobalt	1860	ug/Kg		160	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-50-8	Copper	52300	ug/Kg		319	1060	1060	1	P	HSC	07/02/09 11:22	070209-1	880928
7439-89-6	Iron	8130000	ug/Kg		8510	26600	26600	1	P	HSC	07/02/09 11:22	070209-1	880928
7439-92-1	Lead	31700	ug/Kg		266	1060	1060	1	P	HSC	07/02/09 11:22	070209-1	880928
7439-95-4	Magnesium	463000	ug/Kg		9040	31900	31900	1	P	HSC	07/02/09 11:22	070209-1	880928
7439-96-5	Manganese	317000	ug/Kg		213	1060	1060	1	P	HSC	07/02/09 11:22	070209-1	880928
7439-97-6	Mercury	4.9	ug/kg	J	3.84	11.3	11.3	1	AV	JXL1	07/13/09 10:30	071309S2-6	880997
7440-02-0	Nickel	17400	ug/kg		108	432	432	2	MS	RMJ	07/03/09 13:20	090702-2	880941
7440-09-7	Potassium	357000	ug/Kg		6810	26600	26600	1	P	HSC	07/02/09 11:22	070209-1	880928
7782-49-2	Selenium UJ,I6a	1080	ug/kg	UN	540	1080	1080	2	MS	RMJ	07/03/09 13:20	090702-2	880941
7440-22-4	Silver	336	ug/Kg	J	106	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-23-5	Sodium U,I4d	71300	ug/Kg		7450	26600	26600	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-28-0	Thallium U,I4b	113	ug/kg	JN	64.9	216	216	2	MS	RMJ	07/03/09 13:20	090702-2	880941
7440-62-2	Vanadium	6730	ug/Kg		106	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-66-6	Zinc	161000	ug/Kg		351	1060	1060	1	P	HSC	07/02/09 11:22	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.51	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.502	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.576	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429007 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6045 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 92

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1500000	ug/Kg	*	7390	21700	21700	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-36-0	Antimony U,I4b	1050	ug/Kg	J	359	1090	1090	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-38-2	Arsenic J-,I6a	945	ug/kg	JN	216	1080	1080	2	MS	RMJ	07/03/09 13:26	090702-2	880941
7440-39-3	Barium	30300	ug/Kg	*N	109	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-41-7	Beryllium	665	ug/kg		21.6	108	108	2	MS	RMJ	07/04/09 00:59	090703-4	880941
7440-43-9	Cadmium	160	ug/Kg	J	109	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-70-2	Calcium J-,I6a	785000	ug/Kg	*N	8700	27200	27200	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-47-3	Chromium	31000	ug/Kg		163	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-48-4	Cobalt	969	ug/Kg		163	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-50-8	Copper	12000	ug/Kg		326	1090	1090	1	P	HSC	07/02/09 11:25	070209-1	880928
7439-89-6	Iron	8230000	ug/Kg		8700	27200	27200	1	P	HSC	07/02/09 11:25	070209-1	880928
7439-92-1	Lead	9410	ug/Kg		272	1090	1090	1	P	HSC	07/02/09 11:25	070209-1	880928
7439-95-4	Magnesium	340000	ug/Kg		9240	32600	32600	1	P	HSC	07/02/09 11:25	070209-1	880928
7439-96-5	Manganese	330000	ug/Kg		217	1090	1090	1	P	HSC	07/02/09 11:25	070209-1	880928
7439-97-6	Mercury	11	ug/kg	J	3.83	11.3	11.3	1	AV	JXL1	07/13/09 10:32	071309S2-6	880997
7440-02-0	Nickel	7150	ug/kg		108	431	431	2	MS	RMJ	07/03/09 13:26	090702-2	880941
7440-09-7	Potassium	356000	ug/Kg		6960	27200	27200	1	P	HSC	07/02/09 11:25	070209-1	880928
7782-49-2	Selenium UJ,I6a	1080	ug/kg	UN	539	1080	1080	2	MS	RMJ	07/03/09 13:26	090702-2	880941
7440-22-4	Silver	426	ug/Kg	J	109	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-23-5	Sodium U,I4d	60900	ug/Kg		7610	27200	27200	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-28-0	Thallium U,I4b	112	ug/kg	JN	64.7	216	216	2	MS	RMJ	07/03/09 13:26	090702-2	880941
7440-62-2	Vanadium	6180	ug/Kg		109	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-66-6	Zinc	62200	ug/Kg		359	1090	1090	1	P	HSC	07/02/09 11:25	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.504	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.579	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429008 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6041 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 94.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2170000	ug/Kg	*	7160	21100	21100	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-36-0	Antimony U,I4b	2810	ug/Kg		347	1050	1050	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-38-2	Arsenic J-,I6a	1570	ug/kg	N	202	1010	1010	2	MS	RMJ	07/03/09 13:32	090702-2	880941
7440-39-3	Barium	29500	ug/Kg	*N	105	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-41-7	Beryllium	420	ug/kg		20.2	101	101	2	MS	RMJ	07/04/09 01:02	090703-4	880941
7440-43-9	Cadmium	299	ug/Kg	J	105	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-70-2	Calcium J-,I6a	1200000	ug/Kg	*N	8420	26300	26300	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-47-3	Chromium	241000	ug/Kg		158	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-48-4	Cobalt	2070	ug/Kg		158	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-50-8	Copper	52700	ug/Kg		316	1050	1050	1	P	HSC	07/02/09 11:28	070209-1	880928
7439-89-6	Iron	12700000	ug/Kg		8420	26300	26300	1	P	HSC	07/02/09 11:28	070209-1	880928
7439-92-1	Lead	23400	ug/Kg		263	1050	1050	1	P	HSC	07/02/09 11:28	070209-1	880928
7439-95-4	Magnesium	518000	ug/Kg		8950	31600	31600	1	P	HSC	07/02/09 11:28	070209-1	880928
7439-96-5	Manganese	282000	ug/Kg		211	1050	1050	1	P	HSC	07/02/09 11:28	070209-1	880928
7439-97-6	Mercury	8.32	ug/kg	J	3.85	11.3	11.3	1	AV	JXL1	07/13/09 10:34	071309S2-6	880997
7440-02-0	Nickel	15300	ug/kg		101	405	405	2	MS	RMJ	07/03/09 13:32	090702-2	880941
7440-09-7	Potassium	332000	ug/Kg		6740	26300	26300	1	P	HSC	07/02/09 11:28	070209-1	880928
7782-49-2	Selenium UJ,I6a	1010	ug/kg	UN	506	1010	1010	2	MS	RMJ	07/03/09 13:32	090702-2	880941
7440-22-4	Silver	612	ug/Kg		105	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-23-5	Sodium U,I4d	64800	ug/Kg		7370	26300	26300	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-28-0	Thallium U,I4b	114	ug/kg	JN	60.7	202	202	2	MS	RMJ	07/03/09 13:32	090702-2	880941
7440-62-2	Vanadium	11500	ug/Kg		105	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-66-6	Zinc	259000	ug/Kg		347	1050	1050	1	P	HSC	07/02/09 11:28	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.501	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.521	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.559	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429009 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6040 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 73

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4300000	ug/Kg	*	8900	26200	26200	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-36-0	Antimony U,I4b	4110	ug/Kg		432	1310	1310	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-38-2	Arsenic J-,I6a	4020	ug/kg	N	273	1370	1370	2	MS	RMJ	07/03/09 13:38	090702-2	880941
7440-39-3	Barium	152000	ug/Kg	*N	131	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-41-7	Beryllium	735	ug/kg		27.3	137	137	2	MS	RMJ	07/04/09 01:04	090703-4	880941
7440-43-9	Cadmium	1100	ug/Kg		131	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-70-2	Calcium J-,I6a	5950000	ug/Kg	*N	10500	32700	32700	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-47-3	Chromium	465000	ug/Kg		196	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-48-4	Cobalt	10200	ug/Kg		196	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-50-8	Copper	318000	ug/Kg		393	1310	1310	1	P	HSC	07/02/09 11:38	070209-1	880928
7439-89-6	Iron	14100000	ug/Kg		10500	32700	32700	1	P	HSC	07/02/09 11:38	070209-1	880928
7439-92-1	Lead	156000	ug/Kg		327	1310	1310	1	P	HSC	07/02/09 11:38	070209-1	880928
7439-95-4	Magnesium	1430000	ug/Kg		11100	39300	39300	1	P	HSC	07/02/09 11:38	070209-1	880928
7439-96-5	Manganese	1140000	ug/Kg		262	1310	1310	1	P	HSC	07/02/09 11:38	070209-1	880928
7439-97-6	Mercury	59.4	ug/kg		5.61	16.5	16.5	1	AV	JXL1	07/13/09 10:36	071309S2-6	880997
7440-02-0	Nickel	58400	ug/kg		683	2730	2730	10	MS	RMJ	07/03/09 19:50	090702-3	880941
7440-09-7	Potassium	671000	ug/Kg		8380	32700	32700	1	P	HSC	07/02/09 11:38	070209-1	880928
7782-49-2	Selenium J-,I6a	862	ug/kg	JN	683	1370	1370	2	MS	RMJ	07/03/09 13:38	090702-2	880941
7440-22-4	Silver	1480	ug/Kg		131	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-23-5	Sodium U,I4d	127000	ug/Kg		9170	32700	32700	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-28-0	Thallium U,I4b	231	ug/kg	JN	82	273	273	2	MS	RMJ	07/03/09 13:38	090702-2	880941
7440-62-2	Vanadium	19400	ug/Kg		131	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-66-6	Zinc	499000	ug/Kg		432	1310	1310	1	P	HSC	07/02/09 11:38	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.525	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.503	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.5	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429010 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6044 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 87

CAS No.	Analyte		Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum		1980000	ug/Kg	*	7720	22700	22700	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-36-0	Antimony	U,I4b	1330	ug/Kg		375	1140	1140	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-38-2	Arsenic	J-,I6a	1390	ug/kg	N	227	1140	1140	2	MS	RMJ	07/03/09 13:44	090702-2	880941
7440-39-3	Barium		48200	ug/Kg	*N	114	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-41-7	Beryllium		790	ug/kg		22.7	114	114	2	MS	RMJ	07/04/09 02:00	090703-5	880941
7440-43-9	Cadmium		344	ug/Kg	J	114	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-70-2	Calcium	J-,I6a	3060000	ug/Kg	*N	9080	28400	28400	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-47-3	Chromium		73800	ug/Kg		170	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-48-4	Cobalt		2270	ug/Kg		170	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-50-8	Copper		71300	ug/Kg		341	1140	1140	1	P	HSC	07/02/09 11:41	070209-1	880928
7439-89-6	Iron		7370000	ug/Kg		9080	28400	28400	1	P	HSC	07/02/09 11:41	070209-1	880928
7439-92-1	Lead		36800	ug/Kg		284	1140	1140	1	P	HSC	07/02/09 11:41	070209-1	880928
7439-95-4	Magnesium		628000	ug/Kg		9650	34100	34100	1	P	HSC	07/02/09 11:41	070209-1	880928
7439-96-5	Manganese		395000	ug/Kg		227	1140	1140	1	P	HSC	07/02/09 11:41	070209-1	880928
7439-97-6	Mercury		14.5	ug/kg		4.32	12.7	12.7	1	AV	JXL1	07/13/09 10:38	071309S2-6	880997
7440-02-0	Nickel		47700	ug/kg		568	2270	2270	10	MS	RMJ	07/03/09 19:56	090702-3	880941
7440-09-7	Potassium		473000	ug/Kg		7260	28400	28400	1	P	HSC	07/02/09 11:41	070209-1	880928
7782-49-2	Selenium	UJ,I6a	1140	ug/kg	UN	568	1140	1140	2	MS	RMJ	07/03/09 13:44	090702-2	880941
7440-22-4	Silver		389	ug/Kg	J	114	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-23-5	Sodium	U,I4d	84200	ug/Kg		7950	28400	28400	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-28-0	Thallium	U,I4b	197	ug/kg	JN	68.1	227	227	2	MS	RMJ	07/03/09 13:44	090702-2	880941
7440-62-2	Vanadium		8500	ug/Kg		114	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-66-6	Zinc		158000	ug/Kg		375	1140	1140	1	P	HSC	07/02/09 11:41	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.505	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.505	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.542	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429011 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6035 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 96

CAS No.	Analyte		Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum		1310000	ug/Kg	*	7070	20800	20800	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-36-0	Antimony	U,I4b	381	ug/Kg	J	343	1040	1040	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-38-2	Arsenic	J-,I6a	603	ug/kg	JN	200	998	998	2	MS	RMJ	07/03/09 13:50	090702-2	880941
7440-39-3	Barium		18900	ug/Kg	*N	104	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-41-7	Beryllium		497	ug/kg		20	99.8	99.8	2	MS	RMJ	07/04/09 02:03	090703-5	880941
7440-43-9	Cadmium		146	ug/Kg	J	104	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-70-2	Calcium	J-,I6a	221000	ug/Kg	*N	8320	26000	26000	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-47-3	Chromium		9570	ug/Kg		156	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-48-4	Cobalt		704	ug/Kg		156	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-50-8	Copper		8770	ug/Kg		312	1040	1040	1	P	HSC	07/02/09 11:44	070209-1	880928
7439-89-6	Iron		7180000	ug/Kg		8320	26000	26000	1	P	HSC	07/02/09 11:44	070209-1	880928
7439-92-1	Lead		4130	ug/Kg		260	1040	1040	1	P	HSC	07/02/09 11:44	070209-1	880928
7439-95-4	Magnesium		123000	ug/Kg		8840	31200	31200	1	P	HSC	07/02/09 11:44	070209-1	880928
7439-96-5	Manganese		427000	ug/Kg		208	1040	1040	1	P	HSC	07/02/09 11:44	070209-1	880928
7439-97-6	Mercury		11.1	ug/kg	U	3.77	11.1	11.1	1	AV	JXL1	07/13/09 10:40	071309S2-6	880997
7440-02-0	Nickel		2390	ug/kg		99.8	399	399	2	MS	RMJ	07/03/09 13:50	090702-2	880941
7440-09-7	Potassium	U,I4d	143000	ug/Kg		6650	26000	26000	1	P	HSC	07/02/09 11:44	070209-1	880928
7782-49-2	Selenium	UJ,I6a	998	ug/kg	UN	499	998	998	2	MS	RMJ	07/03/09 13:50	090702-2	880941
7440-22-4	Silver		241	ug/Kg	J	104	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-23-5	Sodium	U,I4d	71600	ug/Kg		7280	26000	26000	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-28-0	Thallium	UJ,I6a	200	ug/kg	UN	59.9	200	200	2	MS	RMJ	07/03/09 13:50	090702-2	880941
7440-62-2	Vanadium		3310	ug/Kg		104	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-66-6	Zinc		69400	ug/Kg		343	1040	1040	1	P	HSC	07/02/09 11:44	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.501	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.522	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.563	g	30	mL	07/10/09	AXG2

DJS
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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429012 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6038 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 75

CAS No.	Analyte		Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum		4790000	ug/Kg	*	9060	26600	26600	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-36-0	Antimony	U,I4b	1220	ug/Kg	J	439	1330	1330	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-38-2	Arsenic	J-,I6a	2470	ug/kg	N	266	1330	1330	2	MS	RMJ	07/03/09 13:56	090702-2	880941
7440-39-3	Barium		87600	ug/Kg	*N	133	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-41-7	Beryllium		630	ug/kg		26.6	133	133	2	MS	RMJ	07/04/09 02:05	090703-5	880941
7440-43-9	Cadmium		307	ug/Kg	J	133	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-70-2	Calcium	J-,I6a	3980000	ug/Kg	*N	10700	33300	33300	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-47-3	Chromium		8450	ug/Kg		200	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-48-4	Cobalt		3030	ug/Kg		200	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-50-8	Copper		8070	ug/Kg		400	1330	1330	1	P	HSC	07/02/09 11:47	070209-1	880928
7439-89-6	Iron		12100000	ug/Kg		10700	33300	33300	1	P	HSC	07/02/09 11:47	070209-1	880928
7439-92-1	Lead		33600	ug/Kg		333	1330	1330	1	P	HSC	07/02/09 11:47	070209-1	880928
7439-95-4	Magnesium		1400000	ug/Kg		11300	40000	40000	1	P	HSC	07/02/09 11:47	070209-1	880928
7439-96-5	Manganese		553000	ug/Kg		266	1330	1330	1	P	HSC	07/02/09 11:47	070209-1	880928
7439-97-6	Mercury		26.2	ug/kg		4.79	14.1	14.1	1	AV	JXL1	07/13/09 10:46	071309S2-6	880997
7440-02-0	Nickel		5050	ug/kg		133	533	533	2	MS	RMJ	07/03/09 13:56	090702-2	880941
7440-09-7	Potassium		947000	ug/Kg		8520	33300	33300	1	P	HSC	07/02/09 11:47	070209-1	880928
7782-49-2	Selenium	UJ,I6a	1330	ug/kg	UN	666	1330	1330	2	MS	RMJ	07/03/09 13:56	090702-2	880941
7440-22-4	Silver		376	ug/Kg	J	133	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-23-5	Sodium	U,I4d	71400	ug/Kg		9320	33300	33300	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-28-0	Thallium	U,I4b	133	ug/kg	JN	79.9	266	266	2	MS	RMJ	07/03/09 13:56	090702-2	880941
7440-62-2	Vanadium		13200	ug/Kg		133	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-66-6	Zinc		54900	ug/Kg		439	1330	1330	1	P	HSC	07/02/09 11:47	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.502	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.502	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.569	g	30	mL	07/10/09	AXG2

DJS
08/04/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429013 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-9039 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 90.9

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3030000	ug/Kg	*	7210	21200	21200	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-36-0	Antimony U,I4b	1360	ug/Kg		350	1060	1060	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-38-2	Arsenic J-,I6a	874	ug/kg	JN	216	1080	1080	2	MS	RMJ	07/03/09 14:14	090702-2	880941
7440-39-3	Barium	16100	ug/Kg	*N	106	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-41-7	Beryllium	741	ug/kg		21.6	108	108	2	MS	RMJ	07/04/09 02:08	090703-5	880941
7440-43-9	Cadmium	530	ug/Kg	U	106	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-70-2	Calcium J-,I6a	578000	ug/Kg	*N	8480	26500	26500	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-47-3	Chromium	15000	ug/Kg		159	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-48-4	Cobalt	776	ug/Kg		159	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-50-8	Copper	2360	ug/Kg		318	1060	1060	1	P	HSC	07/02/09 11:50	070209-1	880928
7439-89-6	Iron	8300000	ug/Kg		8480	26500	26500	1	P	HSC	07/02/09 11:50	070209-1	880928
7439-92-1	Lead	4880	ug/Kg		265	1060	1060	1	P	HSC	07/02/09 11:50	070209-1	880928
7439-95-4	Magnesium	312000	ug/Kg		9010	31800	31800	1	P	HSC	07/02/09 11:50	070209-1	880928
7439-96-5	Manganese	218000	ug/Kg		212	1060	1060	1	P	HSC	07/02/09 11:50	070209-1	880928
7439-97-6	Mercury	5.44	ug/kg	J	4.02	11.8	11.8	1	AV	JXL1	07/13/09 10:48	071309S2-6	880997
7440-02-0	Nickel	3090	ug/kg		108	432	432	2	MS	RMJ	07/03/09 14:14	090702-2	880941
7440-09-7	Potassium	248000	ug/Kg		6780	26500	26500	1	P	HSC	07/02/09 11:50	070209-1	880928
7782-49-2	Selenium UJ,I6a	1080	ug/kg	UN	540	1080	1080	2	MS	RMJ	07/03/09 14:14	090702-2	880941
7440-22-4	Silver	188	ug/Kg	J	106	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-23-5	Sodium U,I4d	105000	ug/Kg		7420	26500	26500	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-28-0	Thallium UJ,I6a	216	ug/kg	UN	64.9	216	216	2	MS	RMJ	07/03/09 14:14	090702-2	880941
7440-62-2	Vanadium	4250	ug/Kg		106	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-66-6	Zinc	39500	ug/Kg		350	1060	1060	1	P	HSC	07/02/09 11:50	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.519	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.509	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.558	g	30	mL	07/10/09	AXG2

DJS
08/04/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429014 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6042 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 82

CAS No.	Analyte		Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum		3630000	ug/Kg	*	8130	23900	23900	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-36-0	Antimony	U,I4b	1500	ug/Kg		394	1190	1190	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-38-2	Arsenic	J-,I6a	1720	ug/kg	N	236	1180	1180	2	MS	RMJ	07/03/09 14:19	090702-2	880941
7440-39-3	Barium		78700	ug/Kg	*N	119	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-41-7	Beryllium		663	ug/kg		23.6	118	118	2	MS	RMJ	07/04/09 02:10	090703-5	880941
7440-43-9	Cadmium		406	ug/Kg	J	119	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-70-2	Calcium	J-,I6a	4620000	ug/Kg	*N	9560	29900	29900	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-47-3	Chromium		58900	ug/Kg		179	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-48-4	Cobalt		2580	ug/Kg		179	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-50-8	Copper		55400	ug/Kg		358	1190	1190	1	P	HSC	07/02/09 11:54	070209-1	880928
7439-89-6	Iron		9090000	ug/Kg		9560	29900	29900	1	P	HSC	07/02/09 11:54	070209-1	880928
7439-92-1	Lead		36600	ug/Kg		299	1190	1190	1	P	HSC	07/02/09 11:54	070209-1	880928
7439-95-4	Magnesium		1490000	ug/Kg		10200	35800	35800	1	P	HSC	07/02/09 11:54	070209-1	880928
7439-96-5	Manganese		444000	ug/Kg		239	1190	1190	1	P	HSC	07/02/09 11:54	070209-1	880928
7439-97-6	Mercury		19	ug/kg		4.38	12.9	12.9	1	AV	JXL1	07/13/09 10:50	071309S2-6	880997
7440-02-0	Nickel		26600	ug/kg		589	2360	2360	10	MS	RMJ	07/03/09 20:02	090702-3	880941
7440-09-7	Potassium		819000	ug/Kg		7650	29900	29900	1	P	HSC	07/02/09 11:54	070209-1	880928
7782-49-2	Selenium	UJ,I6a	1180	ug/kg	UN	589	1180	1180	2	MS	RMJ	07/03/09 14:19	090702-2	880941
7440-22-4	Silver		430	ug/Kg	J	119	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-23-5	Sodium	U,I4d	93600	ug/Kg		8360	29900	29900	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-28-0	Thallium	U,I4b	298	ug/kg	N	70.7	236	236	2	MS	RMJ	07/03/09 14:19	090702-2	880941
7440-62-2	Vanadium		12900	ug/Kg		119	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-66-6	Zinc		134000	ug/Kg		394	1190	1190	1	P	HSC	07/02/09 11:54	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.509	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.516	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.567	g	30	mL	07/10/09	AXG2

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08/04/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429015 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6049 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 88

CAS No.	Analyte		Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum		8380000	ug/Kg	*	7640	22500	22500	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-36-0	Antimony	U,I4b	1010	ug/Kg	J	371	1120	1120	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-38-2	Arsenic	J-,I6a	2850	ug/kg	N	221	1110	1110	2	MS	RMJ	07/03/09 14:25	090702-2	880941
7440-39-3	Barium		93000	ug/Kg	*N	112	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-41-7	Beryllium		891	ug/kg		22.1	111	111	2	MS	RMJ	07/04/09 02:13	090703-5	880941
7440-43-9	Cadmium		115	ug/Kg	J	112	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-70-2	Calcium	J-,I6a	2270000	ug/Kg	*N	8990	28100	28100	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-47-3	Chromium		9210	ug/Kg		169	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-48-4	Cobalt		5850	ug/Kg		169	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-50-8	Copper		6290	ug/Kg		337	1120	1120	1	P	HSC	07/02/09 11:57	070209-1	880928
7439-89-6	Iron		12100000	ug/Kg		8990	28100	28100	1	P	HSC	07/02/09 11:57	070209-1	880928
7439-92-1	Lead		16500	ug/Kg		281	1120	1120	1	P	HSC	07/02/09 11:57	070209-1	880928
7439-95-4	Magnesium		1730000	ug/Kg		9560	33700	33700	1	P	HSC	07/02/09 11:57	070209-1	880928
7439-96-5	Manganese		299000	ug/Kg		225	1120	1120	1	P	HSC	07/02/09 11:57	070209-1	880928
7439-97-6	Mercury		15.5	ug/kg		4.31	12.7	12.7	1	AV	JXL1	07/13/09 10:52	071309S2-6	880997
7440-02-0	Nickel		8130	ug/kg		111	443	443	2	MS	RMJ	07/03/09 14:25	090702-2	880941
7440-09-7	Potassium		1150000	ug/Kg		7190	28100	28100	1	P	HSC	07/02/09 11:57	070209-1	880928
7782-49-2	Selenium	UJ,I6a	1110	ug/kg	UN	553	1110	1110	2	MS	RMJ	07/03/09 14:25	090702-2	880941
7440-22-4	Silver		987	ug/Kg		112	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-23-5	Sodium	U,I4d	80400	ug/Kg		7870	28100	28100	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-28-0	Thallium	U,I4b	224	ug/kg	N	66.4	221	221	2	MS	RMJ	07/03/09 14:25	090702-2	880941
7440-62-2	Vanadium		25900	ug/Kg		112	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-66-6	Zinc		23800	ug/Kg		371	1120	1120	1	P	HSC	07/02/09 11:57	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.503	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.511	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.535	g	30	mL	07/10/09	AXG2

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METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232432001 **BASIS:** As Received **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6054 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/04/09 02:37	090703-2	881357
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/04/09 02:37	090703-2	881357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/04/09 02:37	090703-2	881357
7440-70-2	Calcium	35.1	ug/L	J	30	100	100	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-47-3	Chromium	5	ug/L	U	2	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	06/30/09 18:59	063009-1	881354
7439-89-6	Iron	100	ug/L	U	25	100	100	1	P	HSC	06/30/09 18:59	063009-1	881354
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/04/09 02:37	090703-2	881357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	06/30/09 18:59	063009-1	881354
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/04/09 02:37	090703-2	881357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	ETL	07/02/09 10:58	070209W1-4	881396
7440-02-0	Nickel	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-09-7	Potassium	380	ug/L		50	150	150	1	P	HSC	06/30/09 18:59	063009-1	881354
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-23-5	Sodium	210	ug/L		45	150	150	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-28-0	Thallium UJ,I6a	1	ug/L	U	0.3	1	1	1	MS	PRB	07/04/09 15:15	090703-3	881357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-66-6	Zinc	10	ug/L	U	2	10	10	1	P	HSC	06/30/09 18:59	063009-1	881354

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881354	881353	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881357	881356	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881396	881395	SW846 7470A Prep	20	mL	20	mL	07/01/09	TXB3

DJS
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DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2478 VALIDATION DATE: 08/05/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: David Schwent ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☒ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB associated with the water sample, nitrate/nitrite was detected. The nitrate/nitrite result of sample CAMO-09-6054 was a detect ≤5X the MB concentration and, thus, was qualified U,I4.

2. The soil MS %R of nitrate-N was < the laboratory LAL but ≥10%. The nitrate-N results of samples -6006, -6008, and -6009 were detects and, thus, were qualified J-,I6a. All other associated nitrate-N sample results were NDs and, thus, were qualified UJ,I6a.

3. It should be noted that the matrix QC analyses for the total CN and the pH batches associated with the soil samples in this RN were performed on LANL samples from other RNs. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 8/5/09

VALIDATOR'S SIGNATURE: David Schmoll	DATE: 08/05/09
Form 5120-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☒	☐	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 **General Chemistry Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6007	Project:	LANL01004
Sample ID:	232429001	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	4.27%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.7C	H	8.27		0.010	0.100	SU	1	RXG2 06/29/09	1228	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	112		68.3	251	ug/kg	1	AXC2 07/07/09	1055	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.304	1.01	mg/kg	1	VXP1 07/02/09	1955	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.122	0.408	mg/kg	1	RXG2 07/08/09	1331	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6006	Project:	LANL01004
Sample ID:	232429002	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	11.4%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.6C	H	7.24		0.010	0.100	SU	1	RXG2 06/29/09	1230	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	232		73.8	271	ug/kg	1	AXC2 07/07/09	1058	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HJh	0.924	J-,I6a	0.330	1.10	mg/kg	1	VXP1 07/02/09	2127	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.270	0.898	mg/kg	2	RXG2 07/08/09	1335	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID: CAMO-09-6008
Sample ID: 232429003
Matrix: R
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client
Moisture: 23.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.4C	H	8.04		0.010	0.100	SU	1	RXG2 06/29/09	1233	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		86.7	319	ug/kg	1	AXC2 07/07/09	1142	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	2.85	J-,I6a	0.379	1.26	mg/kg	1	VXP1 07/02/09	2150	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.780	2.60	mg/kg	5	RXG2 07/08/09	1336	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID: CAMO-09-6009
Sample ID: 232429004
Matrix: R
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client
Moisture: 17%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.4C	H	7.97		0.010	0.100	SU	1	RXG2 06/29/09	1236	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		75.9	279	ug/kg	1	AXC2 07/07/09	1143	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	1.31	J-,I6a	0.352	1.17	mg/kg	1	VXP1 07/02/09	2213	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.288	0.959	mg/kg	2	RXG2 07/08/09	1337	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID: CAMO-09-6034
Sample ID: 232429005
Matrix: R
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client
Moisture: 22.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.7C	H	7.85		0.010	0.100	SU	1	RXG2 06/29/09	1242	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	226		85.9	316	ug/kg	1	AXC2 07/07/09	1144	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.382	1.27	mg/kg	1	VXP1 07/02/09	2236	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		3.84	12.8	mg/kg	25	RXG2 07/08/09	1337	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID: CAMO-09-6043
Sample ID: 232429006
Matrix: R
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client
Moisture: 7.85%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.6C	H	7.30		0.010	0.100	SU	1	RXG2 06/29/09	1242	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		64.7	238	ug/kg	1	AXC2 07/07/09	1145	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.310	1.03	mg/kg	1	VXP1 07/02/09	2344	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.635	2.12	mg/kg	5	RXG2 07/08/09	1347	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6045	Project:	LANL01004
Sample ID:	232429007	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	8%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.6C	H	7.62		0.010	0.100	SU	1	RXG2 06/29/09	1243	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		67.2	247	ug/kg	1	AXC2 07/07/09	1146	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.322	1.07	mg/kg	1	VXP1 07/03/09	0007	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.252	0.839	mg/kg	2	RXG2 07/08/09	1348	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

DJS
08/05/09

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6041	Project:	LANL01004
Sample ID:	232429008	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	5.2%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.7C	H	6.77		0.010	0.100	SU	1	RXG2 06/29/09	1245	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		64.0	235	ug/kg	1	AXC2 07/07/09	1147	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.305	1.02	mg/kg	1	VXP1 07/03/09	0030	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.615	2.05	mg/kg	5	RXG2 07/08/09	1348	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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08/05/09

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6040	Project:	LANL01004
Sample ID:	232429009	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	27.3%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.5C	H	7.11		0.010	0.100	SU	1	RXG2 06/29/09	1248	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	299		91.7	337	ug/kg	1	AXC2 07/07/09	1147	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.410	1.37	mg/kg	1	VXP1 07/03/09	0053	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		3.97	13.2	mg/kg	25	RXG2 07/08/09	1348	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6044	Project:	LANL01004
Sample ID:	232429010	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	12.8%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.7C	H	6.38		0.010	0.100	SU	1	RXG2 06/29/09	1252	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	144		68.4	251	ug/kg	1	AXC2 07/07/09	1148	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.332	1.11	mg/kg	1	VXP1 07/03/09	0225	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		3.41	11.4	mg/kg	25	RXG2 07/08/09	1348	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545 .
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6035	Project:	LANL01004
Sample ID:	232429011	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	3.99%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.4C	H	7.88		0.010	0.100	SU	1	RXG2 06/29/09	1252	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		70.8	260	ug/kg	1	AXC2 07/07/09	1149	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.298	0.992	mg/kg	1	VXP1 07/03/09	0248	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	J	0.156		0.123	0.409	mg/kg	1	RXG2 07/08/09	1349	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID: CAMO-09-6038
Sample ID: 232429012
Matrix: R
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client
Moisture: 25.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.7C	H	6.56		0.010	0.100	SU	1	RXG2 06/29/09	1253	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	181		87.4	321	ug/kg	1	AXC2 07/07/09	1150	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.396	1.32	mg/kg	1	VXP1 07/03/09	0310	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.788	2.63	mg/kg	5	RXG2 07/08/09	1349	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-9039	Project:	LANL01004
Sample ID:	232429013	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	9.12%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.3C	H	6.90		0.010	0.100	SU	1	RXG2 06/29/09	1254	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		73.4	270	ug/kg	1	AXC2 07/07/09	1155	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.322	1.07	mg/kg	1	VXP1 07/03/09	0419	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.131	0.435	mg/kg	1	RXG2 07/08/09	1349	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6042	Project:	LANL01004
Sample ID:	232429014	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	17.8%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.9C	H	7.53		0.010	0.100	SU	1	RXG2 06/29/09	1256	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	142		73.9	272	ug/kg	1	AXC2 07/07/09	1156	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.355	1.18	mg/kg	1	VXP1 07/03/09	0442	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.712	2.37	mg/kg	5	RXG2 07/08/09	1349	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID: CAMO-09-6049
Sample ID: 232429015
Matrix: R
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client
Moisture: 11.6%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.7C	H	7.28		0.010	0.100	SU	1	RXG2 06/29/09	1300	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	79.9		67.5	248	ug/kg	1	AXC2 07/07/09	1156	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.326	1.09	mg/kg	1	VXP1 07/03/09	0505	880959	3
Spectrometric Analysis Federal											
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"											
Hexavalent Chromium	U	ND		0.268	0.892	mg/kg	2	RXG2 07/08/09	1349	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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08/05/09

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2478-1

Client Sample ID: CAMO-09-6054
Sample ID: 232432001
Matrix: W
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal											
SW9012A Cyanide, Total "As Received"											
Cyanide, Total	U	ND		1.66	5.00	ug/L	1	AXC2 07/02/09	0948	881036	1
Nutrient Analysis											
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"											
Nitrogen, Nitrate/Nitrite	J	0.065	U,I4	0.050	0.250	mg/L	5	AXH3 06/29/09	1454	881227	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0847	881035

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

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08/05/09

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2478

REQUEST NUMBER: 09-2478

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232429, 232432 ✓.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	POLY	METALS+7196	Ice	R
CAMO-09-6007	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6006	1	POLY	METALS+7196	Ice	R
CAMO-09-6006	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6008	1	POLY	METALS+7196	Ice	R
CAMO-09-6008	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6009	1	POLY	METALS+7196	Ice	R
CAMO-09-6009	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6034	1	POLY	METALS+7196	Ice	R
CAMO-09-6034	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6043	1	POLY	METALS+7196	Ice	R
CAMO-09-6043	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6045	1	POLY	METALS+7196	Ice	R
CAMO-09-6045	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6041	1	POLY	METALS+7196	Ice	R
CAMO-09-6041	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6040	1	POLY	METALS+7196	Ice	R
CAMO-09-6040	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6044	1	POLY	METALS+7196	Ice	R
CAMO-09-6044	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6035	1	POLY	METALS+7196	Ice	R
CAMO-09-6035	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6038	1	POLY	METALS+7196	Ice	R
CAMO-09-6038	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6039	1	POLY	METALS+7196	Ice	R
CAMO-09-6039	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6042	1	POLY	METALS+7196	Ice	R
CAMO-09-6042	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6049	1	POLY	METALS+7196	Ice	R
CAMO-09-6049	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6054	1	POLY	METALS-GEL	Nitric Acid	W

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2478

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6054	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-6054	1	POLY	SW-846:6850	Ice	W
CAMO-09-6054	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/25/09	1400	Patricia Dent	P. Dent	6/26/09	08:40
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2478

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	EPA:353.2	1	CAMO-09-6054	W	6/23/2009	
	SW-846:6010B	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:6020	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:6850	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:7196A	1	CAMO-09-6006	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7196A	1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	SW-846:7471A	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7471A	1	CAMO-09-6049	R	6/23/2009	
	SW-846:9012A	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:9045C	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9045C	1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2478

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

June 27, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Orders: 232429 232432
SDG: 09-2478

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 26, 2009, and analyzed for General Chemistry, Metals and Perchlorates by LCMSMS. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2478
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232429 and 232432
SDG: 09-2478

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Sample Data Summary 856
Quality Control Summary 858
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Raw Data 918
Miscellaneous 1196

General Chemistry Analysis **1232**
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Sample Data Summary 1247

Quality Control Summary 1264
Instrument QC Data Summary 1268
Cyanide, Total 1272
Hexavalent Chromium 1286
Ion Chromatography 1290
pH 1396
Miscellaneous 1400

General Chemistry Analysis 1402
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Quality Control Summary 1413
Instrument QC Data Summary 1416
Cyanide, Total 1419
Nitrate Nitrite by Cadmium Reduction 1426

Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232429 and 232432
SDG # : 09-2478

June 27, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 26, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232429001	CAMO-09-6007
232429002	CAMO-09-6006
232429003	CAMO-09-6008
232429004	CAMO-09-6009
232429005	CAMO-09-6034
232429006	CAMO-09-6043
232429007	CAMO-09-6045
232429008	CAMO-09-6041
232429009	CAMO-09-6040
232429010	CAMO-09-6044
232429011	CAMO-09-6035
232429012	CAMO-09-6038
232429013	CAMO-09-9039
232429014	CAMO-09-6042
232429015	CAMO-09-6049
232432001	CAMO-09-6054

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry, Metals and Perchlorates by LCMSMS.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

List of current GEL Certifications as of 27 June 2009

State	Certification
Arizona	AZ0668
Arkansas	88–0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH–0169
Dept. of Navy	NFESC 413
EPA Region 5	WG–15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C–SC–01
Kansas – NELAP	E–10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M–SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68–00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235–07B–TX
U.S. Dept. of Agriculture	S–52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2478

REQUEST NUMBER: 09-2478

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS: 232429, 232432 ✓.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	POLY	METALS+7196	Ice	R
CAMO-09-6007	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6006	1	POLY	METALS+7196	Ice	R
CAMO-09-6006	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6008	1	POLY	METALS+7196	Ice	R
CAMO-09-6008	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6009	1	POLY	METALS+7196	Ice	R
CAMO-09-6009	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6034	1	POLY	METALS+7196	Ice	R
CAMO-09-6034	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6043	1	POLY	METALS+7196	Ice	R
CAMO-09-6043	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6045	1	POLY	METALS+7196	Ice	R
CAMO-09-6045	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6041	1	POLY	METALS+7196	Ice	R
CAMO-09-6041	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6040	1	POLY	METALS+7196	Ice	R
CAMO-09-6040	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6044	1	POLY	METALS+7196	Ice	R
CAMO-09-6044	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6035	1	POLY	METALS+7196	Ice	R
CAMO-09-6035	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6038	1	POLY	METALS+7196	Ice	R
CAMO-09-6038	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6039	1	POLY	METALS+7196	Ice	R
CAMO-09-6039	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6042	1	POLY	METALS+7196	Ice	R
CAMO-09-6042	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6049	1	POLY	METALS+7196	Ice	R
CAMO-09-6049	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6054	1	POLY	METALS-GEL	Nitric Acid	W

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2478

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6054	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-6054	1	POLY	SW-846:6850	Ice	W
CAMO-09-6054	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:		Date	Time	Received By:		Date	Time
		6/25/09	1400	Patricia Dent	P. Dent	6/26/09	08:40
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2478

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	EPA:353.2	1	CAMO-09-6054	W	6/23/2009	
	SW-846:6010B	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:6020	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:6850	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:7196A	1	CAMO-09-6006	R	6/23/2009	

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REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7196A	1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	SW-846:7471A	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7471A	1	CAMO-09-6049	R	6/23/2009	
	SW-846:9012A	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
		1	CAMO-09-6054	W	6/23/2009	
	SW-846:9045C	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2478

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9045C	1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2478

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2478**
Received By: Patricia Dent	**Date Received: JUNE 26, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,3,6,23,24C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5664 6C
7209 7847 5642 2C
7209 7847 5572 24C
7209 7847 5609 3C
7209 7847 5561 23C
7209 7847 5594 3C
7209 7847 5583 3C
7209 7847 5653 2C

PM (or PMA) review: Initials PCL Date 23 Jun 09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 56.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018amr2a0512bgdo

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

FRI
Deliver By:
26JUN09

TRK# 7288 7847 5664 Form 0201

CHS A1

29407 -SC-US XX CHSA

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 18.0 LB MP
System#: 8014176/C
Account: S *******

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 5
Fe

2°C

Ref: 6b018amr2a0512bgdo

Delivery Bar

BILL S

PRIORITY OVERNIGHT

TRK# 7288 7847 5642 Form 0201

CHS

29407 -SC-US XX CHS

Part # 150140-434 NRST V3 04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 29.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

(843) 556-8171

FedEx Express

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

Ref: 6b010amr1a05101cor

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY OVERNIGHT

FRI
Deliver By:
26JUN09

TRK# 7209 7847 5572 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 158148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 51.0 LB MAN
System#: 0014176/CAF
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-
Fed
Ex

Ref: 6b010amr1a015agumo

Delivery Addr Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

FRI
Deliver
26JUN0

TRK# 7209 7847 5609 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 158148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 55.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

CLS08/18/7/22/23

Ref: 6b018aar1a85181ooo

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

FRI
Deliver By:
26JUN09

TRK# 7209 7847 5561 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 52.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

CLS08/18/7/22/23

Ref: 6b018aae61115700

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

FRI
Deliver By:
26JUN09

TRK# 7209 7847 5594 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 53.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018aum61115700

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7280 7847 5583 Form 0201

FRI
Deliver By:
26JUN09

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 51.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018aur2a0512bgdo

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7280 7847 5653 Form 0201

FRI
Deliver By:
26JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2478

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881213
Prep Batch Number:	881212

Sample Analysis

Sample ID	**Client ID**
232429001	CAMO-09-6007
232429002	CAMO-09-6006
232429003	CAMO-09-6008
232429004	CAMO-09-6009
232429005	CAMO-09-6034
232429006	CAMO-09-6043
232429007	CAMO-09-6045
232429008	CAMO-09-6041
232429009	CAMO-09-6040
232429010	CAMO-09-6044
232429011	CAMO-09-6035
232429012	CAMO-09-6038
232429013	CAMO-09-9039
232429014	CAMO-09-6042

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232429015	CAMO-09-6049
1201871408	Interference Check Sample (ICS)
1201871404	Method Blank (MB)
1201871405	Laboratory Control Sample (LCS)
1201871406	232429001(CAMO-09-6007) Matrix Spike (MS)
1201871407	232429001(CAMO-09-6007) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

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QC Sample Designation
Sample 232429001 (CAMO-09-6007) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

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Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards Prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert N Maue **Date:** 07/09/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6007

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 95.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	0.522	ug/kg	U	1	07-JUL-09 13:02	per0707018a
	Perchlorate-O(18)			5.10	ug/kg		1	07-JUL-09 13:02	per0707018a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6006

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429002

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.564	2.26	0.564	ug/kg	U	1	07-JUL-09 13:25	per0707021a
	Perchlorate-O(18)			5.20	ug/kg		1	07-JUL-09 13:25	per0707021a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6008

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429003

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 77

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.65	2.6	0.650	ug/kg	U	1	07-JUL-09 13:56	per0707025a
	Perchlorate-O(18)			6.17	ug/kg		1	07-JUL-09 13:56	per0707025a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6009

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429004

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 83

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.602	2.41	0.602	ug/kg	U	1	07-JUL-09 14:04	per0707026a
	Perchlorate-O(18)			5.74	ug/kg		1	07-JUL-09 14:04	per0707026a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6034

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429005

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 78

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.644	2.58	0.644	ug/kg	U	1	07-JUL-09 14:12	per0707027a
	Perchlorate-O(18)			6.56	ug/kg		1	07-JUL-09 14:12	per0707027a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6043

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429006

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 92.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	07-JUL-09 14:20	per0707028a
	Perchlorate-O(18)			5.23	ug/kg		1	07-JUL-09 14:20	per0707028a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6045

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429007

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 92

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	07-JUL-09 14:28	per0707029a
	Perchlorate-O(18)			5.10	ug/kg		1	07-JUL-09 14:28	per0707029a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6041

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429008

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 94.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.527	2.11	0.527	ug/kg	U	1	07-JUL-09 14:35	per0707030a
	Perchlorate-O(18)			5.03	ug/kg		1	07-JUL-09 14:35	per0707030a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6040

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429009

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 73

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.687	2.75	0.921	ug/kg	J	1	07-JUL-09 14:43	per0707031a
	Perchlorate-O(18)			7.03	ug/kg		1	07-JUL-09 14:43	per0707031a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6044

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429010

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 87

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.573	2.29	1.60	ug/kg	J	1	07-JUL-09 14:51	per0707032a
	Perchlorate-O(18)			5.83	ug/kg		1	07-JUL-09 14:51	per0707032a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6035

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429011

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 96

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.521	2.08	0.521	ug/kg	U	1	07-JUL-09 14:59	per0707033a
	Perchlorate-O(18)			4.99	ug/kg		1	07-JUL-09 14:59	per0707033a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6038

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429012

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 75

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.669	2.67	0.669	ug/kg	U	1	07-JUL-09 15:06	per0707034a
	Perchlorate-O(18)			6.22	ug/kg		1	07-JUL-09 15:06	per0707034a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9039

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429013

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 90.9

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.55	2.2	0.550	ug/kg	U	1	07-JUL-09 15:37	per0707038a
	Perchlorate-O(18)			5.25	ug/kg		1	07-JUL-09 15:37	per0707038a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6042

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429014

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 82

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.608	2.43	0.608	ug/kg	U	1	07-JUL-09 15:45	per0707039a
	Perchlorate-O(18)			5.74	ug/kg		1	07-JUL-09 15:45	per0707039a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6049

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429015

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 88

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.565	2.26	0.565	ug/kg	U	1	07-JUL-09 15:53	per0707040a
	Perchlorate-O(18)			5.19	ug/kg		1	07-JUL-09 15:53	per0707040a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2478

Extract Batch Code: 881212

Date Filtered: 30–JUN–09

Matrix: SOIL

Sample ID: 1201871405

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.05	ug/kg	102		70 – 130
Perchlorate–O(18)		4.85	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2478

Extract Batch Code: 881212

Date Filtered: 30–JUN–09

Matrix: SOIL

Sample ID: 1201871408

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.39	ug/kg	120		70 – 130
Perchlorate–O(18)		5.28	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707014a
Date: 07-Jul-2009
Time: 11:52:19
ID: 1201871408
Vial: 1:3,C

| LANL | 881213 | 50120 | TIS | 11

AWJ 07-08-09

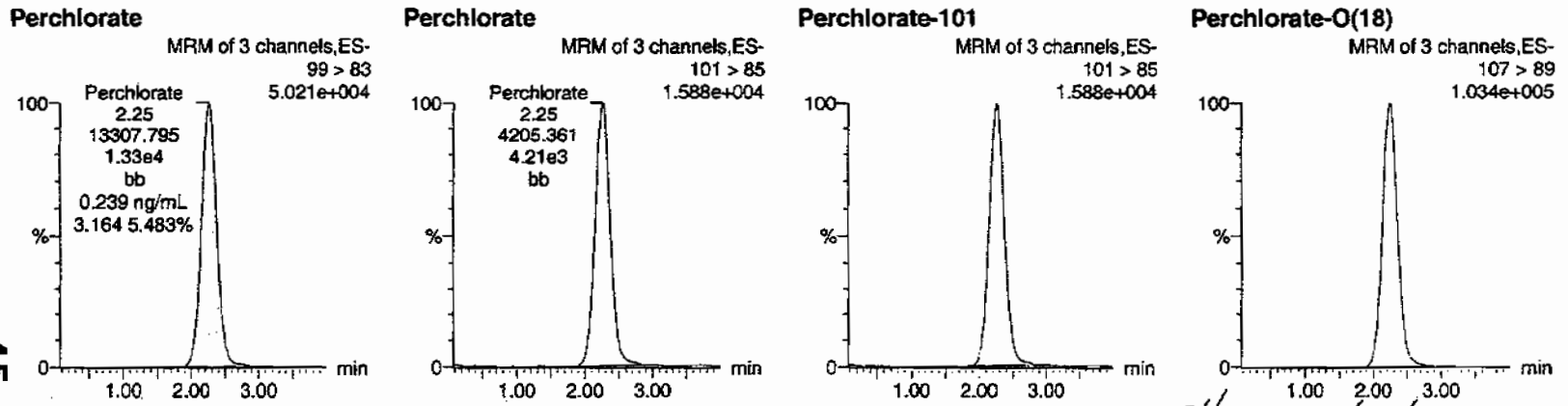

HNM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871408	Perchlorate	99 > 83	2.25	13307.795	13307.795	bb			0.2391	119.56	19.56	2590.8...	3.16
1201871408	Perchlorate-101	101 > 85	2.25	4205.361	4205.361	bb			0.2227	111.35	11.35	2106.0...	
1201871408	Perchlorate-O(18)	107 > 89	2.24	27200.326	27200.326	bb			0.5277	105.54	5.54	6209.6...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2478

Extract Batch Code: 881212

Date Extracted: 30–JUN–09

GEL MS/PS ID: 1201871406

Client ID: CAMO–09–6007

GEL MSD/PSD ID: 1201871407

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.09	0.350	ug/kg	2.48	102	2.51	103	1.22	30	75 – 125
Perchlorate–O(18)	0	5.10	ug/kg	5.16		5.12		.956		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2478

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	07–JUL–09	per0707001a	IPB001
Perchlorate–101	0.00	0	NA	07–JUL–09	per0707001a	IPB001
Perchlorate	0.00	0	NA	07–JUL–09	per0707002a	IPB001
Perchlorate–101	0.00	0	NA	07–JUL–09	per0707002a	IPB001

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070709a.mdb 07 Jul 2009 10:05:35
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070709a.cdb 08 Jul 2009 11:12:39

Name: per0707001a
Date: 07-Jul-2009
Time: 10:11:48
ID: IPB001
Vial: 1:1,A

cwo
07-08-09

Perchlorate

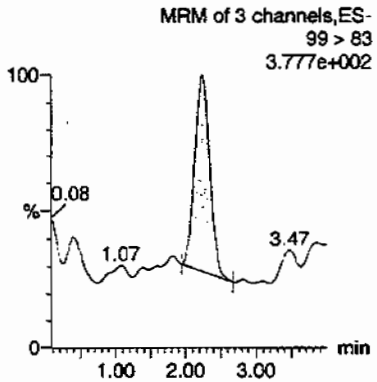

Perchlorate

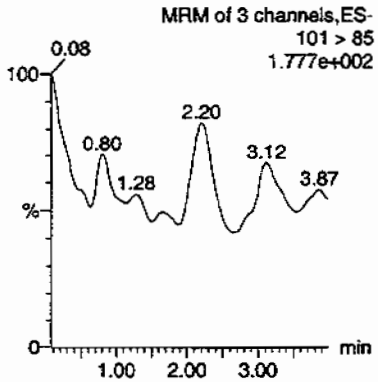

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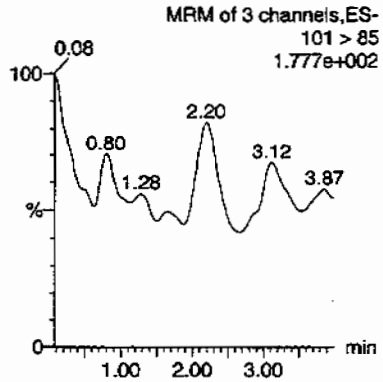

Perchlorate-O(18)

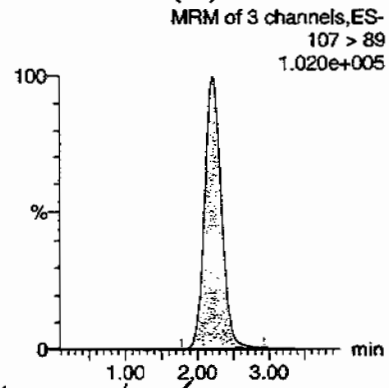

Hmc 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.24	67.591	67.591	bb			0.0012			12.969	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.22	27597.391	27597.391	bb			0.5354	107.08	7.08	9895.4...	

48

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707002a
Date: 07-Jul-2009
Time: 10:19:33
ID: IPB001
Vial: 1:1,A

cwo 07-08-09

Perchlorate

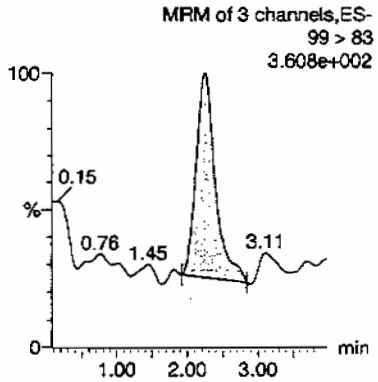

Perchlorate

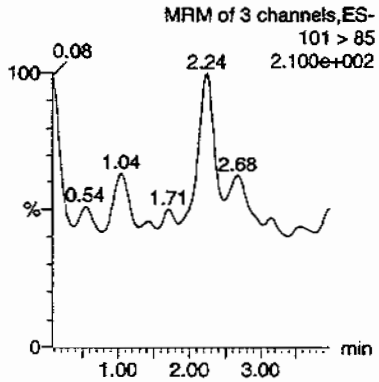

Perchlorate-101

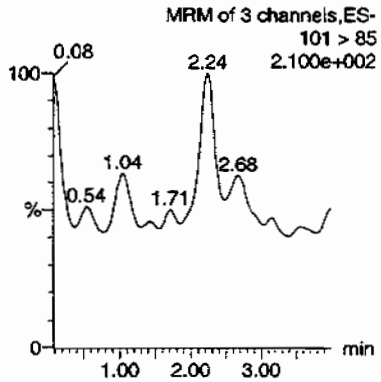

Perchlorate-O(18)

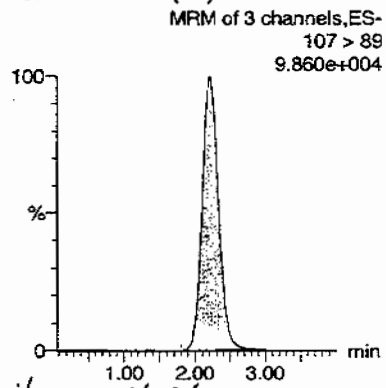

Hmw 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.24	85.770	85.770	bb			0.0015			16.003	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.22	26461.072	26461.072	bb			0.5134	102.67	2.67	5056.4...	

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2478

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	07-JUL-09	per0707008a	IPB002
Perchlorate-101	0.00	0	NA	07-JUL-09	per0707008a	IPB002
Perchlorate	0.00	0	NA	07-JUL-09	per0707010a	IPB003
Perchlorate-101	0.00	0	NA	07-JUL-09	per0707010a	IPB003
Perchlorate	0.00	0	NA	07-JUL-09	per0707023a	IPB004
Perchlorate-101	0.00	0	NA	07-JUL-09	per0707023a	IPB004
Perchlorate	0.00	0	NA	07-JUL-09	per0707036a	IPB005
Perchlorate-101	0.00	0	NA	07-JUL-09	per0707036a	IPB005
Perchlorate	0.00	0	NA	07-JUL-09	per0707041a	IPB006
Perchlorate-101	0.00	0	NA	07-JUL-09	per0707041a	IPB006
Perchlorate	0.00	0	NA	07-JUL-09	per0707049a	IPB007
Perchlorate-101	0.00	0	NA	07-JUL-09	per0707049a	IPB007

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707008a
Date: 07-Jul-2009
Time: 11:05:51
ID: IPB002
Vial: 1:1,A

CWW 07-08-09

Perchlorate

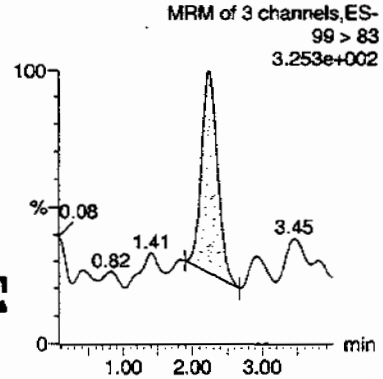

Perchlorate

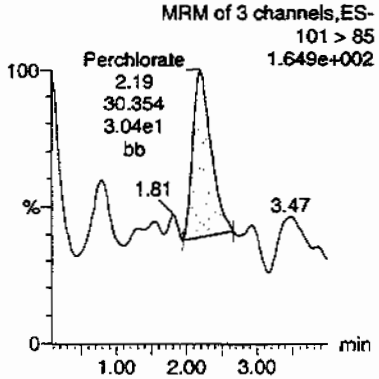

Perchlorate-101

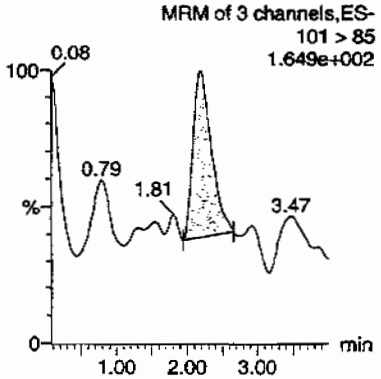

Perchlorate-O(18)

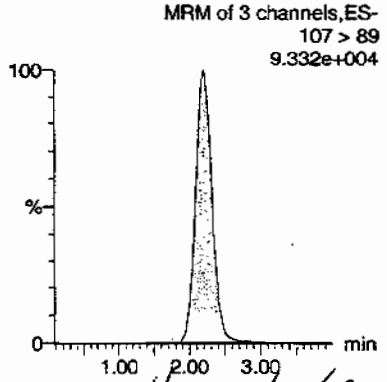

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.24	64.888	64.888	bb			0.0012			13.648	2.14
IPB002	Perchlorate-101	101 > 85	2.19	30.354	30.354	bb			0.0016			12.329	
IPB002	Perchlorate-O(18)	107 > 89	2.20	25095.828	25095.828	bb			0.4869	97.38 *	-2.62	3190.0...	

OKAY LQ 0500

51

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707010a
Date: 07-Jul-2009
Time: 11:21:19
ID: IPB003
Vial: 1:1,A

CWW 09 08 09

Perchlorate

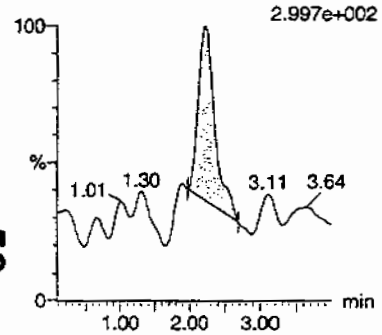

Perchlorate

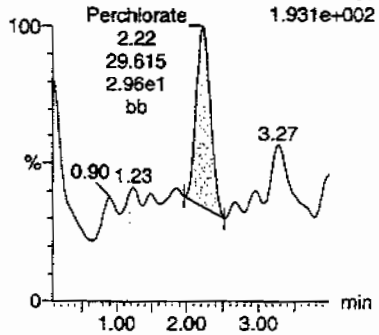

Perchlorate-101

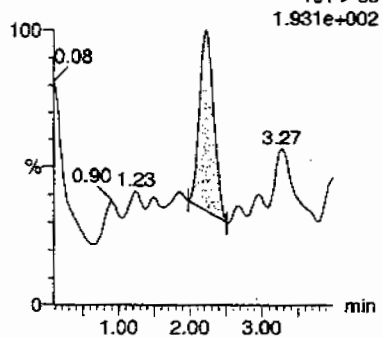

Perchlorate-O(18)

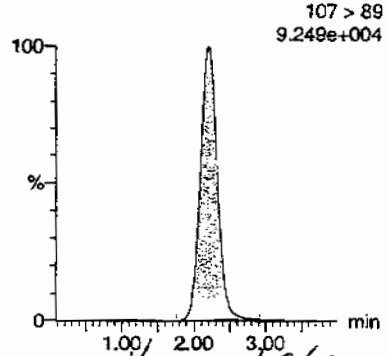

HMK 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.22	52.556	52.556	bb			0.0009			24.634	1.77
IPB003	Perchlorate-101	101 > 85	2.22	29.615	29.615	bb			0.0016			13.335	
IPB003	Perchlorate-O(18)	107 > 89	2.20	24986.230	24986.230	bb			0.4848	96.95	-3.05	9199.0...	

52

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707023a
Date: 07-Jul-2009
Time: 13:41:23
ID: IPB004
Vial: 1:1,A

CWW 07-08-09

Perchlorate

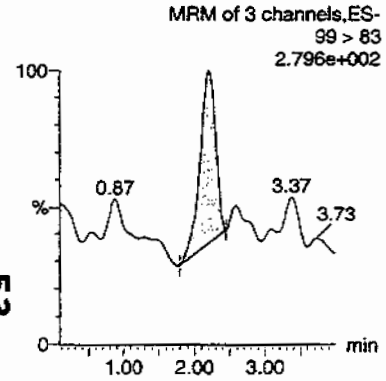

Perchlorate

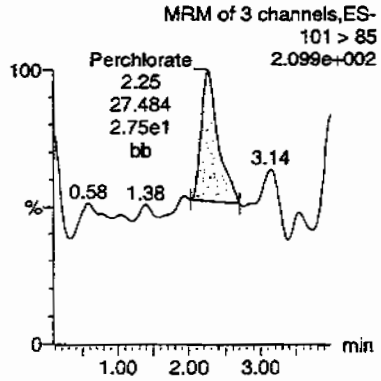

Perchlorate-101

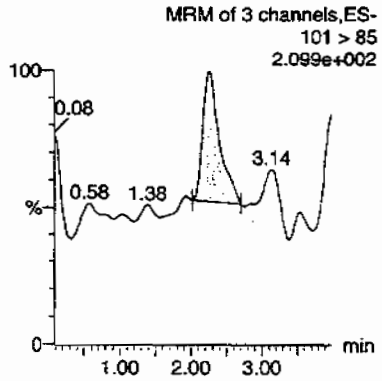

Perchlorate-O(18)

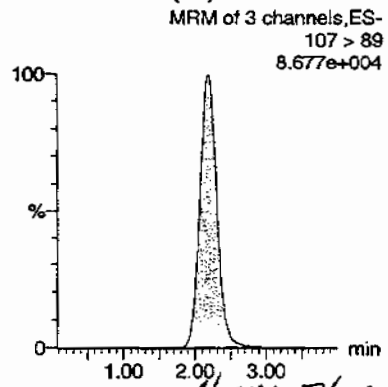

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.20	46.044	46.044	bb			0.0008			21.132	1.68
IPB004	Perchlorate-101	101 > 85	2.25	27.484	27.484	bb			0.0015			16.919	
IPB004	Perchlorate-O(18)	107 > 89	2.18	23486.318	23486.318	bb			0.4557	91.13	-8.87	3147.8...	

OK 84
LO 0300

53

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707036a
Date: 07-Jul-2009
Time: 15:22:19
ID: IPB005
Vial: 1:1,A

CWW 07-08-09

Perchlorate

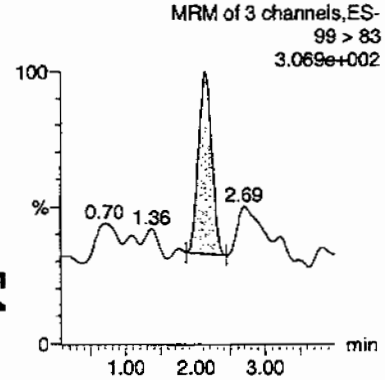

Perchlorate

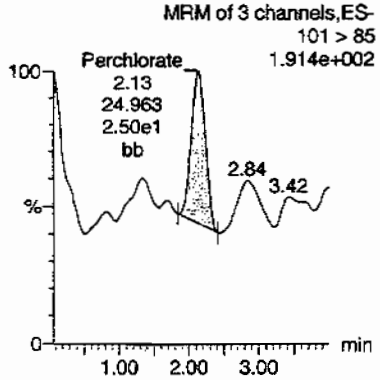

Perchlorate-101

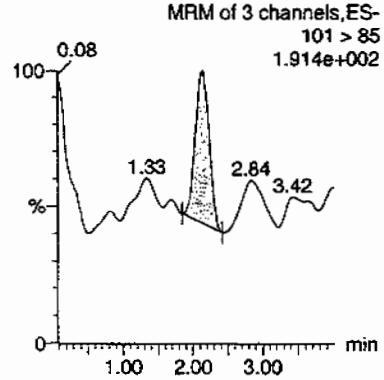

Perchlorate-O(18)

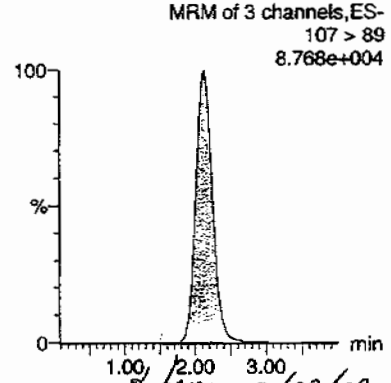

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83	2.13	46.399	46.399	bb			0.0008			15.620	1.86
IPB005	Perchlorate-101	101 > 85	2.13	24.963	24.963	bb			0.0013			19.459	
IPB005	Perchlorate-O(18)	107 > 89	2.13	23741.521	23741.521	bb			0.4606	92.12	-7.88	8976.4...	

OKAY LO 0.50

54

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707041a
Date: 07-Jul-2009
Time: 16:01:12
ID: IPB006
Vial: 1:1,A

Perchlorate

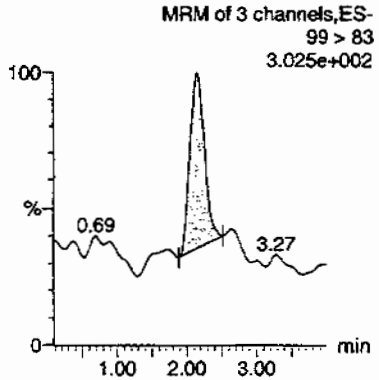

Perchlorate

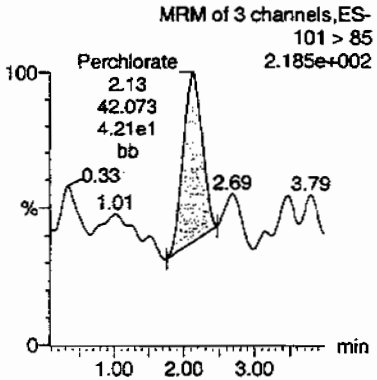

Perchlorate-101

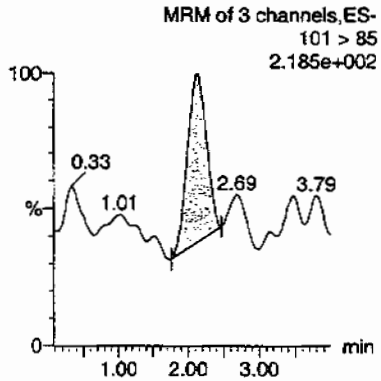

Perchlorate-O(18)

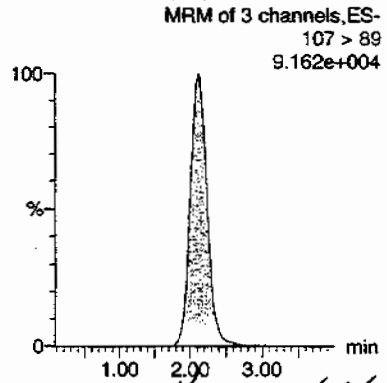

HMM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	2.14	47.443	47.443	bb			0.0009			52.021	1.13
IPB006	Perchlorate-101	101 > 85	2.13	42.073	42.073	bb			0.0022			5.849	
IPB006	Perchlorate-O(18)	107 > 89	2.12	24423.783	24423.783	bb			0.4738	94.77	-5.23	6553.7...	

okay
LO.0500

55

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707049a
Date: 07-Jul-2009
Time: 17:03:43
ID: IPB007
Vial: 1:1,A

CWW
07-08-09

Perchlorate

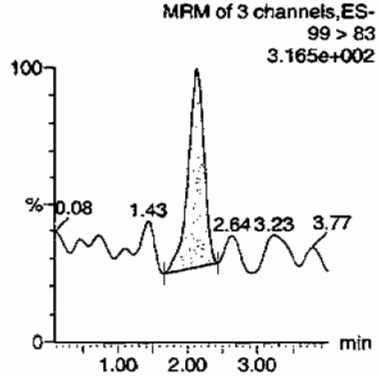

Perchlorate

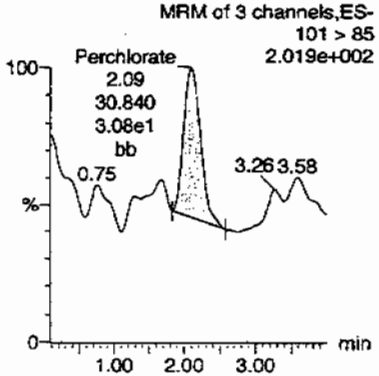

Perchlorate-101

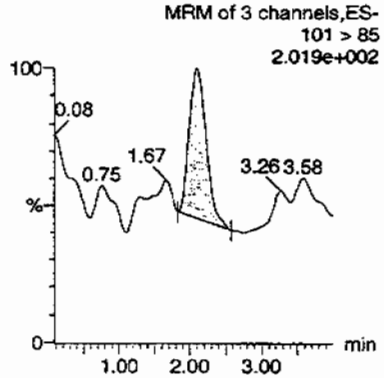

Perchlorate-O(18)

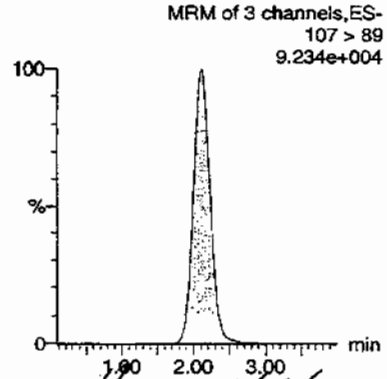

Hmm 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83	2.13	61.301	61.301	bb			0.0011			16.817	1.99
IPB007	Perchlorate-101	101 > 85	2.09	30.840	30.840	bb			0.0016			9.631	
IPB007	Perchlorate-O(18)	107 > 89	2.12	24531.676	24531.676	bb			0.4759	95.19	-4.81	14038....	

OKAY
LO.0500

56

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWJ 01.01.08

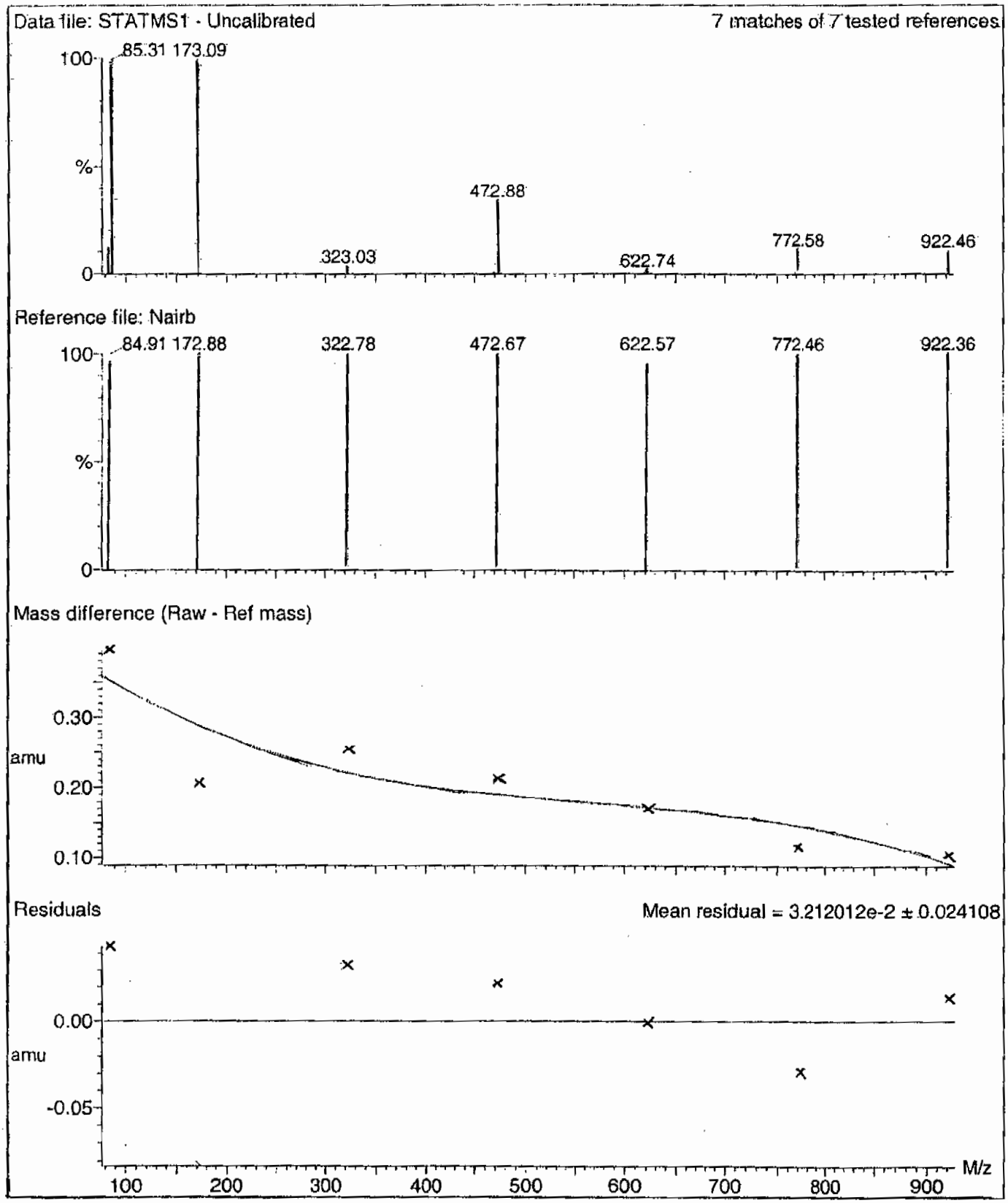

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

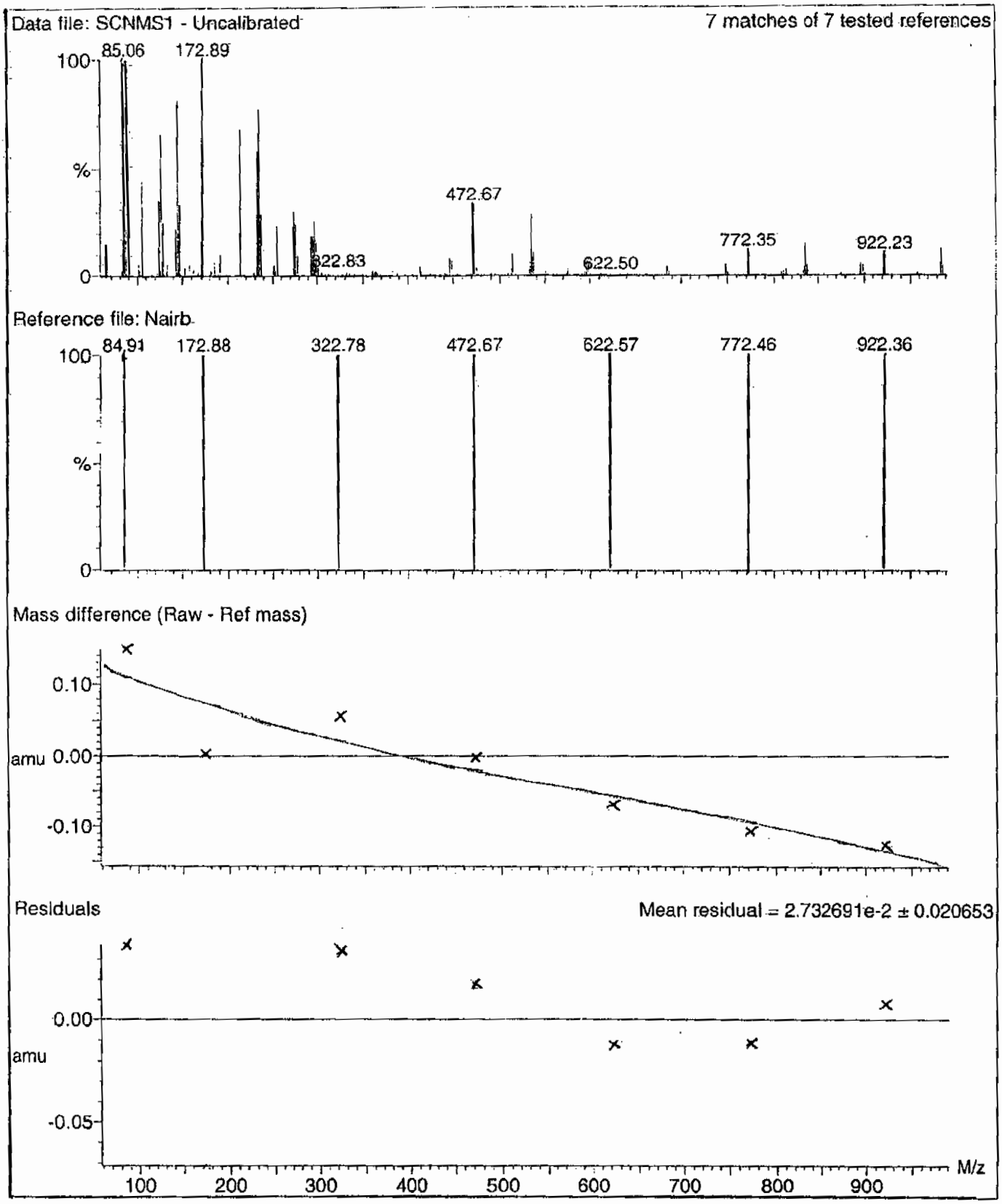

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Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

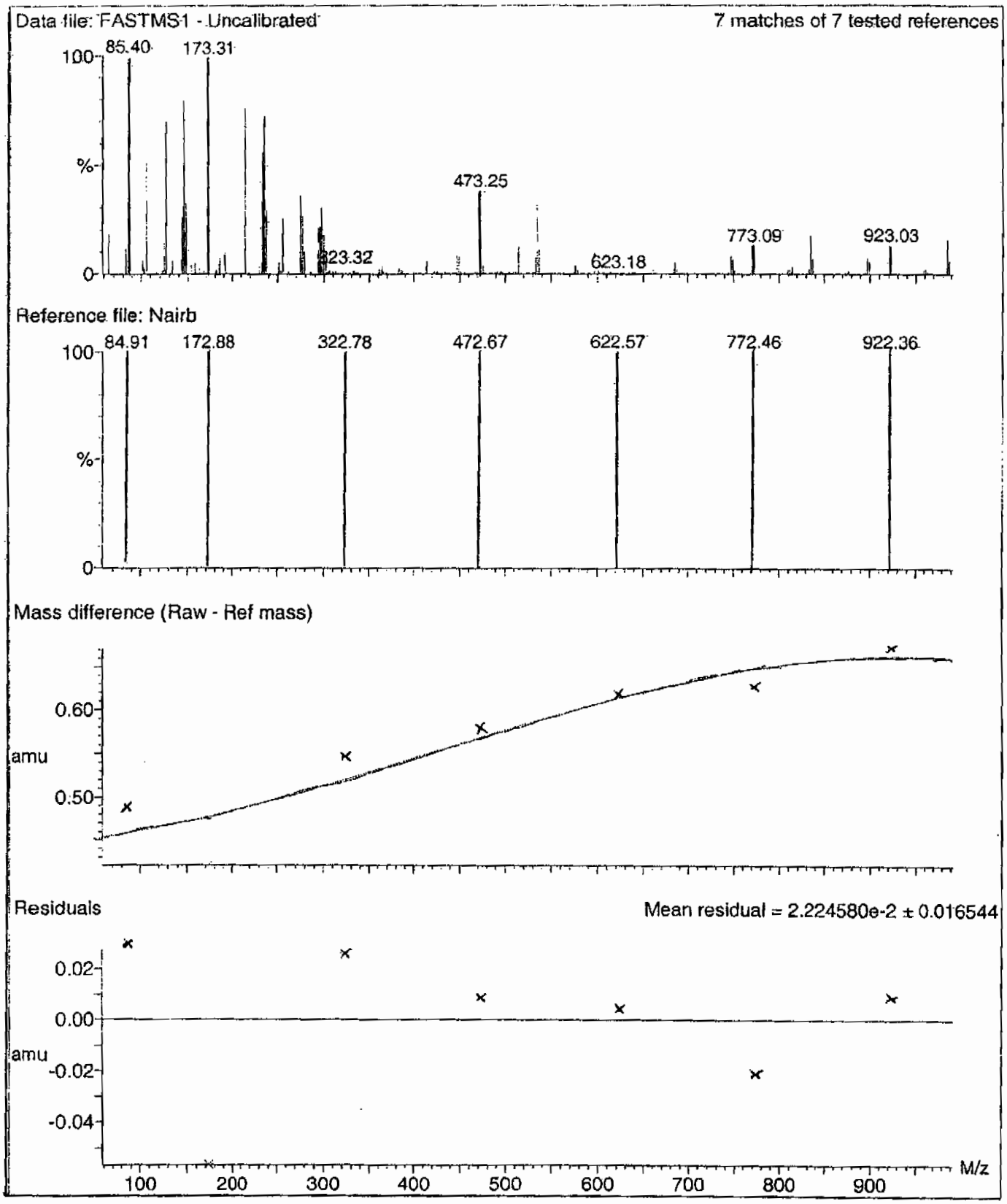

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Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

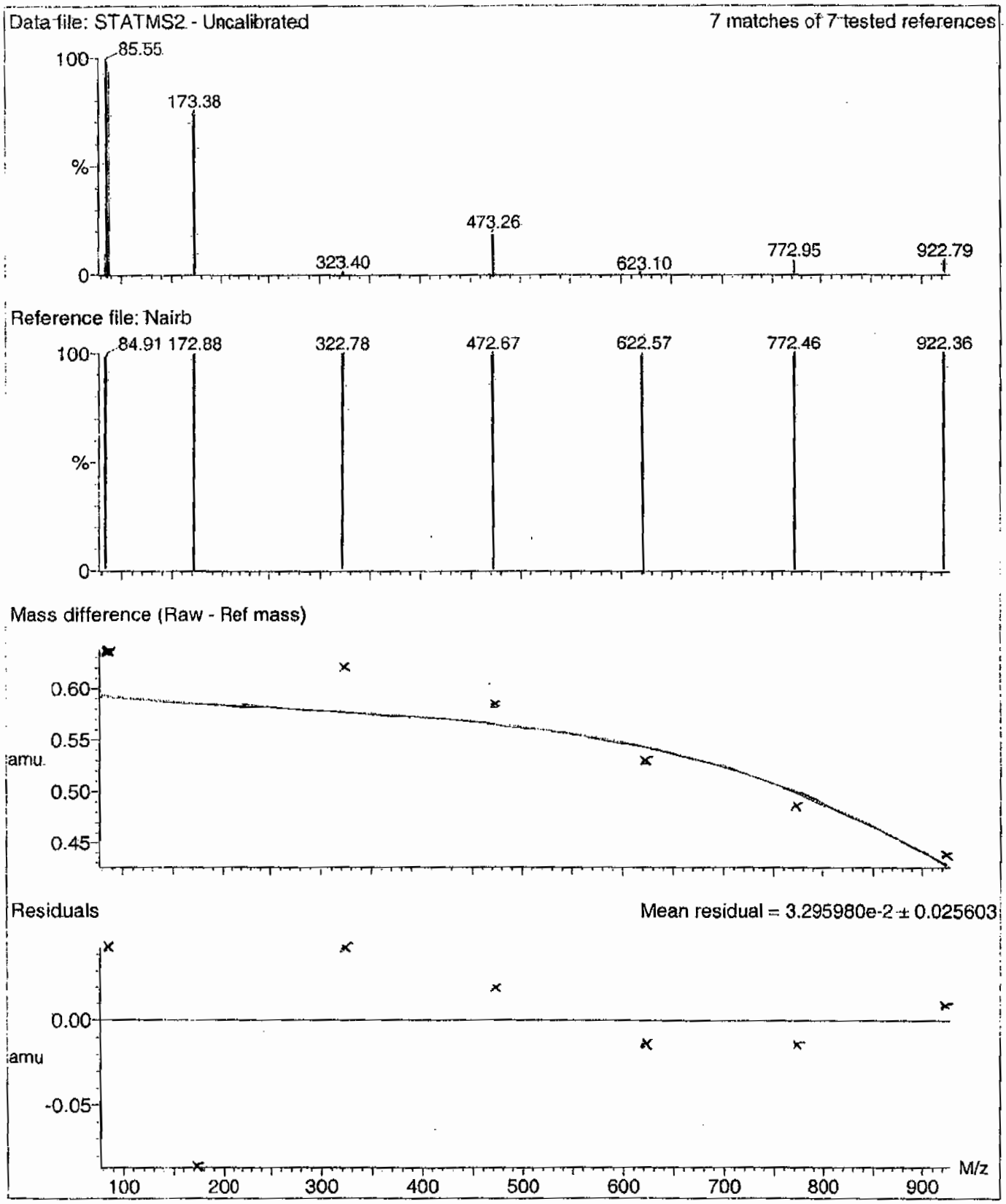

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Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

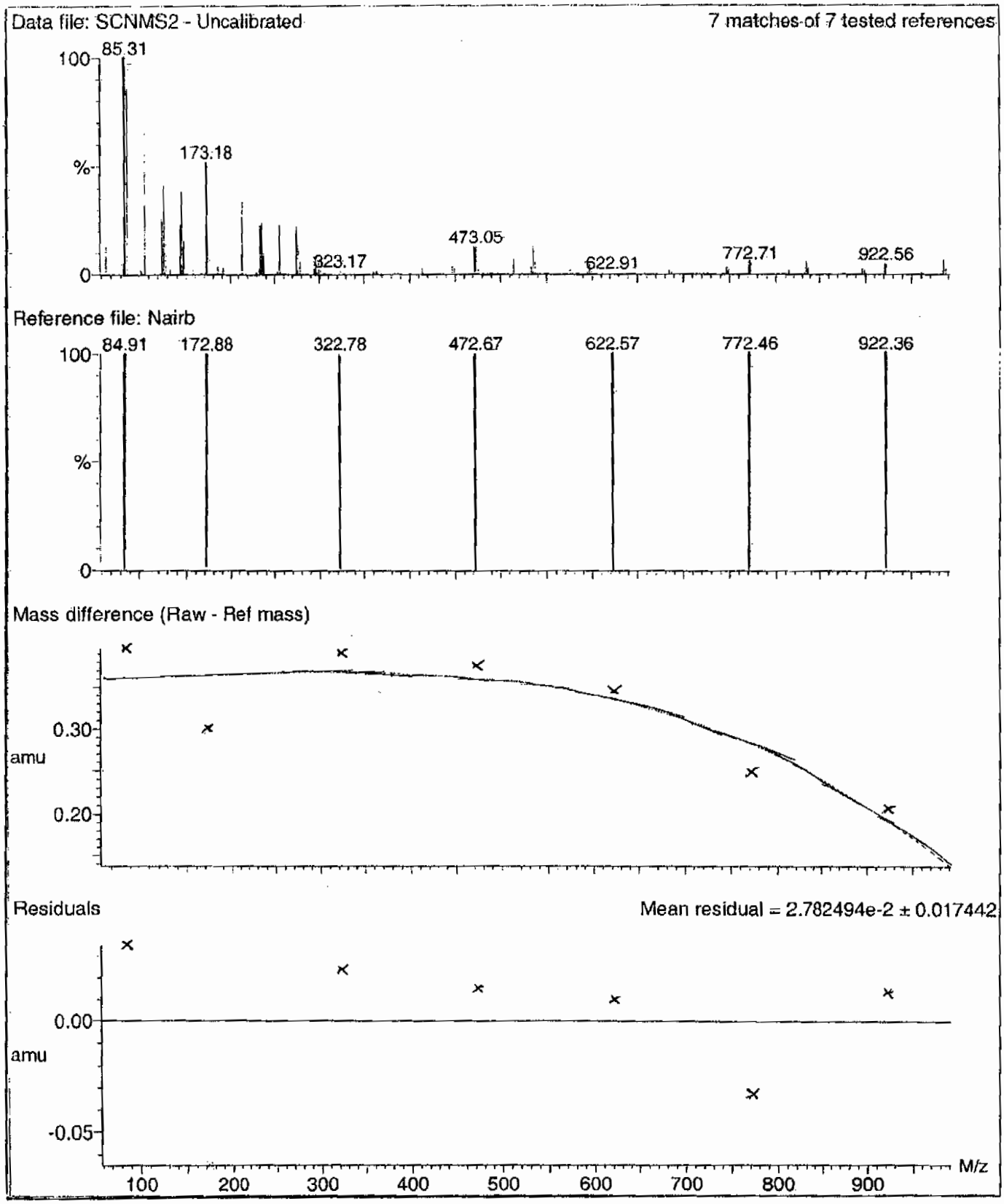

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Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

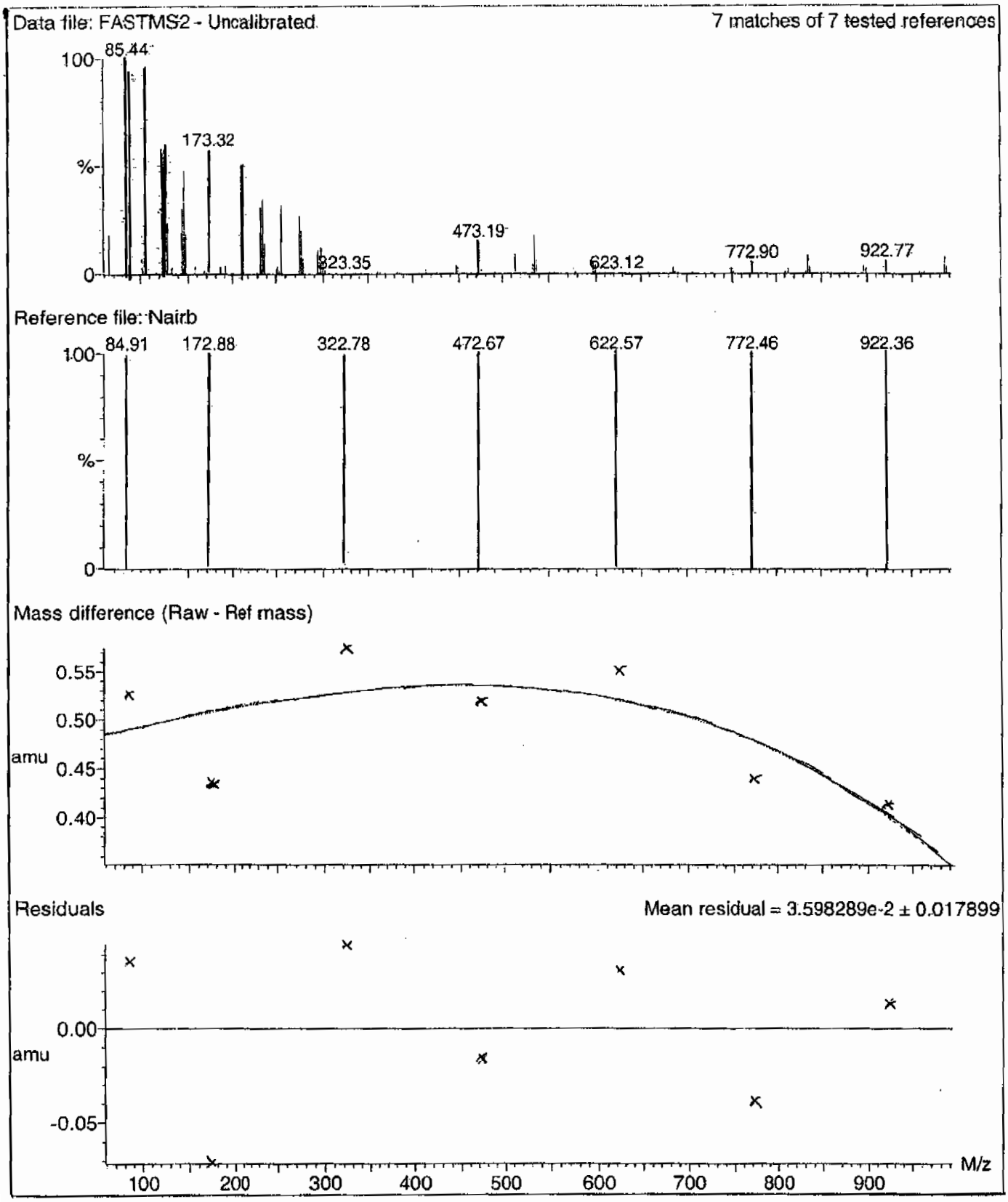

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Tuesday, July 07, 2009 09:02:03 Eastern Daylight Time

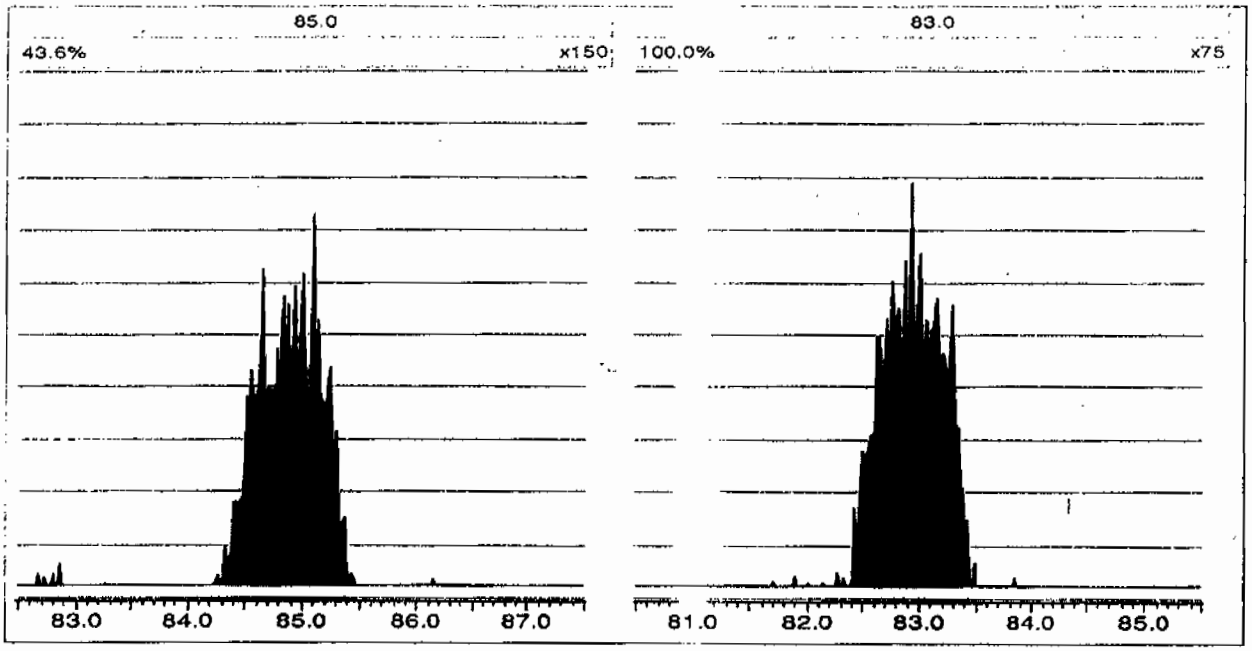

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2478

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0707006a**	**07–JUL–09**	**25911.2**				
Lower Area Limit			**12955.6**				
Upper Area Limit			**51822.4**				
1201871404	per0707012a	07–JUL–09 11:36	24962.2	2.2	2.21573	1.007	
1201871405	per0707013a	07–JUL–09 11:44	24984.7	2.19	2.21577	1.012	
1201871408	per0707014a	07–JUL–09 11:52	27200.3	2.24	2.25302	1.006	
232429001	per0707018a	07–JUL–09 13:02	25144.2	2.19	2.2034	1.006	
1201871406	per0707019a	07–JUL–09 13:10	25484.1	2.32	2.3152	.998	
1201871407	per0707020a	07–JUL–09 13:17	25241.5	2.19	2.20342	1.006	
232429002	per0707021a	07–JUL–09 13:25	23739.4	2.18	2.20338	1.011	
232429003	per0707025a	07–JUL–09 13:56	24462.2	2.18	2.19095	1.005	

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Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2478

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0707006a**	**07–JUL–09**	**25911.2**				
Lower Area Limit			**12955.6**				
Upper Area Limit			**51822.4**				
232429004	per0707026a	07–JUL–09 14:04	24571.9	2.18	2.20338	1.011	
232429005	per0707027a	07–JUL–09 14:12	26253.8	2.18	2.19092	1.005	
232429006	per0707028a	07–JUL–09 14:20	24836.4	2.17	2.17848	1.004	
232429007	per0707029a	07–JUL–09 14:28	24179.9	2.15	2.17845	1.013	
232429008	per0707030a	07–JUL–09 14:35	24567	2.17	2.17848	1.004	
232429009	per0707031a	07–JUL–09 14:43	26343	2.17	2.1785	1.004	
232429010	per0707032a	07–JUL–09 14:51	26206.7	2.14	2.1537	1.006	
232429011	per0707033a	07–JUL–09 14:59	24688.3	2.13	2.12887	.999	

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Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2478

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0707006a**	**07–JUL–09**	**25911.2**				
Lower Area Limit			**12955.6**				
Upper Area Limit			**51822.4**				
232429012	per0707034a	07–JUL–09 15:06	23994.5	2.13	2.12883	.999	
232429013	per0707038a	07–JUL–09 15:37	24588.7	2.13	2.14125	1.005	
232429014	per0707039a	07–JUL–09 15:45	24304.7	2.13	2.1412	1.005	
232429015	per0707040a	07–JUL–09 15:53	23666.3	2.12	2.12885	1.004	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6007

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 95.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	0.522	ug/kg	U	1	07-JUL-09 13:02	per0707018a
	Perchlorate-O(18)			5.10	ug/kg		1	07-JUL-09 13:02	per0707018a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707018a
Date: 07-Jul-2009
Time: 13:02:24
ID: 232429001
Vial: 1:4,A

|LANL|881213|50120|1|

cwo 07-08-09

Perchlorate

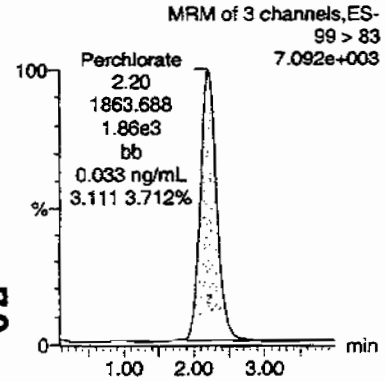

Perchlorate

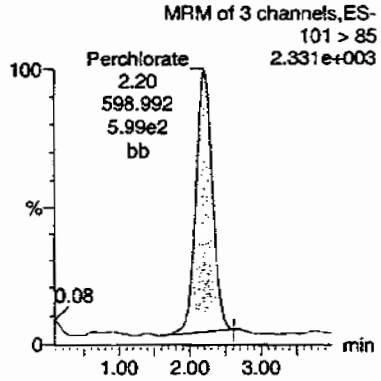

Perchlorate-101

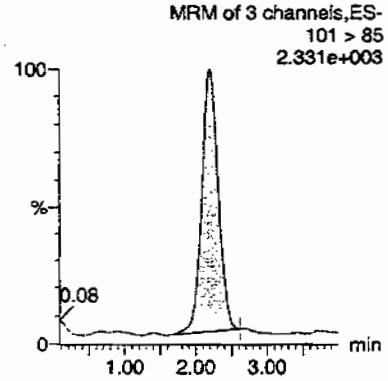

Perchlorate-O(18)

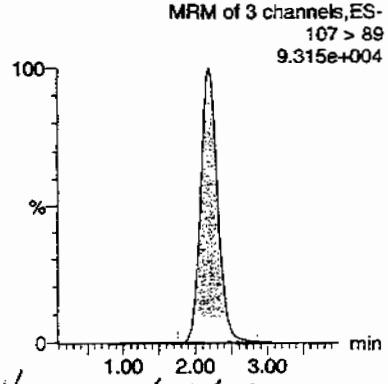

Hnm 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429001	Perchlorate	99 > 83	2.20	1863.688	1863.688	bb			0.0335			489.549	3.11
232429001	Perchlorate-101	101 > 85	2.20	598.992	598.992	bb			0.0317			330.950	
232429001	Perchlorate-O(18)	107 > 89	2.19	25144.225	25144.225	bb			0.4878	97.56	-2.44	3877.7...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6006

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429002

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.564	2.26	0.564	ug/kg	U	1	07-JUL-09 13:25	per0707021a
	Perchlorate-O(18)			5.20	ug/kg		1	07-JUL-09 13:25	per0707021a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707021a
Date: 07-Jul-2009
Time: 13:25:38
ID: 232429002
Vial: 1:4,D

|LANL|881213|50220|1|

CWW 07-08-09

Perchlorate

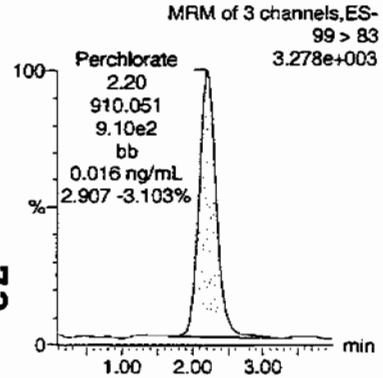

Perchlorate

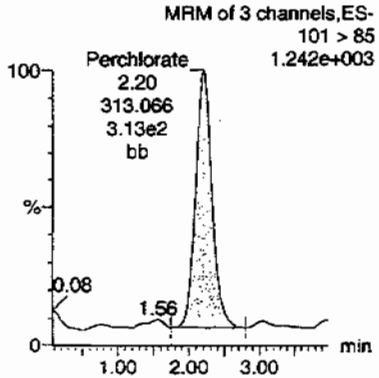

Perchlorate-101

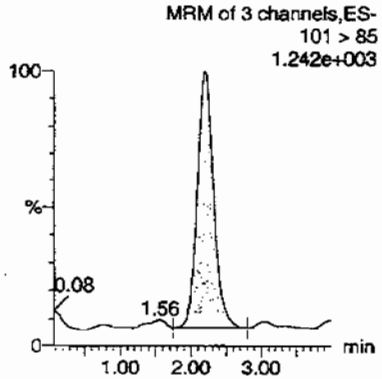

Perchlorate-O(18)

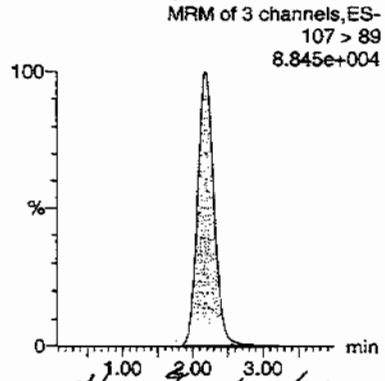

HMM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429002	Perchlorate	99 > 83	2.20	910.051	910.051	bb			0.0164			237.233	2.91
232429002	Perchlorate-101	101 > 85	2.20	313.066	313.066	bb			0.0166			207.875	
232429002	Perchlorate-O(18)	107 > 89	2.18	23739.408	23739.408	bb			0.4606	92.11	-7.89	3363.8...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6008

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429003

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 77

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.65	2.6	0.650	ug/kg	U	1	07-JUL-09 13:56	per0707025a
	Perchlorate-O(18)			6.17	ug/kg		1	07-JUL-09 13:56	per0707025a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707025a
Date: 07-Jul-2009
Time: 13:56:59
ID: 232429003
Vial: 1:4,E

|LANL| 881213 |SD20|1|

07-08-09

Perchlorate

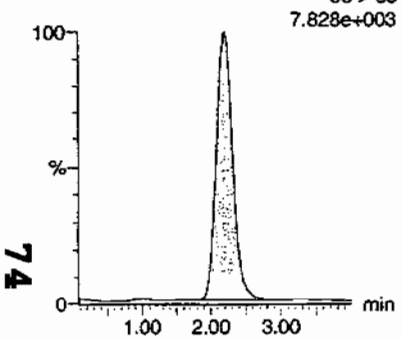

Perchlorate

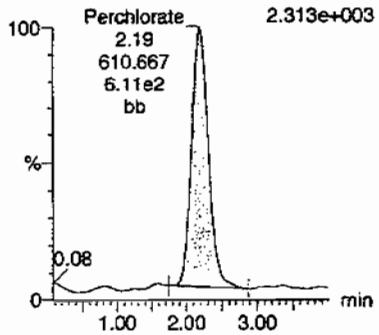

Perchlorate-101

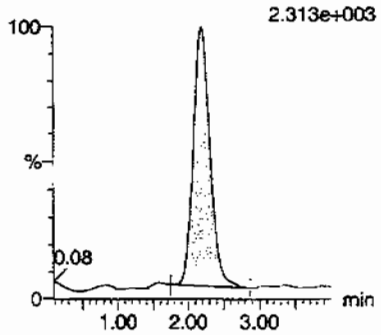

Perchlorate-O(18)

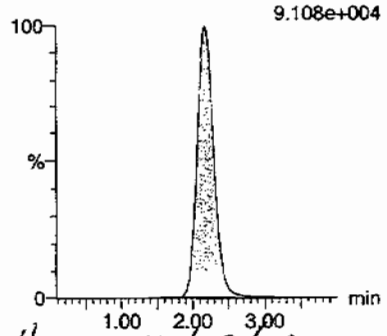

Hume 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429003	Perchlorate	99 > 83	2.19	2112.635	2112.635	bb			0.0380			776.896	3.46
232429003	Perchlorate-101	101 > 85	2.19	610.667	610.667	bb			0.0323			254.535	
232429003	Perchlorate-O(18)	107 > 89	2.18	24462.150	24462.150	bb			0.4746	94.92	-5.08	5007.6...	

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PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6009

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429004

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 83

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.602	2.41	0.602	ug/kg	U	1	07-JUL-09 14:04	per0707026a
	Perchlorate-O(18)			5.74	ug/kg		1	07-JUL-09 14:04	per0707026a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707026a
Date: 07-Jul-2009
Time: 14:04:42
ID: 232429004
Vial: 1:4,F

ILAN | 881213 | 50250 | 11

AWW 07-08-09

Perchlorate

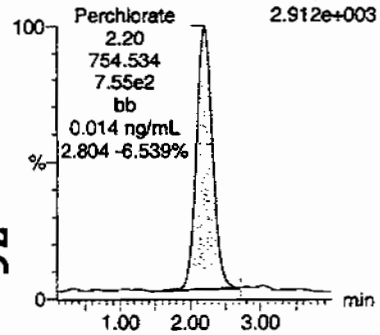

Perchlorate

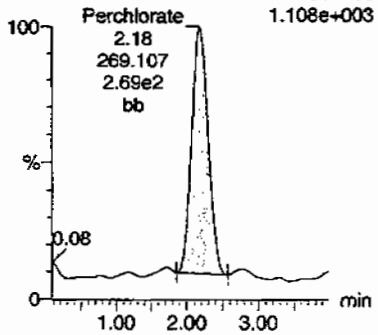

Perchlorate-101

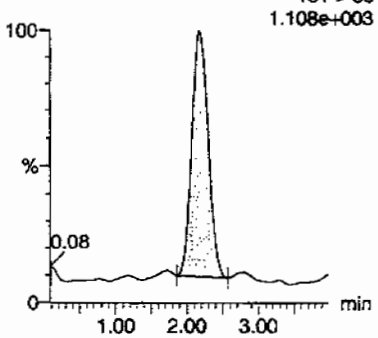

Perchlorate-O(18)

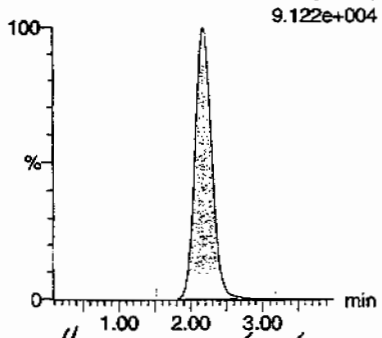

AMM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429004	Perchlorate	99 > 83	2.20	754.534	754.534	bb			0.0136			537.292	2.80
232429004	Perchlorate-101	101 > 85	2.18	269.107	269.107	bb			0.0143			71.526	
232429004	Perchlorate-O(18)	107 > 89	2.18	24571.898	24571.898	bb			0.4767	95.34	-4.66	5943.4...	

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PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6034

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429005

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 78

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.644	2.58	0.644	ug/kg	U	1	07-JUL-09 14:12	per0707027a
	Perchlorate-O(18)			6.56	ug/kg		1	07-JUL-09 14:12	per0707027a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707027a
Date: 07-Jul-2009
Time: 14:12:26
ID: 232429005
Vial: 1:5,A

| LAW | 881213 | 5020 | 11

CWW 07-08-09

Perchlorate

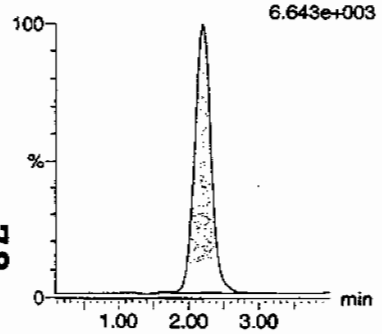

Perchlorate

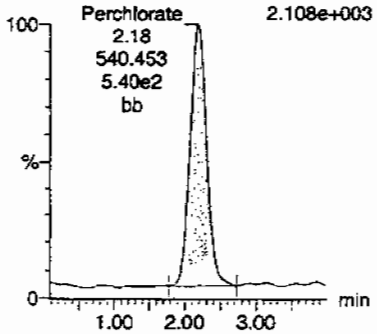

Perchlorate-101

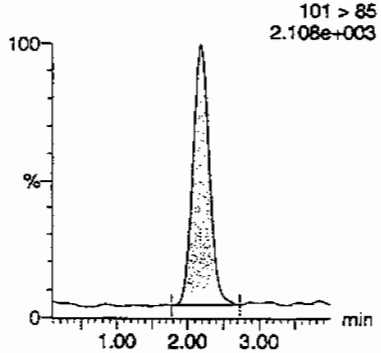

Perchlorate-O(18)

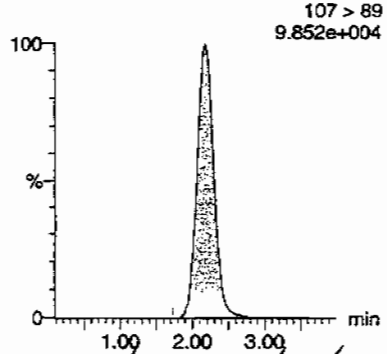

HMM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429005	Perchlorate	99 > 83	2.19	1788.634	1788.634	bb			0.0321			323.992	3.31
232429005	Perchlorate-101	101 > 85	2.18	540.453	540.453	bb			0.0286			256.224	
232429005	Perchlorate-O(18)	107 > 89	2.18	26253.795	26253.795	bb			0.5093	101.87	1.87	15929....	

78

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6043

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429006

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 92.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	07-JUL-09 14:20	per0707028a
	Perchlorate-O(18)			5.23	ug/kg		1	07-JUL-09 14:20	per0707028a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707028a
Date: 07-Jul-2009
Time: 14:20:12
ID: 232429006
Vial: 1:5,B

\LANL\881213\5020\11

CWW 07-08-09

Perchlorate

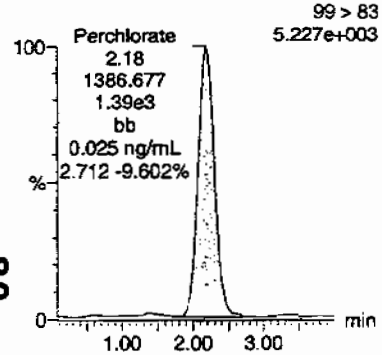

Perchlorate

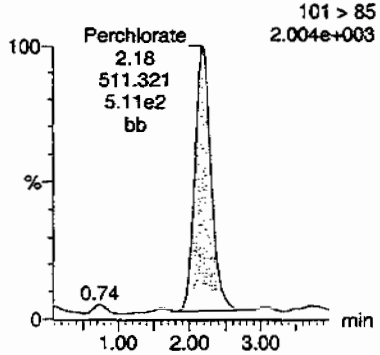

Perchlorate-101

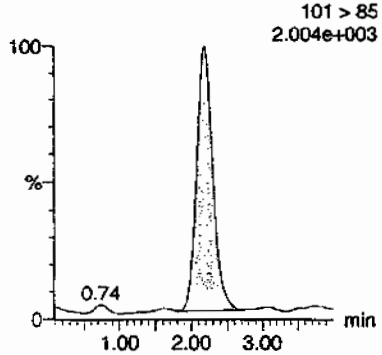

Perchlorate-O(18)

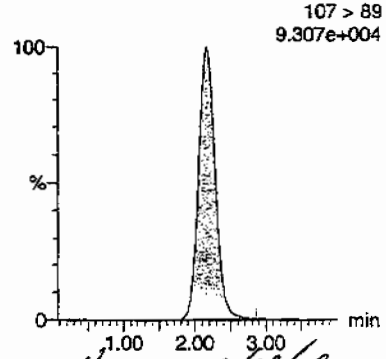

Hmm 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429006	Perchlorate	99 > 83	2.18	1386.677	1386.677	bb			0.0249			1031.6...	2.71
232429006	Perchlorate-101	101 > 85	2.18	511.321	511.321	bb			0.0271			499.761	
232429006	Perchlorate-O(18)	107 > 89	2.17	24836.422	24836.422	bb			0.4818	96.37	-3.63	4397.1...	

80

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6045

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429007

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 92

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	07-JUL-09 14:28	per0707029a
	Perchlorate-O(18)			5.10	ug/kg		1	07-JUL-09 14:28	per0707029a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707029a
Date: 07-Jul-2009
Time: 14:28:06
ID: 232429007
Vial: 1:5,C

1LANL 881213 SOLO 11

07-08-09

Perchlorate

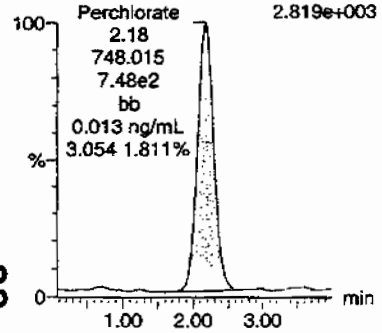

Perchlorate

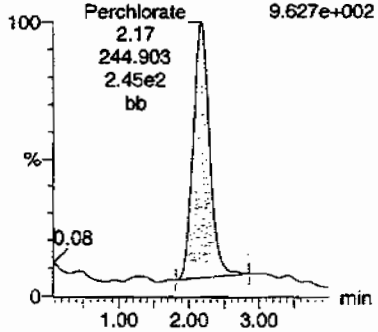

Perchlorate-101

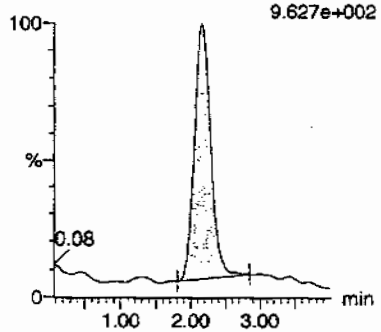

Perchlorate-O(18)

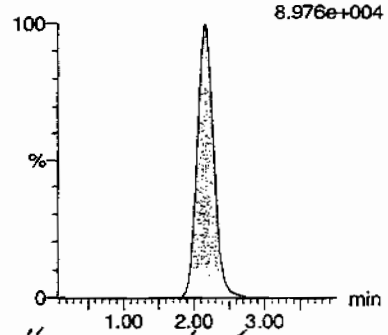

Hmm 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429007	Perchlorate	99 > 83	2.18	748.015	748.015	bb			0.0134			171.226	3.05
232429007	Perchlorate-101	101 > 85	2.17	244.903	244.903	bb			0.0130			93.999	
232429007	Perchlorate-O(18)	107 > 89	2.15	24179.914	24179.914	bb			0.4691	93.82	-6.18	2240.5...	

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6041

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429008

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 94.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.527	2.11	0.527	ug/kg	U	1	07-JUL-09 14:35	per0707030a
	Perchlorate-O(18)			5.03	ug/kg		1	07-JUL-09 14:35	per0707030a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707030a
Date: 07-Jul-2009
Time: 14:35:50
ID: 232429008
Vial: 1:5,D

| LANL | 881213 | 50120 | 11

07-08-09

Perchlorate

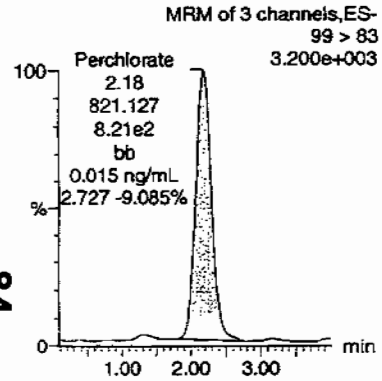

Perchlorate

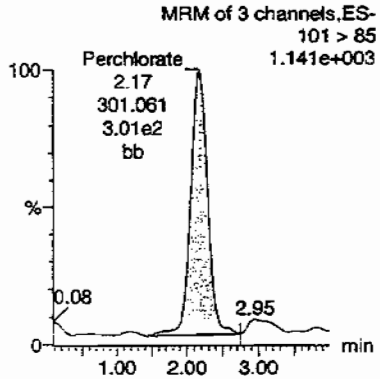

Perchlorate-101

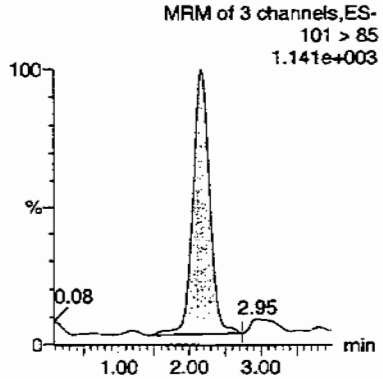

Perchlorate-O(18)

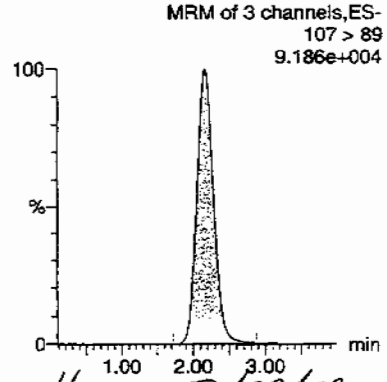

HMM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429008	Perchlorate	99 > 83	2.18	821.127	821.127	bb			0.0148			143.321	2.73
232429008	Perchlorate-101	101 > 85	2.17	301.061	301.061	bb			0.0159			117.383	
232429008	Perchlorate-O(18)	107 > 89	2.17	24567.018	24567.018	bb			0.4766	95.32	-4.68	5672.2...	

84

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6040

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429009

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 73

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.687	2.75	0.921	ug/kg	J	1	07-JUL-09 14:43	per0707031a
	Perchlorate-O(18)			7.03	ug/kg		1	07-JUL-09 14:43	per0707031a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707031a
Date: 07-Jul-2009
Time: 14:43:35
ID: 232429009
Vial: 1:5,E

ILAWL | 881213 | SD020 | 1 |

GWO 07-08-09

Perchlorate

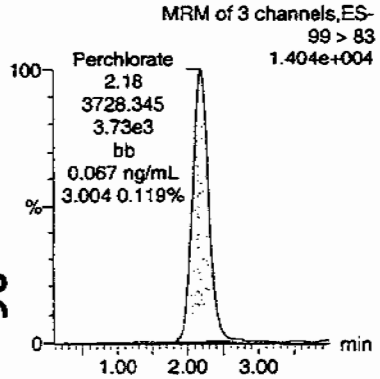

Perchlorate

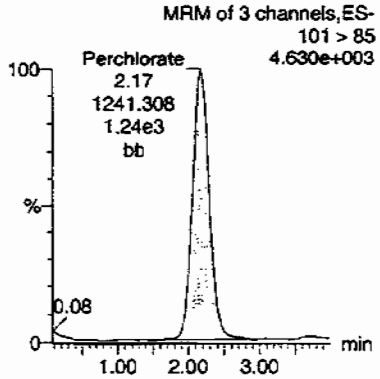

Perchlorate-101

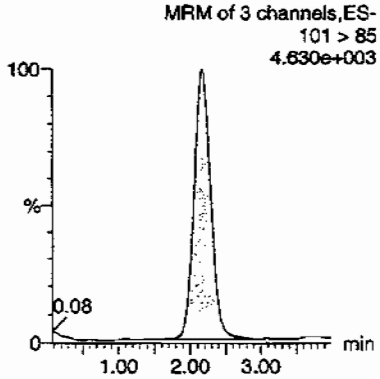

Perchlorate-O(18)

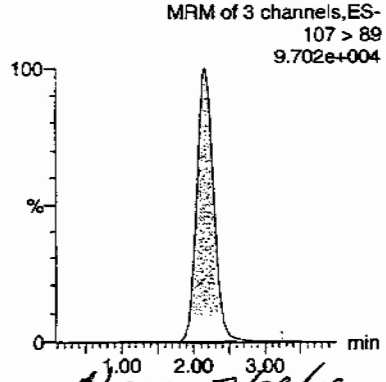

AMM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429009	Perchlorate	99 > 83	2.18	3728.345	3728.345	bb			0.0670			937.659	3.00
232429009	Perchlorate-101	101 > 85	2.17	1241.308	1241.308	bb			0.0657			145.765	
232429009	Perchlorate-O(18)	107 > 89	2.17	26343.047	26343.047	bb			0.5111	102.22	2.22	12197....	

86

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6044

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429010

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 87

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.573	2.29	1.60	ug/kg	J	1	07-JUL-09 14:51	per0707032a
	Perchlorate-O(18)			5.83	ug/kg		1	07-JUL-09 14:51	per0707032a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707032a
Date: 07-Jul-2009
Time: 14:51:19
ID: 232429010 |LANL|881213|SOLID|1|
Vial: 1:5,F

07-08-09

Perchlorate

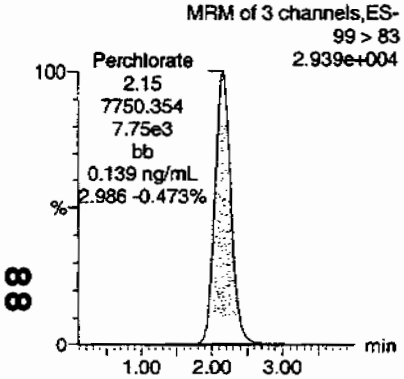

Perchlorate

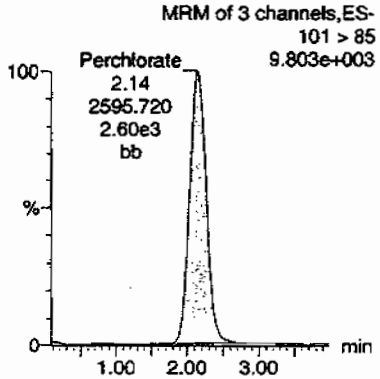

Perchlorate-101

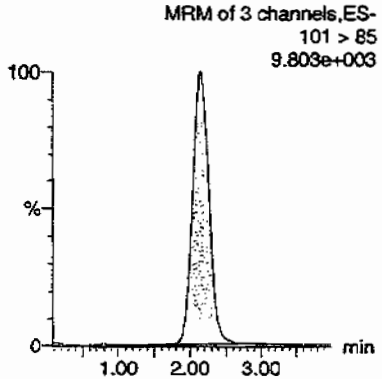

Perchlorate-O(18)

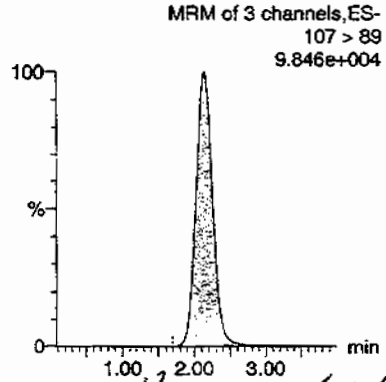

HMM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429010	Perchlorate	99 > 83	2.15	7750.354	7750.354	bb			0.1393			2300.9...	2.99
232429010	Perchlorate-101	101 > 85	2.14	2595.720	2595.720	bb			0.1375			382.547	
232429010	Perchlorate-O(18)	107 > 89	2.14	26206.682	26206.682	bb			0.5084	101.69	1.69	7546.0...	

88

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6035

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429011

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 96

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.521	2.08	0.521	ug/kg	U	1	07-JUL-09 14:59	per0707033a
	Perchlorate-O(18)			4.99	ug/kg		1	07-JUL-09 14:59	per0707033a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707033a
Date: 07-Jul-2009
Time: 14:59:02
ID: 232429011
Vial: 1:6,A

1LANL | 881213 | 5020 | 1 | 07-08-09

Perchlorate

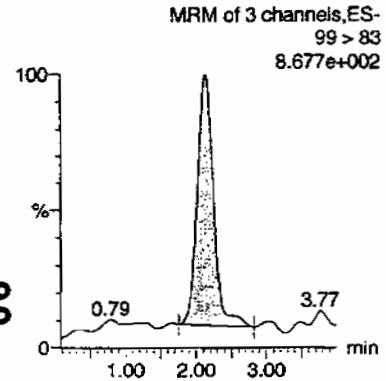

Perchlorate

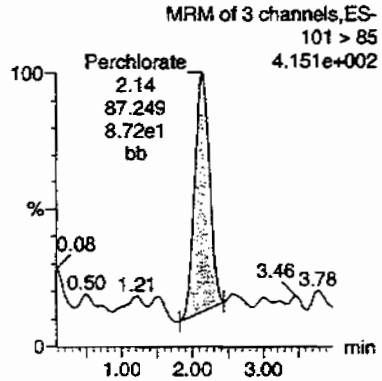

Perchlorate-101

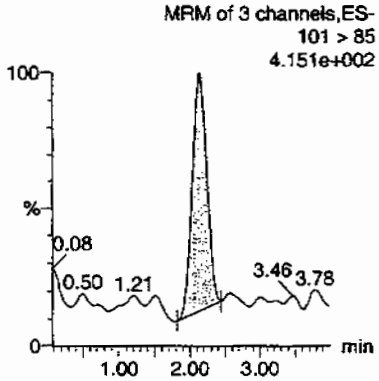

Perchlorate-O(18)

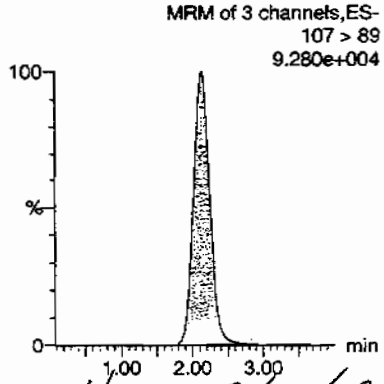

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429011	Perchlorate	99 > 83	2.13	214.748	214.748	bb			0.0039			101.573	2.46
232429011	Perchlorate-101	101 > 85	2.14	87.249	87.249	bb			0.0046			47.631	
232429011	Perchlorate-O(18)	107 > 89	2.13	24688.293	24688.293	bb			0.4790	95.79	-4.21	3125.7...	

90

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6038

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429012

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 75

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.669	2.67	0.669	ug/kg	U	1	07-JUL-09 15:06	per0707034a
	Perchlorate-O(18)			6.22	ug/kg		1	07-JUL-09 15:06	per0707034a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707034a
Date: 07-Jul-2009
Time: 15:06:49
ID: 232429012
Vial: 1:6,B

|LANL|881213|50120|11|

CWW 07-08-09

Perchlorate

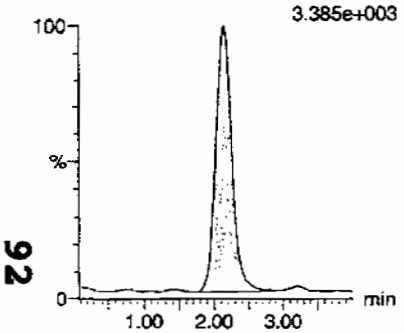

Perchlorate

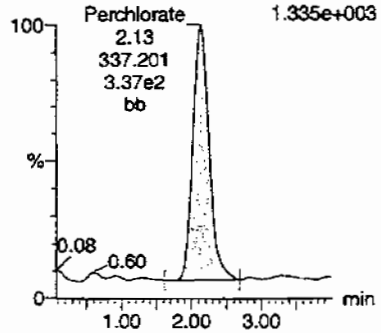

Perchlorate-101

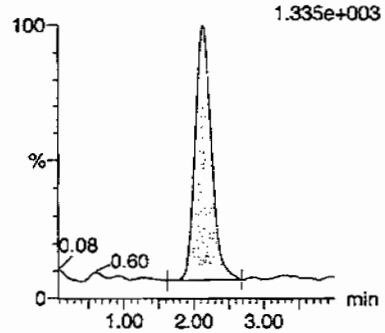

Perchlorate-O(18)

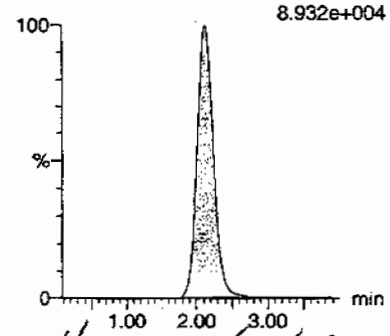

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429012	Perchlorate	99 > 83	2.13	899.974	899.974	bb			0.0162			926.621	2.67
232429012	Perchlorate-101	101 > 85	2.13	337.201	337.201	bb			0.0179			265.890	
232429012	Perchlorate-O(18)	107 > 89	2.13	23994.475	23994.475	bb			0.4655	93.10	-6.90	4752.4...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMQ-09-9039

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429013

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 90.9

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.55	2.2	0.550	ug/kg	U	1	07-JUL-09 15:37	per0707038a
	Perchlorate-O(18)			5.25	ug/kg		1	07-JUL-09 15:37	per0707038a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707038a
Date: 07-Jul-2009
Time: 15:37:57
ID: 232429013
Vial: 1:6,C

1LAN1881213\50120\11

Cwo 07-08-09

Perchlorate

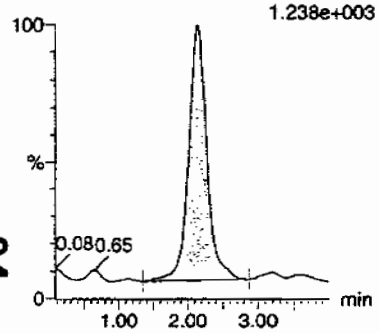

Perchlorate

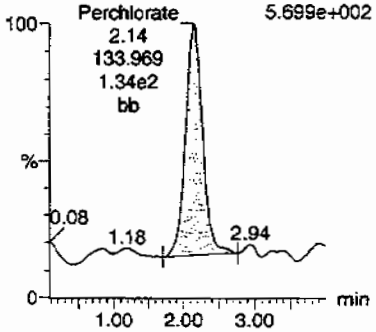

Perchlorate-101

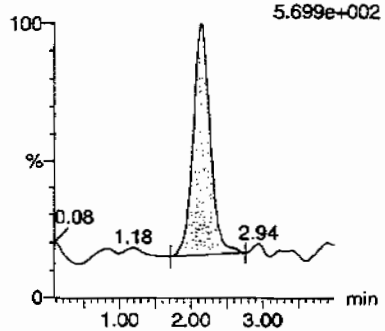

Perchlorate-O(18)

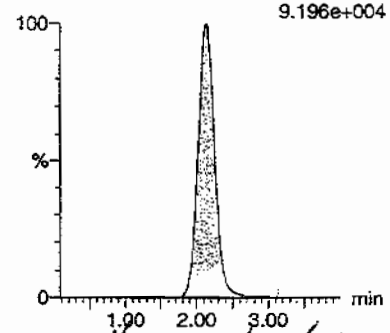

dmm 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429013	Perchlorate	99 > 83	2.14	353.212	353.212	bb			0.0063			95.672	2.64
232429013	Perchlorate-101	101 > 85	2.14	133.969	133.969	bb			0.0071			52.739	
232429013	Perchlorate-O(18)	107 > 89	2.13	24588.686	24588.686	bb			0.4770	95.41	-4.59	11803....	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6042

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429014

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 82

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.608	2.43	0.608	ug/kg	U	1	07-JUL-09 15:45	per0707039a
	Perchlorate-O(18)			5.74	ug/kg		1	07-JUL-09 15:45	per0707039a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707039a
Date: 07-Jul-2009
Time: 15:45:42
ID: 232429014
Vial: 1:6,D

|LANL|881213|SOLZD|1|

AWW 07-08-09

Perchlorate

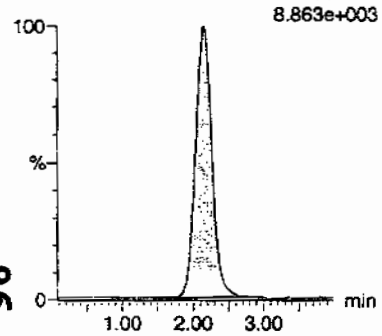

Perchlorate

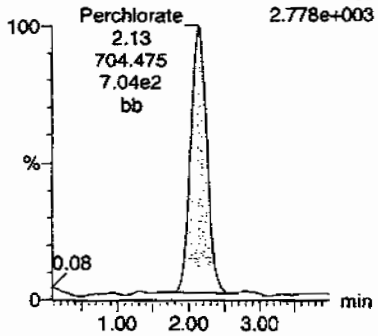

Perchlorate-101

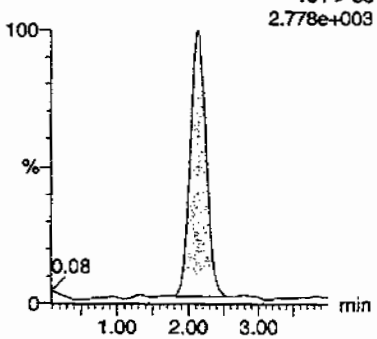

Perchlorate-O(18)

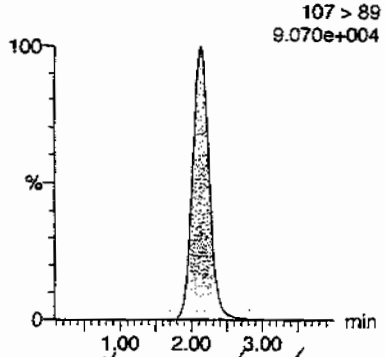

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429014	Perchlorate	99 > 83	2.14	2378.911	2378.911	bb			0.0427			608.859	3.38
232429014	Perchlorate-101	101 > 85	2.13	704.475	704.475	bb			0.0373			195.858	
232429014	Perchlorate-O(18)	107 > 89	2.13	24304.701	24304.701	bb			0.4715	94.31	-5.69	3918.6...	

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PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6049

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 232429015

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 88

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.565	2.26	0.565	ug/kg	U	1	07-JUL-09 15:53	per0707040a
	Perchlorate-O(18)			5.19	ug/kg		1	07-JUL-09 15:53	per0707040a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707040a
Date: 07-Jul-2009
Time: 15:53:27
ID: 232429015
Vial: 1:6,E

|LANL|881213|5020|1|

CWW 07-08-09

Perchlorate

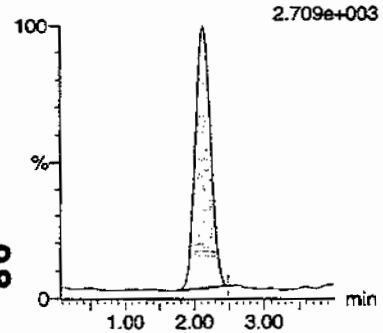

Perchlorate

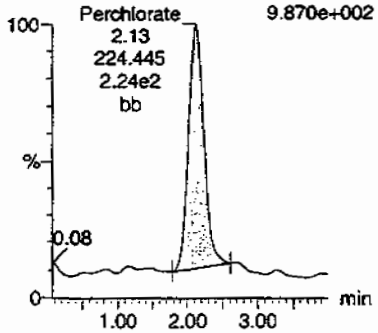

Perchlorate-101

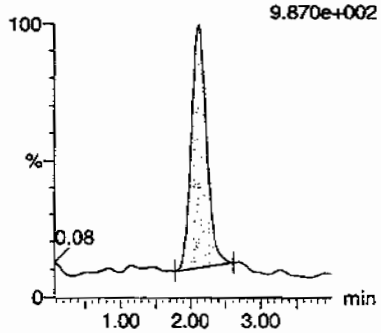

Perchlorate-O(18)

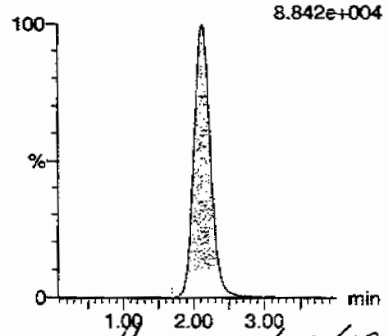

AMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232429015	Perchlorate	99 > 83	2.13	670.853	670.853	bb			0.0121			720.873	2.99
232429015	Perchlorate-101	101 > 85	2.13	224.445	224.445	bb			0.0119			88.386	
232429015	Perchlorate-O(18)	107 > 89	2.12	23666.338	23666.338	bb			0.4591	91.83	-8.17	5777.1...	

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2478

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 07–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 55651.96

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2478

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 07–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 18883.14

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070709a.mdb 07 Jul 2009 10:05:35
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070709a.cdb 08 Jul 2009 11:12:39

Compound name: Perchlorate
Response Factor: 55651.9
RRF SD: 1424.57, % Relative SD: 2.55979
Response type: External Std, Area
Curve type: RF

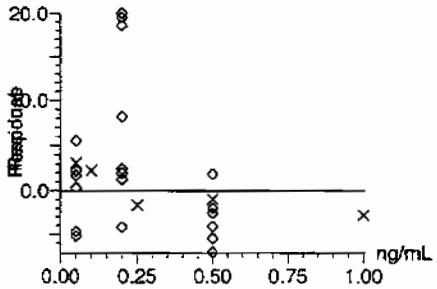

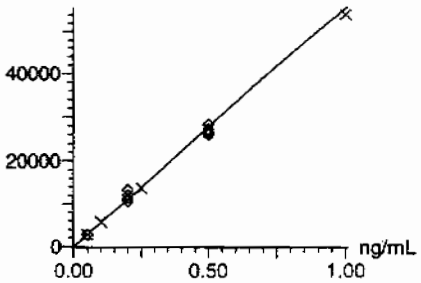

CWW
07-08-09

Compound name: Perchlorate-101
Response Factor: 18883.1
RRF SD: 893.468, % Relative SD: 4.73156
Response type: External Std, Area
Curve type: RF

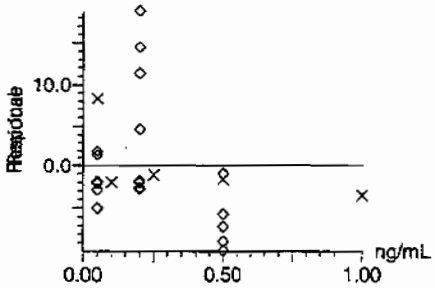

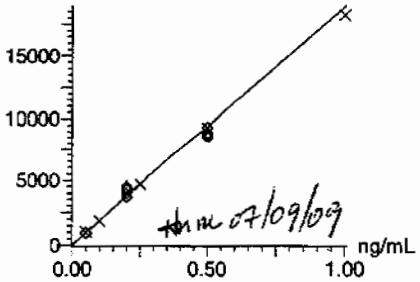

tm 07/09/09

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 51544
RRF SD: 656.316, % Relative SD: 1.27331
Response type: External Std, Area
Curve type: RF

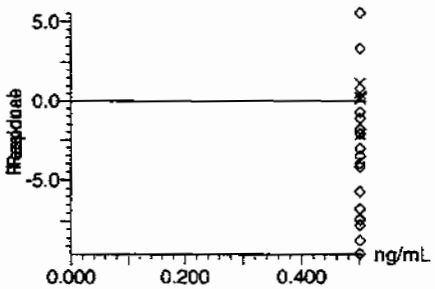

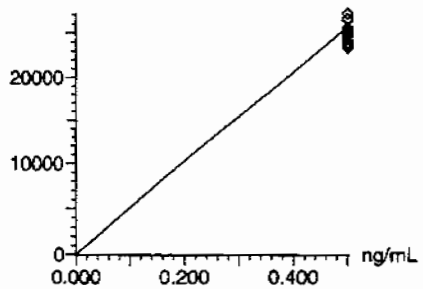

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2478

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.51	101.86	07–JUL–09 11:13	per0707009a
Perchlorate Isotope Ratio		3.03		07–JUL–09 11:13	per0707009a
Perchlorate–101	.5	.5	99.02	07–JUL–09 11:13	per0707009a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707009a
Date: 07-Jul-2009
Time: 11:13:35
ID: WCL090706-06ICV
Vial: 1:2,A

Pass
07-08-09

Perchlorate

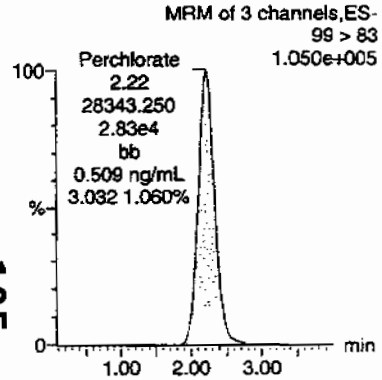

Perchlorate

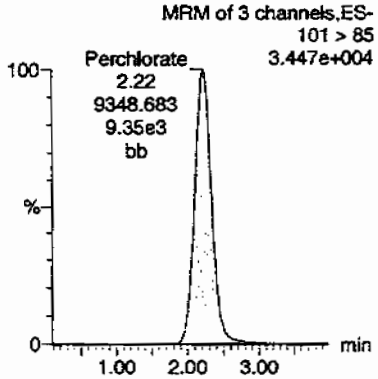

Perchlorate-101

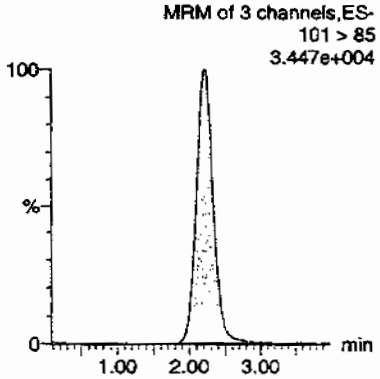

Perchlorate-O(18)

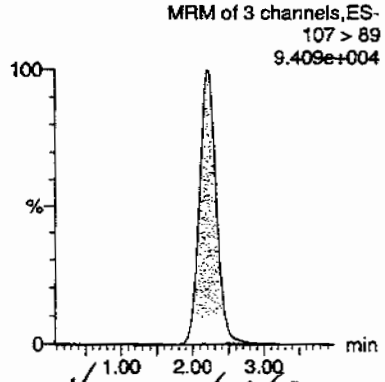

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06ICV	Perchlorate	99 > 83	2.22	28343.250	28343.250	bb			0.5093	101.86	1.86	4333.4...	3.03
WCL090706-06ICV	Perchlorate-101	101 > 85	2.22	9348.683	9348.683	bb			0.4951	99.02	-0.98	1661.2...	
WCL090706-06ICV	Perchlorate-O(18)	107 > 89	2.20	25226.955	25226.955	bb			0.4894	97.89	-2.11	4845.1...	

105

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2478

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	98.01	07-JUL-09 13:33	per0707022a
Perchlorate Isotope Ratio		2.92		07-JUL-09 13:33	per0707022a
Perchlorate-101	.5	.5	99.05	07-JUL-09 13:33	per0707022a
Perchlorate	.5	.49	97.4	07-JUL-09 15:14	per0707035a
Perchlorate Isotope Ratio		3.05		07-JUL-09 15:14	per0707035a
Perchlorate-101	.5	.47	94.27	07-JUL-09 15:14	per0707035a
Perchlorate	.5	.48	95.92	07-JUL-09 16:55	per0707048a
Perchlorate Isotope Ratio		3.04		07-JUL-09 16:55	per0707048a
Perchlorate-101	.5	.46	92.85	07-JUL-09 16:55	per0707048a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707022a
Date: 07-Jul-2009
Time: 13:33:31
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
and
07-08-09

Perchlorate

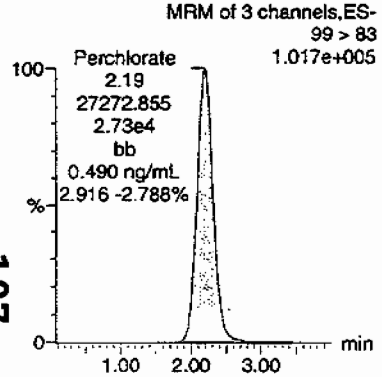

Perchlorate

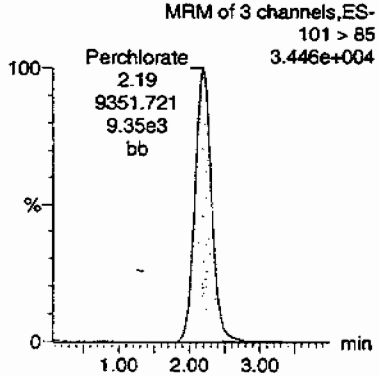

Perchlorate-101

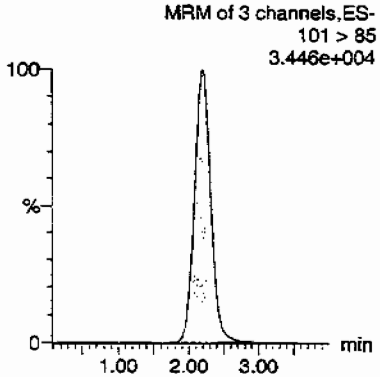

Perchlorate-O(18)

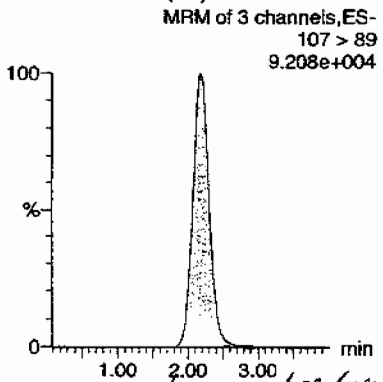

HMR 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.19	27272.855	27272.855	bb			0.4901	98.01	-1.99	2760.0...	2.92
WCL090706-06CCV	Perchlorate-101	101 > 85	2.19	9351.721	9351.721	bb			0.4952	99.05	-0.95	2954.9...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.18	24749.586	24749.586	bb			0.4802	96.03	-3.97	6216.4...	

107

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707035a
Date: 07-Jul-2009
Time: 15:14:35
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
ans
07-08-09

Perchlorate

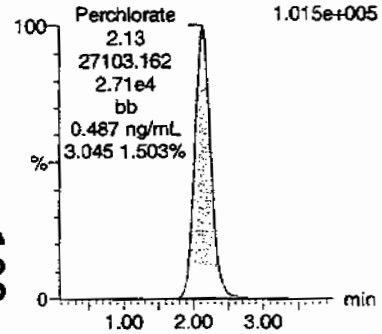

Perchlorate

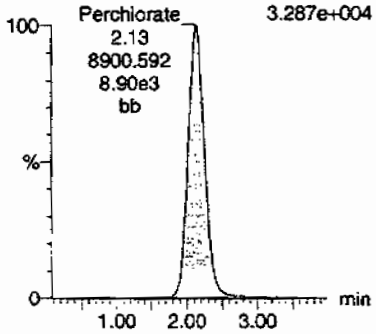

Perchlorate-101

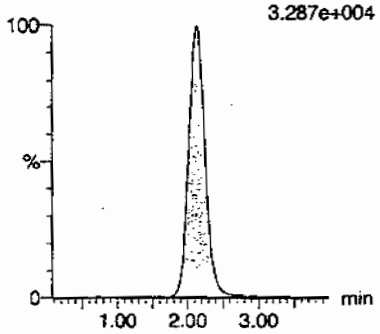

Perchlorate-O(18)

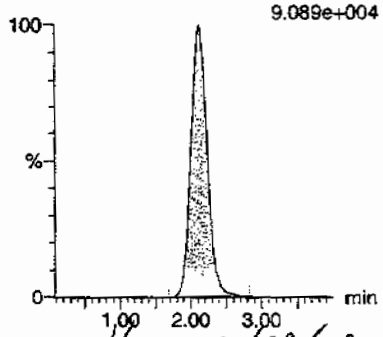

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.13	27103.162	27103.162	bb			0.4870	97.40	-2.60	4455.7...	3.05
WCL090706-06CCV	Perchlorate-101	101 > 85	2.13	8900.592	8900.592	bb			0.4714	94.27	-5.73	666.809	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.12	24305.646	24305.646	bb			0.4716	94.31	-5.69	3815.4...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707048a
Date: 07-Jul-2009
Time: 16:55:44
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
CMW
07-08-09

Perchlorate

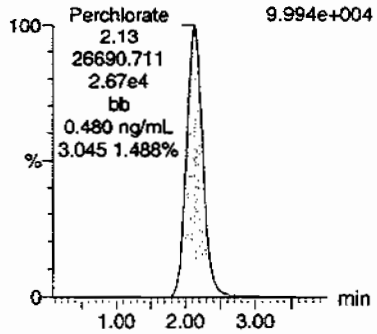

Perchlorate

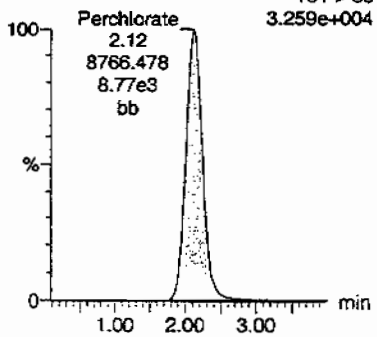

Perchlorate-101

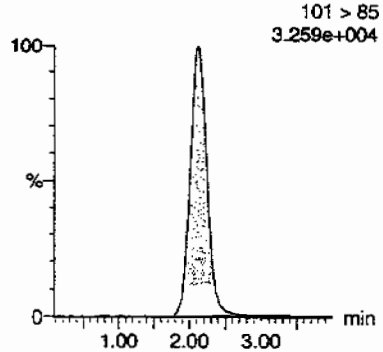

Perchlorate-O(18)

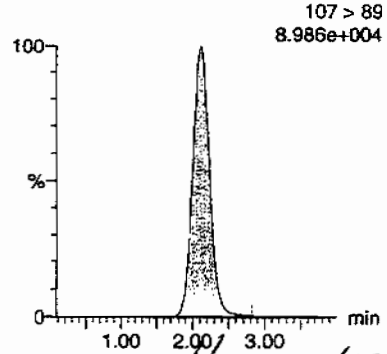

HMM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.13	26690.711	26690.711	bb			0.4796	95.92	-4.08	9791.3...	3.04
WCL090706-06CCV	Perchlorate-101	101 > 85	2.12	8766.478	8766.478	bb			0.4642	92.85	-7.15	282.261	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.12	23860.732	23860.732	bb			0.4629	92.58	-7.42	1345.8...	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2478

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	105.52	07–JUL–09 11:29	per0707011a
Perchlorate Isotope Ratio		3.05		07–JUL–09 11:29	per0707011a
Perchlorate–101	.05	.05	101.85	07–JUL–09 11:29	per0707011a
Perchlorate	.05	.05	102.24	07–JUL–09 13:49	per0707024a
Perchlorate Isotope Ratio		2.97		07–JUL–09 13:49	per0707024a
Perchlorate–101	.05	.05	101.41	07–JUL–09 13:49	per0707024a
Perchlorate	.05	.05	101.75	07–JUL–09 15:30	per0707037a
Perchlorate Isotope Ratio		3.06		07–JUL–09 15:30	per0707037a
Perchlorate–101	.05	.05	98.11	07–JUL–09 15:30	per0707037a
Perchlorate	.05	.05	100.35	07–JUL–09 17:11	per0707050a
Perchlorate Isotope Ratio		3.02		07–JUL–09 17:11	per0707050a

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2478

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate–101	.05	.05	97.87	07–JUL–09 17:11	per0707050a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Pass
CWW
07-08-09

Name: per0707011a
Date: 07-Jul-2009
Time: 11:29:03
ID: WCL090706-07CRI
Vial: 1:2,B

Perchlorate

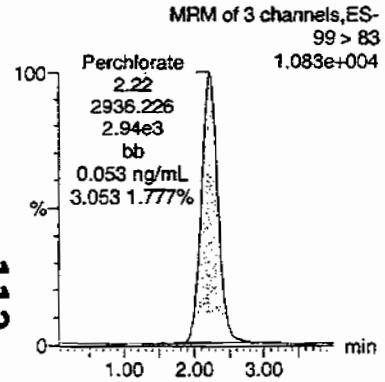

Perchlorate

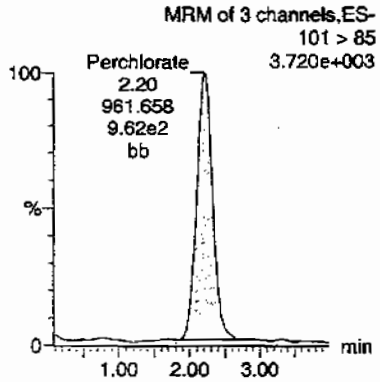

Perchlorate-101

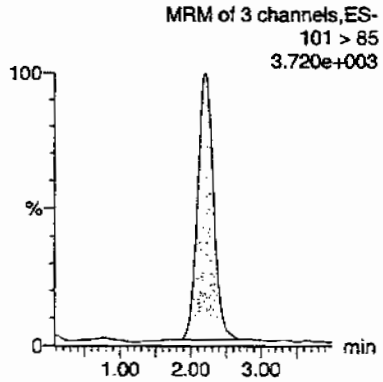

Perchlorate-O(18)

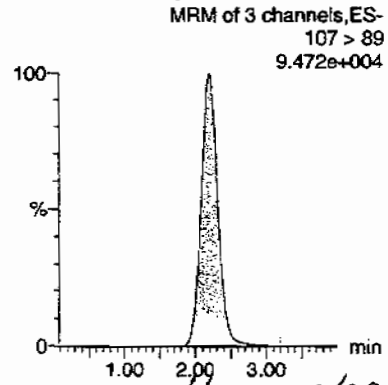

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.22	2936.226	2936.226	bb			0.0528	105.52	5.52	1422.1...	3.05
WCL090706-07CRI	Perchlorate-101	101 > 85	2.20	961.658	961.658	bb			0.0509	101.85	1.85	1140.0...	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.20	25591.541	25591.541	bb			0.4965	99.30	-0.70	2623.9...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707024a
Date: 07-Jul-2009
Time: 13:49:15
ID: WCL090706-07CRI
Vial: 1:2,B

Pers
ans
07-08-09

Perchlorate

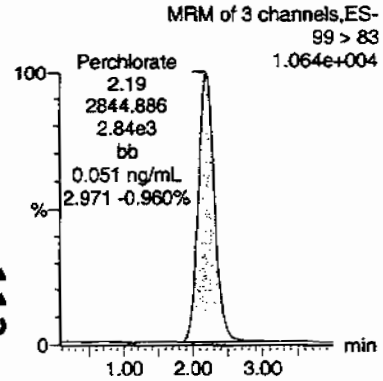

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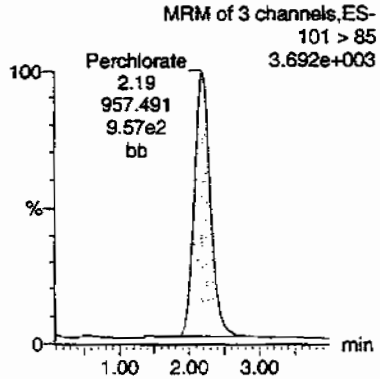

Perchlorate-101

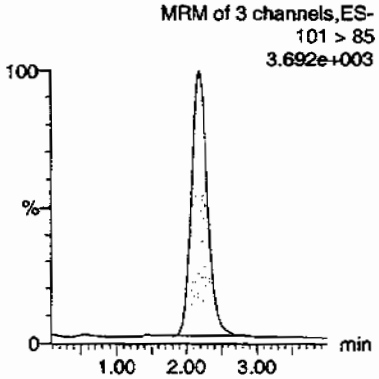

Perchlorate-O(18)

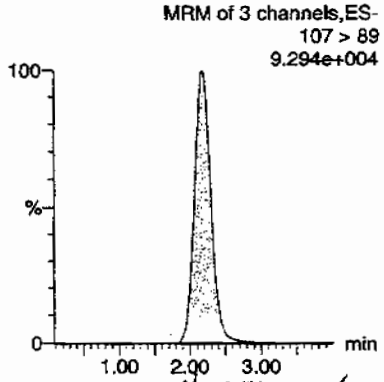

HMK 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.19	2844.886	2844.886	bb			0.0511	102.24	2.24	768.114	2.97
WCL090706-07CRI	Perchlorate-101	101 > 85	2.19	957.491	957.491	bb			0.0507	101.41	1.41	352.026	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.18	24864.365	24864.365	bb			0.4824	96.48	-3.52	4391.6...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707037a
Date: 07-Jul-2009
Time: 15:30:03
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
AWO
07-08-09

Perchlorate

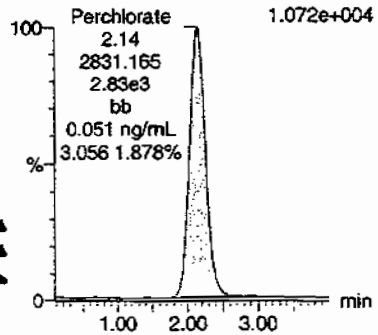

Perchlorate

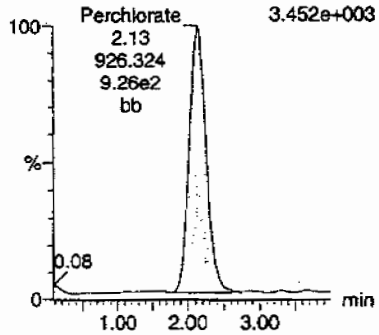

Perchlorate-101

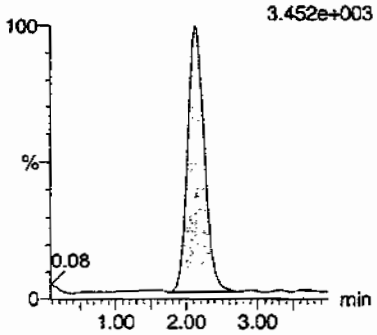

Perchlorate-O(18)

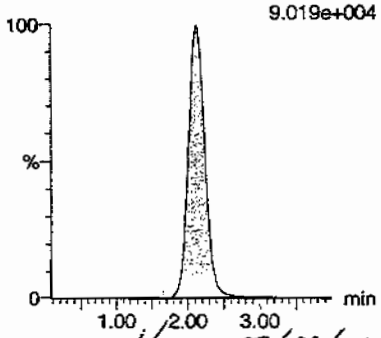

AWW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.14	2831.165	2831.165	bb			0.0509	101.75	1.75	1206.1...	3.06
WCL090706-07CRI	Perchlorate-101	101 > 85	2.13	926.324	926.324	bb			0.0491	98.11	-1.89	433.522	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.12	24037.217	24037.217	bb			0.4663	93.27	-6.73	2112.4...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707050a
Date: 07-Jul-2009
Time: 17:11:27
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
AWJ
07-08-09

Perchlorate

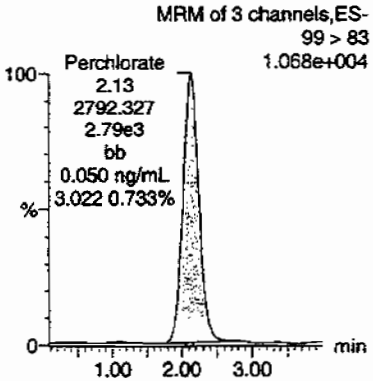

Perchlorate

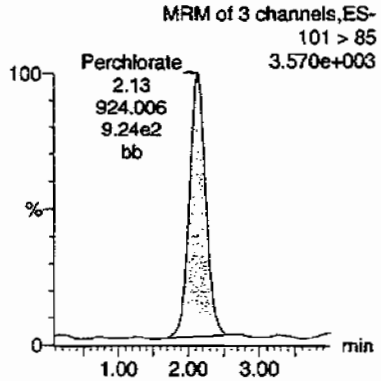

Perchlorate-101

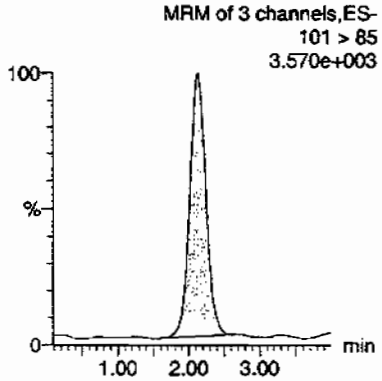

Perchlorate-O(18)

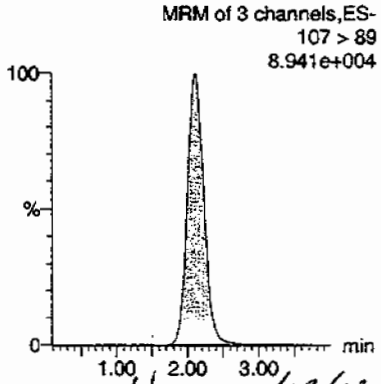

HMM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.13	2792.327	2792.327	bb			0.0502	100.35	0.35	1511.9...	3.02
WCL090706-07CRI	Perchlorate-101	101 > 85	2.13	924.006	924.006	bb			0.0489	97.87	-2.13	333.144	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.12	24029.045	24029.045	bb			0.4662	93.24	-6.76	9450.7...	

115

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 30–JUN–09

GEL Job No (SDG): 09–2478

GEL Sample ID: 1201871404

Date Filtered: 30–JUN–09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.5	2	0.500	ug/kg	U	1	07–JUL–09 11:36	per0707012a
	Perchlorate–O(18)			4.84	ug/kg		1	07–JUL–09 11:36	per0707012a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707012a
Date: 07-Jul-2009
Time: 11:36:50
ID: 1201871404
Vial: 1:3,A

1LAWL | 881213 | 50020 | MB | 11

AWO 07-08-09

Perchlorate

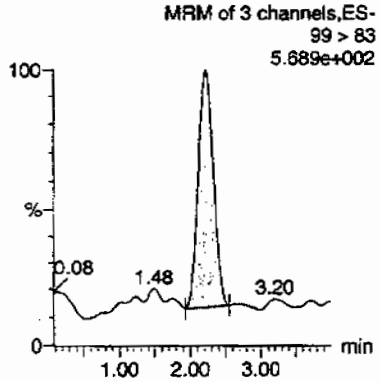

Perchlorate

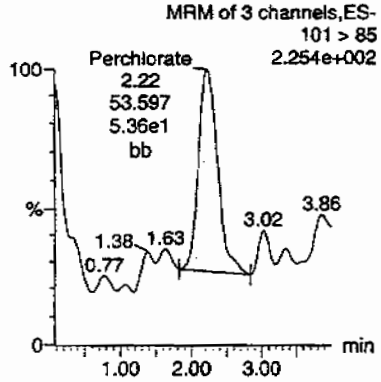

Perchlorate-101

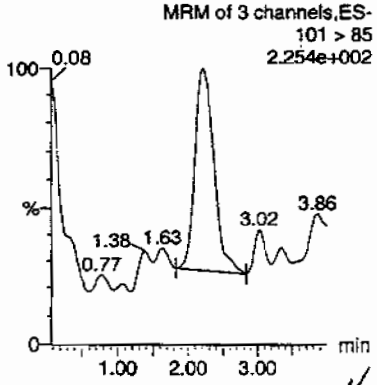

Perchlorate-O(18)

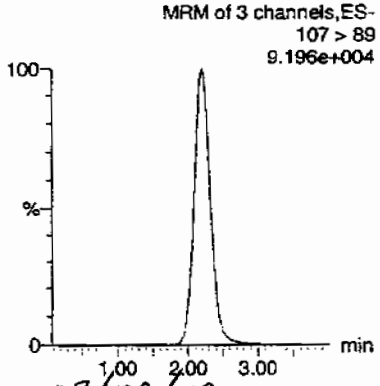

Hmm 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871404	Perchlorate	99 > 83	2.22	123.661	123.661	bb			0.0022			83.289	2.31
1201871404	Perchlorate-101	101 > 85	2.22	53.597	53.597	bb			0.0028			10.873	
1201871404	Perchlorate-O(18)	107 > 89	2.20	24962.213	24962.213	bb			0.4843	96.86	-3.14	23394....	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 1201871405

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.05	ug/kg		1	07-JUL-09 11:44	per0707013a
	Perchlorate-O(18)			4.85	ug/kg		1	07-JUL-09 11:44	per0707013a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707013a
Date: 07-Jul-2009
Time: 11:44:35
ID: 1201871405
Vial: 1:3,B

| LANL | 831213 | 5020 | LCS | 11

CWW
07-08-09

Perchlorate

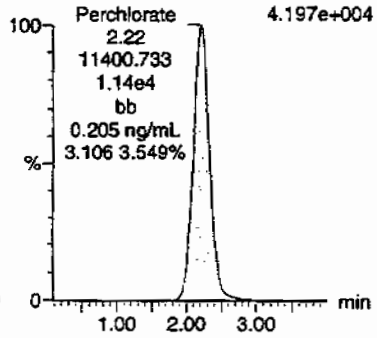

Perchlorate

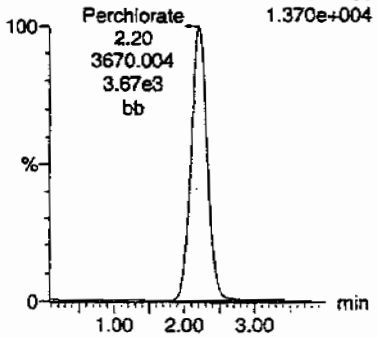

Perchlorate-101

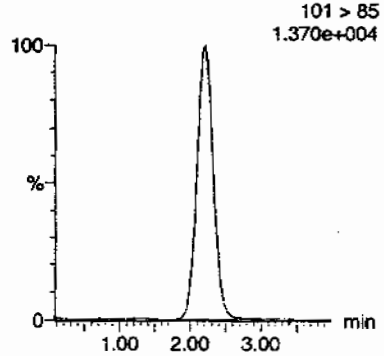

Perchlorate-O(18)

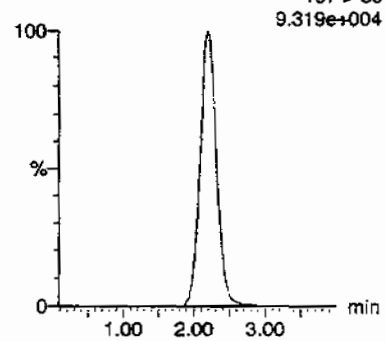

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871405	Perchlorate	99 > 83	2.22	11400.733	11400.733	bb			0.2049	102.43	2.43	1013.6...	3.11
1201871405	Perchlorate-101	101 > 85	2.20	3670.004	3670.004	bb			0.1944	97.18	-2.82	820.491	
1201871405	Perchlorate-O(18)	107 > 89	2.19	24984.744	24984.744	bb			0.4847	96.95	-3.05	2876.9...	

$\frac{11400.733}{55651.9} = 0.2049$

HMC
07/09/09

120

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6007MS

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 1201871406

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 95.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	2.48	ug/kg		1	07-JUL-09 13:10	per0707019a
	Perchlorate-O(18)			5.16	ug/kg		1	07-JUL-09 13:10	per0707019a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707019a
Date: 07-Jul-2009
Time: 13:10:09
ID: 1201871406
Vial: 1:4,B

|LAW|881213|50620|MS|1|

Cwo
07-08-09

Perchlorate

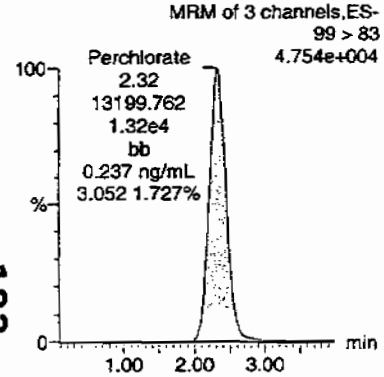

Perchlorate

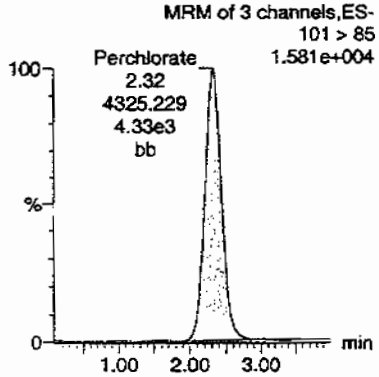

Perchlorate-101

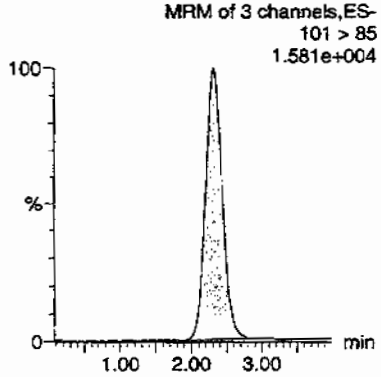

Perchlorate-O(18)

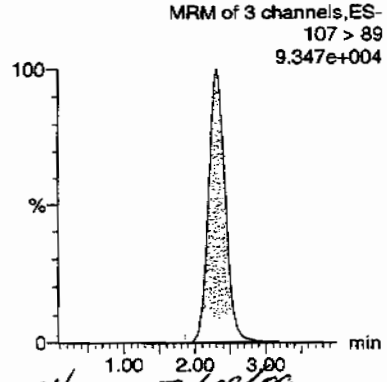

Hmw 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871406	Perchlorate	99 > 83	2.32	13199.762	13199.762	bb			0.2372	118.59	18.59	3175.7...	3.05
1201871406	Perchlorate-101	101 > 85	2.32	4325.229	4325.229	bb			0.2291	114.53	14.53	1782.8...	
1201871406	Perchlorate-O(18)	107 > 89	2.32	25484.055	25484.055	bb			0.4944	98.88	-1.12	4334.1...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6007MSD

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478

GEL Sample ID: 1201871407

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 95.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	2.51	ug/kg		1	07-JUL-09 13:17	per0707020a
	Perchlorate-O(18)			5.12	ug/kg		1	07-JUL-09 13:17	per0707020a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707020a
Date: 07-Jul-2009
Time: 13:17:54
ID: 1201871407
Vial: 1:4,C

| LANL | 881213 | 5020 | MS0 | 1 |

07-08-09

Perchlorate

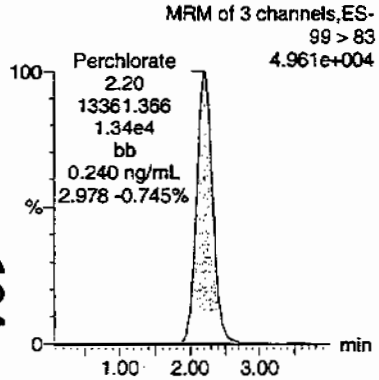

Perchlorate

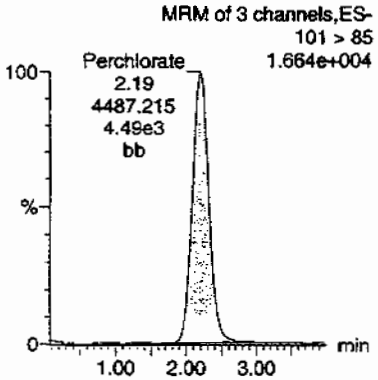

Perchlorate-101

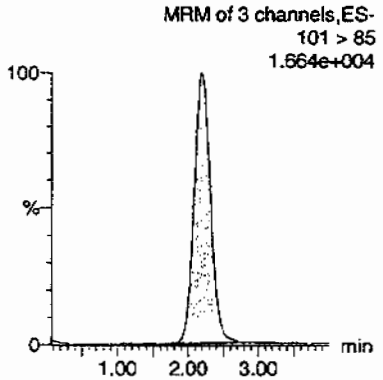

Perchlorate-O(18)

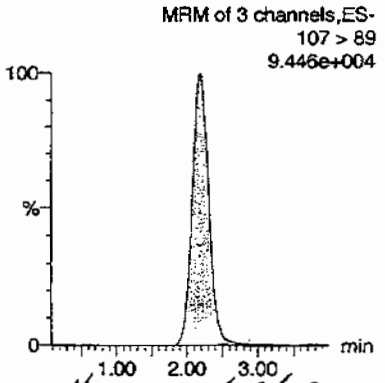

Hrm 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871407	Perchlorate	99 > 83	2.20	13361.366	13361.366	bb			0.2401	120.04	20.04	5671.7...	2.98
1201871407	Perchlorate-101	101 > 85	2.19	4487.215	4487.215	bb			0.2376	118.82	18.82	2181.0...	
1201871407	Perchlorate-O(18)	107 > 89	2.19	25241.471	25241.471	bb			0.4897	97.94	-2.06	11871....	

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 881212 Verified by:
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201871404 MB	30-JUN-2009 09:20:40	2	20	10
1201871405 LCS	30-JUN-2009 09:20:40	2	20	10
232424001	30-JUN-2009 09:20:40	2	20	10
232426001	30-JUN-2009 09:20:40	2	20	10
232426002	30-JUN-2009 09:20:40	2	20	10
232429001	30-JUN-2009 09:20:40	2	20	10
1201871406 MS (232429001)	30-JUN-2009 09:20:40	2	20	10
1201871407 MSD (232429001)	30-JUN-2009 09:20:40	2	20	10
232429002	30-JUN-2009 09:20:40	2	20	10
232429003	30-JUN-2009 09:20:40	2	20	10
232429004	30-JUN-2009 09:20:40	2	20	10
232429005	30-JUN-2009 09:20:40	2	20	10
232429006	30-JUN-2009 09:20:40	2	20	10
232429007	30-JUN-2009 09:20:40	2	20	10
232429008	30-JUN-2009 09:20:40	2	20	10
232429009	30-JUN-2009 09:20:40	2	20	10
232429010	30-JUN-2009 09:20:40	2	20	10
232429011	30-JUN-2009 09:20:40	2	20	10
232429012	30-JUN-2009 09:20:40	2	20	10
232429013	30-JUN-2009 09:20:40	2	20	10
232429014	30-JUN-2009 09:20:40	2	20	10
232429015	30-JUN-2009 09:20:40	2	20	10
1201871408 ICS	30-JUN-2009 09:20:40	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201871408	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
LCS	1201871405	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MS	1201871406	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MSD	1201871407	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL

Comments:

Desalting cartridges used: 090603-1-H & 090401-Ba

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 07/01/09
Extr. Injection Volume: 20uL
Sequence Number: per070109a
Initial Calibration Date: 07/01/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: [illegible]
Date: 07/09/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag	
per0707001a	IPB001	CWW	7/7/2009 10:11			1		USE	B	
per0707002a	IPB001	CWW	7/7/2009 10:19			1		USE	B	
per0707003a	WCLICAL-01	CWW	7/7/2009 10:27			1		USE	I	
per0707004a	WCLICAL-02	CWW	7/7/2009 10:35			1		USE	I	
per0707005a	WCLICAL-03	CWW	7/7/2009 10:42			1		USE	I	
per0707006a	WCLICAL-04	CWW	7/7/2009 10:50			1		USE	I	
per0707007a	WCLICAL-05	CWW	7/7/2009 10:58			1		USE	I	
per0707008a	IPB002	CWW	7/7/2009 11:05			1		USE	B	
per0707009a	WCLICV	CWW	7/7/2009 11:13			1		USE	C	
per0707010a	IPB003	CWW	7/7/2009 11:21			1		USE	B	
per0707011a	WCLCRI	CWW	7/7/2009 11:29			1		USE	C	
per0707012a	1201871404	CWW	7/7/2009 11:36	881213	VARIOUS	1	LANL	USE	S	
per0707013a	1201871405	CWW	7/7/2009 11:44	881213	VARIOUS	1	LANL	USE	S	
per0707014a	1201871408	CWW	7/7/2009 11:52	881213	VARIOUS	1	LANL	USE	S	Injec. Error
per0707015a	232424001	CWW	7/7/2009 12:38	881213	09-2473	1	LANL	USE	S	Restarted
per0707016a	232426001	CWW	7/7/2009 12:46	881213	09-2475	1	LANL	USE	S	
per0707017a	232426002	CWW	7/7/2009 12:54	881213	09-2475	1	LANL	USE	S	
per0707018a	232429001	CWW	7/7/2009 13:02	881213	09-2478	1	LANL	USE	S	
per0707019a	1201871406	CWW	7/7/2009 13:10	881213	09-2478	1	LANL	USE	S	
per0707020a	1201871407	CWW	7/7/2009 13:17	881213	09-2478	1	LANL	USE	S	
per0707021a	232429002	CWW	7/7/2009 13:25	881213	09-2478	1	LANL	USE	S	
per0707022a	WCLCCV	CWW	7/7/2009 13:33			1		USE	C	
per0707023a	IPB004	CWW	7/7/2009 13:41			1		USE	B	
per0707024a	WCLCRI	CWW	7/7/2009 13:49			1		USE	C	
per0707025a	232429003	CWW	7/7/2009 13:56	881213	09-2478	1	LANL	USE	S	
per0707026a	232429004	CWW	7/7/2009 14:04	881213	09-2478	1	LANL	USE	S	
per0707027a	232429005	CWW	7/7/2009 14:12	881213	09-2478	1	LANL	USE	S	
per0707028a	232429006	CWW	7/7/2009 14:20	881213	09-2478	1	LANL	USE	S	
per0707029a	232429007	CWW	7/7/2009 14:28	881213	09-2478	1	LANL	USE	S	

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per0707030a	232429008	CWW	7/7/2009 14:35	881213	09-2478	1	LANL	USE	S
per0707031a	232429009	CWW	7/7/2009 14:43	881213	09-2478	1	LANL	USE	S
per0707032a	232429010	CWW	7/7/2009 14:51	881213	09-2478	1	LANL	USE	S
per0707033a	232429011	CWW	7/7/2009 14:59	881213	09-2478	1	LANL	USE	S
per0707034a	232429012	CWW	7/7/2009 15:06	881213	09-2478	1	LANL	USE	S
per0707035a	WCLCCV	CWW	7/7/2009 15:14			1		USE	C
per0707036a	IPB005	CWW	7/7/2009 15:22			1		USE	B
per0707037a	WCLCRI	CWW	7/7/2009 15:30			1		USE	C
per0707038a	232429013	CWW	7/7/2009 15:37	881213	09-2478	1	LANL	USE	S
per0707039a	232429014	CWW	7/7/2009 15:45	881213	09-2478	1	LANL	USE	S
per0707040a	232429015	CWW	7/7/2009 15:53	881213	09-2478	1	LANL	USE	S
per0707041a	IPB006	CWW	7/7/2009 16:01			1		USE	B
per0707042a	1201868648	CWW	7/7/2009 16:09	880097	VARIOUS	1	LANL	USE	S
per0707043a	1201868649	CWW	7/7/2009 16:17	880097	VARIOUS	1	LANL	USE	S
per0707044a	1201868652	CWW	7/7/2009 16:24	880097	VARIOUS	1	LANL	USE	S
per0707045a	232209001	CWW	7/7/2009 16:32	880097	09-2424	1	LANL	USE	S
per0707046a	1201868650	CWW	7/7/2009 16:40	880097	09-2424	1	LANL	USE	S
per0707047a	1201868651	CWW	7/7/2009 16:48	880097	09-2424	1	LANL	USE	S
per0707048a	WCLCCV	CWW	7/7/2009 16:55			1		USE	C
per0707049a	IPB007	CWW	7/7/2009 17:03			1		USE	B
per0707050a	WCLCRI	CWW	7/7/2009 17:11			1		USE	C
per0707051a	232209002	CWW	7/7/2009 17:19	880097	09-2424	1	LANL	USE	S
per0707052a	232209003	CWW	7/7/2009 17:27	880097	09-2424	1	LANL	USE	S
per0707053a	232209004	CWW	7/7/2009 17:34	880097	09-2424	1	LANL	USE	S
per0707054a	232209005	CWW	7/7/2009 17:42	880097	09-2424	1	LANL	USE	S
per0707055a	232209006	CWW	7/7/2009 17:50	880097	09-2424	1	LANL	USE	S
per0707056a	232209007	CWW	7/7/2009 17:58	880097	09-2424	1	LANL	USE	S
per0707057a	232209008	CWW	7/7/2009 18:05	880097	09-2424	1	LANL	USE	S
per0707058a	232212001	CWW	7/7/2009 18:13	880097	09-2427	1	LANL	USE	S
per0707059a	232212002	CWW	7/7/2009 18:21	880097	09-2427	1	LANL	USE	S
per0707060a	232212003	CWW	7/7/2009 18:28	880097	09-2427	1	LANL	USE	S
per0707061a	WCLCCV	CWW	7/7/2009 18:36			1		USE	C
per0707062a	IPB008	CWW	7/7/2009 18:44			1		USE	B
per0707063a	WCLCRI	CWW	7/7/2009 18:52			1		USE	C
per0707064a	232265001	CWW	7/7/2009 19:00	880097	09-2435	1	LANL	USE	S
per0707065a	232265002	CWW	7/7/2009 19:08	880097	09-2435	1	LANL	USE	S
per0707066a	232265003	CWW	7/7/2009 19:15	880097	09-2435	1	LANL	USE	S

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per0707067a	232265004	CWW	7/7/2009 19:23	880097	09-2435	1	LANL	USE	S
per0707068a	232265005	CWW	7/7/2009 19:31	880097	09-2435	1	LANL	USE	S
per0707069a	232265006	CWW	7/7/2009 19:39	880097	09-2435	1	LANL	USE	S
per0707070a	232265007	CWW	7/7/2009 19:46	880097	09-2435	1	LANL	USE	S
per0707071a	232265008	CWW	7/7/2009 19:54	880097	09-2435	1	LANL	USE	S
per0707072a	232265009	CWW	7/7/2009 20:02	880097	09-2435	1	LANL	USE	S
per0707073a	WCLCCV	CWW	7/7/2009 20:10			1		USE	C
per0707074a	IPB009	CWW	7/7/2009 20:17			1		USE	B
per0707075a	WCLCRI	CWW	7/7/2009 20:25			1		USE	C

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2478-1

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881216
Prep Batch Number:	881215

Sample Analysis

Sample ID	Client ID
232432001	CAMO-09-6054
1201871417	Interference Check Sample (ICS)
1201871409	Method Blank (MB)
1201871410	Laboratory Control Sample (LCS)
1201871414	232370001(CAMO-09-6053) Matrix Spike (MS)
1201871416	232370001(CAMO-09-6053) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

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CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232370001 (CAMO-09-6053) from SDG 09-2452-1 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

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Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The sample in this SDG was not originally analyzed using EPA Method 314.0.

Additional Comments
The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

Perchlorate Isotope Ratio
The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert K Moore **Date:** 07/07/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-6054

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478-1

GEL Sample ID: 232432001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:37	per0630062a
	Perchlorate Isotope Ratio						1	30-JUN-09 18:37	per0630062a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:37	per0630062a
	Perchlorate-O(18)			0.439	ug/L		1	30-JUN-09 18:37	per0630062a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2478–1

Extract Batch Code: 881215

Date Filtered: 30–JUN–09

Matrix: GROUND WATER

Sample ID: 1201871410

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.186	ug/L	93.1		85 – 115
Perchlorate Isotope Ratio		2.71				–
Perchlorate–101	0.200	.189	ug/L	94.6		85 – 115
Perchlorate–O(18)		.435	ug/L			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2478–1

Extract Batch Code: 881215

Date Filtered: 30–JUN–09

Matrix: WATER

Sample ID: 1201871417

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.2	ug/L	100		70 – 130
Perchlorate Isotope Ratio		2.62				
Perchlorate–101	0.200	.211	ug/L	105		70 – 130
Perchlorate–O(18)		.467	ug/L			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630047a
Date: 30-Jun-2009
Time: 16:33:09
ID: 1201871417
Vial: 2:1,C

|LANL|881216|LZQ|IC|1|

CWW 07-01-5

Perchlorate

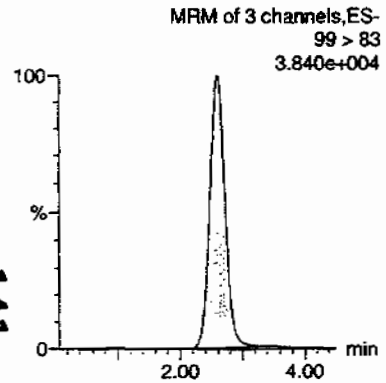

Perchlorate

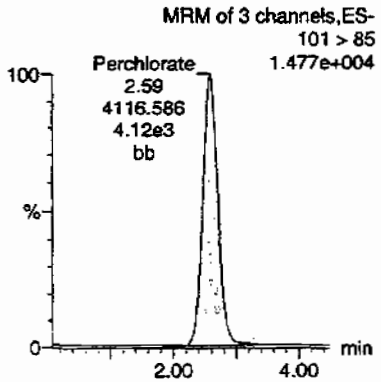

Perchlorate-101

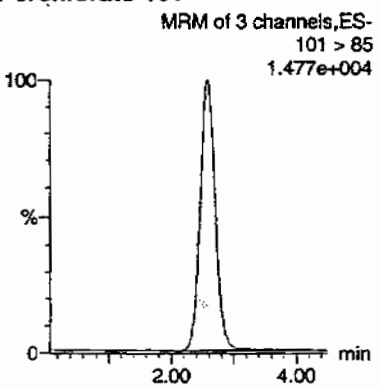

Perchlorate-O(18)

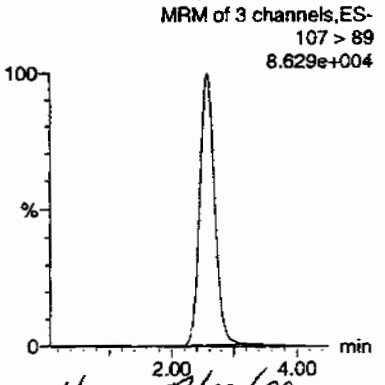

HM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871417	Perchlorate	99 > 83	2.59	10770.017	10770.017	bb			0.2002	100.10	0.10	617.777	2.62
1201871417	Perchlorate-101	101 > 85	2.59	4116.586	4116.586	bb			0.2106	105.31	5.31	471.114	
1201871417	Perchlorate-O(18)	107 > 89	2.58	23954.342	23954.342	bb			0.4666	93.32	-6.68	1264.8...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2478–1

Extract Batch Code: 881215

Date Extracted: 30–JUN–09

GEL MS/PS ID: 1201871414

Client ID: CAMO–09–6053

GEL MSD/PSD ID: 1201871416

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	0.200	0.00507	ug/L	0.192	93.3	.184	89.6	3.92	30	75 – 125
Perchlorate Isotope Ratio	0	0.00		2.68		2.65		0		–
Perchlorate–101	0.200	0.00467	ug/L	0.197	96	.191	93.3	2.8	30	75 – 125
Perchlorate–O(18)	0	0.442	ug/L	0.444		.445		.283		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2478-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	30-JUN-09	per0630001a	IPB001
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630001a	IPB001
Perchlorate	0.00	0	NA	30-JUN-09	per0630002a	IPB001
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630002a	IPB001

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per063009a.mdb 30 Jun 2009 11:03:27
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per063009a.cdb 01 Jul 2009 08:12:45

Name: per0630001a
Date: 30-Jun-2009
Time: 10:13:26
ID: IPB001
Vial: 1:1,A

CWW
07-01-09

Perchlorate

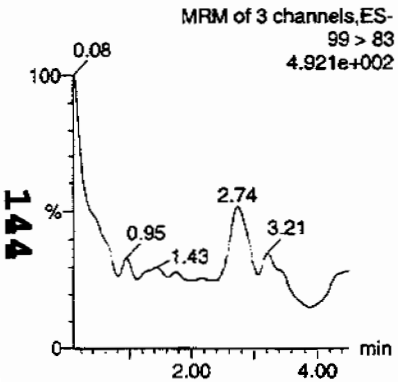

Perchlorate

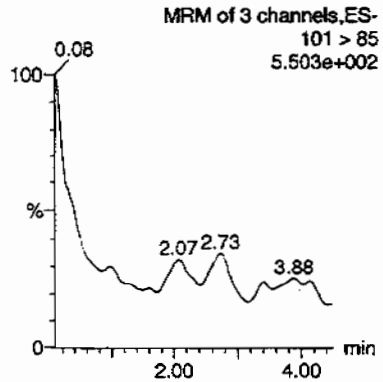

Perchlorate-101

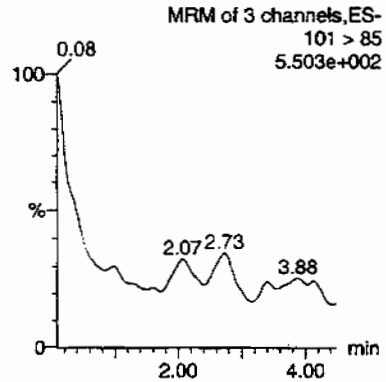

Perchlorate-O(18)

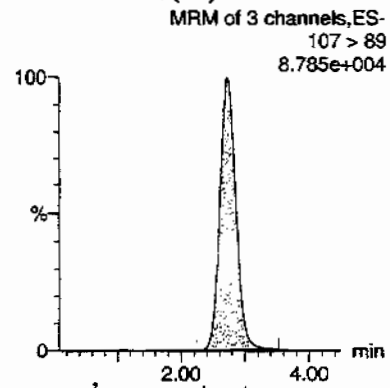

Anne 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.74	25499.680	25499.680	bb			0.4967	99.34	-0.66	1986.5...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630002a
Date: 30-Jun-2009
Time: 10:21:51
ID: IPB001
Vial: 1:1,A

CWW 07-01-09

Perchlorate

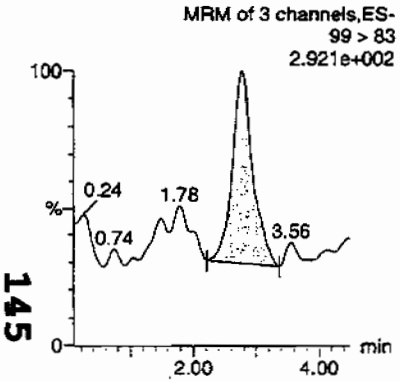

Perchlorate

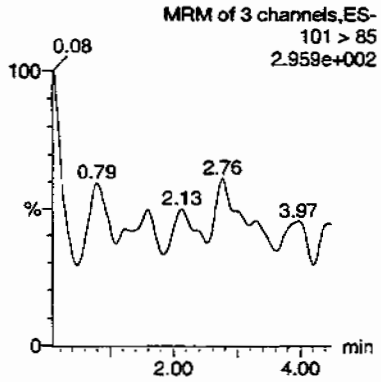

Perchlorate-101

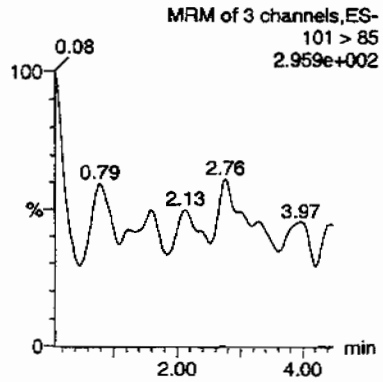

Perchlorate-O(18)

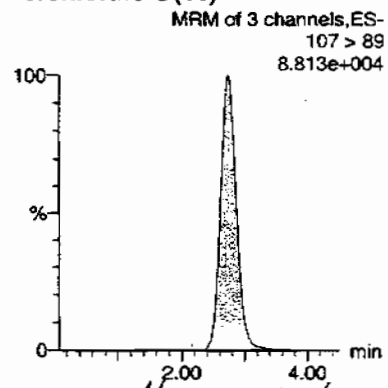

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.77	78.075	78.075	bb			0.0015			13.957	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.74	25611.930	25611.930	bb			0.4989	99.78	-0.22	5316.7...	

145

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2478-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	30-JUN-09	per0630008a	IPB002
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630008a	IPB002
Perchlorate	0.00	0	NA	30-JUN-09	per0630010a	IPB003
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630010a	IPB003
Perchlorate	0.00	0	NA	30-JUN-09	per0630021a	IPB004
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630021a	IPB004
Perchlorate	0.00	0	NA	30-JUN-09	per0630032a	IPB005
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630032a	IPB005
Perchlorate	0.00	0	NA	30-JUN-09	per0630043a	IPB006
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630043a	IPB006
Perchlorate	0.00	0	NA	30-JUN-09	per0630054a	IPB007
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630054a	IPB007
Perchlorate	0.00	0	NA	30-JUN-09	per0630065a	IPB008

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2478–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630065a	IPB008

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630008a
Date: 30-Jun-2009
Time: 11:11:24
ID: IPB002
Vial: 1:1,A

CWW 07-01-09

Perchlorate

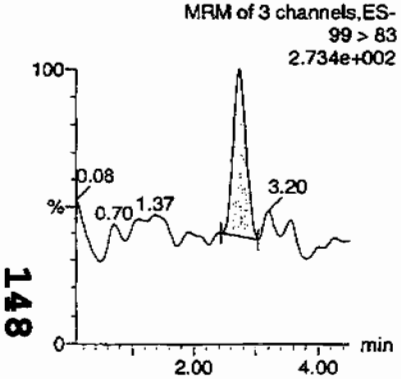

Perchlorate

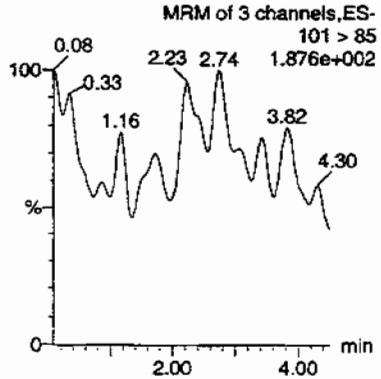

Perchlorate-101

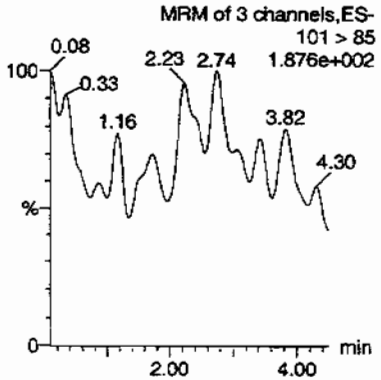

Perchlorate-O(18)

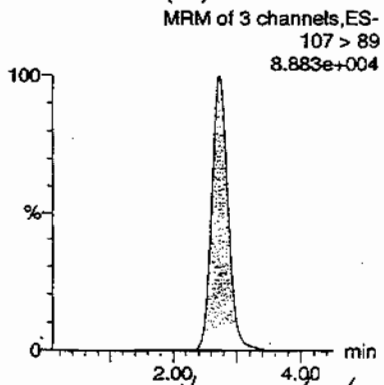

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.73	41.477	41.477	bb			0.0008			22.735	0.00
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	2.74	25865.879	25865.879	bb			0.5039	100.77	0.77	13696....	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qid

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630010a
Date: 30-Jun-2009
Time: 11:27:53
ID: IPB003
Vial: 1:1,A

CWW 07-01-09

Perchlorate

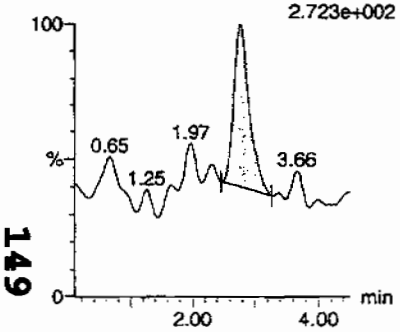

Perchlorate

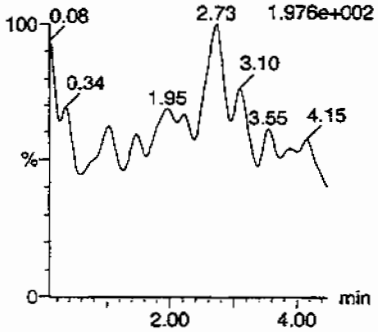

Perchlorate-101

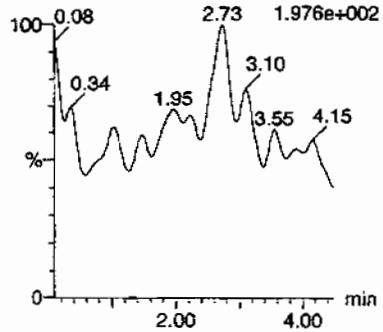

Perchlorate-O(18)

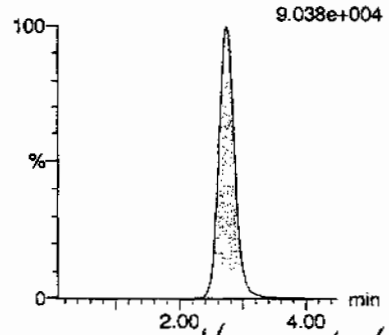

HMW 07/01/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.76	46.613	46.613	bb			0.0009			12.878	0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	2.74	26347.156	26347.156	bb			0.5132	102.65	2.65	1443.4...	

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Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630021a
Date: 30-Jun-2009
Time: 12:58:33
ID: IPB004
Vial: 1:1,A

Amo
07-01-09

Perchlorate

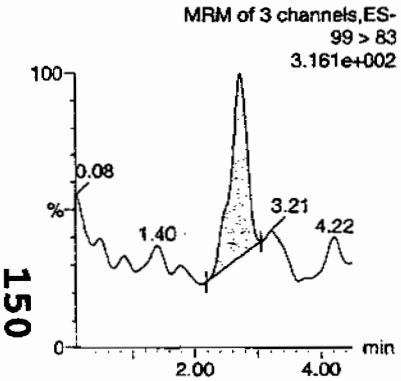

Perchlorate

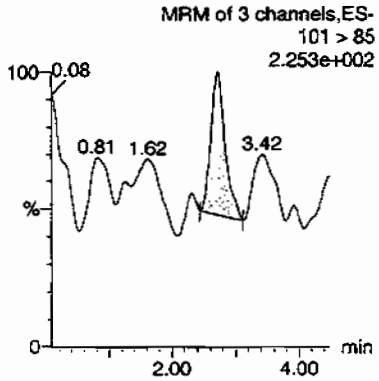

Perchlorate-101

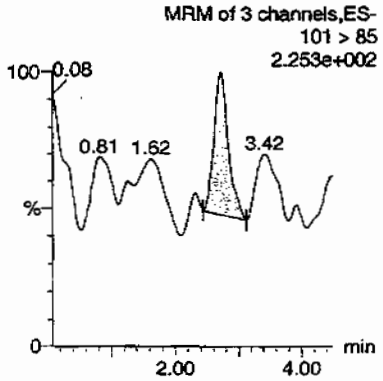

Perchlorate-O(18)

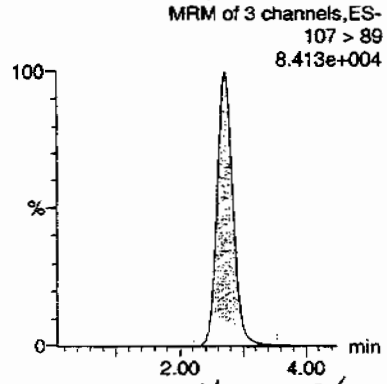

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.73	66.205	66.205	bb			0.0012			10.897	2.12
IPB004	Perchlorate-101	101 > 85	2.73	31.188	31.188	bb			0.0016			11.767	
IPB004	Perchlorate-O(18)	107 > 89	2.71	24336.664	24336.664	bb			0.4741	94.81	-5.19	9731.8...	

OKAY
LA 0500

150

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630032a
Date: 30-Jun-2009
Time: 14:29:15
ID: IPB005
Vial: 1:1,A

07-01-09

Perchlorate

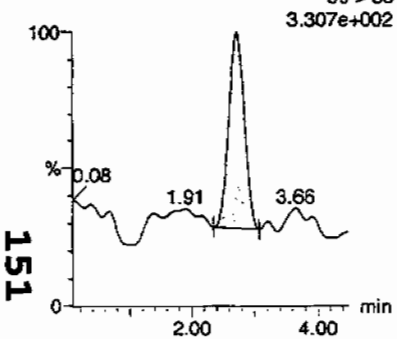

Perchlorate

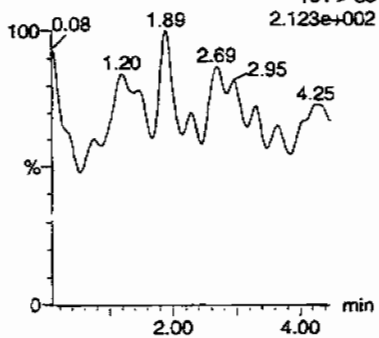

Perchlorate-101

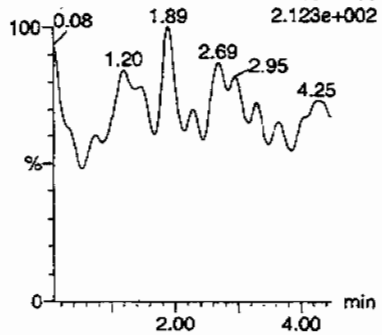

Perchlorate-O(18)

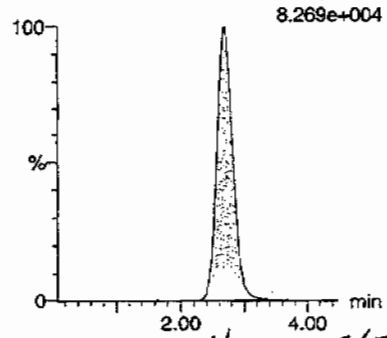

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83	2.73	68.128	68.128	bb			0.0013			10.633	0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.69	24007.066	24007.066	bb			0.4676	93.53	-6.47	4573.8...	

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Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630043a
Date: 30-Jun-2009
Time: 15:59:59
ID: IPB006
Vial: 1:1,A

07-01-09

Perchlorate

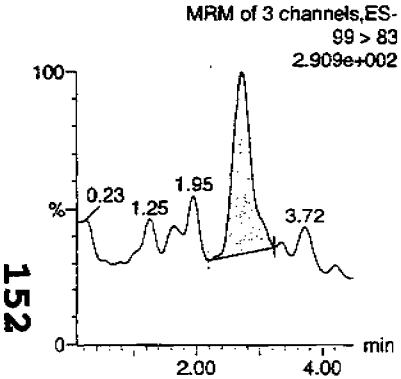

Perchlorate

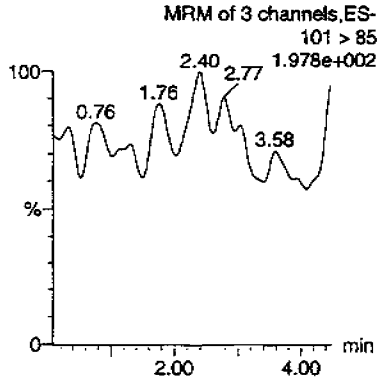

Perchlorate-101

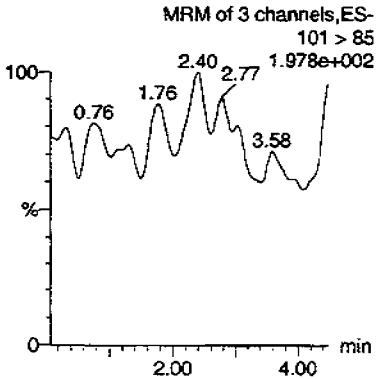

Perchlorate-O(18)

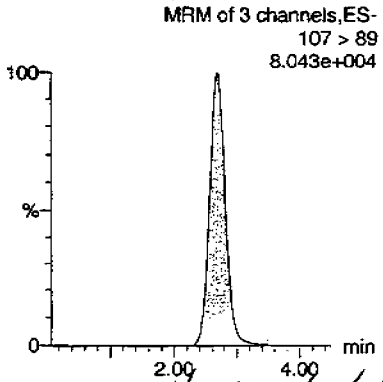

Hn mot lazlog

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	2.71	66.098	66.098	bb			0.0012			24.923	0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	2.68	22968.156	22968.156	bb			0.4474	89.48	-10.52	10845....	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630054a
Date: 30-Jun-2009
Time: 17:30:59
ID: IPB007
Vial: 1:1,A

CWW 07-01-09

Perchlorate

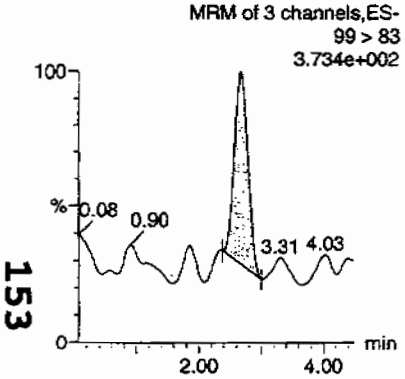

Perchlorate

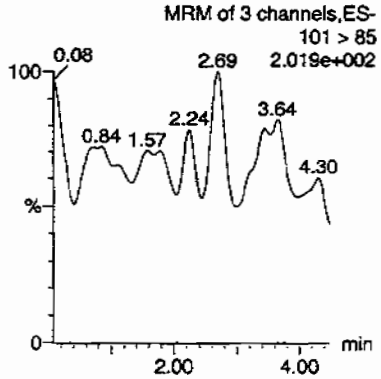

Perchlorate-101

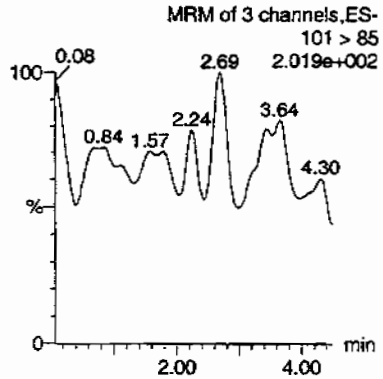

Perchlorate-O(18)

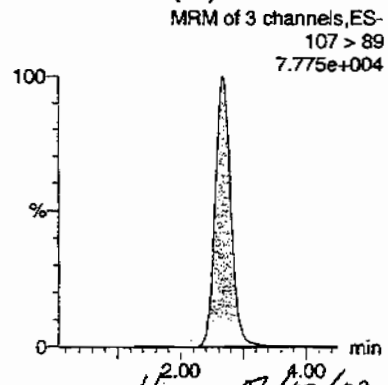

Hmc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83	2.68	66.521	66.521	bb			0.0012			16.943	0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	2.68	22485.289	22485.289	bb			0.4380	87.60	-12.40	12877....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630065a
Date: 30-Jun-2009
Time: 19:01:59
ID: IPB008
Vial: 1:1,A

CWW 07-01-09

Perchlorate

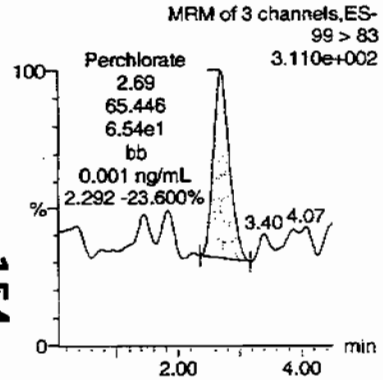

Perchlorate

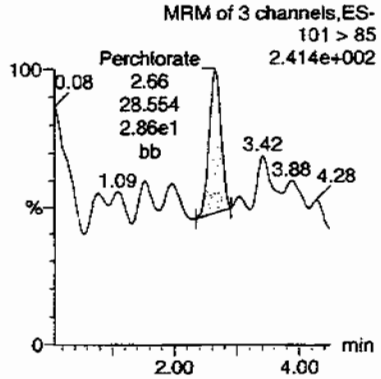

Perchlorate-101

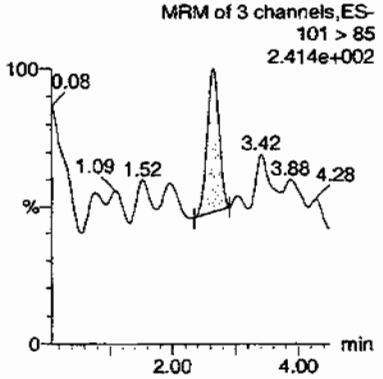

Perchlorate-O(18)

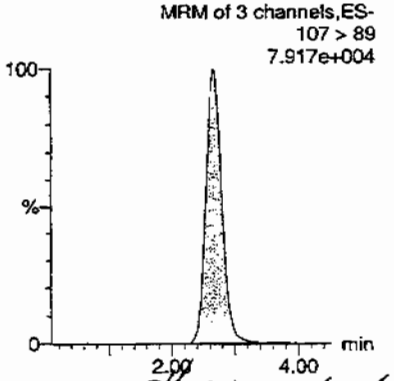

HMK 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83	2.69	65.446	65.446	bb			0.0012			24.164	2.29
IPB008	Perchlorate-101	101 > 85	2.66	28.554	28.554	bb			0.0015			5.670	
IPB008	Perchlorate-O(18)	107 > 89	2.66	22664.361	22664.361	bb			0.4415	88.30	-11.70	11124....	

OKAY
20.050D

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWW 01-09-08

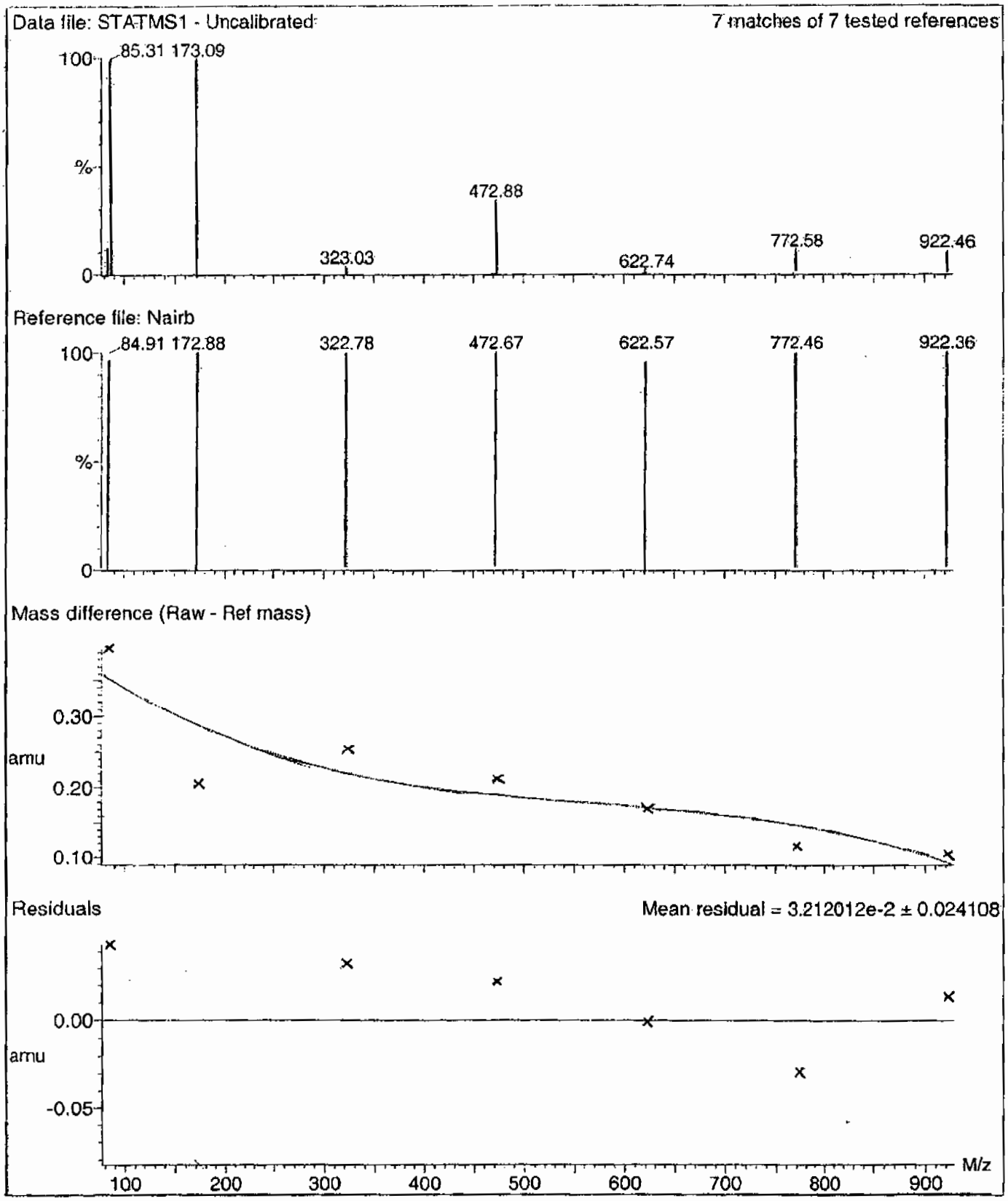

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

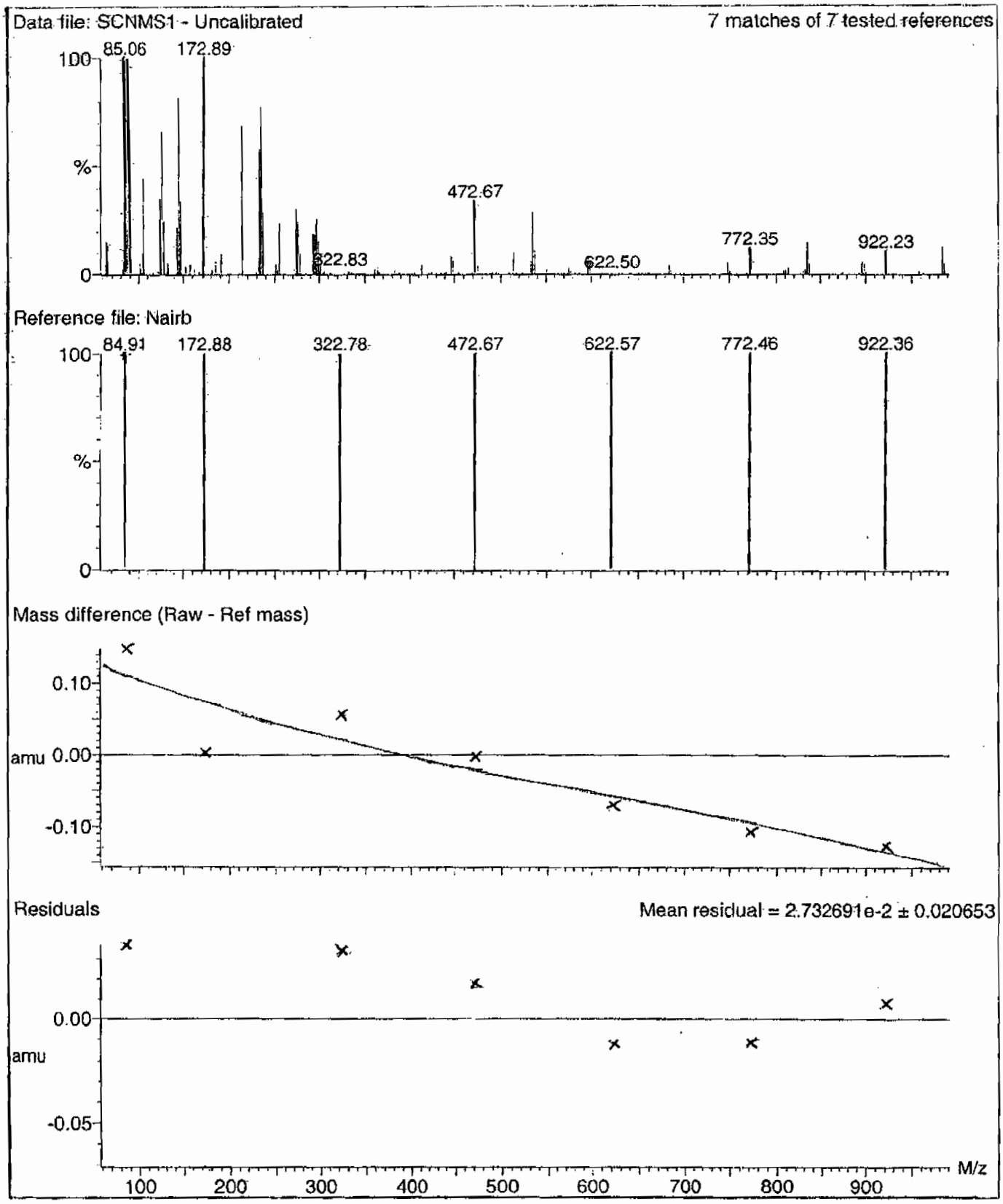

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Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

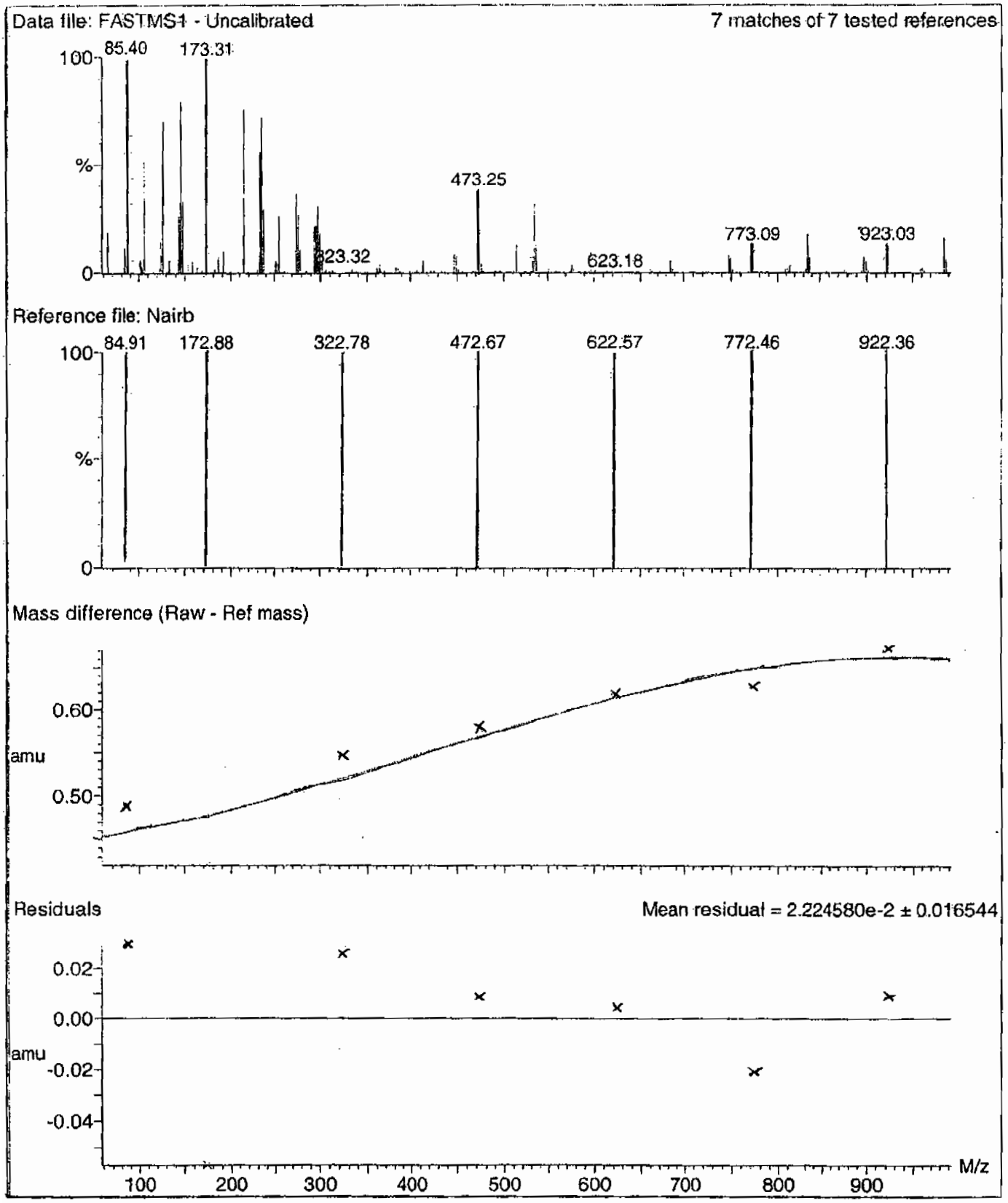

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

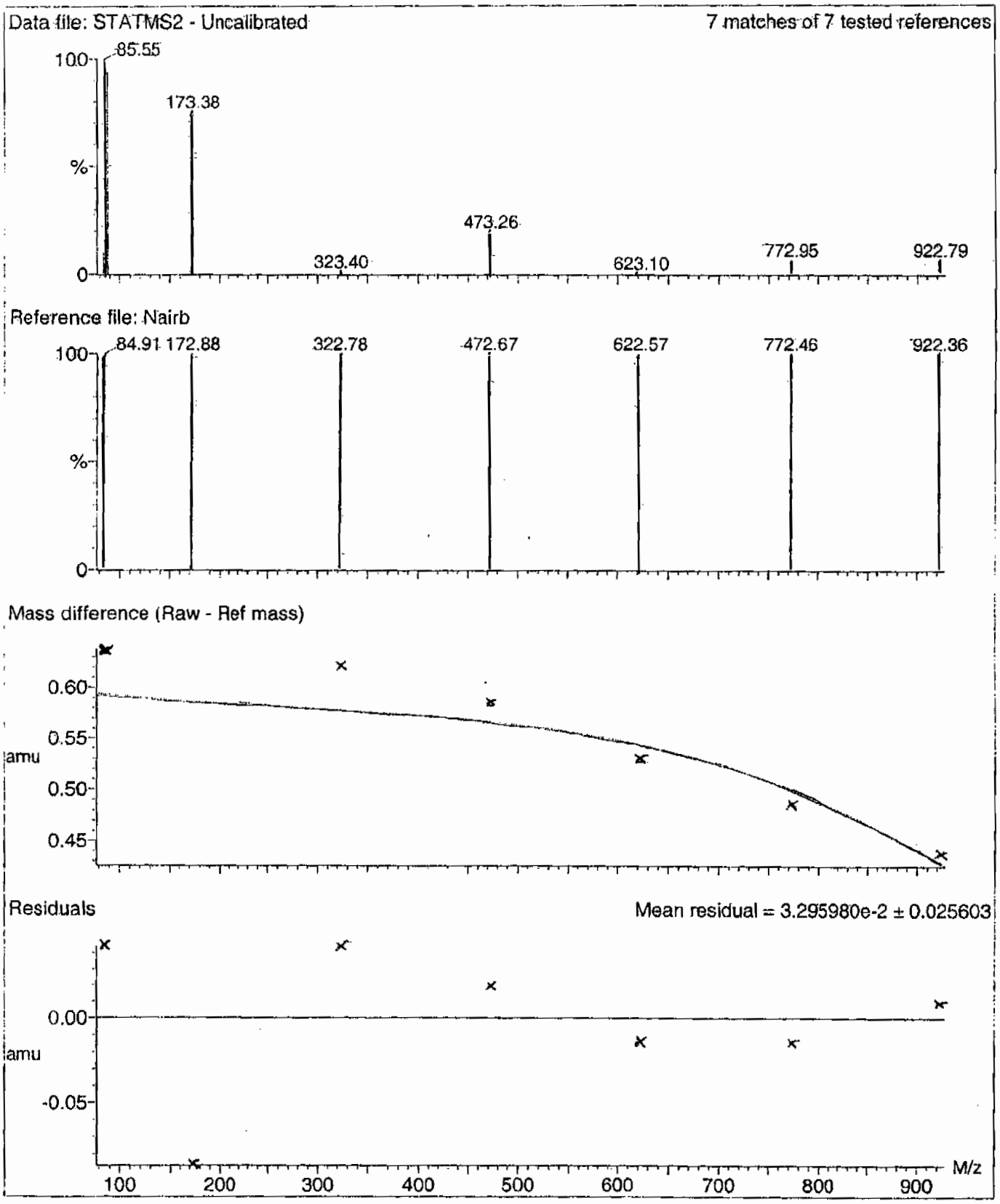

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Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

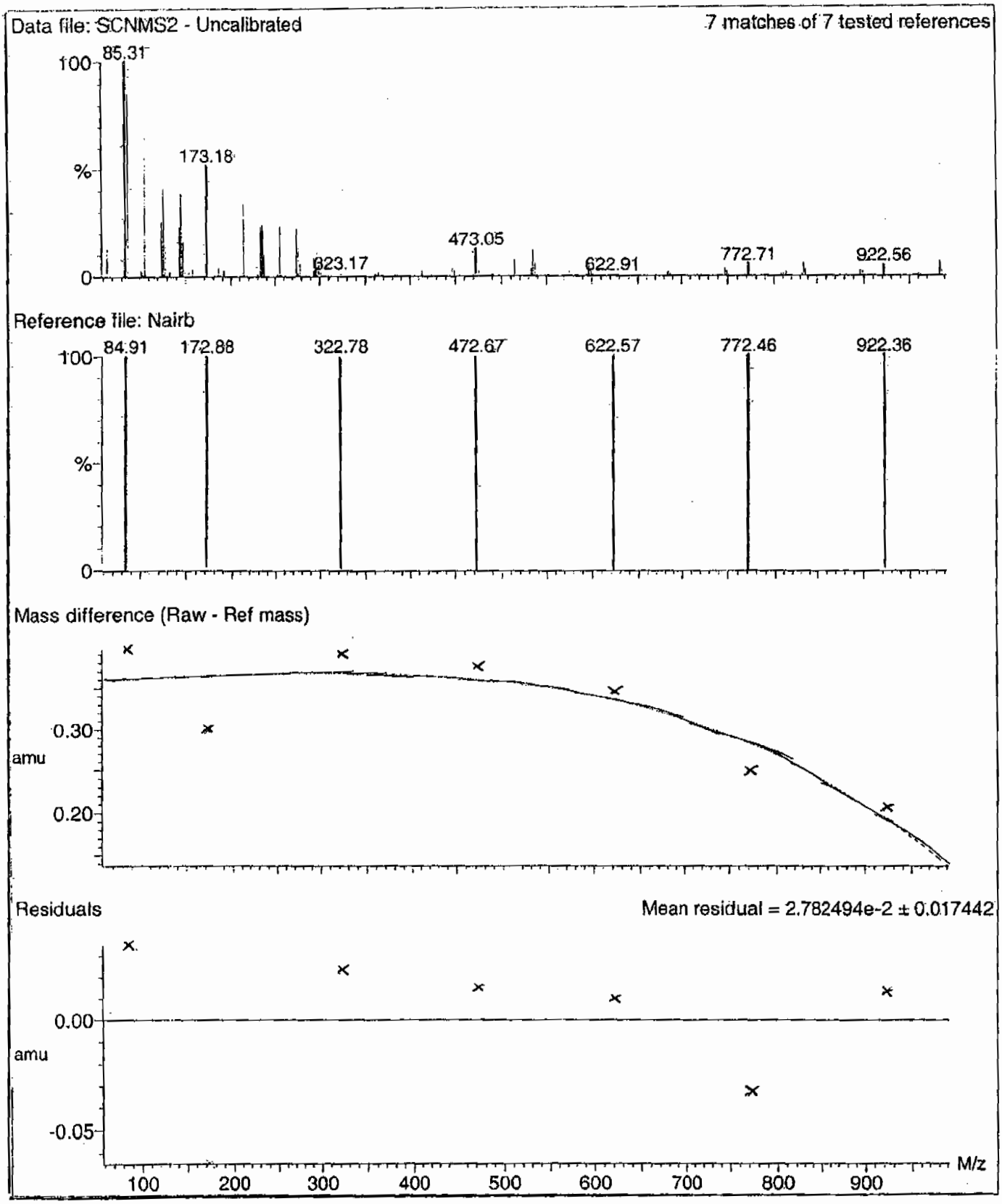

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Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

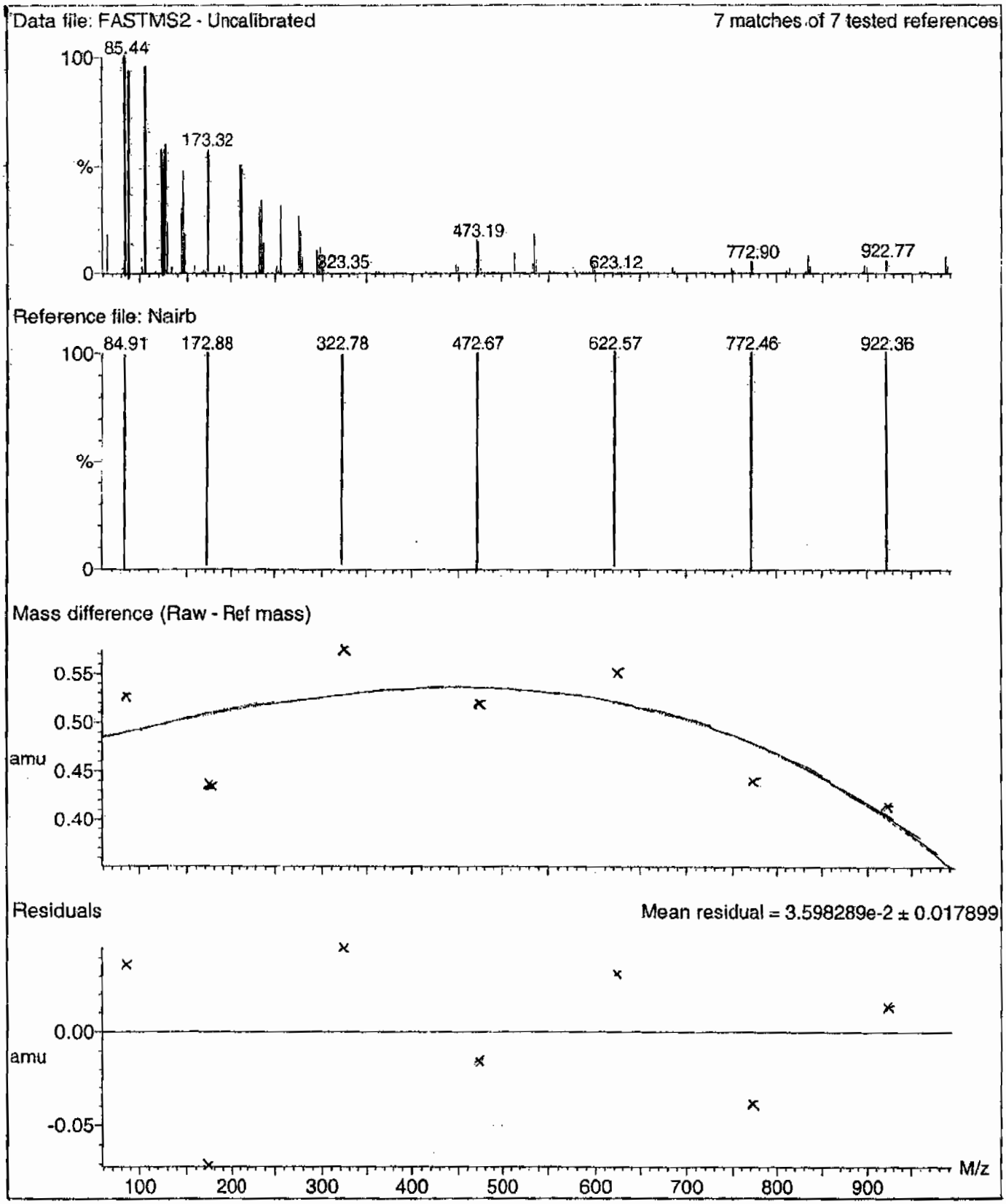

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Tuesday, June 30, 2009 10:00:39 Eastern Daylight Time

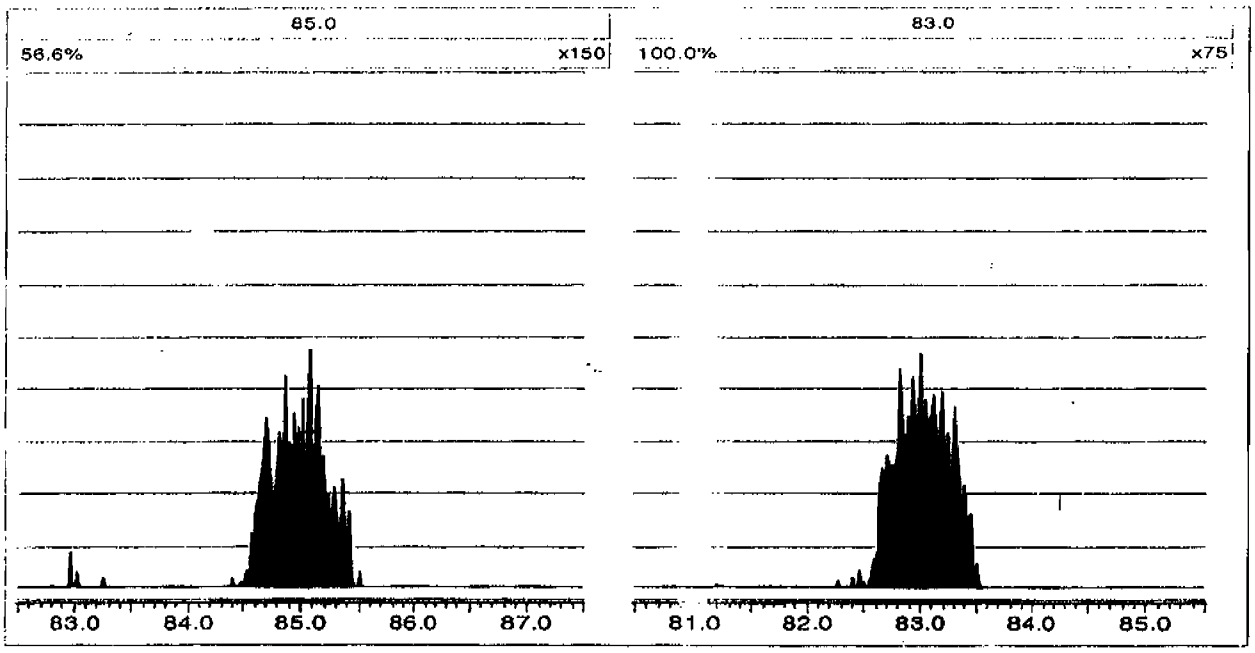

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2478–1

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0630006a**	**30–JUN–09**	**25387.5**				
Lower Area Limit			**12693.75**				
Upper Area Limit			**50775**				
1201871409	per0630045a	30–JUN–09 16:16	21871.3	2.68	2.68793	1.003	
1201871410	per0630046a	30–JUN–09 16:24	22316.8	2.69	2.7002	1.004	
1201871417	per0630047a	30–JUN–09 16:33	23954.3	2.58	2.58837	1.003	
232432001	per0630062a	30–JUN–09 18:37	22511.6	2.66	2.67542	1.006	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-6054

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2478-1

GEL Sample ID: 232432001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:37	per0630062a
	Perchlorate Isotope Ratio						1	30-JUN-09 18:37	per0630062a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:37	per0630062a
	Perchlorate-O(18)			0.439	ug/L		1	30-JUN-09 18:37	per0630062a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630062a
Date: 30-Jun-2009
Time: 18:37:02
ID: 232432001
Vial: 2:3,C

|LANL|881216|LZQ|11|

CWW 07-01-9

Perchlorate

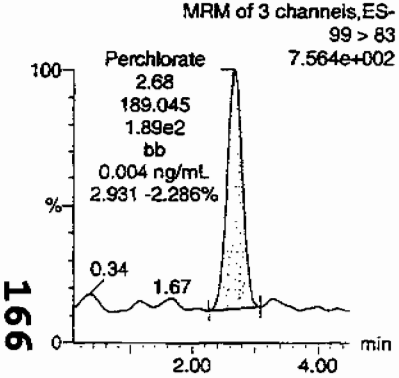

Perchlorate

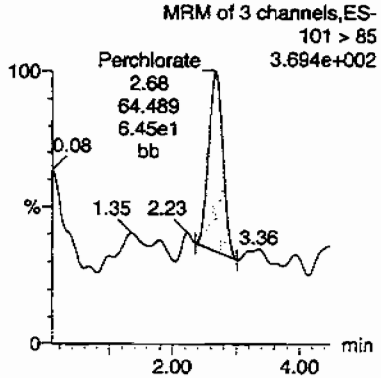

Perchlorate-101

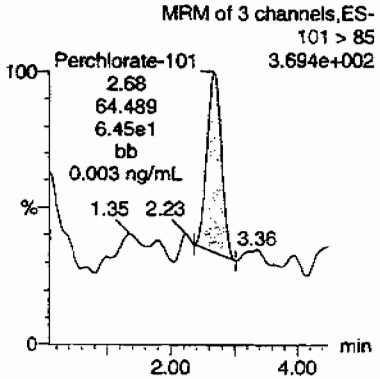

Perchlorate-O(18)

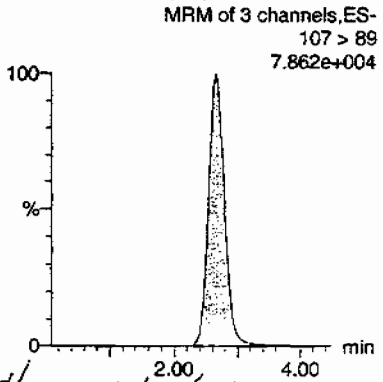

HMW 07/01/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232432001	Perchlorate	99 > 83	2.68	189.045	189.045	bb			0.0035			60.813	2.93
232432001	Perchlorate-101	101 > 85	2.68	64.489	64.489	bb			0.0033			18.097	
232432001	Perchlorate-O(18)	107 > 89	2.66	22511.631	22511.631	bb			0.4385	87.70	-12.30	4601.8...	

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2478-1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 30-JUN-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 53797.02

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2478–1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 30–JUN–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 19544.92

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 9:01:25 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per063009a.mdb 30 Jun 2009 11:03:27
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per063009a.cdb 01 Jul 2009 08:12:45

Compound name: Perchlorate
Response Factor: 53797
RRF SD: 950.099, % Relative SD: 1.76608
Response type: External Std, Area
Curve type: RF

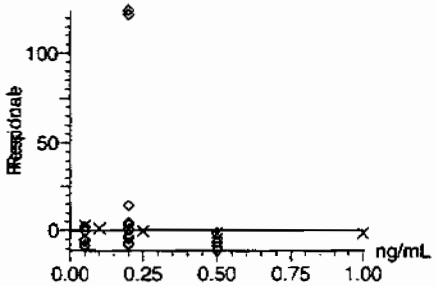

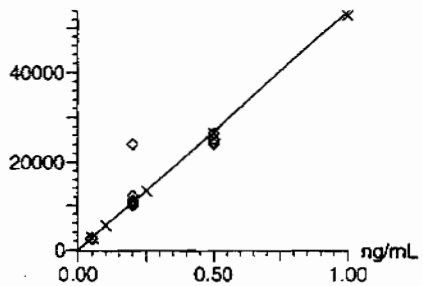

CW 07-01-09

Compound name: Perchlorate-101
Response Factor: 19544.9
RRF SD: 835.421, % Relative SD: 4.27437
Response type: External Std, Area
Curve type: RF

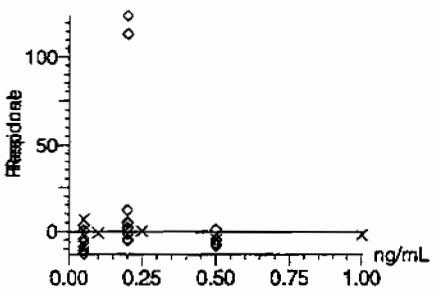

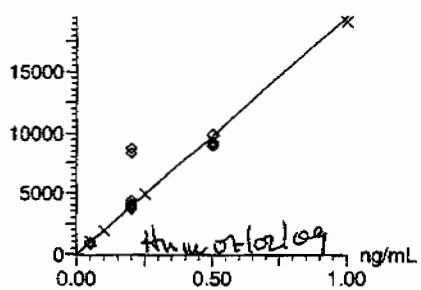

Hm 07/02/09

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GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 9:01:25 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 51336.3
RRF SD: 459.349, % Relative SD: 0.894783
Response type: External Std, Area
Curve type: RF

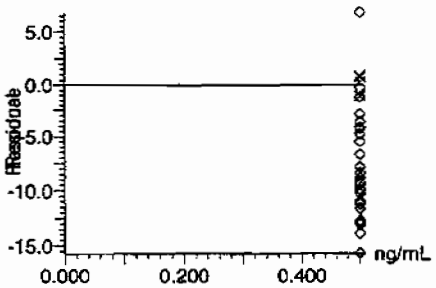

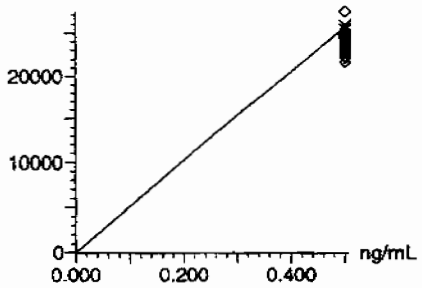

171

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2478–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	98.41	30–JUN–09 11:19	per0630009a
Perchlorate Isotope Ratio		2.68		30–JUN–09 11:19	per0630009a
Perchlorate–101	.5	.51	101.17	30–JUN–09 11:19	per0630009a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630009a
Date: 30-Jun-2009
Time: 11:19:39
ID: WCL090610-06ICV
Vial: 1:2,A

aw
07-01-09

Perchlorate

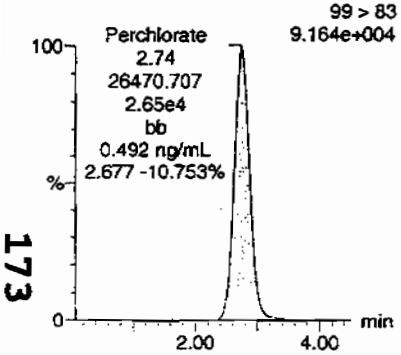

Perchlorate

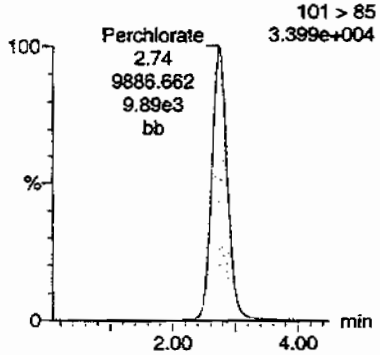

Perchlorate-101

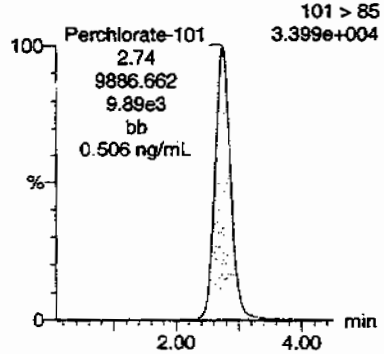

Perchlorate-O(18)

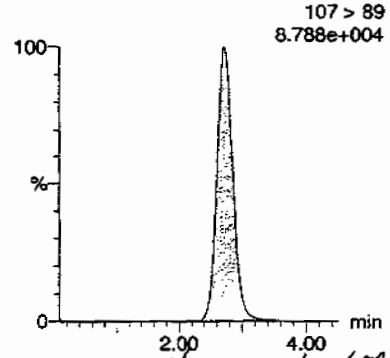

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06ICV	Perchlorate	99 > 83	2.74	26470.707	26470.707	bb			0.4920	98.41	-1.59	15047....	2.68
WCL090610-06ICV	Perchlorate-101	101 > 85	2.74	9886.662	9886.662	bb			0.5058	101.17	1.17	1131.1...	
WCL090610-06ICV	Perchlorate-O(18)	107 > 89	2.73	25360.139	25360.139	bb			0.4940	98.80	-1.20	4237.8...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2478-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	93.51	30-JUN-09 12:50	per0630020a
Perchlorate Isotope Ratio		2.71		30-JUN-09 12:50	per0630020a
Perchlorate-101	.5	.47	94.92	30-JUN-09 12:50	per0630020a
Perchlorate	.5	.47	93.43	30-JUN-09 14:21	per0630031a
Perchlorate Isotope Ratio		2.75		30-JUN-09 14:21	per0630031a
Perchlorate-101	.5	.47	93.52	30-JUN-09 14:21	per0630031a
Perchlorate	.5	.47	93.5	30-JUN-09 15:51	per0630042a
Perchlorate Isotope Ratio		2.7		30-JUN-09 15:51	per0630042a
Perchlorate-101	.5	.48	95.26	30-JUN-09 15:51	per0630042a
Perchlorate	.5	.47	93.35	30-JUN-09 17:22	per0630053a
Perchlorate Isotope Ratio		2.8		30-JUN-09 17:22	per0630053a
Perchlorate-101	.5	.46	91.73	30-JUN-09 17:22	per0630053a
Perchlorate	.5	.45	89.18	30-JUN-09 18:53	per0630064a

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2478-1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		2.66		30-JUN-09 18:53	per0630064a
Perchlorate-101	.5	.46	92.31	30-JUN-09 18:53	per0630064a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630020a
Date: 30-Jun-2009
Time: 12:50:19
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
cmw
07-01-09

Perchlorate

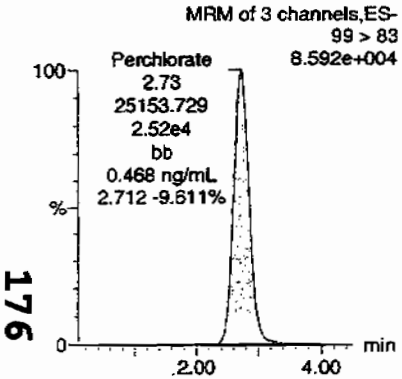

Perchlorate

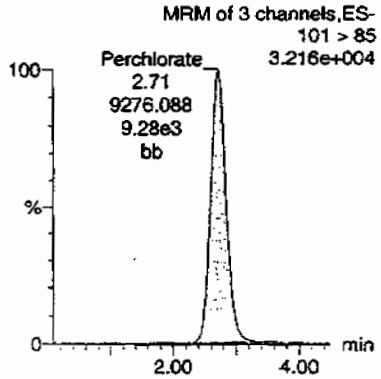

Perchlorate-101

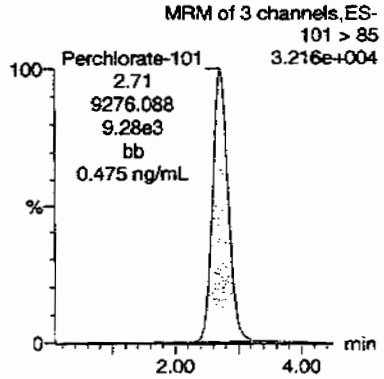

Perchlorate-O(18)

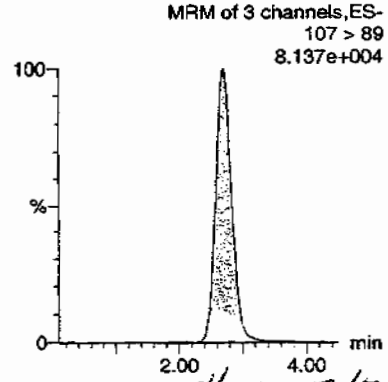

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.73	25153.729	25153.729	bb			0.4676	93.51	-6.49	13956....	2.71
WCL090610-06CCV	Perchlorate-101	101 > 85	2.71	9276.088	9276.088	bb			0.4746	94.92	-5.08	1180.7...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.70	23519.236	23519.236	bb			0.4581	91.63	-8.37	4023.7...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630031a
Date: 30-Jun-2009
Time: 14:21:01
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
07-01-09

Perchlorate

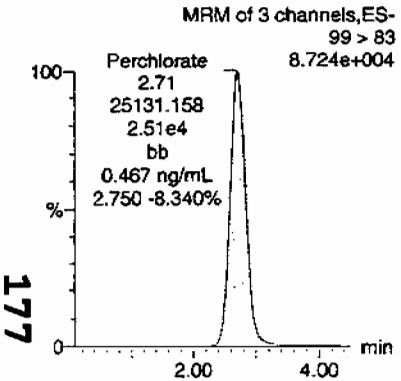

Perchlorate

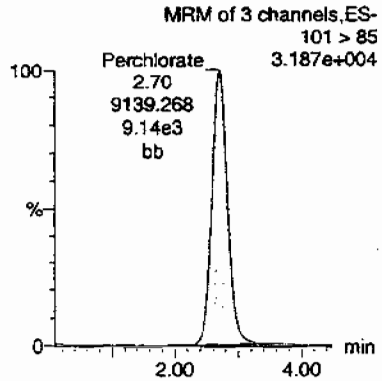

Perchlorate-101

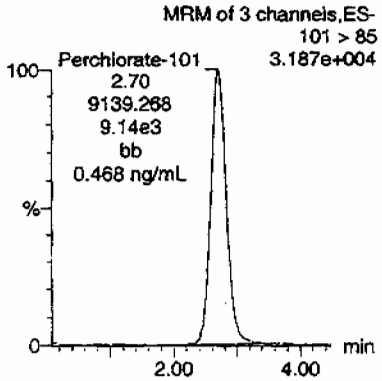

Perchlorate-O(18)

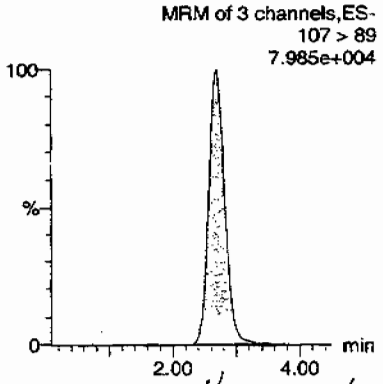

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.71	25131.158	25131.158	bb			0.4671	93.43	-6.57	583.159	2.75
WCL090610-06CCV	Perchlorate-101	101 > 85	2.70	9139.268	9139.268	bb			0.4676	93.52	-6.48	1409.9...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.69	23116.545	23116.545	bb			0.4503	90.06	-9.94	7340.3...	

177

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630042a
Date: 30-Jun-2009
Time: 15:51:45
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
aw
07-01-09

Perchlorate

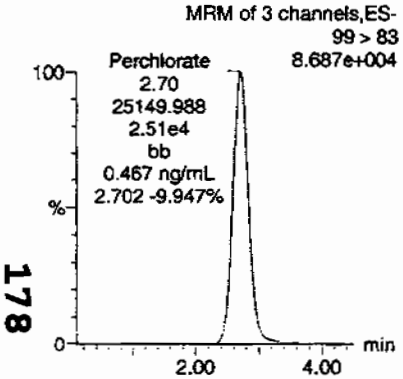

Perchlorate

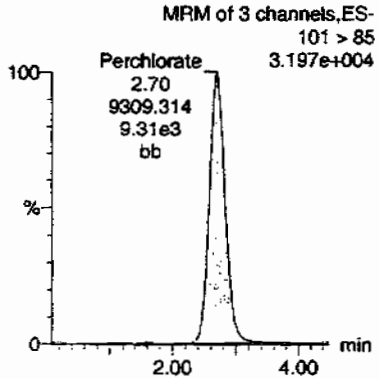

Perchlorate-101

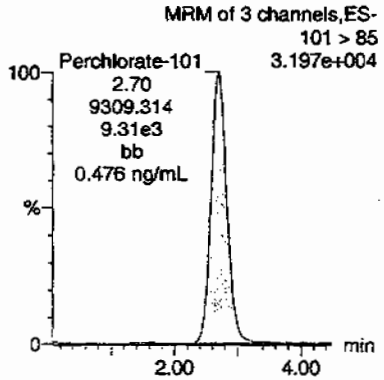

Perchlorate-O(18)

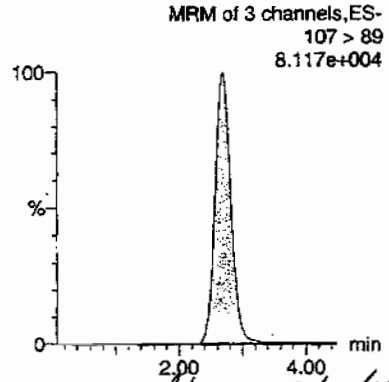

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.70	25149.988	25149.988	bb			0.4675	93.50	-6.50	12682....	2.70
WCL090610-06CCV	Perchlorate-101	101 > 85	2.70	9309.314	9309.314	bb			0.4763	95.26	-4.74	2339.4...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.69	23399.309	23399.309	bb			0.4558	91.16	-8.84	10568....	

178

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630053a
Date: 30-Jun-2009
Time: 17:22:30
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
07-01-09

Perchlorate

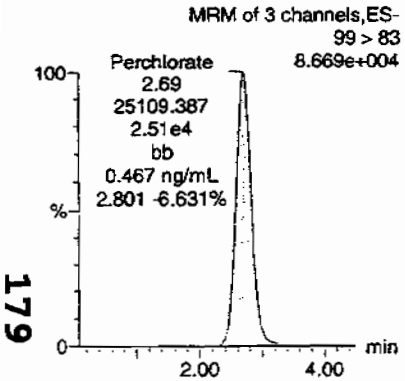

Perchlorate

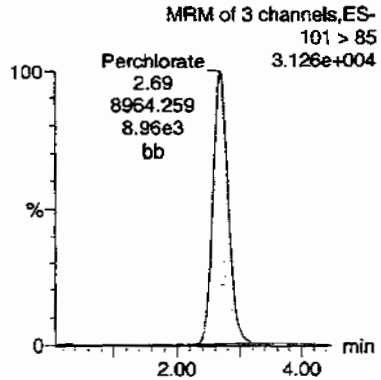

Perchlorate-101

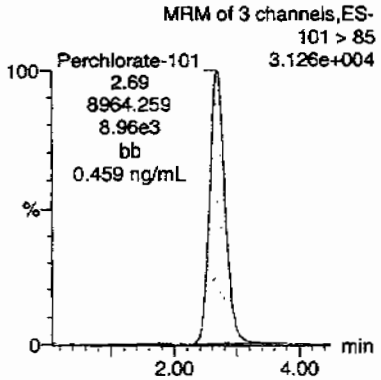

Perchlorate-O(18)

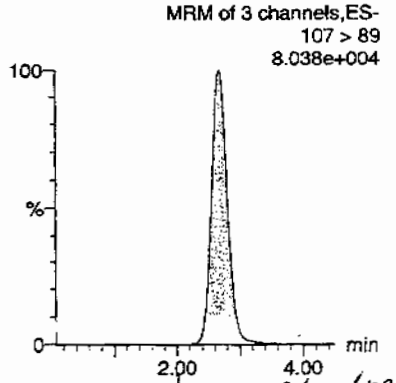

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.69	25109.387	25109.387	bb			0.4667	93.35	-6.65	5465.5...	2.80
WCL090610-06CCV	Perchlorate-101	101 > 85	2.69	8964.259	8964.259	bb			0.4586	91.73	-8.27	2400.4...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.68	23249.029	23249.029	bb			0.4529	90.58	-9.42	2653.1...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630064a
Date: 30-Jun-2009
Time: 18:53:30
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
aw
07/01/09

Perchlorate

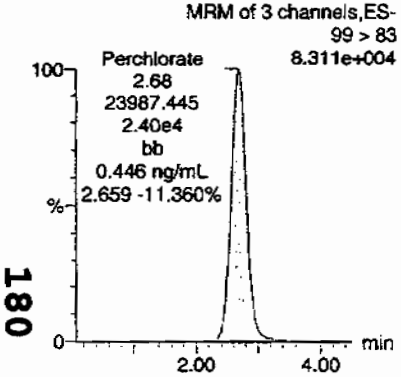

Perchlorate

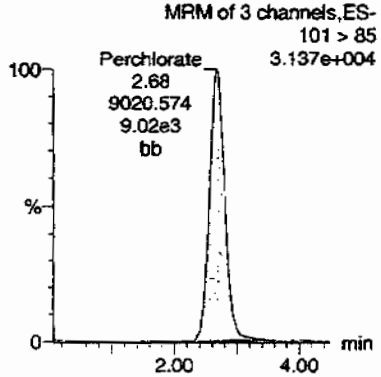

Perchlorate-101

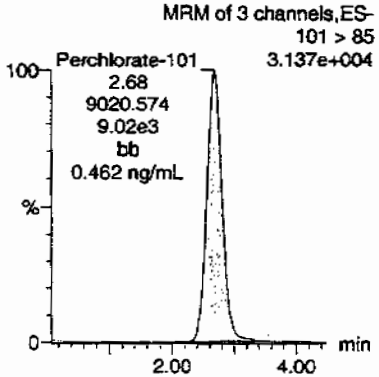

Perchlorate-O(18)

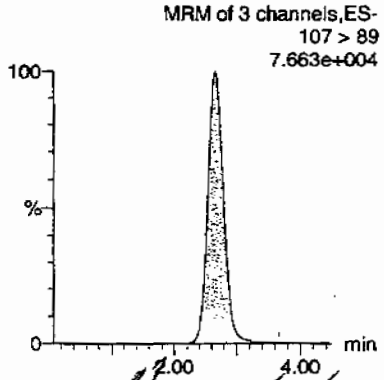

Hmw 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.68	23987.445	23987.445	bb			0.4459	89.18	-10.82	4248.5...	2.66
WCL090610-06CCV	Perchlorate-101	101 > 85	2.68	9020.574	9020.574	bb			0.4615	92.31	-7.69	1904.7...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.66	22107.057	22107.057	bb			0.4306	86.13	-13.87	6813.9...	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2478–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	99.87	30–JUN–09 11:36	per0630011a
Perchlorate Isotope Ratio		2.73		30–JUN–09 11:36	per0630011a
Perchlorate–101	.05	.05	100.55	30–JUN–09 11:36	per0630011a
Perchlorate	.05	.05	95.32	30–JUN–09 13:06	per0630022a
Perchlorate Isotope Ratio		2.93		30–JUN–09 13:06	per0630022a
Perchlorate–101	.05	.04	89.51	30–JUN–09 13:06	per0630022a
Perchlorate	.05	.05	102.07	30–JUN–09 14:37	per0630033a
Perchlorate Isotope Ratio		2.93		30–JUN–09 14:37	per0630033a
Perchlorate–101	.05	.05	95.89	30–JUN–09 14:37	per0630033a
Perchlorate	.05	.05	94.41	30–JUN–09 16:08	per0630044a
Perchlorate Isotope Ratio		2.51		30–JUN–09 16:08	per0630044a

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2478–1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate–101	.05	.05	103.53	30–JUN–09 16:08	per0630044a
Perchlorate	.05	.05	93.98	30–JUN–09 17:39	per0630055a
Perchlorate Isotope Ratio		2.75		30–JUN–09 17:39	per0630055a
Perchlorate–101	.05	.05	94.06	30–JUN–09 17:39	per0630055a
Perchlorate	.05	.05	90.83	30–JUN–09 19:10	per0630066a
Perchlorate Isotope Ratio		2.86		30–JUN–09 19:10	per0630066a
Perchlorate–101	.05	.04	87.49	30–JUN–09 19:10	per0630066a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630011a
Date: 30-Jun-2009
Time: 11:36:07
ID: WCL090610-07CRI
Vial: 1:2,B

Cwo 07-01-09

Perchlorate

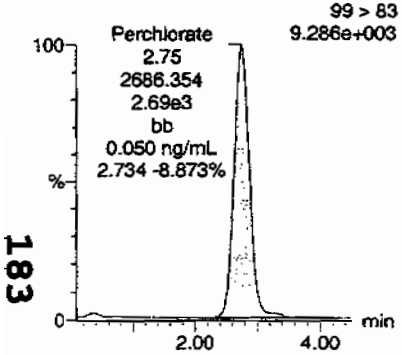

Perchlorate

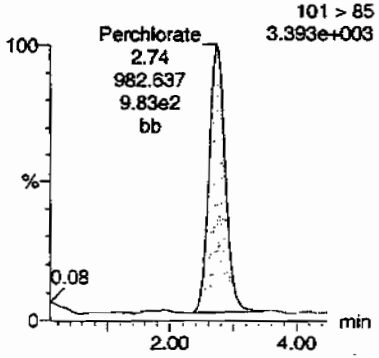

Perchlorate-101

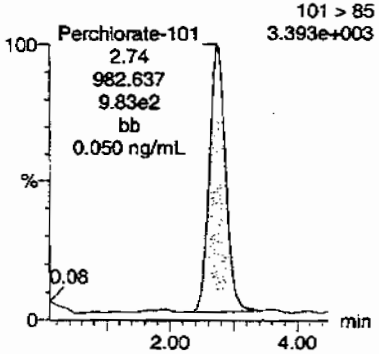

Perchlorate-O(18)

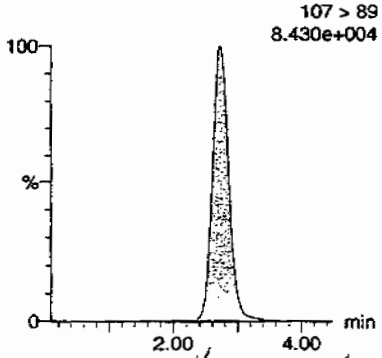

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.75	2686.354	2686.354	bb			0.0499	99.87	-0.13	924.865	2.73
WCL090610-07CRI	Perchlorate-101	101 > 85	2.74	982.637	982.637	bb			0.0503	100.55	0.55	313.910	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.73	24612.648	24612.648	bb			0.4794	95.89	-4.11	2349.9...	

183

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630022a
Date: 30-Jun-2009
Time: 13:06:48
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
and
07-01-09

Perchlorate

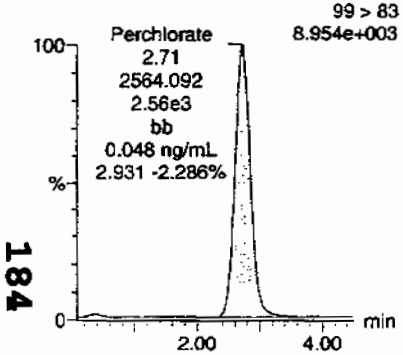

Perchlorate

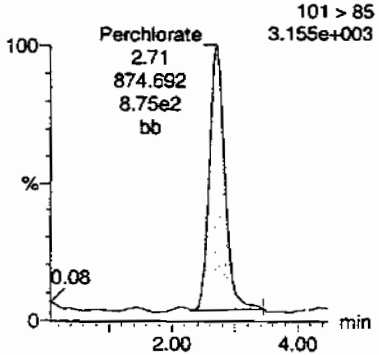

Perchlorate-101

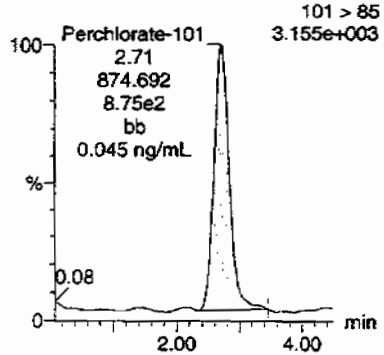

Perchlorate-O(18)

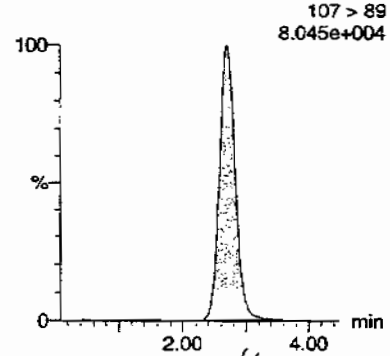

Hrnc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.71	2564.092	2564.092	bb			0.0477	95.32	-4.68	377.492	2.93
WCL090610-07CRI	Perchlorate-101	101 > 85	2.71	874.692	874.692	bb			0.0448	89.51	-10.49	144.469	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.70	23144.973	23144.973	bb			0.4508	90.17	-9.83	8866.8...	

184

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630033a
Date: 30-Jun-2009
Time: 14:37:30
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
and
07/02/09

Perchlorate

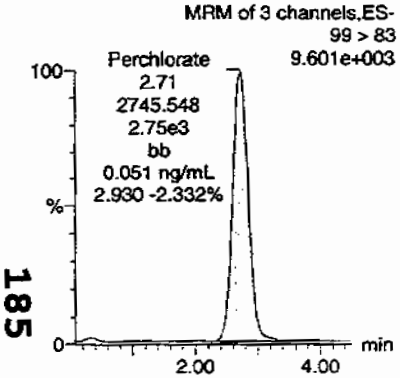

Perchlorate

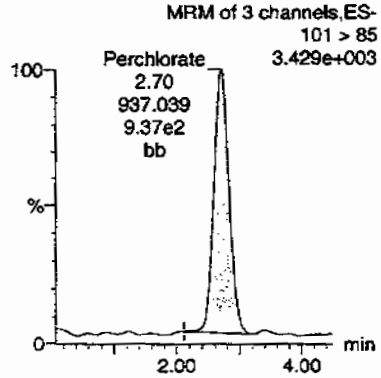

Perchlorate-101

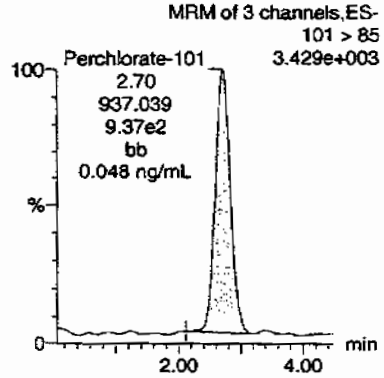

Perchlorate-O(18)

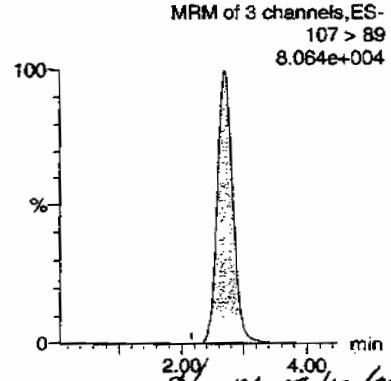

AMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.71	2745.548	2745.548	bb			0.0510	102.07	2.07	1568.9...	2.93
WCL090610-07CRI	Perchlorate-101	101 > 85	2.70	937.039	937.039	bb			0.0479	95.89	-4.11	119.555	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.70	23314.953	23314.953	bb			0.4542	90.83	-9.17	6251.4...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630044a
Date: 30-Jun-2009
Time: 16:08:13
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
cwo
07/01/09

Perchlorate

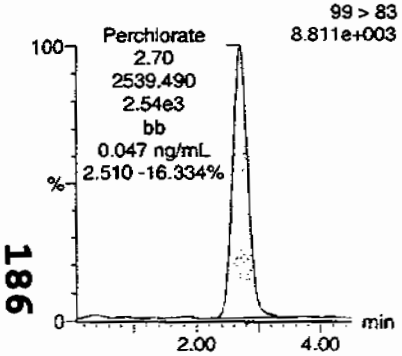

Perchlorate

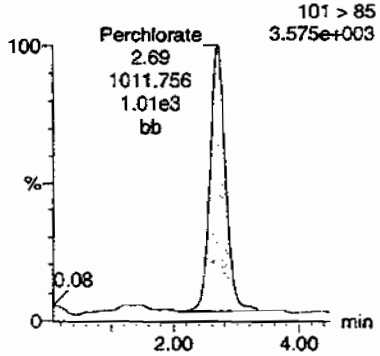

Perchlorate-101

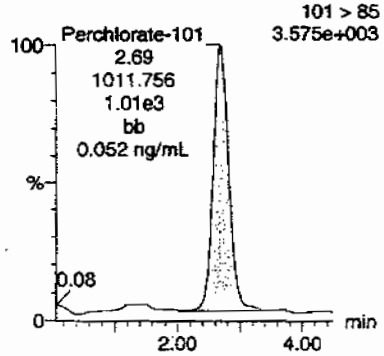

Perchlorate-O(18)

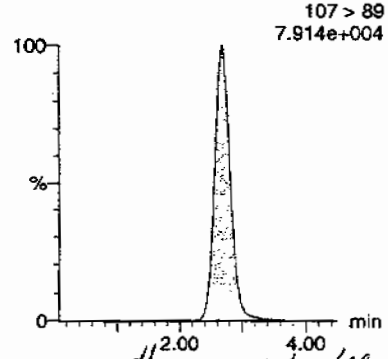

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.70	2539.490	2539.490	bb			0.0472	94.41	-5.59	337.441	2.51
WCL090610-07CRI	Perchlorate-101	101 > 85	2.69	1011.756	1011.756	bb			0.0518	103.53	3.53	78.842	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.69	22688.219	22688.219	bb			0.4420	88.39	-11.61	5355.6...	

186

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630055a
Date: 30-Jun-2009
Time: 17:39:13
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
and
07-01-5

Perchlorate

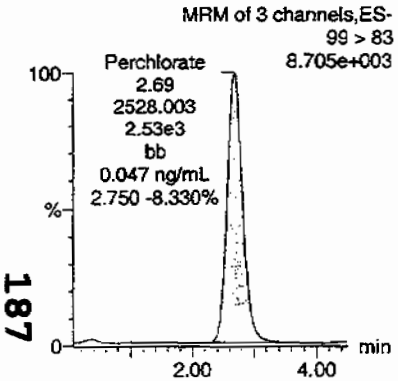

Perchlorate

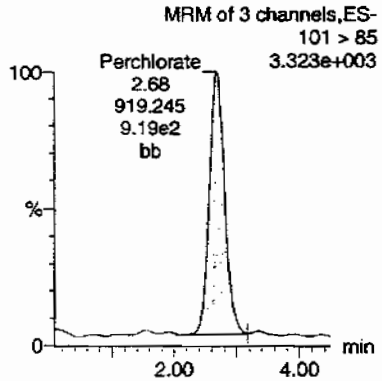

Perchlorate-101

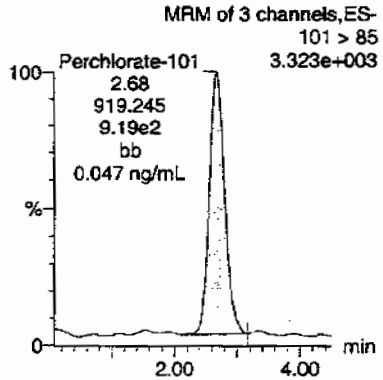

Perchlorate-O(18)

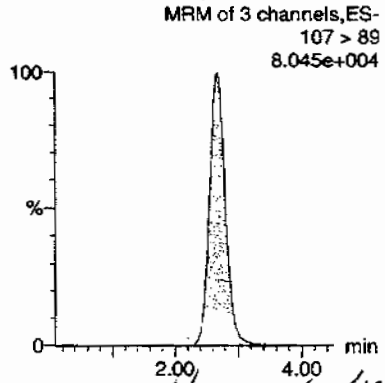

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.69	2528.003	2528.003	bb			0.0470	93.98	-6.02	555.542	2.75
WCL090610-07CRI	Perchlorate-101	101 > 85	2.68	919.245	919.245	bb			0.0470	94.06	-5.94	154.618	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.68	23038.914	23038.914	bb			0.4488	89.76	-10.24	5496.9...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630066a
Date: 30-Jun-2009
Time: 19:10:13
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
and
07.01.09

Perchlorate

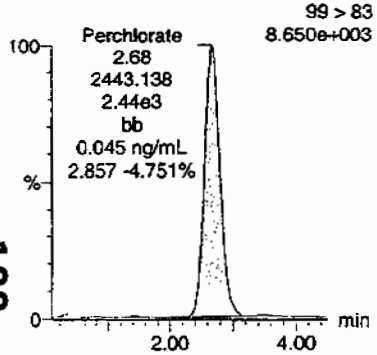

Perchlorate

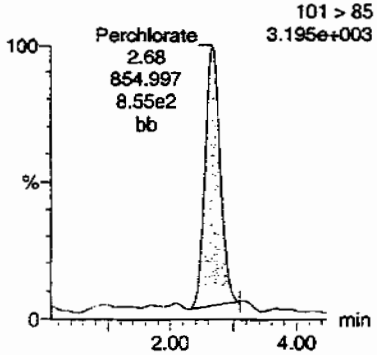

Perchlorate-101

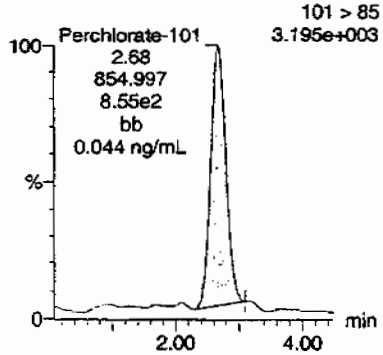

Perchlorate-O(18)

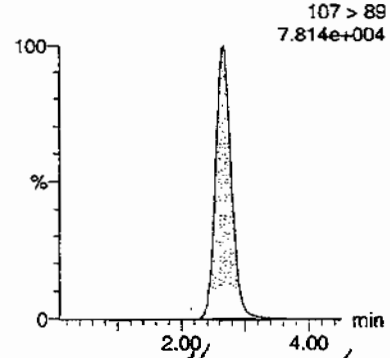

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.68	2443.138	2443.138	bb			0.0454	90.83	-9.17	545.751	2.86
WCL090610-07CRI	Perchlorate-101	101 > 85	2.68	854.997	854.997	bb			0.0437	87.49	-12.51	419.408	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.66	22362.273	22362.273	bb			0.4356	87.12	-12.88	9605.5...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: GROUND WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

MB

Date Received: 30–JUN–09

GEL Job No (SDG): 09–2478–1

GEL Sample ID: 1201871409

Date Filtered: 30–JUN–09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.050	ug/L	U	1	30–JUN–09 16:16	per0630045a
	Perchlorate Isotope Ratio						1	30–JUN–09 16:16	per0630045a
14797–73–0	Perchlorate–101	.05	.2	0.050	ug/L	U	1	30–JUN–09 16:16	per0630045a
	Perchlorate–O(18)			0.426	ug/L		1	30–JUN–09 16:16	per0630045a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630045a
Date: 30-Jun-2009
Time: 16:16:29
ID: 1201871409
Vial: 2:1,A

|LANL|881216|LCQ|MB|1|

Cmw 07-01-09

Perchlorate

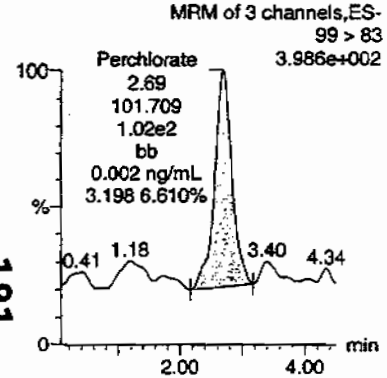

Perchlorate

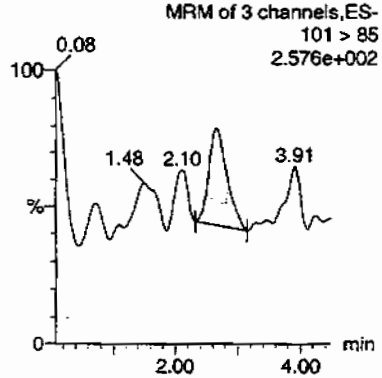

Perchlorate-101

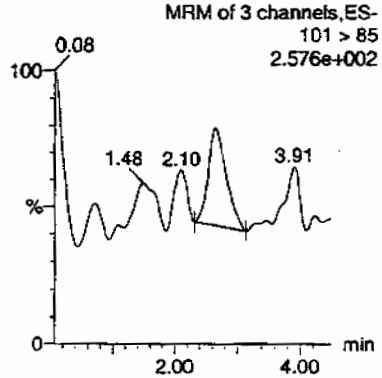

Perchlorate-O(18)

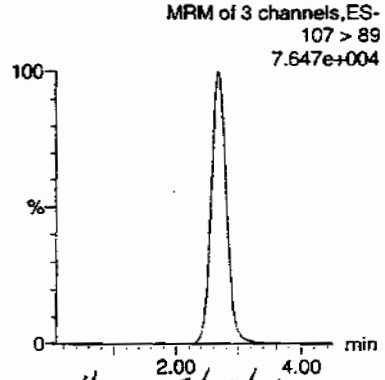

HMC 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871409	Perchlorate	99 > 83	2.69	101.709	101.709	bb			0.0019			47.727	3.20
1201871409	Perchlorate-101	101 > 85	2.65	31.801	31.801	bb			0.0016			8.847	
1201871409	Perchlorate-O(18)	107 > 89	2.68	21871.309	21871.309	bb			0.4260	85.21	-14.79	18447....	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: GROUND WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
LCS

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2478-1

GEL Sample ID: 1201871410

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.186	ug/L	J	1	30-JUN-09 16:24	per0630046a
	Perchlorate Isotope Ratio			2.71			1	30-JUN-09 16:24	per0630046a
14797-73-0	Perchlorate-101	.05	.2	0.189	ug/L	J	1	30-JUN-09 16:24	per0630046a
	Perchlorate-O(18)			0.435	ug/L		1	30-JUN-09 16:24	per0630046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630046a
Date: 30-Jun-2009
Time: 16:24:55
ID: 1201871410
Vial: 2:1,B

|LANL| 881216 |LCQ|LCS|1|

LMO 07-01-09

Perchlorate

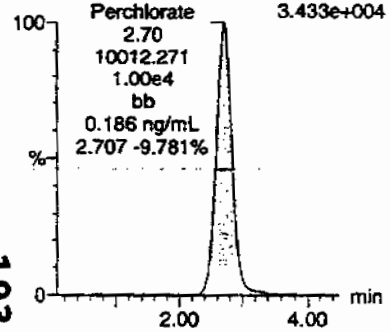

Perchlorate

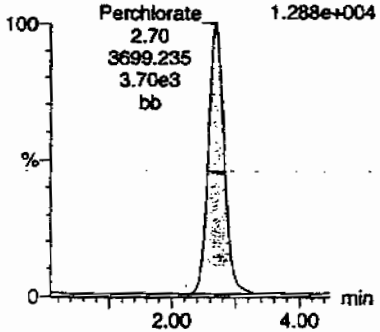

Perchlorate-101

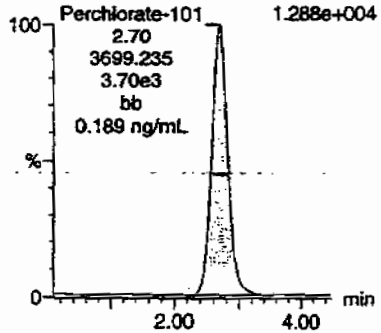

Perchlorate-O(18)

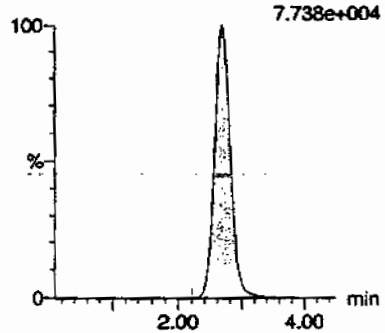

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871410	Perchlorate	99 > 83	2.70	10012.271	10012.271	bb			0.1861	93.06	-6.94	5613.9...	2.71
1201871410	Perchlorate-101	101 > 85	2.70	3699.235	3699.235	bb			0.1893	94.63	-5.37	1128.3...	
1201871410	Perchlorate-O(18)	107 > 89	2.69	22316.830	22316.830	bb			0.4347	86.94	-13.06	7263.1...	

$\frac{10012.271}{53797} = 0.1861$

Hnw 07/02/09

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 881215 Verified by:
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1201871409 MB	30-JUN-2009 11:11:16	10	10	1
1201871410 LCS	30-JUN-2009 11:11:16	10	10	1
232341002	30-JUN-2009 11:11:16	10	10	1
232345001	30-JUN-2009 11:11:16	10	10	1
1201871411 MS (232345001)	30-JUN-2009 11:11:16	10	10	1
1201871412 MSD (232345001)	30-JUN-2009 11:11:16	10	10	1
232345003	30-JUN-2009 11:11:16	10	10	1
232345008	30-JUN-2009 11:11:16	10	10	1
232345009	30-JUN-2009 11:11:16	10	10	1
232370001	30-JUN-2009 11:11:16	10	10	1
1201871414 MS (232370001)	30-JUN-2009 11:11:16	10	10	1
1201871416 MSD (232370001)	30-JUN-2009 11:11:16	10	10	1
232425001	30-JUN-2009 11:11:16	10	10	1
232432001	30-JUN-2009 11:11:16	10	10	1
232435002	30-JUN-2009 11:11:16	10	10	1
232437001	30-JUN-2009 11:11:16	10	10	1
1201871413 MS (232437001)	30-JUN-2009 11:11:16	10	10	1
1201871415 MSD (232437001)	30-JUN-2009 11:11:16	10	10	1
232502001	30-JUN-2009 11:11:16	10	10	1
232502002	30-JUN-2009 11:11:16	10	10	1
232502003	30-JUN-2009 11:11:16	10	10	1
232502004	30-JUN-2009 11:11:16	10	10	1
232510001	30-JUN-2009 11:11:16	10	10	1
1201871417 ICS	30-JUN-2009 11:11:16	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201871417	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
LCS	1201871410	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MS	1201871411	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MS	1201871413	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MS	1201871414	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MSD	1201871412	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MSD	1201871415	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MSD	1201871416	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
RGNT	All	500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1133543	10	mL
RGNT	All	O2SI HPLC Grade Water	1141273	10	mL

Comments:

Desalting cartridges used: 090603-1-H & 090401-Ba

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 06/30/09
Extr. Injection Volume: 20uL
Sequence Number: per063009a
Initial Calibration Date: 06/30/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: Anne
Date: 07/02/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090618-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0630001a	IPB001	CWW	6/30/2009 10:13			1		USE	B
per0630002a	IPB001	CWW	6/30/2009 10:21			1		USE	B
per0630003a	WCLICAL-01	CWW	6/30/2009 10:30			1		USE	I
per0630004a	WCLICAL-02	CWW	6/30/2009 10:38			1		USE	I
per0630005a	WCLICAL-03	CWW	6/30/2009 10:46			1		USE	I
per0630006a	WCLICAL-04	CWW	6/30/2009 10:54			1		USE	I
per0630007a	WCLICAL-05	CWW	6/30/2009 11:02			1		USE	I
per0630008a	IPB002	CWW	6/30/2009 11:11			1		USE	B
per0630009a	WCLICV	CWW	6/30/2009 11:19			1		USE	C
per0630010a	IPB003	CWW	6/30/2009 11:27			1		USE	B
per0630011a	WCLCRI	CWW	6/30/2009 11:36			1		USE	C
per0630012a	1201864376	CWW	6/30/2009 11:44	878266	09-2331-1	1	LANL	USE	S
per0630013a	1201864377	CWW	6/30/2009 11:52	878266	09-2331-1	1	LANL	USE	S
per0630014a	1201864380	CWW	6/30/2009 12:00	878266	09-2331-1	1	LANL	USE	S
per0630015a	231844001	CWW	6/30/2009 12:09	878266	09-2331-1	1	LANL	USE	S
per0630016a	1201864378	CWW	6/30/2009 12:17	878266	09-2331-1	1	LANL	USE	S
per0630017a	1201864379	CWW	6/30/2009 12:25	878266	09-2331-1	1	LANL	USE	S
per0630018a	231844002	CWW	6/30/2009 12:33	878266	09-2331-1	1	LANL	USE	S
per0630019a	231844003	CWW	6/30/2009 12:42	878266	09-2331-1	1	LANL	USE	S
per0630020a	WCLCCV	CWW	6/30/2009 12:50			1		USE	C
per0630021a	IPB004	CWW	6/30/2009 12:58			1		USE	B
per0630022a	WCLCRI	CWW	6/30/2009 13:06			1		USE	C
per0630023a	231844004	CWW	6/30/2009 13:15	878266	09-2331-1	1	LANL	USE	S
per0630024a	231844005	CWW	6/30/2009 13:23	878266	09-2331-1	1	LANL	USE	S
per0630025a	231844006	CWW	6/30/2009 13:31	878266	09-2331-1	1	LANL	USE	S
per0630026a	231844007	CWW	6/30/2009 13:39	878266	09-2331-1	1	LANL	USE	S
per0630027a	231844008	CWW	6/30/2009 13:48	878266	09-2331-1	1	LANL	USE	S
per0630028a	231844009	CWW	6/30/2009 13:56	878266	09-2331-1	1	LANL	USE	S
per0630029a	231844010	CWW	6/30/2009 14:04	878266	09-2331-1	1	LANL	USE	S

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per0630030a	231844011	CWW	6/30/2009 14:12	878266	09-2331-1	1	LANL	USE	S
per0630031a	WCLCCV	CWW	6/30/2009 14:21			1		USE	C
per0630032a	IPB005	CWW	6/30/2009 14:29			1		USE	B
per0630033a	WCLCRI	CWW	6/30/2009 14:37			1		USE	C
per0630034a	231844012	CWW	6/30/2009 14:45	878266	09-2331-1	1	LANL	USE	S
per0630035a	231844013	CWW	6/30/2009 14:54	878266	09-2331-1	1	LANL	USE	S
per0630036a	231844014	CWW	6/30/2009 15:02	878266	09-2331-1	1	LANL	USE	S
per0630037a	231844015	CWW	6/30/2009 15:10	878266	09-2331-1	1	LANL	USE	S
per0630038a	231844016	CWW	6/30/2009 15:18	878266	09-2331-1	1	LANL	USE	S
per0630039a	231844017	CWW	6/30/2009 15:27	878266	09-2331-1	1	LANL	USE	S
per0630040a	231844018	CWW	6/30/2009 15:35	878266	09-2331-1	1	LANL	USE	S
per0630041a	231844019	CWW	6/30/2009 15:43	878266	09-2331-1	1	LANL	USE	S
per0630042a	WCLCCV	CWW	6/30/2009 15:51			1		USE	C
per0630043a	IPB006	CWW	6/30/2009 15:59			1		USE	B
per0630044a	WCLCRI	CWW	6/30/2009 16:08			1		USE	C
per0630045a	1201871409	CWW	6/30/2009 16:16	881216	VARIOUS	1	LANL	USE	S
per0630046a	1201871410	CWW	6/30/2009 16:24	881216	VARIOUS	1	LANL	USE	S
per0630047a	1201871417	CWW	6/30/2009 16:33	881216	VARIOUS	1	LANL	USE	S
per0630048a	232341002	CWW	6/30/2009 16:41	881216	09-2469	1	LANL	USE	S
per0630049a	232345001	CWW	6/30/2009 16:49	881216	09-2464	1	LANL	USE	S
per0630050a	1201871411	CWW	6/30/2009 16:57	881216	09-2464	1	LANL	USE	S
per0630051a	1201871412	CWW	6/30/2009 17:06	881216	09-2464	1	LANL	USE	S
per0630052a	232345003	CWW	6/30/2009 17:14	881216	09-2464	1	LANL	USE	S
per0630053a	WCLCCV	CWW	6/30/2009 17:22			1		USE	C
per0630054a	IPB007	CWW	6/30/2009 17:30			1		USE	B
per0630055a	WCLCRI	CWW	6/30/2009 17:39			1		USE	C
per0630056a	232345008	CWW	6/30/2009 17:47	881216	09-2464	1	LANL	USE	S
per0630057a	232345009	CWW	6/30/2009 17:55	881216	09-2464	1	LANL	USE	S
per0630058a	232370001	CWW	6/30/2009 18:04	881216	09-2452-1	1	LANL	USE	S
per0630059a	1201871414	CWW	6/30/2009 18:12	881216	09-2452-1	1	LANL	USE	S
per0630060a	1201871416	CWW	6/30/2009 18:20	881216	09-2452-1	1	LANL	USE	S
per0630061a	232425001	CWW	6/30/2009 18:28	881216	09-2473-1	1	LANL	USE	S
per0630062a	232432001	CWW	6/30/2009 18:37	881216	09-2478-1	1	LANL	USE	S
per0630063a	232435002	CWW	6/30/2009 18:45	881216	09-2484	1	LANL	USE	S
per0630064a	WCLCCV	CWW	6/30/2009 18:53			1		USE	C
per0630065a	IPB008	CWW	6/30/2009 19:01			1		USE	B
per0630066a	WCLCRI	CWW	6/30/2009 19:10			1		USE	C

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per0630067a	232437001	CWW	6/30/2009 19:18	881216	09-2493	1	LANL	USE	S
per0630068a	1201871413	CWW	6/30/2009 19:26	881216	09-2493	1	LANL	USE	S
per0630069a	1201871415	CWW	6/30/2009 19:35	881216	09-2493	1	LANL	USE	S
per0630070a	232502001	CWW	6/30/2009 19:43	881216	09-2496	1	LANL	USE	S
per0630071a	232502002	CWW	6/30/2009 19:51	881216	09-2496	1	LANL	USE	S
per0630072a	232502003	CWW	6/30/2009 19:59	881216	09-2496	1	LANL	USE	S
per0630073a	232502004	CWW	6/30/2009 20:08	881216	09-2496	1	LANL	USE	S
per0630074a	232510001	CWW	6/30/2009 20:16	881216	09-2500-1	1	LANL	USE	S
per0630075a	WCLCCV	CWW	6/30/2009 20:24			1		USE	C
per0630076a	IPB009	CWW	6/30/2009 20:33			1		USE	B
per0630077a	WCLCRI	CWW	6/30/2009 20:41			1		USE	C

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630059a
Date: 30-Jun-2009
Time: 18:12:19
ID: 1201871414
Vial: 2:2,F

|LANL|881216|IZQ|MS|1|

CWW 07-01-09

Perchlorate

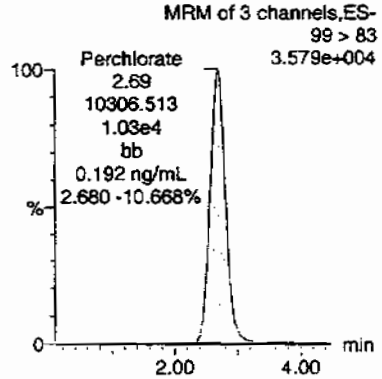

Perchlorate

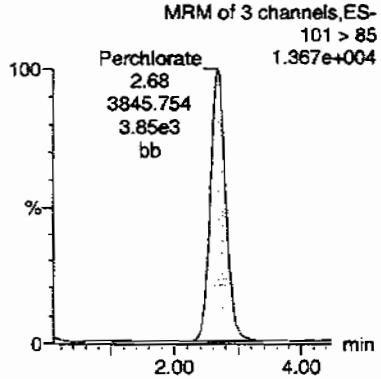

Perchlorate-101

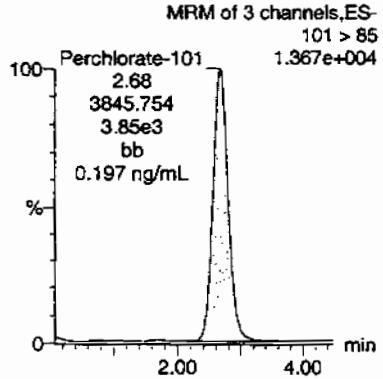

Perchlorate-O(18)

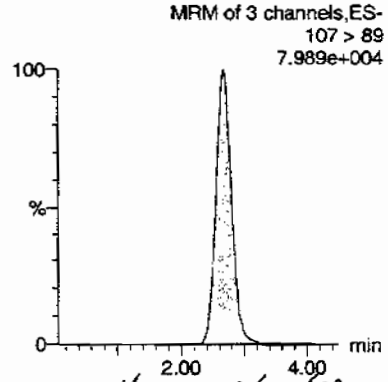

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871414	Perchlorate	99 > 83	2.69	10306.513	10306.513	bb			0.1916	95.79	-4.21	1474.6...	2.68
1201871414	Perchlorate-101	101 > 85	2.68	3845.754	3845.754	bb			0.1968	98.38	-1.62	515.957	
1201871414	Perchlorate-O(18)	107 > 89	2.66	22800.783	22800.783	bb			0.4441	88.83	-11.17	10123....	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630060a
Date: 30-Jun-2009
Time: 18:20:32
ID: 1201871416
Vial: 2:3,A

|LZNL|881216|LIQ|MSD|1|

CWW 07-01-09

Perchlorate

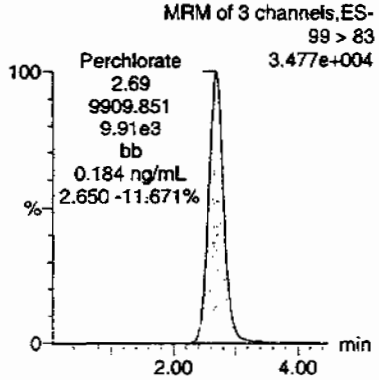

Perchlorate

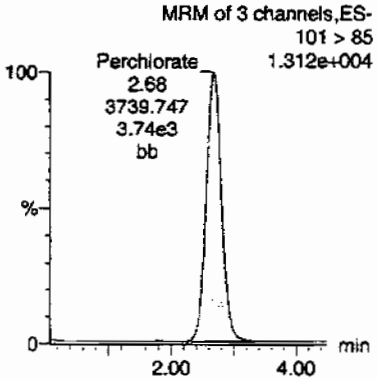

Perchlorate-101

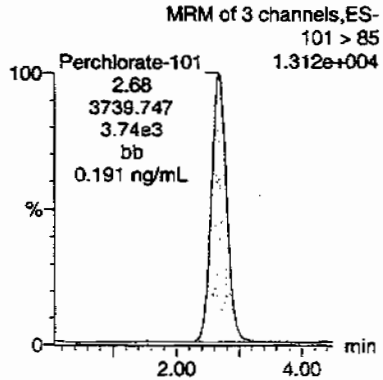

Perchlorate-O(18)

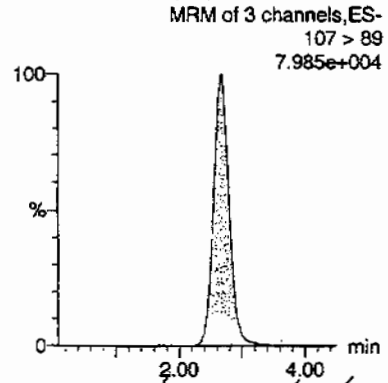

Amm 07/01/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871416	Perchlorate	99 > 83	2.69	9909.851	9909.851	bb			0.1842	92.10	-7.90	3219.4...	2.65
1201871416	Perchlorate-101	101 > 85	2.68	3739.747	3739.747	bb			0.1913	95.67	-4.33	1064.5...	
1201871416	Perchlorate-O(18)	107 > 89	2.66	22865.434	22865.434	bb			0.4454	89.08	-10.92	5575.2...	

200

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2478

Sample Analysis

Sample ID	**Client ID**
232429001	CAMO-09-6007
232429002	CAMO-09-6006
232429003	CAMO-09-6008
232429004	CAMO-09-6009
232429005	CAMO-09-6034
232429006	CAMO-09-6043
232429007	CAMO-09-6045
232429008	CAMO-09-6041
232429009	CAMO-09-6040
232429010	CAMO-09-6044
232429011	CAMO-09-6035
232429012	CAMO-09-6038
232429013	CAMO-09-9039
232429014	CAMO-09-6042
232429015	CAMO-09-6049
1201870533	Method Blank (MB) **ICP**
1201870538	Laboratory Control Sample (LCS)
1201870535	232429001(CAMO-09-6007L) Serial Dilution (SD)
1201870534	232429001(CAMO-09-6007D) Sample Duplicate (DUP)
1201870536	232429001(CAMO-09-6007S) Matrix Spike (MS)

1201870537	232429001(CAMO-09-6007SD) Matrix Spike Duplicate (MSD)
1201870569	Method Blank (MB) **ICP-MS**
1201870574	Laboratory Control Sample (LCS)
1201870571	232429001(CAMO-09-6007L) Serial Dilution (SD)
1201870570	232429001(CAMO-09-6007D) Sample Duplicate (DUP)
1201870572	232429001(CAMO-09-6007S) Matrix Spike (MS)
1201870573	232429001(CAMO-09-6007SD) Matrix Spike Duplicate (MSD)
1201870737	Method Blank (MB) **CVAA**
1201870738	Laboratory Control Sample (LCS)
1201870745	232429001(CAMO-09-6007L) Serial Dilution (SD)
1201870739	232429001(CAMO-09-6007D) Sample Duplicate (DUP)
1201870740	232429001(CAMO-09-6007S) Matrix Spike (MS)
1201870746	232429001(CAMO-09-6007SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	880928, 880941 and 880997
Prep Batch :	880927, 880940 and 880994
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 4300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following sample was selected as the quality control (QC) sample for this SDG: 232429001 (CAMO-09-6007)-ICP, ICP-MS and CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of calcium, arsenic, selenium and thallium, as indicated by the "N" qualifiers.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of barium, calcium, arsenic, selenium and thallium, as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements with the exceptions of aluminum, barium and calcium, as indicated by the "*" qualifiers.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples 232429009, 232429010 and 232429014 required dilutions for nickel in order to bring over range concentrations within the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCRs were generated for this SDG: 707927 and 708123. A copy of each NCR is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Parson **Date:** 7/17/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429001 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6007 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5160000	ug/Kg	*	6830	20100	20100	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-36-0	Antimony	917	ug/Kg	J	331	1000	1000	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-38-2	Arsenic	1230	ug/kg	N	204	1020	1020	2	MS	RMJ	07/03/09 12:15	090702-2	880941
7440-39-3	Barium	45800	ug/Kg	*N	100	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-41-7	Beryllium	401	ug/kg		20.4	102	102	2	MS	RMJ	07/04/09 00:28	090703-4	880941
7440-43-9	Cadmium	157	ug/Kg	J	100	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-70-2	Calcium	1180000	ug/Kg	*N	8040	25100	25100	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-47-3	Chromium	7010	ug/Kg		151	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-48-4	Cobalt	1780	ug/Kg		151	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-50-8	Copper	2730	ug/Kg		301	1000	1000	1	P	HSC	07/02/09 10:47	070209-1	880928
7439-89-6	Iron	12000000	ug/Kg		8040	25100	25100	1	P	HSC	07/02/09 10:47	070209-1	880928
7439-92-1	Lead	6190	ug/Kg		251	1000	1000	1	P	HSC	07/02/09 10:47	070209-1	880928
7439-95-4	Magnesium	927000	ug/Kg		8540	30100	30100	1	P	HSC	07/02/09 10:47	070209-1	880928
7439-96-5	Manganese	234000	ug/Kg		201	1000	1000	1	P	HSC	07/02/09 10:47	070209-1	880928
7439-97-6	Mercury	18.4	ug/kg		3.85	11.3	11.3	1	AV	JXL1	07/13/09 10:08	071309S2-6	880997
7440-02-0	Nickel	3820	ug/kg		102	408	408	2	MS	RMJ	07/03/09 12:15	090702-2	880941
7440-09-7	Potassium	566000	ug/Kg		6430	25100	25100	1	P	HSC	07/02/09 10:47	070209-1	880928
7782-49-2	Selenium	1020	ug/kg	UN	510	1020	1020	2	MS	RMJ	07/03/09 12:15	090702-2	880941
7440-22-4	Silver	456	ug/Kg	J	100	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-23-5	Sodium	220000	ug/Kg		7030	25100	25100	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-28-0	Thallium	109	ug/kg	JN	61.2	204	204	2	MS	RMJ	07/03/09 12:15	090702-2	880941
7440-62-2	Vanadium	11100	ug/Kg		100	502	502	1	P	HSC	07/02/09 10:47	070209-1	880928
7440-66-6	Zinc	39300	ug/Kg		331	1000	1000	1	P	HSC	07/02/09 10:47	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.52	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.512	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.553	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429002 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6006 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7780000	ug/Kg	*	7540	22200	22200	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-36-0	Antimony	1370	ug/Kg		366	1110	1110	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-38-2	Arsenic	2730	ug/kg	N	220	1100	1100	2	MS	RMJ	07/03/09 12:45	090702-2	880941
7440-39-3	Barium	114000	ug/Kg	*N	111	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-41-7	Beryllium	808	ug/kg		22	110	110	2	MS	RMJ	07/04/09 00:41	090703-4	880941
7440-43-9	Cadmium	554	ug/Kg	U	111	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-70-2	Calcium	2090000	ug/Kg	*N	8870	27700	27700	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-47-3	Chromium	8230	ug/Kg		166	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-48-4	Cobalt	8120	ug/Kg		166	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-50-8	Copper	6000	ug/Kg		333	1110	1110	1	P	HSC	07/02/09 11:09	070209-1	880928
7439-89-6	Iron	12000000	ug/Kg		8870	27700	27700	1	P	HSC	07/02/09 11:09	070209-1	880928
7439-92-1	Lead	18900	ug/Kg		277	1110	1110	1	P	HSC	07/02/09 11:09	070209-1	880928
7439-95-4	Magnesium	1630000	ug/Kg		9430	33300	33300	1	P	HSC	07/02/09 11:09	070209-1	880928
7439-96-5	Manganese	535000	ug/Kg		222	1110	1110	1	P	HSC	07/02/09 11:09	070209-1	880928
7439-97-6	Mercury	15	ug/kg		4.29	12.6	12.6	1	AV	JXL1	07/13/09 10:22	071309S2-6	880997
7440-02-0	Nickel	8110	ug/kg		110	441	441	2	MS	RMJ	07/03/09 12:45	090702-2	880941
7440-09-7	Potassium	1100000	ug/Kg		7100	27700	27700	1	P	HSC	07/02/09 11:09	070209-1	880928
7782-49-2	Selenium	1100	ug/kg	UN	551	1100	1100	2	MS	RMJ	07/03/09 12:45	090702-2	880941
7440-22-4	Silver	465	ug/Kg	J	111	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-23-5	Sodium	83400	ug/Kg		7760	27700	27700	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-28-0	Thallium	239	ug/kg	N	66.1	220	220	2	MS	RMJ	07/03/09 12:45	090702-2	880941
7440-62-2	Vanadium	26200	ug/Kg		111	554	554	1	P	HSC	07/02/09 11:09	070209-1	880928
7440-66-6	Zinc	20600	ug/Kg		366	1110	1110	1	P	HSC	07/02/09 11:09	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.509	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.512	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.537	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429003 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6008 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 77

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2170000	ug/Kg	*	8490	25000	25000	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-36-0	Antimony	1070	ug/Kg	J	412	1250	1250	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-38-2	Arsenic	933	ug/kg	JN	256	1280	1280	2	MS	RMJ	07/03/09 12:51	090702-2	880941
7440-39-3	Barium	39500	ug/Kg	*N	125	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-41-7	Beryllium	525	ug/kg		25.6	128	128	2	MS	RMJ	07/04/09 00:49	090703-4	880941
7440-43-9	Cadmium	205	ug/Kg	J	125	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-70-2	Calcium	1550000	ug/Kg	*N	9990	31200	31200	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-47-3	Chromium	30200	ug/Kg		187	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-48-4	Cobalt	1660	ug/Kg		187	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-50-8	Copper	38600	ug/Kg		375	1250	1250	1	P	HSC	07/02/09 11:12	070209-1	880928
7439-89-6	Iron	8080000	ug/Kg		9990	31200	31200	1	P	HSC	07/02/09 11:12	070209-1	880928
7439-92-1	Lead	17500	ug/Kg		312	1250	1250	1	P	HSC	07/02/09 11:12	070209-1	880928
7439-95-4	Magnesium	542000	ug/Kg		10600	37500	37500	1	P	HSC	07/02/09 11:12	070209-1	880928
7439-96-5	Manganese	429000	ug/Kg		250	1250	1250	1	P	HSC	07/02/09 11:12	070209-1	880928
7439-97-6	Mercury	14.1	ug/kg	J	5.25	15.5	15.5	1	AV	JXL1	07/13/09 10:24	071309S2-6	880997
7440-02-0	Nickel	12500	ug/kg		128	511	511	2	MS	RMJ	07/03/09 12:51	090702-2	880941
7440-09-7	Potassium	417000	ug/Kg		7990	31200	31200	1	P	HSC	07/02/09 11:12	070209-1	880928
7782-49-2	Selenium	1280	ug/kg	UN	639	1280	1280	2	MS	RMJ	07/03/09 12:51	090702-2	880941
7440-22-4	Silver	331	ug/Kg	J	125	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-23-5	Sodium	77300	ug/Kg		8740	31200	31200	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-28-0	Thallium	89.2	ug/kg	JN	76.7	256	256	2	MS	RMJ	07/03/09 12:51	090702-2	880941
7440-62-2	Vanadium	5810	ug/Kg		125	624	624	1	P	HSC	07/02/09 11:12	070209-1	880928
7440-66-6	Zinc	105000	ug/Kg		412	1250	1250	1	P	HSC	07/02/09 11:12	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.521	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.509	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.505	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429004 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6009 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 83

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1750000	ug/Kg	*	8000	23500	23500	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-36-0	Antimony	837	ug/Kg	J	388	1180	1180	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-38-2	Arsenic	716	ug/kg	JN	230	1150	1150	2	MS	RMJ	07/03/09 12:57	090702-2	880941
7440-39-3	Barium	27300	ug/Kg	*N	118	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-41-7	Beryllium	653	ug/kg		23	115	115	2	MS	RMJ	07/04/09 00:52	090703-4	880941
7440-43-9	Cadmium	145	ug/Kg	J	118	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-70-2	Calcium	777000	ug/Kg	*N	9410	29400	29400	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-47-3	Chromium	15900	ug/Kg		177	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-48-4	Cobalt	1150	ug/Kg		177	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-50-8	Copper	13600	ug/Kg		353	1180	1180	1	P	HSC	07/02/09 11:15	070209-1	880928
7439-89-6	Iron	7870000	ug/Kg		9410	29400	29400	1	P	HSC	07/02/09 11:15	070209-1	880928
7439-92-1	Lead	9210	ug/Kg		294	1180	1180	1	P	HSC	07/02/09 11:15	070209-1	880928
7439-95-4	Magnesium	307000	ug/Kg		10000	35300	35300	1	P	HSC	07/02/09 11:15	070209-1	880928
7439-96-5	Manganese	417000	ug/Kg		235	1180	1180	1	P	HSC	07/02/09 11:15	070209-1	880928
7439-97-6	Mercury	12.6	ug/kg	U	4.28	12.6	12.6	1	AV	JXL1	07/13/09 10:26	071309S2-6	880997
7440-02-0	Nickel	6240	ug/kg		115	459	459	2	MS	RMJ	07/03/09 12:57	090702-2	880941
7440-09-7	Potassium	235000	ug/Kg		7530	29400	29400	1	P	HSC	07/02/09 11:15	070209-1	880928
7782-49-2	Selenium	1150	ug/kg	UN	574	1150	1150	2	MS	RMJ	07/03/09 12:57	090702-2	880941
7440-22-4	Silver	298	ug/Kg	J	118	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-23-5	Sodium	74300	ug/Kg		8240	29400	29400	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-28-0	Thallium	230	ug/kg	UN	68.9	230	230	2	MS	RMJ	07/03/09 12:57	090702-2	880941
7440-62-2	Vanadium	5140	ug/Kg		118	588	588	1	P	HSC	07/02/09 11:15	070209-1	880928
7440-66-6	Zinc	75600	ug/Kg		388	1180	1180	1	P	HSC	07/02/09 11:15	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.512	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.525	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.574	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429005 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6034 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 78

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5450000	ug/Kg	*	8760	25800	25800	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-36-0	Antimony	4180	ug/Kg		425	1290	1290	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-38-2	Arsenic	2070	ug/kg	N	255	1270	1270	2	MS	RMJ	07/03/09 13:14	090702-2	880941
7440-39-3	Barium	97300	ug/Kg	*N	129	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-41-7	Beryllium	806	ug/kg		25.5	127	127	2	MS	RMJ	07/04/09 00:54	090703-4	880941
7440-43-9	Cadmium	483	ug/Kg	J	129	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-70-2	Calcium	7890000	ug/Kg	*N	10300	32200	32200	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-47-3	Chromium	449000	ug/Kg		193	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-48-4	Cobalt	3410	ug/Kg		193	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-50-8	Copper	107000	ug/Kg		387	1290	1290	1	P	HSC	07/02/09 11:19	070209-1	880928
7439-89-6	Iron	10100000	ug/Kg		10300	32200	32200	1	P	HSC	07/02/09 11:19	070209-1	880928
7439-92-1	Lead	39900	ug/Kg		322	1290	1290	1	P	HSC	07/02/09 11:19	070209-1	880928
7439-95-4	Magnesium	2050000	ug/Kg		11000	38700	38700	1	P	HSC	07/02/09 11:19	070209-1	880928
7439-96-5	Manganese	328000	ug/Kg		258	1290	1290	1	P	HSC	07/02/09 11:19	070209-1	880928
7439-97-6	Mercury	28	ug/kg		4.96	14.6	14.6	1	AV	JXL1	07/13/09 10:28	071309S2-6	880997
7440-02-0	Nickel	22200	ug/kg		127	509	509	2	MS	RMJ	07/03/09 13:14	090702-2	880941
7440-09-7	Potassium	1130000	ug/Kg		8250	32200	32200	1	P	HSC	07/02/09 11:19	070209-1	880928
7782-49-2	Selenium	1270	ug/kg	UN	637	1270	1270	2	MS	RMJ	07/03/09 13:14	090702-2	880941
7440-22-4	Silver	515	ug/Kg	J	129	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-23-5	Sodium	111000	ug/Kg		9020	32200	32200	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-28-0	Thallium	293	ug/kg	N	76.4	255	255	2	MS	RMJ	07/03/09 13:14	090702-2	880941
7440-62-2	Vanadium	22700	ug/Kg		129	644	644	1	P	HSC	07/02/09 11:19	070209-1	880928
7440-66-6	Zinc	272000	ug/Kg		425	1290	1290	1	P	HSC	07/02/09 11:19	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.506	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.53	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429006 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6043 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 92.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2200000	ug/Kg	*	7230	21300	21300	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-36-0	Antimony	2330	ug/Kg		351	1060	1060	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-38-2	Arsenic	1140	ug/kg	N	216	1080	1080	2	MS	RMJ	07/03/09 13:20	090702-2	880941
7440-39-3	Barium	32200	ug/Kg	*N	106	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-41-7	Beryllium	464	ug/kg		21.6	108	108	2	MS	RMJ	07/04/09 00:57	090703-4	880941
7440-43-9	Cadmium	290	ug/Kg	J	106	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-70-2	Calcium	1270000	ug/Kg	*N	8510	26600	26600	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-47-3	Chromium	165000	ug/Kg		160	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-48-4	Cobalt	1860	ug/Kg		160	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-50-8	Copper	52300	ug/Kg		319	1060	1060	1	P	HSC	07/02/09 11:22	070209-1	880928
7439-89-6	Iron	8130000	ug/Kg		8510	26600	26600	1	P	HSC	07/02/09 11:22	070209-1	880928
7439-92-1	Lead	31700	ug/Kg		266	1060	1060	1	P	HSC	07/02/09 11:22	070209-1	880928
7439-95-4	Magnesium	463000	ug/Kg		9040	31900	31900	1	P	HSC	07/02/09 11:22	070209-1	880928
7439-96-5	Manganese	317000	ug/Kg		213	1060	1060	1	P	HSC	07/02/09 11:22	070209-1	880928
7439-97-6	Mercury	4.9	ug/kg	J	3.84	11.3	11.3	1	AV	JXL1	07/13/09 10:30	071309S2-6	880997
7440-02-0	Nickel	17400	ug/kg		108	432	432	2	MS	RMJ	07/03/09 13:20	090702-2	880941
7440-09-7	Potassium	357000	ug/Kg		6810	26600	26600	1	P	HSC	07/02/09 11:22	070209-1	880928
7782-49-2	Selenium	1080	ug/kg	UN	540	1080	1080	2	MS	RMJ	07/03/09 13:20	090702-2	880941
7440-22-4	Silver	336	ug/Kg	J	106	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-23-5	Sodium	71300	ug/Kg		7450	26600	26600	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-28-0	Thallium	113	ug/kg	JN	64.9	216	216	2	MS	RMJ	07/03/09 13:20	090702-2	880941
7440-62-2	Vanadium	6730	ug/Kg		106	532	532	1	P	HSC	07/02/09 11:22	070209-1	880928
7440-66-6	Zinc	161000	ug/Kg		351	1060	1060	1	P	HSC	07/02/09 11:22	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.51	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.502	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.576	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429007 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6045 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 92

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1500000	ug/Kg	*	7390	21700	21700	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-36-0	Antimony	1050	ug/Kg	J	359	1090	1090	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-38-2	Arsenic	945	ug/kg	JN	216	1080	1080	2	MS	RMJ	07/03/09 13:26	090702-2	880941
7440-39-3	Barium	30300	ug/Kg	*N	109	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-41-7	Beryllium	665	ug/kg		21.6	108	108	2	MS	RMJ	07/04/09 00:59	090703-4	880941
7440-43-9	Cadmium	160	ug/Kg	J	109	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-70-2	Calcium	785000	ug/Kg	*N	8700	27200	27200	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-47-3	Chromium	31000	ug/Kg		163	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-48-4	Cobalt	969	ug/Kg		163	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-50-8	Copper	12000	ug/Kg		326	1090	1090	1	P	HSC	07/02/09 11:25	070209-1	880928
7439-89-6	Iron	8230000	ug/Kg		8700	27200	27200	1	P	HSC	07/02/09 11:25	070209-1	880928
7439-92-1	Lead	9410	ug/Kg		272	1090	1090	1	P	HSC	07/02/09 11:25	070209-1	880928
7439-95-4	Magnesium	340000	ug/Kg		9240	32600	32600	1	P	HSC	07/02/09 11:25	070209-1	880928
7439-96-5	Manganese	330000	ug/Kg		217	1090	1090	1	P	HSC	07/02/09 11:25	070209-1	880928
7439-97-6	Mercury	11	ug/kg	J	3.83	11.3	11.3	1	AV	JXL1	07/13/09 10:32	071309S2-6	880997
7440-02-0	Nickel	7150	ug/kg		108	431	431	2	MS	RMJ	07/03/09 13:26	090702-2	880941
7440-09-7	Potassium	356000	ug/Kg		6960	27200	27200	1	P	HSC	07/02/09 11:25	070209-1	880928
7782-49-2	Selenium	1080	ug/kg	UN	539	1080	1080	2	MS	RMJ	07/03/09 13:26	090702-2	880941
7440-22-4	Silver	426	ug/Kg	J	109	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-23-5	Sodium	60900	ug/Kg		7610	27200	27200	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-28-0	Thallium	112	ug/kg	JN	64.7	216	216	2	MS	RMJ	07/03/09 13:26	090702-2	880941
7440-62-2	Vanadium	6180	ug/Kg		109	543	543	1	P	HSC	07/02/09 11:25	070209-1	880928
7440-66-6	Zinc	62200	ug/Kg		359	1090	1090	1	P	HSC	07/02/09 11:25	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.504	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.579	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429008 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6041 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 94.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2170000	ug/Kg	*	7160	21100	21100	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-36-0	Antimony	2810	ug/Kg		347	1050	1050	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-38-2	Arsenic	1570	ug/kg	N	202	1010	1010	2	MS	RMJ	07/03/09 13:32	090702-2	880941
7440-39-3	Barium	29500	ug/Kg	*N	105	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-41-7	Beryllium	420	ug/kg		20.2	101	101	2	MS	RMJ	07/04/09 01:02	090703-4	880941
7440-43-9	Cadmium	299	ug/Kg	J	105	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-70-2	Calcium	1200000	ug/Kg	*N	8420	26300	26300	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-47-3	Chromium	241000	ug/Kg		158	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-48-4	Cobalt	2070	ug/Kg		158	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-50-8	Copper	52700	ug/Kg		316	1050	1050	1	P	HSC	07/02/09 11:28	070209-1	880928
7439-89-6	Iron	12700000	ug/Kg		8420	26300	26300	1	P	HSC	07/02/09 11:28	070209-1	880928
7439-92-1	Lead	23400	ug/Kg		263	1050	1050	1	P	HSC	07/02/09 11:28	070209-1	880928
7439-95-4	Magnesium	518000	ug/Kg		8950	31600	31600	1	P	HSC	07/02/09 11:28	070209-1	880928
7439-96-5	Manganese	282000	ug/Kg		211	1050	1050	1	P	HSC	07/02/09 11:28	070209-1	880928
7439-97-6	Mercury	8.32	ug/kg	J	3.85	11.3	11.3	1	AV	JXL1	07/13/09 10:34	071309S2-6	880997
7440-02-0	Nickel	15300	ug/kg		101	405	405	2	MS	RMJ	07/03/09 13:32	090702-2	880941
7440-09-7	Potassium	332000	ug/Kg		6740	26300	26300	1	P	HSC	07/02/09 11:28	070209-1	880928
7782-49-2	Selenium	1010	ug/kg	UN	506	1010	1010	2	MS	RMJ	07/03/09 13:32	090702-2	880941
7440-22-4	Silver	612	ug/Kg		105	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-23-5	Sodium	64800	ug/Kg		7370	26300	26300	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-28-0	Thallium	114	ug/kg	JN	60.7	202	202	2	MS	RMJ	07/03/09 13:32	090702-2	880941
7440-62-2	Vanadium	11500	ug/Kg		105	526	526	1	P	HSC	07/02/09 11:28	070209-1	880928
7440-66-6	Zinc	259000	ug/Kg		347	1050	1050	1	P	HSC	07/02/09 11:28	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.501	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.521	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.559	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429009 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6040 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 73

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4300000	ug/Kg	*	8900	26200	26200	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-36-0	Antimony	4110	ug/Kg		432	1310	1310	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-38-2	Arsenic	4020	ug/kg	N	273	1370	1370	2	MS	RMJ	07/03/09 13:38	090702-2	880941
7440-39-3	Barium	152000	ug/Kg	*N	131	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-41-7	Beryllium	735	ug/kg		27.3	137	137	2	MS	RMJ	07/04/09 01:04	090703-4	880941
7440-43-9	Cadmium	1100	ug/Kg		131	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-70-2	Calcium	5950000	ug/Kg	*N	10500	32700	32700	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-47-3	Chromium	465000	ug/Kg		196	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-48-4	Cobalt	10200	ug/Kg		196	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-50-8	Copper	318000	ug/Kg		393	1310	1310	1	P	HSC	07/02/09 11:38	070209-1	880928
7439-89-6	Iron	14100000	ug/Kg		10500	32700	32700	1	P	HSC	07/02/09 11:38	070209-1	880928
7439-92-1	Lead	156000	ug/Kg		327	1310	1310	1	P	HSC	07/02/09 11:38	070209-1	880928
7439-95-4	Magnesium	1430000	ug/Kg		11100	39300	39300	1	P	HSC	07/02/09 11:38	070209-1	880928
7439-96-5	Manganese	1140000	ug/Kg		262	1310	1310	1	P	HSC	07/02/09 11:38	070209-1	880928
7439-97-6	Mercury	59.4	ug/kg		5.61	16.5	16.5	1	AV	JXL1	07/13/09 10:36	071309S2-6	880997
7440-02-0	Nickel	58400	ug/kg		683	2730	2730	10	MS	RMJ	07/03/09 19:50	090702-3	880941
7440-09-7	Potassium	671000	ug/Kg		8380	32700	32700	1	P	HSC	07/02/09 11:38	070209-1	880928
7782-49-2	Selenium	862	ug/kg	JN	683	1370	1370	2	MS	RMJ	07/03/09 13:38	090702-2	880941
7440-22-4	Silver	1480	ug/Kg		131	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-23-5	Sodium	127000	ug/Kg		9170	32700	32700	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-28-0	Thallium	231	ug/kg	JN	82	273	273	2	MS	RMJ	07/03/09 13:38	090702-2	880941
7440-62-2	Vanadium	19400	ug/Kg		131	655	655	1	P	HSC	07/02/09 11:38	070209-1	880928
7440-66-6	Zinc	499000	ug/Kg		432	1310	1310	1	P	HSC	07/02/09 11:38	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.525	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.503	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.5	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429010 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6044 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 87

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1980000	ug/Kg	*	7720	22700	22700	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-36-0	Antimony	1330	ug/Kg		375	1140	1140	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-38-2	Arsenic	1390	ug/kg	N	227	1140	1140	2	MS	RMJ	07/03/09 13:44	090702-2	880941
7440-39-3	Barium	48200	ug/Kg	*N	114	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-41-7	Beryllium	790	ug/kg		22.7	114	114	2	MS	RMJ	07/04/09 02:00	090703-5	880941
7440-43-9	Cadmium	344	ug/Kg	J	114	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-70-2	Calcium	3060000	ug/Kg	*N	9080	28400	28400	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-47-3	Chromium	73800	ug/Kg		170	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-48-4	Cobalt	2270	ug/Kg		170	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-50-8	Copper	71300	ug/Kg		341	1140	1140	1	P	HSC	07/02/09 11:41	070209-1	880928
7439-89-6	Iron	7370000	ug/Kg		9080	28400	28400	1	P	HSC	07/02/09 11:41	070209-1	880928
7439-92-1	Lead	36800	ug/Kg		284	1140	1140	1	P	HSC	07/02/09 11:41	070209-1	880928
7439-95-4	Magnesium	628000	ug/Kg		9650	34100	34100	1	P	HSC	07/02/09 11:41	070209-1	880928
7439-96-5	Manganese	395000	ug/Kg		227	1140	1140	1	P	HSC	07/02/09 11:41	070209-1	880928
7439-97-6	Mercury	14.5	ug/kg		4.32	12.7	12.7	1	AV	JXL1	07/13/09 10:38	071309S2-6	880997
7440-02-0	Nickel	47700	ug/kg		568	2270	2270	10	MS	RMJ	07/03/09 19:56	090702-3	880941
7440-09-7	Potassium	473000	ug/Kg		7260	28400	28400	1	P	HSC	07/02/09 11:41	070209-1	880928
7782-49-2	Selenium	1140	ug/kg	UN	568	1140	1140	2	MS	RMJ	07/03/09 13:44	090702-2	880941
7440-22-4	Silver	389	ug/Kg	J	114	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-23-5	Sodium	84200	ug/Kg		7950	28400	28400	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-28-0	Thallium	197	ug/kg	JN	68.1	227	227	2	MS	RMJ	07/03/09 13:44	090702-2	880941
7440-62-2	Vanadium	8500	ug/Kg		114	568	568	1	P	HSC	07/02/09 11:41	070209-1	880928
7440-66-6	Zinc	158000	ug/Kg		375	1140	1140	1	P	HSC	07/02/09 11:41	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.505	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.505	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.542	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429011 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6035 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 96

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1310000	ug/Kg	*	7070	20800	20800	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-36-0	Antimony	381	ug/Kg	J	343	1040	1040	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-38-2	Arsenic	603	ug/kg	JN	200	998	998	2	MS	RMJ	07/03/09 13:50	090702-2	880941
7440-39-3	Barium	18900	ug/Kg	*N	104	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-41-7	Beryllium	497	ug/kg		20	99.8	99.8	2	MS	RMJ	07/04/09 02:03	090703-5	880941
7440-43-9	Cadmium	146	ug/Kg	J	104	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-70-2	Calcium	221000	ug/Kg	*N	8320	26000	26000	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-47-3	Chromium	9570	ug/Kg		156	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-48-4	Cobalt	704	ug/Kg		156	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-50-8	Copper	8770	ug/Kg		312	1040	1040	1	P	HSC	07/02/09 11:44	070209-1	880928
7439-89-6	Iron	7180000	ug/Kg		8320	26000	26000	1	P	HSC	07/02/09 11:44	070209-1	880928
7439-92-1	Lead	4130	ug/Kg		260	1040	1040	1	P	HSC	07/02/09 11:44	070209-1	880928
7439-95-4	Magnesium	123000	ug/Kg		8840	31200	31200	1	P	HSC	07/02/09 11:44	070209-1	880928
7439-96-5	Manganese	427000	ug/Kg		208	1040	1040	1	P	HSC	07/02/09 11:44	070209-1	880928
7439-97-6	Mercury	11.1	ug/kg	U	3.77	11.1	11.1	1	AV	JXL1	07/13/09 10:40	071309S2-6	880997
7440-02-0	Nickel	2390	ug/kg		99.8	399	399	2	MS	RMJ	07/03/09 13:50	090702-2	880941
7440-09-7	Potassium	143000	ug/Kg		6650	26000	26000	1	P	HSC	07/02/09 11:44	070209-1	880928
7782-49-2	Selenium	998	ug/kg	UN	499	998	998	2	MS	RMJ	07/03/09 13:50	090702-2	880941
7440-22-4	Silver	241	ug/Kg	J	104	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-23-5	Sodium	71600	ug/Kg		7280	26000	26000	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-28-0	Thallium	200	ug/kg	UN	59.9	200	200	2	MS	RMJ	07/03/09 13:50	090702-2	880941
7440-62-2	Vanadium	3310	ug/Kg		104	520	520	1	P	HSC	07/02/09 11:44	070209-1	880928
7440-66-6	Zinc	69400	ug/Kg		343	1040	1040	1	P	HSC	07/02/09 11:44	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.501	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.522	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.563	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429012 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6038 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 75

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4790000	ug/Kg	*	9060	26600	26600	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-36-0	Antimony	1220	ug/Kg	J	439	1330	1330	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-38-2	Arsenic	2470	ug/kg	N	266	1330	1330	2	MS	RMJ	07/03/09 13:56	090702-2	880941
7440-39-3	Barium	87600	ug/Kg	*N	133	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-41-7	Beryllium	630	ug/kg		26.6	133	133	2	MS	RMJ	07/04/09 02:05	090703-5	880941
7440-43-9	Cadmium	307	ug/Kg	J	133	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-70-2	Calcium	3980000	ug/Kg	*N	10700	33300	33300	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-47-3	Chromium	8450	ug/Kg		200	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-48-4	Cobalt	3030	ug/Kg		200	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-50-8	Copper	8070	ug/Kg		400	1330	1330	1	P	HSC	07/02/09 11:47	070209-1	880928
7439-89-6	Iron	12100000	ug/Kg		10700	33300	33300	1	P	HSC	07/02/09 11:47	070209-1	880928
7439-92-1	Lead	33600	ug/Kg		333	1330	1330	1	P	HSC	07/02/09 11:47	070209-1	880928
7439-95-4	Magnesium	1400000	ug/Kg		11300	40000	40000	1	P	HSC	07/02/09 11:47	070209-1	880928
7439-96-5	Manganese	553000	ug/Kg		266	1330	1330	1	P	HSC	07/02/09 11:47	070209-1	880928
7439-97-6	Mercury	26.2	ug/kg		4.79	14.1	14.1	1	AV	JXL1	07/13/09 10:46	071309S2-6	880997
7440-02-0	Nickel	5050	ug/kg		133	533	533	2	MS	RMJ	07/03/09 13:56	090702-2	880941
7440-09-7	Potassium	947000	ug/Kg		8520	33300	33300	1	P	HSC	07/02/09 11:47	070209-1	880928
7782-49-2	Selenium	1330	ug/kg	UN	666	1330	1330	2	MS	RMJ	07/03/09 13:56	090702-2	880941
7440-22-4	Silver	376	ug/Kg	J	133	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-23-5	Sodium	71400	ug/Kg		9320	33300	33300	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-28-0	Thallium	133	ug/kg	JN	79.9	266	266	2	MS	RMJ	07/03/09 13:56	090702-2	880941
7440-62-2	Vanadium	13200	ug/Kg		133	666	666	1	P	HSC	07/02/09 11:47	070209-1	880928
7440-66-6	Zinc	54900	ug/Kg		439	1330	1330	1	P	HSC	07/02/09 11:47	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.502	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.502	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.569	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429013 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-9039 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 90.9

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3030000	ug/Kg	*	7210	21200	21200	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-36-0	Antimony	1360	ug/Kg		350	1060	1060	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-38-2	Arsenic	874	ug/kg	JN	216	1080	1080	2	MS	RMJ	07/03/09 14:14	090702-2	880941
7440-39-3	Barium	16100	ug/Kg	*N	106	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-41-7	Beryllium	741	ug/kg		21.6	108	108	2	MS	RMJ	07/04/09 02:08	090703-5	880941
7440-43-9	Cadmium	530	ug/Kg	U	106	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-70-2	Calcium	578000	ug/Kg	*N	8480	26500	26500	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-47-3	Chromium	15000	ug/Kg		159	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-48-4	Cobalt	776	ug/Kg		159	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-50-8	Copper	2360	ug/Kg		318	1060	1060	1	P	HSC	07/02/09 11:50	070209-1	880928
7439-89-6	Iron	8300000	ug/Kg		8480	26500	26500	1	P	HSC	07/02/09 11:50	070209-1	880928
7439-92-1	Lead	4880	ug/Kg		265	1060	1060	1	P	HSC	07/02/09 11:50	070209-1	880928
7439-95-4	Magnesium	312000	ug/Kg		9010	31800	31800	1	P	HSC	07/02/09 11:50	070209-1	880928
7439-96-5	Manganese	218000	ug/Kg		212	1060	1060	1	P	HSC	07/02/09 11:50	070209-1	880928
7439-97-6	Mercury	5.44	ug/kg	J	4.02	11.8	11.8	1	AV	JXL1	07/13/09 10:48	071309S2-6	880997
7440-02-0	Nickel	3090	ug/kg		108	432	432	2	MS	RMJ	07/03/09 14:14	090702-2	880941
7440-09-7	Potassium	248000	ug/Kg		6780	26500	26500	1	P	HSC	07/02/09 11:50	070209-1	880928
7782-49-2	Selenium	1080	ug/kg	UN	540	1080	1080	2	MS	RMJ	07/03/09 14:14	090702-2	880941
7440-22-4	Silver	188	ug/Kg	J	106	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-23-5	Sodium	105000	ug/Kg		7420	26500	26500	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-28-0	Thallium	216	ug/kg	UN	64.9	216	216	2	MS	RMJ	07/03/09 14:14	090702-2	880941
7440-62-2	Vanadium	4250	ug/Kg		106	530	530	1	P	HSC	07/02/09 11:50	070209-1	880928
7440-66-6	Zinc	39500	ug/Kg		350	1060	1060	1	P	HSC	07/02/09 11:50	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.519	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.509	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.558	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429014 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6042 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 82

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3630000	ug/Kg	*	8130	23900	23900	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-36-0	Antimony	1500	ug/Kg		394	1190	1190	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-38-2	Arsenic	1720	ug/kg	N	236	1180	1180	2	MS	RMJ	07/03/09 14:19	090702-2	880941
7440-39-3	Barium	78700	ug/Kg	*N	119	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-41-7	Beryllium	663	ug/kg		23.6	118	118	2	MS	RMJ	07/04/09 02:10	090703-5	880941
7440-43-9	Cadmium	406	ug/Kg	J	119	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-70-2	Calcium	4620000	ug/Kg	*N	9560	29900	29900	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-47-3	Chromium	58900	ug/Kg		179	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-48-4	Cobalt	2580	ug/Kg		179	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-50-8	Copper	55400	ug/Kg		358	1190	1190	1	P	HSC	07/02/09 11:54	070209-1	880928
7439-89-6	Iron	9090000	ug/Kg		9560	29900	29900	1	P	HSC	07/02/09 11:54	070209-1	880928
7439-92-1	Lead	36600	ug/Kg		299	1190	1190	1	P	HSC	07/02/09 11:54	070209-1	880928
7439-95-4	Magnesium	1490000	ug/Kg		10200	35800	35800	1	P	HSC	07/02/09 11:54	070209-1	880928
7439-96-5	Manganese	444000	ug/Kg		239	1190	1190	1	P	HSC	07/02/09 11:54	070209-1	880928
7439-97-6	Mercury	19	ug/kg		4.38	12.9	12.9	1	AV	JXLI	07/13/09 10:50	071309S2-6	880997
7440-02-0	Nickel	26600	ug/kg		589	2360	2360	10	MS	RMJ	07/03/09 20:02	090702-3	880941
7440-09-7	Potassium	819000	ug/Kg		7650	29900	29900	1	P	HSC	07/02/09 11:54	070209-1	880928
7782-49-2	Selenium	1180	ug/kg	UN	589	1180	1180	2	MS	RMJ	07/03/09 14:19	090702-2	880941
7440-22-4	Silver	430	ug/Kg	J	119	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-23-5	Sodium	93600	ug/Kg		8360	29900	29900	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-28-0	Thallium	298	ug/kg	N	70.7	236	236	2	MS	RMJ	07/03/09 14:19	090702-2	880941
7440-62-2	Vanadium	12900	ug/Kg		119	597	597	1	P	HSC	07/02/09 11:54	070209-1	880928
7440-66-6	Zinc	134000	ug/Kg		394	1190	1190	1	P	HSC	07/02/09 11:54	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.509	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.516	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.567	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232429015 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6049 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 88

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	8380000	ug/Kg	*	7640	22500	22500	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-36-0	Antimony	1010	ug/Kg	J	371	1120	1120	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-38-2	Arsenic	2850	ug/kg	N	221	1110	1110	2	MS	RMJ	07/03/09 14:25	090702-2	880941
7440-39-3	Barium	93000	ug/Kg	*N	112	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-41-7	Beryllium	891	ug/kg		22.1	111	111	2	MS	RMJ	07/04/09 02:13	090703-5	880941
7440-43-9	Cadmium	115	ug/Kg	J	112	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-70-2	Calcium	2270000	ug/Kg	*N	8990	28100	28100	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-47-3	Chromium	9210	ug/Kg		169	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-48-4	Cobalt	5850	ug/Kg		169	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-50-8	Copper	6290	ug/Kg		337	1120	1120	1	P	HSC	07/02/09 11:57	070209-1	880928
7439-89-6	Iron	12100000	ug/Kg		8990	28100	28100	1	P	HSC	07/02/09 11:57	070209-1	880928
7439-92-1	Lead	16500	ug/Kg		281	1120	1120	1	P	HSC	07/02/09 11:57	070209-1	880928
7439-95-4	Magnesium	1730000	ug/Kg		9560	33700	33700	1	P	HSC	07/02/09 11:57	070209-1	880928
7439-96-5	Manganese	299000	ug/Kg		225	1120	1120	1	P	HSC	07/02/09 11:57	070209-1	880928
7439-97-6	Mercury	15.5	ug/kg		4.31	12.7	12.7	1	AV	JXL1	07/13/09 10:52	071309S2-6	880997
7440-02-0	Nickel	8130	ug/kg		111	443	443	2	MS	RMJ	07/03/09 14:25	090702-2	880941
7440-09-7	Potassium	1150000	ug/Kg		7190	28100	28100	1	P	HSC	07/02/09 11:57	070209-1	880928
7782-49-2	Selenium	1110	ug/kg	UN	553	1110	1110	2	MS	RMJ	07/03/09 14:25	090702-2	880941
7440-22-4	Silver	987	ug/Kg		112	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-23-5	Sodium	80400	ug/Kg		7870	28100	28100	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-28-0	Thallium	224	ug/kg	N	66.4	221	221	2	MS	RMJ	07/03/09 14:25	090702-2	880941
7440-62-2	Vanadium	25900	ug/Kg		112	562	562	1	P	HSC	07/02/09 11:57	070209-1	880928
7440-66-6	Zinc	23800	ug/Kg		371	1120	1120	1	P	HSC	07/02/09 11:57	070209-1	880928

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880928	880927	SW846 3050B	0.503	g	50	mL	06/30/09	FGA
880941	880940	SW846 3050B	0.511	g	50	mL	06/30/09	BXA1
880997	880994	SW846 7471A Prep	0.535	g	30	mL	07/10/09	AXG2

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Antimony	518	ug/L	500	ug/L	103.5	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Barium	533	ug/L	500	ug/L	106.6	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Cadmium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Calcium	4950	ug/L	5000	ug/L	98.9	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Chromium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Cobalt	485	ug/L	500	ug/L	97	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Copper	510	ug/L	500	ug/L	102	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Iron	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Lead	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Magnesium	5280	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Manganese	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Potassium	2560	ug/L	2500	ug/L	102.5	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Silver	257	ug/L	250	ug/L	103	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Sodium	2600	ug/L	2500	ug/L	103.9	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Vanadium	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Zinc	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	02-JUL-09 08:03	070209-1
	Arsenic	47.7	ug/L	50	ug/L	95.3	90.0 – 110.0	MS	03-JUL-09 11:10	090702-2
	Nickel	52.2	ug/L	50	ug/L	104.4	90.0 – 110.0	MS	03-JUL-09 11:10	090702-2
	Selenium	50.1	ug/L	50	ug/L	100.1	90.0 – 110.0	MS	03-JUL-09 11:10	090702-2
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 – 110.0	MS	03-JUL-09 11:10	090702-2
	Nickel	52	ug/L	50	ug/L	104	90.0 – 110.0	MS	03-JUL-09 15:07	090702-3
	Beryllium	47.5	ug/L	50	ug/L	95.1	90.0 – 110.0	MS	04-JUL-09 00:05	090703-4
	Beryllium	50.3	ug/L	50	ug/L	100.7	90.0 – 110.0	MS	04-JUL-09 01:42	090703-5
	Mercury	5.22	ug/L	5	ug/L	104.4	90.0 – 110.0	AV	13-JUL-09 09:48	071309S2-6
CCV01										
	Aluminum	5400	ug/L	5000	ug/L	107.9	90.0 – 110.0	P	02-JUL-09 08:25	070209-1
	Antimony	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	02-JUL-09 08:25	070209-1
	Barium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	02-JUL-09 08:25	070209-1
	Cadmium	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	02-JUL-09 08:25	070209-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2478

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Calcium	5490	ug/L	5000	ug/L	109.7	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Chromium	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Cobalt	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Copper	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Iron	5360	ug/L	5000	ug/L	107.2	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Lead	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Magnesium	5550	ug/L	5000	ug/L	111	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Manganese	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Potassium	5290	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Silver	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Sodium	10100	ug/L	10000	ug/L	101.2	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Vanadium	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Zinc	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	02–JUL–09 08:25	070209–1
	Arsenic	46.7	ug/L	50	ug/L	93.4	90.0 – 110.0	MS	03–JUL–09 11:40	090702–2
	Nickel	51.3	ug/L	50	ug/L	102.5	90.0 – 110.0	MS	03–JUL–09 11:40	090702–2
	Selenium	49.3	ug/L	50	ug/L	98.5	90.0 – 110.0	MS	03–JUL–09 11:40	090702–2
	Thallium	49.5	ug/L	50	ug/L	99	90.0 – 110.0	MS	03–JUL–09 11:40	090702–2
	Nickel	55.1	ug/L	50	ug/L	110.2	90.0 – 110.0	MS	03–JUL–09 15:36	090702–3
	Beryllium	48.5	ug/L	50	ug/L	96.9	90.0 – 110.0	MS	04–JUL–09 00:18	090703–4
	Beryllium	53.4	ug/L	50	ug/L	106.8	90.0 – 110.0	MS	04–JUL–09 01:55	090703–5
	Mercury	5.16	ug/L	5	ug/L	103.2	80.0 – 120.0	AV	13–JUL–09 09:54	071309S2–6
CCV02										
	Aluminum	5060	ug/L	5000	ug/L	101.2	90.0 – 110.0	P	02–JUL–09 08:33	070209–1
	Antimony	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	02–JUL–09 08:33	070209–1
	Barium	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	02–JUL–09 08:33	070209–1
	Cadmium	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	02–JUL–09 08:33	070209–1
	Calcium	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	02–JUL–09 08:33	070209–1
	Chromium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	02–JUL–09 08:33	070209–1
	Cobalt	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	02–JUL–09 08:33	070209–1
	Copper	490	ug/L	500	ug/L	98	90.0 – 110.0	P	02–JUL–09 08:33	070209–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	02-JUL-09 08:33	070209-1
	Lead	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	02-JUL-09 08:33	070209-1
	Magnesium	5160	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	02-JUL-09 08:33	070209-1
	Manganese	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	02-JUL-09 08:33	070209-1
	Potassium	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	02-JUL-09 08:33	070209-1
	Silver	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	02-JUL-09 08:33	070209-1
	Sodium	10200	ug/L	10000	ug/L	101.6	90.0 – 110.0	P	02-JUL-09 08:33	070209-1
	Vanadium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	02-JUL-09 08:33	070209-1
	Zinc	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	02-JUL-09 08:33	070209-1
	Arsenic	47.2	ug/L	50	ug/L	94.4	90.0 – 110.0	MS	03-JUL-09 12:03	090702-2
	Nickel	51.6	ug/L	50	ug/L	103.1	90.0 – 110.0	MS	03-JUL-09 12:03	090702-2
	Selenium	48.9	ug/L	50	ug/L	97.8	90.0 – 110.0	MS	03-JUL-09 12:03	090702-2
	Thallium	49.6	ug/L	50	ug/L	99.1	90.0 – 110.0	MS	03-JUL-09 12:03	090702-2
	Nickel	51.5	ug/L	50	ug/L	102.9	90.0 – 110.0	MS	03-JUL-09 15:54	090702-3
	Beryllium	45.2	ug/L	50	ug/L	90.5	90.0 – 110.0	MS	04-JUL-09 00:44	090703-4
	Beryllium	47.1	ug/L	50	ug/L	94.2	90.0 – 110.0	MS	04-JUL-09 02:16	090703-5
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 – 120.0	AV	13-JUL-09 10:18	071309S2-6
CCV03										
	Aluminum	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Antimony	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Barium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Cadmium	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Calcium	5080	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Chromium	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Cobalt	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Copper	495	ug/L	500	ug/L	98.9	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Iron	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Lead	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Magnesium	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	02-JUL-09 09:13	070209-1
	Manganese	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	02-JUL-09 09:13	070209-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5070	ug/L	5000	ug/L	101.5	90.0 - 110.0	P	02-JUL-09 09:13	070209-1
	Silver	512	ug/L	500	ug/L	102.3	90.0 - 110.0	P	02-JUL-09 09:13	070209-1
	Sodium	10200	ug/L	10000	ug/L	101.5	90.0 - 110.0	P	02-JUL-09 09:13	070209-1
	Vanadium	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	02-JUL-09 09:13	070209-1
	Zinc	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	02-JUL-09 09:13	070209-1
	Arsenic	46.7	ug/L	50	ug/L	93.4	90.0 - 110.0	MS	03-JUL-09 13:02	090702-2
	Nickel	51.7	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	03-JUL-09 13:02	090702-2
	Selenium	49.9	ug/L	50	ug/L	99.9	90.0 - 110.0	MS	03-JUL-09 13:02	090702-2
	Thallium	49.6	ug/L	50	ug/L	99.2	90.0 - 110.0	MS	03-JUL-09 13:02	090702-2
	Nickel	52.2	ug/L	50	ug/L	104.4	90.0 - 110.0	MS	03-JUL-09 16:17	090702-3
	Beryllium	45.1	ug/L	50	ug/L	90.2	90.0 - 110.0	MS	04-JUL-09 01:07	090703-4
	Mercury	5.04	ug/L	5	ug/L	100.9	80.0 - 120.0	AV	13-JUL-09 10:42	071309S2-6
CCV04										
	Aluminum	5300	ug/L	5000	ug/L	106	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Antimony	501	ug/L	500	ug/L	100.2	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Barium	506	ug/L	500	ug/L	101.1	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Cadmium	507	ug/L	500	ug/L	101.5	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Calcium	5340	ug/L	5000	ug/L	106.9	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Cobalt	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Copper	495	ug/L	500	ug/L	98.9	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Iron	5210	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Lead	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Magnesium	5420	ug/L	5000	ug/L	108.4	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Manganese	501	ug/L	500	ug/L	100.2	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Silver	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Sodium	10200	ug/L	10000	ug/L	101.9	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Vanadium	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	02-JUL-09 09:46	070209-1
	Zinc	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	02-JUL-09 09:46	070209-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Arsenic	47.4	ug/L	50	ug/L	94.8	90.0 - 110.0	MS	03-JUL-09 14:02	090702-2
	Nickel	52.3	ug/L	50	ug/L	104.7	90.0 - 110.0	MS	03-JUL-09 14:02	090702-2
	Selenium	50.8	ug/L	50	ug/L	101.6	90.0 - 110.0	MS	03-JUL-09 14:02	090702-2
	Thallium	49.3	ug/L	50	ug/L	98.7	90.0 - 110.0	MS	03-JUL-09 14:02	090702-2
	Nickel	51.3	ug/L	50	ug/L	102.5	90.0 - 110.0	MS	03-JUL-09 16:59	090702-3
	Mercury	5.1	ug/L	5	ug/L	102	80.0 - 120.0	AV	13-JUL-09 11:06	071309S2-6
CCV05										
	Aluminum	5110	ug/L	5000	ug/L	102.2	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Antimony	496	ug/L	500	ug/L	99.3	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Barium	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Cadmium	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Calcium	5100	ug/L	5000	ug/L	101.9	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Chromium	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Cobalt	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Copper	490	ug/L	500	ug/L	98	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Iron	5110	ug/L	5000	ug/L	102.1	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Lead	500	ug/L	500	ug/L	100	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Manganese	500	ug/L	500	ug/L	100	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Potassium	5090	ug/L	5000	ug/L	101.7	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Silver	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Sodium	10100	ug/L	10000	ug/L	101.2	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Vanadium	505	ug/L	500	ug/L	101	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Zinc	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	02-JUL-09 10:16	070209-1
	Arsenic	47.1	ug/L	50	ug/L	94.3	90.0 - 110.0	MS	03-JUL-09 14:31	090702-2
	Nickel	52.4	ug/L	50	ug/L	104.7	90.0 - 110.0	MS	03-JUL-09 14:31	090702-2
	Selenium	48.7	ug/L	50	ug/L	97.3	90.0 - 110.0	MS	03-JUL-09 14:31	090702-2
	Thallium	48.9	ug/L	50	ug/L	97.8	90.0 - 110.0	MS	03-JUL-09 14:31	090702-2
	Nickel	50.3	ug/L	50	ug/L	100.6	90.0 - 110.0	MS	03-JUL-09 17:46	090702-3

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV06										
	Aluminum	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Antimony	500	ug/L	500	ug/L	100	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Barium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Cadmium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Calcium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Chromium	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Cobalt	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Copper	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Iron	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Lead	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Magnesium	5200	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Manganese	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Potassium	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Silver	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Vanadium	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Zinc	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	02-JUL-09 10:34	070209-1
	Nickel	50.6	ug/L	50	ug/L	101.2	90.0 – 110.0	MS	03-JUL-09 18:37	090702-3
CCV07										
	Aluminum	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Antimony	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Barium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Cadmium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Calcium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Chromium	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Cobalt	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Iron	5120	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Lead	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Magnesium	5180	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	02-JUL-09 11:02	070209-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Manganese	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Silver	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Sodium	10100	ug/L	10000	ug/L	101.2	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Vanadium	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Zinc	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	02-JUL-09 11:02	070209-1
	Nickel	50.4	ug/L	50	ug/L	100.9	90.0 – 110.0	MS	03-JUL-09 19:12	090702-3
CCV08										
	Aluminum	5110	ug/L	5000	ug/L	102.2	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Antimony	500	ug/L	500	ug/L	100	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Barium	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Cadmium	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Calcium	5140	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Chromium	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Cobalt	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Copper	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Iron	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Lead	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Magnesium	5210	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Manganese	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Potassium	5100	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Silver	510	ug/L	500	ug/L	102	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Vanadium	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Zinc	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	02-JUL-09 11:31	070209-1
	Nickel	49.9	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	03-JUL-09 20:08	090702-3
CCV09										
	Aluminum	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	02-JUL-09 12:00	070209-1
	Antimony	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	02-JUL-09 12:00	070209-1
	Barium	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	02-JUL-09 12:00	070209-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2478

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cadmium	514	ug/L	500	ug/L	102.9	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Calcium	5170	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Chromium	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Cobalt	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Copper	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Iron	5200	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Lead	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Magnesium	5260	ug/L	5000	ug/L	105.2	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Manganese	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Potassium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Silver	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Vanadium	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	02–JUL–09 12:00	070209–1
	Zinc	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	02–JUL–09 12:00	070209–1

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 09–2478

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS6,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Arsenic	4.88	ug/L	5	ug/L	97.5	70.0 – 130.0	MS	03–JUL–09 11:22	090702–2
	Nickel	1.99	ug/L	2	ug/L	99.5	70.0 – 130.0	MS	03–JUL–09 11:22	090702–2
	Selenium	5.26	ug/L	5	ug/L	105.2	70.0 – 130.0	MS	03–JUL–09 11:22	090702–2
	Thallium	1.08	ug/L	1	ug/L	108.3	70.0 – 130.0	MS	03–JUL–09 11:22	090702–2
	Nickel	2.01	ug/L	2	ug/L	100.4	70.0 – 130.0	MS	03–JUL–09 15:18	090702–3
	Beryllium	.476	ug/L	.5	ug/L	95.2	70.0 – 130.0	MS	04–JUL–09 00:10	090703–4
	Beryllium	.454	ug/L	.5	ug/L	90.8	70.0 – 130.0	MS	04–JUL–09 01:47	090703–5
	Mercury	.146	ug/L	.2	ug/L	72.8	70.0 – 130.0	AV	13–JUL–09 09:52	071309S2–6
PQL01										
	Aluminum	212	ug/L	200	ug/L	106.2	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Antimony	12.3	ug/L	10	ug/L	122.5	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Barium	5.14	ug/L	5	ug/L	102.9	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Cadmium	4.98	ug/L	5	ug/L	99.7	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Calcium	200	ug/L	200	ug/L	100	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Chromium	5.16	ug/L	5	ug/L	103.2	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Cobalt	5.29	ug/L	5	ug/L	105.7	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Copper	10.6	ug/L	10	ug/L	105.9	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Iron	105	ug/L	100	ug/L	104.7	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Lead	11.5	ug/L	10	ug/L	115.3	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Magnesium	307	ug/L	300	ug/L	102.3	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Manganese	10.4	ug/L	10	ug/L	103.6	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Potassium	151	ug/L	150	ug/L	100.8	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Silver	5.63	ug/L	5	ug/L	112.7	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Sodium	303	ug/L	300	ug/L	101	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Vanadium	4.8	ug/L	5	ug/L	95.9	70.0 – 130.0	P	02–JUL–09 08:09	070209–1
	Zinc	10.7	ug/L	10	ug/L	106.8	70.0 – 130.0	P	02–JUL–09 08:09	070209–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2478

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	02–JUL–09 08:06	070209–1
	Antimony	4.02	+/–10	J	3.3	10.0	SOL	P	02–JUL–09 08:06	070209–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 08:06	070209–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 08:06	070209–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	02–JUL–09 08:06	070209–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	02–JUL–09 08:06	070209–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	02–JUL–09 08:06	070209–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	02–JUL–09 08:06	070209–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	02–JUL–09 08:06	070209–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	02–JUL–09 08:06	070209–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	02–JUL–09 08:06	070209–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	02–JUL–09 08:06	070209–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	02–JUL–09 08:06	070209–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 08:06	070209–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	02–JUL–09 08:06	070209–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 08:06	070209–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	02–JUL–09 08:06	070209–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	03–JUL–09 11:16	090702–2
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	03–JUL–09 11:16	090702–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	03–JUL–09 11:16	090702–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	03–JUL–09 11:16	090702–2
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	03–JUL–09 15:13	090702–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	04–JUL–09 00:08	090703–4
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	04–JUL–09 01:44	090703–5
	Mercury	–0.121	+/–.2	J	0.068	0.2	SOL	AV	13–JUL–09 09:50	071309S2–6
CCB01										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	02–JUL–09 08:28	070209–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	02–JUL–09 08:28	070209–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 08:28	070209–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 08:28	070209–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	02–JUL–09 08:28	070209–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 08:28	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 08:28	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 08:28	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 08:28	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 08:28	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 08:28	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 08:28	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 08:28	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 08:28	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 08:28	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 08:28	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 08:28	070209-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	03-JUL-09 11:46	090702-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 11:46	090702-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	03-JUL-09 11:46	090702-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	03-JUL-09 11:46	090702-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 15:42	090702-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	04-JUL-09 00:20	090703-4
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	04-JUL-09 01:57	090703-5
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 09:56	071309S2-6
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 08:36	070209-1
	Antimony	7.86	+/-10	J	3.3	10.0	SOL	P	02-JUL-09 08:36	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 08:36	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 08:36	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 08:36	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 08:36	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 08:36	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 08:36	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 08:36	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 08:36	070209-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 08:36	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 08:36	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 08:36	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 08:36	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 08:36	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 08:36	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 08:36	070209-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	03-JUL-09 12:09	090702-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 12:09	090702-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	03-JUL-09 12:09	090702-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	03-JUL-09 12:09	090702-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 16:00	090702-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	04-JUL-09 00:46	090703-4
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	04-JUL-09 02:18	090703-5
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:20	071309S2-6
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 09:17	070209-1
	Antimony	5.15	+/-10	J	3.3	10.0	SOL	P	02-JUL-09 09:17	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 09:17	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 09:17	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 09:17	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 09:17	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 09:17	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 09:17	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 09:17	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 09:17	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 09:17	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 09:17	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 09:17	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 09:17	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 09:17	070209-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 09:17	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 09:17	070209-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	03-JUL-09 13:08	090702-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 13:08	090702-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	03-JUL-09 13:08	090702-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	03-JUL-09 13:08	090702-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 16:23	090702-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	04-JUL-09 01:10	090703-4
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:44	071309S2-6
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 09:49	070209-1
	Antimony	6.61	+/-10	J	3.3	10.0	SOL	P	02-JUL-09 09:49	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 09:49	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 09:49	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 09:49	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 09:49	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 09:49	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 09:49	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 09:49	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 09:49	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 09:49	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 09:49	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 09:49	070209-1
	Silver	1.08	+/-5	J	1.0	5.0	SOL	P	02-JUL-09 09:49	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 09:49	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 09:49	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 09:49	070209-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	03-JUL-09 14:08	090702-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 14:08	090702-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	03-JUL-09 14:08	090702-2
	Thallium	0.327	+/-1	J	0.3	1.0	SOL	MS	03-JUL-09 14:08	090702-2

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 17:05	090702-3
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:08	071309S2-6
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 10:19	070209-1
	Antimony	5.7	+/-10	J	3.3	10.0	SOL	P	02-JUL-09 10:19	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 10:19	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 10:19	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 10:19	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 10:19	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 10:19	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 10:19	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 10:19	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 10:19	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 10:19	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 10:19	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 10:19	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 10:19	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 10:19	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 10:19	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 10:19	070209-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	03-JUL-09 14:37	090702-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 14:37	090702-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	03-JUL-09 14:37	090702-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	03-JUL-09 14:37	090702-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 17:52	090702-3
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 10:37	070209-1
	Antimony	3.61	+/-10	J	3.3	10.0	SOL	P	02-JUL-09 10:37	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 10:37	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 10:37	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 10:37	070209-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 10:37	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 10:37	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 10:37	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 10:37	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 10:37	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 10:37	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 10:37	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 10:37	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 10:37	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 10:37	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 10:37	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 10:37	070209-1
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 18:43	090702-3
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 11:05	070209-1
	Antimony	4.62	+/-10	J	3.3	10.0	SOL	P	02-JUL-09 11:05	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:05	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:05	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 11:05	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 11:05	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 11:05	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 11:05	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 11:05	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 11:05	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 11:05	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 11:05	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 11:05	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:05	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 11:05	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:05	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 11:05	070209-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 19:18	090702-3
CCB08										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 11:34	070209-1
	Antimony	6.72	+/-10	J	3.3	10.0	SOL	P	02-JUL-09 11:34	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:34	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:34	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 11:34	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 11:34	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 11:34	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 11:34	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 11:34	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 11:34	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 11:34	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 11:34	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 11:34	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:34	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 11:34	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:34	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 11:34	070209-1
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	03-JUL-09 20:14	090702-3
CCB09										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 12:03	070209-1
	Antimony	5.7	+/-10	J	3.3	10.0	SOL	P	02-JUL-09 12:03	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 12:03	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 12:03	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 12:03	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 12:03	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 12:03	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 12:03	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 12:03	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 12:03	070209-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2478

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	02–JUL–09 12:03	070209–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	02–JUL–09 12:03	070209–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	02–JUL–09 12:03	070209–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 12:03	070209–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	02–JUL–09 12:03	070209–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 12:03	070209–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	02–JUL–09 12:03	070209–1

METALS
–3b–
PREPARATION BLANK SUMMARY

SDG NO. 09–2478

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201870533								
	Aluminum	6770	ug/Kg	+/–19920.319	U	P	6770	19900
	Antimony	329	ug/Kg	+/–996.016	U	P	329	996
	Barium	99.6	ug/Kg	+/–498.008	U	P	99.6	498
	Cadmium	99.6	ug/Kg	+/–498.008	U	P	99.6	498
	Calcium	7970	ug/Kg	+/–24900.398	U	P	7970	24900
	Chromium	149	ug/Kg	+/–498.008	U	P	149	498
	Cobalt	149	ug/Kg	+/–498.008	U	P	149	498
	Copper	299	ug/Kg	+/–996.016	U	P	299	996
	Iron	7970	ug/Kg	+/–24900.398	U	P	7970	24900
	Lead	249	ug/Kg	+/–996.016	U	P	249	996
	Magnesium	8470	ug/Kg	+/–29880.478	U	P	8470	29900
	Manganese	199	ug/Kg	+/–996.016	U	P	199	996
	Potassium	6370	ug/Kg	+/–24900.398	U	P	6370	24900
	Silver	99.6	ug/Kg	+/–498.008	U	P	99.6	498
	Sodium	6970	ug/Kg	+/–24900.398	U	P	6970	24900
	Vanadium	99.6	ug/Kg	+/–498.008	U	P	99.6	498
	Zinc	329	ug/Kg	+/–996.016	U	P	329	996
1201870569								
	Arsenic	196	ug/kg	+/–982.318	U	MS	196	982
	Beryllium	19.6	ug/kg	+/–98.232	U	MS	19.6	98.2
	Nickel	98.2	ug/kg	+/–392.927	U	MS	98.2	393
	Selenium	491	ug/kg	+/–982.318	U	MS	491	982
	Thallium	58.9	ug/kg	+/–196.464	U	MS	58.9	196
1201870737								
	Mercury	–8.77	ug/kg	+/–11.719	J	AV	3.98	11.7

METALS
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Interference Check Sample

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 - 120.0	02-JUL-09 08:13	070209-1
	Antimony	-13.2	ug/L					02-JUL-09 08:13	070209-1
	Barium	4.68	ug/L					02-JUL-09 08:13	070209-1
	Cadmium	1.6	ug/L					02-JUL-09 08:13	070209-1
	Calcium	487000	ug/L	500000	ug/L	97.5	80.0 - 120.0	02-JUL-09 08:13	070209-1
	Chromium	-3.49	ug/L					02-JUL-09 08:13	070209-1
	Cobalt	-1.42	ug/L					02-JUL-09 08:13	070209-1
	Copper	-7.99	ug/L					02-JUL-09 08:13	070209-1
	Iron	187000	ug/L	200000	ug/L	93.5	80.0 - 120.0	02-JUL-09 08:13	070209-1
	Lead	8.68	ug/L					02-JUL-09 08:13	070209-1
	Magnesium	483000	ug/L	500000	ug/L	96.6	80.0 - 120.0	02-JUL-09 08:13	070209-1
	Manganese	-3.18	ug/L					02-JUL-09 08:13	070209-1
	Potassium	41.6	ug/L					02-JUL-09 08:13	070209-1
	Silver	2.46	ug/L					02-JUL-09 08:13	070209-1
	Sodium	19.6	ug/L					02-JUL-09 08:13	070209-1
	Vanadium	-4.03	ug/L					02-JUL-09 08:13	070209-1
	Zinc	11.2	ug/L					02-JUL-09 08:13	070209-1
ICSAB01									
	Aluminum	505000	ug/L	500000	ug/L	101	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Antimony	504	ug/L	500	ug/L	101	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Barium	503	ug/L	500	ug/L	101	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Cadmium	466	ug/L	500	ug/L	93.1	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Calcium	484000	ug/L	500000	ug/L	96.8	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Chromium	479	ug/L	500	ug/L	95.8	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Cobalt	456	ug/L	500	ug/L	91.3	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Copper	538	ug/L	500	ug/L	108	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Iron	187000	ug/L	200000	ug/L	93.4	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Lead	494	ug/L	500	ug/L	98.8	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Magnesium	482000	ug/L	500000	ug/L	96.3	80.0 - 120.0	02-JUL-09 08:16	070209-1

METALS
-4-
Interference Check Sample

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	472	ug/L	500	ug/L	94.4	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Potassium	5220	ug/L	5000	ug/L	104	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Silver	274	ug/L	250	ug/L	110	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Sodium	5210	ug/L	5000	ug/L	104	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Vanadium	524	ug/L	500	ug/L	105	80.0 - 120.0	02-JUL-09 08:16	070209-1
	Zinc	486	ug/L	500	ug/L	97.3	80.0 - 120.0	02-JUL-09 08:16	070209-1

METALS
-4-
Interference Check Sample

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	-0.565	ug/L					03-JUL-09 11:28	090702-2
	Nickel	4.99	ug/L					03-JUL-09 11:28	090702-2
	Selenium	-1.43	ug/L					03-JUL-09 11:28	090702-2
	Thallium	0.057	ug/L					03-JUL-09 11:28	090702-2
ICSAB01									
	Arsenic	20.8	ug/L	20	ug/L	104	80.0 - 120.0	03-JUL-09 11:34	090702-2
	Nickel	23.2	ug/L	22.1	ug/L	105	80.0 - 120.0	03-JUL-09 11:34	090702-2
	Selenium	19.8	ug/L	20	ug/L	98.8	80.0 - 120.0	03-JUL-09 11:34	090702-2
	Thallium	18.7	ug/L	20	ug/L	93.7	80.0 - 120.0	03-JUL-09 11:34	090702-2

METALS
-4-
Interference Check Sample

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Nickel	5.13	ug/L					03-JUL-09 15:24	090702-3
ICSAB01									
	Nickel	23.5	ug/L	22.1	ug/L	106	80.0 - 120.0	03-JUL-09 15:30	090702-3

METALS
-4-
Interference Check Sample

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.077	ug/L					04-JUL-09 00:13	090703-4
ICSAB01									
	Beryllium	17.5	ug/L	20	ug/L	87.7	80.0 - 120.0	04-JUL-09 00:15	090703-4

METALS
-4-
Interference Check Sample

SDG No: 09-2478

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.072	ug/L					04-JUL-09 01:50	090703-5
ICSAB01									
	Beryllium	20.2	ug/L	20	ug/L	101	80.0 - 120.0	04-JUL-09 01:52	090703-5

METALS
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Matrix Spike Summary

SDG NO. 09–2478 **Client ID** CAMO–09–6007S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.7

Sample ID: 232429001 **Spike ID:** 1201870536

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		5540000		5160000		498000	75.7	N/A	P
Antimony	ug/Kg	75–125	44500		917	J	49800	87.5		P
Barium	ug/Kg	75–125	85000		45800		49800	78.5		P
Cadmium	ug/Kg	75–125	49500		157	J	49800	99		P
Calcium	ug/Kg	75–125	1360000		1180000		498000	36.2	N	P
Chromium	ug/Kg	75–125	54500		7010		49800	95.4		P
Cobalt	ug/Kg	75–125	48700		1780		49800	94.1		P
Copper	ug/Kg	75–125	51200		2730		49800	97.2		P
Iron	ug/Kg		11700000		12000000		498000	–72	N/A	P
Lead	ug/Kg	75–125	54600		6190		49800	97.1		P
Magnesium	ug/Kg	75–125	1410000		927000		498000	97		P
Manganese	ug/Kg		305000		234000		49800	141	N/A	P
Potassium	ug/Kg	75–125	1020000		566000		498000	91.5		P
Silver	ug/Kg	75–125	49700		456	J	49800	98.9		P
Sodium	ug/Kg	75–125	651000		220000		498000	86.5		P
Vanadium	ug/Kg	75–125	56600		11100		49800	91.4		P
Zinc	ug/Kg	75–125	86800		39300		49800	95.2		P

METALS
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Matrix Spike Duplicate Summary

SDG NO.	09–2478	**Client ID**	CAMO–09–6007SD
Contract:	LANL01004	**Level:**	Low
Matrix:	SOIL	**% Solids:**	95.7
Sample ID:	232429001	**Spike ID:**	1201870537

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		4990000		5160000		517000	–33.1	N/A	P
Antimony	ug/Kg	75–125	48400		917	J	51700	91.8		P
Barium	ug/Kg	75–125	83600		45800		51700	73	N	P
Cadmium	ug/Kg	75–125	52100		157	J	51700	100		P
Calcium	ug/Kg	75–125	1300000		1180000		517000	23.6	N	P
Chromium	ug/Kg	75–125	56900		7010		51700	96.5		P
Cobalt	ug/Kg	75–125	51400		1780		51700	96		P
Copper	ug/Kg	75–125	54900		2730		51700	101		P
Iron	ug/Kg		11800000		12000000		517000	–39.1	N/A	P
Lead	ug/Kg	75–125	57000		6190		51700	98.3		P
Magnesium	ug/Kg	75–125	1400000		927000		517000	90.7		P
Manganese	ug/Kg		324000		234000		51700	173	N/A	P
Potassium	ug/Kg	75–125	1040000		566000		517000	92.2		P
Silver	ug/Kg	75–125	52100		456	J	51700	100		P
Sodium	ug/Kg	75–125	679000		220000		517000	88.8		P
Vanadium	ug/Kg	75–125	59200		11100		51700	92.9		P
Zinc	ug/Kg	75–125	92200		39300		51700	102		P

METALS
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Matrix Spike Summary

SDG NO. 09–2478 **Client ID** CAMO–09–6007S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.7

Sample ID: 232429001 **Spike ID:** 1201870572

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75–125	5550		1230		8140	53	N	MS
Beryllium	ug/kg	75–125	5040		401		5090	91.1		MS
Nickel	ug/kg	75–125	9580		3820		5090	113		MS
Selenium	ug/kg	75–125	1100		510	U	2040	43.6	N	MS
Thallium	ug/kg	75–125	4890		109	J	10200	47	N	MS

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2478 **Client ID** CAMO-09-6007SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.7

Sample ID: 232429001 **Spike ID:** 1201870573

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	5500		1230		8360	51.1	N	MS
Beryllium	ug/kg	75-125	4900		401		5220	86.1		MS
Nickel	ug/kg	75-125	9930		3820		5220	117		MS
Selenium	ug/kg	75-125	1150		510	U	2090	44.9	N	MS
Thallium	ug/kg	75-125	5120		109	J	10400	48	N	MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2478 **Client ID** CAMO-09-6007S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.7

Sample ID: 232429001 **Spike ID:** 1201870740

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	137		18.4		116	102		AV

METALS
–5a–
Matrix Spike Duplicate Summary

SDG NO. 09–2478 **Client ID** CAMO–09–6007SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.7

Sample ID: 232429001 **Spike ID:** 1201870746

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75–125	137		18.4		109	109		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2478

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–6007D

Sample ID: 232429001 **Duplicate ID:** 1201870534 **Percent Solids for Dup:** 95.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	5160000		4150000		21.8	*	P
Antimony	ug/Kg	+/–1030	917	J	936	J	1.98		P
Barium	ug/Kg	+/–20%	45800		35600		25.1	*	P
Cadmium	ug/Kg	+/–516	157	J	126	J	21.8		P
Calcium	ug/Kg	+/–20%	1180000		924000		24.3	*	P
Chromium	ug/Kg	+/–20%	7010		7830		11.1		P
Cobalt	ug/Kg	+/–516	1780		1560		13		P
Copper	ug/Kg	+/–1030	2730		2500		8.71		P
Iron	ug/Kg	+/–20%	12000000		10800000		11.1		P
Lead	ug/Kg	+/–20%	6190		5370		14.3		P
Magnesium	ug/Kg	+/–20%	927000		839000		9.95		P
Manganese	ug/Kg	+/–20%	234000		209000		11.5		P
Potassium	ug/Kg	+/–20%	566000		508000		10.9		P
Silver	ug/Kg	+/–516	456	J	432	J	5.21		P
Sodium	ug/Kg	+/–20%	220000		199000		10		P
Vanadium	ug/Kg	+/–20%	11100		9530		15.3		P
Zinc	ug/Kg	+/–20%	39300		37800		3.84		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2478

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–6007SD

Sample ID: 1201870536 **Duplicate ID:** 1201870537 **Percent Solids for Dup:** 95.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	5540000		4990000		10.4		P
Antimony	ug/Kg	+/–20	44500		48400		8.33		P
Barium	ug/Kg	+/–20	85000		83600		1.62		P
Cadmium	ug/Kg	+/–20	49500		52100		5.17		P
Calcium	ug/Kg	+/–20	1360000		1300000		4.38		P
Chromium	ug/Kg	+/–20	54500		56900		4.28		P
Cobalt	ug/Kg	+/–20	48700		51400		5.43		P
Copper	ug/Kg	+/–20	51200		54900		7.09		P
Iron	ug/Kg	+/–20	11700000		11800000		1.33		P
Lead	ug/Kg	+/–20	54600		57000		4.38		P
Magnesium	ug/Kg	+/–20	1410000		1400000		1.02		P
Manganese	ug/Kg	+/–20	305000		324000		6.12		P
Potassium	ug/Kg	+/–20	1020000		1040000		2.01		P
Silver	ug/Kg	+/–20	49700		52100		4.76		P
Sodium	ug/Kg	+/–20	651000		679000		4.16		P
Vanadium	ug/Kg	+/–20	56600		59200		4.35		P
Zinc	ug/Kg	+/–20	86800		92200		6.04		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2478

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-6007D

Sample ID: 232429001 **Duplicate ID:** 1201870570 **Percent Solids for Dup:** 95.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-1040	1230		1320		7.22		MS
Beryllium	ug/kg	+/-104	401		380		5.43		MS
Nickel	ug/kg	+/-20%	3820		4270		11.3		MS
Selenium	ug/kg		510	U	518	U			MS
Thallium	ug/kg	+/-207	109	J	112	J	2.69		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2478

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-6007SD

Sample ID: 1201870572 **Duplicate ID:** 1201870573 **Percent Solids for Dup:** 95.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-20	5550		5500		.801		MS
Beryllium	ug/kg	+/-20	5040		4900		2.82		MS
Nickel	ug/kg	+/-20	9580		9930		3.61		MS
Selenium	ug/kg	+/-20	1100		1150		4.52		MS
Thallium	ug/kg	+/-20	4890		5120		4.59		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2478

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–6007D

Sample ID: 232429001 **Duplicate ID:** 1201870739 **Percent Solids for Dup:** 95.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/–10.8	18.4		19.4		5.78		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2478

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–6007SD

Sample ID: 1201870740 **Duplicate ID:** 1201870746 **Percent Solids for Dup:** 95.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/–20	137		137		.285		AV

METALS
–7–
Laboratory Control Sample Summary

SDG NO. 09–2478

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201870538								
	Aluminum	ug/Kg	7290000	6450000		88.4	63.5–118	P
	Antimony	ug/Kg	121000	102000		84.5	39.1–132.1	P
	Barium	ug/Kg	475000	469000		98.7	82–110.6	P
	Cadmium	ug/Kg	116000	121000		104	77.9–115.2	P
	Calcium	ug/Kg	3720000	3510000		94.3	77.4–111.7	P
	Chromium	ug/Kg	84000	76700		91.3	66.6–116.5	P
	Cobalt	ug/Kg	83000	83300		100	79–113.9	P
	Copper	ug/Kg	105000	98500		93.8	77.6–112	P
	Iron	ug/Kg	20000000	18200000		91.1	51.5–145.5	P
	Lead	ug/Kg	161000	169000		105	83.1–114.7	P
	Magnesium	ug/Kg	2980000	2900000		97.5	81–114.3	P
	Manganese	ug/Kg	398000	365000		91.7	76.6–106.6	P
	Potassium	ug/Kg	2390000	2150000		90.2	72.2–111.1	P
	Silver	ug/Kg	133000	134000		101	81.7–115.7	P
	Sodium	ug/Kg	614000	555000		90.4	71.5–109.3	P
	Vanadium	ug/Kg	166000	148000		89.3	65–118.6	P
	Zinc	ug/Kg	195000	196000		100	82.8–111.9	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2478

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201870574								
	Arsenic	ug/kg	255000	269000		105	83-120	MS
	Beryllium	ug/kg	86400	86500		100	81.2-126.8	MS
	Nickel	ug/kg	101000	107000		106	83.3-121.4	MS
	Selenium	ug/kg	171000	202000		118	80.2-125.9	MS
	Thallium	ug/kg	203000	195000		96	78-123.2	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2478

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201870738								
	Mercury	ug/kg	5150	5620		109	71.6-128.3	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2478 **Client ID** CAMO-09-6007L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232429001 **Serial Dilution ID:** 1201870535

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	51400		51500		.195		10	P
Antimony	9.13	J	16.6	J	81.8			P
Barium	456		458		.439		10	P
Cadmium	1.56	J	6.2	J	297			P
Calcium	11700		11900		1.71		10	P
Chromium	69.8		79		13.2			P
Cobalt	17.7		23.8	J	34.5			P
Copper	27.2		27.4	J	.551			P
Iron	120000		121000		.417		10	P
Lead	61.7		66.5		7.78			P
Magnesium	9220		9350		1.41		10	P
Manganese	2330		2370		1.72		10	P
Potassium	5640		5650		.177		10	P
Silver	4.54	J	8.75	J	92.7			P
Sodium	2190		2150		1.83			P
Vanadium	111		112		.45		10	P
Zinc	391		397		1.53		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2478 **Client ID** CAMO-09-6007L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232429001 **Serial Dilution ID:** 1201870571

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	6.02		5	U	100			MS
Beryllium	1.97		1.92	J	2.79			MS
Nickel	18.7		19.4		3.74			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.536	J	1.5	U	100			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2478 **Client ID** CAMO-09-6007L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232429001 **Serial Dilution ID:** 1201870745

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.324		.34	U	100			AV

METALS
–13–
SAMPLE PREPARATION SUMMARY

SDG No: 09–2478 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880927						
1201870533	MB for batch 880927	MB	S	30–JUN–09	.502g	50mL	
1201870538	LCS for batch 880927	LCS	S	30–JUN–09	.504g	50mL	
1201870536	CAMO–09–6007S	MS	S	30–JUN–09	.524g	50mL	
1201870537	CAMO–09–6007SD	MSD	S	30–JUN–09	.505g	50mL	
1201870534	CAMO–09–6007D	DUP	S	30–JUN–09	.506g	50mL	
232429001	CAMO–09–6007	SAMPLE	S	30–JUN–09	.52g	50mL	
232429002	CAMO–09–6006	SAMPLE	S	30–JUN–09	.509g	50mL	
232429003	CAMO–09–6008	SAMPLE	S	30–JUN–09	.521g	50mL	
232429004	CAMO–09–6009	SAMPLE	S	30–JUN–09	.512g	50mL	
232429005	CAMO–09–6034	SAMPLE	S	30–JUN–09	.5g	50mL	
232429006	CAMO–09–6043	SAMPLE	S	30–JUN–09	.51g	50mL	
232429007	CAMO–09–6045	SAMPLE	S	30–JUN–09	.5g	50mL	
232429008	CAMO–09–6041	SAMPLE	S	30–JUN–09	.501g	50mL	
232429009	CAMO–09–6040	SAMPLE	S	30–JUN–09	.525g	50mL	
232429010	CAMO–09–6044	SAMPLE	S	30–JUN–09	.505g	50mL	
232429011	CAMO–09–6035	SAMPLE	S	30–JUN–09	.501g	50mL	
232429012	CAMO–09–6038	SAMPLE	S	30–JUN–09	.502g	50mL	
232429013	CAMO–09–9039	SAMPLE	S	30–JUN–09	.519g	50mL	
232429014	CAMO–09–6042	SAMPLE	S	30–JUN–09	.509g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2478 **Method Type:** P

Contract: **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
232429015	CAMO-09-6049	SAMPLE	S	30-JUN-09	.503g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2478 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880940						
1201870569	MB for batch 880940	MB	S	30-JUN-09	.509g	50mL	
1201870574	LCS for batch 880940	LCS	S	30-JUN-09	.511g	50mL	
1201870572	CAMO-09-6007S	MS	S	30-JUN-09	.513g	50mL	
1201870573	CAMO-09-6007SD	MSD	S	30-JUN-09	.5g	50mL	
1201870570	CAMO-09-6007D	DUP	S	30-JUN-09	.504g	50mL	
232429001	CAMO-09-6007	SAMPLE	S	30-JUN-09	.512g	50mL	
232429002	CAMO-09-6006	SAMPLE	S	30-JUN-09	.512g	50mL	
232429003	CAMO-09-6008	SAMPLE	S	30-JUN-09	.509g	50mL	
232429004	CAMO-09-6009	SAMPLE	S	30-JUN-09	.525g	50mL	
232429005	CAMO-09-6034	SAMPLE	S	30-JUN-09	.506g	50mL	
232429006	CAMO-09-6043	SAMPLE	S	30-JUN-09	.502g	50mL	
232429007	CAMO-09-6045	SAMPLE	S	30-JUN-09	.504g	50mL	
232429008	CAMO-09-6041	SAMPLE	S	30-JUN-09	.521g	50mL	
232429009	CAMO-09-6040	SAMPLE	S	30-JUN-09	.503g	50mL	
232429010	CAMO-09-6044	SAMPLE	S	30-JUN-09	.505g	50mL	
232429011	CAMO-09-6035	SAMPLE	S	30-JUN-09	.522g	50mL	
232429012	CAMO-09-6038	SAMPLE	S	30-JUN-09	.502g	50mL	
232429013	CAMO-09-9039	SAMPLE	S	30-JUN-09	.509g	50mL	
232429014	CAMO-09-6042	SAMPLE	S	30-JUN-09	.516g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2478 **Method Type:** MS

Contract: **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
232429015	CAMO-09-6049	SAMPLE	S	30-JUN-09	.511g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2478 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880994						
1201870737	MB for batch 880994	MB	S	10-JUL-09	.512g	30mL	
1201870738	LCS for batch 880994	LCS	S	10-JUL-09	.203g	30mL	
1201870740	CAMO-09-6007S	MS	S	10-JUL-09	.541g	30mL	
1201870746	CAMO-09-6007SD	MSD	S	10-JUL-09	.573g	30mL	
1201870739	CAMO-09-6007D	DUP	S	10-JUL-09	.581g	30mL	
232429001	CAMO-09-6007	SAMPLE	S	10-JUL-09	.553g	30mL	
232429002	CAMO-09-6006	SAMPLE	S	10-JUL-09	.537g	30mL	
232429003	CAMO-09-6008	SAMPLE	S	10-JUL-09	.505g	30mL	
232429004	CAMO-09-6009	SAMPLE	S	10-JUL-09	.574g	30mL	
232429005	CAMO-09-6034	SAMPLE	S	10-JUL-09	.53g	30mL	
232429006	CAMO-09-6043	SAMPLE	S	10-JUL-09	.576g	30mL	
232429007	CAMO-09-6045	SAMPLE	S	10-JUL-09	.579g	30mL	
232429008	CAMO-09-6041	SAMPLE	S	10-JUL-09	.559g	30mL	
232429009	CAMO-09-6040	SAMPLE	S	10-JUL-09	.5g	30mL	
232429010	CAMO-09-6044	SAMPLE	S	10-JUL-09	.542g	30mL	
232429011	CAMO-09-6035	SAMPLE	S	10-JUL-09	.563g	30mL	
232429012	CAMO-09-6038	SAMPLE	S	10-JUL-09	.569g	30mL	
232429013	CAMO-09-9039	SAMPLE	S	10-JUL-09	.558g	30mL	
232429014	CAMO-09-6042	SAMPLE	S	10-JUL-09	.567g	30mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2478 **Method Type:** AV

Contract: **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
232429015	CAMO-09-6049	SAMPLE	S	10-JUL-09	.535g	30mL	

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 03–JUL–09 **End Date:** 03–JUL–09

Client Sdg: 09–2478
Method MS
Data File: 090702–2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	10:53			X													X		X			X		
S10	1	10:59			X													X		X			X		
S100	1	11:04			X													X		X			X		
ICV01	1	11:10			X													X		X			X		
ICB01	1	11:16			X													X		X			X		
CRDL01	1	11:22			X													X		X			X		
ICSA01	1	11:28			X													X		X			X		
ICSAB01	1	11:34			X													X		X			X		
CCV01	1	11:40			X													X		X			X		
CCB01	1	11:46			X													X		X			X		
1201870569	2	11:52			X													X		X			X		
1201870574	40	11:57			X													X		X			X		
CCV02	1	12:03			X													X		X			X		
CCB02	1	12:09			X													X		X			X		
232429001	2	12:15			X													X		X			X		
1201870570	2	12:21			X													X		X			X		
1201870572	2	12:27			X													X		X			X		
1201870573	2	12:33			X													X		X			X		
1201870571	10	12:39			X													X		X			X		
232429002	2	12:45			X													X		X			X		
232429003	2	12:51			X													X		X			X		
232429004	2	12:57			X													X		X			X		
CCV03	1	13:02			X													X		X			X		
CCB03	1	13:08			X													X		X			X		
232429005	2	13:14			X													X		X			X		
232429006	2	13:20			X													X		X			X		
232429007	2	13:26			X													X		X			X		
232429008	2	13:32			X													X		X			X		
232429009	2	13:38			X															X			X		
232429010	2	13:44			X															X			X		
232429011	2	13:50			X													X		X			X		
232429012	2	13:56			X													X		X			X		
CCV04	1	14:02			X													X		X			X		
CCB04	1	14:08			X													X		X			X		
232429013	2	14:14			X													X		X			X		
232429014	2	14:19			X															X			X		
232429015	2	14:25			X													X		X			X		
CCV05	1	14:31			X													X		X			X		
CCB05	1	14:37			X													X		X			X		

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 03-JUL-09 **End Date:** 03-JUL-09

Client Sdg: 09-2478
Method MS
Data File: 090702-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	14:49																X							
S10	1	14:55																X							
S100	1	15:01																X							
ICV01	1	15:07																X							
ICB01	1	15:13																X							
CRDL01	1	15:18																X							
ICSA01	1	15:24																X							
ICSAB01	1	15:30																X							
CCV01	1	15:36																X							
CCB01	1	15:42																X							
LR01	1	15:48																X							
CCV02	1	15:54																X							
CCB02	1	16:00																X							
ZZZZZZ	1	16:06																							
ZZZZZZ	1	16:12																							
CCV03	1	16:17																X							
CCB03	1	16:23																X							
ZZZZZZ	1	16:29																							
ZZZZZZ	1	16:35																							
ZZZZZZ	5	16:41																							
ZZZZZZ	1	16:47																							
ZZZZZZ	1	16:53																							
CCV04	1	16:59																X							
CCB04	1	17:05																X							
ZZZZZZ	1	17:10																							
ZZZZZZ	1	17:16																							
ZZZZZZ	1	17:22																							
ZZZZZZ	1	17:28																							
ZZZZZZ	1	17:34																							
ZZZZZZ	5	17:40																							
CCV05	1	17:46																X							
CCB05	1	17:52																X							
ZZZZZZ	10	18:19																							
ZZZZZZ	10	18:25																							
ZZZZZZ	10	18:31																							
CCV06	1	18:37																X							
CCB06	1	18:43																X							
ZZZZZZ	10	18:54																							
ZZZZZZ	10	19:00																							
ZZZZZZ	10	19:06																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
CCV07	1	19:12																X							
CCB07	1	19:18																X							
ZZZZZZ	10	19:32																							
ZZZZZZ	10	19:38																							
ZZZZZZ	10	19:44																							
232429009	10	19:50																X							
232429010	10	19:56																X							
232429014	10	20:02																X							
CCV08	1	20:08																X							
CCB08	1	20:14																X							

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 03-JUL-09 **End Date:** 04-JUL-09

Client Sdg: 09-2478
Method MS
Data File: 090703-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	23:57					X																		
S10	1	00:00					X																		
S100	1	00:02					X																		
ICV01	1	00:05					X																		
ICB01	1	00:08					X																		
CRDL01	1	00:10					X																		
ICSA01	1	00:13					X																		
ICSAB01	1	00:15					X																		
CCV01	1	00:18					X																		
CCB01	1	00:20					X																		
1201870569	2	00:23					X																		
1201870574	40	00:26					X																		
232429001	2	00:28					X																		
1201870570	2	00:31					X																		
1201870572	2	00:33					X																		
1201870573	2	00:36					X																		
1201870571	10	00:39					X																		
232429002	2	00:41					X																		
CCV02	1	00:44					X																		
CCB02	1	00:46					X																		
232429003	2	00:49					X																		
232429004	2	00:52					X																		
232429005	2	00:54					X																		
232429006	2	00:57					X																		
232429007	2	00:59					X																		
232429008	2	01:02					X																		
232429009	2	01:04					X																		
CCV03	1	01:07					X																		
CCB03	1	01:10					X																		

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 03-JUL-09 **End Date:** 04-JUL-09

Client Sdg: 09-2478
Method MS
Data File: 090703-5

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	01:34					X																		
S10	1	01:37					X																		
S100	1	01:39					X																		
ICV01	1	01:42					X																		
ICB01	1	01:44					X																		
CRDL01	1	01:47					X																		
ICSA01	1	01:50					X																		
ICSAB01	1	01:52					X																		
CCV01	1	01:55					X																		
CCB01	1	01:57					X																		
232429010	2	02:00					X																		
232429011	2	02:03					X																		
232429012	2	02:05					X																		
232429013	2	02:08					X																		
232429014	2	02:10					X																		
232429015	2	02:13					X																		
CCV02	1	02:16					X																		
CCB02	1	02:18					X																		

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 13–JUL–09 **End Date:** 13–JUL–09

Client Sdg: 09–2478
Method AV
Data File: 071309S2–6

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:36															X								
S0.2	1	09:38															X								
S0.5	1	09:40															X								
S2.0	1	09:42															X								
S5.0	1	09:44															X								
S10	1	09:46															X								
ICV01	1	09:48															X								
ICB01	1	09:50															X								
CRDL01	1	09:52															X								
CCV01	1	09:54															X								
CCB01	1	09:56															X								
1201870737	1	09:58															X								
1201870738	10	10:00															X								
ZZZZZZ	1	10:02																							
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
232429001	1	10:08															X								
1201870739	1	10:10															X								
1201870740	1	10:12															X								
1201870746	1	10:14															X								
1201870745	5	10:16															X								
CCV02	1	10:18															X								
CCB02	1	10:20															X								
232429002	1	10:22															X								
232429003	1	10:24															X								
232429004	1	10:26															X								
232429005	1	10:28															X								
232429006	1	10:30															X								
232429007	1	10:32															X								
232429008	1	10:34															X								
232429009	1	10:36															X								
232429010	1	10:38															X								
232429011	1	10:40															X								
CCV03	1	10:42															X								
CCB03	1	10:44															X								
232429012	1	10:46															X								
232429013	1	10:48															X								
232429014	1	10:50															X								
232429015	1	10:52															X								
ZZZZZZ	1	10:54																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	10	10:56																						
ZZZZZZ	1	10:58																						
ZZZZZZ	1	11:00																						
ZZZZZZ	1	11:02																						
ZZZZZZ	1	11:04																						
CCV04	1	11:06													X									
CCB04	1	11:08													X									

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA1
Start Date: 02–JUL–09 **End Date:** 02–JUL–09

Client Sdg: 09–2478
Method P
Data File: 070209–1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	07:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	07:52		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	07:55	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	07:59	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	08:01	X						X				X		X							X			
ICV01	1	08:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	08:06	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	08:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	08:13	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	08:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	08:19	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	08:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV01	1	08:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	08:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV02	1	08:33	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	08:36	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	08:48																							
ZZZZZZ	1	08:51																							
ZZZZZZ	1	08:55																							
ZZZZZZ	1	08:59																							
ZZZZZZ	1	09:02																							
ZZZZZZ	1	09:06																							
ZZZZZZ	1	09:09																							
CCV03	1	09:13	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	09:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	09:20																							
ZZZZZZ	1	09:24																							
ZZZZZZ	1	09:27																							
ZZZZZZ	1	09:30																							
ZZZZZZ	1	09:34																							
ZZZZZZ	5	09:37																							
ZZZZZZ	1	09:40																							
ZZZZZZ	1	09:43																							
CCV04	1	09:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	09:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	09:53																							
ZZZZZZ	1	09:56																							
ZZZZZZ	1	09:59																							
ZZZZZZ	1	10:02																							
ZZZZZZ	1	10:05																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	10:07																							
ZZZZZZ	5	10:10																							
ZZZZZZ	1	10:13																							
CCV05	1	10:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	10:19	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV06	1	10:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	10:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870533	1	10:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870538	2	10:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429001	1	10:47	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870534	1	10:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870536	1	10:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870537	1	10:56	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870535	5	10:58	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV07	1	11:02	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	11:05	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429002	1	11:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429003	1	11:12	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429004	1	11:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429005	1	11:19	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429006	1	11:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429007	1	11:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429008	1	11:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV08	1	11:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB08	1	11:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429009	1	11:38	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429010	1	11:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429011	1	11:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429012	1	11:47	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429013	1	11:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429014	1	11:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232429015	1	11:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV09	1	12:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB09	1	12:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2478

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2478

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2478

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.08714	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.36980	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.01008	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	4.75140	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-33.0980	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	2.44121
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	1.49970	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	176.49
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	4.07230	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	3.65700

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	38.0301
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	1.47380
Arsenic	188.979	-0.49261	0.00000	0.00000	0.00000	1.83900
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.31446	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.19492	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	-2.33110
Copper	324.752	-0.05080	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.01248	0.00000	0.00000	0.00000	-2.95230
Magnesium	279.077	1.68320	0.00000	0.00000	0.00000	-24.9658
Manganese	257.61	-0.17632	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	-0.03930	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	1.17810	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.07891	0.00000	0.34018	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.0660
Silver	328.068	-0.07890	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	3.84480	0.00000
Tin	189.927	-0.05585	0.00000	-0.13696	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	-0.08158	0.00000	0.00000	0.00000	-6.97050
Zinc	213.857	0.11260	0.00000	0.04420	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Selenium	Silicon	Silver
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-1.09390	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	5.19130	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478
Effective Dates: 01-MAY-09

Parmname	Wavelength	Thallium	Tin	Titanium	Uranium	Vanadium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	-3.74360	-0.55870	0.00000
Arsenic	188.979	0.00000	0.00000	-2.71110	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	-2.10080
Beryllium	313.107	0.00000	0.00000	-2.91300	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	-0.71290	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	-1.47980
Cobalt	228.616	0.00000	0.00000	2.08900	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.84100	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	-21.8313	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	38.5869	36.0710	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	-6.85200
Thallium	190.801	0.00000	0.00000	-7.24690	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	-1.61770	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478
Effective Dates: 01-MAY-09

Parmname	Wavelength	Zinc
Aluminum	396.153	0.00000
Antimony	206.836	0.00000
Arsenic	188.979	0.00000
Barium	233.527	0.00000
Beryllium	313.107	0.00000
Boron	249.677	0.00000
Cadmium	226.502	0.00000
Chromium	267.716	0.00000
Cobalt	228.616	0.00000
Copper	324.752	0.00000
Iron	238.204	0.00000
Lead	220.353	0.00000
Magnesium	279.077	0.00000
Manganese	257.61	0.00000
Molybdenum	202.031	0.00000
Nickel	231.604	0.00000
Phosphorous	214.914	0.00000
Selenium	196.026	0.00000
Silicon	251.611	0.00000
Silver	328.068	0.00000
Thallium	190.801	0.00000
Tin	189.927	0.00000
Titanium	334.94	0.00000
Uranium	409.014	0.00000
Vanadium	292.402	0.00000
Zinc	213.857	0.00000

METALS
–12–
Linear Ranges

SDG NO. 09–2478

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS6

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01–MAY–09
Antimony	20	250	ug/L	01–MAY–09
Arsenic	20	1000	ug/L	01–MAY–09
Barium	20	2500	ug/L	01–MAY–09
Beryllium	20	1000	ug/L	01–MAY–09
Cadmium	20	1000	ug/L	01–MAY–09
Calcium	20	50000	ug/L	01–MAY–09
Chromium	20	1000	ug/L	01–MAY–09
Cobalt	20	1000	ug/L	01–MAY–09
Copper	20	1000	ug/L	01–MAY–09
Iron	20	50000	ug/L	01–MAY–09
Lead	20	5000	ug/L	01–MAY–09
Magnesium	20	50000	ug/L	01–MAY–09
Manganese	20	1000	ug/L	01–MAY–09
Nickel	20	1000	ug/L	01–MAY–09
Potassium	20	50000	ug/L	01–MAY–09
Selenium	20	500	ug/L	01–MAY–09
Silver	20	250	ug/L	01–MAY–09
Sodium	20	50000	ug/L	01–MAY–09
Thallium	20	500	ug/L	01–MAY–09
Vanadium	20	100	ug/L	01–MAY–09
Zinc	20	2500	ug/L	01–MAY–09

METALS
-12-
Linear Ranges

SDG NO. 09-2478

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA1

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

Raw Data

Method: Hg_ReAlign
Result: 071409

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

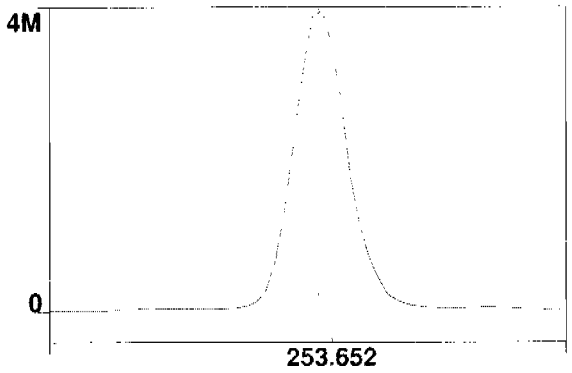

Intensity: 4189915.0 cps
Conc:

1

7/2/2009 07:48:28 Hg ReAlign... Actual peak offset (nm): 0.005
Drift (nm): 0.000 Slit adjustment: 0

Analysis Begun

Start Time: 7/2/2009 07:49:09 **Plasma On Time: 6/29/2009 11:03:38**
Logged In Analyst: optima **Technique: ICP Continuous**
Spectrometer Model: Optima 4300 DV, S/N 077N1030502Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\070209.sif
Batch ID:
Results Data Set: 070209
Results Library: c:\pe\optima1\Results\Results.mdb

Method Loaded
Method Name: Gen Eng fast_new Si **Method Last Saved: 7/1/2009 17:07:39**
IEC File: 042009.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 7/2/2009 07:49:11**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time

1	Sc RADIAL	173803.3	173803.3	99.9	%	07:49:45
1	Al 396.153Radial†	-158.7	-159.0	[0.00]	µg/L	07:49:45
1	Ca 317.933Radial†	863.5	864.7	[0.00]	µg/L	07:50:05
1	Fe 238.204 Radial†	-24.0	-24.0	[0.00]	µg/L	07:50:05
1	K 766.490 Radial†	744.4	745.5	[0.00]	µg/L	07:49:45
1	Mg 279.077 IEC†	42.3	42.4	[0.00]	µg/L	07:50:05
1	Na 589.592 Radial†	147.3	147.5	[0.00]	µg/L	07:49:45
1	Sr 421.552†	63.7	63.8	[0.00]	µg/L	07:49:45
1	Sc 361.383	2174348.2	2174348.2	99.201	%	07:51:08
1	Y 371.029	1391583.5	1391583.5	99.206	%	07:51:08
1	Ag 328.068†	-820.9	-827.5	[0.00]	µg/L	07:51:13
1	As 188.979†	2.9	2.9	[0.00]	µg/L	07:51:34
1	B 249.677†	219.3	221.0	[0.00]	µg/L	07:51:13
1	Ba 233.527†	75.8	-76.4	[0.00]	µg/L	07:51:34
1	Be 313.107†	3625.1	3654.3	[0.00]	µg/L	07:51:13
1	Cd 226.502†	-138.2	-139.3	[0.00]	µg/L	07:51:34
1	Co 228.616†	-98.0	-98.8	[0.00]	µg/L	07:51:34
1	Cr 267.716†	-157.9	-159.1	[0.00]	µg/L	07:51:13
1	Cu 324.752†	4695.1	4732.9	[0.00]	µg/L	07:51:13
1	Mn 257.610†	68.5	69.1	[0.00]	µg/L	07:51:13
1	Mo 202.031†	-0.2	-0.2	[0.00]	µg/L	07:51:34
1	Ni 231.604†	444.7	448.3	[0.00]	µg/L	07:51:34
1	P 214.914†	229.1	231.0	[0.00]	µg/L	07:51:34
1	Pb 220.353†	42.0	42.3	[0.00]	µg/L	07:51:34
1	S 181.975 Axial†	44.6	44.9	[0.00]	µg/L	07:51:34
1	Sb 206.836†	17.7	17.8	[0.00]	µg/L	07:51:34
1	Se 196.026†	17.8	17.9	[0.00]	µg/L	07:51:34
1	SiO2†	3193.0	3218.7	[0.00]	µg/L	07:51:13
1	Si 251.611†	378.3	381.4	[0.00]	µg/L	07:51:34
1	Sn 189.927†	5.8	5.9	[0.00]	µg/L	07:51:34
1	Ti 334.940†	1102.4	1111.3	[0.00]	µg/L	07:51:13
1	Tl 190.801†	-26.0	-26.2	[0.00]	µg/L	07:51:34
1	U 409.014†	-18.1	-18.3	[0.00]	µg/L	07:51:13
1	V 292.402†	-147.2	-148.4	[0.00]	µg/L	07:51:13
1	Zn 213.857†	724.5	730.3	[0.00]	µg/L	07:51:34
2	Sc RADIAL	174838.3	174838.3	100	%	07:50:11
2	Al 396.153Radial†	-183.3	-182.5	[0.00]	µg/L	07:50:11
2	Ca 317.933Radial†	883.3	879.4	[0.00]	µg/L	07:50:31
2	Fe 238.204 Radial†	-26.7	-26.6	[0.00]	µg/L	07:50:31
2	K 766.490 Radial†	796.8	793.2	[0.00]	µg/L	07:50:11
2	Mg 279.077 IEC†	43.5	43.3	[0.00]	µg/L	07:50:31
2	Na 589.592 Radial†	93.3	92.8	[0.00]	µg/L	07:50:11
2	Sr 421.552†	81.4	81.0	[0.00]	µg/L	07:50:11
2	Sc 361.383	2190651.9	2190651.9	99.945	%	07:51:40
2	Y 371.029	1402250.0	1402250.0	99.967	%	07:51:40
2	Ag 328.068†	-827.4	-827.9	[0.00]	µg/L	07:51:45
2	As 188.979†	6.2	6.2	[0.00]	µg/L	07:52:06
2	B 249.677†	210.2	210.4	[0.00]	µg/L	07:51:45
2	Ba 233.527†	-76.1	-76.1	[0.00]	µg/L	07:52:06
2	Be 313.107†	3726.2	3728.2	[0.00]	µg/L	07:51:45
2	Cd 226.502†	-148.0	-148.0	[0.00]	µg/L	07:52:06
2	Co 228.616†	-101.9	-102.0	[0.00]	µg/L	07:52:06
2	Cr 267.716†	-195.8	-195.9	[0.00]	µg/L	07:51:45
2	Cu 324.752†	4644.4	4647.0	[0.00]	µg/L	07:51:45
2	Mn 257.610†	50.0	50.0	[0.00]	µg/L	07:51:45
2	Mo 202.031†	1.2	1.2	[0.00]	µg/L	07:52:06
2	Ni 231.604†	448.4	448.6	[0.00]	µg/L	07:52:06
2	P 214.914†	236.6	236.7	[0.00]	µg/L	07:52:06
2	Pb 220.353†	45.6	45.6	[0.00]	µg/L	07:52:06
2	S 181.975 Axial†	43.4	43.5	[0.00]	µg/L	07:52:06
2	Sb 206.836†	23.4	23.4	[0.00]	µg/L	07:52:06
2	Se 196.026†	25.9	25.9	[0.00]	µg/L	07:52:06
2	SiO2†	3171.0	3172.8	[0.00]	µg/L	07:51:45
2	Si 251.611†	389.6	389.9	[0.00]	µg/L	07:52:06
2	Sn 189.927†	8.3	8.3	[0.00]	µg/L	07:52:06
2	Ti 334.940†	1133.5	1134.1	[0.00]	µg/L	07:51:45
2	Tl 190.801†	-24.9	-24.9	[0.00]	µg/L	07:52:06
2	U 409.014†	12.5	12.5	[0.00]	µg/L	07:51:45
2	V 292.402†	-185.4	-185.5	[0.00]	µg/L	07:51:45
2	Zn 213.857†	719.1	719.5	[0.00]	µg/L	07:52:06
3	Sc RADIAL	173534.4	173534.4	99.7	%	07:50:37

3	Al 396.153Radial†	-167.8	-168.4	[0.00] µg/L	07:50:37
3	Ca 317.933Radial†	873.8	876.4	[0.00] µg/L	07:50:57
3	Fe 238.204 Radial†	-28.0	-28.1	[0.00] µg/L	07:50:57
3	K 766.490 Radial†	769.3	771.6	[0.00] µg/L	07:50:37
3	Mg 279.077 IEC†	43.5	43.7	[0.00] µg/L	07:50:57
3	Na 589.592 Radial†	114.6	115.0	[0.00] µg/L	07:50:37
3	Sr 421.552†	55.4	55.5	[0.00] µg/L	07:50:37
3	Sc 361.383	2210585.5	2210585.5	100.85 %	07:52:12
3	Y 371.029	1414325.6	1414325.6	100.83 %	07:52:12
3	Ag 328.068†	-817.4	-810.5	[0.00] µg/L	07:52:17
3	As 188.979†	-2.4	-2.4	[0.00] µg/L	07:52:38
3	B 249.677†	196.0	194.3	[0.00] µg/L	07:52:17
3	Ba 233.527†	-90.8	-90.0	[0.00] µg/L	07:52:38
3	Be 313.107†	3624.2	3593.5	[0.00] µg/L	07:52:17
3	Cd 226.502†	-134.7	-133.6	[0.00] µg/L	07:52:38
3	Co 228.616†	-104.7	-103.8	[0.00] µg/L	07:52:38
3	Cr 267.716†	-193.6	-192.0	[0.00] µg/L	07:52:17
3	Cu 324.752†	4654.2	4614.7	[0.00] µg/L	07:52:17
3	Mn 257.610†	50.1	49.7	[0.00] µg/L	07:52:17
3	Mo 202.031†	-3.8	-3.8	[0.00] µg/L	07:52:38
3	Ni 231.604†	436.7	433.0	[0.00] µg/L	07:52:38
3	P 214.914†	236.7	234.7	[0.00] µg/L	07:52:38
3	Pb 220.353†	45.8	45.4	[0.00] µg/L	07:52:38
3	S 181.975 Axial†	45.0	44.6	[0.00] µg/L	07:52:38
3	Sb 206.836†	22.8	22.6	[0.00] µg/L	07:52:38
3	Se 196.026†	15.0	14.8	[0.00] µg/L	07:52:38
3	SiO2†	3152.4	3125.7	[0.00] µg/L	07:52:17
3	Si 251.611†	403.2	399.8	[0.00] µg/L	07:52:38
3	Sn 189.927†	7.4	7.3	[0.00] µg/L	07:52:38
3	Ti 334.940†	1084.4	1075.2	[0.00] µg/L	07:52:17
3	Tl 190.801†	-23.3	-23.1	[0.00] µg/L	07:52:38
3	U 409.014†	106.3	105.4	[0.00] µg/L	07:52:17
3	V 292.402†	-156.8	-155.5	[0.00] µg/L	07:52:17
3	Zn 213.857†	724.6	718.5	[0.00] µg/L	07:52:38

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2191861.9	18148.91	0.83%	100.00	%
Sc RADIAL	174058.7	688.44	0.40%	100	%
Y 371.029	1402719.7	11378.36	0.81%	100.00	%
Ag 328.068†	-821.9	9.93	1.21%	[0.00]	µg/L
Al 396.153Radial†	-169.9	11.84	6.97%	[0.00]	µg/L
As 188.979†	2.2	4.32	192.26%	[0.00]	µg/L
B 249.677†	208.6	13.44	6.44%	[0.00]	µg/L
Ba 233.527†	-80.9	7.93	9.81%	[0.00]	µg/L
Be 313.107†	3658.7	67.46	1.84%	[0.00]	µg/L
Ca 317.933Radial†	873.5	7.74	0.89%	[0.00]	µg/L
Cd 226.502†	-140.3	7.29	5.20%	[0.00]	µg/L
Co 228.616†	-101.5	2.52	2.48%	[0.00]	µg/L
Cr 267.716†	-182.3	20.18	11.07%	[0.00]	µg/L
Cu 324.752†	4664.9	61.11	1.31%	[0.00]	µg/L
Fe 238.204 Radial†	-26.2	2.05	7.80%	[0.00]	µg/L
K 766.490 Radial†	770.1	23.91	3.10%	[0.00]	µg/L
Mg 279.077 IEC†	43.1	0.67	1.56%	[0.00]	µg/L
Mn 257.610†	56.3	11.09	19.72%	[0.00]	µg/L
Mo 202.031†	-0.9	2.58	273.23%	[0.00]	µg/L
Na 589.592 Radial†	118.4	27.47	23.20%	[0.00]	µg/L
Ni 231.604†	443.3	8.94	2.02%	[0.00]	µg/L
P 214.914†	234.1	2.92	1.25%	[0.00]	µg/L
Pb 220.353†	44.4	1.85	4.16%	[0.00]	µg/L
S 181.975 Axial†	44.3	0.76	1.70%	[0.00]	µg/L
Sb 206.836†	21.3	3.00	14.13%	[0.00]	µg/L
Se 196.026†	19.6	5.72	29.23%	[0.00]	µg/L
SiO2†	3172.4	46.53	1.47%	[0.00]	µg/L
Si 251.611†	390.3	9.20	2.36%	[0.00]	µg/L
Sn 189.927†	7.2	1.24	17.33%	[0.00]	µg/L
Sr 421.552†	66.8	12.99	19.44%	[0.00]	µg/L
Ti 334.940†	1106.9	29.69	2.68%	[0.00]	µg/L
Tl 190.801†	-24.7	1.56	6.29%	[0.00]	µg/L

U 409.014†	33.2	64.37	193.89%	[0.00]	µg/L
V 292.402†	-163.1	19.69	12.07%	[0.00]	µg/L
Zn 213.857†	722.8	6.55	0.91%	[0.00]	µg/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/2/2009 07:52:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	173727.0	173727.0	99.8	%	07:53:21
1	K 766.490 Radial†	2681.9	1916.9	[1000]	µg/L	07:53:21
1	Sr 421.552†	23476.3	23454.3	[100]	µg/L	07:53:21
1	Sc 361.383	2173740.4	2173740.4	99.173	%	07:53:43
1	Y 371.029	1389758.0	1389758.0	99.076	%	07:53:43
1	Ag 328.068†	10721.4	11632.7	[100]	µg/L	07:53:49
1	As 188.979†	65.0	63.3	[100]	µg/L	07:54:09
1	B 249.677†	2647.0	2460.5	[100]	µg/L	07:53:49
1	Ba 233.527†	4085.5	4200.4	[100]	µg/L	07:53:49
1	Be 313.107†	176714.3	174528.8	[100]	µg/L	07:53:43
1	Cd 226.502†	4279.7	4455.6	[100]	µg/L	07:53:49
1	Co 228.616†	2146.7	2266.2	[100]	µg/L	07:54:09
1	Cr 267.716†	5021.2	5245.4	[100]	µg/L	07:53:49
1	Cu 324.752†	18872.1	14364.5	[100]	µg/L	07:53:49
1	Mn 257.610†	35453.4	35692.7	[100]	µg/L	07:53:49
1	Mo 202.031†	949.6	958.4	[100]	µg/L	07:54:09
1	Ni 231.604†	2488.6	2066.0	[100]	µg/L	07:53:49
1	P 214.914†	518.4	288.6	[500]	µg/L	07:54:09
1	Pb 220.353†	477.7	437.2	[100]	µg/L	07:54:09
1	S 181.975 Axial†	90.9	47.3	[200]	µg/L	07:54:09
1	Sb 206.836†	137.8	117.7	[100]	µg/L	07:54:09
1	Se 196.026†	109.0	90.3	[100]	µg/L	07:54:09
1	SiO2†	9228.5	6133.1	[1069.5]	µg/L	07:53:49
1	Si 251.611†	7465.3	7137.2	[500]	µg/L	07:53:49
1	Sn 189.927†	231.9	226.6	[100]	µg/L	07:54:09
1	Ti 334.940†	44687.2	43952.8	[100]	µg/L	07:53:49
1	Tl 190.801†	38.2	63.2	[100]	µg/L	07:54:09
1	U 409.014†	1154.8	1131.3	[100]	µg/L	07:53:49
1	V 292.402†	9216.5	9456.5	[100]	µg/L	07:53:49
1	Zn 213.857†	4976.4	4295.1	[100]	µg/L	07:53:49
2	Sc RADIAL	173968.1	173968.1	99.9	%	07:53:27
2	K 766.490 Radial†	2771.2	2002.5	[1000]	µg/L	07:53:27
2	Sr 421.552†	23864.8	23810.4	[100]	µg/L	07:53:27
2	Sc 361.383	2183771.5	2183771.5	99.631	%	07:54:16
2	Y 371.029	1396671.2	1396671.2	99.569	%	07:54:16
2	Ag 328.068†	10773.2	11635.0	[100]	µg/L	07:54:21
2	As 188.979†	60.7	58.6	[100]	µg/L	07:54:42
2	B 249.677†	2617.6	2418.7	[100]	µg/L	07:54:21
2	Ba 233.527†	4061.1	4157.0	[100]	µg/L	07:54:21
2	Be 313.107†	174287.9	171274.9	[100]	µg/L	07:54:16
2	Cd 226.502†	4249.7	4405.8	[100]	µg/L	07:54:21
2	Co 228.616†	2140.4	2249.9	[100]	µg/L	07:54:42
2	Cr 267.716†	4992.7	5193.5	[100]	µg/L	07:54:21
2	Cu 324.752†	18917.7	14322.9	[100]	µg/L	07:54:21
2	Mn 257.610†	35422.5	35497.5	[100]	µg/L	07:54:21
2	Mo 202.031†	940.9	945.4	[100]	µg/L	07:54:42
2	Ni 231.604†	2511.8	2077.8	[100]	µg/L	07:54:21
2	P 214.914†	521.6	289.4	[500]	µg/L	07:54:42
2	Pb 220.353†	490.4	447.8	[100]	µg/L	07:54:42
2	S 181.975 Axial†	87.9	43.9	[200]	µg/L	07:54:42
2	Sb 206.836†	136.2	115.5	[100]	µg/L	07:54:42
2	Se 196.026†	110.3	91.2	[100]	µg/L	07:54:42
2	SiO2†	9251.3	6113.2	[1069.5]	µg/L	07:54:21
2	Si 251.611†	7478.1	7115.4	[500]	µg/L	07:54:21
2	Sn 189.927†	236.7	230.4	[100]	µg/L	07:54:42
2	Ti 334.940†	44719.1	43777.9	[100]	µg/L	07:54:21
2	Tl 190.801†	48.1	73.0	[100]	µg/L	07:54:42
2	U 409.014†	1055.6	1026.3	[100]	µg/L	07:54:21
2	V 292.402†	9183.8	9380.9	[100]	µg/L	07:54:21

2	Zn 213.857†	4998.9	4294.7	[100]	µg/L	07:54:21
3	Sc RADIAL	173685.7	173685.7	99.8	%	07:53:32
3	K 766.490 Radial†	2746.8	1982.6	[1000]	µg/L	07:53:32
3	Sr 421.552†	23491.8	23475.4	[100]	µg/L	07:53:32
3	Sc 361.383	2190319.1	2190319.1	99.930	%	07:54:48
3	Y 371.029	1400641.8	1400641.8	99.852	%	07:54:48
3	Ag 328.068†	10724.6	11554.1	[100]	µg/L	07:54:53
3	As 188.979†	63.9	61.7	[100]	µg/L	07:55:14
3	B 249.677†	2658.7	2452.0	[100]	µg/L	07:54:53
3	Ba 233.527†	4084.5	4168.2	[100]	µg/L	07:54:53
3	Be 313.107†	175070.2	171534.8	[100]	µg/L	07:54:48
3	Cd 226.502†	4279.5	4422.9	[100]	µg/L	07:54:53
3	Co 228.616†	2138.8	2241.8	[100]	µg/L	07:55:14
3	Cr 267.716†	5031.5	5217.4	[100]	µg/L	07:54:53
3	Cu 324.752†	18946.2	14294.6	[100]	µg/L	07:54:53
3	Mn 257.610†	35410.4	35379.1	[100]	µg/L	07:54:53
3	Mo 202.031†	942.3	943.9	[100]	µg/L	07:55:14
3	Ni 231.604†	2513.5	2072.0	[100]	µg/L	07:54:53
3	P 214.914†	524.4	290.6	[500]	µg/L	07:55:14
3	Pb 220.353†	486.9	442.9	[100]	µg/L	07:55:14
3	S 181.975 Axial†	91.4	47.1	[200]	µg/L	07:55:14
3	Sb 206.836†	124.8	103.6	[100]	µg/L	07:55:14
3	Se 196.026†	112.4	92.9	[100]	µg/L	07:55:14
3	SiO2†	9285.4	6119.6	[1069.5]	µg/L	07:54:53
3	Si 251.611†	7539.4	7154.4	[500]	µg/L	07:54:53
3	Sn 189.927†	235.7	228.7	[100]	µg/L	07:55:14
3	Ti 334.940†	44773.4	43698.0	[100]	µg/L	07:54:53
3	Tl 190.801†	38.1	62.9	[100]	µg/L	07:55:14
3	U 409.014†	1015.7	983.2	[100]	µg/L	07:54:53
3	V 292.402†	9235.2	9404.9	[100]	µg/L	07:54:53
3	Zn 213.857†	4984.6	4265.3	[100]	µg/L	07:54:53

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2182610.3	8350.10	0.38%	99.578	%
Sc RADIAL	173793.6	152.53	0.09%	99.8	%
Y 371.029	1395690.3	5507.81	0.39%	99.499	%
Ag 328.068†	11607.3	46.09	0.40%	[100]	µg/L
As 188.979†	61.2	2.36	3.85%	[100]	µg/L
B 249.677†	2443.7	22.08	0.90%	[100]	µg/L
Ba 233.527†	4175.2	22.56	0.54%	[100]	µg/L
Be 313.107†	172446.2	1808.29	1.05%	[100]	µg/L
Cd 226.502†	4428.1	25.34	0.57%	[100]	µg/L
Co 228.616†	2252.6	12.40	0.55%	[100]	µg/L
Cr 267.716†	5218.8	25.99	0.50%	[100]	µg/L
Cu 324.752†	14327.3	35.16	0.25%	[100]	µg/L
K 766.490 Radial†	1967.4	44.78	2.28%	[1000]	µg/L
Mn 257.610†	35523.1	158.33	0.45%	[100]	µg/L
Mo 202.031†	949.2	8.00	0.84%	[100]	µg/L
Ni 231.604†	2071.9	5.86	0.28%	[100]	µg/L
P 214.914†	289.5	1.03	0.36%	[500]	µg/L
Pb 220.353†	442.6	5.28	1.19%	[100]	µg/L
S 181.975 Axial†	46.1	1.92	4.16%	[200]	µg/L
Sb 206.836†	112.3	7.58	6.75%	[100]	µg/L
Se 196.026†	91.5	1.32	1.45%	[100]	µg/L
SiO2†	6122.0	10.14	0.17%	[1069.5]	µg/L
Si 251.611†	7135.7	19.53	0.27%	[500]	µg/L
Sn 189.927†	228.6	1.89	0.83%	[100]	µg/L
Sr 421.552†	23580.1	199.77	0.85%	[100]	µg/L
Ti 334.940†	43809.6	130.33	0.30%	[100]	µg/L
Tl 190.801†	66.4	5.77	8.69%	[100]	µg/L
U 409.014†	1046.9	76.16	7.27%	[100]	µg/L
V 292.402†	9414.1	38.60	0.41%	[100]	µg/L
Zn 213.857†	4285.0	17.08	0.40%	[100]	µg/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/2/2009 07:55:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	175376.4	175376.4	101	%	07:55:56
1	Al 396.153Radial†	11913.1	11993.6	[5000]	µg/L	07:56:17
1	Ca 317.933Radial†	27820.9	26738.4	[5000]	µg/L	07:56:17
1	K 766.490 Radial†	10026.2	9180.7	[5000]	µg/L	07:55:56
1	Mg 279.077 IEC†	2577.4	2514.9	[5000]	µg/L	07:56:17
1	Sr 421.552†	117143.5	116196.5	[500]	µg/L	07:55:56
1	Sc 361.383	2179114.9	2179114.9	99.418	%	07:57:20
1	Y 371.029	1385086.6	1385086.6	98.743	%	07:57:20
1	Ag 328.068†	56916.5	58071.4	[500]	µg/L	07:57:26
1	As 188.979†	315.3	314.9	[500]	µg/L	07:57:46
1	B 249.677†	12531.5	12396.2	[500]	µg/L	07:57:26
1	Ba 233.527†	20732.5	20934.6	[500]	µg/L	07:57:26
1	Be 313.107†	856915.5	858269.4	[500]	µg/L	07:57:20
1	Cd 226.502†	21500.3	21766.4	[500]	µg/L	07:57:26
1	Co 228.616†	11089.8	11256.2	[500]	µg/L	07:57:26
1	Cr 267.716†	25612.0	25944.2	[500]	µg/L	07:57:26
1	Cu 324.752†	74511.3	70282.3	[500]	µg/L	07:57:26
1	Mn 257.610†	174069.0	175031.0	[500]	µg/L	07:57:20
1	Mo 202.031†	4693.2	4721.6	[500]	µg/L	07:57:46
1	Ni 231.604†	10593.6	10212.2	[500]	µg/L	07:57:26
1	P 214.914†	1683.6	1459.3	[2500]	µg/L	07:57:46
1	Pb 220.353†	2189.8	2158.2	[500]	µg/L	07:57:46
1	S 181.975 Axial†	271.1	228.4	[1000]	µg/L	07:57:46
1	Sb 206.836†	595.3	577.6	[500]	µg/L	07:57:46
1	Se 196.026†	470.8	454.0	[500]	µg/L	07:57:46
1	SiO2†	34496.6	31526.0	[5347.5]	µg/L	07:57:26
1	Si 251.611†	36871.2	36696.6	[2500]	µg/L	07:57:26
1	Sn 189.927†	1155.3	1154.9	[500]	µg/L	07:57:46
1	Ti 334.940†	221766.5	221956.9	[500]	µg/L	07:57:20
1	Tl 190.801†	330.2	356.9	[500]	µg/L	07:57:46
1	U 409.014†	5371.2	5369.4	[500]	µg/L	07:57:26
1	V 292.402†	46507.1	46942.3	[500]	µg/L	07:57:26
1	Zn 213.857†	21648.1	21052.0	[500]	µg/L	07:57:26
2	Sc RADIAL	175809.6	175809.6	101	%	07:56:22
2	Al 396.153Radial†	11883.3	11934.9	[5000]	µg/L	07:56:43
2	Ca 317.933Radial†	27698.2	26548.9	[5000]	µg/L	07:56:43
2	K 766.490 Radial†	9972.7	9103.2	[5000]	µg/L	07:56:22
2	Mg 279.077 IEC†	2564.6	2496.0	[5000]	µg/L	07:56:43
2	Sr 421.552†	117036.8	115804.4	[500]	µg/L	07:56:22
2	Sc 361.383	2191159.2	2191159.2	99.968	%	07:57:54
2	Y 371.029	1393693.4	1393693.4	99.357	%	07:57:54
2	Ag 328.068†	56050.7	56890.6	[500]	µg/L	07:57:59
2	As 188.979†	315.3	313.1	[500]	µg/L	07:58:20
2	B 249.677†	12311.5	12106.8	[500]	µg/L	07:57:59
2	Ba 233.527†	20358.2	20445.6	[500]	µg/L	07:57:59
2	Be 313.107†	859540.7	856157.7	[500]	µg/L	07:57:54
2	Cd 226.502†	21170.7	21317.8	[500]	µg/L	07:57:59
2	Co 228.616†	10935.4	11040.4	[500]	µg/L	07:57:59
2	Cr 267.716†	25304.6	25495.0	[500]	µg/L	07:57:59
2	Cu 324.752†	73602.6	68961.3	[500]	µg/L	07:57:59
2	Mn 257.610†	174420.9	174420.6	[500]	µg/L	07:57:54
2	Mo 202.031†	4692.5	4695.0	[500]	µg/L	07:58:20
2	Ni 231.604†	10446.0	10006.0	[500]	µg/L	07:57:59
2	P 214.914†	1670.4	1436.8	[2500]	µg/L	07:58:20
2	Pb 220.353†	2206.0	2162.3	[500]	µg/L	07:58:20
2	S 181.975 Axial†	271.3	227.1	[1000]	µg/L	07:58:20
2	Sb 206.836†	602.8	581.7	[500]	µg/L	07:58:20
2	Se 196.026†	483.4	464.0	[500]	µg/L	07:58:20
2	SiO2†	34009.5	30848.0	[5347.5]	µg/L	07:57:59

2	Si 251.611†	36414.2	36035.5	[2500]	µg/L	07:57:59
2	Sn 189.927†	1149.7	1142.9	[500]	µg/L	07:58:20
2	Ti 334.940†	222497.7	221462.2	[500]	µg/L	07:57:54
2	Tl 190.801†	326.5	351.4	[500]	µg/L	07:58:20
2	U 409.014†	5355.3	5323.8	[500]	µg/L	07:57:59
2	V 292.402†	45752.7	45930.5	[500]	µg/L	07:57:59
2	Zn 213.857†	21368.9	20653.0	[500]	µg/L	07:57:59
3	Sc RADIAL	172235.5	172235.5	99.0	%	07:56:48
3	Al 396.153Radial†	11900.5	12196.5	[5000]	µg/L	07:57:09
3	Ca 317.933Radial†	27784.4	27205.0	[5000]	µg/L	07:57:09
3	K 766.490 Radial†	9990.2	9325.9	[5000]	µg/L	07:56:48
3	Mg 279.077 IEC†	2572.2	2556.3	[5000]	µg/L	07:57:09
3	Sr 421.552†	117585.3	118763.2	[500]	µg/L	07:56:48
3	Sc 361.383	2210352.8	2210352.8	100.84	%	07:58:27
3	Y 371.029	1405873.2	1405873.2	100.22	%	07:58:27
3	Ag 328.068†	56366.6	56717.0	[500]	µg/L	07:58:33
3	As 188.979†	318.2	313.3	[500]	µg/L	07:58:53
3	B 249.677†	12403.5	12091.1	[500]	µg/L	07:58:33
3	Ba 233.527†	20490.6	20400.1	[500]	µg/L	07:58:33
3	Be 313.107†	863798.5	852913.6	[500]	µg/L	07:58:27
3	Cd 226.502†	21286.5	21248.7	[500]	µg/L	07:58:33
3	Co 228.616†	11018.1	11027.5	[500]	µg/L	07:58:33
3	Cr 267.716†	25359.9	25330.1	[500]	µg/L	07:58:33
3	Cu 324.752†	73941.9	68658.4	[500]	µg/L	07:58:33
3	Mn 257.610†	175427.8	173904.0	[500]	µg/L	07:58:27
3	Mo 202.031†	4674.5	4636.3	[500]	µg/L	07:58:53
3	Ni 231.604†	10458.4	9927.6	[500]	µg/L	07:58:33
3	P 214.914†	1685.5	1437.3	[2500]	µg/L	07:58:53
3	Pb 220.353†	2187.8	2125.1	[500]	µg/L	07:58:53
3	S 181.975 Axial†	268.3	221.7	[1000]	µg/L	07:58:53
3	Sb 206.836†	586.5	560.3	[500]	µg/L	07:58:53
3	Se 196.026†	464.9	441.5	[500]	µg/L	07:58:53
3	SiO2†	34225.5	30766.8	[5347.5]	µg/L	07:58:33
3	Si 251.611†	36561.2	35865.0	[2500]	µg/L	07:58:33
3	Sn 189.927†	1143.0	1126.2	[500]	µg/L	07:58:53
3	Ti 334.940†	223316.3	220341.2	[500]	µg/L	07:58:27
3	Tl 190.801†	325.1	347.2	[500]	µg/L	07:58:53
3	U 409.014†	5304.6	5227.1	[500]	µg/L	07:58:33
3	V 292.402†	45918.2	45697.2	[500]	µg/L	07:58:33
3	Zn 213.857†	21435.9	20533.8	[500]	µg/L	07:58:33

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2193542.3	15754.73	0.72%	100.08	%
Sc RADIAL	174473.8	1950.54	1.12%	100	%
Y 371.029	1394884.4	10444.35	0.75%	99.441	%
Ag 328.068†	57226.4	736.96	1.29%	[500]	µg/L
Al 396.153Radial†	12041.6	137.26	1.14%	[5000]	µg/L
As 188.979†	313.8	0.96	0.31%	[500]	µg/L
B 249.677†	12198.1	171.80	1.41%	[500]	µg/L
Ba 233.527†	20593.4	296.38	1.44%	[500]	µg/L
Be 313.107†	855780.2	2697.77	0.32%	[500]	µg/L
Ca 317.933Radial†	26830.8	337.69	1.26%	[5000]	µg/L
Cd 226.502†	21444.3	281.08	1.31%	[500]	µg/L
Co 228.616†	11108.0	128.50	1.16%	[500]	µg/L
Cr 267.716†	25589.8	317.79	1.24%	[500]	µg/L
Cu 324.752†	69300.7	863.51	1.25%	[500]	µg/L
K 766.490 Radial†	9203.3	113.01	1.23%	[5000]	µg/L
Mg 279.077 IEC†	2522.4	30.86	1.22%	[5000]	µg/L
Mn 257.610†	174451.9	564.13	0.32%	[500]	µg/L
Mo 202.031†	4684.3	43.64	0.93%	[500]	µg/L
Ni 231.604†	10048.6	147.01	1.46%	[500]	µg/L
P 214.914†	1444.5	12.85	0.89%	[2500]	µg/L
Pb 220.353†	2148.5	20.40	0.95%	[500]	µg/L
S 181.975 Axial†	225.7	3.52	1.56%	[1000]	µg/L
Sb 206.836†	573.2	11.33	1.98%	[500]	µg/L
Se 196.026†	453.2	11.27	2.49%	[500]	µg/L
SiO2†	31046.9	416.87	1.34%	[5347.5]	µg/L
Si 251.611†	36199.0	439.25	1.21%	[2500]	µg/L

Sn 189.927†	1141.3	14.39	1.26%	[500] µg/L
Sr 421.552†	116921.4	1607.07	1.37%	[500] µg/L
Ti 334.940†	221253.4	827.83	0.37%	[500] µg/L
Tl 190.801†	351.8	4.88	1.39%	[500] µg/L
U 409.014†	5306.7	72.68	1.37%	[500] µg/L
V 292.402†	46190.0	661.88	1.43%	[500] µg/L
Zn 213.857†	20746.3	271.37	1.31%	[500] µg/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/2/2009 07:59:02
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	175984.0	175984.0	101	%	07:59:35
1	Al 396.153Radial†	23858.3	23767.3	[10000]	µg/L	07:59:41
1	Ca 317.933Radial†	54037.5	52572.8	[10000]	µg/L	07:59:41
1	Fe 238.204 Radial†	14040.1	13912.7	[10000]	µg/L	07:59:41
1	K 766.490 Radial†	19036.6	18058.2	[10000]	µg/L	07:59:41
1	Mg 279.077 IEC†	5048.7	4950.3	[10000]	µg/L	07:59:41
1	Na 589.592 Radial†	42430.4	41847.8	[10000]	µg/L	07:59:35
1	Sr 421.552†	233940.0	231313.8	[1000]	µg/L	07:59:35
1	Sc 361.383	2184848.4	2184848.4	99.680	%	08:00:15
1	Y 371.029	1386830.1	1386830.1	98.867	%	08:00:15
1	Ag 328.068†	111886.7	113067.8	[1000]	µg/L	08:00:21
1	As 188.979†	632.5	632.3	[1000]	µg/L	08:00:42
1	B 249.677†	24554.9	24425.1	[1000]	µg/L	08:00:21
1	Ba 233.527†	40673.0	40884.4	[1000]	µg/L	08:00:21
1	Be 313.107†	1698043.9	1699836.0	[1000]	µg/L	08:00:15
1	Cd 226.502†	41963.8	42238.8	[1000]	µg/L	08:00:21
1	Co 228.616†	21746.7	21918.0	[1000]	µg/L	08:00:21
1	Cr 267.716†	50658.9	51003.9	[1000]	µg/L	08:00:21
1	Cu 324.752†	145483.3	141285.4	[1000]	µg/L	08:00:15
1	Mn 257.610†	345710.7	346764.2	[1000]	µg/L	08:00:15
1	Mo 202.031†	9297.6	9328.4	[1000]	µg/L	08:00:21
1	Ni 231.604†	20140.9	19762.3	[1000]	µg/L	08:00:21
1	P 214.914†	3107.2	2883.1	[5000]	µg/L	08:00:42
1	Pb 220.353†	4307.6	4277.0	[1000]	µg/L	08:00:42
1	S 181.975 Axial†	491.6	448.9	[2000]	µg/L	08:00:42
1	Sb 206.836†	1159.0	1141.4	[1000]	µg/L	08:00:42
1	Se 196.026†	925.3	908.7	[1000]	µg/L	08:00:42
1	SiO2†	63018.1	60048.0	[10695]	µg/L	08:00:21
1	Si 251.611†	70087.1	69921.7	[5000]	µg/L	08:00:21
1	Sn 189.927†	2283.7	2283.9	[1000]	µg/L	08:00:42
1	Ti 334.940†	439271.1	439574.3	[1000]	µg/L	08:00:15
1	Tl 190.801†	684.8	711.8	[1000]	µg/L	08:00:42
1	U 409.014†	10594.3	10595.1	[1000]	µg/L	08:00:21
1	V 292.402†	91491.3	91948.1	[1000]	µg/L	08:00:21
1	Zn 213.857†	41502.3	40912.8	[1000]	µg/L	08:00:21
2	Sc RADIAL	173941.1	173941.1	99.9	%	07:59:46
2	Al 396.153Radial†	23977.0	24163.2	[10000]	µg/L	07:59:52
2	Ca 317.933Radial†	54550.2	53713.6	[10000]	µg/L	07:59:52
2	Fe 238.204 Radial†	14141.8	14177.6	[10000]	µg/L	07:59:52
2	K 766.490 Radial†	19203.9	18446.8	[10000]	µg/L	07:59:52
2	Mg 279.077 IEC†	5081.8	5042.1	[10000]	µg/L	07:59:52
2	Na 589.592 Radial†	42344.1	42254.3	[10000]	µg/L	07:59:46
2	Sr 421.552†	233433.9	233524.9	[1000]	µg/L	07:59:46
2	Sc 361.383	2186411.7	2186411.7	99.751	%	08:00:49
2	Y 371.029	1389727.3	1389727.3	99.074	%	08:00:49
2	Ag 328.068†	112657.6	113760.3	[1000]	µg/L	08:00:55
2	As 188.979†	624.4	623.7	[1000]	µg/L	08:01:15
2	B 249.677†	24810.8	24664.0	[1000]	µg/L	08:00:55
2	Ba 233.527†	40974.0	41157.0	[1000]	µg/L	08:00:55
2	Be 313.107†	1714527.2	1715142.3	[1000]	µg/L	08:00:49
2	Cd 226.502†	42304.8	42550.6	[1000]	µg/L	08:00:55
2	Co 228.616†	21939.5	22095.8	[1000]	µg/L	08:00:55
2	Cr 267.716†	50977.2	51286.6	[1000]	µg/L	08:00:55
2	Cu 324.752†	146629.8	142330.4	[1000]	µg/L	08:00:49
2	Mn 257.610†	348996.7	349810.4	[1000]	µg/L	08:00:49
2	Mo 202.031†	9393.5	9417.9	[1000]	µg/L	08:00:55
2	Ni 231.604†	20246.0	19853.1	[1000]	µg/L	08:00:55
2	P 214.914†	3099.2	2872.7	[5000]	µg/L	08:01:15
2	Pb 220.353†	4312.1	4278.4	[1000]	µg/L	08:01:15

2	S 181.975 Axial†	492.1	449.0	[2000]	µg/L	08:01:15
2	Sb 206.836†	1158.8	1140.4	[1000]	µg/L	08:01:15
2	Se 196.026†	916.1	898.9	[1000]	µg/L	08:01:15
2	SiO2†	63536.9	60522.8	[10695]	µg/L	08:00:55
2	Si 251.611†	70686.3	70472.1	[5000]	µg/L	08:00:55
2	Sn 189.927†	2266.7	2265.2	[1000]	µg/L	08:01:15
2	Ti 334.940†	443126.8	443124.6	[1000]	µg/L	08:00:49
2	Tl 190.801†	690.2	716.6	[1000]	µg/L	08:01:15
2	U 409.014†	10606.1	10599.4	[1000]	µg/L	08:00:55
2	V 292.402†	92141.4	92534.2	[1000]	µg/L	08:00:55
2	Zn 213.857†	41833.5	41215.0	[1000]	µg/L	08:00:55
3	Sc RADIAL	175865.0	175865.0	101	%	07:59:58
3	Al 396.153Radial†	23995.7	23919.2	[10000]	µg/L	08:00:03
3	Ca 317.933Radial†	54480.8	53047.7	[10000]	µg/L	08:00:03
3	Fe 238.204 Radial†	14134.9	14015.9	[10000]	µg/L	08:00:03
3	K 766.490 Radial†	19135.2	18168.5	[10000]	µg/L	08:00:03
3	Mg 279.077 IEC†	5052.5	4957.5	[10000]	µg/L	08:00:03
3	Na 589.592 Radial†	42229.9	41677.7	[10000]	µg/L	07:59:58
3	Sr 421.552†	232954.9	230495.3	[1000]	µg/L	07:59:58
3	Sc 361.383	2173994.7	2173994.7	99.185	%	08:01:22
3	Y 371.029	1380282.2	1380282.2	98.400	%	08:01:22
3	Ag 328.068†	111011.8	112746.1	[1000]	µg/L	08:01:28
3	As 188.979†	630.8	633.8	[1000]	µg/L	08:01:49
3	B 249.677†	24472.9	24465.5	[1000]	µg/L	08:01:28
3	Ba 233.527†	40303.1	40715.1	[1000]	µg/L	08:01:28
3	Be 313.107†	1702497.7	1712831.2	[1000]	µg/L	08:01:22
3	Cd 226.502†	41612.7	42095.0	[1000]	µg/L	08:01:28
3	Co 228.616†	21581.6	21860.5	[1000]	µg/L	08:01:28
3	Cr 267.716†	50214.7	50809.7	[1000]	µg/L	08:01:28
3	Cu 324.752†	145960.1	142494.8	[1000]	µg/L	08:01:22
3	Mn 257.610†	346594.5	349386.7	[1000]	µg/L	08:01:22
3	Mo 202.031†	9225.4	9302.2	[1000]	µg/L	08:01:28
3	Ni 231.604†	19929.7	19650.2	[1000]	µg/L	08:01:28
3	P 214.914†	3093.3	2884.6	[5000]	µg/L	08:01:49
3	Pb 220.353†	4283.8	4274.6	[1000]	µg/L	08:01:49
3	S 181.975 Axial†	499.7	459.5	[2000]	µg/L	08:01:49
3	Sb 206.836†	1165.6	1153.9	[1000]	µg/L	08:01:49
3	Se 196.026†	913.4	901.3	[1000]	µg/L	08:01:49
3	SiO2†	62744.9	60088.2	[10695]	µg/L	08:01:28
3	Si 251.611†	69786.2	69969.4	[5000]	µg/L	08:01:28
3	Sn 189.927†	2267.3	2278.8	[1000]	µg/L	08:01:49
3	Ti 334.940†	440769.6	443285.2	[1000]	µg/L	08:01:22
3	Tl 190.801†	685.2	715.5	[1000]	µg/L	08:01:49
3	U 409.014†	10564.2	10617.8	[1000]	µg/L	08:01:28
3	V 292.402†	90628.0	91536.0	[1000]	µg/L	08:01:28
3	Zn 213.857†	41175.9	40791.5	[1000]	µg/L	08:01:28

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2181751.6	6763.02	0.31%	99.539	%
Sc RADIAL	175263.4	1146.71	0.65%	101	%
Y 371.029	1385613.2	4838.71	0.35%	98.780	%
Ag 328.068†	113191.4	518.28	0.46%	[1000]	µg/L
Al 396.153Radial†	23949.9	199.73	0.83%	[10000]	µg/L
As 188.979†	629.9	5.44	0.86%	[1000]	µg/L
B 249.677†	24518.2	127.90	0.52%	[1000]	µg/L
Ba 233.527†	40918.9	222.95	0.54%	[1000]	µg/L
Be 313.107†	1709269.8	8251.28	0.48%	[1000]	µg/L
Ca 317.933Radial†	53111.4	573.06	1.08%	[10000]	µg/L
Cd 226.502†	42294.8	232.86	0.55%	[1000]	µg/L
Co 228.616†	21958.1	122.66	0.56%	[1000]	µg/L
Cr 267.716†	51033.4	239.79	0.47%	[1000]	µg/L
Cu 324.752†	142036.9	655.97	0.46%	[1000]	µg/L
Fe 238.204 Radial†	14035.4	133.52	0.95%	[10000]	µg/L
K 766.490 Radial†	18224.5	200.24	1.10%	[10000]	µg/L
Mg 279.077 IEC†	4983.3	51.04	1.02%	[10000]	µg/L
Mn 257.610†	348653.8	1650.09	0.47%	[1000]	µg/L
Mo 202.031†	9349.5	60.64	0.65%	[1000]	µg/L
Na 589.592 Radial†	41926.6	296.28	0.71%	[10000]	µg/L

Ni 231.604†	19755.2	101.65	0.51%	[1000]	µg/L
P 214.914†	2880.1	6.44	0.22%	[5000]	µg/L
Pb 220.353†	4276.7	1.91	0.04%	[1000]	µg/L
S 181.975 Axial†	452.5	6.07	1.34%	[2000]	µg/L
Sb 206.836†	1145.3	7.54	0.66%	[1000]	µg/L
Se 196.026†	903.0	5.15	0.57%	[1000]	µg/L
SiO2†	60219.7	263.33	0.44%	[10695]	µg/L
Si 251.611†	70121.1	304.97	0.43%	[5000]	µg/L
Sn 189.927†	2275.9	9.67	0.43%	[1000]	µg/L
Sr 421.552†	231778.0	1567.23	0.68%	[1000]	µg/L
Ti 334.940†	441994.7	2097.66	0.47%	[1000]	µg/L
Tl 190.801†	714.6	2.55	0.36%	[1000]	µg/L
U 409.014†	10604.1	12.06	0.11%	[1000]	µg/L
V 292.402†	92006.1	501.60	0.55%	[1000]	µg/L
Zn 213.857†	40973.1	218.11	0.53%	[1000]	µg/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/2/2009 08:01:58
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	172207.7	172207.7	98.9	%	08:02:31
1	Al 396.153Radial†	118202.2	119642.7	[50000]	µg/L	08:02:31
1	Ca 317.933Radial†	263592.1	265551.8	[50000]	µg/L	08:02:31
1	Fe 238.204 Radial†	27686.0	28009.8	[20000]	µg/L	08:02:31
1	Mg 279.077 IEC†	24289.5	24507.4	[50000]	µg/L	08:02:31
1	Na 589.592 Radial†	83025.8	83799.7	[20000]	µg/L	08:02:31
1	Sc 361.383	2193601.1	2193601.1	100.08	%	08:02:54
1	Y 371.029	1383828.5	1383828.5	98.653	%	08:02:54
2	Sc RADIAL	174538.7	174538.7	100	%	08:02:37
2	Al 396.153Radial†	119003.6	118846.3	[50000]	µg/L	08:02:37
2	Ca 317.933Radial†	266175.0	264569.4	[50000]	µg/L	08:02:37
2	Fe 238.204 Radial†	27966.5	27915.8	[20000]	µg/L	08:02:37
2	Mg 279.077 IEC†	24482.6	24372.2	[50000]	µg/L	08:02:37
2	Na 589.592 Radial†	83490.4	83142.3	[20000]	µg/L	08:02:37
2	Sc 361.383	2189174.9	2189174.9	99.877	%	08:03:02
2	Y 371.029	1381343.0	1381343.0	98.476	%	08:03:02
3	Sc RADIAL	174173.3	174173.3	100	%	08:02:42
3	Al 396.153Radial†	117760.6	117853.0	[50000]	µg/L	08:02:42
3	Ca 317.933Radial†	262582.7	261536.3	[50000]	µg/L	08:02:42
3	Fe 238.204 Radial†	27594.2	27602.3	[20000]	µg/L	08:02:42
3	Mg 279.077 IEC†	24185.7	24126.7	[50000]	µg/L	08:02:42
3	Na 589.592 Radial†	82812.2	82639.3	[20000]	µg/L	08:02:42
3	Sc 361.383	2181525.3	2181525.3	99.528	%	08:03:10
3	Y 371.029	1375753.3	1375753.3	98.078	%	08:03:10

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2188100.4	6109.19	0.28%	99.828	%
Sc RADIAL	173639.9	1253.74	0.72%	99.8	%
Y 371.029	1380308.3	4135.88	0.30%	98.402	%
Al 396.153Radial†	118780.7	896.62	0.75%	[50000]	µg/L
Ca 317.933Radial†	263885.8	2093.23	0.79%	[50000]	µg/L
Fe 238.204 Radial†	27842.6	213.41	0.77%	[20000]	µg/L
Mg 279.077 IEC†	24335.4	193.02	0.79%	[50000]	µg/L
Na 589.592 Radial†	83193.8	581.94	0.70%	[20000]	µg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	113.5	0.00000	0.999988	
Al 396.153Radial	3	Lin Thru 0	0.0	2.377	0.00000	0.999998	
As 188.979	3	Lin Thru 0	0.0	0.6293	0.00000	0.999996	
B 249.677	3	Lin Thru 0	0.0	24.49	0.00000	0.999998	
Ba 233.527	3	Lin Thru 0	0.0	40.98	0.00000	0.999995	
Be 313.107	3	Lin Thru 0	0.0	1710	0.00000	1.000000	
Ca 317.933Radial	3	Lin Thru 0	0.0	5.280	0.00000	0.999998	
Cd 226.502	3	Lin Thru 0	0.0	42.43	0.00000	0.999977	
Co 228.616	3	Lin Thru 0	0.0	22.01	0.00000	0.999987	
Cr 267.716	3	Lin Thru 0	0.0	51.07	0.00000	0.999997	
Cu 324.752	3	Lin Thru 0	0.0	141.4	0.00000	0.999952	
Fe 238.204 Radia	2	Lin Thru 0	0.0	1.394	0.00000	0.999995	
K 766.490 Radial	3	Lin Thru 0	0.0	1.827	0.00000	0.999969	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.4873	0.00000	0.999984	
Mn 257.610	3	Lin Thru 0	0.0	348.8	0.00000	0.999999	
Mo 202.031	3	Lin Thru 0	0.0	9.354	0.00000	0.999999	
Na 589.592 Radia	2	Lin Thru 0	0.0	4.166	0.00000	0.999995	

Ni 231.604	3	Lin Thru 0	0.0	19.83	0.00000	0.999968
P 214.914	3	Lin Thru 0	0.0	0.5764	0.00000	0.999999
Pb 220.353	3	Lin Thru 0	0.0	4.282	0.00000	0.999994
S 181.975 Axial	3	Lin Thru 0	0.0	0.2262	0.00000	0.999998
Sb 206.836	3	Lin Thru 0	0.0	1.145	0.00000	0.999998
Se 196.026	3	Lin Thru 0	0.0	0.9037	0.00000	0.999998
SiO2	3	Lin Thru 0	0.0	5.666	0.00000	0.999924
Si 251.611	3	Lin Thru 0	0.0	14.12	0.00000	0.999917
Sn 189.927	3	Lin Thru 0	0.0	2.277	0.00000	0.999999
Sr 421.552	3	Lin Thru 0	0.0	232.2	0.00000	0.999993
Ti 334.940	3	Lin Thru 0	0.0	442.1	0.00000	1.000000
Tl 190.801	3	Lin Thru 0	0.0	0.7121	0.00000	0.999963
U 409.014	3	Lin Thru 0	0.0	10.60	0.00000	0.999999
V 292.402	3	Lin Thru 0	0.0	92.10	0.00000	0.999997
Zn 213.857	3	Lin Thru 0	0.0	41.09	0.00000	0.999980

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/2/2009 08:03:18
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	175407.1	175407.1	101	%			08:03:52
1	Al 396.153Radial†	12131.8	12208.5	5117.0	µg/L	5117.0	ppb	08:03:57
1	Ca 317.933Radial†	26933.8	25853.3	4896.6	µg/L	4896.6	ppb	08:03:57
1	Fe 238.204 Radial†	7128.9	7100.3	5108.1	µg/L	5108.1	ppb	08:03:57
1	K 766.490 Radial†	5404.2	4592.6	2513.4	µg/L	2513.4	ppb	08:03:57
1	Mg 279.077 IEC†	2612.2	2548.9	5235.0	µg/L	5235.0	ppb	08:03:57
1	Na 589.592 Radial†	10940.6	10738.1	2577.4	µg/L	2577.4	ppb	08:03:57
1	Sr 421.552†	116228.9	115268.6	496.38	µg/L	496.38	ppb	08:03:52
1	Sc 361.383	2181121.0	2181121.0	99.510	%			08:04:31
1	Y 371.029	1390059.7	1390059.7	99.097	%			08:04:31
1	Ag 328.068†	27974.6	28934.3	258.88	µg/L	258.88	ppb	08:04:36
1	As 188.979†	300.7	300.0	479.03	µg/L	479.03	ppb	08:04:57
1	B 249.677†	12575.2	12428.5	505.82	µg/L	505.82	ppb	08:04:36
1	Ba 233.527†	21743.0	21930.9	536.24	µg/L	536.24	ppb	08:04:36
1	Be 313.107†	441343.2	439857.9	258.71	µg/L	258.71	ppb	08:04:31
1	Cd 226.502†	21225.6	21470.4	506.60	µg/L	506.60	ppb	08:04:36
1	Co 228.616†	10555.4	10708.9	486.63	µg/L	486.63	ppb	08:04:36
1	Cr 267.716†	25627.0	25935.5	508.58	µg/L	508.58	ppb	08:04:36
1	Cu 324.752†	76728.5	72441.5	513.13	µg/L	513.13	ppb	08:04:36
1	Mn 257.610†	178159.8	178980.8	513.23	µg/L	513.23	ppb	08:04:31
1	Mo 202.031†	4851.5	4876.3	521.49	µg/L	521.49	ppb	08:04:57
1	Ni 231.604†	11057.3	10668.5	537.25	µg/L	537.25	ppb	08:04:36
1	P 214.914†	1686.4	1460.6	2451.0	µg/L	2451.0	ppb	08:04:57
1	Pb 220.353†	2178.3	2144.6	501.08	µg/L	501.08	ppb	08:04:57
1	S 181.975 Axial†	630.7	589.5	2604.9	µg/L	2604.9	ppb	08:04:57
1	Sb 206.836†	621.8	603.7	525.72	µg/L	525.72	ppb	08:04:57
1	Se 196.026†	2295.1	2286.9	2531.7	µg/L	2531.7	ppb	08:04:57
1	SiO2†	63529.5	60670.0	10707	µg/L	10707	ppb	08:04:36
1	Si 251.611†	70521.4	70478.3	4944.2	µg/L	4944.2	ppb	08:04:36
1	Sn 189.927†	1210.5	1209.3	533.74	µg/L	533.74	ppb	08:04:57
1	Ti 334.940†	222195.3	222182.6	502.43	µg/L	502.43	ppb	08:04:31
1	Tl 190.801†	327.4	353.8	496.04	µg/L	496.04	ppb	08:04:57
1	U 409.014†	5471.2	5464.9	513.87	µg/L	513.87	ppb	08:04:36
1	V 292.402†	46301.1	46692.3	511.87	µg/L	511.87	ppb	08:04:36
1	Zn 213.857†	21867.9	21252.9	512.05	µg/L	512.05	ppb	08:04:36
2	Sc RADIAL	173101.9	173101.9	99.5	%			08:04:03
2	Al 396.153Radial†	12206.5	12444.0	5216.3	µg/L	5216.3	ppb	08:04:08
2	Ca 317.933Radial†	27185.0	26461.7	5011.8	µg/L	5011.8	ppb	08:04:08
2	Fe 238.204 Radial†	7191.3	7257.3	5220.6	µg/L	5220.6	ppb	08:04:08
2	K 766.490 Radial†	5512.6	4772.9	2612.1	µg/L	2612.1	ppb	08:04:08
2	Mg 279.077 IEC†	2651.0	2622.6	5385.7	µg/L	5385.7	ppb	08:04:08
2	Na 589.592 Radial†	10992.6	10934.9	2624.6	µg/L	2624.6	ppb	08:04:08
2	Sr 421.552†	115808.7	116382.0	501.17	µg/L	501.17	ppb	08:04:03
2	Sc 361.383	2196297.2	2196297.2	100.20	%			08:05:04
2	Y 371.029	1399441.8	1399441.8	99.766	%			08:05:04
2	Ag 328.068†	27955.9	28721.4	256.99	µg/L	256.99	ppb	08:05:10
2	As 188.979†	299.4	296.6	473.70	µg/L	473.70	ppb	08:05:30
2	B 249.677†	12560.0	12326.1	501.60	µg/L	501.60	ppb	08:05:10
2	Ba 233.527†	21753.5	21790.4	532.81	µg/L	532.81	ppb	08:05:10
2	Be 313.107†	442835.4	438282.5	257.79	µg/L	257.79	ppb	08:05:04
2	Cd 226.502†	21252.8	21350.2	503.74	µg/L	503.74	ppb	08:05:10
2	Co 228.616†	10591.8	10671.9	484.94	µg/L	484.94	ppb	08:05:10
2	Cr 267.716†	25576.5	25707.2	504.10	µg/L	504.10	ppb	08:05:10
2	Cu 324.752†	76680.0	71860.3	509.03	µg/L	509.03	ppb	08:05:10
2	Mn 257.610†	178689.1	178272.0	511.20	µg/L	511.20	ppb	08:05:04
2	Mo 202.031†	4836.8	4828.0	516.32	µg/L	516.32	ppb	08:05:30
2	Ni 231.604†	11064.9	10599.3	533.76	µg/L	533.76	ppb	08:05:10
2	P 214.914†	1685.5	1447.9	2429.6	µg/L	2429.6	ppb	08:05:30
2	Pb 220.353†	2170.7	2121.8	495.79	µg/L	495.79	ppb	08:05:30

2	S 181.975 Axial†	618.4	572.8	2531.2 µg/L	2531.2 ppb	08:05:30
2	Sb 206.836†	609.7	587.2	511.37 µg/L	511.37 ppb	08:05:30
2	Se 196.026†	2295.7	2271.5	2514.7 µg/L	2514.7 ppb	08:05:30
2	SiO2†	63553.9	60253.2	10634 µg/L	10634 ppb	08:05:10
2	Si 251.611†	70501.2	69968.5	4908.3 µg/L	4908.3 ppb	08:05:10
2	Sn 189.927†	1210.9	1201.3	530.31 µg/L	530.31 ppb	08:05:30
2	Ti 334.940†	222703.9	221147.3	500.09 µg/L	500.09 ppb	08:05:04
2	Tl 190.801†	318.4	342.5	480.21 µg/L	480.21 ppb	08:05:30
2	U 409.014†	5335.5	5291.5	497.48 µg/L	497.48 ppb	08:05:10
2	V 292.402†	46229.3	46299.1	507.55 µg/L	507.55 ppb	08:05:10
2	Zn 213.857†	21843.1	21076.2	507.77 µg/L	507.77 ppb	08:05:10
3	Sc RADIAL	174143.9	174143.9	100 %		08:04:14
3	Al 396.153Radial†	12042.4	12206.5	5116.4 µg/L	5116.4 ppb	08:04:19
3	Ca 317.933Radial†	26905.0	26018.3	4927.9 µg/L	4927.9 ppb	08:04:19
3	Fe 238.204 Radial†	7139.2	7161.9	5152.1 µg/L	5152.1 ppb	08:04:19
3	K 766.490 Radial†	5452.7	4679.9	2561.2 µg/L	2561.2 ppb	08:04:19
3	Mg 279.077 IEC†	2589.8	2545.4	5227.4 µg/L	5227.4 ppb	08:04:19
3	Na 589.592 Radial†	10918.7	10794.9	2591.0 µg/L	2591.0 ppb	08:04:19
3	Sr 421.552†	116800.6	116676.7	502.44 µg/L	502.44 ppb	08:04:14
3	Sc 361.383	2197349.3	2197349.3	100.25 %		08:05:37
3	Y 371.029	1399930.5	1399930.5	99.801 %		08:05:37
3	Ag 328.068†	27909.1	28661.4	256.44 µg/L	256.44 ppb	08:05:43
3	As 188.979†	311.0	308.0	491.86 µg/L	491.86 ppb	08:06:03
3	B 249.677†	12520.9	12281.0	499.79 µg/L	499.79 ppb	08:05:43
3	Ba 233.527†	21658.8	21685.6	530.24 µg/L	530.24 ppb	08:05:43
3	Be 313.107†	446695.8	441921.6	259.93 µg/L	259.93 ppb	08:05:37
3	Cd 226.502†	21195.0	21282.4	502.15 µg/L	502.15 ppb	08:05:43
3	Co 228.616†	10551.6	10626.8	482.88 µg/L	482.88 ppb	08:05:43
3	Cr 267.716†	25559.9	25678.4	503.54 µg/L	503.54 ppb	08:05:43
3	Cu 324.752†	76456.2	71600.4	507.18 µg/L	507.18 ppb	08:05:43
3	Mn 257.610†	180394.0	179887.2	515.83 µg/L	515.83 ppb	08:05:37
3	Mo 202.031†	4821.5	4810.4	514.44 µg/L	514.44 ppb	08:06:03
3	Ni 231.604†	11001.6	10530.8	530.31 µg/L	530.31 ppb	08:05:43
3	P 214.914†	1679.3	1440.9	2417.9 µg/L	2417.9 ppb	08:06:03
3	Pb 220.353†	2174.3	2124.5	496.39 µg/L	496.39 ppb	08:06:03
3	S 181.975 Axial†	626.4	580.6	2565.4 µg/L	2565.4 ppb	08:06:03
3	Sb 206.836†	615.1	592.3	515.86 µg/L	515.86 ppb	08:06:03
3	Se 196.026†	2289.8	2264.6	2507.1 µg/L	2507.1 ppb	08:06:03
3	SiO2†	63440.7	60109.9	10609 µg/L	10609 ppb	08:05:43
3	Si 251.611†	70392.0	69825.9	4898.2 µg/L	4898.2 ppb	08:05:43
3	Sn 189.927†	1208.8	1198.6	529.06 µg/L	529.06 ppb	08:06:03
3	Ti 334.940†	224594.4	222926.7	504.11 µg/L	504.11 ppb	08:05:37
3	Tl 190.801†	324.7	348.7	488.85 µg/L	488.85 ppb	08:06:03
3	U 409.014†	5391.3	5344.6	502.51 µg/L	502.51 ppb	08:05:43
3	V 292.402†	46122.0	46169.9	506.14 µg/L	506.14 ppb	08:05:43
3	Zn 213.857†	21849.7	21072.4	507.71 µg/L	507.71 ppb	08:05:43

Mean Data: ICV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2191589.2	99.988	%	0.4143				0.41%
Sc RADIAL	174217.6	100	%	0.7				0.66%
Y 371.029	1396477.3	99.555	%	0.3966				0.40%
Ag 328.068†	28772.3	257.44	µg/L	1.281	257.44	ppb	1.281	0.50%
QC value within limits for Ag 328.068 Recovery = 102.97%								
Al 396.153Radial†	12286.3	5149.9	µg/L	57.48	5149.9	ppb	57.48	1.12%
QC value within limits for Al 396.153Radial Recovery = 103.00%								
As 188.979†	301.5	481.53	µg/L	9.332	481.53	ppb	9.332	1.94%
QC value within limits for As 188.979 Recovery = 96.31%								
B 249.677†	12345.2	502.40	µg/L	3.096	502.40	ppb	3.096	0.62%
QC value within limits for B 249.677 Recovery = 100.48%								
Ba 233.527†	21802.3	533.10	µg/L	3.010	533.10	ppb	3.010	0.56%
QC value within limits for Ba 233.527 Recovery = 106.62%								
Be 313.107†	440020.6	258.81	µg/L	1.073	258.81	ppb	1.073	0.41%
QC value within limits for Be 313.107 Recovery = 103.52%								
Ca 317.933Radial†	26111.1	4945.4	µg/L	59.60	4945.4	ppb	59.60	1.21%
QC value within limits for Ca 317.933Radial Recovery = 98.91%								
Cd 226.502†	21367.7	504.16	µg/L	2.255	504.16	ppb	2.255	0.45%
QC value within limits for Cd 226.502 Recovery = 100.83%								
Co 228.616†	10669.2	484.82	µg/L	1.878	484.82	ppb	1.878	0.39%

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   QC value within limits for Co 228.616  Recovery = 96.96%
Cr 267.716†            25773.7      505.40 µg/L         2.763      505.40 ppb          2.763   0.55%
   QC value within limits for Cr 267.716  Recovery = 101.08%
Cu 324.752†            71967.4      509.78 µg/L         3.042      509.78 ppb          3.042   0.60%
   QC value within limits for Cu 324.752  Recovery = 101.96%
Fe 238.204 Radial†      7173.2      5160.3 µg/L         56.69      5160.3 ppb          56.69   1.10%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.21%
K 766.490 Radial†       4681.8      2562.3 µg/L         49.36      2562.3 ppb          49.36   1.93%
   QC value within limits for K 766.490 Radial  Recovery = 102.49%
Mg 279.077 IEC†         2572.3      5282.7 µg/L         89.31      5282.7 ppb          89.31   1.69%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.65%
Mn 257.610†           179046.7      513.42 µg/L         2.321      513.42 ppb          2.321   0.45%
   QC value within limits for Mn 257.610  Recovery = 102.68%
Mo 202.031†             4838.2      517.42 µg/L         3.648      517.42 ppb          3.648   0.71%
   QC value within limits for Mo 202.031  Recovery = 103.48%
Na 589.592 Radial†     10822.6      2597.7 µg/L         24.32      2597.7 ppb          24.32   0.94%
   QC value within limits for Na 589.592 Radial  Recovery = 103.91%
Ni 231.604†            10599.5      533.77 µg/L         3.468      533.77 ppb          3.468   0.65%
   QC value within limits for Ni 231.604  Recovery = 106.75%
P 214.914†              1449.8      2432.8 µg/L         16.81      2432.8 ppb          16.81   0.69%
   QC value within limits for P 214.914  Recovery = 97.31%
Pb 220.353†             2130.3      497.75 µg/L         2.897      497.75 ppb          2.897   0.58%
   QC value within limits for Pb 220.353  Recovery = 99.55%
S 181.975 Axial†         580.9      2567.2 µg/L         36.93      2567.2 ppb          36.93   1.44%
   QC value within limits for S 181.975 Axial  Recovery = 102.69%
Sb 206.836†              594.4      517.65 µg/L         7.339      517.65 ppb          7.339   1.42%
   QC value within limits for Sb 206.836  Recovery = 103.53%
Se 196.026†             2274.3      2517.8 µg/L         12.63      2517.8 ppb          12.63   0.50%
   QC value within limits for Se 196.026  Recovery = 100.71%
SiO2†                  60344.3       10650 µg/L          51.4       10650 ppb           51.4   0.48%
   QC value within limits for SiO2  Recovery = 99.58%
Si 251.611†            70090.9      4916.9 µg/L         24.16      4916.9 ppb          24.16   0.49%
   QC value within limits for Si 251.611  Recovery = 98.34%
Sn 189.927†             1203.0      531.04 µg/L         2.426      531.04 ppb          2.426   0.46%
   QC value within limits for Sn 189.927  Recovery = 106.21%
Sr 421.552†           116109.1      500.00 µg/L         3.198      500.00 ppb          3.198   0.64%
   QC value within limits for Sr 421.552  Recovery = 100.00%
Ti 334.940†           222085.5      502.21 µg/L         2.023      502.21 ppb          2.023   0.40%
   QC value within limits for Ti 334.940  Recovery = 100.44%
Tl 190.801†              348.3      488.37 µg/L         7.925      488.37 ppb          7.925   1.62%
   QC value within limits for Tl 190.801  Recovery = 97.67%
U 409.014†              5367.0      504.62 µg/L         8.394      504.62 ppb          8.394   1.66%
   QC value within limits for U 409.014  Recovery = 100.92%
V 292.402†             46387.1      508.52 µg/L         2.988      508.52 ppb          2.988   0.59%
   QC value within limits for V 292.402  Recovery = 101.70%
Zn 213.857†            21133.8      509.18 µg/L         2.487      509.18 ppb          2.487   0.49%
   QC value within limits for Zn 213.857  Recovery = 101.84%
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/2/2009 08:06:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	173494.9	173494.9	99.7	%			08:06:45
1	Al 396.153Radial†	-146.6	22.8	9.5389	µg/L	9.5389	ppb	08:06:45
1	Ca 317.933Radial†	894.0	23.4	4.4327	µg/L	4.4327	ppb	08:07:06
1	Fe 238.204 Radial†	-16.9	9.3	6.6675	µg/L	6.6675	ppb	08:07:06
1	K 766.490 Radial†	888.3	121.0	66.241	µg/L	66.241	ppb	08:06:45
1	Mg 279.077 IEC†	54.1	11.1	22.872	µg/L	22.872	ppb	08:07:06
1	Na 589.592 Radial†	131.8	13.8	3.3218	µg/L	3.3218	ppb	08:06:45
1	Sr 421.552†	147.2	80.9	0.3484	µg/L	0.3484	ppb	08:06:45
1	Sc 361.383	2197217.4	2197217.4	100.24	%			08:08:08
1	Y 371.029	1405282.1	1405282.1	100.18	%			08:08:08
1	Ag 328.068†	-710.4	113.3	0.9965	µg/L	0.9965	ppb	08:08:14
1	As 188.979†	1.0	-1.3	-2.0229	µg/L	-2.0229	ppb	08:08:34
1	B 249.677†	266.0	56.8	2.3162	µg/L	2.3162	ppb	08:08:14
1	Ba 233.527†	-63.9	17.1	0.4159	µg/L	0.4159	ppb	08:08:34
1	Be 313.107†	3804.0	136.0	0.0811	µg/L	0.0811	ppb	08:08:14
1	Cd 226.502†	-142.0	-1.4	-0.0350	µg/L	-0.0350	ppb	08:08:34
1	Co 228.616†	-89.2	12.5	0.5729	µg/L	0.5729	ppb	08:08:34
1	Cr 267.716†	-168.2	14.5	0.2834	µg/L	0.2834	ppb	08:08:14
1	Cu 324.752†	4597.4	-78.7	-0.5556	µg/L	-0.5556	ppb	08:08:14
1	Mn 257.610†	156.2	99.6	0.2856	µg/L	0.2856	ppb	08:08:14
1	Mo 202.031†	15.3	16.2	1.7305	µg/L	1.7305	ppb	08:08:34
1	Ni 231.604†	448.2	3.8	0.1900	µg/L	0.1900	ppb	08:08:34
1	P 214.914†	224.5	-10.2	-17.520	µg/L	-17.520	ppb	08:08:34
1	Pb 220.353†	46.3	1.7	0.4177	µg/L	0.4177	ppb	08:08:34
1	S 181.975 Axial†	41.8	-2.7	-11.774	µg/L	-11.774	ppb	08:08:34
1	Sb 206.836†	26.6	5.3	4.5886	µg/L	4.5886	ppb	08:08:34
1	Se 196.026†	18.1	-1.5	-1.6752	µg/L	-1.6752	ppb	08:08:34
1	SiO2†	3112.3	-67.6	-11.937	µg/L	-11.937	ppb	08:08:14
1	Si 251.611†	418.4	27.0	1.8403	µg/L	1.8403	ppb	08:08:34
1	Sn 189.927†	7.2	0.0	0.0223	µg/L	0.0223	ppb	08:08:34
1	Ti 334.940†	1340.1	230.0	0.5201	µg/L	0.5201	ppb	08:08:14
1	Tl 190.801†	-26.4	-1.6	-2.2350	µg/L	-2.2350	ppb	08:08:34
1	U 409.014†	-5.0	-38.2	-3.6020	µg/L	-3.6020	ppb	08:08:14
1	V 292.402†	-193.5	-29.8	-0.3173	µg/L	-0.3173	ppb	08:08:14
1	Zn 213.857†	758.1	33.5	0.8158	µg/L	0.8158	ppb	08:08:34
2	Sc RADIAL	174320.7	174320.7	100	%			08:07:12
2	Al 396.153Radial†	-165.3	4.9	2.0391	µg/L	2.0391	ppb	08:07:12
2	Ca 317.933Radial†	891.1	16.3	3.0830	µg/L	3.0830	ppb	08:07:32
2	Fe 238.204 Radial†	-25.5	0.8	0.6014	µg/L	0.6014	ppb	08:07:32
2	K 766.490 Radial†	762.6	-8.7	-4.7461	µg/L	-4.7461	ppb	08:07:12
2	Mg 279.077 IEC†	51.3	8.1	16.665	µg/L	16.665	ppb	08:07:32
2	Na 589.592 Radial†	119.7	1.1	0.2554	µg/L	0.2554	ppb	08:07:12
2	Sr 421.552†	89.7	22.8	0.0983	µg/L	0.0983	ppb	08:07:12
2	Sc 361.383	2200536.7	2200536.7	100.40	%			08:08:41
2	Y 371.029	1407492.9	1407492.9	100.34	%			08:08:41
2	Ag 328.068†	-699.3	125.4	1.1053	µg/L	1.1053	ppb	08:08:46
2	As 188.979†	3.5	1.2	1.9351	µg/L	1.9351	ppb	08:09:07
2	B 249.677†	276.5	66.8	2.7274	µg/L	2.7274	ppb	08:08:46
2	Ba 233.527†	-58.5	22.6	0.5507	µg/L	0.5507	ppb	08:09:07
2	Be 313.107†	3979.2	304.8	0.1808	µg/L	0.1808	ppb	08:08:46
2	Cd 226.502†	-118.5	22.2	0.5221	µg/L	0.5221	ppb	08:09:07
2	Co 228.616†	-83.9	18.0	0.8171	µg/L	0.8171	ppb	08:09:07
2	Cr 267.716†	-159.2	23.7	0.4645	µg/L	0.4645	ppb	08:08:46
2	Cu 324.752†	4651.2	-32.0	-0.2265	µg/L	-0.2265	ppb	08:08:46
2	Mn 257.610†	188.5	131.5	0.3770	µg/L	0.3770	ppb	08:08:46
2	Mo 202.031†	6.6	7.6	0.8072	µg/L	0.8072	ppb	08:09:07
2	Ni 231.604†	468.5	23.3	1.1740	µg/L	1.1740	ppb	08:09:07
2	P 214.914†	213.4	-21.5	-37.279	µg/L	-37.279	ppb	08:09:07
2	Pb 220.353†	29.0	-15.5	-3.6200	µg/L	-3.6200	ppb	08:09:07

2	S 181.975 Axial†	49.3	4.7	20.983 µg/L	20.983 ppb	08:09:07
2	Sb 206.836†	23.9	2.5	2.2094 µg/L	2.2094 ppb	08:09:07
2	Se 196.026†	17.9	-1.7	-1.8866 µg/L	-1.8866 ppb	08:09:07
2	SiO2†	3128.1	-56.6	-9.9865 µg/L	-9.9865 ppb	08:08:46
2	Si 251.611†	448.7	56.6	3.8713 µg/L	3.8713 ppb	08:09:07
2	Sn 189.927†	12.6	5.4	2.3811 µg/L	2.3811 ppb	08:09:07
2	Ti 334.940†	1496.8	384.0	0.8686 µg/L	0.8686 ppb	08:08:46
2	Tl 190.801†	-24.3	0.5	0.7676 µg/L	0.7676 ppb	08:09:07
2	U 409.014†	-16.8	-49.9	-4.7081 µg/L	-4.7081 ppb	08:08:46
2	V 292.402†	-164.3	-0.5	-0.0069 µg/L	-0.0069 ppb	08:08:46
2	Zn 213.857†	758.5	32.7	0.7904 µg/L	0.7904 ppb	08:09:07
3	Sc RADIAL	172326.4	172326.4	99.0 %		08:07:38
3	Al 396.153Radial†	-144.3	24.2	10.116 µg/L	10.116 ppb	08:07:38
3	Ca 317.933Radial†	898.7	34.3	6.4890 µg/L	6.4890 ppb	08:07:58
3	Fe 238.204 Radial†	-21.9	4.1	3.0130 µg/L	3.0130 ppb	08:07:58
3	K 766.490 Radial†	912.0	151.1	82.699 µg/L	82.699 ppb	08:07:38
3	Mg 279.077 IEC†	47.6	4.9	10.095 µg/L	10.095 ppb	08:07:58
3	Na 589.592 Radial†	90.0	-27.6	-6.6134 µg/L	-6.6134 ppb	08:07:38
3	Sr 421.552†	167.5	102.4	0.4410 µg/L	0.4410 ppb	08:07:38
3	Sc 361.383	2182467.7	2182467.7	99.571 %		08:09:13
3	Y 371.029	1396211.0	1396211.0	99.536 %		08:09:13
3	Ag 328.068†	-777.6	41.0	0.3634 µg/L	0.3634 ppb	08:09:18
3	As 188.979†	-5.9	-8.2	-12.999 µg/L	-12.999 ppb	08:09:39
3	B 249.677†	256.7	49.2	2.0073 µg/L	2.0073 ppb	08:09:18
3	Ba 233.527†	-27.8	53.0	1.2934 µg/L	1.2934 ppb	08:09:39
3	Be 313.107†	4337.4	697.3	0.4115 µg/L	0.4115 ppb	08:09:18
3	Cd 226.502†	-97.5	42.4	0.9986 µg/L	0.9986 ppb	08:09:39
3	Co 228.616†	-67.2	34.1	1.5492 µg/L	1.5492 ppb	08:09:39
3	Cr 267.716†	-136.3	45.4	0.8902 µg/L	0.8902 ppb	08:09:18
3	Cu 324.752†	4747.5	103.0	0.7293 µg/L	0.7293 ppb	08:09:18
3	Mn 257.610†	330.7	275.9	0.7911 µg/L	0.7911 ppb	08:09:18
3	Mo 202.031†	16.2	17.2	1.8365 µg/L	1.8365 ppb	08:09:39
3	Ni 231.604†	476.3	35.1	1.7661 µg/L	1.7661 ppb	08:09:39
3	P 214.914†	223.8	-9.4	-16.402 µg/L	-16.402 ppb	08:09:39
3	Pb 220.353†	48.7	4.5	1.0606 µg/L	1.0606 ppb	08:09:39
3	S 181.975 Axial†	46.1	2.0	8.9272 µg/L	8.9272 ppb	08:09:39
3	Sb 206.836†	27.2	6.0	5.2474 µg/L	5.2474 ppb	08:09:39
3	Se 196.026†	17.3	-2.2	-2.3864 µg/L	-2.3864 ppb	08:09:39
3	SiO2†	3173.1	14.3	2.5285 µg/L	2.5285 ppb	08:09:18
3	Si 251.611†	527.5	139.4	9.7599 µg/L	9.7599 ppb	08:09:39
3	Sn 189.927†	7.5	0.4	0.1678 µg/L	0.1678 ppb	08:09:39
3	Ti 334.940†	1662.1	562.4	1.2719 µg/L	1.2719 ppb	08:09:18
3	Tl 190.801†	-27.5	-2.9	-4.0339 µg/L	-4.0339 ppb	08:09:39
3	U 409.014†	-4.6	-37.8	-3.5647 µg/L	-3.5647 ppb	08:09:18
3	V 292.402†	-139.1	23.4	0.2615 µg/L	0.2615 ppb	08:09:18
3	Zn 213.857†	790.2	70.8	1.7110 µg/L	1.7110 ppb	08:09:39

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2193407.3	100.07	%	0.439				0.44%
Sc RADIAL	173380.7	99.6	%	0.58				0.58%
Y 371.029	1402995.3	100.02	%	0.426				0.43%
Ag 328.068†	93.2	0.8217	µg/L	0.40067	0.8217	ppb	0.40067	48.76%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.3	7.2315	µg/L	4.50596	7.2315	ppb	4.50596	62.31%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-2.7	-4.3623	µg/L	7.73712	-4.3623	ppb	7.73712	177.36%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	57.6	2.3503	µg/L	0.36124	2.3503	ppb	0.36124	15.37%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	30.9	0.7533	µg/L	0.47259	0.7533	ppb	0.47259	62.73%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	379.4	0.2245	µg/L	0.16952	0.2245	ppb	0.16952	75.52%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	24.6	4.6682	µg/L	1.71515	4.6682	ppb	1.71515	36.74%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	21.1	0.4952	µg/L	0.51732	0.4952	ppb	0.51732	104.46%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	21.5	0.9797	µg/L	0.50810	0.9797	ppb	0.50810	51.86%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              27.9      0.5460 µg/L       0.31152      0.5460 ppb        0.31152  57.05%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -2.6     -0.0176 µg/L       0.66743     -0.0176 ppb        0.66743 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        4.7      3.4273 µg/L       3.05422      3.4273 ppb        3.05422  89.11%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        87.8      48.065 µg/L       46.4699      48.065 ppb        46.4699  96.68%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           8.0      16.544 µg/L        6.3891      16.544 ppb         6.3891  38.62%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             169.0      0.4846 µg/L       0.26938      0.4846 ppb        0.26938  55.59%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              13.6      1.4581 µg/L       0.56616      1.4581 ppb        0.56616  38.83%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -4.2     -1.0121 µg/L       5.08741     -1.0121 ppb        5.08741 502.66%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              20.7      1.0434 µg/L       0.79613      1.0434 ppb        0.79613  76.30%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -13.7     -23.734 µg/L       11.7441     -23.734 ppb        11.7441  49.48%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -3.1     -0.7139 µg/L       2.53719     -0.7139 ppb        2.53719 355.39%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          1.4      6.0455 µg/L      16.56762      6.0455 ppb       16.56762 274.05%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               4.6      4.0151 µg/L       1.59813      4.0151 ppb        1.59813  39.80%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -1.8     -1.9828 µg/L       0.36522     -1.9828 ppb        0.36522  18.42%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                   -36.6     -6.4650 µg/L       7.84942     -6.4650 ppb        7.84942 121.41%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              74.3      5.1572 µg/L       4.11339      5.1572 ppb        4.11339  79.76%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.9      0.8571 µg/L       1.32189      0.8571 ppb        1.32189 154.24%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              68.7      0.2959 µg/L       0.17729      0.2959 ppb        0.17729  59.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             392.1      0.8869 µg/L       0.37626      0.8869 ppb        0.37626  42.43%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -1.3     -1.8338 µg/L       2.42578     -1.8338 ppb        2.42578 132.28%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -42.0     -3.9583 µg/L       0.64964     -3.9583 ppb        0.64964  16.41%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -2.3     -0.0209 µg/L       0.28965     -0.0209 ppb        0.28965 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              45.7      1.1058 µg/L       0.52431      1.1058 ppb        0.52431  47.42%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 101
Date Collected: 7/2/2009 08:09:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174827.7	174827.7	100	%			08:10:20
1	Al 396.153Radial†	358.8	527.2	221.43	µg/L	221.43	ppb	08:10:20
1	Ca 317.933Radial†	1929.4	1047.4	198.37	µg/L	198.37	ppb	08:10:40
1	Fe 238.204 Radial†	127.2	152.8	109.78	µg/L	109.78	ppb	08:10:40
1	K 766.490 Radial†	1055.1	280.4	153.45	µg/L	153.45	ppb	08:10:20
1	Mg 279.077 IEC†	192.9	148.9	305.61	µg/L	305.61	ppb	08:10:40
1	Na 589.592 Radial†	1369.7	1245.3	298.90	µg/L	298.90	ppb	08:10:20
1	Sr 421.552†	1209.2	1137.1	4.8966	µg/L	4.8966	ppb	08:10:20
1	Sc 361.383	2179268.6	2179268.6	99.425	%			08:11:42
1	Y 371.029	1395928.6	1395928.6	99.516	%			08:11:42
1	Ag 328.068†	-194.7	626.1	5.5602	µg/L	5.5602	ppb	08:11:48
1	As 188.979†	20.2	18.1	28.697	µg/L	28.697	ppb	08:12:08
1	B 249.677†	1444.1	1243.8	50.749	µg/L	50.749	ppb	08:11:48
1	Ba 233.527†	136.4	218.1	5.3322	µg/L	5.3322	ppb	08:12:08
1	Be 313.107†	12244.7	8656.8	5.0786	µg/L	5.0786	ppb	08:11:48
1	Cd 226.502†	65.2	205.9	4.8808	µg/L	4.8808	ppb	08:12:08
1	Co 228.616†	8.5	110.1	5.0121	µg/L	5.0121	ppb	08:12:08
1	Cr 267.716†	92.5	275.4	5.3999	µg/L	5.3999	ppb	08:11:48
1	Cu 324.752†	6155.4	1526.1	10.810	µg/L	10.810	ppb	08:11:48
1	Mn 257.610†	3687.9	3652.9	10.475	µg/L	10.475	ppb	08:11:48
1	Mo 202.031†	94.1	95.6	10.222	µg/L	10.222	ppb	08:12:08
1	Ni 231.604†	546.9	106.7	5.3736	µg/L	5.3736	ppb	08:12:08
1	P 214.914†	311.8	79.5	136.08	µg/L	136.08	ppb	08:12:08
1	Pb 220.353†	94.0	50.1	11.690	µg/L	11.690	ppb	08:12:08
1	S 181.975 Axial†	68.1	24.2	106.76	µg/L	106.76	ppb	08:12:08
1	Sb 206.836†	36.0	14.9	13.020	µg/L	13.020	ppb	08:12:08
1	Se 196.026†	49.5	30.2	33.390	µg/L	33.390	ppb	08:12:08
1	SiO2†	4360.1	1212.9	214.06	µg/L	214.06	ppb	08:11:48
1	Si 251.611†	1834.1	1454.4	102.26	µg/L	102.26	ppb	08:11:48
1	Sn 189.927†	27.0	20.0	8.8721	µg/L	8.8721	ppb	08:12:08
1	Ti 334.940†	3465.4	2378.5	5.3736	µg/L	5.3736	ppb	08:11:48
1	Tl 190.801†	-19.8	4.9	6.8043	µg/L	6.8043	ppb	08:12:08
1	U 409.014†	500.4	470.1	44.287	µg/L	44.287	ppb	08:11:48
1	V 292.402†	285.2	449.9	5.0375	µg/L	5.0375	ppb	08:11:48
1	Zn 213.857†	1166.1	450.0	10.869	µg/L	10.869	ppb	08:12:08
2	Sc RADIAL	174790.2	174790.2	100	%			08:10:46
2	Al 396.153Radial†	318.8	487.4	204.69	µg/L	204.69	ppb	08:10:46
2	Ca 317.933Radial†	1934.5	1052.9	199.43	µg/L	199.43	ppb	08:11:06
2	Fe 238.204 Radial†	114.4	140.1	100.68	µg/L	100.68	ppb	08:11:06
2	K 766.490 Radial†	1038.9	264.5	144.75	µg/L	144.75	ppb	08:10:46
2	Mg 279.077 IEC†	196.5	152.6	313.17	µg/L	313.17	ppb	08:11:06
2	Na 589.592 Radial†	1373.9	1249.7	299.96	µg/L	299.96	ppb	08:10:46
2	Sr 421.552†	1251.8	1179.8	5.0803	µg/L	5.0803	ppb	08:10:46
2	Sc 361.383	2196964.2	2196964.2	100.23	%			08:12:14
2	Y 371.029	1406712.1	1406712.1	100.28	%			08:12:14
2	Ag 328.068†	-227.3	595.2	5.2860	µg/L	5.2860	ppb	08:12:20
2	As 188.979†	23.8	21.5	34.227	µg/L	34.227	ppb	08:12:41
2	B 249.677†	1486.0	1273.9	51.980	µg/L	51.980	ppb	08:12:20
2	Ba 233.527†	127.2	207.8	5.0801	µg/L	5.0801	ppb	08:12:41
2	Be 313.107†	12226.8	8539.7	5.0095	µg/L	5.0095	ppb	08:12:20
2	Cd 226.502†	65.1	205.2	4.8725	µg/L	4.8725	ppb	08:12:41
2	Co 228.616†	21.4	122.9	5.5970	µg/L	5.5970	ppb	08:12:41
2	Cr 267.716†	76.2	258.4	5.0659	µg/L	5.0659	ppb	08:12:20
2	Cu 324.752†	6197.9	1518.6	10.756	µg/L	10.756	ppb	08:12:20
2	Mn 257.610†	3705.0	3640.2	10.438	µg/L	10.438	ppb	08:12:20
2	Mo 202.031†	91.5	92.2	9.8629	µg/L	9.8629	ppb	08:12:41
2	Ni 231.604†	556.5	111.9	5.6339	µg/L	5.6339	ppb	08:12:41
2	P 214.914†	301.3	66.4	113.49	µg/L	113.49	ppb	08:12:41
2	Pb 220.353†	95.0	50.4	11.738	µg/L	11.738	ppb	08:12:41

2	S 181.975 Axial†	66.1	21.6	95.392 µg/L	95.392 ppb	08:12:41
2	Sb 206.836†	34.9	13.6	11.844 µg/L	11.844 ppb	08:12:41
2	Se 196.026†	47.8	28.1	31.076 µg/L	31.076 ppb	08:12:41
2	SiO2†	4387.5	1204.9	212.65 µg/L	212.65 ppb	08:12:20
2	Si 251.611†	1842.1	1447.5	101.76 µg/L	101.76 ppb	08:12:20
2	Sn 189.927†	28.9	21.7	9.6137 µg/L	9.6137 ppb	08:12:41
2	Ti 334.940†	3409.5	2294.7	5.1841 µg/L	5.1841 ppb	08:12:20
2	Tl 190.801†	-10.3	14.5	20.260 µg/L	20.260 ppb	08:12:41
2	U 409.014†	578.5	543.9	51.250 µg/L	51.250 ppb	08:12:20
2	V 292.402†	273.4	435.9	4.8926 µg/L	4.8926 ppb	08:12:20
2	Zn 213.857†	1165.0	439.5	10.613 µg/L	10.613 ppb	08:12:41
3	Sc RADIAL	175123.4	175123.4	101 %		08:11:12
3	Al 396.153Radial†	334.1	502.0	210.84 µg/L	210.84 ppb	08:11:12
3	Ca 317.933Radial†	1951.6	1066.3	201.95 µg/L	201.95 ppb	08:11:32
3	Fe 238.204 Radial†	119.0	144.5	103.77 µg/L	103.77 ppb	08:11:32
3	K 766.490 Radial†	1060.2	283.6	155.22 µg/L	155.22 ppb	08:11:12
3	Mg 279.077 IEC†	191.4	147.1	301.89 µg/L	301.89 ppb	08:11:32
3	Na 589.592 Radial†	1419.3	1292.2	310.16 µg/L	310.16 ppb	08:11:12
3	Sr 421.552†	1263.4	1188.9	5.1199 µg/L	5.1199 ppb	08:11:12
3	Sc 361.383	2199134.5	2199134.5	100.33 %		08:12:47
3	Y 371.029	1407303.7	1407303.7	100.33 %		08:12:47
3	Ag 328.068†	-139.8	682.6	6.0538 µg/L	6.0538 ppb	08:12:52
3	As 188.979†	20.9	18.6	29.568 µg/L	29.568 ppb	08:13:13
3	B 249.677†	1442.7	1229.3	50.157 µg/L	50.157 ppb	08:12:52
3	Ba 233.527†	124.9	205.4	5.0211 µg/L	5.0211 ppb	08:13:13
3	Be 313.107†	12109.4	8410.7	4.9339 µg/L	4.9339 ppb	08:12:52
3	Cd 226.502†	79.1	219.2	5.1940 µg/L	5.1940 ppb	08:13:13
3	Co 228.616†	13.8	115.3	5.2514 µg/L	5.2514 ppb	08:13:13
3	Cr 267.716†	73.6	255.7	5.0129 µg/L	5.0129 ppb	08:12:52
3	Cu 324.752†	6127.2	1442.0	10.215 µg/L	10.215 ppb	08:12:52
3	Mn 257.610†	3617.3	3549.1	10.177 µg/L	10.177 ppb	08:12:52
3	Mo 202.031†	93.1	93.7	10.023 µg/L	10.023 ppb	08:13:13
3	Ni 231.604†	564.5	119.3	6.0071 µg/L	6.0071 ppb	08:13:13
3	P 214.914†	298.7	63.6	108.75 µg/L	108.75 ppb	08:13:13
3	Pb 220.353†	92.5	47.8	11.148 µg/L	11.148 ppb	08:13:13
3	S 181.975 Axial†	65.5	20.9	92.431 µg/L	92.431 ppb	08:13:13
3	Sb 206.836†	35.0	13.6	11.887 µg/L	11.887 ppb	08:13:13
3	Se 196.026†	40.7	21.0	23.181 µg/L	23.181 ppb	08:13:13
3	SiO2†	4392.0	1205.1	212.68 µg/L	212.68 ppb	08:12:52
3	Si 251.611†	1827.8	1431.4	100.59 µg/L	100.59 ppb	08:12:52
3	Sn 189.927†	30.3	23.0	10.191 µg/L	10.191 ppb	08:13:13
3	Ti 334.940†	3378.0	2259.9	5.1052 µg/L	5.1052 ppb	08:12:52
3	Tl 190.801†	-13.3	11.5	16.076 µg/L	16.076 ppb	08:13:13
3	U 409.014†	484.7	449.9	42.380 µg/L	42.380 ppb	08:12:52
3	V 292.402†	234.7	397.1	4.4584 µg/L	4.4584 ppb	08:12:52
3	Zn 213.857†	1163.7	437.1	10.554 µg/L	10.554 ppb	08:13:13

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2191789.1	99.997	%	0.4972				0.50%
Sc RADIAL	174913.8	100	%	0.1				0.10%
Y 371.029	1403314.8	100.04	%	0.457				0.46%
Ag 328.068†	634.6	5.6333	µg/L	0.38911	5.6333	ppb	0.38911	6.91%
QC value within limits for Ag 328.068 Recovery = 112.67%								
Al 396.153Radial†	505.5	212.32	µg/L	8.466	212.32	ppb	8.466	3.99%
QC value within limits for Al 396.153Radial Recovery = 106.16%								
As 188.979†	19.4	30.831	µg/L	2.9734	30.831	ppb	2.9734	9.64%
QC value within limits for As 188.979 Recovery = 102.77%								
B 249.677†	1249.0	50.962	µg/L	0.9303	50.962	ppb	0.9303	1.83%
QC value within limits for B 249.677 Recovery = 101.92%								
Ba 233.527†	210.4	5.1445	µg/L	0.16523	5.1445	ppb	0.16523	3.21%
QC value within limits for Ba 233.527 Recovery = 102.89%								
Be 313.107†	8535.7	5.0073	µg/L	0.07239	5.0073	ppb	0.07239	1.45%
QC value within limits for Be 313.107 Recovery = 100.15%								
Ca 317.933Radial†	1055.5	199.92	µg/L	1.838	199.92	ppb	1.838	0.92%
QC value within limits for Ca 317.933Radial Recovery = 99.96%								
Cd 226.502†	210.1	4.9824	µg/L	0.18330	4.9824	ppb	0.18330	3.68%
QC value within limits for Cd 226.502 Recovery = 99.65%								
Co 228.616†	116.1	5.2868	µg/L	0.29404	5.2868	ppb	0.29404	5.56%

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   QC value within limits for Co 228.616  Recovery = 105.74%
Cr 267.716†              263.2      5.1596 µg/L       0.20981      5.1596 ppb        0.20981   4.07%
   QC value within limits for Cr 267.716  Recovery = 103.19%
Cu 324.752†             1495.6      10.594 µg/L        0.3291      10.594 ppb         0.3291   3.11%
   QC value within limits for Cu 324.752  Recovery = 105.94%
Fe 238.204 Radial†       145.8      104.74 µg/L         4.627      104.74 ppb          4.627   4.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.74%
K 766.490 Radial†        276.2      151.14 µg/L         5.608      151.14 ppb          5.608   3.71%
   QC value within limits for K 766.490 Radial  Recovery = 100.76%
Mg 279.077 IEC†          149.5      306.89 µg/L         5.748      306.89 ppb          5.748   1.87%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.30%
Mn 257.610†             3614.1      10.363 µg/L        0.1623      10.363 ppb         0.1623   1.57%
   QC value within limits for Mn 257.610  Recovery = 103.63%
Mo 202.031†               93.8      10.036 µg/L        0.1801      10.036 ppb         0.1801   1.79%
   QC value within limits for Mo 202.031  Recovery = 100.36%
Na 589.592 Radial†      1262.4      303.01 µg/L         6.221      303.01 ppb          6.221   2.05%
   QC value within limits for Na 589.592 Radial  Recovery = 101.00%
Ni 231.604†              112.6      5.6716 µg/L       0.31844      5.6716 ppb        0.31844   5.61%
   QC value within limits for Ni 231.604  Recovery = 113.43%
P 214.914†                69.8      119.44 µg/L        14.603      119.44 ppb         14.603  12.23%
   QC value within limits for P 214.914  Recovery = 79.63%
Pb 220.353†               49.4      11.525 µg/L        0.3276      11.525 ppb         0.3276   2.84%
   QC value within limits for Pb 220.353  Recovery = 115.25%
S 181.975 Axial†          22.2      98.194 µg/L        7.5636      98.194 ppb         7.5636   7.70%
   QC value within limits for S 181.975 Axial  Recovery = 98.19%
Sb 206.836†               14.0      12.250 µg/L        0.6667      12.250 ppb         0.6667   5.44%
   QC value within limits for Sb 206.836  Recovery = 122.50%
Se 196.026†               26.4      29.216 µg/L        5.3525      29.216 ppb         5.3525  18.32%
   QC value within limits for Se 196.026  Recovery = 97.39%
SiO2†                   1207.6      213.13 µg/L         0.805      213.13 ppb          0.805   0.38%
   QC value within limits for SiO2  Recovery = 100.06%
Si 251.611†             1444.4      101.54 µg/L         0.857      101.54 ppb          0.857   0.84%
   QC value within limits for Si 251.611  Recovery = 101.54%
Sn 189.927†               21.5      9.5590 µg/L       0.66131      9.5590 ppb        0.66131   6.92%
   QC value within limits for Sn 189.927  Recovery = 95.59%
Sr 421.552†             1168.6      5.0323 µg/L       0.11913      5.0323 ppb        0.11913   2.37%
   QC value within limits for Sr 421.552  Recovery = 100.65%
Ti 334.940†             2311.1      5.2210 µg/L       0.13797      5.2210 ppb        0.13797   2.64%
   QC value within limits for Ti 334.940  Recovery = 104.42%
Tl 190.801†               10.3      14.380 µg/L        6.8862      14.380 ppb         6.8862  47.89%
   QC value within limits for Tl 190.801  Recovery = 71.90%
U 409.014†               488.0      45.972 µg/L        4.6693      45.972 ppb         4.6693  10.16%
   QC value within limits for U 409.014  Recovery = 91.94%
V 292.402†               427.6      4.7962 µg/L       0.30133      4.7962 ppb        0.30133   6.28%
   QC value within limits for V 292.402  Recovery = 95.92%
Zn 213.857†              442.2      10.678 µg/L        0.1674      10.678 ppb         0.1674   1.57%
   QC value within limits for Zn 213.857  Recovery = 106.78%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 103
Date Collected: 7/2/2009 08:13:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	167669.4	167669.4	96.3	%			08:14:02
1	Al 396.153Radial†	1165901.0	1210499.1	509330	µg/L	509330	ppb	08:13:57
1	Ca 317.933Radial†	2481239.2	2574916.6	487690	µg/L	487690	ppb	08:13:57
1	Fe 238.204 Radial†	251480.1	261089.3	187240	µg/L	187240	ppb	08:14:02
1	K 766.490 Radial†	797.4	57.6	31.541	µg/L	31.541	ppb	08:14:02
1	Mg 279.077 IEC†	226987.1	235593.6	483130	µg/L	483130	ppb	08:14:02
1	Na 589.592 Radial†	225.2	115.4	27.698	µg/L	27.698	ppb	08:14:02
1	Sr 421.552†	963.4	933.3	4.0192	µg/L	4.0192	ppb	08:14:02
1	Sc 361.383	2062768.5	2062768.5	94.110	%			08:14:36
1	Y 371.029	1297269.0	1297269.0	92.482	%			08:14:36
1	Ag 328.068†	-2154.7	-1467.6	1.7069	µg/L	1.7069	ppb	08:14:42
1	As 188.979†	20.8	19.8	-37.014	µg/L	-37.014	ppb	08:15:02
1	B 249.677†	1898.4	1808.7	14.964	µg/L	14.964	ppb	08:14:42
1	Ba 233.527†	108.6	196.3	4.7489	µg/L	4.7489	ppb	08:15:02
1	Be 313.107†	2478.3	-1025.3	-0.5422	µg/L	-0.5422	ppb	08:14:42
1	Cd 226.502†	504.1	676.0	1.4346	µg/L	1.4346	ppb	08:15:02
1	Co 228.616†	-126.6	-33.0	-1.5740	µg/L	-1.5740	ppb	08:15:02
1	Cr 267.716†	-340.7	-179.7	-3.5472	µg/L	-3.5472	ppb	08:15:02
1	Cu 324.752†	-17.6	-4683.6	-7.9646	µg/L	-7.9646	ppb	08:14:42
1	Mn 257.610†	-1363.5	-1505.0	-3.0961	µg/L	-3.0961	ppb	08:14:42
1	Mo 202.031†	-124.4	-131.3	-6.6758	µg/L	-6.6758	ppb	08:15:02
1	Ni 231.604†	404.5	-13.5	-0.6789	µg/L	-0.6789	ppb	08:15:02
1	P 214.914†	241.7	22.7	8.8231	µg/L	8.8231	ppb	08:15:02
1	Pb 220.353†	-92.1	-142.3	8.8286	µg/L	8.8286	ppb	08:15:02
1	S 181.975 Axial†	86.6	47.7	114.06	µg/L	114.06	ppb	08:15:02
1	Sb 206.836†	38.1	19.2	-16.687	µg/L	-16.687	ppb	08:15:02
1	Se 196.026†	17.1	-1.3	-19.084	µg/L	-19.084	ppb	08:15:02
1	SiO2†	2851.8	-142.1	-25.078	µg/L	-25.078	ppb	08:15:02
1	Si 251.611†	435.3	72.2	11.912	µg/L	11.912	ppb	08:15:02
1	Sn 189.927†	-397.5	-429.6	-0.2967	µg/L	-0.2967	ppb	08:15:02
1	Ti 334.940†	9239.4	8710.7	2.8549	µg/L	2.8549	ppb	08:14:42
1	Tl 190.801†	9.4	34.8	-1.7568	µg/L	-1.7568	ppb	08:15:02
1	U 409.014†	203.7	183.3	-68.059	µg/L	-68.059	ppb	08:14:42
1	V 292.402†	-1820.5	-1771.3	-4.0280	µg/L	-4.0280	ppb	08:14:42
1	Zn 213.857†	2107.6	1516.7	10.858	µg/L	10.858	ppb	08:15:02
2	Sc RADIAL	169093.0	169093.0	97.1	%			08:14:14
2	Al 396.153Radial†	1176704.5	1211430.0	509720	µg/L	509720	ppb	08:14:08
2	Ca 317.933Radial†	2504700.8	2577381.5	488160	µg/L	488160	ppb	08:14:08
2	Fe 238.204 Radial†	252511.6	259953.2	186420	µg/L	186420	ppb	08:14:14
2	K 766.490 Radial†	851.5	106.4	58.210	µg/L	58.210	ppb	08:14:14
2	Mg 279.077 IEC†	228042.6	234696.3	481290	µg/L	481290	ppb	08:14:14
2	Na 589.592 Radial†	184.7	71.7	17.209	µg/L	17.209	ppb	08:14:14
2	Sr 421.552†	997.4	959.9	4.1334	µg/L	4.1334	ppb	08:14:14
2	Sc 361.383	2054981.7	2054981.7	93.755	%			08:15:08
2	Y 371.029	1293469.9	1293469.9	92.212	%			08:15:08
2	Ag 328.068†	-1999.7	-1310.9	3.0226	µg/L	3.0226	ppb	08:15:14
2	As 188.979†	30.4	30.2	-21.424	µg/L	-21.424	ppb	08:15:34
2	B 249.677†	1828.5	1741.8	12.488	µg/L	12.488	ppb	08:15:14
2	Ba 233.527†	106.0	193.9	4.6904	µg/L	4.6904	ppb	08:15:34
2	Be 313.107†	2542.4	-946.9	-0.4942	µg/L	-0.4942	ppb	08:15:14
2	Cd 226.502†	505.6	679.5	1.5849	µg/L	1.5849	ppb	08:15:34
2	Co 228.616†	-121.7	-28.3	-1.3561	µg/L	-1.3561	ppb	08:15:34
2	Cr 267.716†	-319.8	-158.8	-3.1375	µg/L	-3.1375	ppb	08:15:34
2	Cu 324.752†	-43.7	-4711.5	-8.2710	µg/L	-8.2710	ppb	08:15:14
2	Mn 257.610†	-1403.8	-1553.6	-3.2407	µg/L	-3.2407	ppb	08:15:14
2	Mo 202.031†	-112.0	-118.5	-5.3449	µg/L	-5.3449	ppb	08:15:34
2	Ni 231.604†	418.3	2.9	0.1458	µg/L	0.1458	ppb	08:15:34
2	P 214.914†	231.4	12.7	-7.3987	µg/L	-7.3987	ppb	08:15:34
2	Pb 220.353†	-85.0	-135.0	10.578	µg/L	10.578	ppb	08:15:34

2	S 181.975 Axial†	73.3	33.8	53.327 µg/L	53.327 ppb	08:15:34
2	Sb 206.836†	35.7	16.9	-18.789 µg/L	-18.789 ppb	08:15:34
2	Se 196.026†	19.8	1.5	-15.795 µg/L	-15.795 ppb	08:15:34
2	SiO2†	2891.5	-88.3	-15.585 µg/L	-15.585 ppb	08:15:34
2	Si 251.611†	422.8	60.6	11.047 µg/L	11.047 ppb	08:15:34
2	Sn 189.927†	397.0	-430.7	-1.1335 µg/L	-1.1335 ppb	08:15:34
2	Ti 334.940†	9519.8	9047.1	3.5997 µg/L	3.5997 ppb	08:15:14
2	Tl 190.801†	16.8	42.7	9.3130 µg/L	9.3130 ppb	08:15:34
2	U 409.014†	237.3	219.9	-64.505 µg/L	-64.505 ppb	08:15:14
2	V 292.402†	-1826.6	-1785.1	-4.2291 µg/L	-4.2291 ppb	08:15:14
2	Zn 213.857†	2122.7	1541.3	11.559 µg/L	11.559 ppb	08:15:34
3	Sc RADIAL	169073.7	169073.7	97.1 %		08:14:26
3	Al 396.153Radial†	1172038.5	1206765.0	507760 µg/L	507760 ppb	08:14:20
3	Ca 317.933Radial†	2495952.7	2568670.4	486510 µg/L	486510 ppb	08:14:20
3	Fe 238.204 Radial†	254023.7	261539.6	187560 µg/L	187560 ppb	08:14:26
3	K 766.490 Radial†	810.2	64.0	35.034 µg/L	35.034 ppb	08:14:26
3	Mg 279.077 IEC†	229351.5	236070.6	484110 µg/L	484110 ppb	08:14:26
3	Na 589.592 Radial†	170.7	57.3	13.746 µg/L	13.746 ppb	08:14:26
3	Sr 421.552†	974.6	936.6	4.0332 µg/L	4.0332 ppb	08:14:26
3	Sc 361.383	2068662.1	2068662.1	94.379 %		08:15:41
3	Y 371.029	1302439.6	1302439.6	92.851 %		08:15:41
3	Ag 328.068†	-2062.7	-1363.6	2.6504 µg/L	2.6504 ppb	08:15:46
3	As 188.979†	31.9	31.6	-17.541 µg/L	-17.541 ppb	08:16:07
3	B 249.677†	1918.0	1823.7	15.475 µg/L	15.475 ppb	08:15:46
3	Ba 233.527†	103.1	190.1	4.5984 µg/L	4.5984 ppb	08:16:07
3	Be 313.107†	2502.9	-1006.8	-0.5263 µg/L	-0.5263 ppb	08:15:46
3	Cd 226.502†	520.6	691.9	1.7823 µg/L	1.7823 ppb	08:16:07
3	Co 228.616†	-122.2	-27.9	-1.3443 µg/L	-1.3443 ppb	08:16:07
3	Cr 267.716†	-353.8	-192.5	-3.7983 µg/L	-3.7983 ppb	08:16:07
3	Cu 324.752†	5.3	-4659.2	-7.7486 µg/L	-7.7486 ppb	08:15:46
3	Mn 257.610†	-1400.1	-1539.8	-3.1936 µg/L	-3.1936 ppb	08:15:46
3	Mo 202.031†	-115.4	-121.4	-5.6030 µg/L	-5.6030 ppb	08:16:07
3	Ni 231.604†	394.0	-25.9	-1.3040 µg/L	-1.3040 ppb	08:16:07
3	P 214.914†	242.1	22.4	7.4515 µg/L	7.4515 ppb	08:16:07
3	Pb 220.353†	-100.7	-151.2	6.6317 µg/L	6.6317 ppb	08:16:07
3	S 181.975 Axial†	80.7	41.2	85.216 µg/L	85.216 ppb	08:16:07
3	Sb 206.836†	51.8	33.6	-4.0590 µg/L	-4.0590 ppb	08:16:07
3	Se 196.026†	24.8	6.7	-10.298 µg/L	-10.298 ppb	08:16:07
3	SiO2†	2876.5	-124.6	-21.991 µg/L	-21.991 ppb	08:16:07
3	Si 251.611†	442.7	78.7	12.125 µg/L	12.125 ppb	08:16:07
3	Sn 189.927†	-389.4	-419.8	4.0052 µg/L	4.0052 ppb	08:16:07
3	Ti 334.940†	10000.6	9489.3	4.6570 µg/L	4.6570 ppb	08:15:46
3	Tl 190.801†	1.9	26.7	-12.946 µg/L	-12.946 ppb	08:16:07
3	U 409.014†	172.7	149.7	-71.158 µg/L	-71.158 ppb	08:15:46
3	V 292.402†	-1810.9	-1755.6	-3.8286 µg/L	-3.8286 ppb	08:15:46
3	Zn 213.857†	2132.7	1536.9	11.303 µg/L	11.303 ppb	08:16:07

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2062137.5	94.082	%	0.3131				0.33%
Sc RADIAL	168612.0	96.9	%	0.47				0.48%
Y 371.029	1297726.2	92.515	%	0.3210				0.35%
Ag 328.068†	-1380.7	2.4599	µg/L	0.67819	2.4599	ppb	0.67819	27.57%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	1209564.7	508930	µg/L	1038.8	508930	ppb	1038.8	0.20%
QC value within limits for Al 396.153Radial Recovery = 101.79%								
As 188.979†	27.2	-25.326	µg/L	10.3064	-25.326	ppb	10.3064	40.69%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1791.4	14.309	µg/L	1.5974	14.309	ppb	1.5974	11.16%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	193.4	4.6792	µg/L	0.07588	4.6792	ppb	0.07588	1.62%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-993.0	-0.5209	µg/L	0.02445	-0.5209	ppb	0.02445	4.69%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2573656.2	487450	µg/L	850.5	487450	ppb	850.5	0.17%
QC value within limits for Ca 317.933Radial Recovery = 97.49%								
Cd 226.502†	682.5	1.6006	µg/L	0.17439	1.6006	ppb	0.17439	10.90%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-29.7	-1.4248	µg/L	0.12934	-1.4248	ppb	0.12934	9.08%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -177.0     -3.4943 µg/L      0.33358     -3.4943 ppb       0.33358   9.55%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -4684.8     -7.9947 µg/L      0.26249     -7.9947 ppb       0.26249   3.28%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    260860.7     187080 µg/L        586.3      187080 ppb         586.3   0.31%
   QC value within limits for Fe 238.204 Radial  Recovery = 93.54%
K 766.490 Radial†         76.0     41.595 µg/L      14.4948      41.595 ppb       14.4948  34.85%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       235453.5     482840 µg/L       1430.9      482840 ppb        1430.9   0.30%
   QC value within limits for Mg 279.077 IEC  Recovery = 96.57%
Mn 257.610†           -1532.8     -3.1768 µg/L      0.07374     -3.1768 ppb       0.07374   2.32%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -123.7     -5.8746 µg/L      0.70581     -5.8746 ppb       0.70581  12.01%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        81.5     19.551 µg/L       7.2649      19.551 ppb        7.2649  37.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              -12.2     -0.6124 µg/L      0.72718     -0.6124 ppb       0.72718 118.74%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                19.2      2.9586 µg/L      8.99588      2.9586 ppb       8.99588 304.06%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -142.9      8.6795 µg/L      1.97742      8.6795 ppb       1.97742  22.78%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          40.9     84.200 µg/L      30.3783      84.200 ppb       30.3783  36.08%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               23.2    -13.178 µg/L       7.9673     -13.178 ppb        7.9673  60.46%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                2.3    -15.059 µg/L       4.4392     -15.059 ppb        4.4392  29.48%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                  -118.3    -20.885 µg/L       4.8421     -20.885 ppb        4.8421  23.18%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               70.5     11.695 µg/L       0.5707      11.695 ppb        0.5707   4.88%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -426.7      0.8583 µg/L      2.75723      0.8583 ppb       2.75723 321.23%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             943.3      4.0619 µg/L      0.06232      4.0619 ppb       0.06232   1.53%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†            9082.4      3.7039 µg/L      0.90554      3.7039 ppb       0.90554  24.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               34.7    -1.7966 µg/L     11.12952     -1.7966 ppb      11.12952 619.49%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               184.3    -67.907 µg/L      3.3292     -67.907 ppb        3.3292   4.90%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†            -1770.7     -4.0286 µg/L      0.20024     -4.0286 ppb       0.20024   4.97%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            1531.6      11.240 µg/L       0.3549      11.240 ppb        0.3549   3.16%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 104
Date Collected: 7/2/2009 08:16:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	170691.0	170691.0	98.1	%			08:16:56
1	Al 396.153Radial†	1171503.5	1194786.6	502700	µg/L	502700	ppb	08:16:50
1	Ca 317.933Radial†	2501680.9	2550164.3	483000	µg/L	483000	ppb	08:16:50
1	Fe 238.204 Radial†	254213.6	259255.3	185940	µg/L	185940	ppb	08:16:56
1	K 766.490 Radial†	10046.7	9474.8	5185.4	µg/L	5185.4	ppb	08:16:56
1	Mg 279.077 IEC†	229291.6	233772.2	479410	µg/L	479410	ppb	08:16:56
1	Na 589.592 Radial†	21296.0	21597.7	5183.9	µg/L	5183.9	ppb	08:16:56
1	Sr 421.552†	115433.2	117643.8	506.61	µg/L	506.61	ppb	08:16:56
1	Sc 361.383	2079322.9	2079322.9	94.866	%			08:17:33
1	Y 371.029	1312169.9	1312169.9	93.545	%			08:17:33
1	Ag 328.068†	26708.5	28976.0	273.50	µg/L	273.50	ppb	08:17:33
1	As 188.979†	340.7	356.9	500.17	µg/L	500.17	ppb	08:17:54
1	B 249.677†	13984.8	14533.2	534.89	µg/L	534.89	ppb	08:17:33
1	Ba 233.527†	19358.6	20487.2	501.01	µg/L	501.01	ppb	08:17:54
1	Be 313.107†	397866.9	415741.9	244.72	µg/L	244.72	ppb	08:17:33
1	Cd 226.502†	19066.8	20239.1	463.51	µg/L	463.51	ppb	08:17:54
1	Co 228.616†	9378.1	9987.2	453.70	µg/L	453.70	ppb	08:17:54
1	Cr 267.716†	22883.8	24304.6	476.64	µg/L	476.64	ppb	08:17:54
1	Cu 324.752†	73147.0	72441.1	537.43	µg/L	537.43	ppb	08:17:33
1	Mn 257.610†	155820.4	164197.6	472.02	µg/L	472.02	ppb	08:17:33
1	Mo 202.031†	4371.1	4608.7	499.98	µg/L	499.98	ppb	08:17:54
1	Ni 231.604†	8791.1	8823.6	444.27	µg/L	444.27	ppb	08:17:54
1	P 214.914†	1654.0	1509.4	2502.2	µg/L	2502.2	ppb	08:17:54
1	Pb 220.353†	1877.6	1934.8	493.06	µg/L	493.06	ppb	08:17:54
1	S 181.975 Axial†	655.1	646.3	2761.5	µg/L	2761.5	ppb	08:17:54
1	Sb 206.836†	599.6	610.8	499.38	µg/L	499.38	ppb	08:17:54
1	Se 196.026†	2050.2	2141.6	2352.3	µg/L	2352.3	ppb	08:17:54
1	SiO2†	64266.0	64571.8	11396	µg/L	11396	ppb	08:17:33
1	Si 251.611†	71547.8	75029.8	5272.7	µg/L	5272.7	ppb	08:17:33
1	Sn 189.927†	709.6	740.9	512.06	µg/L	512.06	ppb	08:17:54
1	Ti 334.940†	226982.3	238160.4	522.06	µg/L	522.06	ppb	08:17:33
1	Tl 190.801†	345.6	389.1	496.37	µg/L	496.37	ppb	08:17:54
1	U 409.014†	5814.8	6096.3	490.25	µg/L	490.25	ppb	08:17:33
1	V 292.402†	43857.2	46394.0	523.28	µg/L	523.28	ppb	08:17:33
1	Zn 213.857†	20760.5	21161.3	484.82	µg/L	484.82	ppb	08:17:54
2	Sc RADIAL	169649.6	169649.6	97.5	%			08:17:08
2	Al 396.153Radial†	1168902.1	1199451.2	504660	µg/L	504660	ppb	08:17:02
2	Ca 317.933Radial†	2491624.3	2555506.9	484010	µg/L	484010	ppb	08:17:02
2	Fe 238.204 Radial†	256161.1	262844.8	188510	µg/L	188510	ppb	08:17:08
2	K 766.490 Radial†	10113.0	9605.7	5257.0	µg/L	5257.0	ppb	08:17:08
2	Mg 279.077 IEC†	231033.4	236994.7	486020	µg/L	486020	ppb	08:17:08
2	Na 589.592 Radial†	21507.6	21948.1	5268.0	µg/L	5268.0	ppb	08:17:08
2	Sr 421.552†	116357.1	119314.4	513.80	µg/L	513.80	ppb	08:17:08
2	Sc 361.383	2061356.7	2061356.7	94.046	%			08:18:03
2	Y 371.029	1300107.6	1300107.6	92.685	%			08:18:03
2	Ag 328.068†	26569.4	29073.4	274.55	µg/L	274.55	ppb	08:18:03
2	As 188.979†	331.6	350.4	491.39	µg/L	491.39	ppb	08:18:24
2	B 249.677†	13838.1	14505.7	532.95	µg/L	532.95	ppb	08:18:03
2	Ba 233.527†	19313.7	20617.3	504.18	µg/L	504.18	ppb	08:18:24
2	Be 313.107†	393533.6	414789.7	244.16	µg/L	244.16	ppb	08:18:03
2	Cd 226.502†	19012.7	20356.8	466.09	µg/L	466.09	ppb	08:18:24
2	Co 228.616†	9385.2	10080.9	457.97	µg/L	457.97	ppb	08:18:24
2	Cr 267.716†	22859.7	24489.3	480.25	µg/L	480.25	ppb	08:18:24
2	Cu 324.752†	72480.6	72404.5	537.52	µg/L	537.52	ppb	08:18:03
2	Mn 257.610†	154179.8	163884.7	471.14	µg/L	471.14	ppb	08:18:03
2	Mo 202.031†	4365.5	4642.8	503.73	µg/L	503.73	ppb	08:18:24
2	Ni 231.604†	8778.8	8891.3	447.67	µg/L	447.67	ppb	08:18:24
2	P 214.914†	1636.9	1506.4	2494.6	µg/L	2494.6	ppb	08:18:24
2	Pb 220.353†	1851.4	1924.2	490.72	µg/L	490.72	ppb	08:18:24

2	S 181.975 Axial†	641.6	637.9	2723.2 µg/L	2723.2 ppb	08:18:24
2	Sb 206.836†	607.9	625.2	511.86 µg/L	511.86 ppb	08:18:24
2	Se 196.026†	2043.9	2153.7	2365.2 µg/L	2365.2 ppb	08:18:24
2	SiO2†	63712.3	64573.6	11396 µg/L	11396 ppb	08:18:03
2	Si 251.611†	70797.2	74889.0	5262.9 µg/L	5262.9 ppb	08:18:03
2	Sn 189.927†	689.1	725.6	506.98 µg/L	506.98 ppb	08:18:24
2	Ti 334.940†	224888.3	238019.2	521.70 µg/L	521.70 ppb	08:18:03
2	Tl 190.801†	349.4	396.3	506.35 µg/L	506.35 ppb	08:18:24
2	U 409.014†	5884.2	6223.6	501.66 µg/L	501.66 ppb	08:18:03
2	V 292.402†	43397.0	46307.6	522.60 µg/L	522.60 ppb	08:18:03
2	Zn 213.857†	20668.1	21253.8	486.69 µg/L	486.69 ppb	08:18:24
3	Sc RADIAL	169032.8	169032.8	97.1 %		08:17:20
3	Al 396.153Radial†	1169368.7	1204307.8	506700 µg/L	506700 ppb	08:17:14
3	Ca 317.933Radial†	2489898.8	2563058.2	485440 µg/L	485440 ppb	08:17:14
3	Fe 238.204 Radial†	251527.2	259032.1	185780 µg/L	185780 ppb	08:17:20
3	K 766.490 Radial†	9994.1	9521.2	5210.8 µg/L	5210.8 ppb	08:17:20
3	Mg 279.077 IEC†	227016.0	233722.8	479310 µg/L	479310 ppb	08:17:20
3	Na 589.592 Radial†	21111.6	21620.8	5189.5 µg/L	5189.5 ppb	08:17:20
3	Sr 421.552†	114444.8	117780.8	507.20 µg/L	507.20 ppb	08:17:20
3	Sc 361.383	2070509.7	2070509.7	94.464 %		08:18:33
3	Y 371.029	1306649.8	1306649.8	93.151 %		08:18:33
3	Ag 328.068†	26751.6	29141.5	274.95 µg/L	274.95 ppb	08:18:33
3	As 188.979†	328.2	345.2	480.35 µg/L	480.35 ppb	08:18:53
3	B 249.677†	13959.8	14569.4	536.42 µg/L	536.42 ppb	08:18:33
3	Ba 233.527†	19377.3	20593.9	503.61 µg/L	503.61 ppb	08:18:53
3	Be 313.107†	396909.5	416513.5	245.17 µg/L	245.17 ppb	08:18:33
3	Cd 226.502†	19122.0	20383.1	466.93 µg/L	466.93 ppb	08:18:53
3	Co 228.616†	9415.8	10069.2	457.43 µg/L	457.43 ppb	08:18:53
3	Cr 267.716†	22942.4	24469.4	479.87 µg/L	479.87 ppb	08:18:53
3	Cu 324.752†	72916.2	72524.9	538.00 µg/L	538.00 ppb	08:18:33
3	Mn 257.610†	155448.6	164503.1	472.90 µg/L	472.90 ppb	08:18:33
3	Mo 202.031†	4363.6	4620.3	501.22 µg/L	501.22 ppb	08:18:53
3	Ni 231.604†	8803.4	8876.1	446.91 µg/L	446.91 ppb	08:18:53
3	P 214.914†	1638.8	1500.7	2488.7 µg/L	2488.7 ppb	08:18:53
3	Pb 220.353†	1890.3	1956.6	498.50 µg/L	498.50 ppb	08:18:53
3	S 181.975 Axial†	653.5	647.5	2767.0 µg/L	2767.0 ppb	08:18:53
3	Sb 206.836†	598.7	612.5	500.70 µg/L	500.70 ppb	08:18:53
3	Se 196.026†	2073.6	2175.6	2390.0 µg/L	2390.0 ppb	08:18:53
3	SiO2†	64157.4	64745.3	11427 µg/L	11427 ppb	08:18:33
3	Si 251.611†	71329.3	75119.6	5278.8 µg/L	5278.8 ppb	08:18:33
3	Sn 189.927†	715.1	749.8	516.35 µg/L	516.35 ppb	08:18:53
3	Ti 334.940†	226369.3	238529.9	522.81 µg/L	522.81 ppb	08:18:33
3	Tl 190.801†	354.3	399.8	511.17 µg/L	511.17 ppb	08:18:53
3	U 409.014†	5997.2	6315.5	510.70 µg/L	510.70 ppb	08:18:33
3	V 292.402†	43813.6	46544.7	524.95 µg/L	524.95 ppb	08:18:33
3	Zn 213.857†	20776.8	21271.8	487.50 µg/L	487.50 ppb	08:18:53

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2070396.4	94.458	%	0.4099				0.43%
Sc RADIAL	169791.1	97.5	%	0.48				0.49%
Y 371.029	1306309.1	93.127	%	0.4305				0.46%
Ag 328.068†	29063.6	274.33	µg/L	0.752	274.33	ppb	0.752	0.27%
QC value within limits for Ag 328.068 Recovery = 109.73%								
Al 396.153Radial†	1199515.2	504690	µg/L	2003.2	504690	ppb	2003.2	0.40%
QC value within limits for Al 396.153Radial Recovery = 100.94%								
As 188.979†	350.8	490.64	µg/L	9.931	490.64	ppb	9.931	2.02%
QC value within limits for As 188.979 Recovery = 98.13%								
B 249.677†	14536.1	534.75	µg/L	1.736	534.75	ppb	1.736	0.32%
QC value within limits for B 249.677 Recovery = 106.95%								
Ba 233.527†	20566.1	502.93	µg/L	1.693	502.93	ppb	1.693	0.34%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	415681.7	244.68	µg/L	0.507	244.68	ppb	0.507	0.21%
QC value within limits for Be 313.107 Recovery = 97.87%								
Ca 317.933Radial†	2556243.1	484150	µg/L	1227.0	484150	ppb	1227.0	0.25%
QC value within limits for Ca 317.933Radial Recovery = 96.83%								
Cd 226.502†	20326.3	465.51	µg/L	1.785	465.51	ppb	1.785	0.38%
QC value within limits for Cd 226.502 Recovery = 93.10%								
Co 228.616†	10045.8	456.37	µg/L	2.321	456.37	ppb	2.321	0.51%

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   QC value within limits for Co 228.616  Recovery = 91.27%
Cr 267.716†          24421.1      478.92 µg/L        1.984      478.92 ppb        1.984   0.41%
   QC value within limits for Cr 267.716  Recovery = 95.78%
Cu 324.752†          72456.8      537.65 µg/L        0.308      537.65 ppb        0.308   0.06%
   QC value within limits for Cu 324.752  Recovery = 107.53%
Fe 238.204 Radial†  260377.4      186740 µg/L       1534.6      186740 ppb       1534.6   0.82%
   QC value within limits for Fe 238.204 Radial  Recovery = 93.37%
K 766.490 Radial†     9533.9      5217.7 µg/L        36.33      5217.7 ppb        36.33   0.70%
   QC value within limits for K 766.490 Radial  Recovery = 104.35%
Mg 279.077 IEC†    234829.9      481580 µg/L       3844.9      481580 ppb       3844.9   0.80%
   QC value within limits for Mg 279.077 IEC  Recovery = 96.32%
Mn 257.610†         164195.2      472.02 µg/L        0.878      472.02 ppb        0.878   0.19%
   QC value within limits for Mn 257.610  Recovery = 94.40%
Mo 202.031†           4623.9      501.64 µg/L        1.913      501.64 ppb        1.913   0.38%
   QC value within limits for Mo 202.031  Recovery = 100.33%
Na 589.592 Radial†   21722.2      5213.8 µg/L        47.04      5213.8 ppb        47.04   0.90%
   QC value within limits for Na 589.592 Radial  Recovery = 104.28%
Ni 231.604†           8863.7      446.28 µg/L        1.787      446.28 ppb        1.787   0.40%
   QC value within limits for Ni 231.604  Recovery = 89.26%
P 214.914†            1505.5      2495.1 µg/L         6.74      2495.1 ppb         6.74   0.27%
   QC value within limits for P 214.914  Recovery = 99.81%
Pb 220.353†           1938.5      494.09 µg/L        3.988      494.09 ppb        3.988   0.81%
   QC value within limits for Pb 220.353  Recovery = 98.82%
S 181.975 Axial†       643.9      2750.6 µg/L        23.83      2750.6 ppb        23.83   0.87%
   QC value within limits for S 181.975 Axial  Recovery = 110.02%
Sb 206.836†            616.2      503.98 µg/L        6.856      503.98 ppb        6.856   1.36%
   QC value within limits for Sb 206.836  Recovery = 100.80%
Se 196.026†           2157.0      2369.2 µg/L        19.14      2369.2 ppb        19.14   0.81%
   QC value within limits for Se 196.026  Recovery = 94.77%
SiO2†                64630.2       11406 µg/L         17.6       11406 ppb         17.6   0.15%
   QC value within limits for SiO2  Recovery = 106.65%
Si 251.611†          75012.8      5271.5 µg/L        8.04      5271.5 ppb         8.04   0.15%
   QC value within limits for Si 251.611  Recovery = 105.43%
Sn 189.927†            738.7      511.80 µg/L        4.687      511.80 ppb        4.687   0.92%
   QC value within limits for Sn 189.927  Recovery = 102.36%
Sr 421.552†         118246.3      509.20 µg/L        3.994      509.20 ppb        3.994   0.78%
   QC value within limits for Sr 421.552  Recovery = 101.84%
Ti 334.940†         238236.5      522.19 µg/L        0.565      522.19 ppb        0.565   0.11%
   QC value within limits for Ti 334.940  Recovery = 104.44%
Tl 190.801†            395.0      504.63 µg/L        7.548      504.63 ppb        7.548   1.50%
   QC value within limits for Tl 190.801  Recovery = 100.93%
U 409.014†            6211.8      500.87 µg/L       10.246      500.87 ppb       10.246   2.05%
   QC value within limits for U 409.014  Recovery = 100.17%
V 292.402†           46415.4      523.61 µg/L        1.208      523.61 ppb        1.208   0.23%
   QC value within limits for V 292.402  Recovery = 104.72%
Zn 213.857†          21229.0      486.34 µg/L        1.378      486.34 ppb        1.378   0.28%
   QC value within limits for Zn 213.857  Recovery = 97.27%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 105
Date Collected: 7/2/2009 08:19:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	166650.1	166650.1	95.7	%			08:19:44
1	Al 396.153Radial†	1159450.7	1211165.1	509610	µg/L	509610	ppb	08:19:39
1	Ca 317.933Radial†	2502297.5	2612665.9	494840	µg/L	494840	ppb	08:19:39
1	Fe 238.204 Radial†	626688.9	654575.1	469430	µg/L	469430	ppb	08:19:39
1	K 766.490 Radial†	871.3	139.9	76.584	µg/L	76.584	ppb	08:19:44
1	Mg 279.077 IEC†	228127.5	238226.0	488060	µg/L	488060	ppb	08:19:44
1	Na 589.592 Radial†	1963145.1	2050300.1	492120	µg/L	492120	ppb	08:19:39
1	Sr 421.552†	1186.6	1172.6	5.0495	µg/L	5.0495	ppb	08:19:44
1	Sc 361.383	2033346.3	2033346.3	92.768	%			08:20:21
1	Y 371.029	1266592.0	1266592.0	90.295	%			08:20:21
1	Ag 328.068†	-4485.6	-4013.4	1.2259	µg/L	1.2259	ppb	08:20:27
1	As 188.979†	29.9	30.0	207.51	µg/L	207.51	ppb	08:20:47
1	B 249.677†	4081.0	4190.6	23.476	µg/L	23.476	ppb	08:20:27
1	Ba 233.527†	257.7	358.7	8.6181	µg/L	8.6181	ppb	08:20:47
1	Be 313.107†	-2077.7	-5898.4	-3.3530	µg/L	-3.3530	ppb	08:20:27
1	Cd 226.502†	1331.4	1575.5	10.960	µg/L	10.960	ppb	08:20:27
1	Co 228.616†	-1.6	99.8	4.4057	µg/L	4.4057	ppb	08:20:47
1	Cr 267.716†	-409.4	-259.0	-5.1667	µg/L	-5.1667	ppb	08:20:27
1	Cu 324.752†	-7719.9	-12986.7	-28.770	µg/L	-28.770	ppb	08:20:27
1	Mn 257.610†	-12621.1	-13661.3	-36.115	µg/L	-36.115	ppb	08:20:27
1	Mo 202.031†	-218.0	-234.0	-6.5681	µg/L	-6.5681	ppb	08:20:47
1	Ni 231.604†	381.9	-31.6	-1.6017	µg/L	-1.6017	ppb	08:20:47
1	P 214.914†	422.2	221.0	30.465	µg/L	30.465	ppb	08:20:47
1	Pb 220.353†	-10.7	-55.9	13.600	µg/L	13.600	ppb	08:20:47
1	S 181.975 Axial†	81.4	43.4	52.467	µg/L	52.467	ppb	08:20:47
1	Sb 206.836†	24.4	5.0	-21.535	µg/L	-21.535	ppb	08:20:47
1	Se 196.026†	-121.9	-151.0	-53.507	µg/L	-53.507	ppb	08:20:47
1	SiO2†	2502.4	-474.9	-83.812	µg/L	-83.812	ppb	08:20:47
1	Si 251.611†	-395.9	-817.1	-50.682	µg/L	-50.682	ppb	08:20:47
1	Sn 189.927†	-431.4	-472.2	54.060	µg/L	54.060	ppb	08:20:47
1	Ti 334.940†	14642.0	14676.6	16.103	µg/L	16.103	ppb	08:20:27
1	Tl 190.801†	12.7	38.4	2.9016	µg/L	2.9016	ppb	08:20:47
1	U 409.014†	140847.9	151794.9	14175	µg/L	14175	ppb	08:20:27
1	V 292.402†	-5648.2	-5925.4	-3.0620	µg/L	-3.0620	ppb	08:20:27
1	Zn 213.857†	3437.4	2982.6	27.021	µg/L	27.021	ppb	08:20:47
2	Sc RADIAL	167206.9	167206.9	96.1	%			08:19:58
2	Al 396.153Radial†	1162147.6	1209939.5	509090	µg/L	509090	ppb	08:19:52
2	Ca 317.933Radial†	2502906.3	2604595.9	493310	µg/L	493310	ppb	08:19:52
2	Fe 238.204 Radial†	626963.5	652681.2	468070	µg/L	468070	ppb	08:19:52
2	K 766.490 Radial†	881.8	147.9	80.929	µg/L	80.929	ppb	08:19:58
2	Mg 279.077 IEC†	228156.8	237463.0	486490	µg/L	486490	ppb	08:19:58
2	Na 589.592 Radial†	1968504.9	2049051.1	491820	µg/L	491820	ppb	08:19:52
2	Sr 421.552†	1306.8	1293.6	5.5707	µg/L	5.5707	ppb	08:19:58
2	Sc 361.383	2037306.7	2037306.7	92.949	%			08:20:53
2	Y 371.029	1270575.6	1270575.6	90.579	%			08:20:53
2	Ag 328.068†	-4514.2	-4034.7	0.9258	µg/L	0.9258	ppb	08:20:59
2	As 188.979†	16.9	15.9	184.67	µg/L	184.67	ppb	08:21:20
2	B 249.677†	4163.7	4271.0	27.185	µg/L	27.185	ppb	08:20:59
2	Ba 233.527†	262.9	363.7	8.7392	µg/L	8.7392	ppb	08:21:20
2	Be 313.107†	-2051.4	-5865.7	-3.3360	µg/L	-3.3360	ppb	08:20:59
2	Cd 226.502†	1410.5	1657.8	13.074	µg/L	13.074	ppb	08:20:59
2	Co 228.616†	-3.8	97.5	4.3041	µg/L	4.3041	ppb	08:21:20
2	Cr 267.716†	-428.0	-278.1	-5.5424	µg/L	-5.5424	ppb	08:20:59
2	Cu 324.752†	-7789.4	-13045.3	-29.367	µg/L	-29.367	ppb	08:20:59
2	Mn 257.610†	-12771.7	-13796.8	-36.512	µg/L	-36.512	ppb	08:20:59
2	Mo 202.031†	-206.4	-221.1	-5.2414	µg/L	-5.2414	ppb	08:21:20
2	Ni 231.604†	359.7	-56.3	-2.8464	µg/L	-2.8464	ppb	08:21:20
2	P 214.914†	409.9	206.9	7.6491	µg/L	7.6491	ppb	08:21:20
2	Pb 220.353†	-24.8	-71.1	9.9606	µg/L	9.9606	ppb	08:21:20

2	S 181.975 Axial†	93.7	56.5	111.02	µg/L	111.02 ppb	08:21:20
2	Sb 206.836†	17.2	-2.8	-28.173	µg/L	-28.173 ppb	08:21:20
2	Se 196.026†	-150.5	-181.4	-87.522	µg/L	-87.522 ppb	08:21:20
2	SiO2†	2506.5	-475.7	-83.957	µg/L	-83.957 ppb	08:21:20
2	Si 251.611†	-423.9	-846.4	-52.935	µg/L	-52.935 ppb	08:21:20
2	Sn 189.927†	-422.5	-461.7	57.869	µg/L	57.869 ppb	08:21:20
2	Ti 334.940†	14368.5	14351.6	15.421	µg/L	15.421 ppb	08:20:59
2	Tl 190.801†	3.3	28.3	-11.216	µg/L	-11.216 ppb	08:21:20
2	U 409.014†	142089.0	152835.1	14273	µg/L	14273 ppb	08:20:59
2	V 292.402†	-5719.9	-5990.7	-3.7136	µg/L	-3.7136 ppb	08:20:59
2	Zn 213.857†	3453.8	2993.0	27.419	µg/L	27.419 ppb	08:21:20
3	Sc RADIAL	167815.3	167815.3	96.4	%		08:20:11
3	Al 396.153Radial†	1154384.3	1197501.6	503860	µg/L	503860 ppb	08:20:05
3	Ca 317.933Radial†	2483553.4	2575077.3	487720	µg/L	487720 ppb	08:20:05
3	Fe 238.204 Radial†	622178.9	645352.5	462810	µg/L	462810 ppb	08:20:05
3	K 766.490 Radial†	846.3	107.7	58.945	µg/L	58.945 ppb	08:20:11
3	Mg 279.077 IEC†	225904.3	234265.7	479940	µg/L	479940 ppb	08:20:11
3	Na 589.592 Radial†	1956049.6	2028703.4	486930	µg/L	486930 ppb	08:20:05
3	Sr 421.552†	1163.6	1140.2	4.9098	µg/L	4.9098 ppb	08:20:11
3	Sc 361.383	2031795.9	2031795.9	92.697	%		08:21:26
3	Y 371.029	1266713.3	1266713.3	90.304	%		08:21:26
3	Ag 328.068†	-4449.7	-3978.3	1.0087	µg/L	1.0087 ppb	08:21:32
3	As 188.979†	26.2	26.0	198.99	µg/L	198.99 ppb	08:21:52
3	B 249.677†	4158.0	4277.0	29.083	µg/L	29.083 ppb	08:21:32
3	Ba 233.527†	267.3	369.2	8.8728	µg/L	8.8728 ppb	08:21:52
3	Be 313.107†	-2009.8	-5826.8	-3.3128	µg/L	-3.3128 ppb	08:21:32
3	Cd 226.502†	1388.9	1638.6	13.014	µg/L	13.014 ppb	08:21:32
3	Co 228.616†	5.4	107.4	4.7519	µg/L	4.7519 ppb	08:21:52
3	Cr 267.716†	-419.0	-269.7	-5.3761	µg/L	-5.3761 ppb	08:21:32
3	Cu 324.752†	-7719.3	-12992.3	-29.700	µg/L	-29.700 ppb	08:21:32
3	Mn 257.610†	-12640.6	-13692.7	-36.248	µg/L	-36.248 ppb	08:21:32
3	Mo 202.031†	-214.9	-230.9	-6.4939	µg/L	-6.4939 ppb	08:21:52
3	Ni 231.604†	368.3	-46.0	-2.3261	µg/L	-2.3261 ppb	08:21:52
3	P 214.914†	422.1	221.3	36.629	µg/L	36.629 ppb	08:21:52
3	Pb 220.353†	-28.9	-75.6	8.5277	µg/L	8.5277 ppb	08:21:52
3	S 181.975 Axial†	79.0	40.9	43.527	µg/L	43.527 ppb	08:21:52
3	Sb 206.836†	35.7	17.3	-10.293	µg/L	-10.293 ppb	08:21:52
3	Se 196.026†	-116.2	-145.0	-48.160	µg/L	-48.160 ppb	08:21:52
3	SiO2†	2552.3	-419.0	-73.951	µg/L	-73.951 ppb	08:21:52
3	Si 251.611†	-363.2	-782.1	-48.171	µg/L	-48.171 ppb	08:21:52
3	Sn 189.927†	-431.6	-472.7	49.968	µg/L	49.968 ppb	08:21:52
3	Ti 334.940†	14392.2	14419.2	15.767	µg/L	15.767 ppb	08:21:32
3	Tl 190.801†	7.0	32.3	-4.9313	µg/L	-4.9313 ppb	08:21:52
3	U 409.014†	141495.4	152609.3	14254	µg/L	14254 ppb	08:21:32
3	V 292.402†	-5695.0	-5980.5	-4.0732	µg/L	-4.0732 ppb	08:21:32
3	Zn 213.857†	3465.8	3016.0	28.519	µg/L	28.519 ppb	08:21:52

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2034149.7	92.805	%	0.1297				0.14%
Sc RADIAL	167224.1	96.1	%	0.33				0.35%
Y 371.029	1267960.3	90.393	%	0.1615				0.18%
Ag 328.068†	-4008.8	1.0534	µg/L	0.15496	1.0534	ppb	0.15496	14.71%
Al 396.153Radial†	1206202.1	507520	µg/L	3180.8	507520	ppb	3180.8	0.63%
QC value within limits for Al 396.153Radial Recovery = 101.50%								
As 188.979†	24.0	197.06	µg/L	11.546	197.06	ppb	11.546	5.86%
B 249.677†	4246.2	26.582	µg/L	2.8517	26.582	ppb	2.8517	10.73%
Ba 233.527†	363.9	8.7434	µg/L	0.12740	8.7434	ppb	0.12740	1.46%
Be 313.107†	-5863.7	-3.3339	µg/L	0.02017	-3.3339	ppb	0.02017	0.60%
Ca 317.933Radial†	2597446.4	491960	µg/L	3747.8	491960	ppb	3747.8	0.76%
QC value within limits for Ca 317.933Radial Recovery = 98.39%								
Cd 226.502†	1624.0	12.349	µg/L	1.2036	12.349	ppb	1.2036	9.75%
Co 228.616†	101.5	4.4872	µg/L	0.23476	4.4872	ppb	0.23476	5.23%
Cr 267.716†	-268.9	-5.3617	µg/L	0.18829	-5.3617	ppb	0.18829	3.51%
Cu 324.752†	-13008.1	-29.279	µg/L	0.4709	-29.279	ppb	0.4709	1.61%
Fe 238.204 Radial†	650869.6	466770	µg/L	3493.1	466770	ppb	3493.1	0.75%
QC value within limits for Fe 238.204 Radial Recovery = 93.35%								
K 766.490 Radial†	131.8	72.152	µg/L	11.6427	72.152	ppb	11.6427	16.14%
Mg 279.077 IEC†	236651.5	484830	µg/L	4305.7	484830	ppb	4305.7	0.89%

QC value within limits for Mg 279.077 IEC Recovery = 96.97%

Mn 257.610†	-13716.9	36.291 µg/L	0.2023	-36.291 ppb	0.2023	0.56%
Mo 202.031†	-228.7	-6.1012 µg/L	0.74551	-6.1012 ppb	0.74551	12.22%
Na 589.592 Radial†	2042684.9	490290 µg/L	2910.1	490290 ppb	2910.1	0.59%

QC value within limits for Na 589.592 Radial Recovery = 98.06%

Ni 231.604†	-44.6	-2.2580 µg/L	0.62515	-2.2580 ppb	0.62515	27.69%
P 214.914†	216.4	24.915 µg/L	15.2667	24.915 ppb	15.2667	61.28%
Pb 220.353†	-67.5	10.696 µg/L	2.6148	10.696 ppb	2.6148	24.45%
S 181.975 Axial†	46.9	69.003 µg/L	36.6575	69.003 ppb	36.6575	53.12%
Sb 206.836†	6.5	-20.000 µg/L	9.0384	-20.000 ppb	9.0384	45.19%
Se 196.026†	-159.1	-63.063 µg/L	21.3501	-63.063 ppb	21.3501	33.86%
SiO2†	-456.5	-80.573 µg/L	5.7358	-80.573 ppb	5.7358	7.12%
Si 251.611†	-815.2	-50.596 µg/L	2.3832	-50.596 ppb	2.3832	4.71%
Sn 189.927†	-468.9	53.966 µg/L	3.9516	53.966 ppb	3.9516	7.32%
Sr 421.552†	1202.1	5.1767 µg/L	0.34831	5.1767 ppb	0.34831	6.73%
Ti 334.940†	14482.4	15.764 µg/L	0.3412	15.764 ppb	0.3412	2.16%
Tl 190.801†	33.0	-4.4152 µg/L	7.07291	-4.4152 ppb	7.07291	160.20%
U 409.014†	152413.1	14234 µg/L	52.1	14234 ppb	52.1	0.37%

QC value within limits for U 409.014 Recovery = 94.89%

V 292.402†	-5965.5	-3.6163 µg/L	0.51256	-3.6163 ppb	0.51256	14.17%
Zn 213.857†	2997.2	27.653 µg/L	0.7758	27.653 ppb	0.7758	2.81%

All analyte(s) passed QC.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 108
Date Collected: 7/2/2009 08:22:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174517.6	174517.6	100	%			08:22:43
1	Al 396.153Radial†	756.3	924.3	14.594	µg/L	14.594	ppb	08:23:04
1	Ca 317.933Radial†	1540.5	663.0	125.56	µg/L	125.56	ppb	08:23:04
1	Fe 238.204 Radial†	35.6	61.7	371.67	µg/L	371.67	ppb	08:23:04
1	K 766.490 Radial†	536618.8	534437.4	292490	µg/L	292490	ppb	08:22:38
1	Mg 279.077 IEC†	-103.0	-145.9	-53.698	µg/L	-53.698	ppb	08:23:04
1	Na 589.592 Radial†	1049.3	928.1	222.76	µg/L	222.76	ppb	08:22:43
1	Sr 421.552†	2277762.6	2271705.3	9782.6	µg/L	9782.6	ppb	08:22:38
1	Sc 361.383	2172235.7	2172235.7	99.105	%			08:24:37
1	Y 371.029	1368704.2	1368704.2	97.575	%			08:24:37
1	Ag 328.068†	-6579.5	-5817.0	18.193	µg/L	18.193	ppb	08:24:37
1	As 188.979†	6306.9	6361.7	10118	µg/L	10118	ppb	08:24:43
1	B 249.677†	122394.6	123291.8	5033.7	µg/L	5033.7	ppb	08:24:37
1	Ba 233.527†	613448.3	619071.6	15128	µg/L	15128	ppb	08:24:37
1	Be 313.107†	4980515.2	5021855.4	2965.8	µg/L	2965.8	ppb	08:24:26
1	Cd 226.502†	430878.9	434912.2	10262	µg/L	10262	ppb	08:24:37
1	Co 228.616†	215708.7	217759.2	9894.3	µg/L	9894.3	ppb	08:24:37
1	Cr 267.716†	1252402.2	1263899.9	24763	µg/L	24763	ppb	08:24:37
1	Cu 324.752†	2862858.7	2884059.7	20402	µg/L	20402	ppb	08:24:37
1	Mn 257.610†	3332212.0	3362262.2	9640.7	µg/L	9640.7	ppb	08:24:37
1	Mo 202.031†	91246.5	92071.8	9842.6	µg/L	9842.6	ppb	08:24:37
1	Ni 231.604†	196998.9	198335.5	9986.6	µg/L	9986.6	ppb	08:24:37
1	P 214.914†	10040.2	9896.8	13801	µg/L	13801	ppb	08:24:43
1	Pb 220.353†	107859.2	108789.2	25386	µg/L	25386	ppb	08:24:37
1	S 181.975 Axial†	11391.8	11450.4	50628	µg/L	50628	ppb	08:24:43
1	Sb 206.836†	11875.2	11961.2	10349	µg/L	10349	ppb	08:24:43
1	Se 196.026†	8846.0	8906.4	9855.2	µg/L	9855.2	ppb	08:24:43
1	SiO2†	574797.0	576817.8	101800	µg/L	101800	ppb	08:24:37
1	Si 251.611†	662677.1	668274.0	46297	µg/L	46297	ppb	08:24:37
1	Sn 189.927†	23971.3	24180.7	10618	µg/L	10618	ppb	08:24:43
1	Ti 334.940†	4327370.5	4365361.4	9874.9	µg/L	9874.9	ppb	08:24:26
1	Tl 190.801†	6993.0	7080.9	9938.5	µg/L	9938.5	ppb	08:24:43
1	U 409.014†	1152.5	1129.7	106.51	µg/L	106.51	ppb	08:24:37
1	V 292.402†	925039.6	933560.4	10205	µg/L	10205	ppb	08:24:37
1	Zn 213.857†	619957.1	624835.6	15080	µg/L	15080	ppb	08:24:37
2	Sc RADIAL	175133.7	175133.7	101	%			08:23:16
2	Al 396.153Radial†	641.6	807.6	-31.181	µg/L	-31.181	ppb	08:23:36
2	Ca 317.933Radial†	1243.7	362.5	68.661	µg/L	68.661	ppb	08:23:36
2	Fe 238.204 Radial†	-45.8	-19.3	310.71	µg/L	310.71	ppb	08:23:36
2	K 766.490 Radial†	542464.0	538364.2	294640	µg/L	294640	ppb	08:23:10
2	Mg 279.077 IEC†	-125.8	-168.2	-101.52	µg/L	-101.52	ppb	08:23:36
2	Na 589.592 Radial†	520.4	398.8	95.711	µg/L	95.711	ppb	08:23:16
2	Sr 421.552†	2304002.1	2289793.1	9860.5	µg/L	9860.5	ppb	08:23:10
2	Sc 361.383	2196984.3	2196984.3	100.23	%			08:25:02
2	Y 371.029	1380892.4	1380892.4	98.444	%			08:25:02
2	Ag 328.068†	-6569.4	-5732.2	18.267	µg/L	18.267	ppb	08:25:02
2	As 188.979†	6286.9	6270.0	9972.0	µg/L	9972.0	ppb	08:25:08
2	B 249.677†	122838.1	122343.1	4995.0	µg/L	4995.0	ppb	08:25:02
2	Ba 233.527†	615030.4	613677.3	14997	µg/L	14997	ppb	08:25:02
2	Be 313.107†	4989529.2	4974237.0	2937.7	µg/L	2937.7	ppb	08:24:52
2	Cd 226.502†	432318.0	431450.4	10180	µg/L	10180	ppb	08:25:02
2	Co 228.616†	216247.2	215844.5	9807.3	µg/L	9807.3	ppb	08:25:02
2	Cr 267.716†	1255266.7	1252522.3	24540	µg/L	24540	ppb	08:25:02
2	Cu 324.752†	2866123.3	2854775.9	20194	µg/L	20194	ppb	08:25:02
2	Mn 257.610†	3340119.2	3332275.3	9554.8	µg/L	9554.8	ppb	08:25:02
2	Mo 202.031†	91462.3	91250.0	9754.8	µg/L	9754.8	ppb	08:25:02
2	Ni 231.604†	197514.0	196610.1	9899.7	µg/L	9899.7	ppb	08:25:02
2	P 214.914†	10049.4	9791.8	13652	µg/L	13652	ppb	08:25:08
2	Pb 220.353†	108251.5	107954.7	25191	µg/L	25191	ppb	08:25:02

2	S 181.975 Axial†	11375.2	11304.4	49983	µg/L	49983 ppb	08:25:08
2	Sb 206.836†	11875.9	11827.0	10232	µg/L	10232 ppb	08:25:08
2	Se 196.026†	8803.9	8763.8	9697.4	µg/L	9697.4 ppb	08:25:08
2	SiO2†	578033.4	573513.3	101220	µg/L	101220 ppb	08:25:02
2	Si 251.611†	666104.0	664160.6	46015	µg/L	46015 ppb	08:25:02
2	Sn 189.927†	23899.7	23836.8	10467	µg/L	10467 ppb	08:25:08
2	Ti 334.940†	4335092.1	4323877.7	9781.1	µg/L	9781.1 ppb	08:24:52
2	Tl 190.801†	6971.8	6980.3	9797.2	µg/L	9797.2 ppb	08:25:08
2	U 409.014†	1018.4	982.8	92.671	µg/L	92.671 ppb	08:25:02
2	V 292.402†	926557.4	924560.2	10107	µg/L	10107 ppb	08:25:02
2	Zn 213.857†	621494.7	619322.9	14947	µg/L	14947 ppb	08:25:02
3	Sc RADIAL	175735.3	175735.3	101	%		08:23:49
3	Al 396.153Radial†	667.2	830.8	-22.420	µg/L	-22.420 ppb	08:24:09
3	Ca 317.933Radial†	1243.5	358.1	67.821	µg/L	67.821 ppb	08:24:09
3	Fe 238.204 Radial†	-41.6	-15.0	314.60	µg/L	314.60 ppb	08:24:09
3	K 766.490 Radial†	541608.9	535671.5	293160	µg/L	293160 ppb	08:23:43
3	Mg 279.077 IEC†	-118.6	-160.6	-85.314	µg/L	-85.314 ppb	08:24:09
3	Na 589.592 Radial†	454.2	331.4	79.546	µg/L	79.546 ppb	08:23:49
3	Sr 421.552†	2299570.1	2277564.1	9807.8	µg/L	9807.8 ppb	08:23:43
3	Sc 361.383	2187799.0	2187799.0	99.815	%		08:25:27
3	Y 371.029	1376416.1	1376416.1	98.125	%		08:25:27
3	Ag 328.068†	-6586.4	-5776.7	18.095	µg/L	18.095 ppb	08:25:27
3	As 188.979†	6289.2	6298.7	10018	µg/L	10018 ppb	08:25:33
3	B 249.677†	122660.7	122680.0	5008.7	µg/L	5008.7 ppb	08:25:27
3	Ba 233.527†	614066.0	615287.3	15036	µg/L	15036 ppb	08:25:27
3	Be 313.107†	5002282.7	5007913.6	2957.6	µg/L	2957.6 ppb	08:25:17
3	Cd 226.502†	431473.3	432414.9	10203	µg/L	10203 ppb	08:25:27
3	Co 228.616†	215878.9	216381.4	9831.6	µg/L	9831.6 ppb	08:25:27
3	Cr 267.716†	1253429.9	1255940.0	24607	µg/L	24607 ppb	08:25:27
3	Cu 324.752†	2864411.2	2865065.8	20267	µg/L	20267 ppb	08:25:27
3	Mn 257.610†	3334871.2	3341008.0	9579.8	µg/L	9579.8 ppb	08:25:27
3	Mo 202.031†	91324.5	91495.1	9781.0	µg/L	9781.0 ppb	08:25:27
3	Ni 231.604†	197161.3	197084.1	9923.6	µg/L	9923.6 ppb	08:25:27
3	P 214.914†	10056.4	9840.9	13727	µg/L	13727 ppb	08:25:33
3	Pb 220.353†	108125.5	108281.8	25268	µg/L	25268 ppb	08:25:27
3	S 181.975 Axial†	11399.7	11376.5	50302	µg/L	50302 ppb	08:25:33
3	Sb 206.836†	11828.8	11829.5	10234	µg/L	10234 ppb	08:25:33
3	Se 196.026†	8854.1	8851.0	9793.9	µg/L	9793.9 ppb	08:25:33
3	SiO2†	579355.4	577259.0	101880	µg/L	101880 ppb	08:25:27
3	Si 251.611†	667966.9	668817.0	46339	µg/L	46339 ppb	08:25:27
3	Sn 189.927†	24007.1	24044.5	10558	µg/L	10558 ppb	08:25:33
3	Ti 334.940†	4348967.2	4355936.7	9853.6	µg/L	9853.6 ppb	08:25:17
3	Tl 190.801†	7007.3	7045.1	9888.5	µg/L	9888.5 ppb	08:25:33
3	U 409.014†	1208.7	1177.7	111.05	µg/L	111.05 ppb	08:25:27
3	V 292.402†	925650.2	927532.4	10140	µg/L	10140 ppb	08:25:27
3	Zn 213.857†	620473.5	620903.0	14985	µg/L	14985 ppb	08:25:27

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	2185673.0	99.718	%	0.5708				0.57%
Sc RADIAL	175128.9	101	%	0.3				0.35%
Y 371.029	1375337.6	98.048	%	0.4395				0.45%
Ag 328.068†	-5775.3	18.185	µg/L	0.0860	18.185	ppb	0.0860	0.47%
Al 396.153Radial†	854.2	-13.002	µg/L	24.2969	-13.002	ppb	24.2969	186.87%
As 188.979†	6310.1	10036	µg/L	74.6	10036	ppb	74.6	0.74%
QC value within limits for As 188.979 Recovery = 100.36%								
B 249.677†	122771.6	5012.4	µg/L	19.63	5012.4	ppb	19.63	0.39%
QC value within limits for B 249.677 Recovery = 100.25%								
Ba 233.527†	616012.1	15054	µg/L	67.7	15054	ppb	67.7	0.45%
QC value within limits for Ba 233.527 Recovery = 100.36%								
Be 313.107†	5001335.3	2953.7	µg/L	14.46	2953.7	ppb	14.46	0.49%
QC value within limits for Be 313.107 Recovery = 98.46%								
Ca 317.933Radial†	461.2	87.348	µg/L	33.0974	87.348	ppb	33.0974	37.89%
Cd 226.502†	432925.8	10215	µg/L	42.2	10215	ppb	42.2	0.41%
QC value within limits for Cd 226.502 Recovery = 102.15%								
Co 228.616†	216661.7	9844.4	µg/L	44.88	9844.4	ppb	44.88	0.46%
QC value within limits for Co 228.616 Recovery = 98.44%								
Cr 267.716†	1257454.1	24636	µg/L	114.4	24636	ppb	114.4	0.46%
QC value within limits for Cr 267.716 Recovery = 98.55%								

Cu 324.752†	2867967.1	20288 µg/L	105.1	20288 ppb	105.1	0.52%
QC value within limits for Cu 324.752 Recovery = 101.44%						
Fe 238.204 Radial†	9.2	332.33 µg/L	34.129	332.33 ppb	34.129	10.27%
K 766.490 Radial†	536157.7	293430 µg/L	1098.9	293430 ppb	1098.9	0.37%
QC value within limits for K 766.490 Radial Recovery = 97.81%						
Mg 279.077 IEC†	-158.2	-80.176 µg/L	24.3192	-80.176 ppb	24.3192	30.33%
Mn 257.610†	3345181.9	9591.8 µg/L	44.22	9591.8 ppb	44.22	0.46%
QC value within limits for Mn 257.610 Recovery = 95.92%						
Mo 202.031†	91605.6	9792.8 µg/L	45.11	9792.8 ppb	45.11	0.46%
QC value within limits for Mo 202.031 Recovery = 97.93%						
Na 589.592 Radial†	552.8	132.67 µg/L	78.438	132.67 ppb	78.438	59.12%
Ni 231.604†	197343.2	9936.6 µg/L	44.88	9936.6 ppb	44.88	0.45%
QC value within limits for Ni 231.604 Recovery = 99.37%						
P 214.914†	9843.2	13727 µg/L	74.4	13727 ppb	74.4	0.54%
QC value within limits for P 214.914 Recovery = 91.51%						
Pb 220.353†	108341.9	25282 µg/L	98.1	25282 ppb	98.1	0.39%
QC value within limits for Pb 220.353 Recovery = 101.13%						
S 181.975 Axial†	11377.1	50304 µg/L	322.8	50304 ppb	322.8	0.64%
QC value within limits for S 181.975 Axial Recovery = 100.61%						
Sb 206.836†	11872.5	10272 µg/L	66.6	10272 ppb	66.6	0.65%
QC value within limits for Sb 206.836 Recovery = 102.72%						
Se 196.026†	8840.4	9782.2 µg/L	79.56	9782.2 ppb	79.56	0.81%
QC value within limits for Se 196.026 Recovery = 97.82%						
SiO2†	575863.4	101630 µg/L	361.3	101630 ppb	361.3	0.36%
QC value within limits for SiO2 Recovery = 94.98%						
Si 251.611†	667083.9	46217 µg/L	176.0	46217 ppb	176.0	0.38%
QC value within limits for Si 251.611 Recovery = 92.43%						
Sn 189.927†	24020.7	10548 µg/L	76.1	10548 ppb	76.1	0.72%
QC value within limits for Sn 189.927 Recovery = 105.48%						
Sr 421.552†	2279687.5	9816.9 µg/L	39.74	9816.9 ppb	39.74	0.40%
QC value within limits for Sr 421.552 Recovery = 98.17%						
Ti 334.940†	4348391.9	9836.5 µg/L	49.19	9836.5 ppb	49.19	0.50%
QC value within limits for Ti 334.940 Recovery = 98.37%						
Tl 190.801†	7035.4	9874.7 µg/L	71.67	9874.7 ppb	71.67	0.73%
QC value within limits for Tl 190.801 Recovery = 98.75%						
U 409.014†	1096.8	103.41 µg/L	9.574	103.41 ppb	9.574	9.26%
V 292.402†	928551.0	10151 µg/L	50.1	10151 ppb	50.1	0.49%
QC value within limits for V 292.402 Recovery = 101.51%						
Zn 213.857†	621687.2	15004 µg/L	68.5	15004 ppb	68.5	0.46%
QC value within limits for Zn 213.857 Recovery = 100.02%						

All analyte(s) passed QC.

Sequence No.: 13
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 08:25:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176874.9	176874.9	102	%			08:26:17
1	Al 396.153Radial†	14121.9	14067.0	5899.6	µg/L	5899.6	ppb	08:26:22
1	Ca 317.933Radial†	32923.2	31525.5	5970.9	µg/L	5970.9	ppb	08:26:22
1	Fe 238.204 Radial†	8018.4	7917.0	5694.7	µg/L	5694.7	ppb	08:26:22
1	K 766.490 Radial†	10961.8	10017.2	5482.2	µg/L	5482.2	ppb	08:26:22
1	Mg 279.077 IEC†	3035.2	2943.7	6043.7	µg/L	6043.7	ppb	08:26:22
1	Na 589.592 Radial†	42725.0	41926.3	10063	µg/L	10063	ppb	08:26:17
1	Sr 421.552†	118318.3	116367.7	501.11	µg/L	501.11	ppb	08:26:17
1	Sc 361.383	2211112.5	2211112.5	100.88	%			08:26:56
1	Y 371.029	1407006.7	1407006.7	100.31	%			08:26:56
1	Ag 328.068†	57530.2	57851.3	513.80	µg/L	513.80	ppb	08:27:02
1	As 188.979†	320.6	315.6	503.89	µg/L	503.89	ppb	08:27:22
1	B 249.677†	12987.5	12665.9	515.33	µg/L	515.33	ppb	08:27:02
1	Ba 233.527†	21067.9	20965.4	512.69	µg/L	512.69	ppb	08:27:02
1	Be 313.107†	869229.5	858003.0	503.27	µg/L	503.27	ppb	08:26:56
1	Cd 226.502†	22008.8	21957.4	518.00	µg/L	518.00	ppb	08:27:02
1	Co 228.616†	11322.7	11325.7	514.60	µg/L	514.60	ppb	08:27:02
1	Cr 267.716†	26138.6	26093.4	511.67	µg/L	511.67	ppb	08:27:02
1	Cu 324.752†	75562.5	70239.7	497.63	µg/L	497.63	ppb	08:27:02
1	Mn 257.610†	176536.9	174943.6	501.66	µg/L	501.66	ppb	08:26:56
1	Mo 202.031†	4775.4	4734.8	506.38	µg/L	506.38	ppb	08:27:22
1	Ni 231.604†	10762.3	10225.3	514.86	µg/L	514.86	ppb	08:27:02
1	P 214.914†	1677.7	1428.9	2398.0	µg/L	2398.0	ppb	08:27:22
1	Pb 220.353†	2262.5	2198.4	513.71	µg/L	513.71	ppb	08:27:22
1	S 181.975 Axial†	272.9	226.2	998.63	µg/L	998.63	ppb	08:27:22
1	Sb 206.836†	605.7	579.2	504.28	µg/L	504.28	ppb	08:27:22
1	Se 196.026†	476.7	453.0	502.64	µg/L	502.64	ppb	08:27:22
1	SiO2†	35136.4	31658.1	5587.2	µg/L	5587.2	ppb	08:27:02
1	Si 251.611†	37534.1	36817.0	2559.5	µg/L	2559.5	ppb	08:27:02
1	Sn 189.927†	1178.1	1160.7	512.84	µg/L	512.84	ppb	08:27:22
1	Ti 334.940†	226514.9	223435.9	505.23	µg/L	505.23	ppb	08:26:56
1	Tl 190.801†	339.3	361.0	506.07	µg/L	506.07	ppb	08:27:22
1	U 409.014†	5447.2	5366.6	504.37	µg/L	504.37	ppb	08:27:02
1	V 292.402†	47219.9	46971.9	514.83	µg/L	514.83	ppb	08:27:02
1	Zn 213.857†	22110.6	21195.3	510.76	µg/L	510.76	ppb	08:27:02
2	Sc RADIAL	175548.5	175548.5	101	%			08:26:28
2	Al 396.153Radial†	12447.9	12512.2	5245.4	µg/L	5245.4	ppb	08:26:33
2	Ca 317.933Radial†	29372.6	28249.8	5350.5	µg/L	5350.5	ppb	08:26:33
2	Fe 238.204 Radial†	7361.0	7324.8	5269.6	µg/L	5269.6	ppb	08:26:33
2	K 766.490 Radial†	10472.7	9613.7	5261.4	µg/L	5261.4	ppb	08:26:33
2	Mg 279.077 IEC†	2699.0	2632.9	5406.6	µg/L	5406.6	ppb	08:26:33
2	Na 589.592 Radial†	43103.4	42619.2	10230	µg/L	10230	ppb	08:26:28
2	Sr 421.552†	118719.2	117644.9	506.61	µg/L	506.61	ppb	08:26:28
2	Sc 361.383	2230178.4	2230178.4	101.75	%			08:27:29
2	Y 371.029	1419805.4	1419805.4	101.22	%			08:27:29
2	Ag 328.068†	57131.0	56971.4	505.95	µg/L	505.95	ppb	08:27:35
2	As 188.979†	326.6	318.8	508.89	µg/L	508.89	ppb	08:27:55
2	B 249.677†	12835.4	12406.4	504.87	µg/L	504.87	ppb	08:27:35
2	Ba 233.527†	20823.0	20546.1	502.44	µg/L	502.44	ppb	08:27:35
2	Be 313.107†	875022.5	856330.1	502.29	µg/L	502.29	ppb	08:27:29
2	Cd 226.502†	21688.9	21456.6	506.20	µg/L	506.20	ppb	08:27:35
2	Co 228.616†	11199.0	11108.1	504.72	µg/L	504.72	ppb	08:27:35
2	Cr 267.716†	25947.2	25683.7	503.64	µg/L	503.64	ppb	08:27:35
2	Cu 324.752†	75019.4	69065.6	489.27	µg/L	489.27	ppb	08:27:35
2	Mn 257.610†	177817.4	174706.0	500.98	µg/L	500.98	ppb	08:27:29
2	Mo 202.031†	4807.6	4725.9	505.41	µg/L	505.41	ppb	08:27:55
2	Ni 231.604†	10614.0	9988.3	502.92	µg/L	502.92	ppb	08:27:35
2	P 214.914†	1683.8	1420.7	2385.4	µg/L	2385.4	ppb	08:27:55
2	Pb 220.353†	2275.2	2191.7	512.14	µg/L	512.14	ppb	08:27:55

2	S 181.975 Axial†	268.6	219.7	969.86 µg/L	969.86 ppb	08:27:55
2	Sb 206.836†	608.8	577.1	502.50 µg/L	502.50 ppb	08:27:55
2	Se 196.026†	473.6	445.9	494.70 µg/L	494.70 ppb	08:27:55
2	SiO2†	34751.7	30982.3	5468.0 µg/L	5468.0 ppb	08:27:35
2	Si 251.611†	37228.2	36198.3	2516.0 µg/L	2516.0 ppb	08:27:35
2	Sn 189.927†	1179.1	1151.7	508.60 µg/L	508.60 ppb	08:27:55
2	Ti 334.940†	227520.7	222504.8	503.15 µg/L	503.15 ppb	08:27:29
2	Tl 190.801†	337.7	356.6	499.97 µg/L	499.97 ppb	08:27:55
2	U 409.014†	5292.1	5167.9	485.78 µg/L	485.78 ppb	08:27:35
2	V 292.402†	46743.3	46103.3	505.33 µg/L	505.33 ppb	08:27:35
2	Zn 213.857†	21911.5	20812.3	501.58 µg/L	501.58 ppb	08:27:35
3	Sc RADIAL	176047.9	176047.9	101 %		08:26:39
3	Al 396.153Radial†	11995.3	12029.7	5042.3 µg/L	5042.3 ppb	08:26:44
3	Ca 317.933Radial†	28306.2	27112.8	5135.2 µg/L	5135.2 ppb	08:26:44
3	Fe 238.204 Radial†	7157.8	7103.1	5110.8 µg/L	5110.8 ppb	08:26:44
3	K 766.490 Radial†	10228.9	9343.2	5113.4 µg/L	5113.4 ppb	08:26:44
3	Mg 279.077 IEC†	2602.9	2530.3	5196.4 µg/L	5196.4 ppb	08:26:44
3	Na 589.592 Radial†	42597.5	41997.7	10080 µg/L	10080 ppb	08:26:39
3	Sr 421.552†	117392.3	115999.0	499.52 µg/L	499.52 ppb	08:26:39
3	Sc 361.383	2213163.5	2213163.5	100.97 %		08:28:02
3	Y 371.029	1408746.5	1408746.5	100.43 %		08:28:02
3	Ag 328.068†	56999.4	57272.7	508.62 µg/L	508.62 ppb	08:28:08
3	As 188.979†	328.0	322.6	514.90 µg/L	514.90 ppb	08:28:28
3	B 249.677†	12759.4	12428.0	505.80 µg/L	505.80 ppb	08:28:08
3	Ba 233.527†	20873.7	20753.6	507.51 µg/L	507.51 ppb	08:28:08
3	Be 313.107†	867768.4	855757.5	501.96 µg/L	501.96 ppb	08:28:02
3	Cd 226.502†	21687.3	21618.8	510.05 µg/L	510.05 ppb	08:28:08
3	Co 228.616†	11178.5	11172.5	507.65 µg/L	507.65 ppb	08:28:08
3	Cr 267.716†	26029.9	25961.7	509.09 µg/L	509.09 ppb	08:28:08
3	Cu 324.752†	75136.0	69747.9	494.07 µg/L	494.07 ppb	08:28:08
3	Mn 257.610†	176634.8	174878.5	501.47 µg/L	501.47 ppb	08:28:02
3	Mo 202.031†	4790.3	4745.2	507.47 µg/L	507.47 ppb	08:28:28
3	Ni 231.604†	10601.7	10056.3	506.35 µg/L	506.35 ppb	08:28:08
3	P 214.914†	1688.1	1437.7	2414.2 µg/L	2414.2 ppb	08:28:28
3	Pb 220.353†	2258.3	2192.1	512.20 µg/L	512.20 ppb	08:28:28
3	S 181.975 Axial†	264.8	217.9	961.89 µg/L	961.89 ppb	08:28:28
3	Sb 206.836†	597.7	570.7	496.93 µg/L	496.93 ppb	08:28:28
3	Se 196.026†	482.7	458.4	508.53 µg/L	508.53 ppb	08:28:28
3	SiO2†	34799.1	31291.7	5522.6 µg/L	5522.6 ppb	08:28:08
3	Si 251.611†	37232.5	36483.8	2536.0 µg/L	2536.0 ppb	08:28:08
3	Sn 189.927†	1182.8	1164.3	514.01 µg/L	514.01 ppb	08:28:28
3	Ti 334.940†	226476.3	223189.6	504.70 µg/L	504.70 ppb	08:28:02
3	Tl 190.801†	330.2	351.7	493.09 µg/L	493.09 ppb	08:28:28
3	U 409.014†	5397.5	5312.4	499.45 µg/L	499.45 ppb	08:28:08
3	V 292.402†	46718.5	46432.0	508.92 µg/L	508.92 ppb	08:28:08
3	Zn 213.857†	21849.0	20916.0	504.08 µg/L	504.08 ppb	08:28:08

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2218151.5	101.20	%	0.477				0.47%
Sc RADIAL	176157.1	101	%	0.4				0.38%
Y 371.029	1411852.9	100.65	%	0.495				0.49%
Ag 328.068†	57365.1	509.46	µg/L	3.993	509.46	ppb	3.993	0.78%
QC value within limits for Ag 328.068 Recovery = 101.89%								
Al 396.153Radial†	12869.6	5395.8	µg/L	447.97	5395.8	ppb	447.97	8.30%
QC value within limits for Al 396.153Radial Recovery = 107.92%								
As 188.979†	319.0	509.23	µg/L	5.512	509.23	ppb	5.512	1.08%
QC value within limits for As 188.979 Recovery = 101.85%								
B 249.677†	12500.1	508.67	µg/L	5.790	508.67	ppb	5.790	1.14%
QC value within limits for B 249.677 Recovery = 101.73%								
Ba 233.527†	20755.0	507.54	µg/L	5.126	507.54	ppb	5.126	1.01%
QC value within limits for Ba 233.527 Recovery = 101.51%								
Be 313.107†	856696.9	502.51	µg/L	0.684	502.51	ppb	0.684	0.14%
QC value within limits for Be 313.107 Recovery = 100.50%								
Ca 317.933Radial†	28962.7	5485.5	µg/L	433.94	5485.5	ppb	433.94	7.91%
QC value within limits for Ca 317.933Radial Recovery = 109.71%								
Cd 226.502†	21677.6	511.42	µg/L	6.017	511.42	ppb	6.017	1.18%
QC value within limits for Cd 226.502 Recovery = 102.28%								
Co 228.616†	11202.1	508.99	µg/L	5.076	508.99	ppb	5.076	1.00%

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   QC value within limits for Co 228.616  Recovery = 101.80%
Cr 267.716†            25912.9      508.13 µg/L         4.101      508.13 ppb          4.101   0.81%
   QC value within limits for Cr 267.716  Recovery = 101.63%
Cu 324.752†            69684.4      493.66 µg/L         4.197      493.66 ppb          4.197   0.85%
   QC value within limits for Cu 324.752  Recovery = 98.73%
Fe 238.204 Radial†      7448.3      5358.4 µg/L        301.88      5358.4 ppb         301.88   5.63%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.17%
K 766.490 Radial†       9658.0      5285.7 µg/L        185.60      5285.7 ppb         185.60   3.51%
   QC value within limits for K 766.490 Radial  Recovery = 105.71%
Mg 279.077 IEC†         2702.3      5548.9 µg/L        441.24      5548.9 ppb         441.24   7.95%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 110.98%
Mn 257.610†           174842.7      501.37 µg/L         0.353      501.37 ppb          0.353   0.07%
   QC value within limits for Mn 257.610  Recovery = 100.27%
Mo 202.031†             4735.3      506.42 µg/L         1.027      506.42 ppb          1.027   0.20%
   QC value within limits for Mo 202.031  Recovery = 101.28%
Na 589.592 Radial†     42181.1       10124 µg/L          91.5       10124 ppb           91.5   0.90%
   QC value within limits for Na 589.592 Radial  Recovery = 101.24%
Ni 231.604†            10090.0      508.04 µg/L         6.147      508.04 ppb          6.147   1.21%
   QC value within limits for Ni 231.604  Recovery = 101.61%
P 214.914†              1429.1      2399.2 µg/L         14.44      2399.2 ppb          14.44   0.60%
   QC value within limits for P 214.914  Recovery = 95.97%
Pb 220.353†             2194.1      512.68 µg/L         0.892      512.68 ppb          0.892   0.17%
   QC value within limits for Pb 220.353  Recovery = 102.54%
S 181.975 Axial†         221.3      976.79 µg/L        19.327      976.79 ppb         19.327   1.98%
   QC value within limits for S 181.975 Axial  Recovery = 97.68%
Sb 206.836†              575.6      501.24 µg/L         3.834      501.24 ppb          3.834   0.76%
   QC value within limits for Sb 206.836  Recovery = 100.25%
Se 196.026†              452.5      501.96 µg/L         6.944      501.96 ppb          6.944   1.38%
   QC value within limits for Se 196.026  Recovery = 100.39%
SiO2†                  31310.7      5525.9 µg/L         59.71      5525.9 ppb          59.71   1.08%
   QC value within limits for SiO2  Recovery = 103.34%
Si 251.611†            36499.7      2537.1 µg/L         21.77      2537.1 ppb          21.77   0.86%
   QC value within limits for Si 251.611  Recovery = 101.49%
Sn 189.927†             1158.9      511.82 µg/L         2.848      511.82 ppb          2.848   0.56%
   QC value within limits for Sn 189.927  Recovery = 102.36%
Sr 421.552†           116670.5      502.41 µg/L         3.719      502.41 ppb          3.719   0.74%
   QC value within limits for Sr 421.552  Recovery = 100.48%
Ti 334.940†           223043.4      504.36 µg/L         1.084      504.36 ppb          1.084   0.21%
   QC value within limits for Ti 334.940  Recovery = 100.87%
Tl 190.801†              356.5      499.71 µg/L         6.496      499.71 ppb          6.496   1.30%
   QC value within limits for Tl 190.801  Recovery = 99.94%
U 409.014†              5282.3      496.54 µg/L         9.631      496.54 ppb          9.631   1.94%
   QC value within limits for U 409.014  Recovery = 99.31%
V 292.402†             46502.4      509.70 µg/L         4.798      509.70 ppb          4.798   0.94%
   QC value within limits for V 292.402  Recovery = 101.94%
Zn 213.857†            20974.5      505.47 µg/L         4.747      505.47 ppb          4.747   0.94%
   QC value within limits for Zn 213.857  Recovery = 101.09%
QC Failed.  Continue with analysis.
```

Sequence No.: 14
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 08:28:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	177009.9	177009.9	102	%			08:29:11
1	Al 396.153Radial†	-160.3	12.3	5.1349	µg/L	5.1349	ppb	08:29:11
1	Ca 317.933Radial†	878.2	-9.9	-1.8762	µg/L	-1.8762	ppb	08:29:31
1	Fe 238.204 Radial†	-17.0	9.5	6.8564	µg/L	6.8564	ppb	08:29:31
1	K 766.490 Radial†	923.8	138.2	75.660	µg/L	75.660	ppb	08:29:11
1	Mg 279.077 IEC†	51.1	7.1	14.641	µg/L	14.641	ppb	08:29:31
1	Na 589.592 Radial†	190.8	69.2	16.602	µg/L	16.602	ppb	08:29:11
1	Sr 421.552†	86.6	18.4	0.0792	µg/L	0.0792	ppb	08:29:11
1	Sc 361.383	2194900.3	2194900.3	100.14	%			08:30:33
1	Y 371.029	1404026.8	1404026.8	100.09	%			08:30:33
1	Ag 328.068†	-756.2	66.8	0.5874	µg/L	0.5874	ppb	08:30:39
1	As 188.979†	0.9	-1.4	-2.1572	µg/L	-2.1572	ppb	08:30:59
1	B 249.677†	316.6	107.6	4.3895	µg/L	4.3895	ppb	08:30:39
1	Ba 233.527†	-68.3	12.7	0.3086	µg/L	0.3086	ppb	08:30:59
1	Be 313.107†	3720.7	56.9	0.0361	µg/L	0.0361	ppb	08:30:39
1	Cd 226.502†	-140.4	0.0	-0.0036	µg/L	-0.0036	ppb	08:30:59
1	Co 228.616†	-80.5	21.1	0.9599	µg/L	0.9599	ppb	08:30:59
1	Cr 267.716†	-207.6	-24.9	-0.4888	µg/L	-0.4888	ppb	08:30:39
1	Cu 324.752†	4691.2	19.8	0.1410	µg/L	0.1410	ppb	08:30:39
1	Mn 257.610†	69.7	13.3	0.0383	µg/L	0.0383	ppb	08:30:39
1	Mo 202.031†	6.6	7.5	0.8040	µg/L	0.8040	ppb	08:30:59
1	Ni 231.604†	449.7	5.8	0.2907	µg/L	0.2907	ppb	08:30:59
1	P 214.914†	223.9	-10.6	-18.284	µg/L	-18.284	ppb	08:30:59
1	Pb 220.353†	47.7	3.2	0.7502	µg/L	0.7502	ppb	08:30:59
1	S 181.975 Axial†	46.6	2.3	9.9913	µg/L	9.9913	ppb	08:30:59
1	Sb 206.836†	26.7	5.4	4.6970	µg/L	4.6970	ppb	08:30:59
1	Se 196.026†	18.1	-1.5	-1.6645	µg/L	-1.6645	ppb	08:30:59
1	SiO2†	3154.9	-21.9	-3.8648	µg/L	-3.8648	ppb	08:30:39
1	Si 251.611†	425.7	34.8	2.2885	µg/L	2.2885	ppb	08:30:59
1	Sn 189.927†	13.1	5.9	2.6103	µg/L	2.6103	ppb	08:30:59
1	Ti 334.940†	1543.1	434.1	0.9820	µg/L	0.9820	ppb	08:30:39
1	Tl 190.801†	-24.5	0.3	0.4134	µg/L	0.4134	ppb	08:30:59
1	U 409.014†	-34.6	-67.8	-6.3930	µg/L	-6.3930	ppb	08:30:39
1	V 292.402†	-182.8	-19.4	-0.2146	µg/L	-0.2146	ppb	08:30:39
1	Zn 213.857†	774.0	50.2	1.2180	µg/L	1.2180	ppb	08:30:59
2	Sc RADIAL	176374.9	176374.9	101	%			08:29:37
2	Al 396.153Radial†	-175.7	-3.4	-1.4980	µg/L	-1.4980	ppb	08:29:37
2	Ca 317.933Radial†	890.1	4.9	0.9241	µg/L	0.9241	ppb	08:29:57
2	Fe 238.204 Radial†	-20.4	6.1	4.4187	µg/L	4.4187	ppb	08:29:57
2	K 766.490 Radial†	896.4	114.5	62.652	µg/L	62.652	ppb	08:29:37
2	Mg 279.077 IEC†	44.7	0.9	1.9410	µg/L	1.9410	ppb	08:29:57
2	Na 589.592 Radial†	169.9	49.2	11.807	µg/L	11.807	ppb	08:29:37
2	Sr 421.552†	93.3	25.3	0.1091	µg/L	0.1091	ppb	08:29:37
2	Sc 361.383	2201024.4	2201024.4	100.42	%			08:31:05
2	Y 371.029	1407879.4	1407879.4	100.37	%			08:31:05
2	Ag 328.068†	-764.6	60.6	0.5303	µg/L	0.5303	ppb	08:31:11
2	As 188.979†	4.5	2.2	3.5577	µg/L	3.5577	ppb	08:31:31
2	B 249.677†	344.2	134.2	5.4758	µg/L	5.4758	ppb	08:31:11
2	Ba 233.527†	-58.4	22.7	0.5522	µg/L	0.5522	ppb	08:31:31
2	Be 313.107†	3805.9	131.4	0.0794	µg/L	0.0794	ppb	08:31:11
2	Cd 226.502†	-123.5	17.3	0.4106	µg/L	0.4106	ppb	08:31:31
2	Co 228.616†	-86.6	15.3	0.6960	µg/L	0.6960	ppb	08:31:31
2	Cr 267.716†	-175.9	7.1	0.1387	µg/L	0.1387	ppb	08:31:11
2	Cu 324.752†	4673.3	-11.0	-0.0772	µg/L	-0.0772	ppb	08:31:11
2	Mn 257.610†	145.8	88.9	0.2550	µg/L	0.2550	ppb	08:31:11
2	Mo 202.031†	10.6	11.5	1.2287	µg/L	1.2287	ppb	08:31:31
2	Ni 231.604†	452.6	7.4	0.3733	µg/L	0.3733	ppb	08:31:31
2	P 214.914†	222.9	-12.1	-21.043	µg/L	-21.043	ppb	08:31:31
2	Pb 220.353†	59.7	15.0	3.5026	µg/L	3.5026	ppb	08:31:31

2	S 181.975 Axial†	40.5	-4.0	-17.723 µg/L	-17.723 ppb	08:31:31
2	Sb 206.836†	21.2	-0.1	-0.0810 µg/L	-0.0810 ppb	08:31:31
2	Se 196.026†	15.5	-4.1	-4.5741 µg/L	-4.5741 ppb	08:31:31
2	SiO2†	3156.2	-29.3	-5.1680 µg/L	-5.1680 ppb	08:31:11
2	Si 251.611†	447.9	55.7	3.8516 µg/L	3.8516 ppb	08:31:31
2	Sn 189.927†	8.3	1.1	0.4963 µg/L	0.4963 ppb	08:31:31
2	Ti 334.940†	1496.8	383.7	0.8680 µg/L	0.8680 ppb	08:31:11
2	Tl 190.801†	-21.8	3.0	4.2712 µg/L	4.2712 ppb	08:31:31
2	U 409.014†	66.2	32.7	3.0853 µg/L	3.0853 ppb	08:31:11
2	V 292.402†	-214.9	-50.8	-0.5378 µg/L	-0.5378 ppb	08:31:11
2	Zn 213.857†	758.7	32.8	0.7964 µg/L	0.7964 ppb	08:31:31
3	Sc RADIAL	174060.0	174060.0	100 %		08:30:02
3	Al 396.153Radial†	-129.5	40.4	16.939 µg/L	16.939 ppb	08:30:02
3	Ca 317.933Radial†	885.5	12.0	2.2691 µg/L	2.2691 ppb	08:30:23
3	Fe 238.204 Radial†	-24.6	1.6	1.1607 µg/L	1.1607 ppb	08:30:23
3	K 766.490 Radial†	807.3	37.2	20.348 µg/L	20.348 ppb	08:30:02
3	Mg 279.077 IEC†	49.9	6.8	13.937 µg/L	13.937 ppb	08:30:23
3	Na 589.592 Radial†	130.6	12.2	2.9237 µg/L	2.9237 ppb	08:30:02
3	Sr 421.552†	95.8	29.0	0.1250 µg/L	0.1250 ppb	08:30:02
3	Sc 361.383	2209969.4	2209969.4	100.83 %		08:31:37
3	Y 371.029	1415392.3	1415392.3	100.90 %		08:31:37
3	Ag 328.068†	-712.8	115.0	1.0126 µg/L	1.0126 ppb	08:31:43
3	As 188.979†	2.5	0.2	0.3802 µg/L	0.3802 ppb	08:32:04
3	B 249.677†	297.6	86.6	3.5364 µg/L	3.5364 ppb	08:31:43
3	Ba 233.527†	-56.0	25.3	0.6178 µg/L	0.6178 ppb	08:32:04
3	Be 313.107†	4037.6	345.8	0.2056 µg/L	0.2056 ppb	08:31:43
3	Cd 226.502†	-114.5	26.7	0.6301 µg/L	0.6301 ppb	08:32:04
3	Co 228.616†	-95.9	6.4	0.2925 µg/L	0.2925 ppb	08:32:04
3	Cr 267.716†	-149.7	33.9	0.6628 µg/L	0.6628 ppb	08:31:43
3	Cu 324.752†	4713.9	10.4	0.0739 µg/L	0.0739 ppb	08:31:43
3	Mn 257.610†	162.2	104.7	0.3001 µg/L	0.3001 ppb	08:31:43
3	Mo 202.031†	14.5	15.3	1.6367 µg/L	1.6367 ppb	08:32:04
3	Ni 231.604†	465.5	18.4	0.9278 µg/L	0.9278 ppb	08:32:04
3	P 214.914†	223.6	-12.4	-21.410 µg/L	-21.410 ppb	08:32:04
3	Pb 220.353†	57.7	12.8	3.0004 µg/L	3.0004 ppb	08:32:04
3	S 181.975 Axial†	45.5	0.8	3.7150 µg/L	3.7150 ppb	08:32:04
3	Sb 206.836†	27.3	5.9	5.1083 µg/L	5.1083 ppb	08:32:04
3	Se 196.026†	13.0	-6.7	-7.4107 µg/L	-7.4107 ppb	08:32:04
3	SiO2†	3140.0	-58.1	-10.248 µg/L	-10.248 ppb	08:31:43
3	Si 251.611†	451.9	57.9	3.9051 µg/L	3.9051 ppb	08:32:04
3	Sn 189.927†	14.2	6.9	3.0456 µg/L	3.0456 ppb	08:32:04
3	Ti 334.940†	1638.2	517.9	1.1715 µg/L	1.1715 ppb	08:31:43
3	Tl 190.801†	-26.2	-1.3	-1.7647 µg/L	-1.7647 ppb	08:32:04
3	U 409.014†	13.8	-19.5	-1.8414 µg/L	-1.8414 ppb	08:31:43
3	V 292.402†	-178.8	-14.2	-0.1457 µg/L	-0.1457 ppb	08:31:43
3	Zn 213.857†	771.7	42.6	1.0323 µg/L	1.0323 ppb	08:32:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2201964.7	100.46	%	0.346				0.34%
Sc RADIAL	175814.9	101	%	0.9				0.88%
Y 371.029	1409099.5	100.45	%	0.412				0.41%
Ag 328.068†	80.8	0.7101	µg/L	0.26350	0.7101	ppb	0.26350	37.11%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	16.4	6.8586	µg/L	9.33849	6.8586	ppb	9.33849	136.16%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.4	0.5936	µg/L	2.86342	0.5936	ppb	2.86342	482.40%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	109.4	4.4672	µg/L	0.97205	4.4672	ppb	0.97205	21.76%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	20.2	0.4929	µg/L	0.16288	0.4929	ppb	0.16288	33.05%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	178.0	0.1070	µg/L	0.08808	0.1070	ppb	0.08808	82.29%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2.3	0.4390	µg/L	2.11479	0.4390	ppb	2.11479	481.71%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	14.7	0.3457	µg/L	0.32179	0.3457	ppb	0.32179	93.09%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	14.3	0.6495	µg/L	0.33611	0.6495	ppb	0.33611	51.75%

```
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                5.3      0.1042 µg/L       0.57657      0.1042 ppb        0.57657 553.25%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                6.4      0.0459 µg/L       0.11177      0.0459 ppb        0.11177 243.57%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         5.8      4.1452 µg/L       2.85765      4.1452 ppb        2.85765  68.94%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         96.6     52.887 µg/L       28.9203     52.887 ppb        28.9203  54.68%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            4.9     10.173 µg/L        7.1376     10.173 ppb         7.1376  70.16%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               69.0      0.1978 µg/L       0.13995      0.1978 ppb        0.13995  70.75%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               11.4      1.2231 µg/L       0.41636      1.2231 ppb        0.41636  34.04%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        43.5     10.444 µg/L        6.9404     10.444 ppb         6.9404  66.45%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               10.5      0.5306 µg/L       0.34646      0.5306 ppb        0.34646  65.29%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -11.7    -20.245 µg/L        1.7088    -20.245 ppb         1.7088   8.44%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               10.3      2.4177 µg/L       1.46580      2.4177 ppb        1.46580  60.63%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.3     -1.3388 µg/L      14.53174     -1.3388 ppb       14.53174 >999.9%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                3.7      3.2414 µg/L       2.88466      3.2414 ppb        2.88466  88.99%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.1     -4.5497 µg/L       2.87320     -4.5497 ppb        2.87320  63.15%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    -36.4     -6.4268 µg/L       3.37246     -6.4268 ppb        3.37246  52.48%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               49.5      3.3484 µg/L       0.91830      3.3484 ppb        0.91830  27.42%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.7      2.0507 µg/L       1.36367      2.0507 ppb        1.36367  66.50%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               24.3      0.1044 µg/L       0.02326      0.1044 ppb        0.02326  22.27%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              445.2      1.0072 µg/L       0.15333      1.0072 ppb        0.15333  15.22%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.7      0.9733 µg/L       3.05667      0.9733 ppb        3.05667 314.05%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -18.2     -1.7164 µg/L       4.74036     -1.7164 ppb        4.74036 276.19%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -28.1     -0.2994 µg/L       0.20936     -0.2994 ppb        0.20936  69.94%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               41.9      1.0156 µg/L       0.21128      1.0156 ppb        0.21128  20.80%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/2/2009 08:33:30 Plasma On Time: 6/29/2009 11:03:38
Logged In Analyst: optima Technique: ICP Continuous
Spectrometer Model: Optima 4300 DV, S/N 077N1030502Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\070209.sif
Batch ID:
Results Data Set: 070209
Results Library: c:\pe\optima1\Results\Results.mdb

Method Loaded
Method Name: Gen Eng fast_new Si Method Last Saved: 7/2/2009 07:52:40
IEC File: 042009.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 7
Sample ID: CCV Date Collected: 7/2/2009 08:33:32
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174330.5	174330.5	100	%			08:34:05
1	Al 396.153Radial†	11986.7	12138.0	5088.4	µg/L	5088.4	ppb	08:34:11
1	Ca 317.933Radial†	27851.3	26934.3	5101.4	µg/L	5101.4	ppb	08:34:11
1	Fe 238.204 Radial†	7067.8	7083.0	5096.0	µg/L	5096.0	ppb	08:34:11

1	K 766.490 Radial†	10114.9	9329.0	5105.6 µg/L	5105.6 ppb	08:34:11
1	Mg 279.077 IEC†	2570.9	2523.8	5182.6 µg/L	5182.6 ppb	08:34:11
1	Na 589.592 Radial†	42768.6	42583.4	10221 µg/L	10221 ppb	08:34:05
1	Sr 421.552†	117301.0	117051.3	504.05 µg/L	504.05 ppb	08:34:05
1	Sc 361.383	2214717.1	2214717.1	101.04 %		08:34:45
1	Y 371.029	1408994.6	1408994.6	100.45 %		08:34:45
1	Ag 328.068†	56539.4	56777.9	504.20 µg/L	504.20 ppb	08:34:50
1	As 188.979†	313.5	308.0	491.72 µg/L	491.72 ppb	08:35:11
1	B 249.677†	12429.1	12092.3	492.10 µg/L	492.10 ppb	08:34:50
1	Ba 233.527†	20427.5	20297.5	496.36 µg/L	496.36 ppb	08:34:50
1	Be 313.107†	860974.0	848430.3	497.66 µg/L	497.66 ppb	08:34:45
1	Cd 226.502†	21181.7	21103.4	497.89 µg/L	497.89 ppb	08:34:50
1	Co 228.616†	10948.7	10937.2	496.94 µg/L	496.94 ppb	08:34:50
1	Cr 267.716†	25383.0	25303.4	496.18 µg/L	496.18 ppb	08:34:50
1	Cu 324.752†	74143.5	68713.5	486.75 µg/L	486.75 ppb	08:34:50
1	Mn 257.610†	175072.7	173209.8	496.68 µg/L	496.68 ppb	08:34:45
1	Mo 202.031†	4664.2	4617.0	493.77 µg/L	493.77 ppb	08:35:11
1	Ni 231.604†	10374.3	9823.9	494.64 µg/L	494.64 ppb	08:34:50
1	P 214.914†	1666.8	1415.5	2376.7 µg/L	2376.7 ppb	08:35:11
1	Pb 220.353†	2169.6	2102.8	491.32 µg/L	491.32 ppb	08:35:11
1	S 181.975 Axial†	268.7	221.6	978.51 µg/L	978.51 ppb	08:35:11
1	Sb 206.836†	599.1	571.7	497.88 µg/L	497.88 ppb	08:35:11
1	Se 196.026†	463.2	438.9	486.86 µg/L	486.86 ppb	08:35:11
1	SiO2†	34071.4	30547.4	5391.2 µg/L	5391.2 ppb	08:34:50
1	Si 251.611†	36375.6	35609.9	2475.1 µg/L	2475.1 ppb	08:34:50
1	Sn 189.927†	1147.7	1128.7	498.38 µg/L	498.38 ppb	08:35:11
1	Ti 334.940†	223832.9	220416.1	498.43 µg/L	498.43 ppb	08:34:45
1	Tl 190.801†	330.0	351.3	492.53 µg/L	492.53 ppb	08:35:11
1	U 409.014†	5382.4	5293.6	497.69 µg/L	497.69 ppb	08:34:50
1	V 292.402†	46008.7	45697.1	500.85 µg/L	500.85 ppb	08:34:50
1	Zn 213.857†	21377.4	20434.0	492.44 µg/L	492.44 ppb	08:34:50
2	Sc RADIAL	176725.9	176725.9	102 %		08:34:16
2	Al 396.153Radial†	11932.3	11922.2	4997.2 µg/L	4997.2 ppb	08:34:22
2	Ca 317.933Radial†	27835.4	26541.8	5027.0 µg/L	5027.0 ppb	08:34:22
2	Fe 238.204 Radial†	7056.0	6975.8	5019.3 µg/L	5019.3 ppb	08:34:22
2	K 766.490 Radial†	10095.6	9173.1	5020.3 µg/L	5020.3 ppb	08:34:22
2	Mg 279.077 IEC†	2552.7	2471.0	5074.7 µg/L	5074.7 ppb	08:34:22
2	Na 589.592 Radial†	42585.8	41824.6	10039 µg/L	10039 ppb	08:34:16
2	Sr 421.552†	117168.1	115333.0	496.65 µg/L	496.65 ppb	08:34:16
2	Sc 361.383	2196329.1	2196329.1	100.20 %		08:35:18
2	Y 371.029	1397874.7	1397874.7	99.655 %		08:35:18
2	Ag 328.068†	56640.3	57347.0	509.26 µg/L	509.26 ppb	08:35:23
2	As 188.979†	322.2	319.3	509.57 µg/L	509.57 ppb	08:35:44
2	B 249.677†	12513.3	12279.2	499.76 µg/L	499.76 ppb	08:35:23
2	Ba 233.527†	20539.1	20578.2	503.22 µg/L	503.22 ppb	08:35:23
2	Be 313.107†	853825.9	848430.6	497.66 µg/L	497.66 ppb	08:35:18
2	Cd 226.502†	21277.8	21374.9	504.31 µg/L	504.31 ppb	08:35:23
2	Co 228.616†	11020.0	11099.1	504.32 µg/L	504.32 ppb	08:35:23
2	Cr 267.716†	25439.0	25569.6	501.41 µg/L	501.41 ppb	08:35:23
2	Cu 324.752†	74467.6	69651.2	493.38 µg/L	493.38 ppb	08:35:23
2	Mn 257.610†	173644.3	173234.9	496.76 µg/L	496.76 ppb	08:35:18
2	Mo 202.031†	4714.7	4706.0	503.28 µg/L	503.28 ppb	08:35:44
2	Ni 231.604†	10478.4	10013.7	504.21 µg/L	504.21 ppb	08:35:23
2	P 214.914†	1667.1	1429.6	2400.1 µg/L	2400.1 ppb	08:35:44
2	Pb 220.353†	2201.3	2152.4	502.90 µg/L	502.90 ppb	08:35:44
2	S 181.975 Axial†	265.8	221.0	975.60 µg/L	975.60 ppb	08:35:44
2	Sb 206.836†	592.7	570.2	496.55 µg/L	496.55 ppb	08:35:44
2	Se 196.026†	468.1	447.6	496.47 µg/L	496.47 ppb	08:35:44
2	SiO2†	34292.5	31050.4	5480.0 µg/L	5480.0 ppb	08:35:23
2	Si 251.611†	36519.7	36055.1	2506.3 µg/L	2506.3 ppb	08:35:23
2	Sn 189.927†	1152.7	1143.2	504.70 µg/L	504.70 ppb	08:35:44
2	Ti 334.940†	222112.2	220553.5	498.74 µg/L	498.74 ppb	08:35:18
2	Tl 190.801†	329.0	353.1	494.96 µg/L	494.96 ppb	08:35:44
2	U 409.014†	5340.3	5296.3	497.96 µg/L	497.96 ppb	08:35:23
2	V 292.402†	46203.1	46272.2	507.15 µg/L	507.15 ppb	08:35:23
2	Zn 213.857†	21469.8	20703.4	498.93 µg/L	498.93 ppb	08:35:23
3	Sc RADIAL	175263.8	175263.8	101 %		08:34:27
3	Al 396.153Radial†	12066.7	12153.7	5094.8 µg/L	5094.8 ppb	08:34:33
3	Ca 317.933Radial†	28175.6	27108.3	5134.3 µg/L	5134.3 ppb	08:34:33
3	Fe 238.204 Radial†	7138.5	7115.7	5119.5 µg/L	5119.5 ppb	08:34:33
3	K 766.490 Radial†	10238.6	9398.1	5143.4 µg/L	5143.4 ppb	08:34:33

3	Mg 279.077 IEC†	2597.4	2536.4	5208.6 µg/L	5208.6 ppb	08:34:33
3	Na 589.592 Radial†	42951.7	42538.0	10210 µg/L	10210 ppb	08:34:27
3	Sr 421.552†	117929.7	117052.0	504.06 µg/L	504.06 ppb	08:34:27
3	Sc 361.383	2209639.4	2209639.4	100.81 %		08:35:51
3	Y 371.029	1406113.1	1406113.1	100.24 %		08:35:51
3	Ag 328.068†	56710.1	57075.8	506.85 µg/L	506.85 ppb	08:35:57
3	As 188.979†	313.7	308.9	493.23 µg/L	493.23 ppb	08:36:17
3	B 249.677†	12503.5	12194.4	496.26 µg/L	496.26 ppb	08:35:57
3	Ba 233.527†	20480.1	20396.1	498.77 µg/L	498.77 ppb	08:35:57
3	Be 313.107†	863255.1	852651.1	500.13 µg/L	500.13 ppb	08:35:51
3	Cd 226.502†	21264.1	21233.3	500.95 µg/L	500.95 ppb	08:35:57
3	Co 228.616†	11003.3	11016.4	500.55 µg/L	500.55 ppb	08:35:57
3	Cr 267.716†	25517.2	25494.2	499.92 µg/L	499.92 ppb	08:35:57
3	Cu 324.752†	74428.9	69165.2	489.95 µg/L	489.95 ppb	08:35:57
3	Mn 257.610†	175453.3	173985.5	498.91 µg/L	498.91 ppb	08:35:51
3	Mo 202.031†	4704.6	4667.7	499.18 µg/L	499.18 ppb	08:36:17
3	Ni 231.604†	10406.7	9879.6	497.45 µg/L	497.45 ppb	08:35:57
3	P 214.914†	1664.3	1416.8	2378.4 µg/L	2378.4 ppb	08:36:17
3	Pb 220.353†	2193.4	2131.4	498.01 µg/L	498.01 ppb	08:36:17
3	S 181.975 Axial†	269.8	223.4	986.05 µg/L	986.05 ppb	08:36:17
3	Sb 206.836†	601.6	575.5	501.16 µg/L	501.16 ppb	08:36:17
3	Se 196.026†	474.8	451.4	500.77 µg/L	500.77 ppb	08:36:17
3	SiO2†	34276.5	30828.4	5440.8 µg/L	5440.8 ppb	08:35:57
3	Si 251.611†	36611.9	35927.0	2497.3 µg/L	2497.3 ppb	08:35:57
3	Sn 189.927†	1151.7	1135.3	501.30 µg/L	501.30 ppb	08:36:17
3	Ti 334.940†	224375.6	221463.5	500.80 µg/L	500.80 ppb	08:35:51
3	Tl 190.801†	326.7	348.8	489.05 µg/L	489.05 ppb	08:36:17
3	U 409.014†	5339.4	5263.3	494.82 µg/L	494.82 ppb	08:35:57
3	V 292.402†	46133.2	45925.2	503.36 µg/L	503.36 ppb	08:35:57
3	Zn 213.857†	21489.0	20593.3	496.29 µg/L	496.29 ppb	08:35:57

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2206895.2	100.69	%	0.433				0.43%
Sc RADIAL	175440.1	101	%	0.7				0.69%
Y 371.029	1404327.5	100.11	%	0.411				0.41%
Ag 328.068†	57066.9	506.77	µg/L	2.527	506.77	ppb	2.527	0.50%
QC value within limits for Ag 328.068 Recovery = 101.35%								
Al 396.153Radial†	12071.3	5060.1	µg/L	54.57	5060.1	ppb	54.57	1.08%
QC value within limits for Al 396.153Radial Recovery = 101.20%								
As 188.979†	312.1	498.17	µg/L	9.902	498.17	ppb	9.902	1.99%
QC value within limits for As 188.979 Recovery = 99.63%								
B 249.677†	12188.6	496.04	µg/L	3.833	496.04	ppb	3.833	0.77%
QC value within limits for B 249.677 Recovery = 99.21%								
Ba 233.527†	20423.9	499.45	µg/L	3.480	499.45	ppb	3.480	0.70%
QC value within limits for Ba 233.527 Recovery = 99.89%								
Be 313.107†	849837.3	498.48	µg/L	1.429	498.48	ppb	1.429	0.29%
QC value within limits for Be 313.107 Recovery = 99.70%								
Ca 317.933Radial†	26861.5	5087.6	µg/L	54.97	5087.6	ppb	54.97	1.08%
QC value within limits for Ca 317.933Radial Recovery = 101.75%								
Cd 226.502†	21237.2	501.05	µg/L	3.208	501.05	ppb	3.208	0.64%
QC value within limits for Cd 226.502 Recovery = 100.21%								
Co 228.616†	11017.6	500.60	µg/L	3.688	500.60	ppb	3.688	0.74%
QC value within limits for Co 228.616 Recovery = 100.12%								
Cr 267.716†	25455.7	499.17	µg/L	2.691	499.17	ppb	2.691	0.54%
QC value within limits for Cr 267.716 Recovery = 99.83%								
Cu 324.752†	69176.6	490.03	µg/L	3.312	490.03	ppb	3.312	0.68%
QC value within limits for Cu 324.752 Recovery = 98.01%								
Fe 238.204 Radial†	7058.1	5078.3	µg/L	52.40	5078.3	ppb	52.40	1.03%
QC value within limits for Fe 238.204 Radial Recovery = 101.57%								
K 766.490 Radial†	9300.1	5089.8	µg/L	63.09	5089.8	ppb	63.09	1.24%
QC value within limits for K 766.490 Radial Recovery = 101.80%								
Mg 279.077 IEC†	2510.4	5155.3	µg/L	70.99	5155.3	ppb	70.99	1.38%
QC value within limits for Mg 279.077 IEC Recovery = 103.11%								
Mn 257.610†	173476.7	497.45	µg/L	1.264	497.45	ppb	1.264	0.25%
QC value within limits for Mn 257.610 Recovery = 99.49%								
Mo 202.031†	4663.6	498.74	µg/L	4.770	498.74	ppb	4.770	0.96%
QC value within limits for Mo 202.031 Recovery = 99.75%								
Na 589.592 Radial†	42315.3	10157	µg/L	102.1	10157	ppb	102.1	1.01%

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   QC value within limits for Na 589.592 Radial  Recovery = 101.57%
Ni 231.604†            9905.8      498.77 µg/L        4.915      498.77 ppb        4.915   0.99%
   QC value within limits for Ni 231.604  Recovery = 99.75%
P 214.914†             1420.6      2385.1 µg/L       13.05      2385.1 ppb        13.05   0.55%
   QC value within limits for P 214.914  Recovery = 95.40%
Pb 220.353†            2128.8      497.41 µg/L        5.814      497.41 ppb        5.814   1.17%
   QC value within limits for Pb 220.353  Recovery = 99.48%
S 181.975 Axial†        222.0      980.05 µg/L        5.396      980.05 ppb        5.396   0.55%
   QC value within limits for S 181.975 Axial  Recovery = 98.01%
Sb 206.836†             572.5      498.53 µg/L        2.372      498.53 ppb        2.372   0.48%
   QC value within limits for Sb 206.836  Recovery = 99.71%
Se 196.026†             446.0      494.70 µg/L        7.125      494.70 ppb        7.125   1.44%
   QC value within limits for Se 196.026  Recovery = 98.94%
SiO2†                  30808.7      5437.3 µg/L       44.49      5437.3 ppb        44.49   0.82%
   QC value within limits for SiO2  Recovery = 101.68%
Si 251.611†            35864.0      2492.9 µg/L       16.03      2492.9 ppb        16.03   0.64%
   QC value within limits for Si 251.611  Recovery = 99.72%
Sn 189.927†            1135.7      501.46 µg/L        3.166      501.46 ppb        3.166   0.63%
   QC value within limits for Sn 189.927  Recovery = 100.29%
Sr 421.552†           116478.8      501.59 µg/L        4.273      501.59 ppb        4.273   0.85%
   QC value within limits for Sr 421.552  Recovery = 100.32%
Ti 334.940†           220811.0      499.32 µg/L        1.286      499.32 ppb        1.286   0.26%
   QC value within limits for Ti 334.940  Recovery = 99.86%
Tl 190.801†             351.1      492.18 µg/L        2.972      492.18 ppb        2.972   0.60%
   QC value within limits for Tl 190.801  Recovery = 98.44%
U 409.014†             5284.4      496.83 µg/L        1.741      496.83 ppb        1.741   0.35%
   QC value within limits for U 409.014  Recovery = 99.37%
V 292.402†            45964.8      503.78 µg/L        3.174      503.78 ppb        3.174   0.63%
   QC value within limits for V 292.402  Recovery = 100.76%
Zn 213.857†           20576.9      495.89 µg/L        3.263      495.89 ppb        3.263   0.66%
   QC value within limits for Zn 213.857  Recovery = 99.18%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 08:36:27
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176342.1	176342.1	101	%			08:36:59
1	Al 396.153Radial†	-148.6	23.3	9.7981	µg/L	9.7981	ppb	08:36:59
1	Ca 317.933Radial†	909.3	24.1	4.5579	µg/L	4.5579	ppb	08:37:20
1	Fe 238.204 Radial†	-19.1	7.4	5.3049	µg/L	5.3049	ppb	08:37:20
1	K 766.490 Radial†	863.0	81.7	44.724	µg/L	44.724	ppb	08:36:59
1	Mg 279.077 IEC†	36.5	-7.1	-14.582	µg/L	-14.582	ppb	08:37:20
1	Na 589.592 Radial†	177.0	56.3	13.506	µg/L	13.506	ppb	08:36:59
1	Sr 421.552†	148.2	79.5	0.3423	µg/L	0.3423	ppb	08:36:59
1	Sc 361.383	2225761.6	2225761.6	101.55	%			08:38:22
1	Y 371.029	1423993.2	1423993.2	101.52	%			08:38:22
1	Ag 328.068†	-729.4	103.6	0.9118	µg/L	0.9118	ppb	08:38:27
1	As 188.979†	4.5	2.2	3.4307	µg/L	3.4307	ppb	08:38:48
1	B 249.677†	271.9	59.2	2.4164	µg/L	2.4164	ppb	08:38:27
1	Ba 233.527†	-57.3	24.4	0.5947	µg/L	0.5947	ppb	08:38:48
1	Be 313.107†	3813.6	96.9	0.0589	µg/L	0.0589	ppb	08:38:27
1	Cd 226.502†	-120.9	21.3	0.4937	µg/L	0.4937	ppb	08:38:48
1	Co 228.616†	-92.4	10.6	0.4805	µg/L	0.4805	ppb	08:38:48
1	Cr 267.716†	-189.6	-4.4	-0.0857	µg/L	-0.0857	ppb	08:38:27
1	Cu 324.752†	4667.6	-68.4	-0.4828	µg/L	-0.4828	ppb	08:38:27
1	Mn 257.610†	114.3	56.3	0.1614	µg/L	0.1614	ppb	08:38:27
1	Mo 202.031†	1.2	2.2	0.2321	µg/L	0.2321	ppb	08:38:48
1	Ni 231.604†	467.4	17.0	0.8565	µg/L	0.8565	ppb	08:38:48
1	P 214.914†	221.3	-16.2	-28.061	µg/L	-28.061	ppb	08:38:48
1	Pb 220.353†	54.8	9.6	2.2499	µg/L	2.2499	ppb	08:38:48
1	S 181.975 Axial†	41.1	-3.8	-17.009	µg/L	-17.009	ppb	08:38:48
1	Sb 206.836†	31.5	9.8	8.5225	µg/L	8.5225	ppb	08:38:48
1	Se 196.026†	10.5	-9.2	-10.201	µg/L	-10.201	ppb	08:38:48
1	SiO2†	3166.5	-54.1	-9.5559	µg/L	-9.5559	ppb	08:38:27
1	Si 251.611†	434.3	37.3	2.5374	µg/L	2.5374	ppb	08:38:48
1	Sn 189.927†	10.9	3.5	1.5498	µg/L	1.5498	ppb	08:38:48
1	Ti 334.940†	1470.9	341.6	0.7726	µg/L	0.7726	ppb	08:38:27
1	Tl 190.801†	-23.6	1.5	2.1058	µg/L	2.1058	ppb	08:38:48
1	U 409.014†	-94.1	-125.9	-11.871	µg/L	-11.871	ppb	08:38:27
1	V 292.402†	-191.0	-25.0	-0.2882	µg/L	-0.2882	ppb	08:38:27
1	Zn 213.857†	753.9	19.7	0.4760	µg/L	0.4760	ppb	08:38:48
2	Sc RADIAL	174145.2	174145.2	100	%			08:37:25
2	Al 396.153Radial†	-161.6	8.4	3.4903	µg/L	3.4903	ppb	08:37:25
2	Ca 317.933Radial†	884.7	10.7	2.0321	µg/L	2.0321	ppb	08:37:46
2	Fe 238.204 Radial†	-23.6	2.6	1.8744	µg/L	1.8744	ppb	08:37:46
2	K 766.490 Radial†	809.9	39.4	21.543	µg/L	21.543	ppb	08:37:25
2	Mg 279.077 IEC†	53.8	10.7	21.959	µg/L	21.959	ppb	08:37:46
2	Na 589.592 Radial†	161.4	42.9	10.299	µg/L	10.299	ppb	08:37:25
2	Sr 421.552†	122.5	55.7	0.2398	µg/L	0.2398	ppb	08:37:25
2	Sc 361.383	2202023.6	2202023.6	100.46	%			08:38:54
2	Y 371.029	1409052.2	1409052.2	100.45	%			08:38:54
2	Ag 328.068†	-769.3	56.2	0.4966	µg/L	0.4966	ppb	08:38:59
2	As 188.979†	5.9	3.6	5.7100	µg/L	5.7100	ppb	08:39:20
2	B 249.677†	301.1	91.1	3.7190	µg/L	3.7190	ppb	08:38:59
2	Ba 233.527†	-72.4	8.8	0.2151	µg/L	0.2151	ppb	08:39:20
2	Be 313.107†	3788.1	111.9	0.0672	µg/L	0.0672	ppb	08:38:59
2	Cd 226.502†	-124.3	16.6	0.3868	µg/L	0.3868	ppb	08:39:20
2	Co 228.616†	-84.8	17.1	0.7795	µg/L	0.7795	ppb	08:39:20
2	Cr 267.716†	-176.7	6.4	0.1259	µg/L	0.1259	ppb	08:38:59
2	Cu 324.752†	4692.5	5.9	0.0422	µg/L	0.0422	ppb	08:38:59
2	Mn 257.610†	103.3	46.6	0.1336	µg/L	0.1336	ppb	08:38:59
2	Mo 202.031†	9.5	10.4	1.1101	µg/L	1.1101	ppb	08:39:20
2	Ni 231.604†	452.4	7.0	0.3506	µg/L	0.3506	ppb	08:39:20
2	P 214.914†	213.9	-21.3	-36.944	µg/L	-36.944	ppb	08:39:20
2	Pb 220.353†	51.1	6.5	1.5172	µg/L	1.5172	ppb	08:39:20

2	S 181.975 Axial†	48.3	3.7	16.407 µg/L	16.407 ppb	08:39:20
2	Sb 206.836†	26.9	5.5	4.7820 µg/L	4.7820 ppb	08:39:20
2	Se 196.026†	20.4	0.8	0.8312 µg/L	0.8312 ppb	08:39:20
2	SiO2†	3140.1	-46.8	-8.2616 µg/L	-8.2616 ppb	08:38:59
2	Si 251.611†	410.2	18.0	1.3242 µg/L	1.3242 ppb	08:39:20
2	Sn 189.927†	1.4	-5.8	-2.5332 µg/L	-2.5332 ppb	08:39:20
2	Ti 334.940†	1381.4	268.1	0.6064 µg/L	0.6064 ppb	08:38:59
2	Tl 190.801†	-19.3	5.5	7.7759 µg/L	7.7759 ppb	08:39:20
2	U 409.014†	-23.7	-56.8	-5.3594 µg/L	-5.3594 ppb	08:38:59
2	V 292.402†	-149.1	14.8	0.1597 µg/L	0.1597 ppb	08:38:59
2	Zn 213.857†	751.2	25.0	0.6054 µg/L	0.6054 ppb	08:39:20
3	Sc RADIAL	174317.6	174317.6	100 %		08:37:51
3	Al 396.153Radial†	-149.3	20.9	8.7442 µg/L	8.7442 ppb	08:37:51
3	Ca 317.933Radial†	886.1	11.3	2.1341 µg/L	2.1341 ppb	08:38:12
3	Fe 238.204 Radial†	-23.8	2.4	1.7813 µg/L	1.7813 ppb	08:38:12
3	K 766.490 Radial†	833.9	62.5	34.209 µg/L	34.209 ppb	08:37:51
3	Mg 279.077 IEC†	47.2	4.0	8.3340 µg/L	8.3340 ppb	08:38:12
3	Na 589.592 Radial†	162.8	44.1	10.588 µg/L	10.588 ppb	08:37:51
3	Sr 421.552†	156.0	89.0	0.3833 µg/L	0.3833 ppb	08:37:51
3	Sc 361.383	2206647.0	2206647.0	100.67 %		08:39:26
3	Y 371.029	1411099.2	1411099.2	100.60 %		08:39:26
3	Ag 328.068†	-691.8	134.8	1.1857 µg/L	1.1857 ppb	08:39:32
3	As 188.979†	1.7	-0.5	-0.8452 µg/L	-0.8452 ppb	08:39:52
3	B 249.677†	231.1	21.0	0.8570 µg/L	0.8570 ppb	08:39:32
3	Ba 233.527†	-68.4	13.0	0.3157 µg/L	0.3157 ppb	08:39:52
3	Be 313.107†	4056.3	370.4	0.2195 µg/L	0.2195 ppb	08:39:32
3	Cd 226.502†	-122.5	18.7	0.4343 µg/L	0.4343 ppb	08:39:52
3	Co 228.616†	-82.8	19.3	0.8777 µg/L	0.8777 ppb	08:39:52
3	Cr 267.716†	-206.7	-23.0	-0.4510 µg/L	-0.4510 ppb	08:39:32
3	Cu 324.752†	4756.1	59.4	0.4201 µg/L	0.4201 ppb	08:39:32
3	Mn 257.610†	157.8	100.5	0.2881 µg/L	0.2881 ppb	08:39:32
3	Mo 202.031†	12.4	13.2	1.4164 µg/L	1.4164 ppb	08:39:52
3	Ni 231.604†	461.4	15.0	0.7529 µg/L	0.7529 ppb	08:39:52
3	P 214.914†	216.8	-18.8	-32.575 µg/L	-32.575 ppb	08:39:52
3	Pb 220.353†	54.0	9.2	2.1686 µg/L	2.1686 ppb	08:39:52
3	S 181.975 Axial†	40.0	-4.6	-20.171 µg/L	-20.171 ppb	08:39:52
3	Sb 206.836†	33.2	11.8	10.272 µg/L	10.272 ppb	08:39:52
3	Se 196.026†	12.0	-7.7	-8.4667 µg/L	-8.4667 ppb	08:39:52
3	SiO2†	3181.6	-12.1	-2.1404 µg/L	-2.1404 ppb	08:39:32
3	Si 251.611†	432.1	38.9	2.6258 µg/L	2.6258 ppb	08:39:52
3	Sn 189.927†	10.7	3.5	1.5178 µg/L	1.5178 ppb	08:39:52
3	Ti 334.940†	1554.8	437.5	0.9896 µg/L	0.9896 ppb	08:39:32
3	Tl 190.801†	-27.4	-2.5	-3.5062 µg/L	-3.5062 ppb	08:39:52
3	U 409.014†	-57.2	-90.0	-8.4855 µg/L	-8.4855 ppb	08:39:32
3	V 292.402†	-194.1	-29.7	-0.3257 µg/L	-0.3257 ppb	08:39:32
3	Zn 213.857†	756.1	28.2	0.6811 µg/L	0.6811 ppb	08:39:52

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2211477.4	100.89	%	0.574				0.57%
Sc RADIAL	174935.0	101	%	0.7				0.70%
Y 371.029	1414714.9	100.86	%	0.577				0.57%
Ag 328.068†	98.2	0.8647	µg/L	0.34695	0.8647	ppb	0.34695	40.12%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.5	7.3442	µg/L	3.37888	7.3442	ppb	3.37888	46.01%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.7	2.7652	µg/L	3.32790	2.7652	ppb	3.32790	120.35%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	57.1	2.3308	µg/L	1.43291	2.3308	ppb	1.43291	61.48%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	15.4	0.3752	µg/L	0.19667	0.3752	ppb	0.19667	52.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	193.1	0.1152	µg/L	0.09043	0.1152	ppb	0.09043	78.49%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	15.4	2.9080	µg/L	1.42975	2.9080	ppb	1.42975	49.17%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	18.8	0.4383	µg/L	0.05354	0.4383	ppb	0.05354	12.22%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	15.7	0.7126	µg/L	0.20688	0.7126	ppb	0.20688	29.03%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -7.0     -0.1369 µg/L      0.29182     -0.1369 ppb       0.29182 213.09%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -1.0     -0.0068 µg/L      0.45345     -0.0068 ppb       0.45345 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        4.1      2.9869 µg/L      2.00803      2.9869 ppb       2.00803  67.23%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        61.2      33.492 µg/L      11.6073      33.492 ppb       11.6073  34.66%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           2.5      5.2370 µg/L     18.46655      5.2370 ppb      18.46655 352.62%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              67.8      0.1943 µg/L      0.08237      0.1943 ppb       0.08237  42.39%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               8.6      0.9195 µg/L      0.61472      0.9195 ppb       0.61472  66.85%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       47.8      11.465 µg/L       1.7742      11.465 ppb        1.7742  15.48%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              13.0      0.6533 µg/L      0.26723      0.6533 ppb       0.26723  40.90%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -18.8     -32.527 µg/L       4.4415     -32.527 ppb        4.4415  13.66%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               8.4      1.9786 µg/L      0.40160      1.9786 ppb       0.40160  20.30%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -1.6     -6.9241 µg/L     20.26710     -6.9241 ppb      20.26710 292.71%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               9.0      7.8587 µg/L      2.80431      7.8587 ppb       2.80431  35.68%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -5.4     -5.9455 µg/L      5.93256     -5.9455 ppb       5.93256  99.78%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                   -37.7     -6.6526 µg/L      3.96096     -6.6526 ppb       3.96096  59.54%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              31.4      2.1625 µg/L      0.72731      2.1625 ppb       0.72731  33.63%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               0.4      0.1781 µg/L      2.34814      0.1781 ppb       2.34814 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              74.7      0.3218 µg/L      0.07394      0.3218 ppb       0.07394  22.98%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             349.1      0.7895 µg/L      0.19212      0.7895 ppb       0.19212  24.33%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               1.5      2.1252 µg/L      5.64111      2.1252 ppb       5.64111 265.44%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -90.9     -8.5720 µg/L      3.25663     -8.5720 ppb       3.25663  37.99%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -13.3     -0.1514 µg/L      0.27004     -0.1514 ppb       0.27004 178.37%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              24.3      0.5875 µg/L      0.10370      0.5875 ppb       0.10370  17.65%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 09:13:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	173238.6	173238.6	99.5	%			09:14:04
1	Al 396.153Radial†	11928.9	12155.3	5095.3	µg/L	5095.3	ppb	09:14:24
1	Ca 317.933Radial†	27660.9	26918.3	5098.3	µg/L	5098.3	ppb	09:14:24
1	Fe 238.204 Radial†	7065.1	7124.7	5126.2	µg/L	5126.2	ppb	09:14:24
1	K 766.490 Radial†	10011.2	9288.5	5083.4	µg/L	5083.4	ppb	09:14:04
1	Mg 279.077 IEC†	2571.4	2540.4	5217.0	µg/L	5217.0	ppb	09:14:24
1	Na 589.592 Radial†	42449.6	42532.1	10209	µg/L	10209	ppb	09:14:04
1	Sr 421.552†	116515.8	117000.6	503.84	µg/L	503.84	ppb	09:14:04
1	Sc 361.383	2186858.2	2186858.2	99.772	%			09:15:28
1	Y 371.029	1392004.0	1392004.0	99.236	%			09:15:28
1	Ag 328.068†	56601.9	57553.3	511.09	µg/L	511.09	ppb	09:15:34
1	As 188.979†	315.7	314.2	501.53	µg/L	501.53	ppb	09:15:54
1	B 249.677†	12432.1	12252.0	498.61	µg/L	498.61	ppb	09:15:34
1	Ba 233.527†	20466.6	20594.3	503.62	µg/L	503.62	ppb	09:15:34
1	Be 313.107†	858517.5	856823.1	502.58	µg/L	502.58	ppb	09:15:28
1	Cd 226.502†	21226.3	21415.2	505.26	µg/L	505.26	ppb	09:15:34
1	Co 228.616†	10992.4	11119.1	505.21	µg/L	505.21	ppb	09:15:34
1	Cr 267.716†	25448.2	25688.7	503.74	µg/L	503.74	ppb	09:15:34
1	Cu 324.752†	74199.7	69704.6	493.77	µg/L	493.77	ppb	09:15:34
1	Mn 257.610†	174476.6	174819.6	501.30	µg/L	501.30	ppb	09:15:28
1	Mo 202.031†	4690.9	4702.5	502.91	µg/L	502.91	ppb	09:15:54
1	Ni 231.604†	10433.1	10013.7	504.20	µg/L	504.20	ppb	09:15:34
1	P 214.914†	1655.9	1425.6	2393.1	µg/L	2393.1	ppb	09:15:54
1	Pb 220.353†	2185.3	2145.8	501.37	µg/L	501.37	ppb	09:15:54
1	S 181.975 Axial†	265.0	221.3	977.10	µg/L	977.10	ppb	09:15:54
1	Sb 206.836†	593.1	573.2	499.14	µg/L	499.14	ppb	09:15:54
1	Se 196.026†	472.8	454.3	503.92	µg/L	503.92	ppb	09:15:54
1	SiO2†	34038.7	30944.2	5461.2	µg/L	5461.2	ppb	09:15:34
1	Si 251.611†	36407.0	36100.0	2509.3	µg/L	2509.3	ppb	09:15:34
1	Sn 189.927†	1146.1	1141.5	504.03	µg/L	504.03	ppb	09:15:54
1	Ti 334.940†	223294.1	222698.1	503.59	µg/L	503.59	ppb	09:15:28
1	Tl 190.801†	328.9	354.4	496.89	µg/L	496.89	ppb	09:15:54
1	U 409.014†	5436.1	5415.3	509.16	µg/L	509.16	ppb	09:15:34
1	V 292.402†	46102.3	46371.0	508.25	µg/L	508.25	ppb	09:15:34
1	Zn 213.857†	21365.8	20692.0	498.64	µg/L	498.64	ppb	09:15:34
2	Sc RADIAL	174503.2	174503.2	100	%			09:14:30
2	Al 396.153Radial†	11925.8	12065.4	5057.5	µg/L	5057.5	ppb	09:14:50
2	Ca 317.933Radial†	27629.0	26685.1	5054.2	µg/L	5054.2	ppb	09:14:50
2	Fe 238.204 Radial†	7058.9	7067.1	5085.1	µg/L	5085.1	ppb	09:14:50
2	K 766.490 Radial†	10122.1	9326.2	5104.1	µg/L	5104.1	ppb	09:14:30
2	Mg 279.077 IEC†	2566.3	2516.6	5168.2	µg/L	5168.2	ppb	09:14:50
2	Na 589.592 Radial†	42434.1	42207.6	10131	µg/L	10131	ppb	09:14:30
2	Sr 421.552†	116627.2	116263.3	500.66	µg/L	500.66	ppb	09:14:30
2	Sc 361.383	2181186.9	2181186.9	99.513	%			09:16:01
2	Y 371.029	1388754.8	1388754.8	99.004	%			09:16:01
2	Ag 328.068†	57129.6	58231.2	517.10	µg/L	517.10	ppb	09:16:07
2	As 188.979†	317.8	317.1	506.17	µg/L	506.17	ppb	09:16:27
2	B 249.677†	12535.9	12388.7	504.21	µg/L	504.21	ppb	09:16:07
2	Ba 233.527†	20733.4	20915.8	511.48	µg/L	511.48	ppb	09:16:07
2	Be 313.107†	857338.8	857876.1	503.20	µg/L	503.20	ppb	09:16:01
2	Cd 226.502†	21449.7	21695.0	511.86	µg/L	511.86	ppb	09:16:07
2	Co 228.616†	11125.6	11281.6	512.59	µg/L	512.59	ppb	09:16:07
2	Cr 267.716†	25691.1	25999.2	509.83	µg/L	509.83	ppb	09:16:07
2	Cu 324.752†	74937.7	70639.5	500.38	µg/L	500.38	ppb	09:16:07
2	Mn 257.610†	174317.1	175114.0	502.14	µg/L	502.14	ppb	09:16:01
2	Mo 202.031†	4674.0	4697.8	502.40	µg/L	502.40	ppb	09:16:27
2	Ni 231.604†	10575.7	10184.1	512.78	µg/L	512.78	ppb	09:16:07
2	P 214.914†	1650.7	1424.6	2390.2	µg/L	2390.2	ppb	09:16:27
2	Pb 220.353†	2177.9	2144.1	500.96	µg/L	500.96	ppb	09:16:27

2	S 181.975 Axial†	268.1	225.0	993.54	µg/L	993.54 ppb	09:16:27
2	Sb 206.836†	588.0	569.6	495.98	µg/L	495.98 ppb	09:16:27
2	Se 196.026†	467.1	449.8	499.00	µg/L	499.00 ppb	09:16:27
2	SiO2†	34456.3	31452.5	5550.9	µg/L	5550.9 ppb	09:16:07
2	Si 251.611†	36904.1	36694.4	2551.5	µg/L	2551.5 ppb	09:16:07
2	Sn 189.927†	1134.5	1132.8	500.19	µg/L	500.19 ppb	09:16:27
2	Ti 334.940†	222886.8	222870.8	503.98	µg/L	503.98 ppb	09:16:01
2	Tl 190.801†	329.5	355.9	498.92	µg/L	498.92 ppb	09:16:27
2	U 409.014†	5342.9	5335.9	501.68	µg/L	501.68 ppb	09:16:07
2	V 292.402†	46495.3	46886.0	513.82	µg/L	513.82 ppb	09:16:07
2	Zn 213.857†	21635.2	21018.3	506.52	µg/L	506.52 ppb	09:16:07
3	Sc RADIAL	174326.3	174326.3	100	%		09:14:56
3	Al 396.153Radial†	11998.7	12150.2	5093.5	µg/L	5093.5 ppb	09:15:16
3	Ca 317.933Radial†	27844.3	26928.0	5100.2	µg/L	5100.2 ppb	09:15:16
3	Fe 238.204 Radial†	7110.4	7125.7	5126.8	µg/L	5126.8 ppb	09:15:16
3	K 766.490 Radial†	9989.3	9203.9	5037.1	µg/L	5037.1 ppb	09:14:56
3	Mg 279.077 IEC†	2584.5	2537.4	5210.5	µg/L	5210.5 ppb	09:15:16
3	Na 589.592 Radial†	42339.6	42156.1	10118	µg/L	10118 ppb	09:14:56
3	Sr 421.552†	116166.8	115921.6	499.19	µg/L	499.19 ppb	09:14:56
3	Sc 361.383	2216864.2	2216864.2	101.14	%		09:16:35
3	Y 371.029	1410745.0	1410745.0	100.57	%		09:16:35
3	Ag 328.068†	56895.5	57075.8	506.86	µg/L	506.86 ppb	09:16:40
3	As 188.979†	314.6	308.8	493.01	µg/L	493.01 ppb	09:17:01
3	B 249.677†	12506.3	12156.7	494.72	µg/L	494.72 ppb	09:16:40
3	Ba 233.527†	20658.7	20506.5	501.47	µg/L	501.47 ppb	09:16:40
3	Be 313.107†	863819.6	850418.5	498.82	µg/L	498.82 ppb	09:16:35
3	Cd 226.502†	21382.9	21282.0	502.11	µg/L	502.11 ppb	09:16:40
3	Co 228.616†	11061.0	11037.8	501.52	µg/L	501.52 ppb	09:16:40
3	Cr 267.716†	25607.4	25501.0	500.06	µg/L	500.06 ppb	09:16:40
3	Cu 324.752†	74635.2	69128.6	489.69	µg/L	489.69 ppb	09:16:40
3	Mn 257.610†	175445.5	173410.5	497.26	µg/L	497.26 ppb	09:16:35
3	Mo 202.031†	4683.0	4631.1	495.27	µg/L	495.27 ppb	09:17:01
3	Ni 231.604†	10511.0	9949.1	500.95	µg/L	500.95 ppb	09:16:40
3	P 214.914†	1649.0	1396.3	2342.8	µg/L	2342.8 ppb	09:17:01
3	Pb 220.353†	2178.2	2109.2	492.81	µg/L	492.81 ppb	09:17:01
3	S 181.975 Axial†	261.3	214.0	944.72	µg/L	944.72 ppb	09:17:01
3	Sb 206.836†	599.3	571.2	497.46	µg/L	497.46 ppb	09:17:01
3	Se 196.026†	461.8	437.0	484.81	µg/L	484.81 ppb	09:17:01
3	SiO2†	34326.7	30767.2	5430.0	µg/L	5430.0 ppb	09:16:40
3	Si 251.611†	36829.4	36023.7	2504.4	µg/L	2504.4 ppb	09:16:40
3	Sn 189.927†	1152.5	1132.3	499.99	µg/L	499.99 ppb	09:17:01
3	Ti 334.940†	224274.8	220638.5	498.93	µg/L	498.93 ppb	09:16:35
3	Tl 190.801†	317.4	338.6	474.65	µg/L	474.65 ppb	09:17:01
3	U 409.014†	5483.7	5388.7	506.65	µg/L	506.65 ppb	09:16:40
3	V 292.402†	46402.1	46041.9	504.62	µg/L	504.62 ppb	09:16:40
3	Zn 213.857†	21551.1	20585.3	496.08	µg/L	496.08 ppb	09:16:40

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2194969.8	100.14	%	0.875				0.87%
Sc RADIAL	174022.7	100.0	%	0.39				0.39%
Y 371.029	1397167.9	99.604	%	0.8462				0.85%
Ag 328.068†	57620.1	511.68	µg/L	5.147	511.68	ppb	5.147	1.01%
QC value within limits for Ag 328.068 Recovery = 102.34%								
Al 396.153Radial†	12123.6	5082.1	µg/L	21.31	5082.1	ppb	21.31	0.42%
QC value within limits for Al 396.153Radial Recovery = 101.64%								
As 188.979†	313.3	500.24	µg/L	6.674	500.24	ppb	6.674	1.33%
QC value within limits for As 188.979 Recovery = 100.05%								
B 249.677†	12265.8	499.18	µg/L	4.768	499.18	ppb	4.768	0.96%
QC value within limits for B 249.677 Recovery = 99.84%								
Ba 233.527†	20672.2	505.52	µg/L	5.267	505.52	ppb	5.267	1.04%
QC value within limits for Ba 233.527 Recovery = 101.10%								
Be 313.107†	855039.2	501.53	µg/L	2.369	501.53	ppb	2.369	0.47%
QC value within limits for Be 313.107 Recovery = 100.31%								
Ca 317.933Radial†	26843.8	5084.2	µg/L	26.05	5084.2	ppb	26.05	0.51%
QC value within limits for Ca 317.933Radial Recovery = 101.68%								
Cd 226.502†	21464.1	506.41	µg/L	4.974	506.41	ppb	4.974	0.98%
QC value within limits for Cd 226.502 Recovery = 101.28%								
Co 228.616†	11146.1	506.44	µg/L	5.640	506.44	ppb	5.640	1.11%

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   QC value within limits for Co 228.616  Recovery = 101.29%
Cr 267.716†            25729.6      504.54 µg/L          4.934      504.54 ppb          4.934   0.98%
   QC value within limits for Cr 267.716  Recovery = 100.91%
Cu 324.752†            69824.2      494.61 µg/L          5.391      494.61 ppb          5.391   1.09%
   QC value within limits for Cu 324.752  Recovery = 98.92%
Fe 238.204 Radial†      7105.9      5112.7 µg/L         23.87      5112.7 ppb         23.87   0.47%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.25%
K 766.490 Radial†       9272.9      5074.9 µg/L         34.28      5074.9 ppb         34.28   0.68%
   QC value within limits for K 766.490 Radial  Recovery = 101.50%
Mg 279.077 IEC†         2531.5      5198.6 µg/L         26.47      5198.6 ppb         26.47   0.51%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.97%
Mn 257.610†           174448.0      500.23 µg/L          2.611      500.23 ppb          2.611   0.52%
   QC value within limits for Mn 257.610  Recovery = 100.05%
Mo 202.031†             4677.2      500.19 µg/L          4.271      500.19 ppb          4.271   0.85%
   QC value within limits for Mo 202.031  Recovery = 100.04%
Na 589.592 Radial†     42298.6       10153 µg/L          48.9       10153 ppb          48.9   0.48%
   QC value within limits for Na 589.592 Radial  Recovery = 101.53%
Ni 231.604†            10049.0      505.98 µg/L          6.114      505.98 ppb          6.114   1.21%
   QC value within limits for Ni 231.604  Recovery = 101.20%
P 214.914†              1415.5      2375.3 µg/L         28.22      2375.3 ppb         28.22   1.19%
   QC value within limits for P 214.914  Recovery = 95.01%
Pb 220.353†             2133.1      498.38 µg/L          4.830      498.38 ppb          4.830   0.97%
   QC value within limits for Pb 220.353  Recovery = 99.68%
S 181.975 Axial†         220.1      971.79 µg/L         24.839      971.79 ppb         24.839   2.56%
   QC value within limits for S 181.975 Axial  Recovery = 97.18%
Sb 206.836†              571.3      497.53 µg/L          1.584      497.53 ppb          1.584   0.32%
   QC value within limits for Sb 206.836  Recovery = 99.51%
Se 196.026†              447.0      495.91 µg/L          9.924      495.91 ppb          9.924   2.00%
   QC value within limits for Se 196.026  Recovery = 99.18%
SiO2†                  31054.6      5480.7 µg/L         62.79      5480.7 ppb         62.79   1.15%
   QC value within limits for SiO2  Recovery = 102.49%
Si 251.611†            36272.7      2521.7 µg/L         25.93      2521.7 ppb         25.93   1.03%
   QC value within limits for Si 251.611  Recovery = 100.87%
Sn 189.927†             1135.5      501.40 µg/L          2.276      501.40 ppb          2.276   0.45%
   QC value within limits for Sn 189.927  Recovery = 100.28%
Sr 421.552†           116395.2      501.23 µg/L          2.375      501.23 ppb          2.375   0.47%
   QC value within limits for Sr 421.552  Recovery = 100.25%
Ti 334.940†           222069.1      502.17 µg/L          2.810      502.17 ppb          2.810   0.56%
   QC value within limits for Ti 334.940  Recovery = 100.43%
Tl 190.801†              349.6      490.15 µg/L         13.469      490.15 ppb         13.469   2.75%
   QC value within limits for Tl 190.801  Recovery = 98.03%
U 409.014†              5379.9      505.83 µg/L          3.806      505.83 ppb          3.806   0.75%
   QC value within limits for U 409.014  Recovery = 101.17%
V 292.402†             46433.0      508.89 µg/L          4.636      508.89 ppb          4.636   0.91%
   QC value within limits for V 292.402  Recovery = 101.78%
Zn 213.857†            20765.2      500.41 µg/L          5.442      500.41 ppb          5.442   1.09%
   QC value within limits for Zn 213.857  Recovery = 100.08%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 09:17:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174203.2	174203.2	100	%			09:17:43
1	Al 396.153Radial†	-166.9	3.2	1.3170	µg/L	1.3170	ppb	09:17:43
1	Ca 317.933Radial†	882.3	8.0	1.5235	µg/L	1.5235	ppb	09:18:04
1	Fe 238.204 Radial†	-22.2	4.1	2.9208	µg/L	2.9208	ppb	09:18:04
1	K 766.490 Radial†	783.4	12.7	6.9371	µg/L	6.9371	ppb	09:17:43
1	Mg 279.077 IEC†	50.5	7.3	15.027	µg/L	15.027	ppb	09:18:04
1	Na 589.592 Radial†	113.5	-5.0	-1.2039	µg/L	-1.2039	ppb	09:17:43
1	Sr 421.552†	135.8	68.9	0.2967	µg/L	0.2967	ppb	09:17:43
1	Sc 361.383	2190342.0	2190342.0	99.931	%			09:19:06
1	Y 371.029	1400262.4	1400262.4	99.825	%			09:19:06
1	Ag 328.068†	-799.6	21.8	0.1975	µg/L	0.1975	ppb	09:19:11
1	As 188.979†	5.1	2.9	4.6159	µg/L	4.6159	ppb	09:19:32
1	B 249.677†	226.3	17.9	0.7300	µg/L	0.7300	ppb	09:19:11
1	Ba 233.527†	-84.9	-4.1	-0.0983	µg/L	-0.0983	ppb	09:19:32
1	Be 313.107†	3724.7	68.5	0.0413	µg/L	0.0413	ppb	09:19:11
1	Cd 226.502†	-148.4	-8.2	-0.1963	µg/L	-0.1963	ppb	09:19:32
1	Co 228.616†	-98.6	2.9	0.1324	µg/L	0.1324	ppb	09:19:32
1	Cr 267.716†	-199.7	-17.5	-0.3418	µg/L	-0.3418	ppb	09:19:11
1	Cu 324.752†	4645.4	-16.2	-0.1144	µg/L	-0.1144	ppb	09:19:11
1	Mn 257.610†	83.6	27.4	0.0787	µg/L	0.0787	ppb	09:19:11
1	Mo 202.031†	2.2	3.2	0.3408	µg/L	0.3408	ppb	09:19:32
1	Ni 231.604†	446.2	3.2	0.1620	µg/L	0.1620	ppb	09:19:32
1	P 214.914†	219.8	-14.2	-24.632	µg/L	-24.632	ppb	09:19:32
1	Pb 220.353†	39.8	-4.6	-1.0617	µg/L	-1.0617	ppb	09:19:32
1	S 181.975 Axial†	41.2	-3.1	-13.488	µg/L	-13.488	ppb	09:19:32
1	Sb 206.836†	26.8	5.5	4.8292	µg/L	4.8292	ppb	09:19:32
1	Se 196.026†	10.4	-9.2	-10.147	µg/L	-10.147	ppb	09:19:32
1	SiO2†	3154.5	-15.7	-2.7769	µg/L	-2.7769	ppb	09:19:11
1	Si 251.611†	390.9	0.8	0.0378	µg/L	0.0378	ppb	09:19:32
1	Sn 189.927†	7.0	-0.2	-0.0854	µg/L	-0.0854	ppb	09:19:32
1	Ti 334.940†	1291.8	185.8	0.4202	µg/L	0.4202	ppb	09:19:11
1	Tl 190.801†	-29.0	-4.3	-6.0339	µg/L	-6.0339	ppb	09:19:32
1	U 409.014†	1.7	-31.5	-2.9678	µg/L	-2.9678	ppb	09:19:11
1	V 292.402†	-97.9	65.2	0.7060	µg/L	0.7060	ppb	09:19:11
1	Zn 213.857†	746.7	24.5	0.5951	µg/L	0.5951	ppb	09:19:32
2	Sc RADIAL	173883.6	173883.6	99.9	%			09:18:09
2	Al 396.153Radial†	-187.4	-17.6	-7.4184	µg/L	-7.4184	ppb	09:18:09
2	Ca 317.933Radial†	866.8	-5.9	-1.1137	µg/L	-1.1137	ppb	09:18:30
2	Fe 238.204 Radial†	-20.1	6.1	4.3844	µg/L	4.3844	ppb	09:18:30
2	K 766.490 Radial†	847.6	78.3	42.853	µg/L	42.853	ppb	09:18:09
2	Mg 279.077 IEC†	52.2	9.1	18.636	µg/L	18.636	ppb	09:18:30
2	Na 589.592 Radial†	124.2	5.9	1.4118	µg/L	1.4118	ppb	09:18:09
2	Sr 421.552†	104.6	37.9	0.1634	µg/L	0.1634	ppb	09:18:09
2	Sc 361.383	2194156.5	2194156.5	100.10	%			09:19:38
2	Y 371.029	1403195.6	1403195.6	100.03	%			09:19:38
2	Ag 328.068†	-677.2	145.5	1.2806	µg/L	1.2806	ppb	09:19:43
2	As 188.979†	0.5	-1.8	-2.8311	µg/L	-2.8311	ppb	09:20:04
2	B 249.677†	229.6	20.8	0.8475	µg/L	0.8475	ppb	09:19:43
2	Ba 233.527†	-80.3	0.7	0.0153	µg/L	0.0153	ppb	09:20:04
2	Be 313.107†	3744.1	81.5	0.0486	µg/L	0.0486	ppb	09:19:43
2	Cd 226.502†	-129.0	11.5	0.2670	µg/L	0.2670	ppb	09:20:04
2	Co 228.616†	-81.7	20.0	0.9065	µg/L	0.9065	ppb	09:20:04
2	Cr 267.716†	-201.1	-18.6	-0.3638	µg/L	-0.3638	ppb	09:19:43
2	Cu 324.752†	4662.2	-7.5	-0.0528	µg/L	-0.0528	ppb	09:19:43
2	Mn 257.610†	89.7	33.4	0.0957	µg/L	0.0957	ppb	09:19:43
2	Mo 202.031†	1.8	2.8	0.2951	µg/L	0.2951	ppb	09:20:04
2	Ni 231.604†	465.7	21.9	1.1040	µg/L	1.1040	ppb	09:20:04
2	P 214.914†	231.7	-2.6	-4.5389	µg/L	-4.5389	ppb	09:20:04
2	Pb 220.353†	47.4	2.9	0.6884	µg/L	0.6884	ppb	09:20:04

2	S 181.975 Axial†	43.4	-1.0	-4.4063 µg/L	-4.4063 ppb	09:20:04
2	Sb 206.836†	29.3	8.0	6.9721 µg/L	6.9721 ppb	09:20:04
2	Se 196.026†	20.1	0.5	0.5803 µg/L	0.5803 ppb	09:20:04
2	SiO2†	3114.2	-61.5	-10.851 µg/L	-10.851 ppb	09:19:43
2	Si 251.611†	395.7	5.0	0.2821 µg/L	0.2821 ppb	09:20:04
2	Sn 189.927†	9.3	2.2	0.9545 µg/L	0.9545 ppb	09:20:04
2	Ti 334.940†	1259.5	151.3	0.3424 µg/L	0.3424 ppb	09:19:43
2	Tl 190.801†	-27.5	-2.7	-3.8471 µg/L	-3.8471 ppb	09:20:04
2	U 409.014†	-34.2	-67.3	-6.3497 µg/L	-6.3497 ppb	09:19:43
2	V 292.402†	-188.7	-25.4	-0.2832 µg/L	-0.2832 ppb	09:19:43
2	Zn 213.857†	728.5	5.0	0.1152 µg/L	0.1152 ppb	09:20:04
3	Sc RADIAL	173934.7	173934.7	99.9 %		09:18:35
3	Al 396.153Radial†	-170.1	-0.3	-0.1806 µg/L	-0.1806 ppb	09:18:35
3	Ca 317.933Radial†	875.8	2.9	0.5501 µg/L	0.5501 ppb	09:18:55
3	Fe 238.204 Radial†	-23.4	2.8	2.0222 µg/L	2.0222 ppb	09:18:55
3	K 766.490 Radial†	798.2	28.7	15.682 µg/L	15.682 ppb	09:18:35
3	Mg 279.077 IEC†	39.4	-3.7	-7.6125 µg/L	-7.6125 ppb	09:18:55
3	Na 589.592 Radial†	109.7	-8.6	-2.0664 µg/L	-2.0664 ppb	09:18:35
3	Sr 421.552†	126.8	60.1	0.2589 µg/L	0.2589 ppb	09:18:35
3	Sc 361.383	2189317.6	2189317.6	99.884 %		09:20:10
3	Y 371.029	1401794.0	1401794.0	99.934 %		09:20:10
3	Ag 328.068†	-764.5	56.6	0.5011 µg/L	0.5011 ppb	09:20:15
3	As 188.979†	4.1	1.8	2.9239 µg/L	2.9239 ppb	09:20:36
3	B 249.677†	258.0	49.8	2.0306 µg/L	2.0306 ppb	09:20:15
3	Ba 233.527†	-66.3	14.5	0.3537 µg/L	0.3537 ppb	09:20:36
3	Be 313.107†	4260.9	607.1	0.3573 µg/L	0.3573 ppb	09:20:15
3	Cd 226.502†	-117.9	22.2	0.5293 µg/L	0.5293 ppb	09:20:36
3	Co 228.616†	-82.6	18.9	0.8591 µg/L	0.8591 ppb	09:20:36
3	Cr 267.716†	-194.3	-12.2	-0.2382 µg/L	-0.2382 ppb	09:20:15
3	Cu 324.752†	4656.5	-3.0	-0.0207 µg/L	-0.0207 ppb	09:20:15
3	Mn 257.610†	249.4	193.4	0.5546 µg/L	0.5546 ppb	09:20:15
3	Mo 202.031†	11.8	12.7	1.3592 µg/L	1.3592 ppb	09:20:36
3	Ni 231.604†	462.1	19.4	0.9749 µg/L	0.9749 ppb	09:20:36
3	P 214.914†	218.3	-15.5	-26.926 µg/L	-26.926 ppb	09:20:36
3	Pb 220.353†	55.4	11.0	2.5719 µg/L	2.5719 ppb	09:20:36
3	S 181.975 Axial†	36.9	-7.3	-32.418 µg/L	-32.418 ppb	09:20:36
3	Sb 206.836†	25.4	4.2	3.6605 µg/L	3.6605 ppb	09:20:36
3	Se 196.026†	16.4	-3.2	-3.5121 µg/L	-3.5121 ppb	09:20:36
3	SiO2†	3059.0	-109.8	-19.387 µg/L	-19.387 ppb	09:20:15
3	Si 251.611†	415.3	25.4	1.7081 µg/L	1.7081 ppb	09:20:36
3	Sn 189.927†	9.4	2.3	0.9892 µg/L	0.9892 ppb	09:20:36
3	Ti 334.940†	1439.3	334.1	0.7558 µg/L	0.7558 ppb	09:20:15
3	Tl 190.801†	-23.5	1.2	1.6633 µg/L	1.6633 ppb	09:20:36
3	U 409.014†	101.1	68.0	6.4117 µg/L	6.4117 ppb	09:20:15
3	V 292.402†	-128.2	34.8	0.3975 µg/L	0.3975 ppb	09:20:15
3	Zn 213.857†	752.1	30.2	0.7308 µg/L	0.7308 ppb	09:20:36

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2191272.1	99.973	%	0.1163				0.12%
Sc RADIAL	174007.2	100.0	%	0.10				0.10%
Y 371.029	1401750.7	99.931	%	0.1046				0.10%
Ag 328.068†	74.6	0.6597	µg/L	0.55868	0.6597	ppb	0.55868	84.68%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-4.9	-2.0940	µg/L	4.67145	-2.0940	ppb	4.67145	223.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.0	1.5696	µg/L	3.90387	1.5696	ppb	3.90387	248.72%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	29.5	1.2027	µg/L	0.71940	1.2027	ppb	0.71940	59.81%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.7	0.0902	µg/L	0.23511	0.0902	ppb	0.23511	260.52%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	252.4	0.1491	µg/L	0.18034	0.1491	ppb	0.18034	120.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.7	0.3200	µg/L	1.33354	0.3200	ppb	1.33354	416.79%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	8.5	0.2000	µg/L	0.36740	0.2000	ppb	0.36740	183.68%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	13.9	0.6327	µg/L	0.43390	0.6327	ppb	0.43390	68.58%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -16.1     -0.3146 µg/L       0.06712     -0.3146 ppb        0.06712  21.33%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -8.9     -0.0627 µg/L       0.04762     -0.0627 ppb        0.04762  75.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         4.3      3.1091 µg/L       1.19231      3.1091 ppb        1.19231  38.35%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         39.9     21.824 µg/L       18.7292     21.824 ppb        18.7292  85.82%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            4.2      8.6833 µg/L      14.22744      8.6833 ppb       14.22744 163.85%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               84.7      0.2430 µg/L       0.26997      0.2430 ppb        0.26997 111.11%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                6.2      0.6650 µg/L       0.60162      0.6650 ppb        0.60162  90.47%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -2.6     -0.6195 µg/L       1.81120     -0.6195 ppb        1.81120 292.37%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               14.8      0.7470 µg/L       0.51072      0.7470 ppb        0.51072  68.37%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -10.8     -18.699 µg/L       12.3166     -18.699 ppb        12.3166  65.87%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                3.1      0.7329 µg/L       1.81718      0.7329 ppb        1.81718 247.95%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -3.8     -16.771 µg/L       14.2915     -16.771 ppb        14.2915  85.22%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                5.9      5.1539 µg/L       1.67951      5.1539 ppb        1.67951  32.59%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -3.9     -4.3596 µg/L       5.41371     -4.3596 ppb        5.41371 124.18%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    -62.4     -11.005 µg/L        8.3059     -11.005 ppb         8.3059  75.48%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               10.4      0.6760 µg/L       0.90214      0.6760 ppb        0.90214 133.46%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.4      0.6194 µg/L       0.61066      0.6194 ppb        0.61066  98.59%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               55.7      0.2397 µg/L       0.06871      0.2397 ppb        0.06871  28.67%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              223.7      0.5061 µg/L       0.21968      0.5061 ppb        0.21968  43.40%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -2.0     -2.7392 µg/L       3.96637     -2.7392 ppb        3.96637 144.80%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -10.3     -0.9686 µg/L       6.61140     -0.9686 ppb        6.61140 682.57%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                24.9      0.2734 µg/L       0.50613      0.2734 ppb        0.50613 185.11%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               19.9      0.4804 µg/L       0.32345      0.4804 ppb        0.32345  67.33%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 18
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 09:46:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174759.7	174759.7	100	%			09:47:07
1	Al 396.153Radial†	12792.4	12911.0	5413.4	µg/L	5413.4	ppb	09:47:12
1	Ca 317.933Radial†	29881.6	28888.3	5471.4	µg/L	5471.4	ppb	09:47:12
1	Fe 238.204 Radial†	7310.2	7307.1	5257.0	µg/L	5257.0	ppb	09:47:12
1	K 766.490 Radial†	10078.9	9268.4	5072.4	µg/L	5072.4	ppb	09:47:12
1	Mg 279.077 IEC†	2756.7	2702.5	5549.3	µg/L	5549.3	ppb	09:47:12
1	Na 589.592 Radial†	42598.8	42309.5	10155	µg/L	10155	ppb	09:47:07
1	Sr 421.552†	116967.4	116431.5	501.39	µg/L	501.39	ppb	09:47:07
1	Sc 361.383	2202024.7	2202024.7	100.46	%			09:47:46
1	Y 371.029	1400549.3	1400549.3	99.845	%			09:47:46
1	Ag 328.068†	56833.5	57393.1	509.68	µg/L	509.68	ppb	09:47:52
1	As 188.979†	319.8	316.1	504.56	µg/L	504.56	ppb	09:48:12
1	B 249.677†	12457.8	12191.7	496.11	µg/L	496.11	ppb	09:47:52
1	Ba 233.527†	20624.1	20609.8	504.00	µg/L	504.00	ppb	09:47:52
1	Be 313.107†	863207.9	855565.3	501.84	µg/L	501.84	ppb	09:47:46
1	Cd 226.502†	21409.1	21450.6	506.08	µg/L	506.08	ppb	09:47:52
1	Co 228.616†	11030.5	11081.2	503.49	µg/L	503.49	ppb	09:47:52
1	Cr 267.716†	25621.7	25685.8	503.68	µg/L	503.68	ppb	09:47:52
1	Cu 324.752†	74603.7	69594.5	493.01	µg/L	493.01	ppb	09:47:52
1	Mn 257.610†	175441.5	174575.6	500.60	µg/L	500.60	ppb	09:47:46
1	Mo 202.031†	4691.6	4670.9	499.54	µg/L	499.54	ppb	09:48:12
1	Ni 231.604†	10553.3	10061.3	506.60	µg/L	506.60	ppb	09:47:52
1	P 214.914†	1658.1	1416.3	2377.1	µg/L	2377.1	ppb	09:48:12
1	Pb 220.353†	2190.8	2136.3	499.17	µg/L	499.17	ppb	09:48:12
1	S 181.975 Axial†	263.6	218.0	962.55	µg/L	962.55	ppb	09:48:12
1	Sb 206.836†	597.6	573.6	499.48	µg/L	499.48	ppb	09:48:12
1	Se 196.026†	470.8	449.1	498.20	µg/L	498.20	ppb	09:48:12
1	SiO2†	34197.5	30867.3	5447.7	µg/L	5447.7	ppb	09:47:52
1	Si 251.611†	36554.5	35995.5	2502.1	µg/L	2502.1	ppb	09:47:52
1	Sn 189.927†	1151.1	1138.7	502.91	µg/L	502.91	ppb	09:48:12
1	Ti 334.940†	224094.7	221953.6	501.89	µg/L	501.89	ppb	09:47:46
1	Tl 190.801†	327.0	350.2	490.96	µg/L	490.96	ppb	09:48:12
1	U 409.014†	5401.4	5343.3	502.31	µg/L	502.31	ppb	09:47:52
1	V 292.402†	46347.8	46297.0	507.42	µg/L	507.42	ppb	09:47:52
1	Zn 213.857†	21536.8	20714.7	499.17	µg/L	499.17	ppb	09:47:52
2	Sc RADIAL	173652.1	173652.1	99.8	%			09:47:18
2	Al 396.153Radial†	12381.1	12580.0	5274.0	µg/L	5274.0	ppb	09:47:24
2	Ca 317.933Radial†	28758.9	27952.8	5294.3	µg/L	5294.3	ppb	09:47:24
2	Fe 238.204 Radial†	7176.5	7219.5	5194.2	µg/L	5194.2	ppb	09:47:24
2	K 766.490 Radial†	10169.3	9423.0	5157.1	µg/L	5157.1	ppb	09:47:24
2	Mg 279.077 IEC†	2651.1	2614.1	5368.2	µg/L	5368.2	ppb	09:47:24
2	Na 589.592 Radial†	42372.9	42353.7	10166	µg/L	10166	ppb	09:47:18
2	Sr 421.552†	116392.6	116598.3	502.10	µg/L	502.10	ppb	09:47:18
2	Sc 361.383	2192886.8	2192886.8	100.05	%			09:48:19
2	Y 371.029	1395876.6	1395876.6	99.512	%			09:48:19
2	Ag 328.068†	56704.2	57499.6	510.63	µg/L	510.63	ppb	09:48:25
2	As 188.979†	321.7	319.3	509.73	µg/L	509.73	ppb	09:48:45
2	B 249.677†	12428.0	12213.7	497.02	µg/L	497.02	ppb	09:48:25
2	Ba 233.527†	20624.0	20695.2	506.08	µg/L	506.08	ppb	09:48:25
2	Be 313.107†	856726.3	852667.2	500.14	µg/L	500.14	ppb	09:48:19
2	Cd 226.502†	21352.8	21483.1	506.86	µg/L	506.86	ppb	09:48:25
2	Co 228.616†	11074.4	11170.8	507.57	µg/L	507.57	ppb	09:48:25
2	Cr 267.716†	25454.0	25624.4	502.48	µg/L	502.48	ppb	09:48:25
2	Cu 324.752†	74455.2	69755.5	494.14	µg/L	494.14	ppb	09:48:25
2	Mn 257.610†	174183.8	174046.1	499.08	µg/L	499.08	ppb	09:48:19
2	Mo 202.031†	4712.9	4711.6	503.88	µg/L	503.88	ppb	09:48:45
2	Ni 231.604†	10519.3	10071.1	507.09	µg/L	507.09	ppb	09:48:25
2	P 214.914†	1661.8	1426.9	2395.3	µg/L	2395.3	ppb	09:48:45
2	Pb 220.353†	2204.6	2159.2	504.51	µg/L	504.51	ppb	09:48:45

2	S 181.975 Axial†	264.8	220.4	972.81 µg/L	972.81 ppb	09:48:45
2	Sb 206.836†	595.5	574.0	499.85 µg/L	499.85 ppb	09:48:45
2	Se 196.026†	471.6	451.9	501.25 µg/L	501.25 ppb	09:48:45
2	SiO2†	34157.3	30968.9	5465.6 µg/L	5465.6 ppb	09:48:25
2	Si 251.611†	36568.0	36160.6	2513.6 µg/L	2513.6 ppb	09:48:25
2	Sn 189.927†	1153.0	1145.3	505.75 µg/L	505.75 ppb	09:48:45
2	Ti 334.940†	222372.9	221162.1	500.11 µg/L	500.11 ppb	09:48:19
2	Tl 190.801†	326.4	351.0	492.04 µg/L	492.04 ppb	09:48:45
2	U 409.014†	5441.8	5406.0	508.25 µg/L	508.25 ppb	09:48:25
2	V 292.402†	46284.4	46425.9	508.85 µg/L	508.85 ppb	09:48:25
2	Zn 213.857†	21509.6	20776.7	500.68 µg/L	500.68 ppb	09:48:25
3	Sc RADIAL	173963.9	173963.9	99.9 %		09:47:29
3	Al 396.153Radial†	12254.5	12431.1	5211.3 µg/L	5211.3 ppb	09:47:34
3	Ca 317.933Radial†	28635.7	27777.8	5261.1 µg/L	5261.1 ppb	09:47:34
3	Fe 238.204 Radial†	7178.7	7208.8	5186.5 µg/L	5186.5 ppb	09:47:34
3	K 766.490 Radial†	10137.1	9372.5	5129.4 µg/L	5129.4 ppb	09:47:34
3	Mg 279.077 IEC†	2641.9	2600.2	5339.6 µg/L	5339.6 ppb	09:47:34
3	Na 589.592 Radial†	42793.7	42698.6	10249 µg/L	10249 ppb	09:47:29
3	Sr 421.552†	117621.8	117619.1	506.50 µg/L	506.50 ppb	09:47:29
3	Sc 361.383	2181479.4	2181479.4	99.526 %		09:48:53
3	Y 371.029	1390111.4	1390111.4	99.101 %		09:48:53
3	Ag 328.068†	56646.1	57737.7	512.73 µg/L	512.73 ppb	09:48:58
3	As 188.979†	318.9	318.2	507.86 µg/L	507.86 ppb	09:49:19
3	B 249.677†	12423.0	12273.5	499.47 µg/L	499.47 ppb	09:48:58
3	Ba 233.527†	20554.2	20732.9	507.01 µg/L	507.01 ppb	09:48:58
3	Be 313.107†	860986.6	861425.6	505.28 µg/L	505.28 ppb	09:48:53
3	Cd 226.502†	21324.9	21566.7	508.82 µg/L	508.82 ppb	09:48:58
3	Co 228.616†	11004.4	11158.3	507.00 µg/L	507.00 ppb	09:48:58
3	Cr 267.716†	25459.5	25763.0	505.20 µg/L	505.20 ppb	09:48:58
3	Cu 324.752†	74397.2	70086.4	496.48 µg/L	496.48 ppb	09:48:58
3	Mn 257.610†	174958.1	175734.6	503.92 µg/L	503.92 ppb	09:48:53
3	Mo 202.031†	4688.9	4712.2	503.94 µg/L	503.94 ppb	09:49:19
3	Ni 231.604†	10487.7	10094.3	508.26 µg/L	508.26 ppb	09:48:58
3	P 214.914†	1653.8	1427.5	2395.9 µg/L	2395.9 ppb	09:49:19
3	Pb 220.353†	2187.3	2153.3	503.12 µg/L	503.12 ppb	09:49:19
3	S 181.975 Axial†	267.1	224.0	989.04 µg/L	989.04 ppb	09:49:19
3	Sb 206.836†	597.0	578.6	503.86 µg/L	503.86 ppb	09:49:19
3	Se 196.026†	462.2	444.8	493.46 µg/L	493.46 ppb	09:49:19
3	SiO2†	34174.7	31164.9	5500.2 µg/L	5500.2 ppb	09:48:58
3	Si 251.611†	36555.5	36339.1	2526.1 µg/L	2526.1 ppb	09:48:58
3	Sn 189.927†	1147.6	1145.9	506.01 µg/L	506.01 ppb	09:49:19
3	Ti 334.940†	223647.5	223605.1	505.64 µg/L	505.64 ppb	09:48:53
3	Tl 190.801†	325.4	351.7	492.99 µg/L	492.99 ppb	09:49:19
3	U 409.014†	5275.4	5267.3	495.18 µg/L	495.18 ppb	09:48:58
3	V 292.402†	46195.7	46578.7	510.49 µg/L	510.49 ppb	09:48:58
3	Zn 213.857†	21455.4	20834.8	502.08 µg/L	502.08 ppb	09:48:58

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2192130.3	100.01	%	0.470				0.47%
Sc RADIAL	174125.2	100	%	0.3				0.33%
Y 371.029	1395512.4	99.486	%	0.3727				0.37%
Ag 328.068†	57543.5	511.01	µg/L	1.563	511.01	ppb	1.563	0.31%
QC value within limits for Ag 328.068 Recovery = 102.20%								
Al 396.153Radial†	12640.7	5299.6	µg/L	103.45	5299.6	ppb	103.45	1.95%
QC value within limits for Al 396.153Radial Recovery = 105.99%								
As 188.979†	317.9	507.38	µg/L	2.616	507.38	ppb	2.616	0.52%
QC value within limits for As 188.979 Recovery = 101.48%								
B 249.677†	12226.3	497.53	µg/L	1.739	497.53	ppb	1.739	0.35%
QC value within limits for B 249.677 Recovery = 99.51%								
Ba 233.527†	20679.3	505.70	µg/L	1.542	505.70	ppb	1.542	0.30%
QC value within limits for Ba 233.527 Recovery = 101.14%								
Be 313.107†	856552.7	502.42	µg/L	2.618	502.42	ppb	2.618	0.52%
QC value within limits for Be 313.107 Recovery = 100.48%								
Ca 317.933Radial†	28206.3	5342.3	µg/L	113.08	5342.3	ppb	113.08	2.12%
QC value within limits for Ca 317.933Radial Recovery = 106.85%								
Cd 226.502†	21500.1	507.25	µg/L	1.412	507.25	ppb	1.412	0.28%
QC value within limits for Cd 226.502 Recovery = 101.45%								
Co 228.616†	11136.8	506.02	µg/L	2.211	506.02	ppb	2.211	0.44%

```
   QC value within limits for Co 228.616  Recovery = 101.20%
Cr 267.716†            25691.1      503.79 µg/L        1.361      503.79 ppb        1.361   0.27%
   QC value within limits for Cr 267.716  Recovery = 100.76%
Cu 324.752†            69812.1      494.54 µg/L        1.770      494.54 ppb        1.770   0.36%
   QC value within limits for Cu 324.752  Recovery = 98.91%
Fe 238.204 Radial†      7245.1      5212.6 µg/L       38.63      5212.6 ppb       38.63   0.74%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.25%
K 766.490 Radial†       9354.7      5119.6 µg/L       43.16      5119.6 ppb       43.16   0.84%
   QC value within limits for K 766.490 Radial  Recovery = 102.39%
Mg 279.077 IEC†         2639.0      5419.0 µg/L      113.75      5419.0 ppb      113.75   2.10%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.38%
Mn 257.610†           174785.4      501.20 µg/L        2.476      501.20 ppb        2.476   0.49%
   QC value within limits for Mn 257.610  Recovery = 100.24%
Mo 202.031†             4698.2      502.45 µg/L        2.527      502.45 ppb        2.527   0.50%
   QC value within limits for Mo 202.031  Recovery = 100.49%
Na 589.592 Radial†     42453.9       10190 µg/L         51.1       10190 ppb         51.1   0.50%
   QC value within limits for Na 589.592 Radial  Recovery = 101.90%
Ni 231.604†            10075.6      507.32 µg/L        0.852      507.32 ppb        0.852   0.17%
   QC value within limits for Ni 231.604  Recovery = 101.46%
P 214.914†              1423.6      2389.4 µg/L       10.71      2389.4 ppb       10.71   0.45%
   QC value within limits for P 214.914  Recovery = 95.58%
Pb 220.353†             2149.6      502.27 µg/L        2.771      502.27 ppb        2.771   0.55%
   QC value within limits for Pb 220.353  Recovery = 100.45%
S 181.975 Axial†         220.8      974.80 µg/L       13.357      974.80 ppb       13.357   1.37%
   QC value within limits for S 181.975 Axial  Recovery = 97.48%
Sb 206.836†              575.4      501.06 µg/L        2.429      501.06 ppb        2.429   0.48%
   QC value within limits for Sb 206.836  Recovery = 100.21%
Se 196.026†              448.6      497.64 µg/L        3.924      497.64 ppb        3.924   0.79%
   QC value within limits for Se 196.026  Recovery = 99.53%
SiO2†                  31000.4      5471.2 µg/L       26.70      5471.2 ppb       26.70   0.49%
   QC value within limits for SiO2  Recovery = 102.31%
Si 251.611†            36165.1      2513.9 µg/L       12.00      2513.9 ppb       12.00   0.48%
   QC value within limits for Si 251.611  Recovery = 100.56%
Sn 189.927†             1143.3      504.89 µg/L        1.716      504.89 ppb        1.716   0.34%
   QC value within limits for Sn 189.927  Recovery = 100.98%
Sr 421.552†           116883.0      503.33 µg/L        2.769      503.33 ppb        2.769   0.55%
   QC value within limits for Sr 421.552  Recovery = 100.67%
Ti 334.940†           222240.2      502.55 µg/L        2.821      502.55 ppb        2.821   0.56%
   QC value within limits for Ti 334.940  Recovery = 100.51%
Tl 190.801†              351.0      492.00 µg/L        1.015      492.00 ppb        1.015   0.21%
   QC value within limits for Tl 190.801  Recovery = 98.40%
U 409.014†              5338.9      501.91 µg/L        6.546      501.91 ppb        6.546   1.30%
   QC value within limits for U 409.014  Recovery = 100.38%
V 292.402†             46433.9      508.92 µg/L        1.537      508.92 ppb        1.537   0.30%
   QC value within limits for V 292.402  Recovery = 101.78%
Zn 213.857†            20775.4      500.64 µg/L        1.457      500.64 ppb        1.457   0.29%
   QC value within limits for Zn 213.857  Recovery = 100.13%
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 09:49:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	173332.7	173332.7	99.6	%			09:50:00
1	Al 396.153Radial†	-147.6	21.7	9.1298	µg/L	9.1298	ppb	09:50:00
1	Ca 317.933Radial†	894.7	24.9	4.7193	µg/L	4.7193	ppb	09:50:21
1	Fe 238.204 Radial†	-17.0	9.2	6.6010	µg/L	6.6010	ppb	09:50:21
1	K 766.490 Radial†	862.2	95.7	52.394	µg/L	52.394	ppb	09:50:00
1	Mg 279.077 IEC†	54.3	11.4	23.364	µg/L	23.364	ppb	09:50:21
1	Na 589.592 Radial†	114.0	-4.0	-0.9538	µg/L	-0.9538	ppb	09:50:00
1	Sr 421.552†	120.3	54.0	0.2328	µg/L	0.2328	ppb	09:50:00
1	Sc 361.383	2181009.4	2181009.4	99.505	%			09:51:23
1	Y 371.029	1395092.1	1395092.1	99.456	%			09:51:23
1	Ag 328.068†	-718.9	99.4	0.8730	µg/L	0.8730	ppb	09:51:29
1	As 188.979†	-0.9	-3.1	-4.9351	µg/L	-4.9351	ppb	09:51:49
1	B 249.677†	241.7	34.3	1.4000	µg/L	1.4000	ppb	09:51:29
1	Ba 233.527†	-73.9	6.6	0.1597	µg/L	0.1597	ppb	09:51:49
1	Be 313.107†	3756.7	116.7	0.0692	µg/L	0.0692	ppb	09:51:29
1	Cd 226.502†	-130.1	9.5	0.2223	µg/L	0.2223	ppb	09:51:49
1	Co 228.616†	-94.1	7.0	0.3175	µg/L	0.3175	ppb	09:51:49
1	Cr 267.716†	-191.6	-10.3	-0.2016	µg/L	-0.2016	ppb	09:51:29
1	Cu 324.752†	4634.9	-6.9	-0.0479	µg/L	-0.0479	ppb	09:51:29
1	Mn 257.610†	104.8	49.1	0.1408	µg/L	0.1408	ppb	09:51:29
1	Mo 202.031†	1.8	2.8	0.2983	µg/L	0.2983	ppb	09:51:49
1	Ni 231.604†	441.2	0.1	0.0047	µg/L	0.0047	ppb	09:51:49
1	P 214.914†	231.0	-2.0	-3.5040	µg/L	-3.5040	ppb	09:51:49
1	Pb 220.353†	51.9	7.7	1.7989	µg/L	1.7989	ppb	09:51:49
1	S 181.975 Axial†	37.0	-7.1	-31.451	µg/L	-31.451	ppb	09:51:49
1	Sb 206.836†	26.3	5.1	4.4895	µg/L	4.4895	ppb	09:51:49
1	Se 196.026†	15.4	-4.1	-4.5289	µg/L	-4.5289	ppb	09:51:49
1	SiO2†	3082.8	-74.3	-13.106	µg/L	-13.106	ppb	09:51:29
1	Si 251.611†	393.7	5.3	0.3278	µg/L	0.3278	ppb	09:51:49
1	Sn 189.927†	7.9	0.8	0.3627	µg/L	0.3627	ppb	09:51:49
1	Ti 334.940†	1244.7	144.0	0.3256	µg/L	0.3256	ppb	09:51:29
1	Tl 190.801†	-24.3	0.4	0.5012	µg/L	0.5012	ppb	09:51:49
1	U 409.014†	9.9	-23.3	-2.1955	µg/L	-2.1955	ppb	09:51:29
1	V 292.402†	-213.2	-51.1	-0.5560	µg/L	-0.5560	ppb	09:51:29
1	Zn 213.857†	743.1	24.1	0.5849	µg/L	0.5849	ppb	09:51:49
2	Sc RADIAL	174210.1	174210.1	100	%			09:50:26
2	Al 396.153Radial†	-158.4	11.7	4.8855	µg/L	4.8855	ppb	09:50:26
2	Ca 317.933Radial†	897.5	23.3	4.4048	µg/L	4.4048	ppb	09:50:47
2	Fe 238.204 Radial†	-13.3	12.9	9.2615	µg/L	9.2615	ppb	09:50:47
2	K 766.490 Radial†	817.1	46.3	25.332	µg/L	25.332	ppb	09:50:26
2	Mg 279.077 IEC†	49.3	6.1	12.597	µg/L	12.597	ppb	09:50:47
2	Na 589.592 Radial†	111.6	-6.9	-1.6640	µg/L	-1.6640	ppb	09:50:26
2	Sr 421.552†	91.3	24.4	0.1052	µg/L	0.1052	ppb	09:50:26
2	Sc 361.383	2202869.5	2202869.5	100.50	%			09:51:55
2	Y 371.029	1409753.6	1409753.6	100.50	%			09:51:55
2	Ag 328.068†	-720.9	104.7	0.9188	µg/L	0.9188	ppb	09:52:01
2	As 188.979†	2.3	0.0	0.0830	µg/L	0.0830	ppb	09:52:21
2	B 249.677†	227.4	17.7	0.7204	µg/L	0.7204	ppb	09:52:01
2	Ba 233.527†	-80.0	1.2	0.0287	µg/L	0.0287	ppb	09:52:21
2	Be 313.107†	3828.7	150.9	0.0898	µg/L	0.0898	ppb	09:52:01
2	Cd 226.502†	-134.8	6.2	0.1419	µg/L	0.1419	ppb	09:52:21
2	Co 228.616†	-86.8	15.2	0.6897	µg/L	0.6897	ppb	09:52:21
2	Cr 267.716†	-163.6	19.5	0.3813	µg/L	0.3813	ppb	09:52:01
2	Cu 324.752†	4663.3	-24.9	-0.1749	µg/L	-0.1749	ppb	09:52:01
2	Mn 257.610†	116.4	59.6	0.1708	µg/L	0.1708	ppb	09:52:01
2	Mo 202.031†	4.6	5.6	0.5940	µg/L	0.5940	ppb	09:52:21
2	Ni 231.604†	452.1	6.6	0.3305	µg/L	0.3305	ppb	09:52:21
2	P 214.914†	219.8	-15.4	-26.732	µg/L	-26.732	ppb	09:52:21
2	Pb 220.353†	57.5	12.8	2.9849	µg/L	2.9849	ppb	09:52:21

2	S 181.975 Axial†	31.7	-12.8	-56.690 µg/L	-56.690 ppb	09:52:21
2	Sb 206.836†	29.9	8.5	7.4261 µg/L	7.4261 ppb	09:52:21
2	Se 196.026†	13.6	-6.0	-6.6441 µg/L	-6.6441 ppb	09:52:21
2	SiO2†	3081.9	-105.9	-18.681 µg/L	-18.681 ppb	09:52:01
2	Si 251.611†	393.7	1.4	-0.0104 µg/L	-0.0104 ppb	09:52:21
2	Sn 189.927†	11.5	4.2	1.8609 µg/L	1.8609 ppb	09:52:21
2	Ti 334.940†	1353.3	239.7	0.5420 µg/L	0.5420 ppb	09:52:01
2	Tl 190.801†	-27.3	-2.5	-3.4576 µg/L	-3.4576 ppb	09:52:21
2	U 409.014†	-16.1	-49.2	-4.6457 µg/L	-4.6457 ppb	09:52:01
2	V 292.402†	-225.2	-61.0	-0.6645 µg/L	-0.6645 ppb	09:52:01
2	Zn 213.857†	743.4	16.9	0.4104 µg/L	0.4104 ppb	09:52:21
3	Sc RADIAL	173624.6	173624.6	99.8 %		09:50:52
3	Al 396.153Radial†	-175.4	-5.8	-2.5046 µg/L	-2.5046 ppb	09:50:52
3	Ca 317.933Radial†	894.9	23.6	4.4750 µg/L	4.4750 ppb	09:51:13
3	Fe 238.204 Radial†	-19.1	7.1	5.0826 µg/L	5.0826 ppb	09:51:13
3	K 766.490 Radial†	781.7	13.5	7.3921 µg/L	7.3921 ppb	09:50:52
3	Mg 279.077 IEC†	45.1	2.1	4.2864 µg/L	4.2864 ppb	09:51:13
3	Na 589.592 Radial†	88.6	-29.6	-7.0972 µg/L	-7.0972 ppb	09:50:52
3	Sr 421.552†	75.6	9.1	0.0390 µg/L	0.0390 ppb	09:50:52
3	Sc 361.383	2181086.9	2181086.9	99.508 %		09:52:27
3	Y 371.029	1395020.9	1395020.9	99.451 %		09:52:27
3	Ag 328.068†	-656.0	162.8	1.4356 µg/L	1.4356 ppb	09:52:33
3	As 188.979†	-0.7	-3.0	-4.7104 µg/L	-4.7104 ppb	09:52:54
3	B 249.677†	238.5	31.1	1.2665 µg/L	1.2665 ppb	09:52:33
3	Ba 233.527†	-57.9	22.7	0.5533 µg/L	0.5533 ppb	09:52:54
3	Be 313.107†	4338.0	700.7	0.4123 µg/L	0.4123 ppb	09:52:33
3	Cd 226.502†	-116.5	23.2	0.5396 µg/L	0.5396 ppb	09:52:54
3	Co 228.616†	-84.3	16.9	0.7676 µg/L	0.7676 ppb	09:52:54
3	Cr 267.716†	-133.9	47.8	0.9359 µg/L	0.9359 ppb	09:52:33
3	Cu 324.752†	4700.8	59.2	0.4192 µg/L	0.4192 ppb	09:52:33
3	Mn 257.610†	197.5	142.3	0.4080 µg/L	0.4080 ppb	09:52:33
3	Mo 202.031†	10.0	11.0	1.1734 µg/L	1.1734 ppb	09:52:54
3	Ni 231.604†	459.3	18.2	0.9182 µg/L	0.9182 ppb	09:52:54
3	P 214.914†	221.5	-11.5	-20.058 µg/L	-20.058 ppb	09:52:54
3	Pb 220.353†	45.7	1.4	0.3492 µg/L	0.3492 ppb	09:52:54
3	S 181.975 Axial†	44.9	0.8	3.5683 µg/L	3.5683 ppb	09:52:54
3	Sb 206.836†	30.2	9.1	7.9072 µg/L	7.9072 ppb	09:52:54
3	Se 196.026†	13.5	-6.0	-6.6403 µg/L	-6.6403 ppb	09:52:54
3	SiO2†	3112.1	-44.9	-7.9255 µg/L	-7.9255 ppb	09:52:33
3	Si 251.611†	440.2	52.1	3.6867 µg/L	3.6867 ppb	09:52:54
3	Sn 189.927†	4.0	-3.1	-1.3662 µg/L	-1.3662 ppb	09:52:54
3	Ti 334.940†	1479.5	379.9	0.8592 µg/L	0.8592 ppb	09:52:33
3	Tl 190.801†	-22.7	1.9	2.6990 µg/L	2.6990 ppb	09:52:54
3	U 409.014†	-77.8	-111.4	-10.502 µg/L	-10.502 ppb	09:52:33
3	V 292.402†	-152.2	10.2	0.1028 µg/L	0.1028 ppb	09:52:33
3	Zn 213.857†	755.7	36.6	0.8846 µg/L	0.8846 ppb	09:52:54

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2188321.9	99.838	%	0.5748				0.58%
Sc RADIAL	173722.5	99.8	%	0.26				0.26%
Y 371.029	1399955.5	99.803	%	0.6049				0.61%
Ag 328.068†	122.3	1.0758	µg/L	0.31244	1.0758	ppb	0.31244	29.04%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.2	3.8369	µg/L	5.88765	3.8369	ppb	5.88765	153.45%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-2.0	-3.1875	µg/L	2.83454	-3.1875	ppb	2.83454	88.93%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	27.7	1.1290	µg/L	0.36009	1.1290	ppb	0.36009	31.90%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.2	0.2472	µg/L	0.27305	0.2472	ppb	0.27305	110.46%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	322.8	0.1905	µg/L	0.19241	0.1905	ppb	0.19241	101.03%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	23.9	4.5330	µg/L	0.16506	4.5330	ppb	0.16506	3.64%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	13.0	0.3013	µg/L	0.21025	0.3013	ppb	0.21025	69.79%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	13.0	0.5916	µg/L	0.24058	0.5916	ppb	0.24058	40.67%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                19.0      0.3718 µg/L       0.56879      0.3718 ppb        0.56879 152.96%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                 9.1      0.0655 µg/L       0.31285      0.0655 ppb        0.31285 477.88%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          9.7      6.9817 µg/L       2.11529      6.9817 ppb        2.11529  30.30%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          51.8      28.373 µg/L       22.6543      28.373 ppb        22.6543  79.85%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             6.5      13.416 µg/L        9.5652      13.416 ppb         9.5652  71.30%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                83.6      0.2399 µg/L       0.14637      0.2399 ppb        0.14637  61.02%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 6.4      0.6886 µg/L       0.44514      0.6886 ppb        0.44514  64.65%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -13.5     -3.2383 µg/L       3.36068     -3.2383 ppb        3.36068 103.78%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 8.3      0.4178 µg/L       0.46298      0.4178 ppb        0.46298 110.81%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -9.7     -16.765 µg/L       11.9590     -16.765 ppb        11.9590  71.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 7.3      1.7110 µg/L       1.32006      1.7110 ppb        1.32006  77.15%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -6.4     -28.191 µg/L       30.2612     -28.191 ppb        30.2612 107.34%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 7.6      6.6076 µg/L       1.85001      6.6076 ppb        1.85001  28.00%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -5.4     -5.9378 µg/L       1.22011     -5.9378 ppb        1.22011  20.55%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     -75.0     -13.238 µg/L        5.3792     -13.238 ppb         5.3792  40.64%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                19.6      1.3347 µg/L       2.04392      1.3347 ppb        2.04392 153.14%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.6      0.2858 µg/L       1.61494      0.2858 ppb        1.61494 565.05%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                29.2      0.1256 µg/L       0.09849      0.1256 ppb        0.09849  78.39%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               254.5      0.5756 µg/L       0.26839      0.5756 ppb        0.26839  46.63%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -0.1     -0.0858 µg/L       3.12003     -0.0858 ppb        3.12003 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -61.3     -5.7810 µg/L       4.26792     -5.7810 ppb        4.26792  73.83%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -33.9     -0.3726 µg/L       0.41521     -0.3726 ppb        0.41521 111.45%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                25.9      0.6266 µg/L       0.23982      0.6266 ppb        0.23982  38.27%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 28
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 10:16:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176078.6	176078.6	101	%			10:17:07
1	Al 396.153Radial†	12237.5	12267.1	5142.4	µg/L	5142.4	ppb	10:17:13
1	Ca 317.933Radial†	28271.4	27073.5	5127.7	µg/L	5127.7	ppb	10:17:13
1	Fe 238.204 Radial†	7206.0	7149.5	5143.8	µg/L	5143.8	ppb	10:17:13
1	K 766.490 Radial†	10221.1	9333.7	5108.2	µg/L	5108.2	ppb	10:17:13
1	Mg 279.077 IEC†	2587.6	2514.8	5164.4	µg/L	5164.4	ppb	10:17:13
1	Na 589.592 Radial†	43122.1	42509.0	10203	µg/L	10203	ppb	10:17:07
1	Sr 421.552†	118576.9	117149.8	504.48	µg/L	504.48	ppb	10:17:07
1	Sc 361.383	2203569.2	2203569.2	100.53	%			10:17:46
1	Y 371.029	1404245.3	1404245.3	100.11	%			10:17:46
1	Ag 328.068†	56338.3	56861.0	504.95	µg/L	504.95	ppb	10:17:52
1	As 188.979†	322.0	318.0	507.72	µg/L	507.72	ppb	10:18:12
1	B 249.677†	12329.6	12055.5	490.58	µg/L	490.58	ppb	10:17:52
1	Ba 233.527†	20402.5	20375.0	498.26	µg/L	498.26	ppb	10:17:52
1	Be 313.107†	868517.2	860244.2	504.59	µg/L	504.59	ppb	10:17:46
1	Cd 226.502†	21080.1	21108.4	498.01	µg/L	498.01	ppb	10:17:52
1	Co 228.616†	10941.9	10985.3	499.13	µg/L	499.13	ppb	10:17:52
1	Cr 267.716†	25342.6	25390.3	497.89	µg/L	497.89	ppb	10:17:52
1	Cu 324.752†	73888.3	68830.8	487.59	µg/L	487.59	ppb	10:17:52
1	Mn 257.610†	176625.5	175630.9	503.63	µg/L	503.63	ppb	10:17:46
1	Mo 202.031†	4714.3	4690.2	501.60	µg/L	501.60	ppb	10:18:12
1	Ni 231.604†	10413.7	9915.0	499.24	µg/L	499.24	ppb	10:17:52
1	P 214.914†	1681.0	1438.0	2415.7	µg/L	2415.7	ppb	10:18:12
1	Pb 220.353†	2206.2	2150.1	502.39	µg/L	502.39	ppb	10:18:12
1	S 181.975 Axial†	265.3	219.6	969.53	µg/L	969.53	ppb	10:18:12
1	Sb 206.836†	597.0	572.6	498.67	µg/L	498.67	ppb	10:18:12
1	Se 196.026†	461.7	439.7	487.85	µg/L	487.85	ppb	10:18:12
1	SiO2†	34025.0	30671.9	5413.2	µg/L	5413.2	ppb	10:17:52
1	Si 251.611†	36423.8	35840.0	2490.6	µg/L	2490.6	ppb	10:17:52
1	Sn 189.927†	1163.5	1150.2	507.83	µg/L	507.83	ppb	10:18:12
1	Ti 334.940†	226148.1	223839.7	506.17	µg/L	506.17	ppb	10:17:46
1	Tl 190.801†	330.7	353.7	495.87	µg/L	495.87	ppb	10:18:12
1	U 409.014†	5321.0	5259.5	494.46	µg/L	494.46	ppb	10:17:52
1	V 292.402†	45943.5	45862.5	502.70	µg/L	502.70	ppb	10:17:52
1	Zn 213.857†	21354.8	20518.6	494.47	µg/L	494.47	ppb	10:17:52
2	Sc RADIAL	176563.5	176563.5	101	%			10:17:18
2	Al 396.153Radial†	12122.1	12120.1	5080.7	µg/L	5080.7	ppb	10:17:24
2	Ca 317.933Radial†	27986.1	26715.5	5059.9	µg/L	5059.9	ppb	10:17:24
2	Fe 238.204 Radial†	7132.8	7057.8	5078.0	µg/L	5078.0	ppb	10:17:24
2	K 766.490 Radial†	10135.1	9221.3	5046.6	µg/L	5046.6	ppb	10:17:24
2	Mg 279.077 IEC†	2593.8	2513.9	5162.6	µg/L	5162.6	ppb	10:17:24
2	Na 589.592 Radial†	42519.5	41797.8	10032	µg/L	10032	ppb	10:17:18
2	Sr 421.552†	117062.7	115335.2	496.66	µg/L	496.66	ppb	10:17:18
2	Sc 361.383	2217557.7	2217557.7	101.17	%			10:18:20
2	Y 371.029	1412591.2	1412591.2	100.70	%			10:18:20
2	Ag 328.068†	56648.7	56814.2	504.52	µg/L	504.52	ppb	10:18:25
2	As 188.979†	323.8	317.8	507.30	µg/L	507.30	ppb	10:18:46
2	B 249.677†	12431.7	12079.1	491.57	µg/L	491.57	ppb	10:18:25
2	Ba 233.527†	20562.1	20404.7	498.98	µg/L	498.98	ppb	10:18:25
2	Be 313.107†	864852.6	851172.4	499.27	µg/L	499.27	ppb	10:18:20
2	Cd 226.502†	21220.7	21115.1	498.16	µg/L	498.16	ppb	10:18:25
2	Co 228.616†	11011.6	10985.6	499.15	µg/L	499.15	ppb	10:18:25
2	Cr 267.716†	25422.0	25309.8	496.31	µg/L	496.31	ppb	10:18:25
2	Cu 324.752†	74201.9	68677.2	486.50	µg/L	486.50	ppb	10:18:25
2	Mn 257.610†	175800.9	173707.6	498.11	µg/L	498.11	ppb	10:18:20
2	Mo 202.031†	4719.5	4665.7	498.97	µg/L	498.97	ppb	10:18:46
2	Ni 231.604†	10431.8	9867.6	496.84	µg/L	496.84	ppb	10:18:25
2	P 214.914†	1674.0	1420.4	2385.5	µg/L	2385.5	ppb	10:18:46
2	Pb 220.353†	2201.3	2131.4	498.02	µg/L	498.02	ppb	10:18:46

2	S 181.975 Axial†	266.8	219.3	968.32 µg/L	968.32 ppb	10:18:46
2	Sb 206.836†	593.9	565.7	492.66 µg/L	492.66 ppb	10:18:46
2	Se 196.026†	463.4	438.5	486.48 µg/L	486.48 ppb	10:18:46
2	SiO2†	34221.6	30652.7	5409.8 µg/L	5409.8 ppb	10:18:25
2	Si 251.611†	36582.2	35768.0	2485.9 µg/L	2485.9 ppb	10:18:25
2	Sn 189.927†	1163.6	1142.9	504.61 µg/L	504.61 ppb	10:18:46
2	Ti 334.940†	225137.8	221422.1	500.71 µg/L	500.71 ppb	10:18:20
2	Tl 190.801†	334.4	355.2	498.05 µg/L	498.05 ppb	10:18:46
2	U 409.014†	5265.3	5171.1	486.14 µg/L	486.14 ppb	10:18:25
2	V 292.402†	46093.8	45722.8	501.14 µg/L	501.14 ppb	10:18:25
2	Zn 213.857†	21374.4	20404.0	491.70 µg/L	491.70 ppb	10:18:25
3	Sc RADIAL	175894.9	175894.9	101 %		10:17:29
3	Al 396.153Radial†	12124.3	12167.7	5100.6 µg/L	5100.6 ppb	10:17:35
3	Ca 317.933Radial†	28097.3	26930.5	5100.6 µg/L	5100.6 ppb	10:17:35
3	Fe 238.204 Radial†	7132.6	7084.4	5097.3 µg/L	5097.3 ppb	10:17:35
3	K 766.490 Radial†	10196.9	9320.3	5100.8 µg/L	5100.8 ppb	10:17:35
3	Mg 279.077 IEC†	2565.0	2495.1	5124.0 µg/L	5124.0 ppb	10:17:35
3	Na 589.592 Radial†	42697.5	42133.3	10113 µg/L	10113 ppb	10:17:29
3	Sr 421.552†	117485.3	116192.0	500.35 µg/L	500.35 ppb	10:17:29
3	Sc 361.383	2202914.8	2202914.8	100.50 %		10:18:53
3	Y 371.029	1402581.5	1402581.5	99.990 %		10:18:53
3	Ag 328.068†	57317.2	57851.6	513.74 µg/L	513.74 ppb	10:18:59
3	As 188.979†	321.8	317.9	507.52 µg/L	507.52 ppb	10:19:19
3	B 249.677†	12587.0	12315.3	501.20 µg/L	501.20 ppb	10:18:59
3	Ba 233.527†	20867.4	20843.6	509.71 µg/L	509.71 ppb	10:18:59
3	Be 313.107†	859142.6	851173.3	499.27 µg/L	499.27 ppb	10:18:53
3	Cd 226.502†	21574.1	21606.2	509.76 µg/L	509.76 ppb	10:18:59
3	Co 228.616†	11130.1	11175.8	507.79 µg/L	507.79 ppb	10:18:59
3	Cr 267.716†	25831.0	25883.8	507.56 µg/L	507.56 ppb	10:18:59
3	Cu 324.752†	75090.1	70048.4	496.20 µg/L	496.20 ppb	10:18:59
3	Mn 257.610†	174662.2	173729.6	498.17 µg/L	498.17 ppb	10:18:53
3	Mo 202.031†	4706.6	4683.9	500.91 µg/L	500.91 ppb	10:19:19
3	Ni 231.604†	10561.5	10065.2	506.79 µg/L	506.79 ppb	10:18:59
3	P 214.914†	1662.1	1419.6	2382.3 µg/L	2382.3 ppb	10:19:19
3	Pb 220.353†	2193.5	2138.1	499.56 µg/L	499.56 ppb	10:19:19
3	S 181.975 Axial†	269.5	223.9	988.29 µg/L	988.29 ppb	10:19:19
3	Sb 206.836†	595.6	571.3	497.49 µg/L	497.49 ppb	10:19:19
3	Se 196.026†	472.5	450.5	499.78 µg/L	499.78 ppb	10:19:19
3	SiO2†	34817.9	31470.8	5554.2 µg/L	5554.2 ppb	10:18:59
3	Si 251.611†	37199.8	36622.9	2546.5 µg/L	2546.5 ppb	10:18:59
3	Sn 189.927†	1153.7	1140.8	503.68 µg/L	503.68 ppb	10:19:19
3	Ti 334.940†	223750.7	221521.2	500.93 µg/L	500.93 ppb	10:18:53
3	Tl 190.801†	328.1	351.2	492.29 µg/L	492.29 ppb	10:19:19
3	U 409.014†	5400.4	5340.1	502.08 µg/L	502.08 ppb	10:18:59
3	V 292.402†	46766.1	46694.6	511.73 µg/L	511.73 ppb	10:18:59
3	Zn 213.857†	21665.2	20833.7	502.07 µg/L	502.07 ppb	10:18:59

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2208013.9	100.74	%	0.377				0.37%
Sc RADIAL	176179.0	101	%	0.2				0.20%
Y 371.029	1406472.7	100.27	%	0.382				0.38%
Ag 328.068†	57175.6	507.74	µg/L	5.202	507.74	ppb	5.202	1.02%
QC value within limits for Ag 328.068 Recovery = 101.55%								
Al 396.153Radial†	12184.9	5107.9	µg/L	31.51	5107.9	ppb	31.51	0.62%
QC value within limits for Al 396.153Radial Recovery = 102.16%								
As 188.979†	317.9	507.51	µg/L	0.211	507.51	ppb	0.211	0.04%
QC value within limits for As 188.979 Recovery = 101.50%								
B 249.677†	12150.0	494.45	µg/L	5.868	494.45	ppb	5.868	1.19%
QC value within limits for B 249.677 Recovery = 98.89%								
Ba 233.527†	20541.1	502.31	µg/L	6.415	502.31	ppb	6.415	1.28%
QC value within limits for Ba 233.527 Recovery = 100.46%								
Be 313.107†	854196.6	501.04	µg/L	3.072	501.04	ppb	3.072	0.61%
QC value within limits for Be 313.107 Recovery = 100.21%								
Ca 317.933Radial†	26906.5	5096.1	µg/L	34.13	5096.1	ppb	34.13	0.67%
QC value within limits for Ca 317.933Radial Recovery = 101.92%								
Cd 226.502†	21276.6	501.98	µg/L	6.739	501.98	ppb	6.739	1.34%
QC value within limits for Cd 226.502 Recovery = 100.40%								
Co 228.616†	11048.9	502.02	µg/L	4.997	502.02	ppb	4.997	1.00%

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   QC value within limits for Co 228.616  Recovery = 100.40%
Cr 267.716†            25528.0      500.59 µg/L        6.093      500.59 ppb        6.093   1.22%
   QC value within limits for Cr 267.716  Recovery = 100.12%
Cu 324.752†            69185.5      490.09 µg/L        5.314      490.09 ppb        5.314   1.08%
   QC value within limits for Cu 324.752  Recovery = 98.02%
Fe 238.204 Radial†      7097.2      5106.4 µg/L       33.80      5106.4 ppb       33.80   0.66%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.13%
K 766.490 Radial†       9291.8      5085.2 µg/L       33.62      5085.2 ppb       33.62   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 101.70%
Mg 279.077 IEC†         2508.0      5150.3 µg/L       22.82      5150.3 ppb       22.82   0.44%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.01%
Mn 257.610†           174356.0      499.97 µg/L        3.166      499.97 ppb        3.166   0.63%
   QC value within limits for Mn 257.610  Recovery = 99.99%
Mo 202.031†             4680.0      500.49 µg/L        1.360      500.49 ppb        1.360   0.27%
   QC value within limits for Mo 202.031  Recovery = 100.10%
Na 589.592 Radial†     42146.7       10116 µg/L         85.4       10116 ppb         85.4   0.84%
   QC value within limits for Na 589.592 Radial  Recovery = 101.16%
Ni 231.604†             9949.3      500.96 µg/L        5.194      500.96 ppb        5.194   1.04%
   QC value within limits for Ni 231.604  Recovery = 100.19%
P 214.914†              1426.0      2394.5 µg/L       18.44      2394.5 ppb       18.44   0.77%
   QC value within limits for P 214.914  Recovery = 95.78%
Pb 220.353†             2139.9      499.99 µg/L        2.216      499.99 ppb        2.216   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.00%
S 181.975 Axial†         220.9      975.38 µg/L       11.200      975.38 ppb       11.200   1.15%
   QC value within limits for S 181.975 Axial  Recovery = 97.54%
Sb 206.836†              569.9      496.27 µg/L        3.185      496.27 ppb        3.185   0.64%
   QC value within limits for Sb 206.836  Recovery = 99.25%
Se 196.026†              442.9      491.37 µg/L        7.319      491.37 ppb        7.319   1.49%
   QC value within limits for Se 196.026  Recovery = 98.27%
SiO2†                  30931.8      5459.0 µg/L       82.40      5459.0 ppb       82.40   1.51%
   QC value within limits for SiO2  Recovery = 102.09%
Si 251.611†            36076.9      2507.7 µg/L       33.67      2507.7 ppb       33.67   1.34%
   QC value within limits for Si 251.611  Recovery = 100.31%
Sn 189.927†             1144.6      505.37 µg/L        2.175      505.37 ppb        2.175   0.43%
   QC value within limits for Sn 189.927  Recovery = 101.07%
Sr 421.552†           116225.7      500.50 µg/L        3.909      500.50 ppb        3.909   0.78%
   QC value within limits for Sr 421.552  Recovery = 100.10%
Ti 334.940†           222261.0      502.60 µg/L        3.094      502.60 ppb        3.094   0.62%
   QC value within limits for Ti 334.940  Recovery = 100.52%
Tl 190.801†              353.4      495.40 µg/L        2.909      495.40 ppb        2.909   0.59%
   QC value within limits for Tl 190.801  Recovery = 99.08%
U 409.014†              5256.9      494.23 µg/L        7.969      494.23 ppb        7.969   1.61%
   QC value within limits for U 409.014  Recovery = 98.85%
V 292.402†             46093.3      505.19 µg/L        5.720      505.19 ppb        5.720   1.13%
   QC value within limits for V 292.402  Recovery = 101.04%
Zn 213.857†            20585.4      496.08 µg/L        5.370      496.08 ppb        5.370   1.08%
   QC value within limits for Zn 213.857  Recovery = 99.22%
All analyte(s) passed QC.
```

Sequence No.: 29
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 10:19:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	175624.9	175624.9	101	%			10:20:01
1	Al 396.153Radial†	-176.6	-5.1	-2.2089	µg/L	-2.2089	ppb	10:20:01
1	Ca 317.933Radial†	899.2	17.7	3.3498	µg/L	3.3498	ppb	10:20:22
1	Fe 238.204 Radial†	-14.0	12.3	8.8429	µg/L	8.8429	ppb	10:20:22
1	K 766.490 Radial†	836.2	58.6	32.080	µg/L	32.080	ppb	10:20:01
1	Mg 279.077 IEC†	50.4	6.8	13.983	µg/L	13.983	ppb	10:20:22
1	Na 589.592 Radial†	138.7	19.1	4.5785	µg/L	4.5785	ppb	10:20:01
1	Sr 421.552†	155.8	87.6	0.3774	µg/L	0.3774	ppb	10:20:01
1	Sc 361.383	2193229.2	2193229.2	100.06	%			10:21:23
1	Y 371.029	1403065.7	1403065.7	100.02	%			10:21:23
1	Ag 328.068†	-741.8	80.6	0.7110	µg/L	0.7110	ppb	10:21:29
1	As 188.979†	0.6	-1.7	-2.6376	µg/L	-2.6376	ppb	10:21:50
1	B 249.677†	253.2	44.5	1.8142	µg/L	1.8142	ppb	10:21:29
1	Ba 233.527†	-82.3	-1.4	-0.0333	µg/L	-0.0333	ppb	10:21:50
1	Be 313.107†	3820.6	159.6	0.0948	µg/L	0.0948	ppb	10:21:29
1	Cd 226.502†	-127.0	13.4	0.3100	µg/L	0.3100	ppb	10:21:50
1	Co 228.616†	-96.0	5.6	0.2564	µg/L	0.2564	ppb	10:21:50
1	Cr 267.716†	-197.9	-15.4	-0.3020	µg/L	-0.3020	ppb	10:21:29
1	Cu 324.752†	4706.5	38.7	0.2747	µg/L	0.2747	ppb	10:21:29
1	Mn 257.610†	95.9	39.5	0.1134	µg/L	0.1134	ppb	10:21:29
1	Mo 202.031†	13.7	14.6	1.5619	µg/L	1.5619	ppb	10:21:50
1	Ni 231.604†	441.3	-2.3	-0.1169	µg/L	-0.1169	ppb	10:21:50
1	P 214.914†	216.4	-17.9	-31.019	µg/L	-31.019	ppb	10:21:50
1	Pb 220.353†	45.1	0.7	0.1635	µg/L	0.1635	ppb	10:21:50
1	S 181.975 Axial†	36.7	-7.6	-33.744	µg/L	-33.744	ppb	10:21:50
1	Sb 206.836†	25.0	3.7	3.2169	µg/L	3.2169	ppb	10:21:50
1	Se 196.026†	14.4	-5.2	-5.7452	µg/L	-5.7452	ppb	10:21:50
1	SiO2†	3235.2	60.8	10.730	µg/L	10.730	ppb	10:21:29
1	Si 251.611†	457.0	66.4	4.6281	µg/L	4.6281	ppb	10:21:50
1	Sn 189.927†	8.4	1.2	0.5228	µg/L	0.5228	ppb	10:21:50
1	Ti 334.940†	1339.4	231.7	0.5240	µg/L	0.5240	ppb	10:21:29
1	Tl 190.801†	-30.6	-5.8	-8.2091	µg/L	-8.2091	ppb	10:21:50
1	U 409.014†	-28.8	-62.0	-5.8507	µg/L	-5.8507	ppb	10:21:29
1	V 292.402†	-167.3	-4.0	-0.0413	µg/L	-0.0413	ppb	10:21:29
1	Zn 213.857†	732.9	9.7	0.2349	µg/L	0.2349	ppb	10:21:50
2	Sc RADIAL	175111.1	175111.1	101	%			10:20:27
2	Al 396.153Radial†	-154.1	16.8	7.0337	µg/L	7.0337	ppb	10:20:27
2	Ca 317.933Radial†	894.9	16.0	3.0327	µg/L	3.0327	ppb	10:20:47
2	Fe 238.204 Radial†	-14.8	11.5	8.2677	µg/L	8.2677	ppb	10:20:47
2	K 766.490 Radial†	846.8	71.7	39.214	µg/L	39.214	ppb	10:20:27
2	Mg 279.077 IEC†	48.2	4.8	9.8087	µg/L	9.8087	ppb	10:20:47
2	Na 589.592 Radial†	89.1	-29.9	-7.1754	µg/L	-7.1754	ppb	10:20:27
2	Sr 421.552†	141.0	73.4	0.3161	µg/L	0.3161	ppb	10:20:27
2	Sc 361.383	2228622.1	2228622.1	101.68	%			10:21:56
2	Y 371.029	1425804.0	1425804.0	101.65	%			10:21:56
2	Ag 328.068†	-771.3	63.4	0.5592	µg/L	0.5592	ppb	10:22:01
2	As 188.979†	1.3	-1.0	-1.5318	µg/L	-1.5318	ppb	10:22:22
2	B 249.677†	262.3	49.4	2.0132	µg/L	2.0132	ppb	10:22:01
2	Ba 233.527†	-68.1	13.9	0.3388	µg/L	0.3388	ppb	10:22:22
2	Be 313.107†	4002.7	278.0	0.1638	µg/L	0.1638	ppb	10:22:01
2	Cd 226.502†	-135.3	7.2	0.1638	µg/L	0.1638	ppb	10:22:22
2	Co 228.616†	-91.5	11.6	0.5269	µg/L	0.5269	ppb	10:22:22
2	Cr 267.716†	-197.6	-12.0	-0.2347	µg/L	-0.2347	ppb	10:22:01
2	Cu 324.752†	4694.4	-47.9	-0.3381	µg/L	-0.3381	ppb	10:22:01
2	Mn 257.610†	159.6	100.7	0.2887	µg/L	0.2887	ppb	10:22:01
2	Mo 202.031†	9.7	10.5	1.1179	µg/L	1.1179	ppb	10:22:22
2	Ni 231.604†	454.8	4.0	0.1989	µg/L	0.1989	ppb	10:22:22
2	P 214.914†	224.4	-13.5	-23.246	µg/L	-23.246	ppb	10:22:22
2	Pb 220.353†	54.5	9.2	2.1601	µg/L	2.1601	ppb	10:22:22

2	S 181.975 Axial†	36.9	-8.0	-35.502 µg/L	-35.502 ppb	10:22:22
2	Sb 206.836†	31.8	10.0	8.7124 µg/L	8.7124 ppb	10:22:22
2	Se 196.026†	19.8	-0.1	-0.0991 µg/L	-0.0991 ppb	10:22:22
2	SiO2†	3181.8	-43.1	-7.5979 µg/L	-7.5979 ppb	10:22:01
2	Si 251.611†	487.5	89.1	6.1289 µg/L	6.1289 ppb	10:22:22
2	Sn 189.927†	15.3	7.9	3.4622 µg/L	3.4622 ppb	10:22:22
2	Ti 334.940†	1313.3	184.7	0.4177 µg/L	0.4177 ppb	10:22:01
2	Tl 190.801†	-21.7	3.4	4.7912 µg/L	4.7912 ppb	10:22:22
2	U 409.014†	-64.6	-96.8	-9.1257 µg/L	-9.1257 ppb	10:22:01
2	V 292.402†	-168.9	-3.0	-0.0387 µg/L	-0.0387 ppb	10:22:01
2	Zn 213.857†	741.2	6.2	0.1508 µg/L	0.1508 ppb	10:22:22
3	Sc RADIAL	174994.2	174994.2	101 %		10:20:53
3	Al 396.153Radial†	-161.2	9.6	3.9461 µg/L	3.9461 ppb	10:20:53
3	Ca 317.933Radial†	883.7	5.4	1.0269 µg/L	1.0269 ppb	10:21:13
3	Fe 238.204 Radial†	-14.2	12.1	8.7413 µg/L	8.7413 ppb	10:21:13
3	K 766.490 Radial†	868.2	93.5	51.150 µg/L	51.150 ppb	10:20:53
3	Mg 279.077 IEC†	43.5	0.1	0.3230 µg/L	0.3230 ppb	10:21:13
3	Na 589.592 Radial†	114.4	-4.6	-1.1055 µg/L	-1.1055 ppb	10:20:53
3	Sr 421.552†	84.3	17.1	0.0735 µg/L	0.0735 ppb	10:20:53
3	Sc 361.383	2224163.6	2224163.6	101.47 %		10:22:28
3	Y 371.029	1422092.2	1422092.2	101.38 %		10:22:28
3	Ag 328.068†	-725.5	107.0	0.9474 µg/L	0.9474 ppb	10:22:33
3	As 188.979†	0.8	-1.5	-2.3542 µg/L	-2.3542 ppb	10:22:54
3	B 249.677†	236.9	24.9	1.0142 µg/L	1.0142 ppb	10:22:33
3	Ba 233.527†	-53.8	27.9	0.6813 µg/L	0.6813 ppb	10:22:54
3	Be 313.107†	4506.5	782.4	0.4602 µg/L	0.4602 ppb	10:22:33
3	Cd 226.502†	-107.0	34.9	0.8203 µg/L	0.8203 ppb	10:22:54
3	Co 228.616†	-78.6	24.0	1.0959 µg/L	1.0959 ppb	10:22:54
3	Cr 267.716†	-150.0	34.5	0.6761 µg/L	0.6761 ppb	10:22:33
3	Cu 324.752†	4698.3	-34.8	-0.2451 µg/L	-0.2451 ppb	10:22:33
3	Mn 257.610†	258.2	198.2	0.5683 µg/L	0.5683 ppb	10:22:33
3	Mo 202.031†	21.4	22.1	2.3583 µg/L	2.3583 ppb	10:22:54
3	Ni 231.604†	471.0	20.8	1.0486 µg/L	1.0486 ppb	10:22:54
3	P 214.914†	223.9	-13.5	-23.436 µg/L	-23.436 ppb	10:22:54
3	Pb 220.353†	46.5	1.4	0.3276 µg/L	0.3276 ppb	10:22:54
3	S 181.975 Axial†	38.7	-6.2	-27.258 µg/L	-27.258 ppb	10:22:54
3	Sb 206.836†	27.6	5.9	5.1791 µg/L	5.1791 ppb	10:22:54
3	Se 196.026†	15.7	-4.0	-4.4635 µg/L	-4.4635 ppb	10:22:54
3	SiO2†	3180.4	-38.2	-6.7384 µg/L	-6.7384 ppb	10:22:33
3	Si 251.611†	519.5	121.7	8.5229 µg/L	8.5229 ppb	10:22:54
3	Sn 189.927†	7.5	0.2	0.0940 µg/L	0.0940 ppb	10:22:54
3	Ti 334.940†	1533.9	404.7	0.9155 µg/L	0.9155 ppb	10:22:33
3	Tl 190.801†	-29.3	-4.1	-5.7762 µg/L	-5.7762 ppb	10:22:54
3	U 409.014†	-1.8	-34.9	-3.2959 µg/L	-3.2959 ppb	10:22:33
3	V 292.402†	-112.0	52.8	0.5848 µg/L	0.5848 ppb	10:22:33
3	Zn 213.857†	764.2	30.4	0.7340 µg/L	0.7340 ppb	10:22:54

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2215338.3	101.07	%	0.879				0.87%
Sc RADIAL	175243.4	101	%	0.2				0.19%
Y 371.029	1416987.3	101.02	%	0.870				0.86%
Ag 328.068†	83.7	0.7392	µg/L	0.19561	0.7392	ppb	0.19561	26.46%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	7.1	2.9237	µg/L	4.70537	2.9237	ppb	4.70537	160.94%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.4	-2.1745	µg/L	0.57441	-2.1745	ppb	0.57441	26.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	39.6	1.6139	µg/L	0.52875	1.6139	ppb	0.52875	32.76%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	13.5	0.3289	µg/L	0.35738	0.3289	ppb	0.35738	108.65%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	406.7	0.2396	µg/L	0.19414	0.2396	ppb	0.19414	81.01%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.0	2.4698	µg/L	1.25958	2.4698	ppb	1.25958	51.00%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	18.5	0.4314	µg/L	0.34468	0.4314	ppb	0.34468	79.90%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	13.7	0.6264	µg/L	0.42848	0.6264	ppb	0.42848	68.40%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 2.4      0.0465 µg/L       0.54628      0.0465 ppb        0.54628 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -14.7     -0.1028 µg/L       0.33025     -0.1028 ppb        0.33025 321.19%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         12.0      8.6173 µg/L       0.30697      8.6173 ppb        0.30697   3.56%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          74.6      40.814 µg/L        9.6354      40.814 ppb         9.6354  23.61%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             3.9      8.0383 µg/L       7.00005      8.0383 ppb        7.00005  87.08%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               112.8      0.3235 µg/L       0.22938      0.3235 ppb        0.22938  70.91%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                15.7      1.6793 µg/L       0.62845      1.6793 ppb        0.62845  37.42%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -5.1     -1.2342 µg/L       5.87800     -1.2342 ppb        5.87800 476.28%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 7.5      0.3769 µg/L       0.60280      0.3769 ppb        0.60280 159.95%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -15.0     -25.900 µg/L        4.4339     -25.900 ppb         4.4339  17.12%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 3.7      0.8837 µg/L       1.10843      0.8837 ppb        1.10843 125.43%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -7.3     -32.168 µg/L        4.3420     -32.168 ppb         4.3420  13.50%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.5      5.7028 µg/L       2.78494      5.7028 ppb        2.78494  48.83%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -3.1     -3.4359 µg/L       2.96001     -3.4359 ppb        2.96001  86.15%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      -6.8     -1.2022 µg/L      10.34224     -1.2022 ppb       10.34224 860.26%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                92.4      6.4266 µg/L       1.96440      6.4266 ppb        1.96440  30.57%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 3.1      1.3597 µg/L       1.83339      1.3597 ppb        1.83339 134.84%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                59.4      0.2557 µg/L       0.16068      0.2557 ppb        0.16068  62.85%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               273.7      0.6191 µg/L       0.26214      0.6191 ppb        0.26214  42.35%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -2.2     -3.0647 µg/L       6.91131     -3.0647 ppb        6.91131 225.51%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -64.6     -6.0908 µg/L       2.92231     -6.0908 ppb        2.92231  47.98%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 15.3      0.1683 µg/L       0.36076      0.1683 ppb        0.36076 214.39%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                15.4      0.3732 µg/L       0.31525      0.3732 ppb        0.31525  84.46%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/2/2009 10:34:10
Logged In Analyst: optima
Spectrometer Model: Optima 4300 DV, S/N 077N1030502

Plasma On Time: 6/29/2009 11:03:38
Technique: ICP Continuous
Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\070209D.sif
Batch ID:
Results Data Set: 070209
Results Library: c:\pe\optima1\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 10:34:12
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174232.8	174232.8	100	%			10:34:46
1	Al 396.153Radial†	12036.6	12194.5	5111.7	µg/L	5111.7	ppb	10:34:51
1	Ca 317.933Radial†	28336.7	27434.9	5196.2	µg/L	5196.2	ppb	10:34:51
1	Fe 238.204 Radial†	7150.4	7169.5	5158.4	µg/L	5158.4	ppb	10:34:51
1	K 766.490 Radial†	10126.3	9346.1	5114.9	µg/L	5114.9	ppb	10:34:51
1	Mg 279.077 IEC†	2590.0	2544.3	5225.0	µg/L	5225.0	ppb	10:34:51
1	Na 589.592 Radial†	42635.9	42474.8	10195	µg/L	10195	ppb	10:34:46
1	Sr 421.552†	117387.7	117203.6	504.71	µg/L	504.71	ppb	10:34:46
1	Sc 361.383	2217263.0	2217263.0	101.16	%			10:35:25
1	Y 371.029	1409243.7	1409243.7	100.47	%			10:35:25
1	Ag 328.068†	57210.4	57377.0	509.54	µg/L	509.54	ppb	10:35:30
1	As 188.979†	318.4	312.5	498.81	µg/L	498.81	ppb	10:35:51
1	B 249.677†	12644.3	12290.9	500.19	µg/L	500.19	ppb	10:35:30
1	Ba 233.527†	20858.4	20700.3	506.21	µg/L	506.21	ppb	10:35:30
1	Be 313.107†	877480.5	863769.3	506.64	µg/L	506.64	ppb	10:35:25
1	Cd 226.502†	21782.4	21673.2	511.34	µg/L	511.34	ppb	10:35:30
1	Co 228.616†	11235.2	11208.0	509.26	µg/L	509.26	ppb	10:35:30
1	Cr 267.716†	25946.7	25831.8	506.54	µg/L	506.54	ppb	10:35:30
1	Cu 324.752†	75031.0	69506.6	492.37	µg/L	492.37	ppb	10:35:30
1	Mn 257.610†	178092.1	175995.6	504.67	µg/L	504.67	ppb	10:35:25
1	Mo 202.031†	4790.5	4736.5	506.54	µg/L	506.54	ppb	10:35:51
1	Ni 231.604†	10664.2	10098.7	508.48	µg/L	508.48	ppb	10:35:30
1	P 214.914†	1694.0	1440.5	2419.3	µg/L	2419.3	ppb	10:35:51
1	Pb 220.353†	2248.6	2178.4	508.99	µg/L	508.99	ppb	10:35:51
1	S 181.975 Axial†	268.0	220.6	973.99	µg/L	973.99	ppb	10:35:51
1	Sb 206.836†	604.8	576.6	502.14	µg/L	502.14	ppb	10:35:51
1	Se 196.026†	471.8	446.8	495.71	µg/L	495.71	ppb	10:35:51
1	SiO2†	34679.2	31109.5	5490.4	µg/L	5490.4	ppb	10:35:30
1	Si 251.611†	37050.6	36235.9	2518.5	µg/L	2518.5	ppb	10:35:30
1	Sn 189.927†	1180.6	1159.9	512.11	µg/L	512.11	ppb	10:35:51
1	Ti 334.940†	226505.6	222803.8	503.83	µg/L	503.83	ppb	10:35:25
1	Tl 190.801†	335.7	356.6	499.92	µg/L	499.92	ppb	10:35:51
1	U 409.014†	5449.5	5353.8	503.35	µg/L	503.35	ppb	10:35:30
1	V 292.402†	46839.6	46466.1	509.30	µg/L	509.30	ppb	10:35:30
1	Zn 213.857†	21858.0	20884.8	503.32	µg/L	503.32	ppb	10:35:30
2	Sc RADIAL	177524.8	177524.8	102	%			10:34:56
2	Al 396.153Radial†	12201.9	12133.6	5086.1	µg/L	5086.1	ppb	10:35:02
2	Ca 317.933Radial†	28667.8	27234.6	5158.2	µg/L	5158.2	ppb	10:35:02
2	Fe 238.204 Radial†	7258.5	7143.0	5139.6	µg/L	5139.6	ppb	10:35:02
2	K 766.490 Radial†	10290.7	9319.7	5100.5	µg/L	5100.5	ppb	10:35:02
2	Mg 279.077 IEC†	2614.9	2520.7	5176.6	µg/L	5176.6	ppb	10:35:02
2	Na 589.592 Radial†	42748.2	41795.1	10032	µg/L	10032	ppb	10:34:56
2	Sr 421.552†	117981.4	115611.0	497.85	µg/L	497.85	ppb	10:34:56
2	Sc 361.383	2223126.4	2223126.4	101.43	%			10:35:58
2	Y 371.029	1413539.6	1413539.6	100.77	%			10:35:58
2	Ag 328.068†	57845.9	57854.4	513.78	µg/L	513.78	ppb	10:36:04
2	As 188.979†	325.8	319.0	509.21	µg/L	509.21	ppb	10:36:24

2	B 249.677†	12782.6	12394.3	504.42 µg/L	504.42 ppb	10:36:04
2	Ba 233.527†	21155.6	20938.9	512.04 µg/L	512.04 ppb	10:36:04
2	Be 313.107†	877730.5	861728.0	505.45 µg/L	505.45 ppb	10:35:58
2	Cd 226.502†	22049.8	21880.0	516.22 µg/L	516.22 ppb	10:36:04
2	Co 228.616†	11358.7	11300.5	513.46 µg/L	513.46 ppb	10:36:04
2	Cr 267.716†	26209.8	26023.6	510.30 µg/L	510.30 ppb	10:36:04
2	Cu 324.752†	75843.9	70112.4	496.66 µg/L	496.66 ppb	10:36:04
2	Mn 257.610†	178182.2	175620.1	503.60 µg/L	503.60 ppb	10:35:58
2	Mo 202.031†	4796.0	4729.5	505.79 µg/L	505.79 ppb	10:36:24
2	Ni 231.604†	10770.7	10175.9	512.37 µg/L	512.37 ppb	10:36:04
2	P 214.914†	1693.9	1435.9	2410.6 µg/L	2410.6 ppb	10:36:24
2	Pb 220.353†	2240.8	2164.9	505.83 µg/L	505.83 ppb	10:36:24
2	S 181.975 Axial†	271.3	223.1	985.17 µg/L	985.17 ppb	10:36:24
2	Sb 206.836†	602.2	572.5	498.50 µg/L	498.50 ppb	10:36:24
2	Se 196.026†	484.9	458.6	508.68 µg/L	508.68 ppb	10:36:24
2	SiO2†	35003.7	31339.1	5530.9 µg/L	5530.9 ppb	10:36:04
2	Si 251.611†	37532.5	36614.3	2545.4 µg/L	2545.4 ppb	10:36:04
2	Sn 189.927†	1180.1	1156.3	510.53 µg/L	510.53 ppb	10:36:24
2	Ti 334.940†	226812.7	222516.1	503.18 µg/L	503.18 ppb	10:35:58
2	Tl 190.801†	336.6	356.6	499.95 µg/L	499.95 ppb	10:36:24
2	U 409.014†	5438.5	5328.8	501.00 µg/L	501.00 ppb	10:36:04
2	V 292.402†	47402.6	46899.1	513.99 µg/L	513.99 ppb	10:36:04
2	Zn 213.857†	22059.9	21026.9	506.74 µg/L	506.74 ppb	10:36:04
3	Sc RADIAL	174800.1	174800.1	100 %		10:35:07
3	Al 396.153Radial†	11993.5	12112.5	5077.3 µg/L	5077.3 ppb	10:35:13
3	Ca 317.933Radial†	28060.3	27067.8	5126.6 µg/L	5126.6 ppb	10:35:13
3	Fe 238.204 Radial†	7118.3	7114.4	5119.1 µg/L	5119.1 ppb	10:35:13
3	K 766.490 Radial†	10103.0	9290.1	5084.3 µg/L	5084.3 ppb	10:35:13
3	Mg 279.077 IEC†	2592.0	2537.9	5211.9 µg/L	5211.9 ppb	10:35:13
3	Na 589.592 Radial†	42597.4	42298.3	10153 µg/L	10153 ppb	10:35:07
3	Sr 421.552†	117438.4	116873.5	503.29 µg/L	503.29 ppb	10:35:07
3	Sc 361.383	2220611.7	2220611.7	101.31 %		10:36:31
3	Y 371.029	1412002.8	1412002.8	100.66 %		10:36:31
3	Ag 328.068†	57849.6	57922.6	514.39 µg/L	514.39 ppb	10:36:37
3	As 188.979†	317.8	311.5	497.26 µg/L	497.26 ppb	10:36:57
3	B 249.677†	12832.5	12457.7	507.01 µg/L	507.01 ppb	10:36:37
3	Ba 233.527†	21125.2	20932.5	511.89 µg/L	511.89 ppb	10:36:37
3	Be 313.107†	875273.2	860282.5	504.60 µg/L	504.60 ppb	10:36:31
3	Cd 226.502†	22046.7	21901.6	516.73 µg/L	516.73 ppb	10:36:37
3	Co 228.616†	11389.0	11343.1	515.40 µg/L	515.40 ppb	10:36:37
3	Cr 267.716†	26282.0	26124.1	512.27 µg/L	512.27 ppb	10:36:37
3	Cu 324.752†	75758.6	70112.9	496.66 µg/L	496.66 ppb	10:36:37
3	Mn 257.610†	177715.7	175358.6	502.85 µg/L	502.85 ppb	10:36:31
3	Mo 202.031†	4773.1	4712.2	503.94 µg/L	503.94 ppb	10:36:57
3	Ni 231.604†	10771.1	10188.3	512.99 µg/L	512.99 ppb	10:36:37
3	P 214.914†	1698.6	1442.4	2421.9 µg/L	2421.9 ppb	10:36:57
3	Pb 220.353†	2244.8	2171.3	507.32 µg/L	507.32 ppb	10:36:57
3	S 181.975 Axial†	264.0	216.2	954.64 µg/L	954.64 ppb	10:36:57
3	Sb 206.836†	602.8	573.7	499.57 µg/L	499.57 ppb	10:36:57
3	Se 196.026†	478.7	453.0	502.48 µg/L	502.48 ppb	10:36:57
3	SiO2†	35136.1	31508.8	5560.9 µg/L	5560.9 ppb	10:36:37
3	Si 251.611†	37560.1	36683.5	2550.4 µg/L	2550.4 ppb	10:36:37
3	Sn 189.927†	1176.7	1154.3	509.64 µg/L	509.64 ppb	10:36:57
3	Ti 334.940†	226205.9	222170.4	502.40 µg/L	502.40 ppb	10:36:31
3	Tl 190.801†	333.5	353.9	496.12 µg/L	496.12 ppb	10:36:57
3	U 409.014†	5531.8	5427.0	510.26 µg/L	510.26 ppb	10:36:37
3	V 292.402†	47423.4	46972.5	514.79 µg/L	514.79 ppb	10:36:37
3	Zn 213.857†	22062.5	21054.1	507.40 µg/L	507.40 ppb	10:36:37

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	2220333.7	101.30	%	0.134				0.13%
Sc RADIAL	175519.2	101	%	1.0				1.00%
Y 371.029	1411595.4	100.63	%	0.155				0.15%
Ag 328.068†	57718.0	512.57	µg/L	2.639	512.57	ppb	2.639	0.51%
QC value within limits for Ag 328.068 Recovery = 102.51%								
Al 396.153Radial†	12146.9	5091.7	µg/L	17.86	5091.7	ppb	17.86	0.35%
QC value within limits for Al 396.153Radial Recovery = 101.83%								
As 188.979†	314.3	501.76	µg/L	6.497	501.76	ppb	6.497	1.29%

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   QC value within limits for As 188.979  Recovery = 100.35%
B 249.677†            12381.0      503.87 µg/L        3.445      503.87 ppb          3.445   0.68%
   QC value within limits for B 249.677  Recovery = 100.77%
Ba 233.527†           20857.2      510.05 µg/L        3.324      510.05 ppb          3.324   0.65%
   QC value within limits for Ba 233.527  Recovery = 102.01%
Be 313.107†          861926.6      505.56 µg/L        1.027      505.56 ppb          1.027   0.20%
   QC value within limits for Be 313.107  Recovery = 101.11%
Ca 317.933Radial†     27245.7      5160.3 µg/L       34.81      5160.3 ppb          34.81   0.67%
   QC value within limits for Ca 317.933Radial  Recovery = 103.21%
Cd 226.502†           21818.3      514.76 µg/L        2.977      514.76 ppb          2.977   0.58%
   QC value within limits for Cd 226.502  Recovery = 102.95%
Co 228.616†           11283.9      512.71 µg/L        3.136      512.71 ppb          3.136   0.61%
   QC value within limits for Co 228.616  Recovery = 102.54%
Cr 267.716†           25993.1      509.71 µg/L        2.912      509.71 ppb          2.912   0.57%
   QC value within limits for Cr 267.716  Recovery = 101.94%
Cu 324.752†           69910.6      495.23 µg/L        2.473      495.23 ppb          2.473   0.50%
   QC value within limits for Cu 324.752  Recovery = 99.05%
Fe 238.204 Radial†     7142.3      5139.0 µg/L       19.68      5139.0 ppb          19.68   0.38%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.78%
K 766.490 Radial†      9318.6      5099.9 µg/L       15.34      5099.9 ppb          15.34   0.30%
   QC value within limits for K 766.490 Radial  Recovery = 102.00%
Mg 279.077 IEC†        2534.3      5204.5 µg/L       25.04      5204.5 ppb          25.04   0.48%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.09%
Mn 257.610†          175658.1      503.70 µg/L        0.918      503.70 ppb          0.918   0.18%
   QC value within limits for Mn 257.610  Recovery = 100.74%
Mo 202.031†            4726.1      505.43 µg/L        1.339      505.43 ppb          1.339   0.26%
   QC value within limits for Mo 202.031  Recovery = 101.09%
Na 589.592 Radial†    42189.4       10126 µg/L         84.7       10126 ppb           84.7   0.84%
   QC value within limits for Na 589.592 Radial  Recovery = 101.26%
Ni 231.604†           10154.3      511.28 µg/L        2.443      511.28 ppb          2.443   0.48%
   QC value within limits for Ni 231.604  Recovery = 102.26%
P 214.914†             1439.6      2417.3 µg/L        5.92      2417.3 ppb           5.92   0.25%
   QC value within limits for P 214.914  Recovery = 96.69%
Pb 220.353†            2171.5      507.38 µg/L        1.583      507.38 ppb          1.583   0.31%
   QC value within limits for Pb 220.353  Recovery = 101.48%
S 181.975 Axial†        220.0      971.27 µg/L       15.446      971.27 ppb         15.446   1.59%
   QC value within limits for S 181.975 Axial  Recovery = 97.13%
Sb 206.836†             574.3      500.07 µg/L        1.873      500.07 ppb          1.873   0.37%
   QC value within limits for Sb 206.836  Recovery = 100.01%
Se 196.026†             452.8      502.29 µg/L        6.485      502.29 ppb          6.485   1.29%
   QC value within limits for Se 196.026  Recovery = 100.46%
SiO2†                 31319.1      5527.4 µg/L       35.37      5527.4 ppb          35.37   0.64%
   QC value within limits for SiO2  Recovery = 103.36%
Si 251.611†           36511.2      2538.1 µg/L       17.16      2538.1 ppb          17.16   0.68%
   QC value within limits for Si 251.611  Recovery = 101.53%
Sn 189.927†            1156.8      510.76 µg/L        1.252      510.76 ppb          1.252   0.25%
   QC value within limits for Sn 189.927  Recovery = 102.15%
Sr 421.552†          116562.7      501.95 µg/L        3.620      501.95 ppb          3.620   0.72%
   QC value within limits for Sr 421.552  Recovery = 100.39%
Ti 334.940†          222496.8      503.13 µg/L        0.716      503.13 ppb          0.716   0.14%
   QC value within limits for Ti 334.940  Recovery = 100.63%
Tl 190.801†             355.7      498.66 µg/L        2.202      498.66 ppb          2.202   0.44%
   QC value within limits for Tl 190.801  Recovery = 99.73%
U 409.014†             5369.9      504.87 µg/L        4.816      504.87 ppb          4.816   0.95%
   QC value within limits for U 409.014  Recovery = 100.97%
V 292.402†            46779.3      512.69 µg/L        2.966      512.69 ppb          2.966   0.58%
   QC value within limits for V 292.402  Recovery = 102.54%
Zn 213.857†           20988.6      505.82 µg/L        2.192      505.82 ppb          2.192   0.43%
   QC value within limits for Zn 213.857  Recovery = 101.16%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 10:37:06
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174709.1	174709.1	100	%			10:37:39
1	Al 396.153Radial†	-180.7	-10.1	-4.2993	µg/L	-4.2993	ppb	10:37:39
1	Ca 317.933Radial†	895.3	18.4	3.4896	µg/L	3.4896	ppb	10:37:59
1	Fe 238.204 Radial†	-19.3	7.0	5.0344	µg/L	5.0344	ppb	10:37:59
1	K 766.490 Radial†	879.6	106.2	58.139	µg/L	58.139	ppb	10:37:39
1	Mg 279.077 IEC†	46.7	3.4	7.0526	µg/L	7.0526	ppb	10:37:59
1	Na 589.592 Radial†	95.2	-23.6	-5.6602	µg/L	-5.6602	ppb	10:37:39
1	Sr 421.552†	143.8	76.5	0.3293	µg/L	0.3293	ppb	10:37:39
1	Sc 361.383	2199882.1	2199882.1	100.37	%			10:39:02
1	Y 371.029	1406102.3	1406102.3	100.24	%			10:39:02
1	Ag 328.068†	-673.6	150.8	1.3309	µg/L	1.3309	ppb	10:39:07
1	As 188.979†	3.3	1.1	1.6964	µg/L	1.6964	ppb	10:39:28
1	B 249.677†	283.1	73.5	3.0008	µg/L	3.0008	ppb	10:39:07
1	Ba 233.527†	-71.3	9.8	0.2401	µg/L	0.2401	ppb	10:39:28
1	Be 313.107†	3876.5	203.7	0.1204	µg/L	0.1204	ppb	10:39:07
1	Cd 226.502†	-142.7	-1.9	-0.0427	µg/L	-0.0427	ppb	10:39:28
1	Co 228.616†	-89.6	12.2	0.5591	µg/L	0.5591	ppb	10:39:28
1	Cr 267.716†	-175.4	7.6	0.1488	µg/L	0.1488	ppb	10:39:07
1	Cu 324.752†	4680.5	-1.5	-0.0097	µg/L	-0.0097	ppb	10:39:07
1	Mn 257.610†	104.7	48.0	0.1378	µg/L	0.1378	ppb	10:39:07
1	Mo 202.031†	15.1	16.0	1.7073	µg/L	1.7073	ppb	10:39:28
1	Ni 231.604†	460.1	15.1	0.7601	µg/L	0.7601	ppb	10:39:28
1	P 214.914†	224.1	-10.9	-18.863	µg/L	-18.863	ppb	10:39:28
1	Pb 220.353†	60.5	15.9	3.7148	µg/L	3.7148	ppb	10:39:28
1	S 181.975 Axial†	42.2	-2.2	-9.9028	µg/L	-9.9028	ppb	10:39:28
1	Sb 206.836†	22.6	1.3	1.1157	µg/L	1.1157	ppb	10:39:28
1	Se 196.026†	27.6	8.0	8.8250	µg/L	8.8250	ppb	10:39:28
1	SiO2†	3131.2	-52.6	-9.2830	µg/L	-9.2830	ppb	10:39:07
1	Si 251.611†	420.1	28.2	1.9869	µg/L	1.9869	ppb	10:39:28
1	Sn 189.927†	3.9	-3.3	-1.4563	µg/L	-1.4563	ppb	10:39:28
1	Ti 334.940†	1306.8	195.1	0.4413	µg/L	0.4413	ppb	10:39:07
1	Tl 190.801†	-28.1	-3.3	-4.5717	µg/L	-4.5717	ppb	10:39:28
1	U 409.014†	51.8	18.4	1.7359	µg/L	1.7359	ppb	10:39:07
1	V 292.402†	-147.3	16.4	0.1931	µg/L	0.1931	ppb	10:39:07
1	Zn 213.857†	739.4	13.9	0.3338	µg/L	0.3338	ppb	10:39:28
2	Sc RADIAL	176326.1	176326.1	101	%			10:38:05
2	Al 396.153Radial†	-176.2	-4.0	-1.7308	µg/L	-1.7308	ppb	10:38:05
2	Ca 317.933Radial†	889.5	4.5	0.8616	µg/L	0.8616	ppb	10:38:26
2	Fe 238.204 Radial†	-20.8	5.7	4.0857	µg/L	4.0857	ppb	10:38:26
2	K 766.490 Radial†	846.9	65.9	36.061	µg/L	36.061	ppb	10:38:05
2	Mg 279.077 IEC†	42.6	-1.1	-2.2912	µg/L	-2.2912	ppb	10:38:26
2	Na 589.592 Radial†	101.5	-18.3	-4.3892	µg/L	-4.3892	ppb	10:38:05
2	Sr 421.552†	93.4	25.4	0.1093	µg/L	0.1093	ppb	10:38:05
2	Sc 361.383	2217746.0	2217746.0	101.18	%			10:39:34
2	Y 371.029	1417808.2	1417808.2	101.08	%			10:39:34
2	Ag 328.068†	-726.6	103.9	0.9147	µg/L	0.9147	ppb	10:39:39
2	As 188.979†	-1.0	-3.2	-5.1299	µg/L	-5.1299	ppb	10:40:00
2	B 249.677†	258.6	47.0	1.9160	µg/L	1.9160	ppb	10:39:39
2	Ba 233.527†	-80.2	1.6	0.0376	µg/L	0.0376	ppb	10:40:00
2	Be 313.107†	3757.7	55.2	0.0338	µg/L	0.0338	ppb	10:39:39
2	Cd 226.502†	-129.7	12.1	0.2857	µg/L	0.2857	ppb	10:40:00
2	Co 228.616†	-85.4	17.1	0.7783	µg/L	0.7783	ppb	10:40:00
2	Cr 267.716†	-211.2	-26.4	-0.5171	µg/L	-0.5171	ppb	10:39:39
2	Cu 324.752†	4650.7	-68.4	-0.4836	µg/L	-0.4836	ppb	10:39:39
2	Mn 257.610†	111.8	54.3	0.1556	µg/L	0.1556	ppb	10:39:39
2	Mo 202.031†	7.6	8.4	0.8991	µg/L	0.8991	ppb	10:40:00
2	Ni 231.604†	455.8	7.1	0.3580	µg/L	0.3580	ppb	10:40:00
2	P 214.914†	223.0	-13.7	-23.694	µg/L	-23.694	ppb	10:40:00
2	Pb 220.353†	37.8	-7.0	-1.6381	µg/L	-1.6381	ppb	10:40:00

2	S 181.975 Axial†	41.2	-3.6	-16.098 µg/L	-16.098 ppb	10:40:00
2	Sb 206.836†	26.6	5.0	4.3890 µg/L	4.3890 ppb	10:40:00
2	Se 196.026†	12.0	-7.7	-8.5470 µg/L	-8.5470 ppb	10:40:00
2	SiO2†	3134.9	-74.1	-13.079 µg/L	-13.079 ppb	10:39:39
2	Si 251.611†	418.0	22.8	1.4756 µg/L	1.4756 ppb	10:40:00
2	Sn 189.927†	12.9	5.5	2.4337 µg/L	2.4337 ppb	10:40:00
2	Ti 334.940†	1353.3	230.6	0.5216 µg/L	0.5216 ppb	10:39:39
2	Tl 190.801†	-23.3	1.7	2.4209 µg/L	2.4209 ppb	10:40:00
2	U 409.014†	36.0	2.4	0.2244 µg/L	0.2244 ppb	10:39:39
2	V 292.402†	-177.9	-12.6	-0.1304 µg/L	-0.1304 ppb	10:39:39
2	Zn 213.857†	736.3	5.0	0.1205 µg/L	0.1205 ppb	10:40:00
3	Sc RADIAL	173658.2	173658.2	99.8 %		10:38:31
3	Al 396.153Radial†	-146.5	23.1	9.6772 µg/L	9.6772 ppb	10:38:31
3	Ca 317.933Radial†	885.8	14.4	2.7204 µg/L	2.7204 ppb	10:38:52
3	Fe 238.204 Radial†	-24.2	2.0	1.4263 µg/L	1.4263 ppb	10:38:52
3	K 766.490 Radial†	784.9	16.6	9.0593 µg/L	9.0593 ppb	10:38:31
3	Mg 279.077 IEC†	49.6	6.6	13.517 µg/L	13.517 ppb	10:38:52
3	Na 589.592 Radial†	108.0	-10.1	-2.4351 µg/L	-2.4351 ppb	10:38:31
3	Sr 421.552†	85.8	19.2	0.0828 µg/L	0.0828 ppb	10:38:31
3	Sc 361.383	2195194.2	2195194.2	100.15 %		10:40:06
3	Y 371.029	1403563.7	1403563.7	100.06 %		10:40:06
3	Ag 328.068†	-761.5	61.6	0.5430 µg/L	0.5430 ppb	10:40:11
3	As 188.979†	-1.8	-4.1	-6.4905 µg/L	-6.4905 ppb	10:40:32
3	B 249.677†	229.6	20.7	0.8442 µg/L	0.8442 ppb	10:40:11
3	Ba 233.527†	-71.1	9.8	0.2400 µg/L	0.2400 ppb	10:40:32
3	Be 313.107†	4143.7	478.7	0.2820 µg/L	0.2820 ppb	10:40:11
3	Cd 226.502†	-129.8	10.7	0.2491 µg/L	0.2491 ppb	10:40:32
3	Co 228.616†	-87.6	14.1	0.6423 µg/L	0.6423 ppb	10:40:32
3	Cr 267.716†	-192.0	-9.4	-0.1833 µg/L	-0.1833 ppb	10:40:11
3	Cu 324.752†	4739.6	67.5	0.4780 µg/L	0.4780 ppb	10:40:11
3	Mn 257.610†	168.7	112.1	0.3216 µg/L	0.3216 ppb	10:40:11
3	Mo 202.031†	13.2	14.1	1.5117 µg/L	1.5117 ppb	10:40:32
3	Ni 231.604†	445.4	1.4	0.0691 µg/L	0.0691 ppb	10:40:32
3	P 214.914†	222.4	-12.0	-20.913 µg/L	-20.913 ppb	10:40:32
3	Pb 220.353†	46.6	2.1	0.4885 µg/L	0.4885 ppb	10:40:32
3	S 181.975 Axial†	37.9	-6.5	-28.569 µg/L	-28.569 ppb	10:40:32
3	Sb 206.836†	27.4	6.1	5.3258 µg/L	5.3258 ppb	10:40:32
3	Se 196.026†	20.6	1.0	1.0704 µg/L	1.0704 ppb	10:40:32
3	SiO2†	3134.2	-43.0	-7.5855 µg/L	-7.5855 ppb	10:40:11
3	Si 251.611†	444.3	53.3	3.6295 µg/L	3.6295 ppb	10:40:32
3	Sn 189.927†	12.4	5.2	2.3012 µg/L	2.3012 ppb	10:40:32
3	Ti 334.940†	1421.0	311.9	0.7055 µg/L	0.7055 ppb	10:40:11
3	Tl 190.801†	-23.3	1.5	2.1387 µg/L	2.1387 ppb	10:40:32
3	U 409.014†	-14.7	-47.8	-4.5103 µg/L	-4.5103 ppb	10:40:11
3	V 292.402†	-160.0	3.4	0.0399 µg/L	0.0399 ppb	10:40:11
3	Zn 213.857†	750.0	26.1	0.6317 µg/L	0.6317 ppb	10:40:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2204274.1	100.57	%	0.543				0.54%
Sc RADIAL	174897.8	100	%	0.8				0.77%
Y 371.029	1409158.1	100.46	%	0.542				0.54%
Ag 328.068†	105.4	0.9295	µg/L	0.39416	0.9295	ppb	0.39416	42.40%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	3.0	1.2157	µg/L	7.43954	1.2157	ppb	7.43954	611.96%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-2.1	-3.3080	µg/L	4.38702	-3.3080	ppb	4.38702	132.62%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	47.1	1.9203	µg/L	1.07831	1.9203	ppb	1.07831	56.15%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.1	0.1726	µg/L	0.11688	0.1726	ppb	0.11688	67.72%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	245.9	0.1454	µg/L	0.12600	0.1454	ppb	0.12600	86.65%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	12.4	2.3572	µg/L	1.35113	2.3572	ppb	1.35113	57.32%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	7.0	0.1641	µg/L	0.17997	0.1641	ppb	0.17997	109.70%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	14.5	0.6599	µg/L	0.11063	0.6599	ppb	0.11063	16.77%

```
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -9.4     -0.1838 µg/L       0.33296     -0.1838 ppb        0.33296 181.11%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -0.8     -0.0051 µg/L       0.48080     -0.0051 ppb        0.48080 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.9      3.5154 µg/L       1.87042      3.5154 ppb        1.87042  53.21%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          62.9      34.420 µg/L       24.5810      34.420 ppb        24.5810  71.42%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             3.0      6.0928 µg/L       7.94768      6.0928 ppb        7.94768 130.44%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                71.5      0.2050 µg/L       0.10135      0.2050 ppb        0.10135  49.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                12.8      1.3727 µg/L       0.42169      1.3727 ppb        0.42169  30.72%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -17.3     -4.1615 µg/L       1.62456     -4.1615 ppb        1.62456  39.04%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 7.9      0.3958 µg/L       0.34707      0.3958 ppb        0.34707  87.70%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -12.2     -21.157 µg/L        2.4245     -21.157 ppb         2.4245  11.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 3.6      0.8551 µg/L       2.69524      0.8551 ppb        2.69524 315.20%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -4.1     -18.190 µg/L        9.5075     -18.190 ppb         9.5075  52.27%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 4.1      3.6102 µg/L       2.21045      3.6102 ppb        2.21045  61.23%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.4      0.4495 µg/L       8.70264      0.4495 ppb        8.70264 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     -56.6     -9.9826 µg/L       2.81296     -9.9826 ppb        2.81296  28.18%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                34.8      2.3640 µg/L       1.12535      2.3640 ppb        1.12535  47.60%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 2.5      1.0929 µg/L       2.20866      1.0929 ppb        2.20866 202.10%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                40.4      0.1738 µg/L       0.13531      0.1738 ppb        0.13531  77.85%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               245.9      0.5561 µg/L       0.13545      0.5561 ppb        0.13545  24.36%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -0.0     -0.0040 µg/L       3.95826     -0.0040 ppb        3.95826 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 -9.0     -0.8500 µg/L       3.25877     -0.8500 ppb        3.25877 383.37%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  2.4      0.0342 µg/L       0.16181      0.0342 ppb        0.16181 472.72%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                15.0      0.3620 µg/L       0.25676      0.3620 ppb        0.25676  70.93%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: 1201870533|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 301
Date Collected: 7/2/2009 10:40:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870533|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174681.8	174681.8	100	%			10:41:16
1	Al 396.153Radial†	-134.1	36.3	15.314	µg/L	15.314	ppb	10:41:16
1	Ca 317.933Radial†	986.3	109.2	20.690	µg/L	20.690	ppb	10:41:37
1	Fe 238.204 Radial†	49.0	75.0	53.843	µg/L	53.843	ppb	10:41:37
1	K 766.490 Radial†	904.1	130.7	71.553	µg/L	71.553	ppb	10:41:16
1	Mg 279.077 IEC†	56.0	12.7	25.902	µg/L	25.902	ppb	10:41:37
1	Na 589.592 Radial†	203.3	84.2	20.200	µg/L	20.200	ppb	10:41:16
1	Sr 421.552†	48.1	-18.9	-0.0814	µg/L	-0.0814	ppb	10:41:16
1	Sc 361.383	2175076.8	2175076.8	99.234	%			10:42:39
1	Y 371.029	1387936.3	1387936.3	98.946	%			10:42:39
1	Ag 328.068†	-751.2	64.9	0.5747	µg/L	0.5747	ppb	10:42:44
1	As 188.979†	-2.9	-5.1	-8.1086	µg/L	-8.1086	ppb	10:43:05
1	B 249.677†	268.1	61.6	2.4980	µg/L	2.4980	ppb	10:42:44
1	Ba 233.527†	-72.6	7.7	0.1884	µg/L	0.1884	ppb	10:43:05
1	Be 313.107†	3758.9	129.2	0.0770	µg/L	0.0770	ppb	10:42:44
1	Cd 226.502†	-135.0	4.3	0.0953	µg/L	0.0953	ppb	10:43:05
1	Co 228.616†	-80.2	20.7	0.9397	µg/L	0.9397	ppb	10:43:05
1	Cr 267.716†	-168.5	12.5	0.2443	µg/L	0.2443	ppb	10:42:44
1	Cu 324.752†	4676.4	47.6	0.3443	µg/L	0.3443	ppb	10:42:44
1	Mn 257.610†	349.1	295.6	0.8478	µg/L	0.8478	ppb	10:42:44
1	Mo 202.031†	-7.7	-6.8	-0.7250	µg/L	-0.7250	ppb	10:43:05
1	Ni 231.604†	456.4	16.6	0.8359	µg/L	0.8359	ppb	10:43:05
1	P 214.914†	221.3	-11.2	-19.482	µg/L	-19.482	ppb	10:43:05
1	Pb 220.353†	52.3	8.3	1.9306	µg/L	1.9306	ppb	10:43:05
1	S 181.975 Axial†	45.9	1.9	8.3420	µg/L	8.3420	ppb	10:43:05
1	Sb 206.836†	24.7	3.7	3.2030	µg/L	3.2030	ppb	10:43:05
1	Se 196.026†	24.5	5.1	5.6719	µg/L	5.6719	ppb	10:43:05
1	SiO2†	3331.8	185.2	32.678	µg/L	32.678	ppb	10:42:44
1	Si 251.611†	611.6	226.0	15.953	µg/L	15.953	ppb	10:43:05
1	Sn 189.927†	8.5	1.4	0.6204	µg/L	0.6204	ppb	10:43:05
1	Ti 334.940†	1316.4	219.6	0.4961	µg/L	0.4961	ppb	10:42:44
1	Tl 190.801†	-26.2	-1.7	-2.3835	µg/L	-2.3835	ppb	10:43:05
1	U 409.014†	-6.4	-39.7	-3.7549	µg/L	-3.7549	ppb	10:42:44
1	V 292.402†	-183.5	-21.8	-0.2431	µg/L	-0.2431	ppb	10:42:44
1	Zn 213.857†	800.6	84.0	2.0340	µg/L	2.0340	ppb	10:43:05
2	Sc RADIAL	175810.0	175810.0	101	%			10:41:42
2	Al 396.153Radial†	-148.1	23.3	9.7998	µg/L	9.7998	ppb	10:41:42
2	Ca 317.933Radial†	993.1	109.7	20.770	µg/L	20.770	ppb	10:42:03
2	Fe 238.204 Radial†	58.6	84.3	60.436	µg/L	60.436	ppb	10:42:03
2	K 766.490 Radial†	818.0	39.8	21.756	µg/L	21.756	ppb	10:41:42
2	Mg 279.077 IEC†	45.3	1.7	3.4110	µg/L	3.4110	ppb	10:42:03
2	Na 589.592 Radial†	177.1	56.9	13.664	µg/L	13.664	ppb	10:41:42
2	Sr 421.552†	111.7	43.8	0.1885	µg/L	0.1885	ppb	10:41:42
2	Sc 361.383	2202304.5	2202304.5	100.48	%			10:43:11
2	Y 371.029	1405225.6	1405225.6	100.18	%			10:43:11
2	Ag 328.068†	-698.6	126.7	1.1213	µg/L	1.1213	ppb	10:43:16
2	As 188.979†	4.0	1.8	2.8422	µg/L	2.8422	ppb	10:43:37
2	B 249.677†	293.8	83.8	3.4032	µg/L	3.4032	ppb	10:43:16
2	Ba 233.527†	-73.0	8.2	0.2005	µg/L	0.2005	ppb	10:43:37
2	Be 313.107†	3631.5	-44.4	-0.0247	µg/L	-0.0247	ppb	10:43:16
2	Cd 226.502†	-145.7	-4.7	-0.1245	µg/L	-0.1245	ppb	10:43:37
2	Co 228.616†	-95.6	6.4	0.2902	µg/L	0.2902	ppb	10:43:37
2	Cr 267.716†	-154.3	28.8	0.5631	µg/L	0.5631	ppb	10:43:16
2	Cu 324.752†	4665.3	-21.7	-0.1452	µg/L	-0.1452	ppb	10:43:16
2	Mn 257.610†	326.9	269.1	0.7721	µg/L	0.7721	ppb	10:43:16
2	Mo 202.031†	0.8	1.7	0.1864	µg/L	0.1864	ppb	10:43:37
2	Ni 231.604†	471.5	25.9	1.3072	µg/L	1.3072	ppb	10:43:37
2	P 214.914†	227.1	-8.2	-14.209	µg/L	-14.209	ppb	10:43:37
2	Pb 220.353†	50.2	5.5	1.2946	µg/L	1.2946	ppb	10:43:37

2	S 181.975 Axial†	40.0	-4.6	-20.139	µg/L	-20.139 ppb	10:43:37
2	Sb 206.836†	17.9	-3.4	-3.0155	µg/L	-3.0155 ppb	10:43:37
2	Se 196.026†	14.6	-5.0	-5.4807	µg/L	-5.4807 ppb	10:43:37
2	SiO2†	3259.1	71.3	12.580	µg/L	12.580 ppb	10:43:16
2	Si 251.611†	595.4	202.2	14.314	µg/L	14.314 ppb	10:43:37
2	Sn 189.927†	6.2	-1.0	-0.4097	µg/L	-0.4097 ppb	10:43:37
2	Ti 334.940†	1314.8	201.7	0.4555	µg/L	0.4555 ppb	10:43:16
2	Tl 190.801†	-24.6	0.2	0.3024	µg/L	0.3024 ppb	10:43:37
2	U 409.014†	-123.1	-155.7	-14.693	µg/L	-14.693 ppb	10:43:16
2	V 292.402†	-160.2	3.7	0.0226	µg/L	0.0226 ppb	10:43:16
2	Zn 213.857†	806.5	79.9	1.9351	µg/L	1.9351 ppb	10:43:37
3	Sc RADIAL	173360.0	173360.0	99.6	%		10:42:08
3	Al 396.153Radial†	-191.8	-22.6	-9.5188	µg/L	-9.5188 ppb	10:42:08
3	Ca 317.933Radial†	1009.5	140.1	26.528	µg/L	26.528 ppb	10:42:28
3	Fe 238.204 Radial†	65.9	92.4	66.295	µg/L	66.295 ppb	10:42:28
3	K 766.490 Radial†	830.0	63.2	34.600	µg/L	34.600 ppb	10:42:08
3	Mg 279.077 IEC†	53.4	10.5	21.450	µg/L	21.450 ppb	10:42:28
3	Na 589.592 Radial†	196.3	78.6	18.869	µg/L	18.869 ppb	10:42:08
3	Sr 421.552†	113.1	46.8	0.2016	µg/L	0.2016 ppb	10:42:08
3	Sc 361.383	2192245.6	2192245.6	100.02	%		10:43:43
3	Y 371.029	1398361.0	1398361.0	99.689	%		10:43:43
3	Ag 328.068†	-713.0	109.1	0.9640	µg/L	0.9640 ppb	10:43:49
3	As 188.979†	5.1	2.9	4.6446	µg/L	4.6446 ppb	10:44:09
3	B 249.677†	284.2	75.6	3.0663	µg/L	3.0663 ppb	10:43:49
3	Ba 233.527†	-75.7	5.2	0.1251	µg/L	0.1251 ppb	10:44:09
3	Be 313.107†	3743.8	84.5	0.0515	µg/L	0.0515 ppb	10:43:49
3	Cd 226.502†	-142.4	-2.0	-0.0587	µg/L	-0.0587 ppb	10:44:09
3	Co 228.616†	-91.5	10.1	0.4568	µg/L	0.4568 ppb	10:44:09
3	Cr 267.716†	-176.8	5.5	0.1075	µg/L	0.1075 ppb	10:43:49
3	Cu 324.752†	4686.4	20.7	0.1553	µg/L	0.1553 ppb	10:43:49
3	Mn 257.610†	277.8	221.5	0.6356	µg/L	0.6356 ppb	10:43:49
3	Mo 202.031†	3.6	4.5	0.4875	µg/L	0.4875 ppb	10:44:09
3	Ni 231.604†	473.9	30.5	1.5395	µg/L	1.5395 ppb	10:44:09
3	P 214.914†	227.6	-6.6	-11.570	µg/L	-11.570 ppb	10:44:09
3	Pb 220.353†	41.9	-2.5	-0.5736	µg/L	-0.5736 ppb	10:44:09
3	S 181.975 Axial†	37.1	-7.2	-31.843	µg/L	-31.843 ppb	10:44:09
3	Sb 206.836†	19.4	-1.8	-1.6001	µg/L	-1.6001 ppb	10:44:09
3	Se 196.026†	26.3	6.8	7.5253	µg/L	7.5253 ppb	10:44:09
3	SiO2†	3371.8	198.8	35.084	µg/L	35.084 ppb	10:43:49
3	Si 251.611†	613.0	222.6	15.749	µg/L	15.749 ppb	10:44:09
3	Sn 189.927†	5.6	-1.6	-0.6895	µg/L	-0.6895 ppb	10:44:09
3	Ti 334.940†	1420.7	313.6	0.7084	µg/L	0.7084 ppb	10:43:49
3	Tl 190.801†	-26.4	-1.7	-2.3902	µg/L	-2.3902 ppb	10:44:09
3	U 409.014†	-77.5	-110.7	-10.451	µg/L	-10.451 ppb	10:43:49
3	V 292.402†	-195.0	-31.8	-0.3536	µg/L	-0.3536 ppb	10:43:49
3	Zn 213.857†	805.5	82.6	1.9970	µg/L	1.9970 ppb	10:44:09

Mean Data: 1201870533|880928|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2189875.7	99.909	%	0.6281				0.63%
Sc RADIAL	174617.3	100	%	0.7				0.70%
Y 371.029	1397174.3	99.605	%	0.6206				0.62%
Ag 328.068†	100.2	0.8867	µg/L	0.28137	0.8867	ppb	0.28137	31.73%
Al 396.153Radial†	12.4	5.1983	µg/L	13.04019	5.1983	ppb	13.04019	250.85%
As 188.979†	-0.2	-0.2072	µg/L	6.90183	-0.2072	ppb	6.90183	>999.9%
B 249.677†	73.7	2.9892	µg/L	0.45752	2.9892	ppb	0.45752	15.31%
Ba 233.527†	7.0	0.1713	µg/L	0.04052	0.1713	ppb	0.04052	23.65%
Be 313.107†	56.4	0.0346	µg/L	0.05290	0.0346	ppb	0.05290	152.82%
Ca 317.933Radial†	119.7	22.662	µg/L	3.3480	22.662	ppb	3.3480	14.77%
Cd 226.502†	-0.8	-0.0293	µg/L	0.11282	-0.0293	ppb	0.11282	385.26%
Co 228.616†	12.4	0.5622	µg/L	0.33734	0.5622	ppb	0.33734	60.00%
Cr 267.716†	15.6	0.3050	µg/L	0.23380	0.3050	ppb	0.23380	76.66%
Cu 324.752†	15.6	0.1181	µg/L	0.24685	0.1181	ppb	0.24685	208.99%
Fe 238.204 Radial†	83.9	60.191	µg/L	6.2295	60.191	ppb	6.2295	10.35%
K 766.490 Radial†	77.9	42.636	µg/L	25.8533	42.636	ppb	25.8533	60.64%
Mg 279.077 IEC†	8.3	16.921	µg/L	11.9098	16.921	ppb	11.9098	70.39%
Mn 257.610†	262.1	0.7519	µg/L	0.10754	0.7519	ppb	0.10754	14.30%
Mo 202.031†	-0.2	-0.0170	µg/L	0.63133	-0.0170	ppb	0.63133	>999.9%
Na 589.592 Radial†	73.2	17.578	µg/L	3.4538	17.578	ppb	3.4538	19.65%

Ni 231.604†	24.4	1.2275	µg/L	0.35854	1.2275	ppb	0.35854	29.21%
P 214.914†	-8.6	-15.087	µg/L	4.0282	-15.087	ppb	4.0282	26.70%
Pb 220.353†	3.8	0.8839	µg/L	1.30166	0.8839	ppb	1.30166	147.27%
S 181.975 Axial†	-3.3	-14.546	µg/L	20.6677	-14.546	ppb	20.6677	142.08%
Sb 206.836†	-0.5	-0.4709	µg/L	3.25944	-0.4709	ppb	3.25944	692.24%
Se 196.026†	2.3	2.5722	µg/L	7.03528	2.5722	ppb	7.03528	273.52%
SiO2†	151.7	26.781	µg/L	12.3567	26.781	ppb	12.3567	46.14%
Si 251.611†	216.9	15.339	µg/L	0.8935	15.339	ppb	0.8935	5.83%
Sn 189.927†	-0.4	-0.1596	µg/L	0.68987	-0.1596	ppb	0.68987	432.26%
Sr 421.552†	23.9	0.1029	µg/L	0.15972	0.1029	ppb	0.15972	155.24%
Ti 334.940†	245.0	0.5533	µg/L	0.13582	0.5533	ppb	0.13582	24.55%
Tl 190.801†	-1.1	-1.4904	µg/L	1.55264	-1.4904	ppb	1.55264	104.17%
U 409.014†	-102.0	-9.6332	µg/L	5.51485	-9.6332	ppb	5.51485	57.25%
V 292.402†	-16.6	-0.1914	µg/L	0.19334	-0.1914	ppb	0.19334	101.03%
Zn 213.857†	82.2	1.9887	µg/L	0.04996	1.9887	ppb	0.04996	2.51%

Sequence No.: 4
Sample ID: 1201870538|880928|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 302
Date Collected: 7/2/2009 10:44:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870538|880928|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	175276.5	175276.5	101	%			10:44:51
1	Al 396.153Radial†	78023.3	77651.1	32657	µg/L	32657	ppb	10:44:56
1	Ca 317.933Radial†	95457.4	93920.7	17789	µg/L	17789	ppb	10:44:56
1	Fe 238.204 Radial†	129353.5	128481.0	92154	µg/L	92154	ppb	10:44:56
1	K 766.490 Radial†	20848.4	19933.4	10909	µg/L	10909	ppb	10:44:56
1	Mg 279.077 IEC†	7357.4	7263.1	14759	µg/L	14759	ppb	10:44:56
1	Na 589.592 Radial†	11903.2	11702.1	2808.8	µg/L	2808.8	ppb	10:44:56
1	Sr 421.552†	187285.0	185916.9	800.61	µg/L	800.61	ppb	10:44:51
1	Sc 361.383	2213808.1	2213808.1	101.00	%			10:45:31
1	Y 371.029	1423266.9	1423266.9	101.46	%			10:45:31
1	Ag 328.068†	75182.2	75258.8	675.60	µg/L	675.60	ppb	10:45:37
1	As 188.979†	838.0	827.5	1385.9	µg/L	1385.9	ppb	10:45:57
1	B 249.677†	17703.1	17319.0	678.12	µg/L	678.12	ppb	10:45:37
1	Ba 233.527†	97712.0	96824.2	2364.3	µg/L	2364.3	ppb	10:45:37
1	Be 313.107†	776086.3	764734.0	451.82	µg/L	451.82	ppb	10:45:31
1	Cd 226.502†	26314.2	26193.6	610.75	µg/L	610.75	ppb	10:45:37
1	Co 228.616†	9286.3	9295.8	419.95	µg/L	419.95	ppb	10:45:37
1	Cr 267.716†	19721.1	19707.9	386.98	µg/L	386.98	ppb	10:45:37
1	Cu 324.752†	73858.4	68461.3	496.67	µg/L	496.67	ppb	10:45:37
1	Mn 257.610†	645396.1	638941.8	1832.7	µg/L	1832.7	ppb	10:45:31
1	Mo 202.031†	3867.7	3830.3	413.08	µg/L	413.08	ppb	10:45:57
1	Ni 231.604†	10832.8	10282.1	517.86	µg/L	517.86	ppb	10:45:37
1	P 214.914†	2389.8	2132.0	3528.3	µg/L	3528.3	ppb	10:45:57
1	Pb 220.353†	3700.4	3619.3	847.01	µg/L	847.01	ppb	10:45:57
1	S 181.975 Axial†	274.9	227.8	991.53	µg/L	991.53	ppb	10:45:57
1	Sb 206.836†	612.9	585.6	513.48	µg/L	513.48	ppb	10:45:57
1	Se 196.026†	780.5	753.2	873.47	µg/L	873.47	ppb	10:45:57
1	SiO2†	83207.3	79210.1	13980	µg/L	13980	ppb	10:45:37
1	Si 251.611†	93057.4	91744.5	6411.1	µg/L	6411.1	ppb	10:45:37
1	Sn 189.927†	1218.2	1199.0	554.55	µg/L	554.55	ppb	10:45:57
1	Ti 334.940†	701406.6	693346.4	1567.8	µg/L	1567.8	ppb	10:45:31
1	Tl 190.801†	689.4	707.3	993.90	µg/L	993.90	ppb	10:45:57
1	U 409.014†	-472.1	-500.6	-66.244	µg/L	-66.244	ppb	10:45:37
1	V 292.402†	68359.4	67844.9	746.96	µg/L	746.96	ppb	10:45:37
1	Zn 213.857†	42226.4	41085.1	988.59	µg/L	988.59	ppb	10:45:37
2	Sc RADIAL	176715.8	176715.8	102	%			10:45:02
2	Al 396.153Radial†	77532.6	76536.7	32188	µg/L	32188	ppb	10:45:07
2	Ca 317.933Radial†	94563.0	92267.6	17475	µg/L	17475	ppb	10:45:07
2	Fe 238.204 Radial†	127992.1	126093.8	90442	µg/L	90442	ppb	10:45:07
2	K 766.490 Radial†	20705.1	19623.7	10740	µg/L	10740	ppb	10:45:07
2	Mg 279.077 IEC†	7255.4	7103.1	14434	µg/L	14434	ppb	10:45:07
2	Na 589.592 Radial†	11818.1	11521.9	2765.5	µg/L	2765.5	ppb	10:45:07
2	Sr 421.552†	187341.1	184457.4	794.32	µg/L	794.32	ppb	10:45:02
2	Sc 361.383	2207277.6	2207277.6	100.70	%			10:46:04
2	Y 371.029	1418973.7	1418973.7	101.16	%			10:46:04
2	Ag 328.068†	74782.3	75081.9	673.89	µg/L	673.89	ppb	10:46:10
2	As 188.979†	828.1	820.1	1373.0	µg/L	1373.0	ppb	10:46:30
2	B 249.677†	17604.8	17273.2	676.79	µg/L	676.79	ppb	10:46:10
2	Ba 233.527†	97019.1	96422.4	2354.5	µg/L	2354.5	ppb	10:46:10
2	Be 313.107†	775446.0	766371.5	452.80	µg/L	452.80	ppb	10:46:04
2	Cd 226.502†	26104.6	26062.6	607.80	µg/L	607.80	ppb	10:46:10
2	Co 228.616†	9216.0	9253.2	418.01	µg/L	418.01	ppb	10:46:10
2	Cr 267.716†	19570.4	19616.1	385.18	µg/L	385.18	ppb	10:46:10
2	Cu 324.752†	73426.5	68248.8	494.94	µg/L	494.94	ppb	10:46:10
2	Mn 257.610†	644539.9	639982.2	1835.6	µg/L	1835.6	ppb	10:46:04
2	Mo 202.031†	3887.7	3861.5	416.36	µg/L	416.36	ppb	10:46:30
2	Ni 231.604†	10734.7	10216.4	514.55	µg/L	514.55	ppb	10:46:10
2	P 214.914†	2395.6	2144.7	3552.5	µg/L	3552.5	ppb	10:46:30
2	Pb 220.353†	3719.8	3649.4	854.02	µg/L	854.02	ppb	10:46:30

2	S 181.975 Axial†	266.6	220.5	959.28	µg/L	959.28 ppb	10:46:30
2	Sb 206.836†	617.4	591.8	518.95	µg/L	518.95 ppb	10:46:30
2	Se 196.026†	785.0	760.0	880.26	µg/L	880.26 ppb	10:46:30
2	SiO2†	82711.1	78961.0	13936	µg/L	13936 ppb	10:46:10
2	Si 251.611†	92317.9	91282.8	6378.2	µg/L	6378.2 ppb	10:46:10
2	Sn 189.927†	1215.5	1199.9	554.40	µg/L	554.40 ppb	10:46:30
2	Ti 334.940†	701856.9	695848.3	1573.5	µg/L	1573.5 ppb	10:46:04
2	Tl 190.801†	699.0	718.9	1010.3	µg/L	1010.3 ppb	10:46:30
2	U 409.014†	-350.0	-380.8	-54.592	µg/L	-54.592 ppb	10:46:10
2	V 292.402†	67918.6	67607.4	744.28	µg/L	744.28 ppb	10:46:10
2	Zn 213.857†	41899.5	40884.1	983.85	µg/L	983.85 ppb	10:46:10
3	Sc RADIAL	175200.3	175200.3	101	%		10:45:13
3	Al 396.153Radial†	78093.4	77754.5	32700	µg/L	32700 ppb	10:45:19
3	Ca 317.933Radial†	95367.4	93872.4	17779	µg/L	17779 ppb	10:45:19
3	Fe 238.204 Radial†	129298.5	128482.2	92155	µg/L	92155 ppb	10:45:19
3	K 766.490 Radial†	20811.1	19905.4	10894	µg/L	10894 ppb	10:45:19
3	Mg 279.077 IEC†	7334.9	7244.0	14720	µg/L	14720 ppb	10:45:19
3	Na 589.592 Radial†	11946.9	11750.6	2820.4	µg/L	2820.4 ppb	10:45:19
3	Sr 421.552†	187416.3	186128.2	801.52	µg/L	801.52 ppb	10:45:13
3	Sc 361.383	2195617.0	2195617.0	100.17	%		10:46:38
3	Y 371.029	1413013.4	1413013.4	100.73	%		10:46:38
3	Ag 328.068†	74685.5	75379.7	676.68	µg/L	676.68 ppb	10:46:43
3	As 188.979†	831.8	828.1	1387.0	µg/L	1387.0 ppb	10:47:04
3	B 249.677†	17613.5	17374.8	680.39	µg/L	680.39 ppb	10:46:43
3	Ba 233.527†	97203.5	97118.1	2371.5	µg/L	2371.5 ppb	10:46:43
3	Be 313.107†	776227.9	771241.6	455.66	µg/L	455.66 ppb	10:46:38
3	Cd 226.502†	26185.0	26280.5	612.80	µg/L	612.80 ppb	10:46:43
3	Co 228.616†	9248.6	9334.4	421.69	µg/L	421.69 ppb	10:46:43
3	Cr 267.716†	19597.3	19746.1	387.73	µg/L	387.73 ppb	10:46:43
3	Cu 324.752†	73487.7	68697.2	498.34	µg/L	498.34 ppb	10:46:43
3	Mn 257.610†	645489.1	644328.8	1848.1	µg/L	1848.1 ppb	10:46:38
3	Mo 202.031†	3893.2	3887.5	419.20	µg/L	419.20 ppb	10:47:04
3	Ni 231.604†	10777.9	10316.2	519.58	µg/L	519.58 ppb	10:46:43
3	P 214.914†	2394.4	2156.1	3570.1	µg/L	3570.1 ppb	10:47:04
3	Pb 220.353†	3711.4	3660.7	856.70	µg/L	856.70 ppb	10:47:04
3	S 181.975 Axial†	273.1	228.3	993.64	µg/L	993.64 ppb	10:47:04
3	Sb 206.836†	608.4	586.1	513.96	µg/L	513.96 ppb	10:47:04
3	Se 196.026†	787.8	766.9	888.61	µg/L	888.61 ppb	10:47:04
3	SiO2†	82843.4	79529.4	14036	µg/L	14036 ppb	10:46:43
3	Si 251.611†	92506.7	91958.2	6425.4	µg/L	6425.4 ppb	10:46:43
3	Sn 189.927†	1223.8	1214.5	561.36	µg/L	561.36 ppb	10:47:04
3	Ti 334.940†	701222.8	698916.6	1580.4	µg/L	1580.4 ppb	10:46:38
3	Tl 190.801†	696.0	719.6	1011.2	µg/L	1011.2 ppb	10:47:04
3	U 409.014†	-473.0	-505.3	-66.692	µg/L	-66.692 ppb	10:46:43
3	V 292.402†	68062.9	68109.7	749.88	µg/L	749.88 ppb	10:46:43
3	Zn 213.857†	41918.8	41124.4	989.53	µg/L	989.53 ppb	10:46:43

Mean Data: 1201870538|880928|2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2205567.5	100.63	%	0.420				0.42%
Sc RADIAL	175730.9	101	%	0.5				0.49%
Y 371.029	1418418.0	101.12	%	0.367				0.36%
Ag 328.068†	75240.2	675.39	µg/L	1.410	675.39	ppb	1.410	0.21%
Al 396.153Radial†	77314.1	32515	µg/L	284.1	32515	ppb	284.1	0.87%
As 188.979†	825.2	1382.0	µg/L	7.82	1382.0	ppb	7.82	0.57%
B 249.677†	17322.4	678.43	µg/L	1.825	678.43	ppb	1.825	0.27%
Ba 233.527†	96788.2	2363.5	µg/L	8.53	2363.5	ppb	8.53	0.36%
Be 313.107†	767449.1	453.43	µg/L	1.998	453.43	ppb	1.998	0.44%
Ca 317.933Radial†	93353.5	17681	µg/L	178.2	17681	ppb	178.2	1.01%
Cd 226.502†	26178.9	610.45	µg/L	2.513	610.45	ppb	2.513	0.41%
Co 228.616†	9294.5	419.88	µg/L	1.841	419.88	ppb	1.841	0.44%
Cr 267.716†	19690.0	386.63	µg/L	1.313	386.63	ppb	1.313	0.34%
Cu 324.752†	68469.1	496.65	µg/L	1.701	496.65	ppb	1.701	0.34%
Fe 238.204 Radial†	127685.6	91583	µg/L	988.7	91583	ppb	988.7	1.08%
K 766.490 Radial†	19820.8	10848	µg/L	93.7	10848	ppb	93.7	0.86%
Mg 279.077 IEC†	7203.4	14638	µg/L	177.6	14638	ppb	177.6	1.21%
Mn 257.610†	641084.3	1838.8	µg/L	8.20	1838.8	ppb	8.20	0.45%
Mo 202.031†	3859.8	416.21	µg/L	3.064	416.21	ppb	3.064	0.74%
Na 589.592 Radial†	11658.2	2798.2	µg/L	28.91	2798.2	ppb	28.91	1.03%

Ni 231.604†	10271.6	517.33 µg/L	2.555	517.33 ppb	2.555	0.49%
P 214.914†	2144.3	3550.3 µg/L	20.98	3550.3 ppb	20.98	0.59%
Pb 220.353†	3643.1	852.58 µg/L	5.001	852.58 ppb	5.001	0.59%
S 181.975 Axial†	225.5	981.48 µg/L	19.261	981.48 ppb	19.261	1.96%
Sb 206.836†	587.8	515.46 µg/L	3.029	515.46 ppb	3.029	0.59%
Se 196.026†	760.0	880.78 µg/L	7.583	880.78 ppb	7.583	0.86%
SiO2†	79233.5	13984 µg/L	50.3	13984 ppb	50.3	0.36%
Si 251.611†	91661.8	6404.9 µg/L	24.22	6404.9 ppb	24.22	0.38%
Sn 189.927†	1204.5	556.77 µg/L	3.973	556.77 ppb	3.973	0.71%
Sr 421.552†	185500.8	798.82 µg/L	3.918	798.82 ppb	3.918	0.49%
Ti 334.940†	696037.1	1573.9 µg/L	6.31	1573.9 ppb	6.31	0.40%
Tl 190.801†	715.2	1005.1 µg/L	9.73	1005.1 ppb	9.73	0.97%
U 409.014†	-462.2	-62.509 µg/L	6.8600	-62.509 ppb	6.8600	10.97%
V 292.402†	67854.0	747.04 µg/L	2.798	747.04 ppb	2.798	0.37%
Zn 213.857†	41031.2	987.32 µg/L	3.046	987.32 ppb	3.046	0.31%

Sequence No.: 5
Sample ID: 232429001|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 303
Date Collected: 7/2/2009 10:47:14
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429001|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	178079.6	178079.6	102	%			10:47:46
1	Al 396.153Radial†	123252.4	120639.4	50760	µg/L	50760	ppb	10:47:46
1	Ca 317.933Radial†	63738.5	61425.8	11634	µg/L	11634	ppb	10:47:51
1	Fe 238.204 Radial†	168994.0	165204.4	118480	µg/L	118480	ppb	10:47:46
1	K 766.490 Radial†	11224.3	10200.7	5582.7	µg/L	5582.7	ppb	10:47:51
1	Mg 279.077 IEC†	4681.4	4532.6	9101.8	µg/L	9101.8	ppb	10:47:51
1	Na 589.592 Radial†	9393.6	9063.1	2175.3	µg/L	2175.3	ppb	10:47:51
1	Sr 421.552†	22340.2	21769.0	93.743	µg/L	93.743	ppb	10:47:51
1	Sc 361.383	2212443.2	2212443.2	100.94	%			10:48:26
1	Y 371.029	1449629.1	1449629.1	103.34	%			10:48:26
1	Ag 328.068†	-1521.6	-685.5	3.9949	µg/L	3.9949	ppb	10:48:32
1	As 188.979†	13.2	10.8	120.58	µg/L	120.58	ppb	10:48:52
1	B 249.677†	1430.8	1208.9	12.100	µg/L	12.100	ppb	10:48:32
1	Ba 233.527†	18659.7	18567.0	453.30	µg/L	453.30	ppb	10:48:32
1	Be 313.107†	16100.6	12292.1	19.531	µg/L	19.531	ppb	10:48:32
1	Cd 226.502†	319.7	457.0	1.5717	µg/L	1.5717	ppb	10:48:32
1	Co 228.616†	486.6	583.6	17.680	µg/L	17.680	ppb	10:48:52
1	Cr 267.716†	3384.3	3535.2	69.369	µg/L	69.369	ppb	10:48:32
1	Cu 324.752†	6301.3	1577.8	27.086	µg/L	27.086	ppb	10:48:32
1	Mn 257.610†	821875.3	814173.5	2335.3	µg/L	2335.3	ppb	10:48:26
1	Mo 202.031†	70.8	71.1	12.258	µg/L	12.258	ppb	10:48:52
1	Ni 231.604†	1467.5	1010.6	50.920	µg/L	50.920	ppb	10:48:52
1	P 214.914†	720.5	479.7	709.19	µg/L	709.19	ppb	10:48:52
1	Pb 220.353†	296.8	249.6	61.314	µg/L	61.314	ppb	10:48:52
1	S 181.975 Axial†	89.2	44.0	175.85	µg/L	175.85	ppb	10:48:52
1	Sb 206.836†	15.2	-6.2	9.2250	µg/L	9.2250	ppb	10:48:52
1	Se 196.026†	-52.9	-72.0	-26.091	µg/L	-26.091	ppb	10:48:52
1	SiO2†	165482.2	160770.4	28374	µg/L	28374	ppb	10:48:26
1	Si 251.611†	187369.6	185236.3	12967	µg/L	12967	ppb	10:48:26
1	Sn 189.927†	-15.4	-22.5	23.124	µg/L	23.124	ppb	10:48:52
1	Ti 334.940†	1891664.4	1872960.3	4236.4	µg/L	4236.4	ppb	10:48:26
1	Tl 190.801†	-61.0	-35.7	-30.070	µg/L	-30.070	ppb	10:48:52
1	U 409.014†	-1087.8	-1110.9	-128.08	µg/L	-128.08	ppb	10:48:26
1	V 292.402†	9179.5	9257.3	110.06	µg/L	110.06	ppb	10:48:32
1	Zn 213.857†	17267.3	16383.9	389.94	µg/L	389.94	ppb	10:48:32
2	Sc RADIAL	175945.5	175945.5	101	%			10:47:57
2	Al 396.153Radial†	124220.8	123058.6	51778	µg/L	51778	ppb	10:47:57
2	Ca 317.933Radial†	63684.3	62127.8	11767	µg/L	11767	ppb	10:48:02
2	Fe 238.204 Radial†	170080.9	168283.1	120680	µg/L	120680	ppb	10:47:57
2	K 766.490 Radial†	11206.6	10316.3	5645.9	µg/L	5645.9	ppb	10:48:02
2	Mg 279.077 IEC†	4707.8	4614.2	9265.6	µg/L	9265.6	ppb	10:48:02
2	Na 589.592 Radial†	9335.1	9116.6	2188.2	µg/L	2188.2	ppb	10:48:02
2	Sr 421.552†	22277.9	21972.2	94.618	µg/L	94.618	ppb	10:48:02
2	Sc 361.383	2217056.9	2217056.9	101.15	%			10:49:00
2	Y 371.029	1453042.1	1453042.1	103.59	%			10:49:00
2	Ag 328.068†	-1458.6	-620.1	4.7522	µg/L	4.7522	ppb	10:49:06
2	As 188.979†	17.8	15.4	129.58	µg/L	129.58	ppb	10:49:26
2	B 249.677†	1482.3	1256.9	13.364	µg/L	13.364	ppb	10:49:06
2	Ba 233.527†	18953.9	18819.4	459.46	µg/L	459.46	ppb	10:49:06
2	Be 313.107†	16299.1	12455.1	19.600	µg/L	19.600	ppb	10:49:06
2	Cd 226.502†	343.3	479.7	1.9378	µg/L	1.9378	ppb	10:49:06
2	Co 228.616†	482.1	578.2	17.450	µg/L	17.450	ppb	10:49:26
2	Cr 267.716†	3441.3	3584.5	70.336	µg/L	70.336	ppb	10:49:06
2	Cu 324.752†	6279.3	1543.1	27.137	µg/L	27.137	ppb	10:49:06
2	Mn 257.610†	821796.6	812401.3	2330.2	µg/L	2330.2	ppb	10:49:00
2	Mo 202.031†	69.2	69.4	12.158	µg/L	12.158	ppb	10:49:26
2	Ni 231.604†	1487.0	1026.8	51.740	µg/L	51.740	ppb	10:49:26
2	P 214.914†	719.5	477.2	702.60	µg/L	702.60	ppb	10:49:26
2	Pb 220.353†	307.7	259.8	63.756	µg/L	63.756	ppb	10:49:26

2	S 181.975 Axial†	90.8	45.5	181.89 µg/L	181.89 ppb	10:49:26
2	Sb 206.836†	16.2	-5.2	10.072 µg/L	10.072 ppb	10:49:26
2	Se 196.026†	-44.3	-63.4	-15.539 µg/L	-15.539 ppb	10:49:26
2	SiO2†	165779.8	160723.5	28366 µg/L	28366 ppb	10:49:00
2	Si 251.611†	187599.1	185076.8	12956 µg/L	12956 ppb	10:49:00
2	Sn 189.927†	-23.8	-30.7	20.107 µg/L	20.107 ppb	10:49:26
2	Ti 334.940†	1891510.2	1868907.8	4227.3 µg/L	4227.3 ppb	10:49:00
2	Tl 190.801†	-55.6	-30.2	-22.430 µg/L	-22.430 ppb	10:49:26
2	U 409.014†	-1080.3	-1101.2	-127.59 µg/L	-127.59 ppb	10:49:00
2	V 292.402†	9283.5	9341.2	111.16 µg/L	111.16 ppb	10:49:06
2	Zn 213.857†	17495.2	16573.6	394.40 µg/L	394.40 ppb	10:49:06
3	Sc RADIAL	176788.4	176788.4	102 %		10:48:08
3	Al 396.153Radial†	124487.8	122735.6	51642 µg/L	51642 ppb	10:48:08
3	Ca 317.933Radial†	64286.9	62420.7	11822 µg/L	11822 ppb	10:48:13
3	Fe 238.204 Radial†	170038.8	167439.6	120080 µg/L	120080 ppb	10:48:08
3	K 766.490 Radial†	11328.3	10383.2	5682.6 µg/L	5682.6 ppb	10:48:13
3	Mg 279.077 IEC†	4750.4	4633.9	9307.0 µg/L	9307.0 ppb	10:48:13
3	Na 589.592 Radial†	9475.2	9210.5	2210.7 µg/L	2210.7 ppb	10:48:13
3	Sr 421.552†	22561.4	22146.3	95.368 µg/L	95.368 ppb	10:48:13
3	Sc 361.383	2232897.5	2232897.5	101.87 %		10:49:34
3	Y 371.029	1463274.1	1463274.1	104.32 %		10:49:34
3	Ag 328.068†	-1450.8	-602.1	4.8589 µg/L	4.8589 ppb	10:49:40
3	As 188.979†	16.2	13.7	126.32 µg/L	126.32 ppb	10:50:00
3	B 249.677†	1470.5	1234.9	12.659 µg/L	12.659 ppb	10:49:40
3	Ba 233.527†	18936.8	18669.7	455.81 µg/L	455.81 ppb	10:49:40
3	Be 313.107†	16680.0	12714.7	19.760 µg/L	19.760 ppb	10:49:40
3	Cd 226.502†	310.5	445.1	1.1699 µg/L	1.1699 ppb	10:49:40
3	Co 228.616†	497.1	589.5	17.961 µg/L	17.961 ppb	10:50:00
3	Cr 267.716†	3431.5	3550.8	69.675 µg/L	69.675 ppb	10:49:40
3	Cu 324.752†	6368.1	1586.2	27.360 µg/L	27.360 ppb	10:49:40
3	Mn 257.610†	829708.4	814403.9	2336.0 µg/L	2336.0 ppb	10:49:34
3	Mo 202.031†	75.0	74.6	12.689 µg/L	12.689 ppb	10:50:00
3	Ni 231.604†	1468.8	998.4	50.308 µg/L	50.308 ppb	10:50:00
3	P 214.914†	717.1	469.8	690.38 µg/L	690.38 ppb	10:50:00
3	Pb 220.353†	293.4	243.6	59.963 µg/L	59.963 ppb	10:50:00
3	S 181.975 Axial†	96.3	50.2	202.86 µg/L	202.86 ppb	10:50:00
3	Sb 206.836†	14.0	-7.5	8.1024 µg/L	8.1024 ppb	10:50:00
3	Se 196.026†	-39.2	-58.0	-9.9384 µg/L	-9.9384 ppb	10:50:00
3	SiO2†	167132.2	160888.3	28395 µg/L	28395 ppb	10:49:34
3	Si 251.611†	189281.6	185412.7	12980 µg/L	12980 ppb	10:49:34
3	Sn 189.927†	-20.7	-27.5	21.383 µg/L	21.383 ppb	10:50:00
3	Ti 334.940†	1906277.5	1870137.6	4230.0 µg/L	4230.0 ppb	10:49:34
3	Tl 190.801†	-36.5	-11.1	4.3647 µg/L	4.3647 ppb	10:50:00
3	U 409.014†	-1044.7	-1058.7	-123.47 µg/L	-123.47 ppb	10:49:34
3	V 292.402†	9302.7	9294.9	110.61 µg/L	110.61 ppb	10:49:40
3	Zn 213.857†	17411.2	16368.5	389.45 µg/L	389.45 ppb	10:49:40

Mean Data: 232429001|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2220799.2	101.32	%	0.489				0.48%
Sc RADIAL	176937.8	102	%	0.6				0.61%
Y 371.029	1455315.1	103.75	%	0.506				0.49%
Ag 328.068†	-635.9	4.5353	µg/L	0.47103	4.5353	ppb	0.47103	10.39%
Al 396.153Radial†	122144.5	51393	µg/L	552.6	51393	ppb	552.6	1.08%
As 188.979†	13.3	125.49	µg/L	4.554	125.49	ppb	4.554	3.63%
B 249.677†	1233.6	12.708	µg/L	0.6333	12.708	ppb	0.6333	4.98%
Ba 233.527†	18685.3	456.19	µg/L	3.098	456.19	ppb	3.098	0.68%
Be 313.107†	12487.3	19.630	µg/L	0.1173	19.630	ppb	0.1173	0.60%
Ca 317.933Radial†	61991.5	11741	µg/L	96.8	11741	ppb	96.8	0.82%
Cd 226.502†	460.6	1.5598	µg/L	0.38408	1.5598	ppb	0.38408	24.62%
Co 228.616†	583.8	17.697	µg/L	0.2559	17.697	ppb	0.2559	1.45%
Cr 267.716†	3556.8	69.793	µg/L	0.4945	69.793	ppb	0.4945	0.71%
Cu 324.752†	1569.0	27.194	µg/L	0.1462	27.194	ppb	0.1462	0.54%
Fe 238.204 Radial†	166975.7	119750	µg/L	1140.9	119750	ppb	1140.9	0.95%
K 766.490 Radial†	10300.1	5637.1	µg/L	50.53	5637.1	ppb	50.53	0.90%
Mg 279.077 IEC†	4593.6	9224.8	µg/L	108.52	9224.8	ppb	108.52	1.18%
Mn 257.610†	813659.6	2333.8	µg/L	3.14	2333.8	ppb	3.14	0.13%
Mo 202.031†	71.7	12.368	µg/L	0.2821	12.368	ppb	0.2821	2.28%
Na 589.592 Radial†	9130.0	2191.4	µg/L	17.91	2191.4	ppb	17.91	0.82%

Ni 231.604†	1011.9	50.989	µg/L	0.7181	50.989	ppb	0.7181	1.41%
P 214.914†	475.5	700.72	µg/L	9.544	700.72	ppb	9.544	1.36%
Pb 220.353†	251.0	61.678	µg/L	1.9230	61.678	ppb	1.9230	3.12%
S 181.975 Axial†	46.6	186.86	µg/L	14.175	186.86	ppb	14.175	7.59%
Sb 206.836†	-6.3	9.1331	µg/L	0.98787	9.1331	ppb	0.98787	10.82%
Se 196.026†	-64.5	-17.189	µg/L	8.2019	-17.189	ppb	8.2019	47.72%
SiO2†	160794.1	28378	µg/L	15.0	28378	ppb	15.0	0.05%
Si 251.611†	185241.9	12968	µg/L	11.8	12968	ppb	11.8	0.09%
Sn 189.927†	-26.9	21.538	µg/L	1.5145	21.538	ppb	1.5145	7.03%
Sr 421.552†	21962.5	94.576	µg/L	0.8132	94.576	ppb	0.8132	0.86%
Ti 334.940†	1870668.6	4231.3	µg/L	4.70	4231.3	ppb	4.70	0.11%
Tl 190.801†	-25.6	-16.045	µg/L	18.0836	-16.045	ppb	18.0836	112.70%
U 409.014†	-1090.3	-126.38	µg/L	2.531	-126.38	ppb	2.531	2.00%
V 292.402†	9297.8	110.61	µg/L	0.546	110.61	ppb	0.546	0.49%
Zn 213.857†	16442.0	391.26	µg/L	2.725	391.26	ppb	2.725	0.70%

Sequence No.: 6
Sample ID: 1201870534|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 304
Date Collected: 7/2/2009 10:50:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870534|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176346.1	176346.1	101	%			10:50:42
1	Al 396.153Radial†	96308.8	95229.5	40068	µg/L	40068	ppb	10:50:42
1	Ca 317.933Radial†	48765.2	47259.1	8950.9	µg/L	8950.9	ppb	10:50:47
1	Fe 238.204 Radial†	147057.8	145176.5	104110	µg/L	104110	ppb	10:50:42
1	K 766.490 Radial†	9855.2	8957.2	4902.1	µg/L	4902.1	ppb	10:50:47
1	Mg 279.077 IEC†	4133.4	4036.6	8108.3	µg/L	8108.3	ppb	10:50:47
1	Na 589.592 Radial†	8227.3	8002.1	1920.7	µg/L	1920.7	ppb	10:50:47
1	Sr 421.552†	17715.8	17419.2	75.012	µg/L	75.012	ppb	10:50:47
1	Sc 361.383	2229601.0	2229601.0	101.72	%			10:51:22
1	Y 371.029	1458312.5	1458312.5	103.96	%			10:51:22
1	Ag 328.068†	-1328.4	-483.9	4.5194	µg/L	4.5194	ppb	10:51:28
1	As 188.979†	19.3	16.7	119.07	µg/L	119.07	ppb	10:51:48
1	B 249.677†	1319.8	1088.9	11.716	µg/L	11.716	ppb	10:51:28
1	Ba 233.527†	14115.0	13957.0	340.77	µg/L	340.77	ppb	10:51:28
1	Be 313.107†	15128.6	11213.8	18.544	µg/L	18.544	ppb	10:51:28
1	Cd 226.502†	257.2	393.1	1.1938	µg/L	1.1938	ppb	10:51:48
1	Co 228.616†	422.2	516.6	14.888	µg/L	14.888	ppb	10:51:48
1	Cr 267.716†	3691.1	3811.0	74.744	µg/L	74.744	ppb	10:51:28
1	Cu 324.752†	6236.3	1465.9	24.363	µg/L	24.363	ppb	10:51:28
1	Mn 257.610†	716228.0	704048.6	2019.4	µg/L	2019.4	ppb	10:51:22
1	Mo 202.031†	72.4	72.1	11.803	µg/L	11.803	ppb	10:51:48
1	Ni 231.604†	1521.6	1052.5	53.039	µg/L	53.039	ppb	10:51:48
1	P 214.914†	582.4	338.4	477.20	µg/L	477.20	ppb	10:51:48
1	Pb 220.353†	259.6	210.8	51.484	µg/L	51.484	ppb	10:51:48
1	S 181.975 Axial†	80.2	34.5	135.89	µg/L	135.89	ppb	10:51:48
1	Sb 206.836†	15.2	-6.3	8.8470	µg/L	8.8470	ppb	10:51:48
1	Se 196.026†	-34.3	-53.3	-11.945	µg/L	-11.945	ppb	10:51:48
1	SiO2†	145647.4	140009.7	24710	µg/L	24710	ppb	10:51:22
1	Si 251.611†	162100.5	158966.4	11111	µg/L	11111	ppb	10:51:28
1	Sn 189.927†	-21.6	-28.4	16.304	µg/L	16.304	ppb	10:51:48
1	Ti 334.940†	1851397.3	1818953.0	4114.4	µg/L	4114.4	ppb	10:51:22
1	Tl 190.801†	-52.9	-27.2	-17.539	µg/L	-17.539	ppb	10:51:48
1	U 409.014†	-906.6	-924.4	-107.53	µg/L	-107.53	ppb	10:51:22
1	V 292.402†	7627.2	7661.2	91.593	µg/L	91.593	ppb	10:51:28
1	Zn 213.857†	16173.6	15177.1	361.59	µg/L	361.59	ppb	10:51:28
2	Sc RADIAL	177233.8	177233.8	102	%			10:50:53
2	Al 396.153Radial†	96675.9	95113.9	40020	µg/L	40020	ppb	10:50:53
2	Ca 317.933Radial†	48725.1	46978.7	8897.8	µg/L	8897.8	ppb	10:50:58
2	Fe 238.204 Radial†	147526.8	144910.2	103920	µg/L	103920	ppb	10:50:53
2	K 766.490 Radial†	9861.4	8914.7	4878.8	µg/L	4878.8	ppb	10:50:58
2	Mg 279.077 IEC†	4149.0	4031.5	8098.2	µg/L	8098.2	ppb	10:50:58
2	Na 589.592 Radial†	8293.4	8026.4	1926.5	µg/L	1926.5	ppb	10:50:58
2	Sr 421.552†	17677.4	17293.9	74.472	µg/L	74.472	ppb	10:50:58
2	Sc 361.383	2217888.7	2217888.7	101.19	%			10:51:56
2	Y 371.029	1452247.1	1452247.1	103.53	%			10:51:56
2	Ag 328.068†	-1359.2	-521.3	4.1818	µg/L	4.1818	ppb	10:52:01
2	As 188.979†	15.7	13.2	113.46	µg/L	113.46	ppb	10:52:22
2	B 249.677†	1239.8	1016.7	8.8291	µg/L	8.8291	ppb	10:52:01
2	Ba 233.527†	14270.0	14183.4	346.29	µg/L	346.29	ppb	10:52:01
2	Be 313.107†	14423.5	10595.6	18.228	µg/L	18.228	ppb	10:52:01
2	Cd 226.502†	256.5	393.8	1.2203	µg/L	1.2203	ppb	10:52:22
2	Co 228.616†	422.8	519.4	14.983	µg/L	14.983	ppb	10:52:22
2	Cr 267.716†	3779.2	3917.2	76.824	µg/L	76.824	ppb	10:52:01
2	Cu 324.752†	6158.9	1421.7	24.025	µg/L	24.025	ppb	10:52:01
2	Mn 257.610†	714917.7	706471.9	2026.4	µg/L	2026.4	ppb	10:51:56
2	Mo 202.031†	71.0	71.1	11.683	µg/L	11.683	ppb	10:52:22
2	Ni 231.604†	1522.5	1061.3	53.485	µg/L	53.485	ppb	10:52:22
2	P 214.914†	573.9	333.0	468.20	µg/L	468.20	ppb	10:52:22
2	Pb 220.353†	268.0	220.4	53.743	µg/L	53.743	ppb	10:52:22

2	S 181.975 Axial†	78.1	32.9	128.83 µg/L	128.83	ppb	10:52:22
2	Sb 206.836†	10.0	-11.4	4.4631 µg/L	4.4631	ppb	10:52:22
2	Se 196.026†	-35.6	-54.8	-13.689 µg/L	-13.689	ppb	10:52:22
2	SiO2†	145756.4	140873.6	24862 µg/L	24862	ppb	10:51:56
2	Si 251.611†	162167.6	159874.3	11175 µg/L	11175	ppb	10:52:01
2	Sn 189.927†	-11.9	-18.9	20.428 µg/L	20.428	ppb	10:52:22
2	Ti 334.940†	1848667.3	1825866.4	4130.0 µg/L	4130.0	ppb	10:51:56
2	Tl 190.801†	-53.1	-27.7	-18.142 µg/L	-18.142	ppb	10:52:22
2	U 409.014†	-960.3	-982.2	-112.94 µg/L	-112.94	ppb	10:51:56
2	V 292.402†	7679.0	7752.1	92.554 µg/L	92.554	ppb	10:52:01
2	Zn 213.857†	16377.5	15462.5	368.55 µg/L	368.55	ppb	10:52:01
3	Sc RADIAL	176470.6	176470.6	101 %			10:51:04
3	Al 396.153Radial†	97219.9	96061.1	40418 µg/L	40418	ppb	10:51:04
3	Ca 317.933Radial†	49070.0	47525.9	9001.4 µg/L	9001.4	ppb	10:51:09
3	Fe 238.204 Radial†	148249.5	146249.5	104880 µg/L	104880	ppb	10:51:04
3	K 766.490 Radial†	9999.2	9092.4	4976.1 µg/L	4976.1	ppb	10:51:09
3	Mg 279.077 IEC†	4167.8	4067.7	8170.6 µg/L	8170.6	ppb	10:51:09
3	Na 589.592 Radial†	8309.0	8077.0	1938.7 µg/L	1938.7	ppb	10:51:09
3	Sr 421.552†	17838.6	17528.0	75.480 µg/L	75.480	ppb	10:51:09
3	Sc 361.383	2219602.4	2219602.4	101.27 %			10:52:29
3	Y 371.029	1452603.6	1452603.6	103.56 %			10:52:29
3	Ag 328.068†	-1405.4	-565.9	3.8655 µg/L	3.8655	ppb	10:52:35
3	As 188.979†	14.6	12.2	112.48 µg/L	112.48	ppb	10:52:55
3	B 249.677†	1336.3	1111.0	12.379 µg/L	12.379	ppb	10:52:35
3	Ba 233.527†	14330.7	14232.5	347.49 µg/L	347.49	ppb	10:52:35
3	Be 313.107†	14492.2	10652.4	18.256 µg/L	18.256	ppb	10:52:35
3	Cd 226.502†	260.7	397.8	1.2431 µg/L	1.2431	ppb	10:52:55
3	Co 228.616†	434.0	530.2	15.476 µg/L	15.476	ppb	10:52:55
3	Cr 267.716†	3743.3	3878.8	76.073 µg/L	76.073	ppb	10:52:35
3	Cu 324.752†	6194.7	1452.4	24.371 µg/L	24.371	ppb	10:52:35
3	Mn 257.610†	715215.5	706220.5	2025.7 µg/L	2025.7	ppb	10:52:29
3	Mo 202.031†	66.5	66.6	11.239 µg/L	11.239	ppb	10:52:55
3	Ni 231.604†	1531.4	1069.0	53.869 µg/L	53.869	ppb	10:52:55
3	P 214.914†	580.9	339.5	478.36 µg/L	478.36	ppb	10:52:55
3	Pb 220.353†	255.6	207.9	50.847 µg/L	50.847	ppb	10:52:55
3	S 181.975 Axial†	78.0	32.7	127.96 µg/L	127.96	ppb	10:52:55
3	Sb 206.836†	20.9	-0.6	13.884 µg/L	13.884	ppb	10:52:55
3	Se 196.026†	-34.6	-53.7	-12.051 µg/L	-12.051	ppb	10:52:55
3	SiO2†	145799.1	140804.5	24850 µg/L	24850	ppb	10:52:29
3	Si 251.611†	163017.5	160589.8	11225 µg/L	11225	ppb	10:52:35
3	Sn 189.927†	-10.4	-17.5	21.333 µg/L	21.333	ppb	10:52:55
3	Ti 334.940†	1849171.6	1824953.8	4127.9 µg/L	4127.9	ppb	10:52:29
3	Tl 190.801†	-53.4	-28.0	-18.517 µg/L	-18.517	ppb	10:52:55
3	U 409.014†	-927.0	-948.7	-109.97 µg/L	-109.97	ppb	10:52:29
3	V 292.402†	7696.1	7763.0	92.753 µg/L	92.753	ppb	10:52:35
3	Zn 213.857†	16413.5	15485.6	369.04 µg/L	369.04	ppb	10:52:35

Mean Data: 1201870534|880928|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2222364.0	101.39	%	0.289				0.28%
Sc RADIAL	176683.5	102	%	0.3				0.27%
Y 371.029	1454387.7	103.68	%	0.243				0.23%
Ag 328.068†	-523.7	4.1889	µg/L	0.32699	4.1889	ppb	0.32699	7.81%
Al 396.153Radial†	95468.2	40169	µg/L	217.4	40169	ppb	217.4	0.54%
As 188.979†	14.0	115.00	µg/L	3.558	115.00	ppb	3.558	3.09%
B 249.677†	1072.2	10.975	µg/L	1.8874	10.975	ppb	1.8874	17.20%
Ba 233.527†	14124.3	344.85	µg/L	3.587	344.85	ppb	3.587	1.04%
Be 313.107†	10820.6	18.343	µg/L	0.1751	18.343	ppb	0.1751	0.95%
Ca 317.933Radial†	47254.6	8950.0	µg/L	51.82	8950.0	ppb	51.82	0.58%
Cd 226.502†	394.9	1.2191	µg/L	0.02471	1.2191	ppb	0.02471	2.03%
Co 228.616†	522.0	15.116	µg/L	0.3155	15.116	ppb	0.3155	2.09%
Cr 267.716†	3869.0	75.881	µg/L	1.0537	75.881	ppb	1.0537	1.39%
Cu 324.752†	1446.7	24.253	µg/L	0.1974	24.253	ppb	0.1974	0.81%
Fe 238.204 Radial†	145445.4	104310	µg/L	508.5	104310	ppb	508.5	0.49%
K 766.490 Radial†	8988.1	4919.0	µg/L	50.79	4919.0	ppb	50.79	1.03%
Mg 279.077 IEC†	4045.3	8125.7	µg/L	39.26	8125.7	ppb	39.26	0.48%
Mn 257.610†	705580.3	2023.8	µg/L	3.82	2023.8	ppb	3.82	0.19%
Mo 202.031†	69.9	11.575	µg/L	0.2968	11.575	ppb	0.2968	2.56%
Na 589.592 Radial†	8035.2	1928.6	µg/L	9.18	1928.6	ppb	9.18	0.48%

Ni 231.604†	1060.9	53.464	µg/L	0.4150	53.464	ppb	0.4150	0.78%
P 214.914†	337.0	474.59	µg/L	5.560	474.59	ppb	5.560	1.17%
Pb 220.353†	213.0	52.025	µg/L	1.5216	52.025	ppb	1.5216	2.92%
S 181.975 Axial†	33.4	130.89	µg/L	4.349	130.89	ppb	4.349	3.32%
Sb 206.836†	-6.1	9.0648	µg/L	4.71441	9.0648	ppb	4.71441	52.01%
Se 196.026†	-53.9	-12.561	µg/L	0.9777	-12.561	ppb	0.9777	7.78%
SiO2†	140562.6	24807	µg/L	84.7	24807	ppb	84.7	0.34%
Si 251.611†	159810.2	11170	µg/L	57.3	11170	ppb	57.3	0.51%
Sn 189.927†	-21.6	19.355	µg/L	2.6808	19.355	ppb	2.6808	13.85%
Sr 421.552†	17413.7	74.988	µg/L	0.5044	74.988	ppb	0.5044	0.67%
Ti 334.940†	1823257.7	4124.1	µg/L	8.50	4124.1	ppb	8.50	0.21%
Tl 190.801†	-27.7	-18.066	µg/L	0.4937	-18.066	ppb	0.4937	2.73%
U 409.014†	-951.8	-110.15	µg/L	2.708	-110.15	ppb	2.708	2.46%
V 292.402†	7725.4	92.300	µg/L	0.6204	92.300	ppb	0.6204	0.67%
Zn 213.857†	15375.1	366.39	µg/L	4.167	366.39	ppb	4.167	1.14%

Sequence No.: 7
Sample ID: 1201870536|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 305
Date Collected: 7/2/2009 10:53:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870536|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176545.6	176545.6	101	%			10:53:37
1	Al 396.153Radial†	133062.8	131358.3	55252	µg/L	55252	ppb	10:53:37
1	Ca 317.933Radial†	74425.7	72503.8	13732	µg/L	13732	ppb	10:53:42
1	Fe 238.204 Radial†	166581.0	164260.6	117820	µg/L	117820	ppb	10:53:42
1	K 766.490 Radial†	19807.5	18758.4	10266	µg/L	10266	ppb	10:53:42
1	Mg 279.077 IEC†	7168.3	7024.2	14227	µg/L	14227	ppb	10:53:42
1	Na 589.592 Radial†	27860.8	27349.9	6564.6	µg/L	6564.6	ppb	10:53:42
1	Sr 421.552†	128846.8	126965.0	546.75	µg/L	546.75	ppb	10:53:37
1	Sc 361.383	2225117.3	2225117.3	101.52	%			10:54:17
1	Y 371.029	1463265.3	1463265.3	104.32	%			10:54:17
1	Ag 328.068†	55015.7	55015.4	497.96	µg/L	497.96	ppb	10:54:23
1	As 188.979†	318.7	311.7	598.97	µg/L	598.97	ppb	10:54:43
1	B 249.677†	13214.4	12808.4	485.89	µg/L	485.89	ppb	10:54:23
1	Ba 233.527†	35319.3	34872.3	852.15	µg/L	852.15	ppb	10:54:23
1	Be 313.107†	860515.1	843995.6	508.76	µg/L	508.76	ppb	10:54:17
1	Cd 226.502†	21596.9	21414.4	496.39	µg/L	496.39	ppb	10:54:23
1	Co 228.616†	11059.1	10995.4	489.71	µg/L	489.71	ppb	10:54:43
1	Cr 267.716†	28119.7	27881.7	546.76	µg/L	546.76	ppb	10:54:23
1	Cu 324.752†	75957.9	70157.8	512.12	µg/L	512.12	ppb	10:54:23
1	Mn 257.610†	1086067.2	1069779.1	3068.2	µg/L	3068.2	ppb	10:54:17
1	Mo 202.031†	4444.7	4379.2	472.77	µg/L	472.77	ppb	10:54:43
1	Ni 231.604†	11131.4	10521.7	529.83	µg/L	529.83	ppb	10:54:43
1	P 214.914†	960.7	712.2	1039.8	µg/L	1039.8	ppb	10:54:43
1	Pb 220.353†	2412.6	2332.1	547.91	µg/L	547.91	ppb	10:54:43
1	S 181.975 Axial†	1145.4	1083.9	4773.1	µg/L	4773.1	ppb	10:54:43
1	Sb 206.836†	521.7	492.7	445.56	µg/L	445.56	ppb	10:54:43
1	Se 196.026†	384.1	358.8	449.05	µg/L	449.05	ppb	10:54:43
1	SiO2†	168216.5	162530.1	28684	µg/L	28684	ppb	10:54:23
1	Si 251.611†	191195.8	187947.9	13097	µg/L	13097	ppb	10:54:23
1	Sn 189.927†	1078.0	1054.7	496.93	µg/L	496.93	ppb	10:54:43
1	Ti 334.940†	2334552.7	2298554.8	5199.1	µg/L	5199.1	ppb	10:54:17
1	Tl 190.801†	286.4	306.9	453.02	µg/L	453.02	ppb	10:54:43
1	U 409.014†	3264.3	3182.3	276.66	µg/L	276.66	ppb	10:54:23
1	V 292.402†	51680.7	51071.4	567.90	µg/L	567.90	ppb	10:54:23
1	Zn 213.857†	37515.4	36231.9	868.61	µg/L	868.61	ppb	10:54:23
2	Sc RADIAL	177295.6	177295.6	102	%			10:53:48
2	Al 396.153Radial†	134772.5	132481.9	55725	µg/L	55725	ppb	10:53:48
2	Ca 317.933Radial†	73532.4	71316.4	13507	µg/L	13507	ppb	10:53:53
2	Fe 238.204 Radial†	164748.1	161766.4	116030	µg/L	116030	ppb	10:53:53
2	K 766.490 Radial†	19766.0	18635.0	10199	µg/L	10199	ppb	10:53:53
2	Mg 279.077 IEC†	7109.8	6936.9	14051	µg/L	14051	ppb	10:53:53
2	Na 589.592 Radial†	27654.4	27031.0	6488.0	µg/L	6488.0	ppb	10:53:53
2	Sr 421.552†	130408.9	127961.2	551.04	µg/L	551.04	ppb	10:53:48
2	Sc 361.383	2237037.2	2237037.2	102.06	%			10:54:50
2	Y 371.029	1471310.7	1471310.7	104.89	%			10:54:50
2	Ag 328.068†	55256.5	54962.6	497.35	µg/L	497.35	ppb	10:54:56
2	As 188.979†	316.9	308.2	591.95	µg/L	591.95	ppb	10:55:17
2	B 249.677†	13293.9	12816.8	486.80	µg/L	486.80	ppb	10:54:56
2	Ba 233.527†	35386.4	34752.6	849.23	µg/L	849.23	ppb	10:54:56
2	Be 313.107†	857945.5	836961.2	504.52	µg/L	504.52	ppb	10:54:50
2	Cd 226.502†	21631.2	21334.7	494.64	µg/L	494.64	ppb	10:54:56
2	Co 228.616†	11040.7	10919.3	486.32	µg/L	486.32	ppb	10:55:17
2	Cr 267.716†	28172.8	27786.2	544.88	µg/L	544.88	ppb	10:54:56
2	Cu 324.752†	76390.0	70182.4	512.06	µg/L	512.06	ppb	10:54:56
2	Mn 257.610†	1083600.7	1061661.9	3044.9	µg/L	3044.9	ppb	10:54:50
2	Mo 202.031†	4418.9	4330.6	467.50	µg/L	467.50	ppb	10:55:17
2	Ni 231.604†	11130.7	10462.6	526.85	µg/L	526.85	ppb	10:55:17
2	P 214.914†	952.6	699.2	1019.4	µg/L	1019.4	ppb	10:55:17
2	Pb 220.353†	2416.5	2323.3	545.90	µg/L	545.90	ppb	10:55:17

2	S 181.975 Axial†	1136.6	1069.3	4708.7 µg/L	4708.7 ppb	10:55:17
2	Sb 206.836†	525.1	493.3	445.98 µg/L	445.98 ppb	10:55:17
2	Se 196.026†	399.0	371.4	462.16 µg/L	462.16 ppb	10:55:17
2	SiO2†	168029.4	161463.8	28496 µg/L	28496 ppb	10:54:56
2	Si 251.611†	190928.3	186682.3	13009 µg/L	13009 ppb	10:54:56
2	Sn 189.927†	1077.3	1048.4	493.66 µg/L	493.66 ppb	10:55:17
2	Ti 334.940†	2328603.6	2280472.3	5158.2 µg/L	5158.2 ppb	10:54:50
2	Tl 190.801†	288.4	307.3	453.38 µg/L	453.38 ppb	10:55:17
2	U 409.014†	3197.5	3099.7	269.24 µg/L	269.24 ppb	10:54:56
2	V 292.402†	51864.1	50979.9	566.71 µg/L	566.71 ppb	10:54:56
2	Zn 213.857†	37703.1	36219.0	868.44 µg/L	868.44 ppb	10:54:56
3	Sc RADIAL	176907.9	176907.9	102 %		10:53:59
3	Al 396.153Radial†	134511.7	132515.2	55739 µg/L	55739 ppb	10:53:59
3	Ca 317.933Radial†	74301.6	72231.4	13681 µg/L	13681 ppb	10:54:04
3	Fe 238.204 Radial†	166281.9	163630.0	117360 µg/L	117360 ppb	10:54:04
3	K 766.490 Radial†	19912.0	18821.2	10300 µg/L	10300 ppb	10:54:04
3	Mg 279.077 IEC†	7148.0	6989.7	14157 µg/L	14157 ppb	10:54:04
3	Na 589.592 Radial†	27874.6	27307.2	6554.3 µg/L	6554.3 ppb	10:54:04
3	Sr 421.552†	130007.8	127847.2	550.54 µg/L	550.54 ppb	10:53:59
3	Sc 361.383	2223985.0	2223985.0	101.47 %		10:55:24
3	Y 371.029	1462921.1	1462921.1	104.29 %		10:55:24
3	Ag 328.068†	55361.8	55384.1	501.19 µg/L	501.19 ppb	10:55:30
3	As 188.979†	312.5	305.7	589.03 µg/L	589.03 ppb	10:55:50
3	B 249.677†	13363.3	12961.7	492.29 µg/L	492.29 ppb	10:55:30
3	Ba 233.527†	35455.2	35023.9	855.86 µg/L	855.86 ppb	10:55:30
3	Be 313.107†	856523.2	840492.9	506.65 µg/L	506.65 ppb	10:55:24
3	Cd 226.502†	21682.9	21510.0	498.68 µg/L	498.68 ppb	10:55:30
3	Co 228.616†	11047.5	10989.5	489.48 µg/L	489.48 ppb	10:55:50
3	Cr 267.716†	28272.2	28046.2	549.98 µg/L	549.98 ppb	10:55:30
3	Cu 324.752†	76426.2	70657.4	515.59 µg/L	515.59 ppb	10:55:30
3	Mn 257.610†	1081449.3	1065772.7	3056.7 µg/L	3056.7 ppb	10:55:24
3	Mo 202.031†	4440.6	4377.4	472.56 µg/L	472.56 ppb	10:55:50
3	Ni 231.604†	11117.3	10513.4	529.41 µg/L	529.41 ppb	10:55:50
3	P 214.914†	955.9	707.9	1032.5 µg/L	1032.5 ppb	10:55:50
3	Pb 220.353†	2417.8	2338.4	549.42 µg/L	549.42 ppb	10:55:50
3	S 181.975 Axial†	1144.8	1083.9	4773.2 µg/L	4773.2 ppb	10:55:50
3	Sb 206.836†	524.4	495.6	448.01 µg/L	448.01 ppb	10:55:50
3	Se 196.026†	390.5	365.3	456.03 µg/L	456.03 ppb	10:55:50
3	SiO2†	167750.9	162155.5	28618 µg/L	28618 ppb	10:55:30
3	Si 251.611†	190664.0	187519.7	13067 µg/L	13067 ppb	10:55:30
3	Sn 189.927†	1079.3	1056.6	497.62 µg/L	497.62 ppb	10:55:50
3	Ti 334.940†	2324400.6	2289720.2	5179.1 µg/L	5179.1 ppb	10:55:24
3	Tl 190.801†	276.7	297.4	439.59 µg/L	439.59 ppb	10:55:50
3	U 409.014†	3289.9	3209.2	279.30 µg/L	279.30 ppb	10:55:30
3	V 292.402†	51894.8	51308.4	570.44 µg/L	570.44 ppb	10:55:30
3	Zn 213.857†	37731.7	36463.9	874.28 µg/L	874.28 ppb	10:55:30

Mean Data: 1201870536|880928|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2228713.2	101.68	%	0.330				0.32%
Sc RADIAL	176916.4	102	%	0.2				0.21%
Y 371.029	1465832.4	104.50	%	0.338				0.32%
Ag 328.068†	55120.7	498.84	µg/L	2.066	498.84	ppb	2.066	0.41%
Al 396.153Radial†	132118.5	55572	µg/L	277.1	55572	ppb	277.1	0.50%
As 188.979†	308.5	593.32	µg/L	5.111	593.32	ppb	5.111	0.86%
B 249.677†	12862.3	488.33	µg/L	3.464	488.33	ppb	3.464	0.71%
Ba 233.527†	34883.0	852.41	µg/L	3.322	852.41	ppb	3.322	0.39%
Be 313.107†	840483.2	506.64	µg/L	2.117	506.64	ppb	2.117	0.42%
Ca 317.933Radial†	72017.2	13640	µg/L	117.8	13640	ppb	117.8	0.86%
Cd 226.502†	21419.7	496.57	µg/L	2.025	496.57	ppb	2.025	0.41%
Co 228.616†	10968.0	488.50	µg/L	1.892	488.50	ppb	1.892	0.39%
Cr 267.716†	27904.7	547.21	µg/L	2.577	547.21	ppb	2.577	0.47%
Cu 324.752†	70332.5	513.26	µg/L	2.025	513.26	ppb	2.025	0.39%
Fe 238.204 Radial†	163219.0	117070	µg/L	930.1	117070	ppb	930.1	0.79%
K 766.490 Radial†	18738.2	10255	µg/L	51.8	10255	ppb	51.8	0.51%
Mg 279.077 IEC†	6983.6	14145	µg/L	88.7	14145	ppb	88.7	0.63%
Mn 257.610†	1065737.9	3056.6	µg/L	11.64	3056.6	ppb	11.64	0.38%
Mo 202.031†	4362.4	470.95	µg/L	2.983	470.95	ppb	2.983	0.63%
Na 589.592 Radial†	27229.4	6535.7	µg/L	41.55	6535.7	ppb	41.55	0.64%

Ni 231.604†	10499.2	528.70	µg/L	1.611	528.70	ppb	1.611	0.30%
P 214.914†	706.4	1030.5	µg/L	10.34	1030.5	ppb	10.34	1.00%
Pb 220.353†	2331.3	547.74	µg/L	1.764	547.74	ppb	1.764	0.32%
S 181.975 Axial†	1079.0	4751.6	µg/L	37.21	4751.6	ppb	37.21	0.78%
Sb 206.836†	493.8	446.52	µg/L	1.308	446.52	ppb	1.308	0.29%
Se 196.026†	365.2	455.75	µg/L	6.563	455.75	ppb	6.563	1.44%
SiO2†	162049.8	28600	µg/L	95.5	28600	ppb	95.5	0.33%
Si 251.611†	187383.3	13058	µg/L	44.7	13058	ppb	44.7	0.34%
Sn 189.927†	1053.2	496.07	µg/L	2.116	496.07	ppb	2.116	0.43%
Sr 421.552†	127591.1	549.44	µg/L	2.348	549.44	ppb	2.348	0.43%
Ti 334.940†	2289582.4	5178.8	µg/L	20.45	5178.8	ppb	20.45	0.39%
Tl 190.801†	303.9	448.66	µg/L	7.863	448.66	ppb	7.863	1.75%
U 409.014†	3163.7	275.07	µg/L	5.215	275.07	ppb	5.215	1.90%
V 292.402†	51119.9	568.35	µg/L	1.904	568.35	ppb	1.904	0.34%
Zn 213.857†	36305.0	870.44	µg/L	3.323	870.44	ppb	3.323	0.38%

Sequence No.: 8
Sample ID: 1201870537|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 306
Date Collected: 7/2/2009 10:56:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870537|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176502.9	176502.9	101	%			10:56:32
1	Al 396.153Radial†	115803.8	114370.1	48104	µg/L	48104	ppb	10:56:32
1	Ca 317.933Radial†	67591.0	65781.4	12459	µg/L	12459	ppb	10:56:38
1	Fe 238.204 Radial†	160065.7	157875.3	113240	µg/L	113240	ppb	10:56:38
1	K 766.490 Radial†	19397.8	18359.1	10048	µg/L	10048	ppb	10:56:38
1	Mg 279.077 IEC†	6732.9	6596.6	13358	µg/L	13358	ppb	10:56:38
1	Na 589.592 Radial†	27681.7	27180.0	6523.8	µg/L	6523.8	ppb	10:56:38
1	Sr 421.552†	127201.0	125372.7	539.89	µg/L	539.89	ppb	10:56:32
1	Sc 361.383	2215182.4	2215182.4	101.06	%			10:57:12
1	Y 371.029	1459679.2	1459679.2	104.06	%			10:57:12
1	Ag 328.068†	55203.8	55444.6	501.39	µg/L	501.39	ppb	10:57:18
1	As 188.979†	314.8	309.2	592.69	µg/L	592.69	ppb	10:57:39
1	B 249.677†	13307.4	12958.7	493.47	µg/L	493.47	ppb	10:57:18
1	Ba 233.527†	33155.3	32887.1	803.71	µg/L	803.71	ppb	10:57:18
1	Be 313.107†	864530.8	851770.7	514.20	µg/L	514.20	ppb	10:57:12
1	Cd 226.502†	21728.4	21640.0	502.06	µg/L	502.06	ppb	10:57:18
1	Co 228.616†	11198.0	11181.6	497.57	µg/L	497.57	ppb	10:57:39
1	Cr 267.716†	28056.0	27942.9	547.96	µg/L	547.96	ppb	10:57:18
1	Cu 324.752†	78007.7	72521.5	528.23	µg/L	528.23	ppb	10:57:18
1	Mn 257.610†	1100625.1	1088981.9	3123.2	µg/L	3123.2	ppb	10:57:12
1	Mo 202.031†	4584.2	4536.9	489.45	µg/L	489.45	ppb	10:57:39
1	Ni 231.604†	11299.0	10736.8	540.66	µg/L	540.66	ppb	10:57:39
1	P 214.914†	968.0	723.7	1059.9	µg/L	1059.9	ppb	10:57:39
1	Pb 220.353†	2435.3	2365.2	555.09	µg/L	555.09	ppb	10:57:39
1	S 181.975 Axial†	1177.2	1120.5	4935.4	µg/L	4935.4	ppb	10:57:39
1	Sb 206.836†	541.5	514.6	465.87	µg/L	465.87	ppb	10:57:39
1	Se 196.026†	397.7	374.0	463.85	µg/L	463.85	ppb	10:57:39
1	SiO2†	146849.6	142131.2	25084	µg/L	25084	ppb	10:57:18
1	Si 251.611†	166596.5	164452.3	11420	µg/L	11420	ppb	10:57:18
1	Sn 189.927†	1117.2	1098.2	514.56	µg/L	514.56	ppb	10:57:39
1	Ti 334.940†	2461267.5	2434249.4	5506.1	µg/L	5506.1	ppb	10:57:12
1	Tl 190.801†	284.6	306.4	454.43	µg/L	454.43	ppb	10:57:39
1	U 409.014†	3108.1	3042.2	264.44	µg/L	264.44	ppb	10:57:18
1	V 292.402†	51583.6	51203.7	569.06	µg/L	569.06	ppb	10:57:18
1	Zn 213.857†	38074.2	36950.7	886.32	µg/L	886.32	ppb	10:57:18
2	Sc RADIAL	174936.4	174936.4	101	%			10:56:43
2	Al 396.153Radial†	115698.0	115287.5	48490	µg/L	48490	ppb	10:56:43
2	Ca 317.933Radial†	68559.7	67342.1	12755	µg/L	12755	ppb	10:56:49
2	Fe 238.204 Radial†	162347.6	161559.2	115880	µg/L	115880	ppb	10:56:49
2	K 766.490 Radial†	19474.9	18607.1	10183	µg/L	10183	ppb	10:56:49
2	Mg 279.077 IEC†	6813.7	6736.3	13640	µg/L	13640	ppb	10:56:49
2	Na 589.592 Radial†	27875.2	27616.9	6628.7	µg/L	6628.7	ppb	10:56:49
2	Sr 421.552†	126769.5	126066.6	542.88	µg/L	542.88	ppb	10:56:43
2	Sc 361.383	2200668.8	2200668.8	100.40	%			10:57:46
2	Y 371.029	1452024.9	1452024.9	103.51	%			10:57:46
2	Ag 328.068†	55891.5	56489.7	510.89	µg/L	510.89	ppb	10:57:52
2	As 188.979†	320.2	316.7	606.66	µg/L	606.66	ppb	10:58:12
2	B 249.677†	13405.8	13143.5	500.18	µg/L	500.18	ppb	10:57:52
2	Ba 233.527†	33638.6	33584.8	820.76	µg/L	820.76	ppb	10:57:52
2	Be 313.107†	866835.1	859707.4	519.00	µg/L	519.00	ppb	10:57:46
2	Cd 226.502†	21970.0	22022.4	510.88	µg/L	510.88	ppb	10:57:52
2	Co 228.616†	11174.5	11231.4	499.71	µg/L	499.71	ppb	10:58:12
2	Cr 267.716†	28365.3	28434.1	557.59	µg/L	557.59	ppb	10:57:52
2	Cu 324.752†	78872.8	73892.3	538.28	µg/L	538.28	ppb	10:57:52
2	Mn 257.610†	1103781.3	1099307.8	3152.8	µg/L	3152.8	ppb	10:57:46
2	Mo 202.031†	4544.9	4527.7	488.57	µg/L	488.57	ppb	10:58:12
2	Ni 231.604†	11226.8	10738.6	540.75	µg/L	540.75	ppb	10:58:12
2	P 214.914†	953.2	715.2	1040.7	µg/L	1040.7	ppb	10:58:12
2	Pb 220.353†	2405.0	2350.9	551.71	µg/L	551.71	ppb	10:58:12

2	S 181.975 Axial†	1170.7	1121.7	4940.5 µg/L	4940.5 ppb	10:58:12
2	Sb 206.836†	543.2	519.7	470.55 µg/L	470.55 ppb	10:58:12
2	Se 196.026†	391.9	370.8	461.53 µg/L	461.53 ppb	10:58:12
2	SiO2†	147779.7	144015.9	25417 µg/L	25417 ppb	10:57:52
2	Si 251.611†	167692.7	166631.3	11573 µg/L	11573 ppb	10:57:52
2	Sn 189.927†	1121.6	1110.0	520.46 µg/L	520.46 ppb	10:58:12
2	Ti 334.940†	2468999.1	2458011.5	5559.8 µg/L	5559.8 ppb	10:57:46
2	Tl 190.801†	286.7	310.3	460.25 µg/L	460.25 ppb	10:58:12
2	U 409.014†	3260.6	3214.4	280.15 µg/L	280.15 ppb	10:57:52
2	V 292.402†	52256.8	52210.8	580.23 µg/L	580.23 ppb	10:57:52
2	Zn 213.857†	38574.0	37696.9	904.26 µg/L	904.26 ppb	10:57:52
3	Sc RADIAL	177443.7	177443.7	102 %		10:56:54
3	Al 396.153Radial†	116592.2	114538.0	48175 µg/L	48175 ppb	10:56:54
3	Ca 317.933Radial†	68352.5	66175.0	12534 µg/L	12534 ppb	10:57:00
3	Fe 238.204 Radial†	161884.0	158822.0	113920 µg/L	113920 ppb	10:57:00
3	K 766.490 Radial†	19453.5	18312.3	10022 µg/L	10022 ppb	10:57:00
3	Mg 279.077 IEC†	6832.2	6658.8	13484 µg/L	13484 ppb	10:57:00
3	Na 589.592 Radial†	27924.8	27273.6	6546.3 µg/L	6546.3 ppb	10:57:00
3	Sr 421.552†	127900.7	125394.1	539.98 µg/L	539.98 ppb	10:56:54
3	Sc 361.383	2215749.5	2215749.5	101.09 %		10:58:19
3	Y 371.029	1461493.4	1461493.4	104.19 %		10:58:19
3	Ag 328.068†	55083.6	55311.7	500.26 µg/L	500.26 ppb	10:58:25
3	As 188.979†	326.3	320.5	611.08 µg/L	611.08 ppb	10:58:46
3	B 249.677†	13249.9	12898.5	490.79 µg/L	490.79 ppb	10:58:25
3	Ba 233.527†	33024.9	32749.7	800.35 µg/L	800.35 ppb	10:58:25
3	Be 313.107†	863353.6	850387.2	513.37 µg/L	513.37 ppb	10:58:19
3	Cd 226.502†	21603.8	21511.2	498.97 µg/L	498.97 ppb	10:58:25
3	Co 228.616†	11118.0	11099.7	493.84 µg/L	493.84 ppb	10:58:46
3	Cr 267.716†	27949.1	27830.2	545.74 µg/L	545.74 ppb	10:58:25
3	Cu 324.752†	77766.8	72263.6	526.49 µg/L	526.49 ppb	10:58:25
3	Mn 257.610†	1099330.9	1087422.9	3118.8 µg/L	3118.8 ppb	10:58:19
3	Mo 202.031†	4538.7	4490.7	484.54 µg/L	484.54 ppb	10:58:46
3	Ni 231.604†	11223.8	10659.5	536.77 µg/L	536.77 ppb	10:58:46
3	P 214.914†	959.8	715.3	1044.8 µg/L	1044.8 ppb	10:58:46
3	Pb 220.353†	2404.3	2333.9	547.77 µg/L	547.77 ppb	10:58:46
3	S 181.975 Axial†	1166.7	1109.8	4888.1 µg/L	4888.1 ppb	10:58:46
3	Sb 206.836†	542.7	515.6	466.80 µg/L	466.80 ppb	10:58:46
3	Se 196.026†	399.3	375.5	465.79 µg/L	465.79 ppb	10:58:46
3	SiO2†	146419.2	141668.3	25003 µg/L	25003 ppb	10:58:25
3	Si 251.611†	166170.4	163988.6	11388 µg/L	11388 ppb	10:58:25
3	Sn 189.927†	1102.4	1083.3	508.21 µg/L	508.21 ppb	10:58:46
3	Ti 334.940†	2459393.0	2431771.8	5500.5 µg/L	5500.5 ppb	10:58:19
3	Tl 190.801†	294.1	315.6	467.43 µg/L	467.43 ppb	10:58:46
3	U 409.014†	3190.5	3122.9	271.92 µg/L	271.92 ppb	10:58:25
3	V 292.402†	51397.9	51007.0	566.95 µg/L	566.95 ppb	10:58:25
3	Zn 213.857†	37940.0	36808.2	882.83 µg/L	882.83 ppb	10:58:25

Mean Data: 1201870537|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2210533.6	100.85	%	0.390				0.39%
Sc RADIAL	176294.3	101	%	0.7				0.72%
Y 371.029	1457732.5	103.92	%	0.358				0.34%
Ag 328.068†	55748.7	504.18	µg/L	5.836	504.18	ppb	5.836	1.16%
Al 396.153Radial†	114731.8	48256	µg/L	205.5	48256	ppb	205.5	0.43%
As 188.979†	315.5	603.47	µg/L	9.599	603.47	ppb	9.599	1.59%
B 249.677†	13000.2	494.81	µg/L	4.837	494.81	ppb	4.837	0.98%
Ba 233.527†	33073.9	808.27	µg/L	10.942	808.27	ppb	10.942	1.35%
Be 313.107†	853955.1	515.52	µg/L	3.037	515.52	ppb	3.037	0.59%
Ca 317.933Radial†	66432.9	12582	µg/L	153.7	12582	ppb	153.7	1.22%
Cd 226.502†	21724.5	503.97	µg/L	6.179	503.97	ppb	6.179	1.23%
Co 228.616†	11170.9	497.04	µg/L	2.968	497.04	ppb	2.968	0.60%
Cr 267.716†	28069.1	550.43	µg/L	6.298	550.43	ppb	6.298	1.14%
Cu 324.752†	72892.5	531.00	µg/L	6.363	531.00	ppb	6.363	1.20%
Fe 238.204 Radial†	159418.8	114340	µg/L	1372.0	114340	ppb	1372.0	1.20%
K 766.490 Radial†	18426.2	10084	µg/L	86.7	10084	ppb	86.7	0.86%
Mg 279.077 IEC†	6663.9	13494	µg/L	141.4	13494	ppb	141.4	1.05%
Mn 257.610†	1091904.2	3131.6	µg/L	18.53	3131.6	ppb	18.53	0.59%
Mo 202.031†	4518.4	487.52	µg/L	2.617	487.52	ppb	2.617	0.54%
Na 589.592 Radial†	27356.8	6566.2	µg/L	55.21	6566.2	ppb	55.21	0.84%

Ni 231.604†	10711.6	539.39	µg/L	2.271	539.39	ppb	2.271	0.42%
P 214.914†	718.1	1048.4	µg/L	10.11	1048.4	ppb	10.11	0.96%
Pb 220.353†	2350.0	551.52	µg/L	3.663	551.52	ppb	3.663	0.66%
S 181.975 Axial†	1117.3	4921.3	µg/L	28.88	4921.3	ppb	28.88	0.59%
Sb 206.836†	516.6	467.74	µg/L	2.474	467.74	ppb	2.474	0.53%
Se 196.026†	373.4	463.72	µg/L	2.134	463.72	ppb	2.134	0.46%
SiO2†	142605.1	25168	µg/L	219.5	25168	ppb	219.5	0.87%
Si 251.611†	165024.0	11460	µg/L	98.5	11460	ppb	98.5	0.86%
Sn 189.927†	1097.2	514.41	µg/L	6.130	514.41	ppb	6.130	1.19%
Sr 421.552†	125611.1	540.92	µg/L	1.699	540.92	ppb	1.699	0.31%
Ti 334.940†	2441344.2	5522.2	µg/L	32.77	5522.2	ppb	32.77	0.59%
Tl 190.801†	310.8	460.70	µg/L	6.515	460.70	ppb	6.515	1.41%
U 409.014†	3126.5	272.17	µg/L	7.859	272.17	ppb	7.859	2.89%
V 292.402†	51473.8	572.08	µg/L	7.134	572.08	ppb	7.134	1.25%
Zn 213.857†	37151.9	891.14	µg/L	11.495	891.14	ppb	11.495	1.29%

Sequence No.: 9
Sample ID: 1201870535|880928|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 307
Date Collected: 7/2/2009 10:58:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870535|880928|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176500.8	176500.8	101	%			10:59:27
1	Al 396.153Radial†	24739.4	24567.0	10337	µg/L	10337	ppb	10:59:27
1	Ca 317.933Radial†	13596.2	12534.6	2374.1	µg/L	2374.1	ppb	10:59:48
1	Fe 238.204 Radial†	33918.6	33475.5	24007	µg/L	24007	ppb	10:59:48
1	K 766.490 Radial†	2881.7	2071.7	1133.8	µg/L	1133.8	ppb	10:59:27
1	Mg 279.077 IEC†	985.2	928.4	1864.7	µg/L	1864.7	ppb	10:59:48
1	Na 589.592 Radial†	1923.9	1778.8	426.96	µg/L	426.96	ppb	10:59:48
1	Sr 421.552†	4546.1	4416.4	19.018	µg/L	19.018	ppb	10:59:48
1	Sc 361.383	2212351.6	2212351.6	100.93	%			11:00:51
1	Y 371.029	1419047.3	1419047.3	101.16	%			11:00:51
1	Ag 328.068†	-888.8	-58.6	1.5137	µg/L	1.5137	ppb	11:00:57
1	As 188.979†	1.7	-0.6	20.054	µg/L	20.054	ppb	11:01:17
1	B 249.677†	537.8	324.3	5.6905	µg/L	5.6905	ppb	11:00:57
1	Ba 233.527†	3686.8	3733.5	91.150	µg/L	91.150	ppb	11:00:57
1	Be 313.107†	6423.0	2704.8	4.0714	µg/L	4.0714	ppb	11:00:57
1	Cd 226.502†	-15.1	125.3	1.0753	µg/L	1.0753	ppb	11:01:17
1	Co 228.616†	34.2	135.4	4.3698	µg/L	4.3698	ppb	11:01:17
1	Cr 267.716†	612.0	788.6	15.471	µg/L	15.471	ppb	11:00:57
1	Cu 324.752†	4968.9	258.0	5.0515	µg/L	5.0515	ppb	11:00:57
1	Mn 257.610†	166261.0	164665.0	472.31	µg/L	472.31	ppb	11:00:51
1	Mo 202.031†	17.7	18.5	2.9173	µg/L	2.9173	ppb	11:01:17
1	Ni 231.604†	672.3	222.7	11.223	µg/L	11.223	ppb	11:01:17
1	P 214.914†	319.6	82.5	118.21	µg/L	118.21	ppb	11:01:17
1	Pb 220.353†	100.6	55.3	13.544	µg/L	13.544	ppb	11:01:17
1	S 181.975 Axial†	49.4	4.7	16.793	µg/L	16.793	ppb	11:01:17
1	Sb 206.836†	25.6	4.1	6.5028	µg/L	6.5028	ppb	11:01:17
1	Se 196.026†	3.2	-16.4	-7.2792	µg/L	-7.2792	ppb	11:01:17
1	SiO2†	35304.4	31805.0	5613.2	µg/L	5613.2	ppb	11:00:57
1	Si 251.611†	37634.2	36895.4	2582.5	µg/L	2582.5	ppb	11:00:57
1	Sn 189.927†	-0.3	-7.5	3.3898	µg/L	3.3898	ppb	11:01:17
1	Ti 334.940†	382452.3	377803.3	854.55	µg/L	854.55	ppb	11:00:51
1	Tl 190.801†	-30.9	-5.9	-4.2636	µg/L	-4.2636	ppb	11:01:17
1	U 409.014†	-430.5	-459.7	-48.073	µg/L	-48.073	ppb	11:00:57
1	V 292.402†	1679.4	1827.0	21.740	µg/L	21.740	ppb	11:00:57
1	Zn 213.857†	4068.3	3307.9	78.718	µg/L	78.718	ppb	11:00:57
2	Sc RADIAL	176922.6	176922.6	102	%			10:59:53
2	Al 396.153Radial†	24580.5	24352.5	10246	µg/L	10246	ppb	10:59:53
2	Ca 317.933Radial†	13602.7	12509.0	2369.2	µg/L	2369.2	ppb	11:00:14
2	Fe 238.204 Radial†	34015.1	33490.7	24018	µg/L	24018	ppb	11:00:14
2	K 766.490 Radial†	2817.8	2002.1	1095.7	µg/L	1095.7	ppb	10:59:53
2	Mg 279.077 IEC†	991.8	932.6	1873.3	µg/L	1873.3	ppb	11:00:14
2	Na 589.592 Radial†	1938.6	1788.8	429.35	µg/L	429.35	ppb	11:00:14
2	Sr 421.552†	4534.7	4394.5	18.924	µg/L	18.924	ppb	11:00:14
2	Sc 361.383	2218883.2	2218883.2	101.23	%			11:01:24
2	Y 371.029	1423552.4	1423552.4	101.49	%			11:01:24
2	Ag 328.068†	-827.8	4.3	2.0733	µg/L	2.0733	ppb	11:01:30
2	As 188.979†	0.5	-1.7	18.209	µg/L	18.209	ppb	11:01:50
2	B 249.677†	520.5	305.6	4.9238	µg/L	4.9238	ppb	11:01:30
2	Ba 233.527†	3742.6	3777.9	92.234	µg/L	92.234	ppb	11:01:30
2	Be 313.107†	7059.6	3315.0	4.4281	µg/L	4.4281	ppb	11:01:30
2	Cd 226.502†	-21.4	119.1	0.9375	µg/L	0.9375	ppb	11:01:50
2	Co 228.616†	43.2	144.2	4.7711	µg/L	4.7711	ppb	11:01:50
2	Cr 267.716†	595.4	770.5	15.116	µg/L	15.116	ppb	11:01:30
2	Cu 324.752†	5051.4	325.0	5.5270	µg/L	5.5270	ppb	11:01:30
2	Mn 257.610†	166809.9	164722.3	472.47	µg/L	472.47	ppb	11:01:24
2	Mo 202.031†	22.7	23.4	3.4462	µg/L	3.4462	ppb	11:01:50
2	Ni 231.604†	674.3	222.7	11.222	µg/L	11.222	ppb	11:01:50
2	P 214.914†	326.1	88.0	127.74	µg/L	127.74	ppb	11:01:50
2	Pb 220.353†	101.1	55.4	13.567	µg/L	13.567	ppb	11:01:50

2	S 181.975 Axial†	50.5	5.5	20.687 µg/L	20.687 ppb	11:01:50
2	Sb 206.836†	21.0	-0.5	2.5041 µg/L	2.5041 ppb	11:01:50
2	Se 196.026†	2.1	-17.5	-8.4865 µg/L	-8.4865 ppb	11:01:50
2	SiO2†	35851.8	32242.8	5690.4 µg/L	5690.4 ppb	11:01:30
2	Si 251.611†	38261.5	37405.2	2618.6 µg/L	2618.6 ppb	11:01:30
2	Sn 189.927†	2.0	-5.2	4.3948 µg/L	4.3948 ppb	11:01:50
2	Ti 334.940†	383549.9	377772.1	854.48 µg/L	854.48 ppb	11:01:24
2	Tl 190.801†	-26.3	-1.2	2.3451 µg/L	2.3451 ppb	11:01:50
2	U 409.014†	-292.6	-322.3	-35.117 µg/L	-35.117 ppb	11:01:30
2	V 292.402†	1751.3	1893.1	22.484 µg/L	22.484 ppb	11:01:30
2	Zn 213.857†	4135.6	3362.4	80.043 µg/L	80.043 ppb	11:01:30
3	Sc RADIAL	175615.1	175615.1	101 %		11:00:19
3	Al 396.153Radial†	24556.3	24508.6	10312 µg/L	10312 ppb	11:00:19
3	Ca 317.933Radial†	13573.4	12579.6	2382.6 µg/L	2382.6 ppb	11:00:40
3	Fe 238.204 Radial†	33925.4	33651.0	24133 µg/L	24133 ppb	11:00:40
3	K 766.490 Radial†	2920.0	2124.0	1162.4 µg/L	1162.4 ppb	11:00:19
3	Mg 279.077 IEC†	983.0	931.2	1870.3 µg/L	1870.3 ppb	11:00:40
3	Na 589.592 Radial†	1945.3	1809.6	434.34 µg/L	434.34 ppb	11:00:40
3	Sr 421.552†	4538.6	4431.6	19.084 µg/L	19.084 ppb	11:00:40
3	Sc 361.383	2226449.7	2226449.7	101.58 %		11:01:57
3	Y 371.029	1427574.1	1427574.1	101.77 %		11:01:57
3	Ag 328.068†	-878.8	-43.2	1.6656 µg/L	1.6656 ppb	11:02:03
3	As 188.979†	9.8	7.4	32.829 µg/L	32.829 ppb	11:02:23
3	B 249.677†	551.8	334.7	6.0748 µg/L	6.0748 ppb	11:02:03
3	Ba 233.527†	3726.5	3749.5	91.543 µg/L	91.543 ppb	11:02:03
3	Be 313.107†	7818.5	4038.3	4.8739 µg/L	4.8739 ppb	11:02:03
3	Cd 226.502†	11.9	152.0	1.7086 µg/L	1.7086 ppb	11:02:23
3	Co 228.616†	52.0	152.7	5.1453 µg/L	5.1453 ppb	11:02:23
3	Cr 267.716†	681.4	853.1	16.735 µg/L	16.735 ppb	11:02:03
3	Cu 324.752†	5109.3	365.1	5.8260 µg/L	5.8260 ppb	11:02:03
3	Mn 257.610†	169058.8	166376.2	477.21 µg/L	477.21 ppb	11:01:57
3	Mo 202.031†	34.0	34.4	4.6288 µg/L	4.6288 ppb	11:02:23
3	Ni 231.604†	713.4	259.0	13.049 µg/L	13.049 ppb	11:02:23
3	P 214.914†	322.2	83.0	118.96 µg/L	118.96 ppb	11:02:23
3	Pb 220.353†	97.6	51.7	12.693 µg/L	12.693 ppb	11:02:23
3	S 181.975 Axial†	52.9	7.8	30.507 µg/L	30.507 ppb	11:02:23
3	Sb 206.836†	19.2	-2.3	0.9501 µg/L	0.9501 ppb	11:02:23
3	Se 196.026†	3.4	-16.2	-7.0584 µg/L	-7.0584 ppb	11:02:23
3	SiO2†	35211.0	31491.6	5557.9 µg/L	5557.9 ppb	11:02:03
3	Si 251.611†	37476.7	36504.1	2554.4 µg/L	2554.4 ppb	11:02:03
3	Sn 189.927†	3.8	-3.5	5.2026 µg/L	5.2026 ppb	11:02:23
3	Ti 334.940†	388373.8	381233.6	862.31 µg/L	862.31 ppb	11:01:57
3	Tl 190.801†	-27.4	-2.3	0.8720 µg/L	0.8720 ppb	11:02:23
3	U 409.014†	-242.3	-271.7	-30.372 µg/L	-30.372 ppb	11:02:03
3	V 292.402†	1781.5	1916.9	22.767 µg/L	22.767 ppb	11:02:03
3	Zn 213.857†	4128.5	3341.6	79.518 µg/L	79.518 ppb	11:02:03

Mean Data: 1201870535|880928|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2219228.2	101.25	%	0.322				0.32%
Sc RADIAL	176346.2	101	%	0.4				0.38%
Y 371.029	1423391.3	101.47	%	0.304				0.30%
Ag 328.068†	-32.5	1.7509	µg/L	0.28942	1.7509	ppb	0.28942	16.53%
Al 396.153Radial†	24476.0	10298	µg/L	46.7	10298	ppb	46.7	0.45%
As 188.979†	1.7	23.697	µg/L	7.9618	23.697	ppb	7.9618	33.60%
B 249.677†	321.5	5.5630	µg/L	0.58599	5.5630	ppb	0.58599	10.53%
Ba 233.527†	3753.6	91.642	µg/L	0.5492	91.642	ppb	0.5492	0.60%
Be 313.107†	3352.7	4.4578	µg/L	0.40209	4.4578	ppb	0.40209	9.02%
Ca 317.933Radial†	12541.1	2375.3	µg/L	6.76	2375.3	ppb	6.76	0.28%
Cd 226.502†	132.2	1.2404	µg/L	0.41120	1.2404	ppb	0.41120	33.15%
Co 228.616†	144.1	4.7621	µg/L	0.38780	4.7621	ppb	0.38780	8.14%
Cr 267.716†	804.1	15.774	µg/L	0.8509	15.774	ppb	0.8509	5.39%
Cu 324.752†	316.0	5.4682	µg/L	0.39058	5.4682	ppb	0.39058	7.14%
Fe 238.204 Radial†	33539.0	24053	µg/L	69.7	24053	ppb	69.7	0.29%
K 766.490 Radial†	2065.9	1130.6	µg/L	33.48	1130.6	ppb	33.48	2.96%
Mg 279.077 IEC†	930.7	1869.5	µg/L	4.36	1869.5	ppb	4.36	0.23%
Mn 257.610†	165254.5	474.00	µg/L	2.787	474.00	ppb	2.787	0.59%
Mo 202.031†	25.4	3.6641	µg/L	0.87628	3.6641	ppb	0.87628	23.92%
Na 589.592 Radial†	1792.4	430.22	µg/L	3.766	430.22	ppb	3.766	0.88%

Ni 231.604†	234.8	11.831	µg/L	1.0546	11.831	ppb	1.0546	8.91%
P 214.914†	84.5	121.64	µg/L	5.299	121.64	ppb	5.299	4.36%
Pb 220.353†	54.1	13.268	µg/L	0.4980	13.268	ppb	0.4980	3.75%
S 181.975 Axial†	6.0	22.663	µg/L	7.0673	22.663	ppb	7.0673	31.19%
Sb 206.836†	0.4	3.3190	µg/L	2.86461	3.3190	ppb	2.86461	86.31%
Se 196.026†	-16.7	-7.6080	µg/L	0.76876	-7.6080	ppb	0.76876	10.10%
SiO2†	31846.5	5620.5	µg/L	66.59	5620.5	ppb	66.59	1.18%
Si 251.611†	36934.9	2585.1	µg/L	32.18	2585.1	ppb	32.18	1.24%
Sn 189.927†	-5.4	4.3291	µg/L	0.90819	4.3291	ppb	0.90819	20.98%
Sr 421.552†	4414.2	19.009	µg/L	0.0804	19.009	ppb	0.0804	0.42%
Ti 334.940†	378936.4	857.11	µg/L	4.500	857.11	ppb	4.500	0.53%
Tl 190.801†	-3.1	-0.3489	µg/L	3.46937	-0.3489	ppb	3.46937	994.50%
U 409.014†	-351.2	-37.854	µg/L	9.1623	-37.854	ppb	9.1623	24.20%
V 292.402†	1879.0	22.330	µg/L	0.5307	22.330	ppb	0.5307	2.38%
Zn 213.857†	3337.3	79.426	µg/L	0.6673	79.426	ppb	0.6673	0.84%

Sequence No.: 10
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 11:02:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176320.3	176320.3	101	%			11:03:08
1	Al 396.153Radial†	12104.2	12118.9	5080.0	µg/L	5080.0	ppb	11:03:13
1	Ca 317.933Radial†	28120.5	26886.3	5092.3	µg/L	5092.3	ppb	11:03:13
1	Fe 238.204 Radial†	7146.0	7080.6	5094.4	µg/L	5094.4	ppb	11:03:13
1	K 766.490 Radial†	10220.5	9319.3	5100.3	µg/L	5100.3	ppb	11:03:13
1	Mg 279.077 IEC†	2563.2	2487.2	5107.8	µg/L	5107.8	ppb	11:03:13
1	Na 589.592 Radial†	42690.7	42024.6	10087	µg/L	10087	ppb	11:03:08
1	Sr 421.552†	117577.4	116002.4	499.54	µg/L	499.54	ppb	11:03:08
1	Sc 361.383	2207695.3	2207695.3	100.72	%			11:03:47
1	Y 371.029	1404743.5	1404743.5	100.14	%			11:03:47
1	Ag 328.068†	56570.4	56986.6	506.06	µg/L	506.06	ppb	11:03:52
1	As 188.979†	324.2	319.7	510.25	µg/L	510.25	ppb	11:04:13
1	B 249.677†	12379.6	12082.2	491.69	µg/L	491.69	ppb	11:03:52
1	Ba 233.527†	20547.6	20481.1	500.85	µg/L	500.85	ppb	11:03:52
1	Be 313.107†	864814.0	854952.9	501.48	µg/L	501.48	ppb	11:03:47
1	Cd 226.502†	21319.7	21307.1	502.69	µg/L	502.69	ppb	11:03:52
1	Co 228.616†	10966.7	10989.6	499.33	µg/L	499.33	ppb	11:03:52
1	Cr 267.716†	25473.2	25472.8	499.51	µg/L	499.51	ppb	11:03:52
1	Cu 324.752†	74304.2	69106.5	489.53	µg/L	489.53	ppb	11:03:52
1	Mn 257.610†	175852.6	174535.2	500.48	µg/L	500.48	ppb	11:03:47
1	Mo 202.031†	4728.8	4695.9	502.19	µg/L	502.19	ppb	11:04:13
1	Ni 231.604†	10445.7	9927.5	499.86	µg/L	499.86	ppb	11:03:52
1	P 214.914†	1677.3	1431.1	2403.5	µg/L	2403.5	ppb	11:04:13
1	Pb 220.353†	2226.0	2165.6	506.02	µg/L	506.02	ppb	11:04:13
1	S 181.975 Axial†	263.6	217.4	959.79	µg/L	959.79	ppb	11:04:13
1	Sb 206.836†	597.3	571.8	497.94	µg/L	497.94	ppb	11:04:13
1	Se 196.026†	469.6	446.7	495.56	µg/L	495.56	ppb	11:04:13
1	SiO2†	34218.1	30800.3	5435.8	µg/L	5435.8	ppb	11:03:52
1	Si 251.611†	36517.8	35865.6	2492.7	µg/L	2492.7	ppb	11:03:52
1	Sn 189.927†	1158.2	1142.7	504.52	µg/L	504.52	ppb	11:04:13
1	Ti 334.940†	224871.3	222151.6	502.36	µg/L	502.36	ppb	11:03:47
1	Tl 190.801†	334.1	356.5	499.77	µg/L	499.77	ppb	11:04:13
1	U 409.014†	5268.5	5197.5	488.63	µg/L	488.63	ppb	11:03:52
1	V 292.402†	46142.8	45975.1	503.91	µg/L	503.91	ppb	11:03:52
1	Zn 213.857†	21455.7	20579.1	495.94	µg/L	495.94	ppb	11:03:52
2	Sc RADIAL	174859.4	174859.4	100	%			11:03:19
2	Al 396.153Radial†	12080.8	12195.4	5112.2	µg/L	5112.2	ppb	11:03:24
2	Ca 317.933Radial†	28239.8	27236.9	5158.7	µg/L	5158.7	ppb	11:03:24
2	Fe 238.204 Radial†	7150.2	7143.7	5139.9	µg/L	5139.9	ppb	11:03:24
2	K 766.490 Radial†	10211.1	9394.2	5141.3	µg/L	5141.3	ppb	11:03:24
2	Mg 279.077 IEC†	2601.4	2546.4	5229.2	µg/L	5229.2	ppb	11:03:24
2	Na 589.592 Radial†	42887.8	42573.0	10218	µg/L	10218	ppb	11:03:19
2	Sr 421.552†	118180.6	117572.6	506.30	µg/L	506.30	ppb	11:03:19
2	Sc 361.383	2210806.3	2210806.3	100.86	%			11:04:20
2	Y 371.029	1406182.5	1406182.5	100.25	%			11:04:20
2	Ag 328.068†	57588.6	57917.1	514.32	µg/L	514.32	ppb	11:04:26
2	As 188.979†	324.1	319.0	509.26	µg/L	509.26	ppb	11:04:46
2	B 249.677†	12613.4	12296.8	500.43	µg/L	500.43	ppb	11:04:26
2	Ba 233.527†	20963.4	20864.6	510.22	µg/L	510.22	ppb	11:04:26
2	Be 313.107†	868962.0	857857.2	503.18	µg/L	503.18	ppb	11:04:20
2	Cd 226.502†	21728.6	21682.7	511.57	µg/L	511.57	ppb	11:04:26
2	Co 228.616†	11206.7	11212.2	509.44	µg/L	509.44	ppb	11:04:26
2	Cr 267.716†	25987.3	25946.9	508.80	µg/L	508.80	ppb	11:04:26
2	Cu 324.752†	75441.6	70130.2	496.78	µg/L	496.78	ppb	11:04:26
2	Mn 257.610†	176690.9	175120.6	502.16	µg/L	502.16	ppb	11:04:20
2	Mo 202.031†	4732.9	4693.3	501.93	µg/L	501.93	ppb	11:04:46
2	Ni 231.604†	10692.1	10157.2	511.43	µg/L	511.43	ppb	11:04:26
2	P 214.914†	1684.5	1435.9	2410.4	µg/L	2410.4	ppb	11:04:46
2	Pb 220.353†	2217.2	2153.8	503.22	µg/L	503.22	ppb	11:04:46

2	S 181.975 Axial†	265.8	219.2	967.53 µg/L	967.53 ppb	11:04:46
2	Sb 206.836†	601.0	574.6	500.32 µg/L	500.32 ppb	11:04:46
2	Se 196.026†	473.3	449.7	498.89 µg/L	498.89 ppb	11:04:46
2	SiO2†	34886.3	31415.0	5544.3 µg/L	5544.3 ppb	11:04:26
2	Si 251.611†	37417.7	36706.7	2552.3 µg/L	2552.3 ppb	11:04:26
2	Sn 189.927†	1157.3	1140.3	503.49 µg/L	503.49 ppb	11:04:46
2	Ti 334.940†	225731.8	222690.6	503.57 µg/L	503.57 ppb	11:04:20
2	Tl 190.801†	331.4	353.3	495.32 µg/L	495.32 ppb	11:04:46
2	U 409.014†	5441.7	5361.9	504.12 µg/L	504.12 ppb	11:04:26
2	V 292.402†	46995.6	46756.0	512.41 µg/L	512.41 ppb	11:04:26
2	Zn 213.857†	21799.5	20889.9	503.41 µg/L	503.41 ppb	11:04:26
3	Sc RADIAL	175315.8	175315.8	101 %		11:03:30
3	Al 396.153Radial†	12093.6	12176.9	5104.5 µg/L	5104.5 ppb	11:03:35
3	Ca 317.933Radial†	28039.9	26965.3	5107.2 µg/L	5107.2 ppb	11:03:35
3	Fe 238.204 Radial†	7168.0	7142.8	5139.2 µg/L	5139.2 ppb	11:03:35
3	K 766.490 Radial†	10188.5	9345.3	5114.5 µg/L	5114.5 ppb	11:03:35
3	Mg 279.077 IEC†	2602.5	2540.7	5217.5 µg/L	5217.5 ppb	11:03:35
3	Na 589.592 Radial†	42258.2	41836.8	10042 µg/L	10042 ppb	11:03:30
3	Sr 421.552†	116383.0	115481.7	497.30 µg/L	497.30 ppb	11:03:30
3	Sc 361.383	2221544.2	2221544.2	101.35 %		11:04:53
3	Y 371.029	1414724.2	1414724.2	100.86 %		11:04:53
3	Ag 328.068†	57447.0	57501.4	510.63 µg/L	510.63 ppb	11:04:59
3	As 188.979†	323.2	316.7	505.50 µg/L	505.50 ppb	11:05:19
3	B 249.677†	12620.3	12243.1	498.25 µg/L	498.25 ppb	11:04:59
3	Ba 233.527†	20877.3	20679.2	505.69 µg/L	505.69 ppb	11:04:59
3	Be 313.107†	870757.0	855464.0	501.78 µg/L	501.78 ppb	11:04:53
3	Cd 226.502†	21640.2	21491.4	507.05 µg/L	507.05 ppb	11:04:59
3	Co 228.616†	11204.5	11156.3	506.90 µg/L	506.90 ppb	11:04:59
3	Cr 267.716†	25923.1	25759.1	505.12 µg/L	505.12 ppb	11:04:59
3	Cu 324.752†	75265.0	69594.5	492.99 µg/L	492.99 ppb	11:04:59
3	Mn 257.610†	176898.7	174478.9	500.32 µg/L	500.32 ppb	11:04:53
3	Mo 202.031†	4736.8	4674.5	499.91 µg/L	499.91 ppb	11:05:19
3	Ni 231.604†	10655.1	10069.4	507.01 µg/L	507.01 ppb	11:04:59
3	P 214.914†	1680.9	1424.3	2390.8 µg/L	2390.8 ppb	11:05:19
3	Pb 220.353†	2226.2	2152.0	502.82 µg/L	502.82 ppb	11:05:19
3	S 181.975 Axial†	262.9	215.1	949.37 µg/L	949.37 ppb	11:05:19
3	Sb 206.836†	597.6	568.4	494.95 µg/L	494.95 ppb	11:05:19
3	Se 196.026†	473.4	447.5	496.47 µg/L	496.47 ppb	11:05:19
3	SiO2†	34841.0	31203.1	5506.9 µg/L	5506.9 ppb	11:04:59
3	Si 251.611†	37418.2	36527.9	2539.8 µg/L	2539.8 ppb	11:04:59
3	Sn 189.927†	1158.9	1136.3	501.74 µg/L	501.74 ppb	11:05:19
3	Ti 334.940†	226290.5	222160.1	502.37 µg/L	502.37 ppb	11:04:53
3	Tl 190.801†	330.0	350.3	491.13 µg/L	491.13 ppb	11:05:19
3	U 409.014†	5406.8	5301.4	498.42 µg/L	498.42 ppb	11:04:59
3	V 292.402†	46857.9	46395.0	508.47 µg/L	508.47 ppb	11:04:59
3	Zn 213.857†	21827.0	20812.6	501.56 µg/L	501.56 ppb	11:04:59

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	2213348.6	100.98	%	0.332				0.33%
Sc RADIAL	175498.5	101	%	0.4				0.43%
Y 371.029	1408550.1	100.42	%	0.385				0.38%
Ag 328.068†	57468.4	510.34	µg/L	4.139	510.34	ppb	4.139	0.81%
QC value within limits for Ag 328.068 Recovery = 102.07%								
Al 396.153Radial†	12163.7	5098.9	µg/L	16.80	5098.9	ppb	16.80	0.33%
QC value within limits for Al 396.153Radial Recovery = 101.98%								
As 188.979†	318.4	508.34	µg/L	2.503	508.34	ppb	2.503	0.49%
QC value within limits for As 188.979 Recovery = 101.67%								
B 249.677†	12207.4	496.79	µg/L	4.551	496.79	ppb	4.551	0.92%
QC value within limits for B 249.677 Recovery = 99.36%								
Ba 233.527†	20675.0	505.59	µg/L	4.689	505.59	ppb	4.689	0.93%
QC value within limits for Ba 233.527 Recovery = 101.12%								
Be 313.107†	856091.4	502.15	µg/L	0.909	502.15	ppb	0.909	0.18%
QC value within limits for Be 313.107 Recovery = 100.43%								
Ca 317.933Radial†	27029.5	5119.4	µg/L	34.84	5119.4	ppb	34.84	0.68%
QC value within limits for Ca 317.933Radial Recovery = 102.39%								
Cd 226.502†	21493.7	507.10	µg/L	4.437	507.10	ppb	4.437	0.87%
QC value within limits for Cd 226.502 Recovery = 101.42%								
Co 228.616†	11119.4	505.23	µg/L	5.259	505.23	ppb	5.259	1.04%

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   QC value within limits for Co 228.616  Recovery = 101.05%
Cr 267.716†            25726.3      504.48 µg/L         4.681      504.48 ppb          4.681   0.93%
   QC value within limits for Cr 267.716  Recovery = 100.90%
Cu 324.752†            69610.4      493.10 µg/L         3.625      493.10 ppb          3.625   0.74%
   QC value within limits for Cu 324.752  Recovery = 98.62%
Fe 238.204 Radial†      7122.3      5124.5 µg/L        26.10      5124.5 ppb         26.10   0.51%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.49%
K 766.490 Radial†       9352.9      5118.7 µg/L        20.80      5118.7 ppb         20.80   0.41%
   QC value within limits for K 766.490 Radial  Recovery = 102.37%
Mg 279.077 IEC†         2524.8      5184.8 µg/L        66.93      5184.8 ppb         66.93   1.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.70%
Mn 257.610†           174711.6      500.99 µg/L         1.019      500.99 ppb          1.019   0.20%
   QC value within limits for Mn 257.610  Recovery = 100.20%
Mo 202.031†             4687.9      501.34 µg/L         1.248      501.34 ppb          1.248   0.25%
   QC value within limits for Mo 202.031  Recovery = 100.27%
Na 589.592 Radial†     42144.8       10116 µg/L          91.8       10116 ppb           91.8   0.91%
   QC value within limits for Na 589.592 Radial  Recovery = 101.16%
Ni 231.604†            10051.4      506.10 µg/L         5.837      506.10 ppb          5.837   1.15%
   QC value within limits for Ni 231.604  Recovery = 101.22%
P 214.914†              1430.4      2401.6 µg/L          9.91      2401.6 ppb          9.91   0.41%
   QC value within limits for P 214.914  Recovery = 96.06%
Pb 220.353†             2157.2      504.02 µg/L         1.743      504.02 ppb          1.743   0.35%
   QC value within limits for Pb 220.353  Recovery = 100.80%
S 181.975 Axial†         217.2      958.90 µg/L         9.111      958.90 ppb          9.111   0.95%
   QC value within limits for S 181.975 Axial  Recovery = 95.89%
Sb 206.836†              571.6      497.74 µg/L         2.689      497.74 ppb          2.689   0.54%
   QC value within limits for Sb 206.836  Recovery = 99.55%
Se 196.026†              448.0      496.97 µg/L         1.724      496.97 ppb          1.724   0.35%
   QC value within limits for Se 196.026  Recovery = 99.39%
SiO2†                  31139.4      5495.7 µg/L        55.11      5495.7 ppb         55.11   1.00%
   QC value within limits for SiO2  Recovery = 102.77%
Si 251.611†            36366.7      2528.3 µg/L        31.41      2528.3 ppb         31.41   1.24%
   QC value within limits for Si 251.611  Recovery = 101.13%
Sn 189.927†             1139.7      503.25 µg/L         1.407      503.25 ppb          1.407   0.28%
   QC value within limits for Sn 189.927  Recovery = 100.65%
Sr 421.552†           116352.2      501.04 µg/L         4.687      501.04 ppb          4.687   0.94%
   QC value within limits for Sr 421.552  Recovery = 100.21%
Ti 334.940†           222334.1      502.77 µg/L         0.697      502.77 ppb          0.697   0.14%
   QC value within limits for Ti 334.940  Recovery = 100.55%
Tl 190.801†              353.4      495.41 µg/L         4.320      495.41 ppb          4.320   0.87%
   QC value within limits for Tl 190.801  Recovery = 99.08%
U 409.014†              5286.9      497.05 µg/L         7.833      497.05 ppb          7.833   1.58%
   QC value within limits for U 409.014  Recovery = 99.41%
V 292.402†             46375.4      508.26 µg/L         4.257      508.26 ppb          4.257   0.84%
   QC value within limits for V 292.402  Recovery = 101.65%
Zn 213.857†            20760.5      500.30 µg/L         3.892      500.30 ppb          3.892   0.78%
   QC value within limits for Zn 213.857  Recovery = 100.06%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 11:05:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	175427.6	175427.6	101	%			11:06:01
1	Al 396.153Radial†	-142.9	28.2	11.816	µg/L	11.816	ppb	11:06:01
1	Ca 317.933Radial†	898.3	17.8	3.3765	µg/L	3.3765	ppb	11:06:22
1	Fe 238.204 Radial†	-17.2	9.2	6.6019	µg/L	6.6019	ppb	11:06:22
1	K 766.490 Radial†	763.5	-12.5	-6.8507	µg/L	-6.8507	ppb	11:06:01
1	Mg 279.077 IEC†	53.4	9.8	20.156	µg/L	20.156	ppb	11:06:22
1	Na 589.592 Radial†	120.2	0.9	0.2082	µg/L	0.2082	ppb	11:06:01
1	Sr 421.552†	129.4	61.6	0.2653	µg/L	0.2653	ppb	11:06:01
1	Sc 361.383	2206823.2	2206823.2	100.68	%			11:07:23
1	Y 371.029	1412723.0	1412723.0	100.71	%			11:07:23
1	Ag 328.068†	-747.5	79.5	0.7012	µg/L	0.7012	ppb	11:07:29
1	As 188.979†	0.9	-1.4	-2.2002	µg/L	-2.2002	ppb	11:07:49
1	B 249.677†	257.4	47.0	1.9182	µg/L	1.9182	ppb	11:07:29
1	Ba 233.527†	-62.0	19.3	0.4699	µg/L	0.4699	ppb	11:07:49
1	Be 313.107†	3875.2	190.3	0.1137	µg/L	0.1137	ppb	11:07:29
1	Cd 226.502†	-129.7	11.5	0.2670	µg/L	0.2670	ppb	11:07:49
1	Co 228.616†	-83.9	18.3	0.8300	µg/L	0.8300	ppb	11:07:49
1	Cr 267.716†	-162.8	20.6	0.4035	µg/L	0.4035	ppb	11:07:29
1	Cu 324.752†	4680.6	-16.0	-0.1126	µg/L	-0.1126	ppb	11:07:29
1	Mn 257.610†	154.9	97.6	0.2799	µg/L	0.2799	ppb	11:07:29
1	Mo 202.031†	8.9	9.8	1.0467	µg/L	1.0467	ppb	11:07:49
1	Ni 231.604†	458.3	11.9	0.6002	µg/L	0.6002	ppb	11:07:49
1	P 214.914†	224.9	-10.8	-18.590	µg/L	-18.590	ppb	11:07:49
1	Pb 220.353†	43.8	-0.9	-0.1973	µg/L	-0.1973	ppb	11:07:49
1	S 181.975 Axial†	37.6	-7.0	-30.785	µg/L	-30.785	ppb	11:07:49
1	Sb 206.836†	27.0	5.6	4.8599	µg/L	4.8599	ppb	11:07:49
1	Se 196.026†	16.8	-2.8	-3.1469	µg/L	-3.1469	ppb	11:07:49
1	SiO2†	3217.3	23.1	4.0780	µg/L	4.0780	ppb	11:07:29
1	Si 251.611†	504.1	110.3	7.6396	µg/L	7.6396	ppb	11:07:49
1	Sn 189.927†	14.9	7.6	3.3346	µg/L	3.3346	ppb	11:07:49
1	Ti 334.940†	1493.3	376.2	0.8510	µg/L	0.8510	ppb	11:07:29
1	Tl 190.801†	-30.5	-5.6	-7.8337	µg/L	-7.8337	ppb	11:07:49
1	U 409.014†	-26.6	-59.6	-5.6188	µg/L	-5.6188	ppb	11:07:29
1	V 292.402†	-162.5	1.8	0.0178	µg/L	0.0178	ppb	11:07:29
1	Zn 213.857†	741.5	13.8	0.3312	µg/L	0.3312	ppb	11:07:49
2	Sc RADIAL	173767.6	173767.6	99.8	%			11:06:27
2	Al 396.153Radial†	-169.4	0.2	0.0238	µg/L	0.0238	ppb	11:06:27
2	Ca 317.933Radial†	889.6	17.6	3.3386	µg/L	3.3386	ppb	11:06:47
2	Fe 238.204 Radial†	-16.3	9.9	7.1179	µg/L	7.1179	ppb	11:06:47
2	K 766.490 Radial†	804.4	35.6	19.488	µg/L	19.488	ppb	11:06:27
2	Mg 279.077 IEC†	40.6	-2.4	-4.9669	µg/L	-4.9669	ppb	11:06:47
2	Na 589.592 Radial†	84.2	-34.1	-8.1734	µg/L	-8.1734	ppb	11:06:27
2	Sr 421.552†	105.3	38.7	0.1668	µg/L	0.1668	ppb	11:06:27
2	Sc 361.383	2200417.0	2200417.0	100.39	%			11:07:55
2	Y 371.029	1406908.5	1406908.5	100.30	%			11:07:55
2	Ag 328.068†	-749.1	75.7	0.6704	µg/L	0.6704	ppb	11:08:01
2	As 188.979†	1.4	-0.8	-1.3405	µg/L	-1.3405	ppb	11:08:21
2	B 249.677†	257.7	48.1	1.9610	µg/L	1.9610	ppb	11:08:01
2	Ba 233.527†	-68.5	12.6	0.3082	µg/L	0.3082	ppb	11:08:21
2	Be 313.107†	4086.9	412.3	0.2439	µg/L	0.2439	ppb	11:08:01
2	Cd 226.502†	-133.3	7.5	0.1785	µg/L	0.1785	ppb	11:08:21
2	Co 228.616†	-96.1	5.8	0.2671	µg/L	0.2671	ppb	11:08:21
2	Cr 267.716†	-147.7	35.3	0.6908	µg/L	0.6908	ppb	11:08:01
2	Cu 324.752†	4710.4	27.2	0.1936	µg/L	0.1936	ppb	11:08:01
2	Mn 257.610†	185.1	128.2	0.3675	µg/L	0.3675	ppb	11:08:01
2	Mo 202.031†	18.5	19.4	2.0697	µg/L	2.0697	ppb	11:08:21
2	Ni 231.604†	466.1	21.0	1.0587	µg/L	1.0587	ppb	11:08:21
2	P 214.914†	229.8	-5.2	-9.0409	µg/L	-9.0409	ppb	11:08:21
2	Pb 220.353†	46.2	1.6	0.3722	µg/L	0.3722	ppb	11:08:21

2	S 181.975 Axial†	38.9	-5.6	-24.686	µg/L	-24.686 ppb	11:08:21
2	Sb 206.836†	23.8	2.5	2.1805	µg/L	2.1805 ppb	11:08:21
2	Se 196.026†	25.4	5.8	6.3693	µg/L	6.3693 ppb	11:08:21
2	SiO2†	3342.6	157.2	27.750	µg/L	27.750 ppb	11:08:01
2	Si 251.611†	522.5	130.1	9.0725	µg/L	9.0725 ppb	11:08:21
2	Sn 189.927†	11.2	4.0	1.7597	µg/L	1.7597 ppb	11:08:21
2	Ti 334.940†	1532.0	419.2	0.9481	µg/L	0.9481 ppb	11:08:01
2	Tl 190.801†	-19.9	4.9	6.9525	µg/L	6.9525 ppb	11:08:21
2	U 409.014†	56.5	23.1	2.1753	µg/L	2.1753 ppb	11:08:01
2	V 292.402†	-133.8	29.8	0.3425	µg/L	0.3425 ppb	11:08:01
2	Zn 213.857†	740.6	14.9	0.3571	µg/L	0.3571 ppb	11:08:21
3	Sc RADIAL	174893.7	174893.7	100	%		11:06:53
3	Al 396.153Radial†	-174.4	-3.6	-1.6106	µg/L	-1.6106 ppb	11:06:53
3	Ca 317.933Radial†	886.8	9.1	1.7231	µg/L	1.7231 ppb	11:07:13
3	Fe 238.204 Radial†	-14.8	11.5	8.2924	µg/L	8.2924 ppb	11:07:13
3	K 766.490 Radial†	807.9	34.0	18.590	µg/L	18.590 ppb	11:06:53
3	Mg 279.077 IEC†	55.6	12.2	25.056	µg/L	25.056 ppb	11:07:13
3	Na 589.592 Radial†	85.9	-33.0	-7.9122	µg/L	-7.9122 ppb	11:06:53
3	Sr 421.552†	96.3	29.1	0.1252	µg/L	0.1252 ppb	11:06:53
3	Sc 361.383	2204258.9	2204258.9	100.57	%		11:08:27
3	Y 371.029	1409391.6	1409391.6	100.48	%		11:08:27
3	Ag 328.068†	-730.4	95.7	0.8524	µg/L	0.8524 ppb	11:08:33
3	As 188.979†	2.6	0.3	0.4809	µg/L	0.4809 ppb	11:08:54
3	B 249.677†	266.7	56.6	2.3088	µg/L	2.3088 ppb	11:08:33
3	Ba 233.527†	-62.6	18.6	0.4566	µg/L	0.4566 ppb	11:08:54
3	Be 313.107†	4534.8	850.6	0.5005	µg/L	0.5005 ppb	11:08:33
3	Cd 226.502†	-111.6	29.4	0.6923	µg/L	0.6923 ppb	11:08:54
3	Co 228.616†	-68.8	33.1	1.5068	µg/L	1.5068 ppb	11:08:54
3	Cr 267.716†	-168.1	15.2	0.2999	µg/L	0.2999 ppb	11:08:33
3	Cu 324.752†	4722.1	30.6	0.2177	µg/L	0.2177 ppb	11:08:33
3	Mn 257.610†	265.2	207.5	0.5950	µg/L	0.5950 ppb	11:08:33
3	Mo 202.031†	18.8	19.6	2.0992	µg/L	2.0992 ppb	11:08:54
3	Ni 231.604†	454.8	9.0	0.4502	µg/L	0.4502 ppb	11:08:54
3	P 214.914†	226.9	-8.5	-14.719	µg/L	-14.719 ppb	11:08:54
3	Pb 220.353†	48.0	3.3	0.7710	µg/L	0.7710 ppb	11:08:54
3	S 181.975 Axial†	40.0	-4.5	-20.017	µg/L	-20.017 ppb	11:08:54
3	Sb 206.836†	29.2	7.8	6.8329	µg/L	6.8329 ppb	11:08:54
3	Se 196.026†	16.9	-2.8	-3.0609	µg/L	-3.0609 ppb	11:08:54
3	SiO2†	3221.8	31.3	5.5272	µg/L	5.5272 ppb	11:08:33
3	Si 251.611†	562.7	169.2	11.846	µg/L	11.846 ppb	11:08:54
3	Sn 189.927†	10.7	3.5	1.5389	µg/L	1.5389 ppb	11:08:54
3	Ti 334.940†	1581.4	465.6	1.0532	µg/L	1.0532 ppb	11:08:33
3	Tl 190.801†	-27.0	-2.1	-2.9820	µg/L	-2.9820 ppb	11:08:54
3	U 409.014†	33.8	0.4	0.0328	µg/L	0.0328 ppb	11:08:33
3	V 292.402†	-45.9	117.5	1.2913	µg/L	1.2913 ppb	11:08:33
3	Zn 213.857†	753.4	26.4	0.6371	µg/L	0.6371 ppb	11:08:54

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2203833.0	100.55	%	0.147				0.15%
Sc RADIAL	174696.3	100	%	0.5				0.49%
Y 371.029	1409674.4	100.50	%	0.208				0.21%
Ag 328.068†	83.6	0.7413	µg/L	0.09743	0.7413	ppb	0.09743	13.14%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	8.3	3.4098	µg/L	7.32589	3.4098	ppb	7.32589	214.85%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.6	-1.0199	µg/L	1.36897	-1.0199	ppb	1.36897	134.22%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	50.6	2.0626	µg/L	0.21424	2.0626	ppb	0.21424	10.39%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	16.8	0.4116	µg/L	0.08977	0.4116	ppb	0.08977	21.81%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	484.4	0.2861	µg/L	0.19681	0.2861	ppb	0.19681	68.80%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	14.9	2.8127	µg/L	0.94386	2.8127	ppb	0.94386	33.56%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	16.1	0.3792	µg/L	0.27467	0.3792	ppb	0.27467	72.43%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	19.1	0.8680	µg/L	0.62073	0.8680	ppb	0.62073	71.52%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                23.7      0.4647 µg/L       0.20249      0.4647 ppb        0.20249  43.57%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                13.9      0.0996 µg/L       0.18415      0.0996 ppb        0.18415 184.92%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         10.2      7.3374 µg/L       0.86636      7.3374 ppb        0.86636  11.81%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          19.0      10.409 µg/L       14.9543      10.409 ppb        14.9543 143.66%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             6.5      13.415 µg/L       16.1066      13.415 ppb        16.1066 120.06%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               144.4      0.4141 µg/L       0.16263      0.4141 ppb        0.16263  39.27%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                16.3      1.7386 µg/L       0.59933      1.7386 ppb        0.59933  34.47%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -22.0     -5.2925 µg/L       4.76547     -5.2925 ppb        4.76547  90.04%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.0      0.7031 µg/L       0.31703      0.7031 ppb        0.31703  45.09%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -8.2     -14.116 µg/L        4.8029     -14.116 ppb         4.8029  34.02%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 1.3      0.3153 µg/L       0.48663      0.3153 ppb        0.48663 154.33%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.7     -25.163 µg/L        5.3999     -25.163 ppb         5.3999  21.46%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 5.3      4.6244 µg/L       2.33515      4.6244 ppb        2.33515  50.50%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.0      0.0538 µg/L       5.46953      0.0538 ppb        5.46953 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      70.6      12.452 µg/L       13.2684      12.452 ppb        13.2684 106.56%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               136.5      9.5194 µg/L       2.13865      9.5194 ppb        2.13865  22.47%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.0      2.2111 µg/L       0.97923      2.2111 ppb        0.97923  44.29%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                43.1      0.1858 µg/L       0.07197      0.1858 ppb        0.07197  38.74%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               420.3      0.9508 µg/L       0.10114      0.9508 ppb        0.10114  10.64%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -0.9     -1.2877 µg/L       7.53732     -1.2877 ppb        7.53732 585.32%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -12.0     -1.1369 µg/L       4.02656     -1.1369 ppb        4.02656 354.17%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 49.7      0.5505 µg/L       0.66173      0.5505 ppb        0.66173 120.20%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                18.4      0.4418 µg/L       0.16962      0.4418 ppb        0.16962  38.39%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 12
Sample ID: 232429002|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 308
Date Collected: 7/2/2009 11:09:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429002|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	175004.1	175004.1	101	%			11:09:38
1	Al 396.153Radial†	168128.4	167390.1	70431	µg/L	70431	ppb	11:09:38
1	Ca 317.933Radial†	101605.3	100182.9	18975	µg/L	18975	ppb	11:09:44
1	Fe 238.204 Radial†	152671.0	151872.4	108920	µg/L	108920	ppb	11:09:44
1	K 766.490 Radial†	19033.3	18160.4	9938.8	µg/L	9938.8	ppb	11:09:44
1	Mg 279.077 IEC†	7399.0	7315.9	14829	µg/L	14829	ppb	11:09:44
1	Na 589.592 Radial†	3297.5	3161.2	758.77	µg/L	758.77	ppb	11:09:44
1	Sr 421.552†	44526.1	44218.8	190.42	µg/L	190.42	ppb	11:09:44
1	Sc 361.383	2213131.0	2213131.0	100.97	%			11:10:18
1	Y 371.029	1450664.8	1450664.8	103.42	%			11:10:18
1	Ag 328.068†	-1491.1	-654.8	4.3914	µg/L	4.3914	ppb	11:10:24
1	As 188.979†	31.2	28.7	132.87	µg/L	132.87	ppb	11:10:45
1	B 249.677†	1548.8	1325.4	19.862	µg/L	19.862	ppb	11:10:24
1	Ba 233.527†	42815.2	42484.6	1037.2	µg/L	1037.2	ppb	11:10:24
1	Be 313.107†	16773.5	12953.6	14.650	µg/L	14.650	ppb	11:10:24
1	Cd 226.502†	262.3	400.0	1.0235	µg/L	1.0235	ppb	11:10:24
1	Co 228.616†	1631.7	1717.6	72.951	µg/L	72.951	ppb	11:10:45
1	Cr 267.716†	3659.0	3806.1	74.864	µg/L	74.864	ppb	11:10:24
1	Cu 324.752†	10418.7	5653.7	54.633	µg/L	54.633	ppb	11:10:24
1	Mn 257.610†	1698984.5	1682600.2	4825.3	µg/L	4825.3	ppb	11:10:18
1	Mo 202.031†	-0.4	0.5	4.3337	µg/L	4.3337	ppb	11:10:45
1	Ni 231.604†	1448.2	991.0	49.856	µg/L	49.856	ppb	11:10:45
1	P 214.914†	686.0	445.3	662.40	µg/L	662.40	ppb	11:10:45
1	Pb 220.353†	767.6	715.8	171.87	µg/L	171.87	ppb	11:10:45
1	S 181.975 Axial†	135.9	90.2	380.71	µg/L	380.71	ppb	11:10:45
1	Sb 206.836†	29.1	7.6	14.055	µg/L	14.055	ppb	11:10:45
1	Se 196.026†	-34.2	-53.4	-11.192	µg/L	-11.192	ppb	11:10:45
1	SiO2†	221713.0	216409.9	38193	µg/L	38193	ppb	11:10:18
1	Si 251.611†	251850.4	249039.7	17552	µg/L	17552	ppb	11:10:18
1	Sn 189.927†	-74.7	-81.1	-3.1148	µg/L	-3.1148	ppb	11:10:45
1	Ti 334.940†	1085125.7	1073590.2	2427.9	µg/L	2427.9	ppb	11:10:18
1	Tl 190.801†	-53.6	-28.3	-43.494	µg/L	-43.494	ppb	11:10:45
1	U 409.014†	-268.1	-298.7	-50.459	µg/L	-50.459	ppb	11:10:18
1	V 292.402†	21125.7	21085.8	237.79	µg/L	237.79	ppb	11:10:24
1	Zn 213.857†	8871.1	8063.0	187.85	µg/L	187.85	ppb	11:10:24
2	Sc RADIAL	177960.9	177960.9	102	%			11:09:49
2	Al 396.153Radial†	168348.8	164827.4	69352	µg/L	69352	ppb	11:09:49
2	Ca 317.933Radial†	102542.4	99420.5	18830	µg/L	18830	ppb	11:09:55
2	Fe 238.204 Radial†	154024.4	150673.3	108060	µg/L	108060	ppb	11:09:55
2	K 766.490 Radial†	19244.3	18052.2	9879.6	µg/L	9879.6	ppb	11:09:55
2	Mg 279.077 IEC†	7423.2	7217.3	14628	µg/L	14628	ppb	11:09:55
2	Na 589.592 Radial†	3338.0	3146.3	755.19	µg/L	755.19	ppb	11:09:55
2	Sr 421.552†	44948.1	43895.8	189.03	µg/L	189.03	ppb	11:09:55
2	Sc 361.383	2218174.7	2218174.7	101.20	%			11:10:52
2	Y 371.029	1453244.8	1453244.8	103.60	%			11:10:52
2	Ag 328.068†	-1516.3	-676.3	4.1147	µg/L	4.1147	ppb	11:10:58
2	As 188.979†	26.2	23.6	124.23	µg/L	124.23	ppb	11:11:19
2	B 249.677†	1571.0	1343.8	20.885	µg/L	20.885	ppb	11:10:58
2	Ba 233.527†	42401.4	41979.3	1024.9	µg/L	1024.9	ppb	11:10:58
2	Be 313.107†	16582.1	12726.7	14.520	µg/L	14.520	ppb	11:10:58
2	Cd 226.502†	224.3	362.0	0.1856	µg/L	0.1856	ppb	11:10:58
2	Co 228.616†	1643.0	1725.0	73.285	µg/L	73.285	ppb	11:11:19
2	Cr 267.716†	3592.5	3732.2	73.413	µg/L	73.413	ppb	11:10:58
2	Cu 324.752†	10436.7	5648.0	54.477	µg/L	54.477	ppb	11:10:58
2	Mn 257.610†	1701983.1	1681737.3	4822.8	µg/L	4822.8	ppb	11:10:52
2	Mo 202.031†	-4.7	-3.7	3.8545	µg/L	3.8545	ppb	11:11:19
2	Ni 231.604†	1439.8	979.4	49.270	µg/L	49.270	ppb	11:11:19
2	P 214.914†	693.5	451.1	673.12	µg/L	673.12	ppb	11:11:19
2	Pb 220.353†	767.3	713.7	171.32	µg/L	171.32	ppb	11:11:19

2	S 181.975 Axial†	133.5	87.6	369.32	µg/L	369.32 ppb	11:11:19
2	Sb 206.836†	26.4	4.8	11.638	µg/L	11.638 ppb	11:11:19
2	Se 196.026†	-30.9	-50.1	-7.8404	µg/L	-7.8404 ppb	11:11:19
2	SiO2†	221065.3	215270.5	37992	µg/L	37992 ppb	11:10:52
2	Si 251.611†	251350.4	247978.4	17477	µg/L	17477 ppb	11:10:52
2	Sn 189.927†	-84.3	-90.5	-7.4968	µg/L	-7.4968 ppb	11:11:19
2	Ti 334.940†	1088029.6	1074016.1	2428.9	µg/L	2428.9 ppb	11:10:52
2	Tl 190.801†	-48.6	-23.3	-36.368	µg/L	-36.368 ppb	11:11:19
2	U 409.014†	-366.0	-394.8	-59.350	µg/L	-59.350 ppb	11:10:52
2	V 292.402†	20919.1	20834.1	234.97	µg/L	234.97 ppb	11:10:58
2	Zn 213.857†	8797.4	7970.3	185.66	µg/L	185.66 ppb	11:10:58
3	Sc RADIAL	176152.3	176152.3	101	%		11:10:00
3	Al 396.153Radial†	169604.5	167758.6	70586	µg/L	70586 ppb	11:10:00
3	Ca 317.933Radial†	101623.7	99542.4	18853	µg/L	18853 ppb	11:10:06
3	Fe 238.204 Radial†	152819.5	151029.4	108310	µg/L	108310 ppb	11:10:06
3	K 766.490 Radial†	19053.9	18057.3	9882.4	µg/L	9882.4 ppb	11:10:06
3	Mg 279.077 IEC†	7399.8	7268.7	14733	µg/L	14733 ppb	11:10:06
3	Na 589.592 Radial†	3248.1	3091.1	741.93	µg/L	741.93 ppb	11:10:06
3	Sr 421.552†	44556.1	43959.8	189.30	µg/L	189.30 ppb	11:10:06
3	Sc 361.383	2225798.5	2225798.5	101.55	%		11:11:26
3	Y 371.029	1458688.5	1458688.5	103.99	%		11:11:26
3	Ag 328.068†	-1530.0	-684.7	4.0636	µg/L	4.0636 ppb	11:11:32
3	As 188.979†	29.6	26.9	129.59	µg/L	129.59 ppb	11:11:52
3	B 249.677†	1555.8	1323.5	19.977	µg/L	19.977 ppb	11:11:32
3	Ba 233.527†	42500.0	41932.9	1023.8	µg/L	1023.8 ppb	11:11:32
3	Be 313.107†	16605.7	12693.9	14.489	µg/L	14.489 ppb	11:11:32
3	Cd 226.502†	261.1	397.4	0.9983	µg/L	0.9983 ppb	11:11:32
3	Co 228.616†	1652.1	1728.5	73.451	µg/L	73.451 ppb	11:11:52
3	Cr 267.716†	3653.6	3780.2	74.353	µg/L	74.353 ppb	11:11:32
3	Cu 324.752†	10287.8	5466.0	53.224	µg/L	53.224 ppb	11:11:32
3	Mn 257.610†	1711048.5	1684904.0	4831.9	µg/L	4831.9 ppb	11:11:26
3	Mo 202.031†	-2.6	-1.6	4.0888	µg/L	4.0888 ppb	11:11:52
3	Ni 231.604†	1454.5	989.0	49.753	µg/L	49.753 ppb	11:11:52
3	P 214.914†	688.1	443.4	660.20	µg/L	660.20 ppb	11:11:52
3	Pb 220.353†	760.0	704.0	169.15	µg/L	169.15 ppb	11:11:52
3	S 181.975 Axial†	142.0	95.5	404.00	µg/L	404.00 ppb	11:11:52
3	Sb 206.836†	26.1	4.5	11.316	µg/L	11.316 ppb	11:11:52
3	Se 196.026†	-27.8	-46.9	-4.2837	µg/L	-4.2837 ppb	11:11:52
3	SiO2†	222391.7	215828.5	38091	µg/L	38091 ppb	11:11:26
3	Si 251.611†	252735.2	248491.4	17513	µg/L	17513 ppb	11:11:26
3	Sn 189.927†	-74.8	-80.8	-3.1643	µg/L	-3.1643 ppb	11:11:52
3	Ti 334.940†	1089864.6	1072140.6	2424.6	µg/L	2424.6 ppb	11:11:26
3	Tl 190.801†	-48.0	-22.5	-35.395	µg/L	-35.395 ppb	11:11:52
3	U 409.014†	-429.5	-456.1	-65.181	µg/L	-65.181 ppb	11:11:26
3	V 292.402†	21021.6	20864.2	235.31	µg/L	235.31 ppb	11:11:32
3	Zn 213.857†	8780.8	7924.2	184.52	µg/L	184.52 ppb	11:11:32

Mean Data: 232429002|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2219034.7	101.24	%	0.291				0.29%
Sc RADIAL	176372.4	101	%	0.9				0.85%
Y 371.029	1454199.4	103.67	%	0.292				0.28%
Ag 328.068†	-671.9	4.1899	µg/L	0.17634	4.1899	ppb	0.17634	4.21%
Al 396.153Radial†	166658.7	70123	µg/L	671.8	70123	ppb	671.8	0.96%
As 188.979†	26.4	128.90	µg/L	4.361	128.90	ppb	4.361	3.38%
B 249.677†	1330.9	20.241	µg/L	0.5606	20.241	ppb	0.5606	2.77%
Ba 233.527†	42132.3	1028.6	µg/L	7.47	1028.6	ppb	7.47	0.73%
Be 313.107†	12791.4	14.553	µg/L	0.0856	14.553	ppb	0.0856	0.59%
Ca 317.933Radial†	99715.3	18886	µg/L	77.6	18886	ppb	77.6	0.41%
Cd 226.502†	386.5	0.7358	µg/L	0.47662	0.7358	ppb	0.47662	64.78%
Co 228.616†	1723.7	73.229	µg/L	0.2545	73.229	ppb	0.2545	0.35%
Cr 267.716†	3772.9	74.210	µg/L	0.7361	74.210	ppb	0.7361	0.99%
Cu 324.752†	5589.2	54.111	µg/L	0.7724	54.111	ppb	0.7724	1.43%
Fe 238.204 Radial†	151191.7	108430	µg/L	441.6	108430	ppb	441.6	0.41%
K 766.490 Radial†	18090.0	9900.3	µg/L	33.40	9900.3	ppb	33.40	0.34%
Mg 279.077 IEC†	7267.3	14730	µg/L	100.5	14730	ppb	100.5	0.68%
Mn 257.610†	1683080.5	4826.7	µg/L	4.69	4826.7	ppb	4.69	0.10%
Mo 202.031†	-1.6	4.0923	µg/L	0.23962	4.0923	ppb	0.23962	5.86%
Na 589.592 Radial†	3132.9	751.96	µg/L	8.869	751.96	ppb	8.869	1.18%

Ni 231.604†	986.5	49.626	µg/L	0.3125	49.626	ppb	0.3125	0.63%
P 214.914†	446.6	665.24	µg/L	6.910	665.24	ppb	6.910	1.04%
Pb 220.353†	711.2	170.78	µg/L	1.436	170.78	ppb	1.436	0.84%
S 181.975 Axial†	91.1	384.68	µg/L	17.674	384.68	ppb	17.674	4.59%
Sb 206.836†	5.6	12.336	µg/L	1.4971	12.336	ppb	1.4971	12.14%
Se 196.026†	-50.2	-7.7720	µg/L	3.45465	-7.7720	ppb	3.45465	44.45%
SiO2†	215836.3	38092	µg/L	100.5	38092	ppb	100.5	0.26%
Si 251.611†	248503.2	17514	µg/L	37.5	17514	ppb	37.5	0.21%
Sn 189.927†	-84.2	-4.5920	µg/L	2.51580	-4.5920	ppb	2.51580	54.79%
Sr 421.552†	44024.8	189.58	µg/L	0.736	189.58	ppb	0.736	0.39%
Ti 334.940†	1073249.0	2427.2	µg/L	2.22	2427.2	ppb	2.22	0.09%
Tl 190.801†	-24.7	-38.419	µg/L	4.4219	-38.419	ppb	4.4219	11.51%
U 409.014†	-383.2	-58.330	µg/L	7.4140	-58.330	ppb	7.4140	12.71%
V 292.402†	20928.0	236.02	µg/L	1.540	236.02	ppb	1.540	0.65%
Zn 213.857†	7985.8	186.01	µg/L	1.692	186.01	ppb	1.692	0.91%

Sequence No.: 13
Sample ID: 232429003|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 309
Date Collected: 7/2/2009 11:12:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429003|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	175778.6	175778.6	101	%			11:12:34
1	Al 396.153Radial†	41074.4	40842.4	17184	µg/L	17184	ppb	11:12:34
1	Ca 317.933Radial†	66600.2	65075.0	12325	µg/L	12325	ppb	11:12:34
1	Fe 238.204 Radial†	90372.8	89514.8	64196	µg/L	64196	ppb	11:12:34
1	K 766.490 Radial†	6915.4	6077.6	3326.1	µg/L	3326.1	ppb	11:12:34
1	Mg 279.077 IEC†	2229.5	2164.5	4333.9	µg/L	4333.9	ppb	11:12:54
1	Na 589.592 Radial†	2724.1	2579.0	619.01	µg/L	619.01	ppb	11:12:54
1	Sr 421.552†	17072.4	16838.6	72.512	µg/L	72.512	ppb	11:12:34
1	Sc 361.383	2225448.3	2225448.3	101.53	%			11:13:59
1	Y 371.029	1492487.2	1492487.2	106.40	%			11:13:59
1	Ag 328.068†	-1160.1	-320.7	2.5199	µg/L	2.5199	ppb	11:14:05
1	As 188.979†	12.0	9.6	67.965	µg/L	67.965	ppb	11:14:25
1	B 249.677†	1134.9	909.2	16.934	µg/L	16.934	ppb	11:14:05
1	Ba 233.527†	13008.5	12893.0	314.71	µg/L	314.71	ppb	11:14:05
1	Be 313.107†	13627.5	9763.1	11.874	µg/L	11.874	ppb	11:14:05
1	Cd 226.502†	150.2	288.2	1.8534	µg/L	1.8534	ppb	11:14:25
1	Co 228.616†	293.6	390.8	13.356	µg/L	13.356	ppb	11:14:25
1	Cr 267.716†	12263.8	12261.1	240.14	µg/L	240.14	ppb	11:14:05
1	Cu 324.752†	47661.4	42277.2	307.69	µg/L	307.69	ppb	11:14:05
1	Mn 257.610†	1211678.7	1193335.8	3422.1	µg/L	3422.1	ppb	11:13:59
1	Mo 202.031†	101.4	100.8	13.303	µg/L	13.303	ppb	11:14:25
1	Ni 231.604†	1712.6	1243.4	62.675	µg/L	62.675	ppb	11:14:25
1	P 214.914†	933.2	684.9	1066.0	µg/L	1066.0	ppb	11:14:25
1	Pb 220.353†	657.0	602.6	140.77	µg/L	140.77	ppb	11:14:25
1	S 181.975 Axial†	232.8	185.0	807.64	µg/L	807.64	ppb	11:14:25
1	Sb 206.836†	21.8	0.2	6.0796	µg/L	6.0796	ppb	11:14:25
1	Se 196.026†	-14.4	-33.8	-7.9204	µg/L	-7.9204	ppb	11:14:25
1	SiO2†	131497.3	126340.4	22297	µg/L	22297	ppb	11:14:05
1	Si 251.611†	148523.9	145892.0	10258	µg/L	10258	ppb	11:14:05
1	Sn 189.927†	-22.0	-28.9	6.1364	µg/L	6.1364	ppb	11:14:25
1	Ti 334.940†	950849.0	935391.9	2115.5	µg/L	2115.5	ppb	11:13:59
1	Tl 190.801†	-45.5	-20.1	-27.478	µg/L	-27.478	ppb	11:14:25
1	U 409.014†	-485.9	-511.8	-61.515	µg/L	-61.515	ppb	11:13:59
1	V 292.402†	3668.6	3776.4	46.239	µg/L	46.239	ppb	11:14:05
1	Zn 213.857†	36082.5	34815.2	841.27	µg/L	841.27	ppb	11:14:05
2	Sc RADIAL	173808.1	173808.1	99.9	%			11:13:00
2	Al 396.153Radial†	41724.3	41954.4	17652	µg/L	17652	ppb	11:13:00
2	Ca 317.933Radial†	67611.2	66835.1	12659	µg/L	12659	ppb	11:13:00
2	Fe 238.204 Radial†	91616.8	91775.1	65817	µg/L	65817	ppb	11:13:00
2	K 766.490 Radial†	6981.3	6221.2	3404.8	µg/L	3404.8	ppb	11:13:00
2	Mg 279.077 IEC†	2242.5	2202.5	4409.2	µg/L	4409.2	ppb	11:13:21
2	Na 589.592 Radial†	2715.8	2601.3	624.36	µg/L	624.36	ppb	11:13:21
2	Sr 421.552†	17384.1	17342.4	74.681	µg/L	74.681	ppb	11:13:00
2	Sc 361.383	2208554.2	2208554.2	100.76	%			11:14:33
2	Y 371.029	1485299.8	1485299.8	105.89	%			11:14:33
2	Ag 328.068†	-1158.8	-328.1	2.5852	µg/L	2.5852	ppb	11:14:38
2	As 188.979†	11.5	9.2	68.659	µg/L	68.659	ppb	11:14:59
2	B 249.677†	1119.0	901.9	16.127	µg/L	16.127	ppb	11:14:38
2	Ba 233.527†	13065.7	13047.8	318.49	µg/L	318.49	ppb	11:14:38
2	Be 313.107†	13627.5	9865.8	12.023	µg/L	12.023	ppb	11:14:38
2	Cd 226.502†	138.2	277.5	1.4739	µg/L	1.4739	ppb	11:14:59
2	Co 228.616†	289.6	389.0	13.209	µg/L	13.209	ppb	11:14:59
2	Cr 267.716†	12339.5	12428.6	243.42	µg/L	243.42	ppb	11:14:38
2	Cu 324.752†	47824.9	42798.6	311.60	µg/L	311.60	ppb	11:14:38
2	Mn 257.610†	1219265.9	1209994.4	3469.9	µg/L	3469.9	ppb	11:14:33
2	Mo 202.031†	95.2	95.4	12.782	µg/L	12.782	ppb	11:14:59
2	Ni 231.604†	1697.1	1241.0	62.553	µg/L	62.553	ppb	11:14:59
2	P 214.914†	927.9	686.7	1066.7	µg/L	1066.7	ppb	11:14:59
2	Pb 220.353†	648.8	599.4	140.04	µg/L	140.04	ppb	11:14:59

2	S 181.975 Axial†	228.9	182.9	798.27 µg/L	798.27 ppb	11:14:59
2	Sb 206.836†	26.1	4.7	10.033 µg/L	10.033 ppb	11:14:59
2	Se 196.026†	-15.9	-35.4	-8.9533 µg/L	-8.9533 ppb	11:14:59
2	SiO2†	131498.4	127332.1	22472 µg/L	22472 ppb	11:14:38
2	Si 251.611†	148470.9	146958.4	10332 µg/L	10332 ppb	11:14:38
2	Sn 189.927†	-20.3	-27.3	7.3005 µg/L	7.3005 ppb	11:14:59
2	Ti 334.940†	957219.0	948877.4	2146.0 µg/L	2146.0 ppb	11:14:33
2	Tl 190.801†	-43.9	-18.8	-25.597 µg/L	-25.597 ppb	11:14:59
2	U 409.014†	-476.1	-505.7	-61.283 µg/L	-61.283 ppb	11:14:33
2	V 292.402†	3676.3	3811.6	46.750 µg/L	46.750 ppb	11:14:38
2	Zn 213.857†	36139.5	35143.6	849.14 µg/L	849.14 ppb	11:14:38
3	Sc RADIAL	177108.2	177108.2	102 %		11:13:26
3	Al 396.153Radial†	41403.5	40860.5	17192 µg/L	17192 ppb	11:13:26
3	Ca 317.933Radial†	67085.9	65057.3	12322 µg/L	12322 ppb	11:13:26
3	Fe 238.204 Radial†	90990.9	89450.4	64150 µg/L	64150 ppb	11:13:26
3	K 766.490 Radial†	6921.8	6032.5	3301.5 µg/L	3301.5 ppb	11:13:26
3	Mg 279.077 IEC†	2223.8	2142.4	4288.5 µg/L	4288.5 ppb	11:13:47
3	Na 589.592 Radial†	2726.6	2561.2	614.75 µg/L	614.75 ppb	11:13:47
3	Sr 421.552†	17253.3	16889.4	72.730 µg/L	72.730 ppb	11:13:26
3	Sc 361.383	2219224.3	2219224.3	101.25 %		11:15:06
3	Y 371.029	1488476.4	1488476.4	106.11 %		11:15:06
3	Ag 328.068†	-1120.1	-284.3	2.8390 µg/L	2.8390 ppb	11:15:12
3	As 188.979†	9.9	7.5	64.632 µg/L	64.632 ppb	11:15:32
3	B 249.677†	1148.3	925.6	17.616 µg/L	17.616 ppb	11:15:12
3	Ba 233.527†	13073.8	12993.5	317.17 µg/L	317.17 ppb	11:15:12
3	Be 313.107†	13625.3	9798.6	11.877 µg/L	11.877 ppb	11:15:12
3	Cd 226.502†	138.6	277.2	1.5935 µg/L	1.5935 ppb	11:15:32
3	Co 228.616†	292.0	390.0	13.333 µg/L	13.333 ppb	11:15:32
3	Cr 267.716†	12284.4	12315.2	241.20 µg/L	241.20 ppb	11:15:12
3	Cu 324.752†	47604.3	42352.5	308.22 µg/L	308.22 ppb	11:15:12
3	Mn 257.610†	1205083.0	1190168.4	3413.0 µg/L	3413.0 ppb	11:15:06
3	Mo 202.031†	99.8	99.5	13.162 µg/L	13.162 ppb	11:15:32
3	Ni 231.604†	1701.9	1237.6	62.382 µg/L	62.382 ppb	11:15:32
3	P 214.914†	940.2	694.5	1082.5 µg/L	1082.5 ppb	11:15:32
3	Pb 220.353†	651.4	599.0	139.93 µg/L	139.93 ppb	11:15:32
3	S 181.975 Axial†	224.9	177.8	776.18 µg/L	776.18 ppb	11:15:32
3	Sb 206.836†	25.8	4.3	9.5737 µg/L	9.5737 ppb	11:15:32
3	Se 196.026†	-29.8	-49.0	-24.801 µg/L	-24.801 ppb	11:15:32
3	SiO2†	130472.1	125691.0	22183 µg/L	22183 ppb	11:15:12
3	Si 251.611†	147310.3	145103.7	10202 µg/L	10202 ppb	11:15:12
3	Sn 189.927†	-27.7	-34.5	3.6393 µg/L	3.6393 ppb	11:15:32
3	Ti 334.940†	945538.8	932773.7	2109.6 µg/L	2109.6 ppb	11:15:06
3	Tl 190.801†	-38.4	-13.2	-17.719 µg/L	-17.719 ppb	11:15:32
3	U 409.014†	-541.5	-568.0	-66.813 µg/L	-66.813 ppb	11:15:06
3	V 292.402†	3689.4	3807.0	46.558 µg/L	46.558 ppb	11:15:12
3	Zn 213.857†	36071.2	34903.7	843.43 µg/L	843.43 ppb	11:15:12

Mean Data: 232429003|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2217742.3	101.18	%	0.390				0.39%
Sc RADIAL	175565.0	101	%	1.0				0.95%
Y 371.029	1488754.5	106.13	%	0.257				0.24%
Ag 328.068†	-311.0	2.6480	µg/L	0.16859	2.6480	ppb	0.16859	6.37%
Al 396.153Radial†	41219.1	17343	µg/L	268.0	17343	ppb	268.0	1.55%
As 188.979†	8.7	67.085	µg/L	2.1529	67.085	ppb	2.1529	3.21%
B 249.677†	912.2	16.892	µg/L	0.7457	16.892	ppb	0.7457	4.41%
Ba 233.527†	12978.1	316.79	µg/L	1.916	316.79	ppb	1.916	0.60%
Be 313.107†	9809.2	11.925	µg/L	0.0850	11.925	ppb	0.0850	0.71%
Ca 317.933Radial†	65655.8	12435	µg/L	193.4	12435	ppb	193.4	1.56%
Cd 226.502†	281.0	1.6403	µg/L	0.19404	1.6403	ppb	0.19404	11.83%
Co 228.616†	389.9	13.299	µg/L	0.0790	13.299	ppb	0.0790	0.59%
Cr 267.716†	12335.0	241.58	µg/L	1.675	241.58	ppb	1.675	0.69%
Cu 324.752†	42476.1	309.17	µg/L	2.120	309.17	ppb	2.120	0.69%
Fe 238.204 Radial†	90246.7	64721	µg/L	949.5	64721	ppb	949.5	1.47%
K 766.490 Radial†	6110.4	3344.1	µg/L	53.93	3344.1	ppb	53.93	1.61%
Mg 279.077 IEC†	2169.8	4343.9	µg/L	60.96	4343.9	ppb	60.96	1.40%
Mn 257.610†	1197832.9	3435.0	µg/L	30.54	3435.0	ppb	30.54	0.89%
Mo 202.031†	98.6	13.083	µg/L	0.2694	13.083	ppb	0.2694	2.06%
Na 589.592 Radial†	2580.5	619.38	µg/L	4.817	619.38	ppb	4.817	0.78%

Ni 231.604†	1240.7	62.536	µg/L	0.1472	62.536	ppb	0.1472	0.24%
P 214.914†	688.7	1071.7	µg/L	9.31	1071.7	ppb	9.31	0.87%
Pb 220.353†	600.3	140.25	µg/L	0.457	140.25	ppb	0.457	0.33%
S 181.975 Axial†	181.9	794.03	µg/L	16.151	794.03	ppb	16.151	2.03%
Sb 206.836†	3.0	8.5622	µg/L	2.16219	8.5622	ppb	2.16219	25.25%
Se 196.026†	-39.4	-13.892	µg/L	9.4620	-13.892	ppb	9.4620	68.11%
SiO2†	126454.5	22318	µg/L	145.9	22318	ppb	145.9	0.65%
Si 251.611†	145984.7	10264	µg/L	65.2	10264	ppb	65.2	0.64%
Sn 189.927†	-30.2	5.6921	µg/L	1.87061	5.6921	ppb	1.87061	32.86%
Sr 421.552†	17023.5	73.308	µg/L	1.1943	73.308	ppb	1.1943	1.63%
Ti 334.940†	939014.3	2123.7	µg/L	19.54	2123.7	ppb	19.54	0.92%
Tl 190.801†	-17.4	-23.598	µg/L	5.1776	-23.598	ppb	5.1776	21.94%
U 409.014†	-528.5	-63.204	µg/L	3.1281	-63.204	ppb	3.1281	4.95%
V 292.402†	3798.4	46.516	µg/L	0.2582	46.516	ppb	0.2582	0.56%
Zn 213.857†	34954.2	844.61	µg/L	4.063	844.61	ppb	4.063	0.48%

Sequence No.: 14
Sample ID: 232429004|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 310
Date Collected: 7/2/2009 11:15:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429004|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	173965.3	173965.3	99.9	%			11:16:14
1	Al 396.153Radial†	35425.5	35614.5	14984	µg/L	14984	ppb	11:16:14
1	Ca 317.933Radial†	36025.4	35171.2	6661.4	µg/L	6661.4	ppb	11:16:35
1	Fe 238.204 Radial†	93932.1	94008.7	67419	µg/L	67419	ppb	11:16:14
1	K 766.490 Radial†	4521.7	3754.0	2054.5	µg/L	2054.5	ppb	11:16:14
1	Mg 279.077 IEC†	1385.7	1343.3	2643.4	µg/L	2643.4	ppb	11:16:35
1	Na 589.592 Radial†	2767.7	2650.7	636.24	µg/L	636.24	ppb	11:16:35
1	Sr 421.552†	9809.9	9748.3	41.979	µg/L	41.979	ppb	11:16:35
1	Sc 361.383	2228498.9	2228498.9	101.67	%			11:17:39
1	Y 371.029	1503018.9	1503018.9	107.15	%			11:17:39
1	Ag 328.068†	-1195.8	-354.2	2.4568	µg/L	2.4568	ppb	11:17:45
1	As 188.979†	11.8	9.4	74.330	µg/L	74.330	ppb	11:18:05
1	B 249.677†	998.6	773.6	10.386	µg/L	10.386	ppb	11:17:45
1	Ba 233.527†	9617.0	9539.8	232.88	µg/L	232.88	ppb	11:17:45
1	Be 313.107†	16470.4	12540.9	15.066	µg/L	15.066	ppb	11:17:45
1	Cd 226.502†	141.4	279.3	1.3730	µg/L	1.3730	ppb	11:18:05
1	Co 228.616†	237.7	335.4	9.7314	µg/L	9.7314	ppb	11:18:05
1	Cr 267.716†	6858.2	6927.8	135.70	µg/L	135.70	ppb	11:17:45
1	Cu 324.752†	20209.7	15212.5	116.67	µg/L	116.67	ppb	11:17:45
1	Mn 257.610†	1258973.0	1238218.9	3550.8	µg/L	3550.8	ppb	11:17:39
1	Mo 202.031†	169.8	167.9	20.601	µg/L	20.601	ppb	11:18:05
1	Ni 231.604†	1787.6	1314.9	66.285	µg/L	66.285	ppb	11:18:05
1	P 214.914†	663.6	418.6	633.15	µg/L	633.15	ppb	11:18:05
1	Pb 220.353†	385.1	334.3	78.400	µg/L	78.400	ppb	11:18:05
1	S 181.975 Axial†	102.5	56.5	239.36	µg/L	239.36	ppb	11:18:05
1	Sb 206.836†	18.0	-3.5	5.6938	µg/L	5.6938	ppb	11:18:05
1	Se 196.026†	-23.4	-42.6	-15.995	µg/L	-15.995	ppb	11:18:05
1	SiO2†	84735.2	80169.8	14149	µg/L	14149	ppb	11:17:45
1	Si 251.611†	94743.1	92795.1	6477.1	µg/L	6477.1	ppb	11:17:45
1	Sn 189.927†	-15.0	-21.9	8.8393	µg/L	8.8393	ppb	11:18:05
1	Ti 334.940†	1194102.7	1173364.5	2654.0	µg/L	2654.0	ppb	11:17:39
1	Tl 190.801†	-54.6	-29.0	-35.993	µg/L	-35.993	ppb	11:18:05
1	U 409.014†	-861.6	-880.6	-96.314	µg/L	-96.314	ppb	11:17:39
1	V 292.402†	3377.8	3485.4	43.335	µg/L	43.335	ppb	11:17:45
1	Zn 213.857†	27978.2	26795.5	646.61	µg/L	646.61	ppb	11:17:45
2	Sc RADIAL	175982.1	175982.1	101	%			11:16:40
2	Al 396.153Radial†	35382.6	35165.8	14796	µg/L	14796	ppb	11:16:40
2	Ca 317.933Radial†	35737.1	34473.0	6529.2	µg/L	6529.2	ppb	11:17:01
2	Fe 238.204 Radial†	93772.0	92773.3	66533	µg/L	66533	ppb	11:16:40
2	K 766.490 Radial†	4442.7	3624.1	1983.4	µg/L	1983.4	ppb	11:16:40
2	Mg 279.077 IEC†	1369.4	1311.3	2579.2	µg/L	2579.2	ppb	11:17:01
2	Na 589.592 Radial†	2755.3	2606.7	625.67	µg/L	625.67	ppb	11:17:01
2	Sr 421.552†	9763.0	9589.5	41.295	µg/L	41.295	ppb	11:17:01
2	Sc 361.383	2229137.2	2229137.2	101.70	%			11:18:12
2	Y 371.029	1504744.9	1504744.9	107.27	%			11:18:12
2	Ag 328.068†	-1141.6	-300.6	2.8619	µg/L	2.8619	ppb	11:18:18
2	As 188.979†	18.6	16.0	84.227	µg/L	84.227	ppb	11:18:39
2	B 249.677†	940.9	716.6	8.3361	µg/L	8.3361	ppb	11:18:18
2	Ba 233.527†	9550.1	9471.3	231.21	µg/L	231.21	ppb	11:18:18
2	Be 313.107†	16270.4	12339.6	14.915	µg/L	14.915	ppb	11:18:18
2	Cd 226.502†	137.7	275.7	1.3619	µg/L	1.3619	ppb	11:18:39
2	Co 228.616†	237.7	335.2	9.7492	µg/L	9.7492	ppb	11:18:39
2	Cr 267.716†	6783.4	6852.3	134.23	µg/L	134.23	ppb	11:18:18
2	Cu 324.752†	19960.2	14961.6	114.78	µg/L	114.78	ppb	11:18:18
2	Mn 257.610†	1254274.8	1233244.7	3536.6	µg/L	3536.6	ppb	11:18:12
2	Mo 202.031†	164.6	162.8	20.015	µg/L	20.015	ppb	11:18:39
2	Ni 231.604†	1788.1	1314.8	66.280	µg/L	66.280	ppb	11:18:39
2	P 214.914†	660.3	415.2	628.43	µg/L	628.43	ppb	11:18:39
2	Pb 220.353†	383.2	332.4	77.939	µg/L	77.939	ppb	11:18:39

2	S 181.975 Axial†	107.5	61.3	261.00	µg/L	261.00 ppb	11:18:39
2	Sb 206.836†	22.2	0.6	9.2456	µg/L	9.2456 ppb	11:18:39
2	Se 196.026†	-21.3	-40.5	-14.100	µg/L	-14.100 ppb	11:18:39
2	SiO2†	84178.7	79598.7	14048	µg/L	14048 ppb	11:18:18
2	Si 251.611†	94076.6	92113.2	6429.3	µg/L	6429.3 ppb	11:18:18
2	Sn 189.927†	-18.2	-25.0	7.2165	µg/L	7.2165 ppb	11:18:39
2	Ti 334.940†	1189190.4	1168198.0	2642.4	µg/L	2642.4 ppb	11:18:12
2	Tl 190.801†	-47.8	-22.3	-26.536	µg/L	-26.536 ppb	11:18:39
2	U 409.014†	-783.5	-803.5	-88.868	µg/L	-88.868 ppb	11:18:12
2	V 292.402†	3411.0	3517.1	43.615	µg/L	43.615 ppb	11:18:18
2	Zn 213.857†	27615.0	26430.5	637.80	µg/L	637.80 ppb	11:18:18
3	Sc RADIAL	174434.3	174434.3	100	%		11:17:06
3	Al 396.153Radial†	35175.7	35269.9	14839	µg/L	14839 ppb	11:17:06
3	Ca 317.933Radial†	35909.4	34958.6	6621.2	µg/L	6621.2 ppb	11:17:26
3	Fe 238.204 Radial†	93030.1	92856.0	66592	µg/L	66592 ppb	11:17:06
3	K 766.490 Radial†	4355.6	3576.2	1957.2	µg/L	1957.2 ppb	11:17:06
3	Mg 279.077 IEC†	1372.9	1326.8	2611.1	µg/L	2611.1 ppb	11:17:26
3	Na 589.592 Radial†	2756.2	2631.8	631.69	µg/L	631.69 ppb	11:17:26
3	Sr 421.552†	9806.4	9718.5	41.850	µg/L	41.850 ppb	11:17:26
3	Sc 361.383	2246234.0	2246234.0	102.48	%		11:18:46
3	Y 371.029	1515192.2	1515192.2	108.02	%		11:18:46
3	Ag 328.068†	-1217.9	-366.5	2.2885	µg/L	2.2885 ppb	11:18:52
3	As 188.979†	12.5	9.9	74.561	µg/L	74.561 ppb	11:19:12
3	B 249.677†	972.2	740.1	9.2759	µg/L	9.2759 ppb	11:18:52
3	Ba 233.527†	9693.3	9539.6	232.87	µg/L	232.87 ppb	11:18:52
3	Be 313.107†	16427.9	12371.5	14.944	µg/L	14.944 ppb	11:18:52
3	Cd 226.502†	121.9	259.2	0.9606	µg/L	0.9606 ppb	11:19:12
3	Co 228.616†	239.5	335.2	9.7431	µg/L	9.7431 ppb	11:19:12
3	Cr 267.716†	6873.1	6889.1	134.95	µg/L	134.95 ppb	11:18:52
3	Cu 324.752†	20283.9	15128.0	115.96	µg/L	115.96 ppb	11:18:52
3	Mn 257.610†	1266903.8	1236181.0	3545.0	µg/L	3545.0 ppb	11:18:46
3	Mo 202.031†	175.5	172.2	21.022	µg/L	21.022 ppb	11:19:12
3	Ni 231.604†	1797.2	1310.4	66.056	µg/L	66.056 ppb	11:19:12
3	P 214.914†	658.8	408.7	617.06	µg/L	617.06 ppb	11:19:12
3	Pb 220.353†	388.0	334.2	78.370	µg/L	78.370 ppb	11:19:12
3	S 181.975 Axial†	108.7	61.8	262.95	µg/L	262.95 ppb	11:19:12
3	Sb 206.836†	19.0	-2.7	6.3879	µg/L	6.3879 ppb	11:19:12
3	Se 196.026†	-20.1	-39.2	-12.586	µg/L	-12.586 ppb	11:19:12
3	SiO2†	85299.4	80062.3	14130	µg/L	14130 ppb	11:18:52
3	Si 251.611†	95299.8	92602.6	6463.7	µg/L	6463.7 ppb	11:18:52
3	Sn 189.927†	-14.2	-21.0	9.0128	µg/L	9.0128 ppb	11:19:12
3	Ti 334.940†	1199920.7	1169768.7	2645.9	µg/L	2645.9 ppb	11:18:46
3	Tl 190.801†	-58.9	-32.7	-41.255	µg/L	-41.255 ppb	11:19:12
3	U 409.014†	-900.8	-912.2	-99.129	µg/L	-99.129 ppb	11:18:46
3	V 292.402†	3476.1	3555.1	44.023	µg/L	44.023 ppb	11:18:52
3	Zn 213.857†	28007.7	26607.0	642.08	µg/L	642.08 ppb	11:18:52

Mean Data: 232429004|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2234623.4	101.95	%	0.459				0.45%
Sc RADIAL	174793.9	100	%	0.6				0.60%
Y 371.029	1507652.0	107.48	%	0.470				0.44%
Ag 328.068†	-340.4	2.5357	µg/L	0.29472	2.5357	ppb	0.29472	11.62%
Al 396.153Radial†	35350.1	14873	µg/L	98.8	14873	ppb	98.8	0.66%
As 188.979†	11.8	77.706	µg/L	5.6485	77.706	ppb	5.6485	7.27%
B 249.677†	743.5	9.3326	µg/L	1.02597	9.3326	ppb	1.02597	10.99%
Ba 233.527†	9516.9	232.32	µg/L	0.964	232.32	ppb	0.964	0.41%
Be 313.107†	12417.3	14.975	µg/L	0.0806	14.975	ppb	0.0806	0.54%
Ca 317.933Radial†	34867.6	6603.9	µg/L	67.79	6603.9	ppb	67.79	1.03%
Cd 226.502†	271.4	1.2318	µg/L	0.23493	1.2318	ppb	0.23493	19.07%
Co 228.616†	335.3	9.7412	µg/L	0.00900	9.7412	ppb	0.00900	0.09%
Cr 267.716†	6889.7	134.96	µg/L	0.739	134.96	ppb	0.739	0.55%
Cu 324.752†	15100.7	115.81	µg/L	0.957	115.81	ppb	0.957	0.83%
Fe 238.204 Radial†	93212.7	66848	µg/L	495.3	66848	ppb	495.3	0.74%
K 766.490 Radial†	3651.4	1998.3	µg/L	50.36	1998.3	ppb	50.36	2.52%
Mg 279.077 IEC†	1327.1	2611.2	µg/L	32.11	2611.2	ppb	32.11	1.23%
Mn 257.610†	1235881.5	3544.1	µg/L	7.17	3544.1	ppb	7.17	0.20%
Mo 202.031†	167.6	20.546	µg/L	0.5057	20.546	ppb	0.5057	2.46%
Na 589.592 Radial†	2629.8	631.20	µg/L	5.299	631.20	ppb	5.299	0.84%

Ni 231.604†	1313.4	66.207	µg/L	0.1309	66.207	ppb	0.1309	0.20%
P 214.914†	414.2	626.21	µg/L	8.271	626.21	ppb	8.271	1.32%
Pb 220.353†	333.6	78.236	µg/L	0.2580	78.236	ppb	0.2580	0.33%
S 181.975 Axial†	59.9	254.44	µg/L	13.094	254.44	ppb	13.094	5.15%
Sb 206.836†	-1.9	7.1091	µg/L	1.88250	7.1091	ppb	1.88250	26.48%
Se 196.026†	-40.8	-14.227	µg/L	1.7081	-14.227	ppb	1.7081	12.01%
SiO2†	79943.6	14109	µg/L	53.6	14109	ppb	53.6	0.38%
Si 251.611†	92503.6	6456.7	µg/L	24.67	6456.7	ppb	24.67	0.38%
Sn 189.927†	-22.7	8.3562	µg/L	0.99084	8.3562	ppb	0.99084	11.86%
Sr 421.552†	9685.4	41.708	µg/L	0.3636	41.708	ppb	0.3636	0.87%
Ti 334.940†	1170443.7	2647.4	µg/L	5.99	2647.4	ppb	5.99	0.23%
Tl 190.801†	-28.0	-34.595	µg/L	7.4584	-34.595	ppb	7.4584	21.56%
U 409.014†	-865.4	-94.770	µg/L	5.3022	-94.770	ppb	5.3022	5.59%
V 292.402†	3519.2	43.658	µg/L	0.3457	43.658	ppb	0.3457	0.79%
Zn 213.857†	26611.0	642.16	µg/L	4.407	642.16	ppb	4.407	0.69%

Sequence No.: 15
Sample ID: 232429005|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 311
Date Collected: 7/2/2009 11:19:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429005|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176951.0	176951.0	102	%			11:19:54
1	Al 396.153Radial†	101754.6	100261.4	42185	µg/L	42185	ppb	11:19:54
1	Ca 317.933Radial†	329486.7	323227.6	61219	µg/L	61219	ppb	11:19:54
1	Fe 238.204 Radial†	111730.7	109930.6	78838	µg/L	78838	ppb	11:20:00
1	K 766.490 Radial†	17170.8	16120.1	8822.2	µg/L	8822.2	ppb	11:20:00
1	Mg 279.077 IEC†	7998.5	7824.6	15924	µg/L	15924	ppb	11:20:00
1	Na 589.592 Radial†	3816.3	3635.5	872.60	µg/L	872.60	ppb	11:20:00
1	Sr 421.552†	80105.7	78729.6	339.03	µg/L	339.03	ppb	11:19:54
1	Sc 361.383	2214662.0	2214662.0	101.04	%			11:20:35
1	Y 371.029	1456910.7	1456910.7	103.86	%			11:20:35
1	Ag 328.068†	-1183.9	-349.8	4.2955	µg/L	4.2955	ppb	11:20:40
1	As 188.979†	29.5	27.0	85.564	µg/L	85.564	ppb	11:21:01
1	B 249.677†	1729.7	1503.4	36.588	µg/L	36.588	ppb	11:20:40
1	Ba 233.527†	31111.5	30872.1	753.72	µg/L	753.72	ppb	11:20:40
1	Be 313.107†	14464.3	10656.7	12.603	µg/L	12.603	ppb	11:20:40
1	Cd 226.502†	270.6	408.1	3.7184	µg/L	3.7184	ppb	11:21:01
1	Co 228.616†	594.5	689.9	26.802	µg/L	26.802	ppb	11:21:01
1	Cr 267.716†	179222.9	177560.1	3476.9	µg/L	3476.9	ppb	11:20:40
1	Cu 324.752†	120954.9	115044.8	824.41	µg/L	824.41	ppb	11:20:40
1	Mn 257.610†	895278.9	886005.7	2541.0	µg/L	2541.0	ppb	11:20:35
1	Mo 202.031†	128.9	128.5	16.837	µg/L	16.837	ppb	11:21:01
1	Ni 231.604†	4051.9	3566.9	179.82	µg/L	179.82	ppb	11:21:01
1	P 214.914†	1352.5	1104.5	1694.3	µg/L	1694.3	ppb	11:21:01
1	Pb 220.353†	1390.9	1332.2	311.85	µg/L	311.85	ppb	11:21:01
1	S 181.975 Axial†	560.9	510.8	2244.4	µg/L	2244.4	ppb	11:21:01
1	Sb 206.836†	77.9	55.8	36.167	µg/L	36.167	ppb	11:21:01
1	Se 196.026†	-27.6	-46.9	-16.521	µg/L	-16.521	ppb	11:21:01
1	SiO2†	214627.6	209245.7	36929	µg/L	36929	ppb	11:20:35
1	Si 251.611†	244536.2	241628.3	17036	µg/L	17036	ppb	11:20:35
1	Sn 189.927†	-90.9	-97.1	-10.548	µg/L	-10.548	ppb	11:21:01
1	Ti 334.940†	977938.4	966763.6	2184.8	µg/L	2184.8	ppb	11:20:35
1	Tl 190.801†	-27.0	-2.0	-3.0065	µg/L	-3.0065	ppb	11:21:01
1	U 409.014†	216.8	181.4	-3.9383	µg/L	-3.9383	ppb	11:20:35
1	V 292.402†	15561.3	15564.3	175.55	µg/L	175.55	ppb	11:20:40
1	Zn 213.857†	88603.7	86968.8	2106.7	µg/L	2106.7	ppb	11:20:40
2	Sc RADIAL	178232.1	178232.1	102	%			11:20:05
2	Al 396.153Radial†	103308.0	101058.9	42521	µg/L	42521	ppb	11:20:05
2	Ca 317.933Radial†	333922.7	325230.1	61599	µg/L	61599	ppb	11:20:05
2	Fe 238.204 Radial†	112291.0	109687.9	78663	µg/L	78663	ppb	11:20:11
2	K 766.490 Radial†	17239.8	16066.0	8792.6	µg/L	8792.6	ppb	11:20:11
2	Mg 279.077 IEC†	8027.3	7796.2	15866	µg/L	15866	ppb	11:20:11
2	Na 589.592 Radial†	3809.7	3602.1	864.58	µg/L	864.58	ppb	11:20:11
2	Sr 421.552†	81225.3	79256.5	341.30	µg/L	341.30	ppb	11:20:05
2	Sc 361.383	2209445.0	2209445.0	100.80	%			11:21:09
2	Y 371.029	1453357.9	1453357.9	103.61	%			11:21:09
2	Ag 328.068†	-1212.3	-380.8	4.0305	µg/L	4.0305	ppb	11:21:14
2	As 188.979†	20.4	18.0	71.001	µg/L	71.001	ppb	11:21:35
2	B 249.677†	1741.3	1518.8	37.273	µg/L	37.273	ppb	11:21:14
2	Ba 233.527†	31483.0	31313.3	764.50	µg/L	764.50	ppb	11:21:14
2	Be 313.107†	14547.5	10773.1	12.678	µg/L	12.678	ppb	11:21:14
2	Cd 226.502†	266.0	404.2	3.6361	µg/L	3.6361	ppb	11:21:35
2	Co 228.616†	583.1	680.0	26.347	µg/L	26.347	ppb	11:21:35
2	Cr 267.716†	181759.3	180495.2	3534.4	µg/L	3534.4	ppb	11:21:14
2	Cu 324.752†	122800.5	117158.4	839.34	µg/L	839.34	ppb	11:21:14
2	Mn 257.610†	893697.4	886528.9	2542.5	µg/L	2542.5	ppb	11:21:09
2	Mo 202.031†	132.5	132.4	17.244	µg/L	17.244	ppb	11:21:35
2	Ni 231.604†	4041.8	3566.4	179.79	µg/L	179.79	ppb	11:21:35
2	P 214.914†	1353.8	1108.9	1699.7	µg/L	1699.7	ppb	11:21:35
2	Pb 220.353†	1371.4	1316.0	308.08	µg/L	308.08	ppb	11:21:35

2	S 181.975 Axial†	560.3	511.5	2247.7	µg/L	2247.7 ppb	11:21:35
2	Sb 206.836†	73.4	51.6	32.169	µg/L	32.169 ppb	11:21:35
2	Se 196.026†	-19.1	-38.5	-7.2646	µg/L	-7.2646 ppb	11:21:35
2	SiO2†	214137.6	209261.1	36932	µg/L	36932 ppb	11:21:09
2	Si 251.611†	244079.3	241746.5	17044	µg/L	17044 ppb	11:21:09
2	Sn 189.927†	-94.3	-100.7	-12.093	µg/L	-12.093 ppb	11:21:35
2	Ti 334.940†	976724.7	967844.8	2187.2	µg/L	2187.2 ppb	11:21:09
2	Tl 190.801†	-27.6	-2.6	-3.9083	µg/L	-3.9083 ppb	11:21:35
2	U 409.014†	147.2	112.8	-10.415	µg/L	-10.415 ppb	11:21:09
2	V 292.402†	15818.6	15855.9	178.70	µg/L	178.70 ppb	11:21:14
2	Zn 213.857†	89718.5	88281.7	2138.6	µg/L	2138.6 ppb	11:21:14
3	Sc RADIAL	178710.5	178710.5	103	%		11:20:16
3	Al 396.153Radial†	102655.5	100153.3	42140	µg/L	42140 ppb	11:20:16
3	Ca 317.933Radial†	330441.9	320966.9	60791	µg/L	60791 ppb	11:20:16
3	Fe 238.204 Radial†	112186.3	109292.3	78380	µg/L	78380 ppb	11:20:22
3	K 766.490 Radial†	17256.0	16036.7	8776.6	µg/L	8776.6 ppb	11:20:22
3	Mg 279.077 IEC†	8074.5	7821.2	15918	µg/L	15918 ppb	11:20:22
3	Na 589.592 Radial†	3793.8	3576.6	858.47	µg/L	858.47 ppb	11:20:22
3	Sr 421.552†	80673.9	78507.2	338.07	µg/L	338.07 ppb	11:20:16
3	Sc 361.383	2215646.9	2215646.9	101.09	%		11:21:43
3	Y 371.029	1458594.4	1458594.4	103.98	%		11:21:43
3	Ag 328.068†	-1251.4	-416.0	3.6695	µg/L	3.6695 ppb	11:21:48
3	As 188.979†	17.1	14.7	65.877	µg/L	65.877 ppb	11:22:09
3	B 249.677†	1656.9	1430.6	33.759	µg/L	33.759 ppb	11:21:48
3	Ba 233.527†	30797.4	30547.7	745.81	µg/L	745.81 ppb	11:21:48
3	Be 313.107†	14327.6	10515.1	12.530	µg/L	12.530 ppb	11:21:48
3	Cd 226.502†	277.2	414.5	3.9008	µg/L	3.9008 ppb	11:22:09
3	Co 228.616†	584.7	680.0	26.344	µg/L	26.344 ppb	11:22:09
3	Cr 267.716†	177818.0	176091.4	3448.2	µg/L	3448.2 ppb	11:21:48
3	Cu 324.752†	120245.1	114289.4	819.00	µg/L	819.00 ppb	11:21:48
3	Mn 257.610†	895690.7	886019.2	2541.0	µg/L	2541.0 ppb	11:21:43
3	Mo 202.031†	122.9	122.5	16.178	µg/L	16.178 ppb	11:22:09
3	Ni 231.604†	3997.0	3510.8	176.99	µg/L	176.99 ppb	11:22:09
3	P 214.914†	1341.0	1092.4	1674.8	µg/L	1674.8 ppb	11:22:09
3	Pb 220.353†	1380.0	1320.8	309.20	µg/L	309.20 ppb	11:22:09
3	S 181.975 Axial†	557.9	507.6	2230.3	µg/L	2230.3 ppb	11:22:09
3	Sb 206.836†	69.4	47.4	29.045	µg/L	29.045 ppb	11:22:09
3	Se 196.026†	-26.1	-45.4	-15.107	µg/L	-15.107 ppb	11:22:09
3	SiO2†	214694.7	209217.5	36924	µg/L	36924 ppb	11:21:43
3	Si 251.611†	244614.6	241598.3	17034	µg/L	17034 ppb	11:21:43
3	Sn 189.927†	-97.7	-103.9	-13.686	µg/L	-13.686 ppb	11:22:09
3	Ti 334.940†	979837.4	968211.9	2188.1	µg/L	2188.1 ppb	11:21:43
3	Tl 190.801†	-23.9	1.1	1.3694	µg/L	1.3694 ppb	11:22:09
3	U 409.014†	190.0	154.8	-6.3201	µg/L	-6.3201 ppb	11:21:43
3	V 292.402†	15483.1	15480.1	174.59	µg/L	174.59 ppb	11:21:48
3	Zn 213.857†	87810.7	86145.3	2086.7	µg/L	2086.7 ppb	11:21:48

Mean Data: 232429005|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2213251.3	100.98	%	0.152				0.15%
Sc RADIAL	177964.5	102	%	0.5				0.51%
Y 371.029	1456287.7	103.82	%	0.191				0.18%
Ag 328.068†	-382.2	3.9985	µg/L	0.31422	3.9985	ppb	0.31422	7.86%
Al 396.153Radial†	100491.2	42282	µg/L	208.1	42282	ppb	208.1	0.49%
As 188.979†	19.9	74.147	µg/L	10.2136	74.147	ppb	10.2136	13.77%
B 249.677†	1484.2	35.873	µg/L	1.8630	35.873	ppb	1.8630	5.19%
Ba 233.527†	30911.0	754.68	µg/L	9.383	754.68	ppb	9.383	1.24%
Be 313.107†	10648.3	12.604	µg/L	0.0742	12.604	ppb	0.0742	0.59%
Ca 317.933Radial†	323141.6	61203	µg/L	404.0	61203	ppb	404.0	0.66%
Cd 226.502†	409.0	3.7517	µg/L	0.13549	3.7517	ppb	0.13549	3.61%
Co 228.616†	683.3	26.498	µg/L	0.2636	26.498	ppb	0.2636	0.99%
Cr 267.716†	178048.9	3486.5	µg/L	43.91	3486.5	ppb	43.91	1.26%
Cu 324.752†	115497.5	827.58	µg/L	10.532	827.58	ppb	10.532	1.27%
Fe 238.204 Radial†	109636.9	78627	µg/L	231.1	78627	ppb	231.1	0.29%
K 766.490 Radial†	16074.3	8797.1	µg/L	23.14	8797.1	ppb	23.14	0.26%
Mg 279.077 IEC†	7814.0	15903	µg/L	31.8	15903	ppb	31.8	0.20%
Mn 257.610†	886184.6	2541.5	µg/L	0.86	2541.5	ppb	0.86	0.03%
Mo 202.031†	127.8	16.753	µg/L	0.5376	16.753	ppb	0.5376	3.21%
Na 589.592 Radial†	3604.7	865.21	µg/L	7.087	865.21	ppb	7.087	0.82%

Ni 231.604†	3548.0	178.87	µg/L	1.626	178.87	ppb	1.626	0.91%
P 214.914†	1101.9	1689.6	µg/L	13.08	1689.6	ppb	13.08	0.77%
Pb 220.353†	1323.0	309.71	µg/L	1.936	309.71	ppb	1.936	0.63%
S 181.975 Axial†	509.9	2240.8	µg/L	9.25	2240.8	ppb	9.25	0.41%
Sb 206.836†	51.6	32.460	µg/L	3.5704	32.460	ppb	3.5704	11.00%
Se 196.026†	-43.6	-12.964	µg/L	4.9864	-12.964	ppb	4.9864	38.46%
SiO2†	209241.4	36928	µg/L	3.9	36928	ppb	3.9	0.01%
Si 251.611†	241657.7	17038	µg/L	5.5	17038	ppb	5.5	0.03%
Sn 189.927†	-100.6	-12.109	µg/L	1.5691	-12.109	ppb	1.5691	12.96%
Sr 421.552†	78831.1	339.47	µg/L	1.657	339.47	ppb	1.657	0.49%
Ti 334.940†	967606.8	2186.7	µg/L	1.71	2186.7	ppb	1.71	0.08%
Tl 190.801†	-1.2	-1.8485	µg/L	2.82297	-1.8485	ppb	2.82297	152.72%
U 409.014†	149.6	-6.8910	µg/L	3.27579	-6.8910	ppb	3.27579	47.54%
V 292.402†	15633.4	176.28	µg/L	2.147	176.28	ppb	2.147	1.22%
Zn 213.857†	87131.9	2110.6	µg/L	26.17	2110.6	ppb	26.17	1.24%

Sequence No.: 16
Sample ID: 232429006|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 312
Date Collected: 7/2/2009 11:22:18
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429006|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176802.5	176802.5	102	%			11:22:50
1	Al 396.153Radial†	49774.5	49171.9	20687	µg/L	20687	ppb	11:22:50
1	Ca 317.933Radial†	65867.1	63971.4	12116	µg/L	12116	ppb	11:22:56
1	Fe 238.204 Radial†	108435.9	106779.3	76577	µg/L	76577	ppb	11:22:50
1	K 766.490 Radial†	7073.3	6193.4	3389.5	µg/L	3389.5	ppb	11:22:56
1	Mg 279.077 IEC†	2280.5	2201.9	4391.4	µg/L	4391.4	ppb	11:22:56
1	Na 589.592 Radial†	3007.4	2842.3	682.22	µg/L	682.22	ppb	11:22:56
1	Sr 421.552†	17261.6	16926.9	72.892	µg/L	72.892	ppb	11:22:56
1	Sc 361.383	2233305.1	2233305.1	101.89	%			11:23:30
1	Y 371.029	1488651.8	1488651.8	106.13	%			11:23:30
1	Ag 328.068†	-1178.1	-334.3	3.4860	µg/L	3.4860	ppb	11:23:36
1	As 188.979†	16.5	13.9	86.773	µg/L	86.773	ppb	11:23:56
1	B 249.677†	1034.5	806.8	8.8579	µg/L	8.8579	ppb	11:23:36
1	Ba 233.527†	12615.0	12461.8	304.22	µg/L	304.22	ppb	11:23:36
1	Be 313.107†	14878.8	10944.0	14.438	µg/L	14.438	ppb	11:23:36
1	Cd 226.502†	215.4	351.7	2.8317	µg/L	2.8317	ppb	11:23:56
1	Co 228.616†	408.2	502.2	17.215	µg/L	17.215	ppb	11:23:56
1	Cr 267.716†	81085.5	79763.2	1561.9	µg/L	1561.9	ppb	11:23:36
1	Cu 324.752†	74588.7	68539.6	495.13	µg/L	495.13	ppb	11:23:36
1	Mn 257.610†	1055776.4	1036128.2	2971.4	µg/L	2971.4	ppb	11:23:30
1	Mo 202.031†	681.9	670.2	74.655	µg/L	74.655	ppb	11:23:56
1	Ni 231.604†	9985.9	9357.3	471.82	µg/L	471.82	ppb	11:23:36
1	P 214.914†	876.1	625.7	917.29	µg/L	917.29	ppb	11:23:56
1	Pb 220.353†	1354.6	1285.0	300.03	µg/L	300.03	ppb	11:23:56
1	S 181.975 Axial†	140.1	93.2	400.14	µg/L	400.14	ppb	11:23:56
1	Sb 206.836†	45.0	22.9	21.905	µg/L	21.905	ppb	11:23:56
1	Se 196.026†	-26.0	-45.0	-14.622	µg/L	-14.622	ppb	11:23:56
1	SiO2†	119293.8	113907.7	20103	µg/L	20103	ppb	11:23:36
1	Si 251.611†	134541.9	131654.9	9224.4	µg/L	9224.4	ppb	11:23:36
1	Sn 189.927†	2.3	-4.9	19.745	µg/L	19.745	ppb	11:23:56
1	Ti 334.940†	1243956.7	1219765.8	2758.8	µg/L	2758.8	ppb	11:23:30
1	Tl 190.801†	-44.0	-18.4	-18.760	µg/L	-18.760	ppb	11:23:56
1	U 409.014†	-570.7	-593.3	-71.495	µg/L	-71.495	ppb	11:23:30
1	V 292.402†	5184.4	5251.3	63.675	µg/L	63.675	ppb	11:23:36
1	Zn 213.857†	64895.3	62968.2	1522.7	µg/L	1522.7	ppb	11:23:36
2	Sc RADIAL	178823.2	178823.2	103	%			11:23:01
2	Al 396.153Radial†	49825.9	48668.3	20475	µg/L	20475	ppb	11:23:01
2	Ca 317.933Radial†	65025.8	62419.8	11822	µg/L	11822	ppb	11:23:06
2	Fe 238.204 Radial†	108488.1	105623.8	75749	µg/L	75749	ppb	11:23:01
2	K 766.490 Radial†	7044.5	6086.7	3331.1	µg/L	3331.1	ppb	11:23:06
2	Mg 279.077 IEC†	2241.5	2138.6	4262.8	µg/L	4262.8	ppb	11:23:06
2	Na 589.592 Radial†	2961.7	2764.4	663.51	µg/L	663.51	ppb	11:23:06
2	Sr 421.552†	17085.8	16563.8	71.328	µg/L	71.328	ppb	11:23:06
2	Sc 361.383	2237564.5	2237564.5	102.09	%			11:24:04
2	Y 371.029	1491082.7	1491082.7	106.30	%			11:24:04
2	Ag 328.068†	-1250.7	-403.2	2.8056	µg/L	2.8056	ppb	11:24:09
2	As 188.979†	10.3	7.9	76.611	µg/L	76.611	ppb	11:24:30
2	B 249.677†	1054.2	824.1	9.8265	µg/L	9.8265	ppb	11:24:09
2	Ba 233.527†	12406.4	12233.8	298.66	µg/L	298.66	ppb	11:24:09
2	Be 313.107†	14662.3	10704.1	14.287	µg/L	14.287	ppb	11:24:09
2	Cd 226.502†	209.8	345.8	2.7412	µg/L	2.7412	ppb	11:24:30
2	Co 228.616†	409.4	502.5	17.237	µg/L	17.237	ppb	11:24:30
2	Cr 267.716†	79536.7	78094.5	1529.2	µg/L	1529.2	ppb	11:24:09
2	Cu 324.752†	73466.4	67301.0	486.26	µg/L	486.26	ppb	11:24:09
2	Mn 257.610†	1056584.4	1034947.3	2968.0	µg/L	2968.0	ppb	11:24:04
2	Mo 202.031†	669.6	656.9	73.198	µg/L	73.198	ppb	11:24:30
2	Ni 231.604†	9807.0	9163.4	462.05	µg/L	462.05	ppb	11:24:09
2	P 214.914†	882.3	630.1	927.52	µg/L	927.52	ppb	11:24:30
2	Pb 220.353†	1337.2	1265.5	295.47	µg/L	295.47	ppb	11:24:30

2	S 181.975 Axial†	142.8	95.6	410.86	µg/L	410.86 ppb	11:24:30
2	Sb 206.836†	45.3	23.1	22.279	µg/L	22.279 ppb	11:24:30
2	Se 196.026†	-28.7	-47.7	-17.902	µg/L	-17.902 ppb	11:24:30
2	SiO2†	117500.2	111927.9	19754	µg/L	19754 ppb	11:24:09
2	Si 251.611†	132619.8	129520.7	9073.3	µg/L	9073.3 ppb	11:24:09
2	Sn 189.927†	6.3	-1.0	21.196	µg/L	21.196 ppb	11:24:30
2	Ti 334.940†	1244574.8	1218047.3	2754.9	µg/L	2754.9 ppb	11:24:04
2	Tl 190.801†	-50.8	-25.0	-28.007	µg/L	-28.007 ppb	11:24:30
2	U 409.014†	-648.5	-668.5	-78.400	µg/L	-78.400 ppb	11:24:04
2	V 292.402†	5082.1	5141.5	62.394	µg/L	62.394 ppb	11:24:09
2	Zn 213.857†	63651.3	61628.4	1490.3	µg/L	1490.3 ppb	11:24:09
3	Sc RADIAL	177529.4	177529.4	102	%		11:23:12
3	Al 396.153Radial†	50152.1	49341.6	20758	µg/L	20758 ppb	11:23:12
3	Ca 317.933Radial†	65176.9	63029.1	11938	µg/L	11938 ppb	11:23:17
3	Fe 238.204 Radial†	109393.6	107281.1	76937	µg/L	76937 ppb	11:23:12
3	K 766.490 Radial†	7039.2	6131.5	3355.6	µg/L	3355.6 ppb	11:23:17
3	Mg 279.077 IEC†	2291.6	2203.6	4394.2	µg/L	4394.2 ppb	11:23:17
3	Na 589.592 Radial†	2949.9	2773.8	665.77	µg/L	665.77 ppb	11:23:17
3	Sr 421.552†	17091.6	16690.7	71.875	µg/L	71.875 ppb	11:23:17
3	Sc 361.383	2221273.3	2221273.3	101.34	%		11:24:37
3	Y 371.029	1482562.6	1482562.6	105.69	%		11:24:37
3	Ag 328.068†	-1208.5	-370.5	3.1945	µg/L	3.1945 ppb	11:24:43
3	As 188.979†	11.5	9.1	79.530	µg/L	79.530 ppb	11:25:03
3	B 249.677†	1061.2	838.6	10.045	µg/L	10.045 ppb	11:24:43
3	Ba 233.527†	12586.3	12500.5	305.17	µg/L	305.17 ppb	11:24:43
3	Be 313.107†	14863.9	11008.4	14.531	µg/L	14.531 ppb	11:24:43
3	Cd 226.502†	205.6	343.2	2.5985	µg/L	2.5985 ppb	11:25:03
3	Co 228.616†	427.2	523.1	18.125	µg/L	18.125 ppb	11:25:03
3	Cr 267.716†	80511.3	79627.6	1559.2	µg/L	1559.2 ppb	11:24:43
3	Cu 324.752†	74035.7	68390.5	494.13	µg/L	494.13 ppb	11:24:43
3	Mn 257.610†	1057374.8	1043318.1	2992.0	µg/L	2992.0 ppb	11:24:37
3	Mo 202.031†	676.6	668.6	74.500	µg/L	74.500 ppb	11:25:03
3	Ni 231.604†	9879.5	9305.4	469.20	µg/L	469.20 ppb	11:24:43
3	P 214.914†	882.4	636.6	936.02	µg/L	936.02 ppb	11:25:03
3	Pb 220.353†	1338.5	1276.3	298.01	µg/L	298.01 ppb	11:25:03
3	S 181.975 Axial†	151.6	105.3	453.37	µg/L	453.37 ppb	11:25:03
3	Sb 206.836†	44.2	22.3	21.514	µg/L	21.514 ppb	11:25:03
3	Se 196.026†	-17.9	-37.3	-5.8488	µg/L	-5.8488 ppb	11:25:03
3	SiO2†	118614.5	113871.5	20097	µg/L	20097 ppb	11:24:43
3	Si 251.611†	133883.7	131720.7	9228.4	µg/L	9228.4 ppb	11:24:43
3	Sn 189.927†	-2.9	-10.0	17.572	µg/L	17.572 ppb	11:25:03
3	Ti 334.940†	1245720.1	1228118.9	2777.7	µg/L	2777.7 ppb	11:24:37
3	Tl 190.801†	-46.8	-21.4	-22.889	µg/L	-22.889 ppb	11:25:03
3	U 409.014†	-586.8	-612.3	-73.332	µg/L	-73.332 ppb	11:24:37
3	V 292.402†	5146.7	5241.7	63.596	µg/L	63.596 ppb	11:24:43
3	Zn 213.857†	64505.5	62928.7	1521.8	µg/L	1521.8 ppb	11:24:43

Mean Data: 232429006|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2230714.3	101.77	%	0.385				0.38%
Sc RADIAL	177718.4	102	%	0.6				0.58%
Y 371.029	1487432.4	106.04	%	0.313				0.30%
Ag 328.068†	-369.4	3.1620	µg/L	0.34136	3.1620	ppb	0.34136	10.80%
Al 396.153Radial†	49060.6	20640	µg/L	147.3	20640	ppb	147.3	0.71%
As 188.979†	10.3	80.971	µg/L	5.2319	80.971	ppb	5.2319	6.46%
B 249.677†	823.2	9.5764	µg/L	0.63168	9.5764	ppb	0.63168	6.60%
Ba 233.527†	12398.7	302.68	µg/L	3.518	302.68	ppb	3.518	1.16%
Be 313.107†	10885.5	14.419	µg/L	0.1233	14.419	ppb	0.1233	0.86%
Ca 317.933Radial†	63140.1	11959	µg/L	148.1	11959	ppb	148.1	1.24%
Cd 226.502†	346.9	2.7238	µg/L	0.11756	2.7238	ppb	0.11756	4.32%
Co 228.616†	509.3	17.525	µg/L	0.5193	17.525	ppb	0.5193	2.96%
Cr 267.716†	79161.7	1550.1	µg/L	18.15	1550.1	ppb	18.15	1.17%
Cu 324.752†	68077.1	491.84	µg/L	4.859	491.84	ppb	4.859	0.99%
Fe 238.204 Radial†	106561.4	76421	µg/L	609.5	76421	ppb	609.5	0.80%
K 766.490 Radial†	6137.2	3358.8	µg/L	29.32	3358.8	ppb	29.32	0.87%
Mg 279.077 IEC†	2181.4	4349.4	µg/L	75.08	4349.4	ppb	75.08	1.73%
Mn 257.610†	1038131.2	2977.2	µg/L	12.99	2977.2	ppb	12.99	0.44%
Mo 202.031†	665.2	74.118	µg/L	0.8000	74.118	ppb	0.8000	1.08%
Na 589.592 Radial†	2793.5	670.50	µg/L	10.214	670.50	ppb	10.214	1.52%

Ni 231.604†	9275.4	467.69	µg/L	5.060	467.69	ppb	5.060	1.08%
P 214.914†	630.8	926.94	µg/L	9.374	926.94	ppb	9.374	1.01%
Pb 220.353†	1275.6	297.84	µg/L	2.284	297.84	ppb	2.284	0.77%
S 181.975 Axial†	98.0	421.46	µg/L	28.155	421.46	ppb	28.155	6.68%
Sb 206.836†	22.8	21.899	µg/L	0.3823	21.899	ppb	0.3823	1.75%
Se 196.026†	-43.3	-12.791	µg/L	6.2316	-12.791	ppb	6.2316	48.72%
SiO2†	113235.7	19985	µg/L	199.9	19985	ppb	199.9	1.00%
Si 251.611†	130965.4	9175.4	µg/L	88.42	9175.4	ppb	88.42	0.96%
Sn 189.927†	-5.3	19.504	µg/L	1.8238	19.504	ppb	1.8238	9.35%
Sr 421.552†	16727.1	72.032	µg/L	0.7936	72.032	ppb	0.7936	1.10%
Ti 334.940†	1221977.4	2763.8	µg/L	12.19	2763.8	ppb	12.19	0.44%
Tl 190.801†	-21.6	-23.218	µg/L	4.6323	-23.218	ppb	4.6323	19.95%
U 409.014†	-624.7	-74.409	µg/L	3.5763	-74.409	ppb	3.5763	4.81%
V 292.402†	5211.5	63.222	µg/L	0.7182	63.222	ppb	0.7182	1.14%
Zn 213.857†	62508.4	1511.6	µg/L	18.47	1511.6	ppb	18.47	1.22%

Sequence No.: 17
Sample ID: 232429007|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 313
Date Collected: 7/2/2009 11:25:12
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429007|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	177956.0	177956.0	102	%			11:25:45
1	Al 396.153Radial†	33143.6	32587.7	13711	µg/L	13711	ppb	11:25:45
1	Ca 317.933Radial†	39555.4	37815.6	7162.3	µg/L	7162.3	ppb	11:25:45
1	Fe 238.204 Radial†	107138.3	104818.1	75171	µg/L	75171	ppb	11:25:45
1	K 766.490 Radial†	6896.3	5975.2	3270.1	µg/L	3270.1	ppb	11:25:45
1	Mg 279.077 IEC†	1661.5	1582.0	3120.2	µg/L	3120.2	ppb	11:26:05
1	Na 589.592 Radial†	2520.8	2347.1	563.36	µg/L	563.36	ppb	11:26:05
1	Sr 421.552†	11210.4	10898.1	46.930	µg/L	46.930	ppb	11:25:45
1	Sc 361.383	2230591.9	2230591.9	101.77	%			11:27:10
1	Y 371.029	1517601.5	1517601.5	108.19	%			11:27:10
1	Ag 328.068†	-1093.8	-252.8	4.0506	µg/L	4.0506	ppb	11:27:15
1	As 188.979†	12.3	9.9	82.178	µg/L	82.178	ppb	11:27:36
1	B 249.677†	1060.5	833.5	10.392	µg/L	10.392	ppb	11:27:15
1	Ba 233.527†	11529.7	11410.4	278.55	µg/L	278.55	ppb	11:27:15
1	Be 313.107†	21979.0	17938.7	19.195	µg/L	19.195	ppb	11:27:15
1	Cd 226.502†	172.4	309.7	1.4711	µg/L	1.4711	ppb	11:27:36
1	Co 228.616†	242.2	339.5	9.2216	µg/L	9.2216	ppb	11:27:36
1	Cr 267.716†	14584.9	14514.0	284.26	µg/L	284.26	ppb	11:27:15
1	Cu 324.752†	19120.7	14123.9	110.01	µg/L	110.01	ppb	11:27:15
1	Mn 257.610†	1073298.4	1054606.4	3024.4	µg/L	3024.4	ppb	11:27:10
1	Mo 202.031†	160.2	158.4	19.885	µg/L	19.885	ppb	11:27:36
1	Ni 231.604†	1608.0	1136.8	57.300	µg/L	57.300	ppb	11:27:36
1	P 214.914†	821.6	573.2	893.12	µg/L	893.12	ppb	11:27:36
1	Pb 220.353†	420.7	369.0	86.313	µg/L	86.313	ppb	11:27:36
1	S 181.975 Axial†	96.0	50.0	209.50	µg/L	209.50	ppb	11:27:36
1	Sb 206.836†	21.3	-0.3	9.0252	µg/L	9.0252	ppb	11:27:36
1	Se 196.026†	-17.4	-36.7	-5.8874	µg/L	-5.8874	ppb	11:27:36
1	SiO2†	101130.2	96201.9	16978	µg/L	16978	ppb	11:27:15
1	Si 251.611†	113531.6	111170.0	7766.2	µg/L	7766.2	ppb	11:27:15
1	Sn 189.927†	-14.3	-21.2	11.262	µg/L	11.262	ppb	11:27:36
1	Ti 334.940†	1345353.3	1320886.9	2987.7	µg/L	2987.7	ppb	11:27:10
1	Tl 190.801†	-46.8	-21.2	-20.628	µg/L	-20.628	ppb	11:27:36
1	U 409.014†	-962.7	-979.2	-107.10	µg/L	-107.10	ppb	11:27:10
1	V 292.402†	4593.4	4676.8	56.882	µg/L	56.882	ppb	11:27:15
1	Zn 213.857†	24895.4	23740.3	571.78	µg/L	571.78	ppb	11:27:15
2	Sc RADIAL	175243.2	175243.2	101	%			11:26:11
2	Al 396.153Radial†	33325.9	33270.6	13998	µg/L	13998	ppb	11:26:11
2	Ca 317.933Radial†	39826.6	38683.9	7326.7	µg/L	7326.7	ppb	11:26:11
2	Fe 238.204 Radial†	107772.8	107070.5	76786	µg/L	76786	ppb	11:26:11
2	K 766.490 Radial†	6820.1	6003.9	3285.8	µg/L	3285.8	ppb	11:26:11
2	Mg 279.077 IEC†	1663.3	1609.0	3172.8	µg/L	3172.8	ppb	11:26:31
2	Na 589.592 Radial†	2498.9	2363.5	567.30	µg/L	567.30	ppb	11:26:31
2	Sr 421.552†	11279.1	11136.1	47.955	µg/L	47.955	ppb	11:26:11
2	Sc 361.383	2223465.3	2223465.3	101.44	%			11:27:43
2	Y 371.029	1512281.2	1512281.2	107.81	%			11:27:43
2	Ag 328.068†	-1129.1	-291.1	3.8437	µg/L	3.8437	ppb	11:27:49
2	As 188.979†	11.4	9.0	82.086	µg/L	82.086	ppb	11:28:09
2	B 249.677†	1039.9	816.5	9.1914	µg/L	9.1914	ppb	11:27:49
2	Ba 233.527†	11623.2	11538.9	281.69	µg/L	281.69	ppb	11:27:49
2	Be 313.107†	22085.8	18113.2	19.325	µg/L	19.325	ppb	11:27:49
2	Cd 226.502†	175.9	313.7	1.4507	µg/L	1.4507	ppb	11:28:09
2	Co 228.616†	231.9	330.1	8.7711	µg/L	8.7711	ppb	11:28:09
2	Cr 267.716†	14667.0	14640.8	286.75	µg/L	286.75	ppb	11:27:49
2	Cu 324.752†	19271.1	14332.3	111.71	µg/L	111.71	ppb	11:27:49
2	Mn 257.610†	1074644.9	1059314.1	3037.9	µg/L	3037.9	ppb	11:27:43
2	Mo 202.031†	150.9	149.7	19.025	µg/L	19.025	ppb	11:28:09
2	Ni 231.604†	1590.8	1124.9	56.702	µg/L	56.702	ppb	11:28:09
2	P 214.914†	822.6	576.8	897.36	µg/L	897.36	ppb	11:28:09
2	Pb 220.353†	416.7	366.3	85.679	µg/L	85.679	ppb	11:28:09

2	S 181.975 Axial†	96.3	50.6	211.72 µg/L	211.72 ppb	11:28:09
2	Sb 206.836†	19.6	-1.9	7.6304 µg/L	7.6304 ppb	11:28:09
2	Se 196.026†	-22.4	-41.6	-10.634 µg/L	-10.634 ppb	11:28:09
2	SiO2†	101628.3	97011.4	17121 µg/L	17121 ppb	11:27:49
2	Si 251.611†	114172.6	112159.4	7835.9 µg/L	7835.9 ppb	11:27:49
2	Sn 189.927†	-10.7	-17.7	13.239 µg/L	13.239 ppb	11:28:09
2	Ti 334.940†	1345329.1	1325100.3	2997.3 µg/L	2997.3 ppb	11:27:43
2	Tl 190.801†	-54.2	-28.7	-31.101 µg/L	-31.101 ppb	11:28:09
2	U 409.014†	-799.0	-820.8	-92.492 µg/L	-92.492 ppb	11:27:43
2	V 292.402†	4624.8	4722.2	57.525 µg/L	57.525 ppb	11:27:49
2	Zn 213.857†	25015.5	23937.2	576.46 µg/L	576.46 ppb	11:27:49
3	Sc RADIAL	178710.8	178710.8	103 %		11:26:37
3	Al 396.153Radial†	33320.2	32622.8	13726 µg/L	13726 ppb	11:26:37
3	Ca 317.933Radial†	39748.7	37840.5	7167.0 µg/L	7167.0 ppb	11:26:37
3	Fe 238.204 Radial†	107544.5	104771.2	75137 µg/L	75137 ppb	11:26:37
3	K 766.490 Radial†	6921.3	5971.0	3267.8 µg/L	3267.8 ppb	11:26:37
3	Mg 279.077 IEC†	1651.3	1565.2	3085.7 µg/L	3085.7 ppb	11:26:57
3	Na 589.592 Radial†	2475.4	2292.5	550.25 µg/L	550.25 ppb	11:26:57
3	Sr 421.552†	11257.2	10897.4	46.927 µg/L	46.927 ppb	11:26:37
3	Sc 361.383	2235473.0	2235473.0	101.99 %		11:28:17
3	Y 371.029	1522297.0	1522297.0	108.52 %		11:28:17
3	Ag 328.068†	-1118.0	-274.2	3.8538 µg/L	3.8538 ppb	11:28:22
3	As 188.979†	17.2	14.6	89.758 µg/L	89.758 ppb	11:28:43
3	B 249.677†	996.2	768.2	7.7351 µg/L	7.7351 ppb	11:28:22
3	Ba 233.527†	11486.5	11343.3	276.91 µg/L	276.91 ppb	11:28:22
3	Be 313.107†	21962.7	17875.5	19.228 µg/L	19.228 ppb	11:28:22
3	Cd 226.502†	173.7	310.6	1.5049 µg/L	1.5049 ppb	11:28:43
3	Co 228.616†	233.5	330.5	8.7584 µg/L	8.7584 ppb	11:28:43
3	Cr 267.716†	14655.5	14551.9	285.01 µg/L	285.01 ppb	11:28:22
3	Cu 324.752†	19144.1	14105.8	109.88 µg/L	109.88 ppb	11:28:22
3	Mn 257.610†	1083539.9	1062345.3	3046.6 µg/L	3046.6 ppb	11:28:17
3	Mo 202.031†	150.2	148.3	18.802 µg/L	18.802 ppb	11:28:43
3	Ni 231.604†	1609.9	1135.2	57.220 µg/L	57.220 ppb	11:28:43
3	P 214.914†	826.4	576.1	898.27 µg/L	898.27 ppb	11:28:43
3	Pb 220.353†	428.3	375.5	87.819 µg/L	87.819 ppb	11:28:43
3	S 181.975 Axial†	96.7	50.5	211.50 µg/L	211.50 ppb	11:28:43
3	Sb 206.836†	25.2	3.5	12.405 µg/L	12.405 ppb	11:28:43
3	Se 196.026†	-30.8	-49.7	-20.357 µg/L	-20.357 ppb	11:28:43
3	SiO2†	100297.7	95168.7	16796 µg/L	16796 ppb	11:28:22
3	Si 251.611†	112760.0	110169.9	7694.5 µg/L	7694.5 ppb	11:28:22
3	Sn 189.927†	-9.8	-16.7	13.207 µg/L	13.207 ppb	11:28:43
3	Ti 334.940†	1359117.6	1331496.2	3011.7 µg/L	3011.7 ppb	11:28:17
3	Tl 190.801†	-50.3	-24.6	-25.261 µg/L	-25.261 ppb	11:28:43
3	U 409.014†	-809.7	-827.1	-92.760 µg/L	-92.760 ppb	11:28:17
3	V 292.402†	4524.8	4599.7	56.058 µg/L	56.058 ppb	11:28:22
3	Zn 213.857†	24782.9	23576.7	567.80 µg/L	567.80 ppb	11:28:22

Mean Data: 232429007|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2229843.4	101.73	%	0.276				0.27%
Sc RADIAL	177303.3	102	%	1.0				1.03%
Y 371.029	1517393.2	108.18	%	0.357				0.33%
Ag 328.068†	-272.7	3.9160	µg/L	0.11665	3.9160	ppb	0.11665	2.98%
Al 396.153Radial†	32827.0	13812	µg/L	161.8	13812	ppb	161.8	1.17%
As 188.979†	11.2	84.674	µg/L	4.4030	84.674	ppb	4.4030	5.20%
B 249.677†	806.1	9.1063	µg/L	1.33071	9.1063	ppb	1.33071	14.61%
Ba 233.527†	11430.8	279.05	µg/L	2.427	279.05	ppb	2.427	0.87%
Be 313.107†	17975.8	19.250	µg/L	0.0675	19.250	ppb	0.0675	0.35%
Ca 317.933Radial†	38113.3	7218.7	µg/L	93.62	7218.7	ppb	93.62	1.30%
Cd 226.502†	311.3	1.4756	µg/L	0.02738	1.4756	ppb	0.02738	1.86%
Co 228.616†	333.4	8.9170	µg/L	0.26380	8.9170	ppb	0.26380	2.96%
Cr 267.716†	14568.9	285.34	µg/L	1.276	285.34	ppb	1.276	0.45%
Cu 324.752†	14187.3	110.53	µg/L	1.017	110.53	ppb	1.017	0.92%
Fe 238.204 Radial†	105553.3	75698	µg/L	942.5	75698	ppb	942.5	1.25%
K 766.490 Radial†	5983.4	3274.6	µg/L	9.82	3274.6	ppb	9.82	0.30%
Mg 279.077 IEC†	1585.4	3126.2	µg/L	43.86	3126.2	ppb	43.86	1.40%
Mn 257.610†	1058755.2	3036.3	µg/L	11.18	3036.3	ppb	11.18	0.37%
Mo 202.031†	152.1	19.237	µg/L	0.5719	19.237	ppb	0.5719	2.97%
Na 589.592 Radial†	2334.4	560.30	µg/L	8.930	560.30	ppb	8.930	1.59%

Ni 231.604†	1132.3	57.074	µg/L	0.3248	57.074	ppb	0.3248	0.57%
P 214.914†	575.4	896.25	µg/L	2.749	896.25	ppb	2.749	0.31%
Pb 220.353†	370.3	86.604	µg/L	1.0991	86.604	ppb	1.0991	1.27%
S 181.975 Axial†	50.3	210.91	µg/L	1.229	210.91	ppb	1.229	0.58%
Sb 206.836†	0.4	9.6867	µg/L	2.45495	9.6867	ppb	2.45495	25.34%
Se 196.026†	-42.7	-12.293	µg/L	7.3762	-12.293	ppb	7.3762	60.00%
SiO2†	96127.3	16965	µg/L	163.0	16965	ppb	163.0	0.96%
Si 251.611†	111166.4	7765.5	µg/L	70.74	7765.5	ppb	70.74	0.91%
Sn 189.927†	-18.5	12.569	µg/L	1.1325	12.569	ppb	1.1325	9.01%
Sr 421.552†	10977.2	47.271	µg/L	0.5926	47.271	ppb	0.5926	1.25%
Ti 334.940†	1325827.8	2998.9	µg/L	12.08	2998.9	ppb	12.08	0.40%
Tl 190.801†	-24.8	-25.664	µg/L	5.2478	-25.664	ppb	5.2478	20.45%
U 409.014†	-875.7	-97.452	µg/L	8.3605	-97.452	ppb	8.3605	8.58%
V 292.402†	4666.2	56.822	µg/L	0.7354	56.822	ppb	0.7354	1.29%
Zn 213.857†	23751.4	572.01	µg/L	4.332	572.01	ppb	4.332	0.76%

Sequence No.: 18
Sample ID: 232429008|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 314
Date Collected: 7/2/2009 11:28:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429008|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174358.5	174358.5	100	%			11:29:24
1	Al 396.153Radial†	48790.7	48876.7	20565	µg/L	20565	ppb	11:29:24
1	Ca 317.933Radial†	61113.8	60135.2	11390	µg/L	11390	ppb	11:29:30
1	Fe 238.204 Radial†	168432.5	168169.1	120600	µg/L	120600	ppb	11:29:24
1	K 766.490 Radial†	6587.6	5806.2	3177.6	µg/L	3177.6	ppb	11:29:30
1	Mg 279.077 IEC†	2545.4	2497.9	4923.3	µg/L	4923.3	ppb	11:29:30
1	Na 589.592 Radial†	2671.3	2548.3	611.64	µg/L	611.64	ppb	11:29:30
1	Sr 421.552†	16448.9	16353.8	70.424	µg/L	70.424	ppb	11:29:30
1	Sc 361.383	2200105.2	2200105.2	100.38	%			11:30:03
1	Y 371.029	1432387.6	1432387.6	102.12	%			11:30:03
1	Ag 328.068†	-1331.9	-504.9	5.7541	µg/L	5.7541	ppb	11:30:09
1	As 188.979†	10.4	8.1	119.91	µg/L	119.91	ppb	11:30:30
1	B 249.677†	1286.6	1073.2	5.8922	µg/L	5.8922	ppb	11:30:09
1	Ba 233.527†	11528.8	11566.5	282.47	µg/L	282.47	ppb	11:30:09
1	Be 313.107†	12233.3	8528.7	19.246	µg/L	19.246	ppb	11:30:09
1	Cd 226.502†	375.4	514.3	2.8957	µg/L	2.8957	ppb	11:30:09
1	Co 228.616†	561.8	661.2	19.854	µg/L	19.854	ppb	11:30:30
1	Cr 267.716†	118575.4	118313.4	2316.8	µg/L	2316.8	ppb	11:30:09
1	Cu 324.752†	74109.9	69167.3	505.49	µg/L	505.49	ppb	11:30:09
1	Mn 257.610†	937407.3	933838.8	2678.4	µg/L	2678.4	ppb	11:30:03
1	Mo 202.031†	174.1	174.3	23.377	µg/L	23.377	ppb	11:30:30
1	Ni 231.604†	3000.3	2545.8	128.33	µg/L	128.33	ppb	11:30:30
1	P 214.914†	1007.2	769.3	1113.7	µg/L	1113.7	ppb	11:30:30
1	Pb 220.353†	1016.9	968.7	225.40	µg/L	225.40	ppb	11:30:30
1	S 181.975 Axial†	160.9	115.9	494.05	µg/L	494.05	ppb	11:30:30
1	Sb 206.836†	34.5	13.1	17.960	µg/L	17.960	ppb	11:30:30
1	Se 196.026†	-47.2	-66.6	-18.024	µg/L	-18.024	ppb	11:30:30
1	SiO2†	148603.5	144874.4	25568	µg/L	25568	ppb	11:30:03
1	Si 251.611†	166955.0	165939.2	11577	µg/L	11577	ppb	11:30:09
1	Sn 189.927†	-3.2	-10.4	28.422	µg/L	28.422	ppb	11:30:30
1	Ti 334.940†	2172959.1	2163710.6	4894.2	µg/L	4894.2	ppb	11:30:03
1	Tl 190.801†	-59.4	-34.4	-24.582	µg/L	-24.582	ppb	11:30:30
1	U 409.014†	-264.1	-296.3	-51.629	µg/L	-51.629	ppb	11:30:09
1	V 292.402†	9127.5	9256.5	110.43	µg/L	110.43	ppb	11:30:09
1	Zn 213.857†	103753.2	102641.7	2486.9	µg/L	2486.9	ppb	11:30:09
2	Sc RADIAL	174830.2	174830.2	100	%			11:29:35
2	Al 396.153Radial†	48983.8	48937.6	20590	µg/L	20590	ppb	11:29:35
2	Ca 317.933Radial†	61993.5	60846.4	11524	µg/L	11524	ppb	11:29:40
2	Fe 238.204 Radial†	168491.5	167774.2	120320	µg/L	120320	ppb	11:29:35
2	K 766.490 Radial†	6567.7	5768.6	3157.1	µg/L	3157.1	ppb	11:29:40
2	Mg 279.077 IEC†	2575.8	2521.3	4971.7	µg/L	4971.7	ppb	11:29:40
2	Na 589.592 Radial†	2744.3	2613.7	627.36	µg/L	627.36	ppb	11:29:40
2	Sr 421.552†	16655.3	16515.0	71.118	µg/L	71.118	ppb	11:29:40
2	Sc 361.383	2229239.4	2229239.4	101.71	%			11:30:37
2	Y 371.029	1451489.0	1451489.0	103.48	%			11:30:37
2	Ag 328.068†	-1327.1	-482.9	5.9052	µg/L	5.9052	ppb	11:30:42
2	As 188.979†	-3.2	-5.4	98.030	µg/L	98.030	ppb	11:31:03
2	B 249.677†	1258.2	1028.6	4.1579	µg/L	4.1579	ppb	11:30:42
2	Ba 233.527†	11373.6	11263.8	275.07	µg/L	275.07	ppb	11:30:42
2	Be 313.107†	12062.8	8201.8	18.969	µg/L	18.969	ppb	11:30:42
2	Cd 226.502†	401.3	534.9	3.3946	µg/L	3.3946	ppb	11:30:42
2	Co 228.616†	553.1	645.4	19.197	µg/L	19.197	ppb	11:31:03
2	Cr 267.716†	117138.0	115356.3	2258.9	µg/L	2258.9	ppb	11:30:42
2	Cu 324.752†	73277.9	67384.4	492.84	µg/L	492.84	ppb	11:30:42
2	Mn 257.610†	944608.0	928713.6	2663.7	µg/L	2663.7	ppb	11:30:37
2	Mo 202.031†	176.6	174.6	23.392	µg/L	23.392	ppb	11:31:03
2	Ni 231.604†	3001.6	2508.0	126.43	µg/L	126.43	ppb	11:31:03
2	P 214.914†	1014.1	763.0	1105.2	µg/L	1105.2	ppb	11:31:03
2	Pb 220.353†	1005.9	944.6	219.82	µg/L	219.82	ppb	11:31:03

2	S 181.975 Axial†	165.2	118.1	503.44 µg/L	503.44 ppb	11:31:03
2	Sb 206.836†	51.8	29.7	32.556 µg/L	32.556 ppb	11:31:03
2	Se 196.026†	-43.8	-62.6	-13.728 µg/L	-13.728 ppb	11:31:03
2	SiO2†	149914.6	144228.6	25454 µg/L	25454 ppb	11:30:37
2	Si 251.611†	164920.3	161764.7	11283 µg/L	11283 ppb	11:30:42
2	Sn 189.927†	-15.7	-22.6	22.992 µg/L	22.992 ppb	11:31:03
2	Ti 334.940†	2188519.0	2150717.3	4864.8 µg/L	4864.8 ppb	11:30:37
2	Tl 190.801†	-58.6	-32.8	-22.493 µg/L	-22.493 ppb	11:31:03
2	U 409.014†	-367.9	-394.9	-60.890 µg/L	-60.890 ppb	11:30:42
2	V 292.402†	8967.5	8980.3	107.39 µg/L	107.39 ppb	11:30:42
2	Zn 213.857†	102389.1	99949.6	2421.5 µg/L	2421.5 ppb	11:30:42
3	Sc RADIAL	175874.0	175874.0	101 %		11:29:46
3	Al 396.153Radial†	49257.1	48918.6	20582 µg/L	20582 ppb	11:29:46
3	Ca 317.933Radial†	61023.6	59520.3	11273 µg/L	11273 ppb	11:29:51
3	Fe 238.204 Radial†	169757.6	168031.6	120500 µg/L	120500 ppb	11:29:46
3	K 766.490 Radial†	6559.1	5721.3	3131.1 µg/L	3131.1 ppb	11:29:51
3	Mg 279.077 IEC†	2538.6	2469.3	4864.7 µg/L	4864.7 ppb	11:29:51
3	Na 589.592 Radial†	2673.4	2527.4	606.64 µg/L	606.64 ppb	11:29:51
3	Sr 421.552†	16381.0	16145.2	69.525 µg/L	69.525 ppb	11:29:51
3	Sc 361.383	2206395.7	2206395.7	100.66 %		11:31:10
3	Y 371.029	1438548.0	1438548.0	102.55 %		11:31:10
3	Ag 328.068†	-1330.0	-499.2	5.7917 µg/L	5.7917 ppb	11:31:16
3	As 188.979†	7.6	5.3	115.54 µg/L	115.54 ppb	11:31:36
3	B 249.677†	1309.5	1092.3	6.7023 µg/L	6.7023 ppb	11:31:16
3	Ba 233.527†	11572.5	11577.2	282.73 µg/L	282.73 ppb	11:31:16
3	Be 313.107†	12248.7	8509.3	19.387 µg/L	19.387 ppb	11:31:16
3	Cd 226.502†	348.1	486.1	2.2388 µg/L	2.2388 ppb	11:31:16
3	Co 228.616†	564.9	662.7	19.817 µg/L	19.817 ppb	11:31:36
3	Cr 267.716†	118302.9	117705.9	2304.9 µg/L	2304.9 ppb	11:31:16
3	Cu 324.752†	74033.3	68880.7	503.45 µg/L	503.45 ppb	11:31:16
3	Mn 257.610†	949905.9	943592.5	2706.4 µg/L	2706.4 ppb	11:31:10
3	Mo 202.031†	193.3	193.0	25.366 µg/L	25.366 ppb	11:31:36
3	Ni 231.604†	3008.8	2545.7	128.33 µg/L	128.33 ppb	11:31:36
3	P 214.914†	1013.2	772.4	1119.6 µg/L	1119.6 ppb	11:31:36
3	Pb 220.353†	1007.8	956.7	222.62 µg/L	222.62 ppb	11:31:36
3	S 181.975 Axial†	160.0	114.6	488.26 µg/L	488.26 ppb	11:31:36
3	Sb 206.836†	47.6	26.0	29.452 µg/L	29.452 ppb	11:31:36
3	Se 196.026†	-46.8	-66.0	-17.443 µg/L	-17.443 ppb	11:31:36
3	SiO2†	149434.6	145277.9	25640 µg/L	25640 ppb	11:31:10
3	Si 251.611†	168292.4	166793.5	11636 µg/L	11636 ppb	11:31:16
3	Sn 189.927†	-4.5	-11.6	27.828 µg/L	27.828 ppb	11:31:36
3	Ti 334.940†	2202458.1	2186843.3	4946.5 µg/L	4946.5 ppb	11:31:10
3	Tl 190.801†	-53.0	-27.9	-15.162 µg/L	-15.162 ppb	11:31:36
3	U 409.014†	-277.8	-309.1	-52.813 µg/L	-52.813 ppb	11:31:16
3	V 292.402†	9089.8	9193.0	109.75 µg/L	109.75 ppb	11:31:16
3	Zn 213.857†	103519.8	102115.2	2474.1 µg/L	2474.1 ppb	11:31:16

Mean Data: 232429008|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2211913.4	100.91	%	0.699				0.69%
Sc RADIAL	175020.9	101	%	0.4				0.44%
Y 371.029	1440808.2	102.72	%	0.695				0.68%
Ag 328.068†	-495.7	5.8170	µg/L	0.07866	5.8170	ppb	0.07866	1.35%
Al 396.153Radial†	48911.0	20579	µg/L	13.1	20579	ppb	13.1	0.06%
As 188.979†	2.7	111.16	µg/L	11.577	111.16	ppb	11.577	10.42%
B 249.677†	1064.7	5.5841	µg/L	1.29989	5.5841	ppb	1.29989	23.28%
Ba 233.527†	11469.1	280.09	µg/L	4.345	280.09	ppb	4.345	1.55%
Be 313.107†	8413.3	19.201	µg/L	0.2126	19.201	ppb	0.2126	1.11%
Ca 317.933Radial†	60167.3	11396	µg/L	125.7	11396	ppb	125.7	1.10%
Cd 226.502†	511.7	2.8430	µg/L	0.57965	2.8430	ppb	0.57965	20.39%
Co 228.616†	656.4	19.623	µg/L	0.3696	19.623	ppb	0.3696	1.88%
Cr 267.716†	117125.2	2293.5	µg/L	30.58	2293.5	ppb	30.58	1.33%
Cu 324.752†	68477.5	500.59	µg/L	6.792	500.59	ppb	6.792	1.36%
Fe 238.204 Radial†	167991.6	120480	µg/L	143.8	120480	ppb	143.8	0.12%
K 766.490 Radial†	5765.4	3155.3	µg/L	23.29	3155.3	ppb	23.29	0.74%
Mg 279.077 IEC†	2496.1	4919.9	µg/L	53.56	4919.9	ppb	53.56	1.09%
Mn 257.610†	935381.6	2682.8	µg/L	21.67	2682.8	ppb	21.67	0.81%
Mo 202.031†	180.6	24.045	µg/L	1.1437	24.045	ppb	1.1437	4.76%
Na 589.592 Radial†	2563.1	615.21	µg/L	10.811	615.21	ppb	10.811	1.76%

Ni 231.604†	2533.1	127.69	µg/L	1.098	127.69	ppb	1.098	0.86%
P 214.914†	768.2	1112.8	µg/L	7.23	1112.8	ppb	7.23	0.65%
Pb 220.353†	956.7	222.61	µg/L	2.789	222.61	ppb	2.789	1.25%
S 181.975 Axial†	116.2	495.25	µg/L	7.664	495.25	ppb	7.664	1.55%
Sb 206.836†	22.9	26.656	µg/L	7.6891	26.656	ppb	7.6891	28.85%
Se 196.026†	-65.1	-16.398	µg/L	2.3309	-16.398	ppb	2.3309	14.21%
SiO2†	144793.6	25554	µg/L	93.4	25554	ppb	93.4	0.37%
Si 251.611†	164832.5	11498	µg/L	189.2	11498	ppb	189.2	1.65%
Sn 189.927†	-14.9	26.414	µg/L	2.9784	26.414	ppb	2.9784	11.28%
Sr 421.552†	16338.0	70.356	µg/L	0.7985	70.356	ppb	0.7985	1.13%
Ti 334.940†	2167090.4	4901.8	µg/L	41.40	4901.8	ppb	41.40	0.84%
Tl 190.801†	-31.7	-20.746	µg/L	4.9471	-20.746	ppb	4.9471	23.85%
U 409.014†	-333.4	-55.111	µg/L	5.0397	-55.111	ppb	5.0397	9.14%
V 292.402†	9143.3	109.19	µg/L	1.593	109.19	ppb	1.593	1.46%
Zn 213.857†	101568.8	2460.9	µg/L	34.68	2460.9	ppb	34.68	1.41%

Sequence No.: 19
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 11:31:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	177394.3	177394.3	102	%			11:32:20
1	Al 396.153Radial†	12154.3	12095.7	5070.1	µg/L	5070.1	ppb	11:32:26
1	Ca 317.933Radial†	28361.4	26954.6	5105.2	µg/L	5105.2	ppb	11:32:26
1	Fe 238.204 Radial†	7292.5	7181.6	5167.1	µg/L	5167.1	ppb	11:32:26
1	K 766.490 Radial†	10221.9	9259.6	5067.6	µg/L	5067.6	ppb	11:32:26
1	Mg 279.077 IEC†	2607.6	2515.5	5165.8	µg/L	5165.8	ppb	11:32:26
1	Na 589.592 Radial†	42982.2	42055.5	10094	µg/L	10094	ppb	11:32:20
1	Sr 421.552†	118557.1	116261.1	500.65	µg/L	500.65	ppb	11:32:20
1	Sc 361.383	2232103.7	2232103.7	101.84	%			11:33:00
1	Y 371.029	1421215.9	1421215.9	101.32	%			11:33:00
1	Ag 328.068†	57636.9	57419.7	509.92	µg/L	509.92	ppb	11:33:05
1	As 188.979†	321.8	313.7	500.85	µg/L	500.85	ppb	11:33:26
1	B 249.677†	12715.1	12277.3	499.63	µg/L	499.63	ppb	11:33:05
1	Ba 233.527†	21024.2	20726.1	506.84	µg/L	506.84	ppb	11:33:05
1	Be 313.107†	879897.8	860375.7	504.67	µg/L	504.67	ppb	11:33:00
1	Cd 226.502†	21840.5	21587.0	509.30	µg/L	509.30	ppb	11:33:05
1	Co 228.616†	11311.4	11209.0	509.30	µg/L	509.30	ppb	11:33:05
1	Cr 267.716†	26103.2	25814.9	506.21	µg/L	506.21	ppb	11:33:05
1	Cu 324.752†	75587.7	69560.1	492.75	µg/L	492.75	ppb	11:33:05
1	Mn 257.610†	179115.0	175829.5	504.20	µg/L	504.20	ppb	11:33:00
1	Mo 202.031†	4817.1	4731.2	505.97	µg/L	505.97	ppb	11:33:26
1	Ni 231.604†	10727.8	10091.0	508.10	µg/L	508.10	ppb	11:33:05
1	P 214.914†	1700.9	1436.1	2411.6	µg/L	2411.6	ppb	11:33:26
1	Pb 220.353†	2252.3	2167.3	506.40	µg/L	506.40	ppb	11:33:26
1	S 181.975 Axial†	267.5	218.3	963.88	µg/L	963.88	ppb	11:33:26
1	Sb 206.836†	608.4	576.2	501.79	µg/L	501.79	ppb	11:33:26
1	Se 196.026†	474.1	446.0	494.79	µg/L	494.79	ppb	11:33:26
1	SiO2†	34858.2	31057.3	5481.2	µg/L	5481.2	ppb	11:33:05
1	Si 251.611†	37411.1	36346.3	2526.2	µg/L	2526.2	ppb	11:33:05
1	Sn 189.927†	1190.9	1162.3	513.16	µg/L	513.16	ppb	11:33:26
1	Ti 334.940†	229246.7	224006.8	506.55	µg/L	506.55	ppb	11:33:00
1	Tl 190.801†	332.1	350.8	491.83	µg/L	491.83	ppb	11:33:26
1	U 409.014†	5471.3	5339.5	502.00	µg/L	502.00	ppb	11:33:05
1	V 292.402†	47154.1	46467.1	509.30	µg/L	509.30	ppb	11:33:05
1	Zn 213.857†	21924.7	20806.7	501.42	µg/L	501.42	ppb	11:33:05
2	Sc RADIAL	176187.2	176187.2	101	%			11:32:31
2	Al 396.153Radial†	12311.7	12332.9	5169.9	µg/L	5169.9	ppb	11:32:37
2	Ca 317.933Radial†	28716.1	27495.7	5207.7	µg/L	5207.7	ppb	11:32:37
2	Fe 238.204 Radial†	7325.1	7262.9	5225.4	µg/L	5225.4	ppb	11:32:37
2	K 766.490 Radial†	10319.1	9424.4	5157.8	µg/L	5157.8	ppb	11:32:37
2	Mg 279.077 IEC†	2638.3	2563.3	5263.8	µg/L	5263.8	ppb	11:32:37
2	Na 589.592 Radial†	43286.5	42645.1	10236	µg/L	10236	ppb	11:32:31
2	Sr 421.552†	119529.5	118018.7	508.22	µg/L	508.22	ppb	11:32:31
2	Sc 361.383	2238064.0	2238064.0	102.11	%			11:33:33
2	Y 371.029	1424574.6	1424574.6	101.56	%			11:33:33
2	Ag 328.068†	57878.2	57505.3	510.68	µg/L	510.68	ppb	11:33:38
2	As 188.979†	326.0	317.0	506.05	µg/L	506.05	ppb	11:33:59
2	B 249.677†	12713.9	12242.8	498.20	µg/L	498.20	ppb	11:33:38
2	Ba 233.527†	21116.2	20761.1	507.69	µg/L	507.69	ppb	11:33:38
2	Be 313.107†	884570.6	862651.0	506.00	µg/L	506.00	ppb	11:33:33
2	Cd 226.502†	21928.5	21616.1	509.99	µg/L	509.99	ppb	11:33:38
2	Co 228.616†	11335.6	11203.1	509.03	µg/L	509.03	ppb	11:33:38
2	Cr 267.716†	26173.4	25815.4	506.22	µg/L	506.22	ppb	11:33:38
2	Cu 324.752†	75855.9	69625.0	493.22	µg/L	493.22	ppb	11:33:38
2	Mn 257.610†	179953.0	176181.8	505.21	µg/L	505.21	ppb	11:33:33
2	Mo 202.031†	4829.1	4730.4	505.89	µg/L	505.89	ppb	11:33:59
2	Ni 231.604†	10781.9	10116.0	509.36	µg/L	509.36	ppb	11:33:38
2	P 214.914†	1704.1	1434.8	2409.1	µg/L	2409.1	ppb	11:33:59
2	Pb 220.353†	2277.0	2185.6	510.67	µg/L	510.67	ppb	11:33:59

2	S 181.975 Axial†	269.9	220.0	971.38 µg/L	971.38 ppb	11:33:59
2	Sb 206.836†	607.4	573.6	499.50 µg/L	499.50 ppb	11:33:59
2	Se 196.026†	474.9	445.5	494.29 µg/L	494.29 ppb	11:33:59
2	SiO2†	35054.6	31158.6	5499.1 µg/L	5499.1 ppb	11:33:38
2	Si 251.611†	37562.1	36396.4	2529.9 µg/L	2529.9 ppb	11:33:38
2	Sn 189.927†	1188.0	1156.3	510.56 µg/L	510.56 ppb	11:33:59
2	Ti 334.940†	229804.5	223953.6	506.43 µg/L	506.43 ppb	11:33:33
2	Tl 190.801†	340.7	358.4	502.44 µg/L	502.44 ppb	11:33:59
2	U 409.014†	5484.0	5337.6	501.80 µg/L	501.80 ppb	11:33:38
2	V 292.402†	47302.1	46488.8	509.54 µg/L	509.54 ppb	11:33:38
2	Zn 213.857†	22034.1	20856.4	502.61 µg/L	502.61 ppb	11:33:38
3	Sc RADIAL	177332.4	177332.4	102 %		11:32:42
3	Al 396.153Radial†	12180.1	12125.2	5082.5 µg/L	5082.5 ppb	11:32:48
3	Ca 317.933Radial†	28414.8	27016.7	5117.0 µg/L	5117.0 ppb	11:32:48
3	Fe 238.204 Radial†	7238.5	7131.1	5130.9 µg/L	5130.9 ppb	11:32:48
3	K 766.490 Radial†	10204.9	9246.4	5060.4 µg/L	5060.4 ppb	11:32:48
3	Mg 279.077 IEC†	2619.5	2528.0	5191.7 µg/L	5191.7 ppb	11:32:48
3	Na 589.592 Radial†	42836.7	41927.5	10064 µg/L	10064 ppb	11:32:42
3	Sr 421.552†	118197.7	115948.8	499.31 µg/L	499.31 ppb	11:32:42
3	Sc 361.383	2226550.6	2226550.6	101.58 %		11:34:06
3	Y 371.029	1418220.1	1418220.1	101.11 %		11:34:06
3	Ag 328.068†	57345.9	57274.5	508.64 µg/L	508.64 ppb	11:34:12
3	As 188.979†	322.7	315.4	503.59 µg/L	503.59 ppb	11:34:32
3	B 249.677†	12702.2	12295.7	500.39 µg/L	500.39 ppb	11:34:12
3	Ba 233.527†	21014.9	20768.3	507.87 µg/L	507.87 ppb	11:34:12
3	Be 313.107†	884679.3	867237.7	508.69 µg/L	508.69 ppb	11:34:06
3	Cd 226.502†	21807.7	21608.3	509.81 µg/L	509.81 ppb	11:34:12
3	Co 228.616†	11297.3	11222.8	509.92 µg/L	509.92 ppb	11:34:12
3	Cr 267.716†	26079.5	25855.6	507.01 µg/L	507.01 ppb	11:34:12
3	Cu 324.752†	75318.1	69479.8	492.18 µg/L	492.18 ppb	11:34:12
3	Mn 257.610†	180778.7	177906.0	510.15 µg/L	510.15 ppb	11:34:06
3	Mo 202.031†	4816.2	4742.1	507.14 µg/L	507.14 ppb	11:34:32
3	Ni 231.604†	10706.5	10096.3	508.36 µg/L	508.36 ppb	11:34:12
3	P 214.914†	1701.0	1440.3	2419.0 µg/L	2419.0 ppb	11:34:32
3	Pb 220.353†	2245.4	2165.9	506.09 µg/L	506.09 ppb	11:34:32
3	S 181.975 Axial†	270.2	221.6	978.42 µg/L	978.42 ppb	11:34:32
3	Sb 206.836†	604.0	573.3	499.27 µg/L	499.27 ppb	11:34:32
3	Se 196.026†	481.8	454.7	504.41 µg/L	504.41 ppb	11:34:32
3	SiO2†	35017.5	31299.6	5524.0 µg/L	5524.0 ppb	11:34:12
3	Si 251.611†	37621.2	36644.8	2547.2 µg/L	2547.2 ppb	11:34:12
3	Sn 189.927†	1183.7	1158.1	511.32 µg/L	511.32 ppb	11:34:32
3	Ti 334.940†	230996.3	226290.5	511.72 µg/L	511.72 ppb	11:34:06
3	Tl 190.801†	341.6	361.1	506.21 µg/L	506.21 ppb	11:34:32
3	U 409.014†	5468.1	5349.7	502.97 µg/L	502.97 ppb	11:34:12
3	V 292.402†	47017.8	46448.5	509.11 µg/L	509.11 ppb	11:34:12
3	Zn 213.857†	21940.5	20875.9	503.10 µg/L	503.10 ppb	11:34:12

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	2232239.4	101.84	%	0.263				0.26%
Sc RADIAL	176971.3	102	%	0.4				0.38%
Y 371.029	1421336.9	101.33	%	0.227				0.22%
Ag 328.068†	57399.8	509.75	µg/L	1.034	509.75	ppb	1.034	0.20%
QC value within limits for Ag 328.068 Recovery = 101.95%								
Al 396.153Radial†	12184.6	5107.5	µg/L	54.41	5107.5	ppb	54.41	1.07%
QC value within limits for Al 396.153Radial Recovery = 102.15%								
As 188.979†	315.4	503.50	µg/L	2.601	503.50	ppb	2.601	0.52%
QC value within limits for As 188.979 Recovery = 100.70%								
B 249.677†	12272.0	499.41	µg/L	1.111	499.41	ppb	1.111	0.22%
QC value within limits for B 249.677 Recovery = 99.88%								
Ba 233.527†	20751.8	507.47	µg/L	0.552	507.47	ppb	0.552	0.11%
QC value within limits for Ba 233.527 Recovery = 101.49%								
Be 313.107†	863421.5	506.45	µg/L	2.052	506.45	ppb	2.052	0.41%
QC value within limits for Be 313.107 Recovery = 101.29%								
Ca 317.933Radial†	27155.7	5143.3	µg/L	56.08	5143.3	ppb	56.08	1.09%
QC value within limits for Ca 317.933Radial Recovery = 102.87%								
Cd 226.502†	21603.8	509.70	µg/L	0.354	509.70	ppb	0.354	0.07%
QC value within limits for Cd 226.502 Recovery = 101.94%								
Co 228.616†	11211.6	509.42	µg/L	0.454	509.42	ppb	0.454	0.09%

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   QC value within limits for Co 228.616  Recovery = 101.88%
Cr 267.716†            25828.6      506.48 µg/L        0.457      506.48 ppb          0.457   0.09%
   QC value within limits for Cr 267.716  Recovery = 101.30%
Cu 324.752†            69555.0      492.72 µg/L        0.521      492.72 ppb          0.521   0.11%
   QC value within limits for Cu 324.752  Recovery = 98.54%
Fe 238.204 Radial†      7191.8      5174.5 µg/L       47.65      5174.5 ppb          47.65   0.92%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.49%
K 766.490 Radial†       9310.1      5095.3 µg/L       54.26      5095.3 ppb          54.26   1.06%
   QC value within limits for K 766.490 Radial  Recovery = 101.91%
Mg 279.077 IEC†         2535.6      5207.1 µg/L       50.77      5207.1 ppb          50.77   0.98%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.14%
Mn 257.610†           176639.1      506.52 µg/L       3.186      506.52 ppb          3.186   0.63%
   QC value within limits for Mn 257.610  Recovery = 101.30%
Mo 202.031†             4734.6      506.33 µg/L       0.702      506.33 ppb          0.702   0.14%
   QC value within limits for Mo 202.031  Recovery = 101.27%
Na 589.592 Radial†     42209.3       10131 µg/L        91.9       10131 ppb           91.9   0.91%
   QC value within limits for Na 589.592 Radial  Recovery = 101.31%
Ni 231.604†            10101.1      508.60 µg/L       0.664      508.60 ppb          0.664   0.13%
   QC value within limits for Ni 231.604  Recovery = 101.72%
P 214.914†              1437.1      2413.3 µg/L        5.15      2413.3 ppb           5.15   0.21%
   QC value within limits for P 214.914  Recovery = 96.53%
Pb 220.353†             2172.9      507.72 µg/L       2.561      507.72 ppb          2.561   0.50%
   QC value within limits for Pb 220.353  Recovery = 101.54%
S 181.975 Axial†         220.0      971.23 µg/L       7.271      971.23 ppb          7.271   0.75%
   QC value within limits for S 181.975 Axial  Recovery = 97.12%
Sb 206.836†              574.4      500.19 µg/L       1.394      500.19 ppb          1.394   0.28%
   QC value within limits for Sb 206.836  Recovery = 100.04%
Se 196.026†              448.8      497.83 µg/L       5.703      497.83 ppb          5.703   1.15%
   QC value within limits for Se 196.026  Recovery = 99.57%
SiO2†                  31171.8      5501.4 µg/L       21.47      5501.4 ppb          21.47   0.39%
   QC value within limits for SiO2  Recovery = 102.88%
Si 251.611†            36462.5      2534.4 µg/L       11.23      2534.4 ppb          11.23   0.44%
   QC value within limits for Si 251.611  Recovery = 101.38%
Sn 189.927†             1158.9      511.68 µg/L       1.337      511.68 ppb          1.337   0.26%
   QC value within limits for Sn 189.927  Recovery = 102.34%
Sr 421.552†           116742.8      502.73 µg/L       4.805      502.73 ppb          4.805   0.96%
   QC value within limits for Sr 421.552  Recovery = 100.55%
Ti 334.940†           224750.3      508.23 µg/L       3.019      508.23 ppb          3.019   0.59%
   QC value within limits for Ti 334.940  Recovery = 101.65%
Tl 190.801†              356.8      500.16 µg/L       7.456      500.16 ppb          7.456   1.49%
   QC value within limits for Tl 190.801  Recovery = 100.03%
U 409.014†              5342.2      502.26 µg/L       0.626      502.26 ppb          0.626   0.12%
   QC value within limits for U 409.014  Recovery = 100.45%
V 292.402†             46468.1      509.32 µg/L       0.218      509.32 ppb          0.218   0.04%
   QC value within limits for V 292.402  Recovery = 101.86%
Zn 213.857†            20846.4      502.38 µg/L       0.868      502.38 ppb          0.868   0.17%
   QC value within limits for Zn 213.857  Recovery = 100.48%
All analyte(s) passed QC.
```

Sequence No.: 20
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 11:34:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	176788.8	176788.8	102	%			11:35:15
1	Al 396.153Radial†	-163.2	9.2	3.8467	µg/L	3.8467	ppb	11:35:15
1	Ca 317.933Radial†	921.8	34.0	6.4453	µg/L	6.4453	ppb	11:35:35
1	Fe 238.204 Radial†	8.9	34.9	25.067	µg/L	25.067	ppb	11:35:35
1	K 766.490 Radial†	907.3	123.1	67.388	µg/L	67.388	ppb	11:35:15
1	Mg 279.077 IEC†	58.6	14.6	29.854	µg/L	29.854	ppb	11:35:35
1	Na 589.592 Radial†	150.2	29.4	7.0564	µg/L	7.0564	ppb	11:35:15
1	Sr 421.552†	131.8	63.0	0.2713	µg/L	0.2713	ppb	11:35:15
1	Sc 361.383	2198191.3	2198191.3	100.29	%			11:36:37
1	Y 371.029	1405314.4	1405314.4	100.18	%			11:36:37
1	Ag 328.068†	-838.0	-13.6	-0.1217	µg/L	-0.1217	ppb	11:36:43
1	As 188.979†	-1.8	-4.0	-6.3992	µg/L	-6.3992	ppb	11:37:03
1	B 249.677†	269.1	59.8	2.4320	µg/L	2.4320	ppb	11:36:43
1	Ba 233.527†	-67.2	13.8	0.3362	µg/L	0.3362	ppb	11:37:03
1	Be 313.107†	3839.0	169.2	0.1015	µg/L	0.1015	ppb	11:36:43
1	Cd 226.502†	-140.3	0.5	0.0002	µg/L	0.0002	ppb	11:37:03
1	Co 228.616†	-92.5	9.3	0.4247	µg/L	0.4247	ppb	11:37:03
1	Cr 267.716†	-180.3	2.5	0.0484	µg/L	0.0484	ppb	11:36:43
1	Cu 324.752†	4661.6	-16.7	-0.1145	µg/L	-0.1145	ppb	11:36:43
1	Mn 257.610†	190.3	133.5	0.3829	µg/L	0.3829	ppb	11:36:43
1	Mo 202.031†	7.3	8.2	0.8772	µg/L	0.8772	ppb	11:37:03
1	Ni 231.604†	451.4	6.8	0.3424	µg/L	0.3424	ppb	11:37:03
1	P 214.914†	220.2	-14.5	-25.189	µg/L	-25.189	ppb	11:37:03
1	Pb 220.353†	51.3	6.7	1.5890	µg/L	1.5890	ppb	11:37:03
1	S 181.975 Axial†	38.0	-6.4	-28.238	µg/L	-28.238	ppb	11:37:03
1	Sb 206.836†	26.9	5.5	4.8264	µg/L	4.8264	ppb	11:37:03
1	Se 196.026†	16.1	-3.5	-3.8365	µg/L	-3.8365	ppb	11:37:03
1	SiO2†	3239.5	57.8	10.197	µg/L	10.197	ppb	11:36:43
1	Si 251.611†	495.1	103.4	7.1680	µg/L	7.1680	ppb	11:37:03
1	Sn 189.927†	12.0	4.8	2.1276	µg/L	2.1276	ppb	11:37:03
1	Ti 334.940†	1501.1	389.9	0.8817	µg/L	0.8817	ppb	11:36:43
1	Tl 190.801†	-26.5	-1.7	-2.3769	µg/L	-2.3769	ppb	11:37:03
1	U 409.014†	-101.4	-134.3	-12.666	µg/L	-12.666	ppb	11:36:43
1	V 292.402†	-210.9	-47.1	-0.5243	µg/L	-0.5243	ppb	11:36:43
1	Zn 213.857†	746.4	21.5	0.5185	µg/L	0.5185	ppb	11:37:03
2	Sc RADIAL	177294.3	177294.3	102	%			11:35:41
2	Al 396.153Radial†	-120.9	51.2	21.530	µg/L	21.530	ppb	11:35:41
2	Ca 317.933Radial†	900.4	10.5	1.9858	µg/L	1.9858	ppb	11:36:01
2	Fe 238.204 Radial†	0.5	26.7	19.141	µg/L	19.141	ppb	11:36:01
2	K 766.490 Radial†	875.5	89.4	48.912	µg/L	48.912	ppb	11:35:41
2	Mg 279.077 IEC†	50.8	6.7	13.769	µg/L	13.769	ppb	11:36:01
2	Na 589.592 Radial†	86.1	-33.9	-8.1294	µg/L	-8.1294	ppb	11:35:41
2	Sr 421.552†	92.5	24.0	0.1033	µg/L	0.1033	ppb	11:35:41
2	Sc 361.383	2212517.5	2212517.5	100.94	%			11:37:10
2	Y 371.029	1414454.3	1414454.3	100.84	%			11:37:10
2	Ag 328.068†	-760.9	68.1	0.6022	µg/L	0.6022	ppb	11:37:15
2	As 188.979†	0.8	-1.5	-2.3204	µg/L	-2.3204	ppb	11:37:36
2	B 249.677†	250.2	39.2	1.5964	µg/L	1.5964	ppb	11:37:15
2	Ba 233.527†	-76.8	4.8	0.1172	µg/L	0.1172	ppb	11:37:36
2	Be 313.107†	3810.9	116.6	0.0704	µg/L	0.0704	ppb	11:37:15
2	Cd 226.502†	-124.6	16.9	0.3918	µg/L	0.3918	ppb	11:37:36
2	Co 228.616†	-87.9	14.5	0.6588	µg/L	0.6588	ppb	11:37:36
2	Cr 267.716†	-192.4	-8.2	-0.1614	µg/L	-0.1614	ppb	11:37:15
2	Cu 324.752†	4686.7	-22.0	-0.1529	µg/L	-0.1529	ppb	11:37:15
2	Mn 257.610†	179.6	121.7	0.3491	µg/L	0.3491	ppb	11:37:15
2	Mo 202.031†	6.6	7.5	0.8011	µg/L	0.8011	ppb	11:37:36
2	Ni 231.604†	456.2	8.6	0.4329	µg/L	0.4329	ppb	11:37:36
2	P 214.914†	217.6	-18.6	-32.283	µg/L	-32.283	ppb	11:37:36
2	Pb 220.353†	47.1	2.3	0.5413	µg/L	0.5413	ppb	11:37:36

2	S 181.975 Axial†	39.6	-5.1	-22.593 µg/L	-22.593 ppb	11:37:36
2	Sb 206.836†	30.5	9.0	7.8611 µg/L	7.8611 ppb	11:37:36
2	Se 196.026†	17.6	-2.1	-2.2889 µg/L	-2.2889 ppb	11:37:36
2	SiO2†	3208.5	6.1	1.0805 µg/L	1.0805 ppb	11:37:15
2	Si 251.611†	511.1	116.0	8.1627 µg/L	8.1627 ppb	11:37:36
2	Sn 189.927†	6.8	-0.4	-0.1655 µg/L	-0.1655 ppb	11:37:36
2	Ti 334.940†	1457.4	336.9	0.7620 µg/L	0.7620 ppb	11:37:15
2	Tl 190.801†	-21.0	3.9	5.4871 µg/L	5.4871 ppb	11:37:36
2	U 409.014†	-40.8	-73.6	-6.9486 µg/L	-6.9486 ppb	11:37:15
2	V 292.402†	-160.6	4.1	0.0403 µg/L	0.0403 ppb	11:37:15
2	Zn 213.857†	745.4	15.7	0.3781 µg/L	0.3781 ppb	11:37:36
3	Sc RADIAL	174337.3	174337.3	100 %		11:36:07
3	Al 396.153Radial†	-158.7	11.5	4.7928 µg/L	4.7928 ppb	11:36:07
3	Ca 317.933Radial†	880.8	5.9	1.1109 µg/L	1.1109 ppb	11:36:27
3	Fe 238.204 Radial†	-3.4	22.8	16.375 µg/L	16.375 ppb	11:36:27
3	K 766.490 Radial†	827.5	56.1	30.712 µg/L	30.712 ppb	11:36:07
3	Mg 279.077 IEC†	51.8	8.6	17.640 µg/L	17.640 ppb	11:36:27
3	Na 589.592 Radial†	107.9	-10.7	-2.5591 µg/L	-2.5591 ppb	11:36:07
3	Sr 421.552†	63.1	-3.8	-0.0162 µg/L	-0.0162 ppb	11:36:07
3	Sc 361.383	2224573.1	2224573.1	101.49 %		11:37:42
3	Y 371.029	1421845.7	1421845.7	101.36 %		11:37:42
3	Ag 328.068†	-733.0	99.7	0.8799 µg/L	0.8799 ppb	11:37:47
3	As 188.979†	2.1	-0.2	-0.2903 µg/L	-0.2903 ppb	11:38:08
3	B 249.677†	229.9	17.9	0.7261 µg/L	0.7261 ppb	11:37:47
3	Ba 233.527†	-73.8	8.1	0.1987 µg/L	0.1987 ppb	11:38:08
3	Be 313.107†	4066.5	348.0	0.2059 µg/L	0.2059 ppb	11:37:47
3	Cd 226.502†	-122.3	19.8	0.4601 µg/L	0.4601 ppb	11:38:08
3	Co 228.616†	-80.2	22.5	1.0248 µg/L	1.0248 ppb	11:38:08
3	Cr 267.716†	-183.5	1.5	0.0298 µg/L	0.0298 ppb	11:37:47
3	Cu 324.752†	4691.8	-42.1	-0.2957 µg/L	-0.2957 ppb	11:37:47
3	Mn 257.610†	155.5	97.0	0.2781 µg/L	0.2781 ppb	11:37:47
3	Mo 202.031†	13.1	13.8	1.4790 µg/L	1.4790 ppb	11:38:08
3	Ni 231.604†	459.6	9.5	0.4783 µg/L	0.4783 ppb	11:38:08
3	P 214.914†	221.5	-15.9	-27.450 µg/L	-27.450 ppb	11:38:08
3	Pb 220.353†	48.1	2.9	0.6945 µg/L	0.6945 ppb	11:38:08
3	S 181.975 Axial†	34.9	-10.0	-44.020 µg/L	-44.020 ppb	11:38:08
3	Sb 206.836†	30.3	8.6	7.4703 µg/L	7.4703 ppb	11:38:08
3	Se 196.026†	20.3	0.4	0.4596 µg/L	0.4596 ppb	11:38:08
3	SiO2†	3223.9	4.1	0.7240 µg/L	0.7240 ppb	11:37:47
3	Si 251.611†	631.6	232.0	16.311 µg/L	16.311 ppb	11:38:08
3	Sn 189.927†	10.6	3.2	1.4238 µg/L	1.4238 ppb	11:38:08
3	Ti 334.940†	1488.8	360.0	0.8143 µg/L	0.8143 ppb	11:37:47
3	Tl 190.801†	-29.5	-4.3	-6.0732 µg/L	-6.0732 ppb	11:38:08
3	U 409.014†	-44.7	-77.3	-7.2886 µg/L	-7.2886 ppb	11:37:47
3	V 292.402†	-166.0	-0.4	-0.0050 µg/L	-0.0050 ppb	11:37:47
3	Zn 213.857†	756.2	22.3	0.5393 µg/L	0.5393 ppb	11:38:08

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2211760.6	100.91	%	0.603				0.60%
Sc RADIAL	176140.2	101	%	0.9				0.90%
Y 371.029	1413871.4	100.80	%	0.590				0.59%
Ag 328.068†	51.4	0.4535	µg/L	0.51706	0.4535	ppb	0.51706	114.02%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	24.0	10.056	µg/L	9.9475	10.056	ppb	9.9475	98.92%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.9	-3.0033	µg/L	3.11122	-3.0033	ppb	3.11122	103.59%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	39.0	1.5848	µg/L	0.85298	1.5848	ppb	0.85298	53.82%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.9	0.2173	µg/L	0.11068	0.2173	ppb	0.11068	50.92%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	211.3	0.1259	µg/L	0.07097	0.1259	ppb	0.07097	56.35%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	16.8	3.1807	µg/L	2.86090	3.1807	ppb	2.86090	89.95%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	12.4	0.2840	µg/L	0.24817	0.2840	ppb	0.24817	87.37%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	15.5	0.7027	µg/L	0.30244	0.7027	ppb	0.30244	43.04%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -1.4     -0.0277 µg/L       0.11615     -0.0277 ppb        0.11615 418.59%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -26.9     -0.1877 µg/L       0.09547     -0.1877 ppb        0.09547  50.87%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         28.1      20.195 µg/L        4.4407      20.195 ppb         4.4407  21.99%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          89.5      49.004 µg/L       18.3383      49.004 ppb        18.3383  37.42%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            10.0      20.421 µg/L        8.3954      20.421 ppb         8.3954  41.11%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               117.4      0.3367 µg/L       0.05350      0.3367 ppb        0.05350  15.89%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 9.8      1.0524 µg/L       0.37135      1.0524 ppb        0.37135  35.28%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -5.0     -1.2107 µg/L       7.68220     -1.2107 ppb        7.68220 634.53%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 8.3      0.4179 µg/L       0.06921      0.4179 ppb        0.06921  16.56%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -16.3     -28.307 µg/L        3.6241     -28.307 ppb         3.6241  12.80%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 4.0      0.9416 µg/L       0.56592      0.9416 ppb        0.56592  60.10%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -7.1     -31.617 µg/L       11.1062     -31.617 ppb        11.1062  35.13%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 7.7      6.7192 µg/L       1.65087      6.7192 ppb        1.65087  24.57%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -1.7     -1.8886 µg/L       2.17586     -1.8886 ppb        2.17586 115.21%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      22.7      4.0007 µg/L       5.36956      4.0007 ppb        5.36956 134.22%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               150.4      10.547 µg/L        5.0164      10.547 ppb         5.0164  47.56%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 2.6      1.1287 µg/L       1.17472      1.1287 ppb        1.17472 104.08%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                27.7      0.1195 µg/L       0.14440      0.1195 ppb        0.14440 120.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               362.2      0.8193 µg/L       0.06001      0.8193 ppb        0.06001   7.32%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -0.7     -0.9877 µg/L       5.90403     -0.9877 ppb        5.90403 597.79%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -95.1     -8.9677 µg/L       3.20727     -8.9677 ppb        3.20727  35.76%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -14.5     -0.1630 µg/L       0.31370     -0.1630 ppb        0.31370 192.45%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                19.8      0.4786 µg/L       0.08771      0.4786 ppb        0.08771  18.33%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 21
Sample ID: 232429009|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 315
Date Collected: 7/2/2009 11:38:18
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429009|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	175144.3	175144.3	101	%			11:38:53
1	Al 396.153Radial†	77832.3	77519.8	32616	µg/L	32616	ppb	11:38:53
1	Ca 317.933Radial†	241103.4	238735.4	45216	µg/L	45216	ppb	11:38:53
1	Fe 238.204 Radial†	150825.4	149916.7	107520	µg/L	107520	ppb	11:38:53
1	K 766.490 Radial†	10221.0	9387.5	5137.6	µg/L	5137.6	ppb	11:38:58
1	Mg 279.077 IEC†	5512.7	5435.4	10973	µg/L	10973	ppb	11:38:58
1	Na 589.592 Radial†	4163.4	4019.1	964.68	µg/L	964.68	ppb	11:38:58
1	Sr 421.552†	62945.5	62488.5	269.09	µg/L	269.09	ppb	11:38:53
1	Sc 361.383	2190316.6	2190316.6	99.930	%			11:39:33
1	Y 371.029	1460552.6	1460552.6	104.12	%			11:39:33
1	Ag 328.068†	-621.4	200.1	11.204	µg/L	11.204	ppb	11:39:39
1	As 188.979†	33.0	30.8	122.48	µg/L	122.48	ppb	11:39:59
1	B 249.677†	1457.1	1249.6	17.209	µg/L	17.209	ppb	11:39:39
1	Ba 233.527†	47385.7	47500.0	1159.4	µg/L	1159.4	ppb	11:39:39
1	Be 313.107†	14115.5	10466.8	12.554	µg/L	12.554	ppb	11:39:39
1	Cd 226.502†	525.2	665.9	7.9629	µg/L	7.9629	ppb	11:39:39
1	Co 228.616†	1724.8	1827.5	78.463	µg/L	78.463	ppb	11:39:59
1	Cr 267.716†	181308.1	181618.3	3556.4	µg/L	3556.4	ppb	11:39:39
1	Cu 324.752†	345927.2	341506.3	2430.2	µg/L	2430.2	ppb	11:39:33
1	Mn 257.610†	3036050.0	3038135.6	8712.1	µg/L	8712.1	ppb	11:39:33
1	Mo 202.031†	234.0	235.2	29.363	µg/L	29.363	ppb	11:39:59
1	Ni 231.604†	10518.0	10082.1	508.29	µg/L	508.29	ppb	11:39:39
1	P 214.914†	2988.2	2756.2	4240.6	µg/L	4240.6	ppb	11:39:59
1	Pb 220.353†	5189.2	5148.5	1198.0	µg/L	1198.0	ppb	11:39:39
1	S 181.975 Axial†	612.7	568.8	2497.7	µg/L	2497.7	ppb	11:39:59
1	Sb 206.836†	70.1	48.9	30.928	µg/L	30.928	ppb	11:39:59
1	Se 196.026†	-40.7	-60.3	-17.288	µg/L	-17.288	ppb	11:39:59
1	SiO2†	207030.5	204004.2	36004	µg/L	36004	ppb	11:39:33
1	Si 251.611†	235616.3	235392.2	16593	µg/L	16593	ppb	11:39:33
1	Sn 189.927†	-14.8	-21.9	26.432	µg/L	26.432	ppb	11:39:59
1	Ti 334.940†	976662.3	976244.4	2206.8	µg/L	2206.8	ppb	11:39:33
1	Tl 190.801†	-57.2	-32.5	-68.051	µg/L	-68.051	ppb	11:39:59
1	U 409.014†	682.2	649.5	36.499	µg/L	36.499	ppb	11:39:33
1	V 292.402†	12700.5	12872.6	148.82	µg/L	148.82	ppb	11:39:39
1	Zn 213.857†	158138.4	157527.2	3814.4	µg/L	3814.4	ppb	11:39:33
2	Sc RADIAL	177952.9	177952.9	102	%			11:39:04
2	Al 396.153Radial†	79748.7	78173.5	32891	µg/L	32891	ppb	11:39:04
2	Ca 317.933Radial†	246831.0	240556.0	45561	µg/L	45561	ppb	11:39:04
2	Fe 238.204 Radial†	154591.5	151234.8	108460	µg/L	108460	ppb	11:39:04
2	K 766.490 Radial†	10260.2	9265.5	5070.9	µg/L	5070.9	ppb	11:39:09
2	Mg 279.077 IEC†	5569.8	5404.8	10909	µg/L	10909	ppb	11:39:09
2	Na 589.592 Radial†	4266.9	4055.1	973.32	µg/L	973.32	ppb	11:39:09
2	Sr 421.552†	64587.0	63106.9	271.76	µg/L	271.76	ppb	11:39:04
2	Sc 361.383	2191702.9	2191702.9	99.993	%			11:40:08
2	Y 371.029	1459717.2	1459717.2	104.06	%			11:40:08
2	Ag 328.068†	-631.3	190.6	11.194	µg/L	11.194	ppb	11:40:13
2	As 188.979†	28.0	25.7	115.03	µg/L	115.03	ppb	11:40:34
2	B 249.677†	1496.3	1287.8	18.474	µg/L	18.474	ppb	11:40:13
2	Ba 233.527†	47300.3	47384.5	1156.6	µg/L	1156.6	ppb	11:40:13
2	Be 313.107†	14220.8	10563.2	12.587	µg/L	12.587	ppb	11:40:13
2	Cd 226.502†	553.2	693.5	8.5397	µg/L	8.5397	ppb	11:40:13
2	Co 228.616†	1719.1	1820.8	78.178	µg/L	78.178	ppb	11:40:34
2	Cr 267.716†	181322.5	181518.0	3554.4	µg/L	3554.4	ppb	11:40:13
2	Cu 324.752†	345173.9	340534.1	2423.5	µg/L	2423.5	ppb	11:40:08
2	Mn 257.610†	3023892.2	3024055.3	8671.7	µg/L	8671.7	ppb	11:40:08
2	Mo 202.031†	250.8	251.8	31.181	µg/L	31.181	ppb	11:40:34
2	Ni 231.604†	10486.6	10044.1	506.37	µg/L	506.37	ppb	11:40:13
2	P 214.914†	2980.9	2747.0	4224.9	µg/L	4224.9	ppb	11:40:34
2	Pb 220.353†	5179.1	5135.0	1194.9	µg/L	1194.9	ppb	11:40:13

2	S 181.975 Axial†	603.4	559.2	2454.7	µg/L	2454.7 ppb	11:40:34
2	Sb 206.836†	69.9	48.7	30.716	µg/L	30.716 ppb	11:40:34
2	Se 196.026†	-33.7	-53.3	-9.0843	µg/L	-9.0843 ppb	11:40:34
2	SiO2†	206616.4	203459.0	35908	µg/L	35908 ppb	11:40:08
2	Si 251.611†	235326.8	234953.6	16562	µg/L	16562 ppb	11:40:08
2	Sn 189.927†	-11.2	-18.3	28.303	µg/L	28.303 ppb	11:40:34
2	Ti 334.940†	973623.1	972586.8	2198.5	µg/L	2198.5 ppb	11:40:08
2	Tl 190.801†	-48.8	-24.1	-56.164	µg/L	-56.164 ppb	11:40:34
2	U 409.014†	691.9	658.8	37.162	µg/L	37.162 ppb	11:40:08
2	V 292.402†	12697.5	12861.6	148.79	µg/L	148.79 ppb	11:40:13
2	Zn 213.857†	157633.7	156922.4	3799.6	µg/L	3799.6 ppb	11:40:08
3	Sc RADIAL	176780.5	176780.5	102	%		11:39:15
3	Al 396.153Radial†	79305.4	78254.3	32925	µg/L	32925 ppb	11:39:15
3	Ca 317.933Radial†	244797.8	240155.2	45485	µg/L	45485 ppb	11:39:15
3	Fe 238.204 Radial†	153171.4	150839.3	108180	µg/L	108180 ppb	11:39:15
3	K 766.490 Radial†	10378.5	9448.6	5171.0	µg/L	5171.0 ppb	11:39:20
3	Mg 279.077 IEC†	5543.4	5414.9	10930	µg/L	10930 ppb	11:39:20
3	Na 589.592 Radial†	4228.9	4045.4	970.98	µg/L	970.98 ppb	11:39:20
3	Sr 421.552†	64205.1	63149.8	271.94	µg/L	271.94 ppb	11:39:15
3	Sc 361.383	2203062.0	2203062.0	100.51	%		11:40:42
3	Y 371.029	1467031.6	1467031.6	104.58	%		11:40:42
3	Ag 328.068†	-606.9	218.1	11.407	µg/L	11.407 ppb	11:40:48
3	As 188.979†	26.4	24.0	112.07	µg/L	112.07 ppb	11:41:08
3	B 249.677†	1489.1	1272.9	17.954	µg/L	17.954 ppb	11:40:48
3	Ba 233.527†	47500.2	47339.6	1155.5	µg/L	1155.5 ppb	11:40:48
3	Be 313.107†	14160.3	10429.6	12.513	µg/L	12.513 ppb	11:40:48
3	Cd 226.502†	558.4	695.8	8.6158	µg/L	8.6158 ppb	11:40:48
3	Co 228.616†	1726.4	1819.2	78.098	µg/L	78.098 ppb	11:41:08
3	Cr 267.716†	181612.5	180871.5	3541.7	µg/L	3541.7 ppb	11:40:48
3	Cu 324.752†	346995.7	340566.7	2423.7	µg/L	2423.7 ppb	11:40:42
3	Mn 257.610†	3045482.2	3029943.0	8688.6	µg/L	8688.6 ppb	11:40:42
3	Mo 202.031†	241.0	240.7	29.980	µg/L	29.980 ppb	11:41:08
3	Ni 231.604†	10501.7	10005.0	504.39	µg/L	504.39 ppb	11:40:48
3	P 214.914†	2967.2	2718.0	4174.9	µg/L	4174.9 ppb	11:41:08
3	Pb 220.353†	5190.0	5119.2	1191.2	µg/L	1191.2 ppb	11:40:48
3	S 181.975 Axial†	601.3	553.9	2431.4	µg/L	2431.4 ppb	11:41:08
3	Sb 206.836†	72.4	50.8	32.633	µg/L	32.633 ppb	11:41:08
3	Se 196.026†	-26.1	-45.5	-0.6502	µg/L	-0.6502 ppb	11:41:08
3	SiO2†	207886.9	203657.6	35943	µg/L	35943 ppb	11:40:42
3	Si 251.611†	236519.1	234926.4	16560	µg/L	16560 ppb	11:40:42
3	Sn 189.927†	-9.6	-16.7	28.948	µg/L	28.948 ppb	11:41:08
3	Ti 334.940†	979353.9	973268.0	2200.1	µg/L	2200.1 ppb	11:40:42
3	Tl 190.801†	-50.6	-25.6	-58.258	µg/L	-58.258 ppb	11:41:08
3	U 409.014†	724.8	687.9	39.974	µg/L	39.974 ppb	11:40:42
3	V 292.402†	12662.4	12761.2	147.67	µg/L	147.67 ppb	11:40:48
3	Zn 213.857†	158807.2	157277.1	3808.3	µg/L	3808.3 ppb	11:40:42

Mean Data: 232429009|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2195027.2	100.14	%	0.319				0.32%
Sc RADIAL	176625.9	101	%	0.8				0.80%
Y 371.029	1462433.8	104.26	%	0.285				0.27%
Ag 328.068†	202.9	11.268	µg/L	0.1200	11.268	ppb	0.1200	1.06%
Al 396.153Radial†	77982.5	32811	µg/L	169.4	32811	ppb	169.4	0.52%
As 188.979†	26.8	116.53	µg/L	5.362	116.53	ppb	5.362	4.60%
B 249.677†	1270.1	17.879	µg/L	0.6359	17.879	ppb	0.6359	3.56%
Ba 233.527†	47408.0	1157.2	µg/L	2.02	1157.2	ppb	2.02	0.17%
Be 313.107†	10486.5	12.551	µg/L	0.0369	12.551	ppb	0.0369	0.29%
Ca 317.933Radial†	239815.6	45421	µg/L	181.2	45421	ppb	181.2	0.40%
Cd 226.502†	685.1	8.3728	µg/L	0.35704	8.3728	ppb	0.35704	4.26%
Co 228.616†	1822.5	78.247	µg/L	0.1919	78.247	ppb	0.1919	0.25%
Cr 267.716†	181335.9	3550.8	µg/L	7.94	3550.8	ppb	7.94	0.22%
Cu 324.752†	340869.0	2425.8	µg/L	3.84	2425.8	ppb	3.84	0.16%
Fe 238.204 Radial†	150663.6	108050	µg/L	485.1	108050	ppb	485.1	0.45%
K 766.490 Radial†	9367.2	5126.5	µg/L	51.00	5126.5	ppb	51.00	0.99%
Mg 279.077 IEC†	5418.4	10937	µg/L	32.8	10937	ppb	32.8	0.30%
Mn 257.610†	3030711.3	8690.8	µg/L	20.27	8690.8	ppb	20.27	0.23%
Mo 202.031†	242.5	30.175	µg/L	0.9245	30.175	ppb	0.9245	3.06%
Na 589.592 Radial†	4039.9	969.66	µg/L	4.469	969.66	ppb	4.469	0.46%

Ni 231.604†	10043.7	506.35	µg/L	1.946	506.35	ppb	1.946	0.38%
P 214.914†	2740.4	4213.5	µg/L	34.32	4213.5	ppb	34.32	0.81%
Pb 220.353†	5134.2	1194.7	µg/L	3.41	1194.7	ppb	3.41	0.29%
S 181.975 Axial†	560.6	2461.3	µg/L	33.61	2461.3	ppb	33.61	1.37%
Sb 206.836†	49.5	31.425	µg/L	1.0507	31.425	ppb	1.0507	3.34%
Se 196.026†	-53.0	-9.0077	µg/L	8.31939	-9.0077	ppb	8.31939	92.36%
SiO2†	203706.9	35952	µg/L	48.7	35952	ppb	48.7	0.14%
Si 251.611†	235090.7	16572	µg/L	18.4	16572	ppb	18.4	0.11%
Sn 189.927†	-19.0	27.894	µg/L	1.3066	27.894	ppb	1.3066	4.68%
Sr 421.552†	62915.1	270.93	µg/L	1.593	270.93	ppb	1.593	0.59%
Ti 334.940†	974033.1	2201.8	µg/L	4.41	2201.8	ppb	4.41	0.20%
Tl 190.801†	-27.4	-60.824	µg/L	6.3452	-60.824	ppb	6.3452	10.43%
U 409.014†	665.4	37.879	µg/L	1.8450	37.879	ppb	1.8450	4.87%
V 292.402†	12831.8	148.43	µg/L	0.653	148.43	ppb	0.653	0.44%
Zn 213.857†	157242.2	3807.4	µg/L	7.41	3807.4	ppb	7.41	0.19%

Sequence No.: 22
Sample ID: 232429010|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 316
Date Collected: 7/2/2009 11:41:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429010|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	177559.8	177559.8	102	%			11:41:50
1	Al 396.153Radial†	42106.0	41445.7	17437	µg/L	17437	ppb	11:41:50
1	Ca 317.933Radial†	145941.3	142190.1	26931	µg/L	26931	ppb	11:41:50
1	Fe 238.204 Radial†	92809.9	91006.1	65266	µg/L	65266	ppb	11:41:55
1	K 766.490 Radial†	8526.7	7588.5	4153.0	µg/L	4153.0	ppb	11:41:55
1	Mg 279.077 IEC†	2846.6	2747.4	5528.7	µg/L	5528.7	ppb	11:41:55
1	Na 589.592 Radial†	3259.8	3077.1	738.57	µg/L	738.57	ppb	11:41:55
1	Sr 421.552†	32855.7	32141.1	138.41	µg/L	138.41	ppb	11:41:50
1	Sc 361.383	2213961.0	2213961.0	101.01	%			11:42:29
1	Y 371.029	1483894.4	1483894.4	105.79	%			11:42:29
1	Ag 328.068†	-1023.7	-191.5	3.9404	µg/L	3.9404	ppb	11:42:35
1	As 188.979†	21.1	18.6	77.218	µg/L	77.218	ppb	11:42:55
1	B 249.677†	1487.2	1263.8	31.073	µg/L	31.073	ppb	11:42:35
1	Ba 233.527†	17523.1	17429.0	425.47	µg/L	425.47	ppb	11:42:35
1	Be 313.107†	16186.4	12366.1	14.113	µg/L	14.113	ppb	11:42:35
1	Cd 226.502†	189.5	327.9	2.9472	µg/L	2.9472	ppb	11:42:55
1	Co 228.616†	452.7	549.8	20.112	µg/L	20.112	ppb	11:42:55
1	Cr 267.716†	33368.6	33217.8	650.52	µg/L	650.52	ppb	11:42:35
1	Cu 324.752†	93199.3	87604.1	628.47	µg/L	628.47	ppb	11:42:35
1	Mn 257.610†	1222256.6	1210000.1	3469.9	µg/L	3469.9	ppb	11:42:29
1	Mo 202.031†	293.9	291.9	33.766	µg/L	33.766	ppb	11:42:55
1	Ni 231.604†	6063.5	5559.6	280.32	µg/L	280.32	ppb	11:42:35
1	P 214.914†	1184.1	938.1	1447.6	µg/L	1447.6	ppb	11:42:55
1	Pb 220.353†	1454.3	1395.3	325.19	µg/L	325.19	ppb	11:42:55
1	S 181.975 Axial†	325.2	277.7	1217.2	µg/L	1217.2	ppb	11:42:55
1	Sb 206.836†	33.2	11.6	13.956	µg/L	13.956	ppb	11:42:55
1	Se 196.026†	-30.9	-50.1	-25.179	µg/L	-25.179	ppb	11:42:55
1	SiO2†	133187.8	128685.9	22711	µg/L	22711	ppb	11:42:35
1	Si 251.611†	150593.3	148699.8	10447	µg/L	10447	ppb	11:42:35
1	Sn 189.927†	-16.0	-23.0	11.575	µg/L	11.575	ppb	11:42:55
1	Ti 334.940†	1055778.2	1044132.8	2361.0	µg/L	2361.0	ppb	11:42:29
1	Tl 190.801†	-42.5	-17.3	-23.381	µg/L	-23.381	ppb	11:42:55
1	U 409.014†	-418.9	-447.9	-57.202	µg/L	-57.202	ppb	11:42:29
1	V 292.402†	6335.5	6435.4	75.350	µg/L	75.350	ppb	11:42:35
1	Zn 213.857†	58973.4	57661.9	1394.9	µg/L	1394.9	ppb	11:42:35
2	Sc RADIAL	179242.8	179242.8	103	%			11:42:01
2	Al 396.153Radial†	42167.0	41117.4	17299	µg/L	17299	ppb	11:42:01
2	Ca 317.933Radial†	146487.8	141377.5	26777	µg/L	26777	ppb	11:42:01
2	Fe 238.204 Radial†	91719.4	89092.9	63894	µg/L	63894	ppb	11:42:06
2	K 766.490 Radial†	8535.3	7518.3	4114.6	µg/L	4114.6	ppb	11:42:06
2	Mg 279.077 IEC†	2851.1	2725.5	5486.0	µg/L	5486.0	ppb	11:42:06
2	Na 589.592 Radial†	3238.8	3026.7	726.47	µg/L	726.47	ppb	11:42:06
2	Sr 421.552†	32946.4	31926.8	137.49	µg/L	137.49	ppb	11:42:01
2	Sc 361.383	2219270.1	2219270.1	101.25	%			11:43:03
2	Y 371.029	1487815.3	1487815.3	106.07	%			11:43:03
2	Ag 328.068†	-1073.9	-238.7	3.4108	µg/L	3.4108	ppb	11:43:09
2	As 188.979†	20.4	17.9	74.992	µg/L	74.992	ppb	11:43:29
2	B 249.677†	1482.1	1255.2	31.155	µg/L	31.155	ppb	11:43:09
2	Ba 233.527†	17485.4	17350.4	423.55	µg/L	423.55	ppb	11:43:09
2	Be 313.107†	16154.7	12296.5	14.091	µg/L	14.091	ppb	11:43:09
2	Cd 226.502†	186.3	324.3	2.9597	µg/L	2.9597	ppb	11:43:29
2	Co 228.616†	456.2	552.1	20.202	µg/L	20.202	ppb	11:43:29
2	Cr 267.716†	33389.4	33159.4	649.37	µg/L	649.37	ppb	11:43:09
2	Cu 324.752†	93168.7	87353.2	626.51	µg/L	626.51	ppb	11:43:09
2	Mn 257.610†	1228216.1	1212991.3	3478.5	µg/L	3478.5	ppb	11:43:03
2	Mo 202.031†	286.2	283.6	32.825	µg/L	32.825	ppb	11:43:29
2	Ni 231.604†	6052.7	5534.6	279.06	µg/L	279.06	ppb	11:43:09
2	P 214.914†	1197.4	948.5	1467.4	µg/L	1467.4	ppb	11:43:29
2	Pb 220.353†	1445.0	1382.7	322.26	µg/L	322.26	ppb	11:43:29

2	S 181.975 Axial†	328.6	280.2	1228.8	µg/L	1228.8 ppb	11:43:29
2	Sb 206.836†	32.9	11.2	13.679	µg/L	13.679 ppb	11:43:29
2	Se 196.026†	-15.6	-34.9	-9.0391	µg/L	-9.0391 ppb	11:43:29
2	SiO2†	133357.3	128537.9	22685	µg/L	22685 ppb	11:43:09
2	Si 251.611†	150883.4	148629.6	10442	µg/L	10442 ppb	11:43:09
2	Sn 189.927†	-22.6	-29.5	8.3273	µg/L	8.3273 ppb	11:43:29
2	Ti 334.940†	1061250.4	1047036.9	2367.6	µg/L	2367.6 ppb	11:43:03
2	Tl 190.801†	-38.9	-13.7	-18.250	µg/L	-18.250 ppb	11:43:29
2	U 409.014†	-544.4	-570.9	-68.526	µg/L	-68.526 ppb	11:43:03
2	V 292.402†	6275.9	6361.5	74.410	µg/L	74.410 ppb	11:43:09
2	Zn 213.857†	58950.8	57500.0	1391.0	µg/L	1391.0 ppb	11:43:09
3	Sc RADIAL	175412.4	175412.4	101	%		11:42:12
3	Al 396.153Radial†	42183.4	42027.8	17682	µg/L	17682 ppb	11:42:12
3	Ca 317.933Radial†	145298.6	143303.8	27142	µg/L	27142 ppb	11:42:12
3	Fe 238.204 Radial†	92066.1	91381.8	65535	µg/L	65535 ppb	11:42:17
3	K 766.490 Radial†	8557.0	7720.8	4225.5	µg/L	4225.5 ppb	11:42:17
3	Mg 279.077 IEC†	2843.2	2778.1	5591.3	µg/L	5591.3 ppb	11:42:17
3	Na 589.592 Radial†	3311.1	3167.1	760.17	µg/L	760.17 ppb	11:42:17
3	Sr 421.552†	32847.4	32527.1	140.07	µg/L	140.07 ppb	11:42:12
3	Sc 361.383	2219533.2	2219533.2	101.26	%		11:43:36
3	Y 371.029	1488271.6	1488271.6	106.10	%		11:43:36
3	Ag 328.068†	-1144.8	-308.6	2.9258	µg/L	2.9258 ppb	11:43:42
3	As 188.979†	19.8	17.3	75.251	µg/L	75.251 ppb	11:44:02
3	B 249.677†	1495.3	1268.1	31.166	µg/L	31.166 ppb	11:43:42
3	Ba 233.527†	17533.1	17395.4	424.64	µg/L	424.64 ppb	11:43:42
3	Be 313.107†	16119.1	12259.5	14.077	µg/L	14.077 ppb	11:43:42
3	Cd 226.502†	200.5	338.3	3.1752	µg/L	3.1752 ppb	11:44:02
3	Co 228.616†	444.2	540.2	19.656	µg/L	19.656 ppb	11:44:02
3	Cr 267.716†	33502.8	33267.5	651.49	µg/L	651.49 ppb	11:43:42
3	Cu 324.752†	93584.2	87752.6	629.56	µg/L	629.56 ppb	11:43:42
3	Mn 257.610†	1229914.1	1214524.3	3482.9	µg/L	3482.9 ppb	11:43:36
3	Mo 202.031†	283.7	281.1	32.628	µg/L	32.628 ppb	11:44:02
3	Ni 231.604†	6061.1	5542.2	279.44	µg/L	279.44 ppb	11:43:42
3	P 214.914†	1185.4	936.5	1444.2	µg/L	1444.2 ppb	11:44:02
3	Pb 220.353†	1459.4	1396.7	325.52	µg/L	325.52 ppb	11:44:02
3	S 181.975 Axial†	326.3	277.9	1218.1	µg/L	1218.1 ppb	11:44:02
3	Sb 206.836†	25.9	4.3	7.6213	µg/L	7.6213 ppb	11:44:02
3	Se 196.026†	-14.9	-34.3	-7.5496	µg/L	-7.5496 ppb	11:44:02
3	SiO2†	133605.2	128767.1	22726	µg/L	22726 ppb	11:43:42
3	Si 251.611†	151001.2	148728.3	10449	µg/L	10449 ppb	11:43:42
3	Sn 189.927†	-18.2	-25.2	10.720	µg/L	10.720 ppb	11:44:02
3	Ti 334.940†	1062490.8	1048137.6	2370.1	µg/L	2370.1 ppb	11:43:36
3	Tl 190.801†	-39.3	-14.1	-18.852	µg/L	-18.852 ppb	11:44:02
3	U 409.014†	-353.4	-382.1	-51.074	µg/L	-51.074 ppb	11:43:36
3	V 292.402†	6300.4	6385.0	74.826	µg/L	74.826 ppb	11:43:42
3	Zn 213.857†	59025.0	57566.3	1392.5	µg/L	1392.5 ppb	11:43:42

Mean Data: 232429010|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2217588.1	101.17	%	0.143				0.14%
Sc RADIAL	177405.0	102	%	1.1				1.08%
Y 371.029	1486660.4	105.98	%	0.172				0.16%
Ag 328.068†	-246.3	3.4257	µg/L	0.50747	3.4257	ppb	0.50747	14.81%
Al 396.153Radial†	41530.3	17473	µg/L	194.0	17473	ppb	194.0	1.11%
As 188.979†	17.9	75.821	µg/L	1.2173	75.821	ppb	1.2173	1.61%
B 249.677†	1262.4	31.131	µg/L	0.0509	31.131	ppb	0.0509	0.16%
Ba 233.527†	17391.6	424.55	µg/L	0.964	424.55	ppb	0.964	0.23%
Be 313.107†	12307.4	14.093	µg/L	0.0181	14.093	ppb	0.0181	0.13%
Ca 317.933Radial†	142290.5	26950	µg/L	183.2	26950	ppb	183.2	0.68%
Cd 226.502†	330.2	3.0274	µg/L	0.12816	3.0274	ppb	0.12816	4.23%
Co 228.616†	547.3	19.990	µg/L	0.2929	19.990	ppb	0.2929	1.47%
Cr 267.716†	33214.9	650.46	µg/L	1.060	650.46	ppb	1.060	0.16%
Cu 324.752†	87570.0	628.18	µg/L	1.544	628.18	ppb	1.544	0.25%
Fe 238.204 Radial†	90493.6	64898	µg/L	880.3	64898	ppb	880.3	1.36%
K 766.490 Radial†	7609.2	4164.4	µg/L	56.28	4164.4	ppb	56.28	1.35%
Mg 279.077 IEC†	2750.3	5535.3	µg/L	52.97	5535.3	ppb	52.97	0.96%
Mn 257.610†	1212505.2	3477.1	µg/L	6.60	3477.1	ppb	6.60	0.19%
Mo 202.031†	285.5	33.073	µg/L	0.6085	33.073	ppb	0.6085	1.84%
Na 589.592 Radial†	3090.3	741.73	µg/L	17.073	741.73	ppb	17.073	2.30%

Ni 231.604†	5545.5	279.60	µg/L	0.647	279.60	ppb	0.647	0.23%
P 214.914†	941.0	1453.1	µg/L	12.51	1453.1	ppb	12.51	0.86%
Pb 220.353†	1391.6	324.32	µg/L	1.798	324.32	ppb	1.798	0.55%
S 181.975 Axial†	278.6	1221.3	µg/L	6.44	1221.3	ppb	6.44	0.53%
Sb 206.836†	9.1	11.752	µg/L	3.5800	11.752	ppb	3.5800	30.46%
Se 196.026†	-39.8	-13.923	µg/L	9.7767	-13.923	ppb	9.7767	70.22%
SiO2†	128663.7	22707	µg/L	20.5	22707	ppb	20.5	0.09%
Si 251.611†	148685.9	10446	µg/L	3.5	10446	ppb	3.5	0.03%
Sn 189.927†	-25.9	10.207	µg/L	1.6833	10.207	ppb	1.6833	16.49%
Sr 421.552†	32198.3	138.65	µg/L	1.310	138.65	ppb	1.310	0.94%
Ti 334.940†	1046435.8	2366.2	µg/L	4.68	2366.2	ppb	4.68	0.20%
Tl 190.801†	-15.1	-20.161	µg/L	2.8049	-20.161	ppb	2.8049	13.91%
U 409.014†	-467.0	-58.934	µg/L	8.8538	-58.934	ppb	8.8538	15.02%
V 292.402†	6394.0	74.862	µg/L	0.4708	74.862	ppb	0.4708	0.63%
Zn 213.857†	57576.1	1392.8	µg/L	1.93	1392.8	ppb	1.93	0.14%

Sequence No.: 23
Sample ID: 232429011|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 317
Date Collected: 7/2/2009 11:44:12
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429011|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	178641.1	178641.1	103	%			11:44:44
1	Al 396.153Radial†	30276.6	29669.9	12483	µg/L	12483	ppb	11:44:44
1	Ca 317.933Radial†	12358.9	11168.3	2115.3	µg/L	2115.3	ppb	11:45:05
1	Fe 238.204 Radial†	98052.4	95563.4	68534	µg/L	68534	ppb	11:44:44
1	K 766.490 Radial†	3388.5	2531.5	1385.4	µg/L	1385.4	ppb	11:44:44
1	Mg 279.077 IEC†	691.7	630.8	1179.6	µg/L	1179.6	ppb	11:45:05
1	Na 589.592 Radial†	3040.4	2844.0	682.61	µg/L	682.61	ppb	11:45:05
1	Sr 421.552†	3878.3	3712.1	15.985	µg/L	15.985	ppb	11:45:05
1	Sc 361.383	2244013.0	2244013.0	102.38	%			11:46:09
1	Y 371.029	1534845.6	1534845.6	109.42	%			11:46:09
1	Ag 328.068†	-1209.1	-359.0	2.4206	µg/L	2.4206	ppb	11:46:15
1	As 188.979†	6.5	4.1	70.238	µg/L	70.238	ppb	11:46:36
1	B 249.677†	872.8	644.0	4.7409	µg/L	4.7409	ppb	11:46:15
1	Ba 233.527†	7464.9	7372.2	179.96	µg/L	179.96	ppb	11:46:15
1	Be 313.107†	14938.6	10932.8	15.460	µg/L	15.460	ppb	11:46:15
1	Cd 226.502†	139.3	276.4	1.1554	µg/L	1.1554	ppb	11:46:36
1	Co 228.616†	197.5	294.4	6.9193	µg/L	6.9193	ppb	11:46:36
1	Cr 267.716†	4579.7	4655.6	91.196	µg/L	91.196	ppb	11:46:15
1	Cu 324.752†	15467.5	10443.1	83.085	µg/L	83.085	ppb	11:46:15
1	Mn 257.610†	1466093.2	1431964.8	4106.4	µg/L	4106.4	ppb	11:46:09
1	Mo 202.031†	186.4	183.0	22.258	µg/L	22.258	ppb	11:46:36
1	Ni 231.604†	1471.0	993.5	50.077	µg/L	50.077	ppb	11:46:36
1	P 214.914†	597.1	349.1	516.28	µg/L	516.28	ppb	11:46:36
1	Pb 220.353†	209.0	159.7	37.522	µg/L	37.522	ppb	11:46:36
1	S 181.975 Axial†	58.5	12.8	46.217	µg/L	46.217	ppb	11:46:36
1	Sb 206.836†	8.7	-12.7	-0.1379	µg/L	-0.1379	ppb	11:46:36
1	Se 196.026†	-12.2	-31.4	-2.9316	µg/L	-2.9316	ppb	11:46:36
1	SiO2†	60335.9	55761.3	9841.1	µg/L	9841.1	ppb	11:46:15
1	Si 251.611†	66772.8	64830.6	4479.7	µg/L	4479.7	ppb	11:46:15
1	Sn 189.927†	-11.4	-18.3	9.7552	µg/L	9.7552	ppb	11:46:36
1	Ti 334.940†	1409662.5	1375794.9	3112.1	µg/L	3112.1	ppb	11:46:09
1	Tl 190.801†	-52.2	-26.3	-30.526	µg/L	-30.526	ppb	11:46:36
1	U 409.014†	-1540.3	-1537.7	-158.01	µg/L	-158.01	ppb	11:46:09
1	V 292.402†	2276.4	2386.6	31.407	µg/L	31.407	ppb	11:46:15
1	Zn 213.857†	28795.1	27403.2	661.57	µg/L	661.57	ppb	11:46:15
2	Sc RADIAL	177745.5	177745.5	102	%			11:45:11
2	Al 396.153Radial†	30710.8	30243.8	12725	µg/L	12725	ppb	11:45:11
2	Ca 317.933Radial†	12416.0	11285.0	2137.4	µg/L	2137.4	ppb	11:45:31
2	Fe 238.204 Radial†	99455.5	97418.8	69864	µg/L	69864	ppb	11:45:11
2	K 766.490 Radial†	3358.2	2518.4	1378.3	µg/L	1378.3	ppb	11:45:11
2	Mg 279.077 IEC†	689.9	632.4	1180.7	µg/L	1180.7	ppb	11:45:31
2	Na 589.592 Radial†	3064.0	2882.0	691.75	µg/L	691.75	ppb	11:45:31
2	Sr 421.552†	3897.7	3750.0	16.149	µg/L	16.149	ppb	11:45:31
2	Sc 361.383	2245836.3	2245836.3	102.46	%			11:46:43
2	Y 371.029	1535946.2	1535946.2	109.50	%			11:46:43
2	Ag 328.068†	-1222.6	-371.2	2.4225	µg/L	2.4225	ppb	11:46:49
2	As 188.979†	9.1	6.7	75.385	µg/L	75.385	ppb	11:47:09
2	B 249.677†	891.9	661.9	5.0543	µg/L	5.0543	ppb	11:46:49
2	Ba 233.527†	7559.2	7458.4	182.06	µg/L	182.06	ppb	11:46:49
2	Be 313.107†	15071.9	11051.0	15.559	µg/L	15.559	ppb	11:46:49
2	Cd 226.502†	162.5	298.9	1.5874	µg/L	1.5874	ppb	11:47:09
2	Co 228.616†	188.1	285.1	6.4731	µg/L	6.4731	ppb	11:47:09
2	Cr 267.716†	4663.5	4733.8	92.729	µg/L	92.729	ppb	11:46:49
2	Cu 324.752†	15666.0	10624.6	84.548	µg/L	84.548	ppb	11:46:49
2	Mn 257.610†	1471354.0	1435936.5	4117.8	µg/L	4117.8	ppb	11:46:43
2	Mo 202.031†	187.9	184.3	22.446	µg/L	22.446	ppb	11:47:09
2	Ni 231.604†	1448.0	969.9	48.888	µg/L	48.888	ppb	11:47:09
2	P 214.914†	593.9	345.5	508.56	µg/L	508.56	ppb	11:47:09
2	Pb 220.353†	221.6	171.8	40.349	µg/L	40.349	ppb	11:47:09

2	S 181.975 Axial†	55.9	10.2	34.734 µg/L	34.734 ppb	11:47:09
2	Sb 206.836†	9.3	-12.2	0.3433 µg/L	0.3433 ppb	11:47:09
2	Se 196.026†	-16.2	-35.4	-6.6470 µg/L	-6.6470 ppb	11:47:09
2	SiO2†	61336.0	56689.5	10005 µg/L	10005 ppb	11:46:49
2	Si 251.611†	67811.2	65791.2	4547.2 µg/L	4547.2 ppb	11:46:49
2	Sn 189.927†	2.3	-4.9	15.989 µg/L	15.989 ppb	11:47:09
2	Ti 334.940†	1415503.8	1380378.0	3122.5 µg/L	3122.5 ppb	11:46:43
2	Tl 190.801†	-54.6	-28.6	-33.689 µg/L	-33.689 ppb	11:47:09
2	U 409.014†	-1460.4	-1458.5	-150.80 µg/L	-150.80 ppb	11:46:43
2	V 292.402†	2339.2	2446.1	32.174 µg/L	32.174 ppb	11:46:49
2	Zn 213.857†	29144.3	27721.2	669.21 µg/L	669.21 ppb	11:46:49
3	Sc RADIAL	177490.5	177490.5	102 %		11:45:36
3	Al 396.153Radial†	30209.3	29795.1	12536 µg/L	12536 ppb	11:45:36
3	Ca 317.933Radial†	12347.0	11234.7	2127.9 µg/L	2127.9 ppb	11:45:57
3	Fe 238.204 Radial†	97692.3	95829.6	68724 µg/L	68724 ppb	11:45:36
3	K 766.490 Radial†	3322.9	2488.5	1361.9 µg/L	1361.9 ppb	11:45:36
3	Mg 279.077 IEC†	691.3	634.8	1187.4 µg/L	1187.4 ppb	11:45:57
3	Na 589.592 Radial†	3064.1	2886.4	692.81 µg/L	692.81 ppb	11:45:57
3	Sr 421.552†	3888.4	3746.4	16.133 µg/L	16.133 ppb	11:45:57
3	Sc 361.383	2237955.6	2237955.6	102.10 %		11:47:17
3	Y 371.029	1531087.5	1531087.5	109.15 %		11:47:17
3	Ag 328.068†	-1242.9	-395.3	2.1200 µg/L	2.1200 ppb	11:47:22
3	As 188.979†	17.6	15.0	87.689 µg/L	87.689 ppb	11:47:43
3	B 249.677†	841.2	615.3	3.5108 µg/L	3.5108 ppb	11:47:22
3	Ba 233.527†	7586.7	7511.3	183.35 µg/L	183.35 ppb	11:47:22
3	Be 313.107†	15035.7	11067.3	15.551 µg/L	15.551 ppb	11:47:22
3	Cd 226.502†	152.7	289.8	1.4583 µg/L	1.4583 ppb	11:47:43
3	Co 228.616†	197.0	294.5	6.9120 µg/L	6.9120 ppb	11:47:43
3	Cr 267.716†	4617.1	4704.3	92.152 µg/L	92.152 ppb	11:47:22
3	Cu 324.752†	15783.1	10793.1	85.586 µg/L	85.586 ppb	11:47:22
3	Mn 257.610†	1463455.6	1433257.5	4110.1 µg/L	4110.1 ppb	11:47:17
3	Mo 202.031†	177.8	175.0	21.412 µg/L	21.412 ppb	11:47:43
3	Ni 231.604†	1458.0	984.7	49.634 µg/L	49.634 ppb	11:47:43
3	P 214.914†	602.2	355.7	527.12 µg/L	527.12 ppb	11:47:43
3	Pb 220.353†	225.2	176.1	41.350 µg/L	41.350 ppb	11:47:43
3	S 181.975 Axial†	60.9	15.3	57.471 µg/L	57.471 ppb	11:47:43
3	Sb 206.836†	21.5	-0.2	10.783 µg/L	10.783 ppb	11:47:43
3	Se 196.026†	-21.8	-40.9	-13.309 µg/L	-13.309 ppb	11:47:43
3	SiO2†	60964.9	56536.8	9978.0 µg/L	9978.0 ppb	11:47:22
3	Si 251.611†	67381.1	65603.0	4534.2 µg/L	4534.2 ppb	11:47:22
3	Sn 189.927†	-3.8	-10.9	13.061 µg/L	13.061 ppb	11:47:43
3	Ti 334.940†	1407770.3	1377668.5	3116.4 µg/L	3116.4 ppb	11:47:17
3	Tl 190.801†	-49.3	-23.6	-26.690 µg/L	-26.690 ppb	11:47:43
3	U 409.014†	-1504.0	-1506.2	-155.08 µg/L	-155.08 ppb	11:47:17
3	V 292.402†	2325.7	2440.9	32.011 µg/L	32.011 ppb	11:47:22
3	Zn 213.857†	29132.0	27809.2	671.43 µg/L	671.43 ppb	11:47:22

Mean Data: 232429011|880928|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2242601.7	102.31	%	0.188				0.18%
Sc RADIAL	177959.0	102	%	0.3				0.34%
Y 371.029	1533959.8	109.36	%	0.182				0.17%
Ag 328.068†	-375.2	2.3210	µg/L	0.17410	2.3210	ppb	0.17410	7.50%
Al 396.153Radial†	29902.9	12581	µg/L	127.0	12581	ppb	127.0	1.01%
As 188.979†	8.6	77.771	µg/L	8.9666	77.771	ppb	8.9666	11.53%
B 249.677†	640.4	4.4354	µg/L	0.81587	4.4354	ppb	0.81587	18.39%
Ba 233.527†	7447.3	181.79	µg/L	1.714	181.79	ppb	1.714	0.94%
Be 313.107†	11017.0	15.523	µg/L	0.0551	15.523	ppb	0.0551	0.36%
Ca 317.933Radial†	11229.4	2126.8	µg/L	11.08	2126.8	ppb	11.08	0.52%
Cd 226.502†	288.4	1.4004	µg/L	0.22175	1.4004	ppb	0.22175	15.83%
Co 228.616†	291.3	6.7681	µg/L	0.25557	6.7681	ppb	0.25557	3.78%
Cr 267.716†	4697.9	92.025	µg/L	0.7740	92.025	ppb	0.7740	0.84%
Cu 324.752†	10620.3	84.406	µg/L	1.2566	84.406	ppb	1.2566	1.49%
Fe 238.204 Radial†	96270.6	69041	µg/L	719.5	69041	ppb	719.5	1.04%
K 766.490 Radial†	2512.8	1375.2	µg/L	12.05	1375.2	ppb	12.05	0.88%
Mg 279.077 IEC†	632.7	1182.6	µg/L	4.25	1182.6	ppb	4.25	0.36%
Mn 257.610†	1433719.6	4111.4	µg/L	5.81	4111.4	ppb	5.81	0.14%
Mo 202.031†	180.8	22.039	µg/L	0.5505	22.039	ppb	0.5505	2.50%
Na 589.592 Radial†	2870.8	689.06	µg/L	5.606	689.06	ppb	5.606	0.81%

Ni 231.604†	982.7	49.533	µg/L	0.6010	49.533	ppb	0.6010	1.21%
P 214.914†	350.1	517.32	µg/L	9.324	517.32	ppb	9.324	1.80%
Pb 220.353†	169.2	39.740	µg/L	1.9851	39.740	ppb	1.9851	5.00%
S 181.975 Axial†	12.8	46.141	µg/L	11.3687	46.141	ppb	11.3687	24.64%
Sb 206.836†	-8.4	3.6630	µg/L	6.17121	3.6630	ppb	6.17121	168.48%
Se 196.026†	-35.9	-7.6291	µg/L	5.25785	-7.6291	ppb	5.25785	68.92%
SiO2†	56329.2	9941.4	µg/L	87.84	9941.4	ppb	87.84	0.88%
Si 251.611†	65408.3	4520.4	µg/L	35.78	4520.4	ppb	35.78	0.79%
Sn 189.927†	-11.4	12.935	µg/L	3.1190	12.935	ppb	3.1190	24.11%
Sr 421.552†	3736.2	16.089	µg/L	0.0903	16.089	ppb	0.0903	0.56%
Ti 334.940†	1377947.1	3117.0	µg/L	5.21	3117.0	ppb	5.21	0.17%
Tl 190.801†	-26.1	-30.302	µg/L	3.5047	-30.302	ppb	3.5047	11.57%
U 409.014†	-1500.8	-154.63	µg/L	3.626	-154.63	ppb	3.626	2.34%
V 292.402†	2424.6	31.864	µg/L	0.4042	31.864	ppb	0.4042	1.27%
Zn 213.857†	27644.5	667.40	µg/L	5.174	667.40	ppb	5.174	0.78%

Sequence No.: 24
Sample ID: 232429012|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 318
Date Collected: 7/2/2009 11:47:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429012|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	175544.0	175544.0	101	%			11:48:24
1	Al 396.153Radial†	85937.6	85380.3	35922	µg/L	35922	ppb	11:48:24
1	Ca 317.933Radial†	159954.3	157727.3	29874	µg/L	29874	ppb	11:48:24
1	Fe 238.204 Radial†	127076.8	126027.8	90381	µg/L	90381	ppb	11:48:24
1	K 766.490 Radial†	13947.0	13058.8	7146.9	µg/L	7146.9	ppb	11:48:29
1	Mg 279.077 IEC†	5324.0	5235.8	10594	µg/L	10594	ppb	11:48:29
1	Na 589.592 Radial†	2385.6	2246.9	539.31	µg/L	539.31	ppb	11:48:29
1	Sr 421.552†	47222.1	46755.7	201.34	µg/L	201.34	ppb	11:48:24
1	Sc 361.383	2232623.5	2232623.5	101.86	%			11:49:04
1	Y 371.029	1468356.1	1468356.1	104.68	%			11:49:04
1	Ag 328.068†	-1429.9	-581.8	2.6330	µg/L	2.6330	ppb	11:49:10
1	As 188.979†	21.2	18.6	96.663	µg/L	96.663	ppb	11:49:30
1	B 249.677†	1591.2	1353.6	26.842	µg/L	26.842	ppb	11:49:10
1	Ba 233.527†	27322.3	26904.3	656.74	µg/L	656.74	ppb	11:49:10
1	Be 313.107†	14094.1	10178.1	13.098	µg/L	13.098	ppb	11:49:10
1	Cd 226.502†	266.0	401.5	2.4935	µg/L	2.4935	ppb	11:49:30
1	Co 228.616†	522.0	614.0	22.918	µg/L	22.918	ppb	11:49:30
1	Cr 267.716†	3120.3	3245.7	63.688	µg/L	63.688	ppb	11:49:10
1	Cu 324.752†	11701.8	6823.2	60.415	µg/L	60.415	ppb	11:49:10
1	Mn 257.610†	1473204.5	1446251.5	4147.5	µg/L	4147.5	ppb	11:49:04
1	Mo 202.031†	610.6	600.4	67.735	µg/L	67.735	ppb	11:49:30
1	Ni 231.604†	1080.7	617.7	31.106	µg/L	31.106	ppb	11:49:30
1	P 214.914†	1212.1	955.9	1555.8	µg/L	1555.8	ppb	11:49:30
1	Pb 220.353†	1133.8	1068.6	251.64	µg/L	251.64	ppb	11:49:30
1	S 181.975 Axial†	404.9	353.2	1546.7	µg/L	1546.7	ppb	11:49:30
1	Sb 206.836†	23.4	1.8	8.2595	µg/L	8.2595	ppb	11:49:30
1	Se 196.026†	-27.7	-46.8	-10.917	µg/L	-10.917	ppb	11:49:30
1	SiO2†	196267.3	189511.6	33446	µg/L	33446	ppb	11:49:04
1	Si 251.611†	222944.5	218483.8	15386	µg/L	15386	ppb	11:49:04
1	Sn 189.927†	-78.4	-84.1	-7.8205	µg/L	-7.8205	ppb	11:49:30
1	Ti 334.940†	1105711.0	1084416.8	2452.0	µg/L	2452.0	ppb	11:49:04
1	Tl 190.801†	-42.3	-16.8	-25.003	µg/L	-25.003	ppb	11:49:30
1	U 409.014†	38.3	4.5	-19.541	µg/L	-19.541	ppb	11:49:04
1	V 292.402†	8456.1	8464.8	99.733	µg/L	99.733	ppb	11:49:10
1	Zn 213.857†	18264.3	17208.1	411.88	µg/L	411.88	ppb	11:49:10
2	Sc RADIAL	179701.3	179701.3	103	%			11:48:35
2	Al 396.153Radial†	87431.4	84856.0	35701	µg/L	35701	ppb	11:48:35
2	Ca 317.933Radial†	163067.2	157073.4	29750	µg/L	29750	ppb	11:48:35
2	Fe 238.204 Radial†	129484.3	125444.7	89963	µg/L	89963	ppb	11:48:35
2	K 766.490 Radial†	14014.7	12804.5	7007.7	µg/L	7007.7	ppb	11:48:40
2	Mg 279.077 IEC†	5340.6	5129.8	10377	µg/L	10377	ppb	11:48:40
2	Na 589.592 Radial†	2385.0	2191.6	526.04	µg/L	526.04	ppb	11:48:40
2	Sr 421.552†	48166.1	46586.9	200.62	µg/L	200.62	ppb	11:48:35
2	Sc 361.383	2221496.6	2221496.6	101.35	%			11:49:38
2	Y 371.029	1461738.8	1461738.8	104.21	%			11:49:38
2	Ag 328.068†	-1349.2	-509.3	3.2346	µg/L	3.2346	ppb	11:49:44
2	As 188.979†	27.9	25.3	106.94	µg/L	106.94	ppb	11:50:04
2	B 249.677†	1557.6	1328.2	25.938	µg/L	25.938	ppb	11:49:44
2	Ba 233.527†	27082.9	26802.5	654.25	µg/L	654.25	ppb	11:49:44
2	Be 313.107†	13967.9	10122.9	13.062	µg/L	13.062	ppb	11:49:44
2	Cd 226.502†	258.5	395.4	2.3801	µg/L	2.3801	ppb	11:50:04
2	Co 228.616†	506.0	600.8	22.327	µg/L	22.327	ppb	11:50:04
2	Cr 267.716†	3069.8	3211.1	63.010	µg/L	63.010	ppb	11:49:44
2	Cu 324.752†	11588.5	6769.0	59.975	µg/L	59.975	ppb	11:49:44
2	Mn 257.610†	1462913.2	1443341.7	4139.1	µg/L	4139.1	ppb	11:49:38
2	Mo 202.031†	632.9	625.4	70.389	µg/L	70.389	ppb	11:50:04
2	Ni 231.604†	1076.7	619.1	31.176	µg/L	31.176	ppb	11:50:04
2	P 214.914†	1212.5	962.2	1567.3	µg/L	1567.3	ppb	11:50:04
2	Pb 220.353†	1138.9	1079.3	254.13	µg/L	254.13	ppb	11:50:04

2	S 181.975 Axial†	400.5	350.8	1536.2 µg/L	1536.2 ppb	11:50:04
2	Sb 206.836†	26.5	4.9	10.999 µg/L	10.999 ppb	11:50:04
2	Se 196.026†	-31.9	-51.1	-15.808 µg/L	-15.808 ppb	11:50:04
2	SiO2†	195071.7	189297.1	33408 µg/L	33408 ppb	11:49:38
2	Si 251.611†	221651.7	218304.5	15374 µg/L	15374 ppb	11:49:38
2	Sn 189.927†	-72.5	-78.7	-5.5739 µg/L	-5.5739 ppb	11:50:04
2	Ti 334.940†	1099603.2	1083827.6	2450.7 µg/L	2450.7 ppb	11:49:38
2	Tl 190.801†	-49.3	-23.9	-34.918 µg/L	-34.918 ppb	11:50:04
2	U 409.014†	1.0	-32.3	-22.911 µg/L	-22.911 ppb	11:49:38
2	V 292.402†	8348.2	8400.0	99.008 µg/L	99.008 ppb	11:49:44
2	Zn 213.857†	18117.0	17152.5	410.56 µg/L	410.56 ppb	11:49:44
3	Sc RADIAL	176199.1	176199.1	101 %		11:48:46
3	Al 396.153Radial†	87300.3	86409.7	36355 µg/L	36355 ppb	11:48:46
3	Ca 317.933Radial†	161929.8	159089.3	30132 µg/L	30132 ppb	11:48:46
3	Fe 238.204 Radial†	128745.1	127207.3	91227 µg/L	91227 ppb	11:48:46
3	K 766.490 Radial†	14057.0	13116.2	7178.2 µg/L	7178.2 ppb	11:48:51
3	Mg 279.077 IEC†	5294.2	5186.7	10491 µg/L	10491 ppb	11:48:51
3	Na 589.592 Radial†	2409.4	2261.7	542.85 µg/L	542.85 ppb	11:48:51
3	Sr 421.552†	47916.6	47267.8	203.55 µg/L	203.55 ppb	11:48:46
3	Sc 361.383	2221929.4	2221929.4	101.37 %		11:50:12
3	Y 371.029	1462266.5	1462266.5	104.25 %		11:50:12
3	Ag 328.068†	-1434.9	-593.5	2.5944 µg/L	2.5944 ppb	11:50:17
3	As 188.979†	24.3	21.8	102.29 µg/L	102.29 ppb	11:50:38
3	B 249.677†	1585.7	1355.6	26.660 µg/L	26.660 ppb	11:50:17
3	Ba 233.527†	27394.1	27104.3	661.62 µg/L	661.62 ppb	11:50:17
3	Be 313.107†	14216.9	10365.8	13.245 µg/L	13.245 ppb	11:50:17
3	Cd 226.502†	248.4	385.4	2.0502 µg/L	2.0502 ppb	11:50:38
3	Co 228.616†	522.2	616.6	23.014 µg/L	23.014 ppb	11:50:38
3	Cr 267.716†	3100.4	3240.8	63.591 µg/L	63.591 ppb	11:50:17
3	Cu 324.752†	11784.4	6960.0	61.496 µg/L	61.496 ppb	11:50:17
3	Mn 257.610†	1472978.5	1452989.6	4166.8 µg/L	4166.8 ppb	11:50:12
3	Mo 202.031†	619.8	612.3	69.044 µg/L	69.044 ppb	11:50:38
3	Ni 231.604†	1087.2	629.2	31.687 µg/L	31.687 ppb	11:50:38
3	P 214.914†	1224.2	973.5	1585.4 µg/L	1585.4 ppb	11:50:38
3	Pb 220.353†	1125.8	1066.1	251.08 µg/L	251.08 ppb	11:50:38
3	S 181.975 Axial†	401.6	351.8	1540.4 µg/L	1540.4 ppb	11:50:38
3	Sb 206.836†	23.3	1.8	8.3085 µg/L	8.3085 ppb	11:50:38
3	Se 196.026†	-26.9	-46.1	-9.7665 µg/L	-9.7665 ppb	11:50:38
3	SiO2†	196205.3	190377.9	33599 µg/L	33599 ppb	11:50:12
3	Si 251.611†	222776.5	219371.6	15449 µg/L	15449 ppb	11:50:12
3	Sn 189.927†	-68.4	-74.7	-3.4153 µg/L	-3.4153 ppb	11:50:38
3	Ti 334.940†	1106069.4	1089995.0	2464.6 µg/L	2464.6 ppb	11:50:12
3	Tl 190.801†	-44.1	-18.8	-27.847 µg/L	-27.847 ppb	11:50:38
3	U 409.014†	66.9	32.8	-17.048 µg/L	-17.048 ppb	11:50:12
3	V 292.402†	8381.8	8431.5	99.454 µg/L	99.454 ppb	11:50:17
3	Zn 213.857†	18303.8	17333.4	414.86 µg/L	414.86 ppb	11:50:17

Mean Data: 232429012|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2225349.8	101.53	%	0.288				0.28%
Sc RADIAL	177148.2	102	%	1.3				1.26%
Y 371.029	1464120.4	104.38	%	0.262				0.25%
Ag 328.068†	-561.5	2.8207	µg/L	0.35899	2.8207	ppb	0.35899	12.73%
Al 396.153Radial†	85548.7	35993	µg/L	332.6	35993	ppb	332.6	0.92%
As 188.979†	21.9	101.96	µg/L	5.146	101.96	ppb	5.146	5.05%
B 249.677†	1345.8	26.480	µg/L	0.4783	26.480	ppb	0.4783	1.81%
Ba 233.527†	26937.0	657.54	µg/L	3.747	657.54	ppb	3.747	0.57%
Be 313.107†	10222.3	13.135	µg/L	0.0968	13.135	ppb	0.0968	0.74%
Ca 317.933Radial†	157963.3	29918	µg/L	194.8	29918	ppb	194.8	0.65%
Cd 226.502†	394.1	2.3079	µg/L	0.23028	2.3079	ppb	0.23028	9.98%
Co 228.616†	610.5	22.753	µg/L	0.3723	22.753	ppb	0.3723	1.64%
Cr 267.716†	3232.5	63.430	µg/L	0.3665	63.430	ppb	0.3665	0.58%
Cu 324.752†	6850.8	60.629	µg/L	0.7828	60.629	ppb	0.7828	1.29%
Fe 238.204 Radial†	126226.6	90524	µg/L	644.0	90524	ppb	644.0	0.71%
K 766.490 Radial†	12993.2	7110.9	µg/L	90.78	7110.9	ppb	90.78	1.28%
Mg 279.077 IEC†	5184.1	10487	µg/L	108.5	10487	ppb	108.5	1.03%
Mn 257.610†	1447527.6	4151.1	µg/L	14.19	4151.1	ppb	14.19	0.34%
Mo 202.031†	612.7	69.056	µg/L	1.3269	69.056	ppb	1.3269	1.92%
Na 589.592 Radial†	2233.4	536.07	µg/L	8.861	536.07	ppb	8.861	1.65%

Ni 231.604†	622.0	31.323	µg/L	0.3170	31.323	ppb	0.3170	1.01%
P 214.914†	963.8	1569.5	µg/L	14.92	1569.5	ppb	14.92	0.95%
Pb 220.353†	1071.3	252.28	µg/L	1.626	252.28	ppb	1.626	0.64%
S 181.975 Axial†	351.9	1541.1	µg/L	5.27	1541.1	ppb	5.27	0.34%
Sb 206.836†	2.8	9.1888	µg/L	1.56742	9.1888	ppb	1.56742	17.06%
Se 196.026†	-48.0	-12.164	µg/L	3.2080	-12.164	ppb	3.2080	26.37%
SiO2†	189728.9	33485	µg/L	101.0	33485	ppb	101.0	0.30%
Si 251.611†	218720.0	15403	µg/L	40.1	15403	ppb	40.1	0.26%
Sn 189.927†	-79.2	-5.6033	µg/L	2.20273	-5.6033	ppb	2.20273	39.31%
Sr 421.552†	46870.1	201.84	µg/L	1.527	201.84	ppb	1.527	0.76%
Ti 334.940†	1086079.8	2455.8	µg/L	7.69	2455.8	ppb	7.69	0.31%
Tl 190.801†	-19.8	-29.256	µg/L	5.1055	-29.256	ppb	5.1055	17.45%
U 409.014†	1.7	-19.833	µg/L	2.9422	-19.833	ppb	2.9422	14.83%
V 292.402†	8432.1	99.398	µg/L	0.3655	99.398	ppb	0.3655	0.37%
Zn 213.857†	17231.3	412.43	µg/L	2.204	412.43	ppb	2.204	0.53%

Sequence No.: 25
Sample ID: 232429013|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 319
Date Collected: 7/2/2009 11:50:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429013|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	178310.3	178310.3	102	%			11:51:20
1	Al 396.153Radial†	69026.6	67550.7	28421	µg/L	28421	ppb	11:51:20
1	Ca 317.933Radial†	30357.1	28759.8	5447.1	µg/L	5447.1	ppb	11:51:40
1	Fe 238.204 Radial†	111336.7	108708.1	77960	µg/L	77960	ppb	11:51:20
1	K 766.490 Radial†	5125.6	4233.3	2316.8	µg/L	2316.8	ppb	11:51:20
1	Mg 279.077 IEC†	1577.1	1496.3	2940.5	µg/L	2940.5	ppb	11:51:40
1	Na 589.592 Radial†	4316.6	4095.2	982.95	µg/L	982.95	ppb	11:51:20
1	Sr 421.552†	8925.8	8646.2	37.233	µg/L	37.233	ppb	11:51:40
1	Sc 361.383	2223003.9	2223003.9	101.42	%			11:52:45
1	Y 371.029	1511989.2	1511989.2	107.79	%			11:52:45
1	Ag 328.068†	-1378.4	-537.2	1.6500	µg/L	1.6500	ppb	11:52:50
1	As 188.979†	12.3	9.9	83.174	µg/L	83.174	ppb	11:53:11
1	B 249.677†	1017.5	794.7	7.9287	µg/L	7.9287	ppb	11:52:50
1	Ba 233.527†	6210.9	6204.7	151.49	µg/L	151.49	ppb	11:52:50
1	Be 313.107†	17059.3	13161.6	14.225	µg/L	14.225	ppb	11:52:50
1	Cd 226.502†	126.6	265.1	0.2442	µg/L	0.2442	ppb	11:53:11
1	Co 228.616†	157.3	256.7	7.0875	µg/L	7.0875	ppb	11:53:11
1	Cr 267.716†	7196.8	7278.3	142.56	µg/L	142.56	ppb	11:52:50
1	Cu 324.752†	6445.9	1690.7	22.438	µg/L	22.438	ppb	11:52:50
1	Mn 257.610†	727078.0	716836.1	2055.9	µg/L	2055.9	ppb	11:52:45
1	Mo 202.031†	443.8	438.5	49.938	µg/L	49.938	ppb	11:53:11
1	Ni 231.604†	2359.7	1883.3	94.952	µg/L	94.952	ppb	11:53:11
1	P 214.914†	516.8	275.4	394.23	µg/L	394.23	ppb	11:53:11
1	Pb 220.353†	241.5	193.7	46.936	µg/L	46.936	ppb	11:53:11
1	S 181.975 Axial†	78.5	33.1	134.15	µg/L	134.15	ppb	11:53:11
1	Sb 206.836†	28.1	6.5	12.888	µg/L	12.888	ppb	11:53:11
1	Se 196.026†	-30.5	-49.6	-18.917	µg/L	-18.917	ppb	11:53:11
1	SiO2†	117626.1	112805.8	19909	µg/L	19909	ppb	11:52:50
1	Si 251.611†	132654.2	130405.5	9155.6	µg/L	9155.6	ppb	11:52:50
1	Sn 189.927†	-13.3	-20.3	12.066	µg/L	12.066	ppb	11:53:11
1	Ti 334.940†	1005857.2	990659.3	2240.8	µg/L	2240.8	ppb	11:52:45
1	Tl 190.801†	-40.0	-14.7	-13.176	µg/L	-13.176	ppb	11:53:11
1	U 409.014†	-967.8	-987.4	-108.23	µg/L	-108.23	ppb	11:52:45
1	V 292.402†	3010.9	3131.8	40.542	µg/L	40.542	ppb	11:52:50
1	Zn 213.857†	16600.5	15645.2	374.71	µg/L	374.71	ppb	11:52:50
2	Sc RADIAL	178373.2	178373.2	102	%			11:51:46
2	Al 396.153Radial†	70051.8	68527.3	28832	µg/L	28832	ppb	11:51:46
2	Ca 317.933Radial†	30413.6	28804.4	5455.6	µg/L	5455.6	ppb	11:52:06
2	Fe 238.204 Radial†	112919.3	110214.2	79040	µg/L	79040	ppb	11:51:46
2	K 766.490 Radial†	5267.4	4369.8	2391.5	µg/L	2391.5	ppb	11:51:46
2	Mg 279.077 IEC†	1583.1	1501.6	2949.5	µg/L	2949.5	ppb	11:52:06
2	Na 589.592 Radial†	4372.1	4147.9	995.59	µg/L	995.59	ppb	11:51:46
2	Sr 421.552†	8938.0	8655.1	37.271	µg/L	37.271	ppb	11:52:06
2	Sc 361.383	2232184.8	2232184.8	101.84	%			11:53:18
2	Y 371.029	1518296.0	1518296.0	108.24	%			11:53:18
2	Ag 328.068†	-1383.7	-536.8	1.7311	µg/L	1.7311	ppb	11:53:24
2	As 188.979†	11.4	9.0	82.586	µg/L	82.586	ppb	11:53:44
2	B 249.677†	985.6	759.2	6.1429	µg/L	6.1429	ppb	11:53:24
2	Ba 233.527†	6192.5	6161.5	150.43	µg/L	150.43	ppb	11:53:24
2	Be 313.107†	16925.4	12960.9	14.085	µg/L	14.085	ppb	11:53:24
2	Cd 226.502†	128.6	266.6	0.1959	µg/L	0.1959	ppb	11:53:44
2	Co 228.616†	168.5	267.0	7.5745	µg/L	7.5745	ppb	11:53:44
2	Cr 267.716†	7125.5	7179.1	140.62	µg/L	140.62	ppb	11:53:24
2	Cu 324.752†	6408.8	1628.1	22.141	µg/L	22.141	ppb	11:53:24
2	Mn 257.610†	728350.2	715136.8	2051.1	µg/L	2051.1	ppb	11:53:18
2	Mo 202.031†	445.9	438.8	50.010	µg/L	50.010	ppb	11:53:44
2	Ni 231.604†	2328.1	1842.8	92.907	µg/L	92.907	ppb	11:53:44
2	P 214.914†	507.6	264.3	373.83	µg/L	373.83	ppb	11:53:44
2	Pb 220.353†	243.3	194.5	47.130	µg/L	47.130	ppb	11:53:44

2	S 181.975 Axial†	76.3	30.6	123.23 µg/L	123.23 ppb	11:53:44
2	Sb 206.836†	32.4	10.6	16.447 µg/L	16.447 ppb	11:53:44
2	Se 196.026†	-25.8	-44.9	-13.239 µg/L	-13.239 ppb	11:53:44
2	SiO2†	117408.3	112115.0	19787 µg/L	19787 ppb	11:53:24
2	Si 251.611†	132193.0	129414.7	9085.7 µg/L	9085.7 ppb	11:53:24
2	Sn 189.927†	-14.3	-21.2	11.920 µg/L	11.920 ppb	11:53:44
2	Ti 334.940†	1006444.5	987156.9	2232.9 µg/L	2232.9 ppb	11:53:18
2	Tl 190.801†	-50.7	-25.0	-27.673 µg/L	-27.673 ppb	11:53:44
2	U 409.014†	-931.0	-947.3	-104.65 µg/L	-104.65 ppb	11:53:18
2	V 292.402†	2923.4	3033.8	39.572 µg/L	39.572 ppb	11:53:24
2	Zn 213.857†	16519.8	15498.6	371.08 µg/L	371.08 ppb	11:53:24
3	Sc RADIAL	177735.0	177735.0	102 %		11:52:12
3	Al 396.153Radial†	69061.1	67802.6	28527 µg/L	28527 ppb	11:52:12
3	Ca 317.933Radial†	30363.4	28861.9	5466.4 µg/L	5466.4 ppb	11:52:32
3	Fe 238.204 Radial†	110972.2	108703.0	77957 µg/L	77957 ppb	11:52:12
3	K 766.490 Radial†	5099.4	4223.8	2311.6 µg/L	2311.6 ppb	11:52:12
3	Mg 279.077 IEC†	1577.5	1501.8	2951.7 µg/L	2951.7 ppb	11:52:32
3	Na 589.592 Radial†	4318.2	4110.4	986.59 µg/L	986.59 ppb	11:52:12
3	Sr 421.552†	8946.6	8694.8	37.442 µg/L	37.442 ppb	11:52:32
3	Sc 361.383	2214230.0	2214230.0	101.02 %		11:53:52
3	Y 371.029	1505167.1	1505167.1	107.30 %		11:53:52
3	Ag 328.068†	-1338.1	-502.6	1.9522 µg/L	1.9522 ppb	11:53:57
3	As 188.979†	10.1	7.8	79.844 µg/L	79.844 ppb	11:54:18
3	B 249.677†	1009.9	791.1	7.7847 µg/L	7.7847 ppb	11:53:57
3	Ba 233.527†	6266.8	6284.4	153.43 µg/L	153.43 ppb	11:53:57
3	Be 313.107†	16976.9	13146.7	14.199 µg/L	14.199 ppb	11:53:57
3	Cd 226.502†	128.8	267.8	0.3019 µg/L	0.3019 ppb	11:54:18
3	Co 228.616†	161.0	260.9	7.2968 µg/L	7.2968 ppb	11:54:18
3	Cr 267.716†	7090.8	7201.5	141.06 µg/L	141.06 ppb	11:53:57
3	Cu 324.752†	6405.7	1676.1	22.335 µg/L	22.335 ppb	11:53:57
3	Mn 257.610†	723150.7	715789.2	2052.9 µg/L	2052.9 ppb	11:53:52
3	Mo 202.031†	455.6	451.9	51.373 µg/L	51.373 ppb	11:54:18
3	Ni 231.604†	2344.4	1877.4	94.652 µg/L	94.652 ppb	11:54:18
3	P 214.914†	519.1	279.7	401.56 µg/L	401.56 ppb	11:54:18
3	Pb 220.353†	228.0	181.3	44.054 µg/L	44.054 ppb	11:54:18
3	S 181.975 Axial†	85.3	40.2	165.54 µg/L	165.54 ppb	11:54:18
3	Sb 206.836†	23.7	2.2	9.1184 µg/L	9.1184 ppb	11:54:18
3	Se 196.026†	-19.0	-38.4	-6.4836 µg/L	-6.4836 ppb	11:54:18
3	SiO2†	116980.0	112625.9	19877 µg/L	19877 ppb	11:53:57
3	Si 251.611†	131900.2	130177.4	9139.8 µg/L	9139.8 ppb	11:53:57
3	Sn 189.927†	-23.5	-30.4	7.6003 µg/L	7.6003 ppb	11:54:18
3	Ti 334.940†	999213.5	988012.6	2234.8 µg/L	2234.8 ppb	11:53:52
3	Tl 190.801†	-46.7	-21.5	-22.695 µg/L	-22.695 ppb	11:54:18
3	U 409.014†	-1048.1	-1070.8	-116.09 µg/L	-116.09 ppb	11:53:52
3	V 292.402†	2973.5	3106.6	40.264 µg/L	40.264 ppb	11:53:57
3	Zn 213.857†	16440.6	15551.8	372.44 µg/L	372.44 ppb	11:53:57

Mean Data: 232429013|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2223139.6	101.43	%	0.410				0.40%
Sc RADIAL	178139.5	102	%	0.2				0.20%
Y 371.029	1511817.4	107.78	%	0.468				0.43%
Ag 328.068†	-525.5	1.7778	µg/L	0.15643	1.7778	ppb	0.15643	8.80%
Al 396.153Radial†	67960.2	28593	µg/L	213.3	28593	ppb	213.3	0.75%
As 188.979†	8.9	81.868	µg/L	1.7772	81.868	ppb	1.7772	2.17%
B 249.677†	781.7	7.2854	µg/L	0.99210	7.2854	ppb	0.99210	13.62%
Ba 233.527†	6216.9	151.78	µg/L	1.522	151.78	ppb	1.522	1.00%
Be 313.107†	13089.7	14.170	µg/L	0.0747	14.170	ppb	0.0747	0.53%
Ca 317.933Radial†	28808.7	5456.4	µg/L	9.69	5456.4	ppb	9.69	0.18%
Cd 226.502†	266.5	0.2473	µg/L	0.05306	0.2473	ppb	0.05306	21.46%
Co 228.616†	261.5	7.3196	µg/L	0.24428	7.3196	ppb	0.24428	3.34%
Cr 267.716†	7219.6	141.41	µg/L	1.019	141.41	ppb	1.019	0.72%
Cu 324.752†	1665.0	22.305	µg/L	0.1510	22.305	ppb	0.1510	0.68%
Fe 238.204 Radial†	109208.5	78319	µg/L	624.7	78319	ppb	624.7	0.80%
K 766.490 Radial†	4275.7	2340.0	µg/L	44.72	2340.0	ppb	44.72	1.91%
Mg 279.077 IEC†	1499.9	2947.2	µg/L	5.96	2947.2	ppb	5.96	0.20%
Mn 257.610†	715920.7	2053.3	µg/L	2.45	2053.3	ppb	2.45	0.12%
Mo 202.031†	443.0	50.440	µg/L	0.8084	50.440	ppb	0.8084	1.60%
Na 589.592 Radial†	4117.9	988.38	µg/L	6.509	988.38	ppb	6.509	0.66%

Ni 231.604†	1867.8	94.170	µg/L	1.1041	94.170	ppb	1.1041	1.17%
P 214.914†	273.1	389.87	µg/L	14.367	389.87	ppb	14.367	3.69%
Pb 220.353†	189.8	46.040	µg/L	1.7225	46.040	ppb	1.7225	3.74%
S 181.975 Axial†	34.6	140.97	µg/L	21.961	140.97	ppb	21.961	15.58%
Sb 206.836†	6.4	12.818	µg/L	3.6650	12.818	ppb	3.6650	28.59%
Se 196.026†	-44.3	-12.880	µg/L	6.2243	-12.880	ppb	6.2243	48.33%
SiO2†	112515.6	19857	µg/L	63.3	19857	ppb	63.3	0.32%
Si 251.611†	129999.2	9127.1	µg/L	36.67	9127.1	ppb	36.67	0.40%
Sn 189.927†	-24.0	10.529	µg/L	2.5372	10.529	ppb	2.5372	24.10%
Sr 421.552†	8665.3	37.315	µg/L	0.1114	37.315	ppb	0.1114	0.30%
Ti 334.940†	988609.6	2236.2	µg/L	4.13	2236.2	ppb	4.13	0.18%
Tl 190.801†	-20.4	-21.181	µg/L	7.3661	-21.181	ppb	7.3661	34.78%
U 409.014†	-1001.8	-109.66	µg/L	5.850	-109.66	ppb	5.850	5.34%
V 292.402†	3090.7	40.126	µg/L	0.4998	40.126	ppb	0.4998	1.25%
Zn 213.857†	15565.2	372.75	µg/L	1.834	372.75	ppb	1.834	0.49%

Sequence No.: 26
Sample ID: 232429014|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 320
Date Collected: 7/2/2009 11:54:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429014|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	177793.4	177793.4	102	%			11:55:00
1	Al 396.153Radial†	73384.7	72013.1	30299	µg/L	30299	ppb	11:55:06
1	Ca 317.933Radial†	208519.2	203265.5	38498	µg/L	38498	ppb	11:55:00
1	Fe 238.204 Radial†	108039.6	105796.3	75872	µg/L	75872	ppb	11:55:06
1	K 766.490 Radial†	13580.1	12524.7	6854.5	µg/L	6854.5	ppb	11:55:06
1	Mg 279.077 IEC†	6300.9	6125.4	12442	µg/L	12442	ppb	11:55:06
1	Na 589.592 Radial†	3447.1	3256.3	781.58	µg/L	781.58	ppb	11:55:06
1	Sr 421.552†	50879.3	49743.7	214.21	µg/L	214.21	ppb	11:55:06
1	Sc 361.383	2219269.5	2219269.5	101.25	%			11:55:40
1	Y 371.029	1474858.6	1474858.6	105.14	%			11:55:40
1	Ag 328.068†	-1210.8	-373.9	3.3897	µg/L	3.3897	ppb	11:55:46
1	As 188.979†	20.1	17.6	79.657	µg/L	79.657	ppb	11:56:06
1	B 249.677†	2043.1	1809.3	50.012	µg/L	50.012	ppb	11:55:46
1	Ba 233.527†	27297.5	27041.2	660.10	µg/L	660.10	ppb	11:55:46
1	Be 313.107†	15289.4	11441.9	14.283	µg/L	14.283	ppb	11:55:46
1	Cd 226.502†	245.9	383.2	3.3733	µg/L	3.3733	ppb	11:56:06
1	Co 228.616†	502.4	597.7	21.758	µg/L	21.758	ppb	11:56:06
1	Cr 267.716†	25344.9	25214.2	493.85	µg/L	493.85	ppb	11:55:46
1	Cu 324.752†	69793.9	64267.1	464.82	µg/L	464.82	ppb	11:55:46
1	Mn 257.610†	1314817.1	1298523.1	3723.8	µg/L	3723.8	ppb	11:55:40
1	Mo 202.031†	197.9	196.4	23.973	µg/L	23.973	ppb	11:56:06
1	Ni 231.604†	4917.4	4413.3	222.51	µg/L	222.51	ppb	11:56:06
1	P 214.914†	1202.3	953.3	1494.8	µg/L	1494.8	ppb	11:56:06
1	Pb 220.353†	1353.8	1292.6	302.55	µg/L	302.55	ppb	11:56:06
1	S 181.975 Axial†	401.0	351.7	1542.2	µg/L	1542.2	ppb	11:56:06
1	Sb 206.836†	29.1	7.5	11.253	µg/L	11.253	ppb	11:56:06
1	Se 196.026†	-17.5	-36.8	-6.7935	µg/L	-6.7935	ppb	11:56:06
1	SiO2†	167795.5	162550.8	28688	µg/L	28688	ppb	11:55:40
1	Si 251.611†	190275.0	187534.8	13189	µg/L	13189	ppb	11:55:40
1	Sn 189.927†	-72.0	-78.3	-7.2487	µg/L	-7.2487	ppb	11:56:06
1	Ti 334.940†	1167572.2	1152046.0	2604.7	µg/L	2604.7	ppb	11:55:40
1	Tl 190.801†	-39.6	-14.4	-19.623	µg/L	-19.623	ppb	11:56:06
1	U 409.014†	-295.9	-325.5	-48.832	µg/L	-48.832	ppb	11:55:40
1	V 292.402†	9339.6	9387.4	108.22	µg/L	108.22	ppb	11:55:46
1	Zn 213.857†	47699.5	46387.7	1120.5	µg/L	1120.5	ppb	11:55:46
2	Sc RADIAL	177162.7	177162.7	102	%			11:55:11
2	Al 396.153Radial†	73352.7	72237.5	30394	µg/L	30394	ppb	11:55:16
2	Ca 317.933Radial†	207831.3	203316.4	38508	µg/L	38508	ppb	11:55:11
2	Fe 238.204 Radial†	108075.7	106208.4	76168	µg/L	76168	ppb	11:55:16
2	K 766.490 Radial†	13503.6	12496.9	6839.3	µg/L	6839.3	ppb	11:55:16
2	Mg 279.077 IEC†	6293.0	6139.7	12471	µg/L	12471	ppb	11:55:16
2	Na 589.592 Radial†	3457.3	3278.3	786.86	µg/L	786.86	ppb	11:55:16
2	Sr 421.552†	50876.9	49918.7	214.96	µg/L	214.96	ppb	11:55:16
2	Sc 361.383	2223420.4	2223420.4	101.44	%			11:56:14
2	Y 371.029	1477160.2	1477160.2	105.31	%			11:56:14
2	Ag 328.068†	-1180.4	-341.7	3.6920	µg/L	3.6920	ppb	11:56:20
2	As 188.979†	14.7	12.3	71.453	µg/L	71.453	ppb	11:56:40
2	B 249.677†	2053.5	1815.8	50.182	µg/L	50.182	ppb	11:56:20
2	Ba 233.527†	27232.6	26926.9	657.31	µg/L	657.31	ppb	11:56:20
2	Be 313.107†	15156.9	11283.1	14.173	µg/L	14.173	ppb	11:56:20
2	Cd 226.502†	241.4	378.2	3.2421	µg/L	3.2421	ppb	11:56:40
2	Co 228.616†	487.6	582.2	21.065	µg/L	21.065	ppb	11:56:40
2	Cr 267.716†	25276.5	25100.0	491.62	µg/L	491.62	ppb	11:56:20
2	Cu 324.752†	69556.8	63904.6	462.29	µg/L	462.29	ppb	11:56:20
2	Mn 257.610†	1314045.2	1295337.8	3714.7	µg/L	3714.7	ppb	11:56:14
2	Mo 202.031†	192.7	190.9	23.405	µg/L	23.405	ppb	11:56:40
2	Ni 231.604†	4936.7	4423.3	223.01	µg/L	223.01	ppb	11:56:40
2	P 214.914†	1220.0	968.6	1521.4	µg/L	1521.4	ppb	11:56:40
2	Pb 220.353†	1368.8	1304.9	305.43	µg/L	305.43	ppb	11:56:40

2	S 181.975 Axial†	391.9	342.1	1499.3	µg/L	1499.3 ppb	11:56:40
2	Sb 206.836†	32.9	11.2	14.441	µg/L	14.441 ppb	11:56:40
2	Se 196.026†	-25.9	-45.1	-15.895	µg/L	-15.895 ppb	11:56:40
2	SiO2†	167545.2	161994.8	28590	µg/L	28590 ppb	11:56:14
2	Si 251.611†	189869.3	186784.0	13136	µg/L	13136 ppb	11:56:14
2	Sn 189.927†	-69.5	-75.7	-6.0419	µg/L	-6.0419 ppb	11:56:40
2	Ti 334.940†	1167127.8	1149455.1	2598.9	µg/L	2598.9 ppb	11:56:14
2	Tl 190.801†	-36.2	-10.9	-14.781	µg/L	-14.781 ppb	11:56:40
2	U 409.014†	-185.9	-216.4	-38.606	µg/L	-38.606 ppb	11:56:14
2	V 292.402†	9300.5	9331.6	107.65	µg/L	107.65 ppb	11:56:20
2	Zn 213.857†	47580.0	46181.9	1115.5	µg/L	1115.5 ppb	11:56:20
3	Sc RADIAL	176562.1	176562.1	101	%		11:55:22
3	Al 396.153Radial†	73207.1	72339.0	30436	µg/L	30436 ppb	11:55:27
3	Ca 317.933Radial†	209264.0	205423.4	38907	µg/L	38907 ppb	11:55:22
3	Fe 238.204 Radial†	107672.2	106171.8	76142	µg/L	76142 ppb	11:55:27
3	K 766.490 Radial†	13529.7	12567.7	6878.1	µg/L	6878.1 ppb	11:55:27
3	Mg 279.077 IEC†	6257.3	6125.4	12442	µg/L	12442 ppb	11:55:27
3	Na 589.592 Radial†	3421.5	3254.5	781.16	µg/L	781.16 ppb	11:55:27
3	Sr 421.552†	50717.6	49931.7	215.02	µg/L	215.02 ppb	11:55:27
3	Sc 361.383	2198308.2	2198308.2	100.29	%		11:56:48
3	Y 371.029	1460432.0	1460432.0	104.11	%		11:56:48
3	Ag 328.068†	-1166.2	-340.8	3.7025	µg/L	3.7025 ppb	11:56:53
3	As 188.979†	21.4	19.1	82.132	µg/L	82.132 ppb	11:57:14
3	B 249.677†	2046.6	1832.0	50.854	µg/L	50.854 ppb	11:56:53
3	Ba 233.527†	26968.6	26970.4	658.37	µg/L	658.37 ppb	11:56:53
3	Be 313.107†	15185.0	11481.8	14.281	µg/L	14.281 ppb	11:56:53
3	Cd 226.502†	252.6	392.1	3.5787	µg/L	3.5787 ppb	11:57:14
3	Co 228.616†	499.5	599.6	21.860	µg/L	21.860 ppb	11:57:14
3	Cr 267.716†	25083.5	25192.3	493.43	µg/L	493.43 ppb	11:56:53
3	Cu 324.752†	69169.9	64302.2	465.10	µg/L	465.10 ppb	11:56:53
3	Mn 257.610†	1296950.5	1293091.1	3708.2	µg/L	3708.2 ppb	11:56:48
3	Mo 202.031†	195.5	195.9	23.936	µg/L	23.936 ppb	11:57:14
3	Ni 231.604†	4935.8	4478.0	225.77	µg/L	225.77 ppb	11:57:14
3	P 214.914†	1211.4	973.7	1529.9	µg/L	1529.9 ppb	11:57:14
3	Pb 220.353†	1382.1	1333.6	312.12	µg/L	312.12 ppb	11:57:14
3	S 181.975 Axial†	396.1	350.6	1537.1	µg/L	1537.1 ppb	11:57:14
3	Sb 206.836†	29.6	8.3	11.864	µg/L	11.864 ppb	11:57:14
3	Se 196.026†	-24.8	-44.3	-14.939	µg/L	-14.939 ppb	11:57:14
3	SiO2†	165318.5	161661.3	28531	µg/L	28531 ppb	11:56:48
3	Si 251.611†	187214.8	186275.4	13100	µg/L	13100 ppb	11:56:48
3	Sn 189.927†	-64.1	-71.1	-3.9499	µg/L	-3.9499 ppb	11:57:14
3	Ti 334.940†	1152672.3	1148185.3	2596.0	µg/L	2596.0 ppb	11:56:48
3	Tl 190.801†	-31.1	-6.2	-8.2530	µg/L	-8.2530 ppb	11:57:14
3	U 409.014†	-124.7	-157.5	-33.088	µg/L	-33.088 ppb	11:56:48
3	V 292.402†	9254.0	9390.0	108.29	µg/L	108.29 ppb	11:56:53
3	Zn 213.857†	47139.4	46278.4	1117.8	µg/L	1117.8 ppb	11:56:53

Mean Data: 232429014|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2213666.0	100.99	%	0.614				0.61%
Sc RADIAL	177172.7	102	%	0.4				0.35%
Y 371.029	1470816.9	104.85	%	0.646				0.62%
Ag 328.068†	-352.1	3.5947	µg/L	0.17766	3.5947	ppb	0.17766	4.94%
Al 396.153Radial†	72196.5	30376	µg/L	70.2	30376	ppb	70.2	0.23%
As 188.979†	16.3	77.747	µg/L	5.5896	77.747	ppb	5.5896	7.19%
B 249.677†	1819.1	50.349	µg/L	0.4454	50.349	ppb	0.4454	0.88%
Ba 233.527†	26979.5	658.59	µg/L	1.409	658.59	ppb	1.409	0.21%
Be 313.107†	11402.3	14.246	µg/L	0.0629	14.246	ppb	0.0629	0.44%
Ca 317.933Radial†	204001.8	38638	µg/L	233.2	38638	ppb	233.2	0.60%
Cd 226.502†	384.5	3.3980	µg/L	0.16965	3.3980	ppb	0.16965	4.99%
Co 228.616†	593.2	21.561	µg/L	0.4326	21.561	ppb	0.4326	2.01%
Cr 267.716†	25168.8	492.97	µg/L	1.187	492.97	ppb	1.187	0.24%
Cu 324.752†	64158.0	464.07	µg/L	1.546	464.07	ppb	1.546	0.33%
Fe 238.204 Radial†	106058.8	76061	µg/L	163.6	76061	ppb	163.6	0.22%
K 766.490 Radial†	12529.8	6857.3	µg/L	19.53	6857.3	ppb	19.53	0.28%
Mg 279.077 IEC†	6130.2	12452	µg/L	16.7	12452	ppb	16.7	0.13%
Mn 257.610†	1295650.7	3715.6	µg/L	7.83	3715.6	ppb	7.83	0.21%
Mo 202.031†	194.4	23.771	µg/L	0.3179	23.771	ppb	0.3179	1.34%
Na 589.592 Radial†	3263.0	783.20	µg/L	3.174	783.20	ppb	3.174	0.41%

Ni 231.604†	4438.2	223.76	µg/L	1.755	223.76	ppb	1.755	0.78%
P 214.914†	965.2	1515.4	µg/L	18.32	1515.4	ppb	18.32	1.21%
Pb 220.353†	1310.4	306.70	µg/L	4.909	306.70	ppb	4.909	1.60%
S 181.975 Axial†	348.1	1526.2	µg/L	23.41	1526.2	ppb	23.41	1.53%
Sb 206.836†	9.0	12.519	µg/L	1.6916	12.519	ppb	1.6916	13.51%
Se 196.026†	-42.1	-12.543	µg/L	5.0018	-12.543	ppb	5.0018	39.88%
SiO2†	162069.0	28603	µg/L	79.3	28603	ppb	79.3	0.28%
Si 251.611†	186864.8	13142	µg/L	44.8	13142	ppb	44.8	0.34%
Sn 189.927†	-75.0	-5.7468	µg/L	1.66909	-5.7468	ppb	1.66909	29.04%
Sr 421.552†	49864.7	214.73	µg/L	0.452	214.73	ppb	0.452	0.21%
Ti 334.940†	1149895.5	2599.9	µg/L	4.46	2599.9	ppb	4.46	0.17%
Tl 190.801†	-10.5	-14.219	µg/L	5.7056	-14.219	ppb	5.7056	40.13%
U 409.014†	-233.1	-40.175	µg/L	7.9886	-40.175	ppb	7.9886	19.88%
V 292.402†	9369.7	108.05	µg/L	0.352	108.05	ppb	0.352	0.33%
Zn 213.857†	46282.6	1117.9	µg/L	2.51	1117.9	ppb	2.51	0.22%

Sequence No.: 27
Sample ID: 232429015|880928|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 321
Date Collected: 7/2/2009 11:57:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232429015|880928|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	177400.4	177400.4	102	%			11:57:56
1	Al 396.153Radial†	180999.8	177760.2	74794	µg/L	74794	ppb	11:57:56
1	Ca 317.933Radial†	109680.0	106740.4	20217	µg/L	20217	ppb	11:58:01
1	Fe 238.204 Radial†	153562.9	150696.4	108070	µg/L	108070	ppb	11:58:01
1	K 766.490 Radial†	19884.8	18740.2	10256	µg/L	10256	ppb	11:58:01
1	Mg 279.077 IEC†	7794.9	7604.9	15424	µg/L	15424	ppb	11:58:01
1	Na 589.592 Radial†	3142.6	2964.9	711.65	µg/L	711.65	ppb	11:58:01
1	Sr 421.552†	47509.9	46548.1	200.45	µg/L	200.45	ppb	11:58:01
1	Sc 361.383	2240808.4	2240808.4	102.23	%			11:58:36
1	Y 371.029	1467650.9	1467650.9	104.63	%			11:58:36
1	Ag 328.068†	-1010.3	-166.3	8.5903	µg/L	8.5903	ppb	11:58:42
1	As 188.979†	25.3	22.5	122.23	µg/L	122.23	ppb	11:59:02
1	B 249.677†	1599.2	1355.7	21.367	µg/L	21.367	ppb	11:58:42
1	Ba 233.527†	34767.5	34088.9	832.34	µg/L	832.34	ppb	11:58:42
1	Be 313.107†	17205.9	13171.4	15.217	µg/L	15.217	ppb	11:58:42
1	Cd 226.502†	267.1	401.6	1.1294	µg/L	1.1294	ppb	11:58:42
1	Co 228.616†	1194.1	1269.6	52.284	µg/L	52.284	ppb	11:59:02
1	Cr 267.716†	4114.7	4207.1	82.707	µg/L	82.707	ppb	11:58:42
1	Cu 324.752†	10836.4	5934.8	56.508	µg/L	56.508	ppb	11:58:42
1	Mn 257.610†	951258.0	930423.1	2668.5	µg/L	2668.5	ppb	11:58:36
1	Mo 202.031†	-6.1	-5.0	3.7074	µg/L	3.7074	ppb	11:59:02
1	Ni 231.604†	1486.1	1010.3	50.859	µg/L	50.859	ppb	11:59:02
1	P 214.914†	694.4	445.1	664.34	µg/L	664.34	ppb	11:59:02
1	Pb 220.353†	663.1	604.2	146.19	µg/L	146.19	ppb	11:59:02
1	S 181.975 Axial†	150.6	103.0	437.09	µg/L	437.09	ppb	11:59:02
1	Sb 206.836†	19.4	-2.3	5.8379	µg/L	5.8379	ppb	11:59:02
1	Se 196.026†	-25.7	-44.7	-1.9851	µg/L	-1.9851	ppb	11:59:02
1	SiO2†	171046.7	164138.1	28968	µg/L	28968	ppb	11:58:36
1	Si 251.611†	193821.2	189197.2	13307	µg/L	13307	ppb	11:58:36
1	Sn 189.927†	-81.0	-86.4	-5.3694	µg/L	-5.3694	ppb	11:59:02
1	Ti 334.940†	1166803.5	1140209.8	2578.6	µg/L	2578.6	ppb	11:58:36
1	Tl 190.801†	-44.0	-18.3	-20.122	µg/L	-20.122	ppb	11:59:02
1	U 409.014†	-220.0	-248.4	-45.686	µg/L	-45.686	ppb	11:58:36
1	V 292.402†	20840.3	20548.2	231.89	µg/L	231.89	ppb	11:58:42
1	Zn 213.857†	10060.9	9118.4	213.56	µg/L	213.56	ppb	11:58:42
2	Sc RADIAL	178548.8	178548.8	103	%			11:58:07
2	Al 396.153Radial†	180254.6	175891.5	74008	µg/L	74008	ppb	11:58:07
2	Ca 317.933Radial†	110518.2	106865.4	20240	µg/L	20240	ppb	11:58:12
2	Fe 238.204 Radial†	154786.9	150920.6	108230	µg/L	108230	ppb	11:58:12
2	K 766.490 Radial†	20071.5	18796.7	10287	µg/L	10287	ppb	11:58:12
2	Mg 279.077 IEC†	7821.6	7581.7	15376	µg/L	15376	ppb	11:58:12
2	Na 589.592 Radial†	3198.5	2999.7	719.98	µg/L	719.98	ppb	11:58:12
2	Sr 421.552†	47906.5	46635.0	200.82	µg/L	200.82	ppb	11:58:12
2	Sc 361.383	2233674.4	2233674.4	101.91	%			11:59:10
2	Y 371.029	1464157.0	1464157.0	104.38	%			11:59:10
2	Ag 328.068†	-988.5	-148.1	8.7440	µg/L	8.7440	ppb	11:59:16
2	As 188.979†	21.0	18.4	115.82	µg/L	115.82	ppb	11:59:36
2	B 249.677†	1555.4	1317.7	19.764	µg/L	19.764	ppb	11:59:16
2	Ba 233.527†	34204.4	33644.9	821.50	µg/L	821.50	ppb	11:59:16
2	Be 313.107†	17028.0	13050.6	15.140	µg/L	15.140	ppb	11:59:16
2	Cd 226.502†	260.2	395.6	0.9830	µg/L	0.9830	ppb	11:59:16
2	Co 228.616†	1177.7	1257.2	51.724	µg/L	51.724	ppb	11:59:36
2	Cr 267.716†	4017.8	4124.9	81.093	µg/L	81.093	ppb	11:59:16
2	Cu 324.752†	10664.9	5800.4	55.579	µg/L	55.579	ppb	11:59:16
2	Mn 257.610†	945297.8	927546.3	2660.3	µg/L	2660.3	ppb	11:59:10
2	Mo 202.031†	-3.6	-2.6	3.9776	µg/L	3.9776	ppb	11:59:36
2	Ni 231.604†	1475.4	1004.4	50.565	µg/L	50.565	ppb	11:59:36
2	P 214.914†	684.5	437.6	651.00	µg/L	651.00	ppb	11:59:36
2	Pb 220.353†	668.7	611.7	147.87	µg/L	147.87	ppb	11:59:36

2	S 181.975 Axial†	144.0	97.0	410.71	µg/L	410.71 ppb	11:59:36
2	Sb 206.836†	22.8	1.1	8.8324	µg/L	8.8324 ppb	11:59:36
2	Se 196.026†	-33.4	-52.4	-10.420	µg/L	-10.420 ppb	11:59:36
2	SiO2†	170239.1	163880.0	28923	µg/L	28923 ppb	11:59:10
2	Si 251.611†	192778.1	188779.2	13278	µg/L	13278 ppb	11:59:10
2	Sn 189.927†	-77.6	-83.3	-3.9733	µg/L	-3.9733 ppb	11:59:36
2	Ti 334.940†	1162143.1	1139281.8	2576.5	µg/L	2576.5 ppb	11:59:10
2	Tl 190.801†	-46.2	-20.6	-23.363	µg/L	-23.363 ppb	11:59:36
2	U 409.014†	-123.0	-153.9	-36.814	µg/L	-36.814 ppb	11:59:10
2	V 292.402†	20511.3	20290.5	229.12	µg/L	229.12 ppb	11:59:16
2	Zn 213.857†	9866.9	8959.4	209.69	µg/L	209.69 ppb	11:59:16
3	Sc RADIAL	178289.7	178289.7	102	%		11:58:18
3	Al 396.153Radial†	181840.5	177695.1	74767	µg/L	74767 ppb	11:58:18
3	Ca 317.933Radial†	109988.5	106504.8	20172	µg/L	20172 ppb	11:58:23
3	Fe 238.204 Radial†	153884.0	150258.3	107760	µg/L	107760 ppb	11:58:23
3	K 766.490 Radial†	19885.8	18643.8	10203	µg/L	10203 ppb	11:58:23
3	Mg 279.077 IEC†	7788.5	7560.5	15333	µg/L	15333 ppb	11:58:23
3	Na 589.592 Radial†	3163.2	2969.7	712.80	µg/L	712.80 ppb	11:58:23
3	Sr 421.552†	47686.2	46487.8	200.19	µg/L	200.19 ppb	11:58:23
3	Sc 361.383	2257150.7	2257150.7	102.98	%		11:59:44
3	Y 371.029	1479318.1	1479318.1	105.46	%		11:59:44
3	Ag 328.068†	-964.5	-114.7	9.0082	µg/L	9.0082 ppb	11:59:49
3	As 188.979†	31.4	28.2	131.06	µg/L	131.06 ppb	12:00:10
3	B 249.677†	1582.3	1328.0	20.332	µg/L	20.332 ppb	11:59:49
3	Ba 233.527†	34836.2	33909.5	827.96	µg/L	827.96 ppb	11:59:49
3	Be 313.107†	17293.5	13134.6	15.169	µg/L	15.169 ppb	11:59:49
3	Cd 226.502†	259.7	392.5	0.9449	µg/L	0.9449 ppb	11:59:49
3	Co 228.616†	1199.6	1266.4	52.160	µg/L	52.160 ppb	12:00:10
3	Cr 267.716†	4103.2	4166.9	81.916	µg/L	81.916 ppb	11:59:49
3	Cu 324.752†	10807.9	5830.4	55.727	µg/L	55.727 ppb	11:59:49
3	Mn 257.610†	954076.2	926423.0	2657.1	µg/L	2657.1 ppb	11:59:44
3	Mo 202.031†	-0.6	0.4	4.2786	µg/L	4.2786 ppb	12:00:10
3	Ni 231.604†	1495.7	1009.1	50.800	µg/L	50.800 ppb	12:00:10
3	P 214.914†	703.7	449.2	671.98	µg/L	671.98 ppb	12:00:10
3	Pb 220.353†	670.9	607.0	146.85	µg/L	146.85 ppb	12:00:10
3	S 181.975 Axial†	150.6	102.0	432.65	µg/L	432.65 ppb	12:00:10
3	Sb 206.836†	27.2	5.2	12.371	µg/L	12.371 ppb	12:00:10
3	Se 196.026†	-31.9	-50.6	-8.6315	µg/L	-8.6315 ppb	12:00:10
3	SiO2†	171652.0	163514.6	28858	µg/L	28858 ppb	11:59:44
3	Si 251.611†	194641.1	188620.7	13267	µg/L	13267 ppb	11:59:44
3	Sn 189.927†	-77.7	-82.6	-3.7903	µg/L	-3.7903 ppb	12:00:10
3	Ti 334.940†	1171229.8	1136244.7	2569.6	µg/L	2569.6 ppb	11:59:44
3	Tl 190.801†	-39.8	-13.9	-13.952	µg/L	-13.952 ppb	12:00:10
3	U 409.014†	-131.8	-161.2	-37.398	µg/L	-37.398 ppb	11:59:44
3	V 292.402†	20827.7	20388.4	230.15	µg/L	230.15 ppb	11:59:49
3	Zn 213.857†	10036.5	9023.4	211.28	µg/L	211.28 ppb	11:59:49

Mean Data: 232429015|880928|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2243877.9	102.37	%	0.549				0.54%
Sc RADIAL	178079.6	102	%	0.3				0.34%
Y 371.029	1470375.3	104.82	%	0.566				0.54%
Ag 328.068†	-143.0	8.7808	µg/L	0.21137	8.7808	ppb	0.21137	2.41%
Al 396.153Radial†	177115.6	74523	µg/L	446.2	74523	ppb	446.2	0.60%
As 188.979†	23.0	123.03	µg/L	7.653	123.03	ppb	7.653	6.22%
B 249.677†	1333.8	20.488	µg/L	0.8123	20.488	ppb	0.8123	3.96%
Ba 233.527†	33881.1	827.26	µg/L	5.453	827.26	ppb	5.453	0.66%
Be 313.107†	13118.9	15.175	µg/L	0.0388	15.175	ppb	0.0388	0.26%
Ca 317.933Radial†	106703.5	20210	µg/L	34.7	20210	ppb	34.7	0.17%
Cd 226.502†	396.6	1.0191	µg/L	0.09742	1.0191	ppb	0.09742	9.56%
Co 228.616†	1264.4	52.056	µg/L	0.2943	52.056	ppb	0.2943	0.57%
Cr 267.716†	4166.3	81.906	µg/L	0.8068	81.906	ppb	0.8068	0.99%
Cu 324.752†	5855.2	55.938	µg/L	0.4993	55.938	ppb	0.4993	0.89%
Fe 238.204 Radial†	150625.1	108020	µg/L	241.6	108020	ppb	241.6	0.22%
K 766.490 Radial†	18726.9	10249	µg/L	42.3	10249	ppb	42.3	0.41%
Mg 279.077 IEC†	7582.4	15378	µg/L	45.3	15378	ppb	45.3	0.29%
Mn 257.610†	928130.8	2662.0	µg/L	5.92	2662.0	ppb	5.92	0.22%
Mo 202.031†	-2.4	3.9879	µg/L	0.28570	3.9879	ppb	0.28570	7.16%
Na 589.592 Radial†	2978.1	714.81	µg/L	4.516	714.81	ppb	4.516	0.63%

Ni 231.604†	1007.9	50.741 µg/L	0.1560	50.741 ppb	0.1560	0.31%
P 214.914†	444.0	662.44 µg/L	10.621	662.44 ppb	10.621	1.60%
Pb 220.353†	607.6	146.97 µg/L	0.849	146.97 ppb	0.849	0.58%
S 181.975 Axial†	100.7	426.82 µg/L	14.126	426.82 ppb	14.126	3.31%
Sb 206.836†	1.3	9.0139 µg/L	3.27048	9.0139 ppb	3.27048	36.28%
Se 196.026†	-49.2	-7.0123 µg/L	4.44458	-7.0123 ppb	4.44458	63.38%
SiO2†	163844.2	28916 µg/L	55.3	28916 ppb	55.3	0.19%
Si 251.611†	188865.7	13284 µg/L	21.0	13284 ppb	21.0	0.16%
Sn 189.927†	-84.1	-4.3777 µg/L	0.86374	-4.3777 ppb	0.86374	19.73%
Sr 421.552†	46557.0	200.49 µg/L	0.319	200.49 ppb	0.319	0.16%
Ti 334.940†	1138578.8	2574.9 µg/L	4.69	2574.9 ppb	4.69	0.18%
Tl 190.801†	-17.6	-19.146 µg/L	4.7810	-19.146 ppb	4.7810	24.97%
U 409.014†	-187.8	-39.966 µg/L	4.9624	-39.966 ppb	4.9624	12.42%
V 292.402†	20409.0	230.39 µg/L	1.400	230.39 ppb	1.400	0.61%
Zn 213.857†	9033.8	211.51 µg/L	1.947	211.51 ppb	1.947	0.92%

Sequence No.: 28
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 12:00:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174824.8	174824.8	100	%			12:00:55
1	Al 396.153Radial†	12297.2	12413.3	5203.6	µg/L	5203.6	ppb	12:01:01
1	Ca 317.933Radial†	28356.6	27358.8	5181.8	µg/L	5181.8	ppb	12:01:01
1	Fe 238.204 Radial†	7292.8	7287.1	5243.1	µg/L	5243.1	ppb	12:01:01
1	K 766.490 Radial†	10328.3	9512.9	5206.2	µg/L	5206.2	ppb	12:01:01
1	Mg 279.077 IEC†	2613.0	2558.5	5253.9	µg/L	5253.9	ppb	12:01:01
1	Na 589.592 Radial†	43137.6	42830.1	10280	µg/L	10280	ppb	12:00:55
1	Sr 421.552†	118886.4	118298.6	509.43	µg/L	509.43	ppb	12:00:55
1	Sc 361.383	2210422.5	2210422.5	100.85	%			12:01:35
1	Y 371.029	1407686.8	1407686.8	100.35	%			12:01:35
1	Ag 328.068†	58286.3	58618.8	520.56	µg/L	520.56	ppb	12:01:40
1	As 188.979†	329.4	324.4	517.89	µg/L	517.89	ppb	12:02:01
1	B 249.677†	12763.7	12447.9	506.57	µg/L	506.57	ppb	12:01:40
1	Ba 233.527†	21226.5	21129.1	516.69	µg/L	516.69	ppb	12:01:40
1	Be 313.107†	878060.6	867029.0	508.57	µg/L	508.57	ppb	12:01:35
1	Cd 226.502†	22024.1	21979.5	518.56	µg/L	518.56	ppb	12:01:40
1	Co 228.616†	11397.2	11403.1	518.12	µg/L	518.12	ppb	12:01:40
1	Cr 267.716†	26335.9	26297.1	515.67	µg/L	515.67	ppb	12:01:40
1	Cu 324.752†	76201.5	70896.8	502.22	µg/L	502.22	ppb	12:01:40
1	Mn 257.610†	178674.2	177117.6	507.89	µg/L	507.89	ppb	12:01:35
1	Mo 202.031†	4797.9	4758.5	508.90	µg/L	508.90	ppb	12:02:01
1	Ni 231.604†	10791.0	10257.1	516.46	µg/L	516.46	ppb	12:01:40
1	P 214.914†	1709.3	1460.8	2452.8	µg/L	2452.8	ppb	12:02:01
1	Pb 220.353†	2234.6	2171.4	507.35	µg/L	507.35	ppb	12:02:01
1	S 181.975 Axial†	266.0	219.4	968.77	µg/L	968.77	ppb	12:02:01
1	Sb 206.836†	609.8	583.4	508.01	µg/L	508.01	ppb	12:02:01
1	Se 196.026†	487.2	463.5	514.18	µg/L	514.18	ppb	12:02:01
1	SiO2†	35332.3	31863.3	5623.4	µg/L	5623.4	ppb	12:01:40
1	Si 251.611†	37749.2	37041.9	2575.3	µg/L	2575.3	ppb	12:01:40
1	Sn 189.927†	1178.7	1161.6	512.90	µg/L	512.90	ppb	12:02:01
1	Ti 334.940†	228564.6	225538.5	510.01	µg/L	510.01	ppb	12:01:35
1	Tl 190.801†	335.1	357.0	500.51	µg/L	500.51	ppb	12:02:01
1	U 409.014†	5422.3	5343.5	502.36	µg/L	502.36	ppb	12:01:40
1	V 292.402†	47580.4	47344.0	518.85	µg/L	518.85	ppb	12:01:40
1	Zn 213.857†	22088.5	21180.2	510.42	µg/L	510.42	ppb	12:01:40
2	Sc RADIAL	175750.4	175750.4	101	%			12:01:06
2	Al 396.153Radial†	12342.2	12393.3	5195.2	µg/L	5195.2	ppb	12:01:11
2	Ca 317.933Radial†	28526.2	27378.1	5185.4	µg/L	5185.4	ppb	12:01:11
2	Fe 238.204 Radial†	7287.5	7243.5	5211.5	µg/L	5211.5	ppb	12:01:11
2	K 766.490 Radial†	10260.1	9391.3	5139.7	µg/L	5139.7	ppb	12:01:11
2	Mg 279.077 IEC†	2640.1	2571.6	5280.9	µg/L	5280.9	ppb	12:01:11
2	Na 589.592 Radial†	42890.6	42359.3	10167	µg/L	10167	ppb	12:01:06
2	Sr 421.552†	118273.0	117067.8	504.13	µg/L	504.13	ppb	12:01:06
2	Sc 361.383	2220629.8	2220629.8	101.31	%			12:02:08
2	Y 371.029	1413600.3	1413600.3	100.78	%			12:02:08
2	Ag 328.068†	57428.8	57506.7	510.70	µg/L	510.70	ppb	12:02:13
2	As 188.979†	322.1	315.7	503.93	µg/L	503.93	ppb	12:02:34
2	B 249.677†	12601.1	12229.3	497.66	µg/L	497.66	ppb	12:02:13
2	Ba 233.527†	20962.4	20771.7	507.95	µg/L	507.95	ppb	12:02:13
2	Be 313.107†	874368.8	859382.8	504.08	µg/L	504.08	ppb	12:02:08
2	Cd 226.502†	21719.0	21577.9	509.09	µg/L	509.09	ppb	12:02:13
2	Co 228.616†	11236.8	11192.8	508.58	µg/L	508.58	ppb	12:02:13
2	Cr 267.716†	26020.7	25865.9	507.21	µg/L	507.21	ppb	12:02:13
2	Cu 324.752†	75339.9	69699.0	493.74	µg/L	493.74	ppb	12:02:13
2	Mn 257.610†	177947.5	175586.0	503.50	µg/L	503.50	ppb	12:02:08
2	Mo 202.031†	4821.7	4760.2	509.07	µg/L	509.07	ppb	12:02:34
2	Ni 231.604†	10646.5	10065.3	506.80	µg/L	506.80	ppb	12:02:13
2	P 214.914†	1704.2	1448.0	2432.1	µg/L	2432.1	ppb	12:02:34
2	Pb 220.353†	2248.1	2174.6	508.12	µg/L	508.12	ppb	12:02:34

2	S 181.975 Axial†	268.1	220.3	972.40 µg/L	972.40 ppb	12:02:34
2	Sb 206.836†	613.7	584.5	509.01 µg/L	509.01 ppb	12:02:34
2	Se 196.026†	472.8	447.1	496.05 µg/L	496.05 ppb	12:02:34
2	SiO2†	34958.8	31333.6	5530.0 µg/L	5530.0 ppb	12:02:13
2	Si 251.611†	37416.0	36540.9	2540.0 µg/L	2540.0 ppb	12:02:13
2	Sn 189.927†	1187.0	1164.5	514.15 µg/L	514.15 ppb	12:02:34
2	Ti 334.940†	227161.4	223111.7	504.52 µg/L	504.52 ppb	12:02:08
2	Tl 190.801†	336.1	356.4	499.70 µg/L	499.70 ppb	12:02:34
2	U 409.014†	5517.1	5412.4	508.86 µg/L	508.86 ppb	12:02:13
2	V 292.402†	47000.5	46554.7	510.29 µg/L	510.29 ppb	12:02:13
2	Zn 213.857†	21860.6	20854.6	502.58 µg/L	502.58 ppb	12:02:13
3	Sc RADIAL	175509.7	175509.7	101 %		12:01:17
3	Al 396.153Radial†	12198.0	12267.1	5142.3 µg/L	5142.3 ppb	12:01:23
3	Ca 317.933Radial†	28194.6	27088.0	5130.5 µg/L	5130.5 ppb	12:01:23
3	Fe 238.204 Radial†	7196.5	7163.2	5154.0 µg/L	5154.0 ppb	12:01:23
3	K 766.490 Radial†	10242.2	9387.4	5137.6 µg/L	5137.6 ppb	12:01:23
3	Mg 279.077 IEC†	2619.0	2554.2	5245.3 µg/L	5245.3 ppb	12:01:23
3	Na 589.592 Radial†	42921.6	42448.3	10189 µg/L	10189 ppb	12:01:17
3	Sr 421.552†	118232.8	117188.6	504.65 µg/L	504.65 ppb	12:01:17
3	Sc 361.383	2221801.8	2221801.8	101.37 %		12:02:41
3	Y 371.029	1414430.9	1414430.9	100.83 %		12:02:41
3	Ag 328.068†	58087.2	58126.4	516.19 µg/L	516.19 ppb	12:02:47
3	As 188.979†	326.0	319.4	509.86 µg/L	509.86 ppb	12:03:07
3	B 249.677†	12765.1	12384.5	504.01 µg/L	504.01 ppb	12:02:47
3	Ba 233.527†	21199.8	20995.0	513.41 µg/L	513.41 ppb	12:02:47
3	Be 313.107†	882653.0	867100.1	508.61 µg/L	508.61 ppb	12:02:41
3	Cd 226.502†	22008.8	21852.5	515.57 µg/L	515.57 ppb	12:02:47
3	Co 228.616†	11331.6	11280.4	512.54 µg/L	512.54 ppb	12:02:47
3	Cr 267.716†	26219.3	26048.4	510.79 µg/L	510.79 ppb	12:02:47
3	Cu 324.752†	75975.4	70286.7	497.89 µg/L	497.89 ppb	12:02:47
3	Mn 257.610†	179453.9	176979.4	507.49 µg/L	507.49 ppb	12:02:41
3	Mo 202.031†	4781.2	4717.7	504.53 µg/L	504.53 ppb	12:03:07
3	Ni 231.604†	10782.3	10193.7	513.27 µg/L	513.27 ppb	12:02:47
3	P 214.914†	1703.3	1446.2	2428.2 µg/L	2428.2 ppb	12:03:07
3	Pb 220.353†	2252.7	2178.0	508.87 µg/L	508.87 ppb	12:03:07
3	S 181.975 Axial†	268.4	220.4	973.11 µg/L	973.11 ppb	12:03:07
3	Sb 206.836†	604.3	574.9	500.62 µg/L	500.62 ppb	12:03:07
3	Se 196.026†	484.0	457.9	507.99 µg/L	507.99 ppb	12:03:07
3	SiO2†	35340.9	31692.3	5593.3 µg/L	5593.3 ppb	12:02:47
3	Si 251.611†	37960.9	37059.0	2576.8 µg/L	2576.8 ppb	12:02:47
3	Sn 189.927†	1175.4	1152.3	508.80 µg/L	508.80 ppb	12:03:07
3	Ti 334.940†	229265.1	225068.8	508.95 µg/L	508.95 ppb	12:02:41
3	Tl 190.801†	332.7	353.0	494.83 µg/L	494.83 ppb	12:03:07
3	U 409.014†	5512.8	5405.3	508.21 µg/L	508.21 ppb	12:02:47
3	V 292.402†	47457.7	46981.3	514.89 µg/L	514.89 ppb	12:02:47
3	Zn 213.857†	22034.7	21015.1	506.44 µg/L	506.44 ppb	12:02:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2217618.0	101.18	%	0.286				0.28%
Sc RADIAL	175361.6	101	%	0.3				0.27%
Y 371.029	1411906.0	100.65	%	0.262				0.26%
Ag 328.068†	58084.0	515.82	µg/L	4.942	515.82	ppb	4.942	0.96%
QC value within limits for Ag 328.068 Recovery = 103.16%								
Al 396.153Radial†	12357.9	5180.4	µg/L	33.26	5180.4	ppb	33.26	0.64%
QC value within limits for Al 396.153Radial Recovery = 103.61%								
As 188.979†	319.8	510.56	µg/L	7.005	510.56	ppb	7.005	1.37%
QC value within limits for As 188.979 Recovery = 102.11%								
B 249.677†	12353.9	502.75	µg/L	4.590	502.75	ppb	4.590	0.91%
QC value within limits for B 249.677 Recovery = 100.55%								
Ba 233.527†	20965.3	512.69	µg/L	4.415	512.69	ppb	4.415	0.86%
QC value within limits for Ba 233.527 Recovery = 102.54%								
Be 313.107†	864504.0	507.08	µg/L	2.602	507.08	ppb	2.602	0.51%
QC value within limits for Be 313.107 Recovery = 101.42%								
Ca 317.933Radial†	27275.0	5165.9	µg/L	30.72	5165.9	ppb	30.72	0.59%
QC value within limits for Ca 317.933Radial Recovery = 103.32%								
Cd 226.502†	21803.3	514.41	µg/L	4.841	514.41	ppb	4.841	0.94%
QC value within limits for Cd 226.502 Recovery = 102.88%								
Co 228.616†	11292.1	513.08	µg/L	4.793	513.08	ppb	4.793	0.93%

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   QC value within limits for Co 228.616  Recovery = 102.62%
Cr 267.716†            26070.5      511.22 µg/L         4.244      511.22 ppb          4.244   0.83%
   QC value within limits for Cr 267.716  Recovery = 102.24%
Cu 324.752†            70294.2      497.95 µg/L         4.239      497.95 ppb          4.239   0.85%
   QC value within limits for Cu 324.752  Recovery = 99.59%
Fe 238.204 Radial†      7231.3      5202.9 µg/L         45.14      5202.9 ppb          45.14   0.87%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.06%
K 766.490 Radial†       9430.5      5161.2 µg/L         39.06      5161.2 ppb          39.06   0.76%
   QC value within limits for K 766.490 Radial  Recovery = 103.22%
Mg 279.077 IEC†         2561.4      5260.0 µg/L         18.62      5260.0 ppb          18.62   0.35%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.20%
Mn 257.610†           176561.0      506.29 µg/L         2.429      506.29 ppb          2.429   0.48%
   QC value within limits for Mn 257.610  Recovery = 101.26%
Mo 202.031†             4745.5      507.50 µg/L         2.572      507.50 ppb          2.572   0.51%
   QC value within limits for Mo 202.031  Recovery = 101.50%
Na 589.592 Radial†     42545.9       10212 µg/L          60.0       10212 ppb           60.0   0.59%
   QC value within limits for Na 589.592 Radial  Recovery = 102.12%
Ni 231.604†            10172.0      512.17 µg/L         4.922      512.17 ppb          4.922   0.96%
   QC value within limits for Ni 231.604  Recovery = 102.43%
P 214.914†              1451.7      2437.7 µg/L         13.24      2437.7 ppb          13.24   0.54%
   QC value within limits for P 214.914  Recovery = 97.51%
Pb 220.353†             2174.6      508.11 µg/L         0.763      508.11 ppb          0.763   0.15%
   QC value within limits for Pb 220.353  Recovery = 101.62%
S 181.975 Axial†         220.0      971.43 µg/L         2.328      971.43 ppb          2.328   0.24%
   QC value within limits for S 181.975 Axial  Recovery = 97.14%
Sb 206.836†              580.9      505.88 µg/L         4.584      505.88 ppb          4.584   0.91%
   QC value within limits for Sb 206.836  Recovery = 101.18%
Se 196.026†              456.2      506.07 µg/L         9.215      506.07 ppb          9.215   1.82%
   QC value within limits for Se 196.026  Recovery = 101.21%
SiO2†                  31629.7      5582.2 µg/L         47.71      5582.2 ppb          47.71   0.85%
   QC value within limits for SiO2  Recovery = 104.39%
Si 251.611†            36880.6      2564.0 µg/L         20.84      2564.0 ppb          20.84   0.81%
   QC value within limits for Si 251.611  Recovery = 102.56%
Sn 189.927†             1159.5      511.95 µg/L         2.796      511.95 ppb          2.796   0.55%
   QC value within limits for Sn 189.927  Recovery = 102.39%
Sr 421.552†           117518.3      506.07 µg/L         2.921      506.07 ppb          2.921   0.58%
   QC value within limits for Sr 421.552  Recovery = 101.21%
Ti 334.940†           224573.0      507.83 µg/L         2.912      507.83 ppb          2.912   0.57%
   QC value within limits for Ti 334.940  Recovery = 101.57%
Tl 190.801†              355.5      498.35 µg/L         3.076      498.35 ppb          3.076   0.62%
   QC value within limits for Tl 190.801  Recovery = 99.67%
U 409.014†              5387.1      506.48 µg/L         3.578      506.48 ppb          3.578   0.71%
   QC value within limits for U 409.014  Recovery = 101.30%
V 292.402†             46960.0      514.68 µg/L         4.284      514.68 ppb          4.284   0.83%
   QC value within limits for V 292.402  Recovery = 102.94%
Zn 213.857†            21016.6      506.48 µg/L         3.921      506.48 ppb          3.921   0.77%
   QC value within limits for Zn 213.857  Recovery = 101.30%
All analyte(s) passed QC.
```

Sequence No.: 29
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 12:03:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	174698.0	174698.0	100	%			12:03:50
1	Al 396.153Radial†	-158.8	11.8	4.8585	µg/L	4.8585	ppb	12:03:50
1	Ca 317.933Radial†	889.0	12.2	2.3121	µg/L	2.3121	ppb	12:04:10
1	Fe 238.204 Radial†	-11.4	14.9	10.672	µg/L	10.672	ppb	12:04:10
1	K 766.490 Radial†	801.3	28.3	15.478	µg/L	15.478	ppb	12:03:50
1	Mg 279.077 IEC†	46.2	2.9	6.0461	µg/L	6.0461	ppb	12:04:10
1	Na 589.592 Radial†	95.4	-23.4	-5.6177	µg/L	-5.6177	ppb	12:03:50
1	Sr 421.552†	79.8	12.7	0.0546	µg/L	0.0546	ppb	12:03:50
1	Sc 361.383	2222354.6	2222354.6	101.39	%			12:05:13
1	Y 371.029	1422638.6	1422638.6	101.42	%			12:05:13
1	Ag 328.068†	-799.5	33.4	0.2916	µg/L	0.2916	ppb	12:05:18
1	As 188.979†	-0.6	-2.9	-4.5718	µg/L	-4.5718	ppb	12:05:39
1	B 249.677†	262.3	50.1	2.0440	µg/L	2.0440	ppb	12:05:18
1	Ba 233.527†	-81.0	0.9	0.0219	µg/L	0.0219	ppb	12:05:39
1	Be 313.107†	3923.1	210.6	0.1246	µg/L	0.1246	ppb	12:05:18
1	Cd 226.502†	-132.1	10.0	0.2320	µg/L	0.2320	ppb	12:05:39
1	Co 228.616†	-91.2	11.6	0.5311	µg/L	0.5311	ppb	12:05:39
1	Cr 267.716†	-185.4	-0.5	-0.0109	µg/L	-0.0109	ppb	12:05:18
1	Cu 324.752†	4742.9	12.9	0.0928	µg/L	0.0928	ppb	12:05:18
1	Mn 257.610†	122.7	64.8	0.1858	µg/L	0.1858	ppb	12:05:18
1	Mo 202.031†	20.8	21.5	2.2990	µg/L	2.2990	ppb	12:05:39
1	Ni 231.604†	460.1	10.5	0.5270	µg/L	0.5270	ppb	12:05:39
1	P 214.914†	227.4	-9.9	-17.176	µg/L	-17.176	ppb	12:05:39
1	Pb 220.353†	51.7	6.5	1.5319	µg/L	1.5319	ppb	12:05:39
1	S 181.975 Axial†	38.5	-6.4	-28.206	µg/L	-28.206	ppb	12:05:39
1	Sb 206.836†	26.1	4.5	3.8958	µg/L	3.8958	ppb	12:05:39
1	Se 196.026†	19.3	-0.5	-0.5844	µg/L	-0.5844	ppb	12:05:39
1	SiO2†	3210.2	-6.2	-1.0948	µg/L	-1.0948	ppb	12:05:18
1	Si 251.611†	494.3	97.2	6.7853	µg/L	6.7853	ppb	12:05:39
1	Sn 189.927†	9.5	2.2	0.9788	µg/L	0.9788	ppb	12:05:39
1	Ti 334.940†	1352.3	226.9	0.5132	µg/L	0.5132	ppb	12:05:18
1	Tl 190.801†	-24.1	1.0	1.3605	µg/L	1.3605	ppb	12:05:39
1	U 409.014†	-16.9	-49.8	-4.7025	µg/L	-4.7025	ppb	12:05:18
1	V 292.402†	-212.0	-45.9	-0.4891	µg/L	-0.4891	ppb	12:05:18
1	Zn 213.857†	732.7	-0.1	-0.0063	µg/L	-0.0063	ppb	12:05:39
2	Sc RADIAL	175263.1	175263.1	101	%			12:04:16
2	Al 396.153Radial†	-189.4	-18.1	-7.6661	µg/L	-7.6661	ppb	12:04:16
2	Ca 317.933Radial†	888.0	8.4	1.5982	µg/L	1.5982	ppb	12:04:36
2	Fe 238.204 Radial†	-19.0	7.4	5.3105	µg/L	5.3105	ppb	12:04:36
2	K 766.490 Radial†	883.9	107.7	58.947	µg/L	58.947	ppb	12:04:16
2	Mg 279.077 IEC†	45.6	2.2	4.4630	µg/L	4.4630	ppb	12:04:36
2	Na 589.592 Radial†	129.4	10.1	2.4274	µg/L	2.4274	ppb	12:04:16
2	Sr 421.552†	83.2	15.8	0.0680	µg/L	0.0680	ppb	12:04:16
2	Sc 361.383	2224768.4	2224768.4	101.50	%			12:05:45
2	Y 371.029	1423565.7	1423565.7	101.49	%			12:05:45
2	Ag 328.068†	-749.4	83.6	0.7352	µg/L	0.7352	ppb	12:05:50
2	As 188.979†	1.1	-1.2	-1.8316	µg/L	-1.8316	ppb	12:06:11
2	B 249.677†	255.2	42.8	1.7468	µg/L	1.7468	ppb	12:05:50
2	Ba 233.527†	-72.3	9.6	0.2335	µg/L	0.2335	ppb	12:06:11
2	Be 313.107†	3919.9	203.2	0.1210	µg/L	0.1210	ppb	12:05:50
2	Cd 226.502†	-127.3	14.9	0.3461	µg/L	0.3461	ppb	12:06:11
2	Co 228.616†	-77.6	25.1	1.1425	µg/L	1.1425	ppb	12:06:11
2	Cr 267.716†	-213.1	-27.6	-0.5405	µg/L	-0.5405	ppb	12:05:50
2	Cu 324.752†	4681.6	-52.6	-0.3711	µg/L	-0.3711	ppb	12:05:50
2	Mn 257.610†	156.1	97.5	0.2796	µg/L	0.2796	ppb	12:05:50
2	Mo 202.031†	9.5	10.3	1.0973	µg/L	1.0973	ppb	12:06:11
2	Ni 231.604†	446.9	-3.0	-0.1532	µg/L	-0.1532	ppb	12:06:11
2	P 214.914†	227.6	-9.9	-17.138	µg/L	-17.138	ppb	12:06:11
2	Pb 220.353†	49.5	4.3	1.0114	µg/L	1.0114	ppb	12:06:11

2	S 181.975 Axial†	35.6	-9.3	-40.952 µg/L	-40.952 ppb	12:06:11
2	Sb 206.836†	30.8	9.1	7.9678 µg/L	7.9678 ppb	12:06:11
2	Se 196.026†	14.4	-5.4	-5.9547 µg/L	-5.9547 ppb	12:06:11
2	SiO2†	3257.4	36.9	6.5039 µg/L	6.5039 ppb	12:05:50
2	Si 251.611†	550.8	152.3	10.696 µg/L	10.696 ppb	12:06:11
2	Sn 189.927†	8.9	1.6	0.6989 µg/L	0.6989 ppb	12:06:11
2	Ti 334.940†	1460.7	332.2	0.7514 µg/L	0.7514 ppb	12:05:50
2	Tl 190.801†	-21.8	3.2	4.5372 µg/L	4.5372 ppb	12:06:11
2	U 409.014†	-29.8	-62.5	-5.8976 µg/L	-5.8976 ppb	12:05:50
2	V 292.402†	-197.9	-31.9	-0.3475 µg/L	-0.3475 ppb	12:05:50
2	Zn 213.857†	747.2	13.4	0.3284 µg/L	0.3284 ppb	12:06:11
3	Sc RADIAL	175237.4	175237.4	101 %		12:04:42
3	Al 396.153Radial†	-149.6	21.3	8.9023 µg/L	8.9023 ppb	12:04:42
3	Ca 317.933Radial†	895.4	15.9	3.0068 µg/L	3.0068 ppb	12:05:02
3	Fe 238.204 Radial†	-19.1	7.3	5.2436 µg/L	5.2436 ppb	12:05:02
3	K 766.490 Radial†	810.6	35.0	19.175 µg/L	19.175 ppb	12:04:42
3	Mg 279.077 IEC†	34.2	-9.1	-18.729 µg/L	-18.729 ppb	12:05:02
3	Na 589.592 Radial†	57.1	-61.7	-14.805 µg/L	-14.805 ppb	12:04:42
3	Sr 421.552†	123.9	56.3	0.2423 µg/L	0.2423 ppb	12:04:42
3	Sc 361.383	2228796.8	2228796.8	101.69 %		12:06:17
3	Y 371.029	1425303.5	1425303.5	101.61 %		12:06:17
3	Ag 328.068†	-708.1	125.5	1.1074 µg/L	1.1074 ppb	12:06:23
3	As 188.979†	5.8	3.4	5.4222 µg/L	5.4222 ppb	12:06:43
3	B 249.677†	239.6	27.0	1.1015 µg/L	1.1015 ppb	12:06:23
3	Ba 233.527†	-60.5	21.4	0.5226 µg/L	0.5226 ppb	12:06:43
3	Be 313.107†	4394.1	662.6	0.3899 µg/L	0.3899 ppb	12:06:23
3	Cd 226.502†	-113.4	28.8	0.6726 µg/L	0.6726 ppb	12:06:43
3	Co 228.616†	-75.1	27.7	1.2618 µg/L	1.2618 ppb	12:06:43
3	Cr 267.716†	-185.0	0.4	0.0071 µg/L	0.0071 ppb	12:06:23
3	Cu 324.752†	4757.6	13.9	0.0989 µg/L	0.0989 ppb	12:06:23
3	Mn 257.610†	226.0	166.0	0.4759 µg/L	0.4759 ppb	12:06:23
3	Mo 202.031†	16.1	16.8	1.7966 µg/L	1.7966 ppb	12:06:43
3	Ni 231.604†	459.2	8.2	0.4138 µg/L	0.4138 ppb	12:06:43
3	P 214.914†	217.1	-20.7	-35.953 µg/L	-35.953 ppb	12:06:43
3	Pb 220.353†	42.2	-3.0	-0.6772 µg/L	-0.6772 ppb	12:06:43
3	S 181.975 Axial†	34.2	-10.7	-47.123 µg/L	-47.123 ppb	12:06:43
3	Sb 206.836†	27.7	6.0	5.2307 µg/L	5.2307 ppb	12:06:43
3	Se 196.026†	20.0	0.1	0.1450 µg/L	0.1450 ppb	12:06:43
3	SiO2†	3291.4	64.5	11.381 µg/L	11.381 ppb	12:06:23
3	Si 251.611†	571.9	172.1	12.260 µg/L	12.260 ppb	12:06:43
3	Sn 189.927†	-0.9	-8.0	-3.5197 µg/L	-3.5197 ppb	12:06:43
3	Ti 334.940†	1491.4	359.8	0.8138 µg/L	0.8138 ppb	12:06:23
3	Tl 190.801†	-26.1	-0.9	-1.3174 µg/L	-1.3174 ppb	12:06:43
3	U 409.014†	-59.2	-91.4	-8.6221 µg/L	-8.6221 ppb	12:06:23
3	V 292.402†	-158.3	7.5	0.0803 µg/L	0.0803 ppb	12:06:23
3	Zn 213.857†	748.1	12.9	0.3121 µg/L	0.3121 ppb	12:06:43

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2225306.6	101.53	%	0.148				0.15%
Sc RADIAL	175066.2	101	%	0.2				0.18%
Y 371.029	1423835.9	101.51	%	0.096				0.10%
Ag 328.068†	80.9	0.7114	µg/L	0.40843	0.7114	ppb	0.40843	57.41%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.0	2.0315	µg/L	8.63838	2.0315	ppb	8.63838	425.22%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.2	-0.3271	µg/L	5.16406	-0.3271	ppb	5.16406	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	40.0	1.6308	µg/L	0.48185	1.6308	ppb	0.48185	29.55%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.6	0.2593	µg/L	0.25138	0.2593	ppb	0.25138	96.93%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	358.8	0.2119	µg/L	0.15417	0.2119	ppb	0.15417	72.77%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	12.2	2.3057	µg/L	0.70433	2.3057	ppb	0.70433	30.55%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	17.9	0.4169	µg/L	0.22869	0.4169	ppb	0.22869	54.85%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	21.5	0.9785	µg/L	0.39200	0.9785	ppb	0.39200	40.06%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -9.2     -0.1814 µg/L       0.31108     -0.1814 ppb        0.31108 171.46%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -8.6     -0.0598 µg/L       0.26963     -0.0598 ppb        0.26963 451.09%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          9.8      7.0752 µg/L       3.11480      7.0752 ppb        3.11480  44.02%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          57.0      31.200 µg/L       24.1004      31.200 ppb        24.1004  77.24%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.4     -2.7398 µg/L      13.86925     -2.7398 ppb       13.86925 506.21%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               109.4      0.3138 µg/L       0.14806      0.3138 ppb        0.14806  47.19%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                16.2      1.7310 µg/L       0.60355      1.7310 ppb        0.60355  34.87%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -25.0     -5.9984 µg/L       8.62243     -5.9984 ppb        8.62243 143.75%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 5.2      0.2625 µg/L       0.36443      0.2625 ppb        0.36443 138.82%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -13.5     -23.422 µg/L       10.8520     -23.422 ppb        10.8520  46.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 2.6      0.6220 µg/L       1.15486      0.6220 ppb        1.15486 185.66%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -8.8     -38.760 µg/L        9.6468     -38.760 ppb         9.6468  24.89%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.5      5.6981 µg/L       2.07584      5.6981 ppb        2.07584  36.43%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -1.9     -2.1314 µg/L       3.33111     -2.1314 ppb        3.33111 156.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      31.7      5.5967 µg/L       6.28713      5.5967 ppb        6.28713 112.34%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               140.5      9.9139 µg/L       2.82004      9.9139 ppb        2.82004  28.45%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.4     -0.6140 µg/L       2.52028     -0.6140 ppb        2.52028 410.48%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                28.3      0.1217 µg/L       0.10472      0.1217 ppb        0.10472  86.08%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               306.3      0.6928 µg/L       0.15864      0.6928 ppb        0.15864  22.90%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 1.1      1.5268 µg/L       2.93084      1.5268 ppb        2.93084 191.96%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -67.9     -6.4074 µg/L       2.00890     -6.4074 ppb        2.00890  31.35%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -23.4     -0.2521 µg/L       0.29647     -0.2521 ppb        0.29647 117.61%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 8.8      0.2114 µg/L       0.18867      0.2114 ppb        0.18867  89.25%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Friday, July 03, 2009 00:24:58
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090630\Sample.305
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1219.7	1219.652	56.541	4.6
	Mg	24.0	18029.2	18029.188	804.428	4.5
	Co	58.9	31258.8	31258.766	408.533	1.3
	Rh	102.9	50368.0	50368.042	450.286	0.9
	In	114.9	49711.5	49711.550	496.767	1.0
	Pb	208.0	17418.6	17418.614	223.343	1.3
⌈>	Ba	137.9	40783.0	40783.029	386.593	0.9
⌊	Ba++	69.0	1585.2	0.039	0.001	2.0
⌈>	Ce	139.9	56031.5	56031.469	104.804	0.2
⌊	CeO	155.9	1174.7	0.021	0.001	4.0
	Bkgd	220.0	1.9	1.900	0.548	28.8

Current Optimization File Data

Current Value	Description
0.93	Nebulizer Gas Flow
6.50	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	8.8	3472.8
Co	59	21	10.0	47793.1
In	115	21	12.0	57713.0

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	579	2080	0.615
Be	9.0	9.0	2038	2080	0.649
Mg	24.0	24.0	5674	2120	0.552
Mg	25.0	25.0	5932	2080	0.677
Mg	26.0	26.0	6139	2120	0.654
Co	58.9	59.0	14165	2170	0.620
Rh	102.9	102.8	24859	2230	0.701
In	114.9	114.9	27794	2260	0.689
Ce	139.9	139.9	33861	2280	0.765
Pb	206.0	206.0	49912	2420	0.622
Pb	207.0	207.0	50207	2385	0.733
Pb	208.0	207.9	50403	2430	0.733
U	238.1	238.1	57745	2470	0.721

Report Date/Time: Friday, July 03, 2009 00:07:24

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Friday, July 03, 2009 10:53:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\Blank.103

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		44	
	Be	9		ug/L		5	
	B	11		ug/L		372	
	Na	23		ug/L		20015	
	Mg	24		ug/L		2667	
	Al	27		ug/L		6668	
	P	31		ug/L		3879	
	K	39		ug/L		362568	
	Ca	43		ug/L		291	
>	Sc	45		ug/L		855088	
	V	51		ug/L		6602	
	Cr	52		ug/L		4233	
	Cr	53		ug/L		60894	
	Mn	55		ug/L		823	
	Fe	57		ug/L		4036	
	Co	59		ug/L		160	
	Ni	60		ug/L		55	
	Cu	63		ug/L		131	
	Cu	65		ug/L		64	
	Zn	66		ug/L		249	
	Zn	67		ug/L		5332	
	Zn	68		ug/L		452	
>	Ge	74		ug/L		143954	
	As	75		ug/L		361	
	Se	77		ug/L		2717	
	Se	82		ug/L		1	
	Kr	83		ug/L		39	
	Sr	88		ug/L		95	
	Y	89		ug/L		25	
	Ag	107		ug/L		22	
	Cd	111		ug/L		16	
	Cd	114		ug/L		26	
>	In	115		ug/L		64711	
	Sn	120		ug/L		551	
	Sb	121		ug/L		254	
	Sb	123		ug/L		200	
	Ba	135		ug/L		11	
	Ba	137		ug/L		19	
	Ho	165		ug/L		6	
>	Lu	175		ug/L		58393	
	Tl	205		ug/L		191	
	Pb	208		ug/L		425	
	Bi	209		ug/L		29	
	U	238		ug/L		63	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Friday, July 03, 2009 10:59:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\Standard 1.104

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	7.827	5328	0.006
	Be	9	**10.000**	**ug/L**	3.198	2209	0.003
	B	11	**20.000**	**ug/L**	2.154	4907	0.005
	Na	23	**1000.000**	**ug/L**	2.001	2511546	2.857
	Mg	24	**1000.000**	**ug/L**	6.123	1787790	2.048
	Al	27	**1000.000**	**ug/L**	13.018	2329899	2.662
	P	31	**1000.000**	**ug/L**	0.756	151570	0.169
	K	39	**1000.000**	**ug/L**	3.568	3222657	3.273
	Ca	43	**1000.000**	**ug/L**	0.564	6362	0.007
>	Sc	45		**ug/L**		871841	871840.564
	V	51	**10.000**	**ug/L**	2.229	36065	0.034
	Cr	52	**10.000**	**ug/L**	0.720	29098	0.028
	Cr	53		**ug/L**		61332	-0.001
	Mn	55	**10.000**	**ug/L**	1.249	36681	0.041
	Fe	57	**1000.000**	**ug/L**	1.259	73454	0.080
	Co	59	**10.000**	**ug/L**	0.755	26420	0.030
	Ni	60	**10.000**	**ug/L**	1.482	5563	0.006
	Cu	63		**ug/L**		12810	0.015
	Cu	65	**10.000**	**ug/L**	2.351	6139	0.007
	Zn	66	**10.000**	**ug/L**	1.998	3827	0.025
	Zn	67		**ug/L**		5684	0.002
	Zn	68		**ug/L**		3072	0.018
>	Ge	74		**ug/L**		145402	145402.014
	As	75	**10.000**	**ug/L**	4.797	4209	0.026
	Se	77		**ug/L**		2973	0.002
	Se	82	**10.000**	**ug/L**	4.941	387	0.003
	Kr	83		**ug/L**		43	0.000
	Sr	88	**10.000**	**ug/L**	0.546	42210	0.650
	Y	89		**ug/L**		23	-0.000
	Ag	107	**10.000**	**ug/L**	1.076	16575	0.256
	Cd	111	**10.000**	**ug/L**	2.466	3665	0.056
	Cd	114		**ug/L**		8049	0.124
>	In	115		**ug/L**		64759	64758.982
	Sn	120	**10.000**	**ug/L**	0.894	14776	0.220
	Sb	121	**10.000**	**ug/L**	3.362	11212	0.169
	Sb	123		**ug/L**		8548	0.129
	Ba	135		**ug/L**		3076	0.052
	Ba	137	**10.000**	**ug/L**	1.253	5317	0.090
	Ho	165		**ug/L**		9	0.000
>	Lu	175		**ug/L**		59009	59009.213
	Tl	205	**10.000**	**ug/L**	3.041	17959	0.301
	Pb	208	**10.000**	**ug/L**	1.735	26607	0.444
	Bi	209		**ug/L**		37	0.000
	U	238	**10.000**	**ug/L**	1.347	22708	0.384

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Friday, July 03, 2009 11:04:57
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\Standard 2.105

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.066**	**ug/L**	5.839	53834	0.065
	Be	9	**100.023**	**ug/L**	2.984	21448	0.026
	B	11	**200.021**	**ug/L**	1.770	43869	0.053
	Na	23	**10009.312**	**ug/L**	1.497	26154723	31.536
	Mg	24	**10004.963**	**ug/L**	2.634	17871294	21.562
	Al	27	**10011.635**	**ug/L**	10.616	24989578	30.161
	P	31	**9993.492**	**ug/L**	1.079	1320152	1.589
	K	39	**9999.203**	**ug/L**	7.961	27260875	32.471
	Ca	43	**10000.500**	**ug/L**	0.996	58227	0.070
>	Sc	45		**ug/L**		828678	828677.647
	V	51	**100.015**	**ug/L**	0.357	289694	0.342
	Cr	52	**99.995**	**ug/L**	0.565	238429	0.283
	Cr	53		**ug/L**		81975	0.028
	Mn	55	**99.989**	**ug/L**	0.809	337897	0.407
	Fe	57	**9998.238**	**ug/L**	2.029	651446	0.781
	Co	59	**99.987**	**ug/L**	2.250	246573	0.297
	Ni	60	**99.992**	**ug/L**	2.106	51961	0.063
	Cu	63		**ug/L**		114677	0.138
	Cu	65	**99.963**	**ug/L**	1.683	55728	0.067
	Zn	66	**99.997**	**ug/L**	0.455	34121	0.245
	Zn	67		**ug/L**		10663	0.040
	Zn	68		**ug/L**		25398	0.181
>	Ge	74		**ug/L**		138177	138176.778
	As	75	**100.060**	**ug/L**	1.097	39253	0.282
	Se	77		**ug/L**		5475	0.021
	Se	82	**100.014**	**ug/L**	2.603	3721	0.027
	Kr	83		**ug/L**		40	0.000
	Sr	88	**100.002**	**ug/L**	0.391	399678	6.514
	Y	89		**ug/L**		53	0.000
	Ag	107	**99.997**	**ug/L**	0.604	156319	2.548
	Cd	111	**100.023**	**ug/L**	1.210	35409	0.577
	Cd	114		**ug/L**		77822	1.268
>	In	115		**ug/L**		61346	61345.619
	Sn	120	**100.019**	**ug/L**	0.713	137861	2.239
	Sb	121	**100.088**	**ug/L**	2.726	114152	1.857
	Sb	123		**ug/L**		86307	1.404
	Ba	135		**ug/L**		29684	0.524
	Ba	137	**100.016**	**ug/L**	1.116	51722	0.913
	Ho	165		**ug/L**		11	0.000
>	Lu	175		**ug/L**		56636	56636.299
	Tl	205	**100.009**	**ug/L**	2.244	172298	3.040
	Pb	208	**99.992**	**ug/L**	1.894	249627	4.401
	Bi	209		**ug/L**		79	0.001
	U	238	**100.001**	**ug/L**	1.879	217488	3.840

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Friday, July 03, 2009 11:10:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 1.106

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.364**	ug/L	8.276	28010	0.033
	Be	9	**51.350**	ug/L	5.205	11157	0.013
	B	11	**103.820**	ug/L	2.443	23247	0.027
	Na	23	**5147.354**	ug/L	7.164	13634108	16.218
	Mg	24	**5009.504**	ug/L	3.899	9068286	10.796
	Al	27	**4867.157**	ug/L	3.290	12322869	14.663
	P	31	**5191.083**	ug/L	0.819	696800	0.825
	K	39	**5238.961**	ug/L	3.387	14639269	17.013
	Ca	43	**5024.654**	ug/L	1.531	29790	0.035
>	Sc	45		ug/L		839800	839800.027
	V	51	**51.514**	ug/L	3.212	154309	0.176
	Cr	52	**51.691**	ug/L	2.193	126895	0.146
	Cr	53		ug/L		74114	0.017
	Mn	55	**48.853**	ug/L	0.978	167713	0.199
	Fe	57	**5115.321**	ug/L	1.329	339718	0.400
	Co	59	**51.754**	ug/L	1.150	129420	0.154
	Ni	60	**52.203**	ug/L	1.673	27517	0.033
	Cu	63		ug/L		57080	0.068
	Cu	65	**48.447**	ug/L	1.037	27404	0.033
	Zn	66	**50.817**	ug/L	1.664	17551	0.125
	Zn	67		ug/L		8289	0.023
	Zn	68		ug/L		13261	0.092
>	Ge	74		ug/L		138913	138912.515
	As	75	**47.667**	ug/L	1.884	18979	0.134
	Se	77		ug/L		4304	0.012
	Se	82	**50.071**	ug/L	1.358	1873	0.013
	Kr	83		ug/L		48	0.000
	Sr	88	**51.397**	ug/L	0.916	206758	3.348
	Y	89		ug/L		57	0.001
	Ag	107	**50.670**	ug/L	0.320	79716	1.291
	Cd	111	**52.018**	ug/L	0.672	18539	0.300
	Cd	114		ug/L		41488	0.672
>	In	115		ug/L		61731	61730.953
	Sn	120	**50.291**	ug/L	0.260	70018	1.126
	Sb	121	**48.289**	ug/L	4.650	55550	0.896
	Sb	123		ug/L		42158	0.680
	Ba	135		ug/L		14982	0.268
	Ba	137	**50.505**	ug/L	0.683	25782	0.461
	Ho	165		ug/L		16	0.000
>	Lu	175		ug/L		55886	55885.658
	Tl	205	**49.887**	ug/L	1.115	84916	1.516
	Pb	208	**51.875**	ug/L	0.422	128006	2.283
	Bi	209		ug/L		56	0.001
	U	238	**52.593**	ug/L	0.423	112916	2.019

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	102.727				
	Be	9	102.701				
	B	11	103.820				
	Na	23	102.947				
	Mg	24	100.190				
	Al	27	96.379				
	P	31	103.822				
	K	39	104.779				
	Ca	43	100.493				
>	Sc	45		98.2			
	V	51	103.027				
	Cr	52	103.382				
	Cr	53					
	Mn	55	97.707				
	Fe	57	102.306				
	Co	59	103.508				
	Ni	60	104.406				
	Cu	63					
	Cu	65	96.895				
	Zn	66	101.635				
	Zn	67					
	Zn	68					
>	Ge	74		96.5			
	As	75	95.334				
	Se	77					
	Se	82	100.141				
	Kr	83					
	Sr	88	102.795				
	Y	89					
	Ag	107	101.340				
	Cd	111	104.037				
	Cd	114					
>	In	115		95.4			
	Sn	120	100.581				
	Sb	121	96.579				
	Sb	123					
	Ba	135					
	Ba	137	101.010				
	Ho	165					
>	Lu	175		95.7			
	Tl	205	99.774				
	Pb	208	103.750				
	Bi	209					
	U	238	105.186				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Friday, July 03, 2009 11:16:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 2.107

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.046**	**ug/L**	32.532	70	0.000
	Be	9	**0.017**	**ug/L**	61.913	8	0.000
	B	11	**2.483**	**ug/L**	16.586	927	0.001
	Na	23	**3.481**	**ug/L**	32.643	29364	0.011
	Mg	24	**0.722**	**ug/L**	259.062	4001	0.002
	Al	27	**0.391**	**ug/L**	111.633	7669	0.001
	P	31	**0.068**	**ug/L**	1004.959	3884	0.000
	K	39	**4.380**	**ug/L**	152.076	374177	0.014
	Ca	43	**-3.541**	**ug/L**	108.844	269	-0.000
>	Sc	45		**ug/L**		853998	853997.963
	V	51	**0.314**	**ug/L**	102.246	7506	0.001
	Cr	52	**0.056**	**ug/L**	129.824	4364	0.000
	Cr	53		**ug/L**		62299	0.002
	Mn	55	**-0.021**	**ug/L**	44.516	751	-0.000
	Fe	57	**9.509**	**ug/L**	178.902	4669	0.001
	Co	59	**0.012**	**ug/L**	59.902	190	0.000
	Ni	60	**-0.004**	**ug/L**	424.587	53	-0.000
	Cu	63		**ug/L**		128	-0.000
	Cu	65	**0.035**	**ug/L**	19.927	84	0.000
	Zn	66	**0.026**	**ug/L**	403.109	254	0.000
	Zn	67		**ug/L**		5524	0.002
	Zn	68		**ug/L**		456	0.000
>	Ge	74		**ug/L**		141613	141613.212
	As	75	**-0.652**	**ug/L**	55.020	96	-0.002
	Se	77		**ug/L**		2853	0.001
	Se	82	**-0.186**	**ug/L**	57.227	-6	-0.000
	Kr	83		**ug/L**		49	0.000
	Sr	88	**0.009**	**ug/L**	107.343	130	0.001
	Y	89		**ug/L**		20	-0.000
	Ag	107	**0.012**	**ug/L**	54.415	41	0.000
	Cd	111	**0.005**	**ug/L**	373.886	18	0.000
	Cd	114		**ug/L**		45	0.000
>	In	115		**ug/L**		63029	63028.727
	Sn	120	**0.190**	**ug/L**	10.647	804	0.004
	Sb	121	**0.798**	**ug/L**	15.148	1181	0.015
	Sb	123		**ug/L**		884	0.011
	Ba	135		**ug/L**		12	0.000
	Ba	137	**0.020**	**ug/L**	47.261	29	0.000
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		56861	56860.844
	Tl	205	**0.182**	**ug/L**	14.502	501	0.006
	Pb	208	**0.012**	**ug/L**	65.746	443	0.001
	Bi	209		**ug/L**		30	0.000
	U	238	**0.035**	**ug/L**	14.575	138	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			99.9		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			98.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			97.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.4		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Friday, July 03, 2009 11:22:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 3.108

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.056**	**ug/L**	8.658	5709	0.007
	Be	9	**0.483**	**ug/L**	6.481	113	0.000
	B	11	**15.742**	**ug/L**	4.416	3967	0.004
	Na	23	**251.583**	**ug/L**	11.794	708248	0.793
	Mg	24	**14.227**	**ug/L**	16.327	29364	0.031
	Al	27	**31.509**	**ug/L**	6.074	89279	0.095
	P	31	**56.200**	**ug/L**	3.705	11704	0.009
	K	39	**299.054**	**ug/L**	7.075	1212471	0.971
	Ca	43	**201.456**	**ug/L**	2.491	1519	0.001
>	Sc	45		**ug/L**		868751	868750.942
	V	51	**10.428**	**ug/L**	7.787	37665	0.036
	Cr	52	**10.115**	**ug/L**	2.047	29146	0.029
	Cr	53		**ug/L**		62911	0.001
	Mn	55	**5.275**	**ug/L**	1.134	19479	0.021
	Fe	57	**102.626**	**ug/L**	4.767	11068	0.008
	Co	59	**1.000**	**ug/L**	0.583	2748	0.003
	Ni	60	**1.989**	**ug/L**	1.181	1139	0.001
	Cu	63		**ug/L**		1412	0.001
	Cu	65	**1.061**	**ug/L**	3.475	684	0.001
	Zn	66	**10.993**	**ug/L**	0.561	4125	0.027
	Zn	67		**ug/L**		5824	0.003
	Zn	68		**ug/L**		3218	0.019
>	Ge	74		**ug/L**		143801	143800.577
	As	75	**4.877**	**ug/L**	12.285	2334	0.014
	Se	77		**ug/L**		2840	0.001
	Se	82	**5.260**	**ug/L**	11.166	205	0.001
	Kr	83		**ug/L**		44	0.000
	Sr	88	**10.423**	**ug/L**	0.662	43603	0.679
	Y	89		**ug/L**		25	-0.000
	Ag	107	**1.027**	**ug/L**	2.842	1699	0.026
	Cd	111	**1.033**	**ug/L**	3.288	398	0.006
	Cd	114		**ug/L**		840	0.013
>	In	115		**ug/L**		64083	64083.311
	Sn	120	**4.885**	**ug/L**	1.721	7553	0.109
	Sb	121	**2.526**	**ug/L**	9.369	3255	0.047
	Sb	123		**ug/L**		2429	0.035
	Ba	135		**ug/L**		626	0.011
	Ba	137	**2.023**	**ug/L**	5.809	1078	0.018
	Ho	165		**ug/L**		9	0.000
>	Lu	175		**ug/L**		57369	57368.870
	Tl	205	**1.083**	**ug/L**	3.335	2076	0.033
	Pb	208	**2.070**	**ug/L**	2.231	5643	0.091
	Bi	209		**ug/L**		39	0.000
	U	238	**0.206**	**ug/L**	4.249	516	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	100.561				
	Be	9	96.647				
	B	11	104.950				
	Na	23	100.633				
	Mg	24	94.845				
	Al	27	105.030				
	P	31	112.400				
	K	39	99.685				
	Ca	43	100.728				
>	Sc	45		101.6			
	V	51	104.284				
	Cr	52	101.153				
	Cr	53					
	Mn	55	105.504				
	Fe	57	102.626				
	Co	59	100.048				
	Ni	60	99.445				
	Cu	63					
	Cu	65	106.101				
	Zn	66	109.932				
	Zn	67					
	Zn	68					
>	Ge	74		99.9			
	As	75	97.546				
	Se	77					
	Se	82	105.202				
	Kr	83					
	Sr	88	104.235				
	Y	89					
	Ag	107	102.716				
	Cd	111	103.315				
	Cd	114					
>	In	115		99.0			
	Sn	120	97.700				
	Sb	121	84.184				
	Sb	123					
	Ba	135					
	Ba	137	101.158				
	Ho	165					
>	Lu	175		98.2			
	Tl	205	108.288				
	Pb	208	103.475				
	Bi	209					
	U	238	103.140				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Friday, July 03, 2009 11:28:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 4.109

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.174**	**ug/L**	13.119	127	0.000
	Be	9	**0.090**	**ug/L**	19.846	22	0.000
	B	11	**1.619**	**ug/L**	11.559	661	0.000
	Na	23	**111762.985**	**ug/L**	5.434	270603646	352.130
	Mg	24	**104975.813**	**ug/L**	5.126	173876923	226.241
	Al	27	**100931.723**	**ug/L**	1.510	233671205	304.062
	P	31	**100352.082**	**ug/L**	1.199	12262898	15.952
	K	39	**102332.436**	**ug/L**	4.966	255750049	332.310
	Ca	43	**93229.076**	**ug/L**	0.660	501251	0.652
>	Sc	45		**ug/L**		768498	768497.772
	V	51	**-0.248**	**ug/L**	298.644	5289	-0.001
	Cr	52	**3.883**	**ug/L**	1.007	12243	0.011
	Cr	53		**ug/L**		49055	-0.007
	Mn	55	**5.788**	**ug/L**	1.294	18837	0.024
	Fe	57	**94025.621**	**ug/L**	0.958	5651645	7.349
	Co	59	**0.395**	**ug/L**	6.437	1047	0.001
	Ni	60	**4.988**	**ug/L**	1.352	2451	0.003
	Cu	63		**ug/L**		3492	0.004
	Cu	65	**4.593**	**ug/L**	2.634	2429	0.003
	Zn	66	**5.873**	**ug/L**	0.734	2001	0.014
	Zn	67		**ug/L**		5182	0.005
	Zn	68		**ug/L**		693	0.002
>	Ge	74		**ug/L**		124042	124042.453
	As	75	**-0.565**	**ug/L**	79.623	114	-0.002
	Se	77		**ug/L**		2887	0.004
	Se	82	**-1.425**	**ug/L**	2.003	-47	-0.000
	Kr	83		**ug/L**		120	0.001
	Sr	88	**1.197**	**ug/L**	0.443	4424	0.078
	Y	89		**ug/L**		149	0.002
	Ag	107	**0.543**	**ug/L**	55.671	792	0.014
	Cd	111	**1.790**	**ug/L**	55.142	591	0.010
	Cd	114		**ug/L**		2816	0.050
>	In	115		**ug/L**		55711	55710.955
	Sn	120	**0.181**	**ug/L**	22.651	700	0.004
	Sb	121	**0.307**	**ug/L**	18.410	536	0.006
	Sb	123		**ug/L**		402	0.004
	Ba	135		**ug/L**		197	0.004
	Ba	137	**0.687**	**ug/L**	3.518	331	0.006
	Ho	165		**ug/L**		141	0.003
>	Lu	175		**ug/L**		50247	50246.723
	Tl	205	**0.057**	**ug/L**	14.079	252	0.002
	Pb	208	**0.401**	**ug/L**	3.702	1252	0.018
	Bi	209		**ug/L**		95	0.001
	U	238	**0.165**	**ug/L**	147.984	377	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	111.763				
	Mg	24	104.976				
	Al	27	100.932				
	P	31	100.352				
	K	39	102.332				
	Ca	43	93.229				
>	Sc	45			89.9		
	V	51					
	Cr	52	104.949				
	Cr	53					
	Mn	55	99.795				
	Fe	57	94.026				
	Co	59	157.985				
	Ni	60	184.731				
	Cu	63					
	Cu	65	158.365				
	Zn	66	163.150				
	Zn	67					
	Zn	68					
>	Ge	74			86.2		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	99.717				
	Y	89					
	Ag	107					
	Cd	111	447.408				
	Cd	114					
>	In	115			86.1		
	Sn	120					
	Sb	121	306.879				
	Sb	123					
	Ba	135					
	Ba	137	102.576				
	Ho	165					
>	Lu	175			86.0		
	Tl	205					
	Pb	208	200.326				
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Friday, July 03, 2009 11:34:23
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 5.110

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.506**	**ug/L**	5.742	10685	0.014
	Be	9	**21.544**	**ug/L**	2.072	4257	0.006
	B	11	**23.081**	**ug/L**	0.119	4955	0.006
	Na	23	**103324.795**	**ug/L**	1.236	248432755	325.544
	Mg	24	**107379.265**	**ug/L**	6.844	176608995	231.420
	Al	27	**97481.524**	**ug/L**	8.458	224160246	293.668
	P	31	**98780.439**	**ug/L**	1.994	11985995	15.702
	K	39	**101495.804**	**ug/L**	4.786	251804396	329.594
	Ca	43	**92093.871**	**ug/L**	0.969	491639	0.644
>	Sc	45		**ug/L**		763040	763039.637
	V	51	**19.788**	**ug/L**	1.829	57499	0.068
	Cr	52	**23.242**	**ug/L**	0.862	53928	0.066
	Cr	53		**ug/L**		51958	-0.003
	Mn	55	**25.595**	**ug/L**	1.000	80192	0.104
	Fe	57	**93283.698**	**ug/L**	0.232	5567235	7.291
	Co	59	**20.182**	**ug/L**	0.797	45946	0.060
	Ni	60	**23.145**	**ug/L**	0.213	11114	0.015
	Cu	63		**ug/L**		22791	0.030
	Cu	65	**22.732**	**ug/L**	1.440	11713	0.015
	Zn	66	**25.268**	**ug/L**	1.213	7767	0.062
	Zn	67		**ug/L**		6057	0.013
	Zn	68		**ug/L**		4871	0.037
>	Ge	74		**ug/L**		121939	121939.090
	As	75	**20.794**	**ug/L**	2.803	7441	0.059
	Se	77		**ug/L**		3198	0.007
	Se	82	**19.757**	**ug/L**	3.776	649	0.005
	Kr	83		**ug/L**		123	0.001
	Sr	88	**22.462**	**ug/L**	1.652	80824	1.463
	Y	89		**ug/L**		131	0.002
	Ag	107	**19.354**	**ug/L**	1.070	27233	0.493
	Cd	111	**19.815**	**ug/L**	2.642	6323	0.114
	Cd	114		**ug/L**		16280	0.295
>	In	115		**ug/L**		55192	55192.167
	Sn	120	**22.449**	**ug/L**	16.170	28214	0.503
	Sb	121	**20.304**	**ug/L**	1.597	21010	0.377
	Sb	123		**ug/L**		16088	0.288
	Ba	135		**ug/L**		5532	0.114
	Ba	137	**21.431**	**ug/L**	0.624	9531	0.196
	Ho	165		**ug/L**		140	0.003
>	Lu	175		**ug/L**		48643	48643.162
	Tl	205	**18.742**	**ug/L**	2.388	27865	0.570
	Pb	208	**19.990**	**ug/L**	1.193	43153	0.880
	Bi	209		**ug/L**		95	0.001
	U	238	**21.373**	**ug/L**	0.843	39972	0.821

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	107.532				
	Be	9	107.718				
	B	11	115.405				
	Na	23	103.325				
	Mg	24	107.379				
	Al	27	97.482				
	P	31	98.780				
	K	39	101.496				
	Ca	43	92.094				
>	Sc	45		89.2			
	V	51	98.939				
	Cr	52	98.066				
	Cr	53					
	Mn	55	99.206				
	Fe	57	93.284				
	Co	59	99.663				
	Ni	60	101.962				
	Cu	63					
	Cu	65	99.264				
	Zn	66	107.069				
	Zn	67					
	Zn	68					
>	Ge	74		84.7			
	As	75	103.972				
	Se	77					
	Se	82	98.784				
	Kr	83					
	Sr	88	105.955				
	Y	89					
	Ag	107	96.768				
	Cd	111	97.135				
	Cd	114					
>	In	115		85.3			
	Sn	120	112.245				
	Sb	121	101.017				
	Sb	123					
	Ba	135					
	Ba	137	103.683				
	Ho	165					
>	Lu	175		83.3			
	Tl	205	93.708				
	Pb	208	98.960				
	Bi	209					
	U	238	106.864				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, July 03, 2009 11:40:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 6.111

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.352**	ug/L	5.973	27521	0.034
	Be	9	**55.327**	ug/L	4.968	11586	0.014
	B	11	**109.079**	ug/L	2.705	23526	0.029
	Na	23	**5254.205**	ug/L	2.747	13423782	16.554
	Mg	24	**5128.129**	ug/L	6.635	8958516	11.052
	Al	27	**5074.688**	ug/L	2.961	12378233	15.288
	P	31	**5110.562**	ug/L	0.485	661374	0.812
	K	39	**5085.870**	ug/L	5.462	13714507	16.516
	Ca	43	**5036.017**	ug/L	0.821	28789	0.035
>	Sc	45		ug/L		809644	809643.664
	V	51	**50.073**	ug/L	2.396	144830	0.171
	Cr	52	**50.515**	ug/L	0.770	119653	0.143
	Cr	53		ug/L		68189	0.013
	Mn	55	**47.751**	ug/L	1.390	158042	0.194
	Fe	57	**5036.872**	ug/L	2.115	322471	0.394
	Co	59	**50.869**	ug/L	2.548	122605	0.151
	Ni	60	**51.272**	ug/L	2.601	26049	0.032
	Cu	63		ug/L		54257	0.067
	Cu	65	**47.587**	ug/L	1.398	25949	0.032
	Zn	66	**50.682**	ug/L	0.557	16586	0.124
	Zn	67		ug/L		8078	0.024
	Zn	68		ug/L		12548	0.092
>	Ge	74		ug/L		131631	131631.327
	As	75	**46.690**	ug/L	2.147	17623	0.131
	Se	77		ug/L		3904	0.011
	Se	82	**49.260**	ug/L	1.886	1746	0.013
	Kr	83		ug/L		43	0.000
	Sr	88	**51.993**	ug/L	1.966	193575	3.387
	Y	89		ug/L		62	0.001
	Ag	107	**51.135**	ug/L	0.683	74468	1.303
	Cd	111	**52.508**	ug/L	0.467	17323	0.303
	Cd	114		ug/L		38415	0.672
>	In	115		ug/L		57145	57144.748
	Sn	120	**49.248**	ug/L	0.279	63482	1.102
	Sb	121	**47.434**	ug/L	4.681	50541	0.880
	Sb	123		ug/L		38123	0.664
	Ba	135		ug/L		13732	0.267
	Ba	137	**51.159**	ug/L	0.518	23986	0.467
	Ho	165		ug/L		12	0.000
>	Lu	175		ug/L		51328	51328.228
	Tl	205	**49.476**	ug/L	0.882	77356	1.504
	Pb	208	**51.483**	ug/L	0.988	116676	2.266
	Bi	209		ug/L		42	0.000
	U	238	**53.166**	ug/L	1.076	104832	2.041

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	104.703				
	Be	9	110.654				
	B	11	109.079				
	Na	23	105.084				
	Mg	24	102.563				
	Al	27	100.489				
	P	31	102.211				
	K	39	101.717				
	Ca	43	100.720				
>	Sc	45		94.7			
	V	51	100.147				
	Cr	52	101.029				
	Cr	53					
	Mn	55	95.503				
	Fe	57	100.737				
	Co	59	101.738				
	Ni	60	102.543				
	Cu	63					
	Cu	65	95.174				
	Zn	66	101.363				
	Zn	67					
	Zn	68					
>	Ge	74		91.4			
	As	75	93.381				
	Se	77					
	Se	82	98.520				
	Kr	83					
	Sr	88	103.986				
	Y	89					
	Ag	107	102.270				
	Cd	111	105.017				
	Cd	114					
>	In	115		88.3			
	Sn	120	98.495				
	Sb	121	94.869				
	Sb	123					
	Ba	135					
	Ba	137	102.319				
	Ho	165					
>	Lu	175		87.9			
	Tl	205	98.953				
	Pb	208	102.965				
	Bi	209					
	U	238	106.332				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Be	9	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, July 03, 2009 11:46:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 7.112

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.104**	ug/L	6.849	97	0.000
	Be	9	**-0.001**	ug/L	2667.344	4	-0.000
	B	11	**1.755**	ug/L	23.235	731	0.000
	Na	23	**10.318**	ug/L	31.629	45742	0.033
	Mg	24	**3.845**	ug/L	50.456	9337	0.008
	Al	27	**4.027**	ug/L	63.368	16344	0.012
	P	31	**5.642**	ug/L	42.326	4442	0.001
	K	39	**11.204**	ug/L	15.221	376225	0.036
	Ca	43	**0.134**	ug/L	4561.249	279	0.000
>	Sc	45		ug/L		817126	817125.640
	V	51	**-0.464**	ug/L	96.811	5016	-0.002
	Cr	52	**-0.301**	ug/L	37.877	3352	-0.001
	Cr	53		ug/L		57130	-0.001
	Mn	55	**-0.046**	ug/L	8.950	635	-0.000
	Fe	57	**0.556**	ug/L	372.367	3893	0.000
	Co	59	**0.003**	ug/L	220.433	160	0.000
	Ni	60	**0.005**	ug/L	350.494	55	0.000
	Cu	63		ug/L		139	0.000
	Cu	65	**0.035**	ug/L	22.877	80	0.000
	Zn	66	**-0.012**	ug/L	550.441	227	-0.000
	Zn	67		ug/L		5310	0.003
	Zn	68		ug/L		453	0.000
>	Ge	74		ug/L		133283	133282.861
	As	75	**0.043**	ug/L	439.173	350	0.000
	Se	77		ug/L		2552	0.000
	Se	82	**0.048**	ug/L	402.462	3	0.000
	Kr	83		ug/L		41	0.000
	Sr	88	**0.008**	ug/L	53.223	119	0.001
	Y	89		ug/L		22	-0.000
	Ag	107	**0.013**	ug/L	69.492	40	0.000
	Cd	111	**0.000**	ug/L	2644.414	15	0.000
	Cd	114		ug/L		42	0.000
>	In	115		ug/L		58819	58818.615
	Sn	120	**-0.039**	ug/L	45.727	449	-0.001
	Sb	121	**0.610**	ug/L	17.900	897	0.011
	Sb	123		ug/L		705	0.009
	Ba	135		ug/L		13	0.000
	Ba	137	**0.006**	ug/L	37.414	20	0.000
	Ho	165		ug/L		10	0.000
>	Lu	175		ug/L		52400	52399.782
	Tl	205	**0.167**	ug/L	20.325	438	0.005
	Pb	208	**0.001**	ug/L	626.782	384	0.000
	Bi	209		ug/L		28	0.000
	U	238	**0.034**	ug/L	16.609	124	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			95.6		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			92.6		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			90.9		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			89.7		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870569
Sample Date/Time: Friday, July 03, 2009 11:52:05
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\1201870569.113

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.022**	ug/L	91.155	55	0.000
	Be	9	**-0.015**	ug/L	46.328	1	-0.000
	B	11	**0.894**	ug/L	32.898	560	0.000
	Na	23	**6.684**	ug/L	38.652	37384	0.021
	Mg	24	**1.000**	ug/L	283.524	4335	0.002
	Al	27	**3.669**	ug/L	101.938	15677	0.011
	P	31	**39.910**	ug/L	6.991	9122	0.006
	K	39	**-3.512**	ug/L	348.311	345829	-0.011
	Ca	43	**-1.258**	ug/L	224.138	277	-0.000
>	Sc	45		ug/L		838235	838234.533
	V	51	**-0.506**	ug/L	56.727	5010	-0.002
	Cr	52	**-0.070**	ug/L	19.872	3984	-0.000
	Cr	53		ug/L		46986	-0.015
	Mn	55	**0.142**	ug/L	4.954	1292	0.001
	Fe	57	**10.912**	ug/L	27.368	4668	0.001
	Co	59	**0.033**	ug/L	54.175	240	0.000
	Ni	60	**0.163**	ug/L	75.862	139	0.000
	Cu	63		ug/L		388	0.000
	Cu	65	**0.250**	ug/L	6.652	203	0.000
	Zn	66	**0.212**	ug/L	23.244	301	0.001
	Zn	67		ug/L		4473	-0.004
	Zn	68		ug/L		461	0.000
>	Ge	74		ug/L		133823	133822.901
	As	75	**-0.788**	ug/L	55.843	40	-0.002
	Se	77		ug/L		1916	-0.005
	Se	82	**0.291**	ug/L	83.941	11	0.000
	Kr	83		ug/L		37	0.000
	Sr	88	**0.005**	ug/L	70.654	109	0.000
	Y	89		ug/L		27	0.000
	Ag	107	**-0.002**	ug/L	255.095	17	-0.000
	Cd	111	**-0.004**	ug/L	521.527	14	-0.000
	Cd	114		ug/L		26	0.000
>	In	115		ug/L		60514	60514.202
	Sn	120	**0.089**	ug/L	36.282	635	0.002
	Sb	121	**0.191**	ug/L	34.842	452	0.004
	Sb	123		ug/L		336	0.002
	Ba	135		ug/L		15	0.000
	Ba	137	**0.012**	ug/L	39.668	23	0.000
	Ho	165		ug/L		10	0.000
>	Lu	175		ug/L		54326	54325.993
	Tl	205	**0.110**	ug/L	9.784	358	0.003
	Pb	208	**0.100**	ug/L	4.492	635	0.004
	Bi	209		ug/L		42	0.000
	U	238	**0.004**	ug/L	273.556	67	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.0		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			93.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			93.5		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			93.0		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870574
Sample Date/Time: Friday, July 03, 2009 11:57:59
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 880941|40|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\1201870574.114

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.241**	ug/L	5.930	1264	0.001
	Be	9	**25.456**	ug/L	0.703	5534	0.007
	B	11	**40.165**	ug/L	0.878	9216	0.011
	Na	23	**167.527**	ug/L	8.111	462736	0.528
	Mg	24	**849.797**	ug/L	2.501	1540139	1.831
	Al	27	**2797.151**	ug/L	3.163	7080769	8.427
	P	31	**225.139**	ug/L	2.346	33853	0.036
	K	39	**744.166**	ug/L	7.095	2384766	2.417
	Ca	43	**1053.368**	ug/L	1.396	6469	0.007
>	Sc	45		ug/L		839500	839500.388
	V	51	**35.869**	ug/L	1.883	109408	0.123
	Cr	52	**18.386**	ug/L	1.806	47804	0.052
	Cr	53		ug/L		63581	0.005
	Mn	55	**96.442**	ug/L	0.193	330207	0.392
	Fe	57	**2977.901**	ug/L	0.550	199367	0.233
	Co	59	**22.560**	ug/L	0.735	56488	0.067
	Ni	60	**27.269**	ug/L	1.183	14396	0.017
	Cu	63		ug/L		31090	0.037
	Cu	65	**26.318**	ug/L	0.137	14911	0.018
	Zn	66	**56.830**	ug/L	1.107	19157	0.139
	Zn	67		ug/L		8798	0.028
	Zn	68		ug/L		15011	0.107
>	Ge	74		ug/L		135789	135789.370
	As	75	**68.605**	ug/L	0.922	26553	0.193
	Se	77		ug/L		4049	0.011
	Se	82	**51.608**	ug/L	4.724	1887	0.014
	Kr	83		ug/L		38	0.000
	Sr	88	**44.431**	ug/L	1.157	173559	2.894
	Y	89		ug/L		17319	0.289
	Ag	107	**5.085**	ug/L	1.580	7786	0.130
	Cd	111	**31.163**	ug/L	0.423	10790	0.180
	Cd	114		ug/L		24305	0.405
>	In	115		ug/L		59940	59940.235
	Sn	120	**12.820**	ug/L	1.485	17710	0.287
	Sb	121	**9.879**	ug/L	1.063	11222	0.183
	Sb	123		ug/L		8519	0.139
	Ba	135		ug/L		36258	0.676
	Ba	137	**127.863**	ug/L	0.286	62594	1.167
	Ho	165		ug/L		562	0.010
>	Lu	175		ug/L		53616	53615.628
	Tl	205	**49.773**	ug/L	2.035	81278	1.513
	Pb	208	**45.841**	ug/L	0.897	108566	2.018
	Bi	209		ug/L		179	0.003
	U	238	**0.541**	ug/L	1.894	1170	0.021

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.2		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			94.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			92.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			91.8		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, July 03, 2009 12:03:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 6.115

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.813**	**ug/L**	6.263	27961	0.034
	Be	9	**54.720**	**ug/L**	4.536	11764	0.014
	B	11	**107.630**	**ug/L**	3.098	23832	0.028
	Na	23	**5192.588**	**ug/L**	2.669	13612457	16.360
	Mg	24	**5442.887**	**ug/L**	7.136	9748255	11.730
	Al	27	**5123.592**	**ug/L**	6.258	12829887	15.435
	P	31	**5188.207**	**ug/L**	1.539	688948	0.825
	K	39	**5031.970**	**ug/L**	3.374	13927482	16.341
	Ca	43	**5023.637**	**ug/L**	1.515	29464	0.035
>	Sc	45		**ug/L**		830762	830762.403
	V	51	**49.686**	**ug/L**	2.897	147484	0.170
	Cr	52	**50.600**	**ug/L**	0.461	122989	0.143
	Cr	53		**ug/L**		70541	0.014
	Mn	55	**48.216**	**ug/L**	1.099	163761	0.196
	Fe	57	**5072.243**	**ug/L**	0.860	333272	0.396
	Co	59	**50.740**	**ug/L**	0.509	125532	0.151
	Ni	60	**51.566**	**ug/L**	0.523	26893	0.032
	Cu	63		**ug/L**		55571	0.067
	Cu	65	**47.623**	**ug/L**	1.869	26647	0.032
	Zn	66	**51.103**	**ug/L**	1.080	17053	0.125
	Zn	67		**ug/L**		8283	0.025
	Zn	68		**ug/L**		12864	0.093
>	Ge	74		**ug/L**		134230	134230.351
	As	75	**47.208**	**ug/L**	1.187	18168	0.133
	Se	77		**ug/L**		3941	0.010
	Se	82	**48.920**	**ug/L**	5.203	1768	0.013
	Kr	83		**ug/L**		38	0.000
	Sr	88	**52.011**	**ug/L**	1.170	199556	3.388
	Y	89		**ug/L**		65	0.001
	Ag	107	**50.674**	**ug/L**	1.045	76039	1.291
	Cd	111	**52.159**	**ug/L**	1.685	17730	0.301
	Cd	114		**ug/L**		39409	0.669
>	In	115		**ug/L**		58883	58883.396
	Sn	120	**49.255**	**ug/L**	1.698	65413	1.103
	Sb	121	**47.637**	**ug/L**	6.319	52274	0.884
	Sb	123		**ug/L**		39225	0.663
	Ba	135		**ug/L**		13935	0.261
	Ba	137	**50.438**	**ug/L**	0.219	24570	0.460
	Ho	165		**ug/L**		17	0.000
>	Lu	175		**ug/L**		53329	53329.224
	Tl	205	**49.549**	**ug/L**	0.717	80484	1.506
	Pb	208	**51.625**	**ug/L**	0.569	121565	2.272
	Bi	209		**ug/L**		58	0.001
	U	238	**53.545**	**ug/L**	1.471	109693	2.056

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	103.625				
	Be	9	109.439				
	B	11	107.630				
	Na	23	103.852				
	Mg	24	108.858				
	Al	27	101.457				
	P	31	103.764				
	K	39	100.639				
	Ca	43	100.473				
>	Sc	45		97.2			
	V	51	99.373				
	Cr	52	101.199				
	Cr	53					
	Mn	55	96.433				
	Fe	57	101.445				
	Co	59	101.480				
	Ni	60	103.133				
	Cu	63					
	Cu	65	95.246				
	Zn	66	102.206				
	Zn	67					
	Zn	68					
>	Ge	74		93.2			
	As	75	94.417				
	Se	77					
	Se	82	97.841				
	Kr	83					
	Sr	88	104.021				
	Y	89					
	Ag	107	101.349				
	Cd	111	104.318				
	Cd	114					
>	In	115		91.0			
	Sn	120	98.509				
	Sb	121	95.274				
	Sb	123					
	Ba	135					
	Ba	137	100.876				
	Ho	165					
>	Lu	175		91.3			
	Tl	205	99.098				
	Pb	208	103.250				
	Bi	209					
	U	238	107.091				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, July 03, 2009 12:09:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 7.116

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.038**	ug/L	55.376	63	0.000
	Be	9	**0.015**	ug/L	177.732	8	0.000
	B	11	**1.812**	ug/L	15.878	748	0.000
	Na	23	**1.714**	ug/L	18.998	23686	0.005
	Mg	24	**-0.129**	ug/L	663.622	2334	-0.000
	Al	27	**-0.711**	ug/L	83.256	4667	-0.002
	P	31	**0.417**	ug/L	221.316	3788	0.000
	K	39	**-6.395**	ug/L	73.523	331817	-0.021
	Ca	43	**-2.232**	ug/L	126.990	267	-0.000
>	Sc	45		ug/L		822561	822561.085
	V	51	**-0.538**	ug/L	104.918	4819	-0.002
	Cr	52	**-0.264**	ug/L	3.124	3456	-0.001
	Cr	53		ug/L		57279	-0.002
	Mn	55	**-0.052**	ug/L	24.277	619	-0.000
	Fe	57	**-3.573**	ug/L	33.435	3652	-0.000
	Co	59	**0.001**	ug/L	186.792	156	0.000
	Ni	60	**-0.004**	ug/L	595.014	51	-0.000
	Cu	63		ug/L		133	0.000
	Cu	65	**0.018**	ug/L	110.940	71	0.000
	Zn	66	**-0.035**	ug/L	181.641	223	-0.000
	Zn	67		ug/L		5342	0.002
	Zn	68		ug/L		436	0.000
>	Ge	74		ug/L		135963	135963.066
	As	75	**-0.548**	ug/L	127.672	131	-0.002
	Se	77		ug/L		2624	0.000
	Se	82	**0.257**	ug/L	31.766	10	0.000
	Kr	83		ug/L		37	0.000
	Sr	88	**0.005**	ug/L	78.273	106	0.000
	Y	89		ug/L		22	-0.000
	Ag	107	**0.014**	ug/L	45.609	42	0.000
	Cd	111	**-0.013**	ug/L	130.240	11	-0.000
	Cd	114		ug/L		30	0.000
>	In	115		ug/L		59532	59531.993
	Sn	120	**0.001**	ug/L	2865.133	508	0.000
	Sb	121	**0.557**	ug/L	15.900	849	0.010
	Sb	123		ug/L		654	0.008
	Ba	135		ug/L		16	0.000
	Ba	137	**0.002**	ug/L	99.381	18	0.000
	Ho	165		ug/L		9	0.000
>	Lu	175		ug/L		53146	53145.871
	Tl	205	**0.210**	ug/L	20.303	513	0.006
	Pb	208	**0.003**	ug/L	86.484	394	0.000
	Bi	209		ug/L		28	0.000
	U	238	**0.025**	ug/L	7.955	108	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		96.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.0			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429001
Sample Date/Time: Friday, July 03, 2009 12:15:41
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429001.117

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**74.473**	ug/L	7.496	40106	0.048
	Be	9	**2.124**	ug/L	4.713	461	0.001
	B	11	**5.330**	ug/L	3.485	1521	0.001
	Na	23	**1491.864**	ug/L	5.810	3921971	4.700
	Mg	24	**4534.374**	ug/L	4.801	8107792	9.772
	Al	27	**23725.274**	ug/L	1.868	59303626	71.474
	P	31	**314.979**	ug/L	0.810	45310	0.050
	K	39	**3527.383**	ug/L	7.022	9852923	11.455
	Ca	43	**3906.406**	ug/L	0.795	22948	0.027
>	Sc	45		ug/L		829714	829714.265
	V	51	**30.919**	ug/L	1.123	94095	0.106
	Cr	52	**18.812**	ug/L	0.476	48246	0.053
	Cr	53		ug/L		46388	-0.015
	Mn	55	**883.314**	ug/L	0.584	2982642	3.594
	Fe	57	**39375.795**	ug/L	0.557	2557435	3.078
	Co	59	**6.128**	ug/L	2.583	15274	0.018
	Ni	60	**18.706**	ug/L	0.379	9777	0.012
	Cu	63		ug/L		17026	0.020
	Cu	65	**15.758**	ug/L	2.742	8846	0.011
	Zn	66	**138.034**	ug/L	0.671	43503	0.338
	Zn	67		ug/L		11343	0.052
	Zn	68		ug/L		32039	0.247
>	Ge	74		ug/L		127869	127869.336
	As	75	**6.018**	ug/L	12.699	2485	0.017
	Se	77		ug/L		1683	-0.006
	Se	82	**1.051**	ug/L	11.819	37	0.000
	Kr	83		ug/L		109	0.001
	Sr	88	**31.290**	ug/L	1.139	118890	2.038
	Y	89		ug/L		359812	6.172
	Ag	107	**0.844**	ug/L	6.059	1274	0.022
	Cd	111	**1.776**	ug/L	4.942	612	0.010
	Cd	114		ug/L		259	0.004
>	In	115		ug/L		58295	58295.208
	Sn	120	**10.420**	ug/L	0.714	14093	0.233
	Sb	121	**0.563**	ug/L	12.242	838	0.010
	Sb	123		ug/L		632	0.008
	Ba	135		ug/L		41710	0.736
	Ba	137	**140.772**	ug/L	0.104	72845	1.285
	Ho	165		ug/L		11872	0.209
>	Lu	175		ug/L		56675	56675.435
	Tl	205	**0.536**	ug/L	3.052	1108	0.016
	Pb	208	**18.920**	ug/L	0.520	47609	0.833
	Bi	209		ug/L		452	0.007
	U	238	**2.197**	ug/L	1.124	4843	0.084

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		97.0			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		88.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		90.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870570
Sample Date/Time: Friday, July 03, 2009 12:21:37
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\1201870570.118

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**70.035**	**ug/L**	6.993	37448	0.045
	Be	9	**2.375**	**ug/L**	6.461	510	0.001
	B	11	**6.280**	**ug/L**	1.888	1716	0.002
	Na	23	**1422.156**	**ug/L**	7.457	3711645	4.481
	Mg	24	**4918.542**	**ug/L**	6.979	8738974	10.600
	Al	27	**26384.601**	**ug/L**	4.786	65457776	79.485
	P	31	**371.634**	**ug/L**	1.601	52400	0.059
	K	39	**3659.833**	**ug/L**	2.222	10138759	11.885
	Ca	43	**4562.445**	**ug/L**	1.395	26559	0.032
>	Sc	45		**ug/L**		823634	823634.397
	V	51	**37.483**	**ug/L**	0.794	111884	0.128
	Cr	52	**21.385**	**ug/L**	1.533	53893	0.060
	Cr	53		**ug/L**		44188	-0.018
	Mn	55	**893.245**	**ug/L**	0.323	2994117	3.634
	Fe	57	**41734.723**	**ug/L**	0.998	2690931	3.262
	Co	59	**7.251**	**ug/L**	1.427	17917	0.022
	Ni	60	**20.612**	**ug/L**	0.838	10689	0.013
	Cu	63		**ug/L**		21815	0.026
	Cu	65	**19.971**	**ug/L**	2.659	11114	0.013
	Zn	66	**139.478**	**ug/L**	0.592	44033	0.342
	Zn	67		**ug/L**		11197	0.050
	Zn	68		**ug/L**		32768	0.253
>	Ge	74		**ug/L**		128097	128096.702
	As	75	**6.368**	**ug/L**	3.327	2617	0.018
	Se	77		**ug/L**		1545	-0.007
	Se	82	**0.671**	**ug/L**	59.541	24	0.000
	Kr	83		**ug/L**		112	0.001
	Sr	88	**36.363**	**ug/L**	1.053	138545	2.369
	Y	89		**ug/L**		352985	6.038
	Ag	107	**1.150**	**ug/L**	0.944	1732	0.029
	Cd	111	**2.114**	**ug/L**	8.232	727	0.012
	Cd	114		**ug/L**		343	0.005
>	In	115		**ug/L**		58459	58459.440
	Sn	120	**9.136**	**ug/L**	0.482	12452	0.204
	Sb	121	**0.351**	**ug/L**	0.949	611	0.007
	Sb	123		**ug/L**		428	0.004
	Ba	135		**ug/L**		46754	0.845
	Ba	137	**162.646**	**ug/L**	0.209	82125	1.485
	Ho	165		**ug/L**		11517	0.208
>	Lu	175		**ug/L**		55304	55303.727
	Tl	205	**0.542**	**ug/L**	1.662	1092	0.016
	Pb	208	**21.459**	**ug/L**	1.468	52635	0.944
	Bi	209		**ug/L**		503	0.009
	U	238	**2.394**	**ug/L**	1.812	5143	0.092

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			96.3		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			89.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			90.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			94.7		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870572
Sample Date/Time: Friday, July 03, 2009 12:27:31
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\1201870572.119

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**106.981**	ug/L	5.507	57481	0.069
	Be	9	**29.198**	ug/L	2.461	6258	0.008
	B	11	**59.740**	ug/L	1.236	13344	0.016
	Na	23	**2912.421**	ug/L	9.215	7618151	9.176
	Mg	24	**6596.326**	ug/L	4.605	11769867	14.216
	Al	27	**32039.982**	ug/L	6.324	80003948	96.522
	P	31	**1339.199**	ug/L	0.611	180026	0.213
	K	39	**5373.750**	ug/L	2.678	14799001	17.451
	Ca	43	**5857.566**	ug/L	0.978	34195	0.041
>	Sc	45		ug/L		828076	828075.509
	V	51	**69.700**	ug/L	1.217	203702	0.238
	Cr	52	**50.145**	ug/L	0.814	121520	0.142
	Cr	53		ug/L		50459	-0.010
	Mn	55	**1349.351**	ug/L	0.565	4547172	5.490
	Fe	57	**48646.582**	ug/L	0.178	3152478	3.802
	Co	59	**37.106**	ug/L	1.295	91531	0.110
	Ni	60	**47.055**	ug/L	1.516	24460	0.029
	Cu	63		ug/L		47224	0.057
	Cu	65	**42.114**	ug/L	1.877	23493	0.028
	Zn	66	**184.415**	ug/L	1.050	57698	0.452
	Zn	67		ug/L		13492	0.069
	Zn	68		ug/L		42432	0.331
>	Ge	74		ug/L		127101	127100.855
	As	75	**27.234**	ug/L	1.765	10059	0.077
	Se	77		ug/L		1586	-0.006
	Se	82	**5.410**	ug/L	8.382	186	0.001
	Kr	83		ug/L		125	0.001
	Sr	88	**65.557**	ug/L	0.453	251359	4.270
	Y	89		ug/L		402613	6.842
	Ag	107	**23.281**	ug/L	1.433	34923	0.593
	Cd	111	**5.792**	ug/L	4.145	1981	0.033
	Cd	114		ug/L		2075	0.035
>	In	115		ug/L		58844	58843.527
	Sn	120	**29.735**	ug/L	0.407	39667	0.666
	Sb	121	**24.698**	ug/L	1.456	27199	0.458
	Sb	123		ug/L		20530	0.346
	Ba	135		ug/L		64272	1.145
	Ba	137	**217.283**	ug/L	0.690	111359	1.983
	Ho	165		ug/L		13146	0.234
>	Lu	175		ug/L		56137	56136.976
	Tl	205	**24.019**	ug/L	0.665	41165	0.730
	Pb	208	**36.744**	ug/L	0.513	91193	1.617
	Bi	209		ug/L		565	0.010
	U	238	**28.593**	ug/L	0.458	61693	1.098

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			96.8		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			88.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			90.9		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			96.1		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201870573
Sample Date/Time: Friday, July 03, 2009 12:33:26
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\1201870573.120

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**103.326**	ug/L	7.170	55397	0.067
	Be	9	**29.577**	ug/L	1.914	6328	0.008
	B	11	**60.273**	ug/L	2.285	13431	0.016
	Na	23	**2978.284**	ug/L	3.867	7775896	9.384
	Mg	24	**5618.342**	ug/L	1.009	10010486	12.108
	Al	27	**24781.721**	ug/L	2.992	61727988	74.656
	P	31	**1294.483**	ug/L	1.355	173825	0.206
	K	39	**5165.322**	ug/L	3.562	14218923	16.774
	Ca	43	**5062.655**	ug/L	2.357	29545	0.035
>	Sc	45		ug/L		826408	826407.748
	V	51	**59.963**	ug/L	1.763	175720	0.205
	Cr	52	**46.041**	ug/L	0.819	111689	0.130
	Cr	53		ug/L		48740	-0.012
	Mn	55	**1185.856**	ug/L	0.591	3988064	4.825
	Fe	57	**44578.710**	ug/L	0.818	2883132	3.484
	Co	59	**32.111**	ug/L	1.437	79072	0.096
	Ni	60	**47.548**	ug/L	1.425	24670	0.030
	Cu	63		ug/L		45636	0.055
	Cu	65	**40.582**	ug/L	2.200	22594	0.027
	Zn	66	**180.963**	ug/L	0.663	57115	0.444
	Zn	67		ug/L		13038	0.065
	Zn	68		ug/L		42010	0.325
>	Ge	74		ug/L		128211	128210.716
	As	75	**26.332**	ug/L	0.640	9821	0.074
	Se	77		ug/L		1532	-0.007
	Se	82	**5.517**	ug/L	11.101	191	0.001
	Kr	83		ug/L		123	0.001
	Sr	88	**58.950**	ug/L	0.543	223958	3.840
	Y	89		ug/L		397691	6.821
	Ag	107	**24.671**	ug/L	0.505	36669	0.629
	Cd	111	**5.232**	ug/L	2.718	1774	0.030
	Cd	114		ug/L		2060	0.035
>	In	115		ug/L		58303	58302.887
	Sn	120	**32.611**	ug/L	0.206	43056	0.730
	Sb	121	**28.021**	ug/L	1.528	30544	0.520
	Sb	123		ug/L		23042	0.392
	Ba	135		ug/L		57025	1.013
	Ba	137	**192.645**	ug/L	0.975	98943	1.758
	Ho	165		ug/L		13102	0.233
>	Lu	175		ug/L		56259	56259.128
	Tl	205	**24.511**	ug/L	0.636	42094	0.745
	Pb	208	**30.581**	ug/L	1.238	76128	1.346
	Bi	209		ug/L		467	0.008
	U	238	**28.854**	ug/L	0.734	62388	1.108

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			96.6		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			89.1		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			90.1		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			96.3		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201870571
Sample Date/Time: Friday, July 03, 2009 12:39:20
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 880941|10|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\1201870571.121

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**14.911**	ug/L	6.929	8024	0.010
	Be	9	**0.440**	ug/L	12.768	98	0.000
	B	11	**2.300**	ug/L	9.633	857	0.001
	Na	23	**297.622**	ug/L	3.588	793098	0.938
	Mg	24	**904.754**	ug/L	4.344	1611842	1.950
	Al	27	**4723.661**	ug/L	3.624	11754659	14.230
	P	31	**66.344**	ug/L	1.969	12449	0.011
	K	39	**634.387**	ug/L	11.220	2050782	2.060
	Ca	43	**810.483**	ug/L	2.519	4959	0.006
>	Sc	45		ug/L		825339	825339.134
	V	51	**5.751**	ug/L	6.792	22588	0.020
	Cr	52	**3.213**	ug/L	1.751	11586	0.009
	Cr	53		ug/L		48437	-0.013
	Mn	55	**190.023**	ug/L	0.533	638851	0.773
	Fe	57	**8461.760**	ug/L	0.249	549774	0.661
	Co	59	**1.247**	ug/L	1.644	3215	0.004
	Ni	60	**3.878**	ug/L	1.490	2059	0.002
	Cu	63		ug/L		3638	0.004
	Cu	65	**3.281**	ug/L	1.535	1882	0.002
	Zn	66	**30.109**	ug/L	1.714	10042	0.074
	Zn	67		ug/L		6510	0.012
	Zn	68		ug/L		7425	0.053
>	Ge	74		ug/L		132911	132911.114
	As	75	**0.909**	ug/L	39.348	673	0.003
	Se	77		ug/L		1835	-0.005
	Se	82	**0.120**	ug/L	75.394	5	0.000
	Kr	83		ug/L		56	0.000
	Sr	88	**6.256**	ug/L	1.886	24082	0.407
	Y	89		ug/L		72925	1.238
	Ag	107	**0.160**	ug/L	2.053	261	0.004
	Cd	111	**0.297**	ug/L	16.535	116	0.002
	Cd	114		ug/L		71	0.001
>	In	115		ug/L		58896	58895.824
	Sn	120	**2.045**	ug/L	1.387	3197	0.046
	Sb	121	**0.022**	ug/L	86.475	255	0.000
	Sb	123		ug/L		196	0.000
	Ba	135		ug/L		8426	0.157
	Ba	137	**30.179**	ug/L	1.111	14738	0.275
	Ho	165		ug/L		2380	0.044
>	Lu	175		ug/L		53440	53440.306
	Tl	205	**0.227**	ug/L	11.984	543	0.007
	Pb	208	**4.012**	ug/L	0.637	9825	0.177
	Bi	209		ug/L		108	0.002
	U	238	**0.460**	ug/L	2.072	1000	0.018

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		96.5			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.5			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429002
Sample Date/Time: Friday, July 03, 2009 12:45:16
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429002.122

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**66.213**	ug/L	5.844	35399	0.043
	Be	9	**4.268**	ug/L	2.465	914	0.001
	B	11	**26.467**	ug/L	3.305	6078	0.007
	Na	23	**599.630**	ug/L	7.359	1574860	1.889
	Mg	24	**13168.548**	ug/L	2.007	23375079	28.380
	Al	27	**94649.716**	ug/L	7.505	234603652	285.137
	P	31	**492.153**	ug/L	0.437	68162	0.078
	K	39	**11003.532**	ug/L	5.641	29771745	35.732
	Ca	43	**10921.365**	ug/L	0.784	63178	0.076
>	Sc	45		ug/L		823553	823552.965
	V	51	**138.270**	ug/L	0.389	395565	0.473
	Cr	52	**62.955**	ug/L	0.274	150702	0.178
	Cr	53		ug/L		54088	-0.005
	Mn	55	**1077.418**	ug/L	0.743	3611194	4.383
	Fe	57	**63917.450**	ug/L	0.316	4118404	4.996
	Co	59	**25.982**	ug/L	1.155	63791	0.077
	Ni	60	**36.800**	ug/L	1.343	19038	0.023
	Cu	63		ug/L		40460	0.049
	Cu	65	**36.499**	ug/L	0.827	20261	0.025
	Zn	66	**140.319**	ug/L	0.823	43443	0.344
	Zn	67		ug/L		12508	0.063
	Zn	68		ug/L		34836	0.274
>	Ge	74		ug/L		125625	125624.874
	As	75	**12.403**	ug/L	6.642	4699	0.035
	Se	77		ug/L		1499	-0.007
	Se	82	**-0.824**	ug/L	26.239	-27	-0.000
	Kr	83		ug/L		149	0.001
	Sr	88	**120.413**	ug/L	0.642	450011	7.843
	Y	89		ug/L		279089	4.865
	Ag	107	**0.513**	ug/L	1.066	770	0.013
	Cd	111	**1.822**	ug/L	8.987	618	0.011
	Cd	114		ug/L		247	0.004
>	In	115		ug/L		57363	57363.456
	Sn	120	**0.960**	ug/L	2.154	1720	0.021
	Sb	121	**0.169**	ug/L	17.332	405	0.003
	Sb	123		ug/L		333	0.003
	Ba	135		ug/L		126940	2.425
	Ba	137	**456.064**	ug/L	1.814	217957	4.163
	Ho	165		ug/L		8155	0.156
>	Lu	175		ug/L		52362	52361.658
	Tl	205	**1.082**	ug/L	2.088	1893	0.033
	Pb	208	**70.057**	ug/L	1.270	161815	3.083
	Bi	209		ug/L		1817	0.034
	U	238	**6.270**	ug/L	1.034	12663	0.241

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			96.3		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			87.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			88.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			89.7		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	Sample is out of limits (over linear range)
V 51 Upper, S, EEE	V	51	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EEE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429003
Sample Date/Time: Friday, July 03, 2009 12:51:12
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429003.123

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.189**	ug/L	5.977	11443	0.014
	Be	9	**2.470**	ug/L	5.624	535	0.001
	B	11	**13.278**	ug/L	3.359	3252	0.003
	Na	23	**611.322**	ug/L	6.121	1618358	1.926
	Mg	24	**3097.494**	ug/L	9.273	5543425	6.676
	Al	27	**16413.266**	ug/L	1.876	41027666	49.446
	P	31	**839.663**	ug/L	1.079	114538	0.133
	K	39	**2582.603**	ug/L	7.194	7316832	8.387
	Ca	43	**7887.589**	ug/L	1.127	46053	0.055
>	Sc	45		ug/L		829806	829806.112
	V	51	**22.975**	ug/L	3.803	71549	0.079
	Cr	52	**139.590**	ug/L	0.845	331652	0.395
	Cr	53		ug/L		76637	0.021
	Mn	55	**2334.629**	ug/L	0.477	7883139	9.498
	Fe	57	**22731.060**	ug/L	1.313	1478008	1.777
	Co	59	**10.068**	ug/L	1.685	24999	0.030
	Ni	60	**48.884**	ug/L	0.935	25465	0.031
	Cu	63		ug/L		243749	0.294
	Cu	65	**213.095**	ug/L	0.727	118889	0.143
	Zn	66	**470.666**	ug/L	0.481	149102	1.154
	Zn	67		ug/L		27427	0.176
	Zn	68		ug/L		108885	0.841
>	Ge	74		ug/L		128991	128991.368
	As	75	**3.650**	ug/L	16.006	1649	0.010
	Se	77		ug/L		1440	-0.008
	Se	82	**1.324**	ug/L	23.357	47	0.000
	Kr	83		ug/L		94	0.000
	Sr	88	**51.802**	ug/L	0.631	196396	3.374
	Y	89		ug/L		322740	5.547
	Ag	107	**0.782**	ug/L	9.598	1180	0.020
	Cd	111	**2.511**	ug/L	12.731	858	0.014
	Cd	114		ug/L		745	0.012
>	In	115		ug/L		58180	58180.458
	Sn	120	**3.284**	ug/L	1.036	4773	0.074
	Sb	121	**0.275**	ug/L	0.803	526	0.005
	Sb	123		ug/L		403	0.004
	Ba	135		ug/L		64962	1.178
	Ba	137	**225.379**	ug/L	0.428	113427	2.057
	Ho	165		ug/L		9384	0.170
>	Lu	175		ug/L		55127	55126.714
	Tl	205	**0.349**	ug/L	3.103	765	0.011
	Pb	208	**84.806**	ug/L	1.082	206170	3.733
	Bi	209		ug/L		3533	0.064
	U	238	**9.864**	ug/L	2.068	20938	0.379

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.0		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			89.6		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			89.9		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			94.4		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429004
Sample Date/Time: Friday, July 03, 2009 12:57:06
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429004.124

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**18.740**	ug/L	6.811	10181	0.012
	Be	9	**3.327**	ug/L	5.157	723	0.001
	B	11	**6.410**	ug/L	0.372	1767	0.002
	Na	23	**841.310**	ug/L	4.116	2233173	2.651
	Mg	24	**2172.564**	ug/L	5.970	3909060	4.682
	Al	27	**16987.829**	ug/L	5.542	42706070	51.177
	P	31	**533.794**	ug/L	2.625	74618	0.085
	K	39	**2191.243**	ug/L	4.660	6288384	7.116
	Ca	43	**3592.317**	ug/L	0.505	21249	0.025
>	Sc	45		ug/L		834590	834590.166
	V	51	**16.419**	ug/L	6.128	53321	0.056
	Cr	52	**65.639**	ug/L	1.093	159046	0.186
	Cr	53		ug/L		54703	-0.006
	Mn	55	**1867.705**	ug/L	0.536	6343137	7.599
	Fe	57	**23406.692**	ug/L	1.047	1530617	1.830
	Co	59	**5.673**	ug/L	1.885	14235	0.017
	Ni	60	**27.171**	ug/L	1.824	14257	0.017
	Cu	63		ug/L		102312	0.122
	Cu	65	**89.019**	ug/L	1.647	49980	0.060
	Zn	66	**326.855**	ug/L	0.611	101967	0.802
	Zn	67		ug/L		20145	0.122
	Zn	68		ug/L		74196	0.581
>	Ge	74		ug/L		126947	126946.506
	As	75	**3.121**	ug/L	12.220	1434	0.009
	Se	77		ug/L		1379	-0.008
	Se	82	**1.956**	ug/L	25.583	68	0.001
	Kr	83		ug/L		98	0.000
	Sr	88	**26.332**	ug/L	0.759	98085	1.715
	Y	89		ug/L		431135	7.545
	Ag	107	**0.395**	ug/L	1.194	595	0.010
	Cd	111	**1.566**	ug/L	1.995	531	0.009
	Cd	114		ug/L		349	0.006
>	In	115		ug/L		57136	57136.384
	Sn	120	**2.890**	ug/L	1.514	4183	0.065
	Sb	121	**0.143**	ug/L	8.793	376	0.003
	Sb	123		ug/L		289	0.002
	Ba	135		ug/L		42236	0.767
	Ba	137	**146.334**	ug/L	1.004	73604	1.336
	Ho	165		ug/L		12786	0.232
>	Lu	175		ug/L		55089	55089.232
	Tl	205	**0.259**	ug/L	10.401	613	0.008
	Pb	208	**46.216**	ug/L	0.036	112458	2.034
	Bi	209		ug/L		1239	0.022
	U	238	**4.035**	ug/L	1.554	8594	0.155

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.6		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			88.2		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			88.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			94.3		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, July 03, 2009 13:02:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 6.125

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.421**	ug/L	6.206	29093	0.035
	Be	9	**58.173**	ug/L	4.701	12390	0.015
	B	11	**111.153**	ug/L	2.480	24375	0.029
	Na	23	**5841.180**	ug/L	2.273	15168255	18.404
	Mg	24	**5400.495**	ug/L	1.618	9583599	11.639
	Al	27	**5030.611**	ug/L	7.919	12497703	15.155
	P	31	**5146.941**	ug/L	0.694	677428	0.818
	K	39	**5068.612**	ug/L	4.070	13899459	16.460
	Ca	43	**5056.585**	ug/L	1.447	29395	0.035
>	Sc	45		ug/L		823349	823348.857
	V	51	**49.088**	ug/L	1.093	144503	0.168
	Cr	52	**50.734**	ug/L	1.200	122189	0.143
	Cr	53		ug/L		62852	0.005
	Mn	55	**48.685**	ug/L	0.600	163869	0.198
	Fe	57	**5124.745**	ug/L	0.654	333680	0.401
	Co	59	**51.374**	ug/L	1.078	125949	0.153
	Ni	60	**51.735**	ug/L	0.943	26736	0.032
	Cu	63		ug/L		55407	0.067
	Cu	65	**48.035**	ug/L	1.248	26637	0.032
	Zn	66	**51.915**	ug/L	0.743	17156	0.127
	Zn	67		ug/L		7919	0.023
	Zn	68		ug/L		12617	0.092
>	Ge	74		ug/L		132965	132965.311
	As	75	**46.699**	ug/L	2.087	17808	0.131
	Se	77		ug/L		3279	0.006
	Se	82	**49.942**	ug/L	1.819	1788	0.013
	Kr	83		ug/L		41	0.000
	Sr	88	**52.030**	ug/L	0.989	196845	3.389
	Y	89		ug/L		106	0.001
	Ag	107	**50.593**	ug/L	0.998	74858	1.289
	Cd	111	**51.795**	ug/L	0.281	17361	0.299
	Cd	114		ug/L		38783	0.668
>	In	115		ug/L		58055	58054.839
	Sn	120	**49.258**	ug/L	1.417	64510	1.103
	Sb	121	**46.230**	ug/L	5.783	50039	0.858
	Sb	123		ug/L		37872	0.649
	Ba	135		ug/L		13777	0.269
	Ba	137	**51.601**	ug/L	1.557	24113	0.471
	Ho	165		ug/L		14	0.000
>	Lu	175		ug/L		51155	51155.272
	Tl	205	**49.599**	ug/L	1.254	77285	1.507
	Pb	208	**51.898**	ug/L	1.520	117215	2.284
	Bi	209		ug/L		51	0.001
	U	238	**53.540**	ug/L	0.742	105217	2.056

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	108.841				
	Be	9	116.346				
	B	11	111.153				
	Na	23	116.824				
	Mg	24	108.010				
	Al	27	99.616				
	P	31	102.939				
	K	39	101.372				
	Ca	43	101.132				
>	Sc	45		96.3			
	V	51	98.176				
	Cr	52	101.468				
	Cr	53					
	Mn	55	97.371				
	Fe	57	102.495				
	Co	59	102.748				
	Ni	60	103.469				
	Cu	63					
	Cu	65	96.071				
	Zn	66	103.830				
	Zn	67					
	Zn	68					
>	Ge	74		92.4			
	As	75	93.398				
	Se	77					
	Se	82	99.884				
	Kr	83					
	Sr	88	104.061				
	Y	89					
	Ag	107	101.186				
	Cd	111	103.590				
	Cd	114					
>	In	115		89.7			
	Sn	120	98.517				
	Sb	121	92.460				
	Sb	123					
	Ba	135					
	Ba	137	103.202				
	Ho	165					
>	Lu	175		87.6			
	Tl	205	99.199				
	Pb	208	103.796				
	Bi	209					
	U	238	107.080				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Be	9	CCV is out of limits (+/- 10%)
QC Std 6	B	11	CCV is out of limits (+/- 10%)
QC Std 6	Na	23	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, July 03, 2009 13:08:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 7.126

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.055**	**ug/L**	42.992	74	0.000
	Be	9	**0.025**	**ug/L**	63.686	10	0.000
	B	11	**1.937**	**ug/L**	16.485	793	0.001
	Na	23	**4.365**	**ug/L**	51.891	31369	0.014
	Mg	24	**1.501**	**ug/L**	45.109	5334	0.003
	Al	27	**1.591**	**ug/L**	117.908	10671	0.005
	P	31	**2.451**	**ug/L**	54.419	4149	0.000
	K	39	**-9.317**	**ug/L**	72.294	331130	-0.030
	Ca	43	**-0.763**	**ug/L**	500.572	281	-0.000
>	Sc	45		**ug/L**		841669	841669.361
	V	51	**-0.950**	**ug/L**	96.184	3751	-0.003
	Cr	52	**-0.563**	**ug/L**	5.797	2825	-0.002
	Cr	53		**ug/L**		52756	-0.009
	Mn	55	**0.108**	**ug/L**	12.782	1179	0.000
	Fe	57	**-2.539**	**ug/L**	41.063	3807	-0.000
	Co	59	**0.009**	**ug/L**	83.475	181	0.000
	Ni	60	**0.009**	**ug/L**	87.629	59	0.000
	Cu	63		**ug/L**		135	0.000
	Cu	65	**0.028**	**ug/L**	65.341	79	0.000
	Zn	66	**0.065**	**ug/L**	99.995	259	0.000
	Zn	67		**ug/L**		5298	0.002
	Zn	68		**ug/L**		468	0.000
>	Ge	74		**ug/L**		137265	137265.041
	As	75	**-0.290**	**ug/L**	173.470	234	-0.001
	Se	77		**ug/L**		2016	-0.004
	Se	82	**-0.153**	**ug/L**	188.336	-5	-0.000
	Kr	83		**ug/L**		45	0.000
	Sr	88	**0.020**	**ug/L**	30.009	165	0.001
	Y	89		**ug/L**		40	0.000
	Ag	107	**0.021**	**ug/L**	28.876	52	0.001
	Cd	111	**0.019**	**ug/L**	154.348	22	0.000
	Cd	114		**ug/L**		47	0.000
>	In	115		**ug/L**		59669	59669.219
	Sn	120	**0.015**	**ug/L**	40.218	529	0.000
	Sb	121	**0.567**	**ug/L**	25.227	860	0.011
	Sb	123		**ug/L**		654	0.008
	Ba	135		**ug/L**		15	0.000
	Ba	137	**0.027**	**ug/L**	39.694	29	0.000
	Ho	165		**ug/L**		9	0.000
>	Lu	175		**ug/L**		51997	51997.312
	Tl	205	**0.133**	**ug/L**	12.609	381	0.004
	Pb	208	**0.006**	**ug/L**	118.367	393	0.000
	Bi	209		**ug/L**		29	0.000
	U	238	**0.037**	**ug/L**	26.664	129	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.4		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			95.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			92.2		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			89.0		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429005
Sample Date/Time: Friday, July 03, 2009 13:14:50
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429005.127

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**59.328**	ug/L	9.914	31288	0.038
	Be	9	**3.721**	ug/L	9.581	785	0.001
	B	11	**35.577**	ug/L	7.032	7936	0.009
	Na	23	**705.387**	ug/L	2.242	1826551	2.222
	Mg	24	**12104.261**	ug/L	1.340	21228450	26.087
	Al	27	**51648.608**	ug/L	4.911	126439806	155.594
	P	31	**1066.265**	ug/L	2.858	141463	0.169
	K	39	**7538.132**	ug/L	6.498	20249494	24.479
	Ca	43	**31653.274**	ug/L	4.218	180119	0.221
>	Sc	45		ug/L		813363	813363.319
	V	51	**35.493**	ug/L	33.395	104772	0.121
	Cr	52	**1960.009**	ug/L	4.488	4508029	5.543
	Cr	53		ug/L		564538	0.624
	Mn	55	**1007.303**	ug/L	4.187	3330922	4.098
	Fe	57	**43652.518**	ug/L	3.154	2776806	3.412
	Co	59	**14.306**	ug/L	3.152	34732	0.043
	Ni	60	**87.324**	ug/L	3.744	44504	0.055
	Cu	63		ug/L		418214	0.515
	Cu	65	**374.438**	ug/L	3.815	204521	0.252
	Zn	66	**1089.157**	ug/L	1.008	330713	2.671
	Zn	67		ug/L		56666	0.421
	Zn	68		ug/L		239991	1.936
>	Ge	74		ug/L		123757	123757.396
	As	75	**8.118**	ug/L	3.305	3138	0.023
	Se	77		ug/L		1653	-0.006
	Se	82	**2.086**	ug/L	31.379	70	0.001
	Kr	83		ug/L		111	0.001
	Sr	88	**190.637**	ug/L	1.569	697777	12.417
	Y	89		ug/L		295428	5.257
	Ag	107	**1.891**	ug/L	9.010	2726	0.048
	Cd	111	**4.485**	ug/L	10.697	1468	0.026
	Cd	114		ug/L		1261	0.022
>	In	115		ug/L		56189	56189.151
	Sn	120	**2.420**	ug/L	2.222	3522	0.054
	Sb	121	**0.818**	ug/L	2.013	1073	0.015
	Sb	123		ug/L		844	0.012
	Ba	135		ug/L		112096	2.166
	Ba	137	**412.193**	ug/L	0.192	194777	3.763
	Ho	165		ug/L		8922	0.172
>	Lu	175		ug/L		51763	51763.140
	Tl	205	**1.151**	ug/L	3.599	1980	0.035
	Pb	208	**140.618**	ug/L	2.400	320667	6.189
	Bi	209		ug/L		6135	0.118
	U	238	**29.795**	ug/L	1.952	59264	1.144

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			95.1		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			86.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			86.8		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			88.6		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	Sample is out of limits (over linear range)
Cr 52 Upper, S, EEE	Cr	52	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429006
Sample Date/Time: Friday, July 03, 2009 13:20:44
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429006.128

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**40.243**	**ug/L**	6.984	21176	0.026
	Be	9	**2.725**	**ug/L**	4.321	575	0.001
	B	11	**9.277**	**ug/L**	3.636	2324	0.002
	Na	23	**676.317**	**ug/L**	5.894	1743712	2.131
	Mg	24	**2873.551**	**ug/L**	4.740	5022013	6.193
	Al	27	**19264.685**	**ug/L**	5.416	46995326	58.036
	P	31	**491.302**	**ug/L**	1.327	66947	0.078
	K	39	**2787.701**	**ug/L**	4.748	7672726	9.053
	Ca	43	**5058.857**	**ug/L**	0.476	28933	0.035
>	Sc	45		**ug/L**		810098	810097.721
	V	51	**6.334**	**ug/L**	24.287	23822	0.022
	Cr	52	**436.447**	**ug/L**	1.008	1003720	1.234
	Cr	53		**ug/L**		162879	0.130
	Mn	55	**1337.695**	**ug/L**	0.939	4409426	5.442
	Fe	57	**25031.069**	**ug/L**	0.865	1588588	1.957
	Co	59	**7.261**	**ug/L**	0.648	17646	0.022
	Ni	60	**80.672**	**ug/L**	1.610	40986	0.051
	Cu	63		**ug/L**		217209	0.268
	Cu	65	**192.392**	**ug/L**	2.183	104770	0.129
	Zn	66	**640.054**	**ug/L**	0.146	198700	1.570
	Zn	67		**ug/L**		34856	0.239
	Zn	68		**ug/L**		144641	1.141
>	Ge	74		**ug/L**		126459	126458.525
	As	75	**5.271**	**ug/L**	2.781	2193	0.015
	Se	77		**ug/L**		1391	-0.008
	Se	82	**0.654**	**ug/L**	33.055	23	0.000
	Kr	83		**ug/L**		95	0.000
	Sr	88	**34.560**	**ug/L**	0.234	130013	2.251
	Y	89		**ug/L**		327277	5.670
	Ag	107	**0.632**	**ug/L**	0.839	950	0.016
	Cd	111	**1.811**	**ug/L**	4.736	618	0.010
	Cd	114		**ug/L**		707	0.012
>	In	115		**ug/L**		57718	57717.950
	Sn	120	**6.174**	**ug/L**	2.265	8467	0.138
	Sb	121	**0.307**	**ug/L**	10.927	555	0.006
	Sb	123		**ug/L**		447	0.005
	Ba	135		**ug/L**		44777	0.821
	Ba	137	**156.417**	**ug/L**	0.359	77868	1.428
	Ho	165		**ug/L**		9467	0.174
>	Lu	175		**ug/L**		54526	54525.737
	Tl	205	**0.522**	**ug/L**	3.446	1043	0.016
	Pb	208	**128.501**	**ug/L**	0.795	308780	5.656
	Bi	209		**ug/L**		4241	0.077
	U	238	**8.344**	**ug/L**	1.900	17527	0.320

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			94.7		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			87.8		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			89.2		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			93.4		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEf	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429007
Sample Date/Time: Friday, July 03, 2009 13:26:39
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429007.129

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**25.864**	**ug/L**	6.540	13707	0.017
	Be	9	**3.928**	**ug/L**	7.334	832	0.001
	B	11	**8.138**	**ug/L**	5.959	2094	0.002
	Na	23	**709.599**	**ug/L**	6.718	1839827	2.236
	Mg	24	**2528.961**	**ug/L**	5.218	4442668	5.450
	Al	27	**17528.333**	**ug/L**	6.480	43079049	52.805
	P	31	**454.812**	**ug/L**	0.122	62618	0.072
	K	39	**2960.727**	**ug/L**	1.596	8182746	9.615
	Ca	43	**3796.472**	**ug/L**	1.405	21915	0.027
>	Sc	45		**ug/L**		814962	814961.761
	V	51	**19.042**	**ug/L**	1.623	59349	0.065
	Cr	52	**145.562**	**ug/L**	0.697	339499	0.412
	Cr	53		**ug/L**		75818	0.022
	Mn	55	**1356.545**	**ug/L**	0.895	4499219	5.519
	Fe	57	**24375.013**	**ug/L**	0.799	1556364	1.905
	Co	59	**4.825**	**ug/L**	0.417	11850	0.014
	Ni	60	**33.156**	**ug/L**	2.318	16976	0.021
	Cu	63		**ug/L**		74725	0.092
	Cu	65	**66.407**	**ug/L**	1.668	36424	0.045
	Zn	66	**271.653**	**ug/L**	0.499	83701	0.666
	Zn	67		**ug/L**		16983	0.098
	Zn	68		**ug/L**		60832	0.482
>	Ge	74		**ug/L**		125323	125322.595
	As	75	**4.380**	**ug/L**	13.479	1859	0.012
	Se	77		**ug/L**		1335	-0.008
	Se	82	**1.260**	**ug/L**	16.638	43	0.000
	Kr	83		**ug/L**		104	0.001
	Sr	88	**28.735**	**ug/L**	0.652	106156	1.872
	Y	89		**ug/L**		446288	7.875
	Ag	107	**1.006**	**ug/L**	3.761	1472	0.026
	Cd	111	**1.759**	**ug/L**	4.839	590	0.010
	Cd	114		**ug/L**		462	0.008
>	In	115		**ug/L**		56673	56672.603
	Sn	120	**3.678**	**ug/L**	2.032	5148	0.082
	Sb	121	**0.223**	**ug/L**	9.442	457	0.004
	Sb	123		**ug/L**		351	0.003
	Ba	135		**ug/L**		42812	0.767
	Ba	137	**146.855**	**ug/L**	1.778	74839	1.341
	Ho	165		**ug/L**		12800	0.229
>	Lu	175		**ug/L**		55822	55821.750
	Tl	205	**0.521**	**ug/L**	1.054	1066	0.016
	Pb	208	**39.714**	**ug/L**	2.130	97965	1.748
	Bi	209		**ug/L**		1064	0.019
	U	238	**5.779**	**ug/L**	2.523	12444	0.222

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		95.3			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		87.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		87.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		95.6			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429008
Sample Date/Time: Friday, July 03, 2009 13:32:34
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429008.130

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**45.442**	ug/L	8.723	23856	0.029
	Be	9	**2.622**	ug/L	5.565	553	0.001
	B	11	**9.615**	ug/L	1.561	2392	0.003
	Na	23	**605.250**	ug/L	4.306	1560142	1.907
	Mg	24	**4482.247**	ug/L	2.651	7812021	9.660
	Al	27	**25939.338**	ug/L	3.945	63219903	78.144
	P	31	**756.877**	ug/L	0.143	100967	0.120
	K	39	**3488.767**	ug/L	1.685	9502634	11.329
	Ca	43	**6041.519**	ug/L	1.516	34445	0.042
>	Sc	45		ug/L		808680	808679.976
	V	51	**0.772**	ug/L	358.627	8492	0.003
	Cr	52	**1218.814**	ug/L	0.176	2791381	3.447
	Cr	53		ug/L		369062	0.385
	Mn	55	**1092.335**	ug/L	1.291	3595374	4.444
	Fe	57	**42892.183**	ug/L	0.904	2715353	3.353
	Co	59	**11.134**	ug/L	1.296	26928	0.033
	Ni	60	**75.779**	ug/L	1.375	38437	0.047
	Cu	63		ug/L		295312	0.365
	Cu	65	**264.621**	ug/L	1.297	143848	0.178
	Zn	66	**1206.916**	ug/L	0.500	368287	2.960
	Zn	67		ug/L		61218	0.455
	Zn	68		ug/L		266261	2.138
>	Ge	74		ug/L		124368	124367.938
	As	75	**7.737**	ug/L	5.755	3020	0.022
	Se	77		ug/L		1250	-0.009
	Se	82	**0.925**	ug/L	51.038	32	0.000
	Kr	83		ug/L		87	0.000
	Sr	88	**43.588**	ug/L	1.043	160819	2.839
	Y	89		ug/L		220159	3.888
	Ag	107	**0.926**	ug/L	2.565	1355	0.024
	Cd	111	**2.052**	ug/L	7.318	684	0.012
	Cd	114		ug/L		732	0.013
>	In	115		ug/L		56616	56615.911
	Sn	120	**8.578**	ug/L	1.456	11352	0.192
	Sb	121	**0.282**	ug/L	11.758	519	0.005
	Sb	123		ug/L		407	0.004
	Ba	135		ug/L		44787	0.863
	Ba	137	**164.585**	ug/L	0.318	77927	1.502
	Ho	165		ug/L		6544	0.126
>	Lu	175		ug/L		51859	51859.477
	Tl	205	**0.562**	ug/L	0.687	1055	0.017
	Pb	208	**126.464**	ug/L	0.898	289027	5.566
	Bi	209		ug/L		2826	0.054
	U	238	**8.643**	ug/L	0.703	17267	0.332

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		94.6			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		86.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		87.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		88.8			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Cr 52 Upper, S, EEE	Cr	52	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEt	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429009
Sample Date/Time: Friday, July 03, 2009 13:38:29
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429009.131

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**46.322**	**ug/L**	8.221	23519	0.030
	Be	9	**3.431**	**ug/L**	3.142	698	0.001
	B	11	**21.005**	**ug/L**	0.866	4651	0.006
	Na	23	**753.841**	**ug/L**	2.914	1875264	2.375
	Mg	24	**7071.034**	**ug/L**	0.343	11916228	15.239
	Al	27	**32221.230**	**ug/L**	4.099	75901182	97.068
	P	31	**2272.697**	**ug/L**	1.727	286018	0.361
	K	39	**4339.904**	**ug/L**	8.082	11354961	14.093
	Ca	43	**21013.631**	**ug/L**	1.452	115147	0.147
>	Sc	45		**ug/L**		781759	781759.082
	V	51	**33.001**	**ug/L**	9.676	94273	0.113
	Cr	52	**1268.822**	**ug/L**	0.248	2809014	3.588
	Cr	53		**ug/L**		369325	0.401
	Mn	55	**4412.416**	**ug/L**	1.291	14035612	17.952
	Fe	57	**54620.097**	**ug/L**	1.571	3341396	4.269
	Co	59	**45.960**	**ug/L**	1.094	107005	0.137
	Ni	60	**219.426**	**ug/L**	0.844	107510	0.137
	Cu	63		**ug/L**		956413	1.223
	Cu	65	**916.138**	**ug/L**	1.120	481326	0.616
	Zn	66	**1766.255**	**ug/L**	0.778	532102	4.331
	Zn	67		**ug/L**		88947	0.687
	Zn	68		**ug/L**		391625	3.186
>	Ge	74		**ug/L**		122808	122807.845
	As	75	**14.720**	**ug/L**	3.349	5394	0.041
	Se	77		**ug/L**		1400	-0.007
	Se	82	**3.154**	**ug/L**	5.322	105	0.001
	Kr	83		**ug/L**		102	0.001
	Sr	88	**135.267**	**ug/L**	0.638	501959	8.811
	Y	89		**ug/L**		328979	5.775
	Ag	107	**2.800**	**ug/L**	3.484	4083	0.071
	Cd	111	**5.146**	**ug/L**	7.902	1705	0.030
	Cd	114		**ug/L**		2572	0.045
>	In	115		**ug/L**		56964	56963.531
	Sn	120	**8.062**	**ug/L**	2.048	10764	0.180
	Sb	121	**0.566**	**ug/L**	3.106	822	0.011
	Sb	123		**ug/L**		639	0.008
	Ba	135		**ug/L**		161884	3.029
	Ba	137	**569.778**	**ug/L**	1.097	277916	5.201
	Ho	165		**ug/L**		9437	0.176
>	Lu	175		**ug/L**		53435	53435.289
	Tl	205	**0.846**	**ug/L**	2.571	1550	0.026
	Pb	208	**443.363**	**ug/L**	0.961	1043060	19.514
	Bi	209		**ug/L**		15315	0.286
	U	238	**38.927**	**ug/L**	1.836	79918	1.495

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		91.4			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		85.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		88.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.5			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Cr 52 Upper, S, EEE	Cr	52	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EEE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429010
Sample Date/Time: Friday, July 03, 2009 13:44:24
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429010.132

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**45.317**	**ug/L**	6.779	23093	0.029
	Be	9	**3.908**	**ug/L**	3.380	798	0.001
	B	11	**30.436**	**ug/L**	2.274	6610	0.008
	Na	23	**921.242**	**ug/L**	6.927	2298127	2.903
	Mg	24	**5079.923**	**ug/L**	1.190	8595662	10.948
	Al	27	**19625.899**	**ug/L**	3.725	46435858	59.124
	P	31	**1188.927**	**ug/L**	0.452	151893	0.189
	K	39	**4488.159**	**ug/L**	5.673	11772506	14.575
	Ca	43	**19547.446**	**ug/L**	1.206	107538	0.137
>	Sc	45		**ug/L**		784892	784892.359
	V	51	**32.525**	**ug/L**	4.172	93386	0.111
	Cr	52	**468.297**	**ug/L**	0.771	1043208	1.324
	Cr	53		**ug/L**		166119	0.141
	Mn	55	**2226.985**	**ug/L**	1.301	7112997	9.061
	Fe	57	**28681.950**	**ug/L**	0.745	1763134	2.242
	Co	59	**15.728**	**ug/L**	1.139	36859	0.047
	Ni	60	**210.836**	**ug/L**	1.674	103696	0.132
	Cu	63		**ug/L**		489273	0.623
	Cu	65	**456.648**	**ug/L**	1.580	240869	0.307
	Zn	66	**901.308**	**ug/L**	0.322	275489	2.210
	Zn	67		**ug/L**		47065	0.341
	Zn	68		**ug/L**		200082	1.603
>	Ge	74		**ug/L**		124553	124552.958
	As	75	**6.124**	**ug/L**	7.212	2457	0.017
	Se	77		**ug/L**		1451	-0.007
	Se	82	**1.983**	**ug/L**	31.802	68	0.001
	Kr	83		**ug/L**		89	0.000
	Sr	88	**109.340**	**ug/L**	1.637	405946	7.122
	Y	89		**ug/L**		377749	6.628
	Ag	107	**2.925**	**ug/L**	1.041	4267	0.075
	Cd	111	**3.836**	**ug/L**	2.207	1276	0.022
	Cd	114		**ug/L**		1548	0.027
>	In	115		**ug/L**		56988	56988.452
	Sn	120	**8.892**	**ug/L**	1.888	11828	0.199
	Sb	121	**0.620**	**ug/L**	3.409	879	0.011
	Sb	123		**ug/L**		691	0.009
	Ba	135		**ug/L**		83713	1.514
	Ba	137	**288.813**	**ug/L**	0.842	145762	2.636
	Ho	165		**ug/L**		11135	0.201
>	Lu	175		**ug/L**		55284	55284.319
	Tl	205	**0.868**	**ug/L**	2.854	1638	0.026
	Pb	208	**225.802**	**ug/L**	0.403	549836	9.938
	Bi	209		**ug/L**		10785	0.195
	U	238	**25.100**	**ug/L**	0.820	53338	0.964

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			91.8		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			86.5		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			88.1		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			94.7		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEf	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429011
Sample Date/Time: Friday, July 03, 2009 13:50:21
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429011.133

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**19.562**	ug/L	7.268	10257	0.013
	Be	9	**2.740**	ug/L	1.198	576	0.001
	B	11	**2.606**	ug/L	9.401	901	0.001
	Na	23	**948.562**	ug/L	8.451	2428034	2.989
	Mg	24	**725.130**	ug/L	1.155	1262103	1.563
	Al	27	**9142.947**	ug/L	2.688	22198065	27.544
	P	31	**334.410**	ug/L	0.362	46494	0.053
	K	39	**1543.477**	ug/L	4.229	4382813	5.012
	Ca	43	**1074.541**	ug/L	1.231	6329	0.008
>	Sc	45		ug/L		805874	805874.283
	V	51	**11.177**	ug/L	3.957	37001	0.038
	Cr	52	**25.786**	ug/L	1.377	62740	0.073
	Cr	53		ug/L		42713	-0.018
	Mn	55	**1600.003**	ug/L	0.263	5246883	6.510
	Fe	57	**21835.399**	ug/L	0.705	1379031	1.707
	Co	59	**2.304**	ug/L	1.118	5673	0.007
	Ni	60	**11.961**	ug/L	3.315	6088	0.007
	Cu	63		ug/L		38773	0.048
	Cu	65	**34.728**	ug/L	1.653	18865	0.023
	Zn	66	**253.874**	ug/L	1.030	78389	0.623
	Zn	67		ug/L		15927	0.090
	Zn	68		ug/L		57326	0.453
>	Ge	74		ug/L		125561	125560.984
	As	75	**3.023**	ug/L	10.666	1383	0.009
	Se	77		ug/L		1288	-0.009
	Se	82	**1.268**	ug/L	21.067	44	0.000
	Kr	83		ug/L		105	0.001
	Sr	88	**9.250**	ug/L	1.508	34650	0.602
	Y	89		ug/L		455931	7.947
	Ag	107	**0.756**	ug/L	5.923	1124	0.019
	Cd	111	**1.281**	ug/L	8.750	439	0.007
	Cd	114		ug/L		361	0.006
>	In	115		ug/L		57379	57379.266
	Sn	120	**3.223**	ug/L	1.710	4628	0.072
	Sb	121	**0.192**	ug/L	9.893	430	0.004
	Sb	123		ug/L		307	0.002
	Ba	135		ug/L		23442	0.412
	Ba	137	**77.954**	ug/L	1.609	40469	0.712
	Ho	165		ug/L		13522	0.238
>	Lu	175		ug/L		56854	56854.489
	Tl	205	**0.121**	ug/L	16.105	394	0.004
	Pb	208	**14.302**	ug/L	0.286	36203	0.629
	Bi	209		ug/L		196	0.003
	U	238	**2.844**	ug/L	0.565	6270	0.109

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		94.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		87.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		88.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.4			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEf	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429012
Sample Date/Time: Friday, July 03, 2009 13:56:17
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429012.134

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**33.696**	**ug/L**	8.446	17390	0.022
	Be	9	**2.682**	**ug/L**	3.262	555	0.001
	B	11	**18.478**	**ug/L**	0.474	4198	0.005
	Na	23	**556.867**	**ug/L**	5.568	1412752	1.755
	Mg	24	**6742.522**	**ug/L**	6.165	11538129	14.531
	Al	27	**33514.830**	**ug/L**	2.050	80190438	100.965
	P	31	**973.740**	**ug/L**	1.113	126555	0.155
	K	39	**5664.303**	**ug/L**	3.300	14947523	18.394
	Ca	43	**14224.743**	**ug/L**	1.147	79271	0.099
>	Sc	45		**ug/L**		794229	794229.335
	V	51	**45.686**	**ug/L**	0.779	130166	0.156
	Cr	52	**31.356**	**ug/L**	1.059	74364	0.089
	Cr	53		**ug/L**		44128	-0.016
	Mn	55	**1592.386**	**ug/L**	0.454	5146463	6.479
	Fe	57	**29379.682**	**ug/L**	0.208	1827584	2.296
	Co	59	**10.537**	**ug/L**	0.710	25041	0.031
	Ni	60	**18.954**	**ug/L**	0.883	9483	0.012
	Cu	63		**ug/L**		36378	0.046
	Cu	65	**33.108**	**ug/L**	1.999	17728	0.022
	Zn	66	**160.447**	**ug/L**	1.384	48486	0.393
	Zn	67		**ug/L**		12313	0.063
	Zn	68		**ug/L**		37136	0.300
>	Ge	74		**ug/L**		122701	122700.627
	As	75	**9.277**	**ug/L**	8.656	3510	0.026
	Se	77		**ug/L**		1388	-0.008
	Se	82	**1.269**	**ug/L**	14.763	43	0.000
	Kr	83		**ug/L**		70	0.000
	Sr	88	**105.990**	**ug/L**	0.498	382492	6.904
	Y	89		**ug/L**		233440	4.214
	Ag	107	**0.555**	**ug/L**	20.458	801	0.014
	Cd	111	**2.508**	**ug/L**	10.995	815	0.014
	Cd	114		**ug/L**		485	0.008
>	In	115		**ug/L**		55391	55390.516
	Sn	120	**1.415**	**ug/L**	2.854	2226	0.032
	Sb	121	**0.720**	**ug/L**	9.344	957	0.013
	Sb	123		**ug/L**		705	0.010
	Ba	135		**ug/L**		84682	1.631
	Ba	137	**311.358**	**ug/L**	0.662	147555	2.842
	Ho	165		**ug/L**		6894	0.133
>	Lu	175		**ug/L**		51913	51912.672
	Tl	205	**0.499**	**ug/L**	20.648	957	0.015
	Pb	208	**113.694**	**ug/L**	1.002	260142	5.004
	Bi	209		**ug/L**		2711	0.052
	U	238	**25.238**	**ug/L**	1.731	50358	0.969

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		92.9			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		85.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		85.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		88.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, July 03, 2009 14:02:11
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 6.135

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.525**	**ug/L**	8.339	27648	0.035
	Be	9	**54.719**	**ug/L**	4.382	11265	0.014
	B	11	**106.299**	**ug/L**	0.887	22553	0.028
	Na	23	**5451.238**	**ug/L**	6.558	13695969	17.175
	Mg	24	**5275.467**	**ug/L**	5.098	9056090	11.370
	Al	27	**4954.619**	**ug/L**	1.318	11885785	14.926
	P	31	**5063.547**	**ug/L**	1.557	644245	0.805
	K	39	**5037.446**	**ug/L**	6.191	13364218	16.358
	Ca	43	**4954.741**	**ug/L**	1.983	27847	0.035
>	Sc	45		**ug/L**		795758	795758.184
	V	51	**49.296**	**ug/L**	1.558	140227	0.168
	Cr	52	**50.396**	**ug/L**	0.203	117351	0.143
	Cr	53		**ug/L**		64532	0.010
	Mn	55	**48.571**	**ug/L**	0.835	158021	0.198
	Fe	57	**5086.784**	**ug/L**	0.752	320153	0.398
	Co	59	**51.177**	**ug/L**	1.098	121261	0.152
	Ni	60	**52.323**	**ug/L**	0.394	26138	0.033
	Cu	63		**ug/L**		53555	0.067
	Cu	65	**47.942**	**ug/L**	1.906	25692	0.032
	Zn	66	**50.573**	**ug/L**	0.614	16493	0.124
	Zn	67		**ug/L**		7995	0.024
	Zn	68		**ug/L**		12315	0.091
>	Ge	74		**ug/L**		131168	131167.808
	As	75	**47.414**	**ug/L**	0.810	17830	0.133
	Se	77		**ug/L**		3491	0.008
	Se	82	**50.819**	**ug/L**	1.944	1795	0.014
	Kr	83		**ug/L**		34	-0.000
	Sr	88	**51.562**	**ug/L**	0.885	195485	3.359
	Y	89		**ug/L**		92	0.001
	Ag	107	**50.429**	**ug/L**	0.862	74777	1.285
	Cd	111	**51.834**	**ug/L**	0.391	17412	0.299
	Cd	114		**ug/L**		39060	0.671
>	In	115		**ug/L**		58182	58181.906
	Sn	120	**49.419**	**ug/L**	0.401	64858	1.106
	Sb	121	**46.430**	**ug/L**	4.883	50366	0.862
	Sb	123		**ug/L**		38407	0.657
	Ba	135		**ug/L**		13712	0.264
	Ba	137	**50.815**	**ug/L**	1.218	24104	0.464
	Ho	165		**ug/L**		13	0.000
>	Lu	175		**ug/L**		51932	51932.078
	Tl	205	**49.337**	**ug/L**	1.042	78040	1.500
	Pb	208	**51.495**	**ug/L**	1.201	118073	2.266
	Bi	209		**ug/L**		52	0.001
	U	238	**52.624**	**ug/L**	1.189	104982	2.021

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	107.050				
	Be	9	109.438				
	B	11	106.299				
	Na	23	109.025				
	Mg	24	105.509				
	Al	27	98.111				
	P	31	101.271				
	K	39	100.749				
	Ca	43	99.095				
>	Sc	45		93.1			
	V	51	98.592				
	Cr	52	100.793				
	Cr	53					
	Mn	55	97.143				
	Fe	57	101.736				
	Co	59	102.353				
	Ni	60	104.647				
	Cu	63					
	Cu	65	95.884				
	Zn	66	101.146				
	Zn	67					
	Zn	68					
>	Ge	74		91.1			
	As	75	94.827				
	Se	77					
	Se	82	101.637				
	Kr	83					
	Sr	88	103.125				
	Y	89					
	Ag	107	100.857				
	Cd	111	103.667				
	Cd	114					
>	In	115		89.9			
	Sn	120	98.839				
	Sb	121	92.860				
	Sb	123					
	Ba	135					
	Ba	137	101.631				
	Ho	165					
>	Lu	175		88.9			
	Tl	205	98.674				
	Pb	208	102.989				
	Bi	209					
	U	238	105.248				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, July 03, 2009 14:08:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 7.136

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.053**	**ug/L**	1.388	70	0.000
	Be	9	**0.009**	**ug/L**	130.758	6	0.000
	B	11	**1.931**	**ug/L**	33.597	765	0.001
	Na	23	**2.198**	**ug/L**	47.555	24688	0.007
	Mg	24	**2.535**	**ug/L**	19.499	7002	0.005
	Al	27	**1.340**	**ug/L**	168.628	9671	0.004
	P	31	**2.330**	**ug/L**	26.201	3996	0.000
	K	39	**6.589**	**ug/L**	41.151	362889	0.021
	Ca	43	**-3.361**	**ug/L**	110.155	258	-0.000
>	Sc	45		**ug/L**		814516	814516.460
	V	51	**-0.530**	**ug/L**	41.119	4820	-0.002
	Cr	52	**-0.392**	**ug/L**	9.189	3130	-0.001
	Cr	53		**ug/L**		52593	-0.007
	Mn	55	**0.188**	**ug/L**	15.543	1408	0.001
	Fe	57	**2.490**	**ug/L**	21.100	4003	0.000
	Co	59	**0.007**	**ug/L**	179.171	170	0.000
	Ni	60	**0.010**	**ug/L**	195.888	58	0.000
	Cu	63		**ug/L**		144	0.000
	Cu	65	**0.048**	**ug/L**	34.548	87	0.000
	Zn	66	**0.039**	**ug/L**	67.263	245	0.000
	Zn	67		**ug/L**		5322	0.003
	Zn	68		**ug/L**		481	0.000
>	Ge	74		**ug/L**		134324	134323.659
	As	75	**-0.704**	**ug/L**	55.953	73	-0.002
	Se	77		**ug/L**		2024	-0.004
	Se	82	**0.054**	**ug/L**	625.066	3	0.000
	Kr	83		**ug/L**		41	0.000
	Sr	88	**0.020**	**ug/L**	40.466	164	0.001
	Y	89		**ug/L**		37	0.000
	Ag	107	**0.020**	**ug/L**	19.709	51	0.001
	Cd	111	**0.027**	**ug/L**	38.582	24	0.000
	Cd	114		**ug/L**		46	0.000
>	In	115		**ug/L**		59273	59272.813
	Sn	120	**0.028**	**ug/L**	92.729	542	0.001
	Sb	121	**0.536**	**ug/L**	22.417	821	0.010
	Sb	123		**ug/L**		625	0.007
	Ba	135		**ug/L**		19	0.000
	Ba	137	**0.038**	**ug/L**	71.474	35	0.000
	Ho	165		**ug/L**		8	0.000
>	Lu	175		**ug/L**		52724	52724.311
	Tl	205	**0.327**	**ug/L**	107.424	697	0.010
	Pb	208	**0.029**	**ug/L**	20.358	452	0.001
	Bi	209		**ug/L**		37	0.000
	U	238	**0.042**	**ug/L**	9.452	142	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		95.3			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		93.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		90.3			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429013
Sample Date/Time: Friday, July 03, 2009 14:14:02
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429013.137

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**22.247**	**ug/L**	7.377	11679	0.014
	Be	9	**4.146**	**ug/L**	3.539	869	0.001
	B	11	**6.340**	**ug/L**	5.541	1692	0.002
	Na	23	**991.724**	**ug/L**	6.595	2539384	3.125
	Mg	24	**2344.250**	**ug/L**	2.497	4076765	5.052
	Al	27	**27013.135**	**ug/L**	4.217	65644265	81.379
	P	31	**282.293**	**ug/L**	2.159	39861	0.045
	K	39	**2420.384**	**ug/L**	5.210	6683510	7.860
	Ca	43	**3078.902**	**ug/L**	2.204	17642	0.022
>	Sc	45		**ug/L**		806596	806596.073
	V	51	**19.081**	**ug/L**	5.120	58810	0.065
	Cr	52	**15.754**	**ug/L**	0.684	39928	0.045
	Cr	53		**ug/L**		41124	-0.020
	Mn	55	**1058.754**	**ug/L**	1.620	3475694	4.308
	Fe	57	**29953.019**	**ug/L**	0.816	1892149	2.341
	Co	59	**4.184**	**ug/L**	2.675	10189	0.012
	Ni	60	**14.305**	**ug/L**	3.070	7280	0.009
	Cu	63		**ug/L**		17875	0.022
	Cu	65	**15.967**	**ug/L**	1.200	8715	0.011
	Zn	66	**157.557**	**ug/L**	0.510	48038	0.386
	Zn	67		**ug/L**		11621	0.057
	Zn	68		**ug/L**		34681	0.277
>	Ge	74		**ug/L**		123782	123781.862
	As	75	**4.044**	**ug/L**	8.044	1719	0.011
	Se	77		**ug/L**		1323	-0.008
	Se	82	**0.920**	**ug/L**	44.347	32	0.000
	Kr	83		**ug/L**		132	0.001
	Sr	88	**24.384**	**ug/L**	0.182	89825	1.588
	Y	89		**ug/L**		491334	8.696
	Ag	107	**0.359**	**ug/L**	4.100	537	0.009
	Cd	111	**1.431**	**ug/L**	3.738	481	0.008
	Cd	114		**ug/L**		161	0.002
>	In	115		**ug/L**		56501	56501.105
	Sn	120	**2.466**	**ug/L**	2.428	3599	0.055
	Sb	121	**0.514**	**ug/L**	13.638	761	0.010
	Sb	123		**ug/L**		592	0.007
	Ba	135		**ug/L**		26407	0.480
	Ba	137	**91.396**	**ug/L**	0.639	45881	0.834
	Ho	165		**ug/L**		14751	0.268
>	Lu	175		**ug/L**		54976	54976.136
	Tl	205	**0.245**	**ug/L**	9.978	588	0.007
	Pb	208	**18.644**	**ug/L**	1.252	45511	0.821
	Bi	209		**ug/L**		1031	0.018
	U	238	**4.701**	**ug/L**	1.012	9983	0.181

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			94.3		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			86.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			87.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			94.1		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429014
Sample Date/Time: Friday, July 03, 2009 14:19:57
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429014.138

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**44.697**	**ug/L**	6.897	22857	0.029
	Be	9	**3.320**	**ug/L**	7.226	680	0.001
	B	11	**32.715**	**ug/L**	5.641	7099	0.009
	Na	23	**735.947**	**ug/L**	0.807	1843780	2.319
	Mg	24	**7906.772**	**ug/L**	2.838	13422528	17.040
	Al	27	**32392.570**	**ug/L**	4.574	76833629	97.584
	P	31	**825.169**	**ug/L**	1.311	106836	0.131
	K	39	**5461.695**	**ug/L**	4.753	14291783	17.736
	Ca	43	**17600.954**	**ug/L**	0.697	97168	0.123
>	Sc	45		**ug/L**		787296	787296.078
	V	51	**45.000**	**ug/L**	3.551	127230	0.154
	Cr	52	**245.204**	**ug/L**	0.732	549867	0.693
	Cr	53		**ug/L**		101939	0.058
	Mn	55	**1635.175**	**ug/L**	1.441	5239341	6.653
	Fe	57	**31266.118**	**ug/L**	0.582	1927760	2.444
	Co	59	**10.801**	**ug/L**	0.351	25440	0.032
	Ni	60	**108.933**	**ug/L**	1.233	53774	0.068
	Cu	63		**ug/L**		223460	0.284
	Cu	65	**206.267**	**ug/L**	1.646	109173	0.139
	Zn	66	**505.978**	**ug/L**	0.333	151814	1.241
	Zn	67		**ug/L**		28018	0.192
	Zn	68		**ug/L**		112101	0.914
>	Ge	74		**ug/L**		122187	122186.527
	As	75	**7.303**	**ug/L**	7.584	2818	0.021
	Se	77		**ug/L**		1467	-0.007
	Se	82	**1.723**	**ug/L**	28.622	58	0.000
	Kr	83		**ug/L**		94	0.001
	Sr	88	**111.454**	**ug/L**	1.794	408510	7.260
	Y	89		**ug/L**		340635	6.054
	Ag	107	**1.312**	**ug/L**	5.530	1899	0.033
	Cd	111	**3.408**	**ug/L**	12.865	1119	0.020
	Cd	114		**ug/L**		1095	0.019
>	In	115		**ug/L**		56271	56270.800
	Sn	120	**3.977**	**ug/L**	1.909	5489	0.089
	Sb	121	**0.476**	**ug/L**	3.689	718	0.009
	Sb	123		**ug/L**		572	0.007
	Ba	135		**ug/L**		89063	1.691
	Ba	137	**321.697**	**ug/L**	1.167	154638	2.936
	Ho	165		**ug/L**		9782	0.186
>	Lu	175		**ug/L**		52659	52659.075
	Tl	205	**1.263**	**ug/L**	1.330	2194	0.038
	Pb	208	**141.287**	**ug/L**	2.214	327801	6.218
	Bi	209		**ug/L**		5166	0.098
	U	238	**34.674**	**ug/L**	2.045	70163	1.331

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			92.1		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			84.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			87.0		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			90.2		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232429015
Sample Date/Time: Friday, July 03, 2009 14:25:53
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429015.139

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**66.764**	**ug/L**	5.868	34154	0.043
	Be	9	**4.492**	**ug/L**	4.503	920	0.001
	B	11	**25.105**	**ug/L**	2.220	5535	0.007
	Na	23	**559.131**	**ug/L**	6.599	1407315	1.762
	Mg	24	**12779.607**	**ug/L**	4.009	21694976	27.542
	Al	27	**92436.552**	**ug/L**	4.822	219498012	278.470
	P	31	**472.632**	**ug/L**	0.775	62776	0.075
	K	39	**10873.095**	**ug/L**	3.711	28157614	35.309
	Ca	43	**10323.705**	**ug/L**	1.449	57153	0.072
>	Sc	45		**ug/L**		787913	787913.321
	V	51	**141.450**	**ug/L**	0.595	387023	0.483
	Cr	52	**60.782**	**ug/L**	0.202	139334	0.172
	Cr	53		**ug/L**		50359	-0.007
	Mn	55	**1349.811**	**ug/L**	0.105	4327751	5.492
	Fe	57	**64696.705**	**ug/L**	1.266	3988098	5.057
	Co	59	**30.145**	**ug/L**	0.649	70790	0.090
	Ni	60	**36.717**	**ug/L**	0.880	18174	0.023
	Cu	63		**ug/L**		38539	0.049
	Cu	65	**36.424**	**ug/L**	1.572	19343	0.024
	Zn	66	**137.309**	**ug/L**	1.163	40615	0.337
	Zn	67		**ug/L**		11841	0.062
	Zn	68		**ug/L**		32808	0.270
>	Ge	74		**ug/L**		120021	120020.649
	As	75	**12.875**	**ug/L**	3.607	4650	0.036
	Se	77		**ug/L**		1357	-0.008
	Se	82	**-1.101**	**ug/L**	43.762	-35	-0.000
	Kr	83		**ug/L**		151	0.001
	Sr	88	**113.761**	**ug/L**	0.211	412192	7.410
	Y	89		**ug/L**		262777	4.725
	Ag	107	**0.350**	**ug/L**	7.169	515	0.009
	Cd	111	**1.299**	**ug/L**	5.917	431	0.007
	Cd	114		**ug/L**		247	0.004
>	In	115		**ug/L**		55616	55616.118
	Sn	120	**0.640**	**ug/L**	7.314	1270	0.014
	Sb	121	**0.199**	**ug/L**	11.686	424	0.004
	Sb	123		**ug/L**		318	0.003
	Ba	135		**ug/L**		122385	2.417
	Ba	137	**454.285**	**ug/L**	0.246	209966	4.147
	Ho	165		**ug/L**		7751	0.153
>	Lu	175		**ug/L**		50630	50630.067
	Tl	205	**1.014**	**ug/L**	3.695	1725	0.031
	Pb	208	**80.107**	**ug/L**	1.380	178870	3.526
	Bi	209		**ug/L**		1705	0.033
	U	238	**5.278**	**ug/L**	0.576	10315	0.203

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		92.1			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		83.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		85.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		86.7			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	Sample is out of limits (over linear range)
V 51 Upper, S, EEE	V	51	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EEE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, July 03, 2009 14:31:48
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 6.140

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.525**	**ug/L**	4.465	26928	0.035
	Be	9	**55.143**	**ug/L**	3.180	11052	0.014
	B	11	**106.921**	**ug/L**	0.988	22076	0.028
	Na	23	**5147.994**	**ug/L**	3.525	12582476	16.220
	Mg	24	**4838.302**	**ug/L**	3.532	8083399	10.427
	Al	27	**4846.112**	**ug/L**	4.468	11320489	14.599
	P	31	**5057.002**	**ug/L**	1.283	626227	0.804
	K	39	**4907.758**	**ug/L**	5.664	12672047	15.937
	Ca	43	**4984.416**	**ug/L**	0.410	27260	0.035
>	Sc	45		**ug/L**		774612	774612.273
	V	51	**49.511**	**ug/L**	1.812	137103	0.169
	Cr	52	**50.989**	**ug/L**	0.725	115518	0.144
	Cr	53		**ug/L**		63431	0.011
	Mn	55	**48.717**	**ug/L**	0.337	154283	0.198
	Fe	57	**5133.534**	**ug/L**	0.801	314493	0.401
	Co	59	**51.750**	**ug/L**	0.927	119364	0.154
	Ni	60	**52.345**	**ug/L**	0.508	25452	0.033
	Cu	63		**ug/L**		52544	0.068
	Cu	65	**48.205**	**ug/L**	0.408	25152	0.032
	Zn	66	**49.968**	**ug/L**	0.210	15998	0.123
	Zn	67		**ug/L**		7847	0.024
	Zn	68		**ug/L**		12131	0.091
>	Ge	74		**ug/L**		128747	128746.917
	As	75	**47.137**	**ug/L**	1.992	17400	0.133
	Se	77		**ug/L**		3327	0.007
	Se	82	**48.647**	**ug/L**	1.851	1686	0.013
	Kr	83		**ug/L**		39	0.000
	Sr	88	**50.982**	**ug/L**	0.706	193092	3.321
	Y	89		**ug/L**		89	0.001
	Ag	107	**50.032**	**ug/L**	0.786	74104	1.275
	Cd	111	**51.627**	**ug/L**	0.504	17323	0.298
	Cd	114		**ug/L**		38687	0.665
>	In	115		**ug/L**		58118	58118.255
	Sn	120	**48.738**	**ug/L**	0.334	63900	1.091
	Sb	121	**46.317**	**ug/L**	4.462	50197	0.859
	Sb	123		**ug/L**		38133	0.653
	Ba	135		**ug/L**		13665	0.265
	Ba	137	**50.442**	**ug/L**	1.485	23783	0.460
	Ho	165		**ug/L**		13	0.000
>	Lu	175		**ug/L**		51623	51622.630
	Tl	205	**48.890**	**ug/L**	1.637	76865	1.486
	Pb	208	**51.170**	**ug/L**	0.869	116629	2.252
	Bi	209		**ug/L**		59	0.001
	U	238	**52.388**	**ug/L**	0.275	103894	2.012

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	107.050				
	Be	9	110.286				
	B	11	106.921				
	Na	23	102.960				
	Mg	24	96.766				
	Al	27	95.963				
	P	31	101.140				
	K	39	98.155				
	Ca	43	99.688				
>	Sc	45		90.6			
	V	51	99.022				
	Cr	52	101.978				
	Cr	53					
	Mn	55	97.435				
	Fe	57	102.671				
	Co	59	103.500				
	Ni	60	104.691				
	Cu	63					
	Cu	65	96.409				
	Zn	66	99.935				
	Zn	67					
	Zn	68					
>	Ge	74		89.4			
	As	75	94.274				
	Se	77					
	Se	82	97.294				
	Kr	83					
	Sr	88	101.965				
	Y	89					
	Ag	107	100.064				
	Cd	111	103.255				
	Cd	114					
>	In	115		89.8			
	Sn	120	97.476				
	Sb	121	92.633				
	Sb	123					
	Ba	135					
	Ba	137	100.884				
	Ho	165					
>	Lu	175		88.4			
	Tl	205	97.780				
	Pb	208	102.339				
	Bi	209					
	U	238	104.776				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Be	9	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, July 03, 2009 14:37:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 7.141

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.071**	**ug/L**	46.003	78	0.000
	Be	9	**0.013**	**ug/L**	73.804	7	0.000
	B	11	**1.882**	**ug/L**	19.162	738	0.000
	Na	23	**2.170**	**ug/L**	44.944	24020	0.007
	Mg	24	**3.039**	**ug/L**	31.885	7669	0.007
	Al	27	**2.703**	**ug/L**	35.982	12672	0.008
	P	31	**1.885**	**ug/L**	50.180	3847	0.000
	K	39	**13.261**	**ug/L**	18.952	371436	0.043
	Ca	43	**-4.859**	**ug/L**	17.769	243	-0.000
>	Sc	45		**ug/L**		795222	795222.167
	V	51	**-0.745**	**ug/L**	67.379	4115	-0.003
	Cr	52	**-0.455**	**ug/L**	12.958	2914	-0.001
	Cr	53		**ug/L**		51903	-0.006
	Mn	55	**0.177**	**ug/L**	13.569	1340	0.001
	Fe	57	**6.064**	**ug/L**	62.468	4131	0.000
	Co	59	**0.014**	**ug/L**	37.707	182	0.000
	Ni	60	**-0.003**	**ug/L**	828.152	50	-0.000
	Cu	63		**ug/L**		141	0.000
	Cu	65	**0.037**	**ug/L**	69.523	79	0.000
	Zn	66	**0.075**	**ug/L**	83.823	255	0.000
	Zn	67		**ug/L**		5187	0.002
	Zn	68		**ug/L**		475	0.000
>	Ge	74		**ug/L**		133164	133164.440
	As	75	**-0.638**	**ug/L**	38.789	95	-0.002
	Se	77		**ug/L**		1980	-0.004
	Se	82	**-0.074**	**ug/L**	264.781	-2	-0.000
	Kr	83		**ug/L**		45	0.000
	Sr	88	**0.023**	**ug/L**	44.691	175	0.001
	Y	89		**ug/L**		57	0.001
	Ag	107	**0.021**	**ug/L**	43.169	52	0.001
	Cd	111	**0.015**	**ug/L**	113.043	20	0.000
	Cd	114		**ug/L**		43	0.000
>	In	115		**ug/L**		59362	59362.412
	Sn	120	**0.030**	**ug/L**	77.132	545	0.001
	Sb	121	**0.552**	**ug/L**	18.720	841	0.010
	Sb	123		**ug/L**		633	0.008
	Ba	135		**ug/L**		22	0.000
	Ba	137	**0.019**	**ug/L**	43.173	26	0.000
	Ho	165		**ug/L**		11	0.000
>	Lu	175		**ug/L**		51974	51973.566
	Tl	205	**0.129**	**ug/L**	16.187	374	0.004
	Pb	208	**0.084**	**ug/L**	128.103	570	0.004
	Bi	209		**ug/L**		31	0.000
	U	238	**0.047**	**ug/L**	6.023	149	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		93.0			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		89.0			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Friday, July 03, 2009 14:49:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\Blank.143

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		47	
	Be	9		ug/L		4	
	B	11		ug/L		460	
	Na	23		ug/L		21683	
	Mg	24		ug/L		1667	
	Al	27		ug/L		8336	
	P	31		ug/L		3800	
	K	39		ug/L		349560	
	Ca	43		ug/L		238	
>	Sc	45		ug/L		809383	
	V	51		ug/L		4152	
	Cr	52		ug/L		2607	
	Cr	53		ug/L		52003	
	Mn	55		ug/L		1026	
	Fe	57		ug/L		3863	
	Co	59		ug/L		150	
	Ni	60		ug/L		50	
	Cu	63		ug/L		132	
	Cu	65		ug/L		64	
	Zn	66		ug/L		229	
	Zn	67		ug/L		5192	
	Zn	68		ug/L		452	
>	Ge	74		ug/L		134253	
	As	75		ug/L		18	
	Se	77		ug/L		1958	
	Se	82		ug/L		2	
	Kr	83		ug/L		42	
	Sr	88		ug/L		102	
	Y	89		ug/L		43	
	Ag	107		ug/L		24	
	Cd	111		ug/L		17	
	Cd	114		ug/L		37	
>	In	115		ug/L		59500	
	Sn	120		ug/L		392	
	Sb	121		ug/L		228	
	Sb	123		ug/L		171	
	Ba	135		ug/L		11	
	Ba	137		ug/L		23	
	Ho	165		ug/L		7	
>	Lu	175		ug/L		51892	
	Tl	205		ug/L		192	
	Pb	208		ug/L		382	
	Bi	209		ug/L		27	
	U	238		ug/L		56	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Friday, July 03, 2009 14:55:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\Standard 1.144

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	8.032	5243	0.006
	Be	9	**10.000**	**ug/L**	1.394	2309	0.003
	B	11	**20.000**	**ug/L**	1.041	4905	0.005
	Na	23	**1000.000**	**ug/L**	3.243	2644547	3.201
	Mg	24	**1000.000**	**ug/L**	1.928	1705467	2.079
	Al	27	**1000.000**	**ug/L**	7.592	2322376	2.826
	P	31	**1000.000**	**ug/L**	1.067	141514	0.168
	K	39	**1000.000**	**ug/L**	1.180	3004077	3.235
	Ca	43	**1000.000**	**ug/L**	1.907	5962	0.007
>	Sc	45		**ug/L**		819440	819440.454
	V	51	**10.000**	**ug/L**	4.912	32061	0.034
	Cr	52	**10.000**	**ug/L**	0.541	25982	0.028
	Cr	53		**ug/L**		53065	0.001
	Mn	55	**10.000**	**ug/L**	0.956	34543	0.041
	Fe	57	**1000.000**	**ug/L**	1.102	69890	0.081
	Co	59	**10.000**	**ug/L**	1.269	25028	0.030
	Ni	60	**10.000**	**ug/L**	1.040	5267	0.006
	Cu	63		**ug/L**		11890	0.014
	Cu	65	**10.000**	**ug/L**	1.186	5672	0.007
	Zn	66	**10.000**	**ug/L**	1.107	3633	0.025
	Zn	67		**ug/L**		5581	0.002
	Zn	68		**ug/L**		2934	0.018
>	Ge	74		**ug/L**		135715	135714.626
	As	75	**10.000**	**ug/L**	3.720	3627	0.027
	Se	77		**ug/L**		2245	0.002
	Se	82	**10.000**	**ug/L**	7.428	337	0.002
	Kr	83		**ug/L**		41	-0.000
	Sr	88	**10.000**	**ug/L**	2.040	39290	0.657
	Y	89		**ug/L**		30	-0.000
	Ag	107	**10.000**	**ug/L**	0.828	15429	0.258
	Cd	111	**10.000**	**ug/L**	2.192	3432	0.057
	Cd	114		**ug/L**		7564	0.126
>	In	115		**ug/L**		59685	59685.200
	Sn	120	**10.000**	**ug/L**	2.071	13241	0.215
	Sb	121	**10.000**	**ug/L**	2.877	10350	0.170
	Sb	123		**ug/L**		7814	0.128
	Ba	135		**ug/L**		2762	0.053
	Ba	137	**10.000**	**ug/L**	2.717	4736	0.090
	Ho	165		**ug/L**		7	-0.000
>	Lu	175		**ug/L**		52310	52310.459
	Tl	205	**10.000**	**ug/L**	1.864	15917	0.301
	Pb	208	**10.000**	**ug/L**	2.068	23559	0.443
	Bi	209		**ug/L**		35	0.000
	U	238	**10.000**	**ug/L**	2.039	20324	0.388

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Friday, July 03, 2009 15:01:17
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\Standard 2.145

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.047**	**ug/L**	6.613	52214	0.067
	Be	9	**99.973**	**ug/L**	3.123	21451	0.027
	B	11	**200.018**	**ug/L**	2.993	43258	0.055
	Na	23	**10001.727**	**ug/L**	7.383	25536116	32.575
	Mg	24	**10005.113**	**ug/L**	0.892	17166931	21.922
	Al	27	**10005.811**	**ug/L**	4.198	23520974	30.025
	P	31	**9993.674**	**ug/L**	0.450	1240086	1.579
	K	39	**10008.904**	**ug/L**	6.969	28157614	35.540
	Ca	43	**9999.359**	**ug/L**	0.929	54563	0.069
>	Sc	45		**ug/L**		783026	783025.618
	V	51	**100.001**	**ug/L**	2.208	270395	0.340
	Cr	52	**99.991**	**ug/L**	0.344	223497	0.282
	Cr	53		**ug/L**		76333	0.033
	Mn	55	**99.985**	**ug/L**	0.671	316532	0.403
	Fe	57	**9996.663**	**ug/L**	0.890	613726	0.779
	Co	59	**99.984**	**ug/L**	1.144	234098	0.299
	Ni	60	**99.989**	**ug/L**	1.158	49324	0.063
	Cu	63		**ug/L**		107672	0.137
	Cu	65	**99.971**	**ug/L**	1.350	52100	0.066
	Zn	66	**99.962**	**ug/L**	0.674	31833	0.241
	Zn	67		**ug/L**		10365	0.040
	Zn	68		**ug/L**		24169	0.181
>	Ge	74		**ug/L**		131000	130999.866
	As	75	**100.046**	**ug/L**	0.556	36549	0.279
	Se	77		**ug/L**		4967	0.023
	Se	82	**100.075**	**ug/L**	0.461	3503	0.027
	Kr	83		**ug/L**		41	0.000
	Sr	88	**100.004**	**ug/L**	0.792	380467	6.594
	Y	89		**ug/L**		64	0.000
	Ag	107	**99.984**	**ug/L**	0.485	146511	2.539
	Cd	111	**100.006**	**ug/L**	0.708	33219	0.576
	Cd	114		**ug/L**		73650	1.276
>	In	115		**ug/L**		57687	57687.445
	Sn	120	**100.038**	**ug/L**	0.524	129580	2.240
	Sb	121	**100.071**	**ug/L**	3.242	105575	1.826
	Sb	123		**ug/L**		80713	1.396
	Ba	135		**ug/L**		27404	0.534
	Ba	137	**100.032**	**ug/L**	1.582	47838	0.931
	Ho	165		**ug/L**		11	0.000
>	Lu	175		**ug/L**		51345	51345.288
	Tl	205	**100.004**	**ug/L**	0.851	155142	3.018
	Pb	208	**99.997**	**ug/L**	2.465	227112	4.416
	Bi	209		**ug/L**		67	0.001
	U	238	**99.983**	**ug/L**	2.209	195704	3.811

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Friday, July 03, 2009 15:07:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 1.146

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.611**	**ug/L**	5.484	27225	0.034
	Be	9	**51.104**	**ug/L**	2.473	11077	0.014
	B	11	**101.923**	**ug/L**	3.214	22481	0.028
	Na	23	**5032.418**	**ug/L**	5.052	12978384	16.390
	Mg	24	**4952.392**	**ug/L**	5.689	8580416	10.851
	Al	27	**4967.921**	**ug/L**	6.536	11804196	14.908
	P	31	**5175.543**	**ug/L**	0.744	650496	0.818
	K	39	**4560.510**	**ug/L**	3.206	13151242	16.194
	Ca	43	**4992.664**	**ug/L**	1.259	27630	0.035
>	Sc	45		**ug/L**		790928	790928.336
	V	51	**51.604**	**ug/L**	1.170	142905	0.176
	Cr	52	**52.257**	**ug/L**	0.619	119201	0.147
	Cr	53		**ug/L**		69915	0.024
	Mn	55	**48.946**	**ug/L**	0.603	157040	0.197
	Fe	57	**5155.072**	**ug/L**	0.064	321517	0.402
	Co	59	**51.418**	**ug/L**	0.408	121682	0.154
	Ni	60	**52.001**	**ug/L**	0.885	25934	0.033
	Cu	63		**ug/L**		53520	0.068
	Cu	65	**48.531**	**ug/L**	0.607	25580	0.032
	Zn	66	**50.818**	**ug/L**	0.656	16447	0.123
	Zn	67		**ug/L**		8197	0.023
	Zn	68		**ug/L**		12433	0.091
>	Ge	74		**ug/L**		132237	132236.874
	As	75	**47.693**	**ug/L**	2.084	17598	0.133
	Se	77		**ug/L**		3911	0.015
	Se	82	**49.568**	**ug/L**	3.616	1752	0.013
	Kr	83		**ug/L**		39	-0.000
	Sr	88	**50.244**	**ug/L**	0.961	193980	3.313
	Y	89		**ug/L**		85	0.001
	Ag	107	**50.510**	**ug/L**	0.977	75099	1.283
	Cd	111	**52.053**	**ug/L**	1.301	17549	0.300
	Cd	114		**ug/L**		39160	0.668
>	In	115		**ug/L**		58526	58525.720
	Sn	120	**49.884**	**ug/L**	1.138	65746	1.117
	Sb	121	**48.865**	**ug/L**	4.720	52408	0.892
	Sb	123		**ug/L**		39496	0.672
	Ba	135		**ug/L**		13920	0.268
	Ba	137	**49.388**	**ug/L**	0.440	23857	0.460
	Ho	165		**ug/L**		12	0.000
>	Lu	175		**ug/L**		51836	51836.395
	Tl	205	**49.561**	**ug/L**	0.244	77720	1.496
	Pb	208	**50.410**	**ug/L**	0.347	115786	2.226
	Bi	209		**ug/L**		52	0.000
	U	238	**52.093**	**ug/L**	1.645	102970	1.986

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	103.223				
	Be	9	102.209				
	B	11	101.923				
	Na	23	100.648				
	Mg	24	99.048				
	Al	27	98.375				
	P	31	103.511				
	K	39	91.210				
	Ca	43	99.853				
>	Sc	45		97.7			
	V	51	103.208				
	Cr	52	104.513				
	Cr	53					
	Mn	55	97.891				
	Fe	57	103.101				
	Co	59	102.835				
	Ni	60	104.003				
	Cu	63					
	Cu	65	97.062				
	Zn	66	101.636				
	Zn	67					
	Zn	68					
>	Ge	74		98.5			
	As	75	95.385				
	Se	77					
	Se	82	99.136				
	Kr	83					
	Sr	88	100.488				
	Y	89					
	Ag	107	101.020				
	Cd	111	104.107				
	Cd	114					
>	In	115		98.4			
	Sn	120	99.768				
	Sb	121	97.730				
	Sb	123					
	Ba	135					
	Ba	137	98.775				
	Ho	165					
>	Lu	175		99.9			
	Tl	205	99.122				
	Pb	208	100.820				
	Bi	209					
	U	238	104.186				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Friday, July 03, 2009 15:13:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 2.147

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.037**	**ug/L**	70.588	67	0.000
	Be	9	**0.009**	**ug/L**	70.677	6	0.000
	B	11	**2.232**	**ug/L**	33.407	954	0.001
	Na	23	**1.461**	**ug/L**	114.715	25690	0.005
	Mg	24	**1.513**	**ug/L**	61.956	4334	0.003
	Al	27	**-0.431**	**ug/L**	206.775	7335	-0.001
	P	31	**-0.365**	**ug/L**	23.914	3766	-0.000
	K	39	**7.304**	**ug/L**	58.408	371781	0.026
	Ca	43	**3.175**	**ug/L**	75.212	257	0.000
>	Sc	45		**ug/L**		812098	812097.918
	V	51	**0.461**	**ug/L**	266.835	5494	0.002
	Cr	52	**0.441**	**ug/L**	13.065	3627	0.001
	Cr	53		**ug/L**		56195	0.005
	Mn	55	**-0.037**	**ug/L**	40.160	909	-0.000
	Fe	57	**4.215**	**ug/L**	6.439	4143	0.000
	Co	59	**0.013**	**ug/L**	39.988	181	0.000
	Ni	60	**0.002**	**ug/L**	469.941	51	0.000
	Cu	63		**ug/L**		133	-0.000
	Cu	65	**0.025**	**ug/L**	70.421	77	0.000
	Zn	66	**0.022**	**ug/L**	247.102	238	0.000
	Zn	67		**ug/L**		5391	0.001
	Zn	68		**ug/L**		457	0.000
>	Ge	74		**ug/L**		134939	134939.323
	As	75	**-0.249**	**ug/L**	311.944	-76	-0.001
	Se	77		**ug/L**		2402	0.003
	Se	82	**-0.038**	**ug/L**	747.069	1	-0.000
	Kr	83		**ug/L**		45	0.000
	Sr	88	**0.014**	**ug/L**	47.669	159	0.001
	Y	89		**ug/L**		30	-0.000
	Ag	107	**0.020**	**ug/L**	15.929	55	0.001
	Cd	111	**0.009**	**ug/L**	24.783	20	0.000
	Cd	114		**ug/L**		44	0.000
>	In	115		**ug/L**		59811	59810.806
	Sn	120	**0.241**	**ug/L**	14.138	716	0.005
	Sb	121	**0.769**	**ug/L**	16.458	1067	0.014
	Sb	123		**ug/L**		799	0.010
	Ba	135		**ug/L**		14	0.000
	Ba	137	**0.007**	**ug/L**	187.755	27	0.000
	Ho	165		**ug/L**		9	0.000
>	Lu	175		**ug/L**		52606	52606.209
	Tl	205	**0.199**	**ug/L**	8.296	510	0.006
	Pb	208	**0.015**	**ug/L**	19.309	423	0.001
	Bi	209		**ug/L**		28	0.000
	U	238	**0.037**	**ug/L**	6.516	131	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.3			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		101.4			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Friday, July 03, 2009 15:18:58
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 3.148

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.095**	ug/L	8.725	5615	0.007
	Be	9	**0.527**	ug/L	7.296	123	0.000
	B	11	**15.432**	ug/L	3.170	3966	0.004
	Na	23	**250.834**	ug/L	7.429	699445	0.817
	Mg	24	**16.658**	ug/L	17.519	32037	0.036
	Al	27	**32.848**	ug/L	13.077	90288	0.099
	P	31	**54.338**	ug/L	1.562	11008	0.009
	K	39	**276.958**	ug/L	8.597	1172651	0.983
	Ca	43	**212.965**	ug/L	3.552	1469	0.001
>	Sc	45		ug/L		828833	828832.968
	V	51	**10.781**	ug/L	6.294	34643	0.037
	Cr	52	**10.493**	ug/L	1.263	27211	0.030
	Cr	53		ug/L		56973	0.005
	Mn	55	**5.251**	ug/L	1.118	18589	0.021
	Fe	57	**105.674**	ug/L	2.751	10779	0.008
	Co	59	**1.034**	ug/L	1.713	2715	0.003
	Ni	60	**2.007**	ug/L	0.554	1098	0.001
	Cu	63		ug/L		1281	0.001
	Cu	65	**1.067**	ug/L	6.670	653	0.001
	Zn	66	**11.544**	ug/L	4.997	4045	0.028
	Zn	67		ug/L		5687	0.003
	Zn	68		ug/L		2980	0.018
>	Ge	74		ug/L		136832	136831.598
	As	75	**4.605**	ug/L	5.452	1775	0.013
	Se	77		ug/L		2388	0.003
	Se	82	**5.022**	ug/L	11.833	185	0.001
	Kr	83		ug/L		38	-0.000
	Sr	88	**10.233**	ug/L	0.344	41251	0.675
	Y	89		ug/L		29	-0.000
	Ag	107	**1.034**	ug/L	3.462	1626	0.026
	Cd	111	**1.043**	ug/L	7.659	383	0.006
	Cd	114		ug/L		815	0.013
>	In	115		ug/L		60984	60983.574
	Sn	120	**4.884**	ug/L	1.383	7070	0.109
	Sb	121	**2.569**	ug/L	8.418	3092	0.047
	Sb	123		ug/L		2279	0.034
	Ba	135		ug/L		563	0.010
	Ba	137	**2.005**	ug/L	2.457	1015	0.019
	Ho	165		ug/L		7	0.000
>	Lu	175		ug/L		53125	53124.795
	Tl	205	**1.090**	ug/L	2.078	1943	0.033
	Pb	208	**2.037**	ug/L	2.285	5168	0.090
	Bi	209		ug/L		31	0.000
	U	238	**0.203**	ug/L	3.640	469	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	100.949				
	Be	9	105.407				
	B	11	102.883				
	Na	23	100.334				
	Mg	24	111.055				
	Al	27	109.493				
	P	31	108.675				
	K	39	92.319				
	Ca	43	106.483				
>	Sc	45		102.4			
	V	51	107.808				
	Cr	52	104.934				
	Cr	53					
	Mn	55	105.022				
	Fe	57	105.674				
	Co	59	103.447				
	Ni	60	100.373				
	Cu	63					
	Cu	65	106.682				
	Zn	66	115.441				
	Zn	67					
	Zn	68					
>	Ge	74		101.9			
	As	75	92.098				
	Se	77					
	Se	82	100.438				
	Kr	83					
	Sr	88	102.330				
	Y	89					
	Ag	107	103.421				
	Cd	111	104.292				
	Cd	114					
>	In	115		102.5			
	Sn	120	97.675				
	Sb	121	85.630				
	Sb	123					
	Ba	135					
	Ba	137	100.226				
	Ho	165					
>	Lu	175		102.4			
	Tl	205	108.977				
	Pb	208	101.825				
	Bi	209					
	U	238	101.665				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Friday, July 03, 2009 15:24:51
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 4.149

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.150**	**ug/L**	14.226	115	0.000
	Be	9	**0.062**	**ug/L**	47.313	16	0.000
	B	11	**1.321**	**ug/L**	7.933	676	0.000
	Na	23	**107997.137**	**ug/L**	5.322	255955022	351.741
	Mg	24	**103685.482**	**ug/L**	3.943	165290408	227.179
	Al	27	**100014.977**	**ug/L**	3.959	218379075	300.123
	P	31	**100042.943**	**ug/L**	1.012	11502385	15.807
	K	39	**90607.878**	**ug/L**	3.769	234407653	321.735
	Ca	43	**92966.502**	**ug/L**	0.418	469470	0.645
>	Sc	45		**ug/L**		727409	727409.217
	V	51	**0.414**	**ug/L**	102.691	4761	0.001
	Cr	52	**4.701**	**ug/L**	0.521	11993	0.013
	Cr	53		**ug/L**		47669	0.001
	Mn	55	**5.783**	**ug/L**	0.548	17878	0.023
	Fe	57	**94083.436**	**ug/L**	0.215	5336748	7.332
	Co	59	**0.390**	**ug/L**	6.924	982	0.001
	Ni	60	**5.127**	**ug/L**	2.135	2392	0.003
	Cu	63		**ug/L**		3271	0.004
	Cu	65	**4.738**	**ug/L**	1.530	2349	0.003
	Zn	66	**6.197**	**ug/L**	0.832	1983	0.015
	Zn	67		**ug/L**		5053	0.004
	Zn	68		**ug/L**		619	0.002
>	Ge	74		**ug/L**		118995	118995.426
	As	75	**-0.180**	**ug/L**	448.040	-42	-0.001
	Se	77		**ug/L**		2927	0.010
	Se	82	**-1.690**	**ug/L**	20.811	-52	-0.000
	Kr	83		**ug/L**		115	0.001
	Sr	88	**1.184**	**ug/L**	8.217	4280	0.078
	Y	89		**ug/L**		140	0.002
	Ag	107	**0.522**	**ug/L**	58.762	729	0.013
	Cd	111	**1.764**	**ug/L**	59.834	556	0.010
	Cd	114		**ug/L**		2714	0.050
>	In	115		**ug/L**		53661	53661.034
	Sn	120	**0.221**	**ug/L**	15.431	619	0.005
	Sb	121	**0.265**	**ug/L**	45.171	464	0.005
	Sb	123		**ug/L**		375	0.004
	Ba	135		**ug/L**		197	0.004
	Ba	137	**0.686**	**ug/L**	11.558	319	0.006
	Ho	165		**ug/L**		128	0.003
>	Lu	175		**ug/L**		46575	46575.273
	Tl	205	**0.037**	**ug/L**	6.242	225	0.001
	Pb	208	**0.499**	**ug/L**	26.462	1367	0.022
	Bi	209		**ug/L**		83	0.001
	U	238	**0.286**	**ug/L**	181.263	551	0.011

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	107.997				
	Mg	24	103.685				
	Al	27	100.015				
	P	31	100.043				
	K	39	90.608				
	Ca	43	92.967				
>	Sc	45		89.9			
	V	51					
	Cr	52	127.047				
	Cr	53					
	Mn	55	99.715				
	Fe	57	94.083				
	Co	59	155.949				
	Ni	60	189.903				
	Cu	63					
	Cu	65	163.388				
	Zn	66	172.128				
	Zn	67					
	Zn	68					
>	Ge	74		88.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	98.689				
	Y	89					
	Ag	107					
	Cd	111	441.032				
	Cd	114					
>	In	115		90.2			
	Sn	120					
	Sb	121	265.170				
	Sb	123					
	Ba	135					
	Ba	137	102.429				
	Ho	165					
>	Lu	175		89.8			
	Tl	205					
	Pb	208	249.536				
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Friday, July 03, 2009 15:30:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 5.150

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.113**	**ug/L**	4.804	10072	0.014
	Be	9	**21.323**	**ug/L**	1.703	4171	0.006
	B	11	**21.634**	**ug/L**	2.604	4624	0.006
	Na	23	**101716.820**	**ug/L**	3.368	236357537	331.287
	Mg	24	**104266.393**	**ug/L**	6.597	162948631	228.452
	Al	27	**99847.685**	**ug/L**	3.561	213716841	299.621
	P	31	**99564.451**	**ug/L**	0.944	11224674	15.731
	K	39	**93263.515**	**ug/L**	4.362	236559828	331.165
	Ca	43	**92657.213**	**ug/L**	0.208	458809	0.643
>	Sc	45		**ug/L**		713286	713286.291
	V	51	**19.632**	**ug/L**	4.732	51292	0.067
	Cr	52	**24.320**	**ug/L**	1.272	51258	0.069
	Cr	53		**ug/L**		50181	0.006
	Mn	55	**25.769**	**ug/L**	0.951	74985	0.104
	Fe	57	**93838.066**	**ug/L**	0.720	5219435	7.313
	Co	59	**20.353**	**ug/L**	0.485	43517	0.061
	Ni	60	**23.460**	**ug/L**	0.725	10576	0.015
	Cu	63		**ug/L**		21434	0.030
	Cu	65	**23.437**	**ug/L**	1.842	11169	0.016
	Zn	66	**25.445**	**ug/L**	0.398	7296	0.061
	Zn	67		**ug/L**		5841	0.012
	Zn	68		**ug/L**		4587	0.036
>	Ge	74		**ug/L**		115566	115566.381
	As	75	**21.347**	**ug/L**	2.585	6892	0.060
	Se	77		**ug/L**		3163	0.013
	Se	82	**19.628**	**ug/L**	4.053	607	0.005
	Kr	83		**ug/L**		104	0.001
	Sr	88	**22.319**	**ug/L**	0.493	75069	1.472
	Y	89		**ug/L**		133	0.002
	Ag	107	**19.554**	**ug/L**	1.248	25323	0.497
	Cd	111	**20.430**	**ug/L**	0.722	6005	0.118
	Cd	114		**ug/L**		15297	0.300
>	In	115		**ug/L**		50953	50953.089
	Sn	120	**20.249**	**ug/L**	0.939	23433	0.453
	Sb	121	**21.189**	**ug/L**	1.526	19898	0.387
	Sb	123		**ug/L**		15038	0.292
	Ba	135		**ug/L**		5025	0.111
	Ba	137	**21.336**	**ug/L**	0.327	8973	0.199
	Ho	165		**ug/L**		125	0.003
>	Lu	175		**ug/L**		45069	45068.766
	Tl	205	**18.560**	**ug/L**	1.346	25407	0.560
	Pb	208	**19.873**	**ug/L**	1.461	39888	0.878
	Bi	209		**ug/L**		76	0.001
	U	238	**21.393**	**ug/L**	1.244	36797	0.815

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	105.566				
	Be	9	106.616				
	B	11	108.170				
	Na	23	101.717				
	Mg	24	104.266				
	Al	27	99.848				
	P	31	99.564				
	K	39	93.264				
	Ca	43	92.657				
>	Sc	45		88.1			
	V	51	98.159				
	Cr	52	102.616				
	Cr	53					
	Mn	55	99.880				
	Fe	57	93.838				
	Co	59	100.509				
	Ni	60	103.346				
	Cu	63					
	Cu	65	102.344				
	Zn	66	107.817				
	Zn	67					
	Zn	68					
>	Ge	74		86.1			
	As	75	106.735				
	Se	77					
	Se	82	98.140				
	Kr	83					
	Sr	88	105.279				
	Y	89					
	Ag	107	97.770				
	Cd	111	100.148				
	Cd	114					
>	In	115		85.6			
	Sn	120	101.244				
	Sb	121	105.418				
	Sb	123					
	Ba	135					
	Ba	137	103.221				
	Ho	165					
>	Lu	175		86.9			
	Tl	205	92.798				
	Pb	208	98.381				
	Bi	209					
	U	238	106.964				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, July 03, 2009 15:36:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 6.151

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.196**	ug/L	6.272	26214	0.035
	Be	9	**52.376**	ug/L	2.058	10810	0.014
	B	11	**101.943**	ug/L	2.197	21412	0.028
	Na	23	**4977.143**	ug/L	4.049	12232962	16.210
	Mg	24	**5044.982**	ug/L	1.485	8327334	11.054
	Al	27	**5112.785**	ug/L	2.420	11559428	15.342
	P	31	**5159.929**	ug/L	0.798	617570	0.815
	K	39	**4567.088**	ug/L	3.644	12540339	16.217
	Ca	43	**5019.437**	ug/L	1.053	26450	0.035
>	Sc	45		ug/L		753098	753098.391
	V	51	**50.955**	ug/L	2.246	134421	0.173
	Cr	52	**51.467**	ug/L	0.757	111826	0.145
	Cr	53		ug/L		67472	0.025
	Mn	55	**48.285**	ug/L	0.367	147519	0.195
	Fe	57	**5078.160**	ug/L	0.487	301630	0.396
	Co	59	**50.897**	ug/L	0.529	114684	0.152
	Ni	60	**55.101**	ug/L	11.001	26172	0.035
	Cu	63		ug/L		50837	0.067
	Cu	65	**48.509**	ug/L	1.636	24343	0.032
	Zn	66	**50.855**	ug/L	0.251	15443	0.123
	Zn	67		ug/L		7670	0.023
	Zn	68		ug/L		11784	0.092
>	Ge	74		ug/L		124079	124078.758
	As	75	**47.597**	ug/L	0.784	16478	0.133
	Se	77		ug/L		3814	0.016
	Se	82	**49.136**	ug/L	4.135	1630	0.013
	Kr	83		ug/L		39	0.000
	Sr	88	**50.586**	ug/L	0.362	182801	3.335
	Y	89		ug/L		63	0.000
	Ag	107	**50.120**	ug/L	1.007	69749	1.273
	Cd	111	**51.514**	ug/L	0.968	16256	0.296
	Cd	114		ug/L		36238	0.661
>	In	115		ug/L		54779	54778.767
	Sn	120	**48.644**	ug/L	0.863	60020	1.089
	Sb	121	**47.487**	ug/L	4.716	47687	0.867
	Sb	123		ug/L		36151	0.657
	Ba	135		ug/L		12747	0.264
	Ba	137	**49.144**	ug/L	1.694	22105	0.458
	Ho	165		ug/L		10	0.000
>	Lu	175		ug/L		48267	48266.888
	Tl	205	**49.090**	ug/L	1.046	71678	1.481
	Pb	208	**50.869**	ug/L	1.430	108782	2.247
	Bi	209		ug/L		52	0.001
	U	238	**52.411**	ug/L	1.950	96459	1.998

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	104.393				
	Be	9	104.752				
	B	11	101.943				
	Na	23	99.543				
	Mg	24	100.900				
	Al	27	101.243				
	P	31	103.199				
	K	39	91.342				
	Ca	43	100.389				
>	Sc	45		93.0			
	V	51	101.911				
	Cr	52	102.934				
	Cr	53					
	Mn	55	96.569				
	Fe	57	101.563				
	Co	59	101.794				
	Ni	60	110.202				
	Cu	63					
	Cu	65	97.019				
	Zn	66	101.710				
	Zn	67					
	Zn	68					
>	Ge	74		92.4			
	As	75	95.195				
	Se	77					
	Se	82	98.271				
	Kr	83					
	Sr	88	101.171				
	Y	89					
	Ag	107	100.239				
	Cd	111	103.029				
	Cd	114					
>	In	115		92.1			
	Sn	120	97.289				
	Sb	121	94.974				
	Sb	123					
	Ba	135					
	Ba	137	98.289				
	Ho	165					
>	Lu	175		93.0			
	Tl	205	98.180				
	Pb	208	101.737				
	Bi	209					
	U	238	104.821				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Ni	60	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, July 03, 2009 15:42:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 7.152

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.073**	ug/L	18.228	82	0.000
	Be	9	**0.017**	ug/L	99.777	7	0.000
	B	11	**1.491**	ug/L	23.608	748	0.000
	Na	23	**10.470**	ug/L	25.045	46744	0.034
	Mg	24	**7.801**	ug/L	22.554	14674	0.017
	Al	27	**2.928**	ug/L	73.636	14675	0.009
	P	31	**3.210**	ug/L	53.015	3990	0.001
	K	39	**-1.392**	ug/L	143.466	327378	-0.005
	Ca	43	**3.843**	ug/L	125.384	246	0.000
>	Sc	45		ug/L		766679	766678.686
	V	51	**0.280**	ug/L	334.247	4673	0.001
	Cr	52	**0.420**	ug/L	17.090	3378	0.001
	Cr	53		ug/L		55098	0.008
	Mn	55	**-0.043**	ug/L	170.661	840	-0.000
	Fe	57	**4.433**	ug/L	20.503	3925	0.000
	Co	59	**0.011**	ug/L	105.390	167	0.000
	Ni	60	**0.031**	ug/L	10.076	62	0.000
	Cu	63		ug/L		143	0.000
	Cu	65	**0.041**	ug/L	27.956	81	0.000
	Zn	66	**0.053**	ug/L	43.219	232	0.000
	Zn	67		ug/L		5299	0.003
	Zn	68		ug/L		417	-0.000
>	Ge	74		ug/L		126248	126248.005
	As	75	**-0.021**	ug/L	1885.064	9	-0.000
	Se	77		ug/L		2477	0.005
	Se	82	**-0.026**	ug/L	887.353	1	-0.000
	Kr	83		ug/L		41	0.000
	Sr	88	**0.009**	ug/L	59.882	126	0.001
	Y	89		ug/L		22	-0.000
	Ag	107	**0.010**	ug/L	40.704	36	0.000
	Cd	111	**0.027**	ug/L	148.270	24	0.000
	Cd	114		ug/L		46	0.000
>	In	115		ug/L		54751	54751.109
	Sn	120	**0.037**	ug/L	34.527	406	0.001
	Sb	121	**0.630**	ug/L	14.830	839	0.011
	Sb	123		ug/L		650	0.009
	Ba	135		ug/L		11	0.000
	Ba	137	**-0.003**	ug/L	608.021	21	-0.000
	Ho	165		ug/L		8	0.000
>	Lu	175		ug/L		48934	48933.838
	Tl	205	**0.161**	ug/L	20.651	418	0.005
	Pb	208	**0.011**	ug/L	52.019	384	0.000
	Bi	209		ug/L		26	0.000
	U	238	**0.029**	ug/L	39.432	107	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			94.7		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			94.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			92.0		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			94.3		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Friday, July 03, 2009 15:48:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 10.153

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**1002.504**	ug/L	6.761	456932	0.668
	Be	9	**1030.740**	ug/L	3.175	193237	0.282
	B	11	**0.807**	ug/L	22.357	540	0.000
	Na	23	**54982.772**	ug/L	3.433	122533765	179.076
	Mg	24	**52203.345**	ug/L	0.874	78254373	114.380
	Al	27	**49775.836**	ug/L	2.696	102196186	149.366
	P	31	**25853.744**	ug/L	2.062	2797953	4.085
	K	39	**48160.038**	ug/L	5.606	117293501	171.009
	Ca	43	**49277.792**	ug/L	0.663	234138	0.342
>	Sc	45		ug/L		684151	684151.459
	V	51	**965.639**	ug/L	1.914	2250683	3.285
	Cr	52	**862.953**	ug/L	0.619	1668467	2.436
	Cr	53		ug/L		262036	0.319
	Mn	55	**953.397**	ug/L	0.612	2629820	3.843
	Fe	57	**48829.315**	ug/L	0.419	2606619	3.805
	Co	59	**823.470**	ug/L	0.321	1683766	2.461
	Ni	60	**925.181**	ug/L	0.309	398438	0.582
	Cu	63		ug/L		834797	1.220
	Cu	65	**917.896**	ug/L	0.541	417550	0.610
	Zn	66	**2316.513**	ug/L	0.582	625801	5.592
	Zn	67		ug/L		112407	0.966
	Zn	68		ug/L		470145	4.199
>	Ge	74		ug/L		111882	111881.869
	As	75	**945.594**	ug/L	0.672	294903	2.636
	Se	77		ug/L		13442	0.106
	Se	82	**486.903**	ug/L	0.575	14549	0.130
	Kr	83		ug/L		64	0.000
	Sr	88	**985.065**	ug/L	0.576	3162374	64.950
	Y	89		ug/L		219	0.004
	Ag	107	**241.533**	ug/L	0.849	298687	6.134
	Cd	111	**971.114**	ug/L	0.451	272131	5.589
	Cd	114		ug/L		588049	12.077
>	In	115		ug/L		48689	48688.976
	Sn	120	**918.285**	ug/L	0.473	1001294	20.559
	Sb	121	**255.227**	ug/L	2.440	226980	4.658
	Sb	123		ug/L		172807	3.546
	Ba	135		ug/L		561185	12.309
	Ba	137	**2203.266**	ug/L	0.869	935188	20.513
	Ho	165		ug/L		61	0.001
>	Lu	175		ug/L		45592	45592.096
	Tl	205	**468.273**	ug/L	1.082	644435	14.131
	Pb	208	**4415.296**	ug/L	1.421	8890004	195.001
	Bi	209		ug/L		1505	0.032
	U	238	**5512.685**	ug/L	1.455	9579251	210.113

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	100.250				
	Be	9	103.074				
	B	11					
	Na	23	109.966				
	Mg	24	104.407				
	Al	27	99.552				
	P	31	103.415				
	K	39	96.320				
	Ca	43	98.556				
>	Sc	45		84.5			
	V	51	96.564				
	Cr	52	86.295				
	Cr	53					
	Mn	55	95.340				
	Fe	57	97.659				
	Co	59	82.347				
	Ni	60	92.518				
	Cu	63					
	Cu	65	91.790				
	Zn	66	92.661				
	Zn	67					
	Zn	68					
>	Ge	74		83.3			
	As	75	94.559				
	Se	77					
	Se	82	97.381				
	Kr	83					
	Sr	88	98.506				
	Y	89					
	Ag	107	96.613				
	Cd	111	97.111				
	Cd	114					
>	In	115		81.8			
	Sn	120	91.829				
	Sb	121	102.091				
	Sb	123					
	Ba	135					
	Ba	137	88.131				
	Ho	165					
>	Lu	175		87.9			
	Tl	205	93.655				
	Pb	208	88.306				
	Bi	209					
	U	238	110.254				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Cr	52	LRS is out of limits (+/- 10%)
QC Std 10	Co	59	LRS is out of limits (+/- 10%)
QC Std 10	Ba	137	LRS is out of limits (+/- 10%)
QC Std 10	Pb	208	LRS is out of limits (+/- 10%)
QC Std 10	U	238	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Friday, July 03, 2009 15:54:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 11.154

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.423**	**ug/L**	6.679	24824	0.034
	Be	9	**50.742**	**ug/L**	3.685	10266	0.014
	B	11	**96.911**	**ug/L**	3.455	19976	0.026
	Na	23	**4867.269**	**ug/L**	8.926	11725704	15.852
	Mg	24	**4724.933**	**ug/L**	4.867	7641266	10.353
	Al	27	**4866.613**	**ug/L**	3.779	10798901	14.604
	P	31	**5087.529**	**ug/L**	1.133	597109	0.804
	K	39	**4508.353**	**ug/L**	2.200	12139608	16.008
	Ca	43	**5001.765**	**ug/L**	2.257	25856	0.035
>	Sc	45		**ug/L**		738528	738528.401
	V	51	**50.233**	**ug/L**	1.224	129956	0.171
	Cr	52	**50.846**	**ug/L**	1.616	108342	0.144
	Cr	53		**ug/L**		62692	0.021
	Mn	55	**48.270**	**ug/L**	1.274	144604	0.195
	Fe	57	**5113.873**	**ug/L**	1.467	297775	0.399
	Co	59	**51.167**	**ug/L**	2.102	113028	0.153
	Ni	60	**51.460**	**ug/L**	1.248	23963	0.032
	Cu	63		**ug/L**		49615	0.067
	Cu	65	**48.336**	**ug/L**	1.279	23786	0.032
	Zn	66	**50.875**	**ug/L**	1.234	15223	0.123
	Zn	67		**ug/L**		7663	0.024
	Zn	68		**ug/L**		11552	0.091
>	Ge	74		**ug/L**		122266	122265.547
	As	75	**48.633**	**ug/L**	1.254	16592	0.136
	Se	77		**ug/L**		3366	0.013
	Se	82	**49.129**	**ug/L**	1.907	1606	0.013
	Kr	83		**ug/L**		43	0.000
	Sr	88	**50.273**	**ug/L**	0.925	178722	3.315
	Y	89		**ug/L**		59	0.000
	Ag	107	**50.057**	**ug/L**	0.103	68532	1.271
	Cd	111	**52.898**	**ug/L**	1.643	16420	0.304
	Cd	114		**ug/L**		35893	0.665
>	In	115		**ug/L**		53890	53889.781
	Sn	120	**51.994**	**ug/L**	0.847	63083	1.164
	Sb	121	**50.975**	**ug/L**	2.904	50347	0.930
	Sb	123		**ug/L**		38100	0.704
	Ba	135		**ug/L**		12786	0.262
	Ba	137	**48.811**	**ug/L**	1.791	22217	0.454
	Ho	165		**ug/L**		15	0.000
>	Lu	175		**ug/L**		48843	48842.508
	Tl	205	**50.213**	**ug/L**	0.567	74193	1.515
	Pb	208	**51.615**	**ug/L**	0.174	111700	2.280
	Bi	209		**ug/L**		55	0.001
	U	238	**56.072**	**ug/L**	1.437	104437	2.137

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	100.847				
	Be	9	101.485				
	B	11	96.911				
	Na	23	97.345				
	Mg	24	94.499				
	Al	27	96.369				
	P	31	101.751				
	K	39	90.167				
	Ca	43	100.035				
>	Sc	45		91.2			
	V	51	100.465				
	Cr	52	101.693				
	Cr	53					
	Mn	55	96.541				
	Fe	57	102.277				
	Co	59	102.334				
	Ni	60	102.920				
	Cu	63					
	Cu	65	96.671				
	Zn	66	101.751				
	Zn	67					
	Zn	68					
>	Ge	74		91.1			
	As	75	97.267				
	Se	77					
	Se	82	98.257				
	Kr	83					
	Sr	88	100.545				
	Y	89					
	Ag	107	100.114				
	Cd	111	105.797				
	Cd	114					
>	In	115		90.6			
	Sn	120	103.988				
	Sb	121	101.950				
	Sb	123					
	Ba	135					
	Ba	137	97.622				
	Ho	165					
>	Lu	175		94.1			
	Tl	205	100.426				
	Pb	208	103.230				
	Bi	209					
	U	238	112.143				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Friday, July 03, 2009 16:00:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 12.155

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.216**	**ug/L**	13.064	151	0.000
	Be	9	**0.061**	**ug/L**	20.358	16	0.000
	B	11	**1.406**	**ug/L**	33.414	714	0.000
	Na	23	**8.538**	**ug/L**	33.044	41060	0.028
	Mg	24	**3.686**	**ug/L**	72.545	7669	0.008
	Al	27	**3.350**	**ug/L**	69.757	15342	0.010
	P	31	**-1.240**	**ug/L**	109.029	3380	-0.000
	K	39	**4.735**	**ug/L**	136.754	336938	0.017
	Ca	43	**3.845**	**ug/L**	65.981	241	0.000
>	Sc	45		**ug/L**		750659	750658.512
	V	51	**-0.065**	**ug/L**	1025.750	3703	-0.000
	Cr	52	**0.217**	**ug/L**	30.971	2878	0.001
	Cr	53		**ug/L**		50108	0.003
	Mn	55	**0.078**	**ug/L**	165.829	1181	0.000
	Fe	57	**-2.315**	**ug/L**	92.961	3449	-0.000
	Co	59	**0.056**	**ug/L**	23.782	266	0.000
	Ni	60	**0.052**	**ug/L**	47.424	71	0.000
	Cu	63		**ug/L**		156	0.000
	Cu	65	**0.051**	**ug/L**	25.886	85	0.000
	Zn	66	**0.077**	**ug/L**	34.157	234	0.000
	Zn	67		**ug/L**		4897	0.001
	Zn	68		**ug/L**		407	-0.000
>	Ge	74		**ug/L**		123734	123734.135
	As	75	**0.424**	**ug/L**	108.991	163	0.001
	Se	77		**ug/L**		2098	0.002
	Se	82	**0.065**	**ug/L**	466.126	4	0.000
	Kr	83		**ug/L**		39	0.000
	Sr	88	**0.036**	**ug/L**	38.631	226	0.002
	Y	89		**ug/L**		19	-0.000
	Ag	107	**0.020**	**ug/L**	34.703	49	0.000
	Cd	111	**0.038**	**ug/L**	44.040	27	0.000
	Cd	114		**ug/L**		63	0.001
>	In	115		**ug/L**		54858	54858.361
	Sn	120	**1.080**	**ug/L**	5.041	1688	0.024
	Sb	121	**1.311**	**ug/L**	11.903	1522	0.024
	Sb	123		**ug/L**		1166	0.018
	Ba	135		**ug/L**		31	0.000
	Ba	137	**0.071**	**ug/L**	47.231	55	0.001
	Ho	165		**ug/L**		8	0.000
>	Lu	175		**ug/L**		49695	49695.453
	Tl	205	**0.362**	**ug/L**	13.671	727	0.011
	Pb	208	**0.164**	**ug/L**	34.257	726	0.007
	Bi	209		**ug/L**		28	0.000
	U	238	**0.359**	**ug/L**	14.947	733	0.014

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		92.7			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		95.8			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 12	U	238	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Friday, July 03, 2009 16:17:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 8.158

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.616**	ug/L	6.258	26291	0.035
	Be	9	**52.185**	ug/L	3.579	10715	0.014
	B	11	**100.250**	ug/L	1.822	20961	0.027
	Na	23	**4861.118**	ug/L	10.909	11892728	15.832
	Mg	24	**5024.470**	ug/L	4.468	8251104	11.009
	Al	27	**4999.427**	ug/L	2.181	11253469	15.002
	P	31	**5228.395**	ug/L	0.503	622603	0.826
	K	39	**4711.029**	ug/L	2.055	12857000	16.728
	Ca	43	**5110.861**	ug/L	1.131	26796	0.035
>	Sc	45		ug/L		749398	749397.752
	V	51	**51.702**	ug/L	0.351	135632	0.176
	Cr	52	**52.379**	ug/L	0.291	113194	0.148
	Cr	53		ug/L		65602	0.023
	Mn	55	**49.099**	ug/L	0.462	149257	0.198
	Fe	57	**5147.571**	ug/L	0.162	304191	0.401
	Co	59	**51.557**	ug/L	1.098	115586	0.154
	Ni	60	**52.198**	ug/L	1.038	24664	0.033
	Cu	63		ug/L		50929	0.068
	Cu	65	**49.159**	ug/L	2.448	24543	0.033
	Zn	66	**52.921**	ug/L	1.516	15995	0.128
	Zn	67		ug/L		8332	0.029
	Zn	68		ug/L		12112	0.095
>	Ge	74		ug/L		123569	123568.710
	As	75	**48.851**	ug/L	2.166	16841	0.136
	Se	77		ug/L		3399	0.013
	Se	82	**50.997**	ug/L	1.788	1685	0.014
	Kr	83		ug/L		40	0.000
	Sr	88	**51.676**	ug/L	0.863	182580	3.407
	Y	89		ug/L		31	-0.000
	Ag	107	**51.764**	ug/L	0.617	70434	1.315
	Cd	111	**53.980**	ug/L	0.326	16654	0.311
	Cd	114		ug/L		36997	0.690
>	In	115		ug/L		53560	53560.175
	Sn	120	**50.660**	ug/L	1.440	61098	1.134
	Sb	121	**48.500**	ug/L	6.429	47609	0.885
	Sb	123		ug/L		36490	0.678
	Ba	135		ug/L		12988	0.261
	Ba	137	**48.735**	ug/L	1.481	22561	0.454
	Ho	165		ug/L		16	0.000
>	Lu	175		ug/L		49677	49676.721
	Tl	205	**51.887**	ug/L	1.780	77963	1.566
	Pb	208	**52.922**	ug/L	1.250	116472	2.337
	Bi	209		ug/L		143	0.002
	U	238	**55.716**	ug/L	0.825	105543	2.124

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	105.231				
	Be	9	104.370				
	B	11	100.250				
	Na	23	97.222				
	Mg	24	100.489				
	Al	27	98.999				
	P	31	104.568				
	K	39	94.221				
	Ca	43	102.217				
>	Sc	45		92.6			
	V	51	103.404				
	Cr	52	104.757				
	Cr	53					
	Mn	55	98.198				
	Fe	57	102.951				
	Co	59	103.113				
	Ni	60	104.395				
	Cu	63					
	Cu	65	98.317				
	Zn	66	105.843				
	Zn	67					
	Zn	68					
>	Ge	74		92.0			
	As	75	97.702				
	Se	77					
	Se	82	101.994				
	Kr	83					
	Sr	88	103.353				
	Y	89					
	Ag	107	103.527				
	Cd	111	107.959				
	Cd	114					
>	In	115		90.0			
	Sn	120	101.320				
	Sb	121	96.999				
	Sb	123					
	Ba	135					
	Ba	137	97.469				
	Ho	165					
>	Lu	175		95.7			
	Tl	205	103.774				
	Pb	208	105.844				
	Bi	209					
	U	238	111.433				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Friday, July 03, 2009 16:23:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 9.159

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.069**	ug/L	32.135	79	0.000
	Be	9	**0.025**	ug/L	42.079	9	0.000
	B	11	**1.919**	ug/L	22.479	829	0.001
	Na	23	**3.132**	ug/L	61.911	28028	0.010
	Mg	24	**4.465**	ug/L	25.478	9003	0.010
	Al	27	**-0.803**	ug/L	48.143	6001	-0.002
	P	31	**-1.510**	ug/L	39.820	3384	-0.000
	K	39	**0.791**	ug/L	436.914	330109	0.003
	Ca	43	**4.403**	ug/L	161.745	246	0.000
>	Sc	45		ug/L		759212	759211.568
	V	51	**0.149**	ug/L	397.456	4284	0.001
	Cr	52	**0.282**	ug/L	7.857	3050	0.001
	Cr	53		ug/L		53249	0.006
	Mn	55	**-0.095**	ug/L	1.934	670	-0.000
	Fe	57	**-5.275**	ug/L	30.952	3310	-0.000
	Co	59	**0.015**	ug/L	13.411	174	0.000
	Ni	60	**0.018**	ug/L	52.380	55	0.000
	Cu	63		ug/L		130	0.000
	Cu	65	**0.023**	ug/L	131.461	71	0.000
	Zn	66	**0.102**	ug/L	16.522	246	0.000
	Zn	67		ug/L		5265	0.003
	Zn	68		ug/L		447	0.000
>	Ge	74		ug/L		125657	125657.213
	As	75	**0.246**	ug/L	186.181	101	0.001
	Se	77		ug/L		2156	0.003
	Se	82	**-0.305**	ug/L	11.156	-8	-0.000
	Kr	83		ug/L		42	0.000
	Sr	88	**0.008**	ug/L	78.158	122	0.001
	Y	89		ug/L		17	-0.000
	Ag	107	**0.022**	ug/L	36.731	53	0.001
	Cd	111	**0.003**	ug/L	810.771	17	0.000
	Cd	114		ug/L		32	-0.000
>	In	115		ug/L		54663	54663.181
	Sn	120	**0.462**	ug/L	9.451	925	0.010
	Sb	121	**0.766**	ug/L	21.855	971	0.014
	Sb	123		ug/L		727	0.010
	Ba	135		ug/L		14	0.000
	Ba	137	**0.011**	ug/L	55.381	28	0.000
	Ho	165		ug/L		5	-0.000
>	Lu	175		ug/L		49774	49773.726
	Tl	205	**0.339**	ug/L	17.851	693	0.010
	Pb	208	**0.028**	ug/L	44.204	429	0.001
	Bi	209		ug/L		41	0.000
	U	238	**0.065**	ug/L	14.581	177	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		93.8			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		93.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		95.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Friday, July 03, 2009 16:59:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 8.165

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.978**	ug/L	6.060	27540	0.035
	Be	9	**52.598**	ug/L	3.061	11450	0.014
	B	11	**101.078**	ug/L	2.050	22399	0.028
	Na	23	**4963.821**	ug/L	1.755	12863942	16.167
	Mg	24	**4922.503**	ug/L	3.260	8568220	10.785
	Al	27	**5229.723**	ug/L	4.779	12477306	15.693
	P	31	**5205.170**	ug/L	1.535	657069	0.822
	K	39	**4749.254**	ug/L	2.697	13739727	16.864
	Ca	43	**5112.130**	ug/L	2.907	28415	0.035
>	Sc	45		ug/L		794328	794327.524
	V	51	**51.201**	ug/L	0.659	142413	0.174
	Cr	52	**51.593**	ug/L	1.052	118218	0.146
	Cr	53		ug/L		66571	0.020
	Mn	55	**48.230**	ug/L	0.289	155419	0.194
	Fe	57	**5067.344**	ug/L	1.276	317460	0.395
	Co	59	**51.118**	ug/L	0.770	121487	0.153
	Ni	60	**51.259**	ug/L	0.562	25675	0.032
	Cu	63		ug/L		52990	0.067
	Cu	65	**47.840**	ug/L	0.304	25326	0.032
	Zn	66	**53.862**	ug/L	0.788	16716	0.130
	Zn	67		ug/L		8276	0.027
	Zn	68		ug/L		12487	0.095
>	Ge	74		ug/L		126899	126899.068
	As	75	**49.004**	ug/L	1.485	17351	0.137
	Se	77		ug/L		3719	0.015
	Se	82	**50.989**	ug/L	1.085	1730	0.014
	Kr	83		ug/L		38	-0.000
	Sr	88	**51.966**	ug/L	0.524	187657	3.426
	Y	89		ug/L		35	-0.000
	Ag	107	**51.373**	ug/L	1.261	71444	1.305
	Cd	111	**53.618**	ug/L	0.696	16908	0.309
	Cd	114		ug/L		37756	0.689
>	In	115		ug/L		54743	54743.029
	Sn	120	**50.723**	ug/L	0.675	62528	1.136
	Sb	121	**48.141**	ug/L	5.627	48318	0.879
	Sb	123		ug/L		36544	0.664
	Ba	135		ug/L		13393	0.266
	Ba	137	**49.494**	ug/L	0.825	23233	0.461
	Ho	165		ug/L		13	0.000
>	Lu	175		ug/L		50374	50374.171
	Tl	205	**49.544**	ug/L	3.228	75488	1.495
	Pb	208	**52.650**	ug/L	0.533	117498	2.325
	Bi	209		ug/L		50	0.000
	U	238	**55.095**	ug/L	0.942	105827	2.100

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	103.957				
	Be	9	105.196				
	B	11	101.078				
	Na	23	99.276				
	Mg	24	98.450				
	Al	27	103.559				
	P	31	104.103				
	K	39	94.985				
	Ca	43	102.243				
>	Sc	45		98.1			
	V	51	102.402				
	Cr	52	103.186				
	Cr	53					
	Mn	55	96.460				
	Fe	57	101.347				
	Co	59	102.235				
	Ni	60	102.517				
	Cu	63					
	Cu	65	95.680				
	Zn	66	107.723				
	Zn	67					
	Zn	68					
>	Ge	74		94.5			
	As	75	98.009				
	Se	77					
	Se	82	101.978				
	Kr	83					
	Sr	88	103.931				
	Y	89					
	Ag	107	102.745				
	Cd	111	107.237				
	Cd	114					
>	In	115		92.0			
	Sn	120	101.447				
	Sb	121	96.282				
	Sb	123					
	Ba	135					
	Ba	137	98.988				
	Ho	165					
>	Lu	175		97.1			
	Tl	205	99.088				
	Pb	208	105.299				
	Bi	209					
	U	238	110.190				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Friday, July 03, 2009 17:05:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 9.166

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.016**	**ug/L**	141.513	55	0.000
	Be	9	**0.016**	**ug/L**	82.363	7	0.000
	B	11	**1.867**	**ug/L**	24.888	856	0.001
	Na	23	**0.399**	**ug/L**	477.603	22351	0.001
	Mg	24	**1.954**	**ug/L**	81.930	5001	0.004
	Al	27	**-1.478**	**ug/L**	31.503	4667	-0.004
	P	31	**-2.271**	**ug/L**	25.172	3448	-0.000
	K	39	**5.106**	**ug/L**	47.614	357759	0.018
	Ca	43	**2.202**	**ug/L**	341.634	245	0.000
>	Sc	45		**ug/L**		795093	795093.035
	V	51	**0.262**	**ug/L**	95.152	4779	0.001
	Cr	52	**0.549**	**ug/L**	5.854	3793	0.002
	Cr	53		**ug/L**		54560	0.004
	Mn	55	**-0.092**	**ug/L**	9.880	712	-0.000
	Fe	57	**-4.218**	**ug/L**	36.358	3533	-0.000
	Co	59	**0.005**	**ug/L**	108.117	158	0.000
	Ni	60	**0.005**	**ug/L**	667.753	51	0.000
	Cu	63		**ug/L**		123	-0.000
	Cu	65	**0.018**	**ug/L**	83.274	72	0.000
	Zn	66	**0.167**	**ug/L**	5.882	270	0.000
	Zn	67		**ug/L**		5331	0.003
	Zn	68		**ug/L**		469	0.000
>	Ge	74		**ug/L**		127738	127738.226
	As	75	**0.133**	**ug/L**	416.899	65	0.000
	Se	77		**ug/L**		2329	0.004
	Se	82	**-0.004**	**ug/L**	3505.993	2	-0.000
	Kr	83		**ug/L**		32	-0.000
	Sr	88	**0.008**	**ug/L**	22.466	125	0.001
	Y	89		**ug/L**		16	-0.000
	Ag	107	**0.017**	**ug/L**	51.987	46	0.000
	Cd	111	**0.006**	**ug/L**	102.366	17	0.000
	Cd	114		**ug/L**		34	-0.000
>	In	115		**ug/L**		55589	55588.663
	Sn	120	**0.320**	**ug/L**	11.633	764	0.007
	Sb	121	**0.681**	**ug/L**	17.396	903	0.012
	Sb	123		**ug/L**		664	0.009
	Ba	135		**ug/L**		15	0.000
	Ba	137	**-0.002**	**ug/L**	192.483	22	-0.000
	Ho	165		**ug/L**		9	0.000
>	Lu	175		**ug/L**		50899	50899.356
	Tl	205	**0.771**	**ug/L**	9.706	1372	0.023
	Pb	208	**0.015**	**ug/L**	73.479	407	0.001
	Bi	209		**ug/L**		29	0.000
	U	238	**0.046**	**ug/L**	18.084	144	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		98.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, July 03, 2009 17:46:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 6.173

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.914**	ug/L	7.921	27918	0.035
	Be	9	**52.759**	ug/L	3.473	11659	0.014
	B	11	**102.971**	ug/L	1.470	23159	0.028
	Na	23	**5141.973**	ug/L	6.849	13519666	16.747
	Mg	24	**5140.857**	ug/L	3.430	9083532	11.264
	Al	27	**5049.933**	ug/L	8.413	12229625	15.154
	P	31	**5085.640**	ug/L	0.993	651849	0.804
	K	39	**4618.119**	ug/L	1.822	13574391	16.398
	Ca	43	**5021.044**	ug/L	0.846	28336	0.035
>	Sc	45		ug/L		806439	806438.875
	V	51	**49.528**	ug/L	1.534	139989	0.168
	Cr	52	**50.490**	ug/L	1.075	117502	0.142
	Cr	53		ug/L		70506	0.023
	Mn	55	**47.673**	ug/L	0.918	155967	0.192
	Fe	57	**4987.096**	ug/L	0.864	317247	0.389
	Co	59	**49.538**	ug/L	0.910	119528	0.148
	Ni	60	**50.319**	ug/L	1.370	25588	0.032
	Cu	63		ug/L		52186	0.065
	Cu	65	**46.405**	ug/L	2.147	24939	0.031
	Zn	66	**51.403**	ug/L	0.428	16173	0.124
	Zn	67		ug/L		8153	0.025
	Zn	68		ug/L		12274	0.092
>	Ge	74		ug/L		128572	128572.297
	As	75	**47.287**	ug/L	0.802	16964	0.132
	Se	77		ug/L		3964	0.016
	Se	82	**48.484**	ug/L	1.382	1667	0.013
	Kr	83		ug/L		32	-0.000
	Sr	88	**50.905**	ug/L	0.974	185945	3.356
	Y	89		ug/L		64	0.000
	Ag	107	**50.470**	ug/L	0.302	71000	1.282
	Cd	111	**51.540**	ug/L	0.716	16441	0.297
	Cd	114		ug/L		36778	0.664
>	In	115		ug/L		55374	55374.412
	Sn	120	**49.067**	ug/L	0.621	61194	1.099
	Sb	121	**47.345**	ug/L	4.819	48074	0.864
	Sb	123		ug/L		36401	0.654
	Ba	135		ug/L		13263	0.265
	Ba	137	**48.982**	ug/L	1.311	22833	0.456
	Ho	165		ug/L		11	0.000
>	Lu	175		ug/L		50018	50017.576
	Tl	205	**48.933**	ug/L	2.333	74050	1.477
	Pb	208	**52.052**	ug/L	0.682	115350	2.299
	Bi	209		ug/L		71	0.001
	U	238	**54.420**	ug/L	0.331	103798	2.074

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	103.828				
	Be	9	105.519				
	B	11	102.971				
	Na	23	102.839				
	Mg	24	102.817				
	Al	27	99.999				
	P	31	101.713				
	K	39	92.362				
	Ca	43	100.421				
>	Sc	45		99.6			
	V	51	99.056				
	Cr	52	100.979				
	Cr	53					
	Mn	55	95.347				
	Fe	57	99.742				
	Co	59	99.076				
	Ni	60	100.638				
	Cu	63					
	Cu	65	92.810				
	Zn	66	102.806				
	Zn	67					
	Zn	68					
>	Ge	74		95.8			
	As	75	94.574				
	Se	77					
	Se	82	96.967				
	Kr	83					
	Sr	88	101.810				
	Y	89					
	Ag	107	100.940				
	Cd	111	103.081				
	Cd	114					
>	In	115		93.1			
	Sn	120	98.134				
	Sb	121	94.690				
	Sb	123					
	Ba	135					
	Ba	137	97.963				
	Ho	165					
>	Lu	175		96.4			
	Tl	205	97.866				
	Pb	208	104.105				
	Bi	209					
	U	238	108.840				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, July 03, 2009 17:52:11
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 7.174

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.035**	**ug/L**	42.217	65	0.000
	Be	9	**0.017**	**ug/L**	137.773	7	0.000
	B	11	**3.233**	**ug/L**	11.968	1166	0.001
	Na	23	**2.881**	**ug/L**	84.992	29030	0.009
	Mg	24	**0.967**	**ug/L**	125.548	3334	0.002
	Al	27	**-0.533**	**ug/L**	200.189	7002	-0.002
	P	31	**-2.490**	**ug/L**	5.909	3457	-0.000
	K	39	**-5.448**	**ug/L**	228.167	331499	-0.019
	Ca	43	**1.811**	**ug/L**	250.744	246	0.000
>	Sc	45		**ug/L**		803578	803578.263
	V	51	**0.672**	**ug/L**	97.978	5955	0.002
	Cr	52	**0.663**	**ug/L**	2.291	4092	0.002
	Cr	53		**ug/L**		55471	0.005
	Mn	55	**-0.106**	**ug/L**	4.736	676	-0.000
	Fe	57	**-6.217**	**ug/L**	35.776	3445	-0.000
	Co	59	**0.009**	**ug/L**	44.285	170	0.000
	Ni	60	**0.006**	**ug/L**	279.981	52	0.000
	Cu	63		**ug/L**		137	0.000
	Cu	65	**0.009**	**ug/L**	158.032	68	0.000
	Zn	66	**0.077**	**ug/L**	36.841	243	0.000
	Zn	67		**ug/L**		5238	0.002
	Zn	68		**ug/L**		462	0.000
>	Ge	74		**ug/L**		128285	128285.408
	As	75	**0.374**	**ug/L**	86.372	151	0.001
	Se	77		**ug/L**		2512	0.005
	Se	82	**-0.027**	**ug/L**	452.856	1	-0.000
	Kr	83		**ug/L**		40	-0.000
	Sr	88	**0.009**	**ug/L**	63.418	130	0.001
	Y	89		**ug/L**		16	-0.000
	Ag	107	**0.013**	**ug/L**	23.215	41	0.000
	Cd	111	**0.001**	**ug/L**	974.492	16	0.000
	Cd	114		**ug/L**		34	-0.000
>	In	115		**ug/L**		55587	55586.856
	Sn	120	**0.229**	**ug/L**	8.612	651	0.005
	Sb	121	**0.569**	**ug/L**	26.620	789	0.010
	Sb	123		**ug/L**		608	0.008
	Ba	135		**ug/L**		7	-0.000
	Ba	137	**-0.007**	**ug/L**	127.442	20	-0.000
	Ho	165		**ug/L**		9	0.000
>	Lu	175		**ug/L**		50787	50786.956
	Tl	205	**0.643**	**ug/L**	8.898	1173	0.019
	Pb	208	**0.019**	**ug/L**	37.933	416	0.001
	Bi	209		**ug/L**		39	0.000
	U	238	**0.043**	**ug/L**	2.633	138	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		99.3			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, July 03, 2009 18:37:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 6.178

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.441**	**ug/L**	6.347	26967	0.034
	Be	9	**52.163**	**ug/L**	3.469	11459	0.014
	B	11	**99.937**	**ug/L**	3.742	22350	0.027
	Na	23	**4961.657**	**ug/L**	7.061	12969105	16.160
	Mg	24	**4998.485**	**ug/L**	2.041	8781663	10.952
	Al	27	**4836.338**	**ug/L**	0.682	11643931	14.513
	P	31	**5054.286**	**ug/L**	0.884	644027	0.799
	K	39	**4613.421**	**ug/L**	5.479	13487520	16.382
	Ca	43	**5028.858**	**ug/L**	1.703	28217	0.035
>	Sc	45		**ug/L**		801731	801730.635
	V	51	**50.445**	**ug/L**	1.865	141649	0.172
	Cr	52	**50.662**	**ug/L**	0.746	117214	0.143
	Cr	53		**ug/L**		68679	0.021
	Mn	55	**48.158**	**ug/L**	0.443	156633	0.194
	Fe	57	**5005.246**	**ug/L**	0.884	316549	0.390
	Co	59	**49.904**	**ug/L**	1.105	119701	0.149
	Ni	60	**50.593**	**ug/L**	1.211	25576	0.032
	Cu	63		**ug/L**		52295	0.065
	Cu	65	**46.759**	**ug/L**	1.291	24983	0.031
	Zn	66	**51.744**	**ug/L**	0.666	16377	0.125
	Zn	67		**ug/L**		8366	0.026
	Zn	68		**ug/L**		12244	0.091
>	Ge	74		**ug/L**		129347	129346.894
	As	75	**46.735**	**ug/L**	0.895	16868	0.130
	Se	77		**ug/L**		3837	0.015
	Se	82	**47.806**	**ug/L**	1.536	1653	0.013
	Kr	83		**ug/L**		42	0.000
	Sr	88	**50.707**	**ug/L**	0.837	185923	3.343
	Y	89		**ug/L**		62	0.000
	Ag	107	**50.499**	**ug/L**	1.007	71305	1.283
	Cd	111	**51.951**	**ug/L**	2.917	16632	0.299
	Cd	114		**ug/L**		37287	0.670
>	In	115		**ug/L**		55583	55582.944
	Sn	120	**49.766**	**ug/L**	1.019	62300	1.114
	Sb	121	**47.616**	**ug/L**	4.582	48526	0.869
	Sb	123		**ug/L**		36945	0.662
	Ba	135		**ug/L**		13199	0.255
	Ba	137	**47.984**	**ug/L**	1.194	23127	0.447
	Ho	165		**ug/L**		15	0.000
>	Lu	175		**ug/L**		51714	51714.286
	Tl	205	**48.581**	**ug/L**	1.537	76009	1.466
	Pb	208	**51.985**	**ug/L**	1.571	119104	2.296
	Bi	209		**ug/L**		63	0.001
	U	238	**54.178**	**ug/L**	1.271	106838	2.065

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	100.882				
	Be	9	104.325				
	B	11	99.937				
	Na	23	99.233				
	Mg	24	99.970				
	Al	27	95.769				
	P	31	101.086				
	K	39	92.268				
	Ca	43	100.577				
>	Sc	45		99.1			
	V	51	100.889				
	Cr	52	101.324				
	Cr	53					
	Mn	55	96.316				
	Fe	57	100.105				
	Co	59	99.809				
	Ni	60	101.186				
	Cu	63					
	Cu	65	93.518				
	Zn	66	103.489				
	Zn	67					
	Zn	68					
>	Ge	74		96.3			
	As	75	93.469				
	Se	77					
	Se	82	95.611				
	Kr	83					
	Sr	88	101.415				
	Y	89					
	Ag	107	100.998				
	Cd	111	103.903				
	Cd	114					
>	In	115		93.4			
	Sn	120	99.532				
	Sb	121	95.231				
	Sb	123					
	Ba	135					
	Ba	137	95.968				
	Ho	165					
>	Lu	175		99.7			
	Tl	205	97.162				
	Pb	208	103.969				
	Bi	209					
	U	238	108.355				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, July 03, 2009 18:43:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 7.179

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.003**	**ug/L**	502.513	48	0.000
	Be	9	**0.015**	**ug/L**	73.654	7	0.000
	B	11	**1.868**	**ug/L**	15.167	861	0.001
	Na	23	**1.525**	**ug/L**	46.561	25356	0.005
	Mg	24	**1.518**	**ug/L**	82.408	4334	0.003
	Al	27	**-1.489**	**ug/L**	85.760	4668	-0.004
	P	31	**-1.659**	**ug/L**	43.359	3543	-0.000
	K	39	**1.063**	**ug/L**	648.168	347855	0.004
	Ca	43	**6.787**	**ug/L**	15.855	273	0.000
>	Sc	45		**ug/L**		799069	799068.609
	V	51	**0.803**	**ug/L**	86.424	6300	0.003
	Cr	52	**0.452**	**ug/L**	8.253	3592	0.001
	Cr	53		**ug/L**		54776	0.004
	Mn	55	**-0.110**	**ug/L**	5.262	658	-0.000
	Fe	57	**-2.170**	**ug/L**	55.712	3679	-0.000
	Co	59	**0.013**	**ug/L**	33.095	178	0.000
	Ni	60	**0.012**	**ug/L**	185.289	55	0.000
	Cu	63		**ug/L**		151	0.000
	Cu	65	**0.016**	**ug/L**	100.642	71	0.000
	Zn	66	**0.008**	**ug/L**	665.714	226	0.000
	Zn	67		**ug/L**		5279	0.002
	Zn	68		**ug/L**		450	0.000
>	Ge	74		**ug/L**		131032	131032.192
	As	75	**0.008**	**ug/L**	1066.235	20	0.000
	Se	77		**ug/L**		2355	0.003
	Se	82	**-0.446**	**ug/L**	9.222	-14	-0.000
	Kr	83		**ug/L**		43	0.000
	Sr	88	**0.004**	**ug/L**	102.012	112	0.000
	Y	89		**ug/L**		23	-0.000
	Ag	107	**0.007**	**ug/L**	54.138	32	0.000
	Cd	111	**0.001**	**ug/L**	2922.220	16	0.000
	Cd	114		**ug/L**		37	0.000
>	In	115		**ug/L**		56127	56127.101
	Sn	120	**0.162**	**ug/L**	12.224	573	0.004
	Sb	121	**0.518**	**ug/L**	24.769	745	0.009
	Sb	123		**ug/L**		586	0.008
	Ba	135		**ug/L**		12	0.000
	Ba	137	**-0.003**	**ug/L**	165.420	22	-0.000
	Ho	165		**ug/L**		10	0.000
>	Lu	175		**ug/L**		51841	51841.425
	Tl	205	**0.439**	**ug/L**	11.819	878	0.013
	Pb	208	**0.024**	**ug/L**	107.611	436	0.001
	Bi	209		**ug/L**		35	0.000
	U	238	**0.037**	**ug/L**	9.576	129	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		98.7			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, July 03, 2009 19:12:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 6.183

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.517**	**ug/L**	6.127	27674	0.034
	Be	9	**52.308**	**ug/L**	1.398	11547	0.014
	B	11	**99.515**	**ug/L**	1.421	22369	0.027
	Na	23	**5022.618**	**ug/L**	5.578	13201083	16.358
	Mg	24	**5270.089**	**ug/L**	3.561	9300025	11.547
	Al	27	**5234.053**	**ug/L**	6.771	12666709	15.706
	P	31	**5045.584**	**ug/L**	1.145	645978	0.797
	K	39	**4716.496**	**ug/L**	4.441	13840611	16.748
	Ca	43	**4960.866**	**ug/L**	1.508	27967	0.034
>	Sc	45		**ug/L**		805470	805469.835
	V	51	**49.704**	**ug/L**	1.444	140328	0.169
	Cr	52	**50.232**	**ug/L**	0.986	116793	0.142
	Cr	53		**ug/L**		68604	0.021
	Mn	55	**47.294**	**ug/L**	0.292	154555	0.191
	Fe	57	**4930.226**	**ug/L**	0.433	313319	0.384
	Co	59	**49.603**	**ug/L**	0.757	119545	0.148
	Ni	60	**50.429**	**ug/L**	1.922	25612	0.032
	Cu	63		**ug/L**		52597	0.065
	Cu	65	**46.374**	**ug/L**	1.140	24894	0.031
	Zn	66	**51.014**	**ug/L**	0.453	16084	0.123
	Zn	67		**ug/L**		8132	0.024
	Zn	68		**ug/L**		12227	0.092
>	Ge	74		**ug/L**		128824	128824.193
	As	75	**46.715**	**ug/L**	1.224	16792	0.130
	Se	77		**ug/L**		3748	0.015
	Se	82	**47.048**	**ug/L**	4.212	1620	0.013
	Kr	83		**ug/L**		39	-0.000
	Sr	88	**50.445**	**ug/L**	1.313	184869	3.326
	Y	89		**ug/L**		73	0.001
	Ag	107	**50.312**	**ug/L**	1.424	71012	1.278
	Cd	111	**51.174**	**ug/L**	1.430	16377	0.295
	Cd	114		**ug/L**		37097	0.667
>	In	115		**ug/L**		55559	55558.789
	Sn	120	**49.653**	**ug/L**	0.343	62128	1.112
	Sb	121	**47.361**	**ug/L**	4.280	48248	0.864
	Sb	123		**ug/L**		36430	0.653
	Ba	135		**ug/L**		13165	0.255
	Ba	137	**48.453**	**ug/L**	1.126	23269	0.451
	Ho	165		**ug/L**		14	0.000
>	Lu	175		**ug/L**		51535	51534.647
	Tl	205	**48.812**	**ug/L**	2.083	76094	1.473
	Pb	208	**51.745**	**ug/L**	0.568	118145	2.285
	Bi	209		**ug/L**		63	0.001
	U	238	**54.437**	**ug/L**	0.953	106972	2.075

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	103.034				
	Be	9	104.615				
	B	11	99.515				
	Na	23	100.452				
	Mg	24	105.402				
	Al	27	103.645				
	P	31	100.912				
	K	39	94.330				
	Ca	43	99.217				
>	Sc	45		99.5			
	V	51	99.409				
	Cr	52	100.463				
	Cr	53					
	Mn	55	94.589				
	Fe	57	98.605				
	Co	59	99.207				
	Ni	60	100.858				
	Cu	63					
	Cu	65	92.748				
	Zn	66	102.027				
	Zn	67					
	Zn	68					
>	Ge	74		96.0			
	As	75	93.431				
	Se	77					
	Se	82	94.096				
	Kr	83					
	Sr	88	100.889				
	Y	89					
	Ag	107	100.623				
	Cd	111	102.348				
	Cd	114					
>	In	115		93.4			
	Sn	120	99.306				
	Sb	121	94.721				
	Sb	123					
	Ba	135					
	Ba	137	96.906				
	Ho	165					
>	Lu	175		99.3			
	Tl	205	97.624				
	Pb	208	103.489				
	Bi	209					
	U	238	108.875				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, July 03, 2009 19:18:16
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 7.184

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.001**	**ug/L**	2398.388	47	0.000
	Be	9	**0.011**	**ug/L**	41.014	6	0.000
	B	11	**1.878**	**ug/L**	19.226	869	0.001
	Na	23	**0.948**	**ug/L**	23.150	24020	0.003
	Mg	24	**3.243**	**ug/L**	47.114	7335	0.007
	Al	27	**0.569**	**ug/L**	143.965	9670	0.002
	P	31	**-2.376**	**ug/L**	27.399	3474	-0.000
	K	39	**1.189**	**ug/L**	1054.262	350261	0.004
	Ca	43	**2.665**	**ug/L**	49.441	251	0.000
>	Sc	45		**ug/L**		804299	804299.079
	V	51	**0.249**	**ug/L**	87.012	4814	0.001
	Cr	52	**0.348**	**ug/L**	15.216	3383	0.001
	Cr	53		**ug/L**		54085	0.003
	Mn	55	**-0.105**	**ug/L**	9.442	679	-0.000
	Fe	57	**-5.859**	**ug/L**	34.520	3470	-0.000
	Co	59	**0.006**	**ug/L**	134.318	162	0.000
	Ni	60	**0.014**	**ug/L**	102.072	56	0.000
	Cu	63		**ug/L**		173	0.000
	Cu	65	**0.010**	**ug/L**	78.975	68	0.000
	Zn	66	**-0.011**	**ug/L**	350.424	219	-0.000
	Zn	67		**ug/L**		5285	0.002
	Zn	68		**ug/L**		422	-0.000
>	Ge	74		**ug/L**		130317	130316.683
	As	75	**0.541**	**ug/L**	78.284	215	0.002
	Se	77		**ug/L**		2234	0.003
	Se	82	**-0.188**	**ug/L**	92.352	-5	-0.000
	Kr	83		**ug/L**		39	-0.000
	Sr	88	**0.004**	**ug/L**	88.053	112	0.000
	Y	89		**ug/L**		20	-0.000
	Ag	107	**0.007**	**ug/L**	39.999	33	0.000
	Cd	111	**0.003**	**ug/L**	422.199	17	0.000
	Cd	114		**ug/L**		39	0.000
>	In	115		**ug/L**		56169	56169.152
	Sn	120	**0.156**	**ug/L**	11.012	567	0.003
	Sb	121	**0.545**	**ug/L**	23.241	773	0.010
	Sb	123		**ug/L**		603	0.008
	Ba	135		**ug/L**		13	0.000
	Ba	137	**-0.012**	**ug/L**	61.994	17	-0.000
	Ho	165		**ug/L**		7	-0.000
>	Lu	175		**ug/L**		51821	51821.009
	Tl	205	**0.393**	**ug/L**	18.192	805	0.012
	Pb	208	**0.026**	**ug/L**	13.850	441	0.001
	Bi	209		**ug/L**		35	0.000
	U	238	**0.037**	**ug/L**	10.307	129	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		99.4			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429009
Sample Date/Time: Friday, July 03, 2009 19:50:35
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|10|rmj
Method File: c:\elandata\Method\6020 noththimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429009.188

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**8.989**	**ug/L**	5.470	4771	0.006
	Be	9	**0.701**	**ug/L**	12.512	155	0.000
	B	11	**4.285**	**ug/L**	7.721	1373	0.001
	Na	23	**142.347**	**ug/L**	12.511	386874	0.464
	Mg	24	**1361.447**	**ug/L**	0.995	2357023	2.983
	Al	27	**6470.140**	**ug/L**	3.290	15341666	19.415
	P	31	**475.860**	**ug/L**	1.238	63068	0.075
	K	39	**773.025**	**ug/L**	2.549	2508068	2.745
	Ca	43	**4196.535**	**ug/L**	0.292	23226	0.029
>	Sc	45		**ug/L**		789594	789593.662
	V	51	**6.200**	**ug/L**	17.686	20704	0.021
	Cr	52	**248.375**	**ug/L**	1.534	555931	0.701
	Cr	53		**ug/L**		114275	0.081
	Mn	55	**865.339**	**ug/L**	0.228	2754969	3.488
	Fe	57	**10917.036**	**ug/L**	0.461	675480	0.851
	Co	59	**8.909**	**ug/L**	2.381	21164	0.027
	Ni	60	**42.758**	**ug/L**	2.641	21292	0.027
	Cu	63		**ug/L**		205841	0.261
	Cu	65	**188.863**	**ug/L**	2.204	99176	0.126
	Zn	66	**384.944**	**ug/L**	0.226	116343	0.929
	Zn	67		**ug/L**		23128	0.146
	Zn	68		**ug/L**		84425	0.672
>	Ge	74		**ug/L**		124977	124976.875
	As	75	**3.076**	**ug/L**	10.213	1088	0.009
	Se	77		**ug/L**		1970	0.001
	Se	82	**0.442**	**ug/L**	76.036	17	0.000
	Kr	83		**ug/L**		51	0.000
	Sr	88	**27.054**	**ug/L**	0.992	96768	1.784
	Y	89		**ug/L**		62575	1.154
	Ag	107	**0.590**	**ug/L**	1.243	834	0.015
	Cd	111	**1.206**	**ug/L**	11.409	391	0.007
	Cd	114		**ug/L**		514	0.009
>	In	115		**ug/L**		54197	54196.735
	Sn	120	**1.639**	**ug/L**	3.877	2346	0.037
	Sb	121	**0.030**	**ug/L**	106.953	237	0.001
	Sb	123		**ug/L**		195	0.001
	Ba	135		**ug/L**		30730	0.594
	Ba	137	**111.477**	**ug/L**	0.815	53729	1.038
	Ho	165		**ug/L**		1769	0.034
>	Lu	175		**ug/L**		51748	51747.740
	Tl	205	**0.217**	**ug/L**	9.900	530	0.007
	Pb	208	**92.828**	**ug/L**	0.585	212531	4.100
	Bi	209		**ug/L**		3038	0.058
	U	238	**7.829**	**ug/L**	0.852	15497	0.298

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.6		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			93.1		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			91.1		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.7		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429010
Sample Date/Time: Friday, July 03, 2009 19:56:31
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|10|rmj
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429010.189

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**8.726**	ug/L	7.334	4661	0.006
	Be	9	**0.706**	ug/L	9.939	157	0.000
	B	11	**5.965**	ug/L	3.703	1747	0.002
	Na	23	**179.016**	ug/L	7.035	484425	0.583
	Mg	24	**948.227**	ug/L	3.698	1652372	2.078
	Al	27	**4197.347**	ug/L	2.708	10020891	12.595
	P	31	**252.053**	ug/L	0.887	35385	0.040
	K	39	**772.388**	ug/L	4.204	2524882	2.743
	Ca	43	**3983.984**	ug/L	1.298	22204	0.028
>	Sc	45		ug/L		794896	794896.160
	V	51	**8.896**	ug/L	8.094	28154	0.030
	Cr	52	**100.090**	ug/L	1.132	227086	0.282
	Cr	53		ug/L		74246	0.029
	Mn	55	**432.663**	ug/L	0.992	1386951	1.744
	Fe	57	**6510.907**	ug/L	0.886	407065	0.507
	Co	59	**3.024**	ug/L	1.259	7330	0.009
	Ni	60	**42.044**	ug/L	2.065	21077	0.026
	Cu	63		ug/L		103317	0.130
	Cu	65	**93.495**	ug/L	2.752	49449	0.062
	Zn	66	**202.098**	ug/L	0.578	61132	0.488
	Zn	67		ug/L		14455	0.077
	Zn	68		ug/L		44497	0.353
>	Ge	74		ug/L		124874	124874.316
	As	75	**1.254**	ug/L	20.239	453	0.003
	Se	77		ug/L		1925	0.001
	Se	82	**0.202**	ug/L	151.236	9	0.000
	Kr	83		ug/L		53	0.000
	Sr	88	**22.002**	ug/L	0.644	79262	1.451
	Y	89		ug/L		73863	1.353
	Ag	107	**0.673**	ug/L	1.983	955	0.017
	Cd	111	**1.039**	ug/L	1.133	342	0.006
	Cd	114		ug/L		333	0.005
>	In	115		ug/L		54574	54573.587
	Sn	120	**1.866**	ug/L	2.564	2640	0.042
	Sb	121	**0.030**	ug/L	74.657	238	0.001
	Sb	123		ug/L		189	0.001
	Ba	135		ug/L		16069	0.311
	Ba	137	**58.475**	ug/L	0.600	28101	0.544
	Ho	165		ug/L		2159	0.042
>	Lu	175		ug/L		51575	51575.118
	Tl	205	**0.236**	ug/L	7.007	558	0.007
	Pb	208	**48.782**	ug/L	0.551	111495	2.154
	Bi	209		ug/L		2164	0.041
	U	238	**5.318**	ug/L	2.625	10508	0.203

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		98.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		93.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.4			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429014
Sample Date/Time: Friday, July 03, 2009 20:02:27
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|10|rmj
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\232429014.190

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**8.890**	ug/L	5.727	4762	0.006
	Be	9	**0.676**	ug/L	12.591	151	0.000
	B	11	**6.422**	ug/L	2.560	1852	0.002
	Na	23	**154.114**	ug/L	10.101	421504	0.502
	Mg	24	**1672.070**	ug/L	8.644	2921123	3.664
	Al	27	**6494.895**	ug/L	3.755	15542725	19.490
	P	31	**176.315**	ug/L	4.034	25945	0.028
	K	39	**1023.881**	ug/L	7.270	3242273	3.636
	Ca	43	**3756.204**	ug/L	1.118	21002	0.026
>	Sc	45		ug/L		796761	796761.385
	V	51	**10.114**	ug/L	4.671	31508	0.034
	Cr	52	**51.973**	ug/L	1.325	119441	0.147
	Cr	53		ug/L		60943	0.012
	Mn	55	**335.547**	ug/L	0.727	1078492	1.352
	Fe	57	**7363.711**	ug/L	0.474	461030	0.574
	Co	59	**2.174**	ug/L	1.583	5322	0.006
	Ni	60	**22.579**	ug/L	1.502	11372	0.014
	Cu	63		ug/L		48272	0.060
	Cu	65	**43.276**	ug/L	1.417	22983	0.029
	Zn	66	**112.557**	ug/L	0.813	34208	0.272
	Zn	67		ug/L		10282	0.044
	Zn	68		ug/L		25291	0.199
>	Ge	74		ug/L		125115	125115.105
	As	75	**1.003**	ug/L	9.030	366	0.003
	Se	77		ug/L		1970	0.001
	Se	82	**-0.070**	ug/L	632.628	-0	-0.000
	Kr	83		ug/L		54	0.000
	Sr	88	**22.633**	ug/L	0.231	80948	1.492
	Y	89		ug/L		67659	1.248
	Ag	107	**0.270**	ug/L	5.397	394	0.007
	Cd	111	**0.580**	ug/L	21.506	196	0.003
	Cd	114		ug/L		232	0.004
>	In	115		ug/L		54181	54180.596
	Sn	120	**0.913**	ug/L	0.806	1465	0.020
	Sb	121	**-0.018**	ug/L	75.138	190	-0.000
	Sb	123		ug/L		137	-0.000
	Ba	135		ug/L		17900	0.347
	Ba	137	**64.208**	ug/L	1.769	30814	0.598
	Ho	165		ug/L		2003	0.039
>	Lu	175		ug/L		51515	51514.904
	Tl	205	**0.276**	ug/L	1.503	619	0.008
	Pb	208	**30.104**	ug/L	1.320	68862	1.330
	Bi	209		ug/L		1138	0.022
	U	238	**7.396**	ug/L	1.893	14576	0.282

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.4		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			93.2		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			91.1		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.3		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, July 03, 2009 20:08:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 6.191

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.665**	**ug/L**	6.750	27194	0.034
	Be	9	**52.576**	**ug/L**	2.753	11374	0.014
	B	11	**99.941**	**ug/L**	1.517	22016	0.027
	Na	23	**4862.992**	**ug/L**	4.783	12517522	15.839
	Mg	24	**5054.272**	**ug/L**	4.117	8745072	11.074
	Al	27	**5092.406**	**ug/L**	3.855	12069360	15.281
	P	31	**5022.743**	**ug/L**	0.526	630142	0.794
	K	39	**4829.913**	**ug/L**	4.958	13879843	17.150
	Ca	43	**4996.746**	**ug/L**	1.624	27599	0.035
>	Sc	45		**ug/L**		789343	789342.874
	V	51	**49.706**	**ug/L**	1.642	137523	0.169
	Cr	52	**50.674**	**ug/L**	1.173	115436	0.143
	Cr	53		**ug/L**		65391	0.019
	Mn	55	**47.575**	**ug/L**	0.871	152348	0.192
	Fe	57	**4957.183**	**ug/L**	0.624	308697	0.386
	Co	59	**49.669**	**ug/L**	1.047	117306	0.148
	Ni	60	**49.926**	**ug/L**	1.921	24849	0.031
	Cu	63		**ug/L**		51222	0.065
	Cu	65	**47.137**	**ug/L**	2.640	24792	0.031
	Zn	66	**50.678**	**ug/L**	0.571	15663	0.122
	Zn	67		**ug/L**		7924	0.024
	Zn	68		**ug/L**		11788	0.090
>	Ge	74		**ug/L**		126275	126274.896
	As	75	**46.246**	**ug/L**	0.775	16294	0.129
	Se	77		**ug/L**		3644	0.014
	Se	82	**47.991**	**ug/L**	0.635	1620	0.013
	Kr	83		**ug/L**		40	0.000
	Sr	88	**50.314**	**ug/L**	0.433	181023	3.317
	Y	89		**ug/L**		76	0.001
	Ag	107	**50.047**	**ug/L**	1.554	69338	1.271
	Cd	111	**50.974**	**ug/L**	1.318	16014	0.293
	Cd	114		**ug/L**		36272	0.664
>	In	115		**ug/L**		54540	54539.628
	Sn	120	**49.156**	**ug/L**	2.053	60374	1.101
	Sb	121	**47.290**	**ug/L**	6.067	47266	0.863
	Sb	123		**ug/L**		35927	0.656
	Ba	135		**ug/L**		13085	0.257
	Ba	137	**47.994**	**ug/L**	0.869	22736	0.447
	Ho	165		**ug/L**		14	0.000
>	Lu	175		**ug/L**		50829	50829.444
	Tl	205	**48.798**	**ug/L**	2.553	75048	1.473
	Pb	208	**52.131**	**ug/L**	0.519	117398	2.302
	Bi	209		**ug/L**		59	0.001
	U	238	**54.624**	**ug/L**	0.694	105877	2.082

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	103.329				
	Be	9	105.152				
	B	11	99.941				
	Na	23	97.260				
	Mg	24	101.085				
	Al	27	100.840				
	P	31	100.455				
	K	39	96.598				
	Ca	43	99.935				
>	Sc	45		97.5			
	V	51	99.411				
	Cr	52	101.348				
	Cr	53					
	Mn	55	95.150				
	Fe	57	99.144				
	Co	59	99.338				
	Ni	60	99.852				
	Cu	63					
	Cu	65	94.274				
	Zn	66	101.355				
	Zn	67					
	Zn	68					
>	Ge	74		94.1			
	As	75	92.492				
	Se	77					
	Se	82	95.981				
	Kr	83					
	Sr	88	100.629				
	Y	89					
	Ag	107	100.094				
	Cd	111	101.949				
	Cd	114					
>	In	115		91.7			
	Sn	120	98.312				
	Sb	121	94.581				
	Sb	123					
	Ba	135					
	Ba	137	95.988				
	Ho	165					
>	Lu	175		98.0			
	Tl	205	97.596				
	Pb	208	104.262				
	Bi	209					
	U	238	109.249				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, July 03, 2009 20:14:16
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nothtimozr.mth
Dataset File: C:\elandata\Dataset\090702\QC Std 7.192

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.015**	**ug/L**	135.775	55	0.000
	Be	9	**0.006**	**ug/L**	11.063	5	0.000
	B	11	**1.775**	**ug/L**	16.058	849	0.000
	Na	23	**1.538**	**ug/L**	131.891	25691	0.005
	Mg	24	**2.654**	**ug/L**	27.162	6335	0.006
	Al	27	**0.014**	**ug/L**	6007.258	8336	0.000
	P	31	**-2.328**	**ug/L**	57.591	3489	-0.000
	K	39	**0.154**	**ug/L**	3490.367	348882	0.001
	Ca	43	**3.995**	**ug/L**	134.498	260	0.000
>	Sc	45		**ug/L**		806902	806901.838
	V	51	**0.333**	**ug/L**	112.155	5067	0.001
	Cr	52	**0.450**	**ug/L**	2.547	3623	0.001
	Cr	53		**ug/L**		52086	0.000
	Mn	55	**-0.090**	**ug/L**	16.618	730	-0.000
	Fe	57	**-6.271**	**ug/L**	29.397	3456	-0.000
	Co	59	**0.002**	**ug/L**	123.700	155	0.000
	Ni	60	**0.004**	**ug/L**	544.166	52	0.000
	Cu	63		**ug/L**		154	0.000
	Cu	65	**0.006**	**ug/L**	211.388	66	0.000
	Zn	66	**-0.028**	**ug/L**	152.295	211	-0.000
	Zn	67		**ug/L**		5118	0.001
	Zn	68		**ug/L**		436	0.000
>	Ge	74		**ug/L**		128761	128761.053
	As	75	**0.081**	**ug/L**	628.827	46	0.000
	Se	77		**ug/L**		2167	0.002
	Se	82	**-0.120**	**ug/L**	232.376	-2	-0.000
	Kr	83		**ug/L**		38	-0.000
	Sr	88	**0.008**	**ug/L**	24.150	127	0.001
	Y	89		**ug/L**		21	-0.000
	Ag	107	**0.011**	**ug/L**	43.967	38	0.000
	Cd	111	**0.002**	**ug/L**	1252.049	16	0.000
	Cd	114		**ug/L**		38	0.000
>	In	115		**ug/L**		55649	55648.630
	Sn	120	**0.163**	**ug/L**	27.070	570	0.004
	Sb	121	**0.549**	**ug/L**	18.317	770	0.010
	Sb	123		**ug/L**		571	0.007
	Ba	135		**ug/L**		10	-0.000
	Ba	137	**-0.011**	**ug/L**	20.302	18	-0.000
	Ho	165		**ug/L**		10	0.000
>	Lu	175		**ug/L**		51547	51546.682
	Tl	205	**0.358**	**ug/L**	14.669	747	0.011
	Pb	208	**0.027**	**ug/L**	17.170	441	0.001
	Bi	209		**ug/L**		34	0.000
	U	238	**0.041**	**ug/L**	14.715	136	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		99.7			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.3			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Friday, July 03, 2009 22:26:44
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090630\Sample.306
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1488.3	1488.278	37.162	2.5
	Mg	24.0	18195.4	18195.381	135.855	0.7
	Co	58.9	24935.1	24935.144	235.156	0.9
	Rh	102.9	38713.6	38713.586	148.671	0.4
	In	114.9	41965.8	41965.753	388.036	0.9
	Pb	208.0	15113.2	15113.191	223.572	1.5
⌈>	Ba	137.9	33977.5	33977.468	292.365	0.9
⌊	Ba++	69.0	1405.5	0.041	0.001	2.4
⌈>	Ce	139.9	46918.3	46918.328	515.919	1.1
⌊	CeO	155.9	995.8	0.021	0.001	3.1
	Bkgd	220.0	3.7	3.700	1.037	28.0

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
6.50	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	8.8	2990.0
Co	59	21	10.3	38461.4
In	115	21	11.5	49899.7

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	580	2080	0.619
Be	9.0	9.0	2030	2080	0.633
Mg	24.0	24.0	5684	2120	0.553
Mg	25.0	25.1	5954	2080	0.670
Mg	26.0	26.0	6138	2120	0.647
Co	58.9	59.0	14187	2170	0.628
Rh	102.9	103.0	24876	2230	0.678
In	114.9	114.9	27787	2260	0.688
Ce	139.9	139.9	33866	2280	0.750
Pb	206.0	206.0	49912	2420	0.621
Pb	207.0	207.0	50219	2385	0.740
Pb	208.0	208.0	50415	2430	0.723
U	238.1	238.0	57739	2470	0.727

Report Date/Time: Friday, July 03, 2009 22:31:45

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Friday, July 03, 2009 23:57:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\Blank.030

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9		ug/L		2	
Sc	45		ug/L		518461	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 04, 2009 00:00:23
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\Standard 1.031

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**10.000**	**ug/L**	5.734	2906	0.006
>	Sc	45		**ug/L**		509245	509244.751

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 04, 2009 00:02:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\Standard 2.032

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**100.046**	**ug/L**	4.476	28653	0.060
>	Sc	45		**ug/L**		479167	479166.512

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 04, 2009 00:05:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 1.033

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**47.541**	**ug/L**	0.849	14656	0.028
⌊>	Sc	45		**ug/L**		515112	515112.084

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9	95.081				
⌊>	Sc	45		99.4			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 04, 2009 00:08:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 2.034

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.016**	**ug/L**	110.646	7	0.000
>	Sc	45		**ug/L**		500794	500793.774

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		96.6			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 04, 2009 00:10:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 3.035

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.476**	**ug/L**	13.830	150	0.000
>	Sc	45		**ug/L**		518695	518695.369

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[	Be	9	95.262				
[>	Sc	45		100.0			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 04, 2009 00:13:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 4.036

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.077**	**ug/L**	25.467	24	0.000
>	Sc	45		**ug/L**		476049	476048.935

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		91.8			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 04, 2009 00:15:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 5.037

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**17.538**	**ug/L**	2.326	5030	0.010
⌊>	Sc	45		**ug/L**		479172	479172.445

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9	87.688				
Sc	45		92.4			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 00:18:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 6.038

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**48.453**	**ug/L**	10.571	14598	0.029
⌊>	Sc	45		**ug/L**		507966	507966.277

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9	96.906				
Sc	45		98.0			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 00:20:56
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 7.039

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.005**	**ug/L**	130.968	4	0.000
>	Sc	45		**ug/L**		491044	491043.560

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		94.7			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870569
Sample Date/Time: Saturday, July 04, 2009 00:23:32
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\1201870569.040

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.004	ug/L	106.157	3	0.000
Sc	45		ug/L		488739	488738.748

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		94.3			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870574
Sample Date/Time: Saturday, July 04, 2009 00:26:07
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 880941|40|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\1201870574.041

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**22.103**	**ug/L**	3.282	7019	0.013
>	Sc	45		**ug/L**		530694	530694.035

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		102.4			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429001
Sample Date/Time: Saturday, July 04, 2009 00:28:42
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429001.042

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**1.966**	**ug/L**	5.927	568	0.001
⌊>	Sc	45		**ug/L**		481258	481257.750

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		92.8			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870570
Sample Date/Time: Saturday, July 04, 2009 00:31:17
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\1201870570.043

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**1.833**	**ug/L**	4.883	590	0.001
>	Sc	45		**ug/L**		536419	536418.986

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		103.5			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870572
Sample Date/Time: Saturday, July 04, 2009 00:33:52
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\1201870572.044

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	24.734	ug/L	8.324	7500	0.015
>	Sc	45		ug/L		508984	508983.717

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
> Sc	45		98.2			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870573
Sample Date/Time: Saturday, July 04, 2009 00:36:28
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\1201870573.045

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**23.438**	**ug/L**	4.995	7703	0.014
>	Sc	45		**ug/L**		549859	549859.272

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		106.1			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870571
Sample Date/Time: Saturday, July 04, 2009 00:39:03
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 880941|10|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\1201870571.046

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	0.383	ug/L	4.120	117	0.000
>	Sc	45		ug/L		502149	502149.371

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		96.9			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429002
Sample Date/Time: Saturday, July 04, 2009 00:41:39
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429002.047

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.665**	**ug/L**	4.814	1142	0.002
>	Sc	45		**ug/L**		520938	520937.888

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		100.5			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 00:44:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 6.048

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**45.225**	**ug/L**	5.590	14260	0.027
⌊>	Sc	45		**ug/L**		528075	528074.796

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	90.450				
>	Sc	45		101.9			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 00:46:48
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 7.049

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.010**	**ug/L**	71.675	5	0.000
>	Sc	45		**ug/L**		516049	516049.433

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		99.5			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429003
Sample Date/Time: Saturday, July 04, 2009 00:49:24
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429003.050

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	2.055	ug/L	4.510	656	0.001
>	Sc	45		ug/L		532337	532337.363

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		102.7			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429004
Sample Date/Time: Saturday, July 04, 2009 00:52:00
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429004.051

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.847**	**ug/L**	4.072	901	0.002
>	Sc	45		**ug/L**		527645	527644.683

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		101.8			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429005
Sample Date/Time: Saturday, July 04, 2009 00:54:36
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429005.052

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.164**	**ug/L**	2.185	993	0.002
>	Sc	45		**ug/L**		523299	523299.060

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		100.9			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429006
Sample Date/Time: Saturday, July 04, 2009 00:57:11
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429006.053

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.146**	**ug/L**	8.312	698	0.001
>	Sc	45		**ug/L**		544078	544077.961

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		104.9			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429007
Sample Date/Time: Saturday, July 04, 2009 00:59:47
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429007.054

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	3.083	ug/L	7.468	961	0.002
Sc	45		ug/L		520540	520540.405

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		100.4			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429008
Sample Date/Time: Saturday, July 04, 2009 01:02:23
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429008.055

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.075**	**ug/L**	3.908	629	0.001
>	Sc	45		**ug/L**		505024	505023.712

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		97.4			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429009
Sample Date/Time: Saturday, July 04, 2009 01:04:59
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429009.056

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	**2.690**	**ug/L**	4.413	862	0.002
Sc	45		**ug/L**		534512	534511.658

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		103.1			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 01:07:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 6.057

Concentration Results

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	**45.099**	**ug/L**	2.497	14160	0.027
Sc	45		**ug/L**		524948	524948.320

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9	90.199				
⌊>	Sc	45		101.3			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 01:10:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 7.058

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	0.010	ug/L	74.040	6	0.000
⌊>	Sc	45		ug/L		555528	555527.863

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		107.1			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Saturday, July 04, 2009 01:34:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\Blank.067

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		ug/L		5	
>	Sc	45		ug/L		560802	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 04, 2009 01:37:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\Standard 1.068

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**10.000**	**ug/L**	8.611	2730	0.005
⌊>	Sc	45		**ug/L**		571923	571922.579

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 04, 2009 01:39:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\Standard 2.069

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**100.029**	**ug/L**	3.184	26985	0.049
⌊>	Sc	45		**ug/L**		548516	548515.540

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 04, 2009 01:42:23
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 1.070

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.336**	**ug/L**	1.668	14066	0.025
>	Sc	45		**ug/L**		567835	567835.024

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9	100.672				
Sc	45		101.3			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 04, 2009 01:44:58
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 2.071

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**0.008**	**ug/L**	33.480	7	0.000
⌊>	Sc	45		**ug/L**		569416	569416.059

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		101.5			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 04, 2009 01:47:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 3.072

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.454**	**ug/L**	4.752	134	0.000
>	Sc	45		**ug/L**		576861	576861.462

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9	90.871				
⌊>	Sc	45		102.9			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 04, 2009 01:50:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 4.073

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	**0.072**	**ug/L**	15.572	23	0.000
Sc	45		**ug/L**		512798	512798.373

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		91.4			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 04, 2009 01:52:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 5.074

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**20.200**	**ug/L**	1.364	5123	0.010
>	Sc	45		**ug/L**		515002	515002.331

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9	100.998				
⌊>	Sc	45		91.8			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 01:55:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 6.075

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	**53.393**	**ug/L**	2.758	14039	0.026
Sc	45		**ug/L**		534476	534476.062

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9	106.785				
⌊>	Sc	45		95.3			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 01:57:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 7.076

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.010**	**ug/L**	90.334	8	0.000
>	Sc	45		**ug/L**		573162	573162.491

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		102.2			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429010
Sample Date/Time: Saturday, July 04, 2009 02:00:26
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429010.077

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.478**	**ug/L**	3.855	956	0.002
>	Sc	45		**ug/L**		557115	557114.831

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		99.3			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429011
Sample Date/Time: Saturday, July 04, 2009 02:03:02
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429011.078

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.489**	**ug/L**	5.101	690	0.001
>	Sc	45		**ug/L**		559138	559137.845

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9					
⌊>	Sc	45		99.7			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429012
Sample Date/Time: Saturday, July 04, 2009 02:05:39
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429012.079

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**2.365**	**ug/L**	5.006	670	0.001
⌊>	Sc	45		**ug/L**		571875	571875.118

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		102.0			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429013
Sample Date/Time: Saturday, July 04, 2009 02:08:15
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429013.080

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	**3.428**	**ug/L**	11.347	996	0.002
Sc	45		**ug/L**		591340	591339.951

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		105.4			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429014
Sample Date/Time: Saturday, July 04, 2009 02:10:51
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429014.081

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**2.814**	**ug/L**	4.141	798	0.001
⌊>	Sc	45		**ug/L**		573925	573924.829

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		102.3			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232429015
Sample Date/Time: Saturday, July 04, 2009 02:13:28
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880941|2|rmj
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\232429015.082

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**4.025**	**ug/L**	4.336	1166	0.002
>	Sc	45		**ug/L**		587312	587311.721

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		104.7			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 02:16:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 6.083

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**47.073**	**ug/L**	5.047	13644	0.023
⌊>	Sc	45		**ug/L**		590183	590183.096

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9	94.147				
⌊>	Sc	45		105.2			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 02:18:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be.mth
Dataset File: C:\elandata\Dataset\090703\QC Std 7.084

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	-0.000	ug/L	7616.553	5	-0.000
⌊>	Sc	45		ug/L		581771	581770.681

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		103.7			

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL
Method Description: 7471A, JLM04 ANALYST JXL1
Element: Hg

Date: 07/13/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 071309S1.SIF Results Data Set Name: 071309S2

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/13/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0026	0.0026	09:36:04	No
2			0.0025	0.0025	09:36:39	No
Mean:			0.0025			
SD :			0.0001			
%RSD:			2.0116			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/13/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0047	0.0072	09:38:01	No
2			0.0046	0.0071	09:38:35	No
Mean:			0.0046			
SD :			0.0001			
%RSD:			1.1672			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.02310
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/13/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0089	0.0114	09:39:58	No
2			0.0089	0.0115	09:40:33	No
Mean:			0.0089			
SD :			0.0001			
%RSD:			0.5682			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99055 Slope: 0.01750
Intercept : 0.00042

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/13/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0294	0.0320	09:41:58	No
2			0.0290	0.0315	09:42:33	No
Mean:			0.0292			
SD :			0.0003			
%RSD:			1.1424			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99775 Slope: 0.01416
Intercept : 0.00112

==========

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/13/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0650	0.0676	09:43:58	No
2			0.0670	0.0695	09:44:32	No
Mean:			0.0660			
SD :			0.0014			
%RSD:			2.0933			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99895 Slope: 0.01299
Intercept : 0.00174

==========

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/13/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1277	0.1302	09:45:59	No
2			0.1281	0.1306	09:46:33	No
Mean:			0.1279			
SD :			0.0003			
%RSD:			0.1987			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99964 Slope: 0.01265
Intercept : 0.00213

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0025	---	----	----	----
S0.2	0.0046	0.200	0.197	0.0001	1.2
S0.5	0.0089	0.500	0.535	0.0001	0.6
S2.0	0.0292	2.000	2.141	0.0003	1.1
S5.0	0.0660	5.000	5.051	0.0014	2.1
S10	0.1279	10.000	9.945	0.0003	0.2
Calib Blank	0.0025	---	----	----	----

Correlation Coefficient: 0.99964 Slope: 0.01265 Intercept: 0.0021

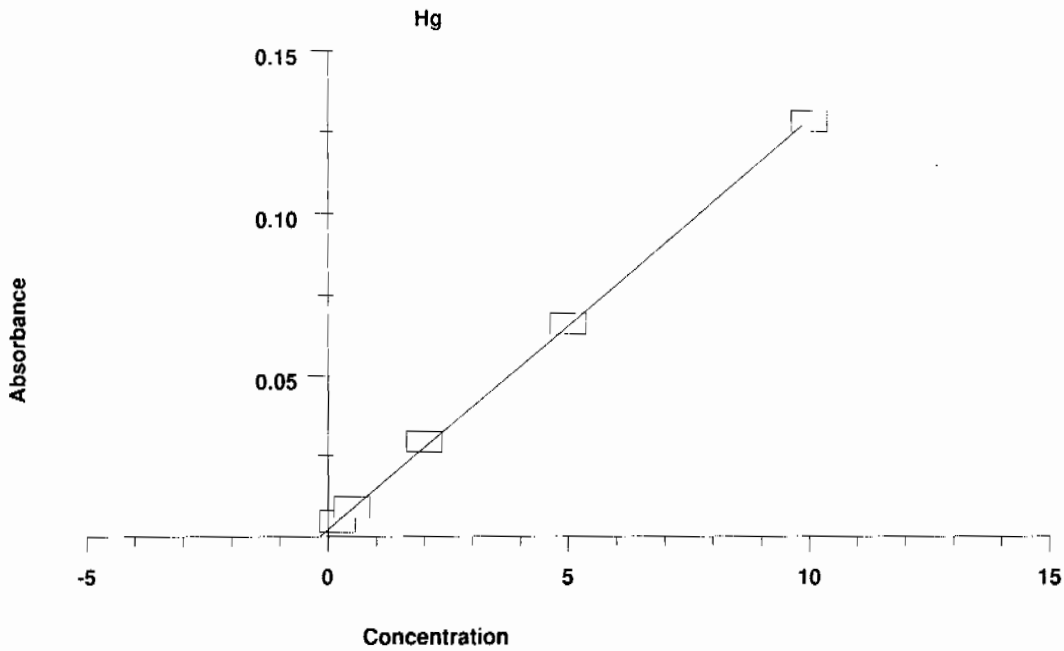

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/13/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.179	5.179	0.0676	0.0702	09:48:02	No
2	5.264	5.264	0.0687	0.0712	09:48:37	No
Mean:	5.221	5.221	0.0682			
SD :	0.0602	0.0602	0.0008			
%RSD:	1.2	1.2	1.1171			

QC value within specified limits.

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/13/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.117	-0.117	0.0007	0.0032	09:49:59	No
2	-0.126	-0.126	0.0005	0.0031	09:50:34	No
Mean:	-0.121	-0.121	0.0006			
SD :	0.0064	0.0064	0.0001			
%RSD:	5.3	5.3	13.7540			

QC value within specified limits.

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/13/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.156	0.156	0.0041	0.0066	09:51:56	No
2	0.135	0.135	0.0038	0.0064	09:52:31	No
Mean:	0.146	0.146	0.0040			
SD :	0.0146	0.0146	0.0002			
%RSD:	10.0	10.0	4.6526			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	09:53:56	No
2	5.219	5.219	0.0681	0.0707	09:54:31	No
Mean:	5.160	5.160	0.0674			
SD :	0.0831	0.0831	0.0011			
%RSD:	1.6	1.6	1.5602			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.014	0.014	0.0023	0.0048	09:55:59	No
2	0.023	0.023	0.0024	0.0050	09:56:34	No
Mean:	0.019	0.019	0.0024			
SD :	0.0063	0.0063	0.0001			
%RSD:	33.8	33.8	3.3712			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/13/2009
Sample ID: 1201870737|i||880997|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.145	-0.145	0.0003	0.0028	09:58:00	No
2	-0.154	-0.154	0.0002	0.0027	09:58:35	No
Mean:	-0.150	-0.150	0.0002			
SD :	0.0066	0.0066	0.0001			
%RSD:	4.4	4.4	35.8425			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/13/2009
Sample ID: 1201870738|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.783	3.783	0.0500	0.0525	10:00:01	No
2	3.816	3.816	0.0504	0.0529	10:00:35	No
Mean:	3.800	3.800	0.0502			
SD :	0.0230	0.0230	0.0003			
%RSD:	0.6	0.6	0.5806			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/13/2009
Sample ID: 232424001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.002	-0.002	0.0021	0.0046	10:02:01	No
2	-0.007	-0.007	0.0020	0.0046	10:02:35	No
Mean:	-0.005	-0.005	0.0021			
SD :	0.0040	0.0040	0.0001			
%RSD:	86.6	86.6	2.4535			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/13/2009
Sample ID: 232426001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.165	0.165	0.0042	0.0067	10:04:02	No
2	0.152	0.152	0.0040	0.0066	10:04:37	No
Mean:	0.158	0.158	0.0041			
SD :	0.0091	0.0091	0.0001			
%RSD:	5.8	5.8	2.8011			

Element: Hg Seq. No.: 16 AS Loc.: 16 Date: 07/13/2009
Sample ID: 232426002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.172	0.172	0.0043	0.0068	10:06:05	No
2	0.187	0.187	0.0045	0.0070	10:06:40	No
Mean:	0.179	0.179	0.0044			
SD :	0.0105	0.0105	0.0001			
%RSD:	5.9	5.9	3.0327			

Element: Hg Seq. No.: 17 AS Loc.: 17 Date: 07/13/2009
Sample ID: 232429001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.333	0.333	0.0063	0.0089	10:08:04	No
2	0.315	0.315	0.0061	0.0086	10:08:39	No
Mean:	0.324	0.324	0.0062			
SD :	0.0126	0.0126	0.0002			
%RSD:	3.9	3.9	2.5584			

Element: Hg Seq. No.: 18 AS Loc.: 18 Date: 07/13/2009
Sample ID: 1201870739|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.364	0.364	0.0067	0.0093	10:09:59	No
2	0.357	0.357	0.0066	0.0092	10:10:34	No
Mean:	0.361	0.361	0.0067			
SD :	0.0054	0.0054	0.0001			
%RSD:	1.5	1.5	1.0164			

Element: Hg Seq. No.: 19 AS Loc.: 19 Date: 07/13/2009
Sample ID: 1201870740|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.406	2.406	0.0326	0.0351	10:11:56	No
2	2.313	2.313	0.0314	0.0339	10:12:31	No
Mean:	2.359	2.359	0.0320			
SD :	0.0656	0.0656	0.0008			
%RSD:	2.8	2.8	2.5958			

Element: Hg Seq. No.: 20 AS Loc.: 20 Date: 07/13/2009
Sample ID: 1201870746|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.476	2.476	0.0334	0.0360	10:13:53	No
2	2.536	2.536	0.0342	0.0367	10:14:28	No
Mean:	2.506	2.506	0.0338			
SD :	0.0428	0.0428	0.0005			

%RSD: 1.7 1.7 1.5996

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/13/2009
Sample ID: 1201870745|i|S||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.025	0.025	0.0024	0.0050	10:15:50	No
2	-0.002	-0.002	0.0021	0.0046	10:16:25	No
Mean:	0.012	0.012	0.0023			
SD :	0.0185	0.0185	0.0002			
%RSD:	159.8	159.8	10.3056			

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	10:17:50	No
2	4.942	4.942	0.0646	0.0672	10:18:24	No
Mean:	5.022	5.022	0.0656			
SD :	0.1122	0.1122	0.0014			
%RSD:	2.2	2.2	2.1625			

QC value within specified limits.

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.043	-0.043	0.0016	0.0041	10:19:52	No
2	-0.052	-0.052	0.0015	0.0040	10:20:27	No
Mean:	-0.048	-0.048	0.0015			
SD :	0.0057	0.0057	0.0001			
%RSD:	11.9	11.9	4.7042			

QC value within specified limits.

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/13/2009
Sample ID: 232429002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.240	0.240	0.0052	0.0077	10:21:52	No
2	0.235	0.235	0.0051	0.0076	10:22:27	No
Mean:	0.238	0.238	0.0051			
SD :	0.0035	0.0035	0.0000			
%RSD:	1.5	1.5	0.8527			

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/13/2009
Sample ID: 232429003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.189	0.189	0.0045	0.0070	10:23:51	No
2	0.176	0.176	0.0044	0.0069	10:24:26	No
Mean:	0.183	0.183	0.0044			
SD :	0.0087	0.0087	0.0001			
%RSD:	4.8	4.8	2.4733			

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/13/2009
Sample ID: 232429004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.048	-0.048	0.0015	0.0041	10:25:50	No
2	-0.037	-0.037	0.0017	0.0042	10:26:25	No
Mean:	-0.043	-0.043	0.0016			
SD :	0.0082	0.0082	0.0001			
%RSD:	19.2	19.2	6.5051			

Element: Hg Seq. No.: 27 AS Loc.: 25 Date: 07/13/2009
Sample ID: 232429005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.397	0.397	0.0071	0.0097	10:27:49	No
2	0.371	0.371	0.0068	0.0094	10:28:24	No
Mean:	0.384	0.384	0.0070			
SD :	0.0180	0.0180	0.0002			
%RSD:	4.7	4.7	3.2608			

Element: Hg Seq. No.: 28 AS Loc.: 26 Date: 07/13/2009
Sample ID: 232429006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.093	0.093	0.0033	0.0058	10:29:49	No
2	0.080	0.080	0.0031	0.0057	10:30:24	No
Mean:	0.087	0.087	0.0032			
SD :	0.0094	0.0094	0.0001			
%RSD:	10.9	10.9	3.6998			

Element: Hg Seq. No.: 29 AS Loc.: 27 Date: 07/13/2009
Sample ID: 232429007|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.201	0.201	0.0047	0.0072	10:31:49	No
2	0.191	0.191	0.0045	0.0071	10:32:23	No
Mean:	0.196	0.196	0.0046			
SD :	0.0069	0.0069	0.0001			
%RSD:	3.5	3.5	1.8813			

Element: Hg Seq. No.: 30 AS Loc.: 28 Date: 07/13/2009
Sample ID: 232429008|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.149	0.149	0.0040	0.0065	10:33:50	No
2	0.145	0.145	0.0040	0.0065	10:34:25	No
Mean:	0.147	0.147	0.0040			
SD :	0.0033	0.0033	0.0000			
%RSD:	2.2	2.2	1.0487			

Element: Hg Seq. No.: 31 AS Loc.: 29 Date: 07/13/2009
Sample ID: 232429009|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.730	0.730	0.0114	0.0139	10:35:51	No
2	0.712	0.712	0.0111	0.0137	10:36:26	No
Mean:	0.721	0.721	0.0112			
SD :	0.0126	0.0126	0.0002			

%RSD: 1.7 1.7 1.4172

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Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/13/2009
Sample ID: 232429010|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.233	0.233	0.0051	0.0076	10:37:52	No
2	0.223	0.223	0.0049	0.0075	10:38:27	No
Mean:	0.228	0.228	0.0050			
SD :	0.0069	0.0069	0.0001			
%RSD:	3.0	3.0	1.7516			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/13/2009
Sample ID: 232429011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.044	0.044	0.0027	0.0052	10:39:54	No
2	0.039	0.039	0.0026	0.0052	10:40:28	No
Mean:	0.042	0.042	0.0027			
SD :	0.0041	0.0041	0.0001			
%RSD:	9.8	9.8	1.9407			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.042	5.042	0.0659	0.0684	10:41:55	No
2	5.045	5.045	0.0659	0.0685	10:42:29	No
Mean:	5.044	5.044	0.0659			
SD :	0.0015	0.0015	0.0000			
%RSD:						

QC value within specified limits.

==========

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.064	-0.064	0.0013	0.0039	10:43:58	No
2	-0.060	-0.060	0.0014	0.0039	10:44:32	No
Mean:	-0.062	-0.062	0.0013			
SD :	0.0028	0.0028	0.0000			
%RSD:	4.5	4.5	2.6158			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/13/2009
Sample ID: 232429012|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.371	0.371	0.0068	0.0093	10:45:57	No
2	0.372	0.372	0.0068	0.0094	10:46:32	No
Mean:	0.371	0.371	0.0068			
SD :	0.0010	0.0010	0.0000			
%RSD:	0.3	0.3	0.1822			

==========

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/13/2009
Sample ID: 232429013|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.093	0.093	0.0033	0.0058	10:47:52	No
2	0.091	0.091	0.0033	0.0058	10:48:27	No
Mean:	0.092	0.092	0.0033			
SD :	0.0018	0.0018	0.0000			
%RSD:	1.9	1.9	0.6877			

Element: Hg Seq. No.: 38 AS Loc.: 34 Date: 07/13/2009
Sample ID: 232429014|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.295	0.295	0.0059	0.0084	10:49:47	No
2	0.296	0.296	0.0059	0.0084	10:50:22	No
Mean:	0.296	0.296	0.0059			
SD :	0.0013	0.0013	0.0000			
%RSD:	0.4	0.4	0.2724			

Element: Hg Seq. No.: 39 AS Loc.: 35 Date: 07/13/2009
Sample ID: 232429015|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.250	0.250	0.0053	0.0078	10:51:43	No
2	0.239	0.239	0.0052	0.0077	10:52:18	No
Mean:	0.245	0.245	0.0052			
SD :	0.0073	0.0073	0.0001			
%RSD:	3.0	3.0	1.7687			

Element: Hg Seq. No.: 40 AS Loc.: 36 Date: 07/13/2009
Sample ID: 1201873031|i||881913|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.032	-0.032	0.0017	0.0043	10:53:40	No
2	-0.031	-0.031	0.0017	0.0043	10:54:15	No
Mean:	-0.031	-0.031	0.0017			
SD :	0.0010	0.0010	0.0000			
%RSD:	3.1	3.1	0.7150			

Element: Hg Seq. No.: 41 AS Loc.: 37 Date: 07/13/2009
Sample ID: 1201873032|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.475	3.475	0.0461	0.0486	10:55:38	No
2	3.365	3.365	0.0447	0.0472	10:56:13	No
Mean:	3.420	3.420	0.0454			
SD :	0.0778	0.0778	0.0010			
%RSD:	2.3	2.3	2.1674			

Element: Hg Seq. No.: 42 AS Loc.: 38 Date: 07/13/2009
Sample ID: 232504001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.116	0.116	0.0036	0.0061	10:57:35	No
2	0.112	0.112	0.0035	0.0061	10:58:09	No
Mean:	0.114	0.114	0.0036			
SD :	0.0025	0.0025	0.0000			

%RSD: 2.2 2.2 0.9016

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Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 07/13/2009
Sample ID: 232504002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.105	0.105	0.0035	0.0060	10:59:32	No
2	0.090	0.090	0.0033	0.0058	11:00:07	No
Mean:	0.097	0.097	0.0034			
SD :	0.0108	0.0108	0.0001			
%RSD:	11.0	11.0	4.0497			

==========

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 07/13/2009
Sample ID: 232504003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.390	0.390	0.0071	0.0096	11:01:30	No
2	0.372	0.372	0.0068	0.0094	11:02:05	No
Mean:	0.381	0.381	0.0069			
SD :	0.0123	0.0123	0.0002			
%RSD:	3.2	3.2	2.2337			

==========

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 07/13/2009
Sample ID: 232504004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.166	0.166	0.0042	0.0068	11:03:29	No
2	0.150	0.150	0.0040	0.0066	11:04:04	No
Mean:	0.158	0.158	0.0041			
SD :	0.0114	0.0114	0.0001			
%RSD:	7.2	7.2	3.4993			

==========

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.130	5.130	0.0670	0.0695	11:05:30	No
2	5.073	5.073	0.0663	0.0688	11:06:05	No
Mean:	5.101	5.101	0.0666			
SD :	0.0403	0.0403	0.0005			
%RSD:	0.8	0.8	0.7652			

QC value within specified limits.

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Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.056	-0.056	0.0014	0.0040	11:07:33	No
2	-0.058	-0.058	0.0014	0.0039	11:08:08	No
Mean:	-0.057	-0.057	0.0014			
SD :	0.0014	0.0014	0.0000			
%RSD:	2.4	2.4	1.2413			

QC value within specified limits.

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Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 07/13/2009
Sample ID: 232504005|i|||

Miscellaneous

Prep LogBook

Analyst: FGA Verified by:_____

Batch: 880927

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870538	UI652380	.504	g
MS	1201870536	UI090622-01	.25	mL
MS	1201870536	UI090622-06	.25	mL
MSD	1201870537	UI090622-01	.25	mL
MSD	1201870537	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870533		SW846 3050B	30-JUN-2009 14:00	0.502 g	50 mL	99.60159	SOIL
LCS	1201870538		SW846 3050B	30-JUN-2009 14:00	0.504 g	50 mL	99.20635	SOIL
SAMPLE	232429001		SW846 3050B	30-JUN-2009 14:00	0.52 g	50 mL	96.15385	SOIL
DUP	1201870534	232429001	SW846 3050B	30-JUN-2009 14:00	0.506 g	50 mL	98.81423	SOIL
SDILT	1201870535	232429001	SW846 3050B	30-JUN-2009 14:00	0.52 g	50 mL	96.15385	SOIL
MS	1201870536	232429001	SW846 3050B	30-JUN-2009 14:00	0.524 g	50 mL	95.41985	SOIL
MSD	1201870537	232429001	SW846 3050B	30-JUN-2009 14:00	0.505 g	50 mL	99.0099	SOIL
SAMPLE	232429002		SW846 3050B	30-JUN-2009 14:00	0.509 g	50 mL	98.23183	SOIL
SAMPLE	232429003		SW846 3050B	30-JUN-2009 14:00	0.521 g	50 mL	95.96929	SOIL
SAMPLE	232429004		SW846 3050B	30-JUN-2009 14:00	0.512 g	50 mL	97.65625	SOIL
SAMPLE	232429005		SW846 3050B	30-JUN-2009 14:00	0.5 g	50 mL	100	SOIL
SAMPLE	232429006		SW846 3050B	30-JUN-2009 14:00	0.51 g	50 mL	98.03922	SOIL
SAMPLE	232429007		SW846 3050B	30-JUN-2009 14:00	0.5 g	50 mL	100	SOIL
SAMPLE	232429008		SW846 3050B	30-JUN-2009 14:00	0.501 g	50 mL	99.8004	SOIL
SAMPLE	232429009		SW846 3050B	30-JUN-2009 14:00	0.525 g	50 mL	95.2381	SOIL
SAMPLE	232429010		SW846 3050B	30-JUN-2009 14:00	0.505 g	50 mL	99.0099	SOIL
SAMPLE	232429011		SW846 3050B	30-JUN-2009 14:00	0.501 g	50 mL	99.8004	SOIL
SAMPLE	232429012		SW846 3050B	30-JUN-2009 14:00	0.502 g	50 mL	99.60159	SOIL
SAMPLE	232429013		SW846 3050B	30-JUN-2009 14:00	0.519 g	50 mL	96.33911	SOIL
SAMPLE	232429014		SW846 3050B	30-JUN-2009 14:00	0.509 g	50 mL	98.23183	SOIL
SAMPLE	232429015		SW846 3050B	30-JUN-2009 14:00	0.503 g	50 mL	99.40358	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments Brown, fine soil.

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 880940

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870574	UI647733-01	.511	g
MS	1201870572	UI090611-A	.5	mL
MS	1201870572	UI090611-B	.5	mL
MSD	1201870573	UI090611-A	.5	mL
MSD	1201870573	UI090611-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870569		SW846 3050B	30-JUN-2009 15:47	0.509 g	50 mL	98.23183	SOIL
LCS	1201870574		SW846 3050B	30-JUN-2009 15:47	0.511 g	50 mL	97.84736	SOIL
SAMPLE	232429001		SW846 3050B	30-JUN-2009 15:47	0.512 g	50 mL	97.65625	SOIL
DUP	1201870570	232429001	SW846 3050B	30-JUN-2009 15:47	0.504 g	50 mL	99.20635	SOIL
SDILT	1201870571	232429001	SW846 3050B	30-JUN-2009 15:47	0.512 g	50 mL	97.65625	SOIL
MS	1201870572	232429001	SW846 3050B	30-JUN-2009 15:47	0.513 g	50 mL	97.46589	SOIL
MSD	1201870573	232429001	SW846 3050B	30-JUN-2009 15:47	0.5 g	50 mL	100	SOIL
SAMPLE	232429002		SW846 3050B	30-JUN-2009 15:47	0.512 g	50 mL	97.65625	SOIL
SAMPLE	232429003		SW846 3050B	30-JUN-2009 15:47	0.509 g	50 mL	98.23183	SOIL
SAMPLE	232429004		SW846 3050B	30-JUN-2009 15:47	0.525 g	50 mL	95.2381	SOIL
SAMPLE	232429005		SW846 3050B	30-JUN-2009 15:47	0.506 g	50 mL	98.81423	SOIL
SAMPLE	232429006		SW846 3050B	30-JUN-2009 15:47	0.502 g	50 mL	99.60159	SOIL
SAMPLE	232429007		SW846 3050B	30-JUN-2009 15:47	0.504 g	50 mL	99.20635	SOIL
SAMPLE	232429008		SW846 3050B	30-JUN-2009 15:47	0.521 g	50 mL	95.96929	SOIL
SAMPLE	232429009		SW846 3050B	30-JUN-2009 15:47	0.503 g	50 mL	99.40358	SOIL
SAMPLE	232429010		SW846 3050B	30-JUN-2009 15:47	0.505 g	50 mL	99.0099	SOIL
SAMPLE	232429011		SW846 3050B	30-JUN-2009 15:47	0.522 g	50 mL	95.78544	SOIL
SAMPLE	232429012		SW846 3050B	30-JUN-2009 15:47	0.502 g	50 mL	99.60159	SOIL
SAMPLE	232429013		SW846 3050B	30-JUN-2009 15:47	0.509 g	50 mL	98.23183	SOIL
SAMPLE	232429014		SW846 3050B	30-JUN-2009 15:47	0.516 g	50 mL	96.89922	SOIL
SAMPLE	232429015		SW846 3050B	30-JUN-2009 15:47	0.511 g	50 mL	97.84736	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments sample#232429001 is a brown, fine soil.

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 880994

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870738	UI031809A	.203	g
MS	1201870740	WHG090710-14	.3	mL
MSD	1201870746	WHG090710-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870737		SW846 7471A Prep	10-JUL-2009 14:20	0.512 g	30 mL	58.59375	SOIL
LCS	1201870738		SW846 7471A Prep	10-JUL-2009 14:20	0.203 g	30 mL	147.78325	SOIL
SAMPLE	232424001		SW846 7471A Prep	10-JUL-2009 14:20	0.523 g	30 mL	57.36138	SOIL
SAMPLE	232426001		SW846 7471A Prep	10-JUL-2009 14:20	0.6 g	30 mL	50	SOIL
SAMPLE	232426002		SW846 7471A Prep	10-JUL-2009 14:20	0.516 g	30 mL	58.13953	SOIL
SAMPLE	232429001		SW846 7471A Prep	10-JUL-2009 14:20	0.553 g	30 mL	54.24955	SOIL
DUP	1201870739	232429001	SW846 7471A Prep	10-JUL-2009 14:20	0.581 g	30 mL	51.63511	SOIL
MS	1201870740	232429001	SW846 7471A Prep	10-JUL-2009 14:20	0.541 g	30 mL	55.45287	SOIL
MSD	1201870746	232429001	SW846 7471A Prep	10-JUL-2009 14:20	0.573 g	30 mL	52.35602	SOIL
SDILT	1201870745	232429001	SW846 7471A Prep	10-JUL-2009 14:20	0.553 g	30 mL	54.24955	SOIL
SAMPLE	232429002		SW846 7471A Prep	10-JUL-2009 14:20	0.537 g	30 mL	55.86592	SOIL
SAMPLE	232429003		SW846 7471A Prep	10-JUL-2009 14:20	0.505 g	30 mL	59.40594	SOIL
SAMPLE	232429004		SW846 7471A Prep	10-JUL-2009 14:20	0.574 g	30 mL	52.26481	SOIL
SAMPLE	232429005		SW846 7471A Prep	10-JUL-2009 14:20	0.53 g	30 mL	56.60377	SOIL
SAMPLE	232429006		SW846 7471A Prep	10-JUL-2009 14:20	0.576 g	30 mL	52.08333	SOIL
SAMPLE	232429007		SW846 7471A Prep	10-JUL-2009 14:20	0.579 g	30 mL	51.81347	SOIL
SAMPLE	232429008		SW846 7471A Prep	10-JUL-2009 14:20	0.559 g	30 mL	53.66726	SOIL
SAMPLE	232429009		SW846 7471A Prep	10-JUL-2009 14:20	0.5 g	30 mL	60	SOIL
SAMPLE	232429010		SW846 7471A Prep	10-JUL-2009 14:20	0.542 g	30 mL	55.35055	SOIL
SAMPLE	232429011		SW846 7471A Prep	10-JUL-2009 14:20	0.563 g	30 mL	53.28597	SOIL
SAMPLE	232429012		SW846 7471A Prep	10-JUL-2009 14:20	0.569 g	30 mL	52.72408	SOIL
SAMPLE	232429013		SW846 7471A Prep	10-JUL-2009 14:20	0.558 g	30 mL	53.76344	SOIL
SAMPLE	232429014		SW846 7471A Prep	10-JUL-2009 14:20	0.567 g	30 mL	52.91005	SOIL
SAMPLE	232429015		SW846 7471A Prep	10-JUL-2009 14:20	0.535 g	30 mL	56.07477	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution
1144356-C	2 mL	Hg reducing agent
WHG090710-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090710-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5

Comments Sample 232429001 consist of light brown, fine soil.
Digestion Start Date: 10-JUL-09 14:20
Digestion End Date: 10-JUL-09 14:50

Prep LogBook

WHG090710-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090710-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090710-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090710-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 707927
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
03-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
880928	See Below		

Potentially affected work order(s)(SDG): 232429(09-2478)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201870536MS 2. Failed RPD for DUP: QC 1201870534DUP 3. Failed Recovery for MSD/PSD: QC 1201870537MSD	1. The matrix spike recovery failed outside of the control limits for calcium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The sample and sample duplicate % RPD failed outside the control limits for aluminum,barium and calcium due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike duplicate recovery failed outside of the control limits for barium and calcium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Helen Camello 03-JUL-09

Data Validator/Group Leader:

Louise Smith 06-JUL-09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 708123
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
04-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3050B/6020	Solid	LANL
Batch ID:	**Sample Numbers:**		
880941	See Below		

Potentially affected work order(s)(SDG): 232429(09-2478)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201870572MS 2. Failed Recovery for MSD/PSD: QC 1201870573MSD	The matrix spike (matrix spike duplicate) recovery failed outside of the control limits for As, Tl and Se due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:
Rose Jenkins 04-JUL-09

Data Validator/Group Leader:
Paul Boyd 05-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID:	UI081025-40	**Opened:**	08-JAN-09	**Amount :**	500 mL
Name:	SECOND SOURCE STD -1	**Received:**	25-OCT-08	**Catalog Number :**	SGELMX38-500N
Type:	Source Material	**Expires:**	31-OCT-09	**Lot Number :**	4810406
Employee:	Helen Camello			**Solvent :**	5%HNO3
Supplier:	RICCA				

Description: SECOND SOURCE STD #1A 5%HNO3

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID:	UI081025-41	**Opened:**	08-JAN-09	**Amount :**	500 mL
Name:	SECOND SOURCE STD -1	**Received:**	25-OCT-08	**Catalog Number :**	SGELMX39-500B
Type:	Source Material	**Expires:**	31-OCT-09	**Lot Number :**	4810407
Employee:	Helen Camello			**Solvent :**	5%HNO3,TR.HF
Supplier:	RICCA				

Description: SECOND SOURCE STD #1B

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID:	UI090209-42	**Opened:**	27-FEB-09	**Amount :**	500 mL
Name:	SI 1000mg/L	**Received:**	09-FEB-09	**Catalog Number :**	060014-02-03
Type:	Source Material	**Expires:**	28-FEB-10	**Lot Number :**	1014829
Employee:	Helen Camello			**Solvent :**	0.3%H2O(NH4)2SiF6
Supplier:	o2si				

Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6

Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Standard Logbook

Serial ID: UI090226-60 **Opened:** 26-FEB-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 26-FEB-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 26-FEB-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI090226-61 **Opened:** 26-FEB-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 26-FEB-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 26-FEB-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-11 **Opened:** 10-JUN-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 10-JUN-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 10-JUN-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Standard Logbook

Serial ID: UI090610-49.14 **Opened:** 02-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 03-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090611-A **Opened:** 11-JUN-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 11-JUN-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 11-JUN-10
Employee: Francena Armstrong
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L

Analyte	Concentration	Analyte	Concentration
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090611-B **Opened:** 11-JUN-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 11-JUN-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 11-JUN-10
Employee: Francena Armstrong
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI

Standard Logbook

Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Standard Logbook

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI647733-01 **Opened:** 02-APR-07 **Amount :** 80 g
Name: ICPMSSOILSRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis
Supplier: ERA
Description: ICPMS Soil LCS (Reference)
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	8270 mg/kg	Antimony	55.8 mg/kg
Arsenic	255 mg/kg	Barium	469 mg/kg
Beryllium	86.4 mg/kg	Boron	138 mg/kg

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Cadmium	119 mg/kg	Calcium	3760 mg/kg
Chromium	71.2 mg/kg	Cobalt	79.6 mg/kg
Copper	96.2 mg/kg	Iron	13200 mg/kg
Lead	169 mg/kg	Lithium	8.01 mg/kg
Magnesium	2990 mg/kg	Manganese	364 mg/kg
Mercury	4.18 mg/kg	Molybdenum	79.6 mg/kg
Nickel	101 mg/kg	Phosphorous	752 mg/kg
Potassium	2420 mg/kg	Selenium	171 mg/kg
Silver	116 mg/kg	Sodium	575 mg/kg
Strontium	144 mg/kg	Thallium	203 mg/kg
Thorium	17.2 mg/kg	Titanium	255 mg/kg
Uranium	2.12 mg/kg	Uranium-235	.0153 mg/kg
Uranium-238	2.105 mg/kg	Vanadium	134 mg/kg
Zinc	202 mg/kg	Zirconium	6.83 mg/kg

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Standard Logbook

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Standard Logbook

Serial ID: IHG090710-01 **Opened:** 10-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 10-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090710-02 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 10-JUL-09
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090710-07 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090710-08 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Standard Logbook

Serial ID: WHG090710-09 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090710-10 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-11 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090710-12 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Standard Logbook

Serial ID: WHG090710-14 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090702-42 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090702-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090702-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090702-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090702-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090702-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090702-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090702-43 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746

Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09

Type: Working **Expires:** 03-JUL-09

Employee: Helen Camello

Supplier: GEL

Description: TRACE ICP 0.5/CCV CALIBRATION STD.

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090702-44 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1143746
Name: TRACE ICP SCAL 1.0 **Received:** 02-JUL-09
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Serial ID: WI090702-45 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1143746
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090702-46 **Opened:** 02-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1143746
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090702-47 **Opened:** 02-JUL-09 **Solvent :** 3%HCL &1%HNO3-1143746
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090702-04AB **Opened:** 02-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 02-JUL-09
Type: Working **Expires:** 03-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090702-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090702-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090702-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090702-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090702-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090702-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090702-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090702-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090702-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090702-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090702-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090702-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090702-04B **Opened:** 02-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 02-JUL-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 03-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090702-05B
Name: ICPMS ICV
Type: Working
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Opened: 02-JUL-09
Received: 02-JUL-09
Expires: 03-JUL-09

Solvent : 2%HNO3/1%HCl - 1143705

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS090702-06B
Name: ICPMS CRDL
Type: Working
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Opened: 02-JUL-09
Received: 02-JUL-09
Expires: 03-JUL-09

Solvent : 2%HNO3/1%HCl - 1143705

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS090702-07B **Opened:** 02-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 02-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 03-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090702-08B **Opened:** 02-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 02-JUL-09
Type: Working **Expires:** 03-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090702-70B **Opened:** 02-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS LINEAR RANGE ST **Received:** 02-JUL-09
Type: Working **Expires:** 03-JUL-09
Employee: Rose Jenkins
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090226-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090226-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090226-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090226-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090226-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090226-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090226-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090226-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090226-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090226-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090226-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090226-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090226-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090226-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090226-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090226-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090226-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090226-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: WMS090703-04 **Opened:** 03-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl-1143705
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090703-04AB **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090703-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090703-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090703-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090703-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090703-04B **Opened:** 03-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 04-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090703-05B **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090703-06B **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090703-07B **Opened:** 03-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 04-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090703-08B **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Standard Logbook

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1143705 **Opened:** 29-JUN-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 06-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Standard Logbook

Serial ID: 1143746 **Opened:** 29-JUN-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JUN-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 05-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2478-1

Sample Analysis

Sample ID	Client ID
232432001	CAMO-09-6054
1201871706	Method Blank (MB) **ICP**
1201871707	Laboratory Control Sample (LCS)
1201871710	232510001(CAMO-09-6533L) Serial Dilution (SD)
1201871708	232510001(CAMO-09-6533D) Sample Duplicate (DUP)
1201871709	232510001(CAMO-09-6533S) Matrix Spike (MS)
1201871711	Method Blank (MB) **ICP-MS**
1201871712	Laboratory Control Sample (LCS)
1201871715	232370001(CAMO-09-6053L) Serial Dilution (SD)
1201871713	232370001(CAMO-09-6053D) Sample Duplicate (DUP)
1201871714	232370001(CAMO-09-6053S) Matrix Spike (MS)
1201871797	Method Blank (MB) **CVAA**
1201871798	Laboratory Control Sample (LCS)
1201871801	232510001(CAMO-09-6533L) Serial Dilution (SD)
1201871799	232510001(CAMO-09-6533D) Sample Duplicate (DUP)
1201871800	232510001(CAMO-09-6533S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Method/Analysis Information

Analytical Batch: 881354, 881357 and 881396

Prep Batch : 881353, 881356 and 881395

Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3005/6010B, SW846 3005/6020 and SW846 7470A
Prep Method :	SW846 3005A and SW846 7470A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232510001 (CAMO-09-6533)-ICP and CVAA and 232370001 (CAMO-09-6053)-ICP-MS.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of thallium, as indicated by the "N" qualifier.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 708200. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Parson **Date:** 7/17/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2478-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232432001 **BASIS:** As Received **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-6054 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/04/09 02:37	090703-2	881357
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/04/09 02:37	090703-2	881357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/04/09 02:37	090703-2	881357
7440-70-2	Calcium	35.1	ug/L	J	30	100	100	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-47-3	Chromium	5	ug/L	U	2	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	06/30/09 18:59	063009-1	881354
7439-89-6	Iron	100	ug/L	U	25	100	100	1	P	HSC	06/30/09 18:59	063009-1	881354
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/04/09 02:37	090703-2	881357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	06/30/09 18:59	063009-1	881354
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/04/09 02:37	090703-2	881357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	ETL	07/02/09 10:58	070209W1-4	881396
7440-02-0	Nickel	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-09-7	Potassium	380	ug/L		50	150	150	1	P	HSC	06/30/09 18:59	063009-1	881354
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-23-5	Sodium	210	ug/L		45	150	150	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	PRB	07/04/09 15:15	090703-3	881357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:59	063009-1	881354
7440-66-6	Zinc	10	ug/L	U	2	10	10	1	P	HSC	06/30/09 18:59	063009-1	881354

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881354	881353	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881357	881356	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881396	881395	SW846 7470A Prep	20	mL	20	mL	07/01/09	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5320	ug/L	5000	ug/L	106.4	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Arsenic	486	ug/L	500	ug/L	97.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Barium	536	ug/L	500	ug/L	107.3	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Calcium	5140	ug/L	5000	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Cobalt	480	ug/L	500	ug/L	96.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Copper	522	ug/L	500	ug/L	104.3	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Iron	5220	ug/L	5000	ug/L	104.4	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Magnesium	5500	ug/L	5000	ug/L	110	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Nickel	530	ug/L	500	ug/L	105.9	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Potassium	2480	ug/L	2500	ug/L	99.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Selenium	2630	ug/L	2500	ug/L	105.2	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Silver	256	ug/L	250	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Sodium	2650	ug/L	2500	ug/L	106.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Zinc	508	ug/L	500	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Mercury	5.23	ug/L	5	ug/L	104.6	90.0 - 110.0	AV	02-JUL-09 08:19	070209W1-4
	Antimony	48.1	ug/L	50	ug/L	96.2	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Beryllium	51.6	ug/L	50	ug/L	103.2	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Cadmium	52.5	ug/L	50	ug/L	105	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Lead	51.3	ug/L	50	ug/L	102.6	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Manganese	48.7	ug/L	50	ug/L	97.4	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Thallium	49.7	ug/L	50	ug/L	99.4	90.0 - 110.0	MS	04-JUL-09 14:15	090703-3
CCV01										
	Aluminum	5240	ug/L	5000	ug/L	104.7	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Arsenic	515	ug/L	500	ug/L	103.1	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Barium	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Chromium	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Cobalt	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 09:33	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Copper	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Iron	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Magnesium	5250	ug/L	5000	ug/L	105.1	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Nickel	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Potassium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Selenium	535	ug/L	500	ug/L	107	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Silver	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Zinc	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Mercury	4.85	ug/L	5	ug/L	97	80.0 – 120.0	AV	02-JUL-09 08:25	070209W1-4
	Antimony	51.5	ug/L	50	ug/L	102.9	90.0 – 110.0	MS	04-JUL-09 01:31	090703-2
	Beryllium	53.8	ug/L	50	ug/L	107.6	90.0 – 110.0	MS	04-JUL-09 01:31	090703-2
	Cadmium	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	04-JUL-09 01:31	090703-2
	Lead	52.2	ug/L	50	ug/L	104.4	90.0 – 110.0	MS	04-JUL-09 01:31	090703-2
	Manganese	52.1	ug/L	50	ug/L	104.2	90.0 – 110.0	MS	04-JUL-09 01:31	090703-2
	Thallium	48.9	ug/L	50	ug/L	97.7	90.0 – 110.0	MS	04-JUL-09 14:33	090703-3
CCV02										
	Aluminum	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Arsenic	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Barium	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Calcium	5260	ug/L	5000	ug/L	105.3	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Chromium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Cobalt	500	ug/L	500	ug/L	100	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Copper	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Magnesium	5280	ug/L	5000	ug/L	105.6	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Nickel	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Potassium	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Selenium	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	30-JUN-09 09:54	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Sodium	10300	ug/L	10000	ug/L	103.3	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Zinc	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Mercury	4.78	ug/L	5	ug/L	95.5	80.0 - 120.0	AV	02-JUL-09 08:49	070209W1-4
	Antimony	53.3	ug/L	50	ug/L	106.7	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Beryllium	52	ug/L	50	ug/L	104	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Cadmium	49.6	ug/L	50	ug/L	99.3	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Lead	53.2	ug/L	50	ug/L	106.3	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Manganese	50.1	ug/L	50	ug/L	100.2	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Thallium	48.5	ug/L	50	ug/L	96.9	90.0 - 110.0	MS	04-JUL-09 15:03	090703-3
CCV03										
	Aluminum	5200	ug/L	5000	ug/L	104	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Arsenic	516	ug/L	500	ug/L	103.1	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Barium	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Calcium	5150	ug/L	5000	ug/L	102.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Chromium	513	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Cobalt	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Copper	507	ug/L	500	ug/L	101.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Iron	4940	ug/L	5000	ug/L	98.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Magnesium	5190	ug/L	5000	ug/L	103.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Nickel	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Potassium	4790	ug/L	5000	ug/L	95.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Selenium	532	ug/L	500	ug/L	106.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Silver	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Zinc	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Mercury	4.76	ug/L	5	ug/L	95.3	80.0 - 120.0	AV	02-JUL-09 09:13	070209W1-4
	Antimony	50.6	ug/L	50	ug/L	101.1	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2478–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	54.4	ug/L	50	ug/L	108.9	90.0 – 110.0	MS	04–JUL–09 02:23	090703–2
	Cadmium	49.2	ug/L	50	ug/L	98.4	90.0 – 110.0	MS	04–JUL–09 02:23	090703–2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	04–JUL–09 02:23	090703–2
	Manganese	52.9	ug/L	50	ug/L	105.8	90.0 – 110.0	MS	04–JUL–09 02:23	090703–2
	Thallium	47	ug/L	50	ug/L	94	90.0 – 110.0	MS	04–JUL–09 15:30	090703–3
CCV04										
	Aluminum	5210	ug/L	5000	ug/L	104.3	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Arsenic	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Barium	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Chromium	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Cobalt	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Copper	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Iron	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Nickel	500	ug/L	500	ug/L	100	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Potassium	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Selenium	526	ug/L	500	ug/L	105.3	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Silver	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Sodium	10200	ug/L	10000	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Zinc	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Mercury	4.77	ug/L	5	ug/L	95.4	80.0 – 120.0	AV	02–JUL–09 09:36	070209W1–4
	Antimony	49.4	ug/L	50	ug/L	98.8	90.0 – 110.0	MS	04–JUL–09 02:56	090703–2
	Beryllium	55.1	ug/L	50	ug/L	110.3	90.0 – 110.0	MS	04–JUL–09 02:56	090703–2
	Cadmium	48.3	ug/L	50	ug/L	96.7	90.0 – 110.0	MS	04–JUL–09 02:56	090703–2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	04–JUL–09 02:56	090703–2
	Manganese	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	04–JUL–09 02:56	090703–2
CCV05										
	Aluminum	5340	ug/L	5000	ug/L	106.7	90.0 – 110.0	P	30–JUN–09 13:02	063009–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Arsenic	520	ug/L	500	ug/L	103.9	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Barium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Calcium	5320	ug/L	5000	ug/L	106.3	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Chromium	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Cobalt	518	ug/L	500	ug/L	103.7	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Copper	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Iron	5100	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Magnesium	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Nickel	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Potassium	4990	ug/L	5000	ug/L	99.7	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Selenium	533	ug/L	500	ug/L	106.6	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Silver	515	ug/L	500	ug/L	103	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Sodium	10500	ug/L	10000	ug/L	104.8	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Vanadium	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Zinc	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Mercury	4.82	ug/L	5	ug/L	96.3	80.0 – 120.0	AV	02-JUL-09 10:00	070209W1-4
CCV06										
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Arsenic	525	ug/L	500	ug/L	104.9	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Barium	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Calcium	5280	ug/L	5000	ug/L	105.6	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Chromium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Cobalt	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Copper	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Iron	5080	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Magnesium	5300	ug/L	5000	ug/L	106	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Nickel	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Potassium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Selenium	539	ug/L	500	ug/L	107.7	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Silver	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 14:20	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	10600	ug/L	10000	ug/L	106	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Vanadium	516	ug/L	500	ug/L	103.2	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Zinc	509	ug/L	500	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Mercury	4.8	ug/L	5	ug/L	96	80.0 - 120.0	AV	02-JUL-09 10:24	070209W1-4
CCV07										
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Arsenic	505	ug/L	500	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Barium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Calcium	5340	ug/L	5000	ug/L	106.8	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Chromium	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Cobalt	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Copper	495	ug/L	500	ug/L	98.9	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Iron	5140	ug/L	5000	ug/L	102.9	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Magnesium	5350	ug/L	5000	ug/L	107.1	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Nickel	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Potassium	5010	ug/L	5000	ug/L	100.1	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Selenium	524	ug/L	500	ug/L	104.9	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Silver	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Sodium	10500	ug/L	10000	ug/L	105.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Vanadium	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Mercury	4.82	ug/L	5	ug/L	96.5	80.0 - 120.0	AV	02-JUL-09 10:48	070209W1-4
CCV08										
	Aluminum	5290	ug/L	5000	ug/L	105.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Arsenic	520	ug/L	500	ug/L	104	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Barium	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Cobalt	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Copper	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Iron	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Nickel	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Potassium	4840	ug/L	5000	ug/L	96.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Selenium	534	ug/L	500	ug/L	106.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Silver	512	ug/L	500	ug/L	102.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Zinc	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Mercury	4.82	ug/L	5	ug/L	96.4	80.0 - 120.0	AV	02-JUL-09 11:11	070209W1-4
CCV09										
	Aluminum	5250	ug/L	5000	ug/L	105	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Arsenic	516	ug/L	500	ug/L	103.1	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Barium	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Calcium	5260	ug/L	5000	ug/L	105.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Chromium	510	ug/L	500	ug/L	102.1	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Cobalt	507	ug/L	500	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Copper	506	ug/L	500	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Iron	5050	ug/L	5000	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Magnesium	5230	ug/L	5000	ug/L	104.6	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Nickel	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Potassium	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Selenium	531	ug/L	500	ug/L	106.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Silver	510	ug/L	500	ug/L	102	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Sodium	10400	ug/L	10000	ug/L	104.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Vanadium	514	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Zinc	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
CCV10										
	Aluminum	5270	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Arsenic	513	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 18:18	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Barium	518	ug/L	500	ug/L	103.5	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Calcium	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Chromium	519	ug/L	500	ug/L	103.9	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Cobalt	521	ug/L	500	ug/L	104.3	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Copper	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Iron	5060	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Magnesium	5240	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Nickel	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Potassium	4970	ug/L	5000	ug/L	99.3	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Selenium	530	ug/L	500	ug/L	106	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Silver	520	ug/L	500	ug/L	104.1	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Sodium	10500	ug/L	10000	ug/L	104.9	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Vanadium	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Zinc	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
CCV11										
	Aluminum	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Arsenic	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Barium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Calcium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Chromium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Cobalt	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Copper	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Iron	4920	ug/L	5000	ug/L	98.4	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Magnesium	5090	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Nickel	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Potassium	4890	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Selenium	529	ug/L	500	ug/L	105.8	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Silver	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Sodium	10400	ug/L	10000	ug/L	104	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Vanadium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-JUN-09 19:13	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Zinc	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
CCV12										
	Aluminum	5290	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Arsenic	519	ug/L	500	ug/L	103.7	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Barium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Cobalt	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Copper	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Iron	4910	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Magnesium	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Nickel	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Potassium	4890	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Selenium	534	ug/L	500	ug/L	106.9	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Silver	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Sodium	10300	ug/L	10000	ug/L	103.4	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Vanadium	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	30-JUN-09 20:01	063009-1
	Zinc	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 20:01	063009-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.228	ug/L	.2	ug/L	114	70.0 – 130.0	AV	02-JUL-09 08:23	070209W1-4
	Antimony	3.11	ug/L	3	ug/L	103.5	70.0 – 130.0	MS	04-JUL-09 01:16	090703-2
	Beryllium	.571	ug/L	.5	ug/L	114.2	70.0 – 130.0	MS	04-JUL-09 01:16	090703-2
	Cadmium	1.01	ug/L	1	ug/L	100.5	70.0 – 130.0	MS	04-JUL-09 01:16	090703-2
	Manganese	5.61	ug/L	5	ug/L	112.2	70.0 – 130.0	MS	04-JUL-09 01:16	090703-2
	Lead	2.17	ug/L	2	ug/L	108.7	70.0 – 130.0	MS	04-JUL-09 01:16	090703-2
	Thallium	.981	ug/L	1	ug/L	98.1	70.0 – 130.0	MS	04-JUL-09 14:22	090703-3
PQL01										
	Aluminum	208	ug/L	200	ug/L	104.1	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Arsenic	18.2	ug/L	15	ug/L	121	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Barium	5.29	ug/L	5	ug/L	105.7	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Calcium	103	ug/L	100	ug/L	103.4	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Chromium	5.14	ug/L	5	ug/L	102.9	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Cobalt	5.22	ug/L	5	ug/L	104.4	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Copper	9.75	ug/L	10	ug/L	97.5	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Iron	114	ug/L	100	ug/L	114.1	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Magnesium	331	ug/L	300	ug/L	110.5	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Nickel	5.6	ug/L	5	ug/L	111.9	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Potassium	153	ug/L	150	ug/L	102.1	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Selenium	16.6	ug/L	15	ug/L	110.5	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Silver	5.26	ug/L	5	ug/L	105.1	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Sodium	156	ug/L	150	ug/L	104.3	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Vanadium	5.17	ug/L	5	ug/L	103.5	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Zinc	10.5	ug/L	10	ug/L	104.6	70.0 – 130.0	P	30-JUN-09 08:45	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 08:39	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 08:39	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 08:39	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 08:39	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 08:39	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 08:39	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 08:39	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 08:39	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 08:39	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 08:39	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 08:21	070209W1-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	04-JUL-09 01:12	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 01:12	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 01:12	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 01:12	090703-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 01:12	090703-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	04-JUL-09 14:19	090703-3
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 09:40	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 09:40	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 09:40	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 09:40	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 09:40	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 09:40	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 09:40	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 09:40	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 09:40	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 09:40	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 08:27	070209W1-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 01:35	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	04-JUL-09 14:37	090703-3
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 10:01	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 10:01	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 10:01	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 10:01	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 10:01	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 10:01	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 10:01	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 10:01	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 10:01	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 10:01	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 08:51	070209W1-4
	Antimony	1.36	+/-3	J	1.0	3.0	LIQ	MS	04-JUL-09 01:50	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 01:50	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 01:50	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 01:50	090703-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 01:50	090703-2
	Thallium	0.37	+/-1	J	0.3	1.0	LIQ	MS	04-JUL-09 15:07	090703-3
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 11:04	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 11:04	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 11:04	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 11:04	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 11:04	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 11:04	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 11:04	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 11:04	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 11:04	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 11:04	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 09:15	070209W1-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	04-JUL-09 02:28	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 02:28	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 02:28	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 02:28	090703-2

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 02:28	090703-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	04-JUL-09 15:34	090703-3
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 11:59	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 11:59	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 11:59	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 11:59	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 11:59	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 11:59	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 11:59	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 11:59	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 11:59	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 11:59	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 09:38	070209W1-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	04-JUL-09 03:01	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 03:01	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 03:01	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 03:01	090703-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 03:01	090703-2
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 13:09	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 13:09	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 13:09	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2478–1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 13:09	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 13:09	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 13:09	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 13:09	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 13:09	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 13:09	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 13:09	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 13:09	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 13:09	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 13:09	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 13:09	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 10:02	070209W1–4
CCB06										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 14:26	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 14:26	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 14:26	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 14:26	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 14:26	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 14:26	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 14:26	063009–1
	Selenium	–5.83	+/–15	J	5.0	15.0	LIQ	P	30–JUN–09 14:26	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 14:26	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 14:26	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 10:26	070209W1–4

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2478–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB07										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 14:50	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 14:50	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 14:50	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 14:50	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 14:50	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 14:50	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 14:50	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 14:50	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 14:50	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 14:50	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 10:50	070209W1–4
CCB08										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 15:59	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 15:59	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 15:59	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 15:59	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 15:59	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 15:59	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 15:59	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 15:59	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 15:59	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 15:59	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 15:59	063009-1
	Mercury	-0.074	+/-.2	J	0.066	0.2	LIQ	AV	02-JUL-09 11:13	070209W1-4
CCB09										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 17:15	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 17:15	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 17:15	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 17:15	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 17:15	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 17:15	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 17:15	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 17:15	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 17:15	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 17:15	063009-1
CCB10										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 18:25	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 18:25	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 18:25	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 18:25	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 18:25	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 18:25	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 18:25	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 18:25	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 18:25	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 18:25	063009-1
CCB11										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 19:20	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 19:20	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 19:20	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 19:20	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 19:20	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 19:20	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 19:20	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 19:20	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 19:20	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 19:20	063009-1
CCB12										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 20:08	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 20:08	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 20:08	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2478-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 20:08	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 20:08	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 20:08	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 20:08	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 20:08	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 20:08	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 20:08	063009-1

METALS
–3b–
PREPARATION BLANK SUMMARY

SDG NO. 09–2478–1

Contract: LANL01004

Matrix: WATER

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201871706								
	Aluminum	68	ug/L	+/–200	U	P	68	200
	Arsenic	5	ug/L	+/–15.0	U	P	5	15
	Calcium	30	ug/L	+/–100	U	P	30	100
	Chromium	2	ug/L	+/–5.0	U	P	2	5
	Barium	1	ug/L	+/–5.0	U	P	1	5
	Cobalt	1	ug/L	+/–5.0	U	P	1	5
	Iron	25	ug/L	+/–100	U	P	25	100
	Nickel	1	ug/L	+/–5.0	U	P	1	5
	Selenium	5	ug/L	+/–15.0	U	P	5	15
	Zinc	2	ug/L	+/–10.0	U	P	2	10
	Vanadium	1	ug/L	+/–5.0	U	P	1	5
	Sodium	45	ug/L	+/–150	U	P	45	150
	Silver	1	ug/L	+/–5.0	U	P	1	5
	Potassium	50	ug/L	+/–150	U	P	50	150
	Magnesium	85	ug/L	+/–300	U	P	85	300
	Copper	3	ug/L	+/–10.0	U	P	3	10
1201871711								
	Lead	0.5	ug/L	+/–2.0	U	MS	0.5	2
	Manganese	1	ug/L	+/–5.0	U	MS	1	5
	Antimony	1.08	ug/L	+/–3.0	J	MS	1	3
	Beryllium	0.1	ug/L	+/–0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/–1.0	U	MS	0.11	1
	Thallium	0.3	ug/L	+/–1.0	U	MS	0.3	1
1201871797								
	Mercury	–0.0839	ug/L	+/–0.2	J	AV	0.066	0.2

METALS
-4-
Interference Check Sample

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	521000	ug/L	500000	ug/L	104	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Arsenic	12.1	ug/L					30-JUN-09 08:52	063009-1
	Barium	-4.95	ug/L					30-JUN-09 08:52	063009-1
	Calcium	479000	ug/L	500000	ug/L	95.8	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Chromium	2.29	ug/L					30-JUN-09 08:52	063009-1
	Cobalt	-1.33	ug/L					30-JUN-09 08:52	063009-1
	Copper	1.81	ug/L					30-JUN-09 08:52	063009-1
	Iron	181000	ug/L	200000	ug/L	90.7	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Magnesium	476000	ug/L	500000	ug/L	95.2	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Nickel	5.0	ug/L					30-JUN-09 08:52	063009-1
	Potassium	-32.1	ug/L					30-JUN-09 08:52	063009-1
	Selenium	0.557	ug/L					30-JUN-09 08:52	063009-1
	Silver	-0.79	ug/L					30-JUN-09 08:52	063009-1
	Sodium	31.8	ug/L					30-JUN-09 08:52	063009-1
	Vanadium	-2.42	ug/L					30-JUN-09 08:52	063009-1
	Zinc	-6.97	ug/L					30-JUN-09 08:52	063009-1
ICSAB01									
	Aluminum	519000	ug/L	500000	ug/L	104	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Arsenic	532	ug/L	500	ug/L	106	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Barium	498	ug/L	500	ug/L	99.6	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Calcium	473000	ug/L	500000	ug/L	94.6	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Chromium	496	ug/L	500	ug/L	99.3	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Cobalt	467	ug/L	500	ug/L	93.4	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Copper	562	ug/L	500	ug/L	112	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Iron	179000	ug/L	200000	ug/L	89.6	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Magnesium	470000	ug/L	500000	ug/L	94.1	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Nickel	473	ug/L	500	ug/L	94.5	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Potassium	5110	ug/L	5000	ug/L	102	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Selenium	2610	ug/L	2500	ug/L	104	80.0 - 120.0	30-JUN-09 08:58	063009-1

METALS
-4-
Interference Check Sample

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silver	282	ug/L	250	ug/L	113	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Sodium	5390	ug/L	5000	ug/L	108	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Vanadium	519	ug/L	500	ug/L	104	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Zinc	495	ug/L	500	ug/L	99	80.0 - 120.0	30-JUN-09 08:58	063009-1

METALS
–4–
Interference Check Sample

SDG No: 09–2478–1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.278	ug/L					04–JUL–09 01:21	090703–2
	Beryllium	0.051	ug/L					04–JUL–09 01:21	090703–2
	Cadmium	0.292	ug/L					04–JUL–09 01:21	090703–2
	Lead	0.17	ug/L					04–JUL–09 01:21	090703–2
	Manganese	5.89	ug/L					04–JUL–09 01:21	090703–2
ICSAB01									
	Antimony	22.0	ug/L	20.1	ug/L	109	80.0 – 120.0	04–JUL–09 01:26	090703–2
	Beryllium	22.7	ug/L	20	ug/L	113	80.0 – 120.0	04–JUL–09 01:26	090703–2
	Cadmium	20.8	ug/L	20.4	ug/L	102	80.0 – 120.0	04–JUL–09 01:26	090703–2
	Lead	20.4	ug/L	20.5	ug/L	99.4	80.0 – 120.0	04–JUL–09 01:26	090703–2
	Manganese	26.2	ug/L	25.8	ug/L	102	80.0 – 120.0	04–JUL–09 01:26	090703–2

METALS
-4-
Interference Check Sample

SDG No: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Thallium	0.034	ug/L					04-JUL-09 14:26	090703-3
ICSAB01									
	Thallium	18.3	ug/L	20	ug/L	91.7	80.0 - 120.0	04-JUL-09 14:30	090703-3

METALS
–5a–
Matrix Spike Summary

SDG NO. 09–2478–1 **Client ID** CAMO–09–6533S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232510001 **Spike ID:** 1201871709

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75–125	5120		68	U	5000	102		P
Arsenic	ug/L	75–125	499		5	U	500	99.6		P
Barium	ug/L	75–125	506		1	U	500	101		P
Calcium	ug/L	75–125	5050		30	U	5000	101		P
Chromium	ug/L	75–125	496		2	U	500	99.1		P
Cobalt	ug/L	75–125	485		1	U	500	97		P
Copper	ug/L	75–125	500		3	U	500	100		P
Iron	ug/L	75–125	4770		25	U	5000	95.4		P
Magnesium	ug/L	75–125	4990		85	U	5000	99.5		P
Nickel	ug/L	75–125	494		1	U	500	98.7		P
Potassium	ug/L	75–125	5020		126	J	5000	97.8		P
Selenium	ug/L	75–125	501		5	U	500	100		P
Silver	ug/L	75–125	496		1	U	500	99.2		P
Sodium	ug/L	75–125	5280		85.2	J	5000	104		P
Vanadium	ug/L	75–125	505		1	U	500	101		P
Zinc	ug/L	75–125	483		2	U	500	96.4		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2478-1 **Client ID** CAMO-09-6053S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232370001 **Spike ID:** 1201871714

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Beryllium	ug/L	75-125	55.2		0.1	U	50	110		MS
Cadmium	ug/L	75-125	5.33		0.11	U	5	107		MS
Lead	ug/L	75-125	21.2		0.5	U	20	106		MS
Manganese	ug/L	75-125	53.3		1	U	50	106		MS
Thallium	ug/L	75-125	29.3		0.3	U	50	58.3	N	MS
Antimony	ug/L	75-125	106		1	U	100	105		MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2478-1 **Client ID** CAMO-09-6533S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232510001 **Spike ID:** 1201871800

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75-125	2.04		0.066	U	2	102		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-6533D

Sample ID: 232510001 **Duplicate ID:** 1201871708 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68	U	68	U			P
Arsenic	ug/L		5	U	5	U			P
Barium	ug/L		1	U	1	U			P
Calcium	ug/L		30	U	30	U			P
Chromium	ug/L		2	U	2	U			P
Cobalt	ug/L		1	U	1	U			P
Copper	ug/L		3	U	3	U			P
Iron	ug/L		25	U	25	U			P
Magnesium	ug/L		85	U	85	U			P
Nickel	ug/L		1	U	1	U			P
Potassium	ug/L	+/-150	126	J	117	J	6.62		P
Selenium	ug/L		5	U	5	U			P
Silver	ug/L		1	U	1	U			P
Sodium	ug/L	+/-150	85.2	J	82.9	J	2.77		P
Vanadium	ug/L		1	U	1	U			P
Zinc	ug/L		2	U	2	U			P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-6053D

Sample ID: 232370001 **Duplicate ID:** 1201871713 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		1	U	1	U			MS
Beryllium	ug/L		0.1	U	0.1	U			MS
Cadmium	ug/L		0.11	U	0.11	U			MS
Lead	ug/L		0.5	U	0.5	U			MS
Manganese	ug/L		1	U	1	U			MS
Thallium	ug/L		0.3	U	0.3	U			MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2478-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-6533D

Sample ID: 232510001 **Duplicate ID:** 1201871799 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066	U	0.066	U			AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2478-1

Contract: LANL01004

Aqueous LCS Source: OS2I **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871707								
	Aluminum	ug/L	5000	5150		103	80-120	P
	Arsenic	ug/L	500	500		100	80-120	P
	Barium	ug/L	500	508		102	80-120	P
	Calcium	ug/L	5000	5050		101	80-120	P
	Chromium	ug/L	500	499		99.9	80-120	P
	Cobalt	ug/L	500	487		97.5	80-120	P
	Copper	ug/L	500	502		100	80-120	P
	Iron	ug/L	5000	4950		98.9	80-120	P
	Magnesium	ug/L	5000	5150		103	80-120	P
	Nickel	ug/L	500	498		99.5	80-120	P
	Potassium	ug/L	5000	4920		98.4	80-120	P
	Selenium	ug/L	500	507		101	80-120	P
	Silver	ug/L	500	498		99.6	80-120	P
	Sodium	ug/L	5000	5220		104	80-120	P
	Vanadium	ug/L	500	508		102	80-120	P
	Zinc	ug/L	500	488		97.6	80-120	P

METALS
–7–
Laboratory Control Sample Summary

SDG NO. 09–2478–1

Contract: LANL01004

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871712								
	Beryllium	ug/L	50	53.6		107	80–120	MS
	Cadmium	ug/L	50	51.5		103	80–120	MS
	Lead	ug/L	50	51.6		103	80–120	MS
	Manganese	ug/L	50	52.4		105	80–120	MS
	Thallium	ug/L	50	43		86	80–120	MS
	Antimony	ug/L	50	54.2		108	80–120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2478-1

Contract: LANL01004

Aqueous LCS Source: GEL **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871798								
	Mercury	ug/L	2	1.99		99.6	80-120	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2478-1 **Client ID** CAMO-09-6533L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232510001 **Serial Dilution ID:** 1201871710

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Arsenic	5	U	25	U				P
Barium	1	U	5	U				P
Calcium	30	U	150	U				P
Chromium	2	U	10	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	25	U	125	U				P
Magnesium	85	U	425	U				P
Nickel	1	U	5	U				P
Potassium	126	J	250	U	100			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	85.2	J	225	U	100			P
Vanadium	1	U	5	U				P
Zinc	2	U	10	U				P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2478-1 **Client ID** CAMO-09-6053L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232370001 **Serial Dilution ID:** 1201871715

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	1	U	5	U				MS
Beryllium	.1	U	.5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	.5	U	2.5	U				MS
Manganese	1	U	5	U				MS
Thallium	.3	U	4.09	J				MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2478-1 **Client ID** CAMO-09-6533L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232510001 **Serial Dilution ID:** 1201871801

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2478-1 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881353						
1201871706	MB for batch 881353	MB	W	30-JUN-09	50mL	50mL	
1201871707	LCS for batch 881353	LCS	W	30-JUN-09	50mL	50mL	
1201871709	CAMO-09-6533S	MS	W	30-JUN-09	50mL	50mL	
1201871708	CAMO-09-6533D	DUP	W	30-JUN-09	50mL	50mL	
232432001	CAMO-09-6054	SAMPLE	W	30-JUN-09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2478-1 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881356						
1201871711	MB for batch 881356	MB	W	30-JUN-09	50mL	50mL	
1201871712	LCS for batch 881356	LCS	W	30-JUN-09	50mL	50mL	
1201871714	CAMO-09-6053S	MS	W	30-JUN-09	50mL	50mL	
1201871713	CAMO-09-6053D	DUP	W	30-JUN-09	50mL	50mL	
232432001	CAMO-09-6054	SAMPLE	W	30-JUN-09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2478-1 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881395						
1201871797	MB for batch 881395	MB	W	01-JUL-09	20mL	20mL	
1201871798	LCS for batch 881395	LCS	W	01-JUL-09	20mL	20mL	
1201871800	CAMO-09-6533S	MS	W	01-JUL-09	20mL	20mL	
1201871799	CAMO-09-6533D	DUP	W	01-JUL-09	20mL	20mL	
232432001	CAMO-09-6054	SAMPLE	W	01-JUL-09	20mL	20mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 30-JUN-09 **End Date:** 30-JUN-09

Client Sdg: 09-2478-1
Method P
Data File: 063009-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	08:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S0.1	1	08:06			X	X				X	X	X						X	X	X	X			X	X
S0.5	1	08:12	X		X	X			X	X	X	X			X			X	X	X	X			X	X
SCAL	1	08:19	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S10	1	08:26	X						X				X		X							X			
ICV01	1	08:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICB01	1	08:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
PQL01	1	08:45	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSA01	1	08:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSAB01	1	08:58	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR01	1	09:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR02	1	09:10	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	09:17																							
ZZZZZZ	1	09:24																							
CCV01	1	09:33	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB01	1	09:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR03	1	09:47	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV02	1	09:54	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB02	1	10:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	10:15																							
ZZZZZZ	1	10:22																							
ZZZZZZ	1	10:29																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:43																							
ZZZZZZ	5	10:50																							
CCV03	1	10:57	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB03	1	11:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	11:11																							
ZZZZZZ	5	11:18																							
ZZZZZZ	5	11:25																							
ZZZZZZ	5	11:32																							
ZZZZZZ	25	11:38																							
ZZZZZZ	5	11:45																							
CCV04	1	11:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB04	1	11:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	12:06																							
ZZZZZZ	2	12:13																							
ZZZZZZ	1	12:20																							
ZZZZZZ	1	12:27																							
ZZZZZZ	1	12:34																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	12:41																							
ZZZZZZ	1	12:48																							
ZZZZZZ	1	12:55																							
CCV05	1	13:02	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB05	1	13:09	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	13:16																							
ZZZZZZ	1	13:23																							
ZZZZZZ	1	13:30																							
ZZZZZZ	1	13:38																							
ZZZZZZ	1	13:45																							
ZZZZZZ	1	13:52																							
ZZZZZZ	5	13:59																							
ZZZZZZ	1	14:05																							
ZZZZZZ	1	14:13																							
CCV06	1	14:20	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB06	1	14:26	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV07	1	14:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB07	1	14:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	14:56																							
ZZZZZZ	2	15:03																							
ZZZZZZ	1	15:10																							
ZZZZZZ	1	15:17																							
ZZZZZZ	1	15:24																							
ZZZZZZ	1	15:31																							
ZZZZZZ	5	15:38																							
ZZZZZZ	1	15:45																							
CCV08	1	15:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB08	1	15:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	16:06																							
ZZZZZZ	2	16:12																							
ZZZZZZ	1	16:19																							
ZZZZZZ	1	16:26																							
ZZZZZZ	1	16:34																							
ZZZZZZ	1	16:40																							
ZZZZZZ	5	16:47																							
ZZZZZZ	1	16:54																							
ZZZZZZ	1	17:01																							
CCV09	1	17:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB09	1	17:15	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	17:22																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	17:29																							
ZZZZZZ	1	17:36																							
ZZZZZZ	1	17:43																							
ZZZZZZ	1	17:50																							
ZZZZZZ	1	17:57																							
ZZZZZZ	1	18:04																							
ZZZZZZ	1	18:11																							
CCV10	1	18:18	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB10	1	18:25	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871706	1	18:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871707	1	18:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	18:46																							
ZZZZZZ	1	18:53																							
232432001	1	18:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	19:06																							
CCV11	1	19:13	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB11	1	19:20	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	19:27																							
ZZZZZZ	1	19:34																							
1201871708	1	19:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871709	1	19:47	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871710	5	19:54	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV12	1	20:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB12	1	20:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 02-JUL-09 **End Date:** 02-JUL-09

Client Sdg: 09-2478-1
Method AV
Data File: 070209W1-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	08:07															X								
S0.2	1	08:09															X								
S0.5	1	08:11															X								
S2.0	1	08:13															X								
S5.0	1	08:15															X								
S10	1	08:17															X								
ICV01	1	08:19															X								
ICB01	1	08:21															X								
CRDL01	1	08:23															X								
CCV01	1	08:25															X								
CCB01	1	08:27															X								
ZZZZZZ	1	08:29																							
ZZZZZZ	1	08:31																							
ZZZZZZ	1	08:33																							
ZZZZZZ	1	08:35																							
ZZZZZZ	1	08:37																							
ZZZZZZ	5	08:39																							
ZZZZZZ	1	08:41																							
ZZZZZZ	1	08:43																							
ZZZZZZ	1	08:45																							
ZZZZZZ	1	08:47																							
CCV02	1	08:49															X								
CCB02	1	08:51															X								
ZZZZZZ	1	08:53																							
ZZZZZZ	1	08:55																							
ZZZZZZ	1	08:57																							
ZZZZZZ	5	08:59																							
ZZZZZZ	1	09:01																							
ZZZZZZ	1	09:03																							
ZZZZZZ	1	09:05																							
ZZZZZZ	1	09:07																							
ZZZZZZ	1	09:09																							
ZZZZZZ	1	09:11																							
CCV03	1	09:13															X								
CCB03	1	09:15															X								
ZZZZZZ	1	09:17																							
ZZZZZZ	1	09:19																							
ZZZZZZ	1	09:21																							
ZZZZZZ	1	09:23																							
ZZZZZZ	1	09:25																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	09:26																							
ZZZZZZ	1	09:28																							
ZZZZZZ	1	09:30																							
ZZZZZZ	1	09:32																							
ZZZZZZ	1	09:34																							
CCV04	1	09:36														X									
CCB04	1	09:38														X									
ZZZZZZ	1	09:40																							
ZZZZZZ	1	09:42																							
ZZZZZZ	1	09:44																							
ZZZZZZ	1	09:47																							
ZZZZZZ	1	09:49																							
ZZZZZZ	1	09:51																							
ZZZZZZ	1	09:53																							
ZZZZZZ	5	09:54																							
ZZZZZZ	1	09:56																							
ZZZZZZ	1	09:58																							
CCV05	1	10:00														X									
CCB05	1	10:02														X									
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
ZZZZZZ	1	10:08																							
ZZZZZZ	1	10:10																							
ZZZZZZ	1	10:12																							
ZZZZZZ	1	10:14																							
ZZZZZZ	5	10:16																							
ZZZZZZ	1	10:18																							
ZZZZZZ	1	10:20																							
ZZZZZZ	1	10:22																							
CCV06	1	10:24														X									
CCB06	1	10:26														X									
ZZZZZZ	1	10:28																							
ZZZZZZ	1	10:30																							
ZZZZZZ	1	10:32																							
ZZZZZZ	1	10:34																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:38																							
ZZZZZZ	1	10:40																							
ZZZZZZ	1	10:42																							
ZZZZZZ	1	10:44																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	10:46																							
CCV07	1	10:48															X								
CCB07	1	10:50															X								
ZZZZZZ	5	10:52																							
1201871797	1	10:54															X								
1201871798	1	10:56															X								
232432001	1	10:58															X								
ZZZZZZ	1	11:00																							
ZZZZZZ	1	11:02																							
ZZZZZZ	1	11:04																							
1201871799	1	11:06															X								
1201871800	1	11:08															X								
1201871801	5	11:09															X								
CCV08	1	11:11															X								
CCB08	1	11:13															X								

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 04-JUL-09 **End Date:** 04-JUL-09

Client Sdg: 09-2478-1
Method MS
Data File: 090703-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	00:53		X			X	X						X		X									
S10	1	00:58		X			X	X						X		X									
S100	1	01:02		X			X	X						X		X									
ICV01	1	01:07		X			X	X						X		X									
ICB01	1	01:12		X			X	X						X		X									
CRDL01	1	01:16		X			X	X						X		X									
ICSA01	1	01:21		X			X	X						X		X									
ICSAB01	1	01:26		X			X	X						X		X									
CCV01	1	01:31		X			X	X						X		X									
CCB01	1	01:35		X			X	X						X		X									
LR01	1	01:40		X			X	X						X		X									
CCV02	1	01:45		X			X	X						X		X									
CCB02	1	01:50		X			X	X						X		X									
1201871711	1	01:54		X			X	X						X		X									
1201871712	1	01:59		X			X	X						X		X									
ZZZZZZ	1	02:04																							
1201871713	1	02:08		X			X	X						X		X									
1201871714	1	02:13		X			X	X						X		X									
1201871715	5	02:18		X			X	X						X		X									
CCV03	1	02:23		X			X	X						X		X									
CCB03	1	02:28		X			X	X						X		X									
ZZZZZZ	1	02:32																							
232432001	1	02:37		X			X	X						X		X									
ZZZZZZ	1	02:42																							
ZZZZZZ	1	02:46																							
ZZZZZZ	1	02:51																							
CCV04	1	02:56		X			X	X						X		X									
CCB04	1	03:01		X			X	X						X		X									

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 04–JUL–09 **End Date:** 04–JUL–09

Client Sdg: 09–2478–1
Method MS
Data File: 090703–3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	14:04																					X		
S10	1	14:08																					X		
S100	1	14:11																					X		
ICV01	1	14:15																					X		
ICB01	1	14:19																					X		
CRDL01	1	14:22																					X		
ICSA01	1	14:26																					X		
ICSAB01	1	14:30																					X		
CCV01	1	14:33																					X		
CCB01	1	14:37																					X		
1201871711	1	14:41																					X		
1201871712	1	14:45																					X		
ZZZZZZ	1	14:48																							
1201871713	1	14:52																					X		
1201871714	1	14:56																					X		
1201871715	5	15:00																					X		
CCV02	1	15:03																					X		
CCB02	1	15:07																					X		
ZZZZZZ	1	15:11																							
232432001	1	15:15																					X		
ZZZZZZ	1	15:19																							
ZZZZZZ	1	15:22																							
ZZZZZZ	1	15:26																							
CCV03	1	15:30																					X		
CCB03	1	15:34																					X		

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2478-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		3.0	10
	Zinc		3.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2478-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
MERCURY				
LIQUID	Mercury		0.066	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2478-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 23-JUL-07

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	15
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	30.0	100
	Chromium	267.716	2.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	25.0	100
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.0	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	15
	Silver	328.068	1.0	5
	Sodium	589.592	45.0	150
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	2.0	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
–11–
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09–2478–1
Effective Dates: 01–MAY–09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	–0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2478-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2478-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09
Aluminum	20	500000	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2478-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

Raw Data

Spectra

Method: Hg_ReAlign
Result: 070909

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

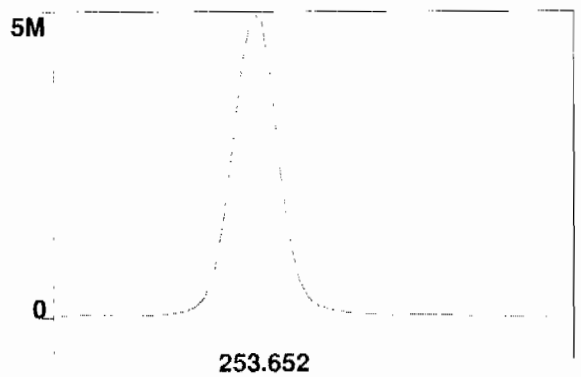

253.652
Intensity: 5431129.6 cps
Conc:

1

Start Time: 6/30/2009 08:00:09 Plasma On Time: 6/29/2009 15:26:31
Logged In Analyst: Optima3 Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1 Autosampler Location: 8
Sample ID: S0 Date Collected: 6/30/2009 08:00:09
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7332.9	7332.9	98.1	%	08:02:02
1	Y RADIAL	6768.4	6768.4	97.75	%	08:02:02
1	Al 396.153Radial†	-69.2	-70.5	[0.00]	ug/L	08:02:02
1	Ca 317.933Radial†	30.7	31.3	[0.00]	ug/L	08:02:22
1	Fe 238.204 Radial†	34.0	34.7	[0.00]	ug/L	08:02:22
1	K 766.490 Radial†	2350.8	2396.2	[0.00]	ug/L	08:02:02
1	Mg 279.077 IEC†	1.8	1.8	[0.00]	ug/L	08:02:22
1	Na 589.592 Radial†	-137.1	-139.7	[0.00]	ug/L	08:02:02
1	Sr 421.552†	-74.2	-75.6	[0.00]	ug/L	08:02:02
1	Sc 361.383	723693.7	723693.7	100.70	%	08:03:19
1	Y 371.029	565792.8	565792.8	100.67	%	08:03:19
1	Ag 328.068†	572.4	568.4	[0.00]	ug/L	08:03:19
1	As 188.979†	-46.3	-46.0	[0.00]	ug/L	08:03:39
1	B 249.677†	-1020.4	-1013.3	[0.00]	ug/L	08:03:19
1	Ba 233.527†	-1.7	-1.7	[0.00]	ug/L	08:03:39
1	Be 313.107†	-4879.3	-4845.6	[0.00]	ug/L	08:03:19
1	Cd 226.502†	-281.3	-279.4	[0.00]	ug/L	08:03:39
1	Co 228.616†	-99.0	-98.3	[0.00]	ug/L	08:03:39
1	Cr 267.716†	-47.5	-47.2	[0.00]	ug/L	08:03:19
1	Cu 324.752†	5579.8	5541.2	[0.00]	ug/L	08:03:19
1	Mn 257.610†	659.8	655.2	[0.00]	ug/L	08:03:19
1	Mo 202.031†	7.3	7.3	[0.00]	ug/L	08:03:39
1	Ni 231.604†	119.2	118.4	[0.00]	ug/L	08:03:39
1	P 214.914†	315.8	313.6	[0.00]	ug/L	08:03:39
1	Pb 220.353†	-12.1	-12.0	[0.00]	ug/L	08:03:39
1	S 181.975 Axial†	77.2	76.7	[0.00]	ug/L	08:03:39
1	Sb 206.836†	60.4	60.0	[0.00]	ug/L	08:03:39
1	Se 196.026†	-31.0	-30.8	[0.00]	ug/L	08:03:39
1	Si 251.611†	415.3	412.5	[0.00]	ug/L	08:03:39
1	Sn 189.927†	11.9	11.8	[0.00]	ug/L	08:03:39
1	Ti 334.940†	-1389.6	-1380.0	[0.00]	ug/L	08:03:19
1	Tl 190.801†	-57.8	-57.4	[0.00]	ug/L	08:03:39
1	U 409.014†	-4755.0	-4722.1	[0.00]	ug/L	08:03:19
1	V 292.402†	-1589.6	-1578.6	[0.00]	ug/L	08:03:19
1	Zn 213.857†	901.8	895.6	[0.00]	ug/L	08:03:39
1	SiO2†	429.1	426.2	[0.00]	ug/L	08:04:35
2	Sc Radial	7660.2	7660.2	102	%	08:02:27
2	Y RADIAL	7100.7	7100.7	102.5	%	08:02:27
2	Al 396.153Radial†	-86.3	-84.2	[0.00]	ug/L	08:02:27
2	Ca 317.933Radial†	21.4	20.9	[0.00]	ug/L	08:02:47
2	Fe 238.204 Radial†	36.8	35.9	[0.00]	ug/L	08:02:47
2	K 766.490 Radial†	2362.0	2304.8	[0.00]	ug/L	08:02:27
2	Mg 279.077 IEC†	5.1	5.0	[0.00]	ug/L	08:02:47
2	Na 589.592 Radial†	-283.4	-276.5	[0.00]	ug/L	08:02:27
2	Sr 421.552†	-46.7	-45.6	[0.00]	ug/L	08:02:27
2	Sc 361.383	713270.6	713270.6	99.246	%	08:03:44
2	Y 371.029	557882.4	557882.4	99.267	%	08:03:44
2	Ag 328.068†	711.7	717.1	[0.00]	ug/L	08:03:44
2	As 188.979†	-32.3	-32.5	[0.00]	ug/L	08:04:04
2	B 249.677†	-913.5	-920.4	[0.00]	ug/L	08:03:44

2	Ba 233.527†	-1.8	-1.8	[0.00]	ug/L	08:04:04
2	Be 313.107†	-4896.3	-4933.5	[0.00]	ug/L	08:03:44
2	Cd 226.502†	-295.8	-298.0	[0.00]	ug/L	08:04:04
2	Co 228.616†	-106.2	-107.0	[0.00]	ug/L	08:04:04
2	Cr 267.716†	-79.3	-79.9	[0.00]	ug/L	08:03:44
2	Cu 324.752†	5643.3	5686.2	[0.00]	ug/L	08:03:44
2	Mn 257.610†	692.3	697.5	[0.00]	ug/L	08:03:44
2	Mo 202.031†	19.0	19.2	[0.00]	ug/L	08:04:04
2	Ni 231.604†	121.8	122.7	[0.00]	ug/L	08:04:04
2	P 214.914†	309.8	312.1	[0.00]	ug/L	08:04:04
2	Pb 220.353†	-3.0	-3.0	[0.00]	ug/L	08:04:04
2	S 181.975 Axial†	69.7	70.3	[0.00]	ug/L	08:04:04
2	Sb 206.836†	54.7	55.1	[0.00]	ug/L	08:04:04
2	Se 196.026†	-23.1	-23.3	[0.00]	ug/L	08:04:04
2	Si 251.611†	423.6	426.8	[0.00]	ug/L	08:04:04
2	Sn 189.927†	7.3	7.3	[0.00]	ug/L	08:04:04
2	Ti 334.940†	-1312.1	-1322.1	[0.00]	ug/L	08:03:44
2	Tl 190.801†	-61.2	-61.7	[0.00]	ug/L	08:04:04
2	U 409.014†	-4836.8	-4873.6	[0.00]	ug/L	08:03:44
2	V 292.402†	-1570.5	-1582.4	[0.00]	ug/L	08:03:44
2	Zn 213.857†	928.6	935.7	[0.00]	ug/L	08:04:04
2	SiO2†	424.7	427.9	[0.00]	ug/L	08:04:40
3	Sc Radial	7430.7	7430.7	99.4	%	08:02:52
3	Y RADIAL	6903.8	6903.8	99.70	%	08:02:52
3	Al 396.153Radial†	-62.8	-63.2	[0.00]	ug/L	08:02:52
3	Ca 317.933Radial†	34.9	35.1	[0.00]	ug/L	08:03:12
3	Fe 238.204 Radial†	33.6	33.8	[0.00]	ug/L	08:03:12
3	K 766.490 Radial†	2505.8	2520.6	[0.00]	ug/L	08:02:52
3	Mg 279.077 IEC†	2.3	2.3	[0.00]	ug/L	08:03:12
3	Na 589.592 Radial†	9.5	9.6	[0.00]	ug/L	08:02:52
3	Sr 421.552†	-46.2	-46.4	[0.00]	ug/L	08:02:52
3	Sc 361.383	719103.6	719103.6	100.06	%	08:04:10
3	Y 371.029	562324.5	562324.5	100.06	%	08:04:10
3	Ag 328.068†	612.8	612.4	[0.00]	ug/L	08:04:10
3	As 188.979†	-27.8	-27.8	[0.00]	ug/L	08:04:30
3	B 249.677†	-886.6	-886.0	[0.00]	ug/L	08:04:10
3	Ba 233.527†	5.0	5.0	[0.00]	ug/L	08:04:30
3	Be 313.107†	-4868.9	-4866.1	[0.00]	ug/L	08:04:10
3	Cd 226.502†	-266.1	-265.9	[0.00]	ug/L	08:04:30
3	Co 228.616†	-93.0	-93.0	[0.00]	ug/L	08:04:30
3	Cr 267.716†	-105.1	-105.1	[0.00]	ug/L	08:04:10
3	Cu 324.752†	5691.2	5687.9	[0.00]	ug/L	08:04:10
3	Mn 257.610†	686.5	686.1	[0.00]	ug/L	08:04:10
3	Mo 202.031†	25.0	25.0	[0.00]	ug/L	08:04:30
3	Ni 231.604†	118.4	118.3	[0.00]	ug/L	08:04:30
3	P 214.914†	318.8	318.6	[0.00]	ug/L	08:04:30
3	Pb 220.353†	-24.8	-24.7	[0.00]	ug/L	08:04:30
3	S 181.975 Axial†	79.4	79.3	[0.00]	ug/L	08:04:30
3	Sb 206.836†	56.7	56.7	[0.00]	ug/L	08:04:30
3	Se 196.026†	-32.3	-32.3	[0.00]	ug/L	08:04:30
3	Si 251.611†	396.3	396.0	[0.00]	ug/L	08:04:30
3	Sn 189.927†	18.3	18.3	[0.00]	ug/L	08:04:30
3	Ti 334.940†	-1343.5	-1342.7	[0.00]	ug/L	08:04:10
3	Tl 190.801†	-63.3	-63.2	[0.00]	ug/L	08:04:30
3	U 409.014†	-4953.4	-4950.5	[0.00]	ug/L	08:04:10
3	V 292.402†	-1535.5	-1534.6	[0.00]	ug/L	08:04:10
3	Zn 213.857†	944.6	944.1	[0.00]	ug/L	08:04:30
3	SiO2†	456.8	456.5	[0.00]	ug/L	08:04:45

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	718689.3	5223.89	0.73%	100.00	%
Sc Radial	7474.6	167.97	2.25%	100	%
Y 371.029	561999.9	3965.18	0.71%	100.00	%
Y RADIAL	6924.3	167.10	2.41%	100.0	%
Ag 328.068†	632.6	76.36	12.07%	[0.00]	ug/L
Al 396.153Radial†	-72.6	10.68	14.70%	[0.00]	ug/L
As 188.979†	-35.4	9.45	26.67%	[0.00]	ug/L
B 249.677†	-939.9	65.84	7.01%	[0.00]	ug/L

Ba 233.527†	0.5	3.89	769.35%	[0.00]	ug/L
Be 313.107†	-4881.7	46.00	0.94%	[0.00]	ug/L
Ca 317.933Radial†	29.1	7.36	25.29%	[0.00]	ug/L
Cd 226.502†	-281.1	16.12	5.73%	[0.00]	ug/L
Co 228.616†	-99.4	7.08	7.12%	[0.00]	ug/L
Cr 267.716†	-77.4	29.04	37.52%	[0.00]	ug/L
Cu 324.752†	5638.4	84.19	1.49%	[0.00]	ug/L
Fe 238.204 Radial†	34.8	1.08	3.11%	[0.00]	ug/L
K 766.490 Radial†	2407.2	108.32	4.50%	[0.00]	ug/L
Mg 279.077 IEC†	3.0	1.67	54.91%	[0.00]	ug/L
Mn 257.610†	679.6	21.90	3.22%	[0.00]	ug/L
Mo 202.031†	17.1	9.03	52.69%	[0.00]	ug/L
Na 589.592 Radial†	-135.6	143.12	105.58%	[0.00]	ug/L
Ni 231.604†	119.8	2.51	2.09%	[0.00]	ug/L
P 214.914†	314.8	3.38	1.07%	[0.00]	ug/L
Pb 220.353†	-13.3	10.92	82.37%	[0.00]	ug/L
S 181.975 Axial†	75.4	4.65	6.16%	[0.00]	ug/L
Sb 206.836†	57.3	2.49	4.36%	[0.00]	ug/L
Se 196.026†	-28.8	4.81	16.71%	[0.00]	ug/L
Si 251.611†	411.8	15.40	3.74%	[0.00]	ug/L
Sn 189.927†	12.5	5.52	44.16%	[0.00]	ug/L
Sr 421.552†	-55.9	17.09	30.60%	[0.00]	ug/L
Ti 334.940†	-1348.3	29.36	2.18%	[0.00]	ug/L
Tl 190.801†	-60.8	3.03	4.98%	[0.00]	ug/L
U 409.014†	-4848.7	116.20	2.40%	[0.00]	ug/L
V 292.402†	-1565.2	26.55	1.70%	[0.00]	ug/L
Zn 213.857†	925.1	25.93	2.80%	[0.00]	ug/L
SiO2†	436.9	17.05	3.90%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 6/30/2009 08:06:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7536.7	7536.7	101	%	08:08:52
1	Y RADIAL	6939.1	6939.1	100.2	%	08:08:52
1	K 766.490 Radial†	7002.8	4537.9	[1000]	ug/L	08:08:47
1	Sr 421.552†	34034.9	33810.4	[100]	ug/L	08:08:47
1	Sc 361.383	734393.9	734393.9	102.19	%	08:09:19
1	Y 371.029	573053.1	573053.1	101.97	%	08:09:19
1	Ag 328.068†	18107.9	17088.1	[100]	ug/L	08:09:19
1	As 188.979†	245.2	275.4	[100]	ug/L	08:09:39
1	B 249.677†	3110.2	3983.6	[100]	ug/L	08:09:19
1	Ba 233.527†	14955.4	14635.1	[100]	ug/L	08:09:19
1	Be 313.107†	222292.2	222420.4	[100]	ug/L	08:09:19
1	Cd 226.502†	7806.4	7920.5	[100]	ug/L	08:09:39
1	Co 228.616†	5943.2	5915.6	[100]	ug/L	08:09:39
1	Cr 267.716†	7405.7	7324.8	[100]	ug/L	08:09:19
1	Cu 324.752†	34513.6	28137.2	[100]	ug/L	08:09:19
1	Mn 257.610†	97154.7	94397.5	[100]	ug/L	08:09:19
1	Mo 202.031†	1505.5	1456.1	[100]	ug/L	08:09:39
1	Ni 231.604†	3998.2	3792.9	[100]	ug/L	08:09:39
1	P 214.914†	1350.2	1006.6	[500]	ug/L	08:09:39
1	Pb 220.353†	890.6	884.8	[100]	ug/L	08:09:39
1	S 181.975 Axial†	232.7	152.3	[200]	ug/L	08:09:39
1	Sb 206.836†	401.3	335.5	[100]	ug/L	08:09:39
1	Se 196.026†	174.4	199.5	[100]	ug/L	08:09:39
1	Si 251.611†	17145.7	16367.3	[500]	ug/L	08:09:19
1	Sn 189.927†	597.0	571.7	[100]	ug/L	08:09:39
1	Ti 334.940†	55327.0	55492.2	[100]	ug/L	08:09:19
1	Tl 190.801†	353.4	406.6	[100]	ug/L	08:09:39
1	U 409.014†	-1643.9	3240.0	[100]	ug/L	08:09:19
1	V 292.402†	9828.0	11183.0	[100]	ug/L	08:09:19
1	Zn 213.857†	12345.3	11156.2	[100]	ug/L	08:09:19
1	SiO2†	16831.6	16034.7	[1069.5]	ug/L	08:10:36
2	Sc Radial	7396.9	7396.9	99.0	%	08:09:02
2	Y RADIAL	6800.1	6800.1	98.21	%	08:09:02
2	K 766.490 Radial†	6887.5	4552.7	[1000]	ug/L	08:08:57
2	Sr 421.552†	34356.2	34773.1	[100]	ug/L	08:08:57
2	Sc 361.383	729336.4	729336.4	101.48	%	08:09:45
2	Y 371.029	568343.4	568343.4	101.13	%	08:09:45
2	Ag 328.068†	18043.8	17147.7	[100]	ug/L	08:09:45
2	As 188.979†	267.9	299.4	[100]	ug/L	08:10:05
2	B 249.677†	2982.8	3879.2	[100]	ug/L	08:09:45
2	Ba 233.527†	14864.7	14647.2	[100]	ug/L	08:09:45
2	Be 313.107†	220607.8	222269.0	[100]	ug/L	08:09:45
2	Cd 226.502†	7778.0	7945.6	[100]	ug/L	08:10:05
2	Co 228.616†	5930.9	5943.8	[100]	ug/L	08:10:05
2	Cr 267.716†	7358.5	7328.4	[100]	ug/L	08:09:45
2	Cu 324.752†	34059.7	27924.1	[100]	ug/L	08:09:45
2	Mn 257.610†	96466.5	94378.6	[100]	ug/L	08:09:45
2	Mo 202.031†	1502.6	1463.6	[100]	ug/L	08:10:05
2	Ni 231.604†	3991.0	3813.0	[100]	ug/L	08:10:05
2	P 214.914†	1333.3	999.1	[500]	ug/L	08:10:05
2	Pb 220.353†	883.7	884.1	[100]	ug/L	08:10:05
2	S 181.975 Axial†	238.4	159.5	[200]	ug/L	08:10:05
2	Sb 206.836†	392.3	329.4	[100]	ug/L	08:10:05
2	Se 196.026†	178.3	204.5	[100]	ug/L	08:10:05
2	Si 251.611†	17027.5	16367.1	[500]	ug/L	08:09:45
2	Sn 189.927†	595.1	573.9	[100]	ug/L	08:10:05
2	Ti 334.940†	54903.8	55450.6	[100]	ug/L	08:09:45
2	Tl 190.801†	340.2	396.0	[100]	ug/L	08:10:05
2	U 409.014†	-1533.7	3337.4	[100]	ug/L	08:09:45

2	V 292.402†	9767.9	11190.5	[100]	ug/L	08:09:45
2	Zn 213.857†	12219.7	11116.2	[100]	ug/L	08:09:45
2	SiO2†	16580.2	15901.3	[1069.5]	ug/L	08:10:41
3	Sc Radial	7592.7	7592.7	102	%	08:09:12
3	Y RADIAL	7005.7	7005.7	101.2	%	08:09:12
3	K 766.490 Radial†	7071.4	4554.3	[1000]	ug/L	08:09:07
3	Sr 421.552†	34873.0	34386.5	[100]	ug/L	08:09:07
3	Sc 361.383	738752.0	738752.0	102.79	%	08:10:10
3	Y 371.029	576233.1	576233.1	102.53	%	08:10:10
3	Ag 328.068†	18197.8	17071.0	[100]	ug/L	08:10:10
3	As 188.979†	254.2	282.7	[100]	ug/L	08:10:30
3	B 249.677†	3118.6	3973.8	[100]	ug/L	08:10:10
3	Ba 233.527†	15063.6	14654.0	[100]	ug/L	08:10:10
3	Be 313.107†	223875.9	222677.8	[100]	ug/L	08:10:10
3	Cd 226.502†	7755.4	7825.9	[100]	ug/L	08:10:30
3	Co 228.616†	5940.8	5878.9	[100]	ug/L	08:10:30
3	Cr 267.716†	7475.5	7349.9	[100]	ug/L	08:10:10
3	Cu 324.752†	34750.0	28167.8	[100]	ug/L	08:10:10
3	Mn 257.610†	97657.0	94325.2	[100]	ug/L	08:10:10
3	Mo 202.031†	1495.8	1438.1	[100]	ug/L	08:10:30
3	Ni 231.604†	4016.8	3787.9	[100]	ug/L	08:10:30
3	P 214.914†	1333.5	982.5	[500]	ug/L	08:10:30
3	Pb 220.353†	877.8	867.2	[100]	ug/L	08:10:30
3	S 181.975 Axial†	222.6	141.1	[200]	ug/L	08:10:30
3	Sb 206.836†	398.6	330.5	[100]	ug/L	08:10:30
3	Se 196.026†	170.3	194.5	[100]	ug/L	08:10:30
3	Si 251.611†	17254.1	16373.7	[500]	ug/L	08:10:10
3	Sn 189.927†	587.6	559.2	[100]	ug/L	08:10:30
3	Ti 334.940†	55848.1	55679.6	[100]	ug/L	08:10:10
3	Tl 190.801†	343.9	395.3	[100]	ug/L	08:10:30
3	U 409.014†	-1621.5	3271.3	[100]	ug/L	08:10:10
3	V 292.402†	9943.5	11238.7	[100]	ug/L	08:10:10
3	Zn 213.857†	12396.5	11134.7	[100]	ug/L	08:10:10
3	SiO2†	16720.9	15829.9	[1069.5]	ug/L	08:10:46

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	734160.8	4712.12	0.64%	102.15	%
Sc Radial	7508.7	100.86	1.34%	100	%
Y 371.029	572543.2	3969.45	0.69%	101.88	%
Y RADIAL	6915.0	104.91	1.52%	99.86	%
Ag 328.068†	17102.3	40.29	0.24%	[100]	ug/L
As 188.979†	285.9	12.31	4.31%	[100]	ug/L
B 249.677†	3945.5	57.65	1.46%	[100]	ug/L
Ba 233.527†	14645.4	9.59	0.07%	[100]	ug/L
Be 313.107†	222455.7	206.65	0.09%	[100]	ug/L
Cd 226.502†	7897.3	63.13	0.80%	[100]	ug/L
Co 228.616†	5912.7	32.55	0.55%	[100]	ug/L
Cr 267.716†	7334.4	13.58	0.19%	[100]	ug/L
Cu 324.752†	28076.4	132.76	0.47%	[100]	ug/L
K 766.490 Radial†	4548.3	9.03	0.20%	[1000]	ug/L
Mn 257.610†	94367.1	37.47	0.04%	[100]	ug/L
Mo 202.031†	1452.6	13.10	0.90%	[100]	ug/L
Ni 231.604†	3797.9	13.28	0.35%	[100]	ug/L
P 214.914†	996.1	12.30	1.24%	[500]	ug/L
Pb 220.353†	878.7	9.94	1.13%	[100]	ug/L
S 181.975 Axial†	151.0	9.23	6.12%	[200]	ug/L
Sb 206.836†	331.8	3.25	0.98%	[100]	ug/L
Se 196.026†	199.5	5.01	2.51%	[100]	ug/L
Si 251.611†	16369.4	3.77	0.02%	[500]	ug/L
Sn 189.927†	568.3	7.94	1.40%	[100]	ug/L
Sr 421.552†	34323.3	484.48	1.41%	[100]	ug/L
Ti 334.940†	55540.8	122.03	0.22%	[100]	ug/L
Tl 190.801†	399.3	6.30	1.58%	[100]	ug/L
U 409.014†	3282.9	49.72	1.51%	[100]	ug/L
V 292.402†	11204.1	30.19	0.27%	[100]	ug/L
Zn 213.857†	11135.7	20.05	0.18%	[100]	ug/L
SiO2†	15922.0	103.97	0.65%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 6/30/2009 08:12:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7331.6	7331.6	98.1	%	08:14:48
1	Y RADIAL	6711.6	6711.6	96.93	%	08:14:48
1	Al 396.153Radial†	6146.5	6339.0	[5000]	ug/L	08:14:48
1	Ca 317.933Radial†	3679.6	3722.2	[5000]	ug/L	08:14:48
1	K 766.490 Radial†	24598.6	22671.0	[5000]	ug/L	08:14:48
1	Mg 279.077 IEC†	216.5	217.7	[5000]	ug/L	08:15:08
1	Sr 421.552†	169572.9	172935.1	[500]	ug/L	08:14:48
1	Sc 361.383	769868.5	769868.5	107.12	%	08:16:07
1	Y 371.029	593513.7	593513.7	105.61	%	08:16:07
1	Ag 328.068†	87541.8	81089.5	[500]	ug/L	08:16:07
1	As 188.979†	1409.8	1351.5	[500]	ug/L	08:16:27
1	B 249.677†	19467.3	19113.1	[500]	ug/L	08:16:07
1	Ba 233.527†	73932.8	69017.4	[500]	ug/L	08:16:07
1	Be 313.107†	1136680.0	1065997.8	[500]	ug/L	08:16:07
1	Cd 226.502†	39456.0	37114.2	[500]	ug/L	08:16:27
1	Co 228.616†	29402.6	27547.4	[500]	ug/L	08:16:27
1	Cr 267.716†	37090.5	34702.2	[500]	ug/L	08:16:07
1	Cu 324.752†	149279.1	133716.9	[500]	ug/L	08:16:07
1	Mn 257.610†	473775.8	441600.6	[500]	ug/L	08:16:07
1	Mo 202.031†	7403.7	6894.4	[500]	ug/L	08:16:27
1	Ni 231.604†	19288.8	17886.7	[500]	ug/L	08:16:27
1	P 214.914†	5408.5	4734.1	[2500]	ug/L	08:16:27
1	Pb 220.353†	4336.2	4061.2	[500]	ug/L	08:16:27
1	S 181.975 Axial†	819.7	689.8	[1000]	ug/L	08:16:27
1	Sb 206.836†	1784.5	1608.6	[500]	ug/L	08:16:27
1	Se 196.026†	996.6	959.1	[500]	ug/L	08:16:27
1	Si 251.611†	85511.7	79415.3	[2500]	ug/L	08:16:07
1	Sn 189.927†	2931.4	2724.0	[500]	ug/L	08:16:27
1	Ti 334.940†	282238.5	264824.2	[500]	ug/L	08:16:07
1	Tl 190.801†	1928.3	1860.8	[500]	ug/L	08:16:27
1	U 409.014†	10443.6	14598.1	[500]	ug/L	08:16:07
1	V 292.402†	55566.5	53437.8	[500]	ug/L	08:16:07
1	Zn 213.857†	57403.7	52662.5	[500]	ug/L	08:16:07
1	SiO2†	86466.0	80281.1	[5347.5]	ug/L	08:17:27
2	Sc Radial	7012.2	7012.2	93.8	%	08:15:13
2	Y RADIAL	6406.9	6406.9	92.53	%	08:15:13
2	Al 396.153Radial†	6199.2	6680.6	[5000]	ug/L	08:15:13
2	Ca 317.933Radial†	3669.6	3882.5	[5000]	ug/L	08:15:13
2	K 766.490 Radial†	24515.2	23724.5	[5000]	ug/L	08:15:13
2	Mg 279.077 IEC†	213.8	224.8	[5000]	ug/L	08:15:33
2	Sr 421.552†	170064.4	181333.7	[500]	ug/L	08:15:13
2	Sc 361.383	741530.7	741530.7	103.18	%	08:16:34
2	Y 371.029	572044.7	572044.7	101.79	%	08:16:34
2	Ag 328.068†	87246.2	83926.1	[500]	ug/L	08:16:34
2	As 188.979†	1416.7	1408.5	[500]	ug/L	08:16:54
2	B 249.677†	19479.9	19819.7	[500]	ug/L	08:16:34
2	Ba 233.527†	73805.8	71531.8	[500]	ug/L	08:16:34
2	Be 313.107†	1135032.3	1104951.6	[500]	ug/L	08:16:34
2	Cd 226.502†	39893.2	38945.5	[500]	ug/L	08:16:54
2	Co 228.616†	29720.4	28904.3	[500]	ug/L	08:16:54
2	Cr 267.716†	37001.7	35939.3	[500]	ug/L	08:16:34
2	Cu 324.752†	148954.2	138727.6	[500]	ug/L	08:16:34
2	Mn 257.610†	472845.3	457600.6	[500]	ug/L	08:16:34
2	Mo 202.031†	7472.5	7225.2	[500]	ug/L	08:16:54
2	Ni 231.604†	19486.5	18766.4	[500]	ug/L	08:16:54
2	P 214.914†	5446.9	4964.3	[2500]	ug/L	08:16:54
2	Pb 220.353†	4388.1	4266.1	[500]	ug/L	08:16:54
2	S 181.975 Axial†	832.2	731.2	[1000]	ug/L	08:16:54
2	Sb 206.836†	1819.4	1706.1	[500]	ug/L	08:16:54

2	Se 196.026†	994.2	992.4	[500]	ug/L	08:16:54
2	Si 251.611†	85264.0	82225.8	[2500]	ug/L	08:16:34
2	Sn 189.927†	2961.9	2858.2	[500]	ug/L	08:16:54
2	Ti 334.940†	282021.6	274682.7	[500]	ug/L	08:16:34
2	Tl 190.801†	1952.3	1953.0	[500]	ug/L	08:16:54
2	U 409.014†	10246.1	14779.2	[500]	ug/L	08:16:34
2	V 292.402†	55595.3	55448.0	[500]	ug/L	08:16:34
2	Zn 213.857†	57330.7	54639.6	[500]	ug/L	08:16:34
2	SiO2†	85458.1	82388.9	[5347.5]	ug/L	08:17:32
3	Sc Radial	7281.7	7281.7	97.4	%	08:15:38
3	Y RADIAL	6673.6	6673.6	96.38	%	08:15:38
3	Al 396.153Radial†	6002.9	6234.6	[5000]	ug/L	08:15:38
3	Ca 317.933Radial†	3580.6	3646.4	[5000]	ug/L	08:15:38
3	K 766.490 Radial†	24009.6	22238.6	[5000]	ug/L	08:15:38
3	Mg 279.077 IEC†	207.3	209.8	[5000]	ug/L	08:15:58
3	Sr 421.552†	165542.3	169984.4	[500]	ug/L	08:15:38
3	Sc 361.383	732297.7	732297.7	101.89	%	08:17:02
3	Y 371.029	565284.2	565284.2	100.58	%	08:17:02
3	Ag 328.068†	86631.1	84388.6	[500]	ug/L	08:17:02
3	As 188.979†	1413.7	1422.9	[500]	ug/L	08:17:22
3	B 249.677†	19357.3	19937.5	[500]	ug/L	08:17:02
3	Ba 233.527†	73252.9	71891.1	[500]	ug/L	08:17:02
3	Be 313.107†	1126344.5	1110295.2	[500]	ug/L	08:17:02
3	Cd 226.502†	39932.3	39471.3	[500]	ug/L	08:17:22
3	Co 228.616†	29714.9	29262.1	[500]	ug/L	08:17:22
3	Cr 267.716†	36694.0	36089.5	[500]	ug/L	08:17:02
3	Cu 324.752†	147084.2	138712.4	[500]	ug/L	08:17:02
3	Mn 257.610†	469176.5	459778.1	[500]	ug/L	08:17:02
3	Mo 202.031†	7457.0	7301.3	[500]	ug/L	08:17:22
3	Ni 231.604†	19533.9	19051.1	[500]	ug/L	08:17:22
3	P 214.914†	5449.9	5033.8	[2500]	ug/L	08:17:22
3	Pb 220.353†	4412.4	4343.7	[500]	ug/L	08:17:22
3	S 181.975 Axial†	840.6	749.6	[1000]	ug/L	08:17:22
3	Sb 206.836†	1816.0	1725.0	[500]	ug/L	08:17:22
3	Se 196.026†	1002.2	1012.3	[500]	ug/L	08:17:22
3	Si 251.611†	84453.6	82472.4	[2500]	ug/L	08:17:02
3	Sn 189.927†	2978.8	2910.9	[500]	ug/L	08:17:22
3	Ti 334.940†	278860.4	275026.5	[500]	ug/L	08:17:02
3	Tl 190.801†	1948.7	1973.3	[500]	ug/L	08:17:22
3	U 409.014†	9966.0	14629.5	[500]	ug/L	08:17:02
3	V 292.402†	54895.9	55441.0	[500]	ug/L	08:17:02
3	Zn 213.857†	56933.7	54950.6	[500]	ug/L	08:17:02
3	SiO2†	86700.3	84652.2	[5347.5]	ug/L	08:17:37

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	747899.0	19578.21	2.62%	104.06	%
Sc Radial	7208.5	171.81	2.38%	96.4	%
Y 371.029	576947.5	14739.54	2.55%	102.66	%
Y RADIAL	6597.4	166.02	2.52%	95.28	%
Ag 328.068†	83134.7	1786.23	2.15%	[500]	ug/L
Al 396.153Radial†	6418.0	233.28	3.63%	[5000]	ug/L
As 188.979†	1394.3	37.77	2.71%	[500]	ug/L
B 249.677†	19623.4	445.89	2.27%	[500]	ug/L
Ba 233.527†	70813.4	1565.76	2.21%	[500]	ug/L
Be 313.107†	1093748.2	24180.62	2.21%	[500]	ug/L
Ca 317.933Radial†	3750.4	120.53	3.21%	[5000]	ug/L
Cd 226.502†	38510.3	1237.37	3.21%	[500]	ug/L
Co 228.616†	28571.3	904.57	3.17%	[500]	ug/L
Cr 267.716†	35577.0	761.31	2.14%	[500]	ug/L
Cu 324.752†	137052.3	2888.55	2.11%	[500]	ug/L
K 766.490 Radial†	22878.0	764.29	3.34%	[5000]	ug/L
Mg 279.077 IEC†	217.4	7.53	3.46%	[5000]	ug/L
Mn 257.610†	452993.1	9926.07	2.19%	[500]	ug/L
Mo 202.031†	7140.3	216.36	3.03%	[500]	ug/L
Ni 231.604†	18568.1	607.02	3.27%	[500]	ug/L
P 214.914†	4910.7	156.86	3.19%	[2500]	ug/L
Pb 220.353†	4223.7	145.95	3.46%	[500]	ug/L
S 181.975 Axial†	723.5	30.63	4.23%	[1000]	ug/L

Sb 206.836†	1679.9	62.46	3.72%	[500]	ug/L
Se 196.026†	987.9	26.86	2.72%	[500]	ug/L
Si 251.611†	81371.2	1698.29	2.09%	[2500]	ug/L
Sn 189.927†	2831.0	96.35	3.40%	[500]	ug/L
Sr 421.552†	174751.0	5888.55	3.37%	[500]	ug/L
Ti 334.940†	271511.1	5793.62	2.13%	[500]	ug/L
Tl 190.801†	1929.0	59.92	3.11%	[500]	ug/L
U 409.014†	14668.9	96.79	0.66%	[500]	ug/L
V 292.402†	54775.6	1158.59	2.12%	[500]	ug/L
Zn 213.857†	54084.3	1241.03	2.29%	[500]	ug/L
SiO2†	82440.7	2186.02	2.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 6/30/2009 08:19:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7204.7	7204.7	96.4	%	08:22:02
1	Y RADIAL	7061.7	7061.7	102.0	%	08:21:42
1	Al 396.153Radial†	12196.2	12725.7	[10000]	ug/L	08:21:42
1	Ca 317.933Radial†	7147.7	7386.4	[10000]	ug/L	08:22:02
1	Fe 238.204 Radial†	2424.5	2480.5	[10000]	ug/L	08:22:02
1	K 766.490 Radial†	45808.2	45117.1	[10000]	ug/L	08:21:42
1	Mg 279.077 IEC†	418.3	431.0	[10000]	ug/L	08:22:02
1	Na 589.592 Radial†	161229.1	167404.7	[10000]	ug/L	08:21:42
1	Sr 421.552†	336493.3	349155.2	[1000]	ug/L	08:21:42
1	Sc 361.383	731644.6	731644.6	101.80	%	08:23:01
1	Y 371.029	562448.6	562448.6	100.08	%	08:23:01
1	Ag 328.068†	173528.7	169823.4	[1000]	ug/L	08:23:01
1	As 188.979†	2839.1	2824.3	[1000]	ug/L	08:23:21
1	B 249.677†	40015.0	40246.4	[1000]	ug/L	08:23:01
1	Ba 233.527†	146287.3	143696.5	[1000]	ug/L	08:23:01
1	Be 313.107†	2249343.7	2214396.2	[1000]	ug/L	08:23:01
1	Cd 226.502†	81183.1	80026.7	[1000]	ug/L	08:23:01
1	Co 228.616†	59665.4	58708.3	[1000]	ug/L	08:23:01
1	Cr 267.716†	73671.7	72444.6	[1000]	ug/L	08:23:01
1	Cu 324.752†	290566.6	279783.1	[1000]	ug/L	08:23:01
1	Mn 257.610†	937074.5	919802.1	[1000]	ug/L	08:23:01
1	Mo 202.031†	14767.8	14489.2	[1000]	ug/L	08:23:21
1	Ni 231.604†	38890.7	38082.2	[1000]	ug/L	08:23:01
1	P 214.914†	10479.1	9978.8	[5000]	ug/L	08:23:21
1	Pb 220.353†	8695.5	8554.8	[1000]	ug/L	08:23:21
1	S 181.975 Axial†	1600.3	1496.5	[2000]	ug/L	08:23:21
1	Sb 206.836†	3574.8	3454.3	[1000]	ug/L	08:23:21
1	Se 196.026†	2002.9	1996.2	[1000]	ug/L	08:23:21
1	Si 251.611†	167224.9	163852.0	[5000]	ug/L	08:23:01
1	Sn 189.927†	5879.4	5762.8	[1000]	ug/L	08:23:21
1	Ti 334.940†	562505.4	553893.3	[1000]	ug/L	08:23:01
1	Tl 190.801†	3903.4	3895.0	[1000]	ug/L	08:23:21
1	U 409.014†	25254.0	29655.6	[1000]	ug/L	08:23:01
1	V 292.402†	112154.0	111733.3	[1000]	ug/L	08:23:01
1	Zn 213.857†	113078.1	110150.7	[1000]	ug/L	08:23:01
1	SiO2†	166605.1	163218.1	[10695]	ug/L	08:24:22
2	Sc Radial	7030.2	7030.2	94.1	%	08:22:27
2	Y RADIAL	5925.9	5925.9	85.58	%	08:22:07
2	Al 396.153Radial†	12831.1	13714.8	[10000]	ug/L	08:22:07
2	Ca 317.933Radial†	7296.2	7728.2	[10000]	ug/L	08:22:27
2	Fe 238.204 Radial†	2474.3	2595.9	[10000]	ug/L	08:22:27
2	K 766.490 Radial†	47735.1	48345.1	[10000]	ug/L	08:22:07
2	Mg 279.077 IEC†	418.7	442.2	[10000]	ug/L	08:22:27
2	Na 589.592 Radial†	168332.5	179107.6	[10000]	ug/L	08:22:07
2	Sr 421.552†	352945.4	375309.4	[1000]	ug/L	08:22:07
2	Sc 361.383	736250.1	736250.1	102.44	%	08:23:29
2	Y 371.029	566550.5	566550.5	100.81	%	08:23:29
2	Ag 328.068†	173180.3	168417.0	[1000]	ug/L	08:23:29
2	As 188.979†	2763.2	2732.7	[1000]	ug/L	08:23:49
2	B 249.677†	39944.8	39932.0	[1000]	ug/L	08:23:29
2	Ba 233.527†	145645.5	142171.1	[1000]	ug/L	08:23:29
2	Be 313.107†	2241322.6	2192745.1	[1000]	ug/L	08:23:29
2	Cd 226.502†	80530.2	78890.5	[1000]	ug/L	08:23:29
2	Co 228.616†	59248.5	57934.7	[1000]	ug/L	08:23:29
2	Cr 267.716†	73330.1	71658.4	[1000]	ug/L	08:23:29
2	Cu 324.752†	290171.2	277611.7	[1000]	ug/L	08:23:29
2	Mn 257.610†	932429.5	909509.9	[1000]	ug/L	08:23:29
2	Mo 202.031†	14414.1	14053.2	[1000]	ug/L	08:23:49
2	Ni 231.604†	38630.1	37588.9	[1000]	ug/L	08:23:29

2	P 214.914†	10255.7	9696.3	[5000]	ug/L	08:23:49
2	Pb 220.353†	8495.4	8306.1	[1000]	ug/L	08:23:49
2	S 181.975 Axial†	1560.2	1447.6	[2000]	ug/L	08:23:49
2	Sb 206.836†	3479.3	3339.0	[1000]	ug/L	08:23:49
2	Se 196.026†	1946.5	1928.8	[1000]	ug/L	08:23:49
2	Si 251.611†	166585.8	162200.7	[5000]	ug/L	08:23:29
2	Sn 189.927†	5744.7	5595.1	[1000]	ug/L	08:23:49
2	Ti 334.940†	561361.9	549320.8	[1000]	ug/L	08:23:29
2	Tl 190.801†	3783.4	3753.9	[1000]	ug/L	08:23:49
2	U 409.014†	25427.8	29670.0	[1000]	ug/L	08:23:29
2	V 292.402†	111767.7	110667.1	[1000]	ug/L	08:23:29
2	Zn 213.857†	112281.5	108678.3	[1000]	ug/L	08:23:29
2	SiO2†	169107.1	164636.8	[10695]	ug/L	08:24:27
3	Sc Radial	7179.0	7179.0	96.0	%	08:22:52
3	Y RADIAL	6782.9	6782.9	97.96	%	08:22:32
3	Al 396.153Radial†	12455.1	13040.5	[10000]	ug/L	08:22:32
3	Ca 317.933Radial†	7211.3	7479.1	[10000]	ug/L	08:22:52
3	Fe 238.204 Radial†	2448.1	2514.1	[10000]	ug/L	08:22:52
3	K 766.490 Radial†	46541.4	46050.6	[10000]	ug/L	08:22:32
3	Mg 279.077 IEC†	421.5	435.8	[10000]	ug/L	08:22:52
3	Na 589.592 Radial†	163743.5	170621.2	[10000]	ug/L	08:22:32
3	Sr 421.552†	342328.1	356479.3	[1000]	ug/L	08:22:32
3	Sc 361.383	754192.3	754192.3	104.94	%	08:23:56
3	Y 371.029	580172.7	580172.7	103.23	%	08:23:56
3	Ag 328.068†	173481.6	164682.5	[1000]	ug/L	08:23:56
3	As 188.979†	2839.1	2740.9	[1000]	ug/L	08:24:16
3	B 249.677†	40141.4	39191.7	[1000]	ug/L	08:23:56
3	Ba 233.527†	146129.4	139249.9	[1000]	ug/L	08:23:56
3	Be 313.107†	2245004.3	2144204.4	[1000]	ug/L	08:23:56
3	Cd 226.502†	80829.2	77305.3	[1000]	ug/L	08:23:56
3	Co 228.616†	59391.2	56694.9	[1000]	ug/L	08:23:56
3	Cr 267.716†	73470.2	70089.1	[1000]	ug/L	08:23:56
3	Cu 324.752†	291067.4	271727.3	[1000]	ug/L	08:23:56
3	Mn 257.610†	935327.1	890617.8	[1000]	ug/L	08:23:56
3	Mo 202.031†	14715.4	14005.6	[1000]	ug/L	08:24:16
3	Ni 231.604†	38693.3	36752.0	[1000]	ug/L	08:23:56
3	P 214.914†	10487.0	9678.6	[5000]	ug/L	08:24:16
3	Pb 220.353†	8683.7	8288.1	[1000]	ug/L	08:24:16
3	S 181.975 Axial†	1594.1	1443.7	[2000]	ug/L	08:24:16
3	Sb 206.836†	3539.1	3315.3	[1000]	ug/L	08:24:16
3	Se 196.026†	2006.3	1940.6	[1000]	ug/L	08:24:16
3	Si 251.611†	167230.5	158946.5	[5000]	ug/L	08:23:56
3	Sn 189.927†	5871.1	5582.2	[1000]	ug/L	08:24:16
3	Ti 334.940†	562636.9	537499.6	[1000]	ug/L	08:23:56
3	Tl 190.801†	3902.1	3779.2	[1000]	ug/L	08:24:16
3	U 409.014†	25678.7	29318.6	[1000]	ug/L	08:23:56
3	V 292.402†	111958.9	108253.7	[1000]	ug/L	08:23:56
3	Zn 213.857†	112557.5	106333.8	[1000]	ug/L	08:23:56
3	SiO2†	166725.6	158440.2	[10695]	ug/L	08:24:32

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	740695.7	11913.08	1.61%	103.06	%
Sc Radial	7138.0	94.18	1.32%	95.5	%
Y 371.029	569723.9	9278.37	1.63%	101.37	%
Y RADIAL	6590.2	591.92	8.98%	95.17	%
Ag 328.068†	167641.0	2656.88	1.58%	[1000]	ug/L
Al 396.153Radial†	13160.3	505.29	3.84%	[10000]	ug/L
As 188.979†	2766.0	50.67	1.83%	[1000]	ug/L
B 249.677†	39790.0	541.48	1.36%	[1000]	ug/L
Ba 233.527†	141705.8	2259.47	1.59%	[1000]	ug/L
Be 313.107†	2183781.9	35944.05	1.65%	[1000]	ug/L
Ca 317.933Radial†	7531.2	176.79	2.35%	[10000]	ug/L
Cd 226.502†	78740.8	1366.83	1.74%	[1000]	ug/L
Co 228.616†	57779.3	1015.70	1.76%	[1000]	ug/L
Cr 267.716†	71397.4	1199.28	1.68%	[1000]	ug/L
Cu 324.752†	276374.0	4168.09	1.51%	[1000]	ug/L
Fe 238.204 Radial†	2530.2	59.32	2.34%	[10000]	ug/L
K 766.490 Radial†	46504.2	1661.12	3.57%	[10000]	ug/L

Mg 279.077 IEC†	436.3	5.61	1.29%	[10000]	ug/L
Mn 257.610†	906643.3	14801.82	1.63%	[1000]	ug/L
Mo 202.031†	14182.7	266.55	1.88%	[1000]	ug/L
Na 589.592 Radial†	172377.9	6045.95	3.51%	[10000]	ug/L
Ni 231.604†	37474.4	672.45	1.79%	[1000]	ug/L
P 214.914†	9784.6	168.42	1.72%	[5000]	ug/L
Pb 220.353†	8383.0	149.05	1.78%	[1000]	ug/L
S 181.975 Axial†	1462.6	29.43	2.01%	[2000]	ug/L
Sb 206.836†	3369.5	74.35	2.21%	[1000]	ug/L
Se 196.026†	1955.2	35.97	1.84%	[1000]	ug/L
Si 251.611†	161666.4	2496.06	1.54%	[5000]	ug/L
Sn 189.927†	5646.7	100.73	1.78%	[1000]	ug/L
Sr 421.552†	360314.6	13492.36	3.74%	[1000]	ug/L
Ti 334.940†	546904.5	8459.75	1.55%	[1000]	ug/L
Tl 190.801†	3809.4	75.25	1.98%	[1000]	ug/L
U 409.014†	29548.0	198.85	0.67%	[1000]	ug/L
V 292.402†	110218.0	1782.72	1.62%	[1000]	ug/L
Zn 213.857†	108387.6	1924.98	1.78%	[1000]	ug/L
SiO2†	162098.4	3246.49	2.00%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 6/30/2009 08:26:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7395.9	7395.9	98.9	%	08:28:57
1	Y RADIAL	6757.0	6757.0	97.58	%	08:28:57
1	Al 396.153Radial†	58979.0	59679.3	[50000]	ug/L	08:28:37
1	Ca 317.933Radial†	34828.4	35170.0	[50000]	ug/L	08:28:57
1	Fe 238.204 Radial†	4716.7	4732.1	[20000]	ug/L	08:28:57
1	Mg 279.077 IEC†	1974.9	1992.8	[50000]	ug/L	08:28:57
1	Na 589.592 Radial†	312800.4	316264.9	[20000]	ug/L	08:28:37
1	Sc 361.383	728229.0	728229.0	101.33	%	08:29:54
1	Y 371.029	558499.0	558499.0	99.377	%	08:29:54
2	Sc Radial	7352.7	7352.7	98.4	%	08:29:22
2	Y RADIAL	6711.0	6711.0	96.92	%	08:29:22
2	Al 396.153Radial†	59889.8	60955.7	[50000]	ug/L	08:29:02
2	Ca 317.933Radial†	34701.3	35247.7	[50000]	ug/L	08:29:22
2	Fe 238.204 Radial†	4700.8	4744.0	[20000]	ug/L	08:29:22
2	Mg 279.077 IEC†	1971.2	2000.9	[50000]	ug/L	08:29:22
2	Na 589.592 Radial†	318315.5	323730.2	[20000]	ug/L	08:29:02
2	Sc 361.383	719163.9	719163.9	100.07	%	08:30:00
2	Y 371.029	551632.9	551632.9	98.155	%	08:30:00
3	Sc Radial	7422.8	7422.8	99.3	%	08:29:47
3	Y RADIAL	6775.3	6775.3	97.85	%	08:29:47
3	Al 396.153Radial†	60312.5	60805.9	[50000]	ug/L	08:29:27
3	Ca 317.933Radial†	34904.4	35118.8	[50000]	ug/L	08:29:47
3	Fe 238.204 Radial†	4722.7	4720.8	[20000]	ug/L	08:29:47
3	Mg 279.077 IEC†	1986.0	1996.8	[50000]	ug/L	08:29:47
3	Na 589.592 Radial†	321104.6	323480.3	[20000]	ug/L	08:29:27
3	Sc 361.383	728485.1	728485.1	101.36	%	08:30:05
3	Y 371.029	558549.8	558549.8	99.386	%	08:30:05

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	725292.7	5309.24	0.73%	100.92	%
Sc Radial	7390.4	35.39	0.48%	98.9	%
Y 371.029	556227.2	3978.89	0.72%	98.973	%
Y RADIAL	6747.8	33.13	0.49%	97.45	%
Al 396.153Radial†	60480.3	697.72	1.15%	[50000]	ug/L
Ca 317.933Radial†	35178.8	64.92	0.18%	[50000]	ug/L
Fe 238.204 Radial†	4732.3	11.57	0.24%	[20000]	ug/L
Mg 279.077 IEC†	1996.9	4.02	0.20%	[50000]	ug/L
Na 589.592 Radial†	321158.5	4239.77	1.32%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	167.4	0.00000	0.999993	
Al 396.153Radial	3	Lin Thru 0	0.0	1.214	0.00000	0.999844	
As 188.979	3	Lin Thru 0	0.0	2.771	0.00000	0.999991	
B 249.677	3	Lin Thru 0	0.0	39.68	0.00000	0.999985	
Ba 233.527	3	Lin Thru 0	0.0	141.7	0.00000	0.999996	
Be 313.107	3	Lin Thru 0	0.0	2185	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.7059	0.00000	0.999891	
Cd 226.502	3	Lin Thru 0	0.0	78.40	0.00000	0.999962	
Co 228.616	3	Lin Thru 0	0.0	57.66	0.00000	0.999988	
Cr 267.716	3	Lin Thru 0	0.0	71.36	0.00000	0.999996	
Cu 324.752	3	Lin Thru 0	0.0	276.0	0.00000	0.999993	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.2399	0.00000	0.999626	
K 766.490 Radial	3	Lin Thru 0	0.0	4.635	0.00000	0.999978	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0401	0.00000	0.999811
Mn 257.610	3	Lin Thru 0	0.0	906.8	0.00000	0.999993
Mo 202.031	3	Lin Thru 0	0.0	14.20	0.00000	0.999994
Na 589.592 Radia	2	Lin Thru 0	0.0	16.29	0.00000	0.999581
Ni 231.604	3	Lin Thru 0	0.0	37.41	0.00000	0.999993
P 214.914	3	Lin Thru 0	0.0	1.959	0.00000	0.999998
Pb 220.353	3	Lin Thru 0	0.0	8.399	0.00000	0.999987
S 181.975 Axial	3	Lin Thru 0	0.0	0.7299	0.00000	0.999986
Sb 206.836	3	Lin Thru 0	0.0	3.367	0.00000	0.999998
Se 196.026	3	Lin Thru 0	0.0	1.960	0.00000	0.999990
Si 251.611	3	Lin Thru 0	0.0	32.38	0.00000	0.999996
Sn 189.927	3	Lin Thru 0	0.0	5.650	0.00000	0.999999
Sr 421.552	3	Lin Thru 0	0.0	358.0	0.00000	0.999921
Ti 334.940	3	Lin Thru 0	0.0	546.2	0.00000	0.999995
Tl 190.801	3	Lin Thru 0	0.0	3.820	0.00000	0.999979
U 409.014	3	Lin Thru 0	0.0	29.53	0.00000	0.999946
V 292.402	3	Lin Thru 0	0.0	110.1	0.00000	0.999996
Zn 213.857	3	Lin Thru 0	0.0	108.4	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	15.21	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 6/30/2009 08:32:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7311.1	7311.1	97.8	%			08:34:29
1	Y RADIAL	6721.5	6721.5	97.07	%			08:34:29
1	Al 396.153Radial†	6272.0	6484.9	5317.7	ug/L	5317.7	ppb	08:34:09
1	Ca 317.933Radial†	3582.0	3633.1	5146.7	ug/L	5146.7	ppb	08:34:29
1	Fe 238.204 Radial†	1260.1	1253.5	5240.1	ug/L	5240.1	ppb	08:34:29
1	K 766.490 Radial†	13670.6	11569.2	2483.4	ug/L	2483.4	ppb	08:34:09
1	Mg 279.077 IEC†	218.5	220.3	5498.7	ug/L	5498.7	ppb	08:34:29
1	Na 589.592 Radial†	42038.9	43114.8	2646.1	ug/L	2646.1	ppb	08:34:09
1	Sr 421.552†	169418.8	173264.0	483.88	ug/L	483.88	ppb	08:34:09
1	Sc 361.383	742145.3	742145.3	103.26	%			08:35:26
1	Y 371.029	574749.9	574749.9	102.27	%			08:35:26
1	Ag 328.068†	44211.4	42181.4	255.12	ug/L	255.12	ppb	08:35:26
1	As 188.979†	1339.9	1333.0	483.93	ug/L	483.93	ppb	08:35:46
1	B 249.677†	19594.8	19915.4	499.11	ug/L	499.11	ppb	08:35:26
1	Ba 233.527†	78271.1	75796.8	535.91	ug/L	535.91	ppb	08:35:26
1	Be 313.107†	582097.1	568581.3	261.42	ug/L	261.42	ppb	08:35:26
1	Cd 226.502†	39466.2	38500.0	490.79	ug/L	490.79	ppb	08:35:46
1	Co 228.616†	28280.5	27486.1	476.94	ug/L	476.94	ppb	08:35:46
1	Cr 267.716†	36963.9	35873.1	503.38	ug/L	503.38	ppb	08:35:26
1	Cu 324.752†	154059.0	143551.4	520.49	ug/L	520.49	ppb	08:35:26
1	Mn 257.610†	490018.2	473851.2	523.10	ug/L	523.10	ppb	08:35:26
1	Mo 202.031†	7718.1	7457.0	525.30	ug/L	525.30	ppb	08:35:46
1	Ni 231.604†	20442.3	19676.4	525.64	ug/L	525.64	ppb	08:35:46
1	P 214.914†	5439.5	4952.8	2430.0	ug/L	2430.0	ppb	08:35:46
1	Pb 220.353†	4408.1	4282.1	511.42	ug/L	511.42	ppb	08:35:46
1	S 181.975 Axial†	2049.7	1909.5	2614.9	ug/L	2614.9	ppb	08:35:46
1	Sb 206.836†	1869.3	1753.0	528.00	ug/L	528.00	ppb	08:35:46
1	Se 196.026†	5231.7	5095.1	2618.6	ug/L	2618.6	ppb	08:35:46
1	Si 251.611†	167612.2	161902.9	4983.0	ug/L	4983.0	ppb	08:35:26
1	Sn 189.927†	3142.3	3030.5	537.29	ug/L	537.29	ppb	08:35:46
1	Ti 334.940†	286278.1	278578.4	509.91	ug/L	509.91	ppb	08:35:26
1	Tl 190.801†	1924.1	1924.0	507.00	ug/L	507.00	ppb	08:35:46
1	U 409.014†	11414.2	15902.2	536.85	ug/L	536.85	ppb	08:35:26
1	V 292.402†	55390.3	55204.8	507.68	ug/L	507.68	ppb	08:35:26
1	Zn 213.857†	58307.0	55539.1	507.72	ug/L	507.72	ppb	08:35:26
1	SiO2†	167219.3	161497.4	10582	ug/L	10582	ppb	08:36:44
2	Sc Radial	7274.5	7274.5	97.3	%			08:34:54
2	Y RADIAL	6697.6	6697.6	96.73	%			08:34:54
2	Al 396.153Radial†	6255.2	6499.9	5329.7	ug/L	5329.7	ppb	08:34:34
2	Ca 317.933Radial†	3558.1	3626.9	5137.9	ug/L	5137.9	ppb	08:34:54
2	Fe 238.204 Radial†	1245.9	1245.3	5206.4	ug/L	5206.4	ppb	08:34:54
2	K 766.490 Radial†	13611.2	11578.5	2485.3	ug/L	2485.3	ppb	08:34:34
2	Mg 279.077 IEC†	219.7	222.7	5558.2	ug/L	5558.2	ppb	08:34:54
2	Na 589.592 Radial†	42036.0	43328.0	2659.2	ug/L	2659.2	ppb	08:34:34
2	Sr 421.552†	168803.2	173502.8	484.55	ug/L	484.55	ppb	08:34:34
2	Sc 361.383	733513.4	733513.4	102.06	%			08:35:52
2	Y 371.029	568212.8	568212.8	101.11	%			08:35:52
2	Ag 328.068†	43958.9	42437.9	256.64	ug/L	256.64	ppb	08:35:52
2	As 188.979†	1336.4	1344.8	488.20	ug/L	488.20	ppb	08:36:12
2	B 249.677†	19510.6	20056.2	502.63	ug/L	502.63	ppb	08:35:52
2	Ba 233.527†	77397.0	75832.3	536.16	ug/L	536.16	ppb	08:35:52
2	Be 313.107†	576054.7	569294.5	261.75	ug/L	261.75	ppb	08:35:52
2	Cd 226.502†	39397.2	38882.0	495.67	ug/L	495.67	ppb	08:36:12
2	Co 228.616†	28277.3	27805.3	482.49	ug/L	482.49	ppb	08:36:12
2	Cr 267.716†	36653.8	35990.4	505.02	ug/L	505.02	ppb	08:35:52
2	Cu 324.752†	152551.9	143830.4	521.50	ug/L	521.50	ppb	08:35:52
2	Mn 257.610†	485576.9	475083.9	524.45	ug/L	524.45	ppb	08:35:52
2	Mo 202.031†	7722.0	7548.8	531.76	ug/L	531.76	ppb	08:36:12
2	Ni 231.604†	20462.9	19929.6	532.41	ug/L	532.41	ppb	08:36:12

2	P 214.914†	5426.8	5002.3	2455.2 ug/L	2455.2 ppb	08:36:12
2	Pb 220.353†	4388.7	4313.2	515.16 ug/L	515.16 ppb	08:36:12
2	S 181.975 Axial†	2036.4	1919.9	2629.1 ug/L	2629.1 ppb	08:36:12
2	Sb 206.836†	1877.4	1782.2	536.82 ug/L	536.82 ppb	08:36:12
2	Se 196.026†	5200.7	5124.4	2633.4 ug/L	2633.4 ppb	08:36:12
2	Si 251.611†	165998.4	162231.9	4993.0 ug/L	4993.0 ppb	08:35:52
2	Sn 189.927†	3121.5	3045.9	540.00 ug/L	540.00 ppb	08:36:12
2	Ti 334.940†	283330.6	278952.8	510.60 ug/L	510.60 ppb	08:35:52
2	Tl 190.801†	1916.6	1938.6	510.80 ug/L	510.80 ppb	08:36:12
2	U 409.014†	11015.3	15641.4	528.02 ug/L	528.02 ppb	08:35:52
2	V 292.402†	54718.8	55178.2	507.51 ug/L	507.51 ppb	08:35:52
2	Zn 213.857†	57714.9	55623.4	508.45 ug/L	508.45 ppb	08:35:52
2	SiO2†	167334.4	163515.8	10715 ug/L	10715 ppb	08:36:49
3	Sc Radial	7288.8	7288.8	97.5 %		08:35:19
3	Y RADIAL	6706.2	6706.2	96.85 %		08:35:19
3	Al 396.153Radial†	6253.6	6485.7	5318.1 ug/L	5318.1 ppb	08:34:59
3	Ca 317.933Radial†	3567.3	3629.1	5141.1 ug/L	5141.1 ppb	08:35:19
3	Fe 238.204 Radial†	1249.8	1246.8	5212.6 ug/L	5212.6 ppb	08:35:19
3	K 766.490 Radial†	13537.7	11475.5	2463.1 ug/L	2463.1 ppb	08:34:59
3	Mg 279.077 IEC†	215.7	218.2	5446.1 ug/L	5446.1 ppb	08:35:19
3	Na 589.592 Radial†	41958.3	43163.3	2649.0 ug/L	2649.0 ppb	08:34:59
3	Sr 421.552†	169081.7	173447.1	484.39 ug/L	484.39 ppb	08:34:59
3	Sc 361.383	733570.0	733570.0	102.07 %		08:36:18
3	Y 371.029	568459.5	568459.5	101.15 %		08:36:18
3	Ag 328.068†	43827.3	42305.6	255.84 ug/L	255.84 ppb	08:36:18
3	As 188.979†	1326.6	1335.2	484.71 ug/L	484.71 ppb	08:36:38
3	B 249.677†	19479.8	20024.6	501.84 ug/L	501.84 ppb	08:36:18
3	Ba 233.527†	77507.0	75934.2	536.88 ug/L	536.88 ppb	08:36:18
3	Be 313.107†	575610.8	568816.2	261.53 ug/L	261.53 ppb	08:36:18
3	Cd 226.502†	39293.8	38777.8	494.34 ug/L	494.34 ppb	08:36:38
3	Co 228.616†	28220.0	27747.0	481.47 ug/L	481.47 ppb	08:36:38
3	Cr 267.716†	36597.3	35932.3	504.20 ug/L	504.20 ppb	08:36:18
3	Cu 324.752†	153006.8	144264.6	523.08 ug/L	523.08 ppb	08:36:18
3	Mn 257.610†	485201.7	474679.6	524.01 ug/L	524.01 ppb	08:36:18
3	Mo 202.031†	7703.1	7529.7	530.42 ug/L	530.42 ppb	08:36:38
3	Ni 231.604†	20403.2	19869.5	530.80 ug/L	530.80 ppb	08:36:38
3	P 214.914†	5408.5	4984.0	2445.5 ug/L	2445.5 ppb	08:36:38
3	Pb 220.353†	4351.6	4276.6	510.79 ug/L	510.79 ppb	08:36:38
3	S 181.975 Axial†	2025.2	1908.7	2613.8 ug/L	2613.8 ppb	08:36:38
3	Sb 206.836†	1863.8	1768.7	532.77 ug/L	532.77 ppb	08:36:38
3	Se 196.026†	5202.5	5125.8	2634.2 ug/L	2634.2 ppb	08:36:38
3	Si 251.611†	166092.4	162311.4	4995.5 ug/L	4995.5 ppb	08:36:18
3	Sn 189.927†	3112.8	3037.1	538.46 ug/L	538.46 ppb	08:36:38
3	Ti 334.940†	283620.0	279215.0	511.08 ug/L	511.08 ppb	08:36:18
3	Tl 190.801†	1917.3	1939.2	510.95 ug/L	510.95 ppb	08:36:38
3	U 409.014†	11453.0	16069.4	542.52 ug/L	542.52 ppb	08:36:18
3	V 292.402†	54718.6	55173.8	507.48 ug/L	507.48 ppb	08:36:18
3	Zn 213.857†	57781.1	55683.9	509.02 ug/L	509.02 ppb	08:36:18
3	SiO2†	166907.8	163085.1	10687 ug/L	10687 ppb	08:36:54

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	736409.6	102.47	%	0.691				0.67%
Sc Radial	7291.5	97.5	%	0.25				0.25%
Y 371.029	570474.1	101.51	%	0.659				0.65%
Y RADIAL	6708.4	96.88	%	0.174				0.18%
Ag 328.068†	42308.3	255.87	ug/L	0.764	255.87	ppb	0.764	0.30%
QC value within limits for Ag 328.068 Recovery = 102.35%								
Al 396.153Radial†	6490.2	5321.8	ug/L	6.84	5321.8	ppb	6.84	0.13%
QC value within limits for Al 396.153Radial Recovery = 106.44%								
As 188.979†	1337.7	485.61	ug/L	2.269	485.61	ppb	2.269	0.47%
QC value within limits for As 188.979 Recovery = 97.12%								
B 249.677†	19998.8	501.19	ug/L	1.848	501.19	ppb	1.848	0.37%
QC value within limits for B 249.677 Recovery = 100.24%								
Ba 233.527†	75854.4	536.31	ug/L	0.503	536.31	ppb	0.503	0.09%
QC value within limits for Ba 233.527 Recovery = 107.26%								
Be 313.107†	568897.3	261.57	ug/L	0.167	261.57	ppb	0.167	0.06%
QC value within limits for Be 313.107 Recovery = 104.63%								
Ca 317.933Radial†	3629.7	5141.9	ug/L	4.41	5141.9	ppb	4.41	0.09%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.84%
Cd 226.502†            38720.0      493.60 ug/L         2.523      493.60 ppb          2.523   0.51%
   QC value within limits for Cd 226.502  Recovery = 98.72%
Co 228.616†            27679.5      480.30 ug/L         2.955      480.30 ppb          2.955   0.62%
   QC value within limits for Co 228.616  Recovery = 96.06%
Cr 267.716†            35931.9      504.20 ug/L         0.823      504.20 ppb          0.823   0.16%
   QC value within limits for Cr 267.716  Recovery = 100.84%
Cu 324.752†           143882.1      521.69 ug/L         1.302      521.69 ppb          1.302   0.25%
   QC value within limits for Cu 324.752  Recovery = 104.34%
Fe 238.204 Radial†      1248.5      5219.7 ug/L        17.92      5219.7 ppb          17.92   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.39%
K 766.490 Radial†      11541.1      2477.3 ug/L        12.30      2477.3 ppb          12.30   0.50%
   QC value within limits for K 766.490 Radial  Recovery = 99.09%
Mg 279.077 IEC†          220.4      5501.0 ug/L        56.09      5501.0 ppb          56.09   1.02%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 110.02%
Mn 257.610†           474538.3      523.86 ug/L         0.690      523.86 ppb          0.690   0.13%
   QC value within limits for Mn 257.610  Recovery = 104.77%
Mo 202.031†             7511.8      529.16 ug/L         3.409      529.16 ppb          3.409   0.64%
   QC value within limits for Mo 202.031  Recovery = 105.83%
Na 589.592 Radial†     43202.0      2651.4 ug/L          6.86      2651.4 ppb           6.86   0.26%
   QC value within limits for Na 589.592 Radial  Recovery = 106.06%
Ni 231.604†            19825.2      529.62 ug/L         3.534      529.62 ppb          3.534   0.67%
   QC value within limits for Ni 231.604  Recovery = 105.92%
P 214.914†              4979.7      2443.5 ug/L        12.68      2443.5 ppb          12.68   0.52%
   QC value within limits for P 214.914  Recovery = 97.74%
Pb 220.353†             4290.6      512.46 ug/L         2.360      512.46 ppb          2.360   0.46%
   QC value within limits for Pb 220.353  Recovery = 102.49%
S 181.975 Axial†        1912.7      2619.3 ug/L          8.53      2619.3 ppb           8.53   0.33%
   QC value within limits for S 181.975 Axial  Recovery = 104.77%
Sb 206.836†             1768.0      532.53 ug/L         4.414      532.53 ppb          4.414   0.83%
   QC value within limits for Sb 206.836  Recovery = 106.51%
Se 196.026†             5115.1      2628.7 ug/L          8.78      2628.7 ppb           8.78   0.33%
   QC value within limits for Se 196.026  Recovery = 105.15%
Si 251.611†           162148.7      4990.5 ug/L          6.62      4990.5 ppb           6.62   0.13%
   QC value within limits for Si 251.611  Recovery = 99.81%
Sn 189.927†             3037.8      538.58 ug/L         1.361      538.58 ppb          1.361   0.25%
   QC value within limits for Sn 189.927  Recovery = 107.72%
Sr 421.552†           173404.7      484.27 ug/L         0.349      484.27 ppb          0.349   0.07%
   QC value within limits for Sr 421.552  Recovery = 96.85%
Ti 334.940†           278915.4      510.53 ug/L         0.584      510.53 ppb          0.584   0.11%
   QC value within limits for Ti 334.940  Recovery = 102.11%
Tl 190.801†             1933.9      509.58 ug/L         2.243      509.58 ppb          2.243   0.44%
   QC value within limits for Tl 190.801  Recovery = 101.92%
U 409.014†             15871.0      535.80 ug/L         7.305      535.80 ppb          7.305   1.36%
   QC value within limits for U 409.014  Recovery = 107.16%
V 292.402†             55185.6      507.56 ug/L         0.110      507.56 ppb          0.110   0.02%
   QC value within limits for V 292.402  Recovery = 101.51%
Zn 213.857†            55615.4      508.40 ug/L         0.654      508.40 ppb          0.654   0.13%
   QC value within limits for Zn 213.857  Recovery = 101.68%
SiO2†                 162699.4       10661 ug/L          69.7       10661 ppb           69.7   0.65%
   QC value within limits for SiO2  Recovery = 99.69%
QC Failed.  Continue with analysis.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 6/30/2009 08:39:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7601.5	7601.5	102	%			08:40:58
1	Y RADIAL	7021.8	7021.8	101.4	%			08:40:58
1	Al 396.153Radial†	-76.5	-2.6	-2.1567	ug/L	-2.1567	ppb	08:40:58
1	Ca 317.933Radial†	33.4	3.8	5.3776	ug/L	5.3776	ppb	08:41:18
1	Fe 238.204 Radial†	37.6	2.2	9.2474	ug/L	9.2474	ppb	08:41:18
1	K 766.490 Radial†	2581.0	130.8	28.208	ug/L	28.208	ppb	08:40:58
1	Mg 279.077 IEC†	0.5	-2.6	-64.453	ug/L	-64.453	ppb	08:41:18
1	Na 589.592 Radial†	-143.1	-5.2	-0.3171	ug/L	-0.3171	ppb	08:40:58
1	Sr 421.552†	-51.1	5.6	0.0157	ug/L	0.0157	ppb	08:40:58
1	Sc 361.383	721142.6	721142.6	100.34	%			08:42:15
1	Y 371.029	564655.5	564655.5	100.47	%			08:42:15
1	Ag 328.068†	614.3	-20.5	-0.1160	ug/L	-0.1160	ppb	08:42:15
1	As 188.979†	-23.4	12.1	4.3570	ug/L	4.3570	ppb	08:42:35
1	B 249.677†	-582.3	359.6	9.0628	ug/L	9.0628	ppb	08:42:15
1	Ba 233.527†	20.3	19.7	0.1392	ug/L	0.1392	ppb	08:42:35
1	Be 313.107†	-4751.1	146.8	0.0669	ug/L	0.0669	ppb	08:42:15
1	Cd 226.502†	-282.9	-0.8	-0.0112	ug/L	-0.0112	ppb	08:42:35
1	Co 228.616†	-100.1	-0.3	-0.0047	ug/L	-0.0047	ppb	08:42:35
1	Cr 267.716†	-50.9	26.7	0.3755	ug/L	0.3755	ppb	08:42:15
1	Cu 324.752†	5612.3	-45.2	-0.1632	ug/L	-0.1632	ppb	08:42:15
1	Mn 257.610†	701.4	19.4	0.0238	ug/L	0.0238	ppb	08:42:35
1	Mo 202.031†	22.6	5.3	0.3767	ug/L	0.3767	ppb	08:42:35
1	Ni 231.604†	146.7	26.4	0.7070	ug/L	0.7070	ppb	08:42:35
1	P 214.914†	307.0	-8.8	-4.4889	ug/L	-4.4889	ppb	08:42:35
1	Pb 220.353†	-28.4	-15.0	-1.7872	ug/L	-1.7872	ppb	08:42:35
1	S 181.975 Axial†	75.0	-0.7	-0.9099	ug/L	-0.9099	ppb	08:42:35
1	Sb 206.836†	58.3	0.8	0.2323	ug/L	0.2323	ppb	08:42:35
1	Se 196.026†	-30.1	-1.2	-0.5968	ug/L	-0.5968	ppb	08:42:35
1	Si 251.611†	433.8	20.5	0.6297	ug/L	0.6297	ppb	08:42:35
1	Sn 189.927†	7.7	-4.9	-0.8615	ug/L	-0.8615	ppb	08:42:35
1	Ti 334.940†	-1422.8	-69.7	-0.1260	ug/L	-0.1260	ppb	08:42:15
1	Tl 190.801†	-44.6	16.3	4.2752	ug/L	4.2752	ppb	08:42:35
1	U 409.014†	-4967.7	-102.1	-3.4593	ug/L	-3.4593	ppb	08:42:15
1	V 292.402†	-1558.5	12.0	0.1047	ug/L	0.1047	ppb	08:42:15
1	Zn 213.857†	954.8	26.4	0.2410	ug/L	0.2410	ppb	08:42:35
1	SiO2†	430.2	-8.2	-0.5457	ug/L	-0.5457	ppb	08:43:31
2	Sc Radial	7362.4	7362.4	98.5	%			08:41:23
2	Y RADIAL	6811.5	6811.5	98.37	%			08:41:23
2	Al 396.153Radial†	-79.9	-8.5	-7.0111	ug/L	-7.0111	ppb	08:41:23
2	Ca 317.933Radial†	28.2	-0.4	-0.6266	ug/L	-0.6266	ppb	08:41:43
2	Fe 238.204 Radial†	33.9	-0.4	-1.6120	ug/L	-1.6120	ppb	08:41:43
2	K 766.490 Radial†	2372.6	1.6	0.3348	ug/L	0.3348	ppb	08:41:23
2	Mg 279.077 IEC†	2.7	-0.3	-6.6483	ug/L	-6.6483	ppb	08:41:43
2	Na 589.592 Radial†	-194.1	-61.5	-3.7725	ug/L	-3.7725	ppb	08:41:23
2	Sr 421.552†	-59.5	-4.6	-0.0127	ug/L	-0.0127	ppb	08:41:23
2	Sc 361.383	709208.7	709208.7	98.681	%			08:42:40
2	Y 371.029	555090.4	555090.4	98.771	%			08:42:40
2	Ag 328.068†	564.1	-61.0	-0.3641	ug/L	-0.3641	ppb	08:42:40
2	As 188.979†	-35.6	-0.6	-0.2289	ug/L	-0.2289	ppb	08:43:00
2	B 249.677†	-626.2	305.3	7.6930	ug/L	7.6930	ppb	08:42:40
2	Ba 233.527†	3.8	3.3	0.0236	ug/L	0.0236	ppb	08:43:00
2	Be 313.107†	-4739.3	79.1	0.0362	ug/L	0.0362	ppb	08:42:40
2	Cd 226.502†	-277.4	0.0	0.0008	ug/L	0.0008	ppb	08:43:00
2	Co 228.616†	-78.7	19.7	0.3421	ug/L	0.3421	ppb	08:43:00
2	Cr 267.716†	5.5	82.9	1.1624	ug/L	1.1624	ppb	08:42:40
2	Cu 324.752†	5692.5	130.2	0.4717	ug/L	0.4717	ppb	08:42:40
2	Mn 257.610†	663.0	-7.7	-0.0086	ug/L	-0.0086	ppb	08:43:00
2	Mo 202.031†	20.5	3.7	0.2595	ug/L	0.2595	ppb	08:43:00
2	Ni 231.604†	145.0	27.2	0.7260	ug/L	0.7260	ppb	08:43:00

2	P 214.914†	321.5	11.0	5.4982	ug/L	5.4982 ppb	08:43:00
2	Pb 220.353†	5.3	18.6	2.2131	ug/L	2.2131 ppb	08:43:00
2	S 181.975 Axial†	80.8	6.5	8.8568	ug/L	8.8568 ppb	08:43:00
2	Sb 206.836†	62.7	6.3	1.8523	ug/L	1.8523 ppb	08:43:00
2	Se 196.026†	-21.3	7.2	3.6577	ug/L	3.6577 ppb	08:43:00
2	Si 251.611†	440.4	34.5	1.0656	ug/L	1.0656 ppb	08:43:00
2	Sn 189.927†	10.4	-2.0	-0.3500	ug/L	-0.3500 ppb	08:43:00
2	Ti 334.940†	-1330.5	-0.0	0.0000	ug/L	0.0000 ppb	08:42:40
2	Tl 190.801†	-57.5	2.5	0.6582	ug/L	0.6582 ppb	08:43:00
2	U 409.014†	-4821.6	-37.3	-1.2666	ug/L	-1.2666 ppb	08:42:40
2	V 292.402†	-1545.3	-0.8	-0.0067	ug/L	-0.0067 ppb	08:42:40
2	Zn 213.857†	934.9	22.3	0.2010	ug/L	0.2010 ppb	08:43:00
2	SiO2†	467.2	36.6	2.4059	ug/L	2.4059 ppb	08:43:36
3	Sc Radial	7531.9	7531.9	101	%		08:41:48
3	Y RADIAL	6932.5	6932.5	100.1	%		08:41:48
3	Al 396.153Radial†	-64.4	8.8	7.2185	ug/L	7.2185 ppb	08:41:48
3	Ca 317.933Radial†	28.1	-1.2	-1.7339	ug/L	-1.7339 ppb	08:42:08
3	Fe 238.204 Radial†	34.0	-1.0	-4.2524	ug/L	-4.2524 ppb	08:42:08
3	K 766.490 Radial†	2517.4	91.0	19.640	ug/L	19.640 ppb	08:41:48
3	Mg 279.077 IEC†	4.8	1.7	42.633	ug/L	42.633 ppb	08:42:08
3	Na 589.592 Radial†	-181.8	-44.8	-2.7524	ug/L	-2.7524 ppb	08:41:48
3	Sr 421.552†	-7.9	48.0	0.1342	ug/L	0.1342 ppb	08:41:48
3	Sc 361.383	717543.5	717543.5	99.841	%		08:43:06
3	Y 371.029	562243.3	562243.3	100.04	%		08:43:06
3	Ag 328.068†	733.3	101.9	0.6059	ug/L	0.6059 ppb	08:43:06
3	As 188.979†	-22.7	12.7	4.5745	ug/L	4.5745 ppb	08:43:26
3	B 249.677†	-621.9	317.0	7.9909	ug/L	7.9909 ppb	08:43:06
3	Ba 233.527†	9.8	9.3	0.0660	ug/L	0.0660 ppb	08:43:26
3	Be 313.107†	-4668.4	205.9	0.0939	ug/L	0.0939 ppb	08:43:06
3	Cd 226.502†	-260.8	19.9	0.2548	ug/L	0.2548 ppb	08:43:26
3	Co 228.616†	-104.9	-5.6	-0.0962	ug/L	-0.0962 ppb	08:43:26
3	Cr 267.716†	-107.3	-30.0	-0.4214	ug/L	-0.4214 ppb	08:43:06
3	Cu 324.752†	5580.9	-48.6	-0.1764	ug/L	-0.1764 ppb	08:43:06
3	Mn 257.610†	660.2	-18.4	-0.0216	ug/L	-0.0216 ppb	08:43:26
3	Mo 202.031†	18.5	1.4	0.0960	ug/L	0.0960 ppb	08:43:26
3	Ni 231.604†	145.2	25.7	0.6864	ug/L	0.6864 ppb	08:43:26
3	P 214.914†	316.1	1.8	0.9886	ug/L	0.9886 ppb	08:43:26
3	Pb 220.353†	-18.2	-5.0	-0.5942	ug/L	-0.5942 ppb	08:43:26
3	S 181.975 Axial†	74.8	-0.5	-0.6830	ug/L	-0.6830 ppb	08:43:26
3	Sb 206.836†	45.9	-11.3	-3.3175	ug/L	-3.3175 ppb	08:43:26
3	Se 196.026†	-20.8	7.9	4.0410	ug/L	4.0410 ppb	08:43:26
3	Si 251.611†	442.8	31.7	0.9554	ug/L	0.9554 ppb	08:43:26
3	Sn 189.927†	18.7	6.3	1.1088	ug/L	1.1088 ppb	08:43:26
3	Ti 334.940†	-1425.7	-79.7	-0.1466	ug/L	-0.1466 ppb	08:43:06
3	Tl 190.801†	-50.9	9.8	2.5513	ug/L	2.5513 ppb	08:43:26
3	U 409.014†	-4789.5	51.6	1.7472	ug/L	1.7472 ppb	08:43:06
3	V 292.402†	-1556.1	6.6	0.0661	ug/L	0.0661 ppb	08:43:06
3	Zn 213.857†	957.3	33.7	0.3060	ug/L	0.3060 ppb	08:43:26
3	SiO2†	457.2	21.1	1.3325	ug/L	1.3325 ppb	08:43:41

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	715964.9	99.621	%	0.8518				0.86%
Sc Radial	7498.6	100	%	1.6				1.64%
Y 371.029	560663.1	99.762	%	0.8851				0.89%
Y RADIAL	6922.0	99.97	%	1.524				1.52%
Ag 328.068†	6.8	0.0419	ug/L	0.50392	0.0419	ppb	0.50392	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-0.8	-0.6498	ug/L	7.23350	-0.6498	ppb	7.23350	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	8.1	2.9008	ug/L	2.71265	2.9008	ppb	2.71265	93.51%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	327.3	8.2489	ug/L	0.72044	8.2489	ppb	0.72044	8.73%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.8	0.0763	ug/L	0.05850	0.0763	ppb	0.05850	76.71%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	143.9	0.0657	ug/L	0.02888	0.0657	ppb	0.02888	43.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.7	1.0057	ug/L	3.82643	1.0057	ppb	3.82643	380.47%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                6.4      0.0815 ug/L       0.15021      0.0815 ppb        0.15021 184.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.6      0.0804 ug/L       0.23125      0.0804 ppb        0.23125 287.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               26.5      0.3722 ug/L       0.79191      0.3722 ppb        0.79191 212.78%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               12.1      0.0440 ug/L       0.37040      0.0440 ppb        0.37040 841.44%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.3      1.1277 ug/L       7.15474      1.1277 ppb        7.15474 634.48%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         74.4     16.061 ug/L       14.2773     16.061 ppb        14.2773  88.89%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4     -9.4894 ug/L      53.59919     -9.4894 ppb       53.59919 564.83%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -2.2     -0.0022 ug/L       0.02340     -0.0022 ppb        0.02340 >999.9%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                3.5      0.2441 ug/L       0.14099      0.2441 ppb        0.14099  57.77%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -37.2     -2.2807 ug/L       1.77531     -2.2807 ppb        1.77531  77.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               26.4      0.7064 ug/L       0.01981      0.7064 ppb        0.01981   2.80%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 1.3      0.6660 ug/L       5.00137      0.6660 ppb        5.00137 750.97%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -0.5     -0.0561 ug/L       2.05369     -0.0561 ppb        2.05369 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           1.8      2.4213 ug/L       5.57447      2.4213 ppb        5.57447 230.23%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               -1.4     -0.4109 ug/L       2.64424     -0.4109 ppb        2.64424 643.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.6      2.3673 ug/L       2.57415      2.3673 ppb        2.57415 108.74%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               28.9      0.8836 ug/L       0.22666      0.8836 ppb        0.22666  25.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -0.2     -0.0342 ug/L       1.02240     -0.0342 ppb        1.02240 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               16.4      0.0457 ug/L       0.07791      0.0457 ppb        0.07791 170.38%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -49.8     -0.0909 ug/L       0.07939     -0.0909 ppb        0.07939  87.37%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                9.5      2.4949 ug/L       1.80916      2.4949 ppb        1.80916  72.52%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -29.3     -0.9929 ug/L       2.61405     -0.9929 ppb        2.61405 263.27%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 5.9      0.0547 ug/L       0.05658      0.0547 ppb        0.05658 103.45%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               27.5      0.2493 ug/L       0.05300      0.2493 ppb        0.05300  21.26%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     16.5      1.0642 ug/L       1.49397      1.0642 ppb        1.49397 140.38%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 6/30/2009 08:45:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7469.8	7469.8	99.9	%			08:47:44
1	Y RADIAL	6890.6	6890.6	99.51	%			08:47:44
1	Al 396.153Radial†	175.4	248.2	203.90	ug/L	203.90	ppb	08:47:44
1	Ca 317.933Radial†	103.5	74.5	105.52	ug/L	105.52	ppb	08:48:04
1	Fe 238.204 Radial†	63.0	28.3	117.94	ug/L	117.94	ppb	08:48:04
1	K 766.490 Radial†	3099.8	694.7	149.59	ug/L	149.59	ppb	08:47:44
1	Mg 279.077 IEC†	18.2	15.1	377.15	ug/L	377.15	ppb	08:48:04
1	Na 589.592 Radial†	2396.5	2533.6	155.49	ug/L	155.49	ppb	08:47:44
1	Sr 421.552†	1663.1	1720.0	4.8031	ug/L	4.8031	ppb	08:47:44
1	Sc 361.383	725321.6	725321.6	100.92	%			08:49:01
1	Y 371.029	567853.4	567853.4	101.04	%			08:49:01
1	Ag 328.068†	1530.3	883.7	5.2825	ug/L	5.2825	ppb	08:49:01
1	As 188.979†	12.1	47.4	17.111	ug/L	17.111	ppb	08:49:21
1	B 249.677†	1246.2	2174.8	54.774	ug/L	54.774	ppb	08:49:01
1	Ba 233.527†	767.7	760.2	5.3731	ug/L	5.3731	ppb	08:49:21
1	Be 313.107†	6713.9	11534.3	5.2910	ug/L	5.2910	ppb	08:49:01
1	Cd 226.502†	144.1	423.9	5.3963	ug/L	5.3963	ppb	08:49:21
1	Co 228.616†	193.0	290.7	5.0579	ug/L	5.0579	ppb	08:49:21
1	Cr 267.716†	317.5	392.0	5.4832	ug/L	5.4832	ppb	08:49:01
1	Cu 324.752†	8440.7	2725.1	9.8818	ug/L	9.8818	ppb	08:49:01
1	Mn 257.610†	10489.3	9713.8	10.720	ug/L	10.720	ppb	08:49:01
1	Mo 202.031†	172.5	153.8	10.834	ug/L	10.834	ppb	08:49:21
1	Ni 231.604†	340.9	218.0	5.8229	ug/L	5.8229	ppb	08:49:21
1	P 214.914†	620.8	300.4	151.53	ug/L	151.53	ppb	08:49:21
1	Pb 220.353†	78.8	91.3	10.926	ug/L	10.926	ppb	08:49:21
1	S 181.975 Axial†	179.1	102.0	139.75	ug/L	139.75	ppb	08:49:21
1	Sb 206.836†	84.0	25.9	7.9773	ug/L	7.9773	ppb	08:49:21
1	Se 196.026†	0.8	29.5	15.487	ug/L	15.487	ppb	08:49:21
1	Si 251.611†	3837.4	3390.5	104.32	ug/L	104.32	ppb	08:49:01
1	Sn 189.927†	78.5	65.3	11.575	ug/L	11.575	ppb	08:49:21
1	Ti 334.940†	1430.2	2765.4	5.0414	ug/L	5.0414	ppb	08:49:01
1	Tl 190.801†	24.6	85.1	22.333	ug/L	22.333	ppb	08:49:21
1	U 409.014†	-3151.4	1726.2	58.424	ug/L	58.424	ppb	08:49:01
1	V 292.402†	-1092.4	482.8	4.6171	ug/L	4.6171	ppb	08:49:01
1	Zn 213.857†	2104.5	1160.2	10.630	ug/L	10.630	ppb	08:49:21
1	SiO2†	3737.0	3266.0	213.91	ug/L	213.91	ppb	08:50:18
2	Sc Radial	7389.0	7389.0	98.9	%			08:48:09
2	Y RADIAL	6822.2	6822.2	98.53	%			08:48:09
2	Al 396.153Radial†	187.2	262.0	215.31	ug/L	215.31	ppb	08:48:09
2	Ca 317.933Radial†	104.7	76.8	108.86	ug/L	108.86	ppb	08:48:29
2	Fe 238.204 Radial†	62.6	28.5	119.06	ug/L	119.06	ppb	08:48:29
2	K 766.490 Radial†	3147.0	776.2	167.20	ug/L	167.20	ppb	08:48:09
2	Mg 279.077 IEC†	15.7	12.9	321.01	ug/L	321.01	ppb	08:48:29
2	Na 589.592 Radial†	2342.4	2505.1	153.74	ug/L	153.74	ppb	08:48:09
2	Sr 421.552†	1719.8	1795.5	5.0140	ug/L	5.0140	ppb	08:48:09
2	Sc 361.383	733226.2	733226.2	102.02	%			08:49:27
2	Y 371.029	573027.7	573027.7	101.96	%			08:49:27
2	Ag 328.068†	1568.7	904.9	5.4068	ug/L	5.4068	ppb	08:49:27
2	As 188.979†	19.6	54.7	19.748	ug/L	19.748	ppb	08:49:47
2	B 249.677†	1211.3	2127.2	53.574	ug/L	53.574	ppb	08:49:27
2	Ba 233.527†	742.7	727.5	5.1428	ug/L	5.1428	ppb	08:49:47
2	Be 313.107†	6763.7	11511.4	5.2808	ug/L	5.2808	ppb	08:49:27
2	Cd 226.502†	135.2	413.6	5.2649	ug/L	5.2649	ppb	08:49:47
2	Co 228.616†	208.3	303.6	5.2795	ug/L	5.2795	ppb	08:49:47
2	Cr 267.716†	250.3	322.7	4.5115	ug/L	4.5115	ppb	08:49:27
2	Cu 324.752†	8539.6	2731.8	9.9063	ug/L	9.9063	ppb	08:49:27
2	Mn 257.610†	10566.6	9677.5	10.681	ug/L	10.681	ppb	08:49:27
2	Mo 202.031†	166.3	145.9	10.280	ug/L	10.280	ppb	08:49:47
2	Ni 231.604†	323.5	197.3	5.2697	ug/L	5.2697	ppb	08:49:47

2	P 214.914†	614.1	287.1	144.74 ug/L	144.74 ppb	08:49:47
2	Pb 220.353†	84.8	96.4	11.526 ug/L	11.526 ppb	08:49:47
2	S 181.975 Axial†	160.4	81.8	112.05 ug/L	112.05 ppb	08:49:47
2	Sb 206.836†	89.6	30.6	9.3585 ug/L	9.3585 ppb	08:49:47
2	Se 196.026†	8.6	37.2	19.421 ug/L	19.421 ppb	08:49:47
2	Si 251.611†	3808.8	3321.5	102.20 ug/L	102.20 ppb	08:49:27
2	Sn 189.927†	77.2	63.1	11.195 ug/L	11.195 ppb	08:49:47
2	Ti 334.940†	1503.2	2821.7	5.1427 ug/L	5.1427 ppb	08:49:27
2	Tl 190.801†	30.6	90.8	23.822 ug/L	23.822 ppb	08:49:47
2	U 409.014†	-3028.0	1880.8	63.661 ug/L	63.661 ppb	08:49:27
2	V 292.402†	-1064.8	521.6	4.9718 ug/L	4.9718 ppb	08:49:27
2	Zn 213.857†	2100.2	1133.4	10.389 ug/L	10.389 ppb	08:49:47
2	SiO2†	3824.9	3312.2	216.97 ug/L	216.97 ppb	08:50:23
3	Sc Radial	7545.0	7545.0	101 %		08:48:34
3	Y RADIAL	6987.4	6987.4	100.9 %		08:48:34
3	Al 396.153Radial†	179.1	250.1	205.50 ug/L	205.50 ppb	08:48:34
3	Ca 317.933Radial†	97.6	67.6	95.785 ug/L	95.785 ppb	08:48:54
3	Fe 238.204 Radial†	60.5	25.2	105.16 ug/L	105.16 ppb	08:48:54
3	K 766.490 Radial†	3097.9	661.8	142.50 ug/L	142.50 ppb	08:48:34
3	Mg 279.077 IEC†	15.1	11.9	296.23 ug/L	296.23 ppb	08:48:54
3	Na 589.592 Radial†	2493.3	2605.6	159.91 ug/L	159.91 ppb	08:48:34
3	Sr 421.552†	1679.3	1719.5	4.8017 ug/L	4.8017 ppb	08:48:34
3	Sc 361.383	735021.6	735021.6	102.27 %		08:49:52
3	Y 371.029	575191.2	575191.2	102.35 %		08:49:52
3	Ag 328.068†	1514.9	848.6	5.0767 ug/L	5.0767 ppb	08:49:52
3	As 188.979†	13.6	48.8	17.600 ug/L	17.600 ppb	08:50:12
3	B 249.677†	1366.1	2275.7	57.317 ug/L	57.317 ppb	08:49:52
3	Ba 233.527†	773.0	755.3	5.3414 ug/L	5.3414 ppb	08:50:12
3	Be 313.107†	6813.5	11543.9	5.2957 ug/L	5.2957 ppb	08:49:52
3	Cd 226.502†	136.9	415.0	5.2844 ug/L	5.2844 ppb	08:50:12
3	Co 228.616†	211.0	305.8	5.3190 ug/L	5.3190 ppb	08:50:12
3	Cr 267.716†	318.4	388.7	5.4401 ug/L	5.4401 ppb	08:49:52
3	Cu 324.752†	8436.2	2610.3	9.4650 ug/L	9.4650 ppb	08:49:52
3	Mn 257.610†	10583.1	9668.4	10.669 ug/L	10.669 ppb	08:49:52
3	Mo 202.031†	172.2	151.2	10.654 ug/L	10.654 ppb	08:50:12
3	Ni 231.604†	340.6	213.2	5.6963 ug/L	5.6963 ppb	08:50:12
3	P 214.914†	625.1	296.4	149.59 ug/L	149.59 ppb	08:50:12
3	Pb 220.353†	81.2	92.7	11.086 ug/L	11.086 ppb	08:50:12
3	S 181.975 Axial†	161.5	82.5	113.02 ug/L	113.02 ppb	08:50:12
3	Sb 206.836†	96.1	36.7	11.181 ug/L	11.181 ppb	08:50:12
3	Se 196.026†	-0.5	28.3	14.812 ug/L	14.812 ppb	08:50:12
3	Si 251.611†	3835.0	3338.0	102.70 ug/L	102.70 ppb	08:49:52
3	Sn 189.927†	80.7	66.4	11.763 ug/L	11.763 ppb	08:50:12
3	Ti 334.940†	1516.6	2831.1	5.1624 ug/L	5.1624 ppb	08:49:52
3	Tl 190.801†	19.2	79.6	20.887 ug/L	20.887 ppb	08:50:12
3	U 409.014†	-3277.7	1643.9	55.640 ug/L	55.640 ppb	08:49:52
3	V 292.402†	-957.8	628.7	5.9348 ug/L	5.9348 ppb	08:49:52
3	Zn 213.857†	2101.3	1129.5	10.352 ug/L	10.352 ppb	08:50:12
3	SiO2†	3842.2	3319.9	217.46 ug/L	217.46 ppb	08:50:28

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	731189.8	101.74	%	0.718				0.71%
Sc Radial	7467.9	99.9	%	1.04				1.04%
Y 371.029	572024.1	101.78	%	0.671				0.66%
Y RADIAL	6900.1	99.65	%	1.199				1.20%
Ag 328.068†	879.1	5.2553	ug/L	0.16669	5.2553	ppb	0.16669	3.17%
QC value within limits for Ag 328.068 Recovery = 105.11%								
Al 396.153Radial†	253.4	208.24	ug/L	6.175	208.24	ppb	6.175	2.97%
QC value within limits for Al 396.153Radial Recovery = 104.12%								
As 188.979†	50.3	18.153	ug/L	1.4027	18.153	ppb	1.4027	7.73%
QC value within limits for As 188.979 Recovery = 121.02%								
B 249.677†	2192.5	55.222	ug/L	1.9115	55.222	ppb	1.9115	3.46%
QC value within limits for B 249.677 Recovery = 110.44%								
Ba 233.527†	747.6	5.2858	ug/L	0.12480	5.2858	ppb	0.12480	2.36%
QC value within limits for Ba 233.527 Recovery = 105.72%								
Be 313.107†	11529.8	5.2891	ug/L	0.00762	5.2891	ppb	0.00762	0.14%
QC value within limits for Be 313.107 Recovery = 105.78%								
Ca 317.933Radial†	73.0	103.39	ug/L	6.794	103.39	ppb	6.794	6.57%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.39%
Cd 226.502†              417.5      5.3152 ug/L       0.07090      5.3152 ppb        0.07090   1.33%
   QC value within limits for Cd 226.502  Recovery = 106.30%
Co 228.616†              300.0      5.2188 ug/L       0.14074      5.2188 ppb        0.14074   2.70%
   QC value within limits for Co 228.616  Recovery = 104.38%
Cr 267.716†              367.8      5.1449 ug/L       0.54900      5.1449 ppb        0.54900  10.67%
   QC value within limits for Cr 267.716  Recovery = 102.90%
Cu 324.752†             2689.1      9.7511 ug/L       0.24804      9.7511 ppb        0.24804   2.54%
   QC value within limits for Cu 324.752  Recovery = 97.51%
Fe 238.204 Radial†        27.3      114.05 ug/L         7.726      114.05 ppb          7.726   6.77%
   QC value within limits for Fe 238.204 Radial  Recovery = 114.05%
K 766.490 Radial†        710.9      153.10 ug/L        12.717      153.10 ppb         12.717   8.31%
   QC value within limits for K 766.490 Radial  Recovery = 102.07%
Mg 279.077 IEC†           13.3      331.46 ug/L        41.459      331.46 ppb         41.459  12.51%
   QC value within limits for Mg 279.077 IEC  Recovery = 110.49%
Mn 257.610†             9686.5      10.690 ug/L        0.0263      10.690 ppb         0.0263   0.25%
   QC value within limits for Mn 257.610  Recovery = 106.90%
Mo 202.031†              150.3      10.589 ug/L        0.2827      10.589 ppb         0.2827   2.67%
   QC value within limits for Mo 202.031  Recovery = 105.89%
Na 589.592 Radial†      2548.1      156.38 ug/L         3.178      156.38 ppb          3.178   2.03%
   QC value within limits for Na 589.592 Radial  Recovery = 104.25%
Ni 231.604†              209.5      5.5963 ug/L       0.28988      5.5963 ppb        0.28988   5.18%
   QC value within limits for Ni 231.604  Recovery = 111.93%
P 214.914†               294.6      148.62 ug/L         3.496      148.62 ppb          3.496   2.35%
   QC value within limits for P 214.914  Recovery = 99.08%
Pb 220.353†               93.5      11.179 ug/L        0.3107      11.179 ppb         0.3107   2.78%
   QC value within limits for Pb 220.353  Recovery = 111.79%
S 181.975 Axial†          88.8      121.61 ug/L        15.720      121.61 ppb         15.720  12.93%
   QC value within limits for S 181.975 Axial  Recovery = 121.61%
Sb 206.836†               31.1      9.5055 ug/L       1.60681      9.5055 ppb        1.60681  16.90%
   QC value within limits for Sb 206.836  Recovery = 95.06%
Se 196.026†               31.7      16.573 ug/L        2.4893      16.573 ppb         2.4893  15.02%
   QC value within limits for Se 196.026  Recovery = 110.49%
Si 251.611†             3350.0      103.07 ug/L         1.109      103.07 ppb          1.109   1.08%
   QC value within limits for Si 251.611  Recovery = 103.07%
Sn 189.927†               64.9      11.511 ug/L        0.2890      11.511 ppb         0.2890   2.51%
   QC value within limits for Sn 189.927  Recovery = 115.11%
Sr 421.552†             1745.0      4.8729 ug/L       0.12215      4.8729 ppb        0.12215   2.51%
   QC value within limits for Sr 421.552  Recovery = 97.46%
Ti 334.940†             2806.1      5.1155 ug/L       0.06491      5.1155 ppb        0.06491   1.27%
   QC value within limits for Ti 334.940  Recovery = 102.31%
Tl 190.801†               85.1      22.347 ug/L        1.4678      22.347 ppb         1.4678   6.57%
   QC value within limits for Tl 190.801  Recovery = 111.74%
U 409.014†              1750.3      59.242 ug/L        4.0728      59.242 ppb         4.0728   6.87%
   QC value within limits for U 409.014  Recovery = 118.48%
V 292.402†               544.3      5.1746 ug/L       0.68186      5.1746 ppb        0.68186  13.18%
   QC value within limits for V 292.402  Recovery = 103.49%
Zn 213.857†             1141.0      10.457 ug/L        0.1509      10.457 ppb         0.1509   1.44%
   QC value within limits for Zn 213.857  Recovery = 104.57%
SiO2†                   3299.4      216.11 ug/L         1.925      216.11 ppb          1.925   0.89%
   QC value within limits for SiO2  Recovery = 101.46%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 6/30/2009 08:52:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6850.8	6850.8	91.7	%			08:54:37
1	Y RADIAL	6235.8	6235.8	90.06	%			08:54:37
1	Al 396.153Radial†	583718.5	636936.7	524500	ug/L	524500	ppb	08:54:32
1	Ca 317.933Radial†	312430.1	340846.7	482850	ug/L	482850	ppb	08:54:32
1	Fe 238.204 Radial†	40162.7	43784.6	182510	ug/L	182510	ppb	08:54:37
1	K 766.490 Radial†	2341.7	147.7	-18.935	ug/L	-18.935	ppb	08:54:37
1	Mg 279.077 IEC†	17585.8	19183.9	478110	ug/L	478110	ppb	08:54:37
1	Na 589.592 Radial†	330.1	495.8	30.426	ug/L	30.426	ppb	08:54:37
1	Sr 421.552†	1325.2	1501.7	-0.5494	ug/L	-0.5494	ppb	08:54:37
1	Sc 361.383	638864.5	638864.5	88.893	%			08:55:04
1	Y 371.029	490311.2	490311.2	87.244	%			08:55:04
1	Ag 328.068†	-7196.6	-8728.4	-0.7953	ug/L	-0.7953	ppb	08:55:04
1	As 188.979†	-92.4	-68.5	11.625	ug/L	11.625	ppb	08:55:24
1	B 249.677†	-106.4	820.2	8.2059	ug/L	8.2059	ppb	08:55:04
1	Ba 233.527†	-509.4	-573.6	-4.8606	ug/L	-4.8606	ppb	08:55:24
1	Be 313.107†	-4943.1	-679.0	-0.3804	ug/L	-0.3804	ppb	08:55:04
1	Cd 226.502†	1055.1	1468.1	-2.5471	ug/L	-2.5471	ppb	08:55:24
1	Co 228.616†	-33.7	61.5	-1.5195	ug/L	-1.5195	ppb	08:55:24
1	Cr 267.716†	-157.6	-99.9	2.3562	ug/L	2.3562	ppb	08:55:24
1	Cu 324.752†	2925.6	-2347.3	2.0463	ug/L	2.0463	ppb	08:55:04
1	Mn 257.610†	56.7	-615.8	13.039	ug/L	13.039	ppb	08:55:04
1	Mo 202.031†	-211.7	-255.3	-6.0630	ug/L	-6.0630	ppb	08:55:24
1	Ni 231.604†	274.2	188.7	5.0434	ug/L	5.0434	ppb	08:55:24
1	P 214.914†	243.2	-41.2	10.354	ug/L	10.354	ppb	08:55:24
1	Pb 220.353†	-657.8	-726.7	-1.6856	ug/L	-1.6856	ppb	08:55:24
1	S 181.975 Axial†	106.7	44.7	-41.972	ug/L	-41.972	ppb	08:55:24
1	Sb 206.836†	107.0	63.1	8.2049	ug/L	8.2049	ppb	08:55:24
1	Se 196.026†	-1143.6	-1257.7	0.0601	ug/L	0.0601	ppb	08:55:24
1	Si 251.611†	-128.9	-556.8	-16.030	ug/L	-16.030	ppb	08:55:24
1	Sn 189.927†	-312.0	-363.4	-1.2012	ug/L	-1.2012	ppb	08:55:24
1	Ti 334.940†	-15732.9	-16350.4	-1.7855	ug/L	-1.7855	ppb	08:55:04
1	Tl 190.801†	-98.6	-50.2	-0.5835	ug/L	-0.5835	ppb	08:55:24
1	U 409.014†	-3610.2	787.5	4.2387	ug/L	4.2387	ppb	08:55:04
1	V 292.402†	68.5	1642.2	-2.7310	ug/L	-2.7310	ppb	08:55:24
1	Zn 213.857†	3606.0	3131.4	-6.7355	ug/L	-6.7355	ppb	08:55:24
1	SiO2†	-207.4	-670.2	-41.439	ug/L	-41.439	ppb	08:56:21
2	Sc Radial	6902.1	6902.1	92.3	%			08:54:48
2	Y RADIAL	6270.0	6270.0	90.55	%			08:54:48
2	Al 396.153Radial†	588201.4	637059.3	524600	ug/L	524600	ppb	08:54:43
2	Ca 317.933Radial†	313676.9	339664.1	481170	ug/L	481170	ppb	08:54:43
2	Fe 238.204 Radial†	40118.0	43410.6	180960	ug/L	180960	ppb	08:54:48
2	K 766.490 Radial†	2274.2	55.7	-39.051	ug/L	-39.051	ppb	08:54:48
2	Mg 279.077 IEC†	17568.0	19022.0	474070	ug/L	474070	ppb	08:54:48
2	Na 589.592 Radial†	396.1	564.6	34.648	ug/L	34.648	ppb	08:54:48
2	Sr 421.552†	1347.8	1515.4	-0.4946	ug/L	-0.4946	ppb	08:54:48
2	Sc 361.383	652326.9	652326.9	90.766	%			08:55:30
2	Y 371.029	500307.2	500307.2	89.023	%			08:55:30
2	Ag 328.068†	-7238.1	-8607.1	-0.5407	ug/L	-0.5407	ppb	08:55:30
2	As 188.979†	-93.3	-67.4	11.741	ug/L	11.741	ppb	08:55:50
2	B 249.677†	-18.8	919.2	10.806	ug/L	10.806	ppb	08:55:30
2	Ba 233.527†	-527.7	-581.9	-4.9115	ug/L	-4.9115	ppb	08:55:50
2	Be 313.107†	-4881.7	-496.6	-0.2943	ug/L	-0.2943	ppb	08:55:30
2	Cd 226.502†	1039.2	1426.0	-2.9018	ug/L	-2.9018	ppb	08:55:50
2	Co 228.616†	-27.1	69.6	-1.3609	ug/L	-1.3609	ppb	08:55:50
2	Cr 267.716†	-169.0	-108.8	2.2016	ug/L	2.2016	ppb	08:55:50
2	Cu 324.752†	2941.1	-2398.1	1.7719	ug/L	1.7719	ppb	08:55:30
2	Mn 257.610†	102.2	-567.0	12.975	ug/L	12.975	ppb	08:55:30
2	Mo 202.031†	-222.9	-262.7	-6.6896	ug/L	-6.6896	ppb	08:55:50
2	Ni 231.604†	294.4	204.6	5.4673	ug/L	5.4673	ppb	08:55:50

2	P 214.914†	245.8	-44.0	10.245	ug/L	10.245 ppb	08:55:50
2	Pb 220.353†	-685.3	-741.8	-3.3156	ug/L	-3.3156 ppb	08:55:50
2	S 181.975 Axial†	135.4	73.8	-2.1013	ug/L	-2.1013 ppb	08:55:50
2	Sb 206.836†	100.3	53.2	5.2286	ug/L	5.2286 ppb	08:55:50
2	Se 196.026†	-1149.2	-1237.4	5.2343	ug/L	5.2343 ppb	08:55:50
2	Si 251.611†	-174.6	-604.1	-17.479	ug/L	-17.479 ppb	08:55:50
2	Sn 189.927†	-317.5	-362.3	-1.2801	ug/L	-1.2801 ppb	08:55:50
2	Ti 334.940†	-15508.9	-15738.4	-0.7613	ug/L	-0.7613 ppb	08:55:30
2	Tl 190.801†	-102.2	-51.8	-0.9939	ug/L	-0.9939 ppb	08:55:50
2	U 409.014†	-3768.6	696.7	1.3570	ug/L	1.3570 ppb	08:55:30
2	V 292.402†	97.5	1672.6	-2.3186	ug/L	-2.3186 ppb	08:55:50
2	Zn 213.857†	3582.3	3021.6	-7.4489	ug/L	-7.4489 ppb	08:55:50
2	SiO2†	-193.6	-650.2	-40.093	ug/L	-40.093 ppb	08:56:26
3	Sc Radial	7020.0	7020.0	93.9	%		08:54:58
3	Y RADIAL	6403.5	6403.5	92.48	%		08:54:58
3	Al 396.153Radial†	587631.3	625753.0	515290	ug/L	515290 ppb	08:54:53
3	Ca 317.933Radial†	313618.8	333896.4	473000	ug/L	473000 ppb	08:54:53
3	Fe 238.204 Radial†	40809.0	43416.6	180980	ug/L	180980 ppb	08:54:58
3	K 766.490 Radial†	2309.7	52.0	-38.307	ug/L	-38.307 ppb	08:54:58
3	Mg 279.077 IEC†	17948.0	19107.1	476190	ug/L	476190 ppb	08:54:58
3	Na 589.592 Radial†	337.3	494.7	30.360	ug/L	30.360 ppb	08:54:58
3	Sr 421.552†	1390.4	1536.3	-0.3561	ug/L	-0.3561 ppb	08:54:58
3	Sc 361.383	643963.2	643963.2	89.602	%		08:55:55
3	Y 371.029	493367.8	493367.8	87.788	%		08:55:55
3	Ag 328.068†	-7239.8	-8712.5	-1.0341	ug/L	-1.0341 ppb	08:55:55
3	As 188.979†	-89.2	-64.1	12.933	ug/L	12.933 ppb	08:56:15
3	B 249.677†	-136.4	787.7	7.4900	ug/L	7.4900 ppb	08:55:55
3	Ba 233.527†	-542.4	-605.8	-5.0801	ug/L	-5.0801 ppb	08:56:15
3	Be 313.107†	-4938.6	-630.0	-0.3576	ug/L	-0.3576 ppb	08:55:55
3	Cd 226.502†	1053.5	1456.9	-2.5114	ug/L	-2.5114 ppb	08:56:15
3	Co 228.616†	-14.3	83.5	-1.1097	ug/L	-1.1097 ppb	08:56:15
3	Cr 267.716†	-159.7	-100.9	2.3163	ug/L	2.3163 ppb	08:56:15
3	Cu 324.752†	2865.6	-2440.4	1.6203	ug/L	1.6203 ppb	08:55:55
3	Mn 257.610†	344.3	-295.4	13.236	ug/L	13.236 ppb	08:55:55
3	Mo 202.031†	-176.1	-213.7	-3.2346	ug/L	-3.2346 ppb	08:56:15
3	Ni 231.604†	257.8	167.9	4.4876	ug/L	4.4876 ppb	08:56:15
3	P 214.914†	234.9	-52.6	2.7037	ug/L	2.7037 ppb	08:56:15
3	Pb 220.353†	-706.7	-775.4	-9.1286	ug/L	-9.1286 ppb	08:56:15
3	S 181.975 Axial†	131.0	70.8	-4.3212	ug/L	-4.3212 ppb	08:56:15
3	Sb 206.836†	92.7	46.2	3.4672	ug/L	3.4672 ppb	08:56:15
3	Se 196.026†	-1149.1	-1253.7	-3.6228	ug/L	-3.6228 ppb	08:56:15
3	Si 251.611†	-167.3	-598.5	-17.391	ug/L	-17.391 ppb	08:56:15
3	Sn 189.927†	-303.9	-351.6	-0.2390	ug/L	-0.2390 ppb	08:56:15
3	Ti 334.940†	-15801.5	-16286.9	-2.2375	ug/L	-2.2375 ppb	08:55:55
3	Tl 190.801†	-103.1	-54.4	-1.9044	ug/L	-1.9044 ppb	08:56:15
3	U 409.014†	-3992.1	393.4	-8.9157	ug/L	-8.9157 ppb	08:55:55
3	V 292.402†	102.0	1679.0	-2.2042	ug/L	-2.2042 ppb	08:56:15
3	Zn 213.857†	3614.0	3108.3	-6.7189	ug/L	-6.7189 ppb	08:56:15
3	SiO2†	-215.1	-677.0	-42.041	ug/L	-42.041 ppb	08:56:31

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	645051.5	89.754	%	0.9457				1.05%
Sc Radial	6924.3	92.6	%	1.16				1.25%
Y 371.029	494662.1	88.018	%	0.9114				1.04%
Y RADIAL	6303.1	91.03	%	1.280				1.41%
Ag 328.068†	-8682.7	-0.7900	ug/L	0.24674	-0.7900	ppb	0.24674	31.23%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	633249.7	521470	ug/L	5346.6	521470	ppb	5346.6	1.03%
QC value within limits for Al 396.153Radial Recovery = 104.29%								
As 188.979†	-66.7	12.100	ug/L	0.7241	12.100	ppb	0.7241	5.98%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	842.4	8.8340	ug/L	1.74505	8.8340	ppb	1.74505	19.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-587.1	-4.9508	ug/L	0.11490	-4.9508	ppb	0.11490	2.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-601.9	-0.3441	ug/L	0.04461	-0.3441	ppb	0.04461	12.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	338135.7	479010	ug/L	5267.9	479010	ppb	5267.9	1.10%

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   QC value within limits for Ca 317.933Radial  Recovery = 95.80%
Cd 226.502†            1450.3     -2.6535 ug/L      0.21582     -2.6535 ppb       0.21582   8.13%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              71.5     -1.3300 ug/L      0.20665     -1.3300 ppb       0.20665  15.54%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -103.2      2.2914 ug/L      0.08023      2.2914 ppb       0.08023   3.50%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -2395.2      1.8128 ug/L      0.21594      1.8128 ppb       0.21594  11.91%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    43537.2    181480 ug/L        893.0     181480 ppb         893.0   0.49%
   QC value within limits for Fe 238.204 Radial  Recovery = 90.74%
K 766.490 Radial†        85.1     -32.097 ug/L     11.4050     -32.097 ppb       11.4050  35.53%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       19104.3    476120 ug/L       2018.8     476120 ppb        2018.8   0.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 95.22%
Mn 257.610†            -492.7      13.083 ug/L      0.1364      13.083 ppb        0.1364   1.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -243.9      -5.3291 ug/L     1.84072     -5.3291 ppb       1.84072  34.54%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       518.3      31.811 ug/L      2.4568      31.811 ppb        2.4568   7.72%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              187.1       4.9994 ug/L     0.49137      4.9994 ppb       0.49137   9.83%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -45.9       7.7676 ug/L     4.38582      7.7676 ppb       4.38582  56.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -748.0      -4.7099 ug/L     3.91250     -4.7099 ppb       3.91250  83.07%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         63.1     -16.132 ug/L     22.4062     -16.132 ppb      22.4062 138.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              54.2       5.6336 ug/L     2.39467      5.6336 ppb       2.39467  42.51%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†           -1249.6       0.5572 ug/L     4.44942      0.5572 ppb       4.44942 798.53%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -586.5     -16.967 ug/L       0.8126     -16.967 ppb        0.8126   4.79%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -359.1      -0.9068 ug/L     0.57964      -0.9068 ppb       0.57964  63.92%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†            1517.8      -0.4667 ug/L     0.09963      -0.4667 ppb       0.09963  21.35%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†          -16125.2      -1.5947 ug/L     0.75634      -1.5947 ppb       0.75634  47.43%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -52.1      -1.1606 ug/L     0.67608      -1.1606 ppb       0.67608  58.25%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               625.9      -1.1067 ug/L     6.91461      -1.1067 ppb       6.91461 624.82%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†             1664.6      -2.4180 ug/L     0.27710      -2.4180 ppb       0.27710  11.46%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            3087.1      -6.9678 ug/L     0.41678      -6.9678 ppb       0.41678   5.98%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                  -665.8     -41.191 ug/L       0.9975     -41.191 ppb        0.9975   2.42%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 6/30/2009 08:58:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6855.2	6855.2	91.7	%			09:00:40
1	Y RADIAL	6208.8	6208.8	89.67	%			09:00:40
1	Al 396.153Radial†	587975.9	641176.3	527970	ug/L	527970	ppb	09:00:35
1	Ca 317.933Radial†	311516.7	339635.4	481130	ug/L	481130	ppb	09:00:35
1	Fe 238.204 Radial†	39507.6	43042.6	179440	ug/L	179440	ppb	09:00:40
1	K 766.490 Radial†	24540.8	24351.0	5189.4	ug/L	5189.4	ppb	09:00:35
1	Mg 279.077 IEC†	17320.4	18882.3	470600	ug/L	470600	ppb	09:00:40
1	Na 589.592 Radial†	81859.5	89391.6	5486.2	ug/L	5486.2	ppb	09:00:35
1	Sr 421.552†	160589.6	175155.9	484.49	ug/L	484.49	ppb	09:00:35
1	Sc 361.383	652496.2	652496.2	90.790	%			09:01:08
1	Y 371.029	498677.7	498677.7	88.733	%			09:01:08
1	Ag 328.068†	35600.4	38579.2	282.44	ug/L	282.44	ppb	09:01:08
1	As 188.979†	1196.4	1353.2	526.01	ug/L	526.01	ppb	09:01:13
1	B 249.677†	18992.0	21858.6	536.23	ug/L	536.23	ppb	09:01:08
1	Ba 233.527†	64009.1	70502.1	497.80	ug/L	497.80	ppb	09:01:08
1	Be 313.107†	497779.3	553158.8	254.33	ug/L	254.33	ppb	09:01:08
1	Cd 226.502†	35153.6	39000.9	476.84	ug/L	476.84	ppb	09:01:13
1	Co 228.616†	24397.7	26972.2	465.48	ug/L	465.48	ppb	09:01:13
1	Cr 267.716†	31670.4	34960.6	494.20	ug/L	494.20	ppb	09:01:13
1	Cu 324.752†	143721.4	152662.9	563.58	ug/L	563.58	ppb	09:01:08
1	Mn 257.610†	400655.3	440620.6	499.38	ug/L	499.38	ppb	09:01:08
1	Mo 202.031†	6383.3	7013.7	505.46	ug/L	505.46	ppb	09:01:13
1	Ni 231.604†	16114.7	17629.7	470.94	ug/L	470.94	ppb	09:01:13
1	P 214.914†	4855.3	5033.1	2499.9	ug/L	2499.9	ppb	09:01:13
1	Pb 220.353†	2927.1	3237.3	472.24	ug/L	472.24	ppb	09:01:13
1	S 181.975 Axial†	1913.5	2032.2	2680.3	ug/L	2680.3	ppb	09:01:13
1	Sb 206.836†	1774.0	1896.7	559.70	ug/L	559.70	ppb	09:01:13
1	Se 196.026†	3495.6	3879.0	2612.1	ug/L	2612.1	ppb	09:01:13
1	Si 251.611†	159246.7	174989.8	5388.0	ug/L	5388.0	ppb	09:01:08
1	Sn 189.927†	2332.9	2557.1	515.29	ug/L	515.29	ppb	09:01:13
1	Ti 334.940†	244564.5	270722.8	523.29	ug/L	523.29	ppb	09:01:08
1	Tl 190.801†	1581.3	1802.5	487.68	ug/L	487.68	ppb	09:01:13
1	U 409.014†	10317.9	16213.3	526.01	ug/L	526.01	ppb	09:01:08
1	V 292.402†	51266.1	58032.1	516.45	ug/L	516.45	ppb	09:01:13
1	Zn 213.857†	53333.6	57819.0	494.77	ug/L	494.77	ppb	09:01:13
1	SiO2†	156907.4	172388.1	11300	ug/L	11300	ppb	09:01:40
2	Sc Radial	6964.5	6964.5	93.2	%			09:00:51
2	Y RADIAL	6360.1	6360.1	91.85	%			09:00:51
2	Al 396.153Radial†	584733.7	627632.3	516820	ug/L	516820	ppb	09:00:45
2	Ca 317.933Radial†	310333.5	333033.2	471780	ug/L	471780	ppb	09:00:45
2	Fe 238.204 Radial†	40096.1	42997.9	179250	ug/L	179250	ppb	09:00:51
2	K 766.490 Radial†	24603.7	23998.5	5115.2	ug/L	5115.2	ppb	09:00:45
2	Mg 279.077 IEC†	17606.9	18893.4	470880	ug/L	470880	ppb	09:00:51
2	Na 589.592 Radial†	81588.7	87699.8	5382.4	ug/L	5382.4	ppb	09:00:45
2	Sr 421.552†	159721.7	171475.5	474.30	ug/L	474.30	ppb	09:00:45
2	Sc 361.383	640008.8	640008.8	89.052	%			09:01:19
2	Y 371.029	489123.1	489123.1	87.033	%			09:01:19
2	Ag 328.068†	34867.9	38521.8	282.23	ug/L	282.23	ppb	09:01:19
2	As 188.979†	1221.0	1406.6	545.22	ug/L	545.22	ppb	09:01:24
2	B 249.677†	18525.2	21742.5	533.29	ug/L	533.29	ppb	09:01:19
2	Ba 233.527†	62881.8	70611.7	498.59	ug/L	498.59	ppb	09:01:19
2	Be 313.107†	488771.8	553741.5	254.60	ug/L	254.60	ppb	09:01:19
2	Cd 226.502†	35071.1	39663.7	485.32	ug/L	485.32	ppb	09:01:24
2	Co 228.616†	24242.5	27322.3	471.56	ug/L	471.56	ppb	09:01:24
2	Cr 267.716†	31487.6	35436.0	500.88	ug/L	500.88	ppb	09:01:24
2	Cu 324.752†	140491.7	152124.9	561.62	ug/L	561.62	ppb	09:01:19
2	Mn 257.610†	393408.5	441093.3	499.87	ug/L	499.87	ppb	09:01:19
2	Mo 202.031†	6298.7	7055.9	508.42	ug/L	508.42	ppb	09:01:24
2	Ni 231.604†	16045.8	17898.6	478.12	ug/L	478.12	ppb	09:01:24

2	P 214.914†	4819.0	5096.7	2529.1	ug/L	2529.1 ppb	09:01:24
2	Pb 220.353†	2892.3	3261.1	472.94	ug/L	472.94 ppb	09:01:24
2	S 181.975 Axial‖	1952.4	2117.1	2798.6	ug/L	2798.6 ppb	09:01:24
2	Sb 206.836†	1748.6	1906.3	562.68	ug/L	562.68 ppb	09:01:24
2	Se 196.026†	3502.5	3961.8	2652.9	ug/L	2652.9 ppb	09:01:24
2	Si 251.611†	155984.1	174748.5	5380.5	ug/L	5380.5 ppb	09:01:19
2	Sn 189.927†	2266.7	2532.8	510.03	ug/L	510.03 ppb	09:01:24
2	Ti 334.940†	239914.7	270757.3	522.82	ug/L	522.82 ppb	09:01:19
2	Tl 190.801†	1494.2	1738.7	470.66	ug/L	470.66 ppb	09:01:24
2	U 409.014†	9585.9	15613.1	505.69	ug/L	505.69 ppb	09:01:19
2	V 292.402†	51169.7	59025.5	525.50	ug/L	525.50 ppb	09:01:24
2	Zn 213.857†	52846.7	58418.3	500.27	ug/L	500.27 ppb	09:01:24
2	SiO2†	158025.2	177015.4	11605	ug/L	11605 ppb	09:01:45
3	Sc Radial	6904.4	6904.4	92.4	%		09:01:01
3	Y RADIAL	6308.2	6308.2	91.10	%		09:01:01
3	Al 396.153Radial†	574321.0	621827.5	512040	ug/L	512040 ppb	09:00:56
3	Ca 317.933Radial†	304252.1	329351.6	466560	ug/L	466560 ppb	09:00:56
3	Fe 238.204 Radial†	39631.2	42869.6	178720	ug/L	178720 ppb	09:01:01
3	K 766.490 Radial†	24062.9	23643.1	5039.3	ug/L	5039.3 ppb	09:00:56
3	Mg 279.077 IEC†	17393.5	18827.0	469220	ug/L	469220 ppb	09:01:01
3	Na 589.592 Radial†	79837.6	86567.1	5312.9	ug/L	5312.9 ppb	09:00:56
3	Sr 421.552†	156550.0	169535.4	468.93	ug/L	468.93 ppb	09:00:56
3	Sc 361.383	645704.5	645704.5	89.845	%		09:01:30
3	Y 371.029	493775.8	493775.8	87.860	%		09:01:30
3	Ag 328.068†	35088.0	38421.5	281.49	ug/L	281.49 ppb	09:01:30
3	As 188.979†	1180.9	1349.8	524.64	ug/L	524.64 ppb	09:01:35
3	B 249.677†	18741.7	21800.0	534.82	ug/L	534.82 ppb	09:01:30
3	Ba 233.527†	63400.4	70566.1	498.25	ug/L	498.25 ppb	09:01:30
3	Be 313.107†	493451.6	554108.9	254.77	ug/L	254.77 ppb	09:01:30
3	Cd 226.502†	34757.3	38967.1	476.49	ug/L	476.49 ppb	09:01:35
3	Co 228.616†	24041.0	26857.8	463.49	ug/L	463.49 ppb	09:01:35
3	Cr 267.716†	31321.8	34939.5	493.89	ug/L	493.89 ppb	09:01:35
3	Cu 324.752†	141805.9	152196.0	561.85	ug/L	561.85 ppb	09:01:30
3	Mn 257.610†	397141.2	441351.0	500.12	ug/L	500.12 ppb	09:01:30
3	Mo 202.031†	6256.8	6946.9	500.71	ug/L	500.71 ppb	09:01:35
3	Ni 231.604†	15872.8	17547.1	468.74	ug/L	468.74 ppb	09:01:35
3	P 214.914†	4818.5	5048.3	2503.0	ug/L	2503.0 ppb	09:01:35
3	Pb 220.353†	2896.5	3237.1	469.18	ug/L	469.18 ppb	09:01:35
3	S 181.975 Axial†	1916.4	2057.6	2718.1	ug/L	2718.1 ppb	09:01:35
3	Sb 206.836†	1759.5	1901.1	561.12	ug/L	561.12 ppb	09:01:35
3	Se 196.026†	3380.6	3791.5	2564.0	ug/L	2564.0 ppb	09:01:35
3	Si 251.611†	157500.7	174891.4	5385.2	ug/L	5385.2 ppb	09:01:30
3	Sn 189.927†	2251.2	2493.2	502.44	ug/L	502.44 ppb	09:01:35
3	Ti 334.940†	242241.8	270971.0	522.90	ug/L	522.90 ppb	09:01:30
3	Tl 190.801†	1495.1	1724.9	467.00	ug/L	467.00 ppb	09:01:35
3	U 409.014†	9825.0	15784.2	511.57	ug/L	511.57 ppb	09:01:30
3	V 292.402†	50585.3	57868.2	514.95	ug/L	514.95 ppb	09:01:35
3	Zn 213.857†	52327.3	57316.8	490.27	ug/L	490.27 ppb	09:01:35
3	SiO2†	157730.3	175121.9	11481	ug/L	11481 ppb	09:01:51

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	646069.8	89.896	%	0.8699				0.97%
Sc Radial	6908.0	92.4	%	0.73				0.79%
Y 371.029	493858.9	87.875	%	0.8501				0.97%
Y RADIAL	6292.4	90.87	%	1.110				1.22%
Ag 328.068†	38507.5	282.05	ug/L	0.500	282.05	ppb	0.500	0.18%
QC value within limits for Ag 328.068 Recovery = 112.82%								
Al 396.153Radial†	630212.0	518940	ug/L	8176.2	518940	ppb	8176.2	1.58%
QC value within limits for Al 396.153Radial Recovery = 103.79%								
As 188.979†	1369.9	531.96	ug/L	11.511	531.96	ppb	11.511	2.16%
QC value within limits for As 188.979 Recovery = 106.39%								
B 249.677†	21800.4	534.78	ug/L	1.473	534.78	ppb	1.473	0.28%
QC value within limits for B 249.677 Recovery = 106.96%								
Ba 233.527†	70560.0	498.22	ug/L	0.399	498.22	ppb	0.399	0.08%
QC value within limits for Ba 233.527 Recovery = 99.64%								
Be 313.107†	553669.7	254.57	ug/L	0.220	254.57	ppb	0.220	0.09%
QC value within limits for Be 313.107 Recovery = 101.83%								
Ca 317.933Radial†	334006.7	473160	ug/L	7381.4	473160	ppb	7381.4	1.56%

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   QC value within limits for Ca 317.933Radial  Recovery = 94.63%
Cd 226.502†            39210.6      479.55 ug/L         5.000      479.55 ppb          5.000   1.04%
   QC value within limits for Cd 226.502  Recovery = 95.91%
Co 228.616†            27050.7      466.84 ug/L         4.202      466.84 ppb          4.202   0.90%
   QC value within limits for Co 228.616  Recovery = 93.37%
Cr 267.716†            35112.0      496.32 ug/L         3.947      496.32 ppb          3.947   0.80%
   QC value within limits for Cr 267.716  Recovery = 99.26%
Cu 324.752†           152327.9      562.35 ug/L         1.072      562.35 ppb          1.072   0.19%
   QC value within limits for Cu 324.752  Recovery = 112.47%
Fe 238.204 Radial†     42970.0      179130 ug/L         374.5      179130 ppb          374.5   0.21%
   QC value within limits for Fe 238.204 Radial  Recovery = 89.57%
K 766.490 Radial†      23997.5      5114.6 ug/L         75.05      5114.6 ppb          75.05   1.47%
   QC value within limits for K 766.490 Radial  Recovery = 102.29%
Mg 279.077 IEC†        18867.5      470230 ug/L         887.1      470230 ppb          887.1   0.19%
   QC value within limits for Mg 279.077 IEC  Recovery = 94.05%
Mn 257.610†           441021.6      499.79 ug/L         0.377      499.79 ppb          0.377   0.08%
   QC value within limits for Mn 257.610  Recovery = 99.96%
Mo 202.031†             7005.5      504.86 ug/L         3.890      504.86 ppb          3.890   0.77%
   QC value within limits for Mo 202.031  Recovery = 100.97%
Na 589.592 Radial†     87886.2      5393.8 ug/L         87.24      5393.8 ppb          87.24   1.62%
   QC value within limits for Na 589.592 Radial  Recovery = 107.88%
Ni 231.604†            17691.8      472.60 ug/L         4.909      472.60 ppb          4.909   1.04%
   QC value within limits for Ni 231.604  Recovery = 94.52%
P 214.914†              5059.4      2510.7 ug/L         16.01      2510.7 ppb          16.01   0.64%
   QC value within limits for P 214.914  Recovery = 100.43%
Pb 220.353†             3245.2      471.45 ug/L         1.999      471.45 ppb          1.999   0.42%
   QC value within limits for Pb 220.353  Recovery = 94.29%
S 181.975 Axial†        2069.0      2732.3 ug/L         60.46      2732.3 ppb          60.46   2.21%
   QC value within limits for S 181.975 Axial  Recovery = 109.29%
Sb 206.836†             1901.4      561.17 ug/L         1.489      561.17 ppb          1.489   0.27%
   QC value within limits for Sb 206.836  Recovery = 112.23%
Se 196.026†             3877.5      2609.7 ug/L         44.55      2609.7 ppb          44.55   1.71%
   QC value within limits for Se 196.026  Recovery = 104.39%
Si 251.611†           174876.6      5384.6 ug/L          3.75      5384.6 ppb           3.75   0.07%
   QC value within limits for Si 251.611  Recovery = 107.69%
Sn 189.927†             2527.7      509.25 ug/L         6.461      509.25 ppb          6.461   1.27%
   QC value within limits for Sn 189.927  Recovery = 101.85%
Sr 421.552†           172055.6      475.91 ug/L         7.901      475.91 ppb          7.901   1.66%
   QC value within limits for Sr 421.552  Recovery = 95.18%
Ti 334.940†           270817.0      523.00 ug/L         0.253      523.00 ppb          0.253   0.05%
   QC value within limits for Ti 334.940  Recovery = 104.60%
Tl 190.801†             1755.3      475.11 ug/L        11.036      475.11 ppb         11.036   2.32%
   QC value within limits for Tl 190.801  Recovery = 95.02%
U 409.014†             15870.2      514.42 ug/L        10.453      514.42 ppb         10.453   2.03%
   QC value within limits for U 409.014  Recovery = 102.88%
V 292.402†             58308.6      518.97 ug/L         5.707      518.97 ppb          5.707   1.10%
   QC value within limits for V 292.402  Recovery = 103.79%
Zn 213.857†            57851.4      495.10 ug/L         5.004      495.10 ppb          5.004   1.01%
   QC value within limits for Zn 213.857  Recovery = 99.02%
SiO2†                 174841.8       11462 ug/L         153.1       11462 ppb          153.1   1.34%
   QC value within limits for SiO2  Recovery = 107.17%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 6/30/2009 09:04:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	6672.9	6672.9	89.3	%			09:06:04
1	Y RADIAL	6066.4	6066.4	87.61	%			09:06:04
1	Al 396.153Radial†	588193.9	658933.3	542620	ug/L	542620	ppb	09:05:59
1	Ca 317.933Radial†	308456.8	345486.3	489420	ug/L	489420	ppb	09:05:59
1	Fe 238.204 Radial†	95333.1	106751.7	444990	ug/L	444990	ppb	09:05:59
1	K 766.490 Radial†	3042.4	1000.7	149.11	ug/L	149.11	ppb	09:06:04
1	Mg 279.077 IEC†	16910.7	18939.3	471780	ug/L	471780	ppb	09:06:04
1	Na 589.592 Radial†	7414295.7	8305199.0	509710	ug/L	509710	ppb	09:05:53
1	Sr 421.552†	1706.7	1967.6	0.6871	ug/L	0.6871	ppb	09:06:04
1	Sc 361.383	634303.9	634303.9	88.258	%			09:06:43
1	Y 371.029	486307.1	486307.1	86.532	%			09:06:43
1	Ag 328.068†	-17514.1	-20476.8	0.1770	ug/L	0.1770	ppb	09:06:43
1	As 188.979†	-218.8	-212.4	12.230	ug/L	12.230	ppb	09:07:03
1	B 249.677†	714.0	1748.9	13.664	ug/L	13.664	ppb	09:06:43
1	Ba 233.527†	-1455.2	-1649.3	-13.645	ug/L	-13.645	ppb	09:07:03
1	Be 313.107†	-9676.3	-6081.9	-2.8306	ug/L	-2.8306	ppb	09:06:43
1	Cd 226.502†	2949.9	3623.5	-5.6487	ug/L	-5.6487	ppb	09:07:03
1	Co 228.616†	229.2	359.1	-0.1629	ug/L	-0.1629	ppb	09:07:03
1	Cr 267.716†	-60.5	8.8	4.4697	ug/L	4.4697	ppb	09:07:03
1	Cu 324.752†	771.2	-4764.6	8.4617	ug/L	8.4617	ppb	09:06:43
1	Mn 257.610†	-24677.9	-28640.6	15.252	ug/L	15.252	ppb	09:06:43
1	Mo 202.031†	-390.1	-459.2	-3.2898	ug/L	-3.2898	ppb	09:06:43
1	Ni 231.604†	451.5	391.7	10.467	ug/L	10.467	ppb	09:07:03
1	P 214.914†	700.2	478.6	71.900	ug/L	71.900	ppb	09:07:03
1	Pb 220.353†	-433.0	-477.4	6.7025	ug/L	6.7025	ppb	09:07:03
1	S 181.975 Axial†	141.3	84.7	9.2496	ug/L	9.2496	ppb	09:07:03
1	Sb 206.836†	116.3	74.5	15.554	ug/L	15.554	ppb	09:07:03
1	Se 196.026†	-2719.4	-3052.4	-40.929	ug/L	-40.929	ppb	09:07:03
1	Si 251.611†	-1841.5	-2498.2	-75.766	ug/L	-75.766	ppb	09:07:03
1	Sn 189.927†	-322.1	-377.4	16.539	ug/L	16.539	ppb	09:07:03
1	Ti 334.940†	-10915.4	-11019.2	1.7610	ug/L	1.7610	ppb	09:06:43
1	Tl 190.801†	-137.4	-94.9	-11.963	ug/L	-11.963	ppb	09:07:03
1	U 409.014†	385912.9	442102.1	14915	ug/L	14915	ppb	09:06:43
1	V 292.402†	1135.5	2851.8	0.3848	ug/L	0.3848	ppb	09:07:03
1	Zn 213.857†	6547.8	6493.8	-2.8943	ug/L	-2.8943	ppb	09:07:03
1	SiO2†	-1901.7	-2591.6	-167.31	ug/L	-167.31	ppb	09:08:00
2	Sc Radial	6734.9	6734.9	90.1	%			09:06:20
2	Y RADIAL	6141.0	6141.0	88.69	%			09:06:20
2	Al 396.153Radial†	563254.8	625190.0	514830	ug/L	514830	ppb	09:06:15
2	Ca 317.933Radial†	294889.7	327248.4	463590	ug/L	463590	ppb	09:06:15
2	Fe 238.204 Radial†	91146.1	101121.9	421520	ug/L	421520	ppb	09:06:15
2	K 766.490 Radial†	2910.4	822.9	110.63	ug/L	110.63	ppb	09:06:20
2	Mg 279.077 IEC†	16879.2	18730.0	466580	ug/L	466580	ppb	09:06:20
2	Na 589.592 Radial†	7462964.3	8282760.6	508340	ug/L	508340	ppb	09:06:10
2	Sr 421.552†	1762.9	2012.4	1.0662	ug/L	1.0662	ppb	09:06:20
2	Sc 361.383	627079.1	627079.1	87.253	%			09:07:09
2	Y 371.029	480401.5	480401.5	85.481	%			09:07:09
2	Ag 328.068†	-17263.2	-20417.8	-6.6947	ug/L	-6.6947	ppb	09:07:09
2	As 188.979†	-216.4	-212.6	7.4911	ug/L	7.4911	ppb	09:07:29
2	B 249.677†	703.7	1746.5	15.208	ug/L	15.208	ppb	09:07:09
2	Ba 233.527†	-1544.3	-1770.4	-14.389	ug/L	-14.389	ppb	09:07:29
2	Be 313.107†	-9692.9	-6227.2	-2.8955	ug/L	-2.8955	ppb	09:07:09
2	Cd 226.502†	2948.1	3659.9	-2.4489	ug/L	-2.4489	ppb	09:07:29
2	Co 228.616†	210.3	340.4	-0.1617	ug/L	-0.1617	ppb	09:07:29
2	Cr 267.716†	24.0	104.9	5.2985	ug/L	5.2985	ppb	09:07:29
2	Cu 324.752†	682.2	-4856.6	6.7716	ug/L	6.7716	ppb	09:07:09
2	Mn 257.610†	-24380.0	-28621.3	12.424	ug/L	12.424	ppb	09:07:09
2	Mo 202.031†	-417.9	-496.1	-7.4217	ug/L	-7.4217	ppb	09:07:09
2	Ni 231.604†	402.0	340.9	9.1088	ug/L	9.1088	ppb	09:07:29

2	P 214.914†	696.9	484.0	84.249	ug/L	84.249 ppb	09:07:29
2	Pb 220.353†	-474.2	-530.2	-2.7882	ug/L	-2.7882 ppb	09:07:29
2	S 181.975 Axial†	145.2	91.0	23.403	ug/L	23.403 ppb	09:07:29
2	Sb 206.836†	101.7	59.3	11.195	ug/L	11.195 ppb	09:07:29
2	Se 196.026†	-2705.3	-3071.7	-130.71	ug/L	-130.71 ppb	09:07:29
2	Si 251.611†	-1871.8	-2557.0	-77.540	ug/L	-77.540 ppb	09:07:29
2	Sn 189.927†	-312.9	-371.1	13.268	ug/L	13.268 ppb	09:07:29
2	Ti 334.940†	-10467.4	-10648.3	0.8830	ug/L	0.8830 ppb	09:07:09
2	Tl 190.801†	-132.6	-91.2	-11.657	ug/L	-11.657 ppb	09:07:29
2	U 409.014†	384426.7	445436.5	15031	ug/L	15031 ppb	09:07:09
2	V 292.402†	1147.9	2880.8	4.0182	ug/L	4.0182 ppb	09:07:29
2	Zn 213.857†	6559.6	6592.8	0.6570	ug/L	0.6570 ppb	09:07:29
2	SiO2†	-2024.5	-2757.1	-178.11	ug/L	-178.11 ppb	09:08:05
3	Sc Radial	6767.1	6767.1	90.5	%		09:06:36
3	Y RADIAL	6211.2	6211.2	89.70	%		09:06:36
3	Al 396.153Radial†	575709.6	635976.0	523710	ug/L	523710 ppb	09:06:31
3	Ca 317.933Radial†	302452.6	334046.7	473220	ug/L	473220 ppb	09:06:31
3	Fe 238.204 Radial†	93273.8	102991.4	429320	ug/L	429320 ppb	09:06:31
3	K 766.490 Radial†	3023.0	931.8	134.94	ug/L	134.94 ppb	09:06:36
3	Mg 279.077 IEC†	16986.4	18759.4	467310	ug/L	467310 ppb	09:06:36
3	Na 589.592 Radial†	7426290.6	8202888.0	503430	ug/L	503430 ppb	09:06:26
3	Sr 421.552†	1779.2	2021.1	0.9958	ug/L	0.9958 ppb	09:06:36
3	Sc 361.383	633280.0	633280.0	88.116	%		09:07:34
3	Y 371.029	485991.6	485991.6	86.475	%		09:07:34
3	Ag 328.068†	-17711.5	-20732.8	-6.2775	ug/L	-6.2775 ppb	09:07:34
3	As 188.979†	-214.8	-208.3	10.577	ug/L	10.577 ppb	09:07:55
3	B 249.677†	734.1	1773.0	15.342	ug/L	15.342 ppb	09:07:34
3	Ba 233.527†	-1477.0	-1676.8	-13.768	ug/L	-13.768 ppb	09:07:55
3	Be 313.107†	-9808.8	-6249.9	-2.9076	ug/L	-2.9076 ppb	09:07:34
3	Cd 226.502†	2908.0	3581.3	-4.3598	ug/L	-4.3598 ppb	09:07:55
3	Co 228.616†	236.6	367.9	0.2042	ug/L	0.2042 ppb	09:07:55
3	Cr 267.716†	-40.2	31.8	4.4141	ug/L	4.4141 ppb	09:07:55
3	Cu 324.752†	877.3	-4642.8	7.9967	ug/L	7.9967 ppb	09:07:34
3	Mn 257.610†	-24695.8	-28706.0	13.296	ug/L	13.296 ppb	09:07:34
3	Mo 202.031†	-432.4	-507.9	-7.7409	ug/L	-7.7409 ppb	09:07:34
3	Ni 231.604†	439.3	378.8	10.121	ug/L	10.121 ppb	09:07:55
3	P 214.914†	689.5	467.7	72.429	ug/L	72.429 ppb	09:07:55
3	Pb 220.353†	-434.1	-479.4	4.2570	ug/L	4.2570 ppb	09:07:55
3	S 181.975 Axial†	133.6	76.2	1.3507	ug/L	1.3507 ppb	09:07:55
3	Sb 206.836†	101.8	58.3	10.743	ug/L	10.743 ppb	09:07:55
3	Se 196.026†	-2700.4	-3035.8	-85.863	ug/L	-85.863 ppb	09:07:55
3	Si 251.611†	-1854.9	-2516.9	-76.210	ug/L	-76.210 ppb	09:07:55
3	Sn 189.927†	-346.5	-405.7	8.7052	ug/L	8.7052 ppb	09:07:55
3	Ti 334.940†	-10916.1	-11040.1	0.7034	ug/L	0.7034 ppb	09:07:34
3	Tl 190.801†	-124.8	-80.9	-8.7461	ug/L	-8.7461 ppb	09:07:55
3	U 409.014†	389663.6	447065.6	15085	ug/L	15085 ppb	09:07:34
3	V 292.402†	1019.7	2722.5	1.6041	ug/L	1.6041 ppb	09:07:55
3	Zn 213.857†	6557.7	6517.1	-0.8875	ug/L	-0.8875 ppb	09:07:55
3	SiO2†	-1993.7	-2699.5	-174.12	ug/L	-174.12 ppb	09:08:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	631554.3	87.876	%	0.5440				0.62%
Sc Radial	6725.0	90.0	%	0.64				0.71%
Y 371.029	484233.4	86.163	%	0.5912				0.69%
Y RADIAL	6139.5	88.67	%	1.045				1.18%
Ag 328.068†	-20542.5	-4.2651	ug/L	3.85262	-4.2651	ppb	3.85262	90.33%
Al 396.153Radial†	640033.1	527050	ug/L	14191.4	527050	ppb	14191.4	2.69%
QC value within limits for Al 396.153Radial Recovery = 105.41%								
As 188.979†	-211.1	10.099	ug/L	2.4052	10.099	ppb	2.4052	23.82%
B 249.677†	1756.1	14.738	ug/L	0.9322	14.738	ppb	0.9322	6.33%
Ba 233.527†	-1698.8	-13.934	ug/L	0.3991	-13.934	ppb	0.3991	2.86%
Be 313.107†	-6186.4	-2.8779	ug/L	0.04141	-2.8779	ppb	0.04141	1.44%
Ca 317.933Radial†	335593.8	475410	ug/L	13056.7	475410	ppb	13056.7	2.75%
QC value within limits for Ca 317.933Radial Recovery = 95.08%								
Cd 226.502†	3621.5	-4.1525	ug/L	1.60991	-4.1525	ppb	1.60991	38.77%
Co 228.616†	355.8	-0.0401	ug/L	0.21157	-0.0401	ppb	0.21157	527.33%
Cr 267.716†	48.5	4.7274	ug/L	0.49533	4.7274	ppb	0.49533	10.48%
Cu 324.752†	-4754.7	7.7433	ug/L	0.87304	7.7433	ppb	0.87304	11.27%

Fe 238.204 Radial†	103621.7	431940	ug/L	11952.5	431940	ppb	11952.5	2.77%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 86.39%								
K 766.490 Radial†	918.5	131.56	ug/L	19.462	131.56	ppb	19.462	14.79%
Mg 279.077 IEC†	18809.6	468560	ug/L	2815.7	468560	ppb	2815.7	0.60%
QC value within limits for Mg 279.077 IEC Recovery = 93.71%								
Mn 257.610†	-28656.0	13.657	ug/L	1.4485	13.657	ppb	1.4485	10.61%
Mo 202.031†	-487.7	-6.1508	ug/L	2.48284	-6.1508	ppb	2.48284	40.37%
Na 589.592 Radial†	8263615.9	507160	ug/L	3300.3	507160	ppb	3300.3	0.65%
QC value within limits for Na 589.592 Radial Recovery = 101.43%								
Ni 231.604†	370.5	9.8988	ug/L	0.70582	9.8988	ppb	0.70582	7.13%
P 214.914†	476.7	76.193	ug/L	6.9820	76.193	ppb	6.9820	9.16%
Pb 220.353†	-495.7	2.7238	ug/L	4.92765	2.7238	ppb	4.92765	180.91%
S 181.975 Axial†	84.0	11.334	ug/L	11.1731	11.334	ppb	11.1731	98.58%
Sb 206.836†	64.1	12.497	ug/L	2.6567	12.497	ppb	2.6567	21.26%
Se 196.026†	-3053.3	-85.835	ug/L	44.8929	-85.835	ppb	44.8929	52.30%
Si 251.611†	-2524.0	-76.505	ug/L	0.9228	-76.505	ppb	0.9228	1.21%
Sn 189.927†	-384.7	12.837	ug/L	3.9344	12.837	ppb	3.9344	30.65%
Sr 421.552†	2000.3	0.9164	ug/L	0.20161	0.9164	ppb	0.20161	22.00%
Ti 334.940†	-10902.5	1.1158	ug/L	0.56593	1.1158	ppb	0.56593	50.72%
Tl 190.801†	-89.0	-10.789	ug/L	1.7755	-10.789	ppb	1.7755	16.46%
U 409.014†	444868.0	15011	ug/L	86.8	15011	ppb	86.8	0.58%
QC value within limits for U 409.014 Recovery = 100.07%								
V 292.402†	2818.3	2.0024	ug/L	1.84916	2.0024	ppb	1.84916	92.35%
Zn 213.857†	6534.5	-1.0416	ug/L	1.78067	-1.0416	ppb	1.78067	170.95%
SiO2†	-2682.7	-173.18	ug/L	5.457	-173.18	ppb	5.457	3.15%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 6/30/2009 09:10:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7422.4	7422.4	99.3	%			09:12:17
1	Y RADIAL	6803.8	6803.8	98.26	%			09:12:17
1	Al 396.153Radial†	486.3	562.3	36.776	ug/L	36.776	ppb	09:12:17
1	Ca 317.933Radial†	56.2	27.5	38.995	ug/L	38.995	ppb	09:12:37
1	Fe 238.204 Radial†	-27.3	-62.3	51.387	ug/L	51.387	ppb	09:12:37
1	K 766.490 Radial†	1284333.0	1290956.1	278300	ug/L	278300	ppb	09:12:12
1	Mg 279.077 IEC†	-12.1	-15.2	-176.89	ug/L	-176.89	ppb	09:12:37
1	Na 589.592 Radial†	3381.0	3540.3	217.28	ug/L	217.28	ppb	09:12:17
1	Sr 421.552†	3247986.4	3270879.2	9135.7	ug/L	9135.7	ppb	09:12:12
1	Sc 361.383	718051.7	718051.7	99.911	%			09:13:56
1	Y 371.029	548825.4	548825.4	97.656	%			09:13:56
1	Ag 328.068†	-5154.5	-5791.7	5.5336	ug/L	5.5336	ppb	09:14:01
1	As 188.979†	28412.9	28473.6	10329	ug/L	10329	ppb	09:14:01
1	B 249.677†	200225.0	201342.7	5023.7	ug/L	5023.7	ppb	09:13:56
1	Ba 233.527†	2013651.4	2015439.0	14243	ug/L	14243	ppb	09:13:56
1	Be 313.107†	6475018.7	6485650.3	2991.6	ug/L	2991.6	ppb	09:13:49
1	Cd 226.502†	801401.5	802394.2	10241	ug/L	10241	ppb	09:13:56
1	Co 228.616†	568003.8	568607.7	9862.7	ug/L	9862.7	ppb	09:13:56
1	Cr 267.716†	1753379.4	1755013.8	24608	ug/L	24608	ppb	09:13:56
1	Cu 324.752†	5633997.2	5633361.7	20414	ug/L	20414	ppb	09:13:49
1	Mn 257.610†	8719648.2	8726711.6	9623.5	ug/L	9623.5	ppb	09:13:49
1	Mo 202.031†	141325.9	141434.3	9956.8	ug/L	9956.8	ppb	09:14:01
1	Ni 231.604†	375246.3	375459.7	10030	ug/L	10030	ppb	09:13:56
1	P 214.914†	36848.1	36566.0	14746	ug/L	14746	ppb	09:14:01
1	Pb 220.353†	208794.7	208993.4	24898	ug/L	24898	ppb	09:14:01
1	S 181.975 Axial†	38281.0	38239.6	52387	ug/L	52387	ppb	09:14:01
1	Sb 206.836†	36376.8	36351.9	10574	ug/L	10574	ppb	09:14:01
1	Se 196.026†	20377.2	20424.1	10437	ug/L	10437	ppb	09:14:01
1	Si 251.611†	1574586.6	1575573.0	48252	ug/L	48252	ppb	09:13:56
1	Sn 189.927†	59738.9	59779.5	10580	ug/L	10580	ppb	09:14:01
1	Ti 334.940†	5433406.0	5439579.1	9950.3	ug/L	9950.3	ppb	09:13:49
1	Tl 190.801†	37513.8	37607.8	9901.1	ug/L	9901.1	ppb	09:14:01
1	U 409.014†	-3927.2	918.0	-16.385	ug/L	-16.385	ppb	09:14:01
1	V 292.402†	1111733.1	1114285.5	10226	ug/L	10226	ppb	09:13:56
1	Zn 213.857†	1578752.8	1579229.6	14482	ug/L	14482	ppb	09:13:56
1	SiO2†	1612167.7	1613162.5	105180	ug/L	105180	ppb	09:14:48
2	Sc Radial	7206.1	7206.1	96.4	%			09:12:48
2	Y RADIAL	6605.6	6605.6	95.40	%			09:12:48
2	Al 396.153Radial†	485.6	576.3	60.533	ug/L	60.533	ppb	09:12:48
2	Ca 317.933Radial†	45.1	17.7	25.032	ug/L	25.032	ppb	09:13:08
2	Fe 238.204 Radial†	-30.3	-66.2	35.518	ug/L	35.518	ppb	09:13:08
2	K 766.490 Radial†	1251869.1	1296097.9	279420	ug/L	279420	ppb	09:12:43
2	Mg 279.077 IEC†	-5.2	-8.5	-15.141	ug/L	-15.141	ppb	09:13:08
2	Na 589.592 Radial†	3117.0	3368.6	206.74	ug/L	206.74	ppb	09:12:48
2	Sr 421.552†	3168878.4	3286984.7	9180.7	ug/L	9180.7	ppb	09:12:43
2	Sc 361.383	735519.8	735519.8	102.34	%			09:14:16
2	Y 371.029	561414.9	561414.9	99.896	%			09:14:16
2	Ag 328.068†	-5183.2	-5697.2	6.1117	ug/L	6.1117	ppb	09:14:21
2	As 188.979†	28211.9	27601.8	10014	ug/L	10014	ppb	09:14:21
2	B 249.677†	206438.4	202654.5	5056.7	ug/L	5056.7	ppb	09:14:16
2	Ba 233.527†	2058610.8	2011504.3	14215	ug/L	14215	ppb	09:14:16
2	Be 313.107†	6582936.2	6437184.4	2969.3	ug/L	2969.3	ppb	09:14:09
2	Cd 226.502†	822941.6	804391.7	10266	ug/L	10266	ppb	09:14:16
2	Co 228.616†	582933.8	569694.3	9881.0	ug/L	9881.0	ppb	09:14:16
2	Cr 267.716†	1796035.7	1755015.5	24608	ug/L	24608	ppb	09:14:16
2	Cu 324.752†	5728920.0	5592190.0	20265	ug/L	20265	ppb	09:14:09
2	Mn 257.610†	8853284.4	8650020.1	9539.0	ug/L	9539.0	ppb	09:14:09
2	Mo 202.031†	140614.3	137379.6	9671.3	ug/L	9671.3	ppb	09:14:21
2	Ni 231.604†	385203.4	376269.2	10051	ug/L	10051	ppb	09:14:16

2	P 214.914†	36681.5	35527.3	14242	ug/L	14242 ppb	09:14:21
2	Pb 220.353†	208078.1	203330.0	24223	ug/L	24223 ppb	09:14:21
2	S 181.975 Axial†	38120.9	37173.1	50926	ug/L	50926 ppb	09:14:21
2	Sb 206.836†	36309.4	35421.3	10287	ug/L	10287 ppb	09:14:21
2	Se 196.026†	20351.7	19914.8	10177	ug/L	10177 ppb	09:14:21
2	Si 251.611†	1618495.9	1581049.0	48430	ug/L	48430 ppb	09:14:16
2	Sn 189.927†	59380.7	58009.4	10267	ug/L	10267 ppb	09:14:21
2	Ti 334.940†	5520991.7	5396006.2	9870.5	ug/L	9870.5 ppb	09:14:09
2	Tl 190.801†	37408.7	36613.5	9639.6	ug/L	9639.6 ppb	09:14:21
2	U 409.014†	-3870.5	1066.8	-11.345	ug/L	-11.345 ppb	09:14:21
2	V 292.402†	1139430.5	1114922.7	10228	ug/L	10228 ppb	09:14:16
2	Zn 213.857†	1616276.8	1578367.4	14474	ug/L	14474 ppb	09:14:16
2	SiO2†	1605287.1	1568117.4	102240	ug/L	102240 ppb	09:14:56
3	Sc Radial	7389.2	7389.2	98.9	%		09:13:19
3	Y RADIAL	6809.8	6809.8	98.35	%		09:13:19
3	Al 396.153Radial†	492.6	570.9	52.098	ug/L	52.098 ppb	09:13:19
3	Ca 317.933Radial†	52.2	23.7	33.632	ug/L	33.632 ppb	09:13:39
3	Fe 238.204 Radial†	-32.6	-67.8	28.576	ug/L	28.576 ppb	09:13:39
3	K 766.490 Radial†	1295433.0	1307991.1	281980	ug/L	281980 ppb	09:13:14
3	Mg 279.077 IEC†	-9.0	-12.1	-104.20	ug/L	-104.20 ppb	09:13:39
3	Na 589.592 Radial†	3056.6	3227.4	198.08	ug/L	198.08 ppb	09:13:19
3	Sr 421.552†	3283861.0	3321853.3	9278.0	ug/L	9278.0 ppb	09:13:14
3	Sc 361.383	730486.3	730486.3	101.64	%		09:14:36
3	Y 371.029	557699.4	557699.4	99.235	%		09:14:36
3	Ag 328.068†	-5279.5	-5826.9	5.3135	ug/L	5.3135 ppb	09:14:41
3	As 188.979†	28275.2	27854.1	10105	ug/L	10105 ppb	09:14:41
3	B 249.677†	204596.7	202232.5	5046.2	ug/L	5046.2 ppb	09:14:36
3	Ba 233.527†	2042687.3	2009698.5	14203	ug/L	14203 ppb	09:14:36
3	Be 313.107†	6531840.2	6431236.2	2966.5	ug/L	2966.5 ppb	09:14:29
3	Cd 226.502†	815548.9	802659.3	10244	ug/L	10244 ppb	09:14:36
3	Co 228.616†	577808.6	568576.8	9861.8	ug/L	9861.8 ppb	09:14:36
3	Cr 267.716†	1781881.5	1753182.4	24582	ug/L	24582 ppb	09:14:36
3	Cu 324.752†	5675359.2	5578066.8	20213	ug/L	20213 ppb	09:14:29
3	Mn 257.610†	8795863.8	8653135.7	9542.4	ug/L	9542.4 ppb	09:14:29
3	Mo 202.031†	140994.6	138700.4	9764.3	ug/L	9764.3 ppb	09:14:41
3	Ni 231.604†	381768.8	375483.6	10030	ug/L	10030 ppb	09:14:36
3	P 214.914†	36776.7	35868.0	14427	ug/L	14427 ppb	09:14:41
3	Pb 220.353†	208448.9	205095.8	24434	ug/L	24434 ppb	09:14:41
3	S 181.975 Axial†	38215.1	37522.6	51405	ug/L	51405 ppb	09:14:41
3	Sb 206.836†	36365.1	35720.6	10380	ug/L	10380 ppb	09:14:41
3	Se 196.026†	20296.9	19997.9	10219	ug/L	10219 ppb	09:14:41
3	Si 251.611†	1604788.1	1578459.9	48346	ug/L	48346 ppb	09:14:36
3	Sn 189.927†	59493.6	58520.3	10358	ug/L	10358 ppb	09:14:41
3	Ti 334.940†	5479942.6	5392792.7	9864.6	ug/L	9864.6 ppb	09:14:29
3	Tl 190.801†	37353.2	36810.7	9691.3	ug/L	9691.3 ppb	09:14:41
3	U 409.014†	-3711.6	1197.1	-6.8830	ug/L	-6.8830 ppb	09:14:41
3	V 292.402†	1131143.9	1114441.7	10225	ug/L	10225 ppb	09:14:36
3	Zn 213.857†	1603469.7	1576649.5	14458	ug/L	14458 ppb	09:14:36
3	SiO2†	1587412.8	1561340.0	101780	ug/L	101780 ppb	09:15:03

Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	728019.3	101.30	%	1.251				1.24%
Sc Radial	7339.3	98.2	%	1.56				1.59%
Y 371.029	555979.9	98.929	%	1.1510				1.16%
Y RADIAL	6739.7	97.33	%	1.679				1.72%
Ag 328.068†	-5771.9	5.6529	ug/L	0.41226	5.6529	ppb	0.41226	7.29%
Al 396.153Radial†	569.9	49.803	ug/L	12.0435	49.803	ppb	12.0435	24.18%
As 188.979†	27976.5	10149	ug/L	161.9	10149	ppb	161.9	1.60%
QC value within limits for As 188.979 Recovery = 101.49%								
B 249.677†	202076.6	5042.2	ug/L	16.84	5042.2	ppb	16.84	0.33%
QC value within limits for B 249.677 Recovery = 100.84%								
Ba 233.527†	2012213.9	14220	ug/L	20.7	14220	ppb	20.7	0.15%
QC value within limits for Ba 233.527 Recovery = 94.80%								
Be 313.107†	6451357.0	2975.8	ug/L	13.77	2975.8	ppb	13.77	0.46%
QC value within limits for Be 313.107 Recovery = 99.19%								
Ca 317.933Radial†	23.0	32.553	ug/L	7.0439	32.553	ppb	7.0439	21.64%
Cd 226.502†	803148.4	10251	ug/L	13.8	10251	ppb	13.8	0.14%
QC value within limits for Cd 226.502 Recovery = 102.51%								

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Co 228.616†          568959.6      9868.5 ug/L        10.79      9868.5 ppb        10.79   0.11%
   QC value within limits for Co 228.616  Recovery = 98.69%
Cr 267.716†         1754403.9       24599 ug/L         14.8       24599 ppb         14.8   0.06%
   QC value within limits for Cr 267.716  Recovery = 98.40%
Cu 324.752†         5601206.2       20297 ug/L        104.1       20297 ppb        104.1   0.51%
   QC value within limits for Cu 324.752  Recovery = 101.49%
Fe 238.204 Radial†      -65.4      38.494 ug/L       11.6927      38.494 ppb      11.6927  30.38%
K 766.490 Radial†   1298348.4      279900 ug/L       1886.5      279900 ppb       1886.5   0.67%
   QC value within limits for K 766.490 Radial  Recovery = 93.30%
Mg 279.077 IEC†         -11.9     -98.743 ug/L      81.0101     -98.743 ppb      81.0101  82.04%
Mn 257.610†         8676622.5      9568.3 ug/L        47.87      9568.3 ppb        47.87   0.50%
   QC value within limits for Mn 257.610  Recovery = 95.68%
Mo 202.031†          139171.4      9797.5 ug/L       145.58      9797.5 ppb       145.58   1.49%
   QC value within limits for Mo 202.031  Recovery = 97.97%
Na 589.592 Radial†     3378.8      207.37 ug/L        9.617      207.37 ppb        9.617   4.64%
Ni 231.604†          375737.5       10037 ug/L         12.3       10037 ppb         12.3   0.12%
   QC value within limits for Ni 231.604  Recovery = 100.37%
P 214.914†            35987.1       14472 ug/L        255.4       14472 ppb        255.4   1.76%
   QC value within limits for P 214.914  Recovery = 96.48%
Pb 220.353†          205806.4       24519 ug/L        345.3       24519 ppb        345.3   1.41%
   QC value within limits for Pb 220.353  Recovery = 98.07%
S 181.975 Axial†      37645.1       51572 ug/L        744.8       51572 ppb        744.8   1.44%
   QC value within limits for S 181.975 Axial  Recovery = 103.14%
Sb 206.836†           35831.3       10413 ug/L        146.6       10413 ppb        146.6   1.41%
   QC value within limits for Sb 206.836  Recovery = 104.13%
Se 196.026†           20112.3       10278 ug/L        139.7       10278 ppb        139.7   1.36%
   QC value within limits for Se 196.026  Recovery = 102.78%
Si 251.611†         1578360.6       48343 ug/L         89.0       48343 ppb         89.0   0.18%
   QC value within limits for Si 251.611  Recovery = 96.69%
Sn 189.927†           58769.7       10402 ug/L        161.2       10402 ppb        161.2   1.55%
   QC value within limits for Sn 189.927  Recovery = 104.02%
Sr 421.552†         3293239.0      9198.1 ug/L        72.78      9198.1 ppb        72.78   0.79%
   QC value within limits for Sr 421.552  Recovery = 91.98%
Ti 334.940†         5409459.3      9895.1 ug/L        47.85      9895.1 ppb        47.85   0.48%
   QC value within limits for Ti 334.940  Recovery = 98.95%
Tl 190.801†           37010.7      9744.0 ug/L       138.47      9744.0 ppb       138.47   1.42%
   QC value within limits for Tl 190.801  Recovery = 97.44%
U 409.014†             1060.7     -11.538 ug/L       4.7539     -11.538 ppb       4.7539  41.20%
V 292.402†          1114550.0       10226 ug/L          1.6       10226 ppb          1.6   0.02%
   QC value within limits for V 292.402  Recovery = 102.26%
Zn 213.857†         1578082.1       14471 ug/L         12.0       14471 ppb         12.0   0.08%
   QC value within limits for Zn 213.857  Recovery = 96.47%
SiO2†               1580873.3      103070 ug/L       1844.0      103070 ppb       1844.0   1.79%
   QC value within limits for SiO2  Recovery = 96.32%
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 6/30/2009 09:33:27
Plasma On Time: 6/29/2009 15:26:31
Logged In Analyst: Optima3
Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX
Method Last Saved: 6/30/2009 07:55:59
IEC File: 040209.iec
MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1
Autosampler Location: 7
Sample ID: CCV
Date Collected: 6/30/2009 09:33:28
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7423.1	7423.1	99.3	%			09:35:25
1	Y RADIAL	6826.3	6826.3	98.58	%			09:35:25
1	Al 396.153Radial†	6345.6	6462.3	5299.9	ug/L	5299.9	ppb	09:35:25

1	Ca 317.933Radial†	3697.4	3693.9	5232.9 ug/L	5232.9 ppb	09:35:25
1	Fe 238.204 Radial†	1240.3	1214.1	5076.9 ug/L	5076.9 ppb	09:35:45
1	K 766.490 Radial†	24857.4	22622.8	4867.7 ug/L	4867.7 ppb	09:35:20
1	Mg 279.077 IEC†	213.4	211.8	5286.2 ug/L	5286.2 ppb	09:35:45
1	Na 589.592 Radial†	164426.0	165702.9	10170 ug/L	10170 ppb	09:35:20
1	Sr 421.552†	170615.6	171855.8	479.95 ug/L	479.95 ppb	09:35:20
1	Sc 361.383	749922.0	749922.0	104.35 %		09:36:53
1	Y 371.029	578377.8	578377.8	102.91 %		09:36:53
1	Ag 328.068†	88179.2	83874.1	504.14 ug/L	504.14 ppb	09:36:58
1	As 188.979†	1443.2	1418.5	514.68 ug/L	514.68 ppb	09:37:18
1	B 249.677†	20193.0	20291.9	508.46 ug/L	508.46 ppb	09:36:58
1	Ba 233.527†	74246.7	71154.0	503.15 ug/L	503.15 ppb	09:36:58
1	Be 313.107†	1148696.4	1105737.4	507.23 ug/L	507.23 ppb	09:36:53
1	Cd 226.502†	41055.7	39626.9	505.17 ug/L	505.17 ppb	09:36:58
1	Co 228.616†	30353.3	29188.6	506.44 ug/L	506.44 ppb	09:36:58
1	Cr 267.716†	37337.8	35860.2	503.20 ug/L	503.20 ppb	09:36:58
1	Cu 324.752†	149034.2	137188.8	497.43 ug/L	497.43 ppb	09:36:58
1	Mn 257.610†	478322.5	457721.8	505.30 ug/L	505.30 ppb	09:36:53
1	Mo 202.031†	7514.2	7184.1	506.08 ug/L	506.08 ppb	09:37:18
1	Ni 231.604†	19794.6	18850.4	503.55 ug/L	503.55 ppb	09:36:58
1	P 214.914†	5522.9	4978.1	2447.3 ug/L	2447.3 ppb	09:37:18
1	Pb 220.353†	4426.8	4255.7	508.26 ug/L	508.26 ppb	09:37:18
1	S 181.975 Axial†	852.5	741.5	1014.8 ug/L	1014.8 ppb	09:37:18
1	Sb 206.836†	1850.3	1716.0	516.26 ug/L	516.26 ppb	09:37:18
1	Se 196.026†	1028.0	1014.0	535.42 ug/L	535.42 ppb	09:37:18
1	Si 251.611†	86183.9	82182.8	2520.8 ug/L	2520.8 ppb	09:36:58
1	Sn 189.927†	3027.0	2888.4	512.14 ug/L	512.14 ppb	09:37:18
1	Ti 334.940†	276976.0	266788.8	488.34 ug/L	488.34 ppb	09:36:58
1	Tl 190.801†	1970.3	1949.0	513.11 ug/L	513.11 ppb	09:37:18
1	U 409.014†	10959.4	15351.7	518.23 ug/L	518.23 ppb	09:36:58
1	V 292.402†	55911.1	55147.7	506.93 ug/L	506.93 ppb	09:36:58
1	Zn 213.857†	57939.9	54601.7	499.26 ug/L	499.26 ppb	09:36:58
1	SiO2†	87174.2	83106.7	5426.9 ug/L	5426.9 ppb	09:38:25
2	Sc Radial	7525.2	7525.2	101 %		09:35:55
2	Y RADIAL	6923.0	6923.0	99.98 %		09:35:55
2	Al 396.153Radial†	6313.2	6343.4	5202.2 ug/L	5202.2 ppb	09:35:55
2	Ca 317.933Radial†	3695.1	3641.2	5158.2 ug/L	5158.2 ppb	09:35:55
2	Fe 238.204 Radial†	1235.4	1192.3	4986.0 ug/L	4986.0 ppb	09:36:15
2	K 766.490 Radial†	24952.7	22377.7	4814.9 ug/L	4814.9 ppb	09:35:50
2	Mg 279.077 IEC†	213.2	208.7	5209.3 ug/L	5209.3 ppb	09:36:15
2	Na 589.592 Radial†	166648.8	165663.7	10167 ug/L	10167 ppb	09:35:50
2	Sr 421.552†	172873.2	171766.5	479.70 ug/L	479.70 ppb	09:35:50
2	Sc 361.383	749726.7	749726.7	104.32 %		09:37:24
2	Y 371.029	577553.5	577553.5	102.77 %		09:37:24
2	Ag 328.068†	88437.2	84143.4	505.74 ug/L	505.74 ppb	09:37:29
2	As 188.979†	1424.9	1401.3	508.49 ug/L	508.49 ppb	09:37:49
2	B 249.677†	20283.9	20384.1	510.77 ug/L	510.77 ppb	09:37:29
2	Ba 233.527†	74577.0	71489.2	505.52 ug/L	505.52 ppb	09:37:29
2	Be 313.107†	1154468.4	1111557.2	509.90 ug/L	509.90 ppb	09:37:24
2	Cd 226.502†	41318.3	39888.9	508.52 ug/L	508.52 ppb	09:37:29
2	Co 228.616†	30503.1	29339.8	509.04 ug/L	509.04 ppb	09:37:29
2	Cr 267.716†	37503.7	36028.5	505.56 ug/L	505.56 ppb	09:37:29
2	Cu 324.752†	149487.6	137660.6	499.13 ug/L	499.13 ppb	09:37:29
2	Mn 257.610†	481180.8	460581.1	508.44 ug/L	508.44 ppb	09:37:24
2	Mo 202.031†	7416.3	7092.1	499.60 ug/L	499.60 ppb	09:37:49
2	Ni 231.604†	19877.2	18934.5	505.79 ug/L	505.79 ppb	09:37:29
2	P 214.914†	5449.0	4908.6	2411.4 ug/L	2411.4 ppb	09:37:49
2	Pb 220.353†	4369.2	4201.6	501.79 ug/L	501.79 ppb	09:37:49
2	S 181.975 Axial†	848.0	737.4	1009.2 ug/L	1009.2 ppb	09:37:49
2	Sb 206.836†	1820.4	1687.8	507.57 ug/L	507.57 ppb	09:37:49
2	Se 196.026†	1016.3	1003.0	529.49 ug/L	529.49 ppb	09:37:49
2	Si 251.611†	86487.8	82495.6	2530.7 ug/L	2530.7 ppb	09:37:29
2	Sn 189.927†	2979.1	2843.3	504.13 ug/L	504.13 ppb	09:37:49
2	Ti 334.940†	278487.2	268306.6	491.12 ug/L	491.12 ppb	09:37:29
2	Tl 190.801†	1949.7	1929.7	508.08 ug/L	508.08 ppb	09:37:49
2	U 409.014†	10728.8	15133.4	510.85 ug/L	510.85 ppb	09:37:29
2	V 292.402†	56273.5	55509.1	510.12 ug/L	510.12 ppb	09:37:29
2	Zn 213.857†	58249.1	54912.5	502.13 ug/L	502.13 ppb	09:37:29
2	SiO2†	86644.3	82620.5	5395.5 ug/L	5395.5 ppb	09:38:30
3	Sc Radial	7497.0	7497.0	100 %		09:36:26
3	Y RADIAL	6929.0	6929.0	100.1 %		09:36:26

3	Al 396.153Radial†	6295.9	6349.8	5207.0 ug/L	5207.0 ppb	09:36:26
3	Ca 317.933Radial†	3671.2	3631.1	5143.9 ug/L	5143.9 ppb	09:36:26
3	Fe 238.204 Radial†	1247.9	1209.4	5057.6 ug/L	5057.6 ppb	09:36:46
3	K 766.490 Radial†	25275.1	22792.3	4904.2 ug/L	4904.2 ppb	09:36:21
3	Mg 279.077 IEC†	214.6	210.9	5263.3 ug/L	5263.3 ppb	09:36:46
3	Na 589.592 Radial†	168542.7	168174.3	10321 ug/L	10321 ppb	09:36:21
3	Sr 421.552†	175020.0	174552.5	487.48 ug/L	487.48 ppb	09:36:21
3	Sc 361.383	742795.5	742795.5	103.35 %		09:37:55
3	Y 371.029	572707.4	572707.4	101.91 %		09:37:55
3	Ag 328.068†	89178.1	85651.4	514.80 ug/L	514.80 ppb	09:38:00
3	As 188.979†	1453.3	1441.6	523.06 ug/L	523.06 ppb	09:38:20
3	B 249.677†	20460.7	20736.6	519.61 ug/L	519.61 ppb	09:38:00
3	Ba 233.527†	75243.2	72800.8	514.80 ug/L	514.80 ppb	09:38:00
3	Be 313.107†	1144942.8	1112667.4	510.43 ug/L	510.43 ppb	09:37:55
3	Cd 226.502†	41580.1	40511.8	516.47 ug/L	516.47 ppb	09:38:00
3	Co 228.616†	30748.5	29850.0	517.90 ug/L	517.90 ppb	09:38:00
3	Cr 267.716†	37784.8	36635.9	514.08 ug/L	514.08 ppb	09:38:00
3	Cu 324.752†	150573.6	140048.6	507.79 ug/L	507.79 ppb	09:38:00
3	Mn 257.610†	477446.4	461272.1	509.21 ug/L	509.21 ppb	09:37:55
3	Mo 202.031†	7501.5	7240.9	510.08 ug/L	510.08 ppb	09:38:20
3	Ni 231.604†	20016.5	19247.1	514.14 ug/L	514.14 ppb	09:38:00
3	P 214.914†	5517.1	5023.3	2468.3 ug/L	2468.3 ppb	09:38:20
3	Pb 220.353†	4428.4	4297.9	513.28 ug/L	513.28 ppb	09:38:20
3	S 181.975 Axial†	853.9	750.8	1027.5 ug/L	1027.5 ppb	09:38:20
3	Sb 206.836†	1857.2	1739.7	523.18 ug/L	523.18 ppb	09:38:20
3	Se 196.026†	1026.5	1021.9	539.41 ug/L	539.41 ppb	09:38:20
3	Si 251.611†	87171.3	83930.5	2574.7 ug/L	2574.7 ppb	09:38:00
3	Sn 189.927†	3017.8	2907.3	515.47 ug/L	515.47 ppb	09:38:20
3	Ti 334.940†	280908.0	273139.9	499.96 ug/L	499.96 ppb	09:38:00
3	Tl 190.801†	1984.5	1980.8	521.47 ug/L	521.47 ppb	09:38:20
3	U 409.014†	11073.0	15562.3	525.35 ug/L	525.35 ppb	09:38:00
3	V 292.402†	56726.1	56450.4	518.81 ug/L	518.81 ppb	09:38:00
3	Zn 213.857†	58702.4	55872.2	510.91 ug/L	510.91 ppb	09:38:00
3	SiO2†	87234.6	83966.6	5483.2 ug/L	5483.2 ppb	09:38:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	747481.4	104.01	%	0.565				0.54%
Sc Radial	7481.8	100	%	0.7				0.71%
Y 371.029	576212.9	102.53	%	0.545				0.53%
Y RADIAL	6892.8	99.54	%	0.833				0.84%
Ag 328.068†	84556.3	508.23	ug/L	5.745	508.23	ppb	5.745	1.13%
QC value within limits for Ag 328.068 Recovery = 101.65%								
Al 396.153Radial†	6385.1	5236.4	ug/L	55.04	5236.4	ppb	55.04	1.05%
QC value within limits for Al 396.153Radial Recovery = 104.73%								
As 188.979†	1420.5	515.41	ug/L	7.313	515.41	ppb	7.313	1.42%
QC value within limits for As 188.979 Recovery = 103.08%								
B 249.677†	20470.9	512.95	ug/L	5.884	512.95	ppb	5.884	1.15%
QC value within limits for B 249.677 Recovery = 102.59%								
Ba 233.527†	71814.7	507.82	ug/L	6.155	507.82	ppb	6.155	1.21%
QC value within limits for Ba 233.527 Recovery = 101.56%								
Be 313.107†	1109987.3	509.19	ug/L	1.715	509.19	ppb	1.715	0.34%
QC value within limits for Be 313.107 Recovery = 101.84%								
Ca 317.933Radial†	3655.4	5178.3	ug/L	47.79	5178.3	ppb	47.79	0.92%
QC value within limits for Ca 317.933Radial Recovery = 103.57%								
Cd 226.502†	40009.2	510.05	ug/L	5.801	510.05	ppb	5.801	1.14%
QC value within limits for Cd 226.502 Recovery = 102.01%								
Co 228.616†	29459.5	511.13	ug/L	6.007	511.13	ppb	6.007	1.18%
QC value within limits for Co 228.616 Recovery = 102.23%								
Cr 267.716†	36174.9	507.61	ug/L	5.726	507.61	ppb	5.726	1.13%
QC value within limits for Cr 267.716 Recovery = 101.52%								
Cu 324.752†	138299.3	501.45	ug/L	5.556	501.45	ppb	5.556	1.11%
QC value within limits for Cu 324.752 Recovery = 100.29%								
Fe 238.204 Radial†	1205.3	5040.2	ug/L	47.87	5040.2	ppb	47.87	0.95%
QC value within limits for Fe 238.204 Radial Recovery = 100.80%								
K 766.490 Radial†	22597.6	4862.3	ug/L	44.91	4862.3	ppb	44.91	0.92%
QC value within limits for K 766.490 Radial Recovery = 97.25%								
Mg 279.077 IEC†	210.5	5252.9	ug/L	39.45	5252.9	ppb	39.45	0.75%
QC value within limits for Mg 279.077 IEC Recovery = 105.06%								

Mn 257.610†	459858.3	507.65 ug/L	2.073	507.65 ppb	2.073	0.41%
QC value within limits for Mn 257.610 Recovery = 101.53%						
Mo 202.031†	7172.4	505.25 ug/L	5.288	505.25 ppb	5.288	1.05%
QC value within limits for Mo 202.031 Recovery = 101.05%						
Na 589.592 Radial†	166513.6	10219 ug/L	88.3	10219 ppb	88.3	0.86%
QC value within limits for Na 589.592 Radial Recovery = 102.19%						
Ni 231.604†	19010.7	507.83 ug/L	5.584	507.83 ppb	5.584	1.10%
QC value within limits for Ni 231.604 Recovery = 101.57%						
P 214.914†	4970.0	2442.3 ug/L	28.79	2442.3 ppb	28.79	1.18%
QC value within limits for P 214.914 Recovery = 97.69%						
Pb 220.353†	4251.7	507.77 ug/L	5.758	507.77 ppb	5.758	1.13%
QC value within limits for Pb 220.353 Recovery = 101.55%						
S 181.975 Axial†	743.3	1017.2 ug/L	9.36	1017.2 ppb	9.36	0.92%
QC value within limits for S 181.975 Axial Recovery = 101.72%						
Sb 206.836†	1714.5	515.67 ug/L	7.821	515.67 ppb	7.821	1.52%
QC value within limits for Sb 206.836 Recovery = 103.13%						
Se 196.026†	1013.0	534.77 ug/L	4.996	534.77 ppb	4.996	0.93%
QC value within limits for Se 196.026 Recovery = 106.95%						
Si 251.611†	82869.6	2542.1 ug/L	28.66	2542.1 ppb	28.66	1.13%
QC value within limits for Si 251.611 Recovery = 101.68%						
Sn 189.927†	2879.7	510.58 ug/L	5.831	510.58 ppb	5.831	1.14%
QC value within limits for Sn 189.927 Recovery = 102.12%						
Sr 421.552†	172725.0	482.38 ug/L	4.423	482.38 ppb	4.423	0.92%
QC value within limits for Sr 421.552 Recovery = 96.48%						
Ti 334.940†	269411.7	493.14 ug/L	6.066	493.14 ppb	6.066	1.23%
QC value within limits for Ti 334.940 Recovery = 98.63%						
Tl 190.801†	1953.2	514.22 ug/L	6.763	514.22 ppb	6.763	1.32%
QC value within limits for Tl 190.801 Recovery = 102.84%						
U 409.014†	15349.1	518.14 ug/L	7.251	518.14 ppb	7.251	1.40%
QC value within limits for U 409.014 Recovery = 103.63%						
V 292.402†	55702.4	511.96 ug/L	6.148	511.96 ppb	6.148	1.20%
QC value within limits for V 292.402 Recovery = 102.39%						
Zn 213.857†	55128.8	504.10 ug/L	6.068	504.10 ppb	6.068	1.20%
QC value within limits for Zn 213.857 Recovery = 100.82%						
SiO2†	83231.3	5435.2 ug/L	44.44	5435.2 ppb	44.44	0.82%
QC value within limits for SiO2 Recovery = 101.64%						

All analyte(s) passed QC.

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 09:40:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6894.2	6894.2	92.2	%			09:42:38
1	Y RADIAL	6384.5	6384.5	92.20	%			09:42:38
1	Al 396.153Radial†	-102.5	-38.5	-31.712	ug/L	-31.712	ppb	09:42:38
1	Ca 317.933Radial†	29.5	2.9	4.0374	ug/L	4.0374	ppb	09:42:58
1	Fe 238.204 Radial†	36.5	4.8	20.033	ug/L	20.033	ppb	09:42:58
1	K 766.490 Radial†	2481.1	282.8	61.013	ug/L	61.013	ppb	09:42:38
1	Mg 279.077 IEC†	0.9	-2.0	-50.288	ug/L	-50.288	ppb	09:42:58
1	Na 589.592 Radial†	184.5	335.6	20.597	ug/L	20.597	ppb	09:42:38
1	Sr 421.552†	-9.0	46.1	0.1288	ug/L	0.1288	ppb	09:42:38
1	Sc 361.383	719880.5	719880.5	100.17	%			09:43:55
1	Y 371.029	563118.3	563118.3	100.20	%			09:43:55
1	Ag 328.068†	709.6	75.7	0.4618	ug/L	0.4618	ppb	09:43:55
1	As 188.979†	-34.9	0.6	0.2269	ug/L	0.2269	ppb	09:44:15
1	B 249.677†	-391.1	549.5	13.844	ug/L	13.844	ppb	09:43:55
1	Ba 233.527†	18.8	18.3	0.1286	ug/L	0.1286	ppb	09:44:15
1	Be 313.107†	-4691.2	198.3	0.0903	ug/L	0.0903	ppb	09:43:55
1	Cd 226.502†	-263.5	18.0	0.2283	ug/L	0.2283	ppb	09:44:15
1	Co 228.616†	-72.7	26.9	0.4673	ug/L	0.4673	ppb	09:44:15
1	Cr 267.716†	-53.4	24.1	0.3395	ug/L	0.3395	ppb	09:43:55
1	Cu 324.752†	5742.2	94.2	0.3426	ug/L	0.3426	ppb	09:43:55
1	Mn 257.610†	688.0	7.2	0.0115	ug/L	0.0115	ppb	09:43:55
1	Mo 202.031†	25.4	8.2	0.5818	ug/L	0.5818	ppb	09:44:15
1	Ni 231.604†	157.3	37.2	0.9947	ug/L	0.9947	ppb	09:44:15
1	P 214.914†	308.9	-6.4	-3.3577	ug/L	-3.3577	ppb	09:44:15
1	Pb 220.353†	9.0	22.2	2.6412	ug/L	2.6412	ppb	09:44:15
1	S 181.975 Axial†	78.3	2.7	3.7221	ug/L	3.7221	ppb	09:44:15
1	Sb 206.836†	56.2	-1.1	-0.3198	ug/L	-0.3198	ppb	09:44:15
1	Se 196.026†	-22.0	6.8	3.5212	ug/L	3.5212	ppb	09:44:15
1	Si 251.611†	507.8	95.2	2.9043	ug/L	2.9043	ppb	09:44:15
1	Sn 189.927†	14.6	2.0	0.3634	ug/L	0.3634	ppb	09:44:15
1	Ti 334.940†	-1464.0	-113.3	-0.2055	ug/L	-0.2055	ppb	09:43:55
1	Tl 190.801†	-49.5	11.3	2.9527	ug/L	2.9527	ppb	09:44:15
1	U 409.014†	-4984.1	-127.1	-4.3081	ug/L	-4.3081	ppb	09:43:55
1	V 292.402†	-1586.5	-18.7	-0.1745	ug/L	-0.1745	ppb	09:43:55
1	Zn 213.857†	1000.9	74.1	0.6768	ug/L	0.6768	ppb	09:44:15
1	SiO2†	526.1	88.4	5.7331	ug/L	5.7331	ppb	09:45:11
2	Sc Radial	7433.1	7433.1	99.4	%			09:43:03
2	Y RADIAL	6894.2	6894.2	99.57	%			09:43:03
2	Al 396.153Radial†	-54.3	18.0	14.812	ug/L	14.812	ppb	09:43:03
2	Ca 317.933Radial†	23.2	-5.7	-8.1219	ug/L	-8.1219	ppb	09:43:23
2	Fe 238.204 Radial†	40.9	6.3	26.394	ug/L	26.394	ppb	09:43:23
2	K 766.490 Radial†	2620.1	227.6	49.101	ug/L	49.101	ppb	09:43:03
2	Mg 279.077 IEC†	1.7	-1.3	-32.309	ug/L	-32.309	ppb	09:43:23
2	Na 589.592 Radial†	226.0	362.8	22.267	ug/L	22.267	ppb	09:43:03
2	Sr 421.552†	-22.1	33.7	0.0941	ug/L	0.0941	ppb	09:43:03
2	Sc 361.383	714110.1	714110.1	99.363	%			09:44:21
2	Y 371.029	559063.9	559063.9	99.478	%			09:44:21
2	Ag 328.068†	565.2	-63.8	-0.3693	ug/L	-0.3693	ppb	09:44:21
2	As 188.979†	-19.0	16.4	5.9022	ug/L	5.9022	ppb	09:44:41
2	B 249.677†	-386.0	551.5	13.897	ug/L	13.897	ppb	09:44:21
2	Ba 233.527†	21.6	21.2	0.1505	ug/L	0.1505	ppb	09:44:41
2	Be 313.107†	-4693.3	158.3	0.0722	ug/L	0.0722	ppb	09:44:21
2	Cd 226.502†	-258.1	21.4	0.2697	ug/L	0.2697	ppb	09:44:41
2	Co 228.616†	-103.6	-4.8	-0.0823	ug/L	-0.0823	ppb	09:44:41
2	Cr 267.716†	-79.8	-2.9	-0.0388	ug/L	-0.0388	ppb	09:44:21
2	Cu 324.752†	5568.8	-33.9	-0.1215	ug/L	-0.1215	ppb	09:44:21
2	Mn 257.610†	712.7	37.7	0.0455	ug/L	0.0455	ppb	09:44:21
2	Mo 202.031†	24.6	7.7	0.5407	ug/L	0.5407	ppb	09:44:41
2	Ni 231.604†	139.0	20.1	0.5377	ug/L	0.5377	ppb	09:44:41

2	P 214.914†	311.1	-1.7	-0.8331	ug/L	-0.8331 ppb	09:44:41
2	Pb 220.353†	5.5	18.8	2.2417	ug/L	2.2417 ppb	09:44:41
2	S 181.975 Axial†	76.0	1.1	1.4516	ug/L	1.4516 ppb	09:44:41
2	Sb 206.836†	61.5	4.7	1.4121	ug/L	1.4121 ppb	09:44:41
2	Se 196.026†	35.8	-7.2	-3.6099	ug/L	-3.6099 ppb	09:44:41
2	Si 251.611†	492.7	84.1	2.5666	ug/L	2.5666 ppb	09:44:41
2	Sn 189.927†	14.8	2.4	0.4327	ug/L	0.4327 ppb	09:44:41
2	Ti 334.940†	-1394.0	-54.7	-0.0997	ug/L	-0.0997 ppb	09:44:21
2	Tl 190.801†	-53.5	6.9	1.8178	ug/L	1.8178 ppb	09:44:41
2	U 409.014†	-4881.1	-63.7	-2.1597	ug/L	-2.1597 ppb	09:44:21
2	V 292.402†	-1517.5	38.0	0.3435	ug/L	0.3435 ppb	09:44:21
2	Zn 213.857†	988.3	69.5	0.6366	ug/L	0.6366 ppb	09:44:41
2	SiO2†	496.6	62.9	4.0655	ug/L	4.0655 ppb	09:45:17
3	Sc Radial	7360.3	7360.3	98.5	%		09:43:28
3	Y RADIAL	6797.8	6797.8	98.17	%		09:43:28
3	Al 396.153Radial†	-90.0	-18.7	-15.460	ug/L	-15.460 ppb	09:43:28
3	Ca 317.933Radial†	32.4	3.8	5.4300	ug/L	5.4300 ppb	09:43:49
3	Fe 238.204 Radial†	35.1	0.9	3.5646	ug/L	3.5646 ppb	09:43:49
3	K 766.490 Radial†	2468.3	99.4	21.436	ug/L	21.436 ppb	09:43:28
3	Mg 279.077 IEC†	2.7	-0.3	-7.6229	ug/L	-7.6229 ppb	09:43:49
3	Na 589.592 Radial†	277.0	416.8	25.582	ug/L	25.582 ppb	09:43:28
3	Sr 421.552†	-56.3	-1.3	-0.0036	ug/L	-0.0036 ppb	09:43:28
3	Sc 361.383	722967.1	722967.1	100.60	%		09:44:46
3	Y 371.029	565613.4	565613.4	100.64	%		09:44:46
3	Ag 328.068†	639.5	3.1	0.0184	ug/L	0.0184 ppb	09:44:46
3	As 188.979†	-31.7	3.9	1.3987	ug/L	1.3987 ppb	09:45:06
3	B 249.677†	-390.2	552.0	13.909	ug/L	13.909 ppb	09:44:46
3	Ba 233.527†	39.7	39.0	0.2765	ug/L	0.2765 ppb	09:45:06
3	Be 313.107†	-4786.6	123.5	0.0567	ug/L	0.0567 ppb	09:44:46
3	Cd 226.502†	-275.3	7.4	0.0941	ug/L	0.0941 ppb	09:45:06
3	Co 228.616†	-79.1	20.8	0.3617	ug/L	0.3617 ppb	09:45:06
3	Cr 267.716†	-45.9	31.7	0.4442	ug/L	0.4442 ppb	09:44:46
3	Cu 324.752†	5639.4	-32.4	-0.1170	ug/L	-0.1170 ppb	09:44:46
3	Mn 257.610†	719.5	35.7	0.0399	ug/L	0.0399 ppb	09:44:46
3	Mo 202.031†	24.7	7.4	0.5208	ug/L	0.5208 ppb	09:45:06
3	Ni 231.604†	144.8	24.2	0.6462	ug/L	0.6462 ppb	09:45:06
3	P 214.914†	309.6	-7.0	-3.5366	ug/L	-3.5366 ppb	09:45:06
3	Pb 220.353†	-7.1	6.2	0.7392	ug/L	0.7392 ppb	09:45:06
3	S 181.975 Axial†	80.1	4.2	5.7096	ug/L	5.7096 ppb	09:45:06
3	Sb 206.836†	52.2	-5.4	-1.5761	ug/L	-1.5761 ppb	09:45:06
3	Se 196.026†	-16.0	12.9	6.5953	ug/L	6.5953 ppb	09:45:06
3	Si 251.611†	510.2	95.4	2.9083	ug/L	2.9083 ppb	09:45:06
3	Sn 189.927†	22.2	9.6	1.6974	ug/L	1.6974 ppb	09:45:06
3	Ti 334.940†	-1304.9	51.0	0.0916	ug/L	0.0916 ppb	09:44:46
3	Tl 190.801†	-58.8	2.3	0.6090	ug/L	0.6090 ppb	09:45:06
3	U 409.014†	-4742.7	134.1	4.5395	ug/L	4.5395 ppb	09:44:46
3	V 292.402†	-1494.0	80.0	0.7414	ug/L	0.7414 ppb	09:44:46
3	Zn 213.857†	990.5	59.5	0.5453	ug/L	0.5453 ppb	09:45:06
3	SiO2†	542.4	102.3	6.6406	ug/L	6.6406 ppb	09:45:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	718985.9	100.04	%	0.626				0.63%
Sc Radial	7229.2	96.7	%	3.91				4.04%
Y 371.029	562598.5	100.11	%	0.588				0.59%
Y RADIAL	6692.2	96.65	%	3.911				4.05%
Ag 328.068†	5.0	0.0370	ug/L	0.41585	0.0370	ppb	0.41585	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.1	-10.787	ug/L	23.6114	-10.787	ppb	23.6114	218.89%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.0	2.5093	ug/L	2.99621	2.5093	ppb	2.99621	119.40%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	551.0	13.883	ug/L	0.0344	13.883	ppb	0.0344	0.25%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.2	0.1852	ug/L	0.07981	0.1852	ppb	0.07981	43.10%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	160.1	0.0731	ug/L	0.01679	0.0731	ppb	0.01679	22.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.3	0.4485	ug/L	7.45476	0.4485	ppb	7.45476	>999.9%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                15.6      0.1974 ug/L       0.09179      0.1974 ppb        0.09179  46.51%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                14.3      0.2489 ug/L       0.29165      0.2489 ppb        0.29165 117.19%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.6      0.2483 ug/L       0.25408      0.2483 ppb        0.25408 102.32%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                 9.3      0.0347 ug/L       0.26665      0.0347 ppb        0.26665 768.84%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.0      16.664 ug/L       11.7815      16.664 ppb        11.7815  70.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         203.3      43.850 ug/L       20.3045      43.850 ppb        20.3045  46.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.2     -30.073 ug/L       21.4204     -30.073 ppb        21.4204  71.23%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                26.9      0.0323 ug/L       0.01826      0.0323 ppb        0.01826  56.53%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 7.8      0.5478 ug/L       0.03113      0.5478 ppb        0.03113   5.68%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        371.7      22.815 ug/L        2.5369      22.815 ppb         2.5369  11.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                27.2      0.7262 ug/L       0.23879      0.7262 ppb        0.23879  32.88%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -5.0     -2.5758 ug/L       1.51188     -2.5758 ppb        1.51188  58.70%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                15.8      1.8740 ug/L       1.00290      1.8740 ppb        1.00290  53.52%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            2.6      3.6278 ug/L       2.13055      3.6278 ppb        2.13055  58.73%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.6     -0.1613 ug/L       1.50040     -0.1613 ppb        1.50040 930.30%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 4.1      2.1689 ug/L       5.23531      2.1689 ppb        5.23531 241.38%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                91.6      2.7931 ug/L       0.19618      2.7931 ppb        0.19618   7.02%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 4.7      0.8312 ug/L       0.75095      0.8312 ppb        0.75095  90.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                26.2      0.0731 ug/L       0.06869      0.0731 ppb        0.06869  93.96%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -39.0     -0.0712 ug/L       0.15057     -0.0712 ppb        0.15057 211.53%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.7932 ug/L       1.17204      1.7932 ppb        1.17204  65.36%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -18.9     -0.6428 ug/L       4.61470     -0.6428 ppb        4.61470 717.96%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 33.1      0.3035 ug/L       0.45926      0.3035 ppb        0.45926 151.34%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                67.7      0.6196 ug/L       0.06739      0.6196 ppb        0.06739  10.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      84.5      5.4798 ug/L       1.30612      5.4798 ppb        1.30612  23.84%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: LR1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 6/30/2009 09:47:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7516.4	7516.4	101	%			09:49:26
1	Y RADIAL	6915.7	6915.7	99.88	%			09:49:26
1	Al 396.153Radial†	-98.8	-25.7	-20.086	ug/L	-20.086	ppb	09:49:26
1	Ca 317.933Radial†	37.1	7.8	11.041	ug/L	11.041	ppb	09:49:46
1	Fe 238.204 Radial†	87066.9	86547.6	360770	ug/L	360770	ppb	09:49:26
1	K 766.490 Radial†	2428.8	8.1	81.500	ug/L	81.500	ppb	09:49:26
1	Mg 279.077 IEC†	12.0	8.9	-88.405	ug/L	-88.405	ppb	09:49:46
1	Na 589.592 Radial†	397.1	530.5	32.556	ug/L	32.556	ppb	09:49:26
1	Sr 421.552†	117.9	173.1	0.4834	ug/L	0.4834	ppb	09:49:26
1	Sc 361.383	725108.3	725108.3	100.89	%			09:50:43
1	Y 371.029	563385.4	563385.4	100.25	%			09:50:43
1	Ag 328.068†	-18790.9	-19257.2	0.5238	ug/L	0.5238	ppb	09:50:43
1	As 188.979†	-260.5	-222.8	-8.2675	ug/L	-8.2675	ppb	09:51:03
1	B 249.677†	1152.5	2082.2	27.824	ug/L	27.824	ppb	09:50:43
1	Ba 233.527†	-1624.5	-1610.6	-12.915	ug/L	-12.915	ppb	09:51:03
1	Be 313.107†	-4636.8	286.0	0.1315	ug/L	0.1315	ppb	09:50:43
1	Cd 226.502†	2753.8	3010.5	-3.6531	ug/L	-3.6531	ppb	09:51:03
1	Co 228.616†	166.0	264.0	-0.6316	ug/L	-0.6316	ppb	09:51:03
1	Cr 267.716†	-640.8	-557.7	-0.3574	ug/L	-0.3574	ppb	09:51:03
1	Cu 324.752†	-525.4	-6159.2	-1.4610	ug/L	-1.4610	ppb	09:50:43
1	Mn 257.610†	-38240.2	-38581.3	2.8086	ug/L	2.8086	ppb	09:50:43
1	Mo 202.031†	-332.9	-347.1	-0.8931	ug/L	-0.8931	ppb	09:51:03
1	Ni 231.604†	309.3	186.8	4.9901	ug/L	4.9901	ppb	09:51:03
1	P 214.914†	895.5	572.8	5.9449	ug/L	5.9449	ppb	09:51:03
1	Pb 220.353†	275.4	286.2	-0.0517	ug/L	-0.0517	ppb	09:51:03
1	S 181.975 Axial†	104.1	27.7	37.997	ug/L	37.997	ppb	09:51:03
1	Sb 206.836†	39.7	-17.9	0.9970	ug/L	0.9970	ppb	09:51:03
1	Se 196.026†	-2351.1	-2301.5	26.401	ug/L	26.401	ppb	09:51:03
1	Si 251.611†	-1963.8	-2358.2	-72.361	ug/L	-72.361	ppb	09:51:03
1	Sn 189.927†	-6.1	-18.5	23.583	ug/L	23.583	ppb	09:51:03
1	Ti 334.940†	-1212.7	146.3	0.2396	ug/L	0.2396	ppb	09:51:03
1	Tl 190.801†	-59.6	1.7	0.1017	ug/L	0.1017	ppb	09:51:03
1	U 409.014†	-2758.9	2114.2	27.271	ug/L	27.271	ppb	09:50:43
1	V 292.402†	4514.8	6040.0	4.3981	ug/L	4.3981	ppb	09:51:03
1	Zn 213.857†	5026.5	4056.9	-0.1994	ug/L	-0.1994	ppb	09:51:03
1	SiO2†	-2098.2	-2516.5	-164.47	ug/L	-164.47	ppb	09:51:59
2	Sc Radial	7401.7	7401.7	99.0	%			09:49:51
2	Y RADIAL	6860.1	6860.1	99.07	%			09:49:51
2	Al 396.153Radial†	-68.9	3.0	3.4831	ug/L	3.4831	ppb	09:49:51
2	Ca 317.933Radial†	32.6	3.8	5.4514	ug/L	5.4514	ppb	09:50:11
2	Fe 238.204 Radial†	86091.0	86904.1	362260	ug/L	362260	ppb	09:49:51
2	K 766.490 Radial†	2280.1	-104.6	57.480	ug/L	57.480	ppb	09:49:51
2	Mg 279.077 IEC†	14.0	11.1	-34.289	ug/L	-34.289	ppb	09:50:11
2	Na 589.592 Radial†	370.6	509.8	31.289	ug/L	31.289	ppb	09:49:51
2	Sr 421.552†	114.6	171.6	0.4793	ug/L	0.4793	ppb	09:49:51
2	Sc 361.383	731404.0	731404.0	101.77	%			09:51:08
2	Y 371.029	568361.3	568361.3	101.13	%			09:51:08
2	Ag 328.068†	-18900.9	-19204.9	1.3021	ug/L	1.3021	ppb	09:51:08
2	As 188.979†	-252.9	-213.1	-4.4741	ug/L	-4.4741	ppb	09:51:28
2	B 249.677†	1176.0	2095.5	28.056	ug/L	28.056	ppb	09:51:08
2	Ba 233.527†	-1621.3	-1593.6	-12.806	ug/L	-12.806	ppb	09:51:28
2	Be 313.107†	-4754.1	210.3	0.0968	ug/L	0.0968	ppb	09:51:08
2	Cd 226.502†	2731.8	2965.4	-4.4011	ug/L	-4.4011	ppb	09:51:28
2	Co 228.616†	168.6	265.1	-0.6302	ug/L	-0.6302	ppb	09:51:28
2	Cr 267.716†	-644.5	-555.9	-0.3045	ug/L	-0.3045	ppb	09:51:28
2	Cu 324.752†	-590.7	-6218.9	-1.5916	ug/L	-1.5916	ppb	09:51:08
2	Mn 257.610†	-38621.6	-38629.8	2.9409	ug/L	2.9409	ppb	09:51:08
2	Mo 202.031†	-320.2	-331.8	0.2783	ug/L	0.2783	ppb	09:51:28
2	Ni 231.604†	288.4	163.5	4.3684	ug/L	4.3684	ppb	09:51:28

2	P 214.914†	902.1	571.6	4.1616	ug/L	4.1616 ppb	09:51:28
2	Pb 220.353†	269.2	277.8	-1.1874	ug/L	-1.1874 ppb	09:51:28
2	S 181.975 Axial†	109.6	32.2	44.179	ug/L	44.179 ppb	09:51:28
2	Sb 206.836†	47.8	-10.3	3.2563	ug/L	3.2563 ppb	09:51:28
2	Se 196.026†	-2354.5	-2284.8	39.892	ug/L	39.892 ppb	09:51:28
2	Si 251.611†	-2007.9	-2384.8	-73.149	ug/L	-73.149 ppb	09:51:28
2	Sn 189.927†	-24.3	-36.4	20.525	ug/L	20.525 ppb	09:51:28
2	Ti 334.940†	-1232.5	137.2	0.2210	ug/L	0.2210 ppb	09:51:28
2	Tl 190.801†	-76.8	-14.8	-4.1977	ug/L	-4.1977 ppb	09:51:28
2	U 409.014†	-2677.4	2217.9	30.599	ug/L	30.599 ppb	09:51:08
2	V 292.402†	4373.9	5863.1	2.6053	ug/L	2.6053 ppb	09:51:28
2	Zn 213.857†	5020.1	4007.7	-0.8055	ug/L	-0.8055 ppb	09:51:28
2	SiO2†	-2031.8	-2433.4	-158.93	ug/L	-158.93 ppb	09:52:05
3	Sc Radial	7410.2	7410.2	99.1	%		09:50:16
3	Y RADIAL	6847.3	6847.3	98.89	%		09:50:16
3	Al 396.153Radial†	-111.8	-40.1	-31.936	ug/L	-31.936 ppb	09:50:16
3	Ca 317.933Radial†	33.1	4.3	6.1250	ug/L	6.1250 ppb	09:50:36
3	Fe 238.204 Radial†	86398.0	87114.4	363130	ug/L	363130 ppb	09:50:16
3	K 766.490 Radial†	2431.6	45.5	90.097	ug/L	90.097 ppb	09:50:16
3	Mg 279.077 IEC†	13.0	10.1	-60.202	ug/L	-60.202 ppb	09:50:36
3	Na 589.592 Radial†	433.2	572.5	35.136	ug/L	35.136 ppb	09:50:16
3	Sr 421.552†	140.6	197.7	0.5521	ug/L	0.5521 ppb	09:50:16
3	Sc 361.383	728972.2	728972.2	101.43	%		09:51:34
3	Y 371.029	566673.6	566673.6	100.83	%		09:51:34
3	Ag 328.068†	-18859.5	-19226.1	1.4611	ug/L	1.4611 ppb	09:51:34
3	As 188.979†	-247.1	-208.1	-2.5135	ug/L	-2.5135 ppb	09:51:54
3	B 249.677†	1234.9	2157.4	29.557	ug/L	29.557 ppb	09:51:34
3	Ba 233.527†	-1639.4	-1616.8	-12.972	ug/L	-12.972 ppb	09:51:54
3	Be 313.107†	-4699.9	248.2	0.1140	ug/L	0.1140 ppb	09:51:34
3	Cd 226.502†	2783.8	3025.7	-3.7352	ug/L	-3.7352 ppb	09:51:54
3	Co 228.616†	174.3	271.3	-0.5400	ug/L	-0.5400 ppb	09:51:54
3	Cr 267.716†	-591.8	-506.0	0.4145	ug/L	0.4145 ppb	09:51:54
3	Cu 324.752†	-729.8	-6357.9	-2.0447	ug/L	-2.0447 ppb	09:51:34
3	Mn 257.610†	-38791.6	-38924.0	2.7271	ug/L	2.7271 ppb	09:51:34
3	Mo 202.031†	-344.1	-356.4	-1.3967	ug/L	-1.3967 ppb	09:51:54
3	Ni 231.604†	295.1	171.1	4.5706	ug/L	4.5706 ppb	09:51:54
3	P 214.914†	869.6	542.5	-11.288	ug/L	-11.288 ppb	09:51:54
3	Pb 220.353†	261.6	271.1	-2.0706	ug/L	-2.0706 ppb	09:51:54
3	S 181.975 Axial†	102.7	25.9	35.435	ug/L	35.435 ppb	09:51:54
3	Sb 206.836†	50.3	-7.7	4.0433	ug/L	4.0433 ppb	09:51:54
3	Se 196.026†	-2361.0	-2299.0	35.562	ug/L	35.562 ppb	09:51:54
3	Si 251.611†	-1975.7	-2359.6	-72.383	ug/L	-72.383 ppb	09:51:54
3	Sn 189.927†	-11.8	-24.1	22.763	ug/L	22.763 ppb	09:51:54
3	Ti 334.940†	-1278.1	88.2	0.1322	ug/L	0.1322 ppb	09:51:54
3	Tl 190.801†	-76.3	-14.5	-4.1245	ug/L	-4.1245 ppb	09:51:54
3	U 409.014†	-2741.1	2146.3	28.066	ug/L	28.066 ppb	09:51:34
3	V 292.402†	4447.8	5950.2	3.2477	ug/L	3.2477 ppb	09:51:54
3	Zn 213.857†	5010.6	4014.8	-0.8309	ug/L	-0.8309 ppb	09:51:54
3	SiO2†	-2036.2	-2444.4	-159.68	ug/L	-159.68 ppb	09:52:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	728494.8	101.36	%	0.442				0.44%
Sc Radial	7442.8	99.6	%	0.86				0.86%
Y 371.029	566140.1	100.74	%	0.450				0.45%
Y RADIAL	6874.4	99.28	%	0.525				0.53%
Ag 328.068†	-19229.4	1.0957	ug/L	0.50161	1.0957	ppb	0.50161	45.78%
Al 396.153Radial†	-20.9	-16.179	ug/L	18.0298	-16.179	ppb	18.0298	111.44%
As 188.979†	-214.7	-5.0850	ug/L	2.92523	-5.0850	ppb	2.92523	57.53%
B 249.677†	2111.7	28.479	ug/L	0.9406	28.479	ppb	0.9406	3.30%
Ba 233.527†	-1607.0	-12.898	ug/L	0.0845	-12.898	ppb	0.0845	0.66%
Be 313.107†	248.1	0.1141	ug/L	0.01735	0.1141	ppb	0.01735	15.21%
Ca 317.933Radial†	5.3	7.5390	ug/L	3.05107	7.5390	ppb	3.05107	40.47%
Cd 226.502†	3000.5	-3.9298	ug/L	0.41023	-3.9298	ppb	0.41023	10.44%
Co 228.616†	266.8	-0.6006	ug/L	0.05250	-0.6006	ppb	0.05250	8.74%
Cr 267.716†	-539.9	-0.0825	ug/L	0.43120	-0.0825	ppb	0.43120	522.91%
Cu 324.752†	-6245.3	-1.6991	ug/L	0.30636	-1.6991	ppb	0.30636	18.03%
Fe 238.204 Radial†	86855.3	362050	ug/L	1194.5	362050	ppb	1194.5	0.33%
K 766.490 Radial†	-17.0	76.359	ug/L	16.9055	76.359	ppb	16.9055	22.14%

Mg 279.077 IEC†	10.0	-60.965	ug/L	27.0664	-60.965	ppb	27.0664	44.40%
Mn 257.610†	-38711.7	2.8255	ug/L	0.10788	2.8255	ppb	0.10788	3.82%
Mo 202.031†	-345.1	-0.6705	ug/L	0.85941	-0.6705	ppb	0.85941	128.18%
Na 589.592 Radial†	537.6	32.994	ug/L	1.9608	32.994	ppb	1.9608	5.94%
Ni 231.604†	173.8	4.6430	ug/L	0.31712	4.6430	ppb	0.31712	6.83%
P 214.914†	562.3	-0.3937	ug/L	9.47646	-0.3937	ppb	9.47646	>999.9%
Pb 220.353†	278.4	-1.1032	ug/L	1.01205	-1.1032	ppb	1.01205	91.73%
S 181.975 Axial†	28.6	39.204	ug/L	4.4950	39.204	ppb	4.4950	11.47%
Sb 206.836†	-12.0	2.7655	ug/L	1.58134	2.7655	ppb	1.58134	57.18%
Se 196.026†	-2295.1	33.951	ug/L	6.8883	33.951	ppb	6.8883	20.29%
Si 251.611†	-2367.5	-72.631	ug/L	0.4490	-72.631	ppb	0.4490	0.62%
Sn 189.927†	-26.4	22.290	ug/L	1.5828	22.290	ppb	1.5828	7.10%
Sr 421.552†	180.8	0.5049	ug/L	0.04089	0.5049	ppb	0.04089	8.10%
Ti 334.940†	123.9	0.1976	ug/L	0.05741	0.1976	ppb	0.05741	29.06%
Tl 190.801†	-9.2	-2.7402	ug/L	2.46144	-2.7402	ppb	2.46144	89.83%
U 409.014†	2159.5	28.645	ug/L	1.7380	28.645	ppb	1.7380	6.07%
V 292.402†	5951.1	3.4170	ug/L	0.90831	3.4170	ppb	0.90831	26.58%
Zn 213.857†	4026.5	-0.6119	ug/L	0.35751	-0.6119	ppb	0.35751	58.42%
SiO2†	-2464.7	-161.03	ug/L	3.008	-161.03	ppb	3.008	1.87%

Sequence No.: 4
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 09:54:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7478.5	7478.5	100	%			09:56:33
1	Y RADIAL	6940.5	6940.5	100.2	%			09:56:13
1	Al 396.153Radial†	6252.6	6321.9	5184.7	ug/L	5184.7	ppb	09:56:13
1	Ca 317.933Radial†	3732.0	3701.0	5242.8	ug/L	5242.8	ppb	09:56:33
1	Fe 238.204 Radial†	1242.8	1207.3	5048.3	ug/L	5048.3	ppb	09:56:33
1	K 766.490 Radial†	24779.2	22359.0	4811.0	ug/L	4811.0	ppb	09:56:13
1	Mg 279.077 IEC†	213.1	209.9	5239.8	ug/L	5239.8	ppb	09:56:33
1	Na 589.592 Radial†	165729.6	165778.2	10174	ug/L	10174	ppb	09:56:13
1	Sr 421.552†	172347.0	172312.4	481.22	ug/L	481.22	ppb	09:56:13
1	Sc 361.383	755963.2	755963.2	105.19	%			09:57:32
1	Y 371.029	582662.1	582662.1	103.68	%			09:57:32
1	Ag 328.068†	87925.9	82958.0	498.66	ug/L	498.66	ppb	09:57:32
1	As 188.979†	1406.2	1372.3	498.06	ug/L	498.06	ppb	09:57:52
1	B 249.677†	19796.4	19760.2	495.13	ug/L	495.13	ppb	09:57:32
1	Ba 233.527†	74510.0	70835.7	500.89	ug/L	500.89	ppb	09:57:32
1	Be 313.107†	1145024.8	1093449.4	501.63	ug/L	501.63	ppb	09:57:32
1	Cd 226.502†	39856.8	38172.7	486.62	ug/L	486.62	ppb	09:57:52
1	Co 228.616†	29708.8	28343.4	491.74	ug/L	491.74	ppb	09:57:52
1	Cr 267.716†	37343.6	35579.8	499.27	ug/L	499.27	ppb	09:57:32
1	Cu 324.752†	150019.0	136983.6	496.68	ug/L	496.68	ppb	09:57:32
1	Mn 257.610†	477832.6	453592.8	500.74	ug/L	500.74	ppb	09:57:32
1	Mo 202.031†	7443.1	7058.9	497.27	ug/L	497.27	ppb	09:57:52
1	Ni 231.604†	19445.4	18366.8	490.63	ug/L	490.63	ppb	09:57:52
1	P 214.914†	5462.1	4878.0	2396.1	ug/L	2396.1	ppb	09:57:52
1	Pb 220.353†	4416.7	4212.2	503.04	ug/L	503.04	ppb	09:57:52
1	S 181.975 Axial†	837.4	720.7	986.32	ug/L	986.32	ppb	09:57:52
1	Sb 206.836†	1799.7	1653.7	497.42	ug/L	497.42	ppb	09:57:52
1	Se 196.026†	1002.5	981.8	518.88	ug/L	518.88	ppb	09:57:52
1	Si 251.611†	86227.0	81563.6	2502.1	ug/L	2502.1	ppb	09:57:32
1	Sn 189.927†	2970.3	2811.3	498.49	ug/L	498.49	ppb	09:57:52
1	Ti 334.940†	284289.1	271620.1	497.20	ug/L	497.20	ppb	09:57:32
1	Tl 190.801†	1943.0	1907.9	502.50	ug/L	502.50	ppb	09:57:52
1	U 409.014†	10464.7	14797.5	499.48	ug/L	499.48	ppb	09:57:32
1	V 292.402†	55893.3	54702.6	502.73	ug/L	502.73	ppb	09:57:32
1	Zn 213.857†	58022.0	54236.0	495.98	ug/L	495.98	ppb	09:57:32
1	SiO2†	85674.8	81013.6	5290.1	ug/L	5290.1	ppb	09:58:53
2	Sc Radial	7375.3	7375.3	98.7	%			09:56:59
2	Y RADIAL	6971.4	6971.4	100.7	%			09:56:39
2	Al 396.153Radial†	6237.3	6393.9	5243.3	ug/L	5243.3	ppb	09:56:39
2	Ca 317.933Radial†	3700.7	3721.4	5271.8	ug/L	5271.8	ppb	09:56:59
2	Fe 238.204 Radial†	1238.5	1220.4	5103.2	ug/L	5103.2	ppb	09:56:59
2	K 766.490 Radial†	24868.6	22796.1	4905.0	ug/L	4905.0	ppb	09:56:39
2	Mg 279.077 IEC†	212.1	211.9	5288.6	ug/L	5288.6	ppb	09:56:59
2	Na 589.592 Radial†	166224.2	168596.9	10347	ug/L	10347	ppb	09:56:39
2	Sr 421.552†	172525.7	174903.5	488.46	ug/L	488.46	ppb	09:56:39
2	Sc 361.383	741650.4	741650.4	103.19	%			09:58:00
2	Y 371.029	572297.5	572297.5	101.83	%			09:58:00
2	Ag 328.068†	87542.3	84199.4	506.12	ug/L	506.12	ppb	09:58:00
2	As 188.979†	1428.4	1419.6	515.15	ug/L	515.15	ppb	09:58:20
2	B 249.677†	19712.4	20042.0	502.16	ug/L	502.16	ppb	09:58:00
2	Ba 233.527†	74207.4	71909.5	508.48	ug/L	508.48	ppb	09:58:00
2	Be 313.107†	1140040.3	1109627.1	509.05	ug/L	509.05	ppb	09:58:00
2	Cd 226.502†	40268.6	39303.1	501.04	ug/L	501.04	ppb	09:58:20
2	Co 228.616†	29947.4	29119.7	505.23	ug/L	505.23	ppb	09:58:20
2	Cr 267.716†	37278.3	36201.6	507.99	ug/L	507.99	ppb	09:58:00
2	Cu 324.752†	148944.0	138694.3	502.89	ug/L	502.89	ppb	09:58:00
2	Mn 257.610†	475432.5	460033.8	507.85	ug/L	507.85	ppb	09:58:00
2	Mo 202.031†	7521.0	7271.0	512.20	ug/L	512.20	ppb	09:58:20
2	Ni 231.604†	19618.0	18890.8	504.63	ug/L	504.63	ppb	09:58:20

2	P 214.914†	5502.9	5017.8	2466.4 ug/L	2466.4 ppb	09:58:20
2	Pb 220.353†	4442.9	4318.6	515.75 ug/L	515.75 ppb	09:58:20
2	S 181.975 Axial†	845.3	743.7	1017.9 ug/L	1017.9 ppb	09:58:20
2	Sb 206.836†	1809.1	1695.8	510.22 ug/L	510.22 ppb	09:58:20
2	Se 196.026†	1003.1	1000.8	528.79 ug/L	528.79 ppb	09:58:20
2	Si 251.611†	85675.8	82611.5	2534.0 ug/L	2534.0 ppb	09:58:00
2	Sn 189.927†	2986.0	2881.1	510.85 ug/L	510.85 ppb	09:58:20
2	Ti 334.940†	282438.0	275042.2	503.46 ug/L	503.46 ppb	09:58:00
2	Tl 190.801†	1958.2	1958.3	515.69 ug/L	515.69 ppb	09:58:20
2	U 409.014†	10221.9	14754.2	497.99 ug/L	497.99 ppb	09:58:00
2	V 292.402†	55452.0	55300.4	508.33 ug/L	508.33 ppb	09:58:00
2	Zn 213.857†	57730.0	55017.6	503.09 ug/L	503.09 ppb	09:58:00
2	SiO2†	87267.4	84128.8	5493.9 ug/L	5493.9 ppb	09:58:58
3	Sc Radial	7411.0	7411.0	99.1 %		09:57:24
3	Y RADIAL	7040.6	7040.6	101.7 %		09:57:04
3	Al 396.153Radial†	6347.5	6474.6	5309.9 ug/L	5309.9 ppb	09:57:04
3	Ca 317.933Radial†	3721.8	3724.7	5276.5 ug/L	5276.5 ppb	09:57:24
3	Fe 238.204 Radial†	1240.8	1216.7	5087.6 ug/L	5087.6 ppb	09:57:24
3	K 766.490 Radial†	25163.8	22972.6	4943.1 ug/L	4943.1 ppb	09:57:04
3	Mg 279.077 IEC†	213.8	212.6	5307.0 ug/L	5307.0 ppb	09:57:24
3	Na 589.592 Radial†	168879.2	170464.6	10462 ug/L	10462 ppb	09:57:04
3	Sr 421.552†	175504.4	177067.0	494.50 ug/L	494.50 ppb	09:57:04
3	Sc 361.383	748842.8	748842.8	104.20 %		09:58:27
3	Y 371.029	577212.1	577212.1	102.71 %		09:58:27
3	Ag 328.068†	88600.2	84400.0	507.32 ug/L	507.32 ppb	09:58:27
3	As 188.979†	1449.4	1426.5	517.65 ug/L	517.65 ppb	09:58:47
3	B 249.677†	20105.2	20235.5	507.05 ug/L	507.05 ppb	09:58:27
3	Ba 233.527†	75265.7	72234.5	510.78 ug/L	510.78 ppb	09:58:27
3	Be 313.107†	1157683.3	1115948.9	511.94 ug/L	511.94 ppb	09:58:27
3	Cd 226.502†	40484.4	39135.4	498.90 ug/L	498.90 ppb	09:58:47
3	Co 228.616†	30123.4	29009.9	503.32 ug/L	503.32 ppb	09:58:47
3	Cr 267.716†	37752.9	36310.1	509.52 ug/L	509.52 ppb	09:58:27
3	Cu 324.752†	151098.8	139376.1	505.35 ug/L	505.35 ppb	09:58:27
3	Mn 257.610†	482278.8	462179.4	510.21 ug/L	510.21 ppb	09:58:27
3	Mo 202.031†	7551.9	7230.7	509.36 ug/L	509.36 ppb	09:58:47
3	Ni 231.604†	19742.2	18827.4	502.93 ug/L	502.93 ppb	09:58:47
3	P 214.914†	5533.5	4995.9	2454.7 ug/L	2454.7 ppb	09:58:47
3	Pb 220.353†	4475.9	4308.9	514.60 ug/L	514.60 ppb	09:58:47
3	S 181.975 Axial†	854.0	744.2	1018.4 ug/L	1018.4 ppb	09:58:47
3	Sb 206.836†	1825.2	1694.4	509.69 ug/L	509.69 ppb	09:58:47
3	Se 196.026†	1023.7	1011.2	534.06 ug/L	534.06 ppb	09:58:47
3	Si 251.611†	87051.0	83134.0	2550.2 ug/L	2550.2 ppb	09:58:27
3	Sn 189.927†	3008.4	2874.7	509.72 ug/L	509.72 ppb	09:58:47
3	Ti 334.940†	286275.1	276096.0	505.39 ug/L	505.39 ppb	09:58:27
3	Tl 190.801†	1979.1	1960.2	516.21 ug/L	516.21 ppb	09:58:47
3	U 409.014†	10307.6	14741.2	497.55 ug/L	497.55 ppb	09:58:27
3	V 292.402†	56401.2	55695.3	511.88 ug/L	511.88 ppb	09:58:27
3	Zn 213.857†	58544.6	55262.1	505.35 ug/L	505.35 ppb	09:58:27
3	SiO2†	87811.5	83838.7	5475.0 ug/L	5475.0 ppb	09:59:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	748818.8	104.19	%	0.996				0.96%
Sc Radial	7421.6	99.3	%	0.70				0.71%
Y 371.029	577390.6	102.74	%	0.923				0.90%
Y RADIAL	6984.2	100.9	%	0.74				0.73%
Ag 328.068†	83852.5	504.03	ug/L	4.692	504.03	ppb	4.692	0.93%
QC value within limits for Ag 328.068 Recovery = 100.81%								
Al 396.153Radial†	6396.8	5246.0	ug/L	62.65	5246.0	ppb	62.65	1.19%
QC value within limits for Al 396.153Radial Recovery = 104.92%								
As 188.979†	1406.1	510.29	ug/L	10.662	510.29	ppb	10.662	2.09%
QC value within limits for As 188.979 Recovery = 102.06%								
B 249.677†	20012.6	501.45	ug/L	5.991	501.45	ppb	5.991	1.19%
QC value within limits for B 249.677 Recovery = 100.29%								
Ba 233.527†	71659.9	506.72	ug/L	5.175	506.72	ppb	5.175	1.02%
QC value within limits for Ba 233.527 Recovery = 101.34%								
Be 313.107†	1106341.8	507.54	ug/L	5.321	507.54	ppb	5.321	1.05%
QC value within limits for Be 313.107 Recovery = 101.51%								
Ca 317.933Radial†	3715.7	5263.7	ug/L	18.21	5263.7	ppb	18.21	0.35%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.27%
Cd 226.502†            38870.4      495.52 ug/L          7.782      495.52 ppb          7.782   1.57%
   QC value within limits for Cd 226.502  Recovery = 99.10%
Co 228.616†            28824.3      500.10 ug/L          7.297      500.10 ppb          7.297   1.46%
   QC value within limits for Co 228.616  Recovery = 100.02%
Cr 267.716†            36030.5      505.59 ug/L          5.530      505.59 ppb          5.530   1.09%
   QC value within limits for Cr 267.716  Recovery = 101.12%
Cu 324.752†           138351.3      501.64 ug/L          4.468      501.64 ppb          4.468   0.89%
   QC value within limits for Cu 324.752  Recovery = 100.33%
Fe 238.204 Radial†      1214.8      5079.7 ug/L         28.29      5079.7 ppb         28.29   0.56%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.59%
K 766.490 Radial†      22709.2      4886.3 ug/L         68.00      4886.3 ppb         68.00   1.39%
   QC value within limits for K 766.490 Radial  Recovery = 97.73%
Mg 279.077 IEC†          211.5      5278.5 ug/L         34.76      5278.5 ppb         34.76   0.66%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.57%
Mn 257.610†           458602.0      506.27 ug/L          4.930      506.27 ppb          4.930   0.97%
   QC value within limits for Mn 257.610  Recovery = 101.25%
Mo 202.031†             7186.9      506.28 ug/L          7.930      506.28 ppb          7.930   1.57%
   QC value within limits for Mo 202.031  Recovery = 101.26%
Na 589.592 Radial†    168279.9       10328 ug/L        144.8       10328 ppb        144.8   1.40%
   QC value within limits for Na 589.592 Radial  Recovery = 103.28%
Ni 231.604†            18695.0      499.40 ug/L          7.640      499.40 ppb          7.640   1.53%
   QC value within limits for Ni 231.604  Recovery = 99.88%
P 214.914†              4963.9      2439.1 ug/L         37.67      2439.1 ppb         37.67   1.54%
   QC value within limits for P 214.914  Recovery = 97.56%
Pb 220.353†             4279.9      511.13 ug/L          7.030      511.13 ppb          7.030   1.38%
   QC value within limits for Pb 220.353  Recovery = 102.23%
S 181.975 Axial†         736.2      1007.5 ug/L         18.37      1007.5 ppb         18.37   1.82%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             1681.3      505.78 ug/L          7.243      505.78 ppb          7.243   1.43%
   QC value within limits for Sb 206.836  Recovery = 101.16%
Se 196.026†              998.0      527.24 ug/L          7.706      527.24 ppb          7.706   1.46%
   QC value within limits for Se 196.026  Recovery = 105.45%
Si 251.611†            82436.4      2528.7 ug/L         24.47      2528.7 ppb         24.47   0.97%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†             2855.7      506.35 ug/L          6.833      506.35 ppb          6.833   1.35%
   QC value within limits for Sn 189.927  Recovery = 101.27%
Sr 421.552†           174760.9      488.06 ug/L          6.649      488.06 ppb          6.649   1.36%
   QC value within limits for Sr 421.552  Recovery = 97.61%
Ti 334.940†           274252.7      502.02 ug/L          4.284      502.02 ppb          4.284   0.85%
   QC value within limits for Ti 334.940  Recovery = 100.40%
Tl 190.801†             1942.1      511.46 ug/L          7.769      511.46 ppb          7.769   1.52%
   QC value within limits for Tl 190.801  Recovery = 102.29%
U 409.014†             14764.3      498.34 ug/L          1.011      498.34 ppb          1.011   0.20%
   QC value within limits for U 409.014  Recovery = 99.67%
V 292.402†             55232.8      507.65 ug/L          4.612      507.65 ppb          4.612   0.91%
   QC value within limits for V 292.402  Recovery = 101.53%
Zn 213.857†            54838.6      501.47 ug/L          4.890      501.47 ppb          4.890   0.98%
   QC value within limits for Zn 213.857  Recovery = 100.29%
SiO2†                  82993.7      5419.7 ug/L        112.62      5419.7 ppb        112.62   2.08%
   QC value within limits for SiO2  Recovery = 101.35%
All analyte(s) passed QC.
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Sequence No.: 5
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 10:01:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7523.2	7523.2	101	%			10:03:05
1	Y RADIAL	7002.2	7002.2	101.1	%			10:03:05
1	Al 396.153Radial†	-76.6	-3.4	-2.8352	ug/L	-2.8352	ppb	10:03:05
1	Ca 317.933Radial†	29.1	-0.2	-0.2986	ug/L	-0.2986	ppb	10:03:25
1	Fe 238.204 Radial†	35.7	0.7	2.9537	ug/L	2.9537	ppb	10:03:25
1	K 766.490 Radial†	2487.9	64.7	13.944	ug/L	13.944	ppb	10:03:05
1	Mg 279.077 IEC†	6.1	3.0	75.404	ug/L	75.404	ppb	10:03:25
1	Na 589.592 Radial†	81.7	216.7	13.301	ug/L	13.301	ppb	10:03:05
1	Sr 421.552†	-19.2	36.8	0.1029	ug/L	0.1029	ppb	10:03:05
1	Sc 361.383	722848.6	722848.6	100.58	%			10:04:22
1	Y 371.029	565709.7	565709.7	100.66	%			10:04:22
1	Ag 328.068†	713.2	76.4	0.4596	ug/L	0.4596	ppb	10:04:22
1	As 188.979†	-27.7	7.9	2.8303	ug/L	2.8303	ppb	10:04:42
1	B 249.677†	-657.8	285.9	7.2027	ug/L	7.2027	ppb	10:04:22
1	Ba 233.527†	32.1	31.4	0.2212	ug/L	0.2212	ppb	10:04:42
1	Be 313.107†	-4822.3	87.2	0.0396	ug/L	0.0396	ppb	10:04:22
1	Cd 226.502†	-263.1	19.5	0.2480	ug/L	0.2480	ppb	10:04:42
1	Co 228.616†	-67.3	32.6	0.5665	ug/L	0.5665	ppb	10:04:42
1	Cr 267.716†	-53.9	23.8	0.3341	ug/L	0.3341	ppb	10:04:22
1	Cu 324.752†	5612.3	-58.4	-0.2116	ug/L	-0.2116	ppb	10:04:22
1	Mn 257.610†	625.0	-58.2	-0.0652	ug/L	-0.0652	ppb	10:04:42
1	Mo 202.031†	24.0	6.7	0.4712	ug/L	0.4712	ppb	10:04:42
1	Ni 231.604†	124.8	4.3	0.1134	ug/L	0.1134	ppb	10:04:42
1	P 214.914†	314.4	-2.2	-1.0806	ug/L	-1.0806	ppb	10:04:42
1	Pb 220.353†	-6.9	6.4	0.7635	ug/L	0.7635	ppb	10:04:42
1	S 181.975 Axial†	79.8	3.9	5.3226	ug/L	5.3226	ppb	10:04:42
1	Sb 206.836†	60.4	2.8	0.8532	ug/L	0.8532	ppb	10:04:42
1	Se 196.026†	-27.6	1.4	0.7143	ug/L	0.7143	ppb	10:04:42
1	Si 251.611†	482.7	68.1	2.0772	ug/L	2.0772	ppb	10:04:42
1	Sn 189.927†	18.8	6.2	1.0938	ug/L	1.0938	ppb	10:04:42
1	Ti 334.940†	-1435.9	-79.4	-0.1442	ug/L	-0.1442	ppb	10:04:22
1	Tl 190.801†	-53.0	8.1	2.1110	ug/L	2.1110	ppb	10:04:42
1	U 409.014†	-4963.2	-85.9	-2.9104	ug/L	-2.9104	ppb	10:04:22
1	V 292.402†	-1585.9	-11.6	-0.1040	ug/L	-0.1040	ppb	10:04:22
1	Zn 213.857†	973.9	43.2	0.3953	ug/L	0.3953	ppb	10:04:42
1	SiO2†	517.3	77.4	5.0284	ug/L	5.0284	ppb	10:05:38
2	Sc Radial	7549.3	7549.3	101	%			10:03:30
2	Y RADIAL	6999.8	6999.8	101.1	%			10:03:30
2	Al 396.153Radial†	-68.7	4.6	3.7370	ug/L	3.7370	ppb	10:03:30
2	Ca 317.933Radial†	28.8	-0.6	-0.8039	ug/L	-0.8039	ppb	10:03:50
2	Fe 238.204 Radial†	38.7	3.5	14.687	ug/L	14.687	ppb	10:03:50
2	K 766.490 Radial†	2642.9	209.5	45.202	ug/L	45.202	ppb	10:03:30
2	Mg 279.077 IEC†	-0.6	-3.6	-90.505	ug/L	-90.505	ppb	10:03:50
2	Na 589.592 Radial†	76.5	211.3	12.970	ug/L	12.970	ppb	10:03:30
2	Sr 421.552†	29.1	84.7	0.2365	ug/L	0.2365	ppb	10:03:30
2	Sc 361.383	732900.9	732900.9	101.98	%			10:04:47
2	Y 371.029	573361.1	573361.1	102.02	%			10:04:47
2	Ag 328.068†	679.3	33.4	0.2003	ug/L	0.2003	ppb	10:04:47
2	As 188.979†	-34.5	1.6	0.5908	ug/L	0.5908	ppb	10:05:07
2	B 249.677†	-583.0	368.2	9.2784	ug/L	9.2784	ppb	10:04:47
2	Ba 233.527†	20.6	19.7	0.1389	ug/L	0.1389	ppb	10:05:07
2	Be 313.107†	-4829.5	145.9	0.0669	ug/L	0.0669	ppb	10:04:47
2	Cd 226.502†	-270.4	16.0	0.2023	ug/L	0.2023	ppb	10:05:07
2	Co 228.616†	-90.6	10.6	0.1862	ug/L	0.1862	ppb	10:05:07
2	Cr 267.716†	-58.4	20.1	0.2805	ug/L	0.2805	ppb	10:04:47
2	Cu 324.752†	5752.2	2.2	0.0090	ug/L	0.0090	ppb	10:04:47
2	Mn 257.610†	657.3	-35.1	-0.0351	ug/L	-0.0351	ppb	10:05:07
2	Mo 202.031†	28.8	11.1	0.7824	ug/L	0.7824	ppb	10:05:07
2	Ni 231.604†	141.7	19.2	0.5124	ug/L	0.5124	ppb	10:05:07

2	P 214.914†	297.2	-23.3	-11.906	ug/L	-11.906 ppb	10:05:07
2	Pb 220.353†	-9.9	3.5	0.4219	ug/L	0.4219 ppb	10:05:07
2	S 181.975 Axial†	80.3	3.3	4.5650	ug/L	4.5650 ppb	10:05:07
2	Sb 206.836†	74.9	16.2	4.8151	ug/L	4.8151 ppb	10:05:07
2	Se 196.026†	-31.1	-1.8	-0.8478	ug/L	-0.8478 ppb	10:05:07
2	Si 251.611†	459.2	38.5	1.1551	ug/L	1.1551 ppb	10:05:07
2	Sn 189.927†	15.2	2.4	0.4310	ug/L	0.4310 ppb	10:05:07
2	Ti 334.940†	-1349.9	24.5	0.0426	ug/L	0.0426 ppb	10:04:47
2	Tl 190.801†	-51.1	10.6	2.7838	ug/L	2.7838 ppb	10:05:07
2	U 409.014†	-4797.1	144.7	4.8967	ug/L	4.8967 ppb	10:04:47
2	V 292.402†	-1595.8	0.3	0.0187	ug/L	0.0187 ppb	10:04:47
2	Zn 213.857†	962.1	18.3	0.1675	ug/L	0.1675 ppb	10:05:07
2	SiO2†	487.2	40.8	2.6085	ug/L	2.6085 ppb	10:05:43
3	Sc Radial	7617.8	7617.8	102	%		10:03:55
3	Y RADIAL	7019.0	7019.0	101.4	%		10:03:55
3	Al 396.153Radial†	-52.2	21.5	17.674	ug/L	17.674 ppb	10:03:55
3	Ca 317.933Radial†	32.5	2.8	3.9509	ug/L	3.9509 ppb	10:04:15
3	Fe 238.204 Radial†	35.8	0.3	1.4002	ug/L	1.4002 ppb	10:04:15
3	K 766.490 Radial†	2517.2	62.7	13.516	ug/L	13.516 ppb	10:03:55
3	Mg 279.077 IEC†	4.6	1.4	35.985	ug/L	35.985 ppb	10:04:15
3	Na 589.592 Radial†	142.1	275.0	16.876	ug/L	16.876 ppb	10:03:55
3	Sr 421.552†	-5.0	50.9	0.1422	ug/L	0.1422 ppb	10:03:55
3	Sc 361.383	725063.9	725063.9	100.89	%		10:05:13
3	Y 371.029	567550.1	567550.1	100.99	%		10:05:13
3	Ag 328.068†	597.1	-40.8	-0.2368	ug/L	-0.2368 ppb	10:05:13
3	As 188.979†	-33.2	2.5	0.9038	ug/L	0.9038 ppb	10:05:33
3	B 249.677†	-630.7	314.8	7.9341	ug/L	7.9341 ppb	10:05:13
3	Ba 233.527†	24.9	24.2	0.1724	ug/L	0.1724 ppb	10:05:33
3	Be 313.107†	-4848.3	76.1	0.0351	ug/L	0.0351 ppb	10:05:13
3	Cd 226.502†	-279.6	4.0	0.0508	ug/L	0.0508 ppb	10:05:33
3	Co 228.616†	-108.0	-7.6	-0.1325	ug/L	-0.1325 ppb	10:05:33
3	Cr 267.716†	-50.7	27.1	0.3823	ug/L	0.3823 ppb	10:05:13
3	Cu 324.752†	5699.5	11.0	0.0399	ug/L	0.0399 ppb	10:05:13
3	Mn 257.610†	651.6	-33.8	-0.0378	ug/L	-0.0378 ppb	10:05:33
3	Mo 202.031†	15.3	-1.9	-0.1364	ug/L	-0.1364 ppb	10:05:33
3	Ni 231.604†	135.6	14.6	0.3914	ug/L	0.3914 ppb	10:05:33
3	P 214.914†	311.4	-6.1	-3.1113	ug/L	-3.1113 ppb	10:05:33
3	Pb 220.353†	-13.2	0.2	0.0218	ug/L	0.0218 ppb	10:05:33
3	S 181.975 Axial†	84.3	8.2	11.170	ug/L	11.170 ppb	10:05:33
3	Sb 206.836†	60.6	2.8	0.8387	ug/L	0.8387 ppb	10:05:33
3	Se 196.026†	-32.6	-3.6	-1.8077	ug/L	-1.8077 ppb	10:05:33
3	Si 251.611†	470.8	54.9	1.6774	ug/L	1.6774 ppb	10:05:33
3	Sn 189.927†	19.6	6.9	1.2305	ug/L	1.2305 ppb	10:05:33
3	Ti 334.940†	-1300.4	59.2	0.1106	ug/L	0.1106 ppb	10:05:13
3	Tl 190.801†	-51.4	9.8	2.5707	ug/L	2.5707 ppb	10:05:33
3	U 409.014†	-5032.0	-139.1	-4.7100	ug/L	-4.7100 ppb	10:05:13
3	V 292.402†	-1505.5	72.9	0.6516	ug/L	0.6516 ppb	10:05:13
3	Zn 213.857†	974.6	41.0	0.3740	ug/L	0.3740 ppb	10:05:33
3	SiO2†	505.5	64.2	4.1801	ug/L	4.1801 ppb	10:05:48

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	726937.8	101.15	%	0.735				0.73%
Sc Radial	7563.4	101	%	0.7				0.65%
Y 371.029	568873.6	101.22	%	0.711				0.70%
Y RADIAL	7007.0	101.2	%	0.15				0.15%
Ag 328.068†	23.0	0.1410	ug/L	0.35197	0.1410	ppb	0.35197	249.56%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	7.5	6.1919	ug/L	10.47268	6.1919	ppb	10.47268	169.13%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.0	1.4416	ug/L	1.21278	1.4416	ppb	1.21278	84.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	323.0	8.1384	ug/L	1.05284	8.1384	ppb	1.05284	12.94%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.1	0.1775	ug/L	0.04137	0.1775	ppb	0.04137	23.31%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	103.1	0.0472	ug/L	0.01721	0.0472	ppb	0.01721	36.48%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.7	0.9495	ug/L	2.61157	0.9495	ppb	2.61157	275.05%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.1      0.1670 ug/L       0.10326      0.1670 ppb        0.10326  61.82%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                11.9      0.2067 ug/L       0.34993      0.2067 ppb        0.34993 169.27%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                23.7      0.3323 ug/L       0.05096      0.3323 ppb        0.05096  15.33%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -15.1     -0.0542 ug/L       0.13715     -0.0542 ppb        0.13715 252.94%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.5      6.3469 ug/L       7.26416      6.3469 ppb        7.26416 114.45%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         112.3     24.221 ug/L       18.1718     24.221 ppb        18.1718  75.03%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.3      6.9612 ug/L      86.67921      6.9612 ppb       86.67921 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -42.3     -0.0460 ug/L       0.01669     -0.0460 ppb        0.01669  36.26%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 5.3      0.3724 ug/L       0.46732      0.3724 ppb        0.46732 125.49%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        234.3     14.382 ug/L        2.1662     14.382 ppb         2.1662  15.06%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                12.7      0.3391 ug/L       0.20457      0.3391 ppb        0.20457  60.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -10.6     -5.3660 ug/L       5.75414     -5.3660 ppb        5.75414 107.23%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 3.4      0.4024 ug/L       0.37122      0.4024 ppb        0.37122  92.26%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.1      7.0191 ug/L       3.61445      7.0191 ppb        3.61445  51.49%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 7.3      2.1690 ug/L       2.29159      2.1690 ppb        2.29159 105.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -1.3     -0.6470 ug/L       1.27291     -0.6470 ppb        1.27291 196.73%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                53.9      1.6366 ug/L       0.46242      1.6366 ppb        0.46242  28.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.2      0.9184 ug/L       0.42765      0.9184 ppb        0.42765  46.56%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                57.5      0.1605 ug/L       0.06866      0.1605 ppb        0.06866  42.77%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 1.5      0.0030 ug/L       0.13197      0.0030 ppb        0.13197 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 9.5      2.4885 ug/L       0.34386      2.4885 ppb        0.34386  13.82%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -26.8     -0.9079 ug/L       5.10685     -0.9079 ppb        5.10685 562.48%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 20.6      0.1888 ug/L       0.40548      0.1888 ppb        0.40548 214.78%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                34.2      0.3123 ug/L       0.12585      0.3123 ppb        0.12585  40.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      60.8      3.9390 ug/L       1.22783      3.9390 ppb        1.22783  31.17%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 10:57:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7562.8	7562.8	101	%			10:59:20
1	Y RADIAL	6962.9	6962.9	100.6	%			10:59:20
1	Al 396.153Radial†	6246.8	6246.6	5122.4	ug/L	5122.4	ppb	10:59:20
1	Ca 317.933Radial†	3649.3	3577.7	5068.2	ug/L	5068.2	ppb	10:59:20
1	Fe 238.204 Radial†	1210.3	1161.4	4857.7	ug/L	4857.7	ppb	10:59:40
1	K 766.490 Radial†	24506.8	21813.9	4693.3	ug/L	4693.3	ppb	10:59:15
1	Mg 279.077 IEC†	213.1	207.6	5181.7	ug/L	5181.7	ppb	10:59:40
1	Na 589.592 Radial†	163646.8	161874.2	9934.7	ug/L	9934.7	ppb	10:59:15
1	Sr 421.552†	170737.3	168802.3	471.42	ug/L	471.42	ppb	10:59:15
1	Sc 361.383	744688.2	744688.2	103.62	%			11:00:47
1	Y 371.029	574366.7	574366.7	102.20	%			11:00:47
1	Ag 328.068†	89936.9	86164.3	517.80	ug/L	517.80	ppb	11:00:53
1	As 188.979†	1426.8	1412.4	512.51	ug/L	512.51	ppb	11:01:13
1	B 249.677†	20280.2	20512.1	513.95	ug/L	513.95	ppb	11:00:53
1	Ba 233.527†	75895.8	73245.6	517.94	ug/L	517.94	ppb	11:00:53
1	Be 313.107†	1130809.6	1096212.0	502.90	ug/L	502.90	ppb	11:00:47
1	Cd 226.502†	41959.0	40775.2	519.85	ug/L	519.85	ppb	11:00:53
1	Co 228.616†	30995.3	30012.6	520.70	ug/L	520.70	ppb	11:00:53
1	Cr 267.716†	38126.3	36872.6	517.40	ug/L	517.40	ppb	11:00:53
1	Cu 324.752†	152100.8	141152.2	511.78	ug/L	511.78	ppb	11:00:53
1	Mn 257.610†	471556.1	454413.3	501.62	ug/L	501.62	ppb	11:00:47
1	Mo 202.031†	7425.7	7149.3	503.62	ug/L	503.62	ppb	11:01:13
1	Ni 231.604†	20201.5	19376.4	517.60	ug/L	517.60	ppb	11:00:53
1	P 214.914†	5455.1	4949.9	2430.1	ug/L	2430.1	ppb	11:01:13
1	Pb 220.353†	4376.8	4237.3	506.04	ug/L	506.04	ppb	11:01:13
1	S 181.975 Axial†	849.2	744.1	1018.4	ug/L	1018.4	ppb	11:01:13
1	Sb 206.836†	1844.4	1722.8	517.79	ug/L	517.79	ppb	11:01:13
1	Se 196.026†	1011.7	1005.1	530.14	ug/L	530.14	ppb	11:01:13
1	Si 251.611†	88149.6	84660.3	2597.5	ug/L	2597.5	ppb	11:00:53
1	Sn 189.927†	2975.9	2859.5	506.99	ug/L	506.99	ppb	11:01:13
1	Ti 334.940†	282974.0	274443.0	502.34	ug/L	502.34	ppb	11:00:53
1	Tl 190.801†	1970.9	1962.9	516.73	ug/L	516.73	ppb	11:01:13
1	U 409.014†	11173.4	15632.0	527.73	ug/L	527.73	ppb	11:00:53
1	V 292.402†	57110.2	56681.5	520.86	ug/L	520.86	ppb	11:00:53
1	Zn 213.857†	59267.2	56272.9	514.60	ug/L	514.60	ppb	11:00:53
1	SiO2†	86293.0	82843.4	5410.0	ug/L	5410.0	ppb	11:02:20
2	Sc Radial	7484.4	7484.4	100	%			10:59:50
2	Y RADIAL	6908.6	6908.6	99.77	%			10:59:50
2	Al 396.153Radial†	6320.9	6385.2	5236.3	ug/L	5236.3	ppb	10:59:50
2	Ca 317.933Radial†	3688.8	3654.8	5177.5	ug/L	5177.5	ppb	10:59:50
2	Fe 238.204 Radial†	1236.0	1199.6	5016.6	ug/L	5016.6	ppb	11:00:10
2	K 766.490 Radial†	24856.7	22416.9	4823.2	ug/L	4823.2	ppb	10:59:45
2	Mg 279.077 IEC†	209.9	206.6	5155.6	ug/L	5155.6	ppb	11:00:10
2	Na 589.592 Radial†	166232.1	166149.1	10197	ug/L	10197	ppb	10:59:45
2	Sr 421.552†	172573.7	172402.7	481.48	ug/L	481.48	ppb	10:59:45
2	Sc 361.383	736289.9	736289.9	102.45	%			11:01:18
2	Y 371.029	568354.7	568354.7	101.13	%			11:01:18
2	Ag 328.068†	87992.3	85256.3	512.41	ug/L	512.41	ppb	11:01:24
2	As 188.979†	1423.0	1424.4	516.86	ug/L	516.86	ppb	11:01:44
2	B 249.677†	19665.8	20135.6	504.48	ug/L	504.48	ppb	11:01:24
2	Ba 233.527†	74096.3	72324.5	511.43	ug/L	511.43	ppb	11:01:24
2	Be 313.107†	1132360.3	1110173.7	509.28	ug/L	509.28	ppb	11:01:18
2	Cd 226.502†	40924.6	40227.4	512.84	ug/L	512.84	ppb	11:01:24
2	Co 228.616†	30278.6	29654.3	514.51	ug/L	514.51	ppb	11:01:24
2	Cr 267.716†	37224.4	36412.0	510.94	ug/L	510.94	ppb	11:01:24
2	Cu 324.752†	148247.3	139065.1	504.22	ug/L	504.22	ppb	11:01:24
2	Mn 257.610†	472204.2	460236.9	508.07	ug/L	508.07	ppb	11:01:18
2	Mo 202.031†	7412.9	7218.6	508.50	ug/L	508.50	ppb	11:01:44
2	Ni 231.604†	19663.4	19073.6	509.51	ug/L	509.51	ppb	11:01:24

2	P 214.914†	5417.4	4973.1	2443.4 ug/L	2443.4 ppb	11:01:44
2	Pb 220.353†	4337.3	4246.9	507.21 ug/L	507.21 ppb	11:01:44
2	S 181.975 Axial†	840.2	744.7	1019.2 ug/L	1019.2 ppb	11:01:44
2	Sb 206.836†	1839.9	1738.7	522.83 ug/L	522.83 ppb	11:01:44
2	Se 196.026†	1010.9	1015.5	535.99 ug/L	535.99 ppb	11:01:44
2	Si 251.611†	85710.2	83249.6	2553.8 ug/L	2553.8 ppb	11:01:24
2	Sn 189.927†	2960.6	2877.3	510.16 ug/L	510.16 ppb	11:01:44
2	Ti 334.940†	276718.0	271451.5	496.87 ug/L	496.87 ppb	11:01:24
2	Tl 190.801†	1946.4	1960.6	516.18 ug/L	516.18 ppb	11:01:44
2	U 409.014†	10777.4	15368.5	518.79 ug/L	518.79 ppb	11:01:24
2	V 292.402†	55755.1	55987.6	514.58 ug/L	514.58 ppb	11:01:24
2	Zn 213.857†	57695.5	55391.2	506.51 ug/L	506.51 ppb	11:01:24
2	SiO2†	85916.0	83425.4	5447.9 ug/L	5447.9 ppb	11:02:25
3	Sc Radial	7491.8	7491.8	100 %		11:00:20
3	Y RADIAL	6880.3	6880.3	99.36 %		11:00:20
3	Al 396.153Radial†	6340.0	6398.1	5246.9 ug/L	5246.9 ppb	11:00:20
3	Ca 317.933Radial†	3701.1	3663.5	5189.8 ug/L	5189.8 ppb	11:00:20
3	Fe 238.204 Radial†	1222.5	1184.9	4955.6 ug/L	4955.6 ppb	11:00:40
3	K 766.490 Radial†	25054.1	22589.4	4860.4 ug/L	4860.4 ppb	11:00:15
3	Mg 279.077 IEC†	213.6	210.0	5242.5 ug/L	5242.5 ppb	11:00:40
3	Na 589.592 Radial†	167473.7	167224.7	10263 ug/L	10263 ppb	11:00:15
3	Sr 421.552†	174168.1	173824.1	485.45 ug/L	485.45 ppb	11:00:15
3	Sc 361.383	742591.9	742591.9	103.33 %		11:01:49
3	Y 371.029	573318.2	573318.2	102.01 %		11:01:49
3	Ag 328.068†	88554.5	85071.4	511.29 ug/L	511.29 ppb	11:01:55
3	As 188.979†	1436.9	1426.1	517.43 ug/L	517.43 ppb	11:02:15
3	B 249.677†	19971.5	20268.6	507.83 ug/L	507.83 ppb	11:01:55
3	Ba 233.527†	74813.9	72405.2	512.00 ug/L	512.00 ppb	11:01:55
3	Be 313.107†	1143597.4	1111669.0	509.96 ug/L	509.96 ppb	11:01:49
3	Cd 226.502†	41324.4	40275.3	513.46 ug/L	513.46 ppb	11:01:55
3	Co 228.616†	30570.8	29686.2	515.06 ug/L	515.06 ppb	11:01:55
3	Cr 267.716†	37594.3	36461.7	511.64 ug/L	511.64 ppb	11:01:55
3	Cu 324.752†	149668.9	139212.9	504.76 ug/L	504.76 ppb	11:01:55
3	Mn 257.610†	476911.1	460880.6	508.77 ug/L	508.77 ppb	11:01:49
3	Mo 202.031†	7473.8	7216.1	508.32 ug/L	508.32 ppb	11:02:15
3	Ni 231.604†	19910.2	19149.5	511.54 ug/L	511.54 ppb	11:01:55
3	P 214.914†	5449.8	4959.6	2436.4 ug/L	2436.4 ppb	11:02:15
3	Pb 220.353†	4381.3	4253.5	508.01 ug/L	508.01 ppb	11:02:15
3	S 181.975 Axial†	857.8	754.8	1033.0 ug/L	1033.0 ppb	11:02:15
3	Sb 206.836†	1854.8	1737.8	522.52 ug/L	522.52 ppb	11:02:15
3	Se 196.026†	1006.2	1002.5	529.17 ug/L	529.17 ppb	11:02:15
3	Si 251.611†	86609.1	83409.5	2558.7 ug/L	2558.7 ppb	11:01:55
3	Sn 189.927†	2974.4	2866.2	508.19 ug/L	508.19 ppb	11:02:15
3	Ti 334.940†	278364.8	270753.1	495.59 ug/L	495.59 ppb	11:01:55
3	Tl 190.801†	1953.6	1951.5	513.77 ug/L	513.77 ppb	11:02:15
3	U 409.014†	10927.4	15424.4	520.69 ug/L	520.69 ppb	11:01:55
3	V 292.402†	56335.4	56087.3	515.50 ug/L	515.50 ppb	11:01:55
3	Zn 213.857†	58236.1	55436.5	506.92 ug/L	506.92 ppb	11:01:55
3	SiO2†	88598.9	85310.2	5571.9 ug/L	5571.9 ppb	11:02:30

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	741190.0	103.13	%	0.608				0.59%
Sc Radial	7513.0	101	%	0.6				0.58%
Y 371.029	572013.2	101.78	%	0.571				0.56%
Y RADIAL	6917.3	99.90	%	0.606				0.61%
Ag 328.068†	85497.3	513.83	ug/L	3.483	513.83	ppb	3.483	0.68%
QC value within limits for Ag 328.068 Recovery = 102.77%								
Al 396.153Radial†	6343.3	5201.9	ug/L	69.03	5201.9	ppb	69.03	1.33%
QC value within limits for Al 396.153Radial Recovery = 104.04%								
As 188.979†	1421.0	515.60	ug/L	2.693	515.60	ppb	2.693	0.52%
QC value within limits for As 188.979 Recovery = 103.12%								
B 249.677†	20305.4	508.75	ug/L	4.800	508.75	ppb	4.800	0.94%
QC value within limits for B 249.677 Recovery = 101.75%								
Ba 233.527†	72658.4	513.79	ug/L	3.607	513.79	ppb	3.607	0.70%
QC value within limits for Ba 233.527 Recovery = 102.76%								
Be 313.107†	1106018.2	507.38	ug/L	3.894	507.38	ppb	3.894	0.77%
QC value within limits for Be 313.107 Recovery = 101.48%								
Ca 317.933Radial†	3632.0	5145.2	ug/L	66.93	5145.2	ppb	66.93	1.30%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.90%
Cd 226.502†            40426.0      515.38 ug/L         3.881      515.38 ppb          3.881   0.75%
   QC value within limits for Cd 226.502  Recovery = 103.08%
Co 228.616†            29784.3      516.76 ug/L         3.426      516.76 ppb          3.426   0.66%
   QC value within limits for Co 228.616  Recovery = 103.35%
Cr 267.716†            36582.1      513.32 ug/L         3.545      513.32 ppb          3.545   0.69%
   QC value within limits for Cr 267.716  Recovery = 102.66%
Cu 324.752†           139810.0      506.92 ug/L         4.216      506.92 ppb          4.216   0.83%
   QC value within limits for Cu 324.752  Recovery = 101.38%
Fe 238.204 Radial†      1182.0      4943.3 ug/L        80.13      4943.3 ppb         80.13   1.62%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.87%
K 766.490 Radial†      22273.4      4792.3 ug/L        87.75      4792.3 ppb         87.75   1.83%
   QC value within limits for K 766.490 Radial  Recovery = 95.85%
Mg 279.077 IEC†          208.1      5193.3 ug/L        44.55      5193.3 ppb         44.55   0.86%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.87%
Mn 257.610†           458510.3      506.15 ug/L         3.937      506.15 ppb          3.937   0.78%
   QC value within limits for Mn 257.610  Recovery = 101.23%
Mo 202.031†             7194.7      506.82 ug/L         2.770      506.82 ppb          2.770   0.55%
   QC value within limits for Mo 202.031  Recovery = 101.36%
Na 589.592 Radial†    165082.7       10132 ug/L       173.7        10132 ppb        173.7   1.71%
   QC value within limits for Na 589.592 Radial  Recovery = 101.32%
Ni 231.604†            19199.8      512.88 ug/L         4.209      512.88 ppb          4.209   0.82%
   QC value within limits for Ni 231.604  Recovery = 102.58%
P 214.914†              4960.9      2436.6 ug/L         6.66      2436.6 ppb          6.66   0.27%
   QC value within limits for P 214.914  Recovery = 97.47%
Pb 220.353†             4245.9      507.08 ug/L         0.988      507.08 ppb          0.988   0.19%
   QC value within limits for Pb 220.353  Recovery = 101.42%
S 181.975 Axial†         747.9      1023.5 ug/L         8.21      1023.5 ppb          8.21   0.80%
   QC value within limits for S 181.975 Axial  Recovery = 102.35%
Sb 206.836†             1733.1      521.05 ug/L         2.822      521.05 ppb          2.822   0.54%
   QC value within limits for Sb 206.836  Recovery = 104.21%
Se 196.026†             1007.7      531.77 ug/L         3.684      531.77 ppb          3.684   0.69%
   QC value within limits for Se 196.026  Recovery = 106.35%
Si 251.611†            83773.2      2570.0 ug/L        23.95      2570.0 ppb         23.95   0.93%
   QC value within limits for Si 251.611  Recovery = 102.80%
Sn 189.927†             2867.7      508.45 ug/L         1.600      508.45 ppb          1.600   0.31%
   QC value within limits for Sn 189.927  Recovery = 101.69%
Sr 421.552†           171676.4      479.45 ug/L         7.229      479.45 ppb          7.229   1.51%
   QC value within limits for Sr 421.552  Recovery = 95.89%
Ti 334.940†           272215.9      498.27 ug/L         3.582      498.27 ppb          3.582   0.72%
   QC value within limits for Ti 334.940  Recovery = 99.65%
Tl 190.801†             1958.3      515.56 ug/L         1.574      515.56 ppb          1.574   0.31%
   QC value within limits for Tl 190.801  Recovery = 103.11%
U 409.014†             15475.0      522.40 ug/L         4.706      522.40 ppb          4.706   0.90%
   QC value within limits for U 409.014  Recovery = 104.48%
V 292.402†             56252.1      516.98 ug/L         3.388      516.98 ppb          3.388   0.66%
   QC value within limits for V 292.402  Recovery = 103.40%
Zn 213.857†            55700.2      509.35 ug/L         4.558      509.35 ppb          4.558   0.89%
   QC value within limits for Zn 213.857  Recovery = 101.87%
SiO2†                  83859.6      5476.6 ug/L        84.67      5476.6 ppb         84.67   1.55%
   QC value within limits for SiO2  Recovery = 102.41%
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 11:04:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7365.6	7365.6	98.5	%			11:06:33
1	Y RADIAL	6805.4	6805.4	98.28	%			11:06:33
1	Al 396.153Radial†	-89.3	-18.0	-14.782	ug/L	-14.782	ppb	11:06:33
1	Ca 317.933Radial†	32.9	4.3	6.0431	ug/L	6.0431	ppb	11:06:53
1	Fe 238.204 Radial†	33.1	-1.3	-5.2293	ug/L	-5.2293	ppb	11:06:53
1	K 766.490 Radial†	2548.1	178.7	38.547	ug/L	38.547	ppb	11:06:33
1	Mg 279.077 IEC†	2.9	-0.1	-2.5683	ug/L	-2.5683	ppb	11:06:53
1	Na 589.592 Radial†	-30.3	104.8	6.4324	ug/L	6.4324	ppb	11:06:33
1	Sr 421.552†	18.9	75.1	0.2096	ug/L	0.2096	ppb	11:06:33
1	Sc 361.383	728492.4	728492.4	101.36	%			11:07:50
1	Y 371.029	571035.3	571035.3	101.61	%			11:07:50
1	Ag 328.068†	631.7	-9.5	-0.0600	ug/L	-0.0600	ppb	11:07:50
1	As 188.979†	-28.4	7.4	2.6780	ug/L	2.6780	ppb	11:08:10
1	B 249.677†	-589.2	358.7	9.0389	ug/L	9.0389	ppb	11:07:50
1	Ba 233.527†	25.1	24.2	0.1721	ug/L	0.1721	ppb	11:08:10
1	Be 313.107†	-4679.9	264.8	0.1213	ug/L	0.1213	ppb	11:07:50
1	Cd 226.502†	-254.6	30.0	0.3830	ug/L	0.3830	ppb	11:08:10
1	Co 228.616†	-95.8	5.0	0.0862	ug/L	0.0862	ppb	11:08:10
1	Cr 267.716†	-52.7	25.4	0.3547	ug/L	0.3547	ppb	11:07:50
1	Cu 324.752†	5672.3	-42.5	-0.1541	ug/L	-0.1541	ppb	11:07:50
1	Mn 257.610†	704.2	15.1	0.0161	ug/L	0.0161	ppb	11:08:10
1	Mo 202.031†	17.3	-0.1	-0.0066	ug/L	-0.0066	ppb	11:08:10
1	Ni 231.604†	132.1	10.5	0.2808	ug/L	0.2808	ppb	11:08:10
1	P 214.914†	302.8	-16.1	-8.1629	ug/L	-8.1629	ppb	11:08:10
1	Pb 220.353†	-1.8	11.5	1.3675	ug/L	1.3675	ppb	11:08:10
1	S 181.975 Axial†	82.9	6.3	8.6662	ug/L	8.6662	ppb	11:08:10
1	Sb 206.836†	50.0	-7.9	-2.3383	ug/L	-2.3383	ppb	11:08:10
1	Se 196.026†	-25.7	3.4	1.7142	ug/L	1.7142	ppb	11:08:10
1	Si 251.611†	527.4	108.5	3.3159	ug/L	3.3159	ppb	11:08:10
1	Sn 189.927†	22.2	9.4	1.6619	ug/L	1.6619	ppb	11:08:10
1	Ti 334.940†	-1354.1	12.4	0.0209	ug/L	0.0209	ppb	11:07:50
1	Tl 190.801†	-56.7	4.8	1.2660	ug/L	1.2660	ppb	11:08:10
1	U 409.014†	-4780.0	133.1	4.5069	ug/L	4.5069	ppb	11:07:50
1	V 292.402†	-1529.6	56.2	0.5195	ug/L	0.5195	ppb	11:07:50
1	Zn 213.857†	994.4	55.9	0.5148	ug/L	0.5148	ppb	11:08:10
1	SiO2†	560.3	115.9	7.5403	ug/L	7.5403	ppb	11:09:06
2	Sc Radial	7520.6	7520.6	101	%			11:06:58
2	Y RADIAL	6922.2	6922.2	99.97	%			11:06:58
2	Al 396.153Radial†	-54.9	18.1	14.887	ug/L	14.887	ppb	11:06:58
2	Ca 317.933Radial†	32.4	3.1	4.4074	ug/L	4.4074	ppb	11:07:18
2	Fe 238.204 Radial†	40.1	5.0	20.992	ug/L	20.992	ppb	11:07:18
2	K 766.490 Radial†	2407.0	-14.9	-3.2266	ug/L	-3.2266	ppb	11:06:58
2	Mg 279.077 IEC†	1.5	-1.5	-38.623	ug/L	-38.623	ppb	11:07:18
2	Na 589.592 Radial†	-80.6	55.5	3.4061	ug/L	3.4061	ppb	11:06:58
2	Sr 421.552†	-47.4	8.7	0.0244	ug/L	0.0244	ppb	11:06:58
2	Sc 361.383	728647.1	728647.1	101.39	%			11:08:16
2	Y 371.029	570984.1	570984.1	101.60	%			11:08:16
2	Ag 328.068†	543.1	-96.9	-0.5685	ug/L	-0.5685	ppb	11:08:16
2	As 188.979†	-28.6	7.2	2.6118	ug/L	2.6118	ppb	11:08:36
2	B 249.677†	-764.1	186.3	4.6931	ug/L	4.6931	ppb	11:08:16
2	Ba 233.527†	3.2	2.6	0.0209	ug/L	0.0209	ppb	11:08:36
2	Be 313.107†	-4636.0	309.1	0.1414	ug/L	0.1414	ppb	11:08:16
2	Cd 226.502†	-290.4	-5.3	-0.0703	ug/L	-0.0703	ppb	11:08:36
2	Co 228.616†	-107.0	-6.1	-0.1039	ug/L	-0.1039	ppb	11:08:36
2	Cr 267.716†	-64.0	14.3	0.2021	ug/L	0.2021	ppb	11:08:16
2	Cu 324.752†	5705.6	-10.8	-0.0379	ug/L	-0.0379	ppb	11:08:16
2	Mn 257.610†	685.6	-3.4	-0.0004	ug/L	-0.0004	ppb	11:08:36
2	Mo 202.031†	25.6	8.1	0.5737	ug/L	0.5737	ppb	11:08:36
2	Ni 231.604†	130.2	8.6	0.2296	ug/L	0.2296	ppb	11:08:36

2	P 214.914†	323.9	4.7	2.3879 ug/L	2.3879 ppb	11:08:36
2	Pb 220.353†	-10.2	3.1	0.3766 ug/L	0.3766 ppb	11:08:36
2	S 181.975 Axial†	83.1	6.5	8.9582 ug/L	8.9582 ppb	11:08:36
2	Sb 206.836†	61.2	3.1	0.9360 ug/L	0.9360 ppb	11:08:36
2	Se 196.026†	-29.5	-0.3	-0.0928 ug/L	-0.0928 ppb	11:08:36
2	Si 251.611†	502.3	83.7	2.5823 ug/L	2.5823 ppb	11:08:36
2	Sn 189.927†	9.4	-3.2	-0.5694 ug/L	-0.5694 ppb	11:08:36
2	Ti 334.940†	-1385.2	-18.0	-0.0330 ug/L	-0.0330 ppb	11:08:16
2	Tl 190.801†	-57.5	4.0	1.0469 ug/L	1.0469 ppb	11:08:36
2	U 409.014†	-4900.3	15.4	0.5177 ug/L	0.5177 ppb	11:08:16
2	V 292.402†	-1462.9	122.3	1.1153 ug/L	1.1153 ppb	11:08:16
2	Zn 213.857†	990.6	52.0	0.4772 ug/L	0.4772 ppb	11:08:36
2	SiO2†	527.4	83.3	5.4746 ug/L	5.4746 ppb	11:09:11
3	Sc Radial	7467.1	7467.1	99.9 %		11:07:24
3	Y RADIAL	6890.2	6890.2	99.51 %		11:07:24
3	Al 396.153Radial†	-117.4	-44.9	-36.953 ug/L	-36.953 ppb	11:07:24
3	Ca 317.933Radial†	34.2	5.2	7.3018 ug/L	7.3018 ppb	11:07:44
3	Fe 238.204 Radial†	34.3	-0.4	-1.7725 ug/L	-1.7725 ppb	11:07:44
3	K 766.490 Radial†	2550.1	145.5	31.394 ug/L	31.394 ppb	11:07:24
3	Mg 279.077 IEC†	-0.5	-3.6	-88.784 ug/L	-88.784 ppb	11:07:44
3	Na 589.592 Radial†	-14.1	121.5	7.4542 ug/L	7.4542 ppb	11:07:24
3	Sr 421.552†	-10.5	45.3	0.1265 ug/L	0.1265 ppb	11:07:24
3	Sc 361.383	732992.4	732992.4	101.99 %		11:08:41
3	Y 371.029	573758.4	573758.4	102.09 %		11:08:41
3	Ag 328.068†	703.3	56.9	0.3346 ug/L	0.3346 ppb	11:08:41
3	As 188.979†	-29.2	6.8	2.4619 ug/L	2.4619 ppb	11:09:01
3	B 249.677†	-699.1	254.5	6.4135 ug/L	6.4135 ppb	11:08:41
3	Ba 233.527†	33.7	32.5	0.2297 ug/L	0.2297 ppb	11:09:01
3	Be 313.107†	-4724.9	249.0	0.1140 ug/L	0.1140 ppb	11:08:41
3	Cd 226.502†	-265.1	21.1	0.2695 ug/L	0.2695 ppb	11:09:01
3	Co 228.616†	-98.7	2.7	0.0445 ug/L	0.0445 ppb	11:09:01
3	Cr 267.716†	-56.2	22.3	0.3109 ug/L	0.3109 ppb	11:08:41
3	Cu 324.752†	5668.8	-80.3	-0.2910 ug/L	-0.2910 ppb	11:08:41
3	Mn 257.610†	700.1	6.8	0.0090 ug/L	0.0090 ppb	11:09:01
3	Mo 202.031†	8.1	-9.2	-0.6488 ug/L	-0.6488 ppb	11:09:01
3	Ni 231.604†	115.0	-7.0	-0.1876 ug/L	-0.1876 ppb	11:09:01
3	P 214.914†	312.0	-8.9	-4.4559 ug/L	-4.4559 ppb	11:09:01
3	Pb 220.353†	3.3	16.5	1.9544 ug/L	1.9544 ppb	11:09:01
3	S 181.975 Axial†	87.1	10.0	13.702 ug/L	13.702 ppb	11:09:01
3	Sb 206.836†	48.7	-9.5	-2.8044 ug/L	-2.8044 ppb	11:09:01
3	Se 196.026†	-31.7	-2.3	-1.1651 ug/L	-1.1651 ppb	11:09:01
3	Si 251.611†	504.6	83.0	2.5402 ug/L	2.5402 ppb	11:09:01
3	Sn 189.927†	22.8	9.8	1.7428 ug/L	1.7428 ppb	11:09:01
3	Ti 334.940†	-1368.8	6.2	0.0091 ug/L	0.0091 ppb	11:08:41
3	Tl 190.801†	-50.7	11.1	2.8932 ug/L	2.8932 ppb	11:09:01
3	U 409.014†	-4769.8	172.0	5.8227 ug/L	5.8227 ppb	11:08:41
3	V 292.402†	-1585.3	10.8	0.1001 ug/L	0.1001 ppb	11:08:41
3	Zn 213.857†	996.4	51.8	0.4830 ug/L	0.4830 ppb	11:09:01
3	SiO2†	547.1	99.5	6.4910 ug/L	6.4910 ppb	11:09:16

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	730044.0	101.58	%	0.355				0.35%
Sc Radial	7451.1	99.7	%	1.05				1.06%
Y 371.029	571925.9	101.77	%	0.282				0.28%
Y RADIAL	6872.6	99.25	%	0.871				0.88%
Ag 328.068†	-16.5	-0.0980	ug/L	0.45276	-0.0980	ppb	0.45276	462.07%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-14.9	-12.283	ug/L	26.0102	-12.283	ppb	26.0102	211.76%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.2	2.5839	ug/L	0.11071	2.5839	ppb	0.11071	4.28%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	266.5	6.7152	ug/L	2.18855	6.7152	ppb	2.18855	32.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	19.8	0.1409	ug/L	0.10782	0.1409	ppb	0.10782	76.53%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	274.3	0.1256	ug/L	0.01420	0.1256	ppb	0.01420	11.31%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.2	5.9174	ug/L	1.45127	5.9174	ppb	1.45127	24.53%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                15.3      0.1941 ug/L       0.23587      0.1941 ppb        0.23587 121.52%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 0.5      0.0089 ug/L       0.09992      0.0089 ppb        0.09992 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                20.7      0.2892 ug/L       0.07855      0.2892 ppb        0.07855  27.16%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -44.5     -0.1610 ug/L       0.12666     -0.1610 ppb        0.12666  78.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.1      4.6633 ug/L      14.24596      4.6633 ppb       14.24596 305.49%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         103.1     22.238 ug/L       22.3410      22.238 ppb        22.3410 100.46%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.7    -43.325 ug/L       43.2999     -43.325 ppb        43.2999  99.94%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                 6.2      0.0082 ug/L       0.00824      0.0082 ppb        0.00824 100.09%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.4     -0.0272 ug/L       0.61151     -0.0272 ppb        0.61151 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         93.9      5.7642 ug/L       2.10510      5.7642 ppb        2.10510  36.52%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 4.0      0.1076 ug/L       0.25693      0.1076 ppb        0.25693 238.78%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.8     -3.4103 ug/L       5.35253     -3.4103 ppb        5.35253 156.95%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                10.4      1.2328 ug/L       0.79748      1.2328 ppb        0.79748  64.69%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.6      10.442 ug/L        2.8268      10.442 ppb         2.8268  27.07%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -4.8     -1.4022 ug/L       2.03830     -1.4022 ppb        2.03830 145.36%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.3      0.1521 ug/L       1.45521      0.1521 ppb        1.45521 956.84%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                91.7      2.8128 ug/L       0.43618      2.8128 ppb        0.43618  15.51%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.3      0.9451 ug/L       1.31223      0.9451 ppb        1.31223 138.85%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                43.0      0.1202 ug/L       0.09280      0.1202 ppb        0.09280  77.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 0.2     -0.0010 ug/L       0.02834     -0.0010 ppb        0.02834 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.6      1.7354 ug/L       1.00868      1.7354 ppb        1.00868  58.12%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                106.8      3.6158 ug/L       2.76251      3.6158 ppb        2.76251  76.40%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 63.1      0.5783 ug/L       0.51014      0.5783 ppb        0.51014  88.22%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                53.2      0.4917 ug/L       0.02026      0.4917 ppb        0.02026   4.12%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      99.5      6.5020 ug/L       1.03286      6.5020 ppb        1.03286  15.89%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 11:52:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7651.7	7651.7	102	%			11:54:44
1	Y RADIAL	7137.7	7137.7	103.1	%			11:54:44
1	Al 396.153Radial†	6083.8	6015.6	4932.2	ug/L	4932.2	ppb	11:54:24
1	Ca 317.933Radial†	3595.9	3483.6	4934.9	ug/L	4934.9	ppb	11:54:44
1	Fe 238.204 Radial†	1199.3	1136.8	4754.3	ug/L	4754.3	ppb	11:54:44
1	K 766.490 Radial†	24321.8	21351.6	4593.5	ug/L	4593.5	ppb	11:54:24
1	Mg 279.077 IEC†	207.3	199.5	4979.2	ug/L	4979.2	ppb	11:54:44
1	Na 589.592 Radial†	161684.3	158077.3	9701.6	ug/L	9701.6	ppb	11:54:24
1	Sr 421.552†	167822.7	163993.9	457.99	ug/L	457.99	ppb	11:54:24
1	Sc 361.383	744388.0	744388.0	103.58	%			11:55:43
1	Y 371.029	574786.2	574786.2	102.28	%			11:55:43
1	Ag 328.068†	88348.0	84665.3	508.81	ug/L	508.81	ppb	11:55:43
1	As 188.979†	1410.9	1397.6	507.17	ug/L	507.17	ppb	11:56:03
1	B 249.677†	19853.2	20107.7	503.88	ug/L	503.88	ppb	11:55:43
1	Ba 233.527†	74986.6	72397.3	511.94	ug/L	511.94	ppb	11:55:43
1	Be 313.107†	1153787.7	1118837.0	513.27	ug/L	513.27	ppb	11:55:43
1	Cd 226.502†	39844.3	38749.9	494.02	ug/L	494.02	ppb	11:56:03
1	Co 228.616†	29656.2	28731.8	498.49	ug/L	498.49	ppb	11:56:03
1	Cr 267.716†	37552.8	36333.7	509.84	ug/L	509.84	ppb	11:55:43
1	Cu 324.752†	150414.6	139583.4	506.09	ug/L	506.09	ppb	11:55:43
1	Mn 257.610†	479727.5	462486.1	510.52	ug/L	510.52	ppb	11:55:43
1	Mo 202.031†	7428.6	7155.0	504.01	ug/L	504.01	ppb	11:56:03
1	Ni 231.604†	19436.9	18646.1	498.09	ug/L	498.09	ppb	11:56:03
1	P 214.914†	5441.6	4939.0	2425.6	ug/L	2425.6	ppb	11:56:03
1	Pb 220.353†	4406.2	4267.4	509.60	ug/L	509.60	ppb	11:56:03
1	S 181.975 Axial†	846.9	742.2	1015.8	ug/L	1015.8	ppb	11:56:03
1	Sb 206.836†	1803.7	1684.2	506.44	ug/L	506.44	ppb	11:56:03
1	Se 196.026†	997.3	991.6	522.92	ug/L	522.92	ppb	11:56:03
1	Si 251.611†	86686.8	83282.4	2555.0	ug/L	2555.0	ppb	11:55:43
1	Sn 189.927†	2954.3	2839.8	503.47	ug/L	503.47	ppb	11:56:03
1	Ti 334.940†	284554.5	276079.0	505.34	ug/L	505.34	ppb	11:55:43
1	Tl 190.801†	1952.6	1946.0	512.51	ug/L	512.51	ppb	11:56:03
1	U 409.014†	10428.5	14917.2	503.55	ug/L	503.55	ppb	11:55:43
1	V 292.402†	56156.7	55783.2	512.67	ug/L	512.67	ppb	11:55:43
1	Zn 213.857†	58255.7	55319.4	505.95	ug/L	505.95	ppb	11:55:43
1	SiO2†	85799.0	82400.1	5381.0	ug/L	5381.0	ppb	11:57:03
2	Sc Radial	7165.7	7165.7	95.9	%			11:55:10
2	Y RADIAL	6575.4	6575.4	94.96	%			11:55:10
2	Al 396.153Radial†	6218.8	6559.5	5380.0	ug/L	5380.0	ppb	11:54:50
2	Ca 317.933Radial†	3617.3	3744.1	5304.0	ug/L	5304.0	ppb	11:55:10
2	Fe 238.204 Radial†	1209.3	1226.6	5128.7	ug/L	5128.7	ppb	11:55:10
2	K 766.490 Radial†	24712.0	23370.0	5028.8	ug/L	5028.8	ppb	11:54:50
2	Mg 279.077 IEC†	203.6	209.3	5224.9	ug/L	5224.9	ppb	11:55:10
2	Na 589.592 Radial†	164743.4	171980.1	10555	ug/L	10555	ppb	11:54:50
2	Sr 421.552†	170948.2	178372.7	498.15	ug/L	498.15	ppb	11:54:50
2	Sc 361.383	749020.2	749020.2	104.22	%			11:56:11
2	Y 371.029	577772.1	577772.1	102.81	%			11:56:11
2	Ag 328.068†	88621.7	84400.4	507.33	ug/L	507.33	ppb	11:56:11
2	As 188.979†	1428.3	1405.9	510.25	ug/L	510.25	ppb	11:56:31
2	B 249.677†	19956.4	20088.2	503.36	ug/L	503.36	ppb	11:56:11
2	Ba 233.527†	75280.5	72231.6	510.76	ug/L	510.76	ppb	11:56:11
2	Be 313.107†	1159234.9	1117174.5	512.50	ug/L	512.50	ppb	11:56:11
2	Cd 226.502†	40076.5	38734.8	493.78	ug/L	493.78	ppb	11:56:31
2	Co 228.616†	29834.6	28725.9	498.38	ug/L	498.38	ppb	11:56:31
2	Cr 267.716†	37755.8	36304.3	509.43	ug/L	509.43	ppb	11:56:11
2	Cu 324.752†	150915.7	139166.1	504.60	ug/L	504.60	ppb	11:56:11
2	Mn 257.610†	482150.4	461946.5	509.96	ug/L	509.96	ppb	11:56:11
2	Mo 202.031†	7480.9	7160.8	504.45	ug/L	504.45	ppb	11:56:31
2	Ni 231.604†	19539.0	18628.0	497.61	ug/L	497.61	ppb	11:56:31

2	P 214.914†	5495.4	4958.1	2435.5 ug/L	2435.5 ppb	11:56:31
2	Pb 220.353†	4445.8	4279.0	511.04 ug/L	511.04 ppb	11:56:31
2	S 181.975 Axial†	848.2	738.4	1010.5 ug/L	1010.5 ppb	11:56:31
2	Sb 206.836†	1825.6	1694.4	509.48 ug/L	509.48 ppb	11:56:31
2	Se 196.026†	1003.1	991.2	523.98 ug/L	523.98 ppb	11:56:31
2	Si 251.611†	87228.1	83284.1	2554.9 ug/L	2554.9 ppb	11:56:11
2	Sn 189.927†	2974.6	2841.7	503.87 ug/L	503.87 ppb	11:56:31
2	Ti 334.940†	286071.2	275835.3	504.91 ug/L	504.91 ppb	11:56:11
2	Tl 190.801†	1932.4	1915.0	504.40 ug/L	504.40 ppb	11:56:31
2	U 409.014†	10523.2	14945.8	504.47 ug/L	504.47 ppb	11:56:11
2	V 292.402†	56362.2	55645.0	511.37 ug/L	511.37 ppb	11:56:11
2	Zn 213.857†	58590.5	55292.8	505.67 ug/L	505.67 ppb	11:56:11
2	SiO2†	86417.9	82481.6	5386.0 ug/L	5386.0 ppb	11:57:09
3	Sc Radial	7319.7	7319.7	97.9 %		11:55:35
3	Y RADIAL	6733.7	6733.7	97.25 %		11:55:35
3	Al 396.153Radial†	6287.9	6493.6	5325.5 ug/L	5325.5 ppb	11:55:15
3	Ca 317.933Radial†	3688.6	3737.5	5294.6 ug/L	5294.6 ppb	11:55:35
3	Fe 238.204 Radial†	1223.8	1214.9	5080.0 ug/L	5080.0 ppb	11:55:35
3	K 766.490 Radial†	24945.3	23066.0	4963.2 ug/L	4963.2 ppb	11:55:15
3	Mg 279.077 IEC†	211.0	212.4	5301.6 ug/L	5301.6 ppb	11:55:35
3	Na 589.592 Radial†	166850.6	170517.3	10465 ug/L	10465 ppb	11:55:15
3	Sr 421.552†	173511.1	177239.0	494.98 ug/L	494.98 ppb	11:55:15
3	Sc 361.383	740419.2	740419.2	103.02 %		11:56:38
3	Y 371.029	571986.6	571986.6	101.78 %		11:56:38
3	Ag 328.068†	87696.7	84490.4	507.86 ug/L	507.86 ppb	11:56:38
3	As 188.979†	1426.3	1419.9	515.26 ug/L	515.26 ppb	11:56:58
3	B 249.677†	19642.0	20005.5	501.25 ug/L	501.25 ppb	11:56:38
3	Ba 233.527†	74465.2	72279.3	511.10 ug/L	511.10 ppb	11:56:38
3	Be 313.107†	1144420.5	1115715.8	511.84 ug/L	511.84 ppb	11:56:38
3	Cd 226.502†	40084.3	39189.0	499.59 ug/L	499.59 ppb	11:56:58
3	Co 228.616†	29827.3	29051.3	504.04 ug/L	504.04 ppb	11:56:58
3	Cr 267.716†	37244.3	36228.7	508.38 ug/L	508.38 ppb	11:56:38
3	Cu 324.752†	148855.8	138848.8	503.44 ug/L	503.44 ppb	11:56:38
3	Mn 257.610†	476478.4	461815.1	509.81 ug/L	509.81 ppb	11:56:38
3	Mo 202.031†	7477.4	7240.9	510.08 ug/L	510.08 ppb	11:56:58
3	Ni 231.604†	19572.6	18878.4	504.30 ug/L	504.30 ppb	11:56:58
3	P 214.914†	5519.2	5042.4	2478.9 ug/L	2478.9 ppb	11:56:58
3	Pb 220.353†	4424.2	4307.6	514.45 ug/L	514.45 ppb	11:56:58
3	S 181.975 Axial†	849.9	749.5	1025.8 ug/L	1025.8 ppb	11:56:58
3	Sb 206.836†	1830.8	1719.8	517.30 ug/L	517.30 ppb	11:56:58
3	Se 196.026†	1007.9	1007.1	531.92 ug/L	531.92 ppb	11:56:58
3	Si 251.611†	85938.1	83004.2	2546.1 ug/L	2546.1 ppb	11:56:38
3	Sn 189.927†	2983.0	2882.9	511.17 ug/L	511.17 ppb	11:56:58
3	Ti 334.940†	282816.0	275864.2	504.97 ug/L	504.97 ppb	11:56:38
3	Tl 190.801†	1960.9	1964.1	517.24 ug/L	517.24 ppb	11:56:58
3	U 409.014†	10268.3	14815.7	500.07 ug/L	500.07 ppb	11:56:38
3	V 292.402†	55820.6	55747.6	512.37 ug/L	512.37 ppb	11:56:38
3	Zn 213.857†	57893.1	55268.9	505.41 ug/L	505.41 ppb	11:56:38
3	SiO2†	85553.5	82605.8	5393.8 ug/L	5393.8 ppb	11:57:14

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	744609.1	103.61	%	0.599				0.58%
Sc Radial	7379.0	98.7	%	3.32				3.37%
Y 371.029	574848.3	102.29	%	0.515				0.50%
Y RADIAL	6815.6	98.43	%	4.187				4.25%
Ag 328.068†	84518.7	508.00	ug/L	0.747	508.00	ppb	0.747	0.15%
QC value within limits for Ag 328.068 Recovery = 101.60%								
Al 396.153Radial†	6356.3	5212.6	ug/L	244.36	5212.6	ppb	244.36	4.69%
QC value within limits for Al 396.153Radial Recovery = 104.25%								
As 188.979†	1407.8	510.89	ug/L	4.082	510.89	ppb	4.082	0.80%
QC value within limits for As 188.979 Recovery = 102.18%								
B 249.677†	20067.1	502.83	ug/L	1.392	502.83	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.57%								
Ba 233.527†	72302.7	511.27	ug/L	0.604	511.27	ppb	0.604	0.12%
QC value within limits for Ba 233.527 Recovery = 102.25%								
Be 313.107†	1117242.4	512.53	ug/L	0.715	512.53	ppb	0.715	0.14%
QC value within limits for Be 313.107 Recovery = 102.51%								
Ca 317.933Radial†	3655.1	5177.8	ug/L	210.45	5177.8	ppb	210.45	4.06%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.56%
Cd 226.502†            38891.2      495.79 ug/L         3.285      495.79 ppb          3.285   0.66%
   QC value within limits for Cd 226.502  Recovery = 99.16%
Co 228.616†            28836.3      500.30 ug/L         3.237      500.30 ppb          3.237   0.65%
   QC value within limits for Co 228.616  Recovery = 100.06%
Cr 267.716†            36288.9      509.22 ug/L         0.756      509.22 ppb          0.756   0.15%
   QC value within limits for Cr 267.716  Recovery = 101.84%
Cu 324.752†           139199.4      504.71 ug/L         1.325      504.71 ppb          1.325   0.26%
   QC value within limits for Cu 324.752  Recovery = 100.94%
Fe 238.204 Radial†      1192.7      4987.7 ug/L        203.57      4987.7 ppb         203.57   4.08%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.75%
K 766.490 Radial†      22595.9      4861.8 ug/L        234.72      4861.8 ppb         234.72   4.83%
   QC value within limits for K 766.490 Radial  Recovery = 97.24%
Mg 279.077 IEC†          207.1      5168.6 ug/L        168.46      5168.6 ppb         168.46   3.26%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.37%
Mn 257.610†           462082.6      510.10 ug/L         0.371      510.10 ppb          0.371   0.07%
   QC value within limits for Mn 257.610  Recovery = 102.02%
Mo 202.031†             7185.6      506.18 ug/L         3.383      506.18 ppb          3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.24%
Na 589.592 Radial†    166858.3       10241 ug/L         468.9       10241 ppb          468.9   4.58%
   QC value within limits for Na 589.592 Radial  Recovery = 102.41%
Ni 231.604†            18717.5      500.00 ug/L         3.730      500.00 ppb          3.730   0.75%
   QC value within limits for Ni 231.604  Recovery = 100.00%
P 214.914†              4979.8      2446.7 ug/L         28.35      2446.7 ppb          28.35   1.16%
   QC value within limits for P 214.914  Recovery = 97.87%
Pb 220.353†             4284.6      511.70 ug/L         2.490      511.70 ppb          2.490   0.49%
   QC value within limits for Pb 220.353  Recovery = 102.34%
S 181.975 Axial†         743.4      1017.4 ug/L          7.74      1017.4 ppb           7.74   0.76%
   QC value within limits for S 181.975 Axial  Recovery = 101.74%
Sb 206.836†             1699.5      511.08 ug/L         5.604      511.08 ppb          5.604   1.10%
   QC value within limits for Sb 206.836  Recovery = 102.22%
Se 196.026†              996.7      526.27 ug/L         4.918      526.27 ppb          4.918   0.93%
   QC value within limits for Se 196.026  Recovery = 105.25%
Si 251.611†            83190.2      2552.0 ug/L          5.12      2552.0 ppb           5.12   0.20%
   QC value within limits for Si 251.611  Recovery = 102.08%
Sn 189.927†             2854.8      506.17 ug/L         4.333      506.17 ppb          4.333   0.86%
   QC value within limits for Sn 189.927  Recovery = 101.23%
Sr 421.552†           173201.9      483.71 ug/L        22.327      483.71 ppb         22.327   4.62%
   QC value within limits for Sr 421.552  Recovery = 96.74%
Ti 334.940†           275926.2      505.07 ug/L         0.231      505.07 ppb          0.231   0.05%
   QC value within limits for Ti 334.940  Recovery = 101.01%
Tl 190.801†             1941.7      511.38 ug/L         6.494      511.38 ppb          6.494   1.27%
   QC value within limits for Tl 190.801  Recovery = 102.28%
U 409.014†             14892.9      502.70 ug/L         2.319      502.70 ppb          2.319   0.46%
   QC value within limits for U 409.014  Recovery = 100.54%
V 292.402†             55725.3      512.14 ug/L         0.679      512.14 ppb          0.679   0.13%
   QC value within limits for V 292.402  Recovery = 102.43%
Zn 213.857†            55293.7      505.68 ug/L         0.274      505.68 ppb          0.274   0.05%
   QC value within limits for Zn 213.857  Recovery = 101.14%
SiO2†                  82495.8      5386.9 ug/L          6.44      5386.9 ppb           6.44   0.12%
   QC value within limits for SiO2  Recovery = 100.74%
All analyte(s) passed QC.
```

Sequence No.: 16
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 11:59:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6676.6	6676.6	89.3	%			12:01:16
1	Y RADIAL	6221.6	6221.6	89.85	%			12:01:16
1	Al 396.153Radial†	-74.0	-10.2	-8.3558	ug/L	-8.3558	ppb	12:01:16
1	Ca 317.933Radial†	31.1	5.8	8.1594	ug/L	8.1594	ppb	12:01:36
1	Fe 238.204 Radial†	36.5	6.1	25.452	ug/L	25.452	ppb	12:01:36
1	K 766.490 Radial†	2487.6	377.7	81.514	ug/L	81.514	ppb	12:01:16
1	Mg 279.077 IEC†	6.6	4.3	107.37	ug/L	107.37	ppb	12:01:36
1	Na 589.592 Radial†	-155.2	-38.2	-2.3449	ug/L	-2.3449	ppb	12:01:16
1	Sr 421.552†	-43.6	7.0	0.0196	ug/L	0.0196	ppb	12:01:16
1	Sc 361.383	722196.1	722196.1	100.49	%			12:02:33
1	Y 371.029	566873.9	566873.9	100.87	%			12:02:33
1	Ag 328.068†	661.5	25.6	0.1612	ug/L	0.1612	ppb	12:02:33
1	As 188.979†	-35.7	-0.0	-0.0121	ug/L	-0.0121	ppb	12:02:53
1	B 249.677†	-645.8	297.3	7.4909	ug/L	7.4909	ppb	12:02:33
1	Ba 233.527†	10.4	9.8	0.0698	ug/L	0.0698	ppb	12:02:53
1	Be 313.107†	-4667.2	237.2	0.1083	ug/L	0.1083	ppb	12:02:33
1	Cd 226.502†	-262.4	20.0	0.2521	ug/L	0.2521	ppb	12:02:53
1	Co 228.616†	-99.7	0.3	0.0031	ug/L	0.0031	ppb	12:02:53
1	Cr 267.716†	-90.0	-12.1	-0.1697	ug/L	-0.1697	ppb	12:02:33
1	Cu 324.752†	5702.3	36.2	0.1327	ug/L	0.1327	ppb	12:02:33
1	Mn 257.610†	713.1	30.1	0.0343	ug/L	0.0343	ppb	12:02:33
1	Mo 202.031†	9.5	-7.7	-0.5372	ug/L	-0.5372	ppb	12:02:53
1	Ni 231.604†	138.5	18.0	0.4814	ug/L	0.4814	ppb	12:02:53
1	P 214.914†	305.5	-10.8	-5.5324	ug/L	-5.5324	ppb	12:02:53
1	Pb 220.353†	12.8	26.0	3.0925	ug/L	3.0925	ppb	12:02:53
1	S 181.975 Axial†	84.6	8.8	12.017	ug/L	12.017	ppb	12:02:53
1	Sb 206.836†	59.4	1.9	0.5718	ug/L	0.5718	ppb	12:02:53
1	Se 196.026†	-32.6	-3.7	-1.8088	ug/L	-1.8088	ppb	12:02:53
1	Si 251.611†	471.3	57.2	1.7336	ug/L	1.7336	ppb	12:02:53
1	Sn 189.927†	18.9	6.3	1.1223	ug/L	1.1223	ppb	12:02:53
1	Ti 334.940†	-1417.4	-62.3	-0.1140	ug/L	-0.1140	ppb	12:02:33
1	Tl 190.801†	-48.4	12.6	3.2842	ug/L	3.2842	ppb	12:02:53
1	U 409.014†	-4843.9	28.3	0.9560	ug/L	0.9560	ppb	12:02:33
1	V 292.402†	-1549.3	23.4	0.2065	ug/L	0.2065	ppb	12:02:33
1	Zn 213.857†	997.4	67.5	0.6132	ug/L	0.6132	ppb	12:02:53
1	SiO2†	511.0	71.6	4.6352	ug/L	4.6352	ppb	12:03:49
2	Sc Radial	7850.3	7850.3	105	%			12:01:41
2	Y RADIAL	7299.1	7299.1	105.4	%			12:01:41
2	Al 396.153Radial†	-80.8	-4.3	-3.5266	ug/L	-3.5266	ppb	12:01:41
2	Ca 317.933Radial†	37.6	6.7	9.5130	ug/L	9.5130	ppb	12:02:01
2	Fe 238.204 Radial†	37.1	0.5	2.1865	ug/L	2.1865	ppb	12:02:01
2	K 766.490 Radial†	2543.6	14.7	3.1649	ug/L	3.1649	ppb	12:01:41
2	Mg 279.077 IEC†	5.2	1.9	46.597	ug/L	46.597	ppb	12:02:01
2	Na 589.592 Radial†	-97.8	42.4	2.6046	ug/L	2.6046	ppb	12:01:41
2	Sr 421.552†	-10.6	45.8	0.1278	ug/L	0.1278	ppb	12:01:41
2	Sc 361.383	738106.8	738106.8	102.70	%			12:02:58
2	Y 371.029	578058.3	578058.3	102.86	%			12:02:58
2	Ag 328.068†	702.7	51.6	0.3084	ug/L	0.3084	ppb	12:02:58
2	As 188.979†	-28.3	7.9	2.8321	ug/L	2.8321	ppb	12:03:18
2	B 249.677†	-737.6	221.8	5.5873	ug/L	5.5873	ppb	12:02:58
2	Ba 233.527†	34.1	32.7	0.2315	ug/L	0.2315	ppb	12:03:18
2	Be 313.107†	-4673.0	331.6	0.1518	ug/L	0.1518	ppb	12:02:58
2	Cd 226.502†	-270.9	17.3	0.2209	ug/L	0.2209	ppb	12:03:18
2	Co 228.616†	-85.3	16.4	0.2843	ug/L	0.2843	ppb	12:03:18
2	Cr 267.716†	-38.2	40.2	0.5638	ug/L	0.5638	ppb	12:02:58
2	Cu 324.752†	5712.8	-75.9	-0.2750	ug/L	-0.2750	ppb	12:02:58
2	Mn 257.610†	706.1	8.0	0.0082	ug/L	0.0082	ppb	12:02:58
2	Mo 202.031†	20.8	3.1	0.2205	ug/L	0.2205	ppb	12:03:18
2	Ni 231.604†	123.8	0.7	0.0186	ug/L	0.0186	ppb	12:03:18

2	P 214.914†	315.2	-7.9	-3.9885	ug/L	-3.9885	ppb	12:03:18
2	Pb 220.353†	-5.4	8.0	0.9477	ug/L	0.9477	ppb	12:03:18
2	S 181.975 Axial†	83.9	6.3	8.5731	ug/L	8.5731	ppb	12:03:18
2	Sb 206.836†	59.1	0.3	0.0711	ug/L	0.0711	ppb	12:03:18
2	Se 196.026†	-25.3	4.1	2.1232	ug/L	2.1232	ppb	12:03:18
2	Si 251.611†	478.4	54.0	1.6718	ug/L	1.6718	ppb	12:03:18
2	Sn 189.927†	9.6	-3.2	-0.5582	ug/L	-0.5582	ppb	12:03:18
2	Ti 334.940†	-1390.3	-5.5	-0.0105	ug/L	-0.0105	ppb	12:02:58
2	Tl 190.801†	-56.0	6.2	1.6193	ug/L	1.6193	ppb	12:03:18
2	U 409.014†	-4919.4	58.8	1.9895	ug/L	1.9895	ppb	12:02:58
2	V 292.402†	-1566.7	39.7	0.3675	ug/L	0.3675	ppb	12:02:58
2	Zn 213.857†	991.9	40.7	0.3737	ug/L	0.3737	ppb	12:03:18
2	SiO2†	510.4	60.1	3.9610	ug/L	3.9610	ppb	12:03:54
3	Sc Radial	7481.5	7481.5	100	%			12:02:06
3	Y RADIAL	6948.3	6948.3	100.3	%			12:02:06
3	Al 396.153Radial†	-66.5	6.2	5.1212	ug/L	5.1212	ppb	12:02:06
3	Ca 317.933Radial†	29.3	0.2	0.2331	ug/L	0.2331	ppb	12:02:26
3	Fe 238.204 Radial†	38.4	3.6	15.060	ug/L	15.060	ppb	12:02:26
3	K 766.490 Radial†	2403.8	-5.6	-1.2057	ug/L	-1.2057	ppb	12:02:06
3	Mg 279.077 IEC†	2.5	-0.6	-13.800	ug/L	-13.800	ppb	12:02:26
3	Na 589.592 Radial†	-192.8	-57.0	-3.4996	ug/L	-3.4996	ppb	12:02:06
3	Sr 421.552†	-56.4	-0.4	-0.0012	ug/L	-0.0012	ppb	12:02:06
3	Sc 361.383	737609.7	737609.7	102.63	%			12:03:24
3	Y 371.029	577833.9	577833.9	102.82	%			12:03:24
3	Ag 328.068†	559.5	-87.4	-0.5206	ug/L	-0.5206	ppb	12:03:24
3	As 188.979†	-28.1	8.1	2.9158	ug/L	2.9158	ppb	12:03:44
3	B 249.677†	-718.9	239.4	6.0314	ug/L	6.0314	ppb	12:03:24
3	Ba 233.527†	43.0	41.4	0.2924	ug/L	0.2924	ppb	12:03:44
3	Be 313.107†	-4699.2	303.1	0.1387	ug/L	0.1387	ppb	12:03:24
3	Cd 226.502†	-276.5	11.7	0.1475	ug/L	0.1475	ppb	12:03:44
3	Co 228.616†	-81.7	19.8	0.3442	ug/L	0.3442	ppb	12:03:44
3	Cr 267.716†	-60.4	18.5	0.2587	ug/L	0.2587	ppb	12:03:24
3	Cu 324.752†	5668.2	-115.6	-0.4180	ug/L	-0.4180	ppb	12:03:24
3	Mn 257.610†	759.7	60.6	0.0690	ug/L	0.0690	ppb	12:03:24
3	Mo 202.031†	21.7	4.0	0.2812	ug/L	0.2812	ppb	12:03:44
3	Ni 231.604†	123.3	0.3	0.0086	ug/L	0.0086	ppb	12:03:44
3	P 214.914†	328.6	5.3	2.8084	ug/L	2.8084	ppb	12:03:44
3	Pb 220.353†	-14.4	-0.8	-0.0937	ug/L	-0.0937	ppb	12:03:44
3	S 181.975 Axial†	79.6	2.2	2.9820	ug/L	2.9820	ppb	12:03:44
3	Sb 206.836†	63.1	4.2	1.2666	ug/L	1.2666	ppb	12:03:44
3	Se 196.026†	-26.7	2.7	1.4534	ug/L	1.4534	ppb	12:03:44
3	Si 251.611†	490.5	66.2	2.0309	ug/L	2.0309	ppb	12:03:44
3	Sn 189.927†	16.4	3.4	0.6087	ug/L	0.6087	ppb	12:03:44
3	Ti 334.940†	-1399.2	-15.1	-0.0297	ug/L	-0.0297	ppb	12:03:24
3	Tl 190.801†	-58.2	4.1	1.0626	ug/L	1.0626	ppb	12:03:44
3	U 409.014†	-4842.3	130.6	4.4214	ug/L	4.4214	ppb	12:03:24
3	V 292.402†	-1583.7	22.2	0.2111	ug/L	0.2111	ppb	12:03:24
3	Zn 213.857†	1000.5	49.7	0.4579	ug/L	0.4579	ppb	12:03:44
3	SiO2†	479.5	30.3	1.9621	ug/L	1.9621	ppb	12:03:59

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	732637.5	101.94	%	1.259				1.23%
Sc Radial	7336.1	98.1	%	8.03				8.18%
Y 371.029	574255.4	102.18	%	1.138				1.11%
Y RADIAL	6823.0	98.54	%	7.936				8.05%
Ag 328.068†	-3.4	-0.0170	ug/L	0.44227	-0.0170	ppb	0.44227	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-2.7	-2.2537	ug/L	6.82809	-2.2537	ppb	6.82809	302.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.3	1.9119	ug/L	1.66680	1.9119	ppb	1.66680	87.18%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	252.8	6.3699	ug/L	0.99589	6.3699	ppb	0.99589	15.63%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	28.0	0.1979	ug/L	0.11506	0.1979	ppb	0.11506	58.14%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	290.6	0.1329	ug/L	0.02230	0.1329	ppb	0.02230	16.78%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.2	5.9685	ug/L	5.01291	5.9685	ppb	5.01291	83.99%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                16.3      0.2069 ug/L       0.05370      0.2069 ppb        0.05370  25.96%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                12.1      0.2105 ug/L       0.18212      0.2105 ppb        0.18212  86.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                15.5      0.2176 ug/L       0.36845      0.2176 ppb        0.36845 169.30%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -51.8     -0.1868 ug/L       0.28574     -0.1868 ppb        0.28574 152.98%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4      14.233 ug/L       11.6546      14.233 ppb        11.6546  81.89%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         128.9      27.824 ug/L       46.5479      27.824 ppb        46.5479 167.29%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.9      46.722 ug/L       60.5843      46.722 ppb        60.5843 129.67%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                32.9      0.0372 ug/L       0.03054      0.0372 ppb        0.03054  82.18%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.2     -0.0118 ug/L       0.45599     -0.0118 ppb        0.45599 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -17.6     -1.0800 ug/L       3.24277     -1.0800 ppb        3.24277 300.27%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 6.3      0.1695 ug/L       0.27013      0.1695 ppb        0.27013 159.35%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -4.4     -2.2375 ug/L       4.43752     -2.2375 ppb        4.43752 198.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                11.1      1.3155 ug/L       1.62466      1.3155 ppb        1.62466 123.50%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.7      7.8573 ug/L       4.55971      7.8573 ppb        4.55971  58.03%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 2.1      0.6365 ug/L       0.60041      0.6365 ppb        0.60041  94.33%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 1.1      0.5893 ug/L       2.10363      0.5893 ppb        2.10363 356.99%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                59.1      1.8121 ug/L       0.19200      1.8121 ppb        0.19200  10.60%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 2.2      0.3909 ug/L       0.86112      0.3909 ppb        0.86112 220.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                17.5      0.0487 ug/L       0.06926      0.0487 ppb        0.06926 142.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -27.6     -0.0514 ug/L       0.05503     -0.0514 ppb        0.05503 107.08%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 7.6      1.9887 ug/L       1.15598      1.9887 ppb        1.15598  58.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 72.6      2.4556 ug/L       1.77912      2.4556 ppb        1.77912  72.45%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 28.4      0.2617 ug/L       0.09166      0.2617 ppb        0.09166  35.03%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                52.6      0.4816 ug/L       0.12146      0.4816 ppb        0.12146  25.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      54.0      3.5195 ug/L       1.39017      3.5195 ppb        1.39017  39.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 13:02:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7281.5	7281.5	97.4	%			13:05:06
1	Y RADIAL	6680.3	6680.3	96.48	%			13:05:06
1	Al 396.153Radial†	6299.3	6539.0	5362.9	ug/L	5362.9	ppb	13:04:46
1	Ca 317.933Radial†	3703.5	3772.6	5344.4	ug/L	5344.4	ppb	13:05:06
1	Fe 238.204 Radial†	1228.0	1225.8	5126.1	ug/L	5126.1	ppb	13:05:06
1	K 766.490 Radial†	24961.3	23216.1	4995.5	ug/L	4995.5	ppb	13:04:46
1	Mg 279.077 IEC†	211.7	214.2	5347.0	ug/L	5347.0	ppb	13:05:06
1	Na 589.592 Radial†	166781.0	171339.3	10516	ug/L	10516	ppb	13:04:46
1	Sr 421.552†	173274.8	177925.7	496.90	ug/L	496.90	ppb	13:04:46
1	Sc 361.383	741755.7	741755.7	103.21	%			13:06:04
1	Y 371.029	572432.8	572432.8	101.86	%			13:06:04
1	Ag 328.068†	89777.9	86353.5	519.02	ug/L	519.02	ppb	13:06:09
1	As 188.979†	1445.8	1436.2	521.17	ug/L	521.17	ppb	13:06:29
1	B 249.677†	20111.0	20425.5	511.73	ug/L	511.73	ppb	13:06:09
1	Ba 233.527†	75676.2	73322.4	518.48	ug/L	518.48	ppb	13:06:09
1	Be 313.107†	1161288.0	1130057.2	518.40	ug/L	518.40	ppb	13:06:04
1	Cd 226.502†	41966.5	40942.5	521.96	ug/L	521.96	ppb	13:06:09
1	Co 228.616†	31029.2	30163.8	523.33	ug/L	523.33	ppb	13:06:09
1	Cr 267.716†	38024.5	36919.4	518.06	ug/L	518.06	ppb	13:06:09
1	Cu 324.752†	151507.1	141157.3	511.81	ug/L	511.81	ppb	13:06:09
1	Mn 257.610†	483722.8	468000.8	516.64	ug/L	516.64	ppb	13:06:04
1	Mo 202.031†	7486.1	7236.2	509.75	ug/L	509.75	ppb	13:06:29
1	Ni 231.604†	20203.6	19455.5	519.71	ug/L	519.71	ppb	13:06:09
1	P 214.914†	5506.0	5020.0	2465.8	ug/L	2465.8	ppb	13:06:29
1	Pb 220.353†	4373.3	4250.6	507.66	ug/L	507.66	ppb	13:06:29
1	S 181.975 Axial†	861.0	758.8	1038.5	ug/L	1038.5	ppb	13:06:29
1	Sb 206.836†	1842.1	1727.5	519.43	ug/L	519.43	ppb	13:06:29
1	Se 196.026†	1015.3	1012.5	534.84	ug/L	534.84	ppb	13:06:29
1	Si 251.611†	87862.7	84718.7	2599.0	ug/L	2599.0	ppb	13:06:09
1	Sn 189.927†	3005.5	2899.5	514.11	ug/L	514.11	ppb	13:06:29
1	Ti 334.940†	282291.1	274861.0	503.12	ug/L	503.12	ppb	13:06:09
1	Tl 190.801†	1971.1	1970.5	518.80	ug/L	518.80	ppb	13:06:29
1	U 409.014†	11031.4	15537.1	524.48	ug/L	524.48	ppb	13:06:09
1	V 292.402†	57055.2	56846.2	522.39	ug/L	522.39	ppb	13:06:09
1	Zn 213.857†	58967.8	56209.0	513.97	ug/L	513.97	ppb	13:06:09
1	SiO2†	87498.0	84340.2	5507.8	ug/L	5507.8	ppb	13:07:37
2	Sc Radial	7294.7	7294.7	97.6	%			13:05:32
2	Y RADIAL	6695.2	6695.2	96.69	%			13:05:32
2	Al 396.153Radial†	6307.0	6535.2	5359.7	ug/L	5359.7	ppb	13:05:12
2	Ca 317.933Radial†	3668.9	3730.3	5284.4	ug/L	5284.4	ppb	13:05:32
2	Fe 238.204 Radial†	1215.4	1210.6	5062.6	ug/L	5062.6	ppb	13:05:32
2	K 766.490 Radial†	25174.2	23388.0	5032.6	ug/L	5032.6	ppb	13:05:12
2	Mg 279.077 IEC†	212.5	214.7	5359.2	ug/L	5359.2	ppb	13:05:32
2	Na 589.592 Radial†	167635.3	171905.9	10550	ug/L	10550	ppb	13:05:12
2	Sr 421.552†	173780.8	178123.3	497.45	ug/L	497.45	ppb	13:05:12
2	Sc 361.383	744205.0	744205.0	103.55	%			13:06:35
2	Y 371.029	574002.9	574002.9	102.14	%			13:06:35
2	Ag 328.068†	89345.2	85649.2	514.78	ug/L	514.78	ppb	13:06:40
2	As 188.979†	1454.7	1440.3	522.60	ug/L	522.60	ppb	13:07:00
2	B 249.677†	20044.2	20296.9	508.53	ug/L	508.53	ppb	13:06:40
2	Ba 233.527†	75470.1	72882.1	515.37	ug/L	515.37	ppb	13:06:40
2	Be 313.107†	1157004.1	1122217.0	514.80	ug/L	514.80	ppb	13:06:35
2	Cd 226.502†	41734.2	40584.4	517.39	ug/L	517.39	ppb	13:06:40
2	Co 228.616†	30787.2	29831.1	517.58	ug/L	517.58	ppb	13:06:40
2	Cr 267.716†	37890.1	36668.4	514.54	ug/L	514.54	ppb	13:06:40
2	Cu 324.752†	150966.9	140152.4	508.17	ug/L	508.17	ppb	13:06:40
2	Mn 257.610†	483147.7	465903.0	514.32	ug/L	514.32	ppb	13:06:35
2	Mo 202.031†	7534.1	7258.7	511.33	ug/L	511.33	ppb	13:07:00
2	Ni 231.604†	20097.6	19288.7	515.26	ug/L	515.26	ppb	13:06:40

2	P 214.914†	5532.6	5028.1	2470.8	ug/L	2470.8	ppb	13:07:00
2	Pb 220.353†	4435.0	4296.2	513.10	ug/L	513.10	ppb	13:07:00
2	S 181.975 Axial†	855.6	750.9	1027.6	ug/L	1027.6	ppb	13:07:00
2	Sb 206.836†	1849.1	1728.4	519.83	ug/L	519.83	ppb	13:07:00
2	Se 196.026†	1031.5	1024.9	540.96	ug/L	540.96	ppb	13:07:00
2	Si 251.611†	87511.3	84099.1	2579.8	ug/L	2579.8	ppb	13:06:40
2	Sn 189.927†	3021.0	2904.9	515.06	ug/L	515.06	ppb	13:07:00
2	Ti 334.940†	281132.5	272841.9	499.42	ug/L	499.42	ppb	13:06:40
2	Tl 190.801†	1993.9	1986.3	522.92	ug/L	522.92	ppb	13:07:00
2	U 409.014†	11073.6	15542.7	524.68	ug/L	524.68	ppb	13:06:40
2	V 292.402†	56696.5	56317.8	517.62	ug/L	517.62	ppb	13:06:40
2	Zn 213.857†	58743.5	55804.3	510.27	ug/L	510.27	ppb	13:06:40
2	SiO2†	86542.0	83137.9	5428.6	ug/L	5428.6	ppb	13:07:42
3	Sc Radial	7304.1	7304.1	97.7	%			13:05:57
3	Y RADIAL	6729.5	6729.5	97.19	%			13:05:57
3	Al 396.153Radial†	6230.7	6448.7	5288.8	ug/L	5288.8	ppb	13:05:37
3	Ca 317.933Radial†	3697.0	3754.2	5318.3	ug/L	5318.3	ppb	13:05:57
3	Fe 238.204 Radial†	1230.4	1224.3	5119.7	ug/L	5119.7	ppb	13:05:57
3	K 766.490 Radial†	24732.5	22902.6	4928.0	ug/L	4928.0	ppb	13:05:37
3	Mg 279.077 IEC†	214.6	216.5	5404.1	ug/L	5404.1	ppb	13:05:57
3	Na 589.592 Radial†	164955.2	168941.0	10368	ug/L	10368	ppb	13:05:37
3	Sr 421.552†	171454.6	175512.4	490.16	ug/L	490.16	ppb	13:05:37
3	Sc 361.383	749321.2	749321.2	104.26	%			13:07:06
3	Y 371.029	578032.5	578032.5	102.85	%			13:07:06
3	Ag 328.068†	89258.3	84976.8	510.78	ug/L	510.78	ppb	13:07:11
3	As 188.979†	1443.6	1420.0	515.27	ug/L	515.27	ppb	13:07:31
3	B 249.677†	19999.5	20121.8	504.13	ug/L	504.13	ppb	13:07:11
3	Ba 233.527†	75388.4	72306.1	511.30	ug/L	511.30	ppb	13:07:11
3	Be 313.107†	1168029.6	1125162.9	516.14	ug/L	516.14	ppb	13:07:06
3	Cd 226.502†	41658.4	40236.6	512.95	ug/L	512.95	ppb	13:07:11
3	Co 228.616†	30816.1	29655.8	514.53	ug/L	514.53	ppb	13:07:11
3	Cr 267.716†	37880.8	36409.6	510.91	ug/L	510.91	ppb	13:07:11
3	Cu 324.752†	150551.5	138758.6	503.12	ug/L	503.12	ppb	13:07:11
3	Mn 257.610†	486365.0	465803.0	514.21	ug/L	514.21	ppb	13:07:06
3	Mo 202.031†	7486.1	7162.9	504.59	ug/L	504.59	ppb	13:07:31
3	Ni 231.604†	20123.8	19181.4	512.39	ug/L	512.39	ppb	13:07:11
3	P 214.914†	5487.2	4948.1	2430.7	ug/L	2430.7	ppb	13:07:31
3	Pb 220.353†	4377.3	4211.6	503.00	ug/L	503.00	ppb	13:07:31
3	S 181.975 Axial†	855.2	744.9	1019.4	ug/L	1019.4	ppb	13:07:31
3	Sb 206.836†	1834.1	1701.9	511.79	ug/L	511.79	ppb	13:07:31
3	Se 196.026†	1001.4	989.2	522.93	ug/L	522.93	ppb	13:07:31
3	Si 251.611†	87420.1	83434.6	2559.6	ug/L	2559.6	ppb	13:07:11
3	Sn 189.927†	2997.8	2862.7	507.60	ug/L	507.60	ppb	13:07:31
3	Ti 334.940†	280603.6	270480.9	495.11	ug/L	495.11	ppb	13:07:11
3	Tl 190.801†	1970.7	1950.9	513.65	ug/L	513.65	ppb	13:07:31
3	U 409.014†	10813.4	15220.1	513.76	ug/L	513.76	ppb	13:07:11
3	V 292.402†	56734.7	55980.6	514.45	ug/L	514.45	ppb	13:07:11
3	Zn 213.857†	58697.7	55373.1	506.31	ug/L	506.31	ppb	13:07:11
3	SiO2†	86581.0	82604.7	5394.1	ug/L	5394.1	ppb	13:07:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	745094.0	103.67	%	0.537				0.52%
Sc Radial	7293.4	97.6	%	0.15				0.16%
Y 371.029	574822.7	102.28	%	0.514				0.50%
Y RADIAL	6701.6	96.78	%	0.364				0.38%
Ag 328.068†	85659.8	514.86	ug/L	4.124	514.86	ppb	4.124	0.80%
QC value within limits for Ag 328.068 Recovery = 102.97%								
Al 396.153Radial†	6507.6	5337.1	ug/L	41.89	5337.1	ppb	41.89	0.78%
QC value within limits for Al 396.153Radial Recovery = 106.74%								
As 188.979†	1432.2	519.68	ug/L	3.887	519.68	ppb	3.887	0.75%
QC value within limits for As 188.979 Recovery = 103.94%								
B 249.677†	20281.4	508.13	ug/L	3.820	508.13	ppb	3.820	0.75%
QC value within limits for B 249.677 Recovery = 101.63%								
Ba 233.527†	72836.9	515.05	ug/L	3.605	515.05	ppb	3.605	0.70%
QC value within limits for Ba 233.527 Recovery = 103.01%								
Be 313.107†	1125812.4	516.44	ug/L	1.818	516.44	ppb	1.818	0.35%
QC value within limits for Be 313.107 Recovery = 103.29%								
Ca 317.933Radial†	3752.4	5315.7	ug/L	30.06	5315.7	ppb	30.06	0.57%

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   QC value within limits for Ca 317.933Radial  Recovery = 106.31%
Cd 226.502†            40587.8      517.43 ug/L         4.504      517.43 ppb          4.504   0.87%
   QC value within limits for Cd 226.502  Recovery = 103.49%
Co 228.616†            29883.6      518.48 ug/L         4.472      518.48 ppb          4.472   0.86%
   QC value within limits for Co 228.616  Recovery = 103.70%
Cr 267.716†            36665.8      514.50 ug/L         3.576      514.50 ppb          3.576   0.70%
   QC value within limits for Cr 267.716  Recovery = 102.90%
Cu 324.752†           140022.8      507.70 ug/L         4.365      507.70 ppb          4.365   0.86%
   QC value within limits for Cu 324.752  Recovery = 101.54%
Fe 238.204 Radial†      1220.2      5102.8 ug/L        34.97      5102.8 ppb          34.97   0.69%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.06%
K 766.490 Radial†      23168.9      4985.3 ug/L        53.03      4985.3 ppb          53.03   1.06%
   QC value within limits for K 766.490 Radial  Recovery = 99.71%
Mg 279.077 IEC†         215.2      5370.1 ug/L        30.07      5370.1 ppb          30.07   0.56%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.40%
Mn 257.610†           466569.0      515.05 ug/L         1.371      515.05 ppb          1.371   0.27%
   QC value within limits for Mn 257.610  Recovery = 103.01%
Mo 202.031†             7219.3      508.56 ug/L         3.523      508.56 ppb          3.523   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.71%
Na 589.592 Radial†    170728.7       10478 ug/L          96.6       10478 ppb           96.6   0.92%
   QC value within limits for Na 589.592 Radial  Recovery = 104.78%
Ni 231.604†            19308.6      515.78 ug/L         3.690      515.78 ppb          3.690   0.72%
   QC value within limits for Ni 231.604  Recovery = 103.16%
P 214.914†              4998.7      2455.8 ug/L        21.82      2455.8 ppb          21.82   0.89%
   QC value within limits for P 214.914  Recovery = 98.23%
Pb 220.353†             4252.8      507.92 ug/L         5.056      507.92 ppb          5.056   1.00%
   QC value within limits for Pb 220.353  Recovery = 101.58%
S 181.975 Axial†         751.5      1028.5 ug/L         9.59      1028.5 ppb           9.59   0.93%
   QC value within limits for S 181.975 Axial  Recovery = 102.85%
Sb 206.836†             1719.3      517.02 ug/L         4.533      517.02 ppb          4.533   0.88%
   QC value within limits for Sb 206.836  Recovery = 103.40%
Se 196.026†             1008.9      532.91 ug/L         9.172      532.91 ppb          9.172   1.72%
   QC value within limits for Se 196.026  Recovery = 106.58%
Si 251.611†            84084.2      2579.5 ug/L        19.73      2579.5 ppb          19.73   0.76%
   QC value within limits for Si 251.611  Recovery = 103.18%
Sn 189.927†             2889.0      512.26 ug/L         4.062      512.26 ppb          4.062   0.79%
   QC value within limits for Sn 189.927  Recovery = 102.45%
Sr 421.552†           177187.1      494.84 ug/L         4.060      494.84 ppb          4.060   0.82%
   QC value within limits for Sr 421.552  Recovery = 98.97%
Ti 334.940†           272727.9      499.22 ug/L         4.011      499.22 ppb          4.011   0.80%
   QC value within limits for Ti 334.940  Recovery = 99.84%
Tl 190.801†             1969.2      518.46 ug/L         4.648      518.46 ppb          4.648   0.90%
   QC value within limits for Tl 190.801  Recovery = 103.69%
U 409.014†             15433.3      520.97 ug/L         6.249      520.97 ppb          6.249   1.20%
   QC value within limits for U 409.014  Recovery = 104.19%
V 292.402†             56381.5      518.15 ug/L         3.994      518.15 ppb          3.994   0.77%
   QC value within limits for V 292.402  Recovery = 103.63%
Zn 213.857†            55795.5      510.18 ug/L         3.829      510.18 ppb          3.829   0.75%
   QC value within limits for Zn 213.857  Recovery = 102.04%
SiO2†                  83360.9      5443.5 ug/L        58.29      5443.5 ppb          58.29   1.07%
   QC value within limits for SiO2  Recovery = 101.79%
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 13:09:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7339.6	7339.6	98.2	%			13:11:49
1	Y RADIAL	6824.4	6824.4	98.56	%			13:11:49
1	Al 396.153Radial†	-77.7	-6.5	-5.3397	ug/L	-5.3397	ppb	13:11:49
1	Ca 317.933Radial†	31.1	2.6	3.6605	ug/L	3.6605	ppb	13:12:09
1	Fe 238.204 Radial†	35.4	1.3	5.4250	ug/L	5.4250	ppb	13:12:09
1	K 766.490 Radial†	2410.9	48.1	10.371	ug/L	10.371	ppb	13:11:49
1	Mg 279.077 IEC†	2.6	-0.4	-9.7786	ug/L	-9.7786	ppb	13:12:09
1	Na 589.592 Radial†	-194.8	-62.8	-3.8556	ug/L	-3.8556	ppb	13:11:49
1	Sr 421.552†	-28.9	26.4	0.0738	ug/L	0.0738	ppb	13:11:49
1	Sc 361.383	735705.4	735705.4	102.37	%			13:13:06
1	Y 371.029	575918.7	575918.7	102.48	%			13:13:06
1	Ag 328.068†	609.8	-36.9	-0.2214	ug/L	-0.2214	ppb	13:13:06
1	As 188.979†	-29.2	6.9	2.4993	ug/L	2.4993	ppb	13:13:26
1	B 249.677†	-756.7	200.7	5.0583	ug/L	5.0583	ppb	13:13:06
1	Ba 233.527†	3.1	2.6	0.0191	ug/L	0.0191	ppb	13:13:26
1	Be 313.107†	-4761.6	230.3	0.1056	ug/L	0.1056	ppb	13:13:06
1	Cd 226.502†	-263.7	23.5	0.2992	ug/L	0.2992	ppb	13:13:26
1	Co 228.616†	-97.4	4.3	0.0754	ug/L	0.0754	ppb	13:13:26
1	Cr 267.716†	-49.2	29.3	0.4105	ug/L	0.4105	ppb	13:13:06
1	Cu 324.752†	5670.5	-99.0	-0.3586	ug/L	-0.3586	ppb	13:13:06
1	Mn 257.610†	756.0	58.9	0.0658	ug/L	0.0658	ppb	13:13:06
1	Mo 202.031†	20.7	3.1	0.2182	ug/L	0.2182	ppb	13:13:26
1	Ni 231.604†	145.5	22.3	0.5970	ug/L	0.5970	ppb	13:13:26
1	P 214.914†	298.1	-23.6	-11.955	ug/L	-11.955	ppb	13:13:26
1	Pb 220.353†	-12.3	1.3	0.1482	ug/L	0.1482	ppb	13:13:26
1	S 181.975 Axial†	87.8	10.4	14.208	ug/L	14.208	ppb	13:13:26
1	Sb 206.836†	53.6	-4.9	-1.4416	ug/L	-1.4416	ppb	13:13:26
1	Se 196.026†	-20.9	8.4	4.2944	ug/L	4.2944	ppb	13:13:26
1	Si 251.611†	501.3	77.9	2.3948	ug/L	2.3948	ppb	13:13:26
1	Sn 189.927†	14.5	1.7	0.2979	ug/L	0.2979	ppb	13:13:26
1	Ti 334.940†	-1320.2	58.6	0.1051	ug/L	0.1051	ppb	13:13:06
1	Tl 190.801†	-63.1	-0.9	-0.2409	ug/L	-0.2409	ppb	13:13:26
1	U 409.014†	-4805.0	154.9	5.2424	ug/L	5.2424	ppb	13:13:06
1	V 292.402†	-1545.0	56.0	0.5201	ug/L	0.5201	ppb	13:13:06
1	Zn 213.857†	1008.0	59.6	0.5466	ug/L	0.5466	ppb	13:13:26
1	SiO2†	537.4	88.1	5.7670	ug/L	5.7670	ppb	13:14:22
2	Sc Radial	7299.4	7299.4	97.7	%			13:12:14
2	Y RADIAL	6806.6	6806.6	98.30	%			13:12:14
2	Al 396.153Radial†	-64.9	6.2	5.1385	ug/L	5.1385	ppb	13:12:14
2	Ca 317.933Radial†	31.8	3.5	4.9128	ug/L	4.9128	ppb	13:12:34
2	Fe 238.204 Radial†	39.9	6.1	25.460	ug/L	25.460	ppb	13:12:34
2	K 766.490 Radial†	2496.6	149.3	32.227	ug/L	32.227	ppb	13:12:14
2	Mg 279.077 IEC†	1.3	-1.7	-42.568	ug/L	-42.568	ppb	13:12:34
2	Na 589.592 Radial†	-273.7	-144.7	-8.8794	ug/L	-8.8794	ppb	13:12:14
2	Sr 421.552†	4.5	60.4	0.1688	ug/L	0.1688	ppb	13:12:14
2	Sc 361.383	768724.4	768724.4	106.96	%			13:13:31
2	Y 371.029	602364.5	602364.5	107.18	%			13:13:31
2	Ag 328.068†	798.0	113.4	0.6792	ug/L	0.6792	ppb	13:13:31
2	As 188.979†	-36.8	1.1	0.3905	ug/L	0.3905	ppb	13:13:51
2	B 249.677†	-757.7	231.5	5.8327	ug/L	5.8327	ppb	13:13:31
2	Ba 233.527†	24.3	22.2	0.1574	ug/L	0.1574	ppb	13:13:51
2	Be 313.107†	-4731.8	458.0	0.2099	ug/L	0.2099	ppb	13:13:31
2	Cd 226.502†	-281.1	18.3	0.2310	ug/L	0.2310	ppb	13:13:51
2	Co 228.616†	-98.3	7.6	0.1297	ug/L	0.1297	ppb	13:13:51
2	Cr 267.716†	-37.2	42.6	0.5951	ug/L	0.5951	ppb	13:13:31
2	Cu 324.752†	5667.3	-340.0	-1.2308	ug/L	-1.2308	ppb	13:13:31
2	Mn 257.610†	765.8	36.3	0.0441	ug/L	0.0441	ppb	13:13:31
2	Mo 202.031†	12.7	-5.3	-0.3691	ug/L	-0.3691	ppb	13:13:51
2	Ni 231.604†	129.7	1.5	0.0392	ug/L	0.0392	ppb	13:13:51

2	P 214.914†	307.7	-27.1	-13.596	ug/L	-13.596 ppb	13:13:51
2	Pb 220.353†	-14.8	-0.6	-0.0732	ug/L	-0.0732 ppb	13:13:51
2	S 181.975 Axial†	78.9	-1.7	-2.3105	ug/L	-2.3105 ppb	13:13:51
2	Sb 206.836†	59.0	-2.1	-0.6442	ug/L	-0.6442 ppb	13:13:51
2	Se 196.026†	-24.1	6.3	3.2860	ug/L	3.2860 ppb	13:13:51
2	Si 251.611†	664.4	209.4	6.4638	ug/L	6.4638 ppb	13:13:51
2	Sn 189.927†	12.6	-0.7	-0.1213	ug/L	-0.1213 ppb	13:13:51
2	Ti 334.940†	-1365.3	71.8	0.1274	ug/L	0.1274 ppb	13:13:31
2	Tl 190.801†	-46.9	16.9	4.4161	ug/L	4.4161 ppb	13:13:51
2	U 409.014†	-4885.6	281.1	9.5138	ug/L	9.5138 ppb	13:13:31
2	V 292.402†	-1624.1	46.8	0.4340	ug/L	0.4340 ppb	13:13:31
2	Zn 213.857†	994.2	4.4	0.0406	ug/L	0.0406 ppb	13:13:51
2	SiO2†	527.4	56.1	3.6863	ug/L	3.6863 ppb	13:14:27
3	Sc Radial	7409.2	7409.2	99.1	%		13:12:39
3	Y RADIAL	6911.5	6911.5	99.82	%		13:12:39
3	Al 396.153Radial†	-54.6	17.5	14.385	ug/L	14.385 ppb	13:12:39
3	Ca 317.933Radial†	32.6	3.8	5.3612	ug/L	5.3612 ppb	13:12:59
3	Fe 238.204 Radial†	32.0	-2.5	-10.621	ug/L	-10.621 ppb	13:12:59
3	K 766.490 Radial†	2415.8	29.9	6.4454	ug/L	6.4454 ppb	13:12:39
3	Mg 279.077 IEC†	4.7	1.7	43.296	ug/L	43.296 ppb	13:12:59
3	Na 589.592 Radial†	-201.9	-68.2	-4.1837	ug/L	-4.1837 ppb	13:12:39
3	Sr 421.552†	-23.6	32.1	0.0896	ug/L	0.0896 ppb	13:12:39
3	Sc 361.383	732304.3	732304.3	101.89	%		13:13:57
3	Y 371.029	573568.0	573568.0	102.06	%		13:13:57
3	Ag 328.068†	701.6	55.9	0.3317	ug/L	0.3317 ppb	13:13:57
3	As 188.979†	-28.6	7.3	2.6374	ug/L	2.6374 ppb	13:14:17
3	B 249.677†	-724.4	229.0	5.7731	ug/L	5.7731 ppb	13:13:57
3	Ba 233.527†	26.2	25.3	0.1787	ug/L	0.1787 ppb	13:14:17
3	Be 313.107†	-4592.5	374.6	0.1718	ug/L	0.1718 ppb	13:13:57
3	Cd 226.502†	-278.3	8.0	0.1038	ug/L	0.1038 ppb	13:14:17
3	Co 228.616†	-103.0	-1.7	-0.0274	ug/L	-0.0274 ppb	13:14:17
3	Cr 267.716†	-65.7	12.9	0.1810	ug/L	0.1810 ppb	13:13:57
3	Cu 324.752†	5614.1	-128.7	-0.4670	ug/L	-0.4670 ppb	13:13:57
3	Mn 257.610†	731.2	38.0	0.0397	ug/L	0.0397 ppb	13:13:57
3	Mo 202.031†	27.9	10.2	0.7177	ug/L	0.7177 ppb	13:14:17
3	Ni 231.604†	139.4	17.0	0.4539	ug/L	0.4539 ppb	13:14:17
3	P 214.914†	328.4	7.5	3.9420	ug/L	3.9420 ppb	13:14:17
3	Pb 220.353†	0.7	14.0	1.6695	ug/L	1.6695 ppb	13:14:17
3	S 181.975 Axial†	89.7	12.7	17.328	ug/L	17.328 ppb	13:14:17
3	Sb 206.836†	58.2	-0.1	-0.0504	ug/L	-0.0504 ppb	13:14:17
3	Se 196.026†	-29.1	0.2	0.0784	ug/L	0.0784 ppb	13:14:17
3	Si 251.611†	486.7	65.9	2.0347	ug/L	2.0347 ppb	13:14:17
3	Sn 189.927†	6.7	-5.9	-1.0522	ug/L	-1.0522 ppb	13:14:17
3	Ti 334.940†	-1290.1	82.2	0.1510	ug/L	0.1510 ppb	13:13:57
3	Tl 190.801†	-68.9	-6.9	-1.7955	ug/L	-1.7955 ppb	13:14:17
3	U 409.014†	-4958.8	-17.9	-0.6055	ug/L	-0.6055 ppb	13:13:57
3	V 292.402†	-1571.6	22.8	0.2167	ug/L	0.2167 ppb	13:13:57
3	Zn 213.857†	1009.2	65.4	0.6006	ug/L	0.6006 ppb	13:14:17
3	SiO2†	470.1	24.5	1.6090	ug/L	1.6090 ppb	13:14:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	745578.0	103.74	%	2.799				2.70%
Sc Radial	7349.4	98.3	%	0.74				0.76%
Y 371.029	583950.4	103.91	%	2.845				2.74%
Y RADIAL	6847.5	98.89	%	0.811				0.82%
Ag 328.068†	44.1	0.2631	ug/L	0.45419	0.2631	ppb	0.45419	172.60%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.8	4.7278	ug/L	9.86858	4.7278	ppb	9.86858	208.74%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.1	1.8424	ug/L	1.25927	1.8424	ppb	1.25927	68.35%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	220.4	5.5547	ug/L	0.43092	5.5547	ppb	0.43092	7.76%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	16.7	0.1184	ug/L	0.08664	0.1184	ppb	0.08664	73.15%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	354.3	0.1625	ug/L	0.05276	0.1625	ppb	0.05276	32.47%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	3.3	4.6449	ug/L	0.88144	4.6449	ppb	0.88144	18.98%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                16.6      0.2113 ug/L       0.09916      0.2113 ppb        0.09916  46.92%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 3.4      0.0592 ug/L       0.07982      0.0592 ppb        0.07982 134.79%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                28.3      0.3955 ug/L       0.20743      0.3955 ppb        0.20743  52.45%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -189.3     -0.6855 ug/L       0.47536     -0.6855 ppb        0.47536  69.35%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.6      6.7546 ug/L      18.07716      6.7546 ppb       18.07716 267.63%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          75.8     16.348 ug/L       13.8911      16.348 ppb        13.8911  84.97%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.1     -3.0170 ug/L      43.32954     -3.0170 ppb       43.32954 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                44.4      0.0499 ug/L       0.01397      0.0499 ppb        0.01397  28.02%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.7      0.1889 ug/L       0.54399      0.1889 ppb        0.54399 287.92%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -91.9     -5.6396 ug/L       2.81058     -5.6396 ppb        2.81058  49.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                13.6      0.3634 ug/L       0.28971      0.3634 ppb        0.28971  79.73%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -14.4     -7.2029 ug/L       9.68661     -7.2029 ppb        9.68661 134.48%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 4.9      0.5815 ug/L       0.94872      0.5815 ppb        0.94872 163.15%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.1      9.7418 ug/L      10.55350      9.7418 ppb       10.55350 108.33%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.4     -0.7121 ug/L       0.69810     -0.7121 ppb        0.69810  98.04%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      2.5530 ug/L       2.20151      2.5530 ppb        2.20151  86.23%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               117.7      3.6311 ug/L       2.45976      3.6311 ppb        2.45976  67.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.7     -0.2919 ug/L       0.69099     -0.2919 ppb        0.69099 236.73%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                39.7      0.1107 ug/L       0.05087      0.1107 ppb        0.05087  45.94%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                70.9      0.1278 ug/L       0.02295      0.1278 ppb        0.02295  17.96%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.0      0.7933 ug/L       3.23236      0.7933 ppb        3.23236 407.48%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                139.3      4.7169 ug/L       5.08007      4.7169 ppb        5.08007 107.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 41.8      0.3903 ug/L       0.15636      0.3903 ppb        0.15636  40.06%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                43.1      0.3959 ug/L       0.30892      0.3959 ppb        0.30892  78.02%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      56.2      3.6874 ug/L       2.07903      3.6874 ppb        2.07903  56.38%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 20
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 14:20:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7268.9	7268.9	97.2	%			14:22:17
1	Y RADIAL	6682.9	6682.9	96.51	%			14:22:17
1	Al 396.153Radial†	6364.0	6616.7	5426.5	ug/L	5426.5	ppb	14:21:57
1	Ca 317.933Radial†	3675.0	3749.9	5312.2	ug/L	5312.2	ppb	14:22:17
1	Fe 238.204 Radial†	1220.9	1220.6	5104.3	ug/I	5104.3	ppb	14:22:17
1	K 766.490 Radial†	25405.0	23716.6	5103.4	ug/L	5103.4	ppb	14:21:57
1	Mg 279.077 IEC†	209.6	212.5	5304.3	ug/L	5304.3	ppb	14:22:17
1	Na 589.592 Radial†	169392.5	174320.7	10699	ug/L	10699	ppb	14:21:57
1	Sr 421.552†	175803.8	180833.6	505.02	ug/L	505.02	ppb	14:21:57
1	Sc 361.383	736145.7	736145.7	102.43	%			14:23:16
1	Y 371.029	568107.5	568107.5	101.09	%			14:23:16
1	Ag 328.068†	88288.3	85562.1	514.28	ug/L	514.28	ppb	14:23:16
1	As 188.979†	1443.8	1445.0	524.36	ug/L	524.36	ppb	14:23:36
1	B 249.677†	19754.4	20225.9	506.76	ug/L	506.76	ppb	14:23:16
1	Ba 233.527†	74705.4	72933.4	515.73	ug/L	515.73	ppb	14:23:16
1	Be 313.107†	1147152.8	1124832.0	516.02	ug/L	516.02	ppb	14:23:16
1	Cd 226.502†	40642.0	39959.4	509.41	ug/L	509.41	ppb	14:23:36
1	Co 228.616†	30160.4	29544.7	512.60	ug/L	512.60	ppb	14:23:36
1	Cr 267.716†	37385.8	36576.7	513.26	ug/L	513.26	ppb	14:23:16
1	Cu 324.752†	149905.1	140712.0	510.20	ug/L	510.20	ppb	14:23:16
1	Mn 257.610†	478523.4	466496.5	514.98	ug/L	514.98	ppb	14:23:16
1	Mo 202.031†	7561.8	7365.3	518.84	ug/L	518.84	ppb	14:23:36
1	Ni 231.604†	19787.9	19198.8	512.86	ug/L	512.86	ppb	14:23:36
1	P 214.914†	5569.3	5122.4	2518.5	ug/L	2518.5	ppb	14:23:36
1	Pb 220.353†	4461.9	4369.3	521.84	ug/L	521.84	ppb	14:23:36
1	S 181.975 Axial†	857.2	761.5	1042.1	ug/L	1042.1	ppb	14:23:36
1	Sb 206.836†	1836.0	1735.3	522.07	ug/L	522.07	ppb	14:23:36
1	Se 196.026†	1023.6	1028.1	542.76	ug/L	542.76	ppb	14:23:36
1	Si 251.611†	86539.5	84075.6	2578.9	ug/L	2578.9	ppb	14:23:16
1	Sn 189.927†	3007.9	2924.1	518.45	ug/L	518.45	ppb	14:23:36
1	Ti 334.940†	284645.0	279243.5	511.15	ug/L	511.15	ppb	14:23:16
1	Tl 190.801†	1978.3	1992.2	524.59	ug/L	524.59	ppb	14:23:36
1	U 409.014†	10517.9	15117.2	510.27	ug/L	510.27	ppb	14:23:16
1	V 292.402†	56077.6	56313.0	517.63	ug/L	517.63	ppb	14:23:16
1	Zn 213.857†	58084.8	55782.3	510.08	ug/L	510.08	ppb	14:23:16
1	SiO2†	87073.4	84571.7	5522.4	ug/L	5522.4	ppb	14:24:36
2	Sc Radial	7373.5	7373.5	98.6	%			14:22:42
2	Y RADIAL	6779.1	6779.1	97.90	%			14:22:42
2	Al 396.153Radial†	6208.6	6366.3	5220.5	ug/L	5220.5	ppb	14:22:22
2	Ca 317.933Radial†	3650.1	3671.1	5200.5	ug/L	5200.5	ppb	14:22:42
2	Fe 238.204 Radial†	1214.0	1195.9	5000.9	ug/L	5000.9	ppb	14:22:42
2	K 766.490 Radial†	24977.7	22912.9	4930.1	ug/L	4930.1	ppb	14:22:22
2	Mg 279.077 IEC†	212.9	212.8	5310.5	ug/L	5310.5	ppb	14:22:42
2	Na 589.592 Radial†	165853.5	168262.0	10327	ug/L	10327	ppb	14:22:22
2	Sr 421.552†	171817.1	174227.6	486.57	ug/L	486.57	ppb	14:22:22
2	Sc 361.383	745644.9	745644.9	103.75	%			14:23:43
2	Y 371.029	574518.9	574518.9	102.23	%			14:23:43
2	Ag 328.068†	88786.8	84944.5	510.56	ug/L	510.56	ppb	14:23:43
2	As 188.979†	1459.8	1442.5	523.43	ug/L	523.43	ppb	14:24:04
2	B 249.677†	19865.1	20086.9	503.28	ug/L	503.28	ppb	14:23:43
2	Ba 233.527†	75307.6	72584.7	513.26	ug/L	513.26	ppb	14:23:43
2	Be 313.107†	1157447.5	1120486.7	514.03	ug/L	514.03	ppb	14:23:43
2	Cd 226.502†	40807.8	39613.7	505.01	ug/L	505.01	ppb	14:24:04
2	Co 228.616†	30335.0	29337.9	509.01	ug/L	509.01	ppb	14:24:04
2	Cr 267.716†	37765.4	36477.5	511.86	ug/L	511.86	ppb	14:23:43
2	Cu 324.752†	151498.8	140383.5	509.00	ug/L	509.00	ppb	14:23:43
2	Mn 257.610†	483051.4	464909.1	513.21	ug/L	513.21	ppb	14:23:43
2	Mo 202.031†	7588.0	7296.6	513.99	ug/L	513.99	ppb	14:24:04
2	Ni 231.604†	19856.2	19018.6	508.04	ug/L	508.04	ppb	14:24:04

2	P 214.914†	5598.5	5081.3	2497.7 ug/L	2497.7 ppb	14:24:04
2	Pb 220.353†	4505.8	4356.1	520.22 ug/L	520.22 ppb	14:24:04
2	S 181.975 Axial†	872.9	765.9	1048.3 ug/L	1048.3 ppb	14:24:04
2	Sb 206.836†	1849.5	1725.4	518.94 ug/L	518.94 ppb	14:24:04
2	Se 196.026†	1016.7	1008.7	532.50 ug/L	532.50 ppb	14:24:04
2	Si 251.611†	87327.2	83758.4	2569.4 ug/L	2569.4 ppb	14:23:43
2	Sn 189.927†	2997.1	2876.2	509.97 ug/L	509.97 ppb	14:24:04
2	Ti 334.940†	287277.4	278240.4	509.31 ug/L	509.31 ppb	14:23:43
2	Tl 190.801†	1977.4	1966.6	517.91 ug/L	517.91 ppb	14:24:04
2	U 409.014†	10533.6	15001.5	506.37 ug/L	506.37 ppb	14:23:43
2	V 292.402†	56503.2	56025.7	514.97 ug/L	514.97 ppb	14:23:43
2	Zn 213.857†	58507.6	55467.4	507.22 ug/L	507.22 ppb	14:23:43
2	SiO2†	87741.9	84133.1	5494.2 ug/L	5494.2 ppb	14:24:41
3	Sc Radial	7240.3	7240.3	96.9 %		14:23:08
3	Y RADIAL	6661.5	6661.5	96.20 %		14:23:08
3	Al 396.153Radial†	6383.5	6662.7	5464.4 ug/L	5464.4 ppb	14:22:48
3	Ca 317.933Radial†	3673.9	3763.7	5331.7 ug/L	5331.7 ppb	14:23:08
3	Fe 238.204 Radial†	1226.4	1231.3	5148.8 ug/L	5148.8 ppb	14:23:08
3	K 766.490 Radial†	25214.2	23623.1	5083.2 ug/L	5083.2 ppb	14:22:48
3	Mg 279.077 IEC†	207.9	211.6	5281.7 ug/L	5281.7 ppb	14:23:08
3	Na 589.592 Radial†	169684.7	175312.2	10759 ug/L	10759 ppb	14:22:48
3	Sr 421.552†	175629.8	181370.1	506.52 ug/L	506.52 ppb	14:22:48
3	Sc 361.383	740782.9	740782.9	103.07 %		14:24:11
3	Y 371.029	571291.1	571291.1	101.65 %		14:24:11
3	Ag 328.068†	88278.7	85013.2	511.01 ug/L	511.01 ppb	14:24:11
3	As 188.979†	1458.3	1450.2	526.22 ug/L	526.22 ppb	14:24:31
3	B 249.677†	19775.7	20125.9	504.23 ug/L	504.23 ppb	14:24:11
3	Ba 233.527†	75004.4	72766.9	514.55 ug/L	514.55 ppb	14:24:11
3	Be 313.107†	1148487.1	1119115.7	513.40 ug/L	513.40 ppb	14:24:11
3	Cd 226.502†	40987.9	40046.6	510.52 ug/L	510.52 ppb	14:24:31
3	Co 228.616†	30462.5	29653.4	514.50 ug/L	514.50 ppb	14:24:31
3	Cr 267.716†	37490.7	36449.9	511.48 ug/L	511.48 ppb	14:24:11
3	Cu 324.752†	150206.8	140088.5	507.94 ug/L	507.94 ppb	14:24:11
3	Mn 257.610†	480485.2	465475.3	513.86 ug/L	513.86 ppb	14:24:11
3	Mo 202.031†	7621.7	7377.2	519.68 ug/L	519.68 ppb	14:24:31
3	Ni 231.604†	19909.6	19196.0	512.78 ug/L	512.78 ppb	14:24:31
3	P 214.914†	5597.5	5115.8	2515.6 ug/L	2515.6 ppb	14:24:31
3	Pb 220.353†	4520.4	4398.8	525.36 ug/L	525.36 ppb	14:24:31
3	S 181.975 Axial†	866.8	765.5	1047.6 ug/L	1047.6 ppb	14:24:31
3	Sb 206.836†	1868.9	1755.9	528.27 ug/L	528.27 ppb	14:24:31
3	Se 196.026†	1025.7	1023.9	540.74 ug/L	540.74 ppb	14:24:31
3	Si 251.611†	86940.6	83935.9	2574.6 ug/L	2574.6 ppb	14:24:11
3	Sn 189.927†	3032.5	2929.6	519.44 ug/L	519.44 ppb	14:24:31
3	Ti 334.940†	284896.7	277748.0	508.42 ug/L	508.42 ppb	14:24:11
3	Tl 190.801†	1987.7	1989.2	523.79 ug/L	523.79 ppb	14:24:31
3	U 409.014†	10425.0	14962.8	505.04 ug/L	505.04 ppb	14:24:11
3	V 292.402†	56204.3	56093.2	515.63 ug/L	515.63 ppb	14:24:11
3	Zn 213.857†	58249.3	55586.9	508.28 ug/L	508.28 ppb	14:24:11
3	SiO2†	87617.3	84567.3	5522.1 ug/L	5522.1 ppb	14:24:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	740857.8	103.08	%	0.661				0.64%
Sc Radial	7294.2	97.6	%	0.94				0.96%
Y 371.029	571305.8	101.66	%	0.570				0.56%
Y RADIAL	6707.8	96.87	%	0.904				0.93%
Ag 328.068†	85173.3	511.95	ug/L	2.033	511.95	ppb	2.033	0.40%
QC value within limits for Ag 328.068 Recovery = 102.39%								
Al 396.153Radial†	6548.6	5370.4	ug/L	131.23	5370.4	ppb	131.23	2.44%
QC value within limits for Al 396.153Radial Recovery = 107.41%								
As 188.979†	1445.9	524.67	ug/L	1.421	524.67	ppb	1.421	0.27%
QC value within limits for As 188.979 Recovery = 104.93%								
B 249.677†	20146.2	504.76	ug/L	1.799	504.76	ppb	1.799	0.36%
QC value within limits for B 249.677 Recovery = 100.95%								
Ba 233.527†	72761.7	514.51	ug/L	1.233	514.51	ppb	1.233	0.24%
QC value within limits for Ba 233.527 Recovery = 102.90%								
Be 313.107†	1121478.1	514.48	ug/L	1.369	514.48	ppb	1.369	0.27%
QC value within limits for Be 313.107 Recovery = 102.90%								
Ca 317.933Radial†	3728.2	5281.5	ug/L	70.82	5281.5	ppb	70.82	1.34%

```
   QC value within limits for Ca 317.933Radial  Recovery = 105.63%
Cd 226.502†            39873.2      508.32 ug/L        2.913      508.32 ppb          2.913   0.57%
   QC value within limits for Cd 226.502  Recovery = 101.66%
Co 228.616†            29512.0      512.04 ug/L        2.788      512.04 ppb          2.788   0.54%
   QC value within limits for Co 228.616  Recovery = 102.41%
Cr 267.716†            36501.4      512.20 ug/L        0.935      512.20 ppb          0.935   0.18%
   QC value within limits for Cr 267.716  Recovery = 102.44%
Cu 324.752†           140394.7      509.05 ug/L        1.129      509.05 ppb          1.129   0.22%
   QC value within limits for Cu 324.752  Recovery = 101.81%
Fe 238.204 Radial†      1215.9      5084.7 ug/L       75.87      5084.7 ppb         75.87   1.49%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.69%
K 766.490 Radial†      23417.5      5038.9 ug/L       94.75      5038.9 ppb         94.75   1.88%
   QC value within limits for K 766.490 Radial  Recovery = 100.78%
Mg 279.077 IEC†          212.3      5298.8 ug/L       15.20      5298.8 ppb         15.20   0.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.98%
Mn 257.610†           465627.0      514.01 ug/L        0.892      514.01 ppb          0.892   0.17%
   QC value within limits for Mn 257.610  Recovery = 102.80%
Mo 202.031†             7346.4      517.51 ug/L        3.070      517.51 ppb          3.070   0.59%
   QC value within limits for Mo 202.031  Recovery = 103.50%
Na 589.592 Radial†    172631.6       10595 ug/L      234.2        10595 ppb        234.2   2.21%
   QC value within limits for Na 589.592 Radial  Recovery = 105.95%
Ni 231.604†            19137.8      511.23 ug/L        2.759      511.23 ppb          2.759   0.54%
   QC value within limits for Ni 231.604  Recovery = 102.25%
P 214.914†              5106.5      2510.6 ug/L       11.29      2510.6 ppb         11.29   0.45%
   QC value within limits for P 214.914  Recovery = 100.42%
Pb 220.353†             4374.8      522.47 ug/L        2.623      522.47 ppb          2.623   0.50%
   QC value within limits for Pb 220.353  Recovery = 104.49%
S 181.975 Axial†         764.3      1046.0 ug/L        3.36      1046.0 ppb          3.36   0.32%
   QC value within limits for S 181.975 Axial  Recovery = 104.60%
Sb 206.836†             1738.8      523.09 ug/L        4.752      523.09 ppb          4.752   0.91%
   QC value within limits for Sb 206.836  Recovery = 104.62%
Se 196.026†             1020.3      538.67 ug/L        5.438      538.67 ppb          5.438   1.01%
   QC value within limits for Se 196.026  Recovery = 107.73%
Si 251.611†            83923.3      2574.3 ug/L         4.78      2574.3 ppb          4.78   0.19%
   QC value within limits for Si 251.611  Recovery = 102.97%
Sn 189.927†             2910.0      515.95 ug/L        5.205      515.95 ppb          5.205   1.01%
   QC value within limits for Sn 189.927  Recovery = 103.19%
Sr 421.552†           178810.5      499.37 ug/L       11.110      499.37 ppb         11.110   2.22%
   QC value within limits for Sr 421.552  Recovery = 99.87%
Ti 334.940†           278410.6      509.63 ug/L        1.394      509.63 ppb          1.394   0.27%
   QC value within limits for Ti 334.940  Recovery = 101.93%
Tl 190.801†             1982.7      522.10 ug/L        3.647      522.10 ppb          3.647   0.70%
   QC value within limits for Tl 190.801  Recovery = 104.42%
U 409.014†             15027.2      507.23 ug/L        2.718      507.23 ppb          2.718   0.54%
   QC value within limits for U 409.014  Recovery = 101.45%
V 292.402†             56144.0      516.07 ug/L        1.385      516.07 ppb          1.385   0.27%
   QC value within limits for V 292.402  Recovery = 103.21%
Zn 213.857†            55612.2      508.52 ug/L        1.448      508.52 ppb          1.448   0.28%
   QC value within limits for Zn 213.857  Recovery = 101.70%
SiO2†                  84424.0      5512.9 ug/L       16.23      5512.9 ppb         16.23   0.29%
   QC value within limits for SiO2  Recovery = 103.09%
All analyte(s) passed QC.
```

Sequence No.: 21
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 14:26:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7357.7	7357.7	98.4	%			14:28:49
1	Y RADIAL	6806.0	6806.0	98.29	%			14:28:49
1	Al 396.153Radial†	-57.0	14.7	12.054	ug/L	12.054	ppb	14:28:49
1	Ca 317.933Radial†	30.0	1.3	1.8928	ug/L	1.8928	ppb	14:29:09
1	Fe 238.204 Radial†	35.7	1.5	6.3098	ug/L	6.3098	ppb	14:29:09
1	K 766.490 Radial†	2420.4	51.7	11.141	ug/L	11.141	ppb	14:28:49
1	Mg 279.077 IEC†	4.1	1.1	28.546	ug/L	28.546	ppb	14:29:09
1	Na 589.592 Radial†	-146.4	-13.1	-0.8054	ug/L	-0.8054	ppb	14:28:49
1	Sr 421.552†	-20.7	34.9	0.0973	ug/L	0.0973	ppb	14:28:49
1	Sc 361.383	720454.6	720454.6	100.25	%			14:30:06
1	Y 371.029	563412.7	563412.7	100.25	%			14:30:06
1	Ag 328.068†	662.0	27.8	0.1718	ug/L	0.1718	ppb	14:30:06
1	As 188.979†	-25.3	10.2	3.6748	ug/L	3.6748	ppb	14:30:26
1	B 249.677†	-672.7	268.9	6.7766	ug/L	6.7766	ppb	14:30:06
1	Ba 233.527†	42.7	42.1	0.2992	ug/L	0.2992	ppb	14:30:26
1	Be 313.107†	-4827.3	66.3	0.0302	ug/L	0.0302	ppb	14:30:06
1	Cd 226.502†	-275.4	6.3	0.0804	ug/L	0.0804	ppb	14:30:26
1	Co 228.616†	-102.0	-2.3	-0.0375	ug/L	-0.0375	ppb	14:30:26
1	Cr 267.716†	-61.4	16.2	0.2281	ug/L	0.2281	ppb	14:30:06
1	Cu 324.752†	5602.1	-50.0	-0.1809	ug/L	-0.1809	ppb	14:30:06
1	Mn 257.610†	762.0	80.5	0.0890	ug/L	0.0890	ppb	14:30:26
1	Mo 202.031†	29.0	11.8	0.8323	ug/L	0.8323	ppb	14:30:26
1	Ni 231.604†	149.4	29.2	0.7802	ug/L	0.7802	ppb	14:30:26
1	P 214.914†	320.3	4.7	2.4546	ug/L	2.4546	ppb	14:30:26
1	Pb 220.353†	-18.0	-4.7	-0.5563	ug/L	-0.5563	ppb	14:30:26
1	S 181.975 Axial†	71.6	-4.0	-5.4613	ug/L	-5.4613	ppb	14:30:26
1	Sb 206.836†	66.9	9.5	2.8349	ug/L	2.8349	ppb	14:30:26
1	Se 196.026†	-44.1	-15.2	-7.7493	ug/L	-7.7493	ppb	14:30:26
1	Si 251.611†	526.1	113.1	3.4662	ug/L	3.4662	ppb	14:30:26
1	Sn 189.927†	15.7	3.2	0.5611	ug/L	0.5611	ppb	14:30:26
1	Ti 334.940†	-1383.1	-31.5	-0.0578	ug/L	-0.0578	ppb	14:30:06
1	Tl 190.801†	-57.8	3.1	0.8061	ug/L	0.8061	ppb	14:30:26
1	U 409.014†	-4853.3	7.3	0.2454	ug/L	0.2454	ppb	14:30:06
1	V 292.402†	-1455.3	113.4	1.0408	ug/L	1.0408	ppb	14:30:06
1	Zn 213.857†	994.5	67.0	0.6118	ug/L	0.6118	ppb	14:30:26
1	SiO2†	566.6	128.3	8.3824	ug/L	8.3824	ppb	14:31:22
2	Sc Radial	7144.9	7144.9	95.6	%			14:29:14
2	Y RADIAL	6613.7	6613.7	95.51	%			14:29:14
2	Al 396.153Radial†	-62.5	7.2	5.9468	ug/L	5.9468	ppb	14:29:14
2	Ca 317.933Radial†	38.1	10.8	15.270	ug/L	15.270	ppb	14:29:34
2	Fe 238.204 Radial†	37.7	4.7	19.470	ug/L	19.470	ppb	14:29:34
2	K 766.490 Radial†	2432.2	137.3	29.614	ug/L	29.614	ppb	14:29:14
2	Mg 279.077 IEC†	2.0	-1.0	-24.813	ug/L	-24.813	ppb	14:29:34
2	Na 589.592 Radial†	-275.4	-152.5	-9.3607	ug/L	-9.3607	ppb	14:29:14
2	Sr 421.552†	-48.3	5.4	0.0148	ug/L	0.0148	ppb	14:29:14
2	Sc 361.383	710699.1	710699.1	98.888	%			14:30:31
2	Y 371.029	556084.3	556084.3	98.947	%			14:30:31
2	Ag 328.068†	587.2	-38.9	-0.2273	ug/L	-0.2273	ppb	14:30:31
2	As 188.979†	-30.4	4.7	1.6844	ug/L	1.6844	ppb	14:30:51
2	B 249.677†	-781.9	149.3	3.7592	ug/L	3.7592	ppb	14:30:31
2	Ba 233.527†	28.1	27.9	0.1965	ug/L	0.1965	ppb	14:30:51
2	Be 313.107†	-4635.1	194.5	0.0886	ug/L	0.0886	ppb	14:30:31
2	Cd 226.502†	-278.4	-0.5	-0.0082	ug/L	-0.0082	ppb	14:30:51
2	Co 228.616†	-86.4	12.1	0.2105	ug/L	0.2105	ppb	14:30:51
2	Cr 267.716†	-79.0	-2.5	-0.0353	ug/L	-0.0353	ppb	14:30:31
2	Cu 324.752†	5698.4	124.0	0.4504	ug/L	0.4504	ppb	14:30:31
2	Mn 257.610†	727.6	56.2	0.0649	ug/L	0.0649	ppb	14:30:51
2	Mo 202.031†	20.1	3.2	0.2260	ug/L	0.2260	ppb	14:30:51
2	Ni 231.604†	111.5	-7.0	-0.1876	ug/L	-0.1876	ppb	14:30:51

2	P 214.914†	312.0	0.7	0.2668	ug/L	0.2668	ppb	14:30:51
2	Pb 220.353†	1.4	14.6	1.7419	ug/L	1.7419	ppb	14:30:51
2	S 181.975 Axial†	89.1	14.7	20.125	ug/L	20.125	ppb	14:30:51
2	Sb 206.836†	61.8	5.2	1.5531	ug/L	1.5531	ppb	14:30:51
2	Se 196.026†	-34.4	-6.0	-2.9820	ug/L	-2.9820	ppb	14:30:51
2	Si 251.611†	523.9	118.1	3.6358	ug/L	3.6358	ppb	14:30:51
2	Sn 189.927†	11.0	-1.4	-0.2406	ug/L	-0.2406	ppb	14:30:51
2	Ti 334.940†	-1427.4	-95.1	-0.1739	ug/L	-0.1739	ppb	14:30:31
2	Tl 190.801†	-57.0	3.1	0.8020	ug/L	0.8020	ppb	14:30:51
2	U 409.014†	-4754.9	40.4	1.3643	ug/L	1.3643	ppb	14:30:31
2	V 292.402†	-1548.4	-0.6	-0.0029	ug/L	-0.0029	ppb	14:30:31
2	Zn 213.857†	1006.1	92.3	0.8516	ug/L	0.8516	ppb	14:30:51
2	SiO2†	567.5	137.0	8.9890	ug/L	8.9890	ppb	14:31:27
3	Sc Radial	7320.7	7320.7	97.9	%			14:29:39
3	Y RADIAL	6770.7	6770.7	97.78	%			14:29:39
3	Al 396.153Radial†	-80.2	-9.3	-7.6114	ug/L	-7.6114	ppb	14:29:39
3	Ca 317.933Radial†	32.7	4.3	6.0964	ug/L	6.0964	ppb	14:29:59
3	Fe 238.204 Radial†	38.0	4.0	16.490	ug/L	16.490	ppb	14:29:59
3	K 766.490 Radial†	2520.8	166.6	35.953	ug/L	35.953	ppb	14:29:39
3	Mg 279.077 IEC†	6.8	3.9	96.707	ug/L	96.707	ppb	14:29:59
3	Na 589.592 Radial†	-174.0	-42.1	-2.5864	ug/L	-2.5864	ppb	14:29:39
3	Sr 421.552†	-67.5	-13.0	-0.0364	ug/L	-0.0364	ppb	14:29:39
3	Sc 361.383	722799.3	722799.3	100.57	%			14:30:56
3	Y 371.029	564630.8	564630.8	100.47	%			14:30:56
3	Ag 328.068†	662.4	26.0	0.1590	ug/L	0.1590	ppb	14:30:56
3	As 188.979†	-38.2	-2.6	-0.9212	ug/L	-0.9212	ppb	14:31:16
3	B 249.677†	-733.3	210.8	5.3117	ug/L	5.3117	ppb	14:30:56
3	Ba 233.527†	34.8	34.1	0.2388	ug/L	0.2388	ppb	14:31:16
3	Be 313.107†	-4763.4	145.5	0.0666	ug/L	0.0666	ppb	14:30:56
3	Cd 226.502†	-294.8	-12.0	-0.1548	ug/L	-0.1548	ppb	14:31:16
3	Co 228.616†	-103.7	-3.7	-0.0657	ug/L	-0.0657	ppb	14:31:16
3	Cr 267.716†	-48.4	29.3	0.4098	ug/L	0.4098	ppb	14:30:56
3	Cu 324.752†	5673.0	2.3	0.0092	ug/L	0.0092	ppb	14:30:56
3	Mn 257.610†	724.2	40.5	0.0449	ug/L	0.0449	ppb	14:31:16
3	Mo 202.031†	10.6	-6.6	-0.4657	ug/L	-0.4657	ppb	14:31:16
3	Ni 231.604†	134.7	14.1	0.3771	ug/L	0.3771	ppb	14:31:16
3	P 214.914†	329.0	12.4	6.2915	ug/L	6.2915	ppb	14:31:16
3	Pb 220.353†	-18.4	-5.1	-0.6070	ug/L	-0.6070	ppb	14:31:16
3	S 181.975 Axial†	87.4	11.5	15.691	ug/L	15.691	ppb	14:31:16
3	Sb 206.836†	50.4	-7.1	-2.1543	ug/L	-2.1543	ppb	14:31:16
3	Se 196.026†	-42.4	-13.4	-6.7728	ug/L	-6.7728	ppb	14:31:16
3	Si 251.611†	525.2	110.5	3.4199	ug/L	3.4199	ppb	14:31:16
3	Sn 189.927†	7.4	-5.1	-0.9024	ug/L	-0.9024	ppb	14:31:16
3	Ti 334.940†	-1347.4	8.5	0.0163	ug/L	0.0163	ppb	14:30:56
3	Tl 190.801†	-65.9	-4.7	-1.2408	ug/L	-1.2408	ppb	14:31:16
3	U 409.014†	-4904.5	-27.9	-0.9480	ug/L	-0.9480	ppb	14:30:56
3	V 292.402†	-1643.2	-68.7	-0.6323	ug/L	-0.6323	ppb	14:30:56
3	Zn 213.857†	998.2	67.4	0.6142	ug/L	0.6142	ppb	14:31:16
3	SiO2†	536.0	96.1	6.3369	ug/L	6.3369	ppb	14:31:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	717984.4	99.902	%	0.8929				0.89%
Sc Radial	7274.4	97.3	%	1.52				1.56%
Y 371.029	561375.9	99.889	%	0.8226				0.82%
Y RADIAL	6730.1	97.20	%	1.479				1.52%
Ag 328.068†	5.0	0.0345	ug/L	0.22680	0.0345	ppb	0.22680	657.52%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	4.2	3.4631	ug/L	10.06512	3.4631	ppb	10.06512	290.64%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.1	1.4793	ug/L	2.30486	1.4793	ppb	2.30486	155.80%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	209.7	5.2825	ug/L	1.50894	5.2825	ppb	1.50894	28.56%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	34.7	0.2449	ug/L	0.05159	0.2449	ppb	0.05159	21.07%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	135.4	0.0618	ug/L	0.02952	0.0618	ppb	0.02952	47.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.5	7.7531	ug/L	6.84079	7.7531	ppb	6.84079	88.23%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -2.0     -0.0275 ug/L       0.11883     -0.0275 ppb        0.11883 431.73%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 2.0      0.0358 ug/L       0.15200      0.0358 ppb        0.15200 424.78%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.3      0.2009 ug/L       0.22380      0.2009 ppb        0.22380 111.41%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                25.4      0.0929 ug/L       0.32389      0.0929 ppb        0.32389 348.61%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4     14.090 ug/L        6.9006     14.090 ppb         6.9006  48.98%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         118.5     25.569 ug/L       12.8914     25.569 ppb        12.8914  50.42%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.3     33.480 ug/L       60.9101     33.480 ppb        60.9101 181.93%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                59.1      0.0663 ug/L       0.02210      0.0663 ppb        0.02210  33.35%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.8      0.1975 ug/L       0.64950      0.1975 ppb        0.64950 328.83%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -69.3     -4.2508 ug/L       4.51400     -4.2508 ppb        4.51400 106.19%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                12.1      0.3233 ug/L       0.48613      0.3233 ppb        0.48613 150.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  5.9      3.0043 ug/L       3.04972      3.0043 ppb        3.04972 101.51%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 1.6      0.1929 ug/L       1.34174      0.1929 ppb        1.34174 695.60%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.4     10.118 ug/L       13.6732     10.118 ppb        13.6732 135.13%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 2.5      0.7446 ug/L       2.59100      0.7446 ppb        2.59100 347.98%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -11.5     -5.8347 ug/L       2.51832     -5.8347 ppb        2.51832  43.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               113.9      3.5073 ug/L       0.11368      3.5073 ppb        0.11368   3.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.1     -0.1939 ug/L       0.73286     -0.1939 ppb        0.73286 377.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 9.1      0.0252 ug/L       0.06748      0.0252 ppb        0.06748 267.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -39.4     -0.0718 ug/L       0.09585     -0.0718 ppb        0.09585 133.50%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 0.5      0.1224 ug/L       1.18057      0.1224 ppb        1.18057 964.40%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                  6.6      0.2206 ug/L       1.15636      0.2206 ppb        1.15636 524.25%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 14.7      0.1352 ug/L       0.84504      0.1352 ppb        0.84504 625.07%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                75.6      0.6925 ug/L       0.13778      0.6925 ppb        0.13778  19.90%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     120.5      7.9028 ug/L       1.38958      7.9028 ppb        1.38958  17.58%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 6/30/2009 14:43:19
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601

Plasma On Time: 6/29/2009 15:26:31
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 14:43:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7137.2	7137.2	95.5	%			14:45:32
1	Y RADIAL	6564.5	6564.5	94.80	%			14:45:32
1	Al 396.153Radial†	6313.0	6684.1	5482.8	ug/L	5482.8	ppb	14:45:12
1	Ca 317.933Radial†	3719.0	3865.8	5476.3	ug/L	5476.3	ppb	14:45:32
1	Fe 238.204 Radial†	1240.3	1264.1	5285.0	ug/L	5285.0	ppb	14:45:32
1	K 766.490 Radial†	24931.6	23703.1	5101.0	ug/L	5101.0	ppb	14:45:12
1	Mg 279.077 IEC†	211.3	218.3	5447.3	ug/L	5447.3	ppb	14:45:32
1	Na 589.592 Radial†	167622.3	175682.6	10782	ug/L	10782	ppb	14:45:12
1	Sr 421.552†	174150.3	182439.6	509.51	ug/L	509.51	ppb	14:45:12
1	Sc 361.383	766538.4	766538.4	106.66	%			14:46:31
1	Y 371.029	591502.5	591502.5	105.25	%			14:46:31
1	Ag 328.068†	88049.0	81920.1	492.51	ug/L	492.51	ppb	14:46:31
1	As 188.979†	1426.3	1372.7	498.22	ug/L	498.22	ppb	14:46:51
1	B 249.677†	19721.2	19430.0	486.80	ug/L	486.80	ppb	14:46:31
1	Ba 233.527†	74223.1	69589.4	492.08	ug/L	492.08	ppb	14:46:31
1	Be 313.107†	1142807.9	1076352.9	493.78	ug/L	493.78	ppb	14:46:31
1	Cd 226.502†	40577.3	38325.4	488.54	ug/L	488.54	ppb	14:46:51
1	Co 228.616†	30101.9	28322.3	491.40	ug/L	491.40	ppb	14:46:51
1	Cr 267.716†	37316.8	35064.8	492.05	ug/L	492.05	ppb	14:46:31
1	Cu 324.752†	149803.2	134813.7	488.83	ug/L	488.83	ppb	14:46:31
1	Mn 257.610†	475710.6	445336.1	491.66	ug/L	491.66	ppb	14:46:31
1	Mo 202.031†	7571.2	7081.5	498.87	ug/L	498.87	ppb	14:46:51
1	Ni 231.604†	19779.8	18425.3	492.19	ug/L	492.19	ppb	14:46:51
1	P 214.914†	5537.1	4876.6	2396.9	ug/L	2396.9	ppb	14:46:51
1	Pb 220.353†	4488.4	4221.4	504.19	ug/L	504.19	ppb	14:46:51
1	S 181.975 Axial†	851.2	722.7	988.94	ug/L	988.94	ppb	14:46:51
1	Sb 206.836†	1827.8	1656.5	498.41	ug/L	498.41	ppb	14:46:51
1	Se 196.026†	1012.1	977.7	517.57	ug/L	517.57	ppb	14:46:51
1	Si 251.611†	86130.7	80342.5	2464.3	ug/L	2464.3	ppb	14:46:31
1	Sn 189.927†	2996.3	2796.8	495.96	ug/L	495.96	ppb	14:46:51
1	Ti 334.940†	283264.6	266930.9	488.63	ug/L	488.63	ppb	14:46:31
1	Tl 190.801†	1968.1	1906.0	501.90	ug/L	501.90	ppb	14:46:51
1	U 409.014†	10490.6	14684.5	495.64	ug/L	495.64	ppb	14:46:31
1	V 292.402†	55760.9	53845.4	494.94	ug/L	494.94	ppb	14:46:31
1	Zn 213.857†	57833.3	53298.1	487.29	ug/L	487.29	ppb	14:46:31
1	SiO2†	86560.6	80720.4	5270.6	ug/L	5270.6	ppb	14:47:51
2	Sc Radial	7255.2	7255.2	97.1	%			14:45:57
2	Y RADIAL	6649.7	6649.7	96.03	%			14:45:57
2	Al 396.153Radial†	6286.0	6548.7	5371.3	ug/L	5371.3	ppb	14:45:37
2	Ca 317.933Radial†	3699.9	3782.7	5358.6	ug/L	5358.6	ppb	14:45:57
2	Fe 238.204 Radial†	1225.9	1228.1	5135.0	ug/L	5135.0	ppb	14:45:57
2	K 766.490 Radial†	24915.7	23261.9	5005.8	ug/L	5005.8	ppb	14:45:37
2	Mg 279.077 IEC†	212.6	216.0	5391.2	ug/L	5391.2	ppb	14:45:57
2	Na 589.592 Radial†	165986.4	171140.5	10503	ug/L	10503	ppb	14:45:37
2	Sr 421.552†	172511.4	177783.0	496.50	ug/L	496.50	ppb	14:45:37
2	Sc 361.383	765905.4	765905.4	106.57	%			14:46:58
2	Y 371.029	590898.1	590898.1	105.14	%			14:46:58

2	Ag 328.068†	87867.8	81818.4	491.86 ug/L	491.86 ppb	14:46:58
2	As 188.979†	1444.7	1391.1	504.81 ug/L	504.81 ppb	14:47:18
2	B 249.677†	19805.4	19524.4	489.17 ug/L	489.17 ppb	14:46:58
2	Ba 233.527†	74361.4	69776.7	493.41 ug/L	493.41 ppb	14:46:58
2	Be 313.107†	1144475.3	1078803.1	494.90 ug/L	494.90 ppb	14:46:58
2	Cd 226.502†	40726.0	38496.4	490.74 ug/L	490.74 ppb	14:47:18
2	Co 228.616†	30228.7	28464.6	493.87 ug/L	493.87 ppb	14:47:18
2	Cr 267.716†	37299.4	35077.4	492.22 ug/L	492.22 ppb	14:46:58
2	Cu 324.752†	149550.1	134692.3	488.38 ug/L	488.38 ppb	14:46:58
2	Mn 257.610†	476621.3	446559.2	492.99 ug/L	492.99 ppb	14:46:58
2	Mo 202.031†	7579.4	7095.0	499.81 ug/L	499.81 ppb	14:47:18
2	Ni 231.604†	19793.6	18453.6	492.95 ug/L	492.95 ppb	14:47:18
2	P 214.914†	5556.7	4899.3	2408.7 ug/L	2408.7 ppb	14:47:18
2	Pb 220.353†	4502.6	4238.3	506.18 ug/L	506.18 ppb	14:47:18
2	S 181.975 Axial†	856.2	728.0	996.26 ug/L	996.26 ppb	14:47:18
2	Sb 206.836†	1827.7	1657.8	498.87 ug/L	498.87 ppb	14:47:18
2	Se 196.026†	1022.1	987.8	522.25 ug/L	522.25 ppb	14:47:18
2	Si 251.611†	86108.9	80388.7	2465.7 ug/L	2465.7 ppb	14:46:58
2	Sn 189.927†	3017.4	2818.9	499.84 ug/L	499.84 ppb	14:47:18
2	Ti 334.940†	283539.8	267408.6	489.50 ug/L	489.50 ppb	14:46:58
2	Tl 190.801†	1974.7	1913.7	503.91 ug/L	503.91 ppb	14:47:18
2	U 409.014†	10341.8	14553.0	491.20 ug/L	491.20 ppb	14:46:58
2	V 292.402†	55922.9	54040.6	496.74 ug/L	496.74 ppb	14:46:58
2	Zn 213.857†	57768.0	53281.6	487.15 ug/L	487.15 ppb	14:46:58
2	SiO2†	87933.2	82075.5	5359.6 ug/L	5359.6 ppb	14:47:56
3	Sc Radial	7426.8	7426.8	99.4 %		14:46:22
3	Y RADIAL	6805.9	6805.9	98.29 %		14:46:22
3	Al 396.153Radial†	6296.0	6409.2	5255.8 ug/L	5255.8 ppb	14:46:02
3	Ca 317.933Radial†	3666.3	3660.8	5185.9 ug/L	5185.9 ppb	14:46:22
3	Fe 238.204 Radial†	1224.8	1197.9	5009.4 ug/L	5009.4 ppb	14:46:22
3	K 766.490 Radial†	25058.1	22812.2	4908.4 ug/L	4908.4 ppb	14:46:02
3	Mg 279.077 IEC†	211.0	209.3	5224.6 ug/L	5224.6 ppb	14:46:22
3	Na 589.592 Radial†	167205.4	168417.2	10336 ug/L	10336 ppb	14:46:02
3	Sr 421.552†	173181.4	174351.9	486.92 ug/L	486.92 ppb	14:46:02
3	Sc 361.383	749065.5	749065.5	104.23 %		14:47:25
3	Y 371.029	577293.0	577293.0	102.72 %		14:47:25
3	Ag 328.068†	89173.2	84924.4	510.44 ug/L	510.44 ppb	14:47:25
3	As 188.979†	1436.8	1414.0	513.12 ug/L	513.12 ppb	14:47:45
3	B 249.677†	20007.2	20135.8	504.53 ug/L	504.53 ppb	14:47:25
3	Ba 233.527†	75493.4	72431.5	512.18 ug/L	512.18 ppb	14:47:25
3	Be 313.107†	1162013.9	1119773.6	513.70 ug/L	513.70 ppb	14:47:25
3	Cd 226.502†	40671.0	39302.8	501.05 ug/L	501.05 ppb	14:47:45
3	Co 228.616†	30234.1	29107.5	505.02 ug/L	505.02 ppb	14:47:45
3	Cr 267.716†	37870.8	36412.4	510.95 ug/L	510.95 ppb	14:47:25
3	Cu 324.752†	151474.5	139693.5	506.50 ug/L	506.50 ppb	14:47:25
3	Mn 257.610†	483656.1	463363.2	511.51 ug/L	511.51 ppb	14:47:25
3	Mo 202.031†	7607.2	7281.6	512.94 ug/L	512.94 ppb	14:47:45
3	Ni 231.604†	19846.1	18921.5	505.45 ug/L	505.45 ppb	14:47:45
3	P 214.914†	5543.9	5004.3	2458.8 ug/L	2458.8 ppb	14:47:45
3	Pb 220.353†	4505.4	4335.9	517.82 ug/L	517.82 ppb	14:47:45
3	S 181.975 Axial†	855.5	745.4	1020.1 ug/L	1020.1 ppb	14:47:45
3	Sb 206.836†	1838.2	1706.4	513.28 ug/L	513.28 ppb	14:47:45
3	Se 196.026†	1023.4	1010.6	533.50 ug/L	533.50 ppb	14:47:45
3	Si 251.611†	87271.9	83321.1	2555.9 ug/L	2555.9 ppb	14:47:25
3	Sn 189.927†	3001.6	2867.4	508.40 ug/L	508.40 ppb	14:47:45
3	Ti 334.940†	287210.2	276911.5	506.88 ug/L	506.88 ppb	14:47:25
3	Tl 190.801†	1981.5	1961.9	516.66 ug/L	516.66 ppb	14:47:45
3	U 409.014†	10450.5	14875.5	502.10 ug/L	502.10 ppb	14:47:25
3	V 292.402†	56735.2	55999.7	514.71 ug/L	514.71 ppb	14:47:25
3	Zn 213.857†	58731.8	55425.0	506.85 ug/L	506.85 ppb	14:47:25
3	SiO2†	87396.9	83415.8	5447.1 ug/L	5447.1 ppb	14:48:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	760503.1	105.82	%	1.379				1.30%
Sc Radial	7273.1	97.3	%	1.95				2.00%
Y 371.029	586564.5	104.37	%	1.430				1.37%
Y RADIAL	6673.4	96.38	%	1.768				1.83%
Ag 328.068†	82887.6	498.27	ug/L	10.545	498.27	ppb	10.545	2.12%

```
   QC value within limits for Ag 328.068  Recovery = 99.65%
Al 396.153Radial†       6547.3      5370.0 ug/L        113.49      5370.0 ppb        113.49   2.11%
   QC value within limits for Al 396.153Radial  Recovery = 107.40%
As 188.979†             1392.6      505.38 ug/L         7.465      505.38 ppb         7.465   1.48%
   QC value within limits for As 188.979  Recovery = 101.08%
B 249.677†             19696.7      493.50 ug/L         9.627      493.50 ppb         9.627   1.95%
   QC value within limits for B 249.677  Recovery = 98.70%
Ba 233.527†            70599.2      499.22 ug/L        11.240      499.22 ppb        11.240   2.25%
   QC value within limits for Ba 233.527  Recovery = 99.84%
Be 313.107†          1091643.2      500.79 ug/L        11.188      500.79 ppb        11.188   2.23%
   QC value within limits for Be 313.107  Recovery = 100.16%
Ca 317.933Radial†       3769.7      5340.3 ug/L       146.08      5340.3 ppb       146.08   2.74%
   QC value within limits for Ca 317.933Radial  Recovery = 106.81%
Cd 226.502†            38708.2      493.44 ug/L         6.677      493.44 ppb         6.677   1.35%
   QC value within limits for Cd 226.502  Recovery = 98.69%
Co 228.616†            28631.5      496.76 ug/L         7.257      496.76 ppb         7.257   1.46%
   QC value within limits for Co 228.616  Recovery = 99.35%
Cr 267.716†            35518.2      498.41 ug/L        10.865      498.41 ppb        10.865   2.18%
   QC value within limits for Cr 267.716  Recovery = 99.68%
Cu 324.752†           136399.8      494.57 ug/L        10.332      494.57 ppb        10.332   2.09%
   QC value within limits for Cu 324.752  Recovery = 98.91%
Fe 238.204 Radial†      1230.1      5143.1 ug/L       137.94      5143.1 ppb       137.94   2.68%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.86%
K 766.490 Radial†      23259.1      5005.1 ug/L        96.30      5005.1 ppb        96.30   1.92%
   QC value within limits for K 766.490 Radial  Recovery = 100.10%
Mg 279.077 IEC†         214.5      5354.4 ug/L       115.81      5354.4 ppb       115.81   2.16%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.09%
Mn 257.610†           451752.8      498.72 ug/L        11.096      498.72 ppb        11.096   2.22%
   QC value within limits for Mn 257.610  Recovery = 99.74%
Mo 202.031†             7152.7      503.87 ug/L         7.865      503.87 ppb         7.865   1.56%
   QC value within limits for Mo 202.031  Recovery = 100.77%
Na 589.592 Radial†    171746.7       10541 ug/L       225.3        10541 ppb       225.3   2.14%
   QC value within limits for Na 589.592 Radial  Recovery = 105.41%
Ni 231.604†            18600.1      496.86 ug/L         7.444      496.86 ppb         7.444   1.50%
   QC value within limits for Ni 231.604  Recovery = 99.37%
P 214.914†              4926.7      2421.5 ug/L        32.89      2421.5 ppb        32.89   1.36%
   QC value within limits for P 214.914  Recovery = 96.86%
Pb 220.353†             4265.2      509.40 ug/L         7.366      509.40 ppb         7.366   1.45%
   QC value within limits for Pb 220.353  Recovery = 101.88%
S 181.975 Axial†         732.0      1001.8 ug/L        16.31      1001.8 ppb        16.31   1.63%
   QC value within limits for S 181.975 Axial  Recovery = 100.18%
Sb 206.836†             1673.6      503.52 ug/L         8.451      503.52 ppb         8.451   1.68%
   QC value within limits for Sb 206.836  Recovery = 100.70%
Se 196.026†              992.0      524.44 ug/L         8.185      524.44 ppb         8.185   1.56%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†            81350.8      2495.3 ug/L        52.51      2495.3 ppb        52.51   2.10%
   QC value within limits for Si 251.611  Recovery = 99.81%
Sn 189.927†             2827.7      501.40 ug/L         6.367      501.40 ppb         6.367   1.27%
   QC value within limits for Sn 189.927  Recovery = 100.28%
Sr 421.552†           178191.5      497.64 ug/L        11.336      497.64 ppb        11.336   2.28%
   QC value within limits for Sr 421.552  Recovery = 99.53%
Ti 334.940†           270417.0      495.00 ug/L        10.293      495.00 ppb        10.293   2.08%
   QC value within limits for Ti 334.940  Recovery = 99.00%
Tl 190.801†             1927.2      507.49 ug/L         8.006      507.49 ppb         8.006   1.58%
   QC value within limits for Tl 190.801  Recovery = 101.50%
U 409.014†             14704.3      496.31 ug/L         5.481      496.31 ppb         5.481   1.10%
   QC value within limits for U 409.014  Recovery = 99.26%
V 292.402†             54628.6      502.13 ug/L        10.929      502.13 ppb        10.929   2.18%
   QC value within limits for V 292.402  Recovery = 100.43%
Zn 213.857†            54001.6      493.76 ug/L        11.331      493.76 ppb        11.331   2.29%
   QC value within limits for Zn 213.857  Recovery = 98.75%
SiO2†                  82070.6      5359.1 ug/L        88.25      5359.1 ppb        88.25   1.65%
   QC value within limits for SiO2  Recovery = 100.22%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 14:50:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7498.2	7498.2	100	%			14:52:03
1	Y RADIAL	6974.0	6974.0	100.7	%			14:52:03
1	Al 396.153Radial†	-76.4	-3.5	-2.8247	ug/L	-2.8247	ppb	14:52:03
1	Ca 317.933Radial†	27.2	-2.0	-2.8304	ug/L	-2.8304	ppb	14:52:23
1	Fe 238.204 Radial†	39.0	4.1	17.204	ug/L	17.204	ppb	14:52:23
1	K 766.490 Radial†	2478.1	63.1	13.619	ug/L	13.619	ppb	14:52:03
1	Mg 279.077 IEC†	4.6	1.5	37.389	ug/L	37.389	ppb	14:52:23
1	Na 589.592 Radial†	-154.1	-18.0	-1.1077	ug/L	-1.1077	ppb	14:52:03
1	Sr 421.552†	-23.5	32.4	0.0905	ug/L	0.0905	ppb	14:52:03
1	Sc 361.383	720920.1	720920.1	100.31	%			14:53:20
1	Y 371.029	564413.2	564413.2	100.43	%			14:53:20
1	Ag 328.068†	628.9	-5.6	-0.0297	ug/L	-0.0297	ppb	14:53:20
1	As 188.979†	-28.6	7.0	2.5106	ug/L	2.5106	ppb	14:53:40
1	B 249.677†	-707.3	234.8	5.9156	ug/L	5.9156	ppb	14:53:20
1	Ba 233.527†	42.1	41.5	0.2935	ug/L	0.2935	ppb	14:53:40
1	Be 313.107†	-4744.7	151.7	0.0693	ug/L	0.0693	ppb	14:53:20
1	Cd 226.502†	-268.2	13.7	0.1731	ug/L	0.1731	ppb	14:53:40
1	Co 228.616†	-96.0	3.7	0.0625	ug/L	0.0625	ppb	14:53:40
1	Cr 267.716†	-46.5	31.1	0.4351	ug/L	0.4351	ppb	14:53:20
1	Cu 324.752†	5622.5	-33.3	-0.1197	ug/L	-0.1197	ppb	14:53:20
1	Mn 257.610†	734.5	52.6	0.0594	ug/L	0.0594	ppb	14:53:20
1	Mo 202.031†	5.4	-11.8	-0.8283	ug/L	-0.8283	ppb	14:53:40
1	Ni 231.604†	134.8	14.5	0.3885	ug/L	0.3885	ppb	14:53:40
1	P 214.914†	299.8	-16.0	-8.1209	ug/L	-8.1209	ppb	14:53:40
1	Pb 220.353†	-10.0	3.3	0.3868	ug/L	0.3868	ppb	14:53:40
1	S 181.975 Axial†	85.0	9.4	12.814	ug/L	12.814	ppb	14:53:40
1	Sb 206.836†	64.7	7.2	2.1388	ug/L	2.1388	ppb	14:53:40
1	Se 196.026†	-28.6	0.3	0.1849	ug/L	0.1849	ppb	14:53:40
1	Si 251.611†	538.2	124.8	3.8488	ug/L	3.8488	ppb	14:53:40
1	Sn 189.927†	19.0	6.5	1.1461	ug/L	1.1461	ppb	14:53:40
1	Ti 334.940†	-1389.9	-37.3	-0.0703	ug/L	-0.0703	ppb	14:53:20
1	Tl 190.801†	-54.1	6.9	1.7974	ug/L	1.7974	ppb	14:53:40
1	U 409.014†	-4751.7	111.7	3.7797	ug/L	3.7797	ppb	14:53:20
1	V 292.402†	-1521.6	48.3	0.4341	ug/L	0.4341	ppb	14:53:20
1	Zn 213.857†	999.2	71.0	0.6499	ug/L	0.6499	ppb	14:53:40
1	SiO2†	483.8	45.4	2.9735	ug/L	2.9735	ppb	14:54:36
2	Sc Radial	7550.7	7550.7	101	%			14:52:28
2	Y RADIAL	6988.0	6988.0	100.9	%			14:52:28
2	Al 396.153Radial†	-84.3	-10.8	-8.8757	ug/L	-8.8757	ppb	14:52:28
2	Ca 317.933Radial†	32.6	3.2	4.5234	ug/L	4.5234	ppb	14:52:48
2	Fe 238.204 Radial†	37.3	2.1	8.6923	ug/L	8.6923	ppb	14:52:48
2	K 766.490 Radial†	2505.7	73.3	15.813	ug/L	15.813	ppb	14:52:28
2	Mg 279.077 IEC†	8.2	5.1	125.98	ug/L	125.98	ppb	14:52:48
2	Na 589.592 Radial†	-224.4	-86.6	-5.3161	ug/L	-5.3161	ppb	14:52:28
2	Sr 421.552†	35.9	91.4	0.2551	ug/L	0.2551	ppb	14:52:28
2	Sc 361.383	727136.0	727136.0	101.18	%			14:53:45
2	Y 371.029	568952.0	568952.0	101.24	%			14:53:45
2	Ag 328.068†	578.3	-61.1	-0.3614	ug/L	-0.3614	ppb	14:53:45
2	As 188.979†	-32.2	3.6	1.2893	ug/L	1.2893	ppb	14:54:05
2	B 249.677†	-725.3	223.1	5.6208	ug/L	5.6208	ppb	14:53:45
2	Ba 233.527†	38.1	37.2	0.2626	ug/L	0.2626	ppb	14:54:05
2	Be 313.107†	-4754.7	182.3	0.0838	ug/L	0.0838	ppb	14:53:45
2	Cd 226.502†	-270.9	13.3	0.1698	ug/L	0.1698	ppb	14:54:05
2	Co 228.616†	-89.7	10.8	0.1870	ug/L	0.1870	ppb	14:54:05
2	Cr 267.716†	-109.1	-30.5	-0.4262	ug/L	-0.4262	ppb	14:53:45
2	Cu 324.752†	5761.6	56.2	0.2042	ug/L	0.2042	ppb	14:53:45
2	Mn 257.610†	794.7	105.9	0.1154	ug/L	0.1154	ppb	14:53:45
2	Mo 202.031†	13.5	-3.8	-0.2662	ug/L	-0.2662	ppb	14:54:05
2	Ni 231.604†	156.2	34.6	0.9254	ug/L	0.9254	ppb	14:54:05

2	P 214.914†	326.2	7.6	3.8332 ug/L	3.8332 ppb	14:54:05
2	Pb 220.353†	-8.0	5.4	0.6349 ug/L	0.6349 ppb	14:54:05
2	S 181.975 Axial†	87.2	10.8	14.815 ug/L	14.815 ppb	14:54:05
2	Sb 206.836†	57.9	0.0	0.0225 ug/L	0.0225 ppb	14:54:05
2	Se 196.026†	-16.7	12.2	6.2667 ug/L	6.2667 ppb	14:54:05
2	Si 251.611†	507.4	89.7	2.7566 ug/L	2.7566 ppb	14:54:05
2	Sn 189.927†	18.2	5.5	0.9763 ug/L	0.9763 ppb	14:54:05
2	Ti 334.940†	-1283.3	79.9	0.1467 ug/L	0.1467 ppb	14:53:45
2	Tl 190.801†	-55.5	5.9	1.5495 ug/L	1.5495 ppb	14:54:05
2	U 409.014†	-4907.8	-2.0	-0.0694 ug/L	-0.0694 ppb	14:53:45
2	V 292.402†	-1560.6	22.7	0.2040 ug/L	0.2040 ppb	14:53:45
2	Zn 213.857†	995.5	58.8	0.5313 ug/L	0.5313 ppb	14:54:05
2	SiO2†	534.8	91.7	6.0009 ug/L	6.0009 ppb	14:54:41
3	Sc Radial	7378.8	7378.8	98.7 %		14:52:53
3	Y RADIAL	6834.8	6834.8	98.71 %		14:52:53
3	Al 396.153Radial†	-60.7	11.1	9.1352 ug/L	9.1352 ppb	14:52:53
3	Ca 317.933Radial†	23.7	-5.1	-7.1543 ug/L	-7.1543 ppb	14:53:13
3	Fe 238.204 Radial†	41.7	7.4	30.851 ug/L	30.851 ppb	14:53:13
3	K 766.490 Radial†	2380.1	3.8	0.8155 ug/L	0.8155 ppb	14:52:53
3	Mg 279.077 IEC†	6.1	3.1	76.957 ug/L	76.957 ppb	14:53:13
3	Na 589.592 Radial†	-60.8	73.9	4.5371 ug/L	4.5371 ppb	14:52:53
3	Sr 421.552†	-18.8	36.8	0.1030 ug/L	0.1030 ppb	14:52:53
3	Sc 361.383	722489.3	722489.3	100.53 %		14:54:11
3	Y 371.029	565343.4	565343.4	100.59 %		14:54:11
3	Ag 328.068†	586.2	-49.5	-0.2853 ug/L	-0.2853 ppb	14:54:11
3	As 188.979†	-28.8	6.8	2.4664 ug/L	2.4664 ppb	14:54:31
3	B 249.677†	-718.1	225.6	5.6844 ug/L	5.6844 ppb	14:54:11
3	Ba 233.527†	19.6	19.0	0.1349 ug/L	0.1349 ppb	14:54:31
3	Be 313.107†	-4696.3	210.1	0.0956 ug/L	0.0956 ppb	14:54:11
3	Cd 226.502†	-268.1	14.5	0.1810 ug/L	0.1810 ppb	14:54:31
3	Co 228.616†	-99.3	0.7	0.0120 ug/L	0.0120 ppb	14:54:31
3	Cr 267.716†	-101.0	-23.1	-0.3230 ug/L	-0.3230 ppb	14:54:11
3	Cu 324.752†	5636.0	-32.1	-0.1144 ug/L	-0.1144 ppb	14:54:11
3	Mn 257.610†	782.6	98.9	0.1114 ug/L	0.1114 ppb	14:54:11
3	Mo 202.031†	19.4	2.2	0.1564 ug/L	0.1564 ppb	14:54:31
3	Ni 231.604†	136.9	16.3	0.4366 ug/L	0.4366 ppb	14:54:31
3	P 214.914†	326.7	10.2	5.2465 ug/L	5.2465 ppb	14:54:31
3	Pb 220.353†	15.4	28.6	3.4017 ug/L	3.4017 ppb	14:54:31
3	S 181.975 Axial†	82.5	6.6	9.0567 ug/L	9.0567 ppb	14:54:31
3	Sb 206.836†	50.7	-6.8	-1.9961 ug/L	-1.9961 ppb	14:54:31
3	Se 196.026†	-29.7	-0.8	-0.2859 ug/L	-0.2859 ppb	14:54:31
3	Si 251.611†	496.8	82.4	2.5275 ug/L	2.5275 ppb	14:54:31
3	Sn 189.927†	18.9	6.3	1.1210 ug/L	1.1210 ppb	14:54:31
3	Ti 334.940†	-1487.1	-131.0	-0.2407 ug/L	-0.2407 ppb	14:54:11
3	Tl 190.801†	-50.3	10.7	2.8039 ug/L	2.8039 ppb	14:54:31
3	U 409.014†	-4837.8	36.3	1.2271 ug/L	1.2271 ppb	14:54:11
3	V 292.402†	-1527.7	45.5	0.4151 ug/L	0.4151 ppb	14:54:11
3	Zn 213.857†	1007.6	77.2	0.7040 ug/L	0.7040 ppb	14:54:31
3	SiO2†	483.3	43.9	2.8469 ug/L	2.8469 ppb	14:54:46

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	723515.1	100.67	%	0.450				0.45%
Sc Radial	7475.9	100	%	1.2				1.18%
Y 371.029	566236.2	100.75	%	0.427				0.42%
Y RADIAL	6932.3	100.1	%	1.22				1.22%
Ag 328.068†	-38.8	-0.2254	ug/L	0.17376	-0.2254	ppb	0.17376	77.08%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.1	-0.8551	ug/L	9.16556	-0.8551	ppb	9.16556	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.8	2.0888	ug/L	0.69274	2.0888	ppb	0.69274	33.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	227.8	5.7403	ug/L	0.15517	5.7403	ppb	0.15517	2.70%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.5	0.2303	ug/L	0.08411	0.2303	ppb	0.08411	36.51%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	181.4	0.0829	ug/L	0.01319	0.0829	ppb	0.01319	15.91%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.3	-1.8204	ug/L	5.90399	-1.8204	ppb	5.90399	324.32%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.8      0.1747 ug/L       0.00575      0.1747 ppb        0.00575   3.29%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 5.1      0.0872 ug/L       0.09006      0.0872 ppb        0.09006 103.29%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -7.5     -0.1047 ug/L       0.47033     -0.1047 ppb        0.47033 449.21%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -3.1     -0.0100 ug/L       0.18548     -0.0100 ppb        0.18548 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.5      18.916 ug/L       11.1783      18.916 ppb        11.1783  59.09%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          46.7      10.082 ug/L        8.1000      10.082 ppb         8.1000  80.34%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             3.2      80.108 ug/L       44.3783      80.108 ppb        44.3783  55.40%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                85.8       0.0954 ug/L       0.03124      0.0954 ppb        0.03124  32.74%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -4.5     -0.3127 ug/L       0.49396     -0.3127 ppb        0.49396 157.97%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -10.2     -0.6289 ug/L       4.94403     -0.6289 ppb        4.94403 786.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.8       0.5835 ug/L       0.29710      0.5835 ppb        0.29710  50.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  0.6       0.3196 ug/L       7.34373      0.3196 ppb        7.34373 >999.9%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                12.4       1.4745 ug/L       1.67362      1.4745 ppb        1.67362 113.51%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            8.9      12.229 ug/L        2.9233      12.229 ppb         2.9233  23.91%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 0.1       0.0551 ug/L       2.06766      0.0551 ppb        2.06766 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.9       2.0552 ug/L       3.65483      2.0552 ppb        3.65483 177.83%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                99.0       3.0443 ug/L       0.70605      3.0443 ppb        0.70605  23.19%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 6.1       1.0811 ug/L       0.09168      1.0811 ppb        0.09168   8.48%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                53.5       0.1495 ug/L       0.09166      0.1495 ppb        0.09166  61.29%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -29.5     -0.0548 ug/L       0.19418     -0.0548 ppb        0.19418 354.51%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 7.8       2.0503 ug/L       0.66435      2.0503 ppb        0.66435  32.40%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 48.7       1.6458 ug/L       1.95840      1.6458 ppb        1.95840 119.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 38.9       0.3510 ug/L       0.12772      0.3510 ppb        0.12772  36.38%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                69.0       0.6284 ug/L       0.08833      0.6284 ppb        0.08833  14.06%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      60.4       3.9404 ug/L       1.78552      3.9404 ppb        1.78552  45.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 15:52:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7392.6	7392.6	98.9	%			15:54:14
1	Y RADIAL	6831.1	6831.1	98.65	%			15:54:14
1	Al 396.153Radial†	6384.8	6528.2	5353.8	ug/L	5353.8	ppb	15:54:14
1	Ca 317.933Radial†	3686.9	3698.7	5239.7	ug/L	5239.7	ppb	15:54:14
1	Fe 238.204 Radial†	1233.5	1212.4	5070.0	ug/L	5070.0	ppb	15:54:34
1	K 766.490 Radial†	24999.4	22869.4	4920.7	ug/L	4920.7	ppb	15:54:09
1	Mg 279.077 IEC†	209.4	208.7	5208.0	ug/L	5208.0	ppb	15:54:34
1	Na 589.592 Radial†	167953.4	169950.9	10430	ug/L	10430	ppb	15:54:09
1	Sr 421.552†	173977.9	175962.5	491.42	ug/L	491.42	ppb	15:54:09
1	Sc 361.383	743690.7	743690.7	103.48	%			15:55:43
1	Y 371.029	574212.4	574212.4	102.17	%			15:55:43
1	Ag 328.068†	88739.6	85123.7	511.65	ug/L	511.65	ppb	15:55:43
1	As 188.979†	1447.8	1434.5	520.56	ug/L	520.56	ppb	15:56:03
1	B 249.677†	19920.6	20190.8	505.90	ug/L	505.90	ppb	15:55:43
1	Ba 233.527†	75114.0	72588.3	513.29	ug/L	513.29	ppb	15:55:43
1	Be 313.107†	1157668.5	1123631.7	515.47	ug/L	515.47	ppb	15:55:43
1	Cd 226.502†	40637.1	39552.0	504.22	ug/L	504.22	ppb	15:56:03
1	Co 228.616†	30224.8	29308.2	508.49	ug/L	508.49	ppb	15:56:03
1	Cr 267.716†	37736.9	36545.7	512.82	ug/L	512.82	ppb	15:55:43
1	Cu 324.752†	151200.3	140478.8	509.35	ug/L	509.35	ppb	15:55:43
1	Mn 257.610†	481419.3	464555.3	512.83	ug/L	512.83	ppb	15:55:43
1	Mo 202.031†	7567.4	7295.9	513.95	ug/L	513.95	ppb	15:56:03
1	Ni 231.604†	19802.2	19016.7	507.99	ug/L	507.99	ppb	15:56:03
1	P 214.914†	5532.0	5031.2	2472.1	ug/L	2472.1	ppb	15:56:03
1	Pb 220.353†	4494.8	4356.9	520.34	ug/L	520.34	ppb	15:56:03
1	S 181.975 Axial†	857.8	753.6	1031.3	ug/L	1031.3	ppb	15:56:03
1	Sb 206.836†	1837.2	1718.1	516.80	ug/L	516.80	ppb	15:56:03
1	Se 196.026†	1010.8	1005.5	531.10	ug/L	531.10	ppb	15:56:03
1	Si 251.611†	87008.6	83671.7	2566.7	ug/L	2566.7	ppb	15:55:43
1	Sn 189.927†	3003.5	2890.0	512.42	ug/L	512.42	ppb	15:56:03
1	Ti 334.940†	286554.6	278269.5	509.36	ug/L	509.36	ppb	15:55:43
1	Tl 190.801†	1965.3	1960.0	516.18	ug/L	516.18	ppb	15:56:03
1	U 409.014†	10786.1	15272.3	515.53	ug/L	515.53	ppb	15:55:43
1	V 292.402†	56589.2	56252.0	517.03	ug/L	517.03	ppb	15:55:43
1	Zn 213.857†	58438.7	55549.0	507.96	ug/L	507.96	ppb	15:55:43
1	SiO2†	85865.0	82541.5	5389.4	ug/L	5389.4	ppb	15:57:03
2	Sc Radial	7563.8	7563.8	101	%			15:54:44
2	Y RADIAL	6952.9	6952.9	100.4	%			15:54:44
2	Al 396.153Radial†	6473.5	6469.8	5305.5	ug/L	5305.5	ppb	15:54:44
2	Ca 317.933Radial†	3725.1	3652.1	5173.6	ug/L	5173.6	ppb	15:54:44
2	Fe 238.204 Radial†	1246.4	1196.9	5005.6	ug/L	5005.6	ppb	15:55:04
2	K 766.490 Radial†	25155.6	22451.7	4830.5	ug/L	4830.5	ppb	15:54:39
2	Mg 279.077 IEC†	215.7	210.1	5245.3	ug/L	5245.3	ppb	15:55:04
2	Na 589.592 Radial†	167405.4	165566.2	10161	ug/L	10161	ppb	15:54:39
2	Sr 421.552†	173610.7	171618.6	479.29	ug/L	479.29	ppb	15:54:39
2	Sc 361.383	736578.7	736578.7	102.49	%			15:56:10
2	Y 371.029	568582.4	568582.4	101.17	%			15:56:10
2	Ag 328.068†	87970.1	85200.9	512.10	ug/L	512.10	ppb	15:56:10
2	As 188.979†	1438.6	1439.1	522.18	ug/L	522.18	ppb	15:56:30
2	B 249.677†	19816.6	20275.2	508.01	ug/L	508.01	ppb	15:56:10
2	Ba 233.527†	74484.7	72675.2	513.91	ug/L	513.91	ppb	15:56:10
2	Be 313.107†	1146088.8	1123135.4	515.24	ug/L	515.24	ppb	15:56:10
2	Cd 226.502†	40673.3	39966.5	509.52	ug/L	509.52	ppb	15:56:30
2	Co 228.616†	30183.5	29549.9	512.70	ug/L	512.70	ppb	15:56:30
2	Cr 267.716†	37369.9	36539.7	512.74	ug/L	512.74	ppb	15:56:10
2	Cu 324.752†	149465.5	140197.0	508.32	ug/L	508.32	ppb	15:56:10
2	Mn 257.610†	477259.4	464988.6	513.30	ug/L	513.30	ppb	15:56:10
2	Mo 202.031†	7576.9	7375.8	519.57	ug/L	519.57	ppb	15:56:30
2	Ni 231.604†	19805.0	19204.2	513.00	ug/L	513.00	ppb	15:56:30

2	P 214.914†	5548.0	5098.5	2506.7 ug/L	2506.7 ppb	15:56:30
2	Pb 220.353†	4482.5	4386.9	523.92 ug/L	523.92 ppb	15:56:30
2	S 181.975 Axial†	856.1	759.9	1040.0 ug/L	1040.0 ppb	15:56:30
2	Sb 206.836†	1835.4	1733.5	521.56 ug/L	521.56 ppb	15:56:30
2	Se 196.026†	1007.5	1011.8	534.09 ug/L	534.09 ppb	15:56:30
2	Si 251.611†	86181.3	83676.4	2566.7 ug/L	2566.7 ppb	15:56:10
2	Sn 189.927†	3000.1	2914.7	516.77 ug/L	516.77 ppb	15:56:30
2	Ti 334.940†	283810.8	278266.1	509.35 ug/L	509.35 ppb	15:56:10
2	Tl 190.801†	1980.1	1992.7	524.72 ug/L	524.72 ppb	15:56:30
2	U 409.014†	10428.8	15024.2	507.14 ug/L	507.14 ppb	15:56:10
2	V 292.402†	56028.9	56233.3	516.92 ug/L	516.92 ppb	15:56:10
2	Zn 213.857†	57986.8	55653.4	508.90 ug/L	508.90 ppb	15:56:10
2	SiO2†	86048.5	83521.8	5453.6 ug/L	5453.6 ppb	15:57:08
3	Sc Radial	7629.1	7629.1	102 %		15:55:14
3	Y RADIAL	7031.2	7031.2	101.5 %		15:55:14
3	Al 396.153Radial†	6423.1	6365.7	5220.0 ug/L	5220.0 ppb	15:55:14
3	Ca 317.933Radial†	3714.0	3609.7	5113.6 ug/L	5113.6 ppb	15:55:14
3	Fe 238.204 Radial†	1236.5	1176.7	4920.8 ug/L	4920.8 ppb	15:55:35
3	K 766.490 Radial†	25116.6	22200.8	4776.4 ug/L	4776.4 ppb	15:55:09
3	Mg 279.077 IEC†	207.6	200.4	5001.5 ug/L	5001.5 ppb	15:55:35
3	Na 589.592 Radial†	168735.2	165453.6	10154 ug/L	10154 ppb	15:55:09
3	Sr 421.552†	174182.3	170710.7	476.75 ug/L	476.75 ppb	15:55:09
3	Sc 361.383	747076.8	747076.8	103.95 %		15:56:38
3	Y 371.029	576159.0	576159.0	102.52 %		15:56:38
3	Ag 328.068†	89375.6	85346.9	512.94 ug/L	512.94 ppb	15:56:38
3	As 188.979†	1443.8	1424.4	516.88 ug/L	516.88 ppb	15:56:58
3	B 249.677†	20109.7	20285.5	508.30 ug/L	508.30 ppb	15:56:38
3	Ba 233.527†	75729.9	72851.8	515.15 ug/L	515.15 ppb	15:56:38
3	Be 313.107†	1165222.4	1125828.0	516.48 ug/L	516.48 ppb	15:56:38
3	Cd 226.502†	40756.6	39489.0	503.43 ug/L	503.43 ppb	15:56:58
3	Co 228.616†	30278.2	29227.2	507.09 ug/L	507.09 ppb	15:56:58
3	Cr 267.716†	37926.9	36563.2	513.06 ug/L	513.06 ppb	15:56:38
3	Cu 324.752†	152097.2	140679.4	510.07 ug/L	510.07 ppb	15:56:38
3	Mn 257.610†	485326.4	466205.4	514.64 ug/L	514.64 ppb	15:56:38
3	Mo 202.031†	7598.8	7292.9	513.73 ug/L	513.73 ppb	15:56:58
3	Ni 231.604†	19847.3	18973.3	506.83 ug/L	506.83 ppb	15:56:58
3	P 214.914†	5569.7	5043.2	2478.1 ug/L	2478.1 ppb	15:56:58
3	Pb 220.353†	4504.7	4346.8	519.11 ug/L	519.11 ppb	15:56:58
3	S 181.975 Axial†	863.9	755.6	1034.2 ug/L	1034.2 ppb	15:56:58
3	Sb 206.836†	1832.0	1705.1	512.89 ug/L	512.89 ppb	15:56:58
3	Se 196.026†	1030.2	1019.9	537.90 ug/L	537.90 ppb	15:56:58
3	Si 251.611†	87713.4	83968.6	2575.9 ug/L	2575.9 ppb	15:56:38
3	Sn 189.927†	3007.4	2880.7	510.74 ug/L	510.74 ppb	15:56:58
3	Ti 334.940†	288512.1	278897.4	510.51 ug/L	510.51 ppb	15:56:38
3	Tl 190.801†	1973.1	1958.9	515.92 ug/L	515.92 ppb	15:56:58
3	U 409.014†	10473.8	14924.6	503.77 ug/L	503.77 ppb	15:56:38
3	V 292.402†	56778.9	56186.6	516.42 ug/L	516.42 ppb	15:56:38
3	Zn 213.857†	58897.4	55734.3	509.70 ug/L	509.70 ppb	15:56:38
3	SiO2†	86419.9	82699.2	5400.0 ug/L	5400.0 ppb	15:57:13

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	742448.7	103.31	%	0.746				0.72%
Sc Radial	7528.5	101	%	1.6				1.62%
Y 371.029	572984.6	101.95	%	0.700				0.69%
Y RADIAL	6938.4	100.2	%	1.46				1.45%
Ag 328.068†	85223.8	512.23	ug/L	0.658	512.23	ppb	0.658	0.13%
QC value within limits for Ag 328.068 Recovery = 102.45%								
Al 396.153Radial†	6454.6	5293.1	ug/L	67.75	5293.1	ppb	67.75	1.28%
QC value within limits for Al 396.153Radial Recovery = 105.86%								
As 188.979†	1432.7	519.87	ug/L	2.717	519.87	ppb	2.717	0.52%
QC value within limits for As 188.979 Recovery = 103.97%								
B 249.677†	20250.5	507.40	ug/L	1.311	507.40	ppb	1.311	0.26%
QC value within limits for B 249.677 Recovery = 101.48%								
Ba 233.527†	72705.1	514.12	ug/L	0.947	514.12	ppb	0.947	0.18%
QC value within limits for Ba 233.527 Recovery = 102.82%								
Be 313.107†	1124198.3	515.73	ug/L	0.657	515.73	ppb	0.657	0.13%
QC value within limits for Be 313.107 Recovery = 103.15%								
Ca 317.933Radial†	3653.5	5175.6	ug/L	63.05	5175.6	ppb	63.05	1.22%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.51%
Cd 226.502†            39669.2      505.72 ug/L         3.309      505.72 ppb          3.309   0.65%
   QC value within limits for Cd 226.502  Recovery = 101.14%
Co 228.616†            29361.7      509.43 ug/L         2.921      509.43 ppb          2.921   0.57%
   QC value within limits for Co 228.616  Recovery = 101.89%
Cr 267.716†            36549.5      512.87 ug/L         0.171      512.87 ppb          0.171   0.03%
   QC value within limits for Cr 267.716  Recovery = 102.57%
Cu 324.752†           140451.7      509.25 ug/L         0.876      509.25 ppb          0.876   0.17%
   QC value within limits for Cu 324.752  Recovery = 101.85%
Fe 238.204 Radial†      1195.3      4998.8 ug/L         74.81      4998.8 ppb          74.81   1.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.98%
K 766.490 Radial†      22507.3      4842.6 ug/L         72.87      4842.6 ppb          72.87   1.50%
   QC value within limits for K 766.490 Radial  Recovery = 96.85%
Mg 279.077 IEC†          206.4      5151.6 ug/L        131.28      5151.6 ppb         131.28   2.55%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.03%
Mn 257.610†           465249.7      513.59 ug/L         0.936      513.59 ppb          0.936   0.18%
   QC value within limits for Mn 257.610  Recovery = 102.72%
Mo 202.031†             7321.5      515.75 ug/L         3.310      515.75 ppb          3.310   0.64%
   QC value within limits for Mo 202.031  Recovery = 103.15%
Na 589.592 Radial†    166990.2       10249 ug/L         157.4       10249 ppb          157.4   1.54%
   QC value within limits for Na 589.592 Radial  Recovery = 102.49%
Ni 231.604†            19064.7      509.27 ug/L         3.278      509.27 ppb          3.278   0.64%
   QC value within limits for Ni 231.604  Recovery = 101.85%
P 214.914†              5057.7      2485.6 ug/L         18.51      2485.6 ppb          18.51   0.74%
   QC value within limits for P 214.914  Recovery = 99.43%
Pb 220.353†             4363.5      521.12 ug/L         2.496      521.12 ppb          2.496   0.48%
   QC value within limits for Pb 220.353  Recovery = 104.22%
S 181.975 Axial†         756.4      1035.1 ug/L          4.42      1035.1 ppb           4.42   0.43%
   QC value within limits for S 181.975 Axial  Recovery = 103.51%
Sb 206.836†             1718.9      517.08 ug/L         4.344      517.08 ppb          4.344   0.84%
   QC value within limits for Sb 206.836  Recovery = 103.42%
Se 196.026†             1012.4      534.36 ug/L         3.408      534.36 ppb          3.408   0.64%
   QC value within limits for Se 196.026  Recovery = 106.87%
Si 251.611†            83772.3      2569.7 ug/L          5.33      2569.7 ppb           5.33   0.21%
   QC value within limits for Si 251.611  Recovery = 102.79%
Sn 189.927†             2895.1      513.31 ug/L         3.114      513.31 ppb          3.114   0.61%
   QC value within limits for Sn 189.927  Recovery = 102.66%
Sr 421.552†           172763.9      482.48 ug/L         7.839      482.48 ppb          7.839   1.62%
   QC value within limits for Sr 421.552  Recovery = 96.50%
Ti 334.940†           278477.7      509.74 ug/L         0.664      509.74 ppb          0.664   0.13%
   QC value within limits for Ti 334.940  Recovery = 101.95%
Tl 190.801†             1970.6      518.94 ug/L         5.011      518.94 ppb          5.011   0.97%
   QC value within limits for Tl 190.801  Recovery = 103.79%
U 409.014†             15073.7      508.81 ug/L         6.054      508.81 ppb          6.054   1.19%
   QC value within limits for U 409.014  Recovery = 101.76%
V 292.402†             56224.0      516.79 ug/L         0.322      516.79 ppb          0.322   0.06%
   QC value within limits for V 292.402  Recovery = 103.36%
Zn 213.857†            55645.6      508.86 ug/L         0.871      508.86 ppb          0.871   0.17%
   QC value within limits for Zn 213.857  Recovery = 101.77%
SiO2†                  82920.8      5414.3 ug/L         34.42      5414.3 ppb          34.42   0.64%
   QC value within limits for SiO2  Recovery = 101.25%
All analyte(s) passed QC.
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Sequence No.: 12
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 15:59:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7369.9	7369.9	98.6	%			16:01:16
1	Y RADIAL	6844.4	6844.4	98.85	%			16:01:16
1	Al 396.153Radial†	-59.2	12.6	10.377	ug/L	10.377	ppb	16:01:16
1	Ca 317.933Radial†	33.2	4.6	6.5450	ug/L	6.5450	ppb	16:01:36
1	Fe 238.204 Radial†	37.0	2.7	11.352	ug/L	11.352	ppb	16:01:36
1	K 766.490 Radial†	2418.3	45.5	9.8141	ug/L	9.8141	ppb	16:01:16
1	Mg 279.077 IEC†	2.3	-0.8	-19.006	ug/L	-19.006	ppb	16:01:36
1	Na 589.592 Radial†	-198.6	-65.9	-4.0422	ug/L	-4.0422	ppb	16:01:16
1	Sr 421.552†	-79.9	-25.1	-0.0703	ug/L	-0.0703	ppb	16:01:16
1	Sc 361.383	726891.3	726891.3	101.14	%			16:02:33
1	Y 371.029	569168.5	569168.5	101.28	%			16:02:33
1	Ag 328.068†	697.4	56.9	0.3397	ug/L	0.3397	ppb	16:02:33
1	As 188.979†	-38.2	-2.3	-0.8482	ug/L	-0.8482	ppb	16:02:53
1	B 249.677†	-671.7	275.8	6.9498	ug/L	6.9498	ppb	16:02:33
1	Ba 233.527†	33.8	33.0	0.2312	ug/L	0.2312	ppb	16:02:53
1	Be 313.107†	-4696.0	238.7	0.1095	ug/L	0.1095	ppb	16:02:33
1	Cd 226.502†	-284.9	-0.6	-0.0089	ug/L	-0.0089	ppb	16:02:53
1	Co 228.616†	-86.0	14.4	0.2516	ug/L	0.2516	ppb	16:02:53
1	Cr 267.716†	-69.6	8.6	0.1188	ug/L	0.1188	ppb	16:02:33
1	Cu 324.752†	5760.4	57.0	0.2072	ug/L	0.2072	ppb	16:02:33
1	Mn 257.610†	807.8	119.1	0.1332	ug/L	0.1332	ppb	16:02:33
1	Mo 202.031†	25.5	8.1	0.5713	ug/L	0.5713	ppb	16:02:53
1	Ni 231.604†	141.8	20.4	0.5460	ug/L	0.5460	ppb	16:02:53
1	P 214.914†	314.2	-4.2	-2.1738	ug/L	-2.1738	ppb	16:02:53
1	Pb 220.353†	-13.6	-0.2	-0.0209	ug/L	-0.0209	ppb	16:02:53
1	S 181.975 Axial†	92.0	15.6	21.315	ug/L	21.315	ppb	16:02:53
1	Sb 206.836†	53.2	-4.6	-1.3693	ug/L	-1.3693	ppb	16:02:53
1	Se 196.026†	-33.1	-4.0	-1.9932	ug/L	-1.9932	ppb	16:02:53
1	Si 251.611†	527.7	110.0	3.3813	ug/L	3.3813	ppb	16:02:53
1	Sn 189.927†	13.3	0.6	0.1119	ug/L	0.1119	ppb	16:02:53
1	Ti 334.940†	-1299.6	63.3	0.1154	ug/L	0.1154	ppb	16:02:33
1	Tl 190.801†	-48.1	13.2	3.4495	ug/L	3.4495	ppb	16:02:53
1	U 409.014†	-4846.5	56.9	1.9255	ug/L	1.9255	ppb	16:02:33
1	V 292.402†	-1646.4	-62.6	-0.5598	ug/L	-0.5598	ppb	16:02:33
1	Zn 213.857†	1000.6	64.2	0.5878	ug/L	0.5878	ppb	16:02:53
1	SiO2†	506.6	64.0	4.1738	ug/L	4.1738	ppb	16:03:49
2	Sc Radial	7474.7	7474.7	100	%			16:01:41
2	Y RADIAL	6888.8	6888.8	99.49	%			16:01:41
2	Al 396.153Radial†	-87.5	-14.9	-12.233	ug/L	-12.233	ppb	16:01:41
2	Ca 317.933Radial†	26.4	-2.7	-3.8030	ug/L	-3.8030	ppb	16:02:01
2	Fe 238.204 Radial†	39.6	4.8	19.820	ug/L	19.820	ppb	16:02:01
2	K 766.490 Radial†	2372.9	-34.3	-7.3891	ug/L	-7.3891	ppb	16:01:41
2	Mg 279.077 IEC†	3.2	0.2	4.5260	ug/L	4.5260	ppb	16:02:01
2	Na 589.592 Radial†	-109.1	26.5	1.6262	ug/L	1.6262	ppb	16:01:41
2	Sr 421.552†	-82.0	-26.1	-0.0729	ug/L	-0.0729	ppb	16:01:41
2	Sc 361.383	727502.2	727502.2	101.23	%			16:02:58
2	Y 371.029	568746.1	568746.1	101.20	%			16:02:58
2	Ag 328.068†	721.7	80.3	0.4829	ug/L	0.4829	ppb	16:02:58
2	As 188.979†	-34.1	1.7	0.6198	ug/L	0.6198	ppb	16:03:19
2	B 249.677†	-686.8	261.4	6.5865	ug/L	6.5865	ppb	16:02:58
2	Ba 233.527†	47.1	46.0	0.3244	ug/L	0.3244	ppb	16:03:19
2	Be 313.107†	-4841.6	98.8	0.0452	ug/L	0.0452	ppb	16:02:58
2	Cd 226.502†	-268.2	16.1	0.2033	ug/L	0.2033	ppb	16:03:19
2	Co 228.616†	-87.4	13.1	0.2251	ug/L	0.2251	ppb	16:03:19
2	Cr 267.716†	-59.9	18.2	0.2544	ug/L	0.2544	ppb	16:02:58
2	Cu 324.752†	5579.9	-126.1	-0.4559	ug/L	-0.4559	ppb	16:02:58
2	Mn 257.610†	753.5	64.7	0.0738	ug/L	0.0738	ppb	16:02:58
2	Mo 202.031†	7.9	-9.3	-0.6544	ug/L	-0.6544	ppb	16:03:19
2	Ni 231.604†	136.5	15.0	0.4017	ug/L	0.4017	ppb	16:03:19

2	P 214.914†	304.8	-13.7	-6.9260	ug/L	-6.9260	ppb	16:03:19
2	Pb 220.353†	-6.8	6.5	0.7689	ug/L	0.7689	ppb	16:03:19
2	S 181.975 Axial†	94.8	18.2	24.961	ug/L	24.961	ppb	16:03:19
2	Sb 206.836†	53.9	-4.0	-1.2212	ug/L	-1.2212	ppb	16:03:19
2	Se 196.026†	-25.0	4.0	2.1270	ug/L	2.1270	ppb	16:03:19
2	Si 251.611†	485.0	67.3	2.0965	ug/L	2.0965	ppb	16:03:19
2	Sn 189.927†	11.3	-1.4	-0.2431	ug/L	-0.2431	ppb	16:03:19
2	Ti 334.940†	-1357.2	7.5	0.0117	ug/L	0.0117	ppb	16:02:58
2	Tl 190.801†	-54.0	7.4	1.9319	ug/L	1.9319	ppb	16:03:19
2	U 409.014†	-4788.7	118.1	3.9945	ug/L	3.9945	ppb	16:02:58
2	V 292.402†	-1579.9	4.4	0.0367	ug/L	0.0367	ppb	16:02:58
2	Zn 213.857†	1037.5	99.8	0.9166	ug/L	0.9166	ppb	16:03:19
2	SiO2†	486.4	43.6	2.9058	ug/L	2.9058	ppb	16:03:54
3	Sc Radial	7403.0	7403.0	99.0	%			16:02:06
3	Y RADIAL	6847.2	6847.2	98.89	%			16:02:06
3	Al 396.153Radial†	-54.0	18.1	14.884	ug/L	14.884	ppb	16:02:06
3	Ca 317.933Radial†	31.7	2.9	4.1275	ug/L	4.1275	ppb	16:02:26
3	Fe 238.204 Radial†	37.0	2.6	10.803	ug/L	10.803	ppb	16:02:26
3	K 766.490 Radial†	2437.2	53.6	11.551	ug/L	11.551	ppb	16:02:06
3	Mg 279.077 IEC†	2.8	-0.2	-4.3818	ug/L	-4.3818	ppb	16:02:26
3	Na 589.592 Radial†	-102.2	32.4	1.9864	ug/L	1.9864	ppb	16:02:06
3	Sr 421.552†	12.5	68.5	0.1913	ug/L	0.1913	ppb	16:02:06
3	Sc 361.383	724912.0	724912.0	100.87	%			16:03:24
3	Y 371.029	566560.2	566560.2	100.81	%			16:03:24
3	Ag 328.068†	611.5	-26.3	-0.1562	ug/L	-0.1562	ppb	16:03:24
3	As 188.979†	-25.8	9.9	3.5743	ug/L	3.5743	ppb	16:03:44
3	B 249.677†	-797.7	149.0	3.7569	ug/L	3.7569	ppb	16:03:24
3	Ba 233.527†	-2.1	-2.6	-0.0191	ug/L	-0.0191	ppb	16:03:44
3	Be 313.107†	-4783.9	138.9	0.0636	ug/L	0.0636	ppb	16:03:24
3	Cd 226.502†	-262.4	20.9	0.2656	ug/L	0.2656	ppb	16:03:44
3	Co 228.616†	-117.9	-17.5	-0.3023	ug/L	-0.3023	ppb	16:03:44
3	Cr 267.716†	-91.4	-13.2	-0.1862	ug/L	-0.1862	ppb	16:03:24
3	Cu 324.752†	5727.1	39.5	0.1438	ug/L	0.1438	ppb	16:03:24
3	Mn 257.610†	762.8	76.6	0.0860	ug/L	0.0860	ppb	16:03:24
3	Mo 202.031†	23.2	5.8	0.4125	ug/L	0.4125	ppb	16:03:44
3	Ni 231.604†	129.2	8.3	0.2223	ug/L	0.2223	ppb	16:03:44
3	P 214.914†	315.7	-1.8	-0.9448	ug/L	-0.9448	ppb	16:03:44
3	Pb 220.353†	-9.3	4.1	0.4857	ug/L	0.4857	ppb	16:03:44
3	S 181.975 Axial†	83.4	7.2	9.8891	ug/L	9.8891	ppb	16:03:44
3	Sb 206.836†	58.2	0.4	0.1393	ug/L	0.1393	ppb	16:03:44
3	Se 196.026†	-28.4	0.6	0.3462	ug/L	0.3462	ppb	16:03:44
3	Si 251.611†	508.5	92.3	2.8372	ug/L	2.8372	ppb	16:03:44
3	Sn 189.927†	13.9	1.3	0.2327	ug/L	0.2327	ppb	16:03:44
3	Ti 334.940†	-1350.6	9.3	0.0167	ug/L	0.0167	ppb	16:03:24
3	Tl 190.801†	-65.3	-3.9	-1.0304	ug/L	-1.0304	ppb	16:03:44
3	U 409.014†	-4846.3	44.0	1.4896	ug/L	1.4896	ppb	16:03:24
3	V 292.402†	-1605.2	-26.2	-0.2317	ug/L	-0.2317	ppb	16:03:24
3	Zn 213.857†	1020.7	86.8	0.7986	ug/L	0.7986	ppb	16:03:44
3	SiO2†	500.0	58.8	3.8345	ug/L	3.8345	ppb	16:03:59

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	726435.2	101.08	%	0.188				0.19%
Sc Radial	7415.8	99.2	%	0.72				0.72%
Y 371.029	568158.2	101.10	%	0.249				0.25%
Y RADIAL	6860.1	99.07	%	0.359				0.36%
Ag 328.068†	37.0	0.2221	ug/L	0.33539	0.2221	ppb	0.33539	150.99%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.3	4.3424	ug/L	14.53076	4.3424	ppb	14.53076	334.62%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.1	1.1153	ug/L	2.25251	1.1153	ppb	2.25251	201.97%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	228.8	5.7644	ug/L	1.74802	5.7644	ppb	1.74802	30.32%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.4	0.1788	ug/L	0.17762	0.1788	ppb	0.17762	99.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	158.8	0.0728	ug/L	0.03311	0.0728	ppb	0.03311	45.49%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.6	2.2898	ug/L	5.41322	2.2898	ppb	5.41322	236.40%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                12.1      0.1533 ug/L       0.14389      0.1533 ppb        0.14389  93.85%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 3.3      0.0581 ug/L       0.31243      0.0581 ppb        0.31243 537.72%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 4.5      0.0623 ug/L       0.22565      0.0623 ppb        0.22565 361.94%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -9.9     -0.0350 ug/L       0.36590     -0.0350 ppb        0.36590 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4      13.992 ug/L        5.0547      13.992 ppb         5.0547  36.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          21.6      4.6586 ug/L      10.46975      4.6586 ppb       10.46975 224.74%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -6.2873 ug/L      11.88120     -6.2873 ppb       11.88120 188.97%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                86.8      0.0976 ug/L       0.03136      0.0976 ppb        0.03136  32.12%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 1.5      0.1098 ug/L       0.66654      0.1098 ppb        0.66654 607.14%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -2.3     -0.1432 ug/L       3.38145     -0.1432 ppb        3.38145 >999.9%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.6      0.3900 ug/L       0.16215      0.3900 ppb        0.16215  41.58%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.6     -3.3482 ug/L       3.15883     -3.3482 ppb        3.15883  94.34%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 3.5      0.4112 ug/L       0.40015      0.4112 ppb        0.40015  97.30%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           13.7      18.722 ug/L        7.8634      18.722 ppb         7.8634  42.00%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.8     -0.8171 ug/L       0.83153     -0.8171 ppb        0.83153 101.77%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.2      0.1600 ug/L       2.06638      0.1600 ppb        2.06638 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                89.9      2.7717 ug/L       0.64491      2.7717 ppb        0.64491  23.27%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.2      0.0338 ug/L       0.24736      0.0338 ppb        0.24736 730.83%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 5.8      0.0161 ug/L       0.15179      0.0161 ppb        0.15179 944.43%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                26.7      0.0479 ug/L       0.05850      0.0479 ppb        0.05850 122.09%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.5      1.4503 ug/L       2.27843      1.4503 ppb        2.27843 157.10%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 73.0      2.4699 ug/L       1.33823      2.4699 ppb        1.33823  54.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -28.1     -0.2516 ug/L       0.29875     -0.2516 ppb        0.29875 118.75%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                83.6      0.7677 ug/L       0.16655      0.7677 ppb        0.16655  21.70%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      55.5      3.6380 ug/L       0.65642      3.6380 ppb        0.65642  18.04%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 22
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 17:08:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7355.2	7355.2	98.4	%			17:10:59
1	Y RADIAL	6761.2	6761.2	97.64	%			17:10:59
1	Al 396.153Radial†	6223.9	6397.5	5246.3	ug/L	5246.3	ppb	17:10:39
1	Ca 317.933Radial†	3673.7	3704.2	5247.5	ug/L	5247.5	ppb	17:10:59
1	Fe 238.204 Radial†	1224.8	1209.9	5059.2	ug/L	5059.2	ppb	17:10:59
1	K 766.490 Radial†	25156.0	23156.9	4982.8	ug/L	4982.8	ppb	17:10:39
1	Mg 279.077 IEC†	209.2	209.6	5230.9	ug/L	5230.9	ppb	17:10:59
1	Na 589.592 Radial†	167127.7	169975.0	10432	ug/L	10432	ppb	17:10:39
1	Sr 421.552†	173183.6	176049.5	491.66	ug/L	491.66	ppb	17:10:39
1	Sc 361.383	741120.8	741120.8	103.12	%			17:11:58
1	Y 371.029	572028.0	572028.0	101.78	%			17:11:58
1	Ag 328.068†	88301.1	84995.8	510.88	ug/L	510.88	ppb	17:11:58
1	As 188.979†	1419.5	1412.0	512.41	ug/L	512.41	ppb	17:12:18
1	B 249.677†	19772.0	20113.5	503.96	ug/L	503.96	ppb	17:11:58
1	Ba 233.527†	74712.4	72450.6	512.31	ug/L	512.31	ppb	17:11:58
1	Be 313.107†	1148778.6	1118890.4	513.29	ug/L	513.29	ppb	17:11:58
1	Cd 226.502†	40390.2	39448.9	502.90	ug/L	502.90	ppb	17:12:18
1	Co 228.616†	30009.5	29200.6	506.63	ug/L	506.63	ppb	17:12:18
1	Cr 267.716†	37484.1	36427.0	511.16	ug/L	511.16	ppb	17:11:58
1	Cu 324.752†	149844.6	139670.9	506.42	ug/L	506.42	ppb	17:11:58
1	Mn 257.610†	478419.7	463259.8	511.40	ug/L	511.40	ppb	17:11:58
1	Mo 202.031†	7522.9	7278.1	512.70	ug/L	512.70	ppb	17:12:18
1	Ni 231.604†	19647.4	18932.9	505.75	ug/L	505.75	ppb	17:12:18
1	P 214.914†	5504.7	5023.3	2468.5	ug/L	2468.5	ppb	17:12:18
1	Pb 220.353†	4456.9	4335.3	517.74	ug/L	517.74	ppb	17:12:18
1	S 181.975 Axial†	852.7	751.5	1028.4	ug/L	1028.4	ppb	17:12:18
1	Sb 206.836†	1816.2	1704.0	512.55	ug/L	512.55	ppb	17:12:18
1	Se 196.026†	997.4	995.9	526.15	ug/L	526.15	ppb	17:12:18
1	Si 251.611†	87163.1	84113.2	2580.3	ug/L	2580.3	ppb	17:11:58
1	Sn 189.927†	2974.4	2871.9	509.21	ug/L	509.21	ppb	17:12:18
1	Ti 334.940†	284487.2	277224.9	507.45	ug/L	507.45	ppb	17:11:58
1	Tl 190.801†	1946.4	1948.2	513.09	ug/L	513.09	ppb	17:12:18
1	U 409.014†	10382.3	14916.8	503.49	ug/L	503.49	ppb	17:11:58
1	V 292.402†	56045.4	55914.2	513.92	ug/L	513.92	ppb	17:11:58
1	Zn 213.857†	58130.4	55445.8	507.03	ug/L	507.03	ppb	17:11:58
1	SiO2†	87839.5	84744.0	5534.4	ug/L	5534.4	ppb	17:13:18
2	Sc Radial	7325.9	7325.9	98.0	%			17:11:24
2	Y RADIAL	6752.9	6752.9	97.52	%			17:11:24
2	Al 396.153Radial†	6231.0	6430.1	5273.1	ug/L	5273.1	ppb	17:11:04
2	Ca 317.933Radial†	3670.6	3716.0	5264.1	ug/L	5264.1	ppb	17:11:24
2	Fe 238.204 Radial†	1218.3	1208.3	5052.5	ug/L	5052.5	ppb	17:11:24
2	K 766.490 Radial†	25340.6	23447.7	5045.5	ug/L	5045.5	ppb	17:11:04
2	Mg 279.077 IEC†	208.2	209.4	5225.8	ug/L	5225.8	ppb	17:11:24
2	Na 589.592 Radial†	167131.7	170659.6	10474	ug/L	10474	ppb	17:11:04
2	Sr 421.552†	173419.2	176995.0	494.30	ug/L	494.30	ppb	17:11:04
2	Sc 361.383	739217.0	739217.0	102.86	%			17:12:25
2	Y 371.029	570105.1	570105.1	101.44	%			17:12:25
2	Ag 328.068†	87884.9	84811.8	509.78	ug/L	509.78	ppb	17:12:25
2	As 188.979†	1422.5	1418.5	514.76	ug/L	514.76	ppb	17:12:45
2	B 249.677†	19750.7	20142.2	504.69	ug/L	504.69	ppb	17:12:25
2	Ba 233.527†	74335.0	72270.3	511.04	ug/L	511.04	ppb	17:12:25
2	Be 313.107†	1143521.5	1116648.2	512.27	ug/L	512.27	ppb	17:12:25
2	Cd 226.502†	40177.9	39343.3	501.56	ug/L	501.56	ppb	17:12:45
2	Co 228.616†	29852.3	29122.8	505.28	ug/L	505.28	ppb	17:12:45
2	Cr 267.716†	37289.3	36331.2	509.81	ug/L	509.81	ppb	17:12:25
2	Cu 324.752†	149532.5	139741.6	506.68	ug/L	506.68	ppb	17:12:25
2	Mn 257.610†	476899.3	462976.5	511.09	ug/L	511.09	ppb	17:12:25
2	Mo 202.031†	7496.3	7271.0	512.20	ug/L	512.20	ppb	17:12:45
2	Ni 231.604†	19580.3	18916.7	505.32	ug/L	505.32	ppb	17:12:45

2	P 214.914†	5485.3	5018.2	2465.9 ug/L	2465.9 ppb	17:12:45
2	Pb 220.353†	4415.6	4306.2	514.28 ug/L	514.28 ppb	17:12:45
2	S 181.975 Axial†	848.0	749.0	1025.0 ug/L	1025.0 ppb	17:12:45
2	Sb 206.836†	1816.8	1709.1	514.09 ug/L	514.09 ppb	17:12:45
2	Se 196.026†	1003.6	1004.5	530.52 ug/L	530.52 ppb	17:12:45
2	Si 251.611†	86801.9	83979.7	2576.2 ug/L	2576.2 ppb	17:12:25
2	Sn 189.927†	2961.8	2867.1	508.36 ug/L	508.36 ppb	17:12:45
2	Ti 334.940†	283706.8	277176.6	507.37 ug/L	507.37 ppb	17:12:25
2	Tl 190.801†	1947.0	1953.6	514.51 ug/L	514.51 ppb	17:12:45
2	U 409.014†	10377.7	14938.2	504.22 ug/L	504.22 ppb	17:12:25
2	V 292.402†	55940.5	55952.3	514.27 ug/L	514.27 ppb	17:12:25
2	Zn 213.857†	57861.6	55329.7	505.96 ug/L	505.96 ppb	17:12:25
2	SiO2†	87366.6	84503.6	5518.6 ug/L	5518.6 ppb	17:13:23
3	Sc Radial	7318.8	7318.8	97.9 %		17:11:49
3	Y RADIAL	6734.8	6734.8	97.26 %		17:11:49
3	Al 396.153Radial†	6166.3	6370.2	5223.7 ug/L	5223.7 ppb	17:11:29
3	Ca 317.933Radial†	3664.6	3713.5	5260.6 ug/L	5260.6 ppb	17:11:49
3	Fe 238.204 Radial†	1215.9	1207.0	5047.4 ug/L	5047.4 ppb	17:11:49
3	K 766.490 Radial†	25093.8	23220.7	4996.6 ug/L	4996.6 ppb	17:11:29
3	Mg 279.077 IEC†	208.1	209.4	5227.5 ug/L	5227.5 ppb	17:11:49
3	Na 589.592 Radial†	165706.5	169369.3	10395 ug/L	10395 ppb	17:11:29
3	Sr 421.552†	171906.5	175621.7	490.47 ug/L	490.47 ppb	17:11:29
3	Sc 361.383	734212.8	734212.8	102.16 %		17:12:52
3	Y 371.029	566556.0	566556.0	100.81 %		17:12:52
3	Ag 328.068†	87293.3	84815.0	509.79 ug/L	509.79 ppb	17:12:52
3	As 188.979†	1427.4	1432.6	519.86 ug/L	519.86 ppb	17:13:12
3	B 249.677†	19543.9	20070.6	502.87 ug/L	502.87 ppb	17:12:52
3	Ba 233.527†	73660.1	72102.2	509.85 ug/L	509.85 ppb	17:12:52
3	Be 313.107†	1132526.8	1113463.4	510.81 ug/L	510.81 ppb	17:12:52
3	Cd 226.502†	40095.0	39528.3	503.92 ug/L	503.92 ppb	17:13:12
3	Co 228.616†	29800.1	29269.5	507.83 ug/L	507.83 ppb	17:13:12
3	Cr 267.716†	37069.1	36362.7	510.25 ug/L	510.25 ppb	17:12:52
3	Cu 324.752†	148278.3	139504.8	505.82 ug/L	505.82 ppb	17:12:52
3	Mn 257.610†	472366.2	461699.3	509.68 ug/L	509.68 ppb	17:12:52
3	Mo 202.031†	7470.0	7295.0	513.88 ug/L	513.88 ppb	17:13:12
3	Ni 231.604†	19500.0	18967.9	506.69 ug/L	506.69 ppb	17:13:12
3	P 214.914†	5484.0	5053.2	2483.9 ug/L	2483.9 ppb	17:13:12
3	Pb 220.353†	4417.4	4337.3	517.98 ug/L	517.98 ppb	17:13:12
3	S 181.975 Axial†	835.5	742.4	1016.1 ug/L	1016.1 ppb	17:13:12
3	Sb 206.836†	1812.6	1717.1	516.49 ug/L	516.49 ppb	17:13:12
3	Se 196.026†	1010.2	1017.6	537.19 ug/L	537.19 ppb	17:13:12
3	Si 251.611†	86011.1	83780.7	2570.0 ug/L	2570.0 ppb	17:12:52
3	Sn 189.927†	2947.7	2872.9	509.39 ug/L	509.39 ppb	17:13:12
3	Ti 334.940†	281343.0	276742.8	506.57 ug/L	506.57 ppb	17:12:52
3	Tl 190.801†	1949.3	1968.9	518.46 ug/L	518.46 ppb	17:13:12
3	U 409.014†	10333.0	14963.3	505.07 ug/L	505.07 ppb	17:12:52
3	V 292.402†	55374.7	55769.1	512.63 ug/L	512.63 ppb	17:12:52
3	Zn 213.857†	57333.5	55196.2	504.72 ug/L	504.72 ppb	17:12:52
3	SiO2†	86755.9	84484.7	5517.2 ug/L	5517.2 ppb	17:13:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	738183.5	102.71	%	0.496				0.48%
Sc Radial	7333.3	98.1	%	0.26				0.26%
Y 371.029	569563.0	101.35	%	0.494				0.49%
Y RADIAL	6749.7	97.48	%	0.195				0.20%
Ag 328.068†	84874.2	510.15	ug/L	0.633	510.15	ppb	0.633	0.12%
QC value within limits for Ag 328.068 Recovery = 102.03%								
Al 396.153Radial†	6399.3	5247.7	ug/L	24.76	5247.7	ppb	24.76	0.47%
QC value within limits for Al 396.153Radial Recovery = 104.95%								
As 188.979†	1421.0	515.68	ug/L	3.810	515.68	ppb	3.810	0.74%
QC value within limits for As 188.979 Recovery = 103.14%								
B 249.677†	20108.8	503.84	ug/L	0.914	503.84	ppb	0.914	0.18%
QC value within limits for B 249.677 Recovery = 100.77%								
Ba 233.527†	72274.4	511.07	ug/L	1.231	511.07	ppb	1.231	0.24%
QC value within limits for Ba 233.527 Recovery = 102.21%								
Be 313.107†	1116334.0	512.12	ug/L	1.249	512.12	ppb	1.249	0.24%
QC value within limits for Be 313.107 Recovery = 102.42%								
Ca 317.933Radial†	3711.3	5257.4	ug/L	8.77	5257.4	ppb	8.77	0.17%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.15%
Cd 226.502†            39440.2      502.79 ug/L         1.185      502.79 ppb          1.185   0.24%
   QC value within limits for Cd 226.502  Recovery = 100.56%
Co 228.616†            29197.6      506.58 ug/L         1.275      506.58 ppb          1.275   0.25%
   QC value within limits for Co 228.616  Recovery = 101.32%
Cr 267.716†            36373.6      510.41 ug/L         0.684      510.41 ppb          0.684   0.13%
   QC value within limits for Cr 267.716  Recovery = 102.08%
Cu 324.752†           139639.1      506.31 ug/L         0.441      506.31 ppb          0.441   0.09%
   QC value within limits for Cu 324.752  Recovery = 101.26%
Fe 238.204 Radial†      1208.4      5053.0 ug/L          5.94      5053.0 ppb           5.94   0.12%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.06%
K 766.490 Radial†      23275.1      5008.3 ug/L         32.97      5008.3 ppb          32.97   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 100.17%
Mg 279.077 IEC†          209.5      5228.1 ug/L          2.59      5228.1 ppb           2.59   0.05%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.56%
Mn 257.610†           462645.2      510.72 ug/L         0.917      510.72 ppb          0.917   0.18%
   QC value within limits for Mn 257.610  Recovery = 102.14%
Mo 202.031†             7281.4      512.93 ug/L         0.866      512.93 ppb          0.866   0.17%
   QC value within limits for Mo 202.031  Recovery = 102.59%
Na 589.592 Radial†    170001.3       10433 ug/L          39.6       10433 ppb           39.6   0.38%
   QC value within limits for Na 589.592 Radial  Recovery = 104.33%
Ni 231.604†            18939.2      505.92 ug/L         0.698      505.92 ppb          0.698   0.14%
   QC value within limits for Ni 231.604  Recovery = 101.18%
P 214.914†              5031.6      2472.8 ug/L          9.75      2472.8 ppb           9.75   0.39%
   QC value within limits for P 214.914  Recovery = 98.91%
Pb 220.353†             4326.3      516.67 ug/L         2.067      516.67 ppb          2.067   0.40%
   QC value within limits for Pb 220.353  Recovery = 103.33%
S 181.975 Axial†         747.6      1023.2 ug/L          6.38      1023.2 ppb           6.38   0.62%
   QC value within limits for S 181.975 Axial  Recovery = 102.32%
Sb 206.836†             1710.0      514.38 ug/L         1.985      514.38 ppb          1.985   0.39%
   QC value within limits for Sb 206.836  Recovery = 102.88%
Se 196.026†             1006.0      531.29 ug/L         5.557      531.29 ppb          5.557   1.05%
   QC value within limits for Se 196.026  Recovery = 106.26%
Si 251.611†            83957.9      2575.5 ug/L          5.18      2575.5 ppb           5.18   0.20%
   QC value within limits for Si 251.611  Recovery = 103.02%
Sn 189.927†             2870.6      508.98 ug/L         0.547      508.98 ppb          0.547   0.11%
   QC value within limits for Sn 189.927  Recovery = 101.80%
Sr 421.552†           176222.1      492.14 ug/L         1.963      492.14 ppb          1.963   0.40%
   QC value within limits for Sr 421.552  Recovery = 98.43%
Ti 334.940†           277048.1      507.13 ug/L         0.486      507.13 ppb          0.486   0.10%
   QC value within limits for Ti 334.940  Recovery = 101.43%
Tl 190.801†             1956.9      515.35 ug/L         2.787      515.35 ppb          2.787   0.54%
   QC value within limits for Tl 190.801  Recovery = 103.07%
U 409.014†             14939.4      504.26 ug/L         0.789      504.26 ppb          0.789   0.16%
   QC value within limits for U 409.014  Recovery = 100.85%
V 292.402†             55878.5      513.61 ug/L         0.865      513.61 ppb          0.865   0.17%
   QC value within limits for V 292.402  Recovery = 102.72%
Zn 213.857†            55323.9      505.91 ug/L         1.155      505.91 ppb          1.155   0.23%
   QC value within limits for Zn 213.857  Recovery = 101.18%
SiO2†                  84577.4      5523.4 ug/L          9.53      5523.4 ppb           9.53   0.17%
   QC value within limits for SiO2  Recovery = 103.29%
All analyte(s) passed QC.
```

Sequence No.: 23
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 17:15:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7383.1	7383.1	98.8	%			17:17:29
1	Y RADIAL	6829.3	6829.3	98.63	%			17:17:29
1	Al 396.153Radial†	-55.3	16.7	13.755	ug/L	13.755	ppb	17:17:29
1	Ca 317.933Radial†	22.6	-6.2	-8.8370	ug/L	-8.8370	ppb	17:17:49
1	Fe 238.204 Radial†	35.1	0.8	3.2274	ug/L	3.2274	ppb	17:17:49
1	K 766.490 Radial†	2425.1	48.0	10.354	ug/L	10.354	ppb	17:17:29
1	Mg 279.077 IEC†	6.3	3.3	82.931	ug/L	82.931	ppb	17:17:49
1	Na 589.592 Radial†	-137.4	-3.6	-0.2206	ug/L	-0.2206	ppb	17:17:29
1	Sr 421.552†	-31.9	23.5	0.0658	ug/L	0.0658	ppb	17:17:29
1	Sc 361.383	729651.1	729651.1	101.53	%			17:18:46
1	Y 371.029	571078.0	571078.0	101.62	%			17:18:46
1	Ag 328.068†	704.8	61.6	0.3645	ug/L	0.3645	ppb	17:18:46
1	As 188.979†	-33.9	2.1	0.7411	ug/L	0.7411	ppb	17:19:06
1	B 249.677†	-666.7	283.2	7.1376	ug/L	7.1376	ppb	17:18:46
1	Ba 233.527†	12.7	12.0	0.0865	ug/L	0.0865	ppb	17:19:06
1	Be 313.107†	-4888.7	66.5	0.0307	ug/L	0.0307	ppb	17:18:46
1	Cd 226.502†	-288.5	-3.0	-0.0388	ug/L	-0.0388	ppb	17:19:06
1	Co 228.616†	-98.7	2.2	0.0387	ug/L	0.0387	ppb	17:19:06
1	Cr 267.716†	-105.2	-26.2	-0.3687	ug/L	-0.3687	ppb	17:18:46
1	Cu 324.752†	5591.3	-131.1	-0.4750	ug/L	-0.4750	ppb	17:18:46
1	Mn 257.610†	767.2	76.0	0.0826	ug/L	0.0826	ppb	17:18:46
1	Mo 202.031†	17.0	-0.4	-0.0272	ug/L	-0.0272	ppb	17:19:06
1	Ni 231.604†	141.1	19.2	0.5126	ug/L	0.5126	ppb	17:19:06
1	P 214.914†	323.3	3.7	1.9606	ug/L	1.9606	ppb	17:19:06
1	Pb 220.353†	2.6	15.8	1.8861	ug/L	1.8861	ppb	17:19:06
1	S 181.975 Axial†	84.2	7.5	10.335	ug/L	10.335	ppb	17:19:06
1	Sb 206.836†	56.2	-1.9	-0.5435	ug/L	-0.5435	ppb	17:19:06
1	Se 196.026†	-23.3	5.8	2.9742	ug/L	2.9742	ppb	17:19:06
1	Si 251.611†	778.3	354.8	10.956	ug/L	10.956	ppb	17:19:06
1	Sn 189.927†	12.2	-0.5	-0.0805	ug/L	-0.0805	ppb	17:19:06
1	Ti 334.940†	-1301.1	66.7	0.1175	ug/L	0.1175	ppb	17:18:46
1	Tl 190.801†	-47.8	13.7	3.5830	ug/L	3.5830	ppb	17:19:06
1	U 409.014†	-4642.7	275.8	9.3385	ug/L	9.3385	ppb	17:18:46
1	V 292.402†	-1500.3	87.4	0.8126	ug/L	0.8126	ppb	17:18:46
1	Zn 213.857†	967.2	27.5	0.2483	ug/L	0.2483	ppb	17:19:06
1	SiO2†	761.7	313.4	20.603	ug/L	20.603	ppb	17:20:02
2	Sc Radial	7555.7	7555.7	101	%			17:17:54
2	Y RADIAL	7004.6	7004.6	101.2	%			17:17:54
2	Al 396.153Radial†	-70.3	3.1	2.5786	ug/L	2.5786	ppb	17:17:54
2	Ca 317.933Radial†	14.0	-15.3	-21.619	ug/L	-21.619	ppb	17:18:14
2	Fe 238.204 Radial†	38.2	3.0	12.580	ug/L	12.580	ppb	17:18:14
2	K 766.490 Radial†	2533.5	99.1	21.403	ug/L	21.403	ppb	17:17:54
2	Mg 279.077 IEC†	4.3	1.2	30.148	ug/L	30.148	ppb	17:18:14
2	Na 589.592 Radial†	-268.9	-130.5	-8.0088	ug/L	-8.0088	ppb	17:17:54
2	Sr 421.552†	-30.4	25.7	0.0721	ug/L	0.0721	ppb	17:17:54
2	Sc 361.383	716378.7	716378.7	99.678	%			17:19:11
2	Y 371.029	560732.4	560732.4	99.774	%			17:19:11
2	Ag 328.068†	618.9	-11.7	-0.0617	ug/L	-0.0617	ppb	17:19:11
2	As 188.979†	-24.0	11.3	4.0898	ug/L	4.0898	ppb	17:19:31
2	B 249.677†	-741.4	196.1	4.9415	ug/L	4.9415	ppb	17:19:11
2	Ba 233.527†	6.3	5.8	0.0414	ug/L	0.0414	ppb	17:19:31
2	Be 313.107†	-4782.5	83.8	0.0386	ug/L	0.0386	ppb	17:19:11
2	Cd 226.502†	-267.5	12.8	0.1616	ug/L	0.1616	ppb	17:19:31
2	Co 228.616†	-97.4	1.8	0.0286	ug/L	0.0286	ppb	17:19:31
2	Cr 267.716†	-27.4	49.9	0.7010	ug/L	0.7010	ppb	17:19:11
2	Cu 324.752†	5628.5	8.2	0.0304	ug/L	0.0304	ppb	17:19:11
2	Mn 257.610†	744.8	67.6	0.0755	ug/L	0.0755	ppb	17:19:11
2	Mo 202.031†	8.5	-8.6	-0.6049	ug/L	-0.6049	ppb	17:19:31
2	Ni 231.604†	136.4	17.1	0.4563	ug/L	0.4563	ppb	17:19:31

2	P 214.914†	342.5	28.8	14.695 ug/L	14.695 ppb	17:19:31
2	Pb 220.353†	2.1	15.4	1.8303 ug/L	1.8303 ppb	17:19:31
2	S 181.975 Axial†	79.4	4.3	5.8761 ug/L	5.8761 ppb	17:19:31
2	Sb 206.836†	54.6	-2.5	-0.7895 ug/L	-0.7895 ppb	17:19:31
2	Se 196.026†	-26.7	2.0	1.0415 ug/L	1.0415 ppb	17:19:31
2	Si 251.611†	745.8	336.4	10.409 ug/L	10.409 ppb	17:19:31
2	Sn 189.927†	6.2	-6.3	-1.1127 ug/L	-1.1127 ppb	17:19:31
2	Ti 334.940†	-1294.5	49.5	0.0909 ug/L	0.0909 ppb	17:19:11
2	Tl 190.801†	-53.8	6.8	1.7745 ug/L	1.7745 ppb	17:19:31
2	U 409.014†	-4950.8	-118.1	-4.0008 ug/L	-4.0008 ppb	17:19:11
2	V 292.402†	-1542.2	18.0	0.1466 ug/L	0.1466 ppb	17:19:11
2	Zn 213.857†	963.2	41.1	0.3744 ug/L	0.3744 ppb	17:19:31
2	SiO2†	776.6	342.3	22.549 ug/L	22.549 ppb	17:20:07
3	Sc Radial	7361.7	7361.7	98.5 %		17:18:19
3	Y RADIAL	6861.2	6861.2	99.09 %		17:18:19
3	Al 396.153Radial†	-72.8	-1.3	-1.0607 ug/L	-1.0607 ppb	17:18:19
3	Ca 317.933Radial†	31.6	3.0	4.2344 ug/L	4.2344 ppb	17:18:39
3	Fe 238.204 Radial†	36.7	2.5	10.477 ug/L	10.477 ppb	17:18:39
3	K 766.490 Radial†	2542.7	174.5	37.654 ug/L	37.654 ppb	17:18:19
3	Mg 279.077 IEC†	1.9	-1.1	-27.017 ug/L	-27.017 ppb	17:18:39
3	Na 589.592 Radial†	-207.9	-75.5	-4.6364 ug/L	-4.6364 ppb	17:18:19
3	Sr 421.552†	-71.0	-16.2	-0.0452 ug/L	-0.0452 ppb	17:18:19
3	Sc 361.383	722458.7	722458.7	100.52 %		17:19:37
3	Y 371.029	565036.5	565036.5	100.54 %		17:19:37
3	Ag 328.068†	564.6	-71.0	-0.4225 ug/L	-0.4225 ppb	17:19:37
3	As 188.979†	-40.8	-5.1	-1.8485 ug/L	-1.8485 ppb	17:19:57
3	B 249.677†	-804.1	140.0	3.5258 ug/L	3.5258 ppb	17:19:37
3	Ba 233.527†	3.1	2.6	0.0174 ug/L	0.0174 ppb	17:19:57
3	Be 313.107†	-4788.1	118.6	0.0543 ug/L	0.0543 ppb	17:19:37
3	Cd 226.502†	-270.0	12.5	0.1593 ug/L	0.1593 ppb	17:19:57
3	Co 228.616†	-82.6	17.3	0.3002 ug/L	0.3002 ppb	17:19:57
3	Cr 267.716†	-53.3	24.4	0.3415 ug/L	0.3415 ppb	17:19:37
3	Cu 324.752†	5622.5	-45.3	-0.1635 ug/L	-0.1635 ppb	17:19:37
3	Mn 257.610†	717.0	33.6	0.0389 ug/L	0.0389 ppb	17:19:37
3	Mo 202.031†	24.0	6.8	0.4785 ug/L	0.4785 ppb	17:19:57
3	Ni 231.604†	148.7	28.1	0.7516 ug/L	0.7516 ppb	17:19:57
3	P 214.914†	311.3	-5.1	-2.5655 ug/L	-2.5655 ppb	17:19:57
3	Pb 220.353†	-9.4	3.9	0.4590 ug/L	0.4590 ppb	17:19:57
3	S 181.975 Axial†	78.1	2.3	3.1219 ug/L	3.1219 ppb	17:19:57
3	Sb 206.836†	44.1	-13.4	-3.9514 ug/L	-3.9514 ppb	17:19:57
3	Se 196.026†	-21.7	7.1	3.6792 ug/L	3.6792 ppb	17:19:57
3	Si 251.611†	737.4	321.8	9.8971 ug/L	9.8971 ppb	17:19:57
3	Sn 189.927†	21.2	8.6	1.5176 ug/L	1.5176 ppb	17:19:57
3	Ti 334.940†	-1359.0	-3.7	-0.0066 ug/L	-0.0066 ppb	17:19:37
3	Tl 190.801†	-53.6	7.4	1.9366 ug/L	1.9366 ppb	17:19:57
3	U 409.014†	-4870.7	3.4	0.1132 ug/L	0.1132 ppb	17:19:37
3	V 292.402†	-1621.8	-48.1	-0.4327 ug/L	-0.4327 ppb	17:19:37
3	Zn 213.857†	957.3	27.2	0.2461 ug/L	0.2461 ppb	17:19:57
3	SiO2†	748.2	307.4	20.123 ug/L	20.123 ppb	17:20:12

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	722829.5	100.58	%	0.924				0.92%
Sc Radial	7433.5	99.5	%	1.42				1.43%
Y 371.029	565615.6	100.64	%	0.925				0.92%
Y RADIAL	6898.4	99.63	%	1.349				1.35%
Ag 328.068†	-7.0	-0.0399	ug/L	0.39393	-0.0399	ppb	0.39393	987.29%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	6.2	5.0908	ug/L	7.72056	5.0908	ppb	7.72056	151.66%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.8	0.9941	ug/L	2.97723	0.9941	ppb	2.97723	299.48%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	206.4	5.2017	ug/L	1.81989	5.2017	ppb	1.81989	34.99%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	6.8	0.0484	ug/L	0.03505	0.0484	ppb	0.03505	72.38%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	89.6	0.0412	ug/L	0.01198	0.0412	ppb	0.01198	29.10%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-6.2	-8.7407	ug/L	12.92716	-8.7407	ppb	12.92716	147.90%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                7.4      0.0941 ug/L       0.11506      0.0941 ppb        0.11506 122.32%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                7.1      0.1225 ug/L       0.15398      0.1225 ppb        0.15398 125.73%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               16.0      0.2246 ug/L       0.54437      0.2246 ppb        0.54437 242.37%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -56.1     -0.2027 ug/L       0.25498     -0.2027 ppb        0.25498 125.79%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         2.1      8.7613 ug/L       4.90648      8.7613 ppb        4.90648  56.00%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        107.2     23.137 ug/L       13.7321     23.137 ppb        13.7321  59.35%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            1.2     28.687 ug/L       54.9883     28.687 ppb        54.9883 191.68%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               59.1      0.0657 ug/L       0.02347      0.0657 ppb        0.02347  35.73%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.7     -0.0512 ug/L       0.54211     -0.0512 ppb        0.54211 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -69.9     -4.2886 ug/L       3.90572     -4.2886 ppb        3.90572  91.07%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.5      0.5735 ug/L       0.15675      0.5735 ppb        0.15675  27.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 9.1      4.6966 ug/L       8.94941      4.6966 ppb        8.94941 190.55%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               11.7      1.3918 ug/L       0.80833      1.3918 ppb        0.80833  58.08%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           4.7      6.4442 ug/L       3.63975      6.4442 ppb        3.63975  56.48%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               -5.9     -1.7615 ug/L       1.90051     -1.7615 ppb        1.90051 107.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                5.0      2.5649 ug/L       1.36562      2.5649 ppb        1.36562  53.24%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              337.7     10.421 ug/L        0.5298     10.421 ppb         0.5298   5.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                0.6      0.1081 ug/L       1.32522      0.1081 ppb        1.32522 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               11.0      0.0309 ug/L       0.06601      0.0309 ppb        0.06601 213.73%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               37.5      0.0673 ug/L       0.06537      0.0673 ppb        0.06537  97.16%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                9.3      2.4314 ug/L       1.00061      2.4314 ppb        1.00061  41.15%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                53.7      1.8170 ug/L       6.83090      1.8170 ppb        6.83090 375.95%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                19.1      0.1755 ug/L       0.62311      0.1755 ppb        0.62311 355.08%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               32.0      0.2896 ug/L       0.07345      0.2896 ppb        0.07345  25.36%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    321.0     21.092 ug/L        1.2851     21.092 ppb         1.2851   6.09%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 32
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 18:18:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7366.9	7366.9	98.6	%			18:21:03
1	Y RADIAL	6789.6	6789.6	98.05	%			18:21:03
1	Al 396.153Radial†	6381.2	6547.1	5369.6	ug/L	5369.6	ppb	18:20:43
1	Ca 317.933Radial†	3683.4	3708.2	5253.1	ug/L	5253.1	ppb	18:21:03
1	Fe 238.204 Radial†	1228.3	1211.4	5066.0	ug/L	5066.0	ppb	18:21:03
1	K 766.490 Radial†	25571.7	23538.4	5065.1	ug/L	5065.1	ppb	18:20:43
1	Mg 279.077 IEC†	208.6	208.6	5205.9	ug/L	5205.9	ppb	18:21:03
1	Na 589.592 Radial†	171913.5	174562.7	10713	ug/L	10713	ppb	18:20:43
1	Sr 421.552†	178023.7	180682.5	504.60	ug/L	504.60	ppb	18:20:43
1	Sc 361.383	741979.7	741979.7	103.24	%			18:22:00
1	Y 371.029	481732.9	481732.9	85.718	%			18:22:05
1	Ag 328.068†	89407.2	85968.1	516.69	ug/L	516.69	ppb	18:22:05
1	As 188.979†	1424.3	1415.1	513.50	ug/L	513.50	ppb	18:22:25
1	B 249.677†	20010.2	20322.0	509.17	ug/L	509.17	ppb	18:22:05
1	Ba 233.527†	74975.3	72621.4	513.53	ug/L	513.53	ppb	18:22:05
1	Be 313.107†	1148144.2	1116986.4	512.41	ug/L	512.41	ppb	18:22:00
1	Cd 226.502†	41517.3	40495.1	516.25	ug/L	516.25	ppb	18:22:05
1	Co 228.616†	30576.8	29716.4	515.58	ug/L	515.58	ppb	18:22:05
1	Cr 267.716†	37878.9	36767.3	515.92	ug/L	515.92	ppb	18:22:05
1	Cu 324.752†	150859.2	140485.4	509.37	ug/L	509.37	ppb	18:22:05
1	Mn 257.610†	477837.9	462159.2	510.19	ug/L	510.19	ppb	18:22:00
1	Mo 202.031†	7481.2	7229.2	509.26	ug/L	509.26	ppb	18:22:25
1	Ni 231.604†	20046.2	19297.1	515.48	ug/L	515.48	ppb	18:22:05
1	P 214.914†	5493.4	5006.2	2459.3	ug/L	2459.3	ppb	18:22:25
1	Pb 220.353†	4396.0	4271.3	510.13	ug/L	510.13	ppb	18:22:25
1	S 181.975 Axial†	849.6	747.5	1023.0	ug/L	1023.0	ppb	18:22:25
1	Sb 206.836†	1829.4	1714.7	515.60	ug/L	515.60	ppb	18:22:25
1	Se 196.026†	1005.0	1002.3	529.41	ug/L	529.41	ppb	18:22:25
1	Si 251.611†	87322.6	84169.8	2582.1	ug/L	2582.1	ppb	18:22:05
1	Sn 189.927†	2980.6	2874.6	509.68	ug/L	509.68	ppb	18:22:25
1	Ti 334.940†	281193.2	273715.0	501.01	ug/L	501.01	ppb	18:22:05
1	Tl 190.801†	1949.3	1948.9	513.14	ug/L	513.14	ppb	18:22:25
1	U 409.014†	11260.3	15755.5	531.88	ug/L	531.88	ppb	18:22:05
1	V 292.402†	56741.6	56525.7	519.49	ug/L	519.49	ppb	18:22:05
1	Zn 213.857†	58482.3	55721.5	509.51	ug/L	509.51	ppb	18:22:05
1	SiO2†	86787.3	83626.2	5460.9	ug/L	5460.9	ppb	18:23:32
2	Sc Radial	7380.2	7380.2	98.7	%			18:21:28
2	Y RADIAL	6784.0	6784.0	97.97	%			18:21:28
2	Al 396.153Radial†	6225.4	6377.7	5230.5	ug/L	5230.5	ppb	18:21:08
2	Ca 317.933Radial†	3695.3	3713.4	5260.5	ug/L	5260.5	ppb	18:21:28
2	Fe 238.204 Radial†	1233.9	1214.9	5080.5	ug/L	5080.5	ppb	18:21:28
2	K 766.490 Radial†	24792.4	22702.4	4884.9	ug/L	4884.9	ppb	18:21:08
2	Mg 279.077 IEC†	211.8	211.4	5277.1	ug/L	5277.1	ppb	18:21:28
2	Na 589.592 Radial†	166312.9	168576.6	10346	ug/L	10346	ppb	18:21:08
2	Sr 421.552†	171966.4	174222.8	486.56	ug/L	486.56	ppb	18:21:08
2	Sc 361.383	756402.4	756402.4	105.25	%			18:22:31
2	Y 371.029	482492.8	482492.8	85.853	%			18:22:36
2	Ag 328.068†	91031.8	85860.5	516.05	ug/L	516.05	ppb	18:22:36
2	As 188.979†	1430.0	1394.1	505.95	ug/L	505.95	ppb	18:22:56
2	B 249.677†	20503.7	20421.3	511.66	ug/L	511.66	ppb	18:22:36
2	Ba 233.527†	76369.9	72561.7	513.11	ug/L	513.11	ppb	18:22:36
2	Be 313.107†	1172757.8	1119167.6	513.41	ug/L	513.41	ppb	18:22:31
2	Cd 226.502†	42375.2	40543.5	516.87	ug/L	516.87	ppb	18:22:36
2	Co 228.616†	31301.9	29840.7	517.71	ug/L	517.71	ppb	18:22:36
2	Cr 267.716†	38449.3	36609.7	513.72	ug/L	513.72	ppb	18:22:36
2	Cu 324.752†	153966.2	140651.2	509.98	ug/L	509.98	ppb	18:22:36
2	Mn 257.610†	487165.4	462196.5	510.23	ug/L	510.23	ppb	18:22:31
2	Mo 202.031†	7470.1	7080.6	498.79	ug/L	498.79	ppb	18:22:56
2	Ni 231.604†	20398.8	19261.9	514.54	ug/L	514.54	ppb	18:22:36

2	P 214.914†	5494.2	4905.5	2407.5	ug/L	2407.5 ppb	18:22:56
2	Pb 220.353†	4375.4	4170.5	498.08	ug/L	498.08 ppb	18:22:56
2	S 181.975 Axial†	845.8	728.2	996.63	ug/L	996.63 ppb	18:22:56
2	Sb 206.836†	1841.0	1692.0	508.54	ug/L	508.54 ppb	18:22:56
2	Se 196.026†	1005.5	984.1	520.17	ug/L	520.17 ppb	18:22:56
2	Si 251.611†	89109.8	84255.1	2585.1	ug/L	2585.1 ppb	18:22:36
2	Sn 189.927†	2986.1	2824.8	500.87	ug/L	500.87 ppb	18:22:56
2	Ti 334.940†	286481.9	273546.6	500.71	ug/L	500.71 ppb	18:22:36
2	Tl 190.801†	1954.4	1917.7	504.96	ug/L	504.96 ppb	18:22:56
2	U 409.014†	11416.3	15695.8	529.86	ug/L	529.86 ppb	18:22:36
2	V 292.402†	57831.1	56512.9	519.24	ug/L	519.24 ppb	18:22:36
2	Zn 213.857†	59611.9	55714.6	509.45	ug/L	509.45 ppb	18:22:36
2	SiO2†	88060.2	83232.8	5435.8	ug/L	5435.8 ppb	18:23:38
3	Sc Radial	7353.6	7353.6	98.4	%		18:21:53
3	Y RADIAL	6759.1	6759.1	97.61	%		18:21:53
3	Al 396.153Radial†	6191.3	6365.8	5219.8	ug/L	5219.8 ppb	18:21:33
3	Ca 317.933Radial†	3658.2	3689.3	5226.3	ug/L	5226.3 ppb	18:21:53
3	Fe 238.204 Radial†	1220.9	1206.2	5044.6	ug/L	5044.6 ppb	18:21:53
3	K 766.490 Radial†	24981.2	22985.2	4945.7	ug/L	4945.7 ppb	18:21:33
3	Mg 279.077 IEC†	209.0	209.4	5227.8	ug/L	5227.8 ppb	18:21:53
3	Na 589.592 Radial†	166943.5	169826.9	10423	ug/L	10423 ppb	18:21:33
3	Sr 421.552†	172581.9	175478.5	490.07	ug/L	490.07 ppb	18:21:33
3	Sc 361.383	727526.5	727526.5	101.23	%		18:23:02
3	Y 371.029	481127.2	481127.2	85.610	%		18:23:07
3	Ag 328.068†	89683.8	87961.8	528.63	ug/L	528.63 ppb	18:23:07
3	As 188.979†	1416.1	1434.3	520.49	ug/L	520.49 ppb	18:23:27
3	B 249.677†	20221.5	20915.8	524.06	ug/L	524.06 ppb	18:23:07
3	Ba 233.527†	75324.7	74409.3	526.17	ug/L	526.17 ppb	18:23:07
3	Be 313.107†	1125090.4	1116305.8	512.12	ug/L	512.12 ppb	18:23:02
3	Cd 226.502†	41808.2	41581.4	530.12	ug/L	530.12 ppb	18:23:07
3	Co 228.616†	30846.9	30571.7	530.41	ug/L	530.41 ppb	18:23:07
3	Cr 267.716†	38029.6	37645.0	528.24	ug/L	528.24 ppb	18:23:07
3	Cu 324.752†	151258.9	143783.1	521.32	ug/L	521.32 ppb	18:23:07
3	Mn 257.610†	468798.8	462424.7	510.48	ug/L	510.48 ppb	18:23:02
3	Mo 202.031†	7491.9	7383.7	520.13	ug/L	520.13 ppb	18:23:27
3	Ni 231.604†	20078.8	19715.1	526.64	ug/L	526.64 ppb	18:23:07
3	P 214.914†	5486.3	5104.9	2507.4	ug/L	2507.4 ppb	18:23:27
3	Pb 220.353†	4369.1	4329.3	517.04	ug/L	517.04 ppb	18:23:27
3	S 181.975 Axial†	852.1	766.4	1048.9	ug/L	1048.9 ppb	18:23:27
3	Sb 206.836†	1848.7	1769.0	531.80	ug/L	531.80 ppb	18:23:27
3	Se 196.026†	1008.5	1025.0	540.96	ug/L	540.96 ppb	18:23:27
3	Si 251.611†	87674.8	86198.1	2644.5	ug/L	2644.5 ppb	18:23:07
3	Sn 189.927†	2977.2	2928.5	519.23	ug/L	519.23 ppb	18:23:27
3	Ti 334.940†	282004.8	279927.6	512.38	ug/L	512.38 ppb	18:23:07
3	Tl 190.801†	1957.8	1994.7	525.13	ug/L	525.13 ppb	18:23:27
3	U 409.014†	11254.7	15966.7	539.01	ug/L	539.01 ppb	18:23:07
3	V 292.402†	57044.9	57917.2	532.27	ug/L	532.27 ppb	18:23:07
3	Zn 213.857†	58861.3	57221.2	523.26	ug/L	523.26 ppb	18:23:07
3	SiO2†	85896.9	84416.7	5512.3	ug/L	5512.3 ppb	18:23:43

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	741969.5	103.24	%	2.009				1.95%
Sc Radial	7366.9	98.6	%	0.18				0.18%
Y 371.029	481784.3	85.727	%	0.1217				0.14%
Y RADIAL	6777.6	97.88	%	0.234				0.24%
Ag 328.068†	86596.8	520.46	ug/L	7.089	520.46	ppb	7.089	1.36%
QC value within limits for Ag 328.068 Recovery = 104.09%								
Al 396.153Radial†	6430.2	5273.3	ug/L	83.55	5273.3	ppb	83.55	1.58%
QC value within limits for Al 396.153Radial Recovery = 105.47%								
As 188.979†	1414.5	513.31	ug/L	7.270	513.31	ppb	7.270	1.42%
QC value within limits for As 188.979 Recovery = 102.66%								
B 249.677†	20553.0	514.96	ug/L	7.976	514.96	ppb	7.976	1.55%
QC value within limits for B 249.677 Recovery = 102.99%								
Ba 233.527†	73197.5	517.61	ug/L	7.424	517.61	ppb	7.424	1.43%
QC value within limits for Ba 233.527 Recovery = 103.52%								
Be 313.107†	1117486.6	512.65	ug/L	0.674	512.65	ppb	0.674	0.13%
QC value within limits for Be 313.107 Recovery = 102.53%								
Ca 317.933Radial†	3703.7	5246.7	ug/L	17.98	5246.7	ppb	17.98	0.34%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.93%
Cd 226.502†            40873.4      521.08 ug/L         7.834      521.08 ppb          7.834   1.50%
   QC value within limits for Cd 226.502  Recovery = 104.22%
Co 228.616†            30042.9      521.23 ug/L         8.023      521.23 ppb          8.023   1.54%
   QC value within limits for Co 228.616  Recovery = 104.25%
Cr 267.716†            37007.3      519.29 ug/L         7.826      519.29 ppb          7.826   1.51%
   QC value within limits for Cr 267.716  Recovery = 103.86%
Cu 324.752†           141639.9      513.56 ug/L         6.732      513.56 ppb          6.732   1.31%
   QC value within limits for Cu 324.752  Recovery = 102.71%
Fe 238.204 Radial†      1210.8      5063.7 ug/L         18.05      5063.7 ppb          18.05   0.36%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.27%
K 766.490 Radial†      23075.4      4965.2 ug/L         91.67      4965.2 ppb          91.67   1.85%
   QC value within limits for K 766.490 Radial  Recovery = 99.30%
Mg 279.077 IEC†          209.8      5236.9 ug/L         36.47      5236.9 ppb          36.47   0.70%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.74%
Mn 257.610†           462260.1      510.30 ug/L         0.157      510.30 ppb          0.157   0.03%
   QC value within limits for Mn 257.610  Recovery = 102.06%
Mo 202.031†             7231.2      509.39 ug/L        10.671      509.39 ppb         10.671   2.09%
   QC value within limits for Mo 202.031  Recovery = 101.88%
Na 589.592 Radial†    170988.8       10494 ug/L         193.8       10494 ppb          193.8   1.85%
   QC value within limits for Na 589.592 Radial  Recovery = 104.94%
Ni 231.604†            19424.7      518.89 ug/L         6.733      518.89 ppb          6.733   1.30%
   QC value within limits for Ni 231.604  Recovery = 103.78%
P 214.914†              5005.5      2458.0 ug/L         49.92      2458.0 ppb          49.92   2.03%
   QC value within limits for P 214.914  Recovery = 98.32%
Pb 220.353†             4257.0      508.42 ug/L         9.594      508.42 ppb          9.594   1.89%
   QC value within limits for Pb 220.353  Recovery = 101.68%
S 181.975 Axial†         747.4      1022.8 ug/L         26.13      1022.8 ppb          26.13   2.55%
   QC value within limits for S 181.975 Axial  Recovery = 102.28%
Sb 206.836†             1725.2      518.65 ug/L        11.923      518.65 ppb         11.923   2.30%
   QC value within limits for Sb 206.836  Recovery = 103.73%
Se 196.026†             1003.8      530.18 ug/L        10.417      530.18 ppb         10.417   1.96%
   QC value within limits for Se 196.026  Recovery = 106.04%
Si 251.611†            84874.3      2603.9 ug/L         35.17      2603.9 ppb          35.17   1.35%
   QC value within limits for Si 251.611  Recovery = 104.16%
Sn 189.927†             2876.0      509.93 ug/L         9.184      509.93 ppb          9.184   1.80%
   QC value within limits for Sn 189.927  Recovery = 101.99%
Sr 421.552†           176794.6      493.74 ug/L         9.566      493.74 ppb          9.566   1.94%
   QC value within limits for Sr 421.552  Recovery = 98.75%
Ti 334.940†           275729.7      504.70 ug/L         6.652      504.70 ppb          6.652   1.32%
   QC value within limits for Ti 334.940  Recovery = 100.94%
Tl 190.801†             1953.8      514.41 ug/L        10.148      514.41 ppb         10.148   1.97%
   QC value within limits for Tl 190.801  Recovery = 102.88%
U 409.014†             15806.0      533.59 ug/L         4.806      533.59 ppb          4.806   0.90%
   QC value within limits for U 409.014  Recovery = 106.72%
V 292.402†             56985.3      523.67 ug/L         7.450      523.67 ppb          7.450   1.42%
   QC value within limits for V 292.402  Recovery = 104.73%
Zn 213.857†            56219.1      514.07 ug/L         7.959      514.07 ppb          7.959   1.55%
   QC value within limits for Zn 213.857  Recovery = 102.81%
SiO2†                  83758.5      5469.7 ug/L         38.97      5469.7 ppb          38.97   0.71%
   QC value within limits for SiO2  Recovery = 102.28%
All analyte(s) passed QC.
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Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 18:25:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7284.7	7284.7	97.5	%			18:27:44
1	Y RADIAL	6752.1	6752.1	97.51	%			18:27:44
1	Al 396.153Radial†	-76.5	-5.9	-4.8707	ug/L	-4.8707	ppb	18:27:44
1	Ca 317.933Radial†	26.4	-2.0	-2.8920	ug/L	-2.8920	ppb	18:28:04
1	Fe 238.204 Radial†	36.0	2.1	8.7733	ug/L	8.7733	ppb	18:28:04
1	K 766.490 Radial†	2474.9	132.2	28.523	ug/L	28.523	ppb	18:27:44
1	Mg 279.077 IEC†	4.3	1.3	33.065	ug/L	33.065	ppb	18:28:04
1	Na 589.592 Radial†	-403.9	-278.9	-17.116	ug/L	-17.116	ppb	18:27:44
1	Sr 421.552†	-70.1	-16.1	-0.0448	ug/L	-0.0448	ppb	18:27:44
1	Sc 361.383	721634.9	721634.9	100.41	%			18:29:01
1	Y 371.029	565103.1	565103.1	100.55	%			18:29:01
1	Ag 328.068†	599.7	-35.4	-0.2134	ug/L	-0.2134	ppb	18:29:01
1	As 188.979†	-38.1	-2.5	-0.8990	ug/L	-0.8990	ppb	18:29:21
1	B 249.677†	-765.3	177.8	4.4803	ug/L	4.4803	ppb	18:29:01
1	Ba 233.527†	10.2	9.7	0.0674	ug/L	0.0674	ppb	18:29:21
1	Be 313.107†	-4778.8	122.5	0.0562	ug/L	0.0562	ppb	18:29:01
1	Cd 226.502†	-255.0	27.1	0.3447	ug/L	0.3447	ppb	18:29:21
1	Co 228.616†	-102.0	-2.1	-0.0361	ug/L	-0.0361	ppb	18:29:21
1	Cr 267.716†	-87.4	-9.6	-0.1366	ug/L	-0.1366	ppb	18:29:01
1	Cu 324.752†	5674.0	12.4	0.0456	ug/L	0.0456	ppb	18:29:01
1	Mn 257.610†	685.1	2.7	0.0035	ug/L	0.0035	ppb	18:29:21
1	Mo 202.031†	21.7	4.4	0.3133	ug/L	0.3133	ppb	18:29:21
1	Ni 231.604†	118.5	-1.8	-0.0474	ug/L	-0.0474	ppb	18:29:21
1	P 214.914†	298.8	-17.2	-8.8168	ug/L	-8.8168	ppb	18:29:21
1	Pb 220.353†	-13.5	-0.2	-0.0295	ug/L	-0.0295	ppb	18:29:21
1	S 181.975 Axial†	79.3	3.6	4.8842	ug/L	4.8842	ppb	18:29:21
1	Sb 206.836†	53.8	-3.7	-1.0934	ug/L	-1.0934	ppb	18:29:21
1	Se 196.026†	-38.4	-9.5	-4.8185	ug/L	-4.8185	ppb	18:29:21
1	Si 251.611†	557.5	143.4	4.4165	ug/L	4.4165	ppb	18:29:21
1	Sn 189.927†	11.7	-0.9	-0.1592	ug/L	-0.1592	ppb	18:29:21
1	Ti 334.940†	-1310.4	43.2	0.0772	ug/L	0.0772	ppb	18:29:01
1	Tl 190.801†	-48.7	12.2	3.2027	ug/L	3.2027	ppb	18:29:21
1	U 409.014†	-4756.3	111.8	3.7862	ug/L	3.7862	ppb	18:29:01
1	V 292.402†	-1611.3	-39.6	-0.3487	ug/L	-0.3487	ppb	18:29:01
1	Zn 213.857†	959.6	30.5	0.2799	ug/L	0.2799	ppb	18:29:21
1	SiO2†	620.6	181.2	11.888	ug/L	11.888	ppb	18:30:17
2	Sc Radial	7350.6	7350.6	98.3	%			18:28:09
2	Y RADIAL	6817.8	6817.8	98.46	%			18:28:09
2	Al 396.153Radial†	-89.6	-18.4	-15.159	ug/L	-15.159	ppb	18:28:09
2	Ca 317.933Radial†	33.2	4.6	6.5582	ug/L	6.5582	ppb	18:28:29
2	Fe 238.204 Radial†	38.1	4.0	16.509	ug/L	16.509	ppb	18:28:29
2	K 766.490 Radial†	2441.1	75.1	16.221	ug/L	16.221	ppb	18:28:09
2	Mg 279.077 IEC†	1.8	-1.2	-31.067	ug/L	-31.067	ppb	18:28:29
2	Na 589.592 Radial†	-285.1	-154.3	-9.4724	ug/L	-9.4724	ppb	18:28:09
2	Sr 421.552†	-40.7	14.4	0.0402	ug/L	0.0402	ppb	18:28:09
2	Sc 361.383	728244.2	728244.2	101.33	%			18:29:26
2	Y 371.029	570115.9	570115.9	101.44	%			18:29:26
2	Ag 328.068†	662.5	21.2	0.1259	ug/L	0.1259	ppb	18:29:26
2	As 188.979†	-32.5	3.4	1.2323	ug/L	1.2323	ppb	18:29:46
2	B 249.677†	-782.3	167.9	4.2312	ug/L	4.2312	ppb	18:29:26
2	Ba 233.527†	8.3	7.7	0.0545	ug/L	0.0545	ppb	18:29:46
2	Be 313.107†	-4851.6	93.8	0.0427	ug/L	0.0427	ppb	18:29:26
2	Cd 226.502†	-276.3	8.4	0.1052	ug/L	0.1052	ppb	18:29:46
2	Co 228.616†	-112.3	-11.4	-0.1991	ug/L	-0.1991	ppb	18:29:46
2	Cr 267.716†	-90.2	-11.6	-0.1645	ug/L	-0.1645	ppb	18:29:26
2	Cu 324.752†	5687.4	-25.6	-0.0919	ug/L	-0.0919	ppb	18:29:26
2	Mn 257.610†	669.5	-18.9	-0.0182	ug/L	-0.0182	ppb	18:29:46
2	Mo 202.031†	10.8	-6.5	-0.4550	ug/L	-0.4550	ppb	18:29:46
2	Ni 231.604†	135.3	13.7	0.3660	ug/L	0.3660	ppb	18:29:46

2	P 214.914†	316.8	-2.1	-1.0649	ug/L	-1.0649 ppb	18:29:46
2	Pb 220.353†	4.7	17.9	2.1207	ug/L	2.1207 ppb	18:29:46
2	S 181.975 Axial†	80.5	4.1	5.5884	ug/L	5.5884 ppb	18:29:46
2	Sb 206.836†	69.3	11.1	3.3194	ug/L	3.3194 ppb	18:29:46
2	Se 196.026†	-28.5	0.7	0.4013	ug/L	0.4013 ppb	18:29:46
2	Si 251.611†	536.1	117.3	3.6134	ug/L	3.6134 ppb	18:29:46
2	Sn 189.927†	17.6	4.9	0.8646	ug/L	0.8646 ppb	18:29:46
2	Ti 334.940†	-1410.3	-43.6	-0.0828	ug/L	-0.0828 ppb	18:29:26
2	Tl 190.801†	-55.9	5.6	1.4742	ug/L	1.4742 ppb	18:29:46
2	U 409.014†	-4679.1	231.0	7.8208	ug/L	7.8208 ppb	18:29:26
2	V 292.402†	-1557.6	28.1	0.2619	ug/L	0.2619 ppb	18:29:26
2	Zn 213.857†	958.3	20.6	0.1874	ug/L	0.1874 ppb	18:29:46
2	SiO2†	576.1	131.7	8.6371	ug/L	8.6371 ppb	18:30:22
3	Sc Radial	7382.0	7382.0	98.8	%		18:28:34
3	Y RADIAL	6824.7	6824.7	98.56	%		18:28:34
3	Al 396.153Radial†	-80.8	-9.2	-7.5951	ug/L	-7.5951 ppb	18:28:34
3	Ca 317.933Radial†	25.7	-3.0	-4.2807	ug/L	-4.2807 ppb	18:28:54
3	Fe 238.204 Radial†	34.9	0.5	2.1414	ug/L	2.1414 ppb	18:28:54
3	K 766.490 Radial†	2405.9	28.9	6.2193	ug/L	6.2193 ppb	18:28:34
3	Mg 279.077 IEC†	3.1	0.1	3.0843	ug/L	3.0843 ppb	18:28:54
3	Na 589.592 Radial†	-246.5	-114.0	-6.9971	ug/L	-6.9971 ppb	18:28:34
3	Sr 421.552†	-15.0	40.7	0.1137	ug/L	0.1137 ppb	18:28:34
3	Sc 361.383	724186.7	724186.7	100.76	%		18:29:51
3	Y 371.029	566691.6	566691.6	100.83	%		18:29:51
3	Ag 328.068†	571.7	-65.2	-0.3875	ug/L	-0.3875 ppb	18:29:51
3	As 188.979†	-20.8	14.8	5.3251	ug/L	5.3251 ppb	18:30:12
3	B 249.677†	-781.5	164.3	4.1420	ug/L	4.1420 ppb	18:29:51
3	Ba 233.527†	4.7	4.2	0.0305	ug/L	0.0305 ppb	18:30:12
3	Be 313.107†	-4880.0	38.8	0.0178	ug/L	0.0178 ppb	18:29:51
3	Cd 226.502†	-269.9	13.2	0.1685	ug/L	0.1685 ppb	18:30:12
3	Co 228.616†	-108.8	-8.5	-0.1459	ug/L	-0.1459 ppb	18:30:12
3	Cr 267.716†	-75.6	2.3	0.0333	ug/L	0.0333 ppb	18:29:51
3	Cu 324.752†	5626.2	-55.0	-0.1990	ug/L	-0.1990 ppb	18:29:51
3	Mn 257.610†	685.5	0.7	0.0010	ug/L	0.0010 ppb	18:30:12
3	Mo 202.031†	30.1	12.7	0.8936	ug/L	0.8936 ppb	18:30:12
3	Ni 231.604†	136.2	15.3	0.4102	ug/L	0.4102 ppb	18:30:12
3	P 214.914†	321.4	4.2	2.1530	ug/L	2.1530 ppb	18:30:12
3	Pb 220.353†	-34.7	-21.2	-2.5272	ug/L	-2.5272 ppb	18:30:12
3	S 181.975 Axial†	72.1	-3.9	-5.3248	ug/L	-5.3248 ppb	18:30:12
3	Sb 206.836†	49.5	-8.1	-2.3935	ug/L	-2.3935 ppb	18:30:12
3	Se 196.026†	-31.5	-2.5	-1.2567	ug/L	-1.2567 ppb	18:30:12
3	Si 251.611†	564.1	148.1	4.5578	ug/L	4.5578 ppb	18:30:12
3	Sn 189.927†	11.7	-0.9	-0.1668	ug/L	-0.1668 ppb	18:30:12
3	Ti 334.940†	-1337.9	20.5	0.0370	ug/L	0.0370 ppb	18:29:51
3	Tl 190.801†	-63.5	-2.2	-0.5887	ug/L	-0.5887 ppb	18:30:12
3	U 409.014†	-4871.3	14.4	0.4881	ug/L	0.4881 ppb	18:29:51
3	V 292.402†	-1523.9	52.9	0.4925	ug/L	0.4925 ppb	18:29:51
3	Zn 213.857†	967.0	34.6	0.3164	ug/L	0.3164 ppb	18:30:12
3	SiO2†	588.3	147.0	9.6312	ug/L	9.6312 ppb	18:30:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	724688.6	100.83	%	0.464				0.46%
Sc Radial	7339.1	98.2	%	0.66				0.68%
Y 371.029	567303.5	100.94	%	0.456				0.45%
Y RADIAL	6798.2	98.18	%	0.579				0.59%
Ag 328.068†	-26.5	-0.1583	ug/L	0.26109	-0.1583	ppb	0.26109	164.90%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-11.2	-9.2082	ug/L	5.33032	-9.2082	ppb	5.33032	57.89%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.2	1.8861	ug/L	3.16317	1.8861	ppb	3.16317	167.71%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	170.0	4.2845	ug/L	0.17536	4.2845	ppb	0.17536	4.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.2	0.0508	ug/L	0.01873	0.0508	ppb	0.01873	36.86%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	85.0	0.0389	ug/L	0.01948	0.0389	ppb	0.01948	50.02%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-0.1	-0.2048	ug/L	5.89796	-0.2048	ppb	5.89796	>999.9%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                16.2      0.2062 ug/L       0.12410      0.2062 ppb        0.12410  60.19%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -7.4     -0.1270 ug/L       0.08310     -0.1270 ppb        0.08310  65.41%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -6.3     -0.0893 ug/L       0.10707     -0.0893 ppb        0.10707 119.95%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -22.7     -0.0818 ug/L       0.12263     -0.0818 ppb        0.12263 149.92%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          2.2      9.1411 ug/L       7.19072      9.1411 ppb        7.19072  78.66%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          78.7      16.988 ug/L       11.1718      16.988 ppb        11.1718  65.76%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.1      1.6943 ug/L      32.08835      1.6943 ppb       32.08835 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -5.1     -0.0046 ug/L       0.01185     -0.0046 ppb        0.01185 260.18%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 3.6      0.2506 ug/L       0.67648      0.2506 ppb        0.67648 269.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -182.4     -11.195 ug/L        5.2747     -11.195 ppb         5.2747  47.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 9.1      0.2429 ug/L       0.25241      0.2429 ppb        0.25241 103.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -5.1     -2.5762 ug/L       5.63890     -2.5762 ppb        5.63890 218.88%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -1.2     -0.1453 ug/L       2.32613     -0.1453 ppb        2.32613 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            1.3      1.7159 ug/L       6.10762      1.7159 ppb        6.10762 355.93%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.2     -0.0558 ug/L       2.99448     -0.0558 ppb        2.99448 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -3.8     -1.8913 ug/L       2.66714     -1.8913 ppb        2.66714 141.02%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               136.3      4.1959 ug/L       0.50942      4.1959 ppb        0.50942  12.14%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.0      0.1796 ug/L       0.59332      0.1796 ppb        0.59332 330.44%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                13.0      0.0364 ug/L       0.07932      0.0364 ppb        0.07932 218.16%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 6.7      0.0105 ug/L       0.08325      0.0105 ppb        0.08325 794.40%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.2      1.3627 ug/L       1.89815      1.3627 ppb        1.89815 139.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                119.1      4.0317 ug/L       3.67251      4.0317 ppb        3.67251  91.09%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 13.8      0.1352 ug/L       0.43464      0.1352 ppb        0.43464 321.39%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                28.6      0.2612 ug/L       0.06651      0.2612 ppb        0.06651  25.46%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     153.3      10.052 ug/L        1.6656      10.052 ppb         1.6656  16.57%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 34
Sample ID: 1201871706|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 6/30/2009 18:32:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871706|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7511.8	7511.8	100	%			18:34:29
1	Y RADIAL	6950.7	6950.7	100.4	%			18:34:29
1	Al 396.153Radial†	-77.8	-4.8	-3.9731	ug/L	-3.9731	ppb	18:34:29
1	Ca 317.933Radial†	24.6	-4.7	-6.5948	ug/L	-6.5948	ppb	18:34:49
1	Fe 238.204 Radial†	38.5	3.5	14.778	ug/L	14.778	ppb	18:34:49
1	K 766.490 Radial†	2421.9	2.8	0.5996	ug/L	0.5996	ppb	18:34:29
1	Mg 279.077 IEC†	5.2	2.2	53.757	ug/L	53.757	ppb	18:34:49
1	Na 589.592 Radial†	-238.0	-101.3	-6.2164	ug/L	-6.2164	ppb	18:34:29
1	Sr 421.552†	-59.0	-2.8	-0.0079	ug/L	-0.0079	ppb	18:34:29
1	Sc 361.383	720917.4	720917.4	100.31	%			18:35:46
1	Y 371.029	564150.6	564150.6	100.38	%			18:35:46
1	Ag 328.068†	661.5	26.8	0.1666	ug/L	0.1666	ppb	18:35:46
1	As 188.979†	-32.6	2.9	1.0579	ug/L	1.0579	ppb	18:36:06
1	B 249.677†	-780.4	161.9	4.0801	ug/L	4.0801	ppb	18:35:46
1	Ba 233.527†	9.8	9.3	0.0651	ug/L	0.0651	ppb	18:36:06
1	Be 313.107†	-4769.6	126.9	0.0582	ug/L	0.0582	ppb	18:35:46
1	Cd 226.502†	-294.4	-12.4	-0.1587	ug/L	-0.1587	ppb	18:36:06
1	Co 228.616†	-113.8	-14.0	-0.2415	ug/L	-0.2415	ppb	18:36:06
1	Cr 267.716†	-81.7	-4.1	-0.0560	ug/L	-0.0560	ppb	18:35:46
1	Cu 324.752†	5503.3	-152.1	-0.5504	ug/L	-0.5504	ppb	18:35:46
1	Mn 257.610†	638.9	-42.7	-0.0462	ug/L	-0.0462	ppb	18:36:06
1	Mo 202.031†	22.4	5.2	0.3666	ug/L	0.3666	ppb	18:36:06
1	Ni 231.604†	158.6	38.3	1.0239	ug/L	1.0239	ppb	18:36:06
1	P 214.914†	333.3	17.4	9.0135	ug/L	9.0135	ppb	18:36:06
1	Pb 220.353†	-23.5	-10.2	-1.2162	ug/L	-1.2162	ppb	18:36:06
1	S 181.975 Axial†	78.6	3.0	4.0433	ug/L	4.0433	ppb	18:36:06
1	Sb 206.836†	56.2	-1.2	-0.3388	ug/L	-0.3388	ppb	18:36:06
1	Se 196.026†	-35.6	-6.8	-3.4019	ug/L	-3.4019	ppb	18:36:06
1	Si 251.611†	837.7	423.3	13.057	ug/L	13.057	ppb	18:36:06
1	Sn 189.927†	16.8	4.3	0.7595	ug/L	0.7595	ppb	18:36:06
1	Ti 334.940†	-1324.1	28.2	0.0524	ug/L	0.0524	ppb	18:35:46
1	Tl 190.801†	-59.4	1.5	0.4069	ug/L	0.4069	ppb	18:36:06
1	U 409.014†	-4938.2	-74.2	-2.5147	ug/L	-2.5147	ppb	18:35:46
1	V 292.402†	-1587.7	-17.6	-0.1612	ug/L	-0.1612	ppb	18:35:46
1	Zn 213.857†	997.9	69.8	0.6345	ug/L	0.6345	ppb	18:36:06
1	SiO2†	892.2	452.5	29.723	ug/L	29.723	ppb	18:37:02
2	Sc Radial	7634.5	7634.5	102	%			18:34:54
2	Y RADIAL	7043.7	7043.7	101.7	%			18:34:54
2	Al 396.153Radial†	-68.9	5.2	4.2486	ug/L	4.2486	ppb	18:34:54
2	Ca 317.933Radial†	29.6	-0.1	-0.1315	ug/L	-0.1315	ppb	18:35:14
2	Fe 238.204 Radial†	36.6	1.1	4.3988	ug/L	4.3988	ppb	18:35:14
2	K 766.490 Radial†	2376.2	-80.8	-17.424	ug/L	-17.424	ppb	18:34:54
2	Mg 279.077 IEC†	0.1	-3.0	-74.443	ug/L	-74.443	ppb	18:35:14
2	Na 589.592 Radial†	-116.0	21.9	1.3466	ug/L	1.3466	ppb	18:34:54
2	Sr 421.552†	-16.2	40.0	0.1116	ug/L	0.1116	ppb	18:34:54
2	Sc 361.383	736026.2	736026.2	102.41	%			18:36:11
2	Y 371.029	575819.9	575819.9	102.46	%			18:36:11
2	Ag 328.068†	600.6	-46.2	-0.2824	ug/L	-0.2824	ppb	18:36:11
2	As 188.979†	-31.8	4.3	1.5668	ug/L	1.5668	ppb	18:36:31
2	B 249.677†	-763.7	194.3	4.8956	ug/L	4.8956	ppb	18:36:11
2	Ba 233.527†	22.6	21.6	0.1546	ug/L	0.1546	ppb	18:36:31
2	Be 313.107†	-4965.0	33.7	0.0158	ug/L	0.0158	ppb	18:36:11
2	Cd 226.502†	-273.9	13.6	0.1736	ug/L	0.1736	ppb	18:36:31
2	Co 228.616†	-106.2	-4.3	-0.0747	ug/L	-0.0747	ppb	18:36:31
2	Cr 267.716†	-84.5	-5.1	-0.0744	ug/L	-0.0744	ppb	18:36:11
2	Cu 324.752†	5655.5	-116.1	-0.4205	ug/L	-0.4205	ppb	18:36:11
2	Mn 257.610†	684.6	-11.1	-0.0102	ug/L	-0.0102	ppb	18:36:31
2	Mo 202.031†	15.5	-2.0	-0.1373	ug/L	-0.1373	ppb	18:36:31
2	Ni 231.604†	148.2	24.9	0.6669	ug/L	0.6669	ppb	18:36:31

2	P 214.914†	342.9	20.1	10.328	ug/L	10.328	ppb	18:36:31
2	Pb 220.353†	-34.0	-20.0	-2.3801	ug/L	-2.3801	ppb	18:36:31
2	S 181.975 Axial†	79.3	2.0	2.7036	ug/L	2.7036	ppb	18:36:31
2	Sb 206.836†	60.1	1.5	0.4284	ug/L	0.4284	ppb	18:36:31
2	Se 196.026†	-16.0	13.1	6.7222	ug/L	6.7222	ppb	18:36:31
2	Si 251.611†	810.5	379.6	11.737	ug/L	11.737	ppb	18:36:31
2	Sn 189.927†	11.2	-1.6	-0.2770	ug/L	-0.2770	ppb	18:36:31
2	Ti 334.940†	-1294.4	84.4	0.1484	ug/L	0.1484	ppb	18:36:11
2	Tl 190.801†	-62.4	-0.2	-0.0463	ug/L	-0.0463	ppb	18:36:31
2	U 409.014†	-4547.3	408.6	13.834	ug/L	13.834	ppb	18:36:11
2	V 292.402†	-1488.4	111.9	1.0393	ug/L	1.0393	ppb	18:36:11
2	Zn 213.857†	1013.7	64.8	0.5960	ug/L	0.5960	ppb	18:36:31
2	SiO2†	851.5	394.5	25.973	ug/L	25.973	ppb	18:37:07
3	Sc Radial	7574.9	7574.9	101	%			18:35:19
3	Y RADIAL	7048.8	7048.8	101.8	%			18:35:19
3	Al 396.153Radial†	-43.4	29.9	24.564	ug/L	24.564	ppb	18:35:19
3	Ca 317.933Radial†	23.2	-6.2	-8.7615	ug/L	-8.7615	ppb	18:35:39
3	Fe 238.204 Radial†	34.2	-1.1	-4.5073	ug/L	-4.5073	ppb	18:35:39
3	K 766.490 Radial†	2426.9	-12.4	-2.6884	ug/L	-2.6884	ppb	18:35:19
3	Mg 279.077 IEC†	3.5	0.4	9.6412	ug/L	9.6412	ppb	18:35:39
3	Na 589.592 Radial†	-134.2	3.2	0.1954	ug/L	0.1954	ppb	18:35:19
3	Sr 421.552†	-23.5	32.6	0.0912	ug/L	0.0912	ppb	18:35:19
3	Sc 361.383	737077.2	737077.2	102.56	%			18:36:37
3	Y 371.029	576099.6	576099.6	102.51	%			18:36:37
3	Ag 328.068†	511.5	-133.9	-0.8106	ug/L	-0.8106	ppb	18:36:37
3	As 188.979†	-40.3	-3.8	-1.3914	ug/L	-1.3914	ppb	18:36:57
3	B 249.677†	-739.9	218.5	5.5053	ug/L	5.5053	ppb	18:36:37
3	Ba 233.527†	15.8	14.9	0.1061	ug/L	0.1061	ppb	18:36:57
3	Be 313.107†	-4980.5	25.5	0.0125	ug/L	0.0125	ppb	18:36:37
3	Cd 226.502†	-277.5	10.5	0.1348	ug/L	0.1348	ppb	18:36:57
3	Co 228.616†	-89.9	11.8	0.2054	ug/L	0.2054	ppb	18:36:57
3	Cr 267.716†	-61.6	17.3	0.2388	ug/L	0.2388	ppb	18:36:37
3	Cu 324.752†	5577.5	-200.1	-0.7252	ug/L	-0.7252	ppb	18:36:37
3	Mn 257.610†	676.1	-20.3	-0.0232	ug/L	-0.0232	ppb	18:36:57
3	Mo 202.031†	24.6	6.8	0.4811	ug/L	0.4811	ppb	18:36:57
3	Ni 231.604†	130.6	7.6	0.2023	ug/L	0.2023	ppb	18:36:57
3	P 214.914†	317.6	-5.1	-2.4776	ug/L	-2.4776	ppb	18:36:57
3	Pb 220.353†	-16.4	-2.7	-0.3144	ug/L	-0.3144	ppb	18:36:57
3	S 181.975 Axial†	82.1	4.7	6.4013	ug/L	6.4013	ppb	18:36:57
3	Sb 206.836†	67.9	9.0	2.6668	ug/L	2.6668	ppb	18:36:57
3	Se 196.026†	-29.5	-0.0	-0.0282	ug/L	-0.0282	ppb	18:36:57
3	Si 251.611†	803.8	371.9	11.487	ug/L	11.487	ppb	18:36:57
3	Sn 189.927†	9.7	-3.0	-0.5396	ug/L	-0.5396	ppb	18:36:57
3	Ti 334.940†	-1184.5	193.3	0.3479	ug/L	0.3479	ppb	18:36:37
3	Tl 190.801†	-49.9	12.1	3.1693	ug/L	3.1693	ppb	18:36:57
3	U 409.014†	-4599.0	364.4	12.340	ug/L	12.340	ppb	18:36:37
3	V 292.402†	-1570.4	34.0	0.3389	ug/L	0.3389	ppb	18:36:37
3	Zn 213.857†	1006.5	56.3	0.5196	ug/L	0.5196	ppb	18:36:57
3	SiO2†	855.6	397.4	26.135	ug/L	26.135	ppb	18:37:12

Mean Data: 1201871706|881354|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	731340.3	101.76	%	1.258				1.24%
Sc Radial	7573.7	101	%	0.8				0.81%
Y 371.029	572023.3	101.78	%	1.213				1.19%
Y RADIAL	7014.4	101.3	%	0.80				0.79%
Ag 328.068†	-51.1	-0.3088	ug/L	0.48913	-0.3088	ppb	0.48913	158.41%
Al 396.153Radial†	10.1	8.2797	ug/L	14.68934	8.2797	ppb	14.68934	177.41%
As 188.979†	1.1	0.4111	ug/L	1.58158	0.4111	ppb	1.58158	384.74%
B 249.677†	191.5	4.8270	ug/L	0.71509	4.8270	ppb	0.71509	14.81%
Ba 233.527†	15.3	0.1086	ug/L	0.04476	0.1086	ppb	0.04476	41.21%
Be 313.107†	62.0	0.0288	ug/L	0.02549	0.0288	ppb	0.02549	88.45%
Ca 317.933Radial†	-3.6	-5.1626	ug/L	4.48970	-5.1626	ppb	4.48970	86.97%
Cd 226.502†	3.9	0.0499	ug/L	0.18171	0.0499	ppb	0.18171	364.31%
Co 228.616†	-2.1	-0.0369	ug/L	0.22580	-0.0369	ppb	0.22580	611.55%
Cr 267.716†	2.7	0.0361	ug/L	0.17580	0.0361	ppb	0.17580	486.71%
Cu 324.752†	-156.1	-0.5654	ug/L	0.15291	-0.5654	ppb	0.15291	27.05%
Fe 238.204 Radial†	1.2	4.8899	ug/L	9.65206	4.8899	ppb	9.65206	197.39%
K 766.490 Radial†	-30.1	-6.5043	ug/L	9.59863	-6.5043	ppb	9.59863	147.57%

Mg 279.077 IEC†	-0.1	-3.6816	ug/L	65.12984	-3.6816	ppb	65.12984 >999.9%
Mn 257.610†	-24.7	-0.0266	ug/L	0.01823	-0.0266	ppb	0.01823 68.65%
Mo 202.031†	3.4	0.2368	ug/L	0.32901	0.2368	ppb	0.32901 138.94%
Na 589.592 Radial†	-25.4	-1.5582	ug/L	4.07500	-1.5582	ppb	4.07500 261.53%
Ni 231.604†	23.6	0.6310	ug/L	0.41197	0.6310	ppb	0.41197 65.29%
P 214.914†	10.8	5.6212	ug/L	7.04450	5.6212	ppb	7.04450 125.32%
Pb 220.353†	-11.0	-1.3036	ug/L	1.03564	-1.3036	ppb	1.03564 79.44%
S 181.975 Axial†	3.2	4.3827	ug/L	1.87207	4.3827	ppb	1.87207 42.71%
Sb 206.836†	3.1	0.9188	ug/L	1.56169	0.9188	ppb	1.56169 169.97%
Se 196.026†	2.1	1.0974	ug/L	5.15507	1.0974	ppb	5.15507 469.77%
Si 251.611†	391.6	12.093	ug/L	0.8437	12.093	ppb	0.8437 6.98%
Sn 189.927†	-0.1	-0.0190	ug/L	0.68690	-0.0190	ppb	0.68690 >999.9%
Sr 421.552†	23.2	0.0650	ug/L	0.06393	0.0650	ppb	0.06393 98.37%
Ti 334.940†	102.0	0.1829	ug/L	0.15072	0.1829	ppb	0.15072 82.41%
Tl 190.801†	4.5	1.1766	ug/L	1.74051	1.1766	ppb	1.74051 147.92%
U 409.014†	232.9	7.8865	ug/L	9.03860	7.8865	ppb	9.03860 114.61%
V 292.402†	42.8	0.4057	ug/L	0.60300	0.4057	ppb	0.60300 148.64%
Zn 213.857†	63.6	0.5834	ug/L	0.05846	0.5834	ppb	0.05846 10.02%
SiO2†	414.8	27.277	ug/L	2.1199	27.277	ppb	2.1199 7.77%

Sequence No.: 35
Sample ID: 1201871707|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 6/30/2009 18:39:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871707|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7570.2	7570.2	101	%			18:41:15
1	Y RADIAL	6946.8	6946.8	100.3	%			18:41:15
1	Al 396.153Radial†	6284.1	6277.3	5148.0	ug/L	5148.0	ppb	18:41:15
1	Ca 317.933Radial†	3613.8	3539.0	5013.4	ug/L	5013.4	ppb	18:41:35
1	Fe 238.204 Radial†	1228.8	1178.5	4928.1	ug/L	4928.1	ppb	18:41:35
1	K 766.490 Radial†	25587.0	22856.6	4919.0	ug/L	4919.0	ppb	18:41:15
1	Mg 279.077 IEC†	214.6	208.8	5211.3	ug/L	5211.3	ppb	18:41:35
1	Na 589.592 Radial†	86001.0	85050.3	5219.8	ug/L	5219.8	ppb	18:41:15
1	Sr 421.552†	175566.4	173404.7	484.28	ug/L	484.28	ppb	18:41:15
1	Sc 361.383	750645.2	750645.2	104.45	%			18:42:34
1	Y 371.029	579516.0	579516.0	103.12	%			18:42:34
1	Ag 328.068†	87134.6	82792.5	497.65	ug/L	497.65	ppb	18:42:34
1	As 188.979†	1415.1	1390.3	504.54	ug/L	504.54	ppb	18:42:54
1	B 249.677†	19358.9	19474.7	487.95	ug/L	487.95	ppb	18:42:34
1	Ba 233.527†	74836.8	71650.4	506.65	ug/L	506.65	ppb	18:42:34
1	Be 313.107†	1128674.5	1085507.2	498.00	ug/L	498.00	ppb	18:42:34
1	Cd 226.502†	40625.4	39177.0	499.45	ug/L	499.45	ppb	18:42:54
1	Co 228.616†	29452.2	28297.8	490.95	ug/L	490.95	ppb	18:42:54
1	Cr 267.716†	37070.9	35570.2	499.13	ug/L	499.13	ppb	18:42:34
1	Cu 324.752†	149925.0	137904.1	500.01	ug/L	500.01	ppb	18:42:34
1	Mn 257.610†	475642.8	454714.5	501.96	ug/L	501.96	ppb	18:42:34
1	Mo 202.031†	7373.9	7042.9	496.13	ug/L	496.13	ppb	18:42:54
1	Ni 231.604†	19708.6	18749.8	500.87	ug/L	500.87	ppb	18:42:54
1	P 214.914†	1512.0	1132.9	483.68	ug/L	483.68	ppb	18:42:54
1	Pb 220.353†	4447.0	4270.9	510.04	ug/L	510.04	ppb	18:42:54
1	S 181.975 Axial†	3922.3	3679.9	5040.3	ug/L	5040.3	ppb	18:42:54
1	Sb 206.836†	1845.4	1709.5	514.24	ug/L	514.24	ppb	18:42:54
1	Se 196.026†	974.8	962.1	508.42	ug/L	508.42	ppb	18:42:54
1	Si 251.611†	168646.9	161055.6	4956.9	ug/L	4956.9	ppb	18:42:34
1	Sn 189.927†	3041.1	2899.1	514.00	ug/L	514.00	ppb	18:42:54
1	Ti 334.940†	284109.0	273362.4	500.37	ug/L	500.37	ppb	18:42:34
1	Tl 190.801†	1934.8	1913.2	503.90	ug/L	503.90	ppb	18:42:54
1	U 409.014†	10796.5	15185.6	512.63	ug/L	512.63	ppb	18:42:34
1	V 292.402†	56083.3	55260.9	507.83	ug/L	507.83	ppb	18:42:34
1	Zn 213.857†	56679.0	53341.0	487.66	ug/L	487.66	ppb	18:42:34
1	SiO2†	168042.4	160451.8	10514	ug/L	10514	ppb	18:43:54
2	Sc Radial	7439.4	7439.4	99.5	%			18:41:40
2	Y RADIAL	6862.0	6862.0	99.10	%			18:41:40
2	Al 396.153Radial†	6208.3	6310.3	5175.4	ug/L	5175.4	ppb	18:41:40
2	Ca 317.933Radial†	3629.0	3617.1	5124.0	ug/L	5124.0	ppb	18:42:00
2	Fe 238.204 Radial†	1232.3	1203.3	5031.3	ug/L	5031.3	ppb	18:42:00
2	K 766.490 Radial†	25220.2	22932.3	4935.4	ug/L	4935.4	ppb	18:41:40
2	Mg 279.077 IEC†	211.4	209.3	5223.9	ug/L	5223.9	ppb	18:42:00
2	Na 589.592 Radial†	84626.5	85162.2	5226.6	ug/L	5226.6	ppb	18:41:40
2	Sr 421.552†	172041.3	172910.7	482.90	ug/L	482.90	ppb	18:41:40
2	Sc 361.383	757569.2	757569.2	105.41	%			18:43:01
2	Y 371.029	584063.8	584063.8	103.93	%			18:43:01
2	Ag 328.068†	88167.7	83010.2	498.97	ug/L	498.97	ppb	18:43:01
2	As 188.979†	1394.6	1358.5	493.11	ug/L	493.11	ppb	18:43:22
2	B 249.677†	19769.5	19694.8	493.53	ug/L	493.53	ppb	18:43:01
2	Ba 233.527†	75782.7	71892.9	508.36	ug/L	508.36	ppb	18:43:01
2	Be 313.107†	1140521.3	1086869.3	498.62	ug/L	498.62	ppb	18:43:01
2	Cd 226.502†	40451.5	38656.6	492.79	ug/L	492.79	ppb	18:43:22
2	Co 228.616†	29269.7	27866.9	483.46	ug/L	483.46	ppb	18:43:22
2	Cr 267.716†	37465.9	35620.5	499.84	ug/L	499.84	ppb	18:43:01
2	Cu 324.752†	152238.6	138787.0	503.22	ug/L	503.22	ppb	18:43:01
2	Mn 257.610†	480776.3	455422.4	502.76	ug/L	502.76	ppb	18:43:01
2	Mo 202.031†	7363.9	6968.8	490.92	ug/L	490.92	ppb	18:43:22
2	Ni 231.604†	19586.6	18461.6	493.17	ug/L	493.17	ppb	18:43:22

2	P 214.914†	1516.9	1124.3	478.51 ug/L	478.51 ppb	18:43:22
2	Pb 220.353†	4400.0	4187.4	500.07 ug/L	500.07 ppb	18:43:22
2	S 181.975 Axial†	3880.0	3605.5	4938.3 ug/L	4938.3 ppb	18:43:22
2	Sb 206.836†	1856.9	1704.3	512.48 ug/L	512.48 ppb	18:43:22
2	Se 196.026†	987.4	965.5	510.49 ug/L	510.49 ppb	18:43:22
2	Si 251.611†	170889.5	161707.4	4977.1 ug/L	4977.1 ppb	18:43:01
2	Sn 189.927†	3041.6	2873.0	509.40 ug/L	509.40 ppb	18:43:22
2	Ti 334.940†	287306.3	273909.4	501.38 ug/L	501.38 ppb	18:43:01
2	Tl 190.801†	1924.2	1886.2	496.90 ug/L	496.90 ppb	18:43:22
2	U 409.014†	11022.1	15305.1	516.67 ug/L	516.67 ppb	18:43:01
2	V 292.402†	56497.5	55163.1	506.87 ug/L	506.87 ppb	18:43:01
2	Zn 213.857†	57288.4	53423.1	488.45 ug/L	488.45 ppb	18:43:01
2	SiO2†	169845.2	160691.5	10530 ug/L	10530 ppb	18:44:00
3	Sc Radial	7536.8	7536.8	101 %		18:42:05
3	Y RADIAL	6953.1	6953.1	100.4 %		18:42:05
3	Al 396.153Radial†	6236.6	6257.7	5131.9 ug/L	5131.9 ppb	18:42:05
3	Ca 317.933Radial†	3588.2	3529.5	5000.0 ug/L	5000.0 ppb	18:42:26
3	Fe 238.204 Radial†	1212.1	1167.3	4881.1 ug/L	4881.1 ppb	18:42:26
3	K 766.490 Radial†	25431.4	22814.3	4909.9 ug/L	4909.9 ppb	18:42:05
3	Mg 279.077 IEC†	205.5	200.8	5011.9 ug/L	5011.9 ppb	18:42:26
3	Na 589.592 Radial†	85530.3	84959.7	5214.2 ug/L	5214.2 ppb	18:42:05
3	Sr 421.552†	174039.5	172658.6	482.19 ug/L	482.19 ppb	18:42:05
3	Sc 361.383	751772.5	751772.5	104.60 %		18:43:29
3	Y 371.029	579877.2	579877.2	103.18 %		18:43:29
3	Ag 328.068†	87290.5	82816.5	497.78 ug/L	497.78 ppb	18:43:29
3	As 188.979†	1410.1	1383.5	502.07 ug/L	502.07 ppb	18:43:49
3	B 249.677†	19537.5	19617.6	491.57 ug/L	491.57 ppb	18:43:29
3	Ba 233.527†	75167.6	71859.2	508.13 ug/L	508.13 ppb	18:43:29
3	Be 313.107†	1131025.9	1086134.6	498.29 ug/L	498.29 ppb	18:43:29
3	Cd 226.502†	40501.5	39000.3	497.20 ug/L	497.20 ppb	18:43:49
3	Co 228.616†	29306.9	28116.7	487.81 ug/L	487.81 ppb	18:43:49
3	Cr 267.716†	37100.7	35545.4	498.79 ug/L	498.79 ppb	18:43:29
3	Cu 324.752†	150548.4	138284.8	501.39 ug/L	501.39 ppb	18:43:29
3	Mn 257.610†	476366.5	454723.5	501.97 ug/L	501.97 ppb	18:43:29
3	Mo 202.031†	7374.8	7033.2	495.44 ug/L	495.44 ppb	18:43:49
3	Ni 231.604†	19657.8	18672.9	498.81 ug/L	498.81 ppb	18:43:49
3	P 214.914†	1510.9	1129.7	481.79 ug/L	481.79 ppb	18:43:49
3	Pb 220.353†	4412.3	4231.4	505.33 ug/L	505.33 ppb	18:43:49
3	S 181.975 Axial†	3892.9	3646.1	4994.1 ug/L	4994.1 ppb	18:43:49
3	Sb 206.836†	1834.5	1696.5	510.35 ug/L	510.35 ppb	18:43:49
3	Se 196.026†	965.2	951.5	502.85 ug/L	502.85 ppb	18:43:49
3	Si 251.611†	169144.0	161288.7	4964.1 ug/L	4964.1 ppb	18:43:29
3	Sn 189.927†	3041.6	2895.3	513.31 ug/L	513.31 ppb	18:43:49
3	Ti 334.940†	284685.2	273505.3	500.63 ug/L	500.63 ppb	18:43:29
3	Tl 190.801†	1932.6	1908.3	502.63 ug/L	502.63 ppb	18:43:49
3	U 409.014†	10812.0	15184.9	512.62 ug/L	512.62 ppb	18:43:29
3	V 292.402†	56201.7	55293.7	508.12 ug/L	508.12 ppb	18:43:29
3	Zn 213.857†	56807.7	53382.7	488.07 ug/L	488.07 ppb	18:43:29
3	SiO2†	170081.6	162159.9	10626 ug/L	10626 ppb	18:44:05

Mean Data: 1201871707|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	753329.0	104.82	%	0.517				0.49%
Sc Radial	7515.5	101	%	0.9				0.90%
Y 371.029	581152.3	103.41	%	0.450				0.43%
Y RADIAL	6920.7	99.95	%	0.734				0.73%
Ag 328.068†	82873.0	498.13	ug/L	0.730	498.13	ppb	0.730	0.15%
Al 396.153Radial†	6281.8	5151.7	ug/L	21.99	5151.7	ppb	21.99	0.43%
As 188.979†	1377.4	499.91	ug/L	6.017	499.91	ppb	6.017	1.20%
B 249.677†	19595.7	491.02	ug/L	2.831	491.02	ppb	2.831	0.58%
Ba 233.527†	71800.8	507.72	ug/L	0.926	507.72	ppb	0.926	0.18%
Be 313.107†	1086170.4	498.30	ug/L	0.313	498.30	ppb	0.313	0.06%
Ca 317.933Radial†	3561.9	5045.8	ug/L	68.04	5045.8	ppb	68.04	1.35%
Cd 226.502†	38944.6	496.48	ug/L	3.385	496.48	ppb	3.385	0.68%
Co 228.616†	28093.8	487.40	ug/L	3.760	487.40	ppb	3.760	0.77%
Cr 267.716†	35578.7	499.25	ug/L	0.536	499.25	ppb	0.536	0.11%
Cu 324.752†	138325.3	501.54	ug/L	1.608	501.54	ppb	1.608	0.32%
Fe 238.204 Radial†	1183.0	4946.8	ug/L	76.82	4946.8	ppb	76.82	1.55%
K 766.490 Radial†	22867.7	4921.4	ug/L	12.93	4921.4	ppb	12.93	0.26%

Mg 279.077 IEC†	206.3	5149.0	ug/L	118.91	5149.0	ppb	118.91	2.31%
Mn 257.610†	454953.4	502.23	ug/L	0.456	502.23	ppb	0.456	0.09%
Mo 202.031†	7015.0	494.17	ug/L	2.828	494.17	ppb	2.828	0.57%
Na 589.592 Radial†	85057.4	5220.2	ug/L	6.22	5220.2	ppb	6.22	0.12%
Ni 231.604†	18628.1	497.62	ug/L	3.987	497.62	ppb	3.987	0.80%
P 214.914†	1128.9	481.32	ug/L	2.615	481.32	ppb	2.615	0.54%
Pb 220.353†	4229.9	505.14	ug/L	4.986	505.14	ppb	4.986	0.99%
S 181.975 Axial†	3643.8	4990.9	ug/L	51.04	4990.9	ppb	51.04	1.02%
Sb 206.836†	1703.5	512.36	ug/L	1.947	512.36	ppb	1.947	0.38%
Se 196.026†	959.7	507.25	ug/L	3.954	507.25	ppb	3.954	0.78%
Si 251.611†	161350.5	4966.0	ug/L	10.28	4966.0	ppb	10.28	0.21%
Sn 189.927†	2889.1	512.23	ug/L	2.483	512.23	ppb	2.483	0.48%
Sr 421.552†	172991.3	483.12	ug/L	1.060	483.12	ppb	1.060	0.22%
Ti 334.940†	273592.4	500.79	ug/L	0.522	500.79	ppb	0.522	0.10%
Tl 190.801†	1902.6	501.14	ug/L	3.728	501.14	ppb	3.728	0.74%
U 409.014†	15225.2	513.97	ug/L	2.334	513.97	ppb	2.334	0.45%
V 292.402†	55239.2	507.61	ug/L	0.656	507.61	ppb	0.656	0.13%
Zn 213.857†	53382.2	488.06	ug/L	0.396	488.06	ppb	0.396	0.08%
SiO2†	161101.1	10557	ug/L	60.8	10557	ppb	60.8	0.58%

Sequence No.: 38
Sample ID: 232432001|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 67
Date Collected: 6/30/2009 18:59:49
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232432001|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7632.8	7632.8	102	%			19:01:42
1	Y RADIAL	7041.6	7041.6	101.7	%			19:01:42
1	Al 396.153Radial†	-75.1	-1.0	-0.7391	ug/L	-0.7391	ppb	19:01:42
1	Ca 317.933Radial†	54.4	24.2	34.245	ug/L	34.245	ppb	19:02:02
1	Fe 238.204 Radial†	36.5	1.0	3.9857	ug/L	3.9857	ppb	19:02:02
1	K 766.490 Radial†	4290.2	1794.1	387.07	ug/L	387.07	ppb	19:01:42
1	Mg 279.077 IEC†	1.8	-1.3	-32.023	ug/L	-32.023	ppb	19:02:02
1	Na 589.592 Radial†	3317.0	3383.8	207.67	ug/L	207.67	ppb	19:01:42
1	Sr 421.552†	-8.4	47.7	0.1328	ug/L	0.1328	ppb	19:01:42
1	Sc 361.383	738467.2	738467.2	102.75	%			19:02:59
1	Y 371.029	576648.0	576648.0	102.61	%			19:02:59
1	Ag 328.068†	666.2	15.7	0.0952	ug/L	0.0952	ppb	19:02:59
1	As 188.979†	-36.5	-0.1	-0.0295	ug/L	-0.0295	ppb	19:03:19
1	B 249.677†	-508.4	445.2	11.218	ug/L	11.218	ppb	19:02:59
1	Ba 233.527†	59.2	57.1	0.4049	ug/L	0.4049	ppb	19:03:19
1	Be 313.107†	-4840.6	170.8	0.0789	ug/L	0.0789	ppb	19:02:59
1	Cd 226.502†	-269.3	19.1	0.2429	ug/L	0.2429	ppb	19:03:19
1	Co 228.616†	-97.5	4.6	0.0759	ug/L	0.0759	ppb	19:03:19
1	Cr 267.716†	-32.8	45.5	0.6375	ug/L	0.6375	ppb	19:02:59
1	Cu 324.752†	5781.6	-11.6	-0.0419	ug/L	-0.0419	ppb	19:02:59
1	Mn 257.610†	1109.8	400.4	0.4427	ug/L	0.4427	ppb	19:02:59
1	Mo 202.031†	2.6	-14.6	-1.0303	ug/L	-1.0303	ppb	19:03:19
1	Ni 231.604†	141.5	17.9	0.4792	ug/L	0.4792	ppb	19:03:19
1	P 214.914†	315.9	-7.4	-3.7653	ug/L	-3.7653	ppb	19:03:19
1	Pb 220.353†	-21.0	-7.2	-0.8565	ug/L	-0.8565	ppb	19:03:19
1	S 181.975 Axial†	116.4	37.8	51.837	ug/L	51.837	ppb	19:03:19
1	Sb 206.836†	64.3	5.3	1.5420	ug/L	1.5420	ppb	19:03:19
1	Se 196.026†	-33.9	-4.3	-2.1620	ug/L	-2.1620	ppb	19:03:19
1	Si 251.611†	39285.5	37821.5	1168.0	ug/L	1168.0	ppb	19:02:59
1	Sn 189.927†	13.9	1.0	0.1866	ug/L	0.1866	ppb	19:03:19
1	Ti 334.940†	-1201.4	179.0	0.3282	ug/L	0.3282	ppb	19:02:59
1	Tl 190.801†	-53.5	8.7	2.2677	ug/L	2.2677	ppb	19:03:19
1	U 409.014†	-4897.7	82.2	2.7811	ug/L	2.7811	ppb	19:02:59
1	V 292.402†	-1516.9	88.9	0.7983	ug/L	0.7983	ppb	19:02:59
1	Zn 213.857†	1102.4	147.8	1.3617	ug/L	1.3617	ppb	19:03:19
1	SiO2†	39490.1	37995.6	2498.5	ug/L	2498.5	ppb	19:04:15
2	Sc Radial	7688.6	7688.6	103	%			19:02:07
2	Y RADIAL	7082.6	7082.6	102.3	%			19:02:07
2	Al 396.153Radial†	-49.8	24.2	19.943	ug/L	19.943	ppb	19:02:07
2	Ca 317.933Radial†	57.4	26.7	37.853	ug/L	37.853	ppb	19:02:27
2	Fe 238.204 Radial†	39.0	3.1	12.835	ug/L	12.835	ppb	19:02:27
2	K 766.490 Radial†	4179.4	1655.9	357.24	ug/L	357.24	ppb	19:02:07
2	Mg 279.077 IEC†	2.1	-1.0	-24.311	ug/L	-24.311	ppb	19:02:27
2	Na 589.592 Radial†	3403.3	3444.1	211.37	ug/L	211.37	ppb	19:02:07
2	Sr 421.552†	-2.2	53.7	0.1495	ug/L	0.1495	ppb	19:02:07
2	Sc 361.383	746913.9	746913.9	103.93	%			19:03:24
2	Y 371.029	583007.8	583007.8	103.74	%			19:03:24
2	Ag 328.068†	655.7	-1.7	-0.0168	ug/L	-0.0168	ppb	19:03:24
2	As 188.979†	-30.5	6.0	2.1803	ug/L	2.1803	ppb	19:03:45
2	B 249.677†	-367.3	586.5	14.779	ug/L	14.779	ppb	19:03:24
2	Ba 233.527†	50.2	47.8	0.3385	ug/L	0.3385	ppb	19:03:45
2	Be 313.107†	-4828.1	236.1	0.1085	ug/L	0.1085	ppb	19:03:24
2	Cd 226.502†	-287.7	4.3	0.0531	ug/L	0.0531	ppb	19:03:45
2	Co 228.616†	-83.8	18.8	0.3244	ug/L	0.3244	ppb	19:03:45
2	Cr 267.716†	16.1	92.9	1.2987	ug/L	1.2987	ppb	19:03:24
2	Cu 324.752†	5825.6	-33.0	-0.1187	ug/L	-0.1187	ppb	19:03:24
2	Mn 257.610†	1116.6	394.8	0.4375	ug/L	0.4375	ppb	19:03:24
2	Mo 202.031†	11.1	-6.4	-0.4506	ug/L	-0.4506	ppb	19:03:45
2	Ni 231.604†	132.9	8.1	0.2162	ug/L	0.2162	ppb	19:03:45

2	P 214.914†	334.4	6.9	3.5588	ug/L	3.5588 ppb	19:03:45
2	Pb 220.353†	-16.3	-2.5	-0.2910	ug/L	-0.2910 ppb	19:03:45
2	S 181.975 Axial†	111.1	31.5	43.121	ug/L	43.121 ppb	19:03:45
2	Sb 206.836†	48.5	-10.6	-3.1849	ug/L	-3.1849 ppb	19:03:45
2	Se 196.026†	-25.9	3.8	1.9959	ug/L	1.9959 ppb	19:03:45
2	Si 251.611†	39825.2	37908.5	1170.7	ug/L	1170.7 ppb	19:03:24
2	Sn 189.927†	11.8	-1.2	-0.2047	ug/L	-0.2047 ppb	19:03:45
2	Ti 334.940†	-1287.4	109.5	0.1960	ug/L	0.1960 ppb	19:03:24
2	Tl 190.801†	-69.7	-6.3	-1.6388	ug/L	-1.6388 ppb	19:03:45
2	U 409.014†	-4605.5	417.3	14.126	ug/L	14.126 ppb	19:03:24
2	V 292.402†	-1572.4	52.2	0.4929	ug/L	0.4929 ppb	19:03:24
2	Zn 213.857†	1107.8	140.8	1.2979	ug/L	1.2979 ppb	19:03:45
2	SiO2†	39334.5	37411.3	2460.1	ug/L	2460.1 ppb	19:04:20
3	Sc Radial	7628.4	7628.4	102	%		19:02:32
3	Y RADIAL	7078.4	7078.4	102.2	%		19:02:32
3	Al 396.153Radial†	-58.4	15.4	12.698	ug/L	12.698 ppb	19:02:32
3	Ca 317.933Radial†	53.6	23.4	33.209	ug/L	33.209 ppb	19:02:52
3	Fe 238.204 Radial†	36.1	0.5	2.2230	ug/L	2.2230 ppb	19:02:52
3	K 766.490 Radial†	4325.2	1830.8	394.98	ug/L	394.98 ppb	19:02:32
3	Mg 279.077 IEC†	1.4	-1.6	-41.023	ug/L	-41.023 ppb	19:02:52
3	Na 589.592 Radial†	3353.0	3421.0	209.96	ug/L	209.96 ppb	19:02:32
3	Sr 421.552†	13.0	68.6	0.1912	ug/L	0.1912 ppb	19:02:32
3	Sc 361.383	754132.8	754132.8	104.93	%		19:03:50
3	Y 371.029	588718.8	588718.8	104.75	%		19:03:50
3	Ag 328.068†	699.8	34.3	0.1942	ug/L	0.1942 ppb	19:03:50
3	As 188.979†	-28.8	8.0	2.8675	ug/L	2.8675 ppb	19:04:10
3	B 249.677†	-371.9	585.5	14.756	ug/L	14.756 ppb	19:03:50
3	Ba 233.527†	47.5	44.8	0.3168	ug/L	0.3168 ppb	19:04:10
3	Be 313.107†	-4900.0	212.1	0.0978	ug/L	0.0978 ppb	19:03:50
3	Cd 226.502†	-264.0	29.5	0.3767	ug/L	0.3767 ppb	19:04:10
3	Co 228.616†	-97.8	6.3	0.1077	ug/L	0.1077 ppb	19:04:10
3	Cr 267.716†	-70.0	10.7	0.1464	ug/L	0.1464 ppb	19:03:50
3	Cu 324.752†	5827.6	-84.7	-0.3067	ug/L	-0.3067 ppb	19:03:50
3	Mn 257.610†	1152.4	418.7	0.4628	ug/L	0.4628 ppb	19:03:50
3	Mo 202.031†	13.9	-3.9	-0.2736	ug/L	-0.2736 ppb	19:04:10
3	Ni 231.604†	152.5	25.5	0.6813	ug/L	0.6813 ppb	19:04:10
3	P 214.914†	333.8	3.4	1.8077	ug/L	1.8077 ppb	19:04:10
3	Pb 220.353†	-8.8	4.9	0.5820	ug/L	0.5820 ppb	19:04:10
3	S 181.975 Axial†	107.6	27.2	37.219	ug/L	37.219 ppb	19:04:10
3	Sb 206.836†	63.8	3.6	1.0798	ug/L	1.0798 ppb	19:04:10
3	Se 196.026†	-28.6	1.5	0.7628	ug/L	0.7628 ppb	19:04:10
3	Si 251.611†	40191.5	37890.8	1170.1	ug/L	1170.1 ppb	19:03:50
3	Sn 189.927†	25.5	11.8	2.0997	ug/L	2.0997 ppb	19:04:10
3	Ti 334.940†	-1237.1	169.3	0.3056	ug/L	0.3056 ppb	19:03:50
3	Tl 190.801†	-70.1	-6.0	-1.5766	ug/L	-1.5766 ppb	19:04:10
3	U 409.014†	-4654.5	413.0	13.983	ug/L	13.983 ppb	19:03:50
3	V 292.402†	-1604.0	36.6	0.3549	ug/L	0.3549 ppb	19:03:50
3	Zn 213.857†	1110.8	133.5	1.2294	ug/L	1.2294 ppb	19:04:10
3	SiO2†	39188.9	36910.2	2427.0	ug/L	2427.0 ppb	19:04:26

Mean Data: 232432001|881354|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	746504.6	103.87	%	1.091				1.05%
Sc Radial	7649.9	102	%	0.4				0.44%
Y 371.029	582791.5	103.70	%	1.074				1.04%
Y RADIAL	7067.5	102.1	%	0.33				0.32%
Ag 328.068†	16.1	0.0909	ug/L	0.10559	0.0909	ppb	0.10559	116.17%
Al 396.153Radial†	12.9	10.634	ug/L	10.4944	10.634	ppb	10.4944	98.69%
As 188.979†	4.6	1.6728	ug/L	1.51371	1.6728	ppb	1.51371	90.49%
B 249.677†	539.1	13.584	ug/L	2.0490	13.584	ppb	2.0490	15.08%
Ba 233.527†	49.9	0.3534	ug/L	0.04588	0.3534	ppb	0.04588	12.98%
Be 313.107†	206.3	0.0951	ug/L	0.01498	0.0951	ppb	0.01498	15.75%
Ca 317.933Radial†	24.8	35.102	ug/L	2.4377	35.102	ppb	2.4377	6.94%
Cd 226.502†	17.6	0.2242	ug/L	0.16259	0.2242	ppb	0.16259	72.52%
Co 228.616†	9.9	0.1694	ug/L	0.13524	0.1694	ppb	0.13524	79.85%
Cr 267.716†	49.7	0.6942	ug/L	0.57824	0.6942	ppb	0.57824	83.30%
Cu 324.752†	-43.1	-0.1558	ug/L	0.13624	-0.1558	ppb	0.13624	87.45%
Fe 238.204 Radial†	1.5	6.3477	ug/L	5.68649	6.3477	ppb	5.68649	89.58%
K 766.490 Radial†	1760.3	379.76	ug/L	19.905	379.76	ppb	19.905	5.24%

Mg 279.077 1EC†	-1.3	-32.453	ug/L	8.3642	-32.453	ppb	8.3642	25.77%
Mn 257.610†	404.6	0.4476	ug/L	0.01334	0.4476	ppb	0.01334	2.98%
Mo 202.031†	-8.3	-0.5848	ug/L	0.39582	-0.5848	ppb	0.39582	67.69%
Na 589.592 Radial†	3416.3	209.67	ug/L	1.868	209.67	ppb	1.868	0.89%
Ni 231.604†	17.2	0.4589	ug/L	0.23318	0.4589	ppb	0.23318	50.81%
P 214.914†	1.0	0.5337	ug/L	3.82465	0.5337	ppb	3.82465	716.56%
Pb 220.353†	-1.6	-0.1885	ug/L	0.72474	-0.1885	ppb	0.72474	384.44%
S 181.975 Axial†	32.2	44.059	ug/L	7.3541	44.059	ppb	7.3541	16.69%
Sb 206.836†	-0.6	-0.1877	ug/L	2.60592	-0.1877	ppb	2.60592	>999.9%
Se 196.026†	0.3	0.1989	ug/L	2.13554	0.1989	ppb	2.13554	>999.9%
Si 251.611†	37873.6	1169.6	ug/L	1.41	1169.6	ppb	1.41	0.12%
Sn 189.927†	3.9	0.6939	ug/L	1.23314	0.6939	ppb	1.23314	177.72%
Sr 421.552†	56.6	0.1579	ug/L	0.03009	0.1579	ppb	0.03009	19.06%
Ti 334.940†	152.6	0.2766	ug/L	0.07072	0.2766	ppb	0.07072	25.57%
Tl 190.801†	-1.2	-0.3159	ug/L	2.23769	-0.3159	ppb	2.23769	708.30%
U 409.014†	304.1	10.297	ug/L	6.5091	10.297	ppb	6.5091	63.22%
V 292.402†	59.2	0.5487	ug/L	0.22687	0.5487	ppb	0.22687	41.35%
Zn 213.857†	140.7	1.2963	ug/L	0.06616	1.2963	ppb	0.06616	5.10%
SiO2†	37439.0	2461.8	ug/L	35.77	2461.8	ppb	35.77	1.45%

Sequence No.: 40
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 19:13:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7624.8	7624.8	102	%			19:15:19
1	Y RAD1AL	7017.8	7017.8	101.4	%			19:15:19
1	Al 396.153Radial†	6388.3	6335.1	5195.6	ug/L	5195.6	ppb	19:15:19
1	Ca 317.933Radial†	3676.3	3574.7	5064.0	ug/L	5064.0	ppb	19:15:19
1	Fe 238.204 Radial†	1223.7	1164.8	4870.8	ug/L	4870.8	ppb	19:15:39
1	K 766.490 Radial†	25168.9	22265.7	4790.9	ug/L	4790.9	ppb	19:15:14
1	Mg 279.077 IEC†	212.4	205.2	5121.7	ug/L	5121.7	ppb	19:15:39
1	Na 589.592 Radial†	169779.8	166569.6	10223	ug/L	10223	ppb	19:15:14
1	Sr 421.552†	175689.9	172283.6	481.14	ug/L	481.14	ppb	19:15:14
1	Sc 361.383	768663.6	768663.6	106.95	%			19:16:48
1	Y 371.029	592644.8	592644.8	105.45	%			19:16:48
1	Ag 328.068†	88040.7	81684.2	490.97	ug/L	490.97	ppb	19:16:48
1	As 188.979†	1437.1	1379.1	500.45	ug/L	500.45	ppb	19:17:08
1	B 249.677†	19667.4	19328.6	484.28	ug/L	484.28	ppb	19:16:48
1	Ba 233.527†	74178.4	69355.2	490.43	ug/L	490.43	ppb	19:16:48
1	Be 313.107†	1145311.2	1075731.2	493.50	ug/L	493.50	ppb	19:16:48
1	Cd 226.502†	40488.8	38137.6	486.19	ug/L	486.19	ppb	19:17:08
1	Co 228.616†	30065.4	28210.2	489.45	ug/L	489.45	ppb	19:17:08
1	Cr 267.716†	37378.5	35025.8	491.49	ug/L	491.49	ppb	19:16:48
1	Cu 324.752†	149927.6	134541.7	487.82	ug/L	487.82	ppb	19:16:48
1	Mn 257.610†	476428.3	444773.9	491.00	ug/L	491.00	ppb	19:16:48
1	Mo 202.031†	7534.1	7027.2	495.02	ug/L	495.02	ppb	19:17:08
1	Ni 231.604†	19734.5	18331.7	489.69	ug/L	489.69	ppb	19:17:08
1	P 214.914†	5522.7	4848.8	2383.1	ug/L	2383.1	ppb	19:17:08
1	Pb 220.353†	4470.7	4193.3	500.81	ug/L	500.81	ppb	19:17:08
1	S 181.975 Axial†	841.5	711.4	973.60	ug/L	973.60	ppb	19:17:08
1	Sb 206.836†	1830.8	1654.5	497.69	ug/L	497.69	ppb	19:17:08
1	Se 196.026†	1012.3	975.3	514.95	ug/L	514.95	ppb	19:17:08
1	Si 251.611†	86043.3	80037.5	2455.1	ug/L	2455.1	ppb	19:16:48
1	Sn 189.927†	2979.0	2772.8	491.64	ug/L	491.64	ppb	19:17:08
1	Ti 334.940†	283813.9	266710.1	488.20	ug/L	488.20	ppb	19:16:48
1	Tl 190.801†	1926.6	1862.1	490.42	ug/L	490.42	ppb	19:17:08
1	U 409.014†	10499.7	14665.8	495.06	ug/L	495.06	ppb	19:16:48
1	V 292.402†	55901.1	53832.0	494.83	ug/L	494.83	ppb	19:16:48
1	Zn 213.857†	57858.7	53171.9	486.20	ug/L	486.20	ppb	19:16:48
1	SiO2†	85478.5	79484.3	5189.8	ug/L	5189.8	ppb	19:18:08
2	Sc Radial	7544.5	7544.5	101	%			19:15:49
2	Y RADIAL	6937.8	6937.8	100.2	%			19:15:49
2	Al 396.153Radial†	6375.5	6389.0	5239.3	ug/L	5239.3	ppb	19:15:49
2	Ca 317.933Radial†	3709.0	3645.6	5164.4	ug/L	5164.4	ppb	19:15:49
2	Fe 238.204 Radial†	1234.6	1188.3	4969.4	ug/L	4969.4	ppb	19:16:09
2	K 766.490 Radial†	25456.1	22812.9	4908.5	ug/L	4908.5	ppb	19:15:44
2	Mg 279.077 IEC†	208.8	203.9	5088.6	ug/L	5088.6	ppb	19:16:09
2	Na 589.592 Radial†	171290.6	169838.5	10423	ug/L	10423	ppb	19:15:44
2	Sr 421.552†	176920.7	175336.7	489.67	ug/L	489.67	ppb	19:15:44
2	Sc 361.383	739420.8	739420.8	102.88	%			19:17:15
2	Y 371.029	570351.5	570351.5	101.49	%			19:17:15
2	Ag 328.068†	89145.4	86013.3	516.95	ug/L	516.95	ppb	19:17:15
2	As 188.979†	1425.2	1420.7	515.58	ug/L	515.58	ppb	19:17:35
2	B 249.677†	20099.8	20476.2	513.11	ug/L	513.11	ppb	19:17:15
2	Ba 233.527†	75262.9	73152.2	517.28	ug/L	517.28	ppb	19:17:15
2	Be 313.107†	1163202.3	1135470.9	520.90	ug/L	520.90	ppb	19:17:15
2	Cd 226.502†	40416.2	39564.1	504.38	ug/L	504.38	ppb	19:17:35
2	Co 228.616†	29966.2	29225.4	507.04	ug/L	507.04	ppb	19:17:35
2	Cr 267.716†	37953.8	36967.1	518.73	ug/L	518.73	ppb	19:17:15
2	Cu 324.752†	151617.6	141728.2	513.87	ug/L	513.87	ppb	19:17:15
2	Mn 257.610†	483691.3	469450.3	518.22	ug/L	518.22	ppb	19:17:15
2	Mo 202.031†	7504.4	7276.8	512.60	ug/L	512.60	ppb	19:17:35
2	Ni 231.604†	19673.8	19002.4	507.61	ug/L	507.61	ppb	19:17:35

2	P 214.914†	5508.5	5039.3	2475.3 ug/L	2475.3 ppb	19:17:35
2	Pb 220.353†	4456.7	4345.0	518.90 ug/L	518.90 ppb	19:17:35
2	S 181.975 Axial†	846.6	747.5	1023.0 ug/L	1023.0 ppb	19:17:35
2	Sb 206.836†	1823.0	1714.6	515.60 ug/L	515.60 ppb	19:17:35
2	Se 196.026†	1008.5	1009.0	532.54 ug/L	532.54 ppb	19:17:35
2	Si 251.611†	87369.2	84507.9	2592.5 ug/L	2592.5 ppb	19:17:15
2	Sn 189.927†	2991.0	2894.6	513.22 ug/L	513.22 ppb	19:17:35
2	Ti 334.940†	287913.1	281189.0	514.70 ug/L	514.70 ppb	19:17:15
2	Tl 190.801†	1928.6	1935.3	509.77 ug/L	509.77 ppb	19:17:35
2	U 409.014†	10549.8	15102.7	509.79 ug/L	509.79 ppb	19:17:15
2	V 292.402†	56794.2	56767.0	521.68 ug/L	521.68 ppb	19:17:15
2	Zn 213.857†	58603.9	56035.7	512.47 ug/L	512.47 ppb	19:17:15
2	SiO2†	86477.1	83615.7	5460.1 ug/L	5460.1 ppb	19:18:13
3	Sc Radial	7531.2	7531.2	101 %		19:16:19
3	Y RADIAL	6899.9	6899.9	99.65 %		19:16:19
3	Al 396.153Radial†	6366.9	6391.6	5241.3 ug/L	5241.3 ppb	19:16:19
3	Ca 317.933Radial†	3664.6	3608.0	5111.1 ug/L	5111.1 ppb	19:16:19
3	Fe 238.204 Radial†	1221.5	1177.5	4924.4 ug/L	4924.4 ppb	19:16:39
3	K 766.490 Radial†	25737.9	23137.1	4978.4 ug/L	4978.4 ppb	19:16:14
3	Mg 279.077 IEC†	206.8	202.2	5047.9 ug/L	5047.9 ppb	19:16:39
3	Na 589.592 Radial†	173049.7	171883.5	10549 ug/L	10549 ppb	19:16:14
3	Sr 421.552†	178978.7	177688.1	496.24 ug/L	496.24 ppb	19:16:14
3	Sc 361.383	740672.0	740672.0	103.06 %		19:17:43
3	Y 371.029	571519.5	571519.5	101.69 %		19:17:43
3	Ag 328.068†	87920.0	84678.0	508.94 ug/L	508.94 ppb	19:17:43
3	As 188.979†	1448.4	1440.9	522.80 ug/L	522.80 ppb	19:18:03
3	B 249.677†	19705.1	20060.2	502.61 ug/L	502.61 ppb	19:17:43
3	Ba 233.527†	74275.9	72070.9	509.63 ug/L	509.63 ppb	19:17:43
3	Be 313.107†	1148041.0	1118849.7	513.27 ug/L	513.27 ppb	19:17:43
3	Cd 226.502†	40802.6	39872.7	508.33 ug/L	508.33 ppb	19:18:03
3	Co 228.616†	30206.7	29409.7	510.27 ug/L	510.27 ppb	19:18:03
3	Cr 267.716†	37413.1	36380.1	510.50 ug/L	510.50 ppb	19:17:43
3	Cu 324.752†	149436.4	139362.8	505.30 ug/L	505.30 ppb	19:17:43
3	Mn 257.610†	476929.6	462095.1	510.10 ug/L	510.10 ppb	19:17:43
3	Mo 202.031†	7565.6	7324.0	515.92 ug/L	515.92 ppb	19:18:03
3	Ni 231.604†	19891.1	19180.9	512.38 ug/L	512.38 ppb	19:18:03
3	P 214.914†	5557.6	5077.8	2496.8 ug/L	2496.8 ppb	19:18:03
3	Pb 220.353†	4503.6	4383.2	523.47 ug/L	523.47 ppb	19:18:03
3	S 181.975 Axial†	846.1	745.6	1020.4 ug/L	1020.4 ppb	19:18:03
3	Sb 206.836†	1857.8	1745.5	525.08 ug/L	525.08 ppb	19:18:03
3	Se 196.026†	1024.3	1022.6	539.33 ug/L	539.33 ppb	19:18:03
3	Si 251.611†	86072.0	83105.7	2549.1 ug/L	2549.1 ppb	19:17:43
3	Sn 189.927†	3015.7	2913.7	516.58 ug/L	516.58 ppb	19:18:03
3	Ti 334.940†	283942.2	276863.3	506.78 ug/L	506.78 ppb	19:17:43
3	Tl 190.801†	1956.9	1959.5	516.02 ug/L	516.02 ppb	19:18:03
3	U 409.014†	10363.0	14904.2	503.08 ug/L	503.08 ppb	19:17:43
3	V 292.402†	55972.0	55876.0	513.63 ug/L	513.63 ppb	19:17:43
3	Zn 213.857†	57980.4	55334.5	505.98 ug/L	505.98 ppb	19:17:43
3	SiO2†	87652.8	84614.4	5525.5 ug/L	5525.5 ppb	19:18:18

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	749585.4	104.30	%	2.301				2.21%
Sc Radial	7566.9	101	%	0.7				0.67%
Y 371.029	578171.9	102.88	%	2.233				2.17%
Y RADIAL	6951.8	100.4	%	0.87				0.87%
Ag 328.068†	84125.2	505.62	ug/L	13.306	505.62	ppb	13.306	2.63%
QC value within limits for Ag 328.068 Recovery = 101.12%								
Al 396.153Radial†	6371.9	5225.4	ug/L	25.81	5225.4	ppb	25.81	0.49%
QC value within limits for Al 396.153Radial Recovery = 104.51%								
As 188.979†	1413.6	512.94	ug/L	11.405	512.94	ppb	11.405	2.22%
QC value within limits for As 188.979 Recovery = 102.59%								
B 249.677†	19955.0	500.00	ug/L	14.588	500.00	ppb	14.588	2.92%
QC value within limits for B 249.677 Recovery = 100.00%								
Ba 233.527†	71526.1	505.78	ug/L	13.833	505.78	ppb	13.833	2.74%
QC value within limits for Ba 233.527 Recovery = 101.16%								
Be 313.107†	1110017.3	509.22	ug/L	14.144	509.22	ppb	14.144	2.78%
QC value within limits for Be 313.107 Recovery = 101.84%								
Ca 317.933Radial†	3609.4	5113.2	ug/L	50.20	5113.2	ppb	50.20	0.98%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.26%
Cd 226.502†            39191.5      499.63 ug/L        11.810      499.63 ppb        11.810   2.36%
   QC value within limits for Cd 226.502  Recovery = 99.93%
Co 228.616†            28948.4      502.25 ug/L        11.206      502.25 ppb        11.206   2.23%
   QC value within limits for Co 228.616  Recovery = 100.45%
Cr 267.716†            36124.3      506.91 ug/L        13.971      506.91 ppb        13.971   2.76%
   QC value within limits for Cr 267.716  Recovery = 101.38%
Cu 324.752†           138544.2      502.33 ug/L        13.275      502.33 ppb        13.275   2.64%
   QC value within limits for Cu 324.752  Recovery = 100.47%
Fe 238.204 Radial†      1176.9      4921.6 ug/L         49.35      4921.6 ppb         49.35   1.00%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.43%
K 766.490 Radial†      22738.6      4892.6 ug/L         94.74      4892.6 ppb         94.74   1.94%
   QC value within limits for K 766.490 Radial  Recovery = 97.85%
Mg 279.077 IEC†          203.8      5086.1 ug/L         36.96      5086.1 ppb         36.96   0.73%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.72%
Mn 257.610†           458773.1      506.44 ug/L        13.978      506.44 ppb        13.978   2.76%
   QC value within limits for Mn 257.610  Recovery = 101.29%
Mo 202.031†            7209.3       507.85 ug/L        11.231      507.85 ppb        11.231   2.21%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†    169430.5       10398 ug/L         164.5       10398 ppb         164.5   1.58%
   QC value within limits for Na 589.592 Radial  Recovery = 103.98%
Ni 231.604†            18838.3      503.23 ug/L        11.962      503.23 ppb        11.962   2.38%
   QC value within limits for Ni 231.604  Recovery = 100.65%
P 214.914†              4988.6      2451.7 ug/L         60.44      2451.7 ppb         60.44   2.47%
   QC value within limits for P 214.914  Recovery = 98.07%
Pb 220.353†             4307.2      514.39 ug/L        11.984      514.39 ppb        11.984   2.33%
   QC value within limits for Pb 220.353  Recovery = 102.88%
S 181.975 Axial†         734.8      1005.7 ug/L         27.80      1005.7 ppb         27.80   2.76%
   QC value within limits for S 181.975 Axial  Recovery = 100.57%
Sb 206.836†             1704.9      512.79 ug/L        13.907      512.79 ppb        13.907   2.71%
   QC value within limits for Sb 206.836  Recovery = 102.56%
Se 196.026†             1002.3      528.94 ug/L        12.583      528.94 ppb        12.583   2.38%
   QC value within limits for Se 196.026  Recovery = 105.79%
Si 251.611†            82550.3      2532.2 ug/L         70.25      2532.2 ppb         70.25   2.77%
   QC value within limits for Si 251.611  Recovery = 101.29%
Sn 189.927†             2860.4      507.15 ug/L        13.537      507.15 ppb        13.537   2.67%
   QC value within limits for Sn 189.927  Recovery = 101.43%
Sr 421.552†           175102.8      489.02 ug/L         7.568      489.02 ppb         7.568   1.55%
   QC value within limits for Sr 421.552  Recovery = 97.80%
Ti 334.940†           274920.8      503.23 ug/L        13.602      503.23 ppb        13.602   2.70%
   QC value within limits for Ti 334.940  Recovery = 100.65%
Tl 190.801†             1919.0      505.40 ug/L        13.346      505.40 ppb        13.346   2.64%
   QC value within limits for Tl 190.801  Recovery = 101.08%
U 409.014†             14890.9      502.64 ug/L         7.375      502.64 ppb         7.375   1.47%
   QC value within limits for U 409.014  Recovery = 100.53%
V 292.402†             55491.7      510.05 ug/L        13.782      510.05 ppb        13.782   2.70%
   QC value within limits for V 292.402  Recovery = 102.01%
Zn 213.857†            54847.4      501.55 ug/L        13.684      501.55 ppb        13.684   2.73%
   QC value within limits for Zn 213.857  Recovery = 100.31%
SiO2†                  82571.4      5391.8 ug/L        177.96      5391.8 ppb        177.96   3.30%
   QC value within limits for SiO2  Recovery = 100.83%
All analyte(s) passed QC.
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Sequence No.: 41
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 19:20:29
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7503.2	7503.2	100	%			19:22:21
1	Y RADIAL	6942.1	6942.1	100.3	%			19:22:21
1	Al 396.153Radial†	-77.2	-4.3	-3.5081	ug/L	-3.5081	ppb	19:22:21
1	Ca 317.933Radial†	29.2	-0.1	-0.0742	ug/L	-0.0742	ppb	19:22:41
1	Fe 238.204 Radial†	33.7	-1.2	-5.1310	ug/L	-5.1310	ppb	19:22:41
1	K 766.490 Radial†	2474.2	57.6	12.430	ug/L	12.430	ppb	19:22:21
1	Mg 279.077 IEC†	3.7	0.6	15.906	ug/L	15.906	ppb	19:22:41
1	Na 589.592 Radial†	-232.6	-96.2	-5.9039	ug/L	-5.9039	ppb	19:22:21
1	Sr 421.552†	-55.5	0.6	0.0017	ug/L	0.0017	ppb	19:22:21
1	Sc 361.383	733564.8	733564.8	102.07	%			19:23:37
1	Y 371.029	574142.8	574142.8	102.16	%			19:23:37
1	Ag 328.068†	711.6	64.6	0.3807	ug/L	0.3807	ppb	19:23:37
1	As 188.979†	-31.3	4.7	1.7032	ug/L	1.7032	ppb	19:23:58
1	B 249.677†	-734.7	220.1	5.5477	ug/L	5.5477	ppb	19:23:37
1	Ba 233.527†	6.1	5.5	0.0396	ug/L	0.0396	ppb	19:23:58
1	Be 313.107†	-4820.2	159.3	0.0731	ug/L	0.0731	ppb	19:23:37
1	Cd 226.502†	-267.6	18.9	0.2422	ug/L	0.2422	ppb	19:23:58
1	Co 228.616†	-110.0	-8.3	-0.1445	ug/L	-0.1445	ppb	19:23:58
1	Cr 267.716†	-121.0	-41.2	-0.5781	ug/L	-0.5781	ppb	19:23:37
1	Cu 324.752†	5705.7	-48.4	-0.1757	ug/L	-0.1757	ppb	19:23:37
1	Mn 257.610†	747.5	52.7	0.0572	ug/L	0.0572	ppb	19:23:37
1	Mo 202.031†	14.6	-2.9	-0.2021	ug/L	-0.2021	ppb	19:23:58
1	Ni 231.604†	125.3	3.0	0.0803	ug/L	0.0803	ppb	19:23:58
1	P 214.914†	326.2	4.8	2.5214	ug/L	2.5214	ppb	19:23:58
1	Pb 220.353†	-26.5	-12.7	-1.5125	ug/L	-1.5125	ppb	19:23:58
1	S 181.975 Axial†	84.8	7.7	10.517	ug/L	10.517	ppb	19:23:58
1	Sb 206.836†	50.9	-7.4	-2.1646	ug/L	-2.1646	ppb	19:23:58
1	Se 196.026†	-19.3	9.9	5.0124	ug/L	5.0124	ppb	19:23:58
1	Si 251.611†	457.4	36.4	1.0998	ug/L	1.0998	ppb	19:23:58
1	Sn 189.927†	22.7	9.8	1.7290	ug/L	1.7290	ppb	19:23:58
1	Ti 334.940†	-1316.0	59.0	0.1058	ug/L	0.1058	ppb	19:23:37
1	Tl 190.801†	-44.8	16.8	4.4094	ug/L	4.4094	ppb	19:23:58
1	U 409.014†	-4789.3	156.6	5.3032	ug/L	5.3032	ppb	19:23:37
1	V 292.402†	-1564.9	32.0	0.2994	ug/L	0.2994	ppb	19:23:37
1	Zn 213.857†	956.9	12.4	0.1142	ug/L	0.1142	ppb	19:23:58
1	SiO2†	452.6	6.6	0.3761	ug/L	0.3761	ppb	19:24:54
2	Sc Radial	7446.1	7446.1	99.6	%			19:22:46
2	Y RADIAL	6863.2	6863.2	99.12	%			19:22:46
2	Al 396.153Radial†	-61.9	10.5	8.6366	ug/L	8.6366	ppb	19:22:46
2	Ca 317.933Radial†	27.9	-1.1	-1.4958	ug/L	-1.4958	ppb	19:23:06
2	Fe 238.204 Radial†	39.4	4.8	19.992	ug/L	19.992	ppb	19:23:06
2	K 766.490 Radial†	2526.6	129.0	27.851	ug/L	27.851	ppb	19:22:46
2	Mg 279.077 IEC†	1.8	-1.3	-31.935	ug/L	-31.935	ppb	19:23:06
2	Na 589.592 Radial†	-298.2	-163.8	-10.055	ug/L	-10.055	ppb	19:22:46
2	Sr 421.552†	-32.2	23.5	0.0657	ug/L	0.0657	ppb	19:22:46
2	Sc 361.383	724908.4	724908.4	100.87	%			19:24:03
2	Y 371.029	568012.1	568012.1	101.07	%			19:24:03
2	Ag 328.068†	650.9	12.7	0.0769	ug/L	0.0769	ppb	19:24:03
2	As 188.979†	-24.9	10.8	3.8911	ug/L	3.8911	ppb	19:24:23
2	B 249.677†	-714.3	231.8	5.8408	ug/L	5.8408	ppb	19:24:03
2	Ba 233.527†	13.0	12.3	0.0878	ug/L	0.0878	ppb	19:24:23
2	Be 313.107†	-4795.9	127.0	0.0581	ug/L	0.0581	ppb	19:24:03
2	Cd 226.502†	-265.1	18.2	0.2306	ug/L	0.2306	ppb	19:24:23
2	Co 228.616†	-114.9	-14.5	-0.2526	ug/L	-0.2526	ppb	19:24:23
2	Cr 267.716†	-46.1	31.7	0.4424	ug/L	0.4424	ppb	19:24:03
2	Cu 324.752†	5637.2	-49.6	-0.1787	ug/L	-0.1787	ppb	19:24:03
2	Mn 257.610†	726.0	40.2	0.0474	ug/L	0.0474	ppb	19:24:03
2	Mo 202.031†	11.8	-5.4	-0.3778	ug/L	-0.3778	ppb	19:24:23
2	Ni 231.604†	148.9	27.8	0.7438	ug/L	0.7438	ppb	19:24:23

2	P 214.914†	308.1	-9.3	-4.7005	ug/L	-4.7005	ppb	19:24:23
2	Pb 220.353†	-9.8	3.5	0.4190	ug/L	0.4190	ppb	19:24:23
2	S 181.975 Axial†	77.8	1.7	2.2949	ug/L	2.2949	ppb	19:24:23
2	Sb 206.836†	67.8	10.0	2.9668	ug/L	2.9668	ppb	19:24:23
2	Se 196.026†	-29.4	-0.4	-0.1143	ug/L	-0.1143	ppb	19:24:23
2	Si 251.611†	460.8	45.1	1.3740	ug/L	1.3740	ppb	19:24:23
2	Sn 189.927†	19.7	7.0	1.2412	ug/L	1.2412	ppb	19:24:23
2	Ti 334.940†	-1372.9	-12.8	-0.0272	ug/L	-0.0272	ppb	19:24:03
2	Tl 190.801†	-52.2	9.0	2.3613	ug/L	2.3613	ppb	19:24:23
2	U 409.014†	-4660.0	228.7	7.7397	ug/L	7.7397	ppb	19:24:03
2	V 292.402†	-1538.2	40.2	0.3722	ug/L	0.3722	ppb	19:24:03
2	Zn 213.857†	948.2	14.9	0.1323	ug/L	0.1323	ppb	19:24:23
2	SiO2†	435.2	-5.4	-0.4009	ug/L	-0.4009	ppb	19:24:59
3	Sc Radial	7395.5	7395.5	98.9	%			19:23:11
3	Y RADIAL	6866.3	6866.3	99.16	%			19:23:11
3	Al 396.153Radial†	-81.3	-9.5	-7.8152	ug/L	-7.8152	ppb	19:23:11
3	Ca 317.933Radial†	21.3	-7.6	-10.721	ug/L	-10.721	ppb	19:23:31
3	Fe 238.204 Radial†	33.0	-1.4	-6.0319	ug/L	-6.0319	ppb	19:23:31
3	K 766.490 Radial†	2473.3	92.6	19.979	ug/L	19.979	ppb	19:23:11
3	Mg 279.077 IEC†	1.7	-1.3	-31.980	ug/L	-31.980	ppb	19:23:31
3	Na 589.592 Radial†	-332.7	-200.7	-12.316	ug/L	-12.316	ppb	19:23:11
3	Sr 421.552†	-59.9	-4.7	-0.0129	ug/L	-0.0129	ppb	19:23:11
3	Sc 361.383	732958.1	732958.1	101.99	%			19:24:28
3	Y 371.029	573677.3	573677.3	102.08	%			19:24:28
3	Ag 328.068†	581.8	-62.2	-0.3768	ug/L	-0.3768	ppb	19:24:28
3	As 188.979†	-31.1	4.9	1.7798	ug/L	1.7798	ppb	19:24:48
3	B 249.677†	-687.3	266.0	6.7049	ug/L	6.7049	ppb	19:24:28
3	Ba 233.527†	18.1	17.2	0.1217	ug/L	0.1217	ppb	19:24:48
3	Be 313.107†	-4756.9	217.4	0.0996	ug/L	0.0996	ppb	19:24:28
3	Cd 226.502†	-284.8	1.9	0.0249	ug/L	0.0249	ppb	19:24:48
3	Co 228.616†	-110.9	-9.2	-0.1601	ug/L	-0.1601	ppb	19:24:48
3	Cr 267.716†	-69.2	9.5	0.1322	ug/L	0.1322	ppb	19:24:28
3	Cu 324.752†	5718.5	-31.3	-0.1137	ug/L	-0.1137	ppb	19:24:28
3	Mn 257.610†	735.5	41.6	0.0458	ug/L	0.0458	ppb	19:24:28
3	Mo 202.031†	18.6	1.1	0.0789	ug/L	0.0789	ppb	19:24:48
3	Ni 231.604†	138.1	15.6	0.4172	ug/L	0.4172	ppb	19:24:48
3	P 214.914†	319.1	-1.9	-0.9416	ug/L	-0.9416	ppb	19:24:48
3	Pb 220.353†	-8.3	5.2	0.6134	ug/L	0.6134	ppb	19:24:48
3	S 181.975 Axial†	83.2	6.2	8.4605	ug/L	8.4605	ppb	19:24:48
3	Sb 206.836†	60.5	2.0	0.6113	ug/L	0.6113	ppb	19:24:48
3	Se 196.026†	-23.7	5.6	2.8158	ug/L	2.8158	ppb	19:24:48
3	Si 251.611†	447.6	27.1	0.8193	ug/L	0.8193	ppb	19:24:48
3	Sn 189.927†	16.4	3.6	0.6306	ug/L	0.6306	ppb	19:24:48
3	Ti 334.940†	-1363.0	11.8	0.0188	ug/L	0.0188	ppb	19:24:28
3	Tl 190.801†	-47.6	14.1	3.6939	ug/L	3.6939	ppb	19:24:48
3	U 409.014†	-4805.4	136.9	4.6345	ug/L	4.6345	ppb	19:24:28
3	V 292.402†	-1580.9	15.1	0.1473	ug/L	0.1473	ppb	19:24:28
3	Zn 213.857†	959.8	16.0	0.1466	ug/L	0.1466	ppb	19:24:48
3	SiO2†	416.5	-28.5	-1.9131	ug/L	-1.9131	ppb	19:25:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	730477.1	101.64	%	0.672				0.66%
Sc Radial	7448.3	99.6	%	0.72				0.72%
Y 371.029	571944.0	101.77	%	0.607				0.60%
Y RADIAL	6890.5	99.51	%	0.646				0.65%
Ag 328.068†	5.0	0.0269	ug/L	0.38118	0.0269	ppb	0.38118	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.1	-0.8956	ug/L	8.53136	-0.8956	ppb	8.53136	952.59%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	6.8	2.4580	ug/L	1.24170	2.4580	ppb	1.24170	50.52%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	239.3	6.0311	ug/L	0.60163	6.0311	ppb	0.60163	9.98%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	11.7	0.0830	ug/L	0.04122	0.0830	ppb	0.04122	49.66%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	167.9	0.0769	ug/L	0.02100	0.0769	ppb	0.02100	27.30%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.9	-4.0971	ug/L	5.78053	-4.0971	ppb	5.78053	141.09%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.0      0.1659 ug/L       0.12227      0.1659 ppb        0.12227  73.70%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -10.7     -0.1857 ug/L       0.05844     -0.1857 ppb        0.05844  31.46%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 0.0     -0.0012 ug/L       0.52317     -0.0012 ppb        0.52317 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -43.1     -0.1560 ug/L       0.03671     -0.1560 ppb        0.03671  23.53%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.7      2.9430 ug/L      14.77161      2.9430 ppb       14.77161 501.92%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          93.1     20.087 ug/L        7.7111     20.087 ppb         7.7111  38.39%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.6    -16.003 ug/L       27.6339    -16.003 ppb        27.6339 172.68%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                44.8      0.0501 ug/L       0.00619      0.0501 ppb        0.00619  12.34%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -2.4     -0.1670 ug/L       0.23034     -0.1670 ppb        0.23034 137.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -153.6     -9.4250 ug/L       3.25231     -9.4250 ppb        3.25231  34.51%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                15.5      0.4138 ug/L       0.33178      0.4138 ppb        0.33178  80.18%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -2.1     -1.0402 ug/L       3.61197     -1.0402 ppb        3.61197 347.23%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -1.3     -0.1600 ug/L       1.17530     -0.1600 ppb        1.17530 734.38%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.2      7.0906 ug/L       4.27861      7.0906 ppb        4.27861  60.34%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 1.5      0.4712 ug/L       2.56853      0.4712 ppb        2.56853 545.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      2.5713 ug/L       2.57210      2.5713 ppb        2.57210 100.03%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                36.2      1.0977 ug/L       0.27738      1.0977 ppb        0.27738  25.27%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 6.8      1.2003 ug/L       0.55031      1.2003 ppb        0.55031  45.85%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 6.5      0.0182 ug/L       0.04183      0.0182 ppb        0.04183 230.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                19.3      0.0325 ug/L       0.06753      0.0325 ppb        0.06753 207.90%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                13.3      3.4882 ug/L       1.03945      3.4882 ppb        1.03945  29.80%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                174.0      5.8925 ug/L       1.63431      5.8925 ppb        1.63431  27.74%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 29.1      0.2730 ug/L       0.11478      0.2730 ppb        0.11478  42.05%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                14.4      0.1310 ug/L       0.01626      0.1310 ppb        0.01626  12.41%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      -9.1     -0.6460 ug/L       1.16412     -0.6460 ppb        1.16412 180.21%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 44
Sample ID: 1201871708|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 71
Date Collected: 6/30/2009 19:40:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871708|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7744.1	7744.1	104	%			19:42:40
1	Y RADIAL	7164.9	7164.9	103.5	%			19:42:40
1	Al 396.153Radial†	-60.7	14.1	11.570	ug/L	11.570	ppb	19:42:40
1	Ca 317.933Radial†	39.3	8.9	12.557	ug/L	12.557	ppb	19:43:00
1	Fe 238.204 Radial†	36.0	-0.0	-0.1785	ug/L	-0.1785	ppb	19:43:00
1	K 766.490 Radial†	2968.6	458.1	98.814	ug/L	98.814	ppb	19:42:40
1	Mg 279.077 IEC†	2.3	-0.8	-19.459	ug/L	-19.459	ppb	19:43:00
1	Na 589.592 Radial†	1188.2	1282.4	78.702	ug/L	78.702	ppb	19:42:40
1	Sr 421.552†	35.0	89.7	0.2503	ug/L	0.2503	ppb	19:42:40
1	Sc 361.383	746456.7	746456.7	103.86	%			19:43:57
1	Y 371.029	583514.3	583514.3	103.83	%			19:43:57
1	Ag 328.068†	715.3	56.1	0.3269	ug/L	0.3269	ppb	19:43:57
1	As 188.979†	-33.9	2.8	0.9956	ug/L	0.9956	ppb	19:44:17
1	B 249.677†	129.9	1065.0	26.841	ug/L	26.841	ppb	19:43:57
1	Ba 233.527†	40.9	38.9	0.2750	ug/L	0.2750	ppb	19:44:17
1	Be 313.107†	-4807.4	253.2	0.1160	ug/L	0.1160	ppb	19:43:57
1	Cd 226.502†	-262.6	28.2	0.3601	ug/L	0.3601	ppb	19:44:17
1	Co 228.616†	-112.2	-8.6	-0.1475	ug/L	-0.1475	ppb	19:44:17
1	Cr 267.716†	-65.3	14.5	0.2004	ug/L	0.2004	ppb	19:43:57
1	Cu 324.752†	5805.8	-48.6	-0.1763	ug/L	-0.1763	ppb	19:43:57
1	Mn 257.610†	1062.6	343.4	0.3791	ug/L	0.3791	ppb	19:44:17
1	Mo 202.031†	24.8	6.8	0.4777	ug/L	0.4777	ppb	19:44:17
1	Ni 231.604†	125.9	1.5	0.0390	ug/L	0.0390	ppb	19:44:17
1	P 214.914†	329.0	2.0	1.0244	ug/L	1.0244	ppb	19:44:17
1	Pb 220.353†	-2.6	10.7	1.2778	ug/L	1.2778	ppb	19:44:17
1	S 181.975 Axial†	102.7	23.4	32.116	ug/L	32.116	ppb	19:44:17
1	Sb 206.836†	66.6	6.8	2.0049	ug/L	2.0049	ppb	19:44:17
1	Se 196.026†	-24.8	4.9	2.4866	ug/L	2.4866	ppb	19:44:17
1	Si 251.611†	53887.6	51471.2	1589.6	ug/L	1589.6	ppb	19:43:57
1	Sn 189.927†	2.6	-10.0	-1.7773	ug/L	-1.7773	ppb	19:44:17
1	Ti 334.940†	-1373.2	26.2	0.0437	ug/L	0.0437	ppb	19:43:57
1	Tl 190.801†	-64.1	-0.9	-0.2362	ug/L	-0.2362	ppb	19:44:17
1	U 409.014†	-4699.1	324.4	10.985	ug/L	10.985	ppb	19:43:57
1	V 292.402†	-1580.5	43.5	0.4218	ug/L	0.4218	ppb	19:43:57
1	Zn 213.857†	1112.4	145.9	1.3474	ug/L	1.3474	ppb	19:44:17
1	SiO2†	53460.1	51034.5	3356.2	ug/L	3356.2	ppb	19:45:13
2	Sc Radial	7668.0	7668.0	103	%			19:43:05
2	Y RADIAL	7098.7	7098.7	102.5	%			19:43:05
2	Al 396.153Radial†	-79.7	-5.0	-4.1476	ug/L	-4.1476	ppb	19:43:05
2	Ca 317.933Radial†	39.3	9.2	13.011	ug/L	13.011	ppb	19:43:25
2	Fe 238.204 Radial†	36.9	1.2	5.0496	ug/L	5.0496	ppb	19:43:25
2	K 766.490 Radial†	3084.5	599.5	129.33	ug/L	129.33	ppb	19:43:05
2	Mg 279.077 IEC†	2.1	-1.0	-23.705	ug/L	-23.705	ppb	19:43:25
2	Na 589.592 Radial†	1279.2	1382.5	84.846	ug/L	84.846	ppb	19:43:05
2	Sr 421.552†	-15.1	41.2	0.1149	ug/L	0.1149	ppb	19:43:05
2	Sc 361.383	753828.8	753828.8	104.89	%			19:44:22
2	Y 371.029	589108.4	589108.4	104.82	%			19:44:22
2	Ag 328.068†	642.7	-19.9	-0.1290	ug/L	-0.1290	ppb	19:44:22
2	As 188.979†	-29.4	7.4	2.6523	ug/L	2.6523	ppb	19:44:42
2	B 249.677†	96.9	1032.3	26.015	ug/L	26.015	ppb	19:44:22
2	Ba 233.527†	46.6	44.0	0.3101	ug/L	0.3101	ppb	19:44:42
2	Be 313.107†	-4845.6	262.0	0.1203	ug/L	0.1203	ppb	19:44:22
2	Cd 226.502†	-292.8	2.0	0.0248	ug/L	0.0248	ppb	19:44:42
2	Co 228.616†	-96.7	7.3	0.1272	ug/L	0.1272	ppb	19:44:42
2	Cr 267.716†	4.1	81.3	1.1353	ug/L	1.1353	ppb	19:44:22
2	Cu 324.752†	5827.3	-82.8	-0.2997	ug/L	-0.2997	ppb	19:44:22
2	Mn 257.610†	1075.4	345.6	0.3823	ug/L	0.3823	ppb	19:44:42
2	Mo 202.031†	26.6	8.3	0.5823	ug/L	0.5823	ppb	19:44:42
2	Ni 231.604†	142.3	15.8	0.4231	ug/L	0.4231	ppb	19:44:42

2	P 214.914†	331.4	1.1	0.6272	ug/L	0.6272	ppb	19:44:42
2	Pb 220.353†	4.6	8.9	1.0608	ug/L	1.0608	ppb	19:44:42
2	S 181.975 Axial†	102.4	22.2	30.457	ug/L	30.457	ppb	19:44:42
2	Sb 206.836†	58.4	-1.6	-0.4877	ug/L	-0.4877	ppb	19:44:42
2	Se 196.026†	-31.5	-1.3	-0.6380	ug/L	-0.6380	ppb	19:44:42
2	Si 251.611†	54608.0	51650.7	1595.1	ug/L	1595.1	ppb	19:44:22
2	Sn 189.927†	13.7	0.5	0.0970	ug/L	0.0970	ppb	19:44:42
2	Ti 334.940†	-1322.0	87.9	0.1555	ug/L	0.1555	ppb	19:44:22
2	Tl 190.801†	-66.4	-2.6	-0.6678	ug/L	-0.6678	ppb	19:44:42
2	U 409.014†	-4676.7	390.0	13.203	ug/L	13.203	ppb	19:44:22
2	V 292.402†	-1647.0	-5.0	-0.0145	ug/L	-0.0145	ppb	19:44:22
2	Zn 213.857†	1121.3	143.9	1.3258	ug/L	1.3258	ppb	19:44:42
2	SiO2†	53563.9	50630.2	3329.5	ug/L	3329.5	ppb	19:45:18
3	Sc Radial	7610.9	7610.9	102	%			19:43:30
3	Y RADIAL	7017.4	7017.4	101.3	%			19:43:30
3	Al 396.153Radial†	-49.4	24.1	19.929	ug/L	19.929	ppb	19:43:30
3	Ca 317.933Radial†	41.7	11.9	16.839	ug/L	16.839	ppb	19:43:50
3	Fe 238.204 Radial†	36.0	0.5	2.2499	ug/L	2.2499	ppb	19:43:50
3	K 766.490 Radial†	3037.8	576.2	124.31	ug/L	124.31	ppb	19:43:30
3	Mg 279.077 IEC†	1.0	-2.0	-50.857	ug/L	-50.857	ppb	19:43:50
3	Na 589.592 Radial†	1272.2	1385.0	85.002	ug/L	85.002	ppb	19:43:30
3	Sr 421.552†	9.1	64.8	0.1808	ug/L	0.1808	ppb	19:43:30
3	Sc 361.383	742155.8	742155.8	103.27	%			19:44:48
3	Y 371.029	580272.8	580272.8	103.25	%			19:44:48
3	Ag 328.068†	589.3	-61.9	-0.3821	ug/L	-0.3821	ppb	19:44:48
3	As 188.979†	-33.3	3.2	1.1501	ug/L	1.1501	ppb	19:45:08
3	B 249.677†	152.5	1087.6	27.411	ug/L	27.411	ppb	19:44:48
3	Ba 233.527†	33.9	32.3	0.2278	ug/L	0.2278	ppb	19:45:08
3	Be 313.107†	-4852.4	182.7	0.0845	ug/L	0.0845	ppb	19:44:48
3	Cd 226.502†	-271.4	18.3	0.2331	ug/L	0.2331	ppb	19:45:08
3	Co 228.616†	-111.9	-8.9	-0.1591	ug/L	-0.1591	ppb	19:45:08
3	Cr 267.716†	-19.1	58.9	0.8211	ug/L	0.8211	ppb	19:44:48
3	Cu 324.752†	5750.5	-69.7	-0.2526	ug/L	-0.2526	ppb	19:44:48
3	Mn 257.610†	1058.2	345.1	0.3819	ug/L	0.3819	ppb	19:45:08
3	Mo 202.031†	-1.2	-18.3	-1.2904	ug/L	-1.2904	ppb	19:45:08
3	Ni 231.604†	148.1	23.6	0.6309	ug/L	0.6309	ppb	19:45:08
3	P 214.914†	325.3	0.2	0.1660	ug/L	0.1660	ppb	19:45:08
3	Pb 220.353†	-18.4	-4.5	-0.5408	ug/L	-0.5408	ppb	19:45:08
3	S 181.975 Axial†	95.3	16.9	23.090	ug/L	23.090	ppb	19:45:08
3	Sb 206.836†	64.1	4.8	1.3771	ug/L	1.3771	ppb	19:45:08
3	Se 196.026†	-21.3	8.2	4.1830	ug/L	4.1830	ppb	19:45:08
3	Si 251.611†	53511.4	51407.6	1587.7	ug/L	1587.7	ppb	19:44:48
3	Sn 189.927†	13.4	0.5	0.0881	ug/L	0.0881	ppb	19:45:08
3	Ti 334.940†	-1191.4	194.5	0.3502	ug/L	0.3502	ppb	19:44:48
3	Tl 190.801†	-58.5	4.1	1.0780	ug/L	1.0780	ppb	19:45:08
3	U 409.014†	-4553.8	439.0	14.862	ug/L	14.862	ppb	19:44:48
3	V 292.402†	-1614.3	2.0	0.0285	ug/L	0.0285	ppb	19:44:48
3	Zn 213.857†	1138.9	177.8	1.6381	ug/L	1.6381	ppb	19:45:08
3	SiO2†	53594.0	51462.5	3384.3	ug/L	3384.3	ppb	19:45:23

Mean Data: 1201871708|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	747480.4	104.01	%	0.821				0.79%
Sc Radial	7674.3	103	%	0.9				0.87%
Y 371.029	584298.5	103.97	%	0.795				0.76%
Y RADIAL	7093.7	102.4	%	1.07				1.04%
Ag 328.068†	-8.6	-0.0614	ug/L	0.35929	-0.0614	ppb	0.35929	584.99%
Al 396.153Radial†	11.1	9.1172	ug/L	12.22422	9.1172	ppb	12.22422	134.08%
As 188.979†	4.5	1.5993	ug/L	0.91517	1.5993	ppb	0.91517	57.22%
B 249.677†	1061.6	26.755	ug/L	0.7018	26.755	ppb	0.7018	2.62%
Ba 233.527†	38.4	0.2710	ug/L	0.04125	0.2710	ppb	0.04125	15.22%
Be 313.107†	232.6	0.1069	ug/L	0.01957	0.1069	ppb	0.01957	18.30%
Ca 317.933Radial†	10.0	14.135	ug/L	2.3522	14.135	ppb	2.3522	16.64%
Cd 226.502†	16.2	0.2060	ug/L	0.16930	0.2060	ppb	0.16930	82.19%
Co 228.616†	-3.4	-0.0598	ug/L	0.16204	-0.0598	ppb	0.16204	271.01%
Cr 267.716†	51.6	0.7189	ug/L	0.47571	0.7189	ppb	0.47571	66.17%
Cu 324.752†	-67.1	-0.2428	ug/L	0.06227	-0.2428	ppb	0.06227	25.64%
Fe 238.204 Radial†	0.6	2.3737	ug/L	2.61624	2.3737	ppb	2.61624	110.22%
K 766.490 Radial†	544.6	117.49	ug/L	16.363	117.49	ppb	16.363	13.93%

Mg 279.077 IEC†	-1.3	-31.340	ug/L	17.0351	-31.340	ppb	17.0351 54.36%
Mn 257.610†	344.7	0.3811	ug/L	0.00172	0.3811	ppb	0.00172 0.45%
Mo 202.031†	-1.1	-0.0768	ug/L	1.05234	-0.0768	ppb	1.05234 >999.9%
Na 589.592 Radial†	1350.0	82.850	ug/L	3.5928	82.850	ppb	3.5928 4.34%
Ni 231.604†	13.6	0.3643	ug/L	0.30032	0.3643	ppb	0.30032 82.43%
P 214.914†	1.1	0.6059	ug/L	0.42960	0.6059	ppb	0.42960 70.90%
Pb 220.353†	5.0	0.5993	ug/L	0.99325	0.5993	ppb	0.99325 165.74%
S 181.975 Axial†	20.8	28.554	ug/L	4.8043	28.554	ppb	4.8043 16.83%
Sb 206.836†	3.3	0.9648	ug/L	1.29642	0.9648	ppb	1.29642 134.38%
Se 196.026†	3.9	2.0105	ug/L	2.44554	2.0105	ppb	2.44554 121.64%
Si 251.611†	51509.9	1590.8	ug/L	3.87	1590.8	ppb	3.87 0.24%
Sn 189.927†	-3.0	-0.5307	ug/L	1.07958	-0.5307	ppb	1.07958 203.41%
Sr 421.552†	65.2	0.1820	ug/L	0.06772	0.1820	ppb	0.06772 37.21%
Ti 334.940†	102.9	0.1831	ug/L	0.15511	0.1831	ppb	0.15511 84.70%
Tl 190.801†	0.2	0.0580	ug/L	0.90935	0.0580	ppb	0.90935 >999.9%
U 409.014†	384.5	13.017	ug/L	1.9450	13.017	ppb	1.9450 14.94%
V 292.402†	13.5	0.1453	ug/L	0.24043	0.1453	ppb	0.24043 165.51%
Zn 213.857†	155.9	1.4371	ug/L	0.17438	1.4371	ppb	0.17438 12.13%
SiO2†	51042.4	3356.7	ug/L	27.41	3356.7	ppb	27.41 0.82%

Sequence No.: 45
Sample ID: 1201871709|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 72
Date Collected: 6/30/2009 19:47:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871709|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7707.3	7707.3	103	%			19:49:28
1	Y RADIAL	7078.2	7078.2	102.2	%			19:49:28
1	Al 396.153Radial†	6342.7	6223.9	5104.0	ug/L	5104.0	ppb	19:49:28
1	Ca 317.933Radial†	3701.1	3560.3	5043.5	ug/L	5043.5	ppb	19:49:28
1	Fe 238.204 Radial†	1221.2	1149.5	4807.0	ug/L	4807.0	ppb	19:49:48
1	K 766.490 Radial†	26476.1	23269.5	5008.1	ug/L	5008.1	ppb	19:49:28
1	Mg 279.077 IEC†	207.8	198.5	4954.2	ug/L	4954.2	ppb	19:49:48
1	Na 589.592 Radial†	88419.6	85885.6	5271.0	ug/L	5271.0	ppb	19:49:28
1	Sr 421.552†	176922.3	171636.4	479.34	ug/L	479.34	ppb	19:49:28
1	Sc 361.383	748522.5	748522.5	104.15	%			19:50:46
1	Y 371.029	577845.3	577845.3	102.82	%			19:50:46
1	Ag 328.068†	86617.7	82532.9	496.04	ug/L	496.04	ppb	19:50:46
1	As 188.979†	1398.8	1378.4	500.22	ug/L	500.22	ppb	19:51:07
1	B 249.677†	20224.1	20357.9	510.24	ug/L	510.24	ppb	19:50:46
1	Ba 233.527†	74460.8	71492.6	505.53	ug/L	505.53	ppb	19:50:46
1	Be 313.107†	1125260.2	1085293.5	497.89	ug/L	497.89	ppb	19:50:46
1	Cd 226.502†	40175.3	38855.2	495.35	ug/L	495.35	ppb	19:51:07
1	Co 228.616†	29156.8	28094.2	487.42	ug/L	487.42	ppb	19:51:07
1	Cr 267.716†	36758.8	35371.2	496.34	ug/L	496.34	ppb	19:50:46
1	Cu 324.752†	149200.9	137615.9	498.96	ug/L	498.96	ppb	19:50:46
1	Mn 257.610†	471737.8	452256.6	499.24	ug/L	499.24	ppb	19:50:46
1	Mo 202.031†	7330.7	7021.4	494.61	ug/L	494.61	ppb	19:51:07
1	Ni 231.604†	19441.6	18547.0	495.45	ug/L	495.45	ppb	19:51:07
1	P 214.914†	1454.3	1081.5	457.71	ug/L	457.71	ppb	19:51:07
1	Pb 220.353†	4364.3	4203.6	502.02	ug/L	502.02	ppb	19:51:07
1	S 181.975 Axial†	3880.4	3650.4	4999.9	ug/L	4999.9	ppb	19:51:07
1	Sb 206.836†	1841.3	1710.6	514.56	ug/L	514.56	ppb	19:51:07
1	Se 196.026†	965.9	956.2	504.98	ug/L	504.98	ppb	19:51:07
1	Si 251.611†	220649.1	211443.1	6513.1	ug/L	6513.1	ppb	19:50:46
1	Sn 189.927†	3018.5	2885.7	511.61	ug/L	511.61	ppb	19:51:07
1	Ti 334.940†	281471.7	271601.6	497.15	ug/L	497.15	ppb	19:50:46
1	Tl 190.801†	1811.3	1799.8	474.22	ug/L	474.22	ppb	19:51:07
1	U 409.014†	10725.7	15147.0	511.35	ug/L	511.35	ppb	19:50:46
1	V 292.402†	55559.5	54910.3	504.64	ug/L	504.64	ppb	19:50:46
1	Zn 213.857†	55945.4	52790.5	482.64	ug/L	482.64	ppb	19:50:46
1	SiO2†	220542.1	211315.3	13859	ug/L	13859	ppb	19:52:07
2	Sc Radial	7731.2	7731.2	103	%			19:49:53
2	Y RADIAL	7162.5	7162.5	103.4	%			19:49:53
2	Al 396.153Radial†	6390.7	6251.2	5126.7	ug/L	5126.7	ppb	19:49:53
2	Ca 317.933Radial†	3730.5	3577.6	5068.1	ug/L	5068.1	ppb	19:49:53
2	Fe 238.204 Radial†	1210.3	1135.4	4748.0	ug/L	4748.0	ppb	19:50:13
2	K 766.490 Radial†	26570.0	23280.7	5010.6	ug/L	5010.6	ppb	19:49:53
2	Mg 279.077 IEC†	212.2	202.2	5045.6	ug/L	5045.6	ppb	19:50:13
2	Na 589.592 Radial†	88783.8	85972.0	5276.3	ug/L	5276.3	ppb	19:49:53
2	Sr 421.552†	178392.2	172525.9	481.82	ug/L	481.82	ppb	19:49:53
2	Sc 361.383	749577.0	749577.0	104.30	%			19:51:14
2	Y 371.029	578691.4	578691.4	102.97	%			19:51:14
2	Ag 328.068†	86774.5	82566.1	496.22	ug/L	496.22	ppb	19:51:14
2	As 188.979†	1404.3	1381.9	501.44	ug/L	501.44	ppb	19:51:34
2	B 249.677†	20263.0	20367.9	510.50	ug/L	510.50	ppb	19:51:14
2	Ba 233.527†	74574.7	71501.2	505.59	ug/L	505.59	ppb	19:51:14
2	Be 313.107†	1126888.8	1085335.2	497.91	ug/L	497.91	ppb	19:51:14
2	Cd 226.502†	40106.0	38734.5	493.82	ug/L	493.82	ppb	19:51:34
2	Co 228.616†	29102.9	28003.1	485.84	ug/L	485.84	ppb	19:51:34
2	Cr 267.716†	36809.7	35370.3	496.32	ug/L	496.32	ppb	19:51:14
2	Cu 324.752†	149739.4	137930.7	500.10	ug/L	500.10	ppb	19:51:14
2	Mn 257.610†	472755.7	452595.4	499.61	ug/L	499.61	ppb	19:51:14
2	Mo 202.031†	7298.3	6980.5	491.72	ug/L	491.72	ppb	19:51:34
2	Ni 231.604†	19423.1	18502.9	494.27	ug/L	494.27	ppb	19:51:34

2	P 214.914†	1477.4	1101.7	467.83 ug/L	467.83 ppb	19:51:34
2	Pb 220.353†	4362.5	4196.0	501.11 ug/L	501.11 ppb	19:51:34
2	S 181.975 Axial†	3871.4	3636.5	4980.8 ug/L	4980.8 ppb	19:51:34
2	Sb 206.836†	1826.0	1693.5	509.37 ug/L	509.37 ppb	19:51:34
2	Se 196.026†	963.9	953.0	503.14 ug/L	503.14 ppb	19:51:34
2	Si 251.611†	221172.6	211647.0	6519.4 ug/L	6519.4 ppb	19:51:14
2	Sn 189.927†	3012.2	2875.5	509.81 ug/L	509.81 ppb	19:51:34
2	Ti 334.940†	281724.5	271463.8	496.90 ug/L	496.90 ppb	19:51:14
2	Tl 190.801†	1809.2	1795.4	473.06 ug/L	473.06 ppb	19:51:34
2	U 409.014†	10813.8	15217.0	513.73 ug/L	513.73 ppb	19:51:14
2	V 292.402†	55567.9	54843.4	504.01 ug/L	504.01 ppb	19:51:14
2	Zn 213.857†	56125.1	52887.2	483.54 ug/L	483.54 ppb	19:51:14
2	SiO2†	221694.8	212122.6	13912 ug/L	13912 ppb	19:52:12
3	Sc Radial	7664.2	7664.2	103 %		19:50:18
3	Y RADIAL	7133.2	7133.2	103.0 %		19:50:18
3	Al 396.153Radial†	6345.1	6260.8	5134.7 ug/L	5134.7 ppb	19:50:18
3	Ca 317.933Radial†	3684.4	3564.1	5049.0 ug/L	5049.0 ppb	19:50:18
3	Fe 238.204 Radial†	1203.7	1139.1	4763.4 ug/L	4763.4 ppb	19:50:38
3	K 766.490 Radial†	26437.3	23376.1	5031.2 ug/L	5031.2 ppb	19:50:18
3	Mg 279.077 IEC†	206.8	198.7	4958.9 ug/L	4958.9 ppb	19:50:38
3	Na 589.592 Radial†	88332.5	86282.6	5295.4 ug/L	5295.4 ppb	19:50:18
3	Sr 421.552†	176751.3	172434.0	481.56 ug/L	481.56 ppb	19:50:18
3	Sc 361.383	753327.1	753327.1	104.82 %		19:51:41
3	Y 371.029	581538.1	581538.1	103.48 %		19:51:41
3	Ag 328.068†	87118.8	82480.5	495.71 ug/L	495.71 ppb	19:51:41
3	As 188.979†	1390.5	1362.0	494.29 ug/L	494.29 ppb	19:52:01
3	B 249.677†	20481.2	20479.4	513.33 ug/L	513.33 ppb	19:51:41
3	Ba 233.527†	75043.0	71592.0	506.24 ug/L	506.24 ppb	19:51:41
3	Be 313.107†	1132474.5	1085285.4	497.89 ug/L	497.89 ppb	19:51:41
3	Cd 226.502†	40014.2	38455.4	490.26 ug/L	490.26 ppb	19:52:01
3	Co 228.616†	29033.3	27797.8	482.26 ug/L	482.26 ppb	19:52:01
3	Cr 267.716†	36967.8	35345.5	495.98 ug/L	495.98 ppb	19:51:41
3	Cu 324.752†	150637.0	138072.3	500.61 ug/L	500.61 ppb	19:51:41
3	Mn 257.610†	474716.9	452209.9	499.19 ug/L	499.19 ppb	19:51:41
3	Mo 202.031†	7272.1	6920.6	487.51 ug/L	487.51 ppb	19:52:01
3	Ni 231.604†	19399.2	18387.4	491.19 ug/L	491.19 ppb	19:52:01
3	P 214.914†	1484.1	1101.0	467.32 ug/L	467.32 ppb	19:52:01
3	Pb 220.353†	4355.1	4168.1	497.78 ug/L	497.78 ppb	19:52:01
3	S 181.975 Axial†	3853.8	3601.2	4932.5 ug/L	4932.5 ppb	19:52:01
3	Sb 206.836†	1820.4	1679.4	505.04 ug/L	505.04 ppb	19:52:01
3	Se 196.026†	952.3	937.3	495.22 ug/L	495.22 ppb	19:52:01
3	Si 251.611†	222314.6	211680.9	6520.6 ug/L	6520.6 ppb	19:51:41
3	Sn 189.927†	3000.8	2850.3	505.35 ug/L	505.35 ppb	19:52:01
3	Ti 334.940†	283402.6	271720.1	497.36 ug/L	497.36 ppb	19:51:41
3	Tl 190.801†	1828.3	1805.0	475.59 ug/L	475.59 ppb	19:52:01
3	U 409.014†	10970.9	15315.2	517.05 ug/L	517.05 ppb	19:51:41
3	V 292.402†	55969.5	54961.2	505.03 ug/L	505.03 ppb	19:51:41
3	Zn 213.857†	56265.1	52752.9	482.32 ug/L	482.32 ppb	19:51:41
3	SiO2†	218646.9	208156.7	13651 ug/L	13651 ppb	19:52:17

Mean Data: 1201871709|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	750475.5	104.42	%	0.351				0.34%
Sc Radial	7700.9	103	%	0.5				0.44%
Y 371.029	579358.3	103.09	%	0.344				0.33%
Y RADIAL	7124.6	102.9	%	0.62				0.60%
Ag 328.068†	82526.5	495.99	ug/L	0.256	495.99	ppb	0.256	0.05%
Al 396.153Radial†	6245.3	5121.8	ug/L	15.92	5121.8	ppb	15.92	0.31%
As 188.979†	1374.1	498.65	ug/L	3.829	498.65	ppb	3.829	0.77%
B 249.677†	20401.7	511.35	ug/L	1.713	511.35	ppb	1.713	0.34%
Ba 233.527†	71528.6	505.79	ug/L	0.390	505.79	ppb	0.390	0.08%
Be 313.107†	1085304.7	497.90	ug/L	0.012	497.90	ppb	0.012	0.00%
Ca 317.933Radial†	3567.3	5053.5	ug/L	12.90	5053.5	ppb	12.90	0.26%
Cd 226.502†	38681.7	493.14	ug/L	2.615	493.14	ppb	2.615	0.53%
Co 228.616†	27965.0	485.17	ug/L	2.642	485.17	ppb	2.642	0.54%
Cr 267.716†	35362.3	496.21	ug/L	0.205	496.21	ppb	0.205	0.04%
Cu 324.752†	137873.0	499.89	ug/L	0.845	499.89	ppb	0.845	0.17%
Fe 238.204 Radial†	1141.3	4772.8	ug/L	30.58	4772.8	ppb	30.58	0.64%
K 766.490 Radial†	23308.8	5016.6	ug/L	12.67	5016.6	ppb	12.67	0.25%

Mg 279.077 IEC†	199.8	4986.3	ug/L	51.47	4986.3	ppb	51.47	1.03%
Mn 257.610†	452354.0	499.34	ug/L	0.229	499.34	ppb	0.229	0.05%
Mo 202.031†	6974.1	491.28	ug/L	3.571	491.28	ppb	3.571	0.73%
Na 589.592 Radial†	86046.7	5280.9	ug/L	12.81	5280.9	ppb	12.81	0.24%
Ni 231.604†	18479.1	493.63	ug/L	2.201	493.63	ppb	2.201	0.45%
P 214.914†	1094.8	464.29	ug/L	5.700	464.29	ppb	5.700	1.23%
Pb 220.353†	4189.2	500.30	ug/L	2.231	500.30	ppb	2.231	0.45%
S 181.975 Axial†	3629.3	4971.1	ug/L	34.76	4971.1	ppb	34.76	0.70%
Sb 206.836†	1694.5	509.66	ug/L	4.767	509.66	ppb	4.767	0.94%
Se 196.026†	948.8	501.11	ug/L	5.188	501.11	ppb	5.188	1.04%
Si 251.611†	211590.3	6517.7	ug/L	4.06	6517.7	ppb	4.06	0.06%
Sn 189.927†	2870.5	508.92	ug/L	3.225	508.92	ppb	3.225	0.63%
Sr 421.552†	172198.8	480.91	ug/L	1.366	480.91	ppb	1.366	0.28%
Ti 334.940†	271595.2	497.14	ug/L	0.234	497.14	ppb	0.234	0.05%
Tl 190.801†	1800.1	474.29	ug/L	1.264	474.29	ppb	1.264	0.27%
U 409.014†	15226.4	514.04	ug/L	2.864	514.04	ppb	2.864	0.56%
V 292.402†	54905.0	504.56	ug/L	0.515	504.56	ppb	0.515	0.10%
Zn 213.857†	52810.2	482.84	ug/L	0.632	482.84	ppb	0.632	0.13%
SiO2†	210531.5	13807	ug/L	137.6	13807	ppb	137.6	1.00%

Sequence No.: 46
Sample ID: 1201871710|881354|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 73
Date Collected: 6/30/2009 19:54:29
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871710|881354|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7635.3	7635.3	102	%			19:56:22
1	Y RADIAL	7043.6	7043.6	101.7	%			19:56:22
1	Al 396.153Radial†	-64.2	9.8	8.0666	ug/L	8.0666	ppb	19:56:22
1	Ca 317.933Radial†	29.6	-0.1	-0.1384	ug/L	-0.1384	ppb	19:56:42
1	Fe 238.204 Radial†	39.2	3.5	14.712	ug/L	14.712	ppb	19:56:42
1	K 766.490 Radial†	2547.4	86.6	18.668	ug/L	18.668	ppb	19:56:22
1	Mg 279.077 IEC†	1.6	-1.5	-37.750	ug/L	-37.750	ppb	19:56:42
1	Na 589.592 Radial†	169.2	301.2	18.484	ug/L	18.484	ppb	19:56:22
1	Sr 421.552†	-34.6	22.0	0.0613	ug/L	0.0613	ppb	19:56:22
1	Sc 361.383	746613.0	746613.0	103.89	%			19:57:39
1	Y 371.029	583323.8	583323.8	103.79	%			19:57:39
1	Ag 328.068†	623.9	-32.1	-0.1945	ug/L	-0.1945	ppb	19:57:39
1	As 188.979†	-28.2	8.3	2.9911	ug/L	2.9911	ppb	19:57:59
1	B 249.677†	-585.5	376.3	9.4820	ug/L	9.4820	ppb	19:57:39
1	Ba 233.527†	13.5	12.5	0.0884	ug/L	0.0884	ppb	19:57:59
1	Be 313.107†	-4826.2	236.1	0.1081	ug/L	0.1081	ppb	19:57:39
1	Cd 226.502†	-269.4	21.8	0.2764	ug/L	0.2764	ppb	19:57:59
1	Co 228.616†	-103.6	-0.3	-0.0041	ug/L	-0.0041	ppb	19:57:59
1	Cr 267.716†	-63.3	16.4	0.2276	ug/L	0.2276	ppb	19:57:39
1	Cu 324.752†	5824.2	-32.1	-0.1153	ug/L	-0.1153	ppb	19:57:39
1	Mn 257.610†	778.3	69.6	0.0793	ug/L	0.0793	ppb	19:57:39
1	Mo 202.031†	27.1	9.0	0.6321	ug/L	0.6321	ppb	19:57:59
1	Ni 231.604†	127.7	3.1	0.0831	ug/L	0.0831	ppb	19:57:59
1	P 214.914†	320.3	-6.4	-3.2492	ug/L	-3.2492	ppb	19:57:59
1	Pb 220.353†	-16.8	-2.9	-0.3482	ug/L	-0.3482	ppb	19:57:59
1	S 181.975 Axial†	87.6	8.9	12.214	ug/L	12.214	ppb	19:57:59
1	Sb 206.836†	60.7	1.1	0.3722	ug/L	0.3722	ppb	19:57:59
1	Se 196.026†	-24.2	5.5	2.8361	ug/L	2.8361	ppb	19:57:59
1	Si 251.611†	11425.0	10585.9	326.90	ug/L	326.90	ppb	19:57:39
1	Sn 189.927†	22.0	8.7	1.5395	ug/L	1.5395	ppb	19:57:59
1	Ti 334.940†	-1381.5	18.4	0.0296	ug/L	0.0296	ppb	19:57:39
1	Tl 190.801†	-42.9	19.5	5.0984	ug/L	5.0984	ppb	19:57:59
1	U 409.014†	-4753.7	272.8	9.2359	ug/L	9.2359	ppb	19:57:39
1	V 292.402†	-1618.0	7.7	0.0933	ug/L	0.0933	ppb	19:57:39
1	Zn 213.857†	1007.2	44.4	0.4091	ug/L	0.4091	ppb	19:57:59
1	SiO2†	11002.8	10154.4	667.71	ug/L	667.71	ppb	19:58:56
2	Sc Radial	7463.0	7463.0	99.8	%			19:56:48
2	Y RADIAL	6902.2	6902.2	99.68	%			19:56:48
2	Al 396.153Radial†	-56.7	15.8	12.990	ug/L	12.990	ppb	19:56:48
2	Ca 317.933Radial†	33.5	4.5	6.3247	ug/L	6.3247	ppb	19:57:08
2	Fe 238.204 Radial†	34.7	-0.0	-0.1473	ug/L	-0.1473	ppb	19:57:08
2	K 766.490 Radial†	2513.5	110.2	23.773	ug/L	23.773	ppb	19:56:48
2	Mg 279.077 IEC†	3.7	0.6	16.008	ug/L	16.008	ppb	19:57:08
2	Na 589.592 Radial†	121.0	256.8	15.759	ug/L	15.759	ppb	19:56:48
2	Sr 421.552†	-34.6	21.2	0.0593	ug/L	0.0593	ppb	19:56:48
2	Sc 361.383	748378.6	748378.6	104.13	%			19:58:05
2	Y 371.029	584915.5	584915.5	104.08	%			19:58:05
2	Ag 328.068†	621.8	-35.5	-0.2219	ug/L	-0.2219	ppb	19:58:05
2	As 188.979†	-23.4	13.0	4.6826	ug/L	4.6826	ppb	19:58:25
2	B 249.677†	-562.2	400.1	10.082	ug/L	10.082	ppb	19:58:05
2	Ba 233.527†	29.7	28.0	0.1984	ug/L	0.1984	ppb	19:58:25
2	Be 313.107†	-4850.5	223.6	0.1026	ug/L	0.1026	ppb	19:58:05
2	Cd 226.502†	-280.1	12.1	0.1550	ug/L	0.1550	ppb	19:58:25
2	Co 228.616†	-101.8	1.6	0.0302	ug/L	0.0302	ppb	19:58:25
2	Cr 267.716†	-109.2	-27.5	-0.3885	ug/L	-0.3885	ppb	19:58:05
2	Cu 324.752†	5854.5	-16.2	-0.0588	ug/L	-0.0588	ppb	19:58:05
2	Mn 257.610†	800.9	89.5	0.0984	ug/L	0.0984	ppb	19:58:05
2	Mo 202.031†	26.8	8.6	0.6028	ug/L	0.6028	ppb	19:58:25
2	Ni 231.604†	131.9	6.9	0.1833	ug/L	0.1833	ppb	19:58:25

2	P 214.914†	309.7	-17.3	-8.8170	ug/L	-8.8170	ppb	19:58:25
2	Pb 220.353†	-10.5	3.2	0.3828	ug/L	0.3828	ppb	19:58:25
2	S 181.975 Axial†	90.3	11.3	15.486	ug/L	15.486	ppb	19:58:25
2	Sb 206.836†	70.2	10.2	3.0672	ug/L	3.0672	ppb	19:58:25
2	Se 196.026†	-31.5	-1.4	-0.7296	ug/L	-0.7296	ppb	19:58:25
2	Si 251.611†	11356.8	10494.5	324.08	ug/L	324.08	ppb	19:58:05
2	Sn 189.927†	20.3	7.0	1.2360	ug/L	1.2360	ppb	19:58:25
2	Ti 334.940†	-1350.9	51.0	0.0883	ug/L	0.0883	ppb	19:58:05
2	Tl 190.801†	-38.4	23.9	6.2625	ug/L	6.2625	ppb	19:58:25
2	U 409.014†	-4662.9	370.8	12.556	ug/L	12.556	ppb	19:58:05
2	V 292.402†	-1591.4	36.9	0.3677	ug/L	0.3677	ppb	19:58:05
2	Zn 213.857†	1021.7	56.1	0.5160	ug/L	0.5160	ppb	19:58:25
2	SiO2†	11258.2	10374.7	682.20	ug/L	682.20	ppb	19:59:01
3	Sc Radial	7504.6	7504.6	100	%			19:57:13
3	Y RADIAL	6956.8	6956.8	100.5	%			19:57:13
3	Al 396.153Radial†	-62.8	10.1	8.2733	ug/L	8.2733	ppb	19:57:13
3	Ca 317.933Radial†	36.6	7.3	10.375	ug/L	10.375	ppb	19:57:33
3	Fe 238.204 Radial†	32.8	-2.1	-8.8492	ug/L	-8.8492	ppb	19:57:33
3	K 766.490 Radial†	2625.2	207.5	44.752	ug/L	44.752	ppb	19:57:13
3	Mg 279.077 IEC†	1.6	-1.4	-35.740	ug/L	-35.740	ppb	19:57:33
3	Na 589.592 Radial†	25.4	160.9	9.8719	ug/L	9.8719	ppb	19:57:13
3	Sr 421.552†	-62.4	-6.2	-0.0175	ug/L	-0.0175	ppb	19:57:13
3	Sc 361.383	735151.3	735151.3	102.29	%			19:58:30
3	Y 371.029	575283.2	575283.2	102.36	%			19:58:30
3	Ag 328.068†	615.4	-31.0	-0.1934	ug/L	-0.1934	ppb	19:58:30
3	As 188.979†	-30.3	5.8	2.0933	ug/L	2.0933	ppb	19:58:50
3	B 249.677†	-528.2	423.5	10.674	ug/L	10.674	ppb	19:58:30
3	Ba 233.527†	21.7	20.7	0.1470	ug/L	0.1470	ppb	19:58:50
3	Be 313.107†	-4848.5	141.8	0.0648	ug/L	0.0648	ppb	19:58:30
3	Cd 226.502†	-279.9	7.4	0.0963	ug/L	0.0963	ppb	19:58:50
3	Co 228.616†	-93.1	8.5	0.1477	ug/L	0.1477	ppb	19:58:50
3	Cr 267.716†	-45.2	33.2	0.4626	ug/L	0.4626	ppb	19:58:30
3	Cu 324.752†	5738.6	-28.3	-0.1032	ug/L	-0.1032	ppb	19:58:30
3	Mn 257.610†	763.0	66.3	0.0727	ug/L	0.0727	ppb	19:58:30
3	Mo 202.031†	21.7	4.1	0.2848	ug/L	0.2848	ppb	19:58:50
3	Ni 231.604†	156.8	33.5	0.8951	ug/L	0.8951	ppb	19:58:50
3	P 214.914†	321.4	-0.6	-0.2736	ug/L	-0.2736	ppb	19:58:50
3	Pb 220.353†	-7.9	5.5	0.6617	ug/L	0.6617	ppb	19:58:50
3	S 181.975 Axial†	85.7	8.3	11.404	ug/L	11.404	ppb	19:58:50
3	Sb 206.836†	54.2	-4.3	-1.2678	ug/L	-1.2678	ppb	19:58:50
3	Se 196.026†	-24.9	4.4	2.2211	ug/L	2.2211	ppb	19:58:50
3	Si 251.611†	11107.7	10447.2	322.63	ug/L	322.63	ppb	19:58:30
3	Sn 189.927†	16.1	3.3	0.5784	ug/L	0.5784	ppb	19:58:50
3	Ti 334.940†	-1412.5	-32.6	-0.0630	ug/L	-0.0630	ppb	19:58:30
3	Tl 190.801†	-39.4	22.2	5.8122	ug/L	5.8122	ppb	19:58:50
3	U 409.014†	-4699.6	254.3	8.6126	ug/L	8.6126	ppb	19:58:30
3	V 292.402†	-1545.2	54.6	0.5170	ug/L	0.5170	ppb	19:58:30
3	Zn 213.857†	1012.6	64.8	0.5946	ug/L	0.5946	ppb	19:58:50
3	SiO2†	11294.7	10604.9	697.36	ug/L	697.36	ppb	19:59:06

Mean Data: 1201871710|881354|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	743381.0	103.44	%	0.999				0.97%
Sc Radial	7534.3	101	%	1.2				1.19%
Y 371.029	581174.1	103.41	%	0.919				0.89%
Y RADIAL	6967.5	100.6	%	1.03				1.02%
Ag 328.068†	-32.9	-0.2033	ug/L	0.01613	-0.2033	ppb	0.01613	7.94%
Al 396.153Radial†	11.9	9.7766	ug/L	2.78467	9.7766	ppb	2.78467	28.48%
As 188.979†	9.0	3.2557	ug/L	1.31478	3.2557	ppb	1.31478	40.38%
B 249.677†	400.0	10.079	ug/L	0.5958	10.079	ppb	0.5958	5.91%
Ba 233.527†	20.4	0.1446	ug/L	0.05504	0.1446	ppb	0.05504	38.06%
Be 313.107†	200.5	0.0918	ug/L	0.02358	0.0918	ppb	0.02358	25.68%
Ca 317.933Radial†	3.9	5.5205	ug/L	5.30264	5.5205	ppb	5.30264	96.05%
Cd 226.502†	13.8	0.1759	ug/L	0.09188	0.1759	ppb	0.09188	52.24%
Co 228.616†	3.3	0.0579	ug/L	0.07962	0.0579	ppb	0.07962	137.46%
Cr 267.716†	7.4	0.1006	ug/L	0.43955	0.1006	ppb	0.43955	437.06%
Cu 324.752†	-25.5	-0.0924	ug/L	0.02976	-0.0924	ppb	0.02976	32.19%
Fe 238.204 Radial†	0.5	1.9052	ug/L	11.91397	1.9052	ppb	11.91397	625.34%
K 766.490 Radial†	134.8	29.064	ug/L	13.8236	29.064	ppb	13.8236	47.56%

Mg 279.077 IEC†	-0.8	-19.161	ug/L	30.4732	-19.161	ppb	30.4732 159.04%
Mn 257.610†	75.1	0.0835	ug/L	0.01334	0.0835	ppb	0.01334 15.98%
Mo 202.031†	7.2	0.5065	ug/L	0.19263	0.5065	ppb	0.19263 38.03%
Na 589.592 Radial†	239.6	14.705	ug/L	4.4019	14.705	ppb	4.4019 29.93%
Ni 231.604†	14.5	0.3871	ug/L	0.44273	0.3871	ppb	0.44273 114.36%
P 214.914†	-8.1	-4.1132	ug/L	4.33675	-4.1132	ppb	4.33675 105.43%
Pb 220.353†	1.9	0.2321	ug/L	0.52150	0.2321	ppb	0.52150 224.70%
S 181.975 Axial†	9.5	13.034	ug/L	2.1609	13.034	ppb	2.1609 16.58%
Sb 206.836†	2.3	0.7239	ug/L	2.18875	0.7239	ppb	2.18875 302.36%
Se 196.026†	2.8	1.4425	ug/L	1.90606	1.4425	ppb	1.90606 132.13%
Si 251.611†	10509.2	324.53	ug/L	2.173	324.53	ppb	2.173 0.67%
Sn 189.927†	6.3	1.1179	ug/L	0.49130	1.1179	ppb	0.49130 43.95%
Sr 421.552†	12.3	0.0344	ug/L	0.04495	0.0344	ppb	0.04495 130.84%
Ti 334.940†	12.3	0.0183	ug/L	0.07629	0.0183	ppb	0.07629 417.17%
Tl 190.801†	21.9	5.7244	ug/L	0.58701	5.7244	ppb	0.58701 10.25%
U 409.014†	299.3	10.135	ug/L	2.1196	10.135	ppb	2.1196 20.91%
V 292.402†	33.1	0.3260	ug/L	0.21489	0.3260	ppb	0.21489 65.92%
Zn 213.857†	55.1	0.5066	ug/L	0.09314	0.5066	ppb	0.09314 18.38%
SiO2†	10378.0	682.42	ug/L	14.825	682.42	ppb	14.825 2.17%

Sequence No.: 47
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 20:01:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7378.2	7378.2	98.7	%			20:03:14
1	Y RADIAL	6796.8	6796.8	98.16	%			20:03:14
1	Al 396.153Radial†	6314.9	6470.1	5306.0	ug/L	5306.0	ppb	20:03:14
1	Ca 317.933Radial†	3572.8	3590.4	5086.2	ug/L	5086.2	ppb	20:03:34
1	Fe 238.204 Radial†	1207.5	1188.5	4970.4	ug/L	4970.4	ppb	20:03:34
1	K 766.490 Radial†	25097.1	23017.6	4952.7	ug/L	4952.7	ppb	20:03:09
1	Mg 279.077 IEC†	209.6	209.3	5224.5	ug/L	5224.5	ppb	20:03:34
1	Na 589.592 Radial†	168379.6	170714.0	10477	ug/L	10477	ppb	20:03:09
1	Sr 421.552†	173940.5	176267.9	492.27	ug/L	492.27	ppb	20:03:09
1	Sc 361.383	741283.4	741283.4	103.14	%			20:04:41
1	Y 371.029	571635.2	571635.2	101.71	%			20:04:41
1	Ag 328.068†	88388.3	85061.6	511.23	ug/L	511.23	ppb	20:04:47
1	As 188.979†	1434.6	1426.3	517.52	ug/L	517.52	ppb	20:05:07
1	B 249.677†	19762.9	20100.4	503.60	ug/L	503.60	ppb	20:04:47
1	Ba 233.527†	74323.3	72057.4	509.54	ug/L	509.54	ppb	20:04:47
1	Be 313.107†	1154700.8	1124387.7	515.78	ug/L	515.78	ppb	20:04:41
1	Cd 226.502†	41249.1	40273.0	513.43	ug/L	513.43	ppb	20:04:47
1	Co 228.616†	30415.8	29588.2	513.37	ug/L	513.37	ppb	20:04:47
1	Cr 267.716†	37625.3	36555.9	512.95	ug/L	512.95	ppb	20:04:47
1	Cu 324.752†	149212.0	139025.6	504.08	ug/L	504.08	ppb	20:04:47
1	Mn 257.610†	480271.6	464953.5	513.26	ug/L	513.26	ppb	20:04:41
1	Mo 202.031†	7505.4	7259.5	511.39	ug/L	511.39	ppb	20:05:07
1	Ni 231.604†	19915.7	19188.9	512.59	ug/L	512.59	ppb	20:04:47
1	P 214.914†	5511.4	5028.6	2471.9	ug/L	2471.9	ppb	20:05:07
1	Pb 220.353†	4407.9	4286.8	511.99	ug/L	511.99	ppb	20:05:07
1	S 181.975 Axial†	853.8	752.4	1029.7	ug/L	1029.7	ppb	20:05:07
1	Sb 206.836†	1832.4	1719.3	517.16	ug/L	517.16	ppb	20:05:07
1	Se 196.026†	1013.8	1011.6	533.87	ug/L	533.87	ppb	20:05:07
1	Si 251.611†	86257.7	83216.8	2552.6	ug/L	2552.6	ppb	20:04:47
1	Sn 189.927†	3010.9	2906.6	515.33	ug/L	515.33	ppb	20:05:07
1	Ti 334.940†	278147.4	271017.9	496.07	ug/L	496.07	ppb	20:04:47
1	Tl 190.801†	1940.4	1942.0	511.34	ug/L	511.34	ppb	20:05:07
1	U 409.014†	11021.7	15534.5	524.42	ug/L	524.42	ppb	20:04:47
1	V 292.402†	56206.8	56058.8	515.29	ug/L	515.29	ppb	20:04:47
1	Zn 213.857†	58090.0	55394.3	506.53	ug/L	506.53	ppb	20:04:47
1	SiO2†	87130.5	84037.9	5487.8	ug/L	5487.8	ppb	20:06:14
2	Sc Radial	7555.4	7555.4	101	%			20:03:44
2	Y RADIAL	6947.9	6947.9	100.3	%			20:03:44
2	Al 396.153Radial†	6431.6	6435.4	5277.8	ug/L	5277.8	ppb	20:03:44
2	Ca 317.933Radial†	3560.6	3493.4	4948.9	ug/L	4948.9	ppb	20:04:04
2	Fe 238.204 Radial†	1199.3	1151.6	4816.7	ug/L	4816.7	ppb	20:04:04
2	K 766.490 Radial†	25027.4	22352.5	4809.3	ug/L	4809.3	ppb	20:03:39
2	Mg 279.077 IEC†	203.9	198.7	4958.6	ug/L	4958.6	ppb	20:04:04
2	Na 589.592 Radial†	167823.9	166164.5	10198	ug/L	10198	ppb	20:03:39
2	Sr 421.552†	173176.3	171379.9	478.62	ug/L	478.62	ppb	20:03:39
2	Sc 361.383	746132.9	746132.9	103.82	%			20:05:12
2	Y 371.029	575395.9	575395.9	102.38	%			20:05:12
2	Ag 328.068†	89212.5	85298.6	512.61	ug/L	512.61	ppb	20:05:18
2	As 188.979†	1439.7	1422.1	516.00	ug/L	516.00	ppb	20:05:38
2	B 249.677†	20051.7	20254.1	507.49	ug/L	507.49	ppb	20:05:18
2	Ba 233.527†	74916.5	72160.5	510.28	ug/L	510.28	ppb	20:05:18
2	Be 313.107†	1161252.2	1123421.8	515.34	ug/L	515.34	ppb	20:05:12
2	Cd 226.502†	41519.8	40273.7	513.46	ug/L	513.46	ppb	20:05:18
2	Co 228.616†	30587.9	29562.3	512.91	ug/L	512.91	ppb	20:05:18
2	Cr 267.716†	37870.0	36554.5	512.93	ug/L	512.93	ppb	20:05:18
2	Cu 324.752†	150635.1	139456.1	505.63	ug/L	505.63	ppb	20:05:18
2	Mn 257.610†	482597.4	464167.3	512.38	ug/L	512.38	ppb	20:05:12
2	Mo 202.031†	7478.8	7186.5	506.24	ug/L	506.24	ppb	20:05:38
2	Ni 231.604†	20073.1	19215.0	513.29	ug/L	513.29	ppb	20:05:18

2	P 214.914†	5468.1	4952.2	2432.6 ug/L	2432.6 ppb	20:05:38
2	Pb 220.353†	4393.3	4244.9	506.99 ug/L	506.99 ppb	20:05:38
2	S 181.975 Axial†	849.1	742.4	1016.0 ug/L	1016.0 ppb	20:05:38
2	Sb 206.836†	1837.5	1712.7	514.99 ug/L	514.99 ppb	20:05:38
2	Se 196.026†	1024.7	1015.8	535.47 ug/L	535.47 ppb	20:05:38
2	Si 251.611†	86858.0	83251.5	2553.9 ug/L	2553.9 ppb	20:05:18
2	Sn 189.927†	2993.8	2871.1	509.03 ug/L	509.03 ppb	20:05:38
2	Ti 334.940†	280644.2	271670.1	497.26 ug/L	497.26 ppb	20:05:18
2	Tl 190.801†	1947.6	1936.7	509.95 ug/L	509.95 ppb	20:05:38
2	U 409.014†	11205.8	15642.4	528.09 ug/L	528.09 ppb	20:05:18
2	V 292.402†	56777.4	56254.3	517.02 ug/L	517.02 ppb	20:05:18
2	Zn 213.857†	58534.6	55456.5	507.12 ug/L	507.12 ppb	20:05:18
2	SiO2†	86418.9	82803.4	5407.1 ug/L	5407.1 ppb	20:06:19
3	Sc Radial	7474.1	7474.1	100.0 %		20:04:14
3	Y RADIAL	6870.0	6870.0	99.21 %		20:04:14
3	Al 396.153Radial†	6361.2	6434.3	5276.6 ug/L	5276.6 ppb	20:04:14
3	Ca 317.933Radial†	3559.7	3530.8	5001.8 ug/L	5001.8 ppb	20:04:34
3	Fe 238.204 Radial†	1214.0	1179.3	4932.1 ug/L	4932.1 ppb	20:04:34
3	K 766.490 Radial†	25250.4	22844.9	4915.4 ug/L	4915.4 ppb	20:04:09
3	Mg 279.077 IEC†	205.7	202.6	5058.0 ug/L	5058.0 ppb	20:04:34
3	Na 589.592 Radial†	168598.1	168745.0	10356 ug/L	10356 ppb	20:04:09
3	Sr 421.552†	174180.1	174247.7	486.63 ug/L	486.63 ppb	20:04:09
3	Sc 361.383	742105.5	742105.5	103.26 %		20:05:43
3	Y 371.029	572233.2	572233.2	101.82 %		20:05:43
3	Ag 328.068†	88837.8	85402.0	513.26 ug/L	513.26 ppb	20:05:49
3	As 188.979†	1450.6	1440.3	522.56 ug/L	522.56 ppb	20:06:09
3	B 249.677†	19901.8	20213.7	506.46 ug/L	506.46 ppb	20:05:49
3	Ba 233.527†	74531.4	72179.2	510.41 ug/L	510.41 ppb	20:05:49
3	Be 313.107†	1159905.5	1128188.0	517.53 ug/L	517.53 ppb	20:05:43
3	Cd 226.502†	41274.0	40252.7	513.18 ug/L	513.18 ppb	20:05:49
3	Co 228.616†	30494.5	29631.8	514.12 ug/L	514.12 ppb	20:05:49
3	Cr 267.716†	37686.2	36574.4	513.22 ug/L	513.22 ppb	20:05:49
3	Cu 324.752†	150133.2	139757.5	506.73 ug/L	506.73 ppb	20:05:49
3	Mn 257.610†	482050.4	466160.4	514.59 ug/L	514.59 ppb	20:05:43
3	Mo 202.031†	7504.7	7250.8	510.77 ug/L	510.77 ppb	20:06:09
3	Ni 231.604†	19957.2	19207.7	513.09 ug/L	513.09 ppb	20:05:49
3	P 214.914†	5514.8	5026.0	2470.0 ug/L	2470.0 ppb	20:06:09
3	Pb 220.353†	4410.5	4284.6	511.72 ug/L	511.72 ppb	20:06:09
3	S 181.975 Axial†	847.4	745.2	1019.9 ug/L	1019.9 ppb	20:06:09
3	Sb 206.836†	1863.6	1747.5	525.53 ug/L	525.53 ppb	20:06:09
3	Se 196.026†	1015.5	1012.2	534.03 ug/L	534.03 ppb	20:06:09
3	Si 251.611†	86572.7	83429.3	2559.2 ug/L	2559.2 ppb	20:05:49
3	Sn 189.927†	3015.1	2907.5	515.48 ug/L	515.48 ppb	20:06:09
3	Ti 334.940†	279441.6	271972.4	497.81 ug/L	497.81 ppb	20:05:49
3	Tl 190.801†	1955.3	1954.4	514.58 ug/L	514.58 ppb	20:06:09
3	U 409.014†	11053.8	15553.7	525.07 ug/L	525.07 ppb	20:05:49
3	V 292.402†	56412.3	56197.5	516.54 ug/L	516.54 ppb	20:05:49
3	Zn 213.857†	58279.6	55515.5	507.65 ug/L	507.65 ppb	20:05:49
3	SiO2†	87776.5	84569.9	5522.8 ug/L	5522.8 ppb	20:06:24

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	743173.9	103.41	%	0.361				0.35%
Sc Radial	7469.2	99.9	%	1.19				1.19%
Y 371.029	573088.1	101.97	%	0.360				0.35%
Y RADIAL	6871.5	99.24	%	1.091				1.10%
Ag 328.068†	85254.0	512.37	ug/L	1.035	512.37	ppb	1.035	0.20%
QC value within limits for Ag 328.068 Recovery = 102.47%								
Al 396.153Radial†	6446.6	5286.8	ug/L	16.67	5286.8	ppb	16.67	0.32%
QC value within limits for Al 396.153Radial Recovery = 105.74%								
As 188.979†	1429.6	518.69	ug/L	3.436	518.69	ppb	3.436	0.66%
QC value within limits for As 188.979 Recovery = 103.74%								
B 249.677†	20189.4	505.85	ug/L	2.013	505.85	ppb	2.013	0.40%
QC value within limits for B 249.677 Recovery = 101.17%								
Ba 233.527†	72132.4	510.07	ug/L	0.465	510.07	ppb	0.465	0.09%
QC value within limits for Ba 233.527 Recovery = 102.01%								
Be 313.107†	1125332.5	516.22	ug/L	1.154	516.22	ppb	1.154	0.22%
QC value within limits for Be 313.107 Recovery = 103.24%								
Ca 317.933Radial†	3538.2	5012.3	ug/L	69.28	5012.3	ppb	69.28	1.38%

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   QC value within limits for Ca 317.933Radial  Recovery = 100.25%
Cd 226.502†            40266.5      513.35 ug/L         0.155      513.35 ppb          0.155   0.03%
   QC value within limits for Cd 226.502  Recovery = 102.67%
Co 228.616†            29594.1      513.47 ug/L         0.613      513.47 ppb          0.613   0.12%
   QC value within limits for Co 228.616  Recovery = 102.69%
Cr 267.716†            36561.6      513.04 ug/L         0.157      513.04 ppb          0.157   0.03%
   QC value within limits for Cr 267.716  Recovery = 102.61%
Cu 324.752†           139413.1      505.48 ug/L         1.331      505.48 ppb          1.331   0.26%
   QC value within limits for Cu 324.752  Recovery = 101.10%
Fe 238.204 Radial†      1173.1      4906.4 ug/L         80.00      4906.4 ppb          80.00   1.63%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.13%
K 766.490 Radial†      22738.4      4892.5 ug/L         74.42      4892.5 ppb          74.42   1.52%
   QC value within limits for K 766.490 Radial  Recovery = 97.85%
Mg 279.077 IEC†          203.5      5080.4 ug/L        134.35      5080.4 ppb         134.35   2.64%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.61%
Mn 257.610†           465093.7      513.41 ug/L         1.113      513.41 ppb          1.113   0.22%
   QC value within limits for Mn 257.610  Recovery = 102.68%
Mo 202.031†             7232.3      509.46 ug/L         2.811      509.46 ppb          2.811   0.55%
   QC value within limits for Mo 202.031  Recovery = 101.89%
Na 589.592 Radial†    168541.2       10344 ug/L         140.0       10344 ppb          140.0   1.35%
   QC value within limits for Na 589.592 Radial  Recovery = 103.44%
Ni 231.604†            19203.8      512.99 ug/L         0.359      512.99 ppb          0.359   0.07%
   QC value within limits for Ni 231.604  Recovery = 102.60%
P 214.914†              5002.3      2458.2 ug/L         22.16      2458.2 ppb          22.16   0.90%
   QC value within limits for P 214.914  Recovery = 98.33%
Pb 220.353†             4272.1      510.23 ug/L         2.809      510.23 ppb          2.809   0.55%
   QC value within limits for Pb 220.353  Recovery = 102.05%
S 181.975 Axial†         746.7      1021.9 ug/L          7.04      1021.9 ppb           7.04   0.69%
   QC value within limits for S 181.975 Axial  Recovery = 102.19%
Sb 206.836†             1726.5      519.22 ug/L         5.564      519.22 ppb          5.564   1.07%
   QC value within limits for Sb 206.836  Recovery = 103.84%
Se 196.026†             1013.2      534.46 ug/L         0.882      534.46 ppb          0.882   0.16%
   QC value within limits for Se 196.026  Recovery = 106.89%
Si 251.611†            83299.2      2555.2 ug/L          3.49      2555.2 ppb           3.49   0.14%
   QC value within limits for Si 251.611  Recovery = 102.21%
Sn 189.927†             2895.1      513.28 ug/L         3.683      513.28 ppb          3.683   0.72%
   QC value within limits for Sn 189.927  Recovery = 102.66%
Sr 421.552†           173965.2      485.84 ug/L         6.860      485.84 ppb          6.860   1.41%
   QC value within limits for Sr 421.552  Recovery = 97.17%
Ti 334.940†           271553.4      497.05 ug/L         0.890      497.05 ppb          0.890   0.18%
   QC value within limits for Ti 334.940  Recovery = 99.41%
Tl 190.801†             1944.4      511.96 ug/L         2.378      511.96 ppb          2.378   0.46%
   QC value within limits for Tl 190.801  Recovery = 102.39%
U 409.014†             15576.9      525.86 ug/L         1.959      525.86 ppb          1.959   0.37%
   QC value within limits for U 409.014  Recovery = 105.17%
V 292.402†             56170.2      516.28 ug/L         0.895      516.28 ppb          0.895   0.17%
   QC value within limits for V 292.402  Recovery = 103.26%
Zn 213.857†            55455.5      507.10 ug/L         0.561      507.10 ppb          0.561   0.11%
   QC value within limits for Zn 213.857  Recovery = 101.42%
SiO2†                  83803.8      5472.6 ug/L         59.34      5472.6 ppb          59.34   1.08%
   QC value within limits for SiO2  Recovery = 102.34%
All analyte(s) passed QC.
```

Sequence No.: 48
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 20:08:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7745.1	7745.1	104	%			20:10:26
1	Y RADIAL	7165.9	7165.9	103.5	%			20:10:26
1	Al 396.153Radial†	-43.2	30.9	25.431	ug/L	25.431	ppb	20:10:26
1	Ca 317.933Radial†	26.4	-3.6	-5.1697	ug/L	-5.1697	ppb	20:10:46
1	Fe 238.204 Radial†	32.9	-3.1	-12.766	ug/L	-12.766	ppb	20:10:46
1	K 766.490 Radial†	2421.3	-70.4	-15.210	ug/L	-15.210	ppb	20:10:26
1	Mg 279.077 IEC†	3.8	0.6	14.359	ug/L	14.359	ppb	20:10:46
1	Na 589.592 Radial†	-281.4	-136.1	-8.3500	ug/L	-8.3500	ppb	20:10:26
1	Sr 421.552†	-38.8	18.5	0.0516	ug/L	0.0516	ppb	20:10:26
1	Sc 361.383	723317.7	723317.7	100.64	%			20:11:43
1	Y 371.029	565880.7	565880.7	100.69	%			20:11:43
1	Ag 328.068†	637.0	0.3	-0.0052	ug/L	-0.0052	ppb	20:11:43
1	As 188.979†	-27.2	8.4	3.0242	ug/L	3.0242	ppb	20:12:03
1	B 249.677†	-662.5	281.6	7.0972	ug/L	7.0972	ppb	20:11:43
1	Ba 233.527†	19.1	18.5	0.1294	ug/L	0.1294	ppb	20:12:03
1	Be 313.107†	-4782.1	130.3	0.0596	ug/L	0.0596	ppb	20:11:43
1	Cd 226.502†	-265.6	17.2	0.2210	ug/L	0.2210	ppb	20:12:03
1	Co 228.616†	-83.7	16.3	0.2846	ug/L	0.2846	ppb	20:12:03
1	Cr 267.716†	-73.8	4.0	0.0549	ug/L	0.0549	ppb	20:11:43
1	Cu 324.752†	5541.3	-132.6	-0.4812	ug/L	-0.4812	ppb	20:11:43
1	Mn 257.610†	690.4	6.4	0.0052	ug/L	0.0052	ppb	20:12:03
1	Mo 202.031†	24.2	6.9	0.4836	ug/L	0.4836	ppb	20:12:03
1	Ni 231.604†	137.4	16.7	0.4467	ug/L	0.4467	ppb	20:12:03
1	P 214.914†	316.1	-0.7	-0.2411	ug/L	-0.2411	ppb	20:12:03
1	Pb 220.353†	-12.0	1.4	0.1706	ug/L	0.1706	ppb	20:12:03
1	S 181.975 Axial†	76.2	0.3	0.3663	ug/L	0.3663	ppb	20:12:03
1	Sb 206.836†	69.5	11.8	3.5051	ug/L	3.5051	ppb	20:12:03
1	Se 196.026†	-32.9	-4.0	-2.0603	ug/L	-2.0603	ppb	20:12:03
1	Si 251.611†	441.3	26.7	0.8354	ug/L	0.8354	ppb	20:12:03
1	Sn 189.927†	7.1	-5.5	-0.9672	ug/L	-0.9672	ppb	20:12:03
1	Ti 334.940†	-1352.5	4.5	0.0071	ug/L	0.0071	ppb	20:11:43
1	Tl 190.801†	-54.8	6.3	1.6475	ug/L	1.6475	ppb	20:12:03
1	U 409.014†	-4830.7	49.0	1.6596	ug/L	1.6596	ppb	20:11:43
1	V 292.402†	-1621.9	-46.3	-0.4092	ug/L	-0.4092	ppb	20:11:43
1	Zn 213.857†	977.1	45.7	0.4207	ug/L	0.4207	ppb	20:12:03
1	SiO2†	468.7	28.8	1.9199	ug/L	1.9199	ppb	20:12:59
2	Sc Radial	7288.6	7288.6	97.5	%			20:10:52
2	Y RADIAL	6772.5	6772.5	97.81	%			20:10:52
2	Al 396.153Radial†	-53.8	17.5	14.378	ug/L	14.378	ppb	20:10:52
2	Ca 317.933Radial†	26.6	-1.8	-2.5459	ug/L	-2.5459	ppb	20:11:12
2	Fe 238.204 Radial†	38.3	4.5	18.846	ug/L	18.846	ppb	20:11:12
2	K 766.490 Radial†	2432.1	86.9	18.756	ug/L	18.756	ppb	20:10:52
2	Mg 279.077 IEC†	1.8	-1.2	-28.925	ug/L	-28.925	ppb	20:11:12
2	Na 589.592 Radial†	-273.2	-144.6	-8.8775	ug/L	-8.8775	ppb	20:10:52
2	Sr 421.552†	-76.6	-22.7	-0.0635	ug/L	-0.0635	ppb	20:10:52
2	Sc 361.383	723248.4	723248.4	100.63	%			20:12:09
2	Y 371.029	566470.0	566470.0	100.80	%			20:12:09
2	Ag 328.068†	649.0	12.3	0.0724	ug/L	0.0724	ppb	20:12:09
2	As 188.979†	-32.7	3.0	1.0762	ug/L	1.0762	ppb	20:12:29
2	B 249.677†	-753.1	191.6	4.8255	ug/L	4.8255	ppb	20:12:09
2	Ba 233.527†	11.6	11.1	0.0793	ug/L	0.0793	ppb	20:12:29
2	Be 313.107†	-4747.3	164.4	0.0751	ug/L	0.0751	ppb	20:12:09
2	Cd 226.502†	-263.9	18.9	0.2389	ug/L	0.2389	ppb	20:12:29
2	Co 228.616†	-78.6	21.3	0.3697	ug/L	0.3697	ppb	20:12:29
2	Cr 267.716†	-78.3	-0.4	-0.0085	ug/L	-0.0085	ppb	20:12:09
2	Cu 324.752†	5597.5	-76.3	-0.2752	ug/L	-0.2752	ppb	20:12:09
2	Mn 257.610†	687.3	3.3	0.0066	ug/L	0.0066	ppb	20:12:29
2	Mo 202.031†	18.7	1.4	0.1027	ug/L	0.1027	ppb	20:12:29
2	Ni 231.604†	147.7	27.0	0.7213	ug/L	0.7213	ppb	20:12:29

2	P 214.914†	317.2	0.4	0.2422	ug/L	0.2422	ppb	20:12:29
2	Pb 220.353†	-16.3	-3.0	-0.3514	ug/L	-0.3514	ppb	20:12:29
2	S 181.975 Axial†	76.8	0.9	1.2742	ug/L	1.2742	ppb	20:12:29
2	Sb 206.836†	67.6	9.9	2.9631	ug/L	2.9631	ppb	20:12:29
2	Se 196.026†	-39.3	-10.3	-5.1697	ug/L	-5.1697	ppb	20:12:29
2	Si 251.611†	447.9	33.3	1.0147	ug/L	1.0147	ppb	20:12:29
2	Sn 189.927†	15.1	2.5	0.4381	ug/L	0.4381	ppb	20:12:29
2	Ti 334.940†	-1398.3	-41.2	-0.0804	ug/L	-0.0804	ppb	20:12:09
2	Tl 190.801†	-37.8	23.2	6.0785	ug/L	6.0785	ppb	20:12:29
2	U 409.014†	-4559.0	318.5	10.783	ug/L	10.783	ppb	20:12:09
2	V 292.402†	-1512.1	62.6	0.5882	ug/L	0.5882	ppb	20:12:09
2	Zn 213.857†	954.9	23.8	0.2141	ug/L	0.2141	ppb	20:12:29
2	SiO2†	458.1	18.4	1.1770	ug/L	1.1770	ppb	20:13:05
3	Sc Radial	7341.9	7341.9	98.2	%			20:11:17
3	Y RADIAL	6770.2	6770.2	97.77	%			20:11:17
3	Al 396.153Radial†	-102.2	-31.4	-25.871	ug/L	-25.871	ppb	20:11:17
3	Ca 317.933Radial†	28.1	-0.5	-0.6906	ug/L	-0.6906	ppb	20:11:37
3	Fe 238.204 Radial†	36.3	2.2	9.0365	ug/L	9.0365	ppb	20:11:37
3	K 766.490 Radial†	2372.7	8.4	1.8054	ug/L	1.8054	ppb	20:11:17
3	Mg 279.077 IEC†	1.3	-1.7	-43.540	ug/L	-43.540	ppb	20:11:37
3	Na 589.592 Radial†	-177.5	-45.1	-2.7699	ug/L	-2.7699	ppb	20:11:17
3	Sr 421.552†	-29.4	26.0	0.0726	ug/L	0.0726	ppb	20:11:17
3	Sc 361.383	722738.6	722738.6	100.56	%			20:12:34
3	Y 371.029	566076.7	566076.7	100.73	%			20:12:34
3	Ag 328.068†	701.5	64.9	0.3886	ug/L	0.3886	ppb	20:12:34
3	As 188.979†	-29.2	6.4	2.3054	ug/L	2.3054	ppb	20:12:54
3	B 249.677†	-702.5	241.4	6.0833	ug/L	6.0833	ppb	20:12:34
3	Ba 233.527†	16.4	15.8	0.1113	ug/L	0.1113	ppb	20:12:54
3	Be 313.107†	-4822.0	86.8	0.0395	ug/L	0.0395	ppb	20:12:34
3	Cd 226.502†	-263.4	19.2	0.2442	ug/L	0.2442	ppb	20:12:54
3	Co 228.616†	-102.7	-2.7	-0.0436	ug/L	-0.0436	ppb	20:12:54
3	Cr 267.716†	-64.1	13.7	0.1910	ug/L	0.1910	ppb	20:12:34
3	Cu 324.752†	5610.6	-59.2	-0.2141	ug/L	-0.2141	ppb	20:12:34
3	Mn 257.610†	673.6	-9.8	-0.0089	ug/L	-0.0089	ppb	20:12:54
3	Mo 202.031†	30.2	12.9	0.9069	ug/L	0.9069	ppb	20:12:54
3	Ni 231.604†	129.9	9.4	0.2507	ug/L	0.2507	ppb	20:12:54
3	P 214.914†	306.9	-9.6	-4.9046	ug/L	-4.9046	ppb	20:12:54
3	Pb 220.353†	-12.7	0.6	0.0650	ug/L	0.0650	ppb	20:12:54
3	S 181.975 Axial†	85.1	9.2	12.594	ug/L	12.594	ppb	20:12:54
3	Sb 206.836†	65.7	8.1	2.4071	ug/L	2.4071	ppb	20:12:54
3	Se 196.026†	-22.1	6.8	3.5138	ug/L	3.5138	ppb	20:12:54
3	Si 251.611†	440.9	26.7	0.8180	ug/L	0.8180	ppb	20:12:54
3	Sn 189.927†	8.2	-4.4	-0.7737	ug/L	-0.7737	ppb	20:12:54
3	Ti 334.940†	-1415.2	-59.0	-0.1088	ug/L	-0.1088	ppb	20:12:34
3	Tl 190.801†	-48.4	12.6	3.2974	ug/L	3.2974	ppb	20:12:54
3	U 409.014†	-4833.9	41.9	1.4186	ug/L	1.4186	ppb	20:12:34
3	V 292.402†	-1593.5	-19.4	-0.1640	ug/L	-0.1640	ppb	20:12:34
3	Zn 213.857†	968.9	38.4	0.3534	ug/L	0.3534	ppb	20:12:54
3	SiO2†	488.1	48.5	3.1748	ug/L	3.1748	ppb	20:13:10

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	723101.6	100.61	%	0.044				0.04%
Sc Radial	7458.5	99.8	%	3.34				3.35%
Y 371.029	566142.5	100.74	%	0.053				0.05%
Y RADIAL	6902.9	99.69	%	3.290				3.30%
Ag 328.068†	25.8	0.1519	ug/L	0.20864	0.1519	ppb	0.20864	137.33%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.7	4.6460	ug/L	27.00035	4.6460	ppb	27.00035	581.15%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.9	2.1353	ug/L	0.98508	2.1353	ppb	0.98508	46.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	238.2	6.0020	ug/L	1.13799	6.0020	ppb	1.13799	18.96%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	15.1	0.1067	ug/L	0.02537	0.1067	ppb	0.02537	23.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	127.1	0.0581	ug/L	0.01785	0.0581	ppb	0.01785	30.74%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.0	-2.8021	ug/L	2.25052	-2.8021	ppb	2.25052	80.32%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                18.4      0.2347 ug/L       0.01215      0.2347 ppb        0.01215   5.18%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                11.7      0.2035 ug/L       0.21825      0.2035 ppb        0.21825 107.22%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 5.7      0.0791 ug/L       0.10191      0.0791 ppb        0.10191 128.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -89.4     -0.3235 ug/L       0.13994     -0.3235 ppb        0.13994  43.26%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.2      5.0387 ug/L      16.18086      5.0387 ppb       16.18086 321.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†           8.3      1.7841 ug/L      16.98300      1.7841 ppb       16.98300 951.92%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.8    -19.369 ug/L       30.1092     -19.369 ppb        30.1092 155.45%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -0.0      0.0010 ug/L       0.00854      0.0010 ppb        0.00854 885.91%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 7.1      0.4977 ug/L       0.40228      0.4977 ppb        0.40228  80.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -108.6     -6.6658 ug/L       3.38420     -6.6658 ppb        3.38420  50.77%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                17.7      0.4729 ug/L       0.23635      0.4729 ppb        0.23635  49.98%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -3.3     -1.6345 ug/L       2.84225     -1.6345 ppb        2.84225 173.89%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -0.3     -0.0386 ug/L       0.27602     -0.0386 ppb        0.27602 715.17%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            3.5      4.7448 ug/L       6.81273      4.7448 ppb        6.81273 143.58%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                10.0      2.9584 ug/L       0.54904      2.9584 ppb        0.54904  18.56%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.5     -1.2387 ug/L       4.39970     -1.2387 ppb        4.39970 355.18%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                28.9      0.8894 ug/L       0.10887      0.8894 ppb        0.10887  12.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -2.5     -0.4343 ug/L       0.76167     -0.4343 ppb        0.76167 175.38%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 7.2      0.0202 ug/L       0.07323      0.0202 ppb        0.07323 361.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -31.9     -0.0607 ug/L       0.06042     -0.0607 ppb        0.06042  99.52%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                14.0      3.6744 ug/L       2.23945      3.6744 ppb        2.23945  60.95%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                136.5      4.6203 ug/L       5.33820      4.6203 ppb        5.33820 115.54%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 -1.0      0.0050 ug/L       0.51970      0.0050 ppb        0.51970 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                36.0      0.3294 ug/L       0.10536      0.3294 ppb        0.10536  31.99%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      31.9      2.0906 ug/L       1.00977      2.0906 ppb        1.00977  48.30%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Friday, July 03, 2009 10:25:37
Sample Description:
Method File: C:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.871
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1965.7	1965.735	62.027	3.2
	Mg	24.0	18263.7	18263.671	386.561	2.1
	Co	58.9	37400.9	37400.908	681.541	1.8
	Rh	102.9	79798.7	79798.678	939.041	1.2
	In	114.9	105201.2	105201.179	1277.023	1.2
	Pb	208.0	46766.0	46766.037	741.582	1.6
⌈>	Ba	137.9	96373.8	96373.753	1295.560	1.3
⌊	Ba++	69.0	2307.1	0.024	0.000	2.0
⌈>	Ce	139.9	123013.2	123013.181	920.861	0.7
⌊	CeO	155.9	1649.9	0.013	0.000	3.1
	Bkgd	220.0	11.1	11.100	2.584	23.3

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-2000.00	Analog Stage Voltage
1950.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	7.5	1634.1
Co	59	17	8.5	30653.5
In	115	17	9.5	114099.2

ICPMS#3 Instrument Tuning Report

File Name: 090703.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	578	2070	0.649
Be	9.0	9.0	2051	2070	0.624
Mg	24.0	24.0	5700	2120	0.561
Mg	25.0	25.0	5919	2050	0.619
Mg	26.0	25.9	6203	2130	0.680
Co	58.9	58.9	14191	2110	0.678
Rh	102.9	102.9	24896	2170	0.664
In	114.9	114.9	27823	2180	0.659
Ce	139.9	139.9	33909	2200	0.693
Pb	206.0	206.0	49992	2270	0.665
Pb	207.0	207.0	50281	2300	0.673
Pb	208.0	208.0	50486	2320	0.631
U	238.1	238.0	57844	2340	0.680

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Saturday, July 04, 2009 00:53:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Blank.944

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		14	
	Be	9		ug/L		15	
	B	11		ug/L		202	
	Na	23		ug/L		30366	
	Mg	24		ug/L		1667	
	Al	27		ug/L		6001	
	P	31		ug/L		3443	
	K	39		ug/L		431761	
	Ca	43		ug/L		685	
>	Sc	45		ug/L		259742	
	Ti	47		ug/L		218	
	V	51		ug/L		35273	
	Cr	52		ug/L		-2554	
	Cr	53		ug/L		211336	
	Mn	55		ug/L		1205	
	Fe	57		ug/L		5661	
	Co	59		ug/L		135	
	Ni	60		ug/L		77	
	Cu	63		ug/L		179	
	Cu	65		ug/L		69	
	Zn	66		ug/L		105	
	Zn	67		ug/L		9125	
	Zn	68		ug/L		695	
>	Ge	74		ug/L		194460	
	As	75		ug/L		335	
	Se	77		ug/L		8508	
	Se	82		ug/L		-10	
	Kr	83		ug/L		94	
	Sr	88		ug/L		172	
	Y	89		ug/L		29	
	Zr	90		ug/L		222	
	Mo	98		ug/L		76	
	Ag	107		ug/L		49	
	Cd	111		ug/L		24	
	Cd	114		ug/L		49	
>	In	115		ug/L		146234	
	Sn	120		ug/L		155	
	Sb	121		ug/L		424	
	Sb	123		ug/L		346	
	Ba	135		ug/L		38	
	Ba	137		ug/L		60	
	Ho	165		ug/L		34	
>	Lu	175		ug/L		198590	
	Tl	205		ug/L		915	
	Pb	208		ug/L		271	
	Th	232		ug/L		233	
	U	238		ug/L		191	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	0.9991
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 04, 2009 00:58:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Standard 1.945

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	7.519	1457	0.005
	Be	9	**10.000**	**ug/L**	7.847	1321	0.005
	B	11	**20.000**	**ug/L**	6.026	2406	0.008
	Na	23	**1000.000**	**ug/L**	8.178	1069333	3.940
	Mg	24	**1000.000**	**ug/L**	4.819	804723	3.045
	Al	27	**1000.000**	**ug/L**	2.145	1312372	4.948
	P	31	**1000.000**	**ug/L**	2.624	95863	0.350
	K	39	**1000.000**	**ug/L**	7.537	2572982	8.078
	Ca	43	**1000.000**	**ug/L**	4.934	4873	0.016
>	Sc	45		**ug/L**		263905	263904.866
	Ti	47	**10.000**	**ug/L**	1.597	2490	0.009
	V	51	**10.000**	**ug/L**	13.856	52484	0.063
	Cr	52	**10.000**	**ug/L**	4.641	19790	0.085
	Cr	53		**ug/L**		202820	-0.045
	Mn	55	**10.000**	**ug/L**	1.726	36585	0.134
	Fe	57	**1000.000**	**ug/L**	1.565	75725	0.265
	Co	59	**10.000**	**ug/L**	1.901	27054	0.102
	Ni	60	**10.000**	**ug/L**	1.795	5757	0.022
	Cu	63		**ug/L**		13240	0.049
	Cu	65	**10.000**	**ug/L**	2.689	6161	0.023
	Zn	66	**10.000**	**ug/L**	3.735	4544	0.022
	Zn	67		**ug/L**		8999	-0.002
	Zn	68		**ug/L**		3754	0.015
>	Ge	74		**ug/L**		199081	199080.554
	As	75	**10.000**	**ug/L**	6.665	6514	0.031
	Se	77		**ug/L**		8302	-0.002
	Se	82	**10.000**	**ug/L**	10.344	409	0.002
	Kr	83		**ug/L**		98	0.000
	Sr	88	**10.000**	**ug/L**	2.495	60108	0.408
	Y	89		**ug/L**		28	-0.000
	Zr	90	**10.000**	**ug/L**	1.871	33966	0.229
	Mo	98	**10.000**	**ug/L**	2.578	15412	0.104
	Ag	107	**10.000**	**ug/L**	3.222	26596	0.181
	Cd	111	**10.000**	**ug/L**	2.659	6298	0.043
	Cd	114		**ug/L**		15241	0.103
>	In	115		**ug/L**		147096	147095.867
	Sn	120	**10.000**	**ug/L**	2.933	27452	0.186
	Sb	121	**10.000**	**ug/L**	2.322	26450	0.177
	Sb	123		**ug/L**		20447	0.137
	Ba	135		**ug/L**		7021	0.035
	Ba	137	**10.000**	**ug/L**	2.781	12320	0.061
	Ho	165		**ug/L**		30	-0.000
>	Lu	175		**ug/L**		200628	200628.478
	Tl	205	**10.000**	**ug/L**	1.278	67367	0.331
	Pb	208	**10.000**	**ug/L**	1.278	75019	0.373
	Th	232	**10.000**	**ug/L**	0.896	77142	0.383
	U	238	**10.000**	**ug/L**	1.220	75456	0.375

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 04, 2009 01:02:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Standard 2.946

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.010**	ug/L	4.027	14431	0.055
	Be	9	**100.005**	ug/L	3.253	13006	0.050
	B	11	**200.013**	ug/L	4.645	22099	0.084
	Na	23	**10002.784**	ug/L	4.871	10598164	40.535
	Mg	24	**10004.469**	ug/L	5.138	8315220	31.889
	Al	27	**9993.795**	ug/L	0.385	12150908	46.562
	P	31	**9997.252**	ug/L	2.736	891897	3.407
	K	39	**9986.078**	ug/L	10.888	18898396	70.813
	Ca	43	**9996.557**	ug/L	2.198	40580	0.153
>	Sc	45		ug/L		260837	260836.667
	Ti	47	**99.954**	ug/L	2.558	21644	0.082
	V	51	**100.225**	ug/L	3.929	248290	0.816
	Cr	52	**99.976**	ug/L	2.835	213555	0.829
	Cr	53		ug/L		208495	-0.015
	Mn	55	**99.975**	ug/L	1.181	342300	1.308
	Fe	57	**9996.513**	ug/L	1.191	673831	2.562
	Co	59	**99.961**	ug/L	2.465	256193	0.982
	Ni	60	**99.969**	ug/L	1.989	54527	0.209
	Cu	63		ug/L		126894	0.486
	Cu	65	**99.974**	ug/L	0.769	58770	0.225
	Zn	66	**99.968**	ug/L	2.005	41789	0.216
	Zn	67		ug/L		14058	0.026
	Zn	68		ug/L		30116	0.152
>	Ge	74		ug/L		193112	193111.608
	As	75	**99.878**	ug/L	2.794	53594	0.276
	Se	77		ug/L		9929	0.008
	Se	82	**100.012**	ug/L	2.475	4111	0.021
	Kr	83		ug/L		88	-0.000
	Sr	88	**99.970**	ug/L	0.693	568807	3.956
	Y	89		ug/L		75	0.000
	Zr	90	**99.990**	ug/L	1.012	326689	2.271
	Mo	98	**99.989**	ug/L	2.186	148371	1.032
	Ag	107	**99.975**	ug/L	2.365	253206	1.761
	Cd	111	**99.983**	ug/L	1.555	60300	0.419
	Cd	114		ug/L		146428	1.018
>	In	115		ug/L		143762	143762.480
	Sn	120	**99.990**	ug/L	0.665	264471	1.839
	Sb	121	**100.015**	ug/L	0.598	258829	1.798
	Sb	123		ug/L		200890	1.395
	Ba	135		ug/L		68281	0.342
	Ba	137	**99.974**	ug/L	1.923	118869	0.595
	Ho	165		ug/L		38	0.000
>	Lu	175		ug/L		199624	199623.846
	Tl	205	**99.961**	ug/L	2.459	636443	3.185
	Pb	208	**99.943**	ug/L	1.720	703220	3.523
	Th	232	**99.943**	ug/L	2.474	723504	3.625
	U	238	**99.925**	ug/L	3.026	695829	3.487

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 04, 2009 01:07:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 1.947

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.612**	ug/L	4.170	7452	0.029
	Be	9	**51.573**	ug/L	2.572	6712	0.026
	B	11	**104.599**	ug/L	4.736	11646	0.044
	Na	23	**4688.287**	ug/L	7.639	4979923	18.999
	Mg	24	**5204.936**	ug/L	9.478	4320123	16.591
	Al	27	**5254.327**	ug/L	5.411	6383388	24.480
	P	31	**5088.406**	ug/L	1.725	455495	1.734
	K	39	**5458.499**	ug/L	4.317	10532706	38.707
	Ca	43	**5129.546**	ug/L	0.779	21153	0.078
>	Sc	45		ug/L		260780	260780.029
	Ti	47	**49.899**	ug/L	0.559	10914	0.041
	V	51	**47.078**	ug/L	4.509	135374	0.383
	Cr	52	**51.333**	ug/L	2.248	108363	0.426
	Cr	53		ug/L		195537	-0.064
	Mn	55	**48.722**	ug/L	2.494	167343	0.637
	Fe	57	**5108.123**	ug/L	2.617	346893	1.309
	Co	59	**51.726**	ug/L	1.404	132591	0.508
	Ni	60	**52.199**	ug/L	2.660	28493	0.109
	Cu	63		ug/L		62811	0.240
	Cu	65	**50.130**	ug/L	3.272	29482	0.113
	Zn	66	**51.519**	ug/L	2.178	21736	0.111
	Zn	67		ug/L		10914	0.009
	Zn	68		ug/L		15831	0.078
>	Ge	74		ug/L		194444	194443.902
	As	75	**49.625**	ug/L	1.306	26989	0.137
	Se	77		ug/L		8731	0.001
	Se	82	**49.673**	ug/L	1.204	2050	0.011
	Kr	83		ug/L		90	-0.000
	Sr	88	**49.868**	ug/L	1.612	288993	1.973
	Y	89		ug/L		43	0.000
	Zr	90	**48.886**	ug/L	2.025	162740	1.110
	Mo	98	**48.820**	ug/L	1.950	73805	0.504
	Ag	107	**49.539**	ug/L	1.412	127807	0.873
	Cd	111	**52.489**	ug/L	2.178	32243	0.220
	Cd	114		ug/L		77209	0.527
>	In	115		ug/L		146390	146389.750
	Sn	120	**49.197**	ug/L	4.531	132532	0.905
	Sb	121	**48.109**	ug/L	3.664	126960	0.865
	Sb	123		ug/L		99421	0.677
	Ba	135		ug/L		33867	0.170
	Ba	137	**51.032**	ug/L	2.182	60618	0.304
	Ho	165		ug/L		50	0.000
>	Lu	175		ug/L		199286	199285.778
	Tl	205	**49.173**	ug/L	1.513	313157	1.567
	Pb	208	**51.274**	ug/L	1.773	360394	1.807
	Th	232	**51.015**	ug/L	1.722	368948	1.850
	U	238	**53.227**	ug/L	1.762	370284	1.857

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	103.223				
	Be	9	103.146				
	B	11	104.599				
	Na	23	93.766				
	Mg	24	104.099				
	Al	27	104.046				
	P	31	101.768				
	K	39	109.170				
	Ca	43	102.591				
>	Sc	45		100.4			
	Ti	47	99.798				
	V	51	94.156				
	Cr	52	102.667				
	Cr	53					
	Mn	55	97.444				
	Fe	57	102.162				
	Co	59	103.451				
	Ni	60	104.398				
	Cu	63					
	Cu	65	100.260				
	Zn	66	103.038				
	Zn	67					
	Zn	68					
>	Ge	74		100.0			
	As	75	99.250				
	Se	77					
	Se	82	99.346				
	Kr	83					
	Sr	88	99.735				
	Y	89					
	Zr	90	97.772				
	Mo	98	97.641				
	Ag	107	99.079				
	Cd	111	104.978				
	Cd	114					
>	In	115		100.1			
	Sn	120	98.395				
	Sb	121	96.218				
	Sb	123					
	Ba	135					
	Ba	137	102.064				
	Ho	165					
>	Lu	175		100.4			
	Tl	205	98.346				
	Pb	208	102.547				
	Th	232	102.029				
	U	238	106.453				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 04, 2009 01:12:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 2.948

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.091**	ug/L	33.031	27	0.000
	Be	9	**-0.007**	ug/L	318.475	14	-0.000
	B	11	**3.273**	ug/L	20.537	557	0.001
	Na	23	**1.373**	ug/L	337.989	31702	0.006
	Mg	24	**2.027**	ug/L	33.571	3334	0.006
	Al	27	**-0.817**	ug/L	303.666	5001	-0.004
	P	31	**-3.319**	ug/L	22.959	3137	-0.001
	K	39	**26.232**	ug/L	21.357	478209	0.186
	Ca	43	**-18.864**	ug/L	66.672	608	-0.000
>	Sc	45		ug/L		258709	258709.162
	Ti	47	**0.015**	ug/L	793.491	221	0.000
	V	51	**-2.335**	ug/L	60.770	30222	-0.019
	Cr	52	**0.446**	ug/L	27.498	-1588	0.004
	Cr	53		ug/L		192257	-0.071
	Mn	55	**-0.023**	ug/L	27.497	1121	-0.000
	Fe	57	**3.996**	ug/L	41.483	5904	0.001
	Co	59	**0.001**	ug/L	304.267	137	0.000
	Ni	60	**-0.015**	ug/L	201.405	68	-0.000
	Cu	63		ug/L		179	0.000
	Cu	65	**0.019**	ug/L	131.617	80	0.000
	Zn	66	**0.024**	ug/L	110.767	117	0.000
	Zn	67		ug/L		8089	-0.006
	Zn	68		ug/L		646	-0.000
>	Ge	74		ug/L		197285	197284.774
	As	75	**1.112**	ug/L	36.901	945	0.003
	Se	77		ug/L		8027	-0.003
	Se	82	**-0.105**	ug/L	471.784	-15	-0.000
	Kr	83		ug/L		101	0.000
	Sr	88	**0.005**	ug/L	15.375	199	0.000
	Y	89		ug/L		28	-0.000
	Zr	90	**0.123**	ug/L	22.963	621	0.003
	Mo	98	**0.080**	ug/L	19.618	193	0.001
	Ag	107	**0.008**	ug/L	47.454	68	0.000
	Cd	111	**-0.009**	ug/L	270.240	18	-0.000
	Cd	114		ug/L		57	0.000
>	In	115		ug/L		143922	143921.586
	Sn	120	**0.024**	ug/L	11.411	217	0.000
	Sb	121	**0.868**	ug/L	23.776	2662	0.016
	Sb	123		ug/L		2089	0.012
	Ba	135		ug/L		36	-0.000
	Ba	137	**0.008**	ug/L	132.971	68	0.000
	Ho	165		ug/L		29	-0.000
>	Lu	175		ug/L		192783	192782.652
	Tl	205	**0.511**	ug/L	24.227	4029	0.016
	Pb	208	**0.011**	ug/L	5.340	335	0.000
	Th	232	**0.109**	ug/L	39.306	985	0.004
	U	238	**0.021**	ug/L	13.006	326	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		99.6			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.1			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 04, 2009 01:16:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 3.949

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**11.263**	ug/L	3.123	1591	0.006
	Be	9	**0.571**	ug/L	4.231	86	0.000
	B	11	**17.097**	ug/L	2.984	2018	0.007
	Na	23	**236.090**	ug/L	7.652	272595	0.957
	Mg	24	**15.887**	ug/L	37.425	14341	0.051
	Al	27	**35.958**	ug/L	25.877	48419	0.168
	P	31	**46.399**	ug/L	7.997	7360	0.016
	K	39	**390.279**	ug/L	10.340	1121012	2.768
	Ca	43	**202.038**	ug/L	8.017	1451	0.003
>	Sc	45		ug/L		253462	253462.025
	Ti	47	**8.973**	ug/L	3.382	2081	0.007
	V	51	**6.413**	ug/L	24.897	47680	0.052
	Cr	52	**10.718**	ug/L	0.476	20026	0.089
	Cr	53		ug/L		194012	-0.047
	Mn	55	**5.608**	ug/L	3.809	19754	0.073
	Fe	57	**115.524**	ug/L	5.057	13019	0.030
	Co	59	**1.077**	ug/L	4.071	2811	0.011
	Ni	60	**2.199**	ug/L	6.973	1237	0.005
	Cu	63		ug/L		1627	0.006
	Cu	65	**1.216**	ug/L	3.217	762	0.003
	Zn	66	**10.554**	ug/L	2.251	4529	0.023
	Zn	67		ug/L		8625	-0.002
	Zn	68		ug/L		3615	0.015
>	Ge	74		ug/L		194083	194082.815
	As	75	**6.167**	ug/L	9.828	3641	0.017
	Se	77		ug/L		8036	-0.002
	Se	82	**5.196**	ug/L	11.268	205	0.001
	Kr	83		ug/L		102	0.000
	Sr	88	**10.583**	ug/L	1.572	60625	0.419
	Y	89		ug/L		24	-0.000
	Zr	90	**1.997**	ug/L	0.620	6769	0.045
	Mo	98	**0.542**	ug/L	1.799	882	0.006
	Ag	107	**1.061**	ug/L	2.993	2747	0.019
	Cd	111	**1.005**	ug/L	3.091	632	0.004
	Cd	114		ug/L		1536	0.010
>	In	115		ug/L		144379	144379.265
	Sn	120	**5.098**	ug/L	2.215	13688	0.094
	Sb	121	**3.106**	ug/L	1.790	8480	0.056
	Sb	123		ug/L		6572	0.043
	Ba	135		ug/L		1414	0.007
	Ba	137	**2.088**	ug/L	3.703	2452	0.012
	Ho	165		ug/L		35	0.000
>	Lu	175		ug/L		192559	192559.169
	Tl	205	**1.160**	ug/L	0.855	8006	0.037
	Pb	208	**2.174**	ug/L	3.041	15012	0.077
	Th	232	**1.080**	ug/L	2.738	7767	0.039
	U	238	**0.217**	ug/L	1.557	1641	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.630				
	Be	9	114.132				
	B	11	113.981				
	Na	23	94.436				
	Mg	24	105.916				
	Al	27	119.860				
	P	31	92.798				
	K	39	130.093				
	Ca	43	101.019				
>	Sc	45			97.6		
	Ti	47	89.725				
	V	51	64.132				
	Cr	52	107.181				
	Cr	53					
	Mn	55	112.160				
	Fe	57	115.524				
	Co	59	107.730				
	Ni	60	109.936				
	Cu	63					
	Cu	65	121.591				
	Zn	66	105.537				
	Zn	67					
	Zn	68					
>	Ge	74			99.8		
	As	75	123.336				
	Se	77					
	Se	82	103.929				
	Kr	83					
	Sr	88	105.828				
	Y	89					
	Zr	90	99.865				
	Mo	98	108.338				
	Ag	107	106.099				
	Cd	111	100.503				
	Cd	114					
>	In	115			98.7		
	Sn	120	101.969				
	Sb	121	103.548				
	Sb	123					
	Ba	135					
	Ba	137	104.392				
	Ho	165					
>	Lu	175			97.0		
	Tl	205	116.023				
	Pb	208	108.694				
	Th	232	108.005				
	U	238	108.362				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 3	K	39CRDL is out of limits
QC Std 3	V	51CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 04, 2009 01:21:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 4.950

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.147**	ug/L	27.599	33	0.000
	Be	9	**0.051**	ug/L	74.719	20	0.000
	B	11	**1.727**	ug/L	3.074	367	0.001
	Na	23	**105347.607**	ug/L	8.165	104363880	426.907
	Mg	24	**103491.822**	ug/L	7.556	80606174	329.878
	Al	27	**104460.384**	ug/L	0.629	118956833	486.692
	P	31	**99695.908**	ug/L	3.004	8305761	33.974
	K	39	**110305.143**	ug/L	6.532	191548543	782.190
	Ca	43	**100643.864**	ug/L	2.058	376994	1.540
>	Sc	45		ug/L		244404	244403.715
	Ti	47	**1832.225**	ug/L	1.505	368284	1.506
	V	51	**-4.862**	ug/L	11.323	23513	-0.040
	Cr	52	**3.246**	ug/L	6.051	4173	0.027
	Cr	53		ug/L		161729	-0.152
	Mn	55	**5.892**	ug/L	2.127	19969	0.077
	Fe	57	**99394.419**	ug/L	1.789	6230519	25.472
	Co	59	**0.216**	ug/L	3.988	645	0.002
	Ni	60	**2.537**	ug/L	3.495	1367	0.005
	Cu	63		ug/L		2556	0.010
	Cu	65	**2.444**	ug/L	7.986	1410	0.006
	Zn	66	**3.060**	ug/L	5.928	1322	0.007
	Zn	67		ug/L		7410	-0.007
	Zn	68		ug/L		892	0.001
>	Ge	74		ug/L		184938	184937.634
	As	75	**0.217**	ug/L	327.200	426	0.001
	Se	77		ug/L		6838	-0.007
	Se	82	**-0.862**	ug/L	38.289	-44	-0.000
	Kr	83		ug/L		149	0.000
	Sr	88	**1.115**	ug/L	1.863	6188	0.044
	Y	89		ug/L		172	0.001
	Zr	90	**0.541**	ug/L	38.934	1893	0.012
	Mo	98	**1965.314**	ug/L	2.237	2769408	20.279
	Ag	107	**0.047**	ug/L	8.821	160	0.001
	Cd	111	**0.292**	ug/L	21.591	189	0.001
	Cd	114		ug/L		3054	0.022
>	In	115		ug/L		136595	136595.465
	Sn	120	**0.171**	ug/L	10.093	574	0.003
	Sb	121	**0.278**	ug/L	18.762	1080	0.005
	Sb	123		ug/L		856	0.004
	Ba	135		ug/L		472	0.002
	Ba	137	**0.657**	ug/L	3.679	794	0.004
	Ho	165		ug/L		433	0.002
>	Lu	175		ug/L		188523	188523.020
	Tl	205	**0.054**	ug/L	17.839	1193	0.002
	Pb	208	**0.170**	ug/L	5.551	1387	0.006
	Th	232	**0.023**	ug/L	58.371	378	0.001
	U	238	**-0.015**	ug/L	6.023	83	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23	105.348				
	Mg	24	103.492				
	Al	27	104.460				
	P	31	99.696				
	K	39	110.305				
	Ca	43	100.644				
>	Sc	45			94.1		
	Ti	47	91.611				
	V	51					
	Cr	52	87.739				
	Cr	53					
	Mn	55	101.581				
	Fe	57	99.394				
	Co	59	86.377				
	Ni	60	93.963				
	Cu	63					
	Cu	65	84.271				
	Zn	66	84.991				
	Zn	67					
	Zn	68					
>	Ge	74			95.1		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	92.916				
	Y	89					
	Zr	90					
	Mo	98	98.266				
	Ag	107					
	Cd	111	73.051				
	Cd	114					
>	In	115			93.4		
	Sn	120					
	Sb	121	278.099				
	Sb	123					
	Ba	135					
	Ba	137	98.004				
	Ho	165					
>	Lu	175			94.9		
	Tl	205					
	Pb	208	85.081				
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 04, 2009 01:26:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 5.951

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**22.447**	ug/L	3.271	3071	0.012
	Be	9	**22.647**	ug/L	2.881	2793	0.011
	B	11	**22.317**	ug/L	5.531	2499	0.009
	Na	23	**97790.103**	ug/L	12.955	97417314	396.281
	Mg	24	**94023.155**	ug/L	1.742	73845656	299.697
	Al	27	**100200.703**	ug/L	1.664	115050788	466.846
	P	31	**99104.746**	ug/L	4.819	8317378	33.772
	K	39	**107503.666**	ug/L	3.504	188144032	762.325
	Ca	43	**101032.454**	ug/L	3.639	381309	1.546
>	Sc	45		ug/L		246444	246443.634
	Ti	47	**1816.977**	ug/L	2.476	368076	1.494
	V	51	**15.809**	ug/L	5.333	65189	0.129
	Cr	52	**23.148**	ug/L	4.012	44834	0.192
	Cr	53		ug/L		167329	-0.134
	Mn	55	**26.240**	ug/L	3.290	85676	0.343
	Fe	57	**99334.417**	ug/L	5.043	6273094	25.457
	Co	59	**20.577**	ug/L	4.415	49889	0.202
	Ni	60	**21.647**	ug/L	3.190	11207	0.045
	Cu	63		ug/L		26228	0.106
	Cu	65	**22.018**	ug/L	3.120	12273	0.050
	Zn	66	**22.501**	ug/L	1.787	9078	0.049
	Zn	67		ug/L		8340	-0.002
	Zn	68		ug/L		6338	0.031
>	Ge	74		ug/L		184781	184780.836
	As	75	**21.202**	ug/L	3.823	11137	0.059
	Se	77		ug/L		7594	-0.003
	Se	82	**20.519**	ug/L	5.601	798	0.004
	Kr	83		ug/L		141	0.000
	Sr	88	**21.915**	ug/L	1.246	116339	0.867
	Y	89		ug/L		196	0.001
	Zr	90	**21.287**	ug/L	0.765	64981	0.484
	Mo	98	**2062.342**	ug/L	0.845	2851028	21.280
	Ag	107	**20.448**	ug/L	2.176	48308	0.360
	Cd	111	**20.830**	ug/L	3.805	11724	0.087
	Cd	114		ug/L		30708	0.229
>	In	115		ug/L		133985	133985.483
	Sn	120	**20.800**	ug/L	1.418	51387	0.382
	Sb	121	**21.977**	ug/L	1.448	53305	0.395
	Sb	123		ug/L		41005	0.304
	Ba	135		ug/L		13238	0.070
	Ba	137	**21.011**	ug/L	2.102	23759	0.125
	Ho	165		ug/L		422	0.002
>	Lu	175		ug/L		189448	189448.368
	Tl	205	**18.980**	ug/L	0.849	115453	0.605
	Pb	208	**20.378**	ug/L	2.579	136285	0.718
	Th	232	**21.405**	ug/L	2.097	147266	0.776
	U	238	**21.954**	ug/L	0.738	145290	0.766

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.235				
	Be	9	113.233				
	B	11	111.585				
	Na	23	97.790				
	Mg	24	94.023				
	Al	27	100.201				
	P	31	99.105				
	K	39	107.504				
	Ca	43	101.032				
>	Sc	45			94.9		
	Ti	47	90.849				
	V	51	79.043				
	Cr	52	97.672				
	Cr	53					
	Mn	55	101.706				
	Fe	57	99.334				
	Co	59	101.614				
	Ni	60	95.360				
	Cu	63					
	Cu	65	96.147				
	Zn	66	95.343				
	Zn	67					
	Zn	68					
>	Ge	74			95.0		
	As	75	106.010				
	Se	77					
	Se	82	102.594				
	Kr	83					
	Sr	88	103.372				
	Y	89					
	Zr	90	106.433				
	Mo	98	103.117				
	Ag	107	102.238				
	Cd	111	102.110				
	Cd	114					
>	In	115			91.6		
	Sn	120	104.001				
	Sb	121	109.336				
	Sb	123					
	Ba	135					
	Ba	137	101.652				
	Ho	165					
>	Lu	175			95.4		
	Tl	205	94.900				
	Pb	208	100.881				
	Th	232	107.023				
	U	238	109.768				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 5	V	51ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 01:31:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.952

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.337**	ug/L	1.464	8073	0.030
	Be	9	**53.789**	ug/L	1.558	7203	0.027
	B	11	**105.199**	ug/L	2.113	12058	0.044
	Na	23	**4911.740**	ug/L	0.663	5370150	19.904
	Mg	24	**4932.779**	ug/L	3.513	4219907	15.723
	Al	27	**5374.446**	ug/L	7.180	6721838	25.040
	P	31	**5097.195**	ug/L	1.531	469431	1.737
	K	39	**5427.945**	ug/L	4.543	10770686	38.490
	Ca	43	**5149.006**	ug/L	3.385	21837	0.079
>	Sc	45		ug/L		268231	268230.838
	Ti	47	**51.234**	ug/L	0.201	11522	0.042
	V	51	**49.737**	ug/L	1.432	145104	0.405
	Cr	52	**51.215**	ug/L	1.722	111255	0.425
	Cr	53		ug/L		197093	-0.079
	Mn	55	**52.111**	ug/L	1.062	184087	0.682
	Fe	57	**5206.112**	ug/L	1.021	363700	1.334
	Co	59	**51.248**	ug/L	0.492	135155	0.503
	Ni	60	**51.248**	ug/L	1.311	28789	0.107
	Cu	63		ug/L		66874	0.249
	Cu	65	**51.848**	ug/L	0.957	31378	0.117
	Zn	66	**49.459**	ug/L	2.983	21940	0.107
	Zn	67		ug/L		10475	0.004
	Zn	68		ug/L		16420	0.077
>	Ge	74		ug/L		204522	204521.508
	As	75	**49.992**	ug/L	5.332	28546	0.138
	Se	77		ug/L		9312	0.002
	Se	82	**49.645**	ug/L	4.556	2152	0.011
	Kr	83		ug/L		92	-0.000
	Sr	88	**51.410**	ug/L	8.081	298222	2.034
	Y	89		ug/L		54	0.000
	Zr	90	**51.568**	ug/L	9.281	171738	1.171
	Mo	98	**52.756**	ug/L	10.131	79753	0.544
	Ag	107	**51.688**	ug/L	7.396	133540	0.911
	Cd	111	**51.746**	ug/L	9.002	31809	0.217
	Cd	114		ug/L		75266	0.513
>	In	115		ug/L		147088	147088.124
	Sn	120	**50.476**	ug/L	7.753	136172	0.928
	Sb	121	**51.458**	ug/L	8.458	135911	0.925
	Sb	123		ug/L		105824	0.720
	Ba	135		ug/L		34952	0.174
	Ba	137	**52.096**	ug/L	2.603	62134	0.310
	Ho	165		ug/L		33	-0.000
>	Lu	175		ug/L		200152	200152.217
	Tl	205	**50.761**	ug/L	3.284	324482	1.617
	Pb	208	**52.196**	ug/L	2.434	368344	1.840
	Th	232	**52.198**	ug/L	2.279	379033	1.893
	U	238	**52.946**	ug/L	1.999	369837	1.847

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	108.674				
	Be	9	107.577				
	B	11	105.199				
	Na	23	98.235				
	Mg	24	98.656				
	Al	27	106.425				
	P	31	101.944				
	K	39	108.559				
	Ca	43	102.980				
>	Sc	45			103.3		
	Ti	47	102.468				
	V	51	99.475				
	Cr	52	102.430				
	Cr	53					
	Mn	55	104.223				
	Fe	57	104.122				
	Co	59	102.495				
	Ni	60	102.496				
	Cu	63					
	Cu	65	103.696				
	Zn	66	98.917				
	Zn	67					
	Zn	68					
>	Ge	74			105.2		
	As	75	99.983				
	Se	77					
	Se	82	99.290				
	Kr	83					
	Sr	88	102.820				
	Y	89					
	Zr	90	103.136				
	Mo	98	105.512				
	Ag	107	103.376				
	Cd	111	103.492				
	Cd	114					
>	In	115			100.6		
	Sn	120	100.952				
	Sb	121	102.916				
	Sb	123					
	Ba	135					
	Ba	137	104.191				
	Ho	165					
>	Lu	175			100.8		
	Tl	205	101.521				
	Pb	208	104.391				
	Th	232	104.397				
	U	238	105.891				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 01:35:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.953

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.037**	ug/L	39.891	21	0.000
	Be	9	**0.017**	ug/L	94.918	18	0.000
	B	11	**2.422**	ug/L	37.849	489	0.001
	Na	23	**12.214**	ug/L	23.570	45406	0.049
	Mg	24	**1.425**	ug/L	77.306	3000	0.005
	Al	27	**1.070**	ug/L	113.547	7669	0.005
	P	31	**-4.038**	ug/L	50.835	3242	-0.001
	K	39	**11.979**	ug/L	62.909	477181	0.085
	Ca	43	**-22.224**	ug/L	32.146	627	-0.000
>	Sc	45		ug/L		273055	273055.341
	Ti	47	**0.071**	ug/L	136.716	245	0.000
	V	51	**-3.177**	ug/L	53.229	29981	-0.026
	Cr	52	**0.486**	ug/L	27.409	-1582	0.004
	Cr	53		ug/L		195659	-0.097
	Mn	55	**-0.024**	ug/L	77.299	1180	-0.000
	Fe	57	**8.438**	ug/L	57.317	6538	0.002
	Co	59	**-0.005**	ug/L	63.633	130	-0.000
	Ni	60	**-0.006**	ug/L	86.049	77	-0.000
	Cu	63		ug/L		161	-0.000
	Cu	65	**0.000**	ug/L	4059.776	73	0.000
	Zn	66	**0.014**	ug/L	140.150	118	0.000
	Zn	67		ug/L		7650	-0.010
	Zn	68		ug/L		558	-0.001
>	Ge	74		ug/L		206836	206836.307
	As	75	**0.560**	ug/L	24.869	675	0.002
	Se	77		ug/L		8687	-0.002
	Se	82	**0.159**	ug/L	149.844	-4	0.000
	Kr	83		ug/L		92	-0.000
	Sr	88	**0.002**	ug/L	160.611	186	0.000
	Y	89		ug/L		28	-0.000
	Zr	90	**0.021**	ug/L	37.313	299	0.000
	Mo	98	**0.170**	ug/L	24.053	340	0.002
	Ag	107	**0.007**	ug/L	15.247	69	0.000
	Cd	111	**-0.013**	ug/L	90.304	16	-0.000
	Cd	114		ug/L		49	-0.000
>	In	115		ug/L		149357	149356.811
	Sn	120	**0.006**	ug/L	24.610	175	0.000
	Sb	121	**0.236**	ug/L	22.137	1068	0.004
	Sb	123		ug/L		860	0.003
	Ba	135		ug/L		37	-0.000
	Ba	137	**-0.005**	ug/L	66.381	55	-0.000
	Ho	165		ug/L		39	0.000
>	Lu	175		ug/L		201112	201111.744
	Tl	205	**0.703**	ug/L	29.459	5427	0.022
	Pb	208	**0.009**	ug/L	62.197	341	0.000
	Th	232	**0.067**	ug/L	43.818	721	0.002
	U	238	**0.014**	ug/L	21.836	295	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			105.1		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			106.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			102.1		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			101.3		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Saturday, July 04, 2009 01:40:35
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 10.954

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**1099.862**	ug/L	1.353	152815	0.608
	Be	9	**1081.591**	ug/L	1.897	135415	0.539
	B	11	**1.100**	ug/L	19.996	312	0.000
	Na	23	**51774.825**	ug/L	2.364	52760820	209.811
	Mg	24	**53429.185**	ug/L	5.709	42816613	170.304
	Al	27	**52455.497**	ug/L	1.369	61431439	244.396
	P	31	**26054.920**	ug/L	1.116	2234600	8.879
	K	39	**55477.396**	ug/L	4.559	99268375	393.399
	Ca	43	**51573.570**	ug/L	0.294	198976	0.789
>	Sc	45		ug/L		251311	251310.569
	Ti	47	**29.799**	ug/L	3.169	6365	0.024
	V	51	**1017.116**	ug/L	3.308	2115936	8.285
	Cr	52	**968.886**	ug/L	4.740	2016487	8.032
	Cr	53		ug/L		418911	0.853
	Mn	55	**1027.813**	ug/L	1.873	3379654	13.445
	Fe	57	**51929.528**	ug/L	2.671	3349360	13.308
	Co	59	**988.104**	ug/L	1.800	2439108	9.705
	Ni	60	**973.808**	ug/L	2.344	511296	2.034
	Cu	63		ug/L		1173705	4.670
	Cu	65	**1000.270**	ug/L	1.674	566029	2.252
	Zn	66	**2308.684**	ug/L	2.159	975222	4.986
	Zn	67		ug/L		161208	0.777
	Zn	68		ug/L		696747	3.558
>	Ge	74		ug/L		195626	195626.080
	As	75	**919.724**	ug/L	0.712	497243	2.540
	Se	77		ug/L		20634	0.062
	Se	82	**473.085**	ug/L	2.457	19725	0.101
	Kr	83		ug/L		125	0.000
	Sr	88	**1011.810**	ug/L	1.310	5404052	40.035
	Y	89		ug/L		445	0.003
	Zr	90	**503.453**	ug/L	0.745	1543843	11.435
	Mo	98	**1005.809**	ug/L	1.132	1401015	10.378
	Ag	107	**248.353**	ug/L	1.307	590711	4.376
	Cd	111	**999.875**	ug/L	1.626	566111	4.194
	Cd	114		ug/L		1318894	9.770
>	In	115		ug/L		134984	134984.422
	Sn	120	**995.426**	ug/L	0.676	2470915	18.305
	Sb	121	**251.716**	ug/L	0.249	611090	4.524
	Sb	123		ug/L		477027	3.532
	Ba	135		ug/L		1487696	7.820
	Ba	137	**2403.132**	ug/L	0.849	2722519	14.311
	Ho	165		ug/L		197	0.001
>	Lu	175		ug/L		190246	190245.768
	Tl	205	**458.139**	ug/L	2.653	2777391	14.598
	Pb	208	**4789.372**	ug/L	1.721	32109501	168.804
	Th	232	**2371.066**	ug/L	4.111	16355640	85.997
	U	238	**5034.849**	ug/L	2.398	33414971	175.678

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	109.986				
	Be	9	108.159				
	B	11					
	Na	23	103.550				
	Mg	24	106.858				
	Al	27	104.911				
	P	31	104.220				
	K	39	110.955				
	Ca	43	103.147				
>	Sc	45			96.8		
	Ti	47					
	V	51	101.712				
	Cr	52	96.889				
	Cr	53					
	Mn	55	102.781				
	Fe	57	103.859				
	Co	59	98.810				
	Ni	60	97.381				
	Cu	63					
	Cu	65	100.027				
	Zn	66	92.347				
	Zn	67					
	Zn	68					
>	Ge	74			100.6		
	As	75	91.972				
	Se	77					
	Se	82	94.617				
	Kr	83					
	Sr	88	101.181				
	Y	89					
	Zr	90	100.691				
	Mo	98	100.581				
	Ag	107	99.341				
	Cd	111	99.988				
	Cd	114					
>	In	115			92.3		
	Sn	120	99.543				
	Sb	121	100.686				
	Sb	123					
	Ba	135					
	Ba	137	96.125				
	Ho	165					
>	Lu	175			95.8		
	Tl	205	91.628				
	Pb	208	95.787				
	Th	232	94.843				
	U	238	100.697				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 10	K	39LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Saturday, July 04, 2009 01:45:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 11.955

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.296**	ug/L	1.785	8225	0.031
	Be	9	**52.007**	ug/L	0.954	6972	0.026
	B	11	**102.366**	ug/L	1.049	11752	0.043
	Na	23	**5311.112**	ug/L	7.115	5809479	21.523
	Mg	24	**5118.306**	ug/L	6.832	4379710	16.315
	Al	27	**5333.428**	ug/L	4.038	6674677	24.849
	P	31	**4914.763**	ug/L	1.514	453178	1.675
	K	39	**5801.844**	ug/L	5.997	11487425	41.142
	Ca	43	**4981.100**	ug/L	1.543	21169	0.076
>	Sc	45		ug/L		268509	268509.315
	Ti	47	**48.487**	ug/L	4.413	10922	0.040
	V	51	**46.743**	ug/L	4.282	138653	0.381
	Cr	52	**50.104**	ug/L	2.809	108850	0.415
	Cr	53		ug/L		190467	-0.104
	Mn	55	**50.078**	ug/L	2.912	177090	0.655
	Fe	57	**5002.624**	ug/L	3.319	349946	1.282
	Co	59	**50.507**	ug/L	2.798	133297	0.496
	Ni	60	**49.131**	ug/L	1.808	27626	0.103
	Cu	63		ug/L		65812	0.244
	Cu	65	**50.723**	ug/L	2.433	30727	0.114
	Zn	66	**49.991**	ug/L	1.773	21818	0.108
	Zn	67		ug/L		10648	0.006
	Zn	68		ug/L		15940	0.076
>	Ge	74		ug/L		201082	201082.139
	As	75	**49.497**	ug/L	1.925	27838	0.137
	Se	77		ug/L		8481	-0.002
	Se	82	**48.554**	ug/L	1.638	2072	0.010
	Kr	83		ug/L		90	-0.000
	Sr	88	**49.968**	ug/L	1.094	286901	1.977
	Y	89		ug/L		59	0.000
	Zr	90	**51.146**	ug/L	4.056	168622	1.162
	Mo	98	**52.148**	ug/L	3.481	78085	0.538
	Ag	107	**50.064**	ug/L	2.808	127950	0.882
	Cd	111	**49.627**	ug/L	3.425	30199	0.208
	Cd	114		ug/L		73058	0.503
>	In	115		ug/L		145048	145047.817
	Sn	120	**50.231**	ug/L	4.750	134040	0.924
	Sb	121	**53.343**	ug/L	2.496	139433	0.959
	Sb	123		ug/L		107365	0.738
	Ba	135		ug/L		34471	0.177
	Ba	137	**52.488**	ug/L	2.467	60747	0.313
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194160	194160.148
	Tl	205	**51.283**	ug/L	0.432	318155	1.634
	Pb	208	**53.167**	ug/L	0.688	364096	1.874
	Th	232	**52.702**	ug/L	0.606	371362	1.911
	U	238	**53.496**	ug/L	1.568	362621	1.867

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	110.592				
	Be	9	104.013				
	B	11	102.366				
	Na	23	106.222				
	Mg	24	102.366				
	Al	27	105.612				
	P	31	98.295				
	K	39	116.037				
	Ca	43	99.622				
>	Sc	45		103.4			
	Ti	47	96.974				
	V	51	93.487				
	Cr	52	100.209				
	Cr	53					
	Mn	55	100.155				
	Fe	57	100.052				
	Co	59	101.014				
	Ni	60	98.263				
	Cu	63					
	Cu	65	101.446				
	Zn	66	99.982				
	Zn	67					
	Zn	68					
>	Ge	74		103.4			
	As	75	98.995				
	Se	77					
	Se	82	97.108				
	Kr	83					
	Sr	88	99.935				
	Y	89					
	Zr	90	102.291				
	Mo	98	104.297				
	Ag	107	100.128				
	Cd	111	99.254				
	Cd	114					
>	In	115		99.2			
	Sn	120	100.463				
	Sb	121	106.685				
	Sb	123					
	Ba	135					
	Ba	137	104.977				
	Ho	165					
>	Lu	175		97.8			
	Tl	205	102.566				
	Pb	208	106.335				
	Th	232	105.403				
	U	238	106.991				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 11	Li	7CCV is out of limits (+/- 10%)
QC Std 11	K	39CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Saturday, July 04, 2009 01:50:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 12.956

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.293**	ug/L	4.290	58	0.000
	Be	9	**0.017**	ug/L	293.712	17	0.000
	B	11	**2.235**	ug/L	19.071	458	0.001
	Na	23	**0.169**	ug/L	2773.444	31368	0.001
	Mg	24	**2.290**	ug/L	128.589	3667	0.007
	Al	27	**1.743**	ug/L	51.966	8336	0.008
	P	31	**-2.130**	ug/L	100.677	3344	-0.001
	K	39	**17.381**	ug/L	30.404	476485	0.123
	Ca	43	**-21.581**	ug/L	39.372	616	-0.000
>	Sc	45		ug/L		266861	266861.125
	Ti	47	**-0.061**	ug/L	47.344	211	-0.000
	V	51	**-3.375**	ug/L	33.299	28896	-0.027
	Cr	52	**0.623**	ug/L	14.099	-1247	0.005
	Cr	53		ug/L		188907	-0.106
	Mn	55	**0.050**	ug/L	157.186	1413	0.001
	Fe	57	**9.374**	ug/L	29.720	6457	0.002
	Co	59	**0.018**	ug/L	33.386	186	0.000
	Ni	60	**-0.004**	ug/L	755.901	76	-0.000
	Cu	63		ug/L		221	0.000
	Cu	65	**0.036**	ug/L	13.517	93	0.000
	Zn	66	**0.054**	ug/L	29.904	132	0.000
	Zn	67		ug/L		7579	-0.009
	Zn	68		ug/L		640	-0.000
>	Ge	74		ug/L		200384	200383.637
	As	75	**0.966**	ug/L	47.045	879	0.003
	Se	77		ug/L		7997	-0.004
	Se	82	**0.162**	ug/L	145.557	-3	0.000
	Kr	83		ug/L		92	-0.000
	Sr	88	**0.021**	ug/L	23.610	291	0.001
	Y	89		ug/L		28	-0.000
	Zr	90	**0.052**	ug/L	4.788	388	0.001
	Mo	98	**0.239**	ug/L	6.463	430	0.002
	Ag	107	**0.017**	ug/L	20.675	92	0.000
	Cd	111	**0.020**	ug/L	134.806	35	0.000
	Cd	114		ug/L		66	0.000
>	In	115		ug/L		144149	144149.228
	Sn	120	**0.063**	ug/L	13.426	321	0.001
	Sb	121	**1.358**	ug/L	15.857	3942	0.024
	Sb	123		ug/L		3066	0.019
	Ba	135		ug/L		61	0.000
	Ba	137	**0.045**	ug/L	35.699	111	0.000
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194396	194396.402
	Tl	205	**1.027**	ug/L	24.516	7247	0.033
	Pb	208	**0.087**	ug/L	30.499	860	0.003
	Th	232	**0.185**	ug/L	28.582	1531	0.007
	U	238	**0.207**	ug/L	20.207	1589	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		102.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 12	Tl	205CCB is out of limits (+/- PQL)
QC Std 12	U	238CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201871711
Sample Date/Time: Saturday, July 04, 2009 01:54:49
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871711.957

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.349**	ug/L	12.054	66	0.000
	Be	9	**-0.040**	ug/L	117.355	10	-0.000
	B	11	**0.983**	ug/L	34.872	316	0.000
	Na	23	**-18.342**	ug/L	5.113	11338	-0.074
	Mg	24	**-1.228**	ug/L	55.413	667	-0.004
	Al	27	**-2.282**	ug/L	106.587	3334	-0.011
	P	31	**-15.559**	ug/L	12.337	2115	-0.005
	K	39	**29.666**	ug/L	29.954	498212	0.210
	Ca	43	**35.746**	ug/L	21.250	847	0.001
>	Sc	45		ug/L		266073	266072.772
	Ti	47	**0.217**	ug/L	37.506	271	0.000
	V	51	**3.904**	ug/L	38.759	44613	0.032
	Cr	52	**0.747**	ug/L	26.771	-969	0.006
	Cr	53		ug/L		397084	0.679
	Mn	55	**0.177**	ug/L	5.710	1849	0.002
	Fe	57	**15.265**	ug/L	12.684	6839	0.004
	Co	59	**-0.013**	ug/L	24.159	104	-0.000
	Ni	60	**0.025**	ug/L	68.235	92	0.000
	Cu	63		ug/L		288	0.000
	Cu	65	**0.113**	ug/L	18.146	138	0.000
	Zn	66	**0.570**	ug/L	10.223	370	0.001
	Zn	67		ug/L		18527	0.042
	Zn	68		ug/L		1223	0.002
>	Ge	74		ug/L		208569	208569.397
	As	75	**3.847**	ug/L	17.694	2578	0.011
	Se	77		ug/L		23088	0.067
	Se	82	**-0.171**	ug/L	215.730	-18	-0.000
	Kr	83		ug/L		94	-0.000
	Sr	88	**0.012**	ug/L	22.862	248	0.000
	Y	89		ug/L		27	-0.000
	Zr	90	**0.021**	ug/L	12.113	299	0.000
	Mo	98	**0.049**	ug/L	8.592	155	0.001
	Ag	107	**-0.007**	ug/L	11.236	32	-0.000
	Cd	111	**-0.023**	ug/L	39.023	10	-0.000
	Cd	114		ug/L		32	-0.000
>	In	115		ug/L		150788	150788.156
	Sn	120	**0.136**	ug/L	2.729	537	0.002
	Sb	121	**1.083**	ug/L	12.628	3370	0.019
	Sb	123		ug/L		2593	0.015
	Ba	135		ug/L		66	0.000
	Ba	137	**0.032**	ug/L	25.655	98	0.000
	Ho	165		ug/L		31	-0.000
>	Lu	175		ug/L		198113	198112.901
	Tl	205	**0.236**	ug/L	6.775	2405	0.008
	Pb	208	**0.002**	ug/L	63.559	281	0.000
	Th	232	**0.024**	ug/L	14.991	404	0.001
	U	238	**0.024**	ug/L	12.845	358	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		102.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		107.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.8			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871712
Sample Date/Time: Saturday, July 04, 2009 01:59:32
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871712.958

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.273**	ug/L	1.638	7945	0.030
	Be	9	**53.569**	ug/L	1.838	7068	0.027
	B	11	**104.686**	ug/L	1.812	11823	0.044
	Na	23	**1908.098**	ug/L	6.519	2073707	7.732
	Mg	24	**1775.868**	ug/L	5.271	1498135	5.661
	Al	27	**2049.622**	ug/L	2.020	2530052	9.549
	P	31	**2023.215**	ug/L	2.607	185698	0.689
	K	39	**2152.249**	ug/L	4.537	4474020	15.262
	Ca	43	**2143.018**	ug/L	2.637	9363	0.033
>	Sc	45		ug/L		264298	264297.549
	Ti	47	**47.830**	ug/L	1.362	10612	0.039
	V	51	**53.478**	ug/L	6.380	150978	0.436
	Cr	52	**51.335**	ug/L	2.283	109861	0.426
	Cr	53		ug/L		436284	0.837
	Mn	55	**52.404**	ug/L	1.748	182396	0.686
	Fe	57	**2133.237**	ug/L	2.373	150231	0.547
	Co	59	**52.683**	ug/L	0.874	136893	0.517
	Ni	60	**52.727**	ug/L	1.577	29182	0.110
	Cu	63		ug/L		68572	0.259
	Cu	65	**54.072**	ug/L	1.342	32245	0.122
	Zn	66	**50.392**	ug/L	1.161	22825	0.109
	Zn	67		ug/L		23623	0.066
	Zn	68		ug/L		17081	0.078
>	Ge	74		ug/L		208692	208691.606
	As	75	**52.284**	ug/L	4.782	30480	0.144
	Se	77		ug/L		24814	0.075
	Se	82	**51.845**	ug/L	3.068	2297	0.011
	Kr	83		ug/L		95	-0.000
	Sr	88	**51.575**	ug/L	1.246	304501	2.041
	Y	89		ug/L		48	0.000
	Zr	90	**50.268**	ug/L	2.893	170459	1.142
	Mo	98	**51.012**	ug/L	0.933	78567	0.526
	Ag	107	**52.524**	ug/L	1.136	138058	0.925
	Cd	111	**51.482**	ug/L	0.545	32226	0.216
	Cd	114		ug/L		78134	0.524
>	In	115		ug/L		149131	149130.823
	Sn	120	**50.111**	ug/L	1.239	137564	0.921
	Sb	121	**54.163**	ug/L	1.919	145589	0.973
	Sb	123		ug/L		112226	0.750
	Ba	135		ug/L		35268	0.179
	Ba	137	**53.133**	ug/L	2.381	62194	0.316
	Ho	165		ug/L		42	0.000
>	Lu	175		ug/L		196395	196394.796
	Tl	205	**46.106**	ug/L	2.968	289413	1.469
	Pb	208	**51.633**	ug/L	1.089	357658	1.820
	Th	232	**51.230**	ug/L	0.600	365138	1.858
	U	238	**53.549**	ug/L	0.509	367155	1.868

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		107.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871713
Sample Date/Time: Saturday, July 04, 2009 02:08:59
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871713.960

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.413**	ug/L	18.005	74	0.000
	Be	9	**-0.014**	ug/L	87.231	13	-0.000
	B	11	**11.410**	ug/L	2.847	1456	0.005
	Na	23	**196.484**	ug/L	14.589	238664	0.796
	Mg	24	**6.768**	ug/L	35.565	7335	0.022
	Al	27	**-1.688**	ug/L	174.841	4001	-0.008
	P	31	**-13.511**	ug/L	16.344	2261	-0.005
	K	39	**478.992**	ug/L	12.415	1321593	3.397
	Ca	43	**103.560**	ug/L	12.526	1105	0.002
>	Sc	45		ug/L		261460	261460.293
	Ti	47	**0.374**	ug/L	21.523	300	0.000
	V	51	**0.875**	ug/L	499.196	37277	0.007
	Cr	52	**1.845**	ug/L	15.198	1428	0.015
	Cr	53		ug/L		452497	0.917
	Mn	55	**0.502**	ug/L	3.117	2928	0.007
	Fe	57	**17.241**	ug/L	9.341	6854	0.004
	Co	59	**-0.009**	ug/L	19.189	113	-0.000
	Ni	60	**0.085**	ug/L	16.854	124	0.000
	Cu	63		ug/L		1107	0.004
	Cu	65	**0.738**	ug/L	6.837	504	0.002
	Zn	66	**1.210**	ug/L	5.250	652	0.003
	Zn	67		ug/L		20874	0.054
	Zn	68		ug/L		1535	0.004
>	Ge	74		ug/L		206924	206924.438
	As	75	**1.463**	ug/L	82.957	1183	0.004
	Se	77		ug/L		26733	0.086
	Se	82	**-0.099**	ug/L	615.179	-15	-0.000
	Kr	83		ug/L		100	0.000
	Sr	88	**0.168**	ug/L	2.737	1191	0.007
	Y	89		ug/L		56	0.000
	Zr	90	**0.050**	ug/L	10.647	402	0.001
	Mo	98	**0.011**	ug/L	67.301	97	0.000
	Ag	107	**-0.009**	ug/L	19.044	27	-0.000
	Cd	111	**-0.016**	ug/L	80.178	14	-0.000
	Cd	114		ug/L		46	-0.000
>	In	115		ug/L		151802	151801.561
	Sn	120	**0.086**	ug/L	0.597	400	0.002
	Sb	121	**0.521**	ug/L	6.374	1860	0.009
	Sb	123		ug/L		1436	0.007
	Ba	135		ug/L		113	0.000
	Ba	137	**0.124**	ug/L	7.229	207	0.001
	Ho	165		ug/L		37	0.000
>	Lu	175		ug/L		198551	198551.077
	Tl	205	**0.204**	ug/L	11.977	2208	0.007
	Pb	208	**0.015**	ug/L	17.175	376	0.001
	Th	232	**0.001**	ug/L	154.516	237	0.000
	U	238	**-0.008**	ug/L	15.984	134	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			100.7		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			106.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			103.8		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			100.0		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871714
Sample Date/Time: Saturday, July 04, 2009 02:13:44
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871714.961

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.448**	ug/L	2.658	8179	0.031
	Be	9	**55.232**	ug/L	2.821	7213	0.028
	B	11	**117.193**	ug/L	1.771	13078	0.049
	Na	23	**2167.664**	ug/L	4.374	2328443	8.784
	Mg	24	**1952.516**	ug/L	5.882	1630192	6.224
	Al	27	**1972.369**	ug/L	8.743	2410762	9.189
	P	31	**2028.566**	ug/L	0.716	184335	0.691
	K	39	**2797.093**	ug/L	8.799	5621923	19.835
	Ca	43	**2253.076**	ug/L	1.605	9711	0.034
>	Sc	45		ug/L		261645	261644.667
	Ti	47	**47.681**	ug/L	1.944	10474	0.039
	V	51	**51.842**	ug/L	10.098	145979	0.422
	Cr	52	**54.622**	ug/L	1.563	115899	0.453
	Cr	53		ug/L		440248	0.869
	Mn	55	**53.277**	ug/L	1.534	183552	0.697
	Fe	57	**2218.633**	ug/L	0.848	154461	0.569
	Co	59	**53.851**	ug/L	1.484	138526	0.529
	Ni	60	**53.652**	ug/L	2.489	29393	0.112
	Cu	63		ug/L		69616	0.265
	Cu	65	**55.183**	ug/L	1.096	32573	0.124
	Zn	66	**50.032**	ug/L	2.769	22900	0.108
	Zn	67		ug/L		23549	0.065
	Zn	68		ug/L		17293	0.078
>	Ge	74		ug/L		210905	210905.483
	As	75	**41.306**	ug/L	2.621	24422	0.114
	Se	77		ug/L		24392	0.072
	Se	82	**9.933**	ug/L	4.122	436	0.002
	Kr	83		ug/L		96	-0.000
	Sr	88	**51.858**	ug/L	0.663	307646	2.052
	Y	89		ug/L		68	0.000
	Zr	90	**51.172**	ug/L	1.513	174385	1.162
	Mo	98	**51.989**	ug/L	2.091	80446	0.536
	Ag	107	**52.346**	ug/L	1.186	138236	0.922
	Cd	111	**5.327**	ug/L	0.768	3372	0.022
	Cd	114		ug/L		8006	0.053
>	In	115		ug/L		149857	149857.013
	Sn	120	**50.509**	ug/L	1.754	139323	0.929
	Sb	121	**105.709**	ug/L	2.256	285075	1.900
	Sb	123		ug/L		222758	1.484
	Ba	135		ug/L		36818	0.186
	Ba	137	**54.837**	ug/L	2.246	64492	0.327
	Ho	165		ug/L		39	0.000
>	Lu	175		ug/L		197325	197325.489
	Tl	205	**26.502**	ug/L	6.424	167594	0.844
	Pb	208	**21.162**	ug/L	1.991	147432	0.746
	Th	232	**52.364**	ug/L	1.471	374985	1.899
	U	238	**54.189**	ug/L	1.925	373266	1.891

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		108.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.4			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871715
Sample Date/Time: Saturday, July 04, 2009 02:18:29
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881357|5|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871715.962

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.088**	ug/L	39.985	27	0.000
	Be	9	**0.023**	ug/L	127.973	18	0.000
	B	11	**4.528**	ug/L	10.542	696	0.002
	Na	23	**29.250**	ug/L	31.866	61133	0.119
	Mg	24	**1.212**	ug/L	59.518	2667	0.004
	Al	27	**-4.134**	ug/L	20.051	1000	-0.019
	P	31	**-12.615**	ug/L	6.674	2327	-0.004
	K	39	**78.759**	ug/L	16.307	576756	0.558
	Ca	43	**-0.976**	ug/L	1256.023	681	-0.000
>	Sc	45		ug/L		259742	259742.059
	Ti	47	**0.039**	ug/L	189.291	227	0.000
	V	51	**-1.401**	ug/L	130.042	32318	-0.011
	Cr	52	**0.982**	ug/L	22.200	-439	0.008
	Cr	53		ug/L		270763	0.229
	Mn	55	**0.079**	ug/L	21.046	1475	0.001
	Fe	57	**6.706**	ug/L	20.748	6108	0.002
	Co	59	**-0.013**	ug/L	57.943	102	-0.000
	Ni	60	**-0.001**	ug/L	4268.980	76	-0.000
	Cu	63		ug/L		339	0.001
	Cu	65	**0.146**	ug/L	16.136	155	0.000
	Zn	66	**0.333**	ug/L	13.487	254	0.001
	Zn	67		ug/L		10662	0.006
	Zn	68		ug/L		833	0.001
>	Ge	74		ug/L		201666	201666.144
	As	75	**1.377**	ug/L	30.651	1114	0.004
	Se	77		ug/L		13538	0.023
	Se	82	**0.274**	ug/L	53.351	1	0.000
	Kr	83		ug/L		85	-0.000
	Sr	88	**0.030**	ug/L	20.911	341	0.001
	Y	89		ug/L		28	-0.000
	Zr	90	**0.020**	ug/L	38.278	282	0.000
	Mo	98	**0.023**	ug/L	83.947	109	0.000
	Ag	107	**-0.000**	ug/L	1506.644	48	-0.000
	Cd	111	**-0.033**	ug/L	41.200	3	-0.000
	Cd	114		ug/L		31	-0.000
>	In	115		ug/L		144129	144129.045
	Sn	120	**0.014**	ug/L	19.877	190	0.000
	Sb	121	**0.274**	ug/L	10.329	1127	0.005
	Sb	123		ug/L		849	0.004
	Ba	135		ug/L		50	0.000
	Ba	137	**0.016**	ug/L	73.744	77	0.000
	Ho	165		ug/L		27	-0.000
>	Lu	175		ug/L		194491	194490.676
	Tl	205	**3.217**	ug/L	14.536	20848	0.102
	Pb	208	**-0.005**	ug/L	29.663	230	-0.000
	Th	232	**0.005**	ug/L	85.235	263	0.000
	U	238	**-0.007**	ug/L	22.726	142	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			100.0		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			103.7		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.9		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 02:23:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.963

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.081**	ug/L	1.442	7987	0.031
	Be	9	**54.436**	ug/L	0.560	6988	0.027
	B	11	**104.324**	ug/L	4.827	11451	0.044
	Na	23	**4926.997**	ug/L	2.768	5168576	19.966
	Mg	24	**5362.075**	ug/L	10.902	4385128	17.092
	Al	27	**5265.782**	ug/L	8.220	6302937	24.534
	P	31	**5025.347**	ug/L	3.237	443384	1.712
	K	39	**5388.561**	ug/L	1.542	10249930	38.211
	Ca	43	**5129.567**	ug/L	4.017	20844	0.078
>	Sc	45		ug/L		257159	257158.933
	Ti	47	**50.609**	ug/L	3.501	10905	0.042
	V	51	**49.608**	ug/L	5.804	138668	0.404
	Cr	52	**52.029**	ug/L	4.754	108237	0.431
	Cr	53		ug/L		202983	-0.023
	Mn	55	**52.908**	ug/L	4.659	178945	0.692
	Fe	57	**5322.415**	ug/L	5.120	355868	1.364
	Co	59	**53.194**	ug/L	5.432	134290	0.522
	Ni	60	**51.952**	ug/L	6.034	27935	0.109
	Cu	63		ug/L		64478	0.250
	Cu	65	**52.358**	ug/L	6.783	30322	0.118
	Zn	66	**49.901**	ug/L	2.860	21833	0.108
	Zn	67		ug/L		10838	0.007
	Zn	68		ug/L		15807	0.075
>	Ge	74		ug/L		201592	201592.470
	As	75	**49.186**	ug/L	1.832	27730	0.136
	Se	77		ug/L		9431	0.003
	Se	82	**48.809**	ug/L	1.748	2088	0.010
	Kr	83		ug/L		92	-0.000
	Sr	88	**49.646**	ug/L	2.006	285828	1.964
	Y	89		ug/L		57	0.000
	Zr	90	**49.336**	ug/L	0.747	163182	1.121
	Mo	98	**50.951**	ug/L	1.505	76522	0.526
	Ag	107	**49.791**	ug/L	0.576	127617	0.877
	Cd	111	**49.207**	ug/L	0.196	30034	0.206
	Cd	114		ug/L		72763	0.500
>	In	115		ug/L		145418	145418.478
	Sn	120	**49.271**	ug/L	0.151	131909	0.906
	Sb	121	**50.566**	ug/L	1.641	132580	0.909
	Sb	123		ug/L		103113	0.707
	Ba	135		ug/L		33700	0.171
	Ba	137	**50.903**	ug/L	1.829	59662	0.303
	Ho	165		ug/L		38	0.000
>	Lu	175		ug/L		196644	196643.927
	Tl	205	**42.489**	ug/L	4.160	267054	1.354
	Pb	208	**50.874**	ug/L	0.600	352853	1.793
	Th	232	**51.647**	ug/L	1.236	368573	1.873
	U	238	**52.693**	ug/L	3.568	361645	1.839

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.162				
	Be	9	108.873				
	B	11	104.324				
	Na	23	98.540				
	Mg	24	107.241				
	Al	27	104.273				
	P	31	100.507				
	K	39	107.771				
	Ca	43	102.591				
>	Sc	45		99.0			
	Ti	47	101.217				
	V	51	99.215				
	Cr	52	104.057				
	Cr	53					
	Mn	55	105.817				
	Fe	57	106.448				
	Co	59	106.389				
	Ni	60	103.904				
	Cu	63					
	Cu	65	104.716				
	Zn	66	99.802				
	Zn	67					
	Zn	68					
>	Ge	74		103.7			
	As	75	98.371				
	Se	77					
	Se	82	97.617				
	Kr	83					
	Sr	88	99.292				
	Y	89					
	Zr	90	98.671				
	Mo	98	101.903				
	Ag	107	99.582				
	Cd	111	98.413				
	Cd	114					
>	In	115		99.4			
	Sn	120	98.543				
	Sb	121	101.131				
	Sb	123					
	Ba	135					
	Ba	137	101.807				
	Ho	165					
>	Lu	175		99.0			
	Tl	205	84.978				
	Pb	208	101.749				
	Th	232	103.295				
	U	238	105.387				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
QC Std 6	Tl	205	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 02:28:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.964

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.098**	ug/L	6.922	29	0.000
	Be	9	**0.032**	ug/L	106.556	19	0.000
	B	11	**2.828**	ug/L	19.314	514	0.001
	Na	23	**-3.016**	ug/L	195.199	27360	-0.012
	Mg	24	**0.777**	ug/L	82.791	2334	0.002
	Al	27	**-1.666**	ug/L	101.736	4001	-0.008
	P	31	**-4.392**	ug/L	6.083	3079	-0.001
	K	39	**2.178**	ug/L	438.900	438978	0.015
	Ca	43	**-34.431**	ug/L	10.354	553	-0.001
>	Sc	45		ug/L		261788	261788.050
	Ti	47	**0.052**	ug/L	344.563	231	0.000
	V	51	**-4.128**	ug/L	39.572	26703	-0.034
	Cr	52	**0.812**	ug/L	19.034	-810	0.007
	Cr	53		ug/L		189825	-0.088
	Mn	55	**-0.017**	ug/L	134.421	1154	-0.000
	Fe	57	**10.098**	ug/L	28.516	6381	0.003
	Co	59	**0.010**	ug/L	19.874	162	0.000
	Ni	60	**-0.030**	ug/L	43.534	61	-0.000
	Cu	63		ug/L		147	-0.000
	Cu	65	**0.023**	ug/L	79.367	83	0.000
	Zn	66	**0.004**	ug/L	363.200	112	0.000
	Zn	67		ug/L		7581	-0.010
	Zn	68		ug/L		573	-0.001
>	Ge	74		ug/L		203154	203153.747
	As	75	**1.191**	ug/L	93.365	1014	0.003
	Se	77		ug/L		8420	-0.002
	Se	82	**0.034**	ug/L	630.681	-9	0.000
	Kr	83		ug/L		86	-0.000
	Sr	88	**0.005**	ug/L	69.163	194	0.000
	Y	89		ug/L		27	-0.000
	Zr	90	**0.036**	ug/L	23.860	334	0.001
	Mo	98	**0.079**	ug/L	28.896	192	0.001
	Ag	107	**0.007**	ug/L	22.881	66	0.000
	Cd	111	**0.002**	ug/L	616.736	24	0.000
	Cd	114		ug/L		53	0.000
>	In	115		ug/L		143137	143137.440
	Sn	120	**0.015**	ug/L	61.493	191	0.000
	Sb	121	**0.328**	ug/L	16.068	1260	0.006
	Sb	123		ug/L		966	0.004
	Ba	135		ug/L		43	0.000
	Ba	137	**0.008**	ug/L	94.313	68	0.000
	Ho	165		ug/L		32	-0.000
>	Lu	175		ug/L		195393	195392.902
	Tl	205	**4.291**	ug/L	16.990	27625	0.137
	Pb	208	**0.022**	ug/L	18.893	419	0.001
	Th	232	**0.090**	ug/L	36.089	867	0.003
	U	238	**0.024**	ug/L	26.786	353	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		104.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.4			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232432001
Sample Date/Time: Saturday, July 04, 2009 02:37:30
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\232432001.966

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.388**	ug/L	15.167	70	0.000
	Be	9	**-0.011**	ug/L	290.900	13	-0.000
	B	11	**11.318**	ug/L	1.913	1442	0.005
	Na	23	**160.969**	ug/L	19.855	200762	0.652
	Mg	24	**8.017**	ug/L	37.821	8336	0.026
	Al	27	**1.895**	ug/L	107.954	8336	0.009
	P	31	**-17.211**	ug/L	5.976	1927	-0.006
	K	39	**486.681**	ug/L	7.431	1333954	3.451
	Ca	43	**83.389**	ug/L	16.361	1021	0.001
>	Sc	45		ug/L		260811	260811.268
	Ti	47	**0.392**	ug/L	7.237	303	0.000
	V	51	**-0.687**	ug/L	16.776	33958	-0.006
	Cr	52	**1.974**	ug/L	5.292	1705	0.016
	Cr	53		ug/L		456028	0.935
	Mn	55	**0.659**	ug/L	2.027	3457	0.009
	Fe	57	**19.871**	ug/L	4.340	7012	0.005
	Co	59	**-0.011**	ug/L	25.638	107	-0.000
	Ni	60	**0.062**	ug/L	69.175	111	0.000
	Cu	63		ug/L		915	0.003
	Cu	65	**0.651**	ug/L	2.334	452	0.001
	Zn	66	**1.091**	ug/L	2.753	622	0.002
	Zn	67		ug/L		19976	0.046
	Zn	68		ug/L		1399	0.003
>	Ge	74		ug/L		214552	214551.612
	As	75	**1.042**	ug/L	200.682	989	0.003
	Se	77		ug/L		29760	0.095
	Se	82	**-0.410**	ug/L	30.190	-30	-0.000
	Kr	83		ug/L		111	0.000
	Sr	88	**0.140**	ug/L	4.673	1025	0.006
	Y	89		ug/L		140	0.001
	Zr	90	**0.028**	ug/L	22.210	327	0.001
	Mo	98	**-0.008**	ug/L	66.988	68	-0.000
	Ag	107	**-0.009**	ug/L	14.370	26	-0.000
	Cd	111	**-0.011**	ug/L	45.015	18	-0.000
	Cd	114		ug/L		39	-0.000
>	In	115		ug/L		152590	152589.648
	Sn	120	**0.054**	ug/L	10.738	313	0.001
	Sb	121	**0.232**	ug/L	7.906	1078	0.004
	Sb	123		ug/L		808	0.003
	Ba	135		ug/L		240	0.001
	Ba	137	**0.334**	ug/L	3.142	460	0.002
	Ho	165		ug/L		38	0.000
>	Lu	175		ug/L		200832	200831.608
	Tl	205	**0.404**	ug/L	5.174	3514	0.013
	Pb	208	**0.016**	ug/L	22.307	386	0.001
	Th	232	**-0.013**	ug/L	10.493	143	-0.000
	U	238	**-0.018**	ug/L	8.203	67	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			100.4		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			110.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			104.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			101.1		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 02:56:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.970

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.801**	ug/L	5.445	8026	0.031
	Be	9	**55.134**	ug/L	3.125	7024	0.027
	B	11	**100.809**	ug/L	4.621	10999	0.042
	Na	23	**4771.226**	ug/L	10.775	4961833	19.335
	Mg	24	**4998.899**	ug/L	13.415	4065520	15.934
	Al	27	**5143.022**	ug/L	4.516	6119841	23.962
	P	31	**4748.563**	ug/L	2.077	416344	1.618
	K	39	**5216.401**	ug/L	2.018	9866363	36.990
	Ca	43	**4877.992**	ug/L	1.752	19722	0.075
>	Sc	45		ug/L		255243	255243.095
	Ti	47	**48.518**	ug/L	3.148	10392	0.040
	V	51	**47.433**	ug/L	3.919	133254	0.386
	Cr	52	**50.493**	ug/L	2.827	104310	0.419
	Cr	53		ug/L		218872	0.043
	Mn	55	**51.771**	ug/L	1.369	174026	0.677
	Fe	57	**5202.310**	ug/L	3.022	345792	1.333
	Co	59	**51.581**	ug/L	1.501	129440	0.507
	Ni	60	**51.253**	ug/L	0.670	27398	0.107
	Cu	63		ug/L		63800	0.249
	Cu	65	**51.488**	ug/L	1.217	29652	0.116
	Zn	66	**47.822**	ug/L	2.336	21139	0.103
	Zn	67		ug/L		11340	0.009
	Zn	68		ug/L		15422	0.072
>	Ge	74		ug/L		203620	203620.289
	As	75	**48.612**	ug/L	0.907	27689	0.134
	Se	77		ug/L		10143	0.006
	Se	82	**46.113**	ug/L	3.318	1992	0.010
	Kr	83		ug/L		79	-0.000
	Sr	88	**48.234**	ug/L	0.975	276276	1.909
	Y	89		ug/L		58	0.000
	Zr	90	**48.614**	ug/L	3.745	159937	1.104
	Mo	98	**50.109**	ug/L	1.089	74876	0.517
	Ag	107	**49.420**	ug/L	2.232	126001	0.871
	Cd	111	**48.338**	ug/L	1.110	29352	0.203
	Cd	114		ug/L		72102	0.498
>	In	115		ug/L		144688	144687.716
	Sn	120	**48.209**	ug/L	2.308	128383	0.887
	Sb	121	**49.415**	ug/L	1.210	128904	0.888
	Sb	123		ug/L		100068	0.689
	Ba	135		ug/L		33172	0.168
	Ba	137	**49.914**	ug/L	1.558	58763	0.297
	Ho	165		ug/L		42	0.000
>	Lu	175		ug/L		197513	197512.814
	Tl	205	**36.785**	ug/L	2.884	232363	1.172
	Pb	208	**50.881**	ug/L	0.794	354446	1.793
	Th	232	**51.850**	ug/L	2.051	371611	1.881
	U	238	**52.234**	ug/L	1.385	360129	1.823

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	113.601				
	Be	9	110.268				
	B	11	100.809				
	Na	23	95.425				
	Mg	24	99.978				
	Al	27	101.842				
	P	31	94.971				
	K	39	104.328				
	Ca	43	97.560				
>	Sc	45		98.3			
	Ti	47	97.036				
	V	51	94.865				
	Cr	52	100.987				
	Cr	53					
	Mn	55	103.541				
	Fe	57	104.046				
	Co	59	103.162				
	Ni	60	102.506				
	Cu	63					
	Cu	65	102.976				
	Zn	66	95.644				
	Zn	67					
	Zn	68					
>	Ge	74		104.7			
	As	75	97.223				
	Se	77					
	Se	82	92.226				
	Kr	83					
	Sr	88	96.468				
	Y	89					
	Zr	90	97.229				
	Mo	98	100.219				
	Ag	107	98.841				
	Cd	111	96.676				
	Cd	114					
>	In	115		98.9			
	Sn	120	96.419				
	Sb	121	98.829				
	Sb	123					
	Ba	135					
	Ba	137	99.827				
	Ho	165					
>	Lu	175		99.5			
	Tl	205	73.569				
	Pb	208	101.761				
	Th	232	103.701				
	U	238	104.469				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
QC Std 6	Be	9	CCV is out of limits (+/- 10%)
QC Std 6	Tl	205	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 03:01:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.971

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.051**	ug/L	25.397	21	0.000
	Be	9	**0.024**	ug/L	22.382	17	0.000
	B	11	**2.351**	ug/L	22.913	446	0.001
	Na	23	**-0.486**	ug/L	331.587	29030	-0.002
	Mg	24	**0.473**	ug/L	265.593	2000	0.002
	Al	27	**-2.975**	ug/L	43.946	2334	-0.014
	P	31	**-4.816**	ug/L	38.669	2934	-0.002
	K	39	**1.849**	ug/L	567.689	423187	0.013
	Ca	43	**-35.631**	ug/L	12.561	529	-0.001
>	Sc	45		ug/L		252553	252553.265
	Ti	47	**-0.021**	ug/L	843.142	208	-0.000
	V	51	**-2.920**	ug/L	60.984	28308	-0.024
	Cr	52	**0.724**	ug/L	16.144	-968	0.006
	Cr	53		ug/L		188018	-0.069
	Mn	55	**-0.013**	ug/L	36.906	1128	-0.000
	Fe	57	**9.704**	ug/L	46.525	6132	0.002
	Co	59	**0.005**	ug/L	139.610	144	0.000
	Ni	60	**-0.012**	ug/L	207.010	68	-0.000
	Cu	63		ug/L		137	-0.000
	Cu	65	**0.002**	ug/L	1045.413	69	0.000
	Zn	66	**0.019**	ug/L	205.630	117	0.000
	Zn	67		ug/L		7445	-0.010
	Zn	68		ug/L		571	-0.001
>	Ge	74		ug/L		199852	199851.899
	As	75	**1.252**	ug/L	41.240	1036	0.003
	Se	77		ug/L		8405	-0.002
	Se	82	**0.284**	ug/L	39.148	2	0.000
	Kr	83		ug/L		77	-0.000
	Sr	88	**0.005**	ug/L	49.749	195	0.000
	Y	89		ug/L		24	-0.000
	Zr	90	**0.033**	ug/L	25.328	320	0.001
	Mo	98	**0.070**	ug/L	37.724	177	0.001
	Ag	107	**0.009**	ug/L	55.596	71	0.000
	Cd	111	**0.005**	ug/L	160.410	26	0.000
	Cd	114		ug/L		60	0.000
>	In	115		ug/L		141761	141761.344
	Sn	120	**0.017**	ug/L	26.674	194	0.000
	Sb	121	**0.265**	ug/L	25.204	1088	0.005
	Sb	123		ug/L		856	0.004
	Ba	135		ug/L		40	0.000
	Ba	137	**0.006**	ug/L	47.761	67	0.000
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194922	194922.260
	Tl	205	**3.450**	ug/L	14.724	22357	0.110
	Pb	208	**0.018**	ug/L	26.405	386	0.001
	Th	232	**0.085**	ug/L	38.072	832	0.003
	U	238	**0.023**	ug/L	14.589	346	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		97.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.2			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Saturday, July 04, 2009 11:02:58
Sample Description:
Method File: C:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.1057
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1681.5	1681.499	43.815	2.6
	Mg	24.0	16793.5	16793.469	385.861	2.3
	Co	58.9	32721.8	32721.842	598.507	1.8
	Rh	102.9	71511.8	71511.777	1135.666	1.6
	In	114.9	91608.9	91608.866	1676.072	1.8
	Pb	208.0	41004.2	41004.167	382.874	0.9
⌈>	Ba	137.9	85130.0	85129.980	1041.796	1.2
⌊	Ba++	69.0	1858.6	0.022	0.000	1.9
⌈>	Ce	139.9	109273.8	109273.813	1682.715	1.5
⌊	CeO	155.9	1508.8	0.014	0.000	2.3
	Bkgd	220.0	10.1	10.100	1.673	16.6

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-2000.00	Analog Stage Voltage
1950.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	7.3	1853.1
Co	59	17	8.3	33908.2
In	115	17	9.3	120912.5

ICPMS#3 Instrument Tuning Report

File Name: 090704.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	582	2070	0.655
Be	9.0	9.0	2046	2070	0.628
Mg	24.0	24.0	5708	2120	0.577
Mg	25.0	25.0	5927	2050	0.652
Mg	26.0	26.0	6188	2130	0.633
Co	58.9	58.9	14199	2110	0.679
Rh	102.9	103.0	24906	2170	0.655
In	114.9	114.9	27822	2180	0.658
Ce	139.9	139.9	33907	2200	0.688
Pb	206.0	205.9	49980	2270	0.703
Pb	207.0	207.0	50269	2300	0.673
Pb	208.0	208.0	50486	2320	0.628
U	238.1	238.0	57832	2340	0.668

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Saturday, July 04, 2009 14:04:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Blank.1058

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		221755	
	Tl	205		**ug/L**		93	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Simple Linear	
Tl	205	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 04, 2009 14:08:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Standard 1.1059

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		216188	216188.484
	Tl	205	**10.000**	**ug/L**	0.595	78913	0.365

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175					
[	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 04, 2009 14:11:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Standard 2.1060

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		208064	208064.435
	Tl	205	**99.979**	**ug/L**	1.276	742955	3.571

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175					
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 04, 2009 14:15:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 1.1061

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		205540	205540.181
	Tl	205	**49.707**	**ug/L**	0.765	364996	1.775

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			92.7		
	Tl	205	99.414				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 04, 2009 14:19:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 2.1062

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		212674	212673.926
	Tl	205	**0.047**	**ug/L**	9.653	446	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		95.9			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 04, 2009 14:22:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 3.1063

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		211516	211516.206
	Tl	205	**0.981**	**ug/L**	0.855	7500	0.035

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175			95.4		
⌊	Tl	205	98.110				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 04, 2009 14:26:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 4.1064

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		203137	203136.803
	Tl	205	**0.034**	**ug/L**	1.253	332	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		91.6			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 04, 2009 14:30:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 5.1065

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		200750	200749.728
	Tl	205	**18.343**	**ug/L**	1.086	131602	0.655

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175			90.5		
⌊	Tl	205	91.714				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 14:33:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1066

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		206829	206829.015
	Tl	205	**48.863**	ug/L	1.236	361023	1.745

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		93.3			
	Ti	205	97.726				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 14:37:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1067

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		211763	211762.861
	Tl	205	**0.054**	**ug/L**	3.235	494	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		95.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871711
Sample Date/Time: Saturday, July 04, 2009 14:41:23
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871711.1068

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		211249	211249.053
	Tl	205	0.016	ug/L	7.494	208	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		95.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871712
Sample Date/Time: Saturday, July 04, 2009 14:45:10
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871712.1069

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		212039	212039.147
	Tl	205	**42.993**	**ug/L**	0.441	325701	1.536

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		95.6			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871713
Sample Date/Time: Saturday, July 04, 2009 14:52:44
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871713.1071

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		213947	213947.221
	Tl	205	**0.039**	ug/L	9.530	385	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		96.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871714
Sample Date/Time: Saturday, July 04, 2009 14:56:30
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871714.1072

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		209571	209570.521
⌊	Tl	205	**29.263**	ug/L	0.556	219126	1.045

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		94.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871715
Sample Date/Time: Saturday, July 04, 2009 15:00:15
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881357|5|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871715.1073

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		208353	208352.504
	Tl	205	**0.818**	**ug/L**	1.503	6174	0.029

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		94.0			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 15:03:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1074

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		202248	202248.130
	Tl	205	**48.451**	**ug/L**	1.527	350035	1.731

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		91.2			
	Tl	205	96.903				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 15:07:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1075

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		209532	209532.009
	Tl	205	0.370	ug/L	2.492	2860	0.013

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		94.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232432001
Sample Date/Time: Saturday, July 04, 2009 15:15:13
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\232432001.1077

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		207947	207946.721
	Tl	205	0.064	ug/L	7.256	560	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		93.8			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 15:30:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1081

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		204551	204550.807
	Tl	205	**46.976**	**ug/L**	1.330	343271	1.678

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175			92.2		
⌊	Tl	205	93.953				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 15:34:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1082

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		206366	206365.675
	Tl	205	**0.205**	**ug/L**	3.291	1600	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			93.1		
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: WATER
Method Description: 7470A, 245.2, ILM04 ANALYST JXL1
Element: Hg

Date: 07/02/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 070209W1.SIF Results Data Set Name: 070209W1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/02/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0035	0.0035	08:06:52	No
2			0.0035	0.0035	08:07:27	No
Mean:			0.0035			
SD :			0.0000			
%RSD:						

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/02/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0024	0.0059	08:08:50	No
2			0.0024	0.0059	08:09:25	No
Mean:			0.0024			
SD :			0.0000			
%RSD:						

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.01208
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/02/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0065	0.0099	08:10:48	No
2			0.0062	0.0097	08:11:23	No
Mean:			0.0064			
SD :			0.0002			
%RSD:			2.3730			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99975 Slope: 0.01274
Intercept : -0.00005

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/02/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0263	0.0297	08:12:48	No
2			0.0260	0.0294	08:13:22	No
Mean:			0.0261			
SD :			0.0002			
%RSD:			0.8210			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99997 Slope: 0.01312
Intercept : -0.00013

==========

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/02/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0654	0.0689	08:14:47	No
2			0.0647	0.0682	08:15:22	No
Mean:			0.0651			
SD :			0.0005			
%RSD:			0.7186			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99999 Slope: 0.01304
Intercept : -0.00009

==========

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/02/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1313	0.1348	08:16:48	No
2			0.1307	0.1341	08:17:23	No
Mean:			0.1310			
SD :			0.0005			
%RSD:			0.3773			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 1.00000 Slope: 0.01310
Intercept : -0.00016

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0035	---	----	----	----
S0.2	0.0024	0.200	0.196	0.0000	----
S0.5	0.0064	0.500	0.497	0.0002	2.4
S2.0	0.0261	2.000	2.006	0.0002	0.8
S5.0	0.0651	5.000	4.979	0.0005	0.7
S10	0.1310	10.000	10.01	0.0005	0.4

Correlation Coefficient: 1.00000 Slope: 0.01310 Intercept: -0.0002

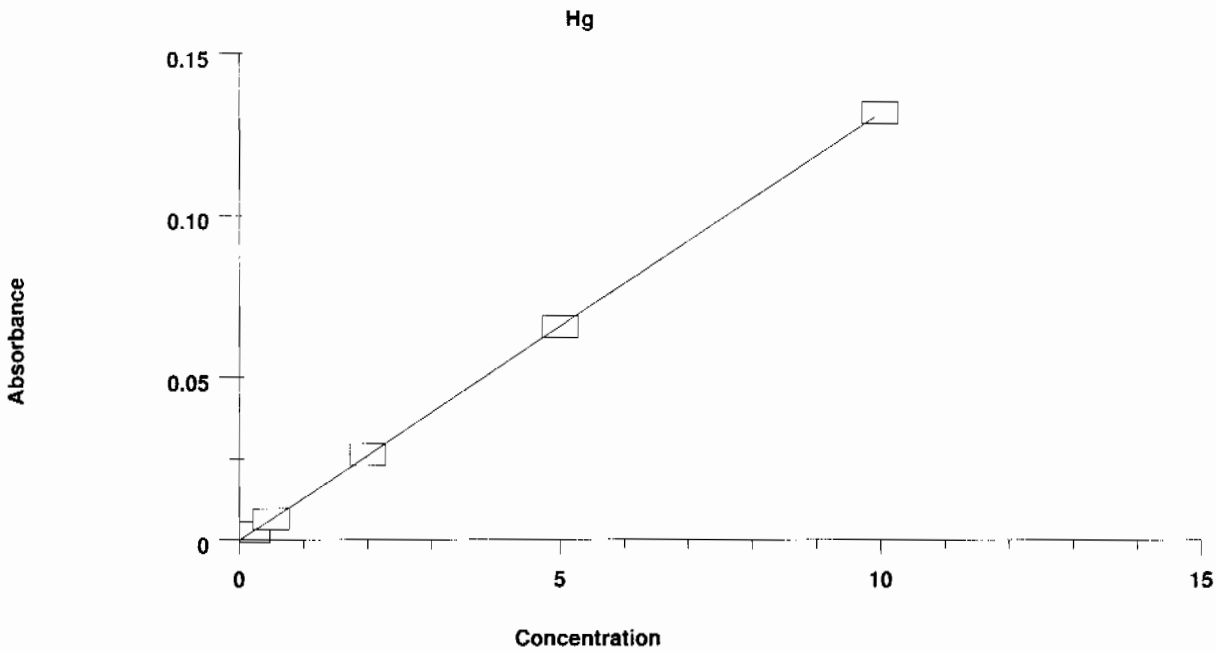

==========

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/02/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.225	5.225	0.0683	0.0718	08:18:51	No
2	5.236	5.236	0.0685	0.0719	08:19:27	No
Mean:	5.231	5.231	0.0684			
SD :	0.0077	0.0077	0.0001			
%RSD:	0.1	0.1	0.1470			

QC value within specified limits.

==========

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/02/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0004	0.0031	08:20:49	No
2	-0.021	-0.021	-0.0004	0.0030	08:21:24	No
Mean:	-0.019	-0.019	-0.0004			
SD :	0.0022	0.0022	0.0000			
%RSD:	11.5	11.5	7.0604			

QC value within specified limits.

==========

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/02/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.232	0.232	0.0029	0.0063	08:22:47	No
2	0.224	0.224	0.0028	0.0062	08:23:22	No
Mean:	0.228	0.228	0.0028			
SD :	0.0056	0.0056	0.0001			
%RSD:	2.4	2.4	2.5791			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.883	4.883	0.0638	0.0673	08:24:47	No
2	4.821	4.821	0.0630	0.0665	08:25:21	No
Mean:	4.852	4.852	0.0634			
SD :	0.0441	0.0441	0.0006			
%RSD:	0.9	0.9	0.9102			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.008	-0.008	-0.0003	0.0032	08:26:49	No
2	-0.012	-0.012	-0.0003	0.0031	08:27:24	No
Mean:	-0.010	-0.010	-0.0003			
SD :	0.0032	0.0032	0.0000			
%RSD:	31.8	31.8	14.4763			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/02/2009
Sample ID: 1201870347|i||880856|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.032	-0.032	-0.0006	0.0029	08:28:49	No
2	-0.048	-0.048	-0.0008	0.0027	08:29:25	No
Mean:	-0.040	-0.040	-0.0007			
SD :	0.0112	0.0112	0.0001			
%RSD:	28.3	28.3	21.6993			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/02/2009
Sample ID: 1201870348|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.008	2.008	0.0261	0.0296	08:30:49	No
2	1.976	1.976	0.0257	0.0292	08:31:24	No
Mean:	1.992	1.992	0.0259			
SD :	0.0223	0.0223	0.0003			
%RSD:	1.1	1.1	1.1248			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/02/2009
Sample ID: 232341001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.041	-0.041	-0.0007	0.0028	08:32:50	No
2	-0.057	-0.057	-0.0009	0.0026	08:33:24	No
Mean:	-0.049	-0.049	-0.0008			
SD :	0.0112	0.0112	0.0001			
%RSD:	23.1	23.1	18.5514			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/02/2009
Sample ID: 1201870349|i|||DUP

%RSD: 14.9 14.9 11.8685

==========

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/02/2009
Sample ID: 1201872353|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.963	1.963	0.0256	0.0290	08:46:39	No
2	1.968	1.968	0.0256	0.0291	08:47:13	No
Mean:	1.966	1.966	0.0256			
SD :	0.0033	0.0033	0.0000			
%RSD:	0.2	0.2	0.1702			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.785	4.785	0.0625	0.0660	08:48:37	No
2	4.766	4.766	0.0623	0.0657	08:49:11	No
Mean:	4.775	4.775	0.0624			
SD :	0.0139	0.0139	0.0002			
%RSD:	0.3	0.3	0.2925			

QC value within specified limits.

==========

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.031	-0.031	-0.0006	0.0029	08:50:39	No
2	-0.034	-0.034	-0.0006	0.0029	08:51:14	No
Mean:	-0.033	-0.033	-0.0006			
SD :	0.0018	0.0018	0.0000			
%RSD:	5.5	5.5	4.0500			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/02/2009
Sample ID: 231723001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	-0.0010	0.0024	08:52:40	No
2	-0.080	-0.080	-0.0012	0.0023	08:53:15	No
Mean:	-0.073	-0.073	-0.0011			
SD :	0.0091	0.0091	0.0001			
%RSD:	12.4	12.4	10.6120			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/02/2009
Sample ID: 1201871389|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.542	1.542	0.0201	0.0235	08:54:38	No
2	1.548	1.548	0.0201	0.0236	08:55:13	No
Mean:	1.545	1.545	0.0201			
SD :	0.0038	0.0038	0.0001			
%RSD:	0.2	0.2	0.2492			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/02/2009
Sample ID: 1201872354|i|||DUP

%RSD: 7.6 7.6 6.1821

==========

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/02/2009
Sample ID: 231723006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.063	-0.063	-0.0010	0.0025	09:08:39	No
2	-0.061	-0.061	-0.0010	0.0025	09:09:14	No
Mean:	-0.062	-0.062	-0.0010			
SD :	0.0011	0.0011	0.0000			
%RSD:	1.8	1.8	1.4924			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/02/2009
Sample ID: 231727001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.072	-0.072	-0.0011	0.0024	09:10:41	No
2	-0.070	-0.070	-0.0011	0.0024	09:11:16	No
Mean:	-0.071	-0.071	-0.0011			
SD :	0.0013	0.0013	0.0000			
%RSD:	1.8	1.8	1.5214			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.773	4.773	0.0624	0.0658	09:12:43	No
2	4.755	4.755	0.0622	0.0656	09:13:18	No
Mean:	4.764	4.764	0.0623			
SD :	0.0125	0.0125	0.0002			
%RSD:	0.3	0.3	0.2638			

QC value within specified limits.

==========

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.024	-0.024	-0.0005	0.0030	09:14:46	No
2	-0.036	-0.036	-0.0006	0.0028	09:15:21	No
Mean:	-0.030	-0.030	-0.0005			
SD :	0.0082	0.0082	0.0001			
%RSD:	27.4	27.4	19.5797			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/02/2009
Sample ID: 231727002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.016	-0.016	-0.0004	0.0031	09:16:46	No
2	-0.024	-0.024	-0.0005	0.0030	09:17:21	No
Mean:	-0.020	-0.020	-0.0004			
SD :	0.0057	0.0057	0.0001			
%RSD:	28.3	28.3	17.7366			

==========

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/02/2009
Sample ID: 231727003|i|||

%RSD: 44.5 44.5 14.3043

==========

Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 07/02/2009
Sample ID: 231732003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.006	-0.006	-0.0002	0.0032	09:30:20	No
2	-0.018	-0.018	-0.0004	0.0031	09:30:55	No
Mean:	-0.012	-0.012	-0.0003			
SD :	0.0085	0.0085	0.0001			
%RSD:	69.5	69.5	35.1341			

==========

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 07/02/2009
Sample ID: 231732004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0000	0.0034	09:32:19	No
2	-0.003	-0.003	-0.0002	0.0033	09:32:54	No
Mean:	0.003	0.003	-0.0001			
SD :	0.0084	0.0084	0.0001			
%RSD:	264.7	264.7	94.3912			

==========

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 07/02/2009
Sample ID: 231732005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	-0.0004	0.0030	09:34:18	No
2	-0.034	-0.034	-0.0006	0.0029	09:34:53	No
Mean:	-0.027	-0.027	-0.0005			
SD :	0.0103	0.0103	0.0001			
%RSD:	38.0	38.0	26.3442			

==========

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.761	4.761	0.0622	0.0657	09:36:18	No
2	4.778	4.778	0.0625	0.0659	09:36:53	No
Mean:	4.769	4.769	0.0623			
SD :	0.0124	0.0124	0.0002			
%RSD:	0.3	0.3	0.2608			

QC value within specified limits.

==========

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.023	-0.023	-0.0005	0.0030	09:38:22	No
2	-0.032	-0.032	-0.0006	0.0029	09:38:57	No
Mean:	-0.027	-0.027	-0.0005			
SD :	0.0068	0.0068	0.0001			
%RSD:	25.0	25.0	17.3712			

QC value within specified limits.

==========

Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 07/02/2009
Sample ID: 231732006|i|||

%RSD: 32.2 32.2 18.1163

Element: Hg Seq. No.: 54 AS Loc.: 48 Date: 07/02/2009
Sample ID: 1201872366|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.024	2.024	0.0264	0.0298	09:52:27	No
2	2.014	2.014	0.0262	0.0297	09:53:02	No
Mean:	2.019	2.019	0.0263			
SD :	0.0072	0.0072	0.0001			
%RSD:	0.4	0.4	0.3580			

Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 07/02/2009
Sample ID: 1201872367|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0012	0.0023	09:54:21	No
2	-0.082	-0.082	-0.0012	0.0022	09:54:56	No
Mean:	-0.079	-0.079	-0.0012			
SD :	0.0042	0.0042	0.0001			
%RSD:	5.3	5.3	4.6033			

Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 07/02/2009
Sample ID: 232604003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.026	-0.026	-0.0005	0.0030	09:56:16	No
2	-0.025	-0.025	-0.0005	0.0030	09:56:51	No
Mean:	-0.025	-0.025	-0.0005			
SD :	0.0005	0.0005	0.0000			
%RSD:	2.0	2.0	1.3807			

Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 07/02/2009
Sample ID: 232604004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.029	-0.029	-0.0005	0.0029	09:58:11	No
2	-0.034	-0.034	-0.0006	0.0029	09:58:46	No
Mean:	-0.032	-0.032	-0.0006			
SD :	0.0038	0.0038	0.0001			
%RSD:	12.1	12.1	8.7533			

Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.824	4.824	0.0631	0.0665	10:00:10	No
2	4.809	4.809	0.0629	0.0663	10:00:45	No
Mean:	4.816	4.816	0.0630			
SD :	0.0111	0.0111	0.0001			
%RSD:	0.2	0.2	0.2305			

QC value within specified limits.

Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.028	-0.028	-0.0005	0.0029	10:02:14	No
2	-0.033	-0.033	-0.0006	0.0029	10:02:49	No
Mean:	-0.030	-0.030	-0.0006			
SD :	0.0038	0.0038	0.0000			
%RSD:	12.4	12.4	8.9172			

QC value within specified limits.

==========

Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 07/02/2009
Sample ID: 232604005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.039	-0.039	-0.0007	0.0028	10:04:14	No
2	-0.045	-0.045	-0.0007	0.0027	10:04:49	No
Mean:	-0.042	-0.042	-0.0007			
SD :	0.0040	0.0040	0.0001			
%RSD:	9.5	9.5	7.4059			

==========

Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 07/02/2009
Sample ID: 1201872375|i||881662|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	-0.0004	0.0030	10:06:11	No
2	-0.029	-0.029	-0.0005	0.0029	10:06:46	No
Mean:	-0.025	-0.025	-0.0005			
SD :	0.0065	0.0065	0.0001			
%RSD:	26.6	26.6	17.8750			

==========

Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 07/02/2009
Sample ID: 1201872376|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.992	1.992	0.0259	0.0294	10:08:08	No
2	1.968	1.968	0.0256	0.0291	10:08:43	No
Mean:	1.980	1.980	0.0258			
SD :	0.0171	0.0171	0.0002			
%RSD:	0.9	0.9	0.8681			

==========

Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 07/02/2009
Sample ID: 231763001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.019	-0.019	-0.0004	0.0030	10:10:06	No
2	-0.045	-0.045	-0.0007	0.0027	10:10:41	No
Mean:	-0.032	-0.032	-0.0006			
SD :	0.0179	0.0179	0.0002			
%RSD:	55.8	55.8	40.5951			

==========

Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 07/02/2009
Sample ID: 1201872377|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.027	-0.027	-0.0005	0.0029	10:12:04	No
2	-0.034	-0.034	-0.0006	0.0029	10:12:38	No
Mean:	-0.030	-0.030	-0.0006			
SD :	0.0046	0.0046	0.0001			

%RSD: 15.1 15.1 10.8186

Element: Hg Seq. No.: 65 AS Loc.: 57 Date: 07/02/2009
Sample ID: 1201872378|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.136	2.136	0.0278	0.0313	10:14:03	No
2	2.111	2.111	0.0275	0.0310	10:14:37	No
Mean:	2.124	2.124	0.0277			
SD :	0.0179	0.0179	0.0002			
%RSD:	0.8	0.8	0.8466			

Element: Hg Seq. No.: 66 AS Loc.: 58 Date: 07/02/2009
Sample ID: 1201872379|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.093	-0.093	-0.0014	0.0021	10:16:01	No
2	-0.097	-0.097	-0.0014	0.0020	10:16:36	No
Mean:	-0.095	-0.095	-0.0014			
SD :	0.0030	0.0030	0.0000			
%RSD:	3.1	3.1	2.7945			

Element: Hg Seq. No.: 67 AS Loc.: 59 Date: 07/02/2009
Sample ID: 231763002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.003	0.003	-0.0001	0.0033	10:18:00	No
2	-0.010	-0.010	-0.0003	0.0032	10:18:35	No
Mean:	-0.004	-0.004	-0.0002			
SD :	0.0098	0.0098	0.0001			
%RSD:	277.5	277.5	63.0283			

Element: Hg Seq. No.: 68 AS Loc.: 60 Date: 07/02/2009
Sample ID: 231763003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0004	0.0031	10:20:00	No
2	-0.021	-0.021	-0.0004	0.0030	10:20:35	No
Mean:	-0.019	-0.019	-0.0004			
SD :	0.0021	0.0021	0.0000			
%RSD:	10.6	10.6	6.5449			

Element: Hg Seq. No.: 69 AS Loc.: 61 Date: 07/02/2009
Sample ID: 231763004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0000	0.0034	10:22:00	No
2	-0.038	-0.038	-0.0007	0.0028	10:22:35	No
Mean:	-0.015	-0.015	-0.0003			
SD :	0.0333	0.0333	0.0004			
%RSD:	229.6	229.6	125.6828			

Element: Hg Seq. No.: 70 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	4.826	4.826	0.0631	0.0665	10:24:01	No
2	4.773	4.773	0.0624	0.0658	10:24:37	No
Mean:	4.800	4.800	0.0627			
SD :	0.0374	0.0374	0.0005			
%RSD:	0.8	0.8	0.7802			

QC value within specified limits.

==========

Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	-0.0009	0.0026	10:26:05	No
2	-0.049	-0.049	-0.0008	0.0027	10:26:40	No
Mean:	-0.051	-0.051	-0.0008			
SD :	0.0031	0.0031	0.0000			
%RSD:	6.1	6.1	4.9132			

QC value within specified limits.

==========

Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 07/02/2009
Sample ID: 231763005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	-0.0010	0.0024	10:28:07	No
2	-0.068	-0.068	-0.0011	0.0024	10:28:42	No
Mean:	-0.068	-0.068	-0.0010			
SD :	0.0008	0.0008	0.0000			
%RSD:	1.1	1.1	0.9406			

==========

Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 07/02/2009
Sample ID: 231763006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.061	-0.061	-0.0010	0.0025	10:30:05	No
2	-0.059	-0.059	-0.0009	0.0025	10:30:40	No
Mean:	-0.060	-0.060	-0.0009			
SD :	0.0015	0.0015	0.0000			
%RSD:	2.4	2.4	2.0349			

==========

Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 07/02/2009
Sample ID: 231763007|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0012	0.0023	10:32:00	No
2	-0.077	-0.077	-0.0012	0.0023	10:32:35	No
Mean:	-0.076	-0.076	-0.0012			
SD :	0.0001	0.0001	0.0000			
%RSD:	0.1	0.1	0.1295			

==========

Element: Hg Seq. No.: 75 AS Loc.: 65 Date: 07/02/2009
Sample ID: 231763008|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.064	-0.064	-0.0010	0.0025	10:33:55	No
2	-0.073	-0.073	-0.0011	0.0023	10:34:30	No
Mean:	-0.069	-0.069	-0.0011			
SD :	0.0062	0.0062	0.0001			

#	µg/L	µg/L	Signal	Height		Stored
1	2.016	2.016	0.0263	0.0297	10:45:33	No
2	1.985	1.985	0.0259	0.0293	10:46:08	No
Mean:	2.001	2.001	0.0261			
SD :	0.0217	0.0217	0.0003			
%RSD:	1.1	1.1	1.0889			

==========

Element: Hg Seq. No.: 82 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.826	4.826	0.0631	0.0665	10:47:34	No
2	4.823	4.823	0.0630	0.0665	10:48:09	No
Mean:	4.824	4.824	0.0631			
SD :	0.0018	0.0018	0.0000			
%RSD:						

QC value within specified limits.

==========

Element: Hg Seq. No.: 83 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	-0.0009	0.0026	10:49:37	No
2	-0.060	-0.060	-0.0009	0.0025	10:50:12	No
Mean:	-0.057	-0.057	-0.0009			
SD :	0.0048	0.0048	0.0001			
%RSD:	8.4	8.4	6.9349			

QC value within specified limits.

==========

Element: Hg Seq. No.: 84 AS Loc.: 72 Date: 07/02/2009
Sample ID: 1201871796|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.110	-0.110	-0.0016	0.0019	10:51:37	No
2	-0.117	-0.117	-0.0017	0.0018	10:52:12	No
Mean:	-0.113	-0.113	-0.0016			
SD :	0.0051	0.0051	0.0001			
%RSD:	4.5	4.5	4.0716			

==========

Element: Hg Seq. No.: 85 AS Loc.: 73 Date: 07/02/2009
Sample ID: 1201871797|i||881396|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.077	-0.077	-0.0012	0.0023	10:53:36	No
2	-0.090	-0.090	-0.0013	0.0021	10:54:11	No
Mean:	-0.084	-0.084	-0.0013			
SD :	0.0091	0.0091	0.0001			
%RSD:	10.8	10.8	9.4415			

==========

Element: Hg Seq. No.: 86 AS Loc.: 74 Date: 07/02/2009
Sample ID: 1201871798|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.001	2.001	0.0261	0.0295	10:55:36	No
2	1.982	1.982	0.0258	0.0293	10:56:11	No
Mean:	1.991	1.991	0.0259			
SD :	0.0132	0.0132	0.0002			

%RSD: 0.7 0.7 0.6679

==========

Element: Hg Seq. No.: 87 AS Loc.: 75 Date: 07/02/2009
Sample ID: 232432001|1|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.048	-0.048	-0.0008	0.0027	10:57:36	No
2	-0.056	-0.056	-0.0009	0.0026	10:58:12	No
Mean:	-0.052	-0.052	-0.0008			
SD :	0.0052	0.0052	0.0001			
%RSD:	9.9	9.9	8.0619			

==========

Element: Hg Seq. No.: 88 AS Loc.: 76 Date: 07/02/2009
Sample ID: 232506001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.042	-0.042	-0.0007	0.0028	10:59:38	No
2	-0.051	-0.051	-0.0008	0.0026	11:00:13	No
Mean:	-0.046	-0.046	-0.0008			
SD :	0.0063	0.0063	0.0001			
%RSD:	13.6	13.6	10.7799			

==========

Element: Hg Seq. No.: 89 AS Loc.: 77 Date: 07/02/2009
Sample ID: 232506002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.061	-0.061	-0.0010	0.0025	11:01:39	No
2	-0.064	-0.064	-0.0010	0.0025	11:02:14	No
Mean:	-0.063	-0.063	-0.0010			
SD :	0.0018	0.0018	0.0000			
%RSD:	2.9	2.9	2.4024			

==========

Element: Hg Seq. No.: 90 AS Loc.: 78 Date: 07/02/2009
Sample ID: 232510001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.046	-0.046	-0.0008	0.0027	11:03:36	No
2	-0.073	-0.073	-0.0011	0.0023	11:04:11	No
Mean:	-0.060	-0.060	-0.0009			
SD :	0.0189	0.0189	0.0002			
%RSD:	31.7	31.7	26.3588			

==========

Element: Hg Seq. No.: 91 AS Loc.: 79 Date: 07/02/2009
Sample ID: 1201871799|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.082	-0.082	-0.0012	0.0022	11:05:31	No
2	-0.093	-0.093	-0.0014	0.0021	11:06:06	No
Mean:	-0.088	-0.088	-0.0013			
SD :	0.0079	0.0079	0.0001			
%RSD:	9.0	9.0	7.8881			

==========

Element: Hg Seq. No.: 92 AS Loc.: 80 Date: 07/02/2009
Sample ID: 1201871800|i|||MS

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	2.050	2.050	0.0267	0.0302	11:07:26	No
2	2.029	2.029	0.0264	0.0299	11:08:01	No
Mean:	2.040	2.040	0.0266			
SD :	0.0148	0.0148	0.0002			
%RSD:	0.7	0.7	0.7307			

==========

Element: Hg Seq. No.: 93 AS Loc.: 81 Date: 07/02/2009
Sample ID: 1201871801|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.126	-0.126	-0.0018	0.0017	11:09:21	No
2	-0.126	-0.126	-0.0018	0.0017	11:09:55	No
Mean:	-0.126	-0.126	-0.0018			
SD :	0.0004	0.0004	0.0000			
%RSD:	0.3	0.3	0.2773			

==========

Element: Hg Seq. No.: 94 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.813	4.813	0.0629	0.0664	11:11:19	No
2	4.826	4.826	0.0631	0.0665	11:11:55	No
Mean:	4.820	4.820	0.0630			
SD :	0.0094	0.0094	0.0001			
%RSD:	0.2	0.2	0.1953			

QC value within specified limits.

==========

Element: Hg Seq. No.: 95 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.070	-0.070	-0.0011	0.0024	11:13:23	No
2	-0.077	-0.077	-0.0012	0.0023	11:13:57	No
Mean:	-0.074	-0.074	-0.0011			
SD :	0.0049	0.0049	0.0001			
%RSD:	6.7	6.7	5.7719			

QC value within specified limits.

==========

Element: Hg Seq. No.: 96 AS Loc.: 82 Date: 07/02/2009
Sample ID: 1201871638|i||881660|TB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	-0.0009	0.0026	11:15:21	No
2	-0.070	-0.070	-0.0011	0.0024	11:15:56	No
Mean:	-0.064	-0.064	-0.0010			
SD :	0.0090	0.0090	0.0001			
%RSD:	14.2	14.2	11.9285			

==========

Element: Hg Seq. No.: 97 AS Loc.: 83 Date: 07/02/2009
Sample ID: 1201872368|i|||MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.079	-0.079	-0.0012	0.0023	11:17:17	No
2	-0.086	-0.086	-0.0013	0.0022	11:17:51	No
Mean:	-0.083	-0.083	-0.0012			
SD :	0.0048	0.0048	0.0001			

Miscellaneous

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881353

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871707	UI090622-01	.25	mL
LCS	1201871707	UI090622-06	.25	mL
MS	1201871709	UI090622-01	.25	mL
MS	1201871709	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871706		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
LCS	1201871707		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232370001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232425001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232432001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506002		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232510001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
DUP	1201871708	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
MS	1201871709	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SDILT	1201871710	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881356

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871712	UI090622-A	.5	mL
LCS	1201871712	UI090622-B	.5	mL
MS	1201871714	UI090612-A	.5	mL
MS	1201871714	UI090612-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871711		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
LCS	1201871712		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232370001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
DUP	1201871713	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
MS	1201871714	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SDILT	1201871715	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232425001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232432001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506002		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232510001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 881395

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871798	WHG090701-13	.2	mL
MS	1201871800	WHG090701-13	.2	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871797		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
LCS	1201871798		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232432001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232506001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232506002		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232510001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
DUP	1201871799	232510001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
MS	1201871800	232510001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SDILT	1201871801	232510001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143839	1 mL	Sulfuric Acid, Concentrated
1136798-1	.5 mL	NITRIC ACID
1125381-C	1.5 mL	5% Potassium Persulfate
1144332-C	3 mL	5% KMnO4 solution
1144356-C	1 mL	Hg reducing agent
WHG090701-06	500 uL	Mercury Working 2nd Source 5.0/ICV
WHG090701-01	20 uL	Mercury Working 1st Source CAL 0.2/CRA
WHG090701-02	50 uL	Mercury Working 1st Source CAL 0.5
WHG090701-05	1 mL	Mercury Working 1st Source CAL 10.0
WHG090701-03	200 uL	Mercury Working 1st Source CAL 2.0
WHG090701-04	500 uL	Mercury Working 1st Source CAL 5.0/CCV

Comments Digestion Start Date: 01-JUL-09 11:35
Digestion End Date: 01-JUL-09 13:35

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
05-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3005/6020	Liquid	LANL
Batch ID:	**Sample Numbers:**		
881357	See Below		

Potentially affected work order(s)(SDG): 232370(09-2452-1),232425(09-2473-1),232432(09-2478-1),232506(09-2498-1),232510(09-2500-1)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201871714MS	The matrix spike recovery failed outside of the control limits for Tl due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Paul Boyd 05-JUL-09

Data Validator/Group Leader:

Kristen Parson 17-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B

Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090121-40 **Opened:** 22-JAN-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 20-JAN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 22-JAN-10 **Lot Number :** 1014592
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	7.5 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	50 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	7.5 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	75 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Standard Logbook

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-11 **Opened:** 10-JUN-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 10-JUN-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 10-JUN-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A

Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.12 **Opened:** 30-JUN-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 01-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090612-A **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE liquid Spike Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	4 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	.5 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L

Analyte	Concentration	Analyte	Concentration
Iron	200 mg/L	Lead	2 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	1 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	5 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090612-B **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE Liquid Spike Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L

Analyte	Concentration	Analyte	Concentration
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL

Analyte	Concentration	Analyte	Concentration
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090622-A **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090622-B **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Standard Logbook

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090701-01 **Opened:** 01-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 01-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 02-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L

Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090701-02 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 01-JUL-09
Type: Intermediate **Expires:** 02-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090701-01 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.2CRA **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

Serial ID: WHG090701-02 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.5 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG090701-03 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL2.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Serial ID: WHG090701-04 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL5.0CCV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090701-05 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL10.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG090701-06 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORK5.0ICV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090701-07 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090701-08 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090701-09 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090701-10 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090701-11 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090701-12 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090701-13 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGLIQLCSMSSPIKE **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury working intermediate standard for LCS/MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090630-42 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090630-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090630-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090630-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090630-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090630-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090630-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090630-43 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746

Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09

Type: Working **Expires:** 01-JUL-09

Employee: Helen Camello

Supplier: GEL

Description: TRACE ICP 0.5/CCV CALIBRATION STD.

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090630-44 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1 %HNO3 -1143746

Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09

Type: Working **Expires:** 01-JUL-09

Employee: Helen Camello

Supplier: o2si

Description: Trace ICP Calibration Standard 1.0ppm

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090630-45 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 -1143746
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090630-46 **Opened:** 30-JUN-09 **Solvent :** 3%HCL AND 1%HNO3 -1143746
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090630-47 **Opened:** 30-JUN-09 **Solvent :** 3%HCL &1%HNO3-1143746
Name: PQL Working Standard **Received:** 22-JAN-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090121-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090121-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Arsenic	7.5 mg/L	2 mL	1000 mL	15 ug/L
UI090121-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090121-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Calcium	50 mg/L	2 mL	1000 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090121-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090121-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Selenium	7.5 mg/L	2 mL	1000 mL	15 ug/L
UI090121-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Sodium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090121-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090121-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090703-04 **Opened:** 03-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl-1143705
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090703-04A **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090703-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090703-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090703-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090703-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090703-05 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090703-06 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090703-07 **Opened:** 03-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090703-08 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090703-70 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS LINEAR RANGE ST **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Standard Logbook

Serial ID: 1116812 **Opened:** 29-APR-09 **Lot Number :** E45475
Name: B-K2S2O8S-MER **Received:** 29-APR-09
Type: Reagent/Solvent **Expires:** 29-APR-10
Employee: Tara Griffin
Supplier: J.T BAKER
Description: Potassium Persulfate Concentrate.
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1125381-C **Opened:** 21-MAY-09
Name: B-K2S2O8-MER **Received:** 21-MAY-09
Type: Reagent/Solvent **Expires:** 21-NOV-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% Potassium Persulfate
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1116812	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1143705 **Opened:** 29-JUN-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 06-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1143746 **Opened:** 29-JUN-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JUN-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 05-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1143839 **Opened:** 29-JUN-09 **Lot Number :** G45010
Name: B-H2SO4-MER **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 29-JUN-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Sulfuric Acid, Concentrated
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL

Standard Logbook

Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2478

Method/Analysis Information

Product: **pH**

Analytical Batch: 881124 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232429001	CAMO-09-6007
232429002	CAMO-09-6006
232429003	CAMO-09-6008
232429004	CAMO-09-6009
232429005	CAMO-09-6034
232429006	CAMO-09-6043
232429007	CAMO-09-6045
232429008	CAMO-09-6041
232429009	CAMO-09-6040
232429010	CAMO-09-6044
232429011	CAMO-09-6035
232429012	CAMO-09-6038
232429013	CAMO-09-9039
232429014	CAMO-09-6042
232429015	CAMO-09-6049
1201871137	232424001(CAMO-09-10463) Sample Duplicate (DUP)
1201871138	232426001(CAMO-09-7143) Sample Duplicate (DUP)
1201871139	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHecT LogR pH/ISE.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation

The following samples were selected for QC analysis: 232424001 (CAMO-09-10463) and 232426001 (CAMO-09-7143).

Duplicate Relative Percent Difference (RPD) Statement

The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times

The following samples from this sample group were received by the lab outside of the method specified holding time: 232429001 (CAMO-09-6007), 232429002 (CAMO-09-6006), 232429003 (CAMO-09-6008), 232429004 (CAMO-09-6009), 232429005 (CAMO-09-6034), 232429006 (CAMO-09-6043), 232429007 (CAMO-09-6045), 232429008 (CAMO-09-6041), 232429009 (CAMO-09-6040), 232429010 (CAMO-09-6044), 232429011 (CAMO-09-6035), 232429012 (CAMO-09-6038), 232429013 (CAMO-09-9039), 232429014 (CAMO-09-6042) and 232429015 (CAMO-09-6049).

Sample Re-analysis

The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation

An NCR was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to

generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881039	**Method:**	SW846 9012A
Prep Batch :	881037	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232429001	CAMO-09-6007
232429002	CAMO-09-6006
232429003	CAMO-09-6008
232429004	CAMO-09-6009
232429005	CAMO-09-6034
232429006	CAMO-09-6043
232429007	CAMO-09-6045
232429008	CAMO-09-6041
232429009	CAMO-09-6040
232429010	CAMO-09-6044
232429011	CAMO-09-6035
232429012	CAMO-09-6038
232429013	CAMO-09-9039
232429014	CAMO-09-6042
232429015	CAMO-09-6049
1201870890	Method Blank (MB)
1201870891	232429001(CAMO-09-6007) Sample Duplicate (DUP)
1201870892	232429002(CAMO-09-6006) Sample Duplicate (DUP)
1201870893	232429001(CAMO-09-6007) Matrix Spike (MS)
1201870894	232429002(CAMO-09-6006) Matrix Spike (MS)
1201870895	232429001(CAMO-09-6007) Matrix Spike Duplicate (MSD)
1201870896	232429002(CAMO-09-6006) Matrix Spike Duplicate (MSD)
1201870897	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation

The following samples were selected for QC analysis: 232429001 (CAMO-09-6007) and 232429002 (CAMO-09-6006).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201870891 (CAMO-09-6007), 1201870892 (CAMO-09-6006), 232429001 (CAMO-09-6007) and 232429002 (CAMO-09-6006).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Negative Bias
No Chlorinated Cyanide results exceed the Total Cyanide results by more than three times the PQL

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1201870897 (LCS).

Sample Re-analysis
The following samples were re-analyzed due to CCV failure: 232429003 (CAMO-09-6008), 232429004 (CAMO-09-6009), 232429005 (CAMO-09-6034), 232429006 (CAMO-09-6043), 232429007 (CAMO-09-6045), 232429008 (CAMO-09-6041), 232429009 (CAMO-09-6040), 232429010 (CAMO-09-6044), 232429011 (CAMO-09-6035) and 232429012 (CAMO-09-6038).

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	880959	**Method:**	EPA 300.0
Prep Batch :	880958	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232429001	CAMO-09-6007
232429002	CAMO-09-6006
232429003	CAMO-09-6008
232429004	CAMO-09-6009
232429005	CAMO-09-6034
232429006	CAMO-09-6043
232429007	CAMO-09-6045
232429008	CAMO-09-6041
232429009	CAMO-09-6040
232429010	CAMO-09-6044
232429011	CAMO-09-6035
232429012	CAMO-09-6038
232429013	CAMO-09-9039
232429014	CAMO-09-6042
232429015	CAMO-09-6049
1201870628	Method Blank (MB)
1201870629	Laboratory Control Sample (LCS)
1201870630	232429001(CAMO-09-6007) Sample Duplicate (DUP)
1201870631	232429001(CAMO-09-6007) Matrix Spike (MS)
1201870633	232429009(CAMO-09-6040) Sample Duplicate (DUP)
1201870634	232429009(CAMO-09-6040) Matrix Spike (MS)
1201870635	232429009(CAMO-09-6040) Matrix Spike Duplicate (MSD)
1201870636	232429001(CAMO-09-6007) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation

The following samples were selected for QC analysis: 232429001 (CAMO-09-6007) and 232429009 (CAMO-09-6040).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201870634 (CAMO-09-6040).

Matrix Spike Duplicate (MSD) Recovery Statement

The spike duplicate recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201870635 (CAMO-09-6040).

MS/MSD Relative Percent Difference (RPD) Statement

The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times

The following samples from this sample group were received by the lab outside of the method specified holding time: 1201870628 (MB), 1201870629 (LCS), 1201870630 (CAMO-09-6007), 1201870631 (CAMO-09-6007), 1201870633 (CAMO-09-6040), 1201870634 (CAMO-09-6040), 1201870635 (CAMO-09-6040), 1201870636 (CAMO-09-6007), 232429001 (CAMO-09-6007), 232429002 (CAMO-09-6006), 232429003 (CAMO-09-6008), 232429004 (CAMO-09-6009), 232429005 (CAMO-09-6034), 232429006 (CAMO-09-6043), 232429007 (CAMO-09-6045), 232429008 (CAMO-09-6041), 232429009 (CAMO-09-6040), 232429010 (CAMO-09-6044), 232429011 (CAMO-09-6035), 232429012 (CAMO-09-6038), 232429013 (CAMO-09-9039), 232429014 (CAMO-09-6042) and 232429015 (CAMO-09-6049).

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-analysis

The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation

The following NCR was generated for this SDG: 709025 1201870634 (CAMO-09-6040) and 1201870635 (CAMO-09-6040).

Manual Integrations

Manual integrations were not required for the samples in this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Hexavalent Chromium**		
Analytical Batch:	881431	**Method:**	SW846 7196A
Prep Batch :	881430	**Method:**	SW846 3060A

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 7196A:

Sample ID	Client ID
232429001	CAMO-09-6007
232429002	CAMO-09-6006
232429003	CAMO-09-6008
232429004	CAMO-09-6009
232429005	CAMO-09-6034
232429006	CAMO-09-6043
232429007	CAMO-09-6045
232429008	CAMO-09-6041
232429009	CAMO-09-6040
232429010	CAMO-09-6044
232429011	CAMO-09-6035
232429012	CAMO-09-6038
232429013	CAMO-09-9039
232429014	CAMO-09-6042
232429015	CAMO-09-6049
1201871861	Method Blank (MB)
1201871862	232429001(CAMO-09-6007) Sample Duplicate (DUP)
1201871863	232429015(CAMO-09-6049) Sample Duplicate (DUP)
1201871866	Laboratory Control Sample (LCS)
1201876601	Insoluble Lab Control Sample (ILCS)
1201877400	232429001(CAMO-09-6007) Matrix Spike (MS)
1201877401	232429015(CAMO-09-6049) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-044 REV# 10.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Spectrometric analysis was performed on a Spectronic 20D + Digital Spectrophotometer.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation

The following samples were selected for QC analysis: 232429001 (CAMO-09-6007) and 232429015 (CAMO-09-6049).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The MS/PS recoveries for this sample set were within the required acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201871863 (CAMO-09-6049) and 232429015 (CAMO-09-6049).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times

All samples in this SDG met the specified holding time.

Sample Dilutions

The following samples in this sample group were diluted due to matrix interference: 1201871863

(CAMO-09-6049), 1201877401 (CAMO-09-6049), 232429002 (CAMO-09-6006), 232429003 (CAMO-09-6008), 232429004 (CAMO-09-6009), 232429005 (CAMO-09-6034), 232429006 (CAMO-09-6043), 232429007 (CAMO-09-6045), 232429008 (CAMO-09-6041), 232429009 (CAMO-09-6040), 232429010 (CAMO-09-6044), 232429012 (CAMO-09-6038), 232429014 (CAMO-09-6042) and 232429015 (CAMO-09-6049).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 17July09

Sample Data Summary

GEL LABORATORIES LLC

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Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2478 GEL Work Order: 232429

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by Tom Lewis, Jr.

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6007	Project:	LANL01004
Sample ID:	232429001	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	4.27%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.7C	H	8.27	0.010	0.100	SU	1	RXG2 06/29/09	1228	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	112	68.3	251	ug/kg	1	AXC2 07/07/09	1055	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.304	1.01	mg/kg	1	VXP1 07/02/09	1955	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.122	0.408	mg/kg	1	RXG2 07/08/09	1331	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6006	Project:	LANL01004
Sample ID:	232429002	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	11.4%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.6C	H	7.24	0.010	0.100	SU	1	RXG2 06/29/09	1230	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	232	73.8	271	ug/kg	1	AXC2 07/07/09	1058	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HJh	0.924	0.330	1.10	mg/kg	1	VXP1 07/02/09	2127	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.270	0.898	mg/kg	2	RXG2 07/08/09	1335	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6008	Project:	LANL01004
Sample ID:	232429003	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	23.1%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.4C	H	8.04	0.010	0.100	SU	1	RXG2 06/29/09	1233	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	86.7	319	ug/kg	1	AXC2 07/07/09	1142	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	2.85	0.379	1.26	mg/kg	1	VXP1 07/02/09	2150	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.780	2.60	mg/kg	5	RXG2 07/08/09	1336	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6009	Project:	LANL01004
Sample ID:	232429004	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	17%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.4C	H	7.97	0.010	0.100	SU	1	RXG2 06/29/09	1236	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	75.9	279	ug/kg	1	AXC2 07/07/09	1143	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.31	0.352	1.17	mg/kg	1	VXP1 07/02/09	2213	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.288	0.959	mg/kg	2	RXG2 07/08/09	1337	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6034	Project:	LANL01004
Sample ID:	232429005	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	22.4%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.7C	H	7.85	0.010	0.100	SU	1	RXG2 06/29/09	1242	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	226	85.9	316	ug/kg	1	AXC2 07/07/09	1144	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.382	1.27	mg/kg	1	VXP1 07/02/09	2236	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	3.84	12.8	mg/kg	25	RXG2 07/08/09	1337	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID: CAMO-09-6043
Sample ID: 232429006
Matrix: R
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client
Moisture: 7.85%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.6C	H	7.30	0.010	0.100	SU	1	RXG2 06/29/09	1242	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	64.7	238	ug/kg	1	AXC2 07/07/09	1145	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.310	1.03	mg/kg	1	VXP1 07/02/09	2344	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.635	2.12	mg/kg	5	RXG2 07/08/09	1347	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6045	Project:	LANL01004
Sample ID:	232429007	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.6C	H	7.62	0.010	0.100	SU	1	RXG2 06/29/09	1243	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	67.2	247	ug/kg	1	AXC2 07/07/09	1146	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.322	1.07	mg/kg	1	VXP1 07/03/09	0007	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.252	0.839	mg/kg	2	RXG2 07/08/09	1348	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6041	Project:	LANL01004
Sample ID:	232429008	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	5.2%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.7C	H	6.77	0.010	0.100	SU	1	RXG2 06/29/09	1245	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	64.0	235	ug/kg	1	AXC2 07/07/09	1147	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.305	1.02	mg/kg	1	VXP1 07/03/09	0030	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.615	2.05	mg/kg	5	RXG2 07/08/09	1348	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6040	Project:	LANL01004
Sample ID:	232429009	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	27.3%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.5C	H	7.11	0.010	0.100	SU	1	RXG2 06/29/09	1248	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	299	91.7	337	ug/kg	1	AXC2 07/07/09	1147	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.410	1.37	mg/kg	1	VXP1 07/03/09	0053	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	3.97	13.2	mg/kg	25	RXG2 07/08/09	1348	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6044	Project:	LANL01004
Sample ID:	232429010	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	12.8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.7C	H	6.38	0.010	0.100	SU	1	RXG2 06/29/09	1252	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	144	68.4	251	ug/kg	1	AXC2 07/07/09	1148	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.332	1.11	mg/kg	1	VXP1 07/03/09	0225	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	3.41	11.4	mg/kg	25	RXG2 07/08/09	1348	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6035	Project:	LANL01004
Sample ID:	232429011	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	3.99%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.4C	H	7.88	0.010	0.100	SU	1	RXG2 06/29/09	1252	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	70.8	260	ug/kg	1	AXC2 07/07/09	1149	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.298	0.992	mg/kg	1	VXP1 07/03/09	0248	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	J	0.156	0.123	0.409	mg/kg	1	RXG2 07/08/09	1349	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID: CAMO-09-6038
Sample ID: 232429012
Matrix: R
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client
Moisture: 25.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.7C	H	6.56	0.010	0.100	SU	1	RXG2 06/29/09	1253	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	181	87.4	321	ug/kg	1	AXC2 07/07/09	1150	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.396	1.32	mg/kg	1	VXP1 07/03/09	0310	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.788	2.63	mg/kg	5	RXG2 07/08/09	1349	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-9039	Project:	LANL01004
Sample ID:	232429013	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	9.12%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.3C	H	6.90	0.010	0.100	SU	1	RXG2 06/29/09	1254	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	73.4	270	ug/kg	1	AXC2 07/07/09	1155	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.322	1.07	mg/kg	1	VXP1 07/03/09	0419	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.131	0.435	mg/kg	1	RXG2 07/08/09	1349	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID:	CAMO-09-6042	Project:	LANL01004
Sample ID:	232429014	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	17.8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.9C	H	7.53	0.010	0.100	SU	1	RXG2 06/29/09	1256	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	142	73.9	272	ug/kg	1	AXC2 07/07/09	1156	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.355	1.18	mg/kg	1	VXP1 07/03/09	0442	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.712	2.37	mg/kg	5	RXG2 07/08/09	1349	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 11, 2009

Client SDG: 09-2478

Client Sample ID: CAMO-09-6049
Sample ID: 232429015
Matrix: R
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client
Moisture: 11.6%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.7C	H	7.28	0.010	0.100	SU	1	RXG2 06/29/09	1300	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	79.9	67.5	248	ug/kg	1	AXC2 07/07/09	1156	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.326	1.09	mg/kg	1	VXP1 07/03/09	0505	880959	3
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.268	0.892	mg/kg	2	RXG2 07/08/09	1349	881431	4

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/01/09	1242	880958
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1017	881430
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	
4	SW846 7196A	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 11, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232429

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis											
Batch 881124											
QC1201871137 232424001 DUP											
pH		H	9.17	H	8.89	SU	3.10		(0%-10%)	RXG2	06/29/09 12:20
QC1201871138 232426001 DUP											
pH		H	7.79	H	7.98	SU	2.41		(0%-10%)		06/29/09 12:23
QC1201871139 LCS											
pH	7.00				7.03	SU		100	(95%-105%)		06/29/09 12:15
Flow Injection Analysis											
Batch 881039											
QC1201870891 232429001 DUP											
Cyanide, Total		J	112	U	ND	ug/kg	N/A ^		(+/-256)	AXC2	07/07/09 10:55
QC1201870892 232429002 DUP											
Cyanide, Total		J	232	J	157	ug/kg	N/A ^		(+/-282)		07/07/09 10:59
QC1201870897 LCS											
Cyanide, Total	174000				167000	ug/kg		95.7	(46%-145%)		07/07/09 10:54
QC1201870890 MB											
Cyanide, Total				U	250	ug/kg					07/07/09 10:53
QC1201870893 232429001 MS											
Cyanide, Total	4750	J	112		4260	ug/kg		87.4	(50%-130%)		07/07/09 10:56
QC1201870894 232429002 MS											
Cyanide, Total	5130	J	232		4810	ug/kg		89.3	(50%-130%)		07/07/09 11:00
QC1201870895 232429001 MSD											
Cyanide, Total	5020	J	112		4650	ug/kg	8.57	90.3	(0%-30%)		07/07/09 10:57
QC1201870896 232429002 MSD											
Cyanide, Total	5130	J	232		4650	ug/kg	3.47	86.1	(0%-30%)		07/07/09 11:01
Ion Chromatography											
Batch 880959											
QC1201870630 232429001 DUP											
Nitrate-N		HUh	ND	HUh	ND	mg/kg	N/A		(+/-1.02)	VXP1	07/02/09 20:18
QC1201870633 232429009 DUP											
Nitrate-N		HUh	ND	HUh	ND	mg/kg	N/A		(+/-1.34)		07/03/09 01:16
QC1201870629 LCS											
Nitrate-N	50.0				47.7	mg/kg		95.3	(90%-110%)		07/02/09 19:32
QC1201870628 MB											
Nitrate-N				U	1.00	mg/kg					07/02/09 19:10
QC1201870631 232429001 MS											
Nitrate-N	50.7	HUh	ND	Hh	46.2	mg/kg		91.1	(90%-110%)		07/02/09 20:41
QC1201870634 232429009 MS											
Nitrate-N	66.7	HUh	ND	Hh	55.9	mg/kg		83.7*	(90%-110%)		07/03/09 01:39
QC1201870635 232429009 MSD											
Nitrate-N	67.7	HUh	ND	Hh	57.0	mg/kg	1.92	84.1*	(0%-20%)		07/03/09 02:02
QC1201870636 232429001 MSD											
Nitrate-N	52.1	HUh	ND	Hh	47.3	mg/kg	2.29	90.7	(0%-20%)		07/02/09 21:04

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QC Summary

Workorder: 232429

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Spectrometric Analysis											
Batch 881431											
QC1201871862 232429001 DUP											
Hexavalent Chromium		U	ND	U	ND	mg/kg	N/A		(+/-0.417)	RXG2	07/08/09 13:32
QC1201871863 232429015 DUP											
Hexavalent Chromium		U	ND	U	ND	mg/kg	N/A		(+/-0.872)		07/08/09 13:50
QC1201876601 ILCS											
Hexavalent Chromium	7.90				7.30	mg/kg		92.4	(80%-120%)		07/08/09 13:31
QC1201871866 LCS											
Hexavalent Chromium	3.91				4.03	mg/kg		103	(80%-120%)		07/08/09 13:30
QC1201871861 MB											
Hexavalent Chromium				U	0.390	mg/kg					07/08/09 13:30
QC1201877400 232429001 MS											
Hexavalent Chromium	4.08	U	ND		3.95	mg/kg		96.7	(75%-125%)		07/08/09 13:32
QC1201877401 232429015 MS											
Hexavalent Chromium	4.42	U	ND		3.84	mg/kg		84.3	(75%-125%)		07/08/09 13:50

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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QC Summary

Workorder: 232429

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 11-JUL-2009 03:05

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2478

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**07-JUL-2009 10:47:46**	**OM_7-7-2009_10-38-00**	**151**	**150**	**101**	**(90%-110%)**	**Yes**
CCV	07-JUL-2009 11:02:04	OM_7-7-2009_10-38-00	90	100	90	(90%-110%)	Yes
CCV	07-JUL-2009 11:39:05	OM_7-7-2009_11-38-18	98.3	100	98	(90%-110%)	Yes
CCV	07-JUL-2009 11:51:31	OM_7-7-2009_11-38-18	99.9	100	100	(90%-110%)	Yes
CCV	07-JUL-2009 12:03:53	OM_7-7-2009_11-38-18	102	100	102	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**07-JUL-2009 10:49:36**	**OM_7-7-2009_10-38-00**	**-1.33**	**5**	**Yes**
CCB	07-JUL-2009 11:03:54	OM_7-7-2009_10-38-00	-2.73	5	Yes
CCB	07-JUL-2009 11:40:56	OM_7-7-2009_11-38-18	-1.68	5	Yes
CCB	07-JUL-2009 11:53:21	OM_7-7-2009_11-38-18	-2.22	5	Yes
CCB	07-JUL-2009 12:05:44	OM_7-7-2009_11-38-18	-1.41	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 11-JUL-2009 03:05

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2478**

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**02-JUL-2009 18:24:00**	**090702**	**4.7705**	**5**	**95**	**(90%-110%)**	**Yes**
CCV	02-JUL-2009 22:59:00	090702	7.3017	7.5	97	(90%-110%)	Yes
CCV	03-JUL-2009 03:33:00	090702	4.7761	5	96	(90%-110%)	Yes
CCV	03-JUL-2009 05:28:00	090702	7.296	7.5	97	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**02-JUL-2009 18:47:00**	**090702**	**0**	**0.1**	**Yes**
CCB	02-JUL-2009 23:21:00	090702	0	0.1	Yes
CCB	03-JUL-2009 03:56:00	090702	0	0.1	Yes
CCB	03-JUL-2009 05:51:00	090702	0	0.1	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 11-JUL-2009 03:05

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2478

Spectrometric Analysis

Method: SW846 7196A Concentration Units:mg/L

Instrument: Spectronic 20D + Digital Spectrophotometer

Parmname: Hexavalent Chromium

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**08-JUL-2009 13:30:42**	**881431**	**0.0993**	**0.1**	**99**	**(80%-120%)**	**Yes**
CCV	08-JUL-2009 13:38:14	881431	0.10054	0.1	101	(80%-120%)	Yes
CCV	08-JUL-2009 13:50:26	881431	0.10054	0.1	101	(80%-120%)	Yes
CCV	08-JUL-2009 13:50:58	881431	0.09806	0.1	98	(80%-120%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**08-JUL-2009 13:30:48**	**881431**	**-0.00115**	**0.01**	**Yes**
CCB	08-JUL-2009 13:38:21	881431	-0.00115	0.01	Yes
CCB	08-JUL-2009 13:50:32	881431	0.0000868	0.01	Yes
CCB	08-JUL-2009 13:51:01	881431	-0.00115	0.01	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881037

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870897	URF071009-01	.25	g
MS	1201870893	URF1091135-02	.025	mL
MS	1201870894	URF1091135-02	.025	mL
MSD	1201870895	URF1091135-02	.025	mL
MSD	1201870896	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870890		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.5 g	25 mL	50	SOIL
LCS	1201870897		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.25 g	25 mL	100	SOIL
SAMPLE	232429001		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.52 g	25 mL	48.07692	SOIL
DUP	1201870891	232429001	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
MS	1201870893	232429001	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.55 g	25 mL	45.45455	SOIL
MSD	1201870895	232429001	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232429002		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.52 g	25 mL	48.07692	SOIL
DUP	1201870892	232429002	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.5 g	25 mL	50	SOIL
MS	1201870894	232429002	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.55 g	25 mL	45.45455	SOIL
MSD	1201870896	232429002	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232429003		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232429004		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232429005		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232429006		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232429007		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232429008		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232429009		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232429010		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232429011		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232429012		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232429013		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232429014		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232429015		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232509001		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232509002		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232509003		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232509004		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232509005		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.56 g	25 mL	44.64286	SOIL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090707-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/7/2009 10:40:37	OM_7-7-2009_10-38-00
150 ppb		1	axc2	7/7/2009 10:41:29	OM_7-7-2009_10-38-00
100 ppb		1	axc2	7/7/2009 10:42:22	OM_7-7-2009_10-38-00
50 ppb		1	axc2	7/7/2009 10:43:14	OM_7-7-2009_10-38-00
10 ppb		1	axc2	7/7/2009 10:44:07	OM_7-7-2009_10-38-00
CRDL 5.0 ppb		1	axc2	7/7/2009 10:45:01	OM_7-7-2009_10-38-00
ICAL-00		1	axc2	7/7/2009 10:45:55	OM_7-7-2009_10-38-00
ICV		1	axc2	7/7/2009 10:47:46	OM_7-7-2009_10-38-00
ICB		1	axc2	7/7/2009 10:49:36	OM_7-7-2009_10-38-00
CRDL		1	axc2	7/7/2009 10:51:26	OM_7-7-2009_10-38-00
1201870890	881039	1	axc2	7/7/2009 10:53:16	OM_7-7-2009_10-38-00
1201870897	881039	50	axc2	7/7/2009 10:54:09	OM_7-7-2009_10-38-00
232429001	881039	1	axc2	7/7/2009 10:55:02	OM_7-7-2009_10-38-00
1201870891	881039	1	axc2	7/7/2009 10:55:55	OM_7-7-2009_10-38-00
1201870893	881039	1	axc2	7/7/2009 10:56:48	OM_7-7-2009_10-38-00
1201870895	881039	1	axc2	7/7/2009 10:57:41	OM_7-7-2009_10-38-00
232429002	881039	1	axc2	7/7/2009 10:58:34	OM_7-7-2009_10-38-00
1201870892	881039	1	axc2	7/7/2009 10:59:26	OM_7-7-2009_10-38-00
1201870894	881039	1	axc2	7/7/2009 11:00:19	OM_7-7-2009_10-38-00
1201870896	881039	1	axc2	7/7/2009 11:01:11	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:02:04	OM_7-7-2009_10-38-00
CCB		1	axc2	7/7/2009 11:03:54	OM_7-7-2009_10-38-00
232429003*	881039	1	axc2	7/7/2009 11:05:42	OM_7-7-2009_10-38-00
232429004*	881039	1	axc2	7/7/2009 11:06:34	OM_7-7-2009_10-38-00
232429005*	881039	1	axc2	7/7/2009 11:07:26	OM_7-7-2009_10-38-00
232429006*	881039	1	axc2	7/7/2009 11:08:18	OM_7-7-2009_10-38-00
232429007*	881039	1	axc2	7/7/2009 11:09:09	OM_7-7-2009_10-38-00
232429008*	881039	1	axc2	7/7/2009 11:10:03	OM_7-7-2009_10-38-00
232429009*	881039	1	axc2	7/7/2009 11:10:57	OM_7-7-2009_10-38-00
232429010*	881039	1	axc2	7/7/2009 11:11:50	OM_7-7-2009_10-38-00
232429011*	881039	1	axc2	7/7/2009 11:12:43	OM_7-7-2009_10-38-00
232429012*	881039	1	axc2	7/7/2009 11:13:36	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:14:28	OM_7-7-2009_10-38-00

Author: axc2 Date : 7/7/2009

Original Run Filename: OM_7-7-2009_10-38-00.OMN created 7/7/2009 10:38:00
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_10-38-00.OMN last modified 7/7/2009 11:15:33
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-01	1	S1	200	8.66	7/7/2009@10:40:37			200 ppb
WCN090707-02	1	S2	150	6.58	7/7/2009@10:41:29			150 ppb
WCN090707-03	1	S3	100	4.25	7/7/2009@10:42:22			100 ppb
WCN090707-04	1	S4	50.0	2.32	7/7/2009@10:43:14			50 ppb
WCN090707-05	1	S5	10.0	0.530	7/7/2009@10:44:07			10 ppb
WCN090707-06	1	S6	5.00	0.393	7/7/2009@10:45:01			CRDL 5.0 ppb
WCN090707-08	1	S7	0.00	-0.00192	7/7/2009@10:45:55			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99969 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090707-07	1	S8	151	6.56	7/7/2009@10:47:46			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090707-08	1	S7	-1.33	0.0378	7/7/2009@10:49:36			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.33 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.33 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090707-06	1	S6	6.83	0.387	7/7/2009@10:51:26			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.83 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.83 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870890|881039|MB	1	1	0.258	0.106	7/7/2009@10:53:16			
1201870897||LCS	1	2	33.3	1.52	7/7/2009@10:54:09		50.00	
232429001	1	3	2.24	0.191	7/7/2009@10:55:02			
1201870891||DUP	1	4	1.10	0.142	7/7/2009@10:55:55			
1201870893||MS	1	5	89.8	3.94	7/7/2009@10:56:48			
1201870895||MSD	1	6	92.5	4.06	7/7/2009@10:57:41			
232429002	1	7	4.27	0.278	7/7/2009@10:58:34			
1201870892||DUP	1	8	2.79	0.214	7/7/2009@10:59:26			
1201870894||MS	1	9	93.8	4.12	7/7/2009@11:00:19			
1201870896||MSD	1	10	90.6	3.98	7/7/2009@11:01:11			
WCN090707-03	1	S3	90.0	3.95	7/7/2009@11:02:04			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-10.0 < 10.0					

		Message	CCV Passed						
		Action	Continue						
		DQM Test: < - Percent Relative Difference							
		Result:	-10.0 < 10.0						
		Message	CCV Passed						
		Action	Continue						
WCN090707-08	1	S7	-2.73	-0.0223	7/7/2009@11:03:54			CCB	
		Known Conc:	0.00						
		DQM Test: > + Concentration Limit							
		Result:	-2.73 < 5.00						
		Message	CCB Passed						
		Action	Continue						
		DQM Test: < - Concentration Limit							
		Result:	-2.73 > -5.00						
		Message	CCB Passed						
		Action	Continue						
232429003	1	11	1.07	0.141	7/7/2009@11:05:42				
232429004	1	12	-2.99	-0.0332	7/7/2009@11:06:34				
232429005	1	13	2.06	0.183	7/7/2009@11:07:26				
232429006	1	14	-3.41	-0.0512	7/7/2009@11:08:18				
232429007	1	15	-3.40	-0.0507	7/7/2009@11:09:09				
232429008	1	16	1.30	0.151	7/7/2009@11:10:03				
232429009	1	17	3.29	0.236	7/7/2009@11:10:57				
232429010	1	18	2.25	0.191	7/7/2009@11:11:50				
232429011	1	19	-3.42	-0.0518	7/7/2009@11:12:43				
232429012	1	20	-4.64	-0.104	7/7/2009@11:13:36				
WCN090707-03	1	S3	40.7	1.84	7/7/2009@11:14:28			CCV	
		Known Conc:	100						
		DQM Test: > + Percent Relative Difference							
		Result:	-59.3 < 10.0						
		Message	CCV Passed						
		Action	Continue						
		DQM Test: < - Percent Relative Difference							
		Result:	-59.3 < 10.0						
		Message	CCV Failed						
		Action	Stop Run						

Analyte Properties Table for OM_7-7-2009_10-38-00.OMN

Property	Channel 1 TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2

Date : 7/7/2009

Channel 1: Current View

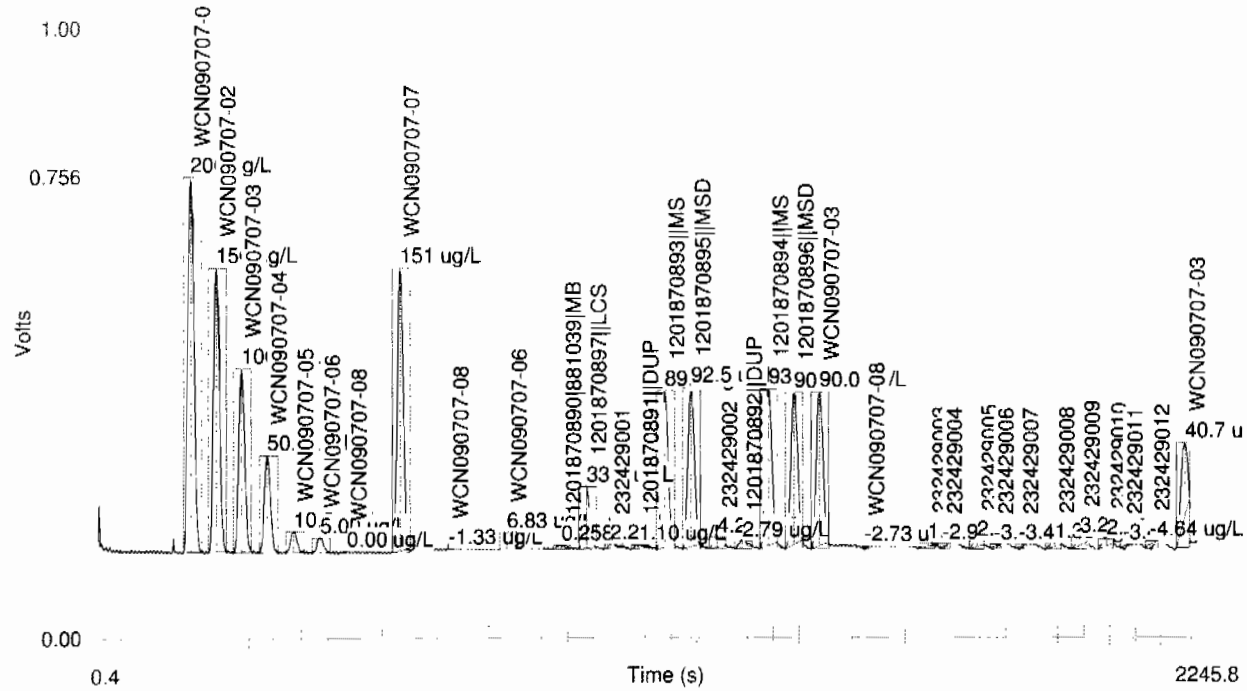

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

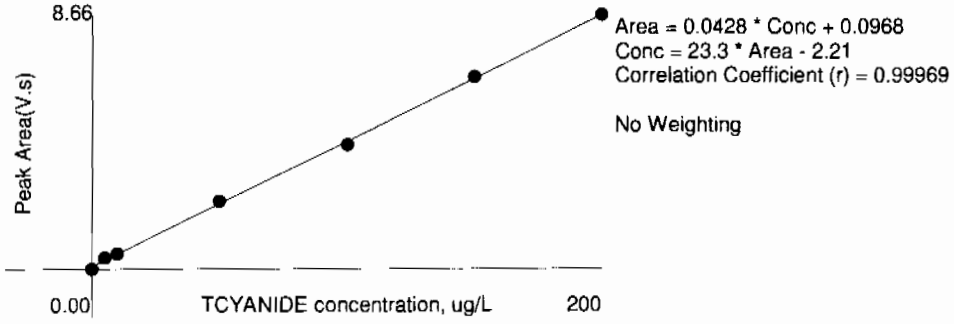

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	7/7/2009 11:39:05	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:40:56	OM_7-7-2009_11-38-18
232429003	881039	1	axc2	7/7/2009 11:42:44	OM_7-7-2009_11-38-18
232429004	881039	1	axc2	7/7/2009 11:43:36	OM_7-7-2009_11-38-18
232429005	881039	1	axc2	7/7/2009 11:44:28	OM_7-7-2009_11-38-18
232429006	881039	1	axc2	7/7/2009 11:45:20	OM_7-7-2009_11-38-18
232429007	881039	1	axc2	7/7/2009 11:46:12	OM_7-7-2009_11-38-18
232429008	881039	1	axc2	7/7/2009 11:47:05	OM_7-7-2009_11-38-18
232429009	881039	1	axc2	7/7/2009 11:47:59	OM_7-7-2009_11-38-18
232429010	881039	1	axc2	7/7/2009 11:48:53	OM_7-7-2009_11-38-18
232429011	881039	1	axc2	7/7/2009 11:49:46	OM_7-7-2009_11-38-18
232429012	881039	1	axc2	7/7/2009 11:50:39	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 11:51:31	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:53:21	OM_7-7-2009_11-38-18
232429013	881039	1	axc2	7/7/2009 11:55:10	OM_7-7-2009_11-38-18
232429014	881039	1	axc2	7/7/2009 11:56:03	OM_7-7-2009_11-38-18
232429015	881039	1	axc2	7/7/2009 11:56:56	OM_7-7-2009_11-38-18
232509001	881039	1	axc2	7/7/2009 11:57:49	OM_7-7-2009_11-38-18
232509002	881039	1	axc2	7/7/2009 11:58:41	OM_7-7-2009_11-38-18
232509003	881039	1	axc2	7/7/2009 11:59:34	OM_7-7-2009_11-38-18
232509004	881039	1	axc2	7/7/2009 12:00:25	OM_7-7-2009_11-38-18
232509005	881039	1	axc2	7/7/2009 12:01:18	OM_7-7-2009_11-38-18
1201873553	882139	1	axc2	7/7/2009 12:02:10	OM_7-7-2009_11-38-18
1201873557	882139	50	axc2	7/7/2009 12:03:01	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:03:53	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:05:44	OM_7-7-2009_11-38-18
232494013	882139	1	axc2	7/7/2009 12:07:35	OM_7-7-2009_11-38-18
232494014	882139	1	axc2	7/7/2009 12:08:28	OM_7-7-2009_11-38-18
232494015	882139	1	axc2	7/7/2009 12:09:22	OM_7-7-2009_11-38-18
232663001	882139	1	axc2	7/7/2009 12:10:15	OM_7-7-2009_11-38-18
1201873554	882139	1	axc2	7/7/2009 12:11:08	OM_7-7-2009_11-38-18
1201873555	882139	1	axc2	7/7/2009 12:12:02	OM_7-7-2009_11-38-18
1201873556	882139	1	axc2	7/7/2009 12:12:55	OM_7-7-2009_11-38-18
232663002	882139	1	axc2	7/7/2009 12:13:47	OM_7-7-2009_11-38-18
232663003	882139	1	axc2	7/7/2009 12:14:40	OM_7-7-2009_11-38-18
232663004	882139	1	axc2	7/7/2009 12:15:33	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:16:26	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:18:16	OM_7-7-2009_11-38-18
232663005	882139	1	axc2	7/7/2009 12:20:04	OM_7-7-2009_11-38-18
1201873558	882142	1	axc2	7/7/2009 12:20:57	OM_7-7-2009_11-38-18
1201873565	882142	1	axc2	7/7/2009 12:21:49	OM_7-7-2009_11-38-18
232662001	882142	1	axc2	7/7/2009 12:22:42	OM_7-7-2009_11-38-18
1201873559	882142	1	axc2	7/7/2009 12:23:33	OM_7-7-2009_11-38-18
1201873561	882142	1	axc2	7/7/2009 12:24:27	OM_7-7-2009_11-38-18
1201873563	882142	1	axc2	7/7/2009 12:25:22	OM_7-7-2009_11-38-18
232674001	882142	1	axc2	7/7/2009 12:26:16	OM_7-7-2009_11-38-18
232674002	882142	1	axc2	7/7/2009 12:27:10	OM_7-7-2009_11-38-18
232677001	882142	1	axc2	7/7/2009 12:28:03	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:28:55	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:30:45	OM_7-7-2009_11-38-18
1201873560	882142	1	axc2	7/7/2009 12:32:35	OM_7-7-2009_11-38-18
1201873562	882142	1	axc2	7/7/2009 12:33:29	OM_7-7-2009_11-38-18
1201873564	882142	1	axc2	7/7/2009 12:34:21	OM_7-7-2009_11-38-18
232703001	882142	1	axc2	7/7/2009 12:35:14	OM_7-7-2009_11-38-18
232728001	882142	1	axc2	7/7/2009 12:36:07	OM_7-7-2009_11-38-18
232728003	882142	1	axc2	7/7/2009 12:36:59	OM_7-7-2009_11-38-18
232742001	882142	1	axc2	7/7/2009 12:37:52	OM_7-7-2009_11-38-18
232753001	882142	1	axc2	7/7/2009 12:38:44	OM_7-7-2009_11-38-18

232755001	882142	1	axc2	7/7/2009	12:39:36	OM_7-7-2009_11-38-18
232759001	882142	1	axc2	7/7/2009	12:40:28	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:41:21	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:43:12	OM_7-7-2009_11-38-18
1201873547	882134	1	axc2	7/7/2009	12:45:02	OM_7-7-2009_11-38-18
1201873548	882134	1	axc2	7/7/2009	12:45:57	OM_7-7-2009_11-38-18
1201873549	882134	1	axc2	7/7/2009	12:46:51	OM_7-7-2009_11-38-18
232494013	882134	1	axc2	7/7/2009	12:47:44	OM_7-7-2009_11-38-18
232494014	882134	1	axc2	7/7/2009	12:48:38	OM_7-7-2009_11-38-18
232494015	882134	1	axc2	7/7/2009	12:49:31	OM_7-7-2009_11-38-18
1201873566	882146	1	axc2	7/7/2009	12:50:26	OM_7-7-2009_11-38-18
1201873568	882146	250	axc2	7/7/2009	12:51:18	OM_7-7-2009_11-38-18
232653001	882146	1	axc2	7/7/2009	12:52:11	OM_7-7-2009_11-38-18
1201873567	882146	1	axc2	7/7/2009	12:53:04	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:53:58	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:55:47	OM_7-7-2009_11-38-18
232657001	882146	1	axc2	7/7/2009	12:57:36	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:58:28	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	13:00:19	OM_7-7-2009_11-38-18

Author: axc2

Date : 7/7/2009

Original Run Filename: OM_7-7-2009_11-38-18.OMN created 7/7/2009 11:38:18
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_11-38-18.OMN last modified 7/7/2009 13:01:23
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-03	1	S3	98.3	4.31	7/7/2009@11:39:05			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	-1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	-1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.68	0.0229	7/7/2009@11:40:56			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.68 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.68 > -5.00					
		Message	CCB Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
232429003|881039|	1	11	0.101	0.0991	7/7/2009@11:42:44			
232429004	1	12	-0.0267	0.0937	7/7/2009@11:43:36			
232429005	1	13	3.58	0.248	7/7/2009@11:44:28			
232429006	1	14	-0.107	0.0902	7/7/2009@11:45:20			
232429007	1	15	-0.282	0.0827	7/7/2009@11:46:12			
232429008	1	16	0.519	0.117	7/7/2009@11:47:05			
232429009	1	17	4.44	0.285	7/7/2009@11:47:59			
232429010	1	18	2.86	0.217	7/7/2009@11:48:53			
232429011	1	19	-0.0810	0.0913	7/7/2009@11:49:46			
232429012	1	20	2.81	0.215	7/7/2009@11:50:39			
WCN090707-03	1	S3	99.9	4.38	7/7/2009@11:51:31			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	-0.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	-0.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-2.22	-3.66e-4	7/7/2009@11:53:21			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-2.22 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-2.22 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232429013	1	21	0.103	0.0992	7/7/2009@11:55:10			
232429014	1	22	2.62	0.207	7/7/2009@11:56:03			
232429015	1	23	1.61	0.164	7/7/2009@11:56:56			
232509001	1	24	2.95	0.221	7/7/2009@11:57:49			
232509002	1	25	2.61	0.207	7/7/2009@11:58:41			

232509003	1	26	2.35	0.195	7/7/2009@11:59:34			
232509004	1	27	0.637	0.122	7/7/2009@12:00:25			
232509005	1	28	1.34	0.152	7/7/2009@12:01:18			
1201873553|882139|MB	1	29	0.978	0.137	7/7/2009@12:02:10			
1201873557||LCS	1	30	34.2	1.56	7/7/2009@12:03:01		50.00	
WCN090707-03	1	S3	102	4.45	7/7/2009@12:03:53			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
	Result:	1.7 < 10.0						
	Message	CCV Passed						
	Action	Continue						
DQM Test: < - Percent Relative Difference								
	Result:	1.7 < 10.0						
	Message	CCV Passed						
	Action	Continue						
WCN090707-08	1	S7	-1.41	0.0343	7/7/2009@12:05:44			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
	Result:	-1.41 < 5.00						
	Message	CCB Passed						
	Action	Continue						
DQM Test: < - Concentration Limit								
	Result:	-1.41 > -5.00						
	Message	CCB Passed						
	Action	Continue						
232494013	1	31	12.4	0.627	7/7/2009@12:07:35			
232494014	1	32	16.5	0.800	7/7/2009@12:08:28			
232494015	1	33	8.15	0.444	7/7/2009@12:09:22			
232663001	1	34	0.469	0.115	7/7/2009@12:10:15			
1201873554||DUP	1	35	0.919	0.134	7/7/2009@12:11:08			
1201873555||MS	1	36	100	4.39	7/7/2009@12:12:02			
1201873556||MSD	1	37	99.9	4.38	7/7/2009@12:12:55			
232663002	1	38	2.87	0.218	7/7/2009@12:13:47			
232663003	1	39	0.612	0.121	7/7/2009@12:14:40			
232663004	1	40	1.78	0.171	7/7/2009@12:15:33			
WCN090707-03	1	S3	103	4.51	7/7/2009@12:16:26			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
	Result:	3.0 < 10.0						
	Message	CCV Passed						
	Action	Continue						
DQM Test: < - Percent Relative Difference								
	Result:	3.0 < 10.0						
	Message	CCV Passed						
	Action	Continue						
WCN090707-08	1	S7	-1.19	0.0436	7/7/2009@12:18:16			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
	Result:	-1.19 < 5.00						
	Message	CCB Passed						
	Action	Continue						
DQM Test: < - Concentration Limit								
	Result:	-1.19 > -5.00						
	Message	CCB Passed						
	Action	Continue						
232663005	1	41	3.51	0.245	7/7/2009@12:20:04			
1201873558|882142|MB	1	42	0.654	0.123	7/7/2009@12:20:57			
1201873565||LCS	1	43	52.4	2.34	7/7/2009@12:21:49			
232662001	1	44	-0.601	0.0690	7/7/2009@12:22:42			
1201873559||DUP	1	45	-0.744	0.0629	7/7/2009@12:23:33			
1201873561||MS	1	46	106	4.66	7/7/2009@12:24:27			
1201873563||MSD	1	47	107	4.68	7/7/2009@12:25:22			
232674001	1	48	2.16	0.187	7/7/2009@12:26:16			
232674002	1	49	0.310	0.108	7/7/2009@12:27:10			
232677001	1	50	-0.639	0.0674	7/7/2009@12:28:03			
WCN090707-03	1	S3	105	4.58	7/7/2009@12:28:55			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								

		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	4.02	0.267	7/7/2009@12:30:45			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	4.02 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	4.02 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873560||DUP	1	51	-0.895	0.0565	7/7/2009@12:32:35			
1201873562||MS	1	52	104	4.54	7/7/2009@12:33:29			
1201873564||MSD	1	53	105	4.61	7/7/2009@12:34:21			
232703001	1	54	5.73	0.340	7/7/2009@12:35:14			
232728001	1	55	-1.14	0.0458	7/7/2009@12:36:07			
232728003	1	56	-1.16	0.0449	7/7/2009@12:36:59			
232742001	1	57	-0.968	0.0533	7/7/2009@12:37:52			
232753001	1	58	0.512	0.117	7/7/2009@12:38:44			
232755001	1	59	-1.02	0.0510	7/7/2009@12:39:36			
232759001	1	60	-0.784	0.0612	7/7/2009@12:40:28			
WCN090707-03	1	S3	101	4.40	7/7/2009@12:41:21			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.381	0.0785	7/7/2009@12:43:12			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.381 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.381 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873547|882134|MB	1	61	-0.997	0.0521	7/7/2009@12:45:02			
1201873548||LCS	1	62	-1.28	0.0400	7/7/2009@12:45:57			
1201873549||LCSD	1	63	-0.406	0.0774	7/7/2009@12:46:51			
232494013	1	64	16.1	0.786	7/7/2009@12:47:44			
232494014	1	65	16.8	0.815	7/7/2009@12:48:38			
232494015	1	66	7.54	0.418	7/7/2009@12:49:31			
1201873566|882146|MB	1	67	-0.184	0.0869	7/7/2009@12:50:26			
1201873568||LCS	1	68	52.2	2.33	7/7/2009@12:51:18		250.00	
232653001	1	69	-0.792	0.0609	7/7/2009@12:52:11			
1201873567||DUP	1	70	-0.809	0.0602	7/7/2009@12:53:04			
WCN090707-03	1	S3	108	4.72	7/7/2009@12:53:58			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.41	0.0344	7/7/2009@12:55:47			CCB

Author: axc2 Date : 7/7/2009

		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-1.41 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-1.41 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232657001	1	71	2.86	0.217	7/7/2009@12:57:36			
WCN090707-03	1	S3	101	4.43	7/7/2009@12:58:28			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	1.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	1.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.0967	0.0907	7/7/2009@13:00:19			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.0967 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.0967 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_7-7-2009_11-38-18.OMN

Property	Channel 1 TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/7/2009

Channel 1: Current View

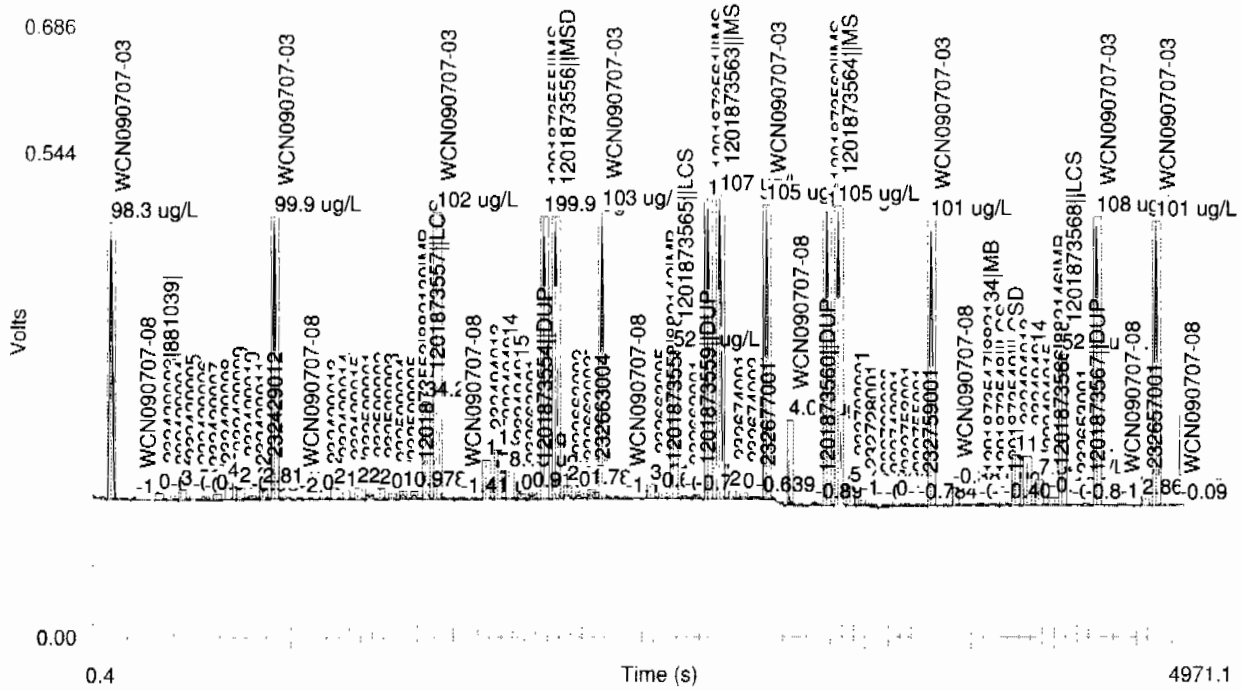

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

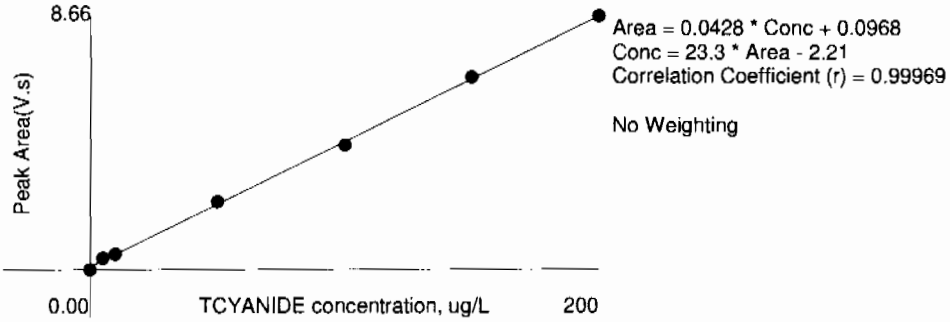

Hexavalent Chromium

Prep LogBook

Analyst: RXG2 Verified by:_____

Batch: 881430

Lab SOP: GL-GC-E-044 REV# 10

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
ILCS	1201876601	IMM090219-HVC	.08	g
LCS	1201871866	WD090708-1	.4	mL
MS	1201877400	WD090708-2	.4	mL
MS	1201877401	WD090708-2	.4	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871861		SW846 3060A	08-JUL-2009 10:17	7.21	1.0245 g	40 mL	39.04344	SOIL
LCS	1201871866		SW846 3060A	08-JUL-2009 10:17	7.02	1.0222 g	40 mL	39.13129	SOIL
ILCS	1201876601		SW846 3060A	08-JUL-2009 10:17	7.38	1.0124 g	40 mL	39.51008	SOIL
SAMPLE	232429001		SW846 3060A	08-JUL-2009 10:17	7.08	1.0243 g	40 mL	39.05106	SOIL
DUP	1201871862	232429001	SW846 3060A	08-JUL-2009 10:17	7.13	1.0031 g	40 mL	39.87638	SOIL
MS	1201877400	232429001	SW846 3060A	08-JUL-2009 10:17	7.24	1.0245 g	40 mL	39.04344	SOIL
SAMPLE	232429002		SW846 3060A	08-JUL-2009 10:17	7.85	1.0052 g	40 mL	39.79308	SOIL
SAMPLE	232429003		SW846 3060A	08-JUL-2009 10:17	7.94	1.0009 g	40 mL	39.96403	SOIL
SAMPLE	232429004		SW846 3060A	08-JUL-2009 10:17	7.02	1.0055 g	40 mL	39.7812	SOIL
SAMPLE	232429005		SW846 3060A	08-JUL-2009 10:17	7.09	1.0064 g	40 mL	39.74563	SOIL
SAMPLE	232429006		SW846 3060A	08-JUL-2009 10:17	7.15	1.0252 g	40 mL	39.01678	SOIL
SAMPLE	232429007		SW846 3060A	08-JUL-2009 10:17	7.19	1.0362 g	40 mL	38.60259	SOIL
SAMPLE	232429008		SW846 3060A	08-JUL-2009 10:17	7.56	1.0294 g	40 mL	38.85759	SOIL
SAMPLE	232429009		SW846 3060A	08-JUL-2009 10:17	7.41	1.0399 g	40 mL	38.46524	SOIL
SAMPLE	232429010		SW846 3060A	08-JUL-2009 10:17	7.91	1.0082 g	40 mL	39.67467	SOIL
SAMPLE	232429011		SW846 3060A	08-JUL-2009 10:17	7.02	1.019 g	40 mL	39.25417	SOIL
SAMPLE	232429012		SW846 3060A	08-JUL-2009 10:17	7.14	1.018 g	40 mL	39.29273	SOIL
SAMPLE	232429013		SW846 3060A	08-JUL-2009 10:17	7.26	1.0115 g	40 mL	39.54523	SOIL
SAMPLE	232429014		SW846 3060A	08-JUL-2009 10:17	7.10	1.0257 g	40 mL	38.99776	SOIL
SAMPLE	232429015		SW846 3060A	08-JUL-2009 10:17	7.36	1.0138 g	40 mL	39.45551	SOIL
DUP	1201871863	232429015	SW846 3060A	08-JUL-2009 10:17	7.39	1.0374 g	40 mL	38.55793	SOIL
MS	1201877401	232429015	SW846 3060A	08-JUL-2009 10:17	7.38	1.024 g	40 mL	39.0625	SOIL

Reagent/Solvent Lot ID	Amount	Description
IMM090626-HVC	2 mL	5M Nitric Acid Solution for Cr+6
IMM090519-HVCS	20 mL	DIGESTION SOLUTION FOR CR+6
090428-C	.4 mL	MAGNESIUM CHLORIDE SOLUTION FOR CR+6
IMM090501-HVCS	.2 mL	PHOSPHATE BUFFER SOLUTION FOR CR+6

Comments

Analytical Logbook

Colorimetric Determination of Hexavalent Chromium

Batch ID: 881431.0
Analyst: Robert Getsinger
Method: SW846 7196A
Lab SOP: GL-GC-E-044 REV# 10
Instrument: Spectronic 20D + Digital Spectrophotometer

Type	Sample Id	Description	Serial Number	Amount	Nominal	Recovery	Rpd %
	All	5N Sulfuric Acid for Cr+6	IMM090224	.5 mL			
	All	DIPHENYLCARBAZIDE SOLUTION FOR CR+6	IMM090619a-HVC	.5 mL			
CCV	13:38:14	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	101	
CCV	13:50:26	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	101	
CCV	13:50:58	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	98.1	
DUP	1201871862						2.091
DUP	1201871863						61.619
ICV	13:30:42	Cr6 LCS 10mg/L	WD090708-1	.25 mL	0.100 mg/L	99.3	

Sample ID	Run Date	Dilution	Hexavalent Chromium Absorbance (mg/L)	Hexavalent Chromium Backgroud (mg/L)	Hexavalent Chromium Initial Result (mg/L)	Hexavalent Chromium Result (mg/kg)
ICV	08-JUL-2009 13:30:42	1	0.082	0	0.0993	0.0993
ICB	08-JUL-2009 13:30:48	1	0.001	0	-0.00115	-0.00115
1201871861 MB	08-JUL-2009 13:30:54	1	0.001	0	-0.00115	-0.04503
1201871866 LCS	08-JUL-2009 13:30:59	1	0.085	0	0.10302	4.03135
1201876601 ILCS	08-JUL-2009 13:31:25	1	0.151	0	0.18487	7.30432
232429001	08-JUL-2009 13:31:56	1	0.012	0.01	8.68E-05	0.00354
1201871862 DUP (232429001)	08-JUL-2009 13:32:26	1	0.012	0.01	8.68E-05	0.00362
1201877400 MS (232429001)	08-JUL-2009 13:32:28	1	0.09	0.01	0.09682	3.94869
232429002	08-JUL-2009 13:35:48	2	0.017	0.018	-0.00363	-0.32648
232429003	08-JUL-2009 13:36:17	5	0.039	0.04	-0.00363	-0.94453
232429004	08-JUL-2009 13:37:18	2	0.025	0.024	-0.00115	-0.11057
232429005	08-JUL-2009 13:37:27	25	0.058	0.058	-0.00239	-3.06476
CCV	08-JUL-2009 13:38:14	1	0.083	0	0.10054	0.10054
CCB	08-JUL-2009 13:38:21	1	0.001	0	-0.00115	-0.00115
232429006	08-JUL-2009 13:47:08	5	0.024	0.022	8.68E-05	0.01838
232429007	08-JUL-2009 13:48:18	2	0.034	0.035	-0.00363	-0.30494
232429008	08-JUL-2009 13:48:28	5	0.054	0.056	-0.00487	-0.99883
232429009	08-JUL-2009 13:48:42	25	0.051	0.05	-0.00115	-1.52478
232429010	08-JUL-2009 13:48:57	25	0.041	0.041	-0.00239	-2.72184
232429011	08-JUL-2009 13:49:09	1	0.005	0	0.00381	0.15566
232429012	08-JUL-2009 13:49:16	5	0.024	0.022	8.68E-05	0.0228

Analytical Logbook

Batch ID: 881431.0
Analyst: Robert Getsinger
Method: SW846 7196A
Lab SOP: GL-GC-E-044 REV# 10
Instrument: Spectronic 20D + Digital Spectrophotometer

Type	Sample Id	Description	Serial Number	Amount	Nominal	Recovery	Rpd %
	All	5N Sulfuric Acid for Cr+6	IMM090224	.5 mL			
	All	DIPHENYLCARBAZIDE SOLUTION FOR CR+6	IMM090619a-HVC	.5 mL			
CCV	13:38:14	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	101	
CCV	13:50:26	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	101	
CCV	13:50:58	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	98.1	
DUP	1201871862						2.091
DUP	1201871863						61.619
ICV	13:30:42	Cr6 LCS 10mg/L	WD090708-1	.25 mL	0.100 mg/L	99.3	

Sample ID	Run Date	Dilution	Hexavalent Chromium Absorbance (mg/L)	Hexavalent Chromium Backgroud (mg/L)	Hexavalent Chromium Initial Result (mg/L)	Hexavalent Chromium Result (mg/kg)
232429013	08-JUL-2009 13:49:26	1	0.029	0.027	8.68E-05	0.00378
232429014	08-JUL-2009 13:49:42	5	0.016	0.015	-0.00115	-0.27355
232429015	08-JUL-2009 13:49:59	2	0.018	0.015	0.00133	0.11842
CCV	08-JUL-2009 13:50:26	1	0.083	0	0.10054	0.10054
CCB	08-JUL-2009 13:50:32	1	0.002	0	8.68E-05	8.68E-05
1201871863 DUP (232429015)	08-JUL-2009 13:50:35	2	0.018	0.014	0.00257	0.22388
1201877401 MS (232429015)	08-JUL-2009 13:50:39	2	0.051	0.014	0.04349	3.84256
CCV	08-JUL-2009 13:50:58	1	0.081	0	0.09806	0.09806
CCB	08-JUL-2009 13:51:01	1	0.001	0	-0.00115	-0.00115

Calibration Information:

Run Date:	08-JUL-09 13:
Instrument:	SPC611
Analyst:	RXG2
Corr. Coefficient :	0.99984
Y-Intercept :	0.00193
Slope:	0.80634

Standard	Absorbance	True Value	Result	Units
WD090708a	.001	0	-.0012	mg/L
WD090708a1	.009	.01	.00877	mg/L
WD090708a2	.019	.02	.02117	mg/L
WD090708a3	.044	.05	.05217	mg/L
WD090708a4	.082	.1	.09930	mg/L
WD090708a5	.163	.2	.19975	mg/L

Comments:

Calculation: {[(Corrected Absorbance - Y intercept) / Slope] * Dilution} / (1 - moisture)

Ion Chromatography

Prep LogBook

Analyst: VXP1 Verified by:_____

Batch: 880958

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870629	UIC090627SPK	.8	mL
MS	1201870631	UIC090627SPK	.8	mL
MS	1201870634	UIC090627SPK	.8	mL
MSD	1201870635	UIC090627SPK	.8	mL
MSD	1201870636	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870628		EPA 300.0 PREP	01-JUL-2009 12:42	4 g	40 mL	10	SOIL
LCS	1201870629		EPA 300.0 PREP	01-JUL-2009 12:42	4 g	40 mL	10	SOIL
SAMPLE	232429001		EPA 300.0 PREP	01-JUL-2009 12:42	4.13 g	40 mL	9.68523	SOIL
DUP	1201870630	232429001	EPA 300.0 PREP	01-JUL-2009 12:42	4.1 g	40 mL	9.7561	SOIL
MS	1201870631	232429001	EPA 300.0 PREP	01-JUL-2009 12:42	4.12 g	40 mL	9.70874	SOIL
MSD	1201870636	232429001	EPA 300.0 PREP	01-JUL-2009 12:42	4.01 g	40 mL	9.97506	SOIL
SAMPLE	232429002		EPA 300.0 PREP	01-JUL-2009 12:42	4.1 g	40 mL	9.7561	SOIL
SAMPLE	232429003		EPA 300.0 PREP	01-JUL-2009 12:42	4.12 g	40 mL	9.70874	SOIL
SAMPLE	232429004		EPA 300.0 PREP	01-JUL-2009 12:42	4.11 g	40 mL	9.73236	SOIL
SAMPLE	232429005		EPA 300.0 PREP	01-JUL-2009 12:42	4.05 g	40 mL	9.87654	SOIL
SAMPLE	232429006		EPA 300.0 PREP	01-JUL-2009 12:42	4.2 g	40 mL	9.52381	SOIL
SAMPLE	232429007		EPA 300.0 PREP	01-JUL-2009 12:42	4.05 g	40 mL	9.87654	SOIL
SAMPLE	232429008		EPA 300.0 PREP	01-JUL-2009 12:42	4.15 g	40 mL	9.63855	SOIL
SAMPLE	232429009		EPA 300.0 PREP	01-JUL-2009 12:42	4.02 g	40 mL	9.95025	SOIL
DUP	1201870633	232429009	EPA 300.0 PREP	01-JUL-2009 12:42	4.11 g	40 mL	9.73236	SOIL
MS	1201870634	232429009	EPA 300.0 PREP	01-JUL-2009 12:42	4.12 g	40 mL	9.70874	SOIL
MSD	1201870635	232429009	EPA 300.0 PREP	01-JUL-2009 12:42	4.06 g	40 mL	9.85222	SOIL
SAMPLE	232429010		EPA 300.0 PREP	01-JUL-2009 12:42	4.14 g	40 mL	9.66184	SOIL
SAMPLE	232429011		EPA 300.0 PREP	01-JUL-2009 12:42	4.2 g	40 mL	9.52381	SOIL
SAMPLE	232429012		EPA 300.0 PREP	01-JUL-2009 12:42	4.05 g	40 mL	9.87654	SOIL
SAMPLE	232429013		EPA 300.0 PREP	01-JUL-2009 12:42	4.1 g	40 mL	9.7561	SOIL
SAMPLE	232429014		EPA 300.0 PREP	01-JUL-2009 12:42	4.11 g	40 mL	9.73236	SOIL
SAMPLE	232429015		EPA 300.0 PREP	01-JUL-2009 12:42	4.16 g	40 mL	9.61538	SOIL

Comments

This is runlog for Sequence 090706.seq for IC7

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	07/02/09 15:44		1	090706	VXP1
ICAL-06	07/02/09 16:07		1	090706	VXP1
ICAL-05	07/02/09 16:30		1	090706	VXP1
ICAL-04	07/02/09 16:53		1	090706	VXP1
ICAL-03	07/02/09 17:15		1	090706	VXP1
ICAL-02	07/02/09 17:38		1	090706	VXP1
ICAL-01	07/02/09 18:01		1	090706	VXP1
ICAL-07	07/02/09 15:44		1	090706	VXP1
ICAL-06	07/02/09 16:07		1	090706	VXP1
ICAL-05	07/02/09 16:30		1	090706	VXP1
ICAL-04	07/02/09 16:53		1	090706	VXP1
ICAL-03	07/02/09 17:15		1	090706	VXP1
ICAL-02	07/02/09 17:38		1	090706	VXP1
ICAL-01	07/02/09 18:01		1	090706	VXP1

5 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:44	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E086;300;9056

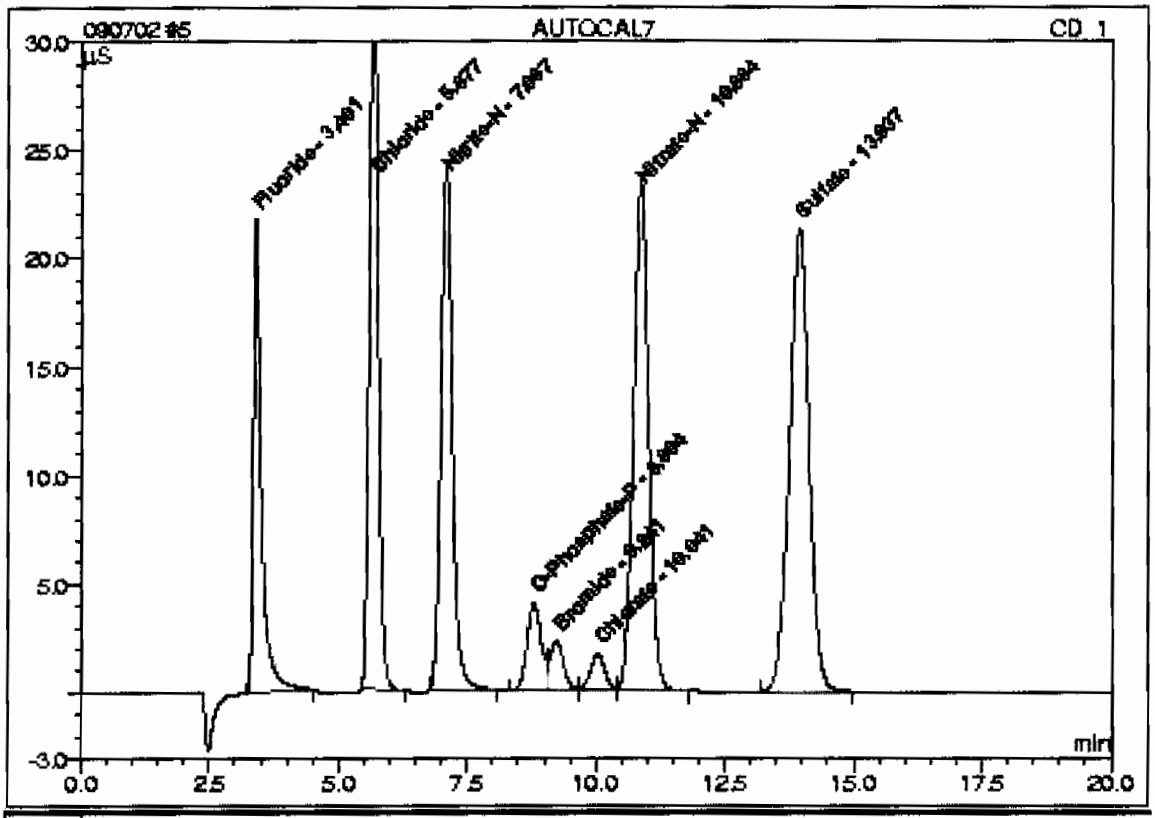

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.40	Fluoride	10.0000	10.0029		4.00162	10.82
2	5.68	Chloride	20.0000	20.0175		6.70740	18.14
3	7.09	Nitrite-N	10.0000	10.0045		6.08863	16.47
4	8.80	O-Phosphate-P	5.0000	4.9507		1.28703	3.48
5	9.24	Bromide	5.0000	4.9021		0.72043	1.95
6	10.04	Chlorate	5.0000	4.9137		0.56214	1.52
7	10.86	Nitrate-N	10.0000	10.0073		8.03747	21.74
8	13.94	Sulfate	40.0000	40.0276		9.57336	25.89
Total:				104.8263	0.000	36.978	100.00

5 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:44	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9055

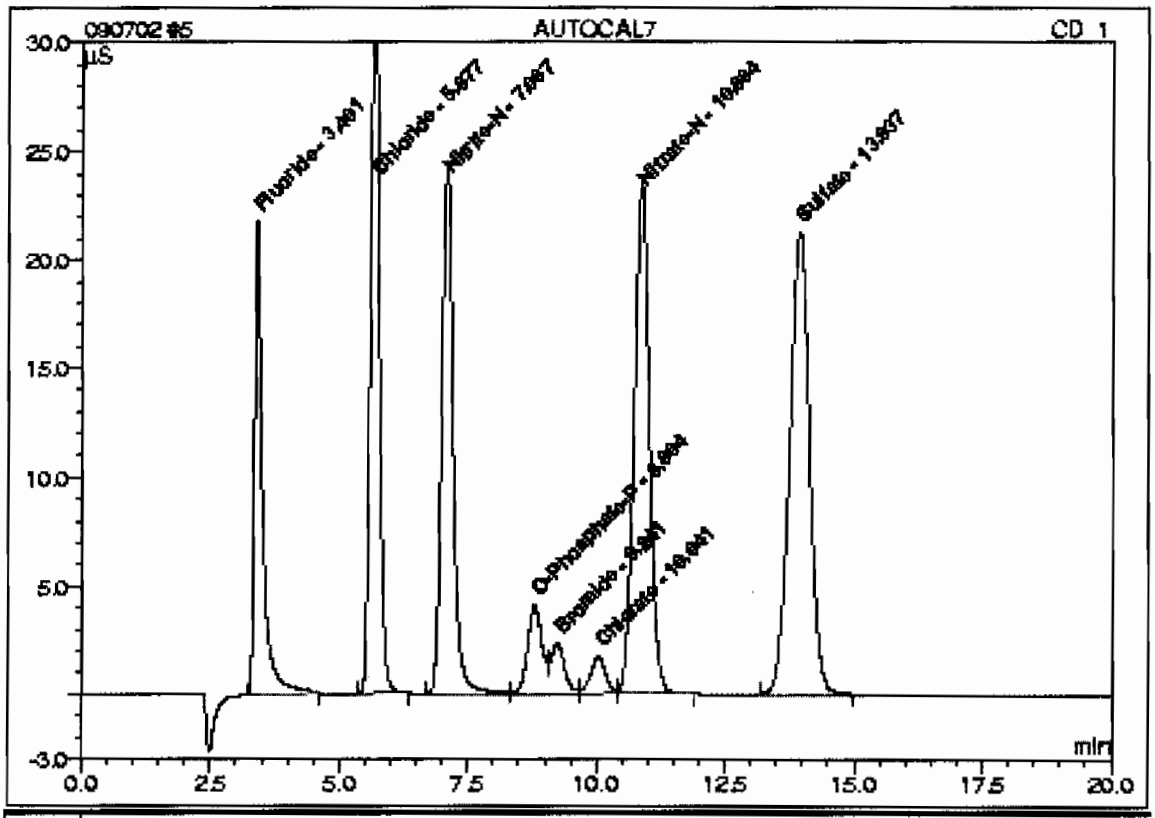

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	10.0000	10.0272		4.06060	10.88
2	5.68	Chloride	20.0000	20.2456		6.79171	18.19
3	7.09	Nitrite-N	10.0000	10.0377		6.23265	16.69
4	8.80	O-Phosphate-P	5.0000	4.9258		1.30977	3.51
5	9.24	Bromide	5.0000	4.9240		0.73625	1.97
6	10.04	Chlorate	5.0000	4.9072		0.57734	1.55
7	10.86	Nitrate-N	10.0000	10.0920		8.05280	21.57
8	13.94	Sulfate	40.0000	40.3281		9.57336	25.64
Total:				105.4876	0.000	37.334	100.00

5 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:44	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

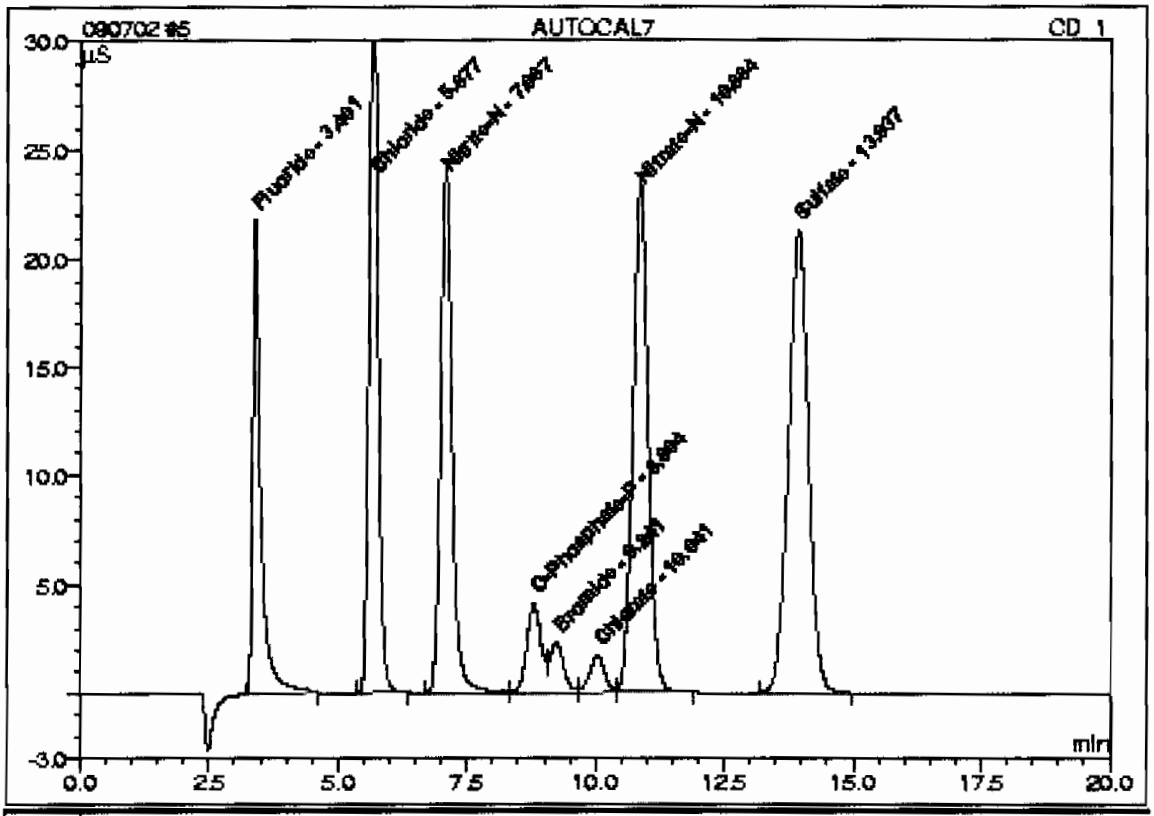

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.40	Fluoride	10.0000	10.0272		4.06060	10.88
2	5.68	Chloride	20.0000	20.2456		6.79171	18.19
3	7.09	Nitrite-N	10.0000	10.0377		6.23265	16.69
4	8.80	O-Phosphate-P	5.0000	4.9258		1.30977	3.51
5	9.24	Bromide	5.0000	4.9240		0.73625	1.97
6	10.04	Chlorate	5.0000	4.9072		0.57734	1.55
7	10.86	Nitrate-N	10.0000	10.0920		8.05280	21.57
8	13.94	Sulfate	40.0000	40.3281		9.57336	25.64
Total:				105.4876	0.000	37.334	100.00

5 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:44	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCB086;300;9055

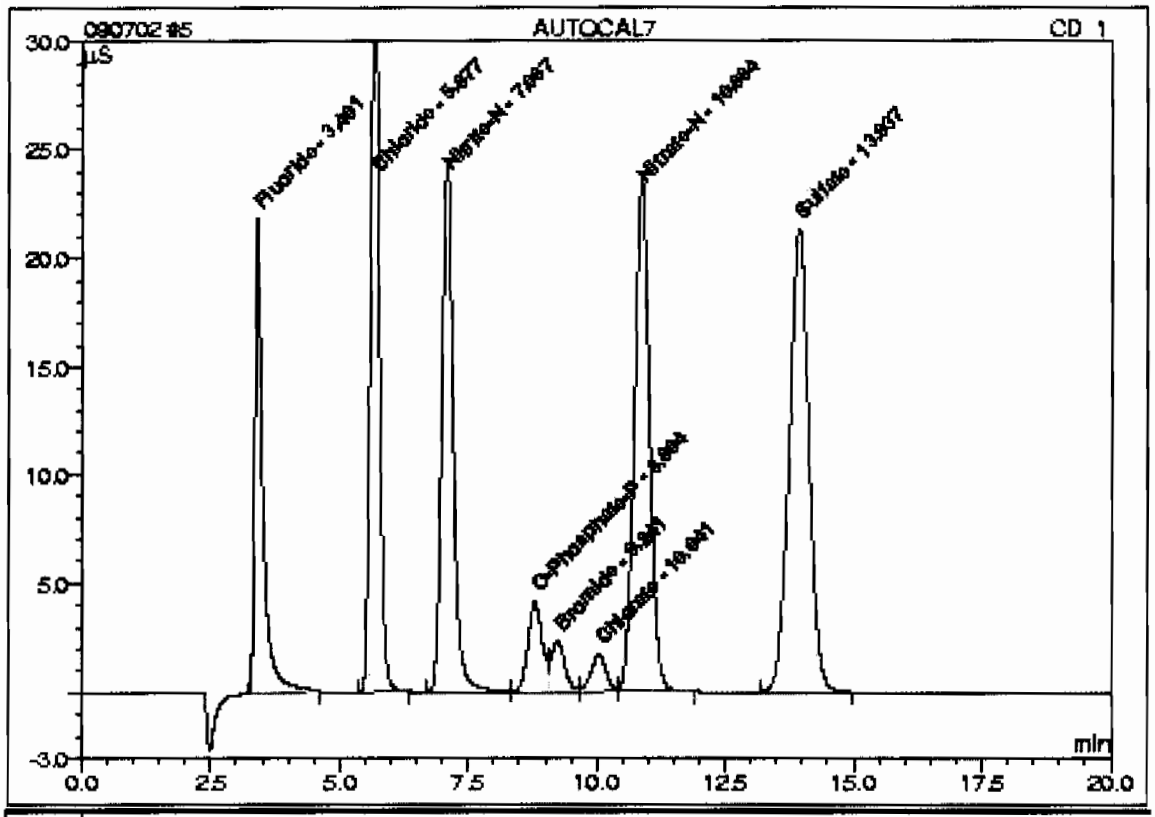

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	10.0000	10.0272		4.06060	10.88
2	5.68	Chloride	20.0000	20.2456		6.79171	18.19
3	7.09	Nitrite-N	10.0000	10.0377		6.23265	16.69
4	8.80	O-Phosphate-P	5.0000	4.9258		1.30977	3.51
5	9.24	Bromide	5.0000	4.9240		0.73625	1.97
6	10.04	Chlorate	5.0000	4.9072		0.57734	1.55
7	10.86	Nitrate-N	10.0000	10.0920		8.05280	21.57
8	13.94	Sulfate	40.0000	40.3281		9.57336	25.64
Total:				105.4876	0.000	37.334	100.00

6 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	6	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

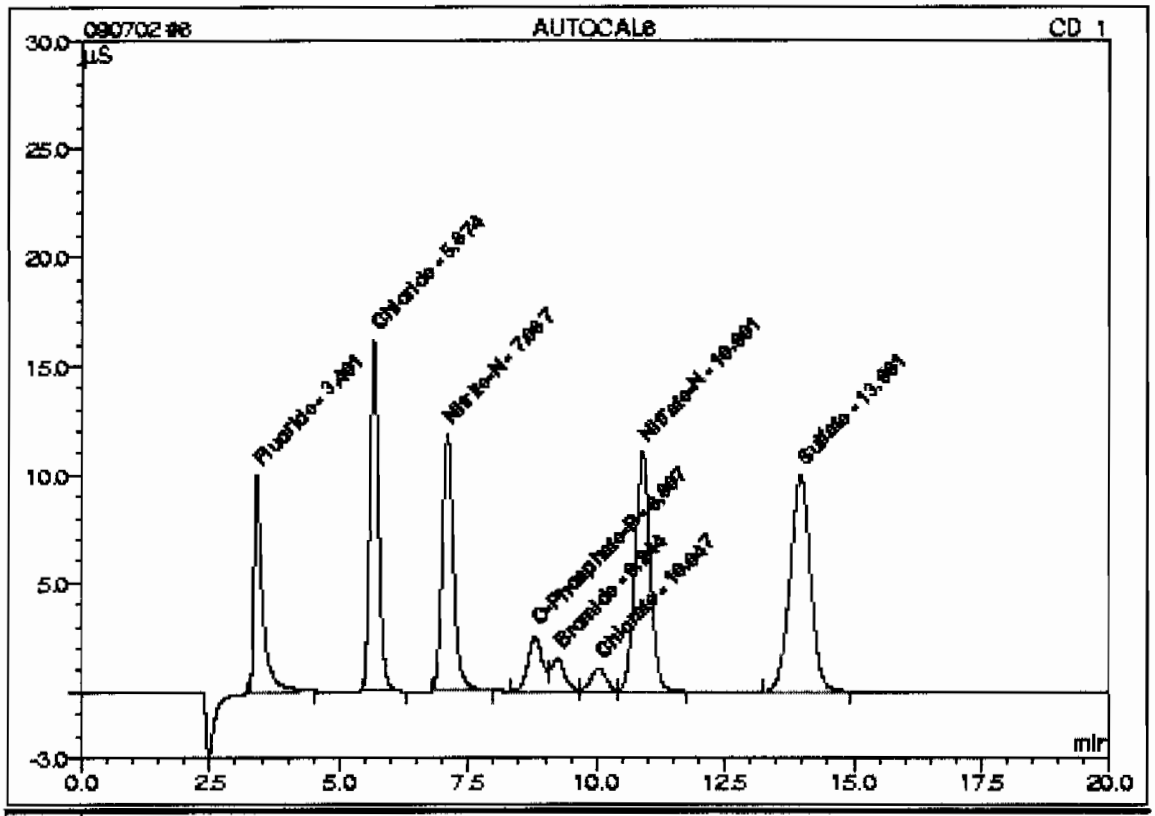

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.40	Fluoride	5.0000	4.9118		1.95166	10.82
2	5.67	Chloride	10.0000	9.5000		3.12801	17.34
3	7.09	Nitrite-N	5.0000	4.9201		2.97401	16.48
4	8.81	O-Phosphate-P	3.0000	3.0361		0.80197	4.44
5	9.24	Bromide	3.0000	3.0615		0.45599	2.53
6	10.05	Chlorate	3.0000	3.0938		0.35521	1.97
7	10.90	Nitrate-N	5.0000	4.8066		3.80491	21.09
8	13.96	Sulfate	20.0000	19.3484		4.57153	25.34
Total:				52.6783	0.000	18.043	100.00

6 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	6	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 16:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E086;300;905B

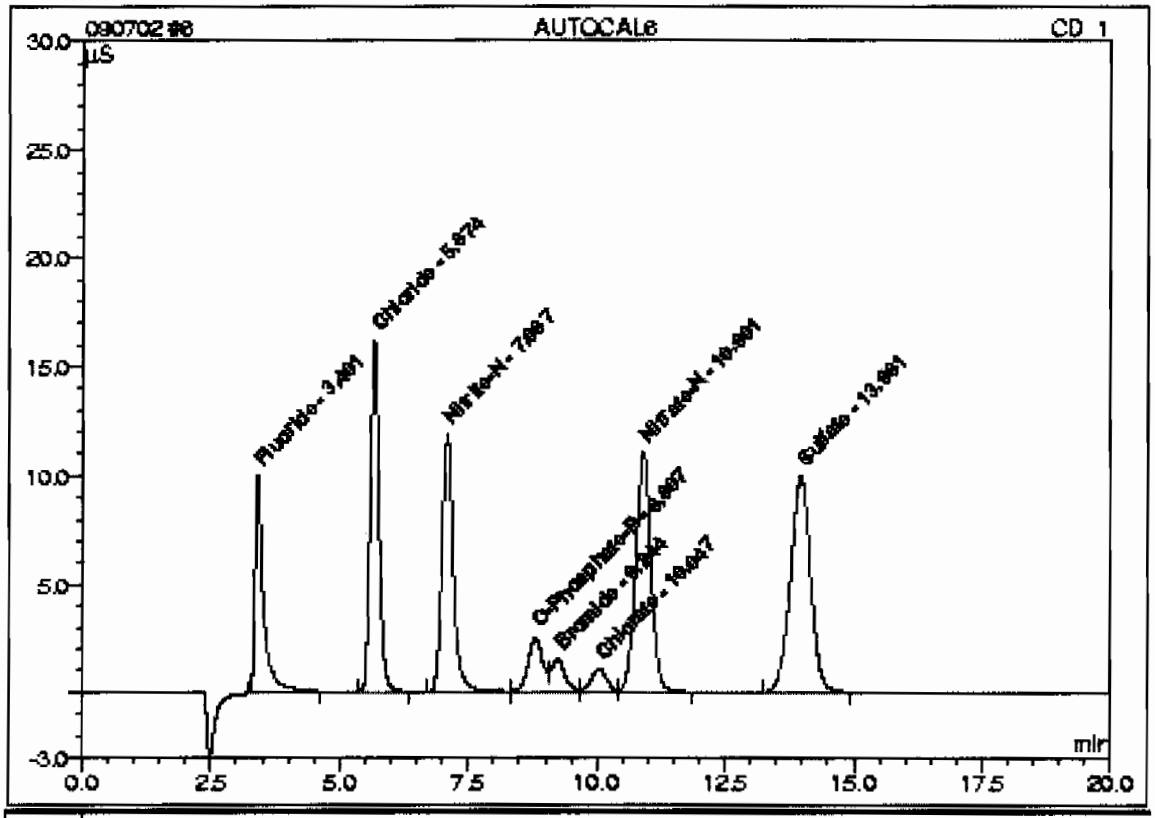

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	5.0000	4.9544		1.99823	10.95
2	5.67	Chloride	10.0000	9.5233		3.17030	17.38
3	7.09	Nitrite-N	5.0000	4.9309		3.04659	16.70
4	8.81	O-Phosphate-P	3.0000	2.9900		0.81237	4.45
5	9.24	Bromide	3.0000	3.0592		0.46337	2.54
6	10.05	Chlorate	3.0000	3.0620		0.36299	1.99
7	10.90	Nitrate-N	5.0000	4.8193		3.81571	20.92
8	13.96	Sulfate	20.0000	19.3666		4.57153	25.06
Total:				52.7057	0.000	18.241	100.00

6 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	6	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

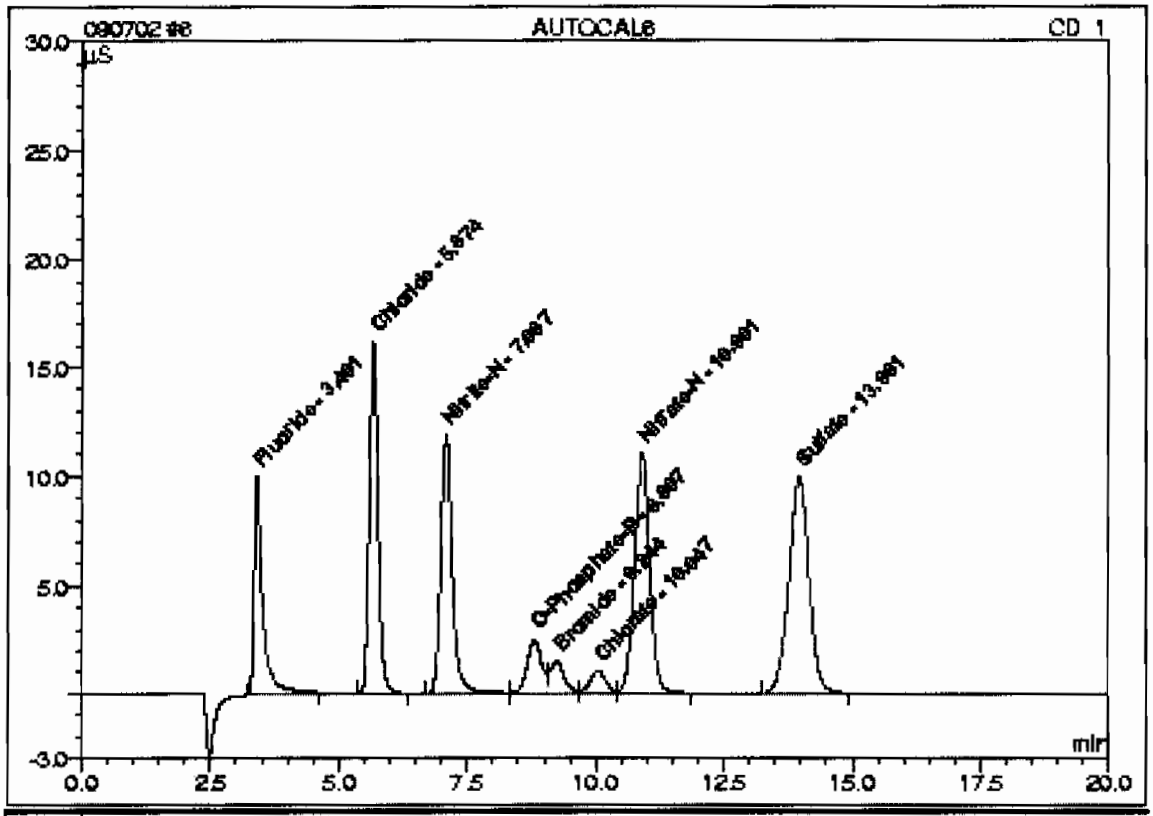

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	5.0000	4.9544		1.99823	10.95
2	5.67	Chloride	10.0000	9.5233		3.17030	17.38
3	7.09	Nitrite-N	5.0000	4.9309		3.04659	16.70
4	8.81	O-Phosphate-P	3.0000	2.9900		0.81237	4.45
5	9.24	Bromide	3.0000	3.0592		0.46337	2.54
6	10.05	Chlorate	3.0000	3.0620		0.36299	1.99
7	10.90	Nitrate-N	5.0000	4.8193		3.81571	20.92
8	13.96	Sulfate	20.0000	19.3666		4.57153	25.06
Total:				52.7057	0.000	18.241	100.00

6 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	6	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

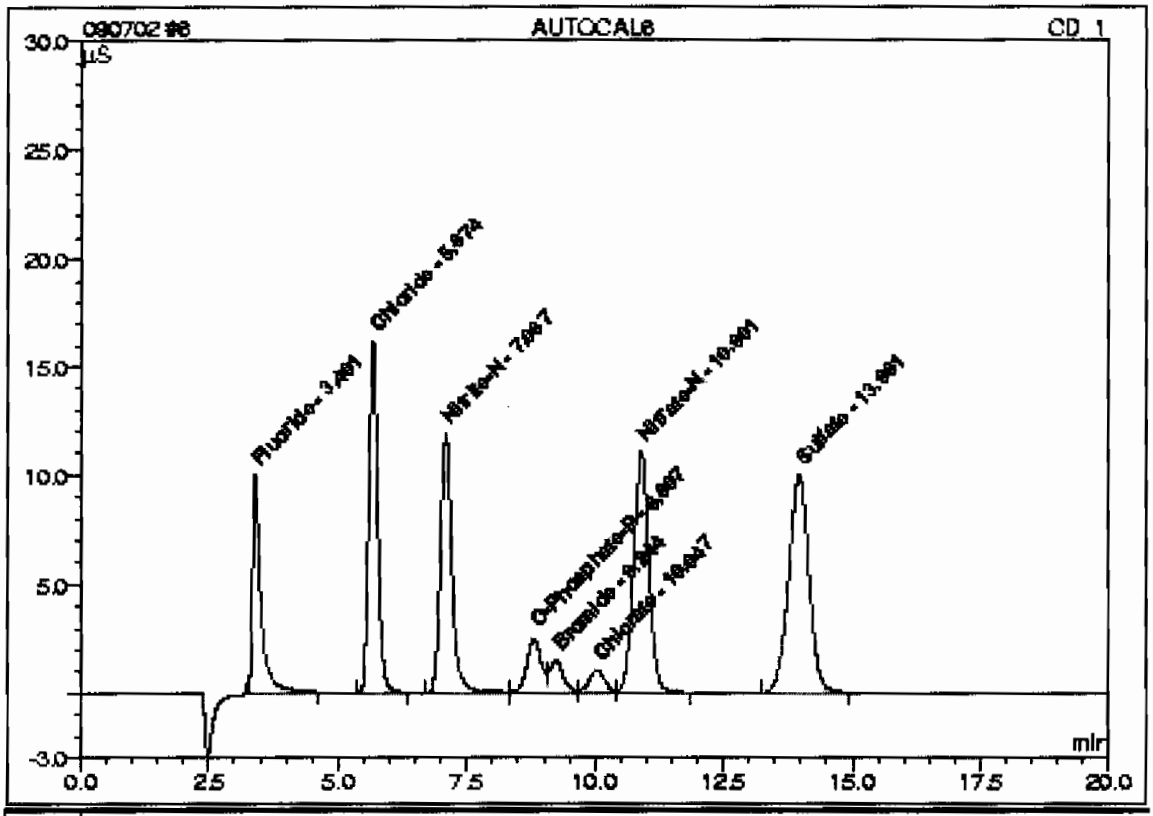

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	5.0000	4.9544		1.99823	10.95
2	5.67	Chloride	10.0000	9.5233		3.17030	17.38
3	7.09	Nitrite-N	5.0000	4.9309		3.04659	16.70
4	8.81	O-Phosphate-P	3.0000	2.9900		0.81237	4.45
5	9.24	Bromide	3.0000	3.0592		0.46337	2.54
6	10.05	Chlorate	3.0000	3.0620		0.36299	1.99
7	10.90	Nitrate-N	5.0000	4.8193		3.81571	20.92
8	13.96	Sulfate	20.0000	19.3666		4.57153	25.06
Total:				52.7057	0.000	18.241	100.00

7 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	50.0
Vial Number:	7	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:30	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCB088;300;9058

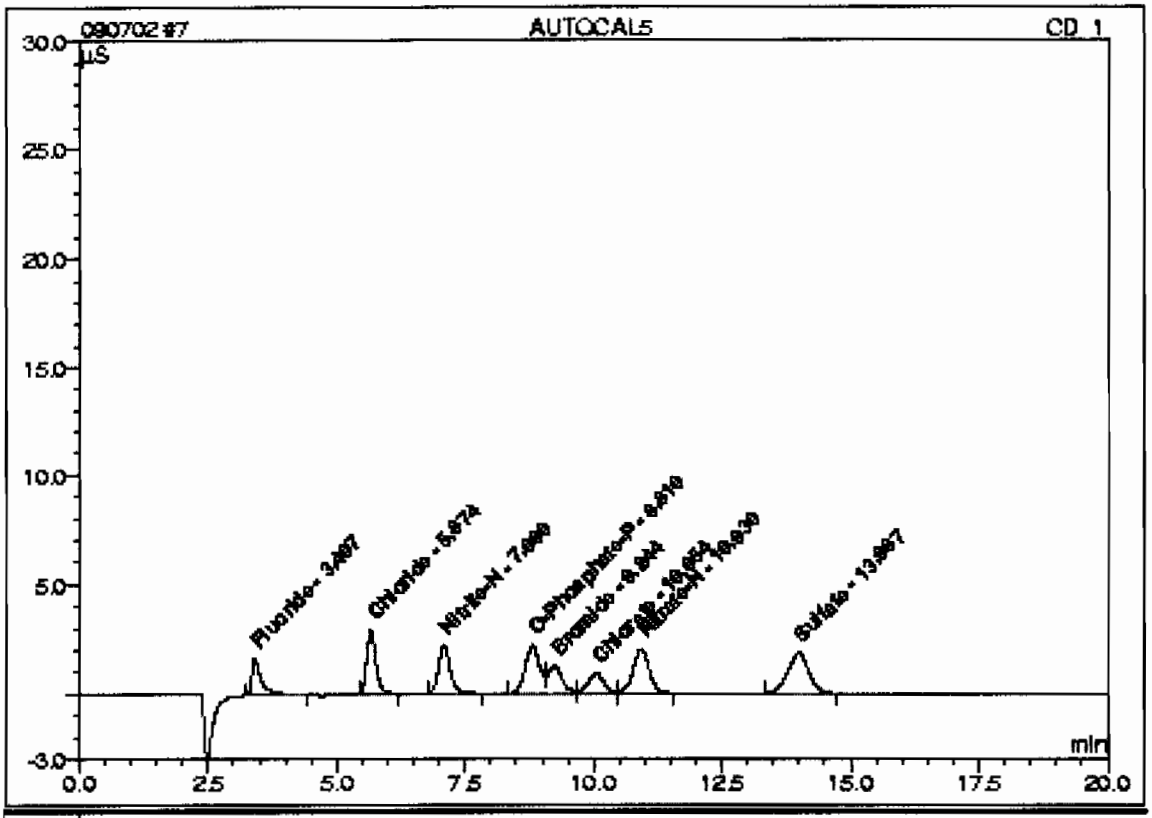

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	1.0000	0.9669		0.37282	8.25
2	5.67	Chloride	2.0000	1.8916		0.58770	13.01
3	7.09	Nitrite-N	1.0000	0.9662		0.56494	12.51
4	8.81	O-Phosphate-P	2.5000	2.6463		0.70832	15.68
5	9.24	Bromide	2.5000	2.5860		0.38867	8.60
6	10.05	Chlorate	2.5000	2.6495		0.30800	6.82
7	10.93	Nitrate-N	1.0000	0.9580		0.71945	15.93
8	13.99	Sulfate	4.0000	3.8387		0.86722	19.20
Total:				16.5033	0.000	4.517	100.00

7 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	50.0
Vial Number:	7	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:30	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

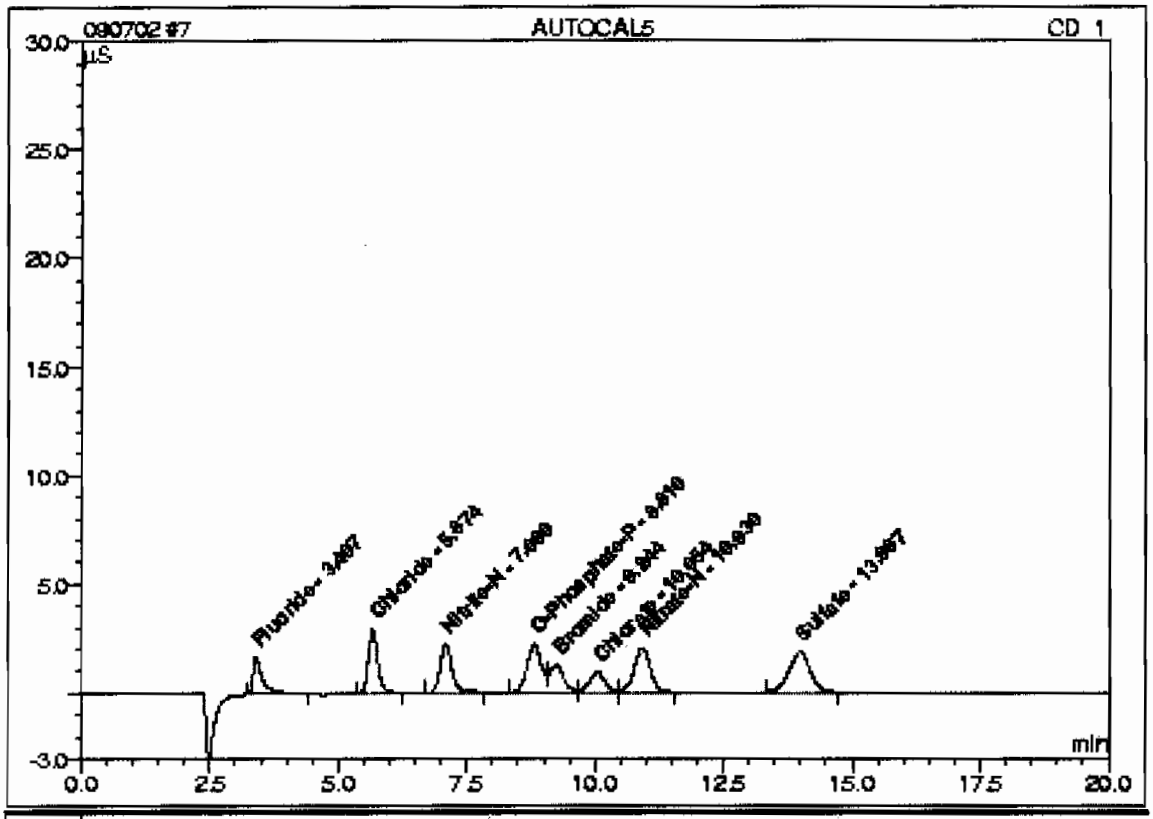

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	1.0000	0.9563		0.37282	8.22
2	5.67	Chloride	2.0000	1.9006		0.59575	13.14
3	7.09	Nitrite-N	1.0000	0.9669		0.57346	12.65
4	8.81	O-Phosphate-P	2.5000	2.5851		0.70832	15.62
5	9.24	Bromide	2.5000	2.5487		0.38867	8.57
6	10.05	Chlorate	2.5000	2.5886		0.30800	6.79
7	10.93	Nitrate-N	1.0000	0.9662		0.71945	15.87
8	13.99	Sulfate	4.0000	3.8427		0.86722	19.13
Total:				16.3550	0.000	4.534	100.00

7 AUTOCAL5

Sample Name:	**AUTOCAL5**	*Injection Volume:*	50.0
Vial Number:	7	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:30	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

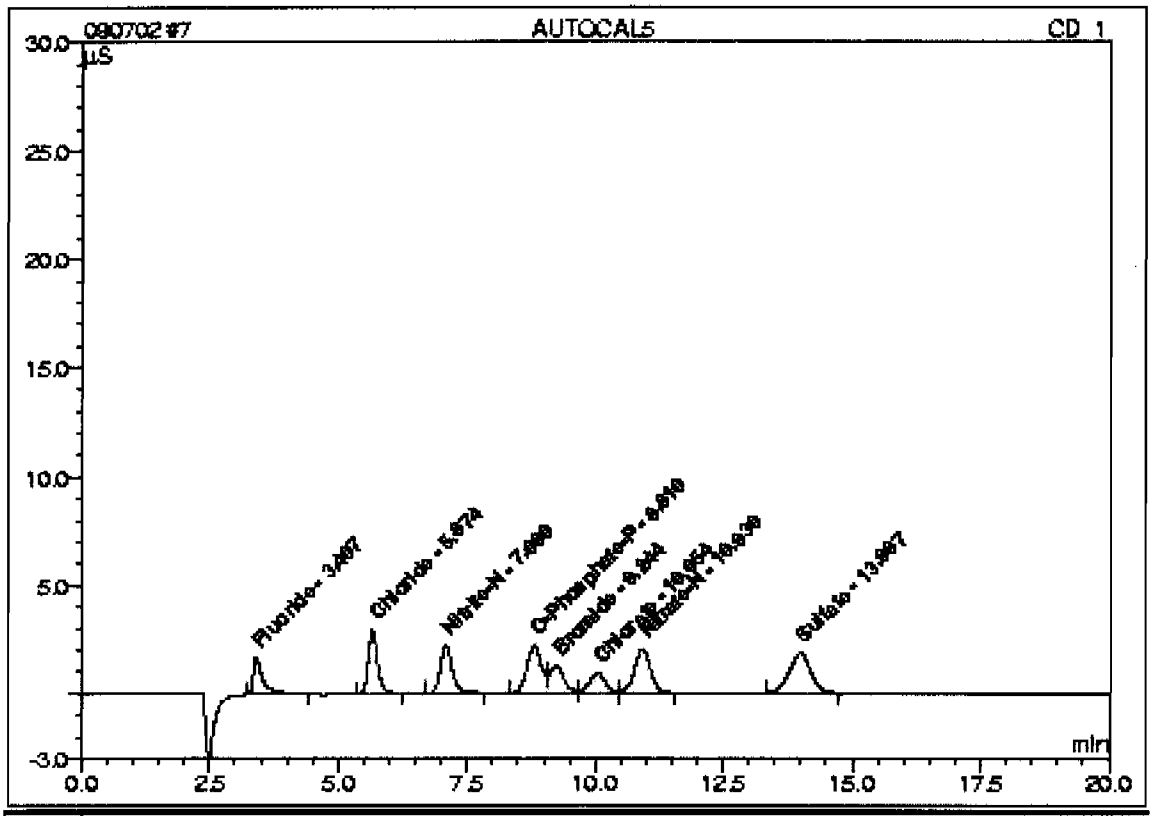

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	1.0000	0.9563		0.37282	8.22
2	5.67	Chloride	2.0000	1.9006		0.59575	13.14
3	7.09	Nitrite-N	1.0000	0.9669		0.57346	12.65
4	8.81	O-Phosphate-P	2.5000	2.5851		0.70832	15.62
5	9.24	Bromide	2.5000	2.5487		0.38867	8.57
6	10.05	Chlorate	2.5000	2.5896		0.30800	6.79
7	10.93	Nitrate-N	1.0000	0.9662		0.71945	15.87
8	13.99	Sulfate	4.0000	3.8427		0.86722	19.13
Total:				16.3550	0.000	4.534	100.00

7 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	50.0
Vial Number:	7	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 16:30	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

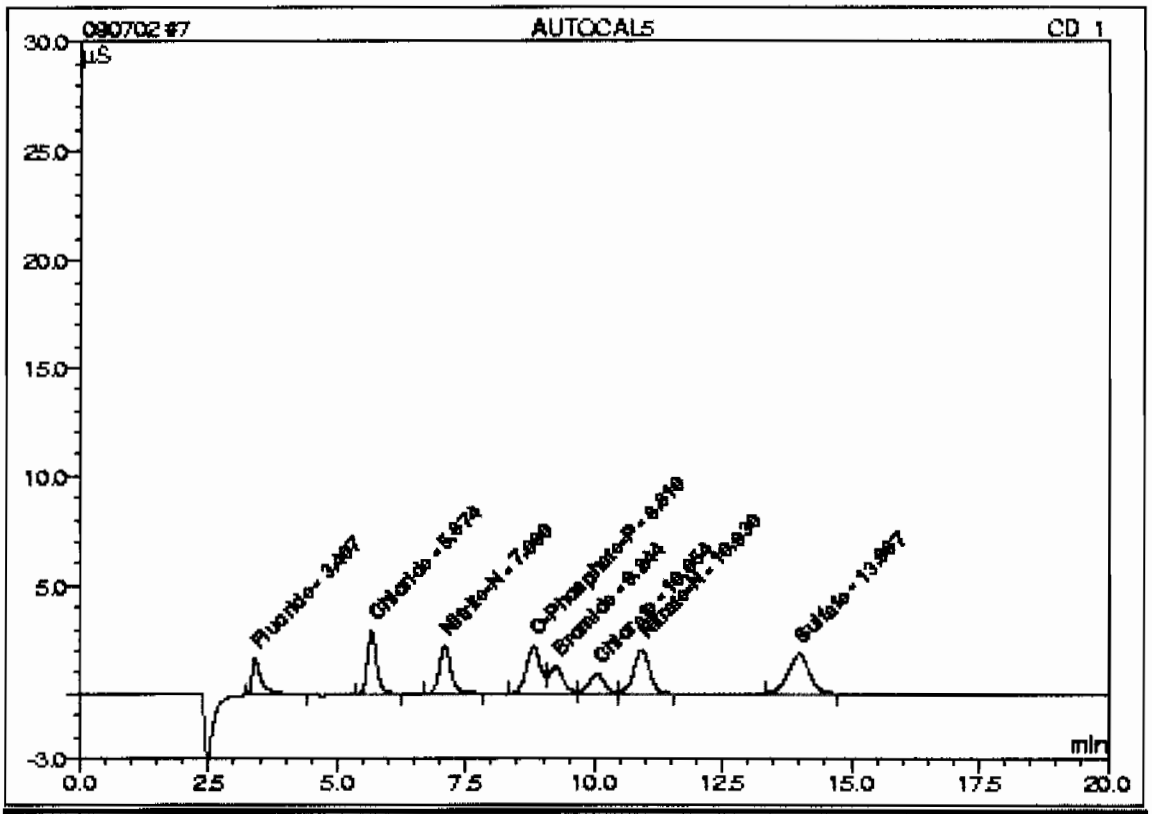

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	1.0000	0.9563		0.37282	8.22
2	5.67	Chloride	2.0000	1.9006		0.59575	13.14
3	7.09	Nitrite-N	1.0000	0.9669		0.57346	12.65
4	8.81	O-Phosphate-P	2.5000	2.5851		0.70832	15.62
5	9.24	Bromide	2.5000	2.5497		0.38867	8.57
6	10.05	Chlorate	2.5000	2.5896		0.30800	6.79
7	10.93	Nitrate-N	1.0000	0.9662		0.71945	15.87
8	13.99	Sulfate	4.0000	3.8427		0.86722	19.13
Total:				16.3550	0.000	4.534	100.00

8 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

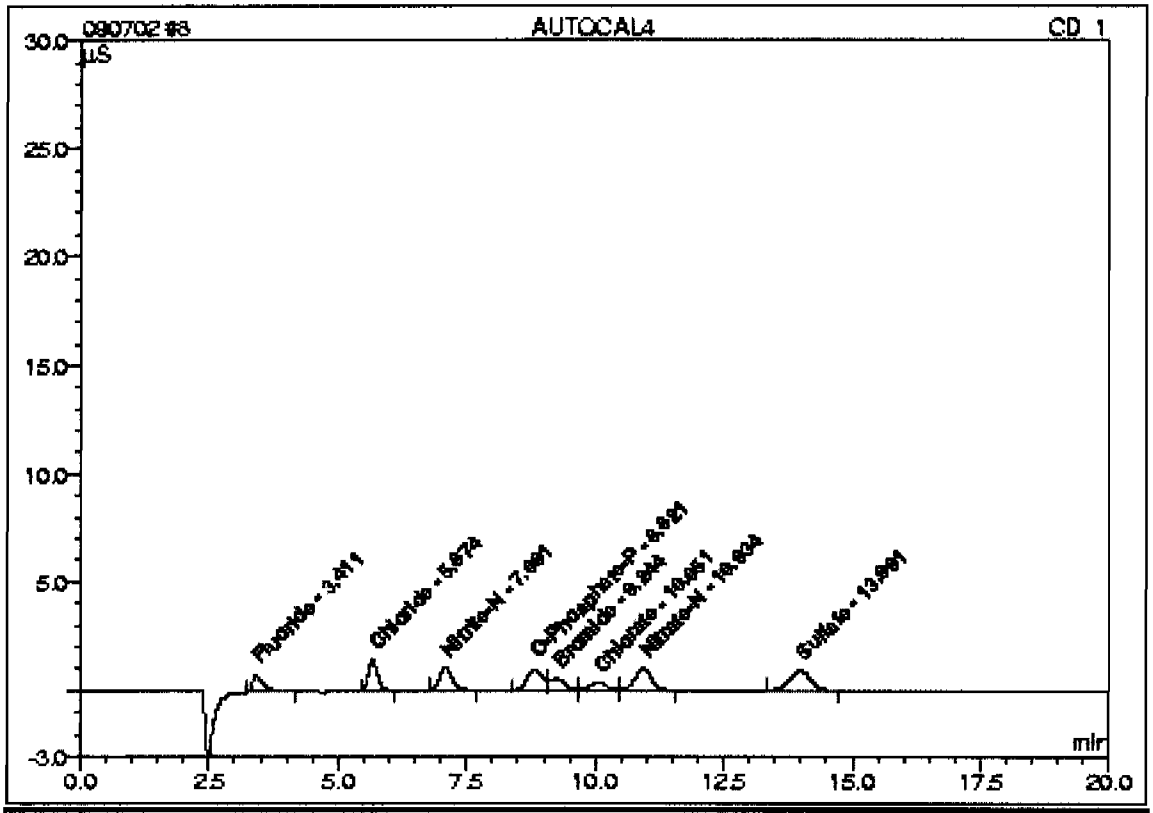

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.5000	0.4973		0.18235	8.44
2	5.67	Chloride	1.0000	1.0120		0.28418	13.15
3	7.09	Nitrite-N	0.5000	0.4965		0.27652	12.80
4	8.82	O-Phosphate-P	1.0000	1.1686		0.33112	15.33
5	9.24	Bromide	1.0000	1.0661		0.17026	7.88
6	10.05	Chlorate	1.0000	1.0780		0.12975	6.01
7	10.93	Nitrate-N	0.5000	0.5112		0.35605	16.48
8	13.99	Sulfate	2.0000	2.0272		0.43032	19.92
Total:				7.8570	0.000	2.161	100.00

8 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

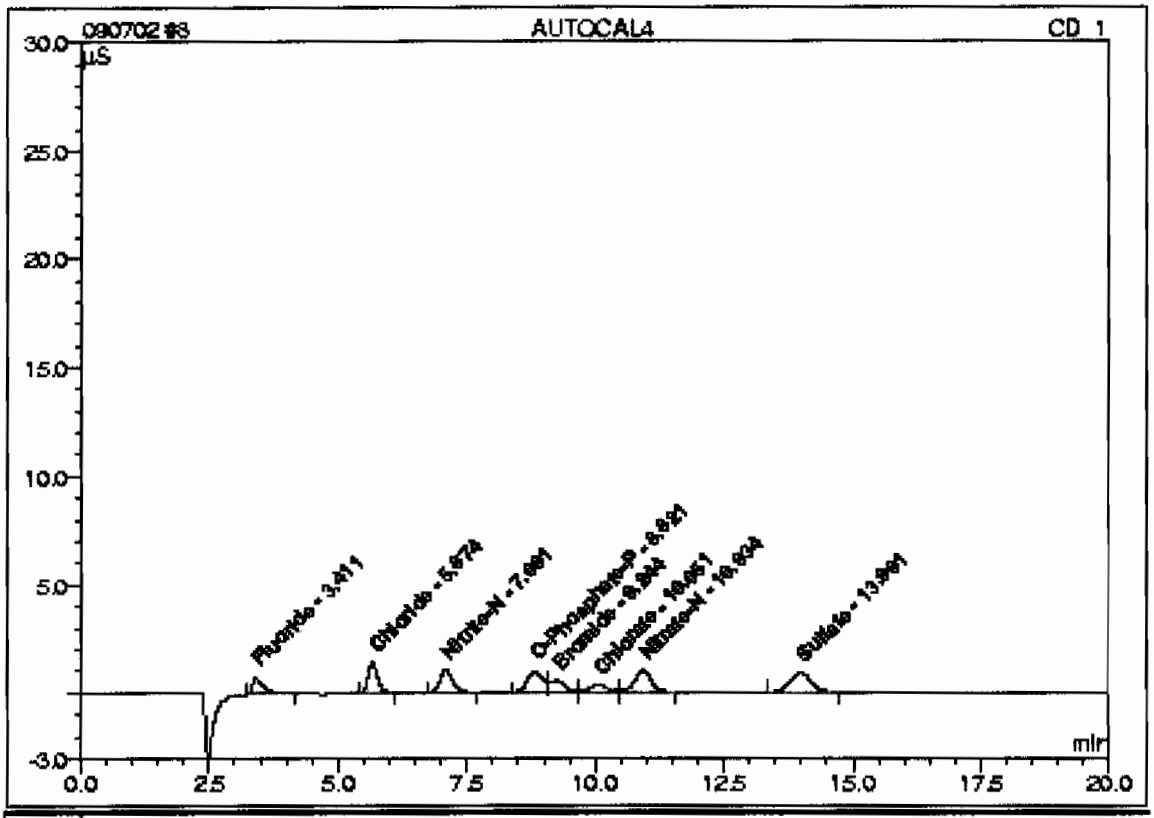

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.5000	0.4878		0.18235	8.42
2	5.67	Chloride	1.0000	0.9844		0.28631	13.22
3	7.09	Nitrite-N	0.5000	0.4947		0.27886	12.88
4	8.82	O-Phosphate-P	1.0000	1.1171		0.33112	15.29
5	9.24	Bromide	1.0000	1.0561		0.17026	7.86
6	10.05	Chlorate	1.0000	1.0541		0.12975	5.99
7	10.93	Nitrate-N	0.5000	0.5140		0.35605	16.45
8	13.99	Sulfate	2.0000	2.0118		0.43032	19.88
Total:				7.7199	0.000	2.165	100.00

8 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE095;300;9055

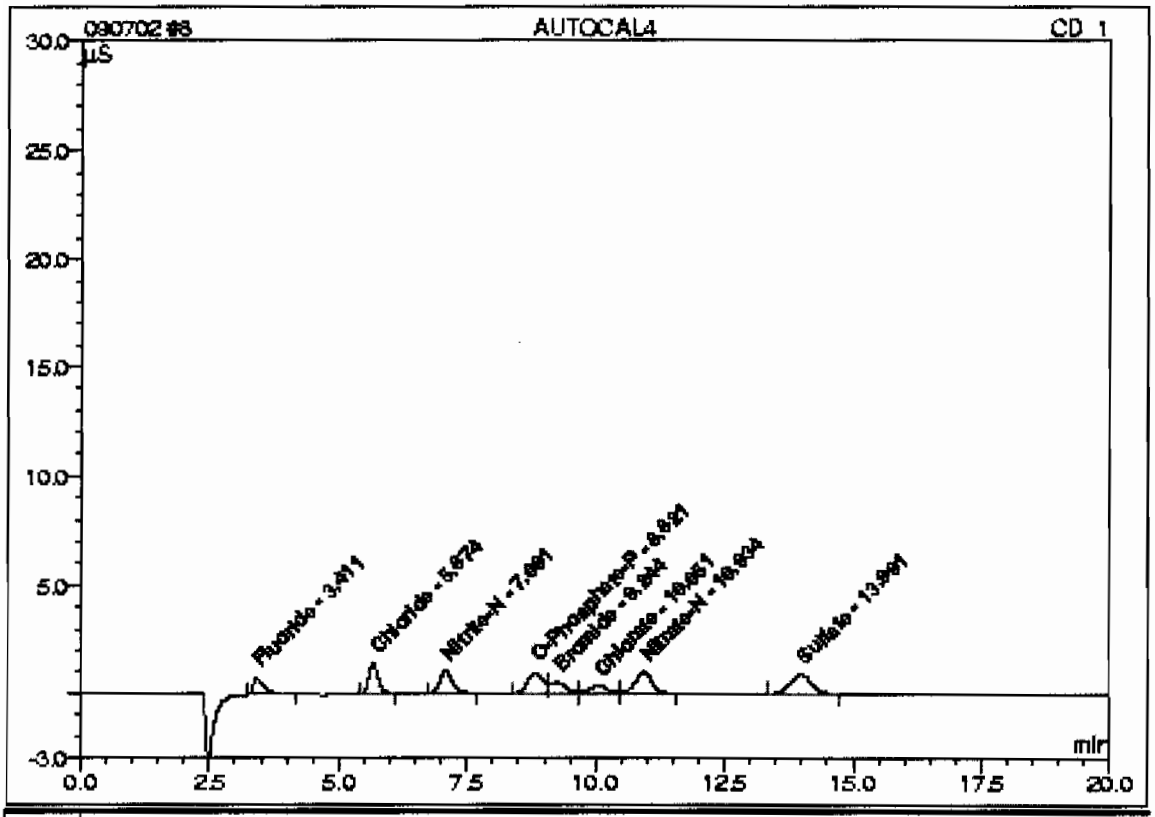

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.5000	0.4878		0.18235	8.42
2	5.67	Chloride	1.0000	0.9844		0.28631	13.22
3	7.09	Nitrite-N	0.5000	0.4947		0.27886	12.88
4	8.82	O-Phosphate-P	1.0000	1.1171		0.33112	15.29
5	9.24	Bromide	1.0000	1.0561		0.17026	7.86
6	10.05	Chlorate	1.0000	1.0541		0.12975	5.99
7	10.93	Nitrate-N	0.5000	0.5140		0.35605	16.45
8	13.99	Sulfate	2.0000	2.0118		0.43032	19.88
Total:				7.7199	0.000	2.165	100.00

8 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E086;300;9056

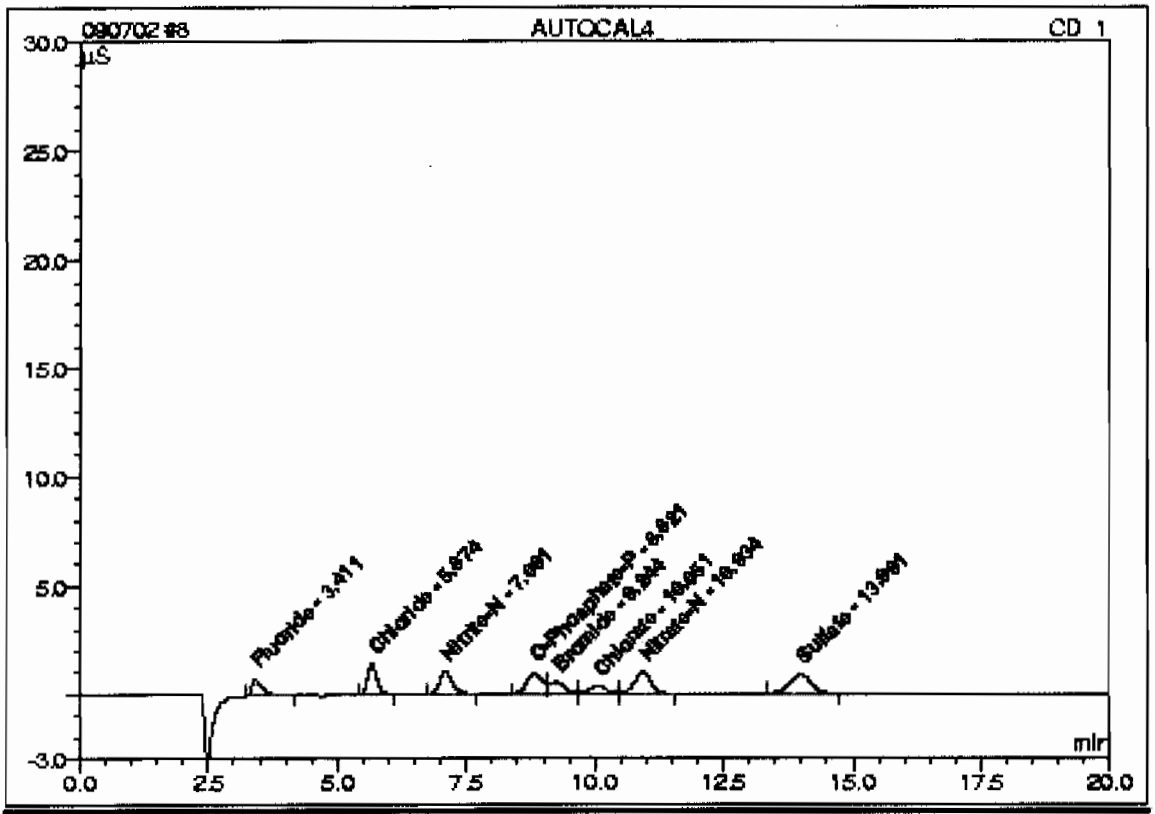

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.5000	0.4878		0.18235	8.42
2	5.67	Chloride	1.0000	0.9844		0.28631	13.22
3	7.09	Nitrite-N	0.5000	0.4947		0.27886	12.88
4	8.82	O-Phosphate-P	1.0000	1.1171		0.33112	15.29
5	9.24	Bromide	1.0000	1.0561		0.17026	7.86
6	10.05	Chlorate	1.0000	1.0541		0.12975	5.99
7	10.93	Nitrate-N	0.5000	0.5140		0.35605	16.45
8	13.99	Sulfate	2.0000	2.0118		0.43032	19.88
Total:				7.7199	0.000	2.165	100.00

9 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:15	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

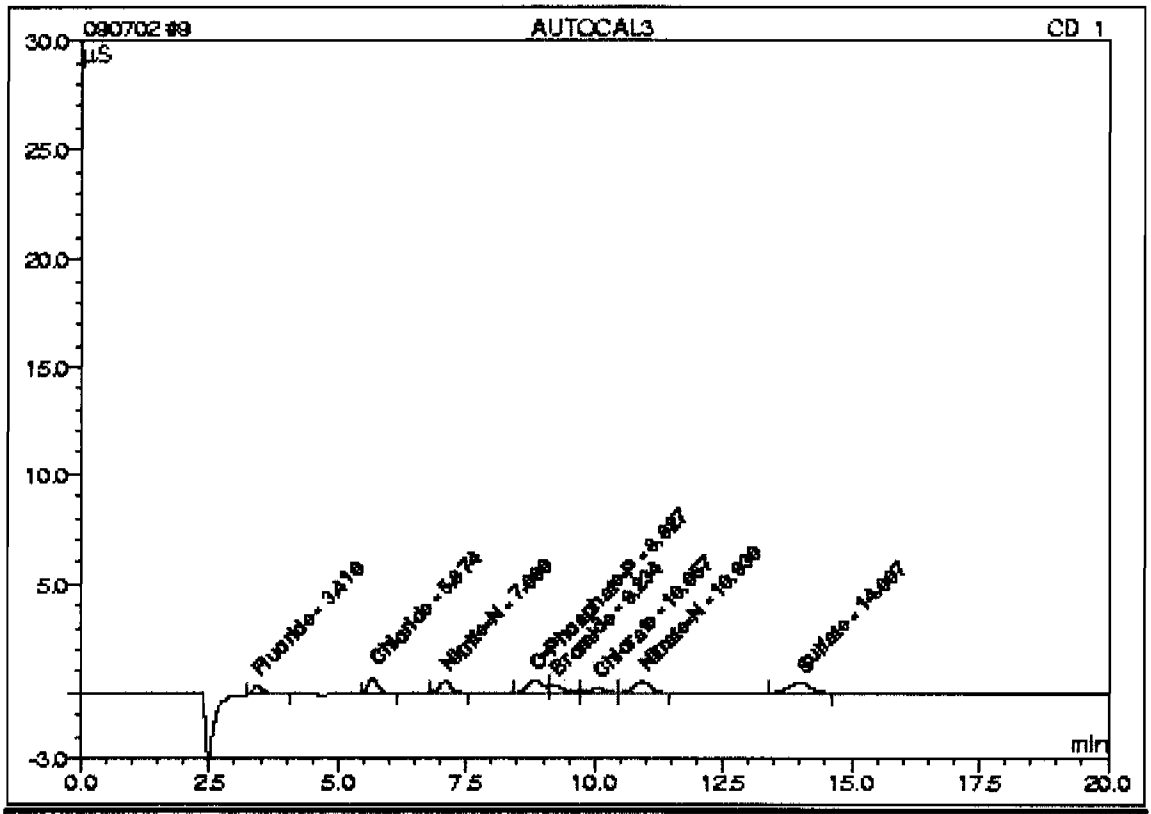

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.2500	0.2721		0.09172	8.05
2	5.67	Chloride	0.5000	0.6222		0.15210	13.34
3	7.09	Nitrite-N	0.2500	0.2625		0.13142	11.53
4	8.83	O-Phosphate-P	0.5000	0.6362		0.20562	18.04
5	9.23	Bromide	0.5000	0.5484		0.09891	8.68
6	10.06	Chlorate	0.5000	0.5056		0.07009	6.15
7	10.93	Nitrate-N	0.2500	0.2939		0.18071	15.85
8	14.01	Sulfate	1.0000	1.1254		0.20942	18.37
Total:				4.2663	0.000	1.140	100.00

9 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:15	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

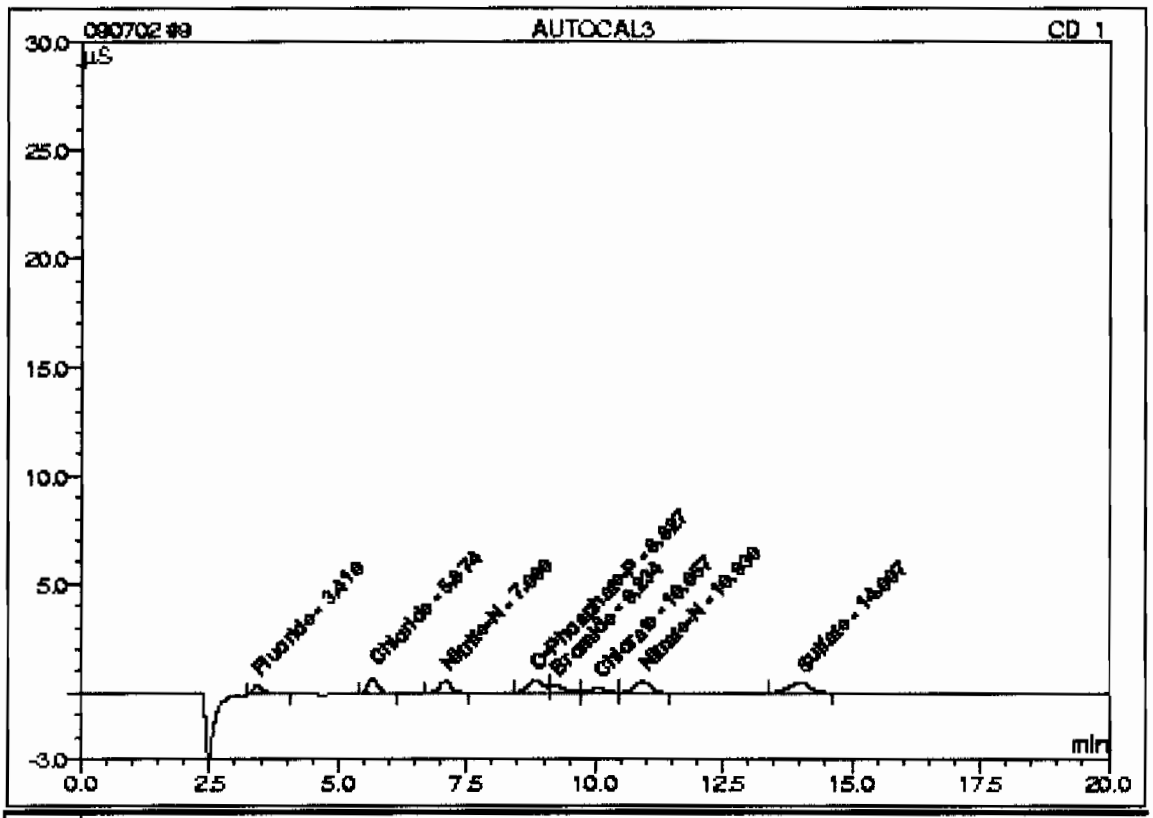

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.2500	0.2648		0.09172	8.01
2	5.67	Chloride	0.5000	0.5992		0.15418	13.46
3	7.09	Nitrite-N	0.2500	0.2640		0.13495	11.78
4	8.83	O-Phosphate-P	0.5000	0.6287		0.20562	17.95
5	9.23	Bromide	0.5000	0.5685		0.09891	8.63
6	10.06	Chlorate	0.5000	0.5406		0.07009	6.12
7	10.93	Nitrate-N	0.2500	0.2958		0.18071	15.77
8	14.01	Sulfate	1.0000	1.0860		0.20942	18.28
Total:				4.2416	0.000	1.146	100.00

9 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:15	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

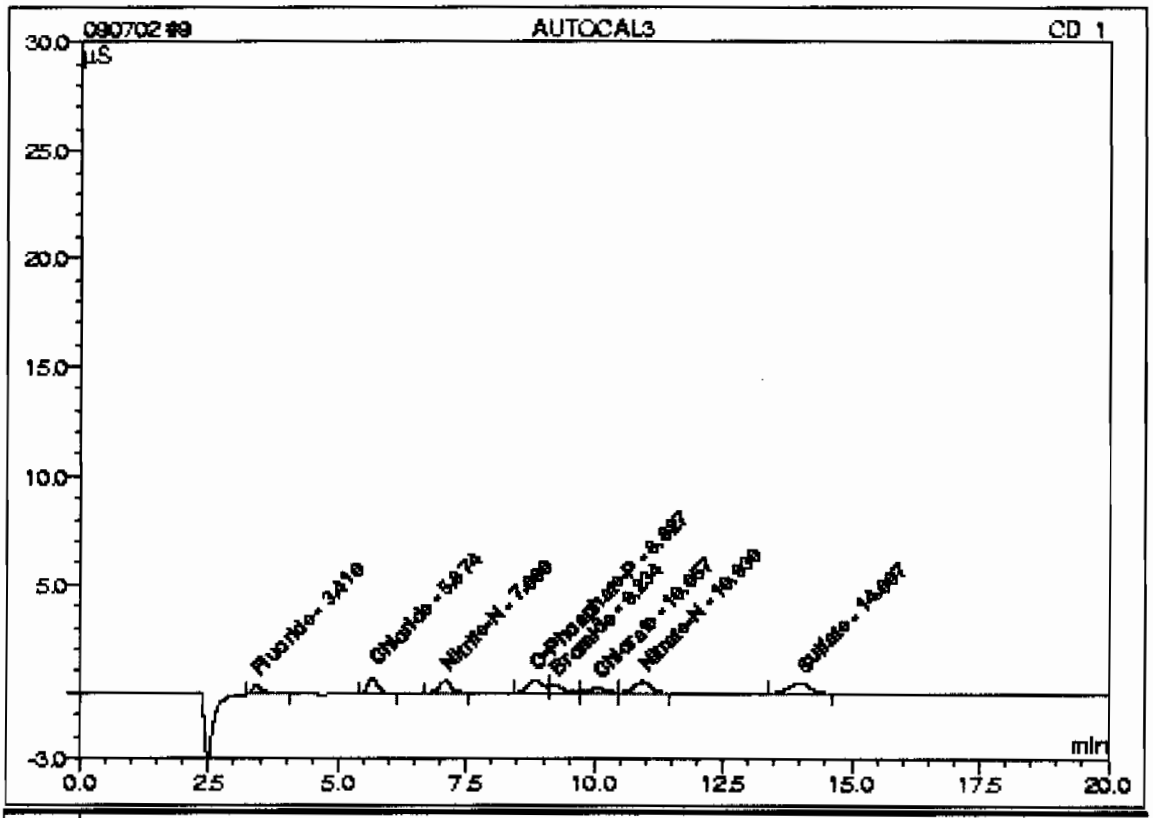

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.2500	0.2648		0.09172	8.01
2	5.67	Chloride	0.5000	0.5932		0.15418	13.46
3	7.09	Nitrite-N	0.2500	0.2640		0.13495	11.78
4	8.83	O-Phosphate-P	0.5000	0.6287		0.20562	17.95
5	9.23	Bromide	0.5000	0.5685		0.09891	8.63
6	10.06	Chlorate	0.5000	0.5406		0.07009	6.12
7	10.93	Nitrate-N	0.2500	0.2958		0.18071	15.77
8	14.01	Sulfate	1.0000	1.0860		0.20942	18.28
Total:				4.2416	0.000	1.146	100.00

9 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:15	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

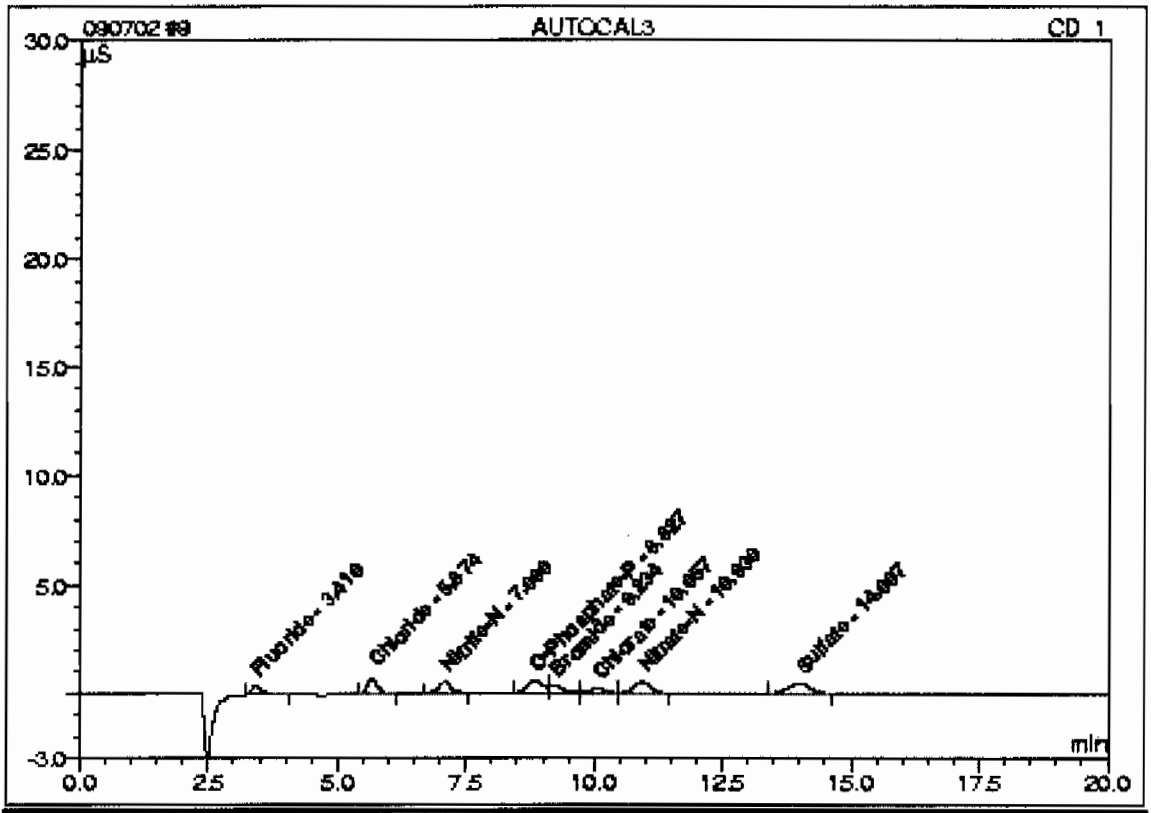

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.2500	0.2648		0.09172	8.01
2	5.67	Chloride	0.5000	0.5932		0.15418	13.46
3	7.09	Nitrite-N	0.2500	0.2640		0.13495	11.78
4	8.83	O-Phosphate-P	0.5000	0.6287		0.20562	17.95
5	9.23	Bromide	0.5000	0.5685		0.09891	8.63
6	10.06	Chlorate	0.5000	0.5406		0.07009	6.12
7	10.93	Nitrate-N	0.2500	0.2958		0.18071	15.77
8	14.01	Sulfate	1.0000	1.0860		0.20942	18.28
Total:				4.2416	0.000	1.146	100.00

10 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:38	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9058

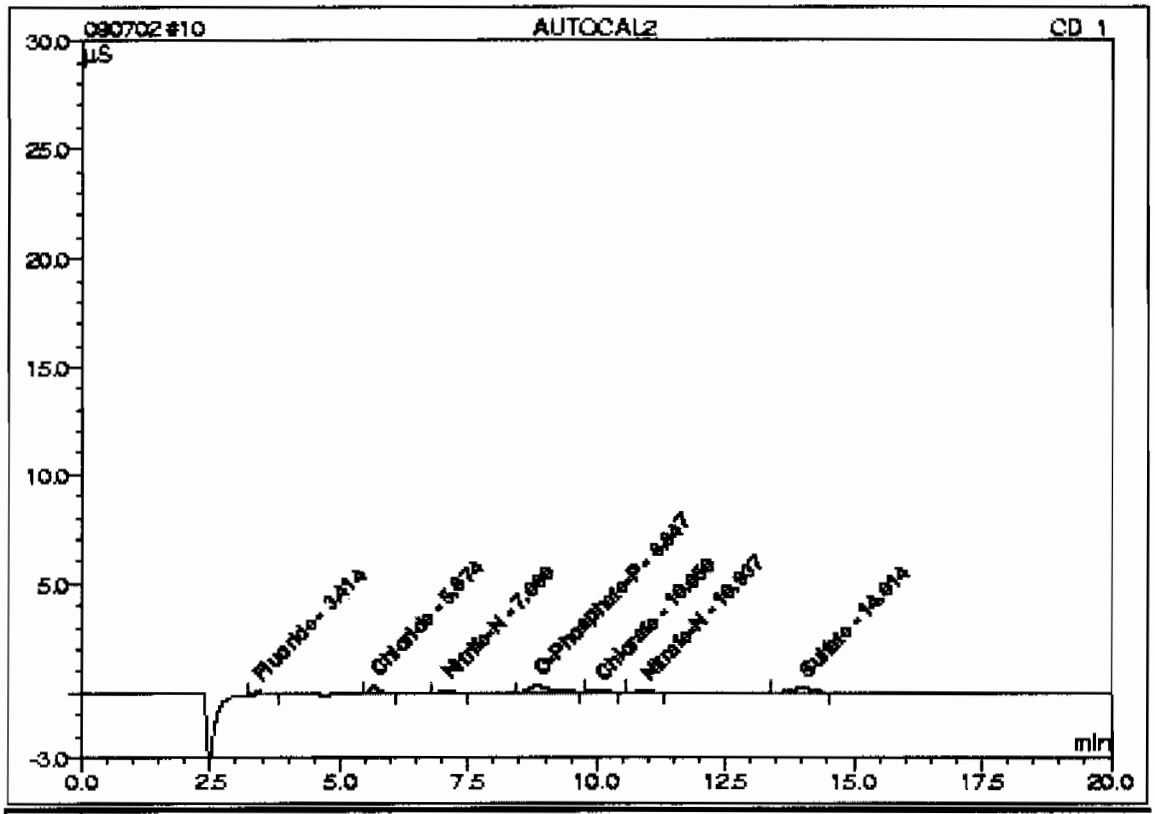

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.1000	0.1201		0.03295	8.42
2	5.67	Chloride	0.2000	0.3153		0.05938	15.18
3	7.09	Nitrite-N	0.1000	0.1058		0.03678	9.40
4	8.85	O-Phosphate-P	0.2000	0.3098		0.14213	36.33
n.a.	n.a.	Bromide	0.2000	n.a.	n.a.	n.a.	n.a.
5	10.05	Chlorate	0.2000	0.0972		0.02012	5.14
6	10.94	Nitrate-N	0.1000	0.0916		0.01678	4.29
7	14.01	Sulfate	0.4000	0.5564		0.08905	21.23
Total:				1.5962	0.000	0.391	100.00

10 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2.09 17:38	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

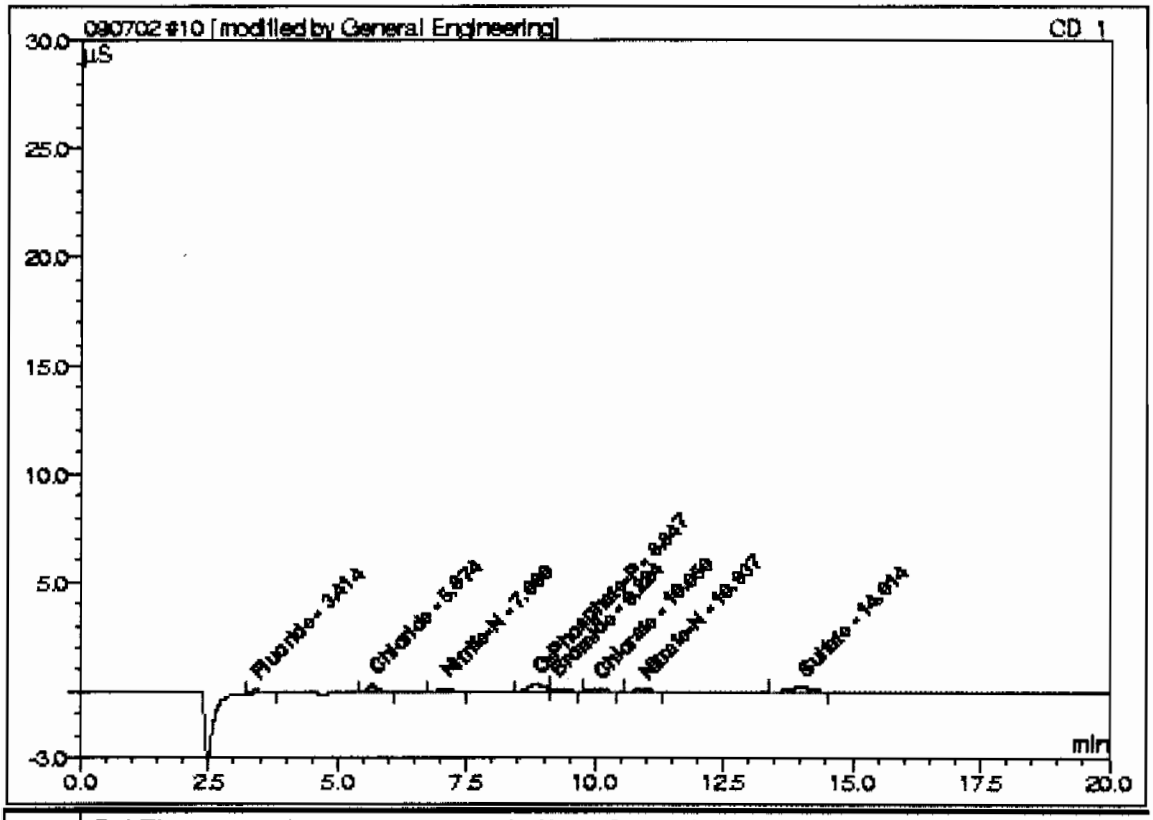

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.1000	0.1203		0.03295	8.38
2	5.67	Chloride	0.2000	0.3163		0.06067	15.42
3	7.09	Nitrite-N	0.1000	0.1081		0.03769	9.58
4	8.85	O-Phosphate-P	0.2000	0.2344 *		0.10432	26.52
5	9.22	Bromide	0.2000	0.1509 *		0.03781	9.61
6	10.05	Chlorate	0.2000	0.1104		0.02012	5.12
7	10.94	Nitrate-N	0.1000	0.0918		0.01678	4.27
8	14.01	Sulfate	0.4000	0.5564		0.08305	21.11
Total:				1.6887	0.000	0.393	100.00

10 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:38	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

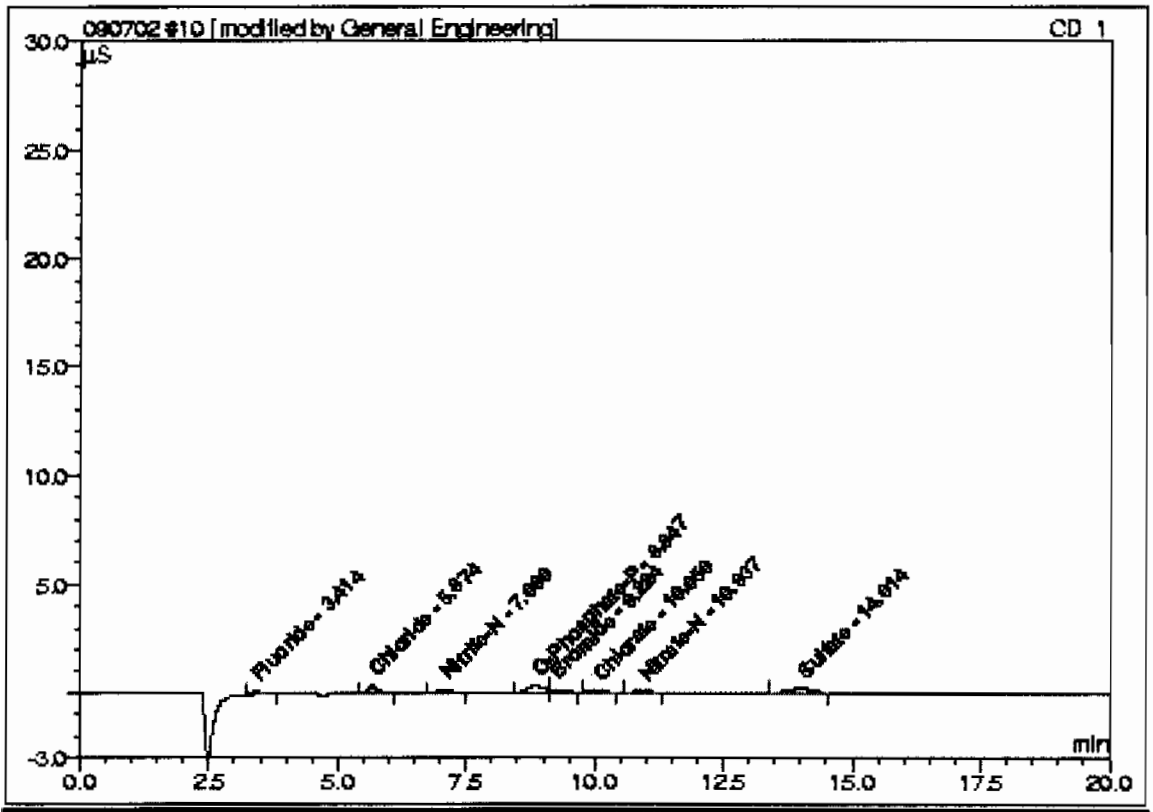

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.1000	0.1203		0.03295	8.38
2	5.67	Chloride	0.2000	0.3163		0.06067	15.42
3	7.09	Nitrite-N	0.1000	0.1091		0.03769	9.58
4	8.85	O-Phosphate-P	0.2000	0.2344 *		0.10432	26.52
5	9.22	Bromide	0.2000	0.1509 *		0.03781	9.61
6	10.05	Chlorate	0.2000	0.1104		0.02012	5.12
7	10.94	Nitrate-N	0.1000	0.0918		0.01678	4.27
8	14.01	Sulfate	0.4000	0.5564		0.08305	21.11
Total:				1.6897	0.000	0.393	100.00

10 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:38	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9055

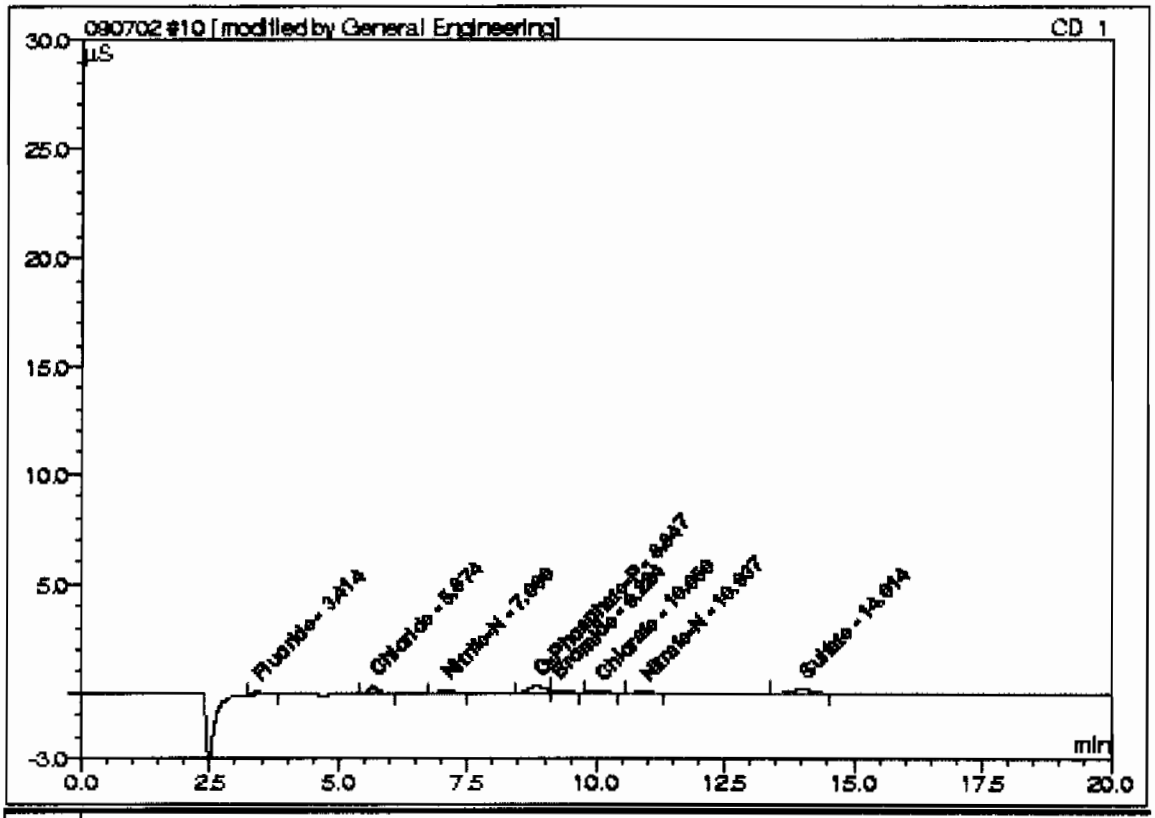

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.1000	0.1203		0.03295	8.38
2	5.67	Chloride	0.2000	0.3163		0.06067	15.42
3	7.09	Nitrite-N	0.1000	0.1081		0.03769	9.58
4	8.85	O-Phosphate-P	0.2000	0.2344 *		0.10432	26.52
5	9.22	Bromide	0.2000	0.1509 *		0.03781	9.61
6	10.05	Chlorate	0.2000	0.1104		0.02012	5.12
7	10.94	Nitrate-N	0.1000	0.0918		0.01678	4.27
8	14.01	Sulfate	0.4000	0.5564		0.08305	21.11
Total:				1.6897	0.000	0.393	100.00

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:01	*Analyst:*	VXP1
Run Time (min):	20.00	Column:	AS9HC-014 108;GLGC E088;300;9056

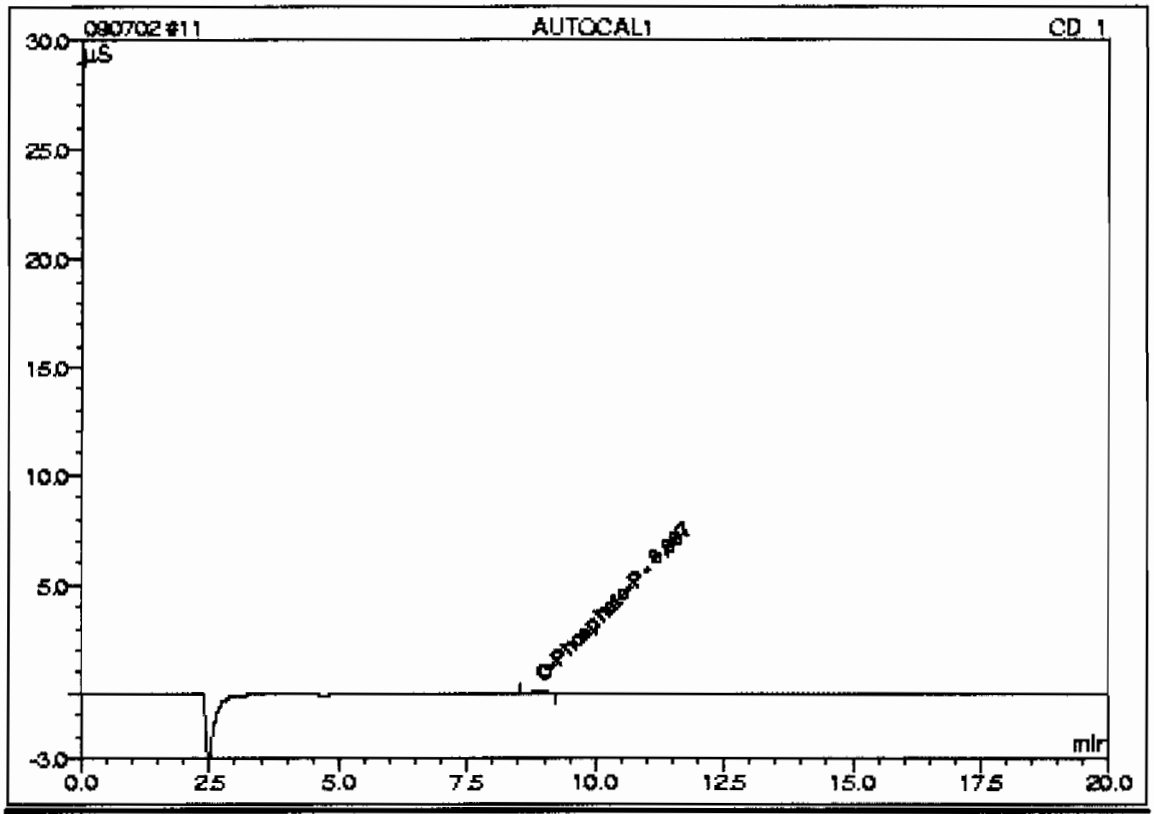

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	0.0000	-0.1529		0.01594	100.00
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				-0.1529	0.000	0.016	100.00

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/2009 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-015952;GLGCE096;300;9055

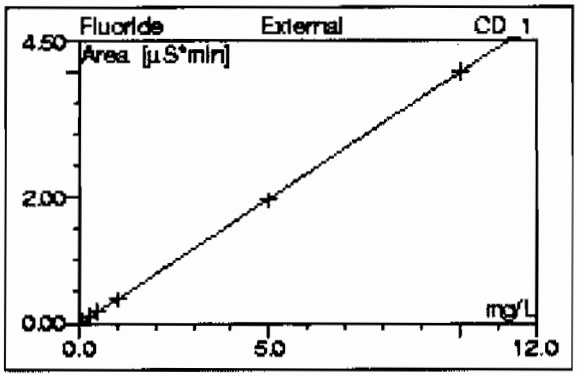

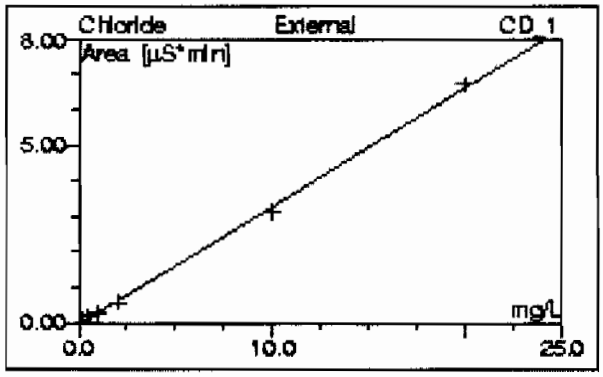

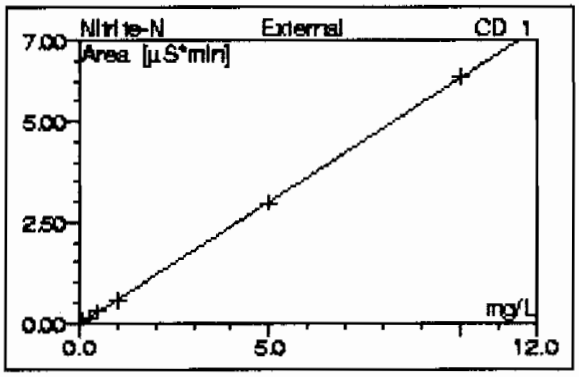

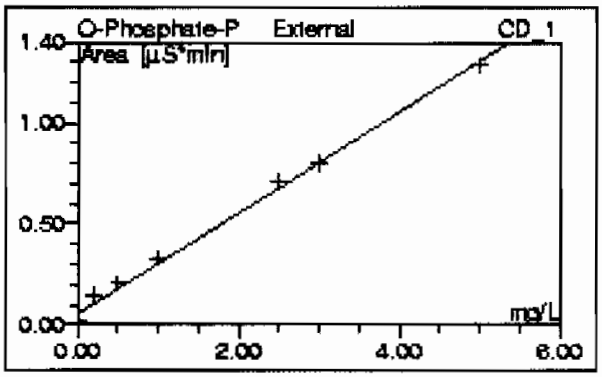

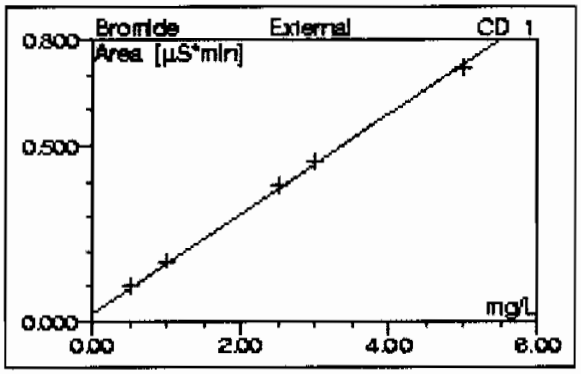

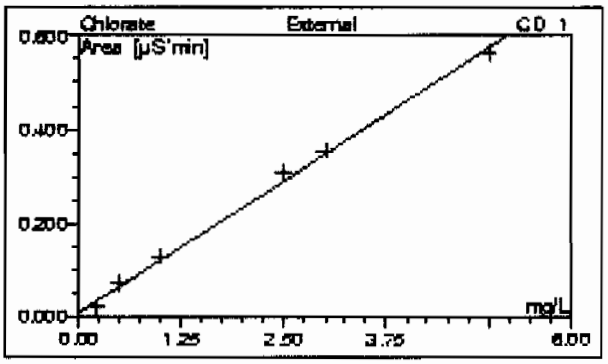

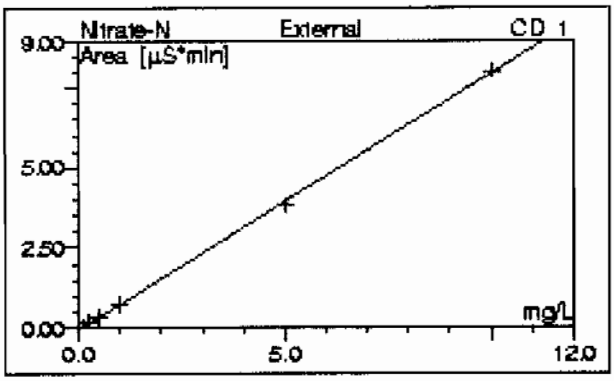

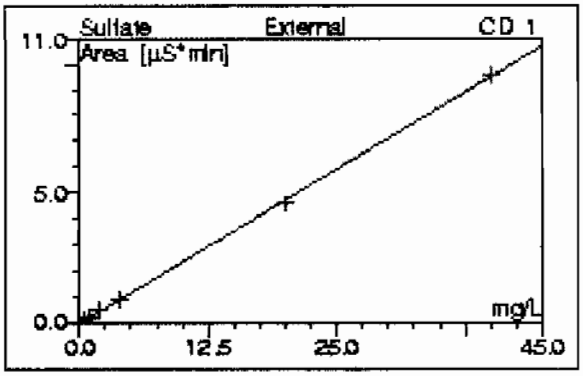

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9870	-0.0151	0.3999	0.0000
n.a.	n.a.	Chloride	0LOff	99.8968	-0.0458	0.3335	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9902	-0.0277	0.6093	0.0000
1	8.90	O-Phosphate-P	0LOff	99.5578	0.0543	0.2507	0.0000
n.a.	n.a.	Bromide	0LOff	99.8133	0.0208	0.1425	0.0000
n.a.	n.a.	Chlorate	0LOff	99.6813	0.0091	0.1132	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.9418	-0.0567	0.8019	0.0000
n.a.	n.a.	Sulfate	0LOff	99.9554	-0.0497	0.2386	0.0000
Average:				99.8530	-0.0138	0.3612	0.0000

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

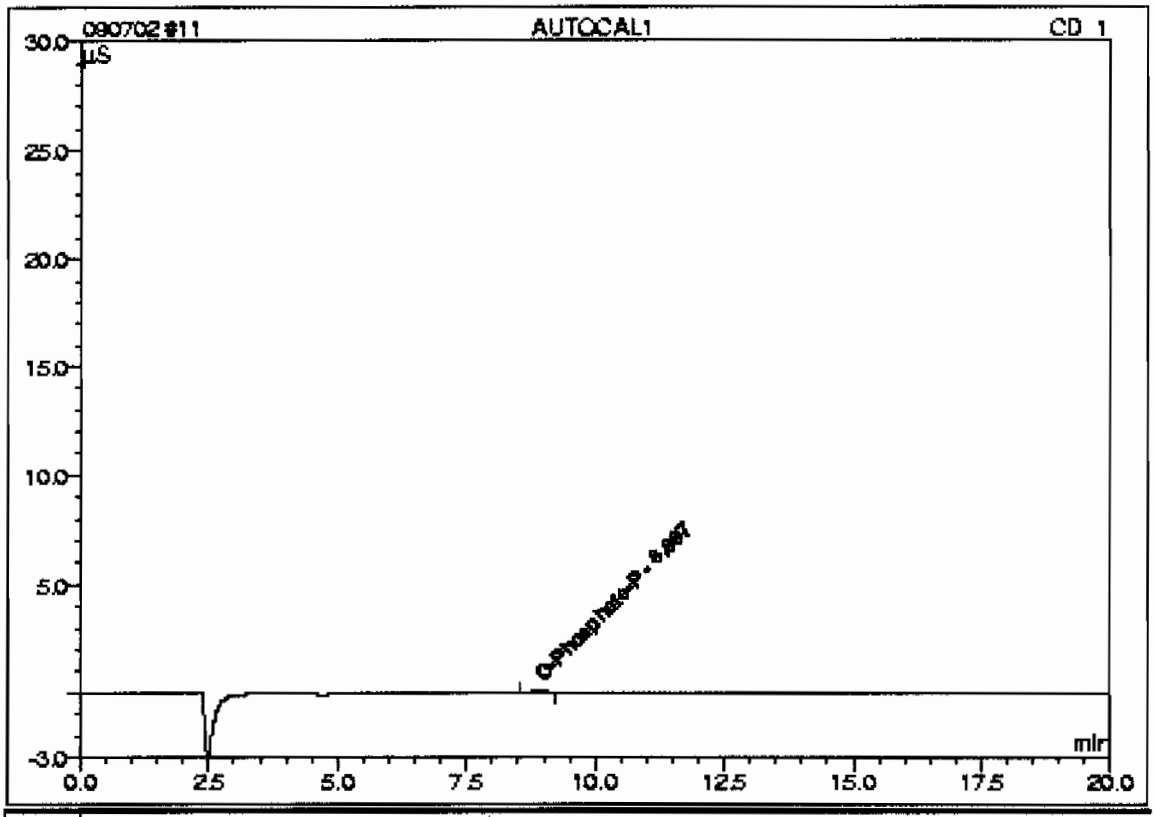

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	0.0000	-0.1095		0.01594	100.00
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				-0.1095	0.000	0.016	100.00

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/2009 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-015982;GLGCE086;300;9056

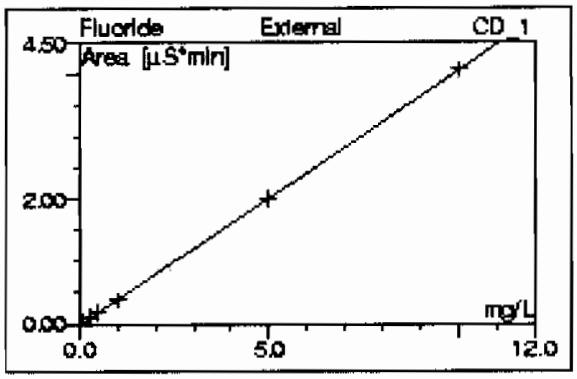

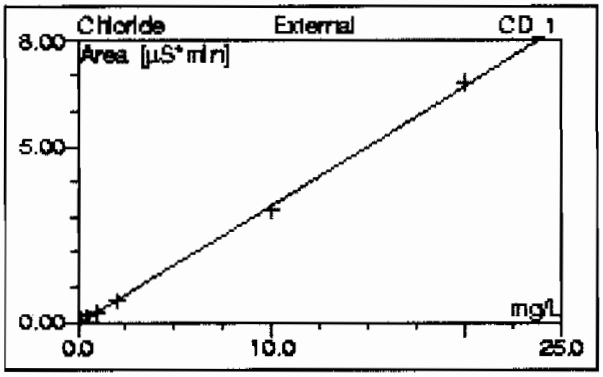

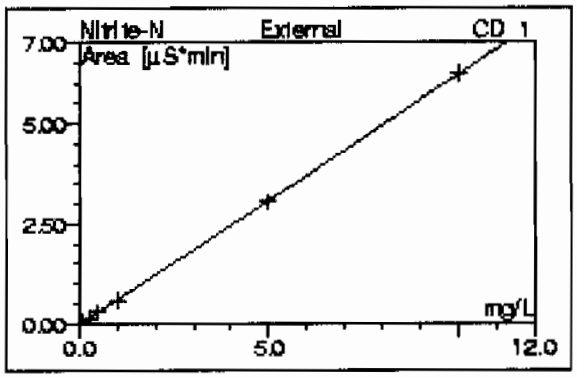

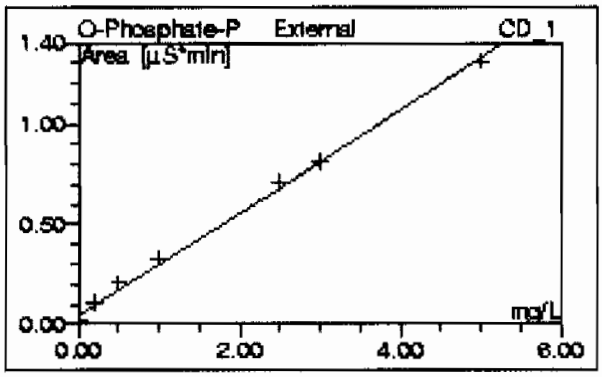

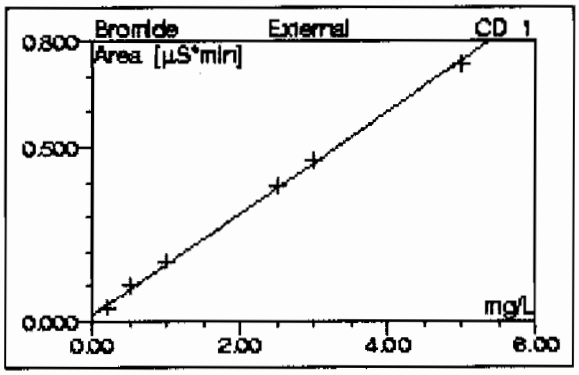

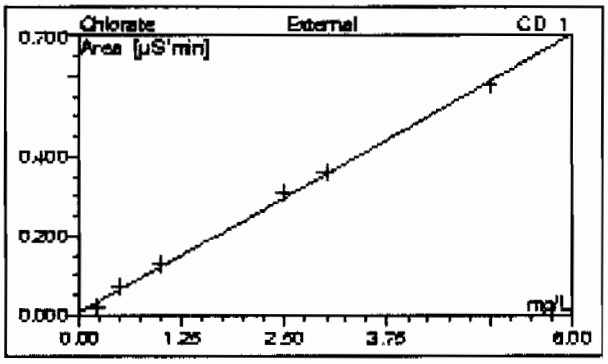

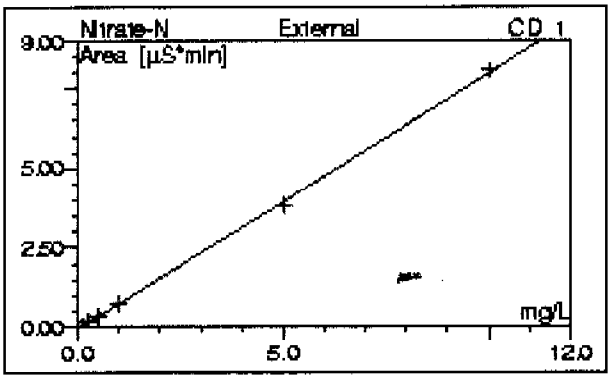

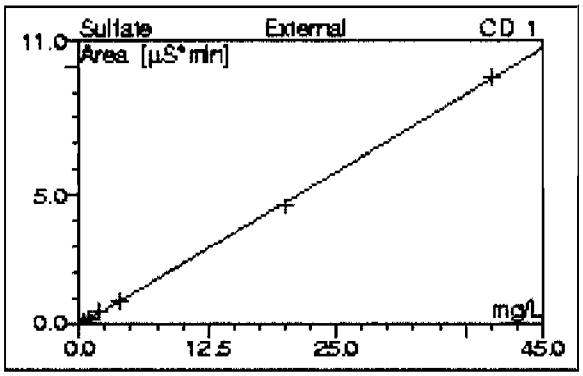

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9930	-0.0160	0.4065	0.0000
n.a.	n.a.	Chloride	0LOff	99.8994	-0.0462	0.3377	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9904	-0.0299	0.6239	0.0000
1	8.90	O-Phosphate-P	0LOff	99.7147	0.0441	0.2570	0.0000
n.a.	n.a.	Bromide	0LOff	99.8658	0.0157	0.1463	0.0000
n.a.	n.a.	Chlorate	0LOff	99.8007	0.0073	0.1162	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.9438	-0.0570	0.8036	0.0000
n.a.	n.a.	Sulfate	0LOff	99.9554	-0.0497	0.2386	0.0000
Average:				99.8954	-0.0164	0.3662	0.0000

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

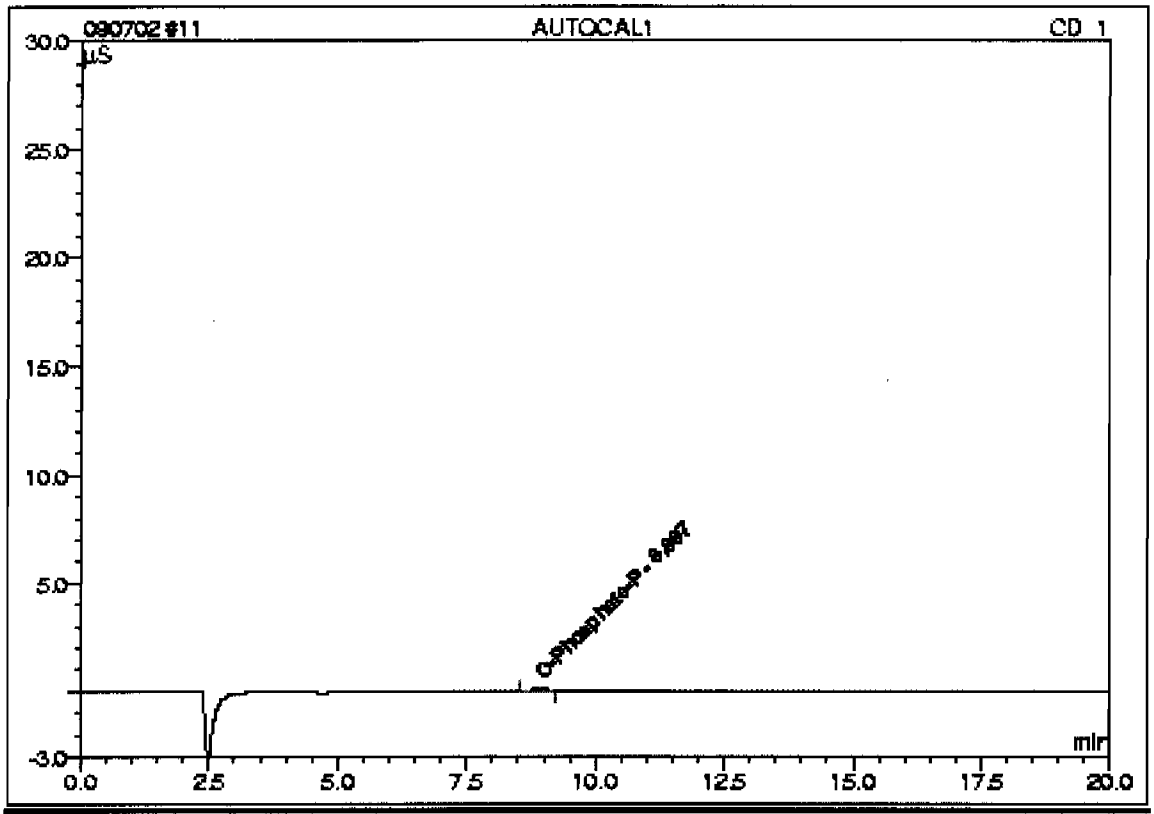

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	0.0000	-0.1095		0.01594	100.00
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				-0.1095	0.000	0.016	100.00

11 AUTOCAL1

Sample Name:	**AUTOCAL1**	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/2009 18:01	Analyst:	**VXP1**
Run Time (min):	20.00	Column:	**AS9HC-015982;GLGCE086;300;9058**

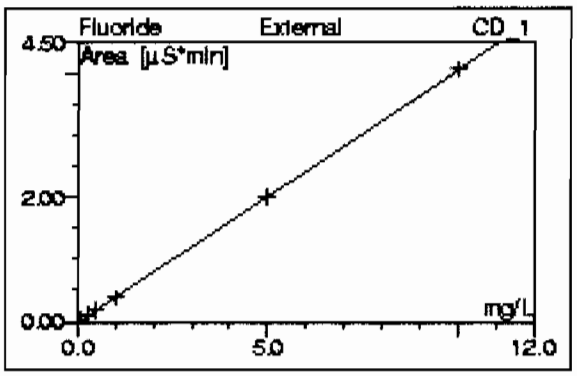

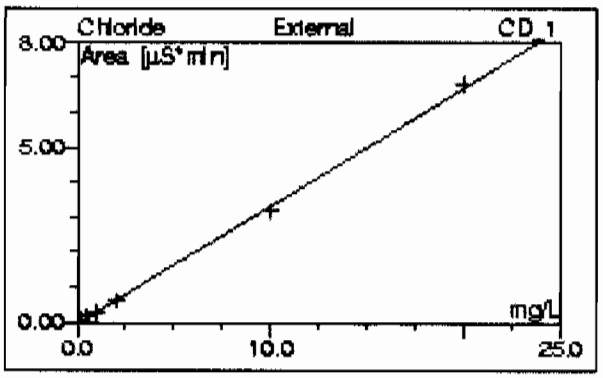

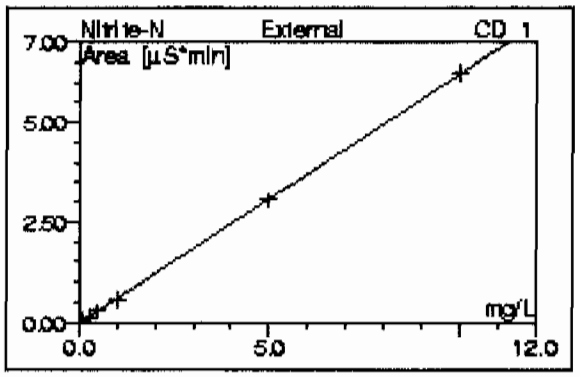

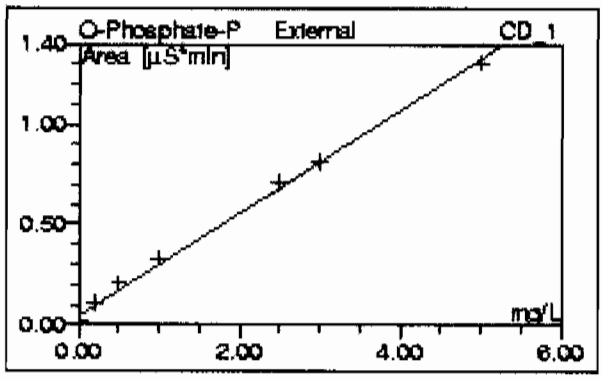

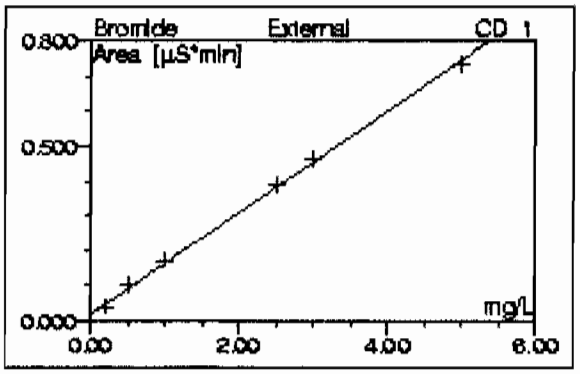

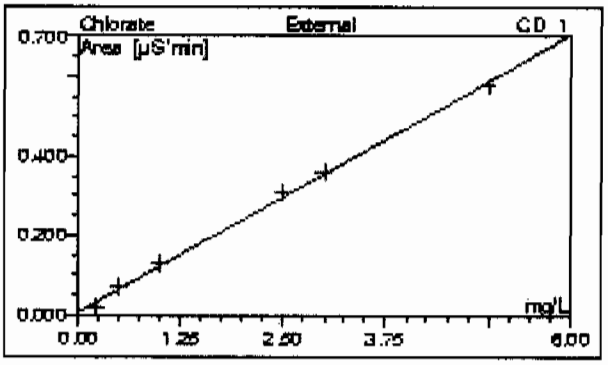

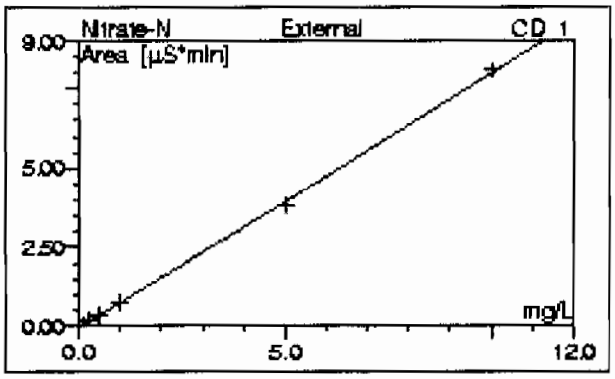

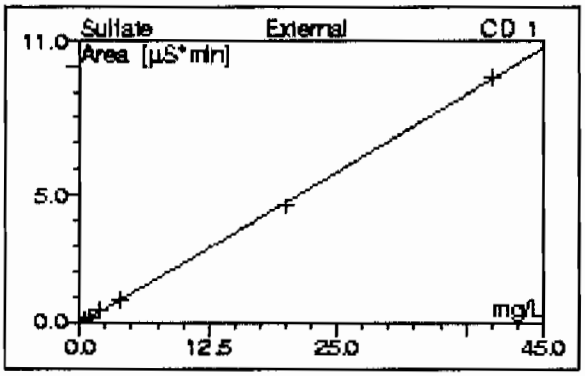

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9930	-0.0160	0.4065	0.0000
n.a.	n.a.	Chloride	0LOff	99.8994	-0.0462	0.3377	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9904	-0.0298	0.6239	0.0000
1	8.90	O-Phosphate-P	0LOff	99.7147	0.0441	0.2570	0.0000
n.a.	n.a.	Bromide	0LOff	99.8658	0.0157	0.1463	0.0000
n.a.	n.a.	Chlorate	0LOff	99.8007	0.0073	0.1162	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.9438	-0.0570	0.8036	0.0000
n.a.	n.a.	Sulfate	0LOff	99.9554	-0.0497	0.2386	0.0000
Average:				99.8954	-0.0164	0.3662	0.0000

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

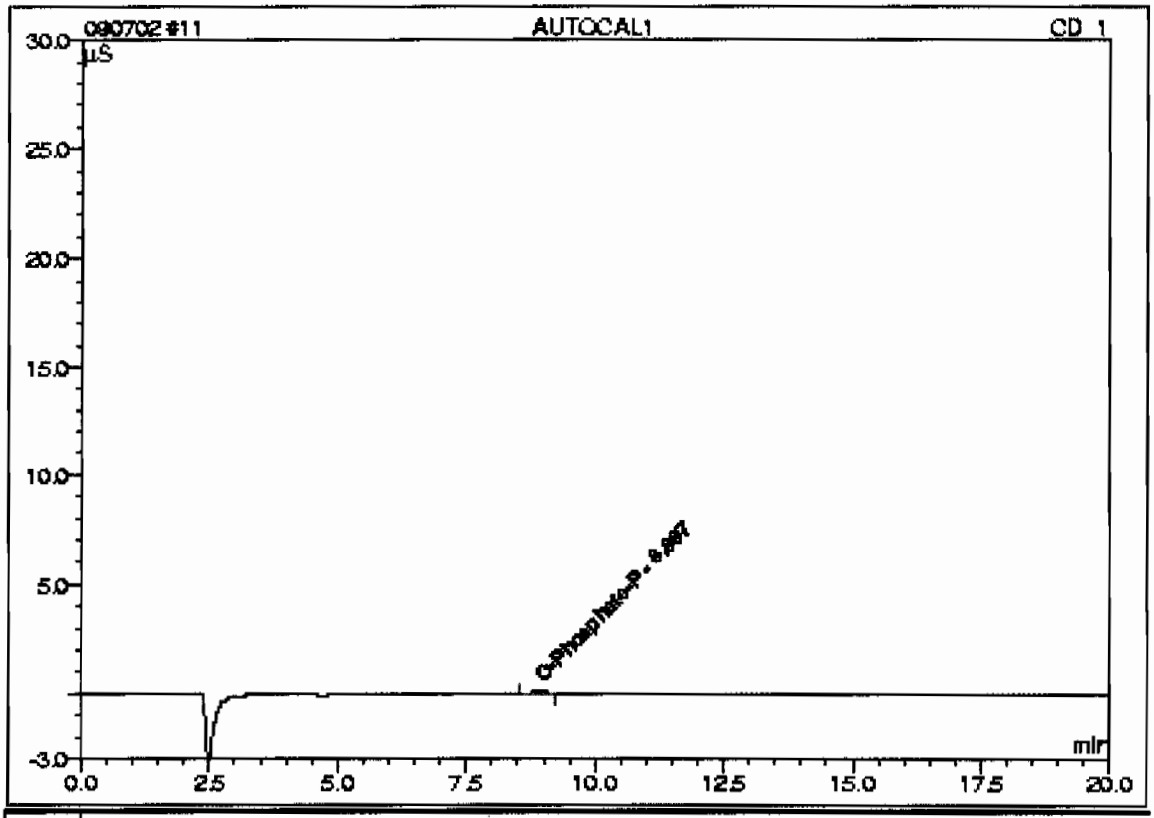

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	0.0000	-0.1095		0.01594	100.00
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				-0.1095	0.000	0.016	100.00

11 AUTOCAL1

Sample Name:	**AUTOCAL1**	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	**AS9_HC**	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/2009 18:01	Analyst:	**VXP1**
Run Time (min):	20.00	Column:	**AS9HC-015952;GLGCE085;300;9058**

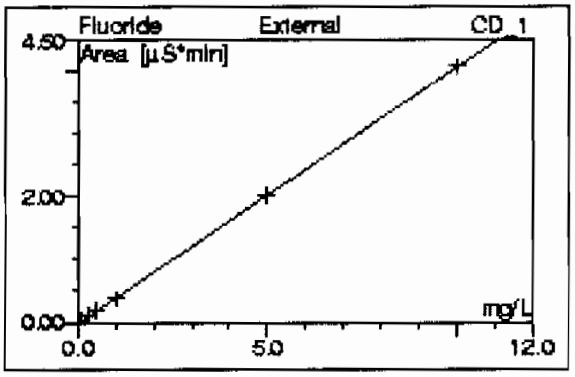

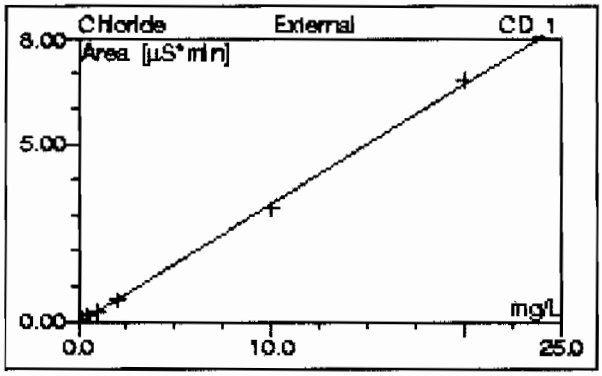

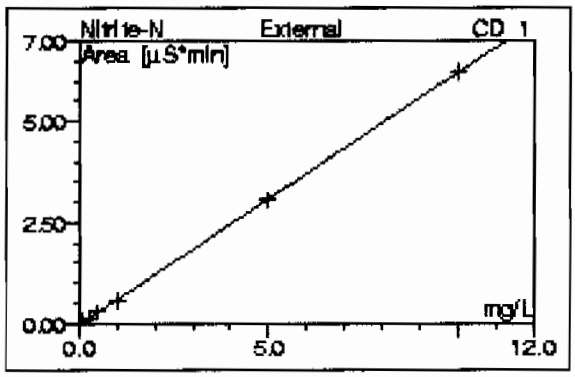

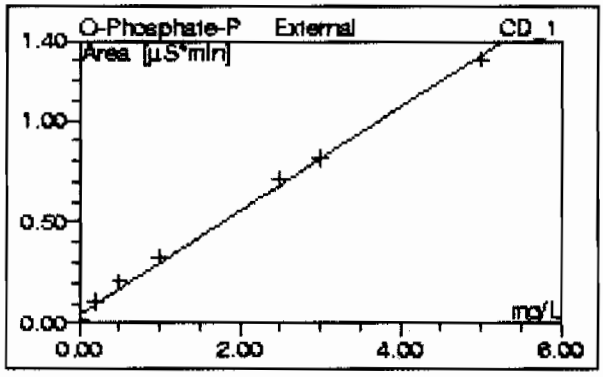

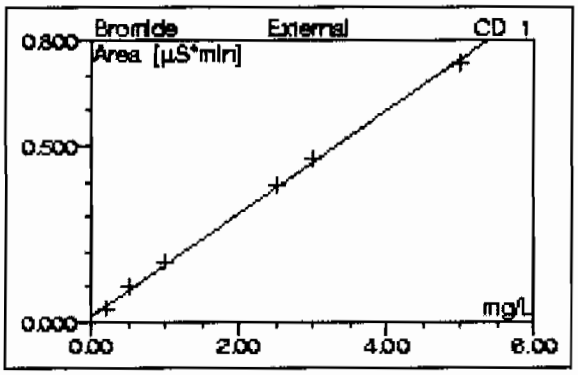

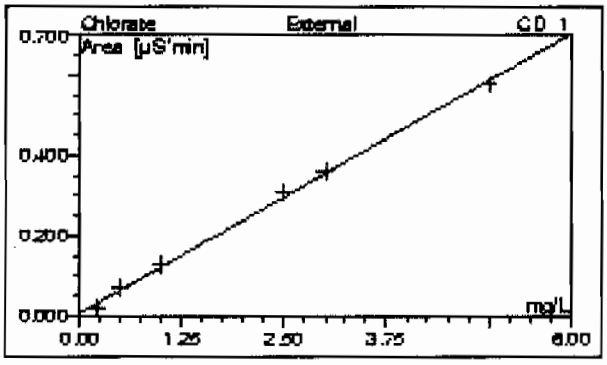

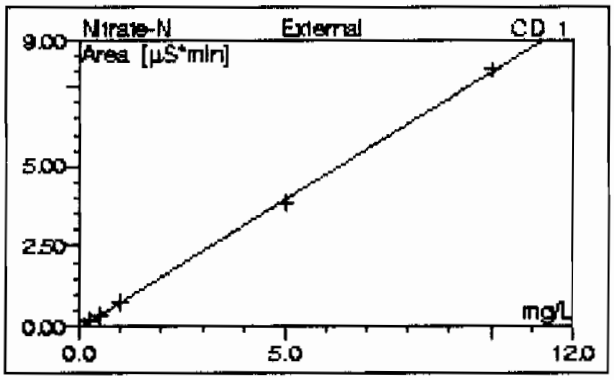

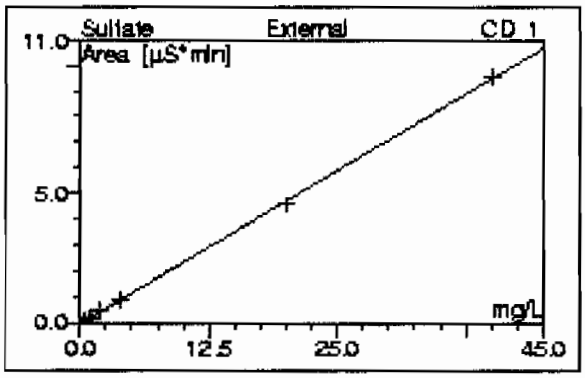

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9930	-0.0160	0.4065	0.0000
n.a.	n.a.	Chloride	0LOff	99.8994	-0.0462	0.3377	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9904	-0.0298	0.6239	0.0000
1	8.90	O-Phosphate-P	0LOff	99.7147	0.0441	0.2570	0.0000
n.a.	n.a.	Bromide	0LOff	99.8658	0.0157	0.1463	0.0000
n.a.	n.a.	Chlorate	0LOff	99.8007	0.0073	0.1162	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.9438	-0.0570	0.8036	0.0000
n.a.	n.a.	Sulfate	0LOff	99.9554	-0.0497	0.2386	0.0000
Average:				99.8954	-0.0164	0.3662	0.0000

This is runlog for Sequence 090702.seq for IC7

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/02/09 14:13		1	090702	VXP1
BLK	07/02/09 14:35		1	090702	VXP1
BLK	07/02/09 15:21		1	090702	VXP1
ICAL-07	07/02/09 15:44		1	090702	VXP1
ICAL-06	07/02/09 16:07		1	090702	VXP1
ICAL-05	07/02/09 16:30		1	090702	VXP1
ICAL-04	07/02/09 16:53		1	090702	VXP1
ICAL-03	07/02/09 17:15		1	090702	VXP1
ICAL-02	07/02/09 17:38		1	090702	VXP1
ICAL-01	07/02/09 18:01		1	090702	VXP1
ICV	07/02/09 18:24		1	090702	VXP1
ICB	07/02/09 18:47		1	090702	VXP1
1201870628	07/02/09 19:10	880959	1	090702	VXP1
1201870629	07/02/09 19:32	880959	1	090702	VXP1
232429001	07/02/09 19:55	880959	1	090702	VXP1
1201870630	07/02/09 20:18	880959	1	090702	VXP1
1201870631	07/02/09 20:41	880959	1	090702	VXP1
1201870636	07/02/09 21:04	880959	1	090702	VXP1
232429002	07/02/09 21:27	880959	1	090702	VXP1
232429003	07/02/09 21:50	880959	1	090702	VXP1
232429004	07/02/09 22:13	880959	1	090702	VXP1
232429005	07/02/09 22:36	880959	1	090702	VXP1
CVH	07/02/09 22:59		1	090702	VXP1
CCB	07/02/09 23:21		1	090702	VXP1
232429006	07/02/09 23:44	880959	1	090702	VXP1

12 WIC090702-02ICV

Sample Name:	WIC090702-02ICV	*Injection Volume:*	50.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:24	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

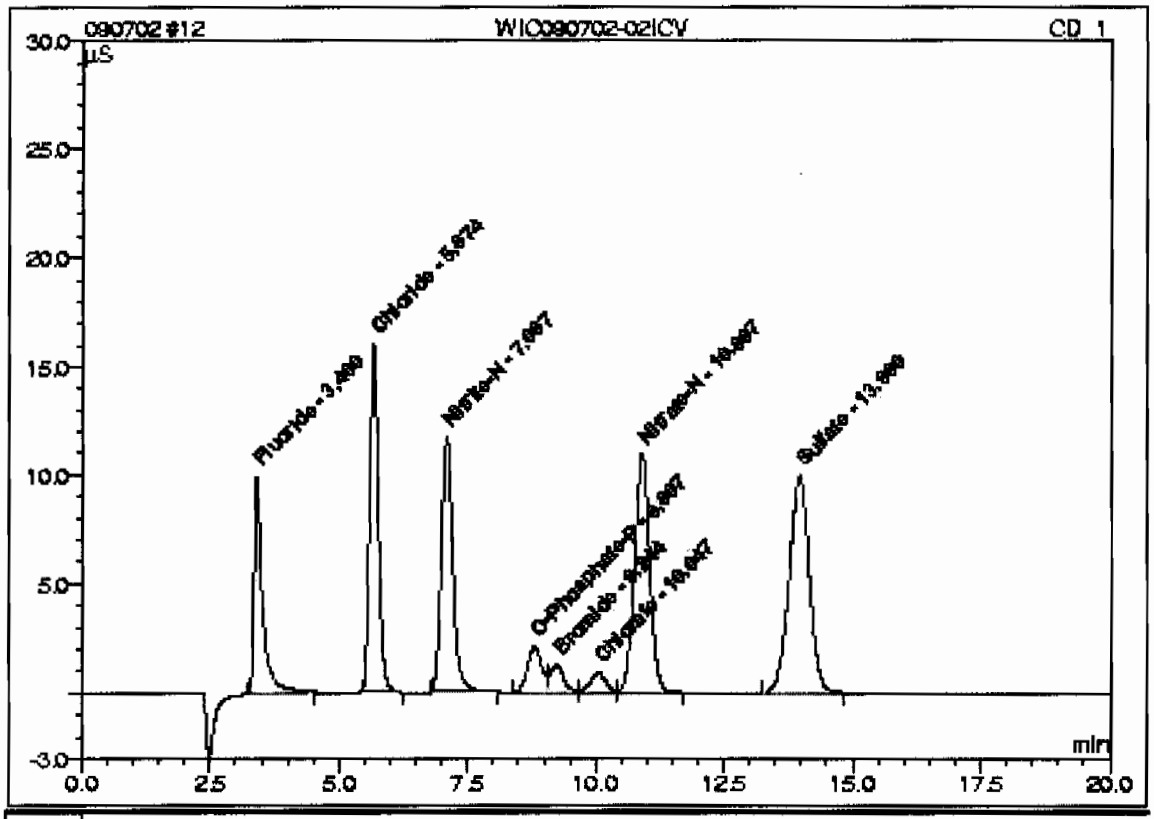

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.8926		1.94155	10.99
2	5.67	Chloride	n.a.	9.4468		3.10481	17.57
3	7.09	Nitrite-N	n.a.	4.9034		2.95977	16.75
4	8.81	O-Phosphate-P	n.a.	2.4988		0.68059	3.85
5	9.24	Bromide	n.a.	2.5150		0.37909	2.15
6	10.05	Chlorate	n.a.	2.5728		0.30046	1.70
7	10.90	Nitrate-N	n.a.	4.7749		3.77237	21.35
8	13.96	Sulfate	n.a.	19.2037		4.53266	25.65
Total:				50.8081	0.000	17.671	100.00

12 WIC090702-02ICV

Sample Name:	WIC090702-02ICV	*Injection Volume:*	50.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:24	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

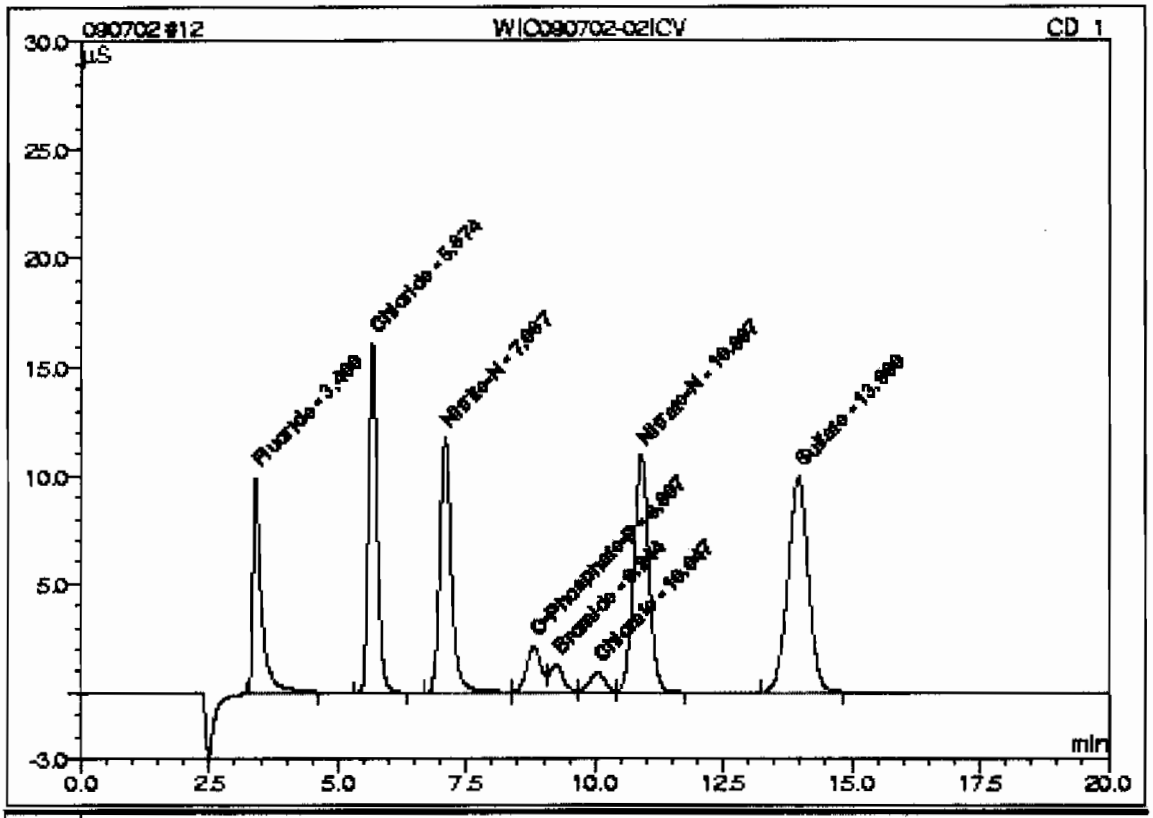

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.9197		1.98416	11.12
2	5.67	Chloride	n.a.	9.4490		3.14519	17.63
3	7.09	Nitrite-N	n.a.	4.8962		3.02494	16.95
4	8.81	O-Phosphate-P	n.a.	2.5085		0.68864	3.86
5	9.24	Bromide	n.a.	2.5209		0.38461	2.16
6	10.05	Chlorate	n.a.	2.5682		0.30563	1.71
7	10.90	Nitrate-N	n.a.	4.7705		3.77655	21.17
8	13.96	Sulfate	n.a.	19.2037		4.53266	25.40
Total:				50.8368	0.000	17.842	100.00

12 WIC090702-02ICV

Sample Name:	WIC090702-02ICV	*Injection Volume:*	50.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:24	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

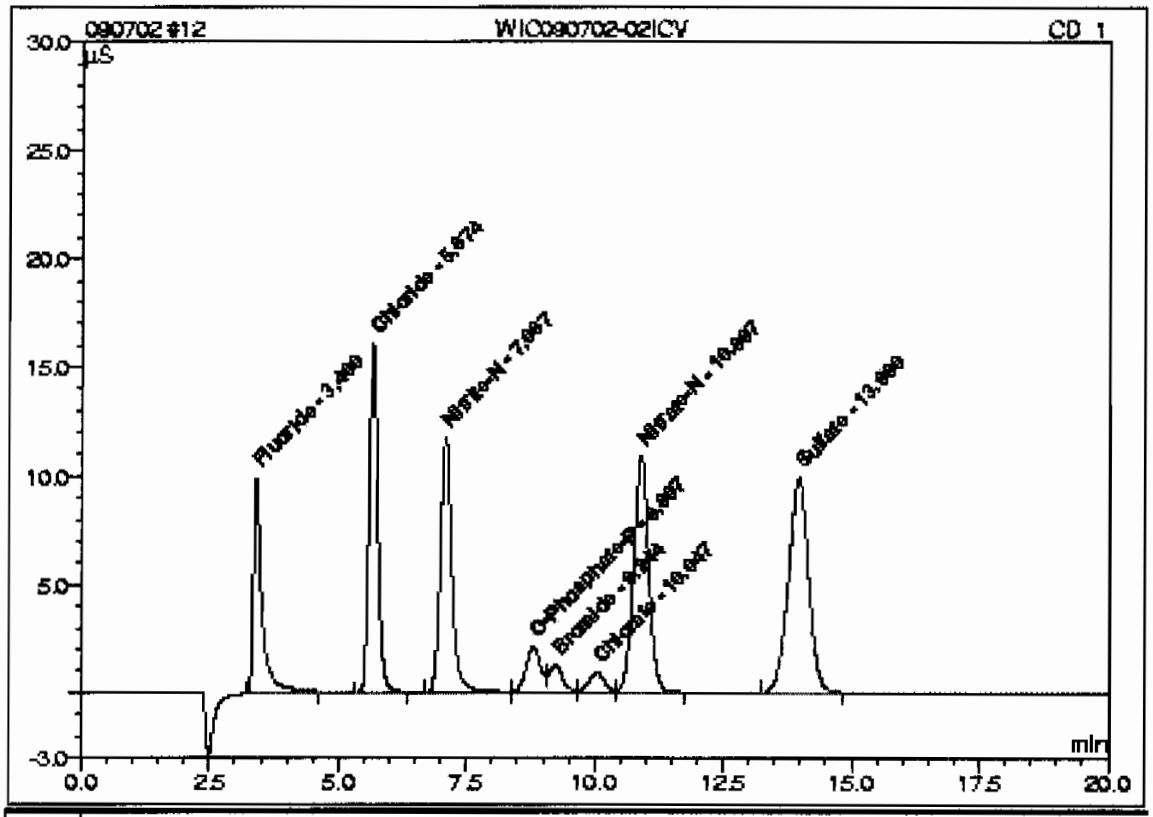

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.9197		1.98416	11.12
2	5.67	Chloride	n.a.	9.4490		3.14519	17.63
3	7.09	Nitrite-N	n.a.	4.8962		3.02494	16.95
4	8.81	O-Phosphate-P	n.a.	2.5085		0.68864	3.86
5	9.24	Bromide	n.a.	2.5209		0.38461	2.16
6	10.05	Chlorate	n.a.	2.5682		0.30563	1.71
7	10.90	Nitrate-N	n.a.	4.7705		3.77655	21.17
8	13.96	Sulfate	n.a.	19.2037		4.53266	25.40
Total:				50.8368	0.000	17.842	100.00

13 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:47	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

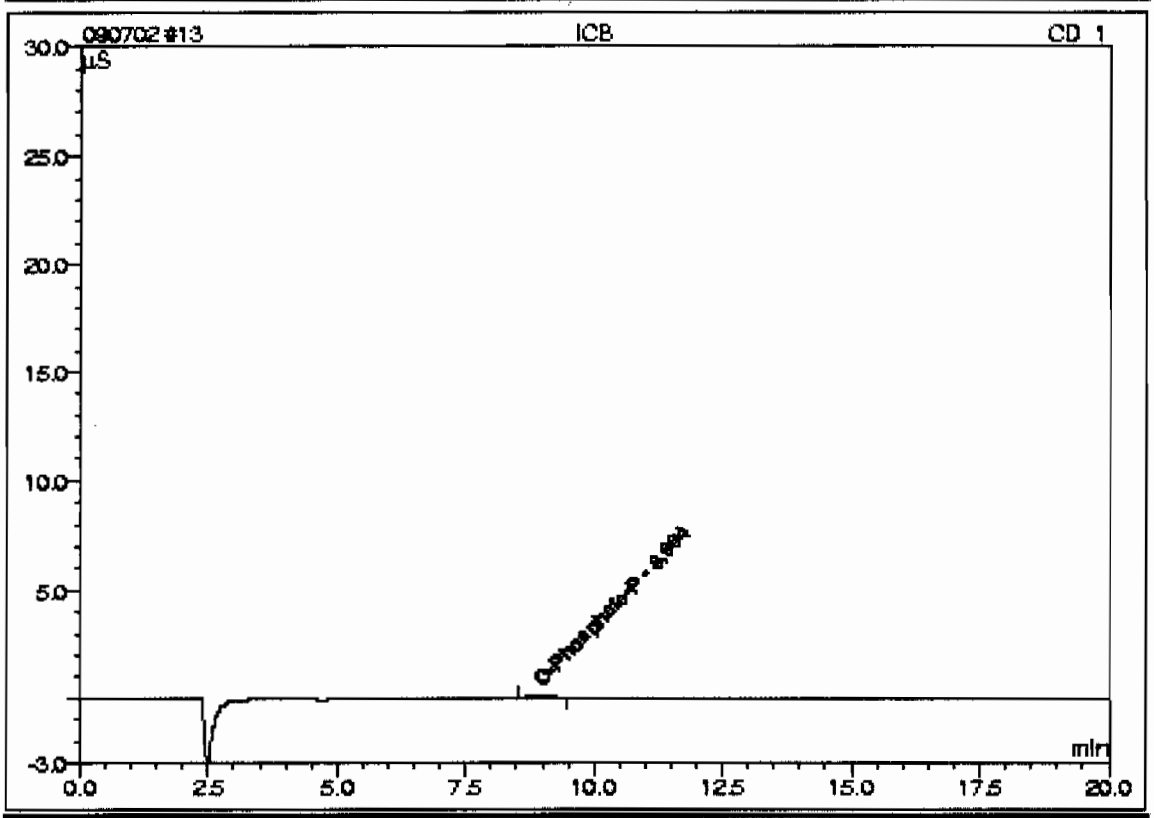

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	n.a.	-0.0901		0.03169	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.0901	0.000	0.032	100.00

13 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:47	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

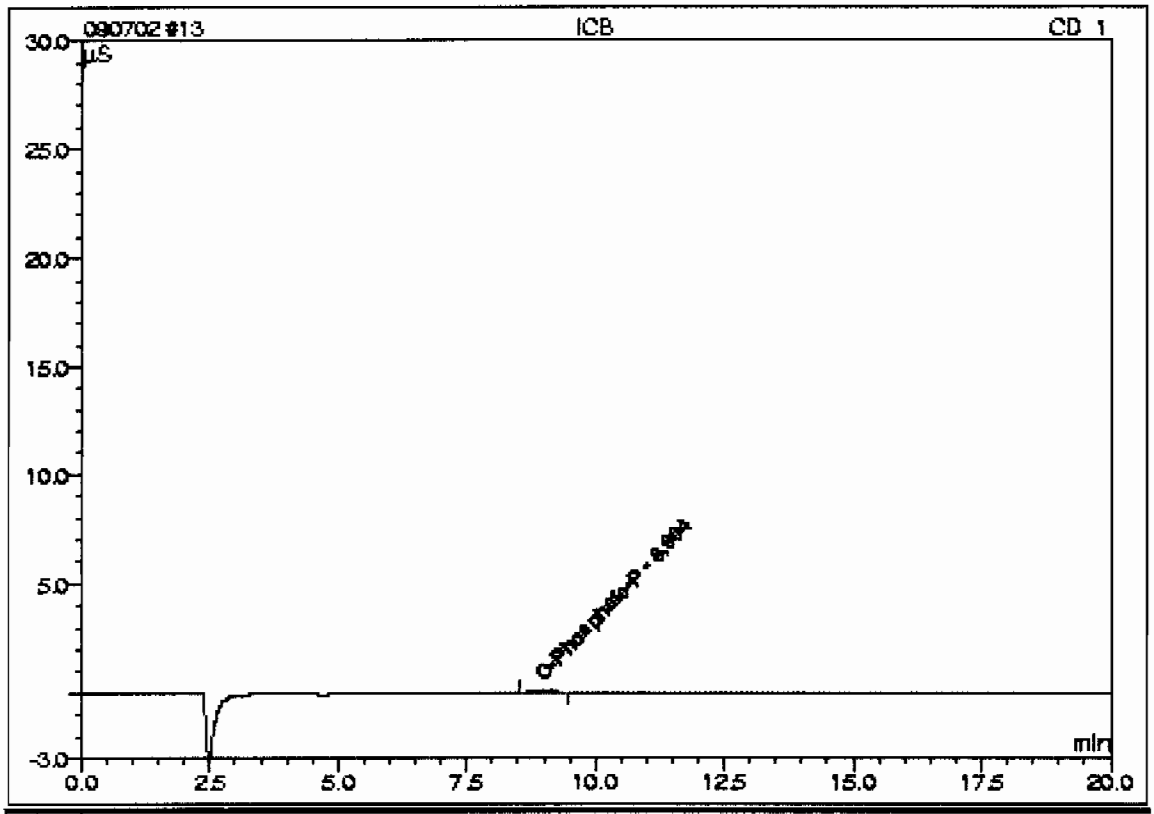

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	n.a.	-0.0483		0.03168	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.0483	0.000	0.032	100.00

13 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:47	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9058

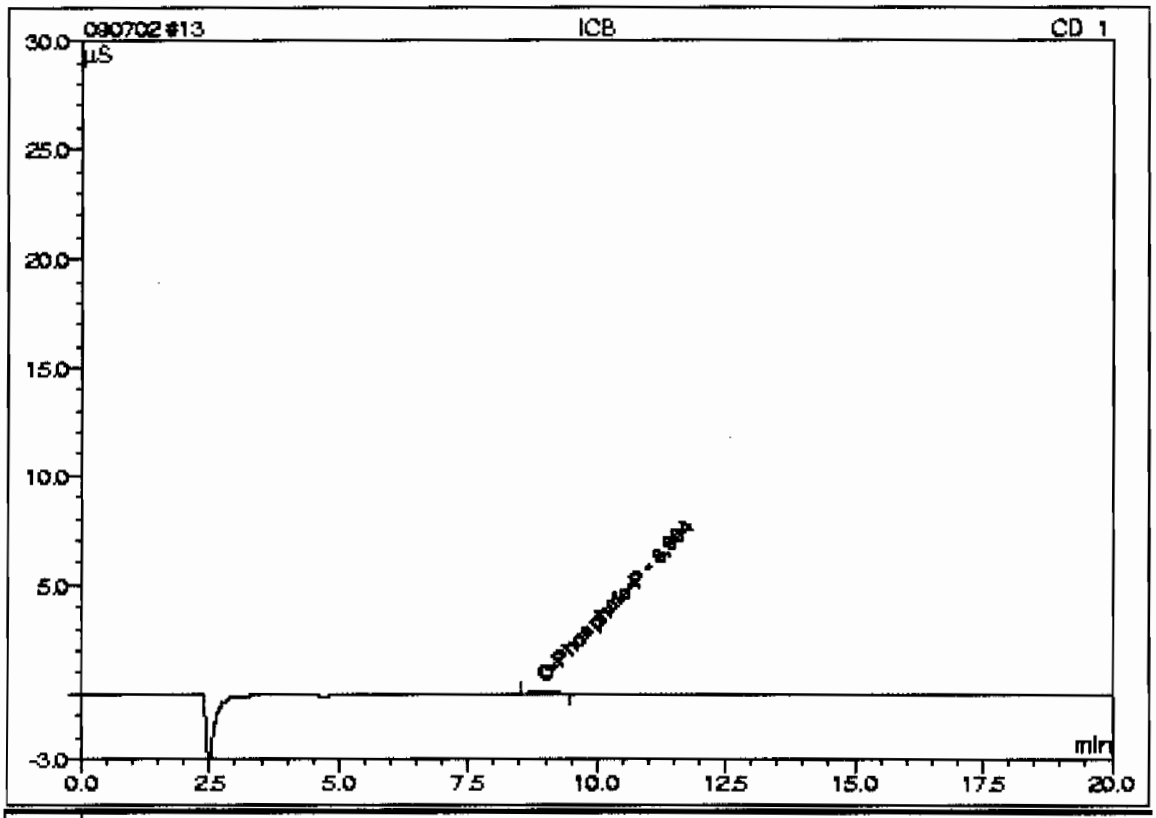

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	n.a.	-0.0483		0.03169	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.0483	0.000	0.032	100.00

14 1201870628/880959/1/1/MB

Sample Name:	1201870628/880959/1/1/MB	*Injection Volume:*	50.0
Vial Number:	14	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 19:10	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE096;300;9058

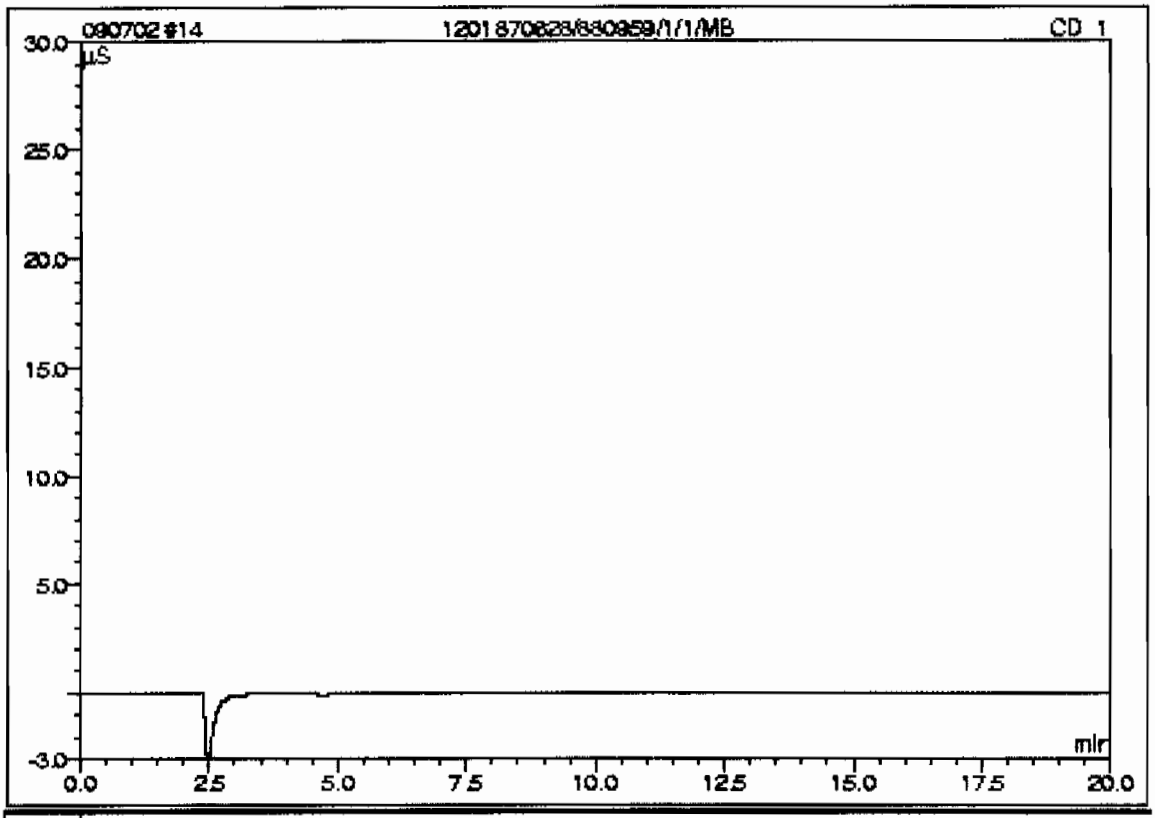

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

14 1201870628/880959/1/1/MB

Sample Name:	1201870628/880959/1/1/MB	*Injection Volume:*	50.0
Vial Number:	14	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 19:10	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC8085;300;9058

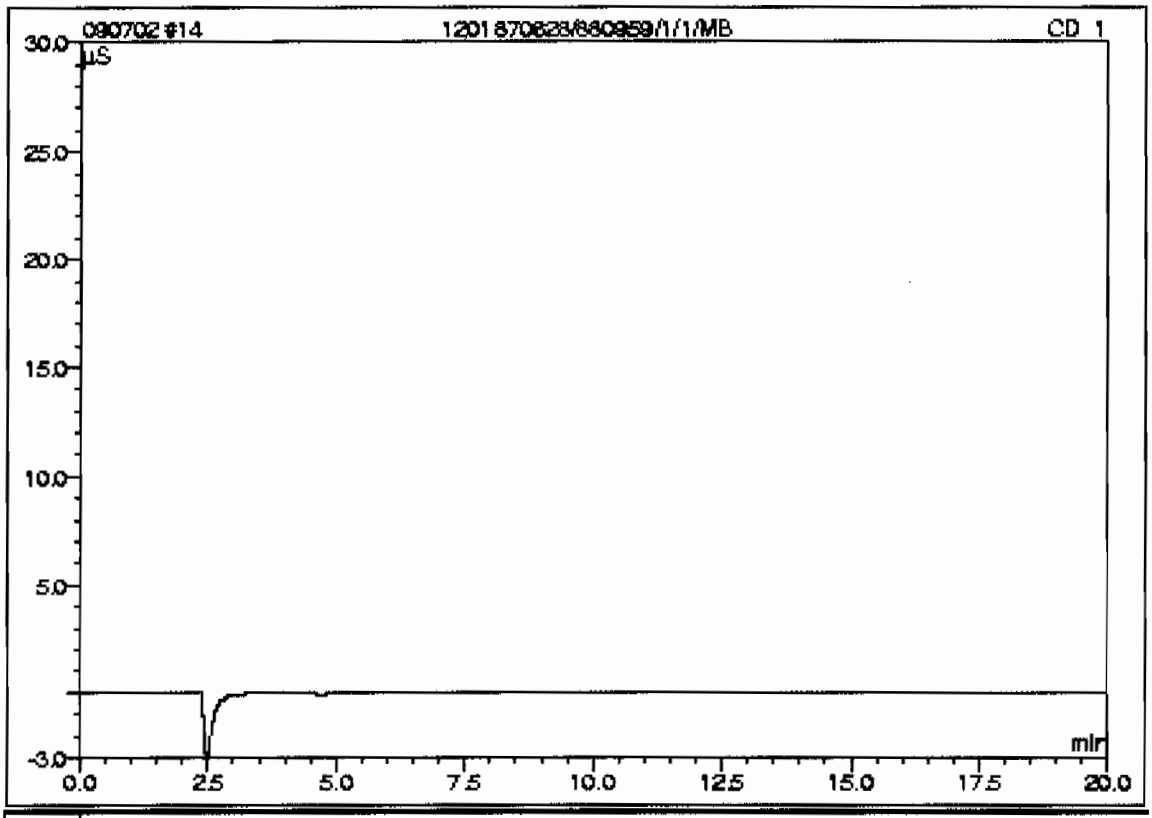

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

15 1201870629/880959/1/1/LCS

Sample Name:	1201870629/880959/1/1/LCS	*Injection Volume:*	50.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 19:32	*Analyst:*	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

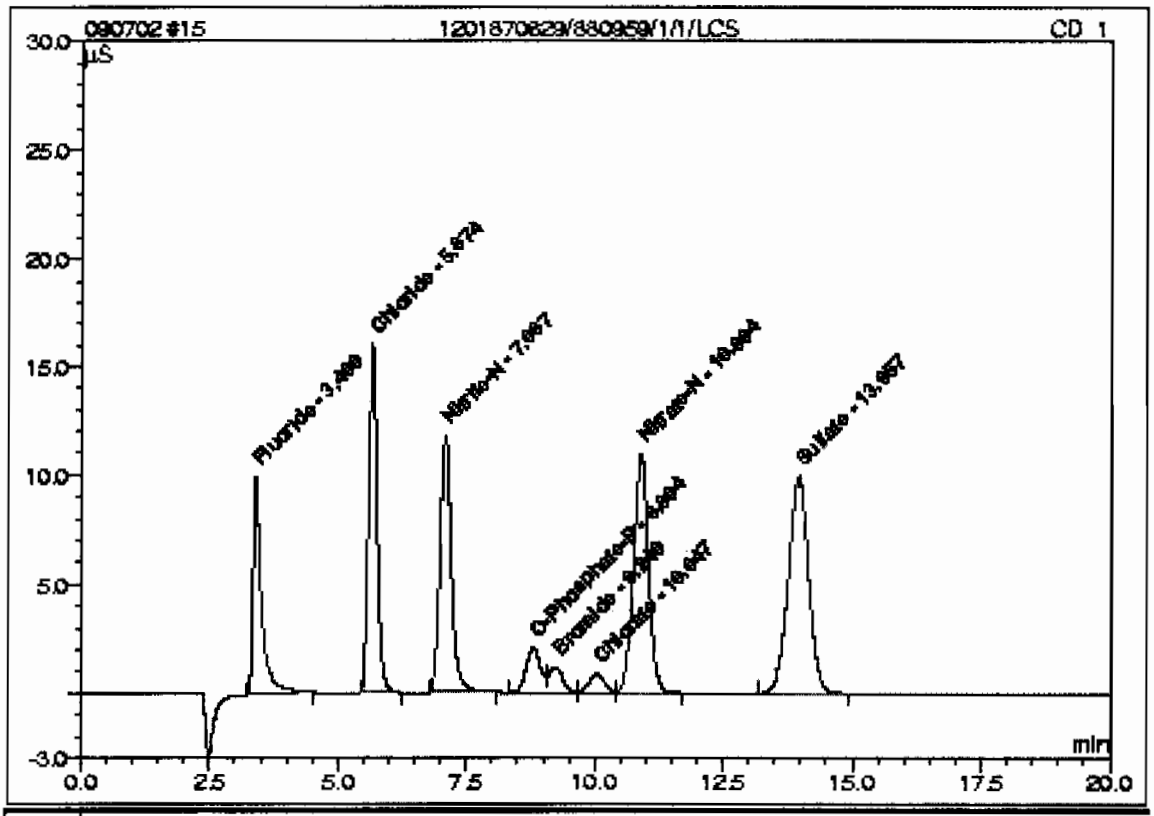

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.8896		1.94037	10.99
2	5.67	Chloride	n.a.	9.4445		3.10405	17.59
3	7.09	Nitrite-N	n.a.	4.9044		2.96039	16.77
4	8.80	O-Phosphate-P	n.a.	2.4550		0.66962	3.79
5	9.24	Bromide	n.a.	2.4666		0.37218	2.11
6	10.05	Chlorate	n.a.	2.5251		0.29505	1.67
7	10.89	Nitrate-N	n.a.	4.7735		3.77119	21.37
8	13.96	Sulfate	n.a.	19.2200		4.53655	25.70
Total:				50.6786	0.000	17.649	100.00

15 1201870629/880959/1/1/LCS

Sample Name:	1201870629/880959/1/1/LCS	*Injection Volume:*	50.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 19:32	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

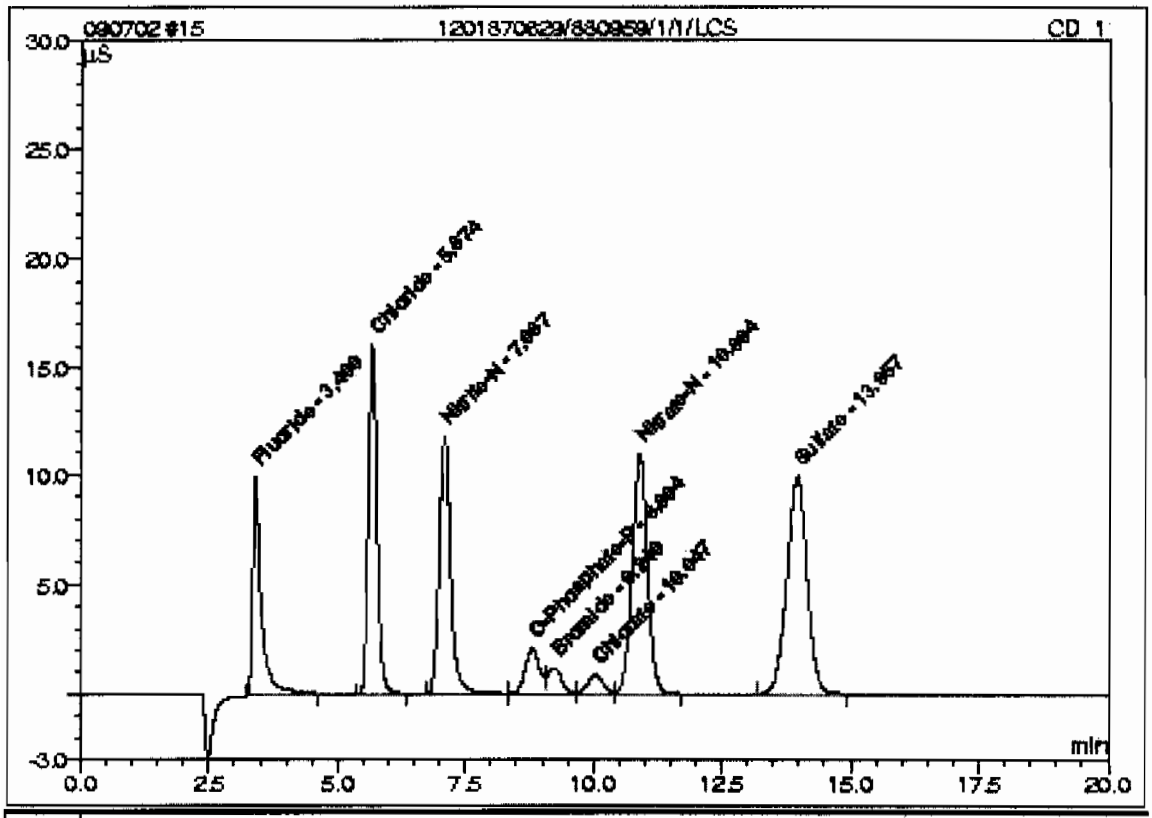

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.9282		1.98759	11.15
2	5.67	Chloride	n.a.	9.4525		3.14640	17.66
3	7.09	Nitrite-N	n.a.	4.8979		3.02596	16.98
4	8.80	O-Phosphate-P	n.a.	2.4596		0.67609	3.79
5	9.24	Bromide	n.a.	2.4649		0.37641	2.11
6	10.05	Chlorate	n.a.	2.5092		0.29878	1.68
7	10.89	Nitrate-N	n.a.	4.7669		3.77366	21.17
8	13.96	Sulfate	n.a.	19.2200		4.53655	25.46
Total:				50.6993	0.000	17.821	100.00

16 232429001/880959/1/1/

Sample Name:	232429001/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 19:55	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9056	

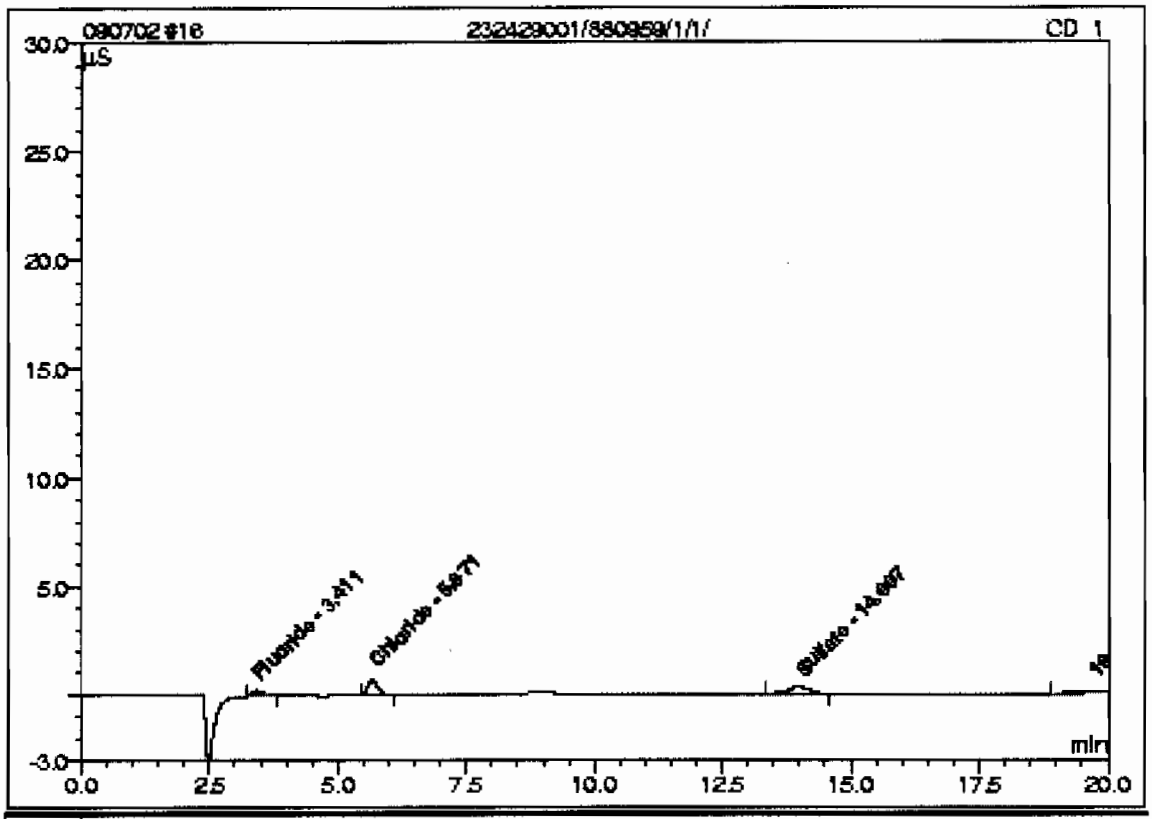

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1549		0.04689	12.08
2	5.67	Chloride	n.a.	0.5935		0.15215	39.19
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.01	Sulfate	n.a.	0.7846		0.13750	35.42
Total:				1.5330	0.000	0.337	86.69

16 232429001/880959/1/1/

Sample Name:	232429001/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 19:55	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

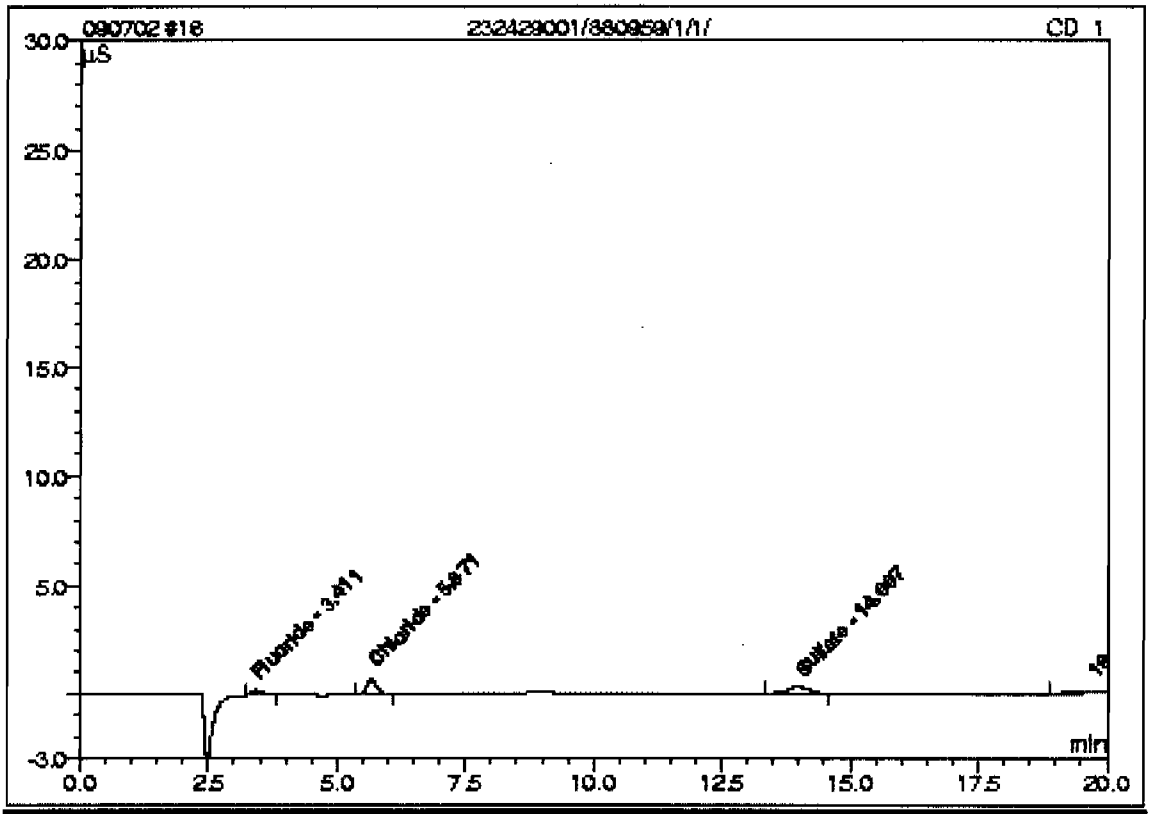

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1546		0.04689	12.02
2	5.67	Chloride	n.a.	0.5926		0.15398	39.48
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.01	Sulfate	n.a.	0.7846		0.13750	35.25
Total:				1.5318	0.000	0.338	86.75

17 1201870630/880959/1/1/DUP

Sample Name:	1201870630/880959/1/1/**DUP**	*Injection Volume:*	50.0
Vial Number:	17	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	**AS9_HC**	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 20:18	Analyst:	**VXP1**
Run Time (min):	20.00	Column:	**AS9HC-014108;GLGCE088;300;9058**

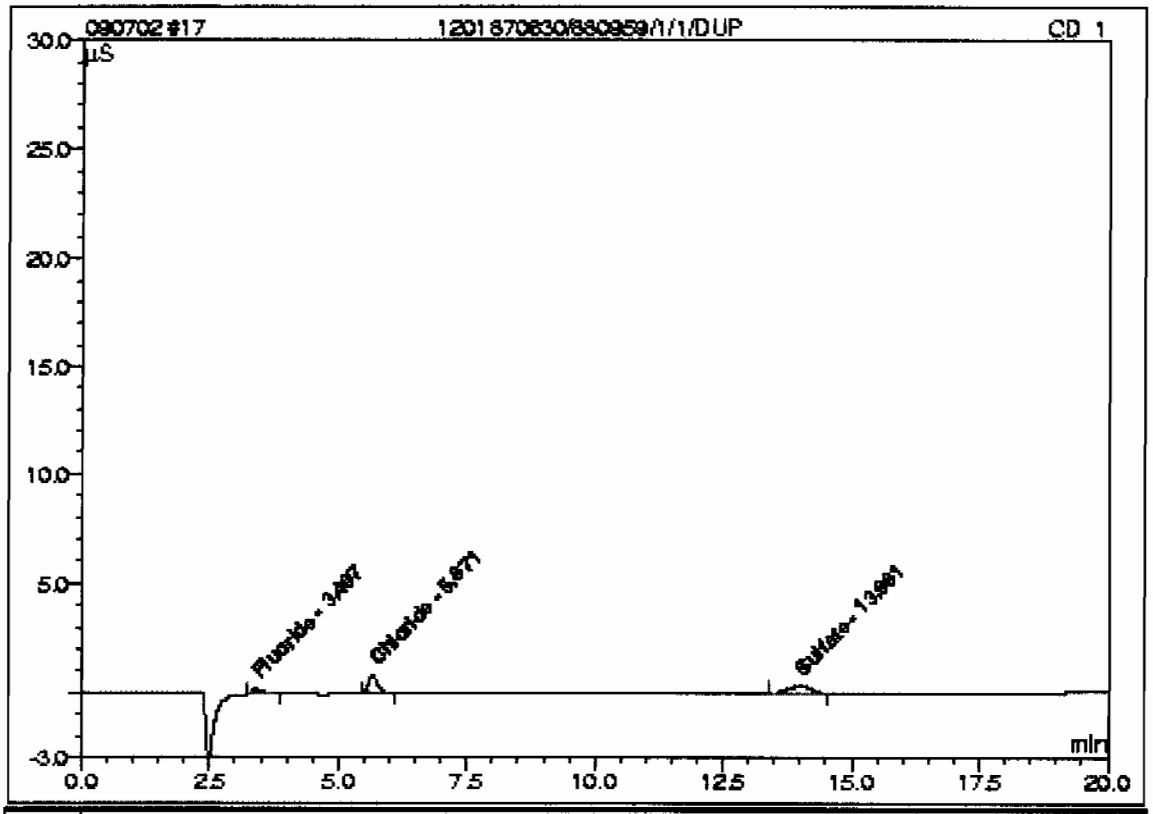

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1675		0.05191	14.17
2	5.67	Chloride	n.a.	0.6207		0.16124	44.01
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.98	Sulfate	n.a.	0.8503		0.15319	41.82
Total:				1.6396	0.000	0.366	100.00

17 1201870630/880959/1/1/DUP

Sample Name:	1201870630/880959/1/1/DUP	*Injection Volume:*	50.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 20:18	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

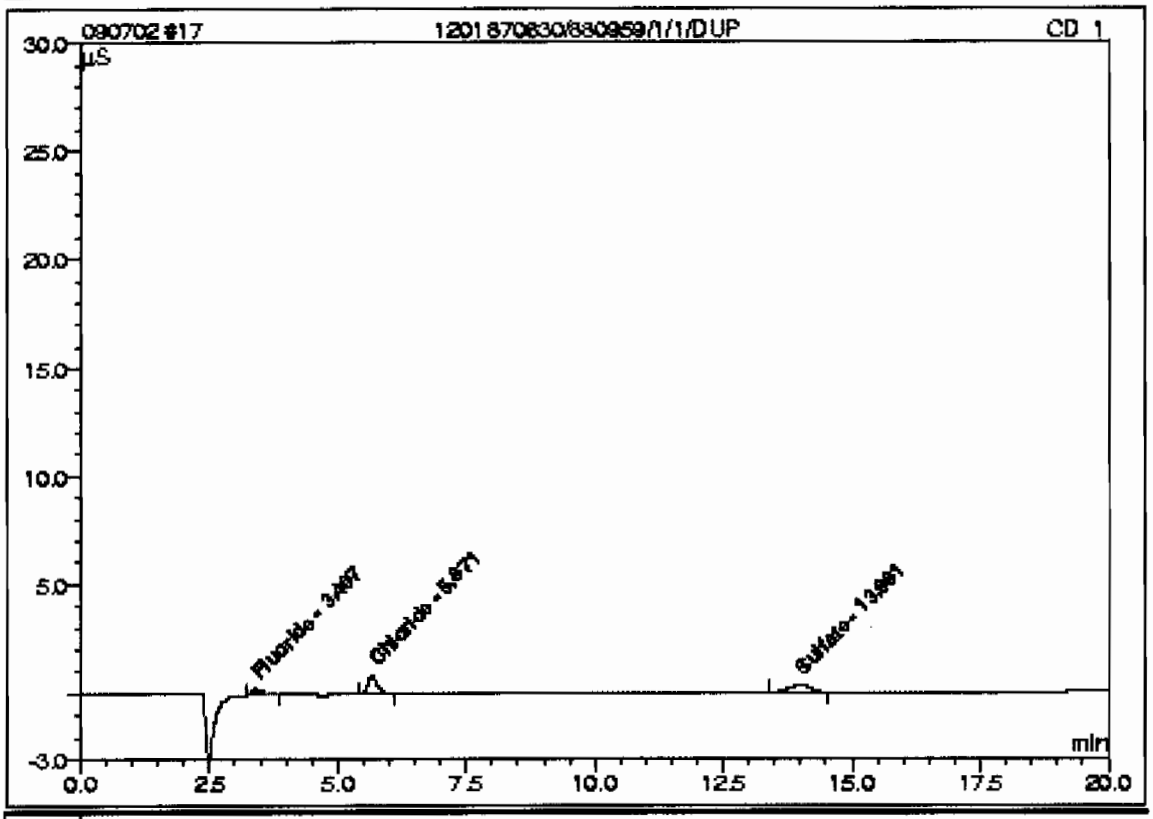

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1669		0.05191	14.11
2	5.67	Chloride	n.a.	0.6186		0.16276	44.25
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.98	Sulfate	n.a.	0.8503		0.15319	41.64
Total:				1.6359	0.000	0.368	100.00

18 1201870631/880959/1/1/MS

Sample Name:	1201870631/880959/1/1/MS	*Injection Volume:*	50.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 20:41	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC8088;300;9058

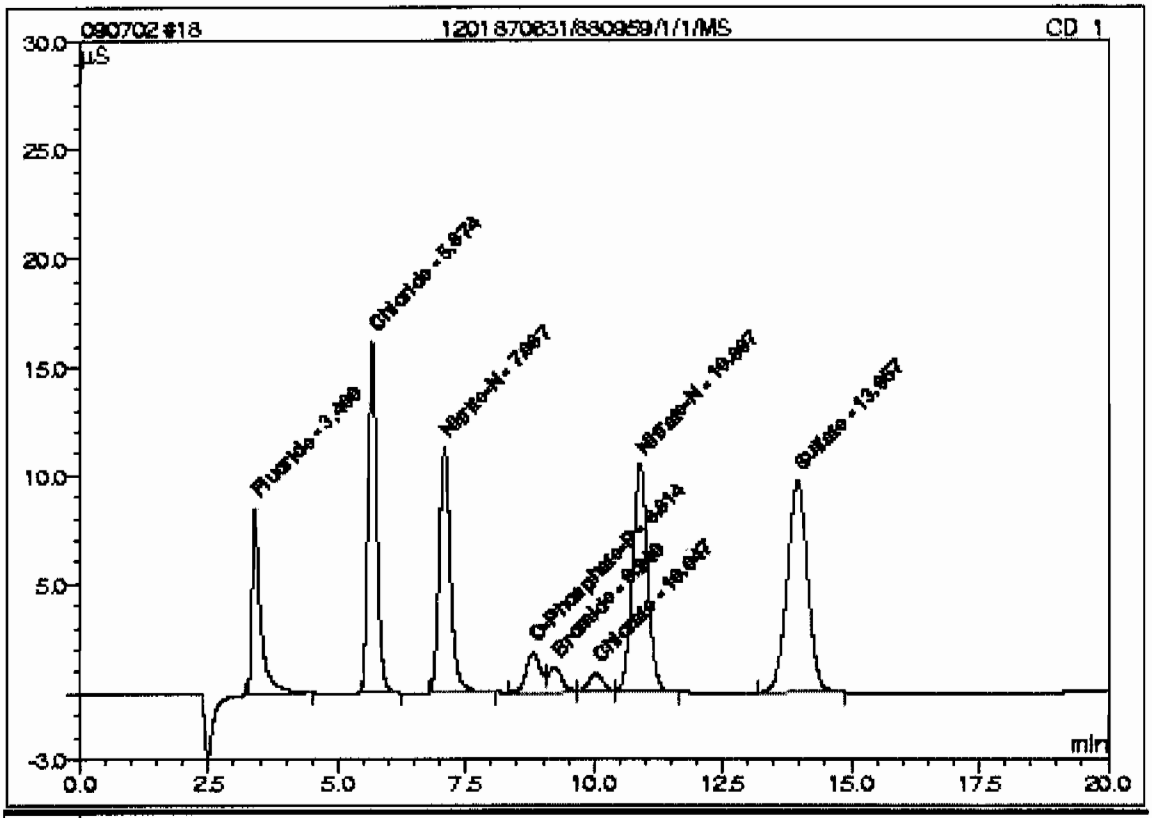

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.2563		1.68710	9.96
2	5.67	Chloride	n.a.	9.5128		3.12681	18.47
3	7.09	Nitrite-N	n.a.	4.6757		2.82102	16.66
4	8.81	O-Phosphate-P	n.a.	2.1418		0.59112	3.49
5	9.24	Bromide	n.a.	2.4816		0.37431	2.21
6	10.05	Chlorate	n.a.	2.4849		0.29051	1.72
7	10.90	Nitrate-N	n.a.	4.5631		3.60252	21.28
8	13.96	Sulfate	n.a.	18.8030		4.43704	26.21
Total:				48.9192	0.000	16.930	100.00

18 1201870631/880959/1/1/MS

Sample Name:	1201870631/880959/1/1/MS	*Injection Volume:*	50.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 20:41	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE086;300;9058	

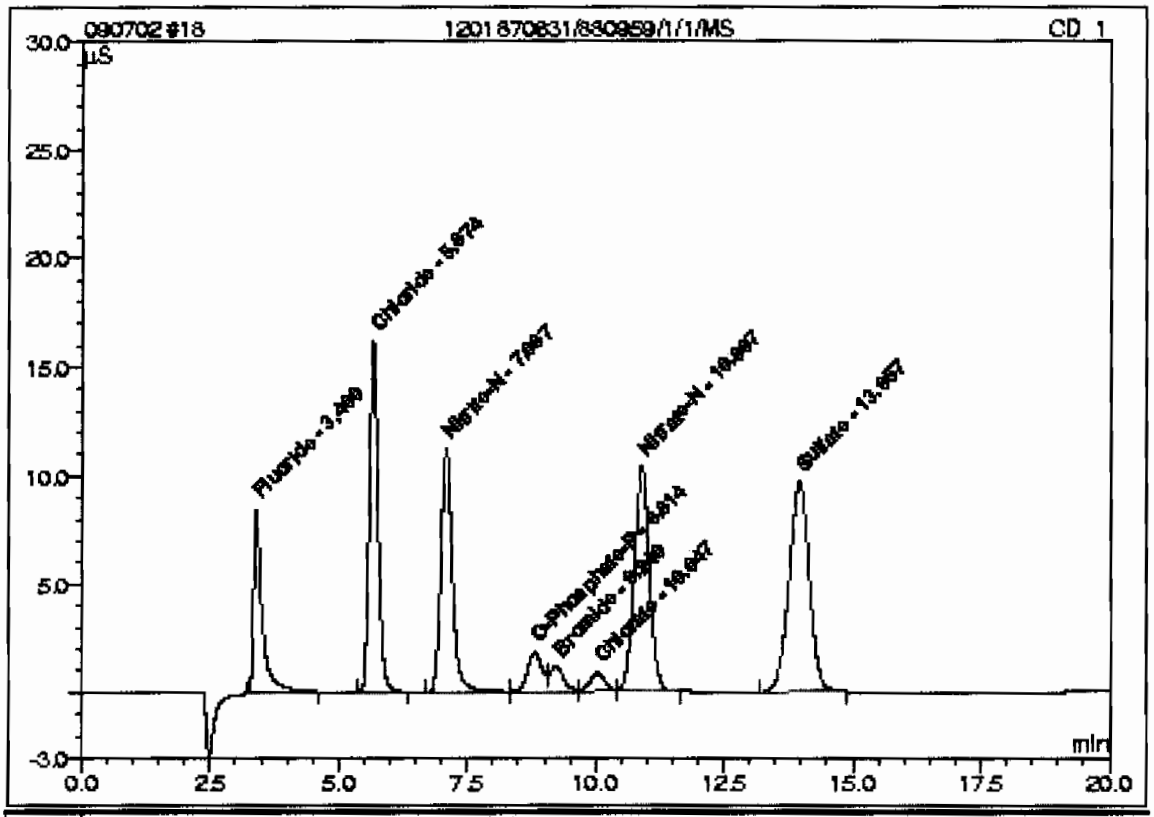

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.2947		1.73003	10.12
2	5.67	Chloride	n.a.	9.5179		3.16848	18.54
3	7.09	Nitrite-N	n.a.	4.6686		2.88296	16.87
4	8.81	O-Phosphate-P	n.a.	2.1478		0.59597	3.49
5	9.24	Bromide	n.a.	2.4719		0.37743	2.21
6	10.05	Chlorate	n.a.	2.4611		0.29319	1.72
7	10.90	Nitrate-N	n.a.	4.5561		3.60425	21.09
8	13.96	Sulfate	n.a.	18.8030		4.43704	25.96
Total:				48.9211	0.000	17.089	100.00

19 1201870636/880959/1/1/MSD

Sample Name:	1201870636/880959/1/1/MSD	*Injection Volume:*	50.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 21:04	*Analyst:*	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

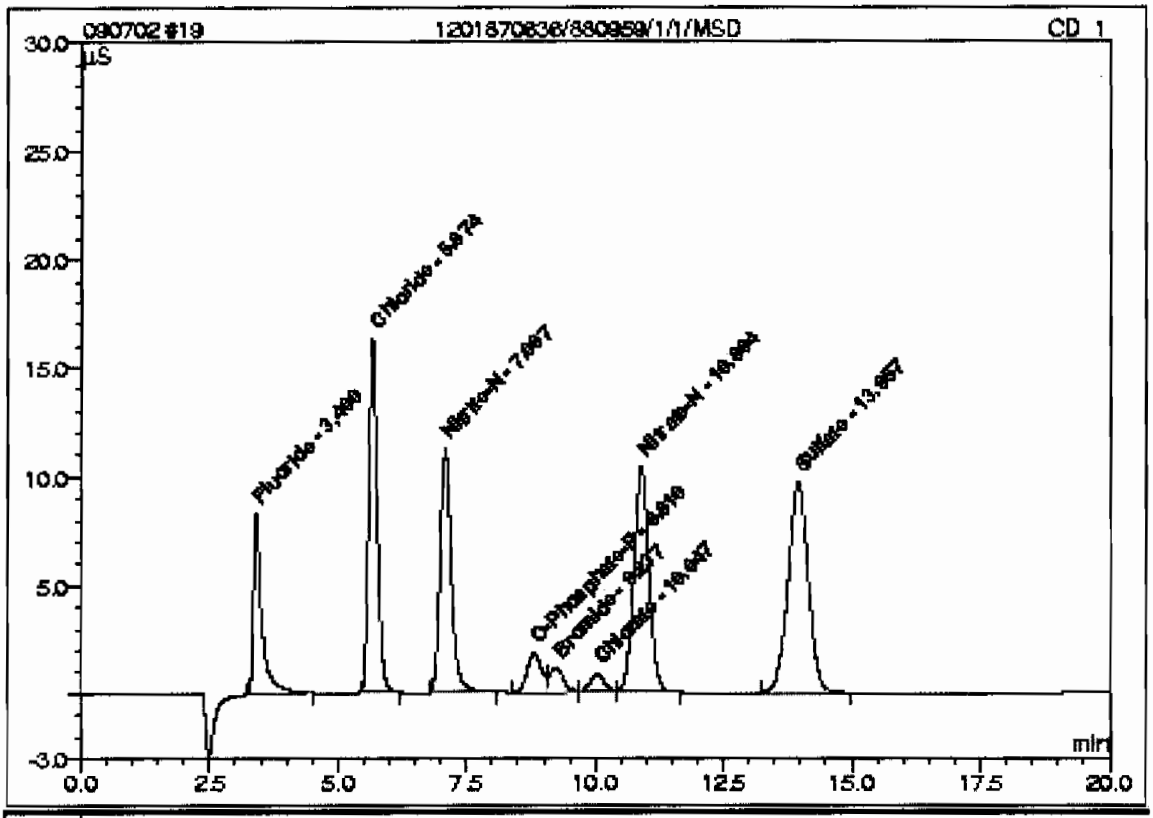

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.1840		1.65818	9.79
2	5.67	Chloride	n.a.	9.6106		3.15943	18.66
3	7.09	Nitrite-N	n.a.	4.6728		2.81923	16.65
4	8.81	O-Phosphate-P	n.a.	2.1403		0.59074	3.49
5	9.24	Bromide	n.a.	2.4953		0.37627	2.22
6	10.05	Chlorate	n.a.	2.4667		0.28844	1.70
7	10.89	Nitrate-N	n.a.	4.5435		3.58674	21.18
8	13.96	Sulfate	n.a.	18.8811		4.45569	26.31
Total:				48.9942	0.000	16.935	100.00

19 1201870636/880959/1/1/MSD

Sample Name:	1201870636/880959/1/1/MSD	*Injection Volume:*	50.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 21:04	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC B086;300;9056

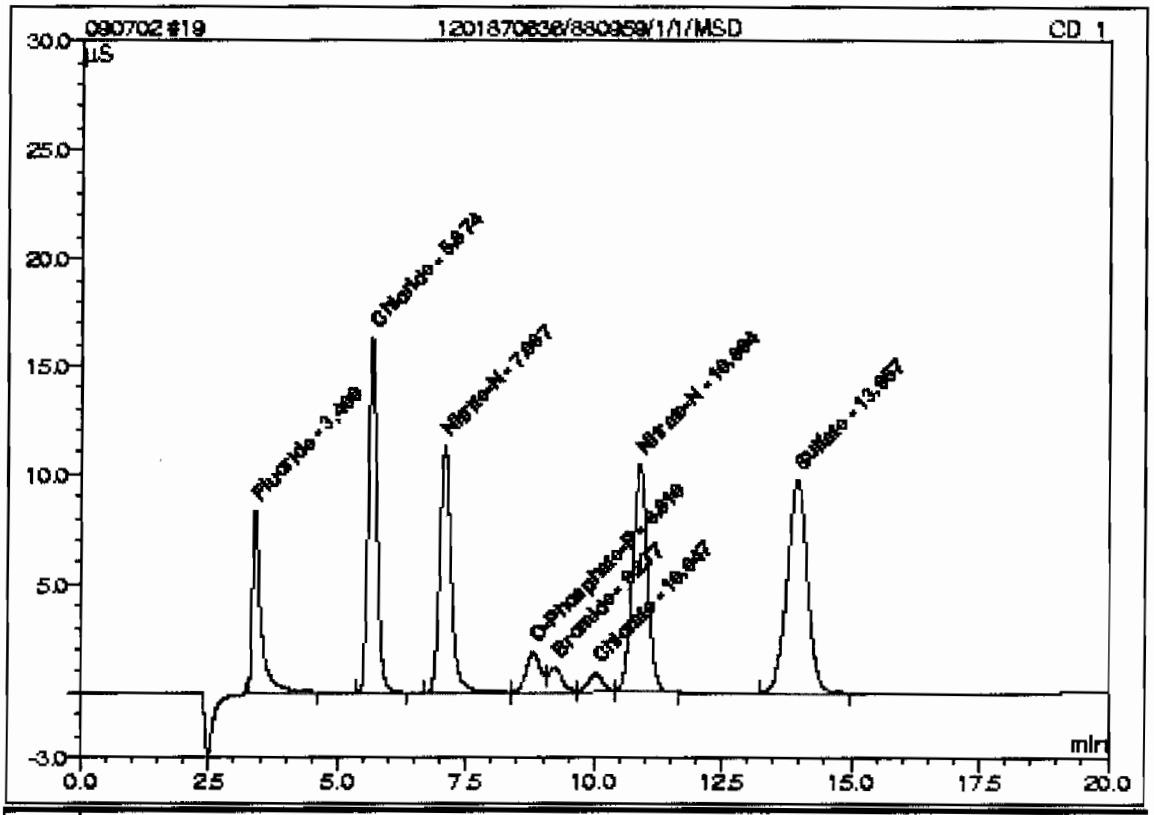

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.2189		1.69925	9.93
2	5.67	Chloride	n.a.	9.6248		3.20459	18.73
3	7.09	Nitrite-N	n.a.	4.6757		2.88736	16.88
4	8.81	O-Phosphate-P	n.a.	2.1510		0.59677	3.49
5	9.24	Bromide	n.a.	2.4926		0.38047	2.22
6	10.05	Chlorate	n.a.	2.4514		0.29206	1.71
7	10.89	Nitrate-N	n.a.	4.5371		3.58999	20.98
8	13.96	Sulfate	n.a.	18.8811		4.45569	26.05
Total:				49.0326	0.000	17.105	100.00

20 232429002/880959/1/1/

Sample Name:	232429002/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 21:27	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

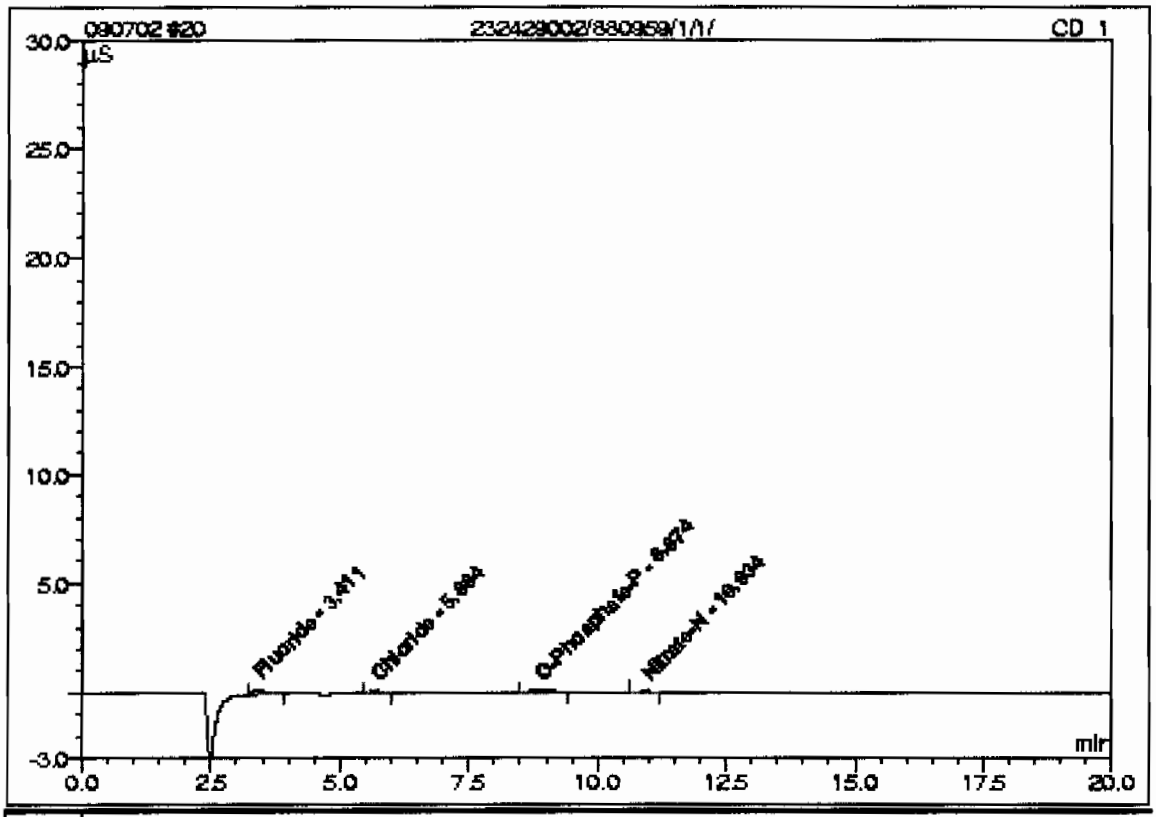

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1629		0.05009	45.30
2	5.68	Chloride	n.a.	0.1946		0.01912	17.29
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.87	O-Phosphate-P	n.a.	-0.0932		0.03092	27.96
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	10.93	Nitrate-N	n.a.	0.0837		0.01046	9.46
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.3481	0.000	0.111	100.00

20 232429002/880959/1/1/

Sample Name:	232429002/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 21:27	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

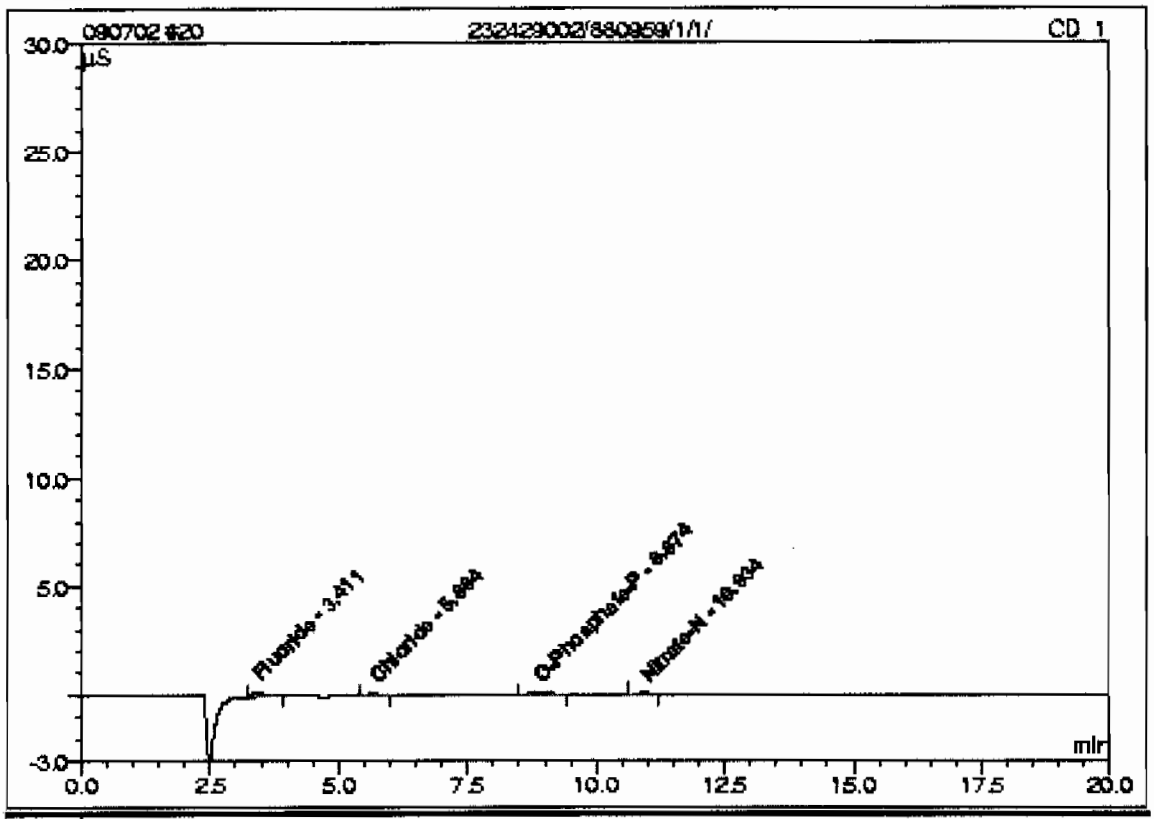

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1624		0.05009	45.16
2	5.68	Chloride	n.a.	0.1943		0.01946	17.54
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.87	O-Phosphate-P	n.a.	-0.0512		0.03092	27.87
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	10.93	Nitrate-N	n.a.	0.0839		0.01046	9.43
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.3894	0.000	0.111	100.00

21 232429003/880959/1/1/

Sample Name:	232429003/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 21:50	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

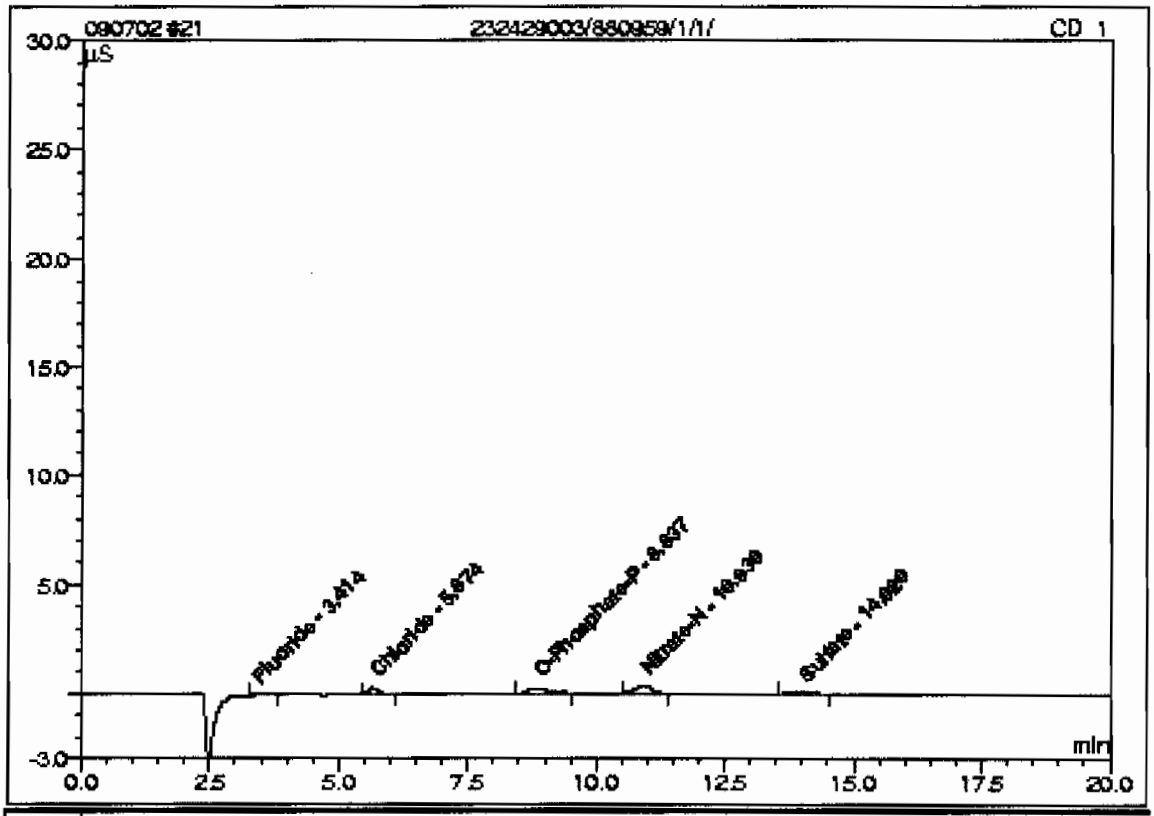

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.0820		0.01772	5.22
2	5.67	Chloride	n.a.	0.3029		0.05523	16.28
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.84	O-Phosphate-P	n.a.	0.1571		0.09364	27.59
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	10.93	Nitrate-N	n.a.	0.2257		0.12428	36.62
5	14.02	Sulfate	n.a.	0.4116		0.04850	14.29
Total:				1.1792	0.000	0.339	100.00

21 232429003/880959/1/1/

Sample Name:	232429003/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 21:50	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

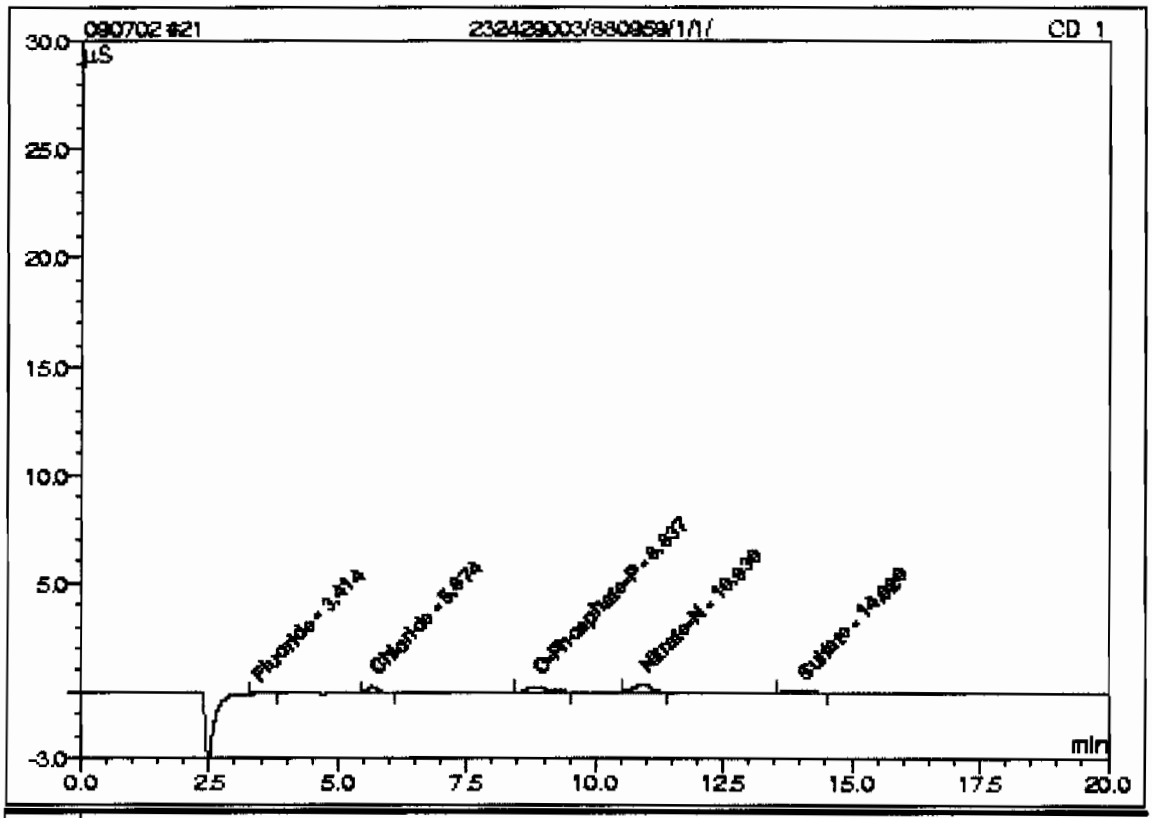

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.0828		0.01772	5.22
2	5.67	Chloride	n.a.	0.3009		0.05547	16.33
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.84	O-Phosphate-P	n.a.	0.1929		0.09364	27.57
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	10.93	Nitrate-N	n.a.	0.2256		0.12428	36.59
5	14.02	Sulfate	n.a.	0.4116		0.04850	14.28
Total:				1.2138	0.000	0.340	100.00

22 232429004/880959/1/1/

Sample Name:	232429004/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 22:13	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE086;300;9058	

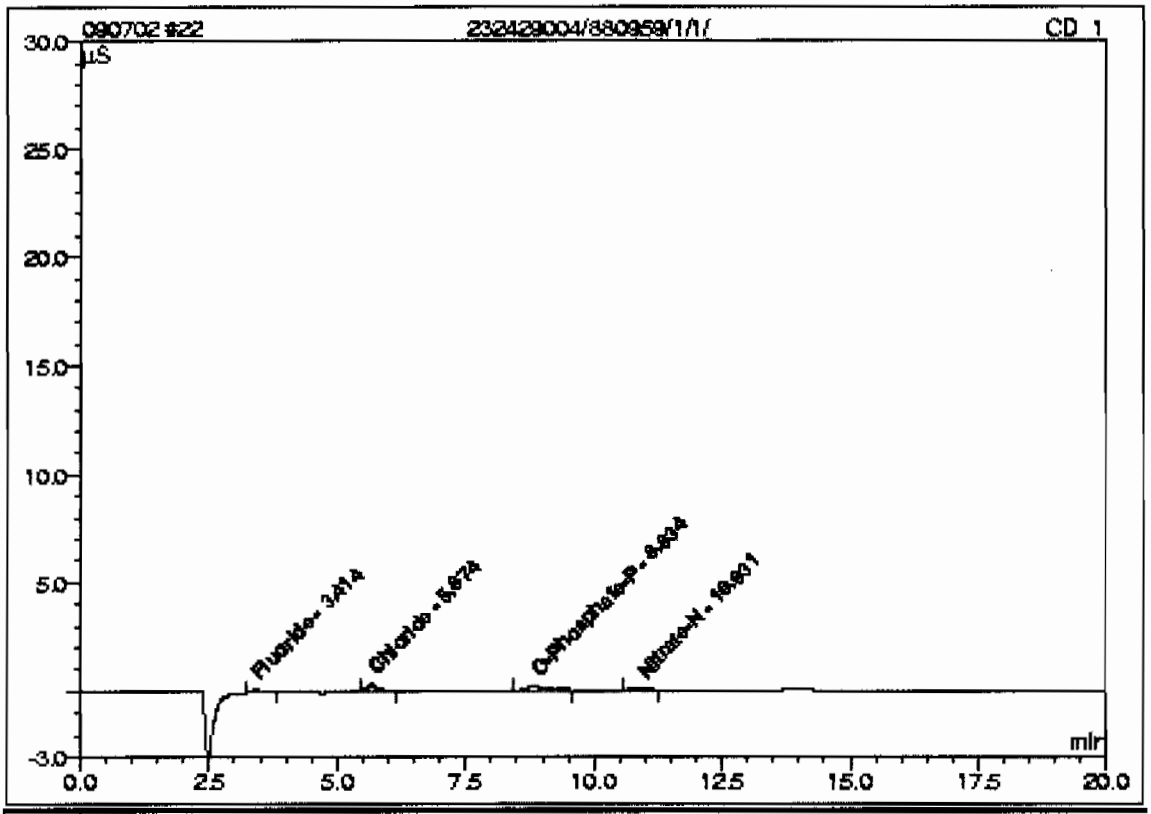

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1035		0.02630	14.17
2	5.67	Chloride	n.a.	0.3153		0.05938	31.99
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.83	O-Phosphate-P	n.a.	0.0525		0.06744	36.33
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	10.93	Nitrate-N	n.a.	0.1112		0.03249	17.50
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.5825	0.000	0.186	100.00

22 232429004/880959/1/1/

Sample Name:	232429004/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 22:13	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

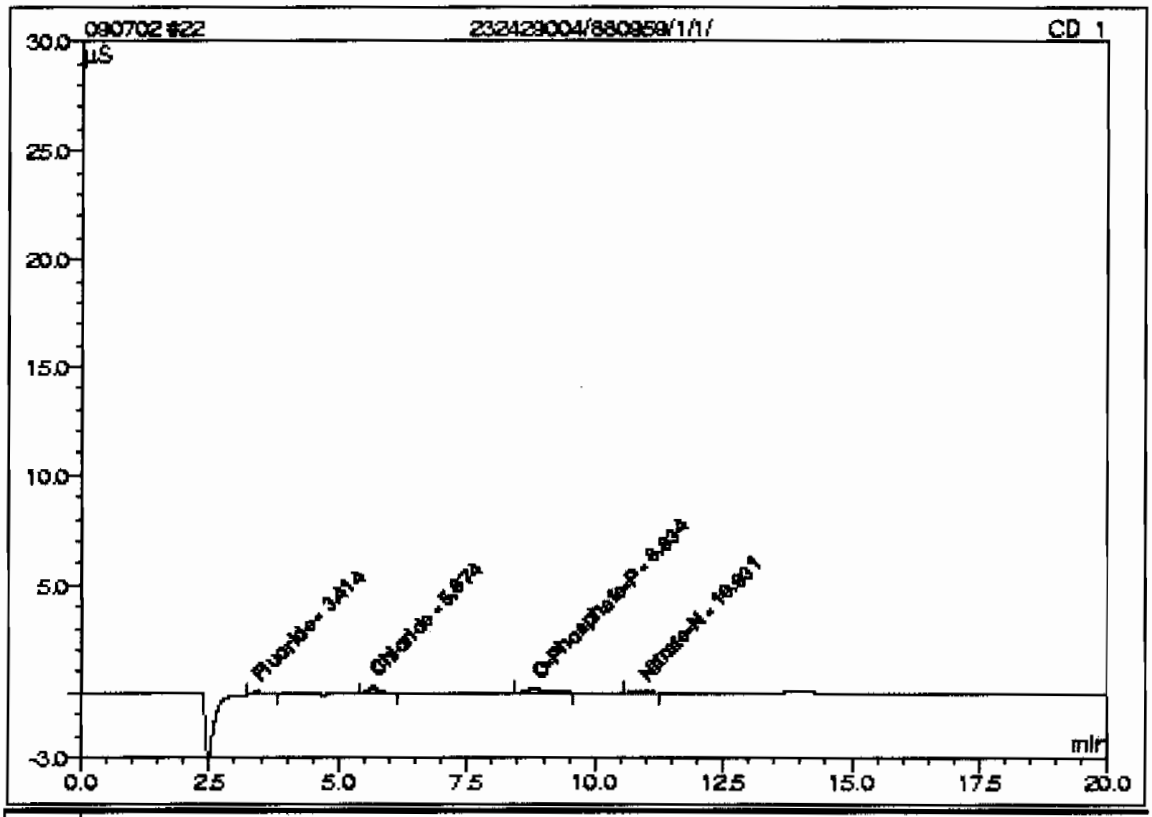

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1039		0.02630	14.05
2	5.67	Chloride	n.a.	0.3172		0.06097	32.57
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.83	O-Phosphate-P	n.a.	0.0909		0.06744	36.03
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	10.93	Nitrate-N	n.a.	0.1114		0.03249	17.35
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.6234	0.000	0.187	100.00

23 232429005/880959/1/1/

Sample Name:	232429005/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 22:36	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE086;300;9056	

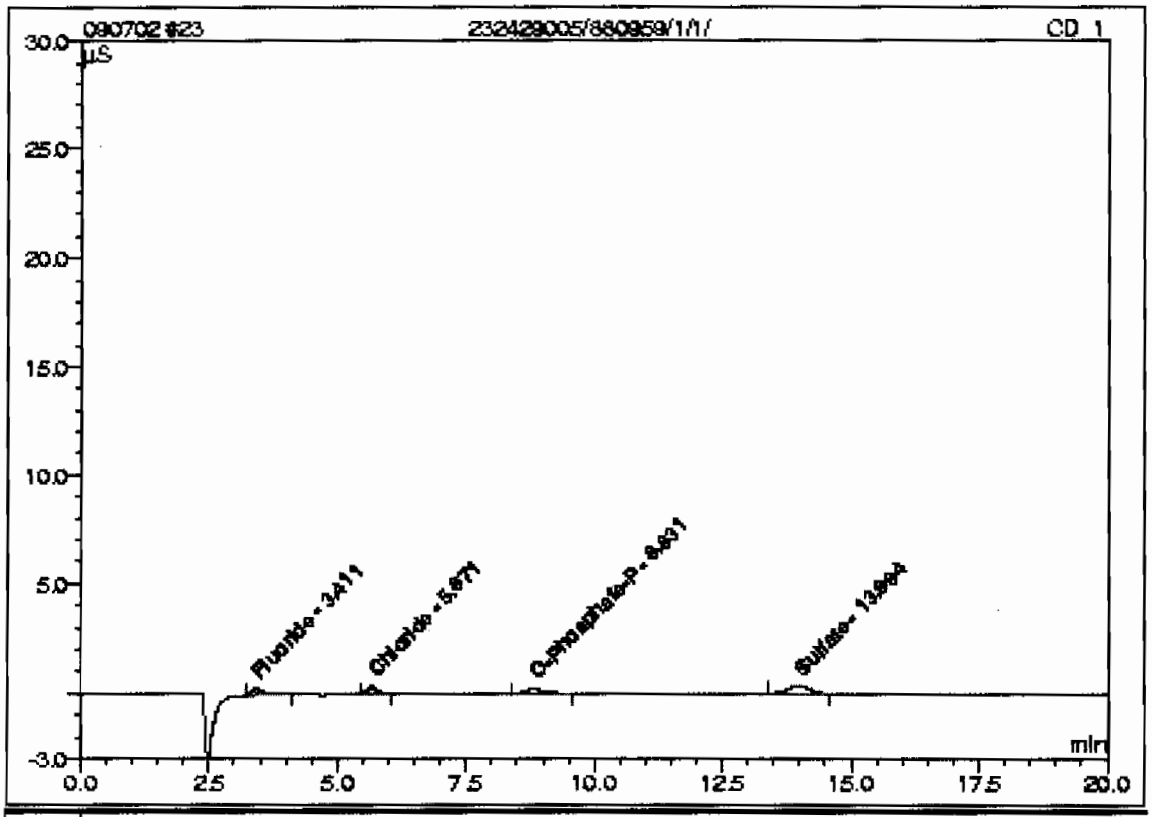

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.2075		0.06793	18.52
2	5.67	Chloride	n.a.	0.3222		0.06169	16.82
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.83	O-Phosphate-P	n.a.	0.0798		0.07426	20.25
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	13.99	Sulfate	n.a.	0.8908		0.16283	44.40
Total:				1.5003	0.000	0.367	100.00

23 232429005/880959/1/1/

Sample Name:	232429005/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 22:36	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

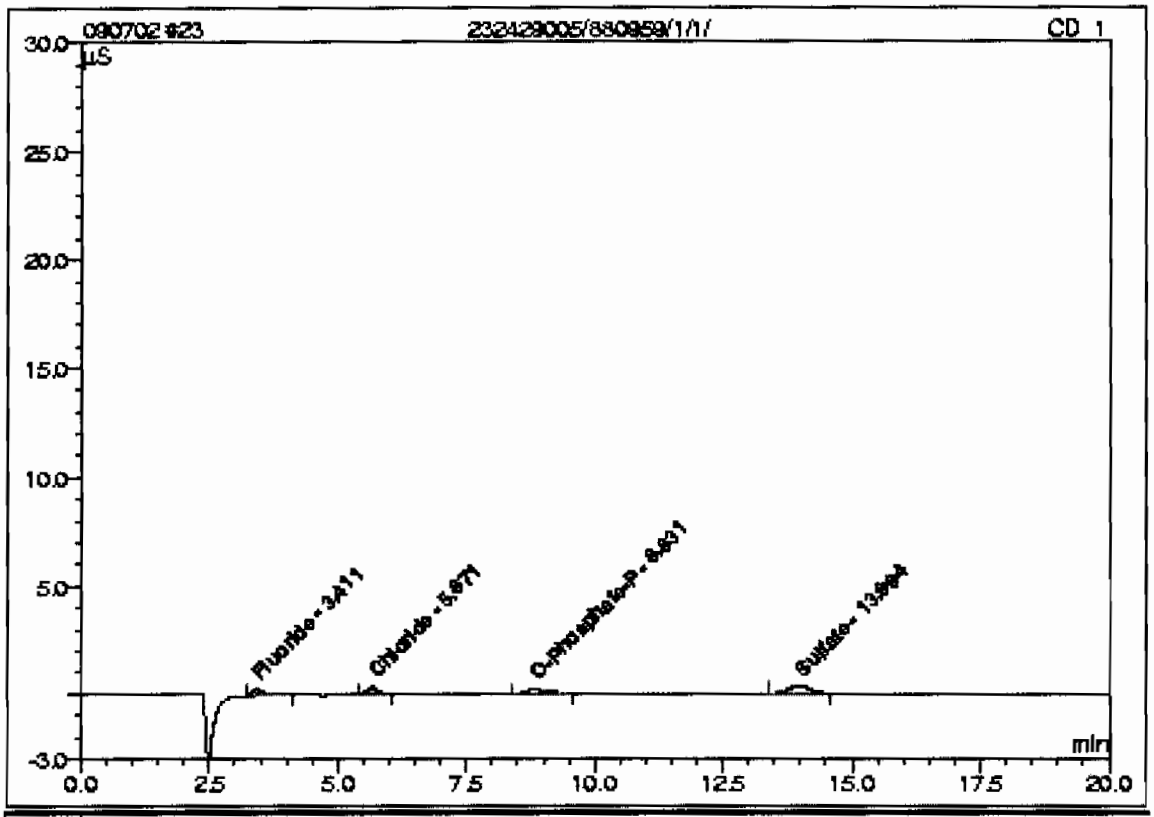

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.2063		0.06793	18.44
2	5.67	Chloride	n.a.	0.3245		0.06345	17.22
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.83	O-Phosphate-P	n.a.	0.1175		0.07426	20.15
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	13.99	Sulfate	n.a.	0.8908		0.16283	44.19
Total:				1.5391	0.000	0.368	100.00

24 WIC090702-02CVH

Sample Name:	WIC090702-02CVH	*Injection Volume:*	50.0
Vial Number:	24	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 22:59	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9058	

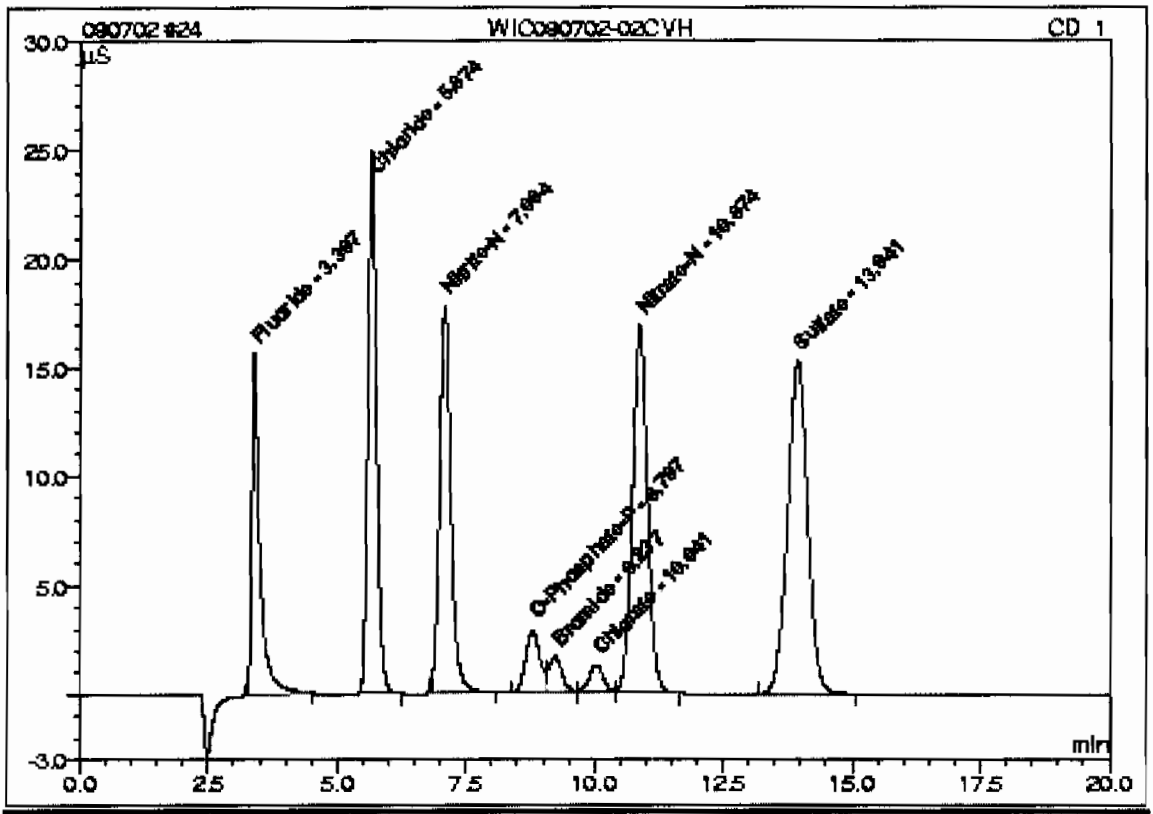

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	7.3777		2.93540	10.98
2	5.67	Chloride	n.a.	14.5214		4.79722	17.95
3	7.08	Nitrite-N	n.a.	7.3819		4.46975	16.72
4	8.80	O-Phosphate-P	n.a.	3.5083		0.93365	3.49
5	9.24	Bromide	n.a.	3.4354		0.51020	1.91
6	10.04	Chlorate	n.a.	3.3718		0.39093	1.46
7	10.87	Nitrate-N	n.a.	7.2360		5.74589	21.50
8	13.94	Sulfate	n.a.	29.3035		6.94266	25.98
Total:				76.1360	0.000	26.726	100.00

24 WIC090702-02CVH

Sample Name:	WIC090702-02CVH	*Injection Volume:*	50.0
Vial Number:	24	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 22:59	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE085;300;9058	

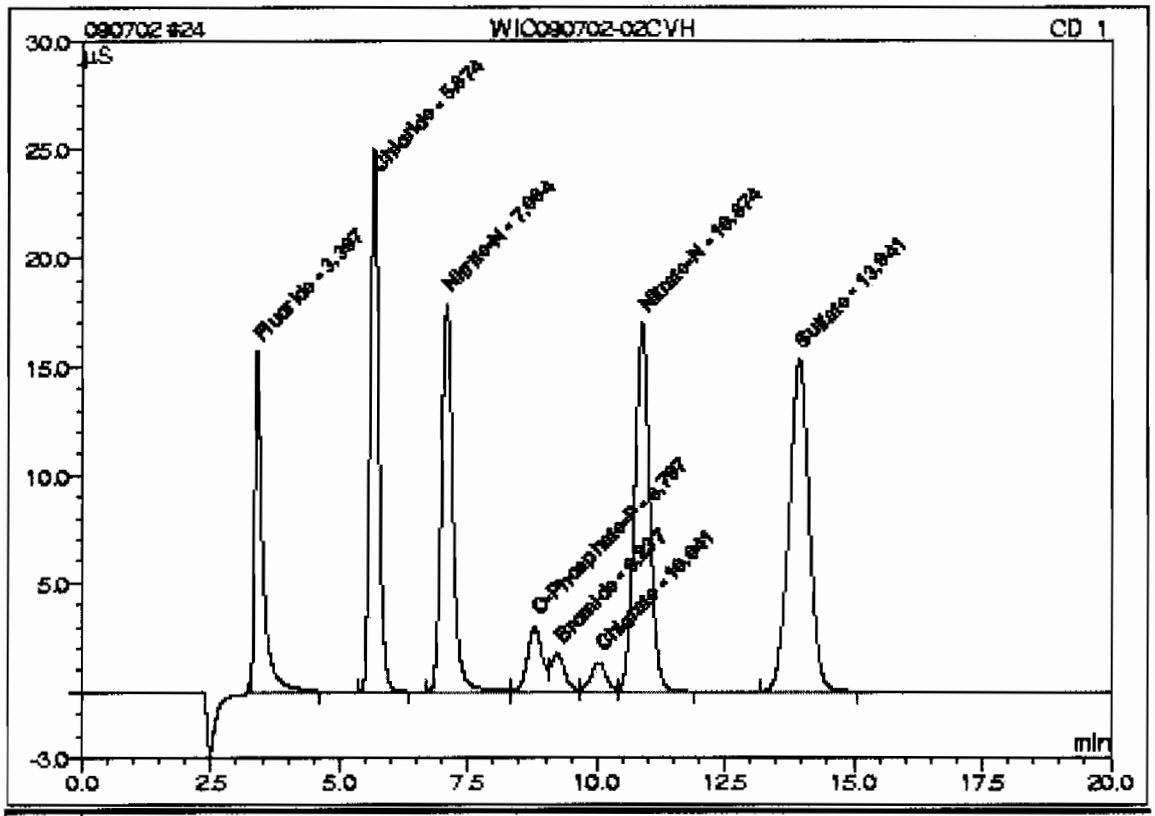

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	7.3892		2.98812	11.01
2	5.67	Chloride	n.a.	14.5469		4.86702	17.94
3	7.08	Nitrite-N	n.a.	7.3930		4.58268	16.89
4	8.80	O-Phosphate-P	n.a.	3.5498		0.95620	3.52
5	9.24	Bromide	n.a.	3.5895		0.54096	1.99
6	10.04	Chlorate	n.a.	3.7611		0.44421	1.64
7	10.87	Nitrate-N	n.a.	7.3017		5.81056	21.42
8	13.94	Sulfate	n.a.	29.3035		6.94266	25.59
Total:				76.8348	0.000	27.132	100.00

25 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	25	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 23:21	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;905B

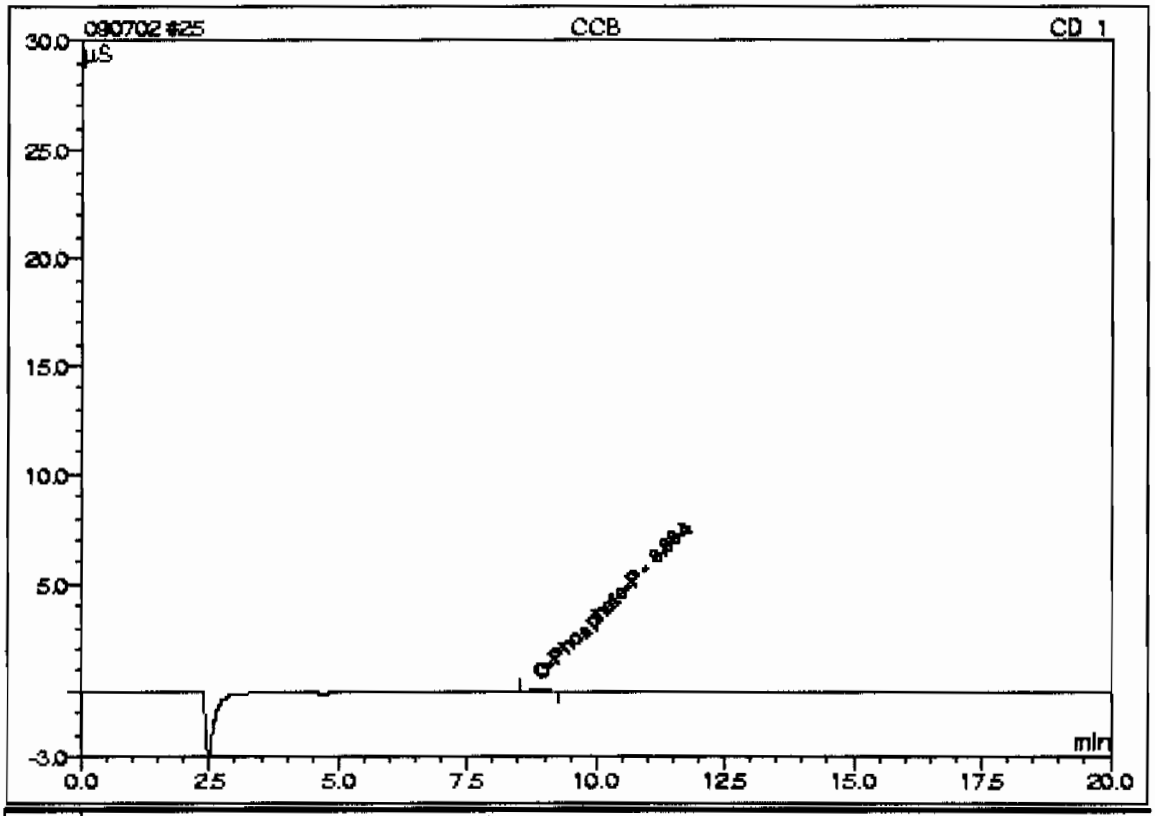

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	8.86	O-Phosphate-P	n.a.	-0.1395		0.01930	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.1395	0.000	0.019	100.00

25 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	25	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 23:21	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9055

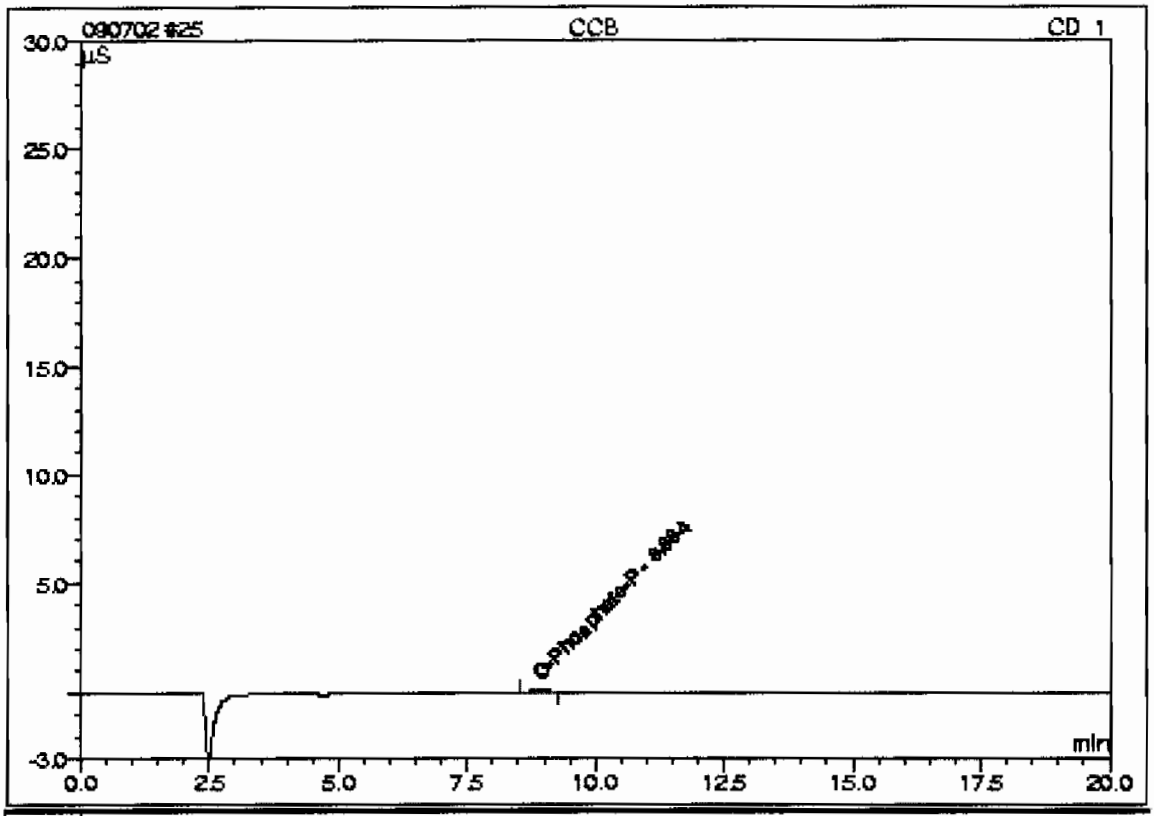

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	8.86	O-Phosphate-P	n.a.	-0.0965		0.01930	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.0965	0.000	0.019	100.00

26 232429006/880959/1/1/

Sample Name:	232429006/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	26	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 23:44	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9055

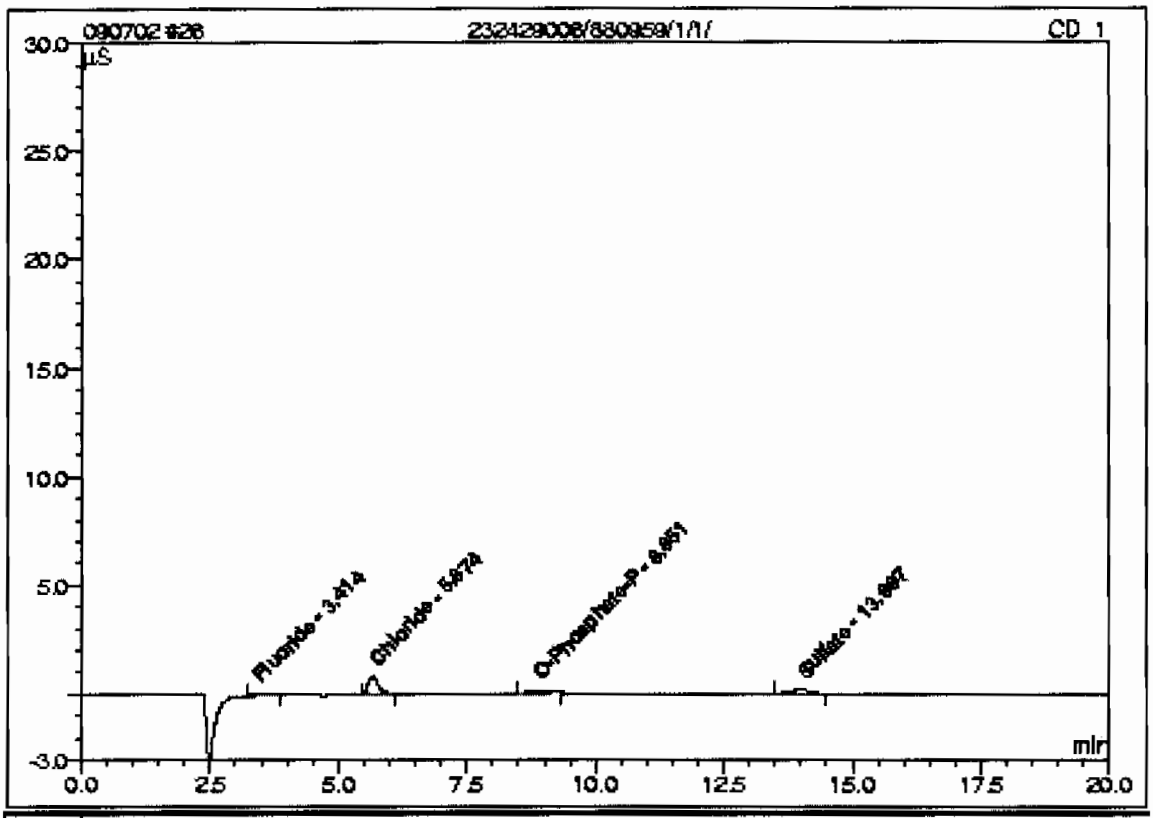

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.0981		0.02416	7.74
2	5.67	Chloride	n.a.	0.6491		0.17069	54.70
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.85	O-Phosphate-P	n.a.	-0.0451		0.04296	13.77
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	14.00	Sulfate	n.a.	0.5195		0.07425	23.79
Total:				1.2216	0.000	0.312	100.00

26 232429006/880959/1/1/

Sample Name:	232429006/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	26	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 23:44	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE085;300;9058	

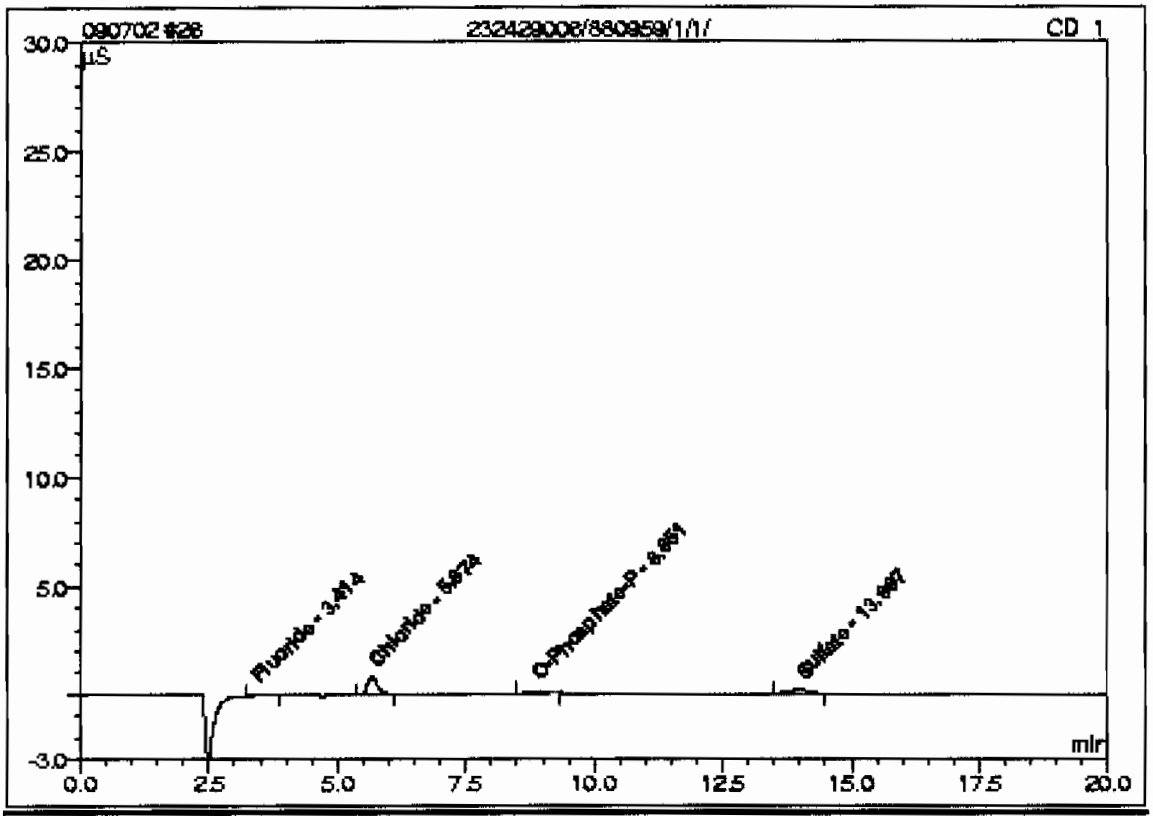

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.0987		0.02416	7.67
2	5.67	Chloride	n.a.	0.6510		0.17370	55.13
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.85	O-Phosphate-P	n.a.	-0.0044		0.04296	13.64
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	14.00	Sulfate	n.a.	0.5195		0.07425	23.56
Total:				1.2648	0.000	0.315	100.00

This is runlog for Sequence 090702.seq for IC7

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
232429007	07/03/09 00:07	880959	1	090702	VXP1
232429008	07/03/09 00:30	880959	1	090702	VXP1
232429009	07/03/09 00:53	880959	1	090702	VXP1
1201870633	07/03/09 01:16	880959	1	090702	VXP1
1201870634	07/03/09 01:39	880959	1	090702	VXP1
1201870635	07/03/09 02:02	880959	1	090702	VXP1
232429010	07/03/09 02:25	880959	1	090702	VXP1
232429011	07/03/09 02:48	880959	1	090702	VXP1
232429012	07/03/09 03:10	880959	1	090702	VXP1
CCV	07/03/09 03:33		1	090702	VXP1
CCB	07/03/09 03:56		1	090702	VXP1
232429013	07/03/09 04:19	880959	1	090702	VXP1
232429014	07/03/09 04:42	880959	1	090702	VXP1
232429015	07/03/09 05:05	880959	1	090702	VXP1
CVH	07/03/09 05:28		1	090702	VXP1
CCB	07/03/09 05:51		1	090702	VXP1
1201870637	07/03/09 06:14	880961	1	090702	VXP1
1201870638	07/03/09 06:37	880961	1	090702	VXP1
232341002	07/03/09 06:59	880961	1	090702	VXP1
1201870641	07/03/09 07:22	880961	1	090702	VXP1
1201870642	07/03/09 07:45	880961	1	090702	VXP1
232435002	07/03/09 08:08	880961	1	090702	VXP1
232437001	07/03/09 08:31	880961	1	090702	VXP1
1201870639	07/03/09 08:54	880961	1	090702	VXP1
1201870640	07/03/09 09:17	880961	1	090702	VXP1
CCV	07/03/09 09:40		1	090702	VXP1
CCB	07/03/09 10:03		1	090702	VXP1
1201865458	07/03/09 10:26	878753	1	090702	VXP1

1201865459	07/03/09	10:48	878753	1	090702	VXP1
232035002	07/03/09	11:11	878753	1	090702	VXP1
232038001	07/03/09	11:34	878753	1	090702	VXP1
1201865460	07/03/09	11:57	878753	1	090702	VXP1
1201865462	07/03/09	12:20	878753	1	090702	VXP1
CVH	07/03/09	13:17		1	090702	VXP1
CCB	07/03/09	13:39		1	090702	VXP1
232483001	07/03/09	14:02	880907	500	090702	VXP1
232483002	07/03/09	14:25	880907	500	090702	VXP1
232483003	07/03/09	14:48	880907	500	090702	VXP1
CCV	07/03/09	15:11		1	090702	VXP1
CCB	07/03/09	15:34		1	090702	VXP1
1201874098	07/03/09	15:57	882417	1	090702	VXP1
1201874102	07/03/09	16:20	882417	1	090702	VXP1
232847001	07/03/09	16:43	882417	1	090702	VXP1
1201874099	07/03/09	17:05	882417	1	090702	VXP1
1201874100	07/03/09	17:28	882417	1	090702	VXP1
1201874101	07/03/09	17:51	882417	1	090702	VXP1
CVH	07/03/09	18:14		1	090702	VXP1
CCB	07/03/09	18:37		1	090702	VXP1

27 232429007/880959/1/1/

Sample Name:	232429007/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	27	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 0:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

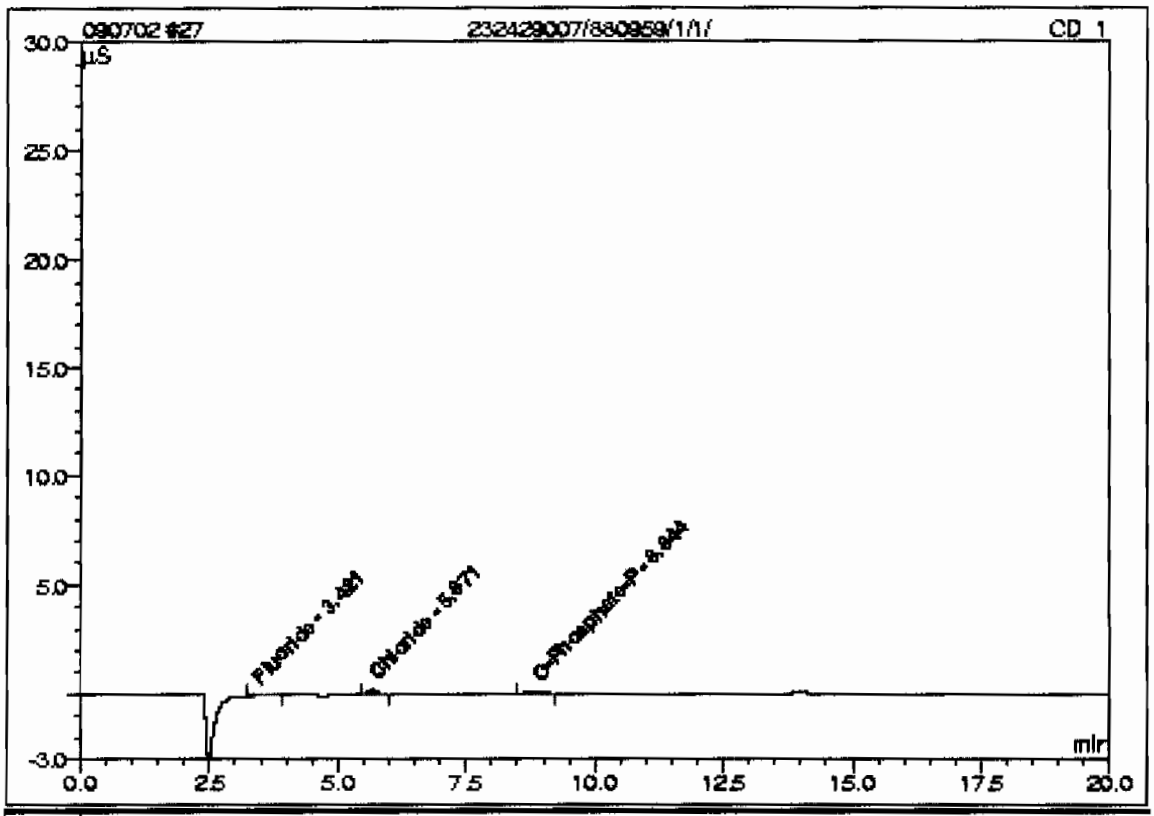

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.0852		0.01899	20.47
2	5.67	Chloride	n.a.	0.2450		0.03593	38.74
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.84	O-Phosphate-P	n.a.	-0.0656		0.03783	40.78
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.2646	0.000	0.093	100.00

27 232429007/880959/1/1/

Sample Name:	232429007/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	27	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 0:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

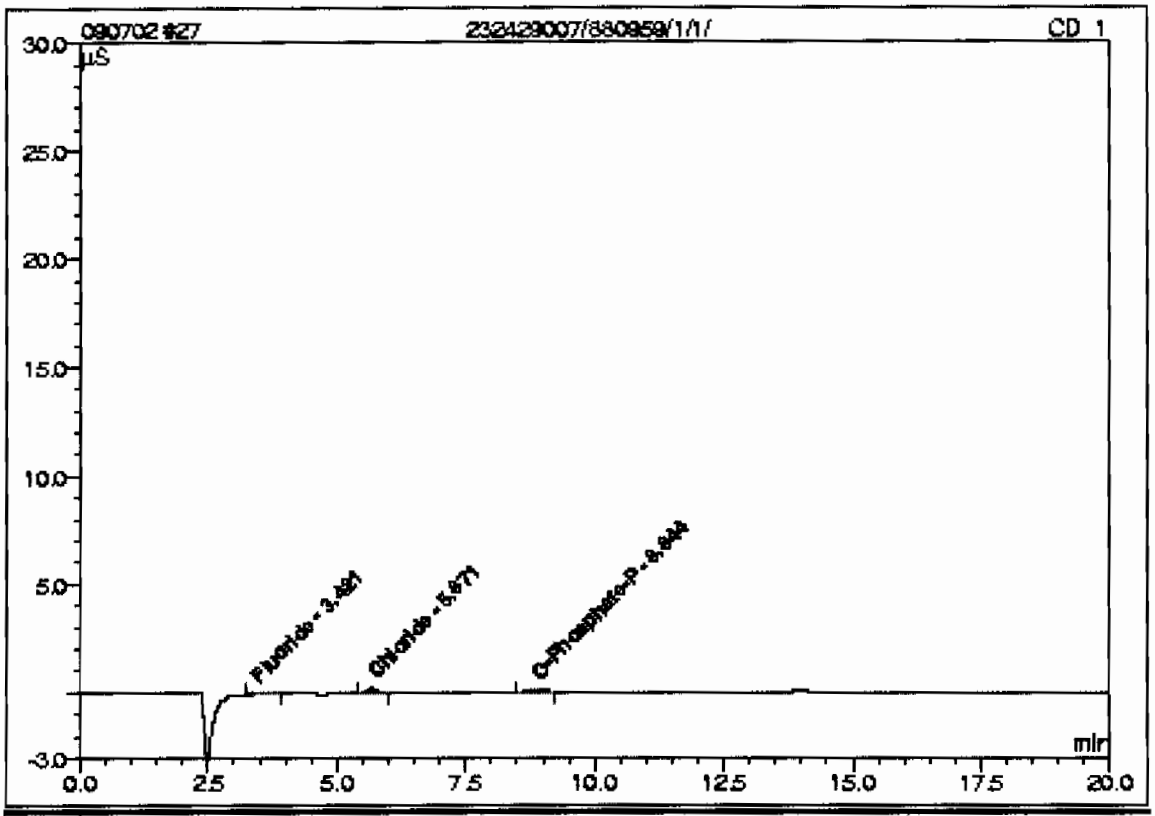

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.0860		0.01899	20.34
2	5.67	Chloride	n.a.	0.2449		0.03657	39.16
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.84	O-Phosphate-P	n.a.	-0.0244		0.03783	40.51
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.3065	0.000	0.093	100.00

28 232429008/880959/1/1/

Sample Name:	232429008/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	28	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 0:30	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE086;300;905B	

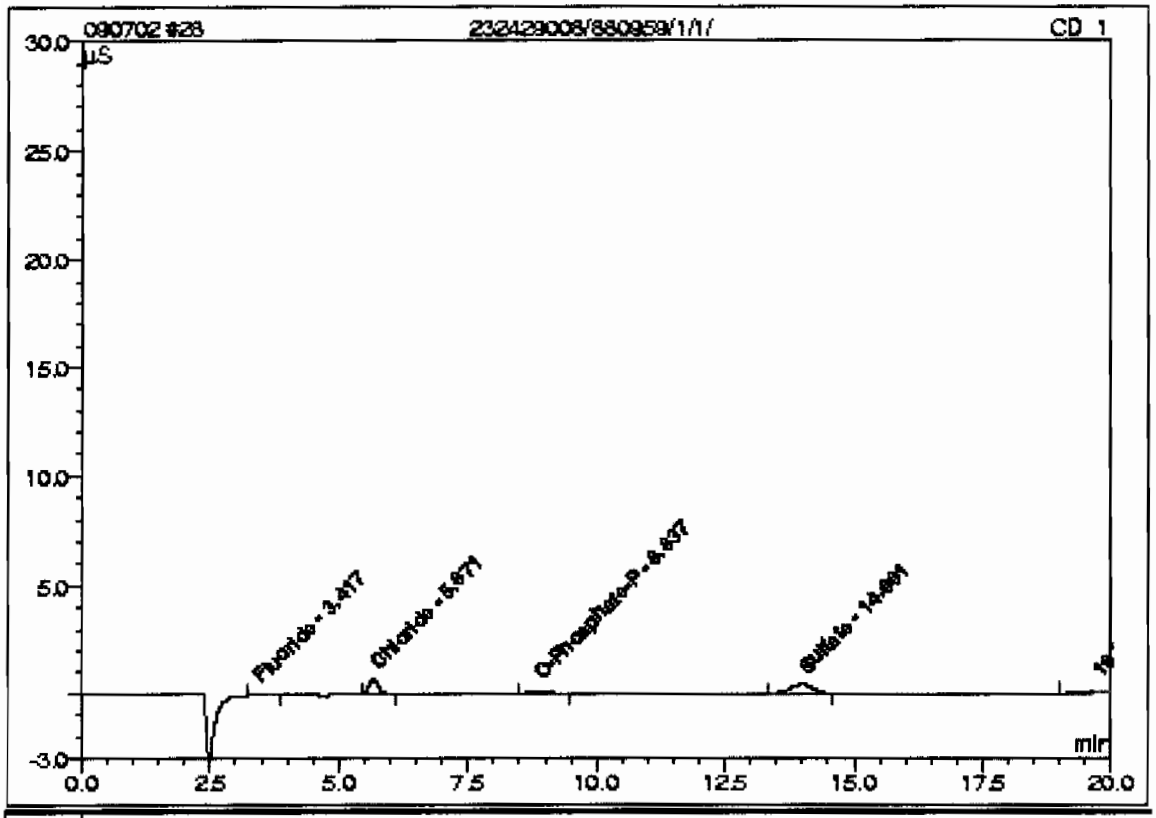

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.1039		0.02646	5.61
2	5.67	Chloride	n.a.	0.5487		0.13721	29.07
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.84	O-Phosphate-P	n.a.	0.0000		0.05428	11.50
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	14.00	Sulfate	n.a.	1.0589		0.20295	43.00
Total:				1.7115	0.000	0.421	89.19

28 232429008/880959/1/1/

Sample Name:	232429008/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	28	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 0:30	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

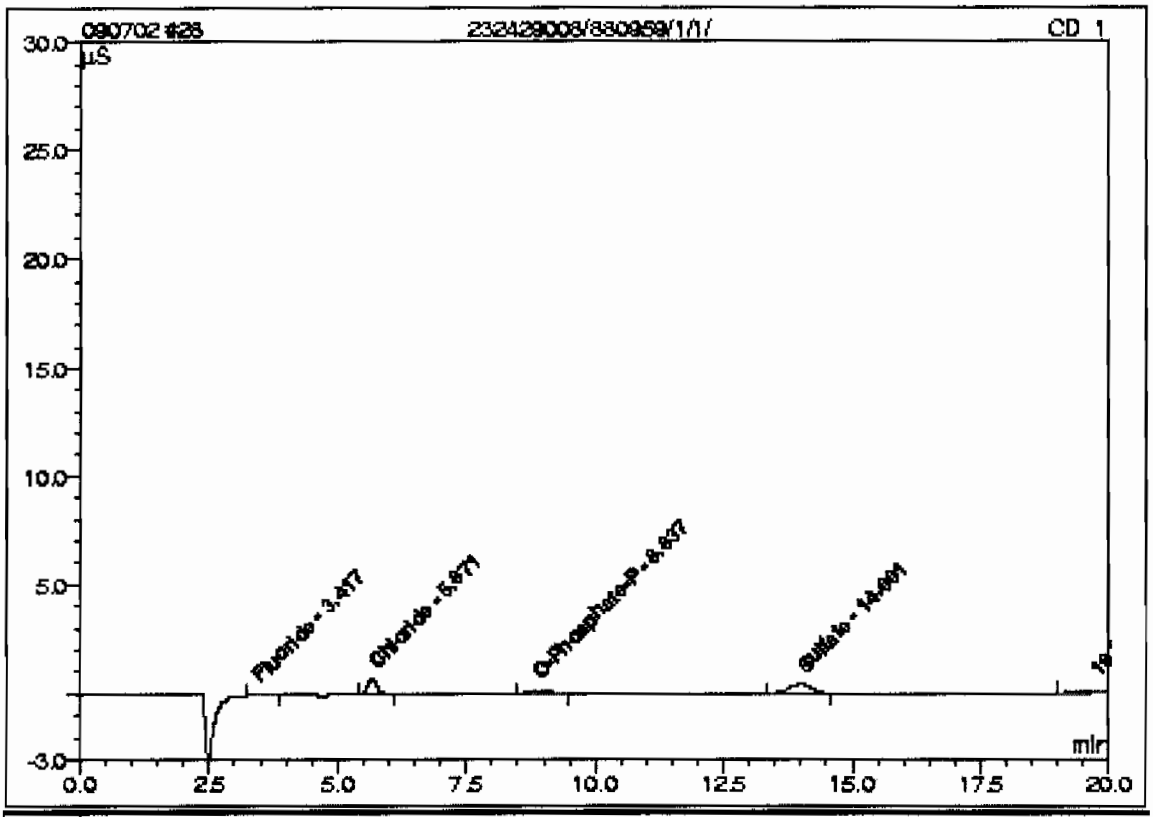

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.1043		0.02646	5.59
2	5.67	Chloride	n.a.	0.5474		0.13871	29.30
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.84	O-Phosphate-P	n.a.	0.0397		0.05428	11.47
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	14.00	Sulfate	n.a.	1.0589		0.20295	42.87
Total:				1.7503	0.000	0.422	89.22

29 232429009/880959/1/1/

Sample Name:	232429009/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	29	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 0:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E086;300;905B

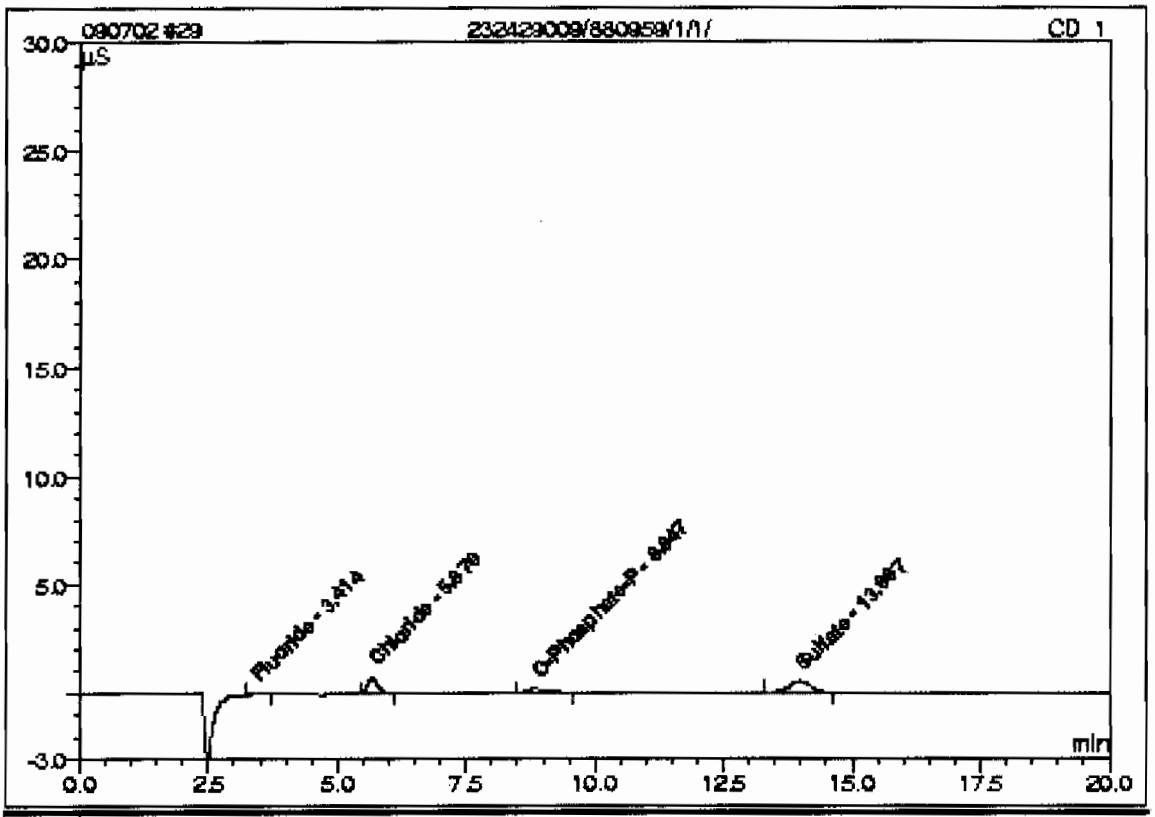

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.0884		0.02029	4.27
2	5.67	Chloride	n.a.	0.5908		0.15126	31.81
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.85	O-Phosphate-P	n.a.	0.0492		0.06634	13.95
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	13.99	Sulfate	n.a.	1.2039		0.23756	49.96
Total:				1.9313	0.000	0.475	100.00

29 232429009/880959/1/1/

Sample Name:	232429009/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	29	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 0:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

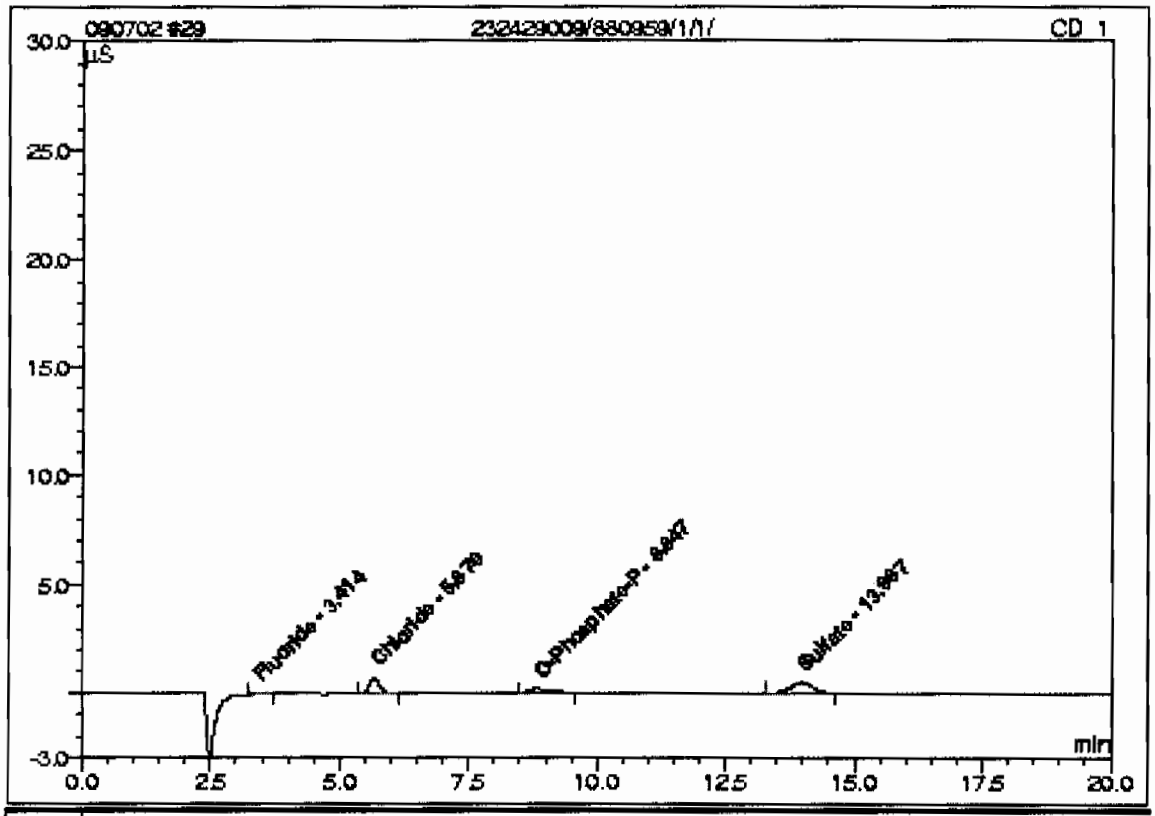

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.0892		0.02029	4.24
2	5.67	Chloride	n.a.	0.5937		0.15436	32.25
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.85	O-Phosphate-P	n.a.	0.0866		0.06634	13.86
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	13.99	Sulfate	n.a.	1.2039		0.23756	49.64
Total:				1.9734	0.000	0.479	100.00

30 1201870633/880959/1/1/DUP

Sample Name:	1201870633/880959/1/1/**DUP**	*Injection Volume:*	50.0
Vial Number:	30	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	**AS9_HC**	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 1:15	Analyst:	**VXP1**
Run Time (min):	20.00	Column:	**AS9HC-014108;GLGCE086;300;9055**

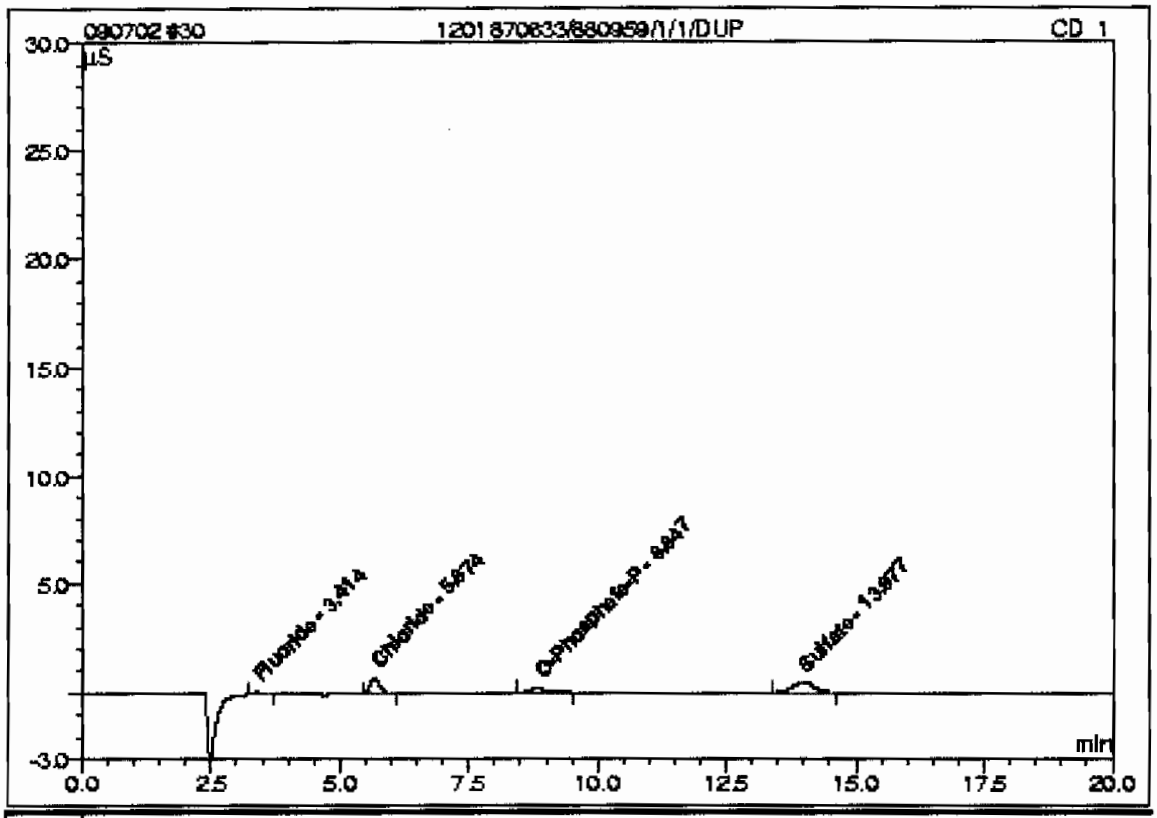

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.0907		0.02121	4.65
2	5.67	Chloride	n.a.	0.5738		0.14559	31.94
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.85	O-Phosphate-P	n.a.	0.0652		0.07062	15.49
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	13.98	Sulfate	n.a.	1.1235		0.21837	47.91
Total:				1.8533	0.000	0.456	100.00

30 1201870633/880959/1/1/DUP

Sample Name:	1201870633/880959/1/1/**DUP**	*Injection Volume:*	50.0
Vial Number:	30	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 1:16	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE085;300;9058	

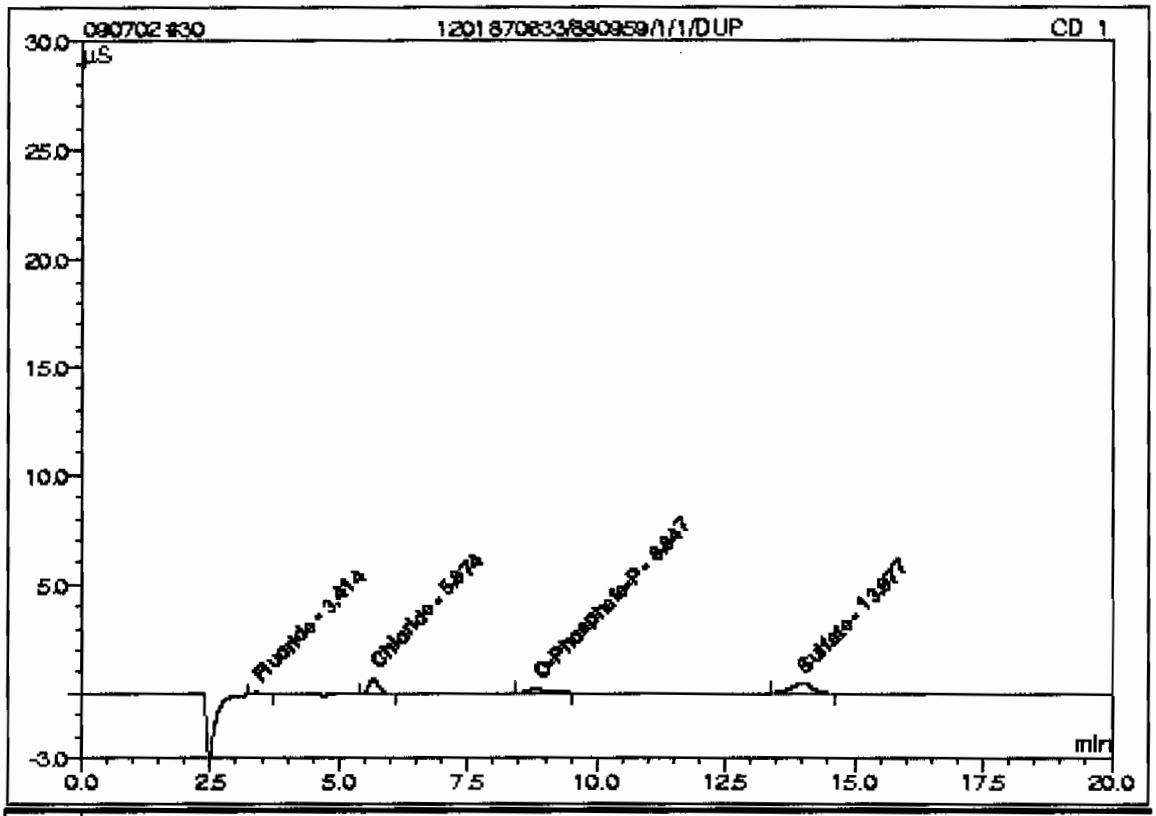

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.0914		0.02121	4.64
2	5.67	Chloride	n.a.	0.5724		0.14715	32.17
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.85	O-Phosphate-P	n.a.	0.1033		0.07062	15.44
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	13.98	Sulfate	n.a.	1.1235		0.21837	47.75
Total:				1.8906	0.000	0.457	100.00

31 1201870634/880959/1/1/MS

Sample Name:	1201870634/880959/1/1/MS	*Injection Volume:*	50.0
Vial Number:	31	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 1:39	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9056	

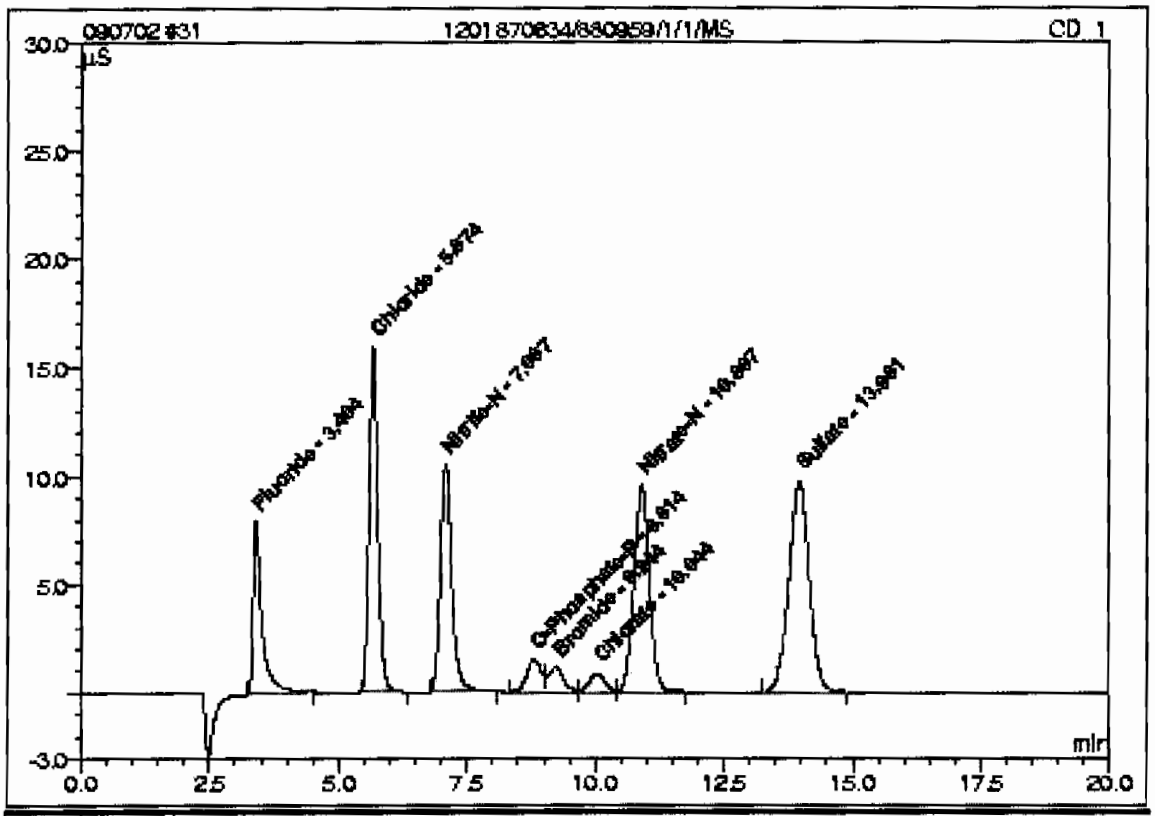

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.0382		1.59989	9.82
2	5.67	Chloride	n.a.	9.4080		3.09188	18.98
3	7.09	Nitrite-N	n.a.	4.4209		2.66577	16.36
4	8.81	O-Phosphate-P	n.a.	1.7357		0.48933	3.00
5	9.24	Bromide	n.a.	2.4752		0.37341	2.29
6	10.04	Chlorate	n.a.	2.4499		0.28654	1.76
7	10.90	Nitrate-N	n.a.	4.1916		3.30457	20.28
8	13.96	Sulfate	n.a.	18.9943		4.48269	27.51
Total:				47.7139	0.000	16.294	100.00

31 1201870634/880959/1/1/MS

Sample Name:	1201870634/880959/1/1/MS	*Injection Volume:*	50.0
Vial Number:	31	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 1:39	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9056	

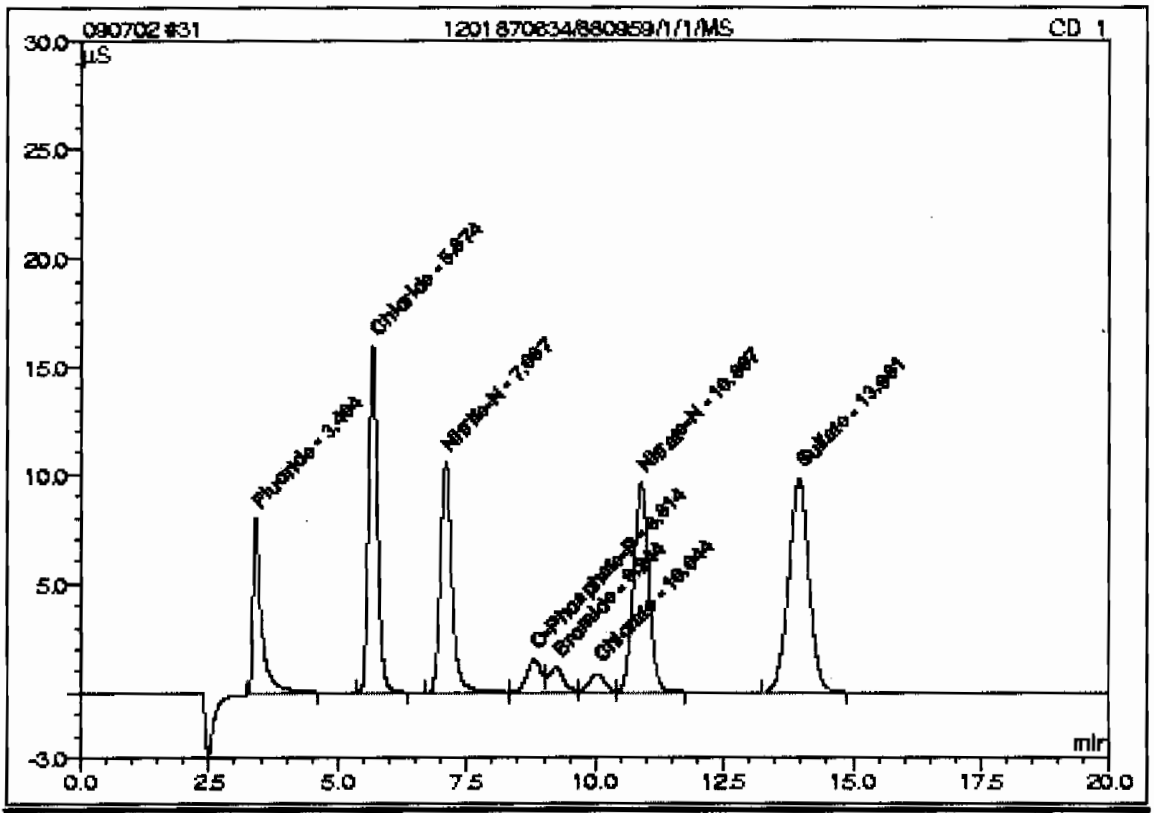

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.0646		1.63651	9.94
2	5.67	Chloride	n.a.	9.4084		3.13151	19.03
3	7.09	Nitrite-N	n.a.	4.4240		2.73035	16.59
4	8.81	O-Phosphate-P	n.a.	1.7639		0.49739	3.02
5	9.24	Bromide	n.a.	2.4818		0.37888	2.30
6	10.04	Chlorate	n.a.	2.4460		0.29143	1.77
7	10.90	Nitrate-N	n.a.	4.1874		3.30796	20.10
8	13.96	Sulfate	n.a.	18.9943		4.48269	27.24
Total:				47.7706	0.000	16.457	100.00

32 1201870635/880959/1/1/MSD

Sample Name:	1201870635/880959/1/1/MSD	*Injection Volume:*	50.0
Vial Number:	32	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 2:02	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE086;900;9056	

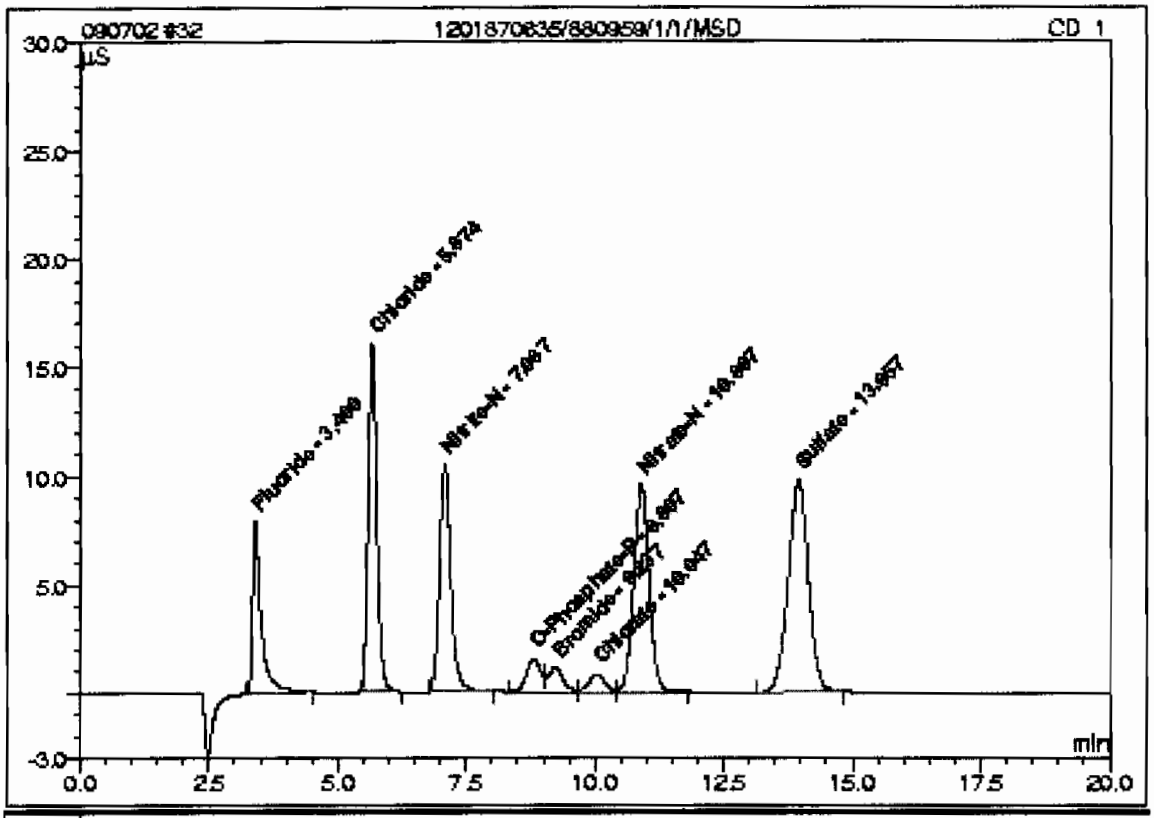

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.0229		1.59376	9.75
2	5.67	Chloride	n.a.	9.4489		3.10552	19.00
3	7.09	Nitrite-N	n.a.	4.3937		2.64921	16.21
4	8.81	O-Phosphate-P	n.a.	1.7816		0.50084	3.07
5	9.24	Bromide	n.a.	2.4901		0.37553	2.30
6	10.05	Chlorate	n.a.	2.4609		0.28778	1.76
7	10.90	Nitrate-N	n.a.	4.2100		3.31935	20.31
8	13.96	Sulfate	n.a.	19.1028		4.50859	27.59
Total:				47.9110	0.000	16.341	100.00

32 1201870635/880959/1/1/MSD

Sample Name:	1201870635/880959/1/1/MSD	*Injection Volume:*	50.0
Vial Number:	32	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 2:02	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E086;300;905B

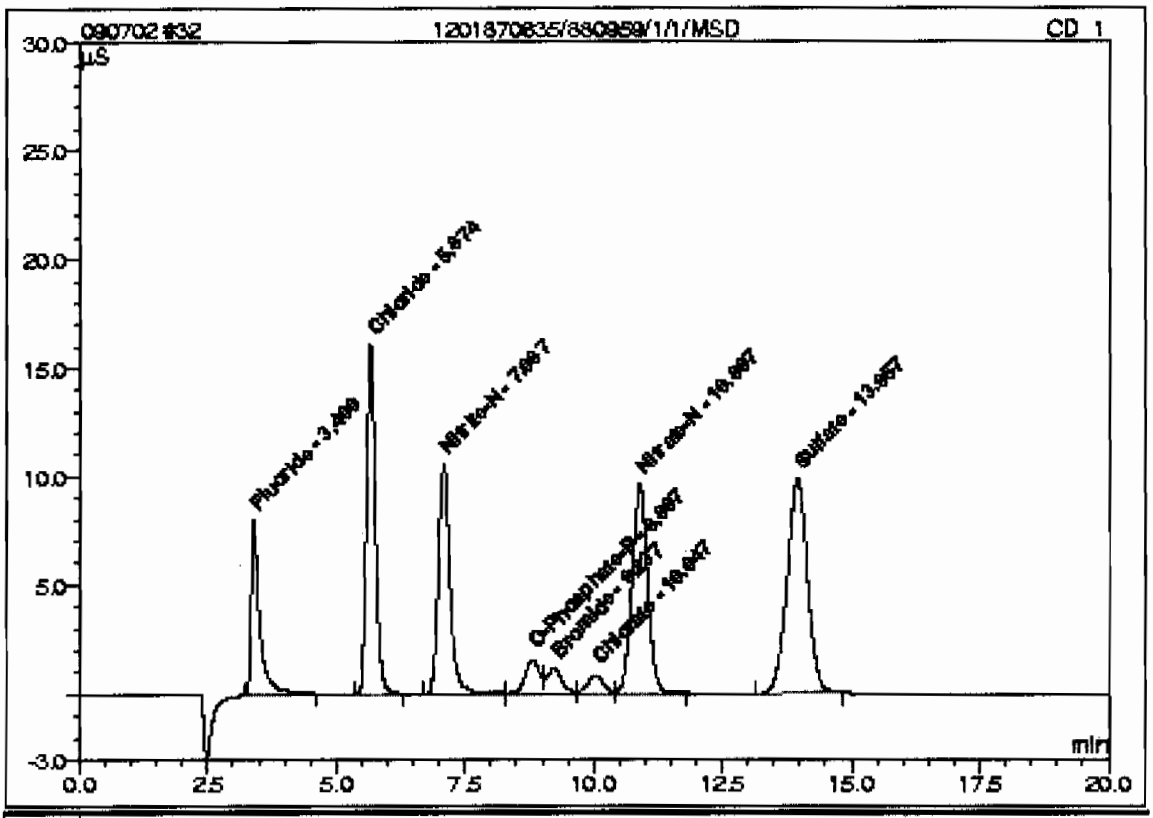

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.0560		1.63301	9.89
2	5.67	Chloride	n.a.	9.4490		3.14520	19.05
3	7.09	Nitrite-N	n.a.	4.4017		2.71643	16.45
4	8.81	O-Phosphate-P	n.a.	1.8141		0.51021	3.09
5	9.24	Bromide	n.a.	2.4992		0.38143	2.31
6	10.05	Chlorate	n.a.	2.4601		0.29308	1.78
7	10.90	Nitrate-N	n.a.	4.2065		3.32327	20.13
8	13.96	Sulfate	n.a.	19.1028		4.50858	27.31
Total:				47.9895	0.000	16.511	100.00

33 232429010/880959/1/1/

Sample Name:	232429010/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	33	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 2:25	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

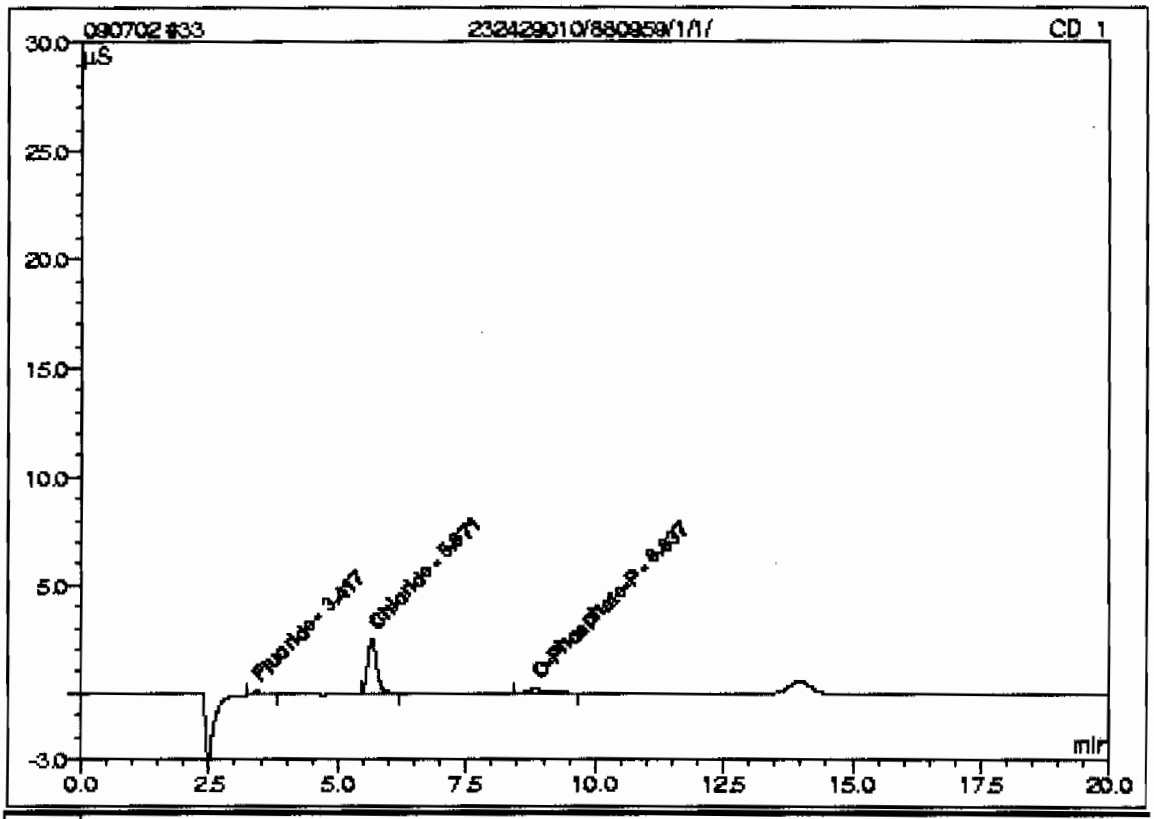

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.1087		0.02839	4.61
2	5.67	Chloride	n.a.	1.6607		0.50807	82.48
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.84	O-Phosphate-P	n.a.	0.1008		0.07953	12.91
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				1.8701	0.000	0.616	100.00

33 232429010/880959/1/1/

Sample Name:	232429010/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	33	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 2:25	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCB088;300;9055

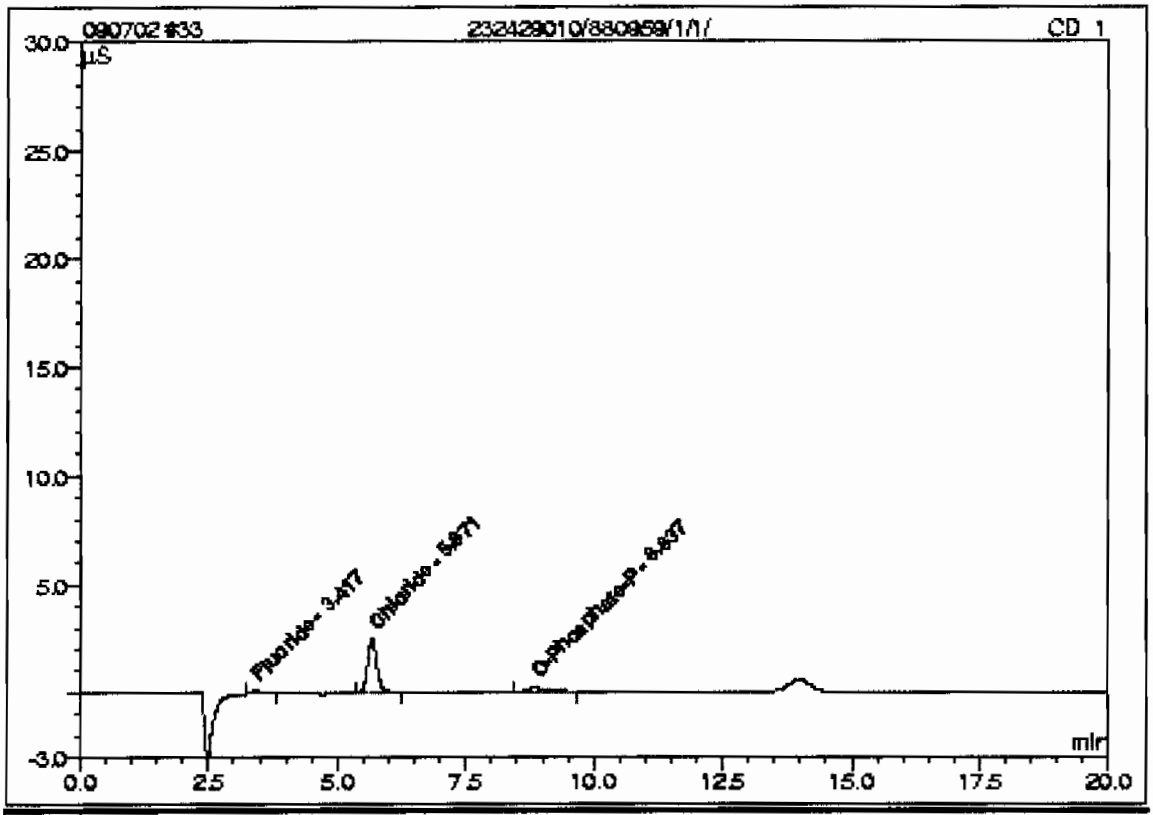

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.1091		0.02839	4.55
2	5.67	Chloride	n.a.	1.6663		0.51663	82.72
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.84	O-Phosphate-P	n.a.	0.1380		0.07953	12.73
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				1.9133	0.000	0.625	100.00

34 232429011/880959/1/1/

Sample Name:	232429011/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	34	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 2:48	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

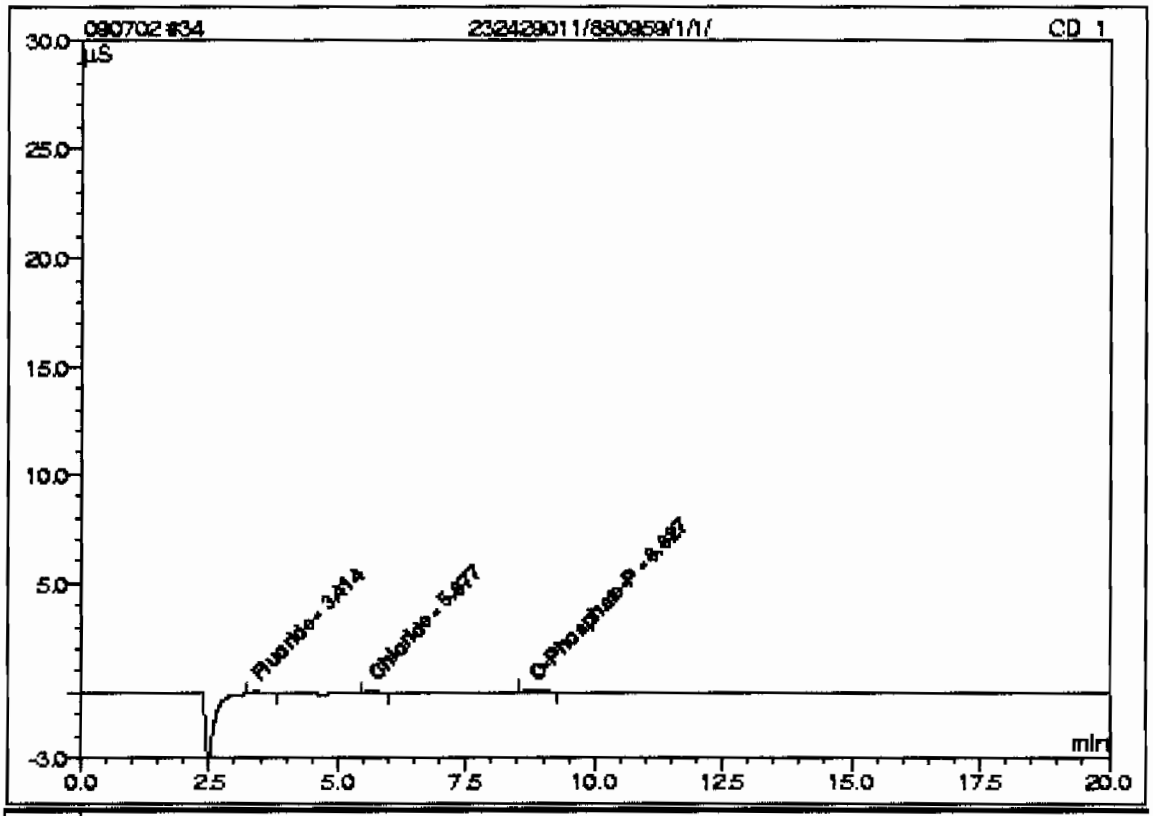

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1097		0.02841	36.02
2	5.68	Chloride	n.a.	0.2120		0.02494	31.61
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.83	O-Phosphate-P	n.a.	-0.1146		0.02554	32.37
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.2062	0.000	0.079	100.00

34 232429011/880959/1/1/

Sample Name:	232429011/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	34	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 2:48	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCB086;300;9058

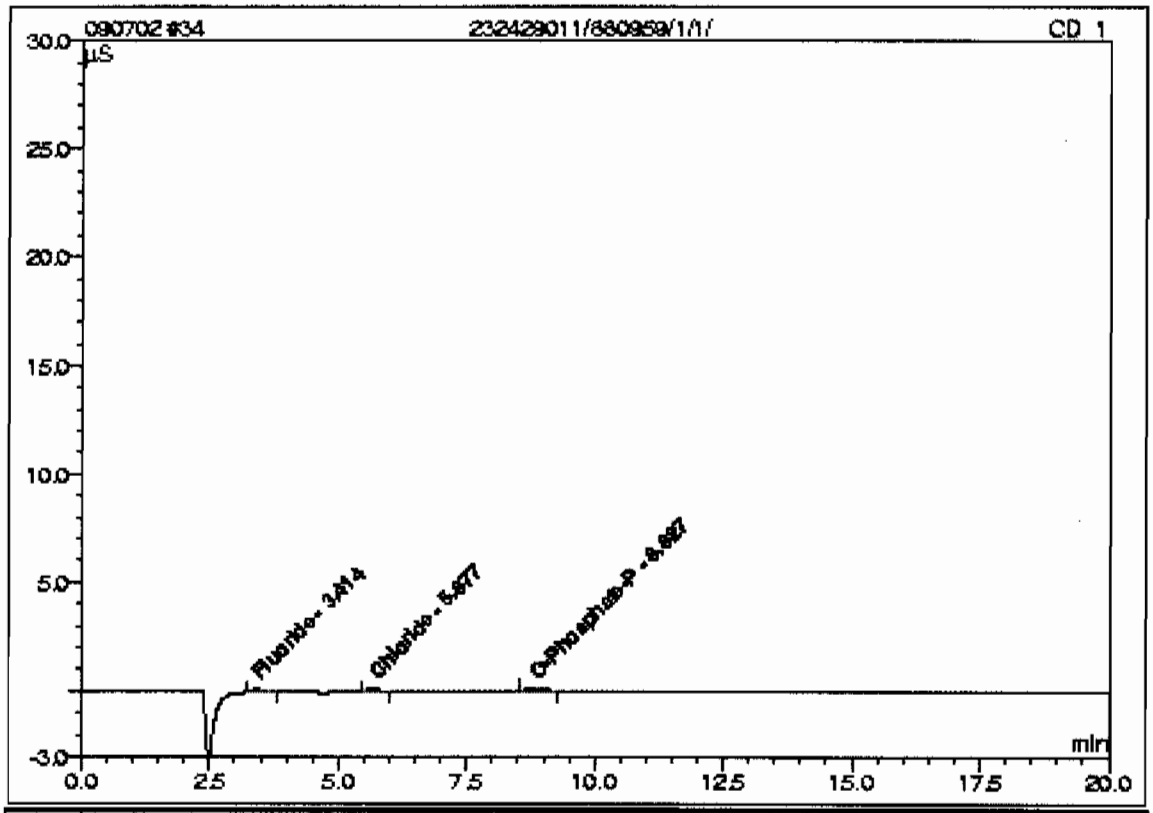

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1091		0.02841	35.99
2	5.68	Chloride	n.a.	0.2107		0.02499	31.65
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.83	O-Phosphate-P	n.a.	-0.0722		0.02554	32.35
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.2476	0.000	0.079	100.00

35 232429012/880959/1/1/

Sample Name:	232429012/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	35	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 3:10	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

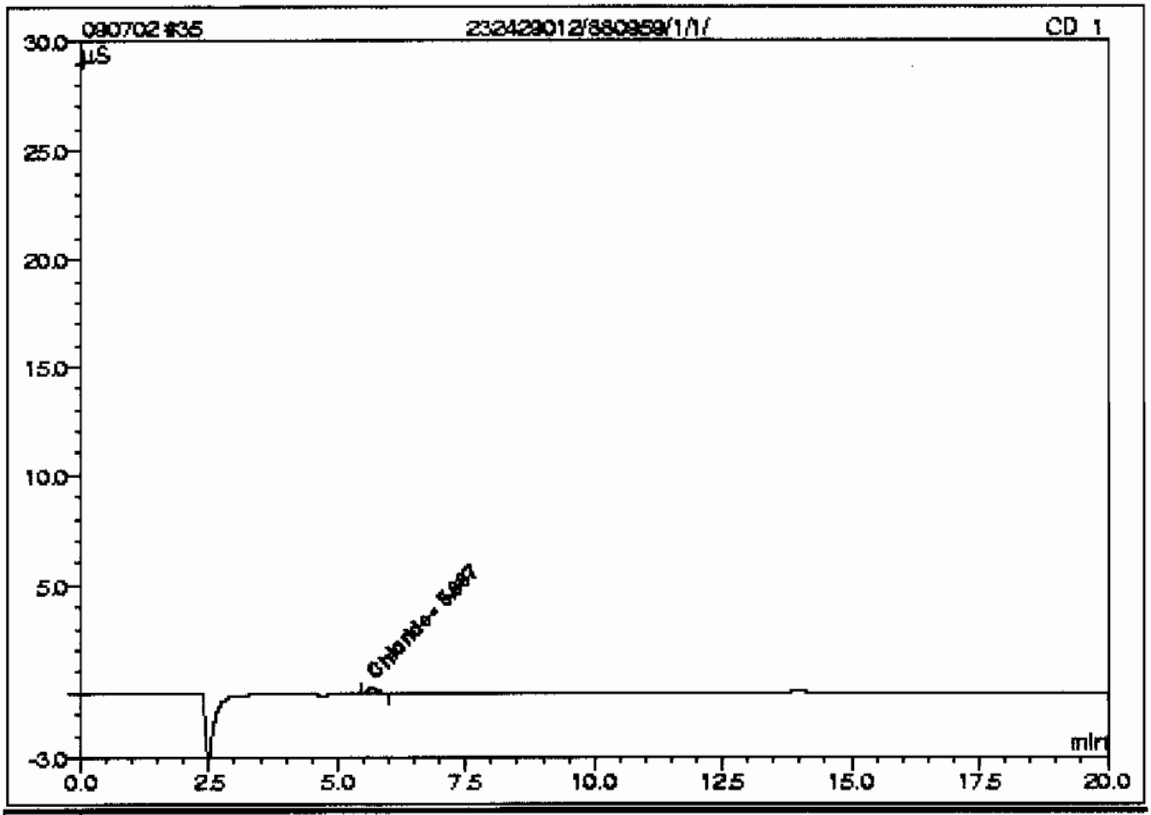

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
1	5.67	Chloride	n.a.	0.2893		0.05072	100.00
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.2893	0.000	0.051	100.00

35 232429012/880959/1/1/

Sample Name:	232429012/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	35	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 3:10	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

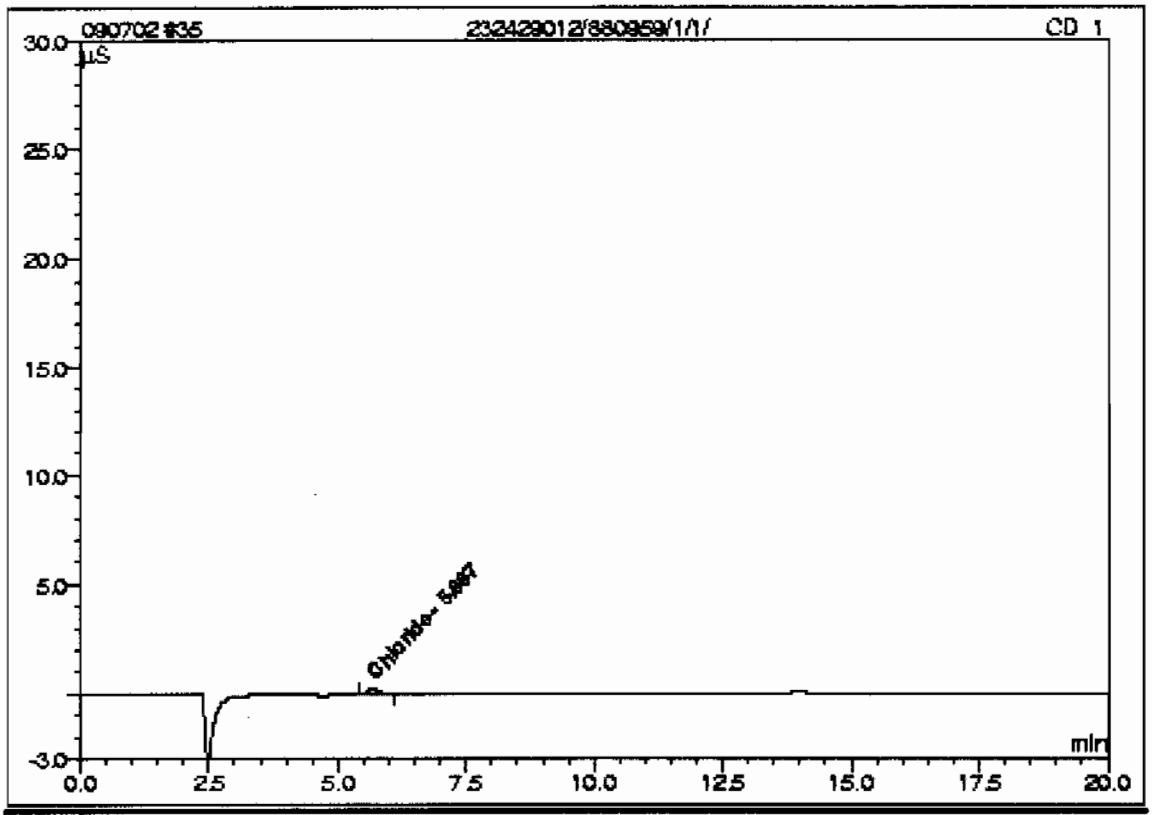

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
1	5.67	Chloride	n.a.	0.2946		0.05335	100.00
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.2946	0.000	0.053	100.00

36 WIC090702-02CCV

Sample Name:	WIC090702-02CCV	*Injection Volume:*	50.0
Vial Number:	36	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 3:33	*Analyst:*	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

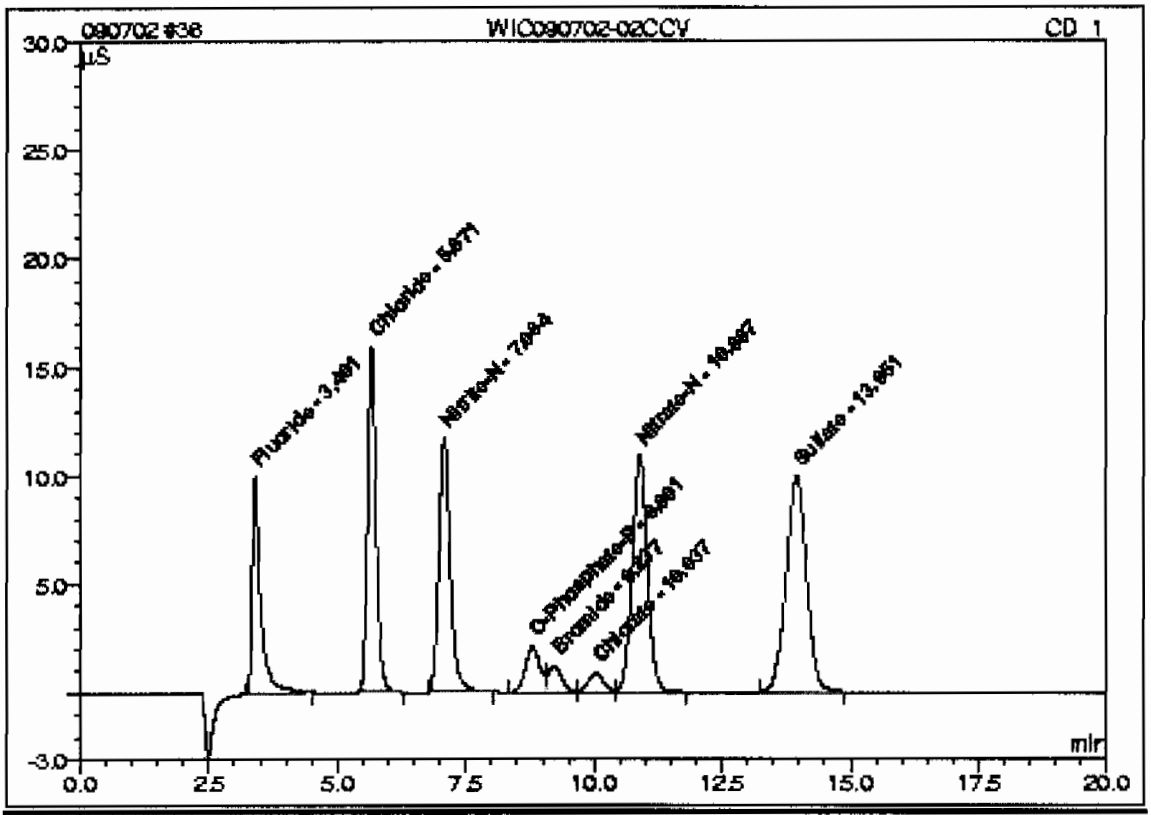

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.8826		1.93756	10.98
2	5.67	Chloride	n.a.	9.4298		3.09914	17.56
3	7.08	Nitrite-N	n.a.	4.8789		2.94479	16.68
4	8.80	O-Phosphate-P	n.a.	2.4726		0.67405	3.82
5	9.24	Bromide	n.a.	2.4909		0.37564	2.13
6	10.04	Chlorate	n.a.	2.5255		0.29510	1.67
7	10.89	Nitrate-N	n.a.	4.7845		3.78006	21.41
8	13.95	Sulfate	n.a.	19.2590		4.54585	25.75
Total:				50.7238	0.000	17.652	100.00

36 WIC090702-02CCV

Sample Name:	WIC090702-02CCV	*Injection Volume:*	50.0
Vial Number:	36	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 3:39	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

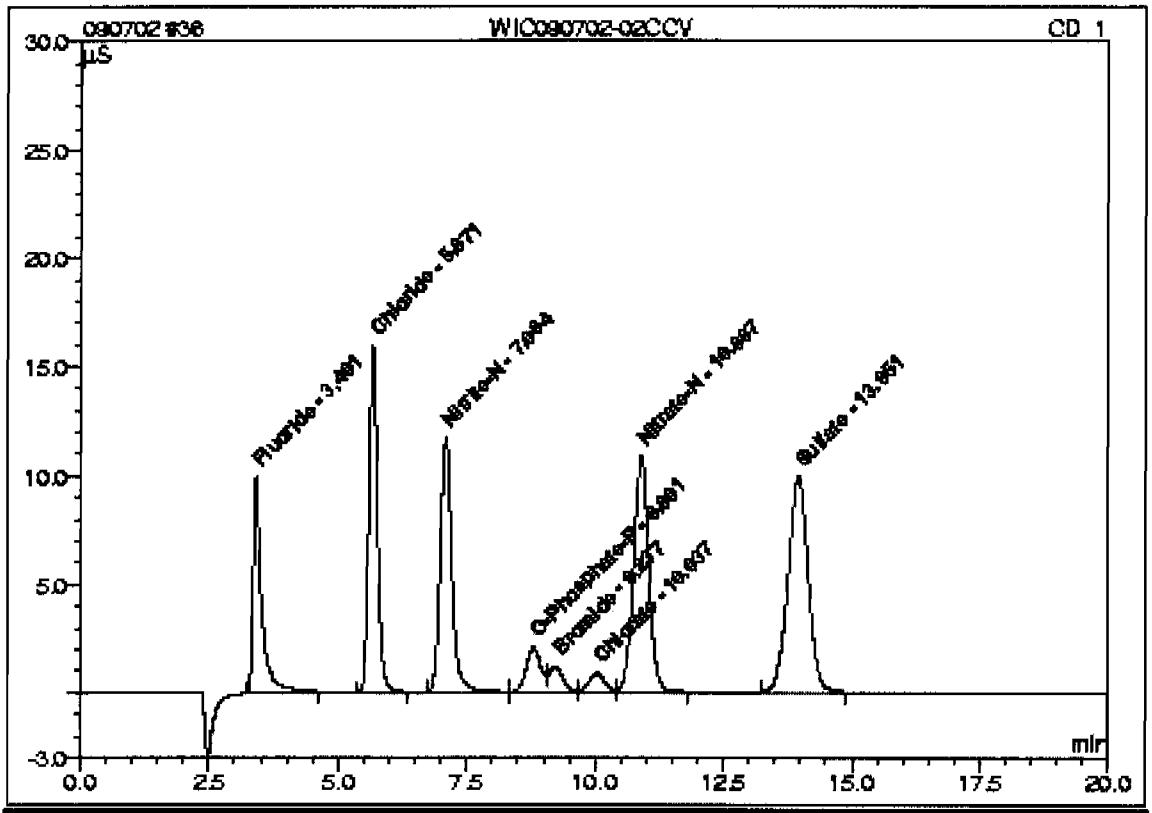

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.9152		1.98230	11.12
2	5.67	Chloride	n.a.	9.4552		3.14730	17.66
3	7.08	Nitrite-N	n.a.	4.8787		3.01400	16.91
4	8.80	O-Phosphate-P	n.a.	2.4605		0.67632	3.80
5	9.24	Bromide	n.a.	2.4699		0.37713	2.12
6	10.04	Chlorate	n.a.	2.4888		0.29641	1.66
7	10.89	Nitrate-N	n.a.	4.7761		3.78103	21.22
8	13.95	Sulfate	n.a.	19.2590		4.54585	25.51
Total:				50.7034	0.000	17.820	100.00

37 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	37	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 3:58	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

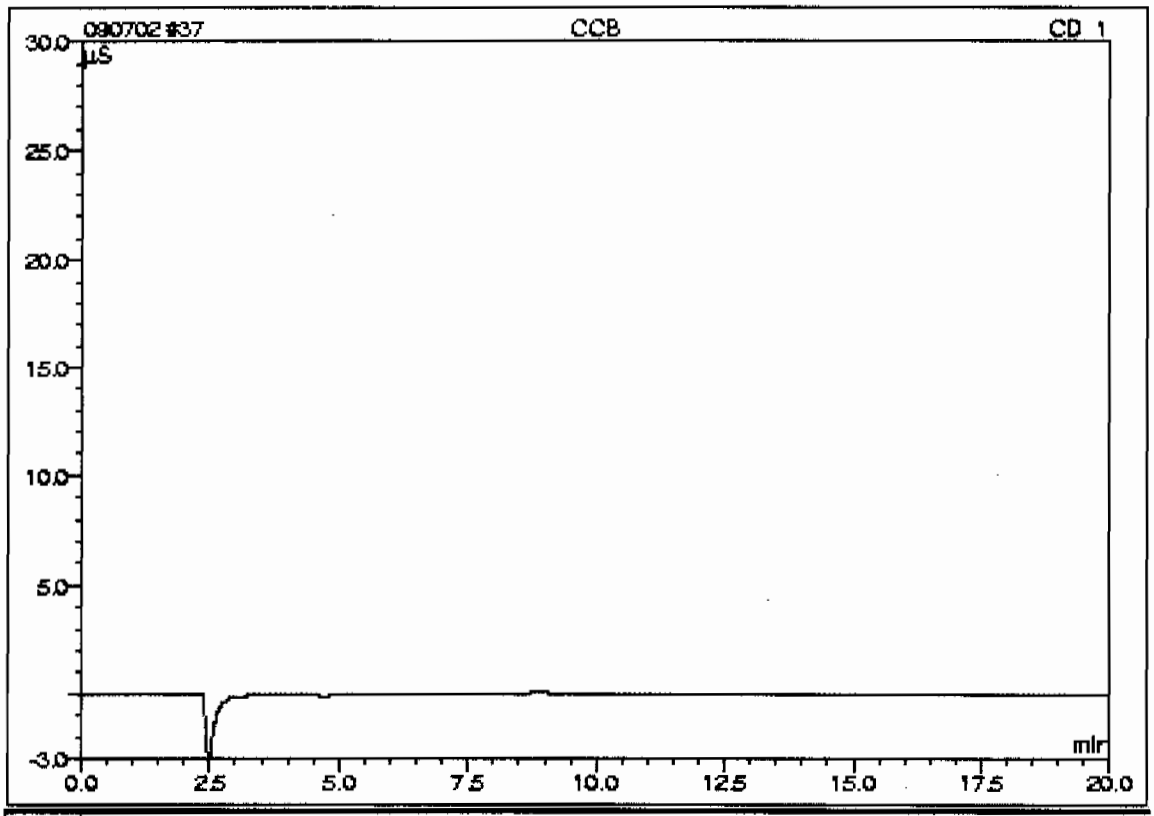

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

37 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	37	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 3:58	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

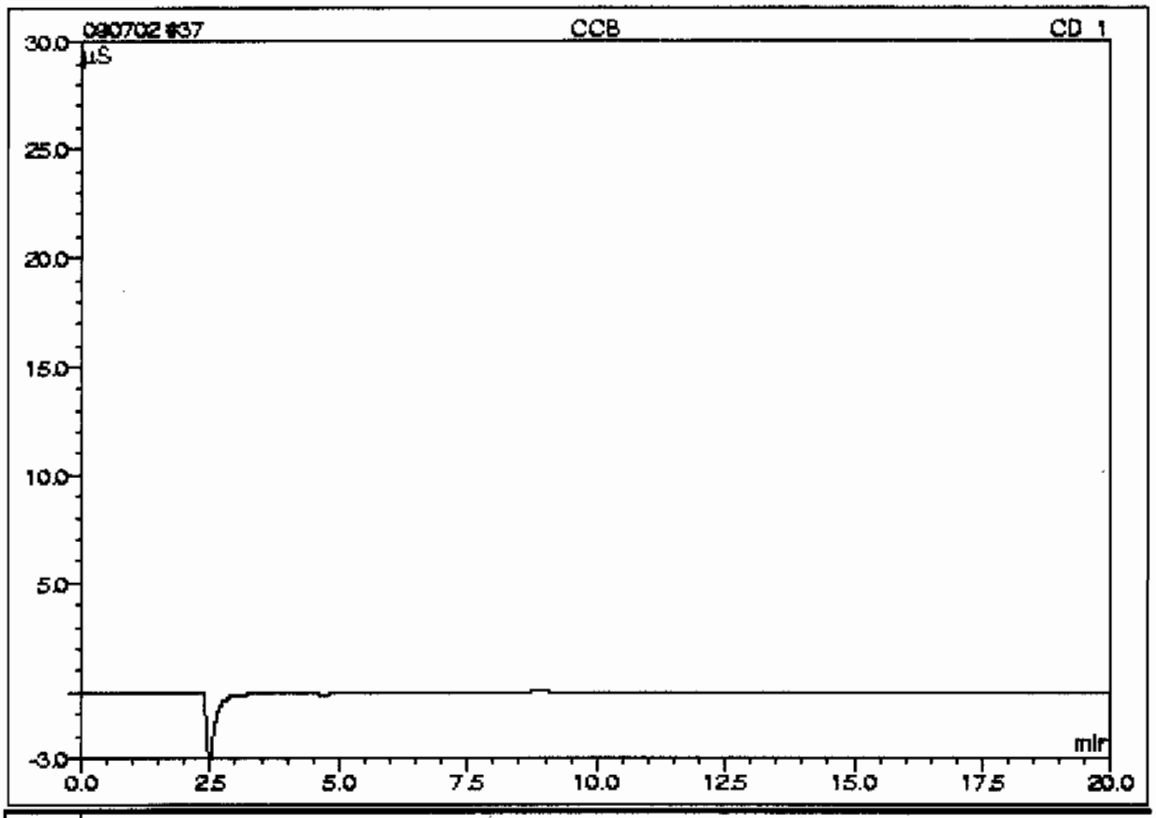

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

38 232429013/880959/1/1/

Sample Name:	232429013/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	38	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 4:19	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE086;300;9058	

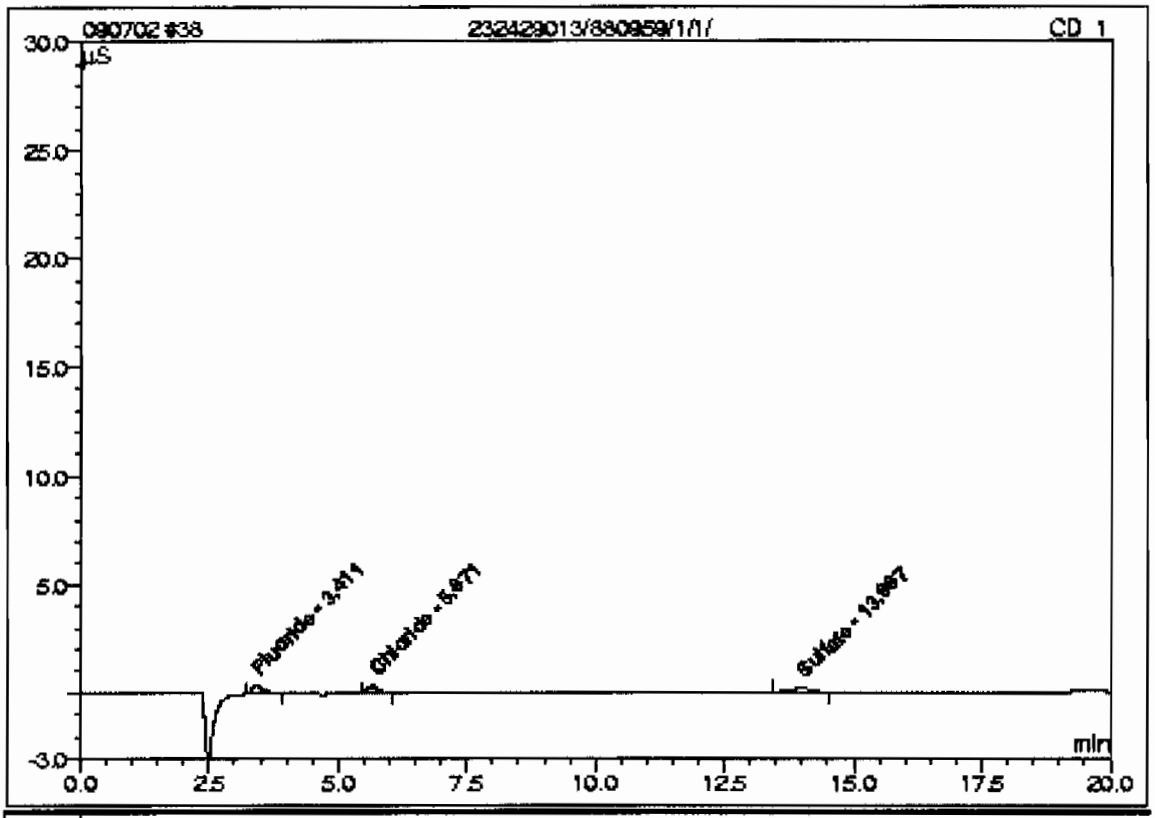

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.2634		0.09027	38.92
2	5.67	Chloride	n.a.	0.3293		0.06405	27.61
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.99	Sulfate	n.a.	0.5337		0.07764	33.47
Total:				1.1264	0.000	0.232	100.00

38 232429013/880959/1/1/

Sample Name:	232429013/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	38	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 4:19	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

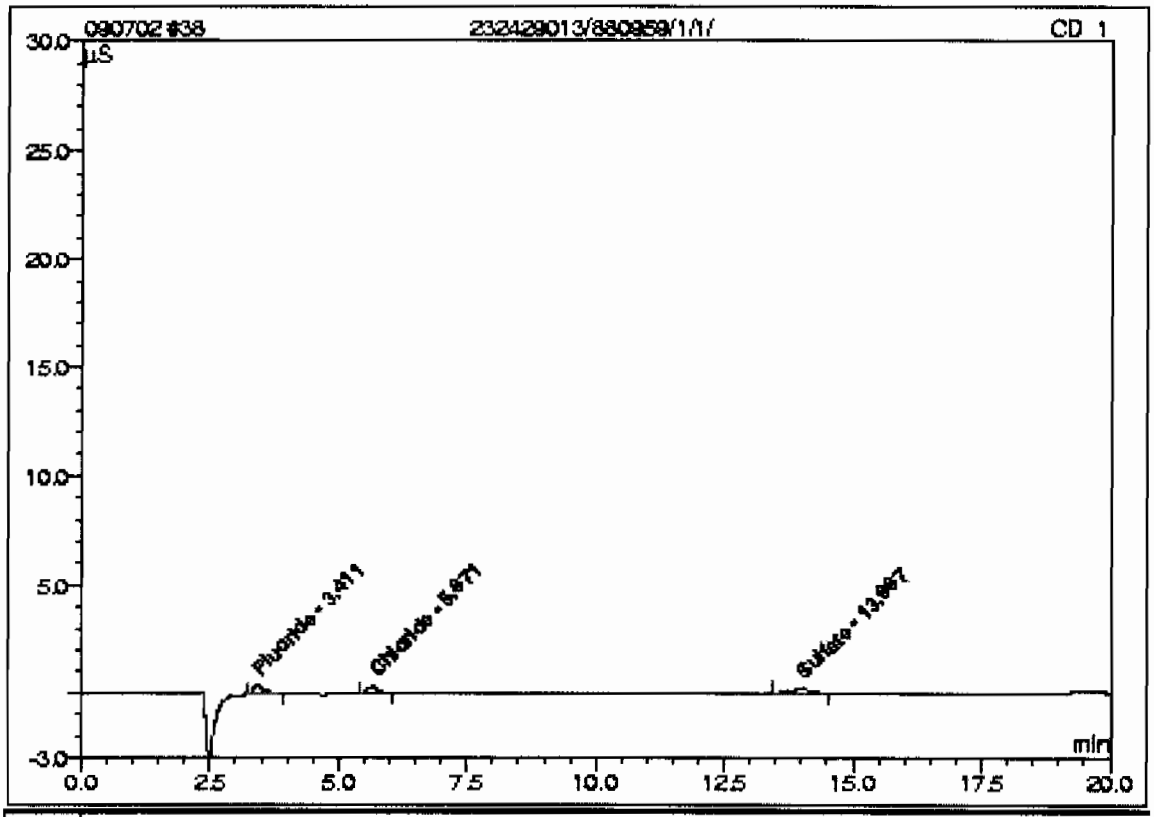

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.2613		0.09027	38.76
2	5.67	Chloride	n.a.	0.3290		0.06496	27.90
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	13.99	Sulfate	n.a.	0.5337		0.07764	33.34
Total:				1.1240	0.000	0.233	100.00

39 232429014/880959/1/1/

Sample Name:	232429014/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	39	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 4:42	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

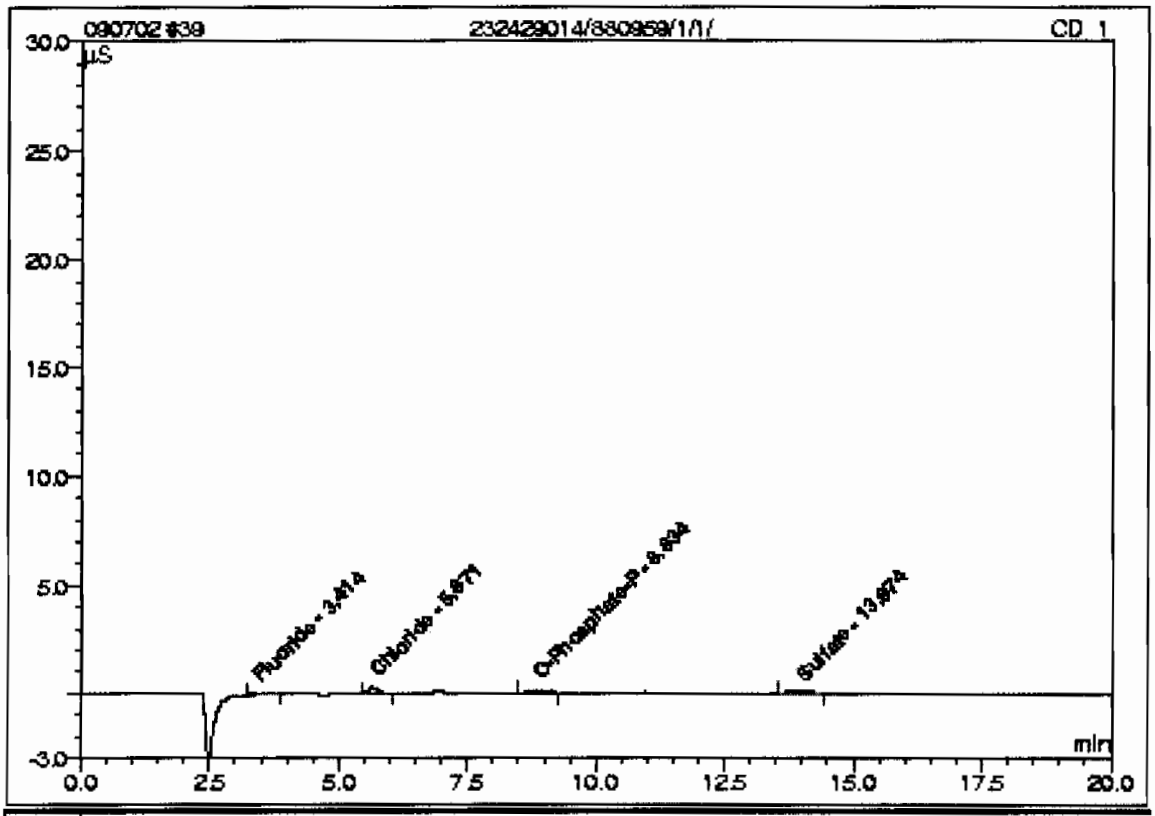

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.0948		0.02285	13.80
2	5.67	Chloride	n.a.	0.3061		0.05630	34.01
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	8.83	O-Phosphate-P	n.a.	-0.0627		0.03856	23.30
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
4	13.97	Sulfate	n.a.	0.4088		0.04782	28.89
Total:				0.7470	0.000	0.166	100.00

39 232429014/880959/1/1/

Sample Name:	232429014/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	39	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 4:42	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

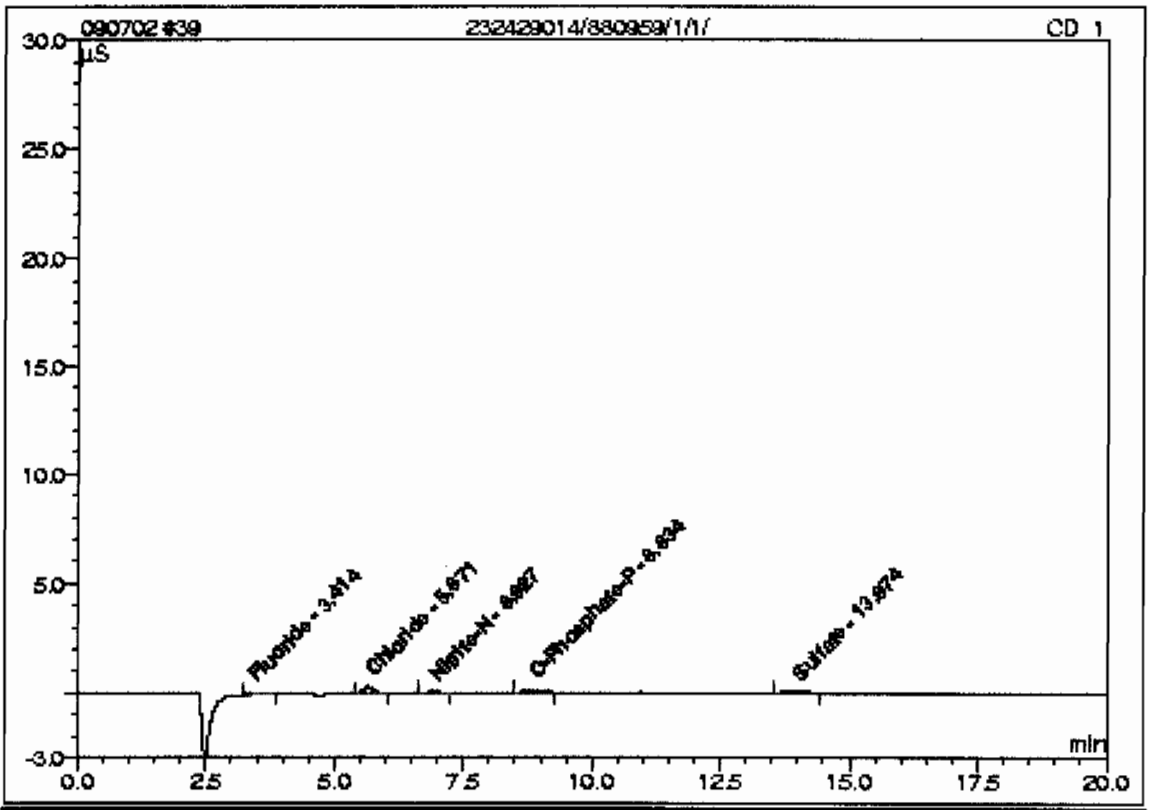

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.0954		0.02285	12.64
2	5.67	Chloride	n.a.	0.3083		0.05797	32.07
3	6.93	Nitrite-N	n.a.	0.0694		0.01354	7.49
4	8.83	O-Phosphate-P	n.a.	-0.0215		0.03856	21.34
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
5	13.97	Sulfate	n.a.	0.4088		0.04782	26.46
Total:				0.8605	0.000	0.181	100.00

40 232429015/880959/1/1/

Sample Name:	232429015/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	40	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 5:05	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

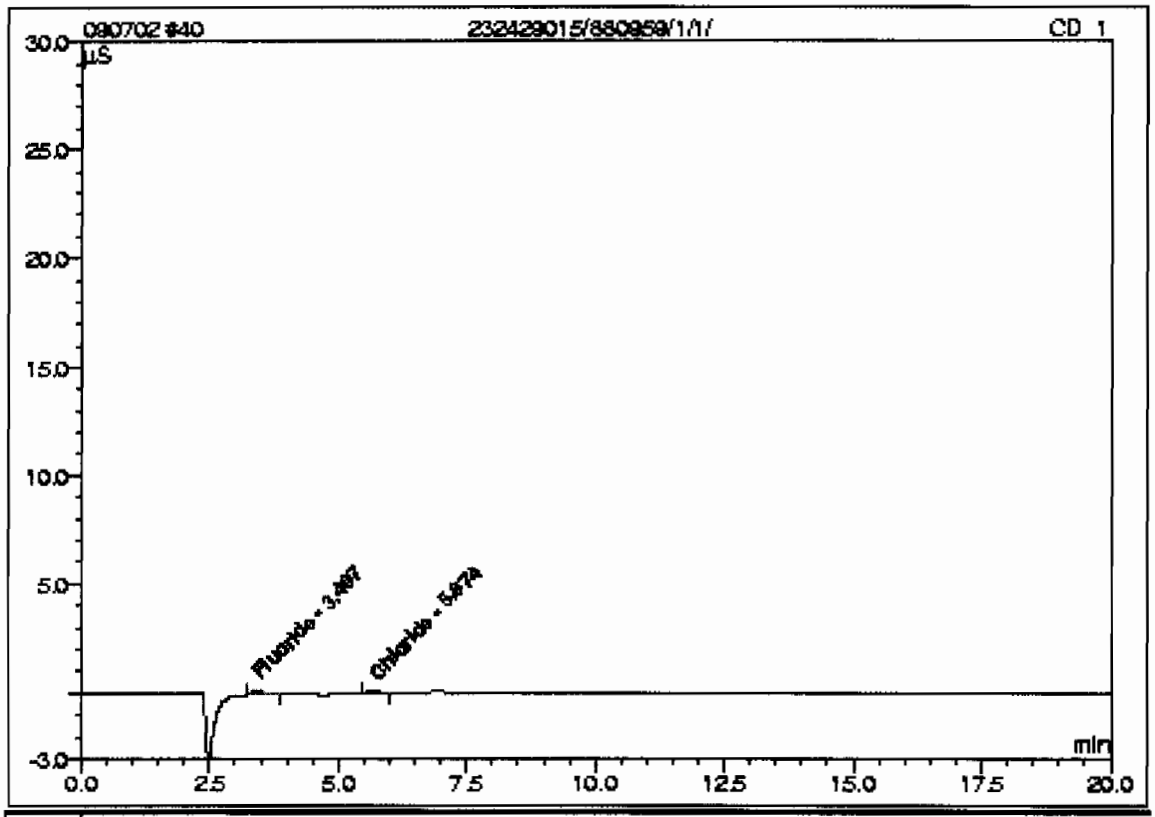

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1581		0.04817	70.88
2	5.67	Chloride	n.a.	0.1966		0.01979	29.12
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.3548	0.000	0.068	100.00

40 232429015/880959/1/1/

Sample Name:	232429015/880959/1/1/	*Injection Volume:*	50.0
Vial Number:	40	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 5:05	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

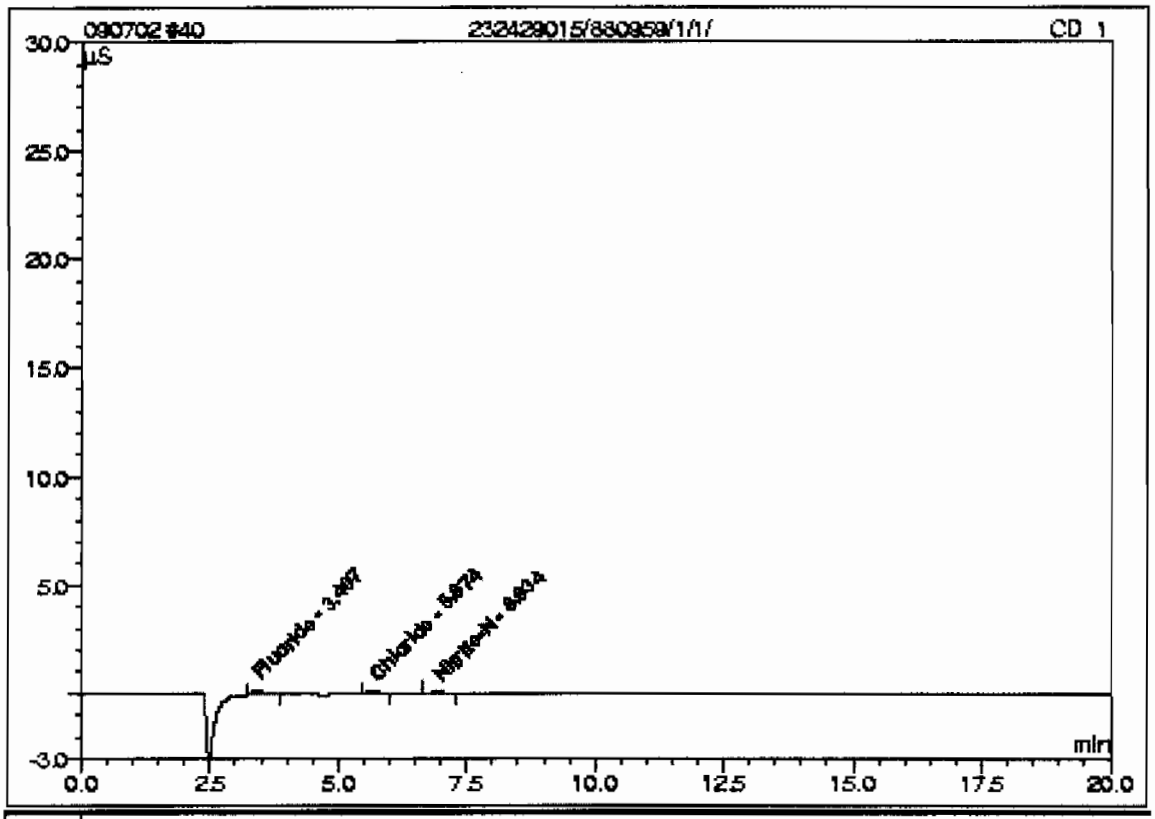

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1577		0.04817	58.51
2	5.67	Chloride	n.a.	0.1953		0.01979	24.04
3	6.93	Nitrite-N	n.a.	0.0707		0.01436	17.45
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.4237	0.000	0.082	100.00

41 WIC090702-02CVH

Sample Name:	WIC090702-02CVH	*Injection Volume:*	50.0
Vial Number:	41	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 5:28	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

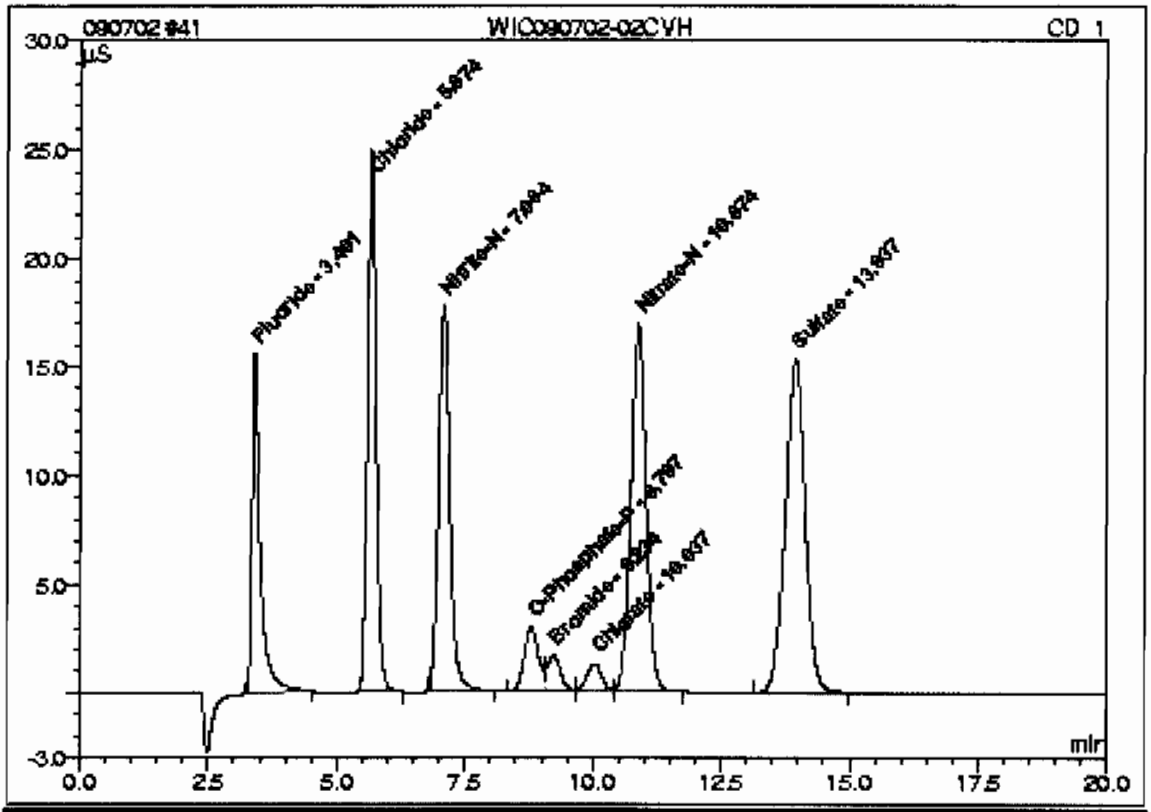

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	7.3971		2.94318	10.94
2	5.67	Chloride	n.a.	14.5423		4.80420	17.86
3	7.08	Nitrite-N	n.a.	7.3743		4.46513	16.60
4	8.80	O-Phosphate-P	n.a.	3.6436		0.96756	3.60
5	9.23	Bromide	n.a.	3.6120		0.53536	1.99
6	10.04	Chlorate	n.a.	3.7554		0.43437	1.61
7	10.87	Nitrate-N	n.a.	7.3090		5.79965	21.56
8	13.94	Sulfate	n.a.	29.3203		6.94669	25.83
Total:				76.9481	0.000	26.896	100.00

41 WIC090702-02CVH

Sample Name:	WIC090702-02CVH	*Injection Volume:*	50.0
Vial Number:	41	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 5:28	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

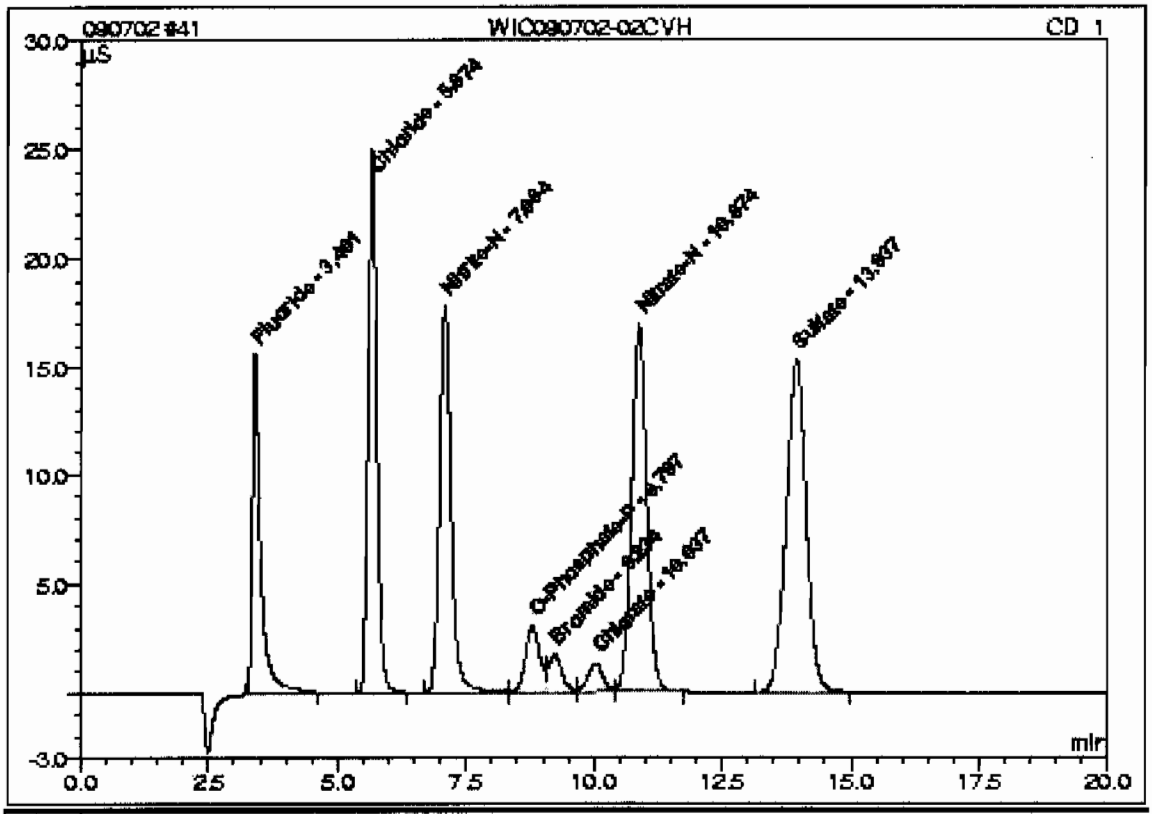

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	7.3996		2.99236	11.02
2	5.67	Chloride	n.a.	14.5563		4.87017	17.93
3	7.08	Nitrite-N	n.a.	7.3855		4.57799	16.85
4	8.80	O-Phosphate-P	n.a.	3.6530		0.98272	3.62
5	9.23	Bromide	n.a.	3.6182		0.54517	2.01
6	10.04	Chlorate	n.a.	3.7533		0.44329	1.63
7	10.87	Nitrate-N	n.a.	7.2960		5.80596	21.37
8	13.94	Sulfate	n.a.	29.3203		6.94668	25.57
Total:				76.9821	0.000	27.164	100.00

42 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	42	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 5:51	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E088;300;9058

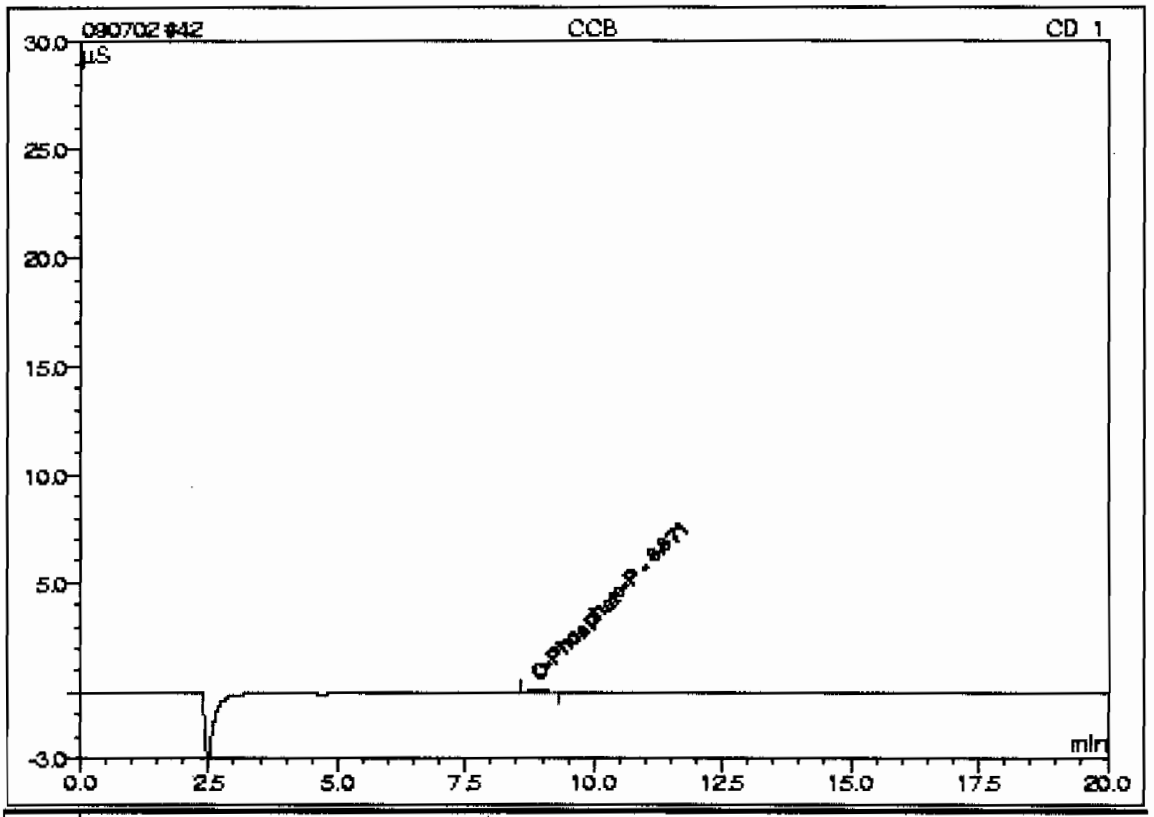

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	8.87	O-Phosphate-P	n.a.	-0.1406		0.01903	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.1406	0.000	0.019	100.00

42 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	42	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/3/09 5:51	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9058

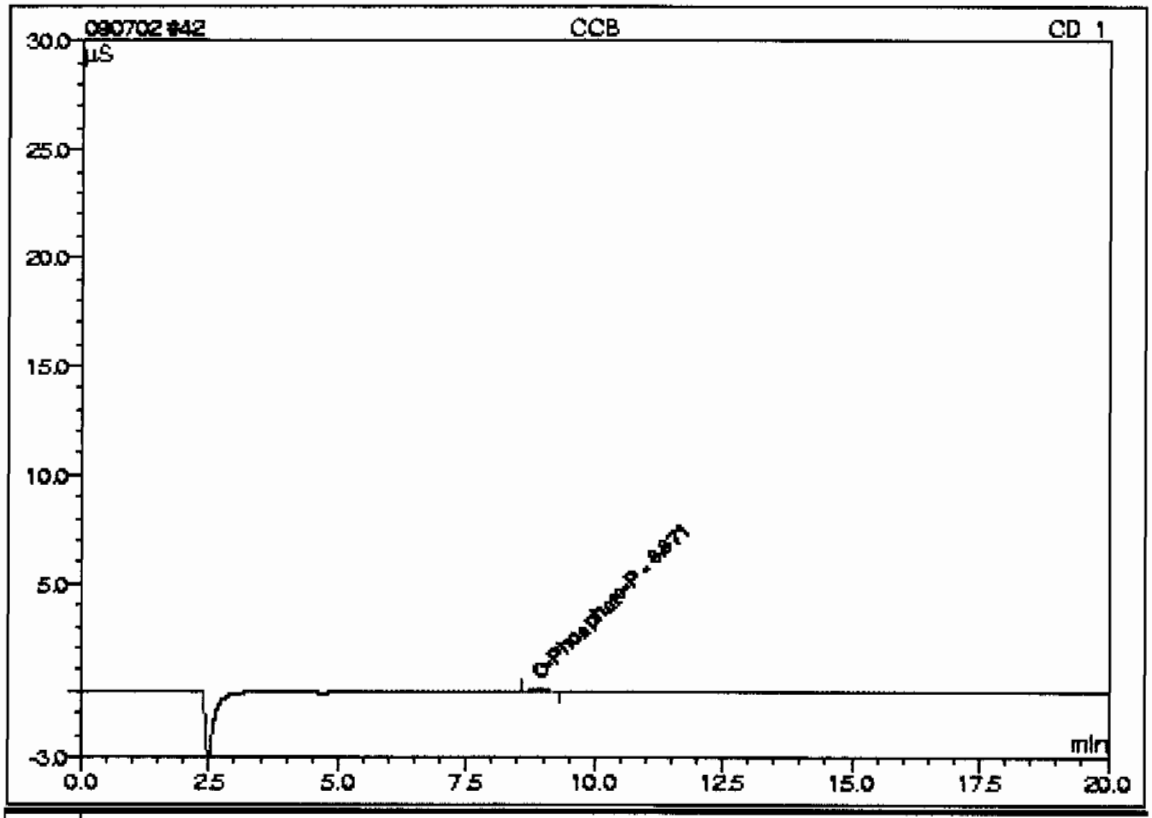

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	8.87	O-Phosphate-P	n.a.	-0.0975		0.01903	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.0975	0.000	0.019	100.00

pH

pH / Corrosivity LogBook

Analyst: RXG2
Batch: 881124
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201871139	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201871139 LCS		Soil	11:00	11:05	29-JUN-09 12:15	pH	20	20	7.03	21.4'C	7	100.429	
1201871139 LCS		Soil	11:00	11:05	29-JUN-09 12:15	pH 2	20	20	7.03	21.4'C	7	100.429	
232424001		Soil	11:00	11:05	29-JUN-09 12:15	pH	20	20	9.17	22.1'C			
232424001		Soil	11:00	11:05	29-JUN-09 12:15	pH 2	20	20	9.18	22.1'C			
1201871137 DUP	232424001	Soil	11:00	11:05	29-JUN-09 12:20	pH	20	20	8.89	21.8'C			3.101
1201871137 DUP	232424001	Soil	11:00	11:05	29-JUN-09 12:20	pH 2	20	20	8.89	21.8'C			3.21
232426001		Soil	11:00	11:05	29-JUN-09 12:21	pH	20	20	7.79	21.8'C			
232426001		Soil	11:00	11:05	29-JUN-09 12:21	pH 2	20	20	7.79	21.8'C			
1201871138 DUP	232426001	Soil	11:00	11:05	29-JUN-09 12:23	pH	20	20	7.98	21.7'C			2.41
1201871138 DUP	232426001	Soil	11:00	11:05	29-JUN-09 12:23	pH 2	20	20	7.97	21.7'C			2.284
CCV			11:00	11:05	29-JUN-09 12:25	pH	20	20	7.02	21.6'C	7	100.286	
CCV			11:00	11:05	29-JUN-09 12:25	pH 2	20	20	7.02	21.6'C	7	100.286	
232426002		Soil	11:00	11:05	29-JUN-09 12:28	pH	20	20	8.56	21.8'C			
232426002		Soil	11:00	11:05	29-JUN-09 12:28	pH 2	20	20	8.57	21.8'C			
232429001		Soil	11:00	11:05	29-JUN-09 12:28	pH	20	20	8.27	21.7'C			
232429001		Soil	11:00	11:05	29-JUN-09 12:28	pH 2	20	20	8.28	21.7'C			
232429002		Soil	11:00	11:05	29-JUN-09 12:30	pH	20	20	7.24	21.6'C			
232429002		Soil	11:00	11:05	29-JUN-09 12:30	pH 2	20	20	7.24	21.6'C			
232429003		Soil	11:00	11:05	29-JUN-09 12:33	pH	20	20	8.04	21.4'C			
232429003		Soil	11:00	11:05	29-JUN-09 12:33	pH 2	20	20	8.05	21.5'C			
232429004		Soil	11:00	11:05	29-JUN-09 12:36	pH	20	20	7.97	21.4'C			
232429004		Soil	11:00	11:05	29-JUN-09 12:36	pH 2	20	20	7.98	21.4'C			
CCV			11:00	11:05	29-JUN-09 12:37	pH	20	20	7.02	21.7'C	7	100.286	
CCV			11:00	11:05	29-JUN-09 12:37	pH 2	20	20	7.03	21.7'C	7	100.429	
232429005		Soil	11:00	11:05	29-JUN-09 12:42	pH	20	20	7.85	21.7'C			
232429005		Soil	11:00	11:05	29-JUN-09 12:42	pH 2	20	20	7.84	21.7'C			
232429006		Soil	11:00	11:05	29-JUN-09 12:42	pH	20	20	7.3	21.6'C			
232429006		Soil	11:00	11:05	29-JUN-09 12:42	pH 2	20	20	7.3	21.6'C			

pH / Corrosivity LogBook

Analyst: RXG2
Batch: 881124
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201871139	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
232429007		Soil	11:00	11:05	29-JUN-09 12:43	pH	20	20	7.62	21.6'C			
232429007		Soil	11:00	11:05	29-JUN-09 12:43	pH 2	20	20	7.62	21.6'C			
232429008		Soil	11:00	11:05	29-JUN-09 12:45	pH	20	20	6.77	21.7'C			
232429008		Soil	11:00	11:05	29-JUN-09 12:45	pH 2	20	20	6.77	21.7'C			
232429009		Soil	11:00	11:05	29-JUN-09 12:48	pH	20	20	7.11	21.5'C			
232429009		Soil	11:00	11:05	29-JUN-09 12:48	pH 2	20	20	7.12	21.5'C			
CCV			11:00	11:05	29-JUN-09 12:49	pH	20	20	7.03	21.8'C	7	100.429	
CCV			11:00	11:05	29-JUN-09 12:49	pH 2	20	20	7.03	21.7'C	7	100.429	
232429010		Soil	11:00	11:05	29-JUN-09 12:52	pH	20	20	6.38	21.7'C			
232429010		Soil	11:00	11:05	29-JUN-09 12:52	pH 2	20	20	6.38	21.7'C			
232429011		Soil	11:00	11:05	29-JUN-09 12:52	pH	20	20	7.88	21.4'C			
232429011		Soil	11:00	11:05	29-JUN-09 12:52	pH 2	20	20	7.88	21.4'C			
232429012		Soil	11:00	11:05	29-JUN-09 12:53	pH	20	20	6.56	20.7'C			
232429012		Soil	11:00	11:05	29-JUN-09 12:53	pH 2	20	20	6.56	20.7'C			
232429013		Soil	11:00	11:05	29-JUN-09 12:54	pH	20	20	6.9	21.3'C			
232429013		Soil	11:00	11:05	29-JUN-09 12:54	pH 2	20	20	6.91	21.3'C			
232429014		Soil	11:00	11:05	29-JUN-09 12:56	pH	20	20	7.53	20.9'C			
232429014		Soil	11:00	11:05	29-JUN-09 12:56	pH 2	20	20	7.52	20.9'C			
CCV			11:00	11:05	29-JUN-09 12:58	pH	20	20	7.03	20.7'C	7	100.429	
CCV			11:00	11:05	29-JUN-09 12:58	pH 2	20	20	7.03	20.7'C	7	100.429	
232429015		Soil	11:00	11:05	29-JUN-09 13:00	pH	20	20	7.28	20.7'C			
232429015		Soil	11:00	11:05	29-JUN-09 13:00	pH 2	20	20	7.28	20.7'C			
CCV			11:00	11:05	29-JUN-09 13:00	pH	20	20	7.01	20.9'C	7	100.143	
CCV			11:00	11:05	29-JUN-09 13:00	pH 2	20	20	7.01	20.9'C	7	100.143	

Comments:

pH / Corrosivity LogBook

Calibration Information:
Run Date: 29-JUN-09 12:11
Instrument: PHX742
Analyst: RXG2

Standard	Observed	Theoretical		C	%Recovery
IMM090629-PH1	4.01	4	SU	21.6	100.25
IMM090629-PH-	7.01	7	SU	21.7	100.14
UPH090629b3-2	10.02	10	SU	21.7	100.2
UPH090629-03e-	2.08	2	SU	21.5	104
090629F30-2	11.94	12	SU	21.5	99.5
IMM090629g3-2	7.01	7	SU	21.5	100.14

Miscellaneous

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 709025
Revision No.: 2

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
07-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
IC	EPA 300.0	Solid	LANL
Batch ID:	**Sample Numbers:**		
880959	See Below		

Potentially affected work order(s)(SDG): 232429(09-2478)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS and MSD: QC 1201870634MS, 1201870635MSD	1. The MS and MSD recoveries were outside of the GEL acceptance limits but were within the client specified limits.

Originator's Name:
Vanessa Parsons 07-JUL-09

Data Validator/Group Leader:
Julia Hamilton 10-JUL-09

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2478-1

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881036	**Method:**	SW846 9012A
Prep Batch :	881035	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232432001	CAMO-09-6054
1201870882	Method Blank (MB)
1201870883	232370001(CAMO-09-6053) Sample Duplicate (DUP)
1201870884	232341002(CAMO-09-10819) Sample Duplicate (DUP)
1201870885	232370001(CAMO-09-6053) Matrix Spike (MS)
1201870886	232341002(CAMO-09-10819) Matrix Spike (MS)
1201870887	232370001(CAMO-09-6053) Matrix Spike Duplicate (MSD)
1201870888	232341002(CAMO-09-10819) Matrix Spike Duplicate (MSD)
1201870889	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within

acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232341002 (CAMO-09-10819) and 232370001 (CAMO-09-6053).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201870883 (CAMO-09-6053) and 1201870884 (CAMO-09-10819).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis

The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation

An NCR was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product: **Nitrate Nitrite by Cadmium Reduction**

Analytical Batch: 881227 **Method:** EPA 353.2

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 353.2:

Sample ID	Client ID
232432001	CAMO-09-6054
1201871446	Method Blank (MB)
1201871447	232370001(CAMO-09-6053) Sample Duplicate (DUP)
1201871448	232370001(CAMO-09-6053) Post Spike (PS)
1201871449	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-128 REV# 5.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8500 Series.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232370001 (CAMO-09-6053).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recovery for this sample set was within the required acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following samples in this sample group were diluted due to matrix interference: 1201871447 (CAMO-09-6053), 1201871448 (CAMO-09-6053) and 232432001 (CAMO-09-6054).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 17July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2478-1 GEL Work Order: 232432

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2478-1

Client Sample ID:	CAMO-09-6054	Project:	LANL01004
Sample ID:	232432001	Client ID:	LANL010
Matrix:	W		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal										
SW9012A Cyanide, Total "As Received"										
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2 07/02/09	0948	881036	1
Nutrient Analysis										
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"										
Nitrogen, Nitrate/Nitrite	J	0.065	0.050	0.250	mg/L	5	AXH3 06/29/09	1454	881227	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0847	881035

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 10, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232432

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Flow Injection Analysis											
Batch 881036											
QC1201870883 232370001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)	AXC2	07/02/09 09:41
QC1201870884 232341002 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)		07/02/09 09:37
QC1201870889 LCS											
Cyanide, Total	50.0				51.2	ug/L		102	(90%-110%)		07/02/09 09:35
QC1201870882 MB											
Cyanide, Total				U	5.00	ug/L					07/02/09 09:34
QC1201870885 232370001 MS											
Cyanide, Total	100	U	ND		103	ug/L		103	(60%-127%)		07/02/09 09:41
QC1201870886 232341002 MS											
Cyanide, Total	100	U	ND		102	ug/L		102	(60%-127%)		07/02/09 09:38
QC1201870887 232370001 MSD											
Cyanide, Total	100	U	ND		106	ug/L	2.87	106	(0%-20%)		07/02/09 09:42
QC1201870888 232341002 MSD											
Cyanide, Total	100	U	ND		106	ug/L	3.85	106	(0%-20%)		07/02/09 09:39
Nutrient Analysis											
Batch 881227											
QC1201871447 232370001 DUP											
Nitrogen, Nitrate/Nitrite		J	0.059	J	0.0625	mg/L	N/A ^		(+/-0.250)	AXH3	06/29/09 14:45
QC1201871449 LCS											
Nitrogen, Nitrate/Nitrite	1.00				1.02	mg/L		102	(90%-110%)		06/29/09 14:43
QC1201871446 MB											
Nitrogen, Nitrate/Nitrite				J	0.0156	mg/L					06/29/09 14:42
QC1201871448 232370001 PS											
Nitrogen, Nitrate/Nitrite	1.00	J	0.0118		0.949	mg/L		93.7	(90%-110%)		06/29/09 14:47

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range

QC Summary

Workorder: 232432

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 10-JUL-2009 10:58

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2478-1**

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**02-JUL-2009 09:29:22**	**OM_7-2-2009_09-19-36**	**143**	**150**	**95**	**(90%-110%)**	**Yes**
CCV	02-JUL-2009 09:43:39	OM_7-2-2009_09-19-36	95.6	100	96	(90%-110%)	Yes
CCV	02-JUL-2009 09:56:05	OM_7-2-2009_09-19-36	103	100	103	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**02-JUL-2009 09:31:12**	**OM_7-2-2009_09-19-36**	**-1.5**	**5**	**Yes**
CCB	02-JUL-2009 09:45:29	OM_7-2-2009_09-19-36	-1.03	5	Yes
CCB	02-JUL-2009 09:57:55	OM_7-2-2009_09-19-36	-0.586	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 10-JUL-2009 10:58

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2478-1

Nutrient Analysis

Method: EPA 353.2 Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8500 Series

Parmname: Nitrogen, Nitrate/Nitrite

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**29-JUN-2009 13:53:21**	**OM_6-29-2009_13-43-51**	**0.987**	**1**	**99**	**(90%-110%)**	**Yes**
CCV	29-JUN-2009 14:31:35	OM_6-29-2009_13-43-51	1.06	1	106	(90%-110%)	Yes
CCV	29-JUN-2009 14:48:18	OM_6-29-2009_13-43-51	1.06	1	106	(90%-110%)	Yes
CCV	29-JUN-2009 14:57:47	OM_6-29-2009_13-43-51	1.06	1	106	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**29-JUN-2009 13:55:42**	**OM_6-29-2009_13-43-51**	**0.00502**	**0.05**	**Yes**
CCB	29-JUN-2009 14:33:56	OM_6-29-2009_13-43-51	0.00474	0.05	Yes
CCB	29-JUN-2009 14:50:40	OM_6-29-2009_13-43-51	0.00488	0.05	Yes
CCB	29-JUN-2009 15:00:09	OM_6-29-2009_13-43-51	0.00491	0.05	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881035

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870889	URF1091135-02	.0125	mL
MS	1201870885	URF1091135-02	.025	mL
MS	1201870886	URF1091135-02	.025	mL
MSD	1201870887	URF1091135-02	.025	mL
MSD	1201870888	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870882		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
LCS	1201870889		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232341002		EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
DUP	1201870884	232341002	EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
MS	1201870886	232341002	EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
MSD	1201870888	232341002	EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
SAMPLE	232370001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
DUP	1201870883	232370001	SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
MS	1201870885	232370001	SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
MSD	1201870887	232370001	SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232425001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232432001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232482002		EPA 335.4	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232510001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090702-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/2/2009 9:22:13	OM_7-2-2009_09-19-36
150 ppb		1	axc2	7/2/2009 9:23:04	OM_7-2-2009_09-19-36
100 ppb		1	axc2	7/2/2009 9:23:57	OM_7-2-2009_09-19-36
50 ppb		1	axc2	7/2/2009 9:24:50	OM_7-2-2009_09-19-36
10 ppb		1	axc2	7/2/2009 9:25:43	OM_7-2-2009_09-19-36
CRDL 5.0 ppb		1	axc2	7/2/2009 9:26:37	OM_7-2-2009_09-19-36
ICAL-00		1	axc2	7/2/2009 9:27:31	OM_7-2-2009_09-19-36
ICV		1	axc2	7/2/2009 9:29:22	OM_7-2-2009_09-19-36
ICB		1	axc2	7/2/2009 9:31:12	OM_7-2-2009_09-19-36
CRDL		1	axc2	7/2/2009 9:33:01	OM_7-2-2009_09-19-36
1201870882	881036	1	axc2	7/2/2009 9:34:51	OM_7-2-2009_09-19-36
1201870889	881036	1	axc2	7/2/2009 9:35:44	OM_7-2-2009_09-19-36
232341002	881036	1	axc2	7/2/2009 9:36:37	OM_7-2-2009_09-19-36
1201870884	881036	1	axc2	7/2/2009 9:37:31	OM_7-2-2009_09-19-36
1201870886	881036	1	axc2	7/2/2009 9:38:24	OM_7-2-2009_09-19-36
1201870888	881036	1	axc2	7/2/2009 9:39:17	OM_7-2-2009_09-19-36
232370001	881036	1	axc2	7/2/2009 9:40:09	OM_7-2-2009_09-19-36
1201870883	881036	1	axc2	7/2/2009 9:41:02	OM_7-2-2009_09-19-36
1201870885	881036	1	axc2	7/2/2009 9:41:55	OM_7-2-2009_09-19-36
1201870887	881036	1	axc2	7/2/2009 9:42:47	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:43:39	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:45:29	OM_7-2-2009_09-19-36
232425001	881036	1	axc2	7/2/2009 9:47:17	OM_7-2-2009_09-19-36
232432001	881036	1	axc2	7/2/2009 9:48:10	OM_7-2-2009_09-19-36
232482002	881036	1	axc2	7/2/2009 9:49:02	OM_7-2-2009_09-19-36
232510001	881036	1	axc2	7/2/2009 9:49:54	OM_7-2-2009_09-19-36
1201871532	881270	1	axc2	7/2/2009 9:50:45	OM_7-2-2009_09-19-36
1201871536	881270	50	axc2	7/2/2009 9:51:39	OM_7-2-2009_09-19-36
232465001	881270	1	axc2	7/2/2009 9:52:32	OM_7-2-2009_09-19-36
232509006	881270	1	axc2	7/2/2009 9:53:26	OM_7-2-2009_09-19-36
1201871533	881270	1	axc2	7/2/2009 9:54:19	OM_7-2-2009_09-19-36
1201871534	881270	1	axc2	7/2/2009 9:55:12	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:56:05	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:57:55	OM_7-2-2009_09-19-36
1201871535	881270	1	axc2	7/2/2009 9:59:45	OM_7-2-2009_09-19-36
232582001	881270	1	axc2	7/2/2009 10:00:37	OM_7-2-2009_09-19-36
232582002	881270	1	axc2	7/2/2009 10:01:30	OM_7-2-2009_09-19-36
232585001	881270	1	axc2	7/2/2009 10:02:23	OM_7-2-2009_09-19-36
232585002	881270	1	axc2	7/2/2009 10:03:15	OM_7-2-2009_09-19-36
232585003	881270	1	axc2	7/2/2009 10:04:07	OM_7-2-2009_09-19-36
232591001	881270	1	axc2	7/2/2009 10:05:00	OM_7-2-2009_09-19-36
1201871541	881272	1	axc2	7/2/2009 10:05:51	OM_7-2-2009_09-19-36
1201871543	881272	1	axc2	7/2/2009 10:06:44	OM_7-2-2009_09-19-36
232465001	881272	1	axc2	7/2/2009 10:07:35	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:08:28	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:10:18	OM_7-2-2009_09-19-36
1201871542	881272	1	axc2	7/2/2009 10:12:09	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:13:01	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:14:52	OM_7-2-2009_09-19-36

Author: axc2 Date : 7/2/2009

Original Run Filename: OM_7-2-2009_09-19-36.OMN created 7/2/2009 09:19:36
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-2-2009_09-19-36.OMN last modified 7/2/2009 10:15:57
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090702-01	1	S1	200	8.98	7/2/2009@09:22:13			200 ppb
WCN090702-02	1	S2	150	6.83	7/2/2009@09:23:04			150 ppb
WCN090702-03	1	S3	100	4.37	7/2/2009@09:23:57			100 ppb
WCN090702-04	1	S4	50.0	2.32	7/2/2009@09:24:50			50 ppb
WCN090702-05	1	S5	10.0	0.586	7/2/2009@09:25:43			10 ppb
WCN090702-06	1	S6	5.00	0.295	7/2/2009@09:26:37			CRDL 5.0 ppb
WCN090702-08	1	S7	0.00	0.0308	7/2/2009@09:27:31			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99974 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090702-07	1	S8	143	6.45	7/2/2009@09:29:22			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090702-08	1	S7	-1.50	-3.75e-4	7/2/2009@09:31:12			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.50 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.50 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090702-06	1	S6	5.03	0.291	7/2/2009@09:33:01			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	5.03 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	5.03 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870882|881036|MB	1	1	0.440	0.0860	7/2/2009@09:34:51			
1201870889||LCS	1	2	51.2	2.35	7/2/2009@09:35:44			
232341002	1	3	-0.350	0.0509	7/2/2009@09:36:37			
1201870884||DUP	1	4	0.739	0.0994	7/2/2009@09:37:31			
1201870886||MS	1	5	102	4.60	7/2/2009@09:38:24			
1201870888||MSD	1	6	106	4.80	7/2/2009@09:39:17			
232370001	1	7	0.145	0.0729	7/2/2009@09:40:09			
1201870883||DUP	1	8	-0.522	0.0432	7/2/2009@09:41:02			
1201870885||MS	1	9	103	4.66	7/2/2009@09:41:55			
1201870887||MSD	1	10	106	4.79	7/2/2009@09:42:47			
WCN090702-03	1	S3	95.6	4.32	7/2/2009@09:43:39			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-4.4 < 10.0					

		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	-4.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.03	0.0204	7/2/2009@09:45:29			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-1.03 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-1.03 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232425001	1	11	2.25	0.167	7/2/2009@09:47:17			
232432001	1	12	0.839	0.104	7/2/2009@09:48:10			
232482002	1	13	3.65	0.229	7/2/2009@09:49:02			
232510001	1	14	-0.112	0.0615	7/2/2009@09:49:54			
1201871532|881270|MB	1	15	3.33	0.215	7/2/2009@09:50:45			
1201871536||LCS	1	16	35.0	1.62	7/2/2009@09:51:39		50.00	
232465001	1	17	7.81	0.414	7/2/2009@09:52:32			
232509006	1	18	3.82	0.237	7/2/2009@09:53:26			
1201871533||DUP	1	19	4.04	0.246	7/2/2009@09:54:19			
1201871534||MS	1	20	105	4.73	7/2/2009@09:55:12			
WCN090702-03	1	S3	103	4.64	7/2/2009@09:56:05			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-0.586	0.0403	7/2/2009@09:57:55			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.586 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.586 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201871535||MSD	1	21	99.2	4.49	7/2/2009@09:59:45			
232582001	1	22	0.545	0.0907	7/2/2009@10:00:37			
232582002	1	23	3.17	0.208	7/2/2009@10:01:30			
232585001	1	24	0.846	0.104	7/2/2009@10:02:23			
232585002	1	25	4.51	0.267	7/2/2009@10:03:15			
232585003	1	26	1.34	0.126	7/2/2009@10:04:07			
232591001	1	27	1.16	0.118	7/2/2009@10:05:00			
1201871541|881272|MB	1	28	-0.342	0.0512	7/2/2009@10:05:51			
1201871543||LCS	1	29	0.253	0.0777	7/2/2009@10:06:44			
232465001	1	30	27.3	1.28	7/2/2009@10:07:35			
WCN090702-03	1	S3	102	4.62	7/2/2009@10:08:28			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.57	-0.00337	7/2/2009@10:10:18			CCB
		Known Conc:	0.00					

DQM Test: > + Concentration Limit								
		Result:	-1.57 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.57 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201871542||DUP	1	31	48.0	2.20	7/2/2009@10:12:09			
WCN090702-03	1	S3	108	4.87	7/2/2009@10:13:01			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	7.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	7.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-0.342	0.0512	7/2/2009@10:14:52			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.342 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.342 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_7-2-2009_09-19-36.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/2/2009

Channel 1: Current View

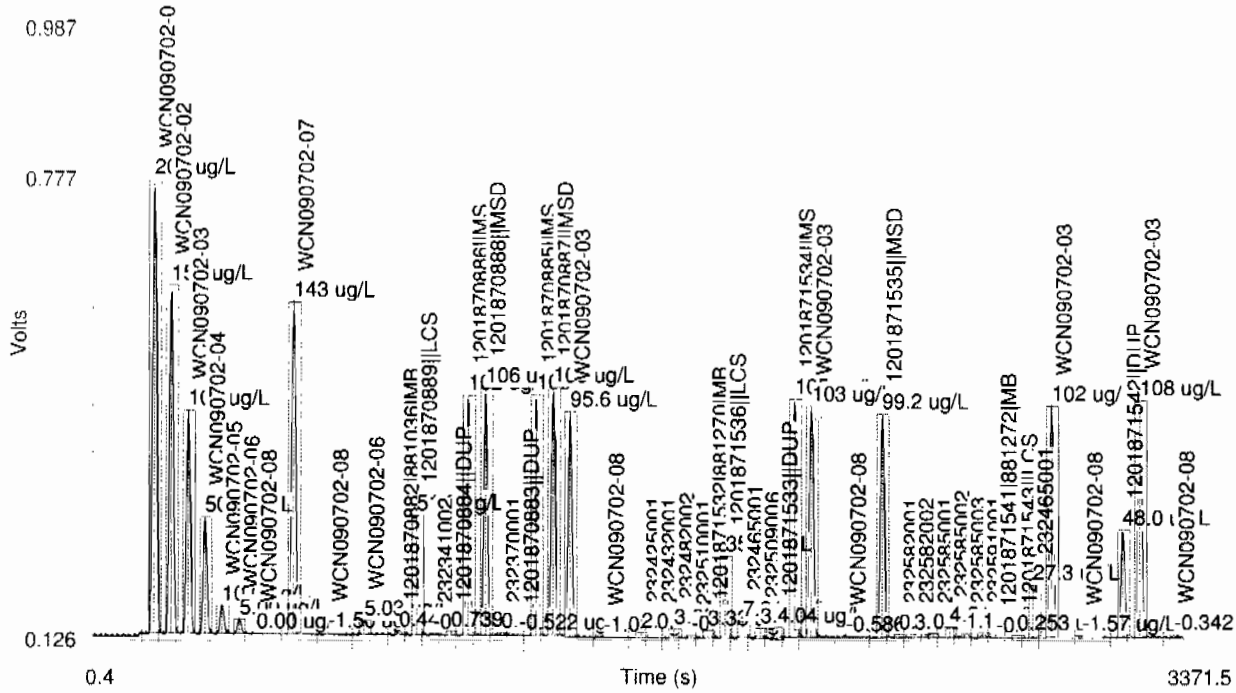

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.98	0.640	-0.0	7/2/2009	09:23:15
2	150	1	6.83	0.489	-1.3	7/2/2009	09:24:07
3	100	1	4.37	0.313	3.4	7/2/2009	09:25:00
4	50.0	1	2.32	0.165	-1.2	7/2/2009	09:25:53
5	10.0	1	0.586	0.0398	-14.0	7/2/2009	09:26:46
6	5.00	1	0.295	0.0201	-1.4	7/2/2009	09:27:40
7	0.00	1	0.0308	8.07e-4		7/2/2009	09:28:34

Figure 1: TCYANIDE

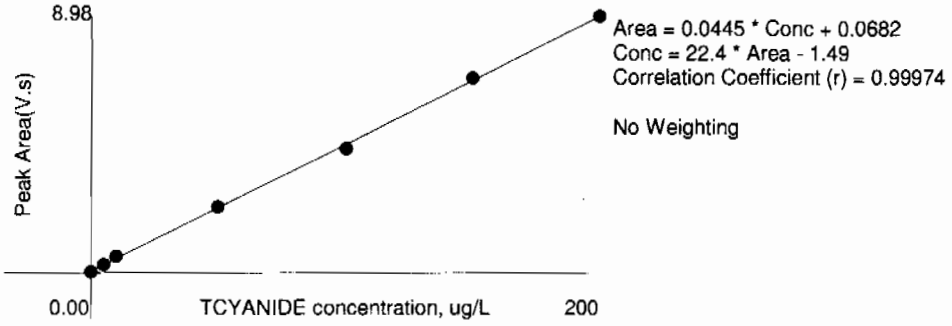

Nitrate Nitrite by Cadmium Reduction

This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
		1	axh3	6/29/2009 13:44:53	OM_6-29-2009_13-43-51
1.0 PPM		1	axh3	6/29/2009 13:46:05	OM_6-29-2009_13-43-51
0.5 ppm		1	axh3	6/29/2009 13:47:18	OM_6-29-2009_13-43-51
0.1 ppm		1	axh3	6/29/2009 13:48:31	OM_6-29-2009_13-43-51
0.05 ppm		1	axh3	6/29/2009 13:49:44	OM_6-29-2009_13-43-51
ICAL-00		1	axh3	6/29/2009 13:50:58	OM_6-29-2009_13-43-51
1.0 ppm ICV		1	axh3	6/29/2009 13:53:21	OM_6-29-2009_13-43-51
ICB		1	axh3	6/29/2009 13:55:42	OM_6-29-2009_13-43-51
Nitrate 1.0 ppm		1	axh3	6/29/2009 13:58:02	OM_6-29-2009_13-43-51
Nitrite 1.0 ppm		1	axh3	6/29/2009 14:00:22	OM_6-29-2009_13-43-51
1201870843	881024	1	axh3	6/29/2009 14:02:43	OM_6-29-2009_13-43-51
1201870852	881024	1	axh3	6/29/2009 14:03:56	OM_6-29-2009_13-43-51
231989001	881024	5	axh3	6/29/2009 14:05:09	OM_6-29-2009_13-43-51
1201870844	881024	5	axh3	6/29/2009 14:06:22	OM_6-29-2009_13-43-51
1201870848	881024	5	axh3	6/29/2009 14:07:34	OM_6-29-2009_13-43-51
231989002	881024	5	axh3	6/29/2009 14:08:47	OM_6-29-2009_13-43-51
231989003	881024	5	axh3	6/29/2009 14:09:59	OM_6-29-2009_13-43-51
231989004	881024	5	axh3	6/29/2009 14:11:12	OM_6-29-2009_13-43-51
231989005	881024	5	axh3	6/29/2009 14:12:24	OM_6-29-2009_13-43-51
231989006	881024	5	axh3	6/29/2009 14:13:37	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:14:49	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 14:17:10	OM_6-29-2009_13-43-51
231989007	881024	5	axh3	6/29/2009 14:19:30	OM_6-29-2009_13-43-51
231989008	881024	5	axh3	6/29/2009 14:20:43	OM_6-29-2009_13-43-51
232341002	881024	5	axh3	6/29/2009 14:21:54	OM_6-29-2009_13-43-51
232435002	881024	5	axh3	6/29/2009 14:23:06	OM_6-29-2009_13-43-51
1201870847	881024	5	axh3	6/29/2009 14:24:17	OM_6-29-2009_13-43-51
1201870851	881024	5	axh3	6/29/2009 14:25:30	OM_6-29-2009_13-43-51
232437001	881024	25	axh3	6/29/2009 14:26:44	OM_6-29-2009_13-43-51
1201870846	881024	25	axh3	6/29/2009 14:27:57	OM_6-29-2009_13-43-51
1201870850	881024	25	axh3	6/29/2009 14:29:10	OM_6-29-2009_13-43-51
232468001	881024	1	axh3	6/29/2009 14:30:22	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:31:35	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 14:33:56	OM_6-29-2009_13-43-51
232468002	881024	1	axh3	6/29/2009 14:36:17	OM_6-29-2009_13-43-51
232468003	881024	1	axh3	6/29/2009 14:37:29	OM_6-29-2009_13-43-51
232468004	881024	1	axh3	6/29/2009 14:38:42	OM_6-29-2009_13-43-51
232468005	881024	1	axh3	6/29/2009 14:39:54	OM_6-29-2009_13-43-51
232468006	881024	1	axh3	6/29/2009 14:41:06	OM_6-29-2009_13-43-51
1201871446	881227	1	axh3	6/29/2009 14:42:18	OM_6-29-2009_13-43-51
1201871449	881227	1	axh3	6/29/2009 14:43:30	OM_6-29-2009_13-43-51
232370001	881227	5	axh3	6/29/2009 14:44:43	OM_6-29-2009_13-43-51
1201871447	881227	5	axh3	6/29/2009 14:45:54	OM_6-29-2009_13-43-51
1201871448	881227	5	axh3	6/29/2009 14:47:06	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:48:18	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 14:50:40	OM_6-29-2009_13-43-51
232425001	881227	5	axh3	6/29/2009 14:53:01	OM_6-29-2009_13-43-51
232432001	881227	5	axh3	6/29/2009 14:54:14	OM_6-29-2009_13-43-51
232510001	881227	5	axh3	6/29/2009 14:55:27	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:57:47	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 15:00:09	OM_6-29-2009_13-43-51

Author: lachat

Date : 6/29/2009

Original Run Filename: OM_6-29-2009_13-43-51.OMN created 6/29/2009 13:43:51
Original Run Author's Signature: [lachat]
Current Run Filename: OM_6-29-2009_13-43-51.OMN last modified 6/29/2009 15:01:31
Current Run Author's Signature: [lachat]
Description: EPA 353.2
Cadmium Colum 9057AAJ
LCS nominal 1.0 mg/L

Sample	Rep.	Cup No.	Channel 1 NO3 + NO2 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR090629-26	1	S9	1.50	16.4	6/29/2009@13:44:53			
WTR090629-25	1	S10	1.00	11.9	6/29/2009@13:46:05			1.0 PPM
WTR090629-24	1	S11	0.500	5.59	6/29/2009@13:47:18			0.5 ppm
WTR090629-23	1	S12	0.100	1.10	6/29/2009@13:48:31			0.1 ppm
WTR090629-21	1	S13	0.0500	0.203	6/29/2009@13:49:44			0.05 ppm
0.0ppm	1	S15	0.00	-0.0163	6/29/2009@13:50:58			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99837 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR090629-27 ICV	1	S16	0.987	11.1	6/29/2009@13:53:21			1.0 ppm ICV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.987 < 1.10					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.987 > 0.894					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
ICB	1	S15	0.00502	-0.0144	6/29/2009@13:55:42			ICB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00502 < 0.0500					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00502 > -0.0500					
		Message	ICB Passed					
		Action	Continue					
WTR090629-22	1	S1	0.987	11.1	6/29/2009@13:58:02			Nitrate 1.0 ppm
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.987 < 1.10					
		Message	Nitrate Standard Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.987 > 0.894					
		Message	Nitrate Standard Passed					
		Action	Continue					
WTR090629-28	1	S2	0.964	10.8	6/29/2009@14:00:22			Nitrite 1.0 ppm
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.964 < 1.10					
		Message	Nitrite Standard Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.964 > 0.894					
		Message	Nitrite Standard Passed					
		Action	Continue					
1201870843|881024|MB	1	1	0.0159	0.109	6/29/2009@14:02:43			
1201870852||LCS	1	2	1.02	11.4	6/29/2009@14:03:56			
231989001	1	3	0.141	1.53	6/29/2009@14:05:09		5.00	
1201870844||DUP	1	4	0.137	1.48	6/29/2009@14:06:22		5.00	
1201870848||PS	1	5	1.09	12.3	6/29/2009@14:07:34		5.00	

231989002	1	6	0.270	2.98	6/29/2009@14:08:47		5.00	
231989003	1	7	0.181	1.97	6/29/2009@14:09:59		5.00	
231989004	1	8	0.181	1.97	6/29/2009@14:11:12		5.00	
231989005	1	9	0.0120	0.0641	6/29/2009@14:12:24		5.00	
231989006	1	10	0.353	3.91	6/29/2009@14:13:37		5.00	
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:14:49			1.0 ppm CCV
	Known Conc:		1.00					
DQM Test: > + Concentration Limit								
		Result:	1.06 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.06 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00506	-0.0140	6/29/2009@14:17:10			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00506 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00506 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
231989007	1	11	0.390	4.33	6/29/2009@14:19:30		5.00	
231989008	1	12	0.181	1.98	6/29/2009@14:20:43		5.00	
232341002	1	13	0.0717	0.738	6/29/2009@14:21:54		5.00	
232435002	1	14	0.0893	0.937	6/29/2009@14:23:06		5.00	
1201870847||DUP	1	15	0.0862	0.902	6/29/2009@14:24:17		5.00	
1201870851||PS	1	16	1.04	11.7	6/29/2009@14:25:30		5.00	
232437001	1	17	0.554	6.18	6/29/2009@14:26:44		25.00	
1201870846||DUP	1	18	0.522	5.82	6/29/2009@14:27:57		25.00	
1201870850||PS	1	19	1.47	16.5	6/29/2009@14:29:10		25.00	
232468001	1	20	-0.0137	-0.226	6/29/2009@14:30:22			
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:31:35			1.0 ppm CCV
	Known Conc:		1.00					
DQM Test: > + Concentration Limit								
		Result:	1.06 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.06 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00474	-0.0176	6/29/2009@14:33:56			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00474 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00474 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
232468002	1	21	-0.0206	-0.304	6/29/2009@14:36:17			
232468003	1	22	-0.0214	-0.313	6/29/2009@14:37:29			
232468004	1	23	-0.0176	-0.270	6/29/2009@14:38:42			
232468005	1	24	0.0207	0.163	6/29/2009@14:39:54			
232468006	1	25	0.0212	0.169	6/29/2009@14:41:06			
1201871446|881227|MB	1	26	0.0156	0.105	6/29/2009@14:42:18			
1201871449||LCS	1	27	1.02	11.5	6/29/2009@14:43:30			
232370001	1	28	0.0118	0.0627	6/29/2009@14:44:43		5.00	
1201871447||DUP	1	29	0.0125	0.0700	6/29/2009@14:45:54		5.00	
1201871448||PS	1	30	0.949	10.6	6/29/2009@14:47:06		5.00	
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:48:18			1.0 ppm CCV
	Known Conc:		1.00					
DQM Test: > + Concentration Limit								

		Result:	1.06 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.06 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00488	-0.0160	6/29/2009@14:50:40			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00488 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.00488 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
232425001	1	31	0.0155	0.104	6/29/2009@14:53:01		5.00	
232432001	1	32	0.0130	0.0755	6/29/2009@14:54:14		5.00	
232510001	1	33	0.0126	0.0714	6/29/2009@14:55:27		5.00	
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:57:47			1.0 ppm CCV
		Known Conc:	1.00					
			DQM Test: > + Concentration Limit					
		Result:	1.06 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.06 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00491	-0.0157	6/29/2009@15:00:09			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00491 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.00491 > -0.0500					
		Message	CCB Passed					
		Action	Continue					

Author: lachat

Date : 6/29/2009

Channel 1 (NO3 + NO2) : Current View

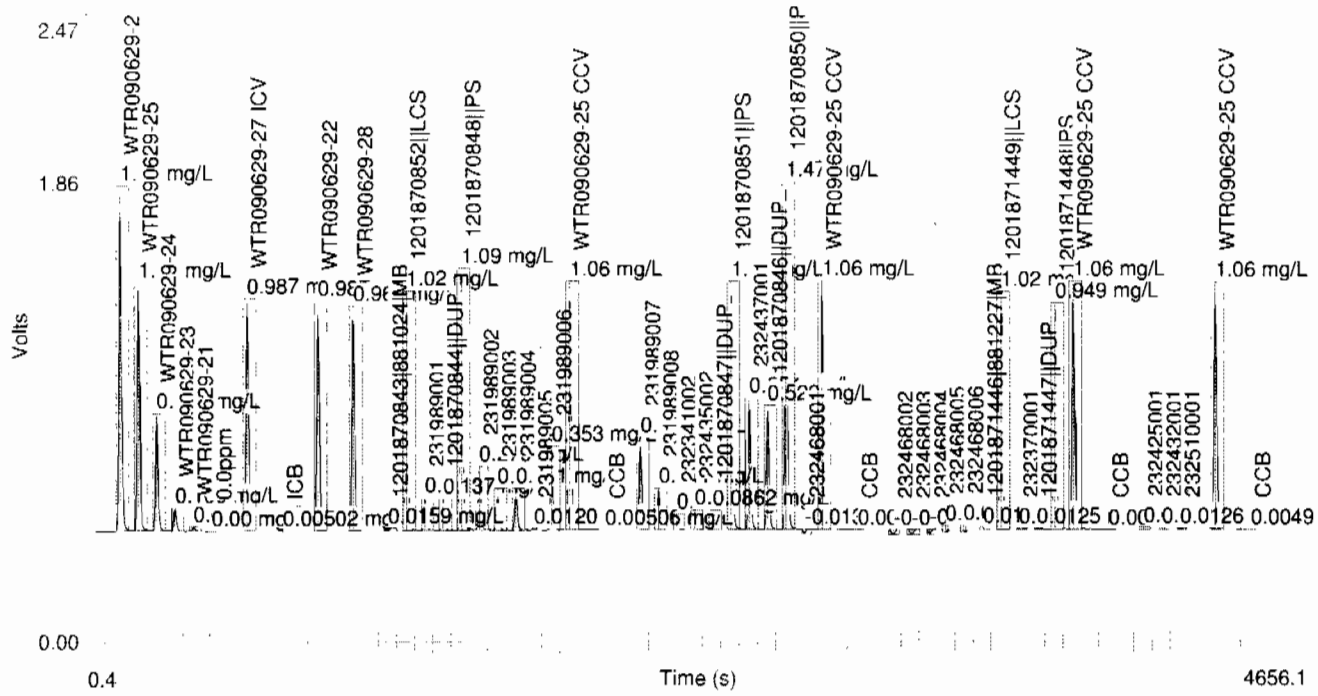

Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	16.4	1.39	2.7	6/29/2009	13:46:13
2	1.00	1	11.9	0.999	-6.1	6/29/2009	13:47:25
3	0.500	1	5.59	0.470	-0.2	6/29/2009	13:48:38
4	0.100	1	1.10	0.0923	-2.6	6/29/2009	13:49:51
5	0.0500	1	0.203	0.0169	60.2	6/29/2009	13:51:04
6	0.00	1	-0.0163	-0.00109		6/29/2009	13:52:18

Figure 1: NO3 + NO2

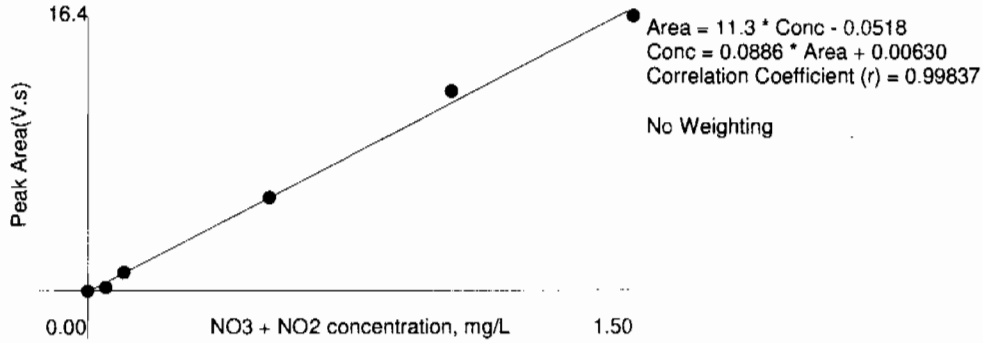

Thursday, June 25, 2009

REQUEST NUMBER: 09-2477

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2477

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	SW-846:8260B	1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2477

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8260B	1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6059	S	6/23/2009	
		1	CAMO-09-6060	S	6/23/2009	
	SW-846:8270C	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2477

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2477

REQUEST NUMBER: 09-2477

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6007	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6006	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6008	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6009	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6009	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6034	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6043	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6043	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6045	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6045	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6041	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6041	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6040	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6044	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6035	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6035	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6038	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6039	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6039	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6042	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6049	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6060	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-6059	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/25/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6006

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Alln
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	03 - 049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604950	ok	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: ND

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER GLASS~~	~~Ice~~ AG	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Light brown dry Loamy → sand soil, some root material & tuff fragments

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-07 AG 6.16.09 above drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 929 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.23.09	(Printed Name)	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	1509

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6007

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		1253	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604950	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	1.0.	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	2.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan, indurated tuff

FTB: CAMO-09-6059

SAMPLE COMMENTS: Interface @ 1.0' bgs

LOCATION DESC: 03-049(a) 07 ~~04~~ AG 6.17.09, above drainage (5) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 920 dpm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez	6.23.09	(Printed Name)	6/23/09
(Signature)	1505	(Signature)	1505

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6008

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		0850	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	AG 6.23.09 ok 03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604951	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~	AG 6.23.09	~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	~~Reg~~ 15 Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sediment from wetland, moist → wet, brown, w/ cobbles

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) - 04 ~~05~~ AG 6.17.09, drainage ⑥ of Sigma, in wetland

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 343 dpm

PID Ambient / Reading = 0.0 / 5.7 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 1505	(Printed Name) [signature] (Signature)	6/23/09 1509

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6009

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	ok
TIME COLLECTED (HH:MM)		0908	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	NA 6.23.09 ok 03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604951		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~10~~ 6.25.09 Rerun 15 Dnl	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/tan moist indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a) 04 ~~05~~ 6.17.09

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq$ 23 dpm

$\beta/\gamma \leq$ 520 dpm

PID Ambient Reading = 0.0 / 3.2 ppm

COLLECTED BY (PRINT) A. Gonzales **REVIEWED BY (PRINT)** Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature) [signature]	6.23.09 1505	(Printed Name) [illegible] (Signature) [signature]	6/23/09 1505

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6034

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		1020	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604981	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.23.09	N	
1	AG 6.26.09 Req 15-Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Moist, light brown loamy sediment

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) 06, drainage (S) of Sigmas

FIELD SCREENING/MEASUREMENT RESULTS:

α ≈ 29 dpm

β/γ ≈ 656 dpm

PID Ambient Reading = 0.0 / 5.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 15.05	(Printed Name) (Signature) [signature]	6/23/09 1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6035

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		1032	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604981	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Aug 6.23.09 15 RES DAY	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan/Pink highly indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-06, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α: 17 dpm

β/γ: 452 dpm

PID Ambient / Reading = 0.0 / 4.3 ppm

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature)	6.23.09 15.05	(Printed Name) (Signature)	6/23/09
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6038

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Mlh
TIME COLLECTED (HH:MM)		0945	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604983	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	AG 6.23.09 Rec'd 15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: light brown, moist, loamy soil

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-09, in drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 704 dpm

PID $\frac{\text{ambient}}{\text{Reading}} = \frac{0.0}{4.3}$ ppm

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales	6.23.09	(Printed Name) Jay Wis.	6/23/09
(Signature) [signature]	1509	(Signature) [signature]	1509
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6039

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		AG 6.22.09 ~~0905~~ 0954	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604983	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	AG 6.23.09 ~~Reg~~ 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Highly indurated tan tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 63 · 049(a) - 09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 1/ dpm

β/γ ≤ 493 dpm

PID Ambient Reading = 0.0 / 6.7 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Melissa Martyn	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	305
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6040

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		0925	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604984	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.23.09	N	
1	AG 6.23.09 ~~Rush~~ 15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown moist sediment w/ some root material, light & loamy

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) · 10, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 622 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{8.2}$ ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature)	6.23.09 1505	(Printed Name) (Signature)	6/23/09 1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6041

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	ok
TIME COLLECTED (HH:MM)		0936	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604984	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	RG 6-22-09 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan/gray indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-10, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α < 11 dpm

β/γ < 622 dpm

PID Ambient Reading = 0.0 / 2.4 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.23.09	(Printed Name)	6/23/09
(Signature)	1505	(Signature)	1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6042

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2006	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1355	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604985	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AGG.23.2009	N	
1	15-Day	8270C	250 ML AMBER GLASS	Ice	Y	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sediment, brown → light brown eroded tuff & duff

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)- 11

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

β/γ 343 dpm

PID Ambient Reading: 0.0 / 5.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Melissa Martinez	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	3:01
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6043

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604985	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Pink/gray/tan weathered tuff → indurated tuff

FTB: CAMO-09-6060

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-11

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 1331 dpm

PID $\frac{\text{ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Sherri Sherwood	6/23/09
(Signature) [signature]	1505	(Signature) Sherri Sherwood	3:25
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6044

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	SED
TIME COLLECTED (HH:MM)		1405	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604986	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~	~~15-Day~~	~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Eroded tuff sediment tan/brown with duff material

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-12, in drainage (5) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 17$ dpm

$\beta/\gamma \leq 1419$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{2.1}$ ppm

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales	6.23.09	(Printed Name)	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	1500
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6045

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Qbt3
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604986	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/gray indurated tuff

FR: CAMO-09-6054

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a) 12, in drainage below Sigma (5)

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 23$ dpm

$\beta/\gamma \leq 1324$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature)	6.23.09 1505	(Printed Name) (Signature)	6/23/09 1509
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6049

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Alluv
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	UNK	MD-604960	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: QC Sample of CAMO-09-6006

~~Light brown, Loamy~~ → sand soil, some root material & tuff material

OK AG 6.23.09

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-07

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 929 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Luian

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09 15.05	(Printed Name)	6/23/09 1509
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6054

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1430	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	OK	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604986	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~7196A~~	~~250 ML POLY~~	~~Ice~~ AG 6.23.09	N	
~~2~~		~~8290~~	~~1 LITER AMBER GLASS~~	~~Ice~~ AG 3/31/09	N	
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-6045

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-12

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gouma

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gouma (Signature)	6.23.09 1505	(Printed Name) (Signature)	6/23/09 1505
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6059

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1253	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604950	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
AG 6.23.09 ~~2~~ 1	15 - Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6007

tan indurated tuff

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-07

FIELD SCREENING/MEASUREMENT RESULTS: NA

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature) [signature]	6.23.09 1505	(Printed Name) Sherri Sherwood (Signature) [signature]	6/23/09 3:30
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6060

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	mo-604985	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
AG 6.23.09 1	Reg	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6043

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-11

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Sherri Sherwood	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	3:30
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6006
Sample Collection Date: 06/23/09 12:45
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-001
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	36.36	71.53	133.66	71.66	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	38.24	15.97	19.98	16.64		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.09	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	18.57	7.43	1.68	7.45		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.14	0.15	0.11	0.15		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.02	0.05	0.08	0.05	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.24	0.20	0.07	0.20		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.20	0.13	11.20	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.28	0.53	0.19	0.53		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.38	0.77	0.20	0.78		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.63	1.32	0.35	1.32		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	0.76	1.87	1.03	1.88	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.03	0.13	0.08	0.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.19

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6007	ARS Sample ID:	ARS2-09-00074-002
Sample Collection Date:	06/23/09 12:53	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	40.17	70.68	127.53	70.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	24.88	14.72	20.61	15.04		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	31.24	11.09	2.24	11.12		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.09	0.10	0.15	0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.26	0.22	0.11	0.22	BI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.00	-0.04	0.09	-0.04	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	15.25	0.17	15.25	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.34	0.59	0.19	0.59		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	3.44	1.68	0.30	1.68		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.55	1.03	0.45	1.03		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	4.27	4.99	2.02	5.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.03	0.12	0.07	0.12	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.32

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6008	ARS Sample ID:	ARS2-09-00074-003
Sample Collection Date:	06/23/09 08:50	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-5.38	40.13	128.32	40.13	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	44.77	17.27	21.30	18.12		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	22.94	8.55	1.81	8.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	11.82	0.12	11.82	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	15.46	0.07	15.46	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.95	0.57	0.14	0.58	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.32	0.51	0.16	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-228	1.84	0.79	0.32	0.80		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.76	1.01	0.33	1.01		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.02	2.64	1.32	2.68		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.54	0.62	0.21	0.62		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 3.34

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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AMERICAN RADIATION SERVICES, INC.

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6009
Sample Collection Date: 06/23/09 09:08
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-004
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	43.37	74.66	133.72	74.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	49.40	17.43	20.15	18.45		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.06	0.11	0.09	0.11	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	25.46	8.08	1.48	8.11		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	0.07	0.10	0.07	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.07	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.10	0.13	0.06	0.13		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.30	0.48	0.17	0.48	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.40	0.30	0.16	0.30		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-228	1.39	0.52	0.28	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	-0.06	86.23	0.19	86.23	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.27	3.20	1.19	3.42		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.04	0.09	0.04	0.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.89

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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AMERICAN RADIATION SERVICES, INC.

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6034	ARS Sample ID:	ARS2-09-00074-005
Sample Collection Date:	06/23/09 10:20	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.11	87.03	133.66	87.47	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	35.82	16.41	19.98	17.12		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.18	0.26	0.15	0.26	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.31	-19.95	4.04	-19.95	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	15.47	0.16	15.47	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.13	0.11	0.13	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.70	0.41	0.10	0.41		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.26	0.38	0.18	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.32	0.64	0.19	0.64		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-228	0.66	0.66	0.54	0.66		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.99	0.87	0.40	0.87		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	7.19	4.21	1.68	4.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.10	0.42	0.20	0.42	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.43

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074

Client Sample ID: CAMO-09-6035

Sample Collection Date: 06/23/09 10:32

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-09-00074-006

Date Received: 06/24/09 00:00

Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	111.18	99.15	127.53	100.08	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	32.01	16.15	20.61	16.62		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	1.12	7.61	4.21	7.61	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO 60	0.00	11.08	0.12	11.98	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	13.68	0.08	13.68	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	63.35	0.14	63.35	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.36	0.55	0.18	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.60	0.68	0.48	0.68		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.19	1.05	0.53	1.06		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.93	3.27	1.41	3.34		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.10	0.32	0.15	0.32	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.47

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate # 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6038	ARS Sample ID:	ARS2-09-00074-007
Sample Collection Date:	06/23/09 09:45	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	53.28	77.50	128.32	77.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	48.71	18.23	21.30	19.18		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.66	-28.61	4.37	-28.61	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	14.10	0.14	14.14	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	1.24	0.52	0.09	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.47	0.42	0.17	0.42	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.42	0.58	0.17	0.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.46	0.33	0.63	0.33	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.35	1.09	0.22	1.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.46	3.13	1.47	3.23		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.48	0.41	0.12	0.41		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.50

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6039	ARS Sample ID:	ARS2-09-00074-008
Sample Collection Date:	06/23/09 09:54	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	Trv	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	76.84	87.88	133.72	88.39	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	42.51	16.91	20.15	17.69		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	1.00	9.18	5.09	9.18	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	13.72	0.14	13.72	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.23	0.21	0.10	0.21	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.81	0.33	0.09	0.33		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	14.27	0.16	14.27	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.50	0.58	0.15	0.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	2.37	0.99	0.37	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.23	0.37	0.29	0.37	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	4.86	4.48	1.88	4.61		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.00	-0.10	0.14	-0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.87

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6040	ARS Sample ID:	ARS2-09-00074-009
Sample Collection Date:	06/23/09 09:25	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	90.02	93.81	133.66	94.46	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	35.56	16.05	19.98	16.63		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.15	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.11	-18.37	3.52	-18.37	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.20	0.21	0.15	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.20	0.11	0.20	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.16	0.20	0.09	0.20		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.53	0.58	0.17	0.58	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.21	0.59	0.21	0.59		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.00	1.00	0.40	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.74	1.00	0.40	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.55	2.91	1.43	2.97		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.57	0.57	0.21	0.57		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 3.28

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate # 30558 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6041	ARS Sample ID:	ARS2-09-00074-010
Sample Collection Date:	06/23/09 09:36	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	57.98	78.78	127.83	79.10	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	31.92	15.72	20.61	16.20		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	0.34	4.79	2.96	4.79	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.14	0.21	0.12	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.11	0.15	0.09	0.15	SE	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	37.23	0.08	37.23	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	12.46	0.14	12.46	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.39	0.49	0.11	0.50		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.59	0.30	0.83	0.36		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.38	0.49	0.21	0.49		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	6.68	3.88	1.44	4.16		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.28	0.27	0.12	0.27		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.65

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CANO-09-6042	ARS Sample ID:	ARS2-09-00074-011
Sample Collection Date:	06/23/09 13:55	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	14.17	55.49	128.32	55.52	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	39.84	16.88	21.30	17.37		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-0.91	-13.77	2.91	-13.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.15	0.21	0.13	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.51	0.31	0.08	0.31		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.50	0.38	0.14	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.46	0.54	0.16	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.32	0.71	0.33	0.71	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.90	0.96	0.19	0.96		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.11	4.22	1.59	4.38		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.42	0.34	0.12	0.34		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.02

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6043	ARS Sample ID:	ARS2-09-00074-012
Sample Collection Date:	06/23/09 14:00	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	9.94	58.52	133.72	58.53	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	42.67	16.65	20.15	17.26		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-2.15	-39.09	4.20	-39.09	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	10.77	0.11	10.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.22	0.05	0.22	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.20	0.16	0.07	0.16		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.20	0.13	11.20	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.51	0.52	0.16	0.53		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.05	0.61	0.20	0.61		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.80	1.04	0.23	1.04		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.71	2.93	1.27	3.05		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.31	0.23	0.07	0.23		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.80

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6044	ARS Sample ID:	ARS2-09-00074-013
Sample Collection Date:	06/23/09 14:05	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Descriptiles	Analysis Results	Analysis Error +/- 2 s	MDC	LLD	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	36.21	71.59	133.66	71.73	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	58.06	18.08	19.98	19.43		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	28.36	10.23	2.10	10.26		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	13.72	0.14	13.72	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.13	0.10	0.13	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.04	0.18	0.10	0.18	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.24	0.38	0.16	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.58	0.56	0.13	0.56		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-228	-0.14	137.77	0.37	137.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.06	0.70	0.26	0.70		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.86	3.02	1.45	3.08		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.16	0.26	0.12	0.26		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.59

Quality Assurance Review

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LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6045
Sample Collection Date: 06/23/09 14:10
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-014
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	93.40	92.88	127.83	93.58	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	46.96	17.64	20.61	18.56		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.07	0.14	0.11	0.14	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	29.56	9.50	1.76	9.54		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.02	0.06	0.12	0.06	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.22	0.08	0.22	BI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.03	0.13	0.09	0.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.96	0.13	11.96	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.18	0.52	0.19	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	2.21	0.85	0.31	0.86		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.09	1.00	0.29	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.42	3.28	1.43	3.38		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.08	0.27	0.14	0.27	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.16

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: AR$2-09-00074

Client Sample ID: CAMO-09-6049

Sample Collection Date: 06/23/09 12:45

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-09-00074-015

Date Received: 06/24/09 00:00

Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	14.17	53.49	128.32	55.52	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	27.37	18.33	21.30	15.69		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.18	0.21	0.10	0.21	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-2.13	-31.44	3.53	-31.44	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	10.13	0.10	10.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.14	0.07	0.14	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.25	0.21	0.06	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.59	0.51	0.12	0.51	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.59	0.48	0.10	0.49		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	-0.12	101.60	0.27	101.65	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.86	0.86	0.42	0.86		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.93	3.39	1.15	3.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.02	0.10	0.06	0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.15

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # EB7558

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-6006 → 6009
6034 → 6035
6038 → 6045
6049
10463
7143
7144

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-6059
6060
6054
10468
9118
9119

Reason: QC of Samples

Print Last Name Gouma's Signature [signature] Date 6.23.09

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2477 VALIDATION DATE: 07/28/2009 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): VOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the FTB, sample CAMO-09-6059, which was associated with sample -6007, benzene was detected. In the FTB, sample -6060, which was associated with sample -6043, acetone was detected. The associated sample results were NDs and, thus, were not qualified.
2. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
3. The ICV or CCV %Ds were >20% for methylene chloride; 2-butanone; 1,2-dichloroethane; isopropylbenzene and 1,2-dibromo-3-chloropropane. All associated sample results were NDs and, thus, were qualified UJ,V7c.
4. It should be noted that trichlorotrifluoroethane was not spiked into the MS/MSD. It should also be noted that the parent sample for the MS/MSD was a LANL sample from another RN. The analysis of an MS or MSD was not required for VOCs and, thus, no sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 7/29/09

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

VALIDATOR'S SIGNATURE: Mary A. Dorsey

DATE: 07/28/2009

Form 5114-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☐	☒	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☒	☐	☐	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☐	☒	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☐	☒	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☐	☒	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☒	☐	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☒	☐	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☒	☐	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 17:41	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s116.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.04	ug/kg	0.355	1.04	
74-87-3	Chloromethane	U	1.04	ug/kg	0.313	1.04	
75-01-4	Vinyl chloride	U	1.04	ug/kg	0.313	1.04	
74-83-9	Bromomethane	U	1.04	ug/kg	0.313	1.04	
75-00-3	Chloroethane	U	1.04	ug/kg	0.313	1.04	
75-69-4	Trichlorofluoromethane	U	1.04	ug/kg	0.595	1.04	
67-64-1	Acetone	U	5.22	ug/kg	1.73	5.22	
75-35-4	1,1-Dichloroethylene	U	1.04	ug/kg	0.313	1.04	
74-88-4	Iodomethane	U	5.22	ug/kg	1.67	5.22	
75-09-2	Methylene chloride	U	5.22	ug/kg	2.09	5.22	UJ,V7c
75-15-0	Carbon disulfide	U	5.22	ug/kg	1.31	5.22	
156-60-5	trans-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04	
75-34-3	1,1-Dichloroethane	U	1.04	ug/kg	0.313	1.04	
78-93-3	2-Butanone	U	5.22	ug/kg	1.57	5.22	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04	
594-20-7	2,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04	
67-66-3	Chloroform	U	1.04	ug/kg	0.313	1.04	
74-97-5	Bromochloromethane	U	1.04	ug/kg	0.345	1.04	
71-55-6	1,1,1-Trichloroethane	U	1.04	ug/kg	0.313	1.04	
563-58-6	1,1-Dichloropropene	U	1.04	ug/kg	0.313	1.04	
56-23-5	Carbon tetrachloride	U	1.04	ug/kg	0.313	1.04	
107-06-2	1,2-Dichloroethane	U	1.04	ug/kg	0.313	1.04	UJ,V7c
71-43-2	Benzene	U	1.04	ug/kg	0.313	1.04	
79-01-6	Trichloroethylene	U	1.04	ug/kg	0.345	1.04	
78-87-5	1,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04	
75-27-4	Bromodichloromethane	U	1.04	ug/kg	0.313	1.04	
74-95-3	Dibromomethane	U	1.04	ug/kg	0.313	1.04	
108-10-1	4-Methyl-2-pentanone	U	5.22	ug/kg	1.31	5.22	
10061-01-5	cis-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04	
108-88-3	Toluene	U	1.04	ug/kg	0.313	1.04	
10061-02-6	trans-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04	
79-00-5	1,1,2-Trichloroethane	U	1.04	ug/kg	0.313	1.04	
591-78-6	2-Hexanone	U	5.22	ug/kg	1.57	5.22	
142-28-9	1,3-Dichloropropane	U	1.04	ug/kg	0.313	1.04	
127-18-4	Tetrachloroethylene	U	1.04	ug/kg	0.313	1.04	
124-48-1	Dibromochloromethane	U	1.04	ug/kg	0.313	1.04	
106-93-4	1,2-Dibromoethane	U	1.04	ug/kg	0.313	1.04	
108-90-7	Chlorobenzene	U	1.04	ug/kg	0.313	1.04	

MAD
07/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 17:41	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s116.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.04	ug/kg	0.313	1.04	
179601-23-1	m,p-Xylenes	U	2.09	ug/kg	0.313	2.09	
95-47-6	o-Xylene	U	1.04	ug/kg	0.313	1.04	
100-42-5	Styrene	U	1.04	ug/kg	0.313	1.04	
75-25-2	Bromoform	U	1.04	ug/kg	0.313	1.04	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04	
96-18-4	1,2,3-Trichloropropane	U	1.04	ug/kg	0.313	1.04	
108-86-1	Bromobenzene	U	1.04	ug/kg	0.313	1.04	
103-65-1	n-Propylbenzene	U	1.04	ug/kg	0.313	1.04	
95-49-8	2-Chlorotoluene	U	1.04	ug/kg	0.313	1.04	
98-82-8	Isopropylbenzene	U	1.04	ug/kg	0.313	1.04	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04	
106-43-4	4-Chlorotoluene	U	1.04	ug/kg	0.313	1.04	
98-06-6	tert-Butylbenzene	U	1.04	ug/kg	0.313	1.04	
95-63-6	1,2,4-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04	
135-98-8	sec-Butylbenzene	U	1.04	ug/kg	0.313	1.04	
99-87-6	4-Isopropyltoluene	U	1.04	ug/kg	0.313	1.04	
541-73-1	1,3-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04	
106-46-7	1,4-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04	
104-51-8	n-Butylbenzene	U	1.04	ug/kg	0.313	1.04	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.04	ug/kg	0.313	1.04	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.22	ug/kg	1.67	5.22	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04	
95-50-1	1,2-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	259	ug/kg		J
	Unknown Siloxane	16.17	37.1	ug/kg		J

MAD
07/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428004**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**17**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6009**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882743**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 18:09**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 13:22**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6s117.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.20	ug/kg	0.410	1.20	
74-87-3	Chloromethane	U	1.20	ug/kg	0.361	1.20	
75-01-4	Vinyl chloride	U	1.20	ug/kg	0.361	1.20	
74-83-9	Bromomethane	U	1.20	ug/kg	0.361	1.20	
75-00-3	Chloroethane	U	1.20	ug/kg	0.361	1.20	
75-69-4	Trichlorofluoromethane	U	1.20	ug/kg	0.687	1.20	
67-64-1	Acetone	U	6.02	ug/kg	2.00	6.02	
75-35-4	1,1-Dichloroethylene	U	1.20	ug/kg	0.361	1.20	
74-88-4	Iodomethane	U	6.02	ug/kg	1.93	6.02	
75-09-2	Methylene chloride	U	6.02	ug/kg	2.41	6.02	UJ,V7c
75-15-0	Carbon disulfide	U	6.02	ug/kg	1.51	6.02	
156-60-5	trans-1,2-Dichloroethylene	U	1.20	ug/kg	0.361	1.20	
75-34-3	1,1-Dichloroethane	U	1.20	ug/kg	0.361	1.20	
78-93-3	2-Butanone	U	6.02	ug/kg	1.81	6.02	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.20	ug/kg	0.361	1.20	
594-20-7	2,2-Dichloropropane	U	1.20	ug/kg	0.361	1.20	
67-66-3	Chloroform	U	1.20	ug/kg	0.361	1.20	
74-97-5	Bromochloromethane	U	1.20	ug/kg	0.398	1.20	
71-55-6	1,1,1-Trichloroethane	U	1.20	ug/kg	0.361	1.20	
563-58-6	1,1-Dichloropropene	U	1.20	ug/kg	0.361	1.20	
56-23-5	Carbon tetrachloride	U	1.20	ug/kg	0.361	1.20	
107-06-2	1,2-Dichloroethane	U	1.20	ug/kg	0.361	1.20	UJ,V7c
71-43-2	Benzene	U	1.20	ug/kg	0.361	1.20	
79-01-6	Trichloroethylene	U	1.20	ug/kg	0.398	1.20	
78-87-5	1,2-Dichloropropane	U	1.20	ug/kg	0.361	1.20	
75-27-4	Bromodichloromethane	U	1.20	ug/kg	0.361	1.20	
74-95-3	Dibromomethane	U	1.20	ug/kg	0.361	1.20	
108-10-1	4-Methyl-2-pentanone	U	6.02	ug/kg	1.51	6.02	
10061-01-5	cis-1,3-Dichloropropylene	U	1.20	ug/kg	0.361	1.20	
108-88-3	Toluene	U	1.20	ug/kg	0.361	1.20	
10061-02-6	trans-1,3-Dichloropropylene	U	1.20	ug/kg	0.361	1.20	
79-00-5	1,1,2-Trichloroethane	U	1.20	ug/kg	0.361	1.20	
591-78-6	2-Hexanone	U	6.02	ug/kg	1.81	6.02	
142-28-9	1,3-Dichloropropane	U	1.20	ug/kg	0.361	1.20	
127-18-4	Tetrachloroethylene	U	1.20	ug/kg	0.361	1.20	
124-48-1	Dibromochloromethane	U	1.20	ug/kg	0.361	1.20	
106-93-4	1,2-Dibromoethane	U	1.20	ug/kg	0.361	1.20	
108-90-7	Chlorobenzene	U	1.20	ug/kg	0.361	1.20	

MAD
07/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428004	Date Received:	06/26/2009 08:40	%Moisture:	17
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6009	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882743	Inst:	VOA6.I	Dilution:	1
Run Date:	07/06/2009 18:09	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/06/2009 13:22	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6s117.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.20	ug/kg	0.361	1.20	
179601-23-1	m,p-Xylenes	U	2.41	ug/kg	0.361	2.41	
95-47-6	o-Xylene	U	1.20	ug/kg	0.361	1.20	
100-42-5	Styrene	U	1.20	ug/kg	0.361	1.20	
75-25-2	Bromoform	U	1.20	ug/kg	0.361	1.20	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.20	ug/kg	0.361	1.20	
96-18-4	1,2,3-Trichloropropane	U	1.20	ug/kg	0.361	1.20	
108-86-1	Bromobenzene	U	1.20	ug/kg	0.361	1.20	
103-65-1	n-Propylbenzene	U	1.20	ug/kg	0.361	1.20	
95-49-8	2-Chlorotoluene	U	1.20	ug/kg	0.361	1.20	
98-82-8	Isopropylbenzene	U	1.20	ug/kg	0.361	1.20	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.20	ug/kg	0.361	1.20	
106-43-4	4-Chlorotoluene	U	1.20	ug/kg	0.361	1.20	
98-06-6	tert-Butylbenzene	U	1.20	ug/kg	0.361	1.20	
95-63-6	1,2,4-Trimethylbenzene	U	1.20	ug/kg	0.361	1.20	
135-98-8	sec-Butylbenzene	U	1.20	ug/kg	0.361	1.20	
99-87-6	4-Isopropyltoluene	U	1.20	ug/kg	0.361	1.20	
541-73-1	1,3-Dichlorobenzene	U	1.20	ug/kg	0.361	1.20	
106-46-7	1,4-Dichlorobenzene	U	1.20	ug/kg	0.361	1.20	
104-51-8	n-Butylbenzene	U	1.20	ug/kg	0.361	1.20	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.20	ug/kg	0.361	1.20	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.02	ug/kg	1.93	6.02	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.20	ug/kg	0.361	1.20	
95-50-1	1,2-Dichlorobenzene	U	1.20	ug/kg	0.361	1.20	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	13.86	13.8	ug/kg	97	J
	Unknown Siloxane	14.24	17.2	ug/kg		J
	Unknown Siloxane	16.17	30.2	ug/kg		J

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Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:00	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s121.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.04	ug/kg	0.354	1.04	
74-87-3	Chloromethane	U	1.04	ug/kg	0.312	1.04	
75-01-4	Vinyl chloride	U	1.04	ug/kg	0.312	1.04	
74-83-9	Bromomethane	U	1.04	ug/kg	0.312	1.04	
75-00-3	Chloroethane	U	1.04	ug/kg	0.312	1.04	
75-69-4	Trichlorofluoromethane	U	1.04	ug/kg	0.594	1.04	
67-64-1	Acetone	U	5.21	ug/kg	1.73	5.21	
75-35-4	1,1-Dichloroethylene	U	1.04	ug/kg	0.312	1.04	
74-88-4	Iodomethane	U	5.21	ug/kg	1.67	5.21	
75-09-2	Methylene chloride	U	5.21	ug/kg	2.08	5.21	UJ,V7c
75-15-0	Carbon disulfide	U	5.21	ug/kg	1.30	5.21	
156-60-5	trans-1,2-Dichloroethylene	U	1.04	ug/kg	0.312	1.04	
75-34-3	1,1-Dichloroethane	U	1.04	ug/kg	0.312	1.04	
78-93-3	2-Butanone	U	5.21	ug/kg	1.56	5.21	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.04	ug/kg	0.312	1.04	
594-20-7	2,2-Dichloropropane	U	1.04	ug/kg	0.312	1.04	
67-66-3	Chloroform	U	1.04	ug/kg	0.312	1.04	
74-97-5	Bromochloromethane	U	1.04	ug/kg	0.344	1.04	
71-55-6	1,1,1-Trichloroethane	U	1.04	ug/kg	0.312	1.04	
563-58-6	1,1-Dichloropropene	U	1.04	ug/kg	0.312	1.04	
56-23-5	Carbon tetrachloride	U	1.04	ug/kg	0.312	1.04	
107-06-2	1,2-Dichloroethane	U	1.04	ug/kg	0.312	1.04	UJ,V7c
71-43-2	Benzene	U	1.04	ug/kg	0.312	1.04	
79-01-6	Trichloroethylene	U	1.04	ug/kg	0.344	1.04	
78-87-5	1,2-Dichloropropane	U	1.04	ug/kg	0.312	1.04	
75-27-4	Bromodichloromethane	U	1.04	ug/kg	0.312	1.04	
74-95-3	Dibromomethane	U	1.04	ug/kg	0.312	1.04	
108-10-1	4-Methyl-2-pentanone	U	5.21	ug/kg	1.30	5.21	
10061-01-5	cis-1,3-Dichloropropylene	U	1.04	ug/kg	0.312	1.04	
108-88-3	Toluene	U	1.04	ug/kg	0.312	1.04	
10061-02-6	trans-1,3-Dichloropropylene	U	1.04	ug/kg	0.312	1.04	
79-00-5	1,1,2-Trichloroethane	U	1.04	ug/kg	0.312	1.04	
591-78-6	2-Hexanone	U	5.21	ug/kg	1.56	5.21	
142-28-9	1,3-Dichloropropane	U	1.04	ug/kg	0.312	1.04	
127-18-4	Tetrachloroethylene	U	1.04	ug/kg	0.312	1.04	
124-48-1	Dibromochloromethane	U	1.04	ug/kg	0.312	1.04	
106-93-4	1,2-Dibromoethane	U	1.04	ug/kg	0.312	1.04	
108-90-7	Chlorobenzene	U	1.04	ug/kg	0.312	1.04	

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Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:00	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s121.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.04	ug/kg	0.312	1.04	
179601-23-1	m,p-Xylenes	U	2.08	ug/kg	0.312	2.08	
95-47-6	o-Xylene	U	1.04	ug/kg	0.312	1.04	
100-42-5	Styrene	U	1.04	ug/kg	0.312	1.04	
75-25-2	Bromoform	U	1.04	ug/kg	0.312	1.04	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.04	ug/kg	0.312	1.04	
96-18-4	1,2,3-Trichloropropane	U	1.04	ug/kg	0.312	1.04	
108-86-1	Bromobenzene	U	1.04	ug/kg	0.312	1.04	
103-65-1	n-Propylbenzene	U	1.04	ug/kg	0.312	1.04	
95-49-8	2-Chlorotoluene	U	1.04	ug/kg	0.312	1.04	
98-82-8	Isopropylbenzene	U	1.04	ug/kg	0.312	1.04	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.04	ug/kg	0.312	1.04	
106-43-4	4-Chlorotoluene	U	1.04	ug/kg	0.312	1.04	
98-06-6	tert-Butylbenzene	U	1.04	ug/kg	0.312	1.04	
95-63-6	1,2,4-Trimethylbenzene	U	1.04	ug/kg	0.312	1.04	
135-98-8	sec-Butylbenzene	U	1.04	ug/kg	0.312	1.04	
99-87-6	4-Isopropyltoluene	U	1.04	ug/kg	0.312	1.04	
541-73-1	1,3-Dichlorobenzene	U	1.04	ug/kg	0.312	1.04	
106-46-7	1,4-Dichlorobenzene	U	1.04	ug/kg	0.312	1.04	
104-51-8	n-Butylbenzene	U	1.04	ug/kg	0.312	1.04	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.04	ug/kg	0.312	1.04	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.21	ug/kg	1.67	5.21	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.04	ug/kg	0.312	1.04	
95-50-1	1,2-Dichlorobenzene	U	1.04	ug/kg	0.312	1.04	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	412	ug/kg		J
	Unknown Siloxane	16.17	192	ug/kg		J

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Volatile
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Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428013	Date Received:	06/26/2009 08:40	%Moisture:	9.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6039	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882743	Inst:	VOA6.I	Dilution:	1
Run Date:	07/06/2009 20:28	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/06/2009 13:27	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6s122.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.10	ug/kg	0.374	1.10	
74-87-3	Chloromethane	U	1.10	ug/kg	0.330	1.10	
75-01-4	Vinyl chloride	U	1.10	ug/kg	0.330	1.10	
74-83-9	Bromomethane	U	1.10	ug/kg	0.330	1.10	
75-00-3	Chloroethane	U	1.10	ug/kg	0.330	1.10	
75-69-4	Trichlorofluoromethane	U	1.10	ug/kg	0.627	1.10	
67-64-1	Acetone	U	5.50	ug/kg	1.83	5.50	
75-35-4	1,1-Dichloroethylene	U	1.10	ug/kg	0.330	1.10	
74-88-4	Iodomethane	U	5.50	ug/kg	1.76	5.50	
75-09-2	Methylene chloride	U	5.50	ug/kg	2.20	5.50	UJ,V7c
75-15-0	Carbon disulfide	U	5.50	ug/kg	1.38	5.50	
156-60-5	trans-1,2-Dichloroethylene	U	1.10	ug/kg	0.330	1.10	
75-34-3	1,1-Dichloroethane	U	1.10	ug/kg	0.330	1.10	
78-93-3	2-Butanone	U	5.50	ug/kg	1.65	5.50	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.10	ug/kg	0.330	1.10	
594-20-7	2,2-Dichloropropane	U	1.10	ug/kg	0.330	1.10	
67-66-3	Chloroform	U	1.10	ug/kg	0.330	1.10	
74-97-5	Bromochloromethane	U	1.10	ug/kg	0.363	1.10	
71-55-6	1,1,1-Trichloroethane	U	1.10	ug/kg	0.330	1.10	
563-58-6	1,1-Dichloropropene	U	1.10	ug/kg	0.330	1.10	
56-23-5	Carbon tetrachloride	U	1.10	ug/kg	0.330	1.10	
107-06-2	1,2-Dichloroethane	U	1.10	ug/kg	0.330	1.10	UJ,V7c
71-43-2	Benzene	U	1.10	ug/kg	0.330	1.10	
79-01-6	Trichloroethylene	U	1.10	ug/kg	0.363	1.10	
78-87-5	1,2-Dichloropropane	U	1.10	ug/kg	0.330	1.10	
75-27-4	Bromodichloromethane	U	1.10	ug/kg	0.330	1.10	
74-95-3	Dibromomethane	U	1.10	ug/kg	0.330	1.10	
108-10-1	4-Methyl-2-pentanone	U	5.50	ug/kg	1.38	5.50	
10061-01-5	cis-1,3-Dichloropropylene	U	1.10	ug/kg	0.330	1.10	
108-88-3	Toluene	J	0.586	ug/kg	0.330	1.10	
10061-02-6	trans-1,3-Dichloropropylene	U	1.10	ug/kg	0.330	1.10	
79-00-5	1,1,2-Trichloroethane	U	1.10	ug/kg	0.330	1.10	
591-78-6	2-Hexanone	U	5.50	ug/kg	1.65	5.50	
142-28-9	1,3-Dichloropropane	U	1.10	ug/kg	0.330	1.10	
127-18-4	Tetrachloroethylene	U	1.10	ug/kg	0.330	1.10	
124-48-1	Dibromochloromethane	U	1.10	ug/kg	0.330	1.10	
106-93-4	1,2-Dibromoethane	U	1.10	ug/kg	0.330	1.10	
108-90-7	Chlorobenzene	U	1.10	ug/kg	0.330	1.10	

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Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428013	Date Received:	06/26/2009 08:40	%Moisture:	9.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6039	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882743	Inst:	VOA6.I	Dilution:	1
Run Date:	07/06/2009 20:28	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/06/2009 13:27	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6s122.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.10	ug/kg	0.330	1.10	
179601-23-1	m,p-Xylenes	U	2.20	ug/kg	0.330	2.20	
95-47-6	o-Xylene	U	1.10	ug/kg	0.330	1.10	
100-42-5	Styrene	U	1.10	ug/kg	0.330	1.10	
75-25-2	Bromoform	U	1.10	ug/kg	0.330	1.10	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.10	ug/kg	0.330	1.10	
96-18-4	1,2,3-Trichloropropane	U	1.10	ug/kg	0.330	1.10	
108-86-1	Bromobenzene	U	1.10	ug/kg	0.330	1.10	
103-65-1	n-Propylbenzene	U	1.10	ug/kg	0.330	1.10	
95-49-8	2-Chlorotoluene	U	1.10	ug/kg	0.330	1.10	
98-82-8	Isopropylbenzene	U	1.10	ug/kg	0.330	1.10	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.10	ug/kg	0.330	1.10	
106-43-4	4-Chlorotoluene	U	1.10	ug/kg	0.330	1.10	
98-06-6	tert-Butylbenzene	U	1.10	ug/kg	0.330	1.10	
95-63-6	1,2,4-Trimethylbenzene	U	1.10	ug/kg	0.330	1.10	
135-98-8	sec-Butylbenzene	U	1.10	ug/kg	0.330	1.10	
99-87-6	4-Isopropyltoluene	U	1.10	ug/kg	0.330	1.10	
541-73-1	1,3-Dichlorobenzene	U	1.10	ug/kg	0.330	1.10	
106-46-7	1,4-Dichlorobenzene	U	1.10	ug/kg	0.330	1.10	
104-51-8	n-Butylbenzene	U	1.10	ug/kg	0.330	1.10	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.10	ug/kg	0.330	1.10	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.50	ug/kg	1.76	5.50	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.10	ug/kg	0.330	1.10	
95-50-1	1,2-Dichlorobenzene	U	1.10	ug/kg	0.330	1.10	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	35.8	ug/kg		J
	Unknown Siloxane	16.17	12	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428008	Date Received:	06/26/2009 08:40	%Moisture:	5.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6041	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882743	Inst:	VOA6.I	Dilution:	1
Run Date:	07/06/2009 19:32	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/06/2009 13:25	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6s120.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.359	1.05	
74-87-3	Chloromethane	U	1.05	ug/kg	0.316	1.05	
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.316	1.05	
74-83-9	Bromomethane	U	1.05	ug/kg	0.316	1.05	
75-00-3	Chloroethane	U	1.05	ug/kg	0.316	1.05	
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.601	1.05	
67-64-1	Acetone	U	5.27	ug/kg	1.75	5.27	
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.316	1.05	
74-88-4	Iodomethane	U	5.27	ug/kg	1.69	5.27	
75-09-2	Methylene chloride	U	5.27	ug/kg	2.11	5.27	UJ,V7c
75-15-0	Carbon disulfide	U	5.27	ug/kg	1.32	5.27	
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.316	1.05	
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.316	1.05	
78-93-3	2-Butanone	U	5.27	ug/kg	1.58	5.27	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.316	1.05	
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.316	1.05	
67-66-3	Chloroform	U	1.05	ug/kg	0.316	1.05	
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.348	1.05	
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.316	1.05	
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.316	1.05	
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.316	1.05	
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.316	1.05	UJ,V7c
71-43-2	Benzene	U	1.05	ug/kg	0.316	1.05	
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.348	1.05	
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.316	1.05	
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.316	1.05	
74-95-3	Dibromomethane	U	1.05	ug/kg	0.316	1.05	
108-10-1	4-Methyl-2-pentanone	U	5.27	ug/kg	1.32	5.27	
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.316	1.05	
108-88-3	Toluene	J	0.347	ug/kg	0.316	1.05	
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.316	1.05	
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.316	1.05	
591-78-6	2-Hexanone	U	5.27	ug/kg	1.58	5.27	
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.316	1.05	
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.316	1.05	
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.316	1.05	
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.316	1.05	
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.316	1.05	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428008**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**5.2**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6041**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882743**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 19:32**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 13:25**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6s120.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.316	1.05	
179601-23-1	m,p-Xylenes	U	2.11	ug/kg	0.316	2.11	
95-47-6	o-Xylene	U	1.05	ug/kg	0.316	1.05	
100-42-5	Styrene	U	1.05	ug/kg	0.316	1.05	
75-25-2	Bromoform	U	1.05	ug/kg	0.316	1.05	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.316	1.05	
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.316	1.05	
108-86-1	Bromobenzene	U	1.05	ug/kg	0.316	1.05	
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.316	1.05	
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.316	1.05	
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.316	1.05	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.316	1.05	
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.316	1.05	
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.316	1.05	
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.316	1.05	
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.316	1.05	
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.316	1.05	
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.316	1.05	
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.316	1.05	
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.316	1.05	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.316	1.05	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.27	ug/kg	1.69	5.27	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.316	1.05	
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.316	1.05	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	40.4	ug/kg		J
	Unknown Siloxane	16.17	11	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428006	Date Received:	06/26/2009 08:40	%Moisture:	7.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6043	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882743	Inst:	VOA6.I	Dilution:	1
Run Date:	07/06/2009 18:37	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/06/2009 13:23	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6s118.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.09	ug/kg	0.369	1.09	
74-87-3	Chloromethane	U	1.09	ug/kg	0.326	1.09	
75-01-4	Vinyl chloride	U	1.09	ug/kg	0.326	1.09	
74-83-9	Bromomethane	U	1.09	ug/kg	0.326	1.09	
75-00-3	Chloroethane	U	1.09	ug/kg	0.326	1.09	
75-69-4	Trichlorofluoromethane	U	1.09	ug/kg	0.619	1.09	
67-64-1	Acetone	U	5.43	ug/kg	1.80	5.43	
75-35-4	1,1-Dichloroethylene	U	1.09	ug/kg	0.326	1.09	
74-88-4	Iodomethane	U	5.43	ug/kg	1.74	5.43	
75-09-2	Methylene chloride	U	5.43	ug/kg	2.17	5.43	UJ,V7c
75-15-0	Carbon disulfide	U	5.43	ug/kg	1.36	5.43	
156-60-5	trans-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09	
75-34-3	1,1-Dichloroethane	U	1.09	ug/kg	0.326	1.09	
78-93-3	2-Butanone	U	5.43	ug/kg	1.63	5.43	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09	
594-20-7	2,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09	
67-66-3	Chloroform	U	1.09	ug/kg	0.326	1.09	
74-97-5	Bromochloromethane	U	1.09	ug/kg	0.358	1.09	
71-55-6	1,1,1-Trichloroethane	U	1.09	ug/kg	0.326	1.09	
563-58-6	1,1-Dichloropropene	U	1.09	ug/kg	0.326	1.09	
56-23-5	Carbon tetrachloride	U	1.09	ug/kg	0.326	1.09	
107-06-2	1,2-Dichloroethane	U	1.09	ug/kg	0.326	1.09	UJ,V7c
71-43-2	Benzene	U	1.09	ug/kg	0.326	1.09	
79-01-6	Trichloroethylene	U	1.09	ug/kg	0.358	1.09	
78-87-5	1,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09	
75-27-4	Bromodichloromethane	U	1.09	ug/kg	0.326	1.09	
74-95-3	Dibromomethane	U	1.09	ug/kg	0.326	1.09	
108-10-1	4-Methyl-2-pentanone	U	5.43	ug/kg	1.36	5.43	
10061-01-5	cis-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09	
108-88-3	Toluene	U	1.09	ug/kg	0.326	1.09	
10061-02-6	trans-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09	
79-00-5	1,1,2-Trichloroethane	U	1.09	ug/kg	0.326	1.09	
591-78-6	2-Hexanone	U	5.43	ug/kg	1.63	5.43	
142-28-9	1,3-Dichloropropane	U	1.09	ug/kg	0.326	1.09	
127-18-4	Tetrachloroethylene	U	1.09	ug/kg	0.326	1.09	
124-48-1	Dibromochloromethane	U	1.09	ug/kg	0.326	1.09	
106-93-4	1,2-Dibromoethane	U	1.09	ug/kg	0.326	1.09	
108-90-7	Chlorobenzene	U	1.09	ug/kg	0.326	1.09	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428006	Date Received:	06/26/2009 08:40	%Moisture:	7.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6043	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882743	Inst:	VOA6.I	Dilution:	1
Run Date:	07/06/2009 18:37	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/06/2009 13:23	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6s118.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.09	ug/kg	0.326	1.09	
179601-23-1	m,p-Xylenes	U	2.17	ug/kg	0.326	2.17	
95-47-6	o-Xylene	U	1.09	ug/kg	0.326	1.09	
100-42-5	Styrene	U	1.09	ug/kg	0.326	1.09	
75-25-2	Bromoform	U	1.09	ug/kg	0.326	1.09	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09	
96-18-4	1,2,3-Trichloropropane	U	1.09	ug/kg	0.326	1.09	
108-86-1	Bromobenzene	U	1.09	ug/kg	0.326	1.09	
103-65-1	n-Propylbenzene	U	1.09	ug/kg	0.326	1.09	
95-49-8	2-Chlorotoluene	U	1.09	ug/kg	0.326	1.09	
98-82-8	Isopropylbenzene	U	1.09	ug/kg	0.326	1.09	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09	
106-43-4	4-Chlorotoluene	U	1.09	ug/kg	0.326	1.09	
98-06-6	tert-Butylbenzene	U	1.09	ug/kg	0.326	1.09	
95-63-6	1,2,4-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09	
135-98-8	sec-Butylbenzene	U	1.09	ug/kg	0.326	1.09	
99-87-6	4-Isopropyltoluene	U	1.09	ug/kg	0.326	1.09	
541-73-1	1,3-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09	
106-46-7	1,4-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09	
104-51-8	n-Butylbenzene	U	1.09	ug/kg	0.326	1.09	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.09	ug/kg	0.326	1.09	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.43	ug/kg	1.74	5.43	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09	
95-50-1	1,2-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	350	ug/kg		J
	Unknown Siloxane	16.17	77.9	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428007	Date Received:	06/26/2009 08:40	%Moisture:	8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6045	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882743	Inst:	VOA6.I	Dilution:	1
Run Date:	07/06/2009 19:05	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/06/2009 13:24	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6s119.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.09	ug/kg	0.370	1.09	
74-87-3	Chloromethane	U	1.09	ug/kg	0.326	1.09	
75-01-4	Vinyl chloride	U	1.09	ug/kg	0.326	1.09	
74-83-9	Bromomethane	U	1.09	ug/kg	0.326	1.09	
75-00-3	Chloroethane	U	1.09	ug/kg	0.326	1.09	
75-69-4	Trichlorofluoromethane	U	1.09	ug/kg	0.620	1.09	
67-64-1	Acetone	U	5.43	ug/kg	1.80	5.43	
75-35-4	1,1-Dichloroethylene	U	1.09	ug/kg	0.326	1.09	
74-88-4	Iodomethane	U	5.43	ug/kg	1.74	5.43	
75-09-2	Methylene chloride	U	5.43	ug/kg	2.17	5.43	UJ,V7c
75-15-0	Carbon disulfide	U	5.43	ug/kg	1.36	5.43	
156-60-5	trans-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09	
75-34-3	1,1-Dichloroethane	U	1.09	ug/kg	0.326	1.09	
78-93-3	2-Butanone	U	5.43	ug/kg	1.63	5.43	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09	
594-20-7	2,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09	
67-66-3	Chloroform	U	1.09	ug/kg	0.326	1.09	
74-97-5	Bromochloromethane	U	1.09	ug/kg	0.359	1.09	
71-55-6	1,1,1-Trichloroethane	U	1.09	ug/kg	0.326	1.09	
563-58-6	1,1-Dichloropropene	U	1.09	ug/kg	0.326	1.09	
56-23-5	Carbon tetrachloride	U	1.09	ug/kg	0.326	1.09	
107-06-2	1,2-Dichloroethane	U	1.09	ug/kg	0.326	1.09	UJ,V7c
71-43-2	Benzene	U	1.09	ug/kg	0.326	1.09	
79-01-6	Trichloroethylene	U	1.09	ug/kg	0.359	1.09	
78-87-5	1,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09	
75-27-4	Bromodichloromethane	U	1.09	ug/kg	0.326	1.09	
74-95-3	Dibromomethane	U	1.09	ug/kg	0.326	1.09	
108-10-1	4-Methyl-2-pentanone	U	5.43	ug/kg	1.36	5.43	
10061-01-5	cis-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09	
108-88-3	Toluene	U	1.09	ug/kg	0.326	1.09	
10061-02-6	trans-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09	
79-00-5	1,1,2-Trichloroethane	U	1.09	ug/kg	0.326	1.09	
591-78-6	2-Hexanone	U	5.43	ug/kg	1.63	5.43	
142-28-9	1,3-Dichloropropane	U	1.09	ug/kg	0.326	1.09	
127-18-4	Tetrachloroethylene	U	1.09	ug/kg	0.326	1.09	
124-48-1	Dibromochloromethane	U	1.09	ug/kg	0.326	1.09	
106-93-4	1,2-Dibromoethane	U	1.09	ug/kg	0.326	1.09	
108-90-7	Chlorobenzene	U	1.09	ug/kg	0.326	1.09	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428007	Date Received:	06/26/2009 08:40	%Moisture:	8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6045	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882743	Inst:	VOA6.I	Dilution:	1
Run Date:	07/06/2009 19:05	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/06/2009 13:24	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6s119.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.09	ug/kg	0.326	1.09	
179601-23-1	m,p-Xylenes	U	2.17	ug/kg	0.326	2.17	
95-47-6	o-Xylene	U	1.09	ug/kg	0.326	1.09	
100-42-5	Styrene	U	1.09	ug/kg	0.326	1.09	
75-25-2	Bromoform	U	1.09	ug/kg	0.326	1.09	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09	
96-18-4	1,2,3-Trichloropropane	U	1.09	ug/kg	0.326	1.09	
108-86-1	Bromobenzene	U	1.09	ug/kg	0.326	1.09	
103-65-1	n-Propylbenzene	U	1.09	ug/kg	0.326	1.09	
95-49-8	2-Chlorotoluene	U	1.09	ug/kg	0.326	1.09	
98-82-8	Isopropylbenzene	U	1.09	ug/kg	0.326	1.09	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09	
106-43-4	4-Chlorotoluene	U	1.09	ug/kg	0.326	1.09	
98-06-6	tert-Butylbenzene	U	1.09	ug/kg	0.326	1.09	
95-63-6	1,2,4-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09	
135-98-8	sec-Butylbenzene	U	1.09	ug/kg	0.326	1.09	
99-87-6	4-Isopropyltoluene	U	1.09	ug/kg	0.326	1.09	
541-73-1	1,3-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09	
106-46-7	1,4-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09	
104-51-8	n-Butylbenzene	U	1.09	ug/kg	0.326	1.09	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.09	ug/kg	0.326	1.09	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.43	ug/kg	1.74	5.43	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09	
95-50-1	1,2-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	59.9	ug/kg		J
	Unknown Siloxane	16.17	26.7	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	S
Lab Sample ID:	232428017	Date Received:	06/26/2009 08:40		
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6059	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882743	Inst:	VOA6.I	Dilution:	1
Run Date:	07/06/2009 21:23	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/06/2009 13:29	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6s124.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00	
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00	
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00	
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00	
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00	
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00	
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00	
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00	
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00	UJ,V7c
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00	
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00	
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00	
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00	
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00	
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00	
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00	
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00	UJ,V7c
71-43-2	Benzene		1.02	ug/kg	0.300	1.00	
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00	
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00	
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00	
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00	
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00	
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00	
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00	
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00	
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00	
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00	
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00	
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00	
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	S
Lab Sample ID:	232428017	**Date Received:**	06/26/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6059	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 21:23	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s124.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00	
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00	
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00	
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00	
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00	
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00	
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00	
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00	
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

MAD
07/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	S
Lab Sample ID:	232428016	**Date Received:**	06/26/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6060	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:55	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:28	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s123.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00	
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00	
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00	
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00	
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00	
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00	
67-64-1	Acetone		10.5	ug/kg	1.66	5.00	
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00	
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00	UJ,V7c
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00	
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00	
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00	
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00	
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00	
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00	
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00	
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00	UJ,V7c
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00	
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00	
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00	
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00	
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00	
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00	
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00	
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00	
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00	
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00	
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00	
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00	
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00	
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	S
Lab Sample ID:	232428016	**Date Received:**	06/26/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6060	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:55	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:28	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s123.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00	
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00	
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00	
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00	
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00	
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00	
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00	
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00	
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	13.85	32.3	ug/kg	99	NJ

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DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2477 VALIDATION DATE: 07/29/2009 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): SVOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. The ICV %Ds were >20% for benzoic acid; 2-methyl-4,6-dinitrophenol and butylbenzylphthalate. The CCV %Ds were >20% for hexachlorocyclopentadiene; 2,4-dinitrophenol and 4-nitroaniline. All associated sample results were NDs and, thus, were qualified UJ,SV7c.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: Mary A. Dominguez	DATE: 07/29/2009
Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☐	☒	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☒	☐	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☒	☐	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428002	Date Received:	06/26/2009 08:40	%Moisture:	11.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6006	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 19:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.08 g	Final Volume:	1 mL
Data File:	s2f3013.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	375	ug/kg	75.1	375	
108-95-2	Phenol	U	375	ug/kg	75.1	375	
95-57-8	2-Chlorophenol	U	375	ug/kg	75.1	375	
106-46-7	1,4-Dichlorobenzene	U	375	ug/kg	75.1	375	
621-64-7	N-Nitrosodipropylamine	U	375	ug/kg	75.1	375	
59-50-7	4-Chloro-3-methylphenol	U	375	ug/kg	37.5	375	
83-32-9	Acenaphthene	U	37.5	ug/kg	12.5	37.5	
121-14-2	2,4-Dinitrotoluene	U	375	ug/kg	37.5	375	
100-02-7	4-Nitrophenol	U	375	ug/kg	75.1	375	
87-86-5	Pentachlorophenol	U	375	ug/kg	75.1	375	
129-00-0	Pyrene		104	ug/kg	11.8	37.5	
110-86-1	Pyridine	U	375	ug/kg	75.1	375	
62-53-3	Aniline	U	375	ug/kg	131	375	
111-44-4	bis(2-Chloroethyl) ether	U	375	ug/kg	75.1	375	
541-73-1	1,3-Dichlorobenzene	U	375	ug/kg	75.1	375	
100-51-6	Benzyl alcohol	U	375	ug/kg	113	375	
95-50-1	1,2-Dichlorobenzene	U	375	ug/kg	75.1	375	
108-60-1	bis(2-Chloroisopropyl)ether	U	375	ug/kg	75.1	375	
95-48-7	o-Cresol	U	375	ug/kg	75.1	375	
65794-96-9	m,p-Cresols	U	375	ug/kg	150	375	
67-72-1	Hexachloroethane	U	375	ug/kg	75.1	375	
98-95-3	Nitrobenzene	U	375	ug/kg	75.1	375	
78-59-1	Isophorone	U	375	ug/kg	75.1	375	
88-75-5	2-Nitrophenol	U	375	ug/kg	37.5	375	
105-67-9	2,4-Dimethylphenol	U	375	ug/kg	75.1	375	
111-91-1	bis(2-Chloroethoxy)methane	U	375	ug/kg	75.1	375	
120-83-2	2,4-Dichlorophenol	U	375	ug/kg	75.1	375	
65-85-0	Benzoic acid	U	751	ug/kg	188	751	UJ,SV7c
91-20-3	Naphthalene	U	37.5	ug/kg	11.3	37.5	
106-47-8	4-Chloroaniline	U	375	ug/kg	75.1	375	
87-68-3	Hexachlorobutadiene	U	375	ug/kg	75.1	375	
91-57-6	2-Methylnaphthalene	U	37.5	ug/kg	7.51	37.5	
77-47-4	Hexachlorocyclopentadiene	U	375	ug/kg	75.1	375	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	375	ug/kg	75.1	375	
95-95-4	2,4,5-Trichlorophenol	U	375	ug/kg	75.1	375	
91-58-7	2-Chloronaphthalene	U	37.5	ug/kg	13.1	37.5	
88-74-4	2-Nitroaniline	U	375	ug/kg	75.1	375	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	375	ug/kg	75.1	375	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428002	Date Received:	06/26/2009 08:40	%Moisture:	11.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6006	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 19:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.08 g	Final Volume:	1 mL
Data File:	s2f3013.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	375	ug/kg	75.1	375	
606-20-2	2,6-Dinitrotoluene	U	375	ug/kg	37.5	375	
208-96-8	Acenaphthylene	U	37.5	ug/kg	11.3	37.5	
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751	UJ,SV7c
132-64-9	Dibenzofuran	U	375	ug/kg	75.1	375	
84-66-2	Diethylphthalate	U	375	ug/kg	75.1	375	
86-73-7	Fluorene	U	37.5	ug/kg	11.3	37.5	
7005-72-3	4-Chlorophenylphenylether	U	375	ug/kg	37.5	375	
534-52-1	2-Methyl-4,6-dinitrophenol	U	375	ug/kg	75.1	375	UJ,SV7c
100-01-6	4-Nitroaniline	U	375	ug/kg	75.1	375	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	375	ug/kg	75.1	375	
122-66-7	Azobenzene	U	375	ug/kg	75.1	375	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	375	ug/kg	37.5	375	
118-74-1	Hexachlorobenzene	U	375	ug/kg	75.1	375	
85-01-8	Phenanthrene		45.5	ug/kg	11.3	37.5	
120-12-7	Anthracene	U	37.5	ug/kg	7.51	37.5	
84-74-2	Di-n-butylphthalate	U	375	ug/kg	37.5	375	
206-44-0	Fluoranthene		120	ug/kg	11.3	37.5	
85-68-7	Butylbenzylphthalate	U	375	ug/kg	75.1	375	UJ,SV7c
56-55-3	Benzo(a)anthracene		45.8	ug/kg	11.3	37.5	
91-94-1	3,3'-Dichlorobenzidine	U	375	ug/kg	113	375	
218-01-9	Chrysene		56.0	ug/kg	11.3	37.5	
117-81-7	bis(2-Ethylhexyl)phthalate	J	85.6	ug/kg	75.1	375	
117-84-0	Di-n-octylphthalate	U	375	ug/kg	75.1	375	
205-99-2	Benzo(b)fluoranthene		104	ug/kg	11.3	37.5	
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.3	37.5	
50-32-8	Benzo(a)pyrene		52.3	ug/kg	11.3	37.5	
193-39-5	Indeno(1,2,3-cd)pyrene	J	28.5	ug/kg	11.3	37.5	
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.3	37.5	
191-24-2	Benzo(ghi)perylene	J	28.7	ug/kg	11.3	37.5	
120-82-1	1,2,4-Trichlorobenzene	U	375	ug/kg	75.1	375	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.14	415	ug/kg		J
	Unknown Aldol Condensate	3.07	261	ug/kg		JA

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428002	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6006	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 19:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	s2f3013.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.33	181	ug/kg		J
	Unknown	8.44	171	ug/kg		J
	Unknown	8.6	227	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	324	ug/kg	96	NJ
112-95-8	Eicosane	9.88	157	ug/kg	96	NJ
	Unknown	12.49	2240	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 18:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s2f3010.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	347	ug/kg	69.5	347	
108-95-2	Phenol	U	347	ug/kg	69.5	347	
95-57-8	2-Chlorophenol	U	347	ug/kg	69.5	347	
106-46-7	1,4-Dichlorobenzene	U	347	ug/kg	69.5	347	
621-64-7	N-Nitrosodipropylamine	U	347	ug/kg	69.5	347	
59-50-7	4-Chloro-3-methylphenol	U	347	ug/kg	34.7	347	
83-32-9	Acenaphthene	U	34.7	ug/kg	11.6	34.7	
121-14-2	2,4-Dinitrotoluene	U	347	ug/kg	34.7	347	
100-02-7	4-Nitrophenol	U	347	ug/kg	69.5	347	
87-86-5	Pentachlorophenol	U	347	ug/kg	69.5	347	
129-00-0	Pyrene	U	34.7	ug/kg	10.9	34.7	
110-86-1	Pyridine	U	347	ug/kg	69.5	347	
62-53-3	Aniline	U	347	ug/kg	122	347	
111-44-4	bis(2-Chloroethyl) ether	U	347	ug/kg	69.5	347	
541-73-1	1,3-Dichlorobenzene	U	347	ug/kg	69.5	347	
100-51-6	Benzyl alcohol	U	347	ug/kg	104	347	
95-50-1	1,2-Dichlorobenzene	U	347	ug/kg	69.5	347	
108-60-1	bis(2-Chloroisopropyl)ether	U	347	ug/kg	69.5	347	
95-48-7	o-Cresol	U	347	ug/kg	69.5	347	
65794-96-9	m,p-Cresols	U	347	ug/kg	139	347	
67-72-1	Hexachloroethane	U	347	ug/kg	69.5	347	
98-95-3	Nitrobenzene	U	347	ug/kg	69.5	347	
78-59-1	Isophorone	U	347	ug/kg	69.5	347	
88-75-5	2-Nitrophenol	U	347	ug/kg	34.7	347	
105-67-9	2,4-Dimethylphenol	U	347	ug/kg	69.5	347	
111-91-1	bis(2-Chloroethoxy)methane	U	347	ug/kg	69.5	347	
120-83-2	2,4-Dichlorophenol	U	347	ug/kg	69.5	347	
65-85-0	Benzoic acid	U	695	ug/kg	174	695	UJ,SV7c
91-20-3	Naphthalene	U	34.7	ug/kg	10.4	34.7	
106-47-8	4-Chloroaniline	U	347	ug/kg	69.5	347	
87-68-3	Hexachlorobutadiene	U	347	ug/kg	69.5	347	
91-57-6	2-Methylnaphthalene	U	34.7	ug/kg	6.95	34.7	
77-47-4	Hexachlorocyclopentadiene	U	347	ug/kg	69.5	347	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	347	ug/kg	69.5	347	
95-95-4	2,4,5-Trichlorophenol	U	347	ug/kg	69.5	347	
91-58-7	2-Chloronaphthalene	U	34.7	ug/kg	12.2	34.7	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	347	ug/kg	69.5	347	
99-09-2	3-Nitroaniline	U	347	ug/kg	69.5	347	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 18:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s2f3010.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	347	ug/kg	69.5	347	
606-20-2	2,6-Dinitrotoluene	U	347	ug/kg	34.7	347	
208-96-8	Acenaphthylene	U	34.7	ug/kg	10.4	34.7	
51-28-5	2,4-Dinitrophenol	U	695	ug/kg	132	695	UJ,SV7c
132-64-9	Dibenzofuran	U	347	ug/kg	69.5	347	
84-66-2	Diethylphthalate	U	347	ug/kg	69.5	347	
86-73-7	Fluorene	U	34.7	ug/kg	10.4	34.7	
7005-72-3	4-Chlorophenylphenylether	U	347	ug/kg	34.7	347	
534-52-1	2-Methyl-4,6-dinitrophenol	U	347	ug/kg	69.5	347	UJ,SV7c
100-01-6	4-Nitroaniline	U	347	ug/kg	69.5	347	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	347	ug/kg	69.5	347	
122-66-7	Azobenzene	U	347	ug/kg	69.5	347	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	347	ug/kg	34.7	347	
118-74-1	Hexachlorobenzene	U	347	ug/kg	69.5	347	
85-01-8	Phenanthrene	U	34.7	ug/kg	10.4	34.7	
120-12-7	Anthracene	U	34.7	ug/kg	6.95	34.7	
84-74-2	Di-n-butylphthalate	U	347	ug/kg	34.7	347	
206-44-0	Fluoranthene	U	34.7	ug/kg	10.4	34.7	
85-68-7	Butylbenzylphthalate	U	347	ug/kg	69.5	347	UJ,SV7c
56-55-3	Benzo(a)anthracene	U	34.7	ug/kg	10.4	34.7	
91-94-1	3,3'-Dichlorobenzidine	U	347	ug/kg	104	347	
218-01-9	Chrysene	U	34.7	ug/kg	10.4	34.7	
117-81-7	bis(2-Ethylhexyl)phthalate	U	347	ug/kg	69.5	347	
117-84-0	Di-n-octylphthalate	U	347	ug/kg	69.5	347	
205-99-2	Benzo(b)fluoranthene	U	34.7	ug/kg	10.4	34.7	
207-08-9	Benzo(k)fluoranthene	U	34.7	ug/kg	10.4	34.7	
50-32-8	Benzo(a)pyrene	U	34.7	ug/kg	10.4	34.7	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.7	ug/kg	10.4	34.7	
53-70-3	Dibenzo(a,h)anthracene	U	34.7	ug/kg	10.4	34.7	
191-24-2	Benzo(ghi)perylene	U	34.7	ug/kg	10.4	34.7	
120-82-1	1,2,4-Trichlorobenzene	U	347	ug/kg	69.5	347	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown	2.13	209	ug/kg		J
	Unknown Aldol Condensate	3.06	309	ug/kg		JA

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428001	Date Received:	06/26/2009 08:40	%Moisture:	4.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6007	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 18:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.06 g	Final Volume:	1 mL
Data File:	s2f3010.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.91	225	ug/kg	99	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.39	212	ug/kg	95	NJ
	Unknown	8.6	234	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	288	ug/kg	98	NJ
4376-20-9	1,2-Benzenedicarboxylic acid, mono(2-eth	8.73	184	ug/kg	81	NJ
	Unknown	8.83	201	ug/kg		J
	Unknown	12.14	214	ug/kg		J
	Unknown	12.47	533	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428003	Date Received:	06/26/2009 08:40	%Moisture:	23.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6008	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	07/01/2009 00:32	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.15 g	Final Volume:	1 mL
Data File:	s2f3027.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Quallfier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	431	ug/kg	86.3	431	
108-95-2	Phenol	U	431	ug/kg	86.3	431	
95-57-8	2-Chlorophenol	U	431	ug/kg	86.3	431	
106-46-7	1,4-Dichlorobenzene	U	431	ug/kg	86.3	431	
621-64-7	N-Nitrosodipropylamine	U	431	ug/kg	86.3	431	
59-50-7	4-Chloro-3-methylphenol	U	431	ug/kg	86.3	431	
83-32-9	Acenaphthene	U	43.1	ug/kg	14.2	43.1	
121-14-2	2,4-Dinitrotoluene	U	431	ug/kg	43.1	431	
100-02-7	4-Nitrophenol	U	431	ug/kg	142	431	
87-86-5	Pentachlorophenol	U	431	ug/kg	108	431	
129-00-0	Pyrene		185	ug/kg	12.9	43.1	
110-86-1	Pyridine	U	431	ug/kg	86.3	431	
62-53-3	Aniline	U	431	ug/kg	129	431	
111-44-4	bis(2-Chloroethyl) ether	U	431	ug/kg	86.3	431	
541-73-1	1,3-Dichlorobenzene	U	431	ug/kg	86.3	431	
100-51-6	Benzyl alcohol	U	431	ug/kg	129	431	
95-50-1	1,2-Dichlorobenzene	U	431	ug/kg	86.3	431	
108-60-1	bis(2-Chloroisopropyl)ether	U	431	ug/kg	86.3	431	
95-48-7	o-Cresol	U	431	ug/kg	86.3	431	
65794-96-9	m,p-Cresols	U	431	ug/kg	129	431	
67-72-1	Hexachloroethane	U	431	ug/kg	86.3	431	
98-95-3	Nitrobenzene	U	431	ug/kg	86.3	431	
78-59-1	Isophorone	U	431	ug/kg	86.3	431	
88-75-5	2-Nitrophenol	U	431	ug/kg	86.3	431	
105-67-9	2,4-Dimethylphenol	U	431	ug/kg	151	431	
111-91-1	bis(2-Chloroethoxy)methane	U	431	ug/kg	86.3	431	
120-83-2	2,4-Dichlorophenol	U	431	ug/kg	86.3	431	
65-85-0	Benzoic acid	U	863	ug/kg	216	863	UJ,SV7c
91-20-3	Naphthalene	U	43.1	ug/kg	12.9	43.1	
106-47-8	4-Chloroaniline	U	431	ug/kg	86.3	431	
87-68-3	Hexachlorobutadiene	U	431	ug/kg	86.3	431	
91-57-6	2-Methylnaphthalene	U	43.1	ug/kg	8.63	43.1	
77-47-4	Hexachlorocyclopentadiene	U	431	ug/kg	86.3	431	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	431	ug/kg	86.3	431	
95-95-4	2,4,5-Trichlorophenol	U	431	ug/kg	86.3	431	
91-58-7	2-Chloronaphthalene	U	43.1	ug/kg	14.2	43.1	
88-74-4	2-Nitroaniline	U	431	ug/kg	86.3	431	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	431	ug/kg	86.3	431	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428003	**Date Received:**	06/26/2009 08:40	**%Moisture:**	23.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6008	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/01/2009 00:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.15 g	**Final Volume:**	1 mL
Data File:	s2f3027.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	431	ug/kg	86.3	431	
606-20-2	2,6-Dinitrotoluene	U	431	ug/kg	43.1	431	
208-96-8	Acenaphthylene	U	43.1	ug/kg	12.9	43.1	
51-28-5	2,4-Dinitrophenol	U	863	ug/kg	164	863	UJ,SV7c
132-64-9	Dibenzofuran	U	431	ug/kg	86.3	431	
84-66-2	Diethylphthalate	U	431	ug/kg	86.3	431	
86-73-7	Fluorene	U	43.1	ug/kg	12.9	43.1	
7005-72-3	4-Chlorophenylphenylether	U	431	ug/kg	86.3	431	
534-52-1	2-Methyl-4,6-dinitrophenol	U	431	ug/kg	86.3	431	UJ,SV7c
100-01-6	4-Nitroaniline	U	431	ug/kg	129	431	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	431	ug/kg	86.3	431	
122-66-7	Azobenzene	U	431	ug/kg	86.3	431	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	431	ug/kg	86.3	431	
118-74-1	Hexachlorobenzene	U	431	ug/kg	86.3	431	
85-01-8	Phenanthrene		63.5	ug/kg	12.9	43.1	
120-12-7	Anthracene	J	14.4	ug/kg	8.63	43.1	
84-74-2	Di-n-butylphthalate	U	431	ug/kg	86.3	431	
206-44-0	Fluoranthene		211	ug/kg	12.9	43.1	
85-68-7	Butylbenzylphthalate	U	431	ug/kg	86.3	431	UJ,SV7c
56-55-3	Benzo(a)anthracene		79.0	ug/kg	12.9	43.1	
91-94-1	3,3'-Dichlorobenzidine	U	431	ug/kg	129	431	
218-01-9	Chrysene		110	ug/kg	12.9	43.1	
117-81-7	bis(2-Ethylhexyl)phthalate	U	431	ug/kg	86.3	431	
117-84-0	Di-n-octylphthalate	U	431	ug/kg	86.3	431	
205-99-2	Benzo(b)fluoranthene		195	ug/kg	12.9	43.1	
207-08-9	Benzo(k)fluoranthene	U	43.1	ug/kg	12.9	43.1	
50-32-8	Benzo(a)pyrene		92.6	ug/kg	12.9	43.1	
193-39-5	Indeno(1,2,3-cd)pyrene		48.3	ug/kg	12.9	43.1	
53-70-3	Dibenzo(a,h)anthracene	U	43.1	ug/kg	12.9	43.1	
191-24-2	Benzo(ghi)perylene		49.5	ug/kg	12.9	43.1	
120-82-1	1,2,4-Trichlorobenzene	U	431	ug/kg	86.3	431	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.11	257	ug/kg		J
	Unknown Aldol Condensate	3.06	232	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428004	Date Received:	06/26/2009 08:40	%Moisture:	17
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6009	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 20:33	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Allquot:	30.17 g	Final Volume:	1 mL
Data File:	s2f3015.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	399	ug/kg	79.9	399	
108-95-2	Phenol	U	399	ug/kg	79.9	399	
95-57-8	2-Chlorophenol	U	399	ug/kg	79.9	399	
106-46-7	1,4-Dichlorobenzene	U	399	ug/kg	79.9	399	
621-64-7	N-Nitrosodipropylamine	U	399	ug/kg	79.9	399	
59-50-7	4-Chloro-3-methylphenol	U	399	ug/kg	39.9	399	
83-32-9	Acenaphthene	U	39.9	ug/kg	13.3	39.9	
121-14-2	2,4-Dinitrotoluene	U	399	ug/kg	39.9	399	
100-02-7	4-Nitrophenol	U	399	ug/kg	79.9	399	
87-86-5	Pentachlorophenol	U	399	ug/kg	79.9	399	
129-00-0	Pyrene		139	ug/kg	12.5	39.9	
110-86-1	Pyridine	U	399	ug/kg	79.9	399	
62-53-3	Aniline	U	399	ug/kg	140	399	
111-44-4	bis(2-Chloroethyl) ether	U	399	ug/kg	79.9	399	
541-73-1	1,3-Dichlorobenzene	U	399	ug/kg	79.9	399	
100-51-6	Benzyl alcohol	U	399	ug/kg	120	399	
95-50-1	1,2-Dichlorobenzene	U	399	ug/kg	79.9	399	
108-60-1	bis(2-Chloroisopropyl)ether	U	399	ug/kg	79.9	399	
95-48-7	o-Cresol	U	399	ug/kg	79.9	399	
65794-96-9	m,p-Cresols	U	399	ug/kg	160	399	
67-72-1	Hexachloroethane	U	399	ug/kg	79.9	399	
98-95-3	Nitrobenzene	U	399	ug/kg	79.9	399	
78-59-1	Isophorone	U	399	ug/kg	79.9	399	
88-75-5	2-Nitrophenol	U	399	ug/kg	39.9	399	
105-67-9	2,4-Dimethylphenol	U	399	ug/kg	79.9	399	
111-91-1	bis(2-Chloroethoxy)methane	U	399	ug/kg	79.9	399	
120-83-2	2,4-Dichlorophenol	U	399	ug/kg	79.9	399	
65-85-0	Benzoic acid	U	799	ug/kg	200	799	UJ,SV7c
91-20-3	Naphthalene	U	39.9	ug/kg	12.0	39.9	
106-47-8	4-Chloroaniline	U	399	ug/kg	79.9	399	
87-68-3	Hexachlorobutadiene	U	399	ug/kg	79.9	399	
91-57-6	2-Methylnaphthalene	U	39.9	ug/kg	7.99	39.9	
77-47-4	Hexachlorocyclopentadiene	U	399	ug/kg	79.9	399	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	399	ug/kg	79.9	399	
95-95-4	2,4,5-Trichlorophenol	U	399	ug/kg	79.9	399	
91-58-7	2-Chloronaphthalene	U	39.9	ug/kg	14.0	39.9	
88-74-4	2-Nitroaniline	U	399	ug/kg	79.9	399	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	399	ug/kg	79.9	399	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428004	Date Received:	06/26/2009 08:40	%Moisture:	17
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6009	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 20:33	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.17 g	Final Volume:	1 mL
Data File:	s2f3015.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	399	ug/kg	79.9	399	
606-20-2	2,6-Dinitrotoluene	U	399	ug/kg	39.9	399	
208-96-8	Acenaphthylene	U	39.9	ug/kg	12.0	39.9	
51-28-5	2,4-Dinitrophenol	U	799	ug/kg	152	799	UJ,SV7c
132-64-9	Dibenzofuran	U	399	ug/kg	79.9	399	
84-66-2	Diethylphthalate	U	399	ug/kg	79.9	399	
86-73-7	Fluorene	U	39.9	ug/kg	12.0	39.9	
7005-72-3	4-Chlorophenylphenylether	U	399	ug/kg	39.9	399	
534-52-1	2-Methyl-4,6-dinitrophenol	U	399	ug/kg	79.9	399	UJ,SV7c
100-01-6	4-Nitroaniline	U	399	ug/kg	79.9	399	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	399	ug/kg	79.9	399	
122-66-7	Azobenzene	U	399	ug/kg	79.9	399	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	399	ug/kg	39.9	399	
118-74-1	Hexachlorobenzene	U	399	ug/kg	79.9	399	
85-01-8	Phenanthrene		50.2	ug/kg	12.0	39.9	
120-12-7	Anthracene	U	39.9	ug/kg	7.99	39.9	
84-74-2	Di-n-butylphthalate	U	399	ug/kg	39.9	399	
206-44-0	Fluoranthene		159	ug/kg	12.0	39.9	
85-68-7	Butylbenzylphthalate	U	399	ug/kg	79.9	399	UJ,SV7c
56-55-3	Benzo(a)anthracene		59.2	ug/kg	12.0	39.9	
91-94-1	3,3'-Dichlorobenzidine	U	399	ug/kg	120	399	
218-01-9	Chrysene		82.3	ug/kg	12.0	39.9	
117-81-7	bis(2-Ethylhexyl)phthalate	U	399	ug/kg	79.9	399	
117-84-0	Di-n-octylphthalate	U	399	ug/kg	79.9	399	
205-99-2	Benzo(b)fluoranthene		139	ug/kg	12.0	39.9	
207-08-9	Benzo(k)fluoranthene	U	39.9	ug/kg	12.0	39.9	
50-32-8	Benzo(a)pyrene		70.0	ug/kg	12.0	39.9	
193-39-5	Indeno(1,2,3-cd)pyrene		41.5	ug/kg	12.0	39.9	
53-70-3	Dibenzo(a,h)anthracene	U	39.9	ug/kg	12.0	39.9	
191-24-2	Benzo(ghi)perylene		43.5	ug/kg	12.0	39.9	
120-82-1	1,2,4-Trichlorobenzene	U	399	ug/kg	79.9	399	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	402	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428005	Date Received:	06/26/2009 08:40	%Moisture:	22.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6034	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 20:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.12 g	Final Volume:	1 mL
Data File:	s2f3016.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	428	ug/kg	85.6	428	
108-95-2	Phenol	U	428	ug/kg	85.6	428	
95-57-8	2-Chlorophenol	U	428	ug/kg	85.6	428	
106-46-7	1,4-Dichlorobenzene	U	428	ug/kg	85.6	428	
621-64-7	N-Nitrosodipropylamine	U	428	ug/kg	85.6	428	
59-50-7	4-Chloro-3-methylphenol	U	428	ug/kg	42.8	428	
83-32-9	Acenaphthene	J	19.1	ug/kg	14.3	42.8	
121-14-2	2,4-Dinitrotoluene	U	428	ug/kg	42.8	428	
100-02-7	4-Nitrophenol	U	428	ug/kg	85.6	428	
87-86-5	Pentachlorophenol	U	428	ug/kg	85.6	428	
129-00-0	Pyrene		363	ug/kg	13.4	42.8	
110-86-1	Pyridine	U	428	ug/kg	85.6	428	
62-53-3	Aniline	U	428	ug/kg	150	428	
111-44-4	bis(2-Chloroethyl) ether	U	428	ug/kg	85.6	428	
541-73-1	1,3-Dichlorobenzene	U	428	ug/kg	85.6	428	
100-51-6	Benzyl alcohol	U	428	ug/kg	128	428	
95-50-1	1,2-Dichlorobenzene	U	428	ug/kg	85.6	428	
108-60-1	bis(2-Chloroisopropyl)ether	U	428	ug/kg	85.6	428	
95-48-7	o-Cresol	U	428	ug/kg	85.6	428	
65794-96-9	m,p-Cresols	U	428	ug/kg	171	428	
67-72-1	Hexachloroethane	U	428	ug/kg	85.6	428	
98-95-3	Nitrobenzene	U	428	ug/kg	85.6	428	
78-59-1	Isophorone	U	428	ug/kg	85.6	428	
88-75-5	2-Nitrophenol	U	428	ug/kg	42.8	428	
105-67-9	2,4-Dimethylphenol	U	428	ug/kg	85.6	428	
111-91-1	bis(2-Chloroethoxy)methane	U	428	ug/kg	85.6	428	
120-83-2	2,4-Dichlorophenol	U	428	ug/kg	85.6	428	
65-85-0	Benzoic acid	U	856	ug/kg	214	856	UJ,SV7c
91-20-3	Naphthalene	U	42.8	ug/kg	12.8	42.8	
106-47-8	4-Chloroaniline	U	428	ug/kg	85.6	428	
87-68-3	Hexachlorobutadiene	U	428	ug/kg	85.6	428	
91-57-6	2-Methylnaphthalene	U	42.8	ug/kg	8.56	42.8	
77-47-4	Hexachlorocyclopentadiene	U	428	ug/kg	85.6	428	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	428	ug/kg	85.6	428	
95-95-4	2,4,5-Trichlorophenol	U	428	ug/kg	85.6	428	
91-58-7	2-Chloronaphthalene	U	42.8	ug/kg	15.0	42.8	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	428	ug/kg	85.6	428	
99-09-2	3-Nitroaniline	U	428	ug/kg	85.6	428	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428005	Date Received:	06/26/2009 08:40	%Moisture:	22.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6034	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 20:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.12 g	Final Volume:	1 mL
Data File:	s2f3016.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	428	ug/kg	85.6	428	
606-20-2	2,6-Dinitrotoluene	U	428	ug/kg	42.8	428	
208-96-8	Acenaphthylene	U	42.8	ug/kg	12.8	42.8	
51-28-5	2,4-Dinitrophenol	U	856	ug/kg	163	856	UJ,SV7c
132-64-9	Dibenzofuran	U	428	ug/kg	85.6	428	
84-66-2	Diethylphthalate	U	428	ug/kg	85.6	428	
86-73-7	Fluorene	J	12.9	ug/kg	12.8	42.8	
7005-72-3	4-Chlorophenylphenylether	U	428	ug/kg	42.8	428	
534-52-1	2-Methyl-4,6-dinitrophenol	U	428	ug/kg	85.6	428	UJ,SV7c
100-01-6	4-Nitroaniline	U	428	ug/kg	85.6	428	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	428	ug/kg	85.6	428	
122-66-7	Azobenzene	U	428	ug/kg	85.6	428	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	428	ug/kg	42.8	428	
118-74-1	Hexachlorobenzene	U	428	ug/kg	85.6	428	
85-01-8	Phenanthrene		150	ug/kg	12.8	42.8	
120-12-7	Anthracene	U	42.8	ug/kg	8.56	42.8	
84-74-2	Di-n-butylphthalate	U	428	ug/kg	42.8	428	
206-44-0	Fluoranthene		415	ug/kg	12.8	42.8	
85-68-7	Butylbenzylphthalate	U	428	ug/kg	85.6	428	UJ,SV7c
56-55-3	Benzo(a)anthracene		156	ug/kg	12.8	42.8	
91-94-1	3,3'-Dichlorobenzidine	U	428	ug/kg	128	428	
218-01-9	Chrysene		194	ug/kg	12.8	42.8	
117-81-7	bis(2-Ethylhexyl)phthalate	J	91.8	ug/kg	85.6	428	
117-84-0	Di-n-octylphthalate	U	428	ug/kg	85.6	428	
205-99-2	Benzo(b)fluoranthene		359	ug/kg	12.8	42.8	
207-08-9	Benzo(k)fluoranthene	U	42.8	ug/kg	12.8	42.8	
50-32-8	Benzo(a)pyrene		175	ug/kg	12.8	42.8	
193-39-5	Indeno(1,2,3-cd)pyrene		96.6	ug/kg	12.8	42.8	
53-70-3	Dibenzo(a,h)anthracene	J	29.3	ug/kg	12.8	42.8	
191-24-2	Benzo(ghi)perylene		97.3	ug/kg	12.8	42.8	
120-82-1	1,2,4-Trichlorobenzene	U	428	ug/kg	85.6	428	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	385	ug/kg		J
	Unknown	8.33	178	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428005	**Date Received:**	06/26/2009 08:40	**%Moisture:**	22.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6034	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 20:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3016.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	327	ug/kg	99	NJ
	Unknown	11.19	186	ug/kg		J
	Unknown	12.51	237	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2f3022.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	347	ug/kg	69.4	347	
108-95-2	Phenol	U	347	ug/kg	69.4	347	
95-57-8	2-Chlorophenol	U	347	ug/kg	69.4	347	
106-46-7	1,4-Dichlorobenzene	U	347	ug/kg	69.4	347	
621-64-7	N-Nitrosodipropylamine	U	347	ug/kg	69.4	347	
59-50-7	4-Chloro-3-methylphenol	U	347	ug/kg	34.7	347	
83-32-9	Acenaphthene	U	34.7	ug/kg	11.6	34.7	
121-14-2	2,4-Dinitrotoluene	U	347	ug/kg	34.7	347	
100-02-7	4-Nitrophenol	U	347	ug/kg	69.4	347	
87-86-5	Pentachlorophenol	U	347	ug/kg	69.4	347	
129-00-0	Pyrene	J	14.6	ug/kg	10.9	34.7	
110-86-1	Pyridine	U	347	ug/kg	69.4	347	
62-53-3	Aniline	U	347	ug/kg	121	347	
111-44-4	bis(2-Chloroethyl) ether	U	347	ug/kg	69.4	347	
541-73-1	1,3-Dichlorobenzene	U	347	ug/kg	69.4	347	
100-51-6	Benzyl alcohol	U	347	ug/kg	104	347	
95-50-1	1,2-Dichlorobenzene	U	347	ug/kg	69.4	347	
108-60-1	bis(2-Chloroisopropyl)ether	U	347	ug/kg	69.4	347	
95-48-7	o-Cresol	U	347	ug/kg	69.4	347	
65794-96-9	m,p-Cresols	U	347	ug/kg	139	347	
67-72-1	Hexachloroethane	U	347	ug/kg	69.4	347	
98-95-3	Nitrobenzene	U	347	ug/kg	69.4	347	
78-59-1	Isophorone	U	347	ug/kg	69.4	347	
88-75-5	2-Nitrophenol	U	347	ug/kg	34.7	347	
105-67-9	2,4-Dimethylphenol	U	347	ug/kg	69.4	347	
111-91-1	bis(2-Chloroethoxy)methane	U	347	ug/kg	69.4	347	
120-83-2	2,4-Dichlorophenol	U	347	ug/kg	69.4	347	
65-85-0	Benzoic acid	U	694	ug/kg	173	694	UJ,SV7c
91-20-3	Naphthalene	U	34.7	ug/kg	10.4	34.7	
106-47-8	4-Chloroaniline	U	347	ug/kg	69.4	347	
87-68-3	Hexachlorobutadiene	U	347	ug/kg	69.4	347	
91-57-6	2-Methylnaphthalene	U	34.7	ug/kg	6.94	34.7	
77-47-4	Hexachlorocyclopentadiene	U	347	ug/kg	69.4	347	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	347	ug/kg	69.4	347	
95-95-4	2,4,5-Trichlorophenol	U	347	ug/kg	69.4	347	
91-58-7	2-Chloronaphthalene	U	34.7	ug/kg	12.1	34.7	
88-74-4	2-Nitroaniline	U	347	ug/kg	69.4	347	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	347	ug/kg	69.4	347	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428011	Date Received:	06/26/2009 08:40	%Moisture:	4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6035	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 22:52	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Allquot:	30.02 g	Final Volume:	1 mL
Data File:	s2f3022.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	347	ug/kg	69.4	347	
606-20-2	2,6-Dinitrotoluene	U	347	ug/kg	34.7	347	
208-96-8	Acenaphthylene	U	34.7	ug/kg	10.4	34.7	
51-28-5	2,4-Dinitrophenol	U	694	ug/kg	132	694	UJ,SV7c
132-64-9	Dibenzofuran	U	347	ug/kg	69.4	347	
84-66-2	Diethylphthalate	U	347	ug/kg	69.4	347	
86-73-7	Fluorene	U	34.7	ug/kg	10.4	34.7	
7005-72-3	4-Chlorophenylphenylether	U	347	ug/kg	34.7	347	
534-52-1	2-Methyl-4,6-dinitrophenol	U	347	ug/kg	69.4	347	UJ,SV7c
100-01-6	4-Nitroaniline	U	347	ug/kg	69.4	347	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	347	ug/kg	69.4	347	
122-66-7	Azobenzene	U	347	ug/kg	69.4	347	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	347	ug/kg	34.7	347	
118-74-1	Hexachlorobenzene	U	347	ug/kg	69.4	347	
85-01-8	Phenanthrene	U	34.7	ug/kg	10.4	34.7	
120-12-7	Anthracene	U	34.7	ug/kg	6.94	34.7	
84-74-2	Di-n-butylphthalate	U	347	ug/kg	34.7	347	
206-44-0	Fluoranthene	J	17.0	ug/kg	10.4	34.7	
85-68-7	Butylbenzylphthalate	U	347	ug/kg	69.4	347	UJ,SV7c
56-55-3	Benzo(a)anthracene	U	34.7	ug/kg	10.4	34.7	
91-94-1	3,3'-Dichlorobenzidine	U	347	ug/kg	104	347	
218-01-9	Chrysene	U	34.7	ug/kg	10.4	34.7	
117-81-7	bis(2-Ethylhexyl)phthalate	U	347	ug/kg	69.4	347	
117-84-0	Di-n-octylphthalate	U	347	ug/kg	69.4	347	
205-99-2	Benzo(b)fluoranthene	J	16.9	ug/kg	10.4	34.7	
207-08-9	Benzo(k)fluoranthene	U	34.7	ug/kg	10.4	34.7	
50-32-8	Benzo(a)pyrene	U	34.7	ug/kg	10.4	34.7	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.7	ug/kg	10.4	34.7	
53-70-3	Dibenzo(a,h)anthracene	U	34.7	ug/kg	10.4	34.7	
191-24-2	Benzo(ghi)perylene	U	34.7	ug/kg	10.4	34.7	
120-82-1	1,2,4-Trichlorobenzene	U	347	ug/kg	69.4	347	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	349	ug/kg		J
	Unknown	11.51	274	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428011	Date Received:	06/26/2009 08:40	%Moisture:	4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6035	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 22:52	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s2f3022.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.32	375	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428012	Date Received:	06/26/2009 08:40	%Moisture:	25.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6038	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 23:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.16 g	Final Volume:	1 mL
Data File:	s2f3023.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	443	ug/kg	88.7	443	
108-95-2	Phenol	U	443	ug/kg	88.7	443	
95-57-8	2-Chlorophenol	U	443	ug/kg	88.7	443	
106-46-7	1,4-Dichlorobenzene	U	443	ug/kg	88.7	443	
621-64-7	N-Nitrosodipropylamine	U	443	ug/kg	88.7	443	
59-50-7	4-Chloro-3-methylphenol	U	443	ug/kg	44.3	443	
83-32-9	Acenaphthene	J	16.2	ug/kg	14.8	44.3	
121-14-2	2,4-Dinitrotoluene	U	443	ug/kg	44.3	443	
100-02-7	4-Nitrophenol	U	443	ug/kg	88.7	443	
87-86-5	Pentachlorophenol	U	443	ug/kg	88.7	443	
129-00-0	Pyrene		155	ug/kg	13.9	44.3	
110-86-1	Pyridine	U	443	ug/kg	88.7	443	
62-53-3	Aniline	U	443	ug/kg	155	443	
111-44-4	bis(2-Chloroethyl) ether	U	443	ug/kg	88.7	443	
541-73-1	1,3-Dichlorobenzene	U	443	ug/kg	88.7	443	
100-51-6	Benzyl alcohol	U	443	ug/kg	133	443	
95-50-1	1,2-Dichlorobenzene	U	443	ug/kg	88.7	443	
108-60-1	bis(2-Chloroisopropyl)ether	U	443	ug/kg	88.7	443	
95-48-7	o-Cresol	U	443	ug/kg	88.7	443	
65794-96-9	m,p-Cresols	U	443	ug/kg	177	443	
67-72-1	Hexachloroethane	U	443	ug/kg	88.7	443	
98-95-3	Nitrobenzene	U	443	ug/kg	88.7	443	
78-59-1	Isophorone	U	443	ug/kg	88.7	443	
88-75-5	2-Nitrophenol	U	443	ug/kg	44.3	443	
105-67-9	2,4-Dimethylphenol	U	443	ug/kg	88.7	443	
111-91-1	bis(2-Chloroethoxy)methane	U	443	ug/kg	88.7	443	
120-83-2	2,4-Dichlorophenol	U	443	ug/kg	88.7	443	
65-85-0	Benzoic acid	U	887	ug/kg	222	887	UJ,SV7c
91-20-3	Naphthalene	U	44.3	ug/kg	13.3	44.3	
106-47-8	4-Chloroaniline	U	443	ug/kg	88.7	443	
87-68-3	Hexachlorobutadiene	U	443	ug/kg	88.7	443	
91-57-6	2-Methylnaphthalene	U	44.3	ug/kg	8.87	44.3	
77-47-4	Hexachlorocyclopentadiene	U	443	ug/kg	88.7	443	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	443	ug/kg	88.7	443	
95-95-4	2,4,5-Trichlorophenol	U	443	ug/kg	88.7	443	
91-58-7	2-Chloronaphthalene	U	44.3	ug/kg	15.5	44.3	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	443	ug/kg	88.7	443	
99-09-2	3-Nitroaniline	U	443	ug/kg	88.7	443	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428012	Date Received:	06/26/2009 08:40	%Moisture:	25.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6038	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 23:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.16 g	Final Volume:	1 mL
Data File:	s2f3023.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	443	ug/kg	88.7	443	
606-20-2	2,6-Dinitrotoluene	U	443	ug/kg	44.3	443	
208-96-8	Acenaphthylene	U	44.3	ug/kg	13.3	44.3	
51-28-5	2,4-Dinitrophenol	U	887	ug/kg	168	887	UJ,SV7c
132-64-9	Dibenzofuran	U	443	ug/kg	88.7	443	
84-66-2	Diethylphthalate	U	443	ug/kg	88.7	443	
86-73-7	Fluorene	U	44.3	ug/kg	13.3	44.3	
7005-72-3	4-Chlorophenylphenylether	U	443	ug/kg	44.3	443	
534-52-1	2-Methyl-4,6-dinitrophenol	U	443	ug/kg	88.7	443	UJ,SV7c
100-01-6	4-Nitroaniline	U	443	ug/kg	88.7	443	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	443	ug/kg	88.7	443	
122-66-7	Azobenzene	U	443	ug/kg	88.7	443	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	443	ug/kg	44.3	443	
118-74-1	Hexachlorobenzene	U	443	ug/kg	88.7	443	
85-01-8	Phenanthrene		103	ug/kg	13.3	44.3	
120-12-7	Anthracene	U	44.3	ug/kg	8.87	44.3	
84-74-2	Di-n-butylphthalate	U	443	ug/kg	44.3	443	
206-44-0	Fluoranthene		185	ug/kg	13.3	44.3	
85-68-7	Butylbenzylphthalate	U	443	ug/kg	88.7	443	UJ,SV7c
56-55-3	Benzo(a)anthracene		66.3	ug/kg	13.3	44.3	
91-94-1	3,3'-Dichlorobenzidine	U	443	ug/kg	133	443	
218-01-9	Chrysene		75.8	ug/kg	13.3	44.3	
117-81-7	bis(2-Ethylhexyl)phthalate	J	322	ug/kg	88.7	443	
117-84-0	Di-n-octylphthalate	U	443	ug/kg	88.7	443	
205-99-2	Benzo(b)fluoranthene		135	ug/kg	13.3	44.3	
207-08-9	Benzo(k)fluoranthene	U	44.3	ug/kg	13.3	44.3	
50-32-8	Benzo(a)pyrene		72.5	ug/kg	13.3	44.3	
193-39-5	Indeno(1,2,3-cd)pyrene	J	33.2	ug/kg	13.3	44.3	
53-70-3	Dibenzo(a,h)anthracene	U	44.3	ug/kg	13.3	44.3	
191-24-2	Benzo(ghi)perylene	J	32.9	ug/kg	13.3	44.3	
120-82-1	1,2,4-Trichlorobenzene	U	443	ug/kg	88.7	443	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	411	ug/kg		J
103-82-2	Benzeneacetic acid	5.04	234	ug/kg	90	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428012	**Date Received:**	06/26/2009 08:40	**%Moisture:**	25.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6038	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3023.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
57-10-3	n-Hexadecanoic acid	7.39	194	ug/kg	97	NJ
1000189-14-9	1-Hydroxy-6-(3-isopropenyl-cycloprop-1-e	7.95	255	ug/kg	83	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.39	195	ug/kg	98	NJ
	Unknown	8.46	899	ug/kg		J
	Unknown	8.6	297	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	211	ug/kg	90	NJ
630-03-5	Nonacosane	9.88	500	ug/kg	98	NJ
630-04-6	Hentriacontane	10.86	502	ug/kg	99	NJ
	Unknown	11.07	620	ug/kg		J
	Unknown	11.19	215	ug/kg		J
	Unknown	12.05	201	ug/kg		J
	Unknown	12.51	336	ug/kg		J
83-46-5	.beta.-Sitosterol	13.28	287	ug/kg	94	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3024.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	365	ug/kg	73.0	365	
108-95-2	Phenol	U	365	ug/kg	73.0	365	
95-57-8	2-Chlorophenol	U	365	ug/kg	73.0	365	
106-46-7	1,4-Dichlorobenzene	U	365	ug/kg	73.0	365	
621-64-7	N-Nitrosodipropylamine	U	365	ug/kg	73.0	365	
59-50-7	4-Chloro-3-methylphenol	U	365	ug/kg	36.5	365	
83-32-9	Acenaphthene	U	36.5	ug/kg	12.2	36.5	
121-14-2	2,4-Dinitrotoluene	U	365	ug/kg	36.5	365	
100-02-7	4-Nitrophenol	U	365	ug/kg	73.0	365	
87-86-5	Pentachlorophenol	U	365	ug/kg	73.0	365	
129-00-0	Pyrene	U	36.5	ug/kg	11.5	36.5	
110-86-1	Pyridine	U	365	ug/kg	73.0	365	
62-53-3	Aniline	U	365	ug/kg	128	365	
111-44-4	bis(2-Chloroethyl) ether	U	365	ug/kg	73.0	365	
541-73-1	1,3-Dichlorobenzene	U	365	ug/kg	73.0	365	
100-51-6	Benzyl alcohol	U	365	ug/kg	109	365	
95-50-1	1,2-Dichlorobenzene	U	365	ug/kg	73.0	365	
108-60-1	bis(2-Chloroisopropyl)ether	U	365	ug/kg	73.0	365	
95-48-7	o-Cresol	U	365	ug/kg	73.0	365	
65794-96-9	m,p-Cresols	U	365	ug/kg	146	365	
67-72-1	Hexachloroethane	U	365	ug/kg	73.0	365	
98-95-3	Nitrobenzene	U	365	ug/kg	73.0	365	
78-59-1	Isophorone	U	365	ug/kg	73.0	365	
88-75-5	2-Nitrophenol	U	365	ug/kg	36.5	365	
105-67-9	2,4-Dimethylphenol	U	365	ug/kg	73.0	365	
111-91-1	bis(2-Chloroethoxy)methane	U	365	ug/kg	73.0	365	
120-83-2	2,4-Dichlorophenol	U	365	ug/kg	73.0	365	
65-85-0	Benzoic acid	U	730	ug/kg	182	730	UJ,SV7c
91-20-3	Naphthalene	U	36.5	ug/kg	10.9	36.5	
106-47-8	4-Chloroaniline	U	365	ug/kg	73.0	365	
87-68-3	Hexachlorobutadiene	U	365	ug/kg	73.0	365	
91-57-6	2-Methylnaphthalene	U	36.5	ug/kg	7.30	36.5	
77-47-4	Hexachlorocyclopentadiene	U	365	ug/kg	73.0	365	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	365	ug/kg	73.0	365	
95-95-4	2,4,5-Trichlorophenol	U	365	ug/kg	73.0	365	
91-58-7	2-Chloronaphthalene	U	36.5	ug/kg	12.8	36.5	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	365	ug/kg	73.0	365	
99-09-2	3-Nitroaniline	U	365	ug/kg	73.0	365	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3024.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	365	ug/kg	73.0	365	
606-20-2	2,6-Dinitrotoluene	U	365	ug/kg	36.5	365	
208-96-8	Acenaphthylene	U	36.5	ug/kg	10.9	36.5	
51-28-5	2,4-Dinitrophenol	U	730	ug/kg	139	730	UJ,SV7c
132-64-9	Dibenzofuran	U	365	ug/kg	73.0	365	
84-66-2	Diethylphthalate	U	365	ug/kg	73.0	365	
86-73-7	Fluorene	U	36.5	ug/kg	10.9	36.5	
7005-72-3	4-Chlorophenylphenylether	U	365	ug/kg	36.5	365	
534-52-1	2-Methyl-4,6-dinitrophenol	U	365	ug/kg	73.0	365	UJ,SV7c
100-01-6	4-Nitroaniline	U	365	ug/kg	73.0	365	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	365	ug/kg	73.0	365	
122-66-7	Azobenzene	U	365	ug/kg	73.0	365	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	365	ug/kg	36.5	365	
118-74-1	Hexachlorobenzene	U	365	ug/kg	73.0	365	
85-01-8	Phenanthrene	U	36.5	ug/kg	10.9	36.5	
120-12-7	Anthracene	U	36.5	ug/kg	7.30	36.5	
84-74-2	Di-n-butylphthalate	U	365	ug/kg	36.5	365	
206-44-0	Fluoranthene	J	12.5	ug/kg	10.9	36.5	
85-68-7	Butylbenzylphthalate	U	365	ug/kg	73.0	365	UJ,SV7c
56-55-3	Benzo(a)anthracene	U	36.5	ug/kg	10.9	36.5	
91-94-1	3,3'-Dichlorobenzidine	U	365	ug/kg	109	365	
218-01-9	Chrysene	U	36.5	ug/kg	10.9	36.5	
117-81-7	bis(2-Ethylhexyl)phthalate	J	85.0	ug/kg	73.0	365	
117-84-0	Di-n-octylphthalate	U	365	ug/kg	73.0	365	
205-99-2	Benzo(b)fluoranthene	U	36.5	ug/kg	10.9	36.5	
207-08-9	Benzo(k)fluoranthene	U	36.5	ug/kg	10.9	36.5	
50-32-8	Benzo(a)pyrene	U	36.5	ug/kg	10.9	36.5	
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.5	ug/kg	10.9	36.5	
53-70-3	Dibenzo(a,h)anthracene	U	36.5	ug/kg	10.9	36.5	
191-24-2	Benzo(ghi)perylene	U	36.5	ug/kg	10.9	36.5	
120-82-1	1,2,4-Trichlorobenzene	U	365	ug/kg	73.0	365	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.07	263	ug/kg		J
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.91	273	ug/kg	99	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3024.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	9.35	208	ug/kg		J
	Unknown	11.52	331	ug/kg		J
	Unknown	12.33	585	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428009	Date Received:	06/26/2009 08:40	%Moisture:	27.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6040	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 22:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s2f3020.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	458	ug/kg	91.6	458	
108-95-2	Phenol	U	458	ug/kg	91.6	458	
95-57-8	2-Chlorophenol	U	458	ug/kg	91.6	458	
106-46-7	1,4-Dichlorobenzene	U	458	ug/kg	91.6	458	
621-64-7	N-Nitrosodipropylamine	U	458	ug/kg	91.6	458	
59-50-7	4-Chloro-3-methylphenol	U	458	ug/kg	45.8	458	
83-32-9	Acenaphthene		47.6	ug/kg	15.3	45.8	
121-14-2	2,4-Dinitrotoluene	U	458	ug/kg	45.8	458	
100-02-7	4-Nitrophenol	U	458	ug/kg	91.6	458	
87-86-5	Pentachlorophenol	U	458	ug/kg	91.6	458	
129-00-0	Pyrene		1660	ug/kg	14.4	45.8	
110-86-1	Pyridine	U	458	ug/kg	91.6	458	
62-53-3	Aniline	U	458	ug/kg	160	458	
111-44-4	bis(2-Chloroethyl) ether	U	458	ug/kg	91.6	458	
541-73-1	1,3-Dichlorobenzene	U	458	ug/kg	91.6	458	
100-51-6	Benzyl alcohol	U	458	ug/kg	137	458	
95-50-1	1,2-Dichlorobenzene	U	458	ug/kg	91.6	458	
108-60-1	bis(2-Chloroisopropyl)ether	U	458	ug/kg	91.6	458	
95-48-7	o-Cresol	U	458	ug/kg	91.6	458	
65794-96-9	m,p-Cresols	U	458	ug/kg	183	458	
67-72-1	Hexachloroethane	U	458	ug/kg	91.6	458	
98-95-3	Nitrobenzene	U	458	ug/kg	91.6	458	
78-59-1	Isophorone	U	458	ug/kg	91.6	458	
88-75-5	2-Nitrophenol	U	458	ug/kg	45.8	458	
105-67-9	2,4-Dimethylphenol	U	458	ug/kg	91.6	458	
111-91-1	bis(2-Chloroethoxy)methane	U	458	ug/kg	91.6	458	
120-83-2	2,4-Dichlorophenol	U	458	ug/kg	91.6	458	
65-85-0	Benzoic acid	U	916	ug/kg	229	916	UJ,SV7c
91-20-3	Naphthalene	U	45.8	ug/kg	13.7	45.8	
106-47-8	4-Chloroaniline	U	458	ug/kg	91.6	458	
87-68-3	Hexachlorobutadiene	U	458	ug/kg	91.6	458	
91-57-6	2-Methylnaphthalene	U	45.8	ug/kg	9.16	45.8	
77-47-4	Hexachlorocyclopentadiene	U	458	ug/kg	91.6	458	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	458	ug/kg	91.6	458	
95-95-4	2,4,5-Trichlorophenol	U	458	ug/kg	91.6	458	
91-58-7	2-Chloronaphthalene	U	45.8	ug/kg	16.0	45.8	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	458	ug/kg	91.6	458	
99-09-2	3-Nitroaniline	U	458	ug/kg	91.6	458	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428009	Date Received:	06/26/2009 08:40	%Moisture:	27.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6040	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 22:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s2f3020.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	458	ug/kg	91.6	458	
606-20-2	2,6-Dinitrotoluene	U	458	ug/kg	45.8	458	
208-96-8	Acenaphthylene	U	45.8	ug/kg	13.7	45.8	
51-28-5	2,4-Dinitrophenol	U	916	ug/kg	174	916	UJ,SV7c
132-64-9	Dibenzofuran	U	458	ug/kg	91.6	458	
84-66-2	Diethylphthalate	U	458	ug/kg	91.6	458	
86-73-7	Fluorene		52.1	ug/kg	13.7	45.8	
7005-72-3	4-Chlorophenylphenylether	U	458	ug/kg	45.8	458	
534-52-1	2-Methyl-4,6-dinitrophenol	U	458	ug/kg	91.6	458	UJ,SV7c
100-01-6	4-Nitroaniline	U	458	ug/kg	91.6	458	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	458	ug/kg	91.6	458	
122-66-7	Azobenzene	U	458	ug/kg	91.6	458	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	458	ug/kg	45.8	458	
118-74-1	Hexachlorobenzene	U	458	ug/kg	91.6	458	
85-01-8	Phenanthrene		564	ug/kg	13.7	45.8	
120-12-7	Anthracene	U	45.8	ug/kg	9.16	45.8	
84-74-2	Di-n-butylphthalate	U	458	ug/kg	45.8	458	
206-44-0	Fluoranthene		1700	ug/kg	13.7	45.8	
85-68-7	Butylbenzylphthalate	U	458	ug/kg	91.6	458	UJ,SV7c
56-55-3	Benzo(a)anthracene		654	ug/kg	13.7	45.8	
91-94-1	3,3'-Dichlorobenzidine	U	458	ug/kg	137	458	
218-01-9	Chrysene		958	ug/kg	13.7	45.8	
117-81-7	bis(2-Ethylhexyl)phthalate	J	150	ug/kg	91.6	458	
117-84-0	Di-n-octylphthalate	U	458	ug/kg	91.6	458	
205-99-2	Benzo(b)fluoranthene		1700	ug/kg	13.7	45.8	
207-08-9	Benzo(k)fluoranthene	U	45.8	ug/kg	13.7	45.8	
50-32-8	Benzo(a)pyrene		835	ug/kg	13.7	45.8	
193-39-5	Indeno(1,2,3-cd)pyrene		450	ug/kg	13.7	45.8	
53-70-3	Dibenzo(a,h)anthracene		121	ug/kg	13.7	45.8	
191-24-2	Benzo(ghi)perylene		474	ug/kg	13.7	45.8	
120-82-1	1,2,4-Trichlorobenzene	U	458	ug/kg	91.6	458	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	371	ug/kg		J
103-82-2	Benzeneacetic acid	5.04	261	ug/kg	90	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428009	**Date Received:**	06/26/2009 08:40	**%Moisture:**	27.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6040	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Allquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s2f3020.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
2381-21-7	Pyrene, 1-methyl-	8.22	219	ug/kg	96	NJ
198-55-0	Perylene	10.35	500	ug/kg	98	NJ
	Unknown	11.5	340	ug/kg		J
302800-55-1	Quinoxaline, 6-(3-nitrobenzylidenamino)-	12.61	239	ug/kg	95	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428008	Date Received:	06/26/2009 08:40	%Moisture:	5.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6041	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 21:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.15 g	Final Volume:	1 mL
Data File:	s2f3019.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	350	ug/kg	70.0	350	
108-95-2	Phenol	U	350	ug/kg	70.0	350	
95-57-8	2-Chlorophenol	U	350	ug/kg	70.0	350	
106-46-7	1,4-Dichlorobenzene	U	350	ug/kg	70.0	350	
621-64-7	N-Nitrosodipropylamine	U	350	ug/kg	70.0	350	
59-50-7	4-Chloro-3-methylphenol	U	350	ug/kg	35.0	350	
83-32-9	Acenaphthene	U	35.0	ug/kg	11.7	35.0	
121-14-2	2,4-Dinitrotoluene	U	350	ug/kg	35.0	350	
100-02-7	4-Nitrophenol	U	350	ug/kg	70.0	350	
87-86-5	Pentachlorophenol	U	350	ug/kg	70.0	350	
129-00-0	Pyrene		133	ug/kg	11.0	35.0	
110-86-1	Pyridine	U	350	ug/kg	70.0	350	
62-53-3	Aniline	U	350	ug/kg	122	350	
111-44-4	bis(2-Chloroethyl) ether	U	350	ug/kg	70.0	350	
541-73-1	1,3-Dichlorobenzene	U	350	ug/kg	70.0	350	
100-51-6	Benzyl alcohol	U	350	ug/kg	105	350	
95-50-1	1,2-Dichlorobenzene	U	350	ug/kg	70.0	350	
108-60-1	bis(2-Chloroisopropyl)ether	U	350	ug/kg	70.0	350	
95-48-7	o-Cresol	U	350	ug/kg	70.0	350	
65794-96-9	m,p-Cresols	U	350	ug/kg	140	350	
67-72-1	Hexachloroethane	U	350	ug/kg	70.0	350	
98-95-3	Nitrobenzene	U	350	ug/kg	70.0	350	
78-59-1	Isophorone	U	350	ug/kg	70.0	350	
88-75-5	2-Nitrophenol	U	350	ug/kg	35.0	350	
105-67-9	2,4-Dimethylphenol	U	350	ug/kg	70.0	350	
111-91-1	bis(2-Chloroethoxy)methane	U	350	ug/kg	70.0	350	
120-83-2	2,4-Dichlorophenol	U	350	ug/kg	70.0	350	
65-85-0	Benzoic acid	U	700	ug/kg	175	700	UJ,SV7c
91-20-3	Naphthalene	U	35.0	ug/kg	10.5	35.0	
106-47-8	4-Chloroaniline	U	350	ug/kg	70.0	350	
87-68-3	Hexachlorobutadiene	U	350	ug/kg	70.0	350	
91-57-6	2-Methylnaphthalene	U	35.0	ug/kg	7.00	35.0	
77-47-4	Hexachlorocyclopentadiene	U	350	ug/kg	70.0	350	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	350	ug/kg	70.0	350	
95-95-4	2,4,5-Trichlorophenol	U	350	ug/kg	70.0	350	
91-58-7	2-Chloronaphthalene	U	35.0	ug/kg	12.2	35.0	
88-74-4	2-Nitroaniline	U	350	ug/kg	70.0	350	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	350	ug/kg	70.0	350	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428008**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**5.2**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6041**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881319**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 21:53**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 14:54**	**Aliquot:**	**30.15 g**	**Final Volume:**	**1 mL**
Data File:	**s2f3019.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	350	ug/kg	70.0	350	
606-20-2	2,6-Dinitrotoluene	U	350	ug/kg	35.0	350	
208-96-8	Acenaphthylene	U	35.0	ug/kg	10.5	35.0	
51-28-5	2,4-Dinitrophenol	U	700	ug/kg	133	700	UJ,SV7c
132-64-9	Dibenzofuran	U	350	ug/kg	70.0	350	
84-66-2	Diethylphthalate	U	350	ug/kg	70.0	350	
86-73-7	Fluorene	U	35.0	ug/kg	10.5	35.0	
7005-72-3	4-Chlorophenylphenylether	U	350	ug/kg	35.0	350	
534-52-1	2-Methyl-4,6-dinitrophenol	U	350	ug/kg	70.0	350	UJ,SV7c
100-01-6	4-Nitroaniline	U	350	ug/kg	70.0	350	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	350	ug/kg	70.0	350	
122-66-7	Azobenzene	U	350	ug/kg	70.0	350	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	350	ug/kg	35.0	350	
118-74-1	Hexachlorobenzene	U	350	ug/kg	70.0	350	
85-01-8	Phenanthrene		64.8	ug/kg	10.5	35.0	
120-12-7	Anthracene	U	35.0	ug/kg	7.00	35.0	
84-74-2	Di-n-butylphthalate	U	350	ug/kg	35.0	350	
206-44-0	Fluoranthene		153	ug/kg	10.5	35.0	
85-68-7	Butylbenzylphthalate	U	350	ug/kg	70.0	350	UJ,SV7c
56-55-3	Benzo(a)anthracene		52.4	ug/kg	10.5	35.0	
91-94-1	3,3'-Dichlorobenzidine	U	350	ug/kg	105	350	
218-01-9	Chrysene		71.4	ug/kg	10.5	35.0	
117-81-7	bis(2-Ethylhexyl)phthalate	J	109	ug/kg	70.0	350	
117-84-0	Di-n-octylphthalate	U	350	ug/kg	70.0	350	
205-99-2	Benzo(b)fluoranthene		120	ug/kg	10.5	35.0	
207-08-9	Benzo(k)fluoranthene	U	35.0	ug/kg	10.5	35.0	
50-32-8	Benzo(a)pyrene		59.5	ug/kg	10.5	35.0	
193-39-5	Indeno(1,2,3-cd)pyrene		35.1	ug/kg	10.5	35.0	
53-70-3	Dibenzo(a,h)anthracene	J	12.8	ug/kg	10.5	35.0	
191-24-2	Benzo(ghi)perylene		40.5	ug/kg	10.5	35.0	
120-82-1	1,2,4-Trichlorobenzene	U	350	ug/kg	70.0	350	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Aldol Condensate	3.06	270	ug/kg		J
	Unknown	9.91	197	ug/kg		J

MAD
07/29/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428008	Date Received:	06/26/2009 08:40	%Moisture:	5.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6041	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 21:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.15 g	Final Volume:	1 mL
Data File:	s2f3019.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	11.5	175	ug/kg	90	NJ

MAD
07/29/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428014	Date Received:	06/26/2009 08:40	%Moisture:	17.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6042	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 23:52	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.19 g	Final Volume:	1 mL
Data File:	s2f3025.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	403	ug/kg	80.6	403	
108-95-2	Phenol	U	403	ug/kg	80.6	403	
95-57-8	2-Chlorophenol	U	403	ug/kg	80.6	403	
106-46-7	1,4-Dichlorobenzene	U	403	ug/kg	80.6	403	
621-64-7	N-Nitrosodipropylamine	U	403	ug/kg	80.6	403	
59-50-7	4-Chloro-3-methylphenol	U	403	ug/kg	40.3	403	
83-32-9	Acenaphthene	U	40.3	ug/kg	13.5	40.3	
121-14-2	2,4-Dinitrotoluene	U	403	ug/kg	40.3	403	
100-02-7	4-Nitrophenol	U	403	ug/kg	80.6	403	
87-86-5	Pentachlorophenol	U	403	ug/kg	80.6	403	
129-00-0	Pyrene		198	ug/kg	12.7	40.3	
110-86-1	Pyridine	U	403	ug/kg	80.6	403	
62-53-3	Aniline	U	403	ug/kg	141	403	
111-44-4	bis(2-Chloroethyl) ether	U	403	ug/kg	80.6	403	
541-73-1	1,3-Dichlorobenzene	U	403	ug/kg	80.6	403	
100-51-6	Benzyl alcohol	U	403	ug/kg	121	403	
95-50-1	1,2-Dichlorobenzene	U	403	ug/kg	80.6	403	
108-60-1	bis(2-Chloroisopropyl)ether	U	403	ug/kg	80.6	403	
95-48-7	o-Cresol	U	403	ug/kg	80.6	403	
65794-96-9	m,p-Cresols	U	403	ug/kg	161	403	
67-72-1	Hexachloroethane	U	403	ug/kg	80.6	403	
98-95-3	Nitrobenzene	U	403	ug/kg	80.6	403	
78-59-1	Isophorone	U	403	ug/kg	80.6	403	
88-75-5	2-Nitrophenol	U	403	ug/kg	40.3	403	
105-67-9	2,4-Dimethylphenol	U	403	ug/kg	80.6	403	
111-91-1	bis(2-Chloroethoxy)methane	U	403	ug/kg	80.6	403	
120-83-2	2,4-Dichlorophenol	U	403	ug/kg	80.6	403	
65-85-0	Benzoic acid	U	806	ug/kg	201	806	UJ,SV7c
91-20-3	Naphthalene	U	40.3	ug/kg	12.1	40.3	
106-47-8	4-Chloroaniline	U	403	ug/kg	80.6	403	
87-68-3	Hexachlorobutadiene	U	403	ug/kg	80.6	403	
91-57-6	2-Methylnaphthalene	U	40.3	ug/kg	8.06	40.3	
77-47-4	Hexachlorocyclopentadiene	U	403	ug/kg	80.6	403	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	403	ug/kg	80.6	403	
95-95-4	2,4,5-Trichlorophenol	U	403	ug/kg	80.6	403	
91-58-7	2-Chloronaphthalene	U	40.3	ug/kg	14.1	40.3	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	403	ug/kg	80.6	403	
99-09-2	3-Nitroaniline	U	403	ug/kg	80.6	403	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428014	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6042	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s2f3025.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	403	ug/kg	80.6	403	
606-20-2	2,6-Dinitrotoluene	U	403	ug/kg	40.3	403	
208-96-8	Acenaphthylene	U	40.3	ug/kg	12.1	40.3	
51-28-5	2,4-Dinitrophenol	U	806	ug/kg	153	806	UJ,SV7c
132-64-9	Dibenzofuran	U	403	ug/kg	80.6	403	
84-66-2	Diethylphthalate	U	403	ug/kg	80.6	403	
86-73-7	Fluorene	U	40.3	ug/kg	12.1	40.3	
7005-72-3	4-Chlorophenylphenylether	U	403	ug/kg	40.3	403	
534-52-1	2-Methyl-4,6-dinitrophenol	U	403	ug/kg	80.6	403	UJ,SV7c
100-01-6	4-Nitroaniline	U	403	ug/kg	80.6	403	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	403	ug/kg	80.6	403	
122-66-7	Azobenzene	U	403	ug/kg	80.6	403	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	403	ug/kg	40.3	403	
118-74-1	Hexachlorobenzene	U	403	ug/kg	80.6	403	
85-01-8	Phenanthrene		67.1	ug/kg	12.1	40.3	
120-12-7	Anthracene	U	40.3	ug/kg	8.06	40.3	
84-74-2	Di-n-butylphthalate	U	403	ug/kg	40.3	403	
206-44-0	Fluoranthene		224	ug/kg	12.1	40.3	
85-68-7	Butylbenzylphthalate	U	403	ug/kg	80.6	403	UJ,SV7c
56-55-3	Benzo(a)anthracene		84.4	ug/kg	12.1	40.3	
91-94-1	3,3'-Dichlorobenzidine	U	403	ug/kg	121	403	
218-01-9	Chrysene		113	ug/kg	12.1	40.3	
117-81-7	bis(2-Ethylhexyl)phthalate	J	107	ug/kg	80.6	403	
117-84-0	Di-n-octylphthalate	U	403	ug/kg	80.6	403	
205-99-2	Benzo(b)fluoranthene		214	ug/kg	12.1	40.3	
207-08-9	Benzo(k)fluoranthene	U	40.3	ug/kg	12.1	40.3	
50-32-8	Benzo(a)pyrene		103	ug/kg	12.1	40.3	
193-39-5	Indeno(1,2,3-cd)pyrene		58.6	ug/kg	12.1	40.3	
53-70-3	Dibenzo(a,h)anthracene	J	18.8	ug/kg	12.1	40.3	
191-24-2	Benzo(ghi)perylene		60.1	ug/kg	12.1	40.3	
120-82-1	1,2,4-Trichlorobenzene	U	403	ug/kg	80.6	403	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	345	ug/kg		J
4630-07-3	Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	5.91	266	ug/kg	96	NJ

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Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428014	Date Received:	06/26/2009 08:40	%Moisture:	17.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6042	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 23:52	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.19 g	Final Volume:	1 mL
Data File:	s2f3025.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	185	ug/kg	95	NJ
	Unknown	11.07	357	ug/kg		J
	Unknown	11.51	277	ug/kg		J
	Unknown	12.08	195	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428006	Date Received:	06/26/2009 08:40	%Moisture:	7.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6043	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 21:13	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.17 g	Final Volume:	1 mL
Data File:	s2f3017.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	360	ug/kg	71.9	360	
108-95-2	Phenol	U	360	ug/kg	71.9	360	
95-57-8	2-Chlorophenol	U	360	ug/kg	71.9	360	
106-46-7	1,4-Dichlorobenzene	U	360	ug/kg	71.9	360	
621-64-7	N-Nitrosodipropylamine	U	360	ug/kg	71.9	360	
59-50-7	4-Chloro-3-methylphenol	U	360	ug/kg	36.0	360	
83-32-9	Acenaphthene	U	36.0	ug/kg	12.0	36.0	
121-14-2	2,4-Dinitrotoluene	U	360	ug/kg	36.0	360	
100-02-7	4-Nitrophenol	U	360	ug/kg	71.9	360	
87-86-5	Pentachlorophenol	U	360	ug/kg	71.9	360	
129-00-0	Pyrene		89.5	ug/kg	11.3	36.0	
110-86-1	Pyridine	U	360	ug/kg	71.9	360	
62-53-3	Aniline	U	360	ug/kg	126	360	
111-44-4	bis(2-Chloroethyl) ether	U	360	ug/kg	71.9	360	
541-73-1	1,3-Dichlorobenzene	U	360	ug/kg	71.9	360	
100-51-6	Benzyl alcohol	U	360	ug/kg	108	360	
95-50-1	1,2-Dichlorobenzene	U	360	ug/kg	71.9	360	
108-60-1	bis(2-Chloroisopropyl)ether	U	360	ug/kg	71.9	360	
95-48-7	o-Cresol	U	360	ug/kg	71.9	360	
65794-96-9	m,p-Cresols	U	360	ug/kg	144	360	
67-72-1	Hexachloroethane	U	360	ug/kg	71.9	360	
98-95-3	Nitrobenzene	U	360	ug/kg	71.9	360	
78-59-1	Isophorone	U	360	ug/kg	71.9	360	
88-75-5	2-Nitrophenol	U	360	ug/kg	36.0	360	
105-67-9	2,4-Dimethylphenol	U	360	ug/kg	71.9	360	
111-91-1	bis(2-Chloroethoxy)methane	U	360	ug/kg	71.9	360	
120-83-2	2,4-Dichlorophenol	U	360	ug/kg	71.9	360	
65-85-0	Benzoic acid	U	719	ug/kg	180	719	UJ,SV7c
91-20-3	Naphthalene	U	36.0	ug/kg	10.8	36.0	
106-47-8	4-Chloroaniline	U	360	ug/kg	71.9	360	
87-68-3	Hexachlorobutadiene	U	360	ug/kg	71.9	360	
91-57-6	2-Methylnaphthalene	U	36.0	ug/kg	7.19	36.0	
77-47-4	Hexachlorocyclopentadiene	U	360	ug/kg	71.9	360	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	360	ug/kg	71.9	360	
95-95-4	2,4,5-Trichlorophenol	U	360	ug/kg	71.9	360	
91-58-7	2-Chloronaphthalene	U	36.0	ug/kg	12.6	36.0	
88-74-4	2-Nitroaniline	U	360	ug/kg	71.9	360	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	360	ug/kg	71.9	360	

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Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428006	**Date Received:**	06/26/2009 08:40	**%Moisture:**	7.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6043	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:13	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s2f3017.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	360	ug/kg	71.9	360	
606-20-2	2,6-Dinitrotoluene	U	360	ug/kg	36.0	360	
208-96-8	Acenaphthylene	U	36.0	ug/kg	10.8	36.0	
51-28-5	2,4-Dinitrophenol	U	719	ug/kg	137	719	UJ,SV7c
132-64-9	Dibenzofuran	U	360	ug/kg	71.9	360	
84-66-2	Diethylphthalate	U	360	ug/kg	71.9	360	
86-73-7	Fluorene	U	36.0	ug/kg	10.8	36.0	
7005-72-3	4-Chlorophenylphenylether	U	360	ug/kg	36.0	360	
534-52-1	2-Methyl-4,6-dinitrophenol	U	360	ug/kg	71.9	360	UJ,SV7c
100-01-6	4-Nitroaniline	U	360	ug/kg	71.9	360	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	360	ug/kg	71.9	360	
122-66-7	Azobenzene	U	360	ug/kg	71.9	360	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	360	ug/kg	36.0	360	
118-74-1	Hexachlorobenzene	U	360	ug/kg	71.9	360	
85-01-8	Phenanthrene	J	31.8	ug/kg	10.8	36.0	
120-12-7	Anthracene	U	36.0	ug/kg	7.19	36.0	
84-74-2	Di-n-butylphthalate	U	360	ug/kg	36.0	360	
206-44-0	Fluoranthene		110	ug/kg	10.8	36.0	
85-68-7	Butylbenzylphthalate	U	360	ug/kg	71.9	360	UJ,SV7c
56-55-3	Benzo(a)anthracene		38.4	ug/kg	10.8	36.0	
91-94-1	3,3'-Dichlorobenzidine	U	360	ug/kg	108	360	
218-01-9	Chrysene		57.9	ug/kg	10.8	36.0	
117-81-7	bis(2-Ethylhexyl)phthalate	J	89.3	ug/kg	71.9	360	
117-84-0	Di-n-octylphthalate	U	360	ug/kg	71.9	360	
205-99-2	Benzo(b)fluoranthene		101	ug/kg	10.8	36.0	
207-08-9	Benzo(k)fluoranthene	U	36.0	ug/kg	10.8	36.0	
50-32-8	Benzo(a)pyrene		49.5	ug/kg	10.8	36.0	
193-39-5	Indeno(1,2,3-cd)pyrene	J	30.1	ug/kg	10.8	36.0	
53-70-3	Dibenzo(a,h)anthracene	U	36.0	ug/kg	10.8	36.0	
191-24-2	Benzo(ghi)perylene	J	31.0	ug/kg	10.8	36.0	
120-82-1	1,2,4-Trichlorobenzene	U	360	ug/kg	71.9	360	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	273	ug/kg		J
	Unknown	9.53	387	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428010**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**12.8**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6044**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881319**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 22:32**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 14:54**	**Aliquot:**	**30.25 g**	**Final Volume:**	**1 mL**
Data File:	**s2f3021.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	379	ug/kg	75.8	379	
108-95-2	Phenol	U	379	ug/kg	75.8	379	
95-57-8	2-Chlorophenol	U	379	ug/kg	75.8	379	
106-46-7	1,4-Dichlorobenzene	U	379	ug/kg	75.8	379	
621-64-7	N-Nitrosodipropylamine	U	379	ug/kg	75.8	379	
59-50-7	4-Chloro-3-methylphenol	U	379	ug/kg	37.9	379	
83-32-9	Acenaphthene	U	37.9	ug/kg	12.7	37.9	
121-14-2	2,4-Dinitrotoluene	U	379	ug/kg	37.9	379	
100-02-7	4-Nitrophenol	U	379	ug/kg	75.8	379	
87-86-5	Pentachlorophenol	U	379	ug/kg	75.8	379	
129-00-0	Pyrene		253	ug/kg	11.9	37.9	
110-86-1	Pyridine	U	379	ug/kg	75.8	379	
62-53-3	Aniline	U	379	ug/kg	133	379	
111-44-4	bis(2-Chloroethyl) ether	U	379	ug/kg	75.8	379	
541-73-1	1,3-Dichlorobenzene	U	379	ug/kg	75.8	379	
100-51-6	Benzyl alcohol	U	379	ug/kg	114	379	
95-50-1	1,2-Dichlorobenzene	U	379	ug/kg	75.8	379	
108-60-1	bis(2-Chloroisopropyl)ether	U	379	ug/kg	75.8	379	
95-48-7	o-Cresol	U	379	ug/kg	75.8	379	
65794-96-9	m,p-Cresols	U	379	ug/kg	152	379	
67-72-1	Hexachloroethane	U	379	ug/kg	75.8	379	
98-95-3	Nitrobenzene	U	379	ug/kg	75.8	379	
78-59-1	Isophorone	U	379	ug/kg	75.8	379	
88-75-5	2-Nitrophenol	U	379	ug/kg	37.9	379	
105-67-9	2,4-Dimethylphenol	U	379	ug/kg	75.8	379	
111-91-1	bis(2-Chloroethoxy)methane	U	379	ug/kg	75.8	379	
120-83-2	2,4-Dichlorophenol	U	379	ug/kg	75.8	379	
65-85-0	Benzoic acid	U	758	ug/kg	190	758	UJ,SV7c
91-20-3	Naphthalene	U	37.9	ug/kg	11.4	37.9	
106-47-8	4-Chloroaniline	U	379	ug/kg	75.8	379	
87-68-3	Hexachlorobutadiene	U	379	ug/kg	75.8	379	
91-57-6	2-Methylnaphthalene	U	37.9	ug/kg	7.58	37.9	
77-47-4	Hexachlorocyclopentadiene	U	379	ug/kg	75.8	379	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	379	ug/kg	75.8	379	
95-95-4	2,4,5-Trichlorophenol	U	379	ug/kg	75.8	379	
91-58-7	2-Chloronaphthalene	U	37.9	ug/kg	13.3	37.9	
88-74-4	2-Nitroaniline	U	379	ug/kg	75.8	379	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	379	ug/kg	75.8	379	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428010	**Date Received:**	06/26/2009 08:40	**%Moisture:**	12.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6044	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.25 g	**Final Volume:**	1 mL
Data File:	s2f3021.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	379	ug/kg	75.8	379	
606-20-2	2,6-Dinitrotoluene	U	379	ug/kg	37.9	379	
208-96-8	Acenaphthylene	U	37.9	ug/kg	11.4	37.9	
51-28-5	2,4-Dinitrophenol	U	758	ug/kg	144	758	UJ,SV7c
132-64-9	Dibenzofuran	U	379	ug/kg	75.8	379	
84-66-2	Diethylphthalate	U	379	ug/kg	75.8	379	
86-73-7	Fluorene	U	37.9	ug/kg	11.4	37.9	
7005-72-3	4-Chlorophenylphenylether	U	379	ug/kg	37.9	379	
534-52-1	2-Methyl-4,6-dinitrophenol	U	379	ug/kg	75.8	379	UJ,SV7c
100-01-6	4-Nitroaniline	U	379	ug/kg	75.8	379	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	379	ug/kg	75.8	379	
122-66-7	Azobenzene	U	379	ug/kg	75.8	379	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	379	ug/kg	37.9	379	
118-74-1	Hexachlorobenzene	U	379	ug/kg	75.8	379	
85-01-8	Phenanthrene		78.5	ug/kg	11.4	37.9	
120-12-7	Anthracene	U	37.9	ug/kg	7.58	37.9	
84-74-2	Di-n-butylphthalate	U	379	ug/kg	37.9	379	
206-44-0	Fluoranthene		299	ug/kg	11.4	37.9	
85-68-7	Butylbenzylphthalate	U	379	ug/kg	75.8	379	UJ,SV7c
56-55-3	Benzo(a)anthracene		111	ug/kg	11.4	37.9	
91-94-1	3,3'-Dichlorobenzidine	U	379	ug/kg	114	379	
218-01-9	Chrysene		148	ug/kg	11.4	37.9	
117-81-7	bis(2-Ethylhexyl)phthalate	J	118	ug/kg	75.8	379	
117-84-0	Di-n-octylphthalate	U	379	ug/kg	75.8	379	
205-99-2	Benzo(b)fluoranthene		286	ug/kg	11.4	37.9	
207-08-9	Benzo(k)fluoranthene	U	37.9	ug/kg	11.4	37.9	
50-32-8	Benzo(a)pyrene		132	ug/kg	11.4	37.9	
193-39-5	Indeno(1,2,3-cd)pyrene		74.1	ug/kg	11.4	37.9	
53-70-3	Dibenzo(a,h)anthracene	J	24.3	ug/kg	11.4	37.9	
191-24-2	Benzo(ghi)perylene		81.0	ug/kg	11.4	37.9	
120-82-1	1,2,4-Trichlorobenzene	U	379	ug/kg	75.8	379	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	358	ug/kg		J
57-10-3	n-Hexadecanoic acid	7.39	170	ug/kg	97	NJ

MAD
07/29/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428010	**Date Received:**	06/26/2009 08:40	**%Moisture:**	12.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6044	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.25 g	**Final Volume:**	1 mL
Data File:	s2f3021.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
60-33-3	9,12-Octadecadienoic acid (Z,Z)-	7.81	159	ug/kg	96	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.39	183	ug/kg	98	NJ
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	268	ug/kg	90	NJ
6971-40-0	17-Pentatriacontene	9.35	304	ug/kg	87	NJ
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	9.54	215	ug/kg	91	NJ
630-03-5	Nonacosane	9.88	242	ug/kg	97	NJ
	Unknown	10.19	190	ug/kg		J
112-95-8	Eicosane	10.86	164	ug/kg	96	NJ
	Unknown	11.1	236	ug/kg		J
	Unknown	11.51	185	ug/kg		J

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07/29/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428007	Date Received:	06/26/2009 08:40	%Moisture:	8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6045	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 21:33	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.19 g	Final Volume:	1 mL
Data File:	s2f3018.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	360	ug/kg	72.0	360	
108-95-2	Phenol	U	360	ug/kg	72.0	360	
95-57-8	2-Chlorophenol	U	360	ug/kg	72.0	360	
106-46-7	1,4-Dichlorobenzene	U	360	ug/kg	72.0	360	
621-64-7	N-Nitrosodipropylamine	U	360	ug/kg	72.0	360	
59-50-7	4-Chloro-3-methylphenol	U	360	ug/kg	36.0	360	
83-32-9	Acenaphthene	U	36.0	ug/kg	12.0	36.0	
121-14-2	2,4-Dinitrotoluene	U	360	ug/kg	36.0	360	
100-02-7	4-Nitrophenol	U	360	ug/kg	72.0	360	
87-86-5	Pentachlorophenol	U	360	ug/kg	72.0	360	
129-00-0	Pyrene		48.2	ug/kg	11.3	36.0	
110-86-1	Pyridine	U	360	ug/kg	72.0	360	
62-53-3	Aniline	U	360	ug/kg	126	360	
111-44-4	bis(2-Chloroethyl) ether	U	360	ug/kg	72.0	360	
541-73-1	1,3-Dichlorobenzene	U	360	ug/kg	72.0	360	
100-51-6	Benzyl alcohol	U	360	ug/kg	108	360	
95-50-1	1,2-Dichlorobenzene	U	360	ug/kg	72.0	360	
108-60-1	bis(2-Chloroisopropyl)ether	U	360	ug/kg	72.0	360	
95-48-7	o-Cresol	U	360	ug/kg	72.0	360	
65794-96-9	m,p-Cresols	U	360	ug/kg	144	360	
67-72-1	Hexachloroethane	U	360	ug/kg	72.0	360	
98-95-3	Nitrobenzene	U	360	ug/kg	72.0	360	
78-59-1	Isophorone	U	360	ug/kg	72.0	360	
88-75-5	2-Nitrophenol	U	360	ug/kg	36.0	360	
105-67-9	2,4-Dimethylphenol	U	360	ug/kg	72.0	360	
111-91-1	bis(2-Chloroethoxy)methane	U	360	ug/kg	72.0	360	
120-83-2	2,4-Dichlorophenol	U	360	ug/kg	72.0	360	
65-85-0	Benzoic acid	U	720	ug/kg	180	720	UJ,SV7c
91-20-3	Naphthalene	U	36.0	ug/kg	10.8	36.0	
106-47-8	4-Chloroaniline	U	360	ug/kg	72.0	360	
87-68-3	Hexachlorobutadiene	U	360	ug/kg	72.0	360	
91-57-6	2-Methylnaphthalene	U	36.0	ug/kg	7.20	36.0	
77-47-4	Hexachlorocyclopentadiene	U	360	ug/kg	72.0	360	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	360	ug/kg	72.0	360	
95-95-4	2,4,5-Trichlorophenol	U	360	ug/kg	72.0	360	
91-58-7	2-Chloronaphthalene	U	36.0	ug/kg	12.6	36.0	
88-74-4	2-Nitroaniline	U	360	ug/kg	72.0	360	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	360	ug/kg	72.0	360	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428007	**Date Received:**	06/26/2009 08:40	**%Moisture:**	8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6045	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:33	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s2f3018.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	360	ug/kg	72.0	360	
606-20-2	2,6-Dinitrotoluene	U	360	ug/kg	36.0	360	
208-96-8	Acenaphthylene	U	36.0	ug/kg	10.8	36.0	
51-28-5	2,4-Dinitrophenol	U	720	ug/kg	137	720	UJ,SV7c
132-64-9	Dibenzofuran	U	360	ug/kg	72.0	360	
84-66-2	Diethylphthalate	U	360	ug/kg	72.0	360	
86-73-7	Fluorene	U	36.0	ug/kg	10.8	36.0	
7005-72-3	4-Chlorophenylphenylether	U	360	ug/kg	36.0	360	
534-52-1	2-Methyl-4,6-dinitrophenol	U	360	ug/kg	72.0	360	UJ,SV7c
100-01-6	4-Nitroaniline	U	360	ug/kg	72.0	360	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	360	ug/kg	72.0	360	
122-66-7	Azobenzene	U	360	ug/kg	72.0	360	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	360	ug/kg	36.0	360	
118-74-1	Hexachlorobenzene	U	360	ug/kg	72.0	360	
85-01-8	Phenanthrene	J	17.3	ug/kg	10.8	36.0	
120-12-7	Anthracene	U	36.0	ug/kg	7.20	36.0	
84-74-2	Di-n-butylphthalate	U	360	ug/kg	36.0	360	
206-44-0	Fluoranthene		59.5	ug/kg	10.8	36.0	
85-68-7	Butylbenzylphthalate	U	360	ug/kg	72.0	360	UJ,SV7c
56-55-3	Benzo(a)anthracene	J	24.2	ug/kg	10.8	36.0	
91-94-1	3,3'-Dichlorobenzidine	U	360	ug/kg	108	360	
218-01-9	Chrysene	J	30.3	ug/kg	10.8	36.0	
117-81-7	bis(2-Ethylhexyl)phthalate	U	360	ug/kg	72.0	360	
117-84-0	Di-n-octylphthalate	U	360	ug/kg	72.0	360	
205-99-2	Benzo(b)fluoranthene		54.0	ug/kg	10.8	36.0	
207-08-9	Benzo(k)fluoranthene	U	36.0	ug/kg	10.8	36.0	
50-32-8	Benzo(a)pyrene	J	26.6	ug/kg	10.8	36.0	
193-39-5	Indeno(1,2,3-cd)pyrene	J	15.3	ug/kg	10.8	36.0	
53-70-3	Dibenzo(a,h)anthracene	U	36.0	ug/kg	10.8	36.0	
191-24-2	Benzo(ghi)perylene	J	16.6	ug/kg	10.8	36.0	
120-82-1	1,2,4-Trichlorobenzene	U	360	ug/kg	72.0	360	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.07	508	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428015	Date Received:	06/26/2009 08:40	%Moisture:	11.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6049	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	07/01/2009 00:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.12 g	Final Volume:	1 mL
Data File:	s2f3026.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	375	ug/kg	75.1	375	
108-95-2	Phenol	U	375	ug/kg	75.1	375	
95-57-8	2-Chlorophenol	U	375	ug/kg	75.1	375	
106-46-7	1,4-Dichlorobenzene	U	375	ug/kg	75.1	375	
621-64-7	N-Nitrosodipropylamine	U	375	ug/kg	75.1	375	
59-50-7	4-Chloro-3-methylphenol	U	375	ug/kg	75.1	375	
83-32-9	Acenaphthene	U	37.5	ug/kg	12.4	37.5	
121-14-2	2,4-Dinitrotoluene	U	375	ug/kg	37.5	375	
100-02-7	4-Nitrophenol	U	375	ug/kg	124	375	
87-86-5	Pentachlorophenol	U	375	ug/kg	93.9	375	
129-00-0	Pyrene		126	ug/kg	11.3	37.5	
110-86-1	Pyridine	U	375	ug/kg	75.1	375	
62-53-3	Aniline	U	375	ug/kg	113	375	
111-44-4	bis(2-Chloroethyl) ether	U	375	ug/kg	75.1	375	
541-73-1	1,3-Dichlorobenzene	U	375	ug/kg	75.1	375	
100-51-6	Benzyl alcohol	U	375	ug/kg	113	375	
95-50-1	1,2-Dichlorobenzene	U	375	ug/kg	75.1	375	
108-60-1	bis(2-Chloroisopropyl)ether	U	375	ug/kg	75.1	375	
95-48-7	o-Cresol	U	375	ug/kg	75.1	375	
65794-96-9	m,p-Cresols	U	375	ug/kg	113	375	
67-72-1	Hexachloroethane	U	375	ug/kg	75.1	375	
98-95-3	Nitrobenzene	U	375	ug/kg	75.1	375	
78-59-1	Isophorone	U	375	ug/kg	75.1	375	
88-75-5	2-Nitrophenol	U	375	ug/kg	75.1	375	
105-67-9	2,4-Dimethylphenol	U	375	ug/kg	131	375	
111-91-1	bis(2-Chloroethoxy)methane	U	375	ug/kg	75.1	375	
120-83-2	2,4-Dichlorophenol	U	375	ug/kg	75.1	375	
65-85-0	Benzoic acid	U	751	ug/kg	188	751	UJ,SV7c
91-20-3	Naphthalene	U	37.5	ug/kg	11.3	37.5	
106-47-8	4-Chloroaniline	U	375	ug/kg	75.1	375	
87-68-3	Hexachlorobutadiene	U	375	ug/kg	75.1	375	
91-57-6	2-Methylnaphthalene	U	37.5	ug/kg	7.51	37.5	
77-47-4	Hexachlorocyclopentadiene	U	375	ug/kg	75.1	375	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	375	ug/kg	75.1	375	
95-95-4	2,4,5-Trichlorophenol	U	375	ug/kg	75.1	375	
91-58-7	2-Chloronaphthalene	U	37.5	ug/kg	12.4	37.5	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	375	ug/kg	75.1	375	
99-09-2	3-Nitroaniline	U	375	ug/kg	75.1	375	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428015	Date Received:	06/26/2009 08:40	%Moisture:	11.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6049	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	07/01/2009 00:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.12 g	Final Volume:	1 mL
Data File:	s2f3026.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	375	ug/kg	75.1	375	
606-20-2	2,6-Dinitrotoluene	U	375	ug/kg	37.5	375	
208-96-8	Acenaphthylene	U	37.5	ug/kg	11.3	37.5	
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751	UJ,SV7c
132-64-9	Dibenzofuran	U	375	ug/kg	75.1	375	
84-66-2	Diethylphthalate	U	375	ug/kg	75.1	375	
86-73-7	Fluorene	U	37.5	ug/kg	11.3	37.5	
7005-72-3	4-Chlorophenylphenylether	U	375	ug/kg	75.1	375	
534-52-1	2-Methyl-4,6-dinitrophenol	U	375	ug/kg	75.1	375	UJ,SV7c
100-01-6	4-Nitroaniline	U	375	ug/kg	113	375	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	375	ug/kg	75.1	375	
122-66-7	Azobenzene	U	375	ug/kg	75.1	375	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	375	ug/kg	75.1	375	
118-74-1	Hexachlorobenzene	U	375	ug/kg	75.1	375	
85-01-8	Phenanthrene		72.9	ug/kg	11.3	37.5	
120-12-7	Anthracene	U	37.5	ug/kg	7.51	37.5	
84-74-2	Di-n-butylphthalate	U	375	ug/kg	75.1	375	
206-44-0	Fluoranthene		137	ug/kg	11.3	37.5	
85-68-7	Butylbenzylphthalate	U	375	ug/kg	75.1	375	UJ,SV7c
56-55-3	Benzo(a)anthracene		47.8	ug/kg	11.3	37.5	
91-94-1	3,3'-Dichlorobenzidine	U	375	ug/kg	113	375	
218-01-9	Chrysene		61.9	ug/kg	11.3	37.5	
117-81-7	bis(2-Ethylhexyl)phthalate	U	375	ug/kg	75.1	375	
117-84-0	Di-n-octylphthalate	U	375	ug/kg	75.1	375	
205-99-2	Benzo(b)fluoranthene		106	ug/kg	11.3	37.5	
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.3	37.5	
50-32-8	Benzo(a)pyrene		54.1	ug/kg	11.3	37.5	
193-39-5	Indeno(1,2,3-cd)pyrene	J	27.3	ug/kg	11.3	37.5	
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.3	37.5	
191-24-2	Benzo(ghi)perylene	J	27.5	ug/kg	11.3	37.5	
120-82-1	1,2,4-Trichlorobenzene	U	375	ug/kg	75.1	375	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.13	409	ug/kg		J
	Unknown Aldol Condensate	3.06	469	ug/kg		J

MAD
07/29/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428015	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6049	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/01/2009 00:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3026.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
630-03-5	Nonacosane	9.88	280	ug/kg	99	NJ
112-95-8	Eicosane	10.87	222	ug/kg	97	NJ
	Unknown	11.51	212	ug/kg		J
	Unknown	12.49	3400	ug/kg		J

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07/29/09

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2477 VALIDATION DATE: 07/29/2009 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☒ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE): PCBs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that PCB analysis of sample CAMO-09-6038 was not listed on the COC or Analytical Request. The analysis was performed and results are reported in the LANL VVM.
2. It should also be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
3. The parent sample for the MS/MSD was from another LANL RN and the raw data for the parent sample were not included in the data package. The analysis of an MS/MSD is not required for PCBs and, thus, no sample results were qualified.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: Mary A. Dominguez	DATE: 07/29/2009
Form 5116-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, P9	J-, P9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, P9b	R, P9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, P7	J, P7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, P7a	J, P7a
☐	☒	☐	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, P7d	J, P7d
☐	☒	☐	8. The multicomponent standard was not analyzed within 72 hours of the initial analysis.	R, P7e	J, P7e
☐	☒	☐	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
☐	☐	☒	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	11. The breakdown criteria have been exceeded. This can cause high bias in the reported results and potential false positive results for the breakdown products Endrin ketone, Endrin aldehyde, DDD, and DDE.	UJ, P13a	J+, P13a
☐	☐	☒	12. The breakdown documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P13b	R, P13b
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, P4	N/A
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X.	N/A	J, P4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	UJ, P4b	N/A
☐	☐	☒	16. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, P4d	N/A
☐	☒	☐	17. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P4e	R, P4e
☐	☒	☐	18. The analyte RT shifted by more than 0.05 minutes from the mid-level standard of the initial calibration.	R, P0	J, P0
☐	☒	☐	19. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P0b	R, P0b
☐	☒	☐	20. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, P3	J-, P3

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, P3a	J-, P3a
☐	☒	☐	22. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P3b
☐	☒	☐	23. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, P3c	J, P3c
☐	☒	☐	24. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P3d	R, P3d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, P12	J-, P12
☐	☒	☐	26. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, P12a	J-, P12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P12c	R, P12c
☐	☒	☐	29. The analyte was not confirmed on a second dissimilar column.	N/A	R, P8
☐	☒	☐	30. The second dissimilar column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P8a	R, P8a
☐	☒	☐	31. Duplicate, Dilution, or reanalysis.	UJ, P88	J, P88

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2 Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, P15	R, P15
☒	☐	☐	33. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, P19	J, R, P19

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428002	Date Received:	06/26/2009 08:40	%Moisture:	11.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6006	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	881260	Inst:	ECD8A.I	Dilution:	1
Run Date:	06/30/2009 15:09	Analyst:	JAOC	Inj. Vol:	1 uL
Prep Date:	06/29/2009 23:24	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	020f2001.d	Column:	1 CLP1	Level:	LOW
	020b2001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.76	ug/kg	1.25	3.76	1
11104-28-2	Aroclor-1221	U	3.76	ug/kg	1.25	3.76	1
11141-16-5	Aroclor-1232	U	3.76	ug/kg	1.25	3.76	1
53469-21-9	Aroclor-1242	U	3.76	ug/kg	1.25	3.76	1
12672-29-6	Aroclor-1248	U	3.76	ug/kg	1.25	3.76	1
11097-69-1	Aroclor-1254		4.80	ug/kg	1.25	3.76	2
11096-82-5	Aroclor-1260		5.60	ug/kg	1.25	3.76	1

MAD
07/29/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428001	Date Received:	06/26/2009 08:40	%Moisture:	4.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO–09–6007	Method:	SW846 8082	SOP Ref:	GL–OA–E–040
Batch ID:	881260	Inst:	ECD8A.I	Dilution:	1
Run Date:	06/30/2009 14:52	Analyst:	JAOC	Inj. Vol:	1 uL
Prep Date:	06/29/2009 23:24	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	019f1901.d	Column:	1 CLP1	Level:	LOW
	019b1901.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.48	ug/kg	1.16	3.48	1
11104–28–2	Aroclor–1221	U	3.48	ug/kg	1.16	3.48	1
11141–16–5	Aroclor–1232	U	3.48	ug/kg	1.16	3.48	1
53469–21–9	Aroclor–1242	U	3.48	ug/kg	1.16	3.48	1
12672–29–6	Aroclor–1248	U	3.48	ug/kg	1.16	3.48	1
11097–69–1	Aroclor–1254	U	3.48	ug/kg	1.16	3.48	1
11096–82–5	Aroclor–1260	U	3.48	ug/kg	1.16	3.48	1

MAD
07/29/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428003	Date Received:	06/26/2009 08:40	%Moisture:	23.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6008	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	881260	Inst:	ECD8A.I	Dilution:	1
Run Date:	06/30/2009 15:25	Analyst:	JAOC	Inj. Vol:	1 uL
Prep Date:	06/29/2009 23:24	Aliquot:	30.08 g	Final Volume:	1 mL
Data File:	021f2101.d	Column:	1 CLP1	Level:	LOW
	021b2101.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.32	ug/kg	1.44	4.32	1
11104-28-2	Aroclor-1221	U	4.32	ug/kg	1.44	4.32	1
11141-16-5	Aroclor-1232	U	4.32	ug/kg	1.44	4.32	1
53469-21-9	Aroclor-1242	U	4.32	ug/kg	1.44	4.32	1
12672-29-6	Aroclor-1248	U	4.32	ug/kg	1.44	4.32	1
11097-69-1	Aroclor-1254	P	43.2	ug/kg	1.44	4.32	2
11096-82-5	Aroclor-1260		20.8	ug/kg	1.44	4.32	2

MAD
07/29/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428004	Date Received:	06/26/2009 08:40	%Moisture:	17
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6009	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	881260	Inst:	ECD8A.I	Dilution:	1
Run Date:	06/30/2009 16:06	Analyst:	JAOC	Inj. Vol:	1 uL
Prep Date:	06/29/2009 23:24	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	024f2401.d	Column:	1 CLP1	Level:	LOW
	024b2401.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.01	ug/kg	1.34	4.01	1
11104-28-2	Aroclor-1221	U	4.01	ug/kg	1.34	4.01	1
11141-16-5	Aroclor-1232	U	4.01	ug/kg	1.34	4.01	1
53469-21-9	Aroclor-1242	U	4.01	ug/kg	1.34	4.01	1
12672-29-6	Aroclor-1248	U	4.01	ug/kg	1.34	4.01	1
11097-69-1	Aroclor-1254	P	9.40	ug/kg	1.34	4.01	2
11096-82-5	Aroclor-1260		5.30	ug/kg	1.34	4.01	2

MAD
07/29/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428012	Date Received:	06/26/2009 08:40	%Moisture:	25.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6038	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	881260	Inst:	ECD8A.I	Dilution:	5
Run Date:	06/30/2009 16:23	Analyst:	JAOC	Inj. Vol:	1 uL
Prep Date:	06/29/2009 23:24	Aliquot:	30 g	Final Volume:	1 mL
Data File:	025f2501.d	Column:	1 CLP1	Level:	LOW
	025b2501.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	22.3	ug/kg	7.42	22.3	1
11104-28-2	Aroclor-1221	U	22.3	ug/kg	7.42	22.3	1
11141-16-5	Aroclor-1232	U	22.3	ug/kg	7.42	22.3	1
53469-21-9	Aroclor-1242	U	22.3	ug/kg	7.42	22.3	1
12672-29-6	Aroclor-1248	U	22.3	ug/kg	7.42	22.3	1
11097-69-1	Aroclor-1254		37.2	ug/kg	7.42	22.3	2
11096-82-5	Aroclor-1260		35.6	ug/kg	7.42	22.3	1

MAD
07/29/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09--2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428015	Date Received:	06/26/2009 08:40	%Moisture:	11.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6049	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	881260	Inst:	ECD8A.I	Dilution:	1
Run Date:	06/30/2009 16:39	Analyst:	JAOC	Inj. Vol:	1 uL
Prep Date:	06/29/2009 23:24	Aliquot:	30 g	Final Volume:	1 mL
Data File:	026f2601.d	Column:	1 CLP1	Level:	LOW
	026b2601.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.77	ug/kg	1.26	3.77	1
11104-28-2	Aroclor-1221	U	3.77	ug/kg	1.26	3.77	1
11141-16-5	Aroclor-1232	U	3.77	ug/kg	1.26	3.77	1
53469-21-9	Aroclor-1242	U	3.77	ug/kg	1.26	3.77	1
12672-29-6	Aroclor-1248	U	3.77	ug/kg	1.26	3.77	1
11097-69-1	Aroclor-1254		6.60	ug/kg	1.26	3.77	2
11096-82-5	Aroclor-1260		6.70	ug/kg	1.26	3.77	1

MAD
07/29/09

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2477

REQUEST NUMBER: 09-2477

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232428 ✓.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6007	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6006	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6008	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6009	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6009	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6034	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6043	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6043	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6045	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6045	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6041	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6041	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6040	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6044	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6035	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6035	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6038	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6039	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6039	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6042	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6049	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6060	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-6059	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/25/09	1400	Patricia Dent	P. Dent	6/26/09	08:40
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Thursday, June 25, 2009

REQUEST NUMBER: 09-2477

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2477
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009
TURNAROUND/REPORT DUE: 7/10/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	SW-846:8260B	1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2477

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8260B	1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6059	S	6/23/2009	
		1	CAMO-09-6060	S	6/23/2009	
	SW-846:8270C	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6036	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2477

GEL LABORATORIES

The GEL Group

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 21, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232428
SDG: 09-2477

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 26, 2009, and analyzed for GC Semivolatile PCB, GC/MS Semivolatile and GC/MS Volatile. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2477
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232428
SDG: 09-2477

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232428
SDG # : 09-2477

July 21, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 26, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232428001	CAMO-09-6007
232428002	CAMO-09-6006
232428003	CAMO-09-6008
232428004	CAMO-09-6009
232428005	CAMO-09-6034
232428006	CAMO-09-6043
232428007	CAMO-09-6045
232428008	CAMO-09-6041
232428009	CAMO-09-6040
232428010	CAMO-09-6044
232428011	CAMO-09-6035
232428012	CAMO-09-6038
232428013	CAMO-09-6039
232428014	CAMO-09-6042
232428015	CAMO-09-6049
232428016	CAMO-09-6060
232428017	CAMO-09-6059

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC Semivolatile PCB, GC/MS Semivolatile and GC/MS Volatile.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

GEL Laboratories LLC PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178 www.gel.com

List of current GEL Certifications as of 21 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2477

REQUEST NUMBER: 09-2477

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232428 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6007	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6006	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6008	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6009	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6009	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6034	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6043	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6043	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6045	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6045	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6041	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6041	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6040	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6044	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6035	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6035	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6038	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6039	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6039	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6042	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6049	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6060	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-6059	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/25/09	1400	Patricia Dent	P. Dent	6/26/09	08:40
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Thursday, June 25, 2009

REQUEST NUMBER: 09-2477

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2477

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	
	SW-846:8260B	1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2477

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8260B	1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6059	S	6/23/2009	
		1	CAMO-09-6060	S	6/23/2009	
	SW-846:8270C	1	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6034	R	6/23/2009	
		1	CAMO-09-6035	R	6/23/2009	
		1	CAMO-09-6038	R	6/23/2009	
		1	CAMO-09-6039	R	6/23/2009	
		1	CAMO-09-6040	R	6/23/2009	
		1	CAMO-09-6041	R	6/23/2009	
		1	CAMO-09-6042	R	6/23/2009	
		1	CAMO-09-6043	R	6/23/2009	
		1	CAMO-09-6044	R	6/23/2009	
		1	CAMO-09-6045	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2477

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2477**
Received By: Patricia Dent	**Date Received: JUNE 26, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,3,6,23,24C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5664 6C
7209 7847 5642 2C
7209 7847 5572 24C
7209 7847 5609 3C
7209 7847 5561 23C
7209 7847 5594 3C
7209 7847 5583 3C
7209 7847 5653 2C

PM (or PMA) review: Initials DCC Date 27 JUN 09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 56.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: [redacted]

[redacted]

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7280 7847 5564 Form 0201

FRI
Deliver By:
26JUN09
A1

CHS

29407 -SC-US XX CHSA

IGIN ID: SAFA (505) 665-9968
LENE VALDEZ
S ALAMOS NATL LAB.
00 BLDG 1237 DPU 03

S ALAMOS, NM 87545
ITED STATES US

Ship Date: 25JUN0
ActWgt: 18.0 LB M
System#: 8014176/
Account: S ******

(843) 5

ALERIE DAVIS
ENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

2°C

Ref: [redacted]

[redacted]

Delivery Bar

BILL S

PRIORITY OVERNIGHT

TRK# 7280 7847 5542 Form 0201

CHS

29407 -SC-US XX CHS

Part # 156148-526 NRUT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 29.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171
FedEx Express

Ref: [redacted]

[redacted]

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5572 Form 0201

FRI
Deliver By:
26JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156140-438 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 51.0 LB MAN
System#: 8014176/CAI
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-
Fed

Ref: [redacted]

[redacted]

Delivery Add Barcode

3°C

BILL SENDEI

PRIORITY OVERNIGHT

TRK# 7288 7847 5889 Form 0201

FRI
Deliver
26JUN

CHS A1

29407 -SC-US XX CHSA

Part # 156140-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA03 BLD6 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 55.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2949 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: [redacted]

[redacted]

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7298 7847 5561 Form 0201

FRI
Deliver By:
26JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRRT V3.04-09

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA03 BLD6 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 52.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2949 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: [redacted]

[redacted]

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7298 7847 5594 Form 0201

FRI
Deliver By:
26JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRRT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 53.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018aar8111b700

[redacted]

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5583 Form 0201

FRI
Deliver By:
26JUN09

:29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 51.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018aar2a0612bgdc

[redacted]

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5653 Form 0201

FRI
Deliver By:
26JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3.04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

GC/MS Volatile Organics
Los Alamos National Laboratory (LANL)
SDG 09-2477

Method/Analysis Information

Procedure:	Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
Analytical Method:	SW846 8260B
Prep Method:	SW846 5030
Analytical Batch Number:	882743
Prep Batch Number:	882741

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232428001	CAMO-09-6007
232428004	CAMO-09-6009
232428006	CAMO-09-6043
232428007	CAMO-09-6045
232428008	CAMO-09-6041
232428011	CAMO-09-6035
232428013	CAMO-09-6039
232428016	CAMO-09-6060
232428017	CAMO-09-6059
1201874911	Method Blank (MB)
1201874914	Laboratory Control Sample (LCS)
1201874915	Laboratory Control Sample (LCS)
1201874912	232424001(CAMO-09-10463) Post Spike (PS)
1201874913	232424001(CAMO-09-10463) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

Samples 232428 001, 004, 006, 007, 008, 011 and 013 in this SDG were analyzed on an "dry weight" basis. Samples 232428 016 and 017 in this SDG were analyzed on a "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 19.1.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the

'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232424001 (CAMO-09-10463) was designated for spike analysis.

Matrix Spike (PS) Recovery Statement
The spike recoveries were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate recoveries were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-analyses were not required for samples in this SDG.

Miscellaneous Information

Electronic Package Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
A nonconformance report was not required for this SDG.

Manual Integrations
Data files associated with the initial calibration, continuing calibration check, and samples did not require manual integrations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA6.I	Gas Chromatograph/Mass Spectrometer	HP6890N/HP5975	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Erin Haubert Date: 07/22/09

Roadmap for LANL 09-2477 VOA

This roadmap was analyzed by ale01592 on 07-09-2009, 16:23.
This roadmap was analyzed by kel00587 on 07-12-2009, 10:56.
This roadmap was reviewed by kel00587 on 07-12-2009, 10:57.

Sample

exclude	manual	datafile	smpid	clientid	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA6.i/070609v6/6s116.d	232428001	CAMO-09-6007	06-JUL-2009	17:41	09-2477.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s117.d	232428004	CAMO-09-6009	06-JUL-2009	18:09	09-2477.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s118.d	232428006	CAMO-09-6043	06-JUL-2009	18:37	09-2477.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s119.d	232428007	CAMO-09-6045	06-JUL-2009	19:05	09-2477.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s120.d	232428008	CAMO-09-6041	06-JUL-2009	19:32	09-2477.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s121.d	232428011	CAMO-09-6035	06-JUL-2009	20:00	09-2477.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s122.d	232428013	CAMO-09-6039	06-JUL-2009	20:28	09-2477.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s123.d	232428016	CAMO-09-6060	06-JUL-2009	20:55	09-2477.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s124.d	232428017	CAMO-09-6059	06-JUL-2009	21:23	09-2477.sub	1	882743	

QC Sample

exclude	manual	datafile	smpid	clientid	sampletype	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA6.i/070609v6/6s104L2.d	1201874914	LCS	lcs	06-JUL-2009	11:17	all.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s106L2.d	1201874915	LCS	lcs	06-JUL-2009	12:12	all.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s108B1.d	1201874911	BLANK	mb	06-JUL-2009	13:07	all.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s125.d	1201874912	CAMO-09-10463MS	ms	06-JUL-2009	21:51	09-2473.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s126.d	1201874913	CAMO-09-10463MSD	msd	06-JUL-2009	22:18	09-2473.sub	1	882743	

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 17:41	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s116.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.04	ug/kg	0.355	1.04
74-87-3	Chloromethane	U	1.04	ug/kg	0.313	1.04
75-01-4	Vinyl chloride	U	1.04	ug/kg	0.313	1.04
74-83-9	Bromomethane	U	1.04	ug/kg	0.313	1.04
75-00-3	Chloroethane	U	1.04	ug/kg	0.313	1.04
75-69-4	Trichlorofluoromethane	U	1.04	ug/kg	0.595	1.04
67-64-1	Acetone	U	5.22	ug/kg	1.73	5.22
75-35-4	1,1-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
74-88-4	Iodomethane	U	5.22	ug/kg	1.67	5.22
75-09-2	Methylene chloride	U	5.22	ug/kg	2.09	5.22
75-15-0	Carbon disulfide	U	5.22	ug/kg	1.31	5.22
156-60-5	trans-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
75-34-3	1,1-Dichloroethane	U	1.04	ug/kg	0.313	1.04
78-93-3	2-Butanone	U	5.22	ug/kg	1.57	5.22
156-59-2	cis-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
594-20-7	2,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04
67-66-3	Chloroform	U	1.04	ug/kg	0.313	1.04
74-97-5	Bromochloromethane	U	1.04	ug/kg	0.345	1.04
71-55-6	1,1,1-Trichloroethane	U	1.04	ug/kg	0.313	1.04
563-58-6	1,1-Dichloropropene	U	1.04	ug/kg	0.313	1.04
56-23-5	Carbon tetrachloride	U	1.04	ug/kg	0.313	1.04
107-06-2	1,2-Dichloroethane	U	1.04	ug/kg	0.313	1.04
71-43-2	Benzene	U	1.04	ug/kg	0.313	1.04
79-01-6	Trichloroethylene	U	1.04	ug/kg	0.345	1.04
78-87-5	1,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04
75-27-4	Bromodichloromethane	U	1.04	ug/kg	0.313	1.04
74-95-3	Dibromomethane	U	1.04	ug/kg	0.313	1.04
108-10-1	4-Methyl-2-pentanone	U	5.22	ug/kg	1.31	5.22
10061-01-5	cis-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04
108-88-3	Toluene	U	1.04	ug/kg	0.313	1.04
10061-02-6	trans-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04
79-00-5	1,1,2-Trichloroethane	U	1.04	ug/kg	0.313	1.04
591-78-6	2-Hexanone	U	5.22	ug/kg	1.57	5.22
142-28-9	1,3-Dichloropropane	U	1.04	ug/kg	0.313	1.04
127-18-4	Tetrachloroethylene	U	1.04	ug/kg	0.313	1.04
124-48-1	Dibromochloromethane	U	1.04	ug/kg	0.313	1.04
106-93-4	1,2-Dibromoethane	U	1.04	ug/kg	0.313	1.04
108-90-7	Chlorobenzene	U	1.04	ug/kg	0.313	1.04

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 17:41	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s116.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.04	ug/kg	0.313	1.04
179601-23-1	m,p-Xylenes	U	2.09	ug/kg	0.313	2.09
95-47-6	o-Xylene	U	1.04	ug/kg	0.313	1.04
100-42-5	Styrene	U	1.04	ug/kg	0.313	1.04
75-25-2	Bromoform	U	1.04	ug/kg	0.313	1.04
79-34-5	1,1,2,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04
96-18-4	1,2,3-Trichloropropane	U	1.04	ug/kg	0.313	1.04
108-86-1	Bromobenzene	U	1.04	ug/kg	0.313	1.04
103-65-1	n-Propylbenzene	U	1.04	ug/kg	0.313	1.04
95-49-8	2-Chlorotoluene	U	1.04	ug/kg	0.313	1.04
98-82-8	Isopropylbenzene	U	1.04	ug/kg	0.313	1.04
108-67-8	1,3,5-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04
106-43-4	4-Chlorotoluene	U	1.04	ug/kg	0.313	1.04
98-06-6	tert-Butylbenzene	U	1.04	ug/kg	0.313	1.04
95-63-6	1,2,4-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04
135-98-8	sec-Butylbenzene	U	1.04	ug/kg	0.313	1.04
99-87-6	4-Isopropyltoluene	U	1.04	ug/kg	0.313	1.04
541-73-1	1,3-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04
106-46-7	1,4-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04
104-51-8	n-Butylbenzene	U	1.04	ug/kg	0.313	1.04
96-12-8	1,2-Dibromo-3-chloropropane	U	1.04	ug/kg	0.313	1.04
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.22	ug/kg	1.67	5.22
630-20-6	1,1,1,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04
95-50-1	1,2-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	259	ug/kg		J
	Unknown Siloxane	16.17	37.1	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428004	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6009	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 18:09	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:22	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s117.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.20	ug/kg	0.410	1.20
74-87-3	Chloromethane	U	1.20	ug/kg	0.361	1.20
75-01-4	Vinyl chloride	U	1.20	ug/kg	0.361	1.20
74-83-9	Bromomethane	U	1.20	ug/kg	0.361	1.20
75-00-3	Chloroethane	U	1.20	ug/kg	0.361	1.20
75-69-4	Trichlorofluoromethane	U	1.20	ug/kg	0.687	1.20
67-64-1	Acetone	U	6.02	ug/kg	2.00	6.02
75-35-4	1,1-Dichloroethylene	U	1.20	ug/kg	0.361	1.20
74-88-4	Iodomethane	U	6.02	ug/kg	1.93	6.02
75-09-2	Methylene chloride	U	6.02	ug/kg	2.41	6.02
75-15-0	Carbon disulfide	U	6.02	ug/kg	1.51	6.02
156-60-5	trans-1,2-Dichloroethylene	U	1.20	ug/kg	0.361	1.20
75-34-3	1,1-Dichloroethane	U	1.20	ug/kg	0.361	1.20
78-93-3	2-Butanone	U	6.02	ug/kg	1.81	6.02
156-59-2	cis-1,2-Dichloroethylene	U	1.20	ug/kg	0.361	1.20
594-20-7	2,2-Dichloropropane	U	1.20	ug/kg	0.361	1.20
67-66-3	Chloroform	U	1.20	ug/kg	0.361	1.20
74-97-5	Bromochloromethane	U	1.20	ug/kg	0.398	1.20
71-55-6	1,1,1-Trichloroethane	U	1.20	ug/kg	0.361	1.20
563-58-6	1,1-Dichloropropene	U	1.20	ug/kg	0.361	1.20
56-23-5	Carbon tetrachloride	U	1.20	ug/kg	0.361	1.20
107-06-2	1,2-Dichloroethane	U	1.20	ug/kg	0.361	1.20
71-43-2	Benzene	U	1.20	ug/kg	0.361	1.20
79-01-6	Trichloroethylene	U	1.20	ug/kg	0.398	1.20
78-87-5	1,2-Dichloropropane	U	1.20	ug/kg	0.361	1.20
75-27-4	Bromodichloromethane	U	1.20	ug/kg	0.361	1.20
74-95-3	Dibromomethane	U	1.20	ug/kg	0.361	1.20
108-10-1	4-Methyl-2-pentanone	U	6.02	ug/kg	1.51	6.02
10061-01-5	cis-1,3-Dichloropropylene	U	1.20	ug/kg	0.361	1.20
108-88-3	Toluene	U	1.20	ug/kg	0.361	1.20
10061-02-6	trans-1,3-Dichloropropylene	U	1.20	ug/kg	0.361	1.20
79-00-5	1,1,2-Trichloroethane	U	1.20	ug/kg	0.361	1.20
591-78-6	2-Hexanone	U	6.02	ug/kg	1.81	6.02
142-28-9	1,3-Dichloropropane	U	1.20	ug/kg	0.361	1.20
127-18-4	Tetrachloroethylene	U	1.20	ug/kg	0.361	1.20
124-48-1	Dibromochloromethane	U	1.20	ug/kg	0.361	1.20
106-93-4	1,2-Dibromoethane	U	1.20	ug/kg	0.361	1.20
108-90-7	Chlorobenzene	U	1.20	ug/kg	0.361	1.20

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428004	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6009	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 18:09	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:22	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s117.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.20	ug/kg	0.361	1.20
179601-23-1	m,p-Xylenes	U	2.41	ug/kg	0.361	2.41
95-47-6	o-Xylene	U	1.20	ug/kg	0.361	1.20
100-42-5	Styrene	U	1.20	ug/kg	0.361	1.20
75-25-2	Bromoform	U	1.20	ug/kg	0.361	1.20
79-34-5	1,1,2,2-Tetrachloroethane	U	1.20	ug/kg	0.361	1.20
96-18-4	1,2,3-Trichloropropane	U	1.20	ug/kg	0.361	1.20
108-86-1	Bromobenzene	U	1.20	ug/kg	0.361	1.20
103-65-1	n-Propylbenzene	U	1.20	ug/kg	0.361	1.20
95-49-8	2-Chlorotoluene	U	1.20	ug/kg	0.361	1.20
98-82-8	Isopropylbenzene	U	1.20	ug/kg	0.361	1.20
108-67-8	1,3,5-Trimethylbenzene	U	1.20	ug/kg	0.361	1.20
106-43-4	4-Chlorotoluene	U	1.20	ug/kg	0.361	1.20
98-06-6	tert-Butylbenzene	U	1.20	ug/kg	0.361	1.20
95-63-6	1,2,4-Trimethylbenzene	U	1.20	ug/kg	0.361	1.20
135-98-8	sec-Butylbenzene	U	1.20	ug/kg	0.361	1.20
99-87-6	4-Isopropyltoluene	U	1.20	ug/kg	0.361	1.20
541-73-1	1,3-Dichlorobenzene	U	1.20	ug/kg	0.361	1.20
106-46-7	1,4-Dichlorobenzene	U	1.20	ug/kg	0.361	1.20
104-51-8	n-Butylbenzene	U	1.20	ug/kg	0.361	1.20
96-12-8	1,2-Dibromo-3-chloropropane	U	1.20	ug/kg	0.361	1.20
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.02	ug/kg	1.93	6.02
630-20-6	1,1,1,2-Tetrachloroethane	U	1.20	ug/kg	0.361	1.20
95-50-1	1,2-Dichlorobenzene	U	1.20	ug/kg	0.361	1.20

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	13.86	13.8	ug/kg	97	J
	Unknown Siloxane	14.24	17.2	ug/kg		J
	Unknown Siloxane	16.17	30.2	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:00	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s121.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.04	ug/kg	0.354	1.04
74-87-3	Chloromethane	U	1.04	ug/kg	0.312	1.04
75-01-4	Vinyl chloride	U	1.04	ug/kg	0.312	1.04
74-83-9	Bromomethane	U	1.04	ug/kg	0.312	1.04
75-00-3	Chloroethane	U	1.04	ug/kg	0.312	1.04
75-69-4	Trichlorofluoromethane	U	1.04	ug/kg	0.594	1.04
67-64-1	Acetone	U	5.21	ug/kg	1.73	5.21
75-35-4	1,1-Dichloroethylene	U	1.04	ug/kg	0.312	1.04
74-88-4	Iodomethane	U	5.21	ug/kg	1.67	5.21
75-09-2	Methylene chloride	U	5.21	ug/kg	2.08	5.21
75-15-0	Carbon disulfide	U	5.21	ug/kg	1.30	5.21
156-60-5	trans-1,2-Dichloroethylene	U	1.04	ug/kg	0.312	1.04
75-34-3	1,1-Dichloroethane	U	1.04	ug/kg	0.312	1.04
78-93-3	2-Butanone	U	5.21	ug/kg	1.56	5.21
156-59-2	cis-1,2-Dichloroethylene	U	1.04	ug/kg	0.312	1.04
594-20-7	2,2-Dichloropropane	U	1.04	ug/kg	0.312	1.04
67-66-3	Chloroform	U	1.04	ug/kg	0.312	1.04
74-97-5	Bromochloromethane	U	1.04	ug/kg	0.344	1.04
71-55-6	1,1,1-Trichloroethane	U	1.04	ug/kg	0.312	1.04
563-58-6	1,1-Dichloropropene	U	1.04	ug/kg	0.312	1.04
56-23-5	Carbon tetrachloride	U	1.04	ug/kg	0.312	1.04
107-06-2	1,2-Dichloroethane	U	1.04	ug/kg	0.312	1.04
71-43-2	Benzene	U	1.04	ug/kg	0.312	1.04
79-01-6	Trichloroethylene	U	1.04	ug/kg	0.344	1.04
78-87-5	1,2-Dichloropropane	U	1.04	ug/kg	0.312	1.04
75-27-4	Bromodichloromethane	U	1.04	ug/kg	0.312	1.04
74-95-3	Dibromomethane	U	1.04	ug/kg	0.312	1.04
108-10-1	4-Methyl-2-pentanone	U	5.21	ug/kg	1.30	5.21
10061-01-5	cis-1,3-Dichloropropylene	U	1.04	ug/kg	0.312	1.04
108-88-3	Toluene	U	1.04	ug/kg	0.312	1.04
10061-02-6	trans-1,3-Dichloropropylene	U	1.04	ug/kg	0.312	1.04
79-00-5	1,1,2-Trichloroethane	U	1.04	ug/kg	0.312	1.04
591-78-6	2-Hexanone	U	5.21	ug/kg	1.56	5.21
142-28-9	1,3-Dichloropropane	U	1.04	ug/kg	0.312	1.04
127-18-4	Tetrachloroethylene	U	1.04	ug/kg	0.312	1.04
124-48-1	Dibromochloromethane	U	1.04	ug/kg	0.312	1.04
106-93-4	1,2-Dibromoethane	U	1.04	ug/kg	0.312	1.04
108-90-7	Chlorobenzene	U	1.04	ug/kg	0.312	1.04

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:00	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s121.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.04	ug/kg	0.312	1.04
179601-23-1	m,p-Xylenes	U	2.08	ug/kg	0.312	2.08
95-47-6	o-Xylene	U	1.04	ug/kg	0.312	1.04
100-42-5	Styrene	U	1.04	ug/kg	0.312	1.04
75-25-2	Bromoform	U	1.04	ug/kg	0.312	1.04
79-34-5	1;1,2,2-Tetrachloroethane	U	1.04	ug/kg	0.312	1.04
96-18-4	1,2,3-Trichloropropane	U	1.04	ug/kg	0.312	1.04
108-86-1	Bromobenzene	U	1.04	ug/kg	0.312	1.04
103-65-1	n-Propylbenzene	U	1.04	ug/kg	0.312	1.04
95-49-8	2-Chlorotoluene	U	1.04	ug/kg	0.312	1.04
98-82-8	Isopropylbenzene	U	1.04	ug/kg	0.312	1.04
108-67-8	1,3,5-Trimethylbenzene	U	1.04	ug/kg	0.312	1.04
106-43-4	4-Chlorotoluene	U	1.04	ug/kg	0.312	1.04
98-06-6	tert-Butylbenzene	U	1.04	ug/kg	0.312	1.04
95-63-6	1,2,4-Trimethylbenzene	U	1.04	ug/kg	0.312	1.04
135-98-8	sec-Butylbenzene	U	1.04	ug/kg	0.312	1.04
99-87-6	4-Isopropyltoluene	U	1.04	ug/kg	0.312	1.04
541-73-1	1,3-Dichlorobenzene	U	1.04	ug/kg	0.312	1.04
106-46-7	1,4-Dichlorobenzene	U	1.04	ug/kg	0.312	1.04
104-51-8	n-Butylbenzene	U	1.04	ug/kg	0.312	1.04
96-12-8	1,2-Dibromo-3-chloropropane	U	1.04	ug/kg	0.312	1.04
76-13-1	1,I,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.21	ug/kg	1.67	5.21
630-20-6	1,1,1,2-Tetrachloroethane	U	1.04	ug/kg	0.312	1.04
95-50-1	1,2-Dichlorobenzene	U	1.04	ug/kg	0.312	1.04

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	412	ug/kg		J
	Unknown Siloxane	16.17	192	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:28	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:27	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s122.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.10	ug/kg	0.374	1.10
74-87-3	Chloromethane	U	1.10	ug/kg	0.330	1.10
75-01-4	Vinyl chloride	U	1.10	ug/kg	0.330	1.10
74-83-9	Bromomethane	U	1.10	ug/kg	0.330	1.10
75-00-3	Chloroethane	U	1.10	ug/kg	0.330	1.10
75-69-4	Trichlorofluoromethane	U	1.10	ug/kg	0.627	1.10
67-64-1	Acetone	U	5.50	ug/kg	1.83	5.50
75-35-4	1,1-Dichloroethylene	U	1.10	ug/kg	0.330	1.10
74-88-4	Iodomethane	U	5.50	ug/kg	1.76	5.50
75-09-2	Methylene chloride	U	5.50	ug/kg	2.20	5.50
75-15-0	Carbon disulfide	U	5.50	ug/kg	1.38	5.50
156-60-5	trans-1,2-Dichloroethylene	U	1.10	ug/kg	0.330	1.10
75-34-3	1,1-Dichloroethane	U	1.10	ug/kg	0.330	1.10
78-93-3	2-Butanone	U	5.50	ug/kg	1.65	5.50
156-59-2	cis-1,2-Dichloroethylene	U	1.10	ug/kg	0.330	1.10
594-20-7	2,2-Dichloropropane	U	1.10	ug/kg	0.330	1.10
67-66-3	Chloroform	U	1.10	ug/kg	0.330	1.10
74-97-5	Bromochloromethane	U	1.10	ug/kg	0.363	1.10
71-55-6	1,1,1-Trichloroethane	U	1.10	ug/kg	0.330	1.10
563-58-6	1,1-Dichloropropene	U	1.10	ug/kg	0.330	1.10
56-23-5	Carbon tetrachloride	U	1.10	ug/kg	0.330	1.10
107-06-2	1,2-Dichloroethane	U	1.10	ug/kg	0.330	1.10
71-43-2	Benzene	U	1.10	ug/kg	0.330	1.10
79-01-6	Trichloroethylene	U	1.10	ug/kg	0.363	1.10
78-87-5	1,2-Dichloropropane	U	1.10	ug/kg	0.330	1.10
75-27-4	Bromodichloromethane	U	1.10	ug/kg	0.330	1.10
74-95-3	Dibromomethane	U	1.10	ug/kg	0.330	1.10
108-10-1	4-Methyl-2-pentanone	U	5.50	ug/kg	1.38	5.50
10061-01-5	cis-1,3-Dichloropropylene	U	1.10	ug/kg	0.330	1.10
108-88-3	Toluene	J	0.586	ug/kg	0.330	1.10
10061-02-6	trans-1,3-Dichloropropylene	U	1.10	ug/kg	0.330	1.10
79-00-5	1,1,2-Trichloroethane	U	1.10	ug/kg	0.330	1.10
591-78-6	2-Hexanone	U	5.50	ug/kg	1.65	5.50
142-28-9	1,3-Dichloropropane	U	1.10	ug/kg	0.330	1.10
127-18-4	Tetrachloroethylene	U	1.10	ug/kg	0.330	1.10
124-48-1	Dibromochloromethane	U	1.10	ug/kg	0.330	1.10
106-93-4	1,2-Dibromoethane	U	1.10	ug/kg	0.330	1.10
108-90-7	Chlorobenzene	U	1.10	ug/kg	0.330	1.10

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:28	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:27	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s122.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.10	ug/kg	0.330	1.10
179601-23-1	m,p-Xylenes	U	2.20	ug/kg	0.330	2.20
95-47-6	o-Xylene	U	1.10	ug/kg	0.330	1.10
100-42-5	Styrene	U	1.10	ug/kg	0.330	1.10
75-25-2	Bromoform	U	1.10	ug/kg	0.330	1.10
79-34-5	1,1,2,2-Tetrachloroethane	U	1.10	ug/kg	0.330	1.10
96-18-4	1,2,3-Trichloropropane	U	1.10	ug/kg	0.330	1.10
108-86-1	Bromobenzene	U	1.10	ug/kg	0.330	1.10
103-65-1	n-Propylbenzene	U	1.10	ug/kg	0.330	1.10
95-49-8	2-Chlorotoluene	U	1.10	ug/kg	0.330	1.10
98-82-8	Isopropylbenzene	U	1.10	ug/kg	0.330	1.10
108-67-8	1,3,5-Trimethylbenzene	U	1.10	ug/kg	0.330	1.10
106-43-4	4-Chlorotoluene	U	1.10	ug/kg	0.330	1.10
98-06-6	tert-Butylbenzene	U	1.10	ug/kg	0.330	1.10
95-63-6	1,2,4-Trimethylbenzene	U	1.10	ug/kg	0.330	1.10
135-98-8	sec-Butylbenzene	U	1.10	ug/kg	0.330	1.10
99-87-6	4-Isopropyltoluene	U	1.10	ug/kg	0.330	1.10
541-73-1	1,3-Dichlorobenzene	U	1.10	ug/kg	0.330	1.10
106-46-7	1,4-Dichlorobenzene	U	1.10	ug/kg	0.330	1.10
104-51-8	n-Butylbenzene	U	1.10	ug/kg	0.330	1.10
96-12-8	1,2-Dibromo-3-chloropropane	U	1.10	ug/kg	0.330	1.10
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.50	ug/kg	1.76	5.50
630-20-6	1,1,1,2-Tetrachloroethane	U	1.10	ug/kg	0.330	1.10
95-50-1	1,2-Dichlorobenzene	U	1.10	ug/kg	0.330	1.10

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	35.8	ug/kg		J
	Unknown Siloxane	16.17	12	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428008	**Date Received:**	06/26/2009 08:40	**%Moisture:**	5.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6041	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 19:32	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:25	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s120.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.359	1.05
74-87-3	Chloromethane	U	1.05	ug/kg	0.316	1.05
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.316	1.05
74-83-9	Bromomethane	U	1.05	ug/kg	0.316	1.05
75-00-3	Chloroethane	U	1.05	ug/kg	0.316	1.05
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.601	1.05
67-64-1	Acetone	U	5.27	ug/kg	1.75	5.27
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.316	1.05
74-88-4	Iodomethane	U	5.27	ug/kg	1.69	5.27
75-09-2	Methylene chloride	U	5.27	ug/kg	2.11	5.27
75-15-0	Carbon disulfide	U	5.27	ug/kg	1.32	5.27
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.316	1.05
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.316	1.05
78-93-3	2-Butanone	U	5.27	ug/kg	1.58	5.27
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.316	1.05
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.316	1.05
67-66-3	Chloroform	U	1.05	ug/kg	0.316	1.05
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.348	1.05
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.316	1.05
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.316	1.05
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.316	1.05
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.316	1.05
71-43-2	Benzene	U	1.05	ug/kg	0.316	1.05
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.348	1.05
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.316	1.05
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.316	1.05
74-95-3	Dibromomethane	U	1.05	ug/kg	0.316	1.05
108-10-1	4-Methyl-2-pentanone	U	5.27	ug/kg	1.32	5.27
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.316	1.05
108-88-3	Toluene	J	0.347	ug/kg	0.316	1.05
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.316	1.05
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.316	1.05
591-78-6	2-Hexanone	U	5.27	ug/kg	1.58	5.27
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.316	1.05
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.316	1.05
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.316	1.05
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.316	1.05
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.316	1.05

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428008	**Date Received:**	06/26/2009 08:40	**%Moisture:**	5.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6041	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 19:32	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:25	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s120.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.316	1.05
179601-23-1	m,p-Xylenes	U	2.11	ug/kg	0.316	2.11
95-47-6	o-Xylene	U	1.05	ug/kg	0.316	1.05
100-42-5	Styrene	U	1.05	ug/kg	0.316	1.05
75-25-2	Bromoform	U	1.05	ug/kg	0.316	1.05
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.316	1.05
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.316	1.05
108-86-1	Bromobenzene	U	1.05	ug/kg	0.316	1.05
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.316	1.05
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.316	1.05
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.316	1.05
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.316	1.05
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.316	1.05
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.316	1.05
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.316	1.05
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.316	1.05
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.316	1.05
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.316	1.05
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.316	1.05
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.316	1.05
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.316	1.05
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.27	ug/kg	1.69	5.27
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.316	1.05
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.316	1.05

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	40.4	ug/kg		J
	Unknown Siloxane	16.17	11	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428006**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**7.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6043**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882743**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 18:37**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 13:23**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6s118.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.09	ug/kg	0.369	1.09
74-87-3	Chloromethane	U	1.09	ug/kg	0.326	1.09
75-01-4	Vinyl chloride	U	1.09	ug/kg	0.326	1.09
74-83-9	Bromomethane	U	1.09	ug/kg	0.326	1.09
75-00-3	Chloroethane	U	1.09	ug/kg	0.326	1.09
75-69-4	Trichlorofluoromethane	U	1.09	ug/kg	0.619	1.09
67-64-1	Acetone	U	5.43	ug/kg	1.80	5.43
75-35-4	1,1-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
74-88-4	Iodomethane	U	5.43	ug/kg	1.74	5.43
75-09-2	Methylene chloride	U	5.43	ug/kg	2.17	5.43
75-15-0	Carbon disulfide	U	5.43	ug/kg	1.36	5.43
156-60-5	trans-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
75-34-3	1,1-Dichloroethane	U	1.09	ug/kg	0.326	1.09
78-93-3	2-Butanone	U	5.43	ug/kg	1.63	5.43
156-59-2	cis-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
594-20-7	2,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09
67-66-3	Chloroform	U	1.09	ug/kg	0.326	1.09
74-97-5	Bromochloromethane	U	1.09	ug/kg	0.358	1.09
71-55-6	1,1,1-Trichloroethane	U	1.09	ug/kg	0.326	1.09
563-58-6	1,1-Dichloropropene	U	1.09	ug/kg	0.326	1.09
56-23-5	Carbon tetrachloride	U	1.09	ug/kg	0.326	1.09
107-06-2	1,2-Dichloroethane	U	1.09	ug/kg	0.326	1.09
71-43-2	Benzene	U	1.09	ug/kg	0.326	1.09
79-01-6	Trichloroethylene	U	1.09	ug/kg	0.358	1.09
78-87-5	1,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09
75-27-4	Bromodichloromethane	U	1.09	ug/kg	0.326	1.09
74-95-3	Dibromomethane	U	1.09	ug/kg	0.326	1.09
108-10-1	4-Methyl-2-pentanone	U	5.43	ug/kg	1.36	5.43
10061-01-5	cis-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09
108-88-3	Toluene	U	1.09	ug/kg	0.326	1.09
10061-02-6	trans-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09
79-00-5	1,1,2-Trichloroethane	U	1.09	ug/kg	0.326	1.09
591-78-6	2-Hexanone	U	5.43	ug/kg	1.63	5.43
142-28-9	1,3-Dichloropropane	U	1.09	ug/kg	0.326	1.09
127-18-4	Tetrachloroethylene	U	1.09	ug/kg	0.326	1.09
124-48-1	Dibromochloromethane	U	1.09	ug/kg	0.326	1.09
106-93-4	1,2-Dibromoethane	U	1.09	ug/kg	0.326	1.09
108-90-7	Chlorobenzene	U	1.09	ug/kg	0.326	1.09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428006	**Date Received:**	06/26/2009 08:40	**%Moisture:**	7.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6043	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 18:37	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:23	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s118.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.09	ug/kg	0.326	1.09
179601-23-1	m,p-Xylenes	U	2.17	ug/kg	0.326	2.17
95-47-6	o-Xylene	U	1.09	ug/kg	0.326	1.09
100-42-5	Styrene	U	1.09	ug/kg	0.326	1.09
75-25-2	Bromoform	U	1.09	ug/kg	0.326	1.09
79-34-5	1,1,2,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09
96-18-4	1,2,3-Trichloropropane	U	1.09	ug/kg	0.326	1.09
108-86-1	Bromobenzene	U	1.09	ug/kg	0.326	1.09
103-65-1	n-Propylbenzene	U	1.09	ug/kg	0.326	1.09
95-49-8	2-Chlorotoluene	U	1.09	ug/kg	0.326	1.09
98-82-8	Isopropylbenzene	U	1.09	ug/kg	0.326	1.09
108-67-8	1,3,5-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09
106-43-4	4-Chlorotoluene	U	1.09	ug/kg	0.326	1.09
98-06-6	tert-Butylbenzene	U	1.09	ug/kg	0.326	1.09
95-63-6	1,2,4-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09
135-98-8	sec-Butylbenzene	U	1.09	ug/kg	0.326	1.09
99-87-6	4-Isopropyltoluene	U	1.09	ug/kg	0.326	1.09
541-73-1	1,3-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09
106-46-7	1,4-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09
104-51-8	n-Butylbenzene	U	1.09	ug/kg	0.326	1.09
96-12-8	1,2-Dibromo-3-chloropropane	U	1.09	ug/kg	0.326	1.09
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.43	ug/kg	1.74	5.43
630-20-6	1,1,1,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09
95-50-1	1,2-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	350	ug/kg		J
	Unknown Siloxane	16.17	77.9	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428007	**Date Received:**	06/26/2009 08:40	**%Moisture:**	8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6045	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 19:05	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:24	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s119.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.09	ug/kg	0.370	1.09
74-87-3	Chloromethane	U	1.09	ug/kg	0.326	1.09
75-01-4	Vinyl chloride	U	1.09	ug/kg	0.326	1.09
74-83-9	Bromomethane	U	1.09	ug/kg	0.326	1.09
75-00-3	Chloroethane	U	1.09	ug/kg	0.326	1.09
75-69-4	Trichlorofluoromethane	U	1.09	ug/kg	0.620	1.09
67-64-1	Acetone	U	5.43	ug/kg	1.80	5.43
75-35-4	1,1-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
74-88-4	Iodomethane	U	5.43	ug/kg	1.74	5.43
75-09-2	Methylene chloride	U	5.43	ug/kg	2.17	5.43
75-15-0	Carbon disulfide	U	5.43	ug/kg	1.36	5.43
156-60-5	trans-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
75-34-3	1,1-Dichloroethane	U	1.09	ug/kg	0.326	1.09
78-93-3	2-Butanone	U	5.43	ug/kg	1.63	5.43
156-59-2	cis-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
594-20-7	2,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09
67-66-3	Chloroform	U	1.09	ug/kg	0.326	1.09
74-97-5	Bromochloromethane	U	1.09	ug/kg	0.359	1.09
71-55-6	1,1,1-Trichloroethane	U	1.09	ug/kg	0.326	1.09
563-58-6	1,1-Dichloropropene	U	1.09	ug/kg	0.326	1.09
56-23-5	Carbon tetrachloride	U	1.09	ug/kg	0.326	1.09
107-06-2	1,2-Dichloroethane	U	1.09	ug/kg	0.326	1.09
71-43-2	Benzene	U	1.09	ug/kg	0.326	1.09
79-01-6	Trichloroethylene	U	1.09	ug/kg	0.359	1.09
78-87-5	1,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09
75-27-4	Bromodichloromethane	U	1.09	ug/kg	0.326	1.09
74-95-3	Dibromomethane	U	1.09	ug/kg	0.326	1.09
108-10-1	4-Methyl-2-pentanone	U	5.43	ug/kg	1.36	5.43
10061-01-5	cis-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09
108-88-3	Toluene	U	1.09	ug/kg	0.326	1.09
10061-02-6	trans-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09
79-00-5	1,1,2-Trichloroethane	U	1.09	ug/kg	0.326	1.09
591-78-6	2-Hexanone	U	5.43	ug/kg	1.63	5.43
142-28-9	1,3-Dichloropropane	U	1.09	ug/kg	0.326	1.09
127-18-4	Tetrachloroethylene	U	1.09	ug/kg	0.326	1.09
124-48-1	Dibromochloromethane	U	1.09	ug/kg	0.326	1.09
106-93-4	1,2-Dibromoethane	U	1.09	ug/kg	0.326	1.09
108-90-7	Chlorobenzene	U	1.09	ug/kg	0.326	1.09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428007	**Date Received:**	06/26/2009 08:40	**%Moisture:**	8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6045	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 19:05	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:24	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s119.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.09	ug/kg	0.326	1.09
179601-23-1	m,p-Xylenes	U	2.17	ug/kg	0.326	2.17
95-47-6	o-Xylene	U	1.09	ug/kg	0.326	1.09
100-42-5	Styrene	U	1.09	ug/kg	0.326	1.09
75-25-2	Bromoform	U	1.09	ug/kg	0.326	1.09
79-34-5	1,1,2,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09
96-18-4	1,2,3-Trichloropropane	U	1.09	ug/kg	0.326	1.09
108-86-1	Bromobenzene	U	1.09	ug/kg	0.326	1.09
103-65-1	n-Propylbenzene	U	1.09	ug/kg	0.326	1.09
95-49-8	2-Chlorotoluene	U	1.09	ug/kg	0.326	1.09
98-82-8	Isopropylbenzene	U	1.09	ug/kg	0.326	1.09
108-67-8	1,3,5-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09
106-43-4	4-Chlorotoluene	U	1.09	ug/kg	0.326	1.09
98-06-6	tert-Butylbenzene	U	1.09	ug/kg	0.326	1.09
95-63-6	1,2,4-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09
135-98-8	sec-Butylbenzene	U	1.09	ug/kg	0.326	1.09
99-87-6	4-Isopropyltoluene	U	1.09	ug/kg	0.326	1.09
541-73-1	1,3-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09
106-46-7	1,4-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09
104-51-8	n-Butylbenzene	U	1.09	ug/kg	0.326	1.09
96-12-8	1,2-Dibromo-3-chloropropane	U	1.09	ug/kg	0.326	1.09
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.43	ug/kg	1.74	5.43
630-20-6	1,1,1,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09
95-50-1	1,2-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	59.9	ug/kg		J
	Unknown Siloxane	16.17	26.7	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	S
Lab Sample ID:	232428017	**Date Received:**	06/26/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6059	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 21:23	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s124.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene		1.02	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	S
Lab Sample ID:	232428017	**Date Received:**	06/26/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6059	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 21:23	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s124.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Flt	Qual
	No Tentatively Identified Compounds Found		ug/kg		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	S
Lab Sample ID:	232428016	**Date Received:**	06/26/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6060	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:55	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:28	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s123.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone		10.5	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	S
Lab Sample ID:	232428016	**Date Received:**	06/26/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6060	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:55	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:28	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s123.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	13.85	32.3	ug/kg	99	NJ

QC Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2477

Matrix Type: SOLID

CAP Column (1) : DB-624

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201874914	LCS for batch 882741	101	101	103
1201874915	LCS for batch 882741	99	99	101
1201874911	MB for batch 882741	98	101	101
232428001	CAMO-09-6007	98	99	102
232428004	CAMO-09-6009	97	100	101
232428006	CAMO-09-6043	98	102	109
232428007	CAMO-09-6045	98	99	102
232428008	CAMO-09-6041	98	101	110
232428011	CAMO-09-6035	99	98	103
232428013	CAMO-09-6039	98	100	104
232428016	CAMO-09-6060	98	99	100
232428017	CAMO-09-6059	99	99	99

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: CAMO-09-10463PS
Lab Sample ID: 1201874912
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 21:51
Prep Batch ID: 882741
Batch ID: 882743
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	48.4	97	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	38.3	77	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	38.9	78	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	38.3	77	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	37.8	76	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	40.0	80	51-151
67-64-1	PS	Acetone	250	0.00	U	253	101	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	36.7	73	61-125
74-88-4	PS	Iodomethane	250	0.00	U	187	75	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	31.4	63	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	203	81	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	34.3	69	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	35.5	71	62-125
78-93-3	PS	2-Butanone	250	0.00	U	308	123	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	36.7	73	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	36.8	74	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	35.5	71	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	37.9	76	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	37.3	75	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	36.4	73	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	38.1	76	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	34.2	68	58-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: CAMO-09-10463PS
Lab Sample ID: 1201874912
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 21:51
Prep Batch ID: 882741
Batch ID: 882743
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	34.7	69	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	36.8	74	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	36.4	73	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	39.1	78	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	37.3	75	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	208	83	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	39.2	78	54-133
108-88-3	PS	Toluene	50.0	0.00	U	33.1	66	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	38.6	77	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	37.4	75	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	248	99	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	36.7	73	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	36.1	72	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	39.9	80	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	38.8	78	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	35.5	71	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	34.4	69	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	69.8	70	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	35.9	72	52-127
100-42-5	PS	Styrene	50.0	0.00	U	37.2	74	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	35.2	70	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	36.8	74	63-127

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: CAMO-09-10463PS
Lab Sample ID: 1201874912
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 21:51
Prep Batch ID: 882741
Batch ID: 882743
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	40.7	81	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	34.9	70	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	32.5	65	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	33.5	67	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	28.3	57	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	33.0	66	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	33.4	67	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	33.7	67	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	33.3	67	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	33.2	66	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	34.2	68	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	35.0	70	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	34.1	68	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	33.1	66	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	49.6	99	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	38.7	77	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	35.2	70	43-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: CAMO-09-10463PSD
Lab Sample ID: 1201874913
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 22:18
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	56.2	112	25-149	15	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	43.3	87	39-140	12	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	43.9	88	47-129	12	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	42.7	85	31-135	11	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	42.9	86	53-128	13	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	46.2	92	51-151	14	0-25
67-64-1	PSD	Acetone	250	0.00	U	260	104	21-153	3	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	41.9	84	61-125	13	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	214	86	53-142	14	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	36.4	73	59-136	15	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	228	91	46-129	12	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	39.5	79	56-126	14	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	40.6	81	62-125	14	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	318	127	26-152	3	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	42.2	84	60-130	14	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	42.6	85	55-135	15	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	41.1	82	60-127	15	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	43.1	86	61-131	13	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	43.5	87	59-131	15	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	42.2	84	57-128	15	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	44.3	89	58-136	15	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	38.6	77	58-126	12	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: CAMO-09-10463PSD
Lab Sample ID: 1201874913
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 22:18
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	40.1	80	56-123	14	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	43.4	87	51-137	16	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	41.9	84	60-126	14	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	45.2	90	55-138	15	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	42.2	84	60-132	12	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	227	91	58-136	9	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	44.9	90	54-133	14	0-25
108-88-3	PSD	Toluene	50.0	0.00	U	39.2	78	52-128	17	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	45.0	90	53-137	15	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	43.3	87	59-130	15	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	263	105	31-148	6	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	41.9	84	57-127	13	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	42.9	86	51-128	17	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	46.1	92	59-139	14	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	44.0	88	57-133	13	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	41.9	84	53-122	17	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	40.5	81	51-125	16	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	82.7	83	50-126	17	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	42.0	84	52-127	16	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	43.6	87	49-135	16	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	40.0	80	57-149	13	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	41.1	82	63-127	11	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: CAMO-09-10463PSD
Lab Sample ID: 1201874913
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 22:18
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	46.7	93	57-149	14	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	41.8	84	49-131	18	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	39.5	79	40-136	19	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	40.3	81	44-135	18	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	34.3	69	44-140	19	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	40.2	80	42-140	20	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	40.5	81	44-132	19	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	41.5	83	42-142	21	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	40.3	81	43-137	19	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	40.8	82	39-139	21	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	42.1	84	38-145	21	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	41.8	84	43-129	18	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	40.8	82	44-125	18	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	40.5	81	36-141	20	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	55.3	111	47-151	11	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	45.9	92	59-131	17	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	41.9	84	43-129	18	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: LCS for batch 882741
Lab Sample ID: 1201874914
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/06/2009 11:17
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	60.2	120	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	45.7	91	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	46.0	92	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	44.4	89	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	45.3	91	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	49.2	98	67-151
67-64-1	LCS	Acetone	250	0.0	293	117	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	45.1	90	70-125
74-88-4	LCS	Iodomethane	250	0.0	226	90	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	39.2	78	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	242	97	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	42.3	85	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	43.2	86	75-120
78-93-3	LCS	2-Butanone	250	0.0	366	146	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	45.2	90	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	46.7	93	74-135
67-66-3	LCS	Chloroform	50.0	0.0	43.7	87	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	46.1	92	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	46.6	93	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	45.7	91	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	47.4	95	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	41.2	82	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882741 **Matrix:** SOIL

Lab Sample ID: 1201874914

Instrument: VOA6.I **Analysis Date:** 07/06/2009 11:17 **Dilution:** 1

Analyst: RXD1 **Prep Batch ID** 882741

Purge Vol: 5 mL **Batch ID:** 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	42.9	86	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	46.0	92	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	45.0	90	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	48.9	98	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	45.0	90	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	255	102	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	49.6	99	80-125
108-88-3	LCS	Toluene	50.0	0.0	42.3	85	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	49.2	98	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	46.4	93	76-120
591-78-6	LCS	2-Hexanone	250	0.0	303	121	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	44.9	90	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	45.8	92	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	50.5	101	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	47.8	96	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	45.0	90	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	44.0	88	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	89.9	90	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	45.7	91	74-120
100-42-5	LCS	Styrene	50.0	0.0	47.6	95	76-125
75-25-2	LCS	Bromoform	50.0	0.0	45.5	91	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	46.5	93	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 882741
Matrix: SOIL
Lab Sample ID: 1201874914
Instrument: VOA6.I
Analysis Date: 07/06/2009 11:17
Dilution: 1
Analyst: RXD1
Prep Batch ID 882741
Purge Vol: 5 mL
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	51.3	103	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	45.3	91	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	43.3	87	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	44.2	88	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	37.7	75	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	44.0	88	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	44.8	90	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	45.0	90	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	44.2	88	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	44.4	89	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	46.3	93	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	45.9	92	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	44.9	90	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	45.7	91	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	63.1	126	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	48.9	98	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	45.4	91	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: LCS for batch 882741
Lab Sample ID: 1201874915
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/06/2009 12:12
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	221	88	52-139

Method Blank Summary

SDG Number:	09-2477	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882741	Instrument ID:	VOA6.I	Data File:	6s108B1.d
Lab Sample ID:	1201874911	Prep Date:	07/06/2009 10:30	Analyzed:	07/06/09 13:07
Column:	DB-624	Heated Purge:	Yes		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 882741	1201874914	6s104L2.d	07/06/09	1117
02	LCS for batch 882741	1201874915	6s106L2.d	07/06/09	1212
03	CAMO-09-6007	232428001	6s116.d	07/06/09	1741
04	CAMO-09-6009	232428004	6s117.d	07/06/09	1809
05	CAMO-09-6043	232428006	6s118.d	07/06/09	1837
06	CAMO-09-6045	232428007	6s119.d	07/06/09	1905
07	CAMO-09-6041	232428008	6s120.d	07/06/09	1932
08	CAMO-09-6035	232428011	6s121.d	07/06/09	2000
09	CAMO-09-6039	232428013	6s122.d	07/06/09	2028
10	CAMO-09-6060	232428016	6s123.d	07/06/09	2055
11	CAMO-09-6059	232428017	6s124.d	07/06/09	2123

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2477

Instrument ID: VOA6.I **Injection Date/Time:** 06-JUL-09 10:49

Column Description: DB-624 **Lab File ID** /070609v6/6s103BFB.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	15
75	30.0 - 60.0% of mass 95	44.3
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.5
174	50.0 - 100.0% of mass 95	92.7
175	5.0 -9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	97.3
177	5.0 - 9.0% of mass 176	6.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD050	W6VM090706-02	/070609v6/6s103.d	06-JUL-09 10:49
LCS	1201874914	/070609v6/6s104L2.d	06-JUL-09 11:17
VSTD250S	UVM090601-08B	/070609v6/6s105.d	06-JUL-09 11:44
LCS	1201874915	/070609v6/6s106L2.d	06-JUL-09 12:12
BLANK	1201874911	/070609v6/6s108B1.d	06-JUL-09 13:07
CAMO-09-6007	232428001	/070609v6/6s116.d	06-JUL-09 17:41
CAMO-09-6009	232428004	/070609v6/6s117.d	06-JUL-09 18:09
CAMO-09-6043	232428006	/070609v6/6s118.d	06-JUL-09 18:37
CAMO-09-6045	232428007	/070609v6/6s119.d	06-JUL-09 19:05
CAMO-09-6041	232428008	/070609v6/6s120.d	06-JUL-09 19:32
CAMO-09-6035	232428011	/070609v6/6s121.d	06-JUL-09 20:00
CAMO-09-6039	232428013	/070609v6/6s122.d	06-JUL-09 20:28
CAMO-09-6060	232428016	/070609v6/6s123.d	06-JUL-09 20:55
CAMO-09-6059	232428017	/070609v6/6s124.d	06-JUL-09 21:23

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2477

Instrument ID: VOA6.I **Injection Date/Time:** 15-JUN-09 16:10

Column Description: DB-624 **Lab File ID** /061509v6/6p111.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	16
75	30.0 - 60.0% of mass 95	46.2
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.5
174	50.0 - 100.0% of mass 95	89.7
175	5.0 -9.0% of mass 174	6.9
176	95.0 - 101.0% of mass 174	97.8
177	5.0 - 9.0% of mass 176	6.4

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD001	W6VM090615-08	/061509v6/6p112.d	15-JUN-09 16:38
VSTD002	W6VM090615-09	/061509v6/6p113.d	15-JUN-09 17:06
VSTD005	W6VM090615-10	/061509v6/6p114.d	15-JUN-09 17:34
VSTD010	W6VM090615-11	/061509v6/6p115.d	15-JUN-09 18:02
VSTD050	W6VM090615-13	/061509v6/6p117.d	15-JUN-09 18:58
VSTD100	W6VM090615-14	/061509v6/6p118.d	15-JUN-09 19:25
VSTD0005	W6VM090615-15	/061509v6/6p120.d	15-JUN-09 20:21
SECONDSOURCE	W6VM090615-17	/061509v6/6p122.d	15-JUN-09 21:17
VSTD005S	W6VM090615-18	/061509v6/6p123.d	15-JUN-09 21:45
VSTD010S	W6VM090615-19	/061509v6/6p124.d	15-JUN-09 22:12
VSTD025S	W6VM090615-20	/061509v6/6p125.d	15-JUN-09 22:40
VSTD050S	W6VM090615-21	/061509v6/6p126.d	15-JUN-09 23:07
VSTD100S	W6VM090615-22	/061509v6/6p127.d	15-JUN-09 23:35
VSTD250S	W6VM090615-23	/061509v6/6p128.d	16-JUN-09 00:03
SECONDSOURCE	W6VM090615-25	/061509v6/6p131.d	16-JUN-09 01:27

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA6.I

GC Column: DB-624

Client SDG: 09-2477

STD Analysis Time: 06-JUL-09 10:49

Data File: 6s103.d

	Fluorobenzene				Chlorobenzene-d5				1,4-Dichlorobenzene-d4			
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 Hour STD	1821350		9.98		1341131		13.2		745869		15.6	
Upper Limit	3642700		10.5		2682262		13.7		1491738		16.1	
Lower Limit	910675		9.48		670566		12.7		372935		15.1	
Sample ID												
BLK01LCS	1801365		9.98		1349530		13.2		754705		15.6	
BLK01SLCS	1725562		9.98		1306571		13.2		741299		15.6	
BLK01	1676832		9.98		1236965		13.2		686146		15.6	
CAMO-09-6007	1501368		9.98		1118305		13.2		613033		15.6	
CAMO-09-6009	1586473		9.98		1181144		13.2		649905		15.6	
CAMO-09-6043	1384310		9.98		1000666		13.2		498845		15.6	
CAMO-09-6045	1552071		9.98		1160283		13.2		625879		15.6	
CAMO-09-6041	1534744		9.98		1112822		13.2		541270		15.6	
CAMO-09-6035	1506069		9.98		1133846		13.2		628072		15.6	
CAMO-09-6039	1520617		9.98		1123255		13.2		589957		15.6	
CAMO-09-6060	1484566		9.98		1120462		13.2		621368		15.6	
CAMO-09-6059	1371925		9.98		1032699		13.2		571758		15.6	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 17:41	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s116.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.04	ug/kg	0.355	1.04
74-87-3	Chloromethane	U	1.04	ug/kg	0.313	1.04
75-01-4	Vinyl chloride	U	1.04	ug/kg	0.313	1.04
74-83-9	Bromomethane	U	1.04	ug/kg	0.313	1.04
75-00-3	Chloroethane	U	1.04	ug/kg	0.313	1.04
75-69-4	Trichlorofluoromethane	U	1.04	ug/kg	0.595	1.04
67-64-1	Acetone	U	5.22	ug/kg	1.73	5.22
75-35-4	1,1-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
74-88-4	Iodomethane	U	5.22	ug/kg	1.67	5.22
75-09-2	Methylene chloride	U	5.22	ug/kg	2.09	5.22
75-15-0	Carbon disulfide	U	5.22	ug/kg	1.31	5.22
156-60-5	trans-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
75-34-3	1,1-Dichloroethane	U	1.04	ug/kg	0.313	1.04
78-93-3	2-Butanone	U	5.22	ug/kg	1.57	5.22
156-59-2	cis-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
594-20-7	2,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04
67-66-3	Chloroform	U	1.04	ug/kg	0.313	1.04
74-97-5	Bromochloromethane	U	1.04	ug/kg	0.345	1.04
71-55-6	1,1,1-Trichloroethane	U	1.04	ug/kg	0.313	1.04
563-58-6	1,1-Dichloropropene	U	1.04	ug/kg	0.313	1.04
56-23-5	Carbon tetrachloride	U	1.04	ug/kg	0.313	1.04
107-06-2	1,2-Dichloroethane	U	1.04	ug/kg	0.313	1.04
71-43-2	Benzene	U	1.04	ug/kg	0.313	1.04
79-01-6	Trichloroethylene	U	1.04	ug/kg	0.345	1.04
78-87-5	1,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04
75-27-4	Bromodichloromethane	U	1.04	ug/kg	0.313	1.04
74-95-3	Dibromomethane	U	1.04	ug/kg	0.313	1.04
108-10-1	4-Methyl-2-pentanone	U	5.22	ug/kg	1.31	5.22
10061-01-5	cis-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04
108-88-3	Toluene	U	1.04	ug/kg	0.313	1.04
10061-02-6	trans-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04
79-00-5	1,1,2-Trichloroethane	U	1.04	ug/kg	0.313	1.04
591-78-6	2-Hexanone	U	5.22	ug/kg	1.57	5.22
142-28-9	1,3-Dichloropropane	U	1.04	ug/kg	0.313	1.04
127-18-4	Tetrachloroethylene	U	1.04	ug/kg	0.313	1.04
124-48-1	Dibromochloromethane	U	1.04	ug/kg	0.313	1.04
106-93-4	1,2-Dibromoethane	U	1.04	ug/kg	0.313	1.04
108-90-7	Chlorobenzene	U	1.04	ug/kg	0.313	1.04

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 17:41	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s116.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.04	ug/kg	0.313	1.04
179601-23-1	m,p-Xylenes	U	2.09	ug/kg	0.313	2.09
95-47-6	o-Xylene	U	1.04	ug/kg	0.313	1.04
100-42-5	Styrene	U	1.04	ug/kg	0.313	1.04
75-25-2	Bromoform	U	1.04	ug/kg	0.313	1.04
79-34-5	1,1,2,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04
96-18-4	1,2,3-Trichloropropane	U	1.04	ug/kg	0.313	1.04
108-86-1	Bromobenzene	U	1.04	ug/kg	0.313	1.04
103-65-1	n-Propylbenzene	U	1.04	ug/kg	0.313	1.04
95-49-8	2-Chlorotoluene	U	1.04	ug/kg	0.313	1.04
98-82-8	Isopropylbenzene	U	1.04	ug/kg	0.313	1.04
108-67-8	1,3,5-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04
106-43-4	4-Chlorotoluene	U	1.04	ug/kg	0.313	1.04
98-06-6	tert-Butylbenzene	U	1.04	ug/kg	0.313	1.04
95-63-6	1,2,4-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04
135-98-8	sec-Butylbenzene	U	1.04	ug/kg	0.313	1.04
99-87-6	4-Isopropyltoluene	U	1.04	ug/kg	0.313	1.04
541-73-1	1,3-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04
106-46-7	1,4-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04
104-51-8	n-Butylbenzene	U	1.04	ug/kg	0.313	1.04
96-12-8	1,2-Dibromo-3-chloropropane	U	1.04	ug/kg	0.313	1.04
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.22	ug/kg	1.67	5.22
630-20-6	1,1,1,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04
95-50-1	1,2-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	259	ug/kg		J
	Unknown Siloxane	16.17	37.1	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s116.d
Lab Smp Id: 232428001 Client Smp ID: CAMO-09-6007
Inj Date : 06-JUL-2009 17:41
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428001|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.26710	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1501368	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1118305	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	613033	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	370020	49.1854	51.4
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1472611	49.7072	51.9
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	577178	50.9773	53.2

ION RATIO REPORT

VOA REPORT

Data file: 6s116.d
Report Date: 07/07/2009 07:52
Lab. ID: 232428001 SampleType: SAMPLE
Injection Date: 06-JUL-2009 17:41
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232428001|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane CAS#: 107-06-2						
62	17454	9.98	9.71	80-120	100	(T)
64	2676	9.98	9.71	2- 62	15	(T)
63 4-Methyl-2-pentanone CAS#: 108-10-1						
58	10477	11.63	11.41	80-120	100	(T)
43	4944	11.63	11.41	199-259	47	(QT)
100	987453	11.63	11.41	11- 71	9425	(QT)
81 Styrene CAS#: 100-42-5						
104	19603	14.23	13.80	80-120	100	(T)
78	457	14.17	13.80	17- 77	2	(QT)
82 Bromoform CAS#: 75-25-2						
173	2523	14.35	14.06	80-120	100	(T)
175	37155	14.36	14.06	19- 79	1472	(QT)
83 Isopropylbenzene CAS#: 98-82-8						
105	14821	14.23	14.16	80-120	100	(T)
120	6814	14.24	14.16	0- 58	46	(T)
88 1,2,3-Trichloropropane CAS#: 96-18-4						
110	18918	14.23	14.53	80-120	100	(T)
75	39357	14.23	14.53	248-308	208	(QT)
77	2168	14.23	14.56	683-743	11	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s116.d
Lab Smp Id: 232428001 Client Smp ID: CAMO-09-6007
Inj Date : 06-JUL-2009 17:41
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428001|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.26710	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3100355	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3309133	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	15359212	247.700813	259	0		0	75

RT	AREA	CONCENTRATIONS ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
16.168	2348859	35.4905433	37.1	0		0	101

Data File: /chem/VOA6.i/070609v6/6s116.d
Date : 06-JUL-2009 17:41
Client ID: CAMO-09-6007
Sample Info: |232428001|88274311|VOAF|1|

Column phase: DB-624

Page 1

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

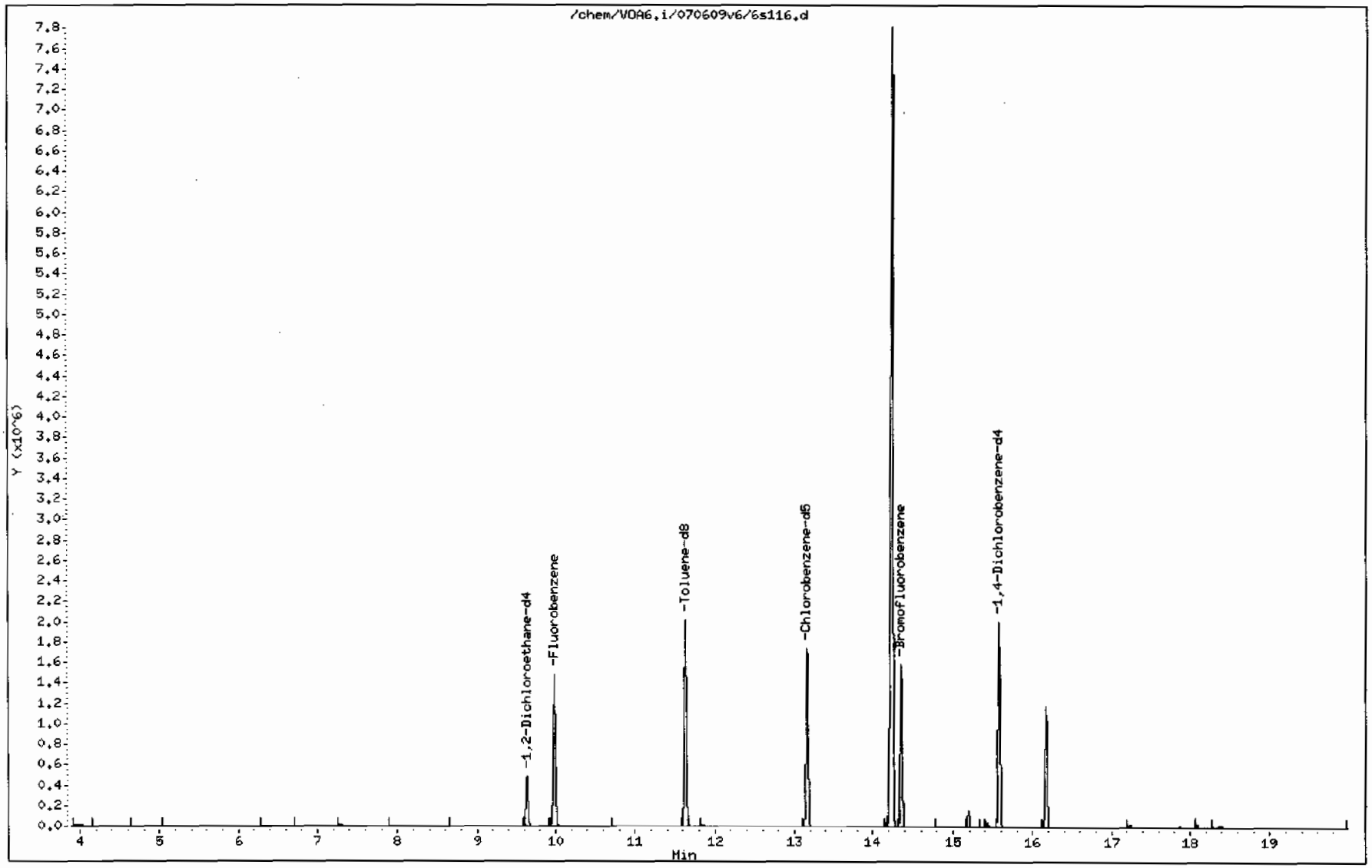

Data File: /chem/VOA6.i/070609v6/6s116.d

Date : 06-JUL-2009 17:41

Client ID: CAMO-09-6007

Instrument: VOA6.i

Sample Info: |2324280001|882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122479	78	C8H24O4Si4	296

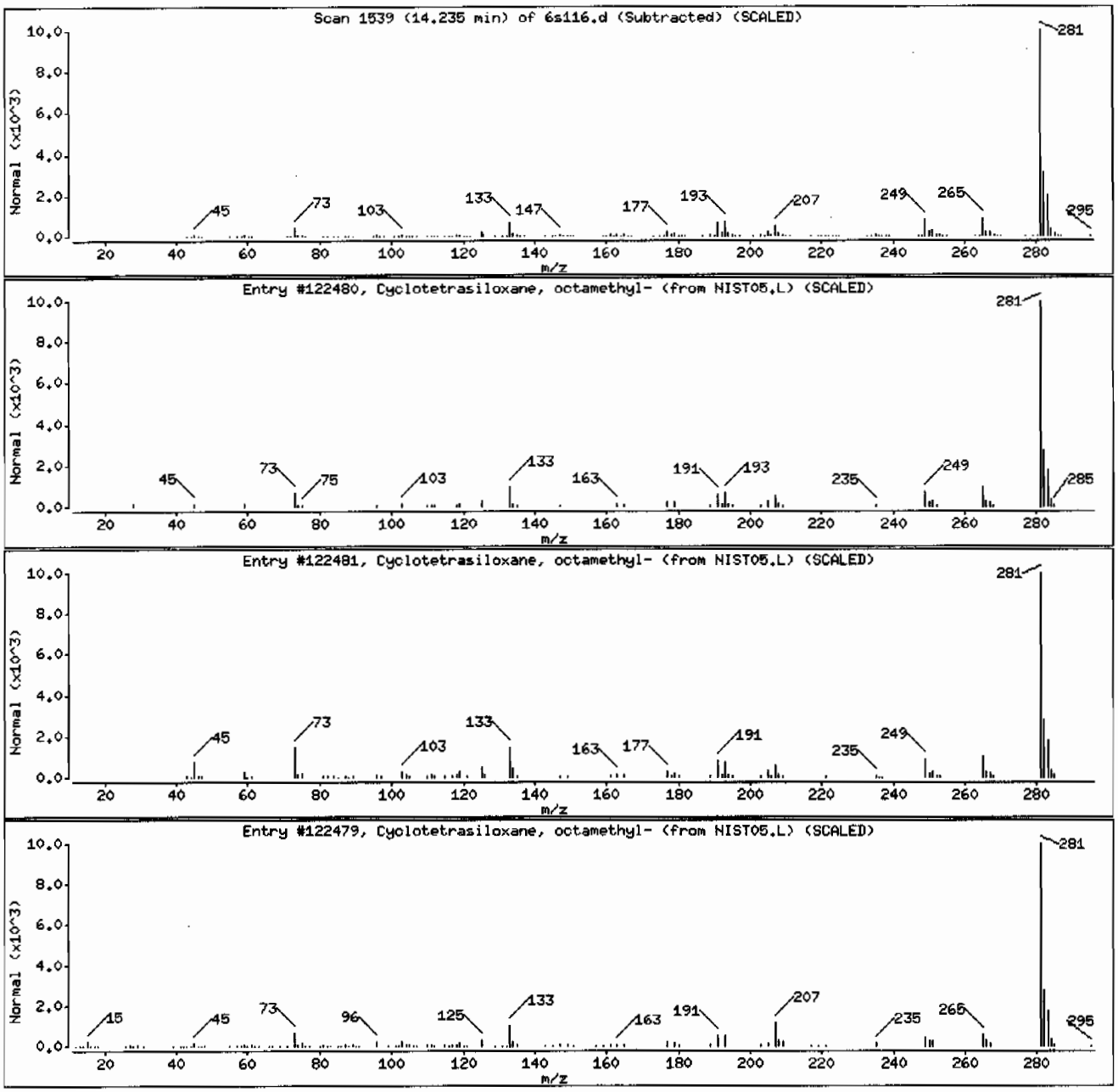

Data File: /chem/VOA6.i/070609v6/6s116.d

Date : 06-JUL-2009 17:41

Client ID: CAMO-09-6007 Instrument: VOA6.i

Sample Info: |2324280011882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Butanamide, 2,2,3,3,4,4,4-heptafluoro-N-	55471-01-7	NIST05.L	184036	72	C18H26F7NO3Si	493
p-Trimethylsilyloxyphenyl-bis(trimethyls	1000079-08-1	NIST05.L	161171	64	C17H34O3Si3	370
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	64	C18H34O4Si3	398

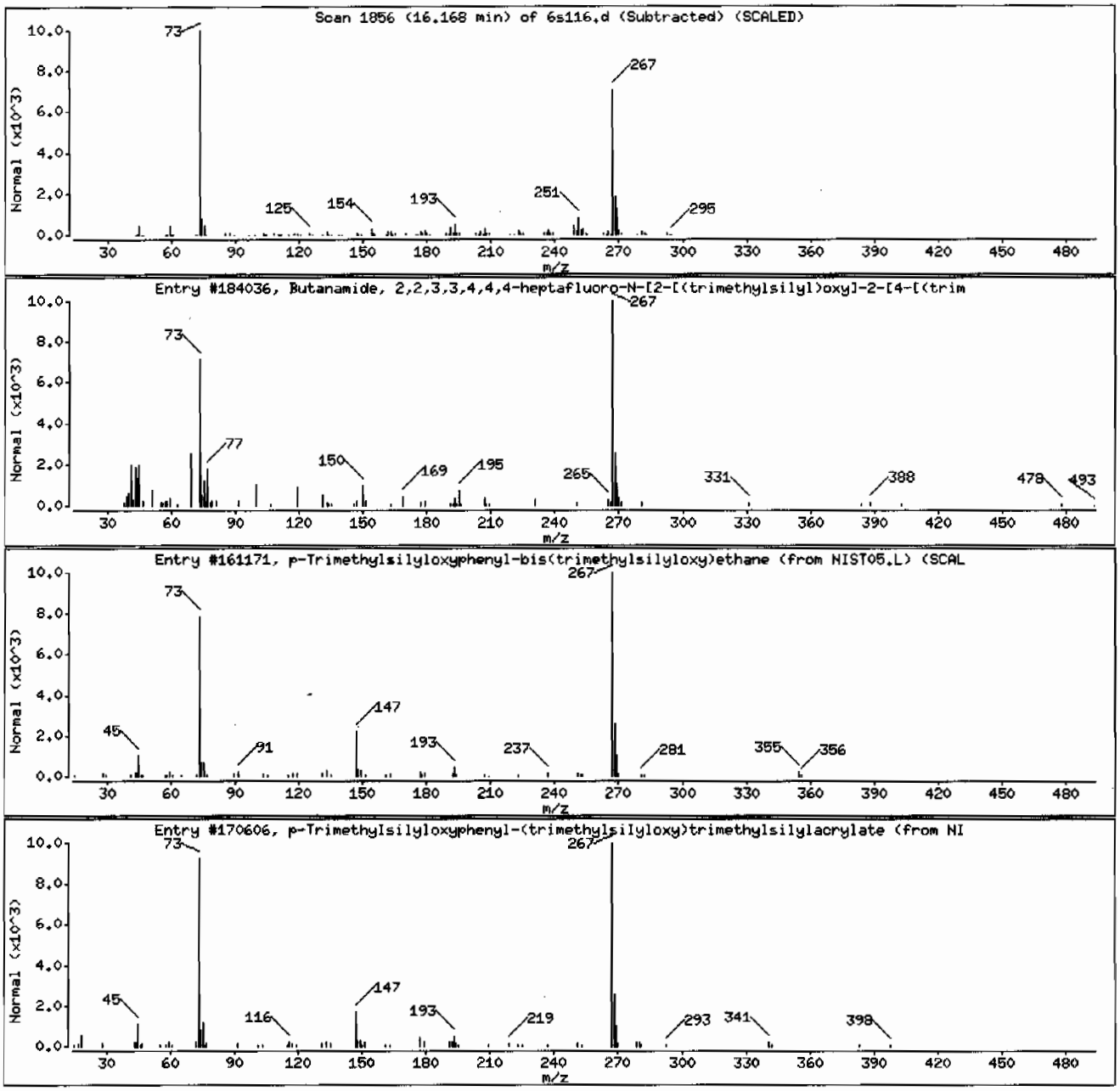

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428004	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6009	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 18:09	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:22	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s117.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.20	ug/kg	0.410	1.20
74-87-3	Chloromethane	U	1.20	ug/kg	0.361	1.20
75-01-4	Vinyl chloride	U	1.20	ug/kg	0.361	1.20
74-83-9	Bromomethane	U	1.20	ug/kg	0.361	1.20
75-00-3	Chloroethane	U	1.20	ug/kg	0.361	1.20
75-69-4	Trichlorofluoromethane	U	1.20	ug/kg	0.687	1.20
67-64-1	Acetone	U	6.02	ug/kg	2.00	6.02
75-35-4	1,1-Dichloroethylene	U	1.20	ug/kg	0.361	1.20
74-88-4	Iodomethane	U	6.02	ug/kg	1.93	6.02
75-09-2	Methylene chloride	U	6.02	ug/kg	2.41	6.02
75-15-0	Carbon disulfide	U	6.02	ug/kg	1.51	6.02
156-60-5	trans-1,2-Dichloroethylene	U	1.20	ug/kg	0.361	1.20
75-34-3	1,1-Dichloroethane	U	1.20	ug/kg	0.361	1.20
78-93-3	2-Butanone	U	6.02	ug/kg	1.81	6.02
156-59-2	cis-1,2-Dichloroethylene	U	1.20	ug/kg	0.361	1.20
594-20-7	2,2-Dichloropropane	U	1.20	ug/kg	0.361	1.20
67-66-3	Chloroform	U	1.20	ug/kg	0.361	1.20
74-97-5	Bromochloromethane	U	1.20	ug/kg	0.398	1.20
71-55-6	1,1,1-Trichloroethane	U	1.20	ug/kg	0.361	1.20
563-58-6	1,1-Dichloropropene	U	1.20	ug/kg	0.361	1.20
56-23-5	Carbon tetrachloride	U	1.20	ug/kg	0.361	1.20
107-06-2	1,2-Dichloroethane	U	1.20	ug/kg	0.361	1.20
71-43-2	Benzene	U	1.20	ug/kg	0.361	1.20
79-01-6	Trichloroethylene	U	1.20	ug/kg	0.398	1.20
78-87-5	1,2-Dichloropropane	U	1.20	ug/kg	0.361	1.20
75-27-4	Bromodichloromethane	U	1.20	ug/kg	0.361	1.20
74-95-3	Dibromomethane	U	1.20	ug/kg	0.361	1.20
108-10-1	4-Methyl-2-pentanone	U	6.02	ug/kg	1.51	6.02
10061-01-5	cis-1,3-Dichloropropylene	U	1.20	ug/kg	0.361	1.20
108-88-3	Toluene	U	1.20	ug/kg	0.361	1.20
10061-02-6	trans-1,3-Dichloropropylene	U	1.20	ug/kg	0.361	1.20
79-00-5	1,1,2-Trichloroethane	U	1.20	ug/kg	0.361	1.20
591-78-6	2-Hexanone	U	6.02	ug/kg	1.81	6.02
142-28-9	1,3-Dichloropropane	U	1.20	ug/kg	0.361	1.20
127-18-4	Tetrachloroethylene	U	1.20	ug/kg	0.361	1.20
124-48-1	Dibromochloromethane	U	1.20	ug/kg	0.361	1.20
106-93-4	1,2-Dibromoethane	U	1.20	ug/kg	0.361	1.20
108-90-7	Chlorobenzene	U	1.20	ug/kg	0.361	1.20

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428004	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6009	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 18:09	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:22	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s117.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.20	ug/kg	0.361	1.20
179601-23-1	m,p-Xylenes	U	2.41	ug/kg	0.361	2.41
95-47-6	o-Xylene	U	1.20	ug/kg	0.361	1.20
100-42-5	Styrene	U	1.20	ug/kg	0.361	1.20
75-25-2	Bromoform	U	1.20	ug/kg	0.361	1.20
79-34-5	1,1,2,2-Tetrachloroethane	U	1.20	ug/kg	0.361	1.20
96-18-4	1,2,3-Trichloropropane	U	1.20	ug/kg	0.361	1.20
108-86-1	Bromobenzene	U	1.20	ug/kg	0.361	1.20
103-65-1	n-Propylbenzene	U	1.20	ug/kg	0.361	1.20
95-49-8	2-Chlorotoluene	U	1.20	ug/kg	0.361	1.20
98-82-8	Isopropylbenzene	U	1.20	ug/kg	0.361	1.20
108-67-8	1,3,5-Trimethylbenzene	U	1.20	ug/kg	0.361	1.20
106-43-4	4-Chlorotoluene	U	1.20	ug/kg	0.361	1.20
98-06-6	tert-Butylbenzene	U	1.20	ug/kg	0.361	1.20
95-63-6	1,2,4-Trimethylbenzene	U	1.20	ug/kg	0.361	1.20
135-98-8	sec-Butylbenzene	U	1.20	ug/kg	0.361	1.20
99-87-6	4-Isopropyltoluene	U	1.20	ug/kg	0.361	1.20
541-73-1	1,3-Dichlorobenzene	U	1.20	ug/kg	0.361	1.20
106-46-7	1,4-Dichlorobenzene	U	1.20	ug/kg	0.361	1.20
104-51-8	n-Butylbenzene	U	1.20	ug/kg	0.361	1.20
96-12-8	1,2-Dibromo-3-chloropropane	U	1.20	ug/kg	0.361	1.20
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.02	ug/kg	1.93	6.02
630-20-6	1,1,1,2-Tetrachloroethane	U	1.20	ug/kg	0.361	1.20
95-50-1	1,2-Dichlorobenzene	U	1.20	ug/kg	0.361	1.20

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	13.86	13.8	ug/kg	97	J
	Unknown Siloxane	14.24	17.2	ug/kg		J
	Unknown Siloxane	16.17	30.2	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s117.d
Lab Smp Id: 232428004 Client Smp ID: CAMO-09-6009
Inj Date : 06-JUL-2009 18:09
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428004|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	17.00960	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1586473	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1181144	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	649905	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	385928	48.5480	58.5
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1557509	49.7760	60.0
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	607885	50.6433	61.0

ION RATIO REPORT

VOA REPORT

Data file: 6s117.d
Report Date: 07/07/2009 07:52
Lab. ID: 232428004 SampleType: SAMPLE
Injection Date: 06-JUL-2009 18:09
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232428004|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	18066	9.98	9.71	80-120	100	(T)
64	2829	9.98	9.71	2- 62	16	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	11155	11.62	11.41	80-120	100	(T)
43	5141	11.62	11.41	199-259	46	(QT)
100	1046584	11.63	11.41	11- 71	9382	(QT)
80 o-Xylene				CAS#: 95-47-6		
106	13523	13.86	13.80	80-120	100	(T)
91	45964	13.86	13.80	173-233	340	(QT)
82 Bromoform				CAS#: 75-25-2		
173	2834	14.36	14.06	80-120	100	(T)
175	38676	14.36	14.06	19- 79	1364	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	35871	13.86	14.16	80-120	100	(T)
120	12455	13.86	14.16	0- 58	35	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	670	14.23	14.53	80-120	100	(T)
75	2384	14.23	14.53	248-308	356	(QT)
77	3085	14.36	14.56	683-743	461	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s117.d
Lab Smp Id: 232428004 Client Smp ID: CAMO-09-6009
Inj Date : 06-JUL-2009 18:09
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428004|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	17.00960	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3263587	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3514574	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
1,4-Methanoazulene, decahydro-4,8,8-trim					CAS #: 475-20-7		
13.857	748589	11.4687993	13.8	97	NIST05.L	60018	75(L)

RT	AREA	CONCENTRATIONS ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	929571	14.2415475	17.2	0		0	75
Unknown Siloxane					CAS #:		
16.168	1762507	25.0742569	30.2	0		0	101

QC Flag Legend

L - Operator selected an alternate library search match.

Data File: /chem/VOA6.i/070609v6/6s117.d
Date : 06-JUL-2009 18:09
Client ID: CAMO-09-6009
Sample Info: |2324280041882743|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

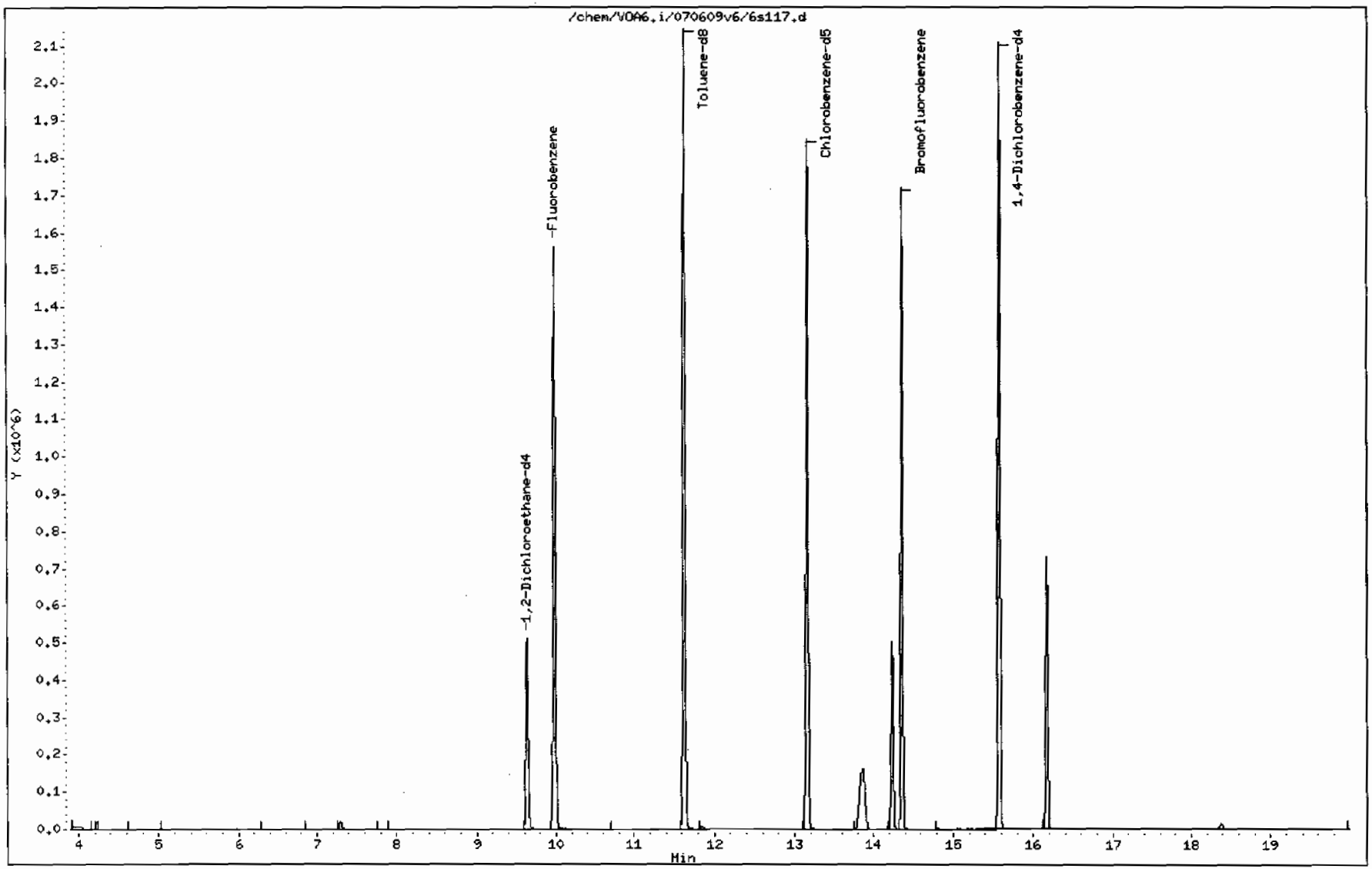

Data File: /chem/VOA6.i/070609v6/6s117.d

Date : 06-JUL-2009 18:09

Client ID: CAMO-09-6009

Instrument: VOA6.i

Sample Info: 1232428004188274311|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60018	97	C15H24	204
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60024	99	C15H24	204
Unknown			0	0		0

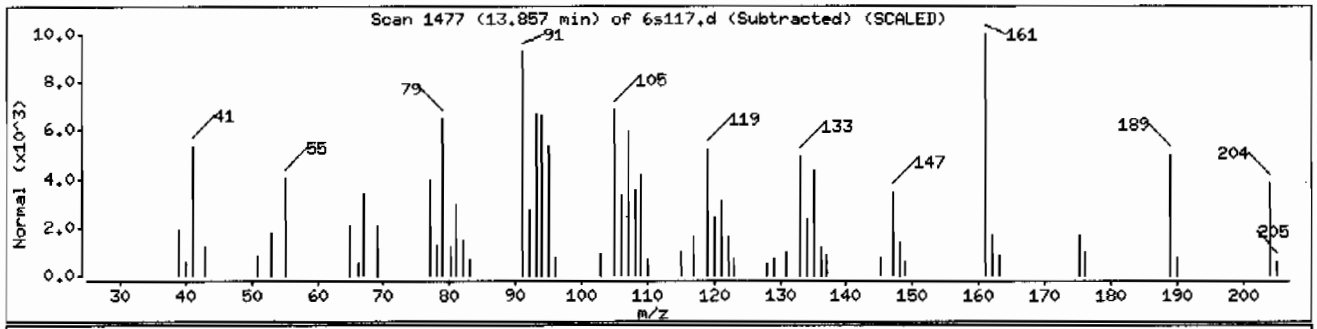

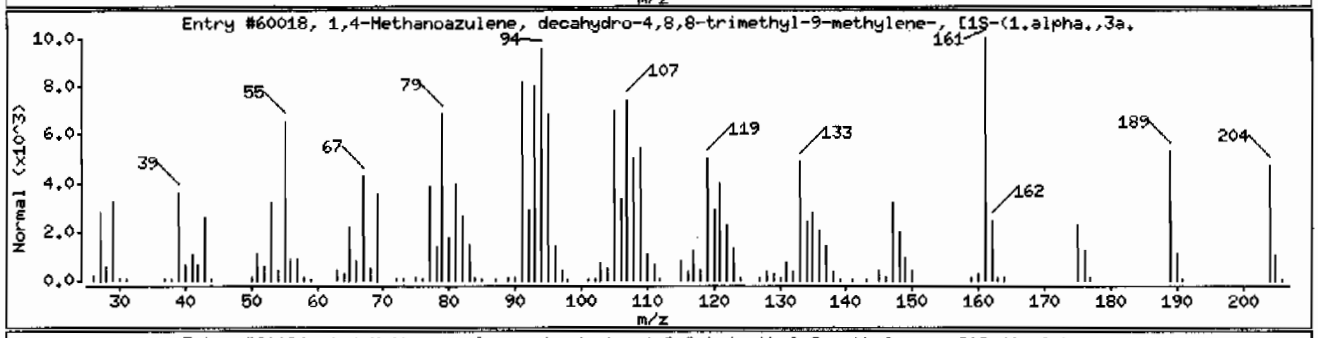

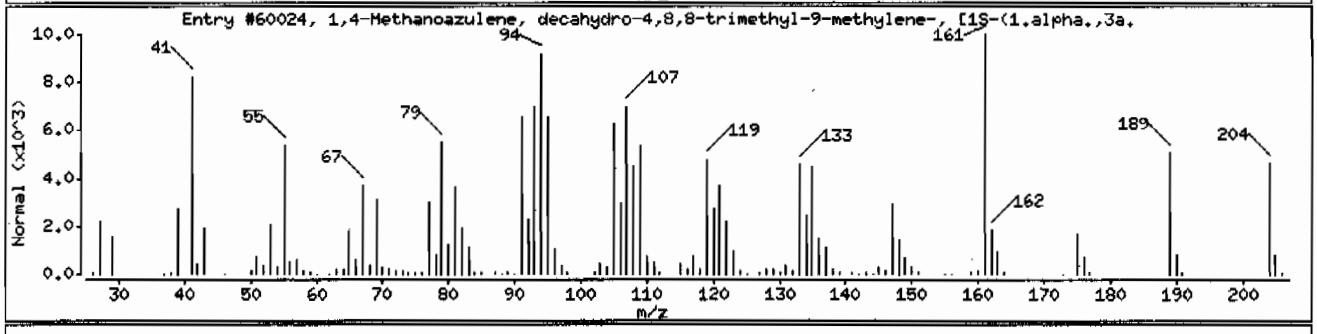

Data File: /chem/VOA6.i/070609v6/6s117.d

Date : 06-JUL-2009 18:09

Client ID: CAMO-09-6009

Instrument: VOA6.i

Sample Info: |2324280041882743111VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	87	C8H24O4Si4	296
7H-Dibenzo[b,g]carbazole, 7-methyl-	3557-49-1	NIST05.L	112705	59	C21H15N	281
5H-Naphtho[2,3-c]carbazole, 5-methyl-	100026-44-3	NIST05.L	112706	50	C21H15N	281

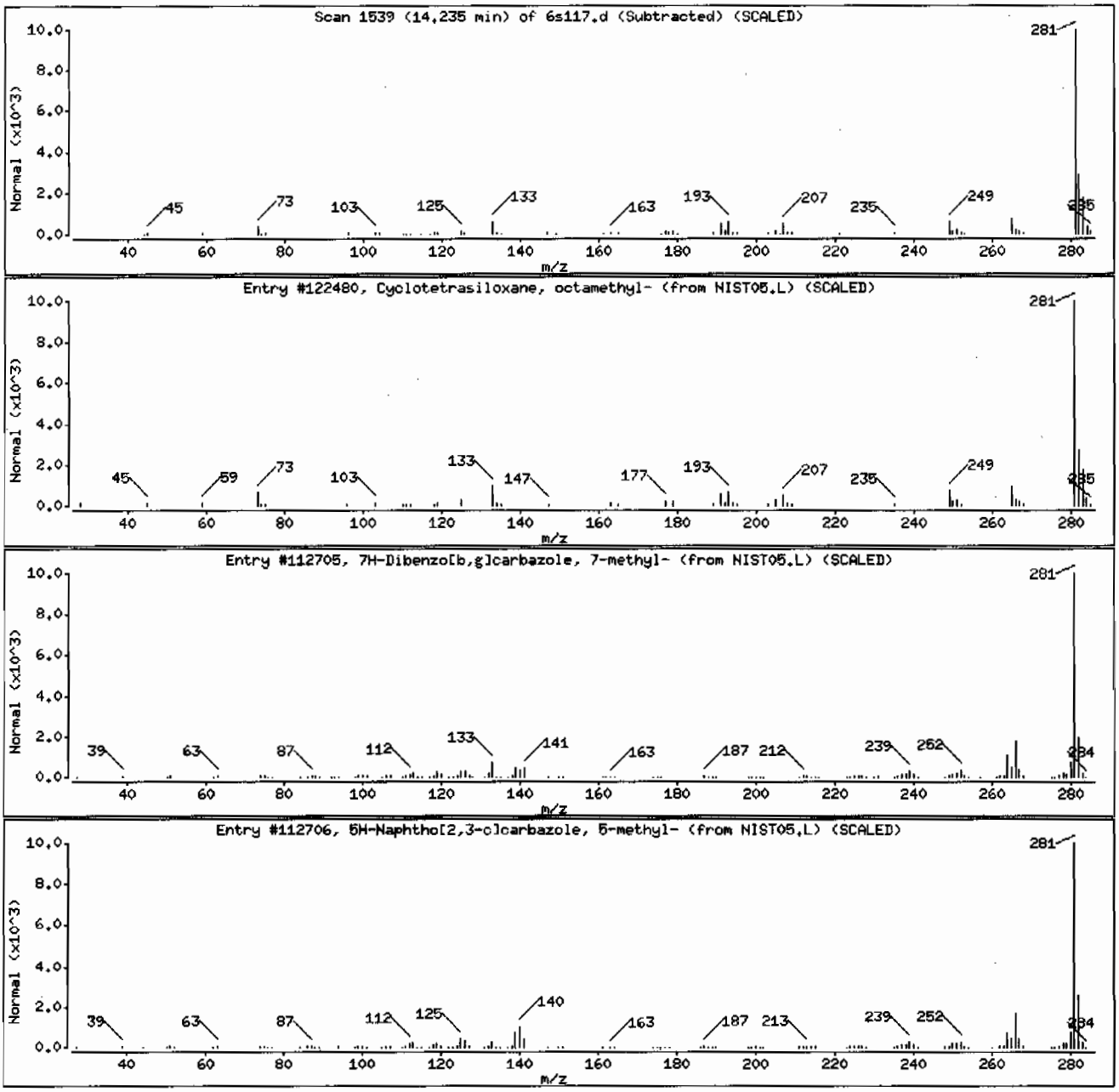

Data File: /chem/VOA6.i/070609v6/6s117.d

Date : 06-JUL-2009 18:09

Client ID: CAMO-09-6009 Instrument: VOA6.i

Sample Info: |2324280041882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Butanamide, 2,2,3,3,4,4,4-heptafluoro-N-	55471-01-7	NIST05.L	184036	59	C18H26F7NO3Si2	493
Benzaldehyde, 2,4-bis(trimethylsiloxy)-	33617-38-8	NIST05.L	112902	56	C13H22O3Si2	282
4-Hydroxymandelic acid, ethyl ester, di-	1000071-53-3	NIST05.L	147514	50	C16H28O4Si2	340

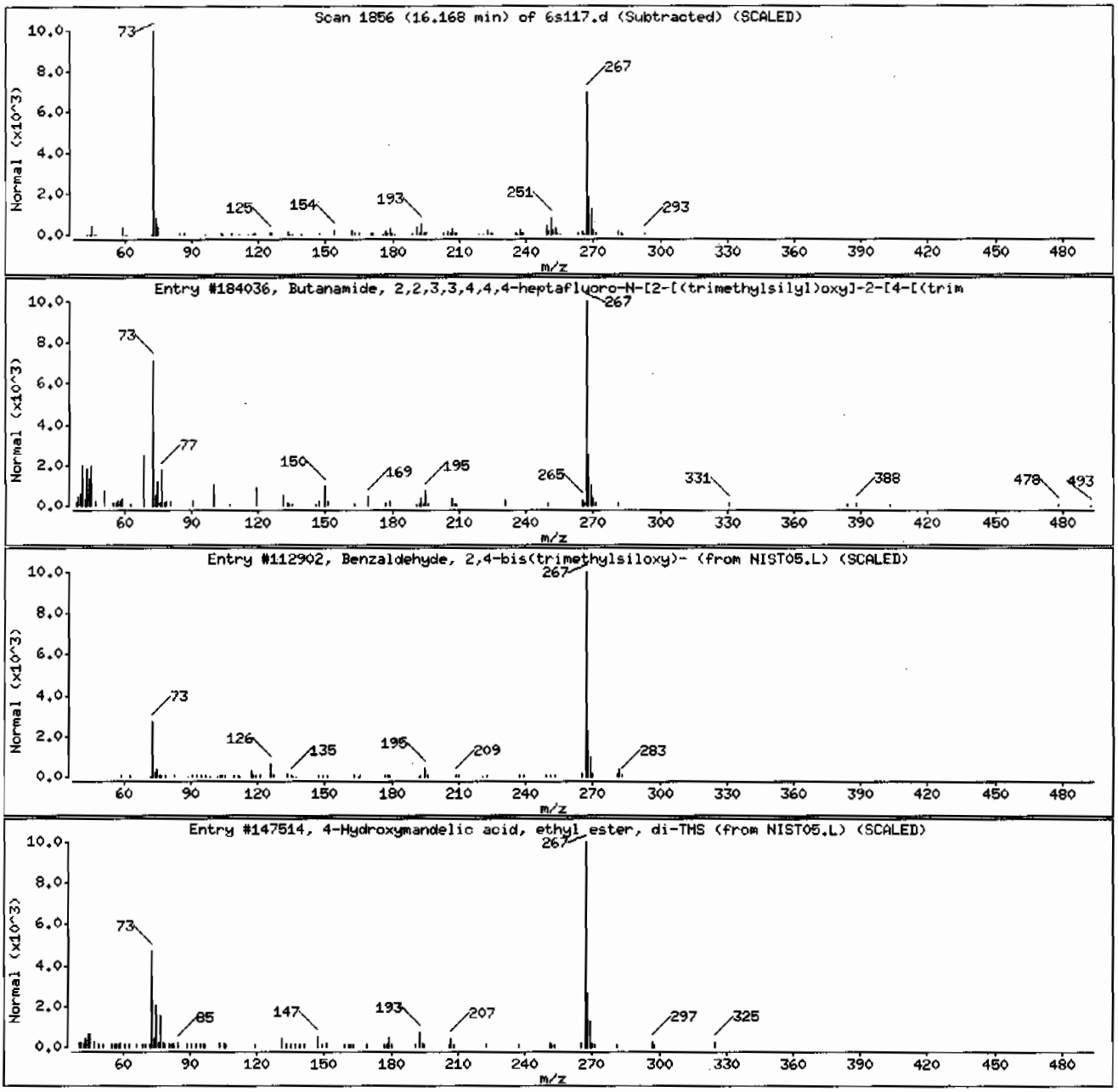

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:00	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s121.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.04	ug/kg	0.354	1.04
74-87-3	Chloromethane	U	1.04	ug/kg	0.312	1.04
75-01-4	Vinyl chloride	U	1.04	ug/kg	0.312	1.04
74-83-9	Bromomethane	U	1.04	ug/kg	0.312	1.04
75-00-3	Chloroethane	U	1.04	ug/kg	0.312	1.04
75-69-4	Trichlorofluoromethane	U	1.04	ug/kg	0.594	1.04
67-64-1	Acetone	U	5.21	ug/kg	1.73	5.21
75-35-4	1,1-Dichloroethylene	U	1.04	ug/kg	0.312	1.04
74-88-4	Iodomethane	U	5.21	ug/kg	1.67	5.21
75-09-2	Methylene chloride	U	5.21	ug/kg	2.08	5.21
75-15-0	Carbon disulfide	U	5.21	ug/kg	1.30	5.21
156-60-5	trans-1,2-Dichloroethylene	U	1.04	ug/kg	0.312	1.04
75-34-3	1,1-Dichloroethane	U	1.04	ug/kg	0.312	1.04
78-93-3	2-Butanone	U	5.21	ug/kg	1.56	5.21
156-59-2	cis-1,2-Dichloroethylene	U	1.04	ug/kg	0.312	1.04
594-20-7	2,2-Dichloropropane	U	1.04	ug/kg	0.312	1.04
67-66-3	Chloroform	U	1.04	ug/kg	0.312	1.04
74-97-5	Bromochloromethane	U	1.04	ug/kg	0.344	1.04
71-55-6	1,1,1-Trichloroethane	U	1.04	ug/kg	0.312	1.04
563-58-6	1,1-Dichloropropene	U	1.04	ug/kg	0.312	1.04
56-23-5	Carbon tetrachloride	U	1.04	ug/kg	0.312	1.04
107-06-2	1,2-Dichloroethane	U	1.04	ug/kg	0.312	1.04
71-43-2	Benzene	U	1.04	ug/kg	0.312	1.04
79-01-6	Trichloroethylene	U	1.04	ug/kg	0.344	1.04
78-87-5	1,2-Dichloropropane	U	1.04	ug/kg	0.312	1.04
75-27-4	Bromodichloromethane	U	1.04	ug/kg	0.312	1.04
74-95-3	Dibromomethane	U	1.04	ug/kg	0.312	1.04
108-10-1	4-Methyl-2-pentanone	U	5.21	ug/kg	1.30	5.21
10061-01-5	cis-1,3-Dichloropropylene	U	1.04	ug/kg	0.312	1.04
108-88-3	Toluene	U	1.04	ug/kg	0.312	1.04
10061-02-6	trans-1,3-Dichloropropylene	U	1.04	ug/kg	0.312	1.04
79-00-5	1,1,2-Trichloroethane	U	1.04	ug/kg	0.312	1.04
591-78-6	2-Hexanone	U	5.21	ug/kg	1.56	5.21
142-28-9	1,3-Dichloropropane	U	1.04	ug/kg	0.312	1.04
127-18-4	Tetrachloroethylene	U	1.04	ug/kg	0.312	1.04
124-48-1	Dibromochloromethane	U	1.04	ug/kg	0.312	1.04
106-93-4	1,2-Dibromoethane	U	1.04	ug/kg	0.312	1.04
108-90-7	Chlorobenzene	U	1.04	ug/kg	0.312	1.04

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428011**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**4**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6035**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882743**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 20:00**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 13:26**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6s121.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.04	ug/kg	0.312	1.04
179601-23-1	m,p-Xylenes	U	2.08	ug/kg	0.312	2.08
95-47-6	o-Xylene	U	1.04	ug/kg	0.312	1.04
100-42-5	Styrene	U	1.04	ug/kg	0.312	1.04
75-25-2	Bromoform	U	1.04	ug/kg	0.312	1.04
79-34-5	1,1,2,2-Tetrachloroethane	U	1.04	ug/kg	0.312	1.04
96-18-4	1,2,3-Trichloropropane	U	1.04	ug/kg	0.312	1.04
108-86-1	Bromobenzene	U	1.04	ug/kg	0.312	1.04
103-65-1	n-Propylbenzene	U	1.04	ug/kg	0.312	1.04
95-49-8	2-Chlorotoluene	U	1.04	ug/kg	0.312	1.04
98-82-8	Isopropylbenzene	U	1.04	ug/kg	0.312	1.04
108-67-8	1,3,5-Trimethylbenzene	U	1.04	ug/kg	0.312	1.04
106-43-4	4-Chlorotoluene	U	1.04	ug/kg	0.312	1.04
98-06-6	tert-Butylbenzene	U	1.04	ug/kg	0.312	1.04
95-63-6	1,2,4-Trimethylbenzene	U	1.04	ug/kg	0.312	1.04
135-98-8	sec-Butylbenzene	U	1.04	ug/kg	0.312	1.04
99-87-6	4-Isopropyltoluene	U	1.04	ug/kg	0.312	1.04
541-73-1	1,3-Dichlorobenzene	U	1.04	ug/kg	0.312	1.04
106-46-7	1,4-Dichlorobenzene	U	1.04	ug/kg	0.312	1.04
104-51-8	n-Butylbenzene	U	1.04	ug/kg	0.312	1.04
96-12-8	1,2-Dibromo-3-chloropropane	U	1.04	ug/kg	0.312	1.04
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.21	ug/kg	1.67	5.21
630-20-6	1,1,1,2-Tetrachloroethane	U	1.04	ug/kg	0.312	1.04
95-50-1	1,2-Dichlorobenzene	U	1.04	ug/kg	0.312	1.04

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	412	ug/kg		J
	Unknown Siloxane	16.17	192	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s121.d
Lab Smp Id: 232428011 Client Smp ID: CAMO-09-6035
Inj Date : 06-JUL-2009 20:00
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428011|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 ke100587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	3.98760	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1506069	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1133846	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	628072	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	373171	49.4494	51.5
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1478474	49.2211	51.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	597440	51.5034	53.6

ION RATIO REPORT

VOA REPORT

Data file: 6s121.d
Report Date: 07/07/2009 07:53
Lab. ID: 232428011 SampleType: SAMPLE
Injection Date: 06-JUL-2009 20:00
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232428011|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	17323	9.98	9.71	80-120	100	(T)
64	2977	9.97	9.71	2- 62	17	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	10544	11.63	11.41	80-120	100	(T)
43	4542	11.62	11.41	199-259	43	(QT)
100	992489	11.63	11.41	11- 71	9412	(QT)
82 Bromoform				CAS#: 75-25-2		
173	1578	14.23	14.06	80-120	100	(T)
175	17765	14.23	14.06	19- 79	1125	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	24640	14.24	14.16	80-120	100	(T)
120	12375	14.23	14.16	0- 58	50	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	31620	14.23	14.53	80-120	100	(T)
75	65759	14.23	14.53	248-308	208	(QT)
77	3431	14.23	14.56	683-743	11	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s121.d
Lab Smp Id: 232428011 Client Smp ID: CAMO-09-6035
Inj Date : 06-JUL-2009 20:00
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428011|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	3.98760	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3131200	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3382154	50.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	24795448	395.941519	412	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	****	==========	==========	****	=======	==========	======
Unknown Siloxane					CAS #:		
16.168	12489553	184.639020	192	0		0	101

Data File: /chem/VOA6.i/070609v6/6s121.d

Date : 06-JUL-2009 20:00

Client ID: CAMO-09-6035

Sample Info: |2324280111882743|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1

Column diameter: 0.25

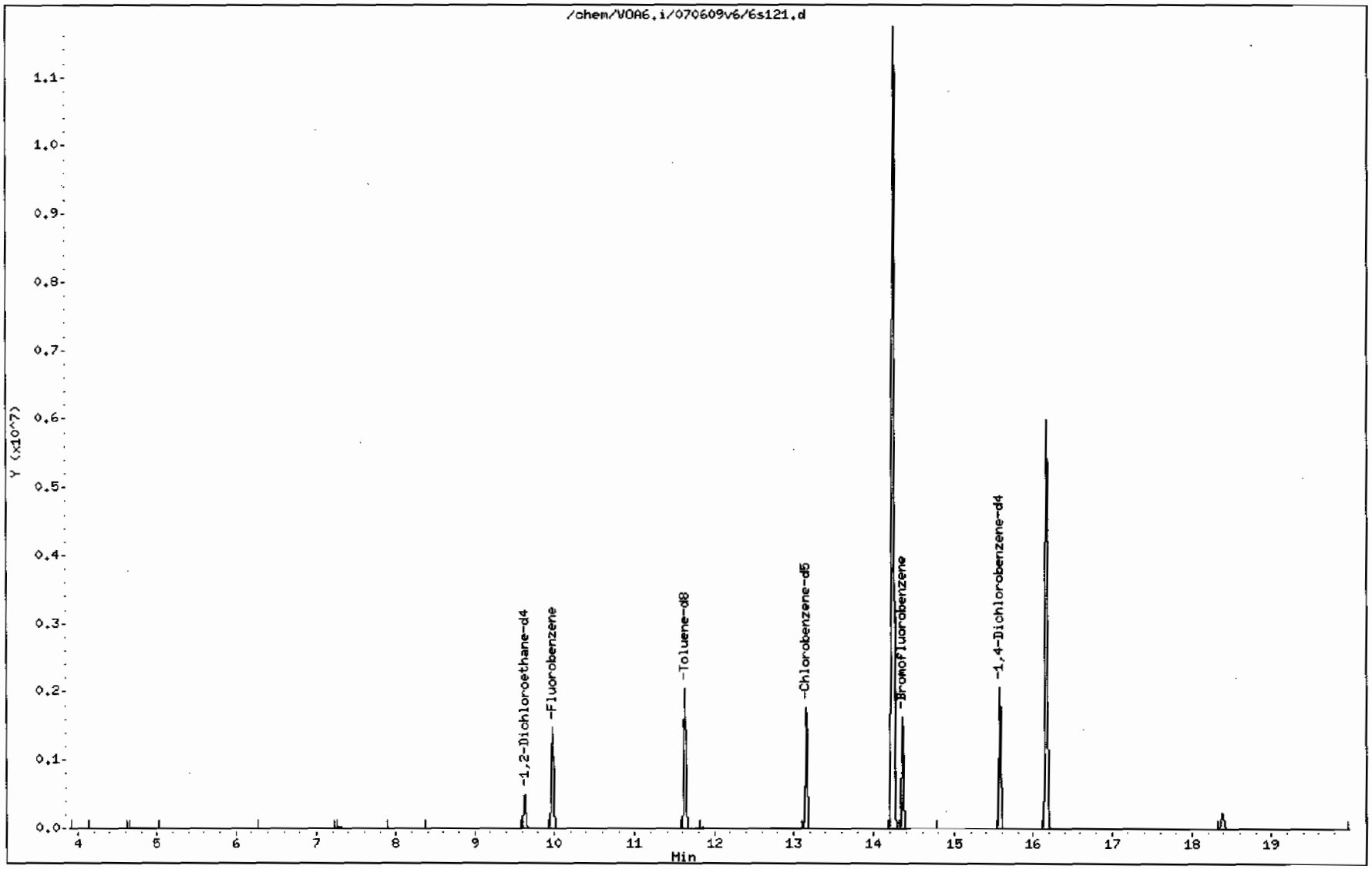

Data File: /chem/VOA6.i/070609v6/6s121.d

Date : 06-JUL-2009 20:00

Client ID: CAMO-09-6035

Instrument: VOA6.i

Sample Info: |2324280111882743111VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	90	C8H24O4Si4	296
7H-Dibenzo[b,g]carbazole, 7-methyl-	3557-49-1	NIST05.L	112705	59	C21H15N	281

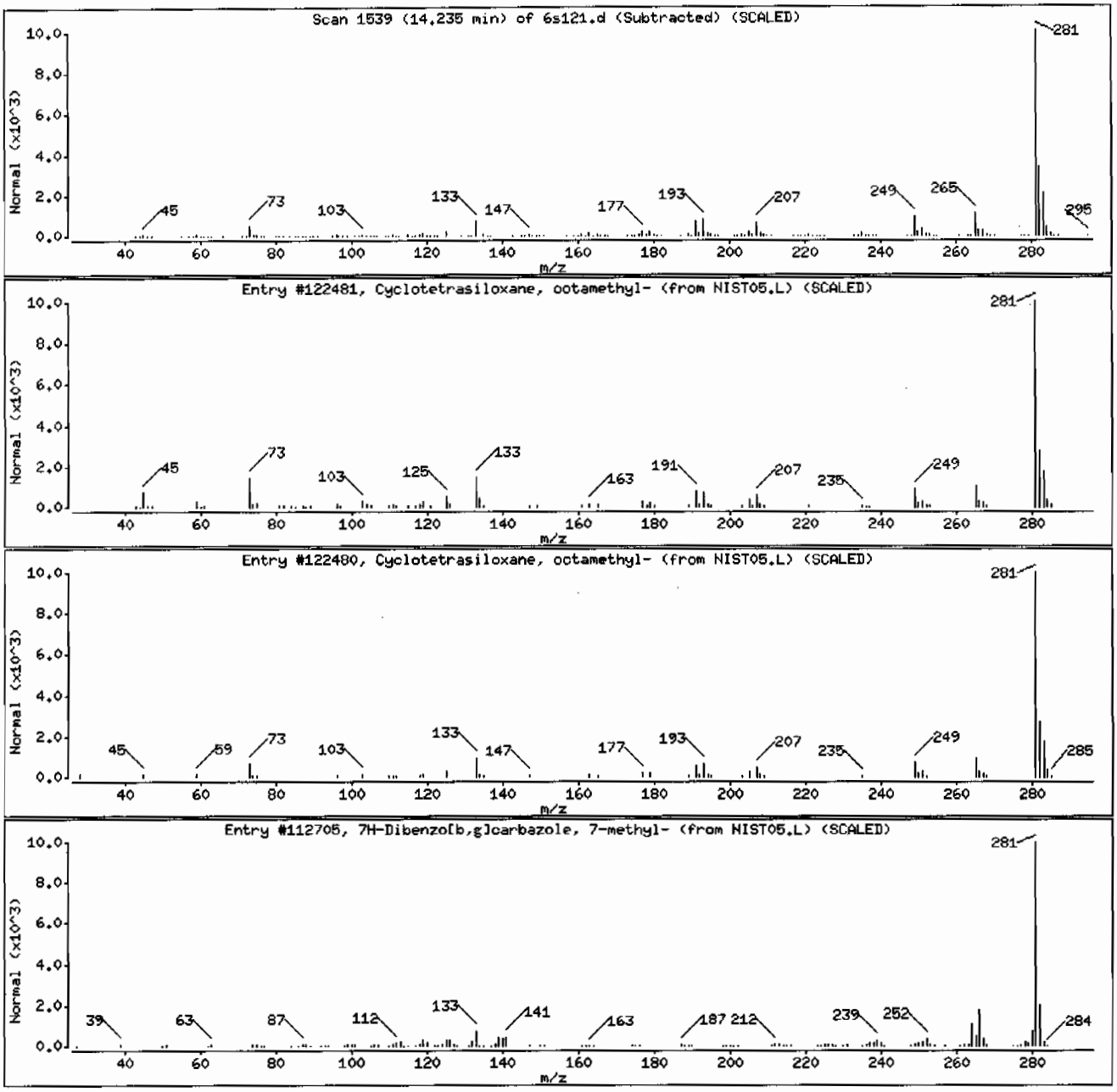

Data File: /chem/VOA6.i/070609v6/6s121.d

Date : 06-JUL-2009 20:00

Client ID: CAMO-09-6035 Instrument: VOA6.i

Sample Info: |2324280111882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	72	C18H3404Si3	398
Benzaldehyde, 2,4-bis(trimethylsiloxy)-	33617-38-8	NIST05.L	112902	64	C13H2203Si2	282
Benzaldehyde, 2,5-bis[(trimethylsilyl)ox	56114-69-3	NIST05.L	112903	56	C13H2203Si2	282

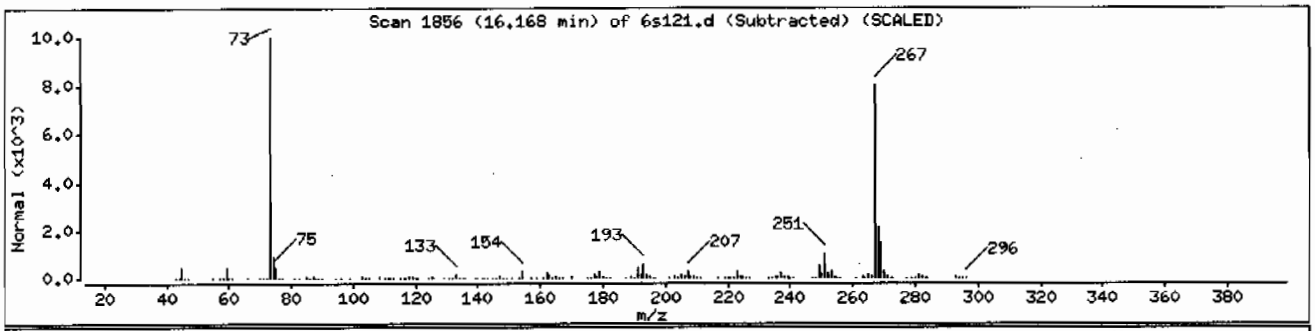

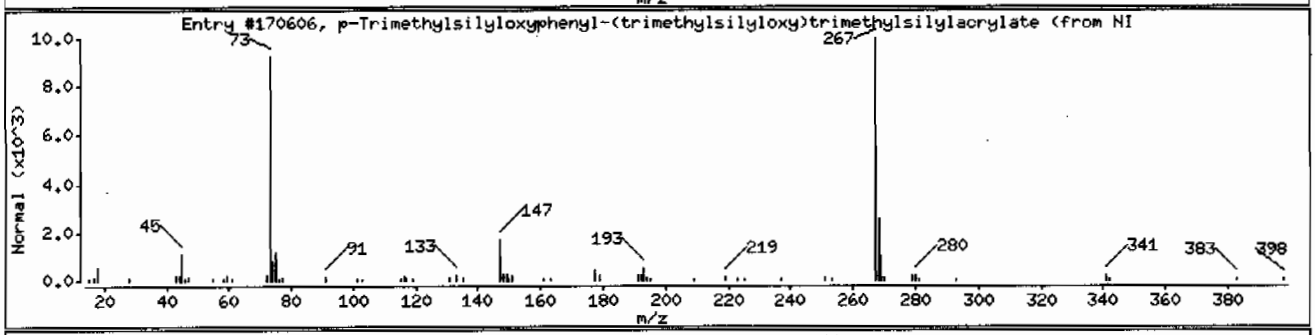

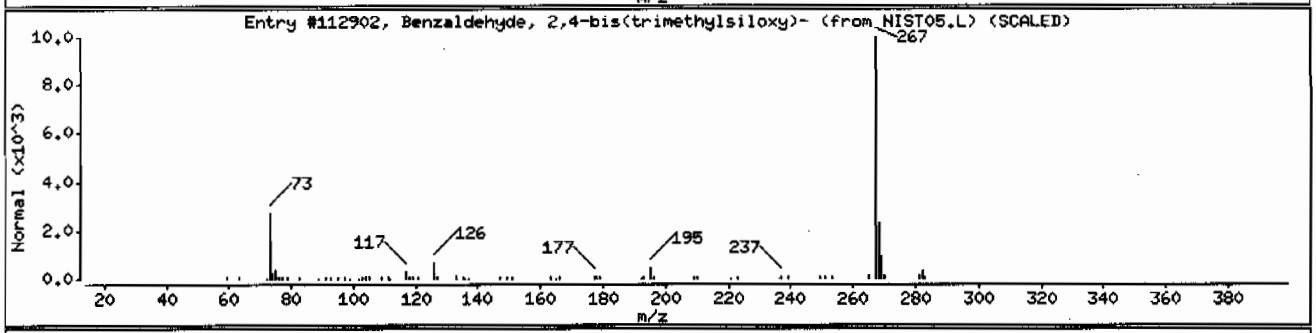

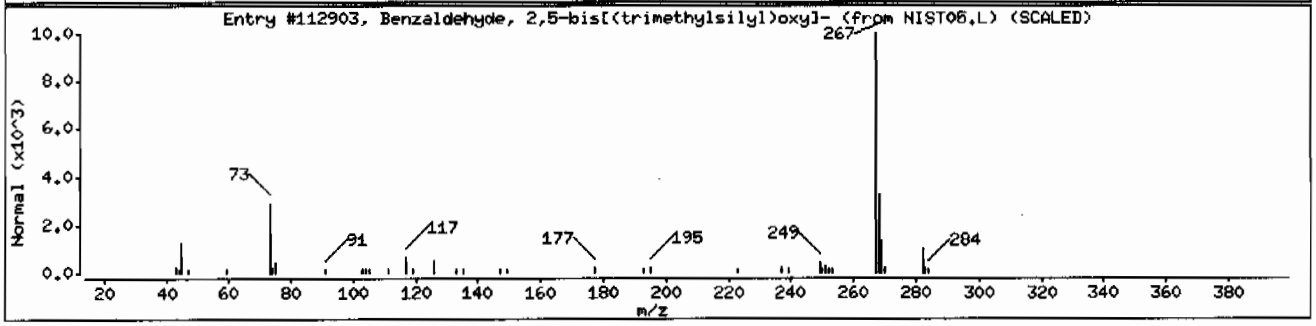

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:28	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:27	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s122.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.10	ug/kg	0.374	1.10
74-87-3	Chloromethane	U	1.10	ug/kg	0.330	1.10
75-01-4	Vinyl chloride	U	1.10	ug/kg	0.330	1.10
74-83-9	Bromomethane	U	1.10	ug/kg	0.330	1.10
75-00-3	Chloroethane	U	1.10	ug/kg	0.330	1.10
75-69-4	Trichlorofluoromethane	U	1.10	ug/kg	0.627	1.10
67-64-1	Acetone	U	5.50	ug/kg	1.83	5.50
75-35-4	1,1-Dichloroethylene	U	1.10	ug/kg	0.330	1.10
74-88-4	Iodomethane	U	5.50	ug/kg	1.76	5.50
75-09-2	Methylene chloride	U	5.50	ug/kg	2.20	5.50
75-15-0	Carbon disulfide	U	5.50	ug/kg	1.38	5.50
156-60-5	trans-1,2-Dichloroethylene	U	1.10	ug/kg	0.330	1.10
75-34-3	1,1-Dichloroethane	U	1.10	ug/kg	0.330	1.10
78-93-3	2-Butanone	U	5.50	ug/kg	1.65	5.50
156-59-2	cis-1,2-Dichloroethylene	U	1.10	ug/kg	0.330	1.10
594-20-7	2,2-Dichloropropane	U	1.10	ug/kg	0.330	1.10
67-66-3	Chloroform	U	1.10	ug/kg	0.330	1.10
74-97-5	Bromochloromethane	U	1.10	ug/kg	0.363	1.10
71-55-6	1,1,1-Trichloroethane	U	1.10	ug/kg	0.330	1.10
563-58-6	1,1-Dichloropropene	U	1.10	ug/kg	0.330	1.10
56-23-5	Carbon tetrachloride	U	1.10	ug/kg	0.330	1.10
107-06-2	1,2-Dichloroethane	U	1.10	ug/kg	0.330	1.10
71-43-2	Benzene	U	1.10	ug/kg	0.330	1.10
79-01-6	Trichloroethylene	U	1.10	ug/kg	0.363	1.10
78-87-5	1,2-Dichloropropane	U	1.10	ug/kg	0.330	1.10
75-27-4	Bromodichloromethane	U	1.10	ug/kg	0.330	1.10
74-95-3	Dibromomethane	U	1.10	ug/kg	0.330	1.10
108-10-1	4-Methyl-2-pentanone	U	5.50	ug/kg	1.38	5.50
10061-01-5	cis-1,3-Dichloropropylene	U	1.10	ug/kg	0.330	1.10
108-88-3	Toluene	J	0.586	ug/kg	0.330	1.10
10061-02-6	trans-1,3-Dichloropropylene	U	1.10	ug/kg	0.330	1.10
79-00-5	1,1,2-Trichloroethane	U	1.10	ug/kg	0.330	1.10
591-78-6	2-Hexanone	U	5.50	ug/kg	1.65	5.50
142-28-9	1,3-Dichloropropane	U	1.10	ug/kg	0.330	1.10
127-18-4	Tetrachloroethylene	U	1.10	ug/kg	0.330	1.10
124-48-1	Dibromochloromethane	U	1.10	ug/kg	0.330	1.10
106-93-4	1,2-Dibromoethane	U	1.10	ug/kg	0.330	1.10
108-90-7	Chlorobenzene	U	1.10	ug/kg	0.330	1.10

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:28	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:27	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s122.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.10	ug/kg	0.330	1.10
179601-23-1	m,p-Xylenes	U	2.20	ug/kg	0.330	2.20
95-47-6	o-Xylene	U	1.10	ug/kg	0.330	1.10
100-42-5	Styrene	U	1.10	ug/kg	0.330	1.10
75-25-2	Bromoform	U	1.10	ug/kg	0.330	1.10
79-34-5	1,1,2,2-Tetrachloroethane	U	1.10	ug/kg	0.330	1.10
96-18-4	1,2,3-Trichloropropane	U	1.10	ug/kg	0.330	1.10
108-86-1	Bromobenzene	U	1.10	ug/kg	0.330	1.10
103-65-1	n-Propylbenzene	U	1.10	ug/kg	0.330	1.10
95-49-8	2-Chlorotoluene	U	1.10	ug/kg	0.330	1.10
98-82-8	Isopropylbenzene	U	1.10	ug/kg	0.330	1.10
108-67-8	1,3,5-Trimethylbenzene	U	1.10	ug/kg	0.330	1.10
106-43-4	4-Chlorotoluene	U	1.10	ug/kg	0.330	1.10
98-06-6	tert-Butylbenzene	U	1.10	ug/kg	0.330	1.10
95-63-6	1,2,4-Trimethylbenzene	U	1.10	ug/kg	0.330	1.10
135-98-8	sec-Butylbenzene	U	1.10	ug/kg	0.330	1.10
99-87-6	4-Isopropyltoluene	U	1.10	ug/kg	0.330	1.10
541-73-1	1,3-Dichlorobenzene	U	1.10	ug/kg	0.330	1.10
106-46-7	1,4-Dichlorobenzene	U	1.10	ug/kg	0.330	1.10
104-51-8	n-Butylbenzene	U	1.10	ug/kg	0.330	1.10
96-12-8	1,2-Dibromo-3-chloropropane	U	1.10	ug/kg	0.330	1.10
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.50	ug/kg	1.76	5.50
630-20-6	1,1,1,2-Tetrachloroethane	U	1.10	ug/kg	0.330	1.10
95-50-1	1,2-Dichlorobenzene	U	1.10	ug/kg	0.330	1.10

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	35.8	ug/kg		J
	Unknown Siloxane	16.17	12	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s122.d
Lab Smp Id: 232428013 Client Smp ID: CAMO-09-6039
Inj Date : 06-JUL-2009 20:28
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428013|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	9.12370	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1520617	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1123255	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	589957	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	373647	49.0387	54.0
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1487587	49.9915	55.0
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	566433	51.9851	57.2
65 Toluene	92	11.699	11.699	(0.889)	9821	0.53247	0.58(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 6s122.d
Report Date: 07/07/2009 07:53
Lab. ID: 232428013 SampleType: SAMPLE
Injection Date: 06-JUL-2009 20:28
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232428013|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	17189	9.97	9.71	80-120	100	(T)
64	2804	9.98	9.71	2- 62	16	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	10507	11.63	11.41	80-120	100	(T)
43	4682	11.63	11.41	199-259	45	(QT)
100	999458	11.63	11.41	11- 71	9511	(QT)
65 Toluene				CAS#: 108-88-3		
92	9821	11.70	11.70	80-120	100	( )
91	16409	11.69	11.70	137-197	167	( )
82 Bromoform				CAS#: 75-25-2		
173	2517	14.36	14.06	80-120	100	(T)
175	36391	14.36	14.06	19- 79	1445	(QT)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	2128	14.23	14.53	80-120	100	(T)
75	5328	14.23	14.53	248-308	250	(T)
77	8421	14.17	14.56	683-743	396	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s122.d
Lab Smp Id: 232428013 Client Smp ID: CAMO-09-6039
Inj Date : 06-JUL-2009 20:28
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428013|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	9.12370	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3108015	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3194487	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	2024173	32.5637539	35.8	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
16.174	696442	10.9006818	12.0	0		0	101

Data File: /chem/VOA6.i/070609v6/6s122.d

Date : 06-JUL-2009 20:28

Client ID: CAMO-09-6039

Sample Info: |2324280131882743|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1

Column diameter: 0.25

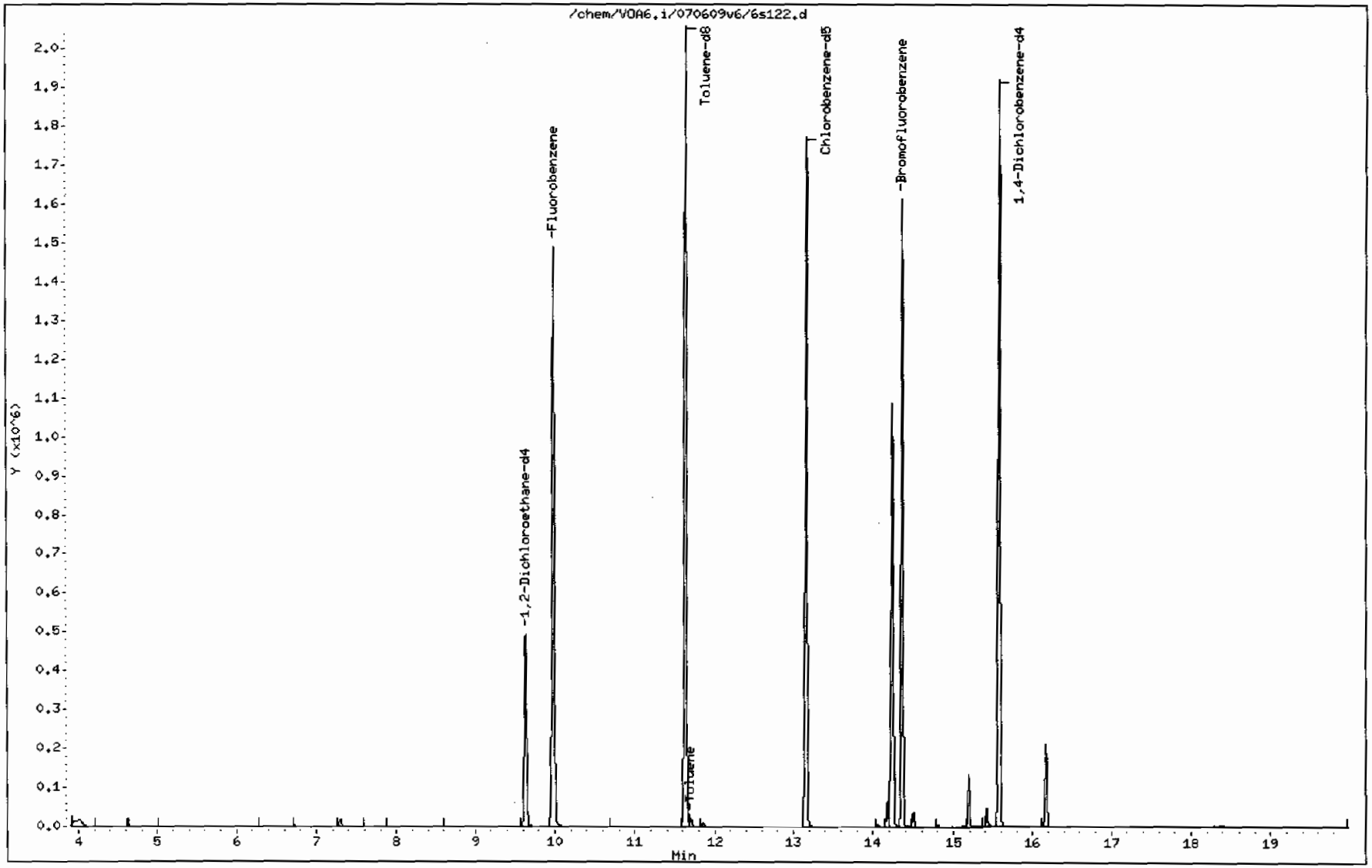

Data File: /chem/VOA6.i/070609v6/6s122.d

Date : 06-JUL-2009 20:28

Client ID: CAMO-09-6039

Instrument: VOA6.i

Sample Info: |2324280131882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

65 Toluene

Concentration: 0.58 ug/Kg

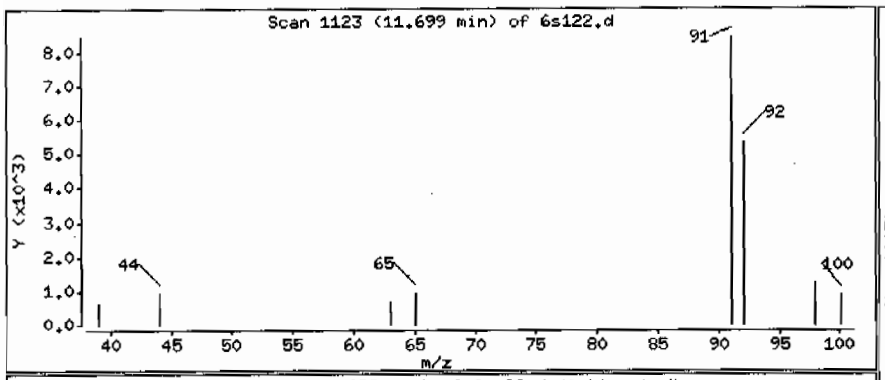

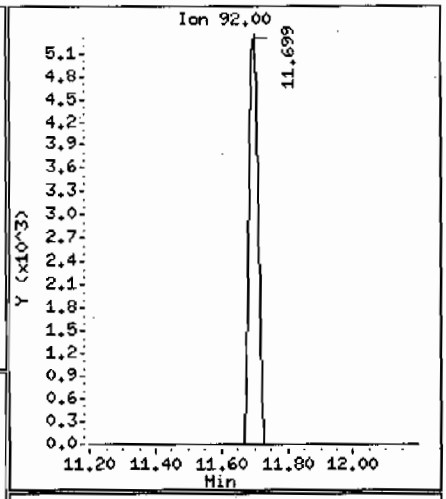

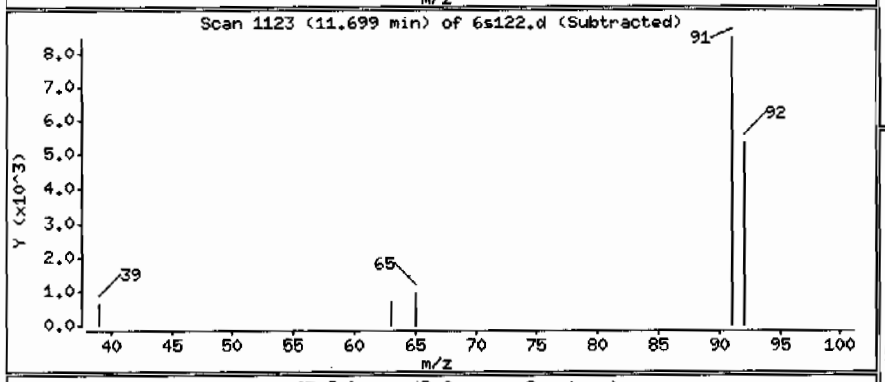

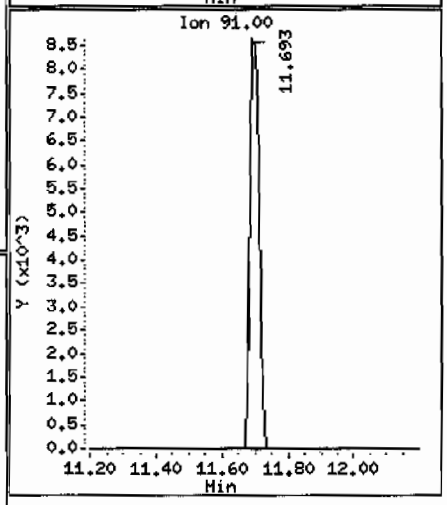

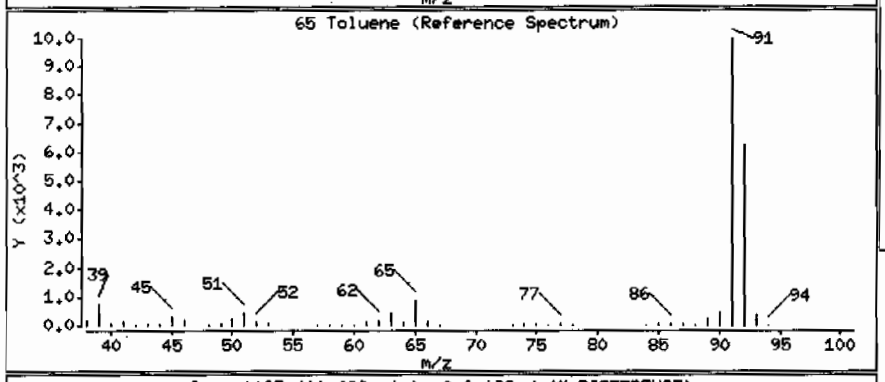

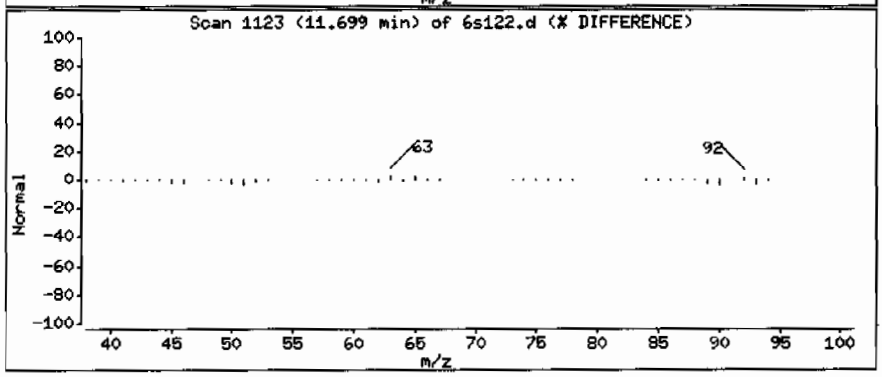

Data File: /chem/VOA6.i/070609v6/6s122.d

Date : 06-JUL-2009 20:28

Client ID: CAMO-09-6039

Instrument: VOA6.i

Sample Info: |2324280131882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122479	78	C8H24O4Si4	296
7H-Dibenzo[b,g]carbazole, 7-methyl-	3557-49-1	NIST05.L	112705	59	C21H15N	281

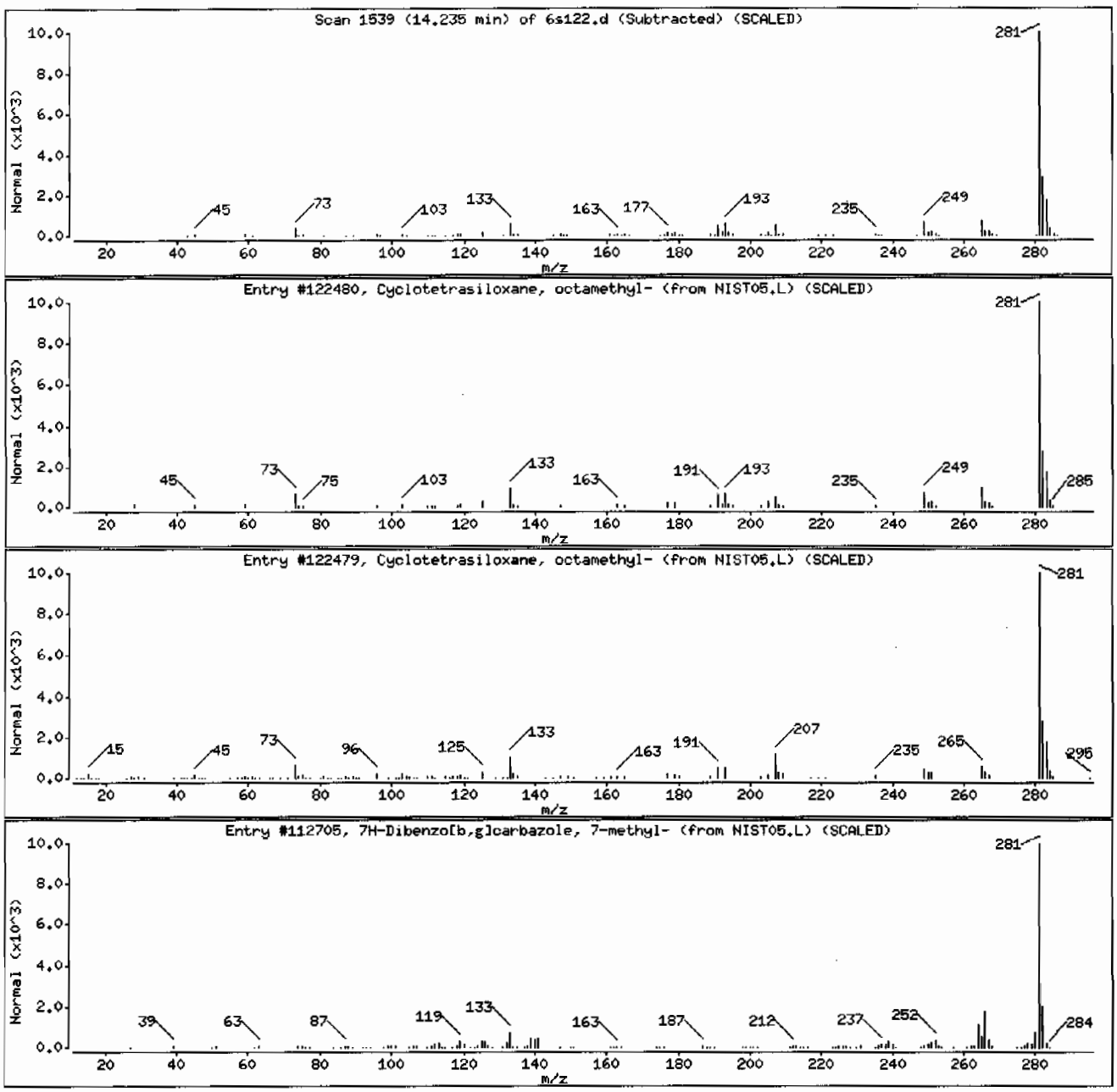

Data File: /chem/VOA6.i/070609v6/6s122.d

Date : 06-JUL-2009 20:28

Client ID: CAHO-09-6039 Instrument: VOA6.i

Sample Info: |2324280131882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	56	C18H34O4Si3	398
4-Hydroxymandelic acid, ethyl ester, di-	1000071-53-3	NIST05.L	147514	56	C16H28O4Si2	340
Benzaldehyde, 2,4-bis(trimethylsiloxy)-	33617-38-8	NIST05.L	112902	56	C13H22O3Si2	282

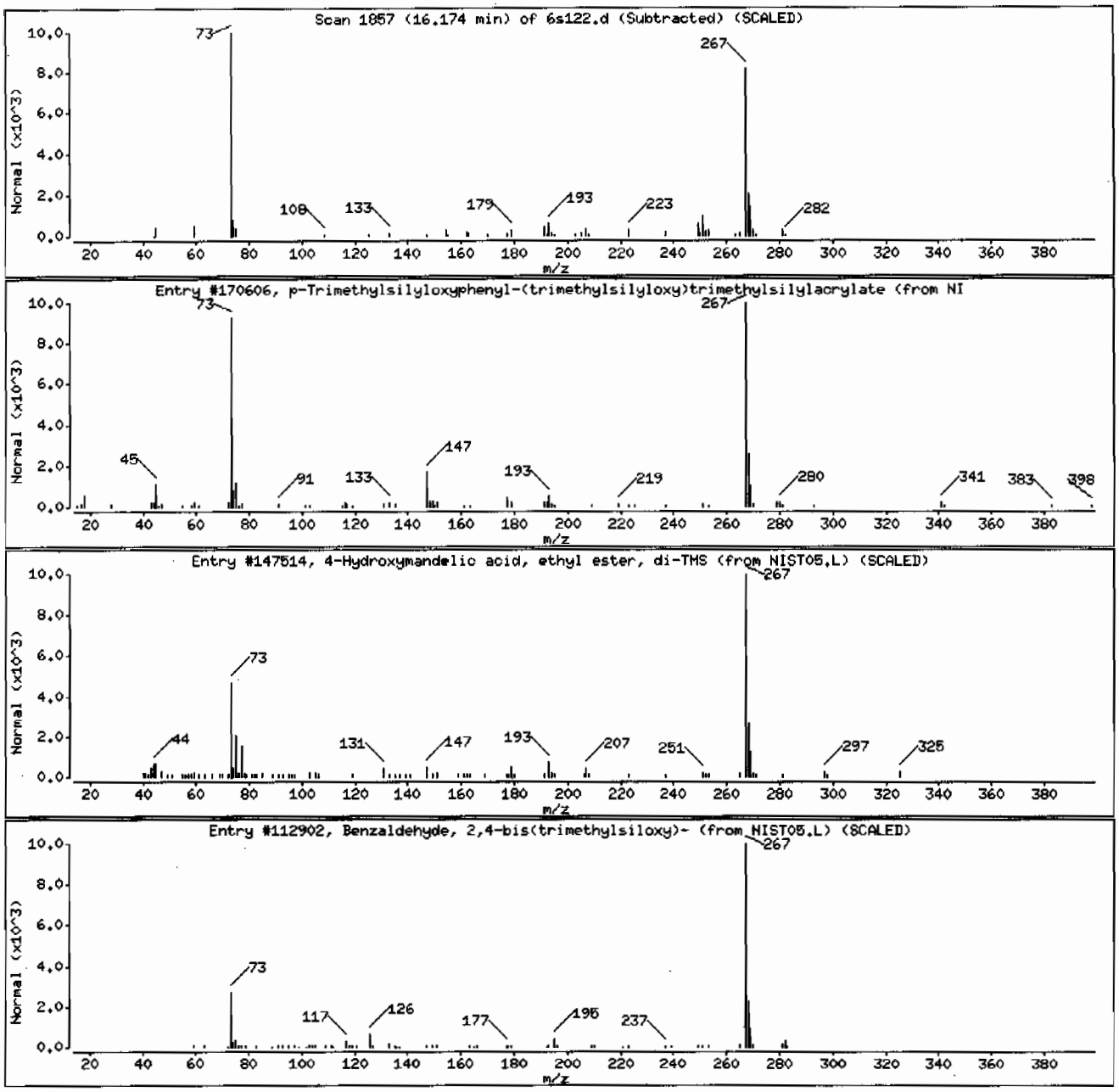

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428008	**Date Received:**	06/26/2009 08:40	**%Moisture:**	5.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6041	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 19:32	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:25	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s120.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.359	1.05
74-87-3	Chloromethane	U	1.05	ug/kg	0.316	1.05
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.316	1.05
74-83-9	Bromomethane	U	1.05	ug/kg	0.316	1.05
75-00-3	Chloroethane	U	1.05	ug/kg	0.316	1.05
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.601	1.05
67-64-1	Acetone	U	5.27	ug/kg	1.75	5.27
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.316	1.05
74-88-4	Iodomethane	U	5.27	ug/kg	1.69	5.27
75-09-2	Methylene chloride	U	5.27	ug/kg	2.11	5.27
75-15-0	Carbon disulfide	U	5.27	ug/kg	1.32	5.27
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.316	1.05
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.316	1.05
78-93-3	2-Butanone	U	5.27	ug/kg	1.58	5.27
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.316	1.05
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.316	1.05
67-66-3	Chloroform	U	1.05	ug/kg	0.316	1.05
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.348	1.05
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.316	1.05
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.316	1.05
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.316	1.05
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.316	1.05
71-43-2	Benzene	U	1.05	ug/kg	0.316	1.05
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.348	1.05
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.316	1.05
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.316	1.05
74-95-3	Dibromomethane	U	1.05	ug/kg	0.316	1.05
108-10-1	4-Methyl-2-pentanone	U	5.27	ug/kg	1.32	5.27
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.316	1.05
108-88-3	Toluene	J	0.347	ug/kg	0.316	1.05
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.316	1.05
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.316	1.05
591-78-6	2-Hexanone	U	5.27	ug/kg	1.58	5.27
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.316	1.05
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.316	1.05
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.316	1.05
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.316	1.05
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.316	1.05

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428008	**Date Received:**	06/26/2009 08:40	**%Moisture:**	5.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6041	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 19:32	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:25	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s120.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.316	1.05
179601-23-1	m,p-Xylenes	U	2.11	ug/kg	0.316	2.11
95-47-6	o-Xylene	U	1.05	ug/kg	0.316	1.05
100-42-5	Styrene	U	1.05	ug/kg	0.316	1.05
75-25-2	Bromoform	U	1.05	ug/kg	0.316	1.05
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.316	1.05
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.316	1.05
108-86-1	Bromobenzene	U	1.05	ug/kg	0.316	1.05
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.316	1.05
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.316	1.05
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.316	1.05
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.316	1.05
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.316	1.05
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.316	1.05
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.316	1.05
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.316	1.05
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.316	1.05
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.316	1.05
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.316	1.05
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.316	1.05
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.316	1.05
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.27	ug/kg	1.69	5.27
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.316	1.05
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.316	1.05

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	40.4	ug/kg		J
	Unknown Siloxane	16.17	11	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s120.d
Lab Smp Id: 232428008 Client Smp ID: CAMO-09-6041
Inj Date : 06-JUL-2009 19:32
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428008|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	5.19580	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1534744	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1112822	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	541270	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	378096	49.1659	51.9
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1490789	50.5688	53.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	550961	55.1135	58.1
65 Toluene	92	11.699	11.699	(0.889)	6019	0.32939	0.35(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 6s120.d
Report Date: 07/07/2009 07:53
Lab. ID: 232428008 SampleType: SAMPLE
Injection Date: 06-JUL-2009 19:32
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232428008|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane			CAS#: 107-06-2			
62	17216	9.97	9.71	80-120	100	(T)
64	3017	9.98	9.71	2- 62	18	(T)
63 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	10404	11.63	11.41	80-120	100	(T)
43	5284	11.62	11.41	199-259	51	(QT)
100	998479	11.63	11.41	11- 71	9596	(QT)
65 Toluene			CAS#: 108-88-3			
92	6019	11.70	11.70	80-120	100	( )
91	10007	11.70	11.70	137-197	166	( )
82 Bromoform			CAS#: 75-25-2			
173	2381	14.36	14.06	80-120	100	(T)
175	35680	14.36	14.06	19- 79	1498	(QT)
88 1,2,3-Trichloropropane			CAS#: 96-18-4			
110	2924	14.24	14.53	80-120	100	(T)
75	5647	14.23	14.53	248-308	193	(QT)
77	2915	14.35	14.56	683-743	100	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s120.d
Lab Smp Id: 232428008 Client Smp ID: CAMO-09-6041
Inj Date : 06-JUL-2009 19:32
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428008|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	5.19580	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3077542	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	2924444	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	2357879	38.3078293	40.4	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown Siloxane				CAS #:			
16.174	607832	10.3922657	11.0	0		0	101

Data File: /chem/VOA6.i/070609v6/6s120.d
Date : 06-JUL-2009 19:32
Client ID: CAMO-09-6041
Sample Info: |2324280081882743|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

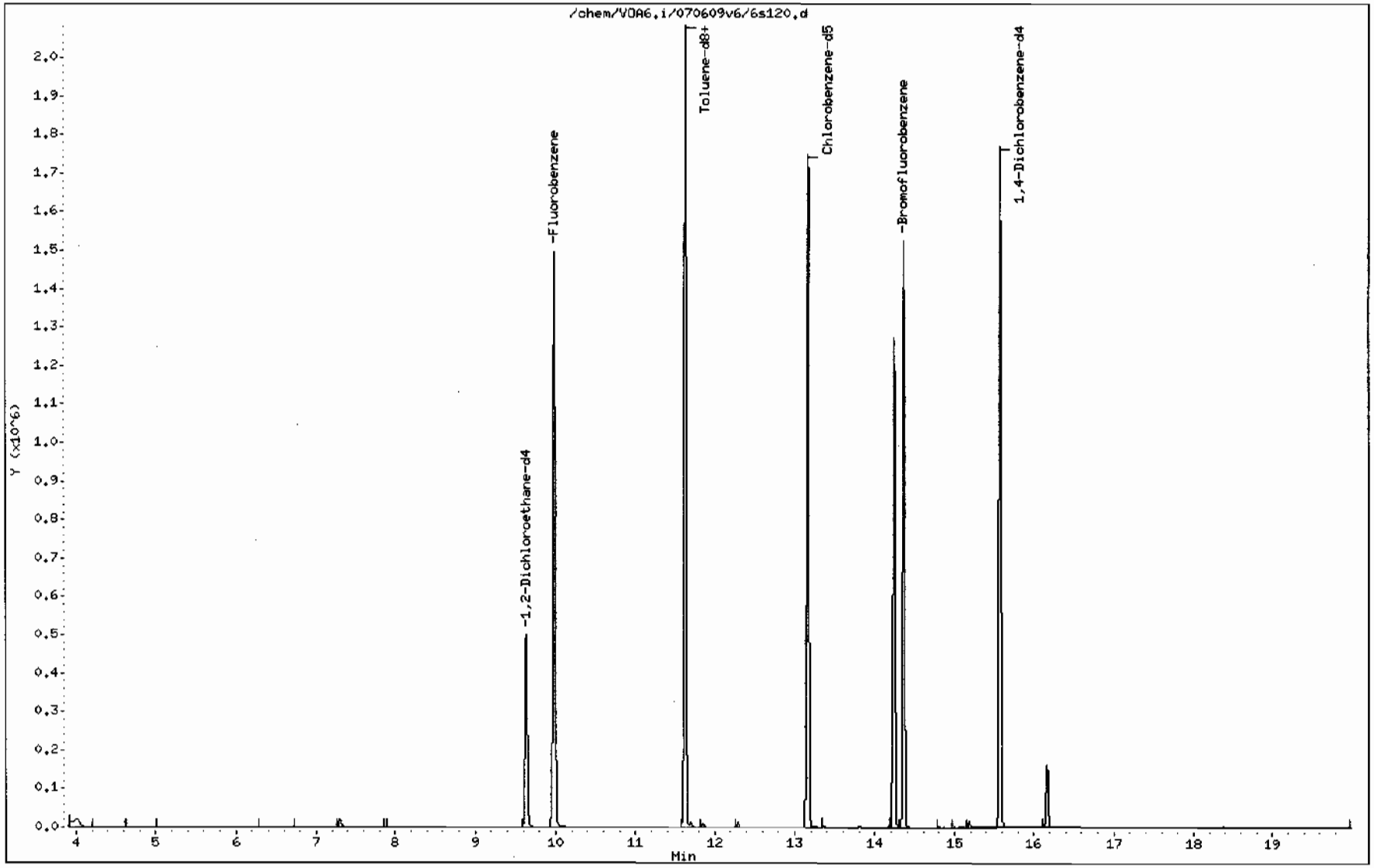

Data File: /chem/VOA6.i/070609v6/6s120.d

Date : 06-JUL-2009 19:32

Client ID: CAMO-09-6041

Instrument: VOA6.i

Sample Info: |2324280008|882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

65 Toluene

Concentration: 0.35 ug/Kg

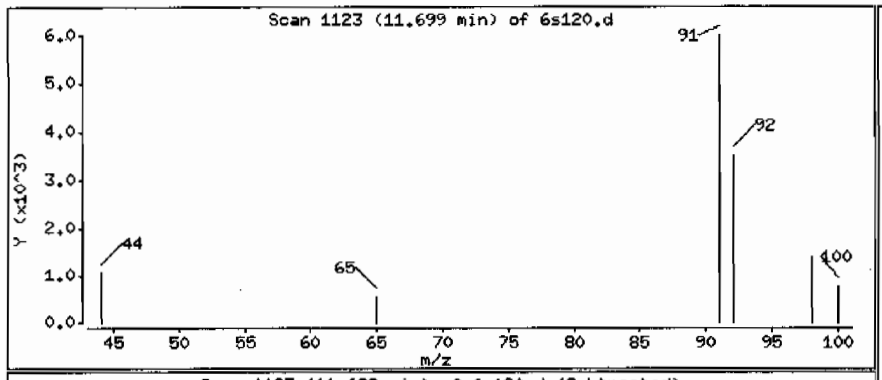

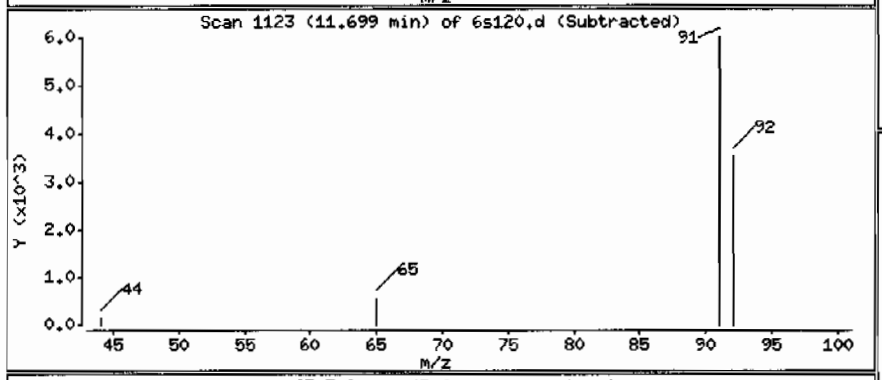

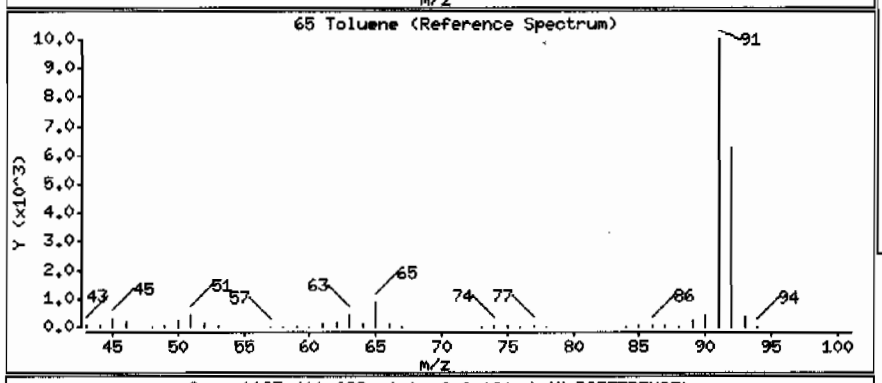

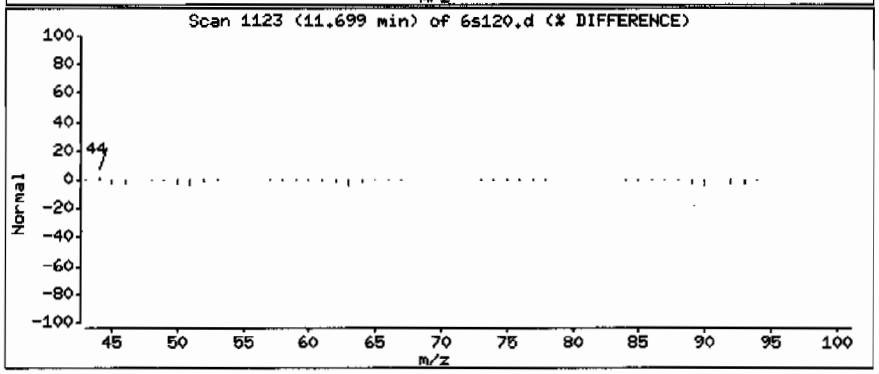

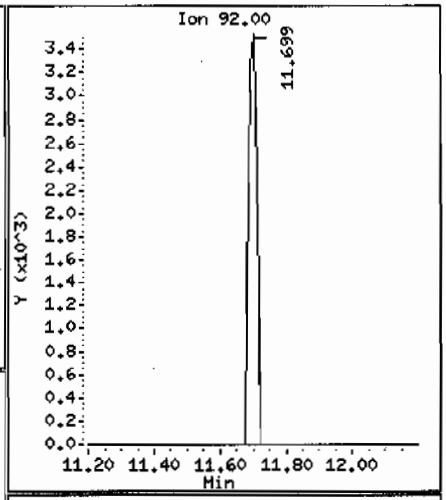

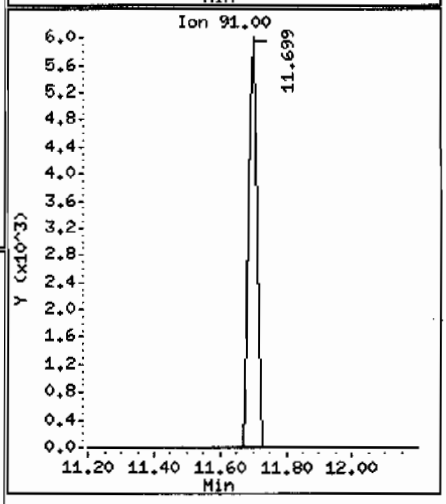

Data File: /chem/VOA6.i/070609v6/6s120.d

Date : 06-JUL-2009 19:32

Client ID: CAMO-09-6041

Instrument: VOA6.i

Sample Info: |2324280008|882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122479	78	C8H24O4Si4	296

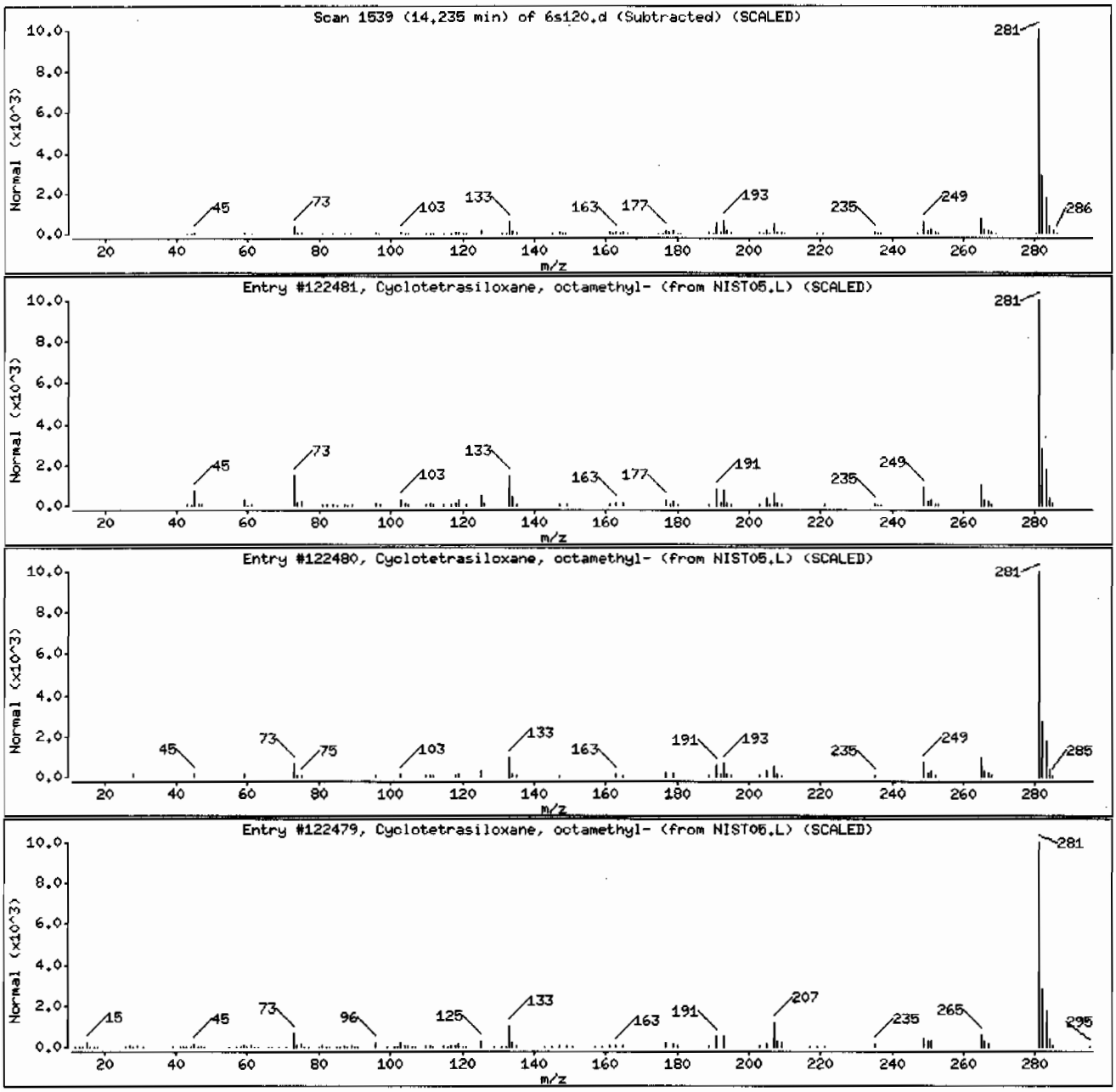

Data File: /chem/VOA6.i/070609v6/6s120.d

Date : 06-JUL-2009 19:32

Client ID: CAMO-09-6041

Instrument: VOA6.i

Sample Info: |2324280008|882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
4-Hydroxymandelic acid, ethyl ester, di-	1000071-53-3	NIST05.L	147514	56	C16H28O4Si2	340
Butanamide, 2,2,3,3,4,4,4-heptafluoro-N-	55471-01-7	NIST05.L	184036	56	C18H26F7NO3Si2	493
Propenenitrile, 2-(2-benzothiazolyl)-3-(	106833-31-2	NIST05.L	103827	53	C14H8N2S2	268

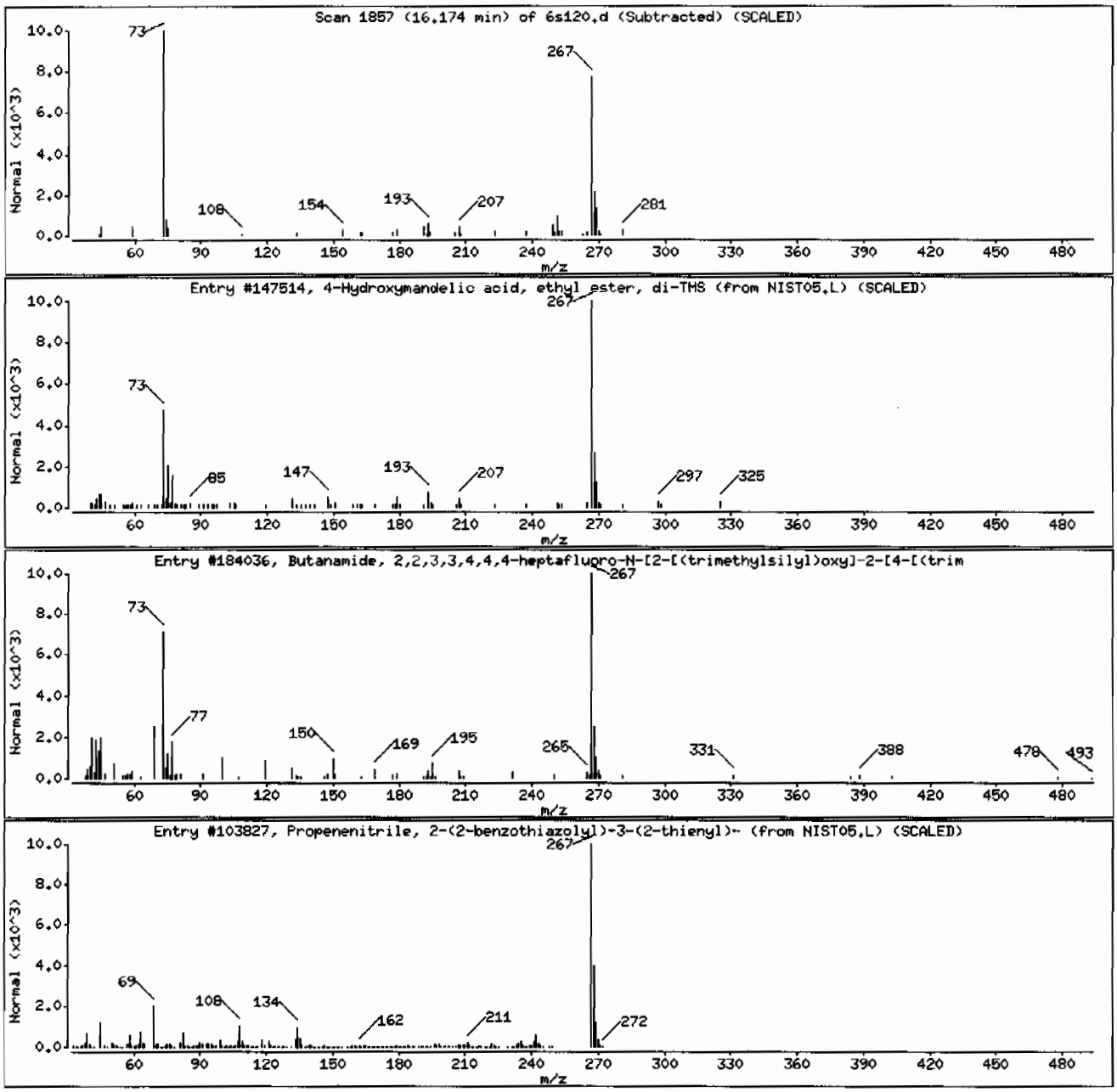

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428006**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**7.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6043**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882743**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 18:37**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 13:23**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6s118.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.09	ug/kg	0.369	1.09
74-87-3	Chloromethane	U	1.09	ug/kg	0.326	1.09
75-01-4	Vinyl chloride	U	1.09	ug/kg	0.326	1.09
74-83-9	Bromomethane	U	1.09	ug/kg	0.326	1.09
75-00-3	Chloroethane	U	1.09	ug/kg	0.326	1.09
75-69-4	Trichlorofluoromethane	U	1.09	ug/kg	0.619	1.09
67-64-1	Acetone	U	5.43	ug/kg	1.80	5.43
75-35-4	1,1-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
74-88-4	Iodomethane	U	5.43	ug/kg	1.74	5.43
75-09-2	Methylene chloride	U	5.43	ug/kg	2.17	5.43
75-15-0	Carbon disulfide	U	5.43	ug/kg	1.36	5.43
156-60-5	trans-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
75-34-3	1,1-Dichloroethane	U	1.09	ug/kg	0.326	1.09
78-93-3	2-Butanone	U	5.43	ug/kg	1.63	5.43
156-59-2	cis-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
594-20-7	2,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09
67-66-3	Chloroform	U	1.09	ug/kg	0.326	1.09
74-97-5	Bromochloromethane	U	1.09	ug/kg	0.358	1.09
71-55-6	1,1,1-Trichloroethane	U	1.09	ug/kg	0.326	1.09
563-58-6	1,1-Dichloropropene	U	1.09	ug/kg	0.326	1.09
56-23-5	Carbon tetrachloride	U	1.09	ug/kg	0.326	1.09
107-06-2	1,2-Dichloroethane	U	1.09	ug/kg	0.326	1.09
71-43-2	Benzene	U	1.09	ug/kg	0.326	1.09
79-01-6	Trichloroethylene	U	1.09	ug/kg	0.358	1.09
78-87-5	1,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09
75-27-4	Bromodichloromethane	U	1.09	ug/kg	0.326	1.09
74-95-3	Dibromomethane	U	1.09	ug/kg	0.326	1.09
108-10-1	4-Methyl-2-pentanone	U	5.43	ug/kg	1.36	5.43
10061-01-5	cis-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09
108-88-3	Toluene	U	1.09	ug/kg	0.326	1.09
10061-02-6	trans-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09
79-00-5	1,1,2-Trichloroethane	U	1.09	ug/kg	0.326	1.09
591-78-6	2-Hexanone	U	5.43	ug/kg	1.63	5.43
142-28-9	1,3-Dichloropropane	U	1.09	ug/kg	0.326	1.09
127-18-4	Tetrachloroethylene	U	1.09	ug/kg	0.326	1.09
124-48-1	Dibromochloromethane	U	1.09	ug/kg	0.326	1.09
106-93-4	1,2-Dibromoethane	U	1.09	ug/kg	0.326	1.09
108-90-7	Chlorobenzene	U	1.09	ug/kg	0.326	1.09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428006	**Date Received:**	06/26/2009 08:40	**%Moisture:**	7.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6043	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 18:37	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:23	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s118.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.09	ug/kg	0.326	1.09
179601-23-1	m,p-Xylenes	U	2.17	ug/kg	0.326	2.17
95-47-6	o-Xylene	U	1.09	ug/kg	0.326	1.09
100-42-5	Styrene	U	1.09	ug/kg	0.326	1.09
75-25-2	Bromoform	U	1.09	ug/kg	0.326	1.09
79-34-5	1,1,2,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09
96-18-4	1,2,3-Trichloropropane	U	1.09	ug/kg	0.326	1.09
108-86-1	Bromobenzene	U	1.09	ug/kg	0.326	1.09
103-65-1	n-Propylbenzene	U	1.09	ug/kg	0.326	1.09
95-49-8	2-Chlorotoluene	U	1.09	ug/kg	0.326	1.09
98-82-8	Isopropylbenzene	U	1.09	ug/kg	0.326	1.09
108-67-8	1,3,5-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09
106-43-4	4-Chlorotoluene	U	1.09	ug/kg	0.326	1.09
98-06-6	tert-Butylbenzene	U	1.09	ug/kg	0.326	1.09
95-63-6	1,2,4-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09
135-98-8	sec-Butylbenzene	U	1.09	ug/kg	0.326	1.09
99-87-6	4-Isopropyltoluene	U	1.09	ug/kg	0.326	1.09
541-73-1	1,3-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09
106-46-7	1,4-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09
104-51-8	n-Butylbenzene	U	1.09	ug/kg	0.326	1.09
96-12-8	1,2-Dibromo-3-chloropropane	U	1.09	ug/kg	0.326	1.09
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.43	ug/kg	1.74	5.43
630-20-6	1,1,1,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09
95-50-1	1,2-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	350	ug/kg		J
	Unknown Siloxane	16.17	77.9	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s118.d
Lab Smp Id: 232428006 Client Smp ID: CAMO-09-6043
Inj Date : 06-JUL-2009 18:37
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428006|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	7.85400	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1384310	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1000666	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	498845	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	340384	49.0720	53.2
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1352157	51.0070	55.4
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	501736	54.4578	59.1

ION RATIO REPORT

VOA REPORT

Data file: 6s118.d
Report Date: 07/07/2009 07:52
Lab. ID: 232428006 SampleType: SAMPLE
Injection Date: 06-JUL-2009 18:37
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232428006|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	15770	9.97	9.71	80-120	100	(T)
64	2314	9.97	9.71	2- 62	15	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	9498	11.63	11.41	80-120	100	(T)
43	4635	11.63	11.41	199-259	49	(QT)
100	905622	11.63	11.41	11- 71	9534	(QT)
82 Bromoform				CAS#: 75-25-2		
173	902	14.24	14.06	80-120	100	(T)
175	12034	14.23	14.06	19- 79	1334	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	16872	14.24	14.16	80-120	100	(T)
120	8358	14.23	14.16	0- 58	50	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	22006	14.24	14.53	80-120	100	(T)
75	46075	14.23	14.53	248-308	209	(QT)
77	2574	14.24	14.56	683-743	12	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s118.d
Lab Smp Id: 232428006 Client Smp ID: CAMO-09-6043
Inj Date : 06-JUL-2009 18:37
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428006|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	7.85400	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	2772742	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	2680544	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
14.235	17870004	322.244271	350	0		0	75

RT	AREA	CONCENTRATIONS ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
16.174	3848098	71.7782953	77.9	0		0	101

Data File: /chem/VOA6.i/070609v6/6s118.d
Date : 06-JUL-2009 18:37
Client ID: CAMD-09-6043
Sample Info: |232428006|88274311|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

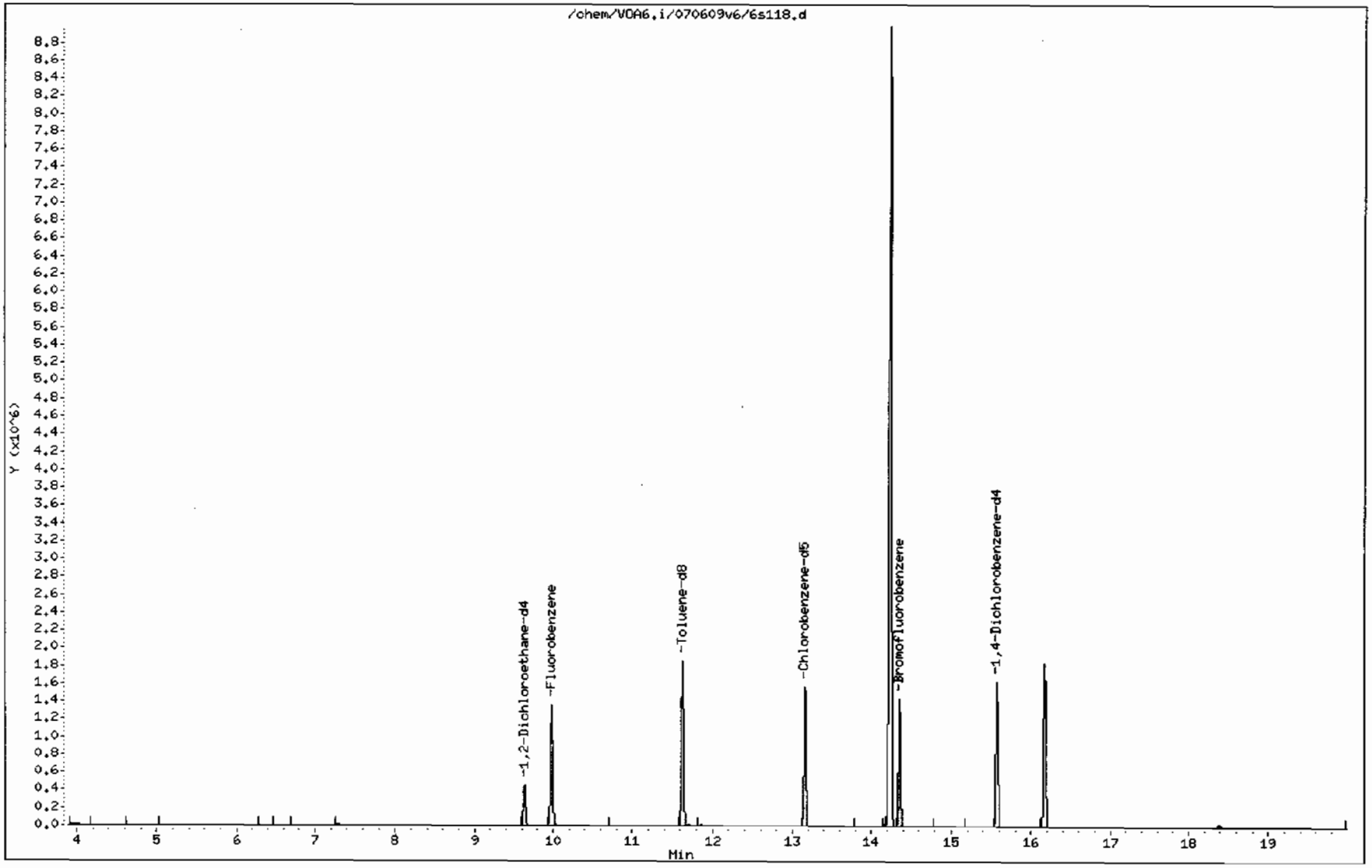

Data File: /chem/VOA6.i/070609v6/6s118.d

Date : 06-JUL-2009 18:37

Client ID: CAMO-09-6043

Instrument: VOA6.i

Sample Info: |2324280061882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	90	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122479	86	C8H24O4Si4	296

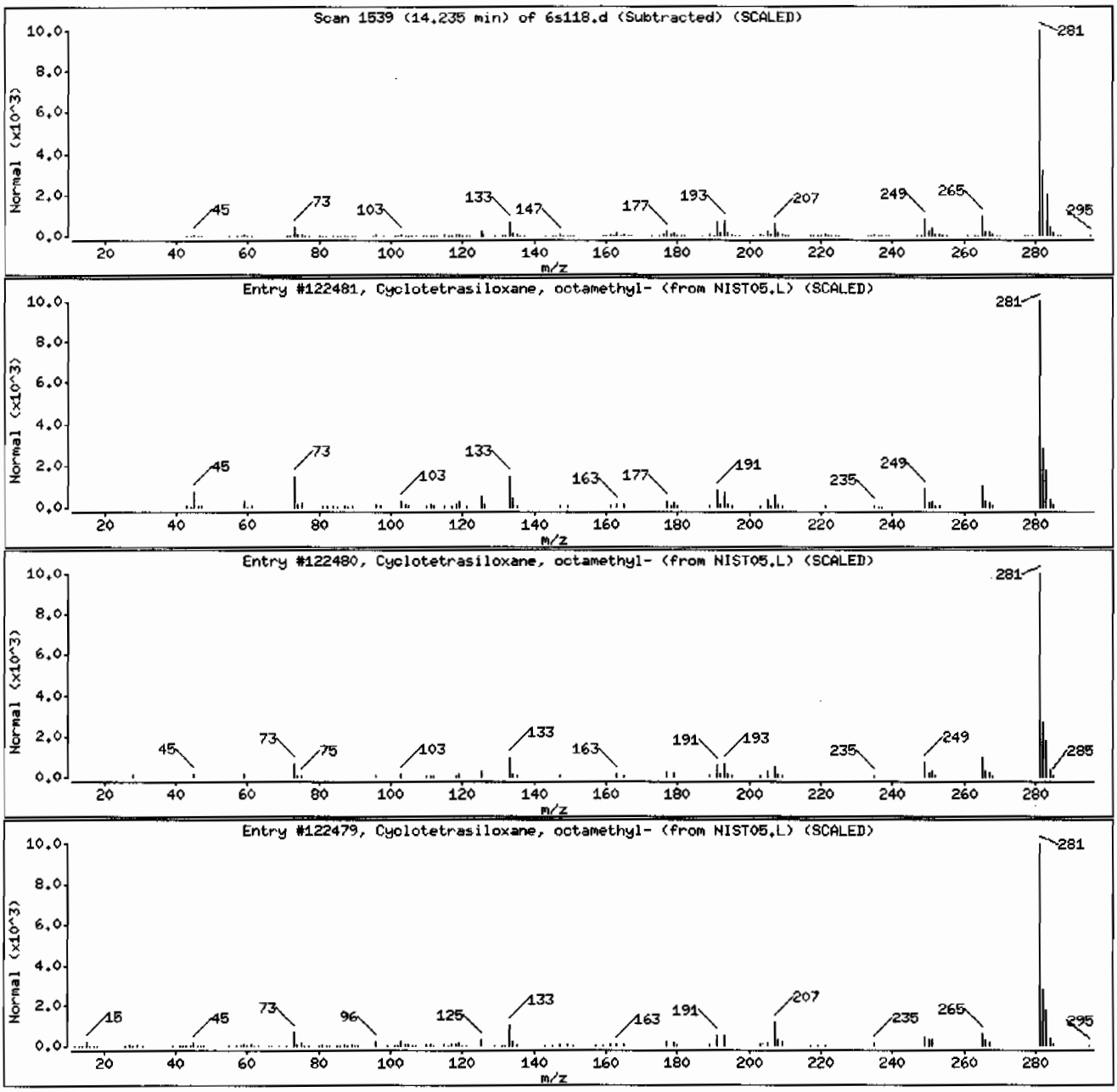

Data File: /chem/VOA6.i/070609v6/6s118.d

Date : 06-JUL-2009 18:37

Client ID: CAMO-09-6043

Instrument: VOA6.i

Sample Info: |2324280061882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	72	C18H3404Si3	398
Benzaldehyde, 2,4-bis(trimethylsiloxy)-	33617-38-8	NIST05.L	112902	72	C13H2203Si2	282
Benzaldehyde, 2,5-bis[(trimethylsilyl)ox	56114-69-3	NIST05.L	112903	56	C13H2203Si2	282

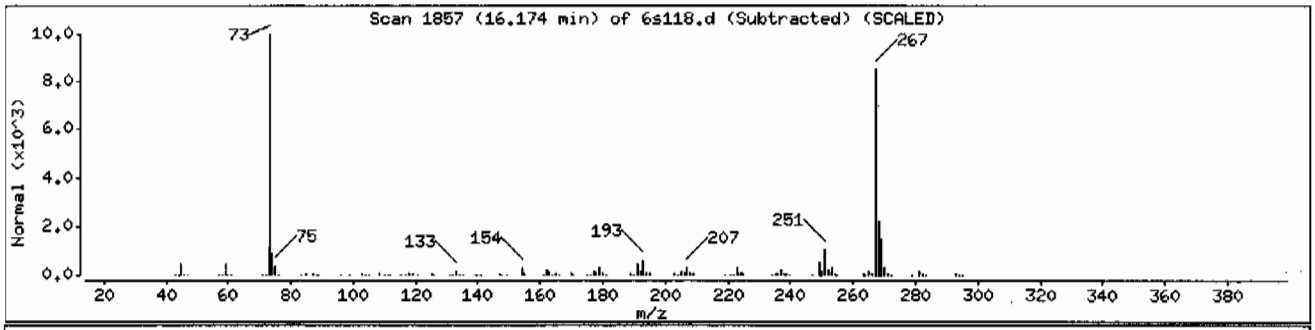

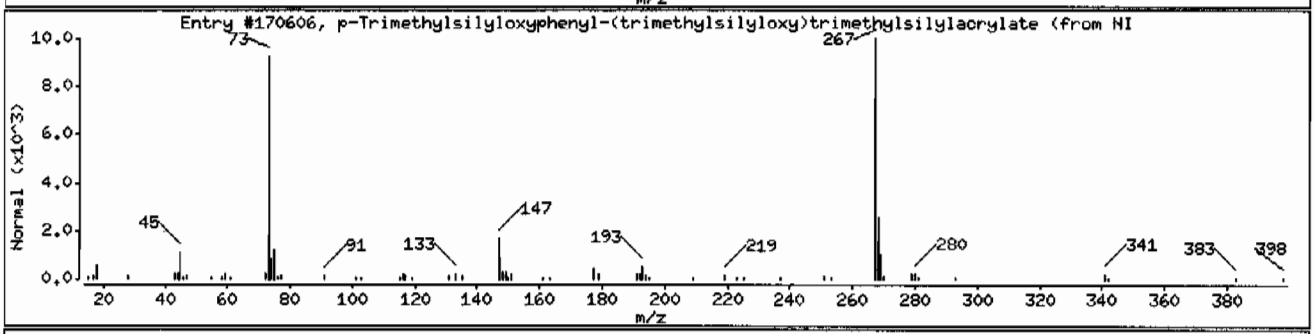

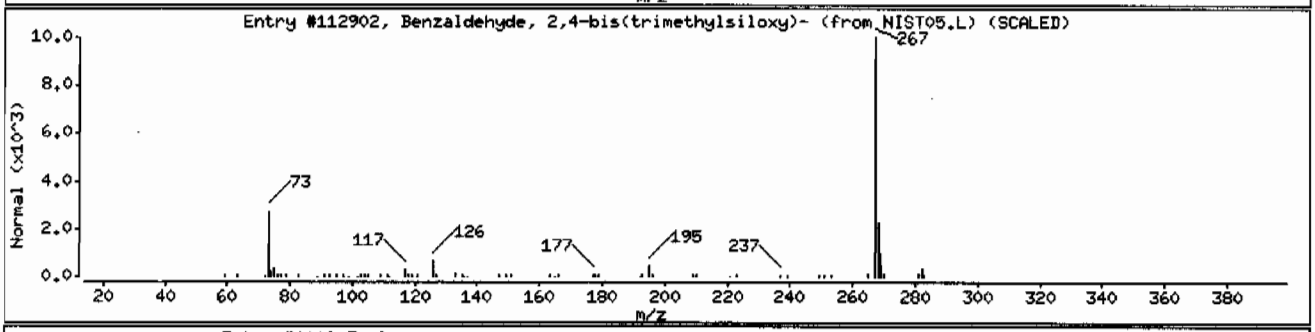

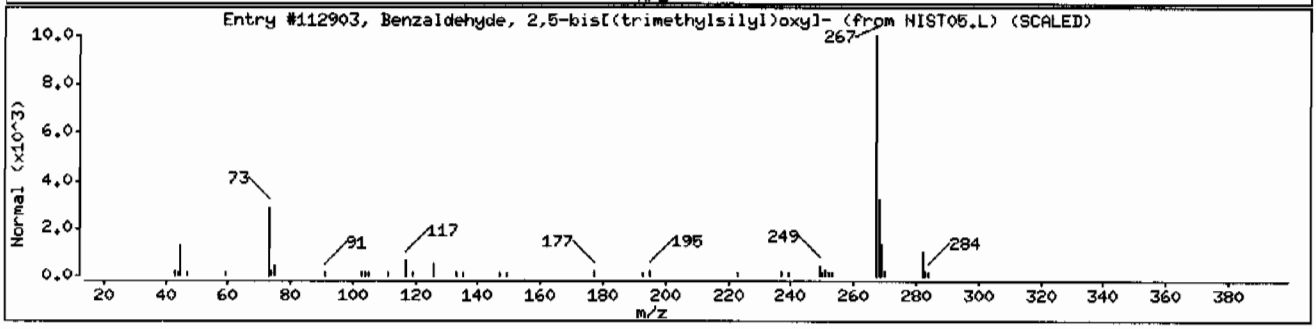

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428007**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**8**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6045**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882743**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 19:05**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 13:24**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6s119.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.09	ug/kg	0.370	1.09
74-87-3	Chloromethane	U	1.09	ug/kg	0.326	1.09
75-01-4	Vinyl chloride	U	1.09	ug/kg	0.326	1.09
74-83-9	Bromomethane	U	1.09	ug/kg	0.326	1.09
75-00-3	Chloroethane	U	1.09	ug/kg	0.326	1.09
75-69-4	Trichlorofluoromethane	U	1.09	ug/kg	0.620	1.09
67-64-1	Acetone	U	5.43	ug/kg	1.80	5.43
75-35-4	1,1-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
74-88-4	Iodomethane	U	5.43	ug/kg	1.74	5.43
75-09-2	Methylene chloride	U	5.43	ug/kg	2.17	5.43
75-15-0	Carbon disulfide	U	5.43	ug/kg	1.36	5.43
156-60-5	trans-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
75-34-3	1,1-Dichloroethane	U	1.09	ug/kg	0.326	1.09
78-93-3	2-Butanone	U	5.43	ug/kg	1.63	5.43
156-59-2	cis-1,2-Dichloroethylene	U	1.09	ug/kg	0.326	1.09
594-20-7	2,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09
67-66-3	Chloroform	U	1.09	ug/kg	0.326	1.09
74-97-5	Bromochloromethane	U	1.09	ug/kg	0.359	1.09
71-55-6	1,1,1-Trichloroethane	U	1.09	ug/kg	0.326	1.09
563-58-6	1,1-Dichloropropene	U	1.09	ug/kg	0.326	1.09
56-23-5	Carbon tetrachloride	U	1.09	ug/kg	0.326	1.09
107-06-2	1,2-Dichloroethane	U	1.09	ug/kg	0.326	1.09
71-43-2	Benzene	U	1.09	ug/kg	0.326	1.09
79-01-6	Trichloroethylene	U	1.09	ug/kg	0.359	1.09
78-87-5	1,2-Dichloropropane	U	1.09	ug/kg	0.326	1.09
75-27-4	Bromodichloromethane	U	1.09	ug/kg	0.326	1.09
74-95-3	Dibromomethane	U	1.09	ug/kg	0.326	1.09
108-10-1	4-Methyl-2-pentanone	U	5.43	ug/kg	1.36	5.43
10061-01-5	cis-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09
108-88-3	Toluene	U	1.09	ug/kg	0.326	1.09
10061-02-6	trans-1,3-Dichloropropylene	U	1.09	ug/kg	0.326	1.09
79-00-5	1,1,2-Trichloroethane	U	1.09	ug/kg	0.326	1.09
591-78-6	2-Hexanone	U	5.43	ug/kg	1.63	5.43
142-28-9	1,3-Dichloropropane	U	1.09	ug/kg	0.326	1.09
127-18-4	Tetrachloroethylene	U	1.09	ug/kg	0.326	1.09
124-48-1	Dibromochloromethane	U	1.09	ug/kg	0.326	1.09
106-93-4	1,2-Dibromoethane	U	1.09	ug/kg	0.326	1.09
108-90-7	Chlorobenzene	U	1.09	ug/kg	0.326	1.09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428007	**Date Received:**	06/26/2009 08:40	**%Moisture:**	8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6045	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 19:05	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:24	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s119.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.09	ug/kg	0.326	1.09
179601-23-1	m,p-Xylenes	U	2.17	ug/kg	0.326	2.17
95-47-6	o-Xylene	U	1.09	ug/kg	0.326	1.09
100-42-5	Styrene	U	1.09	ug/kg	0.326	1.09
75-25-2	Bromoform	U	1.09	ug/kg	0.326	1.09
79-34-5	1,1,2,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09
96-18-4	1,2,3-Trichloropropane	U	1.09	ug/kg	0.326	1.09
108-86-1	Bromobenzene	U	1.09	ug/kg	0.326	1.09
103-65-1	n-Propylbenzene	U	1.09	ug/kg	0.326	1.09
95-49-8	2-Chlorotoluene	U	1.09	ug/kg	0.326	1.09
98-82-8	Isopropylbenzene	U	1.09	ug/kg	0.326	1.09
108-67-8	1,3,5-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09
106-43-4	4-Chlorotoluene	U	1.09	ug/kg	0.326	1.09
98-06-6	tert-Butylbenzene	U	1.09	ug/kg	0.326	1.09
95-63-6	1,2,4-Trimethylbenzene	U	1.09	ug/kg	0.326	1.09
135-98-8	sec-Butylbenzene	U	1.09	ug/kg	0.326	1.09
99-87-6	4-Isopropyltoluene	U	1.09	ug/kg	0.326	1.09
541-73-1	1,3-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09
106-46-7	1,4-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09
104-51-8	n-Butylbenzene	U	1.09	ug/kg	0.326	1.09
96-12-8	1,2-Dibromo-3-chloropropane	U	1.09	ug/kg	0.326	1.09
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.43	ug/kg	1.74	5.43
630-20-6	1,1,1,2-Tetrachloroethane	U	1.09	ug/kg	0.326	1.09
95-50-1	1,2-Dichlorobenzene	U	1.09	ug/kg	0.326	1.09

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	59.9	ug/kg		J
	Unknown Siloxane	16.17	26.7	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s119.d
Lab Smp Id: 232428007 Client Smp ID: CAMO-09-6045
Inj Date : 06-JUL-2009 19:05
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428007|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6pl28.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	8.00100	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1552071	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1160283	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	625879	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	379262	48.7669	53.0
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1525631	49.6338	54.0
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	589009	50.9545	55.4

ION RATIO REPORT

VOA REPORT

Data file: 6s119.d
Report Date: 07/07/2009 07:53
Lab. ID: 232428007 SampleType: SAMPLE
Injection Date: 06-JUL-2009 19:05
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232428007|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	18342	9.98	9.71	80-120	100	(T)
64	2679	9.97	9.71	2- 62	15	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	11066	11.63	11.41	80-120	100	(T)
43	4921	11.63	11.41	199-259	44	(QT)
100	1024129	11.63	11.41	11- 71	9255	(QT)
82 Bromoform				CAS#: 75-25-2		
173	2787	14.36	14.06	80-120	100	(T)
175	37450	14.36	14.06	19- 79	1344	(QT)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	4009	14.23	14.53	80-120	100	(T)
75	8845	14.24	14.53	248-308	221	(QT)
77	1427	14.17	14.56	683-743	36	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s119.d
Lab Smp Id: 232428007 Client Smp ID: CAMO-09-6045
Inj Date : 06-JUL-2009 19:05
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428007|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	8.00100	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3207008	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3373982	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	3535239	55.1173942	59.9	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown Siloxane					CAS #:		
16.174	1657799	24.5673968	26.7	0		0	101

Data File: /chem/VOA6.i/070609v6/6s119.d
Date : 06-JUL-2009 19:05
Client ID: CAMO-09-6045
Sample Info: |2324280071882743|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

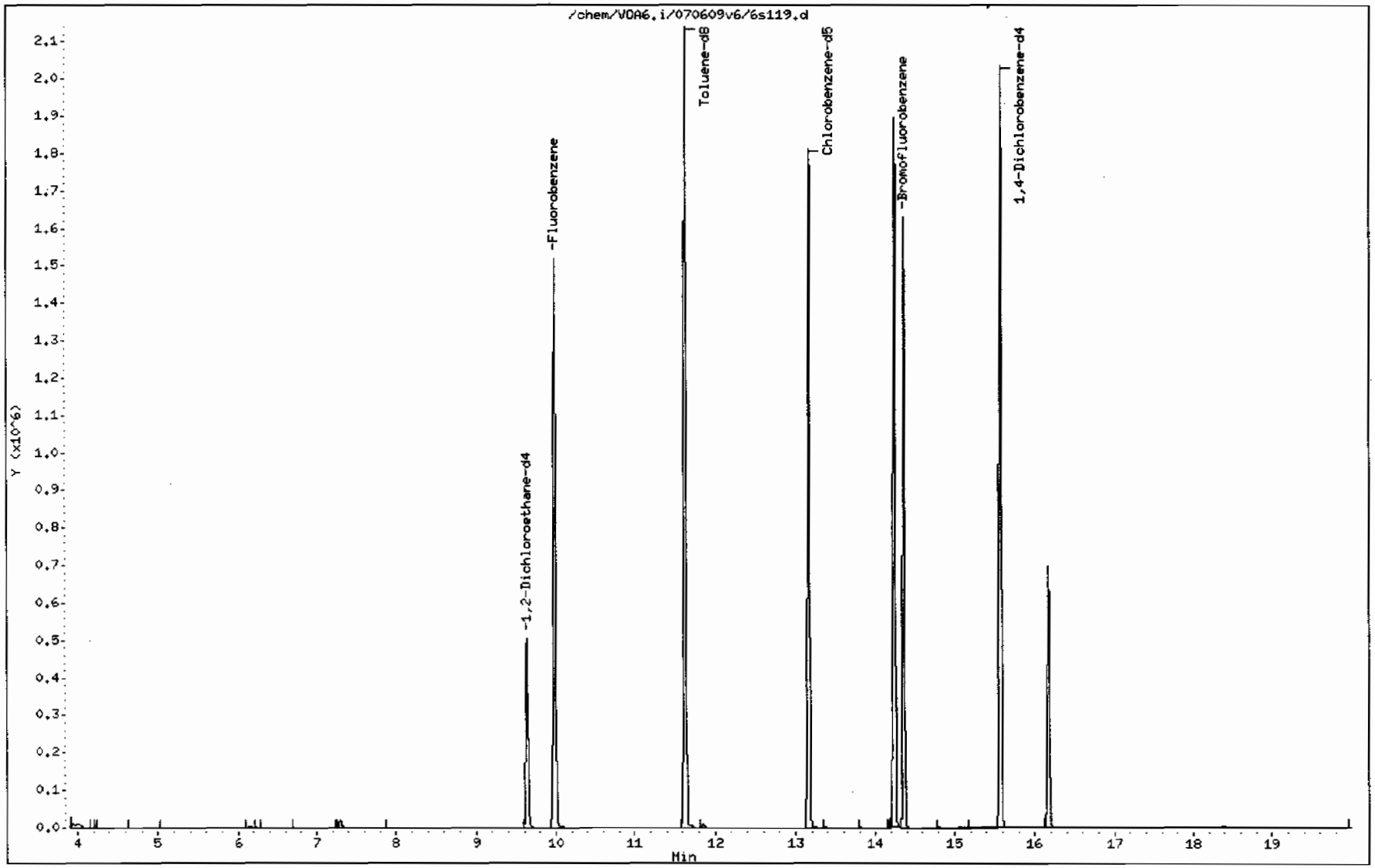

Data File: /chem/VOA6.i/070609v6/6s119.d

Date : 06-JUL-2009 19:05

Client ID: CAMO-09-6045

Instrument: VOA6.i

Sample Info: |2324280071882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122479	78	C8H24O4Si4	296

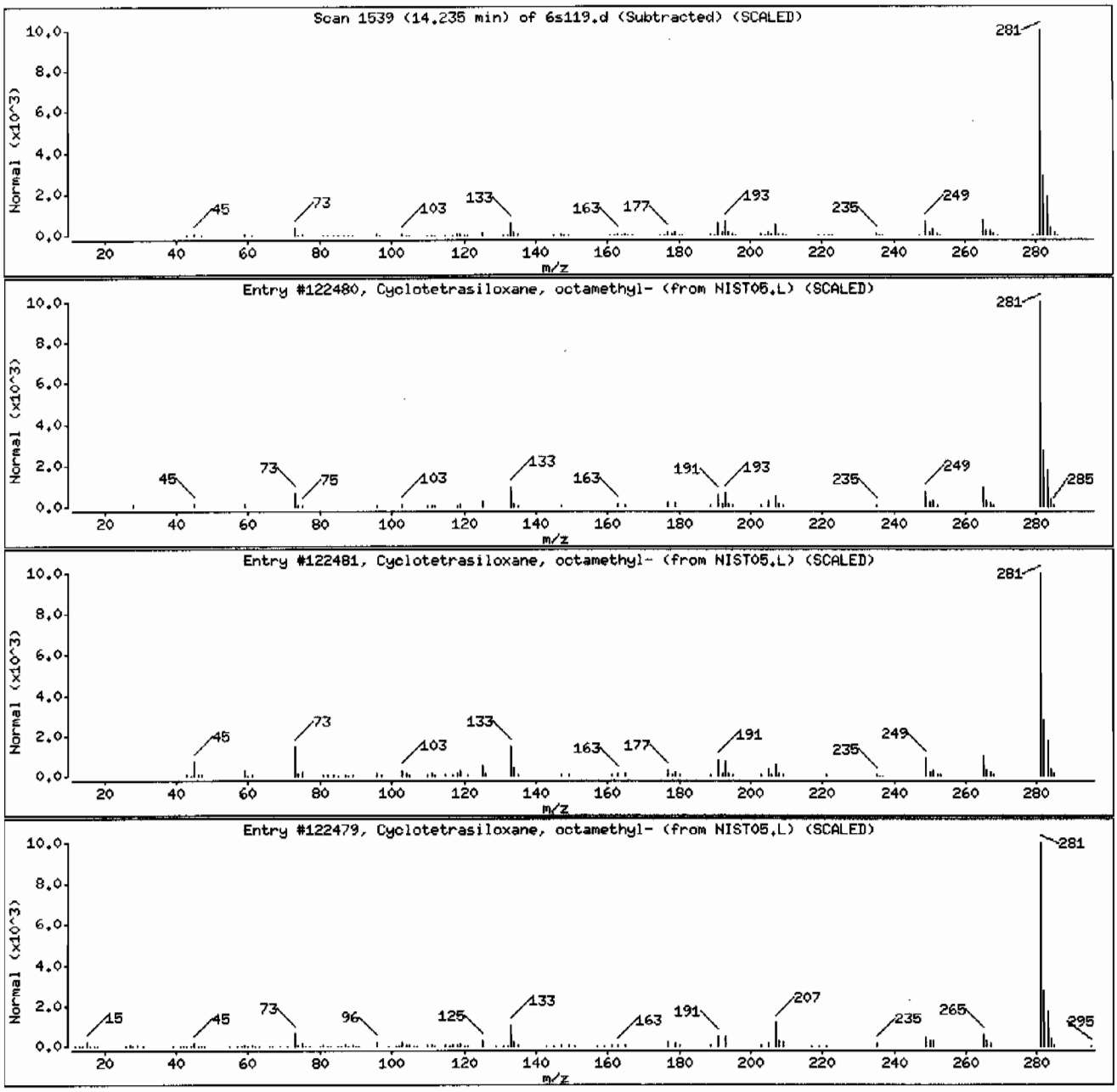

Data File: /chem/VOA6.i/070609v6/6s119.d

Date : 06-JUL-2009 19:05

Client ID: CAMO-09-6045 Instrument: VOA6.i

Sample Info: 1232428007188274311VOAF11

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	72	C18H3404Si3	398
4-Hydroxymandelic acid, ethyl ester, di-	1000071-53-3	NIST05.L	147514	56	C16H2804Si2	340
3-Hydroxymandelic acid, ethyl ester, di-	1000071-88-9	NIST05.L	147513	56	C16H2804Si2	340

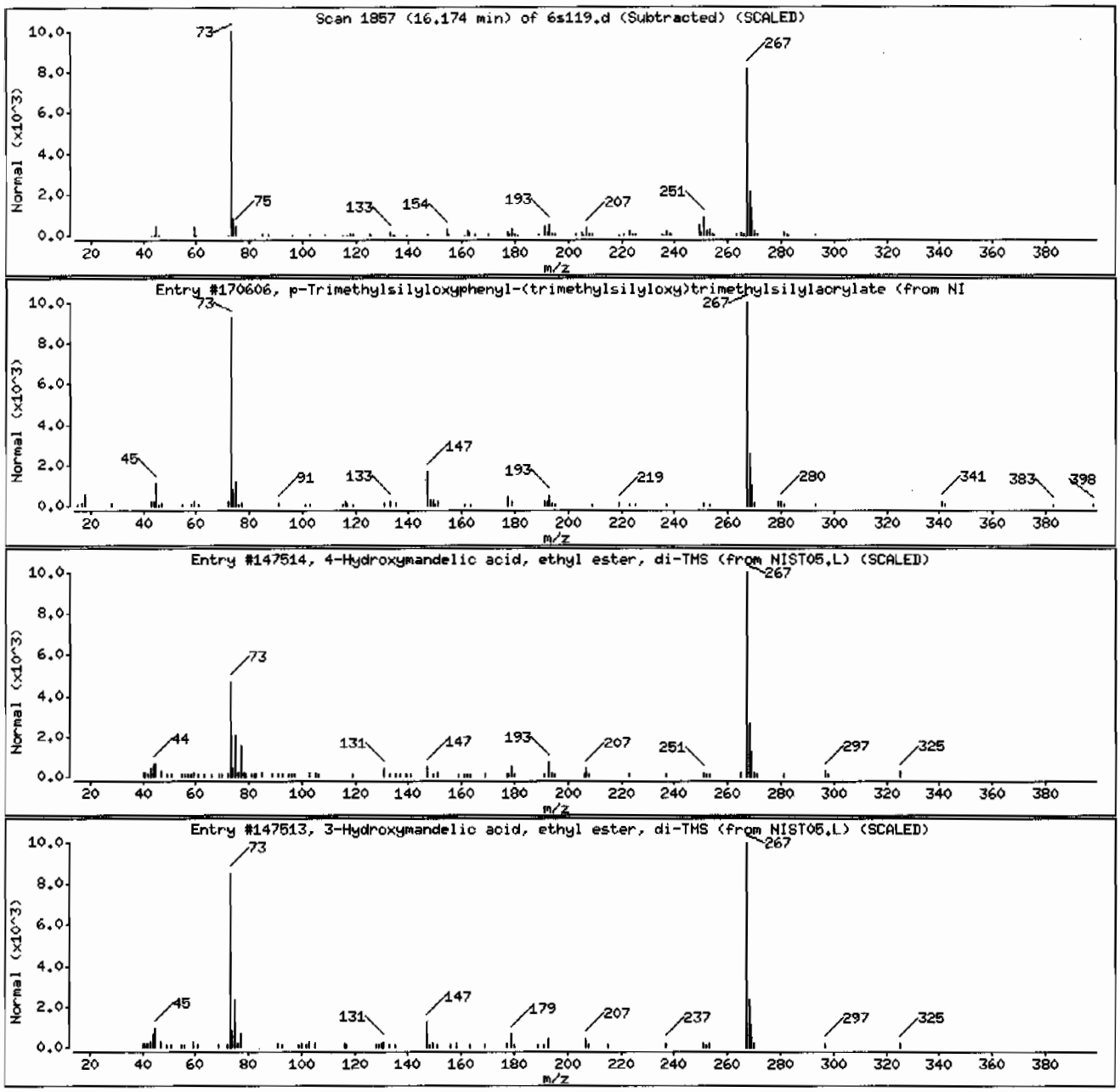

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	S
Lab Sample ID:	232428017	**Date Received:**	06/26/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6059	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 21:23	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s124.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene		1.02	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	S
Lab Sample ID:	232428017	**Date Received:**	06/26/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6059	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 21:23	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s124.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s124.d
Lab Smp Id: 232428017 Client Smp ID: CAMO-09-6059
Inj Date : 06-JUL-2009 21:23
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428017|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1371925	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1032699	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	571758	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	338787	49.2827	49.3
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1359568	49.6957	49.7
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	523603	49.5839	49.6
49 Benzene	78	9.724	9.724	(0.974)	26187	1.02245	1.0

ION RATIO REPORT

VOA REPORT

Data file: 6s124.d
Report Date: 07/07/2009 07:53
Lab. ID: 232428017 SampleType: SAMPLE
Injection Date: 06-JUL-2009 21:23
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232428017|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane			CAS#: 107-06-2			
62	15271	9.98	9.71	80-120	100	(T)
64	2652	9.98	9.71	2- 62	17	(T)
49 Benzene			CAS#: 71-43-2			
78	26187	9.72	9.72	80-120	100	( )
77	5720	9.72	9.72	0- 53	22	( )
51	4846	9.72	9.72	0- 48	19	( )
63 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	9548	11.63	11.41	80-120	100	(T)
43	4105	11.63	11.41	199-259	43	(QT)
100	914310	11.63	11.41	11- 71	9576	(QT)
82 Bromoform			CAS#: 75-25-2			
173	2362	14.36	14.06	80-120	100	(T)
175	33997	14.36	14.06	19- 79	1439	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s124.d
Lab Smp Id: 232428017 Client Smp ID: CAMO-09-6059
Inj Date : 06-JUL-2009 21:23
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428017|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA6.i/070609v6/6s124.d
Date : 06-JUL-2009 21:23
Client ID: CAMO-09-6059
Sample Info: |2324280171882743|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

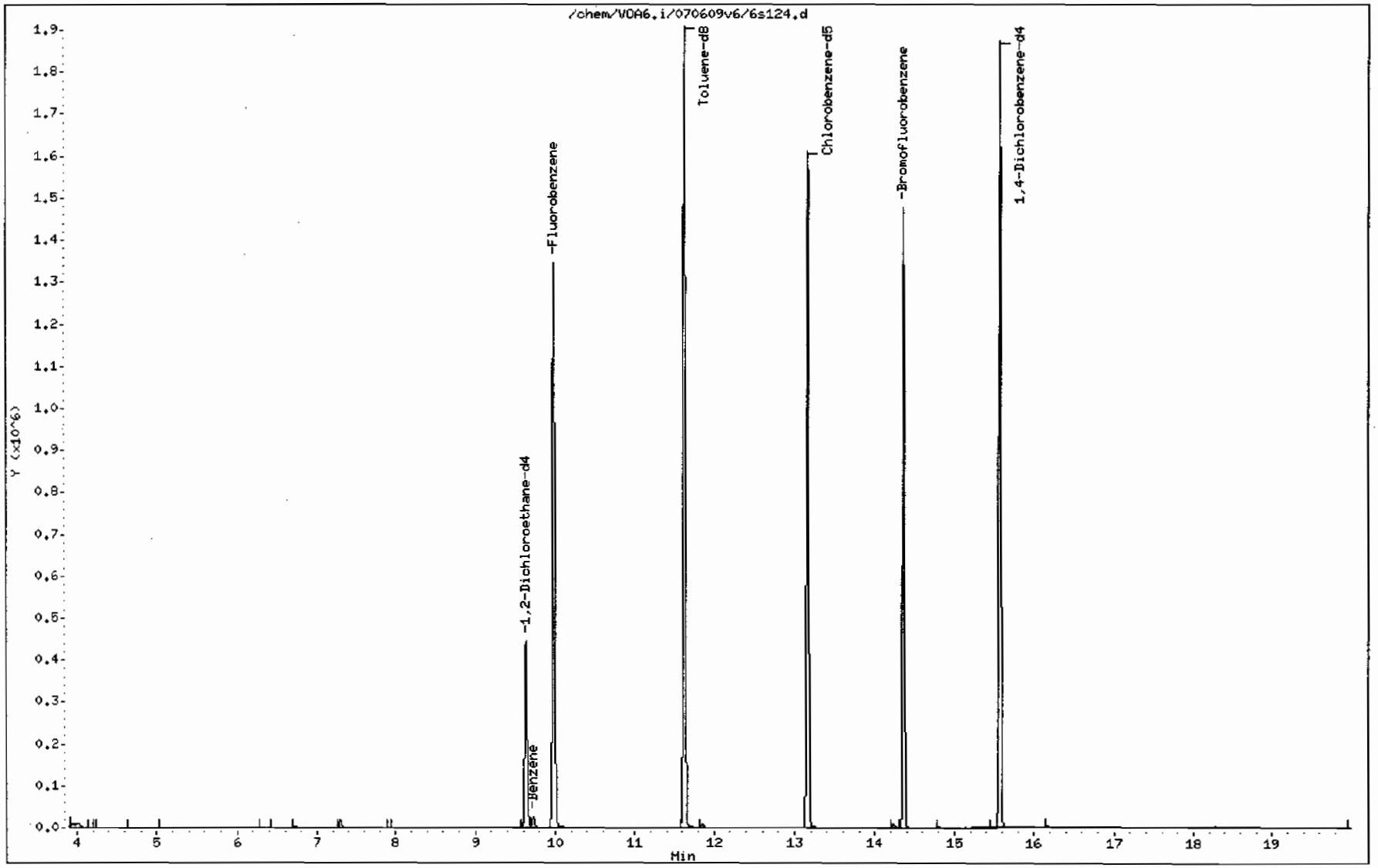

Data File: /chem/VOA6.i/070609v6/6s124.d

Page 2

Date : 06-JUL-2009 21:23

Client ID: CAMO-09-6059

Instrument: VOA6.i

Sample Info: |2324280171882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

49 Benzene

Concentration: 1.0 ug/Kg

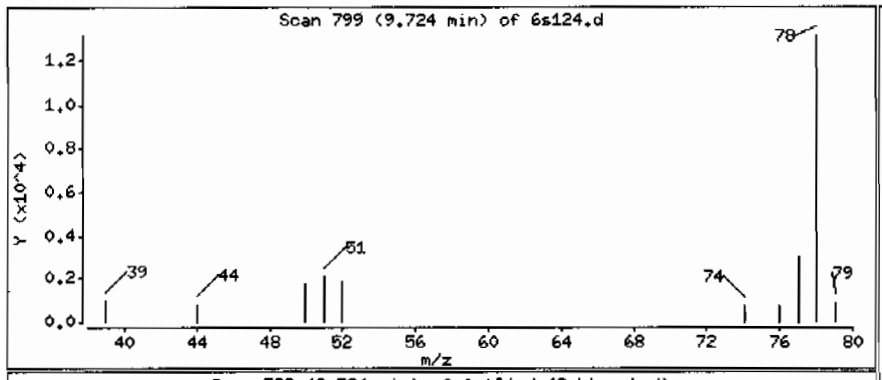

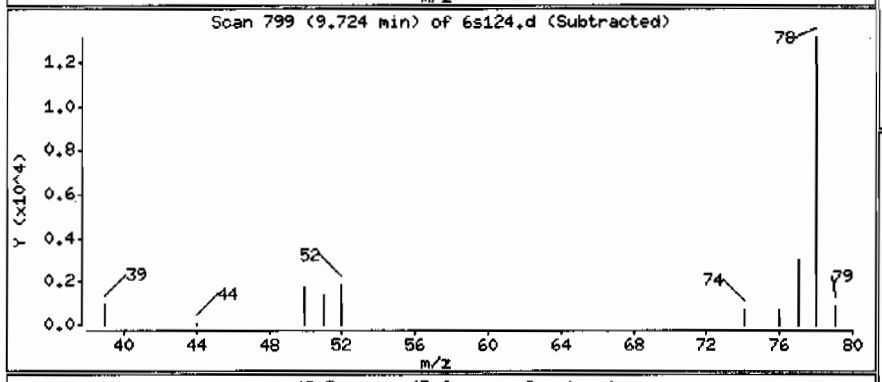

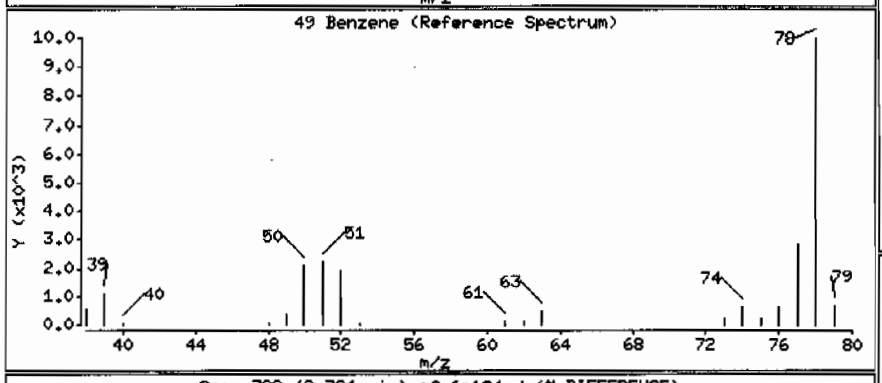

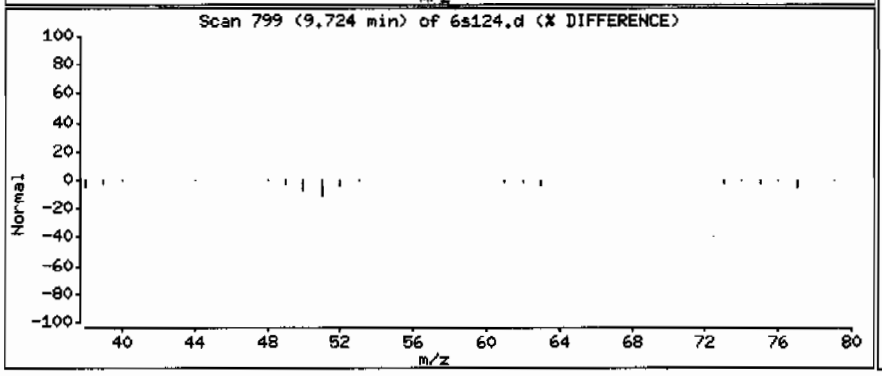

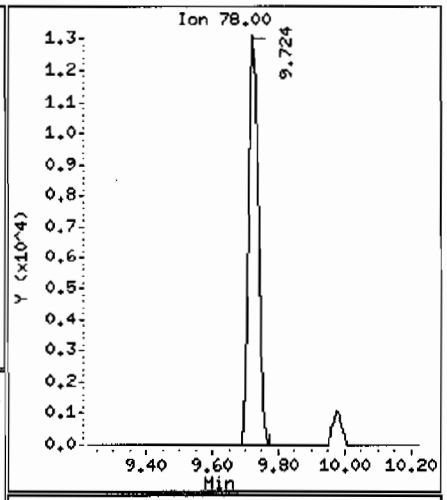

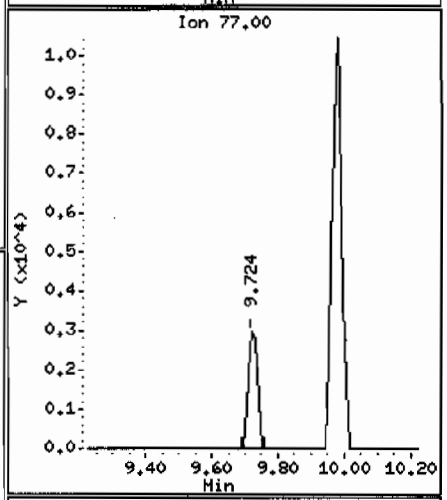

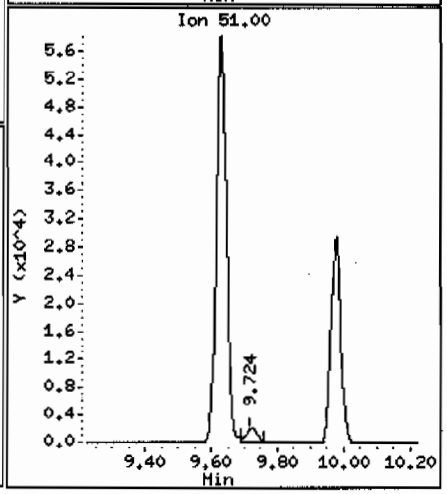

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	S
Lab Sample ID:	232428016	**Date Received:**	06/26/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6060	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 20:55	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:28	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s123.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone		10.5	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**S**
Lab Sample ID:	**232428016**	**Date Received:**	**06/26/2009 08:40**		
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6060**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882743**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 20:55**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 13:28**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6s123.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	13.85	32.3	ug/kg	99	NJ

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s123.d
Lab Smp Id: 232428016 Client Smp ID: CAMO-09-6060
Inj Date : 06-JUL-2009 20:55
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428016|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	888800.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1484566	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1120462	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	621368	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	366307	49.2429	49.2
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1471204	49.5642	49.6
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	574686	50.0763	50.1
13 Acetone	43	6.725	6.718	(0.674)	10228	10.5017	10.5

ION RATIO REPORT

VOA REPORT

Data file: 6s123.d
Report Date: 07/07/2009 07:53
Lab. ID: 232428016 SampleType: SAMPLE
Injection Date: 06-JUL-2009 20:55
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232428016|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
13 Acetone			CAS#: 67-64-1			
43	10228	6.72	6.72	80-120	100	( )
58	2843	6.72	6.72	5- 65	28	( )
48 1,2-Dichloroethane			CAS#: 107-06-2			
62	17407	9.98	9.71	80-120	100	(T)
64	3063	9.98	9.71	2- 62	18	(T)
63 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	10606	11.63	11.41	80-120	100	(T)
43	4480	11.63	11.41	199-259	42	(QT)
100	988932	11.63	11.41	11- 71	9324	(QT)
80 o-Xylene			CAS#: 95-47-6			
106	33604	13.85	13.80	80-120	100	( )
91	111640	13.86	13.80	173-233	332	(QT)
82 Bromoform			CAS#: 75-25-2			
173	2568	14.36	14.06	80-120	100	(T)
175	36509	14.36	14.06	19- 79	1421	(QT)
83 Isopropylbenzene			CAS#: 98-82-8			
105	88506	13.85	14.16	80-120	100	(T)
120	31989	13.85	14.16	0- 58	36	(T)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s123.d
Lab Smp Id: 232428016 Client Smp ID: CAMO-09-6060
Inj Date : 06-JUL-2009 20:55
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232428016|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	888800.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3097600	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
1,4-Methanoazulene, decahydro-4,8,8-trim.				CAS #: 475-20-7			
13.845	2001135	32.3013780	32.3	99	NIST05.L	60018	75

Data File: /chem/VOA6.i/070609v6/6s123.d

Date : 06-JUL-2009 20:55

Client ID: CAMO-09-6060

Sample Info: |2324280161882743|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1

Column diameter: 0.25

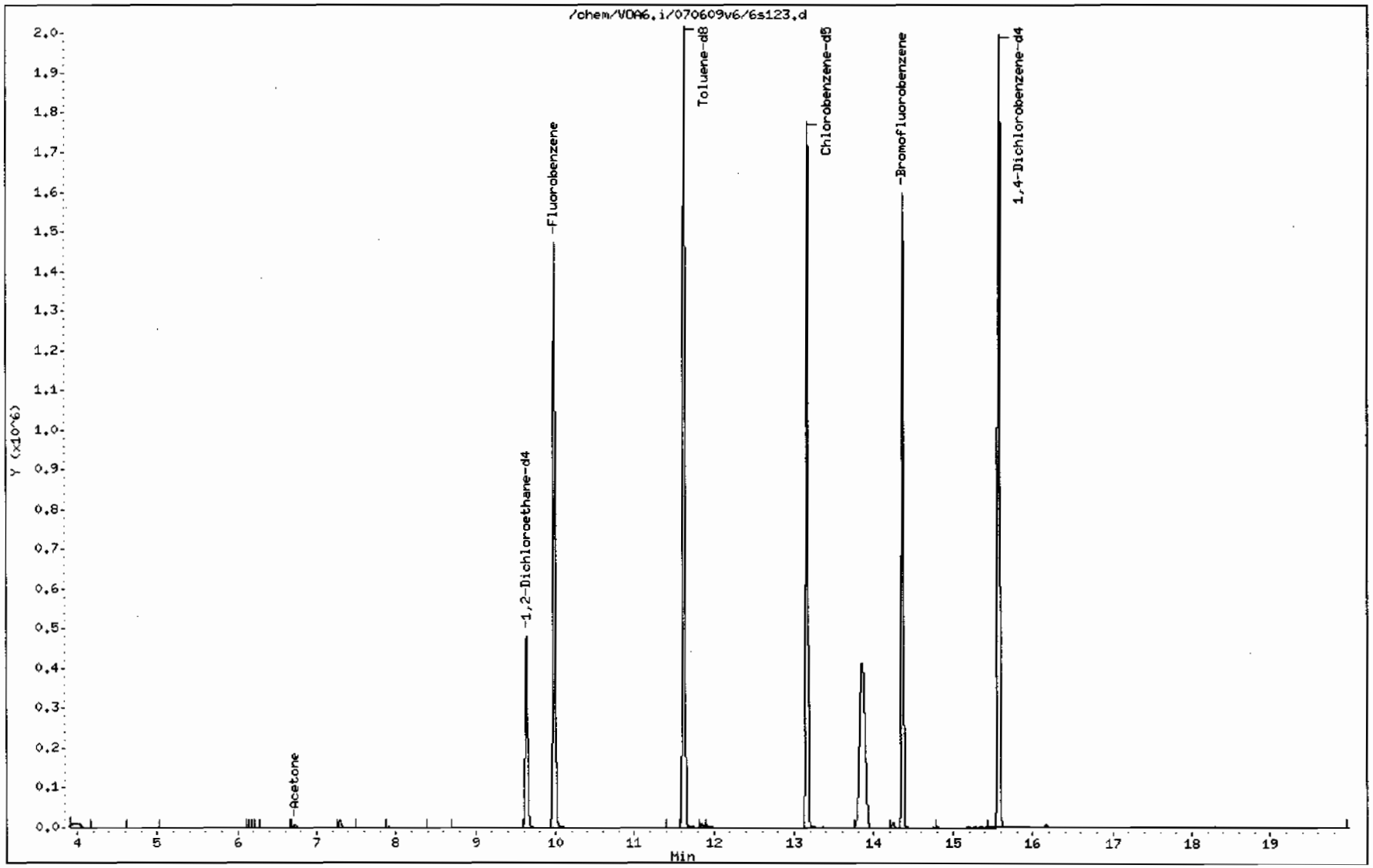

Data File: /chem/VOA6.i/070609v6/6s123.d

Date : 06-JUL-2009 20:55

Client ID: CAMO-09-6060

Instrument: VOA6.i

Sample Info: |2324280161882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

13 Acetone

Concentration: 10.5 ug/Kg

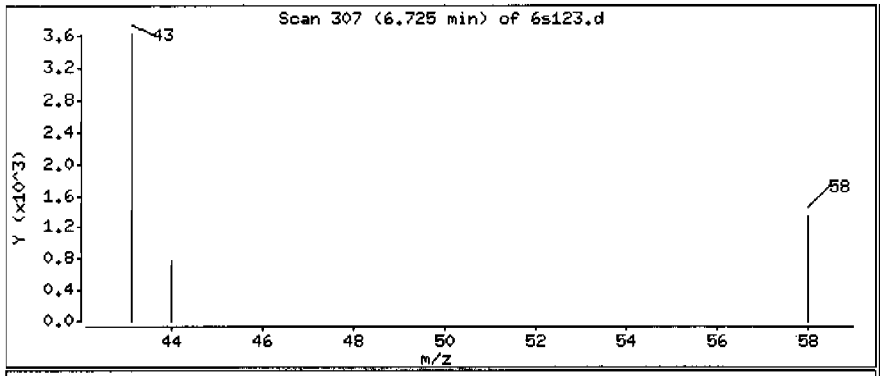

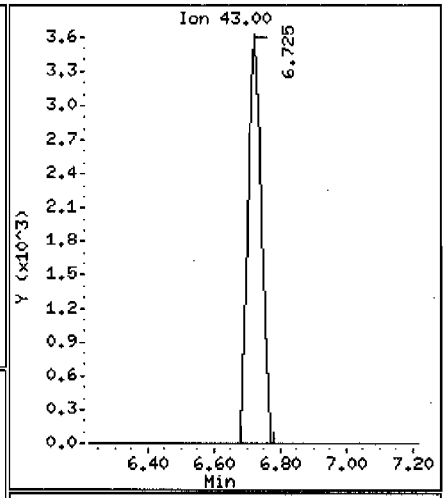

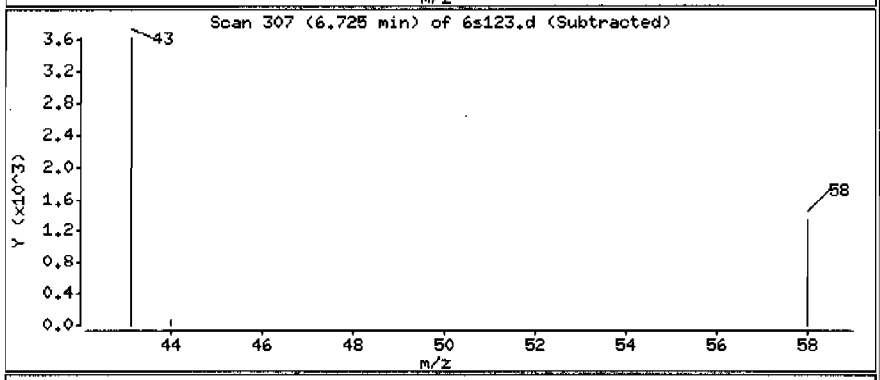

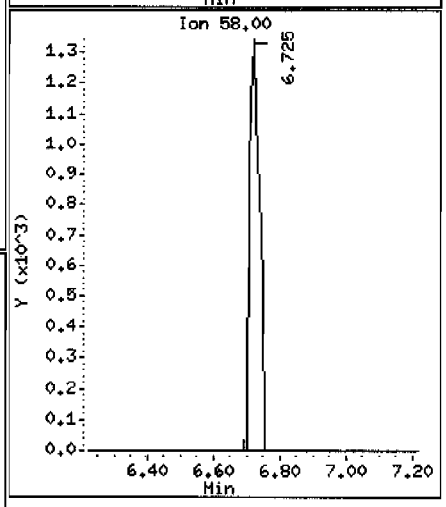

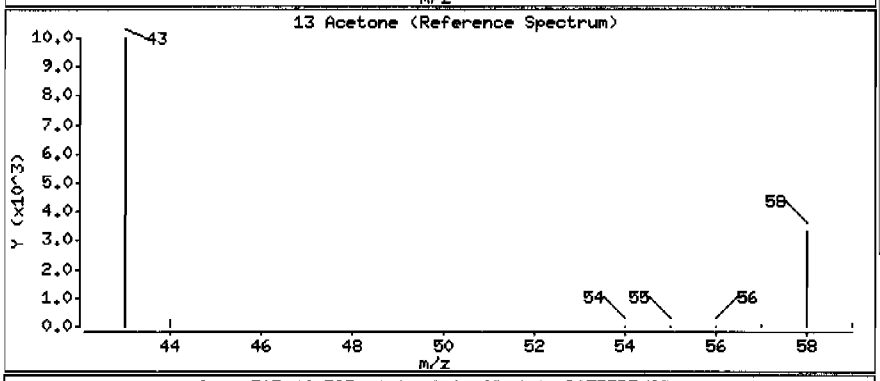

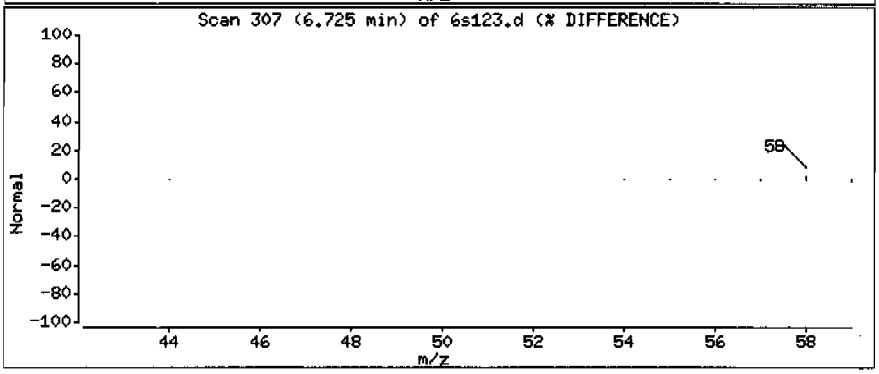

Data File: /chem/VOA6.i/070609v6/6s123.d

Date : 06-JUL-2009 20:55

Client ID: CAMO-09-6060

Instrument: VOA6.i

Sample Info: |2324280161882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60018	99	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60046	96	C15H24	204
1H-Cycloprop[e]azulene, decahydro-1,1,7-	25246-27-9	NIST05.L	60075	95	C15H24	204

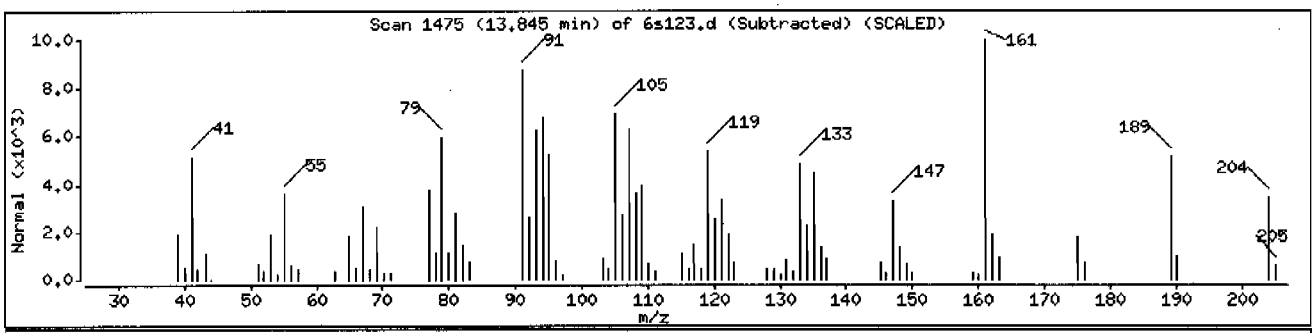

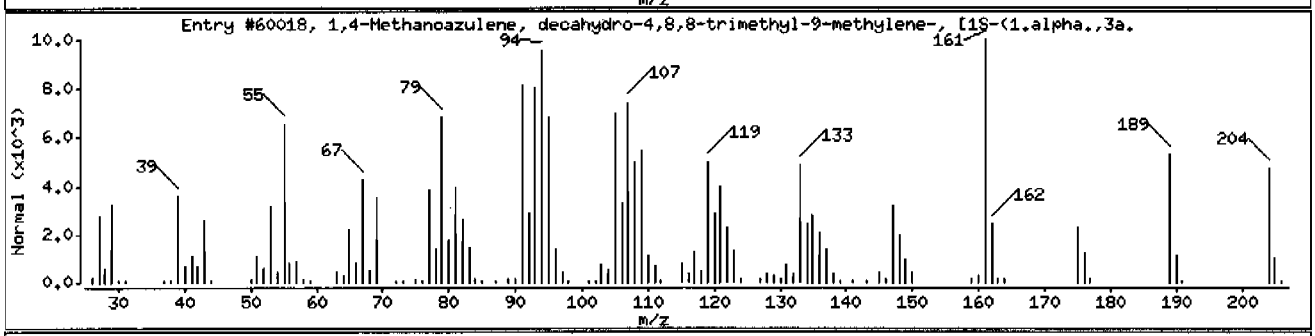

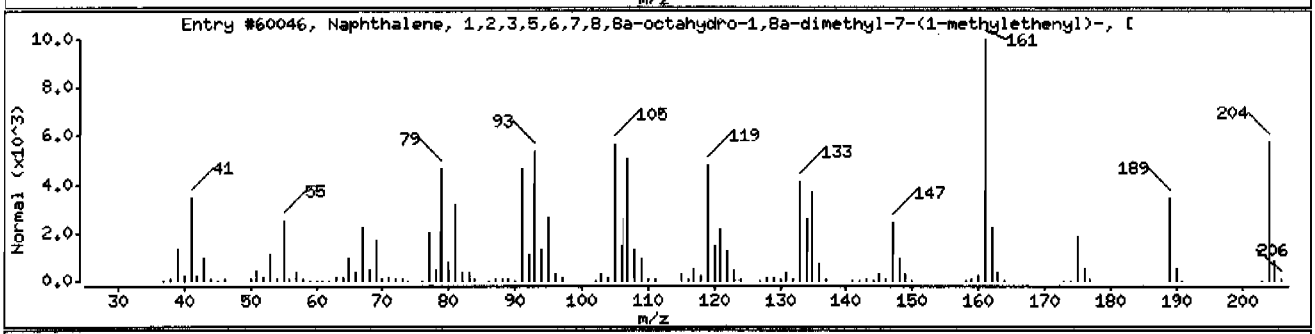

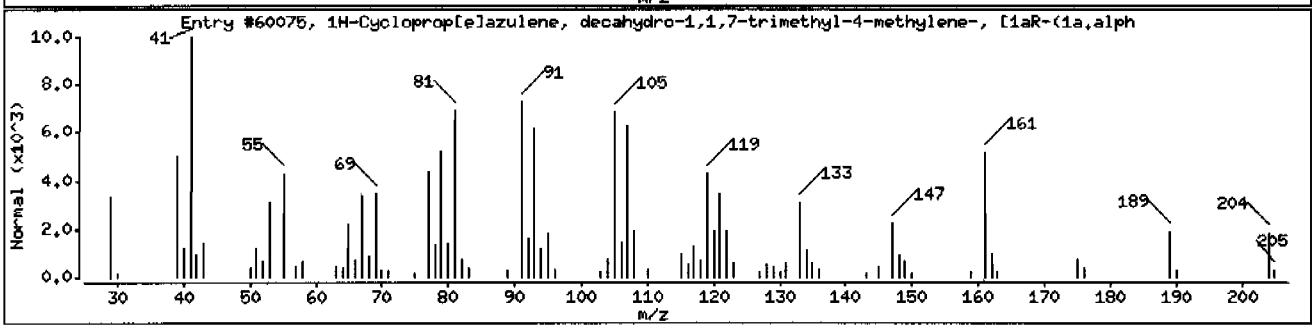

Standard Data

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Report Date: 08-Jul-2009 15:47

Calibration History

Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Start Cal Date: 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
15-JUN-2009 21:45	ICALsubS	/chem/VOA6.i/061509v6/6p123.d
15-JUN-2009 16:38	ICALsubL+	/chem/VOA6.i/061509v6/6p112.d
Cal Level: 2 , Cal Amount: 2.00000		
15-JUN-2009 22:12	ICALsubS	/chem/VOA6.i/061509v6/6p124.d
15-JUN-2009 17:06	ICALsubL+	/chem/VOA6.i/061509v6/6p113.d
Cal Level: 3 , Cal Amount: 5.00000		
15-JUN-2009 22:40	ICALsubS	/chem/VOA6.i/061509v6/6p125.d
15-JUN-2009 17:34	ICALsubL+	/chem/VOA6.i/061509v6/6p114.d
Cal Level: 4 , Cal Amount: 10.00000		
15-JUN-2009 23:07	ICALsubS	/chem/VOA6.i/061509v6/6p126.d
15-JUN-2009 18:02	ICALsubL+	/chem/VOA6.i/061509v6/6p115.d
Cal Level: 5 , Cal Amount: 20.00000		
15-JUN-2009 23:35	ICALsubS	/chem/VOA6.i/061509v6/6p127.d
Cal Level: 6 , Cal Amount: 50.00000		
16-JUN-2009 00:03	ICALsubS	/chem/VOA6.i/061509v6/6p128.d
15-JUN-2009 18:58	ICALsubL+	/chem/VOA6.i/061509v6/6p117.d
Cal Level: 7 , Cal Amount: 100.00000		
16-JUN-2009 00:31	ICALsubS	/chem/VOA6.i/061509v6/6p129.d
15-JUN-2009 19:25	ICALsubL+	/chem/VOA6.i/061509v6/6p118.d
Cal Level: 8 , Cal Amount: 200.00000		
15-JUN-2009 20:21	BENZENE+	/chem/VOA6.i/061509v6/6p120.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

Ccal Level: 6 , Ccal Amount: 50.0

06-JUL-2009 10:49	CALsubL+	/chem/VOA6.i/070609v6/6s103.d
Ccal Level: 6 , Ccal Amount: 50.0		
06-JUL-2009 10:21	CALsubL+	/chem/VOA6.i/070609v6/6s102.d
Ccal Level: 6 , Ccal Amount: 50.0		
06-JUL-2009 11:44	CALsubS+SS	/chem/VOA6.i/070609v6/6s105.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Calibration File Names:
Level 1: /chem/VOA6.i/061509v6/6p123.d
Level 2: /chem/VOA6.i/061509v6/6p124.d
Level 3: /chem/VOA6.i/061509v6/6p125.d
Level 4: /chem/VOA6.i/061509v6/6p126.d
Level 5: /chem/VOA6.i/061509v6/6p127.d
Level 6: /chem/VOA6.i/061509v6/6p128.d
Level 7: /chem/VOA6.i/061509v6/6p129.d
Level 8: /chem/VOA6.i/061509v6/6p120.d

Compound	1 Level 1 / 100 Level 7	2 Level 2 / 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
M 1 1,3-Dichloropropylene	0.27544	0.29033	0.30650	0.32107	++++++	0.34011						
	0.35889	++++++					AVRG		0.31539		9.86340	<-
M 2 Xylenes (total)	0.59566	0.59657	0.59601	0.58227	++++++	0.58411						
	0.59134	++++++					AVRG		0.59099		1.07471	<-
M 3 1,2-Dichloroethylene (total)	0.32414	0.32656	0.33087	0.32600	++++++	0.32023						
	0.34084	++++++					AVRG		0.32811		2.17323	<-
149 2-Chloro-1,1,1-trifluoroethan	++++++	0.29734	0.28267	0.29451	0.29820	0.30590						
	0.30582	++++++					AVRG		0.29741		2.88857	
150 Chlorotrifluoroethylene	++++++	43935	101652	246383	646724	1109403						
	1509962	++++++					LINR	0.24340	0.20463		0.99518	

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Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
4 Dichlorodifluoromethane	0.13161	0.14094	0.11922	0.13531	+++++	0.17053						
	+++++	+++++					AVRG		0.13952		13.67384	<-
5 Chloromethane	0.23779	0.24450	0.21508	0.21165	+++++	0.23513						
	0.24826	+++++					AVRG		0.23207		6.57592	<-
6 Vinyl chloride	0.24395	0.23708	0.22059	0.22101	+++++	0.23679						
	0.25049	+++++					AVRG		0.23499		5.14524	<-
7 Bromomethane	0.18105	0.18725	0.18116	0.17766	+++++	0.18863						
	0.19753	+++++					AVRG		0.18554		3.86954	<-
8 Chloroethane	0.16454	0.16546	0.16079	0.15800	+++++	0.16887						
	0.17831	+++++					AVRG		0.16599		4.28991	<-
9 Trichlorofluoromethane	0.30693	0.30576	0.29943	0.29506	+++++	0.32090						
	0.33843	+++++					AVRG		0.31108		5.14818	<-
10 Ethyl Ether	0.22129	0.22569	0.20788	0.20815	+++++	0.19747						
	0.20146	+++++					AVRG		0.21032		5.25454	<-
11 Acrolein	0.01031	0.01206	0.01277	0.01270	0.01290	0.01304						
	+++++	+++++					AVRG		0.01230		8.36598	
12 Trichlorotrifluoroethane	0.08392	0.08432	0.08499	0.08626	0.08832	0.08660						
	+++++	+++++					AVRG		0.08574		1.92299	

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Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
13 Acetone	12618	16737	37799	72872	++++++	356585						
	775871	++++++					LINR	0.03377	0.03909		0.99837	<-
14 1,1-Dichloroethylene	0.30080	0.31032	0.30296	0.30718	++++++	0.30016						
	0.32939	++++++					AVRG		0.30847		3.55406	<-
15 Iodomethane	0.35239	0.37137	0.37392	0.37331	++++++	0.35631						
	0.37445	++++++					AVRG		0.36696		2.69739	<-
16 Acetonitrile	0.02590	0.02605	0.02566	0.02490	++++++	0.02959						
	0.02427	++++++					AVRG		0.02606		7.11268	<-
17 Methyl acetate	0.16580	0.16150	0.15871	0.15195	++++++	0.13909						
	0.13727	++++++					AVRG		0.15239		7.81037	<-
18 Carbon disulfide	0.58961	0.67421	0.69354	0.68468	++++++	0.64591						
	0.68305	++++++					AVRG		0.66184		5.89088	<-
19 Allyl chloride	0.28034	0.27716	0.28272	0.28775	0.29694	0.28814						
	++++++	++++++					AVRG		0.28551		2.46062	
20 Methylene chloride	++++++	74487	98882	133235	++++++	482869						
	985874	++++++					LINR	-0.09825	0.23638		0.99835	
21 Acrylonitrile	0.06301	0.06531	0.06785	0.07037	0.07088	0.07138						
	++++++	++++++					AVRG		0.06813		4.97324	

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Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
22 tert-Butyl methyl ether	0.58721	0.70504	0.60204	0.59953	+++++	0.57924						
	0.61984	+++++					AVRG		0.61548		7.47666	<-
23 trans-1,2-Dichloroethylene	0.30317	0.31236	0.31106	0.30953	+++++	0.30215						
	0.32350	+++++					AVRG		0.31030		2.48329	<-
24 Vinyl acetate	0.29540	0.31030	0.36823	0.36492	+++++	0.36861						
	0.37071	+++++					AVRG		0.34636		9.84000	<-
25 1,1-Dichloroethane	0.39871	0.39339	0.39239	0.38898	+++++	0.37872						
	0.39998	+++++					AVRG		0.39203		1.96321	<-
26 Isopropyl Alcohol	0.01177	0.01177	0.01204	0.01258	0.01281	0.01381						
	0.01310	+++++					AVRG		0.01255		6.01789	
27 2-Chloro-1,3-butadiene	0.22911	0.24432	0.24771	0.26154	0.27530	0.28081						
	+++++	+++++					AVRG		0.25646		7.69184	
28 tert-butyl Alcohol	0.01975	0.01978	0.02037	0.02092	0.02147	0.02321						
	0.02205	+++++					AVRG		0.02108		6.00892	
29 Ethyl acetate	0.21882	0.19255	0.18745	0.18595	0.18581	0.18189						
	+++++	+++++					AVRG		0.19208		7.05201	
30 2-Butanone	0.05539	0.05429	0.05391	0.05513	+++++	0.05255						
	0.05006	+++++					AVRG		0.05356		3.70852	<-

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31 cis-1,2-Dichloroethylene	0.34510	0.34077	0.35068	0.34247	+++++	0.33832						
	0.35817	+++++					AVRG		0.34592		2.12285	<-
32 Propionitrile	0.02501	0.02566	0.02758	0.02803	0.02842	0.02858						
	+++++	+++++					AVRG		0.02721		5.54678	
33 2,2-Dichloropropane	0.28560	0.27796	0.28689	0.29051	+++++	0.30049						
	0.32415	+++++					AVRG		0.29427		5.56597	<-
34 Isopropyl ether	+++++	0.69275	0.68132	0.69967	0.71415	0.73228						
	0.72086	+++++					AVRG		0.70684		2.68289	
35 Bromochloromethane	0.10578	0.11321	0.11574	0.11774	+++++	0.11580						
	0.12389	+++++					AVRG		0.11536		5.13085	<-
36 Chloroform	0.38994	0.37237	0.37763	0.37588	+++++	0.36743						
	0.38772	+++++					AVRG		0.37849		2.31445	<-
37 Methacrylonitrile	0.10026	0.10191	0.10789	0.11008	0.11174	0.11065						
	+++++	+++++					AVRG		0.10709		4.52446	
38 Tetrahydrofuran	0.13539	0.13746	0.13935	0.13956	0.14219	0.13620						
	+++++	+++++					AVRG		0.13836		1.81013	
40 1,1,1-Trichloroethane	0.28710	0.29716	0.30179	0.30737	+++++	0.31269						
	0.33548	+++++					AVRG		0.30693		5.37992	<-

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41 Ethyl tert-butyl ether	+++++	0.64322	0.64224	0.66405	0.68271	0.71454						
	0.70716	+++++					AVRG		0.67565		4.61349	
42 Isobutyl alcohol	0.00517	0.00549	0.00646	0.00666	0.00674	0.00714						
	+++++	+++++					AVRG		0.00627		12.31212	
43 Cyclohexane	0.38774	0.39266	0.39439	0.38663	+++++	0.37663						
	0.40197	+++++					AVRG		0.39000		2.19048	<-
44 1,1-Dichloropropene	0.30021	0.30299	0.30288	0.29906	+++++	0.29567						
	0.31351	+++++					AVRG		0.30239		2.01290	<-
45 Methyl tert-amyl ether	+++++	0.22564	0.22058	0.22051	0.22550	0.22978						
	+++++	+++++					AVRG		0.22440		1.74568	
46 Carbon tetrachloride	0.25744	0.26327	0.27164	0.27724	+++++	0.28867						
	0.31202	+++++					AVRG		0.27838		7.09602	<-
48 1,2-Dichloroethane	0.30458	0.28647	0.28717	0.27935	+++++	0.27221						
	0.28159	+++++					AVRG		0.28523		3.83066	<-
49 Benzene	0.94902	0.94585	0.93468	0.91611	+++++	0.87809						
	0.90863	1.00168					AVRG		0.93344		4.15708	<-
50 Cyclohexene	0.46008	0.46538	0.45929	0.44925	+++++	0.44053						
	0.46736	+++++					AVRG		0.45698		2.23954	<-

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52 n-Butyl alcohol	0.00464	0.00511	0.00573	0.00608	+++++	0.00637						
	0.00665	0.00471					AVRG		0.00561		14.33859	<-
53 Trichloroethylene	0.23971	0.23898	0.23297	0.22707	+++++	0.22648						
	0.23867	+++++					AVRG		0.23398		2.59771	<-
54 Methyl methacrylate	0.12364	0.12892	0.14080	0.14739	0.15260	0.15458						
	+++++	+++++					AVRG		0.14132		8.98754	
55 1,2-Dichloropropane	0.22783	0.22324	0.22920	0.22835	+++++	0.22693						
	0.23499	+++++					AVRG		0.22842		1.67529	<-
56 Methylcyclohexane	0.42477	0.42266	0.42289	0.42194	+++++	0.41506						
	0.43822	+++++					AVRG		0.42426		1.79331	<-
57 1,4-Dioxane	0.00262	0.00248	0.00220	0.00221	0.00222	0.00220						
	+++++	+++++					AVRG		0.00232		7.70555	
58 Dibromomethane	0.12754	0.12546	0.12824	0.12867	+++++	0.12934						
	0.13533	+++++					AVRG		0.12910		2.58075	<-
59 Bromodichloromethane	0.22808	0.23977	0.24709	0.25744	+++++	0.27278						
	0.28977	+++++					AVRG		0.25582		8.82140	<-
60 2-Nitropropane	7384	14872	43071	93438	205860	564432						
	+++++	+++++					LINR	0.10732	0.05907		0.99899	

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
61 2-Chloroethylvinyl ether	727	38503	140819	281361	+++++	1407499						
	2845999	+++++					LINR	0.04757	0.14555		0.99992	<-
62 cis-1,3-Dichloropropylene	0.29610	0.30995	0.32631	0.34009	+++++	0.35815						
	0.37687	+++++					AVRG		0.33458		8.99690	<-
63 4-Methyl-2-pentanone	0.09341	0.09495	0.10248	0.10385	+++++	0.10341						
	0.10313	+++++					AVRG		0.10020		4.70281	<-
65 Toluene	0.91141	0.84023	0.82843	0.78906	+++++	0.76864						
	0.78836	+++++					AVRG		0.82102		6.31180	<-
66 Ethyl methacrylate	0.29682	0.32657	0.36240	0.38265	0.39208	0.39346						
	+++++	+++++					AVRG		0.35900		10.98089	
67 trans-1,3-Dichloropropylene	0.34306	0.36562	0.38776	0.40296	+++++	0.43261						
	0.45413	+++++					AVRG		0.39769		10.39506	<-
68 1,1,2-Trichloroethane	0.21171	0.20945	0.21496	0.21094	+++++	0.21279						
	0.21762	+++++					AVRG		0.21291		1.38840	<-
69 2-Hexanone	0.13006	0.13152	0.14213	0.14432	+++++	0.14625						
	0.13455	+++++					AVRG		0.13814		5.03470	<-
70 1,3-Dichloropropane	0.44162	0.45818	0.46027	0.45022	+++++	0.44737						
	0.45495	+++++					AVRG		0.45210		1.55643	<-

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	100 Level 7	200 Level 8										
71 Tetrachloroethylene	0.30112	0.29098	0.28869	0.27504	+++++	0.27688						
	0.28831	+++++					AVRG		0.28684		3.36264	<-
72 Dibromochloromethane	0.21794	0.22938	0.24750	0.26041	+++++	0.29497						
	0.31636	+++++					AVRG		0.26109		14.59011	<-
73 1,2-Dibromoethane	0.23390	0.23870	0.25246	0.24801	+++++	0.25726						
	0.26624	+++++					AVRG		0.24943		4.78240	<-
74 1-Chlorohexane	0.27211	0.28382	0.28170	0.29483	0.29776	0.30314						
	0.30570	+++++					AVRG		0.29129		4.24604	
76 Chlorobenzene	0.93302	0.90631	0.89655	0.86163	+++++	0.84895						
	0.86484	+++++					AVRG		0.88521		3.62382	<-
77 1,1,1,2-Tetrachloroethane	0.25774	0.27070	0.28261	0.28601	+++++	0.31034						
	0.32535	+++++					AVRG		0.28879		8.67474	<-
78 Ethylbenzene	1.50952	1.50823	1.50550	1.46571	+++++	1.44903						
	1.45710	+++++					AVRG		1.48252		1.90027	<-
79 m,p-Xylenes	0.60558	0.60238	0.60019	0.58619	+++++	0.58691						
	0.59058	+++++					AVRG		0.59530		1.41623	<-
80 o-Xylene	0.57582	0.58496	0.58765	0.57442	+++++	0.57852						
	0.59287	+++++					AVRG		0.58237		1.25186	<-

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81 Styrene	0.83211	0.84335	0.89085	0.90791	+++++	0.96971						
	0.99167	+++++					AVRG		0.90594		7.15648	<-
82 Bromoform	3930	8536	22967	49700	+++++	300303						
	666165	+++++					LINR	0.03001	0.39998		0.99857	<-
83 Isopropylbenzene	2.82803	2.81708	2.83379	2.74979	+++++	2.63965						
	2.62290	+++++					AVRG		2.74854		3.48702	<-
84 cis-1,4-Dichloro-2-butene	0.14199	0.14772	0.16651	0.17591	0.18262	0.19117						
	+++++	+++++					AVRG		0.16765		11.63406	
86 Cyclohexanone	0.00869	0.00872	0.00979	0.00999	0.00983	0.01089						
	+++++	+++++					AVRG		0.00965		8.68313	<-
87 1,1,2,2-Tetrachloroethane	0.56987	0.59990	0.59690	0.60070	+++++	0.59304						
	0.60455	+++++					AVRG		0.59416		2.10532	<-
88 1,2,3-Trichloropropane	0.14867	0.17230	0.16934	0.16685	+++++	0.16003						
	0.16602	+++++					AVRG		0.16387		5.18064	<-
89 trans-1,4-Dichloro-2-butene	0.13729	0.14472	0.16105	0.17234	0.17490	0.17969						
	+++++	+++++					AVRG		0.16166		10.69889	
90 Bromobenzene	0.72430	0.71936	0.70991	0.68619	+++++	0.68341						
	0.70677	+++++					AVRG		0.70499		2.39534	<-

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	100 Level 7	200 Level 8										
91 n-Propylbenzene	3.38011	3.26003	3.25004	3.15198	+++++	3.05541						
	3.00928	+++++					AVRG		3.18448		4.36680	<-
92 1,3,5-Trimethylbenzene	2.37062	2.30275	2.34618	2.28625	+++++	2.27945						
	2.26106	+++++					AVRG		2.30772		1.82802	<-
93 2-Chlorotoluene	2.24392	2.20790	2.22098	2.13610	+++++	2.08581						
	2.07594	+++++					AVRG		2.16177		3.34713	<-
94 4-Chlorotoluene	2.02892	1.97483	1.94704	1.89262	+++++	1.85123						
	1.86981	+++++					AVRG		1.92741		3.53942	<-
95 tert-Butylbenzene	2.29265	2.21171	2.11549	2.15275	+++++	2.11883						
	2.13761	+++++					AVRG		2.17151		3.17087	<-
96 1,2,4-Trimethylbenzene	2.39024	2.33362	2.38151	2.31035	+++++	2.28740						
	2.28977	+++++					AVRG		2.33215		1.92598	<-
97 Pentachloroethane	0.25931	0.27148	0.29993	0.31670	0.34331	0.35584						
	+++++	+++++					AVRG		0.30776		12.48378	
98 sec-Butylbenzene	3.25024	3.15460	3.11345	3.04554	+++++	2.98216						
	2.92964	+++++					AVRG		3.07927		3.81587	<-
99 4-Isopropyltoluene	2.61296	2.54519	2.56829	2.50275	+++++	2.49418						
	2.46863	+++++					AVRG		2.53200		2.11564	<-

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Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
100 1,3-Dichlorobenzene	1.48980	1.37353	1.35950	1.31086	++++++	1.29451						
	1.32022	+++++					AVRG		1.35807		5.23744	<-
102 1,4-Dichlorobenzene	1.54639	1.45608	1.39583	1.35328	+++++	1.31084						
	1.34330	+++++					AVRG		1.40095		6.21728	<-
103 Benzyl chloride	56588	120138	377253	804087	1690242	4513803						
	+++++	+++++					LINR	0.06055	1.12590		0.99993	
104 n-Butylbenzene	1.33898	1.28517	1.29407	1.25362	+++++	1.26482						
	1.27441	+++++					AVRG		1.28518		2.33440	<-
105 bis(2-Chloroisopropyl)ether	0.06271	0.06955	0.07355	0.07817	0.07996	0.08395						
	+++++	+++++					AVRG		0.07465		10.32263	
106 1,2-Dichlorobenzene	1.38639	1.32225	1.29005	1.26309	+++++	1.22901						
	1.26443	+++++					AVRG		1.29254		4.29218	<-
107 1,2-Dibromo-3-chloropropane	0.08418	0.09329	0.10160	0.10732	+++++	0.12304						
	+++++	+++++					AVRG		0.10188		14.43017	<-
108 1,2,4-Trichlorobenzene	1.10291	1.04218	0.97103	0.94356	+++++	0.92339						
	0.92509	+++++					AVRG		0.98469		7.38894	<-
109 Hexachlorobutadiene	0.69601	0.68171	0.65202	0.62129	+++++	0.63636						
	0.64498	+++++					AVRG		0.65540		4.30874	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
110 Naphthalene	1.98961	1.87703	1.89516	1.85127	+++++	1.87045						
	1.88443	+++++					AVRG		1.89466		2.57499	<-
111 1,2,3-Trichlorobenzene	0.91962	0.87421	0.83927	0.80898	+++++	0.79143						
	0.79782	+++++					AVRG		0.83855		5.98571	<-
$ 47 1,2-Dichloroethane-d4	0.25044	0.25093	0.25260	0.25463	+++++	0.24546						
	0.24916	+++++					AVRG		0.25054		1.24761	<-
$ 64 Toluene-d8	1.31559	1.33322	1.32829	1.31898	+++++	1.32742						
	1.32397	+++++					AVRG		1.32458		0.48818	<-
$ 85 Bromofluorobenzene	0.92807	0.92580	0.93226	0.92712	+++++	0.91268						
	0.91485	+++++					AVRG		0.92346		0.84952	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

Data File: /chem/VOA6.i/061509v6/6p122.d
Report Date: 02-Jul-2009 18:45

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 15-JUN-2009 21:17
Lab File ID: 6p122.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-17 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	2 Xylenes (total)	0.59099	0.59137	0.59137	0.050	0.06414	60.00000	Averaged	
M	3 1,2-Dichloroethylene (total	0.32811	0.32999	0.32999	0.050	0.57430	60.00000	Averaged	
M	1 1,3-Dichloropropylene	0.31539	0.34893	0.34893	0.050	10.63563	60.00000	Averaged	
	4 Dichlorodifluoromethane	0.13952	0.13683	0.13683	0.050	-1.92704	60.00000	Averaged	
	5 Chloromethane	0.23207	0.20931	0.20931	0.100	-9.80892	60.00000	Averaged	spcc
	6 Vinyl chloride	0.23499	0.21065	0.21065	0.050	-10.35677	20.00000	Averaged	ccc
	7 Bromomethane	0.18554	0.17499	0.17499	0.050	-5.68766	60.00000	Averaged	
	8 Chloroethane	0.16599	0.15689	0.15689	0.050	-5.48267	60.00000	Averaged	
	9 Trichlorofluoromethane	0.31108	0.30390	0.30390	0.050	-2.31006	60.00000	Averaged	
	10 Ethyl Ether	0.21032	0.19242	0.19242	0.001	-8.51391	60.00000	Averaged	
	13 Acetone	257	250	0.03987	0.050	2.68916	60.00000	Linear	<-
	16 Acetonitrile	0.02606	0.02962	0.02962	0.010	13.65231	60.00000	Averaged	
	14 1,1-Dichloroethylene	0.30847	0.30569	0.30569	0.050	-0.90003	20.00000	Averaged	ccc
	17 Methyl acetate	0.15239	0.19141	0.19141	0.010	25.60532	60.00000	Averaged	
	15 Iodomethane	0.36696	0.39025	0.39025	0.050	6.34848	60.00000	Averaged	
	20 Methylene chloride	47.66806	50.00000	0.24858	0.050	-4.66388	60.00000	Linear	
	18 Carbon disulfide	0.66184	0.71375	0.71375	0.050	7.84456	60.00000	Averaged	
	22 tert-Butyl methyl ether	0.61548	0.59095	0.59095	0.050	-3.98627	60.00000	Averaged	
	23 trans-1,2-Dichloroethylene	0.31030	0.30642	0.30642	0.050	-1.24902	60.00000	Averaged	
	24 Vinyl acetate	0.34636	0.18977	0.18977	0.010	-45.20998	60.00000	Averaged	
	25 1,1-Dichloroethane	0.39203	0.38761	0.38761	0.100	-1.12735	60.00000	Averaged	spcc
	30 2-Butanone	0.05356	0.06090	0.06090	0.030	13.71574	60.00000	Averaged	
	31 cis-1,2-Dichloroethylene	0.34592	0.35356	0.35356	0.050	2.20986	60.00000	Averaged	
	33 2,2-Dichloropropane	0.29427	0.30847	0.30847	0.050	4.82609	60.00000	Averaged	
	36 Chloroform	0.37849	0.37956	0.37956	0.010	0.28266	20.00000	Averaged	ccc
	35 Bromochloromethane	0.11536	0.12034	0.12034	0.010	4.31878	60.00000	Averaged	
	40 1,1,1-Trichloroethane	0.30693	0.32094	0.32094	0.010	4.56461	60.00000	Averaged	
	43 Cyclohexane	0.39000	0.38799	0.38799	0.010	-0.51659	60.00000	Averaged	
	44 1,1-Dichloropropene	0.30239	0.30591	0.30591	0.010	1.16514	60.00000	Averaged	
	52 n-Butyl alcohol	0.00561	0.00636	0.00636	0.001	13.37079	60.00000	Averaged	
	46 Carbon tetrachloride	0.27838	0.29450	0.29450	0.010	5.79087	60.00000	Averaged	
$	47 1,2-Dichloroethane-d4	0.25054	0.24537	0.24537	0.001	-2.06059	60.00000	Averaged	
	48 1,2-Dichloroethane	0.28523	0.27846	0.27846	0.010	-2.37525	60.00000	Averaged	
	49 Benzene	0.93344	0.89669	0.89669	0.010	-3.93695	60.00000	Averaged	
	50 Cyclohexene	0.45698	0.43774	0.43774	0.001	-4.21100	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6p122.d
Analysis Type: WATER
Lab Sample ID: W6VM090615-17
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Injection Date: 15-JUN-2009 21:17
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	53 Trichloroethylene	0.23398	0.23348	0.23348	0.010	-0.21210	60.00000	Averaged	
	55 1,2-Dichloropropane	0.22842	0.23301	0.23301	0.010	2.00615	20.00000	Averaged	ccc
	56 Methylcyclohexane	0.42426	0.42715	0.42715	0.010	0.68171	60.00000	Averaged	
	59 Bromodichloromethane	0.25582	0.27654	0.27654	0.010	8.09629	60.00000	Averaged	
	58 Dibromomethane	0.12910	0.13156	0.13156	0.010	1.90860	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	203	250	0.11674	0.010	-18.83979	60.00000	Linear	
	63 4-Methyl-2-pentanone	0.10020	0.11086	0.11086	0.010	10.63751	60.00000	Averaged	
	62 cis-1,3-Dichloropropylene	0.33458	0.37060	0.37060	0.010	10.76660	60.00000	Averaged	
$	64 Toluene-d8	1.32458	1.32091	1.32091	0.010	-0.27688	60.00000	Averaged	
	65 Toluene	0.82102	0.77893	0.77893	0.010	-5.12616	20.00000	Averaged	ccc
	67 trans-1,3-Dichloropropylene	0.39769	0.43972	0.43972	0.010	10.56820	60.00000	Averaged	
	68 1,1,2-Trichloroethane	0.21291	0.21809	0.21809	0.010	2.43311	60.00000	Averaged	
	69 2-Hexanone	0.13814	0.16199	0.16199	0.010	17.26788	60.00000	Averaged	
	70 1,3-Dichloropropane	0.45210	0.45865	0.45865	0.010	1.44875	60.00000	Averaged	
	71 Tetrachloroethylene	0.28684	0.28699	0.28699	0.010	0.05439	60.00000	Averaged	
	72 Dibromochloromethane	0.26109	0.30154	0.30154	0.010	15.49125	60.00000	Averaged	
	73 1,2-Dibromoethane	0.24943	0.26313	0.26313	0.010	5.49468	60.00000	Averaged	
	76 Chlorobenzene	0.88521	0.88707	0.88707	0.300	0.21000	60.00000	Averaged	spcc
	77 1,1,1,2-Tetrachloroethane	0.28879	0.31792	0.31792	0.010	10.08760	60.00000	Averaged	
	78 Ethylbenzene	1.48252	1.45927	1.45927	0.010	-1.56790	20.00000	Averaged	ccc
	79 m,p-Xylenes	0.59530	0.59207	0.59207	0.010	-0.54358	60.00000	Averaged	
	80 o-Xylene	0.58237	0.58998	0.58998	0.010	1.30655	60.00000	Averaged	
	81 Styrene	0.90594	0.97253	0.97253	0.010	7.35079	60.00000	Averaged	
	82 Bromoform	48.27471	50.00000	0.37417	0.100	-3.45058	60.00000	Linear	spcc
	83 Isopropylbenzene	2.74854	2.68539	2.68539	0.010	-2.29746	60.00000	Averaged	
	87 1,1,2,2-Tetrachloroethane	0.59416	0.60116	0.60116	0.300	1.17786	60.00000	Averaged	spcc
$	85 Bromofluorobenzene	0.92346	0.91176	0.91176	0.010	-1.26671	60.00000	Averaged	
	88 1,2,3-Trichloropropane	0.16387	0.16327	0.16327	0.010	-0.36663	60.00000	Averaged	
	90 Bromobenzene	0.70499	0.71427	0.71427	0.010	1.31641	60.00000	Averaged	
	91 n-Propylbenzene	3.18448	3.08790	3.08790	0.010	-3.03263	60.00000	Averaged	
	93 2-Chlorotoluene	2.16177	2.15596	2.15596	0.010	-0.26908	60.00000	Averaged	
	92 1,3,5-Trimethylbenzene	2.30772	2.30229	2.30229	0.010	-0.23512	60.00000	Averaged	
	94 4-Chlorotoluene	1.92741	1.92043	1.92043	0.010	-0.36226	60.00000	Averaged	
	95 tert-Butylbenzene	2.17151	2.17106	2.17106	0.010	-0.02069	60.00000	Averaged	
	96 1,2,4-Trimethylbenzene	2.33215	2.32054	2.32054	0.010	-0.49755	60.00000	Averaged	
	98 sec-Butylbenzene	3.07927	3.03817	3.03817	0.010	-1.33484	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6p122.d
Analysis Type: WATER
Lab Sample ID: W6VM090615-17
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Injection Date: 15-JUN-2009 21:17
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
99 4-Isopropyltoluene	2.53200	2.51684	2.51684	0.010	-0.59887	60.00000	Averaged
100 1,3-Dichlorobenzene	1.35807	1.33772	1.33772	0.010	-1.49857	60.00000	Averaged
102 1,4-Dichlorobenzene	1.40095	1.36268	1.36268	0.010	-2.73177	60.00000	Averaged
104 n-Butylbenzene	1.28518	1.26881	1.26881	0.010	-1.27351	60.00000	Averaged
106 1,2-Dichlorobenzene	1.29254	1.29006	1.29006	0.010	-0.19132	60.00000	Averaged
107 1,2-Dibromo-3-chloropropane	0.10188	0.12483	0.12483	0.010	22.52469	60.00000	Averaged
108 1,2,4-Trichlorobenzene	0.98469	0.95045	0.95045	0.010	-3.47769	60.00000	Averaged
109 Hexachlorobutadiene	0.65540	0.66095	0.66095	0.010	0.84703	60.00000	Averaged
110 Naphthalene	1.89466	1.90575	1.90575	0.010	0.58575	60.00000	Averaged
111 1,2,3-Trichlorobenzene	0.83855	0.85498	0.85498	0.010	1.95828	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.13178
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/061509v6/6p122.d
Lab Smp Id: W6VM090615-17 Client Smp ID: SECONDSOURCE
Inj Date : 15-JUN-2009 21:17
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090615-17|L-ICV|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090527-01C+IVM090611-01
Comment :
Method : /chem/VOA6.i/061509v6/VOA6-8260B-061509.m
Meth Date : 02-Jul-2009 18:45 dav01267 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 2 Xylenes (total)	106				2594405	150.000	150
M 3 1,2-Dichloroethylene (total)	96				1296763	100.000	100
M 1 1,3-Dichloropropylene	75				1371197	100.000	111
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	268854	50.0000	49.0
5 Chloromethane	50	4.713	4.713	(0.472)	411251	50.0000	45.1
6 Vinyl chloride	62	4.934	4.934	(0.494)	413890	50.0000	44.8
7 Bromomethane	94	5.498	5.498	(0.551)	343829	50.0000	47.2
8 Chloroethane	64	5.619	5.619	(0.563)	308271	50.0000	47.2
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	597111	50.0000	48.8
10 Ethyl Ether	59	6.334	6.334	(0.635)	378067	50.0000	45.7
13 Acetone	43	6.718	6.718	(0.673)	391734	250.000	257
16 Acetonitrile	41	7.078	7.078	(0.709)	1163904	1000.00	1140
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	600635	50.0000	49.5
17 Methyl acetate	43	7.102	7.102	(0.712)	1880412	250.000	314
15 Iodomethane	142	6.968	6.968	(0.698)	3833936	250.000	266

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	20 Methylene chloride	84	7.291	7.291	(0.731)	488418	50.0000	47.7
	18 Carbon disulfide	76	7.096	7.096	(0.711)	7012062	250.000	270
	22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	1161117	50.0000	48.0
	23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	602067	50.0000	49.4
	24 Vinyl acetate	43	8.066	8.066	(0.808)	1864356	250.000	137
	25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	761592	50.0000	49.4
	30 2-Butanone	43	8.694	8.694	(0.871)	598302	250.000	284
	31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	694696	50.0000	51.1
	33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	606092	50.0000	52.4
	36 Chloroform	83	9.053	9.053	(0.907)	745784	50.0000	50.1
	35 Bromochloromethane	128	9.023	9.023	(0.904)	236448	50.0000	52.2
	40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	630600	50.0000	52.3
	43 Cyclohexane	56	9.413	9.413	(0.943)	762333	50.0000	49.7
	44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	601062	50.0000	50.6
	52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1250337	5000.00	5670
	46 Carbon tetrachloride	117	9.517	9.517	(0.954)	578645	50.0000	52.9
$	47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	482122	50.0000	49.0
	48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	547120	50.0000	48.8
	49 Benzene	78	9.724	9.724	(0.974)	1761848	50.0000	48.0
	50 Cyclohexene	67	9.834	9.834	(0.985)	860085	50.0000	47.9
*	51 Fluorobenzene	96	9.980	9.980	(1.000)	1964840	50.0000	
	53 Trichloroethylene	95	10.364	10.364	(1.038)	458759	50.0000	49.9
	55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	457819	50.0000	51.0
	56 Methylcyclohexane	83	10.608	10.608	(1.063)	839279	50.0000	50.3
	59 Bromodichloromethane	83	10.864	10.864	(1.089)	543350	50.0000	54.0
	58 Dibromomethane	93	10.754	10.754	(1.078)	258499	50.0000	51.0
	61 2-Chloroethylvinyl ether	63	11.089	11.089	(1.111)	1146913	250.000	203
	63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	810617	250.000	276
	62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	728169	50.0000	55.4
$	64 Toluene-d8	98	11.626	11.626	(0.884)	1931653	50.0000	49.9
	65 Toluene	92	11.699	11.699	(0.889)	1139085	50.0000	47.4
	67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	643028	50.0000	55.3
	68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	318929	50.0000	51.2
	69 2-Hexanone	43	12.260	12.260	(0.932)	1184446	250.000	293
	70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	670714	50.0000	50.7
	71 Tetrachloroethylene	164	12.290	12.290	(0.934)	419688	50.0000	50.0
	72 Dibromochloromethane	129	12.540	12.540	(0.953)	440961	50.0000	57.7
	73 1,2-Dibromoethane	107	12.705	12.705	(0.966)	384796	50.0000	52.7
*	75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1462363	50.0000	
	76 Chlorobenzene	112	13.193	13.193	(1.003)	1297224	50.0000	50.1
	77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	464920	50.0000	55.0
	78 Ethylbenzene	91	13.254	13.254	(1.007)	2133985	50.0000	49.2
	79 m,p-Xylenes	106	13.363	13.363	(1.016)	1731637	100.000	99.4
	80 o-Xylene	106	13.796	13.796	(1.049)	862768	50.0000	50.6
	81 Styrene	104	13.802	13.802	(1.049)	1422191	50.0000	53.7
	82 Bromoform	173	14.058	14.058	(0.903)	306428	50.0000	48.3
	83 Isopropylbenzene	105	14.156	14.156	(0.909)	2199194	50.0000	48.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
87 1,1,2,2-Tetrachloroethane	83	14.436	14.436	(0.927)	492318	50.0000	50.6
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	746687	50.0000	49.4
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	133708	50.0000	49.8
90 Bromobenzene	156	14.564	14.564	(0.935)	584949	50.0000	50.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2528829	50.0000	48.5
93 2-Chlorotoluene	91	14.729	14.729	(0.946)	1765614	50.0000	49.9
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1885454	50.0000	49.9
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1572728	50.0000	49.8
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1777982	50.0000	50.0
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1900403	50.0000	49.8
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	2488099	50.0000	49.3
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	2061156	50.0000	49.7
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	1095522	50.0000	49.2
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	818947	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	1115963	50.0000	48.6
104 n-Butylbenzene	92	15.887	15.887	(1.020)	1039089	50.0000	49.4
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	1056493	50.0000	49.9
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	102232	50.0000	61.3
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	778368	50.0000	48.3
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	541281	50.0000	50.4
110 Naphthalene	128	18.289	18.289	(1.174)	1560712	50.0000	50.3
111 1,2,3-Trichlorobenzene	180	18.619	18.619	(1.195)	700180	50.0000	51.0

Data File: /chem/VOA6.i/061509v6/6p122.d
Date : 15-JUN-2009 21:17
Client ID: SECONDSOURCE
Sample Info: IW6VH090615-17IL-ICV11VOAF11
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

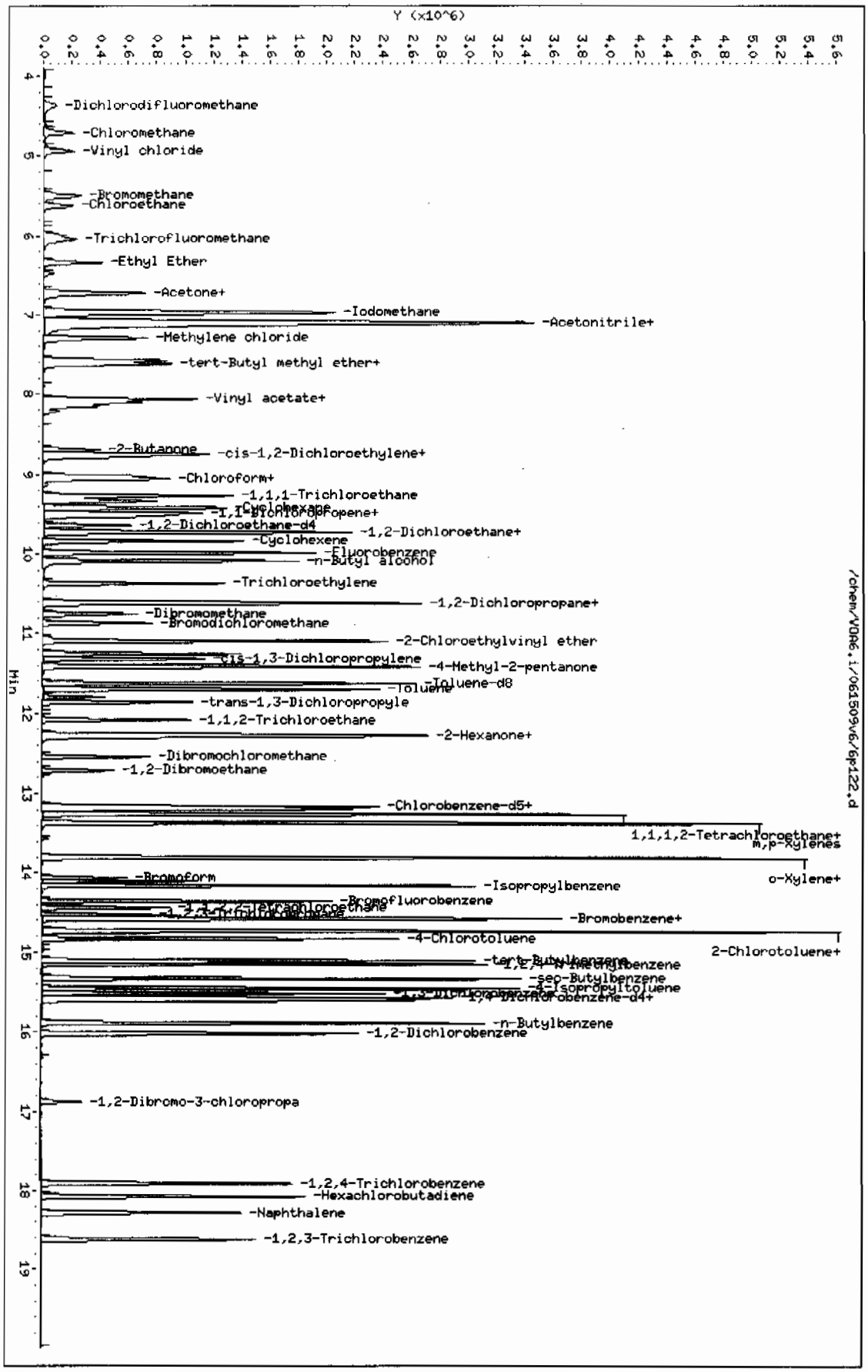

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 16-JUN-2009 01:27
Lab File ID: 6p131.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-25 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
150 Chlorotrifluoroethylene	132	150	0.16345	0.010	-12.01248	60.00000	Linear	
149 2-Chloro-1,1,1-trifluoroeth	0.29741	0.30007	0.30007	0.010	0.89348	60.00000	Averaged	
11 Acrolein	0.01230	0.01826	0.01826	0.001	48.47787	60.00000	Averaged	
12 Trichlorotrifluoroethane	0.08574	0.08796	0.08796	0.050	2.59338	60.00000	Averaged	
26 Isopropyl Alcohol	0.01255	0.01416	0.01416	0.001	12.77310	60.00000	Averaged	
19 Allyl chloride	0.28551	0.25781	0.25781	0.010	-9.70101	60.00000	Averaged	
28 tert-butyl Alcohol	0.02108	0.02335	0.02335	0.001	10.78685	60.00000	Averaged	
21 Acrylonitrile	0.06813	0.06670	0.06670	0.010	-2.10050	60.00000	Averaged	
34 Isopropyl ether	0.70684	0.71757	0.71757	0.001	1.51850	60.00000	Averaged	
27 2-Chloro-1,3-butadiene	0.25646	0.27873	0.27873	0.010	8.68301	60.00000	Averaged	
41 Ethyl tert-butyl ether	0.67565	0.69616	0.69616	0.001	3.03559	60.00000	Averaged	
32 Propionitrile	0.02721	0.02683	0.02683	0.010	-1.42290	60.00000	Averaged	
29 Ethyl acetate	0.19208	0.16826	0.16826	0.010	-12.40188	60.00000	Averaged	
37 Methacrylonitrile	0.10709	0.10354	0.10354	0.010	-3.31123	60.00000	Averaged	
38 Tetrahydrofuran	0.13836	0.13346	0.13346	0.010	-3.54546	60.00000	Averaged	
42 Isobutyl alcohol	0.00627	0.00655	0.00655	0.005	4.39065	60.00000	Averaged	
45 Methyl tert-amyl ether	0.22440	0.18558	0.18558	0.001	-17.30149	60.00000	Averaged	
54 Methyl methacrylate	0.14132	0.14393	0.14393	0.010	1.84815	60.00000	Averaged	
57 1,4-Dioxane	0.00232	0.00205	0.00205	0.001	-11.52266	60.00000	Averaged	
60 2-Nitropropane	230	250	0.05311	0.010	-7.93335	60.00000	Linear	
66 Ethyl methacrylate	0.35900	0.34939	0.34939	0.010	-2.67735	60.00000	Averaged	
74 1-Chlorohexane	0.29129	0.30067	0.30067	0.001	3.21786	60.00000	Averaged	
84 cis-1,4-Dichloro-2-butene	0.16765	0.16758	0.16758	0.010	-0.04286	60.00000	Averaged	
86 Cyclohexanone	0.00965	0.00953	0.00953	0.010	-1.25952	60.00000	Averaged	<-
89 trans-1,4-Dichloro-2-butene	0.16166	0.16037	0.16037	0.010	-0.80088	60.00000	Averaged	
97 Pentachloroethane	0.30776	0.31329	0.31329	0.010	1.79668	60.00000	Averaged	
103 Benzyl chloride	204	250	0.90663	0.010	-18.26389	60.00000	Linear	
105 bis(2-Chloroisopropyl)ether	0.07465	0.07123	0.07123	0.010	-4.58560	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 16-JUN-2009 01:27
Lab File ID: 6p131.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-25 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Average %D / Drift Results.	
Calculated Average %D/Drift =	7.46065
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/061509v6/6p131.d
Lab Smp Id: W6VM090615-25 Client Smp ID: SECONDSOURCE
Inj Date : 16-JUN-2009 01:27
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090615-25|S-ICV|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090601-08A+UVM090528-01C
Comment :
Method : /chem/VOA6.i/061509v6/VOA6-8260B-061509.m
Meth Date : 02-Jul-2009 18:45 dav01267 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALsubS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
150 Chlorotrifluoroethylene	116	4.290	4.290	(0.430)	924962	150.000	132
149 2-Chloro-1,1,1-trifluoroethane	118	5.065	5.065	(0.508)	1698102	150.000	151
11 Acrolein	56	6.542	6.542	(0.655)	172193	250.000	371
12 Trichlorotrifluoroethane	85	6.700	6.700	(0.671)	829627	250.000	256
26 Isopropyl Alcohol	45	6.791	6.791	(0.680)	1335415	2500.00	2820
19 Allyl chloride	41	7.145	7.145	(0.716)	2431624	250.000	226
28 tert-butyl alcohol	59	7.291	7.291	(0.731)	2202614	2500.00	2770
21 Acrylonitrile	53	7.547	7.547	(0.756)	629130	250.000	245
34 Isopropyl ether	45	8.078	8.078	(0.809)	1353604	50.0000	50.8
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	525791	50.0000	54.3
41 Ethyl tert-butyl ether	59	8.486	8.486	(0.850)	1313221	50.0000	51.5
32 Propionitrile	54	8.779	8.779	(0.880)	253020	250.000	246
29 Ethyl acetate	43	8.706	8.706	(0.872)	1586974	250.000	219
37 Methacrylonitrile	41	8.950	8.950	(0.897)	976596	250.000	242
38 Tetrahydrofuran	42	9.065	9.065	(0.582)	519500	250.000	241

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42 Isobutyl alcohol	41	9.389	9.389	(0.941)	617828	2500.00	2610
45 Methyl tert-amyl ether	55	9.742	9.742	(0.976)	350066	50.0000	41.3
54 Methyl methacrylate	69	10.589	10.589	(1.061)	1357561	250.000	255
57 1,4-Dioxane	88	10.699	10.699	(1.072)	193767	2500.00	2210
60 2-Nitropropane	43	11.071	11.071	(1.109)	500944	250.000	230
66 Ethyl methacrylate	69	11.858	11.858	(0.901)	2460727	250.000	243
74 1-Chlorohexane	55	13.052	13.052	(0.992)	423520	50.0000	51.6
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	652342	250.000	250
86 Cyclohexanone	55	14.320	14.320	(1.089)	335574	1250.00	1230
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	624266	250.000	248
97 Pentachloroethane	167	15.180	15.180	(0.975)	1219540	250.000	254
103 Benzyl chloride	91	15.717	15.717	(1.009)	3529240	250.000	204
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	277260	250.000	238
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1886367	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1408600	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	778539	50.0000	

Data File: /chem/VOA6.i/061509v6/6p131.d
Date : 16-JUN-2009 01:27
Client ID: SECONDSOURCE
Sample Info: 1W6VM090615-25|S-ICV11|VOAF11|
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

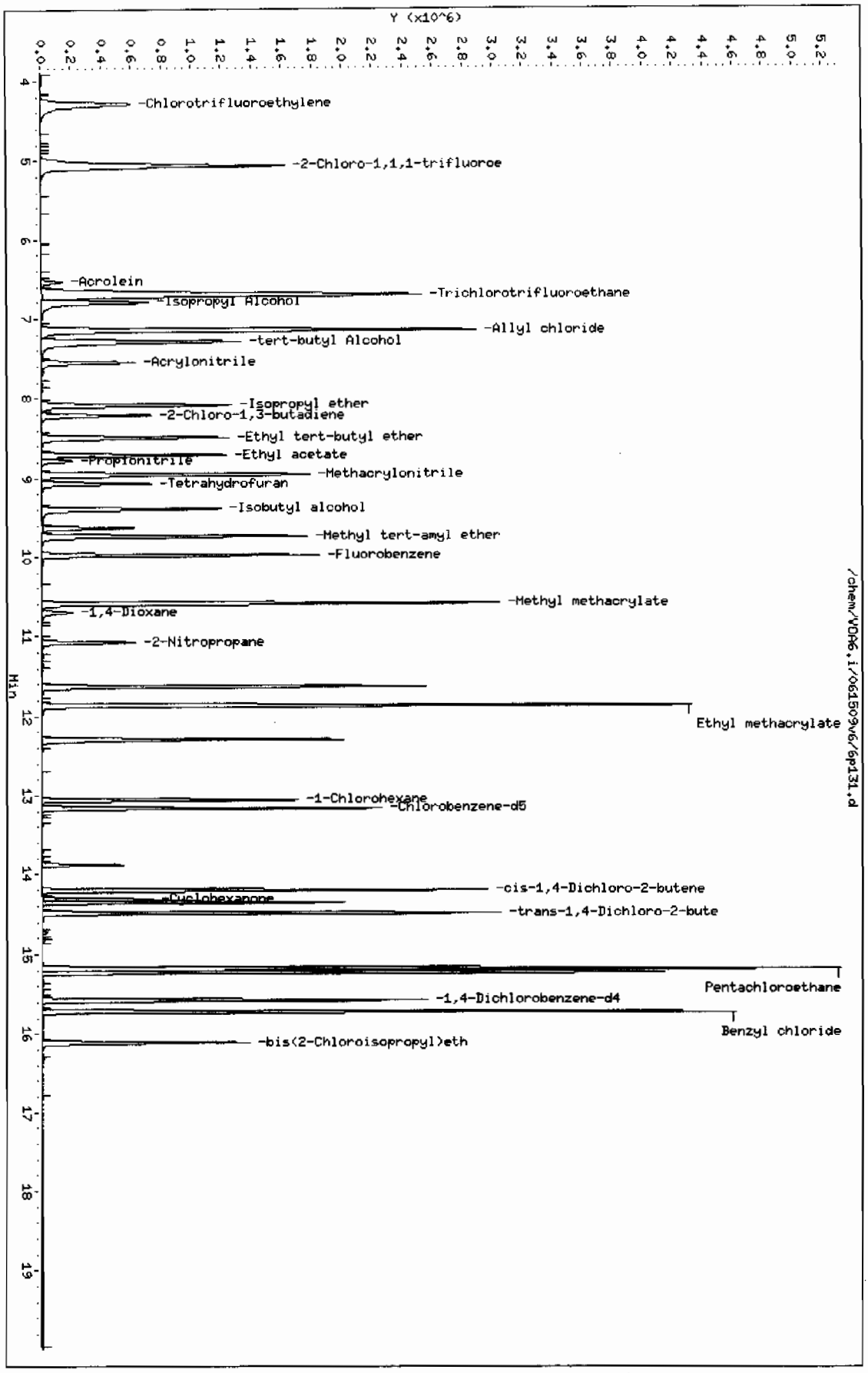

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 06-JUL-2009 10:49
Lab File ID: 6s103.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090706-02 Quant Type: ISTD
Method: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	2 Xylenes (total)	0.59099	0.52782	0.52782	0.050	-10.68976	60.00000	Averaged	
M	3 1,2-Dichloroethylene (total	0.32811	0.28224	0.28224	0.050	-13.97876	60.00000	Averaged	
M	1 1,3-Dichloropropylene	0.31539	0.29847	0.29847	0.050	-5.36600	60.00000	Averaged	
	4 Dichlorodifluoromethane	0.13952	0.16425	0.16425	0.050	17.72262	60.00000	Averaged	
	5 Chloromethane	0.23207	0.20706	0.20706	0.100	-10.77628	60.00000	Averaged	spcc
	6 Vinyl chloride	0.23499	0.21385	0.21385	0.050	-8.99415	20.00000	Averaged	ccc
	7 Bromomethane	0.18554	0.16201	0.16201	0.050	-12.68255	60.00000	Averaged	
	8 Chloroethane	0.16599	0.14733	0.14733	0.050	-11.24560	60.00000	Averaged	
	9 Trichlorofluoromethane	0.31108	0.30082	0.30082	0.050	-3.29907	60.00000	Averaged	
	10 Ethyl Ether	0.21032	0.17558	0.17558	0.001	-16.51847	60.00000	Averaged	
	13 Acetone	264	250	0.04107	0.050	5.75690	60.00000	Linear	<-
	16 Acetonitrile	0.02606	0.02563	0.02563	0.010	-1.65106	60.00000	Averaged	
	14 1,1-Dichloroethylene	0.30847	0.27337	0.27337	0.050	-11.37749	20.00000	Averaged	ccc
	17 Methyl acetate	0.15239	0.12044	0.12044	0.010	-20.96148	60.00000	Averaged	
	15 Iodomethane	0.36696	0.32392	0.32392	0.050	-11.72711	60.00000	Averaged	
	20 Methylene chloride	38.26401	50.00000	0.20412	0.050	-23.47198	60.00000	Linear	
	18 Carbon disulfide	0.66184	0.62955	0.62955	0.050	-4.87809	60.00000	Averaged	
	22 tert-Butyl methyl ether	0.61548	0.50476	0.50476	0.050	-17.98884	60.00000	Averaged	
	23 trans-1,2-Dichloroethylene	0.31030	0.25800	0.25800	0.050	-16.85488	60.00000	Averaged	
	24 Vinyl acetate	0.34636	0.26990	0.26990	0.010	-22.07495	60.00000	Averaged	
	25 1,1-Dichloroethane	0.39203	0.33143	0.33143	0.100	-15.45697	60.00000	Averaged	spcc
	30 2-Butanone	0.05356	0.06967	0.06967	0.030	30.08499	60.00000	Averaged	
	31 cis-1,2-Dichloroethylene	0.34592	0.30649	0.30649	0.050	-11.39882	60.00000	Averaged	
	33 2,2-Dichloropropane	0.29427	0.27242	0.27242	0.050	-7.42470	60.00000	Averaged	
	36 Chloroform	0.37849	0.32160	0.32160	0.010	-15.03263	20.00000	Averaged	ccc
	35 Bromochloromethane	0.11536	0.10308	0.10308	0.010	-10.64672	60.00000	Averaged	
	40 1,1,1-Trichloroethane	0.30693	0.27871	0.27871	0.010	-9.19528	60.00000	Averaged	
	43 Cyclohexane	0.39000	0.34852	0.34852	0.010	-10.63551	60.00000	Averaged	
	44 1,1-Dichloropropene	0.30239	0.27053	0.27053	0.010	-10.53565	60.00000	Averaged	
	52 n-Butyl alcohol	0.00561	0.00564	0.00564	0.001	0.53638	60.00000	Averaged	
	46 Carbon tetrachloride	0.27838	0.25837	0.25837	0.010	-7.18721	60.00000	Averaged	
$	47 1,2-Dichloroethane-d4	0.25054	0.25530	0.25530	0.001	1.90241	60.00000	Averaged	
	48 1,2-Dichloroethane	0.28523	0.22591	0.22591	0.010	-20.79887	60.00000	Averaged	
	49 Benzene	0.93344	0.77726	0.77726	0.010	-16.73098	60.00000	Averaged	
	50 Cyclohexene	0.45698	0.41254	0.41254	0.001	-9.72412	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6s103.d
Analysis Type: WATER
Lab Sample ID: W6VM090706-02
Method: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m

Injection Date: 06-JUL-2009 10:49
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	53 Trichloroethylene	0.23398	0.20704	0.20704	0.010	-11.51286	60.00000	Averaged	
	55 1,2-Dichloropropane	0.22842	0.19943	0.19943	0.010	-12.69177	20.00000	Averaged	ccc
	56 Methylcyclohexane	0.42426	0.39198	0.39198	0.010	-7.60802	60.00000	Averaged	
	59 Bromodichloromethane	0.25582	0.24077	0.24077	0.010	-5.88427	60.00000	Averaged	
	58 Dibromomethane	0.12910	0.11017	0.11017	0.010	-14.65907	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	188	250	0.10783	0.010	-24.96436	60.00000	Linear	
	63 4-Methyl-2-pentanone	0.10020	0.09209	0.09209	0.010	-8.09319	60.00000	Averaged	
	62 cis-1,3-Dichloropropylene	0.33458	0.31755	0.31755	0.010	-5.09023	60.00000	Averaged	
$	64 Toluene-d8	1.32458	1.38189	1.38189	0.010	4.32672	60.00000	Averaged	
	65 Toluene	0.82102	0.68368	0.68368	0.010	-16.72870	20.00000	Averaged	ccc
	67 trans-1,3-Dichloropropylene	0.39769	0.37943	0.37943	0.010	-4.59265	60.00000	Averaged	
	68 1,1,2-Trichloroethane	0.21291	0.19013	0.19013	0.010	-10.69958	60.00000	Averaged	
	69 2-Hexanone	0.13814	0.14915	0.14915	0.010	7.97309	60.00000	Averaged	
	70 1,3-Dichloropropane	0.45210	0.39085	0.39085	0.010	-13.54892	60.00000	Averaged	
	71 Tetrachloroethylene	0.28684	0.26257	0.26257	0.010	-8.45911	60.00000	Averaged	
	72 Dibromochloromethane	0.26109	0.25400	0.25400	0.010	-2.71803	60.00000	Averaged	
	73 1,2-Dibromoethane	0.24943	0.22823	0.22823	0.010	-8.49956	60.00000	Averaged	
	76 Chlorobenzene	0.88521	0.78971	0.78971	0.300	-10.78869	60.00000	Averaged	spcc
	77 1,1,1,2-Tetrachloroethane	0.28879	0.27822	0.27822	0.010	-3.66077	60.00000	Averaged	
	78 Ethylbenzene	1.48252	1.28749	1.28749	0.010	-13.15516	20.00000	Averaged	ccc
	79 m,p-Xylenes	0.59530	0.52959	0.52959	0.010	-11.03925	60.00000	Averaged	
	80 o-Xylene	0.58237	0.52428	0.52428	0.010	-9.97526	60.00000	Averaged	
	81 Styrene	0.90594	0.85268	0.85268	0.010	-5.87877	60.00000	Averaged	
	82 Bromoform	43.48472	50.00000	0.33586	0.100	-13.03056	60.00000	Linear	spcc
	83 Isopropylbenzene	2.74854	2.07174	2.07174	0.010	-24.62403	60.00000	Averaged	
	87 1,1,2,2-Tetrachloroethane	0.59416	0.52699	0.52699	0.300	-11.30558	60.00000	Averaged	spcc
$	85 Bromofluorobenzene	0.92346	0.95594	0.95594	0.010	3.51651	60.00000	Averaged	
	88 1,2,3-Trichloropropane	0.16387	0.16014	0.16014	0.010	-2.27679	60.00000	Averaged	
	90 Bromobenzene	0.70499	0.63701	0.63701	0.010	-9.64296	60.00000	Averaged	
	91 n-Propylbenzene	3.18448	2.75675	2.75675	0.010	-13.43146	60.00000	Averaged	
	93 2-Chlorotoluene	2.16177	1.90449	1.90449	0.010	-11.90149	60.00000	Averaged	
	92 1,3,5-Trimethylbenzene	2.30772	2.03791	2.03791	0.010	-11.69143	60.00000	Averaged	
	94 4-Chlorotoluene	1.92741	1.72370	1.72370	0.010	-10.56910	60.00000	Averaged	
	95 tert-Butylbenzene	2.17151	1.97023	1.97023	0.010	-9.26913	60.00000	Averaged	
	96 1,2,4-Trimethylbenzene	2.33215	2.06799	2.06799	0.010	-11.32696	60.00000	Averaged	
	98 sec-Butylbenzene	3.07927	2.78051	2.78051	0.010	-9.70240	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 06-JUL-2009 10:49
Lab File ID: 6s103.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090706-02 Quant Type: ISTD
Method: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
99	4-Isopropyltoluene	2.53200	2.37142	2.37142	0.010	-6.34207	60.00000	Averaged
100	1,3-Dichlorobenzene	1.35807	1.24969	1.24969	0.010	-7.98028	60.00000	Averaged
102	1,4-Dichlorobenzene	1.40095	1.26366	1.26366	0.010	-9.79993	60.00000	Averaged
104	n-Butylbenzene	1.28518	1.19960	1.19960	0.010	-6.65868	60.00000	Averaged
106	1,2-Dichlorobenzene	1.29254	1.18142	1.18142	0.010	-8.59688	60.00000	Averaged
107	1,2-Dibromo-3-chloropropane	0.10188	0.11837	0.11837	0.010	16.18008	60.00000	Averaged
108	1,2,4-Trichlorobenzene	0.98469	0.91108	0.91108	0.010	-7.47618	60.00000	Averaged
109	Hexachlorobutadiene	0.65540	0.62448	0.62448	0.010	-4.71784	60.00000	Averaged
110	Naphthalene	1.89466	1.76443	1.76443	0.010	-6.87355	60.00000	Averaged
111	1,2,3-Trichlorobenzene	0.83855	0.81638	0.81638	0.010	-2.64496	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 10.70882
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s103.d
Lab Smp Id: W6VM090706-02 Client Smp ID: VSTD050
Inj Date : 06-JUL-2009 10:49
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090706-02|change|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090605-01D+IVM090630-01
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 2 Xylenes (total)	106				2123619	150.000	134
M 3 1,2-Dichloroethylene (total)	96				1028124	100.000	85.9
M 1 1,3-Dichloropropylene	75				1087222	100.000	95.2
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	299153	50.0000	58.9
5 Chloromethane	50	4.713	4.713	(0.472)	377129	50.0000	44.6
6 Vinyl chloride	62	4.934	4.934	(0.494)	389496	50.0000	45.5
7 Bromomethane	94	5.508	5.508	(0.552)	295081	50.0000	43.6
8 Chloroethane	64	5.629	5.629	(0.564)	268335	50.0000	44.4
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	547901	50.0000	48.4
10 Ethyl Ether	59	6.340	6.340	(0.635)	319794	50.0000	41.7
13 Acetone	43	6.718	6.718	(0.673)	374046	250.000	264
16 Acetonitrile	41	7.078	7.078	(0.709)	933630	1000.00	983
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	497906	50.0000	44.3
17 Methyl acetate	43	7.103	7.103	(0.712)	1096857	250.000	198
15 Iodomethane	142	6.968	6.968	(0.698)	2949899	250.000	221

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
20 Methylene chloride	84	7.298	7.298	(0.731)	371775	50.0000	38.3
18 Carbon disulfide	76	7.096	7.096	(0.711)	5733163	250.000	238
22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	919352	50.0000	41.0
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	469901	50.0000	41.6
24 Vinyl acetate	43	8.066	8.066	(0.808)	2457937	250.000	195
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	603657	50.0000	42.3
30 2-Butanone	43	8.694	8.694	(0.871)	634444	250.000	325
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	558223	50.0000	44.3
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	496170	50.0000	46.3
36 Chloroform	83	9.059	9.059	(0.908)	585741	50.0000	42.5
35 Bromochloromethane	128	9.023	9.023	(0.904)	187737	50.0000	44.7
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	507626	50.0000	45.4
43 Cyclohexane	56	9.413	9.413	(0.943)	634783	50.0000	44.7
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	492725	50.0000	44.7
52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1027816	5000.00	5030
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	470585	50.0000	46.4
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	464997	50.0000	51.0
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	411453	50.0000	39.6
49 Benzene	78	9.724	9.724	(0.974)	1415669	50.0000	41.6
50 Cyclohexene	67	9.834	9.834	(0.985)	751387	50.0000	45.1
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1821350	50.0000	
53 Trichloroethylene	95	10.364	10.364	(1.038)	377097	50.0000	44.2
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	363236	50.0000	43.6
56 Methylcyclohexane	83	10.608	10.608	(1.063)	713931	50.0000	46.2
59 Bromodichloromethane	83	10.864	10.864	(1.089)	438528	50.0000	47.0
58 Dibromomethane	93	10.754	10.754	(1.078)	200665	50.0000	42.7
61 2-Chloroethylvinyl ether	63	11.090	11.090	(1.111)	981975	250.000	188
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	617557	250.000	230
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	578363	50.0000	47.4
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1853296	50.0000	52.2
65 Toluene	92	11.699	11.699	(0.889)	916898	50.0000	41.6
67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	508859	50.0000	47.7
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	254990	50.0000	44.6
69 2-Hexanone	43	12.260	12.260	(0.932)	1000156	250.000	270
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	524176	50.0000	43.2
71 Tetrachloroethylene	164	12.291	12.291	(0.934)	352145	50.0000	45.8
72 Dibromochloromethane	129	12.540	12.540	(0.953)	340643	50.0000	48.6
73 1,2-Dibromoethane	107	12.711	12.711	(0.966)	306083	50.0000	45.8
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1341131	50.0000	
76 Chlorobenzene	112	13.193	13.193	(1.003)	1059107	50.0000	44.6
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	373129	50.0000	48.2
78 Ethylbenzene	91	13.254	13.254	(1.007)	1726691	50.0000	43.4
79 m,p-Xylenes	106	13.363	13.363	(1.016)	1420491	100.000	89.0
80 o-Xylene	106	13.796	13.796	(1.049)	703128	50.0000	45.0
81 Styrene	104	13.802	13.802	(1.049)	1143553	50.0000	47.1
82 Bromoform	173	14.065	14.065	(0.903)	250504	50.0000	43.5
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1545245	50.0000	37.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
87 1,1,2,2-Tetrachloroethane	83	14.443	14.443	(0.927)	393064	50.0000	44.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	713003	50.0000	51.8
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	119442	50.0000	48.9
90 Bromobenzene	156	14.564	14.564	(0.935)	475124	50.0000	45.2
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2056178	50.0000	43.3
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1420500	50.0000	44.0
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1520015	50.0000	44.2
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1285654	50.0000	44.7
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1469532	50.0000	45.4
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1542447	50.0000	44.3
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	2073895	50.0000	45.1
99 4-Isopropyltoluene	119	15.455	15.455	(0.992)	1768768	50.0000	46.8
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	932108	50.0000	46.0
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	745869	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	942524	50.0000	45.1
104 n-Butylbenzene	92	15.887	15.887	(1.020)	894746	50.0000	46.7
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	881183	50.0000	45.7
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	88288	50.0000	58.1
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	679544	50.0000	46.3
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	465777	50.0000	47.6
110 Naphthalene	128	18.289	18.289	(1.174)	1316031	50.0000	46.6
111 1,2,3-Trichlorobenzene	180	18.625	18.625	(1.196)	608909	50.0000	48.7

Data File: /chem/VOA6.i/070609v6/6s103.d
Date : 06-JUL-2009 10:49
Client ID: VSTD050
Sample Info: IW6VH090706-02|change|1|VOAF1|
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

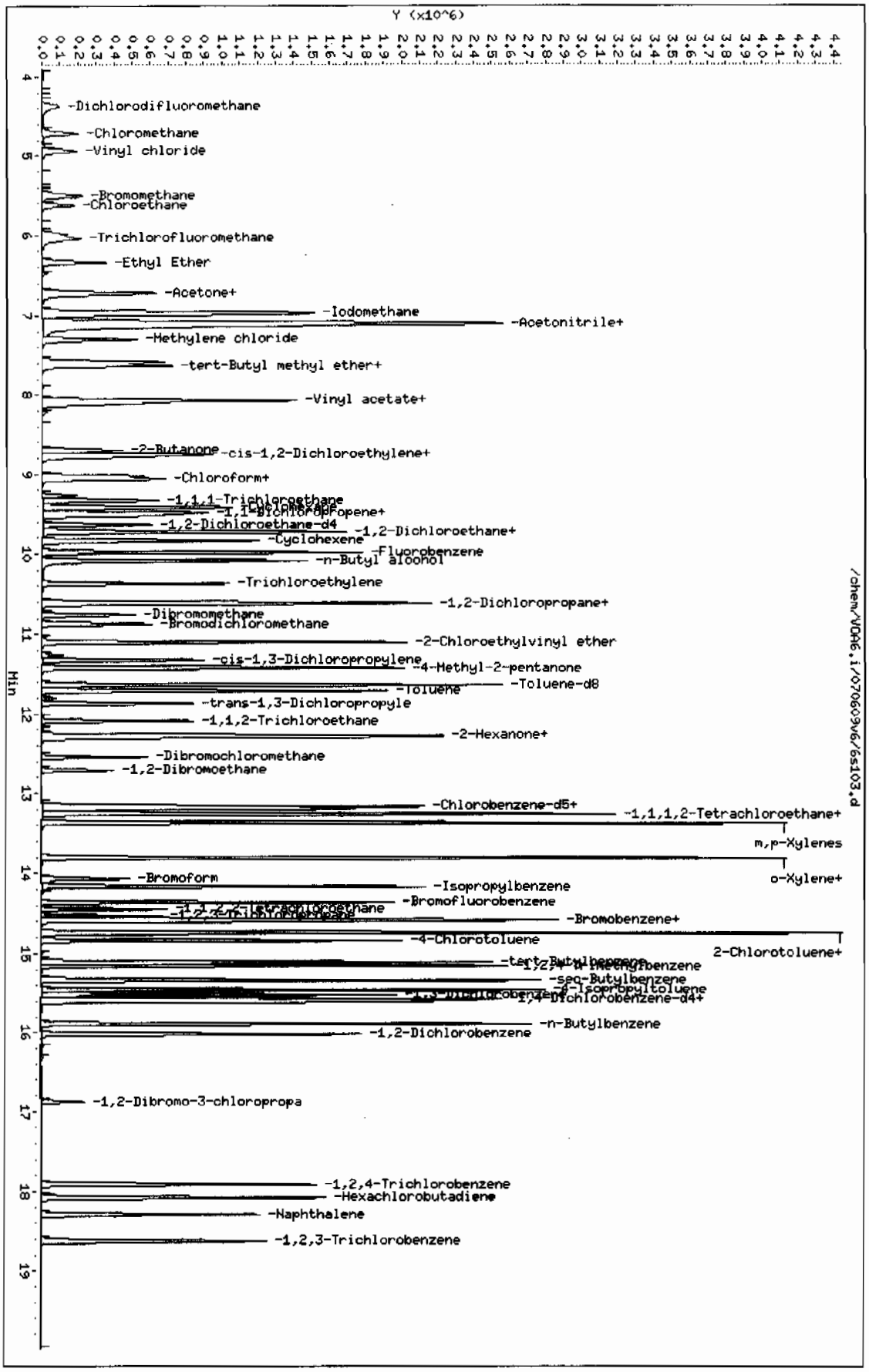

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 06-JUL-2009 11:44
Lab File ID: 6s105.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: UVM090601-08B Quant Type: ISTD
Method: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
11 Acrolein	0.01230	0.01860	0.01860	0.001	51.25216	60.00000	Averaged
12 Trichlorotrifluoroethane	0.08574	0.07419	0.07419	0.050	-13.46632	60.00000	Averaged
19 Allyl chloride	0.28551	0.21605	0.21605	0.010	-24.32748	60.00000	Averaged
21 Acrylonitrile	0.06813	0.05672	0.05672	0.010	-16.75226	60.00000	Averaged
27 2-Chloro-1,3-butadiene	0.25646	0.23272	0.23272	0.010	-9.25632	60.00000	Averaged
32 Propionitrile	0.02721	0.02282	0.02282	0.010	-16.14645	60.00000	Averaged
29 Ethyl acetate	0.19208	0.13817	0.13817	0.010	-28.06482	60.00000	Averaged
37 Methacrylonitrile	0.10709	0.08389	0.08389	0.010	-21.66715	60.00000	Averaged
38 Tetrahydrofuran	0.13836	0.10682	0.10682	0.010	-22.79439	60.00000	Averaged
42 Isobutyl alcohol	0.00627	0.00556	0.00556	0.005	-11.45680	60.00000	Averaged
54 Methyl methacrylate	0.14132	0.12077	0.12077	0.010	-14.54172	60.00000	Averaged
66 Ethyl methacrylate	0.35900	0.29274	0.29274	0.010	-18.45547	60.00000	Averaged
57 1,4-Dioxane	0.00232	0.00188	0.00188	0.001	-19.17604	60.00000	Averaged
60 2-Nitropropane	186	250	0.04266	0.010	-25.63423	60.00000	Linear
84 cis-1,4-Dichloro-2-butene	0.16765	0.14700	0.14700	0.010	-12.31627	60.00000	Averaged
86 Cyclohexanone	0.00965	0.01129	0.01129	0.010	17.00190	60.00000	Averaged <-
89 trans-1,4-Dichloro-2-butene	0.16166	0.13982	0.13982	0.010	-13.51425	60.00000	Averaged
97 Pentachloroethane	0.30776	0.26119	0.26119	0.010	-15.13125	60.00000	Averaged
103 Benzyl chloride	219	250	0.97378	0.010	-12.29955	60.00000	Linear
105 bis(2-Chloroisopropyl)ether	0.07465	0.06560	0.06560	0.010	-12.11770	60.00000	Averaged
$ 47 1,2-Dichloroethane-d4	0.25054	0.24483	0.24483	0.001	-2.27789	60.00000	Averaged
$ 64 Toluene-d8	1.32458	1.33471	1.33471	0.010	0.76517	60.00000	Averaged
$ 85 Bromofluorobenzene	0.92346	0.94766	0.94766	0.010	2.62082	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 21.20893
Maximun Average %D/Drift = 20.00000
* Failed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s105.d
Lab Smp Id: UVM090601-08B Client Smp ID: VSTD250S
Inj Date : 06-JUL-2009 11:44
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |UVM090601-08B|SHORT/LCS|1|VOAF|1|
Misc Info : GEL 5uL N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:57 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
11 Acrolein	56	6.541	6.541	(0.655)	161497	250.000	378
12 Trichlorotrifluoroethane	85	6.706	6.706	(0.672)	644255	250.000	216
19 Allyl chloride	41	7.145	7.145	(0.716)	1876121	250.000	189
21 Acrylonitrile	53	7.547	7.547	(0.756)	492540	250.000	208
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	404182	50.0000	45.4
32 Propionitrile	54	8.779	8.779	(0.880)	198157	250.000	210
29 Ethyl acetate	43	8.706	8.706	(0.872)	1199846	250.000	180
37 Methacrylonitrile	41	8.956	8.956	(0.897)	728437	250.000	196
38 Tetrahydrofuran	42	9.065	9.065	(0.582)	388290	250.000	193
42 Isobutyl alcohol	41	9.395	9.395	(0.941)	482470	2500.00	2210
54 Methyl methacrylate	69	10.589	10.589	(1.061)	1048744	250.000	214
66 Ethyl methacrylate	69	11.864	11.864	(0.902)	1896886	250.000	204
57 1,4-Dioxane	88	10.699	10.699	(1.072)	162966	2500.00	2020
60 2-Nitropropane	43	11.077	11.077	(1.110)	370420	250.000	186
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	534349	250.000	219
86 Cyclohexanone	55	14.320	14.320	(1.089)	365833	1250.00	1460

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	508219	250.000	216
97 Pentachloroethane	167	15.180	15.180	(0.975)	949412	250.000	212
103 Benzyl chloride	91	15.717	15.717	(1.009)	3539627	250.000	219
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	238462	250.000	220
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1736742	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1295939	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	726984	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	425207	50.0000	48.9
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1729709	50.0000	50.4
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	688937	50.0000	51.3

Data File: /chem/VOA6.i/070609v6/6s105.d
Date : 06-JUL-2009 11:44
Client ID: VSTD250S
Sample Info: IUVHC90601-08BISHORT/LCS11|VOAF11|
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

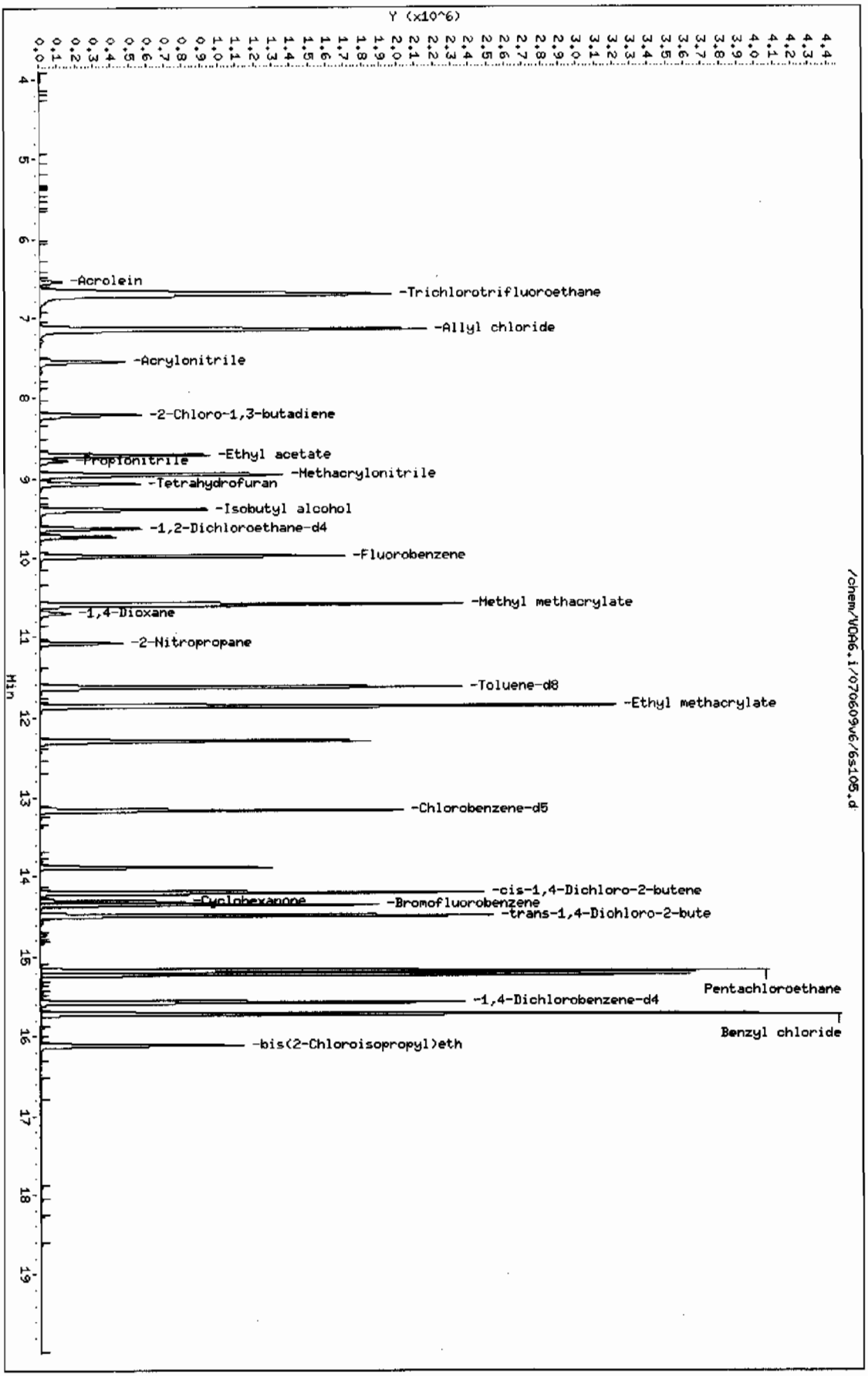

Page 1

QC Data

Data File: /chem/VOA6.i/061509v6/6p111.d

Page 1

Date : 15-JUN-2009 16:10

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

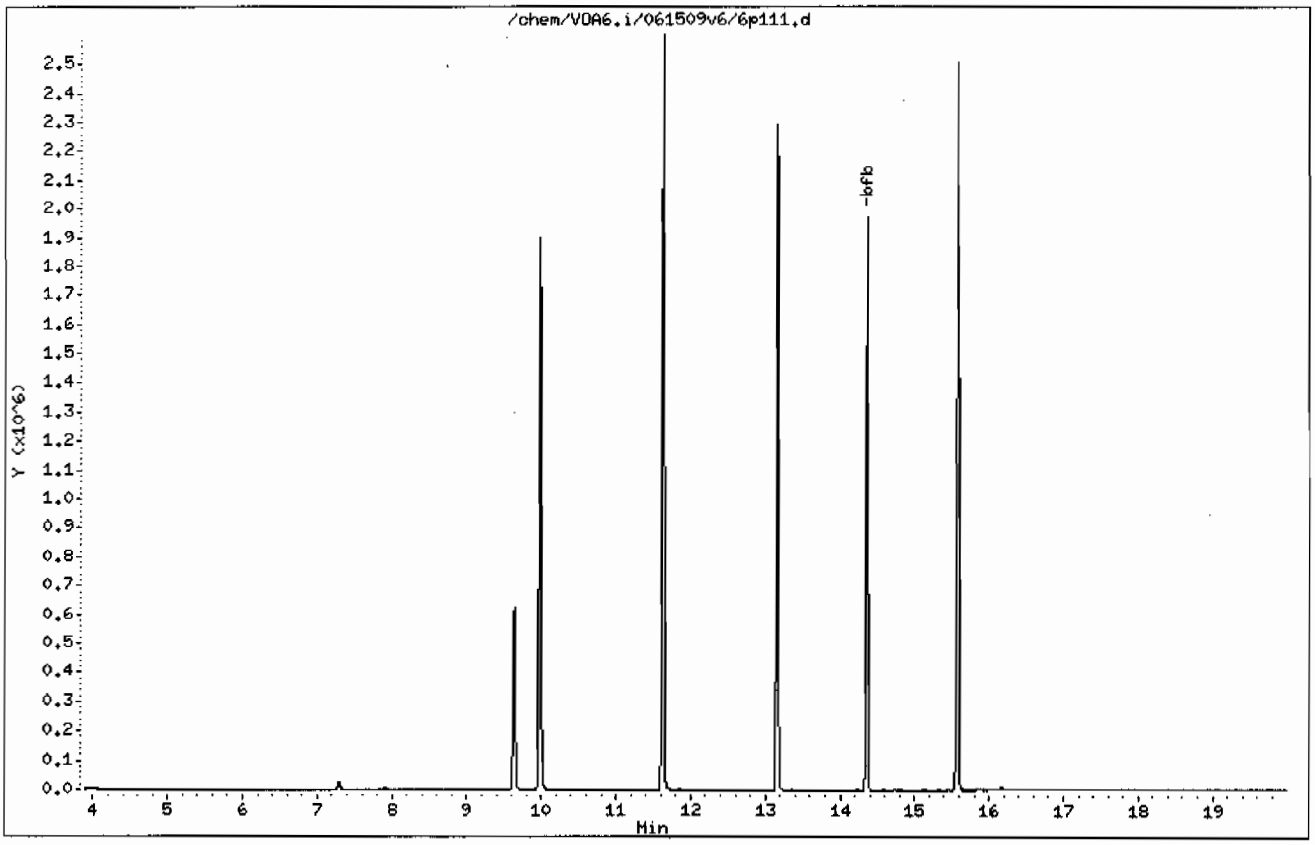

Data File: /chem/VOA6.i/061509v6/6p111.d

Date : 15-JUN-2009 16:10

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

1 bfb

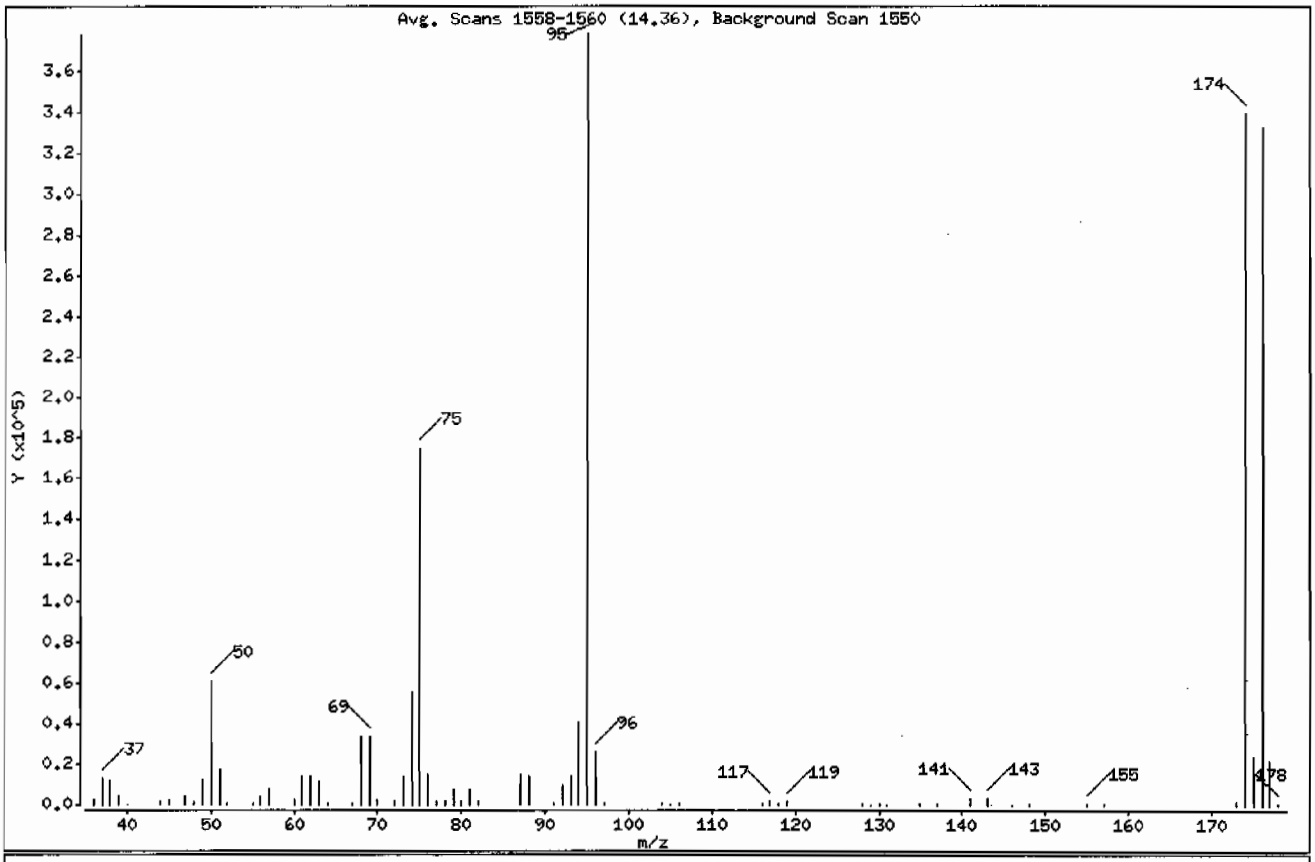

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.99
75	30.00 - 60.00% of mass 95	46.24
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.49 (0.54)
174	50.00 - 100.00% of mass 95	89.71
175	5.00 - 9.00% of mass 174	6.23 (6.94)
176	95.00 - 101.00% of mass 174	87.72 (97.77)
177	5.00 - 9.00% of mass 176	5.64 (6.43)

Data File: /chem/VOA6.i/061509v6/6p111.d

Date : 15-JUN-2009 16:10

Client ID: BFB01 Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Data File: 6p111.d
Spectrum: Avg. Scans 1558-1560 (14.36), Background Scan 1550
Location of Maximum: 95.00
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2269	62.00	13935	87.00	15033	130.00	1206
37.00	13180	63.00	10916	88.00	14161	131.00	168
38.00	12293	64.00	960	91.00	1067	135.00	629
39.00	4779	67.00	849	92.00	9277	137.00	637
40.00	185	68.00	33536	93.00	13940	141.00	3085
44.00	1434	69.00	34232	94.00	40720	143.00	3197
45.00	2465	70.00	2699	95.00	378240	146.00	201
47.00	4159	72.00	1532	96.00	25712	148.00	871
48.00	1584	73.00	13567	97.00	790	155.00	942
49.00	12246	74.00	55256	104.00	1142	157.00	649
50.00	60496	75.00	174912	105.00	187	173.00	1835
51.00	17576	76.00	15006	106.00	1232	174.00	339328
52.00	838	77.00	1958	116.00	1147	175.00	23552
55.00	715	78.00	1408	117.00	1930	176.00	331776
56.00	4247	79.00	7489	118.00	1112	177.00	21320
57.00	8192	80.00	2165	119.00	1755	178.00	704
60.00	2578	81.00	7460	128.00	1279		
61.00	13830	82.00	1674	129.00	402		

Data File: /chem/VOA6.i/070609v6/6s103BFB.d

Page 1

Date : 06-JUL-2009 10:49

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |W6VM090706-02|CCV/BFB/LCS|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

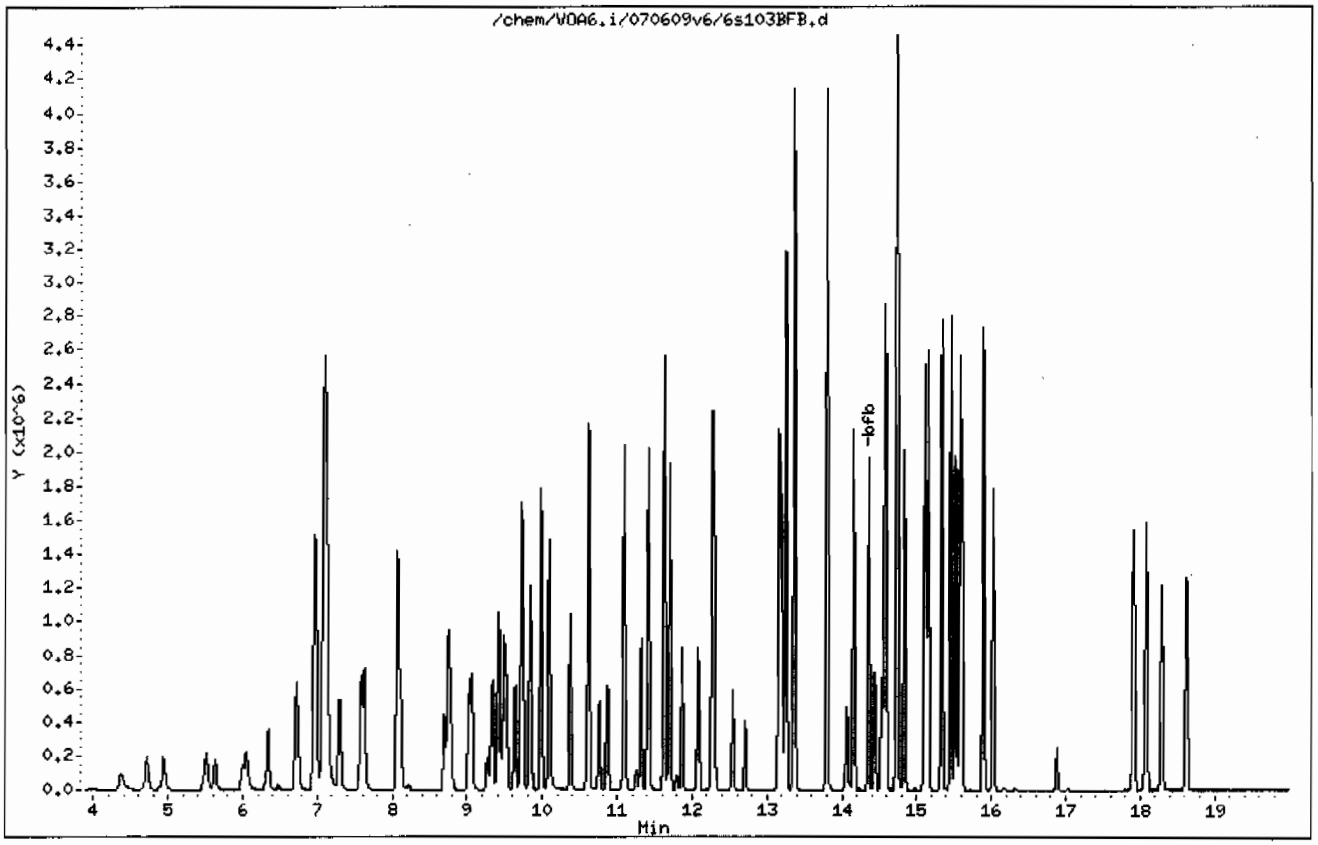

Data File: /chem/VOA6.i/070609v6/6s103BFB.d

Date : 06-JUL-2009 10:49

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |W6VH090706-02|CCV/BFB/LCS|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

1 bfb

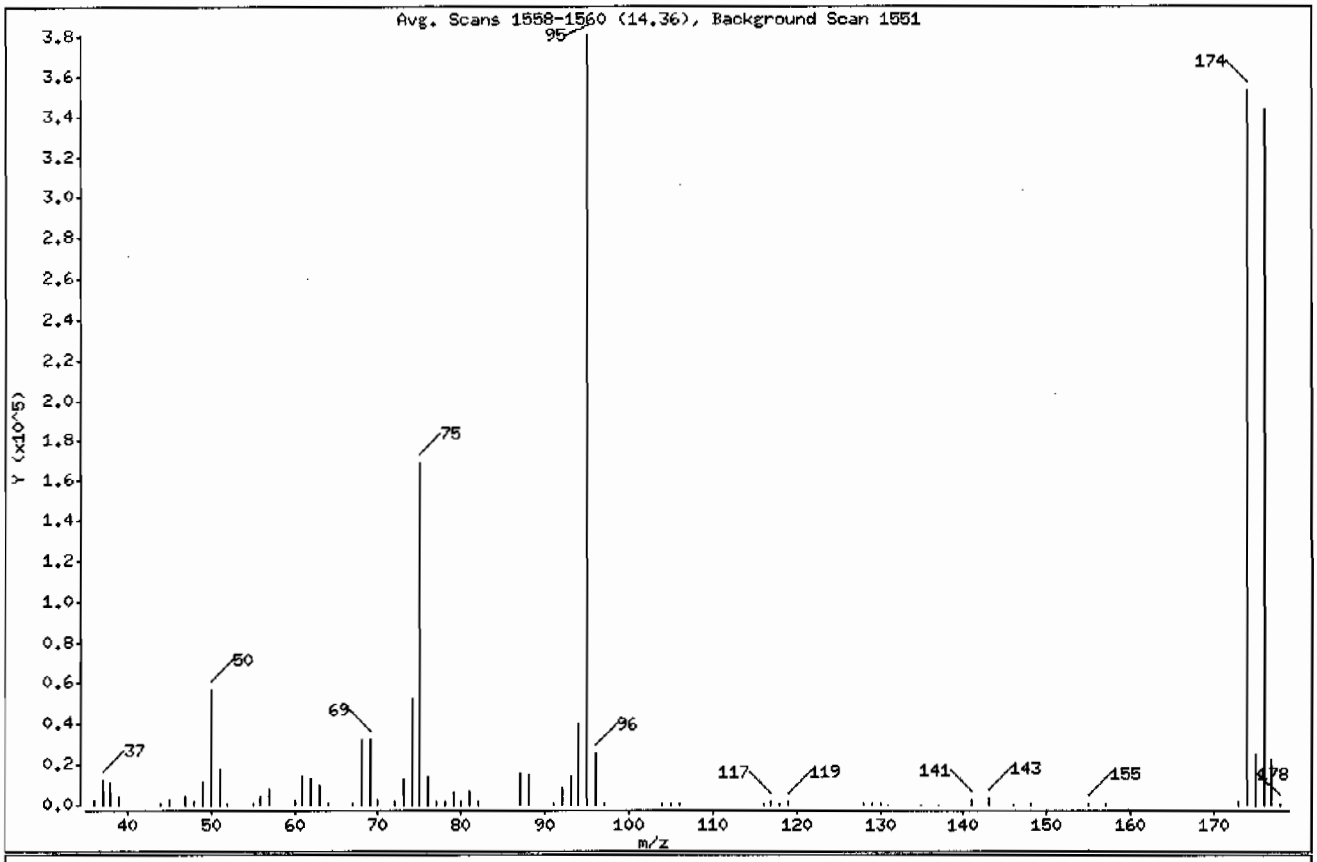

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.05
75	30.00 - 60.00% of mass 95	44.31
96	5.00 - 9.00% of mass 95	6.61
173	Less than 2.00% of mass 174	0.47 (0.51)
174	50.00 - 100.00% of mass 95	92.66
175	5.00 - 9.00% of mass 174	6.64 (7.16)
176	95.00 - 101.00% of mass 174	90.14 (97.28)
177	5.00 - 9.00% of mass 176	6.00 (6.65)

Data File: /chem/VOA6.i/070609v6/6s103BFB.d

Date : 06-JUL-2009 10:49

Client ID: BFB01 Instrument: VOA6.i

Sample Info: |W6VM090706-02|CCV/BFB/LCS|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Data File: 6s103BFB.d
Spectrum: Avg. Scans 1558-1560 (14.36), Background Scan 1551
Location of Maximum: 95.00
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2424	63.00	10057	88.00	14917	131.00	394
37.00	12190	64.00	991	91.00	999	135.00	376
38.00	11260	67.00	795	92.00	8910	137.00	367
39.00	4435	68.00	31800	93.00	13877	141.00	2856
44.00	1050	69.00	32216	94.00	40192	143.00	3216
45.00	2386	70.00	2448	95.00	380864	146.00	367
47.00	4262	72.00	1634	96.00	25184	148.00	870
48.00	1563	73.00	13284	97.00	525	155.00	956
49.00	11572	74.00	52872	104.00	1268	157.00	662
50.00	57312	75.00	168768	105.00	585	173.00	1791
51.00	17464	76.00	14212	106.00	1237	174.00	352896
52.00	792	77.00	2096	116.00	1041	175.00	25280
55.00	730	78.00	1386	117.00	1910	176.00	343296
56.00	4032	79.00	6381	118.00	1059	177.00	22840
57.00	7802	80.00	2129	119.00	1469	178.00	699
60.00	2708	81.00	6687	128.00	1234		
61.00	13821	82.00	1582	129.00	606		
62.00	13336	87.00	15778	130.00	1266		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477			**Matrix:**	SOIL
Lab Sample ID:	1201874911				
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882741	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 13:07	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 10:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s108B1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477			**Matrix:**	SOIL
Lab Sample ID:	1201874911				
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882741	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 13:07	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 10:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s108B1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s108B1.d
Lab Smp Id: 1201874911 Client Smp ID: BLANK
Inj Date : 06-JUL-2009 13:07
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874911|882743|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 09-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	413301	49.1898	49.2
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1676832	50.0000	
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1646939	50.2588	50.2
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1236965	50.0000	
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	638213	50.3616	50.4
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	686146	50.0000	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s108B1.d
Lab Smp Id: 1201874911 Client Smp ID: BLANK
Inj Date : 06-JUL-2009 13:07
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874911|882743|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 09-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA6.i/070609v6/6s108B1.d

Date : 06-JUL-2009 13:07

Client ID: BLANK

Sample Info: |120187491|188274311|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1

Column diameter: 0.25

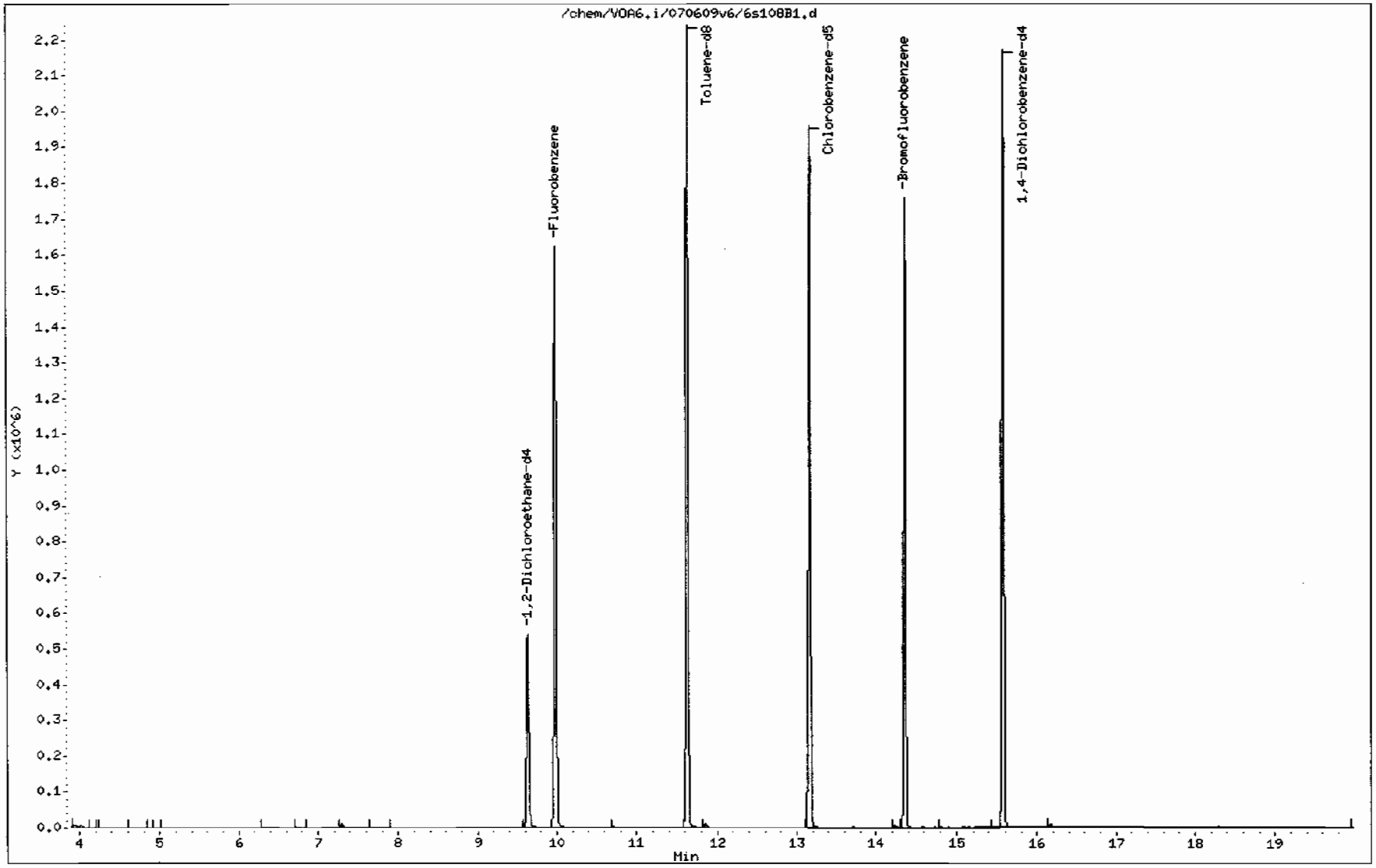

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874914**				
Client Sample:	**QC for batch 882741**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882741**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882743**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 11:17**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 10:30**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6s104L2.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		60.2	ug/kg	0.340	1.00
74-87-3	Chloromethane		45.7	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		46.0	ug/kg	0.300	1.00
74-83-9	Bromomethane		44.4	ug/kg	0.300	1.00
75-00-3	Chloroethane		45.3	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		49.2	ug/kg	0.570	1.00
67-64-1	Acetone		293	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		45.1	ug/kg	0.300	1.00
74-88-4	Iodomethane		226	ug/kg	1.60	5.00
75-09-2	Methylene chloride		39.2	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		242	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		42.3	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		43.2	ug/kg	0.300	1.00
78-93-3	2-Butanone		366	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		45.2	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		46.7	ug/kg	0.300	1.00
67-66-3	Chloroform		43.7	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		46.1	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		46.6	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		45.7	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		47.4	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		41.2	ug/kg	0.300	1.00
71-43-2	Benzene		42.9	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		46.0	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		45.0	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		48.9	ug/kg	0.300	1.00
74-95-3	Dibromomethane		45.0	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		255	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		49.6	ug/kg	0.300	1.00
108-88-3	Toluene		42.3	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		49.2	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		46.4	ug/kg	0.300	1.00
591-78-6	2-Hexanone		303	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		44.9	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		45.8	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		50.5	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		47.8	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		45.0	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874914**				
Client Sample:	**QC for batch 882741**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882741**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882743**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 11:17**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 10:30**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6s104L2.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		44.0	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		89.9	ug/kg	0.300	2.00
95-47-6	o-Xylene		45.7	ug/kg	0.300	1.00
100-42-5	Styrene		47.6	ug/kg	0.300	1.00
75-25-2	Bromoform		45.5	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		46.5	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		51.3	ug/kg	0.300	1.00
108-86-1	Bromobenzene		45.3	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		43.3	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		44.2	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		37.7	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		44.0	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		44.8	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		45.0	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		44.2	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		44.4	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		46.3	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		45.9	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		44.9	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		45.7	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		63.1	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		48.9	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		45.4	ug/kg	0.300	1.00

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s104L2.d
Lab Smp Id: 1201874914 Client Smp ID: LCS
Inj Date : 06-JUL-2009 11:17
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874914|882743|1|VOAF|1|
Misc Info : GEL 5g N/A UVM090605-01D+IVM090630-01
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 09-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1 1,3-Dichloropropylene	75				1126326	98.8285	98.8
M 2 Xylenes (total)	106				2162689	135.592	136
M 3 1,2-Dichloroethylene (total)	96				1036505	87.5237	87.5
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	302513	60.1828	60.2
5 Chloromethane	50	4.713	4.713	(0.472)	381922	45.6801	45.7
6 Vinyl chloride	62	4.934	4.934	(0.494)	389266	45.9806	46.0
7 Bromomethane	94	5.508	5.508	(0.552)	296521	44.3585	44.4
8 Chloroethane	64	5.629	5.629	(0.564)	271203	45.3491	45.3
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	550993	49.1628	49.2
10 Ethyl Ether	59	6.340	6.340	(0.635)	329970	43.5468	43.5
13 Acetone	43	6.718	6.718	(0.673)	410915	293.488	293
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	501666	45.1412	45.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
	15 Iodomethane	142	6.968	6.968	(0.698)	2986356	225.888	226
	16 Acetonitrile	41	7.078	7.078	(0.709)	1007675	1073.27	1070
	17 Methyl acetate	43	7.102	7.103	(0.712)	1191778	217.078	217
	18 Carbon disulfide	76	7.090	7.096	(0.710)	5764729	241.767	242
	20 Methylene chloride	84	7.297	7.298	(0.731)	375888	39.2260	39.2
	22 tert-Butyl methyl ether	73	7.584	7.578	(0.760)	968649	43.6837	43.7
	23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	472650	42.2797	42.3
	24 Vinyl acetate	43	8.066	8.066	(0.808)	2460798	197.203	197
	25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	609667	43.1660	43.2
	30 2-Butanone	43	8.693	8.694	(0.871)	706183	366.001	366
	31 cis-1,2-Dichloroethylene	61	8.748	8.742	(0.877)	563855	45.2440	45.2
	33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	495339	46.7228	46.7
	35 Bromochloromethane	128	9.023	9.023	(0.904)	191561	46.0924	46.1
	36 Chloroform	83	9.059	9.059	(0.908)	596464	43.7414	43.7
	40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	515451	46.6137	46.6
	43 Cyclohexane	56	9.419	9.413	(0.944)	637757	45.3896	45.4
	44 1,1-Dichloropropene	75	9.486	9.480	(0.951)	497962	45.7092	45.7
	46 Carbon tetrachloride	117	9.517	9.517	(0.954)	475801	47.4413	47.4
$	47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	455832	50.5011	50.5
	48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	423243	41.1872	41.2
	49 Benzene	78	9.724	9.724	(0.974)	1441602	42.8676	42.9
	50 Cyclohexene	67	9.834	9.834	(0.985)	759618	46.1387	46.1
*	51 Fluorobenzene	96	9.980	9.980	(1.000)	1801365	50.0000	
	52 n-Butyl alcohol	56	10.083	10.084	(1.010)	1193119	5900.02	5900
	53 Trichloroethylene	95	10.364	10.364	(1.038)	388103	46.0400	46.0
	55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	370640	45.0381	45.0
	56 Methylcyclohexane	83	10.608	10.608	(1.063)	712470	46.6129	46.6
	58 Dibromomethane	93	10.754	10.754	(1.078)	209454	45.0335	45.0
	59 Bromodichloromethane	83	10.864	10.864	(1.089)	450985	48.9315	48.9
	61 2-Chloroethylvinyl ether	63	11.089	11.090	(1.111)	1043599	201.396	201
	62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	598230	49.6295	49.6
	63 4-Methyl-2-pentanone	58	11.412	11.413	(0.867)	690388	255.266	255
$	64 Toluene-d8	98	11.626	11.626	(0.884)	1812403	50.6949	50.7
	65 Toluene	92	11.699	11.699	(0.889)	937312	42.2977	42.3
	67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	528096	49.1990	49.2
	68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	266626	46.3972	46.4
	69 2-Hexanone	43	12.260	12.260	(0.932)	1128064	302.559	302
	70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	547957	44.9054	44.9
	71 Tetrachloroethylene	164	12.290	12.291	(0.934)	354931	45.8454	45.8
	72 Dibromochloromethane	129	12.540	12.540	(0.953)	355740	50.4806	50.5
	73 1,2-Dibromoethane	107	12.711	12.711	(0.966)	321689	47.7836	47.8
*	75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1349530	50.0000	
	76 Chlorobenzene	112	13.193	13.193	(1.003)	1076153	45.0415	45.0
	77 1,1,1,2-Tetrachloroethane	131	13.247	13.248	(1.007)	380785	48.8520	48.8
	78 Ethylbenzene	91	13.254	13.254	(1.007)	1760207	43.9898	44.0
	79 m,p-Xylenes	106	13.363	13.363	(1.016)	1444337	89.8912	89.9
	80 o-Xylene	106	13.796	13.796	(1.049)	718352	45.7008	45.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
81 Styrene	104	13.802	13.802	(1.049)	1164746	47.6345	47.6
82 Bromoform	173	14.064	14.065	(0.903)	265410	45.4621	45.5
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1563498	37.6867	37.7
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	714535	51.2622	51.3
87 1,1,2,2-Tetrachloroethane	83	14.442	14.443	(0.927)	416854	46.4807	46.5
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	126920	51.3128	51.3
90 Bromobenzene	156	14.564	14.564	(0.935)	481985	45.2943	45.3
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2079002	43.2523	43.2
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1532780	44.0038	44.0
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1441556	44.1788	44.2
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1304689	44.8462	44.8
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1475112	45.0045	45.0
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1557443	44.2434	44.2
98 sec-Butylbenzene	105	15.332	15.333	(0.984)	2063803	44.4031	44.4
99 4-Isopropyltoluene	119	15.454	15.455	(0.992)	1770761	46.3328	46.3
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	941164	45.9130	45.9
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	754705	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	949187	44.8871	44.9
104 n-Butylbenzene	92	15.887	15.887	(1.020)	885963	45.6715	45.7
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	886105	45.4188	45.4
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	97078	63.1257	63.1
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	684771	46.0720	46.1
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	449579	45.4459	45.4
110 Naphthalene	128	18.289	18.289	(1.174)	1386972	48.4987	48.5
111 1,2,3-Trichlorobenzene	180	18.624	18.625	(1.196)	623005	49.2213	49.2

Data File: /chem/VOA6.i/070609v6/6s104L2.d
Date : 06-JUL-2009 11:17
Client ID: LCS
Sample Info: 1120187491418827431|VOAF1|

Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

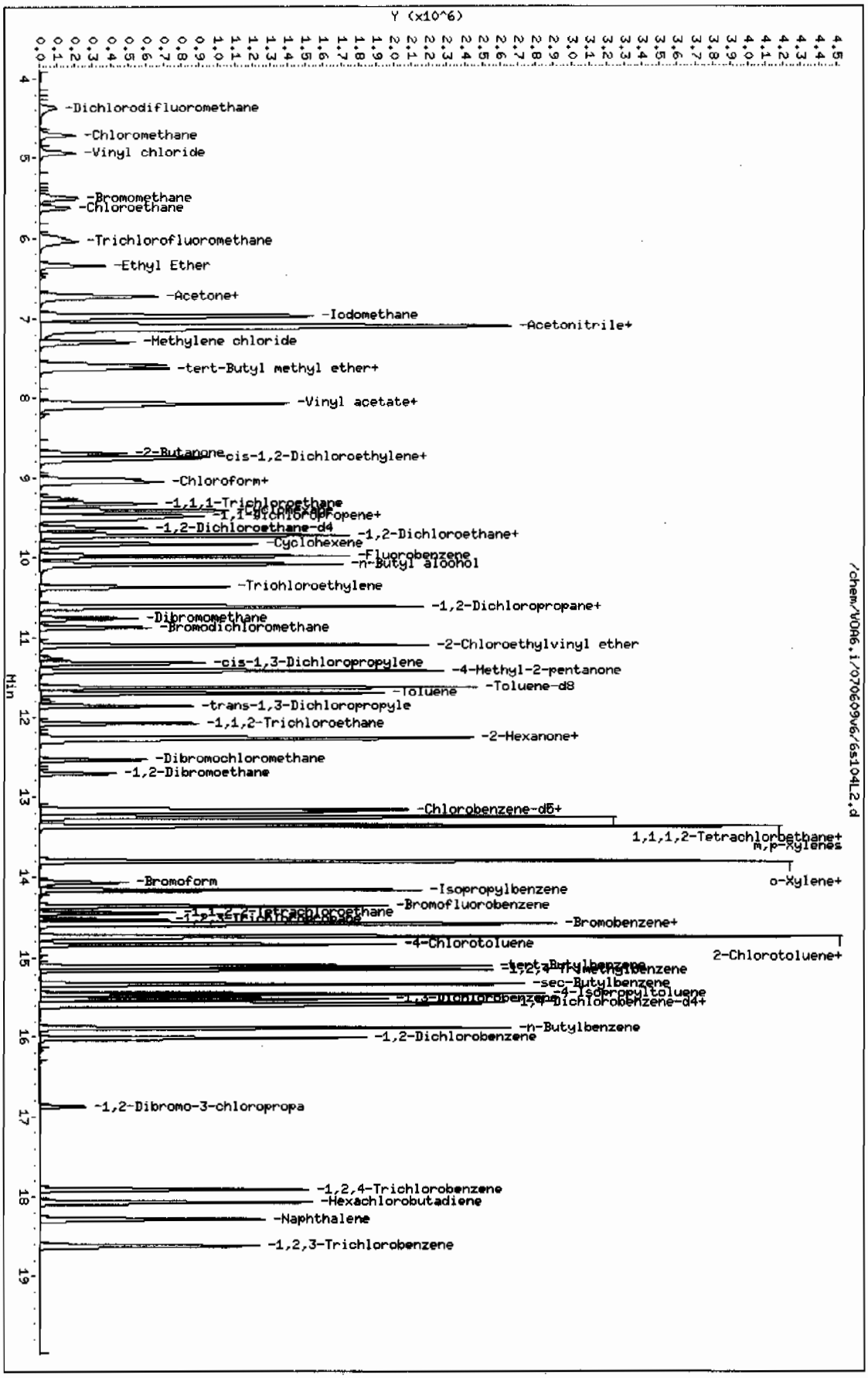

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477			**Matrix:**	SOIL
Lab Sample ID:	1201874915				
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882741	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 12:12	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 10:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s106L2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477			**Matrix:**	SOIL
Lab Sample ID:	1201874915				
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882741	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 12:12	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 10:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s106L2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		221	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s106L2.d
Lab Smp Id: 1201874915 Client Smp ID: LCS
Inj Date : 06-JUL-2009 12:12
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874915|882743|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 09-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
11 Acrolein	56	6.542	6.541	(0.655)	167141	393.881	394(R)
12 Trichlorotrifluoroethane	85	6.706	6.706	(0.672)	652880	220.651	221
19 Allyl chloride	41	7.145	7.145	(0.716)	1864235	189.201	189
21 Acrylonitrile	53	7.548	7.547	(0.756)	510600	217.148	217
26 Isopropyl Alcohol	45	6.804	6.804	(0.682)	16061	37.0679	37.1(aR)
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	408200	46.1198	46.1
29 Ethyl acetate	43	8.706	8.706	(0.872)	1248823	188.392	188
32 Propionitrile	54	8.779	8.779	(0.880)	207535	220.978	221
37 Methacrylonitrile	41	8.956	8.956	(0.897)	750082	202.958	203
38 Tetrahydrofuran	42	9.066	9.065	(0.582)	408004	198.897	199
42 Isobutyl alcohol	41	9.389	9.395	(0.941)	514762	2377.04	2380
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	426039	49.2739	49.3

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1725562	50.0000	
54 Methyl methacrylate	69	10.590	10.589	(1.061)	1083530	222.162	222
57 1,4-Dioxane	88	10.699	10.699	(1.072)	169213	2111.65	2110
60 2-Nitropropane	43	11.077	11.077	(1.110)	386792	195.116	195
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1713875	49.5151	49.5
66 Ethyl methacrylate	69	11.858	11.864	(0.901)	1959810	208.910	209
74 1-Chlorohexane	55	13.156	13.156	(1.000)	10682	1.40332	1.4(aR)
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1306571	50.0000	
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	549724	221.162	221
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	693214	50.6320	50.6
86 Cyclohexanone	55	14.321	14.320	(1.089)	398534	1580.29	1580
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	525553	219.271	219
97 Pentachloroethane	167	15.180	15.180	(0.975)	755431	165.561	166
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	741299	50.0000	
103 Benzyl chloride	91	15.717	15.717	(1.009)	3582943	217.671	218
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	259683	234.637	235

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA6.i/070609v6/6s106L2.d
Date : 06-JUL-2009 12:12
Client ID: LCS
Sample Info: |120187491518827431|VOAF|1|
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

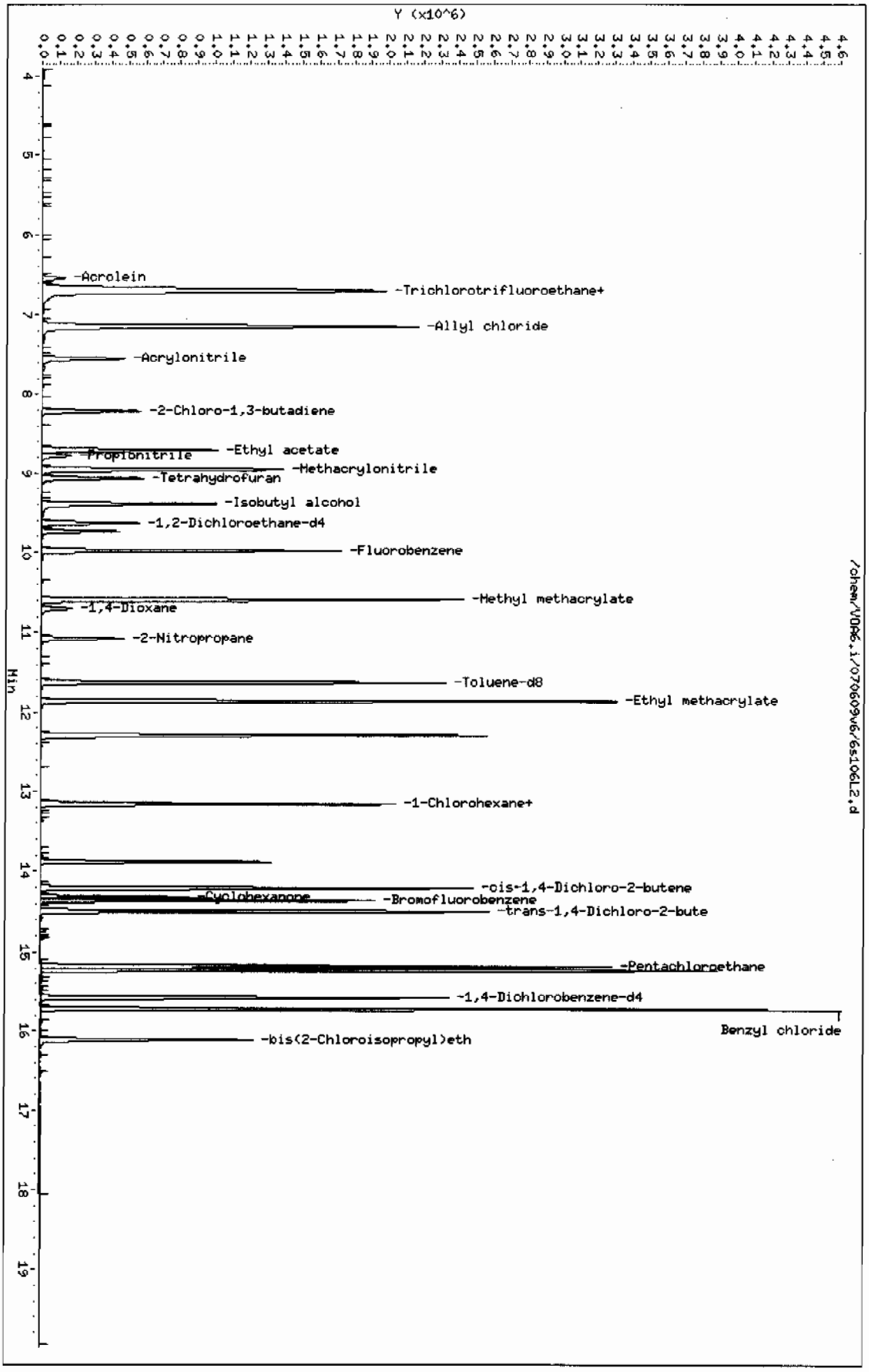

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874912	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10463PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 21:51	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:31	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s125.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		50.5	ug/kg	0.355	1.04
74-87-3	Chloromethane		39.9	ug/kg	0.313	1.04
75-01-4	Vinyl chloride		40.6	ug/kg	0.313	1.04
74-83-9	Bromomethane		40.0	ug/kg	0.313	1.04
75-00-3	Chloroethane		39.4	ug/kg	0.313	1.04
75-69-4	Trichlorofluoromethane		41.8	ug/kg	0.595	1.04
67-64-1	Acetone		264	ug/kg	1.73	5.22
75-35-4	1,1-Dichloroethylene		38.3	ug/kg	0.313	1.04
74-88-4	Iodomethane		195	ug/kg	1.67	5.22
75-09-2	Methylene chloride		32.8	ug/kg	2.09	5.22
75-15-0	Carbon disulfide		211	ug/kg	1.30	5.22
156-60-5	trans-1,2-Dichloroethylene		35.8	ug/kg	0.313	1.04
75-34-3	1,1-Dichloroethane		37.1	ug/kg	0.313	1.04
78-93-3	2-Butanone		321	ug/kg	1.57	5.22
156-59-2	cis-1,2-Dichloroethylene		38.3	ug/kg	0.313	1.04
594-20-7	2,2-Dichloropropane		38.4	ug/kg	0.313	1.04
67-66-3	Chloroform		37.0	ug/kg	0.313	1.04
74-97-5	Bromochloromethane		39.6	ug/kg	0.344	1.04
71-55-6	1,1,1-Trichloroethane		39.0	ug/kg	0.313	1.04
563-58-6	1,1-Dichloropropene		38.0	ug/kg	0.313	1.04
56-23-5	Carbon tetrachloride		39.8	ug/kg	0.313	1.04
107-06-2	1,2-Dichloroethane		35.6	ug/kg	0.313	1.04
71-43-2	Benzene		36.2	ug/kg	0.313	1.04
79-01-6	Trichloroethylene		38.4	ug/kg	0.344	1.04
78-87-5	1,2-Dichloropropane		37.9	ug/kg	0.313	1.04
75-27-4	Bromodichloromethane		40.8	ug/kg	0.313	1.04
74-95-3	Dibromomethane		39.0	ug/kg	0.313	1.04
108-10-1	4-Methyl-2-pentanone		217	ug/kg	1.30	5.22
10061-01-5	cis-1,3-Dichloropropylene		40.9	ug/kg	0.313	1.04
108-88-3	Toluene		34.5	ug/kg	0.313	1.04
10061-02-6	trans-1,3-Dichloropropylene		40.3	ug/kg	0.313	1.04
79-00-5	1,1,2-Trichloroethane		39.1	ug/kg	0.313	1.04
591-78-6	2-Hexanone		259	ug/kg	1.57	5.22
142-28-9	1,3-Dichloropropane		38.3	ug/kg	0.313	1.04
127-18-4	Tetrachloroethylene		37.7	ug/kg	0.313	1.04
124-48-1	Dibromochloromethane		41.7	ug/kg	0.313	1.04
106-93-4	1,2-Dibromoethane		40.5	ug/kg	0.313	1.04
108-90-7	Chlorobenzene		37.1	ug/kg	0.313	1.04

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874912	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10463PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 21:51	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:31	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s125.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		35.9	ug/kg	0.313	1.04
179601-23-1	m,p-Xylenes		72.8	ug/kg	0.313	2.09
95-47-6	o-Xylene		37.5	ug/kg	0.313	1.04
100-42-5	Styrene		38.9	ug/kg	0.313	1.04
75-25-2	Bromoform		36.7	ug/kg	0.313	1.04
79-34-5	1,1,2,2-Tetrachloroethane		38.4	ug/kg	0.313	1.04
96-18-4	1,2,3-Trichloropropane		42.5	ug/kg	0.313	1.04
108-86-1	Bromobenzene		36.4	ug/kg	0.313	1.04
103-65-1	n-Propylbenzene		33.9	ug/kg	0.313	1.04
95-49-8	2-Chlorotoluene		34.9	ug/kg	0.313	1.04
98-82-8	Isopropylbenzene		29.5	ug/kg	0.313	1.04
108-67-8	1,3,5-Trimethylbenzene		34.4	ug/kg	0.313	1.04
106-43-4	4-Chlorotoluene		34.9	ug/kg	0.313	1.04
98-06-6	tert-Butylbenzene		35.2	ug/kg	0.313	1.04
95-63-6	1,2,4-Trimethylbenzene		34.7	ug/kg	0.313	1.04
135-98-8	sec-Butylbenzene		34.6	ug/kg	0.313	1.04
99-87-6	4-Isopropyltoluene		35.7	ug/kg	0.313	1.04
541-73-1	1,3-Dichlorobenzene		36.5	ug/kg	0.313	1.04
106-46-7	1,4-Dichlorobenzene		35.6	ug/kg	0.313	1.04
104-51-8	n-Butylbenzene		34.5	ug/kg	0.313	1.04
96-12-8	1,2-Dibromo-3-chloropropane		51.8	ug/kg	0.313	1.04
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.22	ug/kg	1.67	5.22
630-20-6	1,1,1,2-Tetrachloroethane		40.3	ug/kg	0.313	1.04
95-50-1	1,2-Dichlorobenzene		36.7	ug/kg	0.313	1.04

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s125.d
Lab Smp Id: 1201874912 Client Smp ID: CAMO-09-10463MS
Inj Date : 06-JUL-2009 21:51
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874912|882743|1|VOAF|1|
Misc Info : LANL 5g N/A 232424001MS
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 25 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.16030	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1565823	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1199918	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	698015	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	396420	50.5255	52.7
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1563680	49.1913	51.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	633473	49.1376	51.3
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	211517	48.4097	50.5
5 Chloromethane	50	4.713	4.713	(0.472)	278129	38.2699	39.9
6 Vinyl chloride	62	4.934	4.934	(0.494)	286167	38.8872	40.6
7 Bromomethane	94	5.498	5.508	(0.551)	222628	38.3143	40.0
8 Chloroethane	64	5.619	5.629	(0.563)	196398	37.7807	39.4
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	389812	40.0133	41.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.718	6.718	(0.673)	307290	252.727	264
14 1,1-Dichloroethylene	61	6.725	6.718	(0.674)	354992	36.7482	38.3
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	667095	34.1091	35.6
15 Iodomethane	142	6.968	6.968	(0.698)	2152933	187.345	195
20 Methylene chloride	84	7.292	7.298	(0.731)	268761	31.3940	32.8
18 Carbon disulfide	76	7.103	7.096	(0.712)	4199002	202.592	211
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	332966	34.2650	35.8
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	436053	35.5179	37.0
30 2-Butanone	43	8.694	8.694	(0.871)	516168	307.763	321
31 cis-1,2-Dichloroethylene	61	8.749	8.742	(0.877)	397364	36.6810	38.3
100 1,3-Dichlorobenzene	146	15.516	15.515	(0.996)	663075	34.9740	36.5
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	338958	36.7817	38.4
36 Chloroform	83	9.053	9.059	(0.907)	420503	35.4761	37.0
106 1,2-Dichlorobenzene	146	16.022	16.021	(1.029)	634617	35.1702	36.7
35 Bromochloromethane	128	9.023	9.023	(0.904)	136978	37.9168	39.6
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	358835	37.3319	39.0
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	344515	36.3810	38.0
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	332495	38.1396	39.8
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	305079	34.1542	35.6
49 Benzene	78	9.724	9.724	(0.974)	1014349	34.7000	36.2
53 Trichloroethylene	95	10.364	10.364	(1.038)	269947	36.8406	38.4
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	260058	36.3544	37.9
59 Bromodichloromethane	83	10.864	10.864	(1.089)	313368	39.1147	40.8
58 Dibromomethane	93	10.754	10.754	(1.078)	151002	37.3499	39.0
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	499338	207.647	217
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	410563	39.1842	40.9
65 Toluene	92	11.699	11.699	(0.889)	651953	33.0887	34.5
67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	368285	38.5885	40.3
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	191318	37.4434	39.1
69 2-Hexanone	43	12.260	12.260	(0.932)	821851	247.914	259
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	397996	36.6827	38.3
71 Tetrachloroethylene	164	12.291	12.291	(0.934)	248453	36.0934	37.7
72 Dibromochloromethane	129	12.541	12.540	(0.953)	250289	39.9452	41.7
73 1,2-Dibromoethane	107	12.711	12.711	(0.966)	232126	38.7791	40.5
76 Chlorobenzene	112	13.193	13.193	(1.003)	754345	35.5091	37.0
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	267923	38.6584	40.3
78 Ethylbenzene	91	13.254	13.254	(1.007)	1223899	34.4005	35.9
79 m,p-Xylenes	106	13.364	13.363	(1.016)	996849	69.7765	72.8
80 o-Xylene	106	13.796	13.796	(1.049)	501874	35.9097	37.5
81 Styrene	104	13.802	13.802	(1.049)	809794	37.2474	38.9
82 Bromoform	173	14.065	14.065	(0.903)	188163	35.1985	36.7
87 1,1,2,2-Tetrachloroethane	83	14.436	14.443	(0.927)	304880	36.7561	38.4
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	93145	40.7163	42.5(Q)
90 Bromobenzene	156	14.565	14.564	(0.935)	343538	34.9058	36.4
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1446110	32.5288	33.9
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1009891	33.4634	34.9
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1086424	28.3141	29.5

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1061934	32.9625	34.4
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	899124	33.4157	34.9
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1022325	33.7235	35.2
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1083715	33.2862	34.7
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	1426459	33.1831	34.6
99 4-Isopropyltoluene	119	15.455	15.455	(0.992)	1210060	34.2333	35.7
104 n-Butylbenzene	92	15.887	15.887	(1.020)	593431	33.0759	34.5
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	70617	49.6486	51.8

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070609v6/6s125.d
Date : 06-JUL-2009 21:51
Client ID: CAMO-09-10463MS
Sample Info: 1120187491218827431|1|VOAF1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

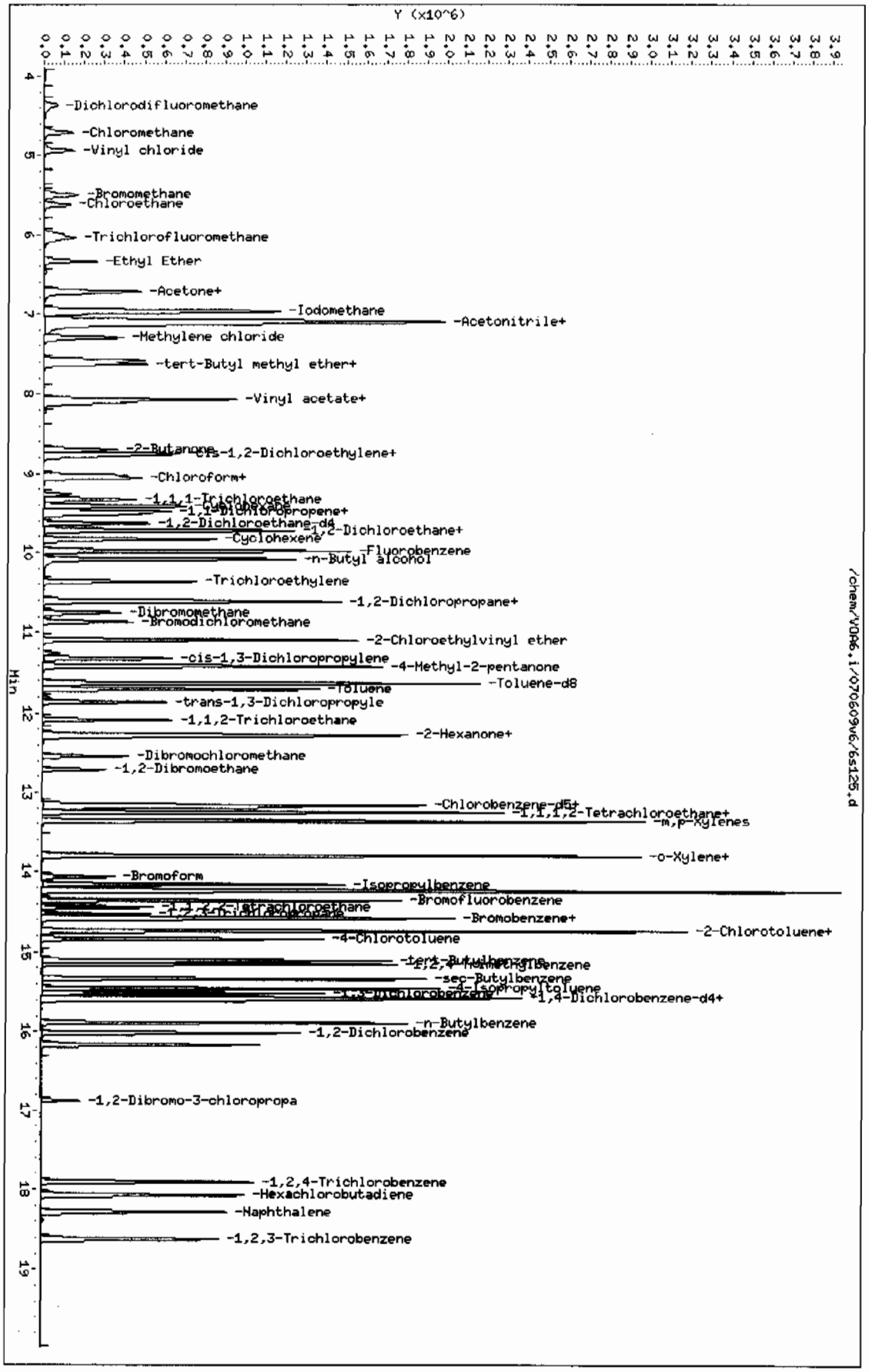

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874913	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10463PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 22:18	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s126.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		58.7	ug/kg	0.355	1.04
74-87-3	Chloromethane		45.2	ug/kg	0.313	1.04
75-01-4	Vinyl chloride		45.8	ug/kg	0.313	1.04
74-83-9	Bromomethane		44.5	ug/kg	0.313	1.04
75-00-3	Chloroethane		44.7	ug/kg	0.313	1.04
75-69-4	Trichlorofluoromethane		48.2	ug/kg	0.595	1.04
67-64-1	Acetone		271	ug/kg	1.73	5.22
75-35-4	1,1-Dichloroethylene		43.7	ug/kg	0.313	1.04
74-88-4	Iodomethane		224	ug/kg	1.67	5.22
75-09-2	Methylene chloride		38.0	ug/kg	2.09	5.22
75-15-0	Carbon disulfide		238	ug/kg	1.30	5.22
156-60-5	trans-1,2-Dichloroethylene		41.2	ug/kg	0.313	1.04
75-34-3	1,1-Dichloroethane		42.4	ug/kg	0.313	1.04
78-93-3	2-Butanone		332	ug/kg	1.57	5.22
156-59-2	cis-1,2-Dichloroethylene		44.0	ug/kg	0.313	1.04
594-20-7	2,2-Dichloropropane		44.5	ug/kg	0.313	1.04
67-66-3	Chloroform		42.9	ug/kg	0.313	1.04
74-97-5	Bromochloromethane		45.0	ug/kg	0.344	1.04
71-55-6	1,1,1-Trichloroethane		45.4	ug/kg	0.313	1.04
563-58-6	1,1-Dichloropropene		44.0	ug/kg	0.313	1.04
56-23-5	Carbon tetrachloride		46.3	ug/kg	0.313	1.04
107-06-2	1,2-Dichloroethane		40.3	ug/kg	0.313	1.04
71-43-2	Benzene		41.8	ug/kg	0.313	1.04
79-01-6	Trichloroethylene		45.3	ug/kg	0.344	1.04
78-87-5	1,2-Dichloropropane		43.7	ug/kg	0.313	1.04
75-27-4	Bromodichloromethane		47.2	ug/kg	0.313	1.04
74-95-3	Dibromomethane		44.0	ug/kg	0.313	1.04
108-10-1	4-Methyl-2-pentanone		237	ug/kg	1.30	5.22
10061-01-5	cis-1,3-Dichloropropylene		46.9	ug/kg	0.313	1.04
108-88-3	Toluene		40.9	ug/kg	0.313	1.04
10061-02-6	trans-1,3-Dichloropropylene		46.9	ug/kg	0.313	1.04
79-00-5	1,1,2-Trichloroethane		45.2	ug/kg	0.313	1.04
591-78-6	2-Hexanone		274	ug/kg	1.57	5.22
142-28-9	1,3-Dichloropropane		43.8	ug/kg	0.313	1.04
127-18-4	Tetrachloroethylene		44.7	ug/kg	0.313	1.04
124-48-1	Dibromochloromethane		48.1	ug/kg	0.313	1.04
106-93-4	1,2-Dibromoethane		46.0	ug/kg	0.313	1.04
108-90-7	Chlorobenzene		43.7	ug/kg	0.313	1.04

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874913	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10463PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 22:18	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s126.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		42.3	ug/kg	0.313	1.04
179601-23-1	m,p-Xylenes		86.2	ug/kg	0.313	2.09
95-47-6	o-Xylene		43.8	ug/kg	0.313	1.04
100-42-5	Styrene		45.5	ug/kg	0.313	1.04
75-25-2	Bromoform		41.8	ug/kg	0.313	1.04
79-34-5	1,1,2,2-Tetrachloroethane		42.9	ug/kg	0.313	1.04
96-18-4	1,2,3-Trichloropropane		48.7	ug/kg	0.313	1.04
108-86-1	Bromobenzene		43.6	ug/kg	0.313	1.04
103-65-1	n-Propylbenzene		41.2	ug/kg	0.313	1.04
95-49-8	2-Chlorotoluene		42.0	ug/kg	0.313	1.04
98-82-8	Isopropylbenzene		35.8	ug/kg	0.313	1.04
108-67-8	1,3,5-Trimethylbenzene		41.9	ug/kg	0.313	1.04
106-43-4	4-Chlorotoluene		42.3	ug/kg	0.313	1.04
98-06-6	tert-Butylbenzene		43.3	ug/kg	0.313	1.04
95-63-6	1,2,4-Trimethylbenzene		42.1	ug/kg	0.313	1.04
135-98-8	sec-Butylbenzene		42.6	ug/kg	0.313	1.04
99-87-6	4-Isopropyltoluene		43.9	ug/kg	0.313	1.04
541-73-1	1,3-Dichlorobenzene		43.6	ug/kg	0.313	1.04
106-46-7	1,4-Dichlorobenzene		42.6	ug/kg	0.313	1.04
104-51-8	n-Butylbenzene		42.3	ug/kg	0.313	1.04
96-12-8	1,2-Dibromo-3-chloropropane		57.7	ug/kg	0.313	1.04
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.22	ug/kg	1.67	5.22
630-20-6	1,1,1,2-Tetrachloroethane		47.9	ug/kg	0.313	1.04
95-50-1	1,2-Dichlorobenzene		43.7	ug/kg	0.313	1.04

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s126.d
Lab Smp Id: 1201874913 Client Smp ID: CAMO-09-10463MSD
Inj Date : 06-JUL-2009 22:18
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874913|882743|1|VOAF|1|
Misc Info : LANL 5g N/A 232424001MSD
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 26 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.16030	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1375439	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1025343	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	583234	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	334690	48.5623	50.7
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1353251	49.8197	52.0
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	532960	49.4769	51.6
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	215742	56.2113	58.6
5 Chloromethane	50	4.713	4.713	(0.472)	276604	43.3282	45.2
6 Vinyl chloride	62	4.934	4.934	(0.494)	283578	43.8693	45.8
7 Bromomethane	94	5.488	5.508	(0.550)	217766	42.6650	44.5
8 Chloroethane	64	5.629	5.629	(0.564)	195828	42.8854	44.7
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	395015	46.1598	48.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.718	6.718	(0.673)	277925	260.165	271
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	355626	41.9095	43.7
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	667000	40.8160	42.6
15 Iodomethane	142	6.968	6.968	(0.698)	2164125	214.385	224
20 Methylene chloride	84	7.298	7.298	(0.731)	268766	36.4202	38.0
18 Carbon disulfide	76	7.090	7.096	(0.710)	4150869	227.991	238
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	337241	39.5087	41.2
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	438310	40.6435	42.4
30 2-Butanone	43	8.694	8.694	(0.871)	468905	318.281	332
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	401454	42.1881	44.0
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	662307	41.8084	43.6
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	345204	42.6445	44.5
36 Chloroform	83	9.059	9.059	(0.908)	427767	41.0843	42.9
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	632171	41.9295	43.7
35 Bromochloromethane	128	9.023	9.023	(0.904)	136731	43.0873	45.0
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	367547	43.5311	45.4
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	350654	42.1547	44.0
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	339496	44.3329	46.2
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	303112	38.6310	40.3
49 Benzene	78	9.724	9.724	(0.974)	1029758	40.1032	41.8
53 Trichloroethylene	95	10.364	10.364	(1.038)	279516	43.4266	45.3
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	263286	41.9002	43.7
59 Bromodichloromethane	83	10.864	10.864	(1.089)	318306	45.2305	47.2
58 Dibromomethane	93	10.754	10.754	(1.078)	149893	42.2075	44.0
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	466172	226.861	237
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	413336	44.9092	46.8
65 Toluene	92	11.699	11.699	(0.889)	659913	39.1952	40.9
67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	366612	44.9535	46.9
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	189257	43.3465	45.2
69 2-Hexanone	43	12.260	12.260	(0.932)	744038	262.655	274
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	388909	41.9482	43.8
71 Tetrachloroethylene	164	12.290	12.291	(0.934)	252255	42.8850	44.7
72 Dibromochloromethane	129	12.540	12.540	(0.953)	246741	46.0836	48.1
73 1,2-Dibromoethane	107	12.711	12.711	(0.966)	225313	44.0496	46.0
76 Chlorobenzene	112	13.193	13.193	(1.003)	760827	41.9120	43.7
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	271813	45.8972	47.9
78 Ethylbenzene	91	13.254	13.254	(1.007)	1232204	40.5307	42.3
79 m,p-Xylenes	106	13.363	13.363	(1.016)	1009100	82.6602	86.2
80 o-Xylene	106	13.796	13.796	(1.049)	501074	41.9567	43.8
81 Styrene	104	13.802	13.802	(1.049)	810502	43.6272	45.5
82 Bromoform	173	14.064	14.065	(0.903)	179851	40.0487	41.8
87 1,1,2,2-Tetrachloroethane	83	14.442	14.443	(0.927)	284753	41.0857	42.9
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	89259	46.6963	48.7
90 Bromobenzene	156	14.564	14.564	(0.935)	344016	41.8334	43.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1466068	39.4678	41.2
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1015142	40.2572	42.0
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1098816	34.2729	35.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1081162	40.1639	41.9
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	910657	40.5049	42.3
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1050781	41.4837	43.3
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1097668	40.3499	42.1
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	1465488	40.8001	42.6
99 4-Isopropyltoluene	119	15.454	15.455	(0.992)	1242017	42.0524	43.9
104 n-Butylbenzene	92	15.887	15.887	(1.020)	607251	40.5072	42.3
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	65695	55.2780	57.7

Data File: /chem/VOA6.i/070609v6/6s126.d
Date : 06-JUL-2009 22:18
Client ID: CAMD-09-10463MSD
Sample Info: |120187491|882743|1|VOAF|1|
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

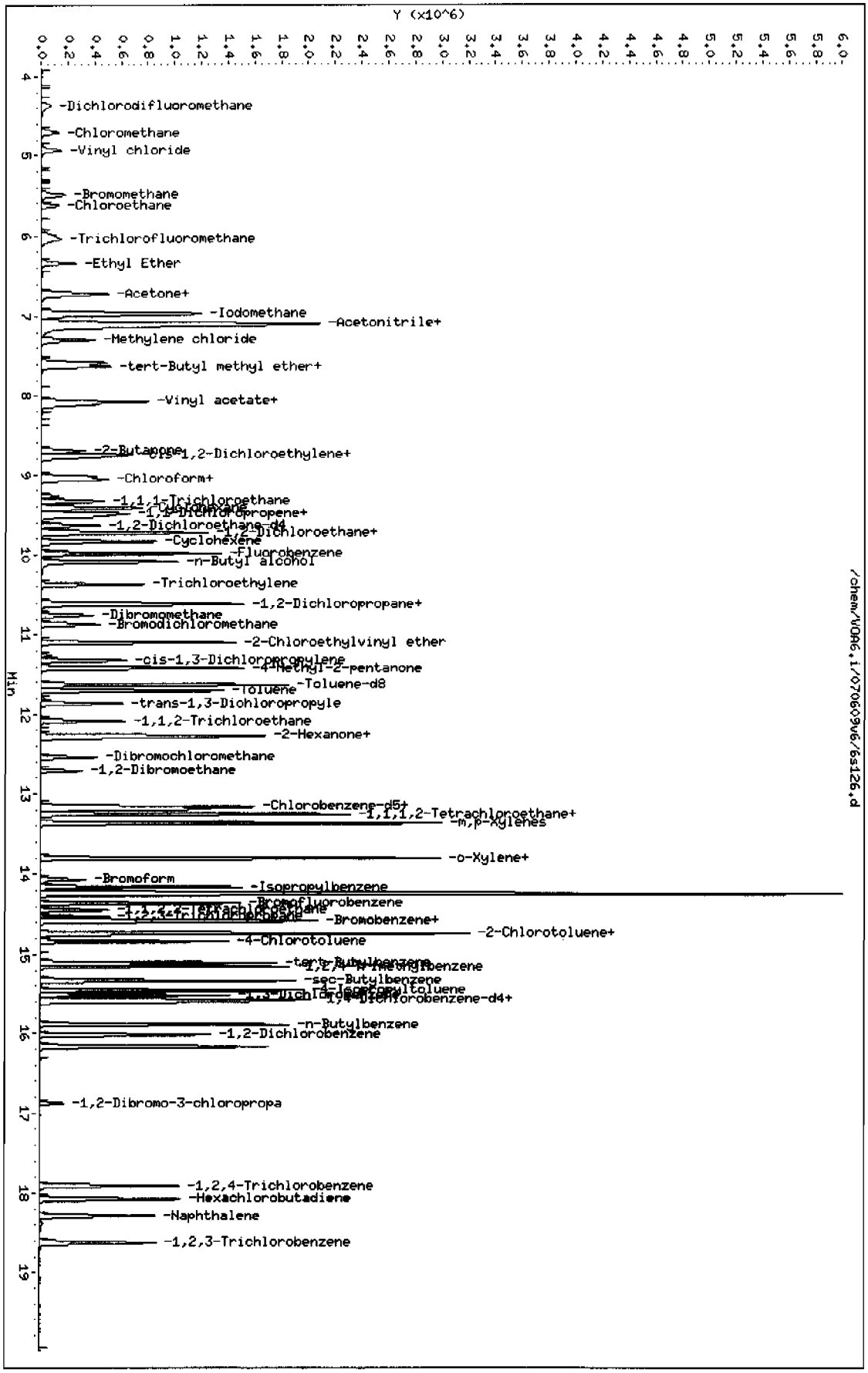

Page 1

Miscellaneous Data

Prep LogBook

Analyst: AXO1 Verified by:_____

Batch: 882741

Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201874911		SW846 5030	06-JUL-2009 10:30	N/A	5 g	5 mL	1	SOIL
MB	1201877123		SW846 5030	07-JUL-2009 10:00	N/A	5 g	5 mL	1	SOIL
LCS	1201874914		SW846 5030	06-JUL-2009 10:30	N/A	5 g	5 mL	1	SOIL
LCS	1201874915		SW846 5030	06-JUL-2009 10:30	N/A	5 g	5 mL	1	SOIL
LCS	1201877124		SW846 5030	07-JUL-2009 10:00	N/A	5 g	5 mL	1	SOIL
LCS	1201877125		SW846 5030	07-JUL-2009 10:00	N/A	5 g	5 mL	1	SOIL
SAMPLE	232424001		SW846 5030	06-JUL-2009 13:16	N/A	5 g	5 mL	1	SOIL
PS	1201874912	232424001	SW846 5030	06-JUL-2009 13:31	N/A	5 g	5 mL	1	SOIL
PSD	1201874913	232424001	SW846 5030	06-JUL-2009 13:32	N/A	5 g	5 mL	1	SOIL
SAMPLE	232426001		SW846 5030	06-JUL-2009 13:17	N/A	5 g	5 mL	1	SOIL
SAMPLE	232426002		SW846 5030	07-JUL-2009 10:45	N/A	5 g	5 mL	1	SOIL
SAMPLE	232426003		SW846 5030	06-JUL-2009 13:19	N/A	5 g	5 mL	1	SOIL
SAMPLE	232426004		SW846 5030	06-JUL-2009 13:20	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428001		SW846 5030	06-JUL-2009 13:21	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428004		SW846 5030	06-JUL-2009 13:22	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428006		SW846 5030	06-JUL-2009 13:23	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428007		SW846 5030	06-JUL-2009 13:24	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428008		SW846 5030	06-JUL-2009 13:25	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428011		SW846 5030	06-JUL-2009 13:26	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428013		SW846 5030	06-JUL-2009 13:27	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428016		SW846 5030	06-JUL-2009 13:28	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428017		SW846 5030	06-JUL-2009 13:29	N/A	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 6/15/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1306

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 061509V6

Daily Standard — Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	ICV	MS/ LCS	BFB
L-ICV	W6VM090615-17		5+5		
IS	UVM090518-01	1	1		
SS	UVM090305-02	1	1		
S-ICV	W6VM090615-25		5+5		
BFB	UVM090305-02				1

Purge Amount

5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6/15/2009	9:58	6P101.D	RINSE	GEL	BLANK	5mL	1	N/A	1	w	RXD1	N/A	X	RINSE
6/15/2009	10:26	6P102.D	RINSE	GEL	BLANK	5mL	1	N/A	2	w	RXD1	N/A	X	RINSE
6/15/2009	11:16	6P103.D	W6VM090615-01	GEL	CCV	5uL	1	N/A	3	w	RXD1	N/A	X	UVM090603-07A+UVM090520-07D
6/15/2009	11:44	6P104.D	W6VM090615-02	GEL	CCV/LCS	5uL	1	N/A	4	w	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	12:36	6P105.D	W6VM090615-03	GEL	CCV	5uL	1	N/A	5	w	RXD1	N/A	X	UVM090603-07A+UVM090520-07D
6/15/2009	13:04	6P106.D	W6VM090615-04	GEL	CCV/LCS	5uL	1	N/A	6	w	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	13:32	6P107.D	W6VM090615-05	GEL	LCS	5g	1	N/A	7	s	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	14:23	6P108.D	W6VM090615-06	GEL	CCV/LCS	5uL	1	N/A	8	w	RXD1	N/A	X	UVM090519-01E+IVM090611-01
6/15/2009	15:14	6P109.D	RINSE	GEL	BLANK	5mL	1	N/A	9	w	RXD1	N/A	X	RINSE
6/15/2009	15:42	6P110.D	W6VM090615-07	GEL	L-1	5uL	1	N/A	10	w	RXD1	N/A	X	TEST
6/15/2009	16:10	6P111.D	UVM090305-02	GEL	BFB	5mL	1	N/A	11	w	RXD1	N/A	O	
6/15/2009	16:38	6P112.D	W6VM090615-08	GEL	L-1	5uL	1	N/A	12	w	RXD1	N/A	O	UVM090603-02A+UVM090520-02D
6/15/2009	17:06	6P113.D	W6VM090615-09	GEL	L-2	5uL	1	N/A	13	w	RXD1	N/A	O	UVM090603-03A+UVM090520-03D
6/15/2009	17:34	6P114.D	W6VM090615-10	GEL	L-5	5uL	1	N/A	14	w	RXD1	N/A	O	UVM090603-04A+UVM090520-04D
6/15/2009	18:02	6P115.D	W6VM090615-11	GEL	L-10	5uL	1	N/A	15	w	RXD1	N/A	O	UVM090603-05A+UVM090520-05D
6/15/2009	18:30	6P116.D	W6VM090615-12	GEL	L-20	5uL	1	N/A	16	w	RXD1	N/A	X	Methyline Chloride would not pass
6/15/2009	18:58	6P117.D	W6VM090615-13	GEL	L-50	5uL	1	N/A	17	w	RXD1	N/A	O	UVM090603-07A+UVM090520-07D
6/15/2009	19:25	6P118.D	W6VM090615-14	GEL	L-100	5uL	1	N/A	18	w	RXD1	N/A	O	UVM090603-08A+UVM090520-08D
6/15/2009	19:53	6P119.D	RINSE	GEL	BLANK	5mL	1	N/A	19	w	RXD1	N/A	x	RINSE
6/15/2009	20:21	6P120.D	W6VM090615-15	GEL	L-0.5	5uL	1	N/A	20	w	RXD1	N/A	O	UVM090603-01A+UVM090520-01D
6/15/2009	20:49	6P121.D	W6VM090615-16	GEL	L-ICV	5uL	1	N/A	21	w	RXD1	N/A	x	UVM090605-01A+IVM090611-01
6/15/2009	21:17	6P122.D	W6VM090615-17	GEL	L-ICV	5uL	1	N/A	22	w	RXD1	N/A	O	UVM090527-01C+IVM090611-01
6/15/2009	21:45	6P123.D	W6VM090615-18	GEL	S-5	5uL	1	N/A	23	w	RXD1	N/A	O	UVM090601-01+UVM090522-01C
6/15/2009	22:12	6P124.D	W6VM090615-19	GEL	S-10	5uL	1	N/A	24	w	RXD1	N/A	O	UVM090601-02+UVM090522-02C
6/15/2009	22:40	6P125.D	W6VM090615-20	GEL	S-25	5uL	1	N/A	25	w	RXD1	N/A	O	UVM090601-03+UVM090522-03C
6/15/2009	23:07	6P126.D	W6VM090615-21	GEL	S-50	5uL	1	N/A	26	w	RXD1	N/A	O	UVM090601-04+UVM090522-04C
6/15/2009	23:35	6P127.D	W6VM090615-22	GEL	S-100	5uL	1	N/A	27	w	RXD1	N/A	O	UVM090601-05+UVM090522-05C
6/16/2009	0:03	6P128.D	W6VM090615-23	GEL	S-250	5uL	1	N/A	28	w	RXD1	N/A	O	UVM090601-06+UVM090522-06C

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 6/15/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY:
DATE:

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1306

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 061509V6

Daily Standard — Volume Added for Purge (ul)

Solution ID#		Blk/ Smpl	ICV	MS/ LCS	BFB
L-ICV	W6VM090615-17		5+5		
IS	UVM090518-01	1	1		
SS	UVM090305-02	1	1		
S-ICV	W6VM090615-25		5+5		
BFB	UVM090305-02				1

Purge Amount

5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6/16/2009	0:31	6P129.D	W6VM090615-24	GEL	S-500	5uL	1	N/A	29	w	RXD1	N/A	O	UVM090601-07+UVM090522-07C
6/16/2009	0:59	6P130.D	RINSE	GEL	BLANK	5mL	1	N/A	30	w	RXD1	N/A	x	RINSE
6/16/2009	1:27	6P131.D	W6VM090615-25	GEL	S-ICV	5uL	1	N/A	31	w	RXD1	N/A	O	UVM090601-08A+UVM090528-01C
6/16/2009	1:55	6P132.D	RINSE	GEL	BLANK	5mL	1	N/A	32	w	RXD1	N/A	x	RINSE

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 7/6/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1341

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. 123 for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 070609V6

Daily Standard — Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W6VM090706-02		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W6VM090706-02/03			5+5	
BFB	W6VM090706-02				1
SHORT	UVM090601-08B		5	5	
DHEC	N/A				

Purge Amount

5	Water Purge Vol:ML
5	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6 Jul 2009 09:53	6S101.D	RINSE	GEL	RINSE	5mL	1	N/A	1	w	AXO1	N/A	X	RINSE
6 Jul 2009 10:21	6S102.D	W6VM090706-01	GEL	CCV	5uL	1	N/A	2	w	AXO1	N/A	X	UVM090603-07B+UVM090617-07C Multiple CCC failures
6 Jul 2009 10:49	6S103.D	W6VM090706-02	GEL	BFB/CCV/LCS	5uL	1	N/A	3	w	AXO1	N/A	O	UVM090605-01D+IVM090630-01
6 Jul 2009 11:17	6S104.D	W6VM090706-03	GEL	LCS	5g	1	N/A	4	s	AXO1	N/A	O	UVM090605-01D+IVM090630-01
6 Jul 2009 11:44	6S105.D	UVM090601-08B	GEL	SHORT/LCS	5uL	1	N/A	5	w	AXO1	N/A	O	
6 Jul 2009 12:12	6S106.D	UVM090601-08B	GEL	SLCS	5g	1	N/A	6	s	AXO1	N/A	O	
6 Jul 2009 12:39	6S107.D	12018--	GEL	MB	5ml	1	N/A	7	w	AXO1	N/A	X	
6 Jul 2009 13:07	6S108.D	12018--	GEL	MB	5g	1	N/A	8	s	AXO1	N/A	O	
6 Jul 2009 13:35	6S109.D	232363003	LANL	882208	5g	1	N/A	9	s	AXO1	N/A	O	
6 Jul 2009 14:03	6S110.D	232363004	LANL	882208	5g	1	N/A	10	s	AXO1	N/A	O	
6 Jul 2009 15:22	6S111.D	232424001	LANL	882743	5g	1	N/A	11	s	AXO1	N/A	O	
6 Jul 2009 15:50	6S112.D	232426001	LANL	882743	5g	1	N/A	12	s	AXO1	N/A	O	
6 Jul 2009 16:18	6S113.D	232426002	LANL	882743	5g	1	N/A	13	s	AXO1	N/A	X	RR IS Failure see file 6s209
6 Jul 2009 16:46	6S114.D	232426003	LANL	882743	5g	1	N/A	14	s	AXO1	N/A	O	
6 Jul 2009 17:14	6S115.D	232426004	LANL	882743	5g	1	N/A	15	s	AXO1	N/A	O	
6 Jul 2009 17:41	6S116.D	232428001	LANL	882743	5g	1	N/A	16	s	AXO1	N/A	O	
6 Jul 2009 18:09	6S117.D	232428004	LANL	882743	5g	1	N/A	17	s	AXO1	N/A	O	
6 Jul 2009 18:37	6S118.D	232428006	LANL	882743	5g	1	N/A	18	s	AXO1	N/A	O	
6 Jul 2009 19:05	6S119.D	232428007	LANL	882743	5g	1	N/A	19	s	AXO1	N/A	O	
6 Jul 2009 19:32	6S120.D	232428008	LANL	882743	5g	1	N/A	20	s	AXO1	N/A	O	
6 Jul 2009 20:00	6S121.D	232428011	LANL	882743	5g	1	N/A	21	s	AXO1	N/A	O	
6 Jul 2009 20:28	6S122.D	232428013	LANL	882743	5g	1	N/A	22	s	AXO1	N/A	O	
6 Jul 2009 20:55	6S123.D	232428016	LANL	882743	5g	1	N/A	23	s	AXO1	N/A	O	
6 Jul 2009 21:23	6S124.D	232428017	LANL	882743	5g	1	N/A	24	s	AXO1	N/A	O	
6 Jul 2009 21:51	6S125.D	1201874912	LANL	882743	5g	1	N/A	25	s	AXO1	N/A	O	232424001MS

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 7/6/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1341

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. 123 for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 070609V6

Daily Standard	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W6VM090706-02		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W6VM090706-02/03			5+5	
BFB	W6VM090706-02				1
SHORT	UVM090601-08B		5	5	
DHEC	N/A				

Purge Amount	
5	Water Purge Vol:ML
5	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6 Jul 2009	22:18	6S126.D	1201874913	LANL	882743	5g	1	N/A	26	s	AXO1	N/A	O	232424001MSD

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s111.d
Lab Smp Id: 232424001 .Client Smp ID: CAMO-09-10463
Inj Date : 06-JUL-2009 15:22
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232424001|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.16030	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1443998	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1093849	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	605914	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	357453	49.4026	51.5
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1423986	49.1406	51.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	564002	50.3988	52.6

ION RATIO REPORT

VOA REPORT

Data file: 6s111.d
Report Date: 07/07/2009 07:51
Lab. ID: 232424001 SampleType: SAMPLE
Injection Date: 06-JUL-2009 15:22
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232424001|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2473
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	16311	9.98	9.71	80-120	100	(T)
64	2596	9.98	9.71	2- 62	16	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	9851	11.63	11.41	80-120	100	(T)
43	4559	11.63	11.41	199-259	46	(QT)
100	959332	11.63	11.41	11- 71	9738	(QT)
82 Bromoform				CAS#: 75-25-2		
173	2383	14.36	14.06	80-120	100	(T)
175	35599	14.36	14.06	19- 79	1494	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	11752	14.23	14.16	80-120	100	(T)
120	5994	14.23	14.16	0- 58	51	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	15767	14.24	14.53	80-120	100	(T)
75	32912	14.24	14.53	248-308	209	(QT)
77	1499	14.22	14.56	683-743	10	(QT)

Q qualifier indicates ion failed ratio requirement
T qualifier indicates RT outside 0.06 minute window of expected RT

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s111.d
Lab Smp Id: 232424001 Client Smp ID: CAMO-09-10463
Inj Date : 06-JUL-2009 15:22
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232424001|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.16030	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3013361	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3271202	50.000

RT	AREA	CONCENTRATIONS ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	12849527	213.209190	222	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	========	======
Unknown Siloxane					CAS #:		
16.174	3986937	60.9399300	63.6	0		0	101

Data File: /chem/VOA6.i/070609v6/6s111.d
Date : 06-JUL-2009 15:22
Client ID: CAMO-09-10463
Sample Info: |232424001|88274311|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

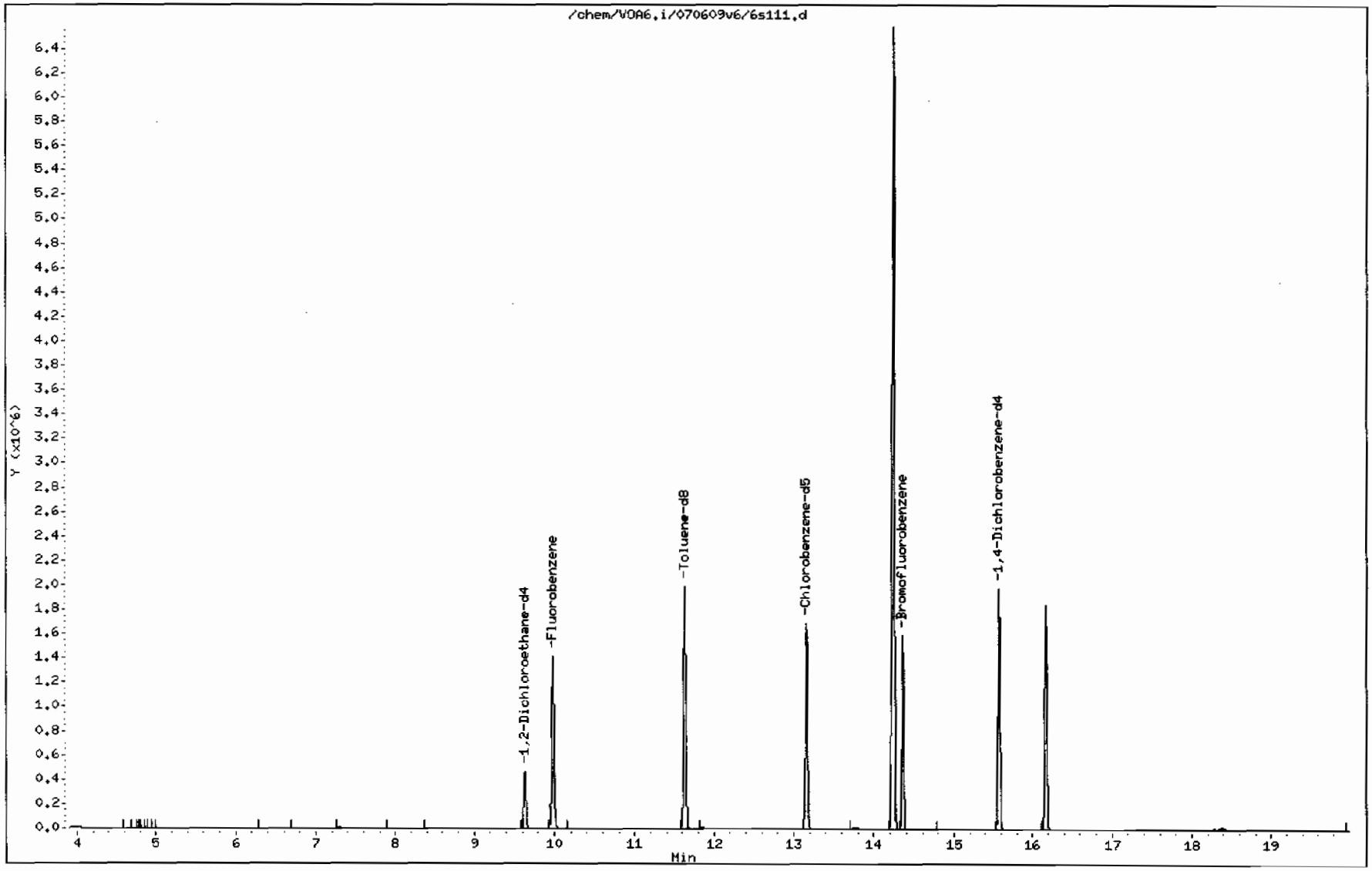

Data File: /chem/VOA6.i/070609v6/6s111.d

Date : 06-JUL-2009 15:22

Client ID: CAMO-09-10463

Instrument: VOA6.i

Sample Info: |2324240001|882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122479	78	C8H24O4Si4	296

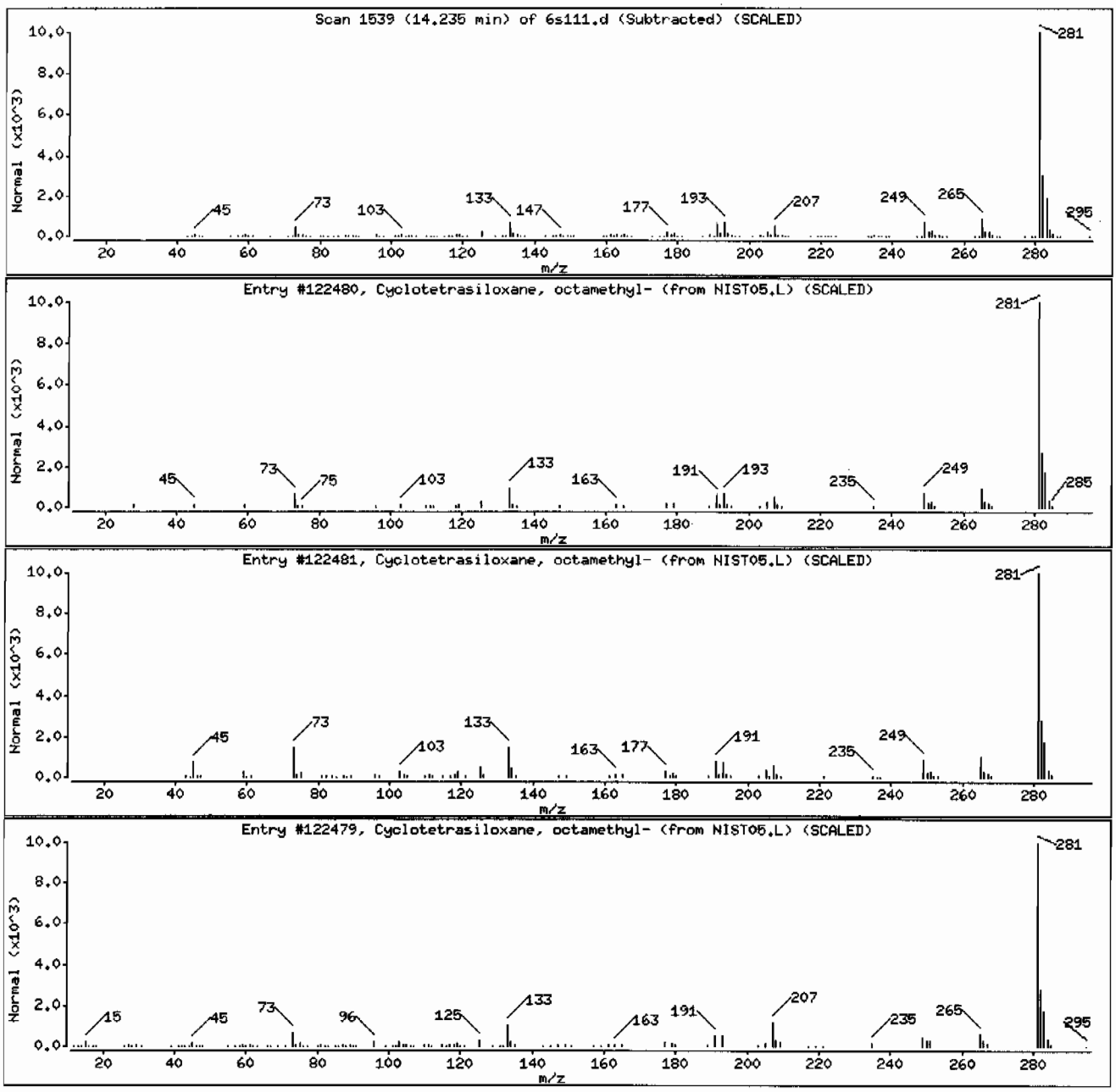

Data File: /chem/VOA6.i/070609v6/6s111.d

Date : 06-JUL-2009 15:22

Client ID: CAMO-09-10463

Instrument: VOA6.i

Sample Info: |2324240001882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	72	C18H3404Si3	398
p-Trimethylsilyloxyphenyl-bis(trimethyls	1000079-08-1	NIST05.L	161171	72	C17H3403Si3	370
Benzaldehyde, 2,4-bis(trimethylsiloxy)-	33617-38-8	NIST05.L	112902	72	C13H2203Si2	282

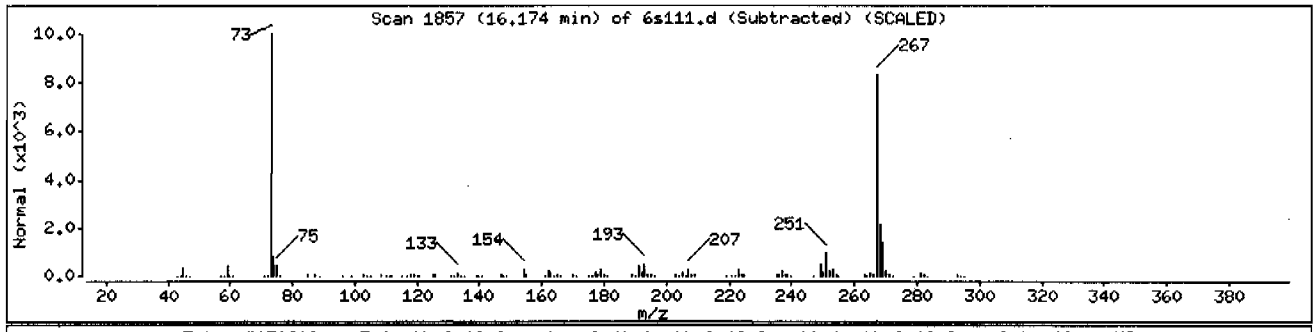

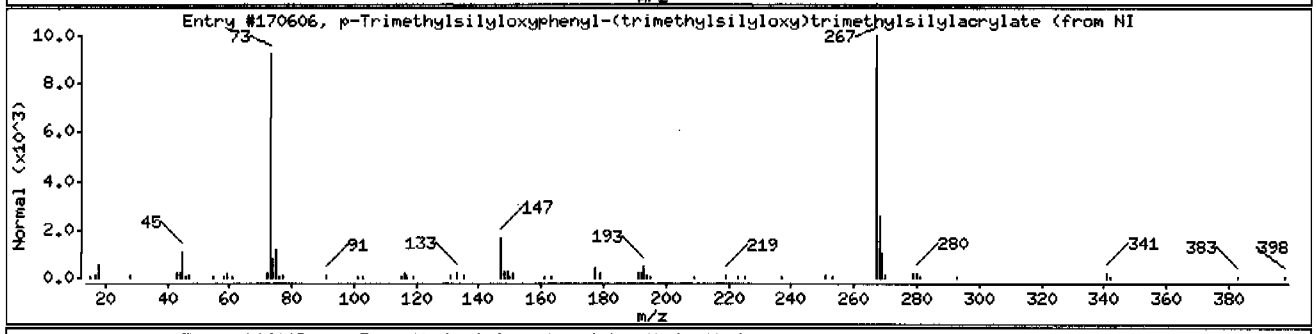

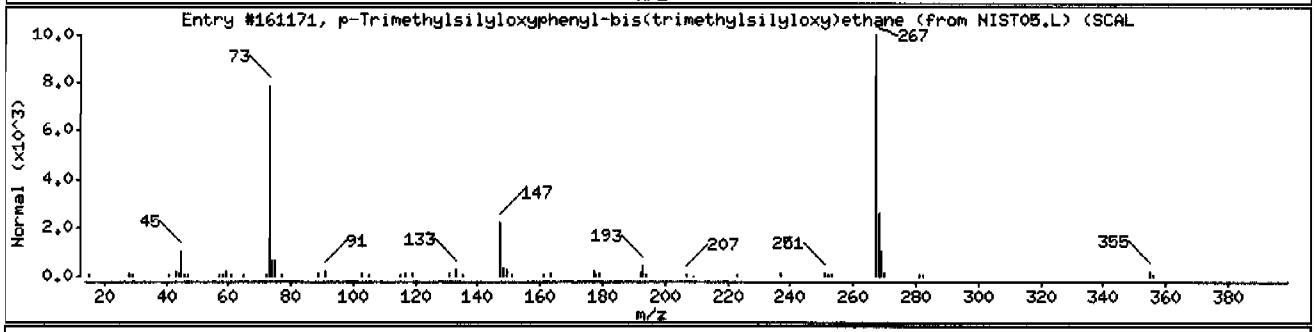

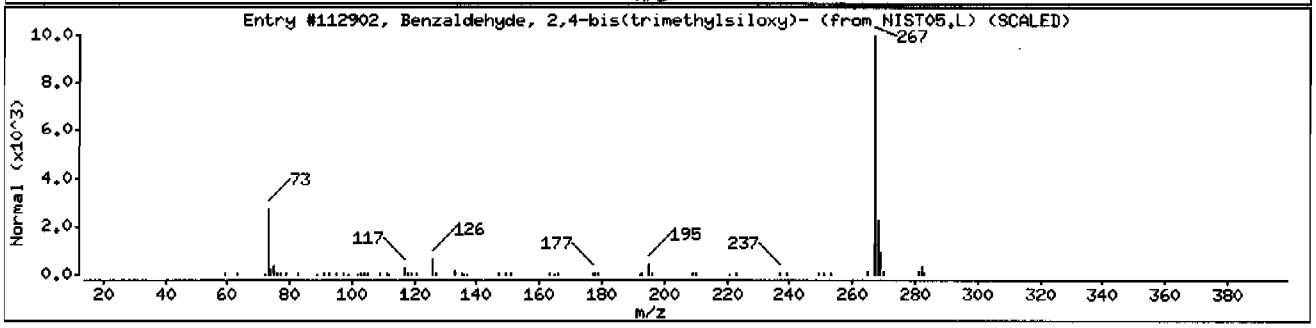

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s125.d
Lab Smp Id: 1201874912 Client Smp ID: CAMO-09-10463MS
Inj Date : 06-JUL-2009 21:51
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874912|882743|1|VOAF|1|
Misc Info : LANL 5g N/A 232424001MS
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 25 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.16030	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1565823	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1199918	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	698015	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	396420	50.5255	52.7
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1563680	49.1913	51.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	633473	49.1376	51.3
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	211517	48.4097	50.5
5 Chloromethane	50	4.713	4.713	(0.472)	278129	38.2699	39.9
6 Vinyl chloride	62	4.934	4.934	(0.494)	286167	38.8872	40.6
7 Bromomethane	94	5.498	5.508	(0.551)	222628	38.3143	40.0
8 Chloroethane	64	5.619	5.629	(0.563)	196398	37.7807	39.4
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	389812	40.0133	41.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.718	6.718	(0.673)	307290	252.727	264
14 1,1-Dichloroethylene	61	6.725	6.718	(0.674)	354992	36.7482	38.3
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	667095	34.1091	35.6
15 Iodomethane	142	6.968	6.968	(0.698)	2152933	187.345	195
20 Methylene chloride	84	7.292	7.298	(0.731)	268761	31.3940	32.8
18 Carbon disulfide	76	7.103	7.096	(0.712)	4199002	202.592	211
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	332966	34.2650	35.8
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	436053	35.5179	37.0
30 2-Butanone	43	8.694	8.694	(0.871)	516168	307.763	321
31 cis-1,2-Dichloroethylene	61	8.749	8.742	(0.877)	397364	36.6810	38.3
100 1,3-Dichlorobenzene	146	15.516	15.515	(0.996)	663075	34.9740	36.5
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	338958	36.7817	38.4
36 Chloroform	83	9.053	9.059	(0.907)	420503	35.4761	37.0
106 1,2-Dichlorobenzene	146	16.022	16.021	(1.029)	634617	35.1702	36.7
35 Bromochloromethane	128	9.023	9.023	(0.904)	136978	37.9168	39.6
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	358835	37.3319	39.0
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	344515	36.3810	38.0
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	332495	38.1396	39.8
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	305079	34.1542	35.6
49 Benzene	78	9.724	9.724	(0.974)	1014349	34.7000	36.2
53 Trichloroethylene	95	10.364	10.364	(1.038)	269947	36.8406	38.4
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	260058	36.3544	37.9
59 Bromodichloromethane	83	10.864	10.864	(1.089)	313368	39.1147	40.8
58 Dibromomethane	93	10.754	10.754	(1.078)	151002	37.3499	39.0
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	499338	207.647	217
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	410563	39.1842	40.9
65 Toluene	92	11.699	11.699	(0.889)	651953	33.0887	34.5
67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	368285	38.5885	40.3
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	191318	37.4434	39.1
69 2-Hexanone	43	12.260	12.260	(0.932)	821851	247.914	259
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	397996	36.6827	38.3
71 Tetrachloroethylene	164	12.291	12.291	(0.934)	248453	36.0934	37.7
72 Dibromochloromethane	129	12.541	12.540	(0.953)	250289	39.9452	41.7
73 1,2-Dibromoethane	107	12.711	12.711	(0.966)	232126	38.7791	40.5
76 Chlorobenzene	112	13.193	13.193	(1.003)	754345	35.5091	37.0
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	267923	38.6584	40.3
78 Ethylbenzene	91	13.254	13.254	(1.007)	1223899	34.4005	35.9
79 m,p-Xylenes	106	13.364	13.363	(1.016)	996849	69.7765	72.8
80 o-Xylene	106	13.796	13.796	(1.049)	501874	35.9097	37.5
81 Styrene	104	13.802	13.802	(1.049)	809794	37.2474	38.9
82 Bromoform	173	14.065	14.065	(0.903)	188163	35.1985	36.7
87 1,1,2,2-Tetrachloroethane	83	14.436	14.443	(0.927)	304880	36.7561	38.4
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	93145	40.7163	42.5(Q)
90 Bromobenzene	156	14.565	14.564	(0.935)	343538	34.9058	36.4
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1446110	32.5288	33.9
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1009891	33.4634	34.9
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1086424	28.3141	29.5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1061934	32.9625	34.4
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	899124	33.4157	34.9
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1022325	33.7235	35.2
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1083715	33.2862	34.7
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	1426459	33.1831	34.6
99 4-Isopropyltoluene	119	15.455	15.455	(0.992)	1210060	34.2333	35.7
104 n-Butylbenzene	92	15.887	15.887	(1.020)	593431	33.0759	34.5
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	70617	49.6486	51.8

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070609v6/6s125.d
Date : 06-JUL-2009 21:51
Client ID: CAMD-09-10463MS
Sample Info: 1120187491218827431 1 1 VOAF 1 1
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

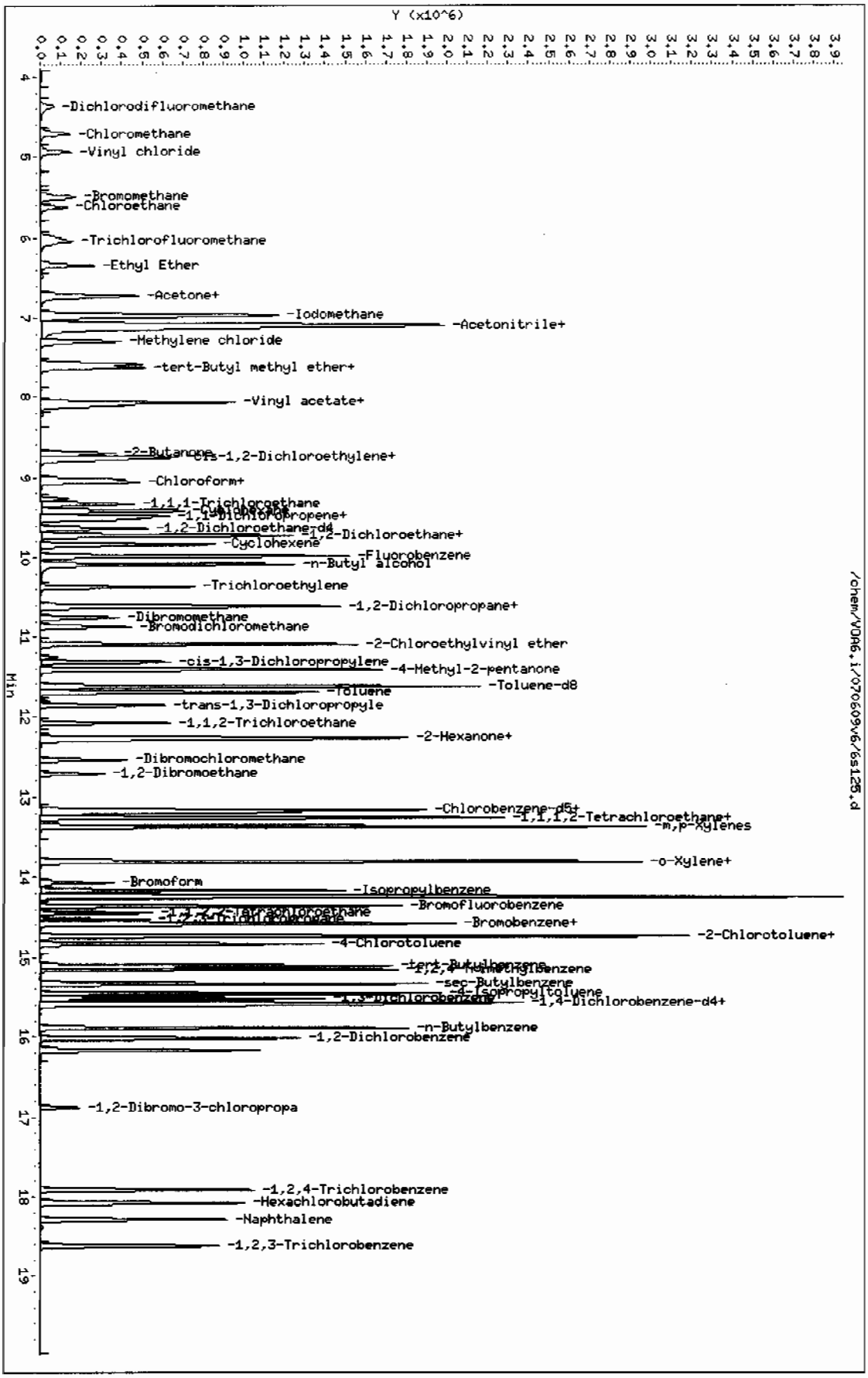

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GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s126.d
Lab Smp Id: 1201874913 Client Smp ID: CAMO-09-10463MSD
Inj Date : 06-JUL-2009 22:18
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874913|882743|1|VOAF|1|
Misc Info : LANL 5g N/A 232424001MSD
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 26 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.16030	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1375439	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1025343	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	583234	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	334690	48.5623	50.7
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1353251	49.8197	52.0
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	532960	49.4769	51.6
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	215742	56.2113	58.6
5 Chloromethane	50	4.713	4.713	(0.472)	276604	43.3282	45.2
6 Vinyl chloride	62	4.934	4.934	(0.494)	283578	43.8693	45.8
7 Bromomethane	94	5.488	5.508	(0.550)	217766	42.6650	44.5
8 Chloroethane	64	5.629	5.629	(0.564)	195828	42.8854	44.7
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	395015	46.1598	48.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.718	6.718	(0.673)	277925	260.165	271
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	355626	41.9095	43.7
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	667000	40.8160	42.6
15 Iodomethane	142	6.968	6.968	(0.698)	2164125	214.385	224
20 Methylene chloride	84	7.298	7.298	(0.731)	268766	36.4202	38.0
18 Carbon disulfide	76	7.090	7.096	(0.710)	4150869	227.991	238
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	337241	39.5087	41.2
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	438310	40.6435	42.4
30 2-Butanone	43	8.694	8.694	(0.871)	468905	318.281	332
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	401454	42.1881	44.0
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	662307	41.8084	43.6
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	345204	42.6445	44.5
36 Chloroform	83	9.059	9.059	(0.908)	427767	41.0843	42.9
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	632171	41.9295	43.7
35 Bromochloromethane	128	9.023	9.023	(0.904)	136731	43.0873	45.0
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	367547	43.5311	45.4
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	350654	42.1547	44.0
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	339496	44.3329	46.2
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	303112	38.6310	40.3
49 Benzene	78	9.724	9.724	(0.974)	1029758	40.1032	41.8
53 Trichloroethylene	95	10.364	10.364	(1.038)	279516	43.4266	45.3
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	263286	41.9002	43.7
59 Bromodichloromethane	83	10.864	10.864	(1.089)	318306	45.2305	47.2
58 Dibromomethane	93	10.754	10.754	(1.078)	149893	42.2075	44.0
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	466172	226.861	237
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	413336	44.9092	46.8
65 Toluene	92	11.699	11.699	(0.889)	659913	39.1952	40.9
67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	366612	44.9535	46.9
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	189257	43.3465	45.2
69 2-Hexanone	43	12.260	12.260	(0.932)	744038	262.655	274
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	388909	41.9482	43.8
71 Tetrachloroethylene	164	12.290	12.291	(0.934)	252255	42.8850	44.7
72 Dibromochloromethane	129	12.540	12.540	(0.953)	246741	46.0836	48.1
73 1,2-Dibromoethane	107	12.711	12.711	(0.966)	225313	44.0496	46.0
76 Chlorobenzene	112	13.193	13.193	(1.003)	760827	41.9120	43.7
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	271813	45.8972	47.9
78 Ethylbenzene	91	13.254	13.254	(1.007)	1232204	40.5307	42.3
79 m,p-Xylenes	106	13.363	13.363	(1.016)	1009100	82.6602	86.2
80 o-Xylene	106	13.796	13.796	(1.049)	501074	41.9567	43.8
81 Styrene	104	13.802	13.802	(1.049)	810502	43.6272	45.5
82 Bromoform	173	14.064	14.065	(0.903)	179851	40.0487	41.8
87 1,1,2,2-Tetrachloroethane	83	14.442	14.443	(0.927)	284753	41.0857	42.9
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	89259	46.6963	48.7
90 Bromobenzene	156	14.564	14.564	(0.935)	344016	41.8334	43.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1466068	39.4678	41.2
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1015142	40.2572	42.0
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1098816	34.2729	35.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1081162	40.1639	41.9
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	910657	40.5049	42.3
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1050781	41.4837	43.3
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1097668	40.3499	42.1
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	1465488	40.8001	42.6
99 4-Isopropyltoluene	119	15.454	15.455	(0.992)	1242017	42.0524	43.9
104 n-Butylbenzene	92	15.887	15.887	(1.020)	607251	40.5072	42.3
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	65695	55.2780	57.7

Data File: /chem/VOA6.i/070609v6/6s126.d
Date : 06-JUL-2009 22:18
Client ID: CAMO-09-10463MSD
Sample Info: 1120187491318827431 1VOAF11

Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

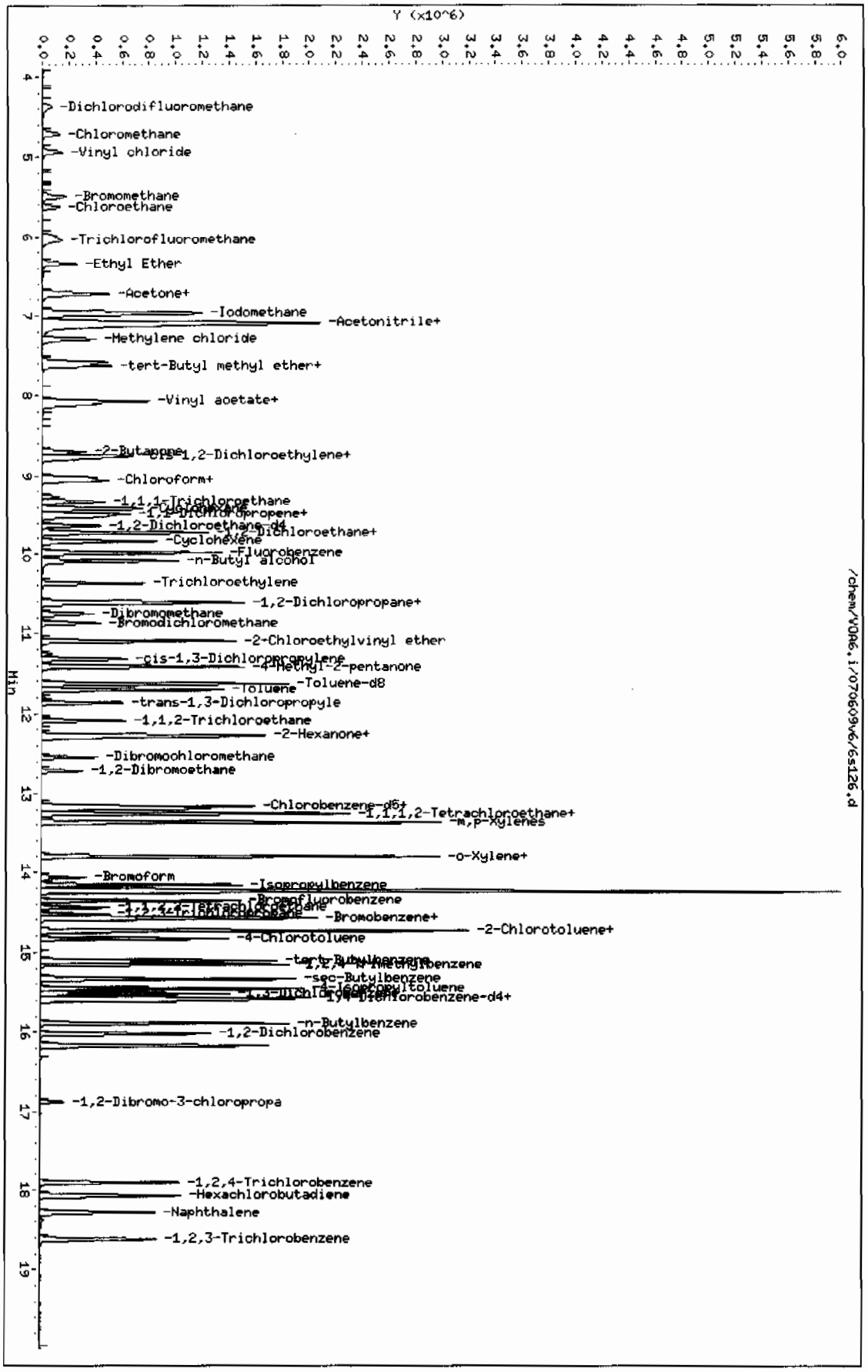

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GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2477

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	881319
Prep Batch Number:	881317

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232428001	CAMO-09-6007
232428002	CAMO-09-6006
232428003	CAMO-09-6008
232428004	CAMO-09-6009
232428005	CAMO-09-6034
232428006	CAMO-09-6043
232428007	CAMO-09-6045
232428008	CAMO-09-6041
232428009	CAMO-09-6040
232428010	CAMO-09-6044
232428011	CAMO-09-6035
232428012	CAMO-09-6038
232428013	CAMO-09-6039
232428014	CAMO-09-6042
232428015	CAMO-09-6049
1201871647	Method Blank (MB)
1201871648	Laboratory Control Sample (LCS)
1201871649	232428001(CAMO-09-6007) Matrix Spike (MS)
1201871650	232428001(CAMO-09-6007) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements

All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

QC Sample Designation

Sample 232428001 (CAMO-09-6007) was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike (MS) Recovery Statement

The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for confirmations and/or dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Additional Comments
Additional comments were not required for this SDG.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration

The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD2.I	Agilent 5975 Mass Spectrometer	HP7890A/HP5975C	DB-5MS	25m x 0.2mm, 0.33um (5% Phenylmethylpolysiloxane)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: [illegible] **Date:** 7-17-09

Roadmap for LANL 09-2477 SVOA

This roadmap was analyzed by ANN00964 on 07-01-2009, 21:12.
This roadmap was reviewed by dan01134 on 07-07-2009, 16:29.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD2.i/s063009.b/s2f3010.d	232428001	30-JUN-2009	18:53	09-2477.sub	CAMO-09-6007	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3013.d	232428002	30-JUN-2009	19:53	09-2477.sub	CAMO-09-6006	1	881319	REPORT
■	N	/chem/MSD2.i/s063009.b/s2f3014.d	232428003	30-JUN-2009	20:13	09-2477.sub	CAMO-09-6008	1	881319	DUSE; fails surr - see rerun s2f3027
☐	N	/chem/MSD2.i/s063009.b/s2f3015.d	232428004	30-JUN-2009	20:33	09-2477.sub	CAMO-09-6009	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3016.d	232428005	30-JUN-2009	20:53	09-2477.sub	CAMO-09-6034	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3017.d	232428006	30-JUN-2009	21:13	09-2477.sub	CAMO-09-6043	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3018.d	232428007	30-JUN-2009	21:33	09-2477.sub	CAMO-09-6045	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3019.d	232428008	30-JUN-2009	21:53	09-2477.sub	CAMO-09-6041	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3020.d	232428009	30-JUN-2009	22:12	09-2477.sub	CAMO-09-6040	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3021.d	232428010	30-JUN-2009	22:32	09-2477.sub	CAMO-09-6044	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3022.d	232428011	30-JUN-2009	22:52	09-2477.sub	CAMO-09-6035	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3023.d	232428012	30-JUN-2009	23:12	09-2477.sub	CAMO-09-6038	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3024.d	232428013	30-JUN-2009	23:32	09-2477.sub	CAMO-09-6039	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3025.d	232428014	30-JUN-2009	23:52	09-2477.sub	CAMO-09-6042	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3026.d	232428015	01-JUL-2009	00:12	09-2477.sub	CAMO-09-6049	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3027.d	232428003	01-JUL-2009	00:32	09-2477.sub	CAMO-09-6008	1	881319	REPORT

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD2.i/s063009.b/s2f3005-2.d	1201871647	mb	30-JUN-2009	17:13	09-2477.sub	SBLK01	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3006-2.d	1201871648	lcs	30-JUN-2009	17:33	09-2477.sub	SBLK01LCS	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3011.d	1201871649	ms	30-JUN-2009	19:13	09-2477.sub	CAMO-09-6007MS	1	881319	REPORT
☐	N	/chem/MSD2.i/s063009.b/s2f3012.d	1201871650	msd	30-JUN-2009	19:32	09-2477.sub	CAMO-09-6007MSD	1	881319	REPORT

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428002	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6006	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 19:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	s2f3013.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	375	ug/kg	75.1	375
108-95-2	Phenol	U	375	ug/kg	75.1	375
95-57-8	2-Chlorophenol	U	375	ug/kg	75.1	375
106-46-7	1,4-Dichlorobenzene	U	375	ug/kg	75.1	375
621-64-7	N-Nitrosodipropylamine	U	375	ug/kg	75.1	375
59-50-7	4-Chloro-3-methylphenol	U	375	ug/kg	37.5	375
83-32-9	Acenaphthene	U	37.5	ug/kg	12.5	37.5
121-14-2	2,4-Dinitrotoluene	U	375	ug/kg	37.5	375
100-02-7	4-Nitrophenol	U	375	ug/kg	75.1	375
87-86-5	Pentachlorophenol	U	375	ug/kg	75.1	375
129-00-0	Pyrene		104	ug/kg	11.8	37.5
110-86-1	Pyridine	U	375	ug/kg	75.1	375
62-53-3	Aniline	U	375	ug/kg	131	375
111-44-4	bis(2-Chloroethyl) ether	U	375	ug/kg	75.1	375
541-73-1	1,3-Dichlorobenzene	U	375	ug/kg	75.1	375
100-51-6	Benzyl alcohol	U	375	ug/kg	113	375
95-50-1	1,2-Dichlorobenzene	U	375	ug/kg	75.1	375
108-60-1	bis(2-Chloroisopropyl)ether	U	375	ug/kg	75.1	375
95-48-7	o-Cresol	U	375	ug/kg	75.1	375
65794-96-9	m,p-Cresols	U	375	ug/kg	150	375
67-72-1	Hexachloroethane	U	375	ug/kg	75.1	375
98-95-3	Nitrobenzene	U	375	ug/kg	75.1	375
78-59-1	Isophorone	U	375	ug/kg	75.1	375
88-75-5	2-Nitrophenol	U	375	ug/kg	37.5	375
105-67-9	2,4-Dimethylphenol	U	375	ug/kg	75.1	375
111-91-1	bis(2-Chloroethoxy)methane	U	375	ug/kg	75.1	375
120-83-2	2,4-Dichlorophenol	U	375	ug/kg	75.1	375
65-85-0	Benzoic acid	U	751	ug/kg	188	751
91-20-3	Naphthalene	U	37.5	ug/kg	11.3	37.5
106-47-8	4-Chloroaniline	U	375	ug/kg	75.1	375
87-68-3	Hexachlorobutadiene	U	375	ug/kg	75.1	375
91-57-6	2-Methylnaphthalene	U	37.5	ug/kg	7.51	37.5
77-47-4	Hexachlorocyclopentadiene	U	375	ug/kg	75.1	375
88-06-2	2,4,6-Trichlorophenol	U	375	ug/kg	75.1	375
95-95-4	2,4,5-Trichlorophenol	U	375	ug/kg	75.1	375
91-58-7	2-Chloronaphthalene	U	37.5	ug/kg	13.1	37.5
88-74-4	2-Nitroaniline	U	375	ug/kg	75.1	375
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	375	ug/kg	75.1	375

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428002	Date Received:	06/26/2009 08:40	%Moisture:	11.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6006	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 19:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.08 g	Final Volume:	1 mL
Data File:	s2f3013.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	375	ug/kg	75.1	375
606-20-2	2,6-Dinitrotoluene	U	375	ug/kg	37.5	375
208-96-8	Acenaphthylene	U	37.5	ug/kg	11.3	37.5
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751
132-64-9	Dibenzofuran	U	375	ug/kg	75.1	375
84-66-2	Diethylphthalate	U	375	ug/kg	75.1	375
86-73-7	Fluorene	U	37.5	ug/kg	11.3	37.5
7005-72-3	4-Chlorophenylphenylether	U	375	ug/kg	37.5	375
534-52-1	2-Methyl-4,6-dinitrophenol	U	375	ug/kg	75.1	375
100-01-6	4-Nitroaniline	U	375	ug/kg	75.1	375
	p-Nitroaniline					
122-39-4	Diphenylamine	U	375	ug/kg	75.1	375
122-66-7	Azobenzene	U	375	ug/kg	75.1	375
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	375	ug/kg	37.5	375
118-74-1	Hexachlorobenzene	U	375	ug/kg	75.1	375
85-01-8	Phenanthrene		45.5	ug/kg	11.3	37.5
120-12-7	Anthracene	U	37.5	ug/kg	7.51	37.5
84-74-2	Di-n-butylphthalate	U	375	ug/kg	37.5	375
206-44-0	Fluoranthene		120	ug/kg	11.3	37.5
85-68-7	Butylbenzylphthalate	U	375	ug/kg	75.1	375
56-55-3	Benzo(a)anthracene		45.8	ug/kg	11.3	37.5
91-94-1	3,3'-Dichlorobenzidine	U	375	ug/kg	113	375
218-01-9	Chrysene		56.0	ug/kg	11.3	37.5
117-81-7	bis(2-Ethylhexyl)phthalate	J	85.6	ug/kg	75.1	375
117-84-0	Di-n-octylphthalate	U	375	ug/kg	75.1	375
205-99-2	Benzo(b)fluoranthene		104	ug/kg	11.3	37.5
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.3	37.5
50-32-8	Benzo(a)pyrene		52.3	ug/kg	11.3	37.5
193-39-5	Indeno(1,2,3-cd)pyrene	J	28.5	ug/kg	11.3	37.5
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.3	37.5
191-24-2	Benzo(ghi)perylene	J	28.7	ug/kg	11.3	37.5
120-82-1	1,2,4-Trichlorobenzene	U	375	ug/kg	75.1	375

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.14	415	ug/kg		J
	Unknown Aldol Condensate	3.07	261	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428002	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6006	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 19:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	s2f3013.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.33	181	ug/kg		J
	Unknown	8.44	171	ug/kg		J
	Unknown	8.6	227	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	324	ug/kg	96	NJ
112-95-8	Eicosane	9.88	157	ug/kg	96	NJ
	Unknown	12.49	2240	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428001**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**4.3**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6007**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881319**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 18:53**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 14:54**	**Aliquot:**	**30.06 g**	**Final Volume:**	**1 mL**
Data File:	**s2f3010.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	347	ug/kg	69.5	347
108-95-2	Phenol	U	347	ug/kg	69.5	347
95-57-8	2-Chlorophenol	U	347	ug/kg	69.5	347
106-46-7	1,4-Dichlorobenzene	U	347	ug/kg	69.5	347
621-64-7	N-Nitrosodipropylamine	U	347	ug/kg	69.5	347
59-50-7	4-Chloro-3-methylphenol	U	347	ug/kg	34.7	347
83-32-9	Acenaphthene	U	34.7	ug/kg	11.6	34.7
121-14-2	2,4-Dinitrotoluene	U	347	ug/kg	34.7	347
100-02-7	4-Nitrophenol	U	347	ug/kg	69.5	347
87-86-5	Pentachlorophenol	U	347	ug/kg	69.5	347
129-00-0	Pyrene	U	34.7	ug/kg	10.9	34.7
110-86-1	Pyridine	U	347	ug/kg	69.5	347
62-53-3	Aniline	U	347	ug/kg	122	347
111-44-4	bis(2-Chloroethyl) ether	U	347	ug/kg	69.5	347
541-73-1	1,3-Dichlorobenzene	U	347	ug/kg	69.5	347
100-51-6	Benzyl alcohol	U	347	ug/kg	104	347
95-50-1	1,2-Dichlorobenzene	U	347	ug/kg	69.5	347
108-60-1	bis(2-Chloroisopropyl)ether	U	347	ug/kg	69.5	347
95-48-7	o-Cresol	U	347	ug/kg	69.5	347
65794-96-9	m,p-Cresols	U	347	ug/kg	139	347
67-72-1	Hexachloroethane	U	347	ug/kg	69.5	347
98-95-3	Nitrobenzene	U	347	ug/kg	69.5	347
78-59-1	Isophorone	U	347	ug/kg	69.5	347
88-75-5	2-Nitrophenol	U	347	ug/kg	34.7	347
105-67-9	2,4-Dimethylphenol	U	347	ug/kg	69.5	347
111-91-1	bis(2-Chloroethoxy)methane	U	347	ug/kg	69.5	347
120-83-2	2,4-Dichlorophenol	U	347	ug/kg	69.5	347
65-85-0	Benzoic acid	U	695	ug/kg	174	695
91-20-3	Naphthalene	U	34.7	ug/kg	10.4	34.7
106-47-8	4-Chloroaniline	U	347	ug/kg	69.5	347
87-68-3	Hexachlorobutadiene	U	347	ug/kg	69.5	347
91-57-6	2-Methylnaphthalene	U	34.7	ug/kg	6.95	34.7
77-47-4	Hexachlorocyclopentadiene	U	347	ug/kg	69.5	347
88-06-2	2,4,6-Trichlorophenol	U	347	ug/kg	69.5	347
95-95-4	2,4,5-Trichlorophenol	U	347	ug/kg	69.5	347
91-58-7	2-Chloronaphthalene	U	34.7	ug/kg	12.2	34.7
88-74-4	2-Nitroaniline	U	347	ug/kg	69.5	347
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	347	ug/kg	69.5	347

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 18:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s2f3010.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	347	ug/kg	69.5	347
606-20-2	2,6-Dinitrotoluene	U	347	ug/kg	34.7	347
208-96-8	Acenaphthylene	U	34.7	ug/kg	10.4	34.7
51-28-5	2,4-Dinitrophenol	U	695	ug/kg	132	695
132-64-9	Dibenzofuran	U	347	ug/kg	69.5	347
84-66-2	Diethylphthalate	U	347	ug/kg	69.5	347
86-73-7	Fluorene	U	34.7	ug/kg	10.4	34.7
7005-72-3	4-Chlorophenylphenylether	U	347	ug/kg	34.7	347
534-52-1	2-Methyl-4,6-dinitrophenol	U	347	ug/kg	69.5	347
100-01-6	4-Nitroaniline	U	347	ug/kg	69.5	347
	p-Nitroaniline					
122-39-4	Diphenylamine	U	347	ug/kg	69.5	347
122-66-7	Azobenzene	U	347	ug/kg	69.5	347
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	347	ug/kg	34.7	347
118-74-1	Hexachlorobenzene	U	347	ug/kg	69.5	347
85-01-8	Phenanthrene	U	34.7	ug/kg	10.4	34.7
120-12-7	Anthracene	U	34.7	ug/kg	6.95	34.7
84-74-2	Di-n-butylphthalate	U	347	ug/kg	34.7	347
206-44-0	Fluoranthene	U	34.7	ug/kg	10.4	34.7
85-68-7	Butylbenzylphthalate	U	347	ug/kg	69.5	347
56-55-3	Benzo(a)anthracene	U	34.7	ug/kg	10.4	34.7
91-94-1	3,3'-Dichlorobenzidine	U	347	ug/kg	104	347
218-01-9	Chrysene	U	34.7	ug/kg	10.4	34.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	347	ug/kg	69.5	347
117-84-0	Di-n-octylphthalate	U	347	ug/kg	69.5	347
205-99-2	Benzo(b)fluoranthene	U	34.7	ug/kg	10.4	34.7
207-08-9	Benzo(k)fluoranthene	U	34.7	ug/kg	10.4	34.7
50-32-8	Benzo(a)pyrene	U	34.7	ug/kg	10.4	34.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.7	ug/kg	10.4	34.7
53-70-3	Dibenzo(a,h)anthracene	U	34.7	ug/kg	10.4	34.7
191-24-2	Benzo(ghi)perylene	U	34.7	ug/kg	10.4	34.7
120-82-1	1,2,4-Trichlorobenzene	U	347	ug/kg	69.5	347

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.13	209	ug/kg		J
	Unknown Aldol Condensate	3.06	309	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 18:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s2f3010.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.91	225	ug/kg	99	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.39	212	ug/kg	95	NJ
	Unknown	8.6	234	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	288	ug/kg	98	NJ
4376-20-9	1,2-Benzenedicarboxylic acid, mono(2-eth	8.73	184	ug/kg	81	NJ
	Unknown	8.83	201	ug/kg		J
	Unknown	12.14	214	ug/kg		J
	Unknown	12.47	533	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428003**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**23.1**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6008**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881319**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**07/01/2009 00:32**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 14:54**	**Aliquot:**	**30.15 g**	**Final Volume:**	**1 mL**
Data File:	**s2f3027.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	431	ug/kg	86.3	431
108-95-2	Phenol	U	431	ug/kg	86.3	431
95-57-8	2-Chlorophenol	U	431	ug/kg	86.3	431
106-46-7	1,4-Dichlorobenzene	U	431	ug/kg	86.3	431
621-64-7	N-Nitrosodipropylamine	U	431	ug/kg	86.3	431
59-50-7	4-Chloro-3-methylphenol	U	431	ug/kg	86.3	431
83-32-9	Acenaphthene	U	43.1	ug/kg	14.2	43.1
121-14-2	2,4-Dinitrotoluene	U	431	ug/kg	43.1	431
100-02-7	4-Nitrophenol	U	431	ug/kg	142	431
87-86-5	Pentachlorophenol	U	431	ug/kg	108	431
129-00-0	Pyrene		185	ug/kg	12.9	43.1
110-86-1	Pyridine	U	431	ug/kg	86.3	431
62-53-3	Aniline	U	431	ug/kg	129	431
111-44-4	bis(2-Chloroethyl) ether	U	431	ug/kg	86.3	431
541-73-1	1,3-Dichlorobenzene	U	431	ug/kg	86.3	431
100-51-6	Benzyl alcohol	U	431	ug/kg	129	431
95-50-1	1,2-Dichlorobenzene	U	431	ug/kg	86.3	431
108-60-1	bis(2-Chloroisopropyl)ether	U	431	ug/kg	86.3	431
95-48-7	o-Cresol	U	431	ug/kg	86.3	431
65794-96-9	m,p-Cresols	U	431	ug/kg	129	431
67-72-1	Hexachloroethane	U	431	ug/kg	86.3	431
98-95-3	Nitrobenzene	U	431	ug/kg	86.3	431
78-59-1	Isophorone	U	431	ug/kg	86.3	431
88-75-5	2-Nitrophenol	U	431	ug/kg	86.3	431
105-67-9	2,4-Dimethylphenol	U	431	ug/kg	151	431
111-91-1	bis(2-Chloroethoxy)methane	U	431	ug/kg	86.3	431
120-83-2	2,4-Dichlorophenol	U	431	ug/kg	86.3	431
65-85-0	Benzoic acid	U	863	ug/kg	216	863
91-20-3	Naphthalene	U	43.1	ug/kg	12.9	43.1
106-47-8	4-Chloroaniline	U	431	ug/kg	86.3	431
87-68-3	Hexachlorobutadiene	U	431	ug/kg	86.3	431
91-57-6	2-Methylnaphthalene	U	43.1	ug/kg	8.63	43.1
77-47-4	Hexachlorocyclopentadiene	U	431	ug/kg	86.3	431
88-06-2	2,4,6-Trichlorophenol	U	431	ug/kg	86.3	431
95-95-4	2,4,5-Trichlorophenol	U	431	ug/kg	86.3	431
91-58-7	2-Chloronaphthalene	U	43.1	ug/kg	14.2	43.1
88-74-4	2-Nitroaniline	U	431	ug/kg	86.3	431
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	431	ug/kg	86.3	431

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428003	Date Received:	06/26/2009 08:40	%Moisture:	23.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6008	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	07/01/2009 00:32	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.15 g	Final Volume:	1 mL
Data File:	s2f3027.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	431	ug/kg	86.3	431
606-20-2	2,6-Dinitrotoluene	U	431	ug/kg	43.1	431
208-96-8	Acenaphthylene	U	43.1	ug/kg	12.9	43.1
51-28-5	2,4-Dinitrophenol	U	863	ug/kg	164	863
132-64-9	Dibenzofuran	U	431	ug/kg	86.3	431
84-66-2	Diethylphthalate	U	431	ug/kg	86.3	431
86-73-7	Fluorene	U	43.1	ug/kg	12.9	43.1
7005-72-3	4-Chlorophenylphenylether	U	431	ug/kg	86.3	431
534-52-1	2-Methyl-4,6-dinitrophenol	U	431	ug/kg	86.3	431
100-01-6	4-Nitroaniline	U	431	ug/kg	129	431
	p-Nitroaniline					
122-39-4	Diphenylamine	U	431	ug/kg	86.3	431
122-66-7	Azobenzene	U	431	ug/kg	86.3	431
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	431	ug/kg	86.3	431
118-74-1	Hexachlorobenzene	U	431	ug/kg	86.3	431
85-01-8	Phenanthrene		63.5	ug/kg	12.9	43.1
120-12-7	Anthracene	J	14.4	ug/kg	8.63	43.1
84-74-2	Di-n-butylphthalate	U	431	ug/kg	86.3	431
206-44-0	Fluoranthene		211	ug/kg	12.9	43.1
85-68-7	Butylbenzylphthalate	U	431	ug/kg	86.3	431
56-55-3	Benzo(a)anthracene		79.0	ug/kg	12.9	43.1
91-94-1	3,3'-Dichlorobenzidine	U	431	ug/kg	129	431
218-01-9	Chrysene		110	ug/kg	12.9	43.1
117-81-7	bis(2-Ethylhexyl)phthalate	U	431	ug/kg	86.3	431
117-84-0	Di-n-octylphthalate	U	431	ug/kg	86.3	431
205-99-2	Benzo(b)fluoranthene		195	ug/kg	12.9	43.1
207-08-9	Benzo(k)fluoranthene	U	43.1	ug/kg	12.9	43.1
50-32-8	Benzo(a)pyrene		92.6	ug/kg	12.9	43.1
193-39-5	Indeno(1,2,3-cd)pyrene		48.3	ug/kg	12.9	43.1
53-70-3	Dibenzo(a,h)anthracene	U	43.1	ug/kg	12.9	43.1
191-24-2	Benzo(ghi)perylene		49.5	ug/kg	12.9	43.1
120-82-1	1,2,4-Trichlorobenzene	U	431	ug/kg	86.3	431

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.11	257	ug/kg		J
	Unknown Aldol Condensate	3.06	232	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428004	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6009	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 20:33	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s2f3015.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	399	ug/kg	79.9	399
108-95-2	Phenol	U	399	ug/kg	79.9	399
95-57-8	2-Chlorophenol	U	399	ug/kg	79.9	399
106-46-7	1,4-Dichlorobenzene	U	399	ug/kg	79.9	399
621-64-7	N-Nitrosodipropylamine	U	399	ug/kg	79.9	399
59-50-7	4-Chloro-3-methylphenol	U	399	ug/kg	39.9	399
83-32-9	Acenaphthene	U	39.9	ug/kg	13.3	39.9
121-14-2	2,4-Dinitrotoluene	U	399	ug/kg	39.9	399
100-02-7	4-Nitrophenol	U	399	ug/kg	79.9	399
87-86-5	Pentachlorophenol	U	399	ug/kg	79.9	399
129-00-0	Pyrene		139	ug/kg	12.5	39.9
110-86-1	Pyridine	U	399	ug/kg	79.9	399
62-53-3	Aniline	U	399	ug/kg	140	399
111-44-4	bis(2-Chloroethyl) ether	U	399	ug/kg	79.9	399
541-73-1	1,3-Dichlorobenzene	U	399	ug/kg	79.9	399
100-51-6	Benzyl alcohol	U	399	ug/kg	120	399
95-50-1	1,2-Dichlorobenzene	U	399	ug/kg	79.9	399
108-60-1	bis(2-Chloroisopropyl)ether	U	399	ug/kg	79.9	399
95-48-7	o-Cresol	U	399	ug/kg	79.9	399
65794-96-9	m,p-Cresols	U	399	ug/kg	160	399
67-72-1	Hexachloroethane	U	399	ug/kg	79.9	399
98-95-3	Nitrobenzene	U	399	ug/kg	79.9	399
78-59-1	Isophorone	U	399	ug/kg	79.9	399
88-75-5	2-Nitrophenol	U	399	ug/kg	39.9	399
105-67-9	2,4-Dimethylphenol	U	399	ug/kg	79.9	399
111-91-1	bis(2-Chloroethoxy)methane	U	399	ug/kg	79.9	399
120-83-2	2,4-Dichlorophenol	U	399	ug/kg	79.9	399
65-85-0	Benzoic acid	U	799	ug/kg	200	799
91-20-3	Naphthalene	U	39.9	ug/kg	12.0	39.9
106-47-8	4-Chloroaniline	U	399	ug/kg	79.9	399
87-68-3	Hexachlorobutadiene	U	399	ug/kg	79.9	399
91-57-6	2-Methylnaphthalene	U	39.9	ug/kg	7.99	39.9
77-47-4	Hexachlorocyclopentadiene	U	399	ug/kg	79.9	399
88-06-2	2,4,6-Trichlorophenol	U	399	ug/kg	79.9	399
95-95-4	2,4,5-Trichlorophenol	U	399	ug/kg	79.9	399
91-58-7	2-Chloronaphthalene	U	39.9	ug/kg	14.0	39.9
88-74-4	2-Nitroaniline	U	399	ug/kg	79.9	399
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	399	ug/kg	79.9	399

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428004	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6009	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 20:33	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s2f3015.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	399	ug/kg	79.9	399
606-20-2	2,6-Dinitrotoluene	U	399	ug/kg	39.9	399
208-96-8	Acenaphthylene	U	39.9	ug/kg	12.0	39.9
51-28-5	2,4-Dinitrophenol	U	799	ug/kg	152	799
132-64-9	Dibenzofuran	U	399	ug/kg	79.9	399
84-66-2	Diethylphthalate	U	399	ug/kg	79.9	399
86-73-7	Fluorene	U	39.9	ug/kg	12.0	39.9
7005-72-3	4-Chlorophenylphenylether	U	399	ug/kg	39.9	399
534-52-1	2-Methyl-4,6-dinitrophenol	U	399	ug/kg	79.9	399
100-01-6	4-Nitroaniline	U	399	ug/kg	79.9	399
	p-Nitroaniline					
122-39-4	Diphenylamine	U	399	ug/kg	79.9	399
122-66-7	Azobenzene	U	399	ug/kg	79.9	399
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	399	ug/kg	39.9	399
118-74-1	Hexachlorobenzene	U	399	ug/kg	79.9	399
85-01-8	Phenanthrene		50.2	ug/kg	12.0	39.9
120-12-7	Anthracene	U	39.9	ug/kg	7.99	39.9
84-74-2	Di-n-butylphthalate	U	399	ug/kg	39.9	399
206-44-0	Fluoranthene		159	ug/kg	12.0	39.9
85-68-7	Butylbenzylphthalate	U	399	ug/kg	79.9	399
56-55-3	Benzo(a)anthracene		59.2	ug/kg	12.0	39.9
91-94-1	3,3'-Dichlorobenzidine	U	399	ug/kg	120	399
218-01-9	Chrysene		82.3	ug/kg	12.0	39.9
117-81-7	bis(2-Ethylhexyl)phthalate	U	399	ug/kg	79.9	399
117-84-0	Di-n-octylphthalate	U	399	ug/kg	79.9	399
205-99-2	Benzo(b)fluoranthene		139	ug/kg	12.0	39.9
207-08-9	Benzo(k)fluoranthene	U	39.9	ug/kg	12.0	39.9
50-32-8	Benzo(a)pyrene		70.0	ug/kg	12.0	39.9
193-39-5	Indeno(1,2,3-cd)pyrene		41.5	ug/kg	12.0	39.9
53-70-3	Dibenzo(a,h)anthracene	U	39.9	ug/kg	12.0	39.9
191-24-2	Benzo(ghi)perylene		43.5	ug/kg	12.0	39.9
120-82-1	1,2,4-Trichlorobenzene	U	399	ug/kg	79.9	399

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	402	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428005	**Date Received:**	06/26/2009 08:40	**%Moisture:**	22.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6034	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 20:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3016.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	428	ug/kg	85.6	428
108-95-2	Phenol	U	428	ug/kg	85.6	428
95-57-8	2-Chlorophenol	U	428	ug/kg	85.6	428
106-46-7	1,4-Dichlorobenzene	U	428	ug/kg	85.6	428
621-64-7	N-Nitrosodipropylamine	U	428	ug/kg	85.6	428
59-50-7	4-Chloro-3-methylphenol	U	428	ug/kg	42.8	428
83-32-9	Acenaphthene	J	19.1	ug/kg	14.3	42.8
121-14-2	2,4-Dinitrotoluene	U	428	ug/kg	42.8	428
100-02-7	4-Nitrophenol	U	428	ug/kg	85.6	428
87-86-5	Pentachlorophenol	U	428	ug/kg	85.6	428
129-00-0	Pyrene		363	ug/kg	13.4	42.8
110-86-1	Pyridine	U	428	ug/kg	85.6	428
62-53-3	Aniline	U	428	ug/kg	150	428
111-44-4	bis(2-Chloroethyl) ether	U	428	ug/kg	85.6	428
541-73-1	1,3-Dichlorobenzene	U	428	ug/kg	85.6	428
100-51-6	Benzyl alcohol	U	428	ug/kg	128	428
95-50-1	1,2-Dichlorobenzene	U	428	ug/kg	85.6	428
108-60-1	bis(2-Chloroisopropyl)ether	U	428	ug/kg	85.6	428
95-48-7	o-Cresol	U	428	ug/kg	85.6	428
65794-96-9	m,p-Cresols	U	428	ug/kg	171	428
67-72-1	Hexachloroethane	U	428	ug/kg	85.6	428
98-95-3	Nitrobenzene	U	428	ug/kg	85.6	428
78-59-1	Isophorone	U	428	ug/kg	85.6	428
88-75-5	2-Nitrophenol	U	428	ug/kg	42.8	428
105-67-9	2,4-Dimethylphenol	U	428	ug/kg	85.6	428
111-91-1	bis(2-Chloroethoxy)methane	U	428	ug/kg	85.6	428
120-83-2	2,4-Dichlorophenol	U	428	ug/kg	85.6	428
65-85-0	Benzoic acid	U	856	ug/kg	214	856
91-20-3	Naphthalene	U	42.8	ug/kg	12.8	42.8
106-47-8	4-Chloroaniline	U	428	ug/kg	85.6	428
87-68-3	Hexachlorobutadiene	U	428	ug/kg	85.6	428
91-57-6	2-Methylnaphthalene	U	42.8	ug/kg	8.56	42.8
77-47-4	Hexachlorocyclopentadiene	U	428	ug/kg	85.6	428
88-06-2	2,4,6-Trichlorophenol	U	428	ug/kg	85.6	428
95-95-4	2,4,5-Trichlorophenol	U	428	ug/kg	85.6	428
91-58-7	2-Chloronaphthalene	U	42.8	ug/kg	15.0	42.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	428	ug/kg	85.6	428
99-09-2	3-Nitroaniline	U	428	ug/kg	85.6	428

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428005	**Date Received:**	06/26/2009 08:40	**%Moisture:**	22.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6034	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 20:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3016.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	428	ug/kg	85.6	428
606-20-2	2,6-Dinitrotoluene	U	428	ug/kg	42.8	428
208-96-8	Acenaphthylene	U	42.8	ug/kg	12.8	42.8
51-28-5	2,4-Dinitrophenol	U	856	ug/kg	163	856
132-64-9	Dibenzofuran	U	428	ug/kg	85.6	428
84-66-2	Diethylphthalate	U	428	ug/kg	85.6	428
86-73-7	Fluorene	J	12.9	ug/kg	12.8	42.8
7005-72-3	4-Chlorophenylphenylether	U	428	ug/kg	42.8	428
534-52-1	2-Methyl-4,6-dinitrophenol	U	428	ug/kg	85.6	428
100-01-6	4-Nitroaniline	U	428	ug/kg	85.6	428
	p-Nitroaniline					
122-39-4	Diphenylamine	U	428	ug/kg	85.6	428
122-66-7	Azobenzene	U	428	ug/kg	85.6	428
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	428	ug/kg	42.8	428
118-74-1	Hexachlorobenzene	U	428	ug/kg	85.6	428
85-01-8	Phenanthrene		150	ug/kg	12.8	42.8
120-12-7	Anthracene	U	42.8	ug/kg	8.56	42.8
84-74-2	Di-n-butylphthalate	U	428	ug/kg	42.8	428
206-44-0	Fluoranthene		415	ug/kg	12.8	42.8
85-68-7	Butylbenzylphthalate	U	428	ug/kg	85.6	428
56-55-3	Benzo(a)anthracene		156	ug/kg	12.8	42.8
91-94-1	3,3'-Dichlorobenzidine	U	428	ug/kg	128	428
218-01-9	Chrysene		194	ug/kg	12.8	42.8
117-81-7	bis(2-Ethylhexyl)phthalate	J	91.8	ug/kg	85.6	428
117-84-0	Di-n-octylphthalate	U	428	ug/kg	85.6	428
205-99-2	Benzo(b)fluoranthene		359	ug/kg	12.8	42.8
207-08-9	Benzo(k)fluoranthene	U	42.8	ug/kg	12.8	42.8
50-32-8	Benzo(a)pyrene		175	ug/kg	12.8	42.8
193-39-5	Indeno(1,2,3-cd)pyrene		96.6	ug/kg	12.8	42.8
53-70-3	Dibenzo(a,h)anthracene	J	29.3	ug/kg	12.8	42.8
191-24-2	Benzo(ghi)perylene		97.3	ug/kg	12.8	42.8
120-82-1	1,2,4-Trichlorobenzene	U	428	ug/kg	85.6	428

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	385	ug/kg		J
	Unknown	8.33	178	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428005	**Date Received:**	06/26/2009 08:40	**%Moisture:**	22.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6034	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 20:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3016.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	327	ug/kg	99	NJ
	Unknown	11.19	186	ug/kg		J
	Unknown	12.51	237	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2f3022.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	347	ug/kg	69.4	347
108-95-2	Phenol	U	347	ug/kg	69.4	347
95-57-8	2-Chlorophenol	U	347	ug/kg	69.4	347
106-46-7	1,4-Dichlorobenzene	U	347	ug/kg	69.4	347
621-64-7	N-Nitrosodipropylamine	U	347	ug/kg	69.4	347
59-50-7	4-Chloro-3-methylphenol	U	347	ug/kg	34.7	347
83-32-9	Acenaphthene	U	34.7	ug/kg	11.6	34.7
121-14-2	2,4-Dinitrotoluene	U	347	ug/kg	34.7	347
100-02-7	4-Nitrophenol	U	347	ug/kg	69.4	347
87-86-5	Pentachlorophenol	U	347	ug/kg	69.4	347
129-00-0	Pyrene	J	14.6	ug/kg	10.9	34.7
110-86-1	Pyridine	U	347	ug/kg	69.4	347
62-53-3	Aniline	U	347	ug/kg	121	347
111-44-4	bis(2-Chloroethyl) ether	U	347	ug/kg	69.4	347
541-73-1	1,3-Dichlorobenzene	U	347	ug/kg	69.4	347
100-51-6	Benzyl alcohol	U	347	ug/kg	104	347
95-50-1	1,2-Dichlorobenzene	U	347	ug/kg	69.4	347
108-60-1	bis(2-Chloroisopropyl)ether	U	347	ug/kg	69.4	347
95-48-7	o-Cresol	U	347	ug/kg	69.4	347
65794-96-9	m,p-Cresols	U	347	ug/kg	139	347
67-72-1	Hexachloroethane	U	347	ug/kg	69.4	347
98-95-3	Nitrobenzene	U	347	ug/kg	69.4	347
78-59-1	Isophorone	U	347	ug/kg	69.4	347
88-75-5	2-Nitrophenol	U	347	ug/kg	34.7	347
105-67-9	2,4-Dimethylphenol	U	347	ug/kg	69.4	347
111-91-1	bis(2-Chloroethoxy)methane	U	347	ug/kg	69.4	347
120-83-2	2,4-Dichlorophenol	U	347	ug/kg	69.4	347
65-85-0	Benzoic acid	U	694	ug/kg	173	694
91-20-3	Naphthalene	U	34.7	ug/kg	10.4	34.7
106-47-8	4-Chloroaniline	U	347	ug/kg	69.4	347
87-68-3	Hexachlorobutadiene	U	347	ug/kg	69.4	347
91-57-6	2-Methylnaphthalene	U	34.7	ug/kg	6.94	34.7
77-47-4	Hexachlorocyclopentadiene	U	347	ug/kg	69.4	347
88-06-2	2,4,6-Trichlorophenol	U	347	ug/kg	69.4	347
95-95-4	2,4,5-Trichlorophenol	U	347	ug/kg	69.4	347
91-58-7	2-Chloronaphthalene	U	34.7	ug/kg	12.1	34.7
88-74-4	2-Nitroaniline	U	347	ug/kg	69.4	347
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	347	ug/kg	69.4	347

Semi-Volatile
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Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2f3022.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	347	ug/kg	69.4	347
606-20-2	2,6-Dinitrotoluene	U	347	ug/kg	34.7	347
208-96-8	Acenaphthylene	U	34.7	ug/kg	10.4	34.7
51-28-5	2,4-Dinitrophenol	U	694	ug/kg	132	694
132-64-9	Dibenzofuran	U	347	ug/kg	69.4	347
84-66-2	Diethylphthalate	U	347	ug/kg	69.4	347
86-73-7	Fluorene	U	34.7	ug/kg	10.4	34.7
7005-72-3	4-Chlorophenylphenylether	U	347	ug/kg	34.7	347
534-52-1	2-Methyl-4,6-dinitrophenol	U	347	ug/kg	69.4	347
100-01-6	4-Nitroaniline	U	347	ug/kg	69.4	347
	p-Nitroaniline					
122-39-4	Diphenylamine	U	347	ug/kg	69.4	347
122-66-7	Azobenzene	U	347	ug/kg	69.4	347
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	347	ug/kg	34.7	347
118-74-1	Hexachlorobenzene	U	347	ug/kg	69.4	347
85-01-8	Phenanthrene	U	34.7	ug/kg	10.4	34.7
120-12-7	Anthracene	U	34.7	ug/kg	6.94	34.7
84-74-2	Di-n-butylphthalate	U	347	ug/kg	34.7	347
206-44-0	Fluoranthene	J	17.0	ug/kg	10.4	34.7
85-68-7	Butylbenzylphthalate	U	347	ug/kg	69.4	347
56-55-3	Benzo(a)anthracene	U	34.7	ug/kg	10.4	34.7
91-94-1	3,3'-Dichlorobenzidine	U	347	ug/kg	104	347
218-01-9	Chrysene	U	34.7	ug/kg	10.4	34.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	347	ug/kg	69.4	347
117-84-0	Di-n-octylphthalate	U	347	ug/kg	69.4	347
205-99-2	Benzo(b)fluoranthene	J	16.9	ug/kg	10.4	34.7
207-08-9	Benzo(k)fluoranthene	U	34.7	ug/kg	10.4	34.7
50-32-8	Benzo(a)pyrene	U	34.7	ug/kg	10.4	34.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.7	ug/kg	10.4	34.7
53-70-3	Dibenzo(a,h)anthracene	U	34.7	ug/kg	10.4	34.7
191-24-2	Benzo(ghi)perylene	U	34.7	ug/kg	10.4	34.7
120-82-1	1,2,4-Trichlorobenzene	U	347	ug/kg	69.4	347

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	349	ug/kg		J
	Unknown	11.51	274	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2f3022.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.32	375	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428012	**Date Received:**	06/26/2009 08:40	**%Moisture:**	25.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6038	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3023.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	443	ug/kg	88.7	443
108-95-2	Phenol	U	443	ug/kg	88.7	443
95-57-8	2-Chlorophenol	U	443	ug/kg	88.7	443
106-46-7	1,4-Dichlorobenzene	U	443	ug/kg	88.7	443
621-64-7	N-Nitrosodipropylamine	U	443	ug/kg	88.7	443
59-50-7	4-Chloro-3-methylphenol	U	443	ug/kg	44.3	443
83-32-9	Acenaphthene	J	16.2	ug/kg	14.8	44.3
121-14-2	2,4-Dinitrotoluene	U	443	ug/kg	44.3	443
100-02-7	4-Nitrophenol	U	443	ug/kg	88.7	443
87-86-5	Pentachlorophenol	U	443	ug/kg	88.7	443
129-00-0	Pyrene		155	ug/kg	13.9	44.3
110-86-1	Pyridine	U	443	ug/kg	88.7	443
62-53-3	Aniline	U	443	ug/kg	155	443
111-44-4	bis(2-Chloroethyl) ether	U	443	ug/kg	88.7	443
541-73-1	1,3-Dichlorobenzene	U	443	ug/kg	88.7	443
100-51-6	Benzyl alcohol	U	443	ug/kg	133	443
95-50-1	1,2-Dichlorobenzene	U	443	ug/kg	88.7	443
108-60-1	bis(2-Chloroisopropyl)ether	U	443	ug/kg	88.7	443
95-48-7	o-Cresol	U	443	ug/kg	88.7	443
65794-96-9	m,p-Cresols	U	443	ug/kg	177	443
67-72-1	Hexachloroethane	U	443	ug/kg	88.7	443
98-95-3	Nitrobenzene	U	443	ug/kg	88.7	443
78-59-1	Isophorone	U	443	ug/kg	88.7	443
88-75-5	2-Nitrophenol	U	443	ug/kg	44.3	443
105-67-9	2,4-Dimethylphenol	U	443	ug/kg	88.7	443
111-91-1	bis(2-Chloroethoxy)methane	U	443	ug/kg	88.7	443
120-83-2	2,4-Dichlorophenol	U	443	ug/kg	88.7	443
65-85-0	Benzoic acid	U	887	ug/kg	222	887
91-20-3	Naphthalene	U	44.3	ug/kg	13.3	44.3
106-47-8	4-Chloroaniline	U	443	ug/kg	88.7	443
87-68-3	Hexachlorobutadiene	U	443	ug/kg	88.7	443
91-57-6	2-Methylnaphthalene	U	44.3	ug/kg	8.87	44.3
77-47-4	Hexachlorocyclopentadiene	U	443	ug/kg	88.7	443
88-06-2	2,4,6-Trichlorophenol	U	443	ug/kg	88.7	443
95-95-4	2,4,5-Trichlorophenol	U	443	ug/kg	88.7	443
91-58-7	2-Chloronaphthalene	U	44.3	ug/kg	15.5	44.3
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	443	ug/kg	88.7	443
99-09-2	3-Nitroaniline	U	443	ug/kg	88.7	443

Semi-Volatile
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Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428012	**Date Received:**	06/26/2009 08:40	**%Moisture:**	25.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6038	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3023.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	443	ug/kg	88.7	443
606-20-2	2,6-Dinitrotoluene	U	443	ug/kg	44.3	443
208-96-8	Acenaphthylene	U	44.3	ug/kg	13.3	44.3
51-28-5	2,4-Dinitrophenol	U	887	ug/kg	168	887
132-64-9	Dibenzofuran	U	443	ug/kg	88.7	443
84-66-2	Diethylphthalate	U	443	ug/kg	88.7	443
86-73-7	Fluorene	U	44.3	ug/kg	13.3	44.3
7005-72-3	4-Chlorophenylphenylether	U	443	ug/kg	44.3	443
534-52-1	2-Methyl-4,6-dinitrophenol	U	443	ug/kg	88.7	443
100-01-6	4-Nitroaniline	U	443	ug/kg	88.7	443
	p-Nitroaniline					
122-39-4	Diphenylamine	U	443	ug/kg	88.7	443
122-66-7	Azobenzene	U	443	ug/kg	88.7	443
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	443	ug/kg	44.3	443
118-74-1	Hexachlorobenzene	U	443	ug/kg	88.7	443
85-01-8	Phenanthrene		103	ug/kg	13.3	44.3
120-12-7	Anthracene	U	44.3	ug/kg	8.87	44.3
84-74-2	Di-n-butylphthalate	U	443	ug/kg	44.3	443
206-44-0	Fluoranthene		185	ug/kg	13.3	44.3
85-68-7	Butylbenzylphthalate	U	443	ug/kg	88.7	443
56-55-3	Benzo(a)anthracene		66.3	ug/kg	13.3	44.3
91-94-1	3,3'-Dichlorobenzidine	U	443	ug/kg	133	443
218-01-9	Chrysene		75.8	ug/kg	13.3	44.3
117-81-7	bis(2-Ethylhexyl)phthalate	J	322	ug/kg	88.7	443
117-84-0	Di-n-octylphthalate	U	443	ug/kg	88.7	443
205-99-2	Benzo(b)fluoranthene		135	ug/kg	13.3	44.3
207-08-9	Benzo(k)fluoranthene	U	44.3	ug/kg	13.3	44.3
50-32-8	Benzo(a)pyrene		72.5	ug/kg	13.3	44.3
193-39-5	Indeno(1,2,3-cd)pyrene	J	33.2	ug/kg	13.3	44.3
53-70-3	Dibenzo(a,h)anthracene	U	44.3	ug/kg	13.3	44.3
191-24-2	Benzo(ghi)perylene	J	32.9	ug/kg	13.3	44.3
120-82-1	1,2,4-Trichlorobenzene	U	443	ug/kg	88.7	443

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	411	ug/kg		J
103-82-2	Benzeneacetic acid	5.04	234	ug/kg	90	NJ

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Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428012	**Date Received:**	06/26/2009 08:40	**%Moisture:**	25.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6038	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3023.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
57-10-3	n-Hexadecanoic acid	7.39	194	ug/kg	97	NJ
1000189-14-9	1-Hydroxy-6-(3-isopropenyl-cycloprop-1-e	7.95	255	ug/kg	83	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.39	195	ug/kg	98	NJ
	Unknown	8.46	899	ug/kg		J
	Unknown	8.6	297	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	211	ug/kg	90	NJ
630-03-5	Nonacosane	9.88	500	ug/kg	98	NJ
630-04-6	Hentriacontane	10.86	502	ug/kg	99	NJ
	Unknown	11.07	620	ug/kg		J
	Unknown	11.19	215	ug/kg		J
	Unknown	12.05	201	ug/kg		J
	Unknown	12.51	336	ug/kg		J
83-46-5	.beta.-Sitosterol	13.28	287	ug/kg	94	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3024.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	365	ug/kg	73.0	365
108-95-2	Phenol	U	365	ug/kg	73.0	365
95-57-8	2-Chlorophenol	U	365	ug/kg	73.0	365
106-46-7	1,4-Dichlorobenzene	U	365	ug/kg	73.0	365
621-64-7	N-Nitrosodipropylamine	U	365	ug/kg	73.0	365
59-50-7	4-Chloro-3-methylphenol	U	365	ug/kg	36.5	365
83-32-9	Acenaphthene	U	36.5	ug/kg	12.2	36.5
121-14-2	2,4-Dinitrotoluene	U	365	ug/kg	36.5	365
100-02-7	4-Nitrophenol	U	365	ug/kg	73.0	365
87-86-5	Pentachlorophenol	U	365	ug/kg	73.0	365
129-00-0	Pyrene	U	36.5	ug/kg	11.5	36.5
110-86-1	Pyridine	U	365	ug/kg	73.0	365
62-53-3	Aniline	U	365	ug/kg	128	365
111-44-4	bis(2-Chloroethyl) ether	U	365	ug/kg	73.0	365
541-73-1	1,3-Dichlorobenzene	U	365	ug/kg	73.0	365
100-51-6	Benzyl alcohol	U	365	ug/kg	109	365
95-50-1	1,2-Dichlorobenzene	U	365	ug/kg	73.0	365
108-60-1	bis(2-Chloroisopropyl)ether	U	365	ug/kg	73.0	365
95-48-7	o-Cresol	U	365	ug/kg	73.0	365
65794-96-9	m,p-Cresols	U	365	ug/kg	146	365
67-72-1	Hexachloroethane	U	365	ug/kg	73.0	365
98-95-3	Nitrobenzene	U	365	ug/kg	73.0	365
78-59-1	Isophorone	U	365	ug/kg	73.0	365
88-75-5	2-Nitrophenol	U	365	ug/kg	36.5	365
105-67-9	2,4-Dimethylphenol	U	365	ug/kg	73.0	365
111-91-1	bis(2-Chloroethoxy)methane	U	365	ug/kg	73.0	365
120-83-2	2,4-Dichlorophenol	U	365	ug/kg	73.0	365
65-85-0	Benzoic acid	U	730	ug/kg	182	730
91-20-3	Naphthalene	U	36.5	ug/kg	10.9	36.5
106-47-8	4-Chloroaniline	U	365	ug/kg	73.0	365
87-68-3	Hexachlorobutadiene	U	365	ug/kg	73.0	365
91-57-6	2-Methylnaphthalene	U	36.5	ug/kg	7.30	36.5
77-47-4	Hexachlorocyclopentadiene	U	365	ug/kg	73.0	365
88-06-2	2,4,6-Trichlorophenol	U	365	ug/kg	73.0	365
95-95-4	2,4,5-Trichlorophenol	U	365	ug/kg	73.0	365
91-58-7	2-Chloronaphthalene	U	36.5	ug/kg	12.8	36.5
88-74-4	2-Nitroaniline	U	365	ug/kg	73.0	365
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	365	ug/kg	73.0	365

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3024.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	365	ug/kg	73.0	365
606-20-2	2,6-Dinitrotoluene	U	365	ug/kg	36.5	365
208-96-8	Acenaphthylene	U	36.5	ug/kg	10.9	36.5
51-28-5	2,4-Dinitrophenol	U	730	ug/kg	139	730
132-64-9	Dibenzofuran	U	365	ug/kg	73.0	365
84-66-2	Diethylphthalate	U	365	ug/kg	73.0	365
86-73-7	Fluorene	U	36.5	ug/kg	10.9	36.5
7005-72-3	4-Chlorophenylphenylether	U	365	ug/kg	36.5	365
534-52-1	2-Methyl-4,6-dinitrophenol	U	365	ug/kg	73.0	365
100-01-6	4-Nitroaniline	U	365	ug/kg	73.0	365
	p-Nitroaniline					
122-39-4	Diphenylamine	U	365	ug/kg	73.0	365
122-66-7	Azobenzene	U	365	ug/kg	73.0	365
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	365	ug/kg	36.5	365
118-74-1	Hexachlorobenzene	U	365	ug/kg	73.0	365
85-01-8	Phenanthrene	U	36.5	ug/kg	10.9	36.5
120-12-7	Anthracene	U	36.5	ug/kg	7.30	36.5
84-74-2	Di-n-butylphthalate	U	365	ug/kg	36.5	365
206-44-0	Fluoranthene	J	12.5	ug/kg	10.9	36.5
85-68-7	Butylbenzylphthalate	U	365	ug/kg	73.0	365
56-55-3	Benzo(a)anthracene	U	36.5	ug/kg	10.9	36.5
91-94-1	3,3'-Dichlorobenzidine	U	365	ug/kg	109	365
218-01-9	Chrysene	U	36.5	ug/kg	10.9	36.5
117-81-7	bis(2-Ethylhexyl)phthalate	J	85.0	ug/kg	73.0	365
117-84-0	Di-n-octylphthalate	U	365	ug/kg	73.0	365
205-99-2	Benzo(b)fluoranthene	U	36.5	ug/kg	10.9	36.5
207-08-9	Benzo(k)fluoranthene	U	36.5	ug/kg	10.9	36.5
50-32-8	Benzo(a)pyrene	U	36.5	ug/kg	10.9	36.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.5	ug/kg	10.9	36.5
53-70-3	Dibenzo(a,h)anthracene	U	36.5	ug/kg	10.9	36.5
191-24-2	Benzo(ghi)perylene	U	36.5	ug/kg	10.9	36.5
120-82-1	1,2,4-Trichlorobenzene	U	365	ug/kg	73.0	365

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.07	263	ug/kg		J
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.91	273	ug/kg	99	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3024.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	9.35	208	ug/kg		J
	Unknown	11.52	331	ug/kg		J
	Unknown	12.33	585	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428009	**Date Received:**	06/26/2009 08:40	**%Moisture:**	27.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6040	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s2f3020.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	458	ug/kg	91.6	458
108-95-2	Phenol	U	458	ug/kg	91.6	458
95-57-8	2-Chlorophenol	U	458	ug/kg	91.6	458
106-46-7	1,4-Dichlorobenzene	U	458	ug/kg	91.6	458
621-64-7	N-Nitrosodipropylamine	U	458	ug/kg	91.6	458
59-50-7	4-Chloro-3-methylphenol	U	458	ug/kg	45.8	458
83-32-9	Acenaphthene		47.6	ug/kg	15.3	45.8
121-14-2	2,4-Dinitrotoluene	U	458	ug/kg	45.8	458
100-02-7	4-Nitrophenol	U	458	ug/kg	91.6	458
87-86-5	Pentachlorophenol	U	458	ug/kg	91.6	458
129-00-0	Pyrene		1660	ug/kg	14.4	45.8
110-86-1	Pyridine	U	458	ug/kg	91.6	458
62-53-3	Aniline	U	458	ug/kg	160	458
111-44-4	bis(2-Chloroethyl) ether	U	458	ug/kg	91.6	458
541-73-1	1,3-Dichlorobenzene	U	458	ug/kg	91.6	458
100-51-6	Benzyl alcohol	U	458	ug/kg	137	458
95-50-1	1,2-Dichlorobenzene	U	458	ug/kg	91.6	458
108-60-1	bis(2-Chloroisopropyl)ether	U	458	ug/kg	91.6	458
95-48-7	o-Cresol	U	458	ug/kg	91.6	458
65794-96-9	m,p-Cresols	U	458	ug/kg	183	458
67-72-1	Hexachloroethane	U	458	ug/kg	91.6	458
98-95-3	Nitrobenzene	U	458	ug/kg	91.6	458
78-59-1	Isophorone	U	458	ug/kg	91.6	458
88-75-5	2-Nitrophenol	U	458	ug/kg	45.8	458
105-67-9	2,4-Dimethylphenol	U	458	ug/kg	91.6	458
111-91-1	bis(2-Chloroethoxy)methane	U	458	ug/kg	91.6	458
120-83-2	2,4-Dichlorophenol	U	458	ug/kg	91.6	458
65-85-0	Benzoic acid	U	916	ug/kg	229	916
91-20-3	Naphthalene	U	45.8	ug/kg	13.7	45.8
106-47-8	4-Chloroaniline	U	458	ug/kg	91.6	458
87-68-3	Hexachlorobutadiene	U	458	ug/kg	91.6	458
91-57-6	2-Methylnaphthalene	U	45.8	ug/kg	9.16	45.8
77-47-4	Hexachlorocyclopentadiene	U	458	ug/kg	91.6	458
88-06-2	2,4,6-Trichlorophenol	U	458	ug/kg	91.6	458
95-95-4	2,4,5-Trichlorophenol	U	458	ug/kg	91.6	458
91-58-7	2-Chloronaphthalene	U	45.8	ug/kg	16.0	45.8
88-74-4	2-Nitroaniline	U	458	ug/kg	91.6	458
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	458	ug/kg	91.6	458

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428009	**Date Received:**	06/26/2009 08:40	**%Moisture:**	27.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6040	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s2f3020.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	458	ug/kg	91.6	458
606-20-2	2,6-Dinitrotoluene	U	458	ug/kg	45.8	458
208-96-8	Acenaphthylene	U	45.8	ug/kg	13.7	45.8
51-28-5	2,4-Dinitrophenol	U	916	ug/kg	174	916
132-64-9	Dibenzofuran	U	458	ug/kg	91.6	458
84-66-2	Diethylphthalate	U	458	ug/kg	91.6	458
86-73-7	Fluorene		52.1	ug/kg	13.7	45.8
7005-72-3	4-Chlorophenylphenylether	U	458	ug/kg	45.8	458
534-52-1	2-Methyl-4,6-dinitrophenol	U	458	ug/kg	91.6	458
100-01-6	4-Nitroaniline	U	458	ug/kg	91.6	458
	p-Nitroaniline					
122-39-4	Diphenylamine	U	458	ug/kg	91.6	458
122-66-7	Azobenzene	U	458	ug/kg	91.6	458
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	458	ug/kg	45.8	458
118-74-1	Hexachlorobenzene	U	458	ug/kg	91.6	458
85-01-8	Phenanthrene		564	ug/kg	13.7	45.8
120-12-7	Anthracene	U	45.8	ug/kg	9.16	45.8
84-74-2	Di-n-butylphthalate	U	458	ug/kg	45.8	458
206-44-0	Fluoranthene		1700	ug/kg	13.7	45.8
85-68-7	Butylbenzylphthalate	U	458	ug/kg	91.6	458
56-55-3	Benzo(a)anthracene		654	ug/kg	13.7	45.8
91-94-1	3,3'-Dichlorobenzidine	U	458	ug/kg	137	458
218-01-9	Chrysene		958	ug/kg	13.7	45.8
117-81-7	bis(2-Ethylhexyl)phthalate	J	150	ug/kg	91.6	458
117-84-0	Di-n-octylphthalate	U	458	ug/kg	91.6	458
205-99-2	Benzo(b)fluoranthene		1700	ug/kg	13.7	45.8
207-08-9	Benzo(k)fluoranthene	U	45.8	ug/kg	13.7	45.8
50-32-8	Benzo(a)pyrene		835	ug/kg	13.7	45.8
193-39-5	Indeno(1,2,3-cd)pyrene		450	ug/kg	13.7	45.8
53-70-3	Dibenzo(a,h)anthracene		121	ug/kg	13.7	45.8
191-24-2	Benzo(ghi)perylene		474	ug/kg	13.7	45.8
120-82-1	1,2,4-Trichlorobenzene	U	458	ug/kg	91.6	458

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	371	ug/kg		J
103-82-2	Benzeneacetic acid	5.04	261	ug/kg	90	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428009	**Date Received:**	06/26/2009 08:40	**%Moisture:**	27.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6040	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s2f3020.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
2381-21-7	Pyrene, 1-methyl-	8.22	219	ug/kg	96	NJ
198-55-0	Perylene	10.35	500	ug/kg	98	NJ
	Unknown	11.5	340	ug/kg		J
302800-55-1	Quinoxaline, 6-(3-nitrobenzylidenamino)-	12.61	239	ug/kg	95	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428008	**Date Received:**	06/26/2009 08:40	**%Moisture:**	5.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6041	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.15 g	**Final Volume:**	1 mL
Data File:	s2f3019.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	350	ug/kg	70.0	350
108-95-2	Phenol	U	350	ug/kg	70.0	350
95-57-8	2-Chlorophenol	U	350	ug/kg	70.0	350
106-46-7	1,4-Dichlorobenzene	U	350	ug/kg	70.0	350
621-64-7	N-Nitrosodipropylamine	U	350	ug/kg	70.0	350
59-50-7	4-Chloro-3-methylphenol	U	350	ug/kg	35.0	350
83-32-9	Acenaphthene	U	35.0	ug/kg	11.7	35.0
121-14-2	2,4-Dinitrotoluene	U	350	ug/kg	35.0	350
100-02-7	4-Nitrophenol	U	350	ug/kg	70.0	350
87-86-5	Pentachlorophenol	U	350	ug/kg	70.0	350
129-00-0	Pyrene		133	ug/kg	11.0	35.0
110-86-1	Pyridine	U	350	ug/kg	70.0	350
62-53-3	Aniline	U	350	ug/kg	122	350
111-44-4	bis(2-Chloroethyl) ether	U	350	ug/kg	70.0	350
541-73-1	1,3-Dichlorobenzene	U	350	ug/kg	70.0	350
100-51-6	Benzyl alcohol	U	350	ug/kg	105	350
95-50-1	1,2-Dichlorobenzene	U	350	ug/kg	70.0	350
108-60-1	bis(2-Chloroisopropyl)ether	U	350	ug/kg	70.0	350
95-48-7	o-Cresol	U	350	ug/kg	70.0	350
65794-96-9	m,p-Cresols	U	350	ug/kg	140	350
67-72-1	Hexachloroethane	U	350	ug/kg	70.0	350
98-95-3	Nitrobenzene	U	350	ug/kg	70.0	350
78-59-1	Isophorone	U	350	ug/kg	70.0	350
88-75-5	2-Nitrophenol	U	350	ug/kg	35.0	350
105-67-9	2,4-Dimethylphenol	U	350	ug/kg	70.0	350
111-91-1	bis(2-Chloroethoxy)methane	U	350	ug/kg	70.0	350
120-83-2	2,4-Dichlorophenol	U	350	ug/kg	70.0	350
65-85-0	Benzoic acid	U	700	ug/kg	175	700
91-20-3	Naphthalene	U	35.0	ug/kg	10.5	35.0
106-47-8	4-Chloroaniline	U	350	ug/kg	70.0	350
87-68-3	Hexachlorobutadiene	U	350	ug/kg	70.0	350
91-57-6	2-Methylnaphthalene	U	35.0	ug/kg	7.00	35.0
77-47-4	Hexachlorocyclopentadiene	U	350	ug/kg	70.0	350
88-06-2	2,4,6-Trichlorophenol	U	350	ug/kg	70.0	350
95-95-4	2,4,5-Trichlorophenol	U	350	ug/kg	70.0	350
91-58-7	2-Chloronaphthalene	U	35.0	ug/kg	12.2	35.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	350	ug/kg	70.0	350
99-09-2	3-Nitroaniline	U	350	ug/kg	70.0	350

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428008	**Date Received:**	06/26/2009 08:40	**%Moisture:**	5.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6041	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.15 g	**Final Volume:**	1 mL
Data File:	s2f3019.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	350	ug/kg	70.0	350
606-20-2	2,6-Dinitrotoluene	U	350	ug/kg	35.0	350
208-96-8	Acenaphthylene	U	35.0	ug/kg	10.5	35.0
51-28-5	2,4-Dinitrophenol	U	700	ug/kg	133	700
132-64-9	Dibenzofuran	U	350	ug/kg	70.0	350
84-66-2	Diethylphthalate	U	350	ug/kg	70.0	350
86-73-7	Fluorene	U	35.0	ug/kg	10.5	35.0
7005-72-3	4-Chlorophenylphenylether	U	350	ug/kg	35.0	350
534-52-1	2-Methyl-4,6-dinitrophenol	U	350	ug/kg	70.0	350
100-01-6	4-Nitroaniline	U	350	ug/kg	70.0	350
	p-Nitroaniline					
122-39-4	Diphenylamine	U	350	ug/kg	70.0	350
122-66-7	Azobenzene	U	350	ug/kg	70.0	350
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	350	ug/kg	35.0	350
118-74-1	Hexachlorobenzene	U	350	ug/kg	70.0	350
85-01-8	Phenanthrene		64.8	ug/kg	10.5	35.0
120-12-7	Anthracene	U	35.0	ug/kg	7.00	35.0
84-74-2	Di-n-butylphthalate	U	350	ug/kg	35.0	350
206-44-0	Fluoranthene		153	ug/kg	10.5	35.0
85-68-7	Butylbenzylphthalate	U	350	ug/kg	70.0	350
56-55-3	Benzo(a)anthracene		52.4	ug/kg	10.5	35.0
91-94-1	3,3'-Dichlorobenzidine	U	350	ug/kg	105	350
218-01-9	Chrysene		71.4	ug/kg	10.5	35.0
117-81-7	bis(2-Ethylhexyl)phthalate	J	109	ug/kg	70.0	350
117-84-0	Di-n-octylphthalate	U	350	ug/kg	70.0	350
205-99-2	Benzo(b)fluoranthene		120	ug/kg	10.5	35.0
207-08-9	Benzo(k)fluoranthene	U	35.0	ug/kg	10.5	35.0
50-32-8	Benzo(a)pyrene		59.5	ug/kg	10.5	35.0
193-39-5	Indeno(1,2,3-cd)pyrene		35.1	ug/kg	10.5	35.0
53-70-3	Dibenzo(a,h)anthracene	J	12.8	ug/kg	10.5	35.0
191-24-2	Benzo(ghi)perylene		40.5	ug/kg	10.5	35.0
120-82-1	1,2,4-Trichlorobenzene	U	350	ug/kg	70.0	350

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	270	ug/kg		J
	Unknown	9.91	197	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428008	**Date Received:**	06/26/2009 08:40	**%Moisture:**	5.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6041	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.15 g	**Final Volume:**	1 mL
Data File:	s2f3019.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	11.5	175	ug/kg	90	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428014	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6042	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s2f3025.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	403	ug/kg	80.6	403
108-95-2	Phenol	U	403	ug/kg	80.6	403
95-57-8	2-Chlorophenol	U	403	ug/kg	80.6	403
106-46-7	1,4-Dichlorobenzene	U	403	ug/kg	80.6	403
621-64-7	N-Nitrosodipropylamine	U	403	ug/kg	80.6	403
59-50-7	4-Chloro-3-methylphenol	U	403	ug/kg	40.3	403
83-32-9	Acenaphthene	U	40.3	ug/kg	13.5	40.3
121-14-2	2,4-Dinitrotoluene	U	403	ug/kg	40.3	403
100-02-7	4-Nitrophenol	U	403	ug/kg	80.6	403
87-86-5	Pentachlorophenol	U	403	ug/kg	80.6	403
129-00-0	Pyrene		198	ug/kg	12.7	40.3
110-86-1	Pyridine	U	403	ug/kg	80.6	403
62-53-3	Aniline	U	403	ug/kg	141	403
111-44-4	bis(2-Chloroethyl) ether	U	403	ug/kg	80.6	403
541-73-1	1,3-Dichlorobenzene	U	403	ug/kg	80.6	403
100-51-6	Benzyl alcohol	U	403	ug/kg	121	403
95-50-1	1,2-Dichlorobenzene	U	403	ug/kg	80.6	403
108-60-1	bis(2-Chloroisopropyl)ether	U	403	ug/kg	80.6	403
95-48-7	o-Cresol	U	403	ug/kg	80.6	403
65794-96-9	m,p-Cresols	U	403	ug/kg	161	403
67-72-1	Hexachloroethane	U	403	ug/kg	80.6	403
98-95-3	Nitrobenzene	U	403	ug/kg	80.6	403
78-59-1	Isophorone	U	403	ug/kg	80.6	403
88-75-5	2-Nitrophenol	U	403	ug/kg	40.3	403
105-67-9	2,4-Dimethylphenol	U	403	ug/kg	80.6	403
111-91-1	bis(2-Chloroethoxy)methane	U	403	ug/kg	80.6	403
120-83-2	2,4-Dichlorophenol	U	403	ug/kg	80.6	403
65-85-0	Benzoic acid	U	806	ug/kg	201	806
91-20-3	Naphthalene	U	40.3	ug/kg	12.1	40.3
106-47-8	4-Chloroaniline	U	403	ug/kg	80.6	403
87-68-3	Hexachlorobutadiene	U	403	ug/kg	80.6	403
91-57-6	2-Methylnaphthalene	U	40.3	ug/kg	8.06	40.3
77-47-4	Hexachlorocyclopentadiene	U	403	ug/kg	80.6	403
88-06-2	2,4,6-Trichlorophenol	U	403	ug/kg	80.6	403
95-95-4	2,4,5-Trichlorophenol	U	403	ug/kg	80.6	403
91-58-7	2-Chloronaphthalene	U	40.3	ug/kg	14.1	40.3
88-74-4	2-Nitroaniline	U	403	ug/kg	80.6	403
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	403	ug/kg	80.6	403

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428014	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6042	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s2f3025.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	403	ug/kg	80.6	403
606-20-2	2,6-Dinitrotoluene	U	403	ug/kg	40.3	403
208-96-8	Acenaphthylene	U	40.3	ug/kg	12.1	40.3
51-28-5	2,4-Dinitrophenol	U	806	ug/kg	153	806
132-64-9	Dibenzofuran	U	403	ug/kg	80.6	403
84-66-2	Diethylphthalate	U	403	ug/kg	80.6	403
86-73-7	Fluorene	U	40.3	ug/kg	12.1	40.3
7005-72-3	4-Chlorophenylphenylether	U	403	ug/kg	40.3	403
534-52-1	2-Methyl-4,6-dinitrophenol	U	403	ug/kg	80.6	403
100-01-6	4-Nitroaniline	U	403	ug/kg	80.6	403
	p-Nitroaniline					
122-39-4	Diphenylamine	U	403	ug/kg	80.6	403
122-66-7	Azobenzene	U	403	ug/kg	80.6	403
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	403	ug/kg	40.3	403
118-74-1	Hexachlorobenzene	U	403	ug/kg	80.6	403
85-01-8	Phenanthrene		67.1	ug/kg	12.1	40.3
120-12-7	Anthracene	U	40.3	ug/kg	8.06	40.3
84-74-2	Di-n-butylphthalate	U	403	ug/kg	40.3	403
206-44-0	Fluoranthene		224	ug/kg	12.1	40.3
85-68-7	Butylbenzylphthalate	U	403	ug/kg	80.6	403
56-55-3	Benzo(a)anthracene		84.4	ug/kg	12.1	40.3
91-94-1	3,3'-Dichlorobenzidine	U	403	ug/kg	121	403
218-01-9	Chrysene		113	ug/kg	12.1	40.3
117-81-7	bis(2-Ethylhexyl)phthalate	J	107	ug/kg	80.6	403
117-84-0	Di-n-octylphthalate	U	403	ug/kg	80.6	403
205-99-2	Benzo(b)fluoranthene		214	ug/kg	12.1	40.3
207-08-9	Benzo(k)fluoranthene	U	40.3	ug/kg	12.1	40.3
50-32-8	Benzo(a)pyrene		103	ug/kg	12.1	40.3
193-39-5	Indeno(1,2,3-cd)pyrene		58.6	ug/kg	12.1	40.3
53-70-3	Dibenzo(a,h)anthracene	J	18.8	ug/kg	12.1	40.3
191-24-2	Benzo(ghi)perylene		60.1	ug/kg	12.1	40.3
120-82-1	1,2,4-Trichlorobenzene	U	403	ug/kg	80.6	403

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	345	ug/kg		J
4630-07-3	Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	5.91	266	ug/kg	96	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428014	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6042	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s2f3025.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	185	ug/kg	95	NJ
	Unknown	11.07	357	ug/kg		J
	Unknown	11.51	277	ug/kg		J
	Unknown	12.08	195	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428006	**Date Received:**	06/26/2009 08:40	**%Moisture:**	7.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6043	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:13	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s2f3017.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	360	ug/kg	71.9	360
108-95-2	Phenol	U	360	ug/kg	71.9	360
95-57-8	2-Chlorophenol	U	360	ug/kg	71.9	360
106-46-7	1,4-Dichlorobenzene	U	360	ug/kg	71.9	360
621-64-7	N-Nitrosodipropylamine	U	360	ug/kg	71.9	360
59-50-7	4-Chloro-3-methylphenol	U	360	ug/kg	36.0	360
83-32-9	Acenaphthene	U	36.0	ug/kg	12.0	36.0
121-14-2	2,4-Dinitrotoluene	U	360	ug/kg	36.0	360
100-02-7	4-Nitrophenol	U	360	ug/kg	71.9	360
87-86-5	Pentachlorophenol	U	360	ug/kg	71.9	360
129-00-0	Pyrene		89.5	ug/kg	11.3	36.0
110-86-1	Pyridine	U	360	ug/kg	71.9	360
62-53-3	Aniline	U	360	ug/kg	126	360
111-44-4	bis(2-Chloroethyl) ether	U	360	ug/kg	71.9	360
541-73-1	1,3-Dichlorobenzene	U	360	ug/kg	71.9	360
100-51-6	Benzyl alcohol	U	360	ug/kg	108	360
95-50-1	1,2-Dichlorobenzene	U	360	ug/kg	71.9	360
108-60-1	bis(2-Chloroisopropyl)ether	U	360	ug/kg	71.9	360
95-48-7	o-Cresol	U	360	ug/kg	71.9	360
65794-96-9	m,p-Cresols	U	360	ug/kg	144	360
67-72-1	Hexachloroethane	U	360	ug/kg	71.9	360
98-95-3	Nitrobenzene	U	360	ug/kg	71.9	360
78-59-1	Isophorone	U	360	ug/kg	71.9	360
88-75-5	2-Nitrophenol	U	360	ug/kg	36.0	360
105-67-9	2,4-Dimethylphenol	U	360	ug/kg	71.9	360
111-91-1	bis(2-Chloroethoxy)methane	U	360	ug/kg	71.9	360
120-83-2	2,4-Dichlorophenol	U	360	ug/kg	71.9	360
65-85-0	Benzoic acid	U	719	ug/kg	180	719
91-20-3	Naphthalene	U	36.0	ug/kg	10.8	36.0
106-47-8	4-Chloroaniline	U	360	ug/kg	71.9	360
87-68-3	Hexachlorobutadiene	U	360	ug/kg	71.9	360
91-57-6	2-Methylnaphthalene	U	36.0	ug/kg	7.19	36.0
77-47-4	Hexachlorocyclopentadiene	U	360	ug/kg	71.9	360
88-06-2	2,4,6-Trichlorophenol	U	360	ug/kg	71.9	360
95-95-4	2,4,5-Trichlorophenol	U	360	ug/kg	71.9	360
91-58-7	2-Chloronaphthalene	U	36.0	ug/kg	12.6	36.0
88-74-4	2-Nitroaniline	U	360	ug/kg	71.9	360
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	360	ug/kg	71.9	360

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428006	Date Received:	06/26/2009 08:40	%Moisture:	7.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6043	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 21:13	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.17 g	Final Volume:	1 mL
Data File:	s2f3017.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	360	ug/kg	71.9	360
606-20-2	2,6-Dinitrotoluene	U	360	ug/kg	36.0	360
208-96-8	Acenaphthylene	U	36.0	ug/kg	10.8	36.0
51-28-5	2,4-Dinitrophenol	U	719	ug/kg	137	719
132-64-9	Dibenzofuran	U	360	ug/kg	71.9	360
84-66-2	Diethylphthalate	U	360	ug/kg	71.9	360
86-73-7	Fluorene	U	36.0	ug/kg	10.8	36.0
7005-72-3	4-Chlorophenylphenylether	U	360	ug/kg	36.0	360
534-52-1	2-Methyl-4,6-dinitrophenol	U	360	ug/kg	71.9	360
100-01-6	4-Nitroaniline	U	360	ug/kg	71.9	360
	p-Nitroaniline					
122-39-4	Diphenylamine	U	360	ug/kg	71.9	360
122-66-7	Azobenzene	U	360	ug/kg	71.9	360
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	360	ug/kg	36.0	360
118-74-1	Hexachlorobenzene	U	360	ug/kg	71.9	360
85-01-8	Phenanthrene	J	31.8	ug/kg	10.8	36.0
120-12-7	Anthracene	U	36.0	ug/kg	7.19	36.0
84-74-2	Di-n-butylphthalate	U	360	ug/kg	36.0	360
206-44-0	Fluoranthene		110	ug/kg	10.8	36.0
85-68-7	Butylbenzylphthalate	U	360	ug/kg	71.9	360
56-55-3	Benzo(a)anthracene		38.4	ug/kg	10.8	36.0
91-94-1	3,3'-Dichlorobenzidine	U	360	ug/kg	108	360
218-01-9	Chrysene		57.9	ug/kg	10.8	36.0
117-81-7	bis(2-Ethylhexyl)phthalate	J	89.3	ug/kg	71.9	360
117-84-0	Di-n-octylphthalate	U	360	ug/kg	71.9	360
205-99-2	Benzo(b)fluoranthene		101	ug/kg	10.8	36.0
207-08-9	Benzo(k)fluoranthene	U	36.0	ug/kg	10.8	36.0
50-32-8	Benzo(a)pyrene		49.5	ug/kg	10.8	36.0
193-39-5	Indeno(1,2,3-cd)pyrene	J	30.1	ug/kg	10.8	36.0
53-70-3	Dibenzo(a,h)anthracene	U	36.0	ug/kg	10.8	36.0
191-24-2	Benzo(ghi)perylene	J	31.0	ug/kg	10.8	36.0
120-82-1	1,2,4-Trichlorobenzene	U	360	ug/kg	71.9	360

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	273	ug/kg		J
	Unknown	9.53	387	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428010	**Date Received:**	06/26/2009 08:40	**%Moisture:**	12.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6044	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.25 g	**Final Volume:**	1 mL
Data File:	s2f3021.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	379	ug/kg	75.8	379
108-95-2	Phenol	U	379	ug/kg	75.8	379
95-57-8	2-Chlorophenol	U	379	ug/kg	75.8	379
106-46-7	1,4-Dichlorobenzene	U	379	ug/kg	75.8	379
621-64-7	N-Nitrosodipropylamine	U	379	ug/kg	75.8	379
59-50-7	4-Chloro-3-methylphenol	U	379	ug/kg	37.9	379
83-32-9	Acenaphthene	U	37.9	ug/kg	12.7	37.9
121-14-2	2,4-Dinitrotoluene	U	379	ug/kg	37.9	379
100-02-7	4-Nitrophenol	U	379	ug/kg	75.8	379
87-86-5	Pentachlorophenol	U	379	ug/kg	75.8	379
129-00-0	Pyrene		253	ug/kg	11.9	37.9
110-86-1	Pyridine	U	379	ug/kg	75.8	379
62-53-3	Aniline	U	379	ug/kg	133	379
111-44-4	bis(2-Chloroethyl) ether	U	379	ug/kg	75.8	379
541-73-1	1,3-Dichlorobenzene	U	379	ug/kg	75.8	379
100-51-6	Benzyl alcohol	U	379	ug/kg	114	379
95-50-1	1,2-Dichlorobenzene	U	379	ug/kg	75.8	379
108-60-1	bis(2-Chloroisopropyl)ether	U	379	ug/kg	75.8	379
95-48-7	o-Cresol	U	379	ug/kg	75.8	379
65794-96-9	m,p-Cresols	U	379	ug/kg	152	379
67-72-1	Hexachloroethane	U	379	ug/kg	75.8	379
98-95-3	Nitrobenzene	U	379	ug/kg	75.8	379
78-59-1	Isophorone	U	379	ug/kg	75.8	379
88-75-5	2-Nitrophenol	U	379	ug/kg	37.9	379
105-67-9	2,4-Dimethylphenol	U	379	ug/kg	75.8	379
111-91-1	bis(2-Chloroethoxy)methane	U	379	ug/kg	75.8	379
120-83-2	2,4-Dichlorophenol	U	379	ug/kg	75.8	379
65-85-0	Benzoic acid	U	758	ug/kg	190	758
91-20-3	Naphthalene	U	37.9	ug/kg	11.4	37.9
106-47-8	4-Chloroaniline	U	379	ug/kg	75.8	379
87-68-3	Hexachlorobutadiene	U	379	ug/kg	75.8	379
91-57-6	2-Methylnaphthalene	U	37.9	ug/kg	7.58	37.9
77-47-4	Hexachlorocyclopentadiene	U	379	ug/kg	75.8	379
88-06-2	2,4,6-Trichlorophenol	U	379	ug/kg	75.8	379
95-95-4	2,4,5-Trichlorophenol	U	379	ug/kg	75.8	379
91-58-7	2-Chloronaphthalene	U	37.9	ug/kg	13.3	37.9
88-74-4	2-Nitroaniline	U	379	ug/kg	75.8	379
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	379	ug/kg	75.8	379

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428010	**Date Received:**	06/26/2009 08:40	**%Moisture:**	12.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6044	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.25 g	**Final Volume:**	1 mL
Data File:	s2f3021.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	379	ug/kg	75.8	379
606-20-2	2,6-Dinitrotoluene	U	379	ug/kg	37.9	379
208-96-8	Acenaphthylene	U	37.9	ug/kg	11.4	37.9
51-28-5	2,4-Dinitrophenol	U	758	ug/kg	144	758
132-64-9	Dibenzofuran	U	379	ug/kg	75.8	379
84-66-2	Diethylphthalate	U	379	ug/kg	75.8	379
86-73-7	Fluorene	U	37.9	ug/kg	11.4	37.9
7005-72-3	4-Chlorophenylphenylether	U	379	ug/kg	37.9	379
534-52-1	2-Methyl-4,6-dinitrophenol	U	379	ug/kg	75.8	379
100-01-6	4-Nitroaniline	U	379	ug/kg	75.8	379
	p-Nitroaniline					
122-39-4	Diphenylamine	U	379	ug/kg	75.8	379
122-66-7	Azobenzene	U	379	ug/kg	75.8	379
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	379	ug/kg	37.9	379
118-74-1	Hexachlorobenzene	U	379	ug/kg	75.8	379
85-01-8	Phenanthrene		78.5	ug/kg	11.4	37.9
120-12-7	Anthracene	U	37.9	ug/kg	7.58	37.9
84-74-2	Di-n-butylphthalate	U	379	ug/kg	37.9	379
206-44-0	Fluoranthene		299	ug/kg	11.4	37.9
85-68-7	Butylbenzylphthalate	U	379	ug/kg	75.8	379
56-55-3	Benzo(a)anthracene		111	ug/kg	11.4	37.9
91-94-1	3,3'-Dichlorobenzidine	U	379	ug/kg	114	379
218-01-9	Chrysene		148	ug/kg	11.4	37.9
117-81-7	bis(2-Ethylhexyl)phthalate	J	118	ug/kg	75.8	379
117-84-0	Di-n-octylphthalate	U	379	ug/kg	75.8	379
205-99-2	Benzo(b)fluoranthene		286	ug/kg	11.4	37.9
207-08-9	Benzo(k)fluoranthene	U	37.9	ug/kg	11.4	37.9
50-32-8	Benzo(a)pyrene		132	ug/kg	11.4	37.9
193-39-5	Indeno(1,2,3-cd)pyrene		74.1	ug/kg	11.4	37.9
53-70-3	Dibenzo(a,h)anthracene	J	24.3	ug/kg	11.4	37.9
191-24-2	Benzo(ghi)perylene		81.0	ug/kg	11.4	37.9
120-82-1	1,2,4-Trichlorobenzene	U	379	ug/kg	75.8	379

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	358	ug/kg		J
57-10-3	n-Hexadecanoic acid	7.39	170	ug/kg	97	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428010	**Date Received:**	06/26/2009 08:40	**%Moisture:**	12.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6044	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.25 g	**Final Volume:**	1 mL
Data File:	s2f3021.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
60-33-3	9,12-Octadecadienoic acid (Z,Z)-	7.81	159	ug/kg	96	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.39	183	ug/kg	98	NJ
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	268	ug/kg	90	NJ
6971-40-0	17-Pentatriacontene	9.35	304	ug/kg	87	NJ
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	9.54	215	ug/kg	91	NJ
630-03-5	Nonacosane	9.88	242	ug/kg	97	NJ
	Unknown	10.19	190	ug/kg		J
112-95-8	Eicosane	10.86	164	ug/kg	96	NJ
	Unknown	11.1	236	ug/kg		J
	Unknown	11.51	185	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428007	**Date Received:**	06/26/2009 08:40	**%Moisture:**	8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6045	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:33	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s2f3018.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	360	ug/kg	72.0	360
108-95-2	Phenol	U	360	ug/kg	72.0	360
95-57-8	2-Chlorophenol	U	360	ug/kg	72.0	360
106-46-7	1,4-Dichlorobenzene	U	360	ug/kg	72.0	360
621-64-7	N-Nitrosodipropylamine	U	360	ug/kg	72.0	360
59-50-7	4-Chloro-3-methylphenol	U	360	ug/kg	36.0	360
83-32-9	Acenaphthene	U	36.0	ug/kg	12.0	36.0
121-14-2	2,4-Dinitrotoluene	U	360	ug/kg	36.0	360
100-02-7	4-Nitrophenol	U	360	ug/kg	72.0	360
87-86-5	Pentachlorophenol	U	360	ug/kg	72.0	360
129-00-0	Pyrene		48.2	ug/kg	11.3	36.0
110-86-1	Pyridine	U	360	ug/kg	72.0	360
62-53-3	Aniline	U	360	ug/kg	126	360
111-44-4	bis(2-Chloroethyl) ether	U	360	ug/kg	72.0	360
541-73-1	1,3-Dichlorobenzene	U	360	ug/kg	72.0	360
100-51-6	Benzyl alcohol	U	360	ug/kg	108	360
95-50-1	1,2-Dichlorobenzene	U	360	ug/kg	72.0	360
108-60-1	bis(2-Chloroisopropyl)ether	U	360	ug/kg	72.0	360
95-48-7	o-Cresol	U	360	ug/kg	72.0	360
65794-96-9	m,p-Cresols	U	360	ug/kg	144	360
67-72-1	Hexachloroethane	U	360	ug/kg	72.0	360
98-95-3	Nitrobenzene	U	360	ug/kg	72.0	360
78-59-1	Isophorone	U	360	ug/kg	72.0	360
88-75-5	2-Nitrophenol	U	360	ug/kg	36.0	360
105-67-9	2,4-Dimethylphenol	U	360	ug/kg	72.0	360
111-91-1	bis(2-Chloroethoxy)methane	U	360	ug/kg	72.0	360
120-83-2	2,4-Dichlorophenol	U	360	ug/kg	72.0	360
65-85-0	Benzoic acid	U	720	ug/kg	180	720
91-20-3	Naphthalene	U	36.0	ug/kg	10.8	36.0
106-47-8	4-Chloroaniline	U	360	ug/kg	72.0	360
87-68-3	Hexachlorobutadiene	U	360	ug/kg	72.0	360
91-57-6	2-Methylnaphthalene	U	36.0	ug/kg	7.20	36.0
77-47-4	Hexachlorocyclopentadiene	U	360	ug/kg	72.0	360
88-06-2	2,4,6-Trichlorophenol	U	360	ug/kg	72.0	360
95-95-4	2,4,5-Trichlorophenol	U	360	ug/kg	72.0	360
91-58-7	2-Chloronaphthalene	U	36.0	ug/kg	12.6	36.0
88-74-4	2-Nitroaniline	U	360	ug/kg	72.0	360
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	360	ug/kg	72.0	360

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428007	Date Received:	06/26/2009 08:40	%Moisture:	8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6045	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 21:33	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.19 g	Final Volume:	1 mL
Data File:	s2f3018.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	360	ug/kg	72.0	360
606-20-2	2,6-Dinitrotoluene	U	360	ug/kg	36.0	360
208-96-8	Acenaphthylene	U	36.0	ug/kg	10.8	36.0
51-28-5	2,4-Dinitrophenol	U	720	ug/kg	137	720
132-64-9	Dibenzofuran	U	360	ug/kg	72.0	360
84-66-2	Diethylphthalate	U	360	ug/kg	72.0	360
86-73-7	Fluorene	U	36.0	ug/kg	10.8	36.0
7005-72-3	4-Chlorophenylphenylether	U	360	ug/kg	36.0	360
534-52-1	2-Methyl-4,6-dinitrophenol	U	360	ug/kg	72.0	360
100-01-6	4-Nitroaniline	U	360	ug/kg	72.0	360
	p-Nitroaniline					
122-39-4	Diphenylamine	U	360	ug/kg	72.0	360
122-66-7	Azobenzene	U	360	ug/kg	72.0	360
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	360	ug/kg	36.0	360
118-74-1	Hexachlorobenzene	U	360	ug/kg	72.0	360
85-01-8	Phenanthrene	J	17.3	ug/kg	10.8	36.0
120-12-7	Anthracene	U	36.0	ug/kg	7.20	36.0
84-74-2	Di-n-butylphthalate	U	360	ug/kg	36.0	360
206-44-0	Fluoranthene		59.5	ug/kg	10.8	36.0
85-68-7	Butylbenzylphthalate	U	360	ug/kg	72.0	360
56-55-3	Benzo(a)anthracene	J	24.2	ug/kg	10.8	36.0
91-94-1	3,3'-Dichlorobenzidine	U	360	ug/kg	108	360
218-01-9	Chrysene	J	30.3	ug/kg	10.8	36.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	360	ug/kg	72.0	360
117-84-0	Di-n-octylphthalate	U	360	ug/kg	72.0	360
205-99-2	Benzo(b)fluoranthene		54.0	ug/kg	10.8	36.0
207-08-9	Benzo(k)fluoranthene	U	36.0	ug/kg	10.8	36.0
50-32-8	Benzo(a)pyrene	J	26.6	ug/kg	10.8	36.0
193-39-5	Indeno(1,2,3-cd)pyrene	J	15.3	ug/kg	10.8	36.0
53-70-3	Dibenzo(a,h)anthracene	U	36.0	ug/kg	10.8	36.0
191-24-2	Benzo(ghi)perylene	J	16.6	ug/kg	10.8	36.0
120-82-1	1,2,4-Trichlorobenzene	U	360	ug/kg	72.0	360

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.07	508	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428015	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6049	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/01/2009 00:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3026.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	375	ug/kg	75.1	375
108-95-2	Phenol	U	375	ug/kg	75.1	375
95-57-8	2-Chlorophenol	U	375	ug/kg	75.1	375
106-46-7	1,4-Dichlorobenzene	U	375	ug/kg	75.1	375
621-64-7	N-Nitrosodipropylamine	U	375	ug/kg	75.1	375
59-50-7	4-Chloro-3-methylphenol	U	375	ug/kg	75.1	375
83-32-9	Acenaphthene	U	37.5	ug/kg	12.4	37.5
121-14-2	2,4-Dinitrotoluene	U	375	ug/kg	37.5	375
100-02-7	4-Nitrophenol	U	375	ug/kg	124	375
87-86-5	Pentachlorophenol	U	375	ug/kg	93.9	375
129-00-0	Pyrene		126	ug/kg	11.3	37.5
110-86-1	Pyridine	U	375	ug/kg	75.1	375
62-53-3	Aniline	U	375	ug/kg	113	375
111-44-4	bis(2-Chloroethyl) ether	U	375	ug/kg	75.1	375
541-73-1	1,3-Dichlorobenzene	U	375	ug/kg	75.1	375
100-51-6	Benzyl alcohol	U	375	ug/kg	113	375
95-50-1	1,2-Dichlorobenzene	U	375	ug/kg	75.1	375
108-60-1	bis(2-Chloroisopropyl)ether	U	375	ug/kg	75.1	375
95-48-7	o-Cresol	U	375	ug/kg	75.1	375
65794-96-9	m,p-Cresols	U	375	ug/kg	113	375
67-72-1	Hexachloroethane	U	375	ug/kg	75.1	375
98-95-3	Nitrobenzene	U	375	ug/kg	75.1	375
78-59-1	Isophorone	U	375	ug/kg	75.1	375
88-75-5	2-Nitrophenol	U	375	ug/kg	75.1	375
105-67-9	2,4-Dimethylphenol	U	375	ug/kg	131	375
111-91-1	bis(2-Chloroethoxy)methane	U	375	ug/kg	75.1	375
120-83-2	2,4-Dichlorophenol	U	375	ug/kg	75.1	375
65-85-0	Benzoic acid	U	751	ug/kg	188	751
91-20-3	Naphthalene	U	37.5	ug/kg	11.3	37.5
106-47-8	4-Chloroaniline	U	375	ug/kg	75.1	375
87-68-3	Hexachlorobutadiene	U	375	ug/kg	75.1	375
91-57-6	2-Methylnaphthalene	U	37.5	ug/kg	7.51	37.5
77-47-4	Hexachlorocyclopentadiene	U	375	ug/kg	75.1	375
88-06-2	2,4,6-Trichlorophenol	U	375	ug/kg	75.1	375
95-95-4	2,4,5-Trichlorophenol	U	375	ug/kg	75.1	375
91-58-7	2-Chloronaphthalene	U	37.5	ug/kg	12.4	37.5
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	375	ug/kg	75.1	375
99-09-2	3-Nitroaniline	U	375	ug/kg	75.1	375

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428015	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6049	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/01/2009 00:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3026.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	375	ug/kg	75.1	375
606-20-2	2,6-Dinitrotoluene	U	375	ug/kg	37.5	375
208-96-8	Acenaphthylene	U	37.5	ug/kg	11.3	37.5
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751
132-64-9	Dibenzofuran	U	375	ug/kg	75.1	375
84-66-2	Diethylphthalate	U	375	ug/kg	75.1	375
86-73-7	Fluorene	U	37.5	ug/kg	11.3	37.5
7005-72-3	4-Chlorophenylphenylether	U	375	ug/kg	75.1	375
534-52-1	2-Methyl-4,6-dinitrophenol	U	375	ug/kg	75.1	375
100-01-6	4-Nitroaniline	U	375	ug/kg	113	375
	p-Nitroaniline					
122-39-4	Diphenylamine	U	375	ug/kg	75.1	375
122-66-7	Azobenzene	U	375	ug/kg	75.1	375
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	375	ug/kg	75.1	375
118-74-1	Hexachlorobenzene	U	375	ug/kg	75.1	375
85-01-8	Phenanthrene		72.9	ug/kg	11.3	37.5
120-12-7	Anthracene	U	37.5	ug/kg	7.51	37.5
84-74-2	Di-n-butylphthalate	U	375	ug/kg	75.1	375
206-44-0	Fluoranthene		137	ug/kg	11.3	37.5
85-68-7	Butylbenzylphthalate	U	375	ug/kg	75.1	375
56-55-3	Benzo(a)anthracene		47.8	ug/kg	11.3	37.5
91-94-1	3,3'-Dichlorobenzidine	U	375	ug/kg	113	375
218-01-9	Chrysene		61.9	ug/kg	11.3	37.5
117-81-7	bis(2-Ethylhexyl)phthalate	U	375	ug/kg	75.1	375
117-84-0	Di-n-octylphthalate	U	375	ug/kg	75.1	375
205-99-2	Benzo(b)fluoranthene		106	ug/kg	11.3	37.5
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.3	37.5
50-32-8	Benzo(a)pyrene		54.1	ug/kg	11.3	37.5
193-39-5	Indeno(1,2,3-cd)pyrene	J	27.3	ug/kg	11.3	37.5
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.3	37.5
191-24-2	Benzo(ghi)perylene	J	27.5	ug/kg	11.3	37.5
120-82-1	1,2,4-Trichlorobenzene	U	375	ug/kg	75.1	375

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.13	409	ug/kg		J
	Unknown Aldol Condensate	3.06	469	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428015	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6049	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/01/2009 00:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3026.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
630-03-5	Nonacosane	9.88	280	ug/kg	99	NJ
112-95-8	Eicosane	10.87	222	ug/kg	97	NJ
	Unknown	11.51	212	ug/kg		J
	Unknown	12.49	3400	ug/kg		J

QC Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 09-2477

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201871647	MB for batch 881317	69	69	69	74	73	96
1201871648	LCS for batch 881317	74	69	76	77	85	91
232428001	CAMO-09-6007	59	59	61	66	76	82
1201871649	CAMO-09-6007MS	54	51	57	57	69	71
1201871650	CAMO-09-6007MSD	46	44	49	51	73	75
232428002	CAMO-09-6006	58	61	61	68	78	84
232428004	CAMO-09-6009	40	43	37	41	68	77
232428005	CAMO-09-6034	55	54	55	57	64	71
232428006	CAMO-09-6043	49	49	48	54	64	73
232428007	CAMO-09-6045	55	58	57	59	74	80
232428008	CAMO-09-6041	52	52	51	57	71	80
232428009	CAMO-09-6040	48	49	49	54	65	78
232428010	CAMO-09-6044	55	55	55	58	72	75
232428011	CAMO-09-6035	56	56	56	58	75	85
232428012	CAMO-09-6038	54	51	56	59	67	75
232428013	CAMO-09-6039	57	57	59	62	73	77
232428014	CAMO-09-6042	52	51	54	56	65	71
232428015	CAMO-09-6049	57	60	61	66	77	91
232428003	CAMO-09-6008	48	48	49	54	69	84

Surrogate			Acceptance Limits
2FP	=	2-Fluorophenol	(35%-96%)
PHL	=	Phenol-d5	(36%-96%)
NBZ	=	Nitrobenzene-d5	(34%-104%)
FBP	=	2-Fluorobiphenyl	(36%-100%)
TBP	=	2,4,6-Tribromophenol	(37%-106%)
TPH	=	p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 881317
Matrix: SOIL
Lab Sample ID: 1201871648
Instrument: MSD2.I
Analysis Date: 06/30/2009 17:33
Dilution: 1
Analyst: AGS1
Prep Batch ID: 881317
Inj. Vol: .5 uL
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1200	72	31-95
108-95-2	LCS	Phenol	1670	0.0	1230	74	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1290	78	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	1190	71	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1250	75	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1410	84	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1210	73	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1430	86	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1540	92	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	1500	90	38-116
129-00-0	LCS	Pyrene	1670	0.0	1350	81	43-108
110-86-1	LCS	Pyridine	1670	0.0	1150	69	13-129
62-53-3	LCS	Aniline	1670	0.0	1380	83	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1180	71	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	1180	71	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	1010	60	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	1260	75	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1200	72	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1320	79	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1460	88	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	1170	70	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1310	78	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: LCS for batch 881317
Lab Sample ID: 1201871648
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 17:33
Dilution: 1
Prep Batch ID: 881317
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1310	79	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1340	80	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1420	85	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1290	77	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1350	81	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	1570	94	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1180	71	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1410	85	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1370	82	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1330	80	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1760	106	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1300	78	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1350	81	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1320	79	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1400	84	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1560	93	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1310	78	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1300	78	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1320	79	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	1410	85	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1370	82	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1360	82	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: LCS for batch 881317
Lab Sample ID: 1201871648
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 17:33
Dilution: 1
Prep Batch ID: 881317
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1240	75	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1370	82	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	1480	89	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	1790	108	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1430	86	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1370	82	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1390	84	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1450	87	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1320	79	45-107
120-12-7	LCS	Anthracene	1670	0.0	1440	87	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1470	88	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1560	94	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1510	91	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1440	87	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1590	96	45-98
218-01-9	LCS	Chrysene	1670	0.0	1500	90	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1470	88	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1360	82	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1610	96	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1510	91	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1580	95	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1570	94	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: LCS for batch 881317
Lab Sample ID: 1201871648
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 17:33
Dilution: 1
Prep Batch ID: 881317
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1640	99	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1560	94	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1300	78	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	09-2477	**Sample Type:**	Matrix Spike
Client ID:	CAMO-09-6007MS	**Matrix:**	R
Lab Sample ID:	1201871649	**%Moisture:**	4.3
Instrument:	MSD2.I	**Analysis Date:**	06/30/2009 19:13
Analyst:	AGS1	**Prep Batch ID**	881317
Inj. Vol:	.5 uL	**Batch ID:**	881319

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	1740	0.00	U	862	50	32-90
108-95-2	MS	Phenol	1740	0.00	U	915	53	32-105
95-57-8	MS	2-Chlorophenol	1740	0.00	U	951	55	33-106
106-46-7	MS	1,4-Dichlorobenzene	1740	0.00	U	835	48	33-95
621-64-7	MS	N-Nitrosodipropylamine	1740	0.00	U	928	53	31-109
59-50-7	MS	4-Chloro-3-methylphenol	1740	0.00	U	1150	66	38-119
83-32-9	MS	Acenaphthene	1740	0.00	U	933	54	39-100
121-14-2	MS	2,4-Dinitrotoluene	1740	0.00	U	1090	63	42-107
100-02-7	MS	4-Nitrophenol	1740	0.00	U	1250	72	24-120
87-86-5	MS	Pentachlorophenol	1740	0.00	U	1240	71	26-121
129-00-0	MS	Pyrene	1740	0.00	U	1080	62	34-120
110-86-1	MS	Pyridine	1740	0.00	U	727	42	30-95
62-53-3	MS	Aniline	1740	0.00	U	972	56	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	1740	0.00	U	855	49	34-101
541-73-1	MS	1,3-Dichlorobenzene	1740	0.00	U	840	48	31-97
100-51-6	MS	Benzyl alcohol	1740	0.00	U	514	30	17-120
95-50-1	MS	1,2-Dichlorobenzene	1740	0.00	U	898	52	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	1740	0.00	U	868	50	32-113
95-48-7	MS	o-Cresol	1740	0.00	U	1020	59	31-119
65794-96-9	MS	m,p-Cresols	1740	0.00	U	1130	65	35-125
67-72-1	MS	Hexachloroethane	1740	0.00	U	804	46	30-100
98-95-3	MS	Nitrobenzene	1740	0.00	U	986	57	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: CAMO-09-6007MS
Lab Sample ID: 1201871649
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 4.3
Analysis Date: 06/30/2009 19:13
Prep Batch ID 881317
Batch ID: 881319
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	1740	0.00	U	977	56	34-110
88-75-5	MS	2-Nitrophenol	1740	0.00	U	1010	58	32-108
105-67-9	MS	2,4-Dimethylphenol	1740	0.00	U	1030	59	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	1740	0.00	U	973	56	35-108
120-83-2	MS	2,4-Dichlorophenol	1740	0.00	U	1020	59	38-110
65-85-0	MS	Benzoic acid	1740	0.00	U	1100	63	18-134
91-20-3	MS	Naphthalene	1740	0.00	U	882	51	31-105
106-47-8	MS	4-Chloroaniline	1740	0.00	U	1050	61	29-123
87-68-3	MS	Hexachlorobutadiene	1740	0.00	U	988	57	31-109
91-57-6	MS	2-Methylnaphthalene	1740	0.00	U	1010	58	32-110
77-47-4	MS	Hexachlorocyclopentadiene	1740	0.00	U	1160	67	21-122
88-06-2	MS	2,4,6-Trichlorophenol	1740	0.00	U	1010	58	37-108
95-95-4	MS	2,4,5-Trichlorophenol	1740	0.00	U	1130	65	37-116
91-58-7	MS	2-Chloronaphthalene	1740	0.00	U	1000	58	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	1740	0.00	U	1090	63	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	1740	0.00	U	1210	69	39-117
131-11-3	MS	Dimethylphthalate	1740	0.00	U	1050	60	41-105
606-20-2	MS	2,6-Dinitrotoluene	1740	0.00	U	1040	60	41-103
208-96-8	MS	Acenaphthylene	1740	0.00	U	1040	60	41-103
51-28-5	MS	2,4-Dinitrophenol	1740	0.00	U	765	44	25-104
132-64-9	MS	Dibenzofuran	1740	0.00	U	1090	63	40-114
84-66-2	MS	Diethylphthalate	1740	0.00	U	1080	62	43-110

Semi-Volatile
Quality Control Summary
Spike Recovery Report

SDG Number:	09-2477	Sample Type:	Matrix Spike
Client ID:	CAMO-09-6007MS	Matrix:	R
Lab Sample ID:	1201871649	%Moisture:	4.3
Instrument:	MSD2.I	Analysis Date:	06/30/2009 19:13
Analyst:	AGS1	Prep Batch ID:	881317
Inj. Vol:	.5 uL	Batch ID:	881319

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	1740	0.00	U	1010	58	48-99
7005-72-3	MS	4-Chlorophenylphenylether	1740	0.00	U	1090	63	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	1740	0.00	U	877	51	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	1740	0.00	U	1340	77	35-139
122-39-4	MS	Diphenylamine	1740	0.00	U	1120	64	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	1740	0.00	U	1100	63	37-118
101-55-3	MS	4-Bromophenylphenylether	1740	0.00	U	1110	64	39-112
118-74-1	MS	Hexachlorobenzene	1740	0.00	U	1170	67	38-113
85-01-8	MS	Phenanthrene	1740	0.00	U	1050	61	38-110
120-12-7	MS	Anthracene	1740	0.00	U	1140	66	38-112
84-74-2	MS	Di-n-butylphthalate	1740	0.00	U	1140	66	42-119
206-44-0	MS	Fluoranthene	1740	0.00	U	1180	68	38-119
85-68-7	MS	Butylbenzylphthalate	1740	0.00	U	1210	70	39-126
56-55-3	MS	Benzo(a)anthracene	1740	0.00	U	1120	65	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	1740	0.00	U	770	44	35-106
218-01-9	MS	Chrysene	1740	0.00	U	1090	63	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	1740	0.00	U	1200	69	40-125
117-84-0	MS	Di-n-octylphthalate	1740	0.00	U	1160	67	30-147
205-99-2	MS	Benzo(b)fluoranthene	1740	0.00	U	1200	69	38-117
207-08-9	MS	Benzo(k)fluoranthene	1740	0.00	U	1180	68	39-120
50-32-8	MS	Benzo(a)pyrene	1740	0.00	U	1160	67	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	1740	0.00	U	983	57	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: CAMO-09-6007MS
Lab Sample ID: 1201871649
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 4.3
Analysis Date: 06/30/2009 19:13
Prep Batch ID: 881317
Batch ID: 881319
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	1740	0.00	U	1010	58	32-124
191-24-2	MS	Benzo(ghi)perylene	1740	0.00	U	902	52	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	1740	0.00	U	956	55	31-105

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	09-2477	**Sample Type:**	Matrix Spike Duplicate
Client ID:	CAMO-09-6007MSD	**Matrix:**	R
Lab Sample ID:	1201871650	**%Moisture:**	4.3
Instrument:	MSD2.1	**Analysis Date:**	06/30/2009 19:32
Analyst:	AGS1	**Prep Batch ID**	881317
Inj. Vol:	.5 uL	**Batch ID:**	881319

Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD N-Methyl-N-nitrosomethylam	1740	0.00	U	793	46	32-90	8	0-30
108-95-2	MSD Phenol	1740	0.00	U	815	47	32-105	12	0-30
95-57-8	MSD 2-Chlorophenol	1740	0.00	U	839	48	33-106	13	0-30
106-46-7	MSD 1,4-Dichlorobenzene	1740	0.00	U	761	44	33-95	9	0-30
621-64-7	MSD N-Nitrosodipropylamine	1740	0.00	U	821	47	31-109	12	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	1740	0.00	U	1170	67	38-119	1	0-30
83-32-9	MSD Acenaphthene	1740	0.00	U	903	52	39-100	3	0-30
121-14-2	MSD 2,4-Dinitrotoluene	1740	0.00	U	1160	67	42-107	6	0-30
100-02-7	MSD 4-Nitrophenol	1740	0.00	U	1390	80	24-120	10	0-30
87-86-5	MSD Pentachlorophenol	1740	0.00	U	1360	78	26-121	10	0-30
129-00-0	MSD Pyrene	1740	0.00	U	1180	68	34-120	8	0-30
110-86-1	MSD Pyridine	1740	0.00	U	713	41	30-95	2	0-30
62-53-3	MSD Aniline	1740	0.00	U	888	51	34-111	9	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	1740	0.00	U	760	44	34-101	12	0-30
541-73-1	MSD 1,3-Dichlorobenzene	1740	0.00	U	755	43	31-97	11	0-30
100-51-6	MSD Benzyl alcohol	1740	0.00	U	421	24	17-120	20	0-30
95-50-1	MSD 1,2-Dichlorobenzene	1740	0.00	U	818	47	32-102	9	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	1740	0.00	U	781	45	32-113	11	0-30
95-48-7	MSD o-Cresol	1740	0.00	U	901	52	31-119	13	0-30
65794-96-9	MSD m,p-Cresols	1740	0.00	U	1020	59	35-125	9	0-30
67-72-1	MSD Hexachloroethane	1740	0.00	U	725	42	30-100	10	0-30
98-95-3	MSD Nitrobenzene	1740	0.00	U	879	51	33-108	12	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: CAMO-09-6007MSD
Lab Sample ID: 1201871650
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 4.3
Analysis Date: 06/30/2009 19:32
Dilution: 1
Prep Batch ID: 881317
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD	Isophorone	1740	0.00	U	888	51	34-110	9	0-30
88-75-5	MSD	2-Nitrophenol	1740	0.00	U	891	51	32-108	13	0-30
105-67-9	MSD	2,4-Dimethylphenol	1740	0.00	U	1020	58	32-115	1	0-30
111-91-1	MSD	bis(2-Chloroethoxy)methane	1740	0.00	U	854	49	35-108	13	0-30
120-83-2	MSD	2,4-Dichlorophenol	1740	0.00	U	952	55	38-110	7	0-30
65-85-0	MSD	Benzoic acid	1740	0.00	U	1220	70	18-134	11	0-30
91-20-3	MSD	Naphthalene	1740	0.00	U	795	46	31-105	10	0-30
106-47-8	MSD	4-Chloroaniline	1740	0.00	U	1020	59	29-123	3	0-30
87-68-3	MSD	Hexachlorobutadiene	1740	0.00	U	887	51	31-109	11	0-30
91-57-6	MSD	2-Methylnaphthalene	1740	0.00	U	911	52	32-110	10	0-30
77-47-4	MSD	Hexachlorocyclopentadiene	1740	0.00	U	982	56	21-122	17	0-30
88-06-2	MSD	2,4,6-Trichlorophenol	1740	0.00	U	1010	58	37-108	0	0-30
95-95-4	MSD	2,4,5-Trichlorophenol	1740	0.00	U	1170	67	37-116	3	0-30
91-58-7	MSD	2-Chloronaphthalene	1740	0.00	U	927	53	37-103	8	0-30
88-74-4	MSD	2-Nitroaniline *o-Nitroaniline*	1740	0.00	U	1120	64	36-115	3	0-30
99-09-2	MSD	3-Nitroaniline *m-Nitroaniline*	1740	0.00	U	1310	75	39-117	8	0-30
131-11-3	MSD	Dimethylphthalate	1740	0.00	U	1070	61	41-105	2	0-30
606-20-2	MSD	2,6-Dinitrotoluene	1740	0.00	U	1060	61	41-103	2	0-30
208-96-8	MSD	Acenaphthylene	1740	0.00	U	996	57	41-103	4	0-30
51-28-5	MSD	2,4-Dinitrophenol	1740	0.00	U	737	42	25-104	4	0-30
132-64-9	MSD	Dibenzofuran	1740	0.00	U	1080	62	40-114	1	0-30
84-66-2	MSD	Diethylphthalate	1740	0.00	U	1160	67	43-110	7	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: CAMO-09-6007MSD
Lab Sample ID: 1201871650
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 4.3
Analysis Date: 06/30/2009 19:32
Prep Batch ID: 881317
Batch ID: 881319
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	1740	0.00	U	1030	59	48-99	2	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	1740	0.00	U	1120	64	42-111	2	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	1740	0.00	U	910	52	19-118	4	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	1740	0.00	U	1460	84	35-139	9	0-30
122-39-4	MSD	Diphenylamine	1740	0.00	U	1180	68	41-112	5	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	1740	0.00	U	1140	65	37-118	4	0-30
101-55-3	MSD	4-Bromophenylphenylether	1740	0.00	U	1190	68	39-112	7	0-30
118-74-1	MSD	Hexachlorobenzene	1740	0.00	U	1230	71	38-113	5	0-30
85-01-8	MSD	Phenanthrene	1740	0.00	U	1130	65	38-110	7	0-30
120-12-7	MSD	Anthracene	1740	0.00	U	1210	70	38-112	6	0-30
84-74-2	MSD	Di-n-butylphthalate	1740	0.00	U	1240	71	42-119	8	0-30
206-44-0	MSD	Fluoranthene	1740	0.00	U	1290	74	38-119	9	0-30
85-68-7	MSD	Butylbenzylphthalate	1740	0.00	U	1320	76	39-126	9	0-30
56-55-3	MSD	Benzo(a)anthracene	1740	0.00	U	1190	68	39-110	6	0-30
91-94-1	MSD	3,3'-Dichlorobenzidine	1740	0.00	U	1010	58	35-106	27	0-30
218-01-9	MSD	Chrysene	1740	0.00	U	1230	71	39-109	12	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	1740	0.00	U	1280	73	40-125	6	0-30
117-84-0	MSD	Di-n-octylphthalate	1740	0.00	U	1250	72	30-147	7	0-30
205-99-2	MSD	Benzo(b)fluoranthene	1740	0.00	U	1370	79	38-117	13	0-30
207-08-9	MSD	Benzo(k)fluoranthene	1740	0.00	U	1240	71	39-120	5	0-30
50-32-8	MSD	Benzo(a)pyrene	1740	0.00	U	1310	75	40-115	12	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	1740	0.00	U	1140	65	32-120	15	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	09-2477	**Sample Type:**	Matrix Spike Duplicate
Client ID:	CAMO-09-6007MSD	**Matrix:**	R
Lab Sample ID:	1201871650	**%Moisture:**	4.3
Instrument:	MSD2.I	**Analysis Date:**	06/30/2009 19:32
Analyst:	AGS1	**Prep Batch ID:**	881317
Inj. Vol:	.5 uL	**Batch ID:**	881319

Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD Dibenzo(a,h)anthracene	1740	0.00	U	1190	69	32-124	17	0-30
191-24-2	MSD Benzo(ghi)perylene	1740	0.00	U	1070	61	28-119	17	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	1740	0.00	U	853	49	31-105	11	0-30

Method Blank Summary

SDG Number:	09-2477	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881317	Instrument ID:	MSD2.I	Data File:	s2f3005-1.d
Lab Sample ID:	1201871647	Prep Date:	06/30/2009 14:54	Analyzed:	06/30/09 17:13
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 881317	1201871648	s2f3006-1.d	06/30/09	1733
02	CAMO-09-6007	232428001	s2f3010.d	06/30/09	1853
03	CAMO-09-6007MS	1201871649	s2f3011.d	06/30/09	1913
04	CAMO-09-6007MSD	1201871650	s2f3012.d	06/30/09	1932
05	CAMO-09-6006	232428002	s2f3013.d	06/30/09	1953
06	CAMO-09-6009	232428004	s2f3015.d	06/30/09	2033
07	CAMO-09-6034	232428005	s2f3016.d	06/30/09	2053
08	CAMO-09-6043	232428006	s2f3017.d	06/30/09	2113
09	CAMO-09-6045	232428007	s2f3018.d	06/30/09	2133
10	CAMO-09-6041	232428008	s2f3019.d	06/30/09	2153
11	CAMO-09-6040	232428009	s2f3020.d	06/30/09	2212
12	CAMO-09-6044	232428010	s2f3021.d	06/30/09	2232
13	CAMO-09-6035	232428011	s2f3022.d	06/30/09	2252
14	CAMO-09-6038	232428012	s2f3023.d	06/30/09	2312
15	CAMO-09-6039	232428013	s2f3024.d	06/30/09	2332
16	CAMO-09-6042	232428014	s2f3025.d	06/30/09	2352
17	CAMO-09-6049	232428015	s2f3026.d	07/01/09	0012
18	CAMO-09-6008	232428003	s2f3027.d	07/01/09	0032

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2477

Instrument ID: MSD2.I **Injection Date/Time:** 27-JUN-09 01:45

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD2.i/s062609.b/s2f2614.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	45.4
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	42.4
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	52.6
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	21.8
365	Greater than 1% of mass 198	2.9
441	Present, but less than mass 443	77.4
442	Greater than 40% of mass 198	73.5
443	17 - 23% of mass 442	20.4

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGA001	WBN090626-08	/chem/MSD2.i/s062609.b/s2f2616	27-JUN-09 02:16
MEGA010	WBN090626-07	/chem/MSD2.i/s062609.b/s2f2617	27-JUN-09 02:40
MEGA020	WBN090626-06	/chem/MSD2.i/s062609.b/s2f2618	27-JUN-09 03:04
MEGA040	WBN090626-05.1	/chem/MSD2.i/s062609.b/s2f2619	27-JUN-09 03:29
MEGA050	WBN090626-04	/chem/MSD2.i/s062609.b/s2f2620	27-JUN-09 03:53
MEGA080	WBN090626-03	/chem/MSD2.i/s062609.b/s2f2621	27-JUN-09 04:17
MEGA100	WBN090626-02	/chem/MSD2.i/s062609.b/s2f2622	27-JUN-09 04:41
MEGA120	WBN090626-01	/chem/MSD2.i/s062609.b/s2f2623	27-JUN-09 05:05
MEGAICV	WBN090626-09.1	/chem/MSD2.i/s062609.b/s2f2625	27-JUN-09 05:54

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2477

Instrument ID: MSD2.I **Injection Date/Time:** 28-JUN-09 18:00

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD2.i/s062809.b/s2f2801.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	42.6
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	40.2
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	51.7
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	7
275	10 - 30% of mass 198	22.4
365	Greater than 1% of mass 198	2.9
441	Present, but less than mass 443	79.1
442	Greater than 40% of mass 198	77
443	17 - 23% of mass 442	20

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
APICAL	WBN090528-07	/chem/MSD2.i/s062809.b/s2f2803	28-JUN-09 18:31
APICAL	WBN090528-06	/chem/MSD2.i/s062809.b/s2f2804	28-JUN-09 18:51
APICAL	WBN090528-05.1	/chem/MSD2.i/s062809.b/s2f2805	28-JUN-09 19:10
APICAL	WBN090528-04	/chem/MSD2.i/s062809.b/s2f2806	28-JUN-09 19:30
APICAL	WBN090528-03	/chem/MSD2.i/s062809.b/s2f2807	28-JUN-09 19:49
APICAL	WBN090528-02	/chem/MSD2.i/s062809.b/s2f2808	28-JUN-09 20:08
APICAL	WBN090528-01	/chem/MSD2.i/s062809.b/s2f2809	28-JUN-09 20:28
APICV	WBN090528-8.1	/chem/MSD2.i/s062809.b/s2f2823	29-JUN-09 00:59

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2477

Instrument ID: MSD2.I **Injection Date/Time:** 30-JUN-09 15:51

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD2.i/s063009.b/s2f3001.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	42.6
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	40.5
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	51.2
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	22.5
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	79.4
442	Greater than 40% of mass 198	79.8
443	17 - 23% of mass 442	19.9

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090626-05.3	/chem/MSD2.i/s063009.b/s2f3002	30-JUN-09 16:03
APCVS	WBN090619-01.2	/chem/MSD2.i/s063009.b/s2f3003	30-JUN-09 16:27
SBLK01	1201871647	/s063009.b/s2f3005-1.d	30-JUN-09 17:13
SBLK01LCS	1201871648	/s063009.b/s2f3006-1.d	30-JUN-09 17:33
CAMO-09-6007	232428001	/s063009.b/s2f3010.d	30-JUN-09 18:53
CAMO-09-6007MS	1201871649	/s063009.b/s2f3011.d	30-JUN-09 19:13
CAMO-09-6007MSD	1201871650	/s063009.b/s2f3012.d	30-JUN-09 19:32
CAMO-09-6006	232428002	/s063009.b/s2f3013.d	30-JUN-09 19:53
CAMO-09-6009	232428004	/s063009.b/s2f3015.d	30-JUN-09 20:33
CAMO-09-6034	232428005	/s063009.b/s2f3016.d	30-JUN-09 20:53
CAMO-09-6043	232428006	/s063009.b/s2f3017.d	30-JUN-09 21:13
CAMO-09-6045	232428007	/s063009.b/s2f3018.d	30-JUN-09 21:33
CAMO-09-6041	232428008	/s063009.b/s2f3019.d	30-JUN-09 21:53
CAMO-09-6040	232428009	/s063009.b/s2f3020.d	30-JUN-09 22:12
CAMO-09-6044	232428010	/s063009.b/s2f3021.d	30-JUN-09 22:32
CAMO-09-6035	232428011	/s063009.b/s2f3022.d	30-JUN-09 22:52

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2477

Instrument ID: MSD2.I **Injection Date/Time:** 30-JUN-09 15:51

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD2.i/s063009.b/s2f3001.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	42.6
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	40.5
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	51.2
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	22.5
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	79.4
442	Greater than 40% of mass 198	79.8
443	17 - 23% of mass 442	19.9

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CAMO-09-6038	232428012	/s063009.b/s2f3023.d	30-JUN-09 23:12
CAMO-09-6039	232428013	/s063009.b/s2f3024.d	30-JUN-09 23:32
CAMO-09-6042	232428014	/s063009.b/s2f3025.d	30-JUN-09 23:52
CAMO-09-6049	232428015	/s063009.b/s2f3026.d	01-JUL-09 00:12
CAMO-09-6008	232428003	/s063009.b/s2f3027.d	01-JUL-09 00:32

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 09-2477

Instrument: MSD2.1

STD Analysis Time: 30-JUN-09 16:03

GC Column: J&W DB-5MS

Data File: s2f3002.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	199810		4.05	811715		4.92	413629		6.17	708218		7.15	583275		8.89	517572		10.5
Upper Limit	399620		4.55	1623430		5.42	827258		6.67	1416436		7.65	1166550		9.39	1035144		11.0
Lower Limit	99905		3.55	405858		4.42	206815		5.67	354109		6.65	291638		8.39	258786		10.0
Sample ID																		
BLK01	196202		4.05	735867		4.92	403005		6.17	671443		7.15	565609		8.88	464558		10.5
BLK01LCS	151287		4.05	611419		4.92	323125		6.17	560782		7.15	498899		8.89	442975		10.5
CAMO-09-6007	180638		4.05	667556		4.92	372896		6.17	629694		7.15	531674		8.88	425334		10.5
CAMO-09-6007MS	198371		4.05	784347		4.92	418050		6.17	718176		7.15	605522		8.89	483563		10.5
CAMO-09-6007MSD	180510		4.05	711148		4.92	382541		6.17	660262		7.15	560383		8.88	456500		10.5
CAMO-09-6006	196939		4.05	734872		4.92	408014		6.17	706732		7.15	567156		8.88	402470		10.5
CAMO-09-6009	187239		4.05	701112		4.92	394599		6.17	672005		7.15	538740		8.88	401621		10.5
CAMO-09-6034	188676		4.05	716189		4.92	400738		6.17	695974		7.15	548946		8.88	380363		10.5
CAMO-09-6043	121278		4.05	454743		4.92	260007		6.17	457469		7.15	379016		8.88	282636		10.5
CAMO-09-6045	204112		4.05	786976		4.92	443544		6.17	770403		7.15	658012		8.88	497161		10.5
CAMO-09-6041	190527		4.05	725944		4.92	410814		6.17	703267		7.15	563662		8.88	404251		10.5
CAMO-09-6040	198932		4.05	754089		4.92	412131		6.17	702696		7.15	503100		8.89	321190		10.5
CAMO-09-6044	140645		4.05	532364		4.92	308082		6.17	551753		7.15	443423		8.88	298178		10.5
CAMO-09-6035	180223		4.05	681008		4.92	386218		6.17	677379		7.15	561554		8.88	414474		10.5
CAMO-09-6038	166453		4.05	626871		4.92	352432		6.17	608541		7.15	480798		8.88	298245		10.5
CAMO-09-6039	206744		4.05	776108		4.92	429326		6.17	752037		7.15	601738		8.88	404648		10.5
CAMO-09-6042	175516		4.05	663062		4.92	371632		6.17	666066		7.15	517462		8.88	339706		10.5
CAMO-09-6049	189027		4.05	735633		4.92	409741		6.17	697398		7.15	519258		8.89	321257		10.5
CAMO-09-6008	152062		4.05	575297		4.92	321243		6.17	569274		7.15	445614		8.88	290015		10.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428002	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6006	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 19:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	s2f3013.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	375	ug/kg	75.1	375
108-95-2	Phenol	U	375	ug/kg	75.1	375
95-57-8	2-Chlorophenol	U	375	ug/kg	75.1	375
106-46-7	1,4-Dichlorobenzene	U	375	ug/kg	75.1	375
621-64-7	N-Nitrosodipropylamine	U	375	ug/kg	75.1	375
59-50-7	4-Chloro-3-methylphenol	U	375	ug/kg	37.5	375
83-32-9	Acenaphthene	U	37.5	ug/kg	12.5	37.5
121-14-2	2,4-Dinitrotoluene	U	375	ug/kg	37.5	375
100-02-7	4-Nitrophenol	U	375	ug/kg	75.1	375
87-86-5	Pentachlorophenol	U	375	ug/kg	75.1	375
129-00-0	Pyrene		104	ug/kg	11.8	37.5
110-86-1	Pyridine	U	375	ug/kg	75.1	375
62-53-3	Aniline	U	375	ug/kg	131	375
111-44-4	bis(2-Chloroethyl) ether	U	375	ug/kg	75.1	375
541-73-1	1,3-Dichlorobenzene	U	375	ug/kg	75.1	375
100-51-6	Benzyl alcohol	U	375	ug/kg	113	375
95-50-1	1,2-Dichlorobenzene	U	375	ug/kg	75.1	375
108-60-1	bis(2-Chloroisopropyl)ether	U	375	ug/kg	75.1	375
95-48-7	o-Cresol	U	375	ug/kg	75.1	375
65794-96-9	m,p-Cresols	U	375	ug/kg	150	375
67-72-1	Hexachloroethane	U	375	ug/kg	75.1	375
98-95-3	Nitrobenzene	U	375	ug/kg	75.1	375
78-59-1	Isophorone	U	375	ug/kg	75.1	375
88-75-5	2-Nitrophenol	U	375	ug/kg	37.5	375
105-67-9	2,4-Dimethylphenol	U	375	ug/kg	75.1	375
111-91-1	bis(2-Chloroethoxy)methane	U	375	ug/kg	75.1	375
120-83-2	2,4-Dichlorophenol	U	375	ug/kg	75.1	375
65-85-0	Benzoic acid	U	751	ug/kg	188	751
91-20-3	Naphthalene	U	37.5	ug/kg	11.3	37.5
106-47-8	4-Chloroaniline	U	375	ug/kg	75.1	375
87-68-3	Hexachlorobutadiene	U	375	ug/kg	75.1	375
91-57-6	2-Methylnaphthalene	U	37.5	ug/kg	7.51	37.5
77-47-4	Hexachlorocyclopentadiene	U	375	ug/kg	75.1	375
88-06-2	2,4,6-Trichlorophenol	U	375	ug/kg	75.1	375
95-95-4	2,4,5-Trichlorophenol	U	375	ug/kg	75.1	375
91-58-7	2-Chloronaphthalene	U	37.5	ug/kg	13.1	37.5
88-74-4	2-Nitroaniline	U	375	ug/kg	75.1	375
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	375	ug/kg	75.1	375

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428002	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6006	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 19:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	s2f3013.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	375	ug/kg	75.1	375
606-20-2	2,6-Dinitrotoluene	U	375	ug/kg	37.5	375
208-96-8	Acenaphthylene	U	37.5	ug/kg	11.3	37.5
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751
132-64-9	Dibenzofuran	U	375	ug/kg	75.1	375
84-66-2	Diethylphthalate	U	375	ug/kg	75.1	375
86-73-7	Fluorene	U	37.5	ug/kg	11.3	37.5
7005-72-3	4-Chlorophenylphenylether	U	375	ug/kg	37.5	375
534-52-1	2-Methyl-4,6-dinitrophenol	U	375	ug/kg	75.1	375
100-01-6	4-Nitroaniline	U	375	ug/kg	75.1	375
	p-Nitroaniline					
122-39-4	Diphenylamine	U	375	ug/kg	75.1	375
122-66-7	Azobenzene	U	375	ug/kg	75.1	375
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	375	ug/kg	37.5	375
118-74-1	Hexachlorobenzene	U	375	ug/kg	75.1	375
85-01-8	Phenanthrene		45.5	ug/kg	11.3	37.5
120-12-7	Anthracene	U	37.5	ug/kg	7.51	37.5
84-74-2	Di-n-butylphthalate	U	375	ug/kg	37.5	375
206-44-0	Fluoranthene		120	ug/kg	11.3	37.5
85-68-7	Butylbenzylphthalate	U	375	ug/kg	75.1	375
56-55-3	Benzo(a)anthracene		45.8	ug/kg	11.3	37.5
91-94-1	3,3'-Dichlorobenzidine	U	375	ug/kg	113	375
218-01-9	Chrysene		56.0	ug/kg	11.3	37.5
117-81-7	bis(2-Ethylhexyl)phthalate	J	85.6	ug/kg	75.1	375
117-84-0	Di-n-octylphthalate	U	375	ug/kg	75.1	375
205-99-2	Benzo(b)fluoranthene		104	ug/kg	11.3	37.5
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.3	37.5
50-32-8	Benzo(a)pyrene		52.3	ug/kg	11.3	37.5
193-39-5	Indeno(1,2,3-cd)pyrene	J	28.5	ug/kg	11.3	37.5
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.3	37.5
191-24-2	Benzo(ghi)perylene	J	28.7	ug/kg	11.3	37.5
120-82-1	1,2,4-Trichlorobenzene	U	375	ug/kg	75.1	375

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.14	415	ug/kg		J
	Unknown Aldol Condensate	3.07	261	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428002	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6006	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 19:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	s2f3013.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.33	181	ug/kg		J
	Unknown	8.44	171	ug/kg		J
	Unknown	8.6	227	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	324	ug/kg	96	NJ
112-95-8	Eicosane	9.88	157	ug/kg	96	NJ
	Unknown	12.49	2240	ug/kg		J

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Data file : /chem/MSD2.i/s063009.b/s2f3013.d
Lab Smp Id: 232428002 Client Smp ID: CAMO-09-6006
Inj Date : 30-JUN-2009 19:53
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428002|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.08000	weight of sample
M	11.42090	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.052	4.051	(1.000)	196939	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	734872	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	408014	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	706732	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	567156	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	402470	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	314905	57.7856	2170
$ 5 Phenol-d5	99	3.752	3.757	(0.926)	408831	60.7518	2280
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	168607	30.4099	1140
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	389773	33.8244	1270
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	109431	78.3070	2940
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	405824	42.0093	1580

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.026	8.031	(0.904)	46805	2.77230	104
68 Phenanthrene	178	7.164	7.170	(1.002)	20381	1.21105	45.4
76 Fluoranthene	202	7.881	7.886	(1.103)	49536	3.19971	120
89 Benzo(a)anthracene	228	8.871	8.881	(0.999)	16823	1.21914	45.8
92 Chrysene	228	8.903	8.919	(1.002)	19870	1.49208	56.0
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.984)	23743	2.28206	85.6(a)
95 Benzo(b)fluoranthene	252	9.972	9.988	(0.950)	26713	2.76481	104
97 Benzo(a)pyrene	252	10.416	10.432	(0.992)	11762	1.39334	52.3
99 Indeno(1,2,3-cd)pyrene	276	12.299	12.337	(1.172)	6155	0.75903	28.5(a)
101 Benzo(ghi)perylene	276	12.877	12.903	(1.227)	5391	0.76568	28.7(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s2f3013.d
Report Date: 06/30/2009 20:37
Lab. ID: 232428002 SampleType: SAMPLE
Injection Date: 30-JUN-2009 19:53
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428002|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	18318	3.75	3.83	80-120	100	(T)
93	279	3.73	3.83	440-500	2	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	22868	4.41	4.29	80-120	100	(T)
42	13900	4.41	4.29	40-100	61	(T)
43 Dimethylphthalate			CAS#: 131-11-3			
163	88090	6.17	5.94	80-120	100	(T)
164	408014	6.17	5.94	0- 40	463	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	52842	6.17	5.99	80-120	100	(T)
63	841	6.17	5.99	46-106	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	52844	6.17	6.27	80-120	100	(T)
89	676	6.17	6.27	38- 98	1	(QT)
63	841	6.17	6.27	16- 76	2	(QT)
53 Fluorene		CAS#: 86-73-7				
166	6963	6.69	6.54	80-120	100	(T)
165	7300	6.69	6.54	61-121	105	(T)
167	2350	6.70	6.54	0- 44	34	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	272	6.70	6.55	80-120	100	(T)
105	514	6.69	6.55	14- 74	189	(QT)
51	928	6.69	6.55	37- 97	341	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	6376	6.70	6.84	80-120	100	(T)
141	44713	6.69	6.84	51-111	701	(QT)
250	13446	6.70	6.84	66-126	211	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	20381	7.16	7.17	80-120	100	( )
179	5213	7.16	7.17	0- 46	26	( )
176	3784	7.16	7.17	0- 49	19	( )
69 Anthracene				CAS#: 120-12-7		
178	20381	7.16	7.20	80-120	100	( )
179	5213	7.16	7.20	0- 46	26	( )
176	3784	7.16	7.20	0- 48	19	( )
76 Fluoranthene				CAS#: 206-44-0		
202	49536	7.88	7.89	80-120	100	( )
203	8886	7.88	7.89	0- 48	18	( )
101	7256	7.88	7.89	0- 45	15	( )
79 Pyrene				CAS#: 129-00-0		
202	46805	8.03	8.03	80-120	100	( )
200	9785	8.03	8.03	0- 51	21	( )
101	8797	8.03	8.03	0- 48	19	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	16823	8.87	8.88	80-120	100	( )
226	4546	8.87	8.88	0- 56	27	( )
229	4820	8.87	8.88	0- 50	29	( )
92 Chrysene				CAS#: 218-01-9		
228	19870	8.90	8.92	80-120	100	( )
229	5089	8.90	8.92	0- 50	26	( )
226	6056	8.90	8.92	0- 59	30	( )
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	23743	8.74	8.75	80-120	100	( )
167	8693	8.74	8.75	2- 62	37	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	26713	9.97	9.99	80-120	100	( )
253	6091	9.97	9.99	0- 52	23	( )
125	4371	9.97	9.99	0- 45	16	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	26713	9.97	10.02	80-120	100	( )
253	6091	9.97	10.02	0- 52	23	( )
125	4371	9.97	10.02	0- 44	16	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	11762	10.42	10.43	80-120	100	( )
253	2891	10.42	10.43	0- 52	25	( )
125	2089	10.42	10.43	0- 46	18	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	6155	12.30	12.34	80-120	100	( )
138	2219	12.30	12.34	7- 67	36	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	5391	12.88	12.90	80-120	100	( )
138	1774	12.88	12.90	4- 64	33	( )

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s063009.b/s2f3013.d
Lab Smp Id: 232428002 Client Smp ID: CAMO-09-6006
Inj Date : 30-JUN-2009 19:53
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428002|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.08000	weight of sample
M	11.42090	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.052	1187885	40.000
* 91 Chrysene-d12	8.881	1933041	40.000
* 98 Perylene-d12	10.497	1141680	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.137	328533	11.0627813	415	0		0	10
Unknown Aldol Condensate				CAS #:			
3.067	206458	6.95212778	261	0		0	10
Unknown				CAS #:			
8.330	233173	4.82500428	181	0		0	91
Unknown				CAS #:			
8.443	219904	4.55042952	171	0		0	91
Unknown				CAS #:			
8.603	292896	6.06083670	227	0		0	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1740-19-8			
8.662	417410	8.63737023	324	96	NIST05.L	125034	91
Eicosane				CAS #: 112-95-8			
9.876	119718	4.19446482	157	96	NIST05.L	113490	98
Unknown				CAS #:			
12.486	1706857	59.8015720	2240	0		0	98

Data File: /chem/MSD2.i/s063009.b/s2f3013.d
Date : 30-JUN-2009 19:53
Client ID: CAMO-09-6006
Sample Info: 1232428002|881319111SVMF11|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

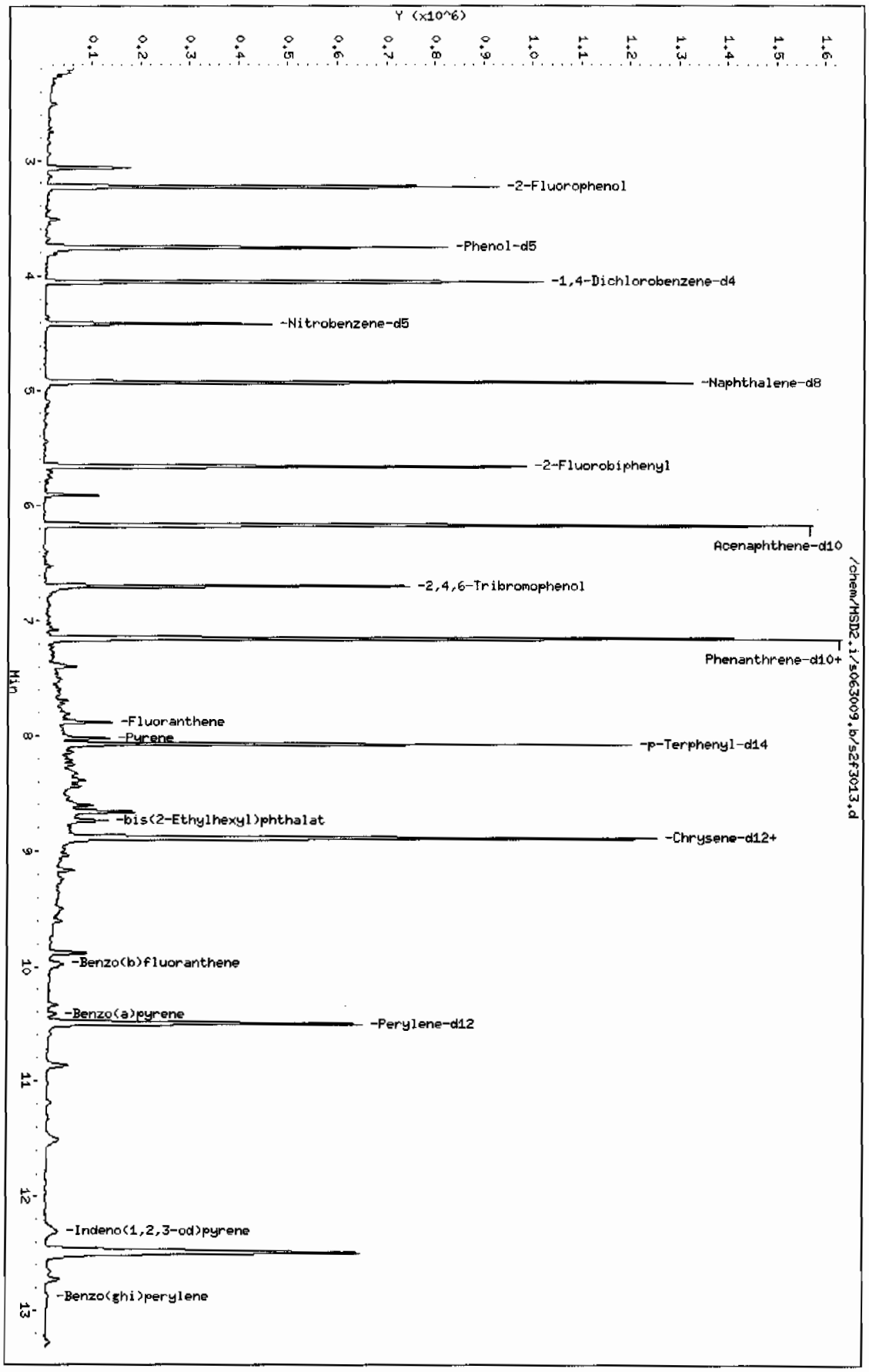

Page 1

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: 1232428002188131911SVMF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 104 ug/Kg

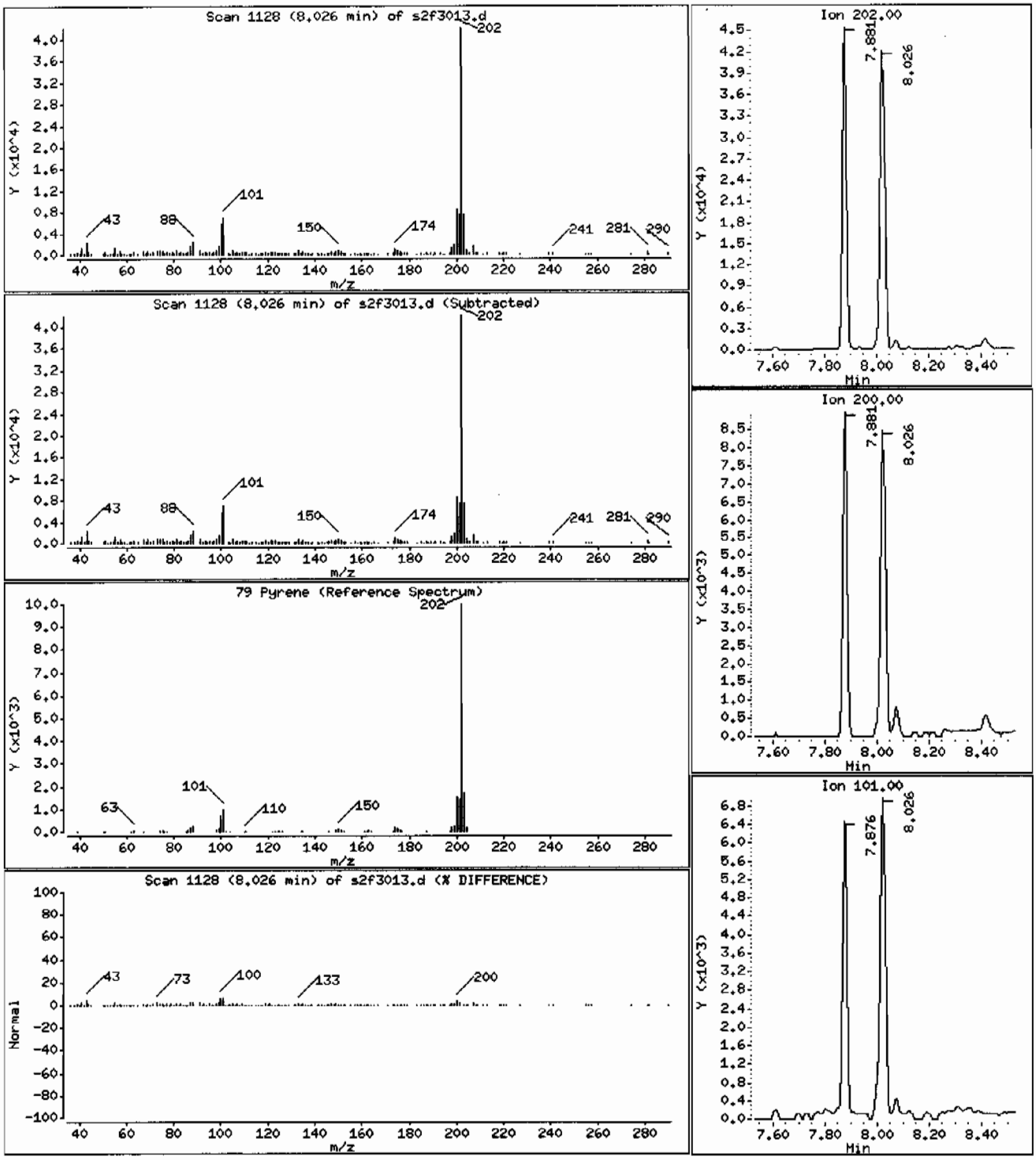

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: |2324280021881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 45.4 ug/Kg

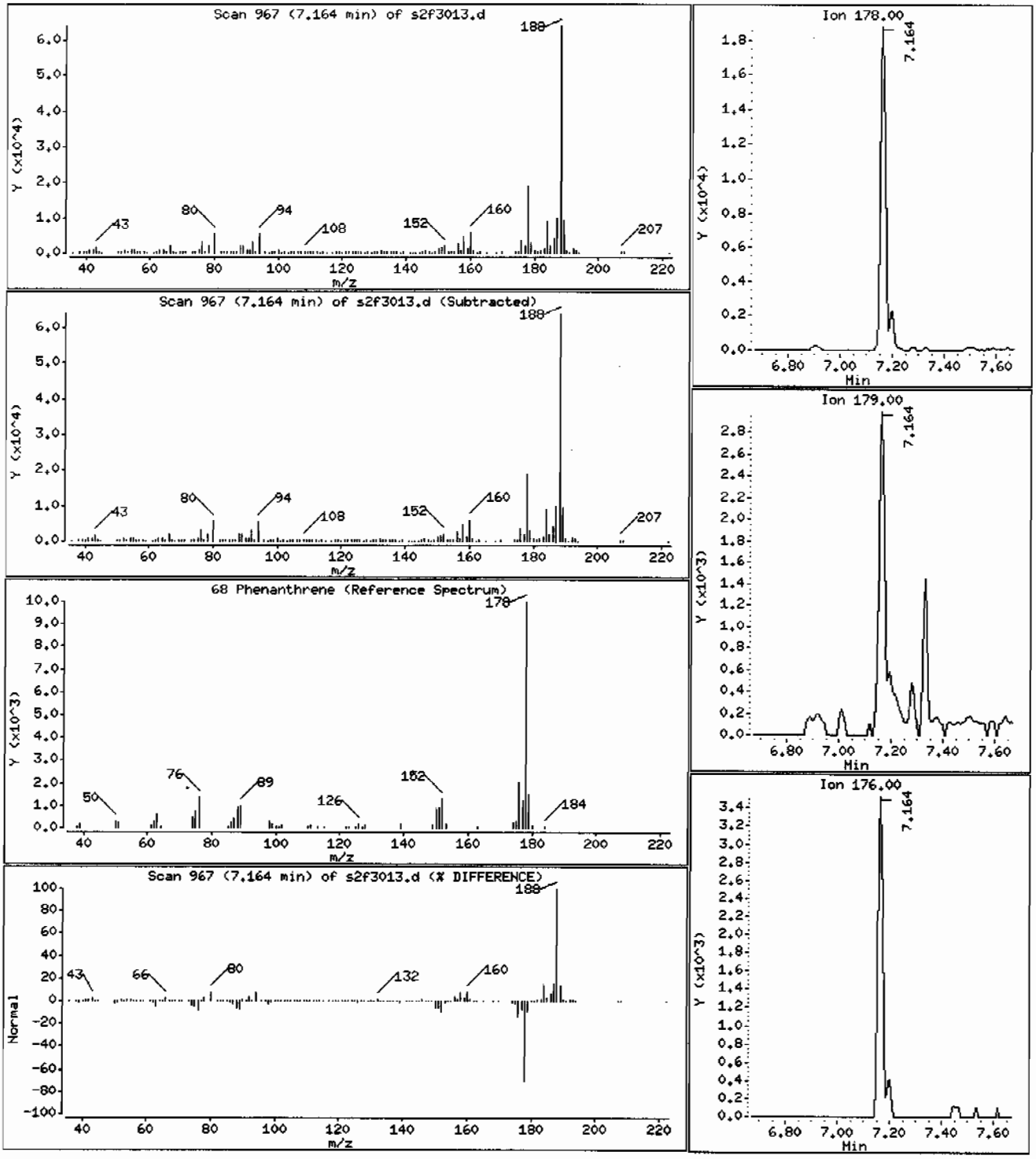

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: 1232428002188131911ISVMF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 120 ug/Kg

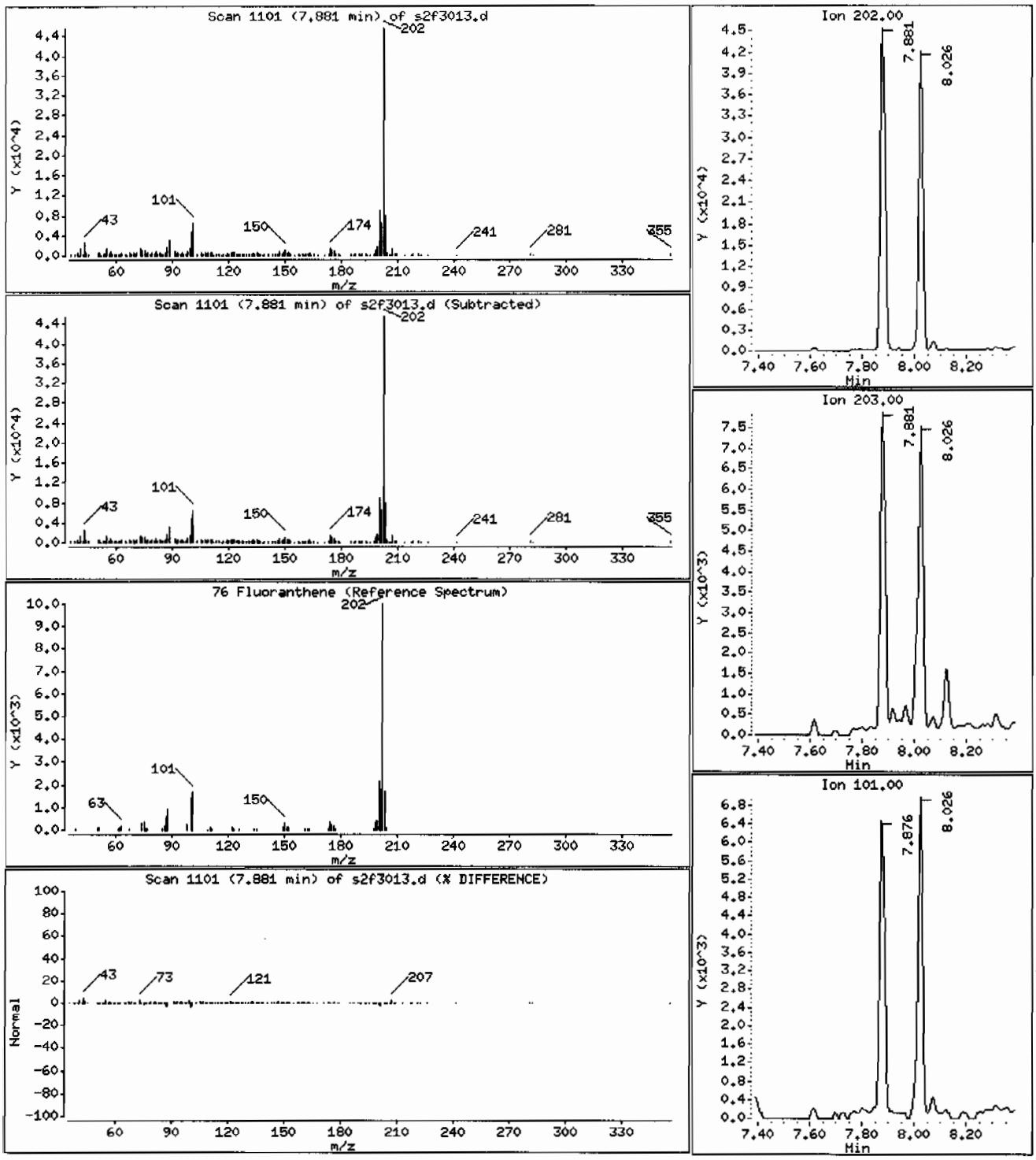

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: |2324280021881319111SVMF11|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 45.8 ug/Kg

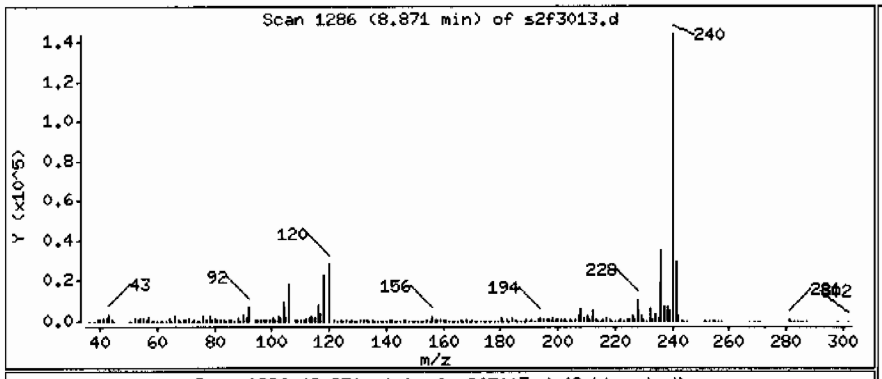

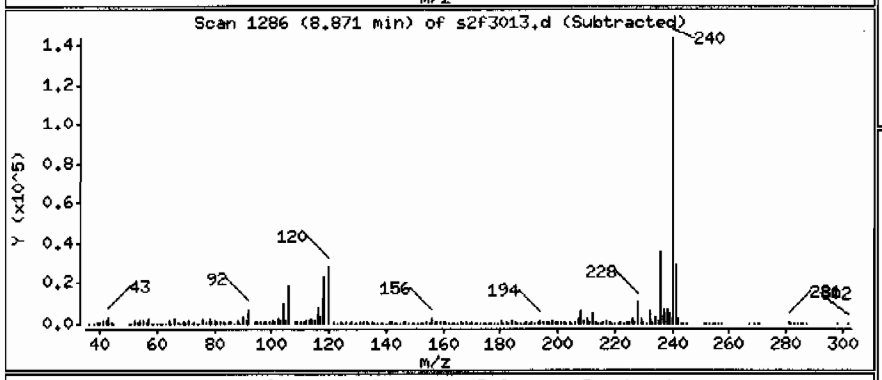

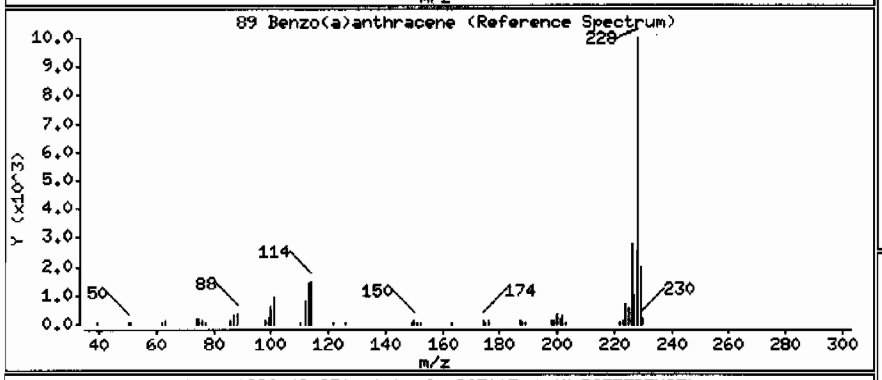

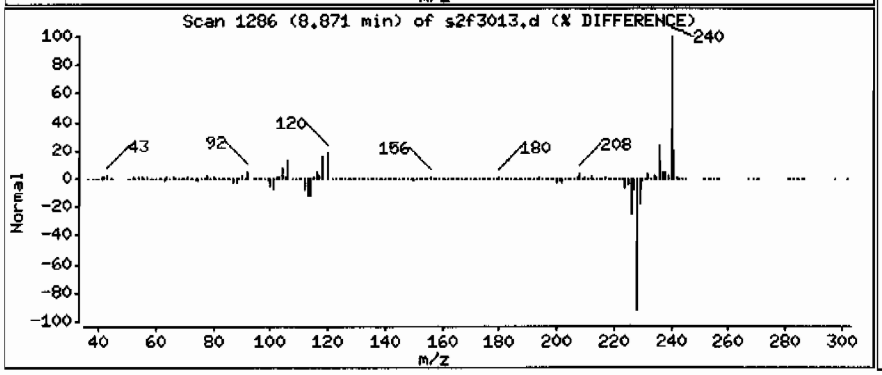

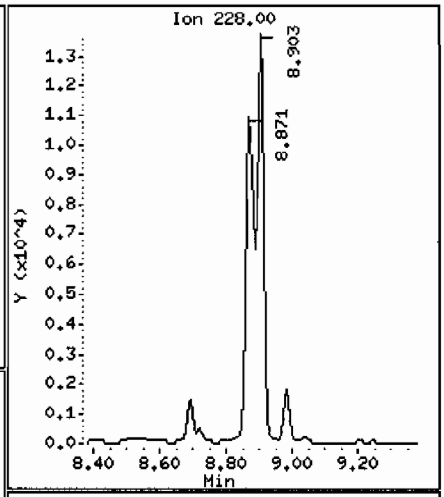

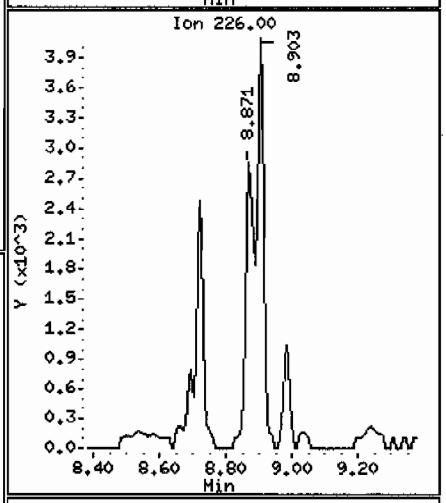

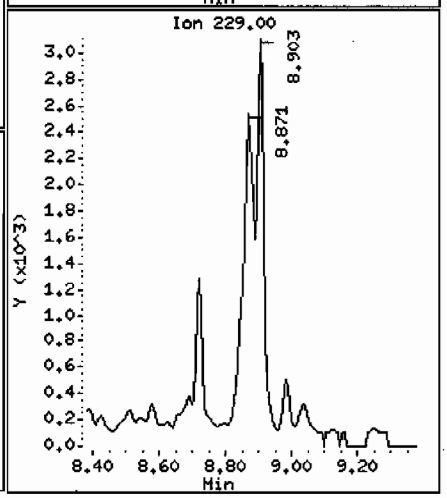

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006 Instrument: MSD2.i

Sample Info: 1232428002188131911SVMF11LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

92 Chrysene Concentration: 56.0 ug/Kg

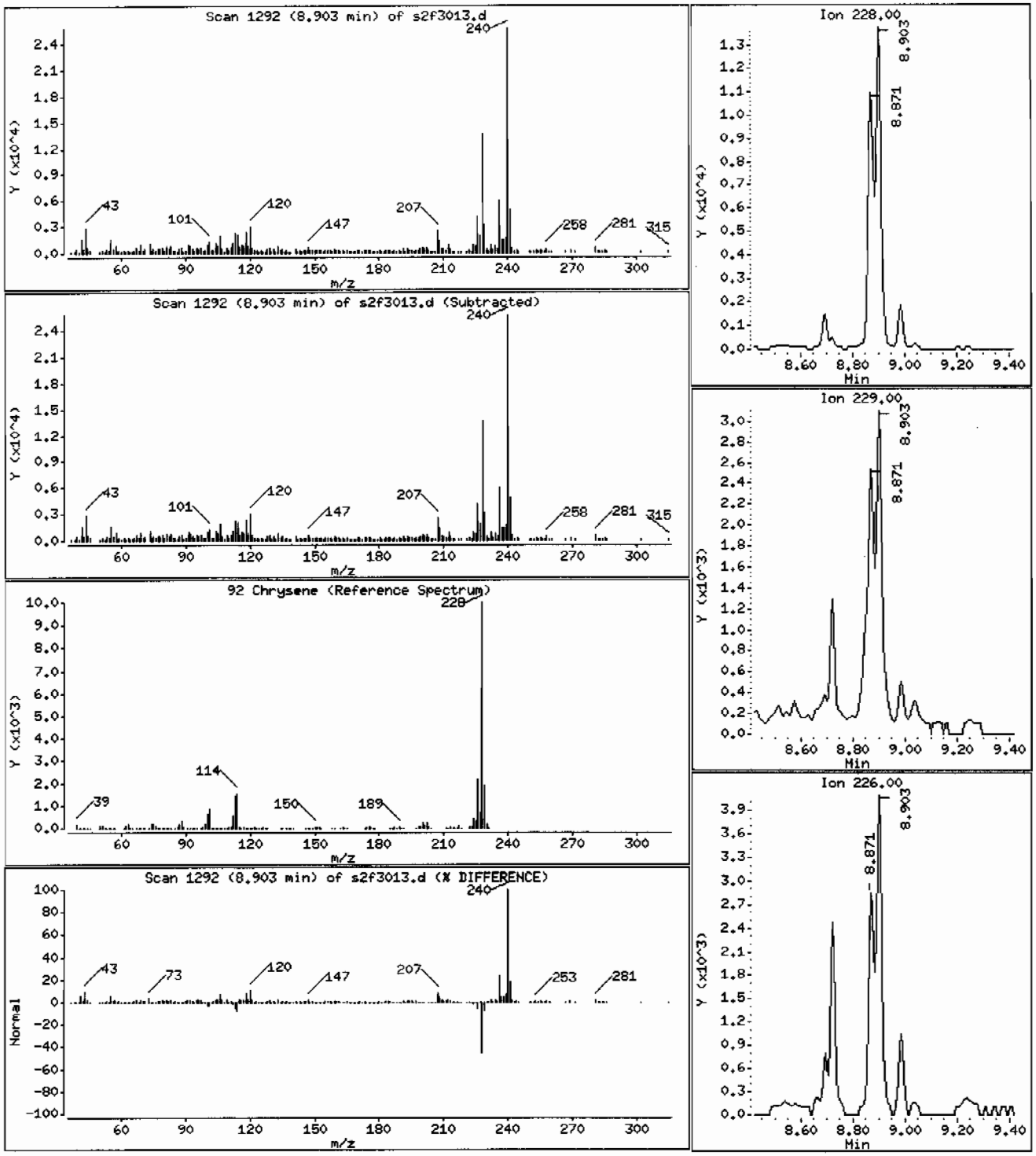

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006 Instrument: MSD2.i

Sample Info: 1232428002|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate Concentration: 85.6 ug/Kg

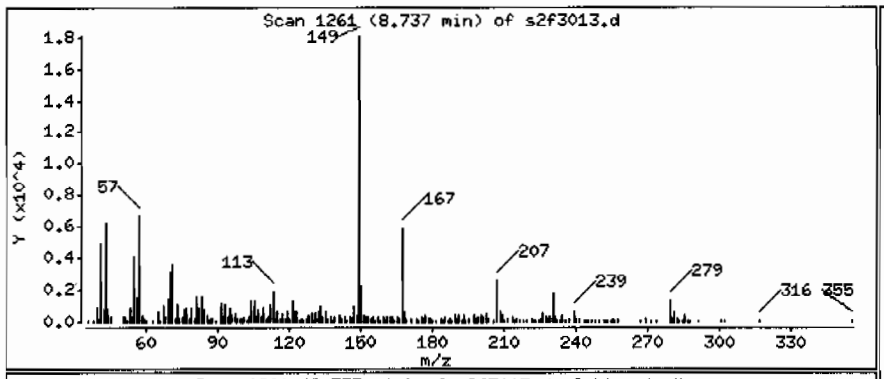

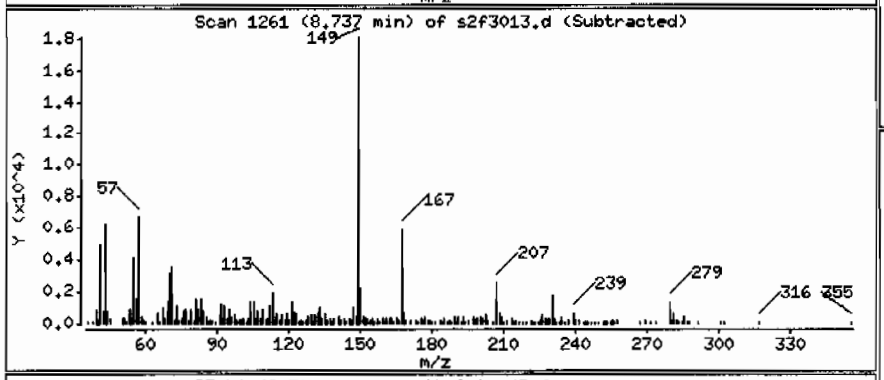

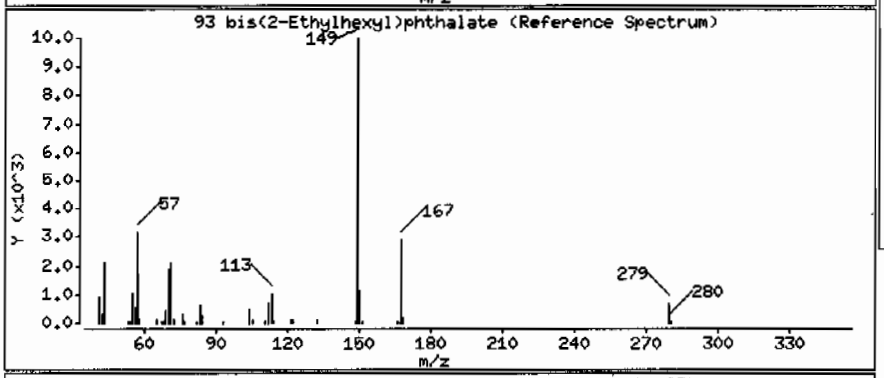

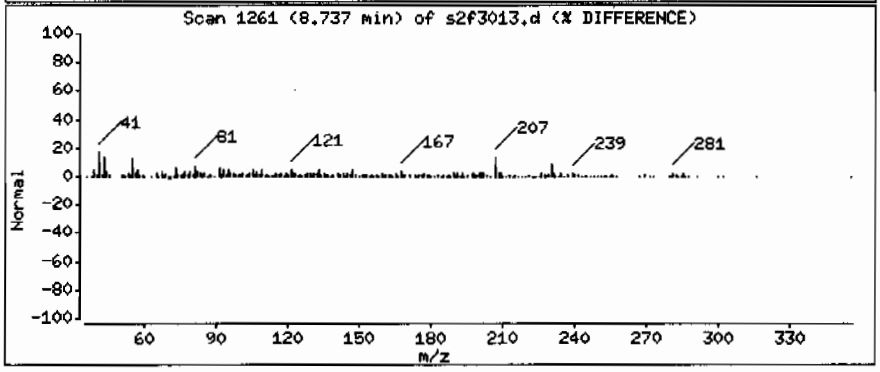

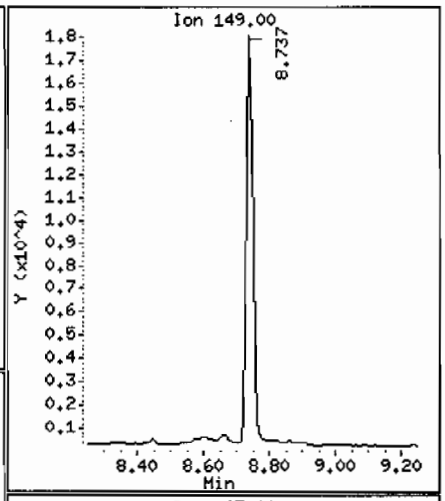

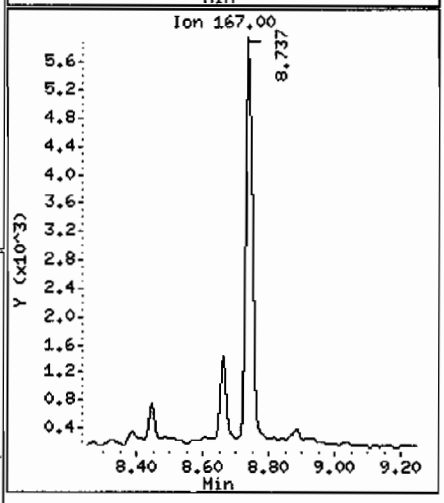

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: |2324280021881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 104 ug/Kg

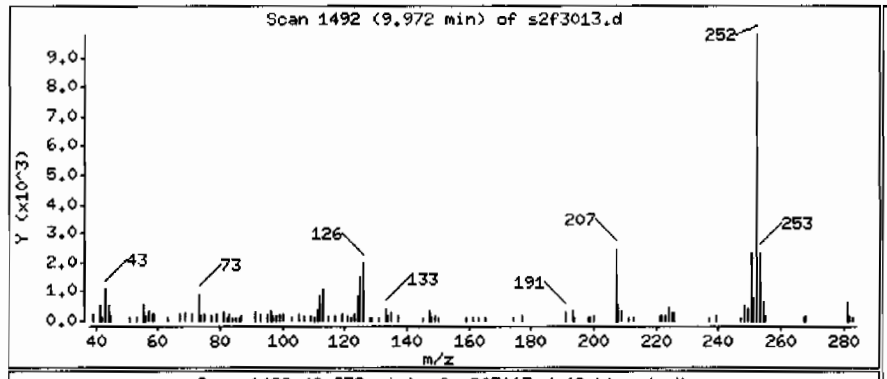

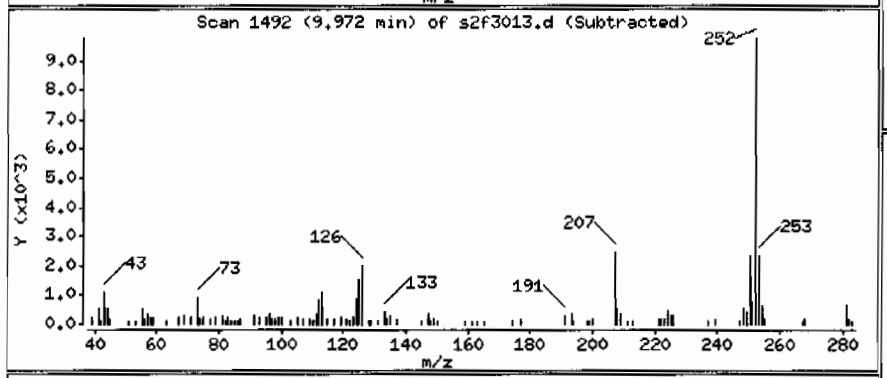

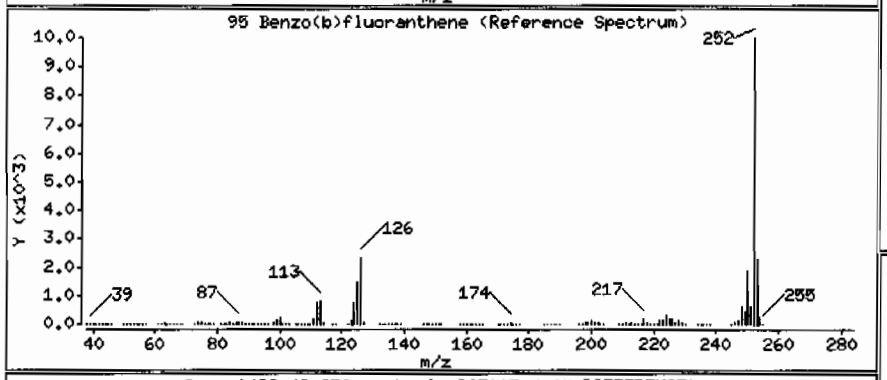

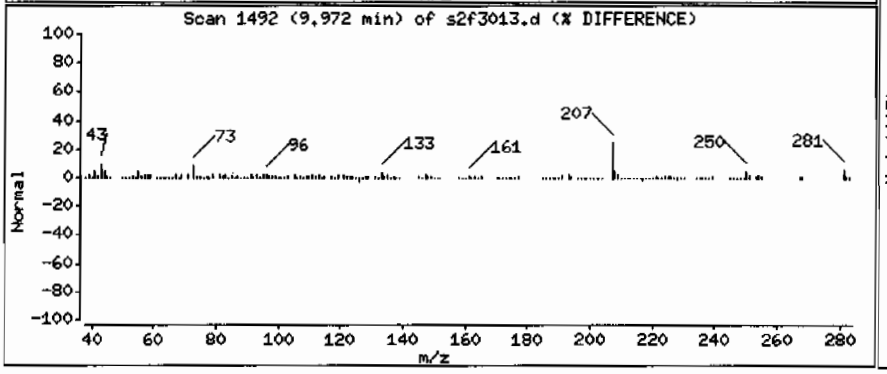

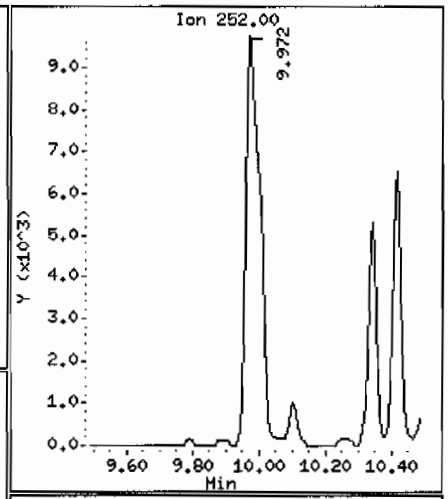

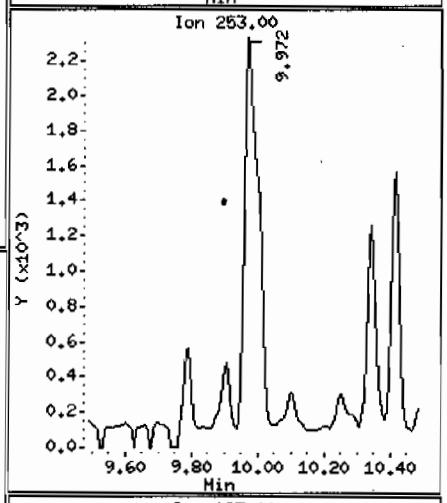

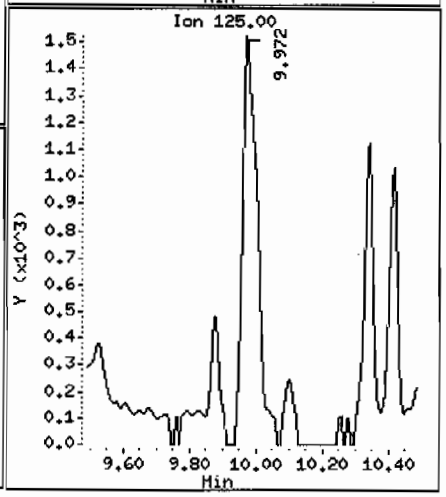

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: 1232428002|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 52.3 ug/Kg

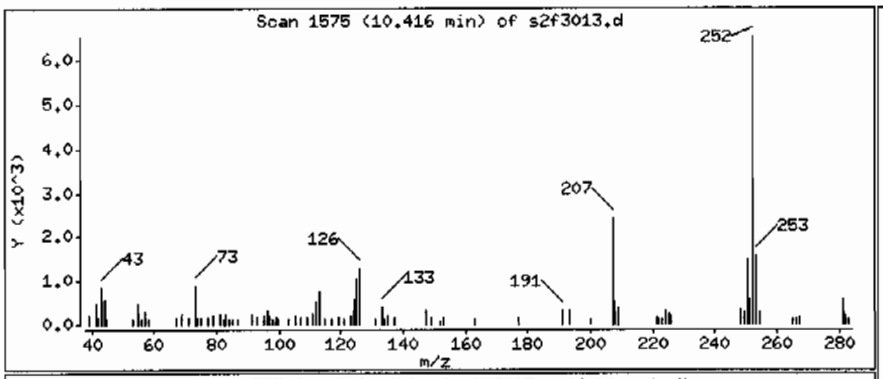

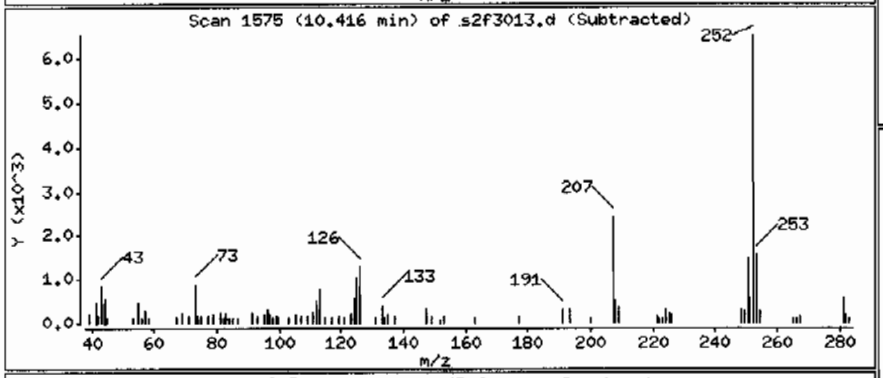

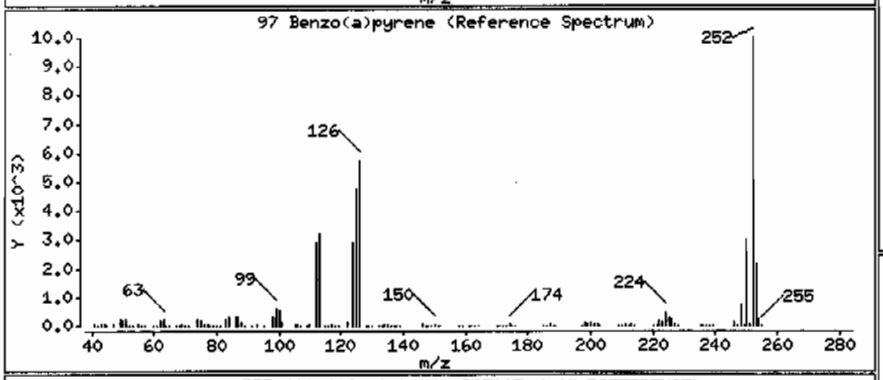

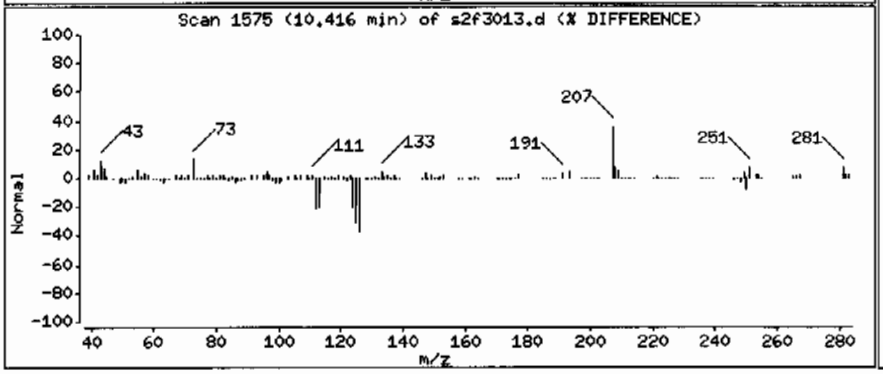

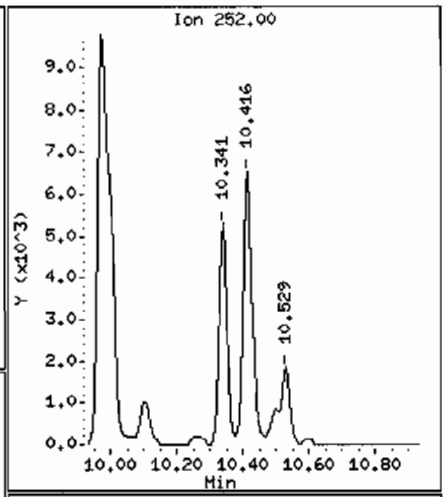

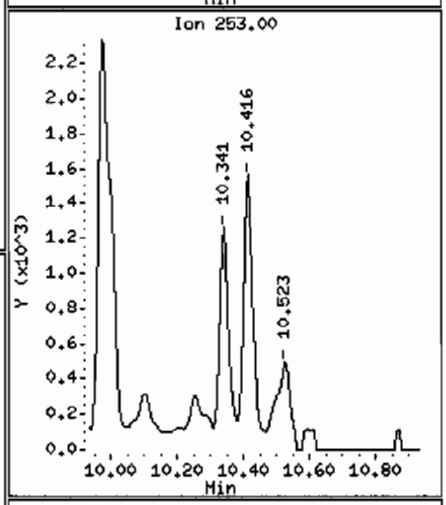

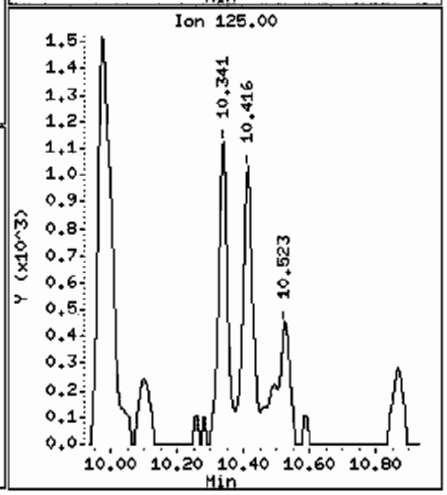

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAHO-09-6006 Instrument: MSD2.i

Sample Info: |2324280021881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 28.5 ug/Kg

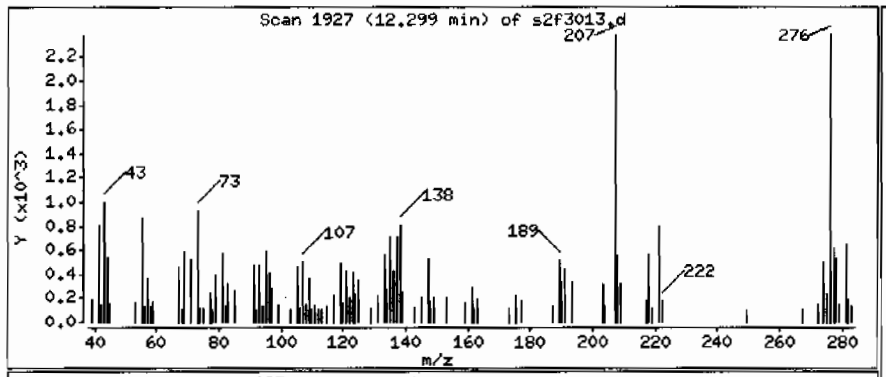

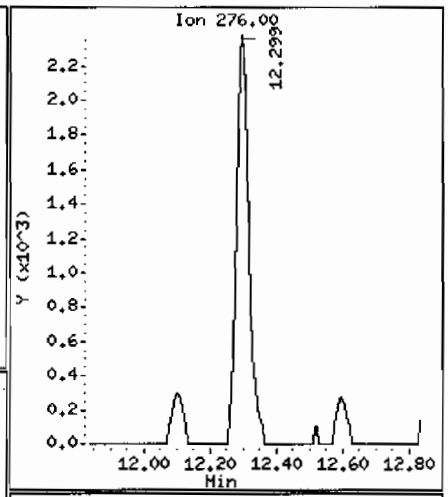

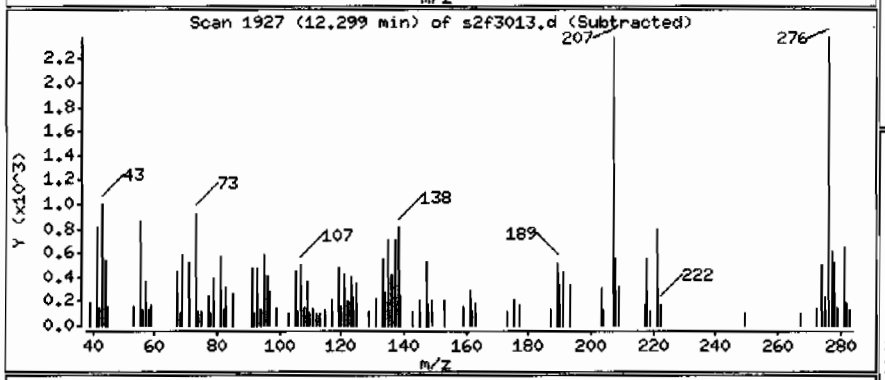

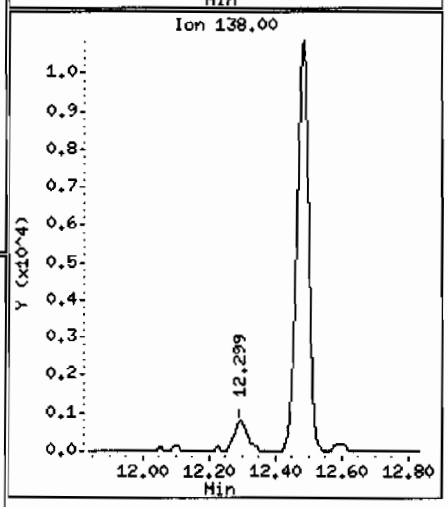

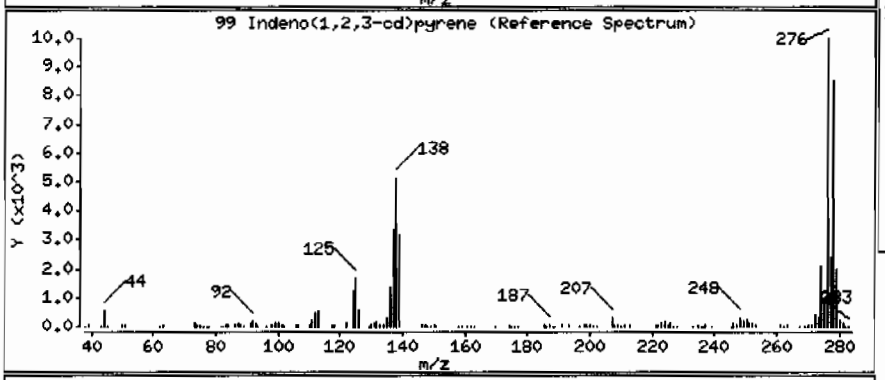

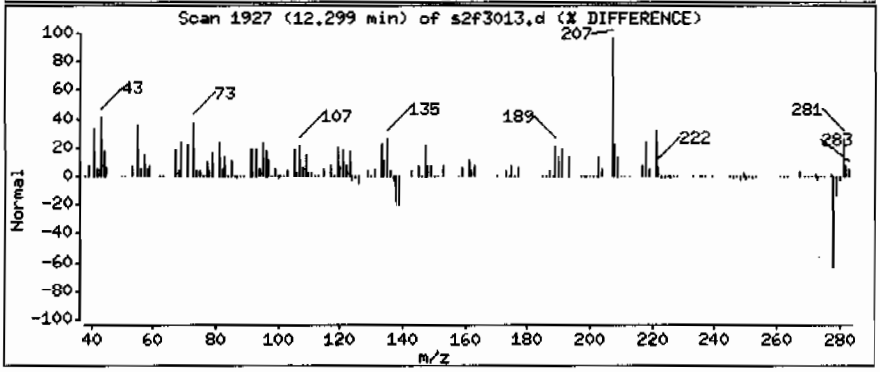

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: 1232428002|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 28.7 ug/Kg

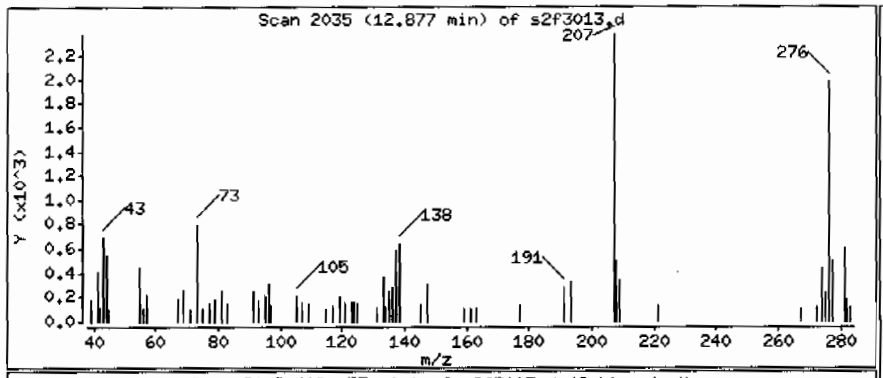

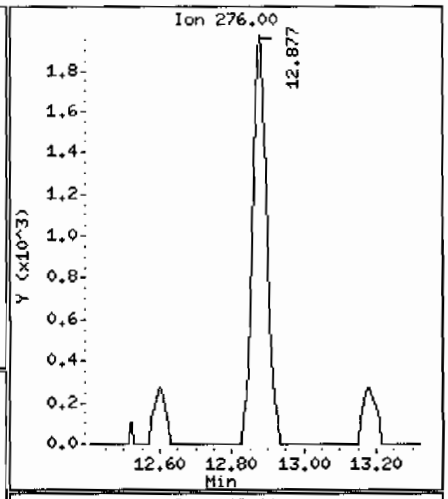

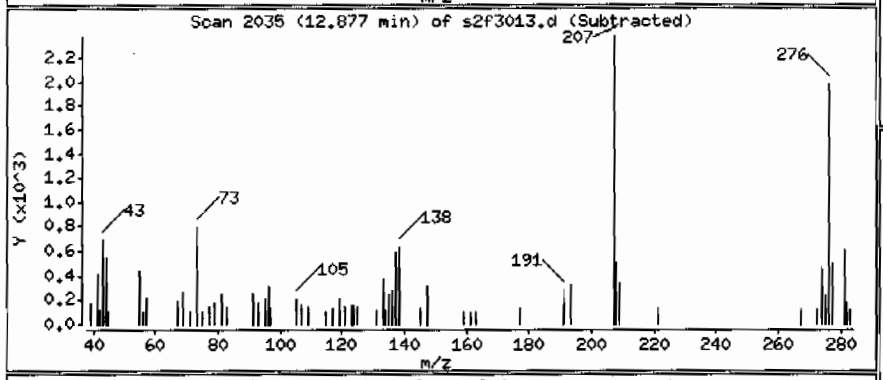

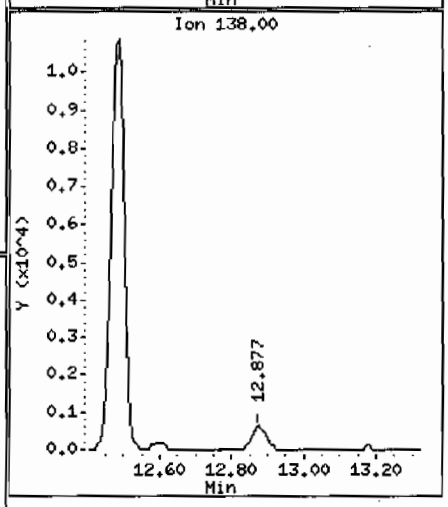

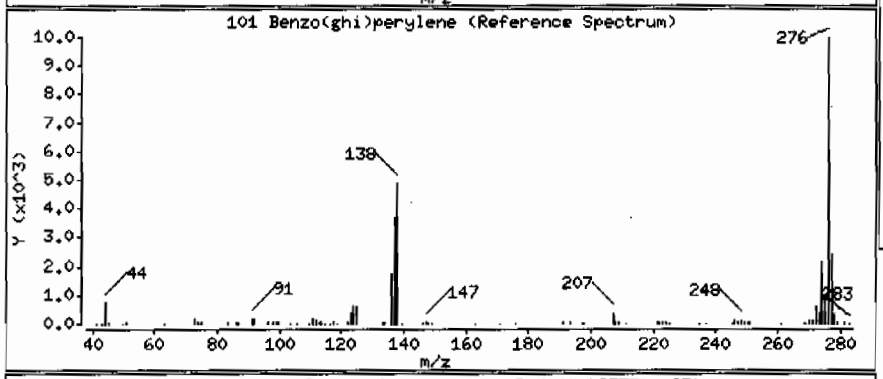

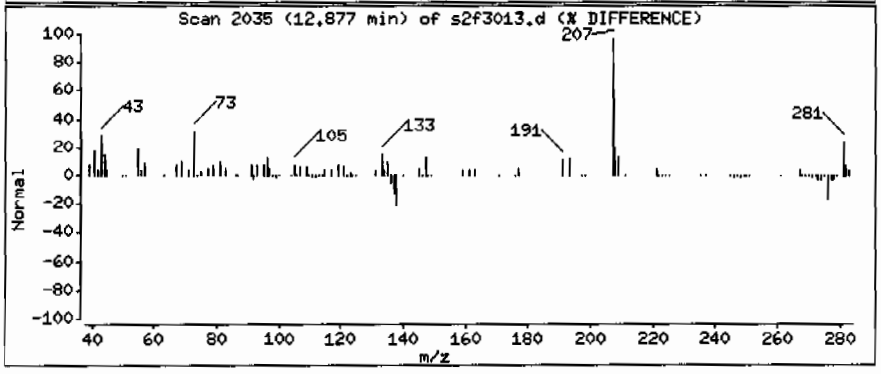

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: 1232428002|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	53	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	40	C5H12O2	104
Acetamide, N-methyl-	79-16-3	NIST05.L	724	25	C3H7NO	73

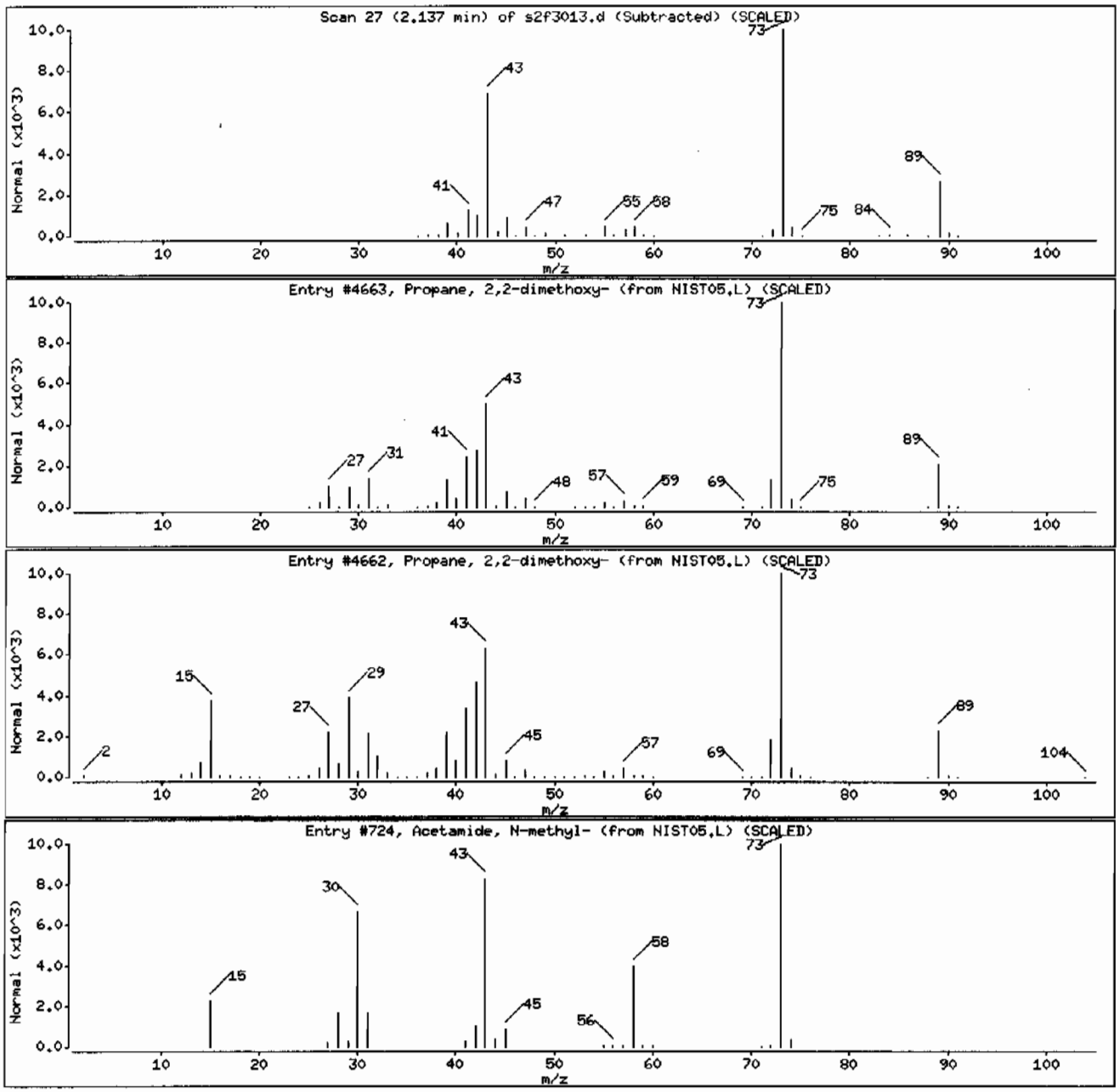

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006 Instrument: MSD2.i

Sample Info: |2324280021881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	45	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	16	C4H7NO2	101

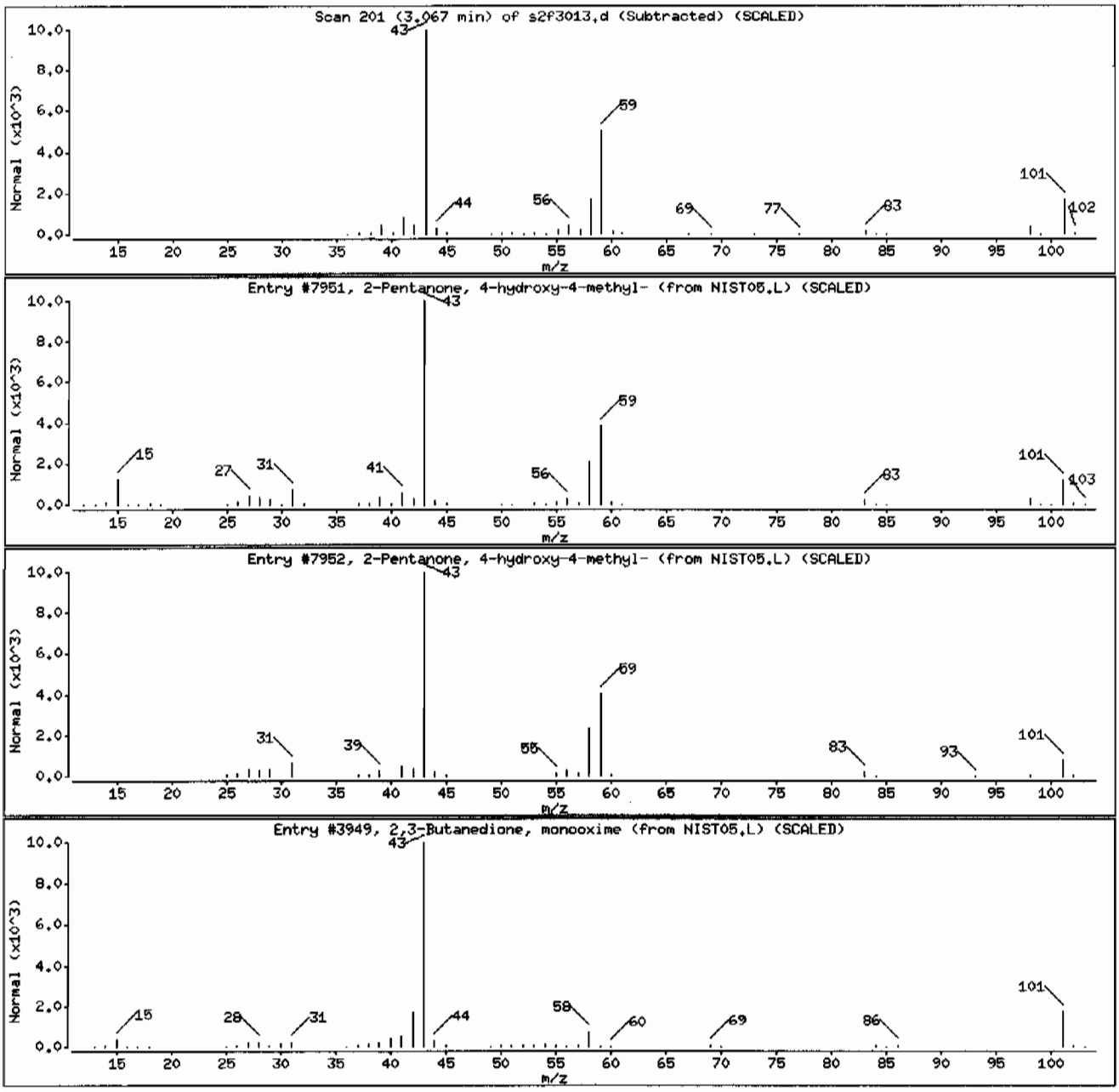

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: |2324280021881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclopropylpyrrol4-[3-(1H-imidazol-4-yl)	1000311-87-7	NIST05.L	106846	38	C16H20N2O2	272
Benzene, 1-(bromomethyl)-4-fluoro-	459-46-1	NIST05.L	48897	30	C7H6BrF	188
Phenol, 3-amino-	591-27-5	NIST05.L	5403	30	C6H7NO	109

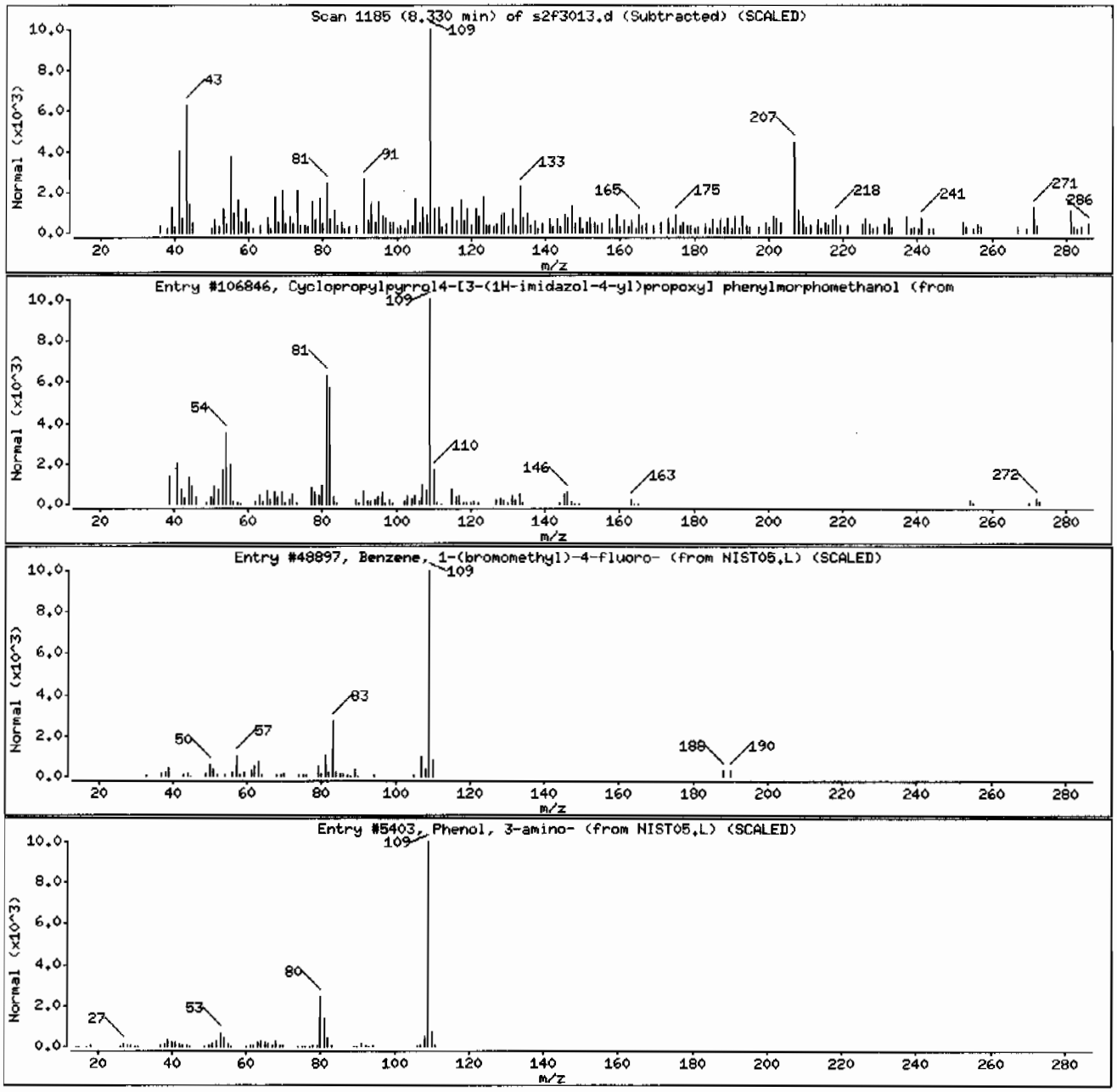

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006 Instrument: MSD2.i

Sample Info: |2324280021881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
N-[2-[p-Methoxybenzyl]aminolethylaziridi	1000254-78-1	NIST05.L	61216	35	C12H18N2O	206
4-Dimethyl(ethenyl)silylbut-1-en-3-yne	18292-17-6	NIST05.L	15732	35	C8H12Si	136
Benzo[h]quinoline, 2,4-dimethyl-	605-67-4	NIST05.L	62243	25	C15H13N	207

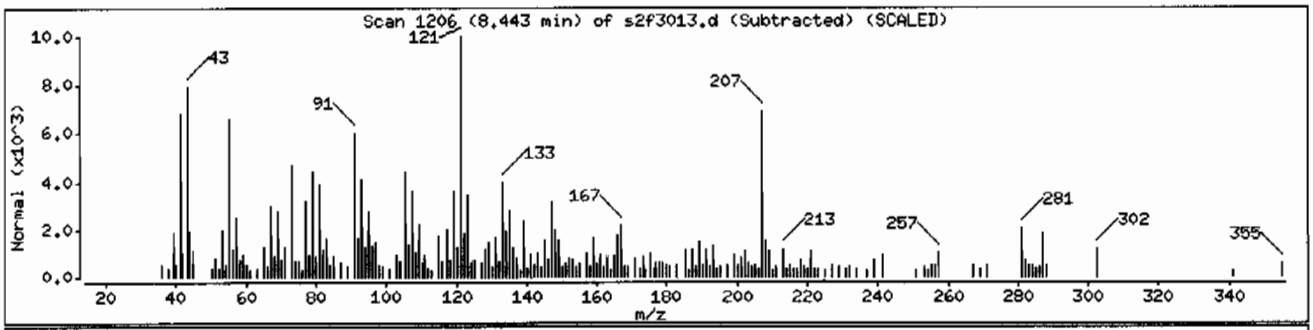

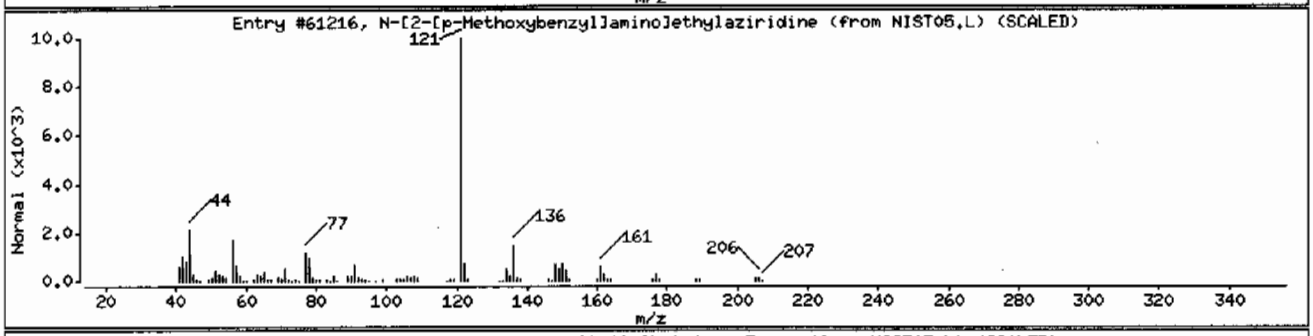

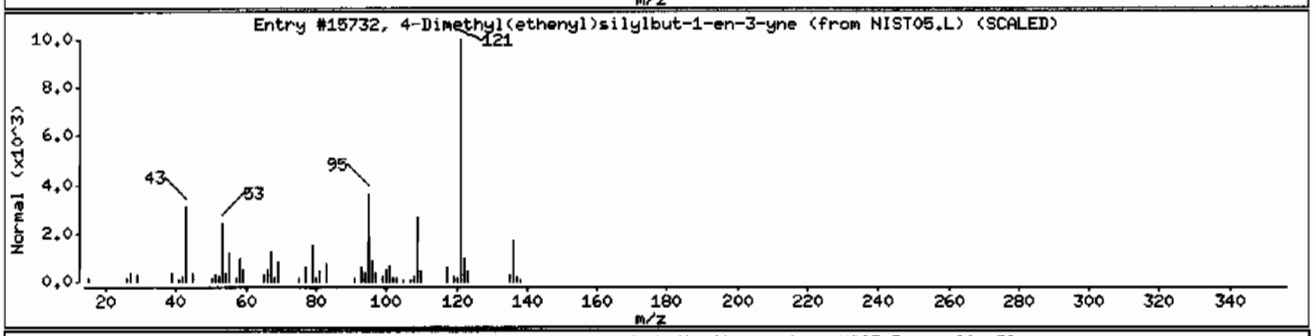

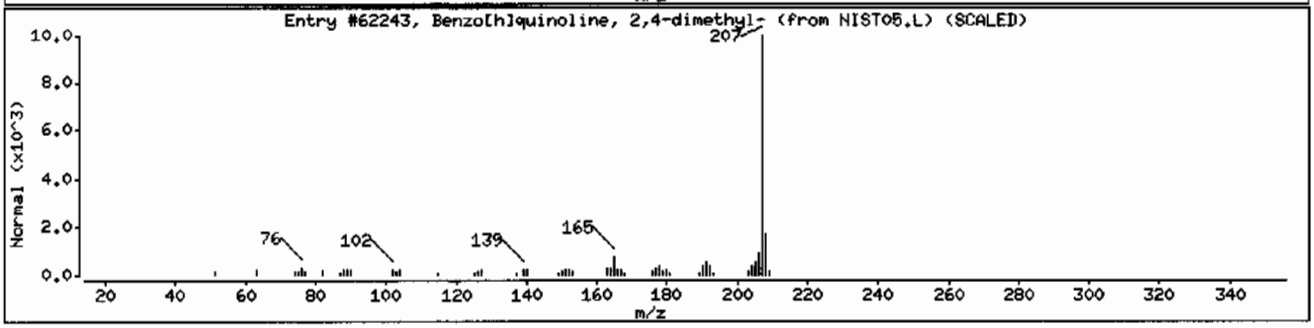

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006 Instrument: MSD2.i

Sample Info: |2324280021881319111SVMF11|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
5.alpha.-Pregnane-3.beta.,20.beta.-diol,	17182-23-9	NIST05.L	158174	10	C23H3803	362
Propanamide, N-(3-methoxyphenyl)-2,2-dim	56619-93-3	NIST05.L	62123	9	C12H17N02	207
Benz[e]azulene-3,8-dione, 5-[(acetyloxy)	25536-74-7	NIST05.L	151695	9	C19H2406	348

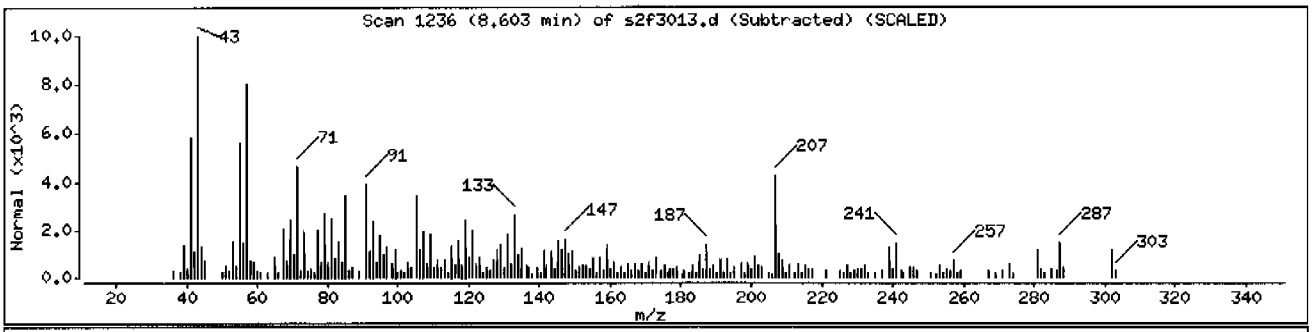

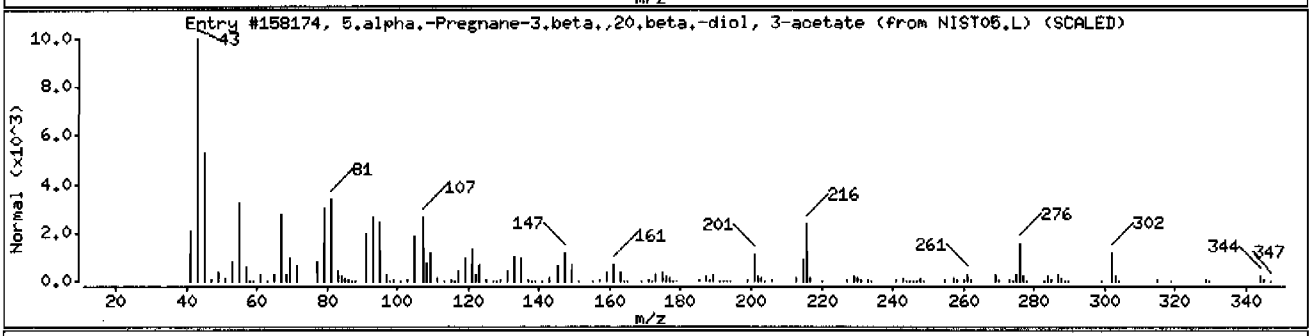

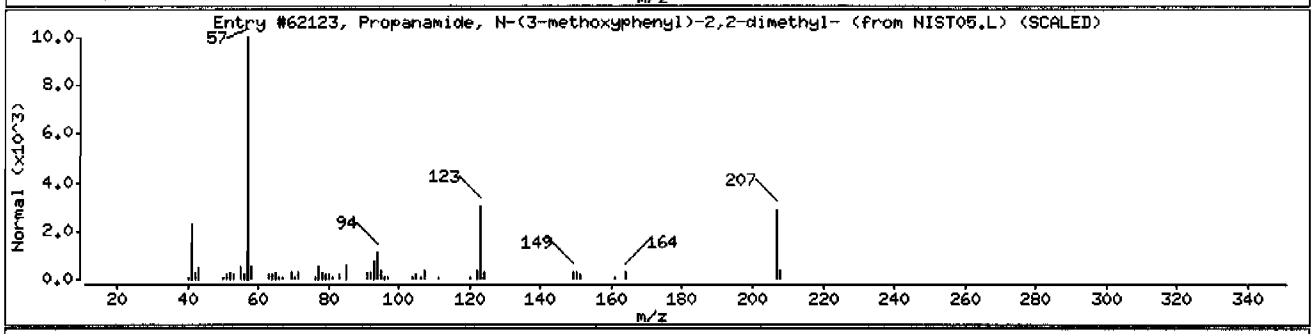

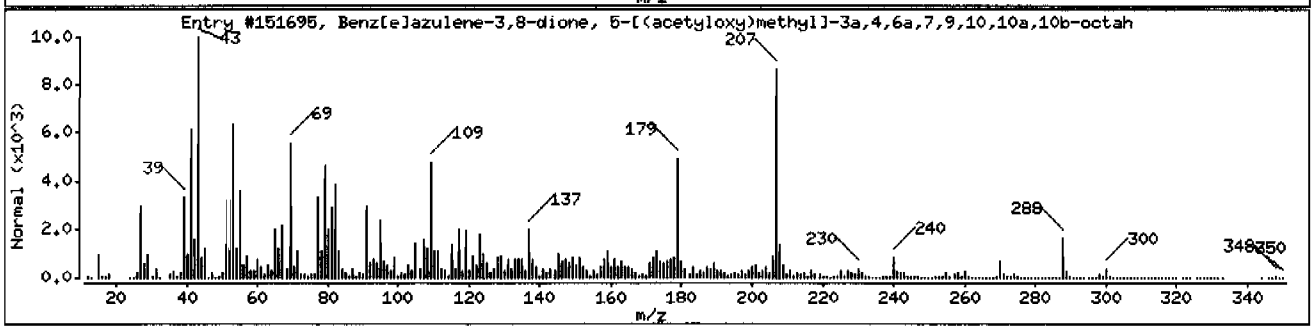

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: 1232428002|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	96	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125037	93	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	5155-70-4	NIST05.L	125035	91	C20H28O2	300

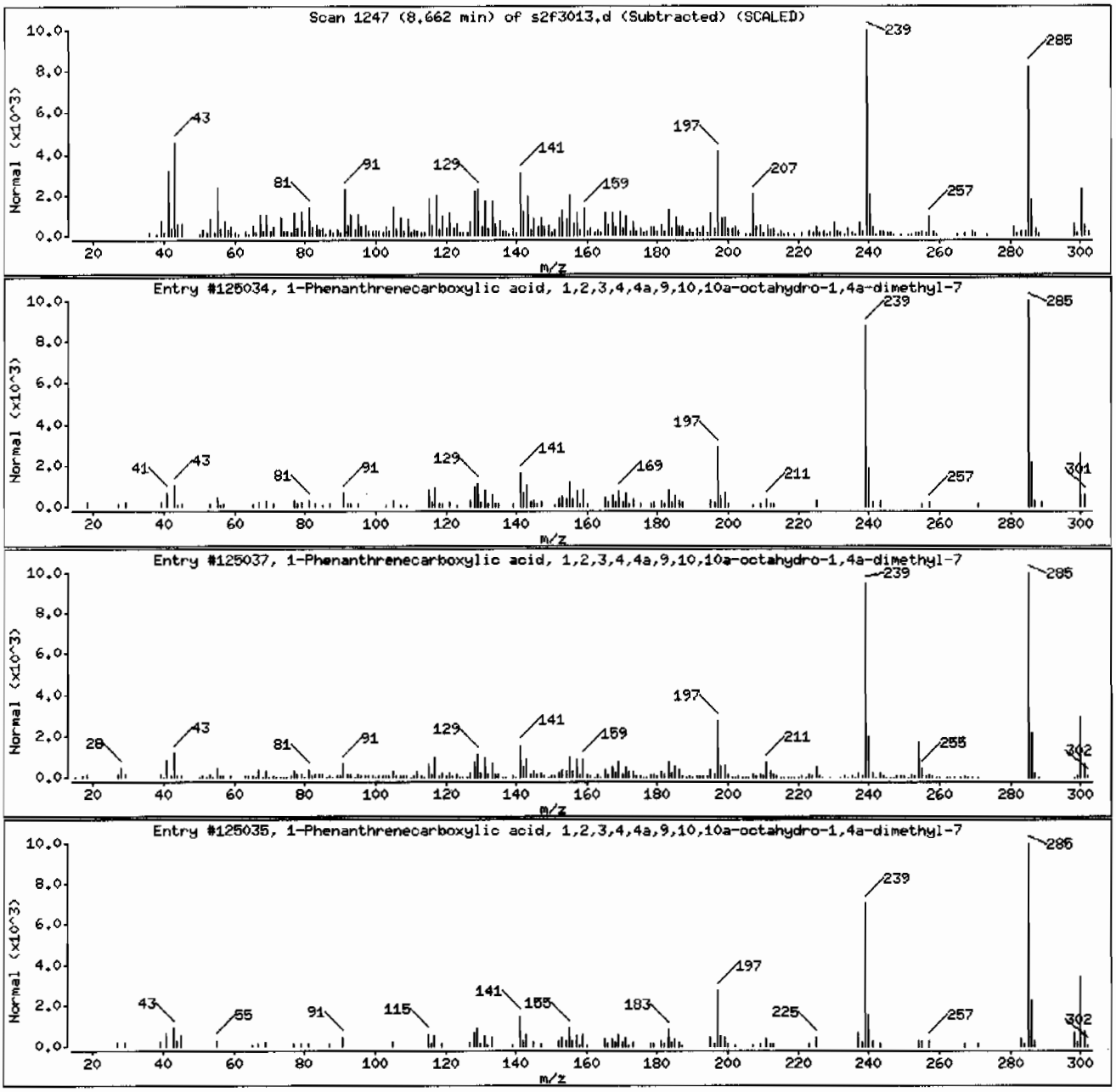

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006 Instrument: MSD2.i

Sample Info: |2324280021881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosane	112-95-8	NIST05.L	113490	96	C20H42	282
Eicosane	112-95-8	NIST05.L	113488	96	C20H42	282
Nonacosane	630-03-5	NIST05.L	173140	87	C29H60	408

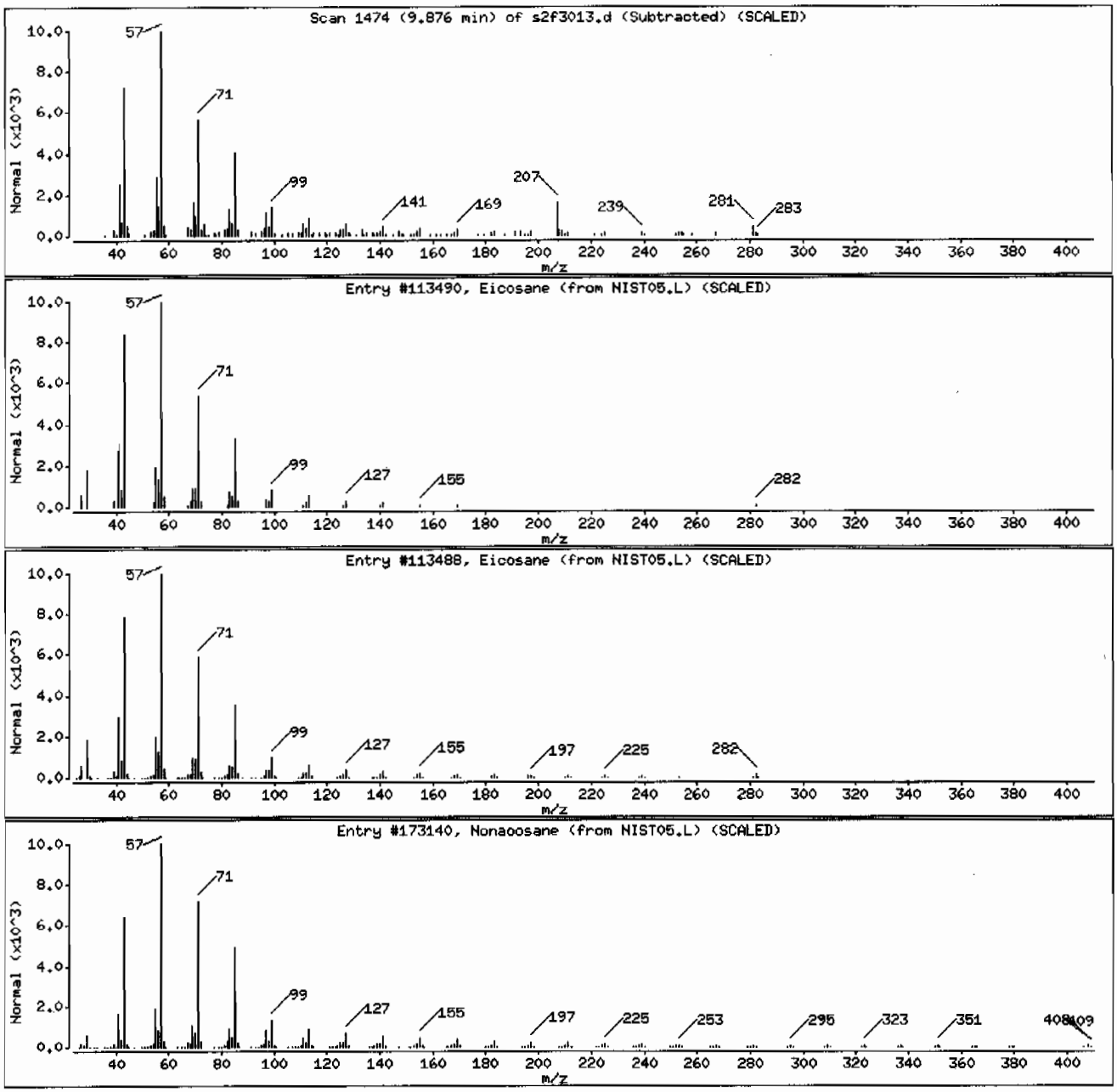

Data File: /chem/MSD2.i/s063009.b/s2f3013.d

Date : 30-JUN-2009 19:53

Client ID: CAMO-09-6006

Instrument: MSD2.i

Sample Info: |2324280021881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
D:B-Friedo-18,19-secolup-19-ene, 3,10-ep	35060-26-5	NIST05.L	176604	70	C30H50O	426
Lanosterol	79-63-0	NIST05.L	176558	38	C30H50O	426
Naphthalene, 1,1'-(1,2-ethanediyl)bis[de	54934-69-9	NIST05.L	126260	35	C22H38	302

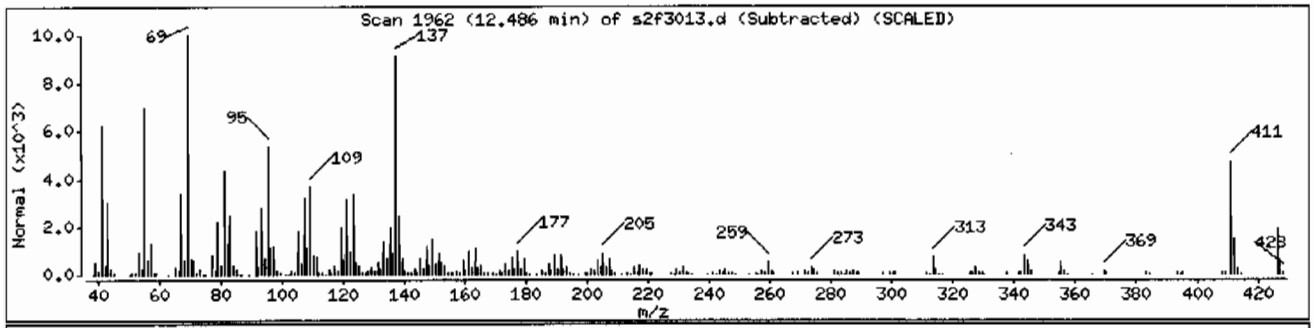

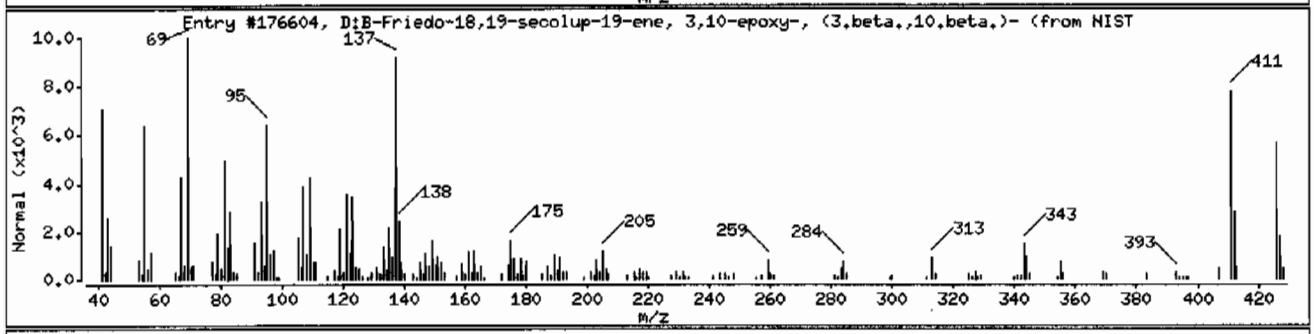

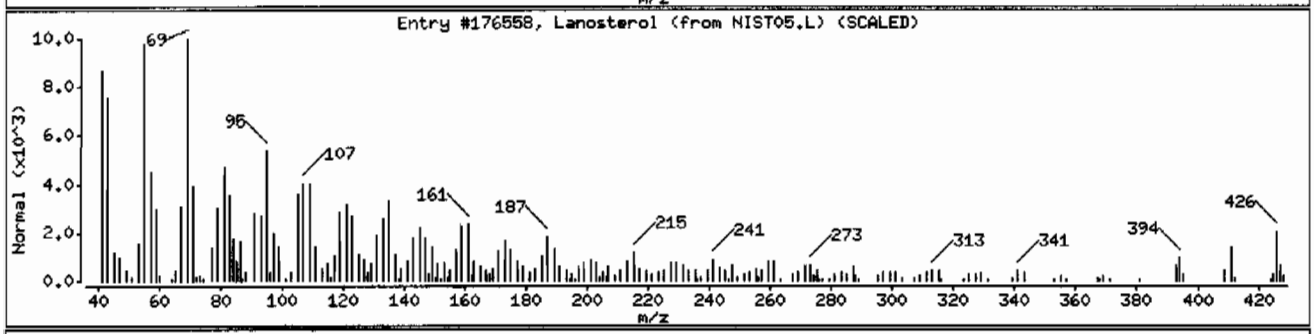

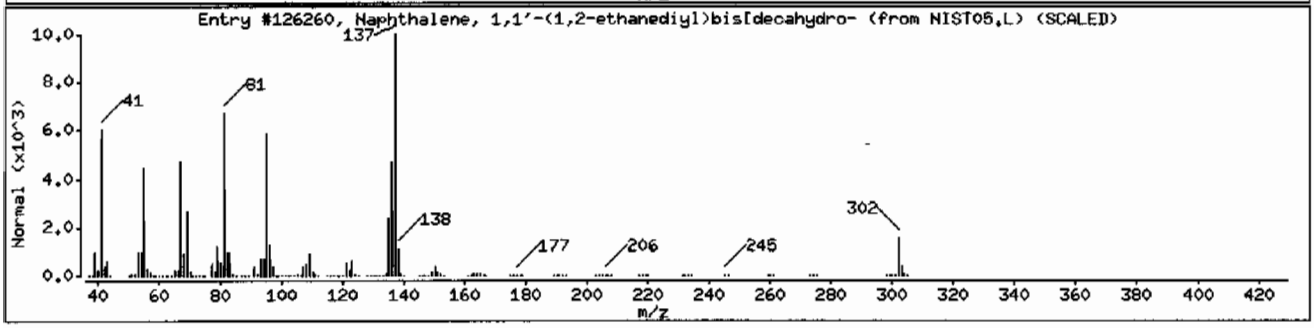

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 18:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s2f3010.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	347	ug/kg	69.5	347
108-95-2	Phenol	U	347	ug/kg	69.5	347
95-57-8	2-Chlorophenol	U	347	ug/kg	69.5	347
106-46-7	1,4-Dichlorobenzene	U	347	ug/kg	69.5	347
621-64-7	N-Nitrosodipropylamine	U	347	ug/kg	69.5	347
59-50-7	4-Chloro-3-methylphenol	U	347	ug/kg	34.7	347
83-32-9	Acenaphthene	U	34.7	ug/kg	11.6	34.7
121-14-2	2,4-Dinitrotoluene	U	347	ug/kg	34.7	347
100-02-7	4-Nitrophenol	U	347	ug/kg	69.5	347
87-86-5	Pentachlorophenol	U	347	ug/kg	69.5	347
129-00-0	Pyrene	U	34.7	ug/kg	10.9	34.7
110-86-1	Pyridine	U	347	ug/kg	69.5	347
62-53-3	Aniline	U	347	ug/kg	122	347
111-44-4	bis(2-Chloroethyl) ether	U	347	ug/kg	69.5	347
541-73-1	1,3-Dichlorobenzene	U	347	ug/kg	69.5	347
100-51-6	Benzyl alcohol	U	347	ug/kg	104	347
95-50-1	1,2-Dichlorobenzene	U	347	ug/kg	69.5	347
108-60-1	bis(2-Chloroisopropyl)ether	U	347	ug/kg	69.5	347
95-48-7	o-Cresol	U	347	ug/kg	69.5	347
65794-96-9	m,p-Cresols	U	347	ug/kg	139	347
67-72-1	Hexachloroethane	U	347	ug/kg	69.5	347
98-95-3	Nitrobenzene	U	347	ug/kg	69.5	347
78-59-1	Isophorone	U	347	ug/kg	69.5	347
88-75-5	2-Nitrophenol	U	347	ug/kg	34.7	347
105-67-9	2,4-Dimethylphenol	U	347	ug/kg	69.5	347
111-91-1	bis(2-Chloroethoxy)methane	U	347	ug/kg	69.5	347
120-83-2	2,4-Dichlorophenol	U	347	ug/kg	69.5	347
65-85-0	Benzoic acid	U	695	ug/kg	174	695
91-20-3	Naphthalene	U	34.7	ug/kg	10.4	34.7
106-47-8	4-Chloroaniline	U	347	ug/kg	69.5	347
87-68-3	Hexachlorobutadiene	U	347	ug/kg	69.5	347
91-57-6	2-Methylnaphthalene	U	34.7	ug/kg	6.95	34.7
77-47-4	Hexachlorocyclopentadiene	U	347	ug/kg	69.5	347
88-06-2	2,4,6-Trichlorophenol	U	347	ug/kg	69.5	347
95-95-4	2,4,5-Trichlorophenol	U	347	ug/kg	69.5	347
91-58-7	2-Chloronaphthalene	U	34.7	ug/kg	12.2	34.7
88-74-4	2-Nitroaniline	U	347	ug/kg	69.5	347
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	347	ug/kg	69.5	347

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 18:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s2f3010.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	347	ug/kg	69.5	347
606-20-2	2,6-Dinitrotoluene	U	347	ug/kg	34.7	347
208-96-8	Acenaphthylene	U	34.7	ug/kg	10.4	34.7
51-28-5	2,4-Dinitrophenol	U	695	ug/kg	132	695
132-64-9	Dibenzofuran	U	347	ug/kg	69.5	347
84-66-2	Diethylphthalate	U	347	ug/kg	69.5	347
86-73-7	Fluorene	U	34.7	ug/kg	10.4	34.7
7005-72-3	4-Chlorophenylphenylether	U	347	ug/kg	34.7	347
534-52-1	2-Methyl-4,6-dinitrophenol	U	347	ug/kg	69.5	347
100-01-6	4-Nitroaniline	U	347	ug/kg	69.5	347
	p-Nitroaniline					
122-39-4	Diphenylamine	U	347	ug/kg	69.5	347
122-66-7	Azobenzene	U	347	ug/kg	69.5	347
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	347	ug/kg	34.7	347
118-74-1	Hexachlorobenzene	U	347	ug/kg	69.5	347
85-01-8	Phenanthrene	U	34.7	ug/kg	10.4	34.7
120-12-7	Anthracene	U	34.7	ug/kg	6.95	34.7
84-74-2	Di-n-butylphthalate	U	347	ug/kg	34.7	347
206-44-0	Fluoranthene	U	34.7	ug/kg	10.4	34.7
85-68-7	Butylbenzylphthalate	U	347	ug/kg	69.5	347
56-55-3	Benzo(a)anthracene	U	34.7	ug/kg	10.4	34.7
91-94-1	3,3'-Dichlorobenzidine	U	347	ug/kg	104	347
218-01-9	Chrysene	U	34.7	ug/kg	10.4	34.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	347	ug/kg	69.5	347
117-84-0	Di-n-octylphthalate	U	347	ug/kg	69.5	347
205-99-2	Benzo(b)fluoranthene	U	34.7	ug/kg	10.4	34.7
207-08-9	Benzo(k)fluoranthene	U	34.7	ug/kg	10.4	34.7
50-32-8	Benzo(a)pyrene	U	34.7	ug/kg	10.4	34.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.7	ug/kg	10.4	34.7
53-70-3	Dibenzo(a,h)anthracene	U	34.7	ug/kg	10.4	34.7
191-24-2	Benzo(ghi)perylene	U	34.7	ug/kg	10.4	34.7
120-82-1	1,2,4-Trichlorobenzene	U	347	ug/kg	69.5	347

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.13	209	ug/kg		J
	Unknown Aldol Condensate	3.06	309	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 18:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s2f3010.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.91	225	ug/kg	99	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.39	212	ug/kg	95	NJ
	Unknown	8.6	234	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	288	ug/kg	98	NJ
4376-20-9	1,2-Benzenedicarboxylic acid, mono(2-eth	8.73	184	ug/kg	81	NJ
	Unknown	8.83	201	ug/kg		J
	Unknown	12.14	214	ug/kg		J
	Unknown	12.47	533	ug/kg		J

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s063009.b/s2f3010.d
Lab Smp Id: 232428001 Client Smp ID: CAMO-09-6007
Inj Date : 30-JUN-2009 18:53
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428001|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.06000	weight of sample
M	4.26710	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	180638	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	667556	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	372896	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	629694	40.0000	
* 91 Chrysene-d12	240	8.876	8.892	(1.000)	531674	40.0000	
* 98 Perylene-d12	264	10.491	10.507	(1.000)	425334	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	295414	59.1009	2050
$ 5 Phenol-d5	99	3.752	3.757	(0.926)	363695	58.9217	2050
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	152612	30.3006	1050
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	345132	32.7711	1140
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	97628	76.4402	2660
$ 81 p-Terphenyl-d14	244	8.068	8.079	(0.909)	372575	41.1413	1430

ION RATIO REPORT

SV REPORT

Data file: s2f3010.d
Report Date: 06/30/2009 19:46
Lab. ID: 232428001 SampleType: SAMPLE
Injection Date: 30-JUN-2009 18:53
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428001|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	16137	3.75	3.83	80-120	100	(T)
93	345	3.73	3.83	440-500	2	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	20417	4.41	4.29	80-120	100	(T)
42	12962	4.41	4.29	40-100	63	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	79777	6.17	5.94	80-120	100	(T)
164	372896	6.17	5.94	0- 40	467	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	48674	6.17	5.99	80-120	100	(T)
63	634	6.17	5.99	46-106	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	48674	6.17	6.27	80-120	100	(T)
89	625	6.17	6.27	38- 98	1	(QT)
63	634	6.17	6.27	16- 76	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	6020	6.69	6.54	80-120	100	(T)
165	6321	6.69	6.54	61-121	105	(T)
167	1952	6.69	6.54	0- 44	32	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	245	6.69	6.55	80-120	100	(T)
105	667	6.69	6.55	14- 74	272	(QT)
51	641	6.69	6.55	37- 97	261	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	5582	6.70	6.84	80-120	100	(T)
141	39761	6.69	6.84	51-111	712	(QT)
250	11635	6.70	6.84	66-126	208	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

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Data file : /chem/MSD2.i/s063009.b/s2f3010.d
Lab Smp Id: 232428001 Client Smp ID: CAMO-09-6007
Inj Date : 30-JUN-2009 18:53
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428001|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.06000	weight of sample
M	4.26710	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.051	1082641	40.000
* 46 Acenaphthene-d10	6.170	1604636	40.000
* 91 Chrysene-d12	8.876	1555175	40.000
* 98 Perylene-d12	10.491	1198932	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.126	162552	6.00574991	209	0		0	10
Unknown Aldol Condensate				CAS #:			
3.062	240315	8.87884741	308	0		0	10
1,4-Methanoazulene, decahydro-4,8,8-trim				CAS #: 475-20-7			
5.913	259463	6.46782781	225	99	NIST05.L	60018	46
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1235-74-1			
8.389	237588	6.11089790	212	95	NIST05.L	133618	91
Unknown				CAS #:			
8.603	262086	6.74099385	234	0		0	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1740-19-8			
8.657	322124	8.28520575	288	98	NIST05.L	125034	91
1,2-Benzenedicarboxylic acid, mono(2-eth				CAS #: 4376-20-9			
8.732	205581	5.28765276	184	81	NIST05.L	110586	91
Unknown				CAS #:			
8.828	225437	5.79835622	201	0		0	91
Unknown				CAS #:			
12.139	184350	6.15045732	214	0		0	98
Unknown				CAS #:			
12.470	459818	15.3409252	533	0		0	98

Data File: /chem/MSD2.i/s063009.b/s2f3010.d
Date : 30-JUN-2009 18:53
Client ID: CAMO-09-6007
Sample Info: 1232428001|881319|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD2.i

Operator: ACS1
Column diameter: 0.20

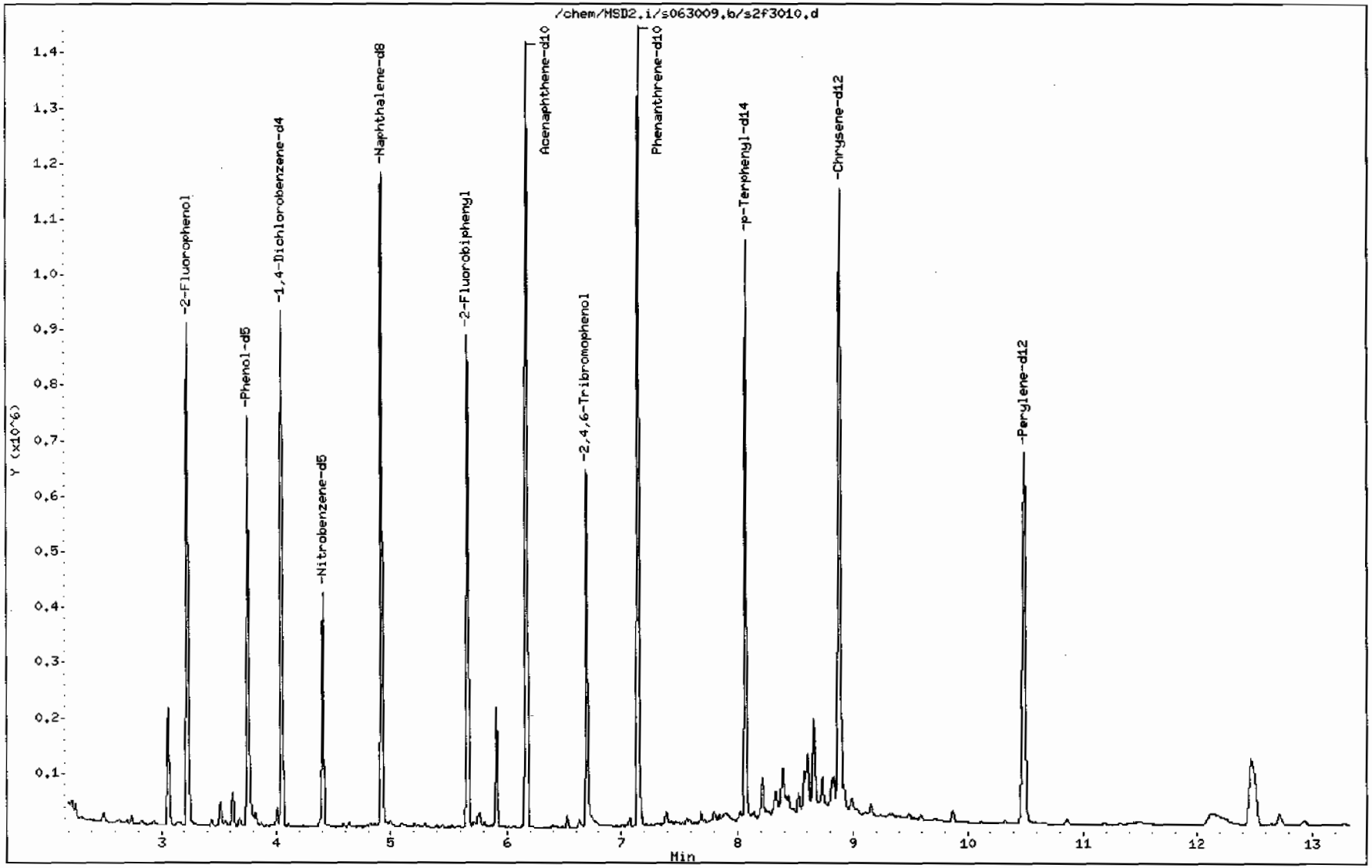

Data File: /chem/MSD2.i/s063009.b/s2f3010.d

Date : 30-JUN-2009 18:53

Client ID: CAMO-09-6007

Instrument: MSD2.i

Sample Info: |2324280001|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Acetamide, N-methyl-	79-16-3	NIST05.L	723	32	C3H7NO	73
Butane	106-97-8	NIST05.L	227	27	C4H10	58
Butane	106-97-8	NIST05.L	226	27	C4H10	58

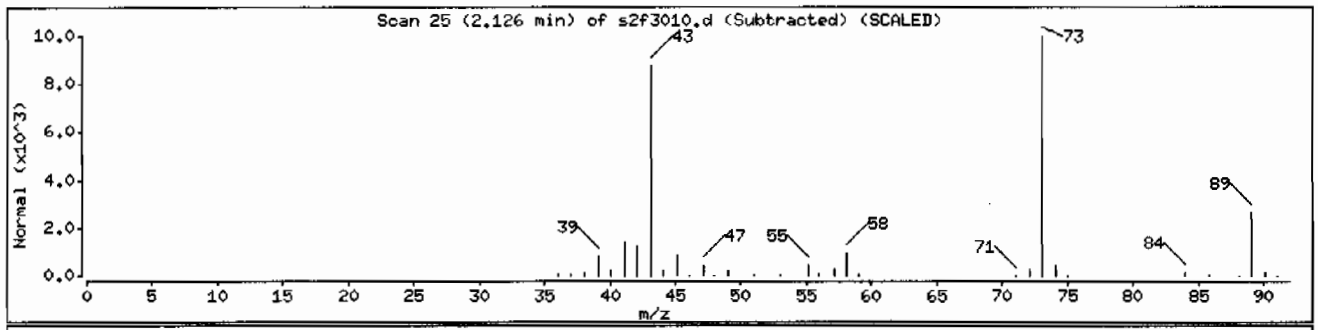

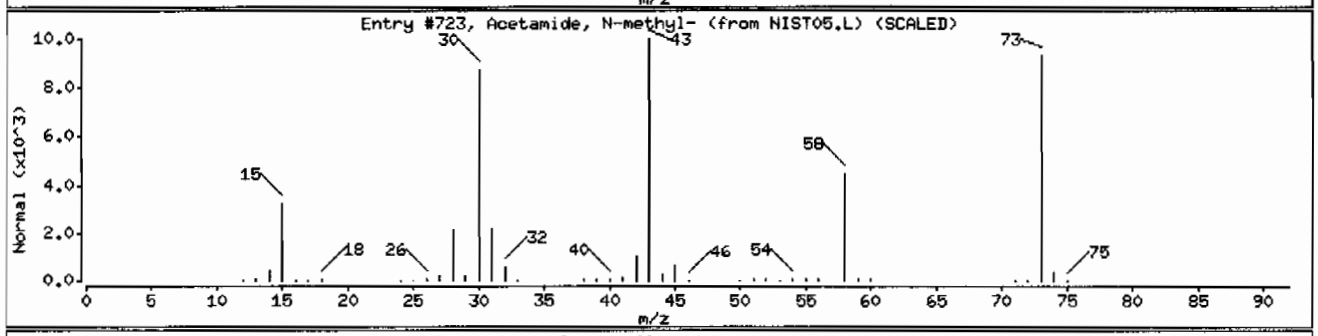

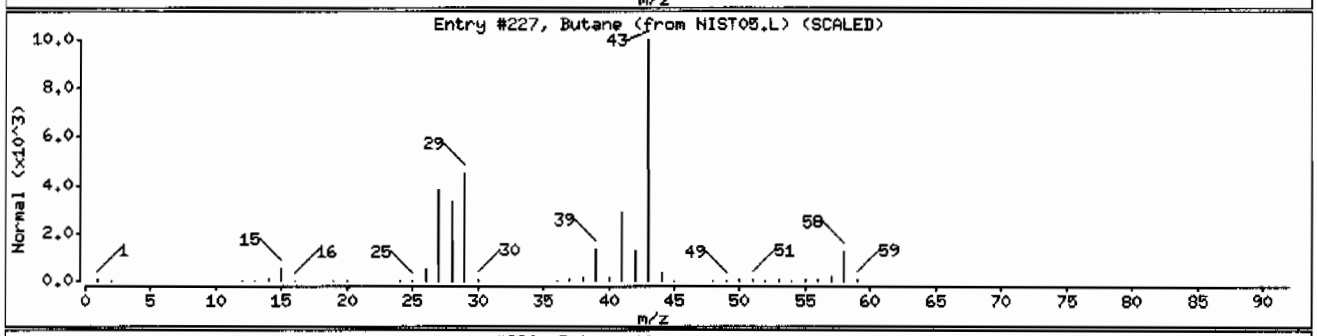

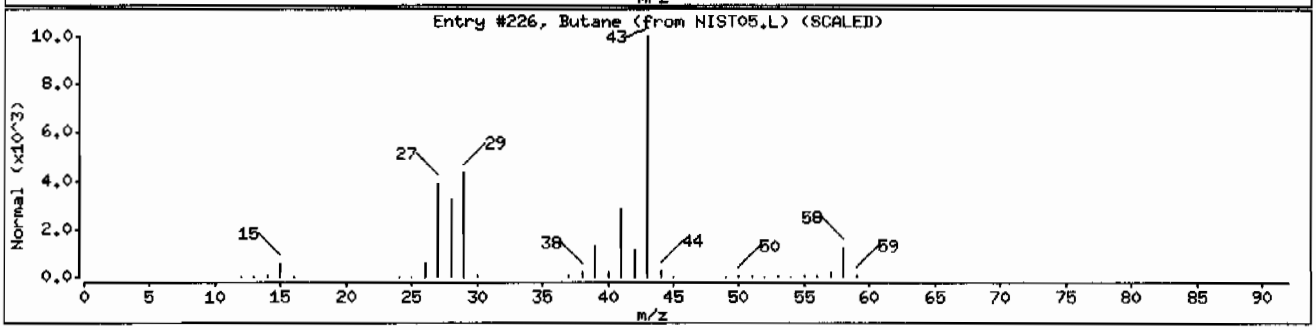

Data File: /chem/MSD2.i/s063009.b/s2f3010.d

Date : 30-JUN-2009 18:53

Client ID: CAMO-09-6007

Instrument: MSD2.i

Sample Info: |2324280011881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	16	C4H7NO2	101

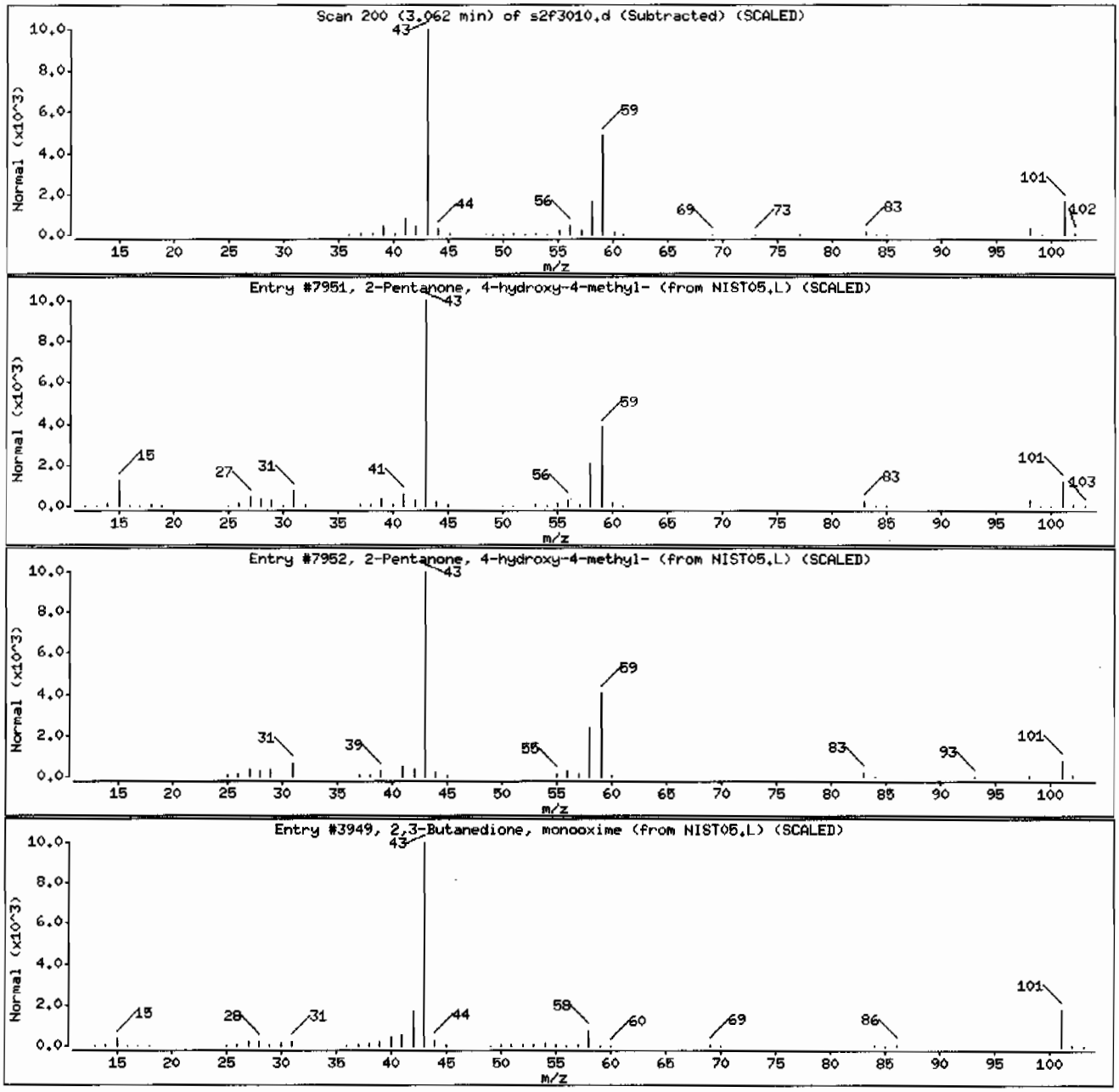

Data File: /chem/MSD2.i/s063009.b/s2f3010.d

Date : 30-JUN-2009 18:53

Client ID: CAMO-09-6007

Instrument: MSD2.i

Sample Info: |2324280011881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60018	99	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60047	98	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60046	96	C15H24	204

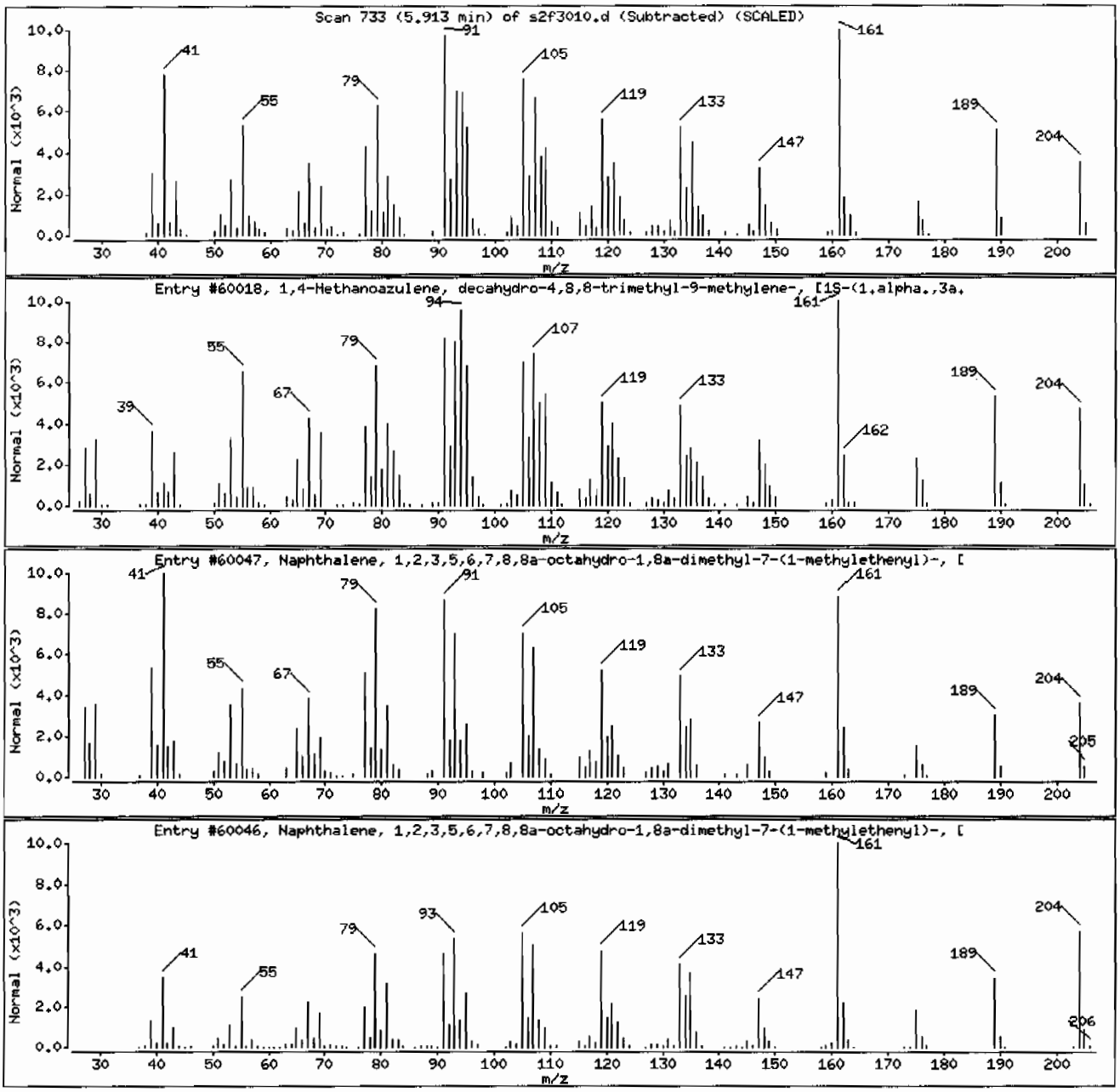

Data File: /chem/MSD2.i/s063009.b/s2f3010.d

Date : 30-JUN-2009 18:53

Client ID: CAHO-09-6007 Instrument: MSD2.i

Sample Info: 1232428001|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	95	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133621	91	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133620	86	C21H3002	314

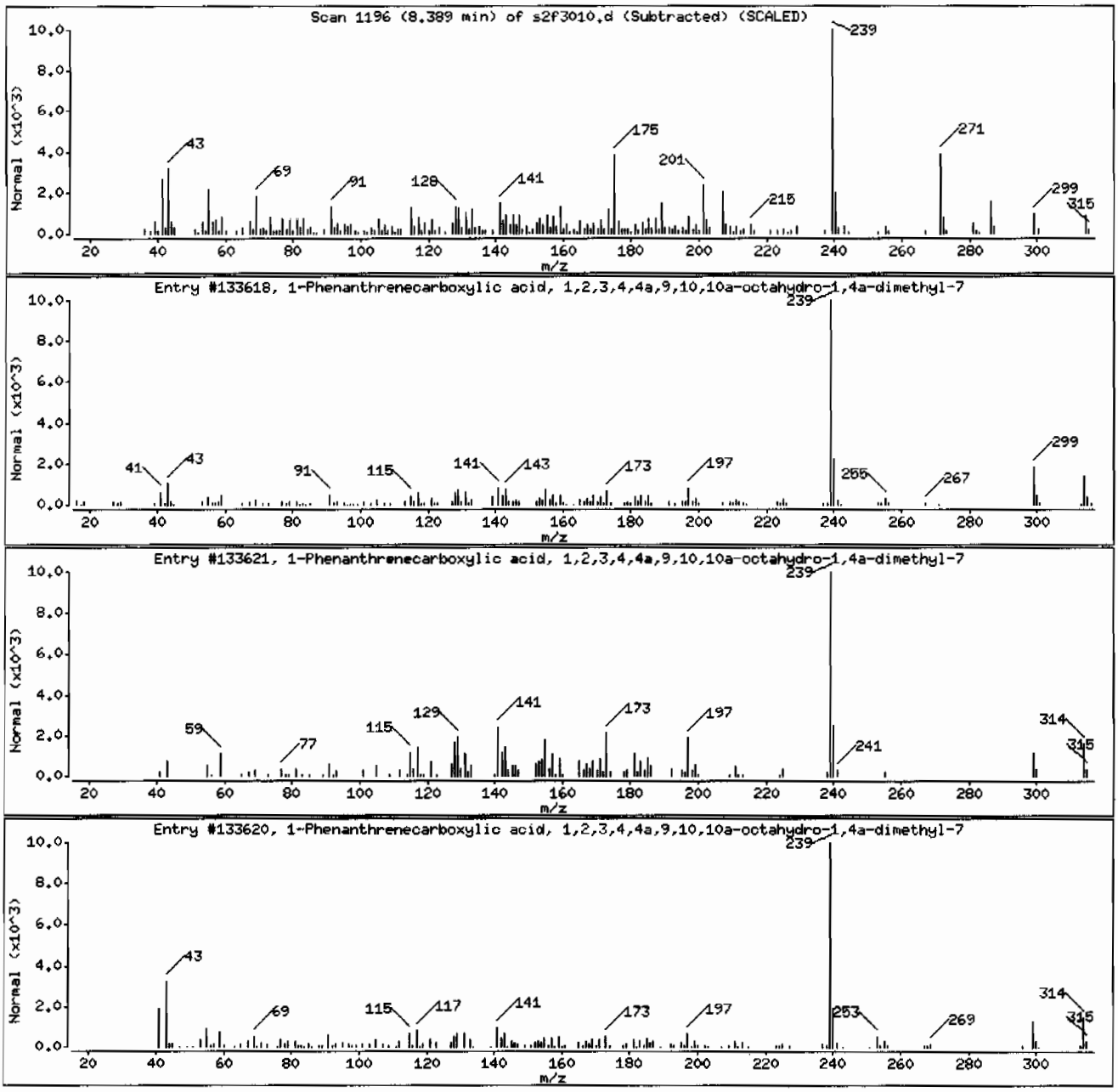

Data File: /chem/MSD2.i/s063009.b/s2f3010.d

Date : 30-JUN-2009 18:53

Client ID: CAMO-09-6007

Instrument: MSD2.i

Sample Info: |2324280011881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Androst-5,15-dien-3ol acetate	1000251-88-0	NIST05.L	133572	27	C21H3OO2	314
2-Amino-4-[N-(4-butoxybenzyl-N-methylami	55384-22-0	NIST05.L	116508	18	C15H21N5O	287
Methanone, [2,4-dimethyl-7-(1-methylethy	72361-25-2	NIST05.L	126245	18	C22H22O	302

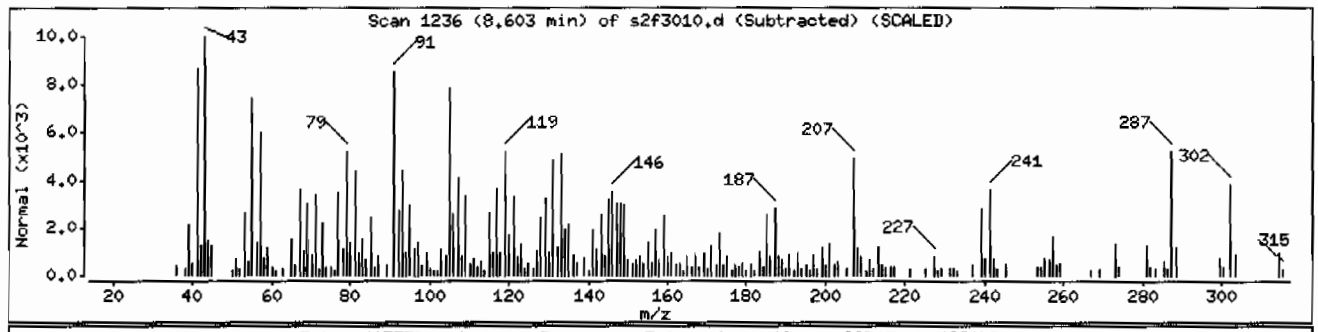

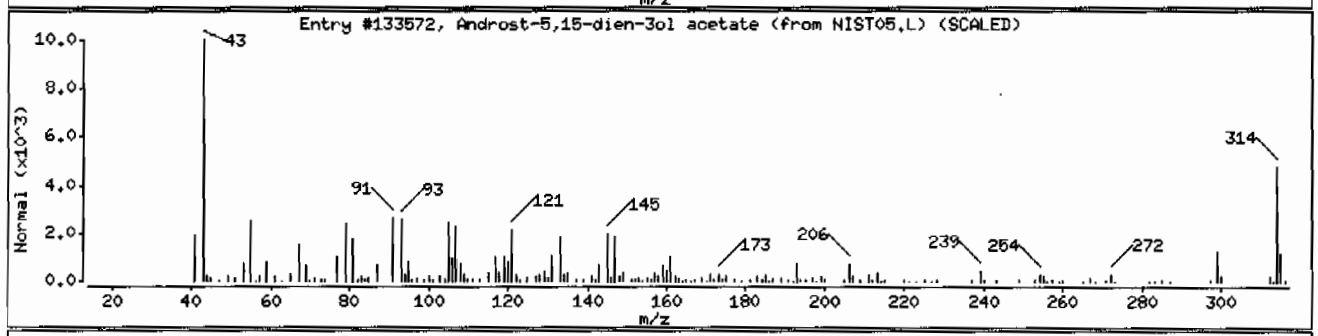

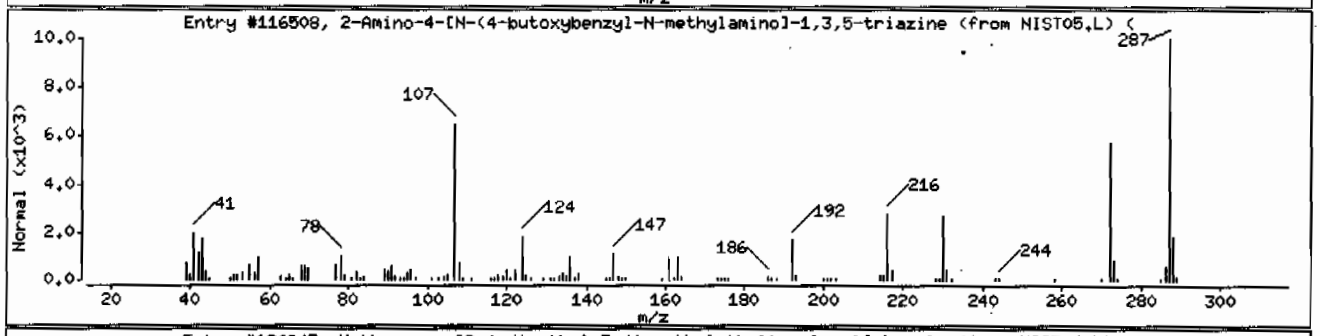

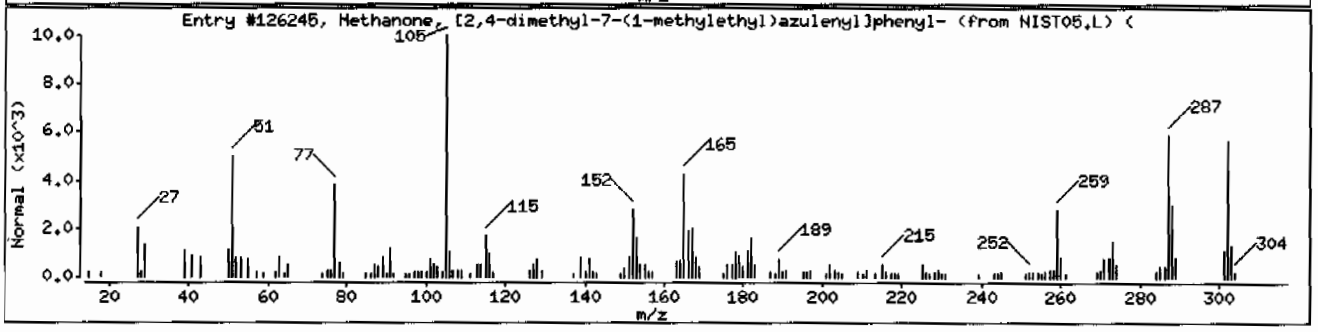

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Date : 30-JUN-2009 18:53

Client ID: CAHO-09-6007 Instrument: HSD2.i

Sample Info: 1232428001|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	98	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125036	94	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	5155-70-4	NIST05.L	125035	93	C20H28O2	300

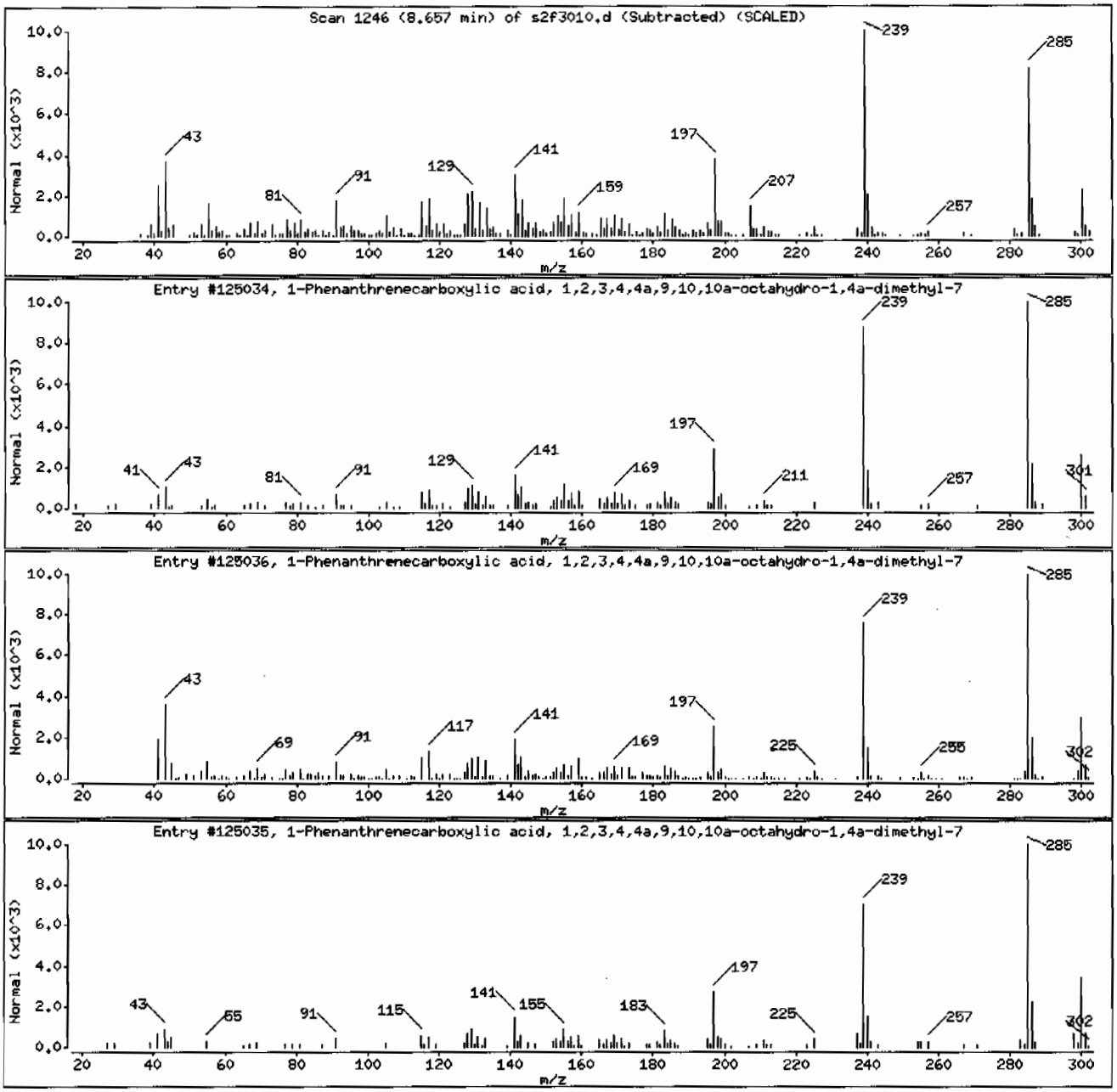

Data File: /chem/MSD2.i/s063009.b/s2f3010.d

Date : 30-JUN-2009 18:53

Client ID: CAMO-09-6007

Instrument: MSD2.i

Sample Info: 1232428001|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,2-Benzenedicarboxylic acid, mono(2-eth	4376-20-9	NIST05.L	110586	81	C16H2204	278
Phthalic acid, 2-ethylhexyl isohexyl est	1000308-98-5	NIST05.L	158098	50	C22H3404	362
Phthalic acid, bis(7-methyloctyl) ester	20548-62-3	NIST05.L	175187	50	C26H4204	418

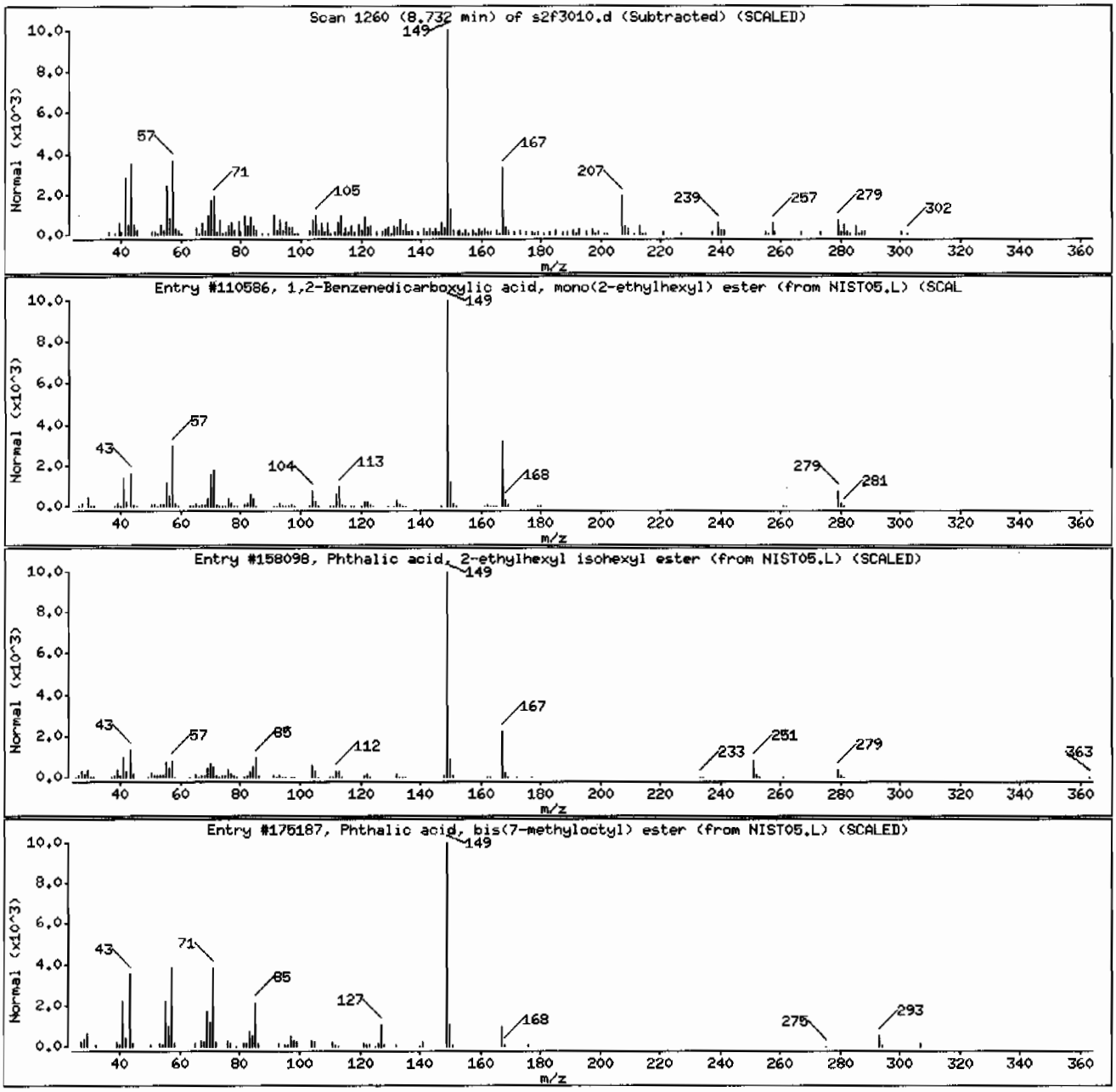

Data File: /chem/MSD2.i/s063009.b/s2f3010.d

Date : 30-JUN-2009 18:53

Client ID: CAMO-09-6007 Instrument: MSD2.i

Sample Info: 1232428001188131911ISVMF11LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Benzenamine, 3,5-dimethyl-5-nitroso-N-et	295780-40-4	NIST05.L	94723	25	C16H18N2O	254
Ethanone, 1-(4-pyridinyl)-, (2-hydroxybe	109760-73-8	NIST05.L	95293	25	C14H13N3O2	255
Pentane-2,4-dione, 3-(5-phenyl-2-furfury	116626-23-4	NIST05.L	94689	25	C16H14O3	254

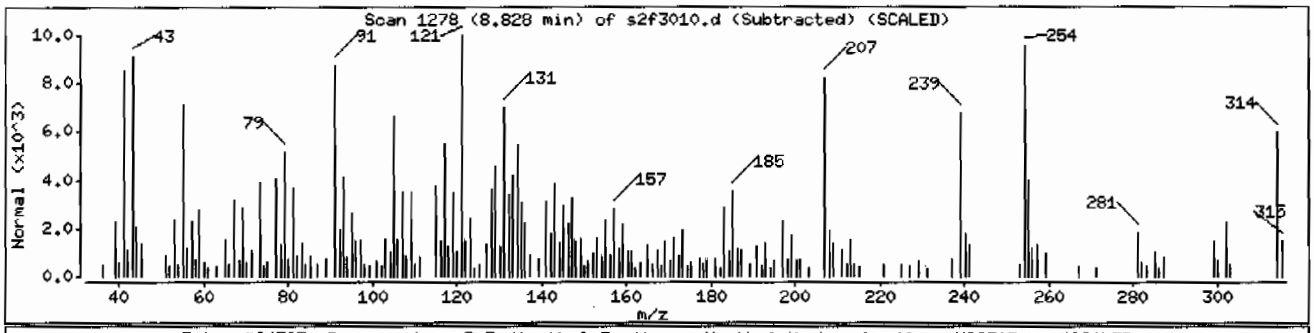

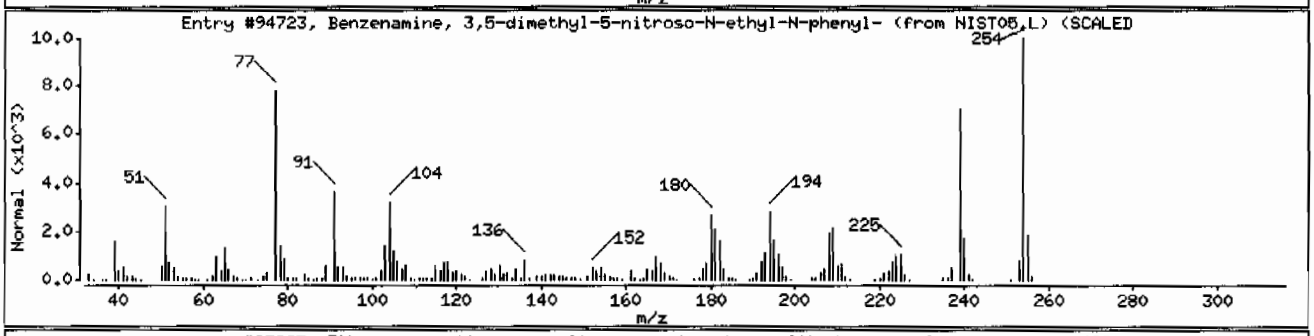

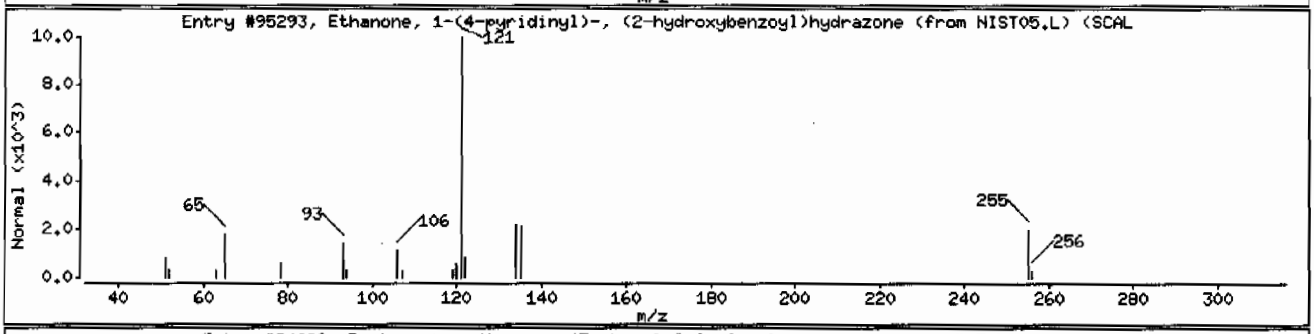

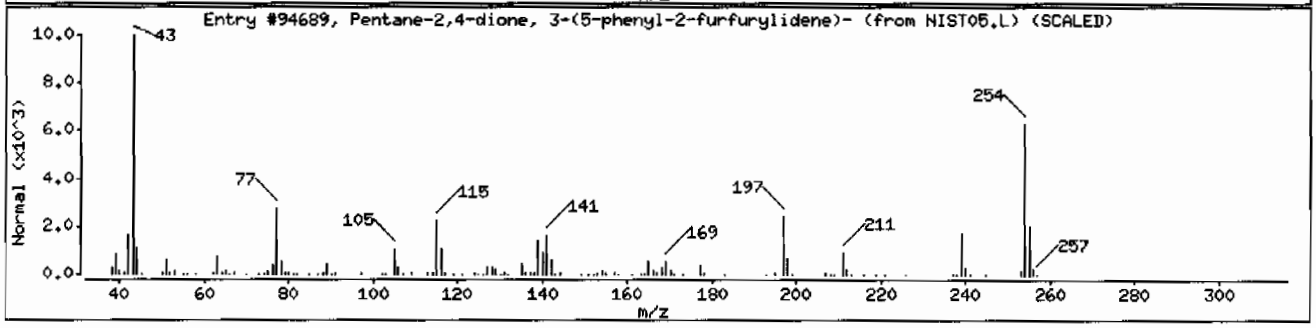

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Date : 30-JUN-2009 18:53

Client ID: CAMO-09-6007 Instrument: MSD2.i

Sample Info: |2324280001|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,2-Benzisothiazole, 3-butoxy-	40991-40-0	NIST05.L	62032	46	C11H13NOS	207
Benzenethiol, o-isopropyl-,	6262-87-9	NIST05.L	25028	25	C9H12S	152
2-(2,2-Dimethylcyclopropyl)thiophene	5919-16-4	NIST05.L	25037	25	C9H12S	152

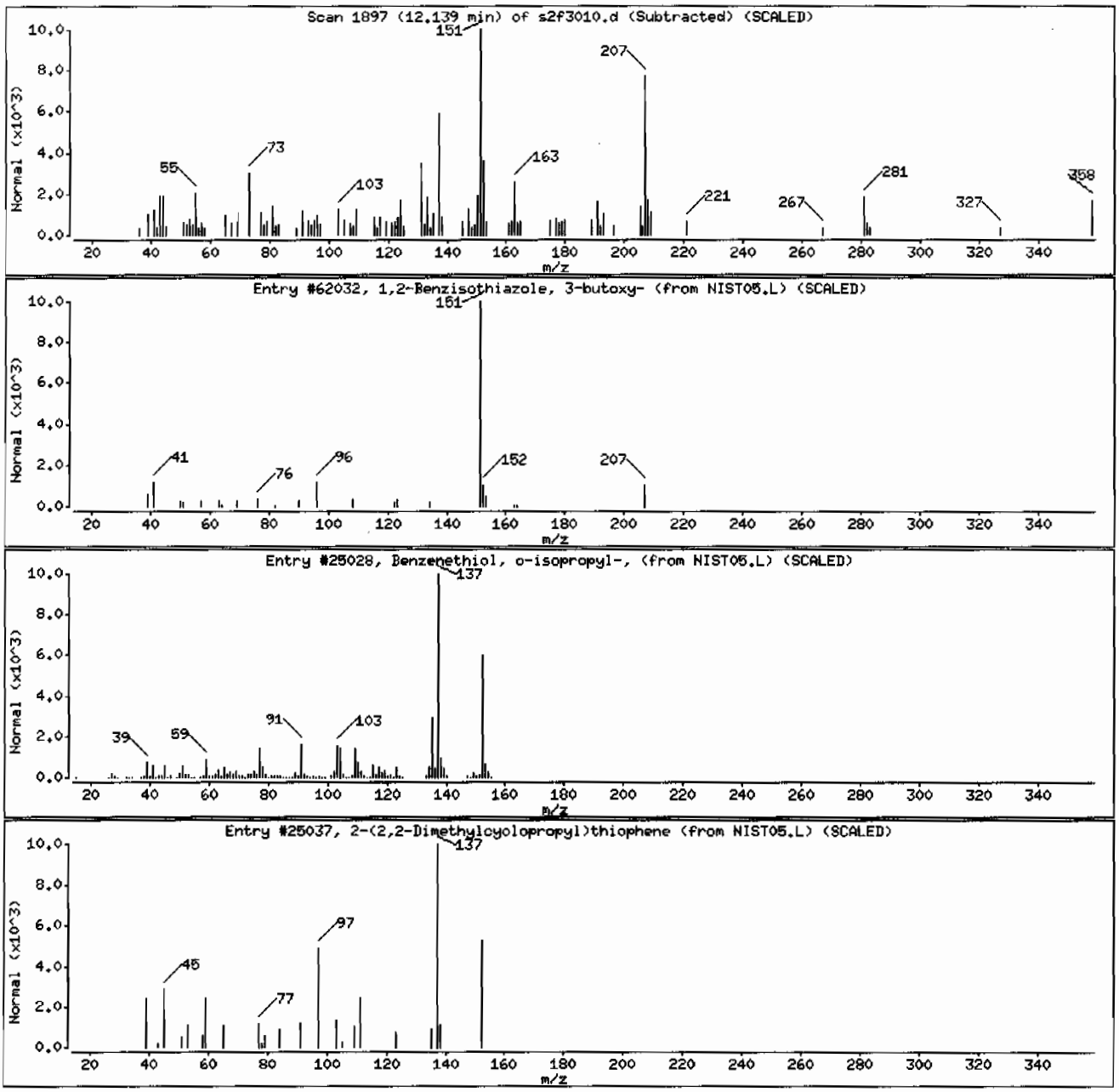

Data File: /chem/MSD2.i/s063009.b/s2f3010.d

Date : 30-JUN-2009 18:53

Client ID: CAMO-09-6007

Instrument: MSD2.i

Sample Info: 1232428001188131911ISVMF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Tetracosapentaene, 2,6,10,15,19,23-hexam	26266-08-0	NIST05.L	173973	45	C30H52	412
1-(2,4-Dihydroxybenzoyl)-3-ethyl-5-trifl	331835-05-3	NIST05.L	135339	38	C13H13F3N2O4	318
Silane, methylphenylbis[(1,7,7-trimethyl	74806-99-8	NIST05.L	176524	38	C27H42O2Si	426

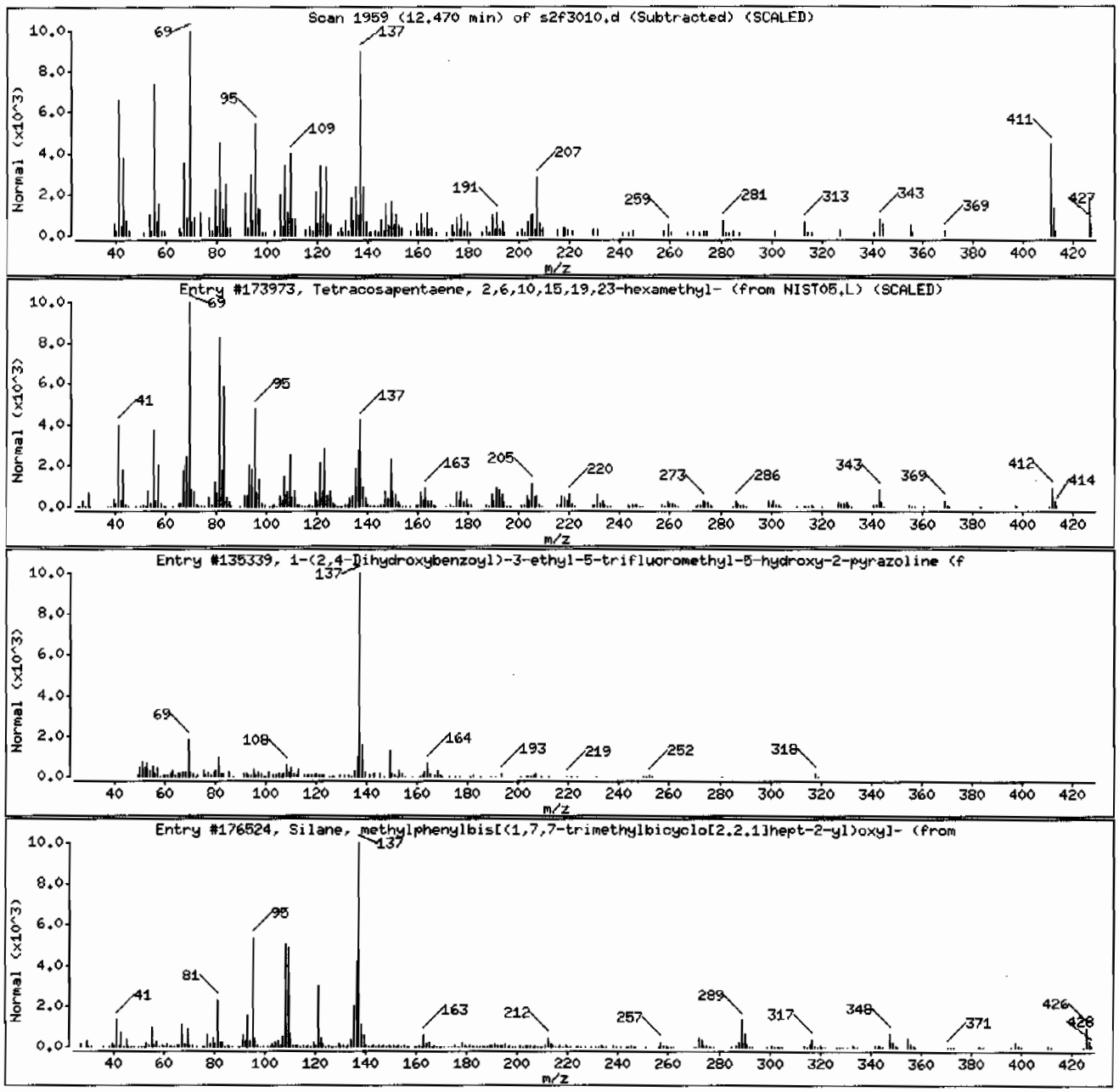

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428003	Date Received:	06/26/2009 08:40	%Moisture:	23.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6008	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.J	Dilution:	1
Run Date:	07/01/2009 00:32	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.15 g	Final Volume:	1 mL
Data File:	s2f3027.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	431	ug/kg	86.3	431
108-95-2	Phenol	U	431	ug/kg	86.3	431
95-57-8	2-Chlorophenol	U	431	ug/kg	86.3	431
106-46-7	1,4-Dichlorobenzene	U	431	ug/kg	86.3	431
621-64-7	N-Nitrosodipropylamine	U	431	ug/kg	86.3	431
59-50-7	4-Chloro-3-methylphenol	U	431	ug/kg	86.3	431
83-32-9	Acenaphthene	U	43.1	ug/kg	14.2	43.1
121-14-2	2,4-Dinitrotoluene	U	431	ug/kg	43.1	431
100-02-7	4-Nitrophenol	U	431	ug/kg	142	431
87-86-5	Pentachlorophenol	U	431	ug/kg	108	431
129-00-0	Pyrene		185	ug/kg	12.9	43.1
110-86-1	Pyridine	U	431	ug/kg	86.3	431
62-53-3	Aniline	U	431	ug/kg	129	431
111-44-4	bis(2-Chloroethyl) ether	U	431	ug/kg	86.3	431
541-73-1	1,3-Dichlorobenzene	U	431	ug/kg	86.3	431
100-51-6	Benzyl alcohol	U	431	ug/kg	129	431
95-50-1	1,2-Dichlorobenzene	U	431	ug/kg	86.3	431
108-60-1	bis(2-Chloroisopropyl)ether	U	431	ug/kg	86.3	431
95-48-7	o-Cresol	U	431	ug/kg	86.3	431
65794-96-9	m,p-Cresols	U	431	ug/kg	129	431
67-72-1	Hexachloroethane	U	431	ug/kg	86.3	431
98-95-3	Nitrobenzene	U	431	ug/kg	86.3	431
78-59-1	Isophorone	U	431	ug/kg	86.3	431
88-75-5	2-Nitrophenol	U	431	ug/kg	86.3	431
105-67-9	2,4-Dimethylphenol	U	431	ug/kg	151	431
111-91-1	bis(2-Chloroethoxy)methane	U	431	ug/kg	86.3	431
120-83-2	2,4-Dichlorophenol	U	431	ug/kg	86.3	431
65-85-0	Benzoic acid	U	863	ug/kg	216	863
91-20-3	Naphthalene	U	43.1	ug/kg	12.9	43.1
106-47-8	4-Chloroaniline	U	431	ug/kg	86.3	431
87-68-3	Hexachlorobutadiene	U	431	ug/kg	86.3	431
91-57-6	2-Methylnaphthalene	U	43.1	ug/kg	8.63	43.1
77-47-4	Hexachlorocyclopentadiene	U	431	ug/kg	86.3	431
88-06-2	2,4,6-Trichlorophenol	U	431	ug/kg	86.3	431
95-95-4	2,4,5-Trichlorophenol	U	431	ug/kg	86.3	431
91-58-7	2-Chloronaphthalene	U	43.1	ug/kg	14.2	43.1
88-74-4	2-Nitroaniline	U	431	ug/kg	86.3	431
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	431	ug/kg	86.3	431

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428003	**Date Received:**	06/26/2009 08:40	**%Moisture:**	23.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6008	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/01/2009 00:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.15 g	**Final Volume:**	1 mL
Data File:	s2f3027.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	431	ug/kg	86.3	431
606-20-2	2,6-Dinitrotoluene	U	431	ug/kg	43.1	431
208-96-8	Acenaphthylene	U	43.1	ug/kg	12.9	43.1
51-28-5	2,4-Dinitrophenol	U	863	ug/kg	164	863
132-64-9	Dibenzofuran	U	431	ug/kg	86.3	431
84-66-2	Diethylphthalate	U	431	ug/kg	86.3	431
86-73-7	Fluorene	U	43.1	ug/kg	12.9	43.1
7005-72-3	4-Chlorophenylphenylether	U	431	ug/kg	86.3	431
534-52-1	2-Methyl-4,6-dinitrophenol	U	431	ug/kg	86.3	431
100-01-6	4-Nitroaniline	U	431	ug/kg	129	431
	p-Nitroaniline					
122-39-4	Diphenylamine	U	431	ug/kg	86.3	431
122-66-7	Azobenzene	U	431	ug/kg	86.3	431
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	431	ug/kg	86.3	431
118-74-1	Hexachlorobenzene	U	431	ug/kg	86.3	431
85-01-8	Phenanthrene		63.5	ug/kg	12.9	43.1
120-12-7	Anthracene	J	14.4	ug/kg	8.63	43.1
84-74-2	Di-n-butylphthalate	U	431	ug/kg	86.3	431
206-44-0	Fluoranthene		211	ug/kg	12.9	43.1
85-68-7	Butylbenzylphthalate	U	431	ug/kg	86.3	431
56-55-3	Benzo(a)anthracene		79.0	ug/kg	12.9	43.1
91-94-1	3,3'-Dichlorobenzidine	U	431	ug/kg	129	431
218-01-9	Chrysene		110	ug/kg	12.9	43.1
117-81-7	bis(2-Ethylhexyl)phthalate	U	431	ug/kg	86.3	431
117-84-0	Di-n-octylphthalate	U	431	ug/kg	86.3	431
205-99-2	Benzo(b)fluoranthene		195	ug/kg	12.9	43.1
207-08-9	Benzo(k)fluoranthene	U	43.1	ug/kg	12.9	43.1
50-32-8	Benzo(a)pyrene		92.6	ug/kg	12.9	43.1
193-39-5	Indeno(1,2,3-cd)pyrene		48.3	ug/kg	12.9	43.1
53-70-3	Dibenzo(a,h)anthracene	U	43.1	ug/kg	12.9	43.1
191-24-2	Benzo(ghi)perylene		49.5	ug/kg	12.9	43.1
120-82-1	1,2,4-Trichlorobenzene	U	431	ug/kg	86.3	431

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.11	257	ug/kg		J
	Unknown Aldol Condensate	3.06	232	ug/kg		J

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Data file : /chem/MSD2.i/s063009.b/s2f3027.d
Lab Smp Id: 232428003 Client Smp ID: CAMO-09-6008
Inj Date : 01-JUL-2009 00:32
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428003|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.15000	weight of sample
M	23.12730	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	152062	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	575297	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	321243	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	569274	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	445614	40.0000	
* 98 Perylene-d12	264	10.491	10.507	(1.000)	290015	40.0000	
$ 3 2-Fluorophenol	112	3.233	3.222	(0.798)	202095	48.0294	2070
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	247965	47.7218	2060
$ 20 Nitrobenzene-d5	82	4.415	4.415	(0.897)	106542	24.5459	1060
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	245434	27.0517	1170
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	76298	69.3449	2990
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	318991	42.0271	1810

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.026	8.031	(0.904)	56826	4.28389	185
68 Phenanthrene	178	7.164	7.170	(1.002)	19944	1.47124	63.5
69 Anthracene	178	7.197	7.202	(1.007)	4367	0.33402	14.4(a)
76 Fluoranthene	202	7.876	7.886	(1.102)	60871	4.88127	211
89 Benzo(a)anthracene	228	8.871	8.881	(0.999)	19854	1.83122	79.0
92 Chrysene	228	8.903	8.919	(1.002)	26790	2.56041	110
95 Benzo(b)fluoranthene	252	9.972	9.988	(0.951)	31447	4.51684	195
97 Benzo(a)pyrene	252	10.416	10.432	(0.993)	13062	2.14734	92.6
99 Indeno(1,2,3-cd)pyrene	276	12.304	12.337	(1.173)	6538	1.11889	48.3
101 Benzo(ghi)perylene	276	12.877	12.903	(1.227)	5818	1.14674	49.5

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s2f3027.d
Report Date: 07/01/2009 08:00
Lab. ID: 232428003 SampleType: SAMPLE
Injection Date: 01-JUL-2009 00:32
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428003|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	14490	4.42	4.29	80-120	100	(T)
42	8565	4.42	4.29	40-100	59	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	69442	6.17	5.94	80-120	100	(T)
164	321243	6.17	5.94	0- 40	463	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	41682	6.17	5.99	80-120	100	(T)
63	606	6.17	5.99	46-106	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	41682	6.17	6.27	80-120	100	(T)
89	503	6.17	6.27	38- 98	1	(QT)
63	606	6.17	6.27	16- 76	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	4788	6.70	6.54	80-120	100	(T)
165	5145	6.70	6.54	61-121	107	(T)
167	1676	6.70	6.54	0- 44	35	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	150	6.70	6.55	80-120	100	(T)
105	403	6.70	6.55	14- 74	267	(QT)
51	574	6.69	6.55	37- 97	381	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	4393	6.70	6.84	80-120	100	(T)
141	31192	6.70	6.84	51-111	710	(QT)
250	8920	6.70	6.84	66-126	203	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	19944	7.16	7.17	80-120	100	( )
179	3613	7.16	7.17	0- 46	18	( )
176	3642	7.16	7.17	0- 49	18	( )
69 Anthracene				CAS#: 120-12-7		
178	4367	7.20	7.20	80-120	100	( )
179	1749	7.19	7.20	0- 46	40	( )
176	734	7.20	7.20	0- 48	17	( )
76 Fluoranthene				CAS#: 206-44-0		
202	60871	7.88	7.89	80-120	100	( )
203	10524	7.88	7.89	0- 48	17	( )
101	9322	7.88	7.89	0- 45	15	( )
79 Pyrene				CAS#: 129-00-0		
202	56826	8.03	8.03	80-120	100	( )
200	11697	8.03	8.03	0- 51	21	( )
101	10645	8.02	8.03	0- 48	19	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	19854	8.87	8.88	80-120	100	( )
226	5264	8.87	8.88	0- 56	27	( )
229	5573	8.87	8.88	0- 50	28	( )
92 Chrysene				CAS#: 218-01-9		
228	26790	8.90	8.92	80-120	100	( )
229	6882	8.90	8.92	0- 50	26	( )
226	8163	8.90	8.92	0- 59	30	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	31447	9.97	9.99	80-120	100	( )
253	6843	9.97	9.99	0- 52	22	( )
125	4607	9.97	9.99	0- 45	15	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	31447	9.97	10.02	80-120	100	( )
253	6843	9.97	10.02	0- 52	22	( )
125	4607	9.97	10.02	0- 44	15	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	13062	10.42	10.43	80-120	100	( )
253	3301	10.41	10.43	0- 52	25	( )
125	1819	10.41	10.43	0- 46	14	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	6538	12.30	12.34	80-120	100	( )
138	2483	12.30	12.34	7- 67	38	( )
100 Dibenzo(a,h)anthracene				CAS#: 53-70-3		
278	1624	12.31	12.34	80-120	100	( )
139	1045	12.31	12.34	0- 55	64	(Q)
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	5818	12.88	12.90	80-120	100	( )
138	2082	12.88	12.90	4- 64	36	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

GEL Laboratories, LLC

Data file : /chem/MSD2.i/s063009.b/s2f3027.d
Lab Smp Id: 232428003 Client Smp ID: CAMO-09-6008
Inj Date : 01-JUL-2009 00:32
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428003|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.15000	weight of sample
M	23.12730	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.051	910512	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.110	135835	5.96742660	257	0		0	10
Unknown Aldol Condensate				CAS #:			
3.062	122190	5.36796829	232	0		0	10

Data File: /chem/MSD2.i/s063009.b/s2f3027.d
Date : 01-JUL-2009 00:32
Client ID: CAMD-09-6008
Sample Info: |2324280031881319|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: AGS1
Column diameter: 0.20

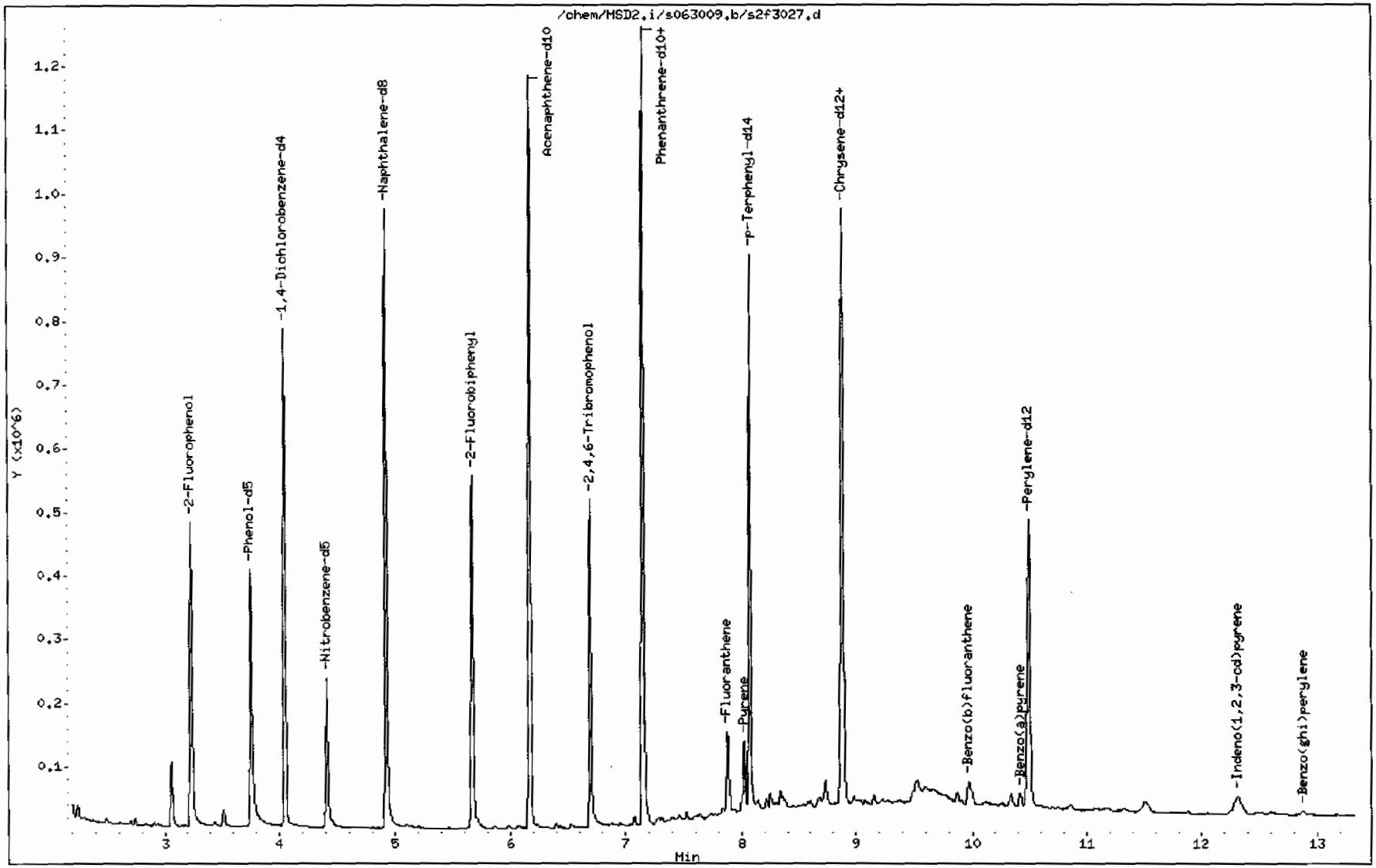

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008

Instrument: MSD2.i

Sample Info: |2324280031881319111SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 185 ug/Kg

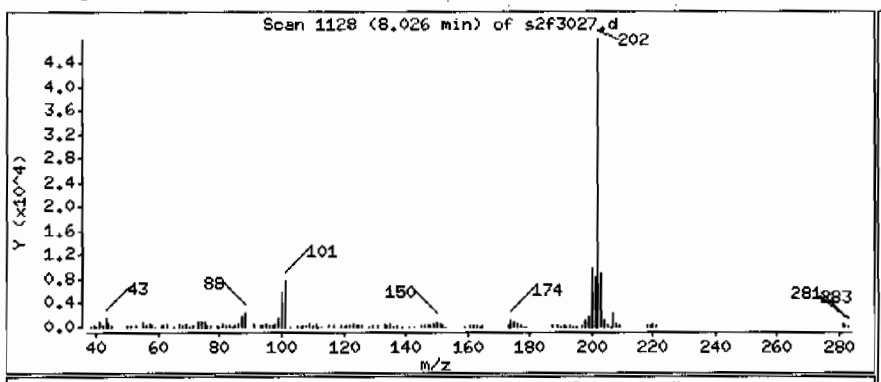

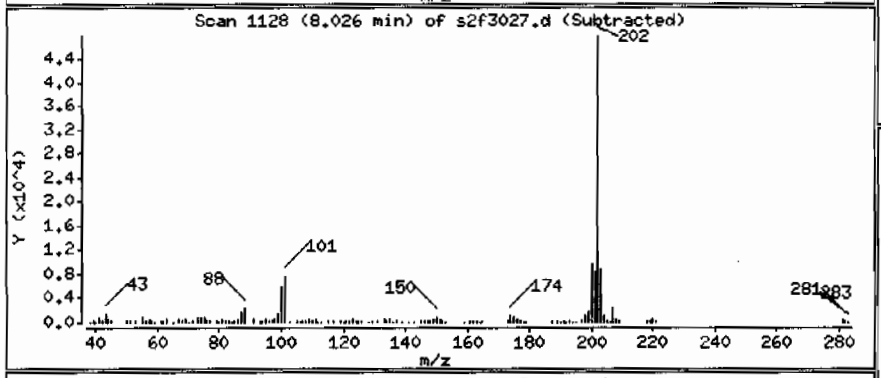

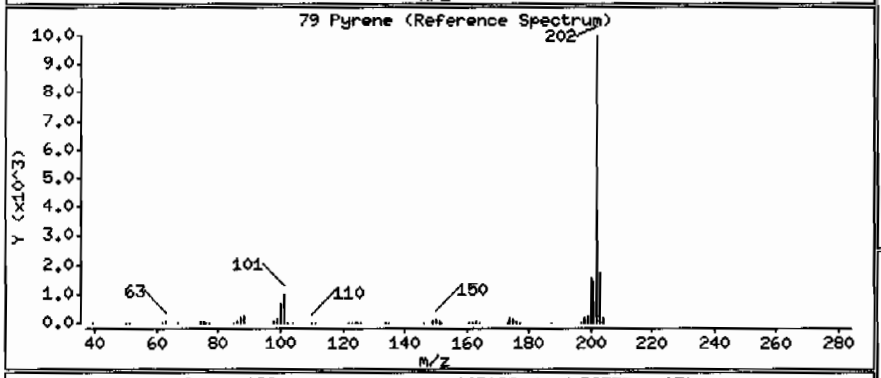

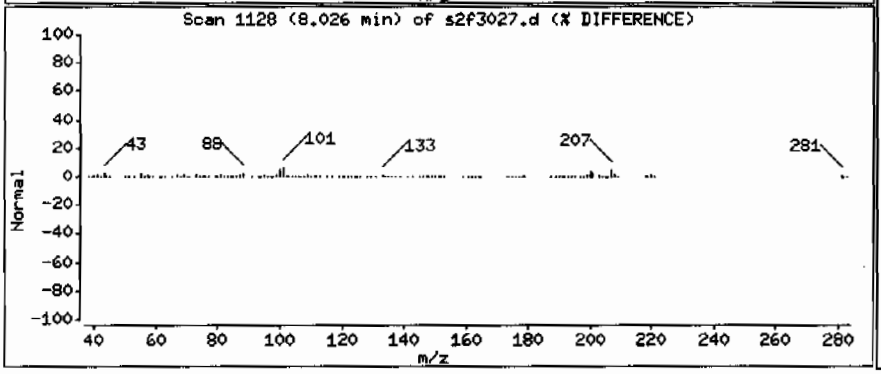

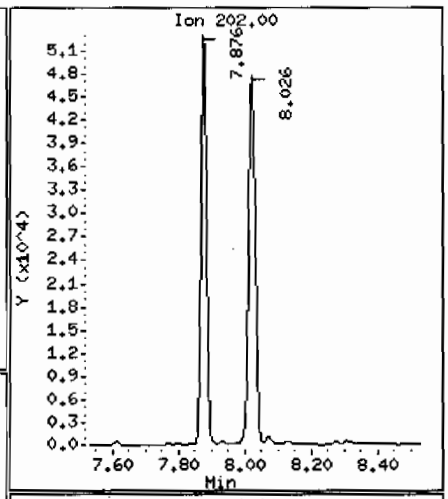

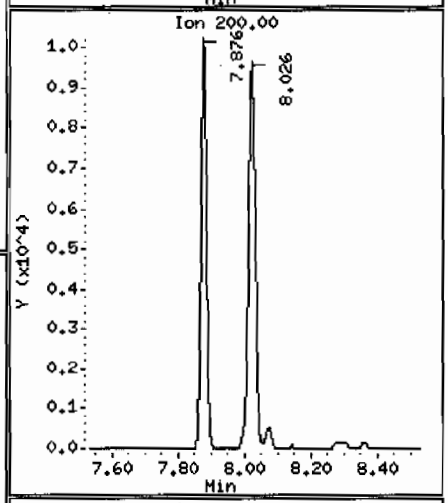

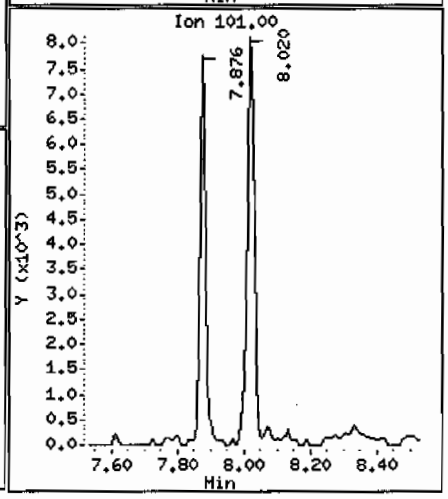

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008

Instrument: MSD2.i

Sample Info: 1232428003188131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 63.5 ug/Kg

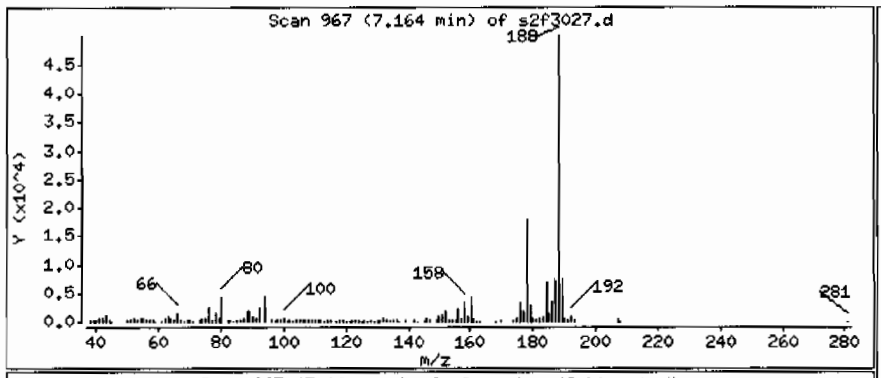

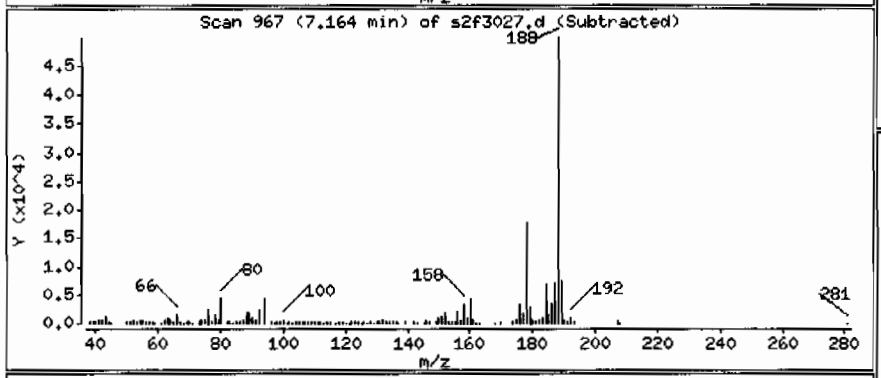

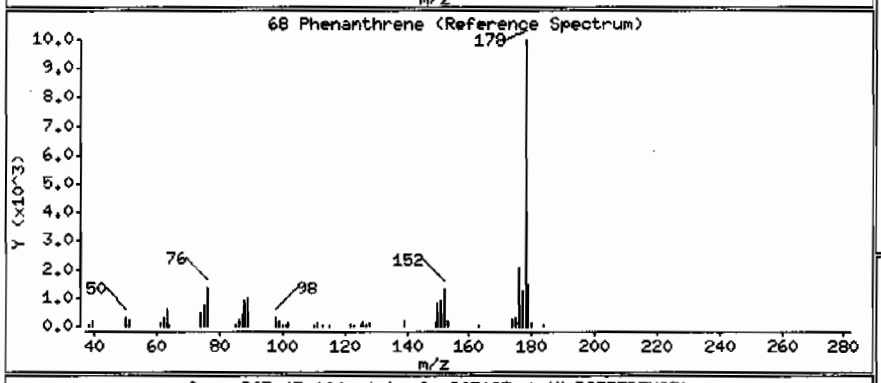

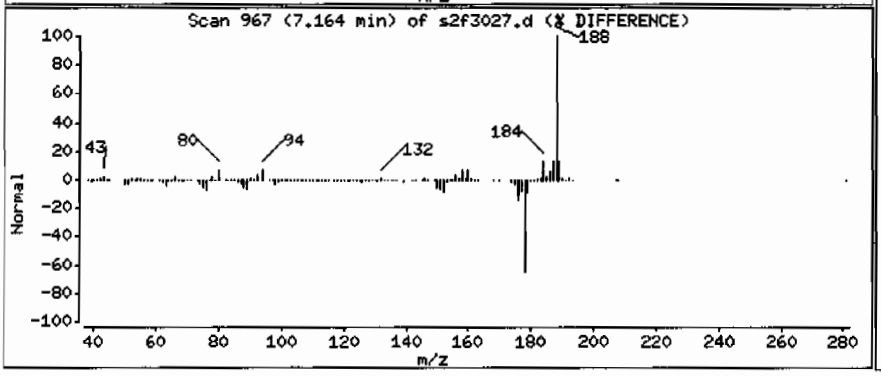

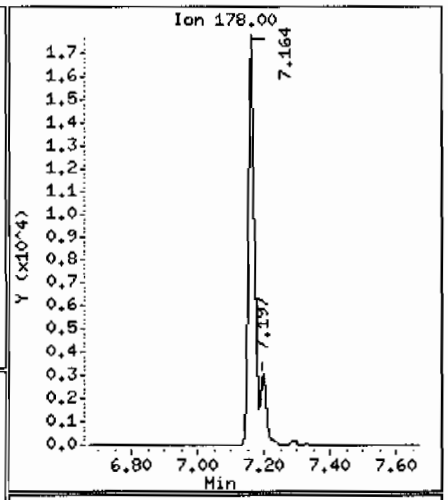

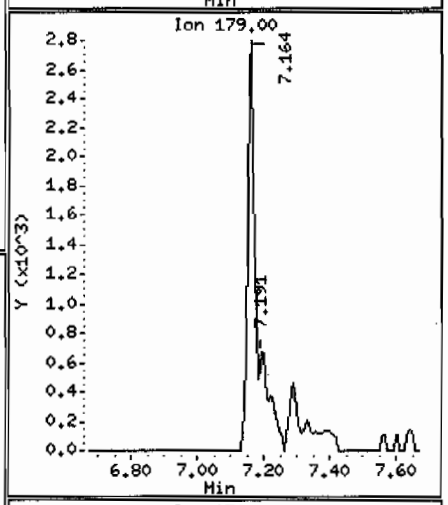

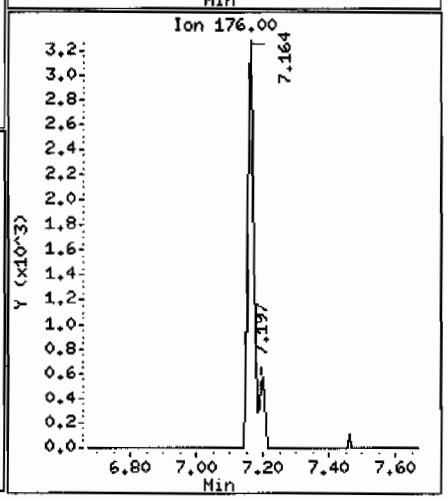

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008

Instrument: MSD2.i

Sample Info: |2324280031881319111SVMF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

69 Anthracene

Concentration: 14.4 ug/Kg

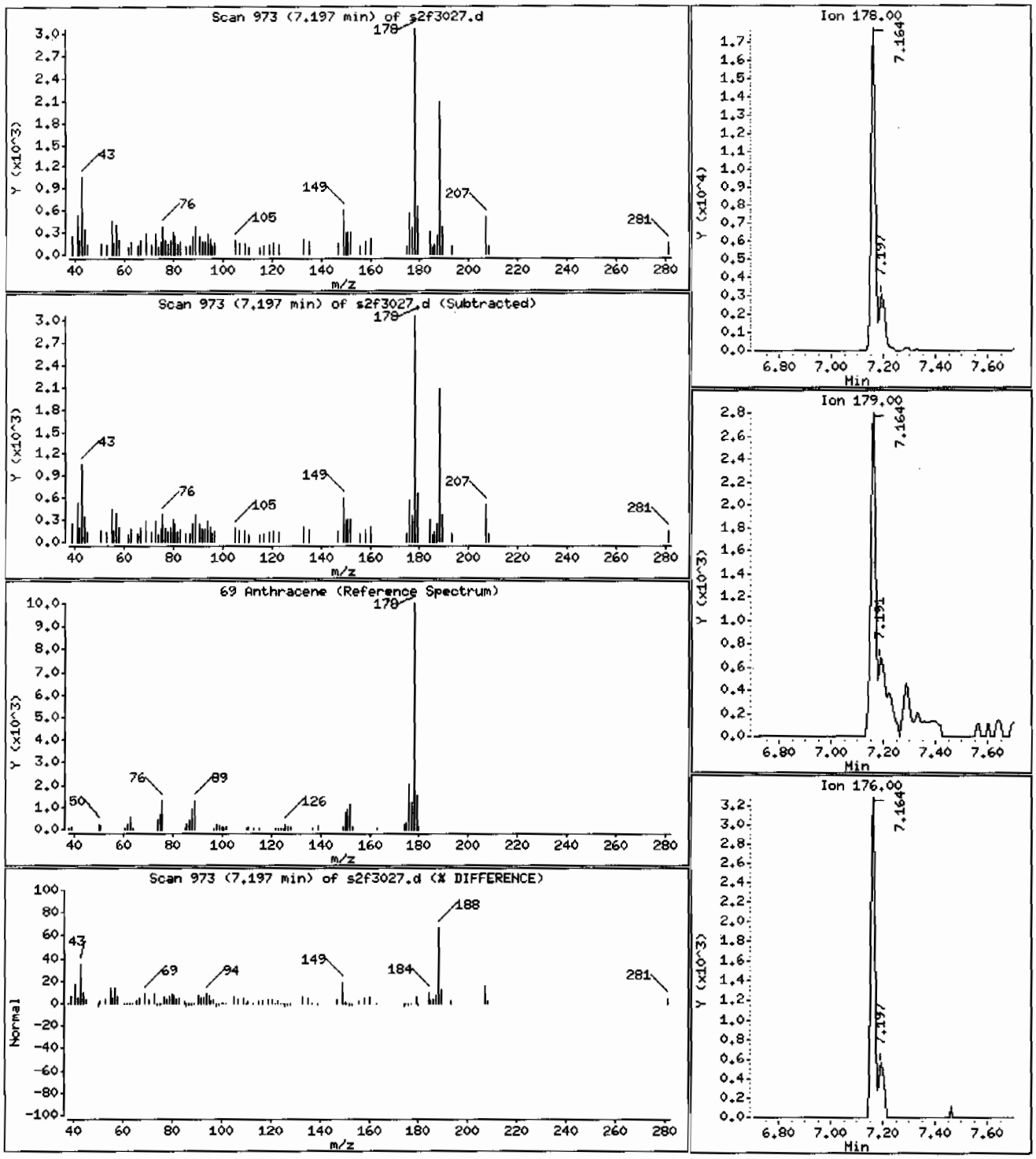

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMD-09-6008

Instrument: MSD2.i

Sample Info: |2324280031881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 211 ug/Kg

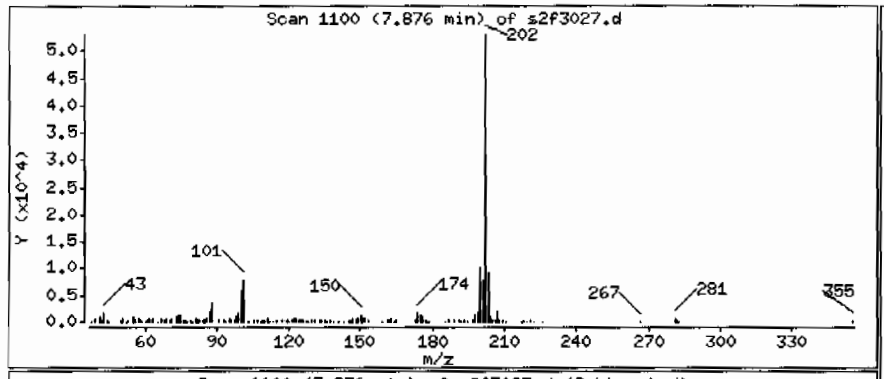

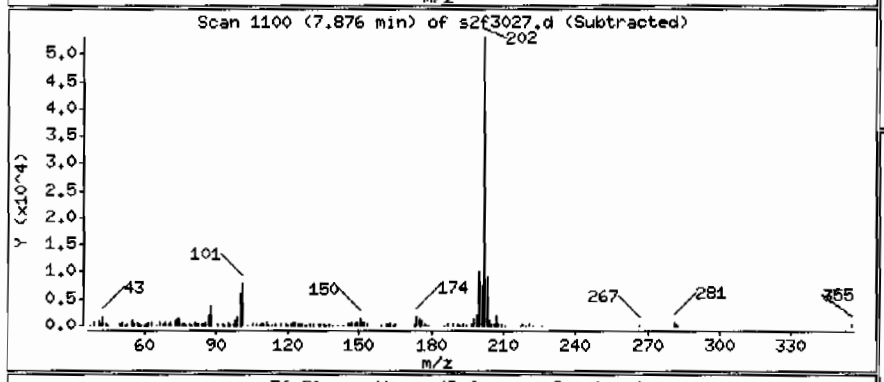

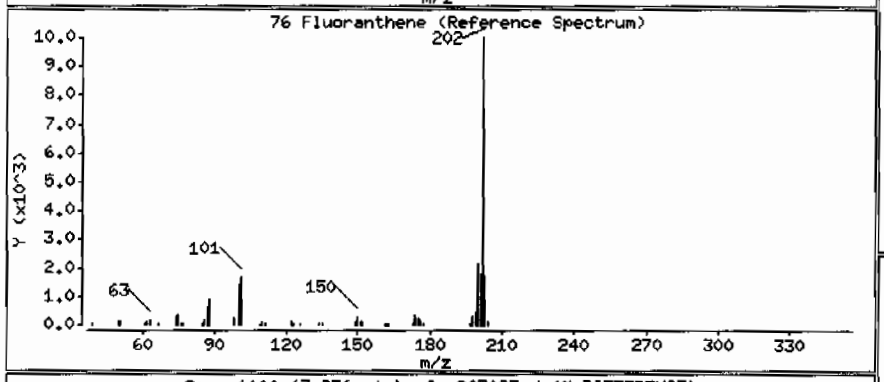

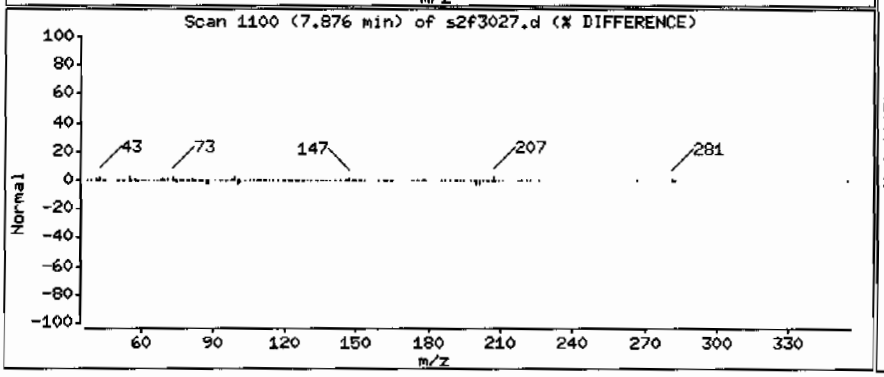

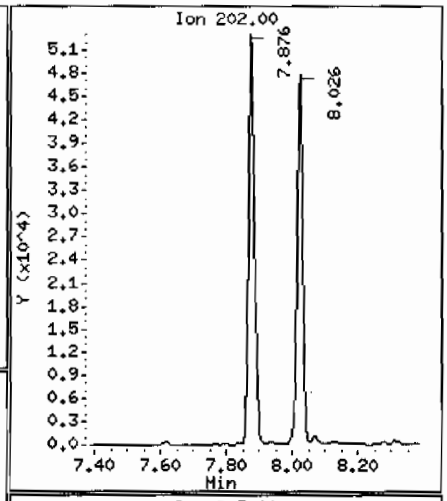

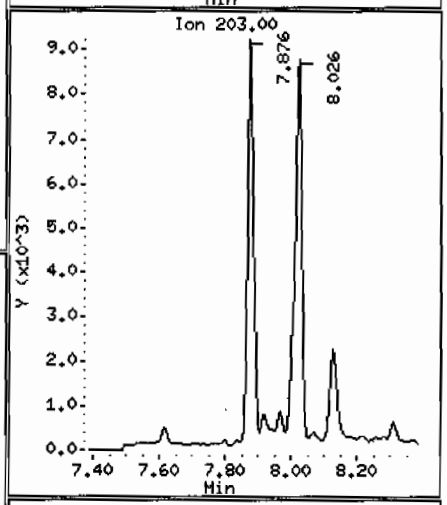

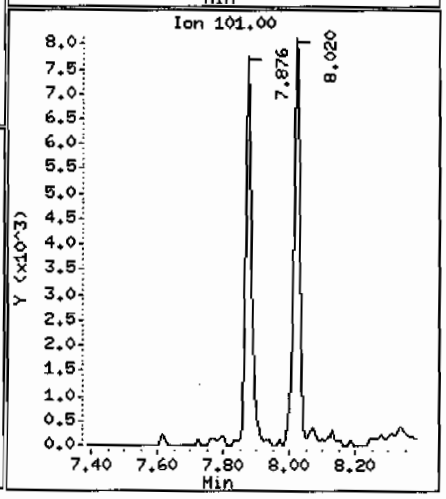

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008

Instrument: MSD2.i

Sample Info: |2324280031881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 79.0 ug/Kg

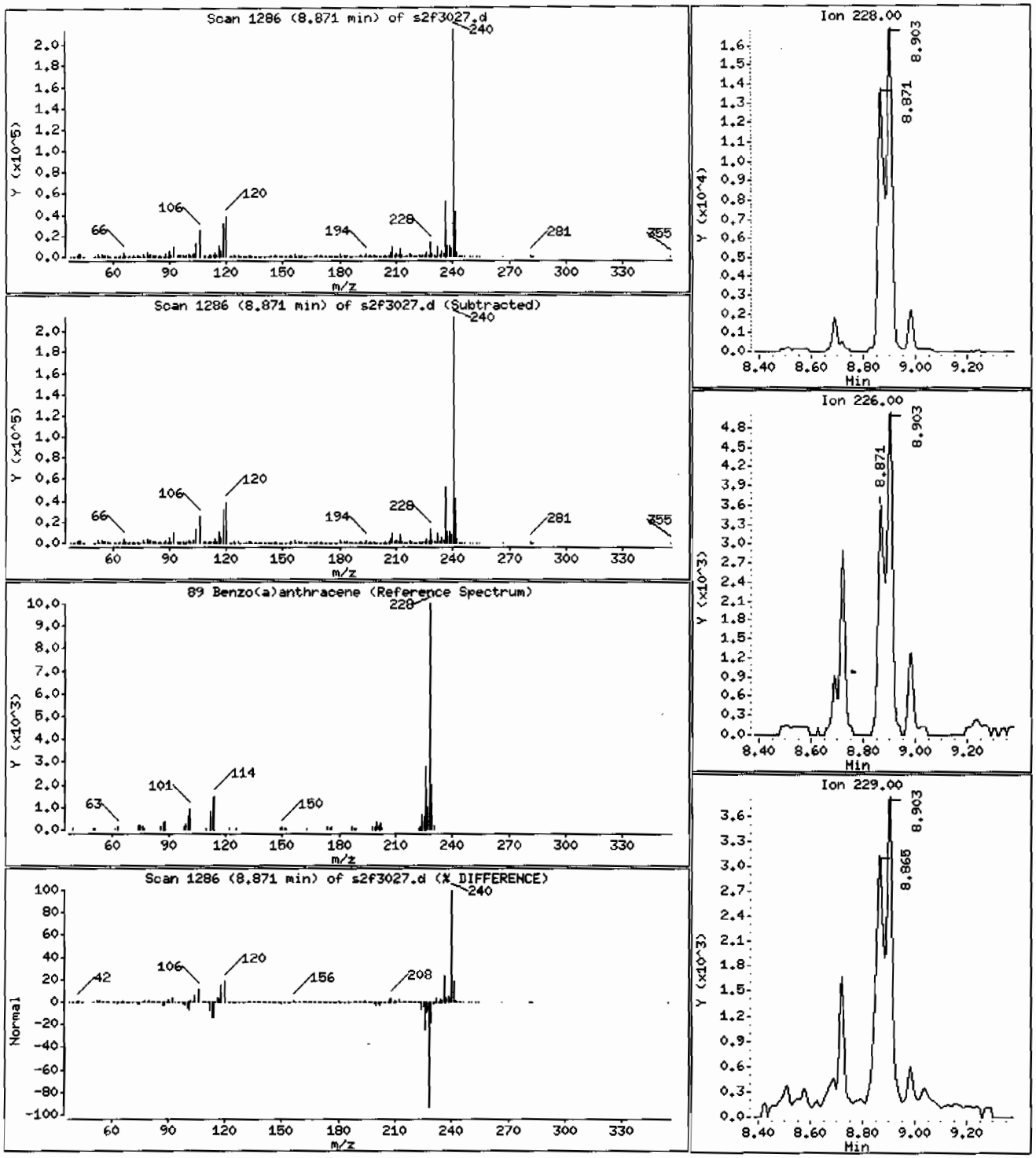

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008 Instrument: MSD2.i

Sample Info: 1232428003|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

92 Chrysene Concentration: 110 ug/Kg

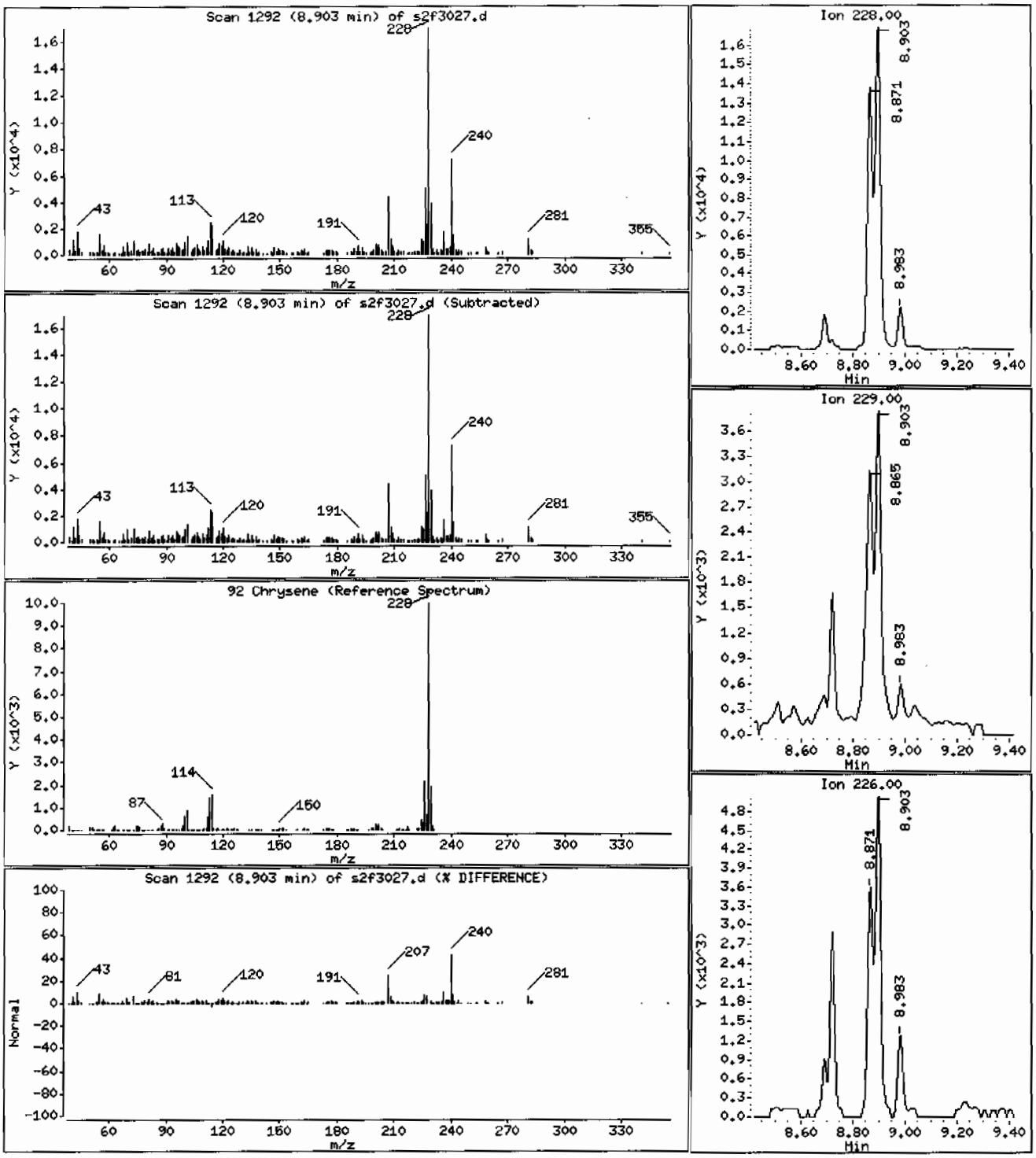

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008 Instrument: MSD2.i

Sample Info: |2324280003|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

95 Benzo(b)fluoranthene Concentration: 195 ug/Kg

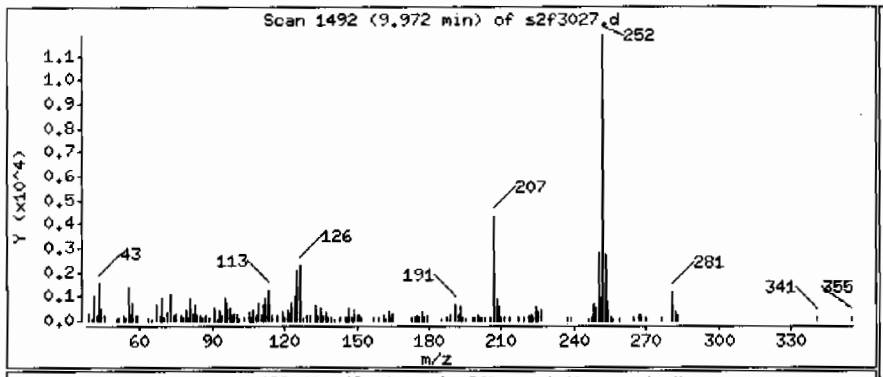

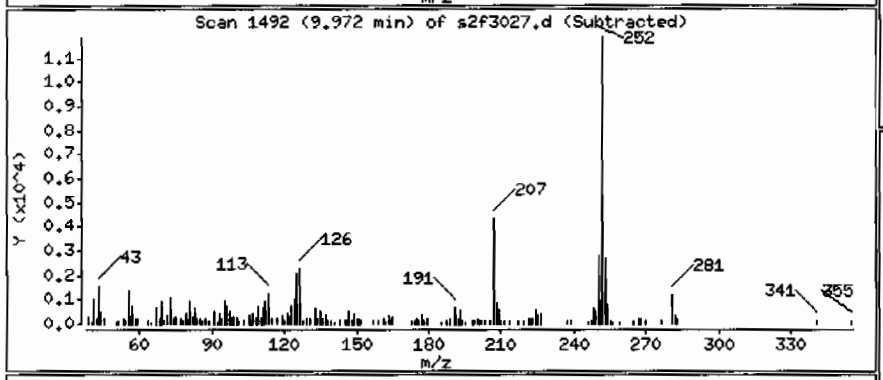

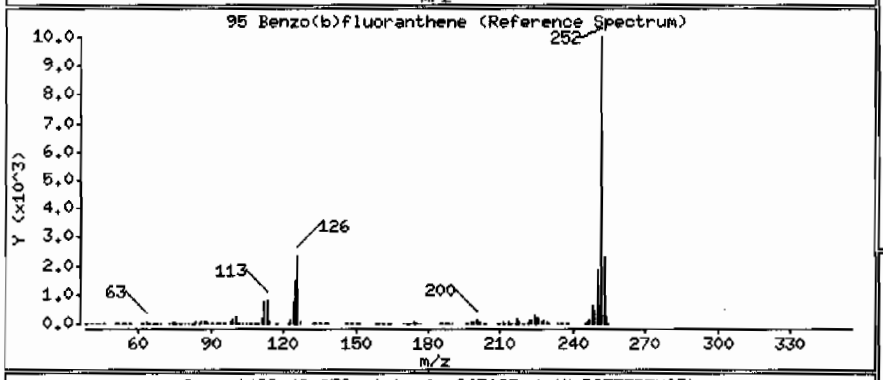

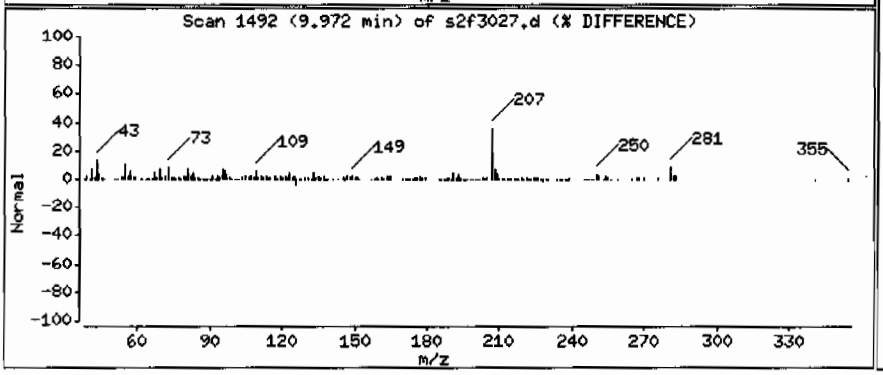

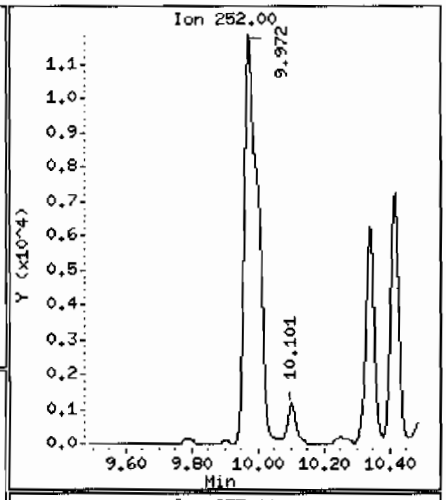

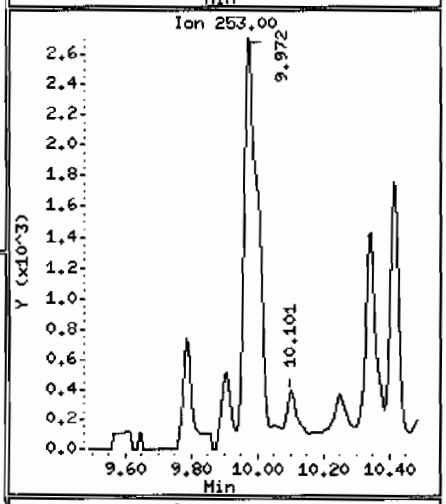

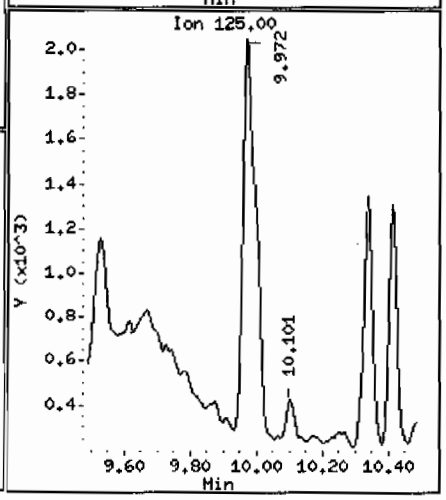

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008

Instrument: MSD2.i

Sample Info: |2324280031881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 92.6 ug/Kg

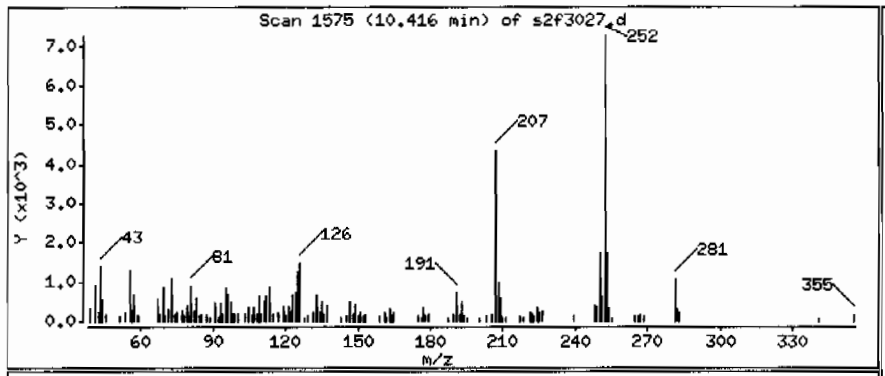

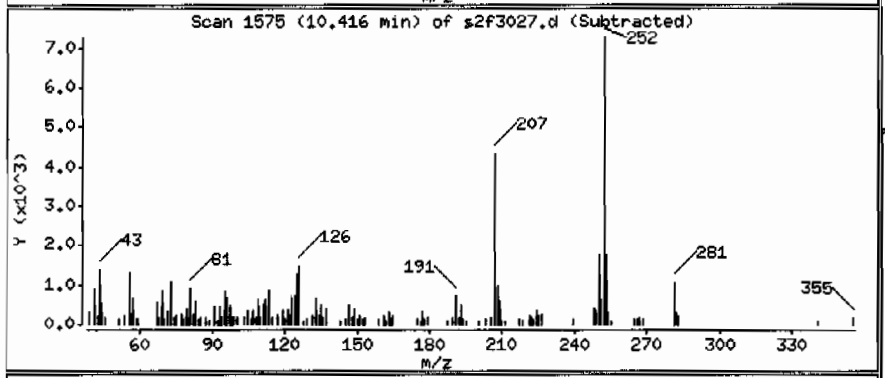

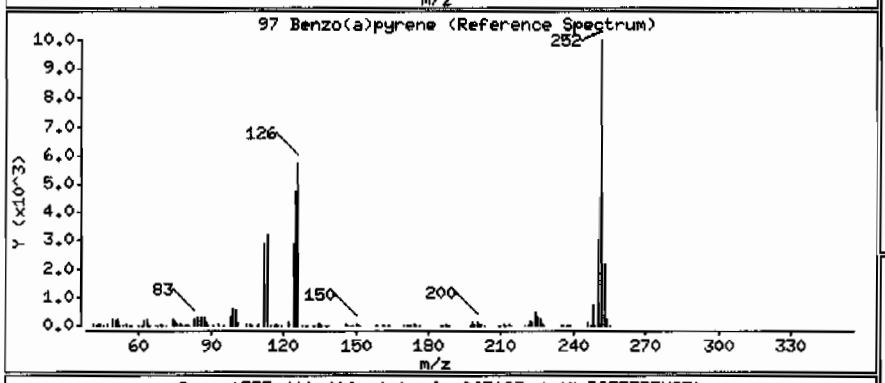

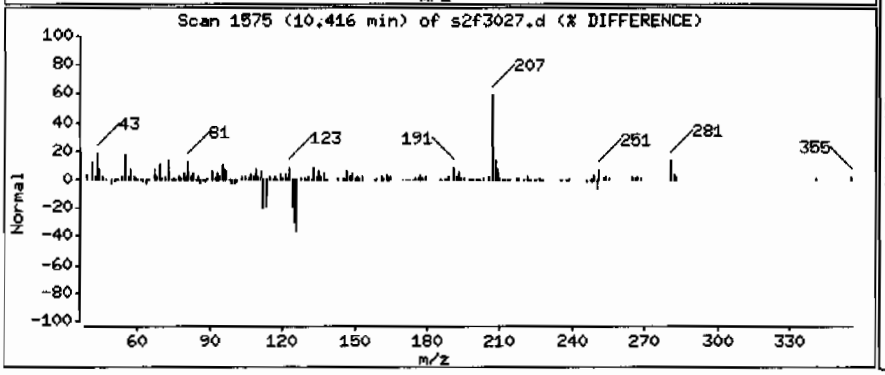

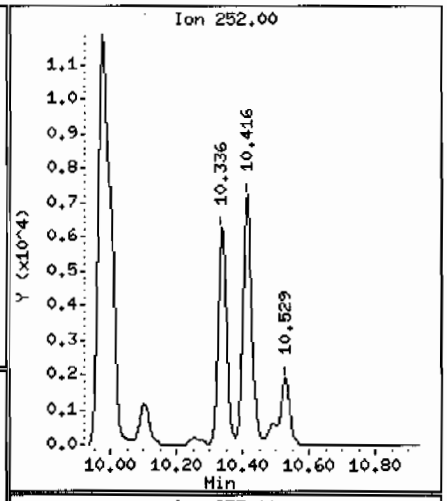

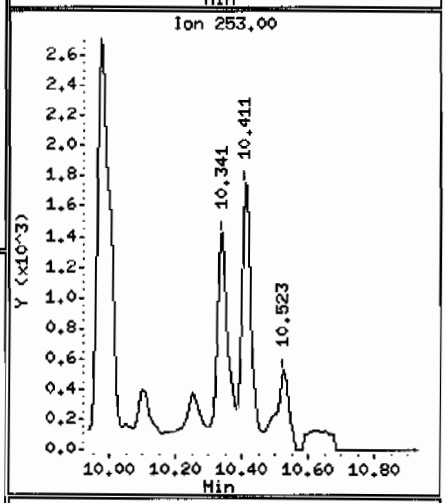

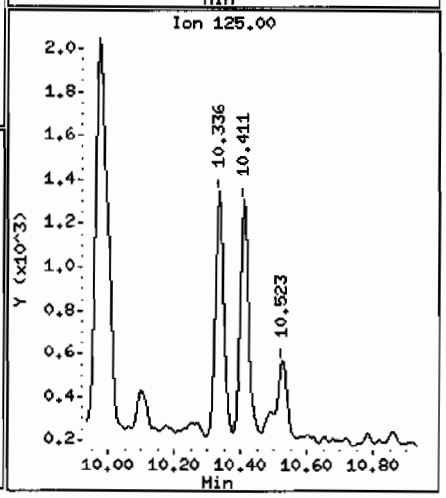

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008 Instrument: MSD2.i

Sample Info: |2324280031881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 48.3 ug/Kg

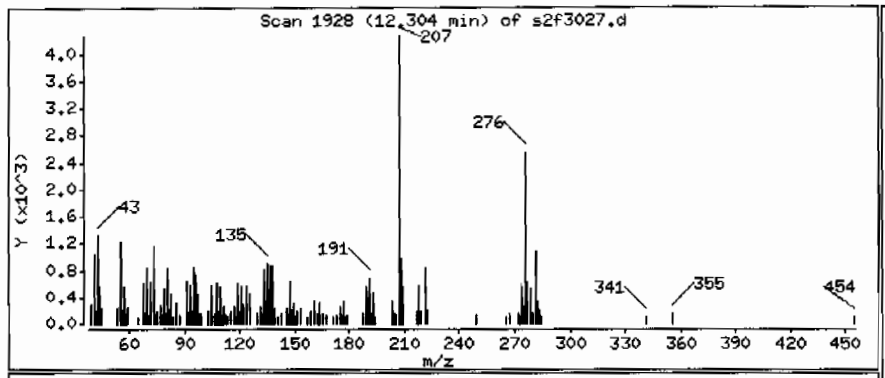

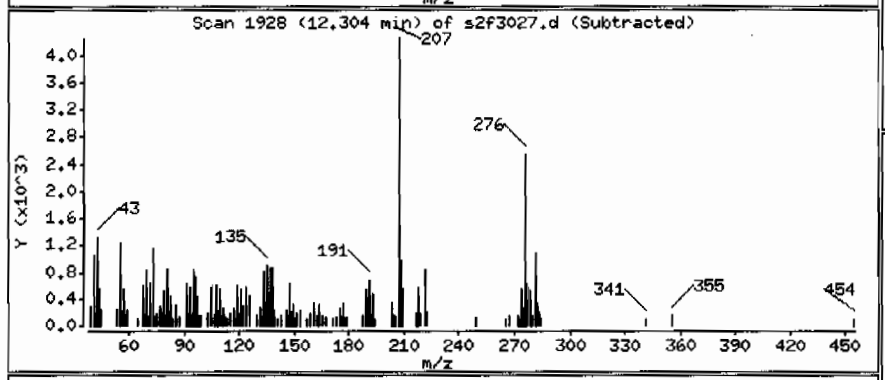

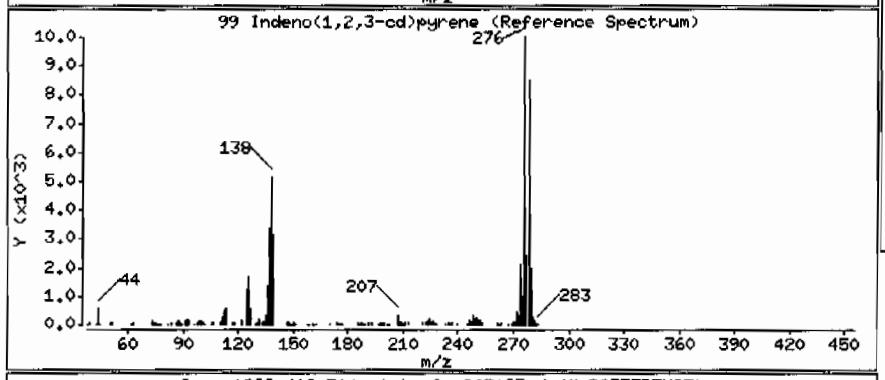

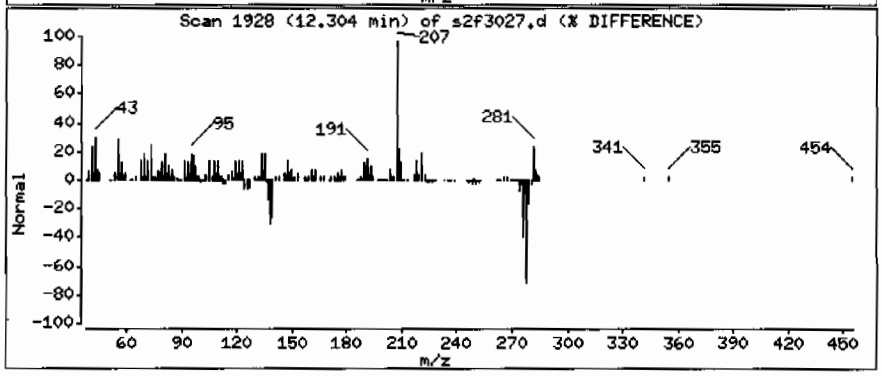

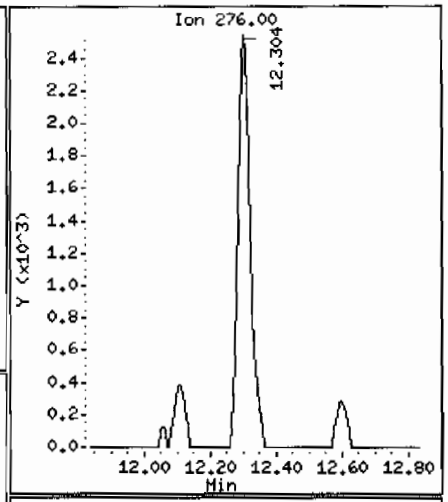

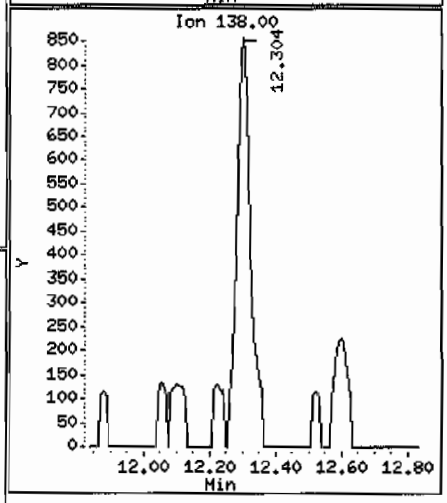

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008

Instrument: MSD2.i

Sample Info: 1232428003188131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 49.5 ug/Kg

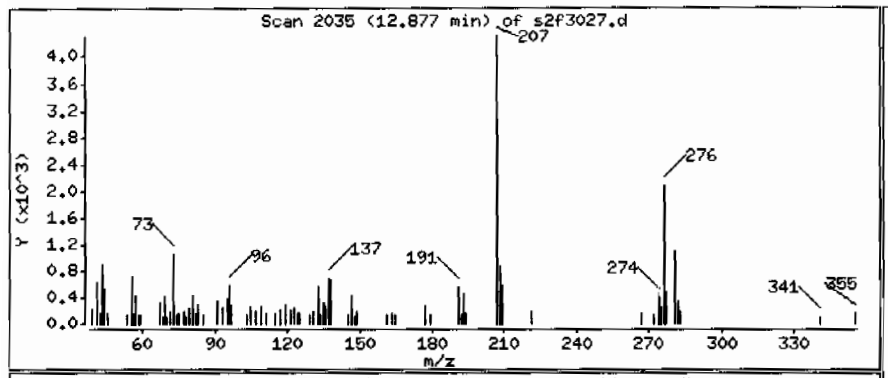

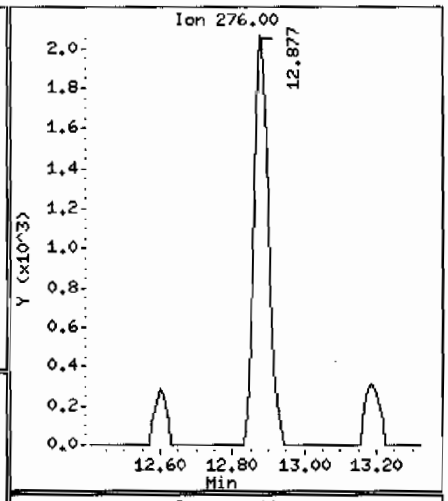

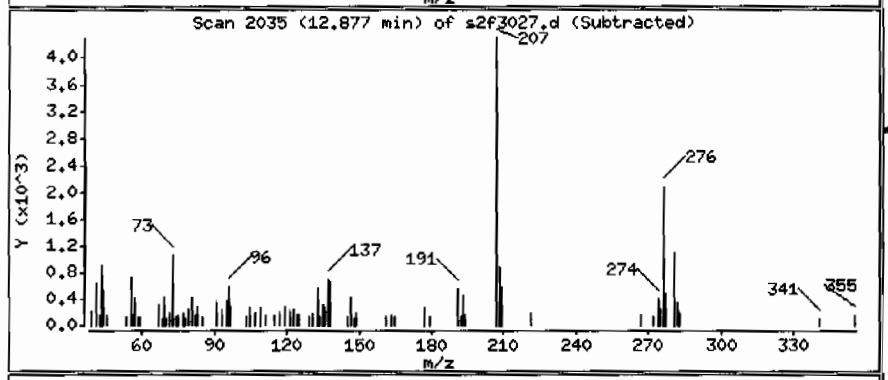

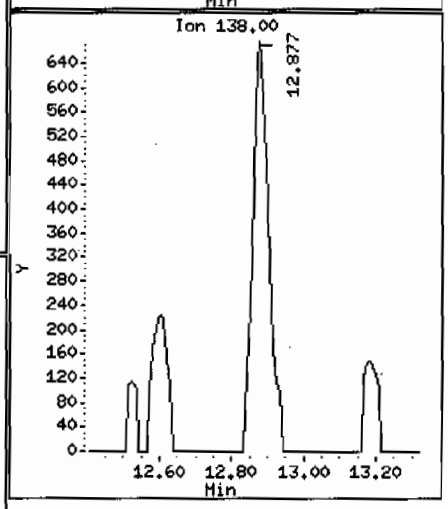

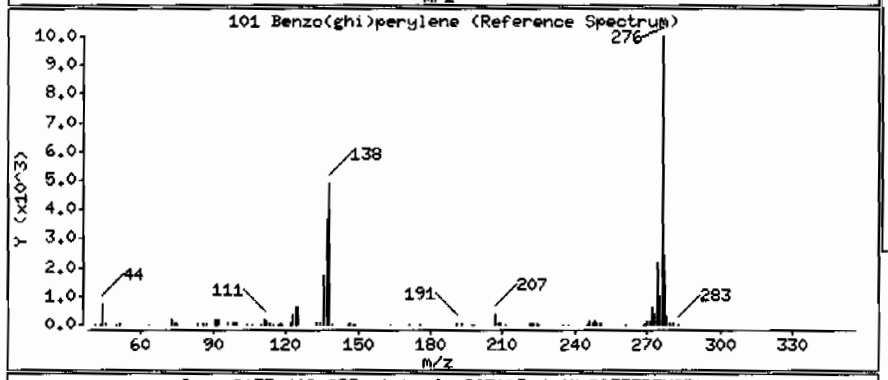

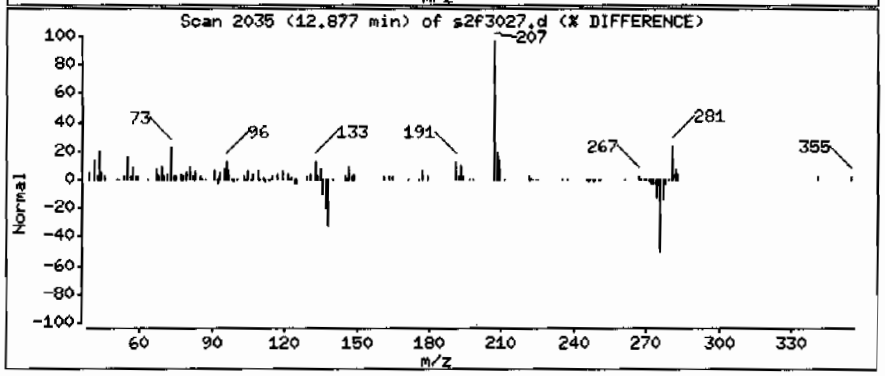

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008 Instrument: MSD2.i

Sample Info: |2324280031881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Acetamide, N-methyl-	79-16-3	NIST05.L	724	38	C3H7NO	73
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4658	32	C5H12O2	104
2-Pentanone	107-87-9	NIST05.L	1683	27	C5H10O	86

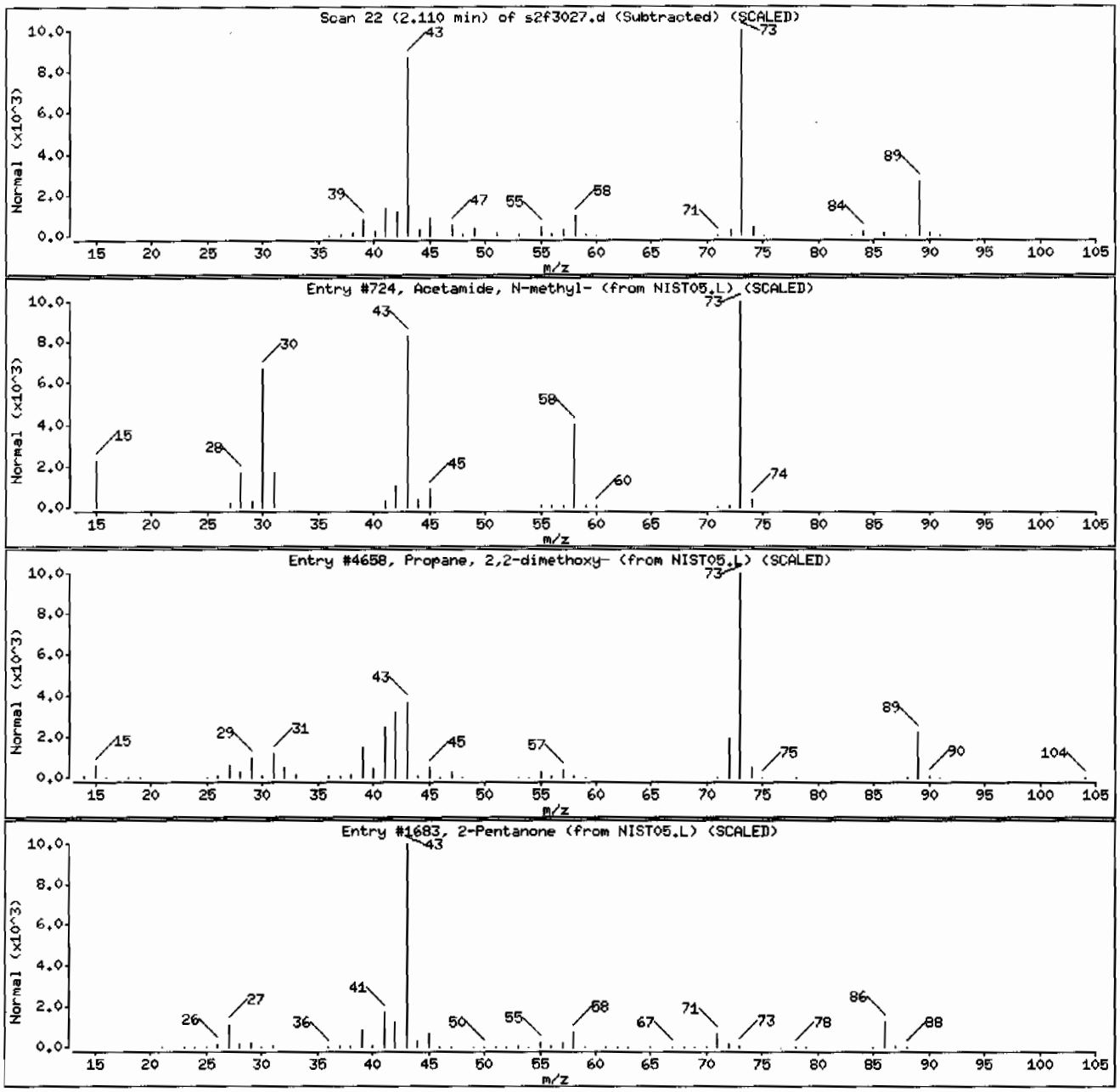

Data File: /chem/MSD2.i/s063009.b/s2f3027.d

Date : 01-JUL-2009 00:32

Client ID: CAMO-09-6008 Instrument: MSD2.i

Sample Info: |2324280031881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	28	C6H12O2	116

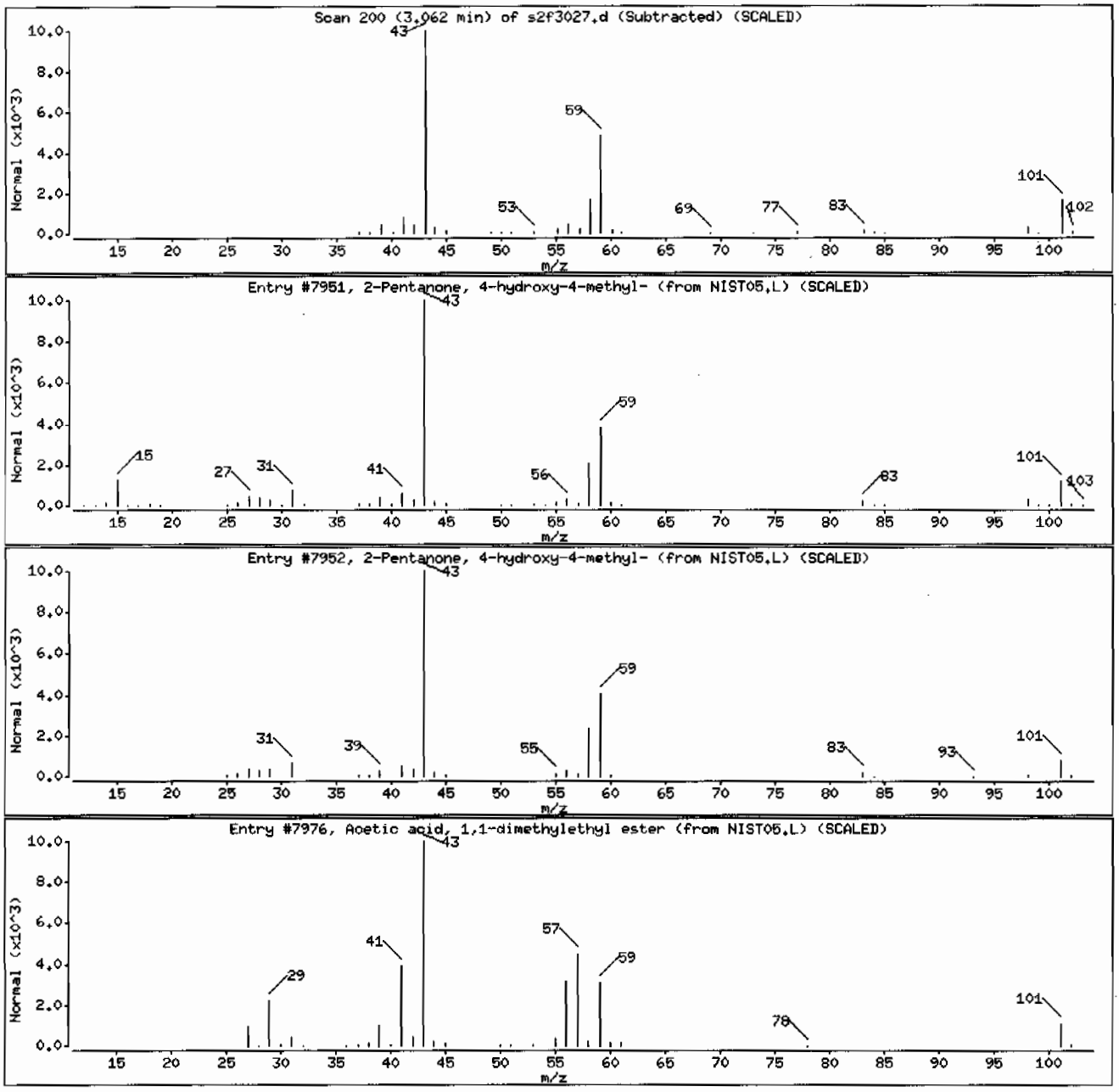

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428004**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**17**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6009**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881319**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 20:33**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 14:54**	**Aliquot:**	**30.17 g**	**Final Volume:**	**1 mL**
Data File:	**s2f3015.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	399	ug/kg	79.9	399
108-95-2	Phenol	U	399	ug/kg	79.9	399
95-57-8	2-Chlorophenol	U	399	ug/kg	79.9	399
106-46-7	1,4-Dichlorobenzene	U	399	ug/kg	79.9	399
621-64-7	N-Nitrosodipropylamine	U	399	ug/kg	79.9	399
59-50-7	4-Chloro-3-methylphenol	U	399	ug/kg	39.9	399
83-32-9	Acenaphthene	U	39.9	ug/kg	13.3	39.9
121-14-2	2,4-Dinitrotoluene	U	399	ug/kg	39.9	399
100-02-7	4-Nitrophenol	U	399	ug/kg	79.9	399
87-86-5	Pentachlorophenol	U	399	ug/kg	79.9	399
129-00-0	Pyrene		139	ug/kg	12.5	39.9
110-86-1	Pyridine	U	399	ug/kg	79.9	399
62-53-3	Aniline	U	399	ug/kg	140	399
111-44-4	bis(2-Chloroethyl) ether	U	399	ug/kg	79.9	399
541-73-1	1,3-Dichlorobenzene	U	399	ug/kg	79.9	399
100-51-6	Benzyl alcohol	U	399	ug/kg	120	399
95-50-1	1,2-Dichlorobenzene	U	399	ug/kg	79.9	399
108-60-1	bis(2-Chloroisopropyl)ether	U	399	ug/kg	79.9	399
95-48-7	o-Cresol	U	399	ug/kg	79.9	399
65794-96-9	m,p-Cresols	U	399	ug/kg	160	399
67-72-1	Hexachloroethane	U	399	ug/kg	79.9	399
98-95-3	Nitrobenzene	U	399	ug/kg	79.9	399
78-59-1	Isophorone	U	399	ug/kg	79.9	399
88-75-5	2-Nitrophenol	U	399	ug/kg	39.9	399
105-67-9	2,4-Dimethylphenol	U	399	ug/kg	79.9	399
111-91-1	bis(2-Chloroethoxy)methane	U	399	ug/kg	79.9	399
120-83-2	2,4-Dichlorophenol	U	399	ug/kg	79.9	399
65-85-0	Benzoic acid	U	799	ug/kg	200	799
91-20-3	Naphthalene	U	39.9	ug/kg	12.0	39.9
106-47-8	4-Chloroaniline	U	399	ug/kg	79.9	399
87-68-3	Hexachlorobutadiene	U	399	ug/kg	79.9	399
91-57-6	2-Methylnaphthalene	U	39.9	ug/kg	7.99	39.9
77-47-4	Hexachlorocyclopentadiene	U	399	ug/kg	79.9	399
88-06-2	2,4,6-Trichlorophenol	U	399	ug/kg	79.9	399
95-95-4	2,4,5-Trichlorophenol	U	399	ug/kg	79.9	399
91-58-7	2-Chloronaphthalene	U	39.9	ug/kg	14.0	39.9
88-74-4	2-Nitroaniline	U	399	ug/kg	79.9	399
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	399	ug/kg	79.9	399

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428004	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6009	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 20:33	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s2f3015.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	399	ug/kg	79.9	399
606-20-2	2,6-Dinitrotoluene	U	399	ug/kg	39.9	399
208-96-8	Acenaphthylene	U	39.9	ug/kg	12.0	39.9
51-28-5	2,4-Dinitrophenol	U	799	ug/kg	152	799
132-64-9	Dibenzofuran	U	399	ug/kg	79.9	399
84-66-2	Diethylphthalate	U	399	ug/kg	79.9	399
86-73-7	Fluorene	U	39.9	ug/kg	12.0	39.9
7005-72-3	4-Chlorophenylphenylether	U	399	ug/kg	39.9	399
534-52-1	2-Methyl-4,6-dinitrophenol	U	399	ug/kg	79.9	399
100-01-6	4-Nitroaniline	U	399	ug/kg	79.9	399
	p-Nitroaniline					
122-39-4	Diphenylamine	U	399	ug/kg	79.9	399
122-66-7	Azobenzene	U	399	ug/kg	79.9	399
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	399	ug/kg	39.9	399
118-74-1	Hexachlorobenzene	U	399	ug/kg	79.9	399
85-01-8	Phenanthrene		50.2	ug/kg	12.0	39.9
120-12-7	Anthracene	U	39.9	ug/kg	7.99	39.9
84-74-2	Di-n-butylphthalate	U	399	ug/kg	39.9	399
206-44-0	Fluoranthene		159	ug/kg	12.0	39.9
85-68-7	Butylbenzylphthalate	U	399	ug/kg	79.9	399
56-55-3	Benzo(a)anthracene		59.2	ug/kg	12.0	39.9
91-94-1	3,3'-Dichlorobenzidine	U	399	ug/kg	120	399
218-01-9	Chrysene		82.3	ug/kg	12.0	39.9
117-81-7	bis(2-Ethylhexyl)phthalate	U	399	ug/kg	79.9	399
117-84-0	Di-n-octylphthalate	U	399	ug/kg	79.9	399
205-99-2	Benzo(b)fluoranthene		139	ug/kg	12.0	39.9
207-08-9	Benzo(k)fluoranthene	U	39.9	ug/kg	12.0	39.9
50-32-8	Benzo(a)pyrene		70.0	ug/kg	12.0	39.9
193-39-5	Indeno(1,2,3-cd)pyrene		41.5	ug/kg	12.0	39.9
53-70-3	Dibenzo(a,h)anthracene	U	39.9	ug/kg	12.0	39.9
191-24-2	Benzo(ghi)perylene		43.5	ug/kg	12.0	39.9
120-82-1	1,2,4-Trichlorobenzene	U	399	ug/kg	79.9	399

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	402	ug/kg		J

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Data file : /chem/MSD2.i/s063009.b/s2f3015.d
Lab Smp Id: 232428004 Client Smp ID: CAMO-09-6009
Inj Date : 30-JUN-2009 20:33
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428004|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.17000	weight of sample
M	17.00960	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.046	4.051	(1.000)	187239	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	701112	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	394599	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	672005	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	538740	40.0000	
* 98 Perylene-d12	264	10.491	10.507	(1.000)	401621	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.798)	208459	40.2343	1610
$ 5 Phenol-d5	99	3.752	3.757	(0.927)	276983	43.2917	1730
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	98886	18.6938	747
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	230963	20.7243	828
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	91433	67.6522	2700
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	353615	38.5355	1540

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.020	8.031	(0.903)	55705	3.47348	139
68 Phenanthrene	178	7.164	7.170	(1.002)	20103	1.25627	50.2
76 Fluoranthene	202	7.876	7.886	(1.102)	58681	3.98629	159
89 Benzo(a)anthracene	228	8.865	8.881	(0.998)	19441	1.48317	59.2(H)
92 Chrysene	228	8.897	8.919	(1.002)	26056	2.05980	82.3
95 Benzo(b)fluoranthene	252	9.967	9.988	(0.950)	33610	3.48600	139
97 Benzo(a)pyrene	252	10.411	10.432	(0.992)	14760	1.75219	70.0
99 Indeno(1,2,3-cd)pyrene	276	12.299	12.337	(1.172)	8402	1.03831	41.5
101 Benzo(ghi)perylene	276	12.871	12.903	(1.227)	7659	1.09010	43.5

QC Flag Legend

H - Operator selected an alternate compound hit.

ION RATIO REPORT

SV REPORT

Data file: s2f3015.d
Report Date: 07/01/2009 07:55
Lab. ID: 232428004 SampleType: SAMPLE
Injection Date: 30-JUN-2009 20:33
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428004|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	12957	4.41	4.29	80-120	100	(T)
42	8149	4.41	4.29	40-100	63	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	84874	6.17	5.94	80-120	100	(T)
164	394599	6.17	5.94	0- 40	465	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	51113	6.17	5.99	80-120	100	(T)
63	769	6.17	5.99	46-106	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	51114	6.17	6.27	80-120	100	(T)
89	632	6.17	6.27	38- 98	1	(QT)
63	769	6.17	6.27	16- 76	2	(QT)
53 Fluorene				CAS#: 86-73-7		
166	5579	6.69	6.54	80-120	100	(T)
165	6119	6.69	6.54	61-121	110	(T)
167	1913	6.69	6.54	0- 44	34	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	232	6.70	6.55	80-120	100	(T)
105	579	6.69	6.55	14- 74	249	(QT)
51	609	6.69	6.55	37- 97	262	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	5319	6.70	6.84	80-120	100	(T)
141	36496	6.69	6.84	51-111	686	(QT)
250	10800	6.70	6.84	66-126	203	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	20103	7.16	7.17	80-120	100	( )
179	5028	7.16	7.17	0- 46	25	( )
176	3665	7.16	7.17	0- 49	18	( )
69 Anthracene				CAS#: 120-12-7		
178	3743	7.19	7.20	80-120	100	( )
179	5028	7.16	7.20	0- 46	134	(Q)
176	612	7.20	7.20	0- 48	16	( )
76 Fluoranthene				CAS#: 206-44-0		
202	58681	7.88	7.89	80-120	100	( )
203	10236	7.88	7.89	0- 48	17	( )
101	8196	7.88	7.89	0- 45	14	( )
79 Pyrene				CAS#: 129-00-0		
202	55705	8.02	8.03	80-120	100	( )
200	11374	8.02	8.03	0- 51	20	( )
101	10478	8.02	8.03	0- 48	19	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	26056	8.90	8.88	80-120	100	( )
226	7788	8.90	8.88	0- 56	30	( )
229	6047	8.90	8.88	0- 50	23	( )
92 Chrysene				CAS#: 218-01-9		
228	26056	8.90	8.92	80-120	100	( )
229	6821	8.90	8.92	0- 50	26	( )
226	7788	8.90	8.92	0- 59	30	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	33610	9.97	9.99	80-120	100	( )
253	7334	9.97	9.99	0- 52	22	( )
125	4804	9.97	9.99	0- 45	14	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	33610	9.97	10.02	80-120	100	( )
253	7334	9.97	10.02	0- 52	22	( )
125	4804	9.97	10.02	0- 44	14	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	14760	10.41	10.43	80-120	100	( )
253	3773	10.41	10.43	0- 52	26	( )
125	2392	10.41	10.43	0- 46	16	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	8402	12.30	12.34	80-120	100	( )
138	2880	12.29	12.34	7- 67	34	( )
100 Dibenzo(a,h)anthracene				CAS#: 53-70-3		
278	2144	12.30	12.34	80-120	100	( )
139	633	12.29	12.34	0- 55	30	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	7659	12.87	12.90	80-120	100	( )
138	2696	12.87	12.90	4- 64	35	( )

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s063009.b/s2f3015.d
Lab Smp Id: 232428004 Client Smp ID: CAMO-09-6009
Inj Date : 30-JUN-2009 20:33
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428004|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.17000	weight of sample
M	17.00960	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.046	1114470	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.062	280423	10.0647879	402	0		0	10

Data File: /chem/MSD2.i/s063009.b/s2f3015.d
Date : 30-JUN-2009 20:33
Client ID: CAMO-09-6009
Sample Info: I23242800418813191115VHF1111LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

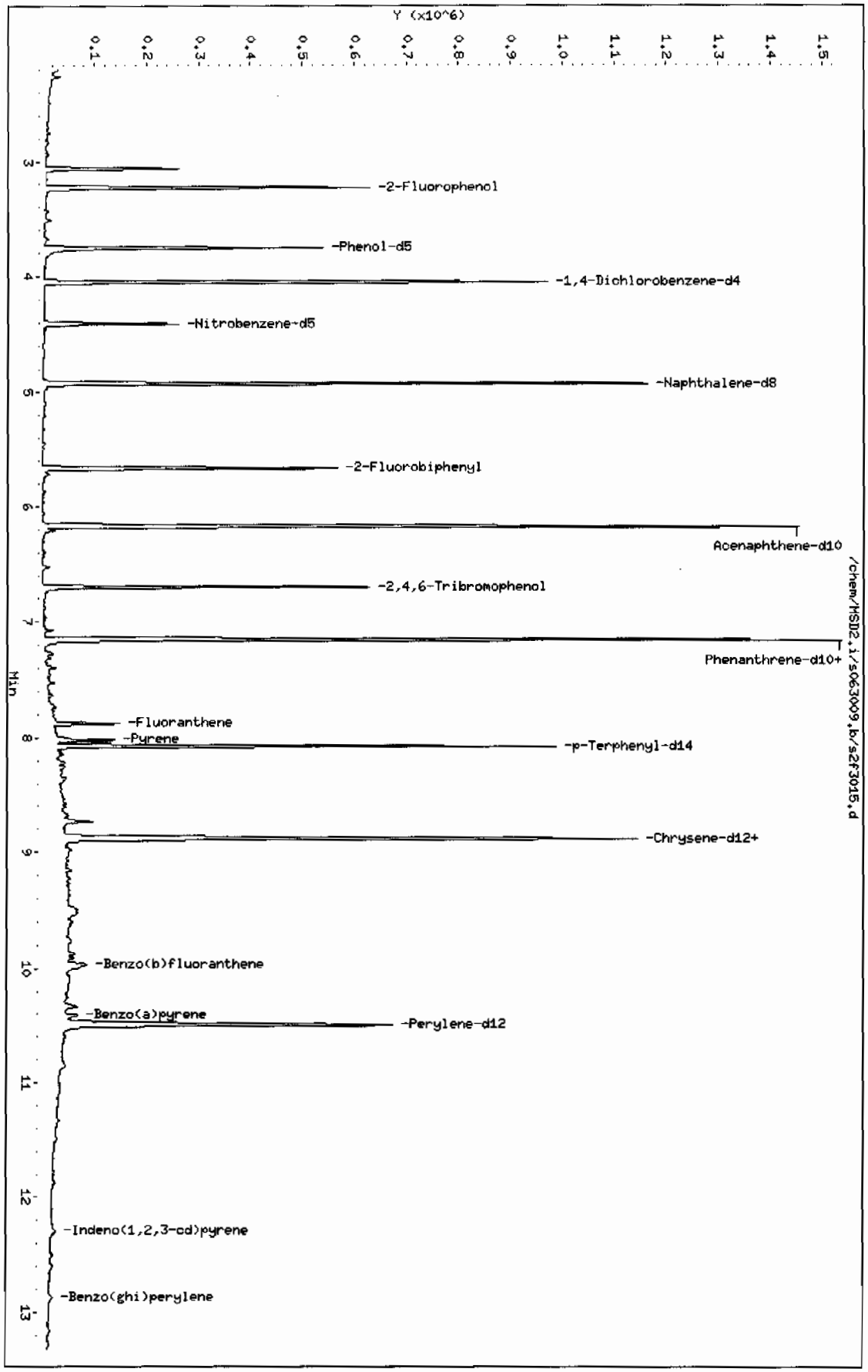

Page 1

Data File: /chem/MSD2.i/s063009.b/s2f3015.d

Date : 30-JUN-2009 20:33

Client ID: CAMO-09-6009

Instrument: MSD2.i

Sample Info: |2324280041881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 139 ug/Kg

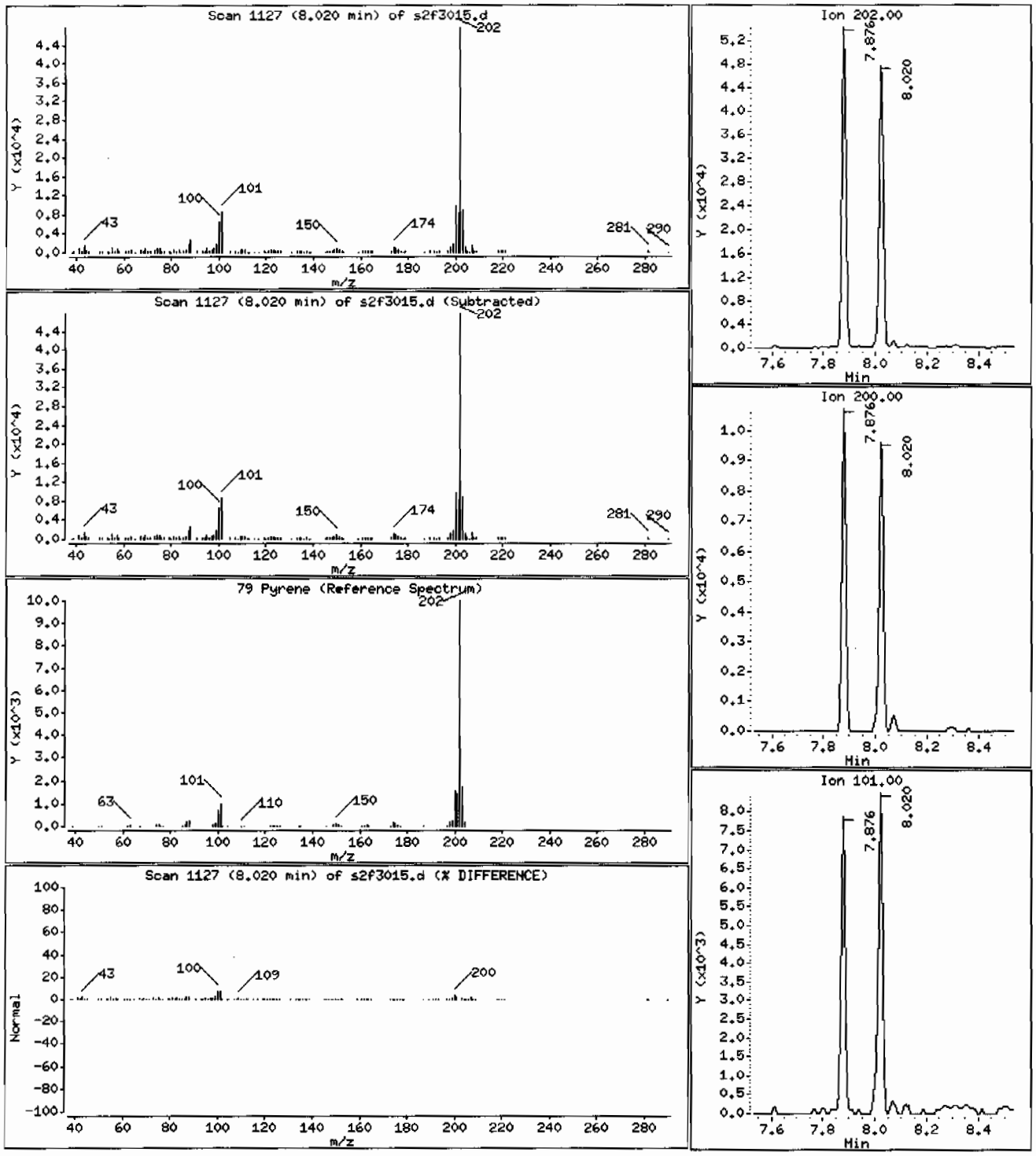

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Date : 30-JUN-2009 20:33

Client ID: CAMO-09-6009

Instrument: MSD2.i

Sample Info: |2324280041881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 50.2 ug/Kg

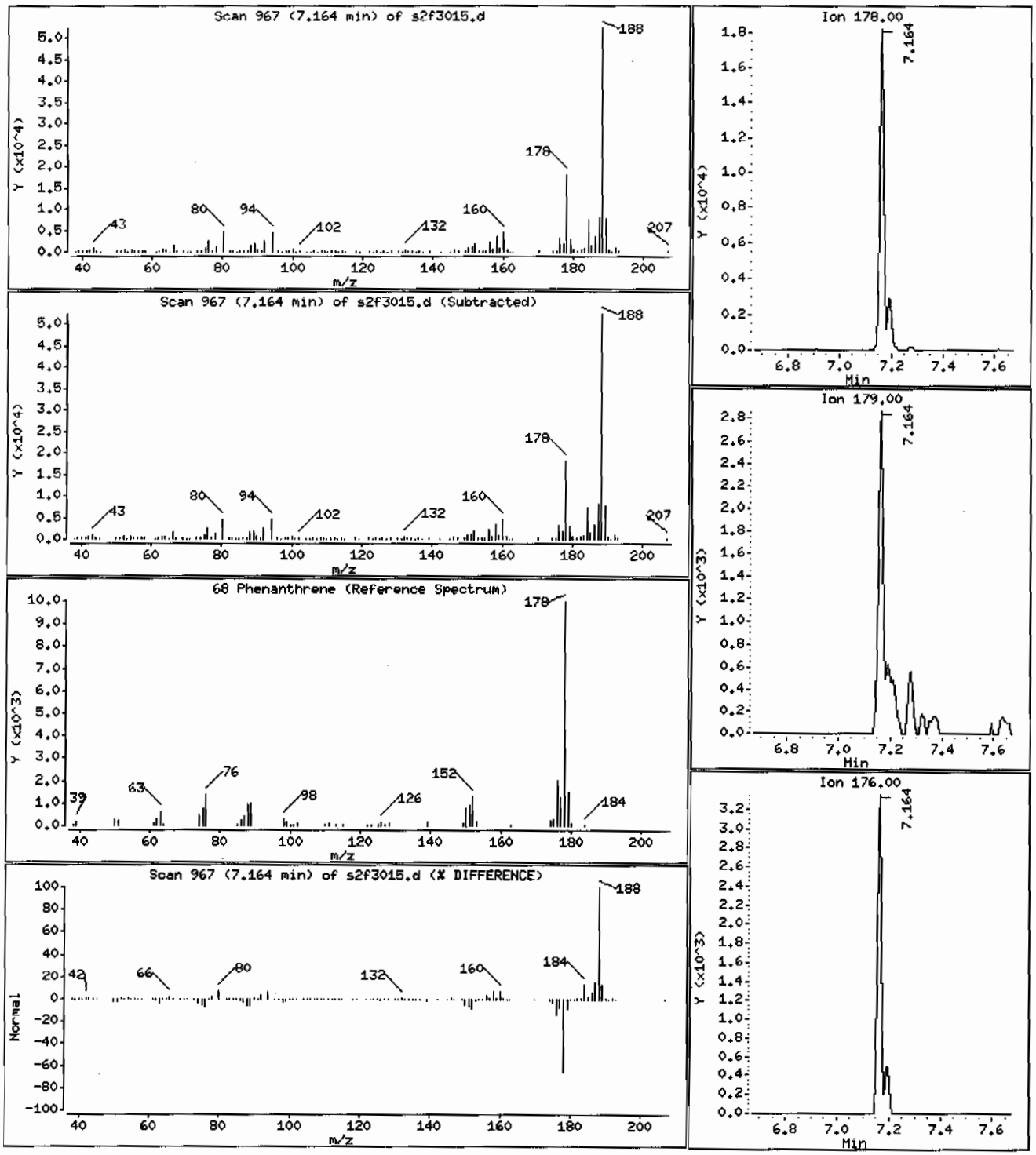

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Date : 30-JUN-2009 20:33

Client ID: CAMD-09-6009

Instrument: MSD2.i

Sample Info: |2324280041881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 159 ug/Kg

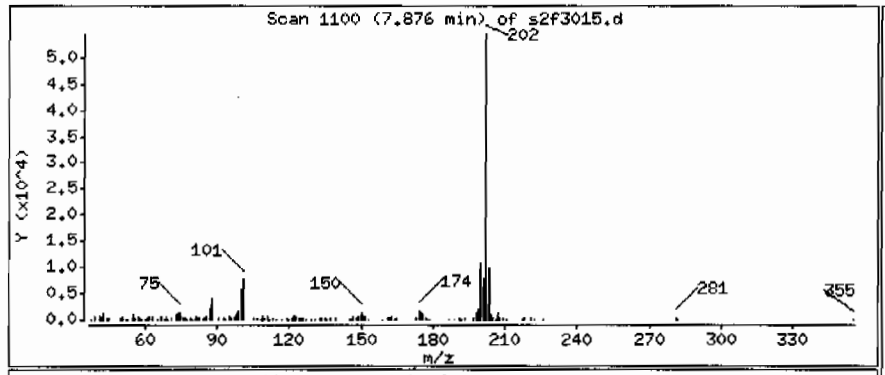

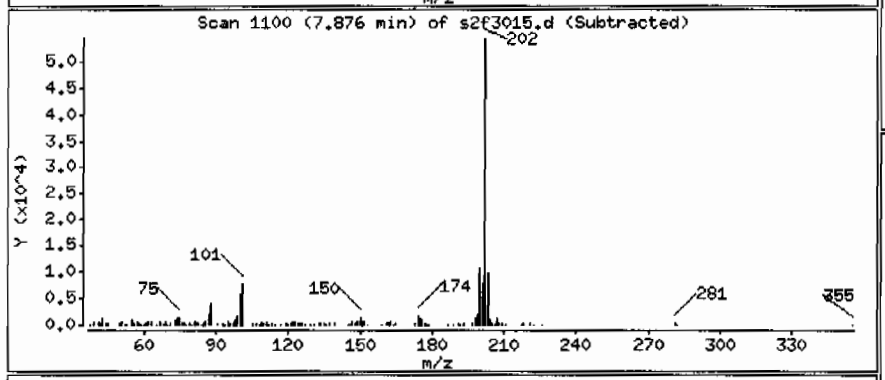

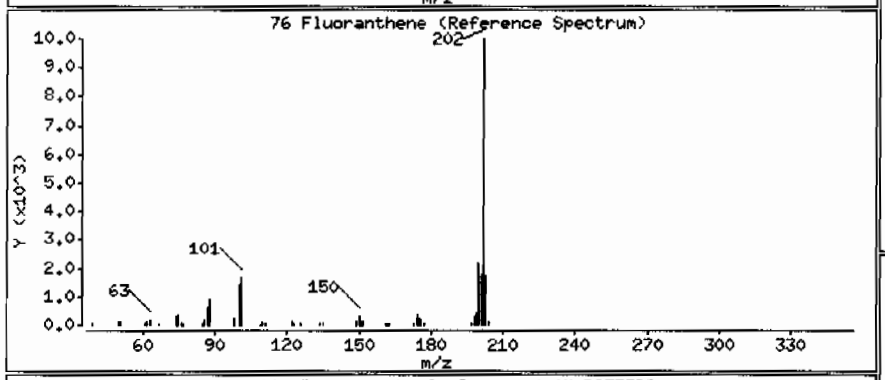

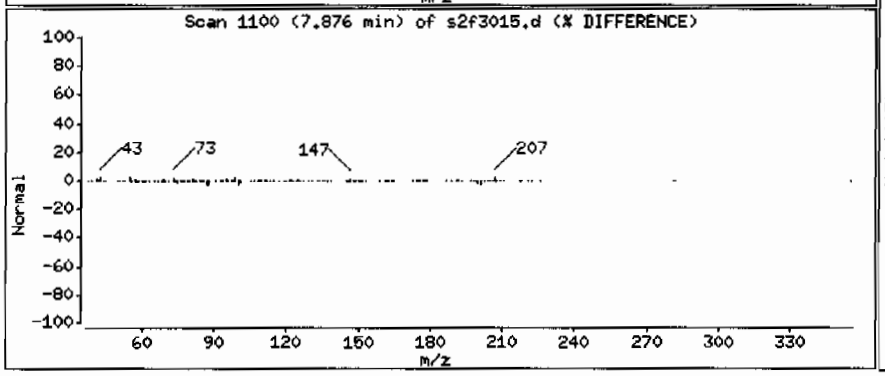

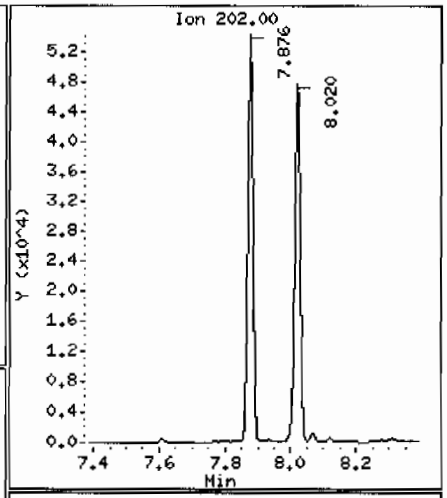

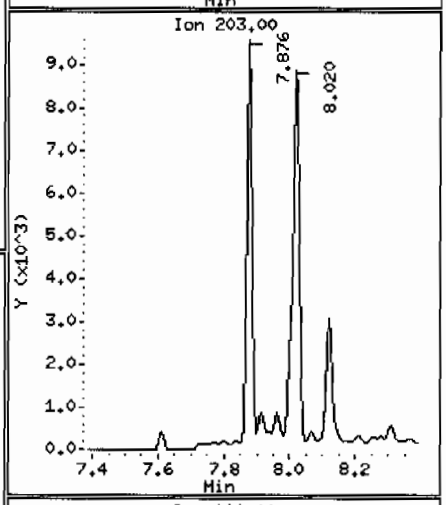

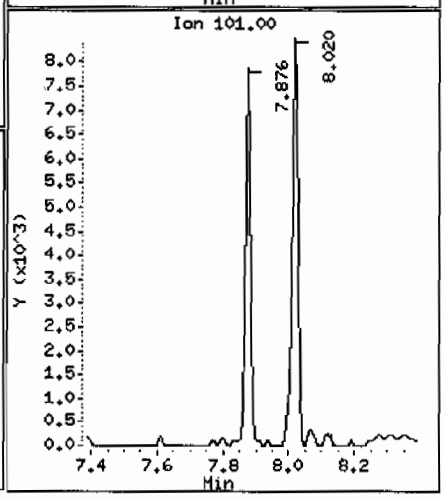

Data File: /chem/MSD2.i/s063009.b/s2f3015.d

Date : 30-JUN-2009 20:33

Client ID: CAMO-09-6009

Instrument: MSD2.i

Sample Info: |232428004|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 59.2 ug/Kg

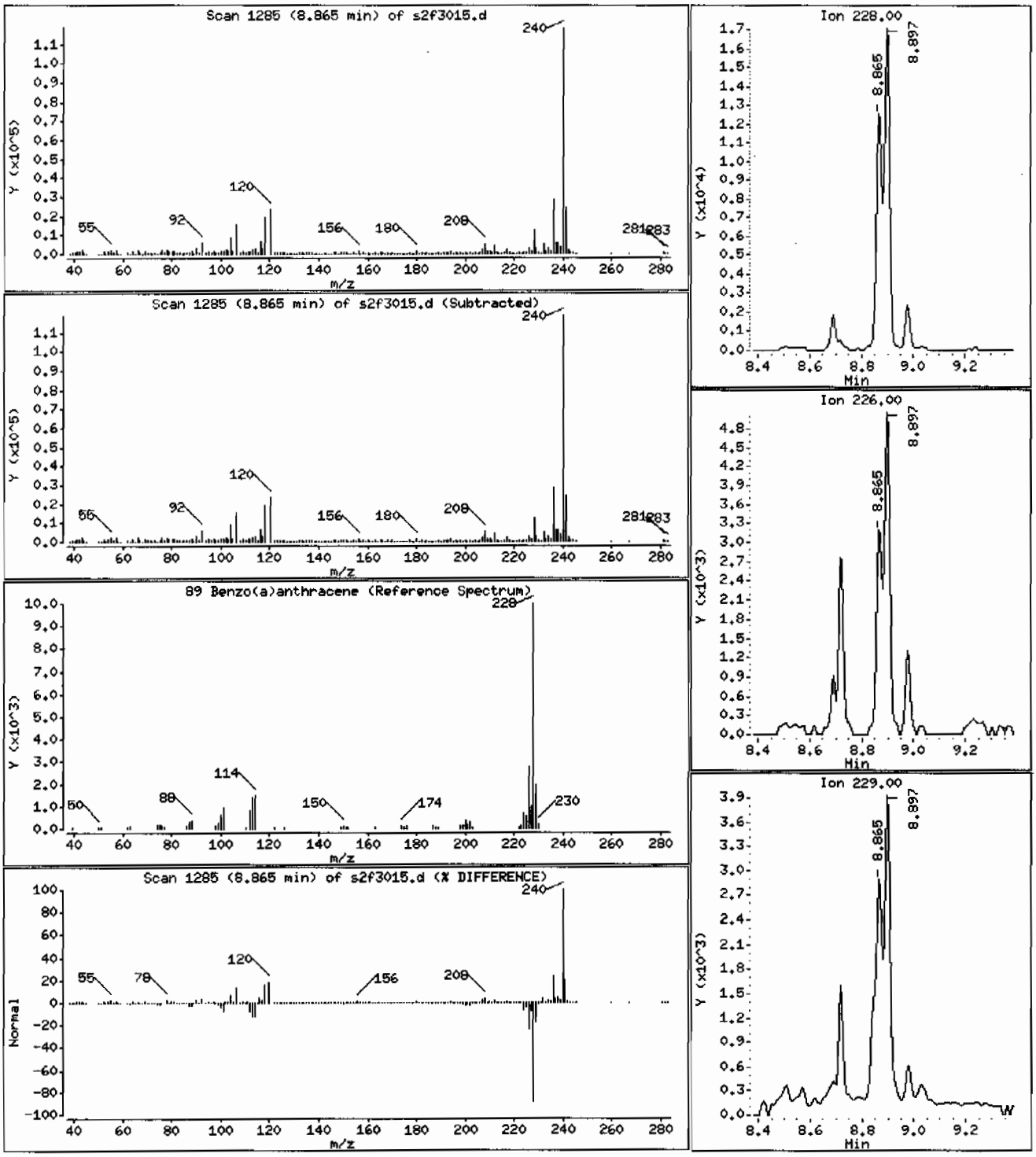

Data File: /chem/MSD2.i/s063009.b/s2f3015.d

Date : 30-JUN-2009 20:33

Client ID: CAMO-09-6009

Instrument: MSD2.i

Sample Info: |2324280041881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 82.3 ug/Kg

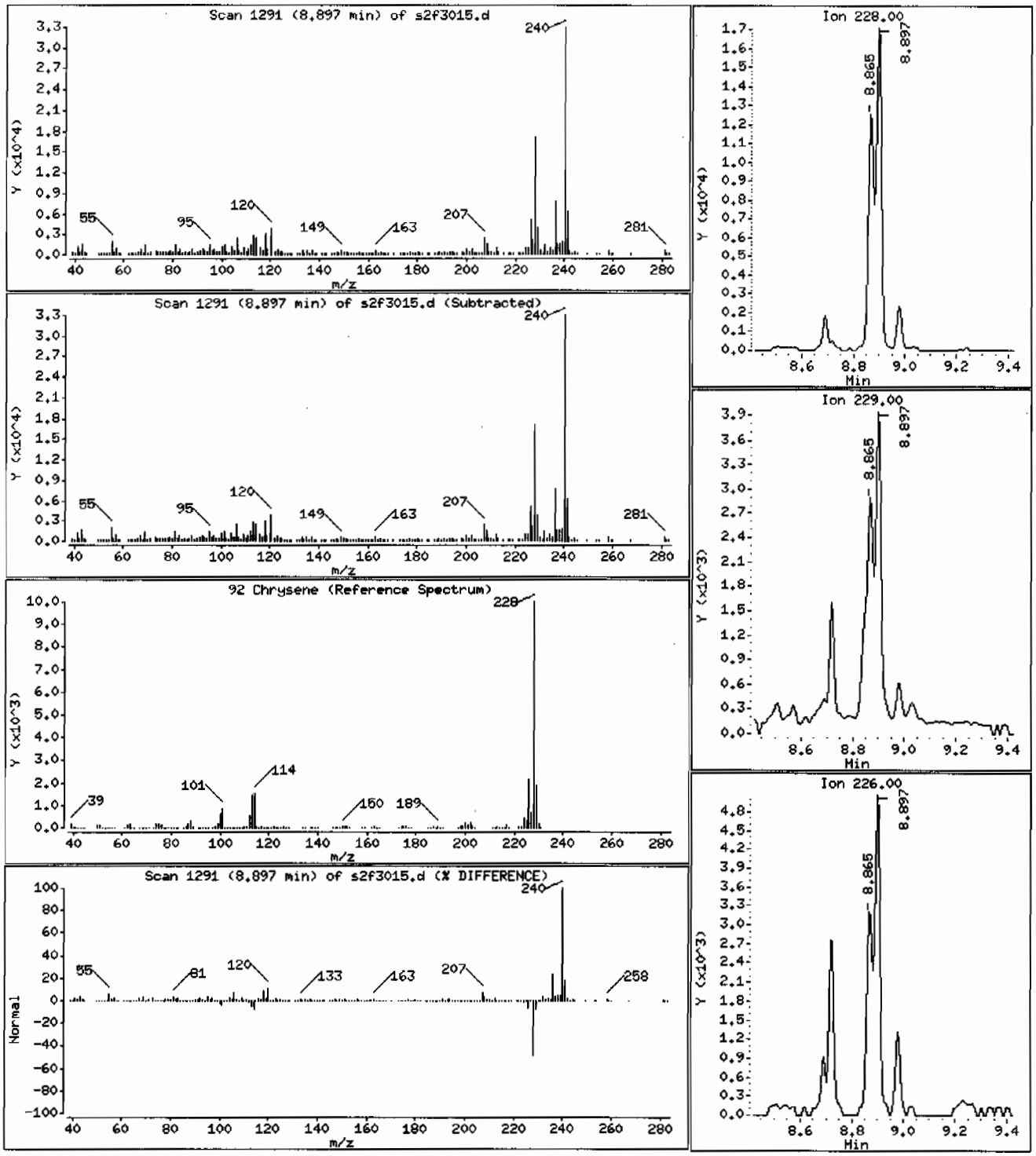

Data File: /chem/MSD2.i/s063009.b/s2f3015.d

Date : 30-JUN-2009 20:33

Client ID: CAMO-09-6009 Instrument: MSD2.i

Sample Info: |232428004|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

95 Benzo(b)fluoranthene Concentration: 139 ug/Kg

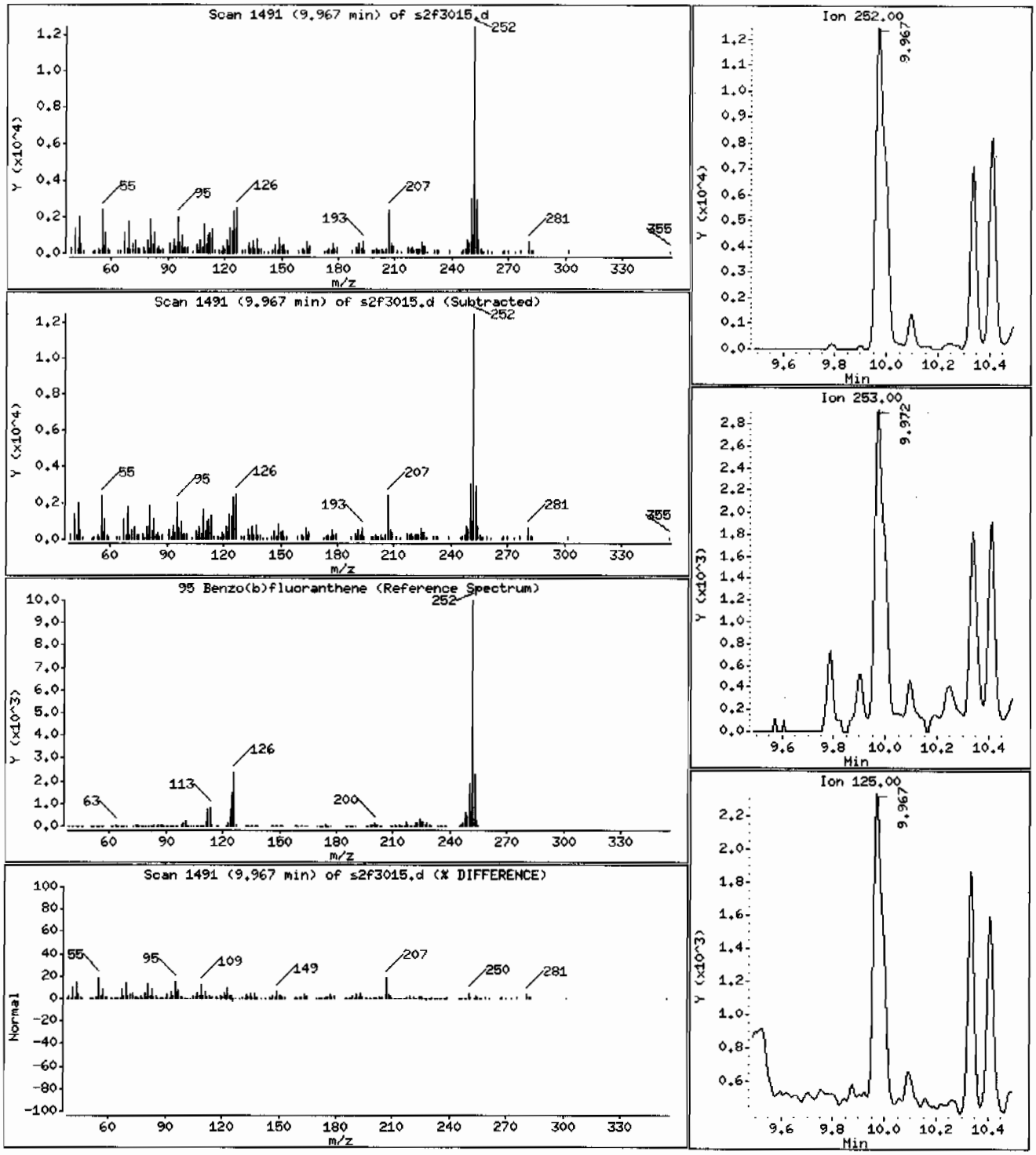

Data File: /chem/MSD2.i/s063009.b/s2f3015.d

Date : 30-JUN-2009 20:33

Client ID: CAMO-09-6009

Instrument: MSD2.i

Sample Info: 1232428004188131911ISVMF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 70.0 ug/Kg

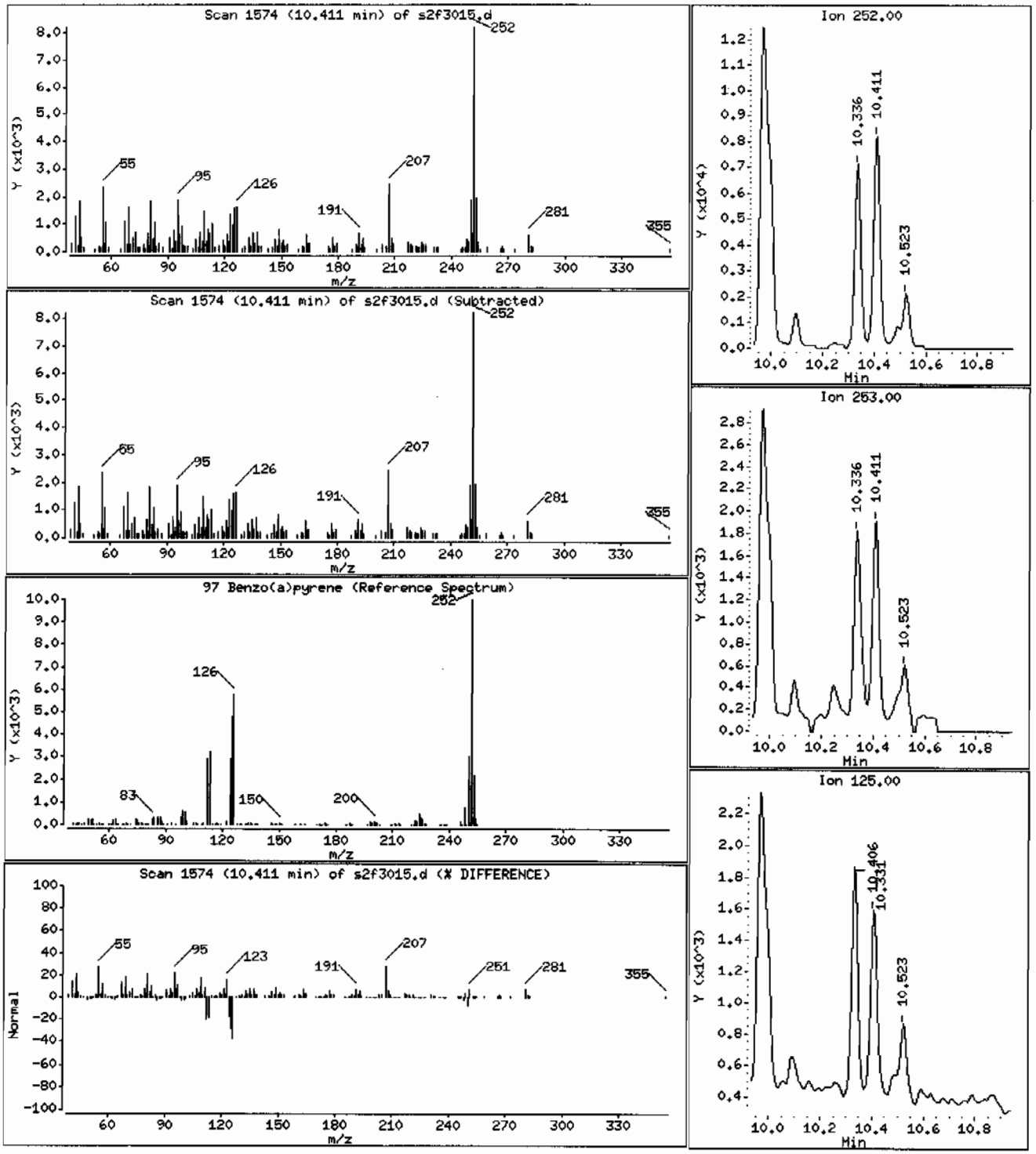

Data File: /chem/MSD2.i/s063009.b/s2f3015.d

Date : 30-JUN-2009 20:33

Client ID: CAMO-09-6009

Instrument: MSD2.i

Sample Info: 1232428004|881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 41.5 ug/Kg

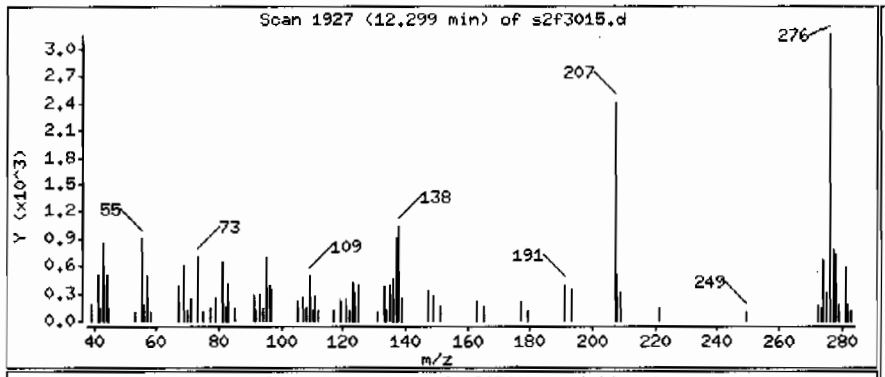

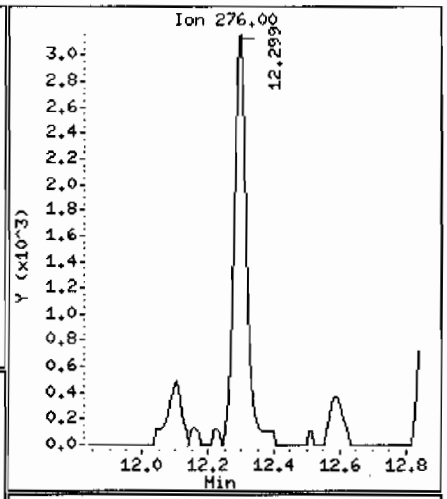

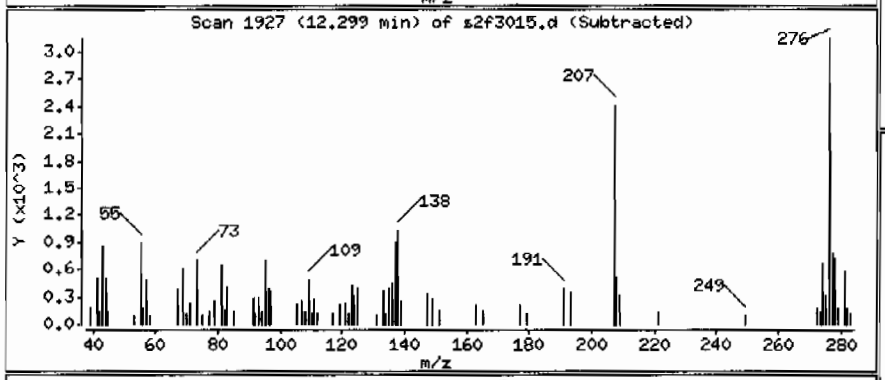

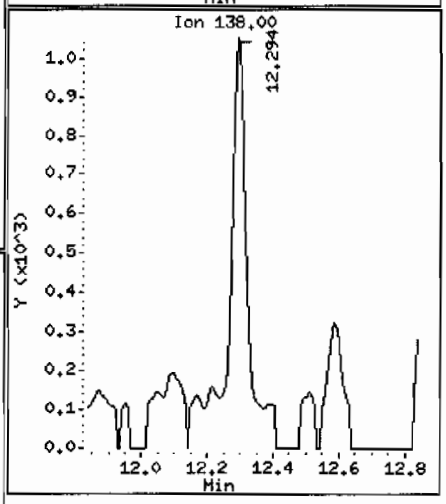

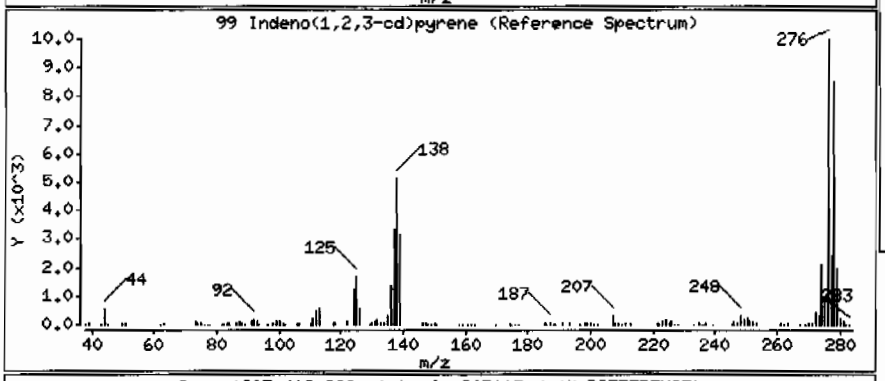

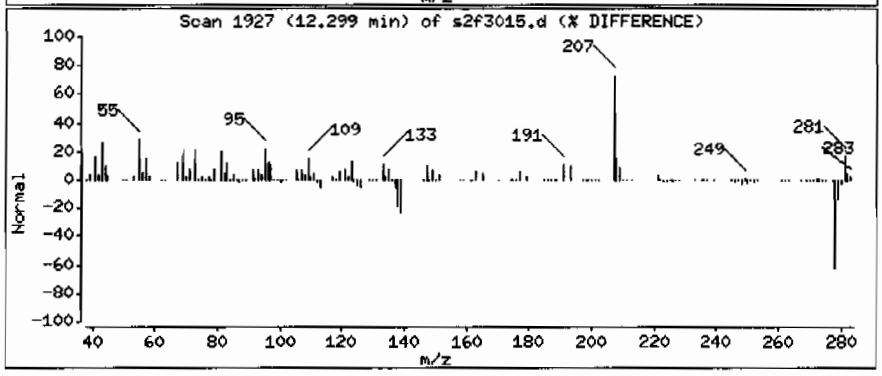

Data File: /chem/MSD2.i/s063009.b/s2f3015.d

Date : 30-JUN-2009 20:33

Client ID: CAMO-09-6009

Instrument: MSD2.i

Sample Info: 1232428004|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 43.5 ug/Kg

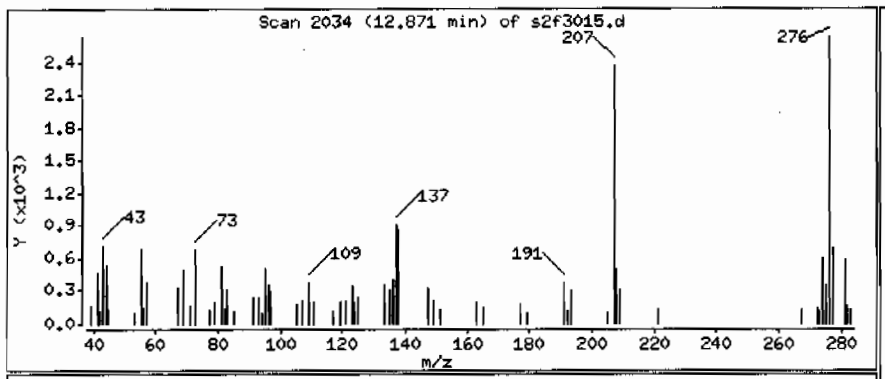

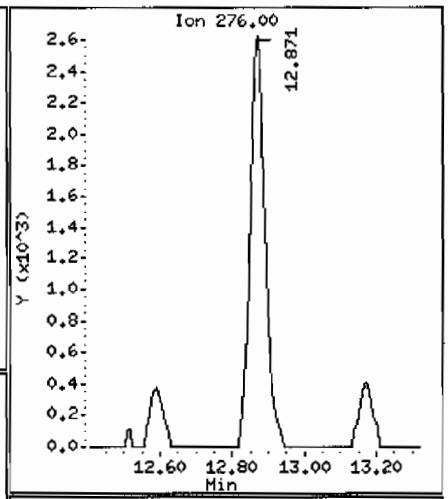

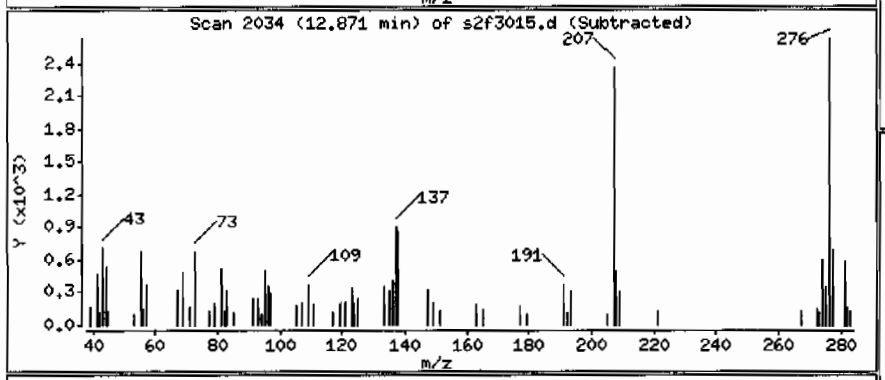

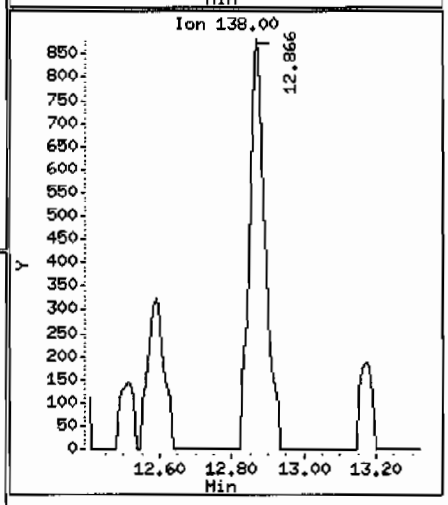

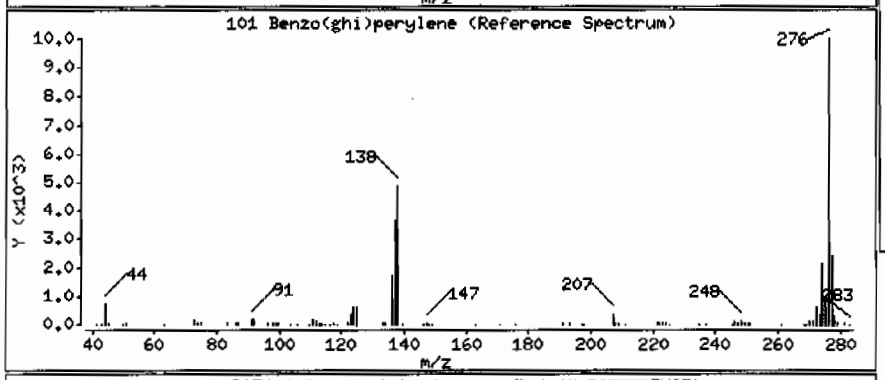

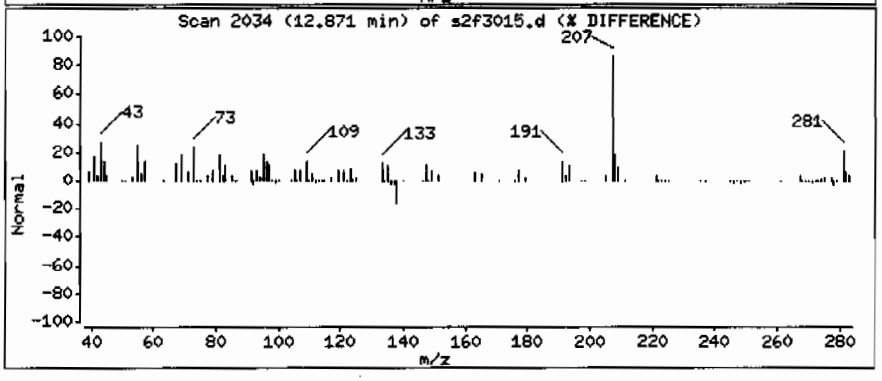

Data File: /chem/MSD2.i/s063009.b/s2f3015.d

Date : 30-JUN-2009 20:33

Client ID: CAMO-09-6009

Instrument: MSD2.i

Sample Info: |2324280041881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

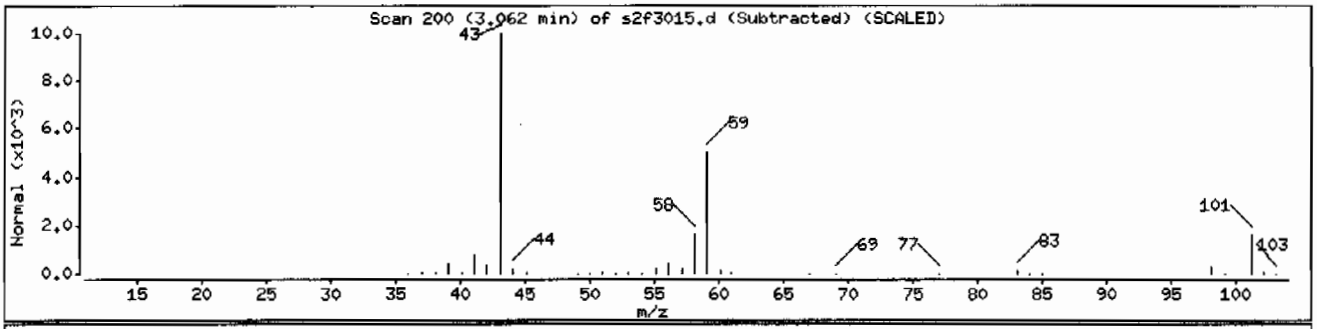

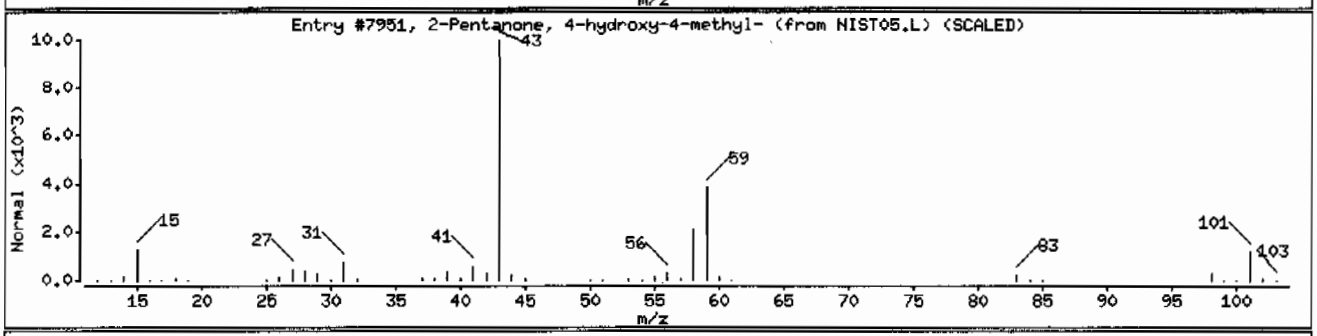

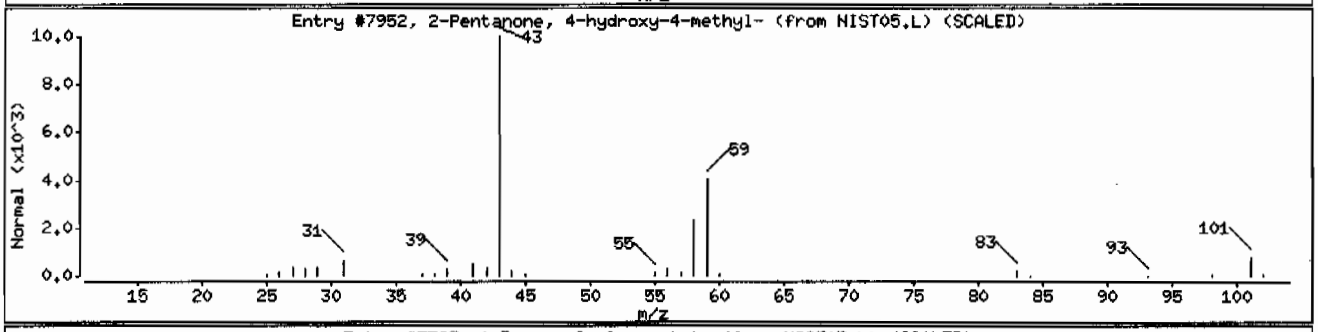

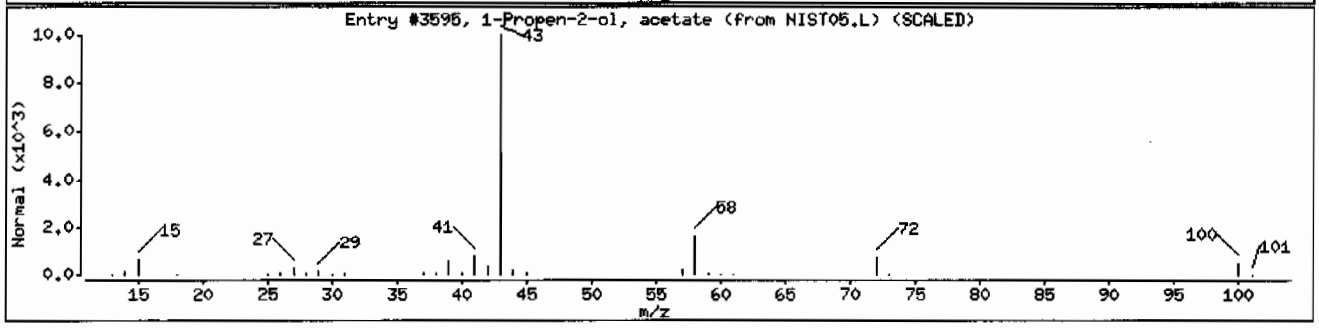

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428005	**Date Received:**	06/26/2009 08:40	**%Moisture:**	22.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6034	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 20:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3016.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	428	ug/kg	85.6	428
108-95-2	Phenol	U	428	ug/kg	85.6	428
95-57-8	2-Chlorophenol	U	428	ug/kg	85.6	428
106-46-7	1,4-Dichlorobenzene	U	428	ug/kg	85.6	428
621-64-7	N-Nitrosodipropylamine	U	428	ug/kg	85.6	428
59-50-7	4-Chloro-3-methylphenol	U	428	ug/kg	42.8	428
83-32-9	Acenaphthene	J	19.1	ug/kg	14.3	42.8
121-14-2	2,4-Dinitrotoluene	U	428	ug/kg	42.8	428
100-02-7	4-Nitrophenol	U	428	ug/kg	85.6	428
87-86-5	Pentachlorophenol	U	428	ug/kg	85.6	428
129-00-0	Pyrene		363	ug/kg	13.4	42.8
110-86-1	Pyridine	U	428	ug/kg	85.6	428
62-53-3	Aniline	U	428	ug/kg	150	428
111-44-4	bis(2-Chloroethyl) ether	U	428	ug/kg	85.6	428
541-73-1	1,3-Dichlorobenzene	U	428	ug/kg	85.6	428
100-51-6	Benzyl alcohol	U	428	ug/kg	128	428
95-50-1	1,2-Dichlorobenzene	U	428	ug/kg	85.6	428
108-60-1	bis(2-Chloroisopropyl)ether	U	428	ug/kg	85.6	428
95-48-7	o-Cresol	U	428	ug/kg	85.6	428
65794-96-9	m,p-Cresols	U	428	ug/kg	171	428
67-72-1	Hexachloroethane	U	428	ug/kg	85.6	428
98-95-3	Nitrobenzene	U	428	ug/kg	85.6	428
78-59-1	Isophorone	U	428	ug/kg	85.6	428
88-75-5	2-Nitrophenol	U	428	ug/kg	42.8	428
105-67-9	2,4-Dimethylphenol	U	428	ug/kg	85.6	428
111-91-1	bis(2-Chloroethoxy)methane	U	428	ug/kg	85.6	428
120-83-2	2,4-Dichlorophenol	U	428	ug/kg	85.6	428
65-85-0	Benzoic acid	U	856	ug/kg	214	856
91-20-3	Naphthalene	U	42.8	ug/kg	12.8	42.8
106-47-8	4-Chloroaniline	U	428	ug/kg	85.6	428
87-68-3	Hexachlorobutadiene	U	428	ug/kg	85.6	428
91-57-6	2-Methylnaphthalene	U	42.8	ug/kg	8.56	42.8
77-47-4	Hexachlorocyclopentadiene	U	428	ug/kg	85.6	428
88-06-2	2,4,6-Trichlorophenol	U	428	ug/kg	85.6	428
95-95-4	2,4,5-Trichlorophenol	U	428	ug/kg	85.6	428
91-58-7	2-Chloronaphthalene	U	42.8	ug/kg	15.0	42.8
88-74-4	2-Nitroaniline	U	428	ug/kg	85.6	428
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	428	ug/kg	85.6	428

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428005	**Date Received:**	06/26/2009 08:40	**%Moisture:**	22.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6034	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 20:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3016.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	428	ug/kg	85.6	428
606-20-2	2,6-Dinitrotoluene	U	428	ug/kg	42.8	428
208-96-8	Acenaphthylene	U	42.8	ug/kg	12.8	42.8
51-28-5	2,4-Dinitrophenol	U	856	ug/kg	163	856
132-64-9	Dibenzofuran	U	428	ug/kg	85.6	428
84-66-2	Diethylphthalate	U	428	ug/kg	85.6	428
86-73-7	Fluorene	J	12.9	ug/kg	12.8	42.8
7005-72-3	4-Chlorophenylphenylether	U	428	ug/kg	42.8	428
534-52-1	2-Methyl-4,6-dinitrophenol	U	428	ug/kg	85.6	428
100-01-6	4-Nitroaniline	U	428	ug/kg	85.6	428
	p-Nitroaniline					
122-39-4	Diphenylamine	U	428	ug/kg	85.6	428
122-66-7	Azobenzene	U	428	ug/kg	85.6	428
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	428	ug/kg	42.8	428
118-74-1	Hexachlorobenzene	U	428	ug/kg	85.6	428
85-01-8	Phenanthrene		150	ug/kg	12.8	42.8
120-12-7	Anthracene	U	42.8	ug/kg	8.56	42.8
84-74-2	Di-n-butylphthalate	U	428	ug/kg	42.8	428
206-44-0	Fluoranthene		415	ug/kg	12.8	42.8
85-68-7	Butylbenzylphthalate	U	428	ug/kg	85.6	428
56-55-3	Benzo(a)anthracene		156	ug/kg	12.8	42.8
91-94-1	3,3'-Dichlorobenzidine	U	428	ug/kg	128	428
218-01-9	Chrysene		194	ug/kg	12.8	42.8
117-81-7	bis(2-Ethylhexyl)phthalate	J	91.8	ug/kg	85.6	428
117-84-0	Di-n-octylphthalate	U	428	ug/kg	85.6	428
205-99-2	Benzo(b)fluoranthene		359	ug/kg	12.8	42.8
207-08-9	Benzo(k)fluoranthene	U	42.8	ug/kg	12.8	42.8
50-32-8	Benzo(a)pyrene		175	ug/kg	12.8	42.8
193-39-5	Indeno(1,2,3-cd)pyrene		96.6	ug/kg	12.8	42.8
53-70-3	Dibenzo(a,h)anthracene	J	29.3	ug/kg	12.8	42.8
191-24-2	Benzo(ghi)perylene		97.3	ug/kg	12.8	42.8
120-82-1	1,2,4-Trichlorobenzene	U	428	ug/kg	85.6	428

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	385	ug/kg		J
	Unknown	8.33	178	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428005	**Date Received:**	06/26/2009 08:40	**%Moisture:**	22.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6034	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 20:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3016.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	327	ug/kg	99	NJ
	Unknown	11.19	186	ug/kg		J
	Unknown	12.51	237	ug/kg		J

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s063009.b/s2f3016.d
Lab Smp Id: 232428005 Client Smp ID: CAMO-09-6034
Inj Date : 30-JUN-2009 20:53
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428005|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.12000	weight of sample
M	22.39810	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	188676	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	716189	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	400738	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	695974	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	548946	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	380363	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	284696	54.5301	2330
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	347496	53.8990	2300
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	148625	27.5052	1180
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	324049	28.6315	1220
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	87598	63.8218	2730
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	332881	35.6016	1520

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
47 Acenaphthene	154	6.191	6.196	(1.003)	4665	0.44606	19.1(a)
79 Pyrene	202	8.026	8.031	(0.904)	138730	8.48967	363
53 Fluorene	166	6.539	6.544	(1.060)	3432	0.30228	12.9(aH)
68 Phenanthrene	178	7.164	7.170	(1.002)	57932	3.49557	150
76 Fluoranthene	202	7.876	7.886	(1.102)	147780	9.69318	415
89 Benzo(a)anthracene	228	8.871	8.881	(0.999)	48739	3.64921	156
92 Chrysene	228	8.903	8.919	(1.002)	58333	4.52565	194
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.984)	21613	2.14624	91.8(a)
95 Benzo(b)fluoranthene	252	9.978	9.988	(0.951)	76716	8.40163	359
97 Benzo(a)pyrene	252	10.416	10.432	(0.992)	32692	4.09783	175
99 Indeno(1,2,3-cd)pyrene	276	12.304	12.337	(1.172)	17303	2.25780	96.6
100 Dibenzo(a,h)anthracene	278	12.310	12.342	(1.173)	4205	0.68379	29.2(a)
101 Benzo(ghi)perylene	276	12.877	12.903	(1.227)	15140	2.27529	97.3

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

ION RATIO REPORT

SV REPORT

Data file: s2f3016.d
Report Date: 07/01/2009 07:55
Lab. ID: 232428005 SampleType: SAMPLE
Injection Date: 30-JUN-2009 20:53
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428005|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	16218	3.75	3.83	80-120	100	(T)
93	4563	3.73	3.83	440-500	28	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	20143	4.41	4.29	80-120	100	(T)
42	12402	4.41	4.29	40-100	62	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	85913	6.17	5.94	80-120	100	(T)
164	400738	6.17	5.94	0- 40	466	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	52010	6.17	5.99	80-120	100	(T)
63	984	6.17	5.99	46-106	2	(QT)
47 Acenaphthene				CAS#: 83-32-9		
154	4665	6.19	6.20	80-120	100	( )
153	3958	6.19	6.20	69-129	85	( )
152	2271	6.19	6.20	17- 77	49	( )
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	52084	6.17	6.27	80-120	100	(T)
89	812	6.17	6.27	38- 98	2	(QT)
63	1946	6.17	6.27	16- 76	4	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
53 Fluorene			CAS#: 86-73-7			
166	3432	6.54	6.54	80-120	100	( )
165	3885	6.54	6.54	61-121	113	( )
167	581	6.54	6.54	0- 44	17	( )
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	325	6.69	6.55	80-120	100	(T)
105	582	6.69	6.55	14- 74	179	(QT)
51	572	6.69	6.55	37- 97	176	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	5046	6.70	6.84	80-120	100	(T)
141	36154	6.69	6.84	51-111	716	(QT)
250	10328	6.70	6.84	66-126	205	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	57932	7.16	7.17	80-120	100	( )
179	14521	7.16	7.17	0- 46	25	( )
176	10795	7.16	7.17	0- 49	19	( )
69 Anthracene			CAS#: 120-12-7			
178	10646	7.19	7.20	80-120	100	( )
179	14521	7.16	7.20	0- 46	136	(Q)
176	1904	7.19	7.20	0- 48	18	( )
76 Fluoranthene			CAS#: 206-44-0			
202	147780	7.88	7.89	80-120	100	( )
203	26053	7.88	7.89	0- 48	18	( )
101	21538	7.88	7.89	0- 45	15	( )
79 Pyrene			CAS#: 129-00-0			
202	138730	8.03	8.03	80-120	100	( )
200	28259	8.03	8.03	0- 51	20	( )
101	25448	8.03	8.03	0- 48	18	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	48739	8.87	8.88	80-120	100	( )
226	11323	8.87	8.88	0- 56	23	( )
229	15597	8.87	8.88	0- 50	32	( )
92 Chrysene			CAS#: 218-01-9			
228	58333	8.90	8.92	80-120	100	( )
229	14307	8.90	8.92	0- 50	25	( )
226	17412	8.90	8.92	0- 59	30	( )
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	21613	8.74	8.75	80-120	100	( )
167	9629	8.74	8.75	2- 62	45	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	76716	9.98	9.99	80-120	100	( )
253	17420	9.98	9.99	0- 52	23	( )
125	11183	9.98	9.99	0- 45	15	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	76716	9.98	10.02	80-120	100	( )
253	17464	9.98	10.02	0- 52	23	( )
125	11183	9.98	10.02	0- 44	15	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	32692	10.42	10.43	80-120	100	( )
253	7875	10.42	10.43	0- 52	24	( )
125	4371	10.41	10.43	0- 46	13	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	17303	12.30	12.34	80-120	100	( )
138	4836	12.30	12.34	7- 67	28	( )
100 Dibenzo(a,h)anthracene				CAS#: 53-70-3		
278	4205	12.31	12.34	80-120	100	( )
139	577	12.32	12.34	0- 55	14	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	15140	12.88	12.90	80-120	100	( )
138	4780	12.87	12.90	4- 64	32	( )

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s063009.b/s2f3016.d
Lab Smp Id: 232428005 Client Smp ID: CAMO-09-6034
Inj Date : 30-JUN-2009 20:53
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428005|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.12000	weight of sample
M	22.39810	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.051	1137753	40.000
* 91 Chrysene-d12	8.881	2269707	40.000
* 98 Perylene-d12	10.497	1111442	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.062	256145	9.00529617	385	0		0	10
Unknown				CAS #:			
8.325	236126	4.16134592	178	0		0	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1740-19-8			
8.657	434131	7.65086881	327	99	NIST05.L	125036	91
Unknown				CAS #:			
11.192	120693	4.34365049	186	0		0	98
Unknown				CAS #:			
12.508	153694	5.53132774	237	0		0	98

Data File: /chem/MSD2.i/s063009.b/s2f3016.d
Date : 30-JUN-2009 20:53
Client ID: CAMD-09-6034
Sample Info: 1232428005188131911|SVMF14||LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

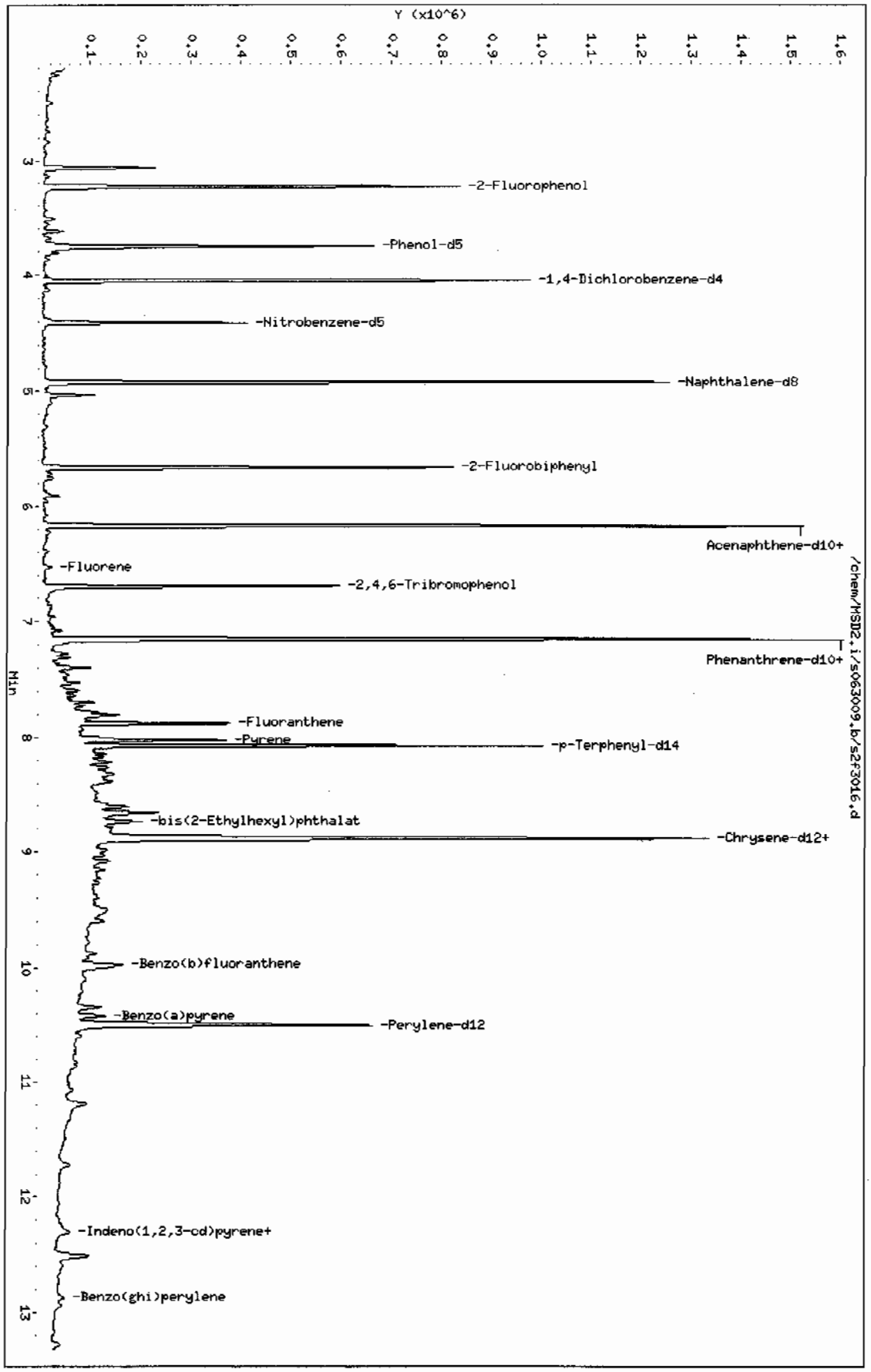

Page 1

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034

Instrument: MSD2.i

Sample Info: |2324280005|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

47 Acenaphthene

Concentration: 19.1 ug/Kg

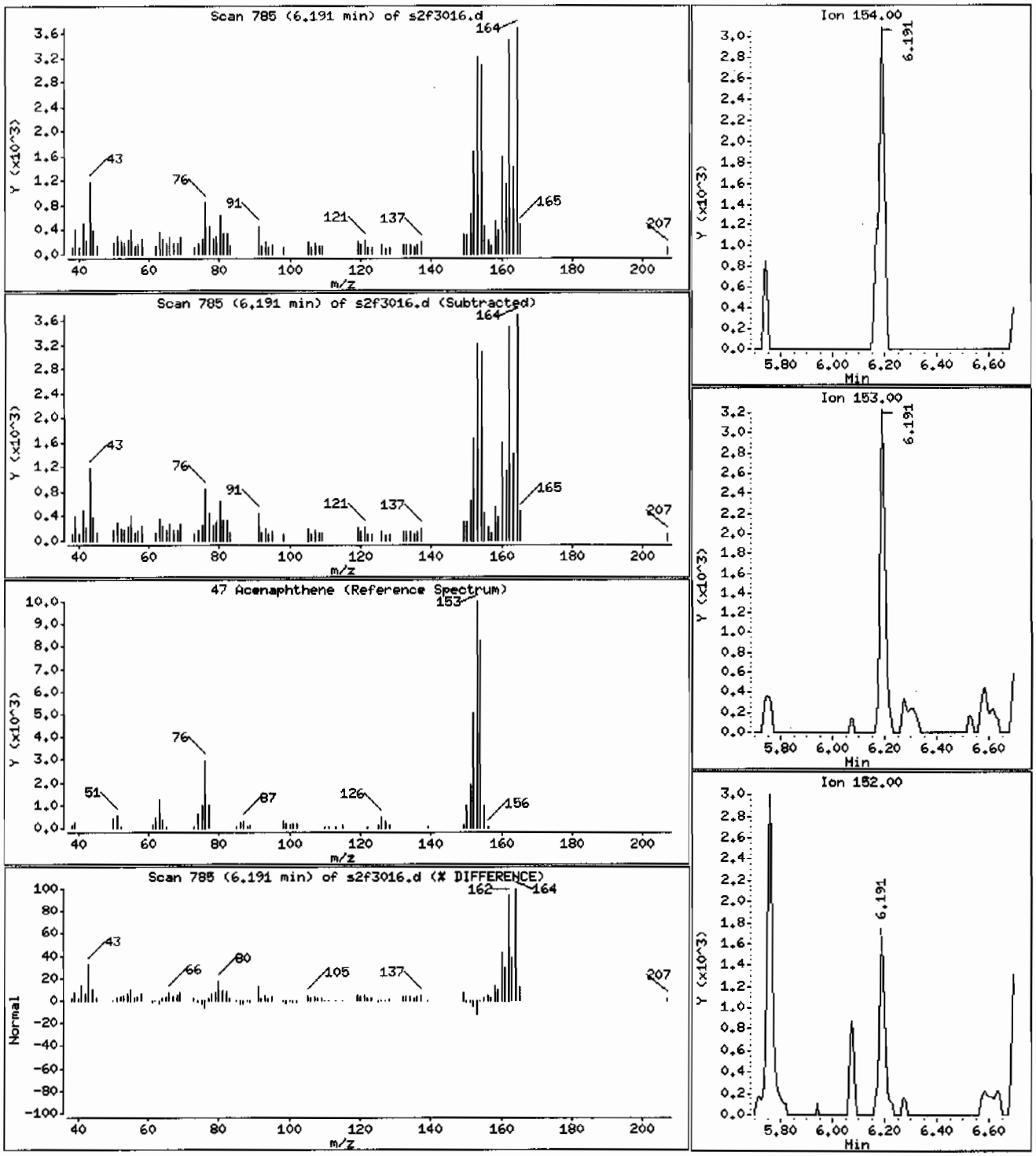

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAHO-09-6034 Instrument: MSD2.i

Sample Info: |2324280051881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

79 Pyrene Concentration: 363 ug/Kg

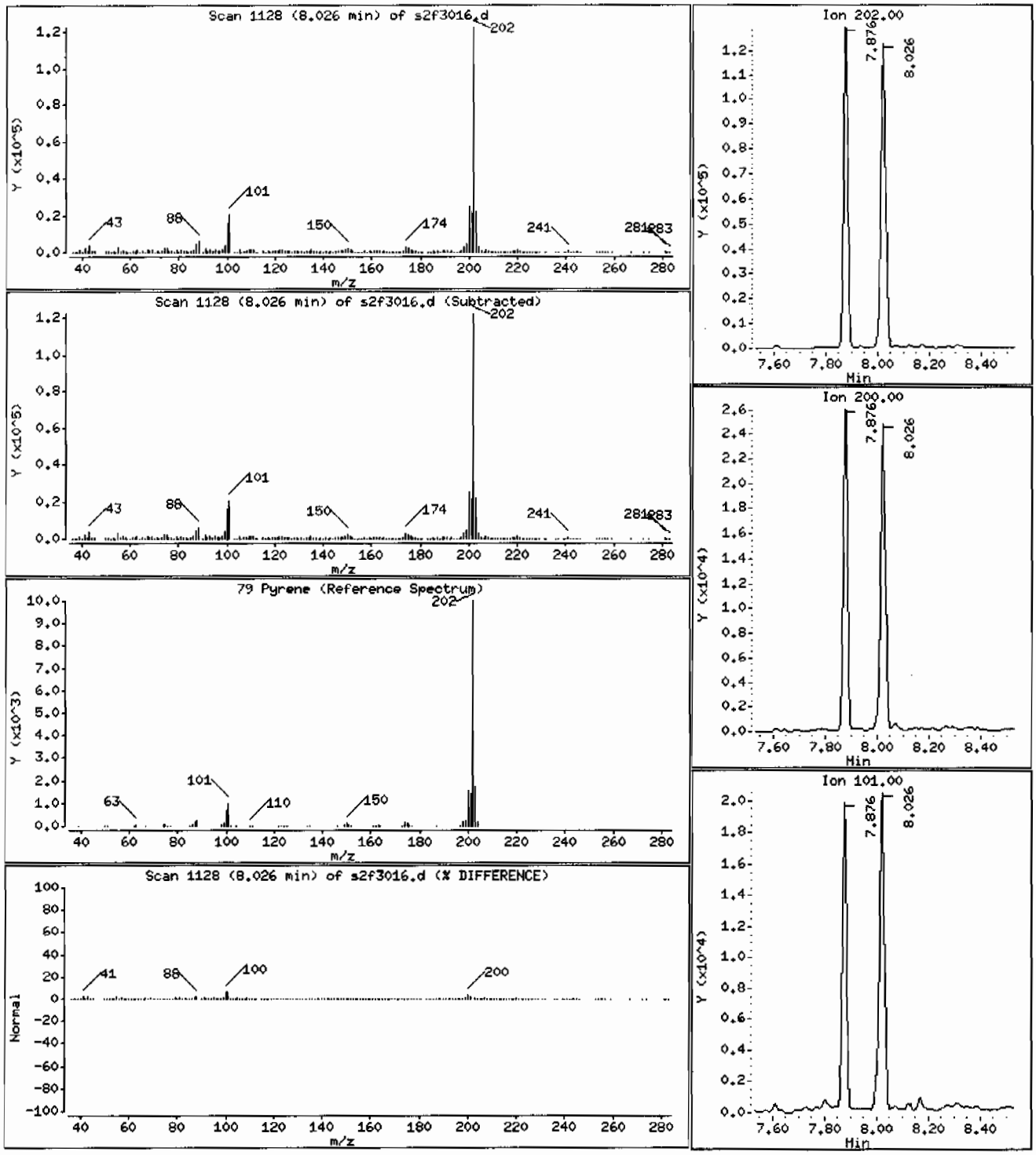

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034

Instrument: MSD2.i

Sample Info: |2324280051881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

53 Fluorene

Concentration: 12.9 ug/Kg

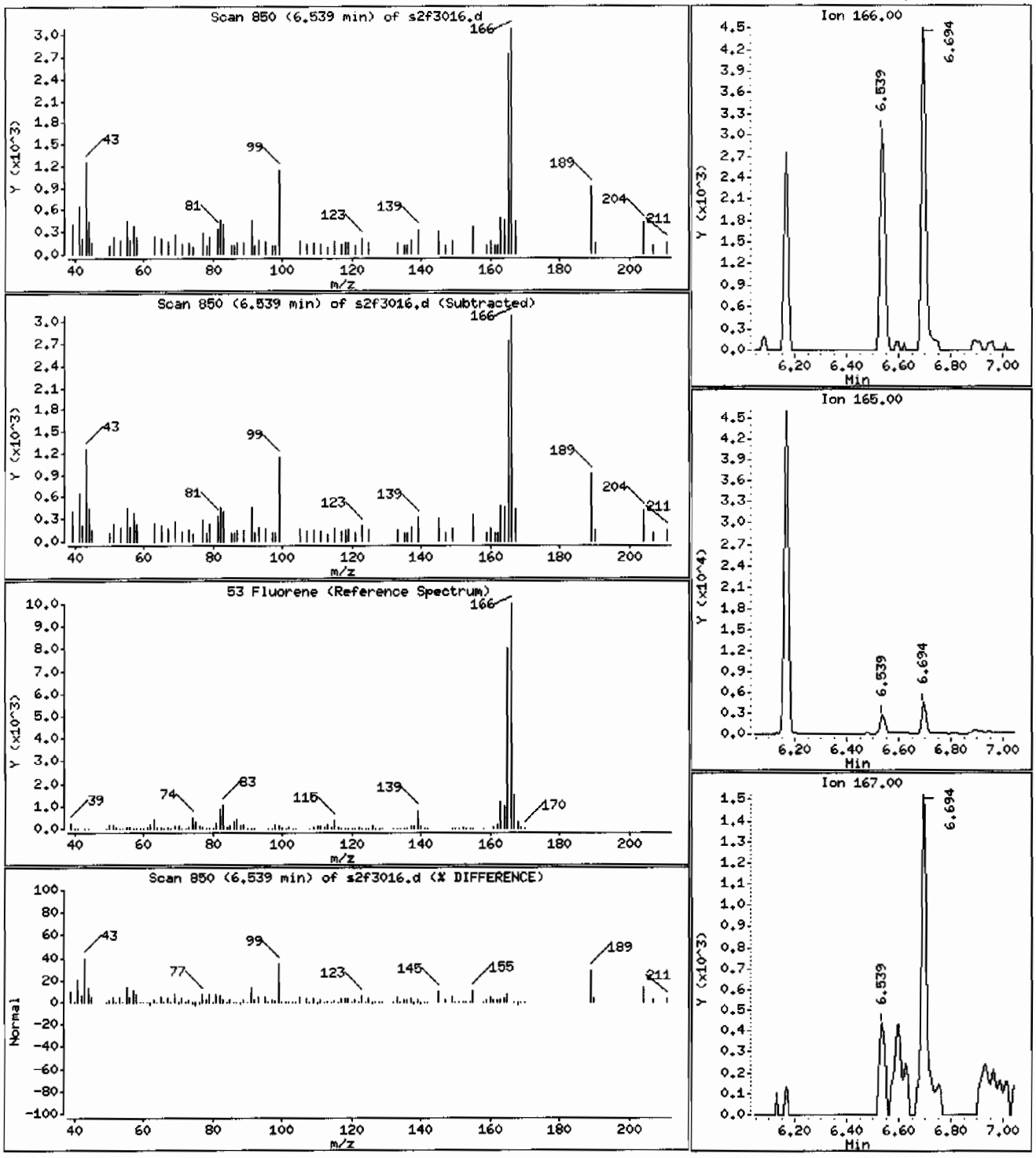

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034

Instrument: MSD2.i

Sample Info: |2324280051881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 150 ug/Kg

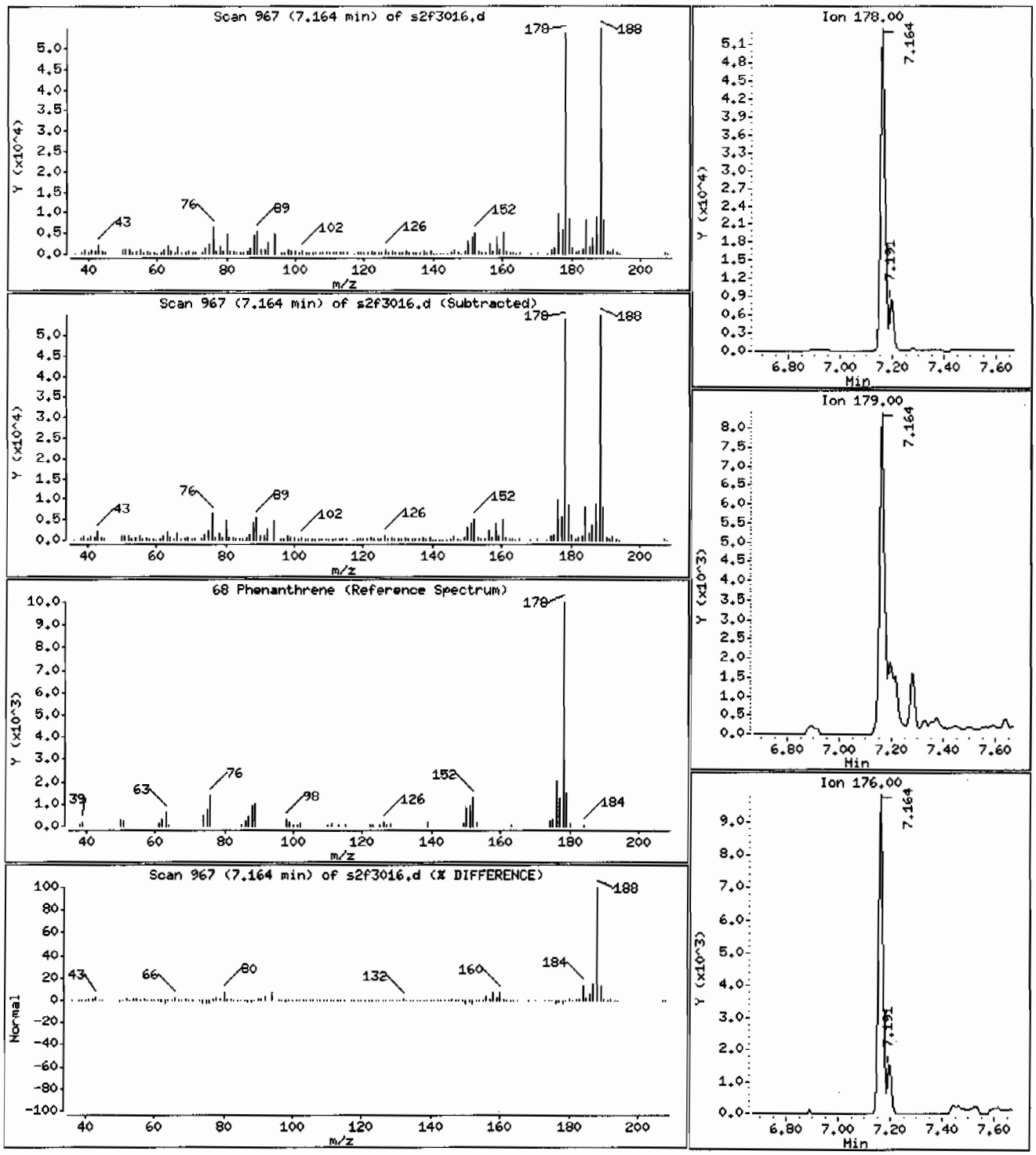

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034

Instrument: MSD2.i

Sample Info: 1232428005|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 415 ug/Kg

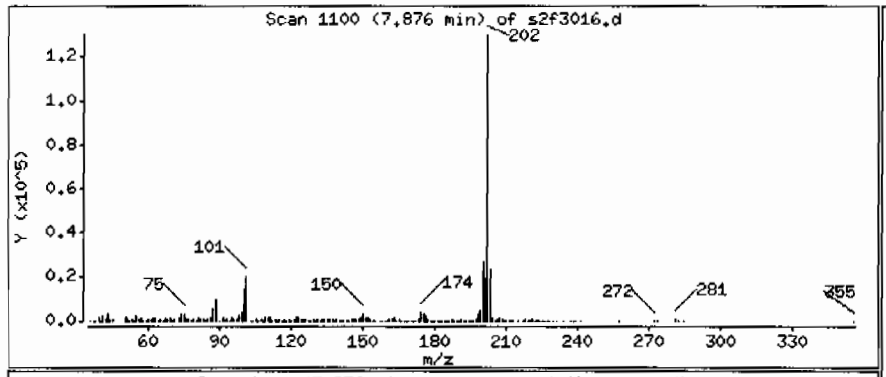

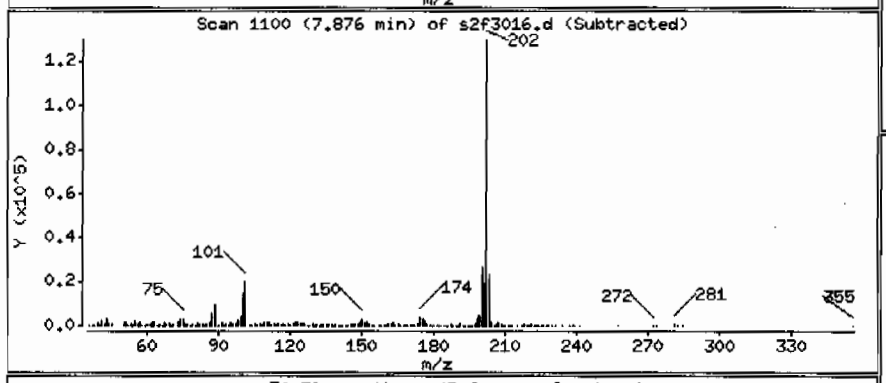

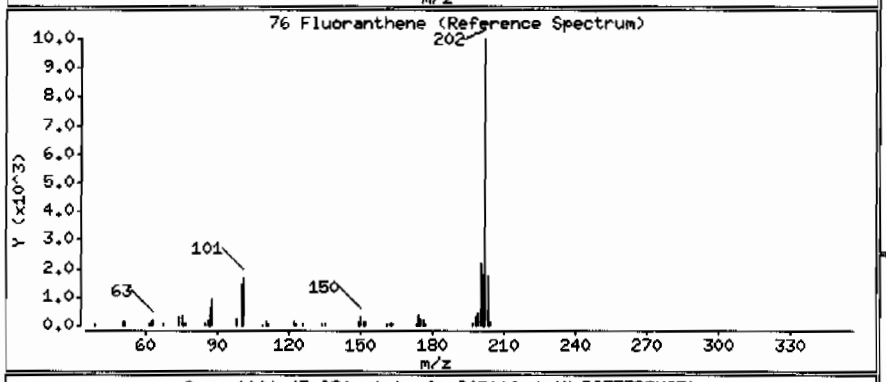

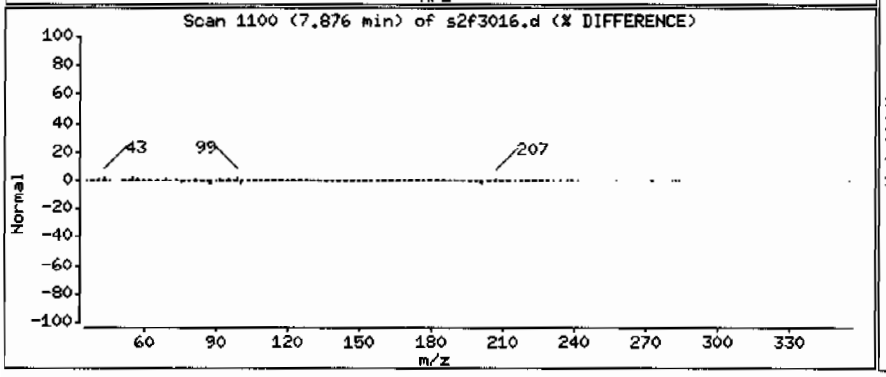

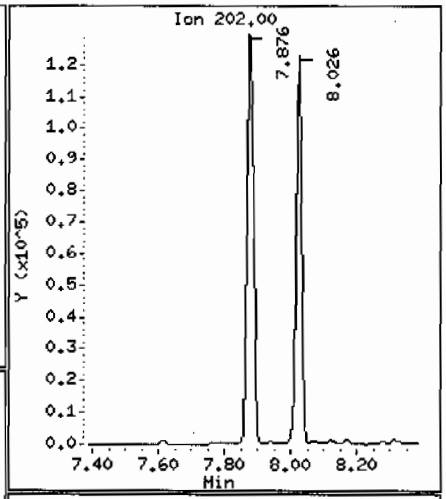

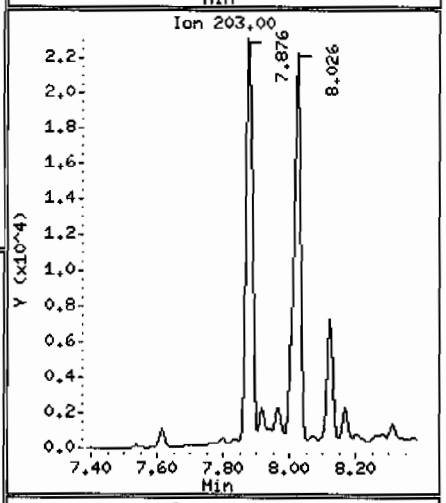

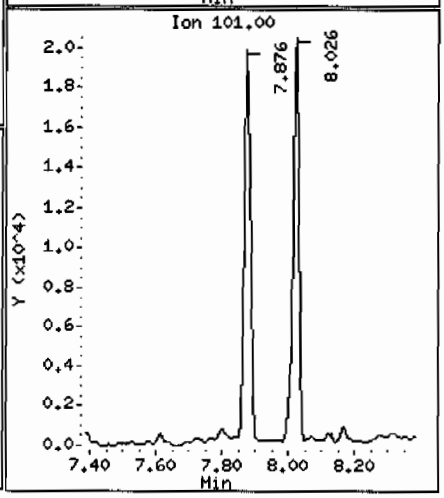

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034

Instrument: MSD2.i

Sample Info: 1232428005188131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 156 ug/Kg

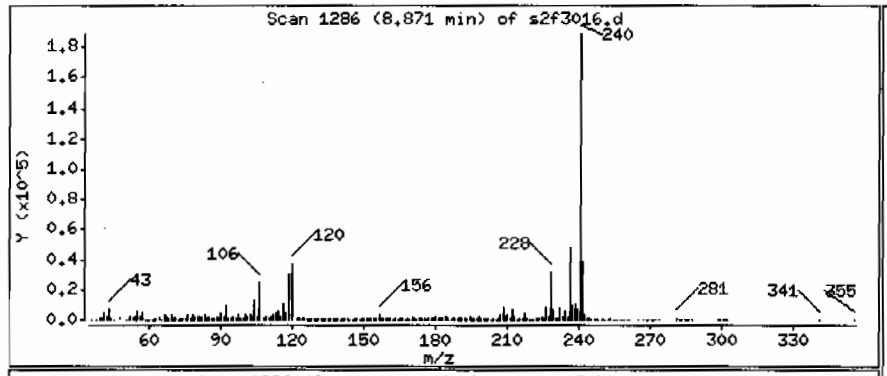

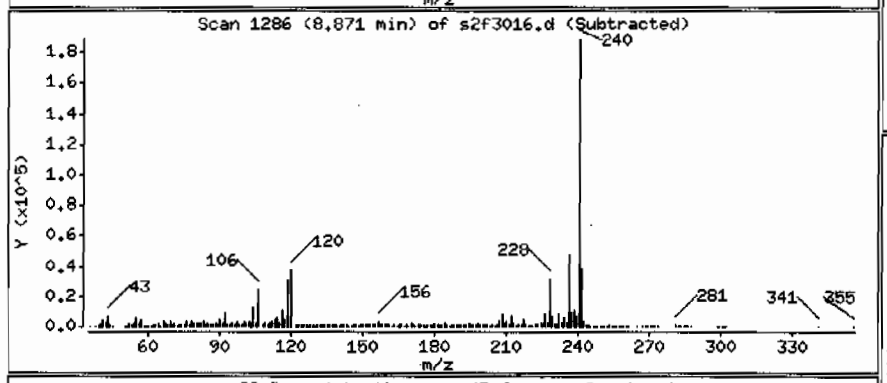

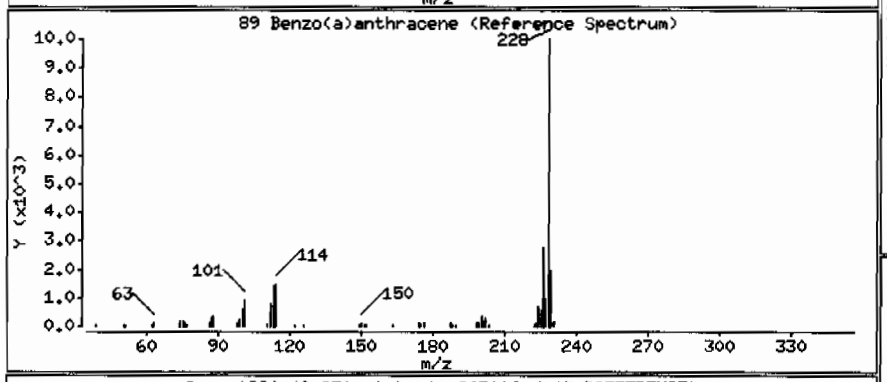

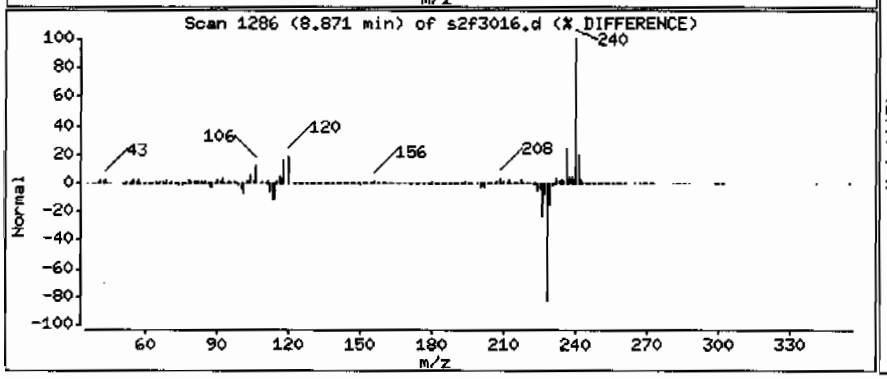

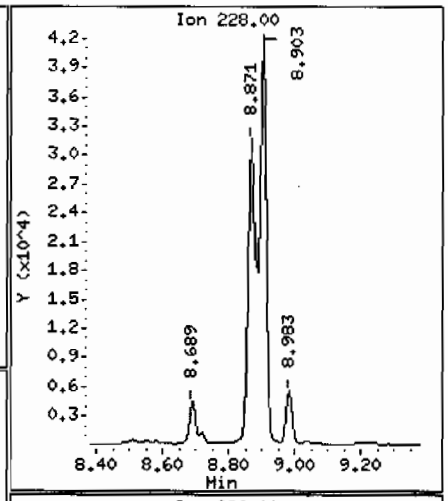

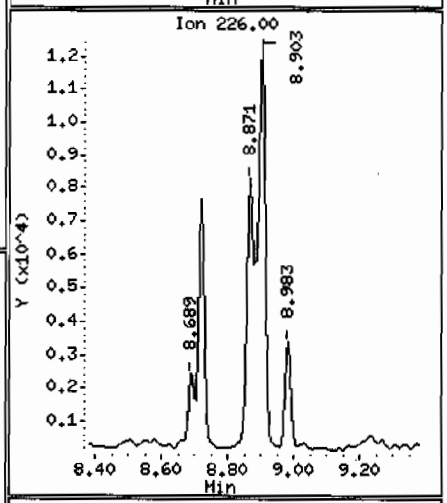

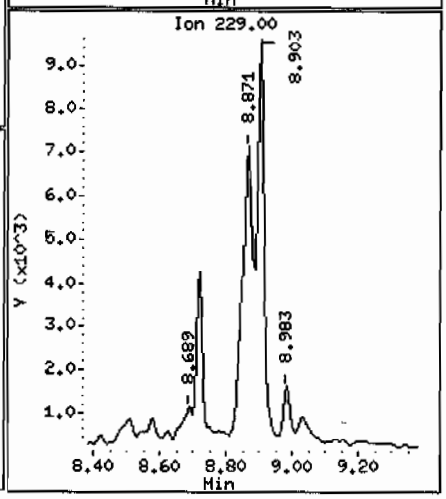

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034

Instrument: MSD2.i

Sample Info: |2324280051881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 194 ug/Kg

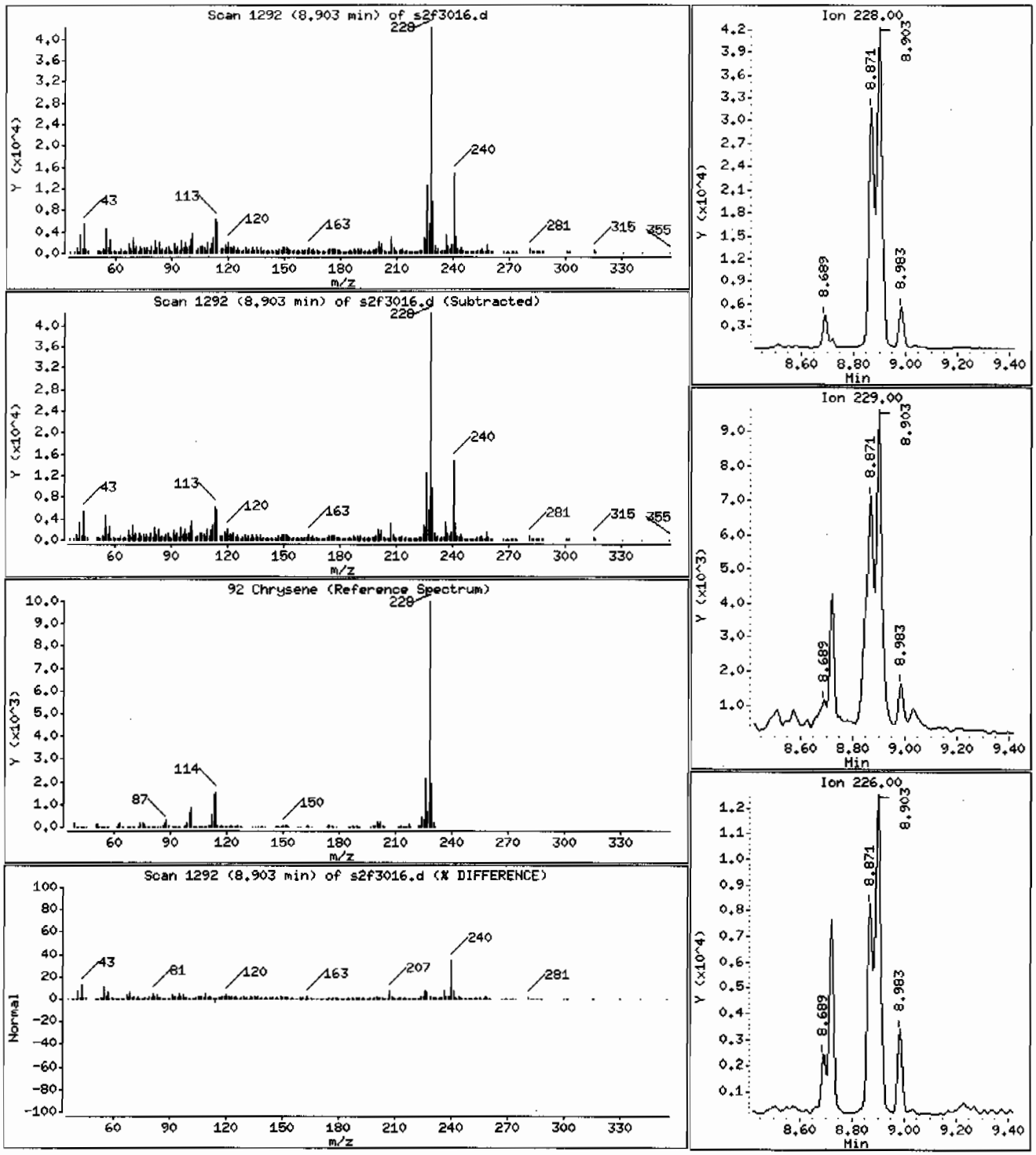

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Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034

Instrument: MSD2.i

Sample Info: |2324280051881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate

Concentration: 91.8 ug/Kg

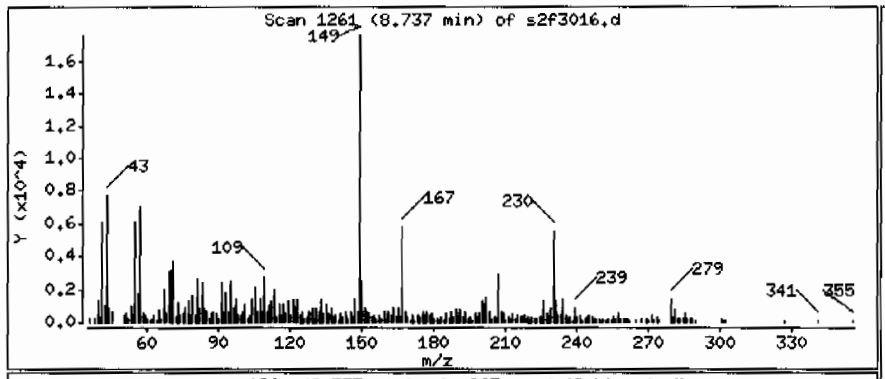

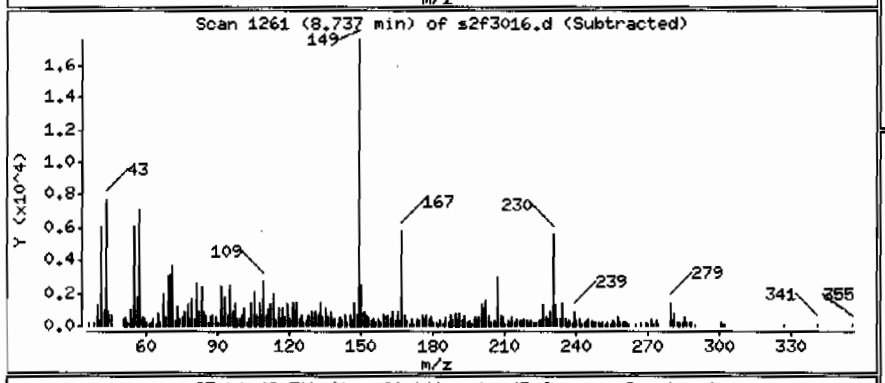

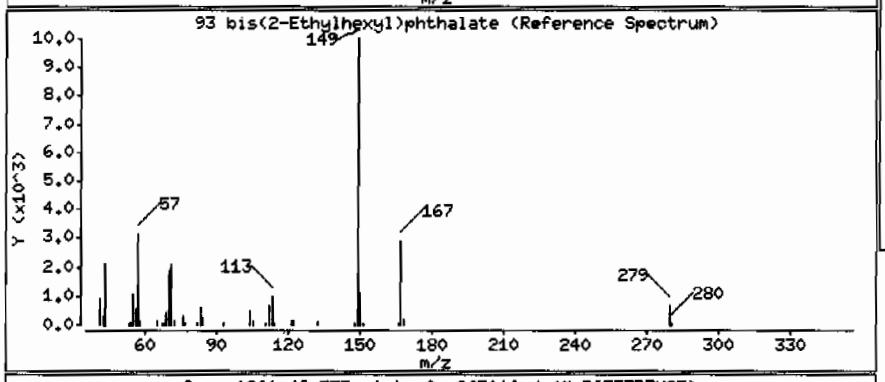

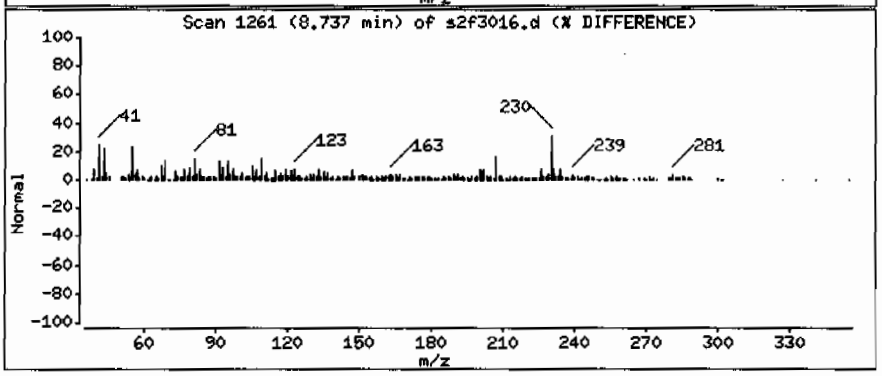

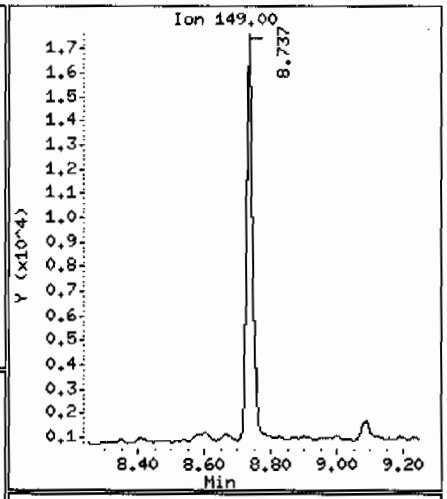

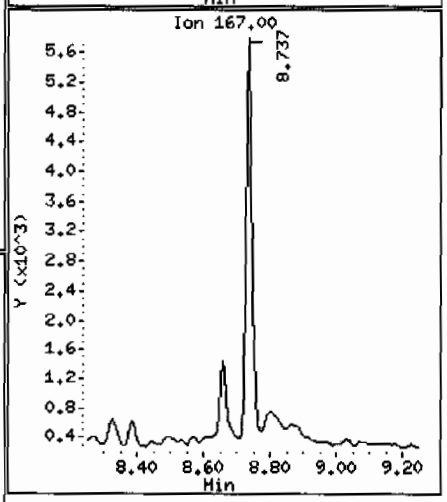

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034

Instrument: MSD2.i

Sample Info: 1232428005188131911SVMF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 359 ug/Kg

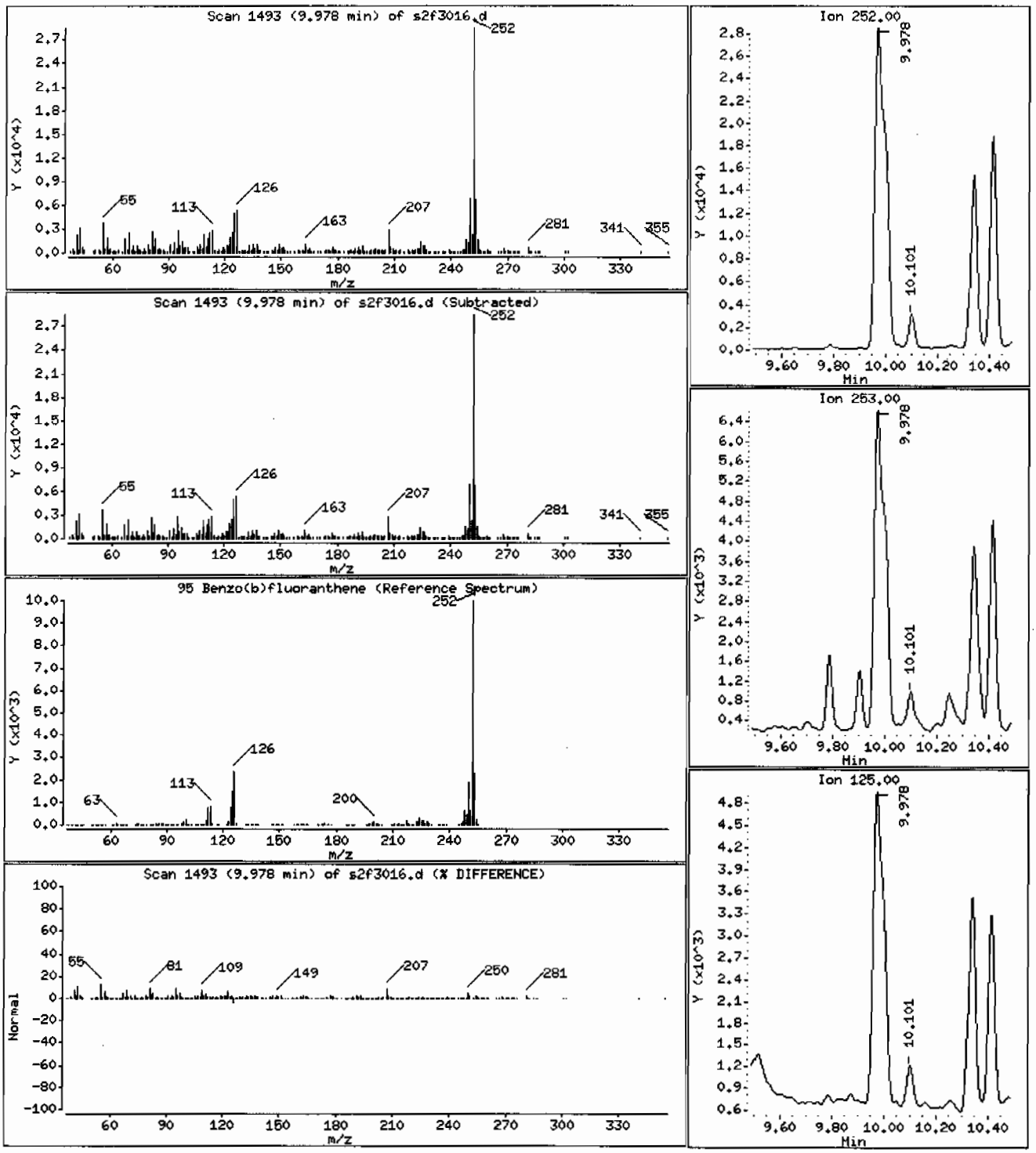

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034 Instrument: MSD2.i

Sample Info: 1232428005188131911|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

97 Benzo(a)pyrene Concentration: 175 ug/Kg

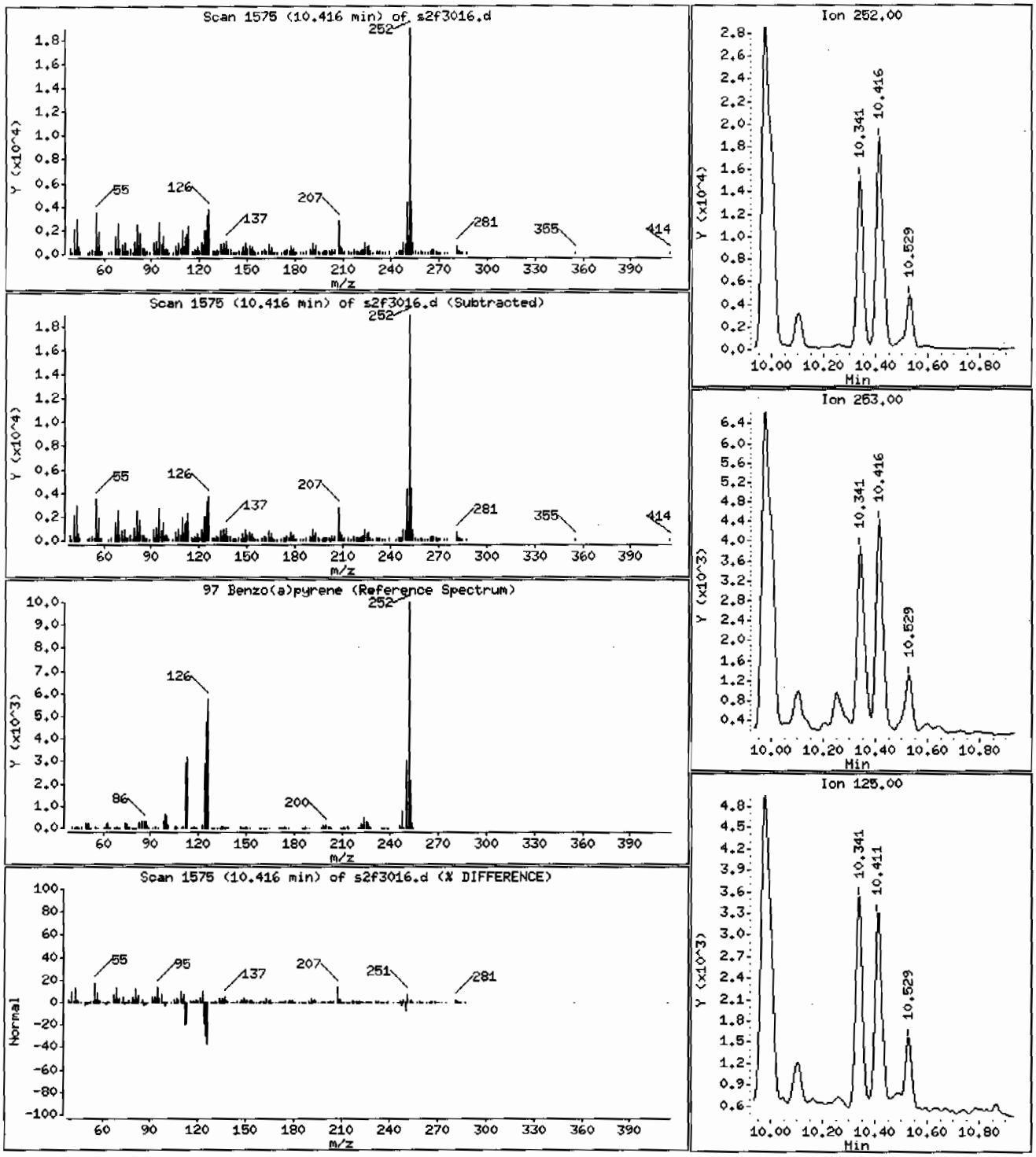

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034 Instrument: MSD2.i

Sample Info: 1232428005188131911SVMF11LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 96.6 ug/Kg

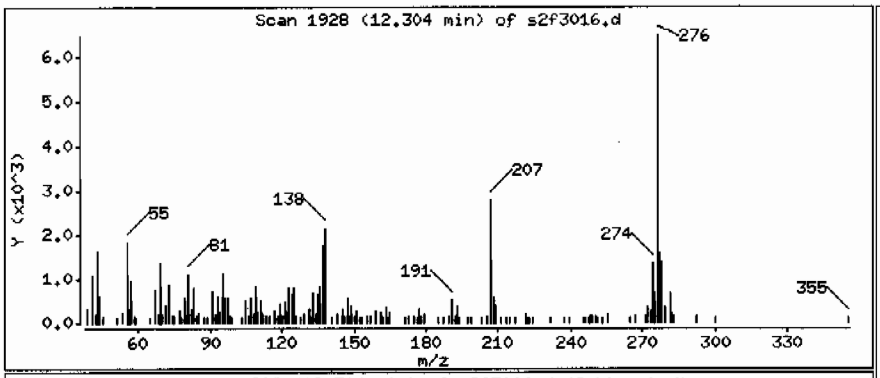

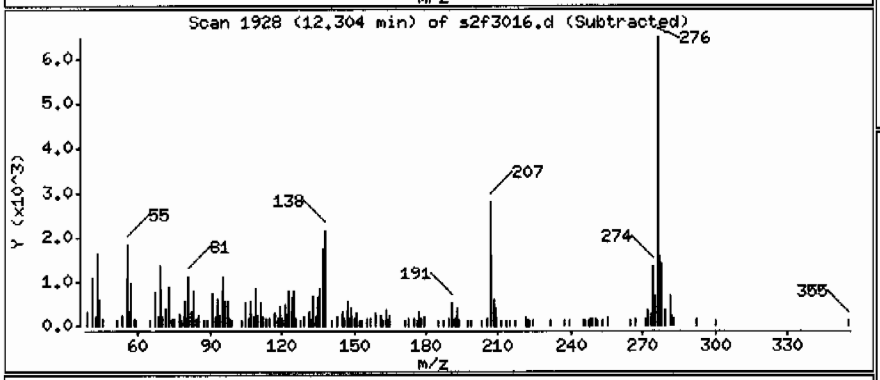

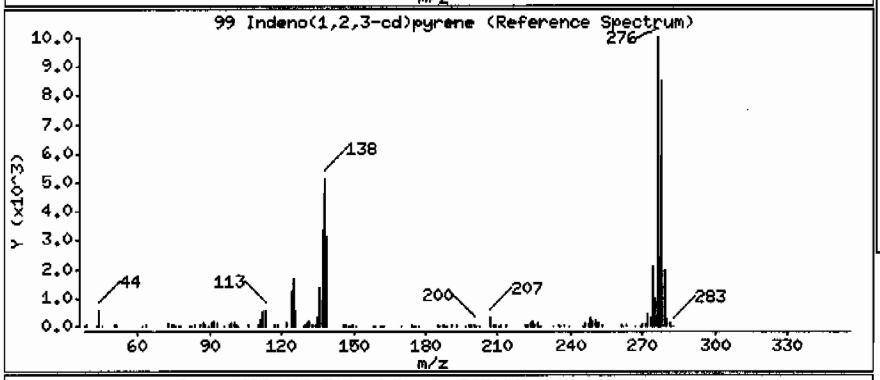

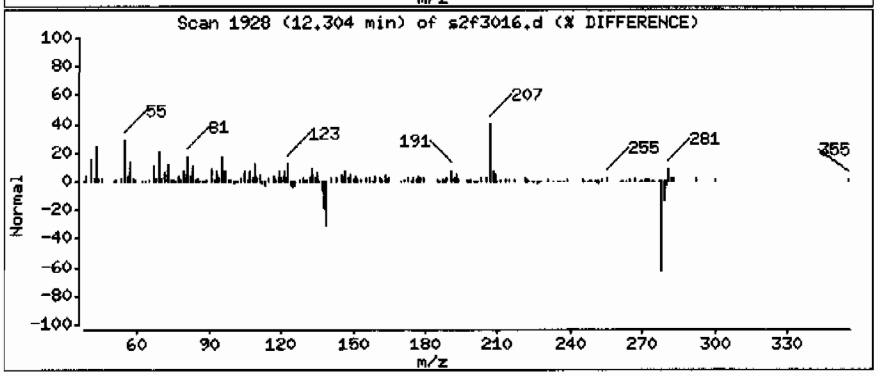

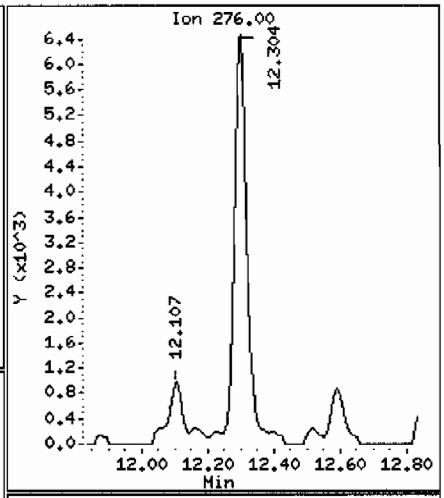

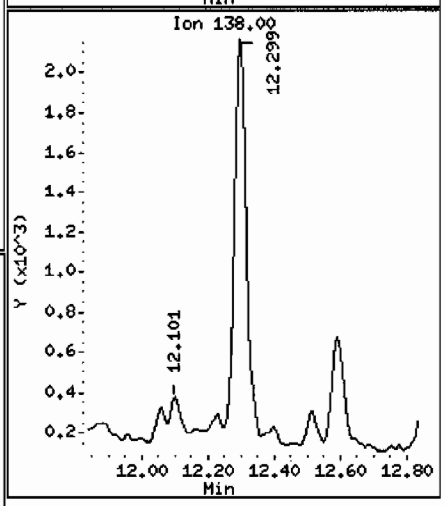

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMD-09-6034 Instrument: MSD2.i

Sample Info: |2324280051881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

100 Dibenzo(a,h)anthracene Concentration: 29.2 ug/Kg

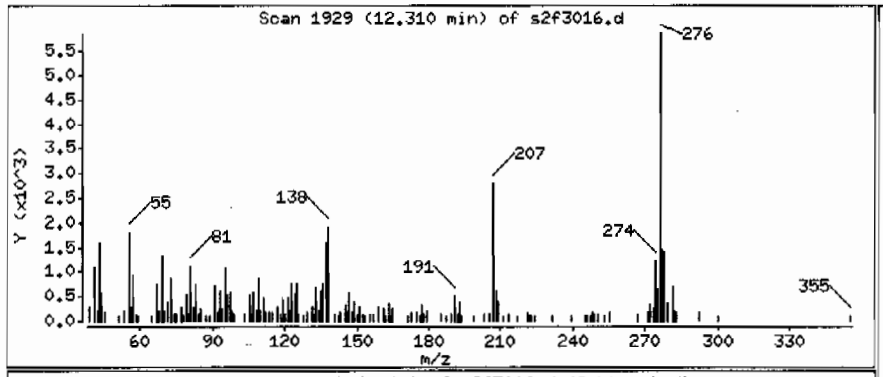

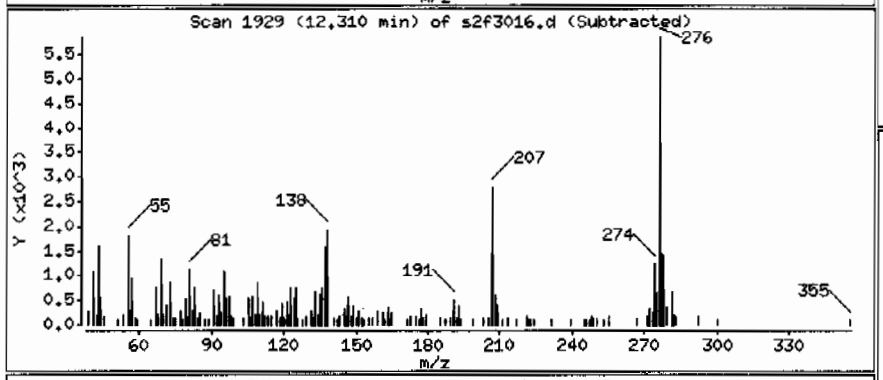

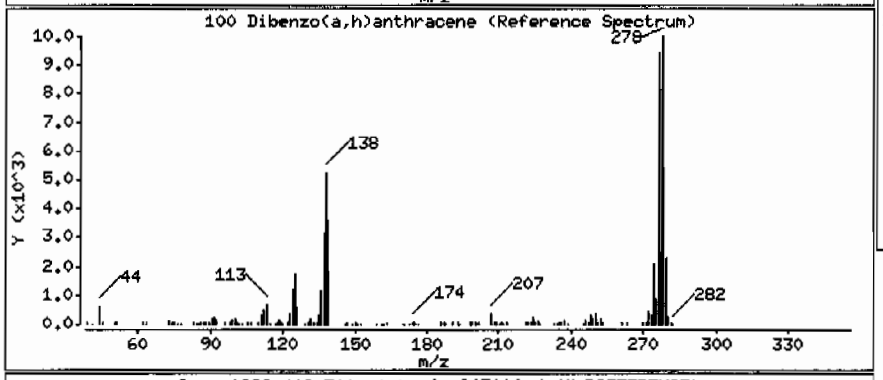

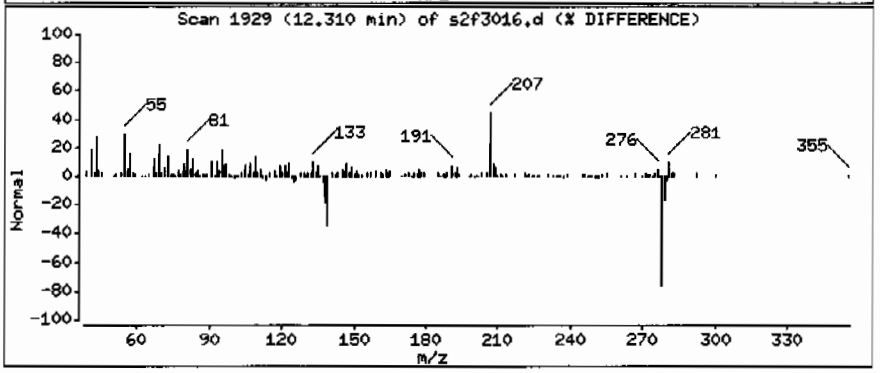

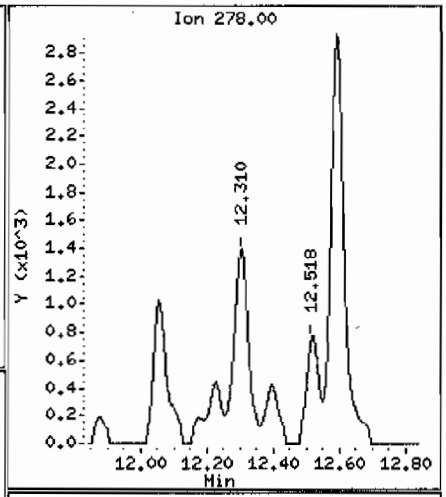

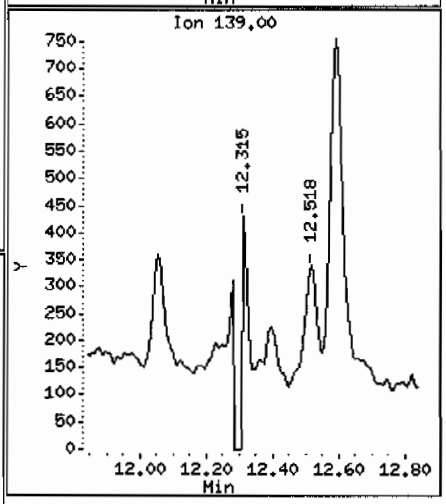

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034 Instrument: MSD2.i

Sample Info: |2324280051881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

101 Benzo(ghi)perylene Concentration: 97.3 ug/Kg

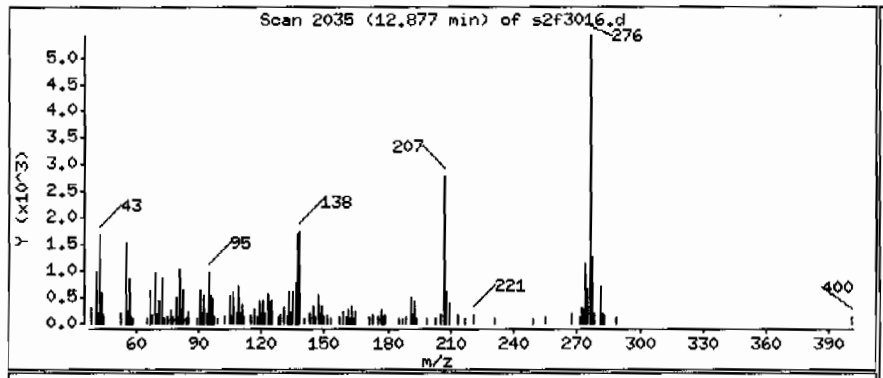

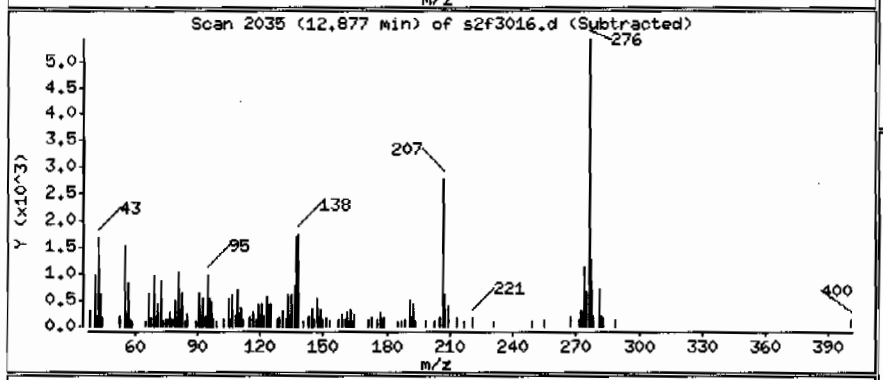

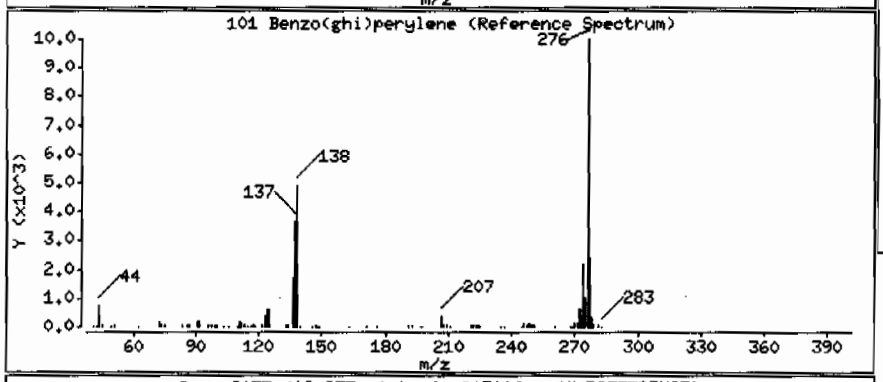

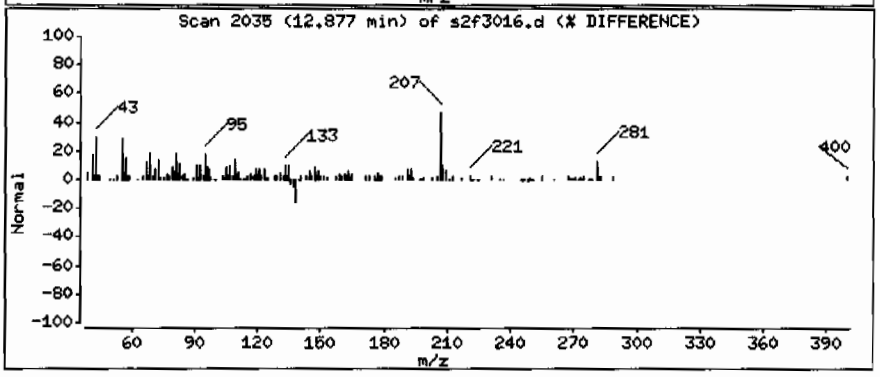

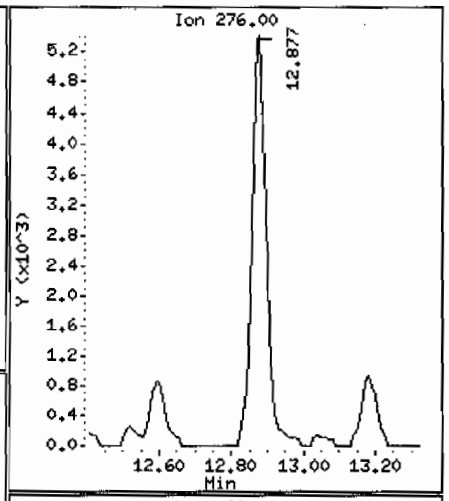

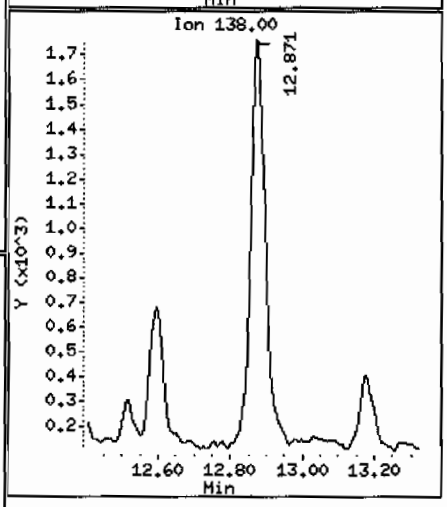

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034

Instrument: MSD2.i

Sample Info: 1232428005188131911ISVMF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

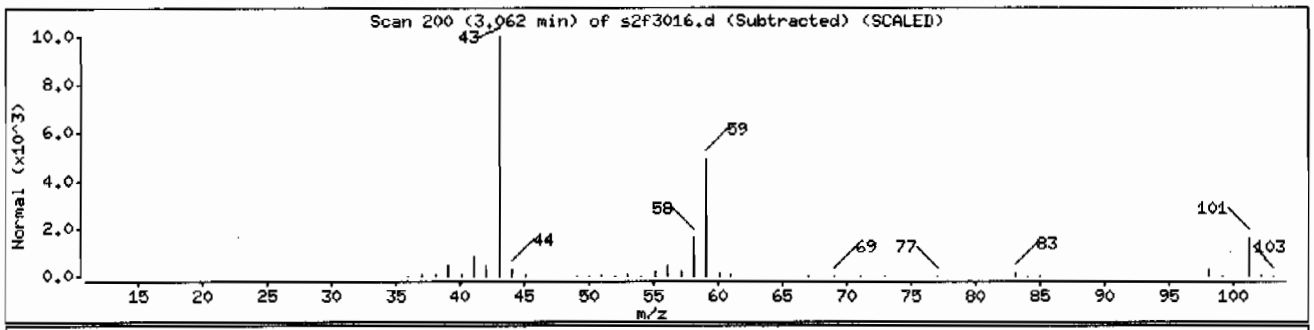

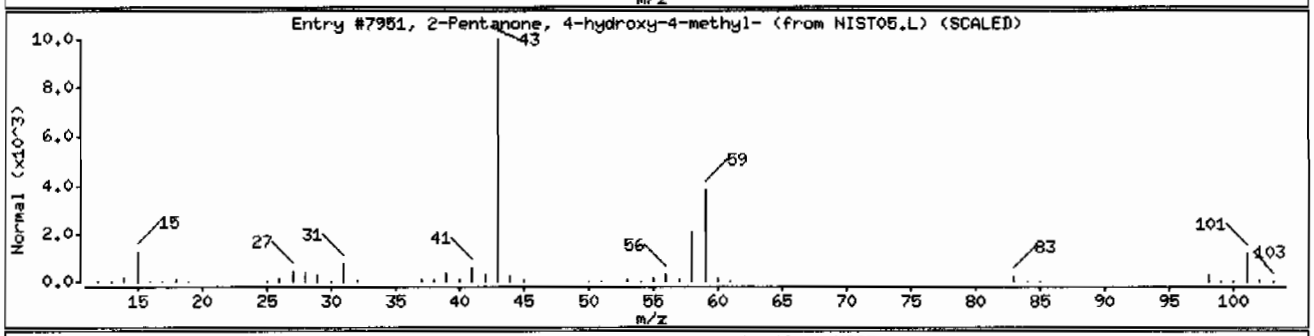

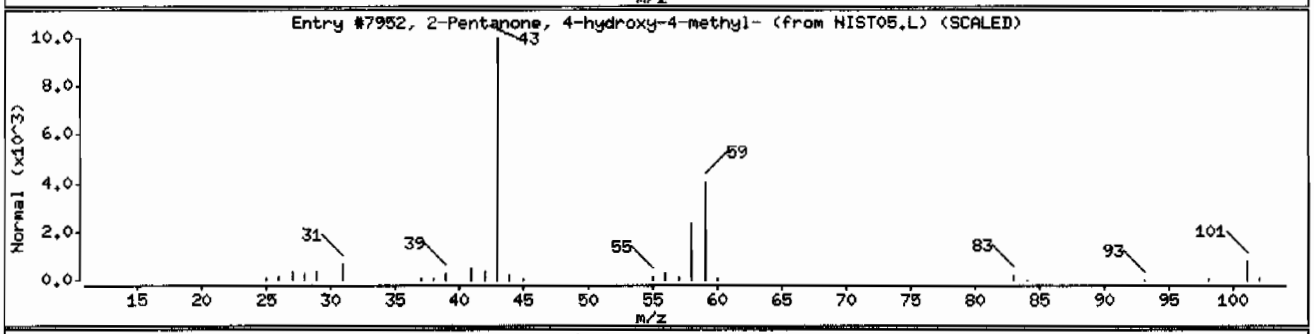

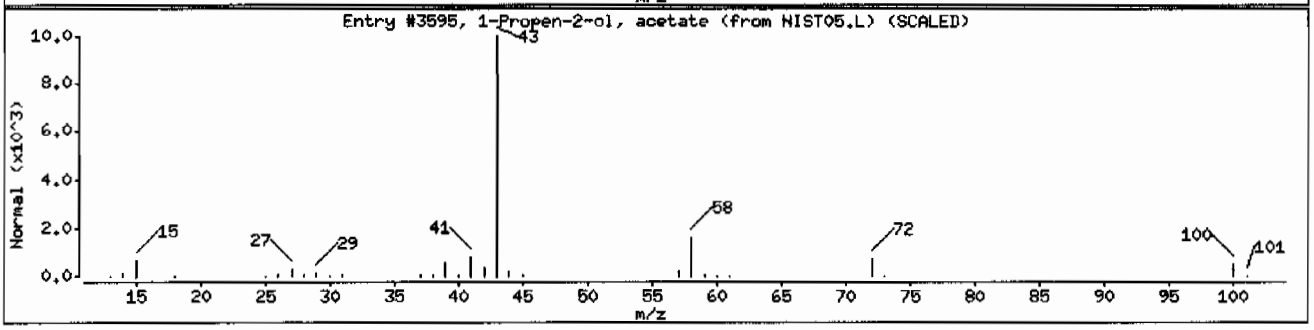

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034

Instrument: MSD2.i

Sample Info: 1232428005188131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
9H-Xanthen-9-one, 3-methoxy-	3722-52-9	NIST05.L	75784	56	C14H1003	226
Acridin-9-amine, 1,2,3,4-tetrahydro-5,7-	1000300-57-6	NIST05.L	76017	48	C15H18N2	226
Catechol-O,O'-diacetic acid	5411-14-3	NIST05.L	75331	46	C10H1006	226

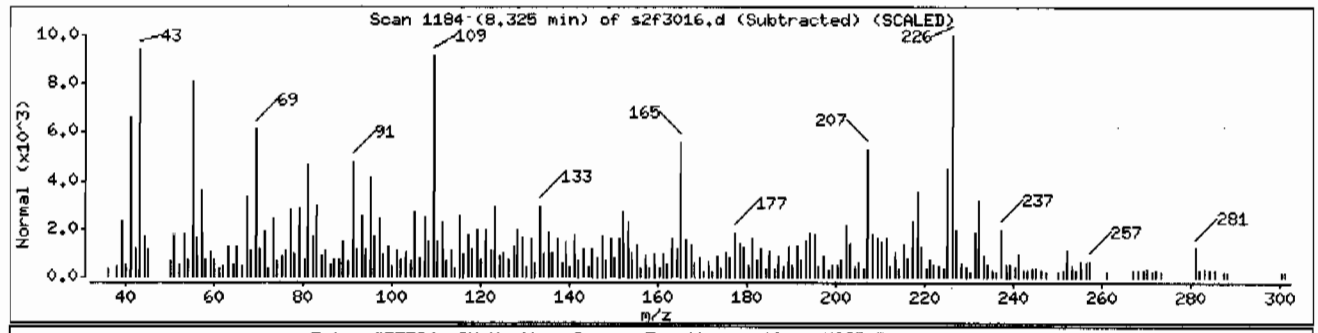

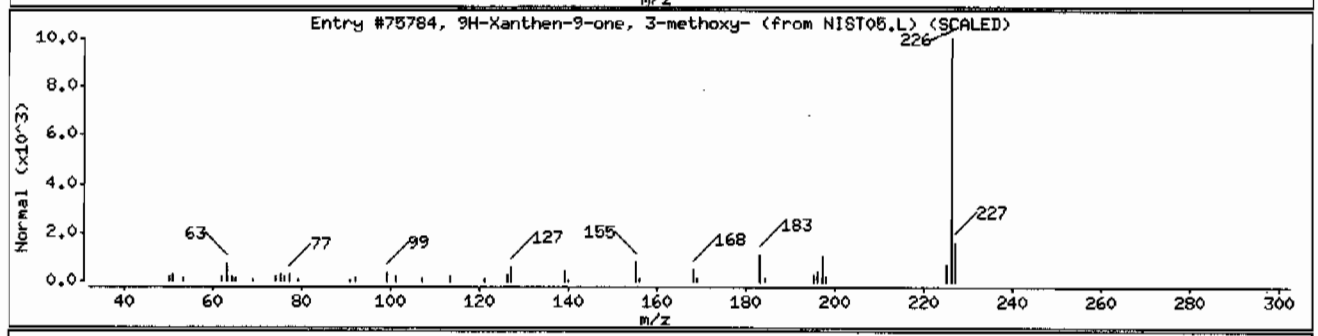

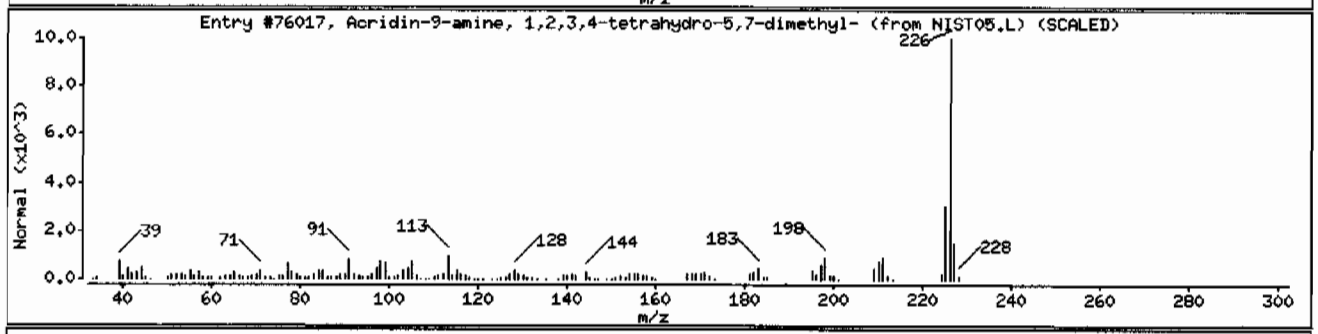

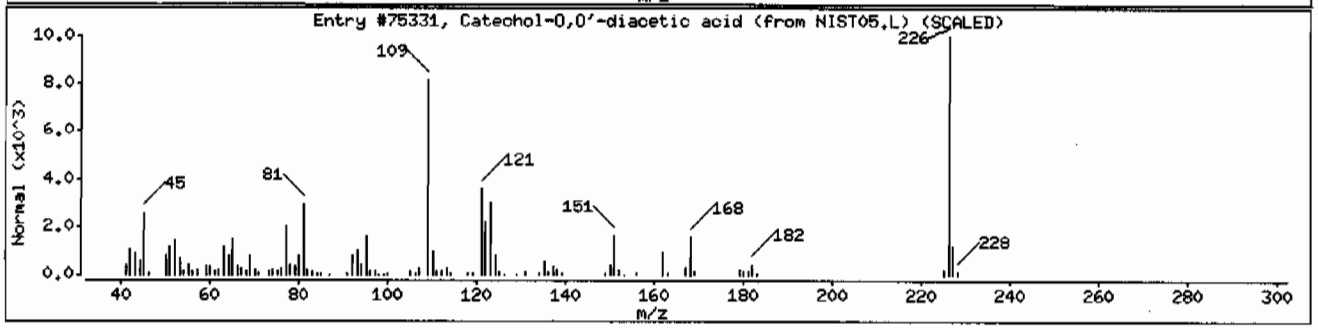

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034 Instrument: MSD2.i

Sample Info: 1232428005188131911SVHF11LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125036	99	C20H2802	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	5155-70-4	NIST05.L	125035	95	C20H2802	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	93	C20H2802	300

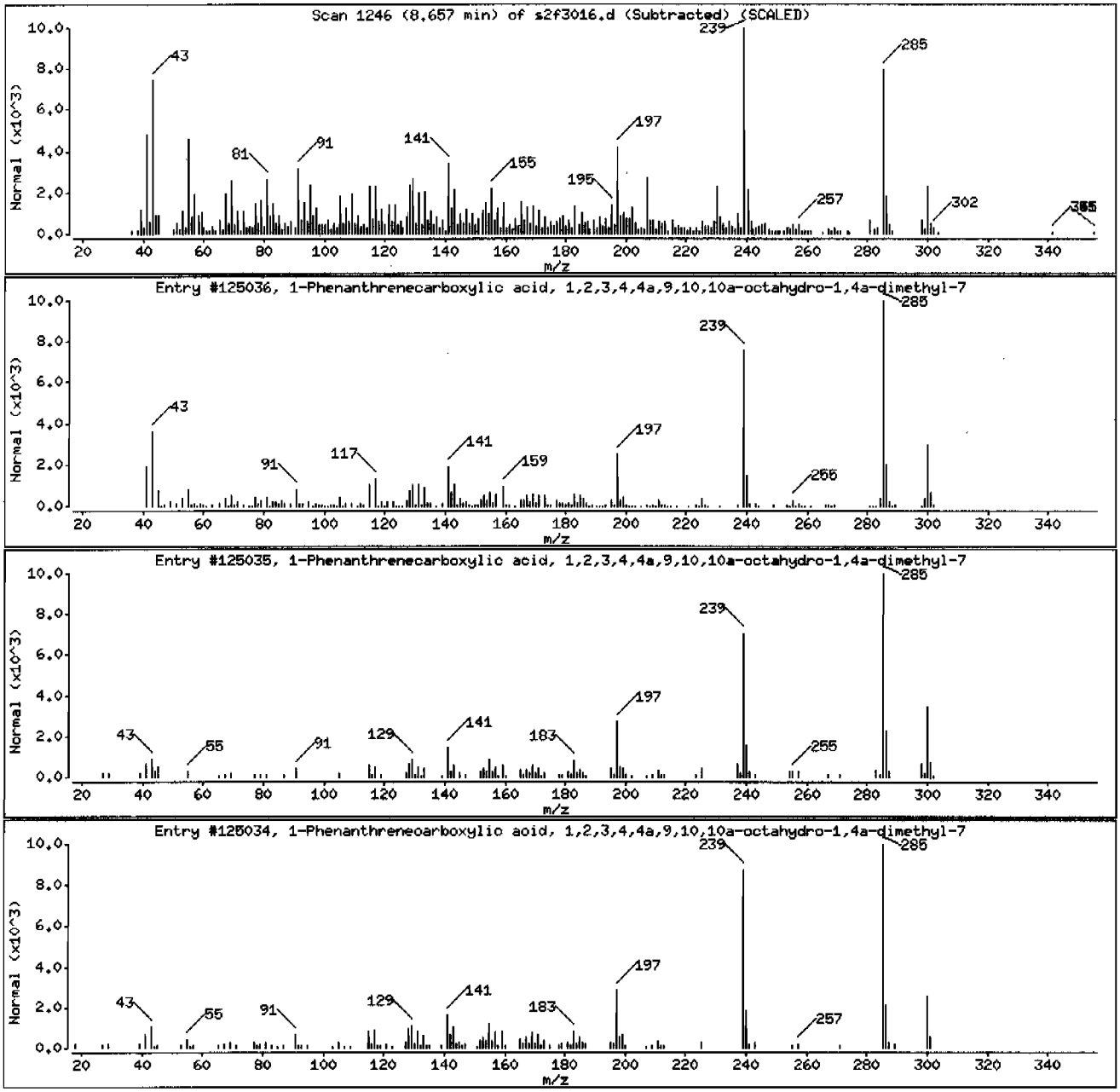

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034 Instrument: MSD2.i

Sample Info: |232428005|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
11,12-Dibromo-tetradecan-1-ol acetate	1000130-78-5	NIST05.L	173750	41	C16H30Br2O2	412
11,13-Dimethyl-12-tetradecen-1-ol acetat	1000130-81-0	NIST05.L	113394	30	C18H34O2	282
N-Methyl-1-adamantaneacetamide	31897-93-5	NIST05.L	62175	25	C13H21NO	207

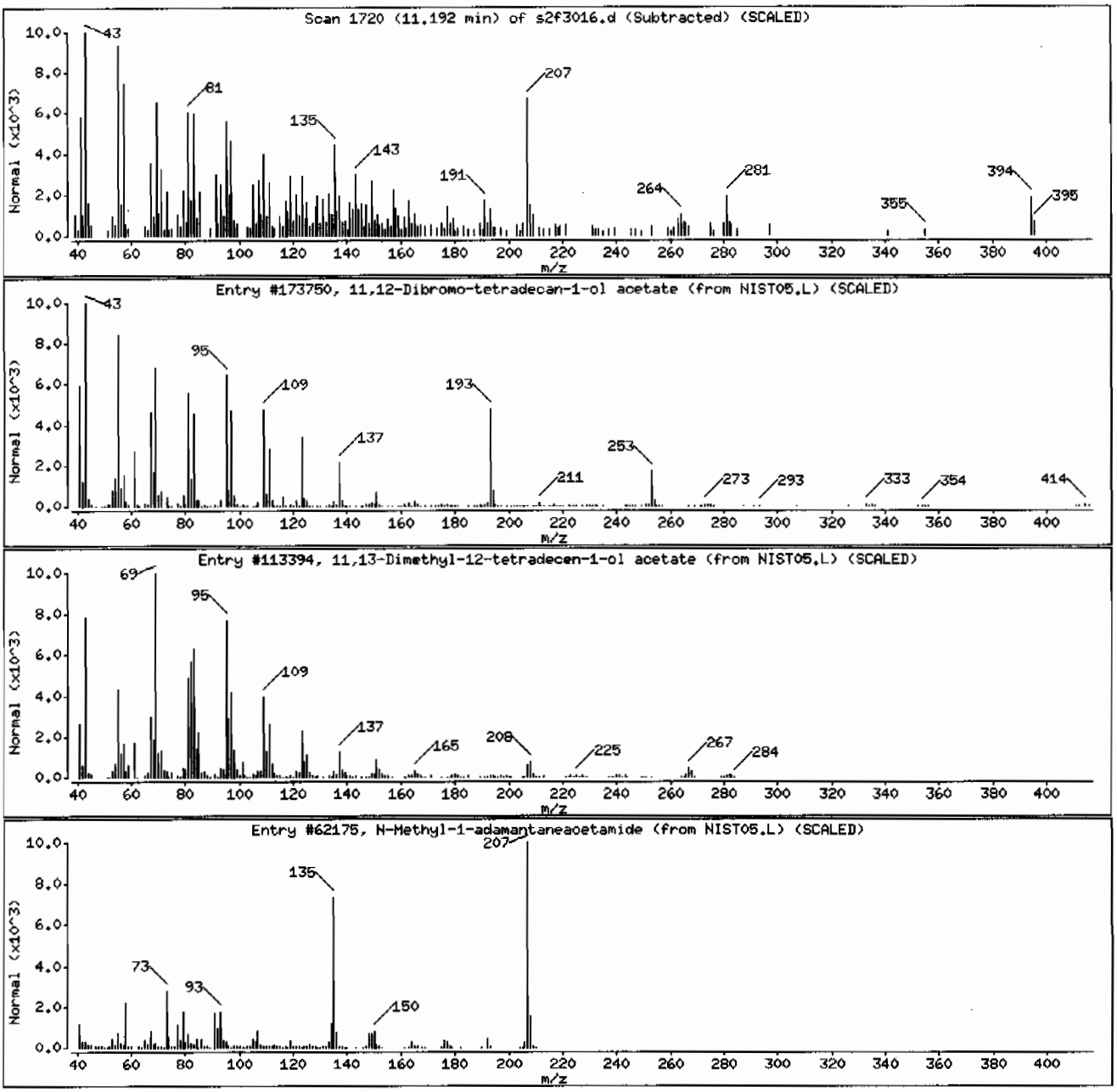

Data File: /chem/MSD2.i/s063009.b/s2f3016.d

Date : 30-JUN-2009 20:53

Client ID: CAMO-09-6034 Instrument: MSD2.i

Sample Info: 1232428005|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,4-Dimethyl-8-isopropylidenetricyclo[5,	1000140-07-7	NIST05.L	59920	55	C15H24	204
1-Naphthalenecarboxylic acid, decahydro-	1235-39-8	NIST05.L	134771	53	C21H32O2	316
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60049	46	C15H24	204

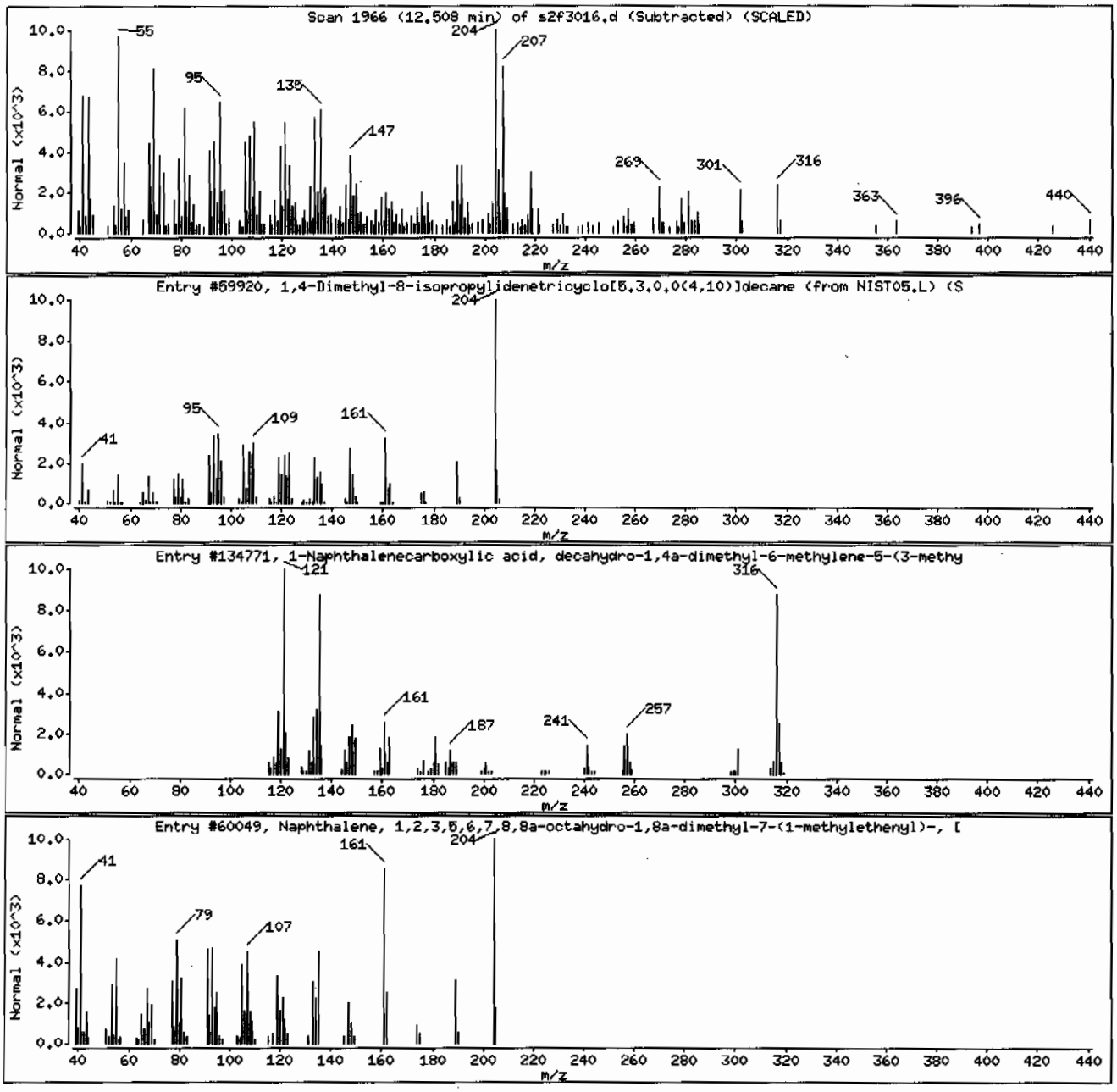

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2f3022.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	347	ug/kg	69.4	347
108-95-2	Phenol	U	347	ug/kg	69.4	347
95-57-8	2-Chlorophenol	U	347	ug/kg	69.4	347
106-46-7	1,4-Dichlorobenzene	U	347	ug/kg	69.4	347
621-64-7	N-Nitrosodipropylamine	U	347	ug/kg	69.4	347
59-50-7	4-Chloro-3-methylphenol	U	347	ug/kg	34.7	347
83-32-9	Acenaphthene	U	34.7	ug/kg	11.6	34.7
121-14-2	2,4-Dinitrotoluene	U	347	ug/kg	34.7	347
100-02-7	4-Nitrophenol	U	347	ug/kg	69.4	347
87-86-5	Pentachlorophenol	U	347	ug/kg	69.4	347
129-00-0	Pyrene	J	14.6	ug/kg	10.9	34.7
110-86-1	Pyridine	U	347	ug/kg	69.4	347
62-53-3	Aniline	U	347	ug/kg	121	347
111-44-4	bis(2-Chloroethyl) ether	U	347	ug/kg	69.4	347
541-73-1	1,3-Dichlorobenzene	U	347	ug/kg	69.4	347
100-51-6	Benzyl alcohol	U	347	ug/kg	104	347
95-50-1	1,2-Dichlorobenzene	U	347	ug/kg	69.4	347
108-60-1	bis(2-Chloroisopropyl)ether	U	347	ug/kg	69.4	347
95-48-7	o-Cresol	U	347	ug/kg	69.4	347
65794-96-9	m,p-Cresols	U	347	ug/kg	139	347
67-72-1	Hexachloroethane	U	347	ug/kg	69.4	347
98-95-3	Nitrobenzene	U	347	ug/kg	69.4	347
78-59-1	Isophorone	U	347	ug/kg	69.4	347
88-75-5	2-Nitrophenol	U	347	ug/kg	34.7	347
105-67-9	2,4-Dimethylphenol	U	347	ug/kg	69.4	347
111-91-1	bis(2-Chloroethoxy)methane	U	347	ug/kg	69.4	347
120-83-2	2,4-Dichlorophenol	U	347	ug/kg	69.4	347
65-85-0	Benzoic acid	U	694	ug/kg	173	694
91-20-3	Naphthalene	U	34.7	ug/kg	10.4	34.7
106-47-8	4-Chloroaniline	U	347	ug/kg	69.4	347
87-68-3	Hexachlorobutadiene	U	347	ug/kg	69.4	347
91-57-6	2-Methylnaphthalene	U	34.7	ug/kg	6.94	34.7
77-47-4	Hexachlorocyclopentadiene	U	347	ug/kg	69.4	347
88-06-2	2,4,6-Trichlorophenol	U	347	ug/kg	69.4	347
95-95-4	2,4,5-Trichlorophenol	U	347	ug/kg	69.4	347
91-58-7	2-Chloronaphthalene	U	34.7	ug/kg	12.1	34.7
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	347	ug/kg	69.4	347
99-09-2	3-Nitroaniline	U	347	ug/kg	69.4	347

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2f3022.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	347	ug/kg	69.4	347
606-20-2	2,6-Dinitrotoluene	U	347	ug/kg	34.7	347
208-96-8	Acenaphthylene	U	34.7	ug/kg	10.4	34.7
51-28-5	2,4-Dinitrophenol	U	694	ug/kg	132	694
132-64-9	Dibenzofuran	U	347	ug/kg	69.4	347
84-66-2	Diethylphthalate	U	347	ug/kg	69.4	347
86-73-7	Fluorene	U	34.7	ug/kg	10.4	34.7
7005-72-3	4-Chlorophenylphenylether	U	347	ug/kg	34.7	347
534-52-1	2-Methyl-4,6-dinitrophenol	U	347	ug/kg	69.4	347
100-01-6	4-Nitroaniline	U	347	ug/kg	69.4	347
	p-Nitroaniline					
122-39-4	Diphenylamine	U	347	ug/kg	69.4	347
122-66-7	Azobenzene	U	347	ug/kg	69.4	347
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	347	ug/kg	34.7	347
118-74-1	Hexachlorobenzene	U	347	ug/kg	69.4	347
85-01-8	Phenanthrene	U	34.7	ug/kg	10.4	34.7
120-12-7	Anthracene	U	34.7	ug/kg	6.94	34.7
84-74-2	Di-n-butylphthalate	U	347	ug/kg	34.7	347
206-44-0	Fluoranthene	J	17.0	ug/kg	10.4	34.7
85-68-7	Butylbenzylphthalate	U	347	ug/kg	69.4	347
56-55-3	Benzo(a)anthracene	U	34.7	ug/kg	10.4	34.7
91-94-1	3,3'-Dichlorobenzidine	U	347	ug/kg	104	347
218-01-9	Chrysene	U	34.7	ug/kg	10.4	34.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	347	ug/kg	69.4	347
117-84-0	Di-n-octylphthalate	U	347	ug/kg	69.4	347
205-99-2	Benzo(b)fluoranthene	J	16.9	ug/kg	10.4	34.7
207-08-9	Benzo(k)fluoranthene	U	34.7	ug/kg	10.4	34.7
50-32-8	Benzo(a)pyrene	U	34.7	ug/kg	10.4	34.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.7	ug/kg	10.4	34.7
53-70-3	Dibenzo(a,h)anthracene	U	34.7	ug/kg	10.4	34.7
191-24-2	Benzo(ghi)perylene	U	34.7	ug/kg	10.4	34.7
120-82-1	1,2,4-Trichlorobenzene	U	347	ug/kg	69.4	347

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	349	ug/kg		J
	Unknown	11.51	274	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428011	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6035	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2f3022.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.32	375	ug/kg		J

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Data file : /chem/MSD2.i/s063009.b/s2f3022.d
Lab Smp Id: 232428011 Client Smp ID: CAMO-09-6035
Inj Date : 30-JUN-2009 22:52
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428011|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	3.98760	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	180223	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	681008	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	386218	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	677379	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	561554	40.0000	
* 98 Perylene-d12	264	10.491	10.507	(1.000)	414474	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	280134	56.1730	1950
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	343828	55.8314	1940
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	144283	28.0811	974
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	316225	28.9906	1000
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	98894	74.7606	2590
$ 81 p-Terphenyl-d14	244	8.073	8.079	(0.909)	406543	42.5035	1470

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.025	8.031	(0.904)	7027	0.42037	14.6(a)
76 Fluoranthene	202	7.876	7.886	(1.102)	7264	0.48954	17.0(a)
95 Benzo(b)fluoranthene	252	9.972	9.988	(0.951)	4851	0.48754	16.9(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s2f3022.d
Report Date: 07/01/2009 07:58
Lab. ID: 232428011 SampleType: SAMPLE
Injection Date: 30-JUN-2009 22:52
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428011|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	19588	4.41	4.29	80-120	100	(T)
42	11636	4.41	4.29	40-100	59	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	82200	6.17	5.94	80-120	100	(T)
164	386218	6.17	5.94	0- 40	470	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	49615	6.17	5.99	80-120	100	(T)
63	620	6.17	5.99	46-106	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	49615	6.17	6.27	80-120	100	(T)
89	680	6.17	6.27	38- 98	1	(QT)
63	620	6.17	6.27	16- 76	1	(QT)
53 Fluorene				CAS#: 86-73-7		
166	5951	6.70	6.54	80-120	100	(T)
165	6438	6.70	6.54	61-121	108	(T)
167	1897	6.70	6.54	0- 44	32	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	223	6.70	6.55	80-120	100	(T)
105	532	6.70	6.55	14- 74	239	(QT)
51	623	6.69	6.55	37- 97	279	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	5479	6.70	6.84	80-120	100	(T)
141	38410	6.70	6.84	51-111	701	(QT)
250	11614	6.70	6.84	66-126	212	(QT)
76 Fluoranthene				CAS#: 206-44-0		
202	7264	7.88	7.89	80-120	100	( )
203	1258	7.88	7.89	0- 48	17	( )
101	1198	7.88	7.89	0- 45	17	( )
79 Pyrene				CAS#: 129-00-0		
202	7027	8.03	8.03	80-120	100	( )
200	1412	8.03	8.03	0- 51	20	( )
101	1359	8.02	8.03	0- 48	19	( )
92 Chrysene				CAS#: 218-01-9		
228	6908	8.90	8.92	80-120	100	( )
229	2108	8.90	8.92	0- 50	31	( )
226	998	8.90	8.92	0- 59	14	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	4851	9.97	9.99	80-120	100	( )
253	1276	9.97	9.99	0- 52	26	( )
125	548	9.97	9.99	0- 45	11	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	4851	9.97	10.02	80-120	100	( )
253	1276	9.97	10.02	0- 52	26	( )
125	548	9.97	10.02	0- 44	11	( )

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s063009.b/s2f3022.d
Lab Smp Id: 232428011 Client Smp ID: CAMO-09-6035
Inj Date : 30-JUN-2009 22:52
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428011|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	3.98760	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.051	1074442	40.000
* 98 Perylene-d12	10.491	1175133	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.062	270138	10.0568465	349	0		0	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
11.513	231847	7.89177074	274	0		0	98
Unknown				CAS #:			
12.320	317148	10.7953067	374	0		0	98

Data File: /chem/MSD2.i/s063009.b/s2f3022.d
Date : 30-JUN-2009 22:52
Client ID: CAMO-09-6035
Sample Info: |2324280111881319|1|SVHF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: AGS1
Column diameter: 0.20

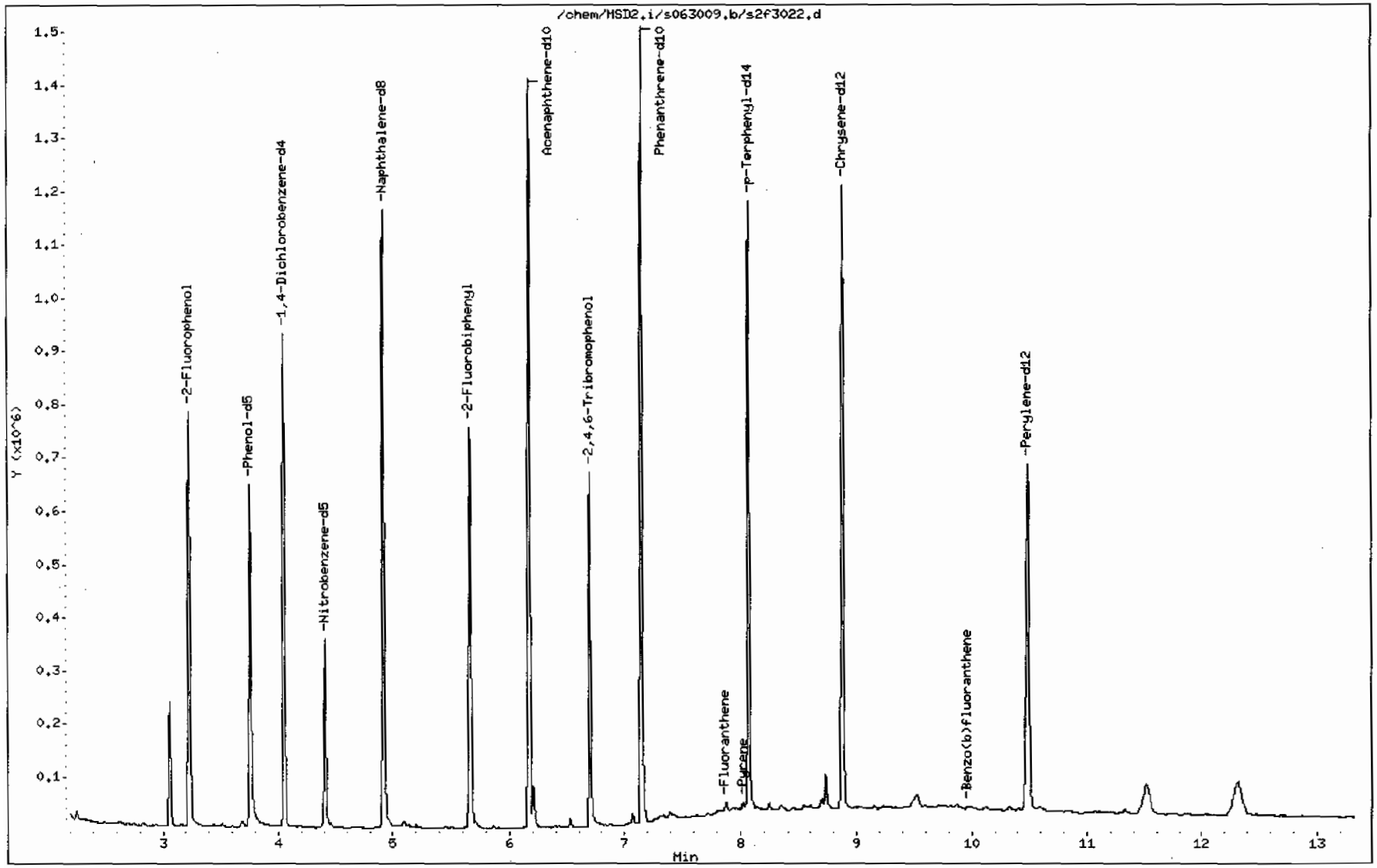

Data File: /chem/MSD2.i/s063009.b/s2f3022.d

Date : 30-JUN-2009 22:52

Client ID: CAMO-09-6035

Instrument: MSD2.i

Sample Info: |2324280111881319111SVMF111LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 14.6 ug/Kg

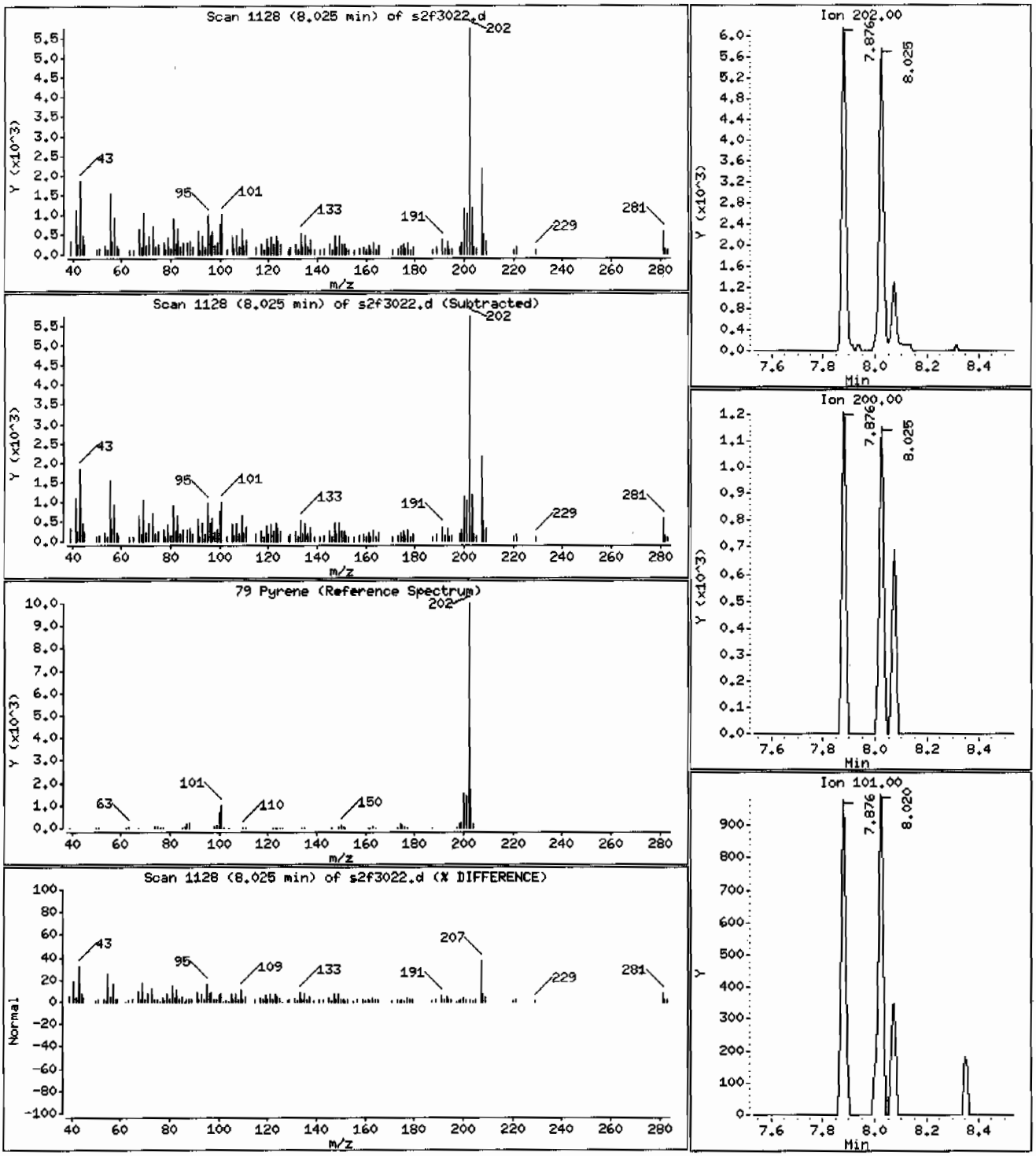

Data File: /chem/MSD2.i/s063009.b/s2f3022.d

Date : 30-JUN-2009 22:52

Client ID: CAMO-09-6035

Instrument: MSD2.i

Sample Info: |2324280111881319111SVMF111LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 17.0 ug/Kg

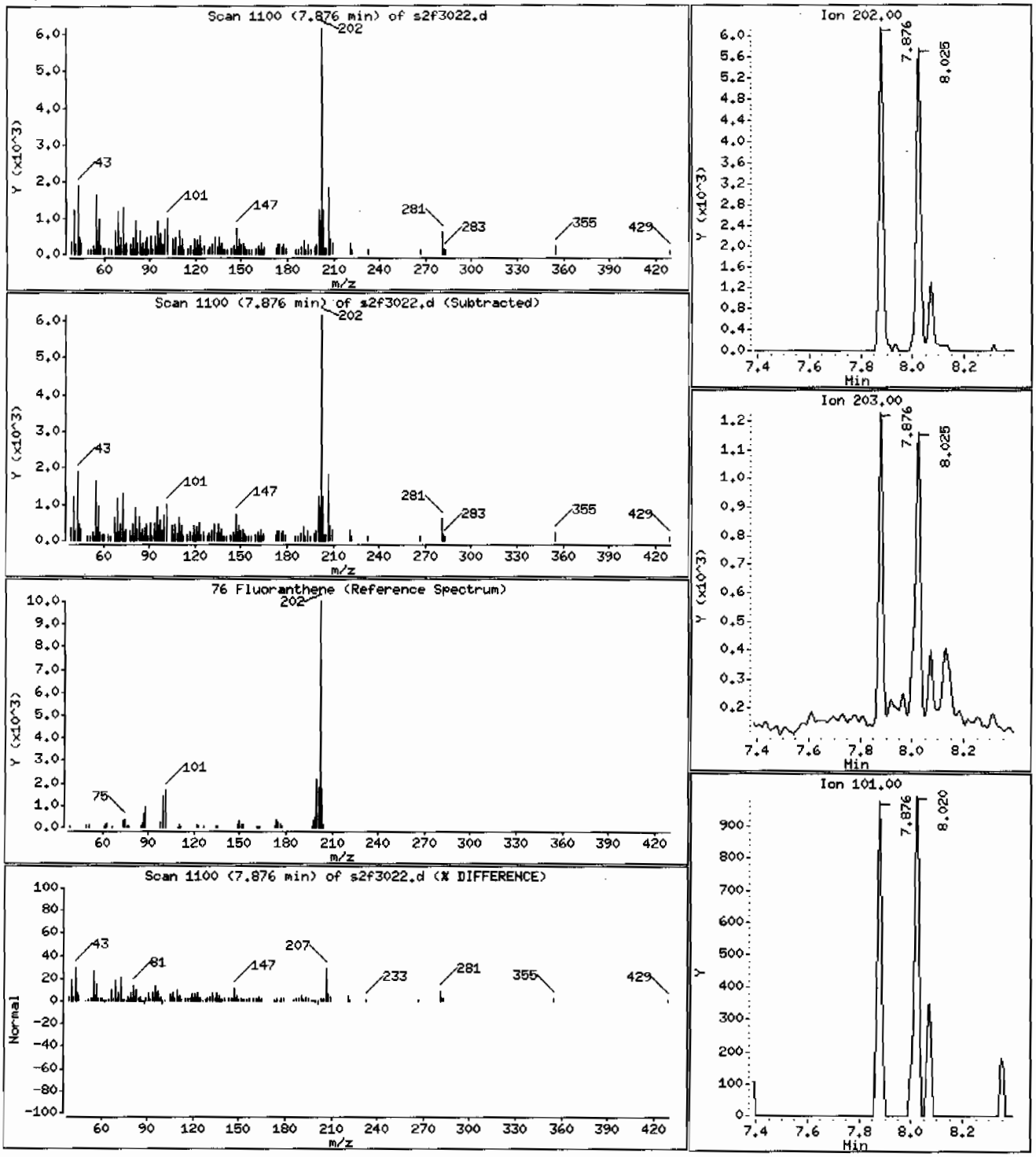

Data File: /chem/MSD2.i/s063009.b/s2f3022.d

Date : 30-JUN-2009 22:52

Client ID: CAMO-09-6035 Instrument: MSD2.i

Sample Info: |2324280111881319111SWMF111LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

95 Benzo(b)fluoranthene Concentration: 16.9 ug/Kg

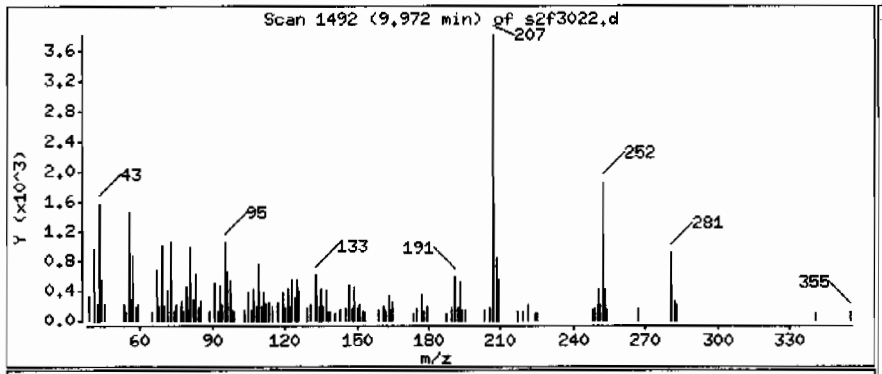

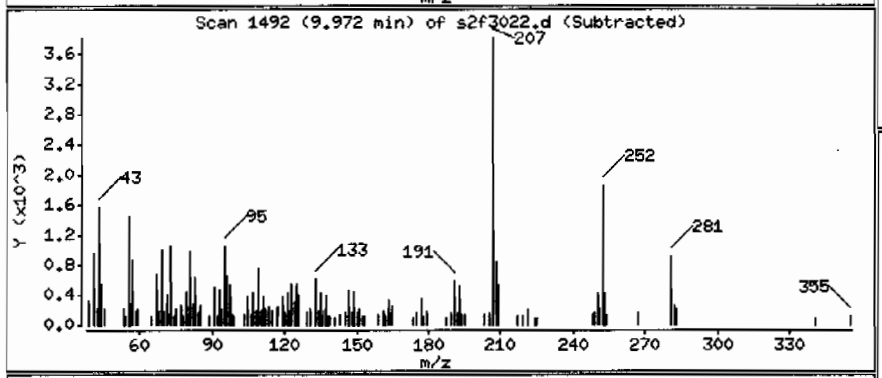

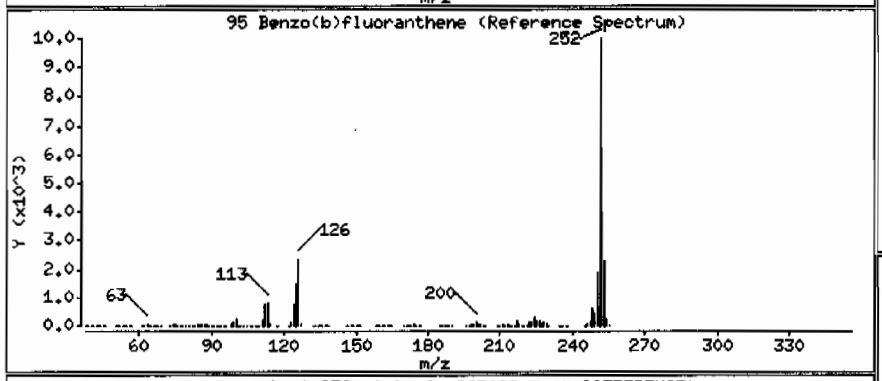

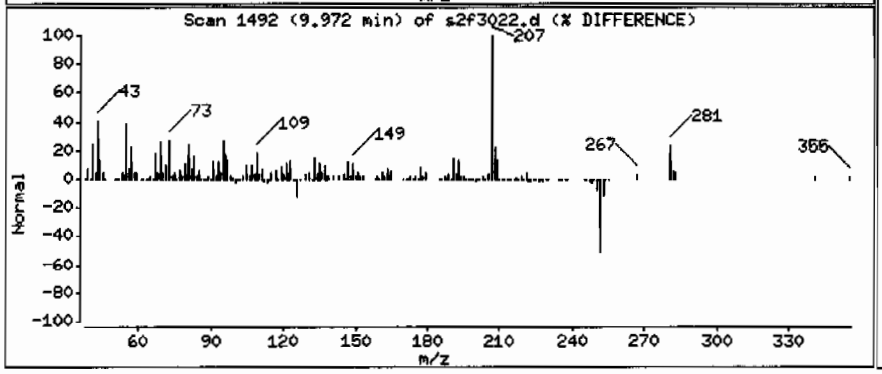

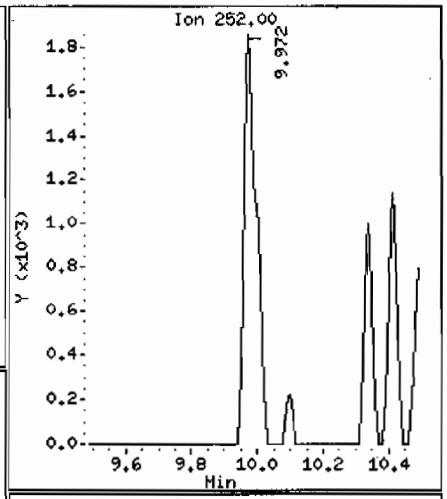

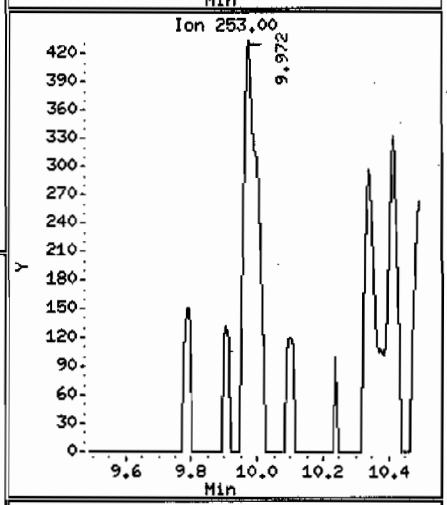

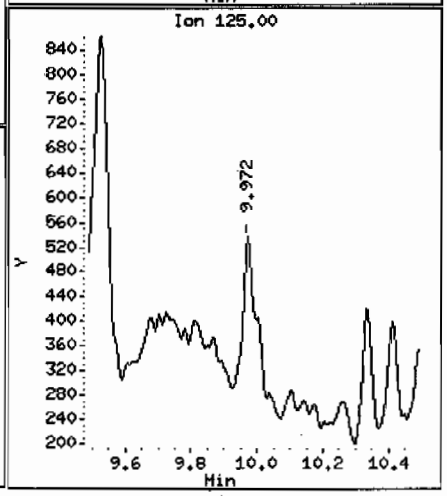

Data File: /chem/MSD2.i/s063009.b/s2f3022.d

Date : 30-JUN-2009 22:52

Client ID: CAMO-09-6035 Instrument: MSD2.i

Sample Info: 1232428011188131911SVMF11LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, cyano-, 1,1-dimethylethyl e	1116-98-9	NIST05.L	18291	25	C7H11NO2	141

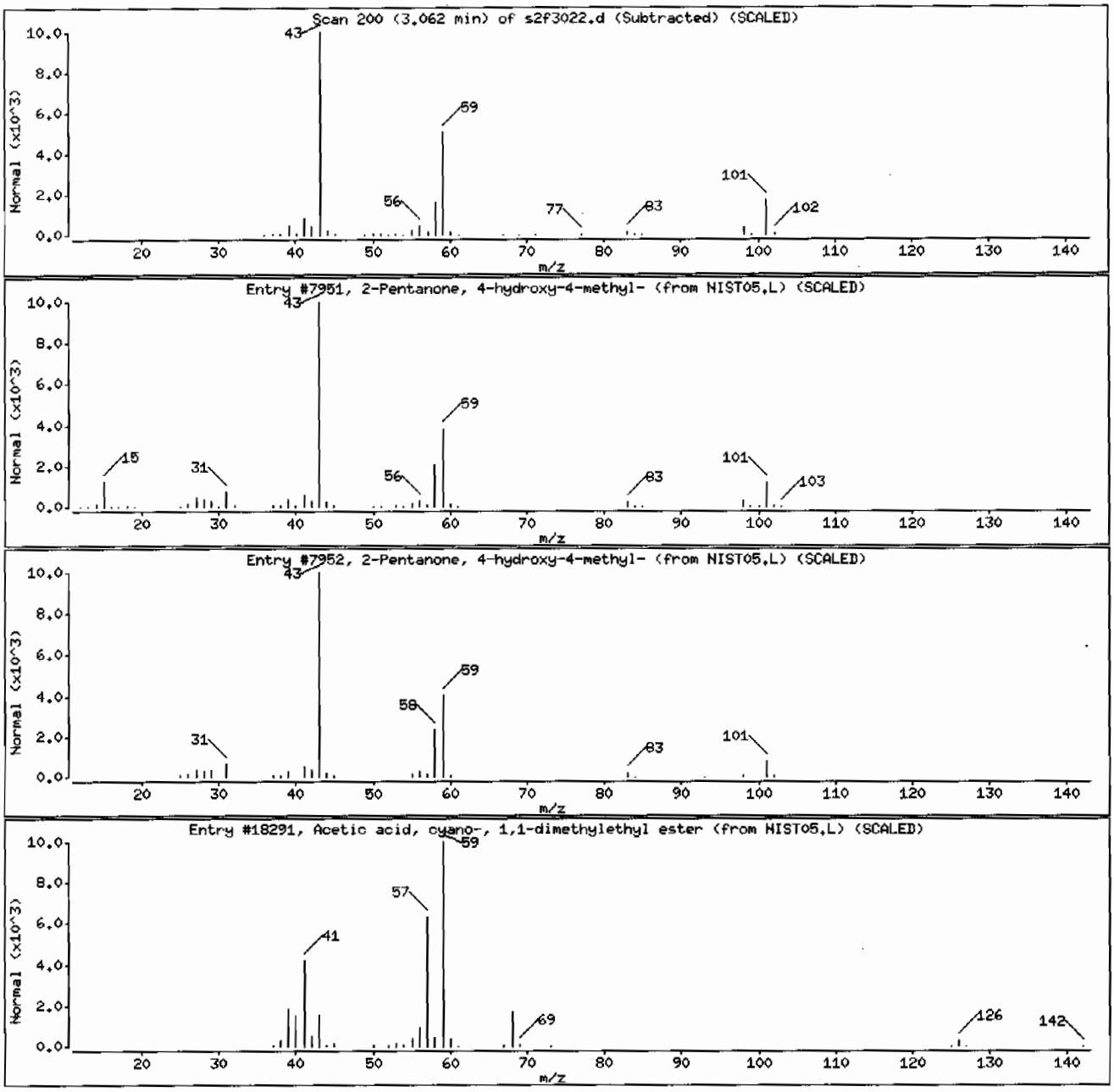

Data File: /chem/MSD2.i/s063009.b/s2f3022.d

Date : 30-JUN-2009 22:52

Client ID: CAMO-09-6035

Instrument: MSD2.i

Sample Info: |2324280111881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
3,3,7,11-Tetramethyltricyclo[5.4.0.0(4,1	117591-80-7	NIST05.L	72963	30	C15H260	222
1,2-Benzenedicarboxylic acid, 4-(1,1-dim	14236-13-6	NIST05.L	72462	18	C12H1404	222
2,4-Cyclohexadien-1-one, 3,5-bis(1,1-dim	54965-43-4	NIST05.L	72776	18	C14H2202	222

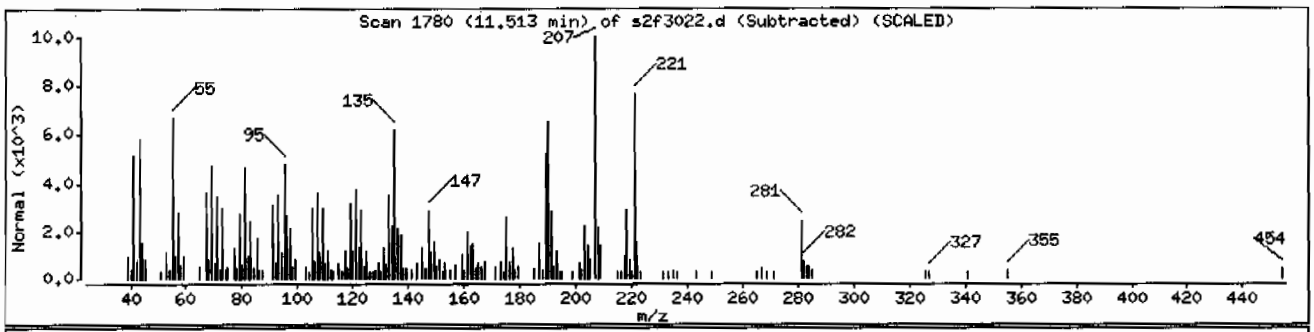

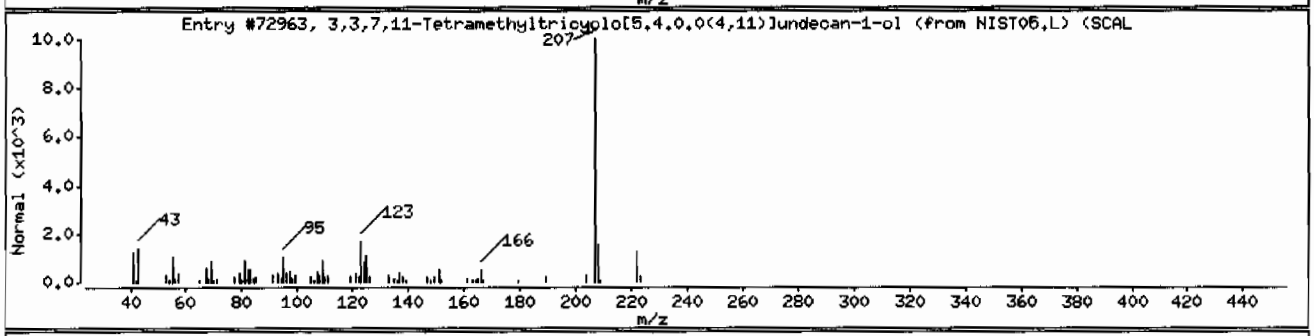

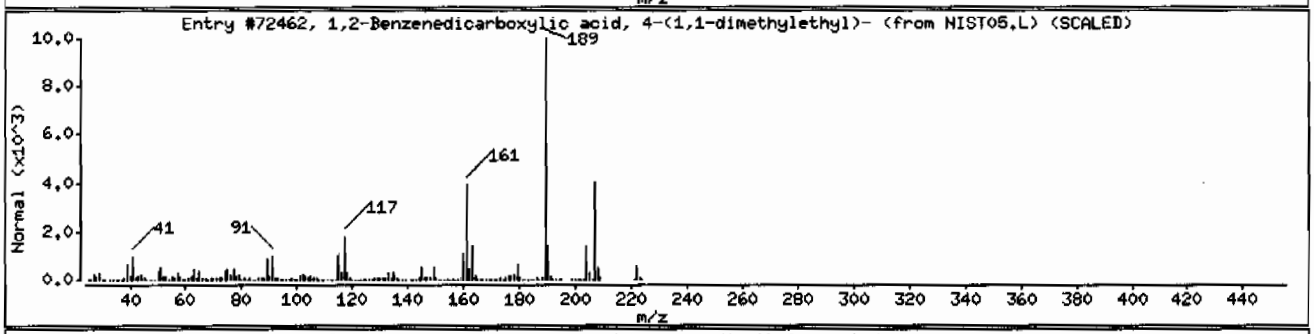

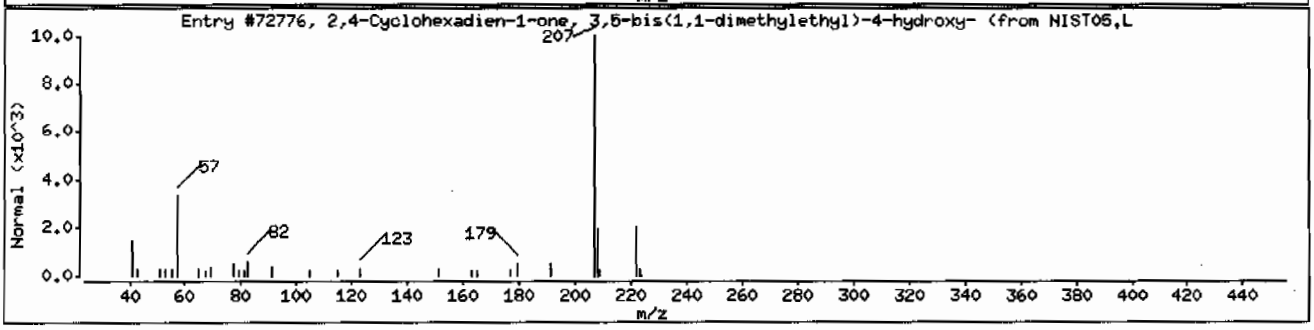

Data File: /chem/MSD2.i/s063009.b/s2f3022.d

Date : 30-JUN-2009 22:52

Client ID: CAMD-09-6035

Instrument: MSD2.i

Sample Info: |2324280111881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
14-Nor-3-acetoxyurs-12-ene, 14.alpha.,20	1000196-16-4	NIST05.L	180478	42	C31H5OO2	454
2-Amino-4-cyanomethyl-6-piperidino-1,3,5	1000241-05-9	NIST05.L	69370	25	C10H14N6	218
5H-3,5a-Epoxynaphth[2,1-cloxepin, dodeca	1153-34-0	NIST05.L	110793	20	C18H3OO2	278

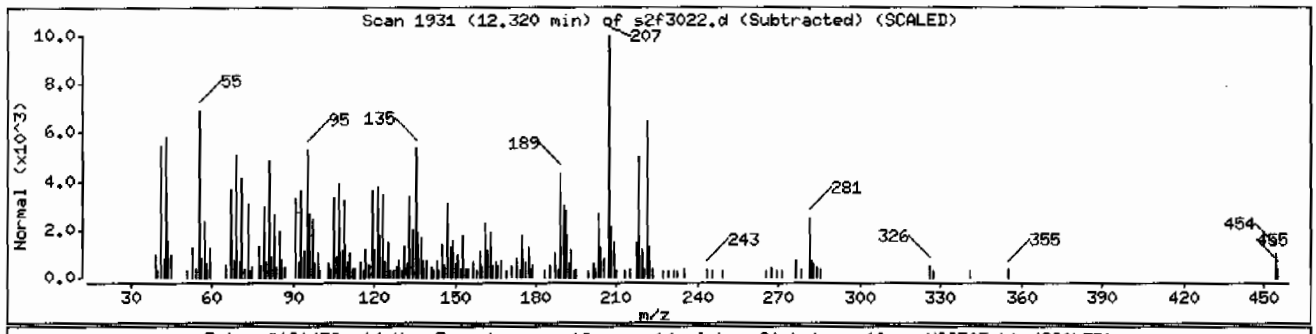

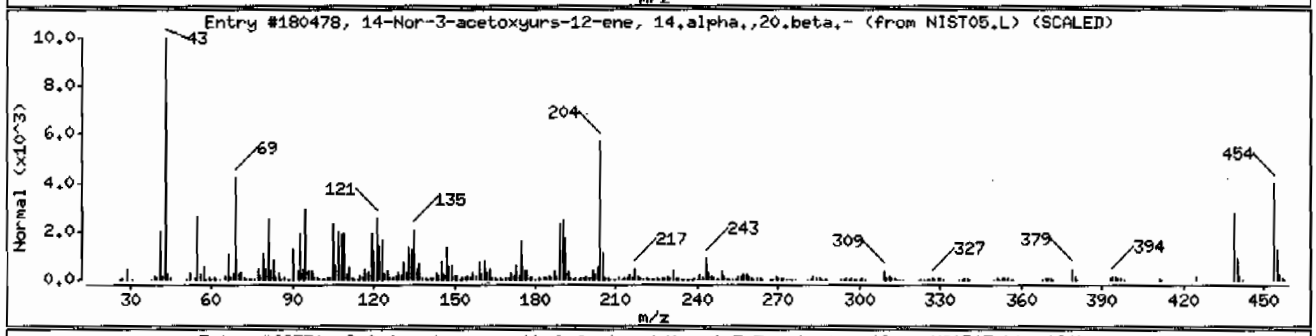

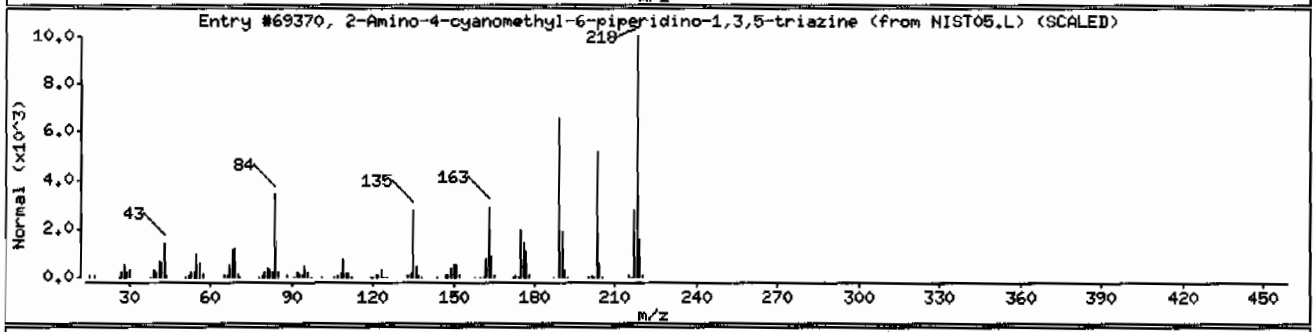

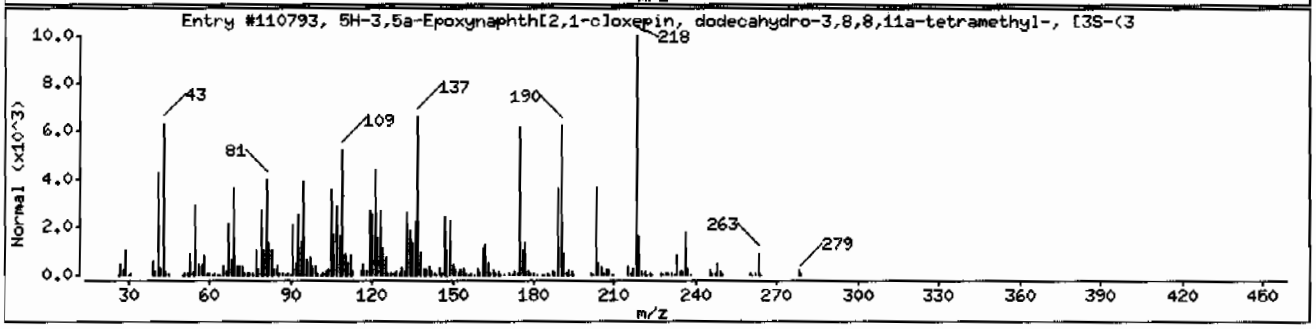

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428012	**Date Received:**	06/26/2009 08:40	**%Moisture:**	25.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6038	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3023.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	443	ug/kg	88.7	443
108-95-2	Phenol	U	443	ug/kg	88.7	443
95-57-8	2-Chlorophenol	U	443	ug/kg	88.7	443
106-46-7	1,4-Dichlorobenzene	U	443	ug/kg	88.7	443
621-64-7	N-Nitrosodipropylamine	U	443	ug/kg	88.7	443
59-50-7	4-Chloro-3-methylphenol	U	443	ug/kg	44.3	443
83-32-9	Acenaphthene	J	16.2	ug/kg	14.8	44.3
121-14-2	2,4-Dinitrotoluene	U	443	ug/kg	44.3	443
100-02-7	4-Nitrophenol	U	443	ug/kg	88.7	443
87-86-5	Pentachlorophenol	U	443	ug/kg	88.7	443
129-00-0	Pyrene		155	ug/kg	13.9	44.3
110-86-1	Pyridine	U	443	ug/kg	88.7	443
62-53-3	Aniline	U	443	ug/kg	155	443
111-44-4	bis(2-Chloroethyl) ether	U	443	ug/kg	88.7	443
541-73-1	1,3-Dichlorobenzene	U	443	ug/kg	88.7	443
100-51-6	Benzyl alcohol	U	443	ug/kg	133	443
95-50-1	1,2-Dichlorobenzene	U	443	ug/kg	88.7	443
108-60-1	bis(2-Chloroisopropyl)ether	U	443	ug/kg	88.7	443
95-48-7	o-Cresol	U	443	ug/kg	88.7	443
65794-96-9	m,p-Cresols	U	443	ug/kg	177	443
67-72-1	Hexachloroethane	U	443	ug/kg	88.7	443
98-95-3	Nitrobenzene	U	443	ug/kg	88.7	443
78-59-1	Isophorone	U	443	ug/kg	88.7	443
88-75-5	2-Nitrophenol	U	443	ug/kg	44.3	443
105-67-9	2,4-Dimethylphenol	U	443	ug/kg	88.7	443
111-91-1	bis(2-Chloroethoxy)methane	U	443	ug/kg	88.7	443
120-83-2	2,4-Dichlorophenol	U	443	ug/kg	88.7	443
65-85-0	Benzoic acid	U	887	ug/kg	222	887
91-20-3	Naphthalene	U	44.3	ug/kg	13.3	44.3
106-47-8	4-Chloroaniline	U	443	ug/kg	88.7	443
87-68-3	Hexachlorobutadiene	U	443	ug/kg	88.7	443
91-57-6	2-Methylnaphthalene	U	44.3	ug/kg	8.87	44.3
77-47-4	Hexachlorocyclopentadiene	U	443	ug/kg	88.7	443
88-06-2	2,4,6-Trichlorophenol	U	443	ug/kg	88.7	443
95-95-4	2,4,5-Trichlorophenol	U	443	ug/kg	88.7	443
91-58-7	2-Chloronaphthalene	U	44.3	ug/kg	15.5	44.3
88-74-4	2-Nitroaniline	U	443	ug/kg	88.7	443
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	443	ug/kg	88.7	443

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428012	**Date Received:**	06/26/2009 08:40	**%Moisture:**	25.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6038	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3023.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	443	ug/kg	88.7	443
606-20-2	2,6-Dinitrotoluene	U	443	ug/kg	44.3	443
208-96-8	Acenaphthylene	U	44.3	ug/kg	13.3	44.3
51-28-5	2,4-Dinitrophenol	U	887	ug/kg	168	887
132-64-9	Dibenzofuran	U	443	ug/kg	88.7	443
84-66-2	Diethylphthalate	U	443	ug/kg	88.7	443
86-73-7	Fluorene	U	44.3	ug/kg	13.3	44.3
7005-72-3	4-Chlorophenylphenylether	U	443	ug/kg	44.3	443
534-52-1	2-Methyl-4,6-dinitrophenol	U	443	ug/kg	88.7	443
100-01-6	4-Nitroaniline	U	443	ug/kg	88.7	443
	p-Nitroaniline					
122-39-4	Diphenylamine	U	443	ug/kg	88.7	443
122-66-7	Azobenzene	U	443	ug/kg	88.7	443
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	443	ug/kg	44.3	443
118-74-1	Hexachlorobenzene	U	443	ug/kg	88.7	443
85-01-8	Phenanthrene		103	ug/kg	13.3	44.3
120-12-7	Anthracene	U	44.3	ug/kg	8.87	44.3
84-74-2	Di-n-butylphthalate	U	443	ug/kg	44.3	443
206-44-0	Fluoranthene		185	ug/kg	13.3	44.3
85-68-7	Butylbenzylphthalate	U	443	ug/kg	88.7	443
56-55-3	Benzo(a)anthracene		66.3	ug/kg	13.3	44.3
91-94-1	3,3'-Dichlorobenzidine	U	443	ug/kg	133	443
218-01-9	Chrysene		75.8	ug/kg	13.3	44.3
117-81-7	bis(2-Ethylhexyl)phthalate	J	322	ug/kg	88.7	443
117-84-0	Di-n-octylphthalate	U	443	ug/kg	88.7	443
205-99-2	Benzo(b)fluoranthene		135	ug/kg	13.3	44.3
207-08-9	Benzo(k)fluoranthene	U	44.3	ug/kg	13.3	44.3
50-32-8	Benzo(a)pyrene		72.5	ug/kg	13.3	44.3
193-39-5	Indeno(1,2,3-cd)pyrene	J	33.2	ug/kg	13.3	44.3
53-70-3	Dibenzo(a,h)anthracene	U	44.3	ug/kg	13.3	44.3
191-24-2	Benzo(ghi)perylene	J	32.9	ug/kg	13.3	44.3
120-82-1	1,2,4-Trichlorobenzene	U	443	ug/kg	88.7	443

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	411	ug/kg		J
103-82-2	Benzeneacetic acid	5.04	234	ug/kg	90	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428012	**Date Received:**	06/26/2009 08:40	**%Moisture:**	25.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6038	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3023.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
57-10-3	n-Hexadecanoic acid	7.39	194	ug/kg	97	NJ
1000189-14-9	1-Hydroxy-6-(3-isopropenyl-cycloprop-1-e	7.95	255	ug/kg	83	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.39	195	ug/kg	98	NJ
	Unknown	8.46	899	ug/kg		J
	Unknown	8.6	297	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	211	ug/kg	90	NJ
630-03-5	Nonacosane	9.88	500	ug/kg	98	NJ
630-04-6	Hentriacontane	10.86	502	ug/kg	99	NJ
	Unknown	11.07	620	ug/kg		J
	Unknown	11.19	215	ug/kg		J
	Unknown	12.05	201	ug/kg		J
	Unknown	12.51	336	ug/kg		J
83-46-5	.beta.-Sitosterol	13.28	287	ug/kg	94	NJ

GEL Laboratories LLC

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Data file : /chem/MSD2.i/s063009.b/s2f3023.d
Lab Smp Id: 232428012 Client Smp ID: CAMO-09-6038
Inj Date : 30-JUN-2009 23:12
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428012|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.16000	weight of sample
M	25.20790	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.052	4.051	(1.000)	166453	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	626871	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	352432	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	608541	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	480798	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	298245	40.0000	
$ 3 2-Fluorophenol	112	3.233	3.222	(0.798)	249769	54.2274	2400
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	291861	51.3135	2270
$ 20 Nitrobenzene-d5	82	4.415	4.415	(0.897)	133568	28.2407	1250
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	294148	29.5518	1310
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	81005	67.1076	2970
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	305931	37.3569	1660

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
47 Acenaphthene	154	6.191	6.196	(1.003)	3353	0.36455	16.2(a)
79 Pyrene	202	8.026	8.031	(0.904)	49950	3.48998	155
68 Phenanthrene	178	7.164	7.170	(1.002)	33770	2.33042	103
76 Fluoranthene	202	7.881	7.886	(1.103)	55554	4.16744	185
89 Benzo(a)anthracene	228	8.871	8.881	(0.999)	17485	1.49470	66.3
92 Chrysene	228	8.903	8.919	(1.002)	19313	1.71074	75.8
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.984)	64099	7.26745	322(a)
95 Benzo(b)fluoranthene	252	9.972	9.988	(0.950)	21837	3.04997	135
97 Benzo(a)pyrene	252	10.416	10.432	(0.992)	10237	1.63648	72.5
99 Indeno(1,2,3-cd)pyrene	276	12.305	12.337	(1.172)	4506	0.74986	33.2(a)
101 Benzo(ghi)perylene	276	12.882	12.903	(1.227)	3867	0.74116	32.8(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s2f3023.d
Report Date: 07/01/2009 07:59
Lab. ID: 232428012 SampleType: SAMPLE
Injection Date: 30-JUN-2009 23:12
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428012|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	12443	3.76	3.83	80-120	100	(T)
93	850	3.73	3.83	440-500	7	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	21885	4.42	4.29	80-120	100	(T)
42	10905	4.42	4.29	40-100	50	(T)
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	4798	5.91	5.78	80-120	100	(T)
164	350	5.91	5.78	3- 63	7	(T)
127	392	5.91	5.78	8- 68	8	(T)
42 o-Nitroaniline				CAS#: 88-74-4		
65	5533	5.91	5.83	80-120	100	(T)
92	6774	5.91	5.83	37- 97	122	(QT)
138	570	5.91	5.83	85-145	10	(QT)
43 Dimethylphthalate				CAS#: 131-11-3		
163	76038	6.17	5.94	80-120	100	(T)
164	350422	6.17	5.94	0- 40	461	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	45797	6.17	5.99	80-120	100	(T)
63	1060	6.17	5.99	46-106	2	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
47 Acenaphthene			CAS#: 83-32-9			
154	3353	6.19	6.20	80-120	100	( )
153	4248	6.19	6.20	69-129	127	( )
152	1936	6.19	6.20	17- 77	58	( )
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	45425	6.17	6.27	80-120	100	(T)
89	1237	6.17	6.27	38- 98	3	(QT)
63	1237	6.17	6.27	16- 76	3	(QT)
53 Fluorene			CAS#: 86-73-7			
166	5477	6.70	6.54	80-120	100	(T)
165	5346	6.70	6.54	61-121	98	(T)
167	2104	6.70	6.54	0- 44	38	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	210	6.70	6.55	80-120	100	(T)
105	423	6.70	6.55	14- 74	202	(QT)
51	430	6.69	6.55	37- 97	205	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	4613	6.70	6.84	80-120	100	(T)
141	35244	6.69	6.84	51-111	764	(QT)
250	9494	6.70	6.84	66-126	206	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	33770	7.16	7.17	80-120	100	( )
179	8274	7.16	7.17	0- 46	25	( )
176	6433	7.16	7.17	0- 49	19	( )
69 Anthracene			CAS#: 120-12-7			
178	6716	7.19	7.20	80-120	100	( )
179	8274	7.16	7.20	0- 46	123	(Q)
176	1293	7.20	7.20	0- 48	19	( )
76 Fluoranthene			CAS#: 206-44-0			
202	55554	7.88	7.89	80-120	100	( )
203	9468	7.88	7.89	0- 48	17	( )
101	8182	7.88	7.89	0- 45	15	( )
79 Pyrene			CAS#: 129-00-0			
202	49950	8.03	8.03	80-120	100	( )
200	10129	8.03	8.03	0- 51	20	( )
101	9313	8.03	8.03	0- 48	19	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	17485	8.87	8.88	80-120	100	( )
226	4753	8.87	8.88	0- 56	27	( )
229	5390	8.87	8.88	0- 50	31	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
92 Chrysene			CAS#: 218-01-9			
228	19313	8.90	8.92	80-120	100	( )
229	4726	8.90	8.92	0- 50	24	( )
226	5865	8.90	8.92	0- 59	30	( )
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	64099	8.74	8.75	80-120	100	( )
167	18068	8.74	8.75	2- 62	28	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	21837	9.97	9.99	80-120	100	( )
253	4886	9.97	9.99	0- 52	22	( )
125	3010	9.98	9.99	0- 45	14	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	21837	9.97	10.02	80-120	100	( )
253	4886	9.97	10.02	0- 52	22	( )
125	3010	9.98	10.02	0- 44	14	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	10237	10.42	10.43	80-120	100	( )
253	2308	10.42	10.43	0- 52	23	( )
125	1394	10.42	10.43	0- 46	14	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	4506	12.30	12.34	80-120	100	( )
138	1346	12.30	12.34	7- 67	30	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	3867	12.88	12.90	80-120	100	( )
138	1824	12.88	12.90	4- 64	47	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

GEL Laboratories, LLC

Data file : /chem/MSD2.i/s063009.b/s2f3023.d
Lab Smp Id: 232428012 Client Smp ID: CAMO-09-6038
Inj Date : 30-JUN-2009 23:12
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428012|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.16000	weight of sample
M	25.20790	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.052	983006	40.000
* 29 Naphthalene-d8	4.923	1308407	40.000
* 67 Phenanthrene-d10	7.148	1641737	40.000
* 91 Chrysene-d12	8.881	1775725	40.000
* 98 Perylene-d12	10.497	850059	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.062	228022	9.27857161	411	0		0	10
Benzeneacetic acid					CAS #: 103-82-2		
5.036	172764	5.28164192	234	90	NIST05.L	15740	29
n-Hexadecanoic acid					CAS #: 57-10-3		
7.394	179153	4.36496685	194	97	NIST05.L	96235	67
1-Hydroxy-6-(3-isopropenyl-cycloprop-1-e					CAS #: 1000189-14-9		
7.945	236000	5.75001475	255	83	NIST05.L	72783	67
1-Phenanthrenecarboxylic acid, 1,2,3,4,4					CAS #: 1235-74-1		
8.389	195218	4.39747030	195	98	NIST05.L	133618	91
Unknown					CAS #:		
8.464	899999	20.2733770	899	0		0	91
Unknown					CAS #:		
8.603	297803	6.70831930	297	0		0	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4					CAS #: 1740-19-8		
8.662	211626	4.76708786	211	90	NIST05.L	125037	91
Nonacosane					CAS #: 630-03-5		
9.876	239698	11.2790972	500	98	NIST05.L	173140	98
Hentriacontane					CAS #: 630-04-6		
10.860	240549	11.3191798	502	99	NIST05.L	178193	98
Unknown					CAS #:		
11.069	297075	13.9790096	620	0		0	98
Unknown					CAS #:		
11.187	102836	4.83898929	214	0		0	98
Unknown					CAS #:		
12.053	96304	4.53164664	201	0		0	98
Unknown					CAS #:		
12.508	160919	7.57214773	336	0		0	98
.beta.-Sitosterol					CAS #: 83-46-5		
13.278	137493	6.46979176	287	94	NIST05.L	174400	98

Data File: /chem/MSD2.i/s063009.b/s2f3023.d
Date : 30-JUN-2009 23:12
Client ID: CAMO-09-6038
Sample Info: |2324280121881319|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: ACS1
Column diameter: 0.20

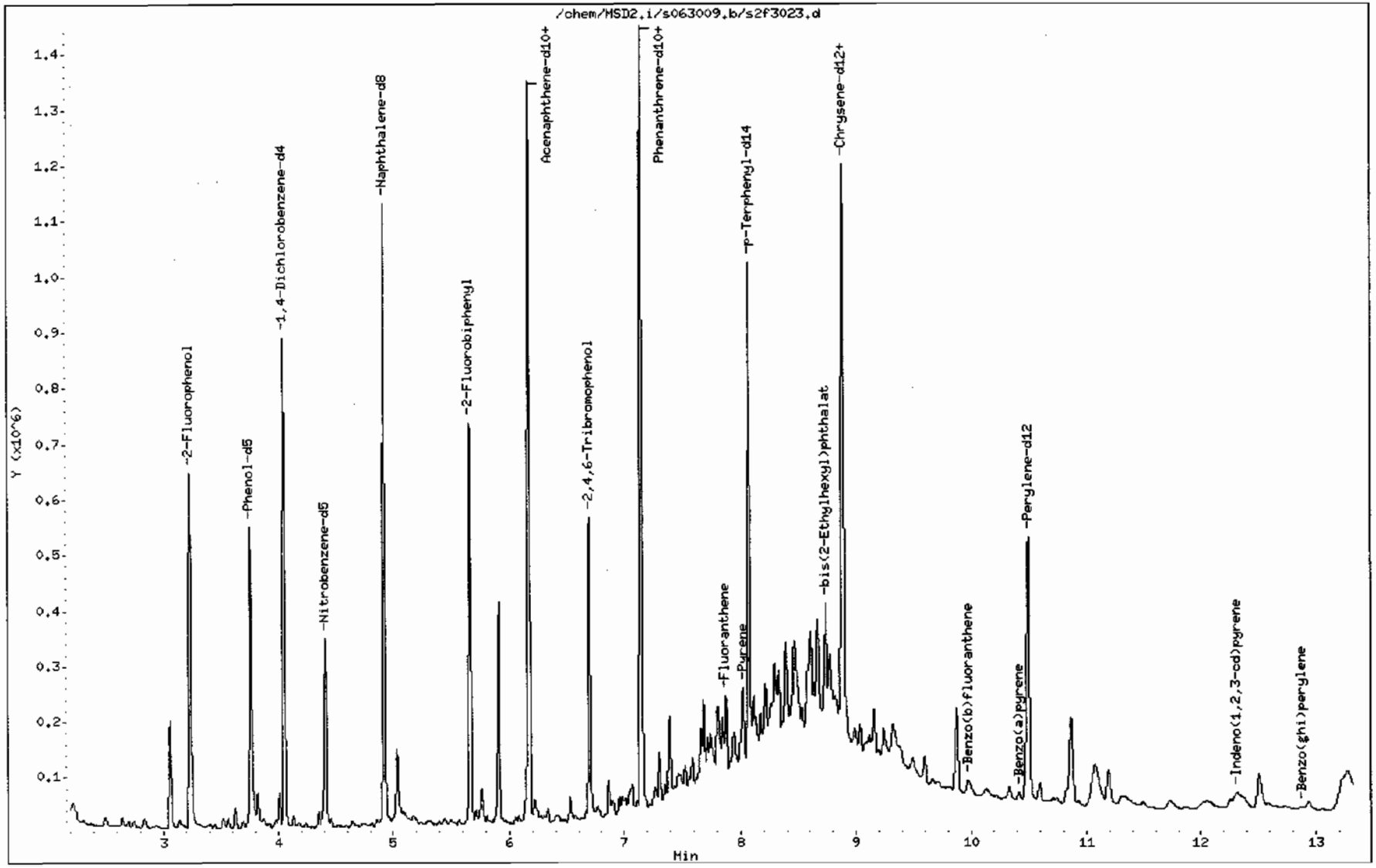

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038

Instrument: MSD2.i

Sample Info: 1232428012|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

47 Acenaphthene

Concentration: 16.2 ug/Kg

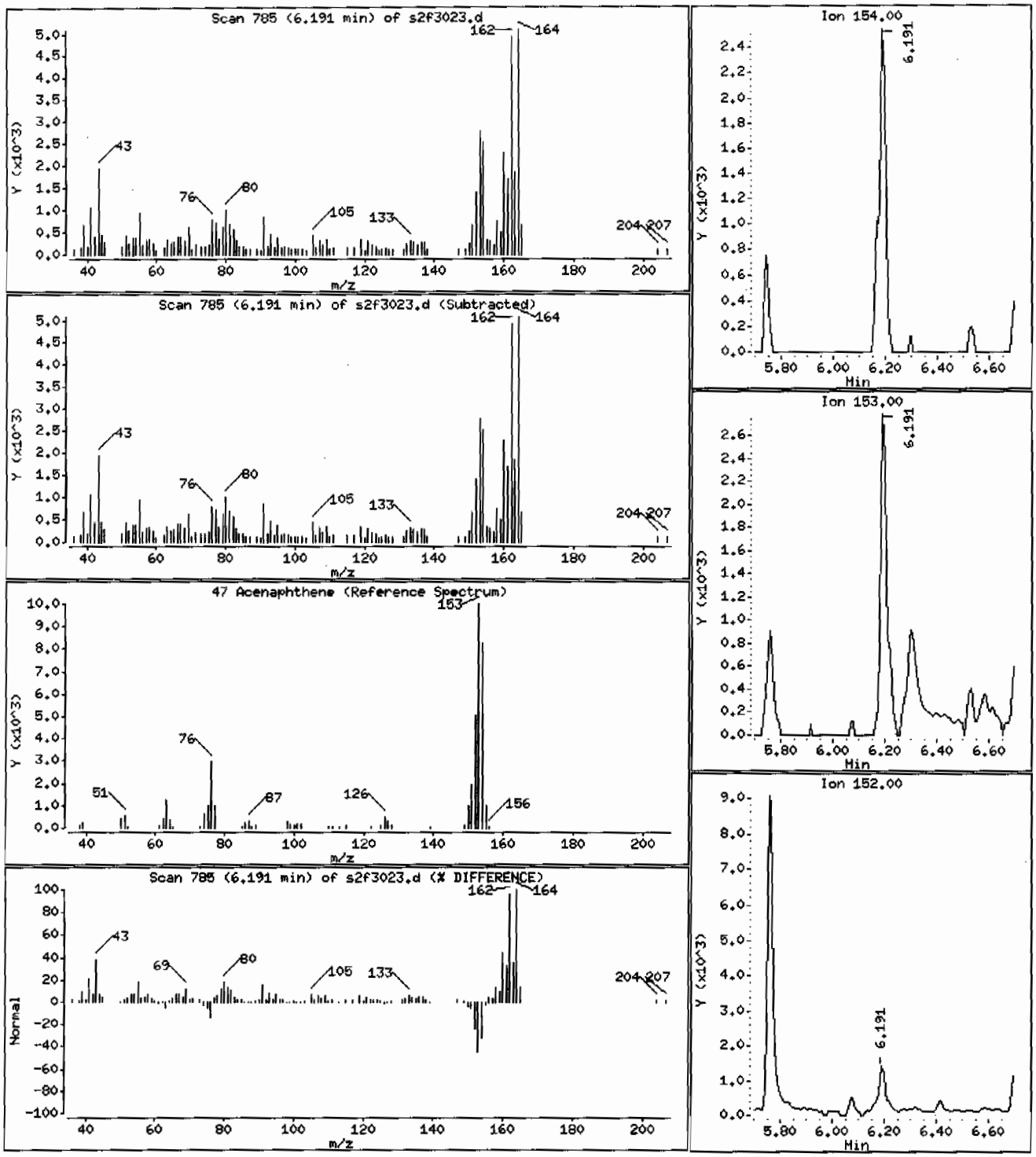

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038

Instrument: MSD2.i

Sample Info: |2324280121881319111SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 155 ug/Kg

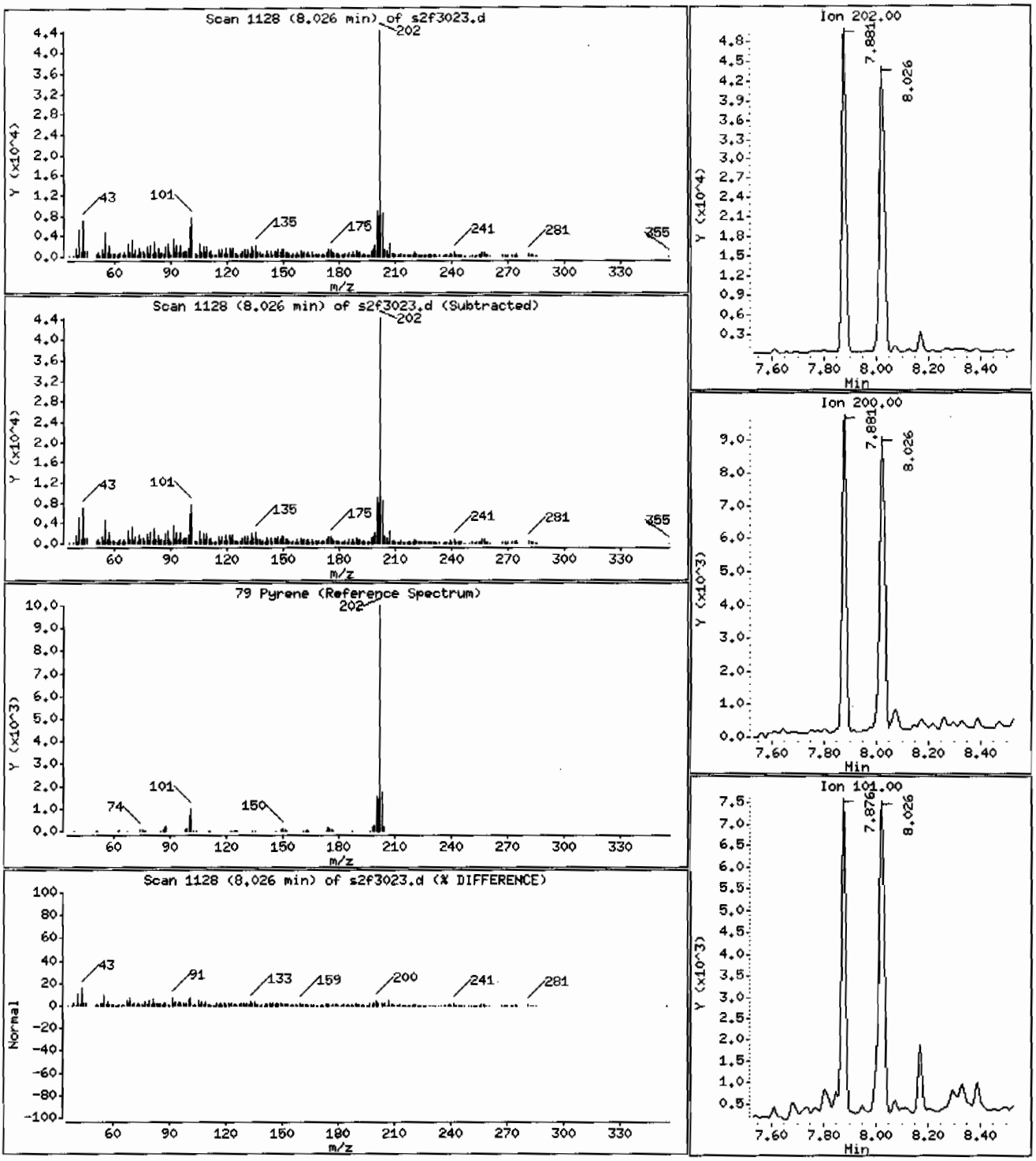

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038

Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 103 ug/Kg

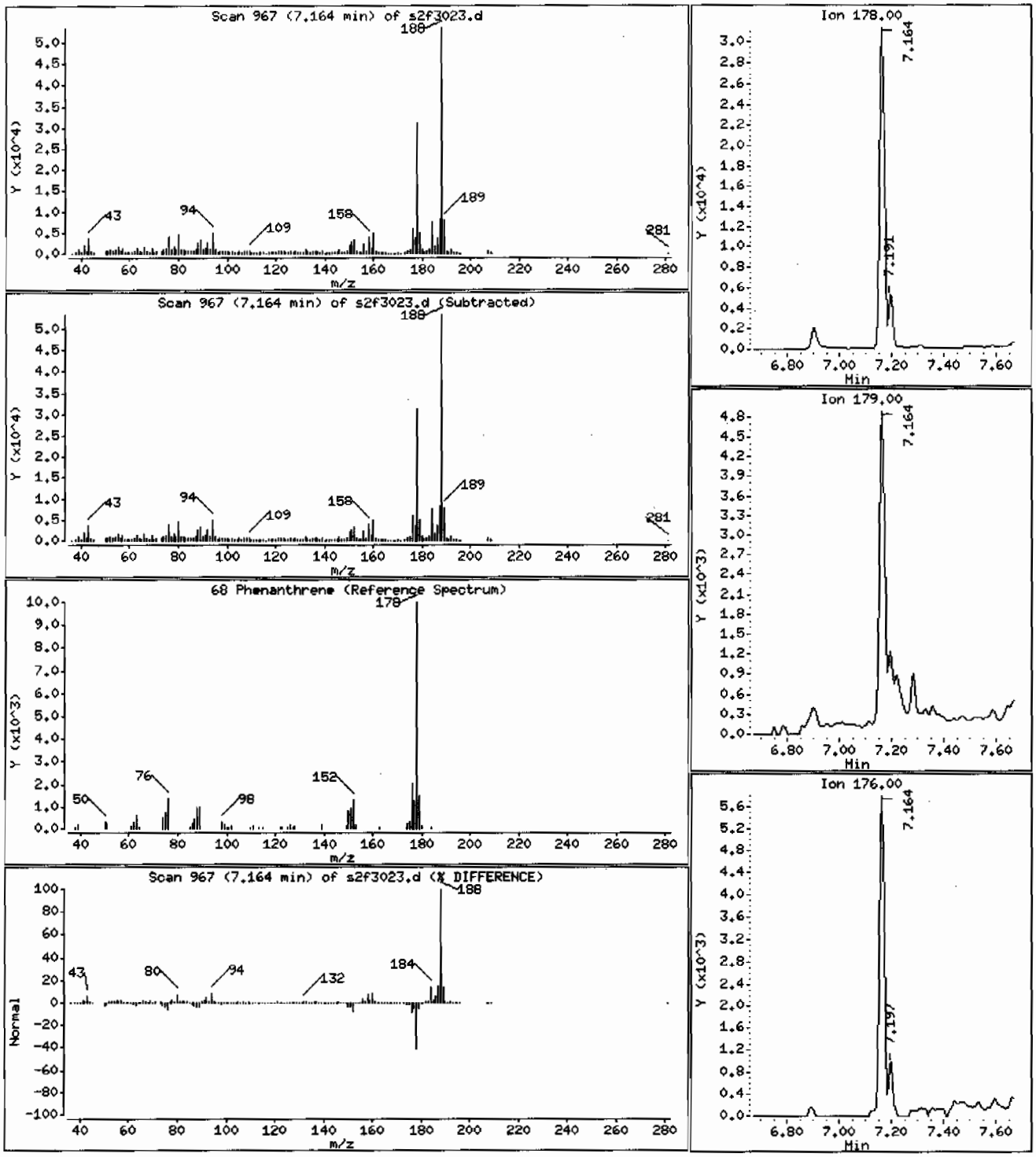

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038

Instrument: MSD2.i

Sample Info: |2324280121881319111SVMF111LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 185 ug/Kg

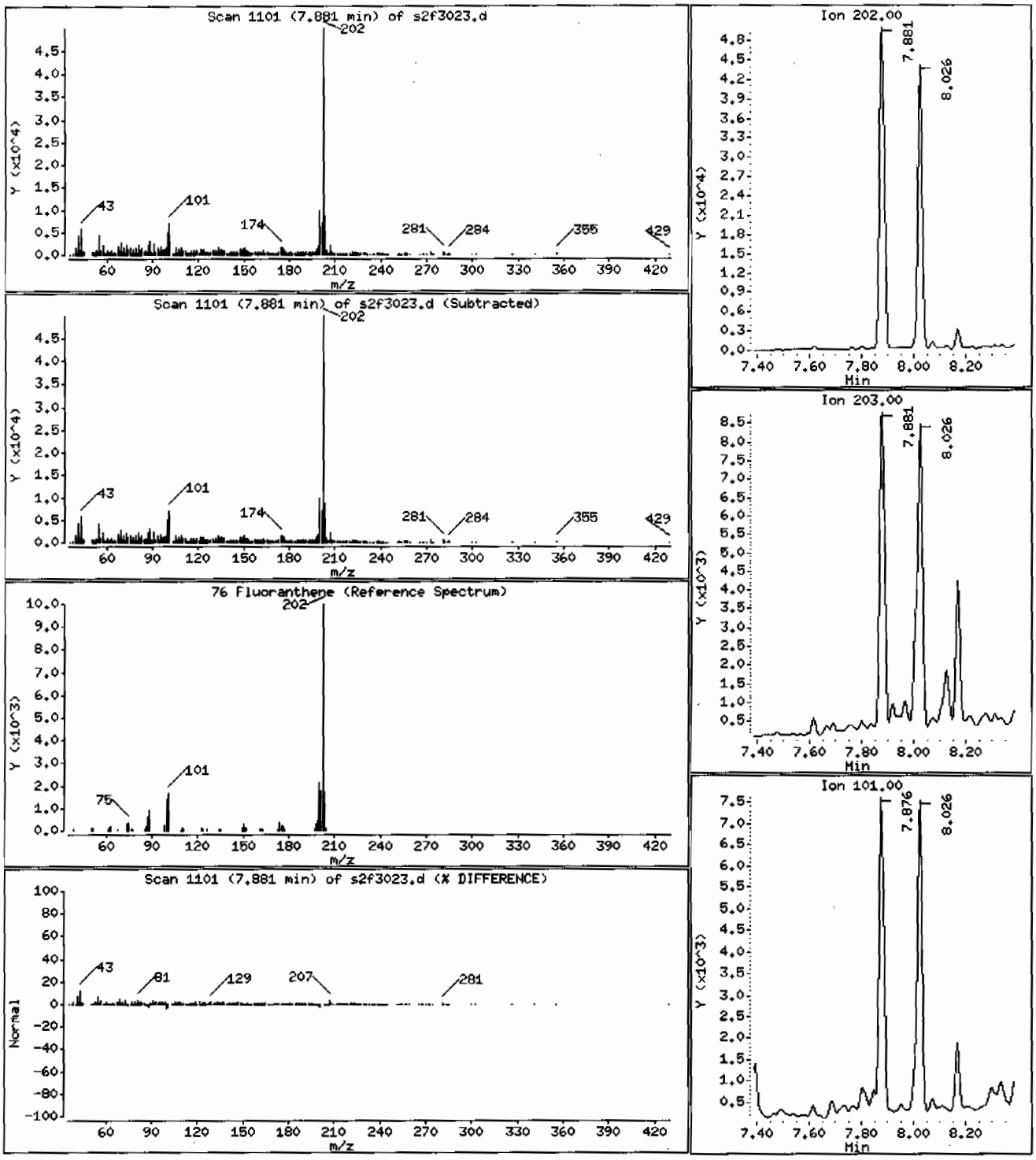

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: 1232428012188131911|SVHF1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

89 Benzo(a)anthracene Concentration: 66.3 ug/Kg

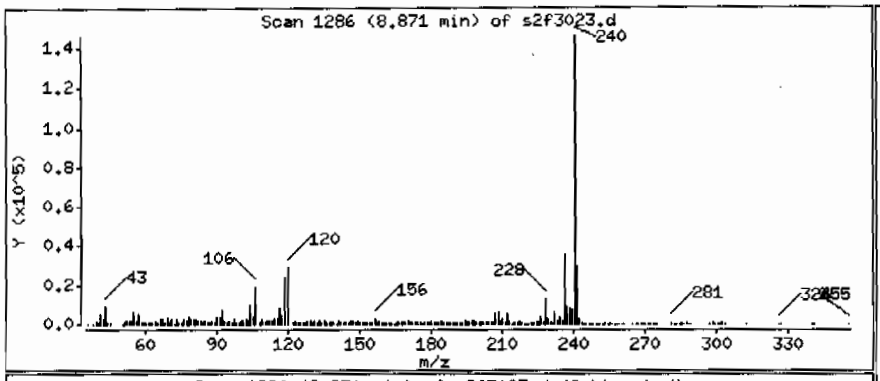

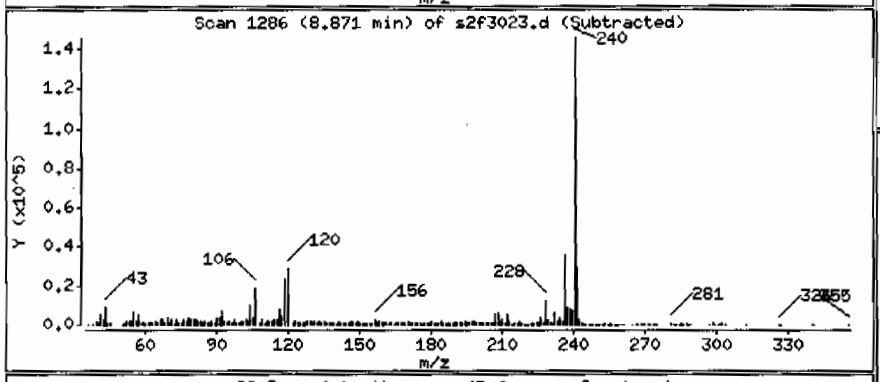

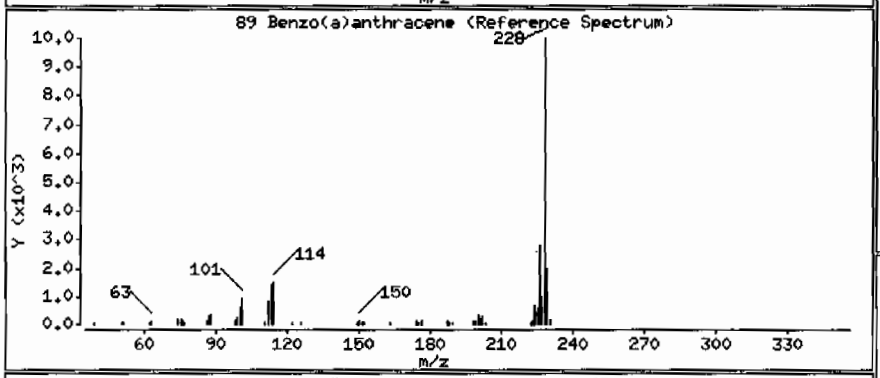

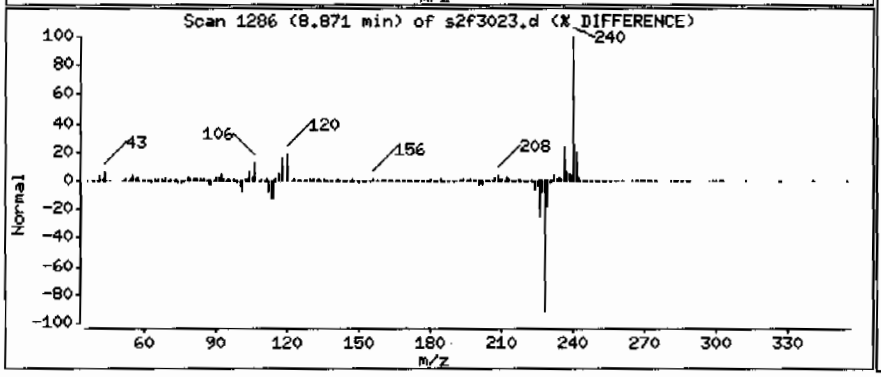

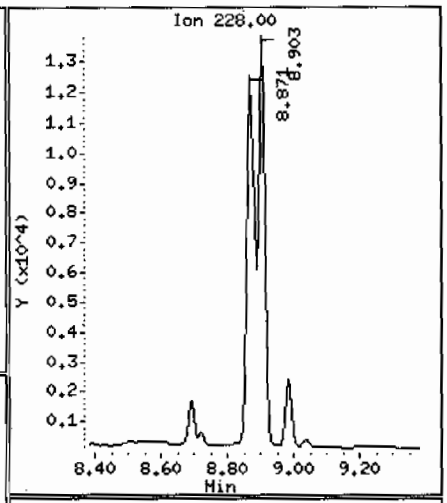

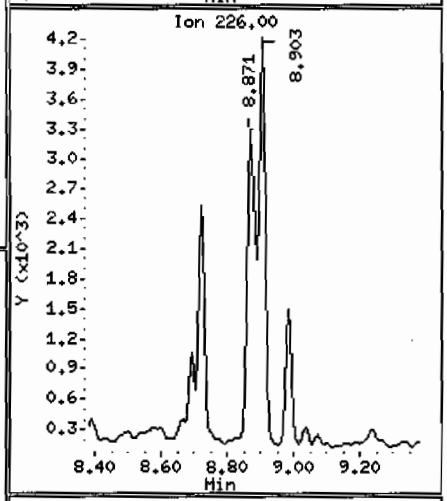

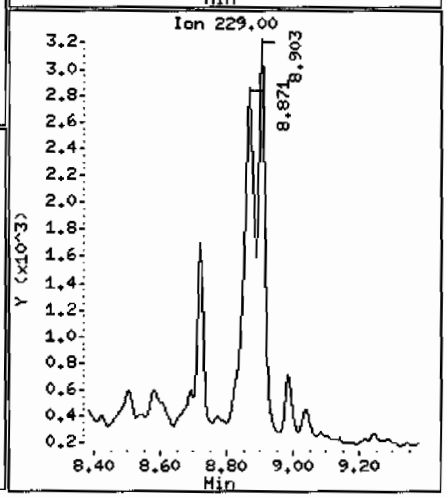

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

92 Chrysene Concentration: 75.8 ug/Kg

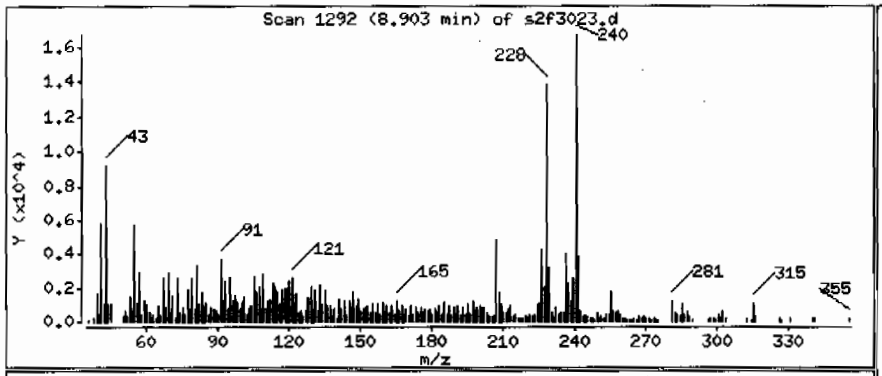

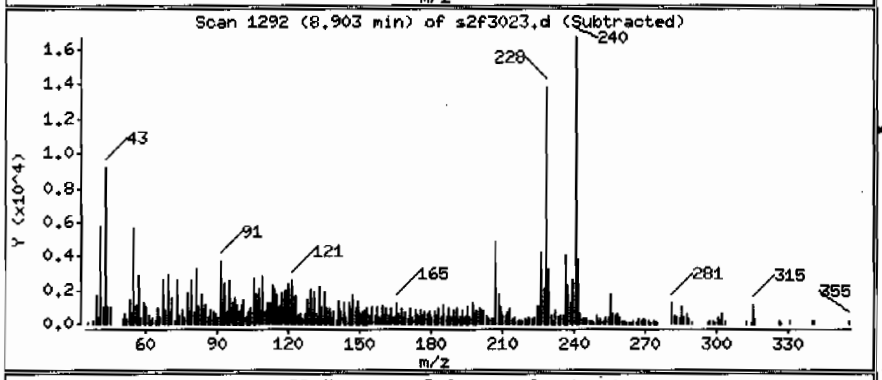

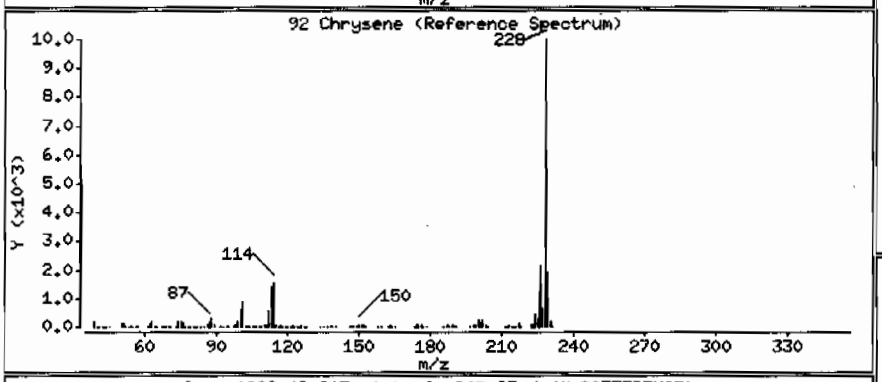

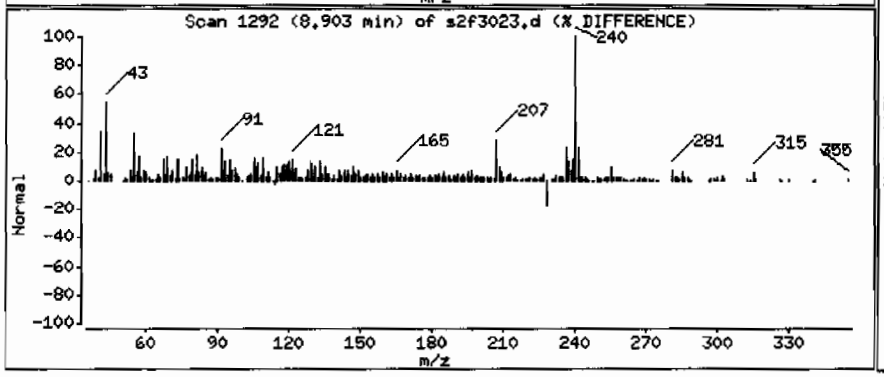

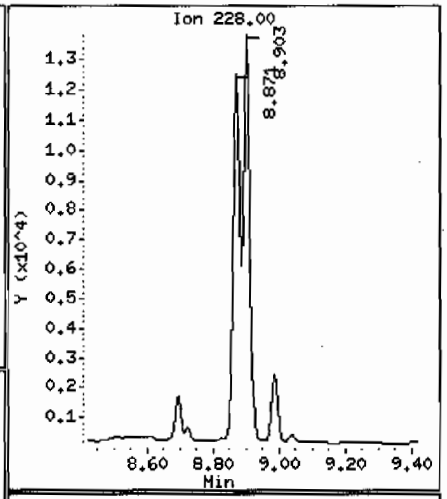

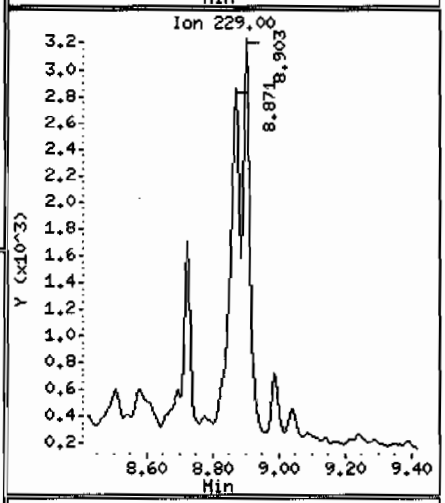

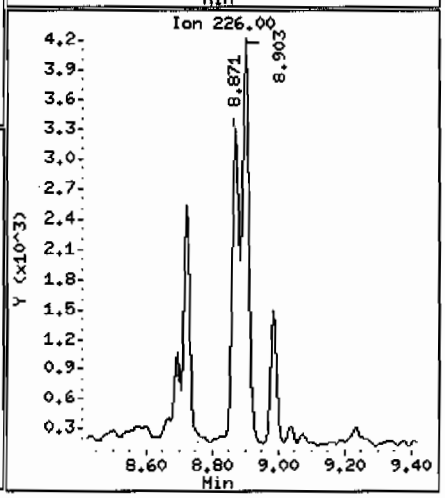

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038

Instrument: MSD2.i

Sample Info: 1232428012|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate

Concentration: 322 ug/Kg

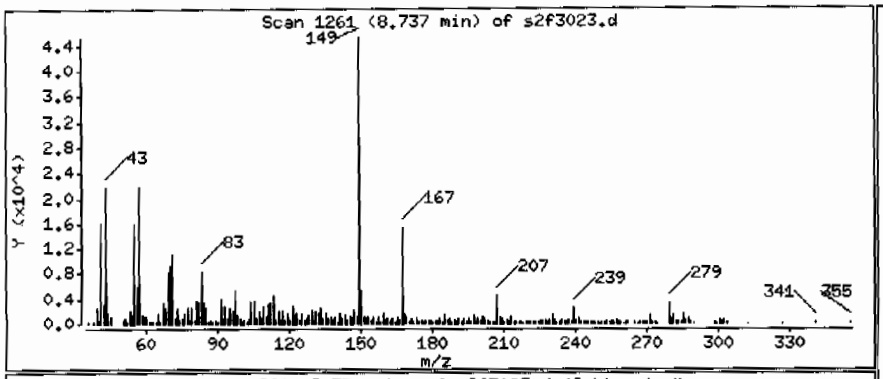

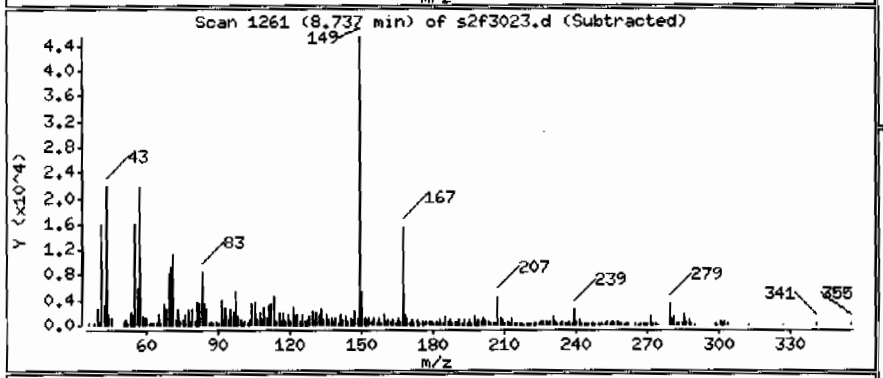

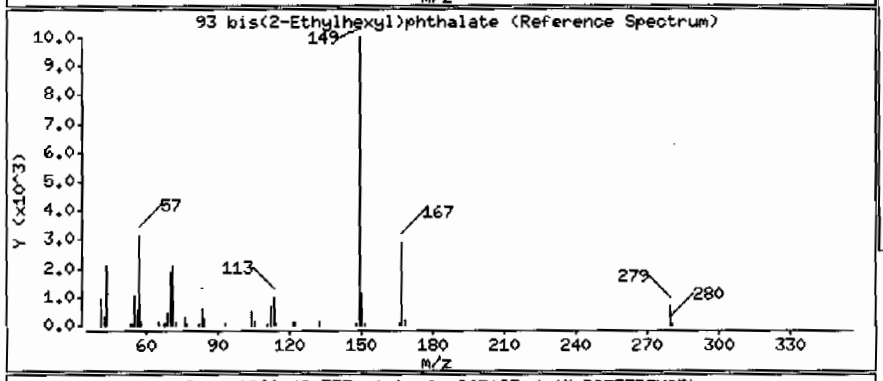

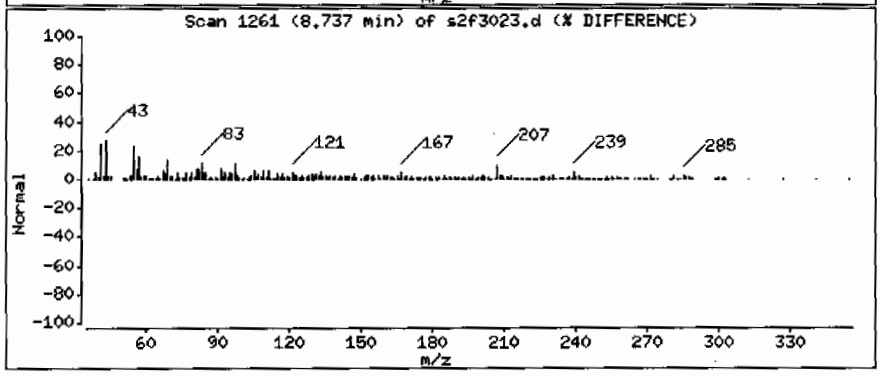

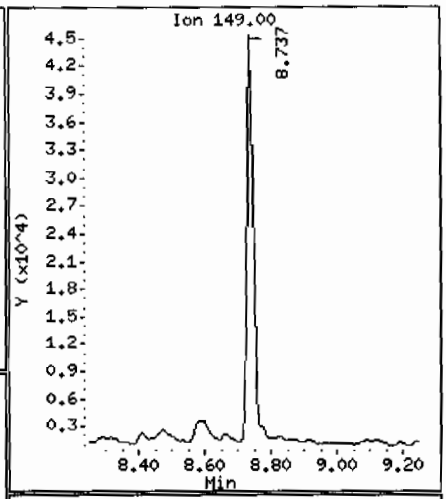

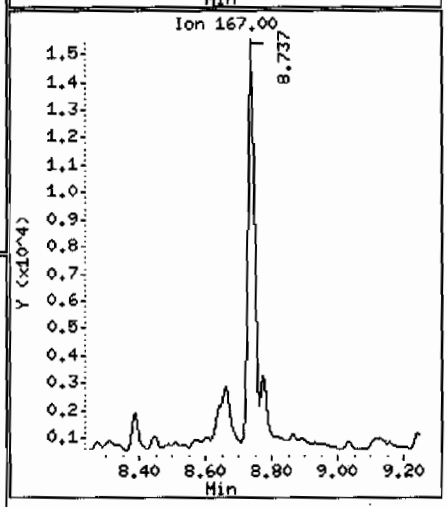

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038

Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 135 ug/Kg

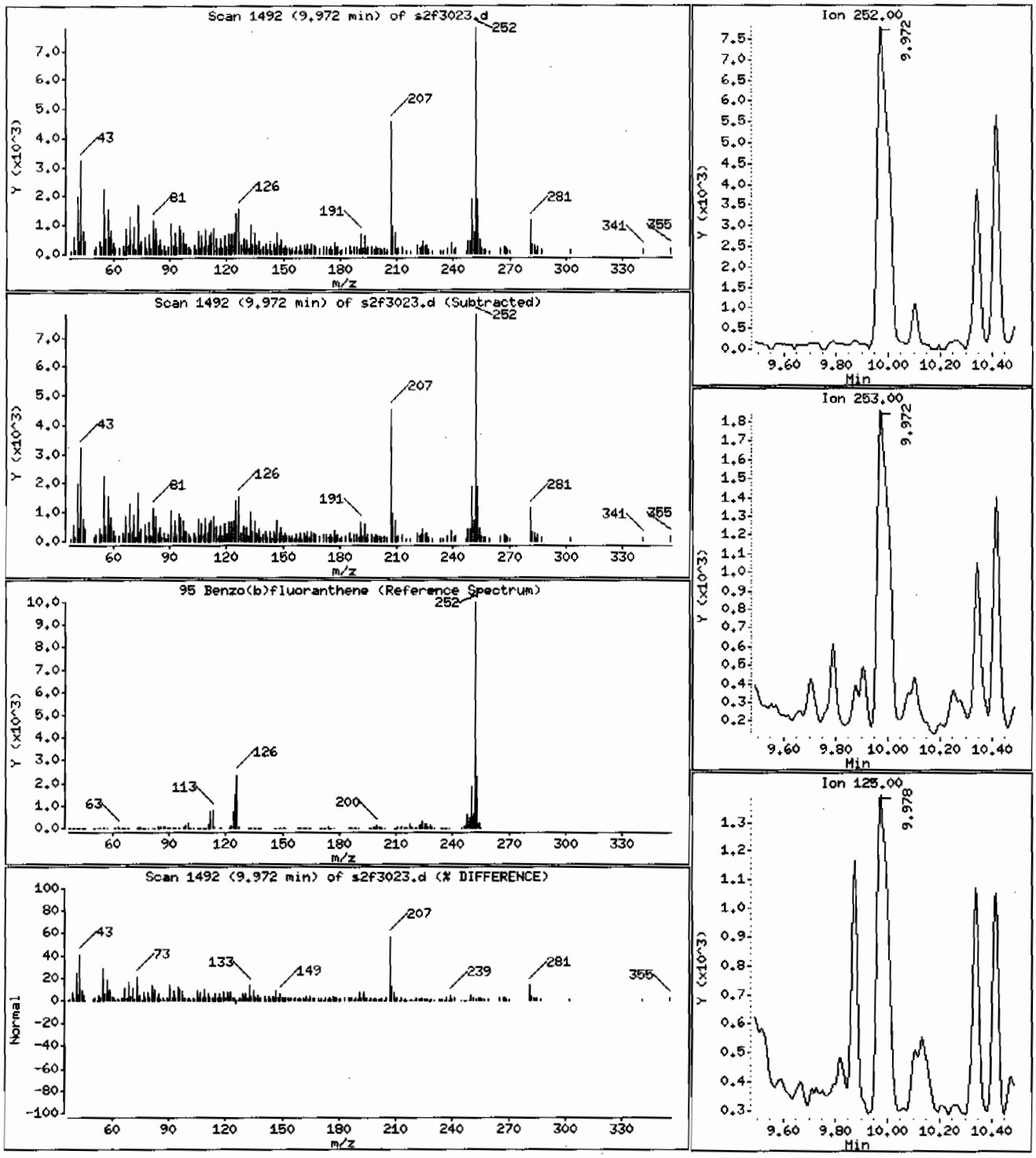

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

97 Benzo(a)pyrene Concentration: 72.5 ug/Kg

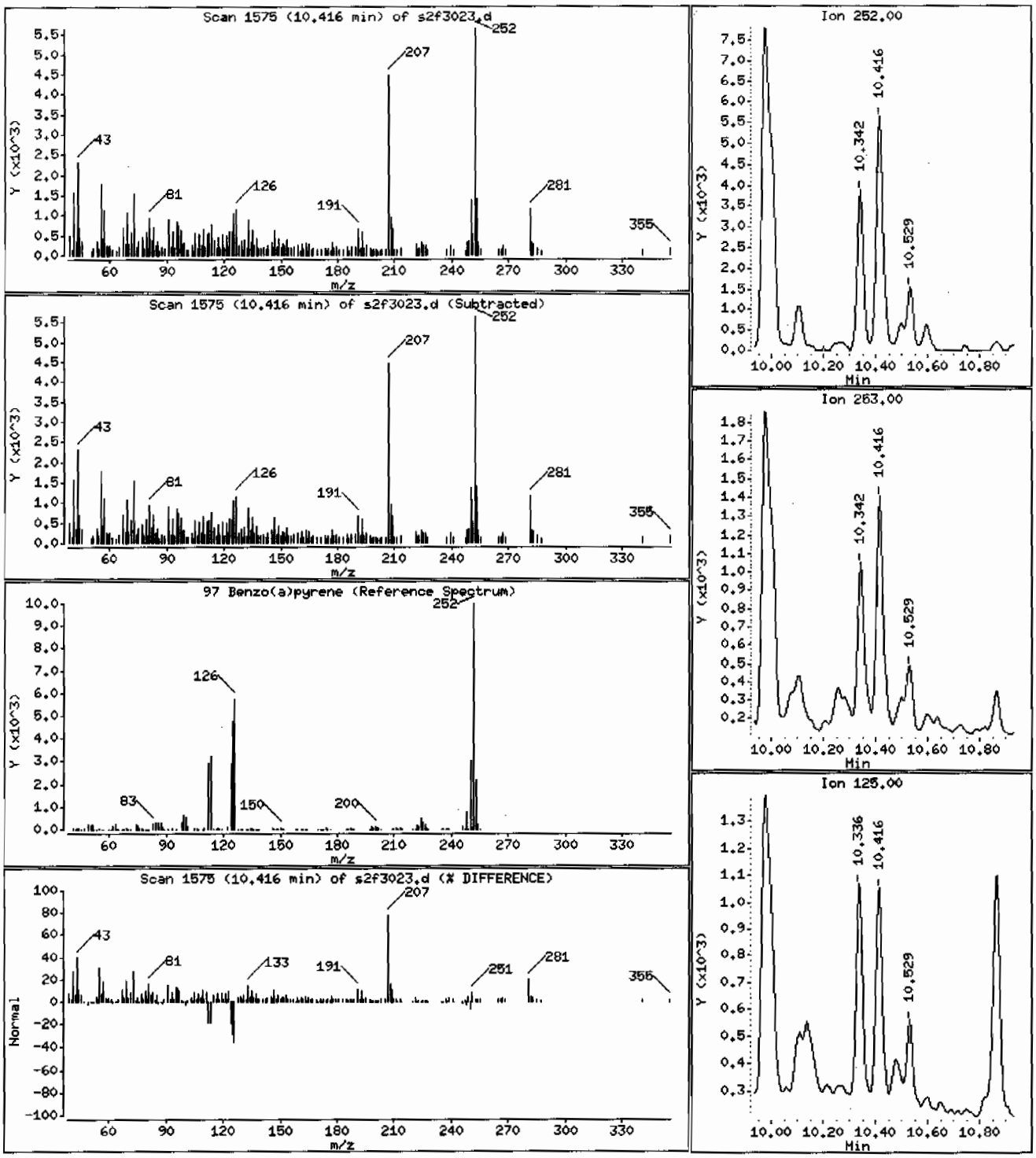

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 33.2 ug/Kg

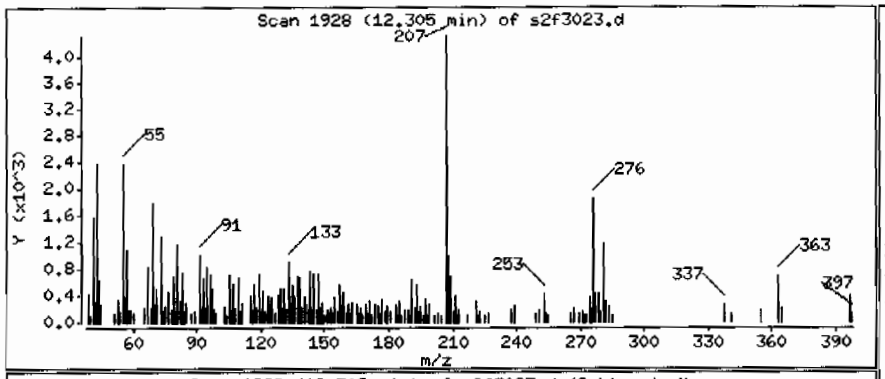

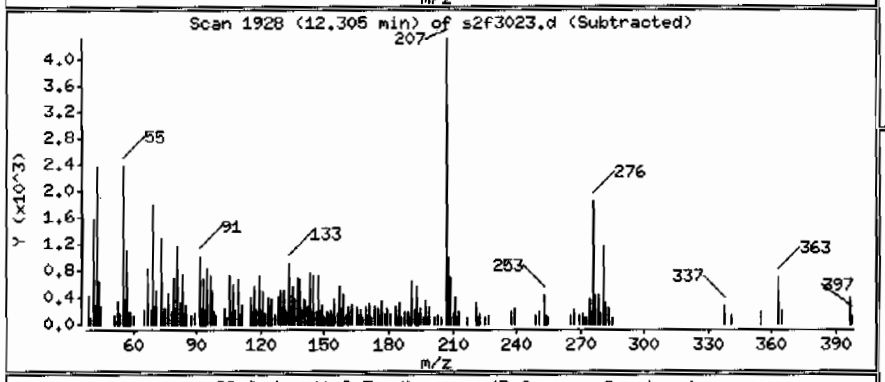

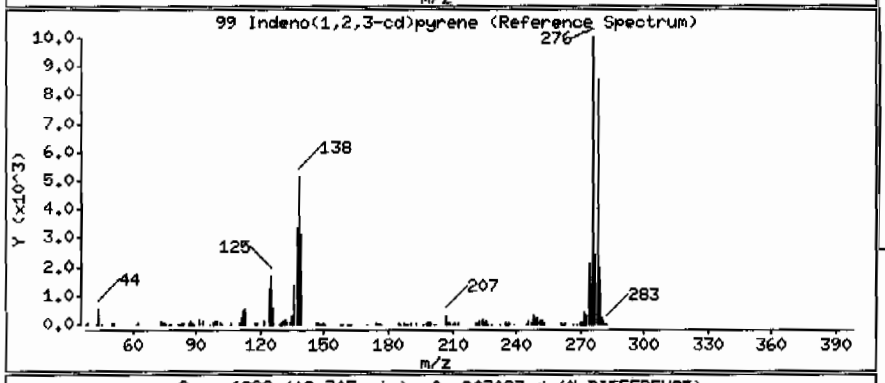

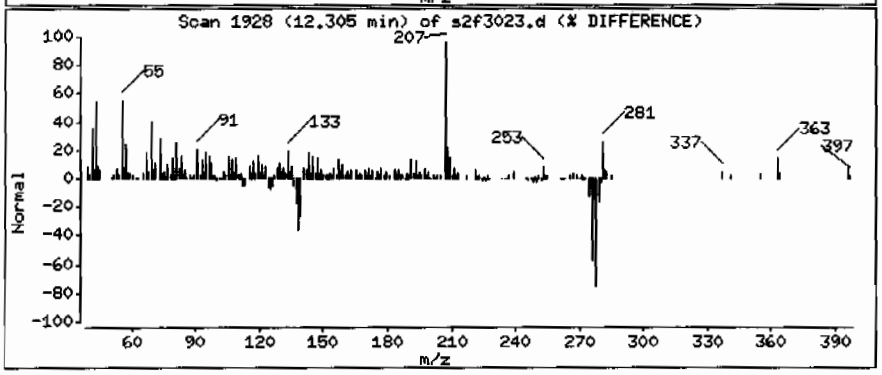

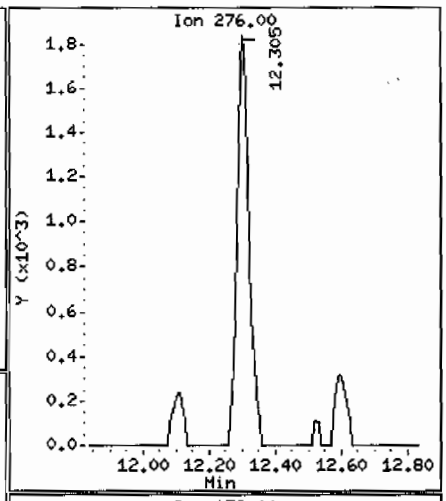

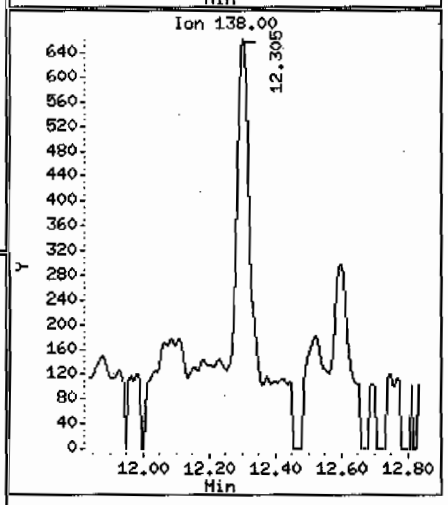

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: 1232428012188131911ISVMF11LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

101 Benzo(ghi)perylene Concentration: 32.8 ug/Kg

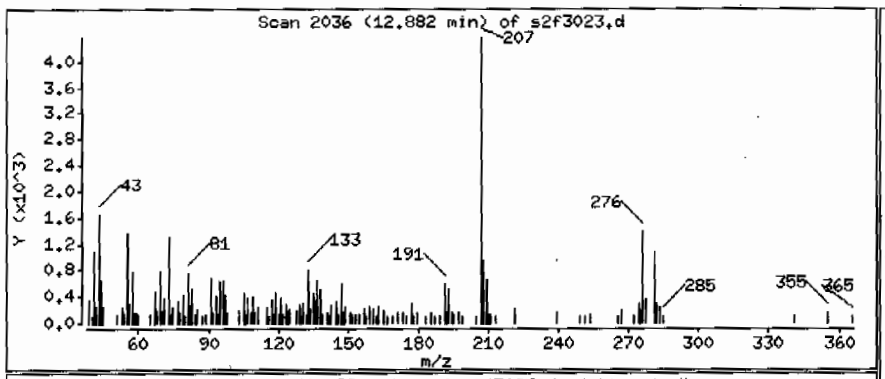

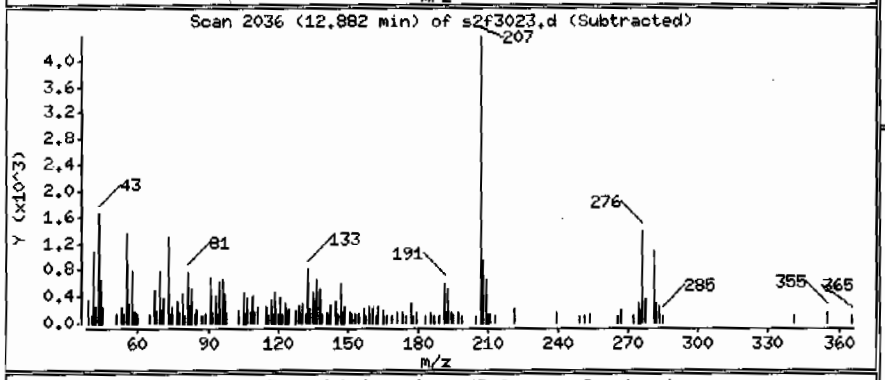

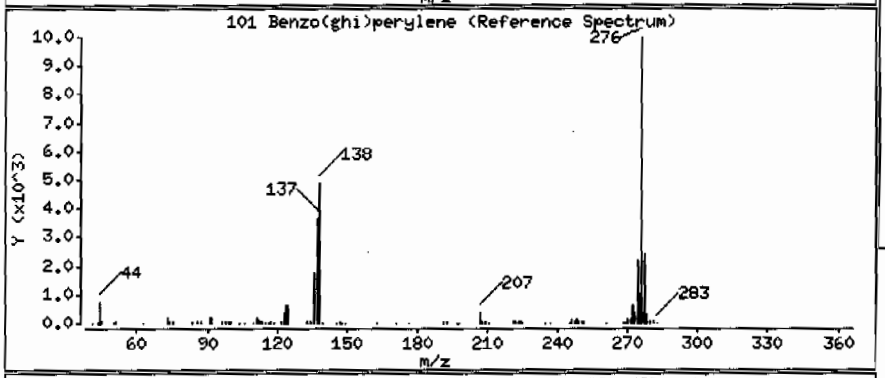

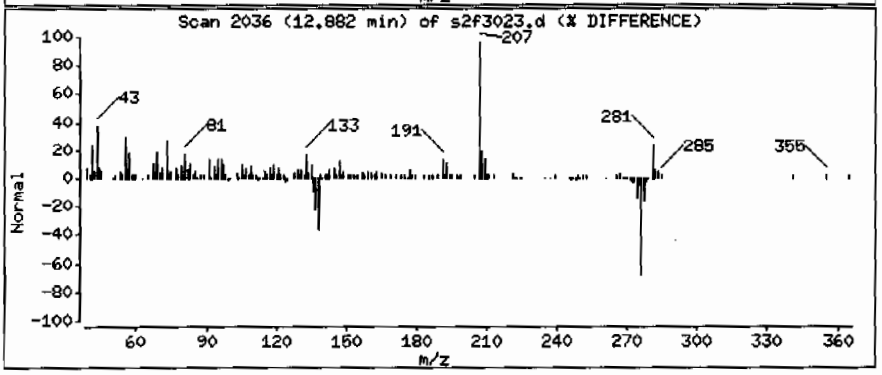

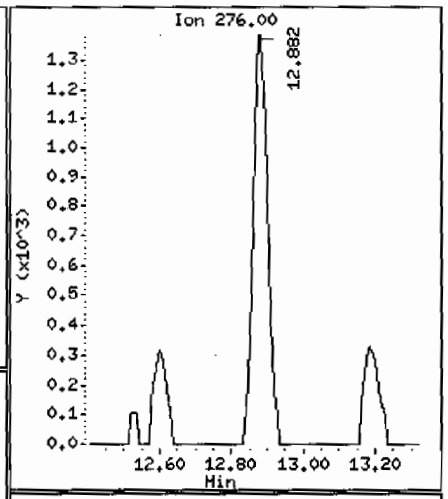

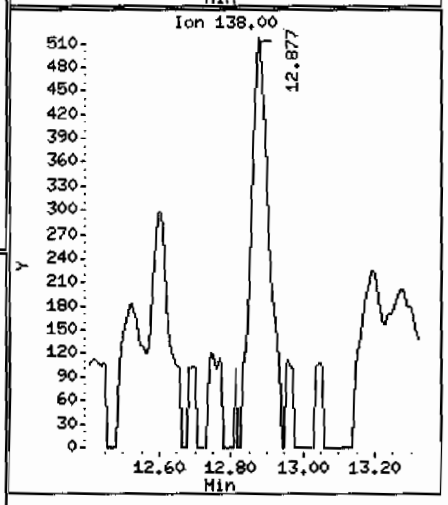

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038

Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	38	C6H12O2	116
Acetic acid, cyano-, 1,1-dimethylethyl e	1116-98-9	NIST05.L	18291	25	C7H11NO2	141

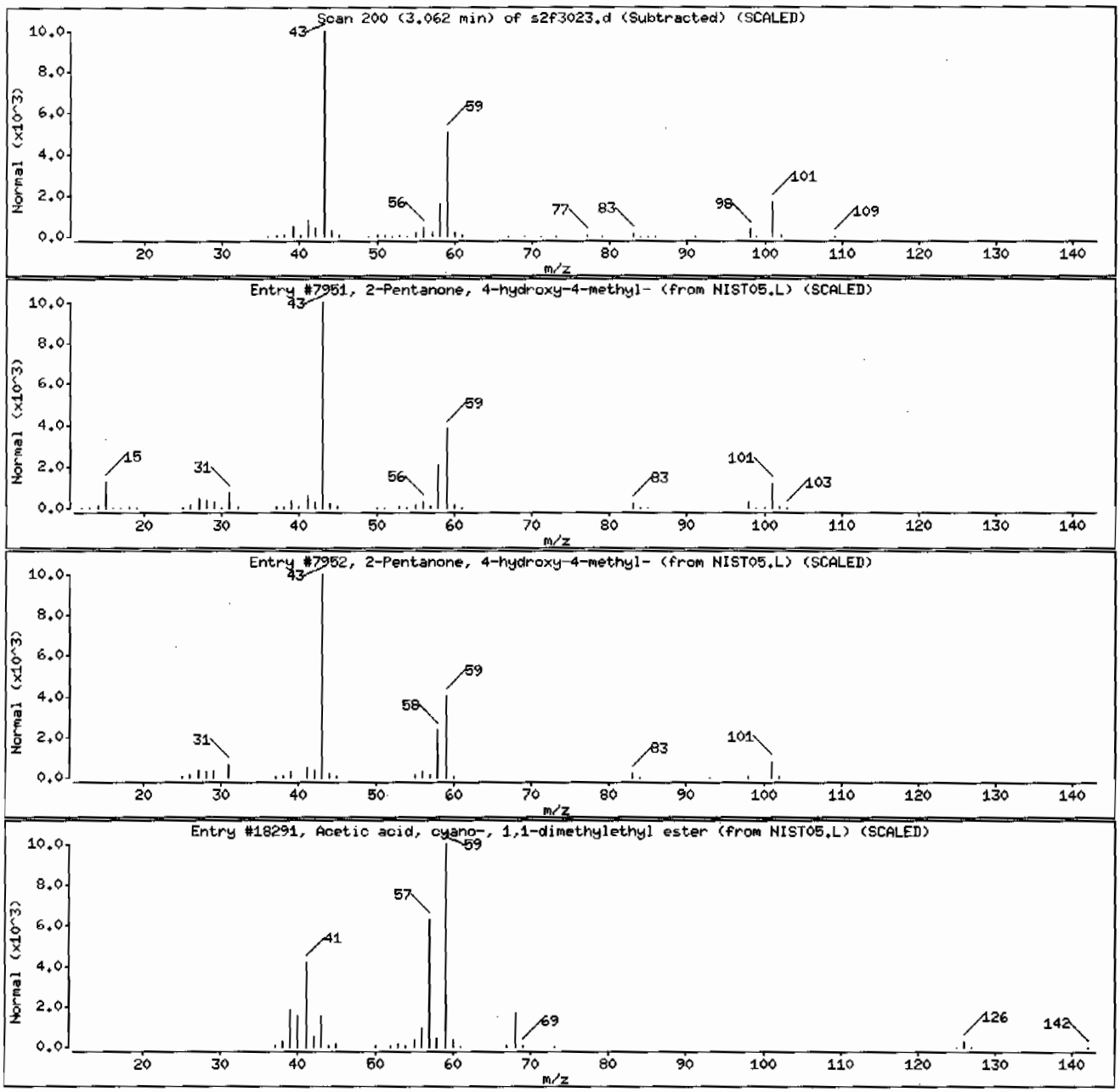

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzeneacetic acid	103-82-2	NIST05.L	15740	90	C8H8O2	136
Benzeneacetic acid	103-82-2	NIST05.L	15739	87	C8H8O2	136
Benzene, (2-methoxyethyl)-	3558-60-9	NIST05.L	15895	78	C9H12O	136

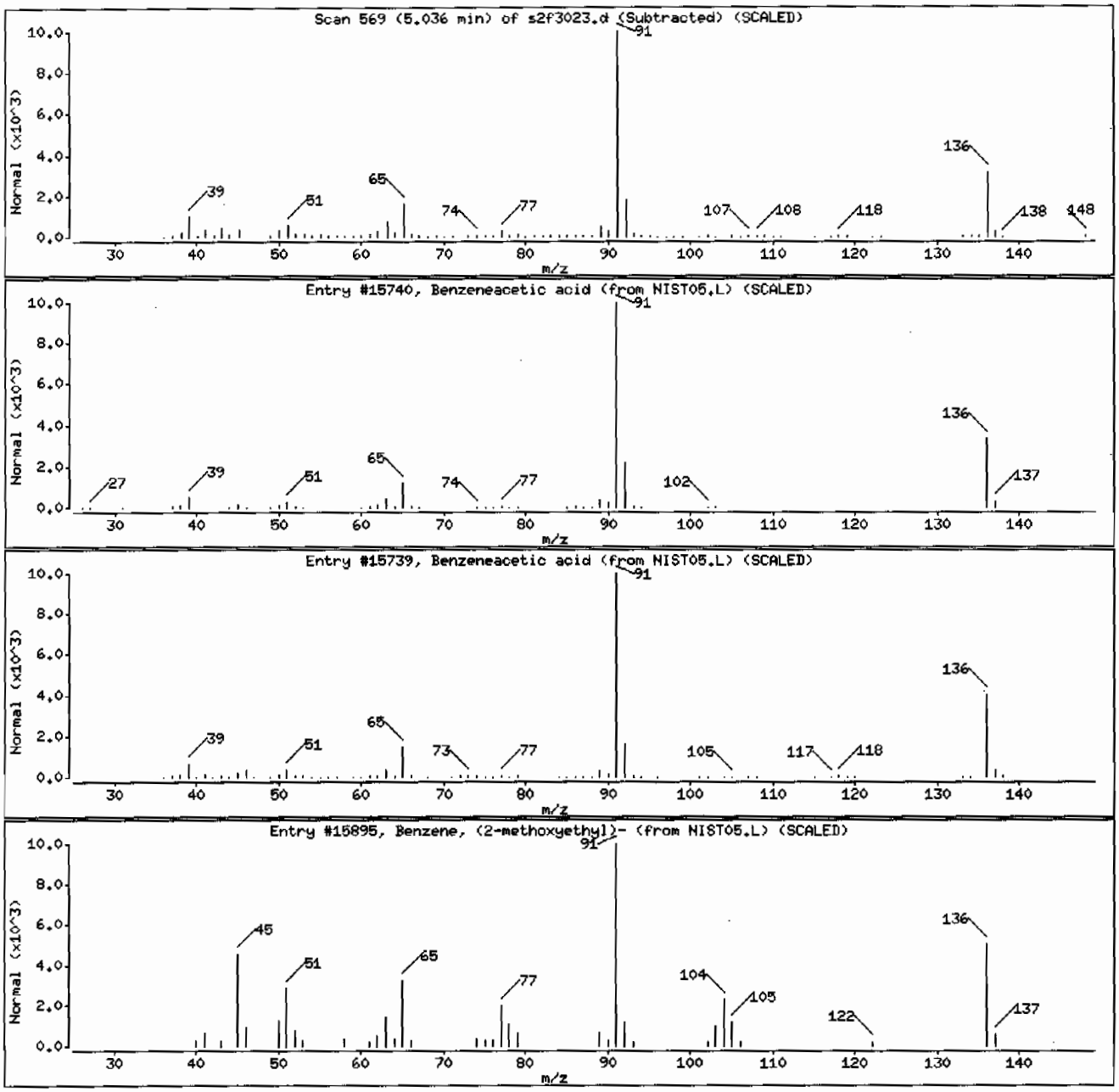

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
n-Hexadecanoic acid	57-10-3	NIST05.L	96235	97	C16H32O2	256
n-Hexadecanoic acid	57-10-3	NIST05.L	96234	96	C16H32O2	256
Tetradecanoic acid	544-63-8	NIST05.L	77276	95	C14H28O2	228

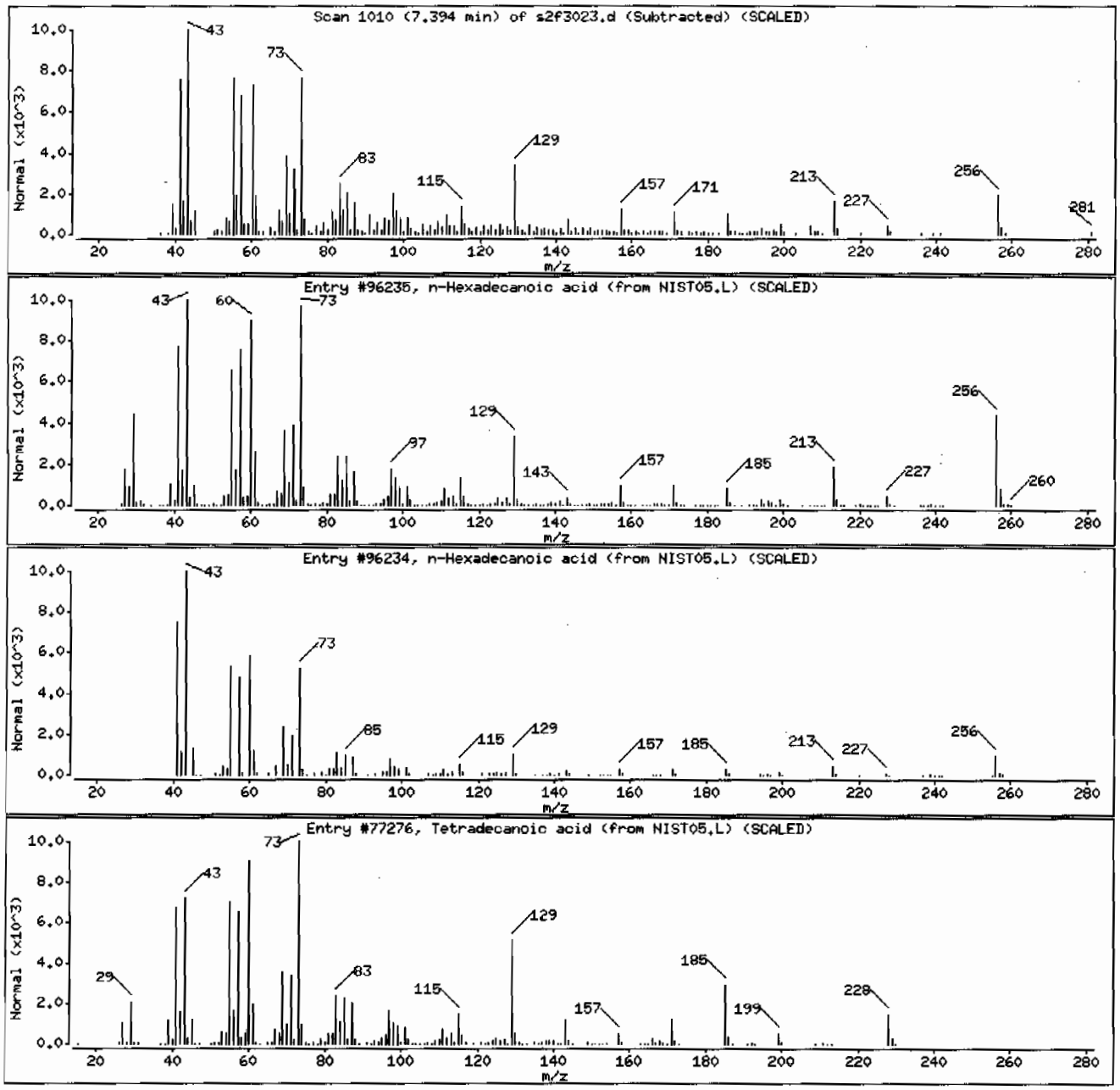

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280121881319111SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Hydroxy-6-(3-isopropenyl-cycloprop-1-e	1000189-14-9	NIST05.L	72783	83	C14H22O2	222
Isolongifolan-8-ol	1139-08-8	NIST05.L	72917	46	C15H26O	222
2-Butanone, 4-(2,6,6-trimethyl-1-cyclohe	17283-81-7	NIST05.L	52842	46	C13H22O	194

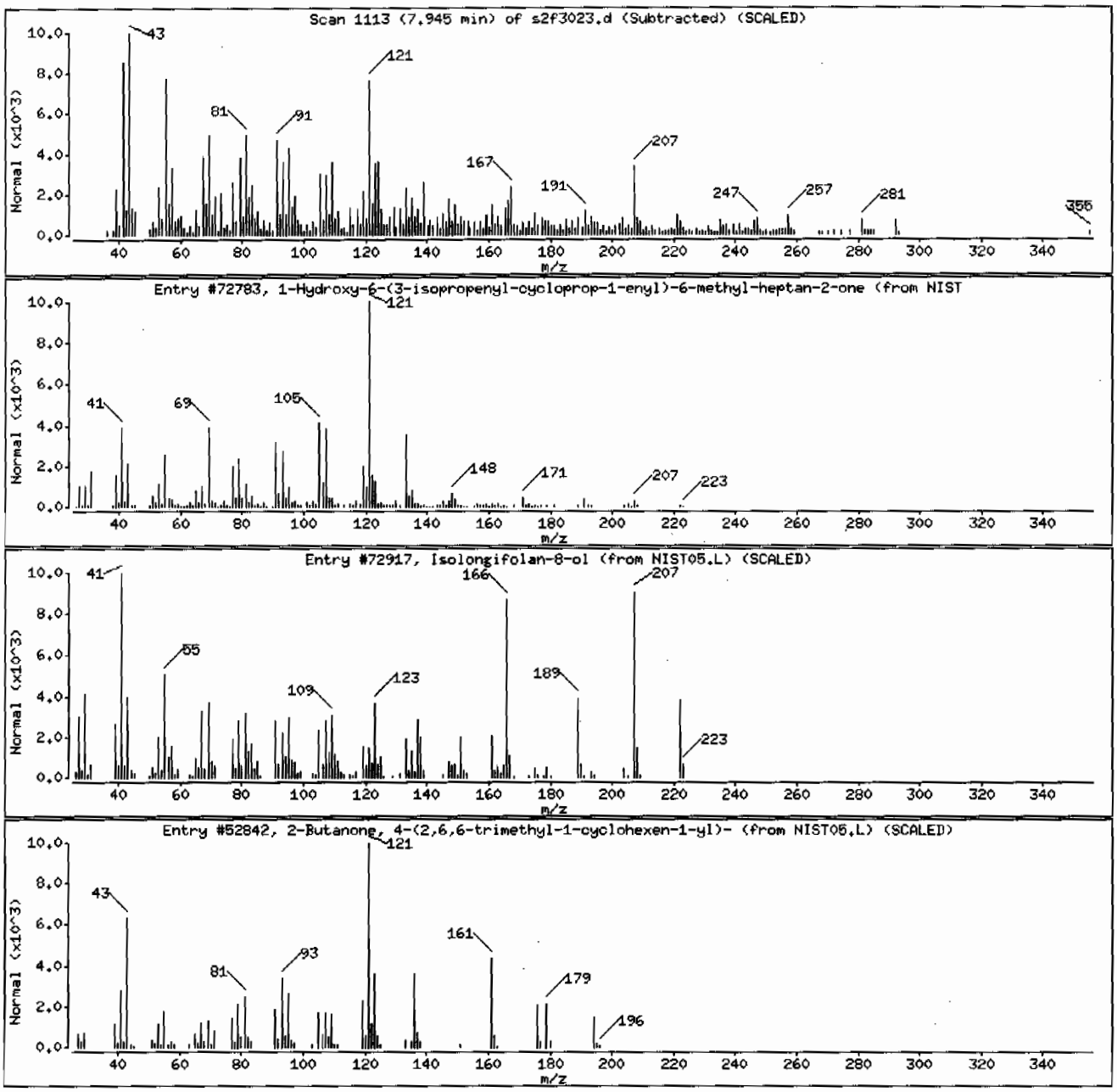

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	98	C21H30O2	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133621	95	C21H30O2	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133620	93	C21H30O2	314

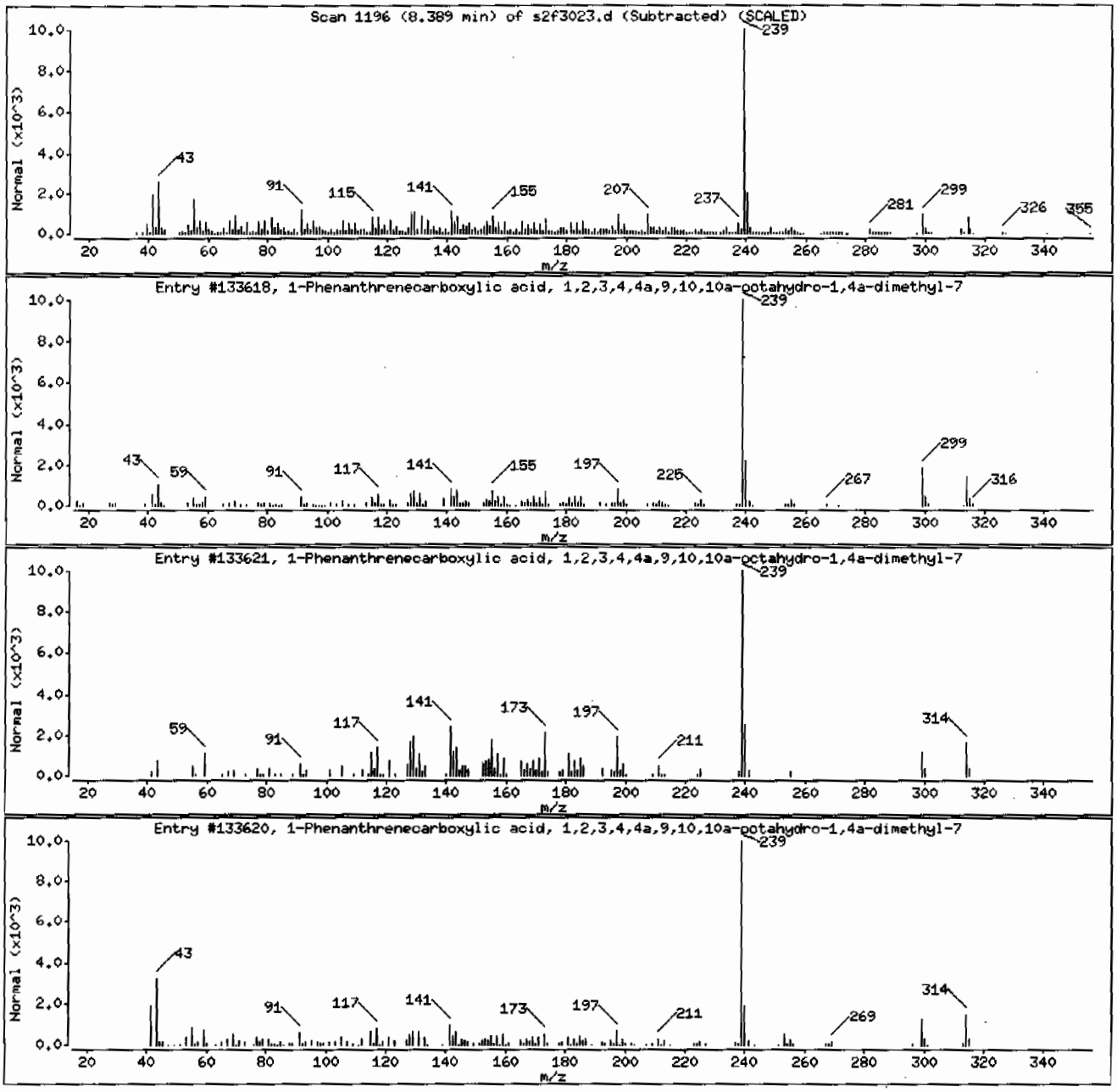

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280121881319111SVMF111LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
4,8,13-Cyclotetradecatriene-1,3-diol, 1,	7220-78-2	NIST05.L	128664	53	C20H34O2	306
Bicyclo[3.1.0]hexan-3-ol, 4-methylene-1-	471-16-9	NIST05.L	24353	45	C10H16O	152
Bicyclo[5.2.0]nonane, 4-methylene-2,8,8-	1000159-38-2	NIST05.L	59916	45	C15H24	204

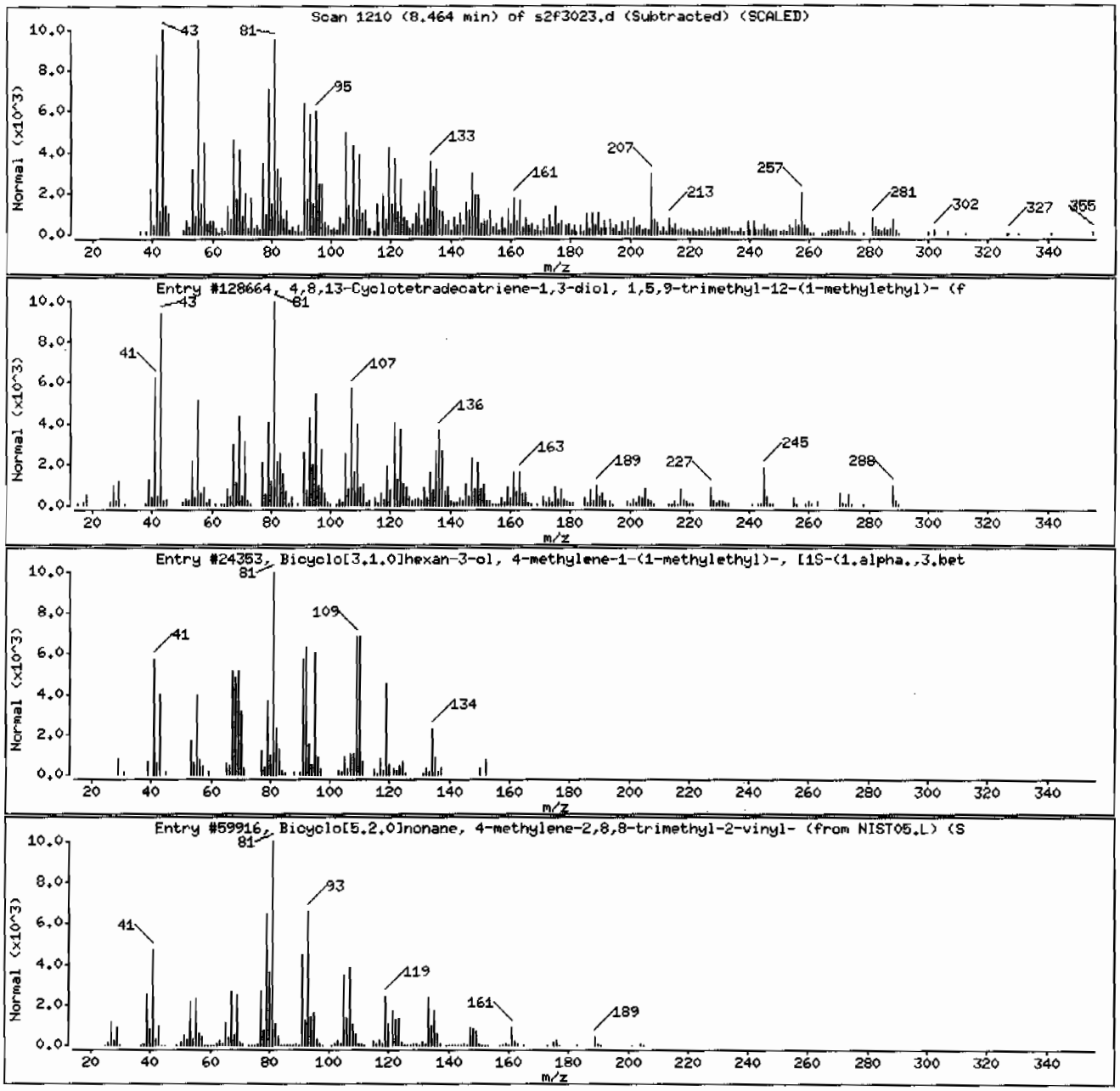

Data File: /chem/HSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: HSD2.i

Sample Info: |2324280121881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Octanoic acid, 8-(octylthio)-	56909-05-8	NIST05.L	117142	56	C16H32O2S	288
Pregnan-20-one, (5.alpha.)-	848-62-4	NIST05.L	126211	25	C21H34O	302
Pregnan-20-one, (5.alpha.,17.alpha.)-	7704-90-7	NIST05.L	126222	11	C21H34O	302

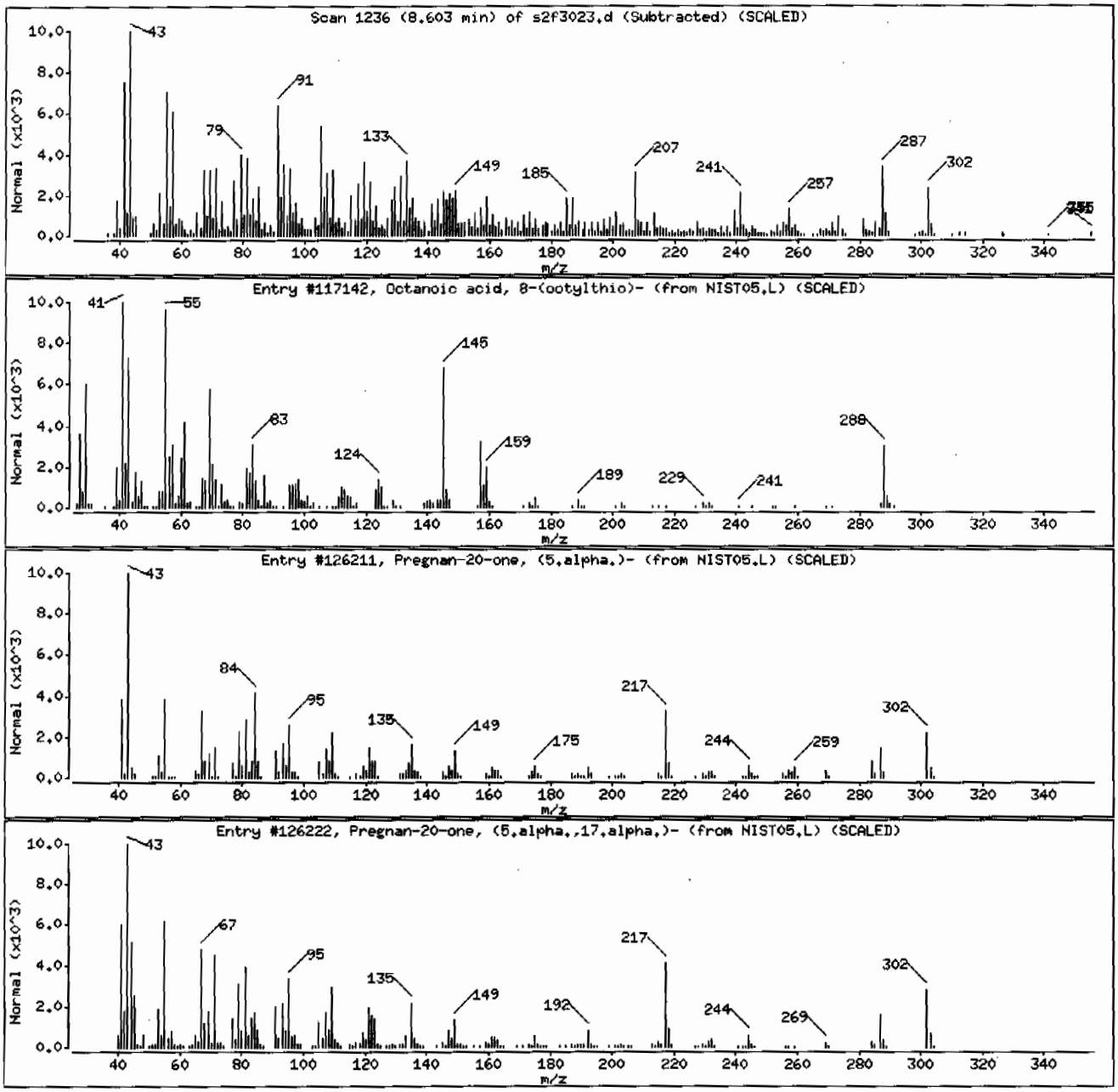

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: 1232428012|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125037	90	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	72	C20H28O2	300
Butanoic acid, 2-(cyano)(2,4,6-trimethyl	1000267-71-7	NIST05.L	124769	59	C17H20N2O3	300

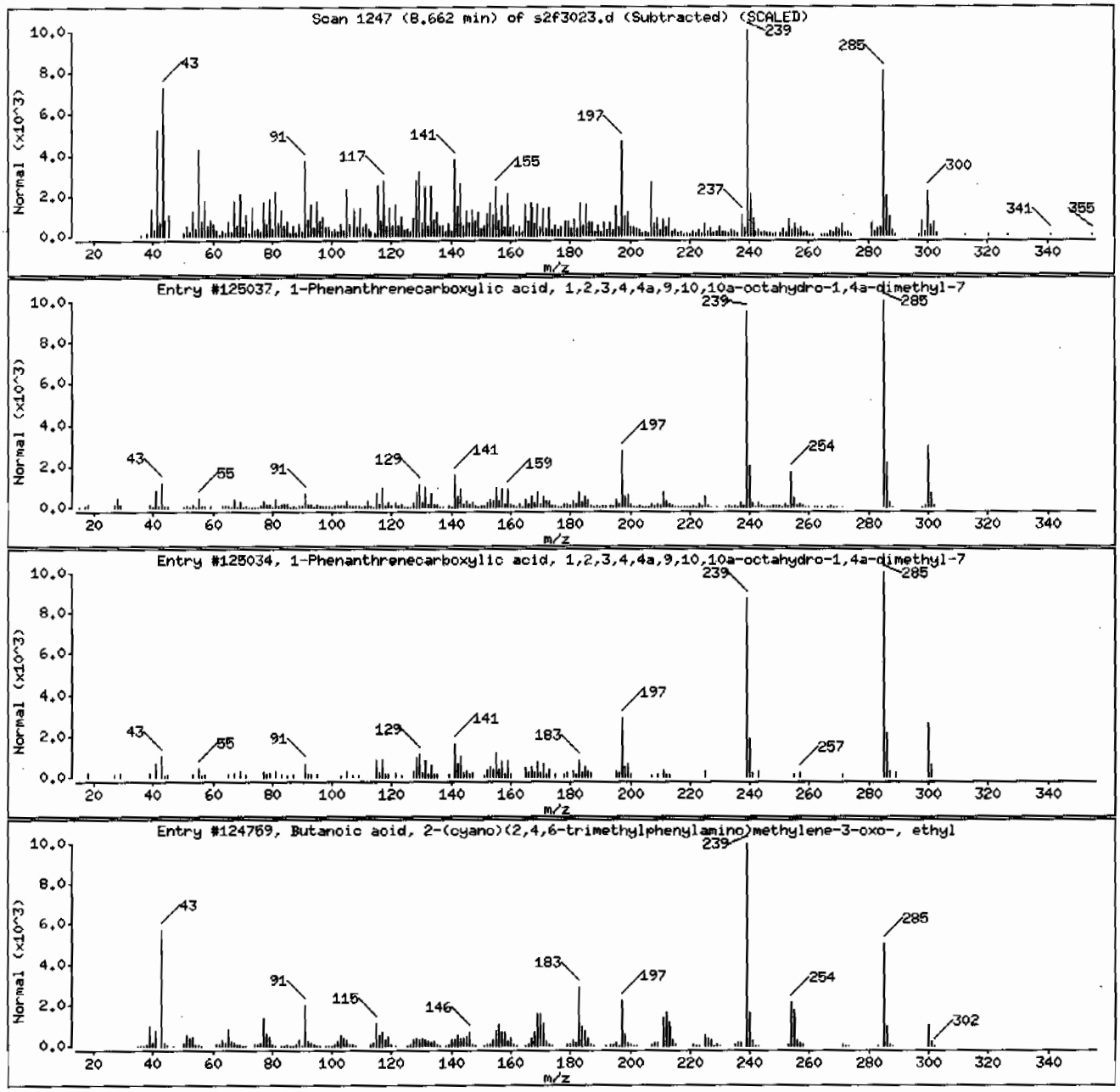

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: 1232428012188131911|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Nonacosane	630-03-5	NIST05.L	173140	98	C29H60	408
Eicosane	112-95-8	NIST05.L	113490	96	C20H42	282
Nonadecane	629-92-5	NIST05.L	104270	95	C19H40	268

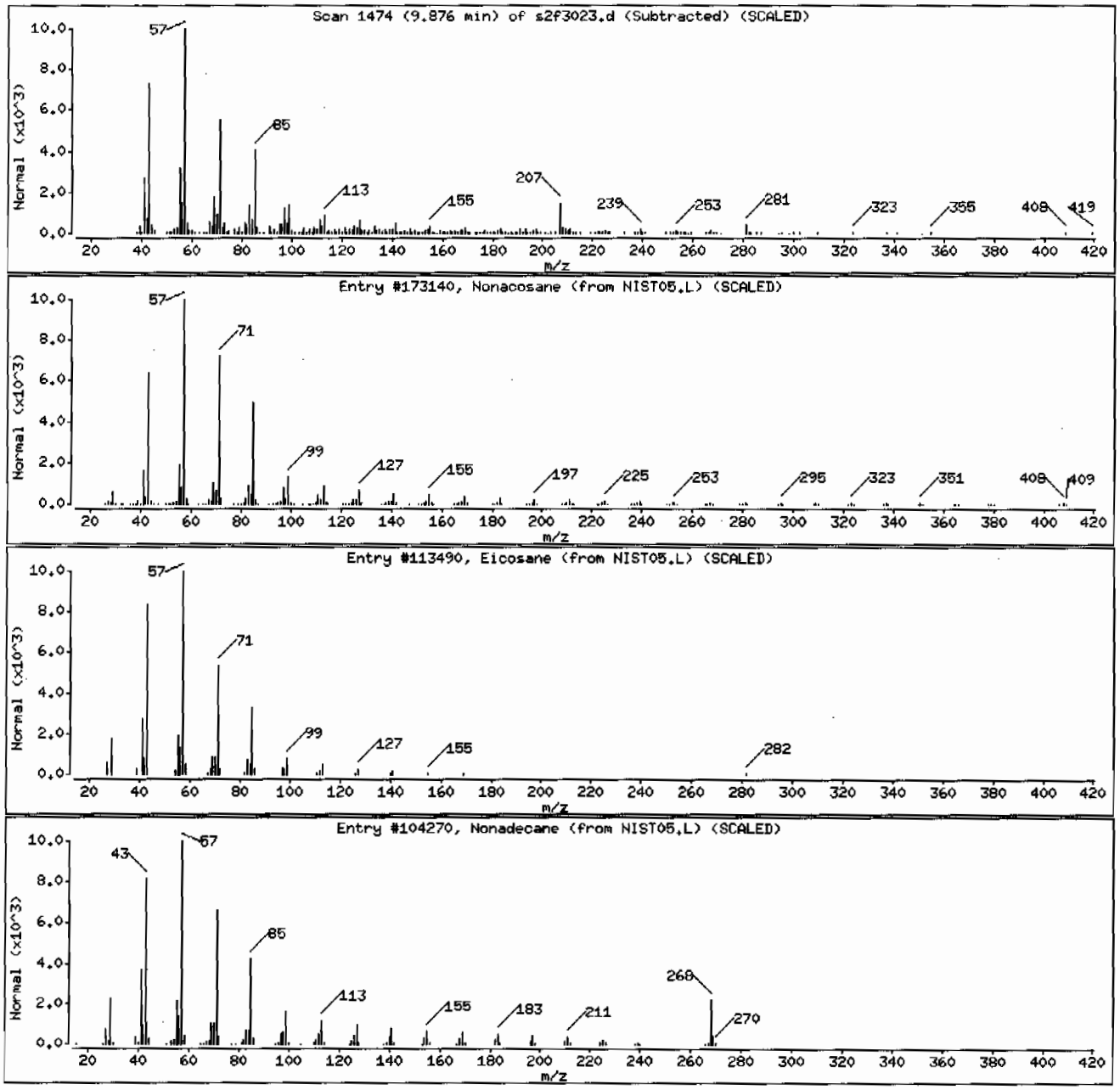

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: 1232428012188131911ISVHF11ILANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Hentriacontane	630-04-6	NIST05.L	178193	99	C31H64	437
Eicosane	112-95-8	NIST05.L	113488	96	C20H42	282
Nonadecane	629-92-5	NIST05.L	104270	95	C19H40	268

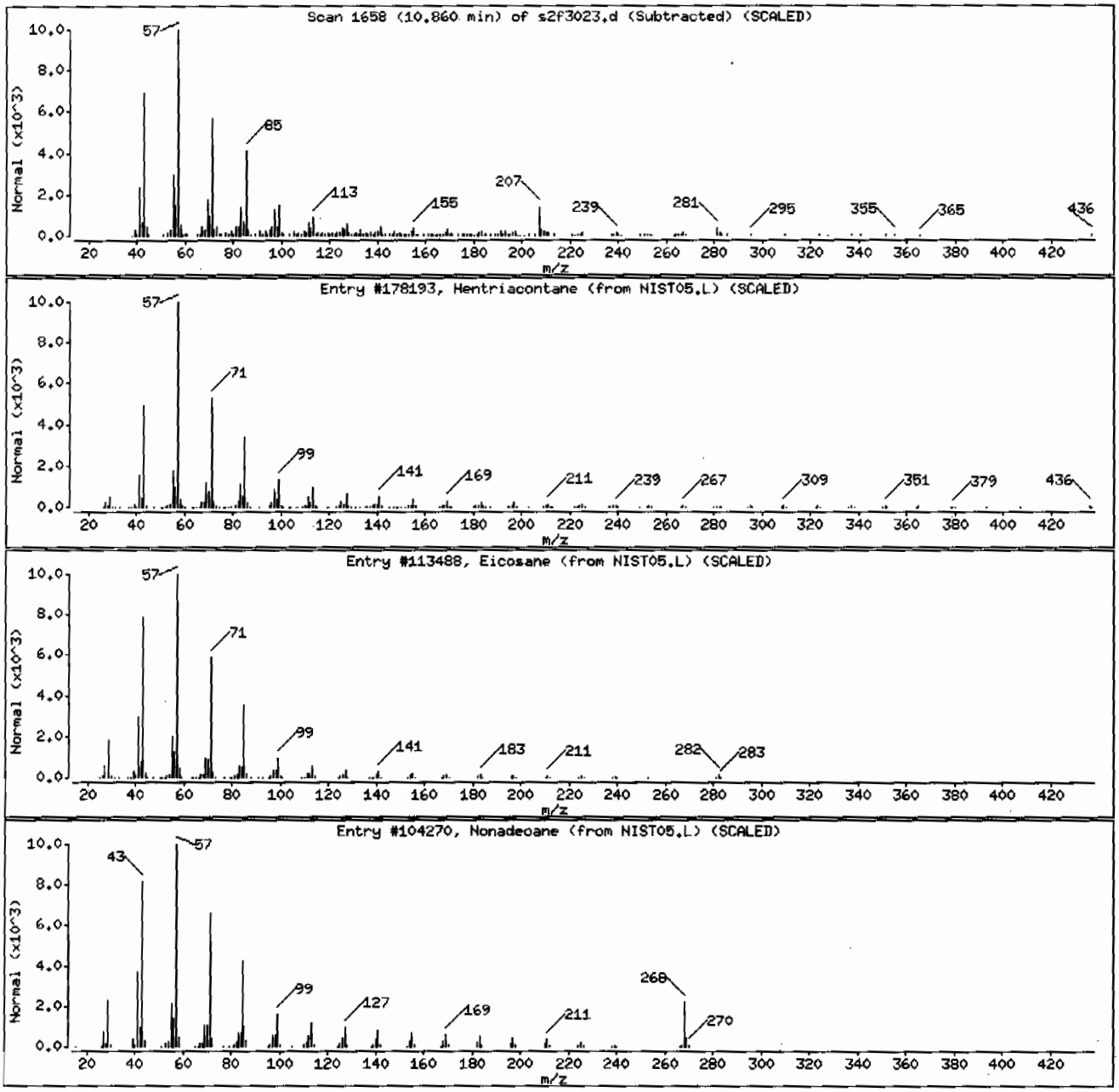

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038

Instrument: MSD2.i

Sample Info: 1232428012188131911ISVMF11LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Trichloroacetic acid, pentadecyl ester	74339-53-0	NIST05.L	162015	49	C17H31Cl3O2	372
Isoheptadecanol	57289-07-3	NIST05.L	96335	49	C17H36O	256
Cyclohexane, 1,1'-(2-methyl-1,3-propaned	2883-08-1	NIST05.L	73082	49	C16H30	222

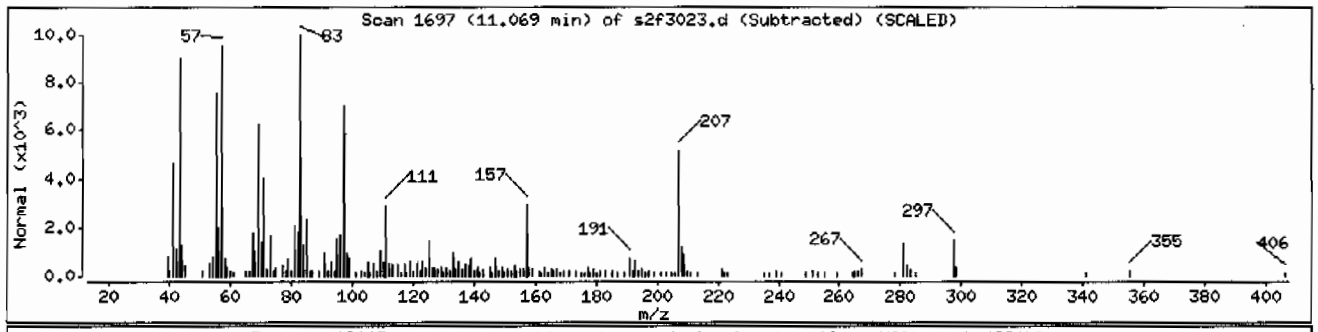

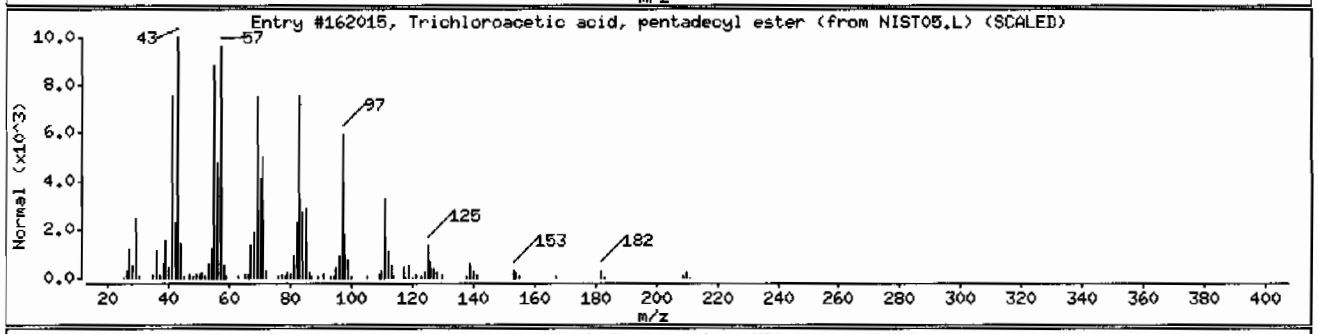

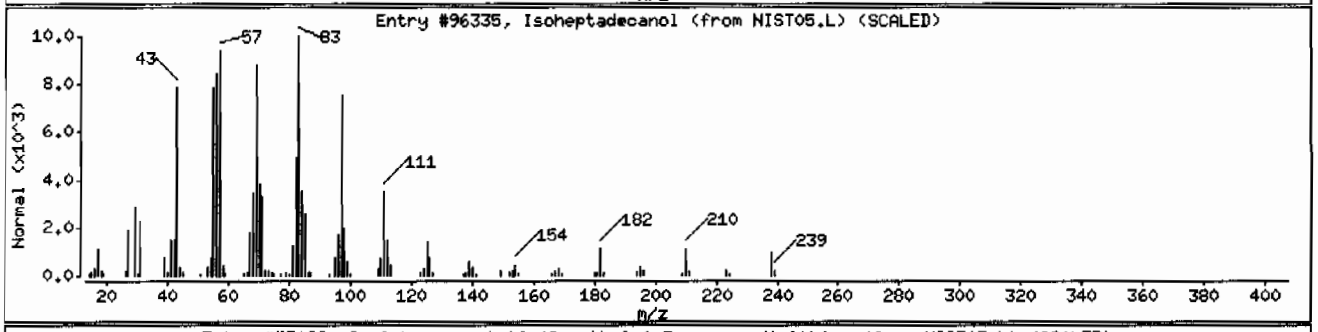

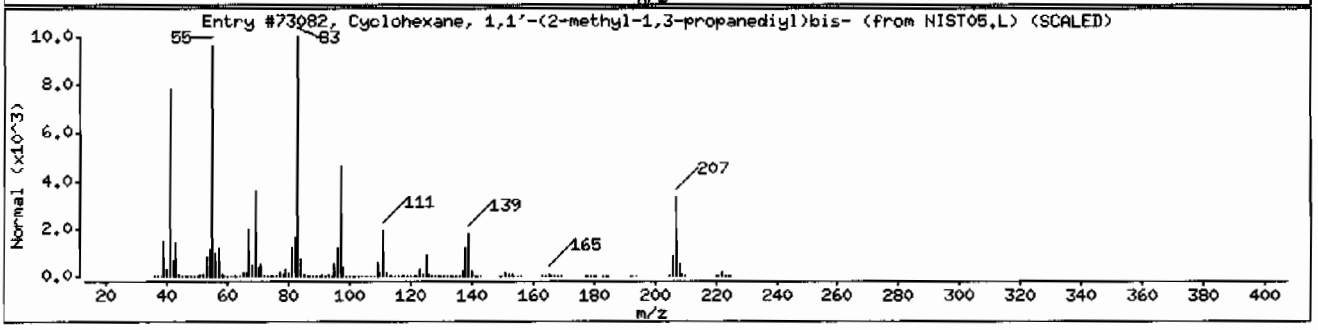

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038

Instrument: MSD2.i

Sample Info: |2324280121881319111SVMF111LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
N-Methyl-1-adamantaneacetamide	31897-93-5	NIST05.L	62175	41	C13H21NO	207
2-Ethylacridine	55751-83-2	NIST05.L	62222	35	C15H13N	207
2-Methyl-7-phenylindole	1140-08-5	NIST05.L	62225	35	C15H13N	207

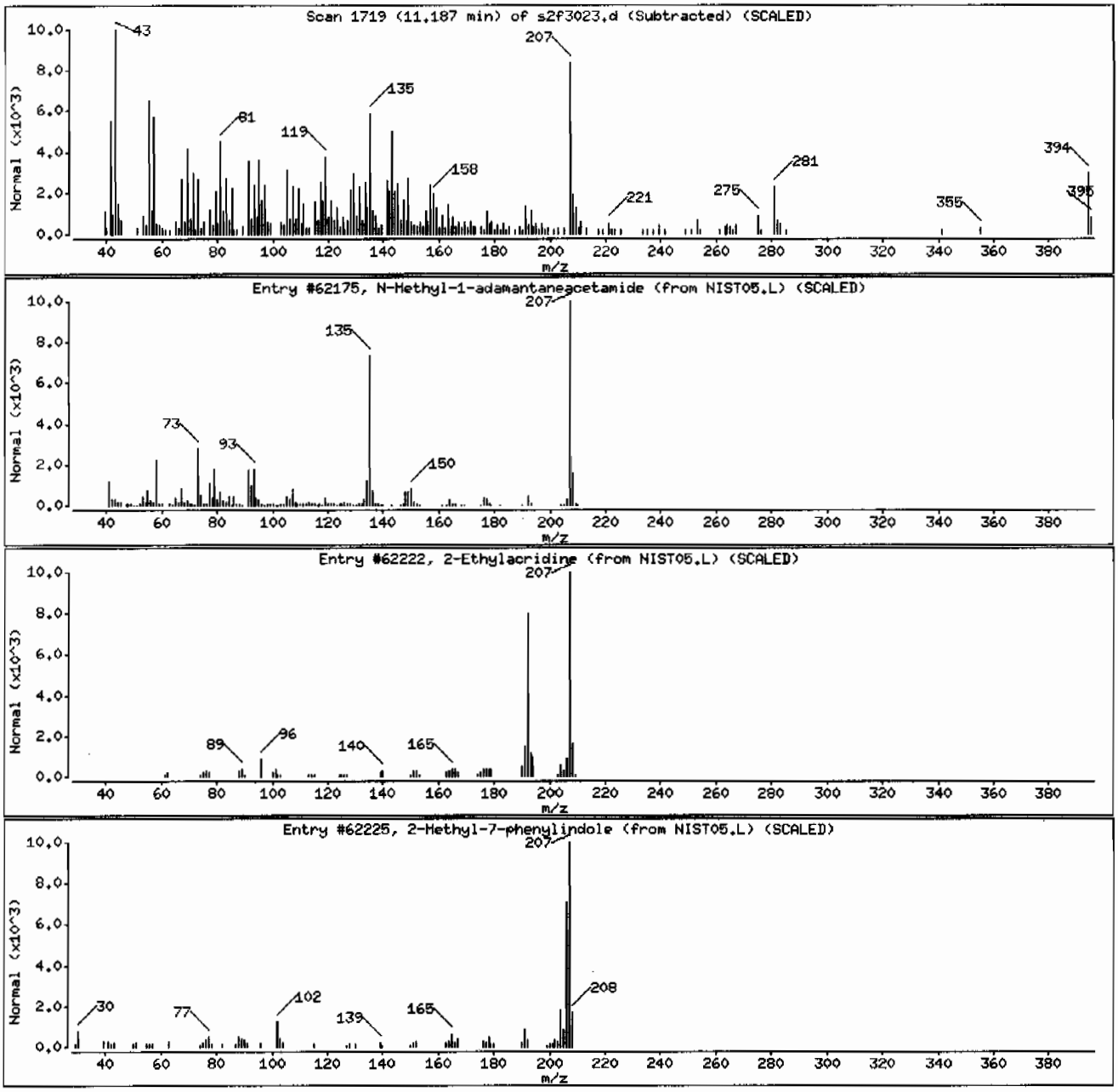

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72520	50	C12H22Si2	222
2-Ethylacridine	55751-83-2	NIST05.L	62222	49	C15H13N	207
N-Methyl-1-adamantaneacetamide	31897-93-5	NIST05.L	62175	47	C13H21NO	207

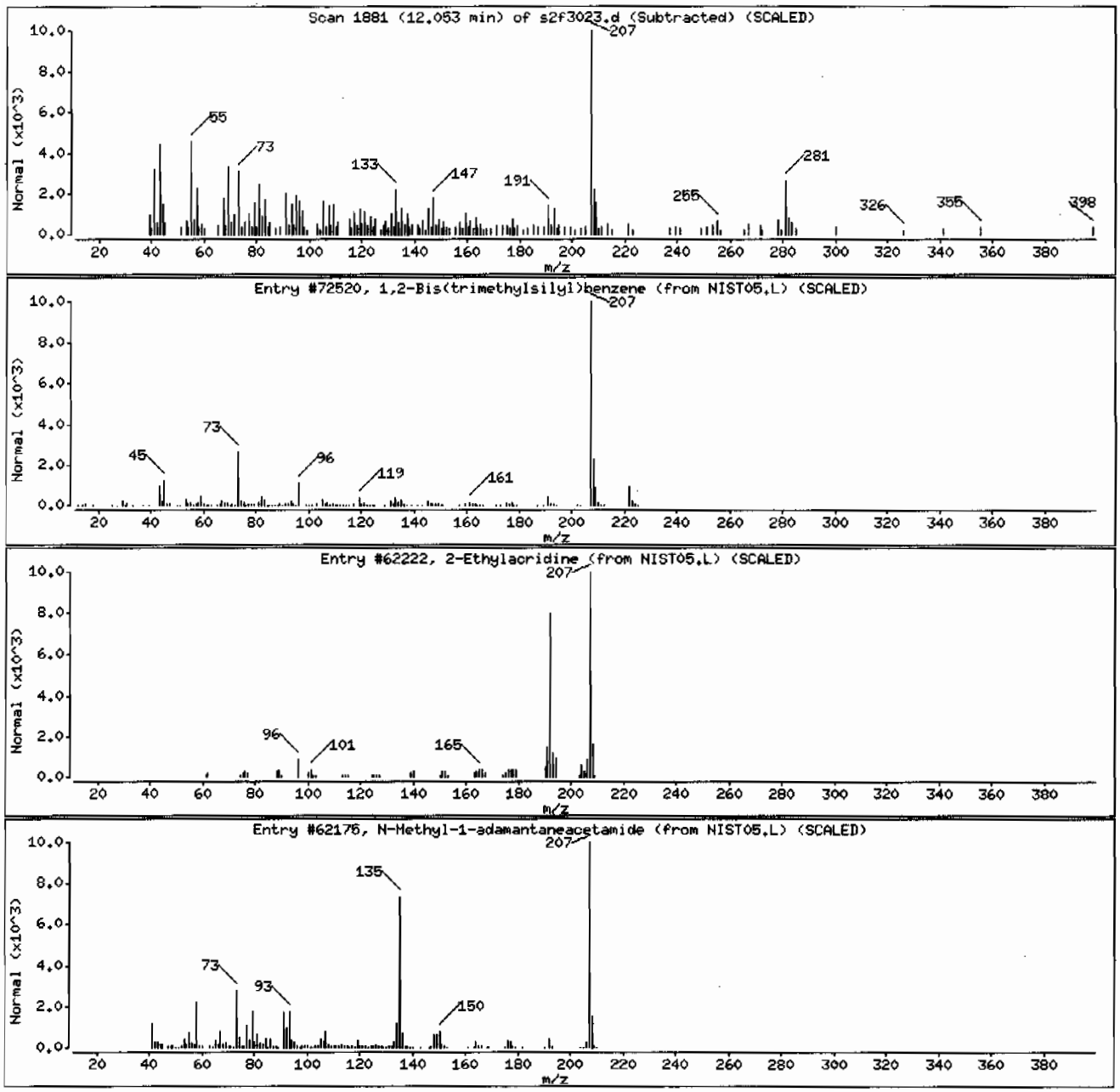

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280 12|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2H-Cyclopentacyclooctene, 4,5,6,7,8,9-he	1000221-85-8	NIST05.L	59950	41	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60049	38	C15H24	204
3-Cyclohexene-1-methanol, .alpha.,4-dime	23178-88-3	NIST05.L	72995	30	C15H26O	222

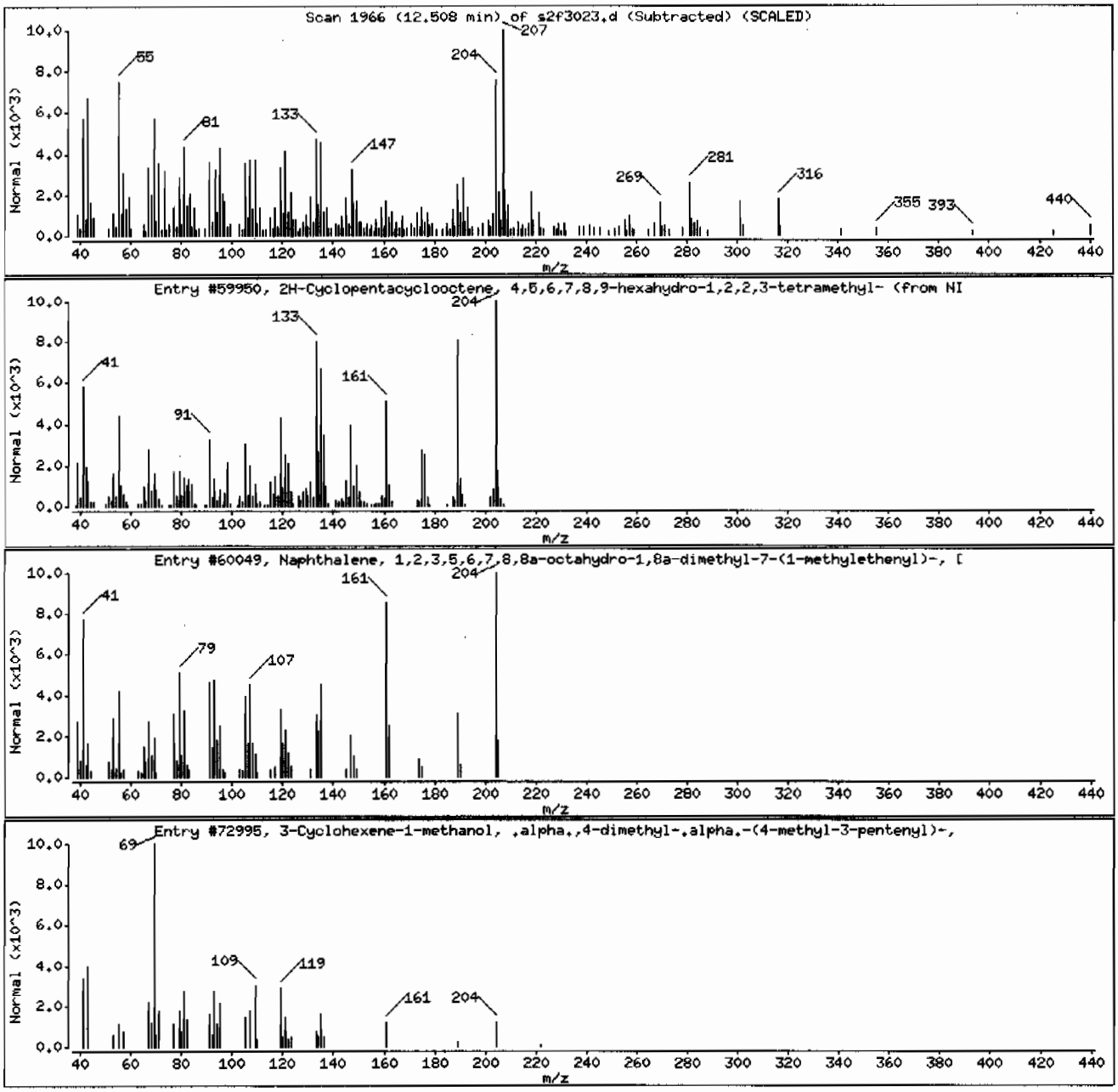

Data File: /chem/MSD2.i/s063009.b/s2f3023.d

Date : 30-JUN-2009 23:12

Client ID: CAMO-09-6038 Instrument: MSD2.i

Sample Info: |2324280121881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
.beta.-Sitosterol	83-46-5	NIST05.L	174400	94	C29H500	414
.beta.-Sitosterol	83-46-5	NIST05.L	174399	78	C29H500	414
.gamma.-Sitosterol	83-47-6	NIST05.L	174402	70	C29H500	414

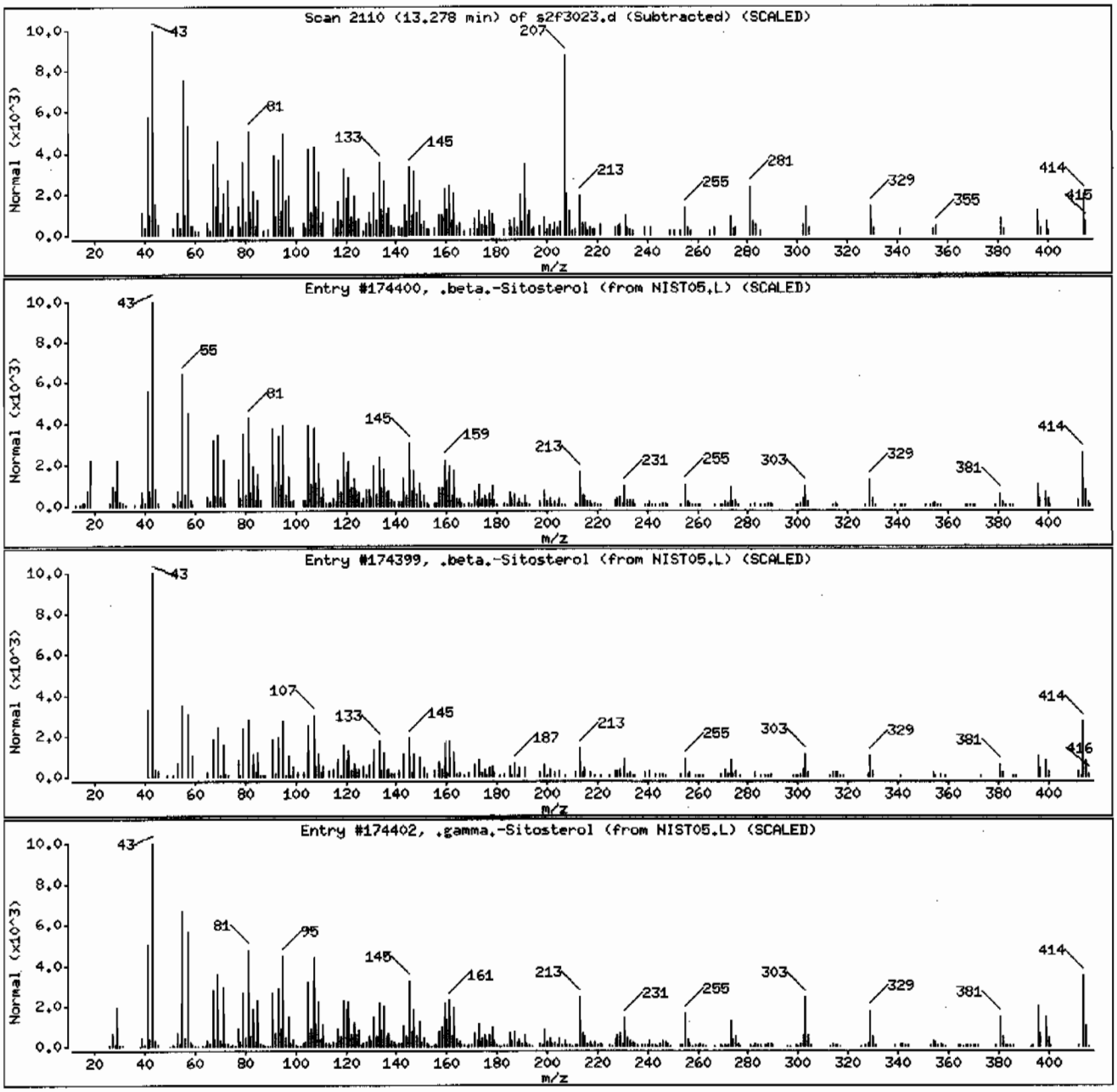

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428013**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**9.1**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6039**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881319**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 23:32**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 14:54**	**Aliquot:**	**30.16 g**	**Final Volume:**	**1 mL**
Data File:	**s2f3024.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	365	ug/kg	73.0	365
108-95-2	Phenol	U	365	ug/kg	73.0	365
95-57-8	2-Chlorophenol	U	365	ug/kg	73.0	365
106-46-7	1,4-Dichlorobenzene	U	365	ug/kg	73.0	365
621-64-7	N-Nitrosodipropylamine	U	365	ug/kg	73.0	365
59-50-7	4-Chloro-3-methylphenol	U	365	ug/kg	36.5	365
83-32-9	Acenaphthene	U	36.5	ug/kg	12.2	36.5
121-14-2	2,4-Dinitrotoluene	U	365	ug/kg	36.5	365
100-02-7	4-Nitrophenol	U	365	ug/kg	73.0	365
87-86-5	Pentachlorophenol	U	365	ug/kg	73.0	365
129-00-0	Pyrene	U	36.5	ug/kg	11.5	36.5
110-86-1	Pyridine	U	365	ug/kg	73.0	365
62-53-3	Aniline	U	365	ug/kg	128	365
111-44-4	bis(2-Chloroethyl) ether	U	365	ug/kg	73.0	365
541-73-1	1,3-Dichlorobenzene	U	365	ug/kg	73.0	365
100-51-6	Benzyl alcohol	U	365	ug/kg	109	365
95-50-1	1,2-Dichlorobenzene	U	365	ug/kg	73.0	365
108-60-1	bis(2-Chloroisopropyl)ether	U	365	ug/kg	73.0	365
95-48-7	o-Cresol	U	365	ug/kg	73.0	365
65794-96-9	m,p-Cresols	U	365	ug/kg	146	365
67-72-1	Hexachloroethane	U	365	ug/kg	73.0	365
98-95-3	Nitrobenzene	U	365	ug/kg	73.0	365
78-59-1	Isophorone	U	365	ug/kg	73.0	365
88-75-5	2-Nitrophenol	U	365	ug/kg	36.5	365
105-67-9	2,4-Dimethylphenol	U	365	ug/kg	73.0	365
111-91-1	bis(2-Chloroethoxy)methane	U	365	ug/kg	73.0	365
120-83-2	2,4-Dichlorophenol	U	365	ug/kg	73.0	365
65-85-0	Benzoic acid	U	730	ug/kg	182	730
91-20-3	Naphthalene	U	36.5	ug/kg	10.9	36.5
106-47-8	4-Chloroaniline	U	365	ug/kg	73.0	365
87-68-3	Hexachlorobutadiene	U	365	ug/kg	73.0	365
91-57-6	2-Methylnaphthalene	U	36.5	ug/kg	7.30	36.5
77-47-4	Hexachlorocyclopentadiene	U	365	ug/kg	73.0	365
88-06-2	2,4,6-Trichlorophenol	U	365	ug/kg	73.0	365
95-95-4	2,4,5-Trichlorophenol	U	365	ug/kg	73.0	365
91-58-7	2-Chloronaphthalene	U	36.5	ug/kg	12.8	36.5
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	365	ug/kg	73.0	365
99-09-2	3-Nitroaniline	U	365	ug/kg	73.0	365

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3024.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	365	ug/kg	73.0	365
606-20-2	2,6-Dinitrotoluene	U	365	ug/kg	36.5	365
208-96-8	Acenaphthylene	U	36.5	ug/kg	10.9	36.5
51-28-5	2,4-Dinitrophenol	U	730	ug/kg	139	730
132-64-9	Dibenzofuran	U	365	ug/kg	73.0	365
84-66-2	Diethylphthalate	U	365	ug/kg	73.0	365
86-73-7	Fluorene	U	36.5	ug/kg	10.9	36.5
7005-72-3	4-Chlorophenylphenylether	U	365	ug/kg	36.5	365
534-52-1	2-Methyl-4,6-dinitrophenol	U	365	ug/kg	73.0	365
100-01-6	4-Nitroaniline	U	365	ug/kg	73.0	365
	p-Nitroaniline					
122-39-4	Diphenylamine	U	365	ug/kg	73.0	365
122-66-7	Azobenzene	U	365	ug/kg	73.0	365
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	365	ug/kg	36.5	365
118-74-1	Hexachlorobenzene	U	365	ug/kg	73.0	365
85-01-8	Phenanthrene	U	36.5	ug/kg	10.9	36.5
120-12-7	Anthracene	U	36.5	ug/kg	7.30	36.5
84-74-2	Di-n-butylphthalate	U	365	ug/kg	36.5	365
206-44-0	Fluoranthene	J	12.5	ug/kg	10.9	36.5
85-68-7	Butylbenzylphthalate	U	365	ug/kg	73.0	365
56-55-3	Benzo(a)anthracene	U	36.5	ug/kg	10.9	36.5
91-94-1	3,3'-Dichlorobenzidine	U	365	ug/kg	109	365
218-01-9	Chrysene	U	36.5	ug/kg	10.9	36.5
117-81-7	bis(2-Ethylhexyl)phthalate	J	85.0	ug/kg	73.0	365
117-84-0	Di-n-octylphthalate	U	365	ug/kg	73.0	365
205-99-2	Benzo(b)fluoranthene	U	36.5	ug/kg	10.9	36.5
207-08-9	Benzo(k)fluoranthene	U	36.5	ug/kg	10.9	36.5
50-32-8	Benzo(a)pyrene	U	36.5	ug/kg	10.9	36.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.5	ug/kg	10.9	36.5
53-70-3	Dibenzo(a,h)anthracene	U	36.5	ug/kg	10.9	36.5
191-24-2	Benzo(ghi)perylene	U	36.5	ug/kg	10.9	36.5
120-82-1	1,2,4-Trichlorobenzene	U	365	ug/kg	73.0	365

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.07	263	ug/kg		J
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.91	273	ug/kg	99	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428013	**Date Received:**	06/26/2009 08:40	**%Moisture:**	9.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6039	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.16 g	**Final Volume:**	1 mL
Data File:	s2f3024.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	9.35	208	ug/kg		J
	Unknown	11.52	331	ug/kg		J
	Unknown	12.33	585	ug/kg		J

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Data file : /chem/MSD2.i/s063009.b/s2f3024.d
Lab Smp Id: 232428013 Client Smp ID: CAMO-09-6039
Inj Date : 30-JUN-2009 23:32
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428013|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.16000	weight of sample
M	9.12370	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	206744	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	776108	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	429326	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	752037	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	601738	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	404648	40.0000	
$ 3 2-Fluorophenol	112	3.233	3.222	(0.798)	325440	56.8866	2080
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	399372	56.5317	2060
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	173298	29.5953	1080
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	375818	30.9945	1130
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	106804	72.6333	2650
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	396053	38.6417	1410

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
76 Fluoranthene	202	7.881	7.886	(1.103)	5646	0.34272	12.5(a)
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.984)	25726	2.33055	85.0(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s2f3024.d
Report Date: 07/01/2009 07:59
Lab. ID: 232428013 SampleType: SAMPLE
Injection Date: 30-JUN-2009 23:32
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428013|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	17005	3.76	3.83	80-120	100	(T)
93	183	3.73	3.83	440-500	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	24216	4.41	4.29	80-120	100	(T)
42	14586	4.41	4.29	40-100	60	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	91008	6.17	5.94	80-120	100	(T)
164	427417	6.17	5.94	0- 40	470	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	55054	6.17	5.99	80-120	100	(T)
63	865	6.17	5.99	46-106	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	55523	6.17	6.27	80-120	100	(T)
89	790	6.17	6.27	38- 98	1	(QT)
63	865	6.17	6.27	16- 76	2	(QT)
53 Fluorene		CAS#: 86-73-7				
166	6489	6.70	6.54	80-120	100	(T)
165	7237	6.70	6.54	61-121	112	(T)
167	2110	6.70	6.54	0- 44	33	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	257	6.70	6.55	80-120	100	(T)
105	603	6.70	6.55	14- 74	235	(QT)
51	601	6.69	6.55	37- 97	234	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	6112	6.70	6.84	80-120	100	(T)
141	43518	6.70	6.84	51-111	712	(QT)
250	12449	6.70	6.84	66-126	204	(QT)
69 Anthracene			CAS#: 120-12-7			
178	3787	7.16	7.20	80-120	100	( )
179	1380	7.16	7.20	0- 46	36	( )
176	677	7.16	7.20	0- 48	18	( )
76 Fluoranthene			CAS#: 206-44-0			
202	5646	7.88	7.89	80-120	100	( )
203	1310	7.88	7.89	0- 48	23	( )
101	915	7.88	7.89	0- 45	16	( )
79 Pyrene			CAS#: 129-00-0			
202	5646	7.88	8.03	80-120	100	(T)
200	1135	7.88	8.03	0- 51	20	(T)
101	155	7.85	8.03	0- 48	3	(T)
92 Chrysene			CAS#: 218-01-9			
228	5175	8.88	8.92	80-120	100	( )
229	1732	8.88	8.92	0- 50	33	( )
226	759	8.87	8.92	0- 59	15	( )
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	25726	8.74	8.75	80-120	100	( )
167	10772	8.74	8.75	2- 62	42	( )

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s063009.b/s2f3024.d
Lab Smp Id: 232428013 Client Smp ID: CAMO-09-6039
Inj Date : 30-JUN-2009 23:32
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428013|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.16000	weight of sample
M	9.12370	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.051	1231251	40.000
* 46 Acenaphthene-d10	6.169	1840763	40.000
* 91 Chrysene-d12	8.881	1611955	40.000
* 98 Perylene-d12	10.497	1132955	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.067	221754	7.20417446	263	0		0	10
1,4-Methanoazulene, decahydro-4,8,8-trim				CAS #: 475-20-7			
5.913	344655	7.48939605	273	99	NIST05.L	60018	46
Unknown				CAS #:			
9.347	229385	5.69208893	208	0		0	91
Unknown				CAS #:			
11.518	256911	9.07046186	331	0		0	98
Unknown				CAS #:			
12.331	454418	16.0436102	585	0		0	98

Data File: /chem/MSD2.i/s063009.b/s2f3024.d

Date : 30-JUN-2009 23:32

Client ID: CAMO-09-6039

Sample Info: 1232428013188131911|SVMFI1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: AGS1

Column diameter: 0.20

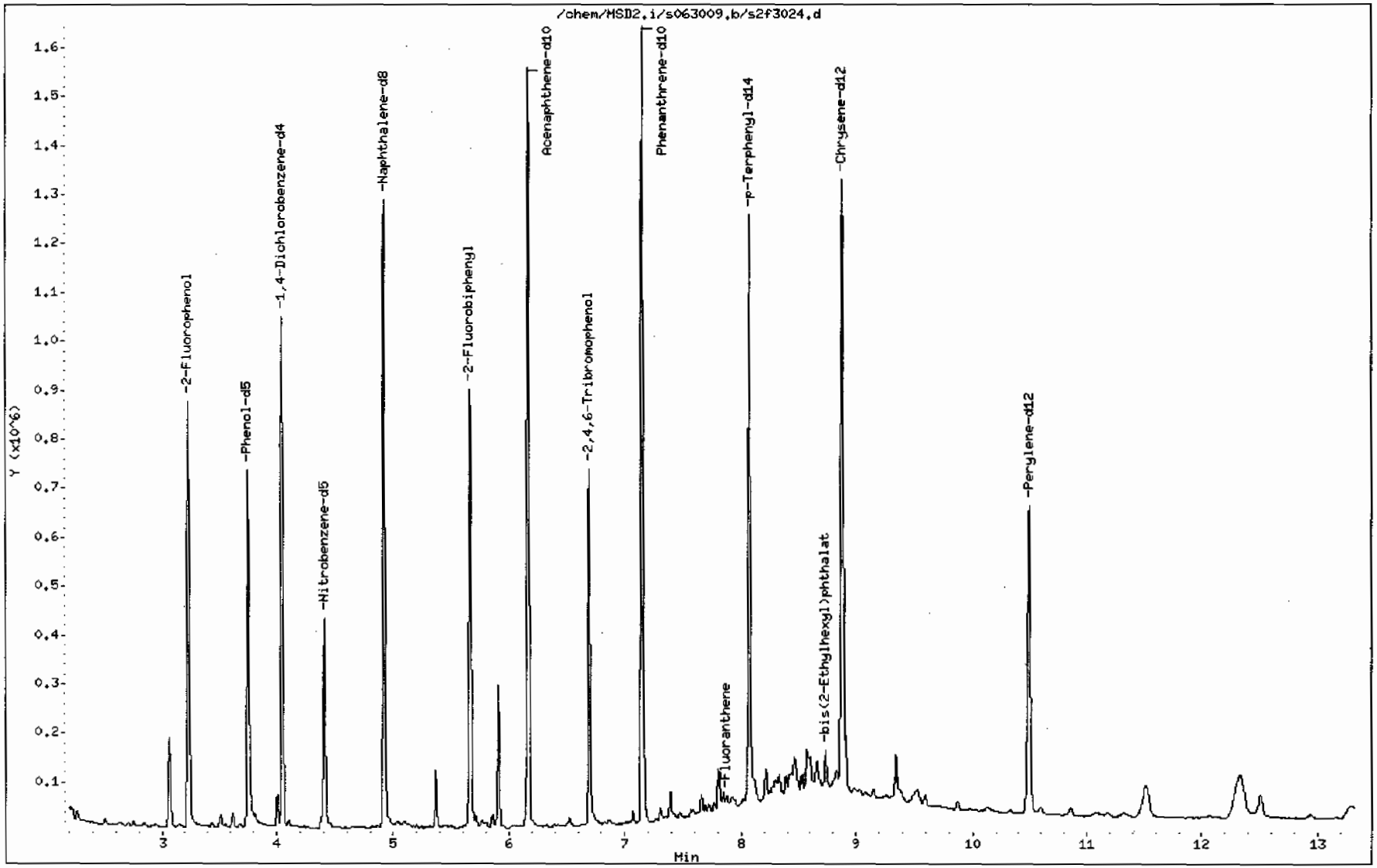

Data File: /chem/MSD2.i/s063009.b/s2f3024.d

Date : 30-JUN-2009 23:32

Client ID: CAMO-09-6039

Instrument: MSD2.i

Sample Info: |2324280131881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 12.5 ug/Kg

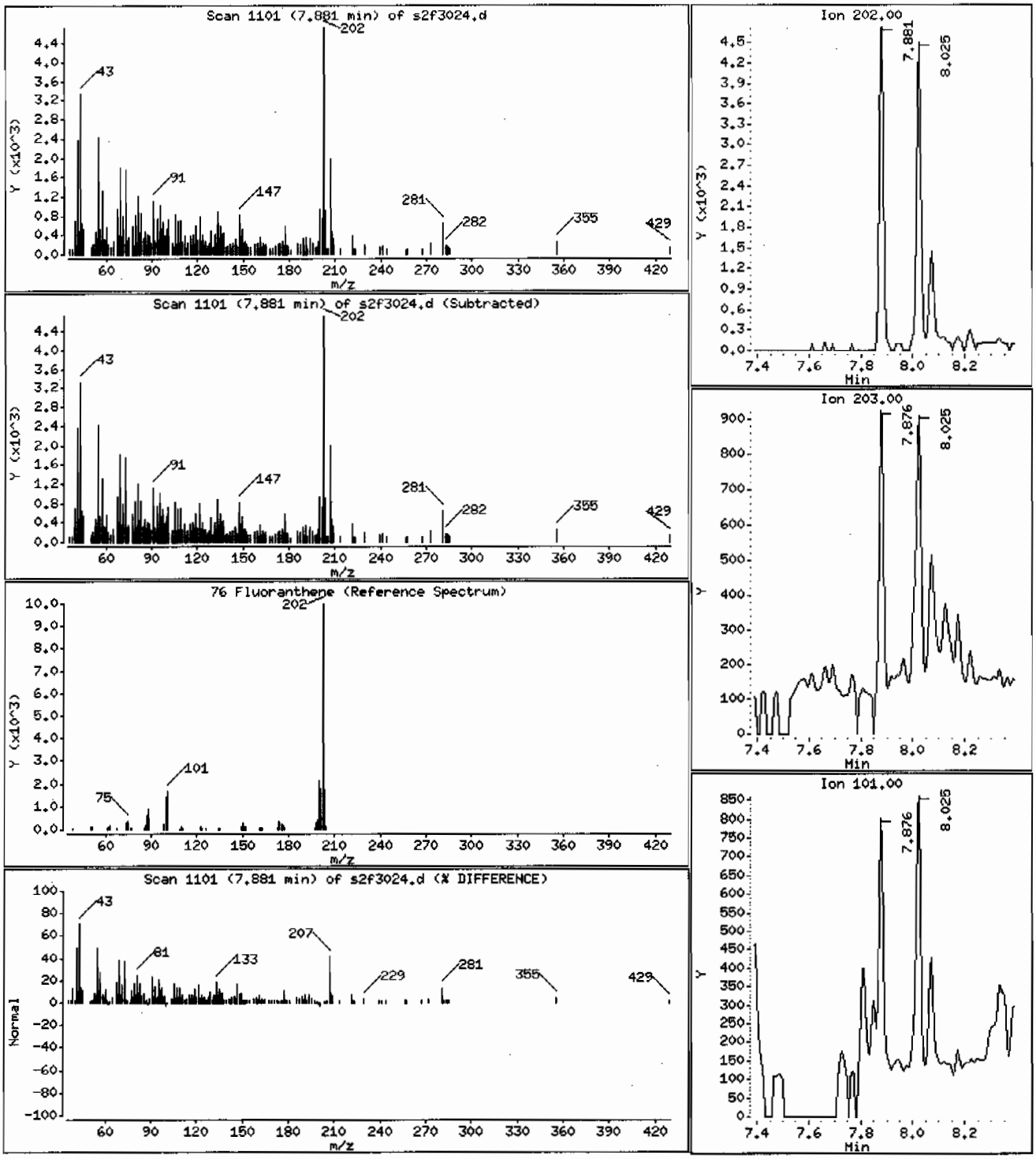

Data File: /chem/MSD2.i/s063009.b/s2f3024.d

Date : 30-JUN-2009 23:32

Client ID: CAMO-09-6039

Instrument: MSD2.i

Sample Info: |2324280131881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate

Concentration: 85.0 ug/Kg

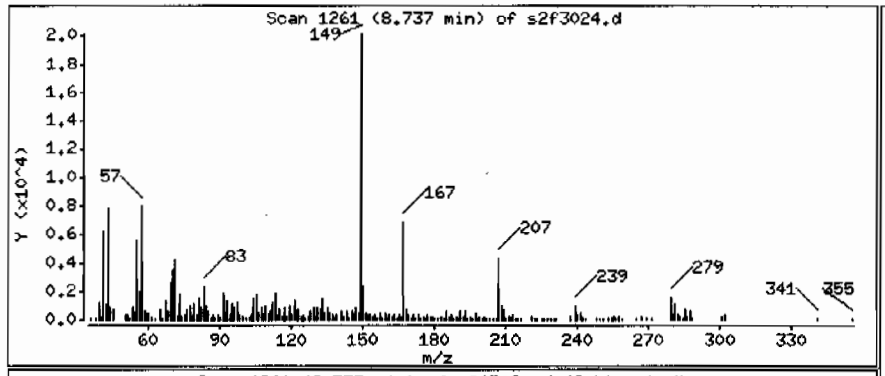

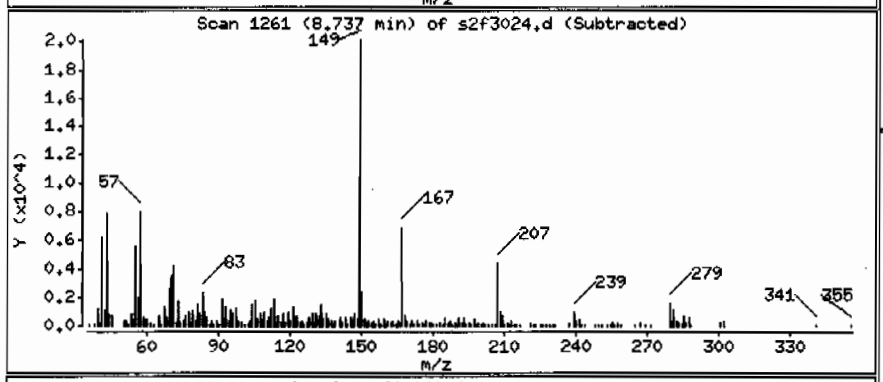

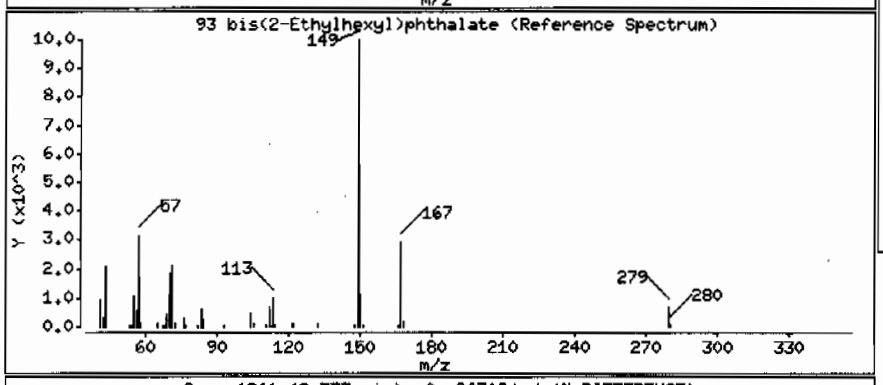

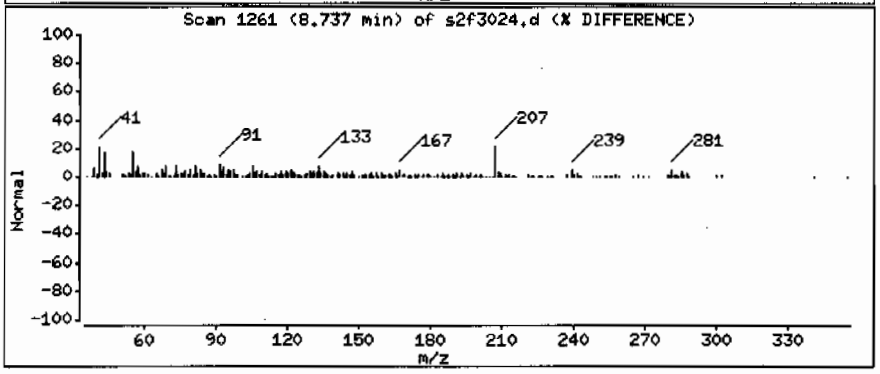

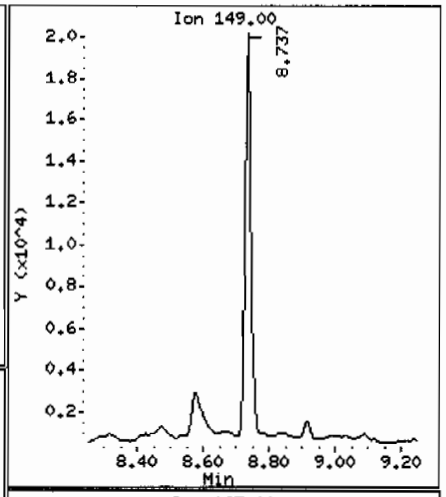

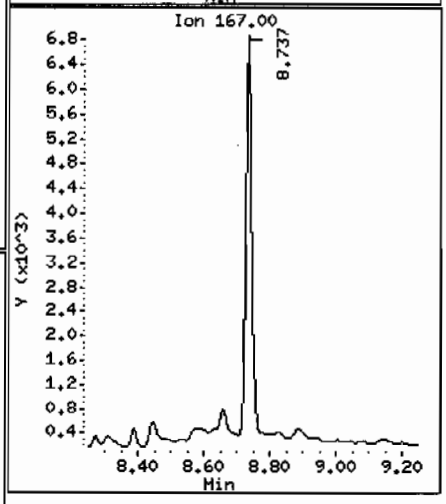

Data File: /chem/MSD2.i/s063009.b/s2f3024.d

Date : 30-JUN-2009 23:32

Client ID: CAMO-09-6039

Instrument: MSD2.i

Sample Info: |2324280131881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7977	39	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	38	C6H12O2	116

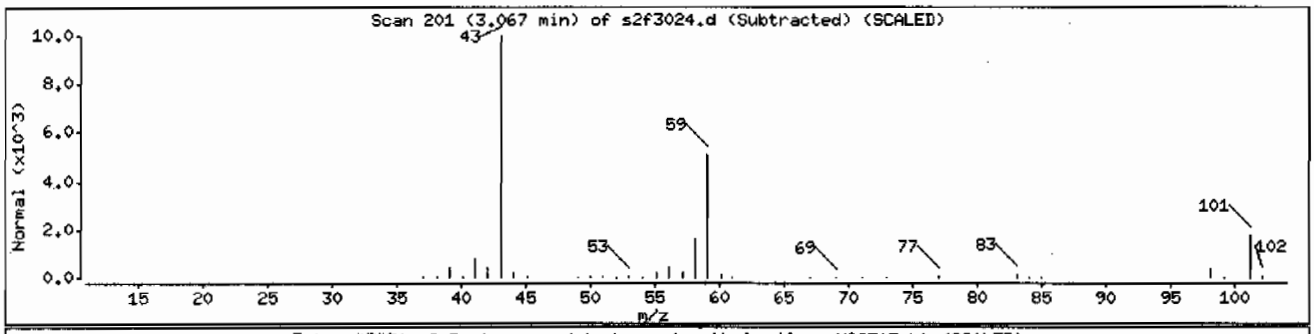

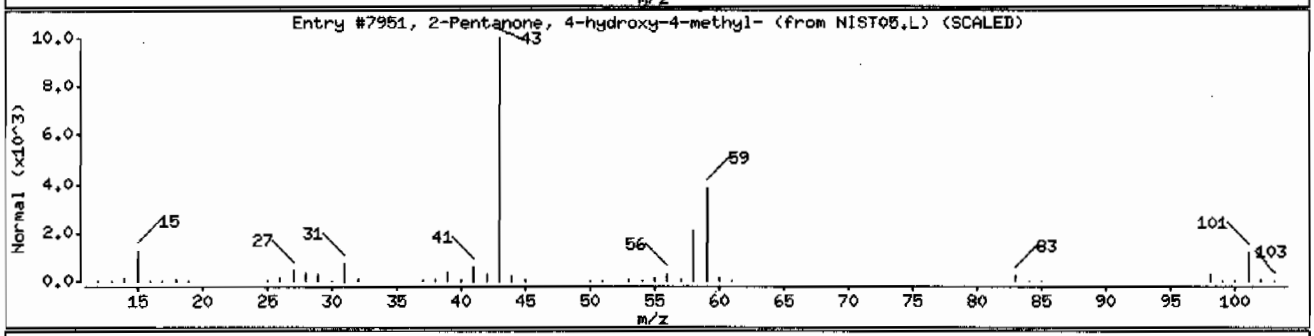

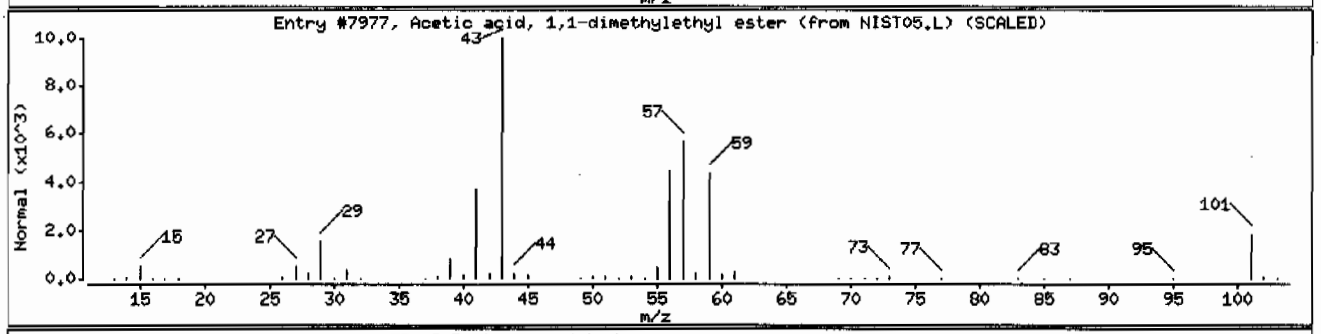

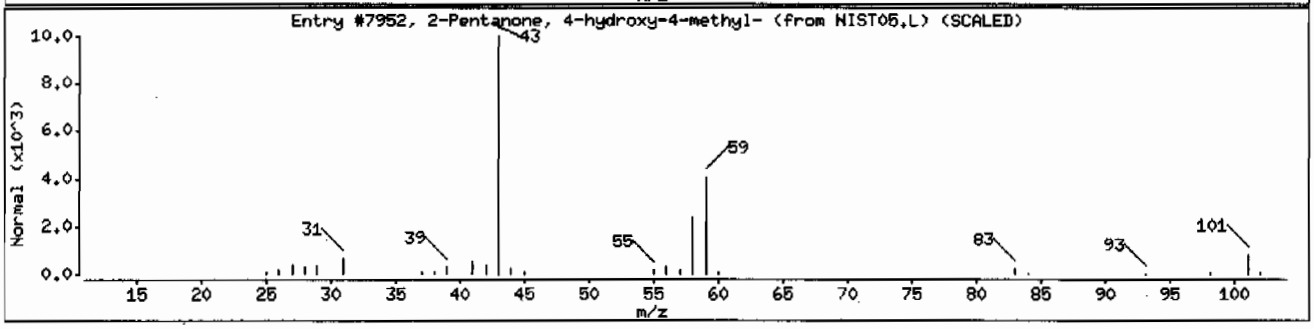

Data File: /chem/MSD2.i/s063009.b/s2f3024.d

Date : 30-JUN-2009 23:32

Client ID: CAMO-09-6039

Instrument: MSD2.i

Sample Info: |2324280131881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60018	99	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60046	96	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60047	95	C15H24	204

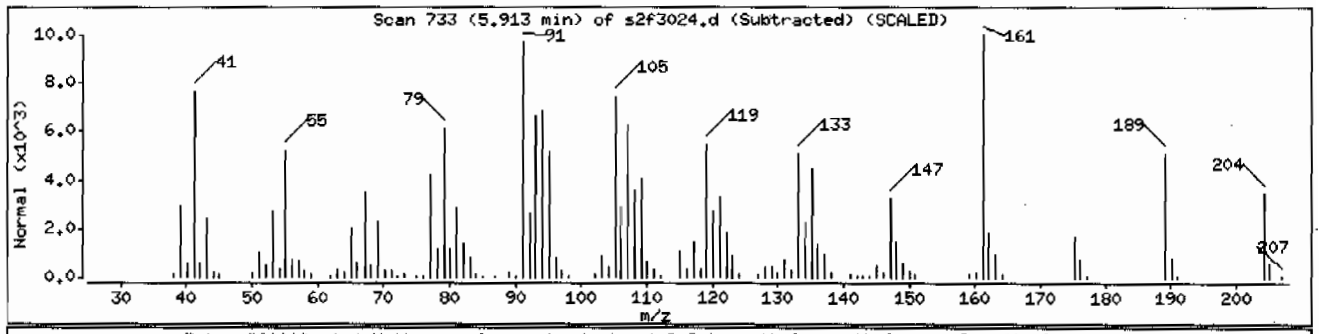

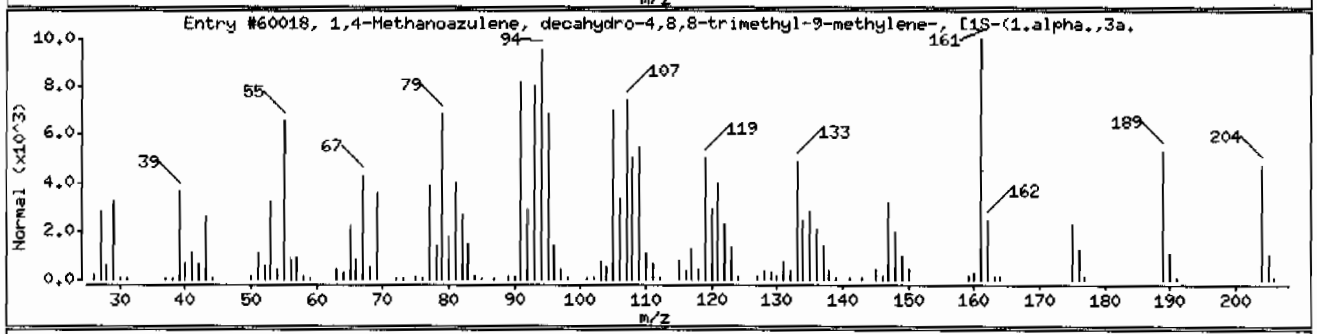

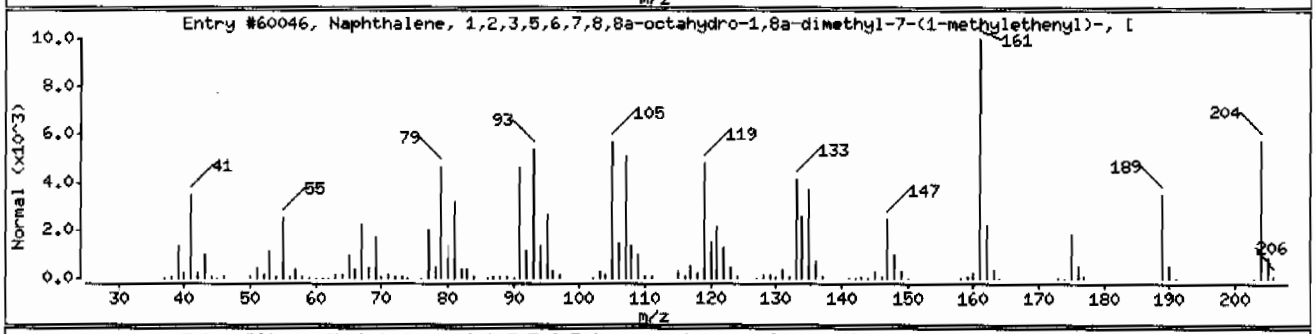

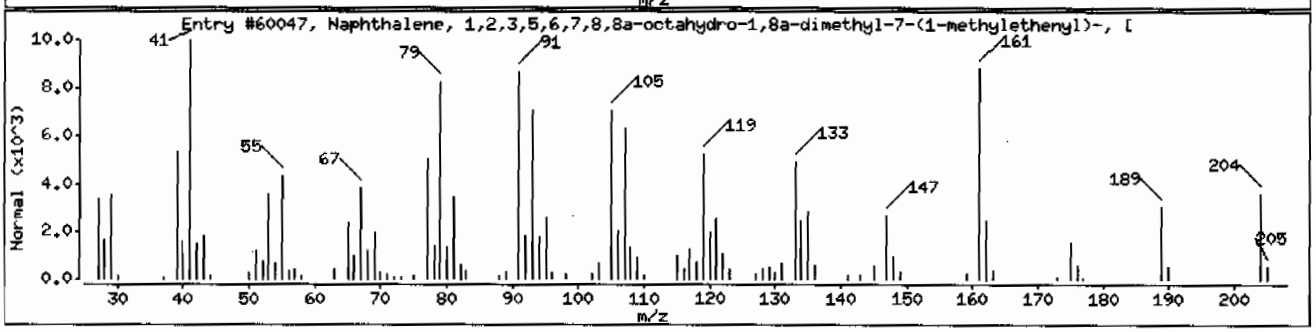

Data File: /chem/MSD2.i/s063009.b/s2f3024.d

Date : 30-JUN-2009 23:32

Client ID: CAMO-09-6039

Instrument: MSD2.i

Sample Info: |2324280131881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Spiro[2.5]octane, 5,5-dimethyl-4-(3-oxob	77143-32-9	NIST05.L	62958	25	C14H24O	208
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	25	C15H26O2	238
5.alpha.,17.alpha.-Pregnan-20-one, 12.be	5618-23-5	NIST05.L	135970	25	C21H34O2	318

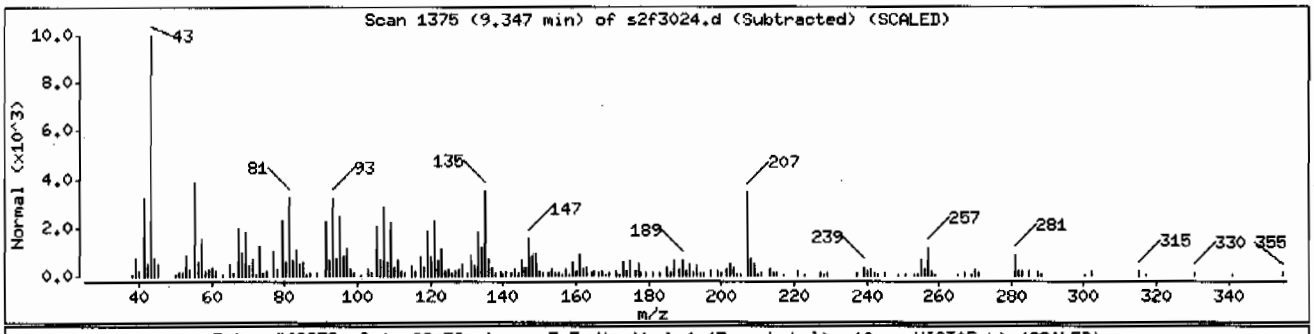

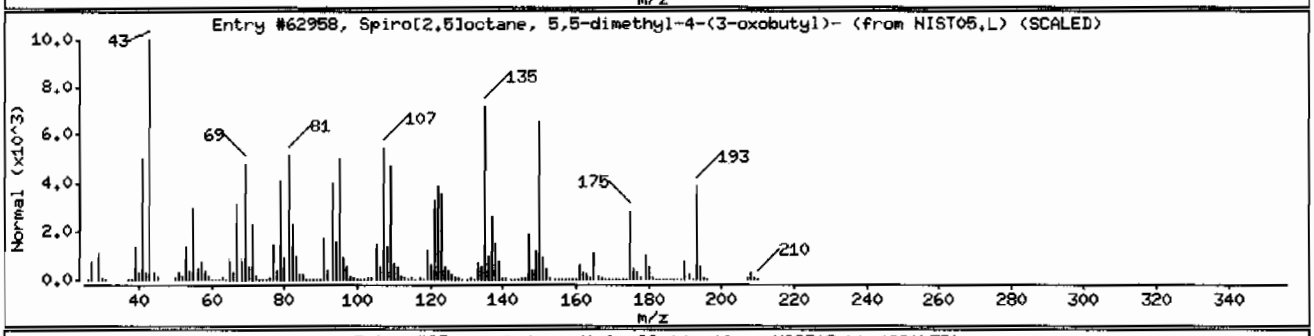

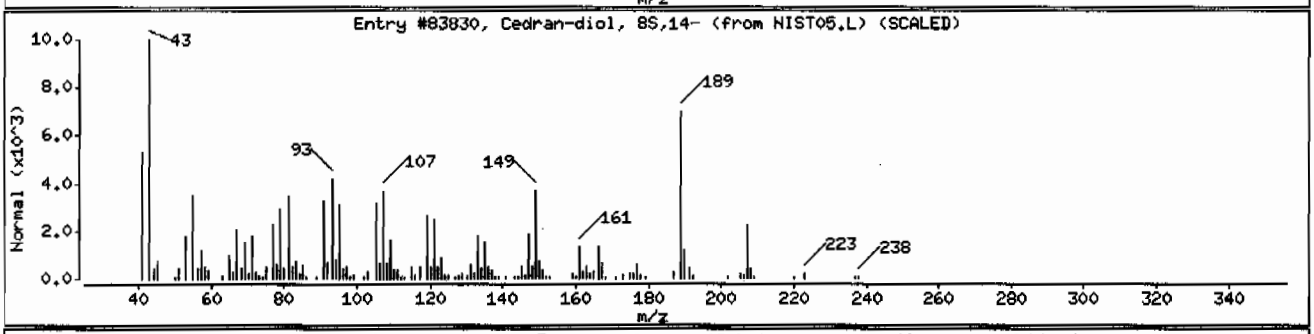

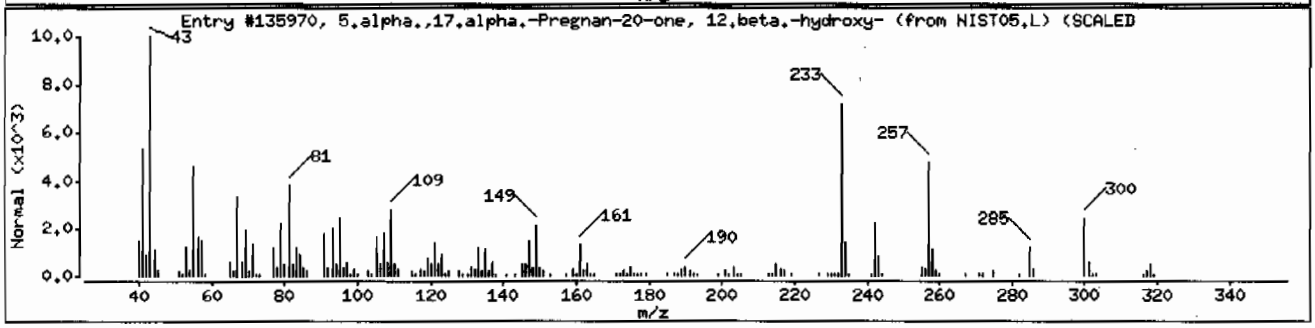

Data File: /chem/MSD2.i/s063009.b/s2f3024.d

Date : 30-JUN-2009 23:32

Client ID: CAMO-09-6039

Instrument: MSD2.i

Sample Info: 1232428013|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Trimethyl(4-tert.-butylphenoxy)silane	25237-79-0	NIST05.L	72670	20	C13H22OSi	222
1,2-Benzenedicarboxylic acid, 4-(1,1-dim	14236-13-6	NIST05.L	72462	18	C12H14O4	222
1,4-Benzenediol, 2,5-bis(1,1-dimethyleth	88-58-4	NIST05.L	72748	18	C14H22O2	222

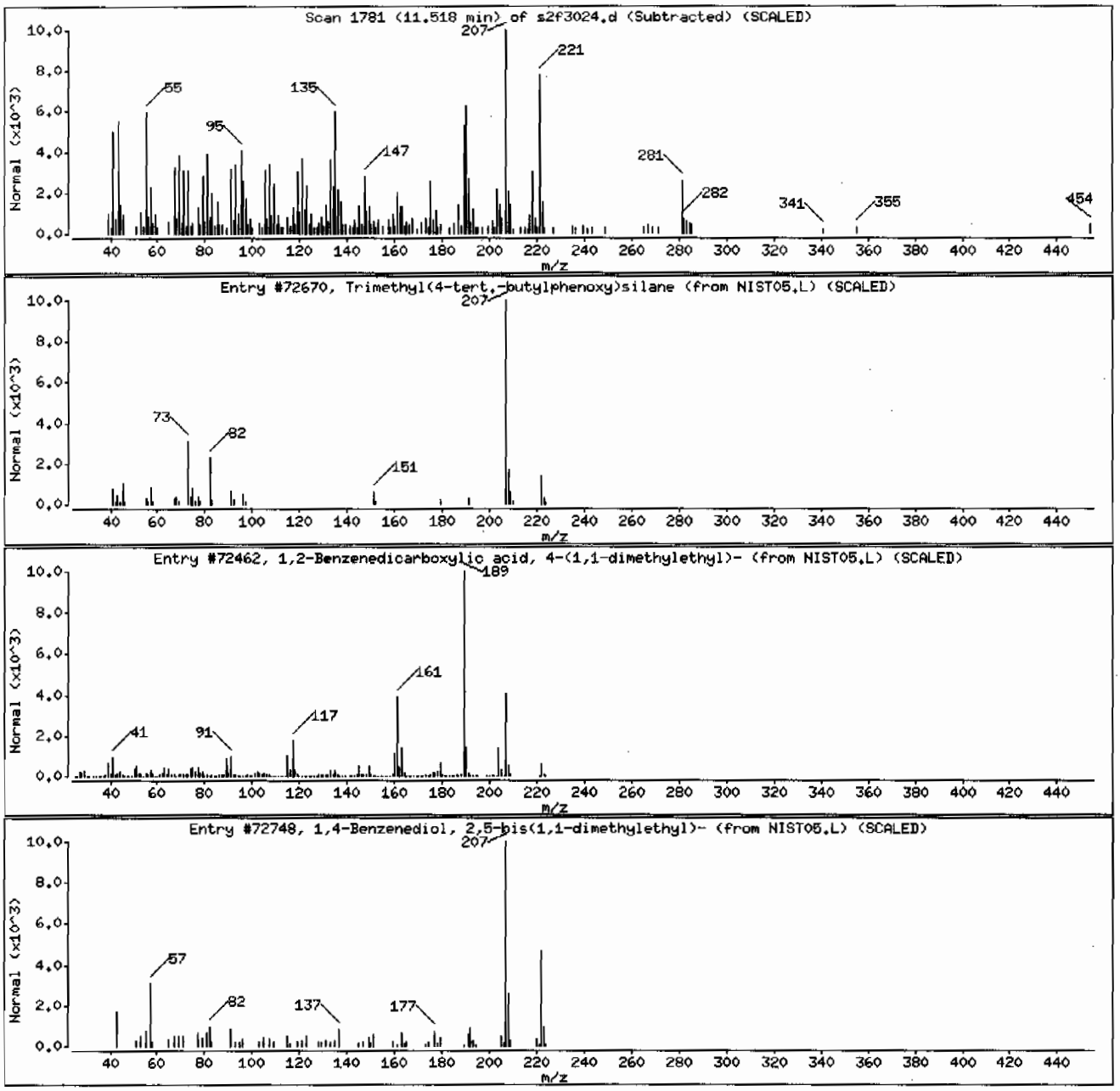

Data File: /chem/MSD2.i/s063009.b/s2f3024.d

Date : 30-JUN-2009 23:32

Client ID: CAMD-09-6039

Instrument: MSD2.i

Sample Info: |2324280131881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet	70038-20-9	NIST05.L	69982	55	C15H22O	218
2-Amino-4-cyanomethyl-6-piperidino-1,3,5	1000241-05-9	NIST05.L	69370	25	C10H14N6	218
Acetic acid, [4-(1,1-dimethylethyl)pheno	88530-52-3	NIST05.L	72620	18	C13H18O3	222

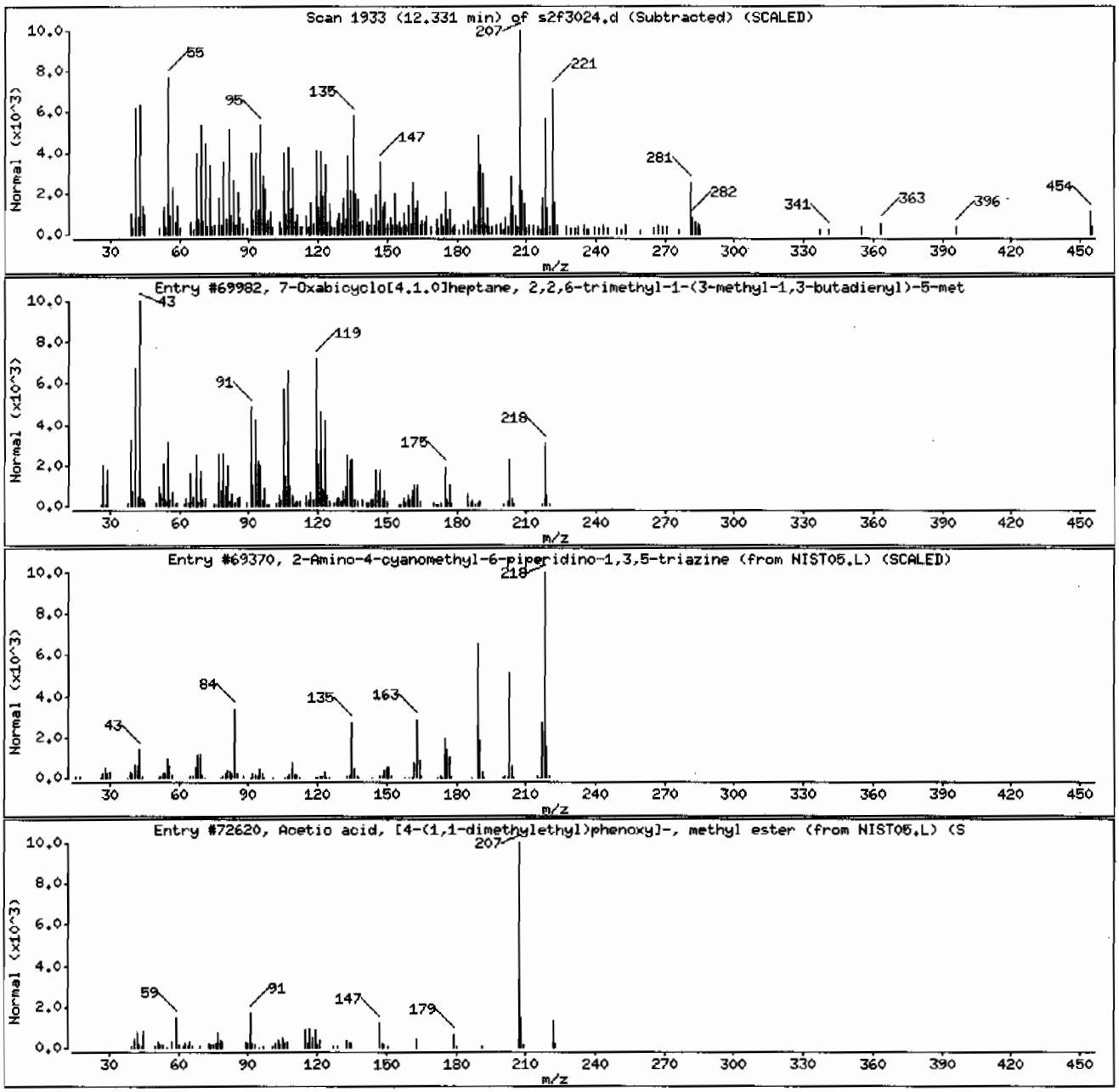

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428009	**Date Received:**	06/26/2009 08:40	**%Moisture:**	27.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6040	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s2f3020.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	458	ug/kg	91.6	458
108-95-2	Phenol	U	458	ug/kg	91.6	458
95-57-8	2-Chlorophenol	U	458	ug/kg	91.6	458
106-46-7	1,4-Dichlorobenzene	U	458	ug/kg	91.6	458
621-64-7	N-Nitrosodipropylamine	U	458	ug/kg	91.6	458
59-50-7	4-Chloro-3-methylphenol	U	458	ug/kg	45.8	458
83-32-9	Acenaphthene		47.6	ug/kg	15.3	45.8
121-14-2	2,4-Dinitrotoluene	U	458	ug/kg	45.8	458
100-02-7	4-Nitrophenol	U	458	ug/kg	91.6	458
87-86-5	Pentachlorophenol	U	458	ug/kg	91.6	458
129-00-0	Pyrene		1660	ug/kg	14.4	45.8
110-86-1	Pyridine	U	458	ug/kg	91.6	458
62-53-3	Aniline	U	458	ug/kg	160	458
111-44-4	bis(2-Chloroethyl) ether	U	458	ug/kg	91.6	458
541-73-1	1,3-Dichlorobenzene	U	458	ug/kg	91.6	458
100-51-6	Benzyl alcohol	U	458	ug/kg	137	458
95-50-1	1,2-Dichlorobenzene	U	458	ug/kg	91.6	458
108-60-1	bis(2-Chloroisopropyl)ether	U	458	ug/kg	91.6	458
95-48-7	o-Cresol	U	458	ug/kg	91.6	458
65794-96-9	m,p-Cresols	U	458	ug/kg	183	458
67-72-1	Hexachloroethane	U	458	ug/kg	91.6	458
98-95-3	Nitrobenzene	U	458	ug/kg	91.6	458
78-59-1	Isophorone	U	458	ug/kg	91.6	458
88-75-5	2-Nitrophenol	U	458	ug/kg	45.8	458
105-67-9	2,4-Dimethylphenol	U	458	ug/kg	91.6	458
111-91-1	bis(2-Chloroethoxy)methane	U	458	ug/kg	91.6	458
120-83-2	2,4-Dichlorophenol	U	458	ug/kg	91.6	458
65-85-0	Benzoic acid	U	916	ug/kg	229	916
91-20-3	Naphthalene	U	45.8	ug/kg	13.7	45.8
106-47-8	4-Chloroaniline	U	458	ug/kg	91.6	458
87-68-3	Hexachlorobutadiene	U	458	ug/kg	91.6	458
91-57-6	2-Methylnaphthalene	U	45.8	ug/kg	9.16	45.8
77-47-4	Hexachlorocyclopentadiene	U	458	ug/kg	91.6	458
88-06-2	2,4,6-Trichlorophenol	U	458	ug/kg	91.6	458
95-95-4	2,4,5-Trichlorophenol	U	458	ug/kg	91.6	458
91-58-7	2-Chloronaphthalene	U	45.8	ug/kg	16.0	45.8
88-74-4	2-Nitroaniline	U	458	ug/kg	91.6	458
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	458	ug/kg	91.6	458

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428009	**Date Received:**	06/26/2009 08:40	**%Moisture:**	27.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6040	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s2f3020.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	458	ug/kg	91.6	458
606-20-2	2,6-Dinitrotoluene	U	458	ug/kg	45.8	458
208-96-8	Acenaphthylene	U	45.8	ug/kg	13.7	45.8
51-28-5	2,4-Dinitrophenol	U	916	ug/kg	174	916
132-64-9	Dibenzofuran	U	458	ug/kg	91.6	458
84-66-2	Diethylphthalate	U	458	ug/kg	91.6	458
86-73-7	Fluorene		52.1	ug/kg	13.7	45.8
7005-72-3	4-Chlorophenylphenylether	U	458	ug/kg	45.8	458
534-52-1	2-Methyl-4,6-dinitrophenol	U	458	ug/kg	91.6	458
100-01-6	4-Nitroaniline	U	458	ug/kg	91.6	458
	p-Nitroaniline					
122-39-4	Diphenylamine	U	458	ug/kg	91.6	458
122-66-7	Azobenzene	U	458	ug/kg	91.6	458
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	458	ug/kg	45.8	458
118-74-1	Hexachlorobenzene	U	458	ug/kg	91.6	458
85-01-8	Phenanthrene		564	ug/kg	13.7	45.8
120-12-7	Anthracene	U	45.8	ug/kg	9.16	45.8
84-74-2	Di-n-butylphthalate	U	458	ug/kg	45.8	458
206-44-0	Fluoranthene		1700	ug/kg	13.7	45.8
85-68-7	Butylbenzylphthalate	U	458	ug/kg	91.6	458
56-55-3	Benzo(a)anthracene		654	ug/kg	13.7	45.8
91-94-1	3,3'-Dichlorobenzidine	U	458	ug/kg	137	458
218-01-9	Chrysene		958	ug/kg	13.7	45.8
117-81-7	bis(2-Ethylhexyl)phthalate	J	150	ug/kg	91.6	458
117-84-0	Di-n-octylphthalate	U	458	ug/kg	91.6	458
205-99-2	Benzo(b)fluoranthene		1700	ug/kg	13.7	45.8
207-08-9	Benzo(k)fluoranthene	U	45.8	ug/kg	13.7	45.8
50-32-8	Benzo(a)pyrene		835	ug/kg	13.7	45.8
193-39-5	Indeno(1,2,3-cd)pyrene		450	ug/kg	13.7	45.8
53-70-3	Dibenzo(a,h)anthracene		121	ug/kg	13.7	45.8
191-24-2	Benzo(ghi)perylene		474	ug/kg	13.7	45.8
120-82-1	1,2,4-Trichlorobenzene	U	458	ug/kg	91.6	458

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	371	ug/kg		J
103-82-2	Benzeneacetic acid	5.04	261	ug/kg	90	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428009	**Date Received:**	06/26/2009 08:40	**%Moisture:**	27.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6040	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s2f3020.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
2381-21-7	Pyrene, 1-methyl-	8.22	219	ug/kg	96	NJ
198-55-0	Perylene	10.35	500	ug/kg	98	NJ
	Unknown	11.5	340	ug/kg		J
302800-55-1	Quinoxaline, 6-(3-nitrobenzylidenamino)-	12.61	239	ug/kg	95	NJ

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s063009.b/s2f3020.d
Lab Smp Id: 232428009 Client Smp ID: CAMO-09-6040
Inj Date : 30-JUN-2009 22:12
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428009|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	27.26130	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.052	4.051	(1.000)	198932	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	754089	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	412131	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	702696	40.0000	
* 91 Chrysene-d12	240	8.887	8.892	(1.000)	503100	40.0000	
* 98 Perylene-d12	264	10.502	10.507	(1.000)	321190	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	266535	48.4196	2220
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	332164	48.8647	2240
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	140740	24.7369	1130
$ 39 2-Fluorobiphenyl	172	5.662	5.667	(0.918)	315930	27.1425	1240
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	91386	64.7410	2960
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	332754	38.8310	1780

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
47 Acenaphthene	154	6.191	6.196	(1.003)	11169	1.03844	47.6
79 Pyrene	202	8.026	8.031	(0.903)	542127	36.1990	1660
53 Fluorene	166	6.539	6.544	(1.060)	13286	1.13785	52.1
68 Phenanthrene	178	7.164	7.170	(1.002)	206171	12.3212	564
76 Fluoranthene	202	7.881	7.886	(1.103)	571742	37.1430	1700
89 Benzo(a)anthracene	228	8.876	8.881	(0.999)	174717	14.2736	654
92 Chrysene	228	8.908	8.919	(1.002)	246971	20.9068	958
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.983)	30274	3.28027	150(a)
95 Benzo(b)fluoranthene	252	9.983	9.988	(0.951)	286152	37.1117	1700
97 Benzo(a)pyrene	252	10.422	10.432	(0.992)	122724	18.2171	834
99 Indeno(1,2,3-cd)pyrene	276	12.315	12.337	(1.173)	63572	9.82350	450
100 Dibenzo(a,h)anthracene	278	12.321	12.342	(1.173)	13709	2.63996	121
101 Benzo(ghi)perylene	276	12.893	12.903	(1.228)	58190	10.3561	474

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s2f3020.d
Report Date: 07/01/2009 07:57
Lab. ID: 232428009 SampleType: SAMPLE
Injection Date: 30-JUN-2009 22:12
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428009|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	14758	3.76	3.83	80-120	100	(T)
93	1093	3.73	3.83	440-500	7	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	21144	4.41	4.29	80-120	100	(T)
42	12376	4.41	4.29	40-100	59	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	89080	6.17	5.94	80-120	100	(T)
164	411937	6.17	5.94	0- 40	462	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	52868	6.17	5.99	80-120	100	(T)
63	738	6.17	5.99	46-106	1	(QT)
45 Acenaphthylene				CAS#: 208-96-8		
152	5476	6.19	6.08	80-120	100	(T)
151	1937	6.19	6.08	0- 50	35	(T)
153	11520	6.19	6.08	0- 43	210	(QT)
47 Acenaphthene				CAS#: 83-32-9		
154	11169	6.19	6.20	80-120	100	( )
153	11520	6.19	6.20	69-129	103	( )
152	5213	6.19	6.20	17- 77	47	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	53495	6.17	6.27	80-120	100	(T)
89	1766	6.17	6.27	38- 98	3	(QT)
63	729	6.17	6.27	16- 76	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	13286	6.54	6.54	80-120	100	( )
165	12166	6.54	6.54	61-121	92	( )
167	2533	6.54	6.54	0- 44	19	( )
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	233	6.70	6.55	80-120	100	(T)
105	424	6.70	6.55	14- 74	181	(QT)
51	593	6.69	6.55	37- 97	254	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	5147	6.70	6.84	80-120	100	(T)
141	39514	6.69	6.84	51-111	768	(QT)
250	10813	6.70	6.84	66-126	210	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	206171	7.16	7.17	80-120	100	( )
179	47813	7.16	7.17	0- 46	23	( )
176	39259	7.16	7.17	0- 49	19	( )
69 Anthracene			CAS#: 120-12-7			
178	38926	7.20	7.20	80-120	100	( )
179	47813	7.16	7.20	0- 46	123	(Q)
176	6814	7.20	7.20	0- 48	18	( )
76 Fluoranthene			CAS#: 206-44-0			
202	571742	7.88	7.89	80-120	100	( )
203	99875	7.88	7.89	0- 48	17	( )
101	82909	7.88	7.89	0- 45	15	( )
79 Pyrene			CAS#: 129-00-0			
202	542127	8.03	8.03	80-120	100	( )
200	110367	8.03	8.03	0- 51	20	( )
101	100593	8.03	8.03	0- 48	19	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	174717	8.88	8.88	80-120	100	( )
226	48024	8.88	8.88	0- 56	27	( )
229	56220	8.88	8.88	0- 50	32	( )
92 Chrysene			CAS#: 218-01-9			
228	246971	8.91	8.92	80-120	100	( )
229	61206	8.91	8.92	0- 50	25	( )
226	74011	8.91	8.92	0- 59	30	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	30274	8.74	8.75	80-120	100	( )
167	7611	8.74	8.75	2- 62	25	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	286152	9.98	9.99	80-120	100	( )
253	65162	9.98	9.99	0- 52	23	( )
125	42891	9.98	9.99	0- 45	15	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	286152	9.98	10.02	80-120	100	( )
253	66060	9.98	10.02	0- 52	23	( )
125	42956	9.98	10.02	0- 44	15	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	122724	10.42	10.43	80-120	100	( )
253	28883	10.42	10.43	0- 52	24	( )
125	17246	10.42	10.43	0- 46	14	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	63572	12.32	12.34	80-120	100	( )
138	20344	12.32	12.34	7- 67	32	( )
100 Dibenzo(a,h)anthracene				CAS#: 53-70-3		
278	13709	12.32	12.34	80-120	100	( )
139	3689	12.33	12.34	0- 55	27	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	58190	12.89	12.90	80-120	100	( )
138	18553	12.89	12.90	4- 64	32	( )

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s063009.b/s2f3020.d
Lab Smp Id: 232428009 Client Smp ID: CAMO-09-6040
Inj Date : 30-JUN-2009 22:12
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428009|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	27.26130	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.052	1199170	40.000
* 29 Naphthalene-d8	4.923	1583438	40.000
* 91 Chrysene-d12	8.887	2545029	40.000
* 98 Perylene-d12	10.502	1130280	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.062	243061	8.10762523	371	0		0	10
Benzeneacetic acid					CAS #: 103-82-2		
5.036	225189	5.68860984	261	90	NIST05.L	15740	29
Pyrene, 1-methyl-					CAS #: 2381-21-7		
8.218	304101	4.77952577	219	96	NIST05.L	68688	91
Perylene					CAS #: 198-55-0		
10.347	308502	10.9177152	500	98	NIST05.L	93574	98
Unknown					CAS #:		
11.502	209582	7.41699483	340	0		0	98
Quinoxaline, 6-(3-nitrobenzylidenamino)-					CAS #: 302800-55-1		
12.615	147343	5.21437622	239	95	NIST05.L	110501	98

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: AGS1

Column diameter: 0.20

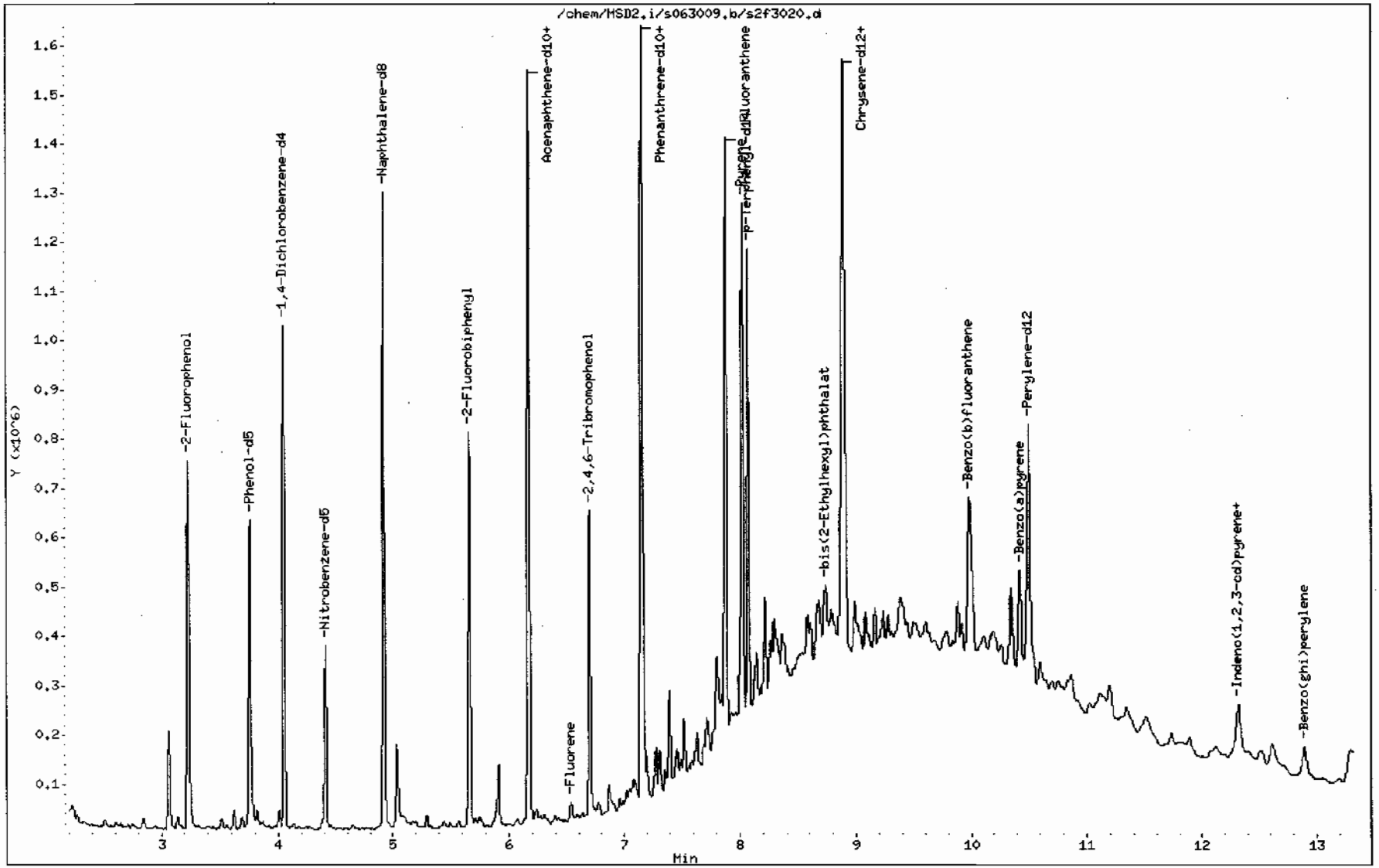

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: 1232428009188131911ISVMF11LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

47 Acenaphthene

Concentration: 47.6 ug/Kg

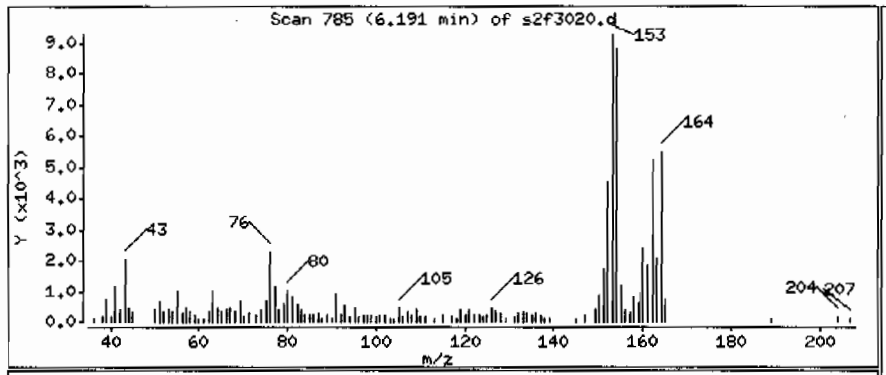

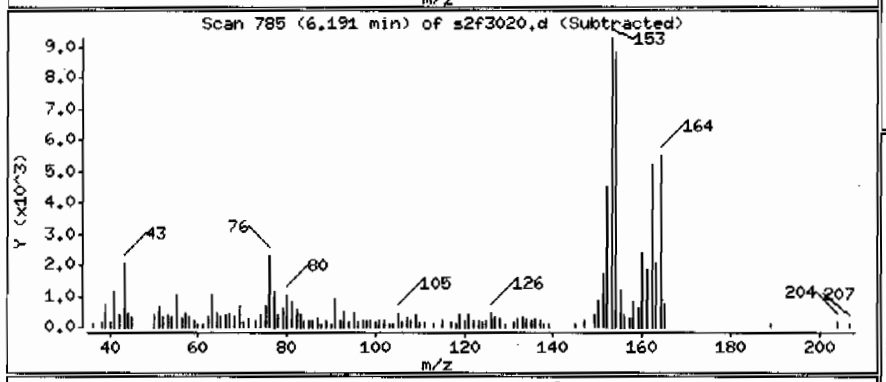

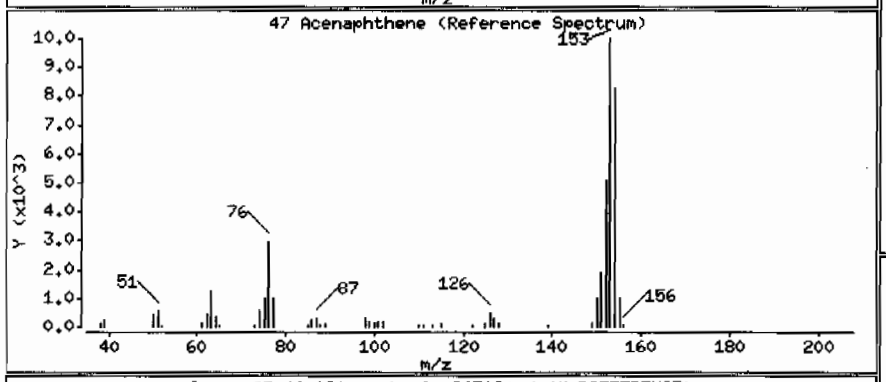

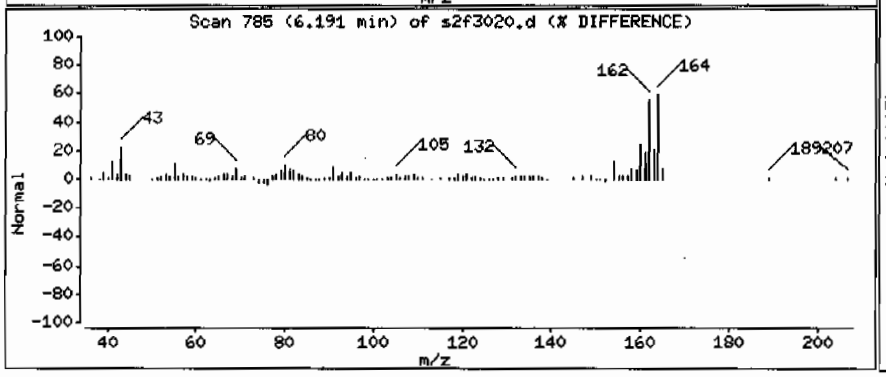

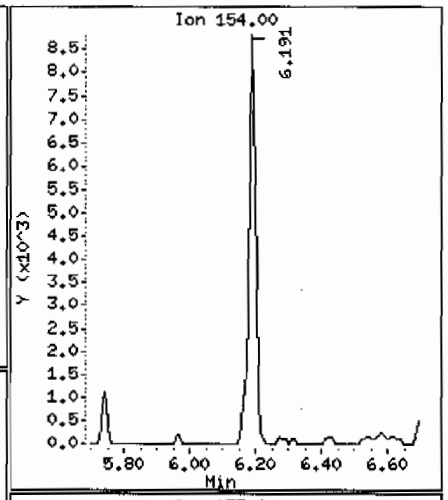

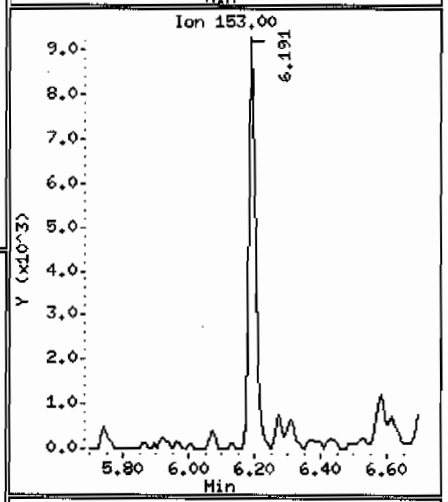

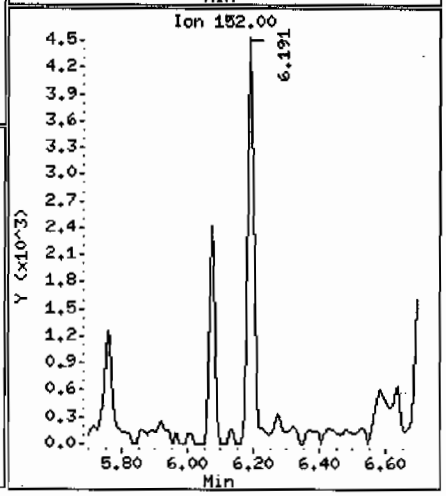

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 1660 ug/Kg

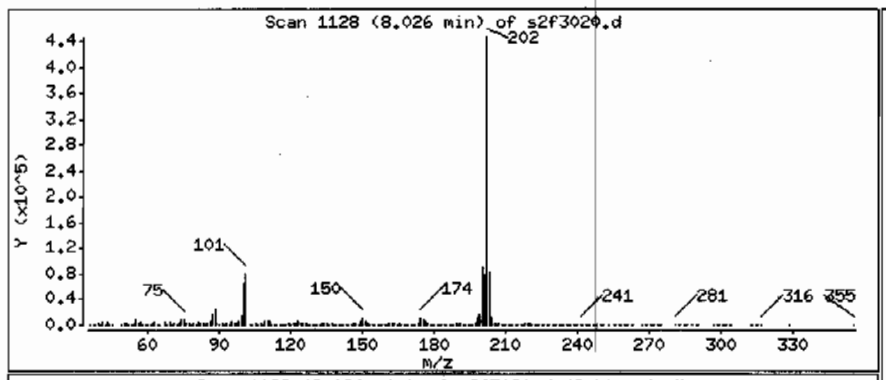

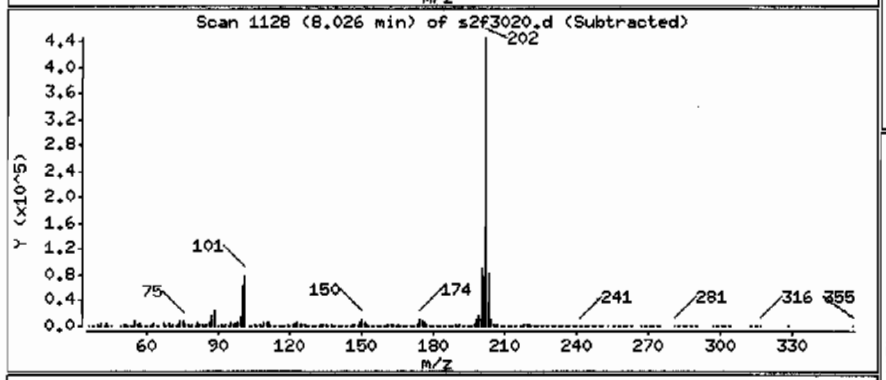

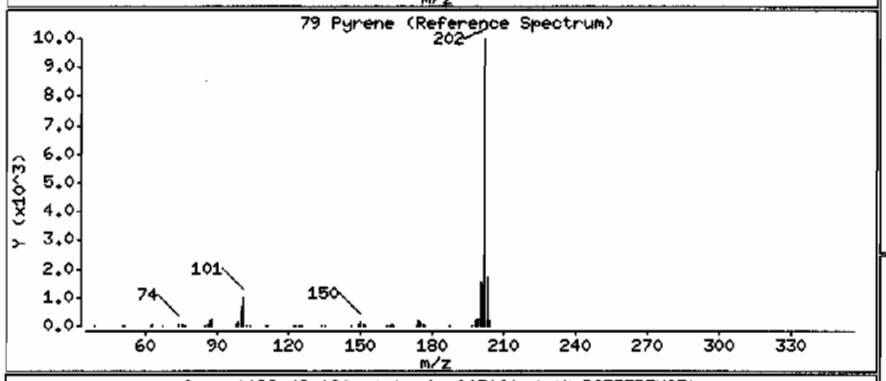

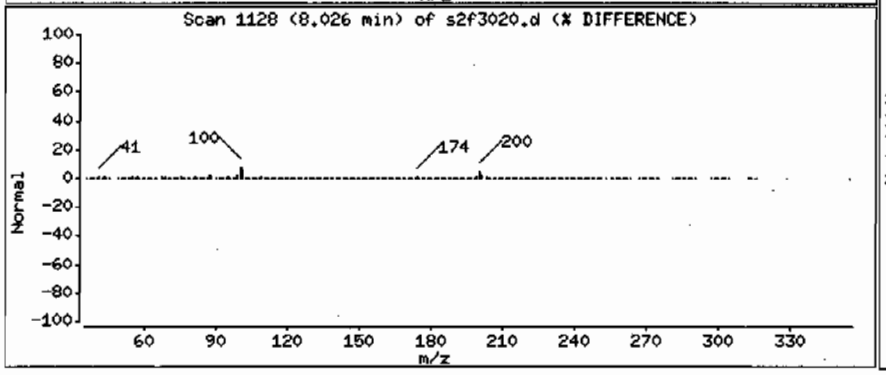

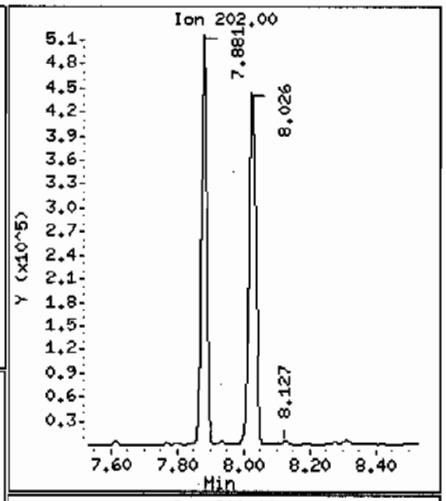

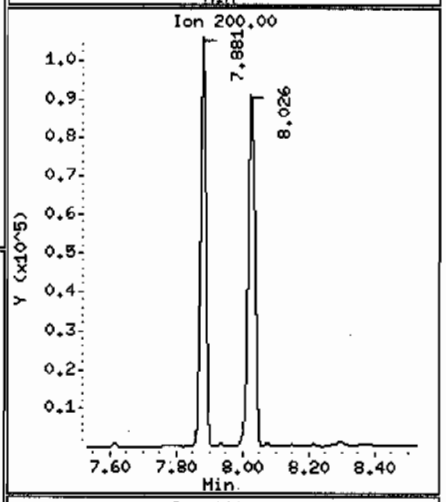

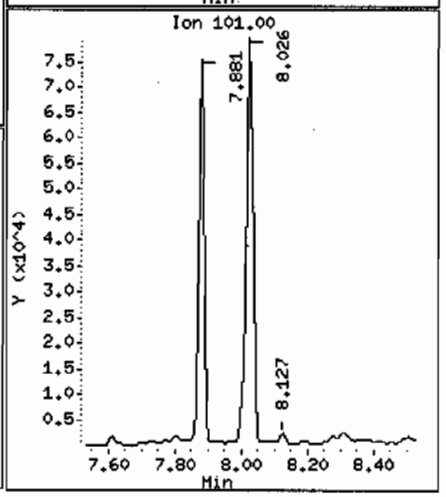

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

53 Fluorene

Concentration: 52.1 ug/Kg

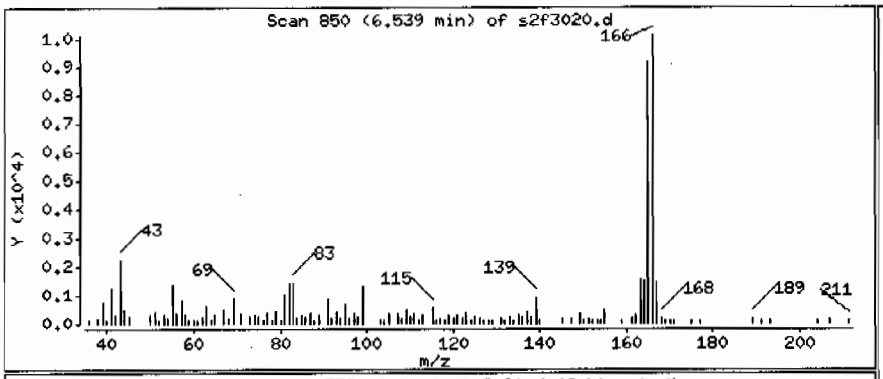

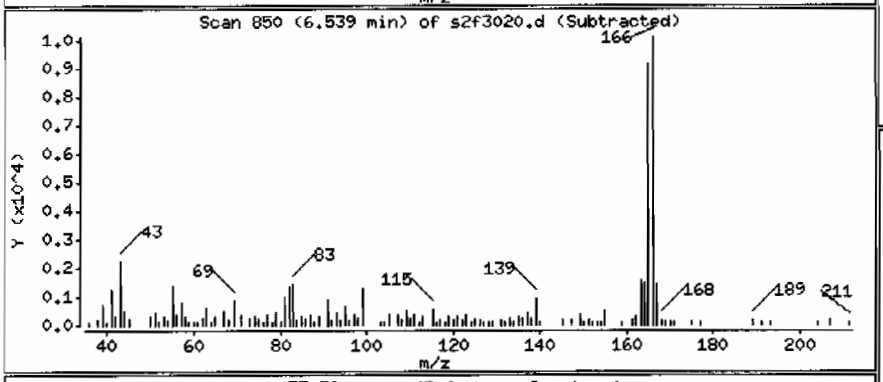

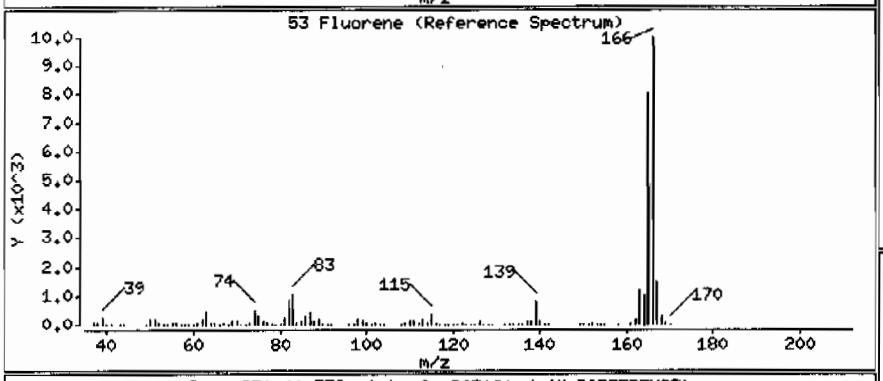

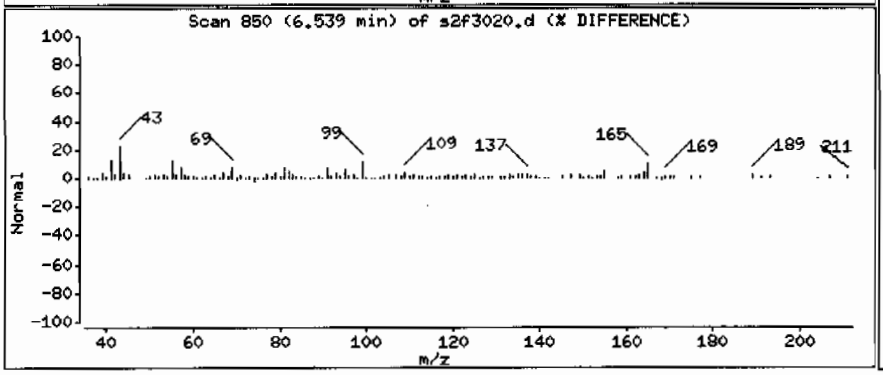

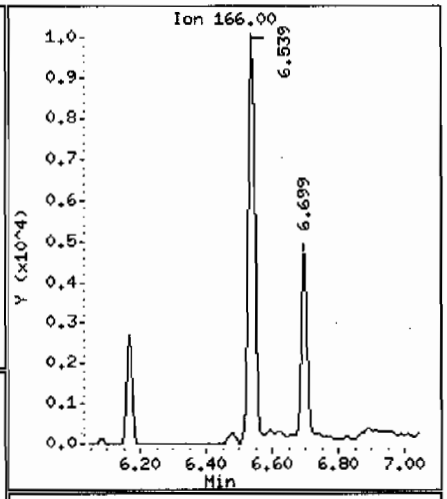

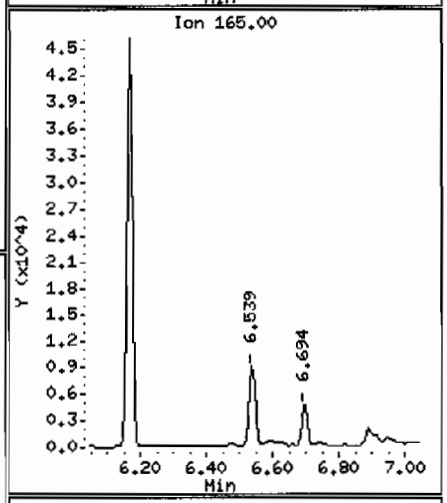

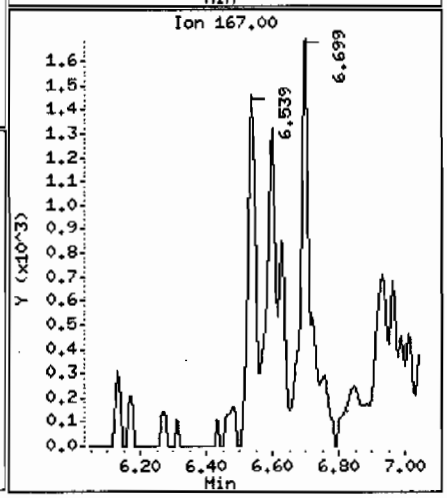

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: 1232428009188131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 564 ug/Kg

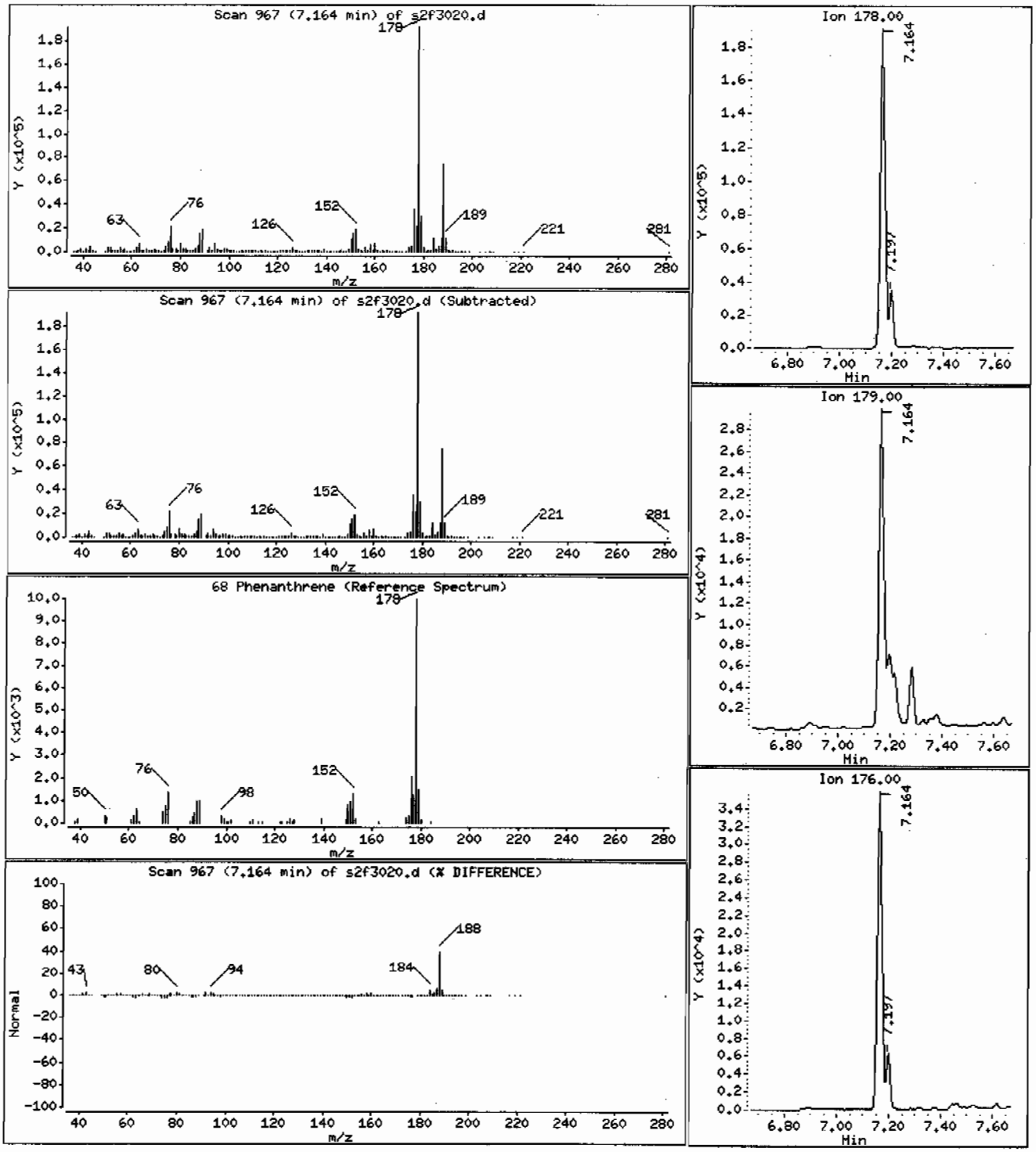

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040 Instrument: MSD2.i

Sample Info: |2324280091881319111SVMF11LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

76 Fluoranthene Concentration: 1700 ug/Kg

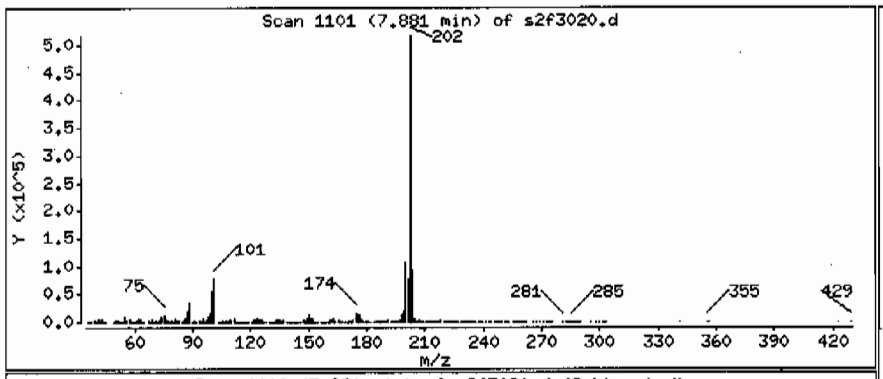

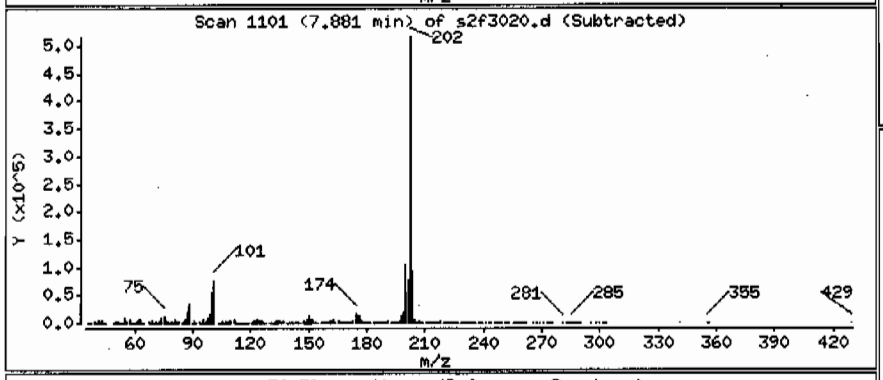

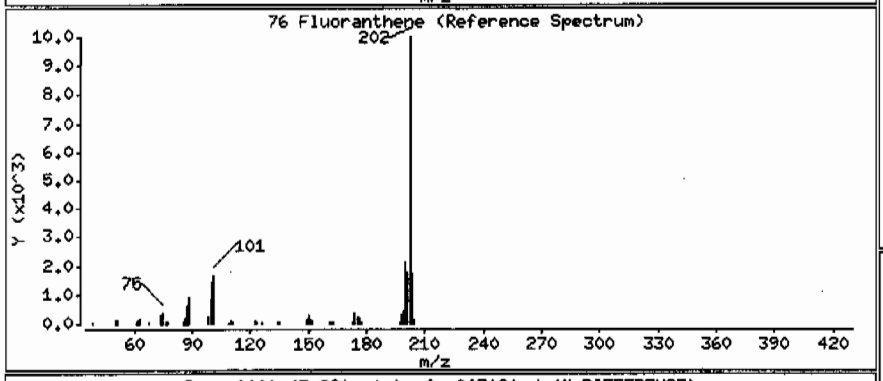

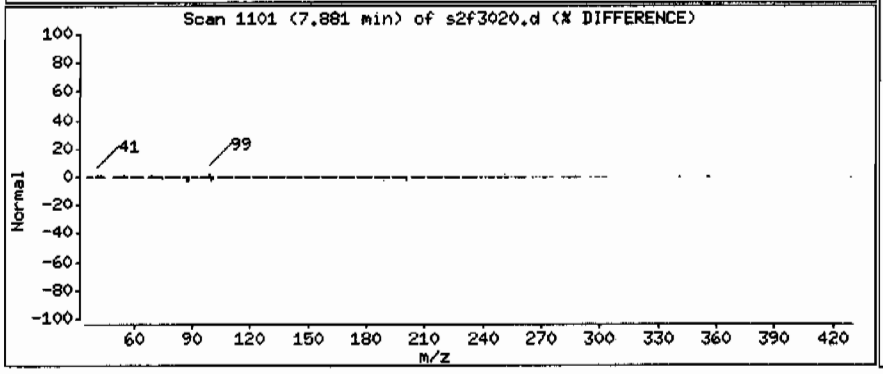

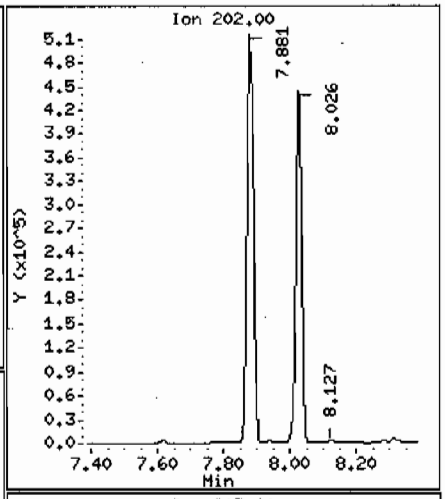

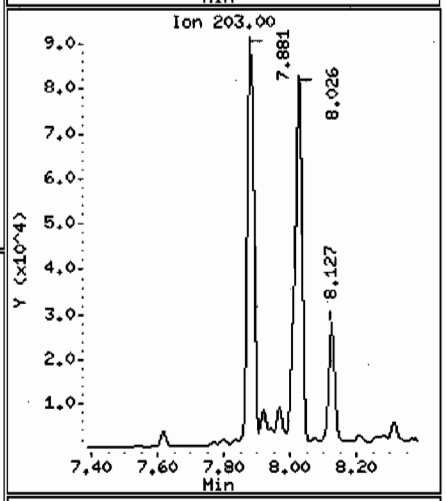

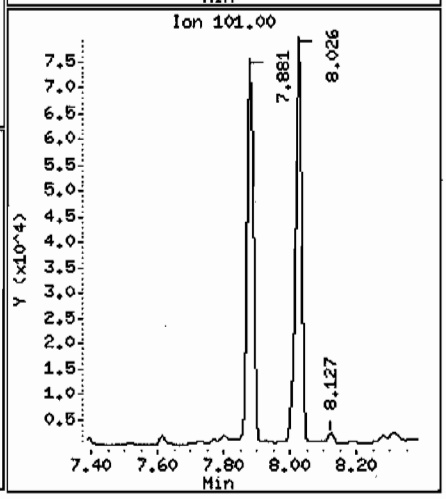

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040 Instrument: MSD2.i

Sample Info: 1232428009|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

89 Benzo(a)anthracene Concentration: 654 ug/Kg

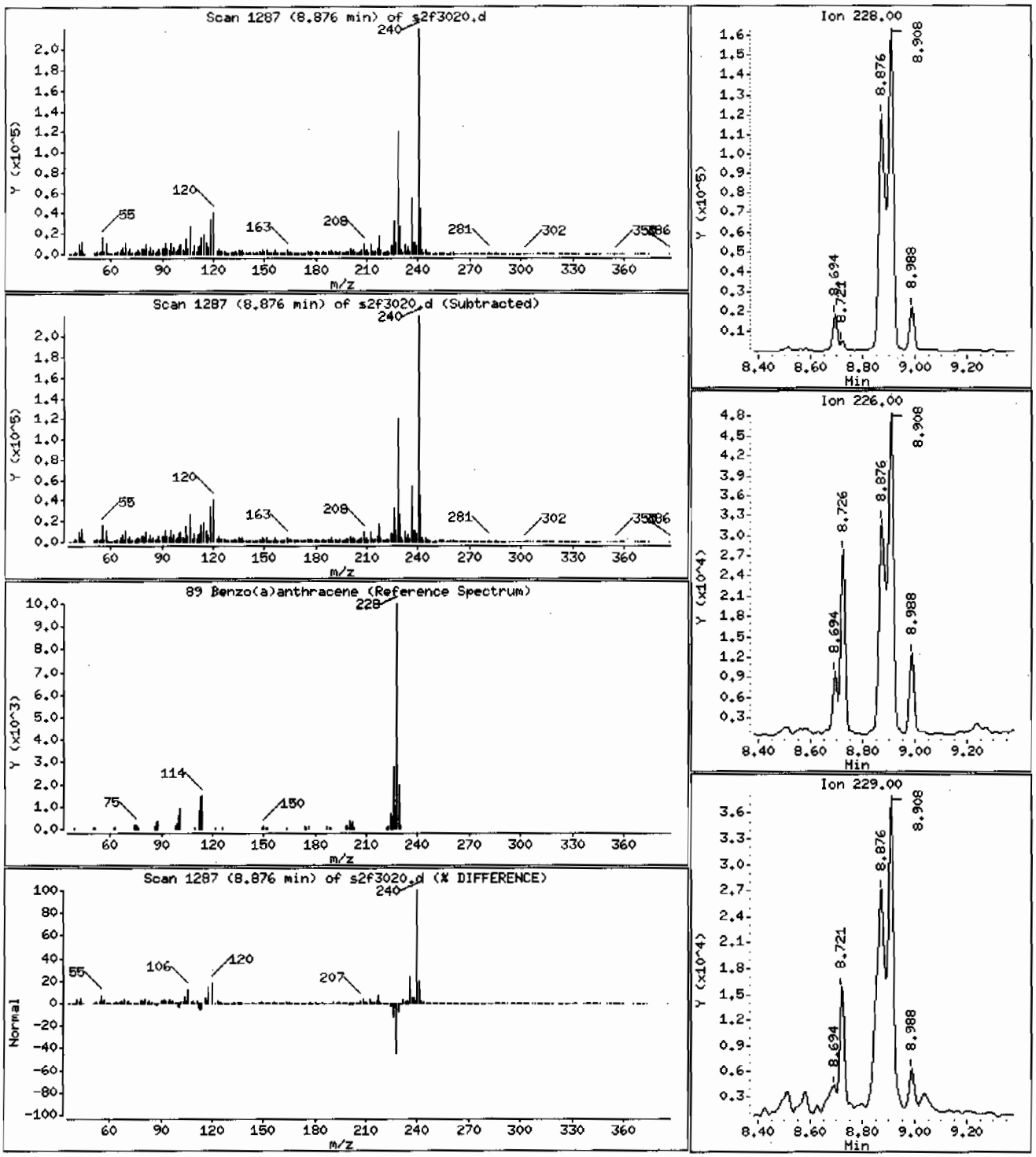

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040 Instrument: MSD2.i

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

92 Chrysene Concentration: 958 ug/Kg

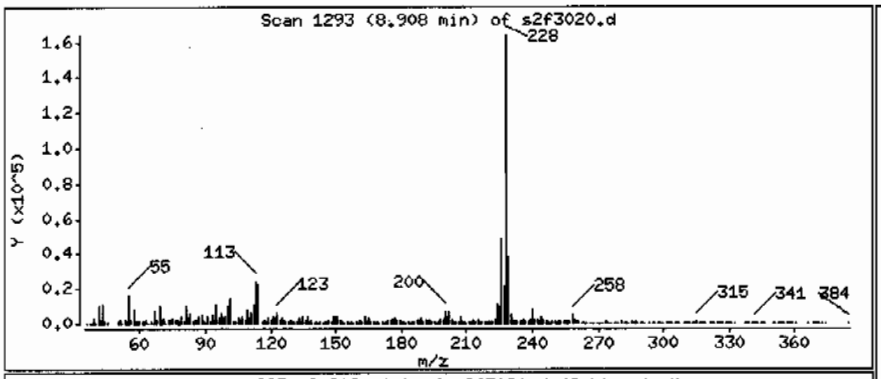

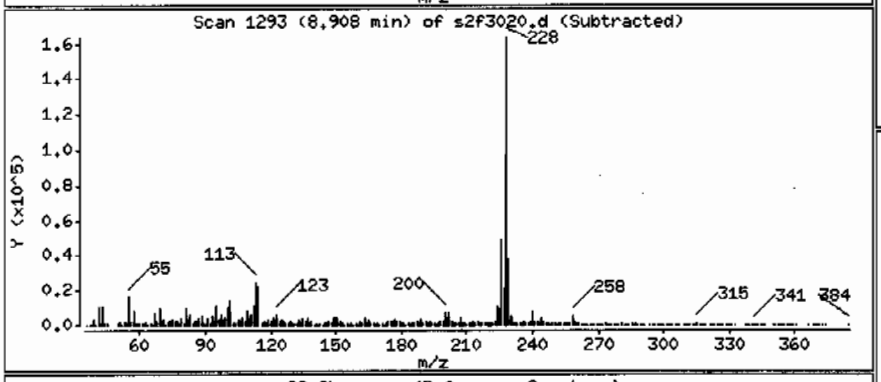

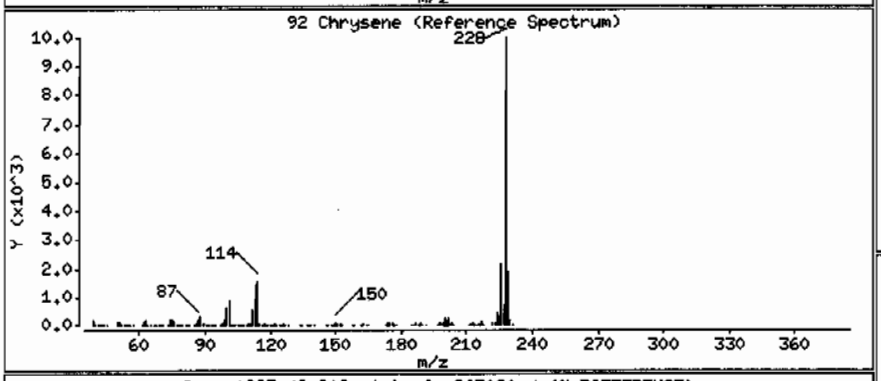

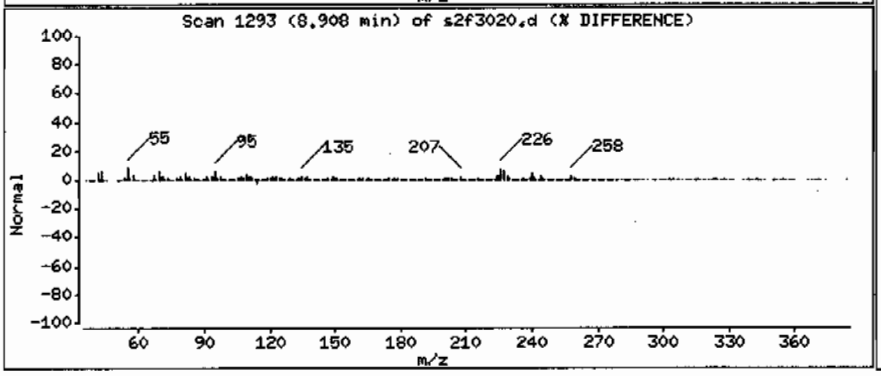

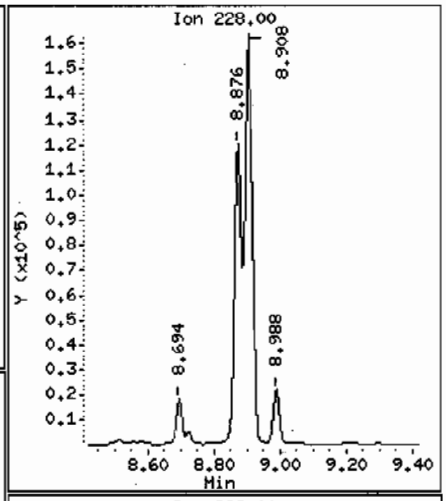

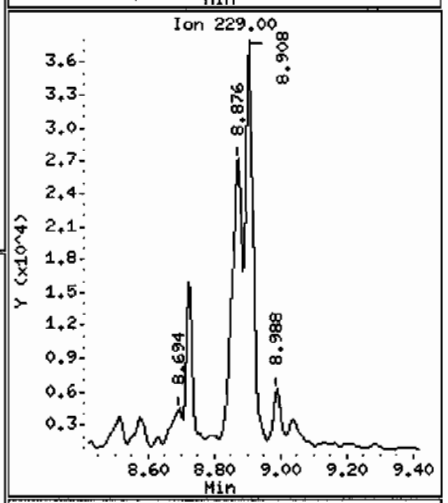

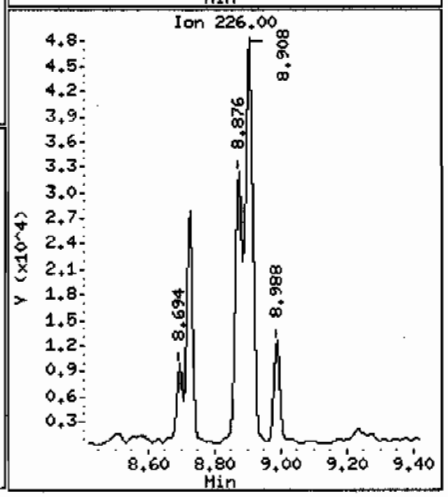

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate

Concentration: 150 ug/Kg

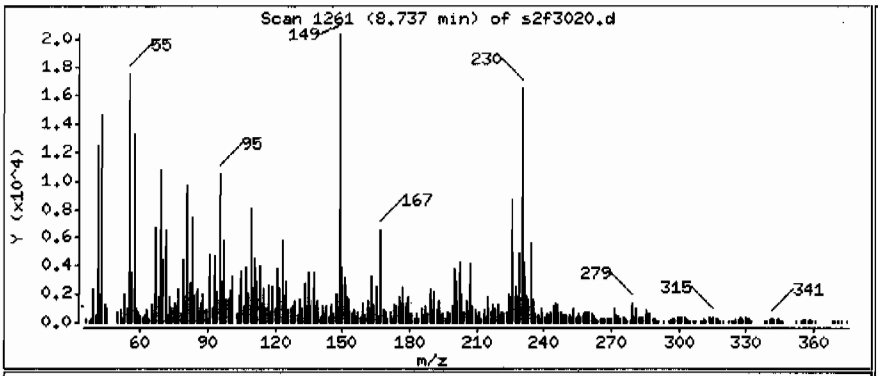

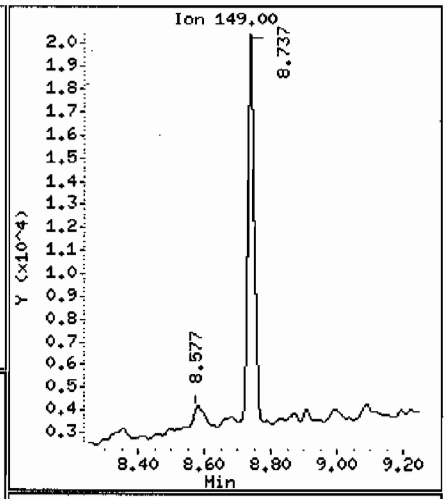

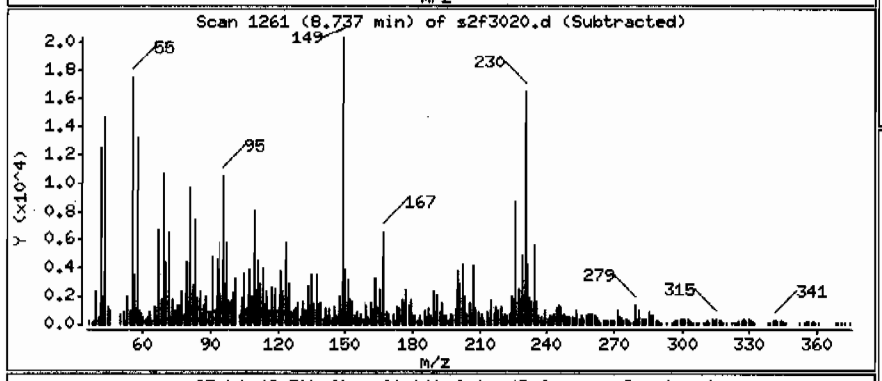

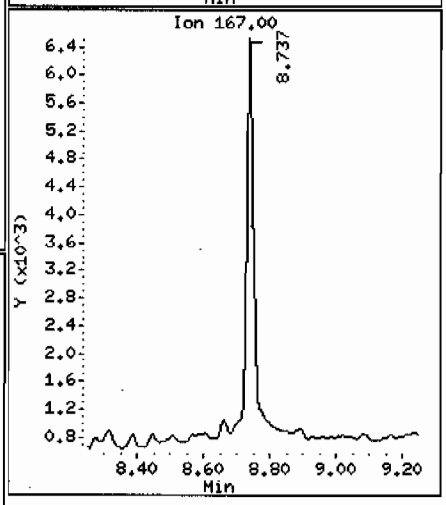

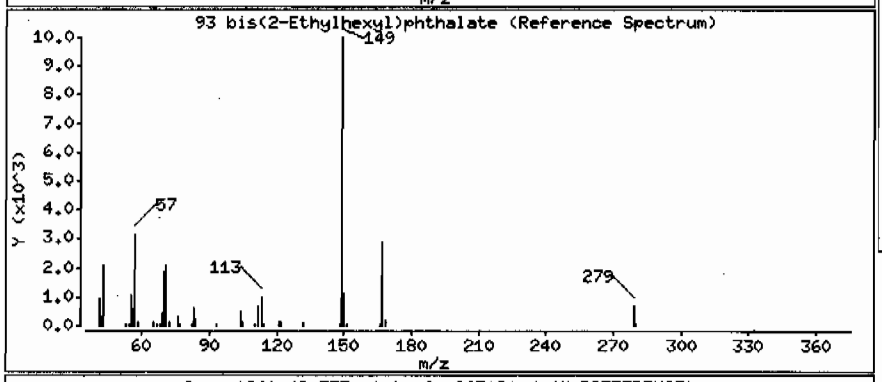

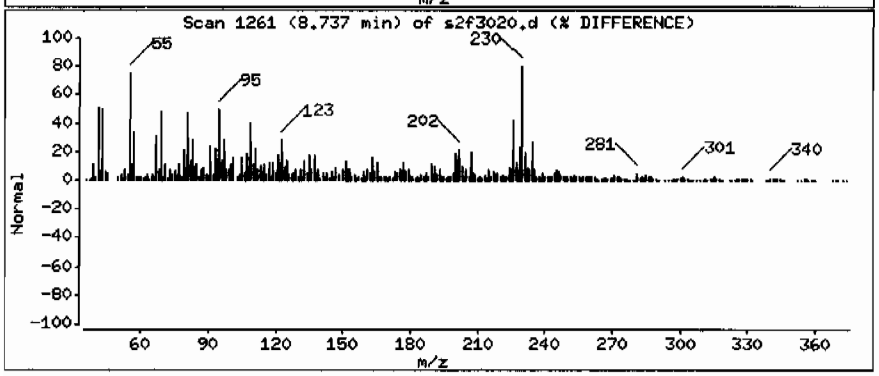

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAHO-09-6040

Instrument: MSD2.i

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 1700 ug/Kg

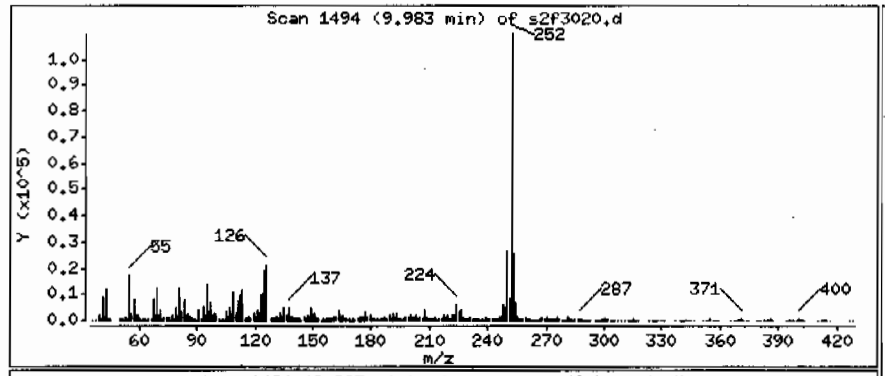

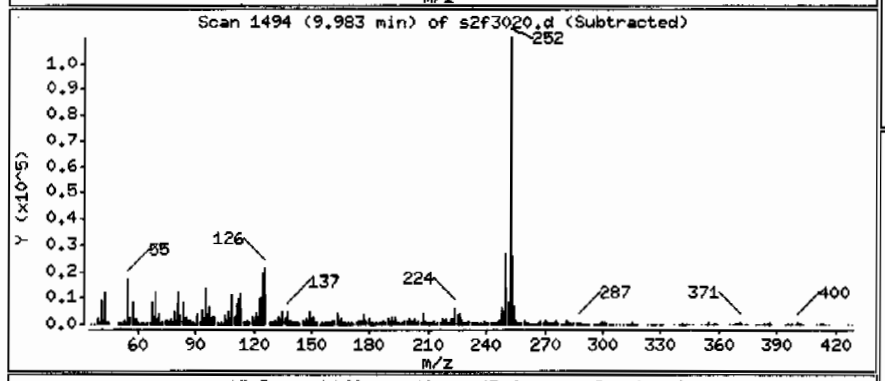

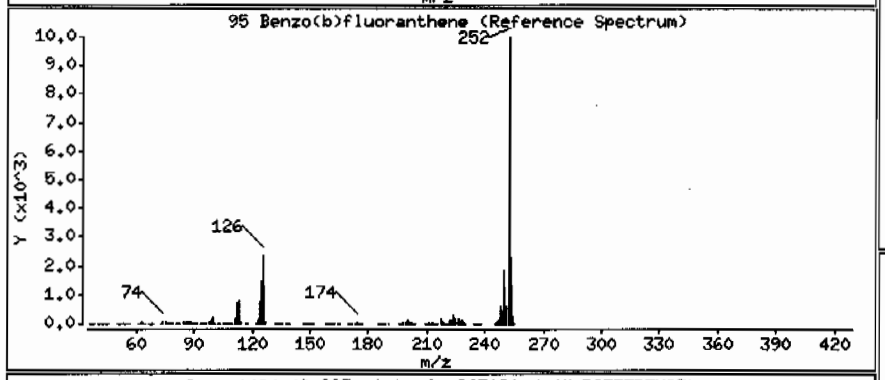

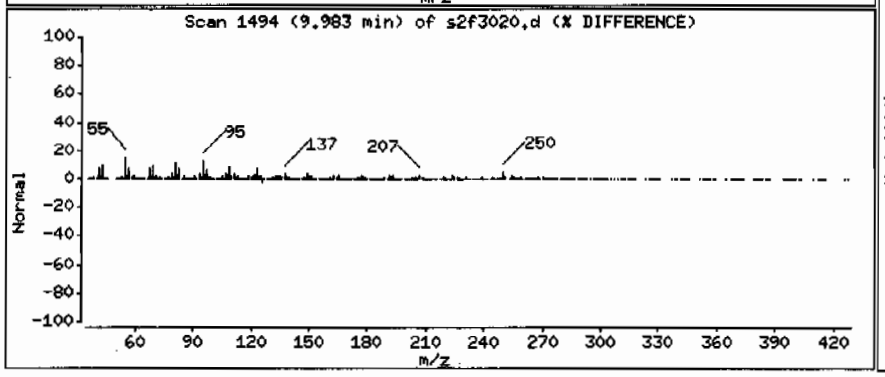

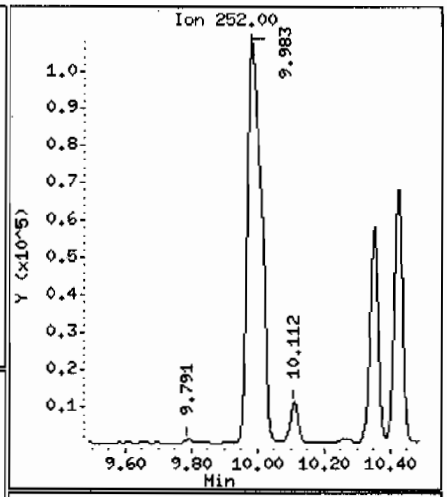

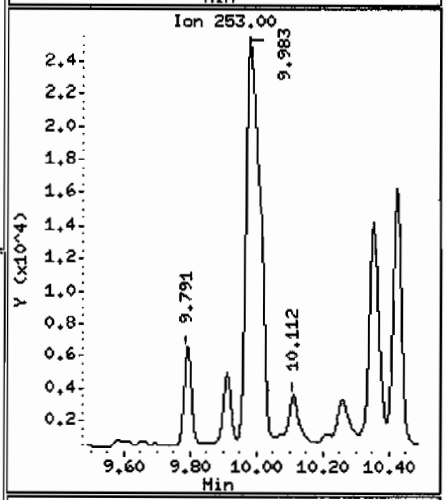

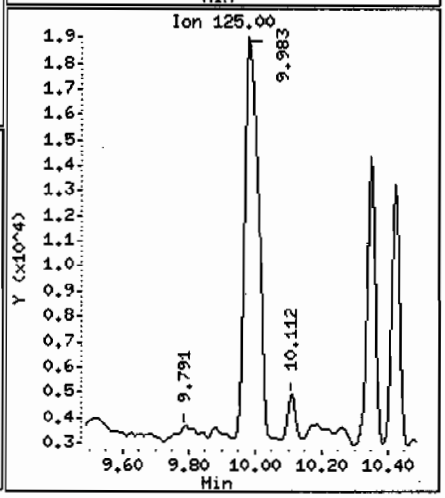

Data File: /chem/HSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAHO-09-6040 Instrument: HSD2.i

Sample Info: |2324280091881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5HS Column diameter: 0.20

97 Benzo(a)pyrene Concentration: 834 ug/Kg

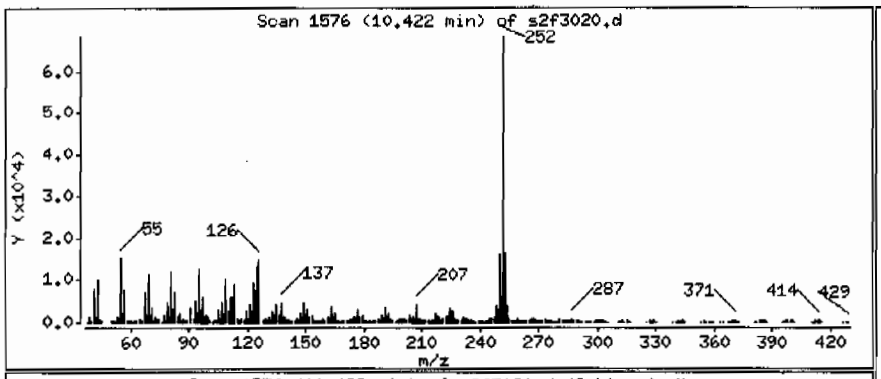

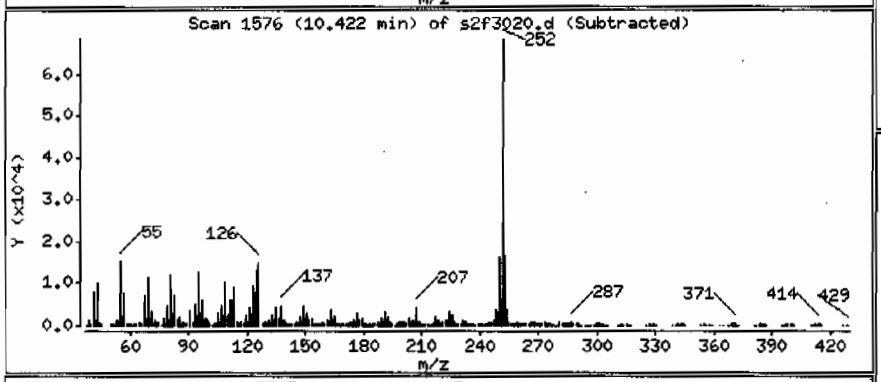

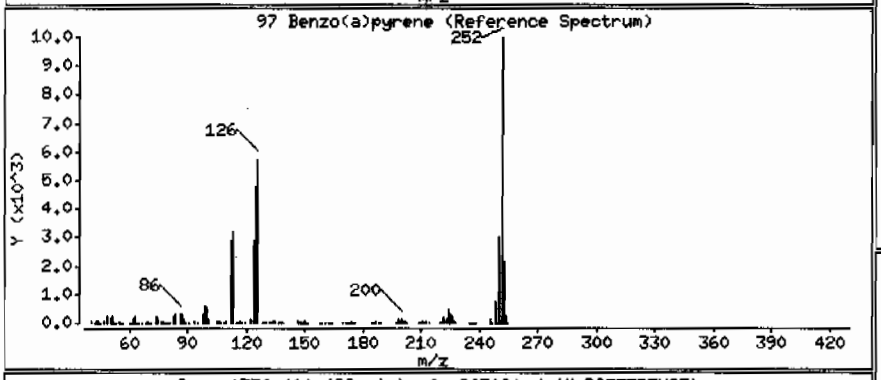

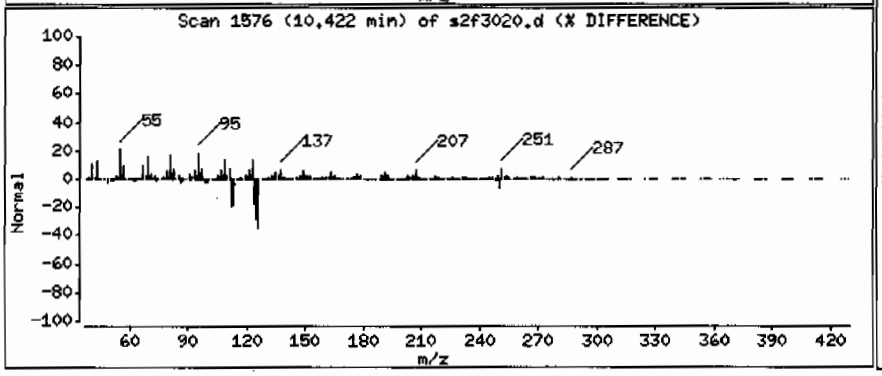

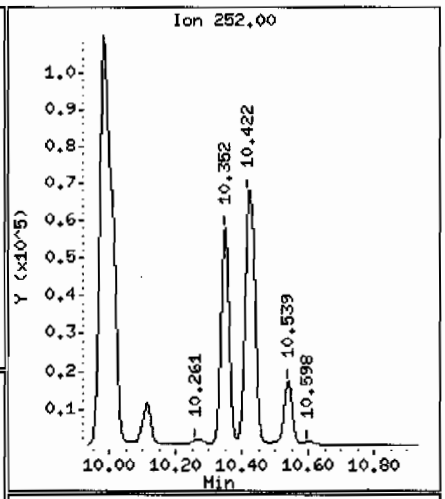

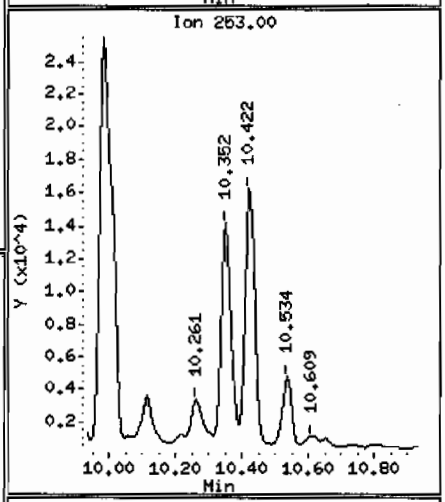

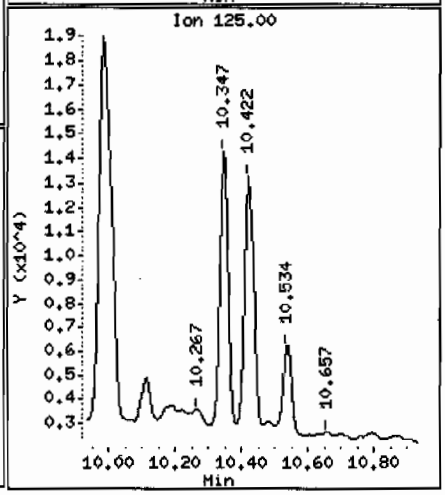

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040 Instrument: MSD2.i

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 450 ug/Kg

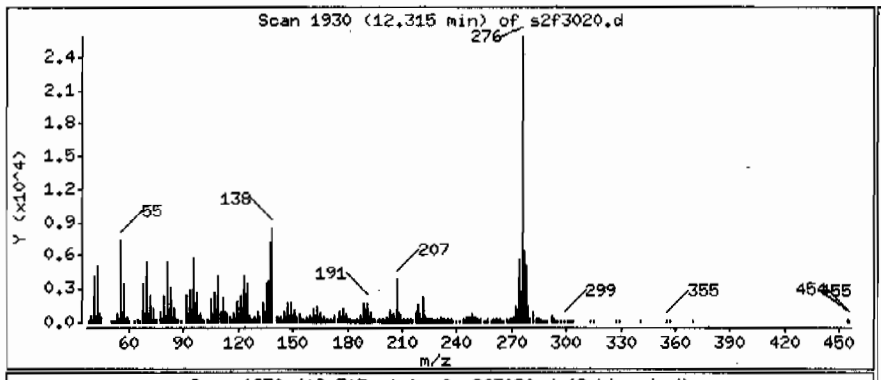

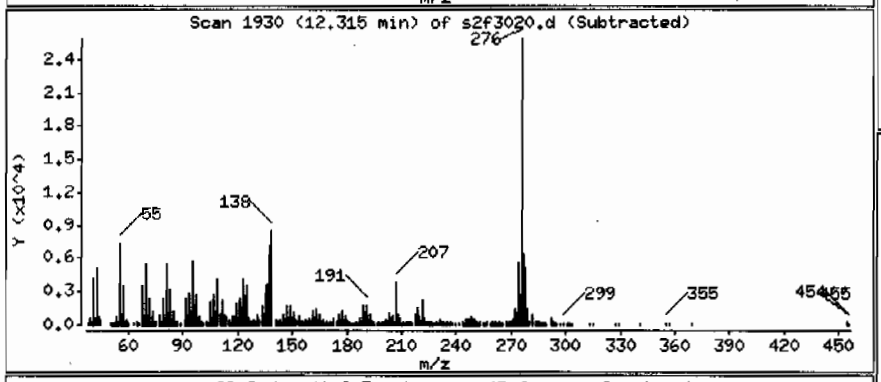

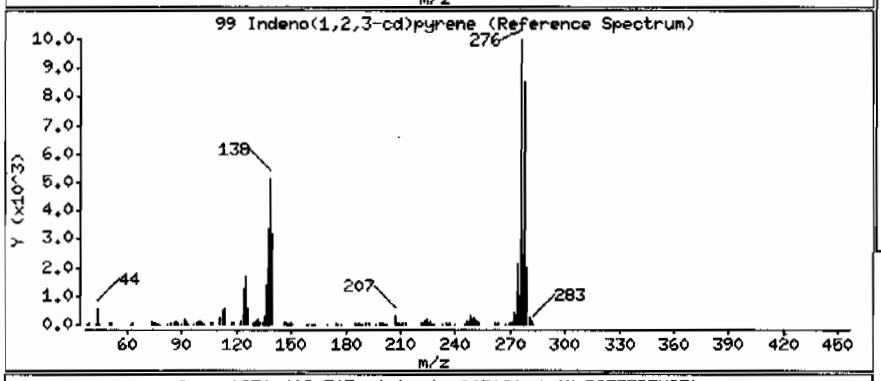

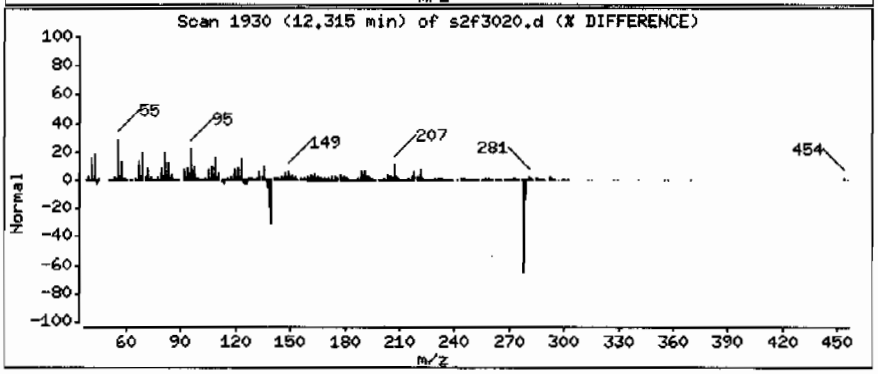

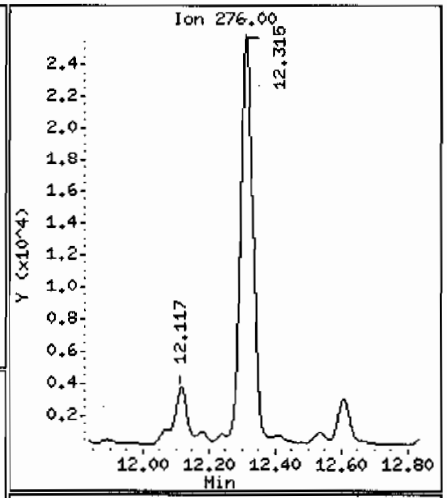

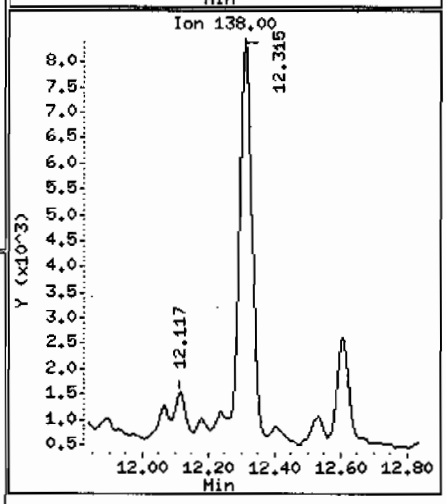

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040 Instrument: MSD2.i

Sample Info: 1232428009|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

100 Dibenzo(a,h)anthracene Concentration: 121 ug/Kg

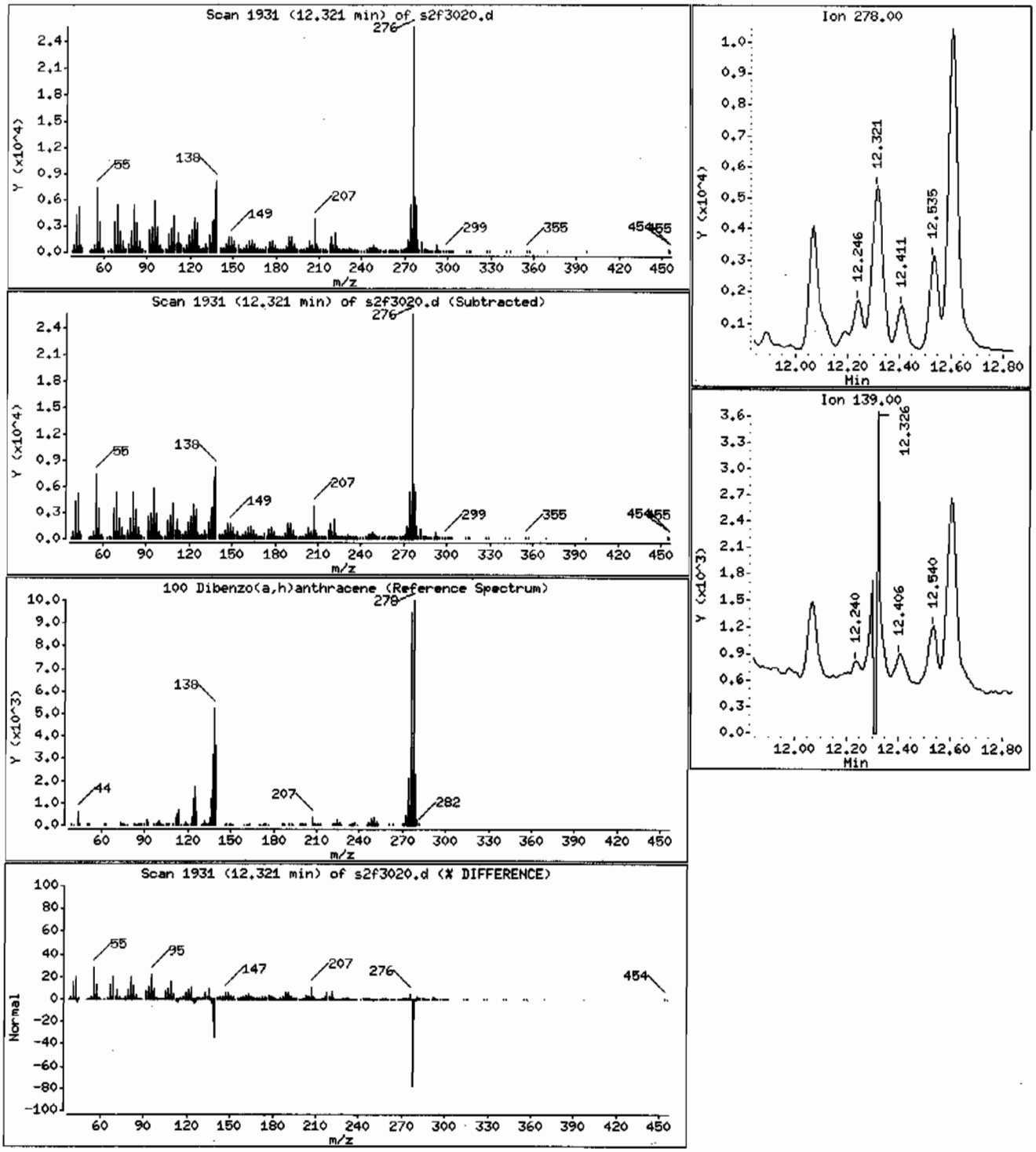

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: 1232428009|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 474 ug/Kg

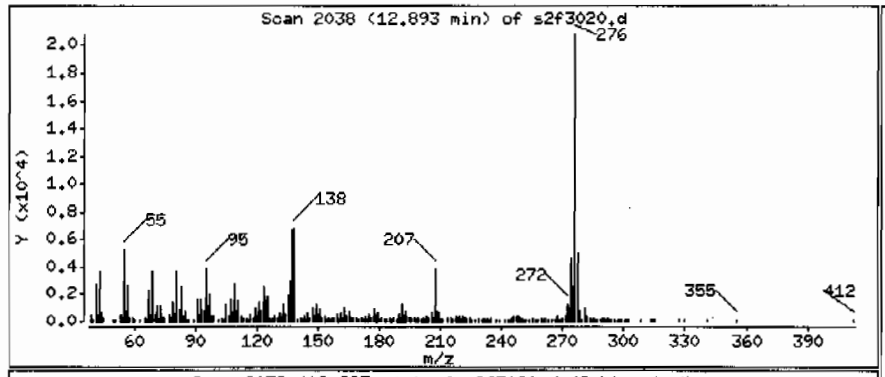

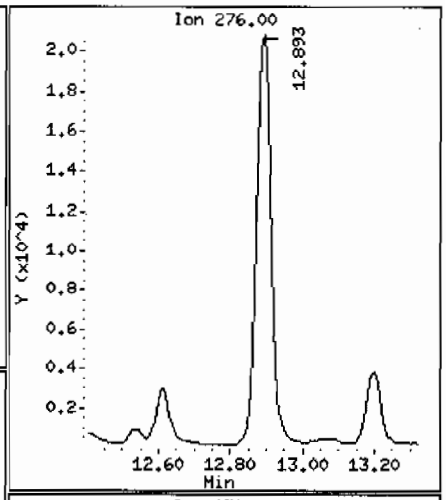

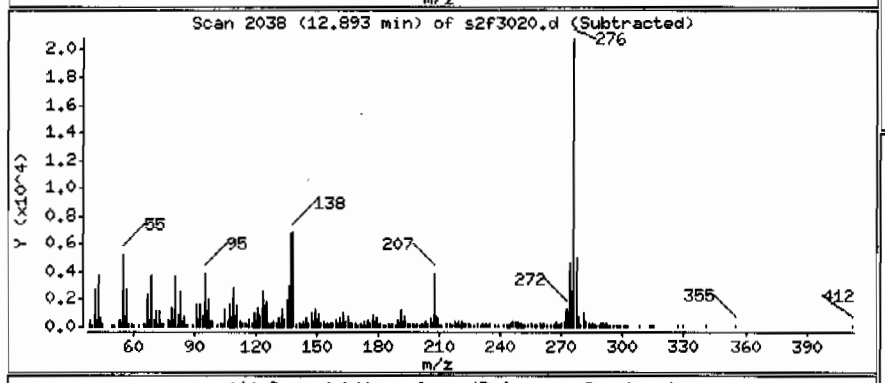

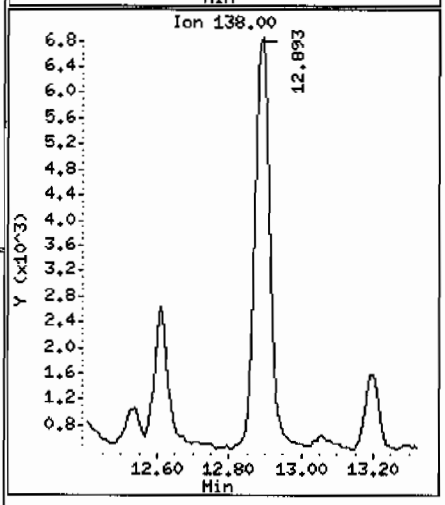

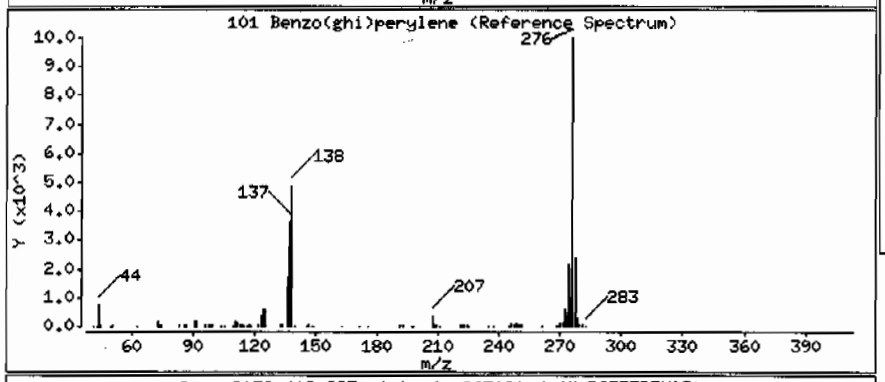

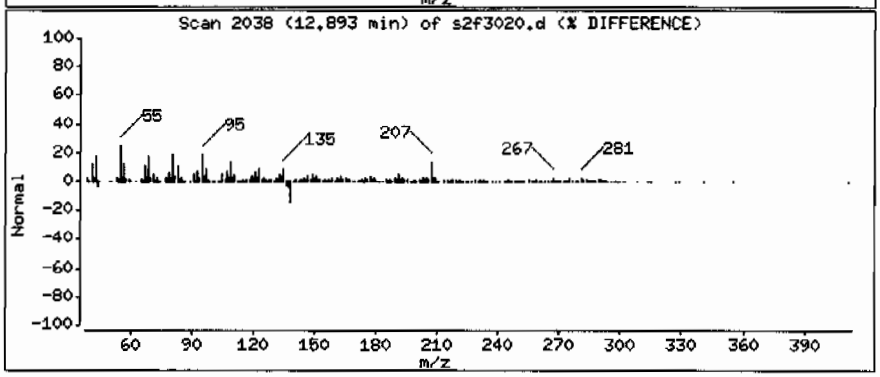

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: |232428009|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

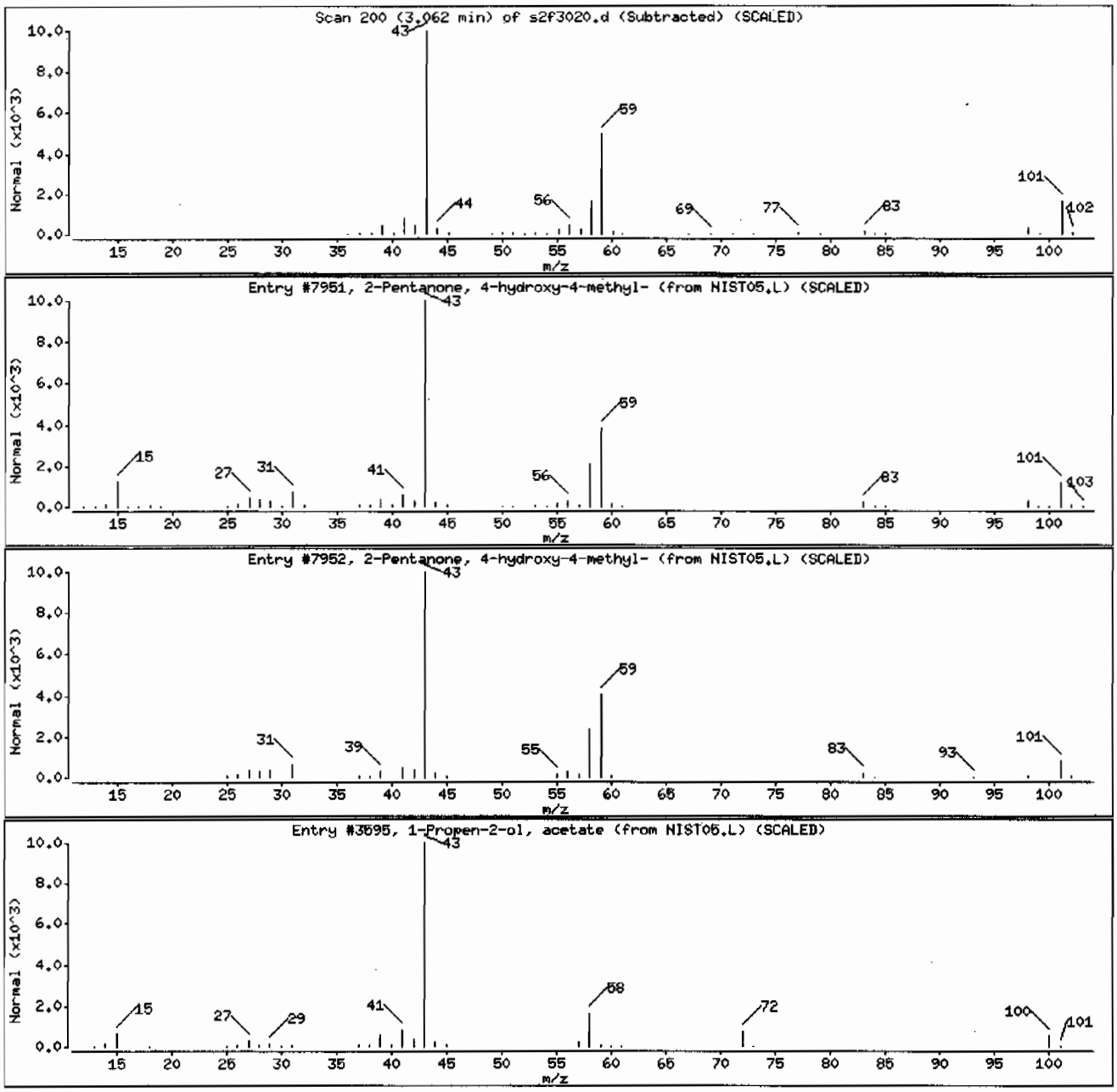

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzeneacetic acid	103-82-2	NIST05.L	15740	90	C8H8O2	136
Benzeneacetic acid	103-82-2	NIST05.L	15739	87	C8H8O2	136
Propanedioic acid, phenyl-	2613-89-0	NIST05.L	43673	78	C9H8O4	180

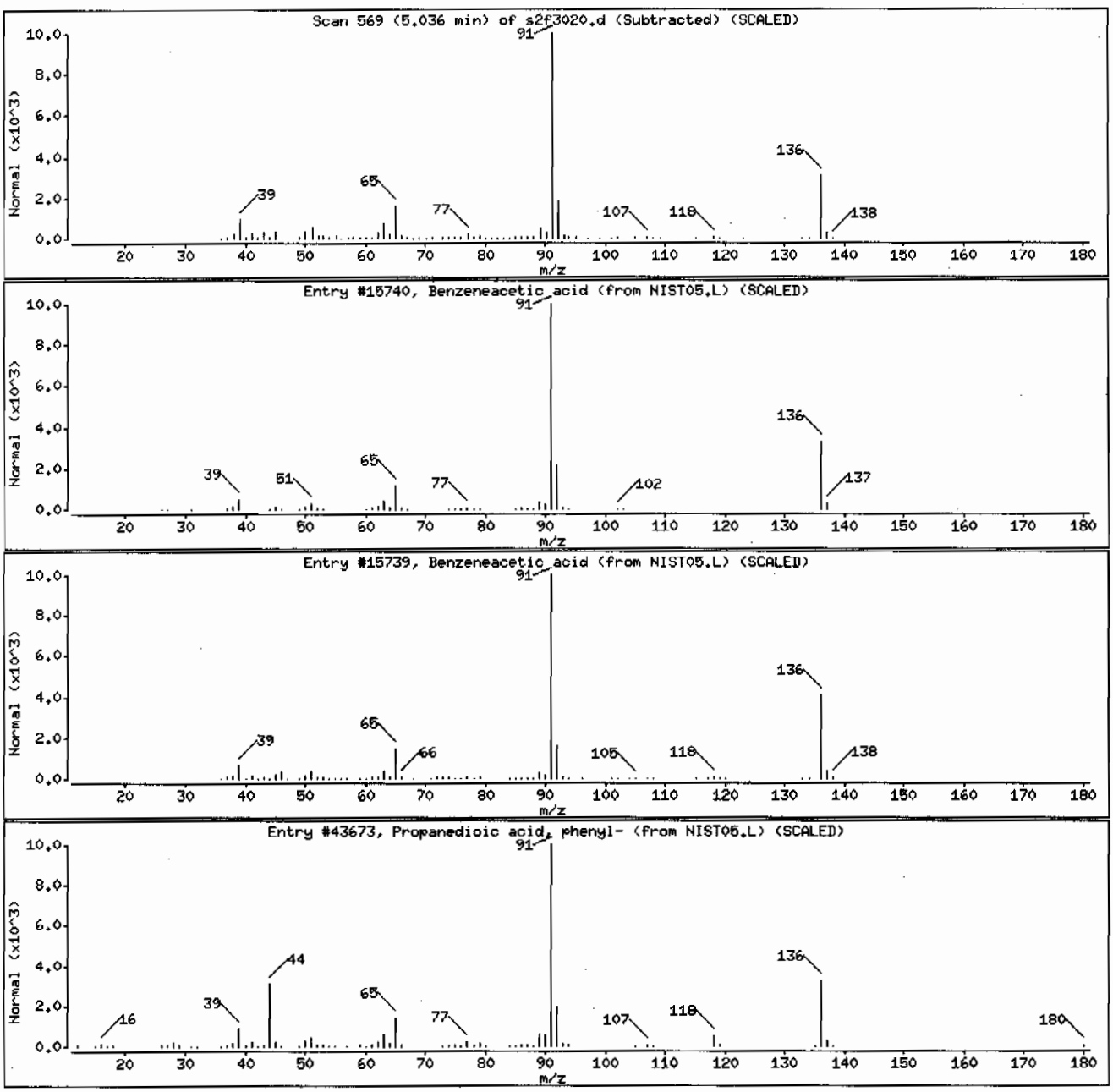

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040 Instrument: MSD2.i

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Pyrene, 1-methyl-	2381-21-7	NIST05.L	68688	96	C17H12	216
11H-Benzo[b]fluorene	243-17-4	NIST05.L	68695	95	C17H12	216
11H-Benzo[b]fluorene	243-17-4	NIST05.L	68699	93	C17H12	216

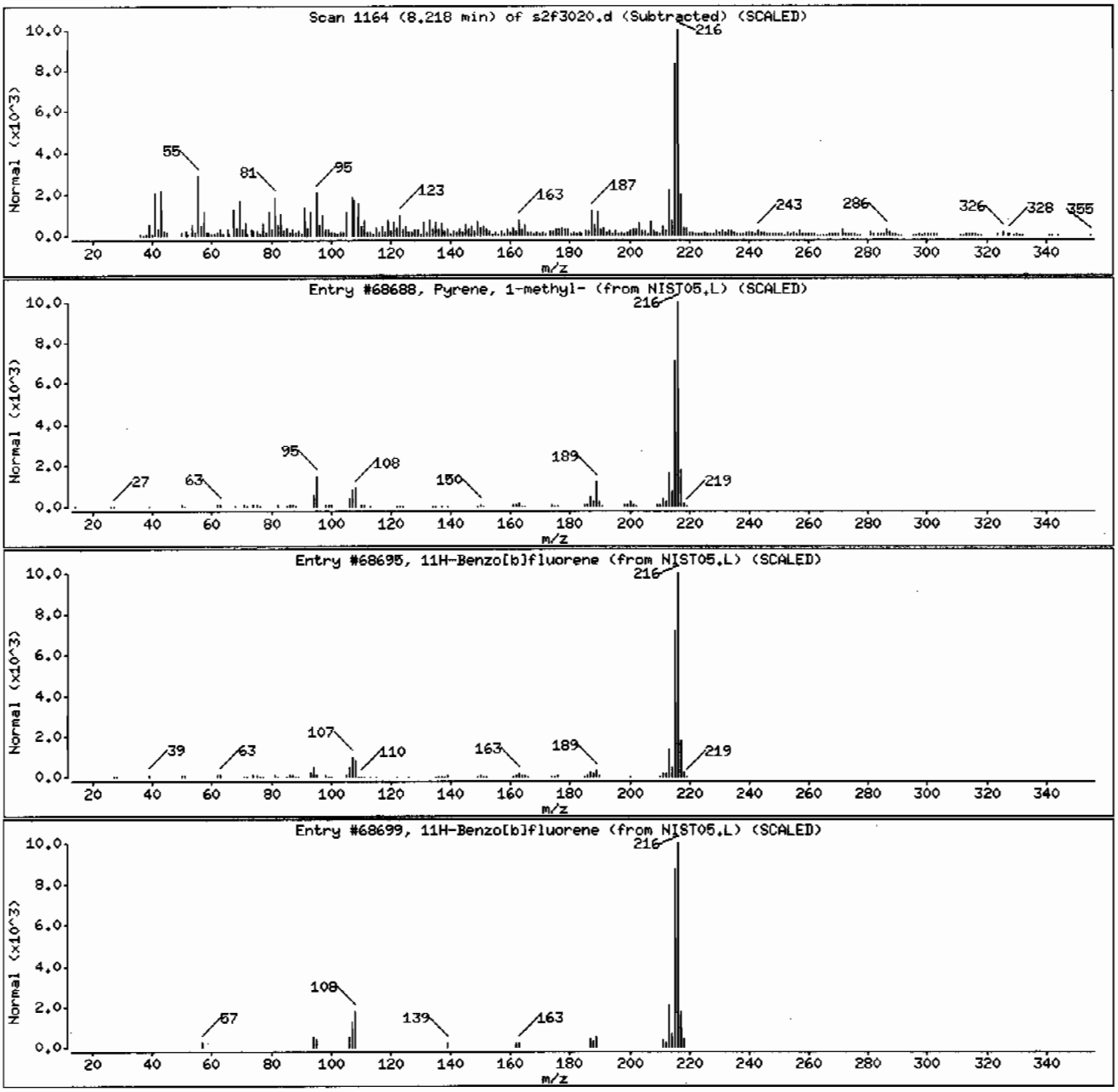

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Perylene	198-55-0	NIST05.L	93574	98	C20H12	252
Benzo[k]fluoranthene	207-08-9	NIST05.L	93584	98	C20H12	252
Benzo[e]pyrene	192-97-2	NIST05.L	93577	97	C20H12	252

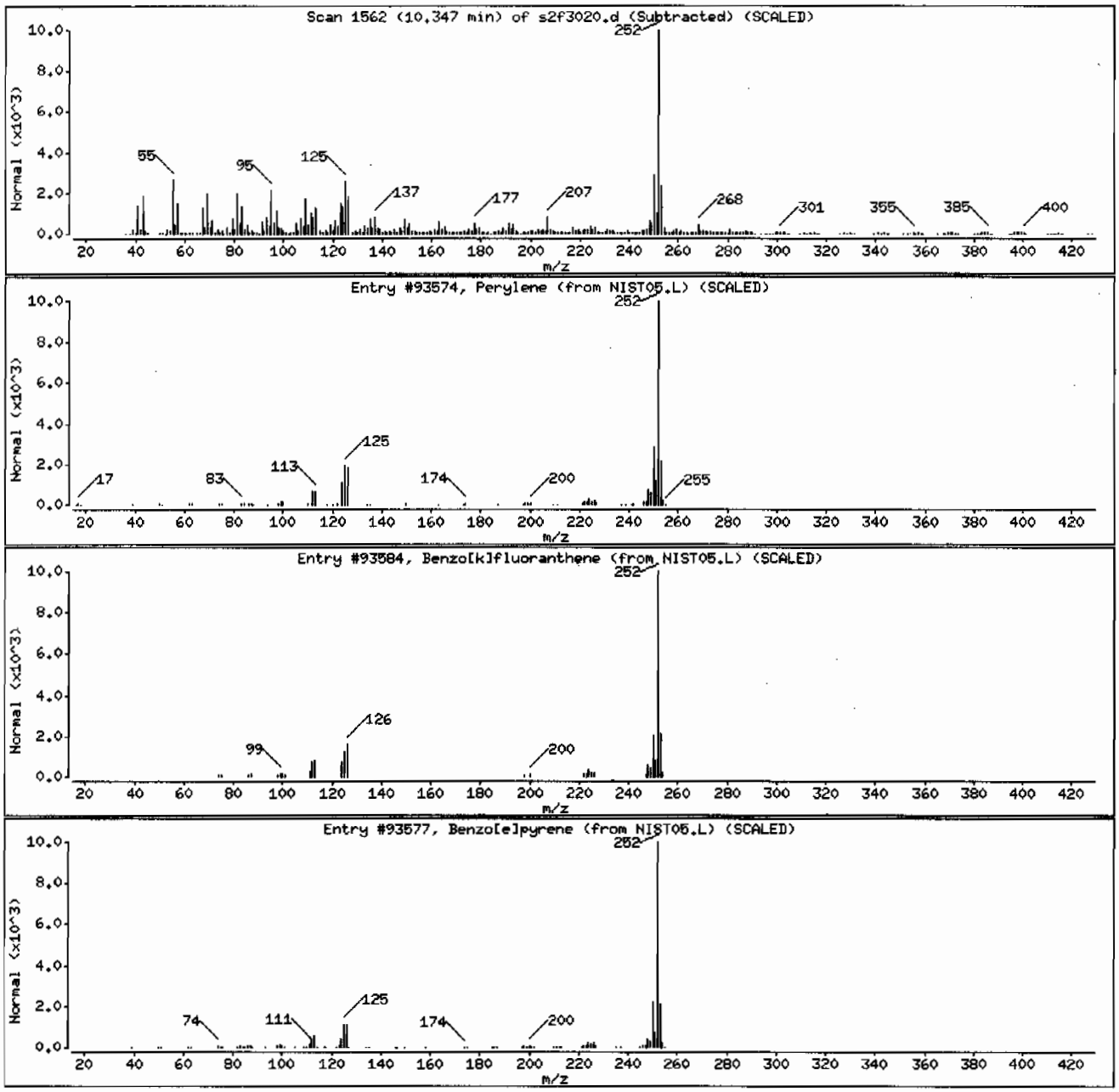

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: 1232428009188131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
6-Isopropenyl-4,8a-dimethyl-4a,5,6,7,8,8	86917-79-5	NIST05.L	69971	56	C15H220	218
D-Homoandrostane, (5.alpha.,13.alpha.)-	54482-31-4	NIST05.L	108369	49	C20H34	274
11,13-Dimethyl-12-tetradecen-1-ol acetat	1000130-81-0	NIST05.L	113394	46	C18H3402	282

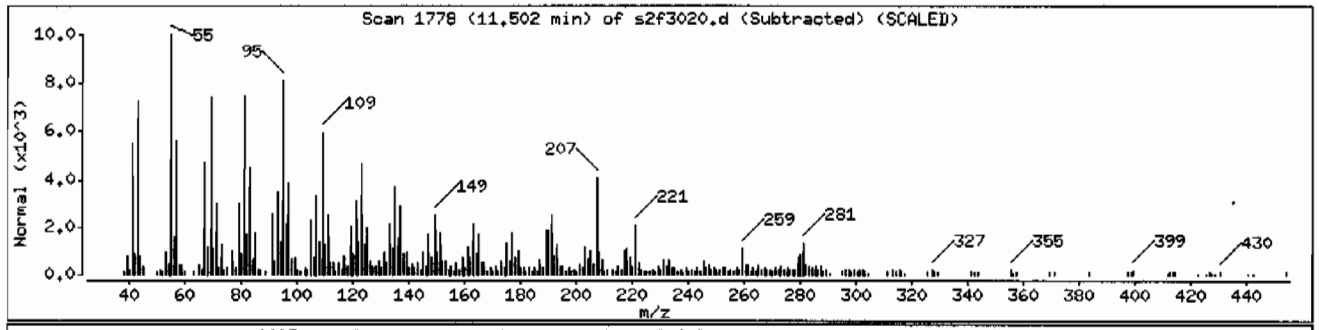

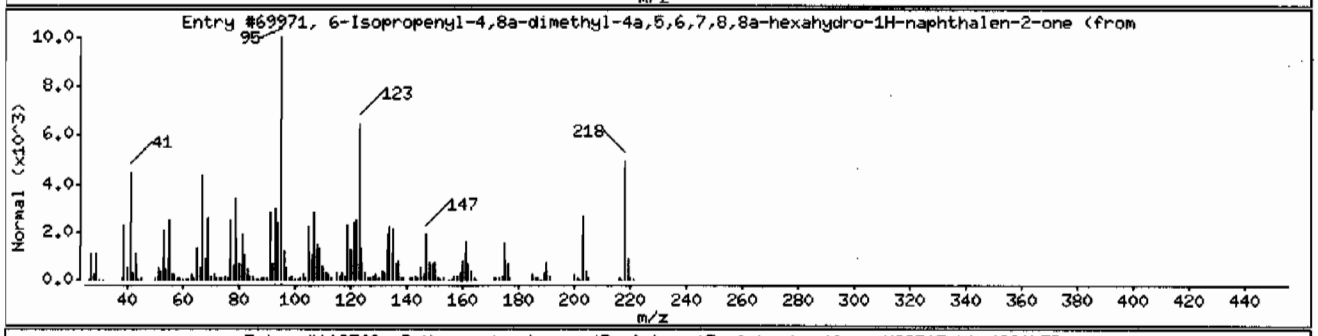

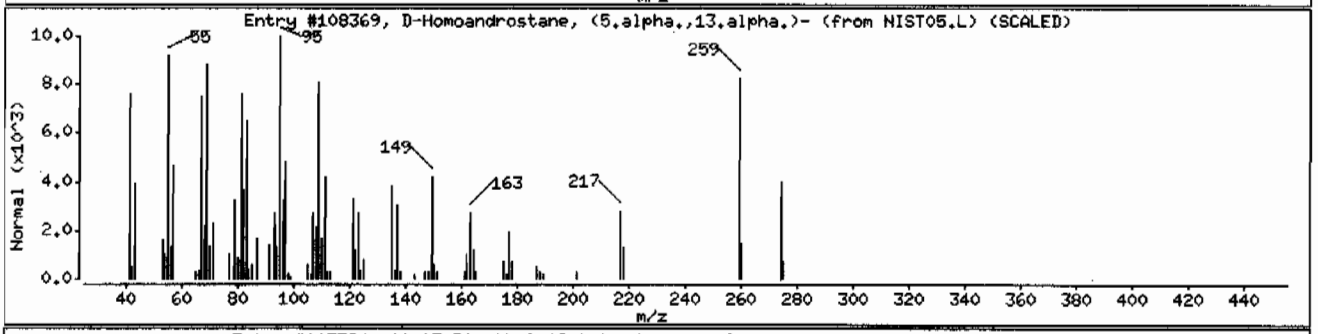

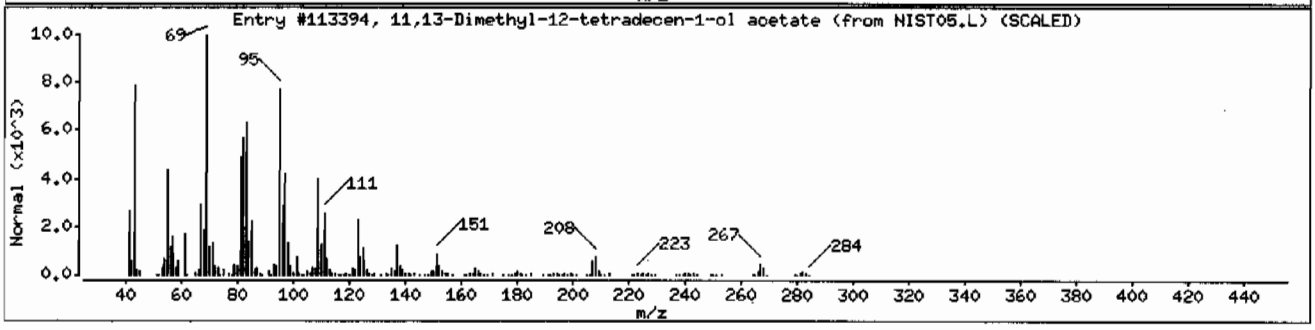

Data File: /chem/MSD2.i/s063009.b/s2f3020.d

Date : 30-JUN-2009 22:12

Client ID: CAMO-09-6040

Instrument: MSD2.i

Sample Info: |2324280091881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Quinoxaline, 6-(3-nitrobenzylidenamino)-	302800-55-1	NIST05.L	110501	95	C15H10N4O2	278
Benzo[a]naphthacene	226-88-0	NIST05.L	110872	64	C22H14	278
1,2:7,8-Dibenzophenanthrene	213-46-7	NIST05.L	110885	50	C22H14	278

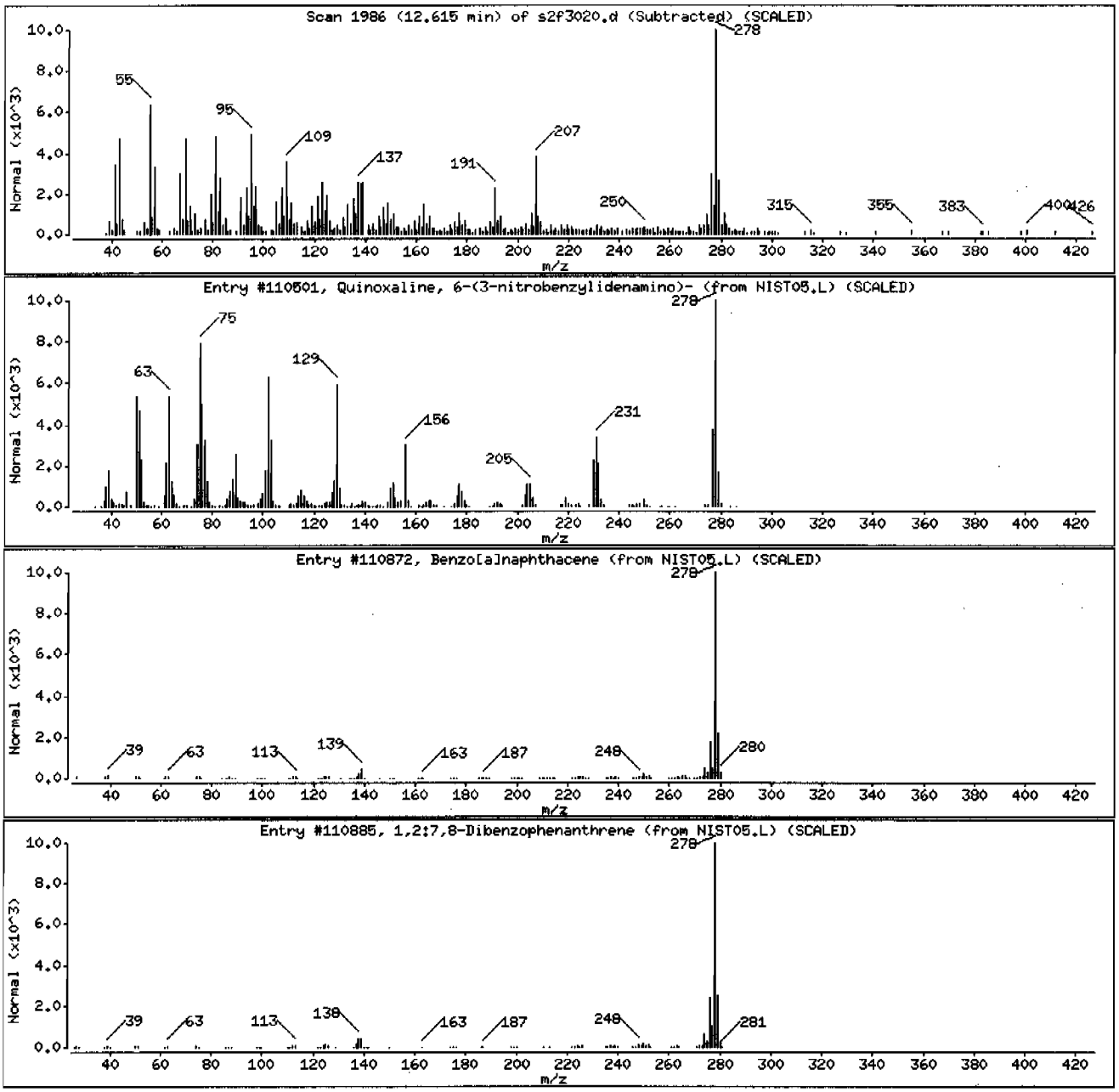

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428008	Date Received:	06/26/2009 08:40	%Moisture:	5.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6041	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 21:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.15 g	Final Volume:	1 mL
Data File:	s2f3019.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	350	ug/kg	70.0	350
108-95-2	Phenol	U	350	ug/kg	70.0	350
95-57-8	2-Chlorophenol	U	350	ug/kg	70.0	350
106-46-7	1,4-Dichlorobenzene	U	350	ug/kg	70.0	350
621-64-7	N-Nitrosodipropylamine	U	350	ug/kg	70.0	350
59-50-7	4-Chloro-3-methylphenol	U	350	ug/kg	35.0	350
83-32-9	Acenaphthene	U	35.0	ug/kg	11.7	35.0
121-14-2	2,4-Dinitrotoluene	U	350	ug/kg	35.0	350
100-02-7	4-Nitrophenol	U	350	ug/kg	70.0	350
87-86-5	Pentachlorophenol	U	350	ug/kg	70.0	350
129-00-0	Pyrene		133	ug/kg	11.0	35.0
110-86-1	Pyridine	U	350	ug/kg	70.0	350
62-53-3	Aniline	U	350	ug/kg	122	350
111-44-4	bis(2-Chloroethyl) ether	U	350	ug/kg	70.0	350
541-73-1	1,3-Dichlorobenzene	U	350	ug/kg	70.0	350
100-51-6	Benzyl alcohol	U	350	ug/kg	105	350
95-50-1	1,2-Dichlorobenzene	U	350	ug/kg	70.0	350
108-60-1	bis(2-Chloroisopropyl)ether	U	350	ug/kg	70.0	350
95-48-7	o-Cresol	U	350	ug/kg	70.0	350
65794-96-9	m,p-Cresols	U	350	ug/kg	140	350
67-72-1	Hexachloroethane	U	350	ug/kg	70.0	350
98-95-3	Nitrobenzene	U	350	ug/kg	70.0	350
78-59-1	Isophorone	U	350	ug/kg	70.0	350
88-75-5	2-Nitrophenol	U	350	ug/kg	35.0	350
105-67-9	2,4-Dimethylphenol	U	350	ug/kg	70.0	350
111-91-1	bis(2-Chloroethoxy)methane	U	350	ug/kg	70.0	350
120-83-2	2,4-Dichlorophenol	U	350	ug/kg	70.0	350
65-85-0	Benzoic acid	U	700	ug/kg	175	700
91-20-3	Naphthalene	U	35.0	ug/kg	10.5	35.0
106-47-8	4-Chloroaniline	U	350	ug/kg	70.0	350
87-68-3	Hexachlorobutadiene	U	350	ug/kg	70.0	350
91-57-6	2-Methylnaphthalene	U	35.0	ug/kg	7.00	35.0
77-47-4	Hexachlorocyclopentadiene	U	350	ug/kg	70.0	350
88-06-2	2,4,6-Trichlorophenol	U	350	ug/kg	70.0	350
95-95-4	2,4,5-Trichlorophenol	U	350	ug/kg	70.0	350
91-58-7	2-Chloronaphthalene	U	35.0	ug/kg	12.2	35.0
88-74-4	2-Nitroaniline	U	350	ug/kg	70.0	350
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	350	ug/kg	70.0	350

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428008	**Date Received:**	06/26/2009 08:40	**%Moisture:**	5.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6041	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.15 g	**Final Volume:**	1 mL
Data File:	s2f3019.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	350	ug/kg	70.0	350
606-20-2	2,6-Dinitrotoluene	U	350	ug/kg	35.0	350
208-96-8	Acenaphthylene	U	35.0	ug/kg	10.5	35.0
51-28-5	2,4-Dinitrophenol	U	700	ug/kg	133	700
132-64-9	Dibenzofuran	U	350	ug/kg	70.0	350
84-66-2	Diethylphthalate	U	350	ug/kg	70.0	350
86-73-7	Fluorene	U	35.0	ug/kg	10.5	35.0
7005-72-3	4-Chlorophenylphenylether	U	350	ug/kg	35.0	350
534-52-1	2-Methyl-4,6-dinitrophenol	U	350	ug/kg	70.0	350
100-01-6	4-Nitroaniline	U	350	ug/kg	70.0	350
	p-Nitroaniline					
122-39-4	Diphenylamine	U	350	ug/kg	70.0	350
122-66-7	Azobenzene	U	350	ug/kg	70.0	350
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	350	ug/kg	35.0	350
118-74-1	Hexachlorobenzene	U	350	ug/kg	70.0	350
85-01-8	Phenanthrene		64.8	ug/kg	10.5	35.0
120-12-7	Anthracene	U	35.0	ug/kg	7.00	35.0
84-74-2	Di-n-butylphthalate	U	350	ug/kg	35.0	350
206-44-0	Fluoranthene		153	ug/kg	10.5	35.0
85-68-7	Butylbenzylphthalate	U	350	ug/kg	70.0	350
56-55-3	Benzo(a)anthracene		52.4	ug/kg	10.5	35.0
91-94-1	3,3'-Dichlorobenzidine	U	350	ug/kg	105	350
218-01-9	Chrysene		71.4	ug/kg	10.5	35.0
117-81-7	bis(2-Ethylhexyl)phthalate	J	109	ug/kg	70.0	350
117-84-0	Di-n-octylphthalate	U	350	ug/kg	70.0	350
205-99-2	Benzo(b)fluoranthene		120	ug/kg	10.5	35.0
207-08-9	Benzo(k)fluoranthene	U	35.0	ug/kg	10.5	35.0
50-32-8	Benzo(a)pyrene		59.5	ug/kg	10.5	35.0
193-39-5	Indeno(1,2,3-cd)pyrene		35.1	ug/kg	10.5	35.0
53-70-3	Dibenzo(a,h)anthracene	J	12.8	ug/kg	10.5	35.0
191-24-2	Benzo(ghi)perylene		40.5	ug/kg	10.5	35.0
120-82-1	1,2,4-Trichlorobenzene	U	350	ug/kg	70.0	350

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	270	ug/kg		J
	Unknown	9.91	197	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428008	**Date Received:**	06/26/2009 08:40	**%Moisture:**	5.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6041	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.15 g	**Final Volume:**	1 mL
Data File:	s2f3019.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	11.5	175	ug/kg	90	NJ

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s063009.b/s2f3019.d
Lab Smp Id: 232428008 Client Smp ID: CAMO-09-6041
Inj Date : 30-JUN-2009 21:53
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428008|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.15000	weight of sample
M	5.19580	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	190527	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	725944	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	410814	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	703267	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	563662	40.0000	
* 98 Perylene-d12	264	10.496	10.507	(1.000)	404251	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	273203	51.8204	1810
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	340788	52.3450	1830
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	140093	25.5779	895
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	332207	28.6324	1000
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	100084	71.1303	2490
$ 81 p-Terphenyl-d14	244	8.068	8.079	(0.908)	382606	39.8514	1390

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.020	8.031	(0.903)	63970	3.81248	133
68 Phenanthrene	178	7.164	7.170	(1.002)	31012	1.85184	64.8
76 Fluoranthene	202	7.876	7.886	(1.102)	67569	4.38602	153
89 Benzo(a)anthracene	228	8.865	8.881	(0.998)	20532	1.49715	52.4(H)
92 Chrysene	228	8.897	8.919	(1.002)	26994	2.03960	71.4
93 bis(2-Ethylhexyl)phthalate	149	8.731	8.748	(0.983)	32245	3.11844	109(a)
95 Benzo(b)fluoranthene	252	9.972	9.988	(0.950)	33372	3.43880	120
97 Benzo(a)pyrene	252	10.416	10.432	(0.992)	14420	1.70069	59.5
99 Indeno(1,2,3-cd)pyrene	276	12.304	12.337	(1.172)	8167	1.00271	35.1
100 Dibenzo(a,h)anthracene	278	12.310	12.342	(1.173)	2400	0.36721	12.8(a)
101 Benzo(ghi)perylene	276	12.877	12.903	(1.227)	8185	1.15738	40.5

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

ION RATIO REPORT

SV REPORT

Data file: s2f3019.d
Report Date: 07/01/2009 07:56
Lab. ID: 232428008 SampleType: SAMPLE
Injection Date: 30-JUN-2009 21:53
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428008|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	14799	3.76	3.83	80-120	100	(T)
93	180	3.73	3.83	440-500	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	19143	4.41	4.29	80-120	100	(T)
42	11816	4.41	4.29	40-100	62	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	88513	6.17	5.94	80-120	100	(T)
164	408967	6.17	5.94	0- 40	462	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	53063	6.17	5.99	80-120	100	(T)
63	946	6.17	5.99	46-106	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	53194	6.17	6.27	80-120	100	(T)
89	750	6.17	6.27	38- 98	1	(QT)
63	946	6.17	6.27	16- 76	2	(QT)
53 Fluorene		CAS#: 86-73-7				
166	6198	6.70	6.54	80-120	100	(T)
165	6621	6.69	6.54	61-121	107	(T)
167	2217	6.69	6.54	0- 44	36	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	253	6.69	6.55	80-120	100	(T)
105	564	6.69	6.55	14- 74	223	(QT)
51	916	6.69	6.55	37- 97	362	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	5749	6.70	6.84	80-120	100	(T)
141	40553	6.69	6.84	51-111	705	(QT)
250	11684	6.70	6.84	66-126	203	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	31012	7.16	7.17	80-120	100	( )
179	7889	7.16	7.17	0- 46	25	( )
176	5697	7.16	7.17	0- 49	18	( )
69 Anthracene				CAS#: 120-12-7		
178	5402	7.19	7.20	80-120	100	( )
179	7889	7.16	7.20	0- 46	146	(Q)
176	925	7.19	7.20	0- 48	17	( )
76 Fluoranthene				CAS#: 206-44-0		
202	67569	7.88	7.89	80-120	100	( )
203	11470	7.88	7.89	0- 48	17	( )
101	9836	7.88	7.89	0- 45	15	( )
79 Pyrene				CAS#: 129-00-0		
202	63970	8.02	8.03	80-120	100	( )
200	12754	8.02	8.03	0- 51	20	( )
101	11584	8.02	8.03	0- 48	18	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	26933	8.90	8.88	80-120	100	( )
226	8055	8.90	8.88	0- 56	30	( )
229	6347	8.90	8.88	0- 50	24	( )
92 Chrysene				CAS#: 218-01-9		
228	26994	8.90	8.92	80-120	100	( )
229	8716	8.90	8.92	0- 50	32	( )
226	8068	8.90	8.92	0- 59	30	( )
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	32245	8.73	8.75	80-120	100	( )
167	8832	8.73	8.75	2- 62	27	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	33372	9.97	9.99	80-120	100	( )
253	7760	9.97	9.99	0- 52	23	( )
125	7951	9.97	9.99	0- 45	24	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	33372	9.97	10.02	80-120	100	( )
253	7760	9.97	10.02	0- 52	23	( )
125	7234	9.97	10.02	0- 44	22	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	14420	10.42	10.43	80-120	100	( )
253	3253	10.42	10.43	0- 52	23	( )
125	3030	10.42	10.43	0- 46	21	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	8167	12.30	12.34	80-120	100	( )
138	2671	12.30	12.34	7- 67	33	( )
100 Dibenzo(a,h)anthracene				CAS#: 53-70-3		
278	2400	12.31	12.34	80-120	100	( )
139	1047	12.31	12.34	0- 55	44	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	8185	12.88	12.90	80-120	100	( )
138	2456	12.88	12.90	4- 64	30	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s063009.b/s2f3019.d
Lab Smp Id: 232428008 Client Smp ID: CAMO-09-6041
Inj Date : 30-JUN-2009 21:53
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428008|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.15000	weight of sample
M	5.19580	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.051	1145276	40.000
* 98 Perylene-d12	10.496	1234612	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.062	221016	7.71922807	270	0		0	10

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
9.913	173952	5.63584525	197	0		0	98
Pyridine-3-carboxamide, oxime, N-(2-trif				CAS #: 288246-53-7			
11.502	154439	5.00365327	175	90	NIST05.L	112295	98

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041

Sample Info: |2324280081881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: AGS1

Column diameter: 0.20

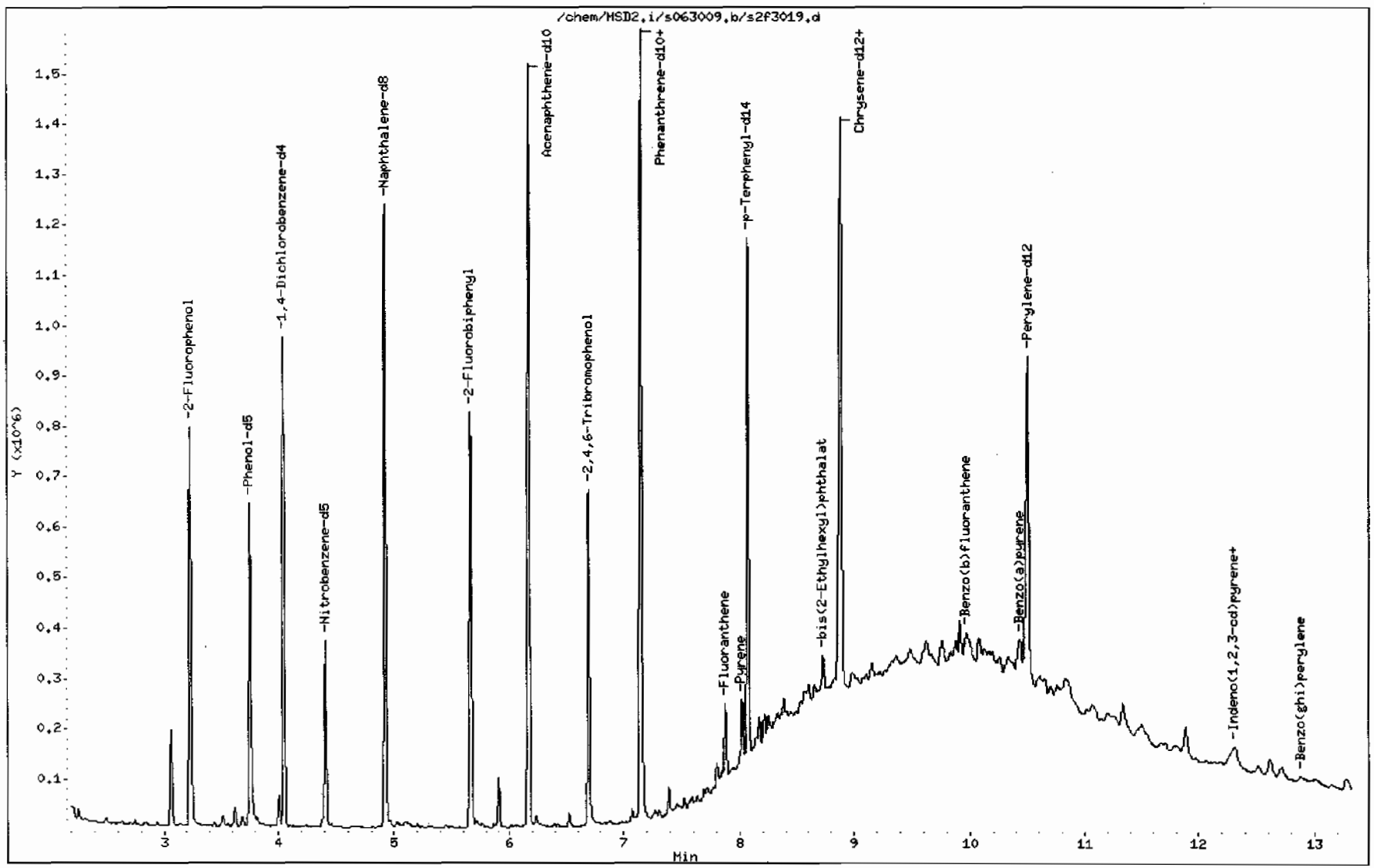

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041

Instrument: MSD2.i

Sample Info: |2324280081881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 133 ug/Kg

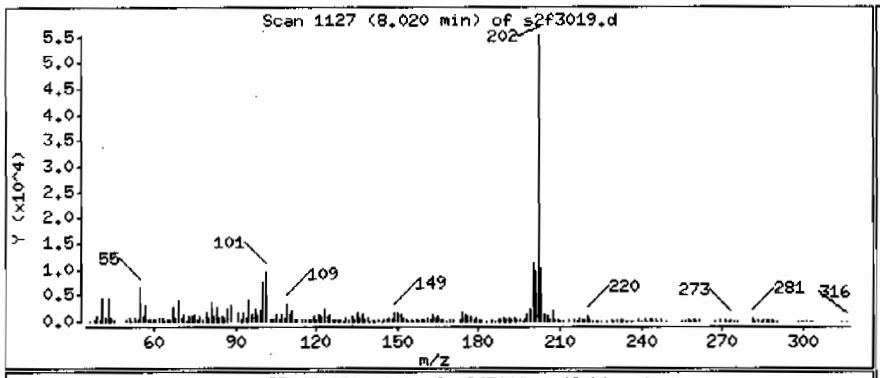

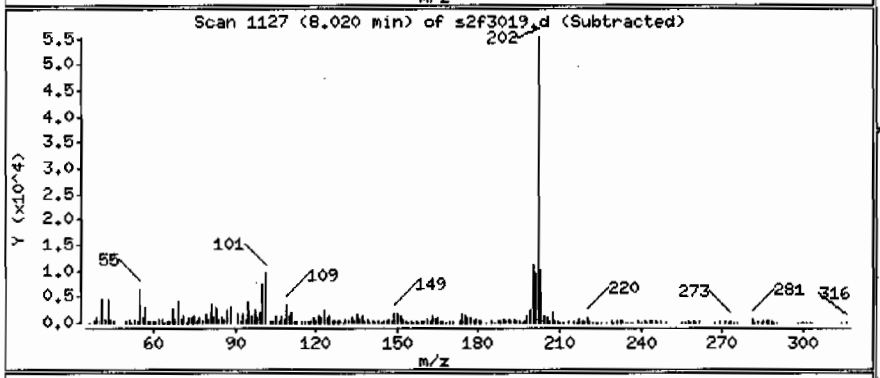

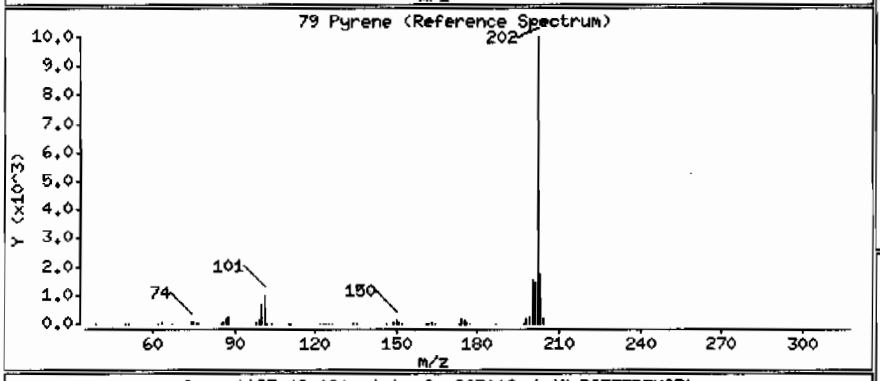

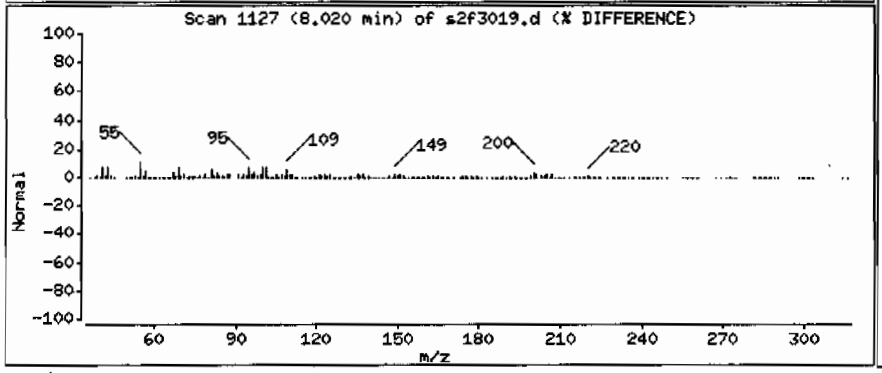

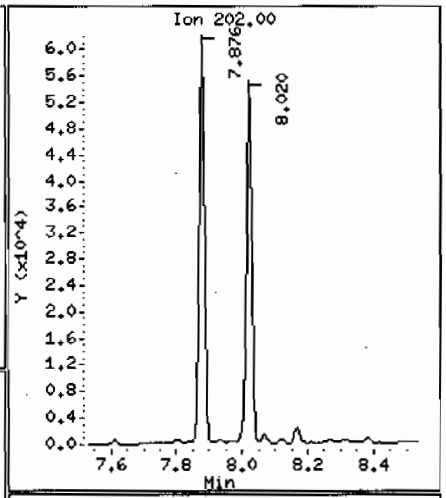

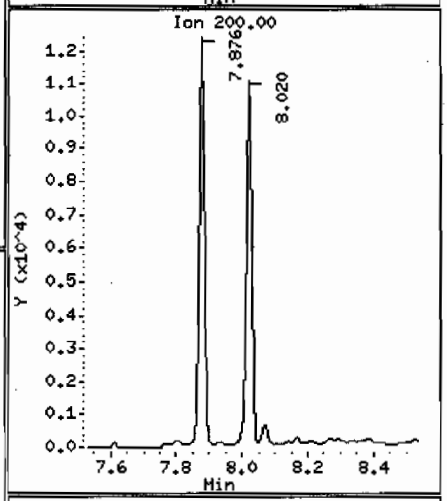

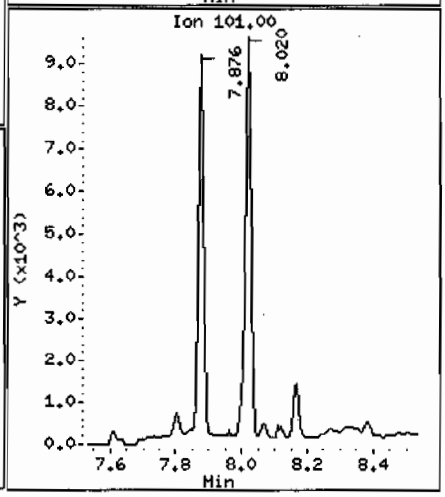

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041

Instrument: MSD2.i

Sample Info: |2324280081881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 64.8 ug/Kg

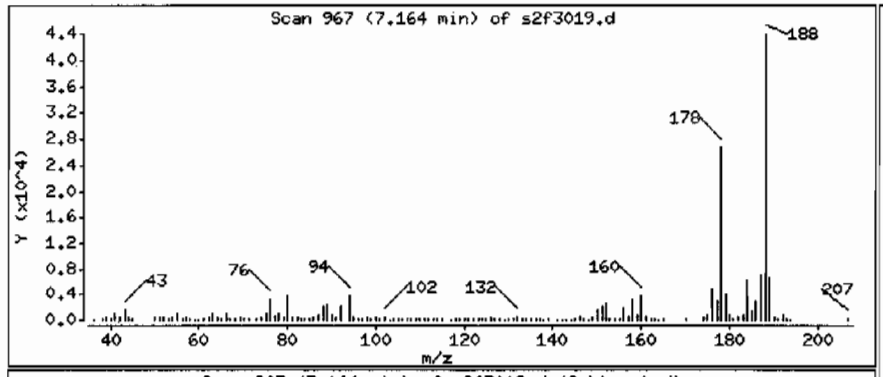

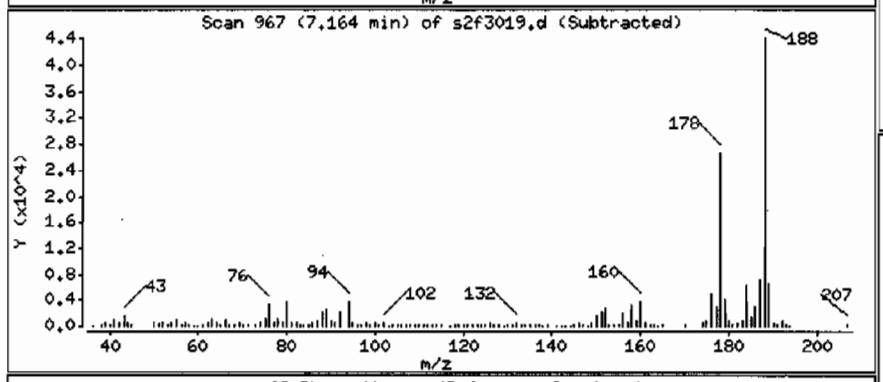

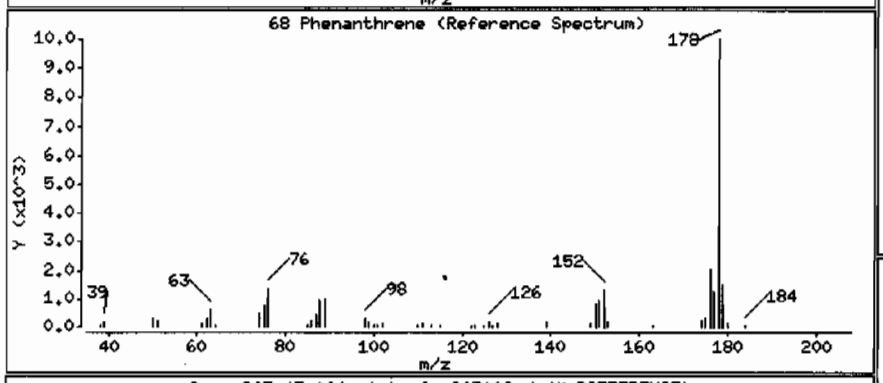

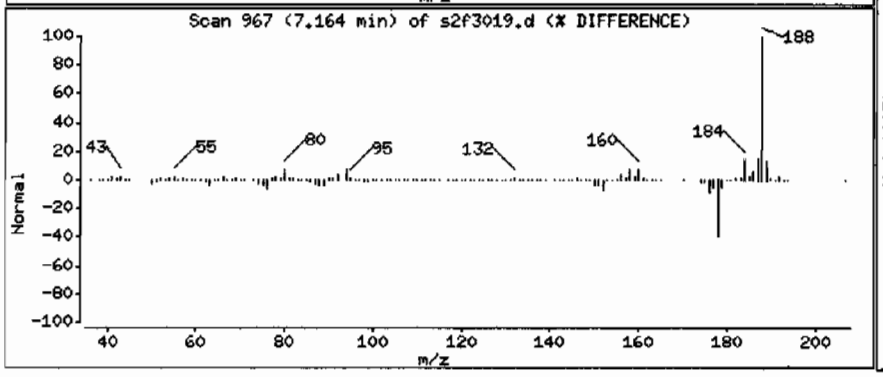

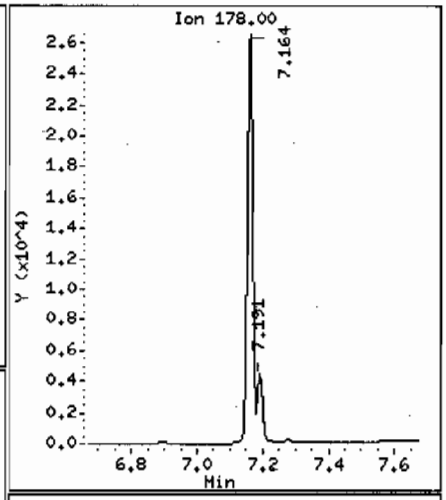

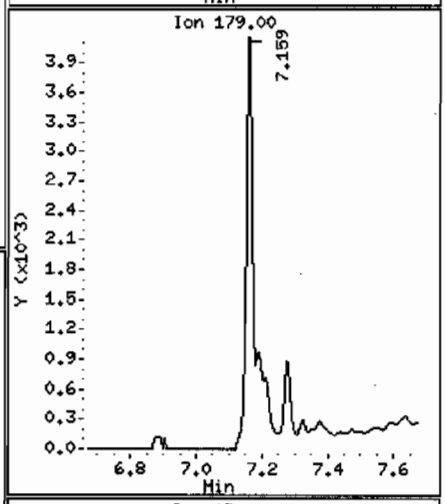

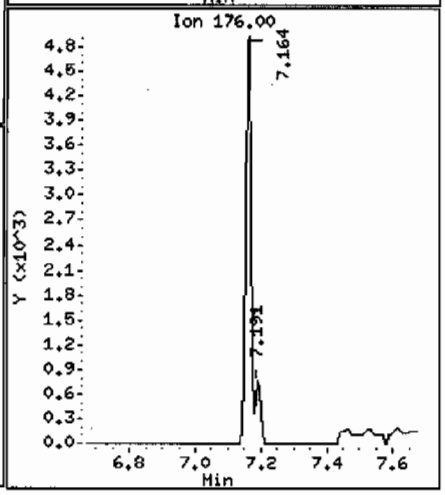

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041

Instrument: MSD2.i

Sample Info: 1232428008188131911SVMF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 153 ug/Kg

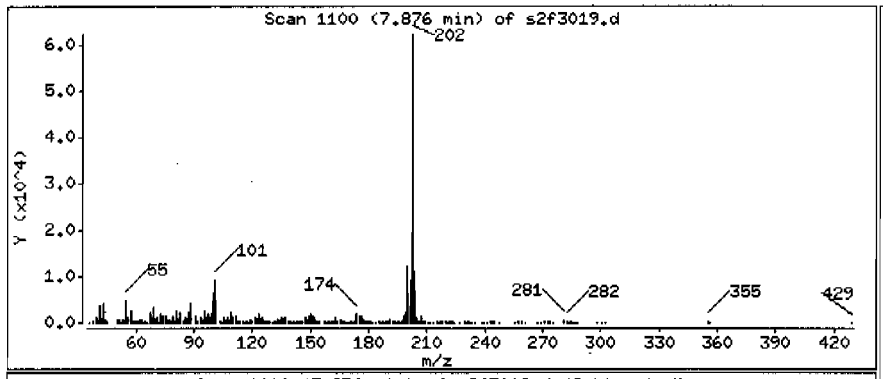

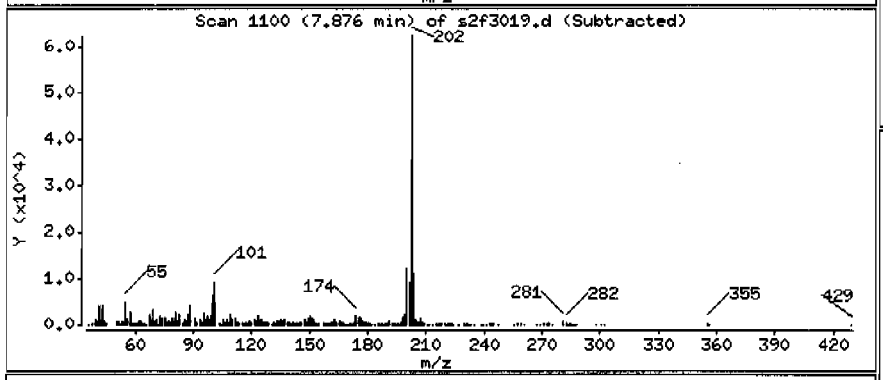

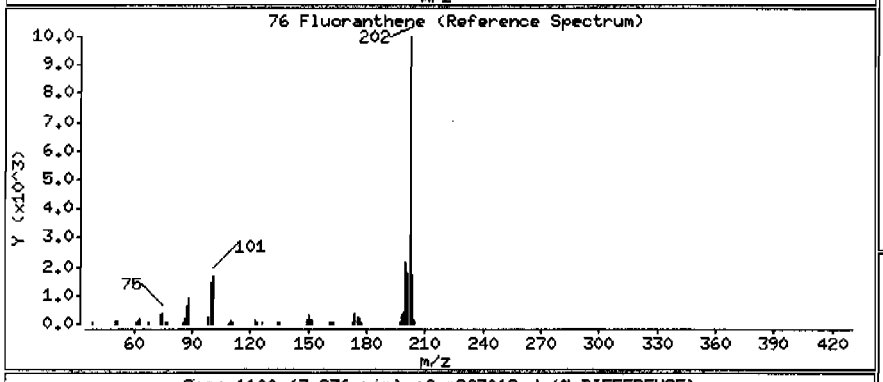

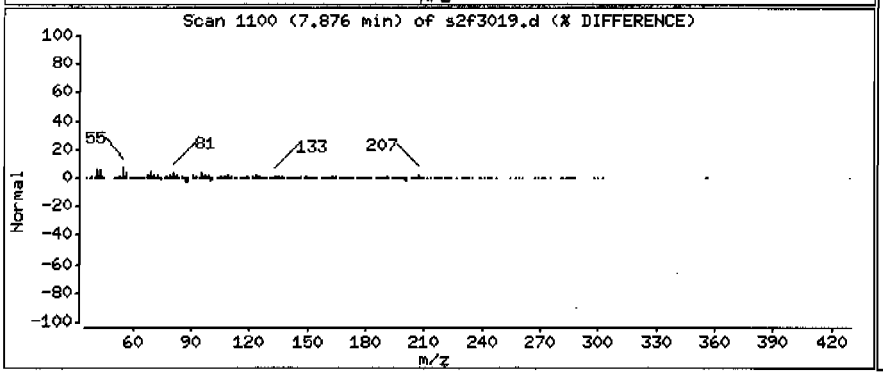

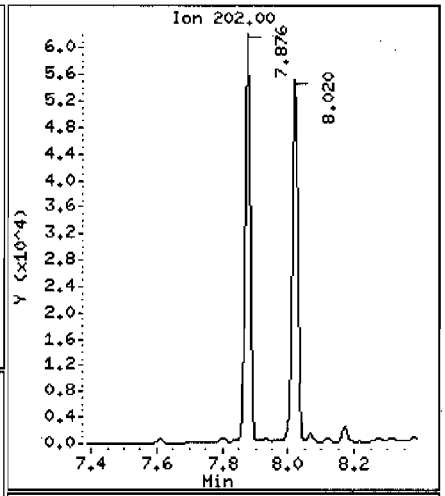

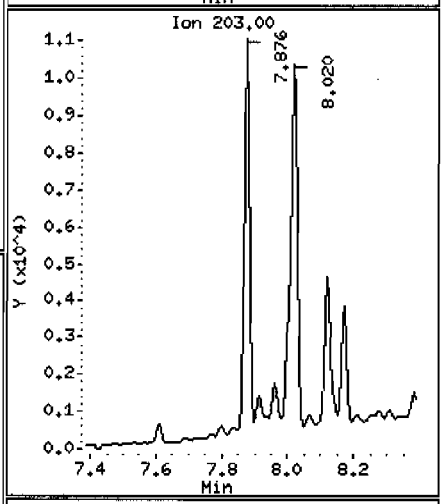

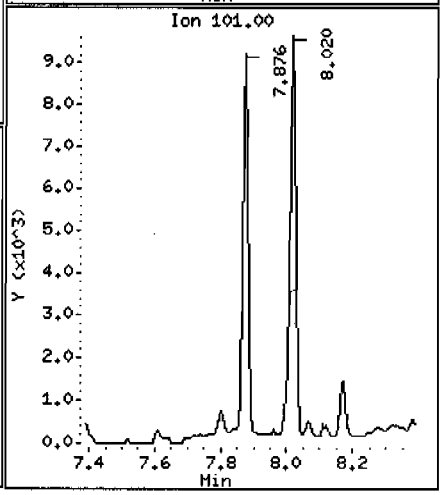

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041

Instrument: MSD2.i

Sample Info: |2324280008|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 52.4 ug/Kg

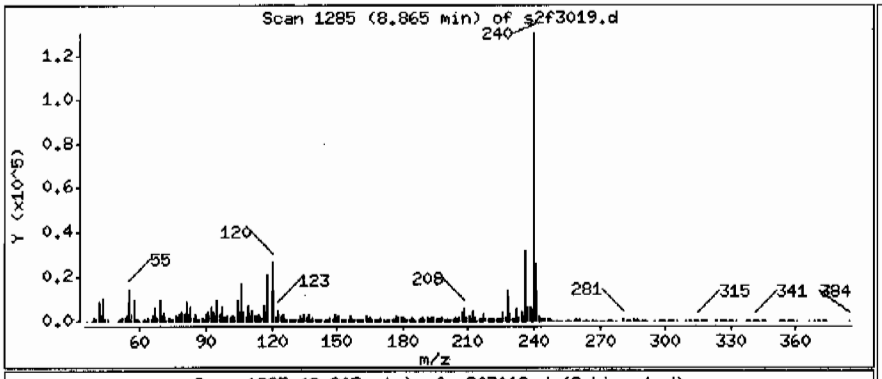

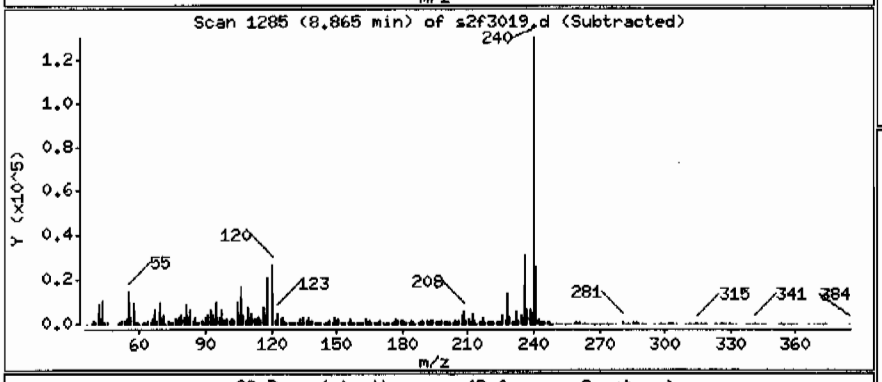

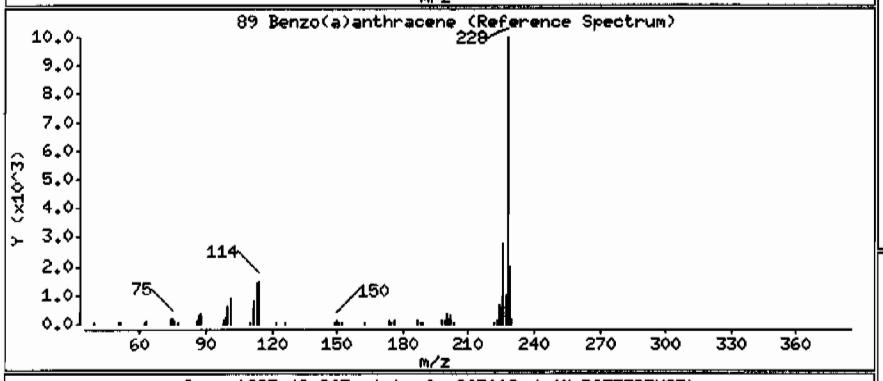

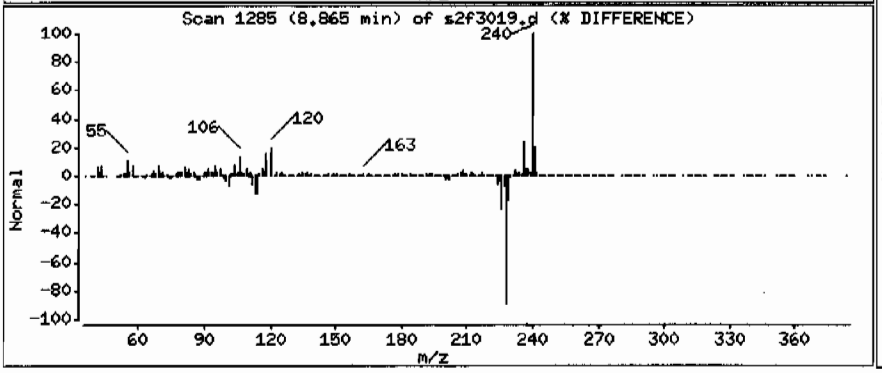

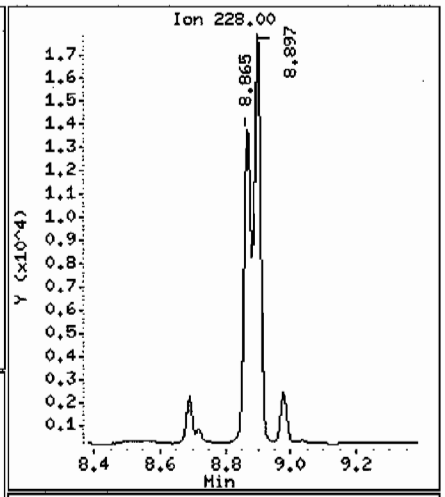

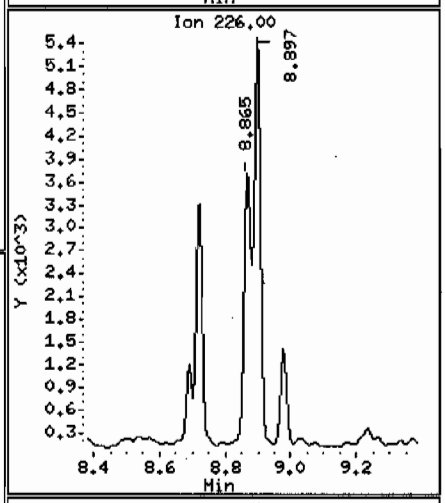

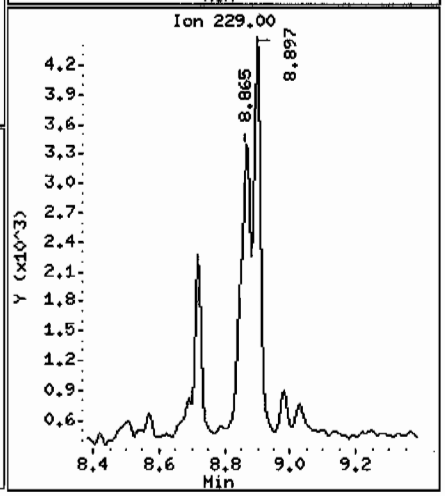

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMD-09-6041 Instrument: MSD2.i

Sample Info: |2324280081881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

92 Chrysene Concentration: 71.4 ug/Kg

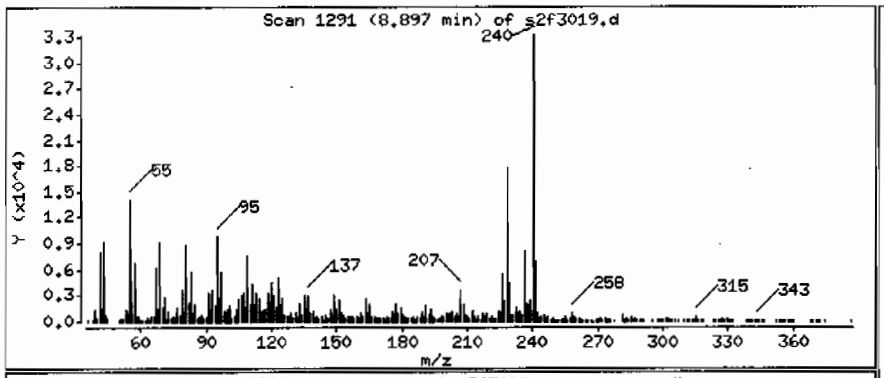

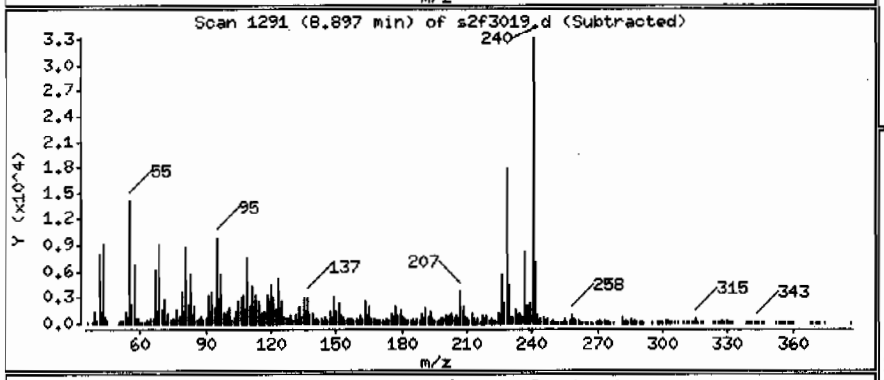

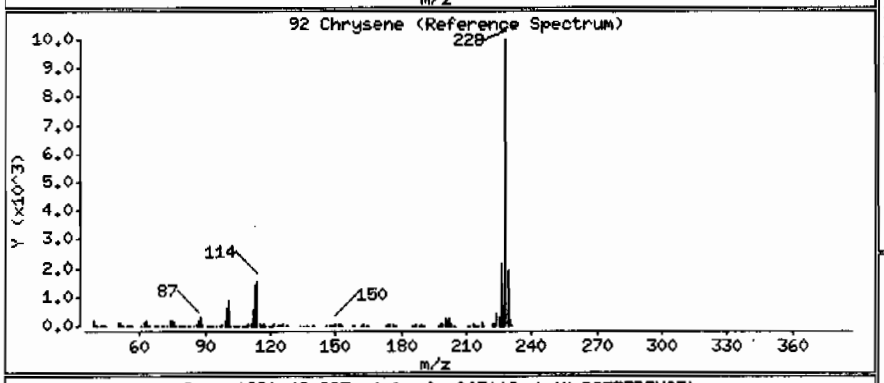

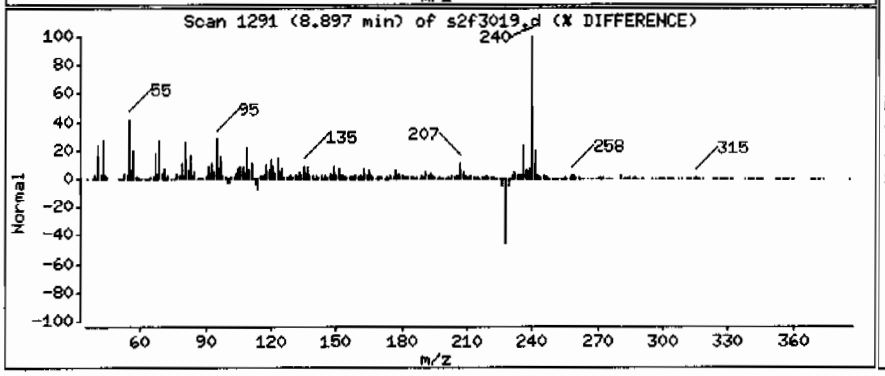

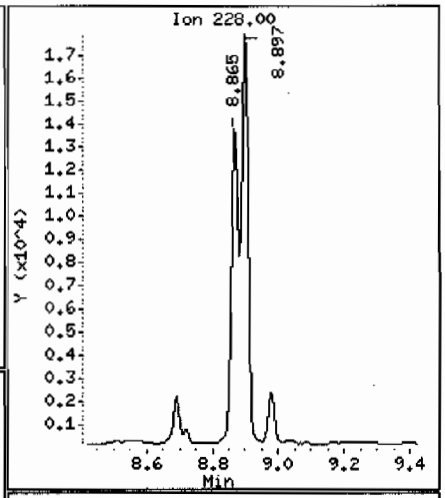

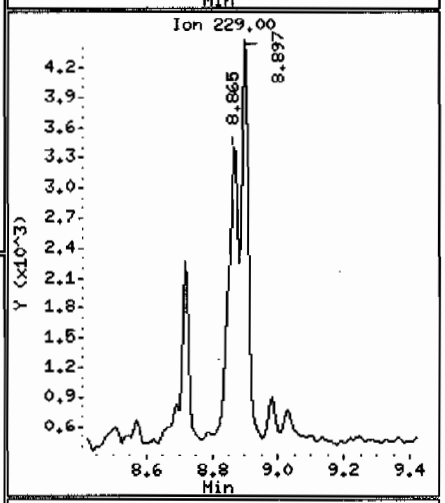

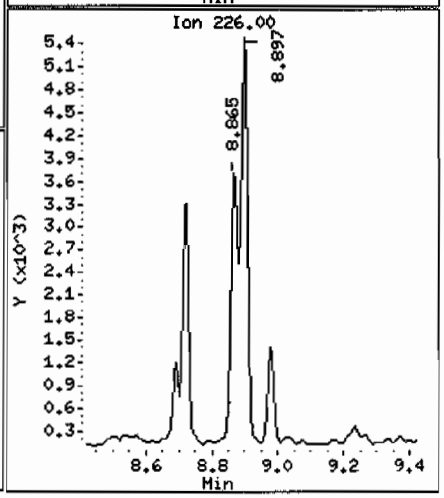

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041 Instrument: MSD2.i

Sample Info: 1232428008188131911SVMF11LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate Concentration: 109 ug/Kg

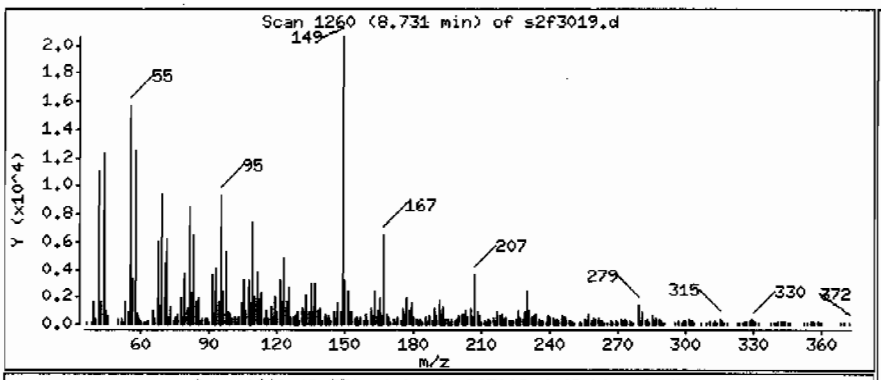

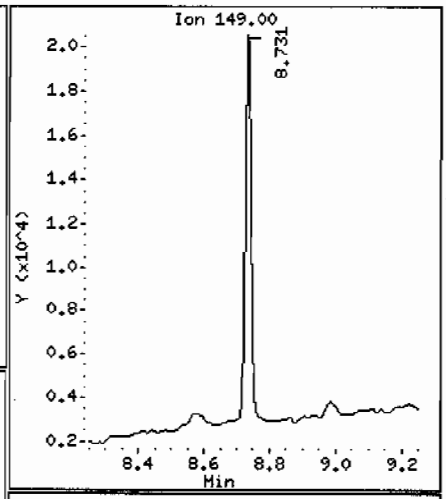

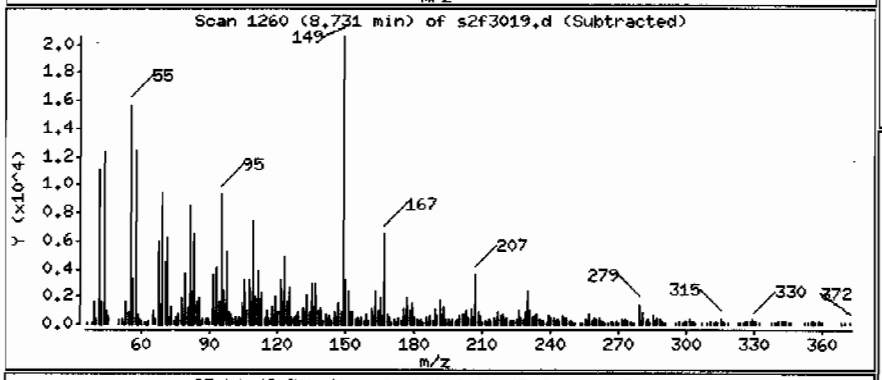

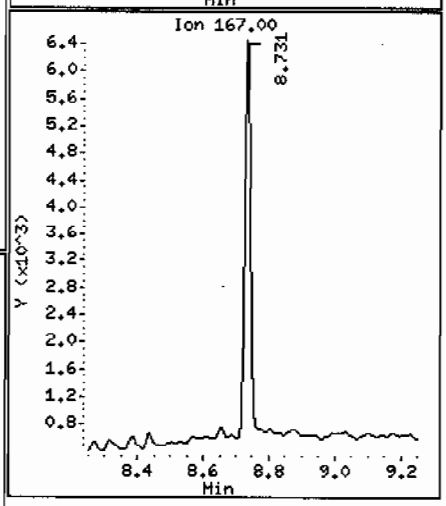

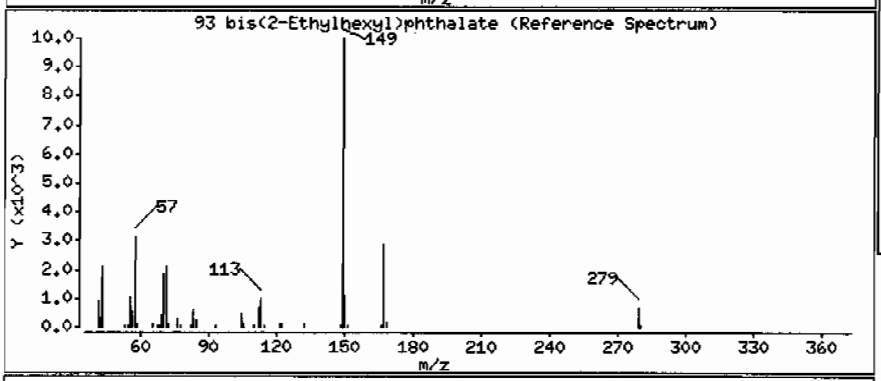

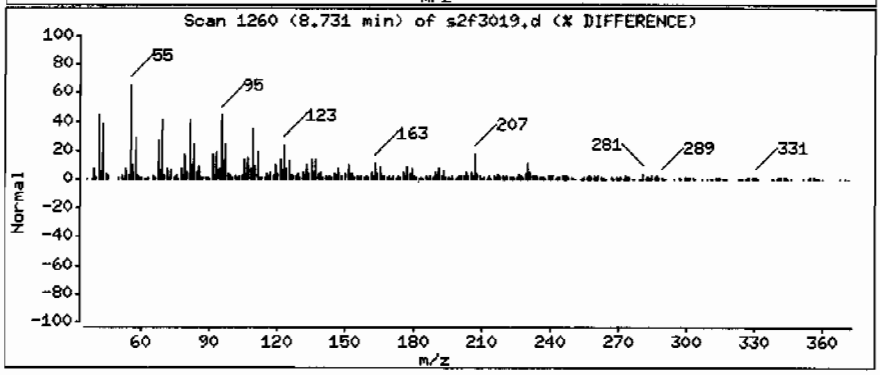

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041

Instrument: MSD2.i

Sample Info: 1232428008|88131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 120 ug/Kg

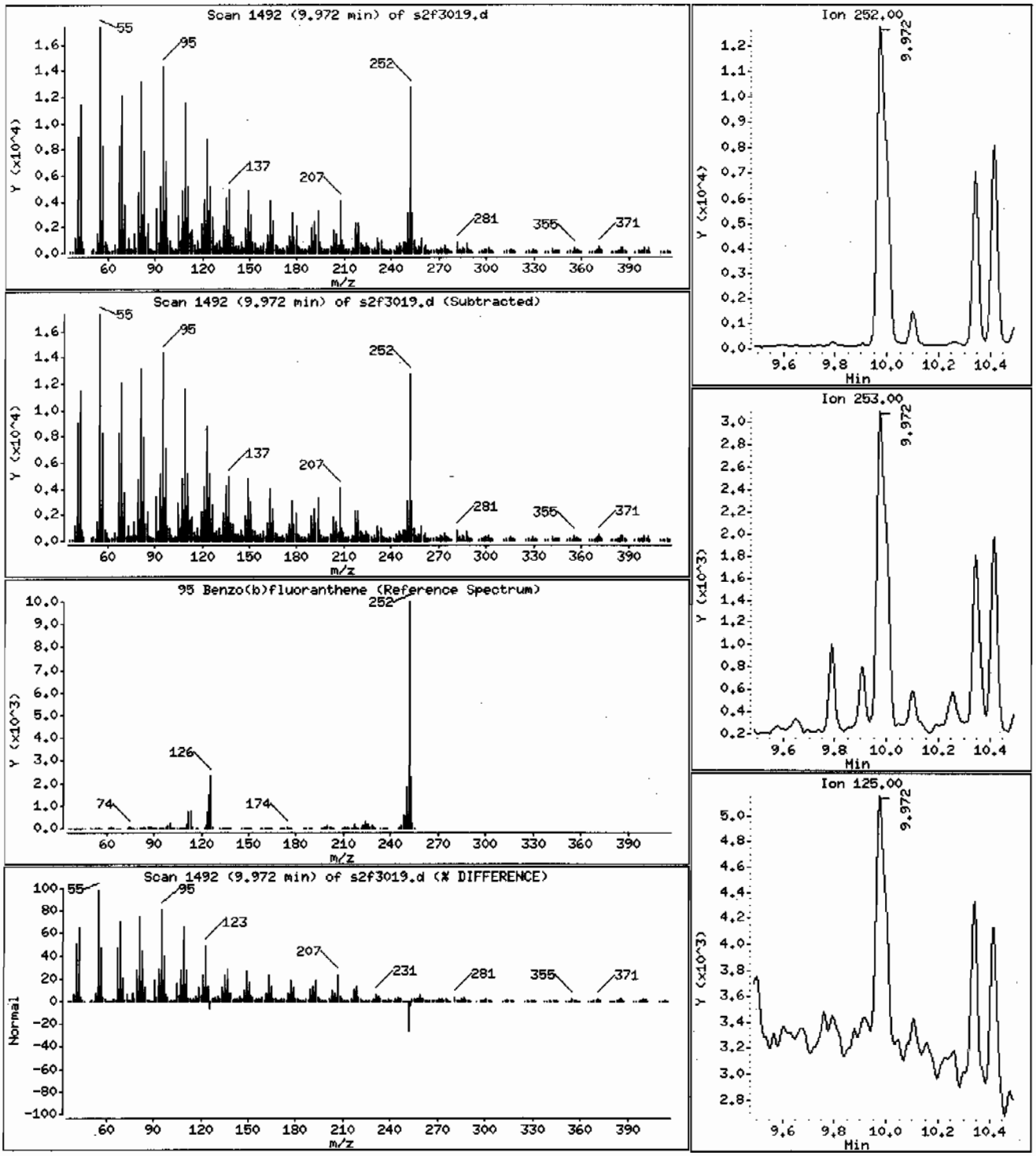

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041

Instrument: MSD2.i

Sample Info: |2324280008|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 59.5 ug/Kg

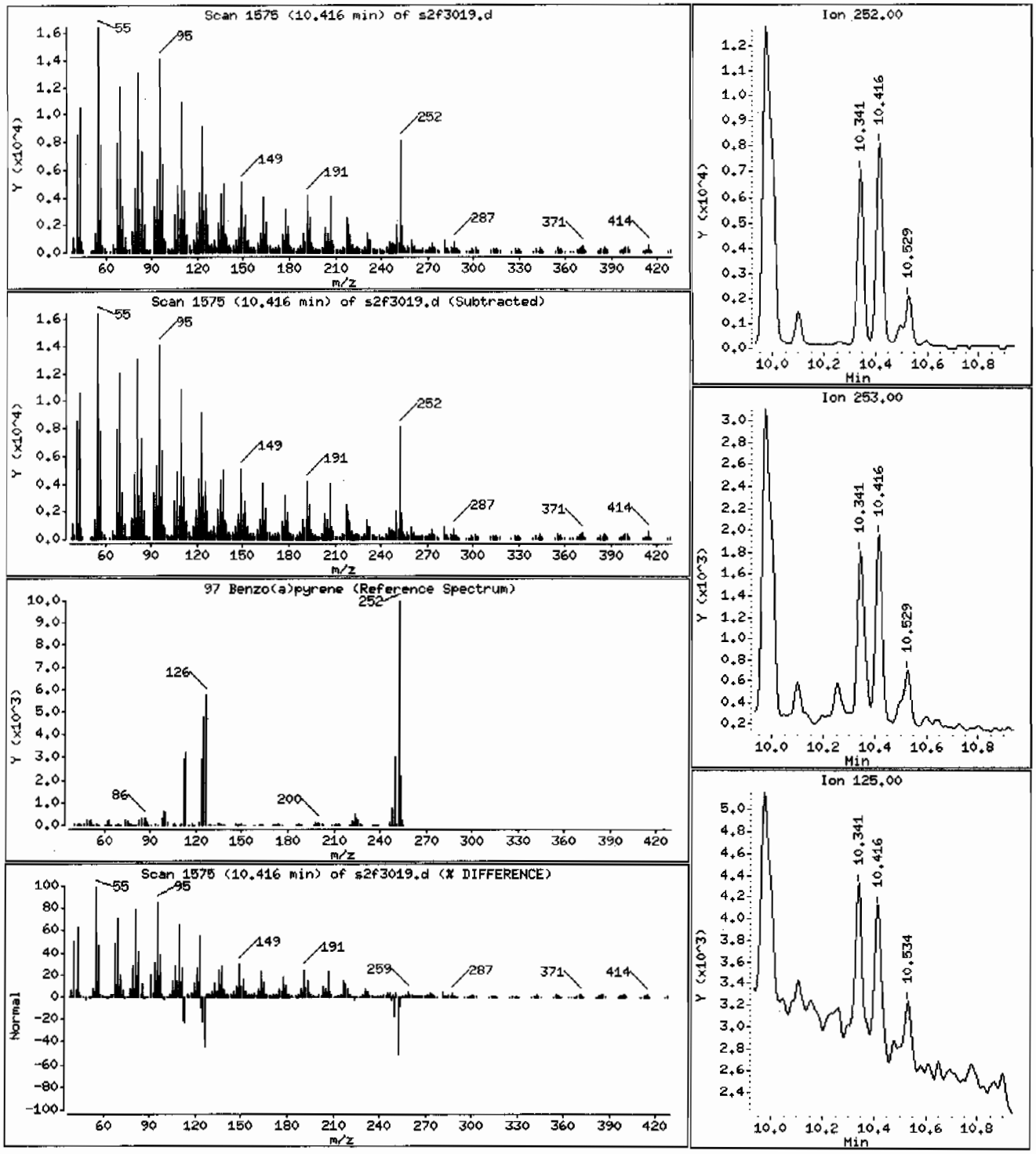

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMD-09-6041 Instrument: MSD2.i

Sample Info: |2324280081881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 35.1 ug/Kg

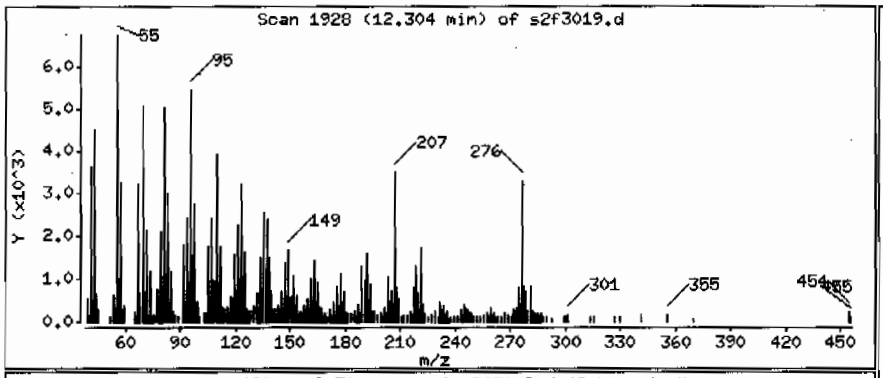

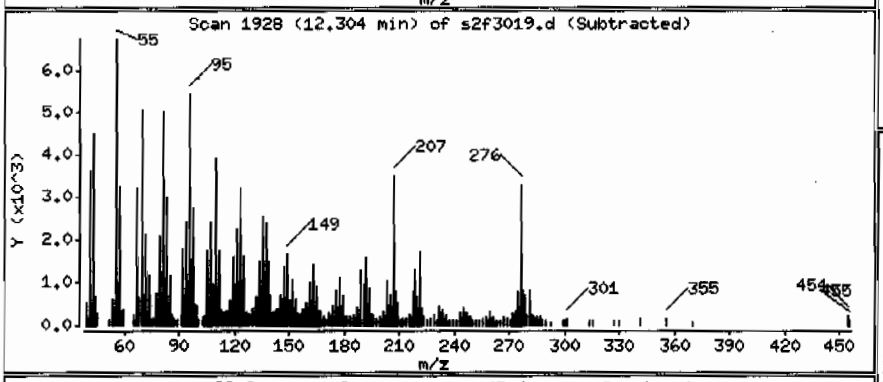

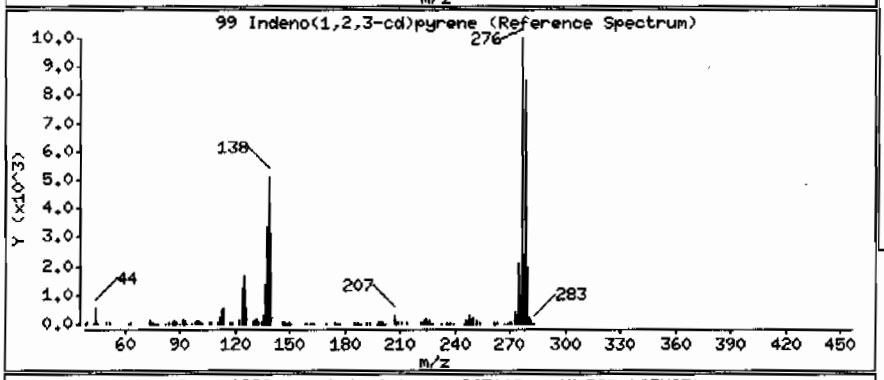

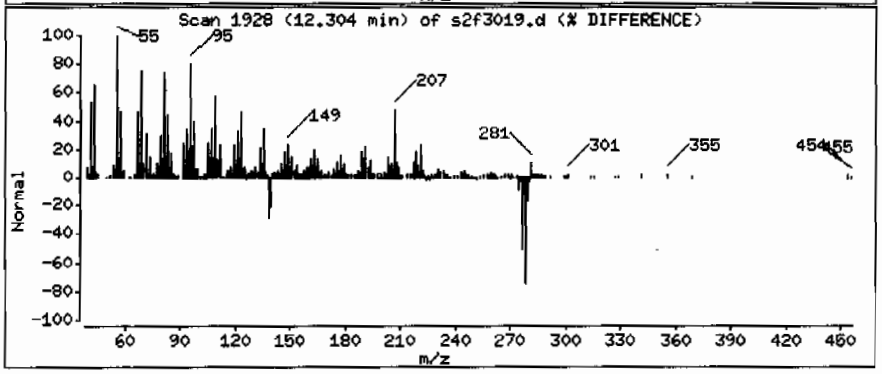

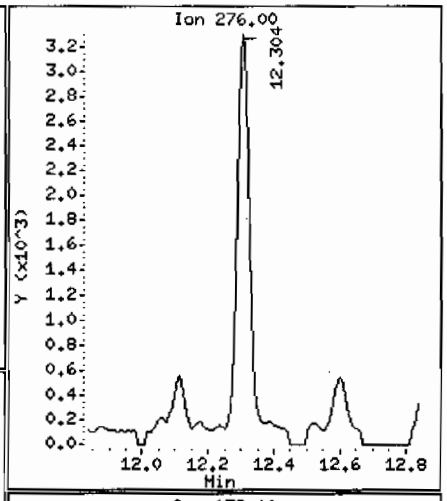

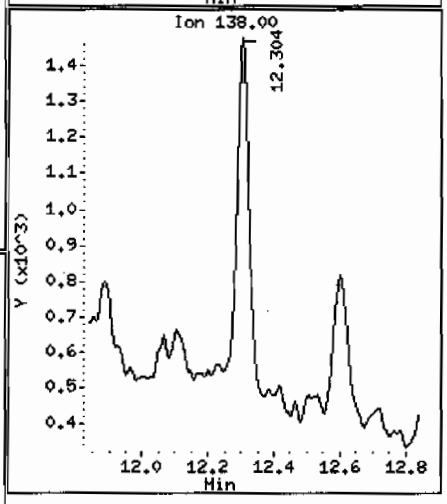

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041

Instrument: MSD2.i

Sample Info: 1232428008188131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

100 Dibenzo(a,h)anthracene

Concentration: 12.8 ug/Kg

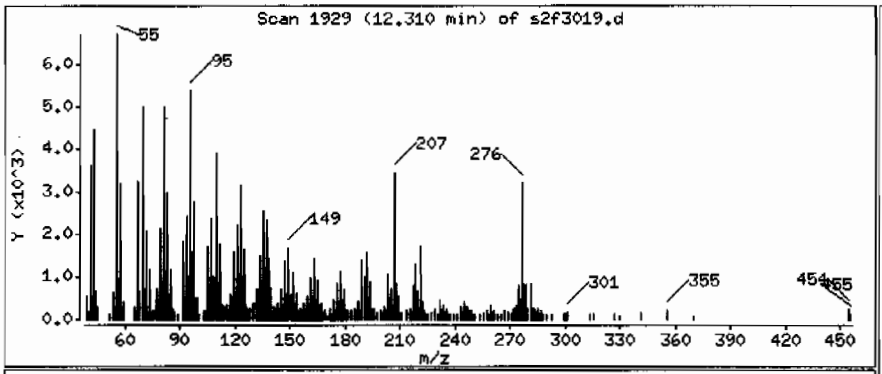

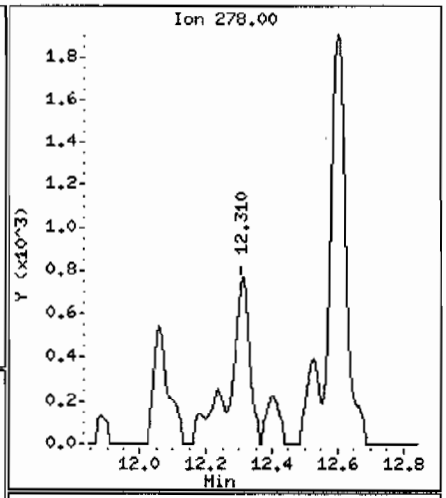

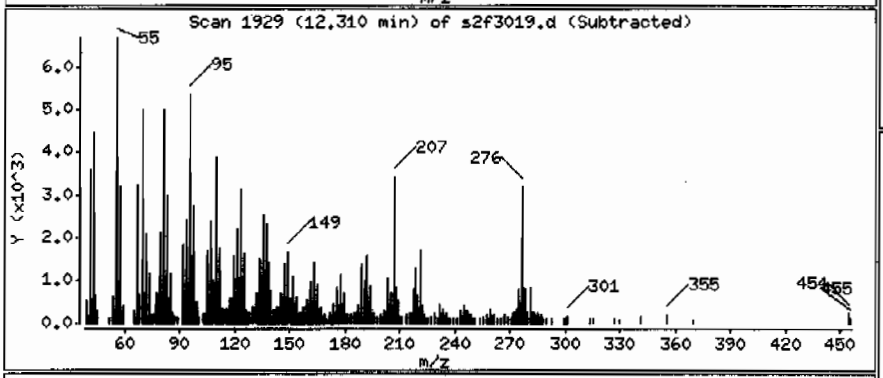

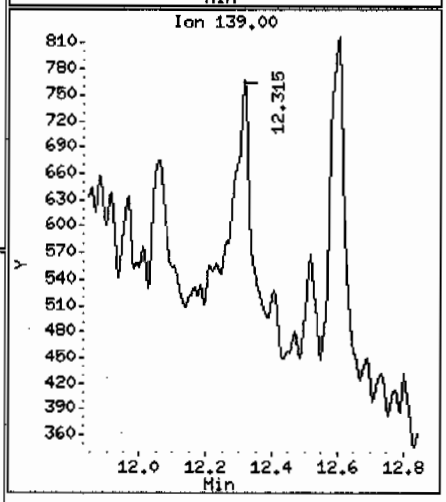

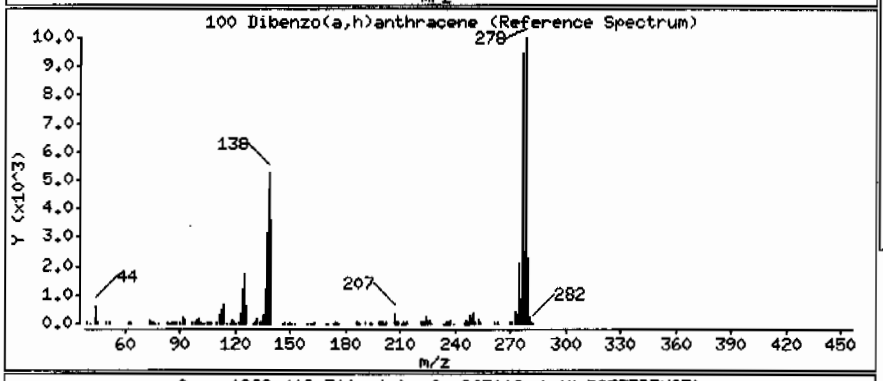

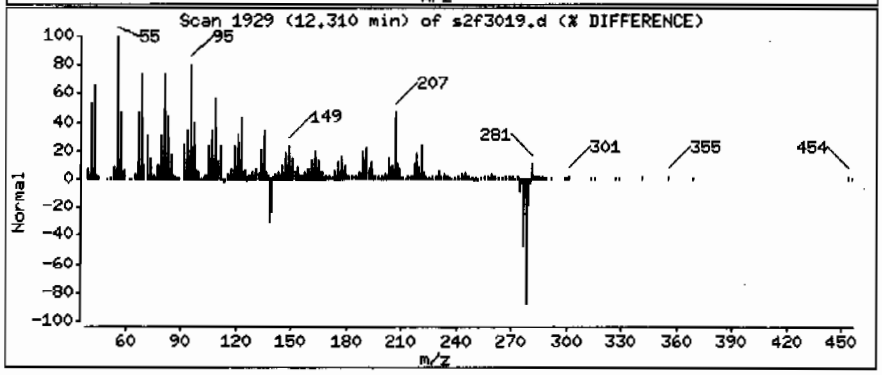

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041 Instrument: MSD2.i

Sample Info: |2324280081881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

101 Benzo(ghi)perylene Concentration: 40.5 ug/Kg

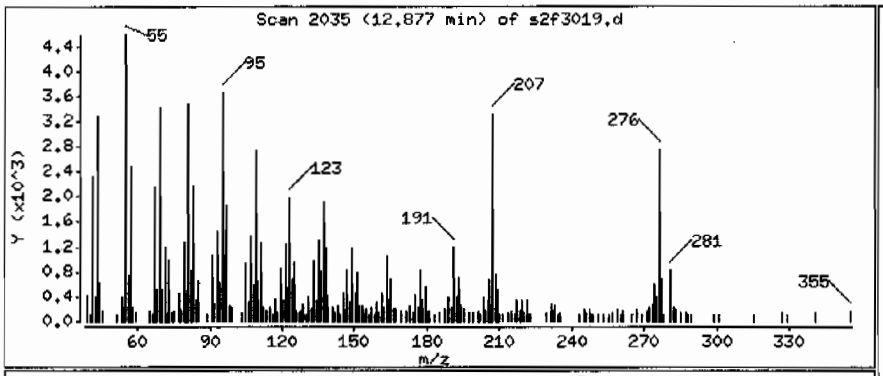

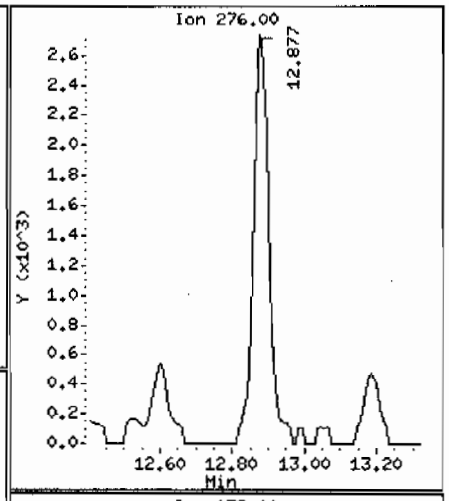

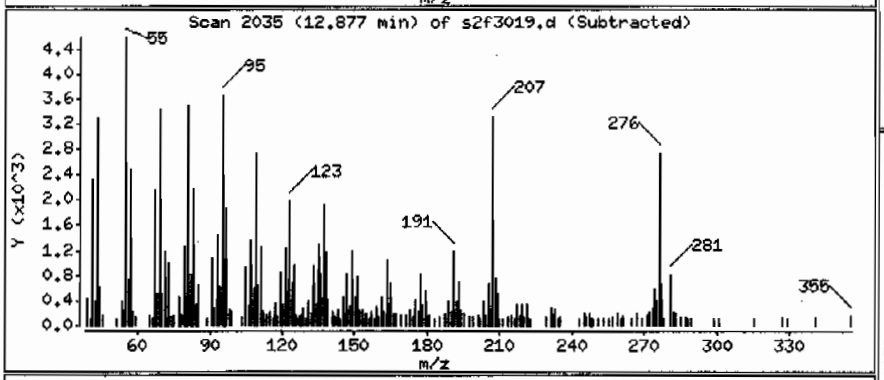

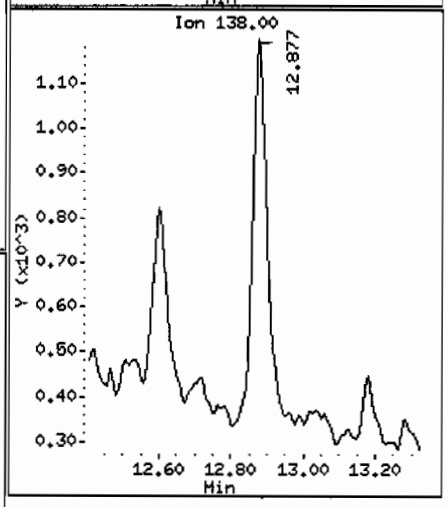

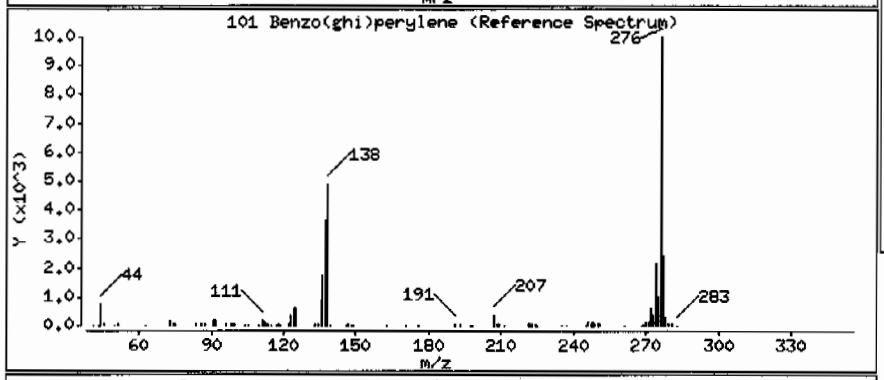

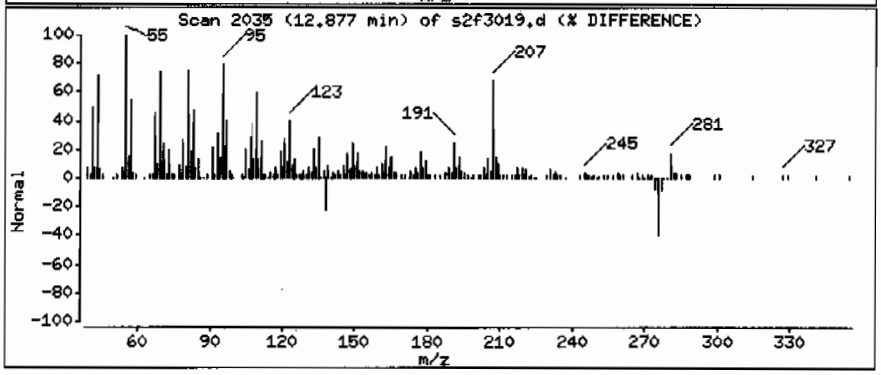

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041

Instrument: MSD2.i

Sample Info: 1232428008|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
5-Hexen-2-one	109-49-9	NIST05.L	3091	10	C6H10O	98

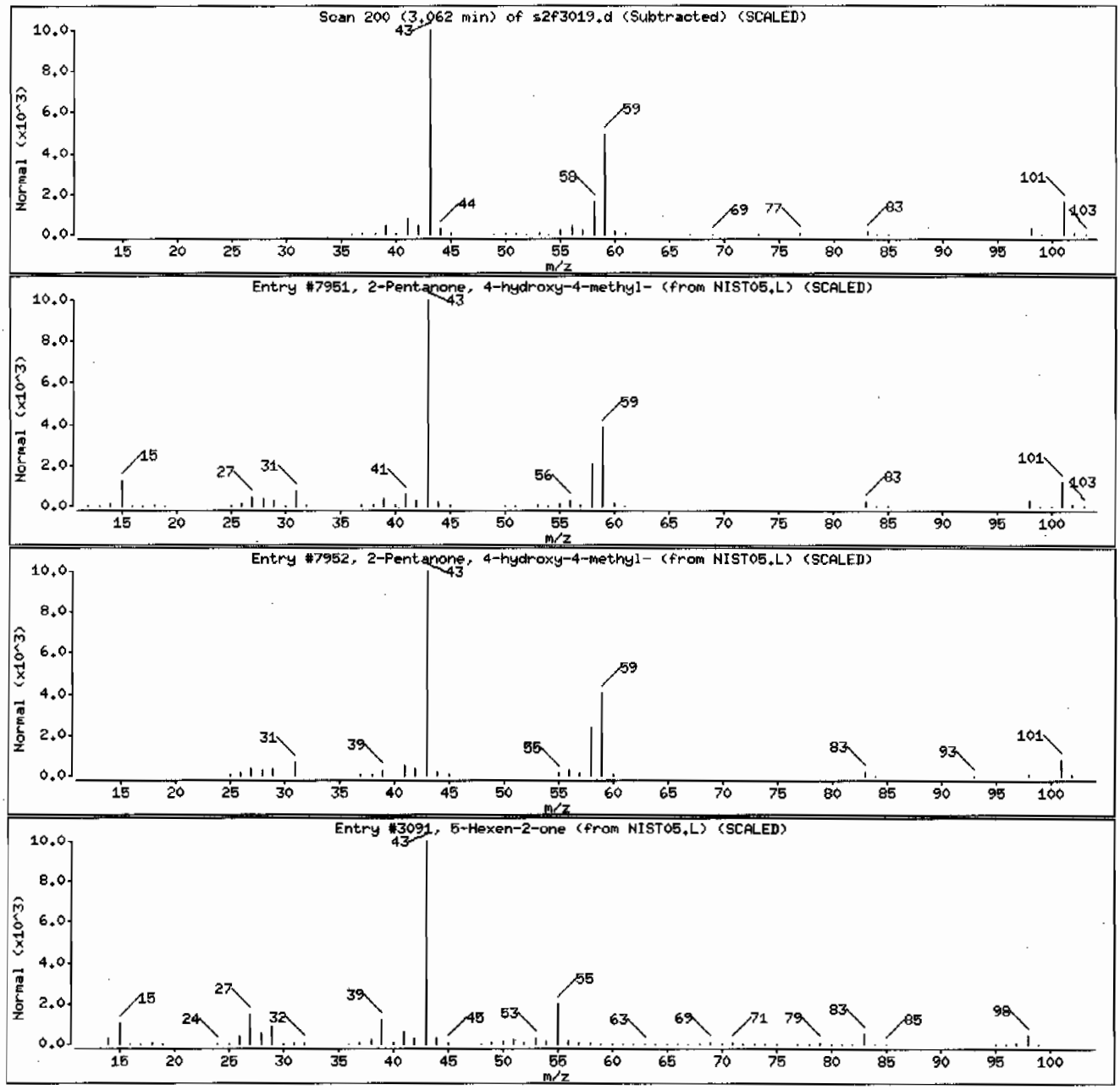

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAHO-09-6041 Instrument: MSD2.i

Sample Info: 1232428008188131911|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Decahydro-8a-ethyl-1,1,4a,6-tetramethyln	1000100-23-6	NIST05.L	73085	47	C16H30	222
D-Homoandrostane, (5.alpha.,13.alpha.)-	54482-31-4	NIST05.L	108369	46	C20H34	274
1H-Indene, 5-butyl-6-hexyloctahydro-	55044-36-5	NIST05.L	101522	45	C19H36	264

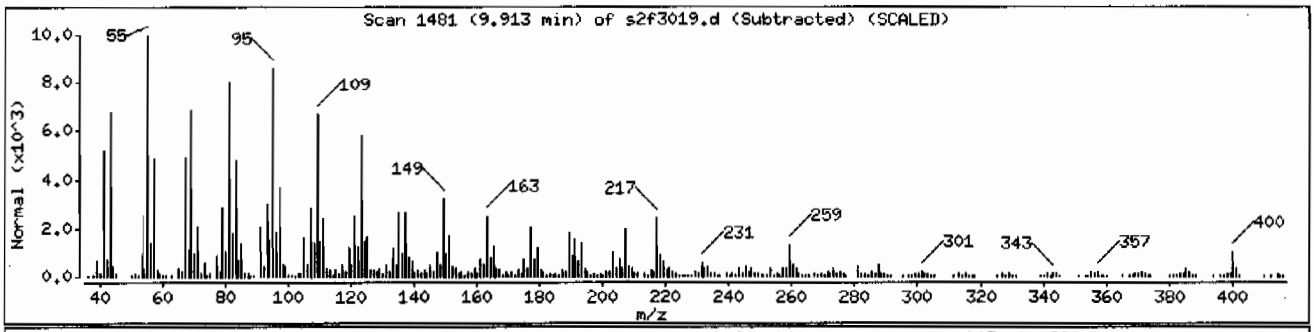

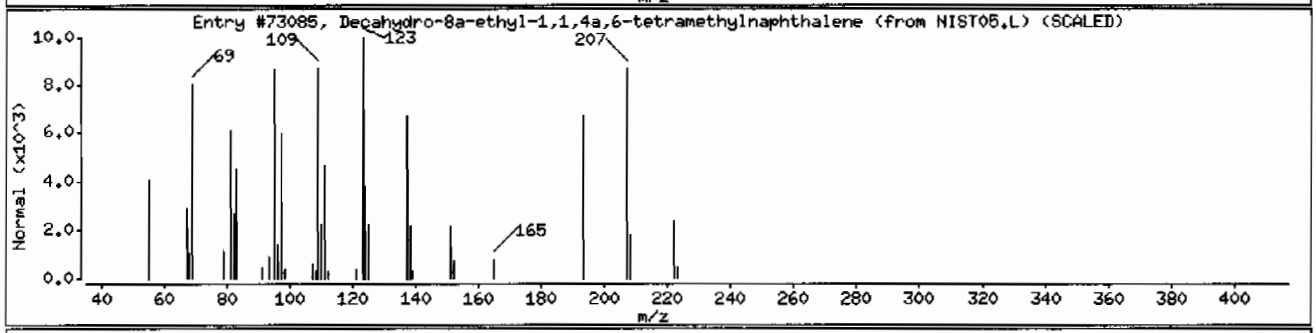

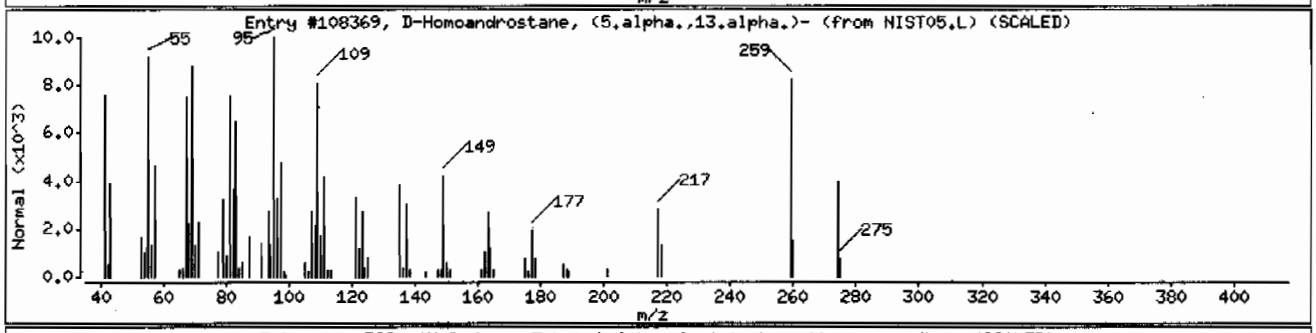

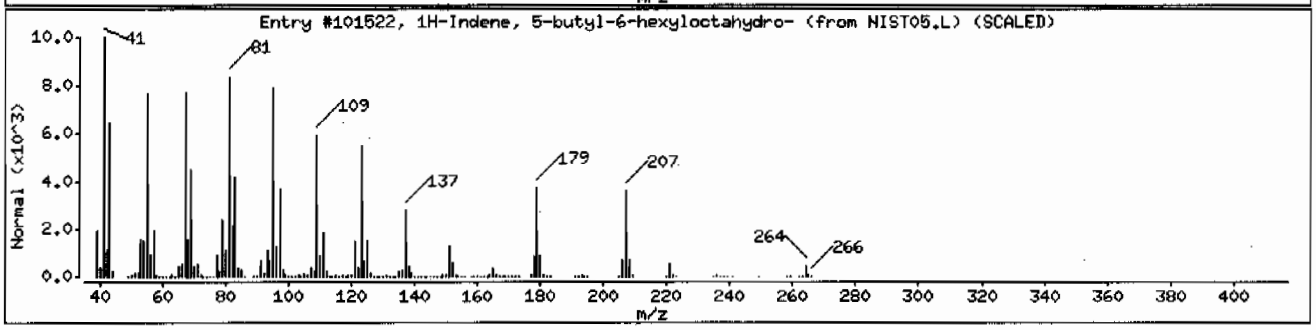

Data File: /chem/MSD2.i/s063009.b/s2f3019.d

Date : 30-JUN-2009 21:53

Client ID: CAMO-09-6041

Instrument: MSD2.i

Sample Info: 1232428008|881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Pyridine-3-carboxamide, oxime, N-(2-trif	288246-53-7	NIST05.L	112295	90	C13H10F3N3O	281
D-Homoandrostane, (5.alpha.,13.alpha.)-	54482-31-4	NIST05.L	108369	58	C20H34	274
2-Methyl-3-(3-methyl-but-2-enyl)-2-(4-me	1000144-10-2	NIST05.L	72975	55	C15H26O	222

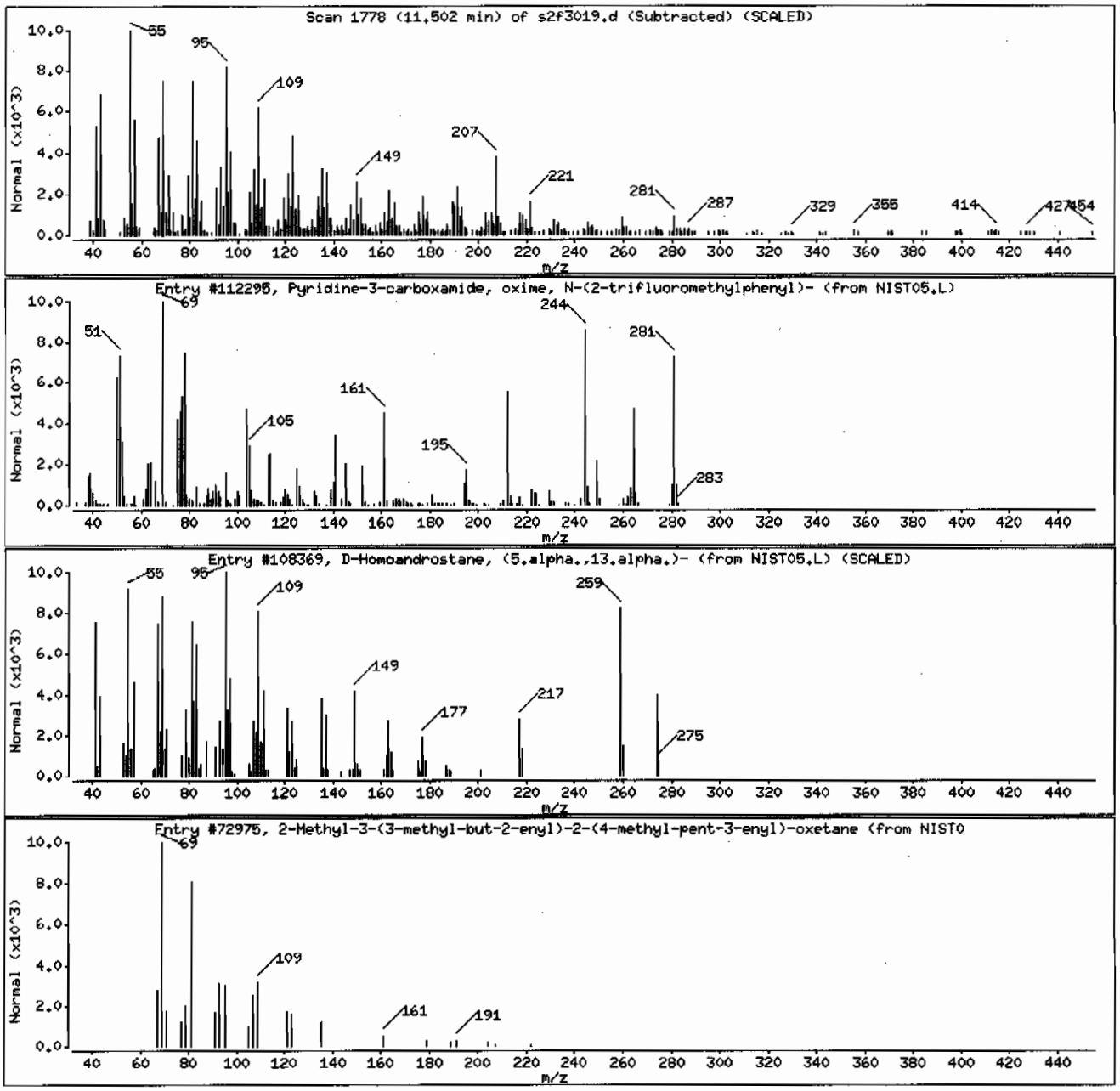

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428014	Date Received:	06/26/2009 08:40	%Moisture:	17.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6042	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 23:52	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.19 g	Final Volume:	1 mL
Data File:	s2f3025.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	403	ug/kg	80.6	403
108-95-2	Phenol	U	403	ug/kg	80.6	403
95-57-8	2-Chlorophenol	U	403	ug/kg	80.6	403
106-46-7	1,4-Dichlorobenzene	U	403	ug/kg	80.6	403
621-64-7	N-Nitrosodipropylamine	U	403	ug/kg	80.6	403
59-50-7	4-Chloro-3-methylphenol	U	403	ug/kg	40.3	403
83-32-9	Acenaphthene	U	40.3	ug/kg	13.5	40.3
121-14-2	2,4-Dinitrotoluene	U	403	ug/kg	40.3	403
100-02-7	4-Nitrophenol	U	403	ug/kg	80.6	403
87-86-5	Pentachlorophenol	U	403	ug/kg	80.6	403
129-00-0	Pyrene		198	ug/kg	12.7	40.3
110-86-1	Pyridine	U	403	ug/kg	80.6	403
62-53-3	Aniline	U	403	ug/kg	141	403
111-44-4	bis(2-Chloroethyl) ether	U	403	ug/kg	80.6	403
541-73-1	1,3-Dichlorobenzene	U	403	ug/kg	80.6	403
100-51-6	Benzyl alcohol	U	403	ug/kg	121	403
95-50-1	1,2-Dichlorobenzene	U	403	ug/kg	80.6	403
108-60-1	bis(2-Chloroisopropyl)ether	U	403	ug/kg	80.6	403
95-48-7	o-Cresol	U	403	ug/kg	80.6	403
65794-96-9	m,p-Cresols	U	403	ug/kg	161	403
67-72-1	Hexachloroethane	U	403	ug/kg	80.6	403
98-95-3	Nitrobenzene	U	403	ug/kg	80.6	403
78-59-1	Isophorone	U	403	ug/kg	80.6	403
88-75-5	2-Nitrophenol	U	403	ug/kg	40.3	403
105-67-9	2,4-Dimethylphenol	U	403	ug/kg	80.6	403
111-91-1	bis(2-Chloroethoxy)methane	U	403	ug/kg	80.6	403
120-83-2	2,4-Dichlorophenol	U	403	ug/kg	80.6	403
65-85-0	Benzoic acid	U	806	ug/kg	201	806
91-20-3	Naphthalene	U	40.3	ug/kg	12.1	40.3
106-47-8	4-Chloroaniline	U	403	ug/kg	80.6	403
87-68-3	Hexachlorobutadiene	U	403	ug/kg	80.6	403
91-57-6	2-Methylnaphthalene	U	40.3	ug/kg	8.06	40.3
77-47-4	Hexachlorocyclopentadiene	U	403	ug/kg	80.6	403
88-06-2	2,4,6-Trichlorophenol	U	403	ug/kg	80.6	403
95-95-4	2,4,5-Trichlorophenol	U	403	ug/kg	80.6	403
91-58-7	2-Chloronaphthalene	U	40.3	ug/kg	14.1	40.3
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	403	ug/kg	80.6	403
99-09-2	3-Nitroaniline	U	403	ug/kg	80.6	403

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428014	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6042	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s2f3025.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	403	ug/kg	80.6	403
606-20-2	2,6-Dinitrotoluene	U	403	ug/kg	40.3	403
208-96-8	Acenaphthylene	U	40.3	ug/kg	12.1	40.3
51-28-5	2,4-Dinitrophenol	U	806	ug/kg	153	806
132-64-9	Dibenzofuran	U	403	ug/kg	80.6	403
84-66-2	Diethylphthalate	U	403	ug/kg	80.6	403
86-73-7	Fluorene	U	40.3	ug/kg	12.1	40.3
7005-72-3	4-Chlorophenylphenylether	U	403	ug/kg	40.3	403
534-52-1	2-Methyl-4,6-dinitrophenol	U	403	ug/kg	80.6	403
100-01-6	4-Nitroaniline	U	403	ug/kg	80.6	403
	p-Nitroaniline					
122-39-4	Diphenylamine	U	403	ug/kg	80.6	403
122-66-7	Azobenzene	U	403	ug/kg	80.6	403
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	403	ug/kg	40.3	403
118-74-1	Hexachlorobenzene	U	403	ug/kg	80.6	403
85-01-8	Phenanthrene		67.1	ug/kg	12.1	40.3
120-12-7	Anthracene	U	40.3	ug/kg	8.06	40.3
84-74-2	Di-n-butylphthalate	U	403	ug/kg	40.3	403
206-44-0	Fluoranthene		224	ug/kg	12.1	40.3
85-68-7	Butylbenzylphthalate	U	403	ug/kg	80.6	403
56-55-3	Benzo(a)anthracene		84.4	ug/kg	12.1	40.3
91-94-1	3,3'-Dichlorobenzidine	U	403	ug/kg	121	403
218-01-9	Chrysene		113	ug/kg	12.1	40.3
117-81-7	bis(2-Ethylhexyl)phthalate	J	107	ug/kg	80.6	403
117-84-0	Di-n-octylphthalate	U	403	ug/kg	80.6	403
205-99-2	Benzo(b)fluoranthene		214	ug/kg	12.1	40.3
207-08-9	Benzo(k)fluoranthene	U	40.3	ug/kg	12.1	40.3
50-32-8	Benzo(a)pyrene		103	ug/kg	12.1	40.3
193-39-5	Indeno(1,2,3-cd)pyrene		58.6	ug/kg	12.1	40.3
53-70-3	Dibenzo(a,h)anthracene	J	18.8	ug/kg	12.1	40.3
191-24-2	Benzo(ghi)perylene		60.1	ug/kg	12.1	40.3
120-82-1	1,2,4-Trichlorobenzene	U	403	ug/kg	80.6	403

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	345	ug/kg		J
4630-07-3	Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	5.91	266	ug/kg	96	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428014	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6042	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 23:52	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s2f3025.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	185	ug/kg	95	NJ
	Unknown	11.07	357	ug/kg		J
	Unknown	11.51	277	ug/kg		J
	Unknown	12.08	195	ug/kg		J

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s063009.b/s2f3025.d
Lab Smp Id: 232428014 Client Smp ID: CAMO-09-6042
Inj Date : 30-JUN-2009 23:52
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428014|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.19000	weight of sample
M	17.78780	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	175516	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	663062	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	371632	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	666066	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	517462	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	339706	40.0000	
$ 3 2-Fluorophenol	112	3.233	3.222	(0.798)	251074	51.6960	2080
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	305505	50.9388	2050
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	134416	26.8688	1080
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	293845	27.9962	1130
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	82204	64.5825	2600
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	313789	35.6016	1430

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.025	8.031	(0.904)	75640	4.91047	198(H)
68 Phenanthrene	178	7.164	7.170	(1.002)	26429	1.66631	67.1
76 Fluoranthene	202	7.881	7.886	(1.103)	81137	5.56090	224
89 Benzo(a)anthracene	228	8.871	8.881	(0.999)	26371	2.09460	84.4
92 Chrysene	228	8.903	8.919	(1.002)	34108	2.80720	113
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.984)	25109	2.64511	106(a)
95 Benzo(b)fluoranthene	252	9.978	9.988	(0.951)	43405	5.32246	214
97 Benzo(a)pyrene	252	10.416	10.432	(0.992)	18201	2.55448	103
99 Indeno(1,2,3-cd)pyrene	276	12.304	12.337	(1.172)	9953	1.45416	58.6
100 Dibenzo(a,h)anthracene	278	12.310	12.342	(1.173)	2567	0.46739	18.8(a)
101 Benzo(ghi)perylene	276	12.877	12.903	(1.227)	8859	1.49070	60.1

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

ION RATIO REPORT

SV REPORT

Data file: s2f3025.d
Report Date: 07/01/2009 07:59
Lab. ID: 232428014 SampleType: SAMPLE
Injection Date: 30-JUN-2009 23:52
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428014|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	12742	3.76	3.83	80-120	100	(T)
93	976	3.73	3.83	440-500	8	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	19241	4.41	4.29	80-120	100	(T)
42	10665	4.41	4.29	40-100	55	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	79858	6.17	5.94	80-120	100	(T)
164	369323	6.17	5.94	0- 40	462	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	48232	6.17	5.99	80-120	100	(T)
63	856	6.17	5.99	46-106	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	48266	6.17	6.27	80-120	100	(T)
89	830	6.17	6.27	38- 98	2	(QT)
63	1954	6.17	6.27	16- 76	4	(QT)
53 Fluorene			CAS#: 86-73-7			
166	5267	6.70	6.54	80-120	100	(T)
165	5756	6.70	6.54	61-121	109	(T)
167	1913	6.70	6.54	0- 44	36	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	199	6.70	6.55	80-120	100	(T)
105	462	6.70	6.55	14- 74	232	(QT)
51	399	6.69	6.55	37- 97	200	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	4667	6.70	6.84	80-120	100	(T)
141	34054	6.70	6.84	51-111	730	(QT)
250	9654	6.70	6.84	66-126	207	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	26429	7.16	7.17	80-120	100	( )
179	6880	7.16	7.17	0- 46	26	( )
176	4894	7.16	7.17	0- 49	19	( )
69 Anthracene				CAS#: 120-12-7		
178	5551	7.20	7.20	80-120	100	( )
179	6880	7.16	7.20	0- 46	124	(Q)
176	882	7.20	7.20	0- 48	16	( )
76 Fluoranthene				CAS#: 206-44-0		
202	81137	7.88	7.89	80-120	100	( )
203	13929	7.88	7.89	0- 48	17	( )
101	11715	7.88	7.89	0- 45	14	( )
79 Pyrene				CAS#: 129-00-0		
202	75640	8.03	8.03	80-120	100	( )
200	15273	8.03	8.03	0- 51	20	( )
101	13630	8.03	8.03	0- 48	18	( )
85 Butylbenzylphthalate				CAS#: 85-68-7		
149	22904	8.41	8.36	80-120	100	( )
91	25486	8.41	8.36	42-102	111	(Q)
206	188	8.42	8.36	0- 53	1	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	26371	8.87	8.88	80-120	100	( )
226	7261	8.87	8.88	0- 56	28	( )
229	8460	8.87	8.88	0- 50	32	( )
92 Chrysene				CAS#: 218-01-9		
228	34108	8.90	8.92	80-120	100	( )
229	8594	8.90	8.92	0- 50	25	( )
226	10132	8.90	8.92	0- 59	30	( )
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	25109	8.74	8.75	80-120	100	( )
167	9826	8.74	8.75	2- 62	39	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	43405	9.98	9.99	80-120	100	( )
253	9942	9.97	9.99	0- 52	23	( )
125	6308	9.98	9.99	0- 45	15	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	43405	9.98	10.02	80-120	100	( )
253	9942	9.97	10.02	0- 52	23	( )
125	6308	9.98	10.02	0- 44	15	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	18201	10.42	10.43	80-120	100	( )
253	4204	10.42	10.43	0- 52	23	( )
125	2641	10.41	10.43	0- 46	15	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	9953	12.30	12.34	80-120	100	( )
138	4261	12.30	12.34	7- 67	43	( )
100 Dibenzo(a,h)anthracene				CAS#: 53-70-3		
278	2567	12.31	12.34	80-120	100	( )
139	1046	12.31	12.34	0- 55	41	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	8859	12.88	12.90	80-120	100	( )
138	3392	12.88	12.90	4- 64	38	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

GEL Laboratories, LLC

Data file : /chem/MSD2.i/s063009.b/s2f3025.d
Lab Smp Id: 232428014 Client Smp ID: CAMO-09-6042
Inj Date : 30-JUN-2009 23:52
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428014|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.19000	weight of sample
M	17.78780	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.051	1047294	40.000
* 46 Acenaphthene-d10	6.170	1612362	40.000
* 91 Chrysene-d12	8.881	1632617	40.000
* 98 Perylene-d12	10.497	981811	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.062	224304	8.56700537	345	0		0	10
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-				CAS #: 4630-07-3			
5.913	266296	6.60635018	266	96	NIST05.L	60046	46
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1740-19-8			
8.662	187331	4.58970714	185	95	NIST05.L	125034	91
Unknown				CAS #:			
11.069	217560	8.86362365	357	0		0	98
Unknown				CAS #:			
11.507	168475	6.86385803	276	0		0	98
Unknown				CAS #:			
12.080	119023	4.84910708	195	0		0	98

Data File: /chem/MSD2.i/s063009.b/s2f3025.d
Date : 30-JUN-2009 23:52
Client ID: CAMO-09-6042
Sample Info: 1232428014188131911ISVMFI11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

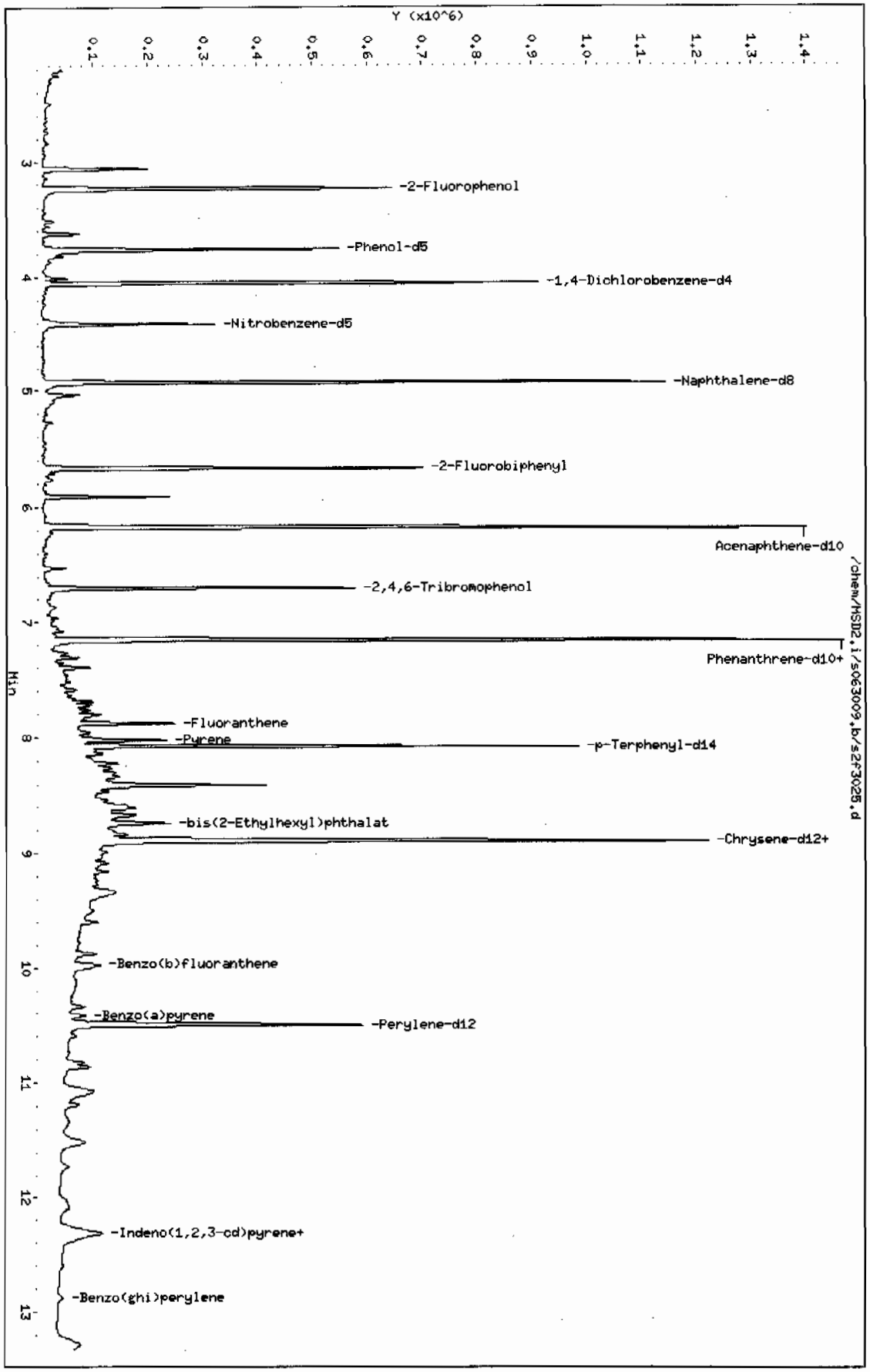

Page 1

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042

Instrument: MSD2.i

Sample Info: 1232428014|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 198 ug/Kg

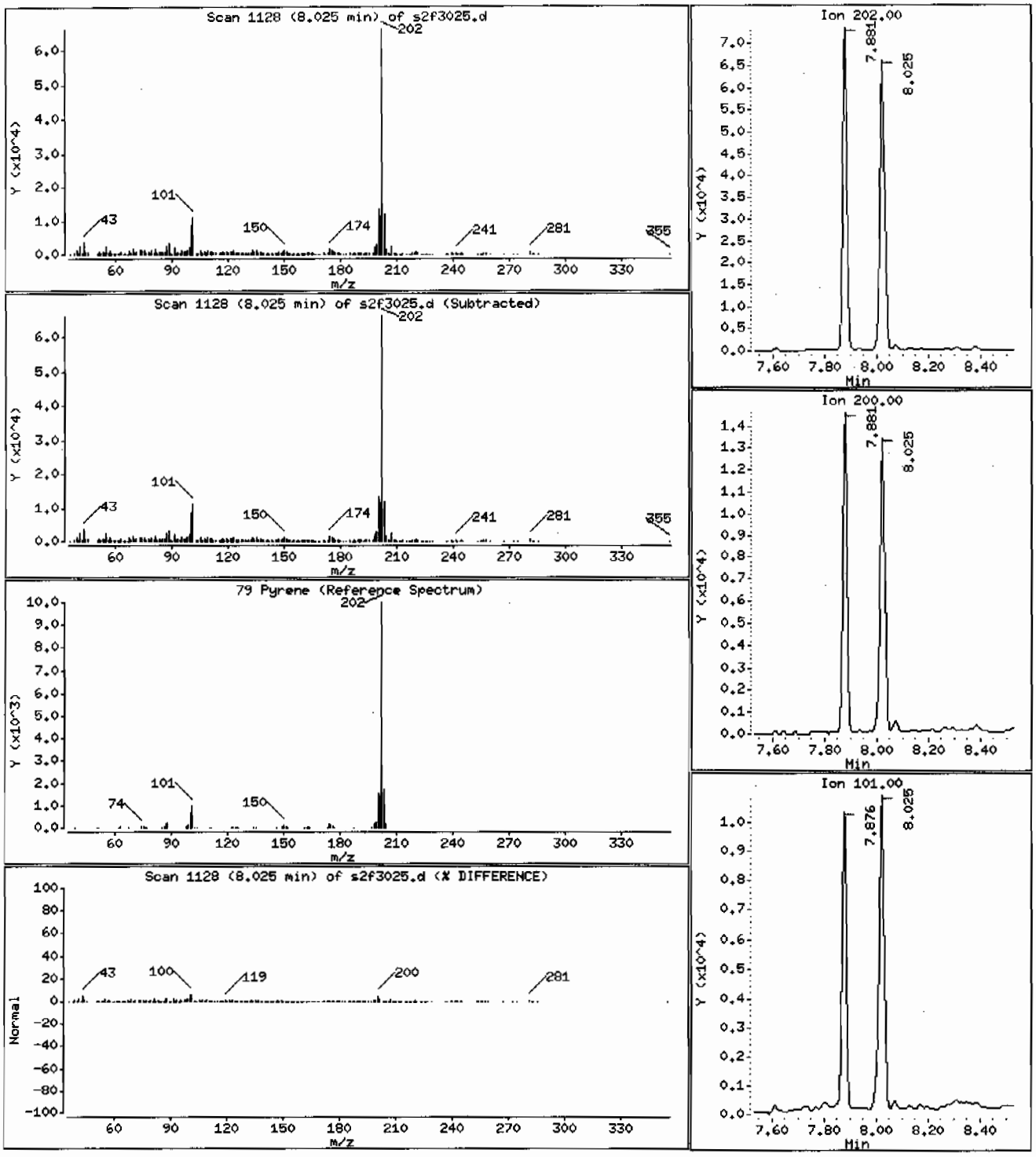

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Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042

Instrument: MSD2.i

Sample Info: 1232428014188131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 67.1 ug/Kg

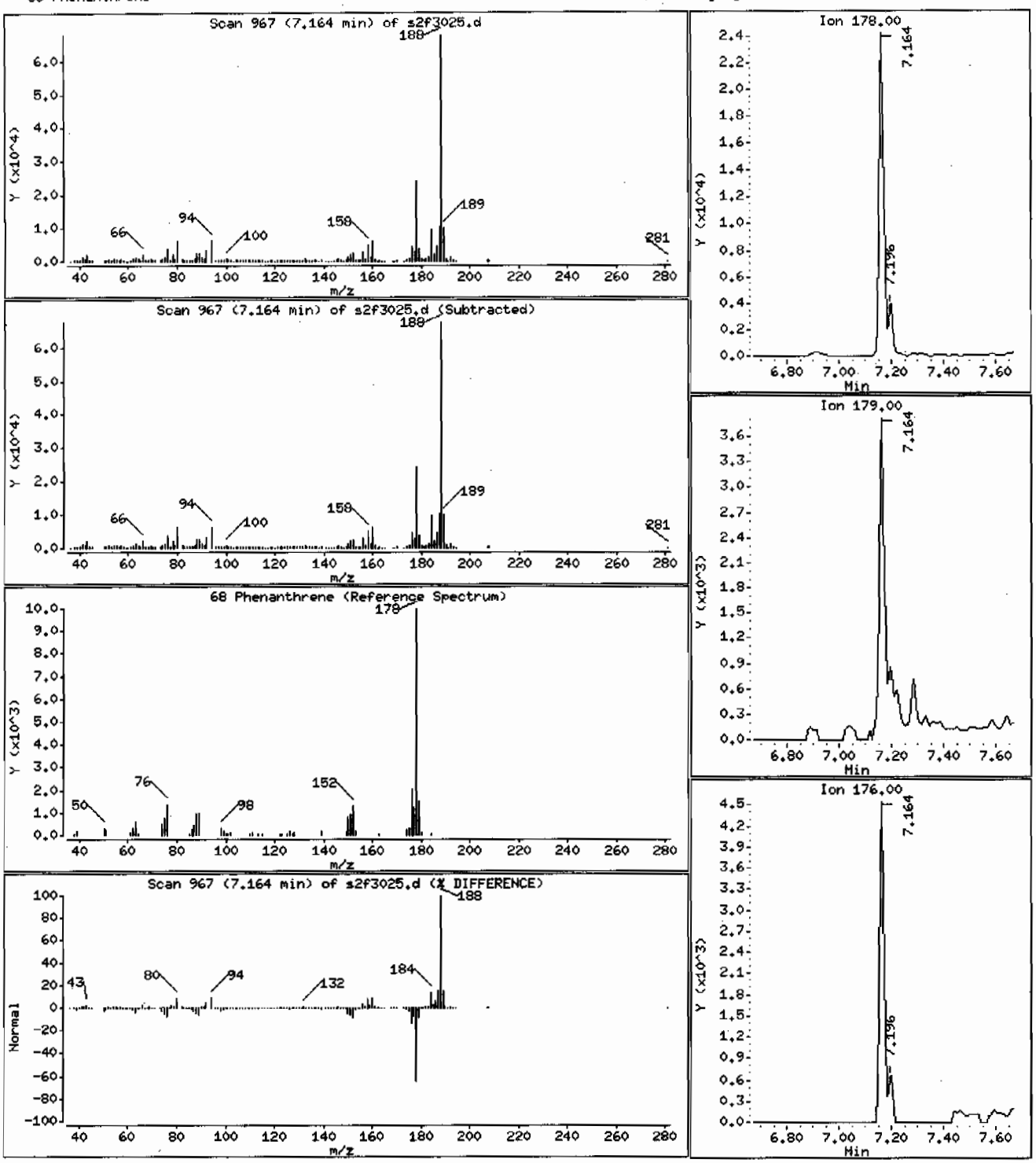

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042 Instrument: MSD2.i

Sample Info: |2324280141881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

76 Fluoranthene Concentration: 224 ug/Kg

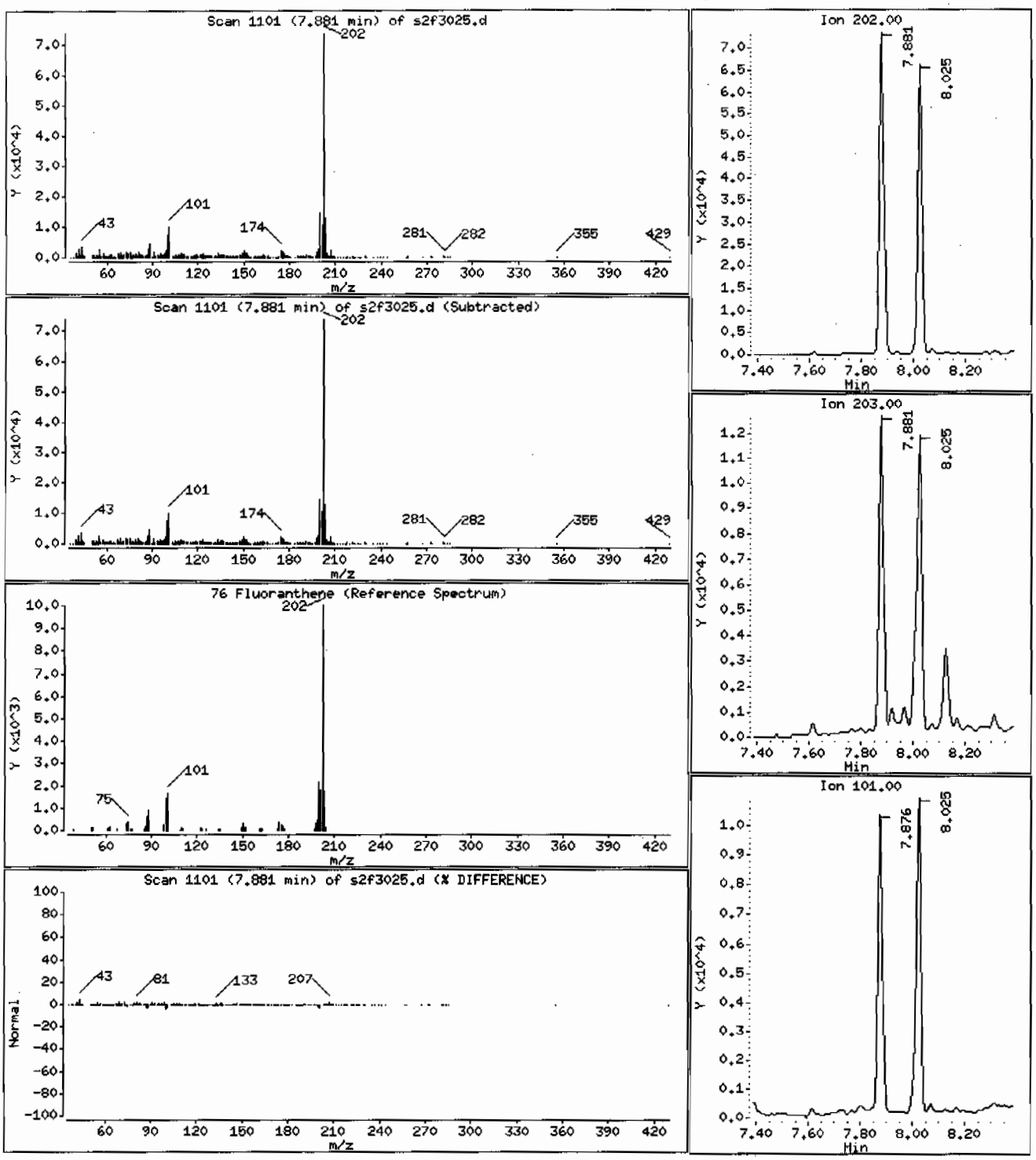

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042

Instrument: MSD2.i

Sample Info: |232428014|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 84.4 ug/Kg

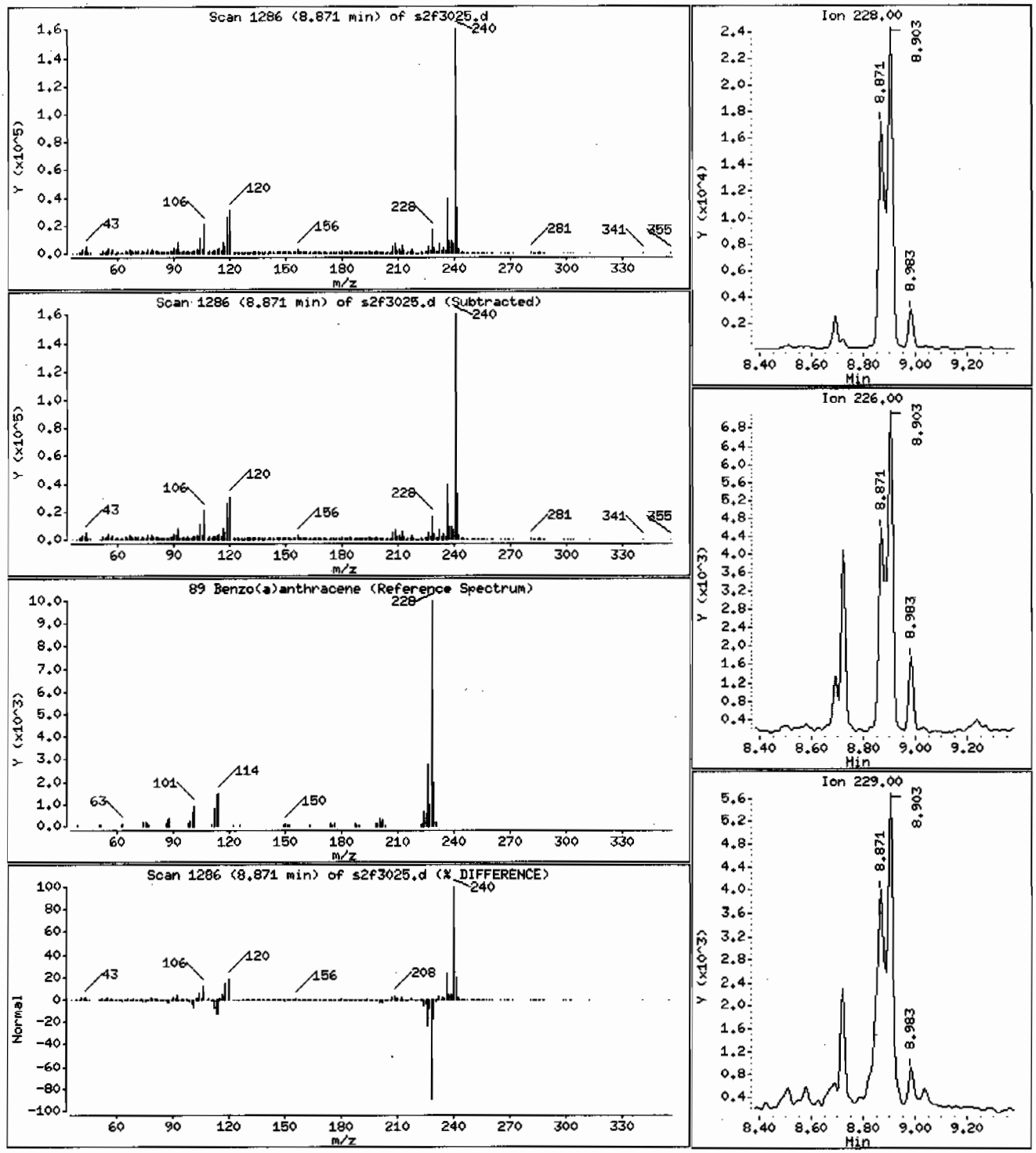

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042 Instrument: MSD2.i

Sample Info: 1232428014|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

92 Chrysene Concentration: 113 ug/Kg

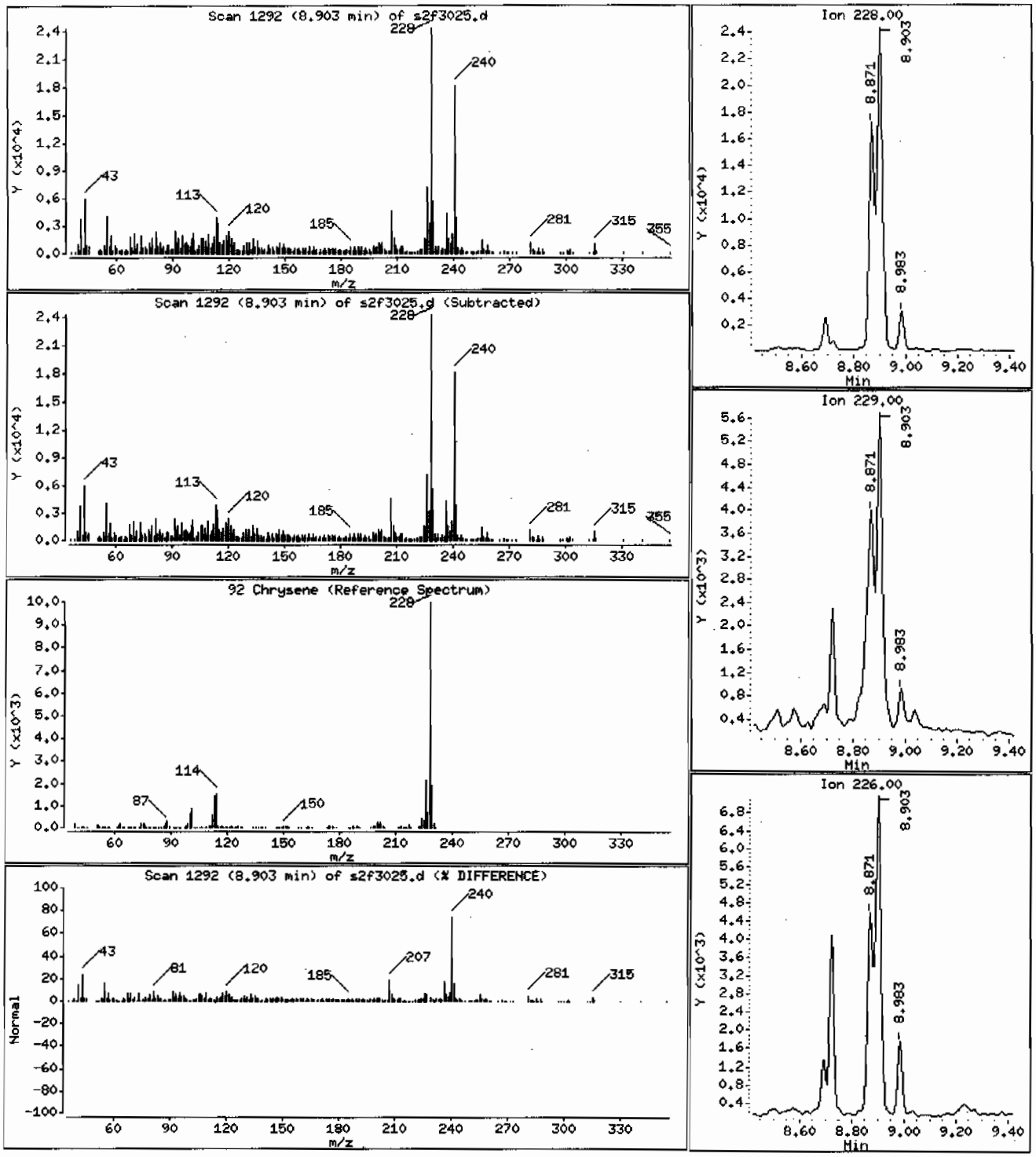

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAHO-09-6042

Instrument: MSD2.i

Sample Info: |2324280141881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate

Concentration: 106 ug/Kg

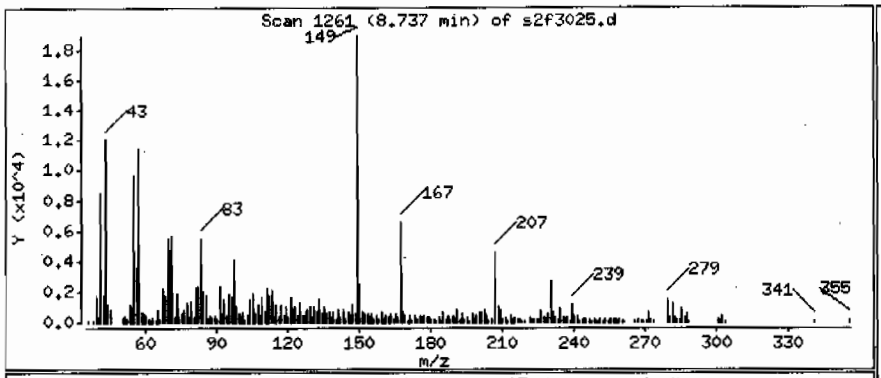

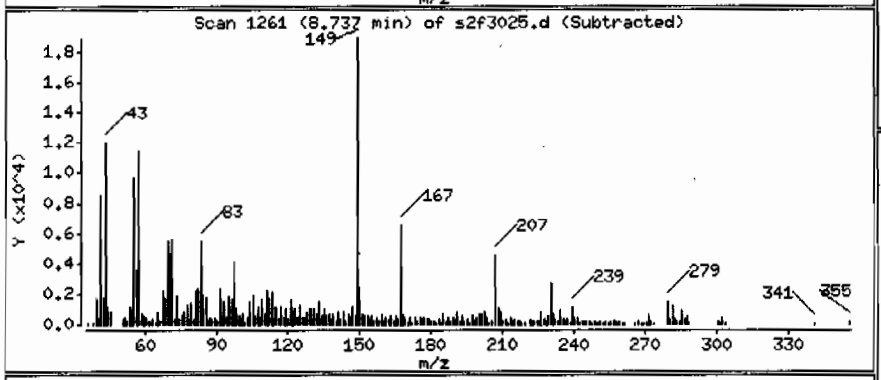

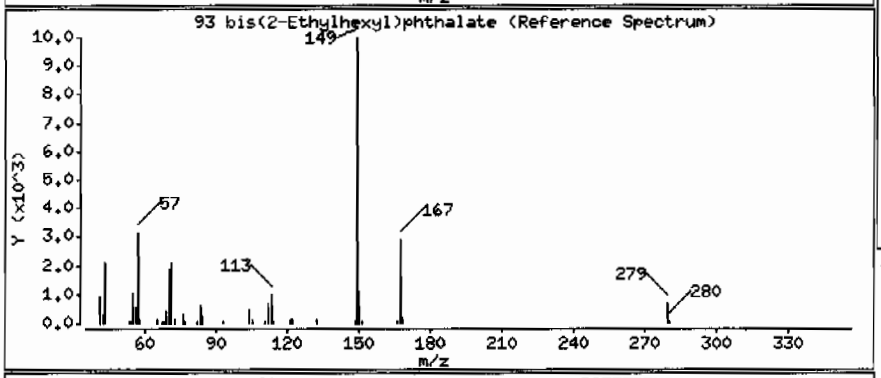

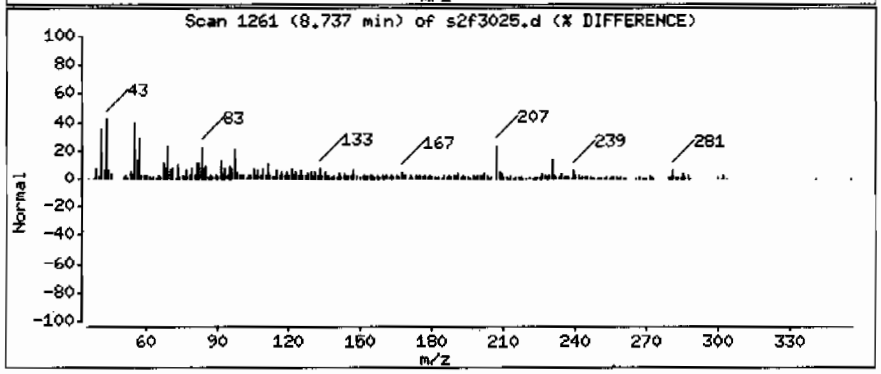

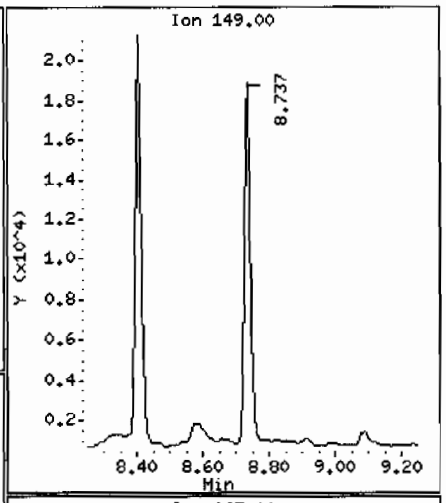

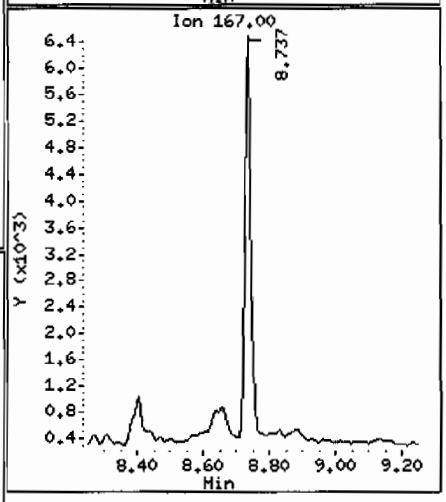

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042

Instrument: MSD2.i

Sample Info: |2324280141881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 214 ug/Kg

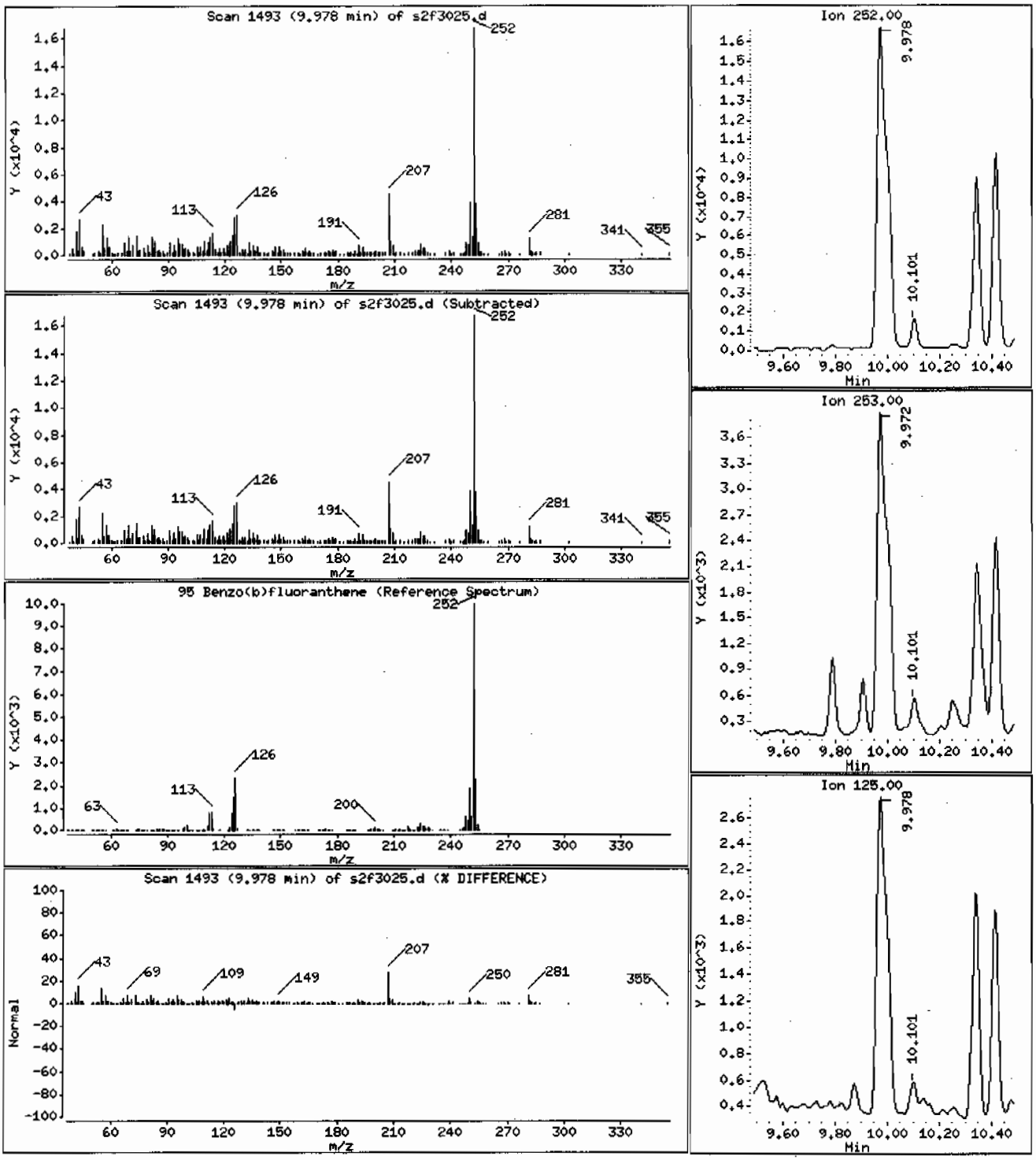

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042

Instrument: MSD2.i

Sample Info: |2324280141881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 103 ug/Kg

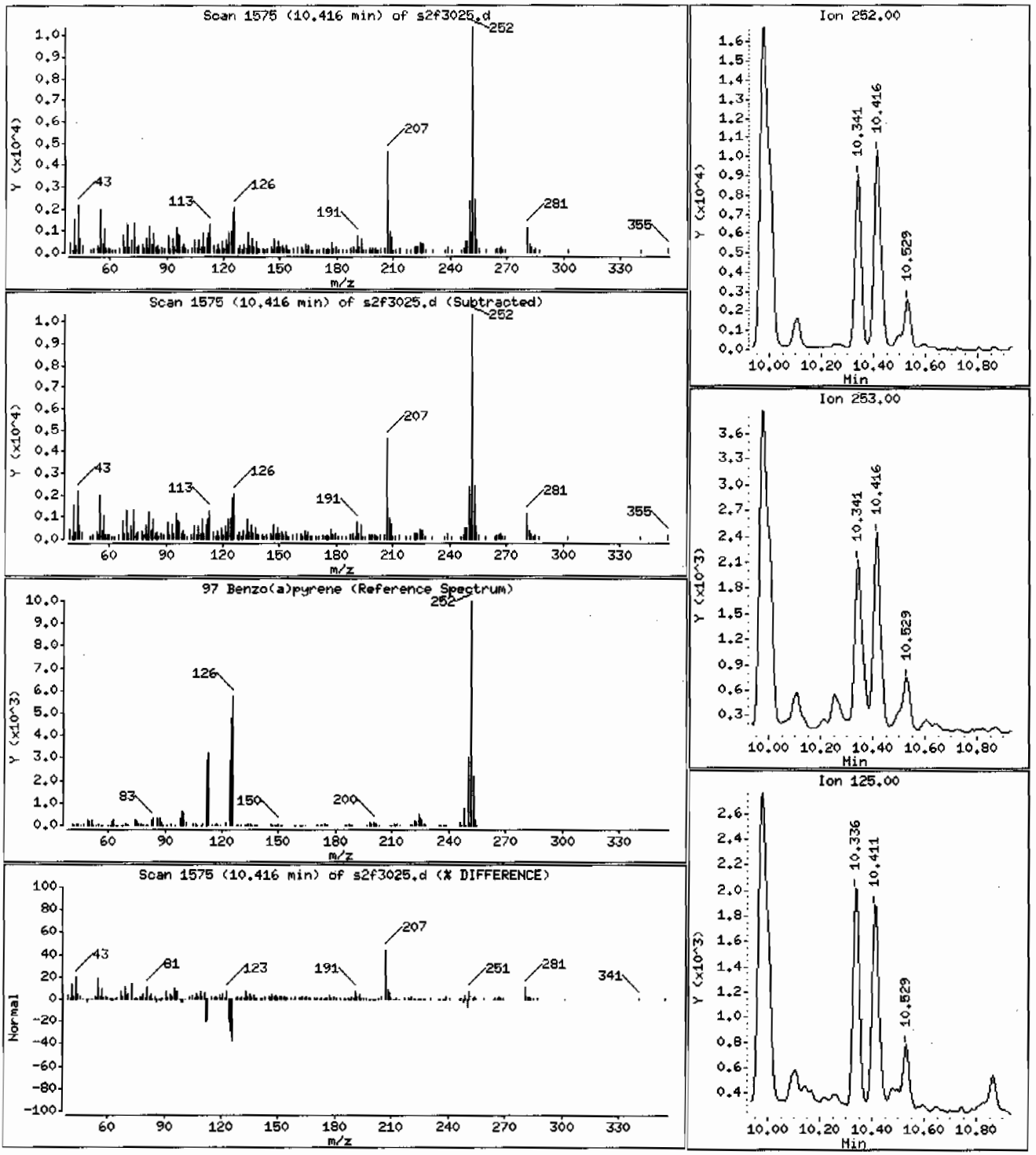

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042 Instrument: MSD2.i

Sample Info: |232428014|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 58.6 ug/Kg

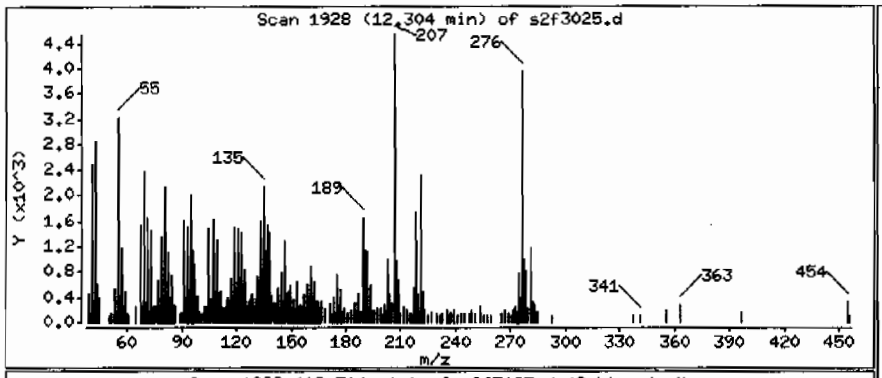

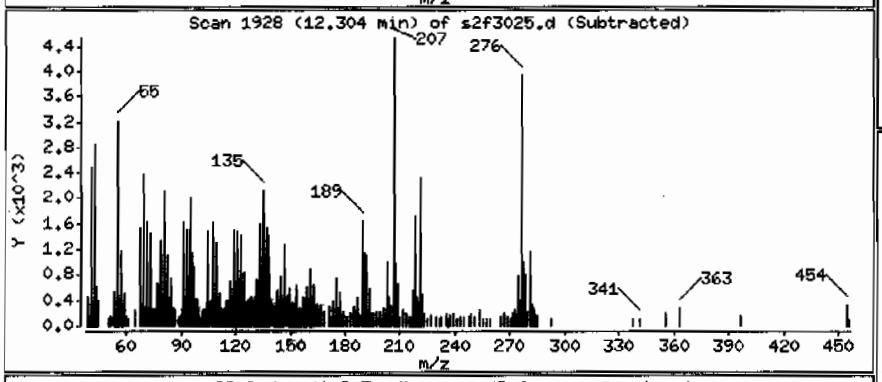

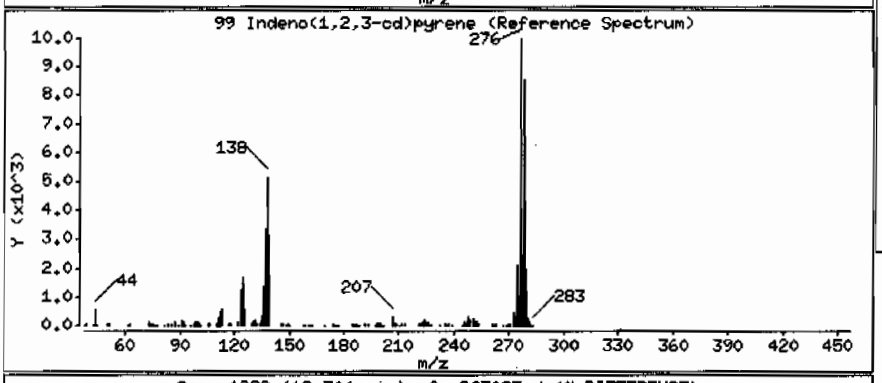

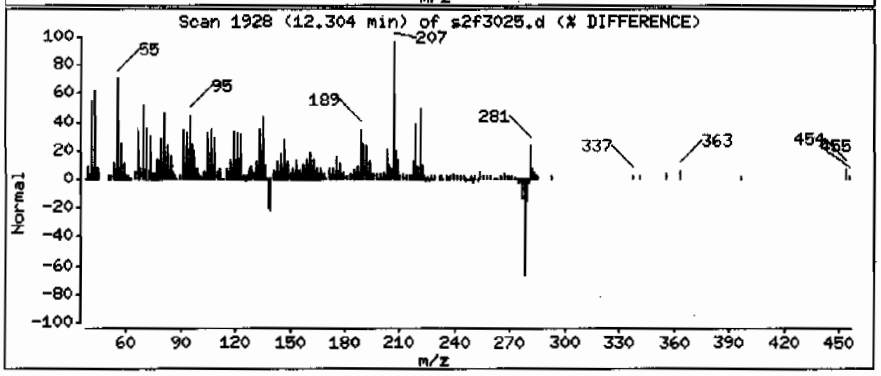

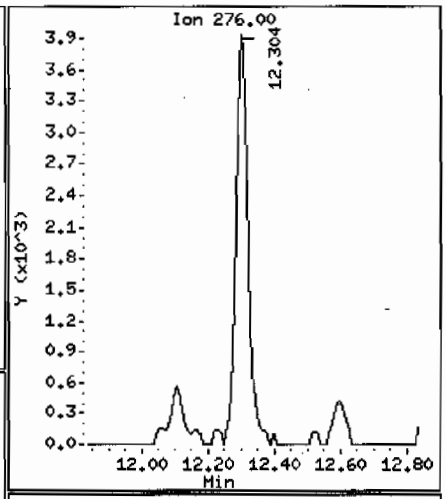

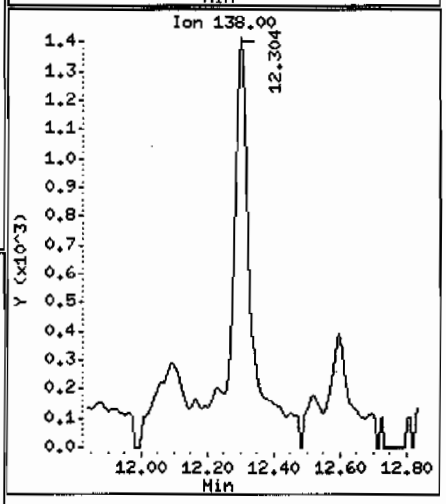

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042

Instrument: MSD2.i

Sample Info: |2324280141881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

100 Dibenzo(a,h)anthracene

Concentration: 18.8 ug/Kg

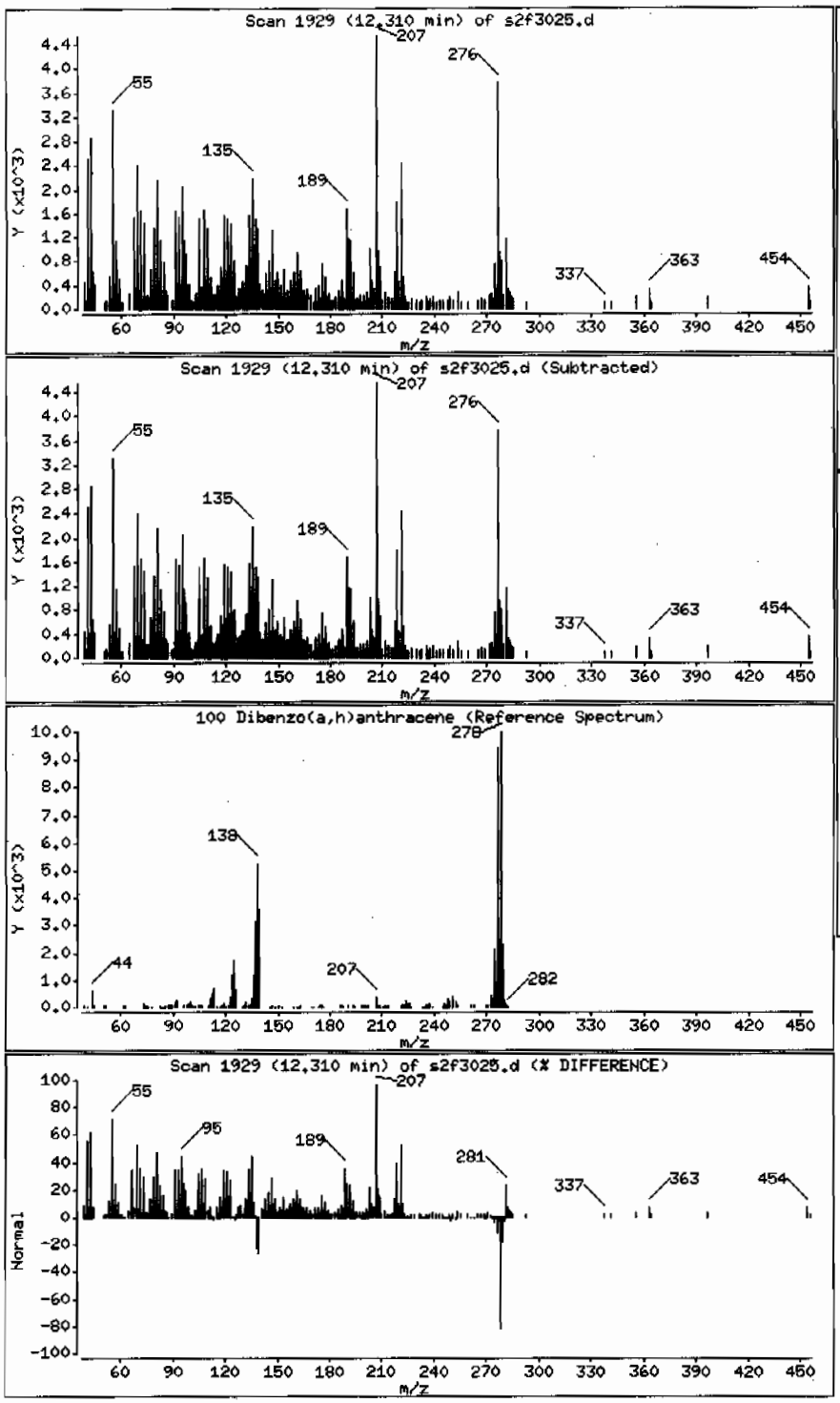

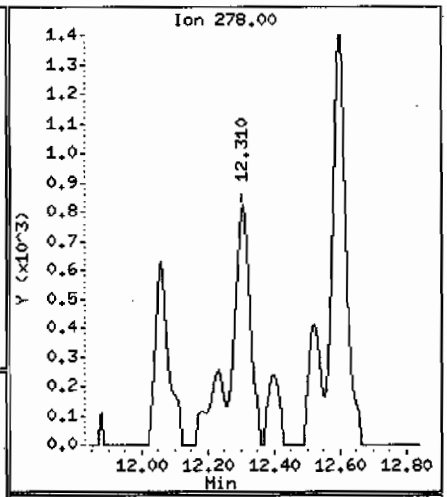

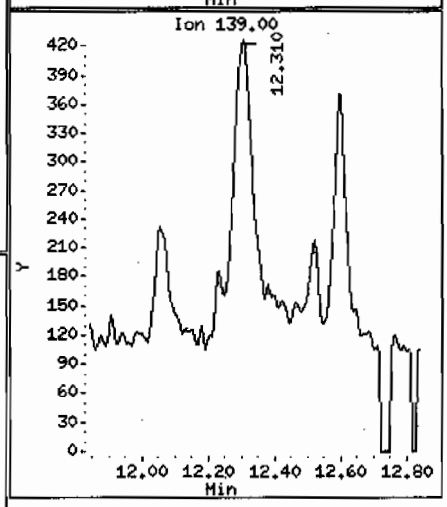

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAHO-09-6042

Instrument: MSD2.i

Sample Info: 1232428014188131911|SVMF1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 60.1 ug/Kg

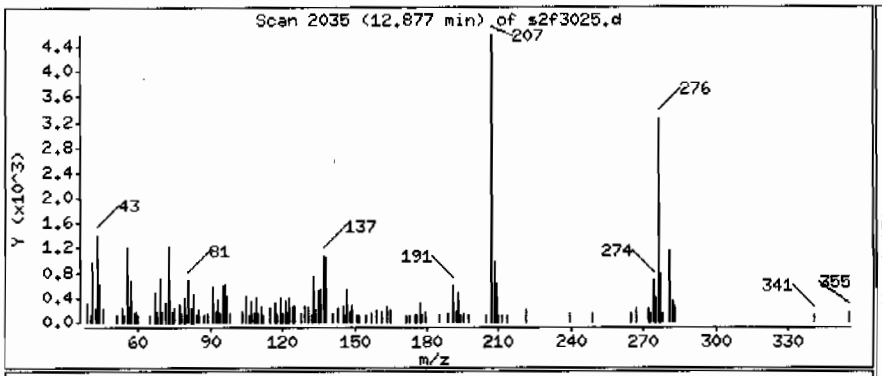

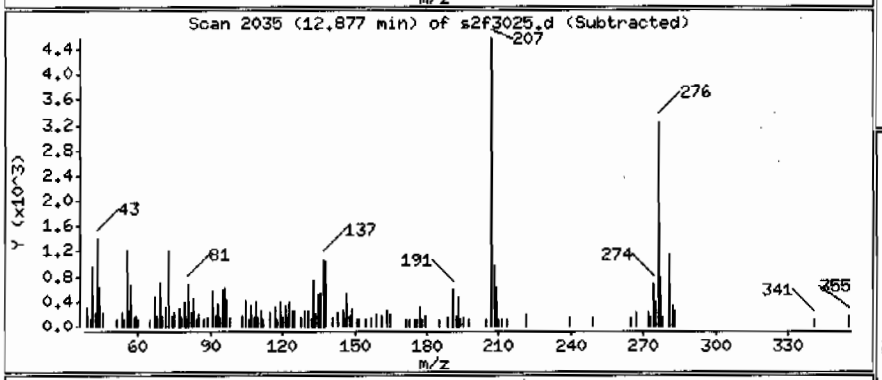

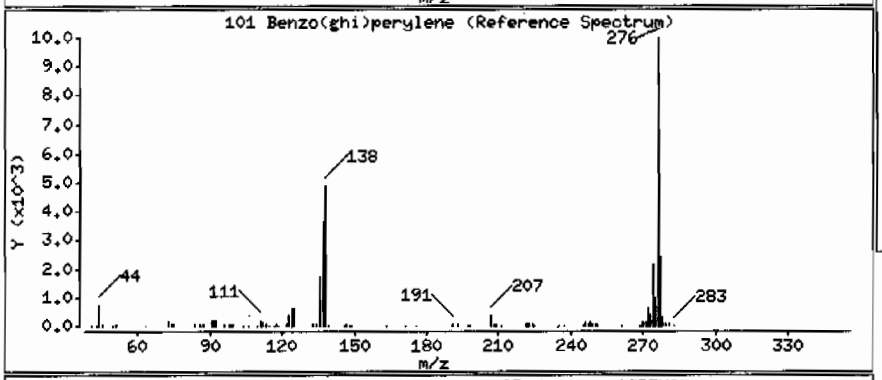

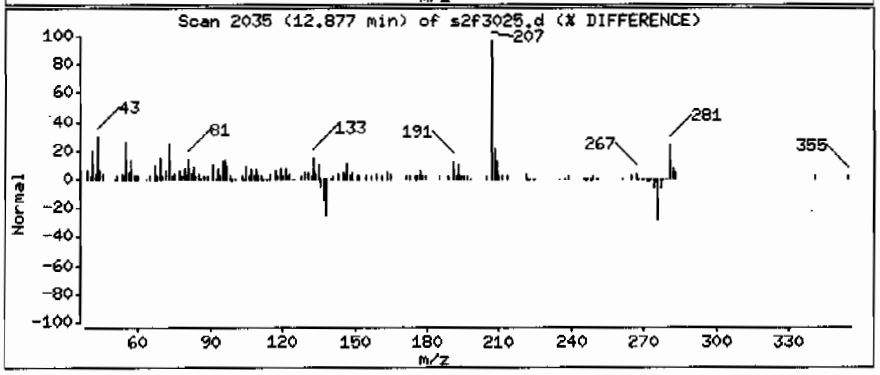

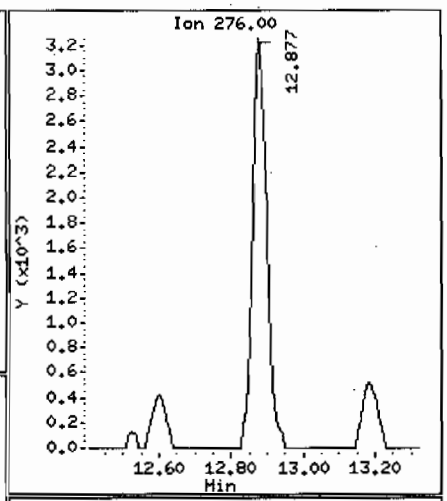

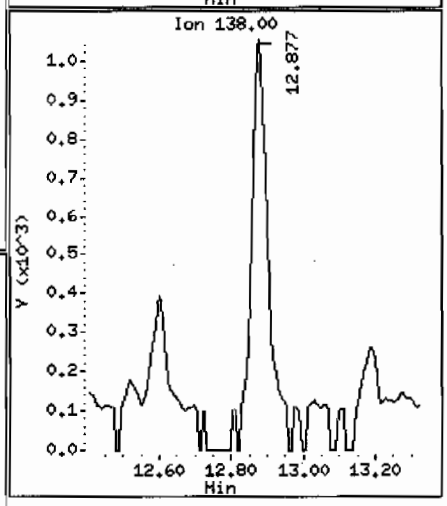

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042

Instrument: MSD2.i

Sample Info: |2324280141881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, cyano-, 1,1-dimethylethyl e	1116-98-9	NIST05.L	18291	25	C7H11NO2	141

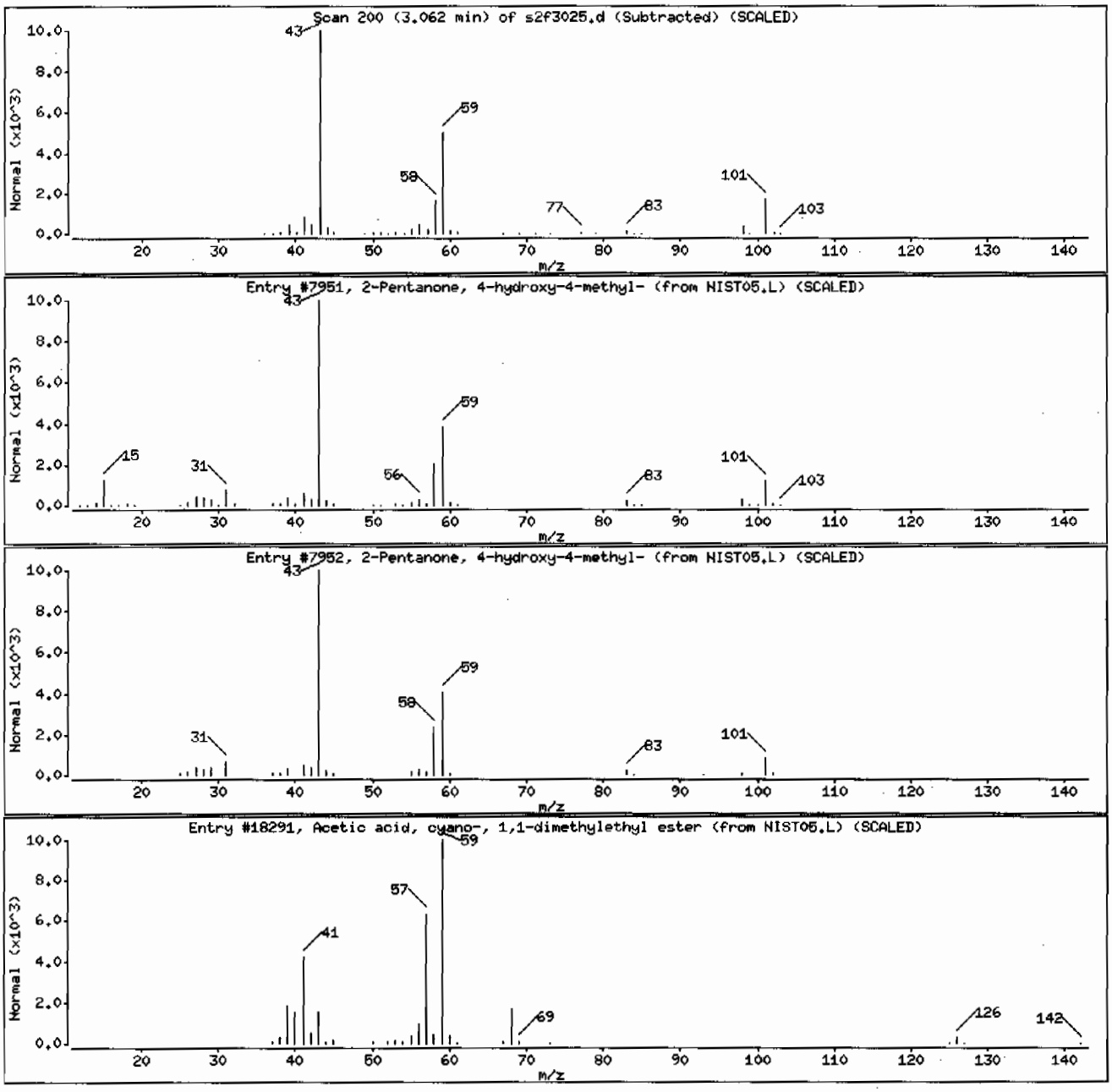

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042

Instrument: MSD2.i

Sample Info: |2324280141881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60046	96	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	10219-75-7	NIST05.L	60051	95	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60047	95	C15H24	204

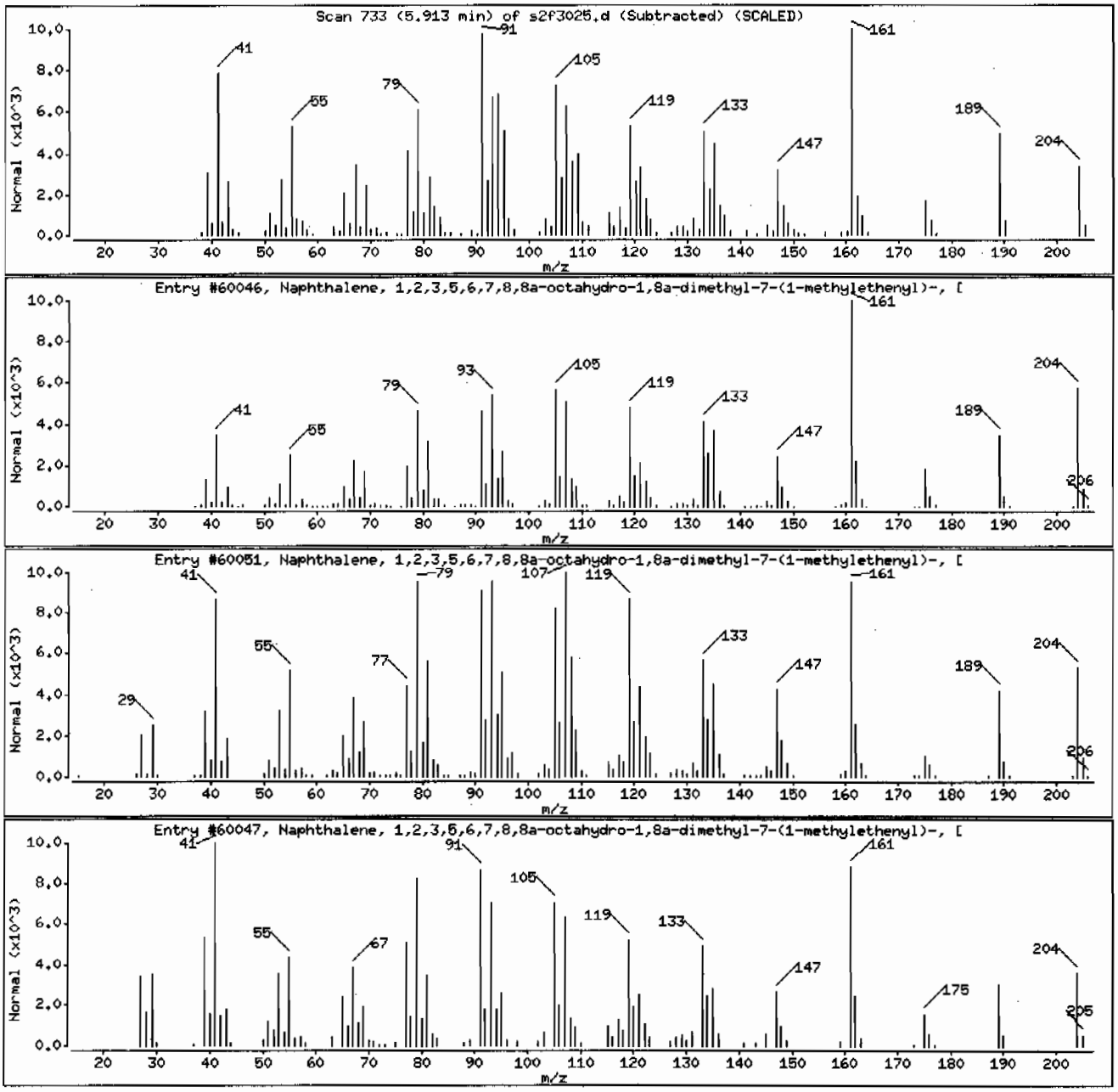

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042 Instrument: MSD2.i

Sample Info: 1232428014188131911ISVMF11LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	95	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	5155-70-4	NIST05.L	125035	91	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125036	89	C20H28O2	300

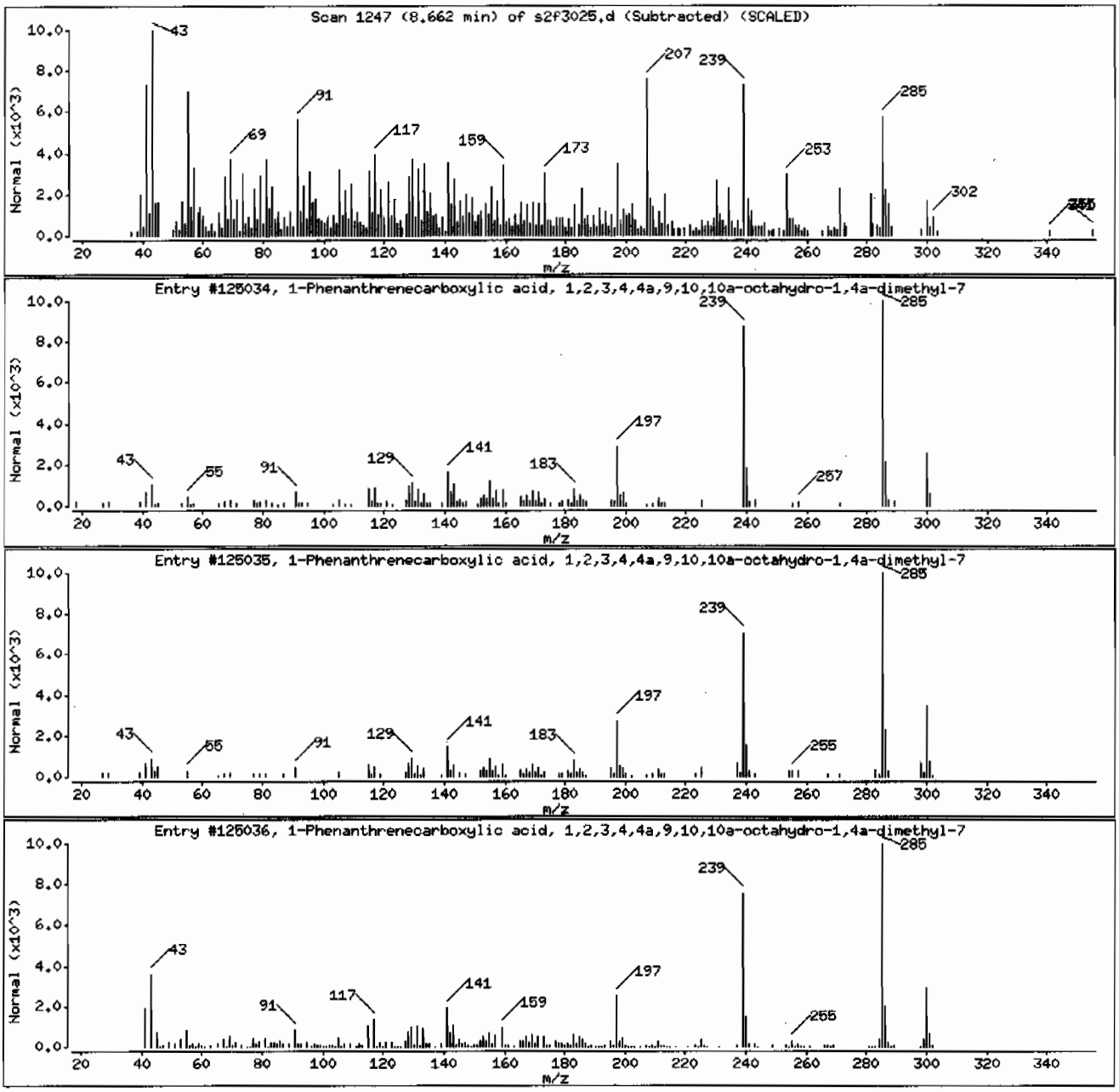

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042 Instrument: MSD2.i

Sample Info: 1232428014|881319|1|SWMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,6-Octadiene, 5,7-dimethyl-, (R)-	85006-04-8	NIST05.L	16379	60	C10H18	138
Cyclohexane, 1,1'-(2-methyl-1,3-propaned	2883-08-1	NIST05.L	73082	49	C16H30	222
1-Heptadecene	6765-39-5	NIST05.L	84041	46	C17H34	238

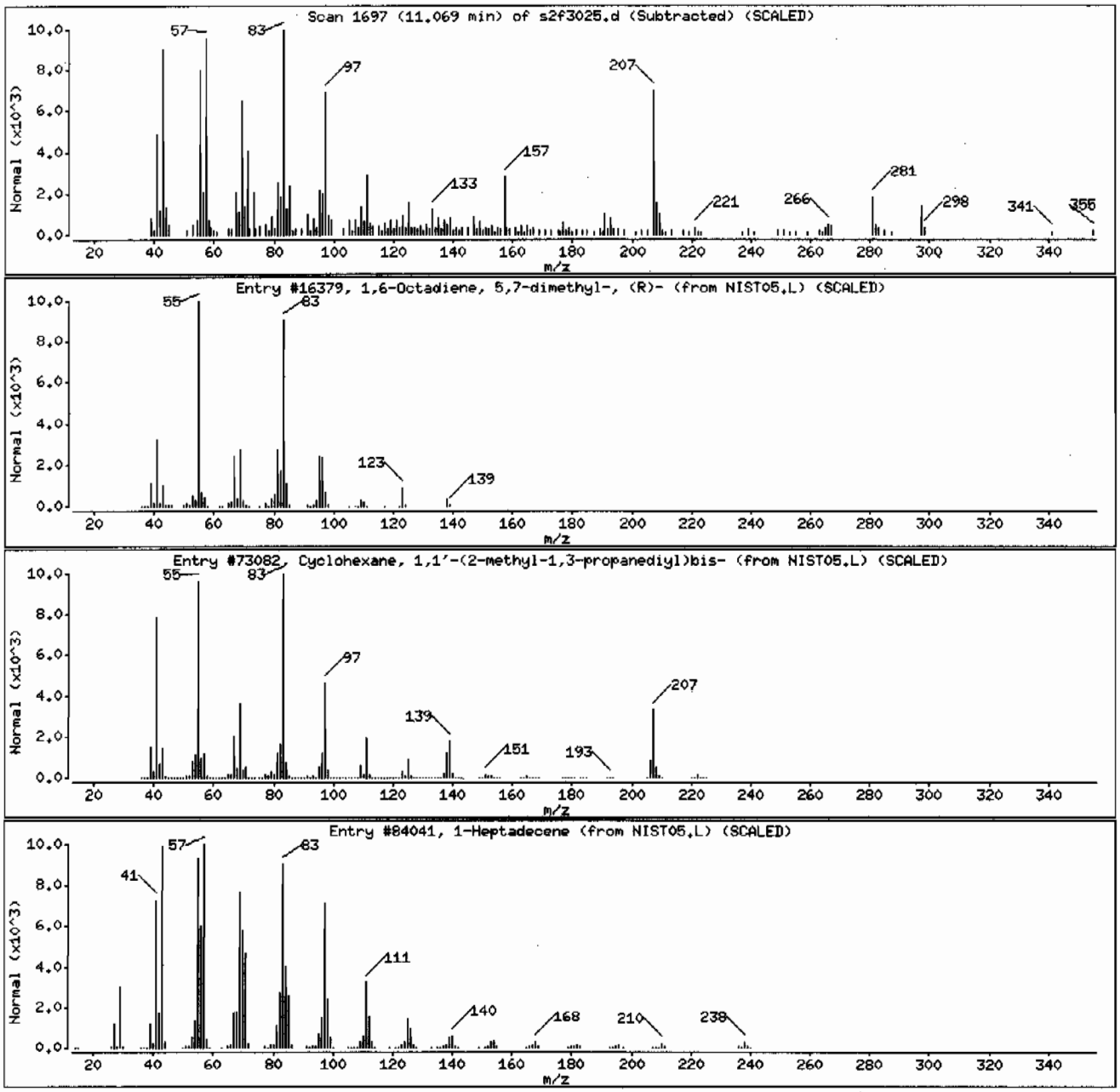

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042

Instrument: MSD2.i

Sample Info: |2324280141881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Benzo[h]quinoline, 2,4-dimethyl-	605-67-4	NIST05.L	62243	38	C15H13N	207
1-Dimethyl(phenyl)silyloxypentane	1000280-41-7	NIST05.L	72668	35	C13H22OSi	222
2-Ethylacridine	55751-83-2	NIST05.L	62222	30	C15H13N	207

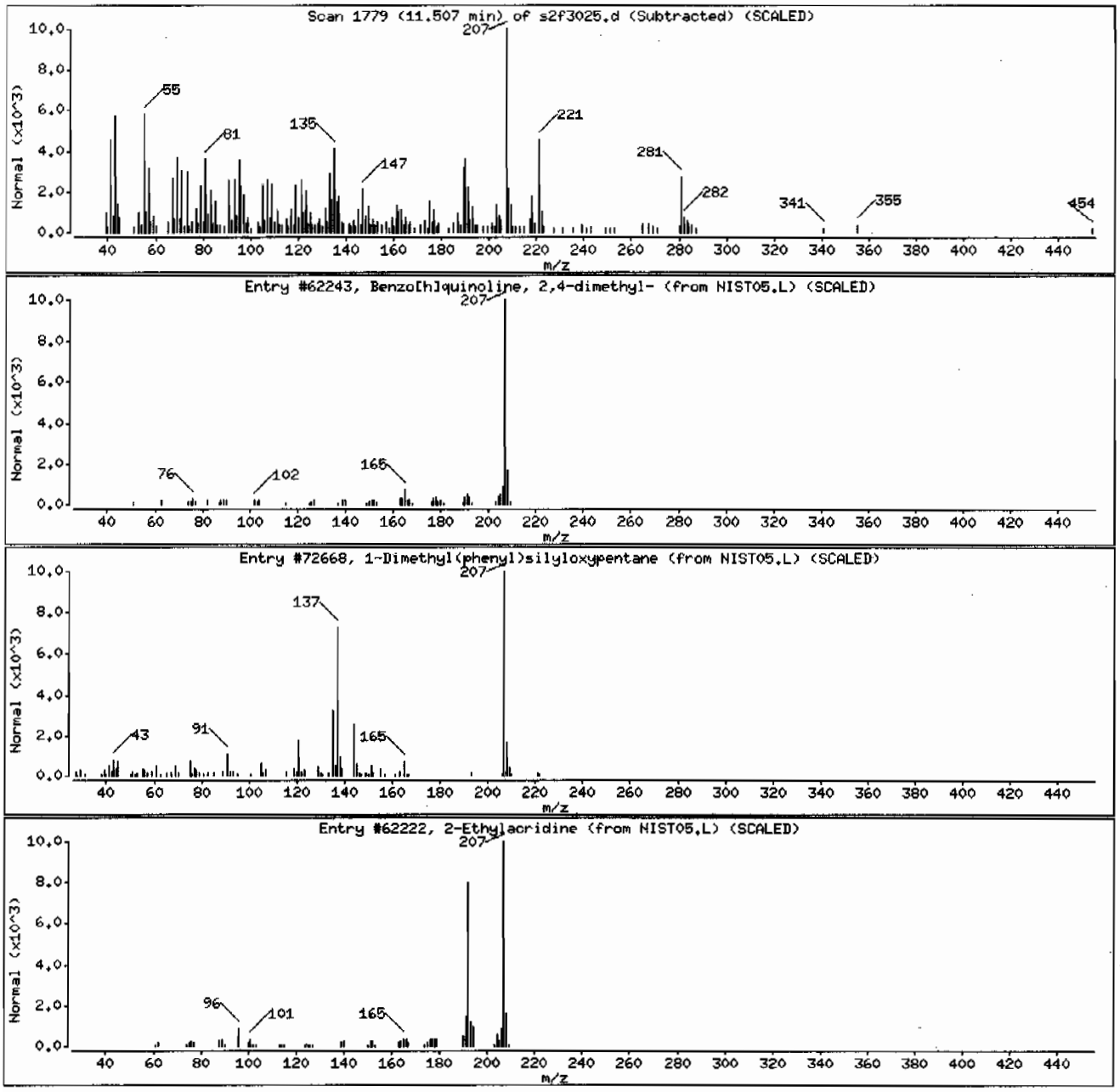

Data File: /chem/MSD2.i/s063009.b/s2f3025.d

Date : 30-JUN-2009 23:52

Client ID: CAMO-09-6042 Instrument: MSD2.i

Sample Info: |2324280141881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Ethylacridine	55751-83-2	NIST05.L	62222	46	C15H13N	207
Benzo[h]quinoline, 2,4-dimethyl-	605-67-4	NIST05.L	62243	46	C15H13N	207
Silane, 1,4-phenylenebis[trimethyl-	13183-70-5	NIST05.L	72522	43	C12H22Si2	222

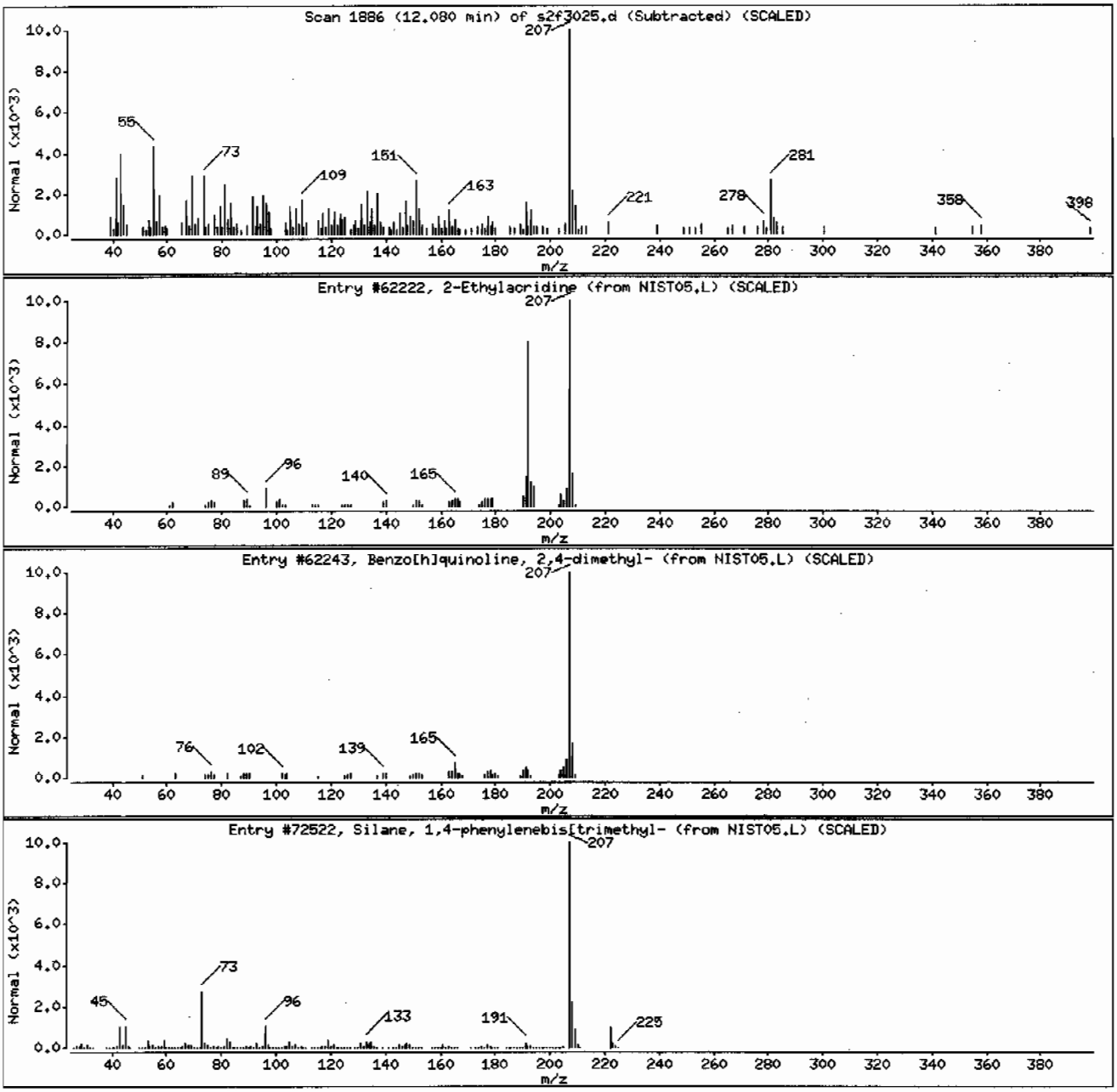

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428006	**Date Received:**	06/26/2009 08:40	**%Moisture:**	7.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6043	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:13	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s2f3017.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	360	ug/kg	71.9	360
108-95-2	Phenol	U	360	ug/kg	71.9	360
95-57-8	2-Chlorophenol	U	360	ug/kg	71.9	360
106-46-7	1,4-Dichlorobenzene	U	360	ug/kg	71.9	360
621-64-7	N-Nitrosodipropylamine	U	360	ug/kg	71.9	360
59-50-7	4-Chloro-3-methylphenol	U	360	ug/kg	36.0	360
83-32-9	Acenaphthene	U	36.0	ug/kg	12.0	36.0
121-14-2	2,4-Dinitrotoluene	U	360	ug/kg	36.0	360
100-02-7	4-Nitrophenol	U	360	ug/kg	71.9	360
87-86-5	Pentachlorophenol	U	360	ug/kg	71.9	360
129-00-0	Pyrene		89.5	ug/kg	11.3	36.0
110-86-1	Pyridine	U	360	ug/kg	71.9	360
62-53-3	Aniline	U	360	ug/kg	126	360
111-44-4	bis(2-Chloroethyl) ether	U	360	ug/kg	71.9	360
541-73-1	1,3-Dichlorobenzene	U	360	ug/kg	71.9	360
100-51-6	Benzyl alcohol	U	360	ug/kg	108	360
95-50-1	1,2-Dichlorobenzene	U	360	ug/kg	71.9	360
108-60-1	bis(2-Chloroisopropyl)ether	U	360	ug/kg	71.9	360
95-48-7	o-Cresol	U	360	ug/kg	71.9	360
65794-96-9	m,p-Cresols	U	360	ug/kg	144	360
67-72-1	Hexachloroethane	U	360	ug/kg	71.9	360
98-95-3	Nitrobenzene	U	360	ug/kg	71.9	360
78-59-1	Isophorone	U	360	ug/kg	71.9	360
88-75-5	2-Nitrophenol	U	360	ug/kg	36.0	360
105-67-9	2,4-Dimethylphenol	U	360	ug/kg	71.9	360
111-91-1	bis(2-Chloroethoxy)methane	U	360	ug/kg	71.9	360
120-83-2	2,4-Dichlorophenol	U	360	ug/kg	71.9	360
65-85-0	Benzoic acid	U	719	ug/kg	180	719
91-20-3	Naphthalene	U	36.0	ug/kg	10.8	36.0
106-47-8	4-Chloroaniline	U	360	ug/kg	71.9	360
87-68-3	Hexachlorobutadiene	U	360	ug/kg	71.9	360
91-57-6	2-Methylnaphthalene	U	36.0	ug/kg	7.19	36.0
77-47-4	Hexachlorocyclopentadiene	U	360	ug/kg	71.9	360
88-06-2	2,4,6-Trichlorophenol	U	360	ug/kg	71.9	360
95-95-4	2,4,5-Trichlorophenol	U	360	ug/kg	71.9	360
91-58-7	2-Chloronaphthalene	U	36.0	ug/kg	12.6	36.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	360	ug/kg	71.9	360
99-09-2	3-Nitroaniline	U	360	ug/kg	71.9	360

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428006	Date Received:	06/26/2009 08:40	%Moisture:	7.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6043	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 21:13	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.17 g	Final Volume:	1 mL
Data File:	s2f3017.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	360	ug/kg	71.9	360
606-20-2	2,6-Dinitrotoluene	U	360	ug/kg	36.0	360
208-96-8	Acenaphthylene	U	36.0	ug/kg	10.8	36.0
51-28-5	2,4-Dinitrophenol	U	719	ug/kg	137	719
132-64-9	Dibenzofuran	U	360	ug/kg	71.9	360
84-66-2	Diethylphthalate	U	360	ug/kg	71.9	360
86-73-7	Fluorene	U	36.0	ug/kg	10.8	36.0
7005-72-3	4-Chlorophenylphenylether	U	360	ug/kg	36.0	360
534-52-1	2-Methyl-4,6-dinitrophenol	U	360	ug/kg	71.9	360
100-01-6	4-Nitroaniline	U	360	ug/kg	71.9	360
	p-Nitroaniline					
122-39-4	Diphenylamine	U	360	ug/kg	71.9	360
122-66-7	Azobenzene	U	360	ug/kg	71.9	360
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	360	ug/kg	36.0	360
118-74-1	Hexachlorobenzene	U	360	ug/kg	71.9	360
85-01-8	Phenanthrene	J	31.8	ug/kg	10.8	36.0
120-12-7	Anthracene	U	36.0	ug/kg	7.19	36.0
84-74-2	Di-n-butylphthalate	U	360	ug/kg	36.0	360
206-44-0	Fluoranthene		110	ug/kg	10.8	36.0
85-68-7	Butylbenzylphthalate	U	360	ug/kg	71.9	360
56-55-3	Benzo(a)anthracene		38.4	ug/kg	10.8	36.0
91-94-1	3,3'-Dichlorobenzidine	U	360	ug/kg	108	360
218-01-9	Chrysene		57.9	ug/kg	10.8	36.0
117-81-7	bis(2-Ethylhexyl)phthalate	J	89.3	ug/kg	71.9	360
117-84-0	Di-n-octylphthalate	U	360	ug/kg	71.9	360
205-99-2	Benzo(b)fluoranthene		101	ug/kg	10.8	36.0
207-08-9	Benzo(k)fluoranthene	U	36.0	ug/kg	10.8	36.0
50-32-8	Benzo(a)pyrene		49.5	ug/kg	10.8	36.0
193-39-5	Indeno(1,2,3-cd)pyrene	J	30.1	ug/kg	10.8	36.0
53-70-3	Dibenzo(a,h)anthracene	U	36.0	ug/kg	10.8	36.0
191-24-2	Benzo(ghi)perylene	J	31.0	ug/kg	10.8	36.0
120-82-1	1,2,4-Trichlorobenzene	U	360	ug/kg	71.9	360

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	273	ug/kg		J
	Unknown	9.53	387	ug/kg		J

GEL Laboratories LLC

GEL Laboratories, LLC

Data file : /chem/MSD2.i/s063009.b/s2f3017.d
Lab Smp Id: 232428006 Client Smp ID: CAMO-09-6043
Inj Date : 30-JUN-2009 21:13
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428006|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.17000	weight of sample
M	7.85400	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.052	4.051	(1.000)	121278	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	454743	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	260007	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	457469	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	379016	40.0000	
* 98 Perylene-d12	264	10.491	10.507	(1.000)	282636	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	163360	48.6783	1750
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	202931	48.9682	1760
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	82098	23.9286	861
$ 39 2-Fluorobiphenyl	172	5.662	5.667	(0.918)	197170	26.8503	966
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	57133	64.1560	2310
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	234970	36.3969	1310

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.026	8.031	(0.904)	28069	2.48782	89.5
68 Phenanthrene	178	7.164	7.170	(1.002)	9628	0.88383	31.8(a)
76 Fluoranthene	202	7.876	7.886	(1.102)	30628	3.05633	110
89 Benzo(a)anthracene	228	8.871	8.881	(0.999)	9852	1.06836	38.4
92 Chrysene	228	8.897	8.919	(1.002)	14326	1.60977	57.9
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.984)	17257	2.48200	89.3(a)
95 Benzo(b)fluoranthene	252	9.973	9.988	(0.951)	19131	2.81959	101
97 Benzo(a)pyrene	252	10.411	10.432	(0.992)	8159	1.37632	49.5
99 Indeno(1,2,3-cd)pyrene	276	12.299	12.337	(1.172)	4768	0.83728	30.1(a)
101 Benzo(ghi)perylene	276	12.871	12.903	(1.227)	4268	0.86319	31.0(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s2f3017.d
Report Date: 07/01/2009 07:56
Lab. ID: 232428006 SampleType: SAMPLE
Injection Date: 30-JUN-2009 21:13
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428006|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	8934	3.76	3.83	80-120	100	(T)
93	161	3.73	3.83	440-500	2	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	11004	4.41	4.29	80-120	100	(T)
42	6429	4.41	4.29	40-100	58	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	55804	6.17	5.94	80-120	100	(T)
164	260007	6.17	5.94	0- 40	466	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	33072	6.17	5.99	80-120	100	(T)
63	449	6.17	5.99	46-106	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	33155	6.17	6.27	80-120	100	(T)
89	437	6.17	6.27	38- 98	1	(QT)
63	449	6.17	6.27	16- 76	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	3406	6.69	6.54	80-120	100	(T)
165	3977	6.69	6.54	61-121	117	(T)
167	1178	6.69	6.54	0- 44	35	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	3121	6.70	6.84	80-120	100	(T)
141	23450	6.69	6.84	51-111	751	(QT)
250	6564	6.70	6.84	66-126	210	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	9628	7.16	7.17	80-120	100	( )
179	2891	7.16	7.17	0- 46	30	( )
176	1757	7.16	7.17	0- 49	18	( )
69 Anthracene				CAS#: 120-12-7		
178	9628	7.16	7.20	80-120	100	( )
179	2891	7.16	7.20	0- 46	30	( )
176	1757	7.16	7.20	0- 48	18	( )
76 Fluoranthene				CAS#: 206-44-0		
202	30628	7.88	7.89	80-120	100	( )
203	5411	7.88	7.89	0- 48	18	( )
101	4357	7.88	7.89	0- 45	14	( )
79 Pyrene				CAS#: 129-00-0		
202	28069	8.03	8.03	80-120	100	( )
200	5838	8.03	8.03	0- 51	21	( )
101	5263	8.02	8.03	0- 48	19	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	9852	8.87	8.88	80-120	100	( )
226	2673	8.87	8.88	0- 56	27	( )
229	2946	8.87	8.88	0- 50	30	( )
92 Chrysene				CAS#: 218-01-9		
228	14326	8.90	8.92	80-120	100	( )
229	3355	8.90	8.92	0- 50	23	( )
226	4317	8.90	8.92	0- 59	30	( )
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	17257	8.74	8.75	80-120	100	( )
167	6319	8.74	8.75	2- 62	37	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	19131	9.97	9.99	80-120	100	( )
253	4110	9.97	9.99	0- 52	21	( )
125	2909	9.97	9.99	0- 45	15	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	19131	9.97	10.02	80-120	100	( )
253	4110	9.97	10.02	0- 52	21	( )
125	2909	9.97	10.02	0- 44	15	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	8159	10.41	10.43	80-120	100	( )
253	2144	10.41	10.43	0- 52	26	( )
125	1249	10.41	10.43	0- 46	15	( )
99 Indeno(1,2,3-cd)pyrene			CAS#: 193-39-5			
276	4768	12.30	12.34	80-120	100	( )
138	2046	12.30	12.34	7- 67	43	( )
101 Benzo(ghi)perylene			CAS#: 191-24-2			
276	4268	12.87	12.90	80-120	100	( )
138	1822	12.87	12.90	4- 64	43	( )

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s063009.b/s2f3017.d
Lab Smp Id: 232428006 Client Smp ID: CAMO-09-6043
Inj Date : 30-JUN-2009 21:13
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428006|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.17000	weight of sample
M	7.85400	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.052	722187	40.000
* 91 Chrysene-d12	8.881	1307368	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.057	137005	7.58834573	273	0		0	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
9.529	352028	10.7705791	387	0		0	91

Data File: /chem/MSD2.i/s063009.b/s2f3017.d
Date : 30-JUN-2009 21:13
Client ID: CAMD-09-6043
Sample Info: 1232428006188131911ISVMF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: ACS1
Column diameter: 0.20

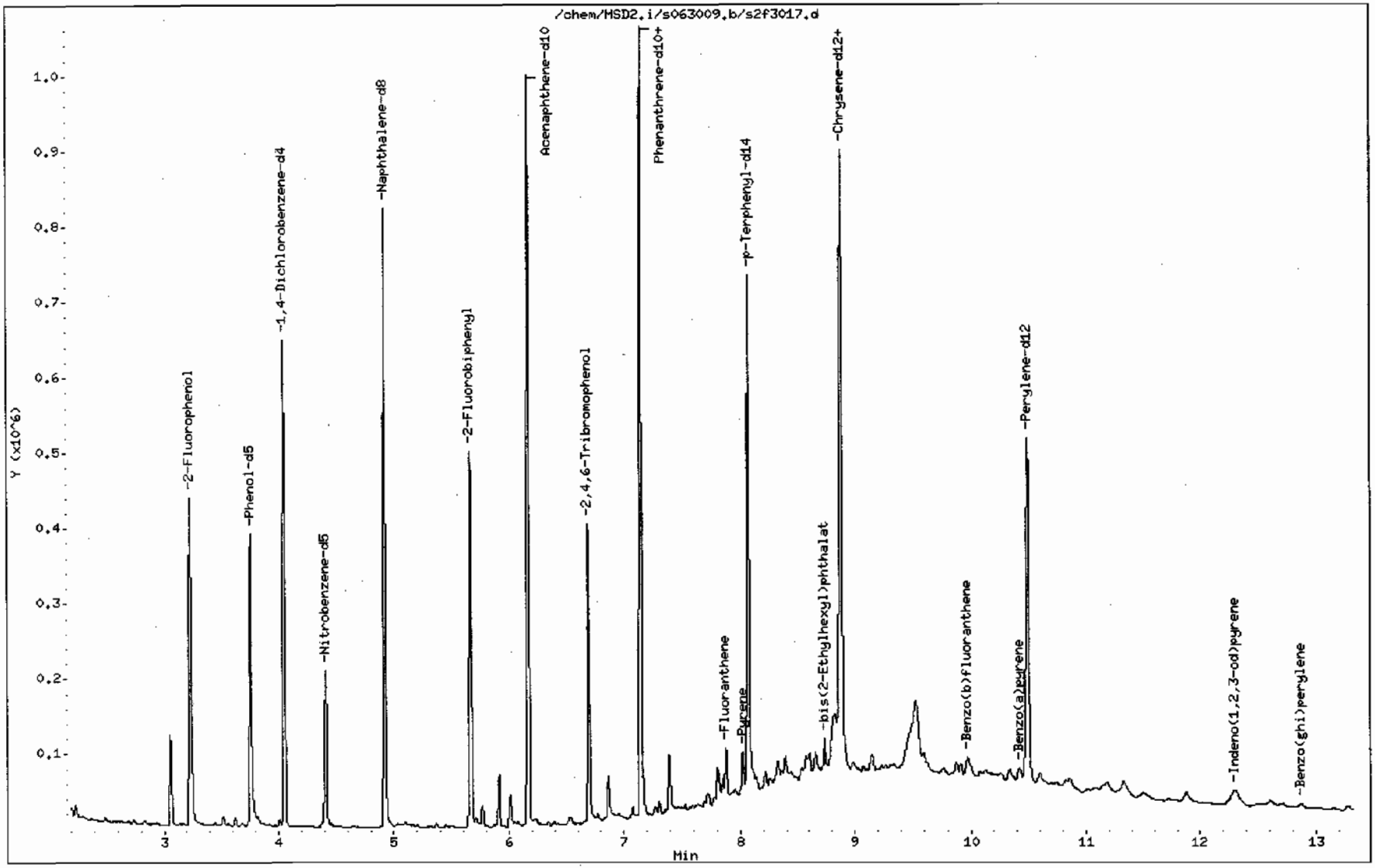

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043

Instrument: MSD2.i

Sample Info: 1232428006188131911ISVMFI11LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 89.5 ug/Kg

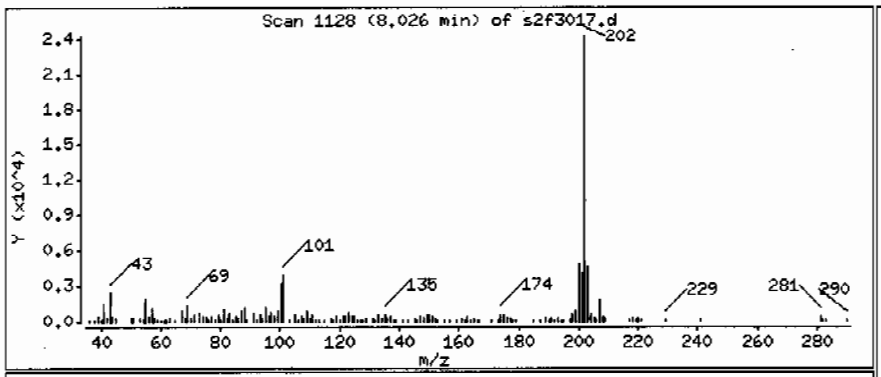

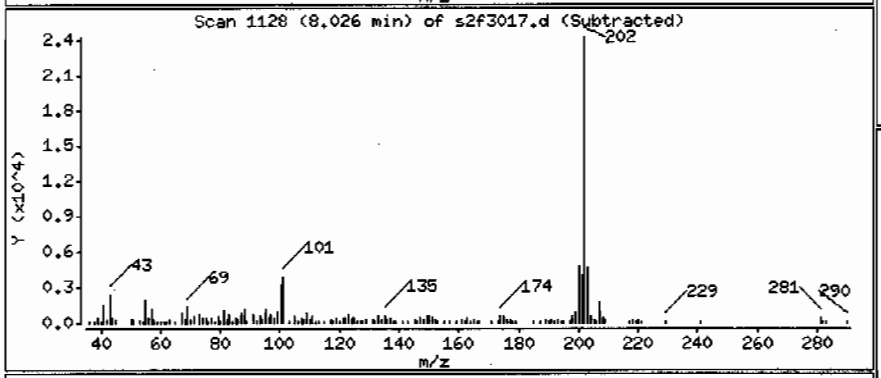

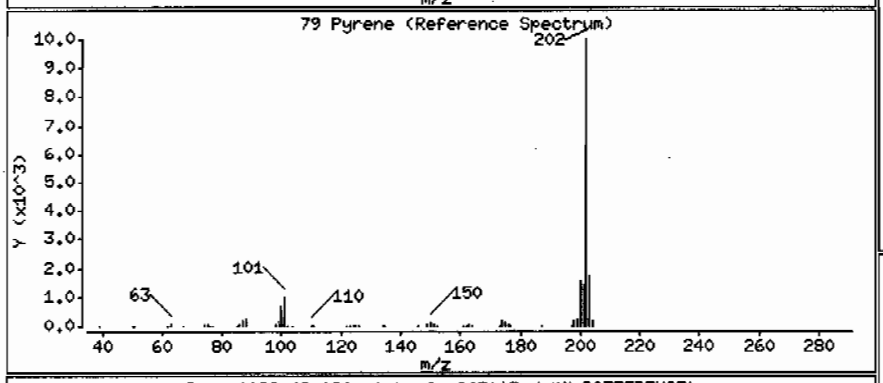

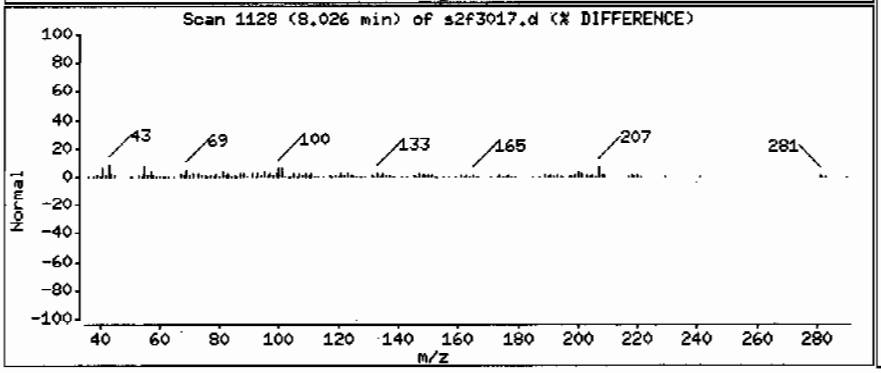

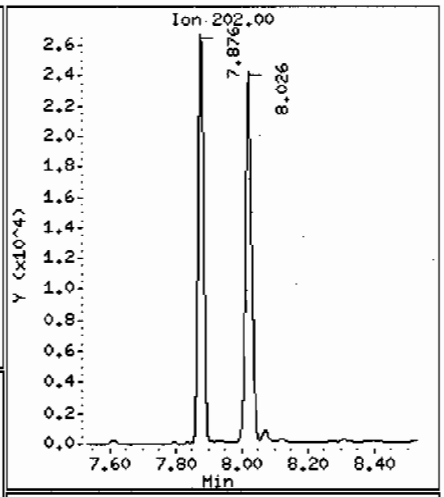

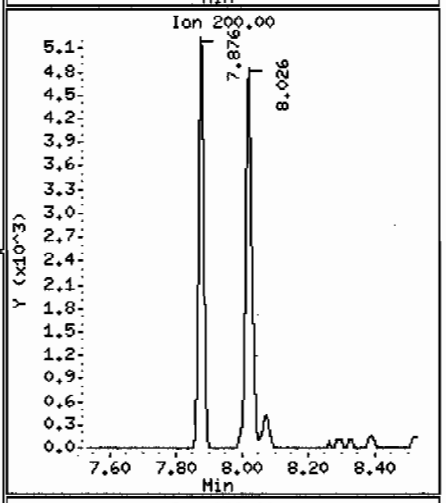

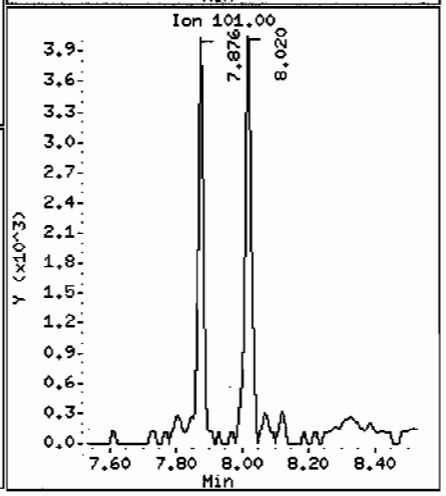

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAHO-09-6043

Instrument: MSD2.i

Sample Info: 1232428006188131911ISVMF11LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 31.8 ug/Kg

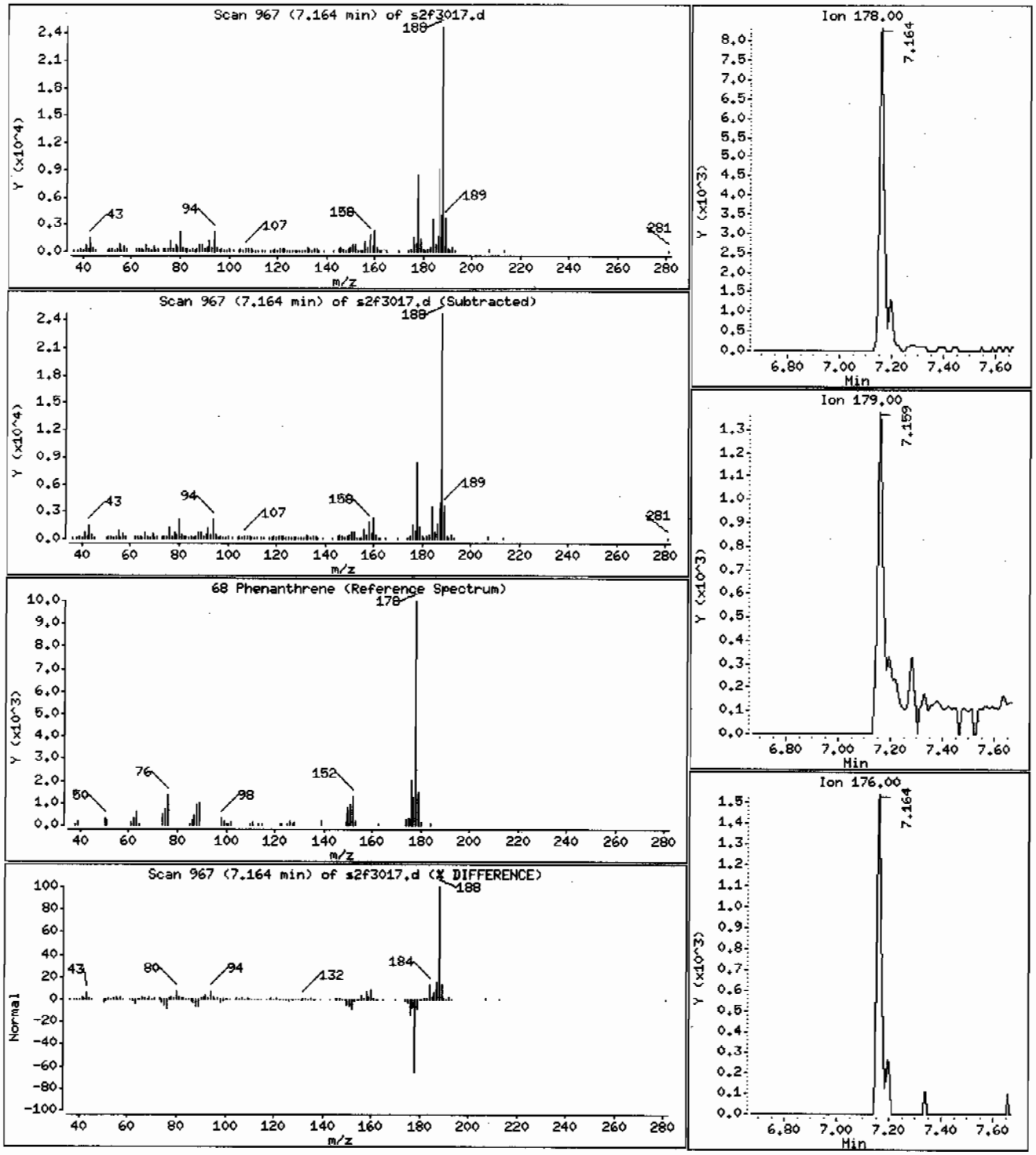

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043

Instrument: MSD2.i

Sample Info: 1232428006|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 110 ug/Kg

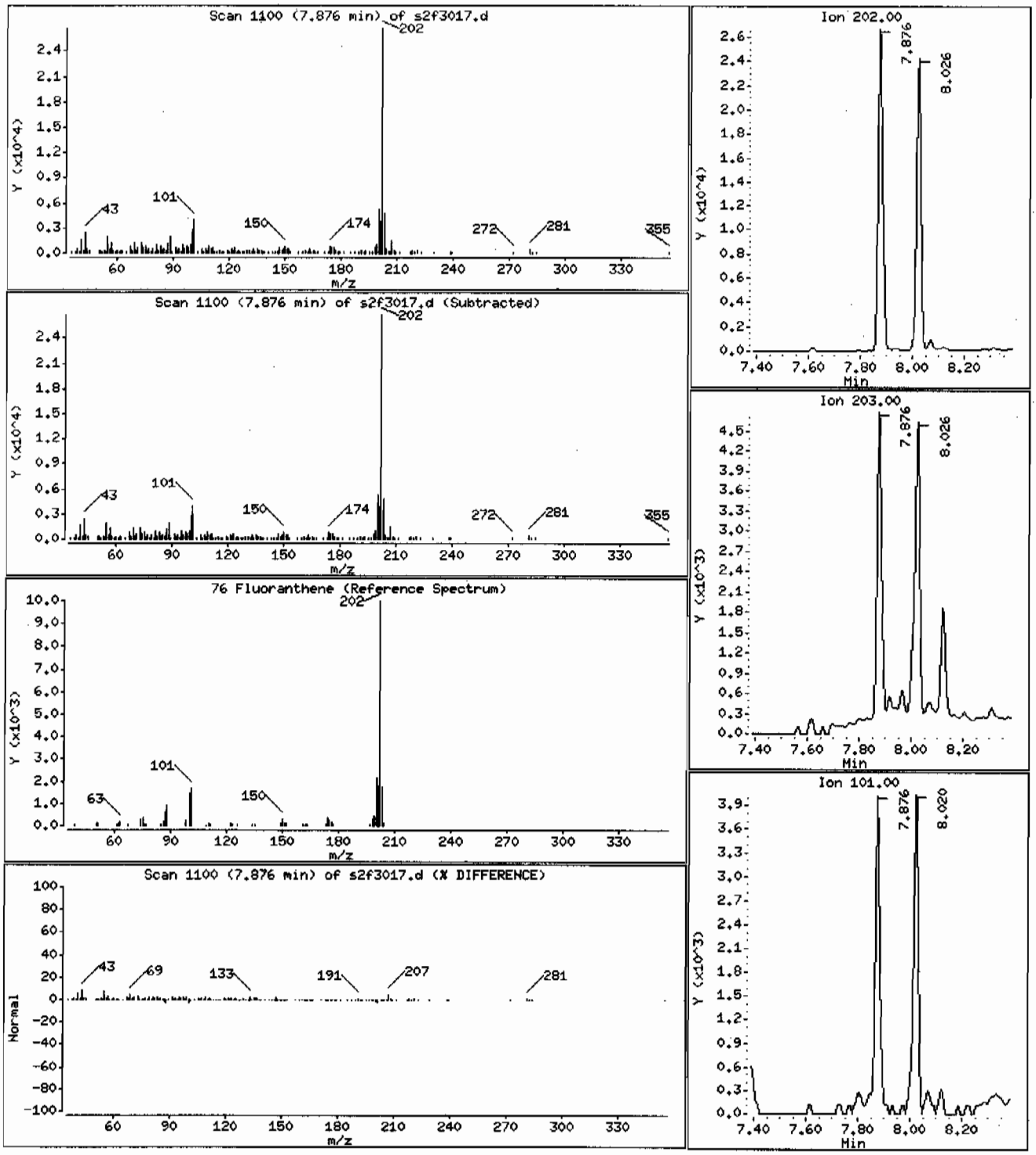

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043 Instrument: MSD2.i

Sample Info: 1232428006|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

89 Benzo(a)anthracene Concentration: 38.4 ug/Kg

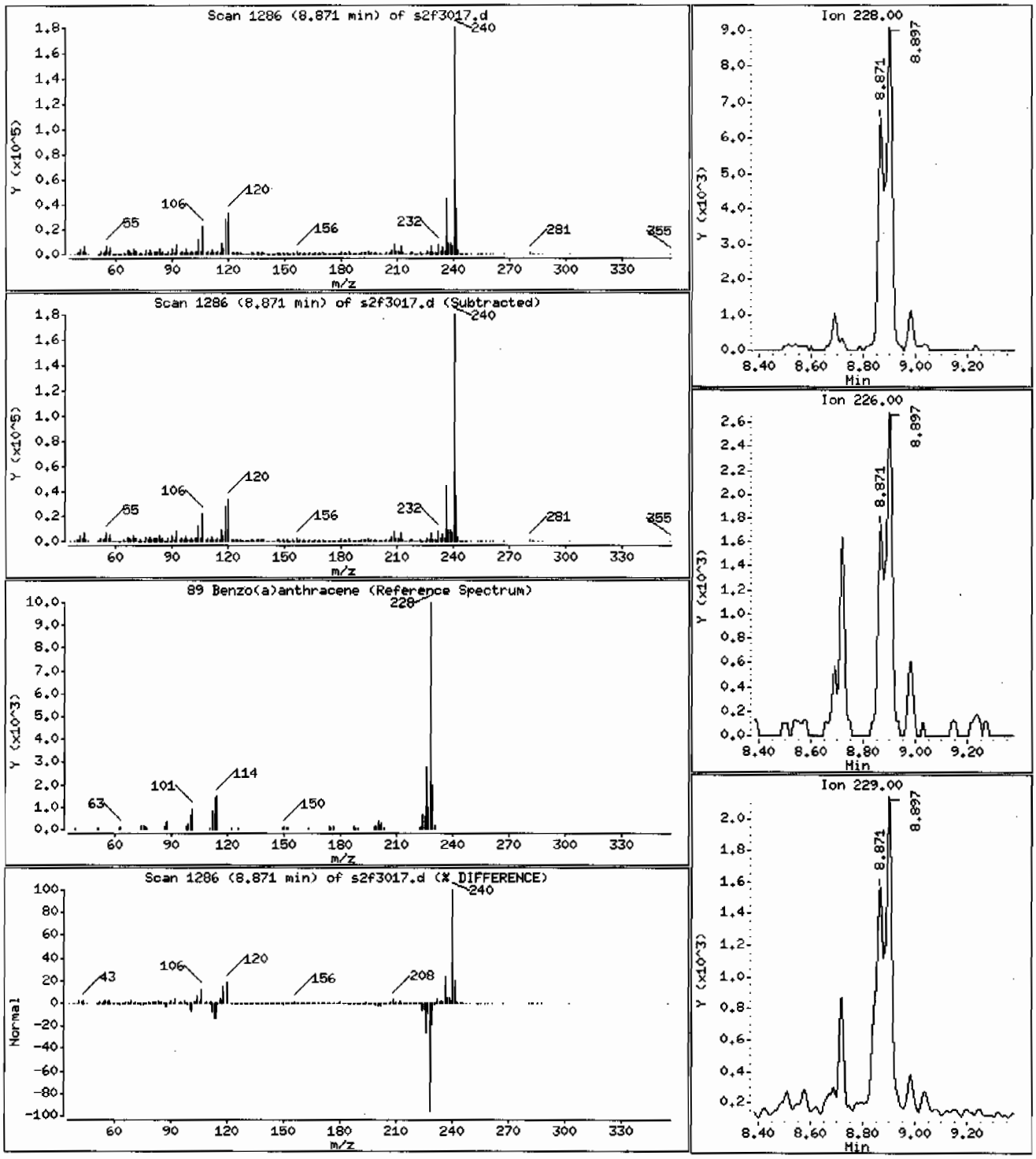

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043

Instrument: MSD2.i

Sample Info: |2324280061881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 57.9 ug/Kg

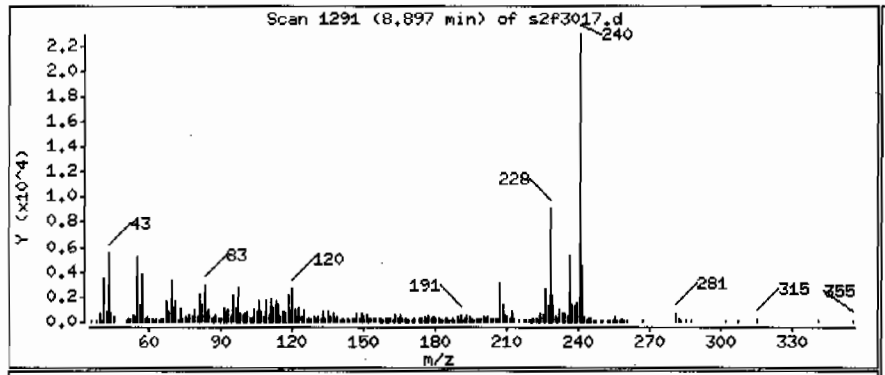

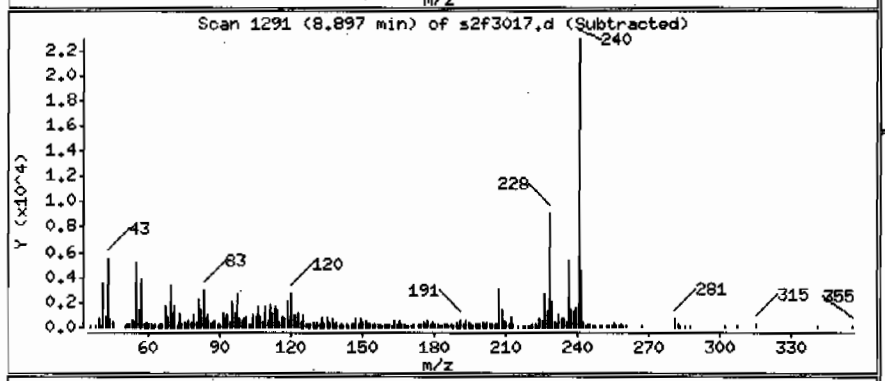

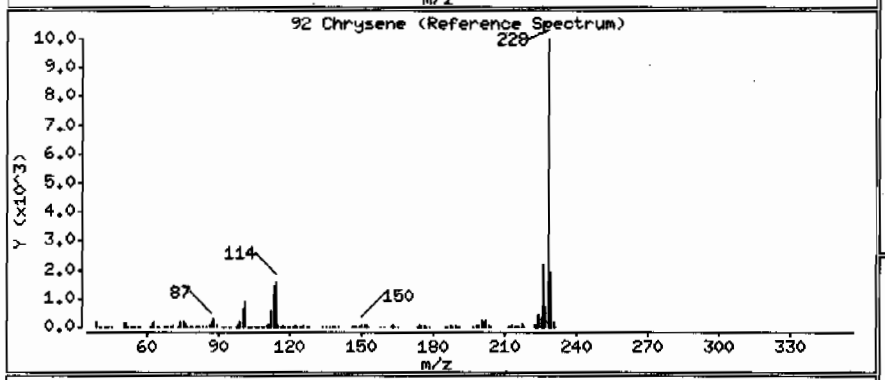

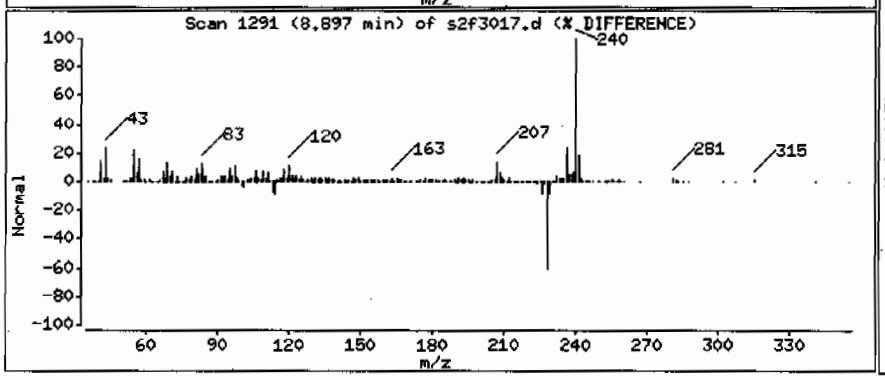

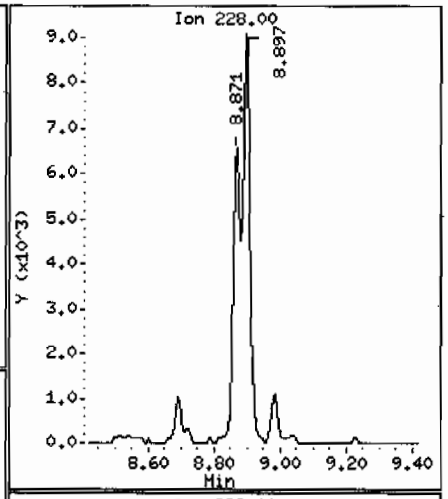

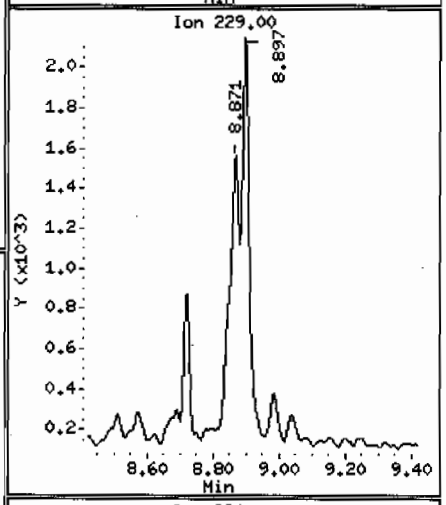

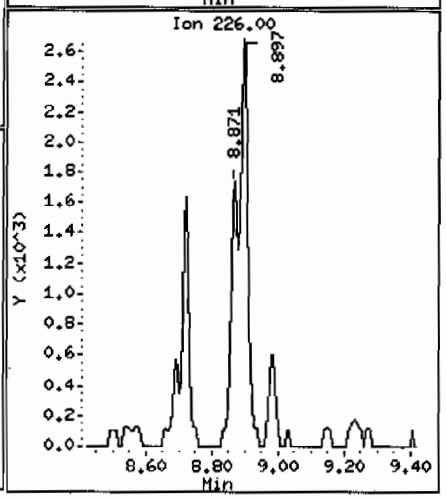

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043

Instrument: MSD2.i

Sample Info: |2324280061881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate

Concentration: 89.3 ug/Kg

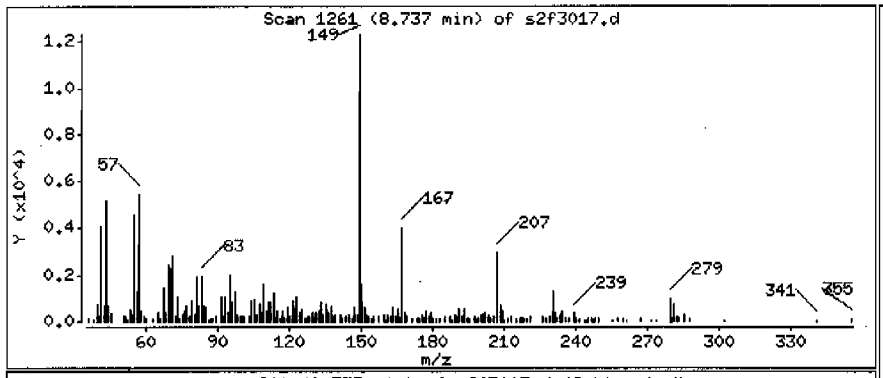

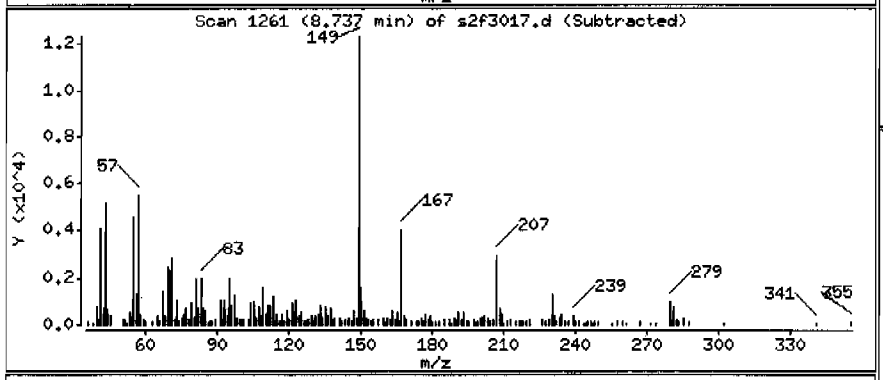

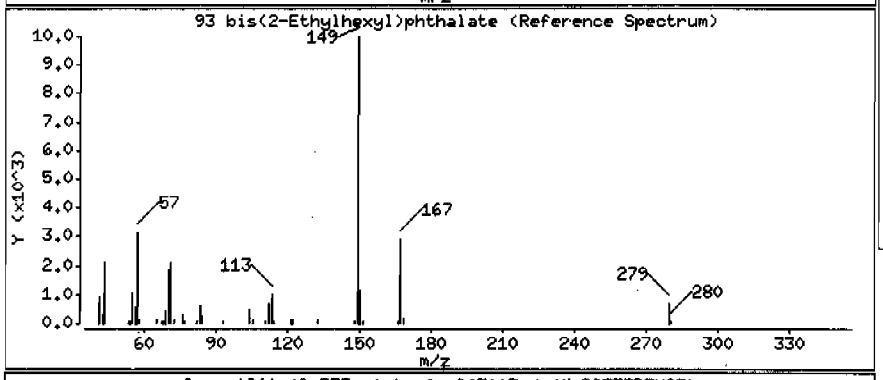

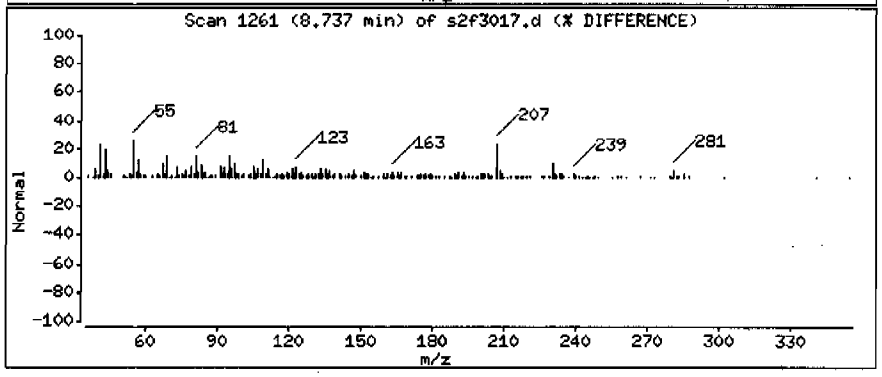

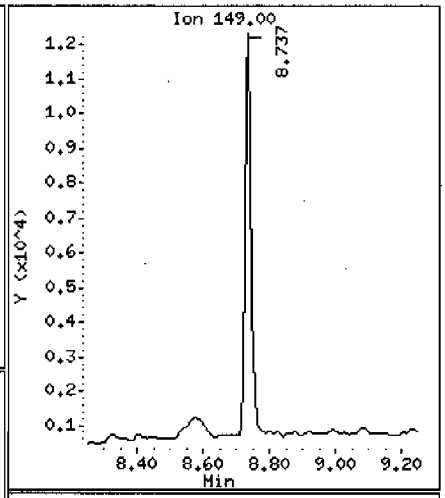

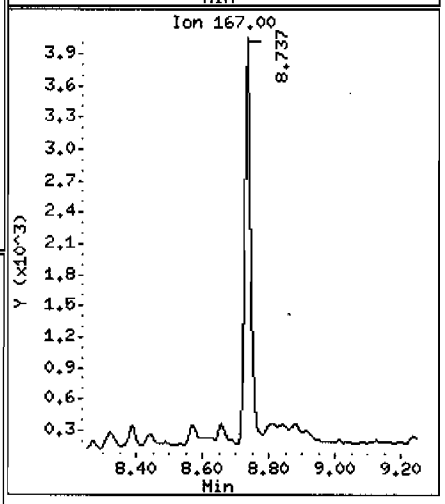

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043

Instrument: MSD2.i

Sample Info: |2324280061881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 101 ug/Kg

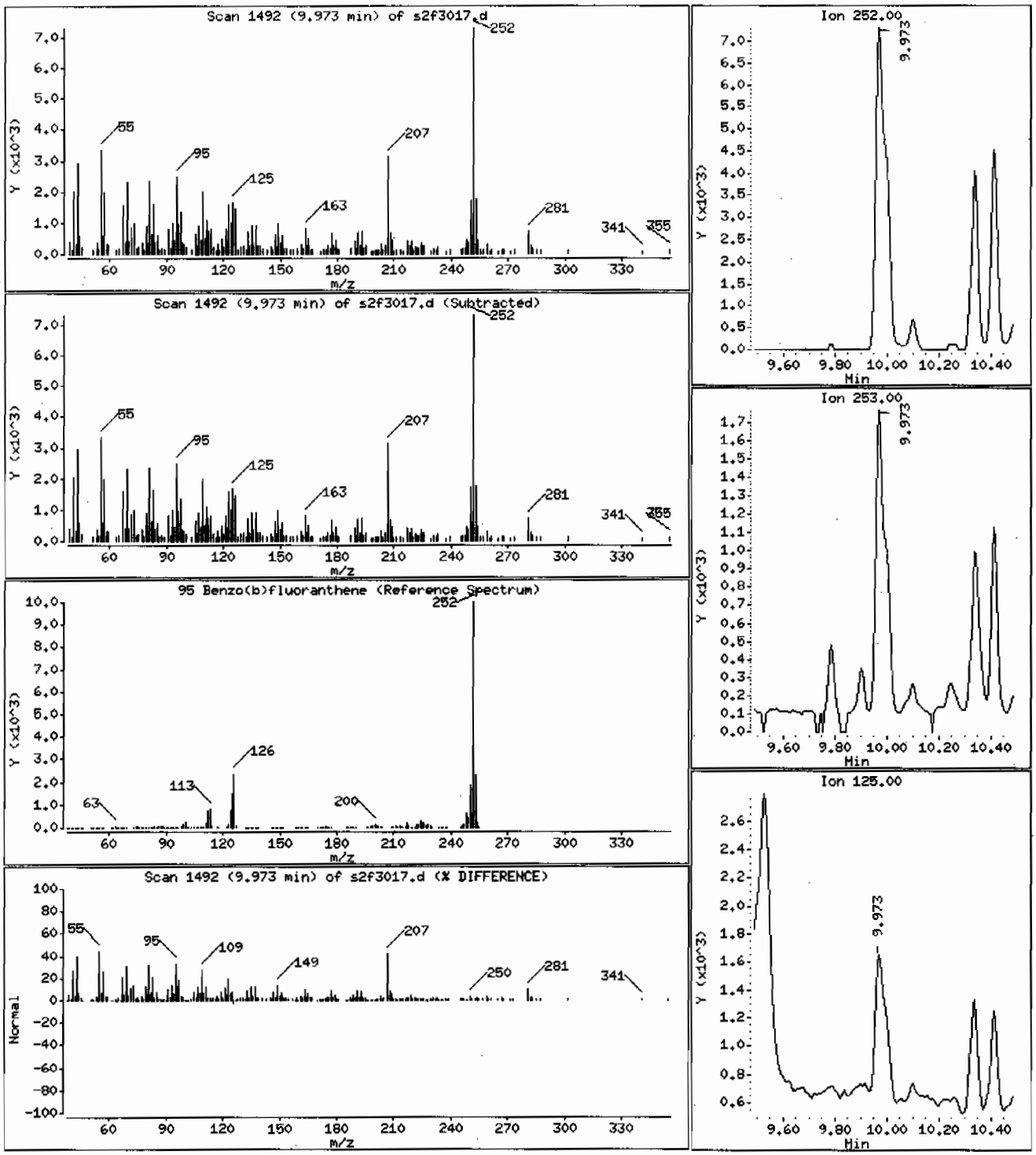

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043

Instrument: MSD2.i

Sample Info: 1232428006188131911ISVMFI1ILANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 49.5 ug/Kg

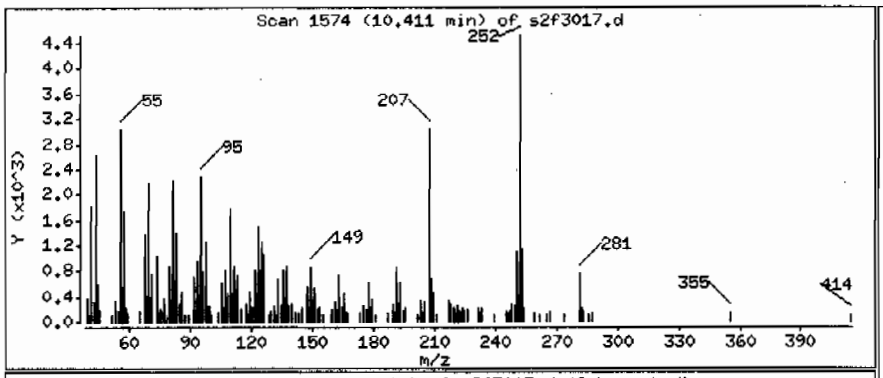

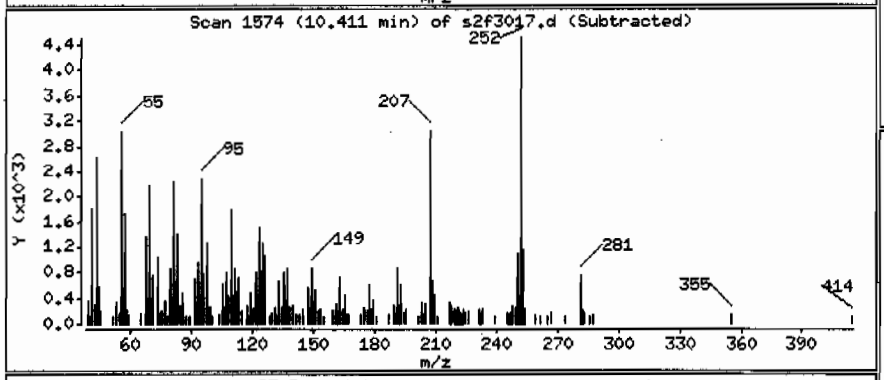

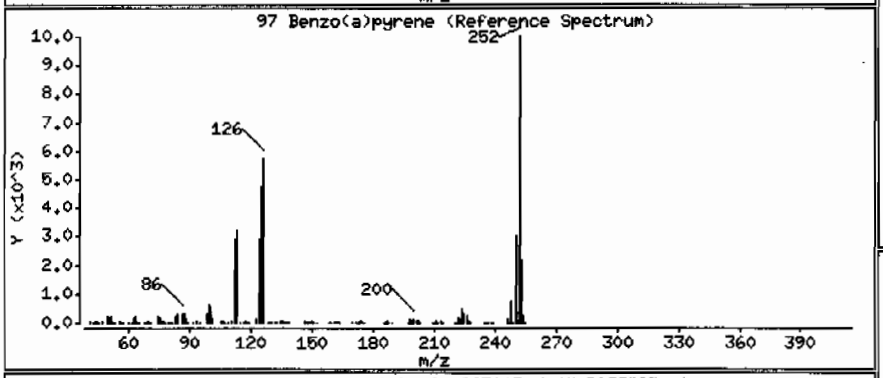

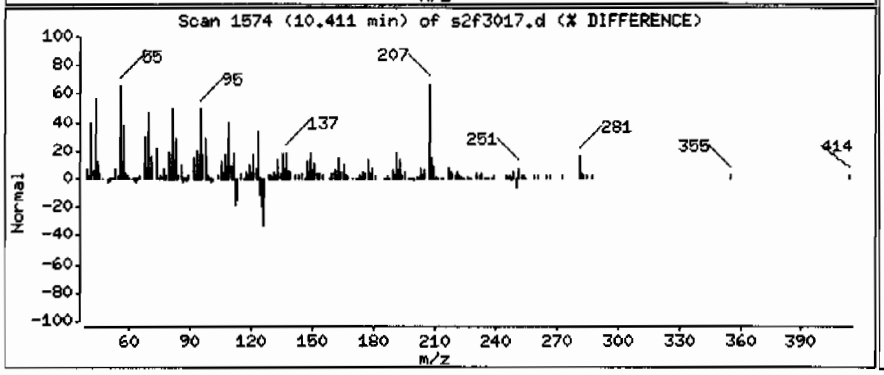

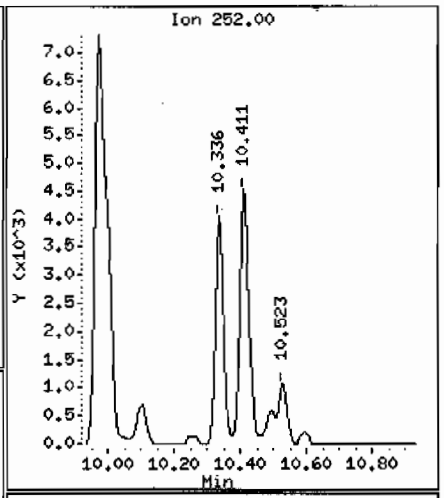

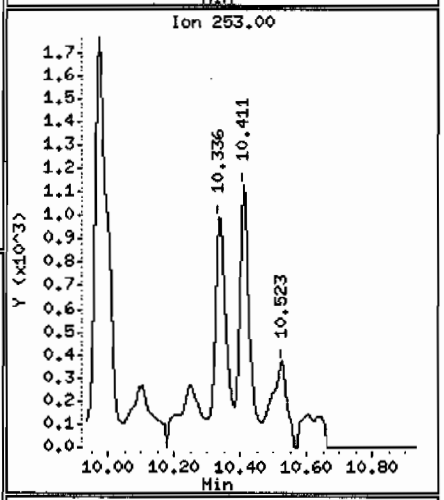

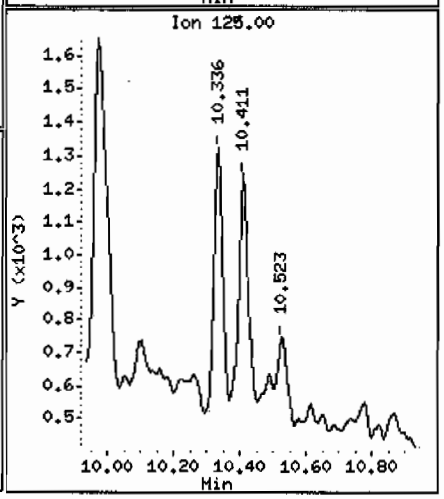

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043 Instrument: MSD2.i

Sample Info: |2324280061881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 30.1 ug/Kg

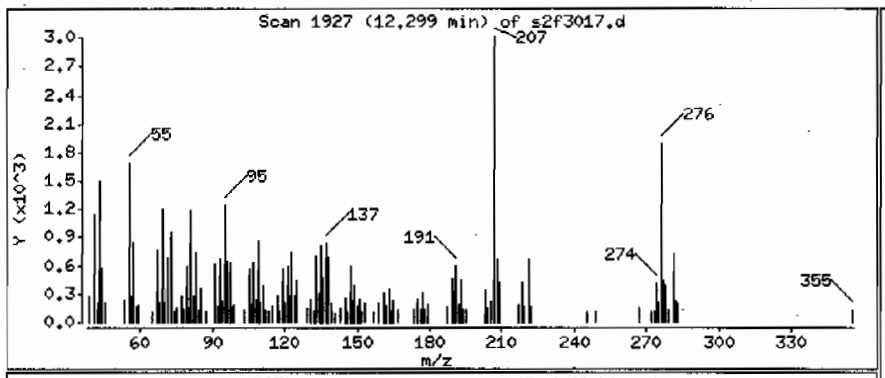

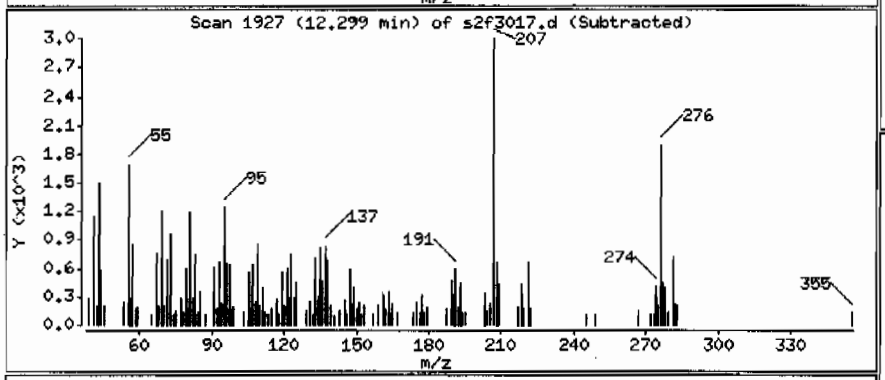

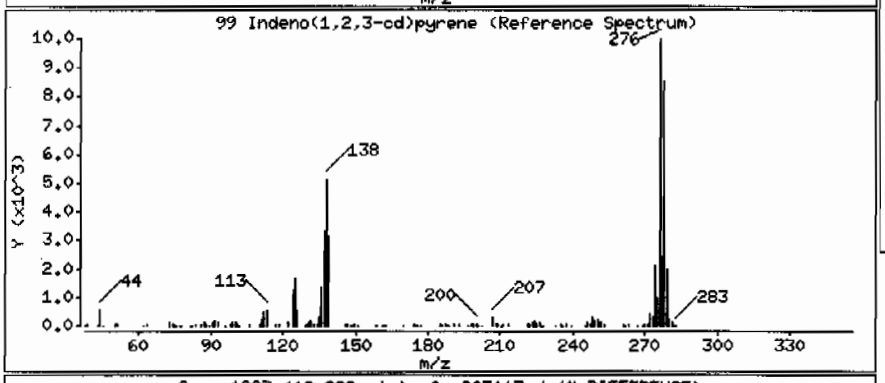

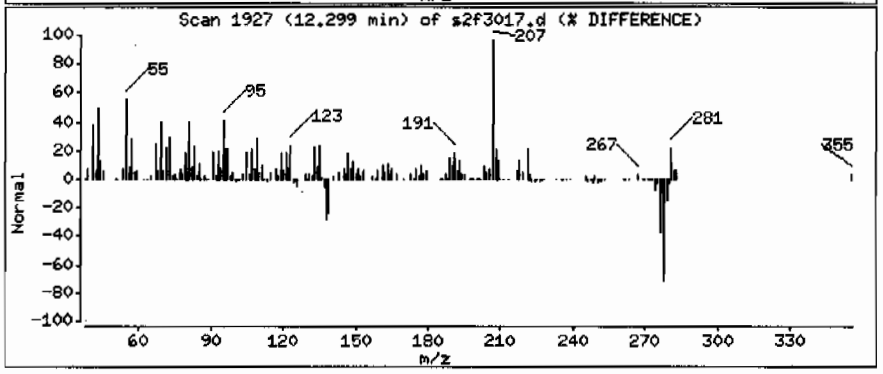

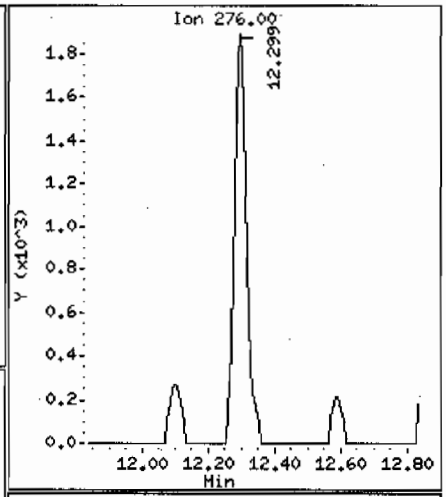

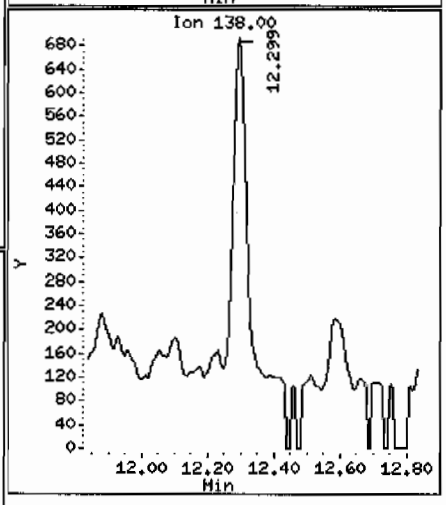

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043

Instrument: MSD2.i

Sample Info: |2324280061881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 31.0 ug/Kg

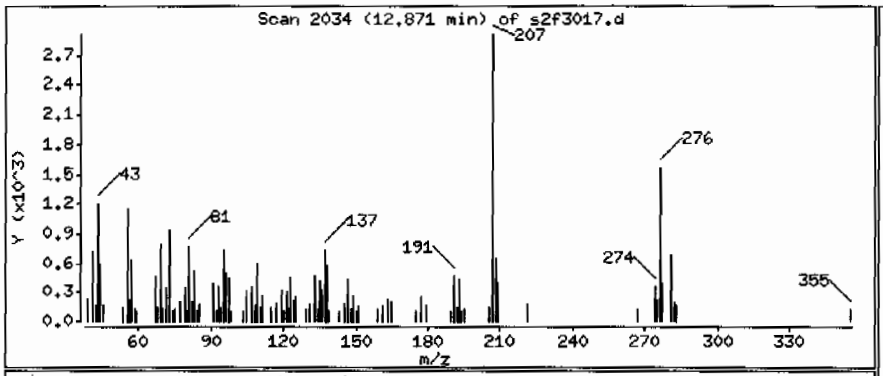

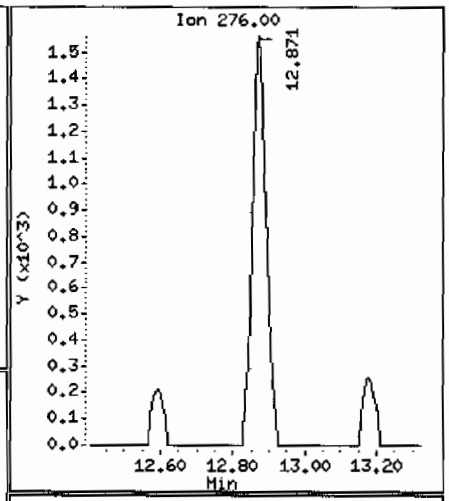

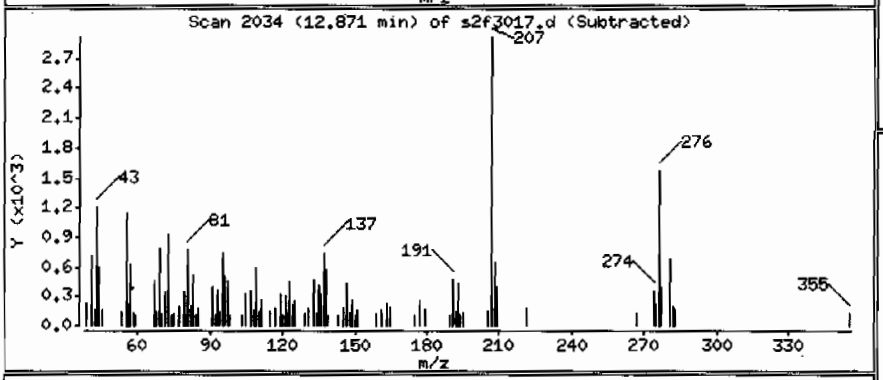

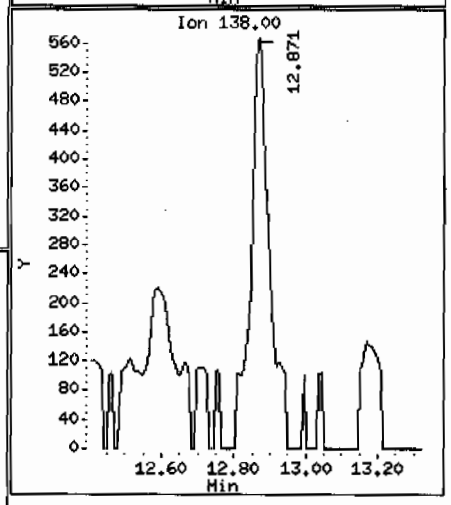

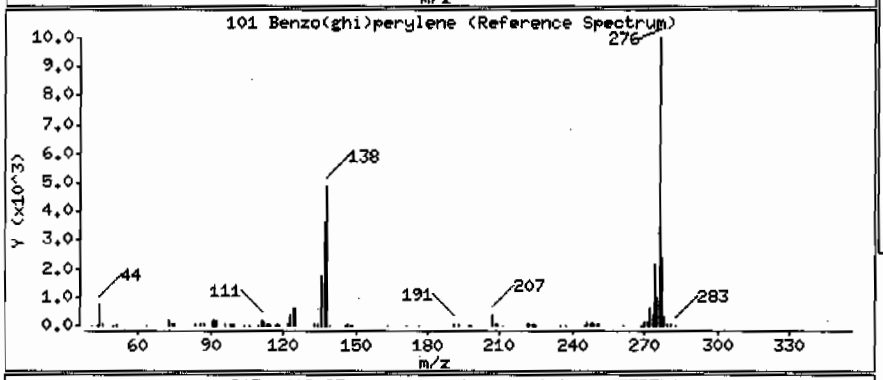

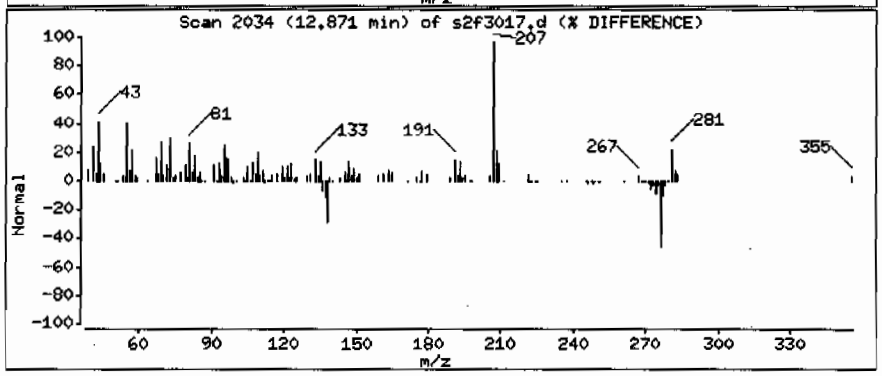

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043

Instrument: MSD2.i

Sample Info: 1232428006|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	38	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7950	23	C6H12O2	116

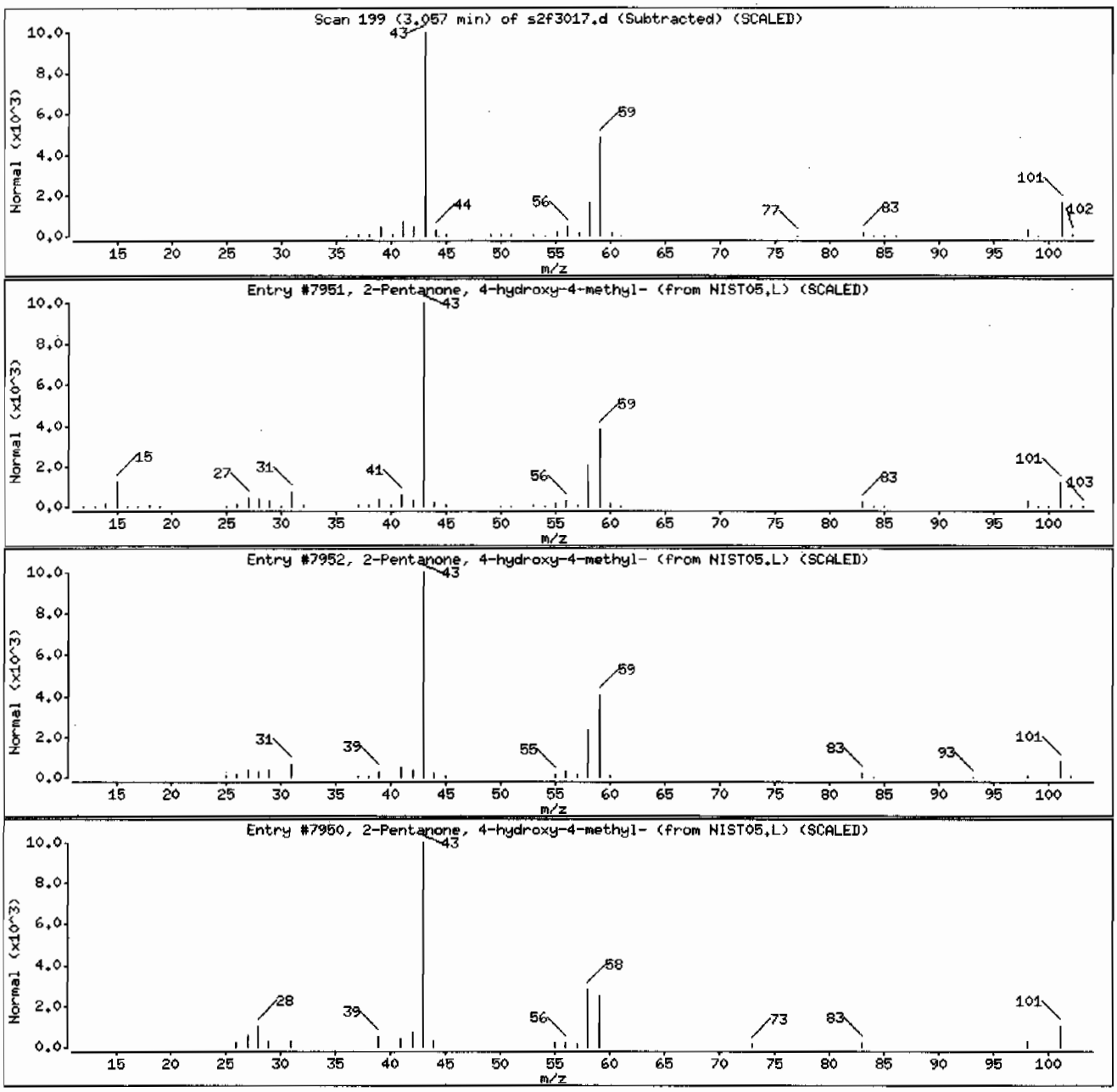

Data File: /chem/MSD2.i/s063009.b/s2f3017.d

Date : 30-JUN-2009 21:13

Client ID: CAMO-09-6043 Instrument: MSD2.i

Sample Info: 1232428006188131911|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclohexane-1-methanol, 3,3-dimethyl-2-(	1000196-01-5	NIST05.L	62981	44	C14H24O	208
1,12-Bis(2-nitrophenoxy)dodecane	155056-69-2	NIST05.L	179215	43	C24H32N2O6	444
Spiro[2,4,5,6,7,7a-hexahydro-2-oxo-4,4,7	1000197-10-9	NIST05.L	62719	42	C12H16O3	208

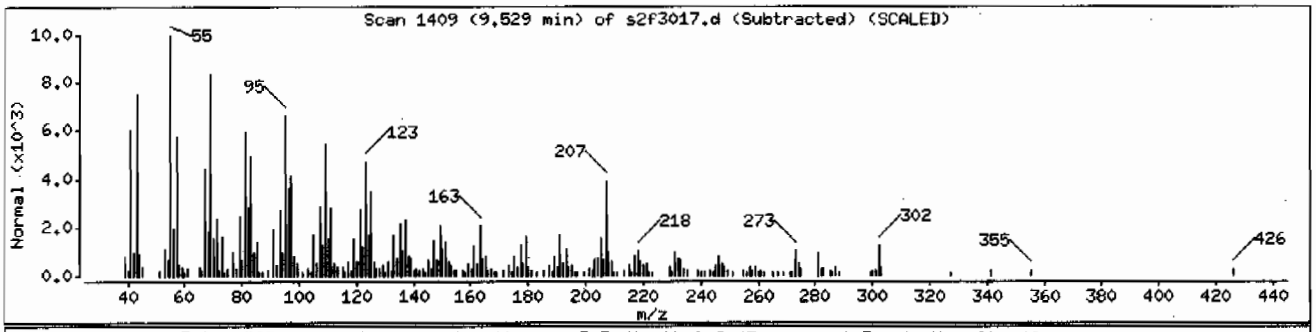

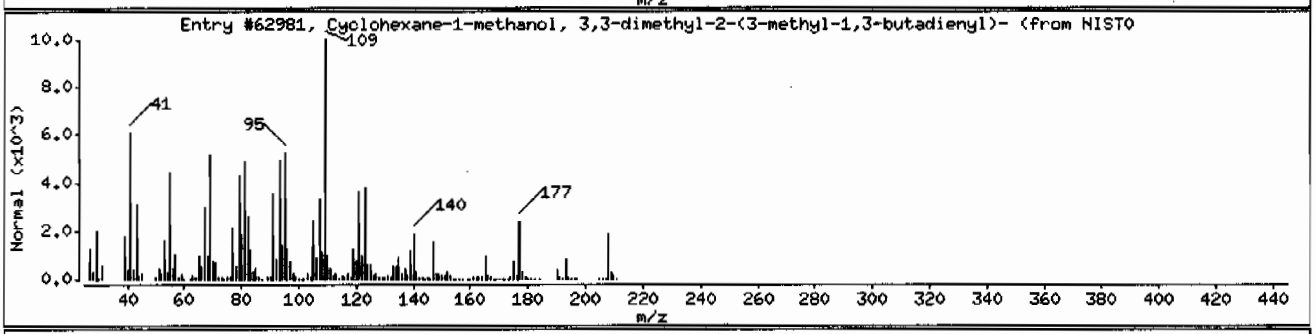

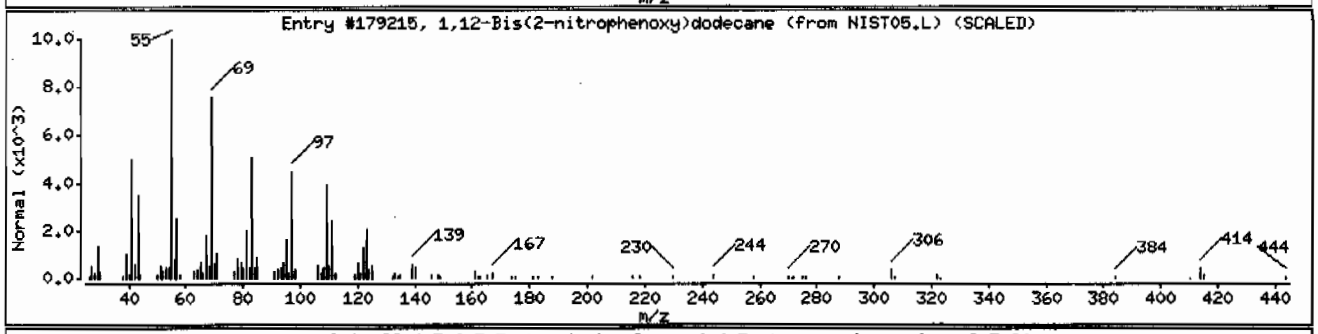

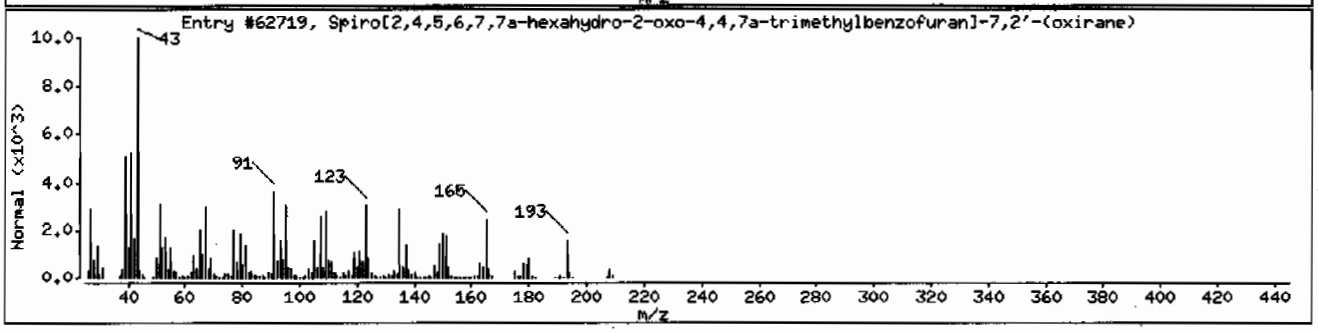

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428010	Date Received:	06/26/2009 08:40	%Moisture:	12.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6044	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 22:32	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.25 g	Final Volume:	1 mL
Data File:	s2f3021.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	379	ug/kg	75.8	379
108-95-2	Phenol	U	379	ug/kg	75.8	379
95-57-8	2-Chlorophenol	U	379	ug/kg	75.8	379
106-46-7	1,4-Dichlorobenzene	U	379	ug/kg	75.8	379
621-64-7	N-Nitrosodipropylamine	U	379	ug/kg	75.8	379
59-50-7	4-Chloro-3-methylphenol	U	379	ug/kg	37.9	379
83-32-9	Acenaphthene	U	37.9	ug/kg	12.7	37.9
121-14-2	2,4-Dinitrotoluene	U	379	ug/kg	37.9	379
100-02-7	4-Nitrophenol	U	379	ug/kg	75.8	379
87-86-5	Pentachlorophenol	U	379	ug/kg	75.8	379
129-00-0	Pyrene		253	ug/kg	11.9	37.9
110-86-1	Pyridine	U	379	ug/kg	75.8	379
62-53-3	Aniline	U	379	ug/kg	133	379
111-44-4	bis(2-Chloroethyl) ether	U	379	ug/kg	75.8	379
541-73-1	1,3-Dichlorobenzene	U	379	ug/kg	75.8	379
100-51-6	Benzyl alcohol	U	379	ug/kg	114	379
95-50-1	1,2-Dichlorobenzene	U	379	ug/kg	75.8	379
108-60-1	bis(2-Chloroisopropyl)ether	U	379	ug/kg	75.8	379
95-48-7	o-Cresol	U	379	ug/kg	75.8	379
65794-96-9	m,p-Cresols	U	379	ug/kg	152	379
67-72-1	Hexachloroethane	U	379	ug/kg	75.8	379
98-95-3	Nitrobenzene	U	379	ug/kg	75.8	379
78-59-1	Isophorone	U	379	ug/kg	75.8	379
88-75-5	2-Nitrophenol	U	379	ug/kg	37.9	379
105-67-9	2,4-Dimethylphenol	U	379	ug/kg	75.8	379
111-91-1	bis(2-Chloroethoxy)methane	U	379	ug/kg	75.8	379
120-83-2	2,4-Dichlorophenol	U	379	ug/kg	75.8	379
65-85-0	Benzoic acid	U	758	ug/kg	190	758
91-20-3	Naphthalene	U	37.9	ug/kg	11.4	37.9
106-47-8	4-Chloroaniline	U	379	ug/kg	75.8	379
87-68-3	Hexachlorobutadiene	U	379	ug/kg	75.8	379
91-57-6	2-Methylnaphthalene	U	37.9	ug/kg	7.58	37.9
77-47-4	Hexachlorocyclopentadiene	U	379	ug/kg	75.8	379
88-06-2	2,4,6-Trichlorophenol	U	379	ug/kg	75.8	379
95-95-4	2,4,5-Trichlorophenol	U	379	ug/kg	75.8	379
91-58-7	2-Chloronaphthalene	U	37.9	ug/kg	13.3	37.9
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	379	ug/kg	75.8	379
99-09-2	3-Nitroaniline	U	379	ug/kg	75.8	379

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428010	Date Received:	06/26/2009 08:40	%Moisture:	12.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6044	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 22:32	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.25 g	Final Volume:	1 mL
Data File:	s2f3021.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	379	ug/kg	75.8	379
606-20-2	2,6-Dinitrotoluene	U	379	ug/kg	37.9	379
208-96-8	Acenaphthylene	U	37.9	ug/kg	11.4	37.9
51-28-5	2,4-Dinitrophenol	U	758	ug/kg	144	758
132-64-9	Dibenzofuran	U	379	ug/kg	75.8	379
84-66-2	Diethylphthalate	U	379	ug/kg	75.8	379
86-73-7	Fluorene	U	37.9	ug/kg	11.4	37.9
7005-72-3	4-Chlorophenylphenylether	U	379	ug/kg	37.9	379
534-52-1	2-Methyl-4,6-dinitrophenol	U	379	ug/kg	75.8	379
100-01-6	4-Nitroaniline	U	379	ug/kg	75.8	379
	p-Nitroaniline					
122-39-4	Diphenylamine	U	379	ug/kg	75.8	379
122-66-7	Azobenzene	U	379	ug/kg	75.8	379
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	379	ug/kg	37.9	379
118-74-1	Hexachlorobenzene	U	379	ug/kg	75.8	379
85-01-8	Phenanthrene		78.5	ug/kg	11.4	37.9
120-12-7	Anthracene	U	37.9	ug/kg	7.58	37.9
84-74-2	Di-n-butylphthalate	U	379	ug/kg	37.9	379
206-44-0	Fluoranthene		299	ug/kg	11.4	37.9
85-68-7	Butylbenzylphthalate	U	379	ug/kg	75.8	379
56-55-3	Benzo(a)anthracene		111	ug/kg	11.4	37.9
91-94-1	3,3'-Dichlorobenzidine	U	379	ug/kg	114	379
218-01-9	Chrysene		148	ug/kg	11.4	37.9
117-81-7	bis(2-Ethylhexyl)phthalate	J	118	ug/kg	75.8	379
117-84-0	Di-n-octylphthalate	U	379	ug/kg	75.8	379
205-99-2	Benzo(b)fluoranthene		286	ug/kg	11.4	37.9
207-08-9	Benzo(k)fluoranthene	U	37.9	ug/kg	11.4	37.9
50-32-8	Benzo(a)pyrene		132	ug/kg	11.4	37.9
193-39-5	Indeno(1,2,3-cd)pyrene		74.1	ug/kg	11.4	37.9
53-70-3	Dibenzo(a,h)anthracene	J	24.3	ug/kg	11.4	37.9
191-24-2	Benzo(ghi)perylene		81.0	ug/kg	11.4	37.9
120-82-1	1,2,4-Trichlorobenzene	U	379	ug/kg	75.8	379

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	358	ug/kg		J
57-10-3	n-Hexadecanoic acid	7.39	170	ug/kg	97	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428010	**Date Received:**	06/26/2009 08:40	**%Moisture:**	12.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6044	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 22:32	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.25 g	**Final Volume:**	1 mL
Data File:	s2f3021.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
60-33-3	9,12-Octadecadienoic acid (Z,Z)-	7.81	159	ug/kg	96	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.39	183	ug/kg	98	NJ
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	8.66	268	ug/kg	90	NJ
6971-40-0	17-Pentatriacontene	9.35	304	ug/kg	87	NJ
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	9.54	215	ug/kg	91	NJ
630-03-5	Nonacosane	9.88	242	ug/kg	97	NJ
	Unknown	10.19	190	ug/kg		J
112-95-8	Eicosane	10.86	164	ug/kg	96	NJ
	Unknown	11.1	236	ug/kg		J
	Unknown	11.51	185	ug/kg		J

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s063009.b/s2f3021.d
Lab Smp Id: 232428010 Client Smp ID: CAMO-09-6044
Inj Date : 30-JUN-2009 22:32
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428010|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.25000	weight of sample
M	12.77730	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	140645	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	532364	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	308082	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	551753	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	443423	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	298178	40.0000	
$ 3 2-Fluorophenol	112	3.233	3.222	(0.798)	214611	55.1442	2090
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	265414	55.2264	2090
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	110506	27.5124	1040
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	253582	29.1438	1100
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	75791	71.8268	2720
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	285054	37.7415	1430

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.025	8.031	(0.904)	88160	6.67887	253
68 Phenanthrene	178	7.164	7.170	(1.002)	27230	2.07251	78.5
76 Fluoranthene	202	7.881	7.886	(1.103)	95303	7.88507	299
89 Benzo(a)anthracene	228	8.871	8.881	(0.999)	31556	2.92493	111
92 Chrysene	228	8.903	8.919	(1.002)	40626	3.90195	148
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.984)	25377	3.11972	118(a)
95 Benzo(b)fluoranthene	252	9.978	9.988	(0.951)	54029	7.54792	286
97 Benzo(a)pyrene	252	10.416	10.432	(0.992)	21785	3.48332	132
99 Indeno(1,2,3-cd)pyrene	276	12.304	12.337	(1.172)	11740	1.95414	74.1
100 Dibenzo(a,h)anthracene	278	12.310	12.342	(1.173)	3089	0.64076	24.3(a)
101 Benzo(ghi)perylene	276	12.877	12.903	(1.227)	11145	2.13656	81.0

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s2f3021.d
Report Date: 07/01/2009 07:58
Lab. ID: 232428010 SampleType: SAMPLE
Injection Date: 30-JUN-2009 22:32
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428010|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	11227	3.76	3.83	80-120	100	(T)
93	876	3.73	3.83	440-500	8	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	15877	4.41	4.29	80-120	100	(T)
42	9109	4.41	4.29	40-100	57	(T)
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	5920	5.91	5.78	80-120	100	(T)
164	372	5.91	5.78	3- 63	6	(T)
127	464	5.91	5.78	8- 68	8	(QT)
42 o-Nitroaniline				CAS#: 88-74-4		
65	5963	5.91	5.83	80-120	100	(T)
92	8130	5.91	5.83	37- 97	136	(QT)
138	708	5.91	5.83	85-145	12	(QT)
43 Dimethylphthalate				CAS#: 131-11-3		
163	65846	6.17	5.94	80-120	100	(T)
164	307609	6.17	5.94	0- 40	467	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	39277	6.17	5.99	80-120	100	(T)
63	1162	6.17	5.99	46-106	3	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	40292	6.17	6.27	80-120	100	(T)
89	757	6.17	6.27	38- 98	2	(QT)
63	2528	6.17	6.27	16- 76	6	(QT)
53 Fluorene			CAS#: 86-73-7			
166	4988	6.70	6.54	80-120	100	(T)
165	4860	6.70	6.54	61-121	97	(T)
167	2092	6.70	6.54	0- 44	42	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	188	6.70	6.55	80-120	100	(T)
105	306	6.70	6.55	14- 74	163	(QT)
51	447	6.69	6.55	37- 97	238	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	4264	6.70	6.84	80-120	100	(T)
141	34377	6.70	6.84	51-111	806	(QT)
250	8512	6.70	6.84	66-126	200	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	27230	7.16	7.17	80-120	100	( )
179	6511	7.16	7.17	0- 46	24	( )
176	4849	7.16	7.17	0- 49	18	( )
69 Anthracene			CAS#: 120-12-7			
178	5237	7.20	7.20	80-120	100	( )
179	6511	7.16	7.20	0- 46	124	(Q)
176	792	7.20	7.20	0- 48	15	( )
76 Fluoranthene			CAS#: 206-44-0			
202	95303	7.88	7.89	80-120	100	( )
203	16823	7.88	7.89	0- 48	18	( )
101	13695	7.88	7.89	0- 45	14	( )
79 Pyrene			CAS#: 129-00-0			
202	88160	8.03	8.03	80-120	100	( )
200	17590	8.03	8.03	0- 51	20	( )
101	16138	8.03	8.03	0- 48	18	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	31556	8.87	8.88	80-120	100	( )
226	6719	8.87	8.88	0- 56	21	( )
229	9402	8.87	8.88	0- 50	30	( )
92 Chrysene			CAS#: 218-01-9			
228	40626	8.90	8.92	80-120	100	( )
229	10320	8.90	8.92	0- 50	25	( )
226	12152	8.90	8.92	0- 59	30	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	25377	8.74	8.75	80-120	100	( )
167	9776	8.74	8.75	2- 62	39	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	54029	9.98	9.99	80-120	100	( )
253	12283	9.98	9.99	0- 52	23	( )
125	7841	9.98	9.99	0- 45	15	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	54029	9.98	10.02	80-120	100	( )
253	12312	9.98	10.02	0- 52	23	( )
125	7837	9.98	10.02	0- 44	15	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	21785	10.42	10.43	80-120	100	( )
253	5288	10.42	10.43	0- 52	24	( )
125	3067	10.42	10.43	0- 46	14	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	11740	12.30	12.34	80-120	100	( )
138	3571	12.30	12.34	7- 67	30	( )
100 Dibenzo(a,h)anthracene				CAS#: 53-70-3		
278	3089	12.31	12.34	80-120	100	( )
139	988	12.31	12.34	0- 55	32	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	11145	12.88	12.90	80-120	100	( )
138	3378	12.88	12.90	4- 64	30	( )

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s063009.b/s2f3021.d
Lab Smp Id: 232428010 Client Smp ID: CAMO-09-6044
Inj Date : 30-JUN-2009 22:32
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428010|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.25000	weight of sample
M	12.77730	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.051	851796	40.000
* 67 Phenanthrene-d10	7.148	1442984	40.000
* 91 Chrysene-d12	8.881	1521791	40.000
* 98 Perylene-d12	10.497	848422	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.062	200927	9.43543646	358	0		0	10
n-Hexadecanoic acid				CAS #:	57-10-3		
7.394	161896	4.48781199	170	97	NIST05.L	96235	67
9,12-Octadecadienoic acid (Z,Z)-				CAS #:	60-33-3		
7.806	151726	4.20588250	159	96	NIST05.L	111993	67
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #:	1235-74-1		
8.389	183836	4.83209028	183	98	NIST05.L	133618	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #:	1740-19-8		
8.662	268886	7.06762761	268	90	NIST05.L	125037	91
17-Pentatriacontene				CAS #:	6971-40-0		
9.347	305004	8.01696840	304	87	NIST05.L	183897	91
Pyridine-3-carboxamide, oxime, N-(2-trif				CAS #:	288246-53-7		
9.539	215718	5.67010381	215	91	NIST05.L	112295	91
Nonacosane				CAS #:	630-03-5		
9.876	135286	6.37825322	242	97	NIST05.L	173140	98
Unknown				CAS #:			
10.192	106312	5.01224120	190	0		0	98
Eicosane				CAS #:	112-95-8		
10.860	91804	4.32824117	164	96	NIST05.L	113492	98
Unknown				CAS #:			
11.096	132169	6.23129650	236	0		0	98
Unknown				CAS #:			
11.513	103747	4.89129227	185	0		0	98

Data File: /chem/MSD2.i/s063009.b/s2f3021.d
Date : 30-JUN-2009 22:32
Client ID: CAMO-09-6044
Sample Info: 1232428010|881319|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

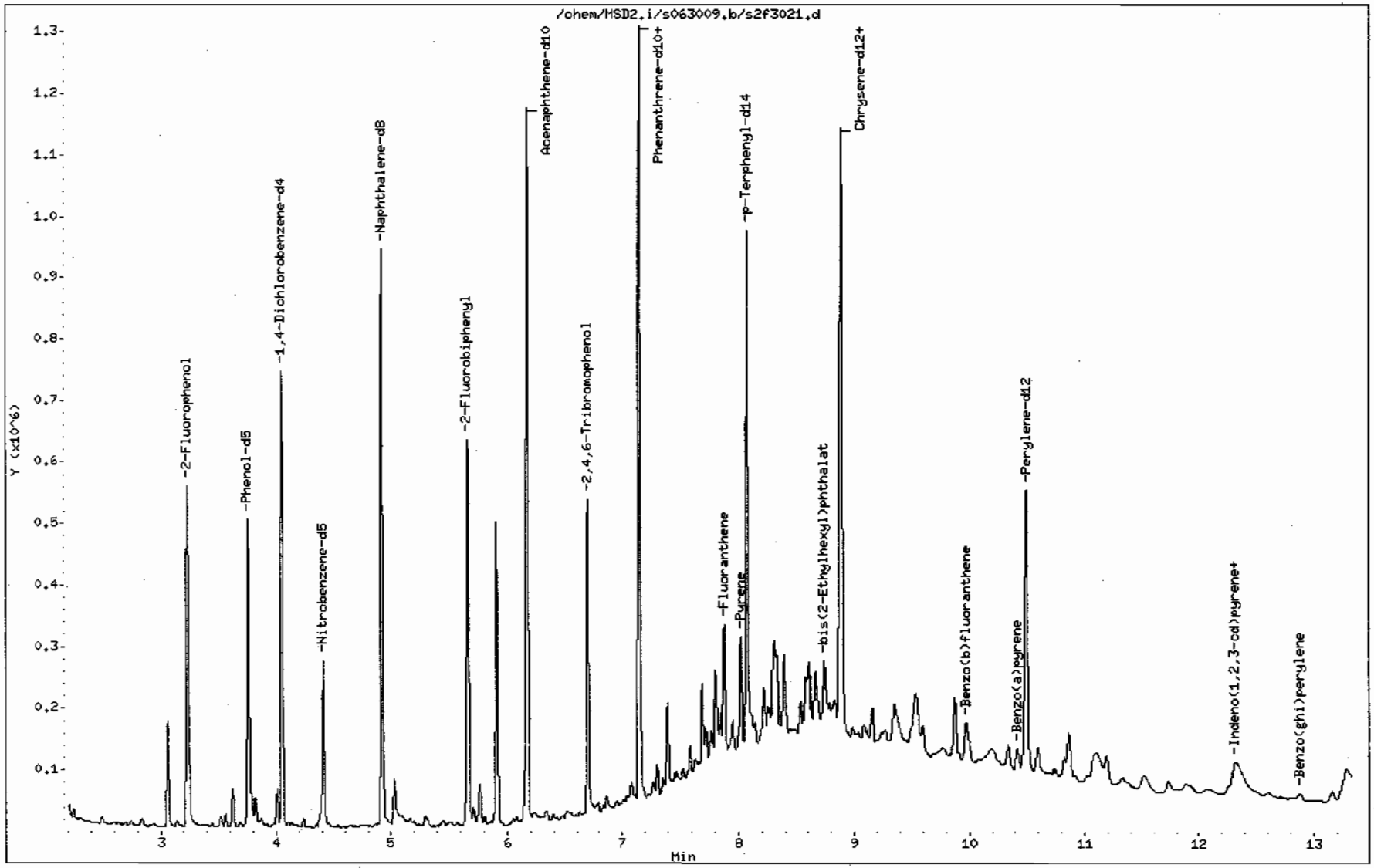

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMD-09-6044

Instrument: MSD2.i

Sample Info: 1232428010|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 253 ug/Kg

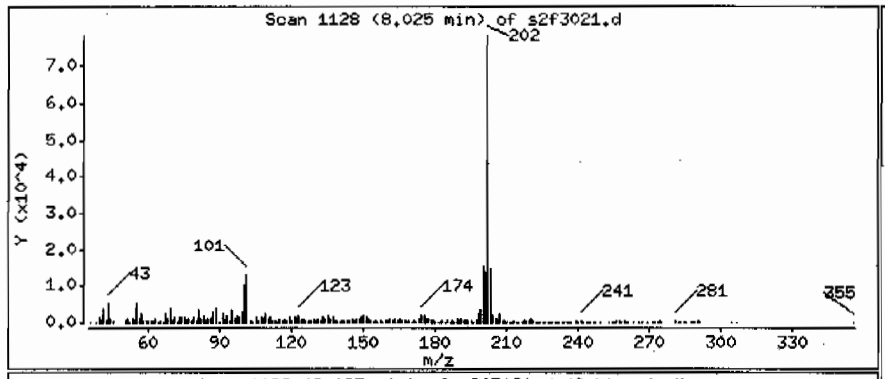

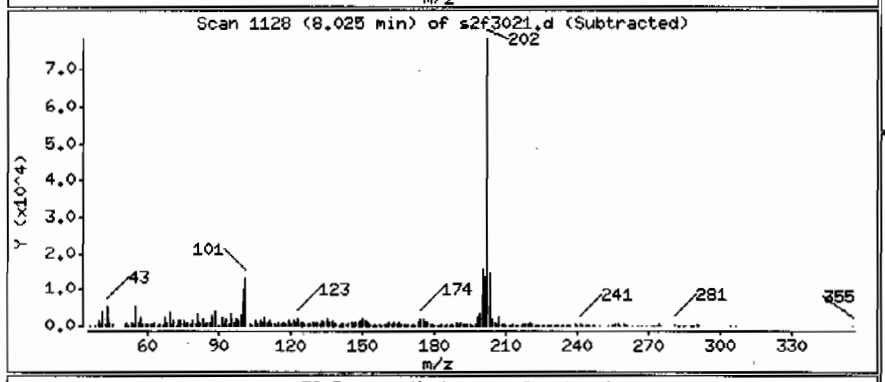

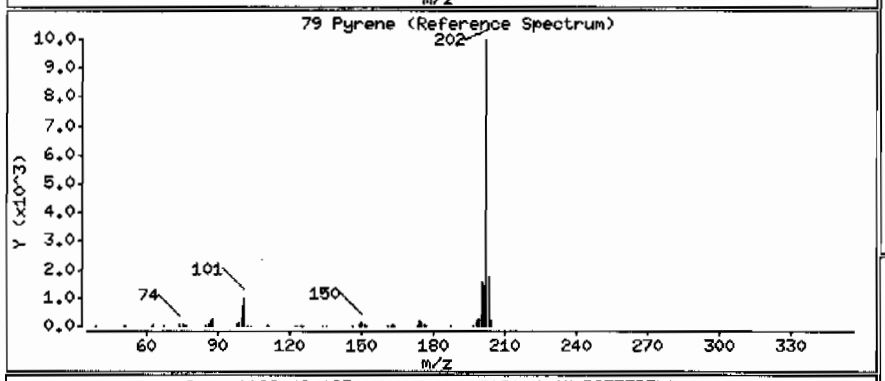

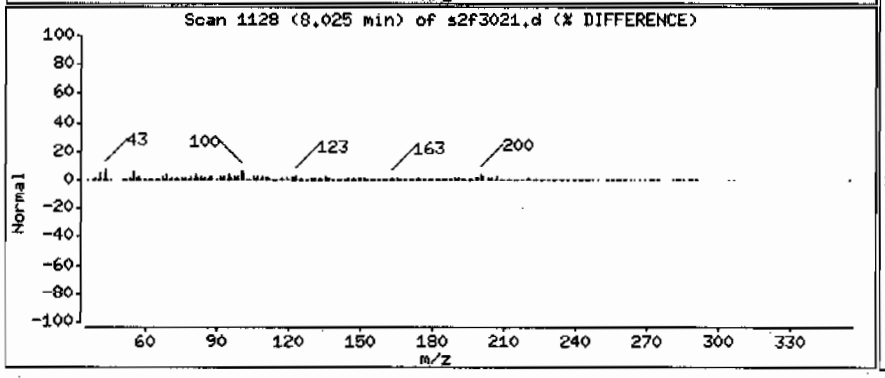

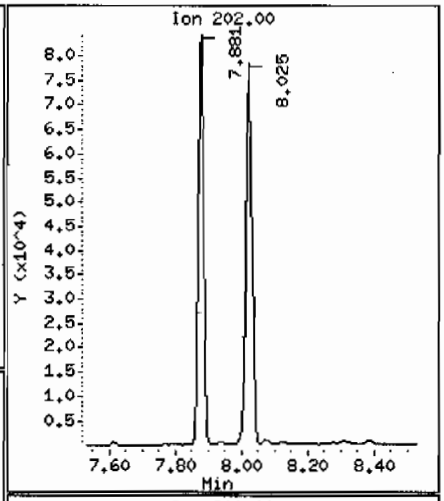

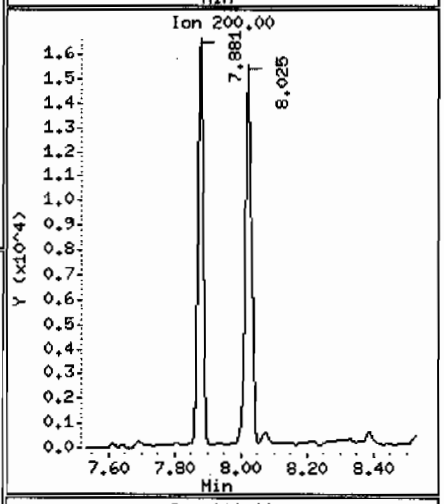

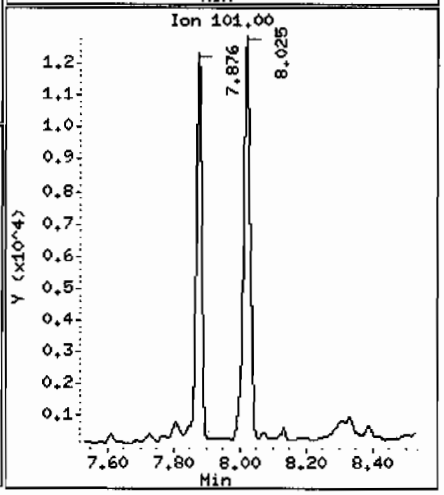

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 78.5 ug/Kg

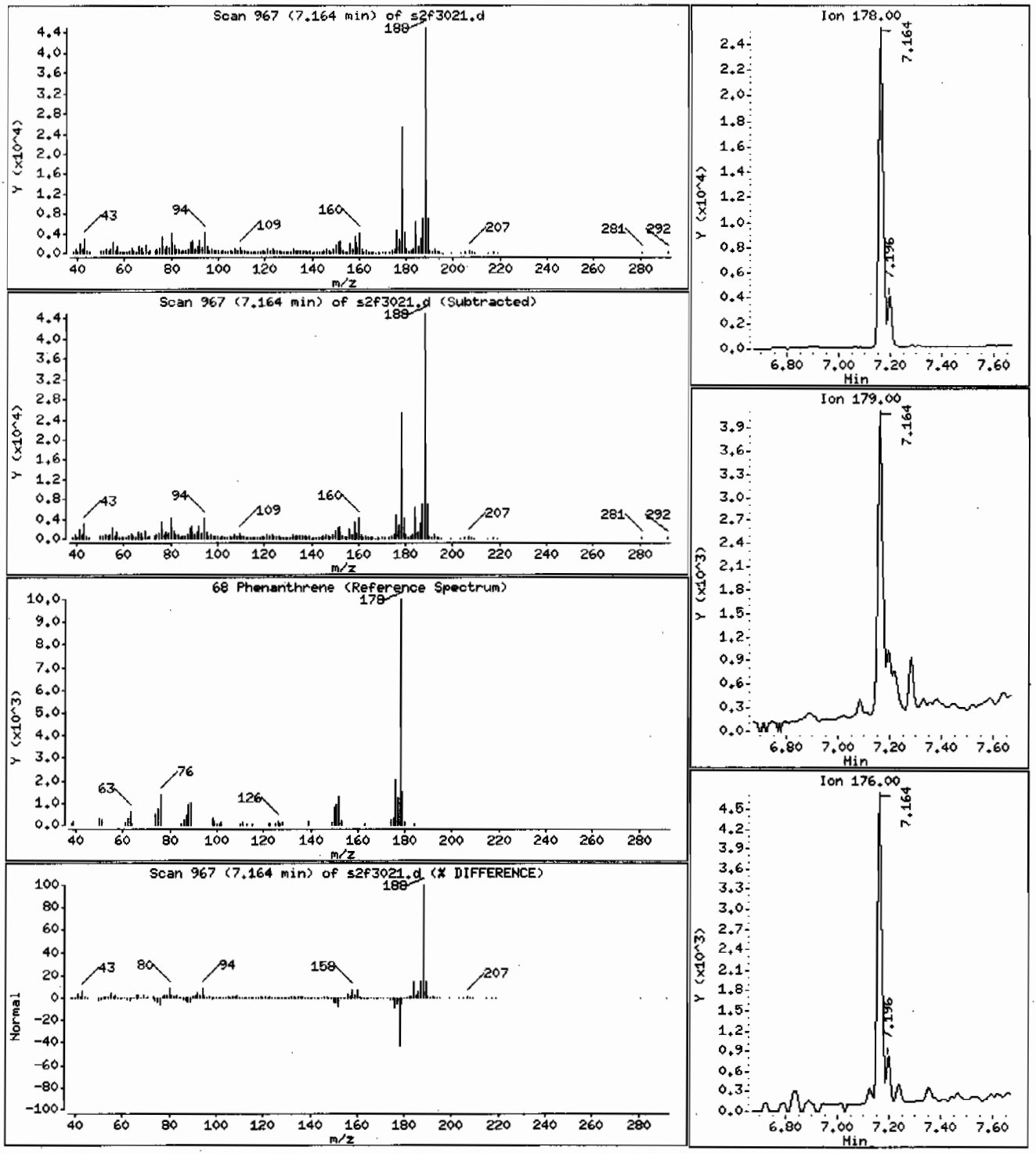

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 299 ug/Kg

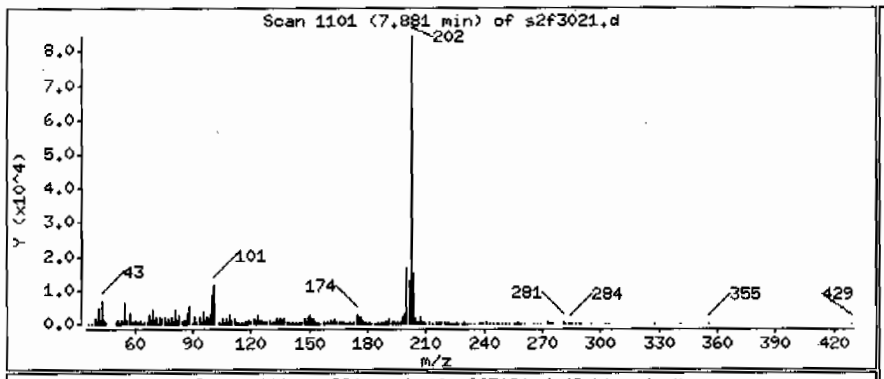

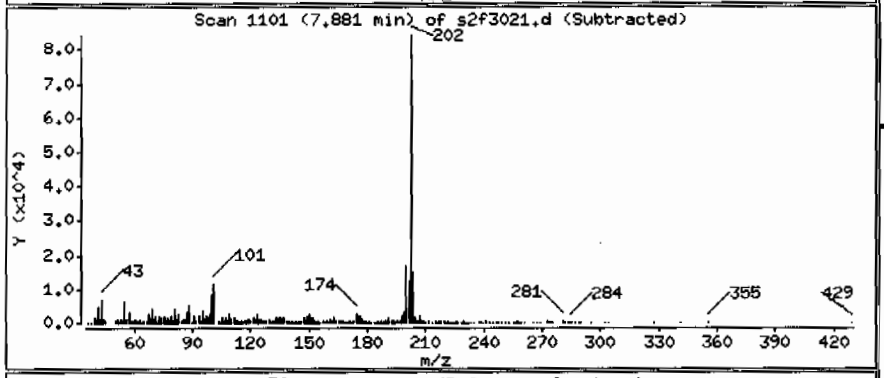

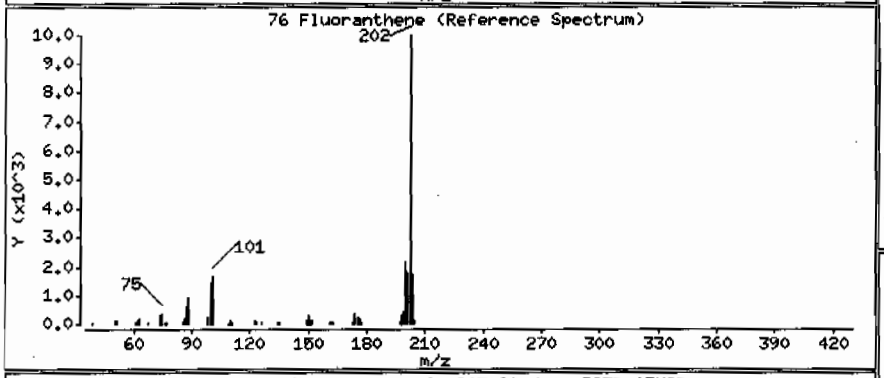

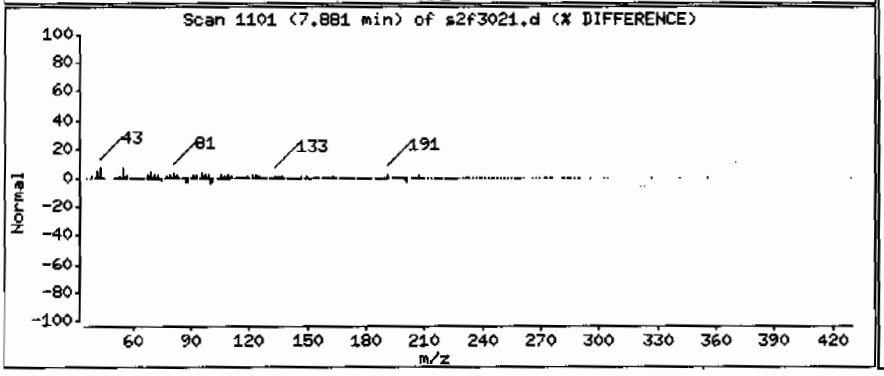

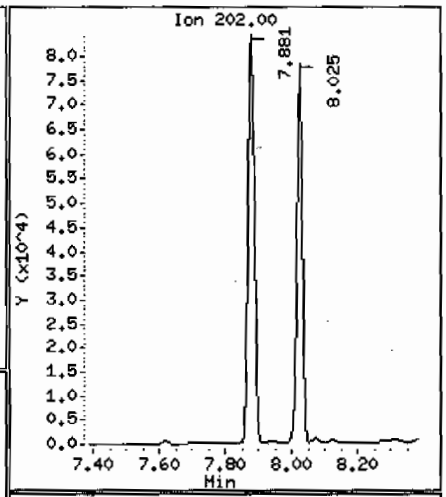

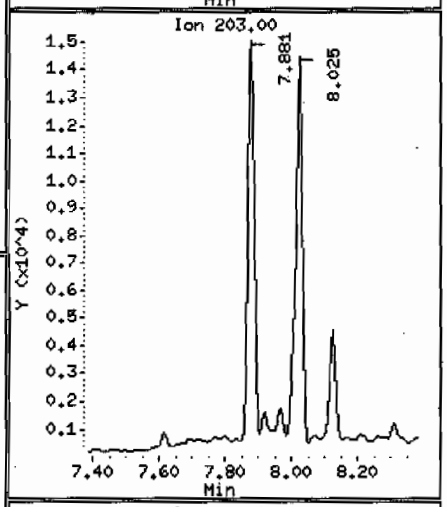

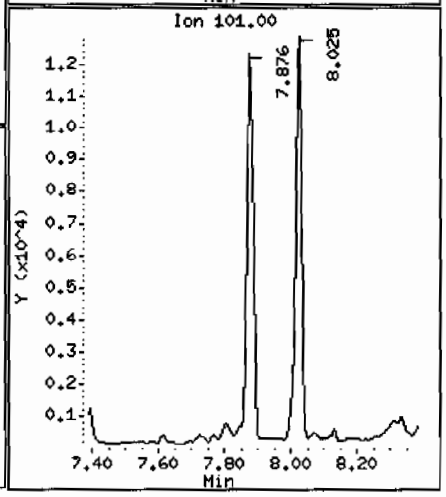

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 111 ug/Kg

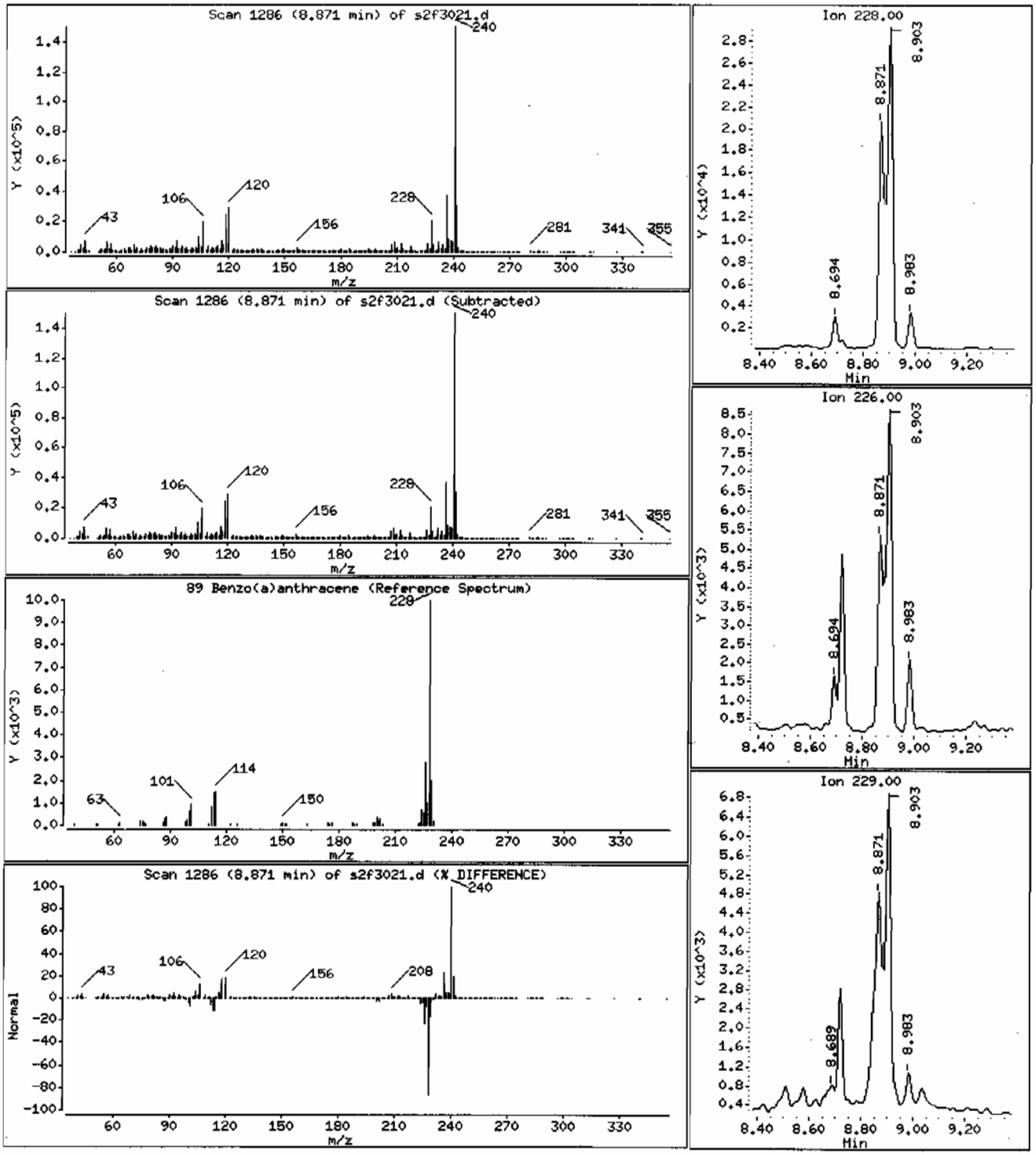

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: 1232428010188131911ISVMF11LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 148 ug/Kg

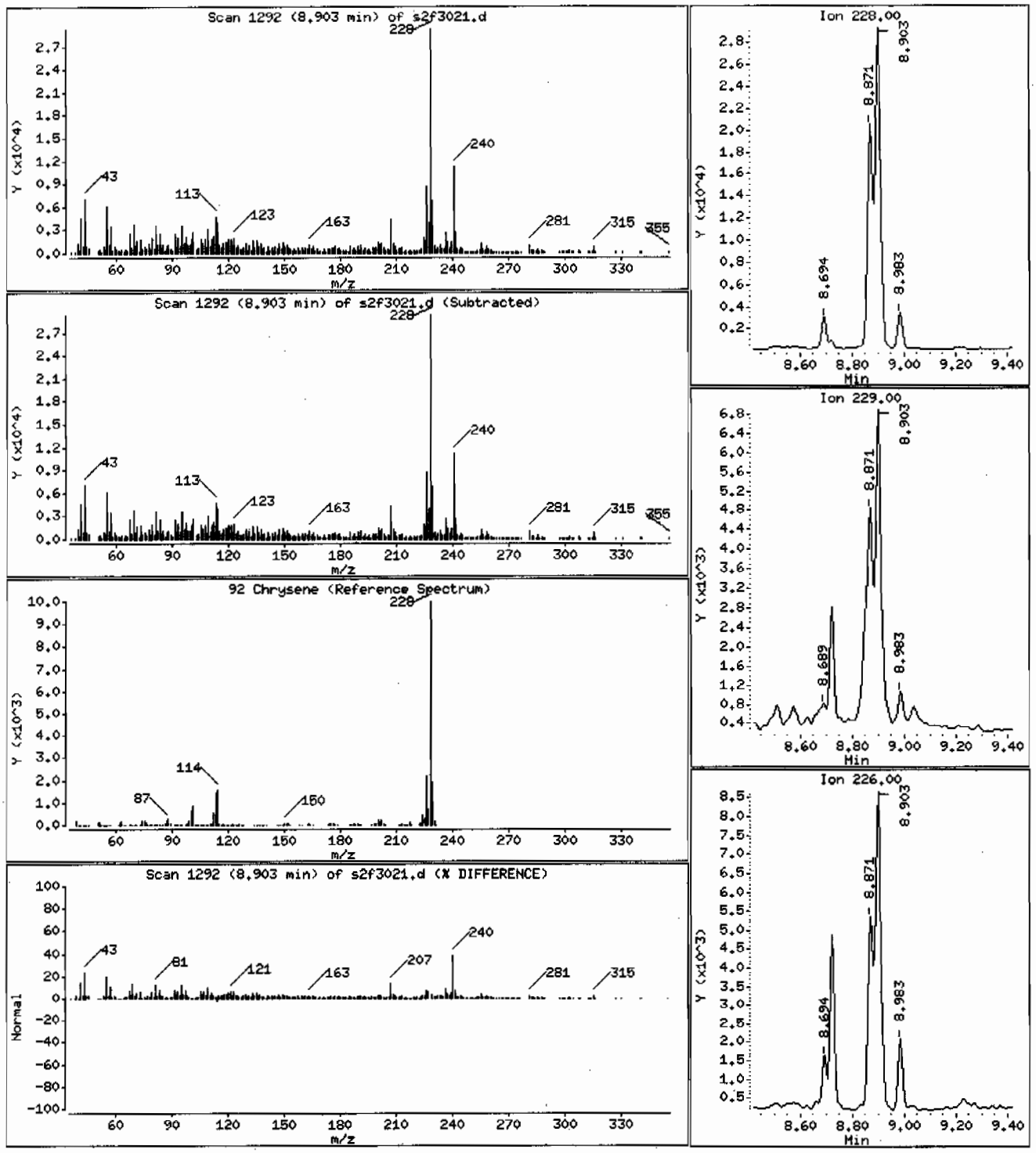

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044 Instrument: MSD2.i

Sample Info: |232428010|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate Concentration: 118 ug/Kg

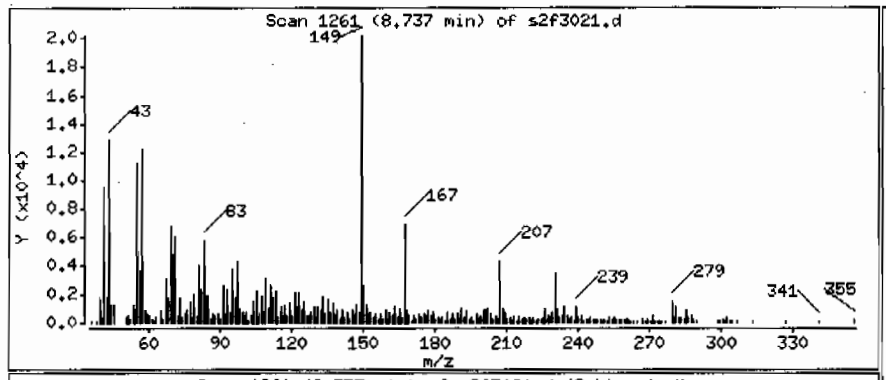

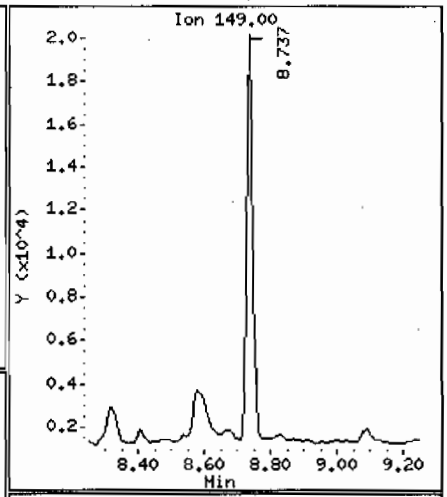

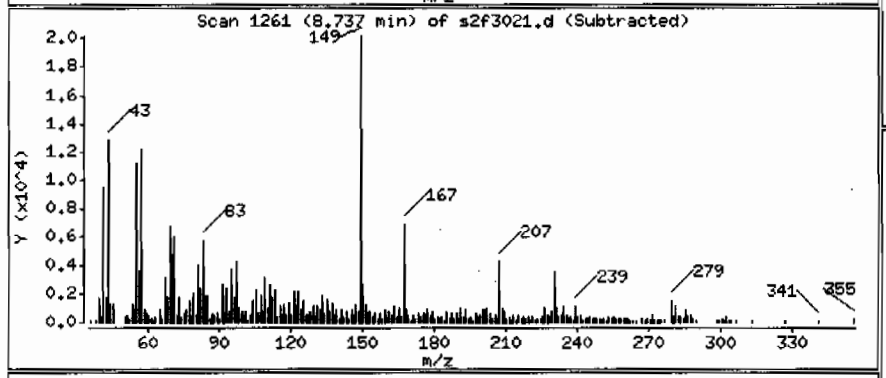

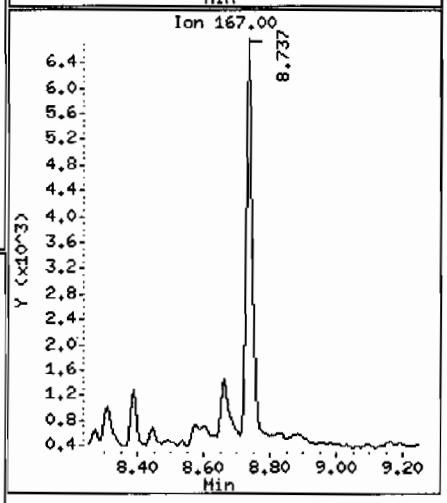

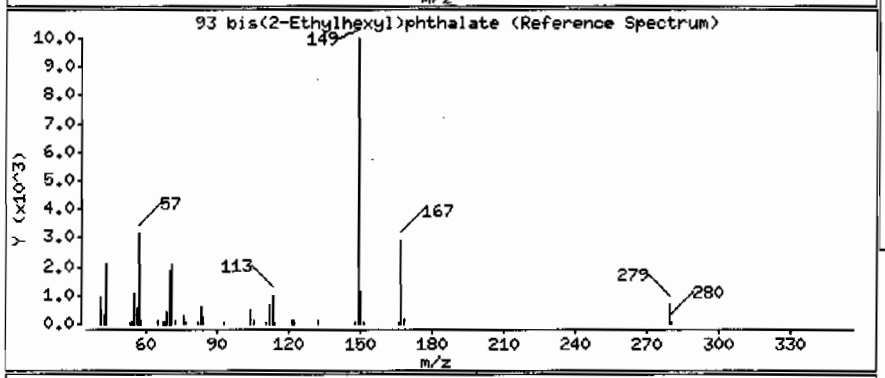

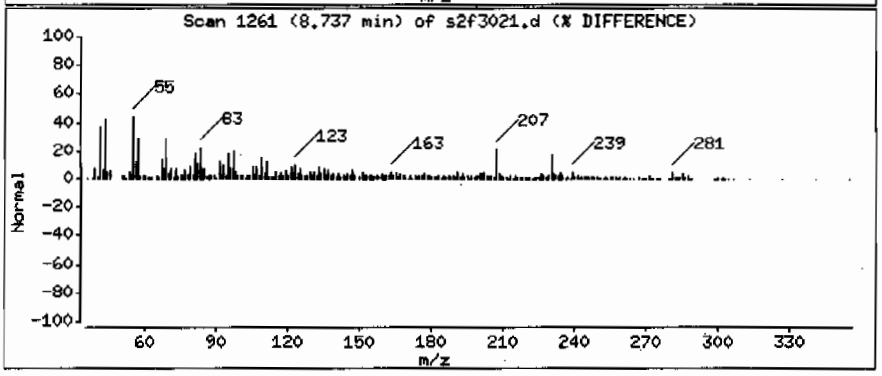

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 286 ug/Kg

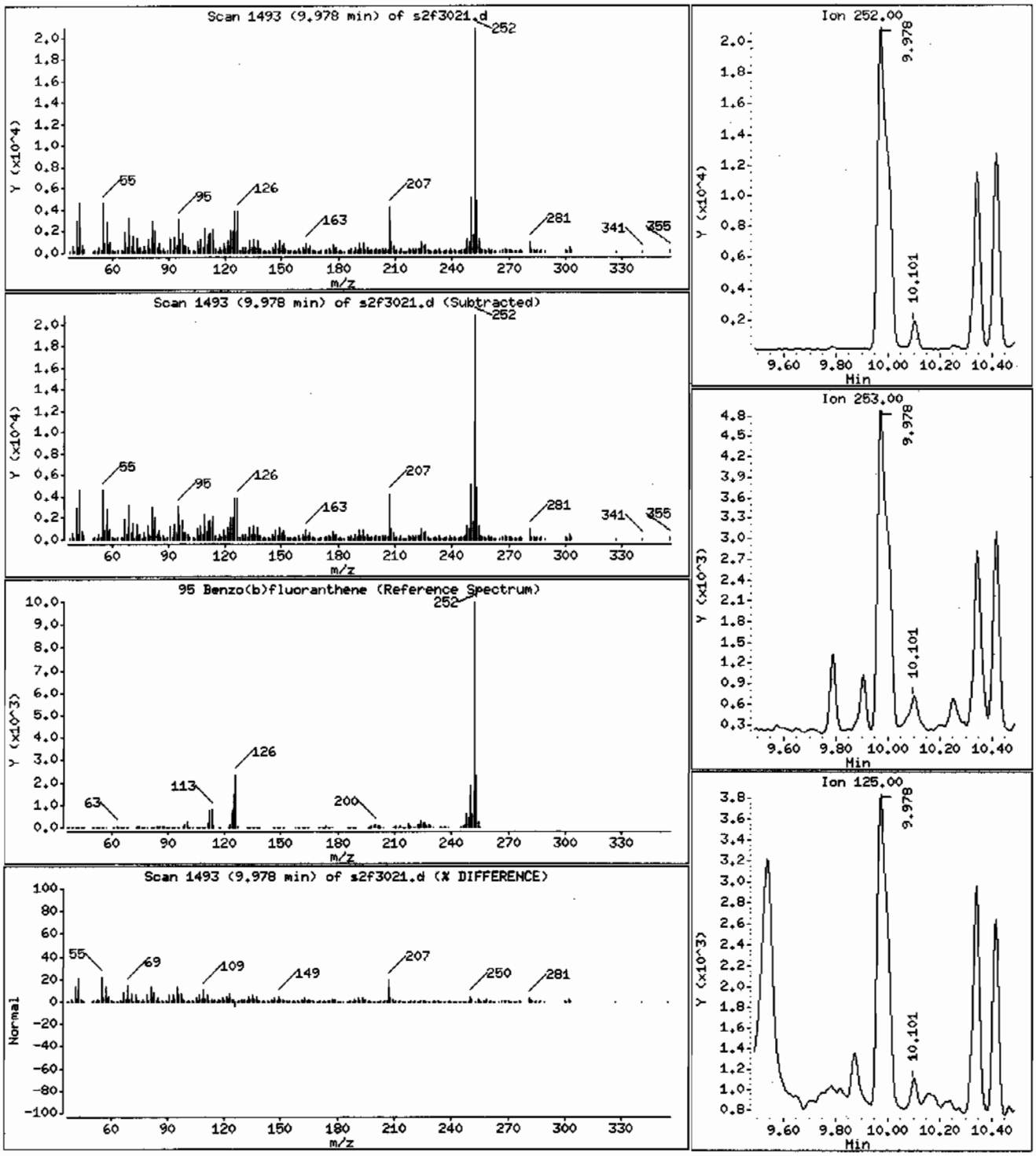

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044 Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

97 Benzo(a)pyrene Concentration: 132 ug/Kg

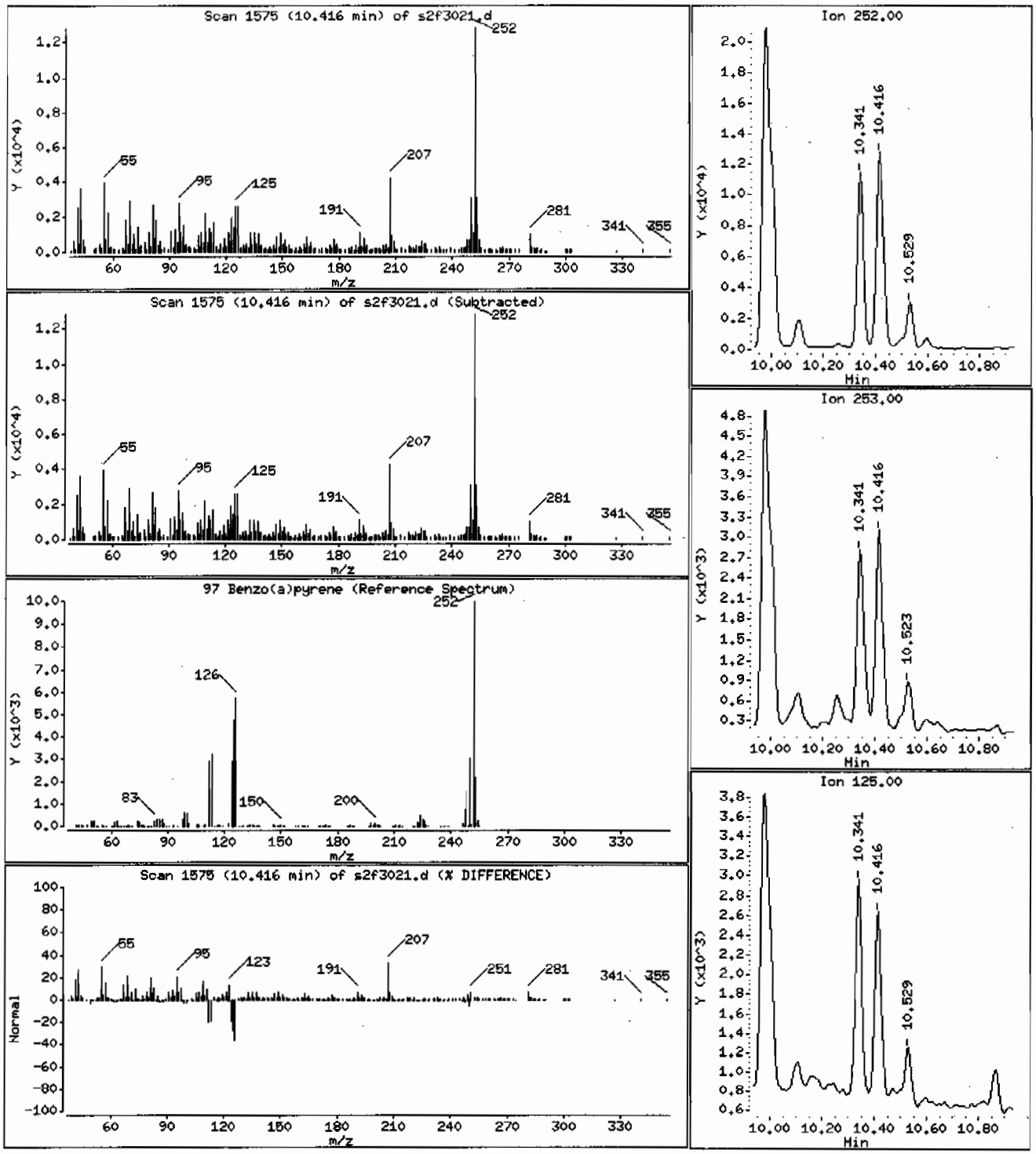

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Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 74.1 ug/Kg

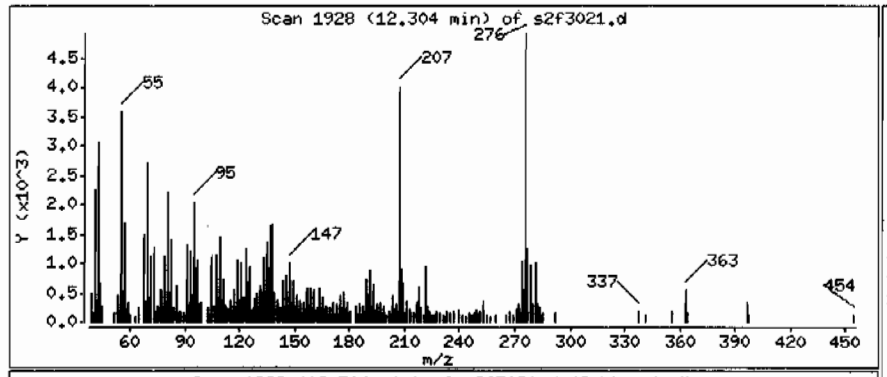

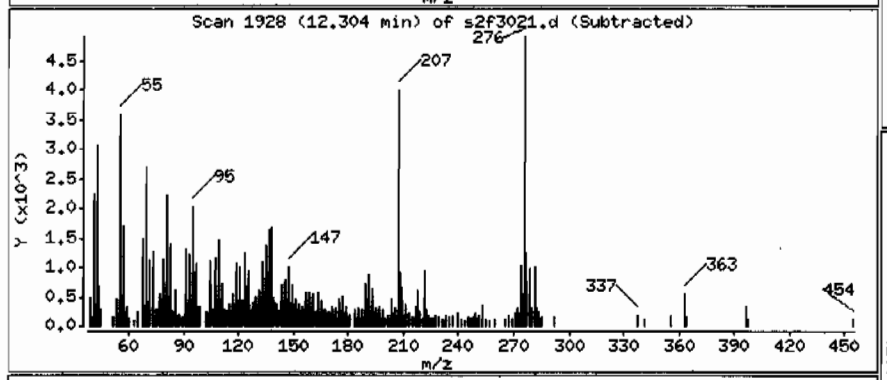

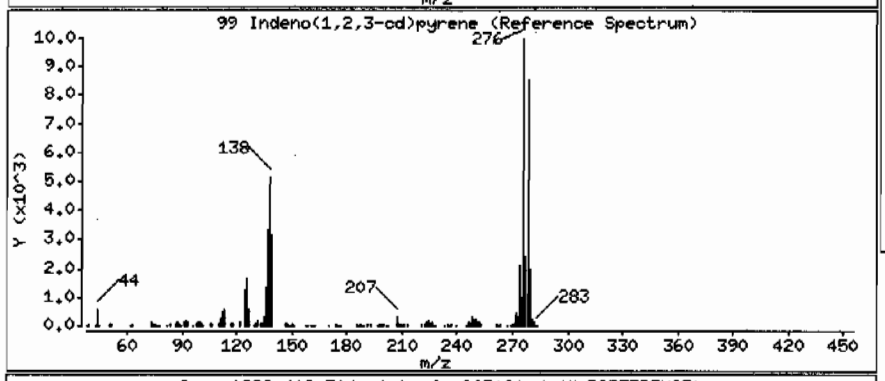

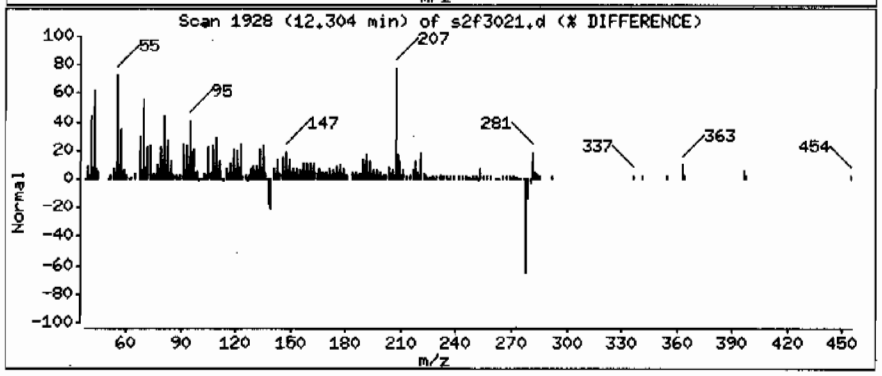

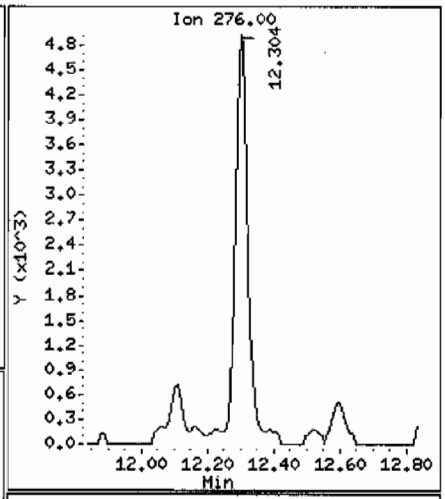

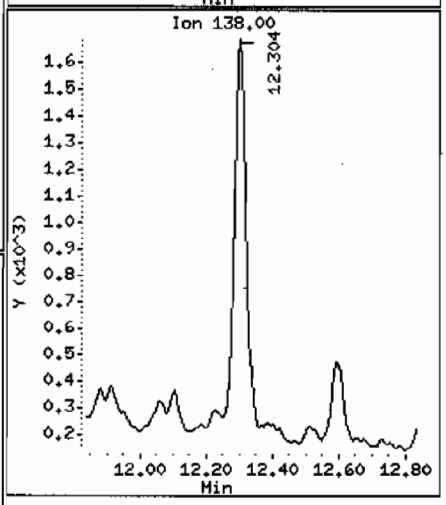

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

100 Dibenzo(a,h)anthracene

Concentration: 24.3 ug/Kg

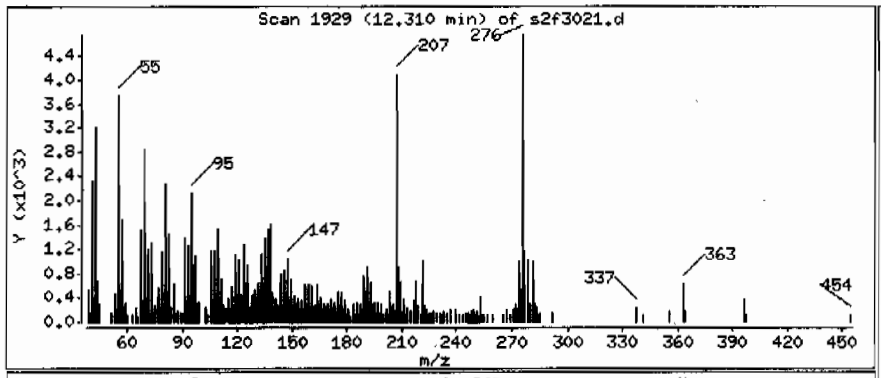

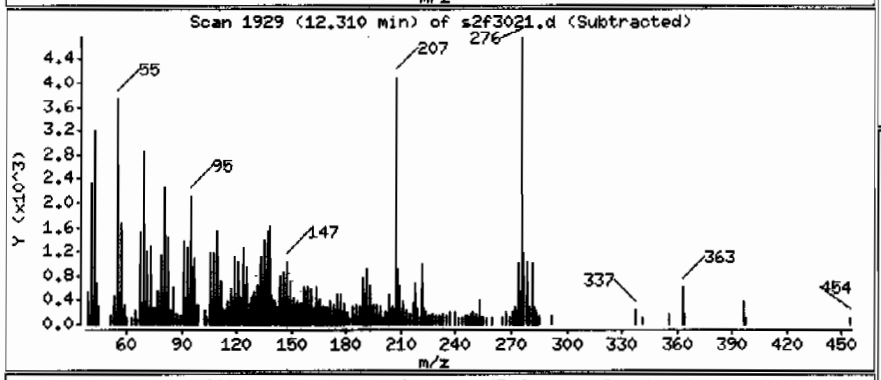

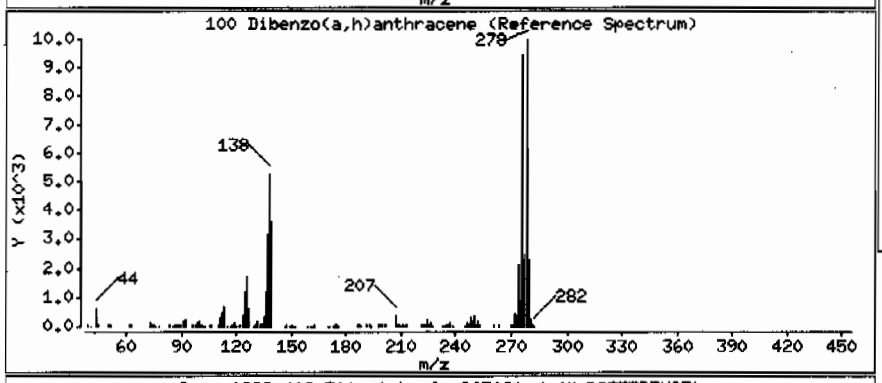

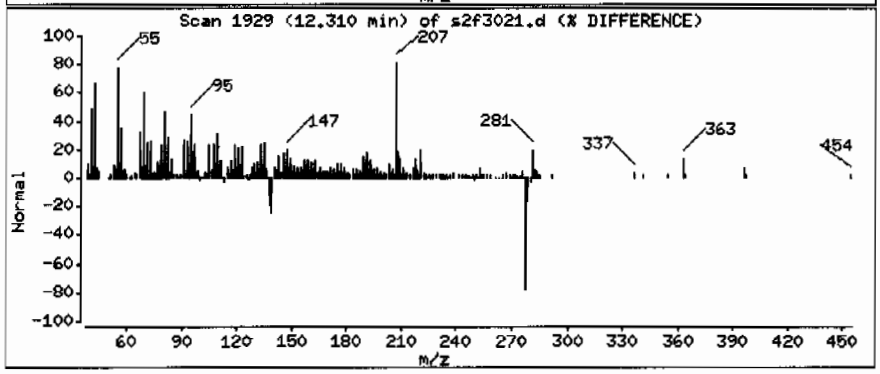

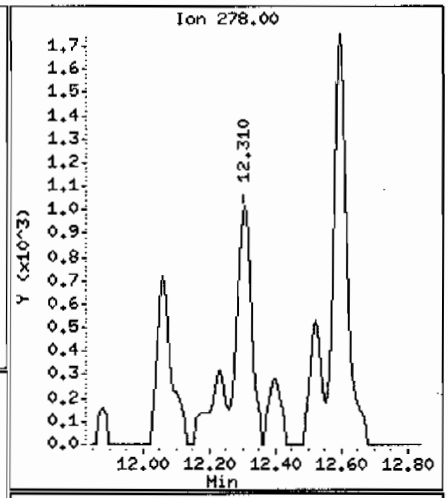

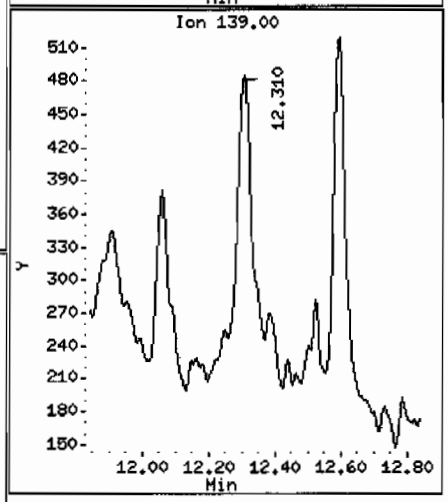

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: 1232428010188131911SVMF11LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 81.0 ug/Kg

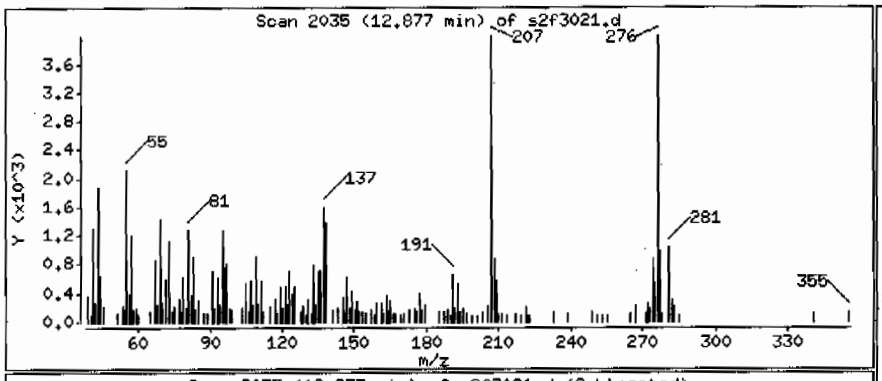

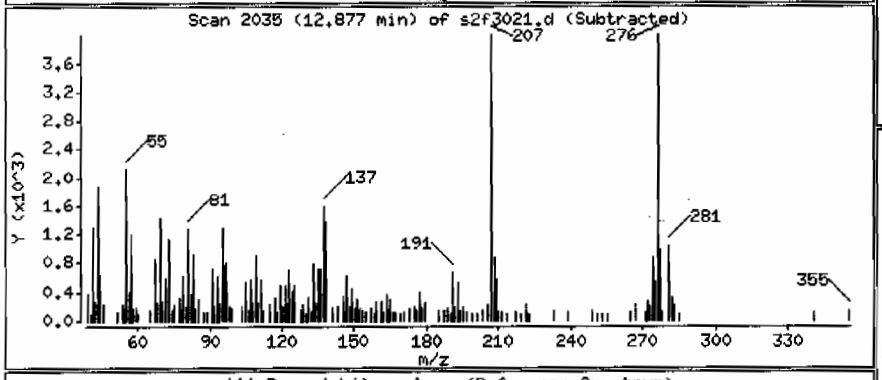

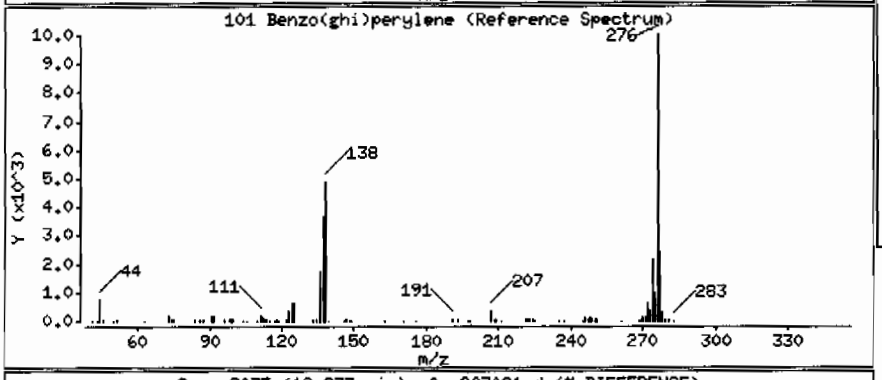

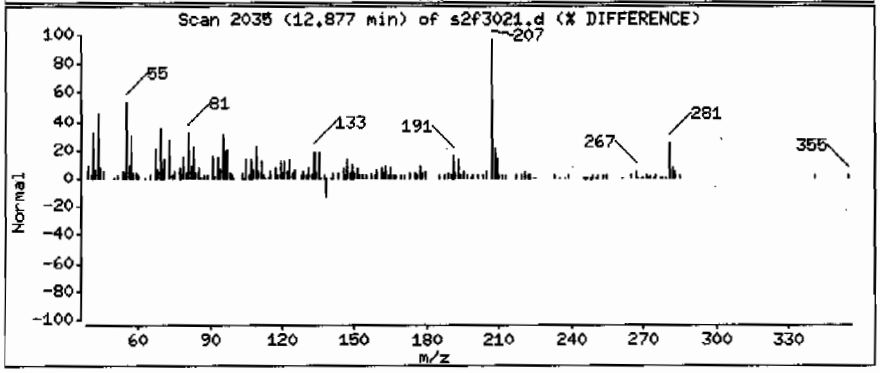

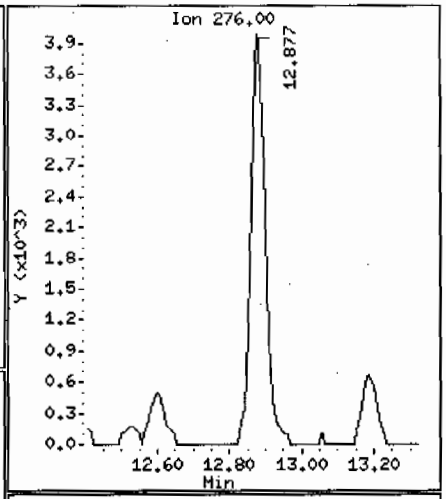

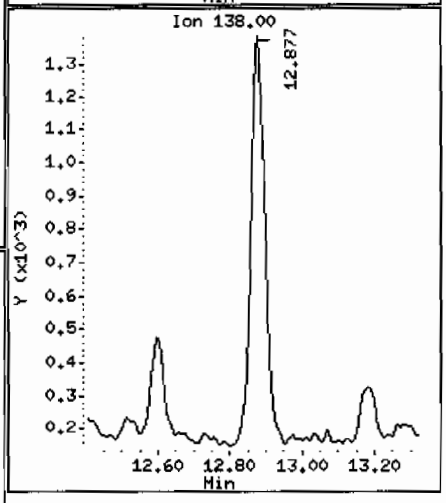

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	45	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	16	C4H7NO2	101

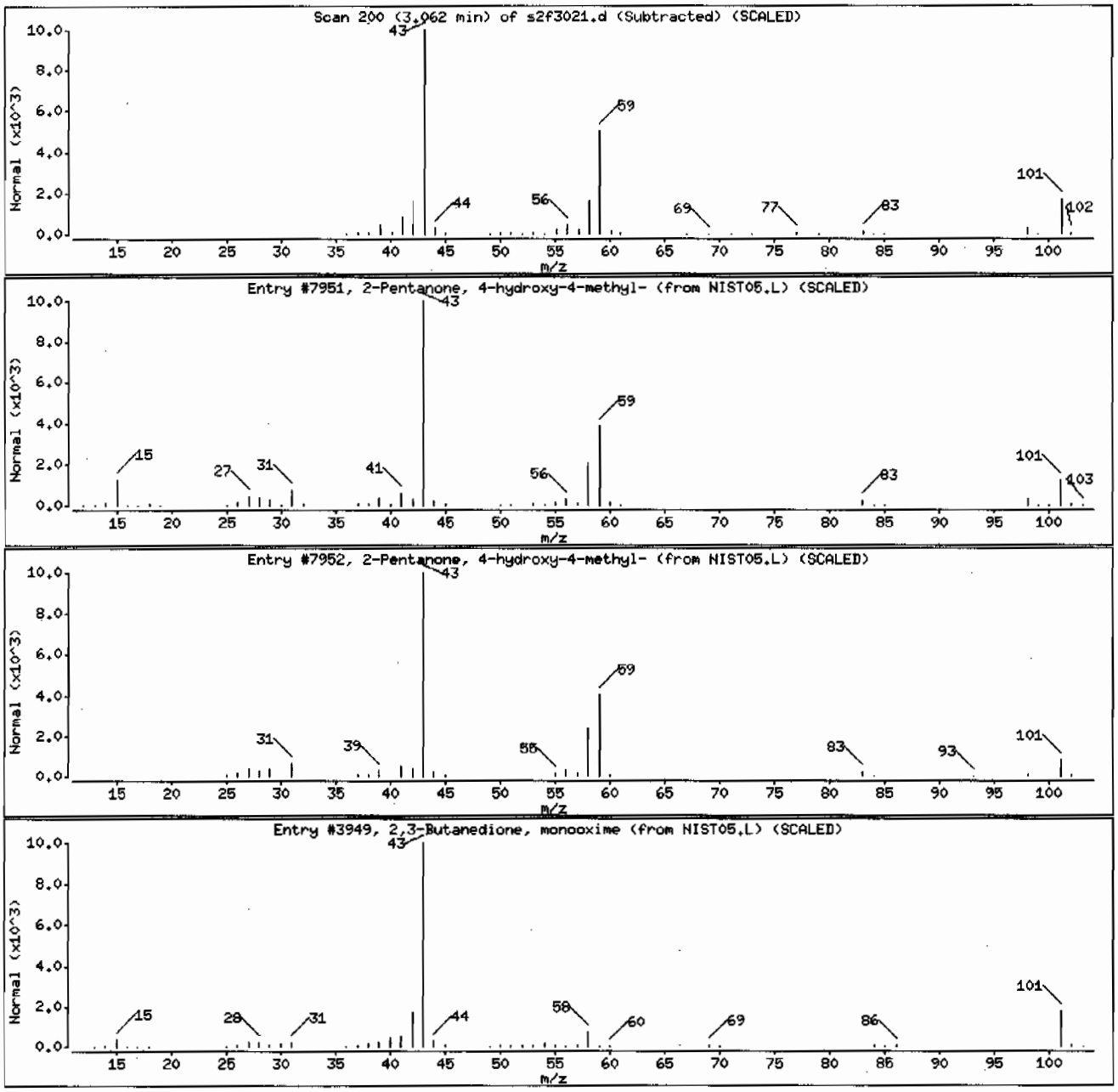

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044 Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5HS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
n-Hexadecanoic acid	57-10-3	NIST05.L	96235	97	C16H3202	256
n-Hexadecanoic acid	57-10-3	NIST05.L	96233	96	C16H3202	256
Tetradecanoic acid	544-63-8	NIST05.L	77276	95	C14H2802	228

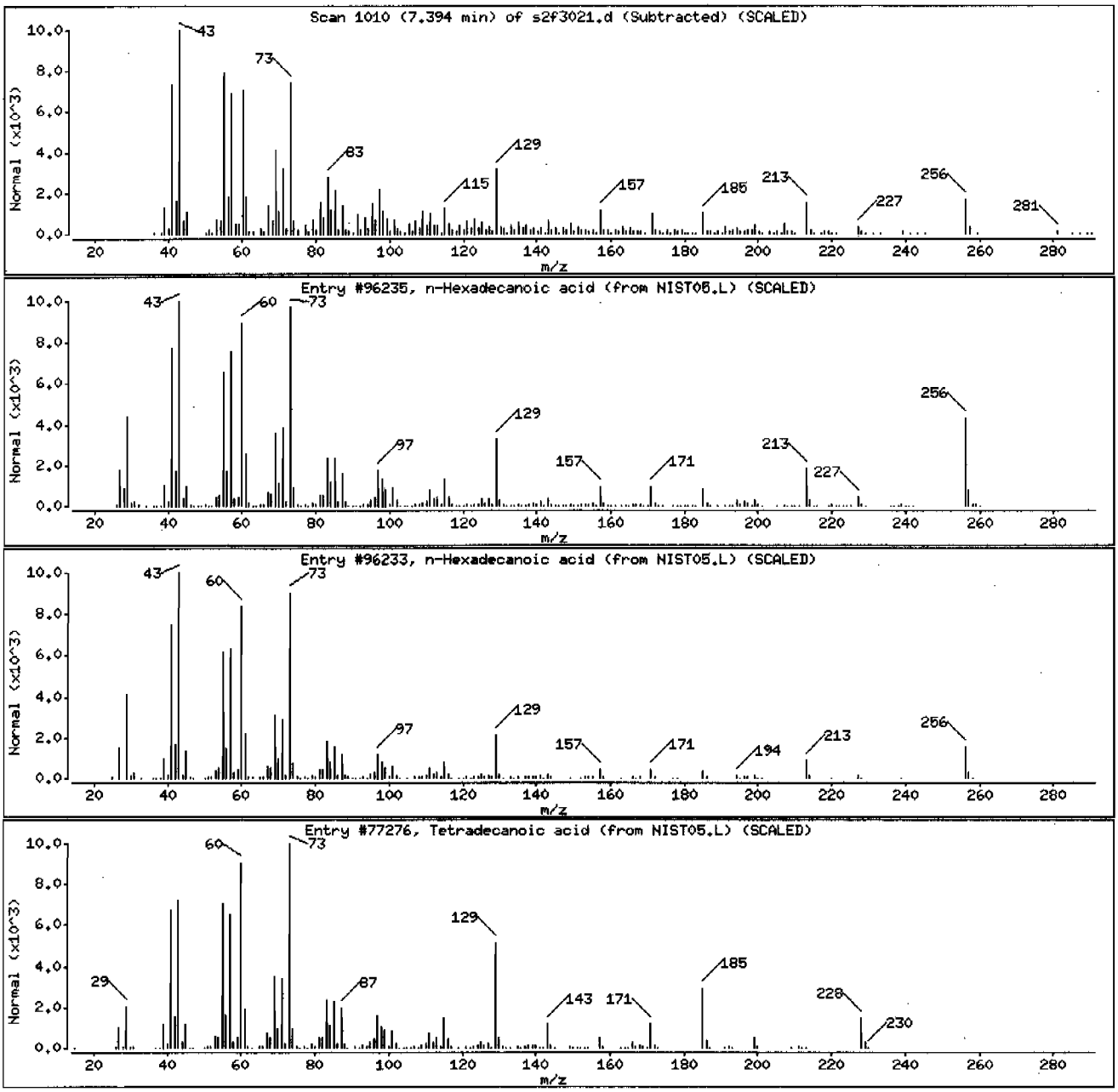

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044 Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
9,12-Octadecadienoic acid (Z,Z)-	60-33-3	NIST05.L	111993	96	C18H32O2	280
7-Heptadecyne, 17-chloro-	56554-75-7	NIST05.L	105608	86	C17H31Cl	270
1,2-15,16-Diepoxyhexadecane	1000192-65-0	NIST05.L	94762	78	C16H30O2	254

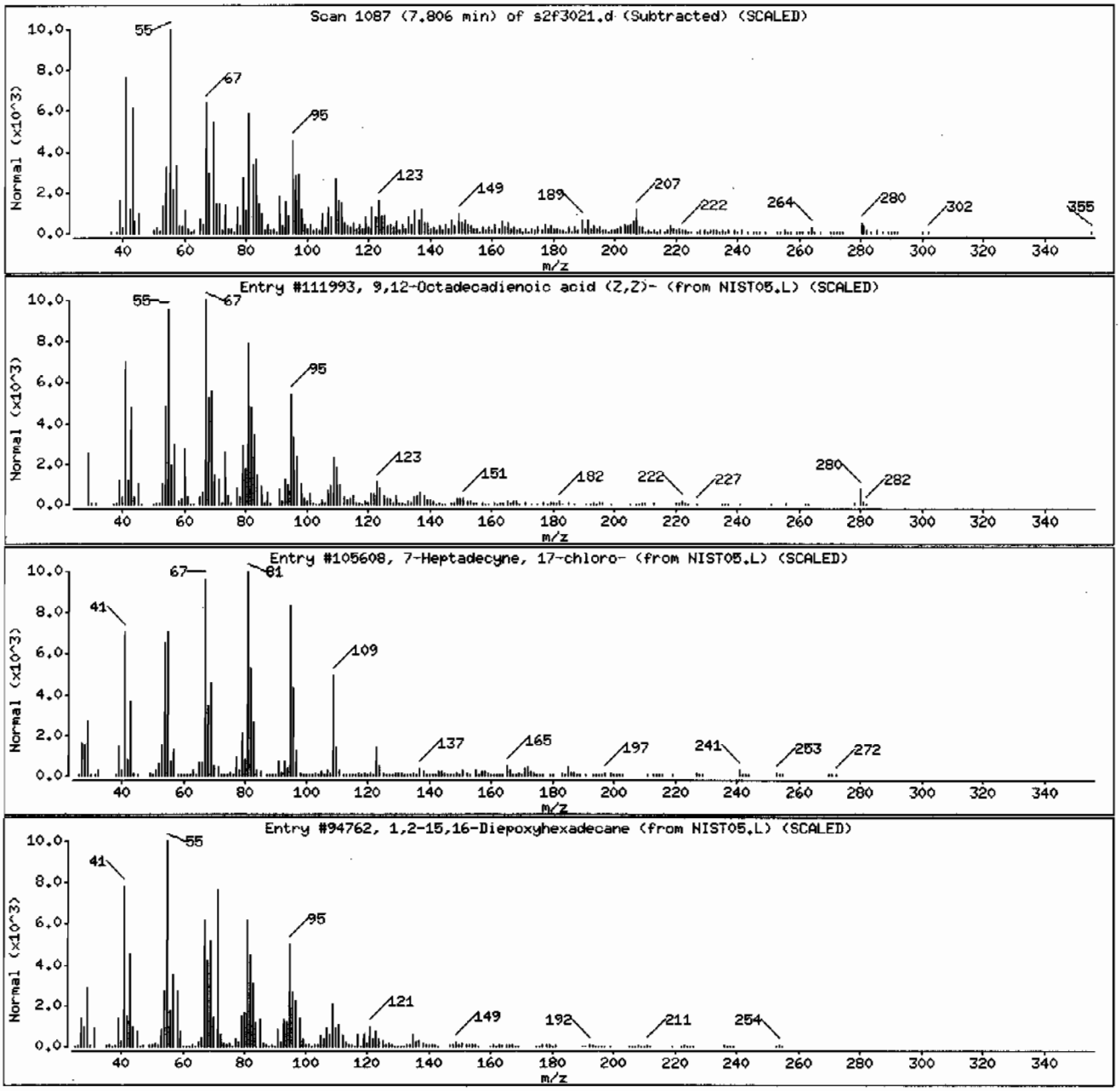

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044 Instrument: MSD2.i

Sample Info: 1232428010|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	98	C21H30O2	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133620	94	C21H30O2	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133621	93	C21H30O2	314

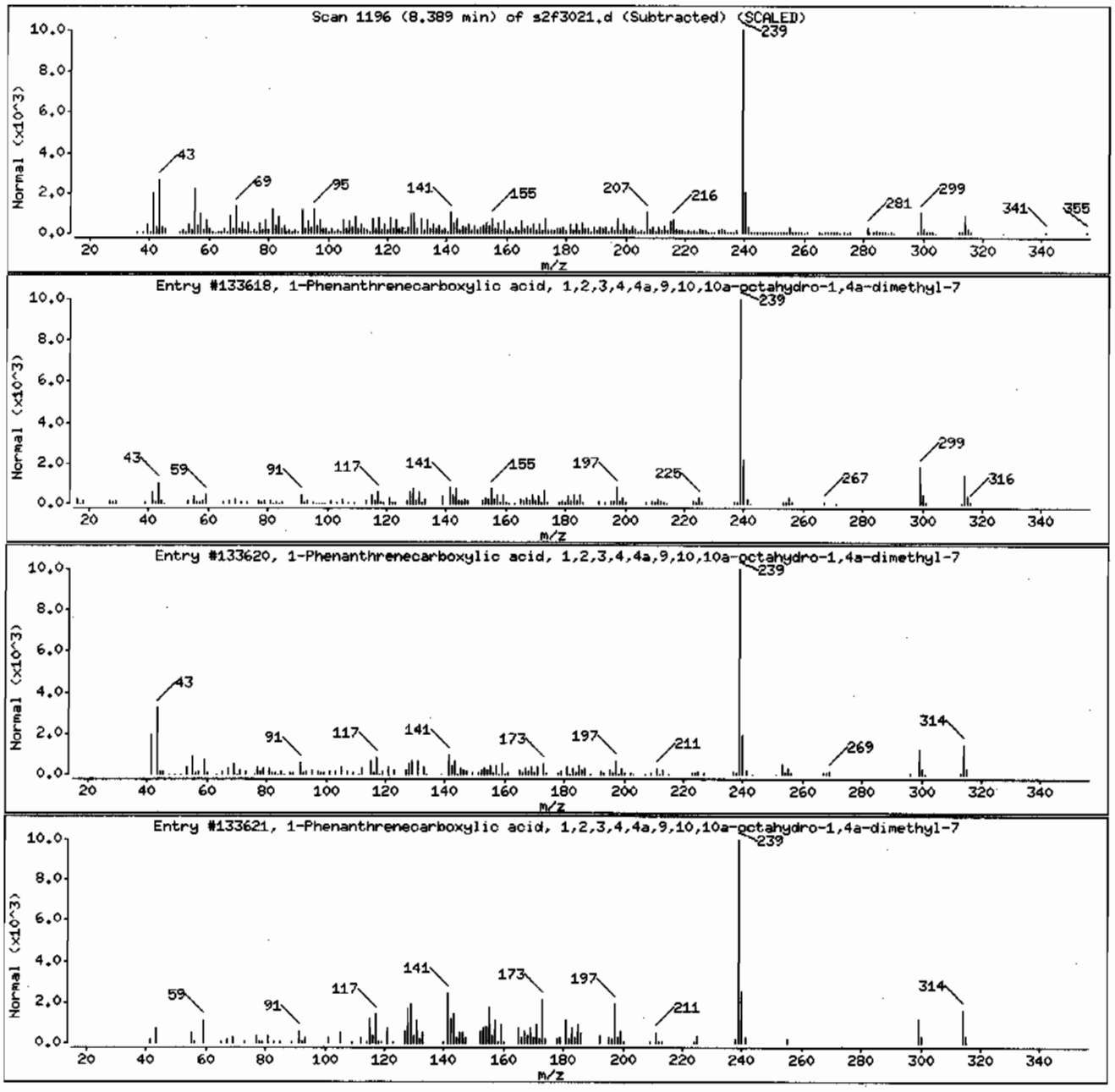

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044 Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125037	90	C20H2802	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	60	C20H2802	300
Butanoic acid, 2-(cyano)(2,4,6-trimethyl	1000267-71-7	NIST05.L	124759	53	C17H20N203	300

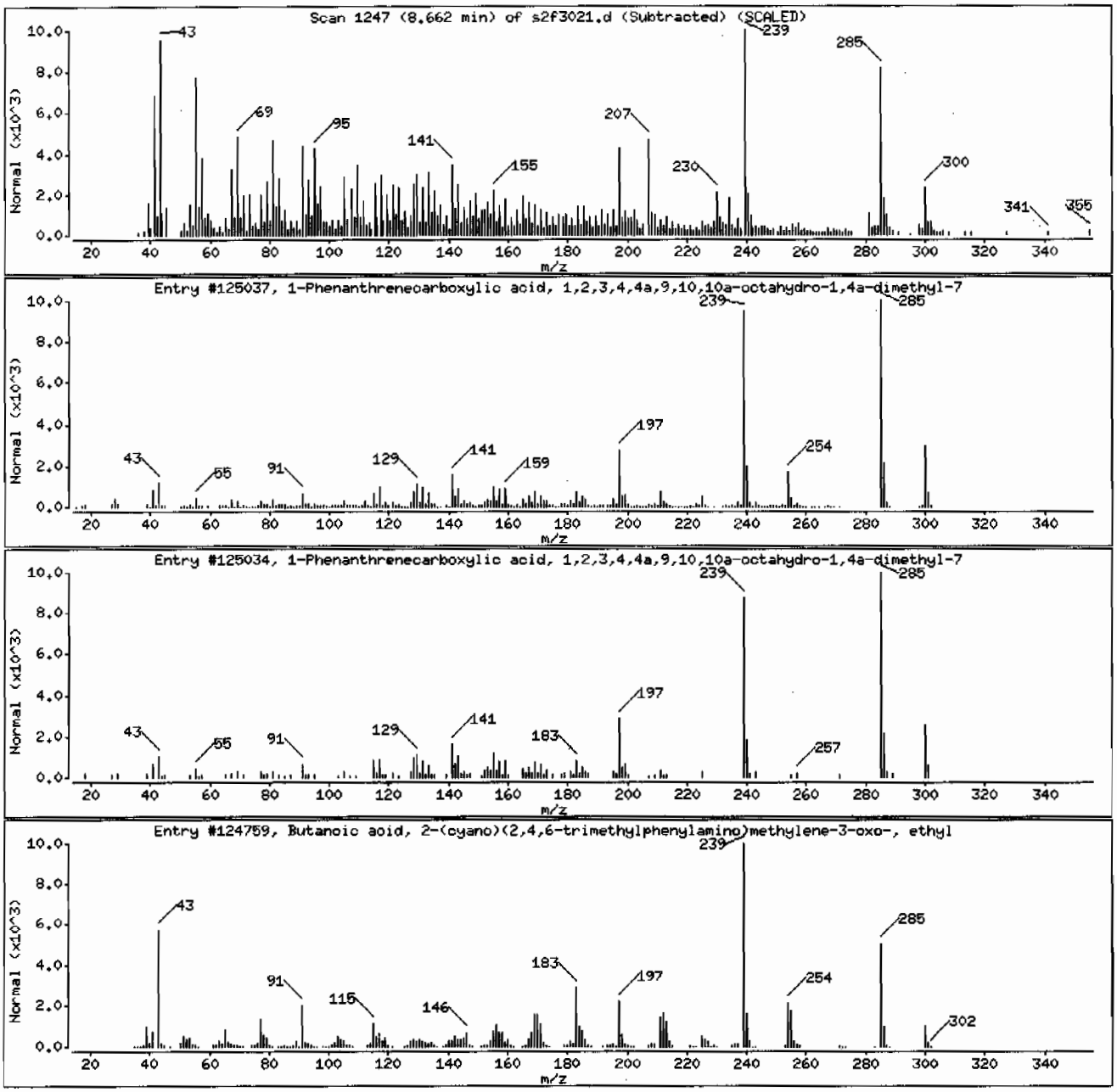

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
17-Pentatriacontene	6971-40-0	NIST05.L	183897	87	C35H70	491
1-Docosene	1599-67-3	NIST05.L	129889	74	C22H44	308
1-Tetracosanol	506-51-4	NIST05.L	154682	50	C24H50O	354

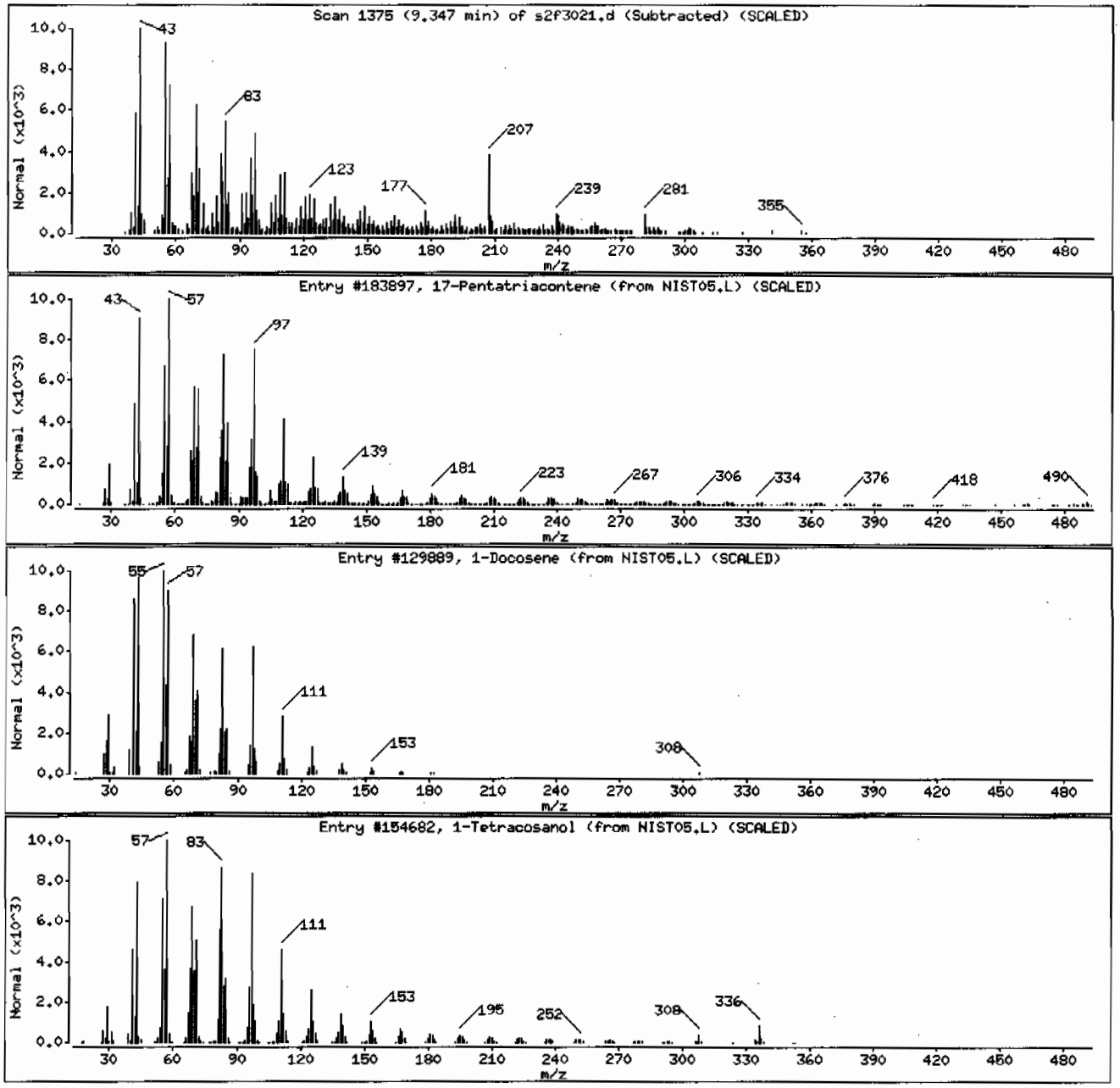

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044 Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Pyridine-3-carboxamide, oxime, N-(2-trif	288246-53-7	NIST05.L	112295	91	C13H10F3N3O	281
Cyclopropane carboxamide, 2-cyclopropyl-	331416-19-4	NIST05.L	62199	53	C13H21NO	207
2(1H)-Naphthalenone, 5-[2-(3-furanyl)eth	59742-40-4	NIST05.L	126182	49	C20H30O2	302

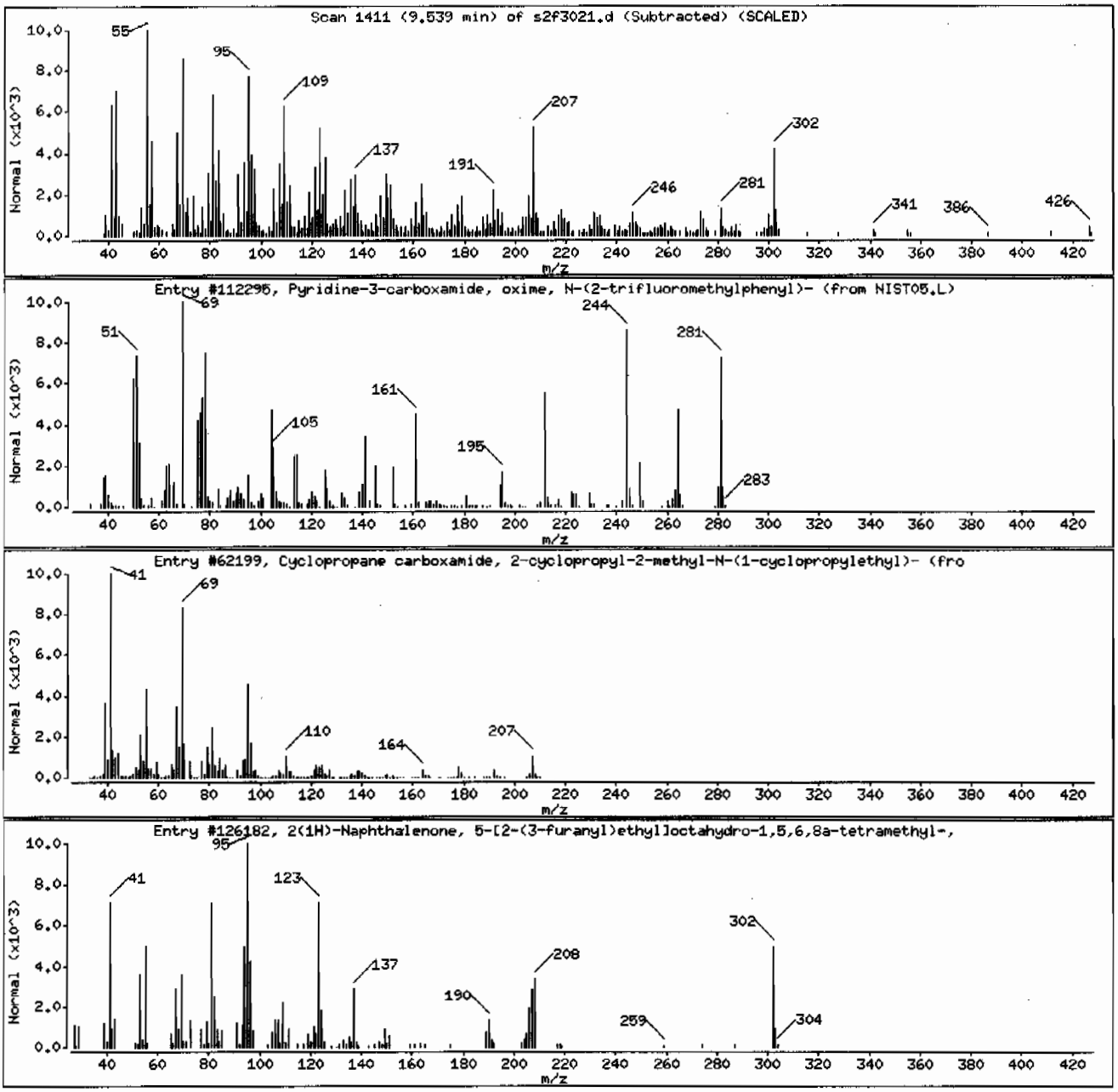

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044 Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Nonacosane	630-03-5	NIST05.L	173140	97	C29H60	408
Octadecane	593-45-3	NIST05.L	94929	97	C18H38	254
Octadecane	593-45-3	NIST05.L	94930	96	C18H38	254

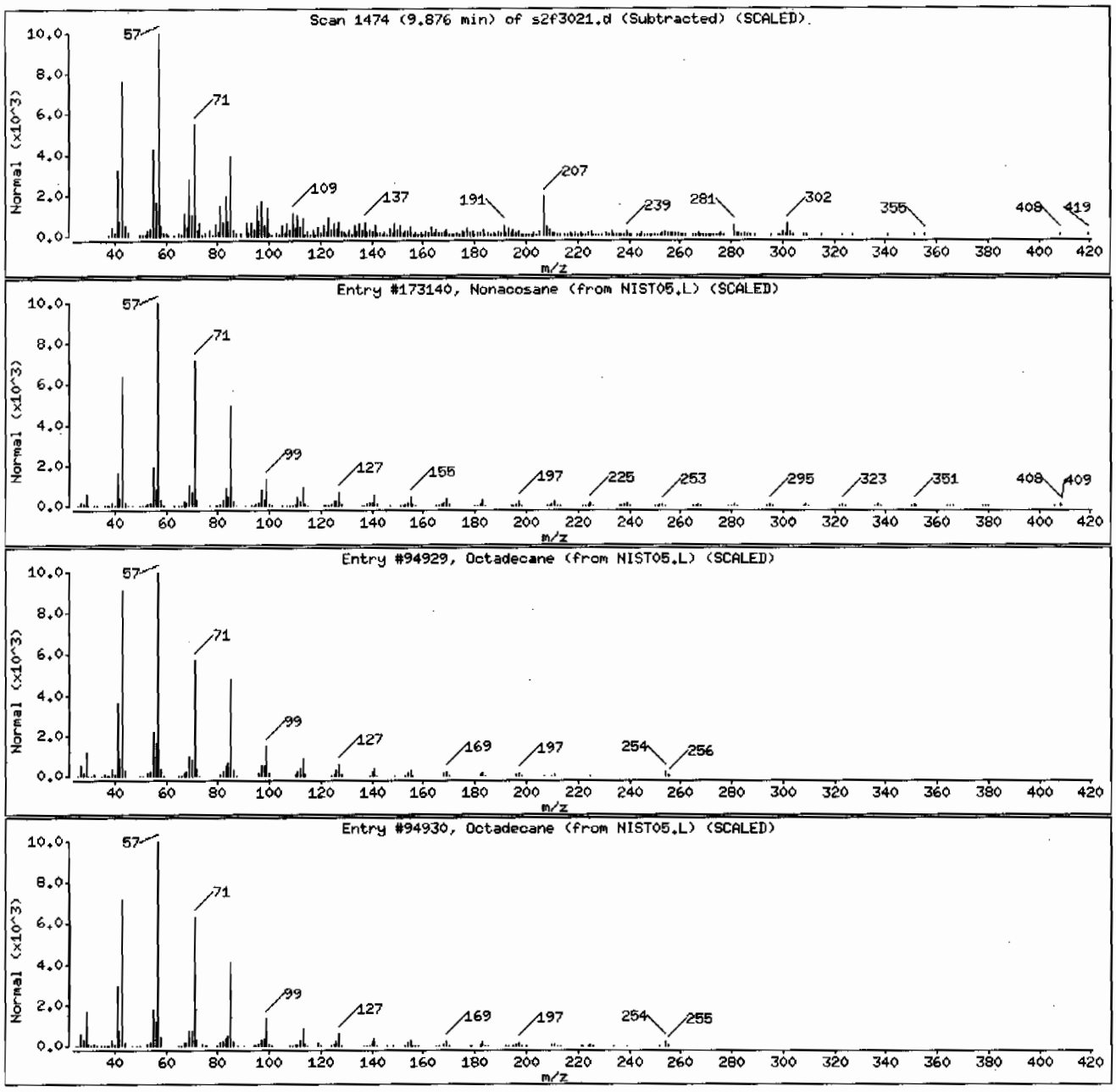

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Pyridine-3-carboxamide, oxime, N-(2-trif	288246-53-7	NIST05.L	112295	90	C13H10F3N3O	281
11,13-Dimethyl-12-tetradecen-1-ol acetat	1000130-81-0	NIST05.L	113394	86	C18H34O2	282
E-11-Methyl-12-tetradecen-1-ol acetate	1000130-80-7	NIST05.L	104147	74	C17H32O2	268

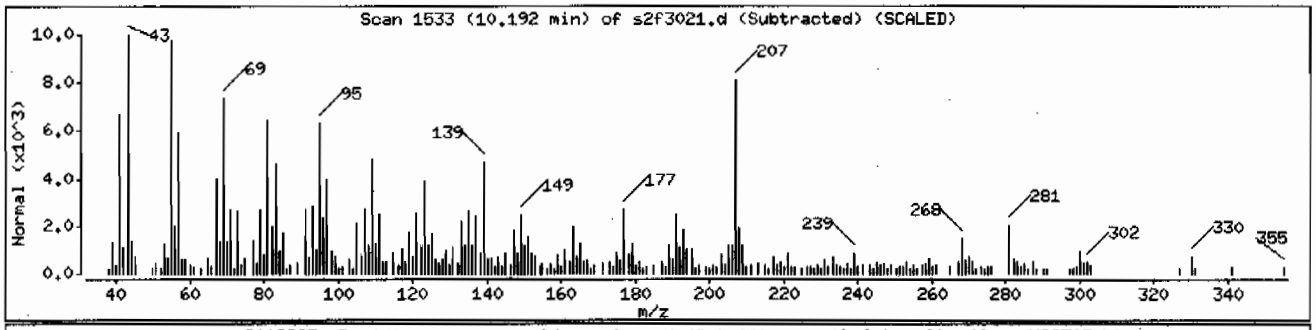

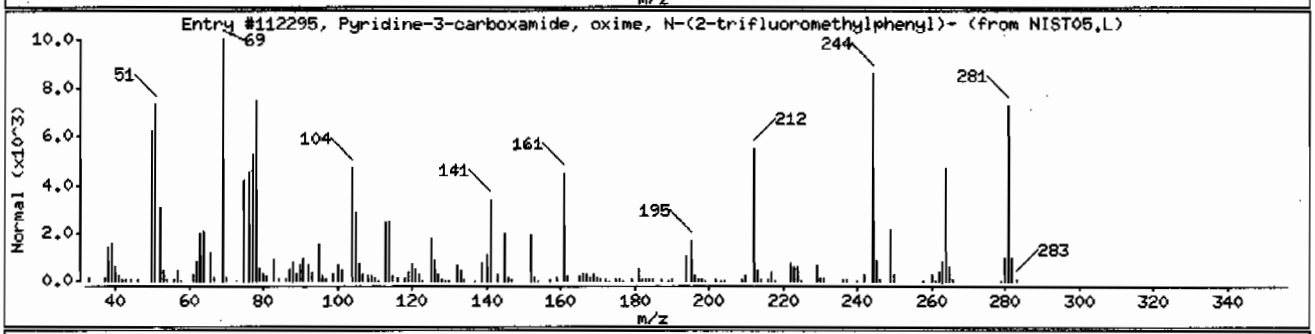

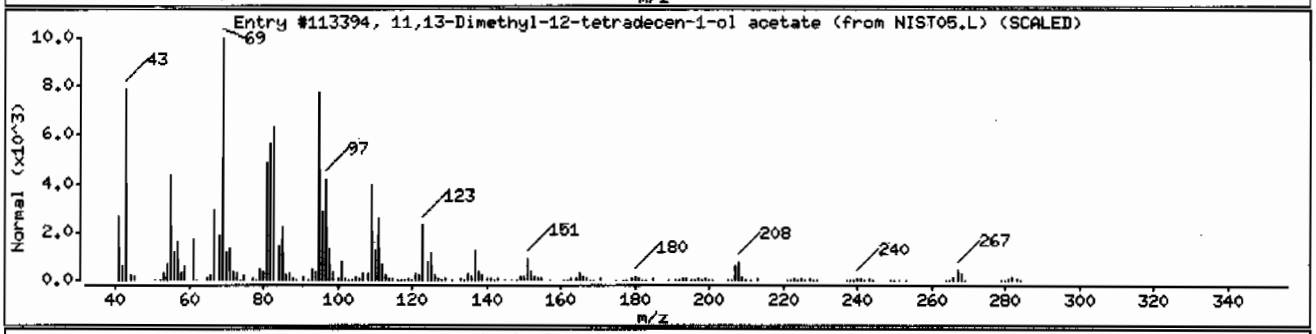

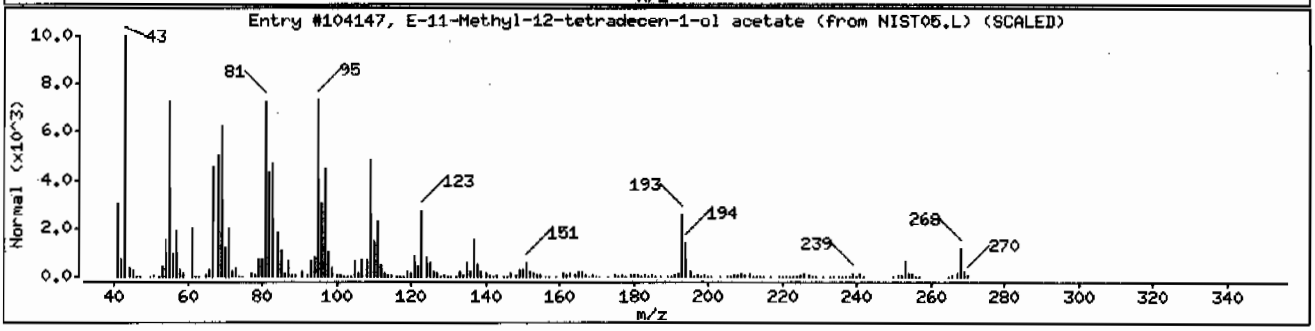

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044 Instrument: MSD2.i

Sample Info: 1232428010|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosane	112-95-8	NIST05.L	113492	96	C20H42	282
Eicosane	112-95-8	NIST05.L	113488	95	C20H42	282
Eicosane	112-95-8	NIST05.L	113489	91	C20H42	282

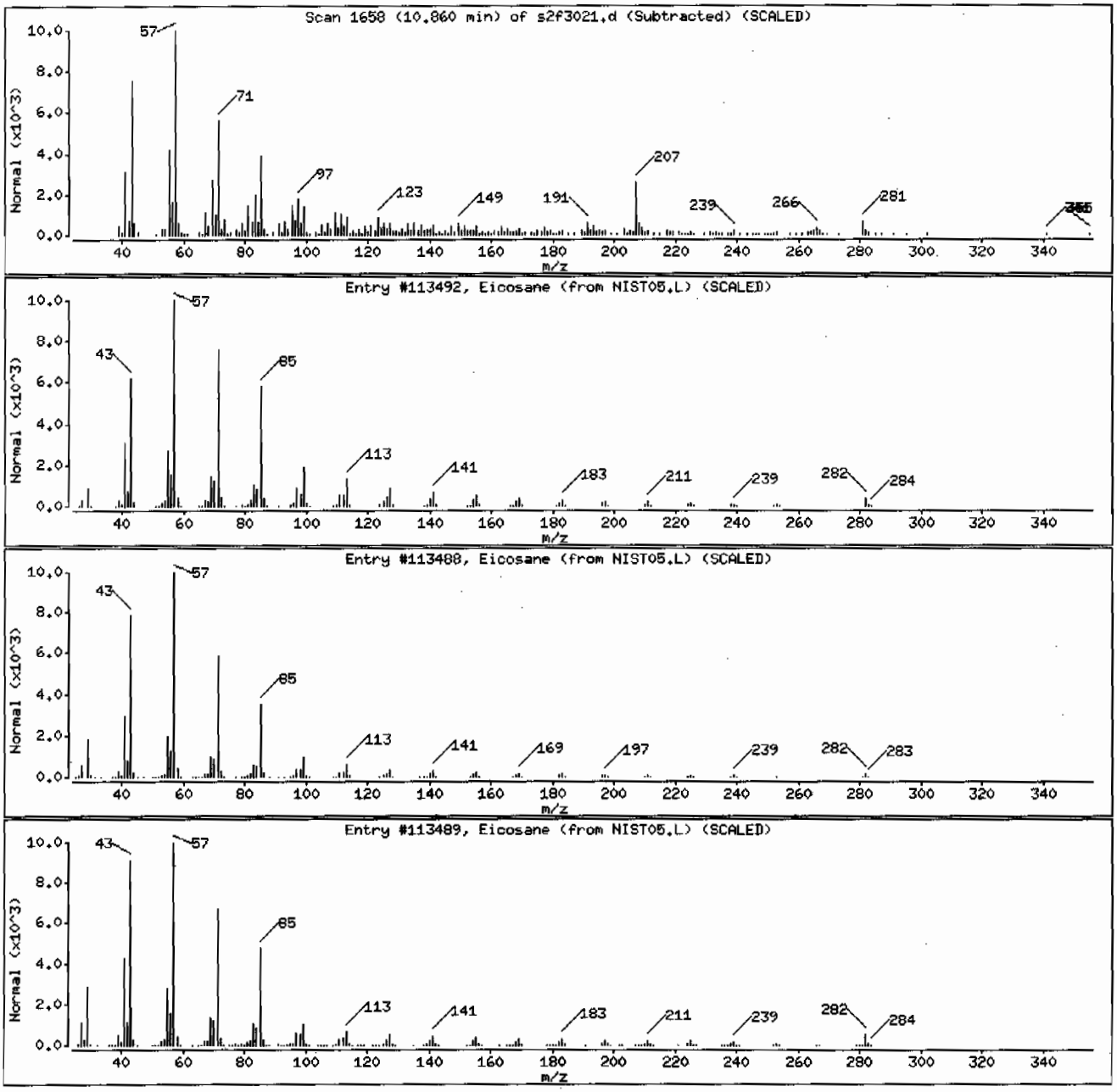

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Bicyclo[3.1.1]heptan-2-one, 6,6-dimethyl	38651-65-9	NIST05.L	17047	74	C9H14O	138
1-Nonadecene	18435-45-5	NIST05.L	102858	55	C19H38	266
Pyridine-3-carboxamide, oxime, N-(2-trif	288246-53-7	NIST05.L	112295	53	C13H10F3N3O	281

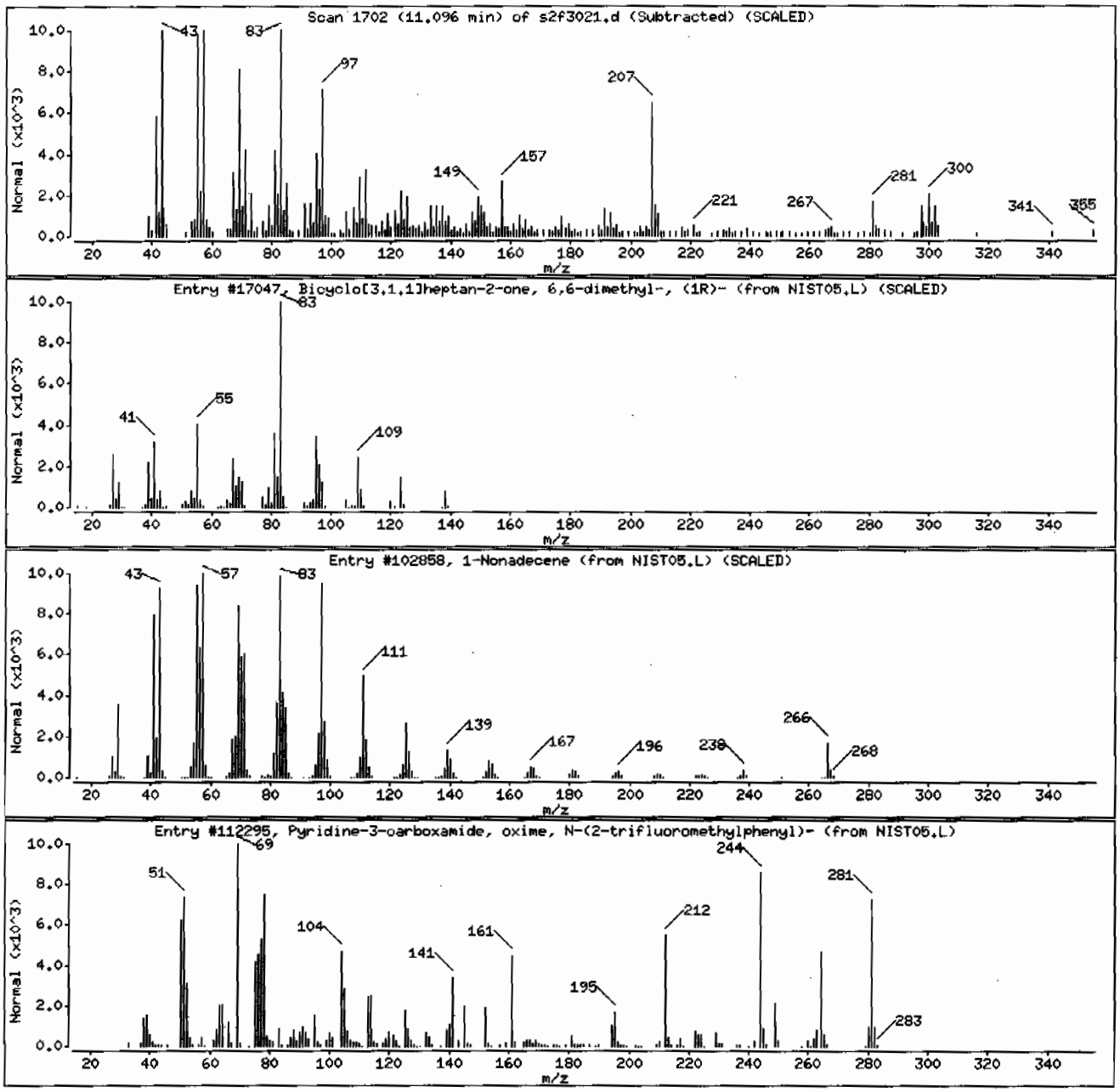

Data File: /chem/MSD2.i/s063009.b/s2f3021.d

Date : 30-JUN-2009 22:32

Client ID: CAMO-09-6044

Instrument: MSD2.i

Sample Info: |2324280101881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Benzo[h]quinoline, 2,4-dimethyl-	605-67-4	NIST05.L	62243	46	C15H13N	207
1,4-Benzenediol, 2,5-bis(1,1-dimethyleth	88-58-4	NIST05.L	72748	42	C14H2202	222
2-Ethylacridine	55751-83-2	NIST05.L	62222	38	C15H13N	207

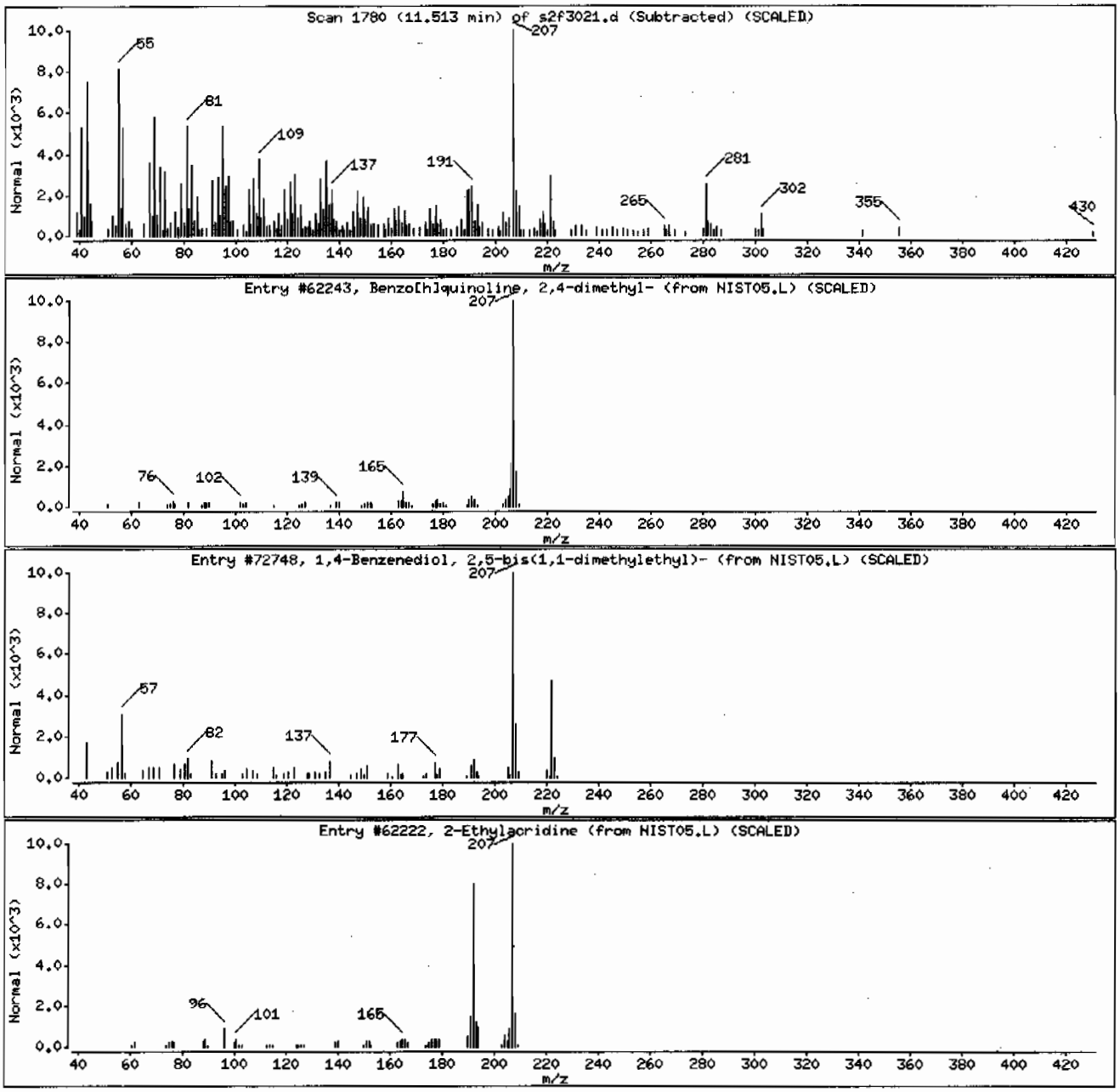

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428007	**Date Received:**	06/26/2009 08:40	**%Moisture:**	8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6045	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:33	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s2f3018.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	360	ug/kg	72.0	360
108-95-2	Phenol	U	360	ug/kg	72.0	360
95-57-8	2-Chlorophenol	U	360	ug/kg	72.0	360
106-46-7	1,4-Dichlorobenzene	U	360	ug/kg	72.0	360
621-64-7	N-Nitrosodipropylamine	U	360	ug/kg	72.0	360
59-50-7	4-Chloro-3-methylphenol	U	360	ug/kg	36.0	360
83-32-9	Acenaphthene	U	36.0	ug/kg	12.0	36.0
121-14-2	2,4-Dinitrotoluene	U	360	ug/kg	36.0	360
100-02-7	4-Nitrophenol	U	360	ug/kg	72.0	360
87-86-5	Pentachlorophenol	U	360	ug/kg	72.0	360
129-00-0	Pyrene		48.2	ug/kg	11.3	36.0
110-86-1	Pyridine	U	360	ug/kg	72.0	360
62-53-3	Aniline	U	360	ug/kg	126	360
111-44-4	bis(2-Chloroethyl) ether	U	360	ug/kg	72.0	360
541-73-1	1,3-Dichlorobenzene	U	360	ug/kg	72.0	360
100-51-6	Benzyl alcohol	U	360	ug/kg	108	360
95-50-1	1,2-Dichlorobenzene	U	360	ug/kg	72.0	360
108-60-1	bis(2-Chloroisopropyl)ether	U	360	ug/kg	72.0	360
95-48-7	o-Cresol	U	360	ug/kg	72.0	360
65794-96-9	m,p-Cresols	U	360	ug/kg	144	360
67-72-1	Hexachloroethane	U	360	ug/kg	72.0	360
98-95-3	Nitrobenzene	U	360	ug/kg	72.0	360
78-59-1	Isophorone	U	360	ug/kg	72.0	360
88-75-5	2-Nitrophenol	U	360	ug/kg	36.0	360
105-67-9	2,4-Dimethylphenol	U	360	ug/kg	72.0	360
111-91-1	bis(2-Chloroethoxy)methane	U	360	ug/kg	72.0	360
120-83-2	2,4-Dichlorophenol	U	360	ug/kg	72.0	360
65-85-0	Benzoic acid	U	720	ug/kg	180	720
91-20-3	Naphthalene	U	36.0	ug/kg	10.8	36.0
106-47-8	4-Chloroaniline	U	360	ug/kg	72.0	360
87-68-3	Hexachlorobutadiene	U	360	ug/kg	72.0	360
91-57-6	2-Methylnaphthalene	U	36.0	ug/kg	7.20	36.0
77-47-4	Hexachlorocyclopentadiene	U	360	ug/kg	72.0	360
88-06-2	2,4,6-Trichlorophenol	U	360	ug/kg	72.0	360
95-95-4	2,4,5-Trichlorophenol	U	360	ug/kg	72.0	360
91-58-7	2-Chloronaphthalene	U	36.0	ug/kg	12.6	36.0
88-74-4	2-Nitroaniline	U	360	ug/kg	72.0	360
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	360	ug/kg	72.0	360

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428007	**Date Received:**	06/26/2009 08:40	**%Moisture:**	8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6045	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 21:33	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s2f3018.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	360	ug/kg	72.0	360
606-20-2	2,6-Dinitrotoluene	U	360	ug/kg	36.0	360
208-96-8	Acenaphthylene	U	36.0	ug/kg	10.8	36.0
51-28-5	2,4-Dinitrophenol	U	720	ug/kg	137	720
132-64-9	Dibenzofuran	U	360	ug/kg	72.0	360
84-66-2	Diethylphthalate	U	360	ug/kg	72.0	360
86-73-7	Fluorene	U	36.0	ug/kg	10.8	36.0
7005-72-3	4-Chlorophenylphenylether	U	360	ug/kg	36.0	360
534-52-1	2-Methyl-4,6-dinitrophenol	U	360	ug/kg	72.0	360
100-01-6	4-Nitroaniline	U	360	ug/kg	72.0	360
	p-Nitroaniline					
122-39-4	Diphenylamine	U	360	ug/kg	72.0	360
122-66-7	Azobenzene	U	360	ug/kg	72.0	360
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	360	ug/kg	36.0	360
118-74-1	Hexachlorobenzene	U	360	ug/kg	72.0	360
85-01-8	Phenanthrene	J	17.3	ug/kg	10.8	36.0
120-12-7	Anthracene	U	36.0	ug/kg	7.20	36.0
84-74-2	Di-n-butylphthalate	U	360	ug/kg	36.0	360
206-44-0	Fluoranthene		59.5	ug/kg	10.8	36.0
85-68-7	Butylbenzylphthalate	U	360	ug/kg	72.0	360
56-55-3	Benzo(a)anthracene	J	24.2	ug/kg	10.8	36.0
91-94-1	3,3'-Dichlorobenzidine	U	360	ug/kg	108	360
218-01-9	Chrysene	J	30.3	ug/kg	10.8	36.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	360	ug/kg	72.0	360
117-84-0	Di-n-octylphthalate	U	360	ug/kg	72.0	360
205-99-2	Benzo(b)fluoranthene		54.0	ug/kg	10.8	36.0
207-08-9	Benzo(k)fluoranthene	U	36.0	ug/kg	10.8	36.0
50-32-8	Benzo(a)pyrene	J	26.6	ug/kg	10.8	36.0
193-39-5	Indeno(1,2,3-cd)pyrene	J	15.3	ug/kg	10.8	36.0
53-70-3	Dibenzo(a,h)anthracene	U	36.0	ug/kg	10.8	36.0
191-24-2	Benzo(ghi)perylene	J	16.6	ug/kg	10.8	36.0
120-82-1	1,2,4-Trichlorobenzene	U	360	ug/kg	72.0	360

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.07	508	ug/kg		J

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Data file : /chem/MSD2.i/s063009.b/s2f3018.d
Lab Smp Id: 232428007 Client Smp ID: CAMO-09-6045
Inj Date : 30-JUN-2009 21:33
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428007|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.19000	weight of sample
M	8.00100	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.046	4.051	(1.000)	204112	40.0000	
* 29 Naphthalene-d8	136	4.918	4.923	(1.000)	786976	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	443544	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	770403	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	658012	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	497161	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.798)	312971	55.4125	2000
$ 5 Phenol-d5	99	3.752	3.757	(0.927)	403317	57.8263	2080
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.897)	167804	28.2613	1020
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	368125	29.3868	1060
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	111930	73.6792	2650
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	449754	40.1283	1440

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.025	8.031	(0.904)	26249	1.34007	48.2
68 Phenanthrene	178	7.164	7.170	(1.002)	8810	0.48023	17.3(a)
76 Fluoranthene	202	7.876	7.886	(1.102)	27878	1.65191	59.5
89 Benzo(a)anthracene	228	8.871	8.881	(0.999)	10766	0.67247	24.2(a)
92 Chrysene	228	8.903	8.919	(1.002)	12991	0.84082	30.3(aH)
95 Benzo(b)fluoranthene	252	9.972	9.988	(0.950)	17887	1.49871	54.0
97 Benzo(a)pyrene	252	10.411	10.432	(0.992)	7699	0.73833	26.6(a)
99 Indeno(1,2,3-cd)pyrene	276	12.299	12.337	(1.172)	4246	0.42388	15.3(a)
101 Benzo(ghi)perylene	276	12.871	12.903	(1.226)	4011	0.46117	16.6(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

ION RATIO REPORT

SV REPORT

Data file: s2f3018.d
Report Date: 07/01/2009 07:56
Lab. ID: 232428007 SampleType: SAMPLE
Injection Date: 30-JUN-2009 21:33
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428007|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	17860	3.75	3.83	80-120	100	(T)
93	1081	3.82	3.83	440-500	6	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	22425	4.41	4.29	80-120	100	(T)
42	13093	4.41	4.29	40-100	58	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	94934	6.17	5.94	80-120	100	(T)
164	443544	6.17	5.94	0- 40	467	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	57010	6.17	5.99	80-120	100	(T)
63	789	6.17	5.99	46-106	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	57052	6.17	6.27	80-120	100	(T)
89	744	6.17	6.27	38- 98	1	(QT)
63	789	6.17	6.27	16- 76	1	(QT)
53 Fluorene		CAS#: 86-73-7				
166	6852	6.69	6.54	80-120	100	(T)
165	7127	6.69	6.54	61-121	104	(T)
167	2208	6.69	6.54	0- 44	32	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	264	6.69	6.55	80-120	100	(T)
105	611	6.69	6.55	14- 74	232	(QT)
51	739	6.69	6.55	37- 97	280	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	6617	6.70	6.84	80-120	100	(T)
141	44890	6.69	6.84	51-111	678	(QT)
250	13039	6.70	6.84	66-126	197	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	8810	7.16	7.17	80-120	100	( )
179	2545	7.16	7.17	0- 46	29	( )
176	1598	7.16	7.17	0- 49	18	( )
69 Anthracene				CAS#: 120-12-7		
178	8810	7.16	7.20	80-120	100	( )
179	2545	7.16	7.20	0- 46	29	( )
176	1598	7.16	7.20	0- 48	18	( )
76 Fluoranthene				CAS#: 206-44-0		
202	27878	7.88	7.89	80-120	100	( )
203	4705	7.88	7.89	0- 48	17	( )
101	3884	7.88	7.89	0- 45	14	( )
79 Pyrene				CAS#: 129-00-0		
202	26249	8.03	8.03	80-120	100	( )
200	5296	8.03	8.03	0- 51	20	( )
101	4933	8.02	8.03	0- 48	19	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	10766	8.87	8.88	80-120	100	( )
226	2468	8.87	8.88	0- 56	23	( )
229	3086	8.87	8.88	0- 50	29	( )
92 Chrysene				CAS#: 218-01-9		
228	12991	8.90	8.92	80-120	100	( )
229	3515	8.90	8.92	0- 50	27	( )
226	3791	8.90	8.92	0- 59	29	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	17887	9.97	9.99	80-120	100	( )
253	4533	9.97	9.99	0- 52	25	( )
125	2605	9.97	9.99	0- 45	15	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	17887	9.97	10.02	80-120	100	( )
253	4533	9.97	10.02	0- 52	25	( )
125	2605	9.97	10.02	0- 44	15	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	7699	10.41	10.43	80-120	100	( )
253	1979	10.41	10.43	0- 52	26	( )
125	1169	10.41	10.43	0- 46	15	( )
99 Indeno(1,2,3-cd)pyrene			CAS#: 193-39-5			
276	4246	12.30	12.34	80-120	100	( )
138	1719	12.30	12.34	7- 67	40	( )
101 Benzo(ghi)perylene			CAS#: 191-24-2			
276	4011	12.87	12.90	80-120	100	( )
138	1427	12.87	12.90	4- 64	36	( )

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s063009.b/s2f3018.d
Lab Smp Id: 232428007 Client Smp ID: CAMO-09-6045
Inj Date : 30-JUN-2009 21:33
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428007|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.19000	weight of sample
M	8.00100	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.046	1226666	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.067	432797	14.1129578	508	0		0	10

Data File: /chem/MSD2.i/s063009.b/s2f3018.d
Date : 30-JUN-2009 21:33
Client ID: CAMD-09-6045
Sample Info: 123242800718813191|1|SVHF11|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

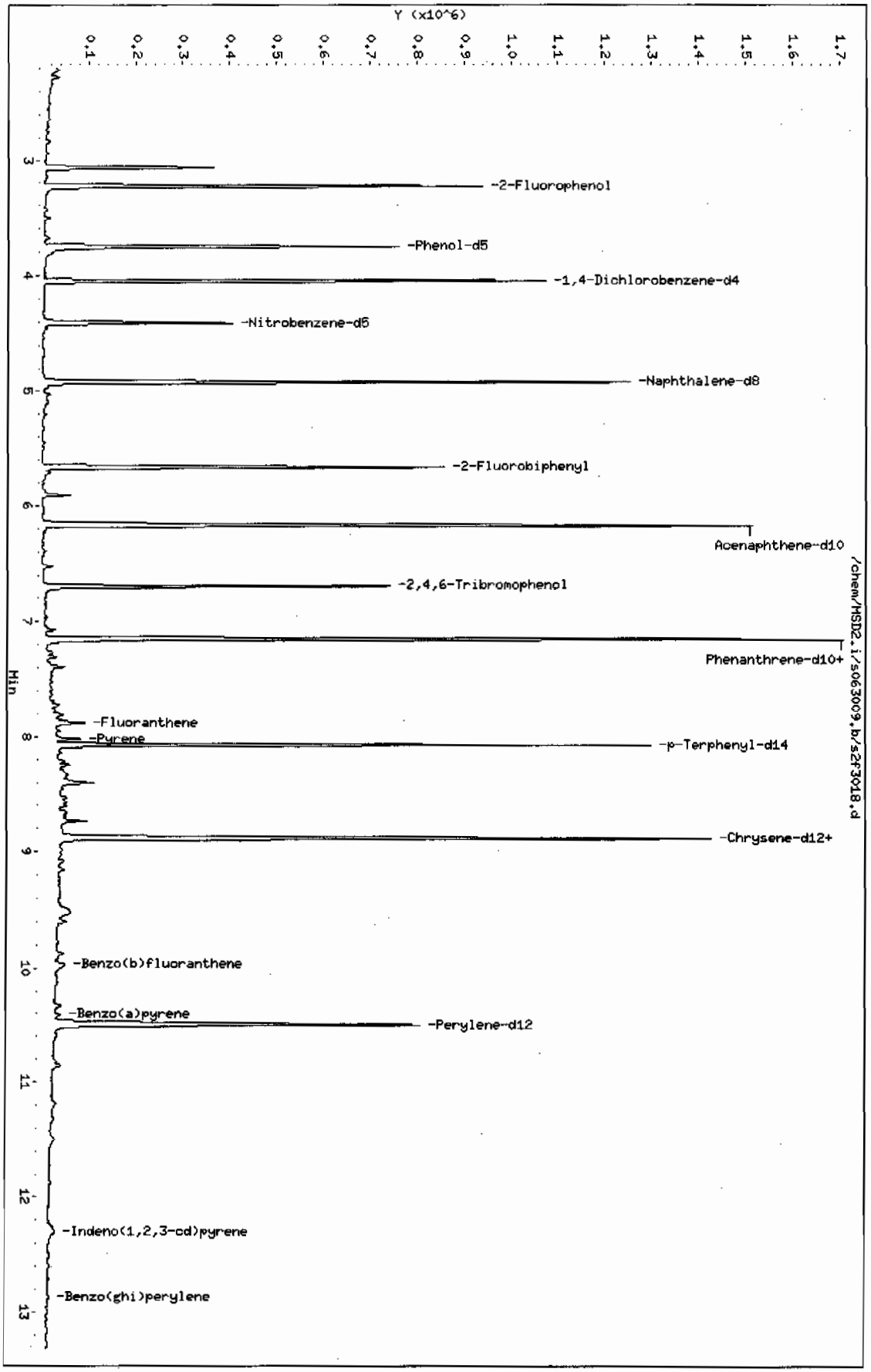

Page 1

Data File: /chem/MSD2.i/s063009.b/s2f3018.d

Date : 30-JUN-2009 21:33

Client ID: CAHO-09-6045

Instrument: MSD2.i

Sample Info: |2324280071881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 48.2 ug/Kg

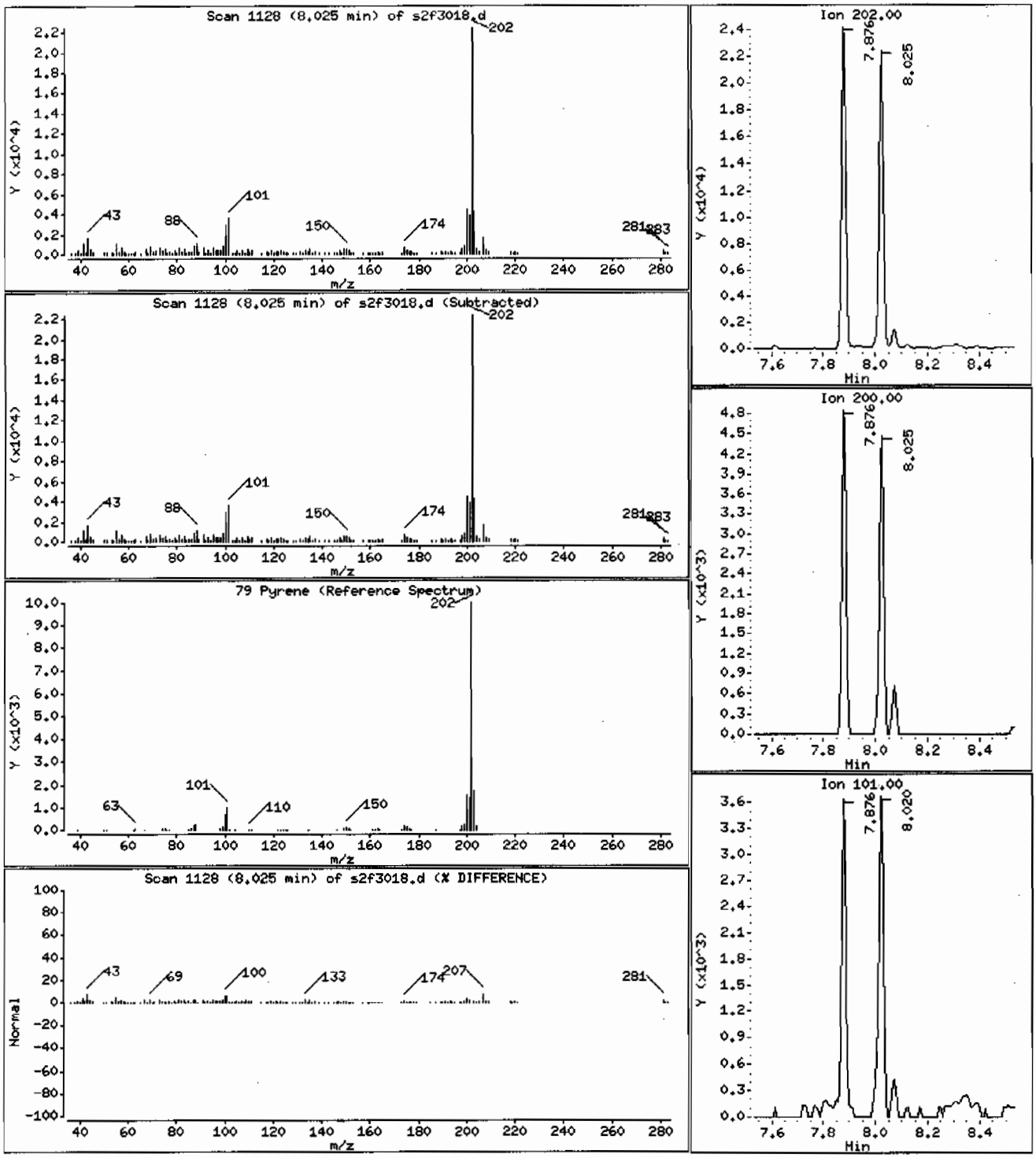

Data File: /chem/MSD2.i/s063009.b/s2f3018.d

Date : 30-JUN-2009 21:33

Client ID: CAMO-09-6045

Instrument: MSD2.i

Sample Info: |2324280071881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 17.3 ug/Kg

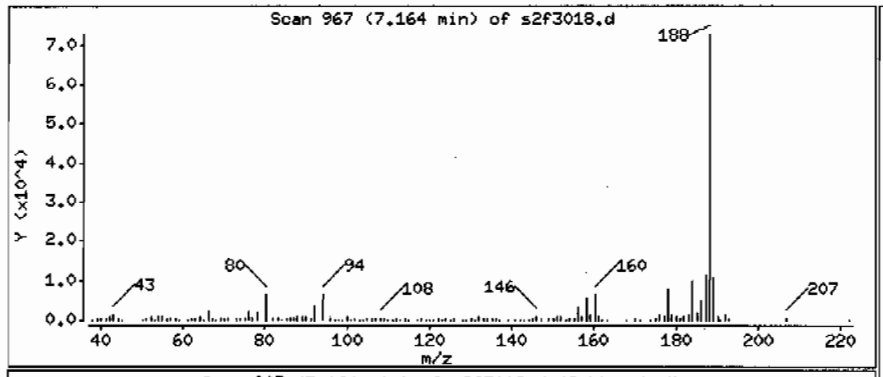

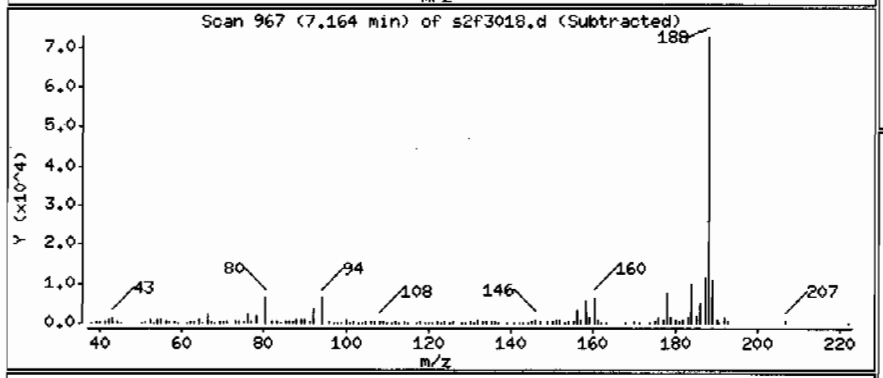

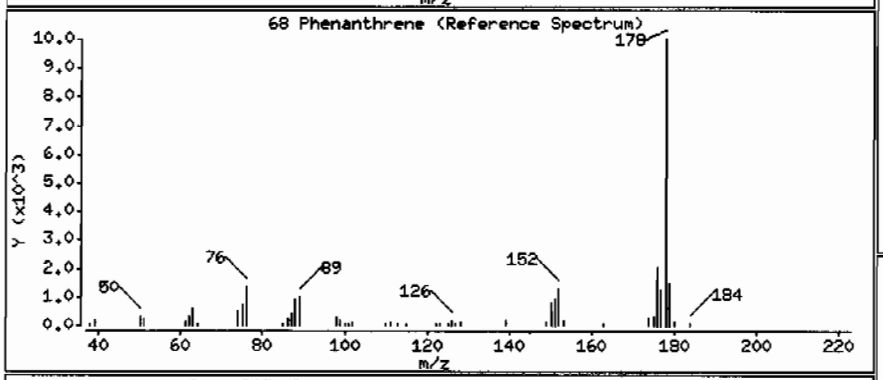

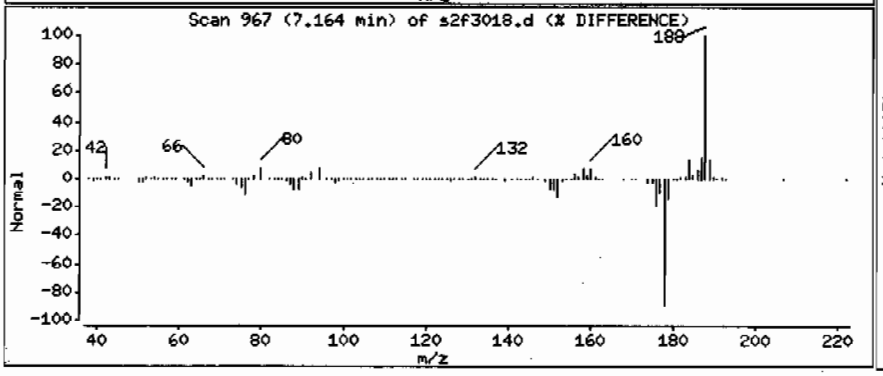

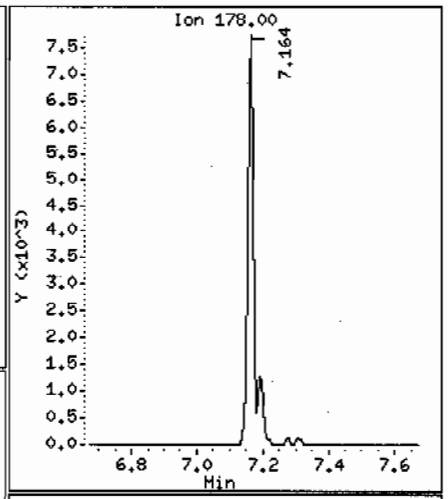

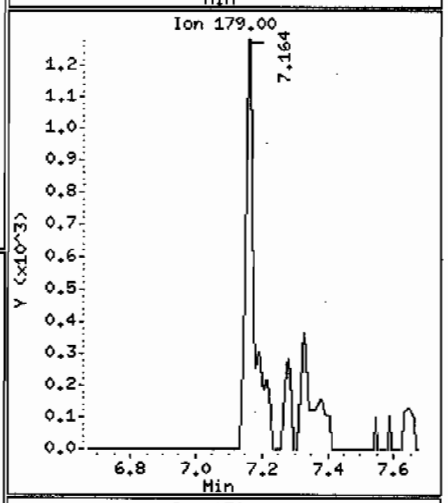

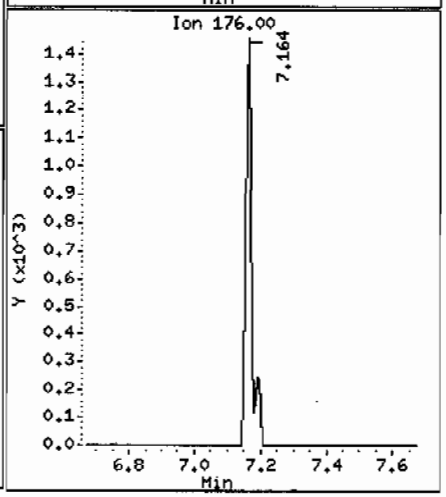

Data File: /chem/MSD2.i/s063009.b/s2f3018.d

Date : 30-JUN-2009 21:33

Client ID: CAMO-09-6045

Instrument: MSD2.i

Sample Info: 1232428007188131911|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 59.5 ug/Kg

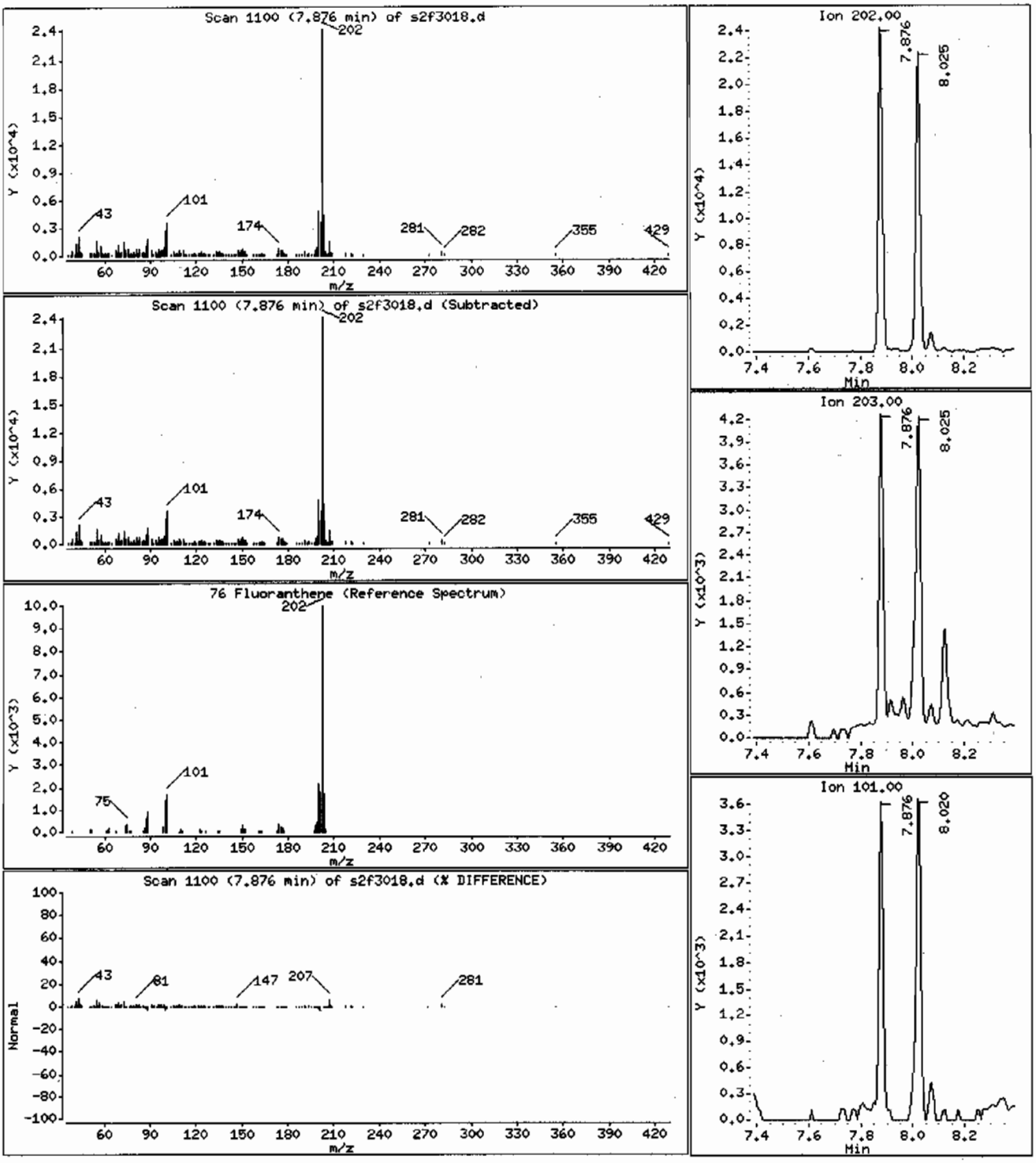

Data File: /chem/MSD2.i/s063009.b/s2f3018.d

Date : 30-JUN-2009 21:33

Client ID: CAMO-09-6045

Instrument: MSD2.i

Sample Info: 1232428007188131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 24.2 ug/Kg

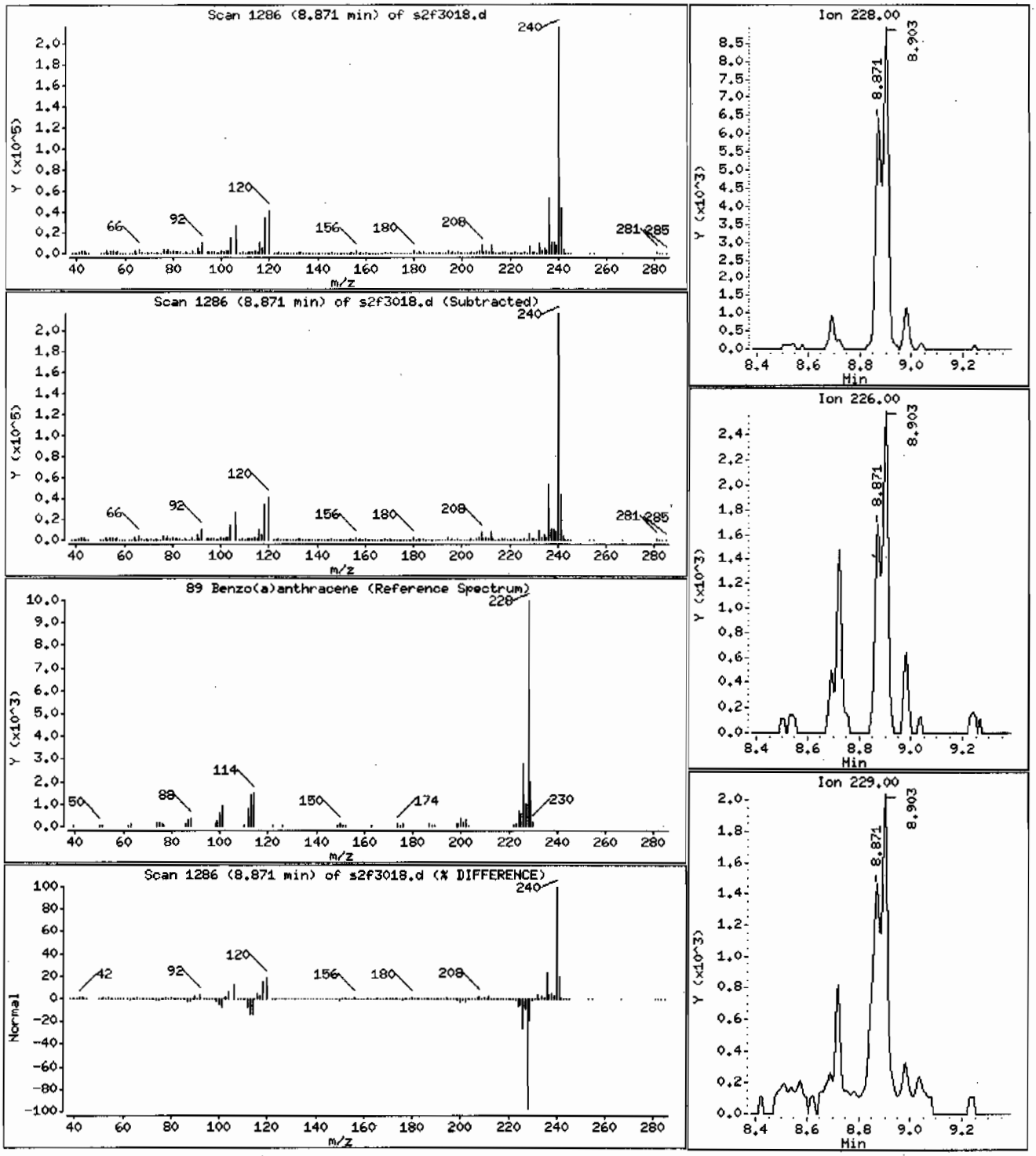

Data File: /chem/MSD2.i/s063009.b/s2f3018.d

Date : 30-JUN-2009 21:33

Client ID: CAMO-09-6045 Instrument: MSD2.i

Sample Info: 1232428007188131911|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

92 Chrysene Concentration: 30.3 ug/Kg

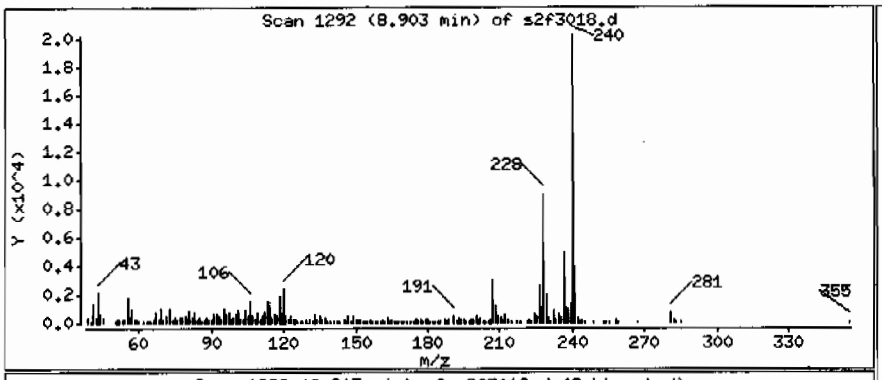

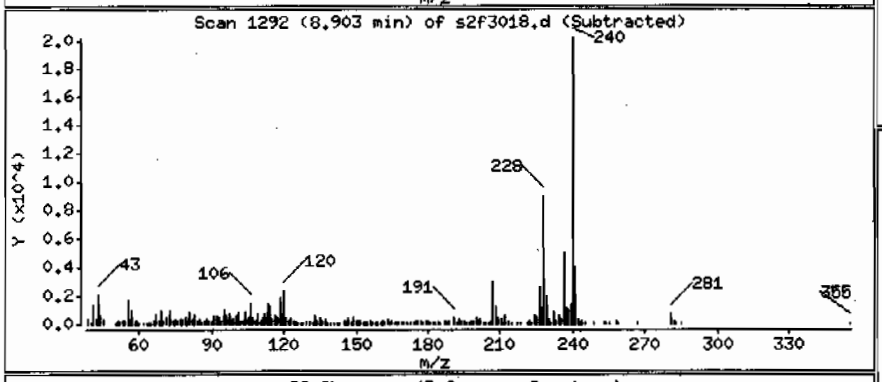

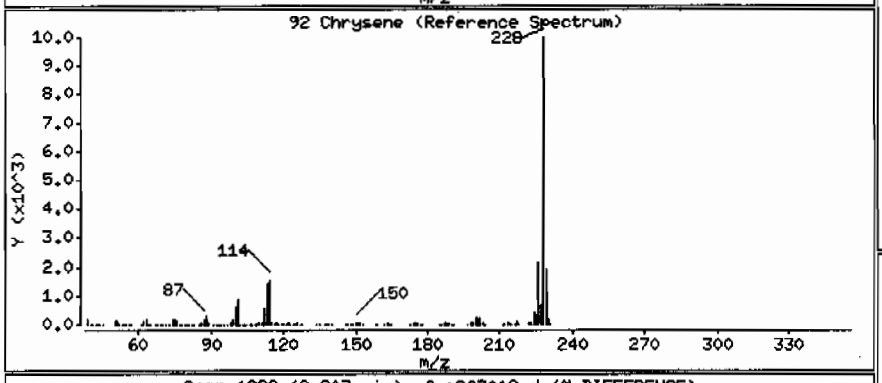

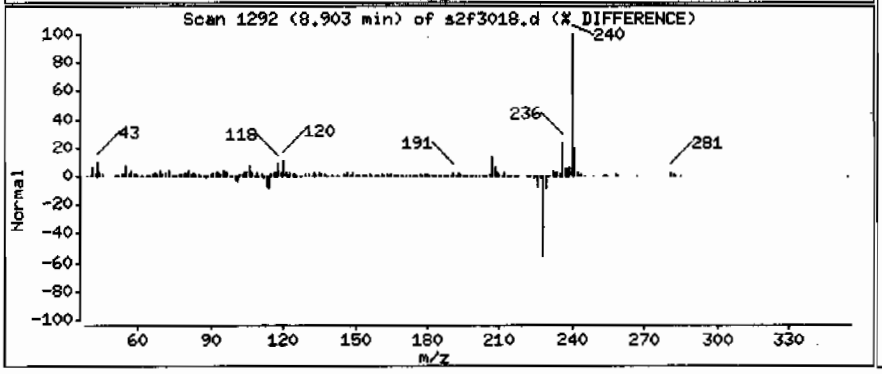

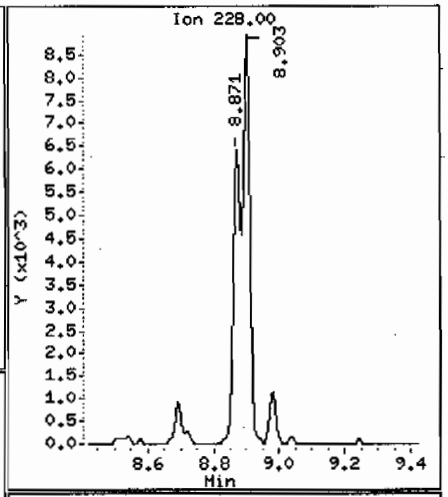

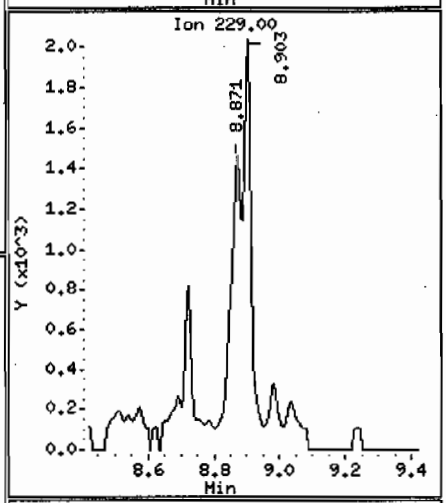

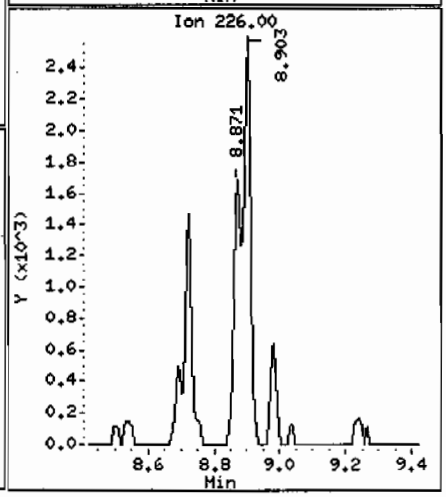

Data File: /chem/MSD2.i/s063009.b/s2f3018.d

Date : 30-JUN-2009 21:33

Client ID: CAMO-09-6045 Instrument: MSD2.i

Sample Info: 1232428007|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

95 Benzo(b)fluoranthene Concentration: 54.0 ug/Kg

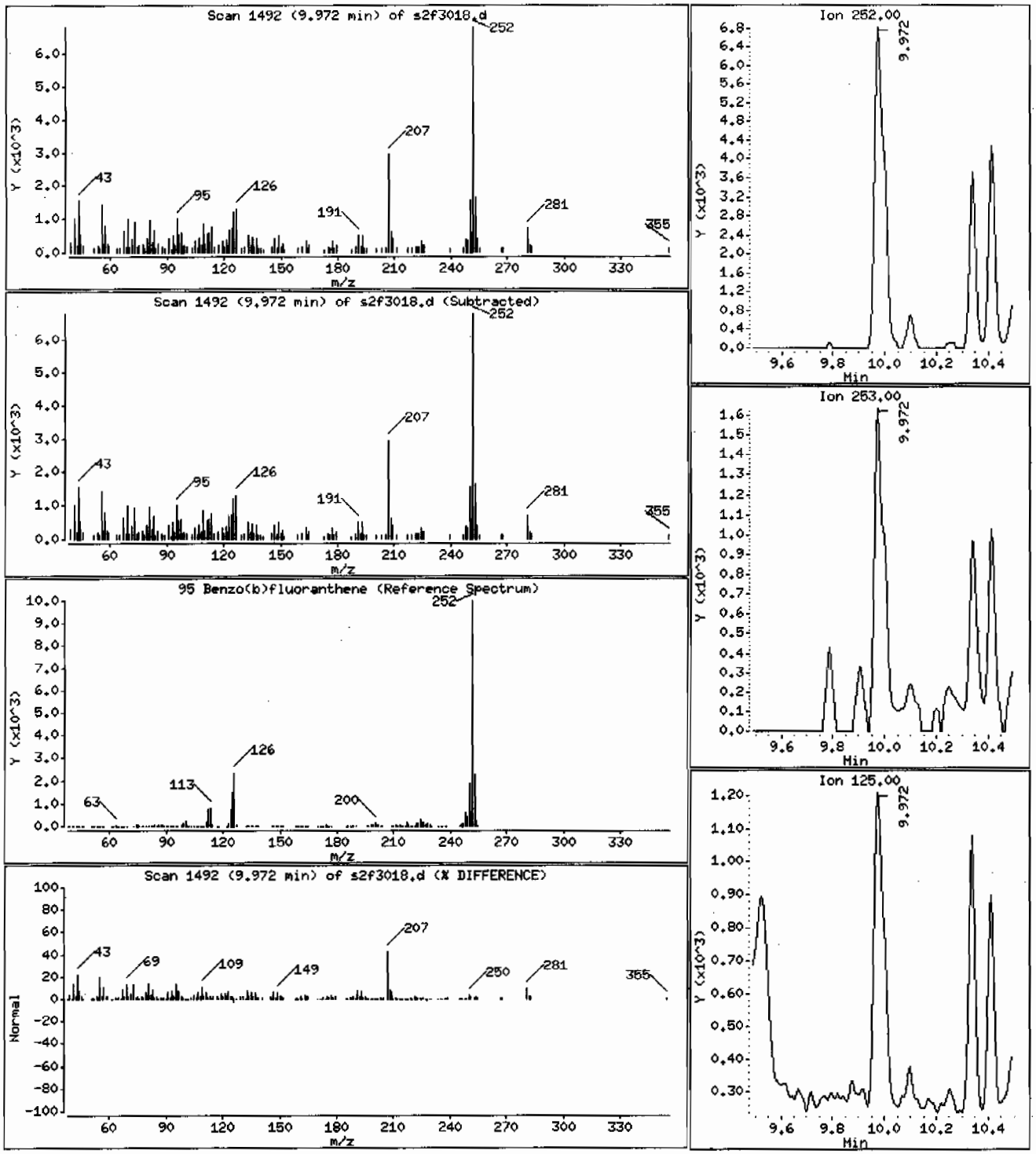

Data File: /chem/MSD2.i/s063009.b/s2f3018.d

Date : 30-JUN-2009 21:33

Client ID: CAMO-09-6045

Instrument: MSD2.i

Sample Info: 1232428007188131911ISVMF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 26.6 ug/Kg

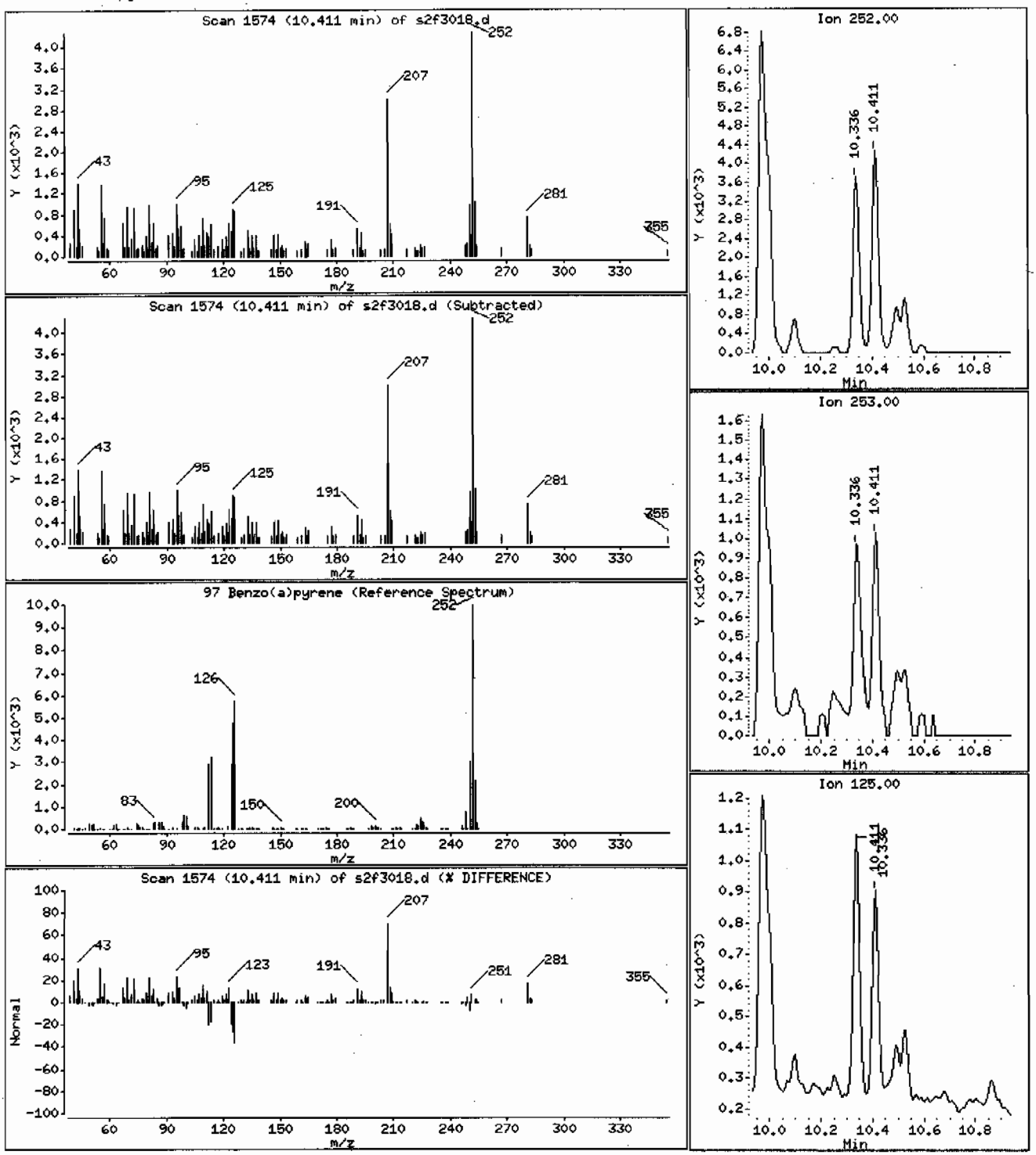

Data File: /chem/MSD2.i/s063009.b/s2f3018.d

Date : 30-JUN-2009 21:33

Client ID: CAMO-09-6045 Instrument: MSD2.i

Sample Info: |232428007|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 15.3 ug/Kg

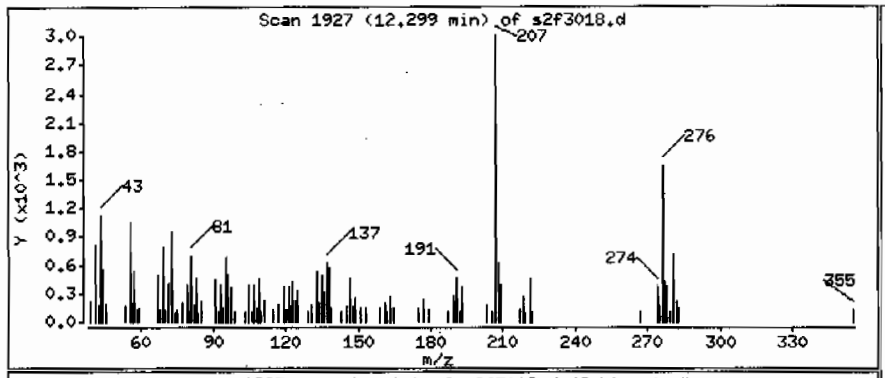

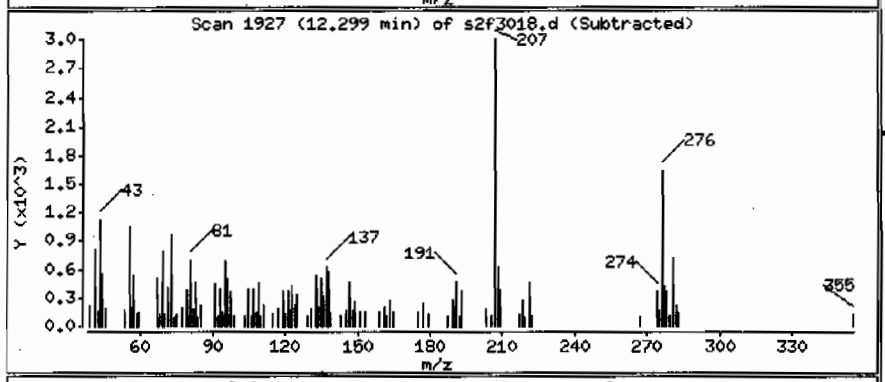

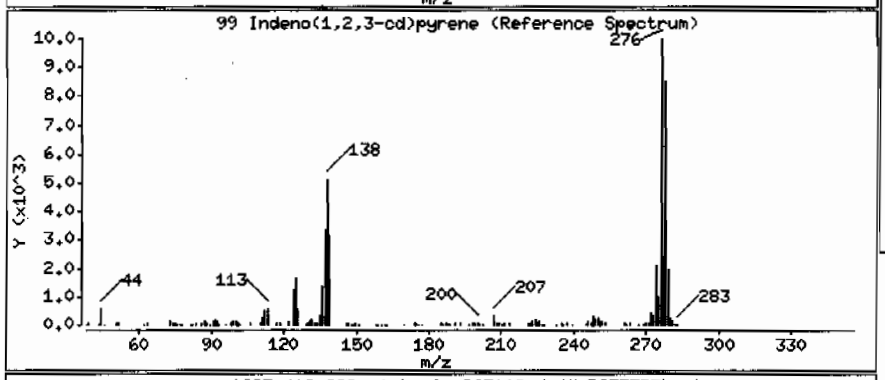

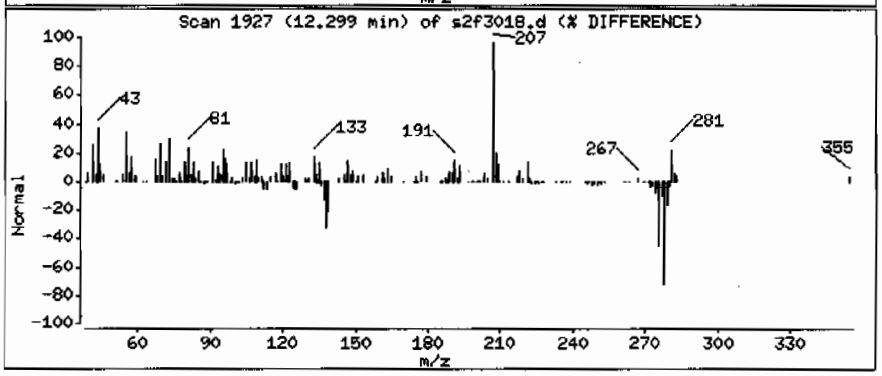

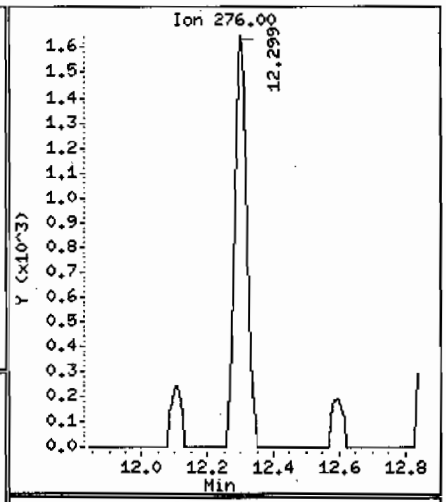

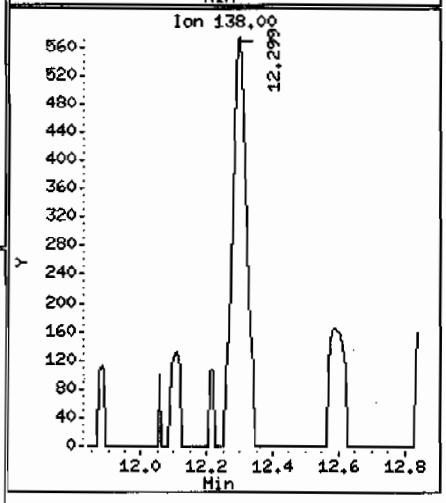

Data File: /chem/MSD2.i/s063009.b/s2f3018.d

Date : 30-JUN-2009 21:33

Client ID: CAMO-09-6045

Instrument: MSD2.i

Sample Info: |232428007|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 16.6 ug/Kg

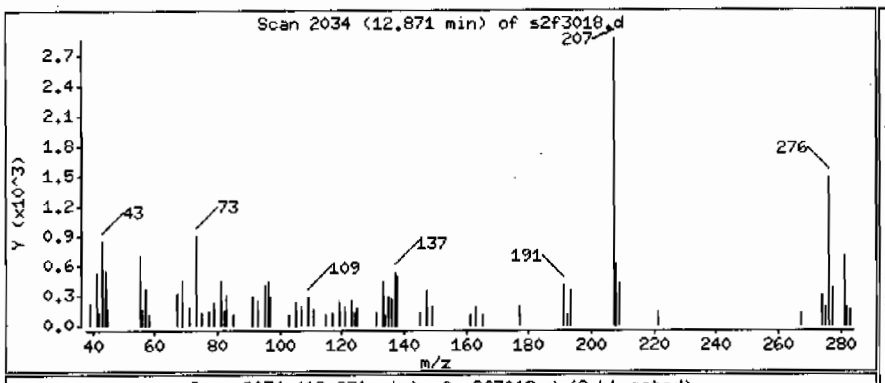

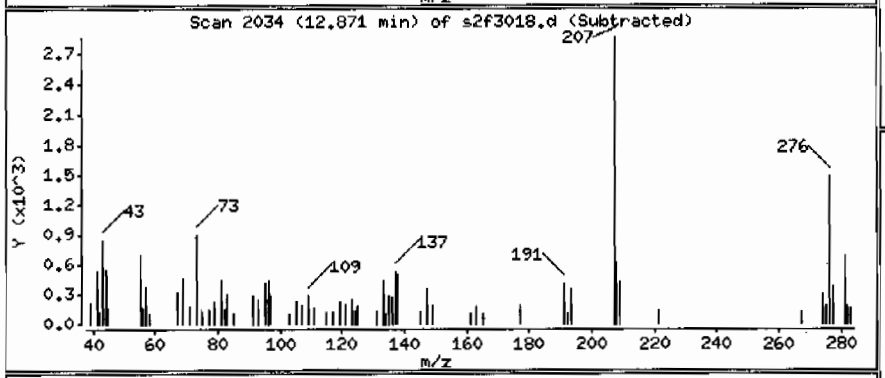

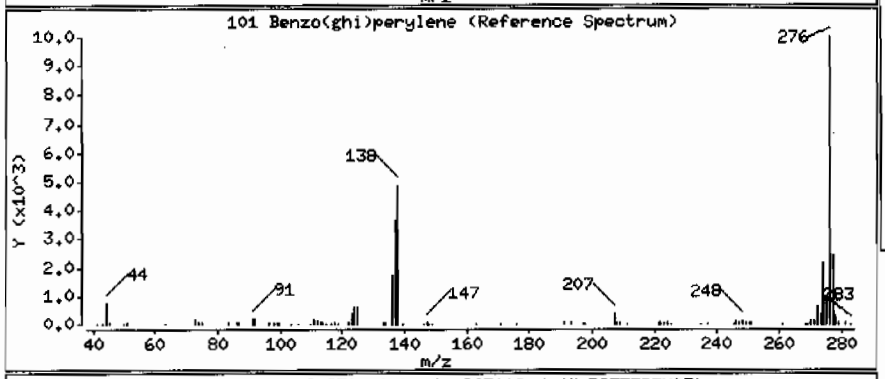

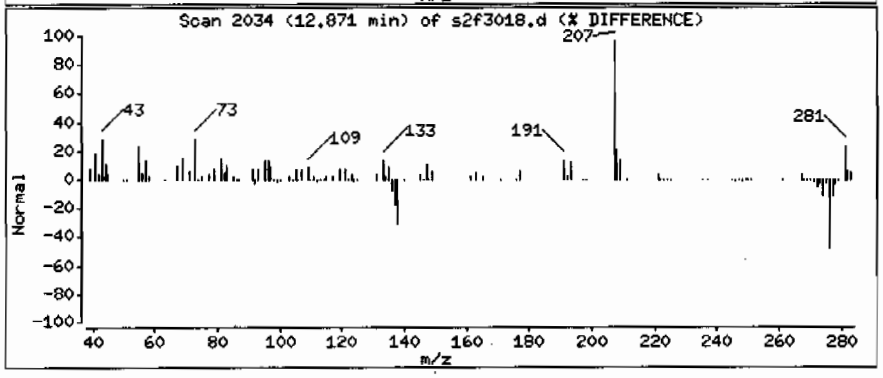

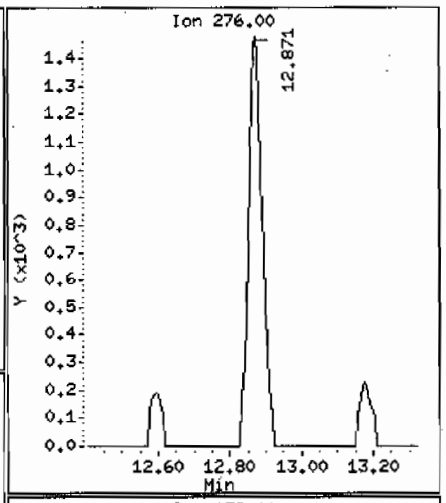

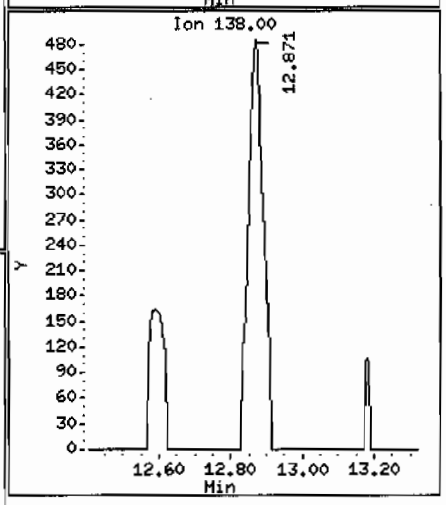

Data File: /chem/MSD2.i/s063009.b/s2f3018.d

Date : 30-JUN-2009 21:33

Client ID: CAMO-09-6045

Instrument: MSD2.i

Sample Info: |2324280071881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7977	39	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	38	C6H12O2	116

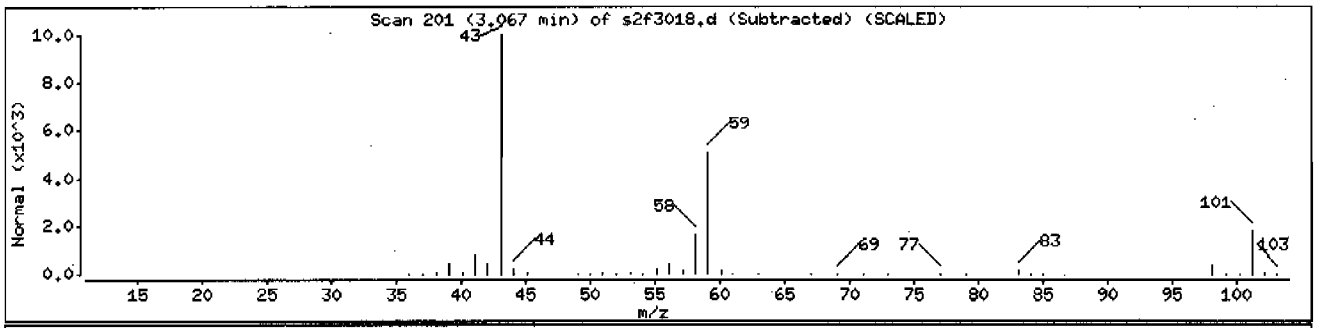

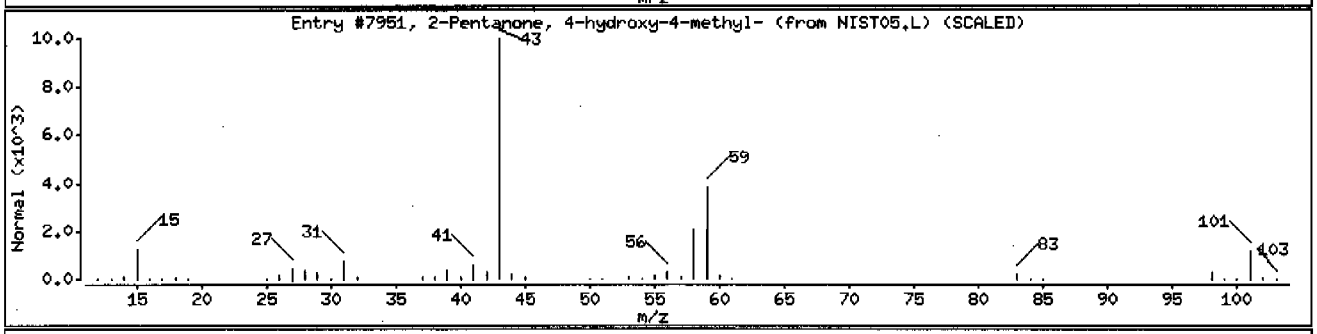

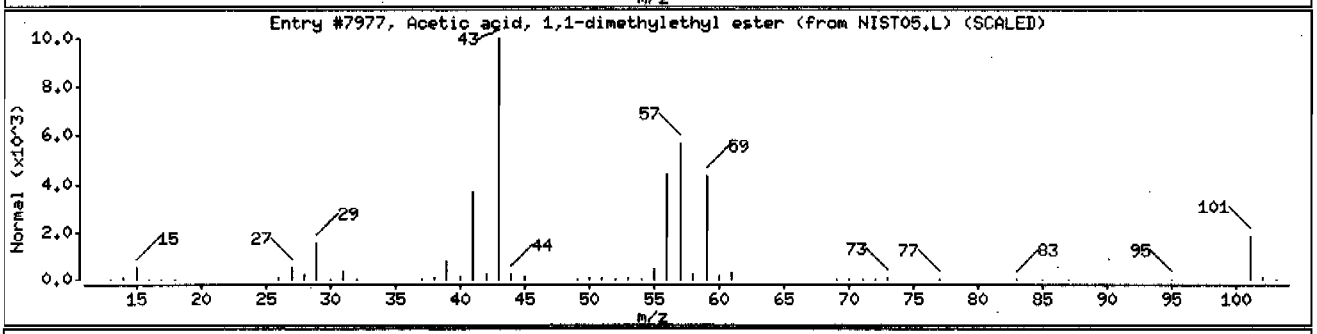

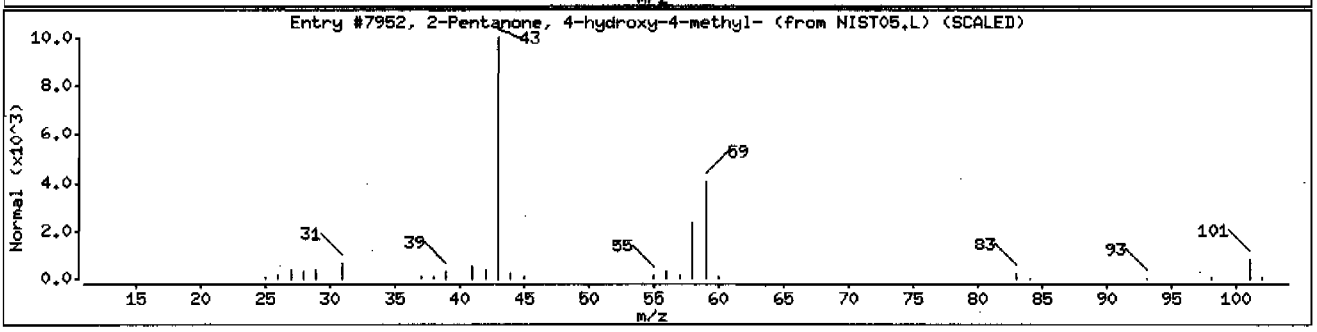

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428015	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6049	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/01/2009 00:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3026.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	375	ug/kg	75.1	375
108-95-2	Phenol	U	375	ug/kg	75.1	375
95-57-8	2-Chlorophenol	U	375	ug/kg	75.1	375
106-46-7	1,4-Dichlorobenzene	U	375	ug/kg	75.1	375
621-64-7	N-Nitrosodipropylamine	U	375	ug/kg	75.1	375
59-50-7	4-Chloro-3-methylphenol	U	375	ug/kg	75.1	375
83-32-9	Acenaphthene	U	37.5	ug/kg	12.4	37.5
121-14-2	2,4-Dinitrotoluene	U	375	ug/kg	37.5	375
100-02-7	4-Nitrophenol	U	375	ug/kg	124	375
87-86-5	Pentachlorophenol	U	375	ug/kg	93.9	375
129-00-0	Pyrene		126	ug/kg	11.3	37.5
110-86-1	Pyridine	U	375	ug/kg	75.1	375
62-53-3	Aniline	U	375	ug/kg	113	375
111-44-4	bis(2-Chloroethyl) ether	U	375	ug/kg	75.1	375
541-73-1	1,3-Dichlorobenzene	U	375	ug/kg	75.1	375
100-51-6	Benzyl alcohol	U	375	ug/kg	113	375
95-50-1	1,2-Dichlorobenzene	U	375	ug/kg	75.1	375
108-60-1	bis(2-Chloroisopropyl)ether	U	375	ug/kg	75.1	375
95-48-7	o-Cresol	U	375	ug/kg	75.1	375
65794-96-9	m,p-Cresols	U	375	ug/kg	113	375
67-72-1	Hexachloroethane	U	375	ug/kg	75.1	375
98-95-3	Nitrobenzene	U	375	ug/kg	75.1	375
78-59-1	Isophorone	U	375	ug/kg	75.1	375
88-75-5	2-Nitrophenol	U	375	ug/kg	75.1	375
105-67-9	2,4-Dimethylphenol	U	375	ug/kg	131	375
111-91-1	bis(2-Chloroethoxy)methane	U	375	ug/kg	75.1	375
120-83-2	2,4-Dichlorophenol	U	375	ug/kg	75.1	375
65-85-0	Benzoic acid	U	751	ug/kg	188	751
91-20-3	Naphthalene	U	37.5	ug/kg	11.3	37.5
106-47-8	4-Chloroaniline	U	375	ug/kg	75.1	375
87-68-3	Hexachlorobutadiene	U	375	ug/kg	75.1	375
91-57-6	2-Methylnaphthalene	U	37.5	ug/kg	7.51	37.5
77-47-4	Hexachlorocyclopentadiene	U	375	ug/kg	75.1	375
88-06-2	2,4,6-Trichlorophenol	U	375	ug/kg	75.1	375
95-95-4	2,4,5-Trichlorophenol	U	375	ug/kg	75.1	375
91-58-7	2-Chloronaphthalene	U	37.5	ug/kg	12.4	37.5
88-74-4	2-Nitroaniline	U	375	ug/kg	75.1	375
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	375	ug/kg	75.1	375

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232428015	Date Received:	06/26/2009 08:40	%Moisture:	11.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6049	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	07/01/2009 00:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.12 g	Final Volume:	1 mL
Data File:	s2f3026.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	375	ug/kg	75.1	375
606-20-2	2,6-Dinitrotoluene	U	375	ug/kg	37.5	375
208-96-8	Acenaphthylene	U	37.5	ug/kg	11.3	37.5
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751
132-64-9	Dibenzofuran	U	375	ug/kg	75.1	375
84-66-2	Diethylphthalate	U	375	ug/kg	75.1	375
86-73-7	Fluorene	U	37.5	ug/kg	11.3	37.5
7005-72-3	4-Chlorophenylphenylether	U	375	ug/kg	75.1	375
534-52-1	2-Methyl-4,6-dinitrophenol	U	375	ug/kg	75.1	375
100-01-6	4-Nitroaniline	U	375	ug/kg	113	375
	p-Nitroaniline					
122-39-4	Diphenylamine	U	375	ug/kg	75.1	375
122-66-7	Azobenzene	U	375	ug/kg	75.1	375
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	375	ug/kg	75.1	375
118-74-1	Hexachlorobenzene	U	375	ug/kg	75.1	375
85-01-8	Phenanthrene		72.9	ug/kg	11.3	37.5
120-12-7	Anthracene	U	37.5	ug/kg	7.51	37.5
84-74-2	Di-n-butylphthalate	U	375	ug/kg	75.1	375
206-44-0	Fluoranthene		137	ug/kg	11.3	37.5
85-68-7	Butylbenzylphthalate	U	375	ug/kg	75.1	375
56-55-3	Benzo(a)anthracene		47.8	ug/kg	11.3	37.5
91-94-1	3,3'-Dichlorobenzidine	U	375	ug/kg	113	375
218-01-9	Chrysene		61.9	ug/kg	11.3	37.5
117-81-7	bis(2-Ethylhexyl)phthalate	U	375	ug/kg	75.1	375
117-84-0	Di-n-octylphthalate	U	375	ug/kg	75.1	375
205-99-2	Benzo(b)fluoranthene		106	ug/kg	11.3	37.5
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.3	37.5
50-32-8	Benzo(a)pyrene		54.1	ug/kg	11.3	37.5
193-39-5	Indeno(1,2,3-cd)pyrene	J	27.3	ug/kg	11.3	37.5
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.3	37.5
191-24-2	Benzo(ghi)perylene	J	27.5	ug/kg	11.3	37.5
120-82-1	1,2,4-Trichlorobenzene	U	375	ug/kg	75.1	375

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.13	409	ug/kg		J
	Unknown Aldol Condensate	3.06	469	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428015	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6049	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/01/2009 00:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.12 g	**Final Volume:**	1 mL
Data File:	s2f3026.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
630-03-5	Nonacosane	9.88	280	ug/kg	99	NJ
112-95-8	Eicosane	10.87	222	ug/kg	97	NJ
	Unknown	11.51	212	ug/kg		J
	Unknown	12.49	3400	ug/kg		J

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Data file : /chem/MSD2.i/s063009.b/s2f3026.d
Lab Smp Id: 232428015 Client Smp ID: CAMO-09-6049
Inj Date : 01-JUL-2009 00:12
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428015|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.12000	weight of sample
M	11.57260	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.046	4.051	(1.000)	189027	40.0000	
* 29 Naphthalene-d8	136	4.918	4.923	(1.000)	735633	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	409741	40.0000	
* 67 Phenanthrene-d10	188	7.154	7.154	(1.000)	697398	40.0000	
* 91 Chrysene-d12	240	8.886	8.892	(1.000)	519258	40.0000	
* 98 Perylene-d12	264	10.496	10.507	(1.000)	321257	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.798)	297939	56.9607	2140
$ 5 Phenol-d5	99	3.752	3.757	(0.927)	390040	60.3855	2270
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.897)	168400	30.3411	1140
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	380445	32.8758	1230
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	108095	77.0249	2890
$ 81 p-Terphenyl-d14	244	8.073	8.079	(0.908)	403843	45.6604	1710

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.025	8.031	(0.903)	51855	3.35473	126
68 Phenanthrene	178	7.164	7.170	(1.001)	32250	1.94197	72.9
76 Fluoranthene	202	7.881	7.886	(1.102)	55606	3.63986	137
89 Benzo(a)anthracene	228	8.870	8.881	(0.998)	16083	1.27302	47.8
92 Chrysene	228	8.903	8.919	(1.002)	20090	1.64776	61.9
95 Benzo(b)fluoranthene	252	9.978	9.988	(0.951)	21872	2.83604	106
97 Benzo(a)pyrene	252	10.416	10.432	(0.992)	9716	1.44194	54.1
99 Indeno(1,2,3-cd)pyrene	276	12.310	12.337	(1.173)	4712	0.72797	27.3(a)
101 Benzo(ghi)perylene	276	12.887	12.903	(1.228)	4112	0.73166	27.5(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s2f3026.d
Report Date: 07/01/2009 08:00
Lab. ID: 232428015 SampleType: SAMPLE
Injection Date: 01-JUL-2009 00:12
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232428015|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2477
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	17509	3.75	3.83	80-120	100	(T)
93	286	3.73	3.83	440-500	2	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	21789	4.41	4.29	80-120	100	(T)
42	12934	4.41	4.29	40-100	59	(T)
43 Dimethylphthalate			CAS#: 131-11-3			
163	87985	6.17	5.94	80-120	100	(T)
164	407564	6.17	5.94	0- 40	463	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	53371	6.17	5.99	80-120	100	(T)
63	982	6.17	5.99	46-106	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	53397	6.17	6.27	80-120	100	(T)
89	740	6.17	6.27	38- 98	1	(QT)
63	982	6.17	6.27	16- 76	2	(QT)
53 Fluorene		CAS#: 86-73-7				
166	6961	6.70	6.54	80-120	100	(T)
165	7505	6.70	6.54	61-121	108	(T)
167	2564	6.70	6.54	0- 44	37	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	257	6.70	6.55	80-120	100	(T)
105	575	6.70	6.55	14- 74	223	(QT)
51	629	6.70	6.55	37- 97	244	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	6263	6.70	6.84	80-120	100	(T)
141	45848	6.70	6.84	51-111	732	(QT)
250	12856	6.70	6.84	66-126	205	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	32250	7.16	7.17	80-120	100	( )
179	7846	7.16	7.17	0- 46	24	( )
176	5953	7.16	7.17	0- 49	18	( )
69 Anthracene				CAS#: 120-12-7		
178	4470	7.20	7.20	80-120	100	( )
179	7846	7.16	7.20	0- 46	175	(Q)
176	977	7.20	7.20	0- 48	22	( )
76 Fluoranthene				CAS#: 206-44-0		
202	55606	7.88	7.89	80-120	100	( )
203	9638	7.88	7.89	0- 48	17	( )
101	8092	7.88	7.89	0- 45	15	( )
79 Pyrene				CAS#: 129-00-0		
202	51855	8.03	8.03	80-120	100	( )
200	10344	8.03	8.03	0- 51	20	( )
101	9291	8.03	8.03	0- 48	18	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	16083	8.87	8.88	80-120	100	( )
226	4431	8.87	8.88	0- 56	28	( )
229	4460	8.87	8.88	0- 50	28	( )
92 Chrysene				CAS#: 218-01-9		
228	20090	8.90	8.92	80-120	100	( )
229	4997	8.90	8.92	0- 50	25	( )
226	5964	8.90	8.92	0- 59	30	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	21872	9.98	9.99	80-120	100	( )
253	4754	9.98	9.99	0- 52	22	( )
125	3010	9.98	9.99	0- 45	14	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	21872	9.98	10.02	80-120	100	( )
253	4754	9.98	10.02	0- 52	22	( )
125	3010	9.98	10.02	0- 44	14	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	9716	10.42	10.43	80-120	100	( )
253	2409	10.42	10.43	0- 52	25	( )
125	1374	10.42	10.43	0- 46	14	( )
99 Indeno(1,2,3-cd)pyrene			CAS#: 193-39-5			
276	4712	12.31	12.34	80-120	100	( )
138	2259	12.31	12.34	7- 67	48	( )
101 Benzo(ghi)perylene			CAS#: 191-24-2			
276	4112	12.89	12.90	80-120	100	( )
138	1533	12.89	12.90	4- 64	37	( )

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s063009.b/s2f3026.d
Lab Smp Id: 232428015 Client Smp ID: CAMO-09-6049
Inj Date : 01-JUL-2009 00:12
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232428015|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 01-Jul-2009 08:20 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.12000	weight of sample
M	11.57260	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.046	1125050	40.000
* 98 Perylene-d12	10.496	899696	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.126	306080	10.8823372	408	0		0	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.062	351464	12.4959357	469	0		0	10
Nonacosane				CAS #:	630-03-5		
9.876	167444	7.44445243	280	99	NIST05.L	173140	98
Eicosane				CAS #:	112-95-8		
10.865	133246	5.92403732	222	97	NIST05.L	113489	98
Unknown				CAS #:			
11.513	126795	5.63721915	212	0		0	98
Unknown				CAS #:			
12.491	2035836	90.5121198	3400	0		0	98

Data File: /chem/MSD2.i/s063009.b/s2f3026.d
Date : 01-JUL-2009 00:12
Client ID: CAMO-09-6049
Sample Info: 1232428015|881319|1|SVHF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

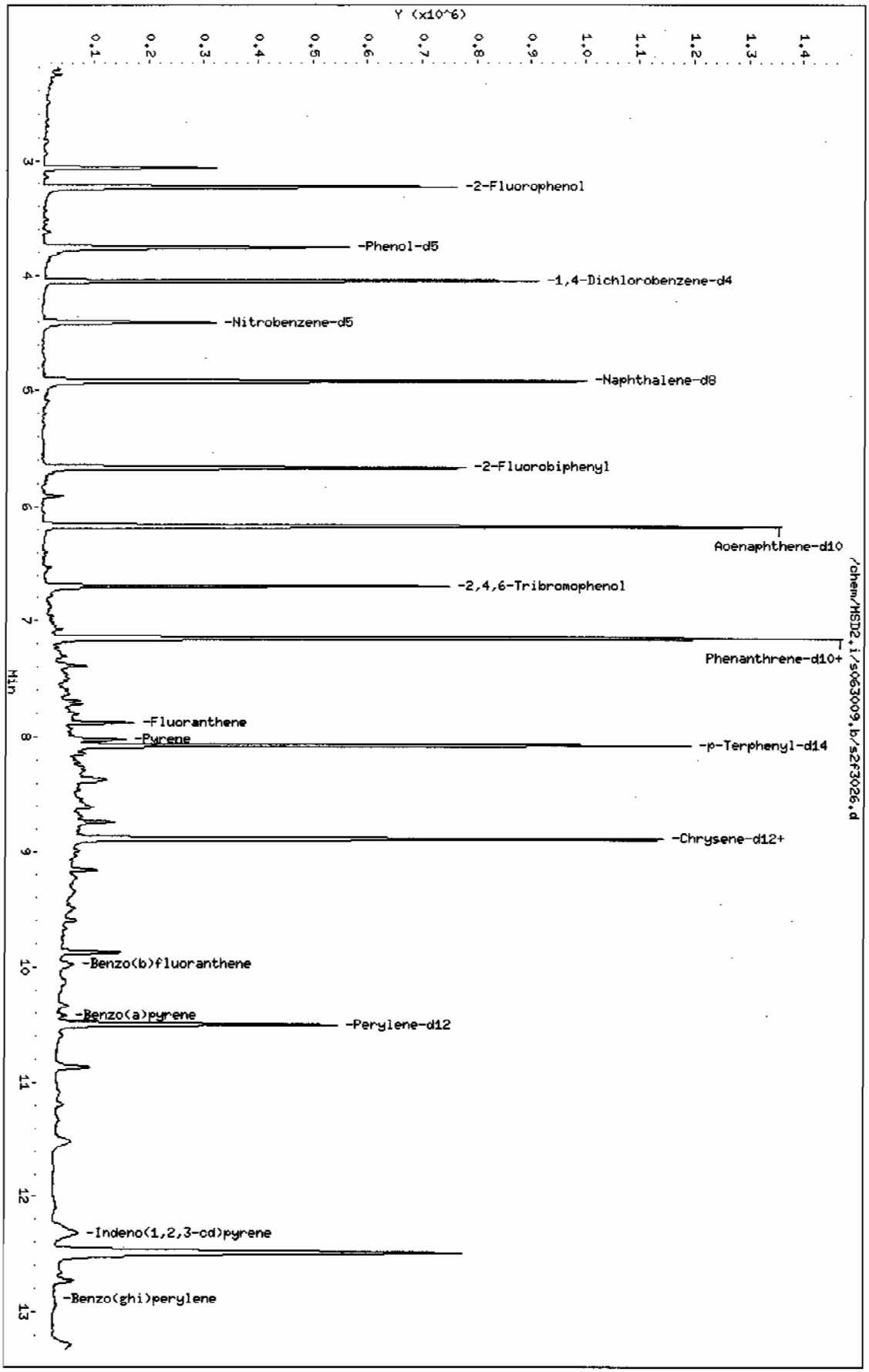

Page 1

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049

Instrument: MSD2.i

Sample Info: |2324280151881319111SVMF11|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 126 ug/Kg

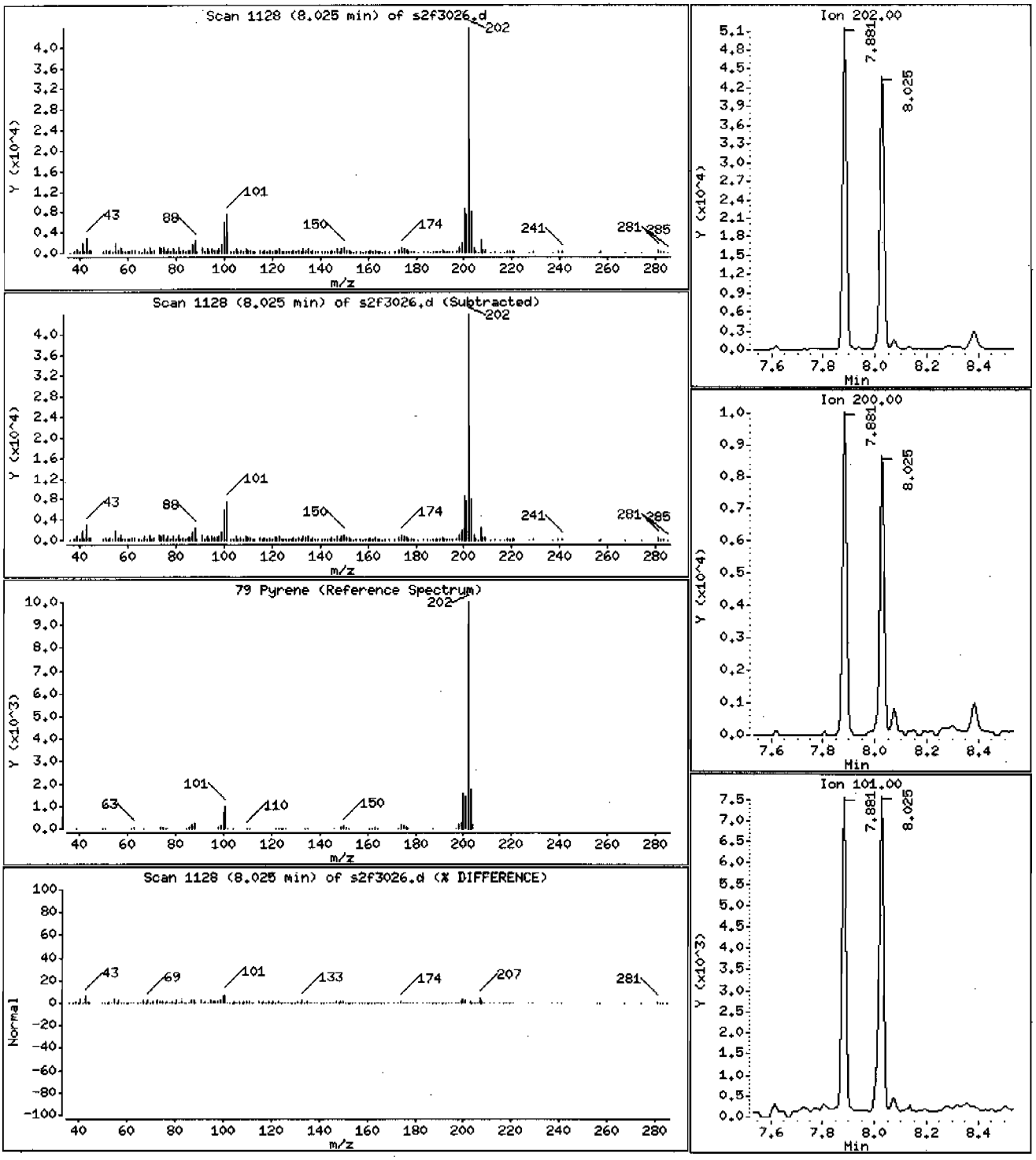

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Date : 01-JUL-2009 00:12

Client ID: CAHO-09-6049 Instrument: MSD2.i

Sample Info: |2324280151881319111SVMF111LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

68 Phenanthrene Concentration: 72.9 ug/Kg

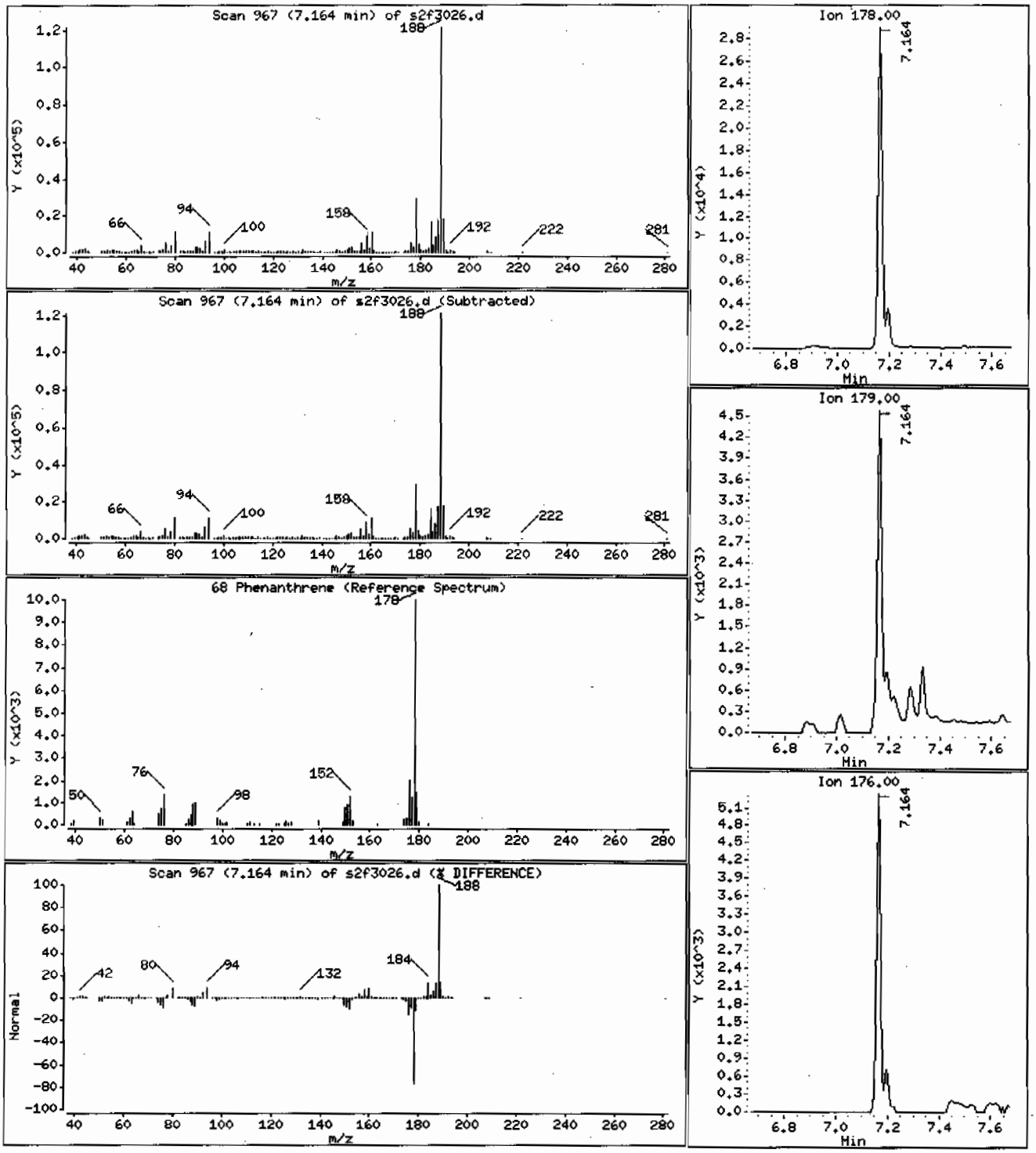

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049

Instrument: MSD2.i

Sample Info: |2324280151881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 137 ug/Kg

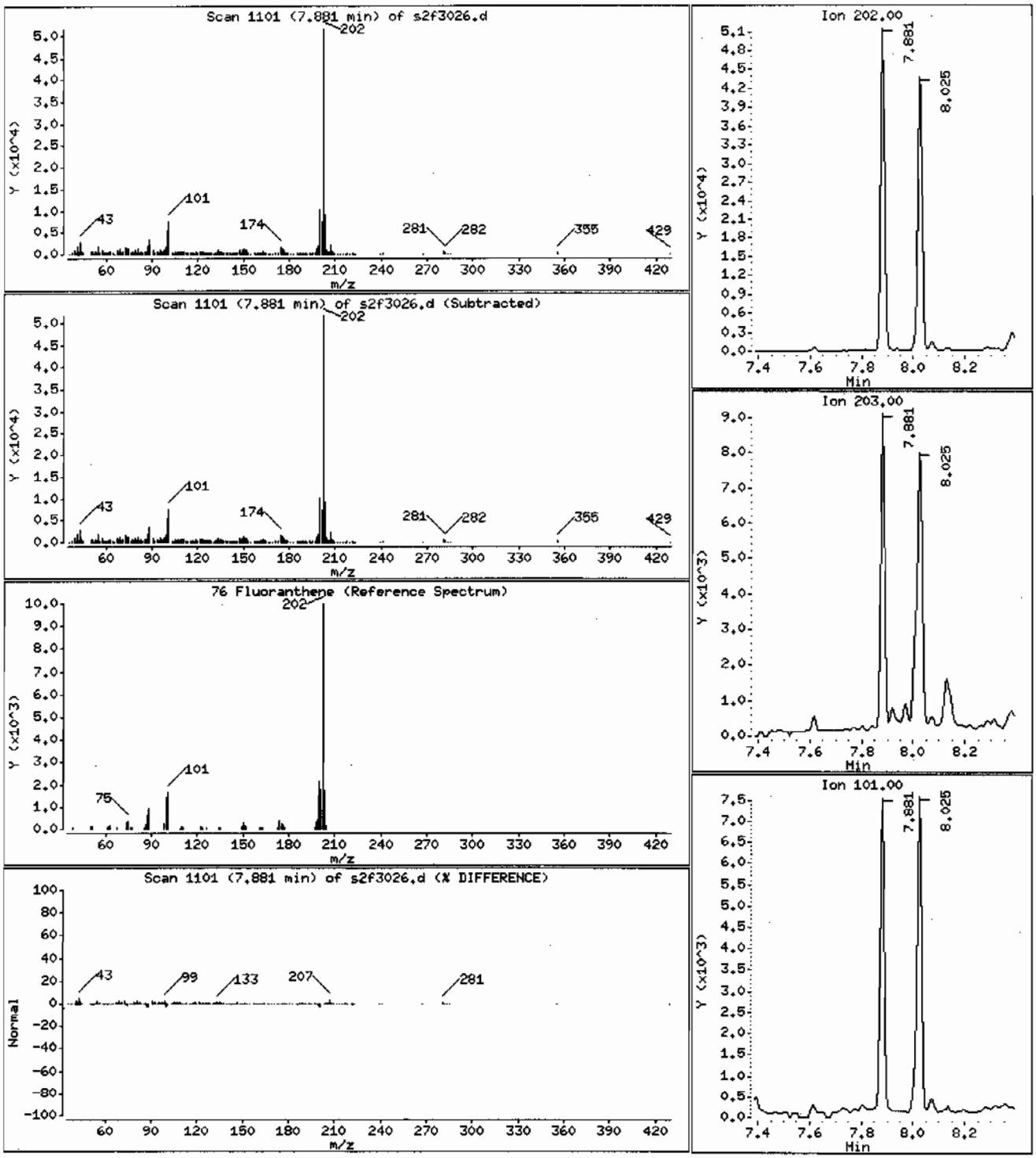

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049

Instrument: MSD2.i

Sample Info: |2324280151881319111SVMF11|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 47.8 ug/Kg

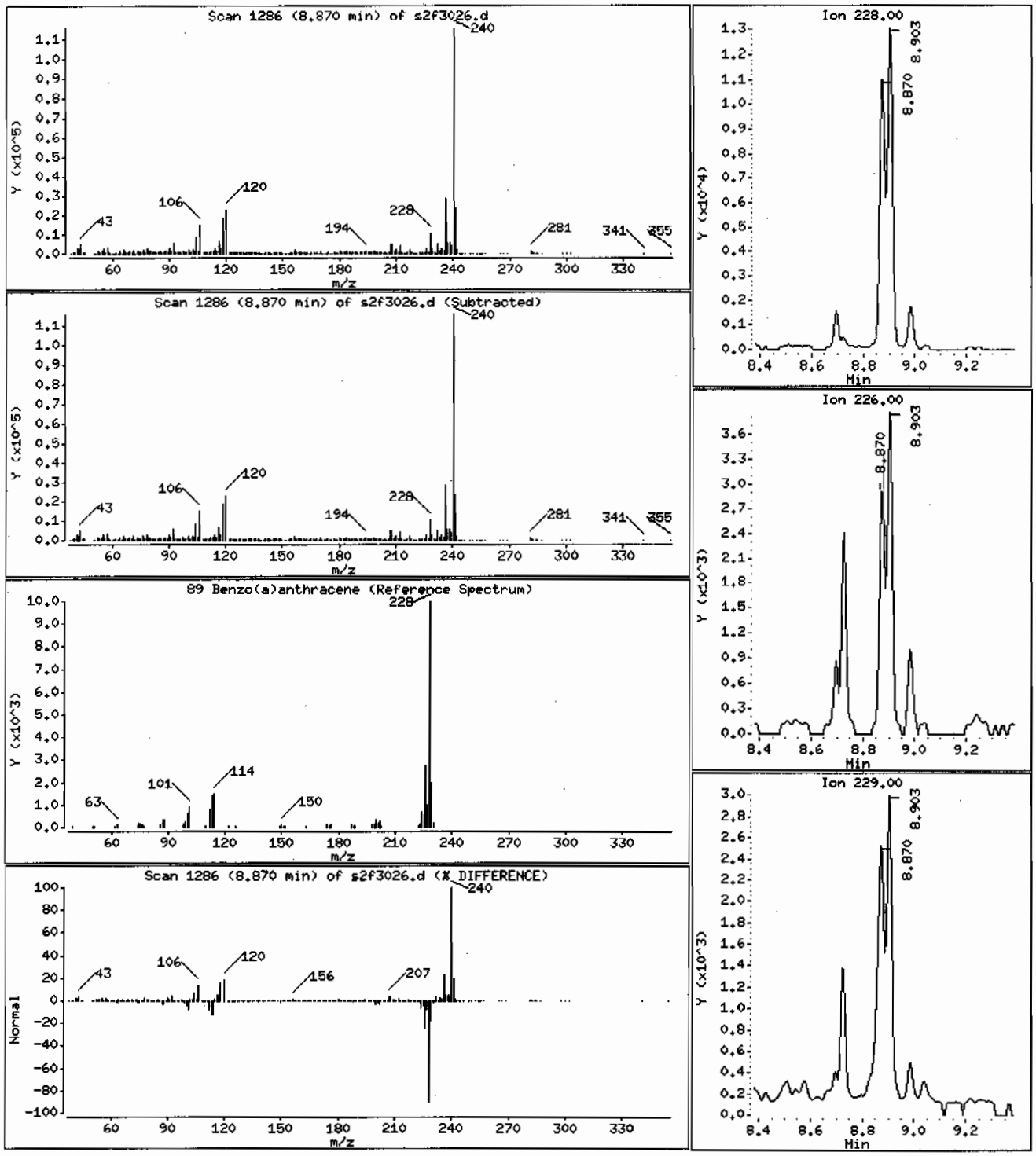

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049

Instrument: MSD2.i

Sample Info: |2324280151881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 61.9 ug/Kg

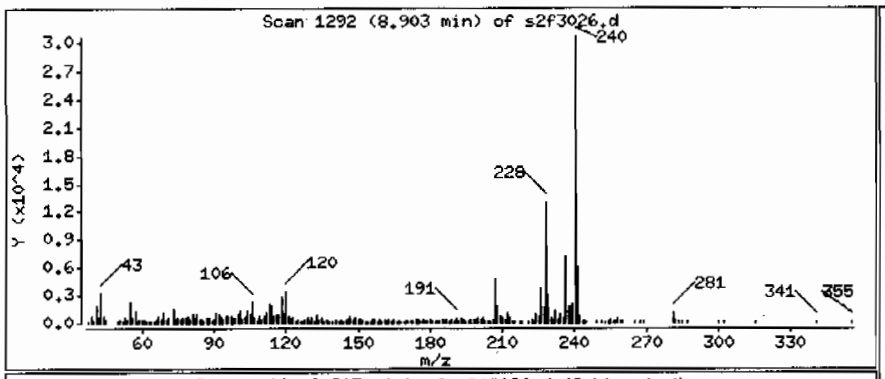

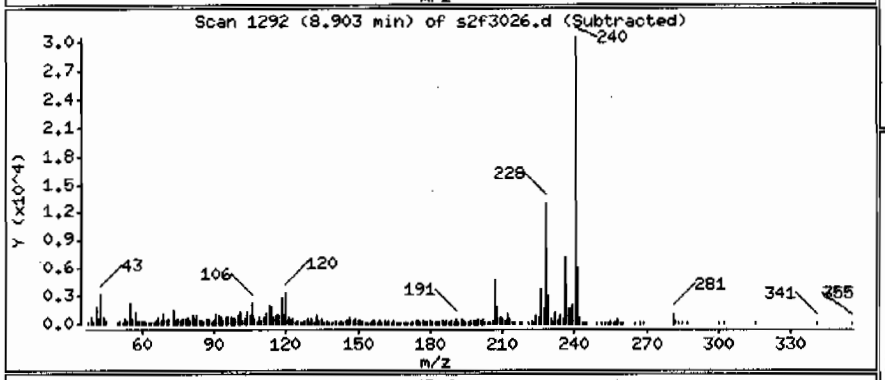

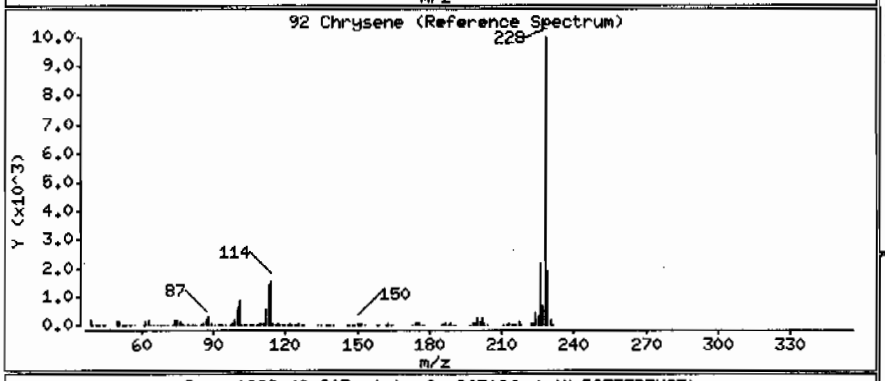

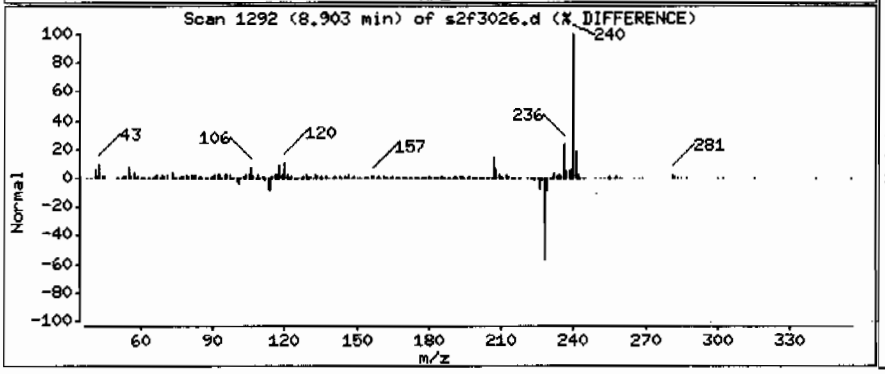

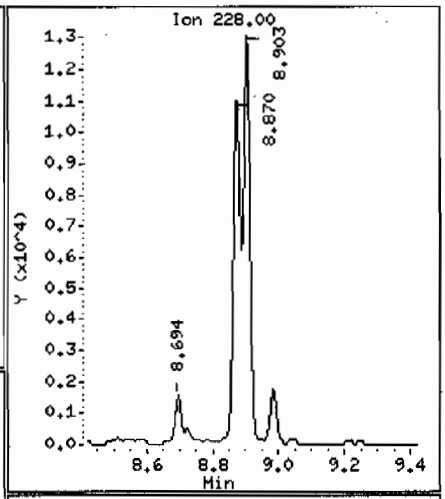

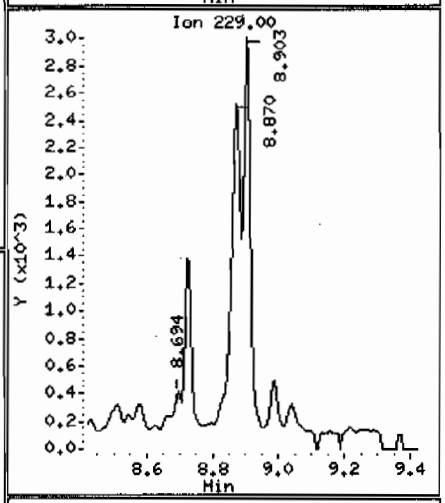

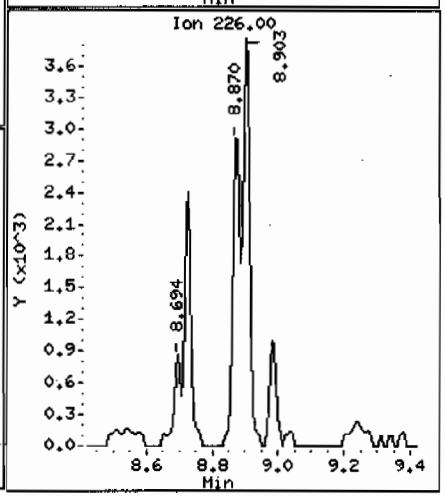

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049

Instrument: MSD2.i

Sample Info: 1232428015|881319111SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 106 ug/Kg

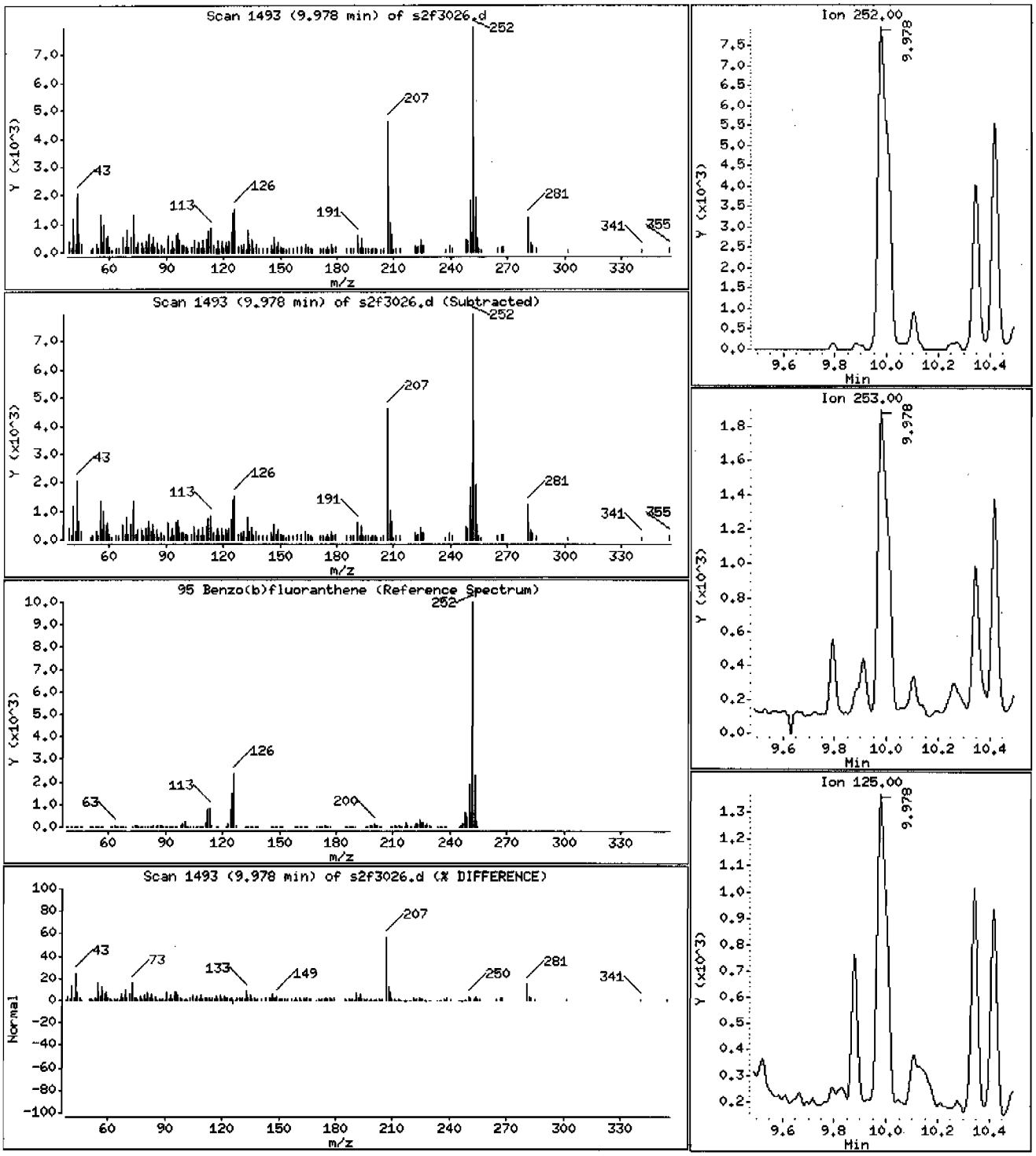

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049

Instrument: MSD2.i

Sample Info: 1232428015188131911SVHF11LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 54.1 ug/Kg

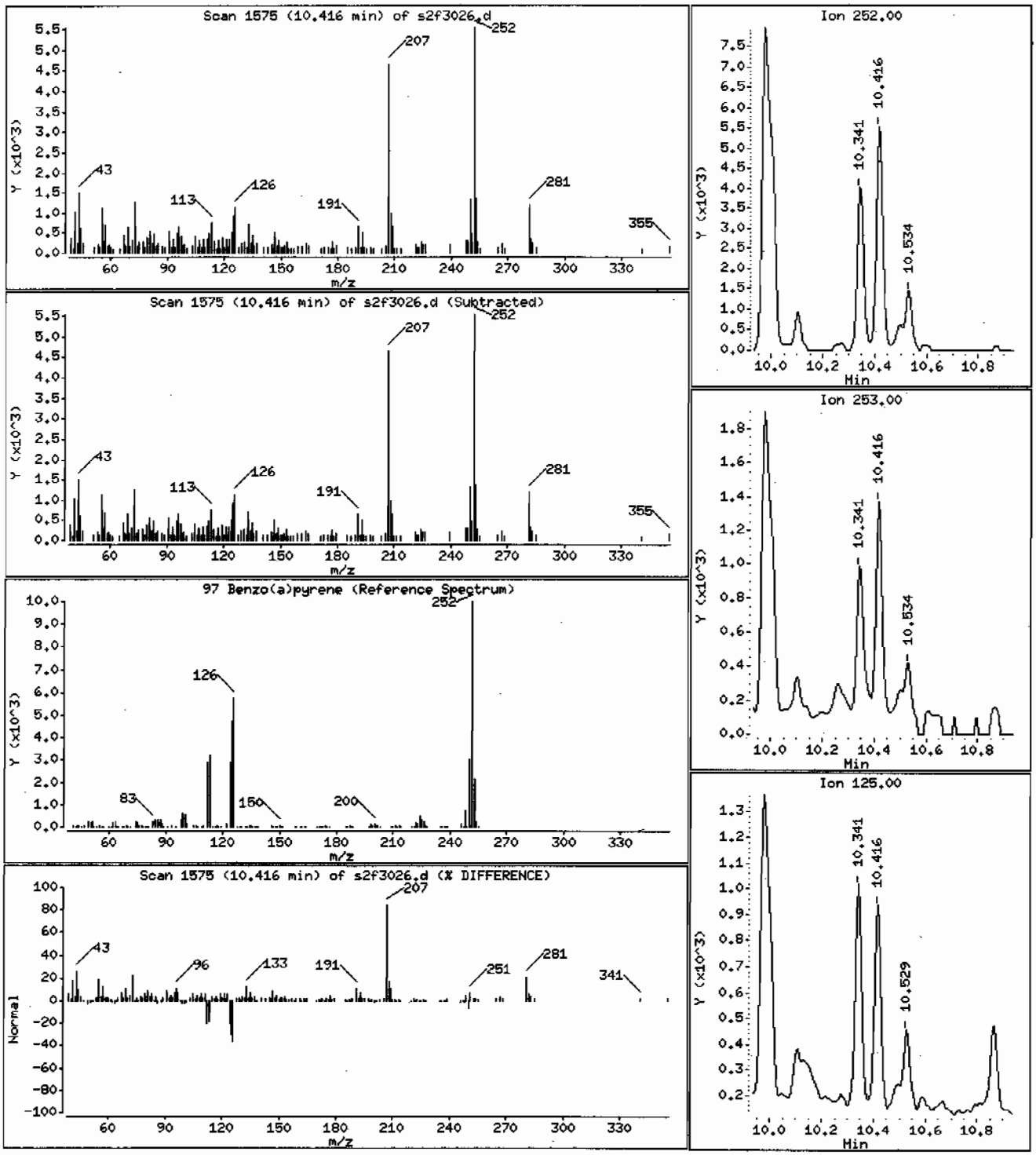

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049

Instrument: MSD2.i

Sample Info: 1232428015188131911|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 27.3 ug/Kg

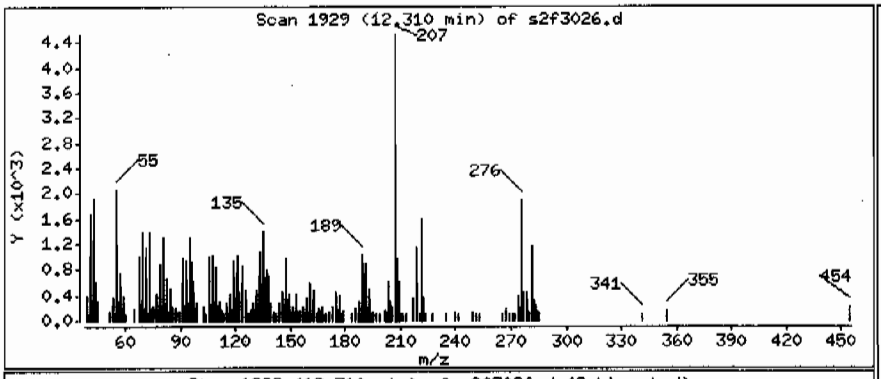

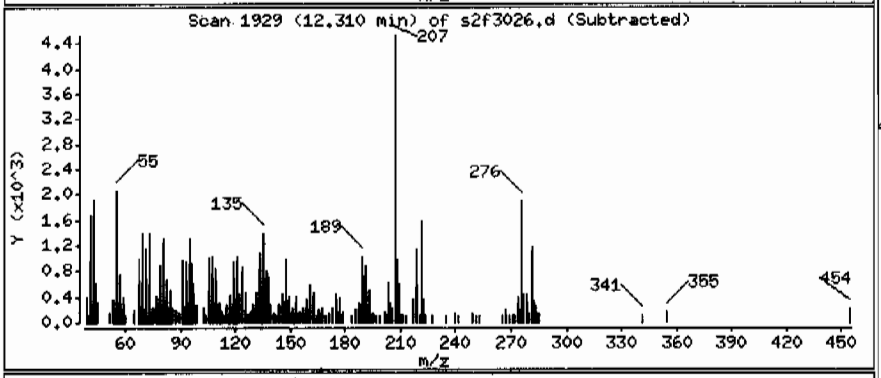

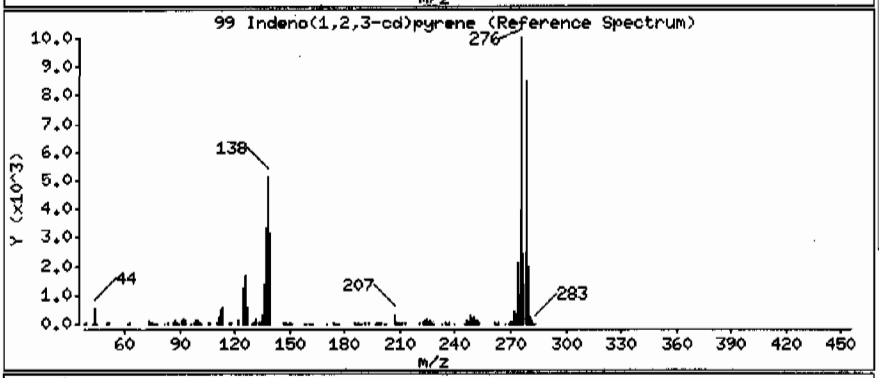

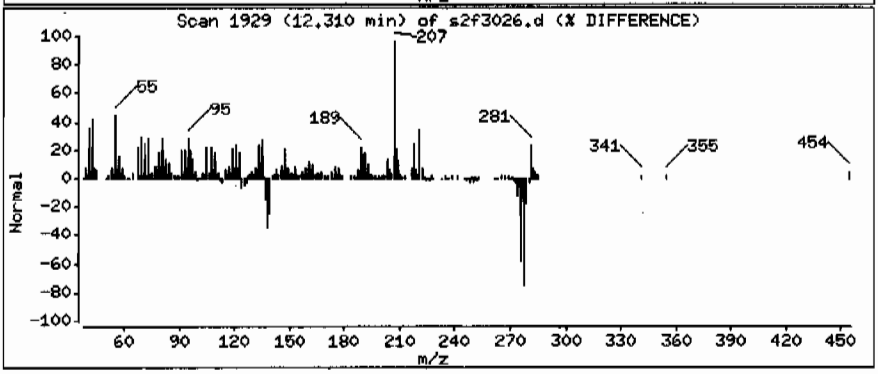

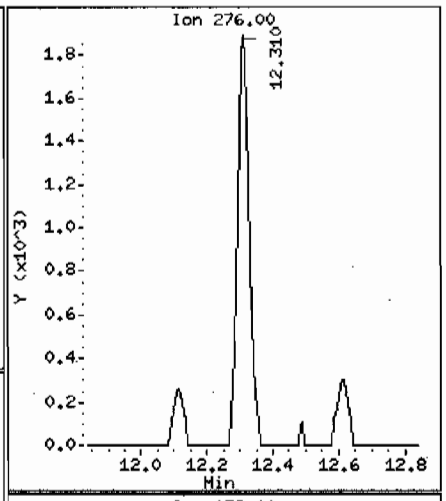

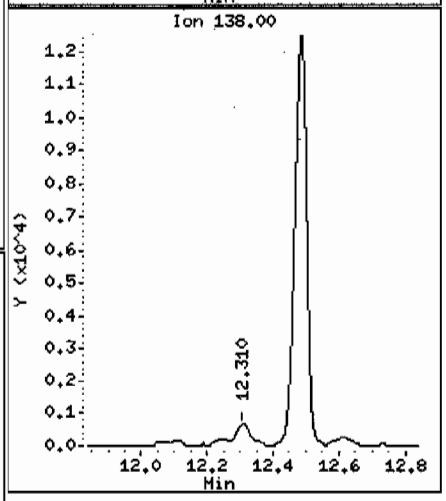

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049

Instrument: MSD2.i

Sample Info: |2324280151881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 27.5 ug/Kg

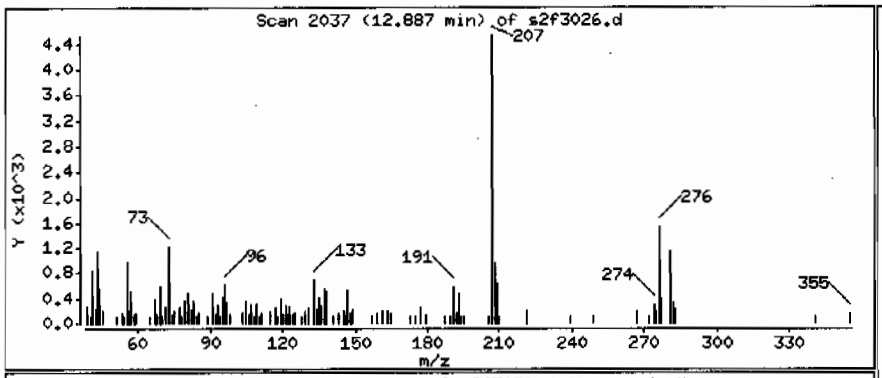

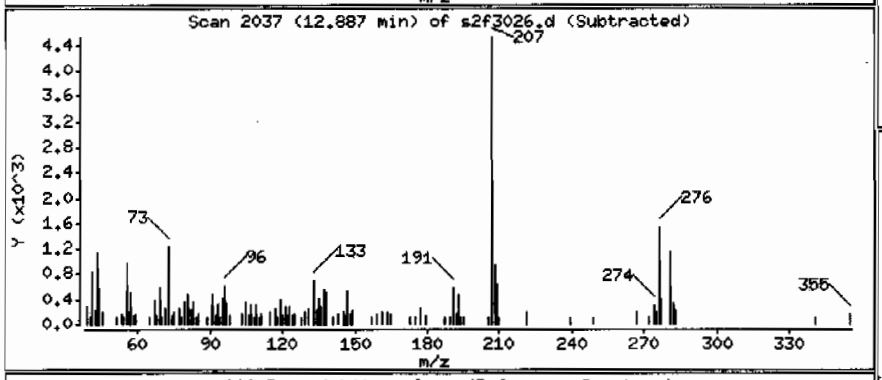

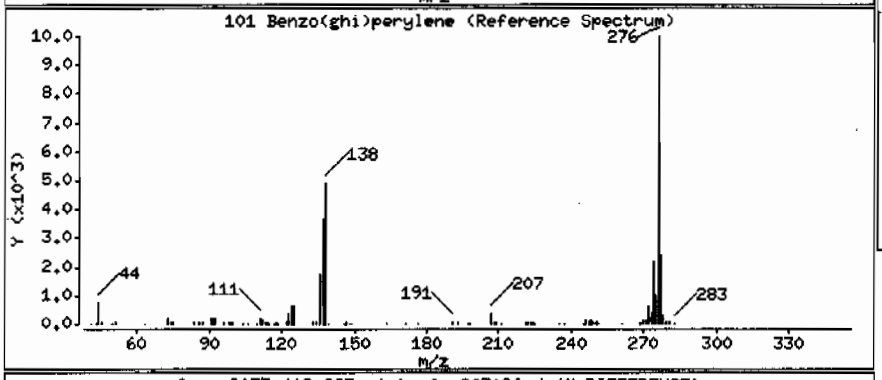

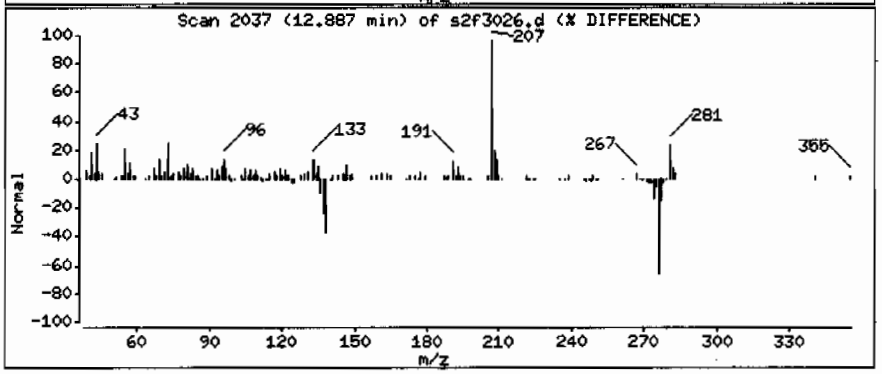

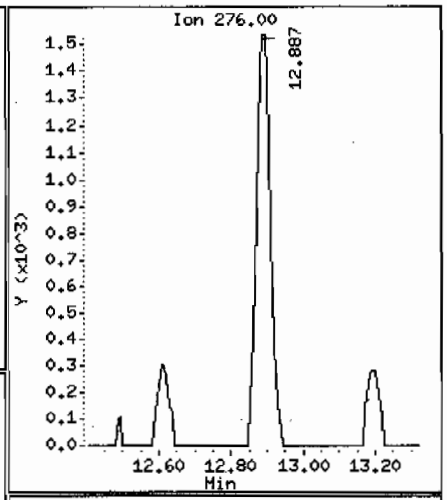

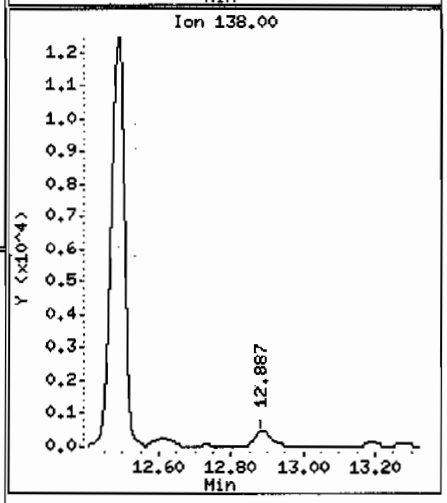

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049 Instrument: MSD2.i

Sample Info: |232428015|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	45	C5H12O2	104
Acetamide, N-methyl-	79-16-3	NIST05.L	724	38	C3H7NO	73
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4658	38	C5H12O2	104

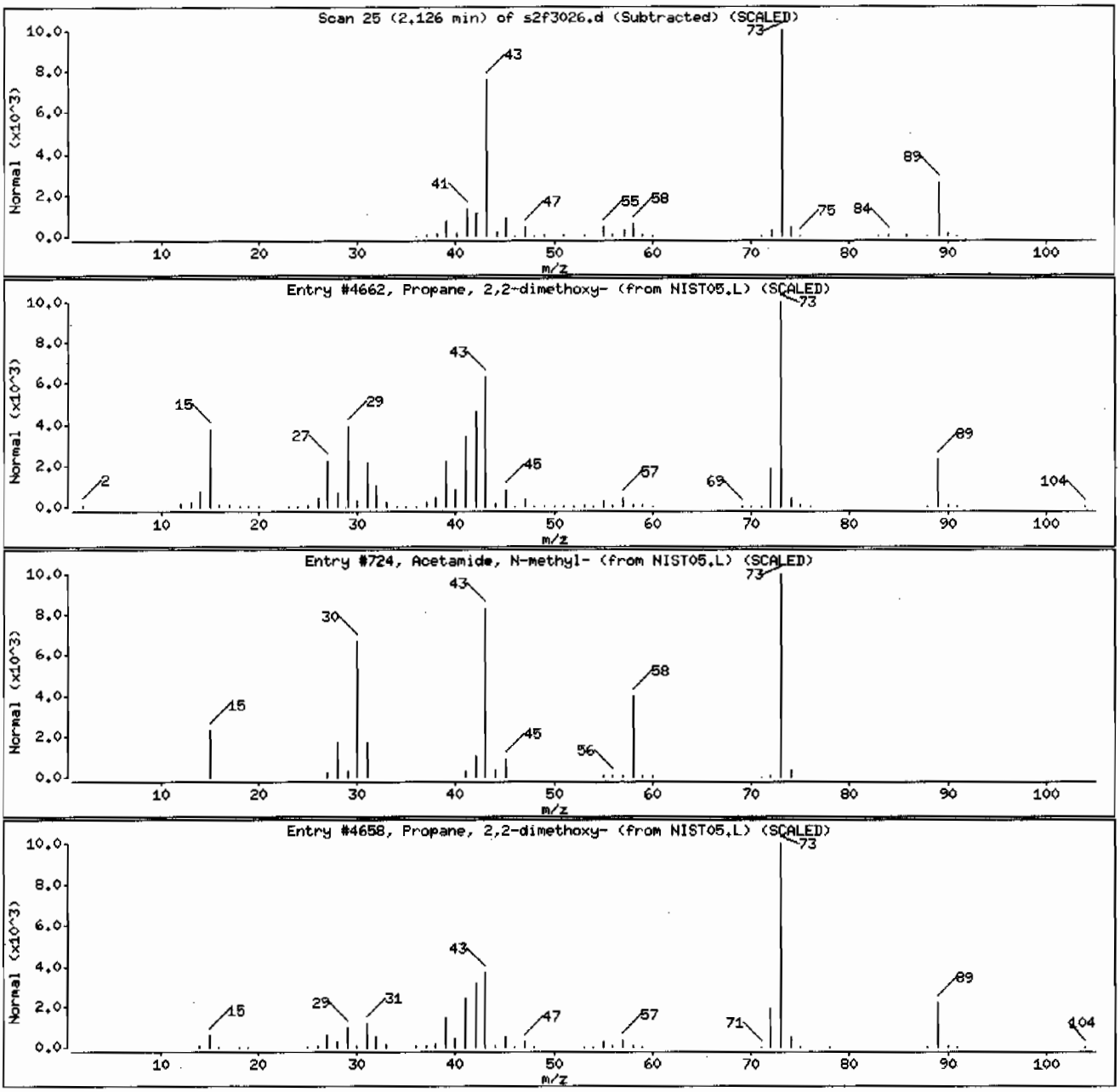

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049 Instrument: MSD2.i

Sample Info: 1232428015|881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7977	39	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	38	C6H12O2	116

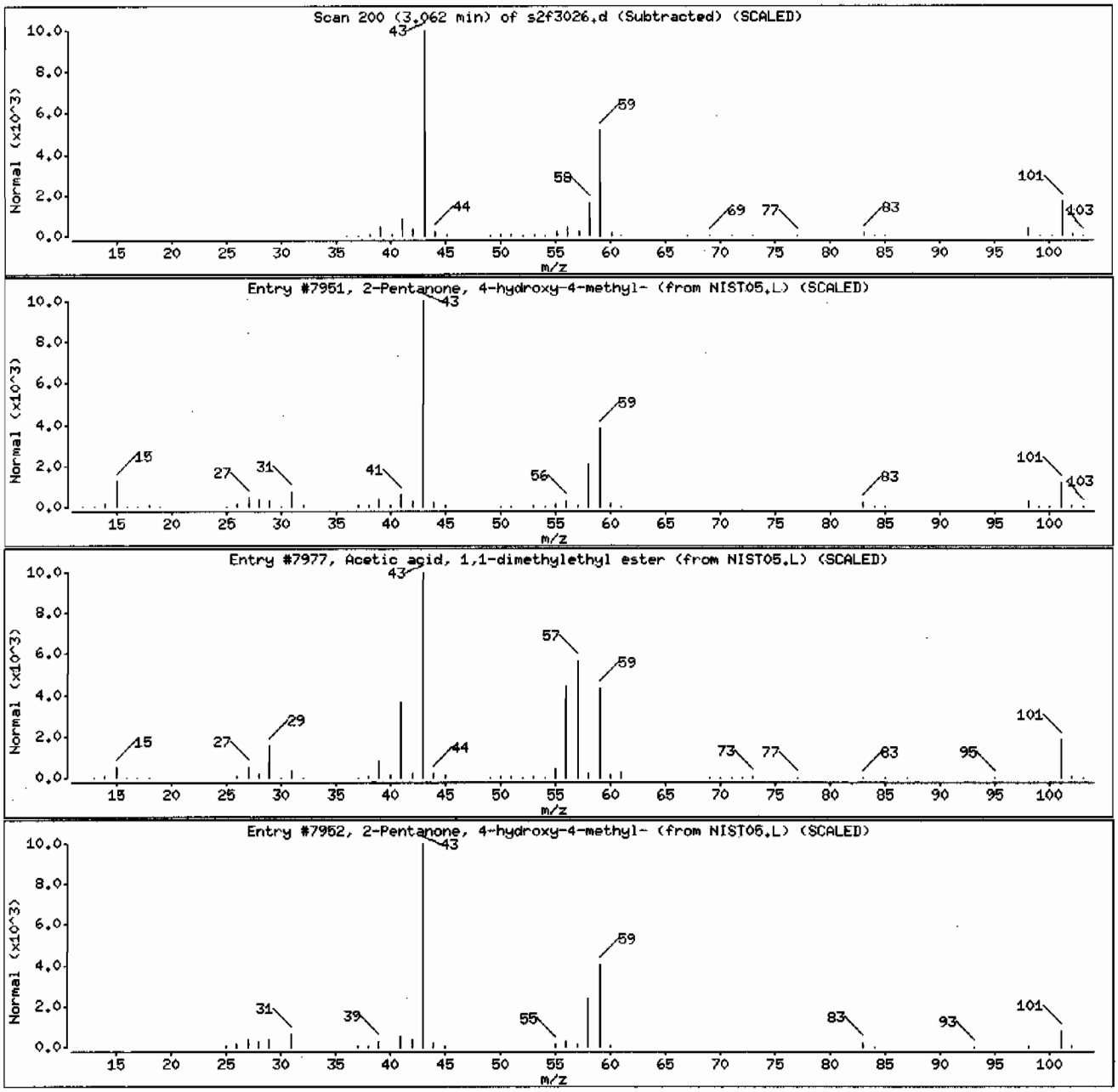

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049 Instrument: MSD2.i

Sample Info: |2324280151881319111SVMF111LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Nonacosane	630-03-5	NIST05.L	173140	99	C29H60	408
Eicosane	112-95-8	NIST05.L	113488	98	C20H42	282
Eicosane	112-95-8	NIST05.L	113489	96	C20H42	282

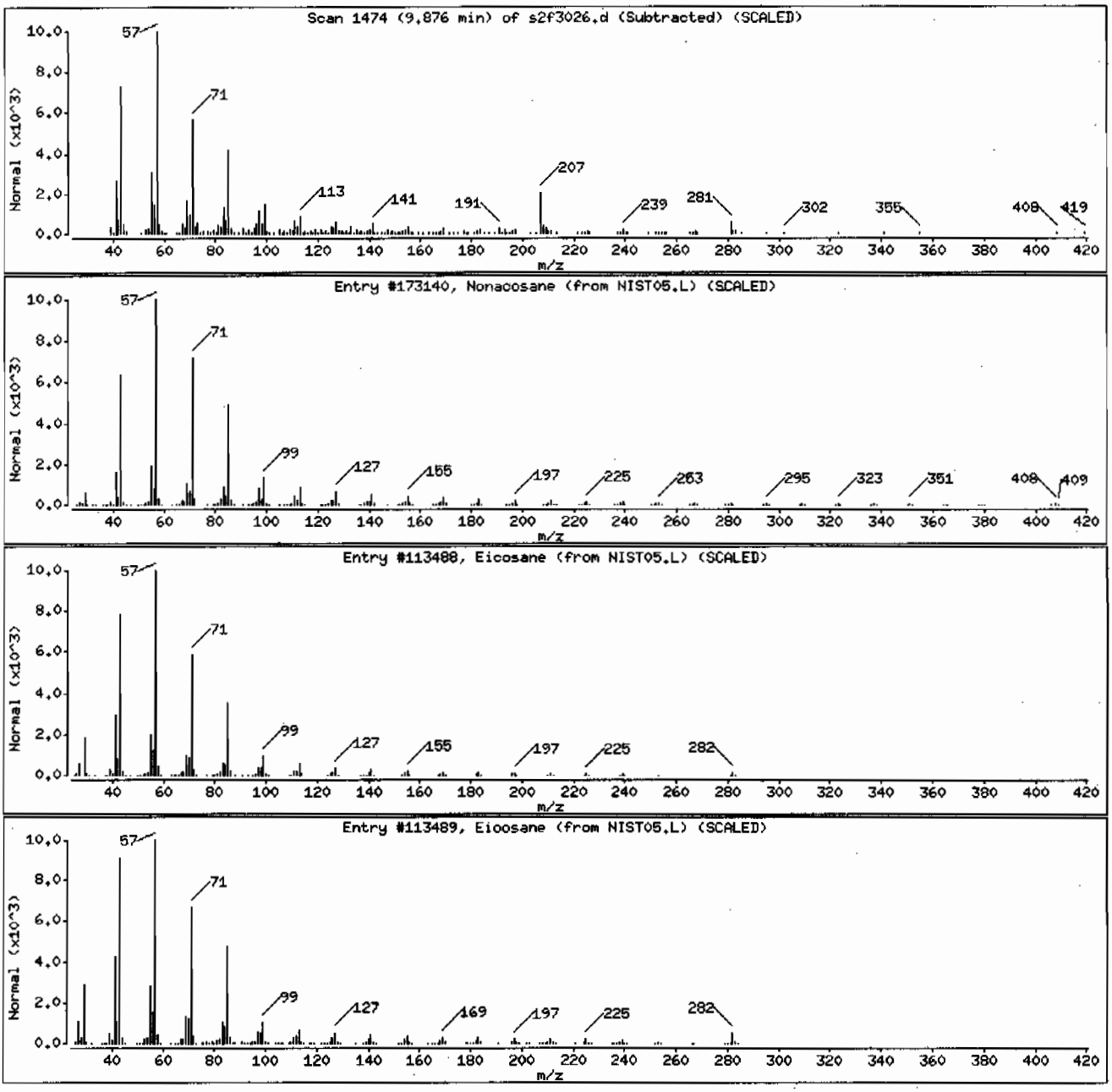

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049 Instrument: MSD2.i

Sample Info: |2324280151881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosane	112-95-8	NIST05.L	113489	97	C20H42	282
Eicosane	112-95-8	NIST05.L	113488	96	C20H42	282
Eicosane	112-95-8	NIST05.L	113492	96	C20H42	282

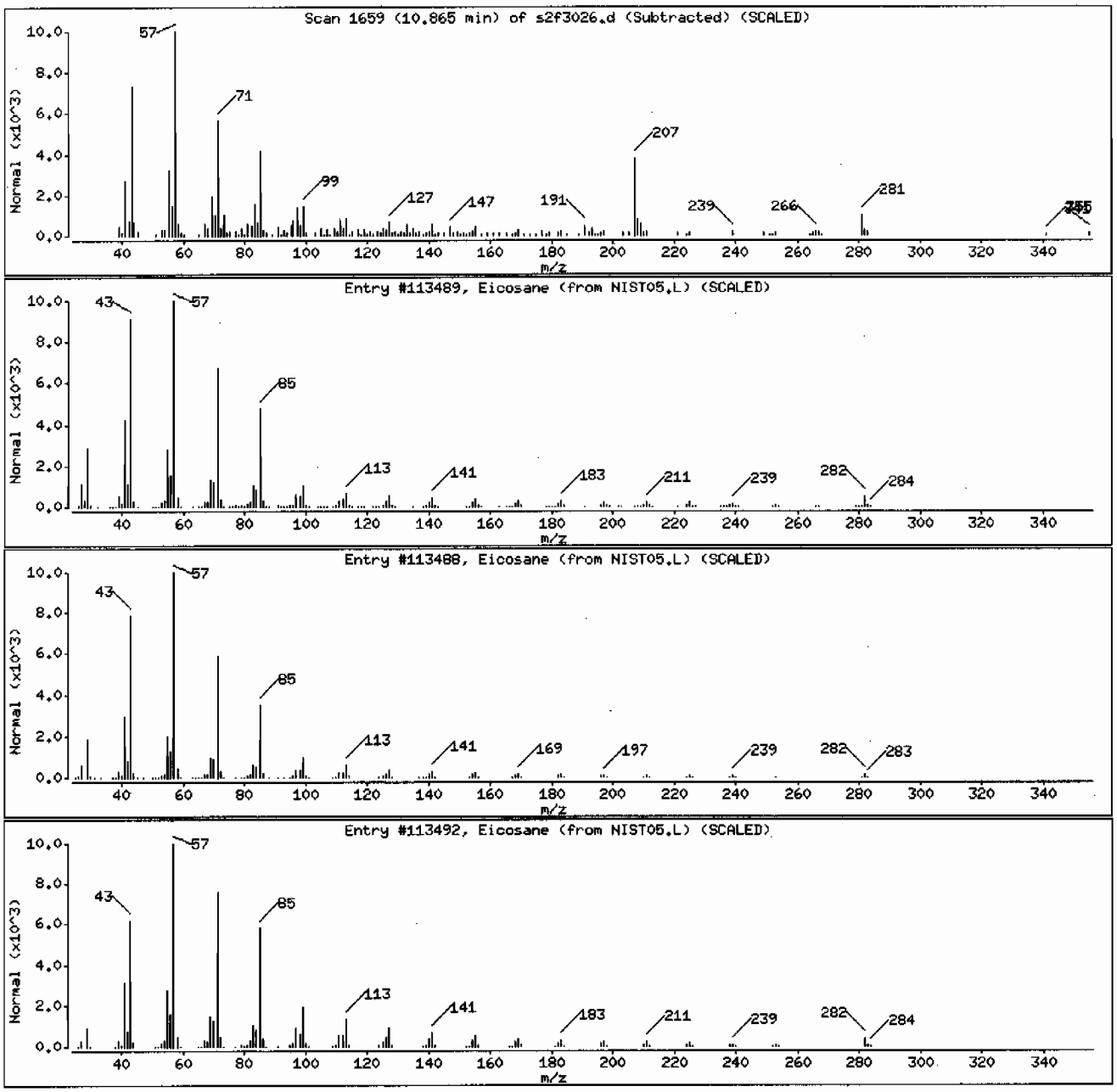

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049

Instrument: MSD2.i

Sample Info: 1232428015|881319|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclotrisiloxane, hexamethyl-	541-05-9	NIST05.L	73123	38	C6H18O3Si3	222
Phenylacetic acid, 2-(1-adamantyl)ethyl	1000282-91-2	NIST05.L	123764	35	C20H26O2	298
Cyclotrisiloxane, hexamethyl-	541-05-9	NIST05.L	73121	35	C6H18O3Si3	222

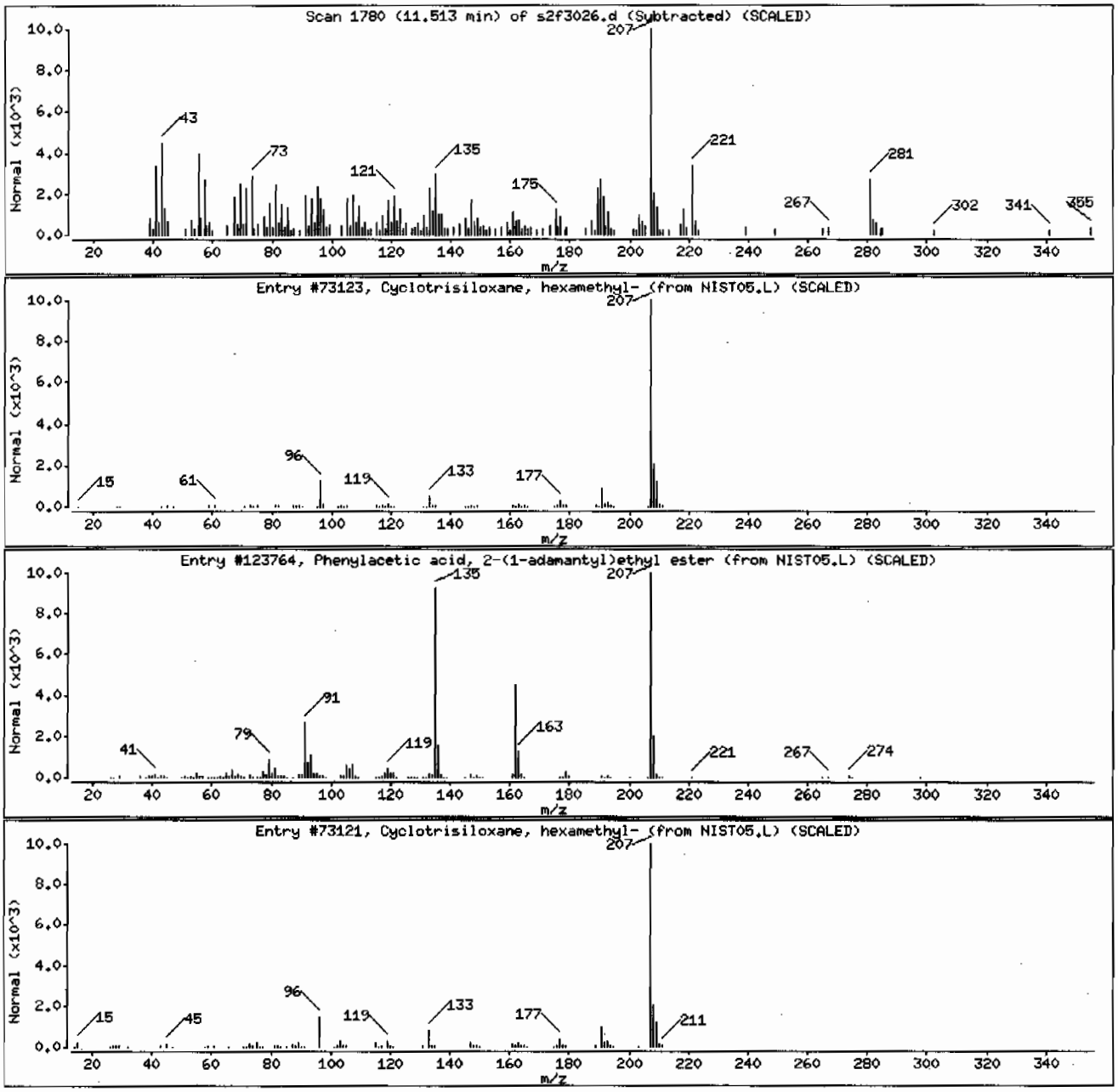

Data File: /chem/MSD2.i/s063009.b/s2f3026.d

Date : 01-JUL-2009 00:12

Client ID: CAMO-09-6049 Instrument: MSD2.i

Sample Info: |2324280|5|881319|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Tetracosapentaene, 2,6,10,15,19,23-hexam	26266-08-0	NIST05.L	173973	55	C30H52	412
D:B-Friedo-18,19-secolup-19-ene, 3,10-ep	35060-26-5	NIST05.L	176604	41	C30H50O	426
Naphthalene, 1,1'-(1,2-ethanediyl)bis[de	54934-69-9	NIST05.L	126260	35	C22H38	302

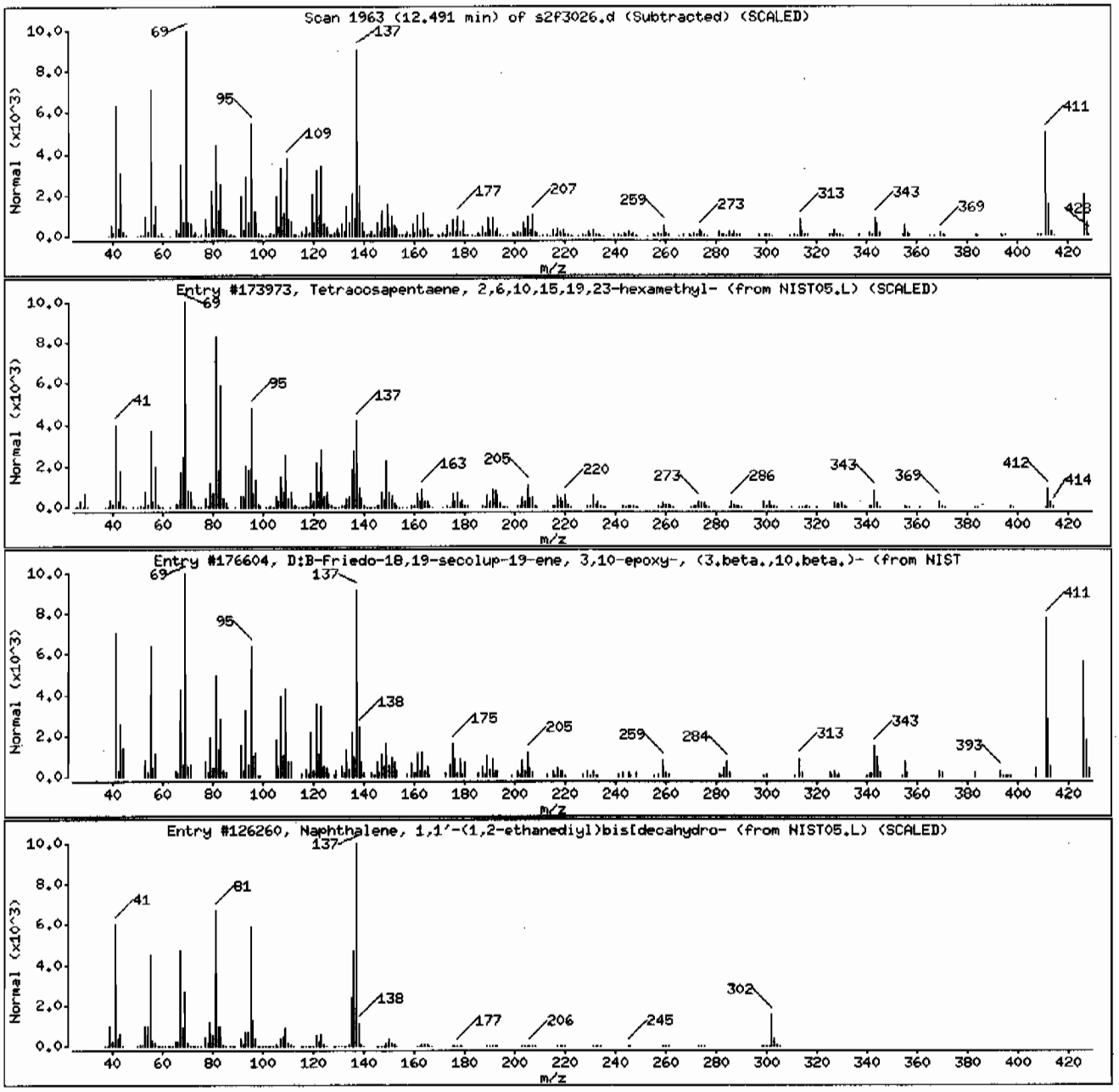

Standard Data

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 30-Jun-2009 18:45

Calibration History

Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Start Cal Date: 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
27-JUN-2009 02:16	MEGAII	/chem/MSD2.i/s062609.b/s2f2616.d
Cal Level: 2 , Cal Amount: 10.00000		
29-JUN-2009 02:32	NEV	/chem/MSD2.i/s062809.b/s2f2828.d
28-JUN-2009 23:03	HEX	/chem/MSD2.i/s062809.b/s2f2817.d
28-JUN-2009 20:47	PEST	/chem/MSD2.i/s062809.b/s2f2810.d
28-JUN-2009 18:31	AP12	/chem/MSD2.i/s062809.b/s2f2803.d
27-JUN-2009 02:40	MEGAII	/chem/MSD2.i/s062609.b/s2f2617.d
Cal Level: 3 , Cal Amount: 20.00000		
29-JUN-2009 02:51	NEV	/chem/MSD2.i/s062809.b/s2f2829.d
28-JUN-2009 23:23	HEX	/chem/MSD2.i/s062809.b/s2f2818.d
28-JUN-2009 21:07	PEST	/chem/MSD2.i/s062809.b/s2f2811.d
28-JUN-2009 18:51	AP12	/chem/MSD2.i/s062809.b/s2f2804.d
27-JUN-2009 03:04	MEGAII	/chem/MSD2.i/s062609.b/s2f2618.d
Cal Level: 4 , Cal Amount: 40.00000		
29-JUN-2009 03:11	NEV	/chem/MSD2.i/s062809.b/s2f2830.d
28-JUN-2009 23:42	HEX	/chem/MSD2.i/s062809.b/s2f2819.d
28-JUN-2009 21:26	PEST	/chem/MSD2.i/s062809.b/s2f2812.d
28-JUN-2009 19:10	AP12	/chem/MSD2.i/s062809.b/s2f2805.d
27-JUN-2009 03:29	MEGAII	/chem/MSD2.i/s062609.b/s2f2619.d
Cal Level: 5 , Cal Amount: 50.00000		
29-JUN-2009 03:30	NEV	/chem/MSD2.i/s062809.b/s2f2831.d
29-JUN-2009 00:01	HEX	/chem/MSD2.i/s062809.b/s2f2820.d
28-JUN-2009 21:45	PEST	/chem/MSD2.i/s062809.b/s2f2813.d
28-JUN-2009 19:30	AP12	/chem/MSD2.i/s062809.b/s2f2806.d
27-JUN-2009 03:53	MEGAII	/chem/MSD2.i/s062609.b/s2f2620.d
Cal Level: 6 , Cal Amount: 80.00000		
29-JUN-2009 03:49	NEV	/chem/MSD2.i/s062809.b/s2f2832.d
29-JUN-2009 00:21	HEX	/chem/MSD2.i/s062809.b/s2f2821.d
28-JUN-2009 22:05	PEST	/chem/MSD2.i/s062809.b/s2f2814.d
28-JUN-2009 19:49	AP12	/chem/MSD2.i/s062809.b/s2f2807.d
27-JUN-2009 04:17	MEGAII	/chem/MSD2.i/s062609.b/s2f2621.d
Cal Level: 7 , Cal Amount: 100.00000		

29-JUN-2009 04:09	NEV	/chem/MSD2.i/s062809.b/s2f2833.d
29-JUN-2009 00:40	HEX	/chem/MSD2.i/s062809.b/s2f2822.d
28-JUN-2009 22:24	PEST	/chem/MSD2.i/s062809.b/s2f2815.d
28-JUN-2009 20:08	AP12	/chem/MSD2.i/s062809.b/s2f2808.d
27-JUN-2009 04:41	MEGAII	/chem/MSD2.i/s062609.b/s2f2622.d

Cal Level: 8 , Cal Amount: 120.00000		
29-JUN-2009 04:28	NEV	/chem/MSD2.i/s062809.b/s2f2834.d
28-JUN-2009 22:44	PEST	/chem/MSD2.i/s062809.b/s2f2816.d
28-JUN-2009 20:28	AP12	/chem/MSD2.i/s062809.b/s2f2809.d
27-JUN-2009 05:05	MEGAII	/chem/MSD2.i/s062609.b/s2f2623.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
30-JUN-2009 16:03	MEGAII	/chem/MSD2.i/s063009.b/s2f3002.d
Ccal Level: 4 , Ccal Amount: 40.0		
30-JUN-2009 16:53	PEST	/chem/MSD2.i/s063009.b/s2f3004.d
Ccal Level: 4 , Ccal Amount: 40.0		
30-JUN-2009 16:27	AP12	/chem/MSD2.i/s063009.b/s2f3003.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Calibration File Names:
Level 1: /chem/MSD2.i/s062609.b/s2f2616.d
Level 2: /chem/MSD2.i/s062809.b/s2f2828.d
Level 3: /chem/MSD2.i/s062809.b/s2f2829.d
Level 4: /chem/MSD2.i/s062809.b/s2f2830.d
Level 5: /chem/MSD2.i/s062809.b/s2f2831.d
Level 6: /chem/MSD2.i/s062809.b/s2f2832.d
Level 7: /chem/MSD2.i/s062809.b/s2f2833.d
Level 8: /chem/MSD2.i/s062809.b/s2f2834.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.69039	0.72951	0.70150	0.66093	0.67965					
	0.66886	0.66718					AVRG		0.68543		3.50704
2 Pyridine	+++++	0.86520	0.92170	0.93760	0.89132	0.90626					
	0.97413	0.93351					AVRG		0.91853		3.82967
4 Aniline	+++++	0.54735	0.57712	0.56139	0.53009	0.55143					
	0.54745	0.54019					AVRG		0.55072		2.74368
209 Benzaldehyde	+++++	0.87905	0.93930	0.87221	0.86925	0.84625					
	0.82101	0.75879					AVRG		0.85512		6.52380
6 Phenol	+++++	1.46571	1.51634	1.43616	1.34991	1.34475					
	1.33903	1.29504					AVRG		1.39242		5.79415

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	1.05547	1.07090	1.10049	1.04112	0.98051	0.98108					
	0.97714	0.94276					AVRG		1.01868		5.45749
8 2-Chlorophenol	+++++	1.22115	1.29024	1.22223	1.14751	1.14427					
	1.14285	1.11008					AVRG		1.18262		5.36811
203 n-Decane	+++++	1.79885	1.79755	1.64128	1.53904	1.36489					
	1.40609	1.23127					AVRG		1.53985		14.21564
9 1,3-Dichlorobenzene	+++++	1.44788	1.45807	1.37028	1.28760	1.24616					
	1.24913	1.17375					AVRG		1.31898		8.23866
11 1,4-Dichlorobenzene	+++++	1.46286	1.46802	1.36944	1.28961	1.23077					
	1.24012	1.16149					AVRG		1.31747		9.03997
12 Benzyl alcohol	+++++	0.77831	0.82396	0.80753	0.75509	0.77236					
	0.75853	0.75992					AVRG		0.77939		3.40855
13 1,2-Dichlorobenzene	+++++	1.36658	1.36378	1.23263	1.15598	1.04264					
	1.07125	0.95328					AVRG		1.16945		13.66615
14 bis(2-Chloroisopropyl)ether	+++++	2.50121	2.52978	2.38393	2.23799	2.15967					
	2.17847	2.00949					AVRG		2.28579		8.40797
15 o-Cresol	+++++	0.95590	0.98573	0.91181	0.85653	0.80175					
	0.81510	0.74571					AVRG		0.86750		10.06907

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Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
16 Acetophenone	+++++	1.22384	1.29748	1.21187	1.20257	1.19254					
	1.17596	1.08741					AVRG		1.19881		5.22238
17 N-Nitrosodipropylamine	0.73956	0.87005	0.91720	0.87383	0.82323	0.83620					
	0.82564	0.80637					AVRG		0.83651		6.33048
18 m,p-Cresols	+++++	1.22788	1.28634	1.23739	1.16848	1.19210					
	1.17119	1.17505					AVRG		1.20835		3.64675
19 Hexachloroethane	+++++	0.51229	0.53508	0.50797	0.47973	0.47238					
	0.47342	0.45215					AVRG		0.49043		5.87067
21 Nitrobenzene	+++++	0.32753	0.33058	0.30836	0.28626	0.27168					
	0.25189	0.24815					AVRG		0.28921		11.76073
22 Isophorone	+++++	0.61385	0.62546	0.57462	0.53543	0.51915					
	0.48565	0.48570					AVRG		0.54855		10.47275
23 2-Nitrophenol	+++++	0.16270	0.15720	0.14780	0.13984	0.13238					
	0.12726	0.12055					AVRG		0.14110		11.06292
24 2,4-Dimethylphenol	+++++	0.34805	0.38714	0.38568	0.36156	0.35852					
	0.33752	0.34099					AVRG		0.35992		5.56929
25 bis(2-Chloroethoxy)methane	+++++	0.38255	0.38068	0.34149	0.31672	0.29025					
	0.27765	0.26754					AVRG		0.32241		14.68930

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Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
26 2,4-Dichlorophenol	+++++	0.24032	0.25043	0.23132	0.21657	0.20464					
	0.18978	0.18966					AVRG		0.21753		11.11236
27 Benzoic acid	+++++	+++++	0.12323	0.14092	0.13590	0.15073					
	0.14033	0.15639					AVRG		0.14125		8.21762
28 1,2,4-Trichlorobenzene	+++++	0.29566	0.29122	0.26037	0.24344	0.22377					
	0.21259	+++++					AVRG		0.25451		13.49716
30 Naphthalene	1.06207	1.01462	0.98540	0.85424	0.79343	+++++					
	+++++	+++++					AVRG		0.94195		12.02841
204 alpha-Terpineol	+++++	0.30102	0.30144	0.27351	0.25618	0.23365					
	0.22385	0.20916					AVRG		0.25697		14.31412
31 4-Chloroaniline	+++++	0.38934	0.42365	0.39825	0.37594	0.34649					
	0.32934	0.31761					AVRG		0.36866		10.51922
189 Caprolactam	+++++	0.07438	0.08756	0.08798	0.08978	0.09316					
	0.09272	0.07649					AVRG		0.08601		8.78430
32 Hexachlorobutadiene	+++++	0.15222	0.15253	0.13591	0.12725	0.11677					
	0.11329	0.10593					AVRG		0.12913		14.39176
33 4-Chloro-3-methylphenol	+++++	0.24254	0.25133	0.23305	0.21576	0.20869					
	0.19634	0.19460					AVRG		0.22033		10.16630

GEL Laboratories LLC

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.61627	0.61413	0.59557	0.52918	0.49047	0.43750					
	+++++	+++++					AVRG		0.54719		13.47068
35 1-Methylnaphthalene	0.65836	0.64408	0.62164	0.55038	0.51269	0.45385					
	+++++	+++++					AVRG		0.57350		14.17642
36 Hexachlorocyclopentadiene	+++++	0.15683	0.18566	0.18509	0.17867	0.17719					
	0.16396	0.16091					AVRG		0.17262		6.87379
208 1,1'-Biphenyl	+++++	1.31230	1.35004	1.20122	1.20269	1.12846					
	1.07439	+++++					AVRG		1.21152		8.67510
205 2,3-Dichloroaniline	+++++	0.58190	0.61084	0.56762	0.53224	0.49923					
	0.50106	0.44766					AVRG		0.53436		10.55301
37 2,4,6-Trichlorophenol	+++++	0.30229	0.32112	0.32700	0.31364	0.27643					
	0.28448	0.24464					AVRG		0.29566		9.85703
38 2,4,5-Trichlorophenol	+++++	0.34231	0.38184	0.34308	0.32995	0.33854					
	0.33063	0.32601					AVRG		0.34176		5.51289
40 2-Chloronaphthalene	1.09290	1.08113	1.08949	1.01572	0.95230	0.89075					
	0.89856	0.82202					AVRG		0.98036		10.66760
42 o-Nitroaniline	+++++	0.27903	0.30714	0.31024	0.29525	0.30377					
	0.29871	0.29495					AVRG		0.29844		3.46682

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Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
41 m-Nitroaniline	+++++	0.19547	0.22895	0.25638	0.24356	0.25315					
	0.24606	0.24731					AVRG		0.23870		8.78227
43 Dimethylphthalate	+++++	1.22393	1.25917	1.17520	1.11662	1.08535					
	1.07942	1.02338					AVRG		1.13758		7.46313
44 2,6-Dinitrotoluene	+++++	0.27918	0.30041	0.28943	0.27384	0.26719					
	0.26625	0.25103					AVRG		0.27533		5.90117
45 Acenaphthylene	1.63476	1.78414	1.81104	1.66333	1.56180	1.46336					
	1.45283	1.33623					AVRG		1.58844		10.47930
47 Acenaphthene	1.24714	1.12257	1.11696	1.01038	0.93440	0.83192					
	+++++	+++++					AVRG		1.04389		14.26541
48 2,4-Dinitrophenol	+++++	+++++	14830	38648	42093	86876					
	73327	114749					LINR	0.19589	0.11047		0.99746
49 Dibenzofuran	+++++	1.54218	1.54361	1.42238	1.33354	1.23825					
	1.23959	1.14217					AVRG		1.35168		11.61081
50 2,4-Dinitrotoluene	+++++	0.32241	0.35522	0.36066	0.34084	0.34591					
	0.34092	0.33105					AVRG		0.34243		3.85045
51 Diethylphthalate	+++++	1.23228	1.24147	1.15655	1.09394	1.04036					
	1.04596	0.96131					AVRG		1.11027		9.42648

GEL Laboratories LLC

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
52 4-Nitrophenol	+++++	0.14566	0.16856	0.18182	0.17258	0.17034					
	0.16713	0.16802					AVRG		0.16773		6.51871
53 Fluorene	1.27314	1.30157	1.27309	1.13280	1.06756	0.94025					
	0.94446	+++++					AVRG		1.13327		13.70159
54 4-Chlorophenylphenylether	+++++	0.58604	0.58562	0.54938	0.51757	0.47803					
	0.48248	0.43360					AVRG		0.51896		11.16990
55 2-Methyl-4,6-dinitrophenol	+++++	9100	30013	65052	69783	134205					
	116111	178378					LINR	0.10059	0.09828		0.99935
56 p-Nitroaniline	+++++	0.16374	0.17999	0.22053	0.21515	0.22182					
	0.20157	0.20958					AVRG		0.20177		10.92280
133 Diphenylamine	+++++	0.61082	0.60843	0.55622	0.52177	0.49063					
	0.49083	0.46088					AVRG		0.53423		11.12025
58 1,2-Diphenylhydrazine	+++++	0.75120	0.79654	0.72292	0.68243	0.64978					
	0.64441	0.61112					AVRG		0.69406		9.49164
59 Tributylphosphate	+++++	1.08075	1.14516	1.15861	1.09688	1.06726					
	1.03024	0.99069					AVRG		1.08137		5.51158
61 4-Bromophenylphenylether	+++++	0.18307	0.19354	0.17513	0.16553	0.15356					
	0.15325	0.14245					AVRG		0.16665		10.96239

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
63 Hexachlorobenzene	+++++	0.20045	0.21246	0.19273	0.18176	0.17202						
	0.16827	0.15968					AVRG		0.18391		10.27984	
207 Atrazine	+++++	0.04721	0.04969	0.04483	0.04470	0.04375						
	0.04029	0.03794					AVRG		0.04406		8.99731	
65 Pentachlorophenol	+++++	0.07738	0.09995	0.10308	0.09843	0.10166						
	0.09959	0.09530					AVRG		0.09648		9.09625	
206 n-Octadecane	+++++	0.61277	0.64232	0.55712	0.52071	0.42108						
	+++++	+++++					AVRG		0.55080		15.72005	<-
68 Phenanthrene	1.12620	1.04733	1.03801	0.96924	0.86678	0.79753						
	0.82243	+++++					AVRG		0.95250		13.21323	
69 Anthracene	0.99489	1.04469	1.05390	0.94444	0.92789	0.82252						
	0.80159	0.75921					AVRG		0.91864		12.28174	
72 Di-n-butylphthalate	+++++	1.13957	1.24371	1.12414	1.05987	0.97905						
	0.98201	0.89443					AVRG		1.06040		11.17434	
76 Fluoranthene	0.86288	1.00215	1.00056	0.93825	0.87050	0.79440						
	0.80778	0.73329					AVRG		0.87623		11.18058	
77 Benzidine	+++++	22872	62918	166793	224649	446051						
	564014	848216					LINR	0.23685	0.44179		0.99510	

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INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
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Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
79 Pyrene	1.34330	1.27250	1.37499	1.21096	1.13484	1.07700					
	1.09795	1.01424					AVRG		1.19072		11.00224
85 Butylbenzylphthalate	+++++	0.52085	0.59986	0.51594	0.49136	0.45596					
	0.47145	0.42685					AVRG		0.49747		11.25124
89 Benzo(a)anthracene	1.04673	0.97487	1.05606	0.99557	0.93319	0.92987					
	0.93218	0.91723					AVRG		0.97321		5.63703
90 3,3'-Dichlorobenzidine	+++++	0.18780	0.23328	0.25613	0.27282	0.29355					
	0.29207	0.27475					AVRG		0.25863		14.52335
92 Chrysene	0.97507	1.02354	0.98860	0.94517	0.89334	0.88895					
	0.91213	0.88692					AVRG		0.93921		5.54276
93 bis(2-Ethylhexyl)phthalate	0.54232	0.72896	0.86988	0.79184	0.75313	0.73043					
	0.76239	0.69130					AVRG		0.73378		12.78238
94 Di-n-octylphthalate	+++++	1.14313	1.45599	1.36696	1.26834	1.28529					
	1.35701	1.22886					AVRG		1.30080		7.87435
95 Benzo(b)fluoranthene	0.87387	1.01569	0.99473	0.99671	0.92029	0.94238					
	0.95465	0.98368					AVRG		0.96025		4.90832
96 Benzo(k)fluoranthene	0.93389	1.01628	1.12965	1.06131	1.03858	0.99069					
	1.02832	0.90660					AVRG		1.01317		6.97095

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	0.67985	0.83878	0.87957	0.89970	0.84749	0.85752					
	0.87472	0.83416					AVRG		0.83897		8.10580
99 Indeno(1,2,3-cd)pyrene	0.64000	0.82233	0.81361	0.88071	0.77965	0.82885					
	0.85683	0.82546					AVRG		0.80593		9.09898
100 Dibenzo(a,h)anthracene	0.50405	0.64680	0.63724	0.70642	0.63479	0.67471					
	0.69689	0.67274					AVRG		0.64671		9.80209
101 Benzo(ghi)perylene	0.59868	0.71182	0.70702	0.75708	0.66677	0.71134					
	0.74457	0.70082					AVRG		0.69976		7.02871
102 1,4-Dioxane	+++++	0.39772	0.40311	0.37296	0.36975	0.37134					
	0.36894	0.33784					AVRG		0.37452		5.73436
103 Methyl methacrylate	+++++	0.20996	0.22614	0.21209	0.21072	0.21330					
	0.21114	0.18984					AVRG		0.21046		5.06778
104 Ethyl methacrylate	+++++	0.79857	0.84722	0.80112	0.80411	0.80737					
	0.81266	0.74558					AVRG		0.80237		3.73419
105 2-Picoline	+++++	1.25271	1.33893	1.25469	1.25060	1.24109					
	1.23220	1.11687					AVRG		1.24101		5.25228
106 N-Nitrosomethylethylamine	+++++	0.49901	0.54314	0.52387	0.52344	0.53620					
	0.54908	0.53084					AVRG		0.52937		3.09819

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.47052	0.50126	0.47524	0.46945	0.47491					
	0.47042	0.45601					AVRG		0.47397		2.87551
108 N-Nitrosodiethylamine	+++++	0.51998	0.56646	0.54327	0.53716	0.54527					
	0.55248	0.52328					AVRG		0.54113		2.99287
109 Ethyl Methanesulfonate	+++++	0.63006	0.67809	0.63459	0.63852	0.64934					
	0.65680	0.63462					AVRG		0.64600		2.62667
110 Pentachloroethane	+++++	0.30499	0.32835	0.31041	0.31171	0.31672					
	0.31609	0.29592					AVRG		0.31203		3.24854
111 N-Nitrosopyrrolidine	+++++	0.49461	0.55822	0.55049	0.55217	0.56133					
	0.56208	0.52723					AVRG		0.54373		4.54126
113 N-Nitrosomorpholine	+++++	0.70881	0.75811	0.72140	0.72252	0.73332					
	0.73620	0.67535					AVRG		0.72224		3.56797
114 o-Toluidine	+++++	1.81344	1.94243	1.83859	1.82660	1.77553					
	1.76318	1.60663					AVRG		1.79520		5.65548
115 N-Nitrosopiperidine	+++++	0.14337	0.15582	0.14726	0.14726	0.15193					
	0.14972	0.14382					AVRG		0.14845		2.98731
116 a,a-Dimethylphenethylamine	+++++	0.57425	0.72322	0.76162	0.78421	0.85786					
	0.86301	0.82195					AVRG		0.76945		12.97979

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	100 Level 7	120 Level 8									
117 Triethylphosphorothioate	+++++	0.14418	0.14938	0.14232	0.13965	0.13684					
	0.12762	0.11819					AVRG		0.13688		7.78882
118 2,6-Dichlorophenol	+++++	0.19961	0.22277	0.21643	0.21941	0.22653					
	0.22167	0.20864					AVRG		0.21644		4.31018
119 Hexachloropropene	+++++	0.07288	0.09224	0.09316	0.09615	0.10218					
	0.10311	0.09990					AVRG		0.09423		10.95111
120 p-Phenylenediamine	+++++	0.15582	0.20451	0.23862	0.24890	0.24828					
	0.23839	0.22055					AVRG		0.22216		14.98248
121 N-Nitrosodi-n-butylamine	+++++	0.22439	0.25129	0.23557	0.19879	0.19823					
	0.19383	0.18437					AVRG		0.21235		11.70943
122 Safrole	+++++	0.19695	0.21207	0.19719	0.19841	0.19789					
	0.19197	0.17613					AVRG		0.19580		5.44019
123 1,2,4,5-Tetrachlorobenzene	+++++	0.44571	0.45113	0.41057	0.40974	0.39204					
	0.37322	0.34950					AVRG		0.40456		9.07998
124 Isosafrole	+++++	0.33722	0.36762	0.35274	0.35141	0.35716					
	0.35384	0.33963					AVRG		0.35137		2.94726
125 1,4-Naphthoquinone	+++++	0.30635	0.38081	0.36257	0.35511	0.32509					
	0.30744	0.28441					AVRG		0.33168		10.60498

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
126 m-Dinitrobenzene	+++++	0.17541	0.20057	0.20342	0.19466	0.19942					
	0.19513	0.19233					AVRG		0.19442		4.74365
127 Pentachlorobenzene	+++++	0.38078	0.39337	0.36052	0.36180	0.35374					
	0.33562	0.30840					AVRG		0.35632		7.89644
128 1-Naphthylamine	+++++	0.89219	0.96731	0.94680	0.96309	0.93980					
	0.90534	0.83429					AVRG		0.92126		5.15448
129 2-Naphthylamine	+++++	0.95674	1.03123	1.02844	1.05408	1.03895					
	0.99761	0.92539					AVRG		1.00463		4.72498
130 2,3,4,6-Tetrachlorophenol	+++++	0.28377	0.31045	0.28533	0.26800	0.27346					
	0.26536	0.23698					AVRG		0.27476		8.17853
131 5-Nitro-o-toluidine	+++++	16520	48018	110753	131396	238779					
	306628	428864					LINR	0.10413	0.31599		0.99907
132 Thionazin	+++++	0.16905	0.17849	0.18173	0.17207	0.17103					
	0.16242	0.15725					AVRG		0.17029		5.00232
134 Sulfotepp	+++++	0.10023	0.10187	0.10250	0.09686	0.09057					
	0.08805	0.08077					AVRG		0.09441		8.67017
135 Phorate	+++++	0.38689	0.39399	0.39568	0.37643	0.36365					
	0.35192	0.32231					AVRG		0.37013		7.15082

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
136 1,3,5-Trinitrobenzene	+++++	7249	24622	65831	82495	150694					
	193765	278057					LINR	0.17364	0.12282		0.99955
137 Phenacetin	+++++	0.18974	0.23994	0.24142	0.24633	0.26389					
	0.26582	0.26374					AVRG		0.24441		10.86750
138 Diallate	+++++	0.29105	0.29277	0.25721	0.25477	0.25095					
	0.24113	0.22815					AVRG		0.25943		9.34012
139 Dimethoate	+++++	0.20718	0.22900	0.24121	0.23799	0.24471					
	0.24405	0.23962					AVRG		0.23482		5.64543
140 4-Aminobiphenyl	+++++	0.44908	0.51202	0.47968	0.49819	0.53554					
	0.50604	0.45671					AVRG		0.49104		6.31269
141 Pentachloronitrobenzene	+++++	0.06058	0.06747	0.06295	0.06212	0.06304					
	0.06031	0.05529					AVRG		0.06168		5.96047
142 Pronamide	+++++	0.27080	0.29112	0.25926	0.25598	0.22611					
	0.21066	+++++					AVRG		0.25232		11.66466
143 Dinoseb	+++++	12725	46848	105565	110643	211821					
	185297	272725					LINR	0.08825	0.15291		0.99806
144 Disulfoton	+++++	0.34980	0.35064	0.34865	0.33531	0.31908					
	0.30426	0.27842					AVRG		0.32659		8.43667

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145 Methyl parathion	+++++	0.13639	0.16231	0.18078	0.17561	0.18580					
	0.18424	0.18201					AVRG		0.17245		10.29419
146 4-Nitroquinoline-1-oxide	+++++	1986	8303	17052	21060	34048					
	+++++	+++++					LINR	0.05856	0.02694		0.99309
147 Methapyrilene	+++++	0.43796	0.52317	0.47267	0.47915	0.45098					
	0.40172	0.34816					AVRG		0.44483		12.77554
148 Isodrin	+++++	0.10982	0.11290	0.10130	0.10133	0.09963					
	0.09488	0.08905					AVRG		0.10127		8.07610
149 Aramite	+++++	0.03964	0.04717	0.04605	0.04734	0.04932					
	0.04730	0.04602					AVRG		0.04612		6.63351
150 Kepone	+++++	0.06380	0.07655	0.07250	0.07309	0.07540					
	0.07338	0.07194					AVRG		0.07238		5.69557
151 p-(Dimethylamino)azobenzene	+++++	0.30974	0.34670	0.32805	0.31690	0.31425					
	0.31275	0.28115					AVRG		0.31565		6.27537
152 Chlorobenzilate	+++++	0.28985	0.29768	0.27730	0.26468	0.26092					
	0.25904	0.22989					AVRG		0.26848		8.37983
153 3,3'-Dimethylbenzidine	+++++	0.40033	0.46884	0.47816	0.49648	0.52910					
	0.53546	0.52449					AVRG		0.49041		9.65612

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	100 Level 7	120 Level 8										
154 Famphur	+++++	0.33413	0.33836	0.37345	0.36796	0.36875						
	0.38338	0.35503					AVRG		0.36015		5.10679	
155 2-Acetylaminofluorene	+++++	13639	53322	139323	180338	352859						
	426563	617426					LINR	0.18098	0.32395		0.99879	
157 7,12Dimethylbenz(a)anthracene	+++++	0.45506	0.48633	0.47694	0.47156	0.48232						
	0.48628	0.45160					AVRG		0.47287		3.03811	
158 3-Methylcholanthrene	+++++	0.32290	0.39428	0.39389	0.41296	0.44058						
	0.43581	0.42267					AVRG		0.40330		9.89218	
26 Phthalic anhydride	+++++	9279	28432	88382	98010	174350						
	155303	233968					LINR	0.08557	0.10270		0.99452	
173 Carbazole	0.76996	0.78964	0.67561	0.73091	0.70289	0.71013						
	0.69698	0.66805					AVRG		0.71802		6.00716	
174 Hexachlorophene	+++++	0.04729	0.05480	0.06131	0.06240	0.05994						
	0.06360	+++++					AVRG		0.05822		10.58982	
179 Dibenzo(a,e)pyrene	+++++	0.40291	0.35847	0.45818	0.33173	0.41418						
	0.46603	0.40080					AVRG		0.40461		12.01988	
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

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	100 Level 7	120 Level 8									
184 p-Benzoquinone	+++++	3150	11516	23358	26594	48466					
	46443	68308					LINR	0.16246	0.14101		0.99754
191 Parathion	+++++	0.05529	0.06328	0.07150	0.06943	0.07088					
	0.07101	0.06676					AVRG		0.06688		8.80608
192 Methoxychlor	+++++	0.46435	0.58624	0.57649	0.51368	0.54017					
	0.54881	0.50354					AVRG		0.53333		8.02107
210 m-Toluidine	+++++	1.49620	1.38339	1.68036	1.63844	1.62579					
	1.55123	1.72011					AVRG		1.58507		7.35471
211 p-Toluidine	+++++	1.01959	1.23757	1.10717	1.03885	1.13933					
	1.16181	0.98132					AVRG		1.09795		8.19734
212 Cis Diallate	+++++	0.28988	0.29966	0.28366	0.28200	0.28772					
	0.28729	0.28618					AVRG		0.28806		1.99541
213 Trans Diallate	+++++	0.34241	0.34326	0.30222	0.29953	0.29524					
	0.28357	0.26826					AVRG		0.30493		9.28034
214 1,4-Dinitrobenzene	+++++	0.17749	0.21032	0.22035	0.21167	0.22213					
	0.21406	0.21900					AVRG		0.21072		7.27016
215 2-Ethoxyethanol	+++++	0.77687	0.83191	0.80656	0.77164	0.78617					
	0.79097	0.78383					AVRG		0.79256		2.60025

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216 Methylenebis(2-chloroaniline)	+++++	12805	28290	73347	76015	163504					
	143350	227450					LINR	0.22688	0.16489		0.99276
226 2,2'-Dichlorobenzil	+++++	0.66353	0.63564	0.69938	0.71605	+++++					
	0.61894	0.61670					AVRG		0.65837		6.38794
227 4-Chlorothioanisole	+++++	0.24506	0.23206	0.25611	0.24444	+++++					
	0.22647	0.22185					AVRG		0.23767		5.47811
228 4-Chlorothiophenol	+++++	16402	35170	110583	127434	+++++					
	369945	362685					LINR	0.16556	0.19296		0.99881
229 bis(p-Chlorophenyl)sulfone	+++++	0.43190	0.39213	0.41296	0.42357	+++++					
	0.35674	0.35512					AVRG		0.39540		8.43542
230 bis(p-Chlorophenyl)disulfide	+++++	0.13289	0.12954	0.13348	0.13989	+++++					
	0.13874	0.13358					AVRG		0.13469		2.894[illegible]2
231 Diphenyl disulfide	+++++	0.21076	0.20544	0.20636	0.21043	+++++					
	0.20788	0.19706					AVRG		0.20632		2.42897
232 Diphenyl sulfide	+++++	0.77433	0.71574	0.74089	0.72654	+++++					
	0.63212	0.61110					AVRG		0.70012		9.18145
233 Phenyl sulfone	+++++	0.45053	0.43893	0.43334	0.43289	+++++					
	0.40522	0.38870					AVRG		0.42493		5.45500

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
234 Hydroxymethyl phthalimide	+++++	0.10467	0.13108	0.13853	0.12812	+++++					
	0.09771	0.10338					AVRG		0.11725		14.74617
235 Phthalic acid	+++++	6901	14671	49475	59125	+++++					
	224418	229358					LINR	0.33489	0.12663		0.99106
236 Thiophenol	+++++	32180	64610	165609	195072	+++++					
	558912	549454					LINR	0.11114	1.06569		0.99908
237 bis(Chloromethyl)ether	+++++	0.84495	0.79365	0.86291	0.82523	+++++					
	0.79051	0.76601					AVRG		0.81388		4.51297
238 Octachlorostyrene	+++++	0.07576	0.07428	0.07540	0.07664	+++++					
	0.06778	0.06554					AVRG		0.07257		6.46624
M 222 Trichlorophenols	+++++	0.32230	0.35148	0.33504	0.32180	0.30748					
	0.30756	0.28533					AVRG		0.31871		6.69034
M 223 Tetrachlorophenols	+++++	0.28377	0.31045	0.28533	0.26800	0.27346					
	0.26536	0.23698					AVRG		0.27476		8.17853
M 224 Benzo(b,k)fluoranthene	0.90388	1.01599	1.06219	1.02901	0.97944	0.96653					
	0.99148	0.94514					AVRG		0.98671		5.05498
M 225 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
$ 3 2-Fluorophenol	+++++	1.11390	1.17947	1.13740	1.07315	1.08214						
	1.09504	1.06683					AVRG		1.10685		3.64091	
$ 5 Phenol-d5	+++++	1.40468	1.49093	1.41246	1.33021	1.32629						
	1.31886	1.28434					AVRG		1.36682		5.25941	
$ 187 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 20 Nitrobenzene-d5	+++++	0.33115	0.34312	0.31862	0.29770	0.28653						
	0.26834	0.26708					AVRG		0.30179		9.96470	
$ 39 2-Fluorobiphenyl	+++++	1.30270	1.30016	1.18745	1.11084	1.02835						
	1.04071	0.93774					AVRG		1.12971		12.39866	
$ 60 2,4,6-Tribromophenol	+++++	0.12926	0.14519	0.14483	0.13812	0.13844						
	0.13560	0.12756					AVRG		0.13700		5.00904	
$ 81 p-Terphenyl-d14	+++++	0.73551	0.79284	0.69691	0.65932	0.63740						
	0.64073	0.60652					AVRG		0.68132		9.52562	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

Data File: /chem/MSD2.i/s062609.b/s2f2625.d
Report Date: 29-Jun-2009 12:08

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2f2625.d
Analysis Type:
Lab Sample ID: WBN090626-09.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m

Injection Date: 27-JUN-2009 05:54
Init. Cal. Date(s): 27-JUN-2009 27-JUN-2009
Init. Cal. Times: 02:16 05:05

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$	3 2-Fluorophenol	1.10685	1.17178	1.17178	0.000	5.86682	60.00000	Averaged	
$	5 Phenol-d5	1.36682	1.39574	1.39574	0.000	2.11573	60.00000	Averaged	
$	20 Nitrobenzene-d5	0.30179	0.33074	0.33074	0.000	9.59180	60.00000	Averaged	
$	39 2-Fluorobiphenyl	1.12971	1.24615	1.24615	0.000	10.30702	60.00000	Averaged	
$	60 2,4,6-Tribromophenol	0.13700	0.15078	0.15078	0.000	10.06079	60.00000	Averaged	
$	81 p-Terphenyl-d14	0.68132	0.78070	0.78070	0.000	14.58697	60.00000	Averaged	
	1 N-Methyl-N-nitrosomethylami	0.68543	0.76584	0.76584	0.000	11.73072	60.00000	Averaged	
	2 Pyridine	0.91853	0.86229	0.86229	0.000	-6.12306	60.00000	Averaged	
	4 Aniline	0.55072	0.57317	0.57317	0.000	4.07658	60.00000	Averaged	
	6 Phenol	1.39242	1.43236	1.43236	0.001	2.86843	20.00000	Averaged	ccc
	7 bis(2-Chloroethyl) ether	1.01868	1.03922	1.03922	0.000	2.01606	60.00000	Averaged	
	8 2-Chlorophenol	1.18262	1.23519	1.23519	0.000	4.44553	60.00000	Averaged	
	203 n-Decane	1.53985	1.60413	1.60413	0.000	4.17402	60.00000	Averaged	
	9 1,3-Dichlorobenzene	1.31898	1.40893	1.40893	0.000	6.81954	60.00000	Averaged	
	11 1,4-Dichlorobenzene	1.31747	1.36837	1.36837	0.001	3.86361	20.00000	Averaged	ccc
	13 1,2-Dichlorobenzene	1.16945	1.21643	1.21643	0.000	4.01722	60.00000	Averaged	
	14 bis(2-Chloroisopropyl)ether	2.28579	2.41210	2.41210	0.000	5.52573	60.00000	Averaged	
	12 Benzyl alcohol	0.77939	0.82303	0.82303	0.000	5.59989	60.00000	Averaged	
	15 o-Cresol	0.86750	0.87142	0.87142	0.000	0.45124	60.00000	Averaged	
	18 m,p-Cresols	1.20835	1.28000	1.28000	0.000	5.92963	60.00000	Averaged	
	17 N-Nitrosodipropylamine	0.83651	0.88727	0.88727	0.050	6.06876	60.00000	Averaged	spcc
	19 Hexachloroethane	0.49043	0.50579	0.50579	0.000	3.13108	60.00000	Averaged	
	21 Nitrobenzene	0.28921	0.31629	0.31629	0.000	9.36578	60.00000	Averaged	
	22 Isophorone	0.54855	0.57925	0.57925	0.000	5.59589	60.00000	Averaged	
	23 2-Nitrophenol	0.14110	0.15568	0.15568	0.001	10.33046	20.00000	Averaged	ccc
	24 2,4-Dimethylphenol	0.35992	0.42881	0.42881	0.000	19.13912	60.00000	Averaged	
	25 bis(2-Chloroethoxy)methane	0.32241	0.35122	0.35122	0.000	8.93649	60.00000	Averaged	
	26 2,4-Dichlorophenol	0.21753	0.23746	0.23746	0.001	9.16146	20.00000	Averaged	ccc
	27 Benzoic acid	0.14125	0.17436	0.17436	0.000	23.44089	60.00000	Averaged	
	28 1,2,4-Trichlorobenzene	0.25451	0.25793	0.25793	0.000	1.34477	60.00000	Averaged	
	30 Naphthalene	0.94195	0.88268	0.88268	0.000	-6.29195	60.00000	Averaged	
	204 alpha-Terpineol	0.25697	0.26727	0.26727	0.000	4.00622	60.00000	Averaged	
	31 4-Chloroaniline	0.36866	0.41756	0.41756	0.000	13.26317	60.00000	Averaged	
	32 Hexachlorobutadiene	0.12913	0.13787	0.13787	0.001	6.76658	20.00000	Averaged	ccc
	33 4-Chloro-3-methylphenol	0.22033	0.24191	0.24191	0.001	9.79481	20.00000	Averaged	ccc
	34 2-Methylnaphthalene	0.54719	0.59562	0.59562	0.000	8.85038	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 27-JUN-2009 05:54
Lab File ID: s2f2625.d Init. Cal. Date(s): 27-JUN-2009 27-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 05:05
Lab Sample ID: WBN090626-09.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35	1-Methylnaphthalene	0.57350	0.55994	0.55994	0.000	-2.36393	60.00000	Averaged	
36	Hexachlorocyclopentadiene	0.17262	0.16622	0.16622	0.050	-3.70260	60.00000	Averaged	spcc
205	2,3-Dichloroaniline	0.53436	0.58180	0.58180	0.000	8.87692	60.00000	Averaged	
37	2,4,6-Trichlorophenol	0.29566	0.34293	0.34293	0.001	15.98835	20.00000	Averaged	ccc
38	2,4,5-Trichlorophenol	0.34176	0.36993	0.36993	0.000	8.24257	60.00000	Averaged	
40	2-Chloronaphthalene	0.98036	1.04394	1.04394	0.000	6.48523	60.00000	Averaged	
42	o-Nitroaniline	0.29844	0.32423	0.32423	0.000	8.64225	60.00000	Averaged	
41	m-Nitroaniline	0.23870	0.27422	0.27422	0.000	14.88399	60.00000	Averaged	
43	Dimethylphthalate	1.13758	1.28061	1.28061	0.000	12.57297	60.00000	Averaged	
44	2,6-Dinitrotoluene	0.27533	0.29805	0.29805	0.000	8.25341	60.00000	Averaged	
50	2,4-Dinitrotoluene	0.34243	0.36829	0.36829	0.000	7.55082	60.00000	Averaged	
45	Acenaphthylene	1.58844	1.78524	1.78524	0.000	12.38970	60.00000	Averaged	
47	Acenaphthene	1.04389	1.03692	1.03692	0.001	-0.66848	20.00000	Averaged	ccc
48	2,4-Dinitrophenol	41.54860	40.00000	0.09311	0.050	3.87150	60.00000	Linear	spcc
49	Dibenzofuran	1.35168	1.47216	1.47216	0.000	8.91346	60.00000	Averaged	
51	Diethylphthalate	1.11027	1.25912	1.25912	0.000	13.40739	60.00000	Averaged	
52	4-Nitrophenol	0.16773	0.18740	0.18740	0.050	11.72935	60.00000	Averaged	spcc
53	Fluorene	1.13327	1.18450	1.18450	0.000	4.52096	60.00000	Averaged	
54	4-Chlorophenylphenylether	0.51896	0.58121	0.58121	0.000	11.99434	60.00000	Averaged	
55	2-Methyl-4,6-dinitrophenol	51.45183	40.00000	0.11653	0.000	28.62959	60.00000	Linear	
56	p-Nitroaniline	0.20177	0.23693	0.23693	0.000	17.42550	60.00000	Averaged	
133	Diphenylamine	0.53423	0.57681	0.57681	0.001	7.97087	20.00000	Averaged	ccc
58	1,2-Diphenylhydrazine	0.69406	0.75023	0.75023	0.000	8.09262	60.00000	Averaged	
61	4-Bromophenylphenylether	0.16665	0.18185	0.18185	0.000	9.12215	60.00000	Averaged	
63	Hexachlorobenzene	0.18391	0.19930	0.19930	0.000	8.36942	60.00000	Averaged	
65	Pentachlorophenol	0.09648	0.11255	0.11255	0.001	16.64996	20.00000	Averaged	ccc
206	n-Octadecane	0.55080	0.55599	0.55599	0.000	0.94275	60.00000	Averaged	
68	Phenanthrene	0.95250	0.95419	0.95419	0.000	0.17665	60.00000	Averaged	
69	Anthracene	0.91864	1.02669	1.02669	0.000	11.76167	60.00000	Averaged	
72	Di-n-butylphthalate	1.06040	1.21201	1.21201	0.000	14.29748	60.00000	Averaged	
76	Fluoranthene	0.87623	0.98279	0.98279	0.001	12.16116	20.00000	Averaged	ccc
79	Pyrene	1.19072	1.24730	1.24730	0.000	4.75140	60.00000	Averaged	
85	Butylbenzylphthalate	0.49747	0.61856	0.61856	0.000	24.34130	60.00000	Averaged	
89	Benzo(a)anthracene	0.97321	1.02966	1.02966	0.000	5.80050	60.00000	Averaged	
92	Chrysene	0.93921	0.99173	0.99173	0.000	5.59137	60.00000	Averaged	
93	bis(2-Ethylhexyl)phthalate	0.73378	0.85303	0.85303	0.000	16.25197	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2f2625.d
Analysis Type:
Lab Sample ID: WBN090626-09.1
Method: /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m

Injection Date: 27-JUN-2009 05:54
Init. Cal. Date(s): 27-JUN-2009 27-JUN-2009
Init. Cal. Times: 02:16 05:05
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	1.30080	1.42438	1.42438	0.001	9.50026	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.96025	1.01654	1.01654	0.000	5.86244	60.00000	Averaged	
	96 Benzo(k)fluoranthene	1.01317	1.14707	1.14707	0.000	13.21595	60.00000	Averaged	
	97 Benzo(a)pyrene	0.83897	0.93000	0.93000	0.001	10.84982	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.80593	0.81608	0.81608	0.000	1.25966	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	0.64671	0.68007	0.68007	0.000	5.15846	60.00000	Averaged	
	101 Benzo(ghi)perylene	0.69976	0.70004	0.70004	0.000	0.03956	60.00000	Averaged	
	126 m-Dinitrobenzene	0.19442	0.21031	0.21031	0.000	8.17273	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.27476	0.27345	0.27345	0.000	-0.47639	60.00000	Averaged	
	143 Dinoseb	40.99235	40.00000	0.14321	0.000	2.48087	60.00000	Linear	
	173 Carbazole	0.71802	0.83406	0.83406	0.000	16.16014	60.00000	Averaged	
	184 p-Benzoquinone	36.34465	40.00000	0.10522	0.000	-9.13838	60.00000	Linear	
	192 Methoxychlor	0.53333	0.55997	0.55997	0.000	4.99631	60.00000	Averaged	
	211 p-Toluidine	1.09795	1.09966	1.09966	0.000	0.15562	60.00000	Averaged	
	210 m-Toluidine	1.58507	1.77063	1.77063	0.000	11.70669	60.00000	Averaged	
	214 1,4-Dinitrobenzene	0.21072	0.23347	0.23347	0.000	10.79737	60.00000	Averaged	
	215 2-Ethoxyethanol	0.79256	0.84757	0.84757	0.000	6.94050	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	43.43535	40.00000	0.14164	0.000	8.58838	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	0.40461	0.25194	0.25194	0.000	-37.73433	60.00000	Averaged	
	26 Phthalic anhydride	54.66208	40.00000	0.13156	0.000	36.65520	60.00000	Linear	
M	222 Trichlorophenols	0.31871	0.35643	0.35643	0.000	11.83533	60.00000	Averaged	
M	223 Tetrachlorophenols	0.27476	0.27345	0.27345	0.000	-0.47639	60.00000	Averaged	
M	224 Benzo(b,k)fluoranthene	0.98671	1.08180	1.08180	0.000	9.63779	60.00000	Averaged	

GEL Laboratories LLC

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Data file : /chem/MSD2.i/s062609.b/s2f2625.d
Lab Smp Id: WBN090626-09.1 Client Smp ID: MEGAICV
Inj Date : 27-JUN-2009 05:54
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090626-09.1|40 PPM|1|SVMF|1|MEGAICV
Misc Info : |MSD8270|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m
Meth Date : 29-Jun-2009 12:08 jos00786 Quant Type: ISTD
Cal Date : 27-JUN-2009 03:29 Cal File: s2f2619.d
Als bottle: 12 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAII.sub
Target Version: 3.50
Processing Host: kilroy

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.057	4.057	(1.000)	205606	40.0000	
* 29 Naphthalene-d8	136	4.929	4.929	(1.000)	846162	40.0000	
* 46 Acenaphthene-d10	164	6.175	6.175	(1.000)	422231	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.148	(1.000)	715323	40.0000	
* 91 Chrysene-d12	240	8.881	8.881	(1.000)	589663	40.0000	
* 98 Perylene-d12	264	10.491	10.491	(1.000)	544803	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.228	(0.796)	240926	40.0000	42.3
$ 5 Phenol-d5	99	3.757	3.757	(0.926)	286973	40.0000	40.8
$ 20 Nitrobenzene-d5	82	4.421	4.421	(0.897)	279860	40.0000	43.8
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	526162	40.0000	44.1
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.085)	63666	40.0000	44.0
$ 81 p-Terphenyl-d14	244	8.074	8.074	(0.909)	460351	40.0000	45.8
1 N-Methyl-N-nitrosomethylamine	74	2.522	2.522	(0.622)	157461	40.0000	44.7
2 Pyridine	79	2.554	2.554	(0.630)	177292	40.0000	37.6
4 Aniline	66	3.838	3.838	(0.946)	117847	40.0000	41.6
6 Phenol	94	3.768	3.768	(0.929)	294502	40.0000	41.1
7 bis(2-Chloroethyl) ether	63	3.848	3.848	(0.949)	213670	40.0000	40.8
8 2-Chlorophenol	128	3.918	3.918	(0.966)	253963	40.0000	41.8
203 n-Decane	43	3.902	3.902	(0.962)	329818	40.0000	41.7
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.991)	289685	40.0000	42.7
11 1,4-Dichlorobenzene	146	4.068	4.068	(1.003)	281346	40.0000	41.5
13 1,2-Dichlorobenzene	146	4.175	4.175	(1.029)	250105	40.0000	41.6
14 bis(2-Chloroisopropyl)ether	45	4.196	4.196	(1.034)	495942	40.0000	42.2
12 Benzyl alcohol	108	4.116	4.116	(1.014)	169220	40.0000	42.2
15 o-Cresol	107	4.164	4.164	(1.026)	179169	40.0000	40.2
18 m,p-Cresols	107	4.265	4.265	(1.051)	263175	40.0000	42.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.292	4.292	(1.058)	182429	40.0000	42.4
19 Hexachloroethane	117	4.405	4.405	(1.086)	103993	40.0000	41.2
21 Nitrobenzene	77	4.431	4.431	(0.899)	267636	40.0000	43.7
22 Isophorone	82	4.586	4.586	(0.931)	490137	40.0000	42.2
23 2-Nitrophenol	139	4.645	4.645	(0.942)	131732	40.0000	44.1
24 2,4-Dimethylphenol	122	4.635	4.635	(0.940)	362843	40.0000	47.6
25 bis(2-Chloroethoxy)methane	93	4.704	4.704	(0.954)	297191	40.0000	43.6
26 2,4-Dichlorophenol	162	4.806	4.806	(0.975)	200929	40.0000	43.7
27 Benzoic acid	105	4.688	4.688	(0.951)	147536	40.0000	49.4
28 1,2,4-Trichlorobenzene	180	4.875	4.875	(0.989)	218251	40.0000	40.5
30 Naphthalene	128	4.945	4.945	(1.003)	746894	40.0000	37.5
204 alpha-Terpineol	59	4.913	4.913	(0.997)	226152	40.0000	41.6
31 4-Chloroaniline	127	4.950	4.950	(1.004)	353320	40.0000	45.3
32 Hexachlorobutadiene	225	5.004	5.004	(1.015)	116658	40.0000	42.7
33 4-Chloro-3-methylphenol	107	5.260	5.260	(1.067)	204697	40.0000	43.9
34 2-Methylnaphthalene	142	5.421	5.421	(1.100)	503988	40.0000	43.5
35 1-Methylnaphthalene	142	5.496	5.496	(1.115)	473804	40.0000	39.0
36 Hexachlorocyclopentadiene	237	5.528	5.528	(0.895)	70185	40.0000	38.5
205 2,3-Dichloroaniline	161	5.619	5.619	(0.910)	245654	40.0000	43.6
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.908)	144796	40.0000	46.4
38 2,4,5-Trichlorophenol	196	5.635	5.635	(0.912)	156198	40.0000	43.3
40 2-Chloronaphthalene	162	5.779	5.779	(0.936)	440783	40.0000	42.6
42 o-Nitroaniline	65	5.827	5.827	(0.944)	136901	40.0000	43.4
41 m-Nitroaniline	138	6.121	6.121	(0.991)	115786	40.0000	46.0
43 Dimethylphthalate	163	5.940	5.940	(0.962)	540713	40.0000	45.0
44 2,6-Dinitrotoluene	165	5.993	5.993	(0.971)	125848	40.0000	43.3
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	155502	40.0000	43.0
45 Acenaphthylene	152	6.079	6.079	(0.984)	753783	40.0000	45.0
47 Acenaphthene	154	6.196	6.196	(1.003)	437818	40.0000	39.7
48 2,4-Dinitrophenol	184	6.186	6.186	(1.002)	39313	40.0000	41.5
49 Dibenzofuran	168	6.314	6.314	(1.023)	621590	40.0000	43.6
51 Diethylphthalate	149	6.416	6.416	(1.039)	531641	40.0000	45.4
52 4-Nitrophenol	139	6.196	6.196	(1.003)	79128	40.0000	44.7
53 Fluorene	166	6.544	6.544	(1.060)	500134	40.0000	41.8
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.055)	245403	40.0000	44.8
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	83355	40.0000	51.4
56 p-Nitroaniline	138	6.539	6.539	(1.059)	100038	40.0000	47.0
133 Diphenylamine	169	6.592	6.592	(0.922)	412604	40.0000	43.2
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.927)	536654	40.0000	43.2
61 4-Bromophenylphenylether	248	6.844	6.844	(0.957)	130081	40.0000	43.6
63 Hexachlorobenzene	284	6.902	6.902	(0.966)	142565	40.0000	43.3
65 Pentachlorophenol	266	7.015	7.015	(0.981)	80509	40.0000	46.6
206 n-Octadecane	57	6.993	6.993	(0.978)	397713	40.0000	40.4
68 Phenanthrene	178	7.164	7.164	(1.002)	682552	40.0000	40.1
69 Anthracene	178	7.197	7.197	(1.007)	734414	40.0000	44.7
72 Di-n-butylphthalate	149	7.432	7.432	(1.040)	866976	40.0000	45.7
76 Fluoranthene	202	7.881	7.881	(1.103)	703009	40.0000	44.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	8.026	8.026	(0.904)	735485	40.0000	41.9
85 Butylbenzylphthalate	149	8.347	8.347	(0.940)	364740	40.0000	49.7
89 Benzo(a)anthracene	228	8.871	8.871	(0.999)	607155	40.0000	42.3
92 Chrysene	228	8.903	8.903	(1.002)	584785	40.0000	42.2
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.737	(0.984)	503003	40.0000	46.5
94 Di-n-octylphthalate	149	9.320	9.320	(0.888)	776004	40.0000	43.8
95 Benzo(b)fluoranthene	252	9.972	9.972	(0.951)	553816	40.0000	42.3
96 Benzo(k)fluoranthene	252	10.010	10.010	(0.954)	624925	40.0000	45.3
97 Benzo(a)pyrene	252	10.416	10.416	(0.993)	506668	40.0000	44.3
99 Indeno(1,2,3-cd)pyrene	276	12.326	12.326	(1.175)	444604	40.0000	40.5
100 Dibenzo(a,h)anthracene	278	12.331	12.331	(1.175)	370502	40.0000	42.1
101 Benzo(ghi)perylene	276	12.887	12.887	(1.228)	381383	40.0000	40.0
126 m-Dinitrobenzene	168	5.977	5.977	(0.968)	88799	40.0000	43.3
130 2,3,4,6-Tetrachlorophenol	232	6.378	6.378	(1.033)	115461	40.0000	39.8
143 Dinoseb	211	7.100	7.100	(0.993)	102438	40.0000	41.0
173 Carbazole	167	7.277	7.277	(1.018)	596619	40.0000	46.5
184 p-Benzoquinone	54	3.533	3.533	(0.871)	21633	40.0000	36.3
192 Methoxychlor	227	8.721	8.721	(0.982)	330195	40.0000	42.0
211 p-Toluidine	106	4.330	4.330	(1.067)	226096	40.0000	40.1
210 m-Toluidine	106	4.351	4.351	(1.073)	364053	40.0000	44.7
214 1,4-Dinitrobenzene	75	5.918	5.918	(0.958)	98577	40.0000	44.3
215 2-Ethoxyethanol	59	2.356	2.356	(0.581)	174266	40.0000	42.8
216 Methylenebis(2-chloroaniline)	231	8.790	8.790	(0.990)	83518	40.0000	43.4
179 Dibenzo(a,e)pyrene	302	17.257	17.257	(1.645)	137255	40.0000	24.9
26 Phthalic anhydride	104	5.458	5.458	(1.107)	111320	40.0000	54.7
M 222 Trichlorophenols	196				300994	80.0000	89.5
M 223 Tetrachlorophenols	232				115461	40.0000	39.8
M 224 Benzo(b,k)fluoranthene	252				1178741	80.0000	87.7

Data File: /chem/MSD2.i/s062609.b/s2f2625.d
Date : 27-JUN-2009 05:54
Client ID: MEGAICV
Sample Info: WBN090626-09,1:40 PPM1:SVMF11:MEGAICV
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

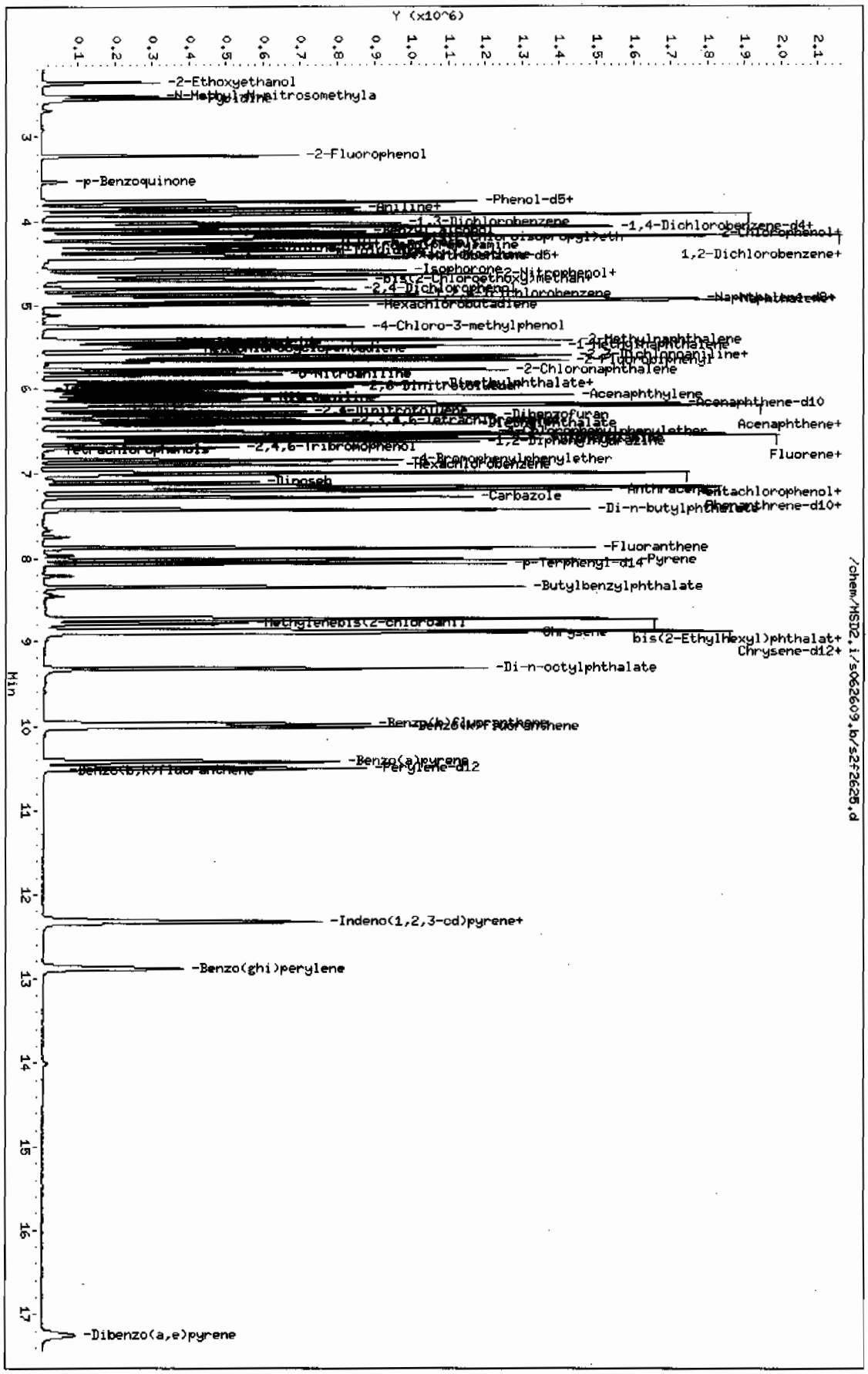

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 29-JUN-2009 00:59
Lab File ID: s2f2823.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090528-8.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062809.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.85512	0.73215	0.73215	0.000	-14.38070	60.00000	Averaged
16 Acetophenone	1.19881	1.22790	1.22790	0.000	2.42616	60.00000	Averaged
189 Caprolactam	0.08601	0.09673	0.09673	0.000	12.46213	60.00000	Averaged
208 1,1'-Biphenyl	1.21152	1.22593	1.22593	0.000	1.18934	60.00000	Averaged
207 Atrazine	0.04406	0.04635	0.04635	0.000	5.20660	60.00000	Averaged
77 Benzidine	32.96272	40.00000	0.25943	0.000	-17.59321	60.00000	Linear
90 3,3'-Dichlorobenzidine	0.25863	0.27950	0.27950	0.000	8.07052	60.00000	Averaged
102 1,4-Dioxane	0.37452	0.45026	0.45026	0.000	20.22257	60.00000	Averaged
103 Methyl methacrylate	0.21046	0.26097	0.26097	0.000	24.00158	60.00000	Averaged
104 Ethyl methacrylate	0.80237	0.96882	0.96882	0.000	20.74475	60.00000	Averaged
105 2-Picoline	1.24101	1.23730	1.23730	0.000	-0.29905	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.52937	0.53916	0.53916	0.000	1.85004	60.00000	Averaged
107 Methyl methanesulfonate	0.47397	0.50724	0.50724	0.000	7.01905	60.00000	Averaged
108 N-Nitrosodiethylamine	0.54113	0.54765	0.54765	0.000	1.20582	60.00000	Averaged
109 Ethyl Methanesulfonate	0.64600	0.79249	0.79249	0.000	22.67636	60.00000	Averaged
110 Pentachloroethane	0.31203	0.42180	0.42180	0.000	35.18260	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.54373	0.54895	0.54895	0.000	0.95984	60.00000	Averaged
113 N-Nitrosomorpholine	0.72224	0.75660	0.75660	0.000	4.75732	60.00000	Averaged
114 o-Toluidine	1.79520	1.86436	1.86436	0.000	3.85230	60.00000	Averaged
115 N-Nitrosopiperidine	0.14845	0.14948	0.14948	0.000	0.69168	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.76945	0.78098	0.78098	0.000	1.49868	60.00000	Averaged
118 2,6-Dichlorophenol	0.21644	0.22654	0.22654	0.000	4.66964	60.00000	Averaged
119 Hexachloropropene	0.09423	0.14226	0.14226	0.000	50.96975	60.00000	Averaged
120 p-Phenylenediamine	0.22216	0.23975	0.23975	0.000	7.92199	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.21235	0.25105	0.25105	0.000	18.22302	60.00000	Averaged
122 Safrole	0.19580	0.23292	0.23292	0.000	18.95759	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.40456	0.43809	0.43809	0.000	8.28861	60.00000	Averaged
124 Isosafrole	0.35137	0.46660	0.46660	0.000	32.79214	60.00000	Averaged
125 1,4-Naphthoquinone	0.33168	0.35285	0.35285	0.000	6.38276	60.00000	Averaged
127 Pentachlorobenzene	0.35632	0.38055	0.38055	0.000	6.79978	60.00000	Averaged
128 1-Naphthylamine	0.92126	0.99462	0.99462	0.000	7.96341	60.00000	Averaged
129 2-Naphthylamine	1.00463	1.03173	1.03173	0.000	2.69747	60.00000	Averaged
131 5-Nitro-o-toluidine	40.98178	40.00000	0.29084	0.000	2.45445	60.00000	Linear
136 1,3,5-Trinitrobenzene	52.14849	40.00000	0.13880	0.000	30.37122	60.00000	Linear
137 Phenacetin	0.24441	0.25948	0.25948	0.000	6.16755	60.00000	Averaged
138 Diallate	0.25943	0.26304	0.26304	0.000	1.39040	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2f2823.d
Analysis Type:
Lab Sample ID: WBN090528-8.1
Method: /chem/MSD2.i/s062809.b/MSD2-M8270CAQA-062809.m

Injection Date: 29-JUN-2009 00:59
Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Init. Cal. Times: 02:16 04:28
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.28806	0.30517	0.30517	0.000	5.94019	60.00000	Averaged
213 Trans Diallate	0.30493	0.30905	0.30905	0.000	1.35293	60.00000	Averaged
140 4-Aminobiphenyl	0.49104	0.54713	0.54713	0.000	11.42323	60.00000	Averaged
141 Pentachloronitrobenzene	0.06168	0.06578	0.06578	0.000	6.64718	60.00000	Averaged
142 Pronamide	0.25232	0.26349	0.26349	0.000	4.42401	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	40.26838	40.00000	0.02554	0.000	0.67094	60.00000	Linear
147 Methapyrilene	0.44483	0.45204	0.45204	0.000	1.61954	60.00000	Averaged
148 Isodrin	0.10127	0.09742	0.09742	0.000	-3.80395	60.00000	Averaged
149 Aramite	0.04612	0.04281	0.04281	0.000	-7.17325	60.00000	Averaged
150 Kepone	0.07238	0.07563	0.07563	0.000	4.49567	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.31565	0.32885	0.32885	0.000	4.18054	60.00000	Averaged
152 Chlorobenzilate	0.26848	0.29038	0.29038	0.000	8.15609	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.49041	0.49218	0.49218	0.000	0.36220	60.00000	Averaged
155 2-Acetylaminofluorene	41.17782	40.00000	0.27486	0.000	2.94454	60.00000	Linear
157 7,12Dimethylbenz(a)anthrace	0.47287	0.44162	0.44162	0.000	-6.60888	60.00000	Averaged
158 3-Methylcholanthrene	0.40330	0.39491	0.39491	0.000	-2.07992	60.00000	Averaged

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Data file : /chem/MSD2.i/s062809.b/s2f2823.d
Lab Smp Id: WBN090528-8.1 Client Smp ID: APICV
Inj Date : 29-JUN-2009 00:59
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090528-8.1|40 PPM|1|SVMF|1|APICV
Misc Info : |MSD8270|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s062809.b/MSD2-M8270CAQA-062809.m
Meth Date : 29-Jun-2009 12:07 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.052	4.052	(1.000)	164062	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	623167	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.170	(1.000)	350836	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.148	(1.000)	600630	40.0000	
* 91 Chrysene-d12	240	8.876	8.876	(1.000)	507539	40.0000	
* 98 Perylene-d12	264	10.486	10.513	(1.000)	420039	40.0000	
209 Benzaldehyde	77	3.773	3.773	(0.931)	120118	40.0000	34.2
16 Acetophenone	105	4.303	4.303	(1.062)	201451	40.0000	41.0
189 Caprolactam	113	5.191	5.191	(1.054)	60278	40.0000	45.0
208 1,1'-Biphenyl	154	5.747	5.747	(0.932)	430099	40.0000	40.5
207 Atrazine	173	6.908	6.908	(0.966)	27840	40.0000	42.1
77 Benzidine	184	7.924	7.924	(0.893)	131669	40.0000	33.0
90 3,3'-Dichlorobenzidine	252	8.796	8.796	(0.991)	141857	40.0000	43.2
102 1,4-Dioxane	88	2.356	2.356	(0.582)	73871	40.0000	48.1
103 Methyl methacrylate	100	2.351	2.351	(0.580)	42815	40.0000	49.6
104 Ethyl methacrylate	69	2.736	2.736	(0.675)	158947	40.0000	48.3
105 2-Picoline	93	2.934	2.934	(0.724)	202994	40.0000	39.9
106 N-Nitrosomethylethylamine	88	2.976	2.976	(0.735)	88456	40.0000	40.7
107 Methyl methanesulfonate	80	3.137	3.137	(0.774)	83219	40.0000	42.8
108 N-Nitrosodiethylamine	102	3.372	3.372	(0.832)	89849	40.0000	40.5
109 Ethyl Methanesulfonate	79	3.527	3.527	(0.871)	130018	40.0000	49.1
110 Pentachloroethane	167	3.880	3.880	(0.958)	69202	40.0000	54.1
111 N-Nitrosopyrrolidine	100	4.287	4.287	(1.058)	90062	40.0000	40.4
113 N-Nitrosomorpholine	56	4.308	4.308	(1.063)	124130	40.0000	41.9
114 o-Toluidine	106	4.330	4.330	(1.069)	305870	40.0000	41.5
115 N-Nitrosopiperidine	114	4.533	4.533	(0.921)	93151	40.0000	40.3
116 a,a-Dimethylphenethylamine	58	4.784	4.784	(0.972)	486679	40.0000	40.6

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
118 2,6-Dichlorophenol	162	4.966	4.966	(1.009)	141174	40.0000	41.9
119 Hexachloropropene	213	4.998	4.998	(1.015)	88654	40.0000	60.4
120 p-Phenylenediamine	108	5.196	5.196	(1.055)	149407	40.0000	43.2
121 N-Nitrosodi-n-butylamine	84	5.164	5.164	(1.049)	156447	40.0000	47.3
122 Safrole	162	5.335	5.335	(1.084)	145148	40.0000	47.6
123 1,2,4,5-Tetrachlorobenzene	216	5.538	5.538	(0.898)	153698	40.0000	43.3
124 Isosafrole	162	5.704	5.704	(0.925)	163699	40.0000	53.1
125 1,4-Naphthoquinone	158	5.891	5.891	(0.955)	123794	40.0000	42.6
127 Pentachlorobenzene	250	6.282	6.282	(1.018)	133510	40.0000	42.7
128 1-Naphthylamine	143	6.357	6.357	(1.030)	348950	40.0000	43.2
129 2-Naphthylamine	143	6.410	6.410	(1.039)	361969	40.0000	41.1
131 5-Nitro-o-toluidine	152	6.528	6.528	(1.058)	102037	40.0000	41.0
136 1,3,5-Trinitrobenzene	75	6.731	6.731	(0.942)	83365	40.0000	52.1
137 Phenacetin	108	6.769	6.769	(0.947)	155854	40.0000	42.5
138 Diallate	86	6.763	6.763	(0.946)	157989	40.0000	40.6
212 Cis Diallate	86	6.827	6.827	(0.955)	27494	6.00000	6.4
213 Trans Diallate	86	6.763	6.763	(0.946)	157782	34.0000	34.4
140 4-Aminobiphenyl	169	7.004	7.004	(0.980)	328623	40.0000	44.6
141 Pentachloronitrobenzene	237	7.025	7.025	(0.983)	39510	40.0000	42.6
142 Pronamide	173	7.009	7.009	(0.981)	158257	40.0000	41.8
146 4-Nitroquinoline-1-oxide	101	7.614	7.614	(1.065)	15343	40.0000	40.3
147 Methapyrilene	58	7.624	7.624	(1.067)	271506	40.0000	40.6
148 Isodrin	193	7.790	7.790	(1.090)	58514	40.0000	38.5
149 Aramite	185	8.015	8.015	(1.121)	25715	40.0000	37.1
150 Kepone	272	8.475	8.475	(1.186)	45428	40.0000	41.8
151 p-(Dimethylamino)azobenzene	120	8.149	8.149	(0.918)	166902	40.0000	41.7
152 Chlorobenzilate	251	8.165	8.165	(0.920)	147378	40.0000	43.3
153 3,3'-Dimethylbenzidine	212	8.373	8.373	(0.943)	249802	40.0000	40.1
155 2-Acetylaminofluorene	181	8.566	8.566	(0.965)	139501	40.0000	41.2
157 7,12Dimethylbenz(a)anthracene	256	9.935	9.935	(0.947)	185497	40.0000	37.4
158 3-Methylcholanthrene	268	10.892	10.892	(1.039)	165878	40.0000	39.2

Data File: /chem/MSD2.i/s062809.b/s2f2823.d
Date : 29-JUN-2009 00:59
Client ID: APICV
Sample Info: IWBN090528-8.1140 PPM|1ISVMF11|APICV
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

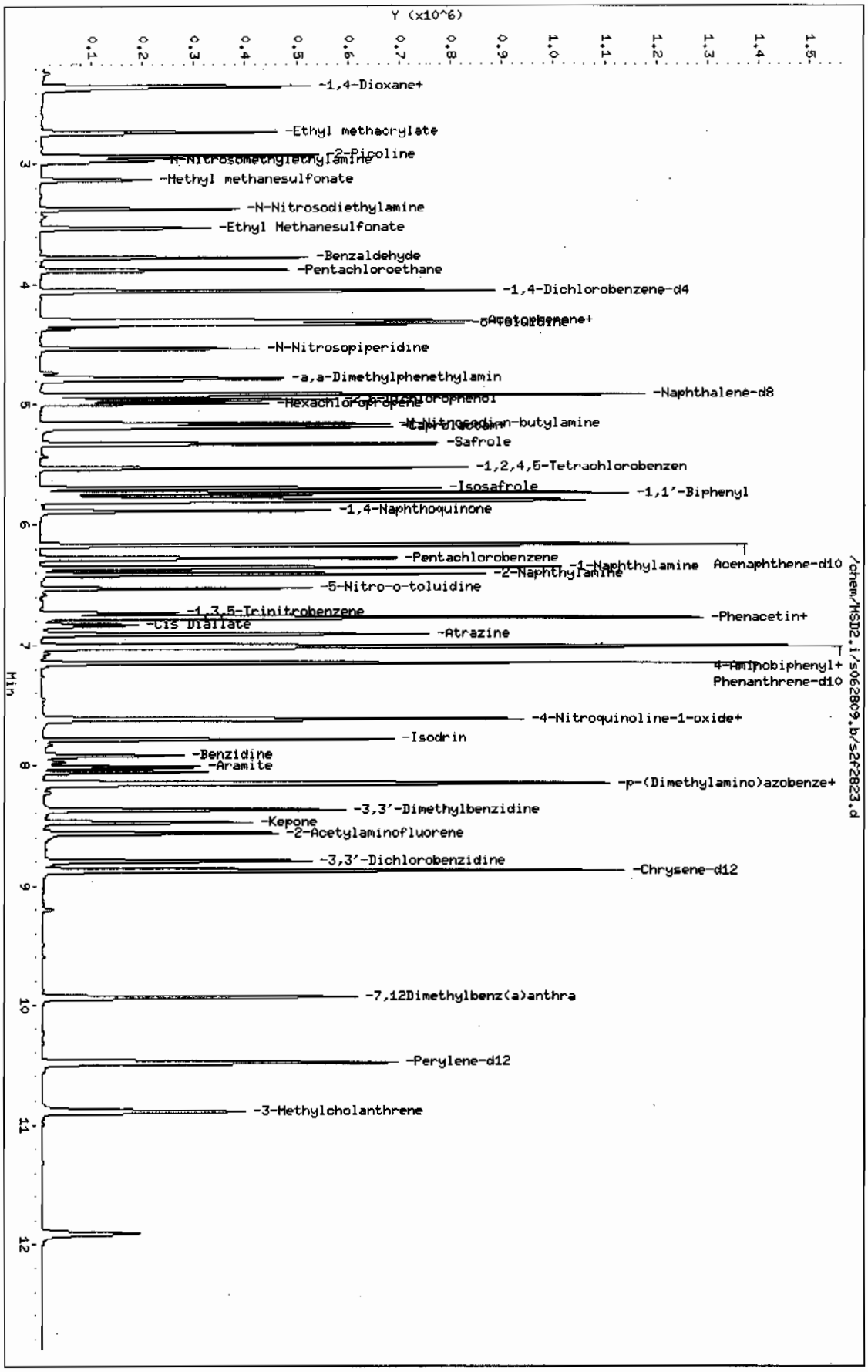

Page 1

Data File: /chem/MSD2.i/s063009.b/s2f3002.d
Report Date: 30-Jun-2009 18:04

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2f3002.d
Analysis Type:
Lab Sample ID: WBN090626-05.3
Method: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m

Injection Date: 30-JUN-2009 16:03
Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Init. Cal. Times: 02:16 04:28
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$	3 2-Fluorophenol	1.10685	1.13956	1.13956	0.000	2.95565	60.00000	Averaged	
$	5 Phenol-d5	1.36682	1.39968	1.39968	0.000	2.40380	60.00000	Averaged	
$	20 Nitrobenzene-d5	0.30179	0.33203	0.33203	0.000	10.01757	60.00000	Averaged	
$	39 2-Fluorobiphenyl	1.12971	1.21463	1.21463	0.000	7.51691	60.00000	Averaged	
$	60 2,4,6-Tribromophenol	0.13700	0.15465	0.15465	0.000	12.87906	60.00000	Averaged	
$	81 p-Terphenyl-d14	0.68132	0.70755	0.70755	0.000	3.85010	60.00000	Averaged	
	1 N-Methyl-N-nitrosomethylami	0.68543	0.70044	0.70044	0.000	2.18884	60.00000	Averaged	
	2 Pyridine	0.91853	0.90943	0.90943	0.000	-0.99053	60.00000	Averaged	
	4 Aniline	0.55072	0.57574	0.57574	0.000	4.54377	60.00000	Averaged	
	6 Phenol	1.39242	1.42075	1.42075	0.001	2.03454	20.00000	Averaged	ccc
	7 bis(2-Chloroethyl) ether	1.01868	1.05130	1.05130	0.000	3.20221	60.00000	Averaged	
	8 2-Chlorophenol	1.18262	1.23259	1.23259	0.000	4.22512	60.00000	Averaged	
	203 n-Decane	1.53985	1.58407	1.58407	0.000	2.87185	60.00000	Averaged	
	9 1,3-Dichlorobenzene	1.31898	1.37757	1.37757	0.000	4.44165	60.00000	Averaged	
	11 1,4-Dichlorobenzene	1.31747	1.38446	1.38446	0.001	5.08418	20.00000	Averaged	ccc
	13 1,2-Dichlorobenzene	1.16945	1.25039	1.25039	0.000	6.92153	60.00000	Averaged	
	14 bis(2-Chloroisopropyl)ether	2.28579	2.31654	2.31654	0.000	1.34520	60.00000	Averaged	
	12 Benzyl alcohol	0.77939	0.77033	0.77033	0.000	-1.16167	60.00000	Averaged	
	15 o-Cresol	0.86750	0.94552	0.94552	0.000	8.99288	60.00000	Averaged	
	18 m,p-Cresols	1.20835	1.21935	1.21935	0.000	0.91051	60.00000	Averaged	
	17 N-Nitrosodipropylamine	0.83651	0.87898	0.87898	0.050	5.07718	60.00000	Averaged	spcc
	19 Hexachloroethane	0.49043	0.51693	0.51693	0.000	5.40322	60.00000	Averaged	
	21 Nitrobenzene	0.28921	0.31565	0.31565	0.000	9.14444	60.00000	Averaged	
	22 Isophorone	0.54855	0.58650	0.58650	0.000	6.91854	60.00000	Averaged	
	23 2-Nitrophenol	0.14110	0.15907	0.15907	0.001	12.73472	20.00000	Averaged	ccc
	24 2,4-Dimethylphenol	0.35992	0.41162	0.41162	0.000	14.36195	60.00000	Averaged	
	25 bis(2-Chloroethoxy)methane	0.32241	0.35286	0.35286	0.000	9.44376	60.00000	Averaged	
	26 2,4-Dichlorophenol	0.21753	0.24317	0.24317	0.001	11.78574	20.00000	Averaged	ccc
	27 Benzoic acid	0.14125	0.16442	0.16442	0.000	16.40593	60.00000	Averaged	
	28 1,2,4-Trichlorobenzene	0.25451	0.27404	0.27404	0.000	7.67570	60.00000	Averaged	
	30 Naphthalene	0.94195	0.87694	0.87694	0.000	-6.90145	60.00000	Averaged	
	204 alpha-Terpineol	0.25697	0.27539	0.27539	0.000	7.16870	60.00000	Averaged	
	31 4-Chloroaniline	0.36866	0.41067	0.41067	0.000	11.39600	60.00000	Averaged	
	32 Hexachlorobutadiene	0.12913	0.14434	0.14434	0.001	11.77544	20.00000	Averaged	ccc
	33 4-Chloro-3-methylphenol	0.22033	0.22999	0.22999	0.001	4.38355	20.00000	Averaged	ccc
	34 2-Methylnaphthalene	0.54719	0.54725	0.54725	0.000	0.01219	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 30-JUN-2009 16:03
Lab File ID: s2f3002.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35 1-Methylnaphthalene	0.57350	0.56769	0.56769	0.000	-1.01374	60.00000	Averaged	
36 Hexachlorocyclopentadiene	0.17262	0.23518	0.23518	0.050	36.24609	60.00000	Averaged	spcc
205 2,3-Dichloroaniline	0.53436	0.58148	0.58148	0.000	8.81749	60.00000	Averaged	
37 2,4,6-Trichlorophenol	0.29566	0.31130	0.31130	0.001	5.28941	20.00000	Averaged	ccc
38 2,4,5-Trichlorophenol	0.34176	0.38777	0.38777	0.000	13.46044	60.00000	Averaged	
40 2-Chloronaphthalene	0.98036	1.03280	1.03280	0.000	5.34886	60.00000	Averaged	
42 o-Nitroaniline	0.29844	0.32658	0.32658	0.000	9.43050	60.00000	Averaged	
41 m-Nitroaniline	0.23870	0.26738	0.26738	0.000	12.01549	60.00000	Averaged	
43 Dimethylphthalate	1.13758	1.19507	1.19507	0.000	5.05365	60.00000	Averaged	
44 2,6-Dinitrotoluene	0.27533	0.29396	0.29396	0.000	6.76670	60.00000	Averaged	
50 2,4-Dinitrotoluene	0.34243	0.36824	0.36824	0.000	7.53600	60.00000	Averaged	
45 Acenaphthylene	1.58844	1.68238	1.68238	0.000	5.91438	60.00000	Averaged	
47 Acenaphthene	1.04389	1.01910	1.01910	0.001	-2.37522	20.00000	Averaged	ccc
48 2,4-Dinitrophenol	50.63501	40.00000	0.11820	0.050	26.58753	60.00000	Linear	spcc
49 Dibenzofuran	1.35168	1.44760	1.44760	0.000	7.09650	60.00000	Averaged	
51 Diethylphthalate	1.11027	1.16995	1.16995	0.000	5.37539	60.00000	Averaged	
52 4-Nitrophenol	0.16773	0.18345	0.18345	0.050	9.37422	60.00000	Averaged	spcc
53 Fluorene	1.13327	1.15397	1.15397	0.000	1.82660	60.00000	Averaged	
54 4-Chlorophenylphenylether	0.51896	0.56434	0.56434	0.000	8.74381	60.00000	Averaged	
55 2-Methyl-4,6-dinitrophenol	46.37719	40.00000	0.10406	0.000	15.94298	60.00000	Linear	
56 p-Nitroaniline	0.20177	0.25457	0.25457	0.000	26.16777	60.00000	Averaged	
133 Diphenylamine	0.53423	0.57363	0.57363	0.001	7.37624	20.00000	Averaged	ccc
58 1,2-Diphenylhydrazine	0.69406	0.72422	0.72422	0.000	4.34553	60.00000	Averaged	
61 4-Bromophenylphenylether	0.16665	0.18003	0.18003	0.000	8.03257	60.00000	Averaged	
63 Hexachlorobenzene	0.18391	0.20155	0.20155	0.000	9.59173	60.00000	Averaged	
65 Pentachlorophenol	0.09648	0.10794	0.10794	0.001	11.87426	20.00000	Averaged	ccc
206 n-Octadecane	0.55080	0.54404	0.54404	0.000	-1.22619	60.00000	Averaged	
68 Phenanthrene	0.95250	0.97516	0.97516	0.000	2.37824	60.00000	Averaged	
69 Anthracene	0.91864	0.94794	0.94794	0.000	3.18966	60.00000	Averaged	
72 Di-n-butylphthalate	1.06040	1.10762	1.10762	0.000	4.45308	60.00000	Averaged	
76 Fluoranthene	0.87623	0.93731	0.93731	0.001	6.97079	20.00000	Averaged	ccc
79 Pyrene	1.19072	1.20920	1.20920	0.000	1.55188	60.00000	Averaged	
85 Butylbenzylphthalate	0.49747	0.52326	0.52326	0.000	5.18440	60.00000	Averaged	
89 Benzo(a)anthracene	0.97321	0.99162	0.99162	0.000	1.89167	60.00000	Averaged	
92 Chrysene	0.93921	0.96765	0.96765	0.000	3.02760	60.00000	Averaged	
93 bis(2-Ethylhexyl)phthalate	0.73378	0.77276	0.77276	0.000	5.31149	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2f3002.d
Analysis Type:
Lab Sample ID: WBN090626-05.3
Method: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m

Injection Date: 30-JUN-2009 16:03
Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Init. Cal. Times: 02:16 04:28
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	1.30080	1.31754	1.31754	0.001	1.28691	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.96025	1.02221	1.02221	0.000	6.45249	60.00000	Averaged	
	96 Benzo(k)fluoranthene	1.01317	1.05440	1.05440	0.000	4.06941	60.00000	Averaged	
	97 Benzo(a)pyrene	0.83897	0.89849	0.89849	0.001	7.09349	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.80593	0.83823	0.83823	0.000	4.00768	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	0.64671	0.68393	0.68393	0.000	5.75654	60.00000	Averaged	
	101 Benzo(ghi)perylene	0.69976	0.71831	0.71831	0.000	2.65010	60.00000	Averaged	
	126 m-Dinitrobenzene	0.19442	0.21399	0.21399	0.000	10.06545	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.27476	0.29108	0.29108	0.000	5.94002	60.00000	Averaged	
	143 Dinoseb	44.88167	40.00000	0.15807	0.000	12.20417	60.00000	Linear	
	173 Carbazole	0.71802	0.80801	0.80801	0.000	12.53311	60.00000	Averaged	
	184 p-Benzoquinone	31.69637	40.00000	0.08883	0.000	-20.75908	60.00000	Linear	
	192 Methoxychlor	0.53333	0.58352	0.58352	0.000	9.41231	60.00000	Averaged	
	211 p-Toluidine	1.09795	1.28071	1.28071	0.000	16.64547	60.00000	Averaged	
	210 m-Toluidine	1.58507	1.54813	1.54813	0.000	-2.33104	60.00000	Averaged	
	214 1,4-Dinitrobenzene	0.21072	0.23597	0.23597	0.000	11.98520	60.00000	Averaged	
	215 2-Ethoxyethanol	0.79256	0.80169	0.80169	0.000	1.15095	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	42.73194	40.00000	0.13874	0.000	6.82986	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	0.40461	0.39593	0.39593	0.000	-2.14523	60.00000	Averaged	
	26 Phthalic anhydride	43.24702	40.00000	0.10225	0.000	8.11754	60.00000	Linear	
M	222 Trichlorophenols	0.31871	0.34953	0.34953	0.000	9.67043	60.00000	Averaged	
M	223 Tetrachlorophenols	0.27476	0.29108	0.29108	0.000	5.94002	60.00000	Averaged	
M	224 Benzo(b,k)fluoranthene	0.98671	1.03830	1.03830	0.000	5.22900	60.00000	Averaged	

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Data file : /chem/MSD2.i/s063009.b/s2f3002.d
Lab Smp Id: WBN090626-05.3 Client Smp ID: MEGACVS
Inj Date : 30-JUN-2009 16:03
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090626-05.3|40 PPM|1|SVMF|1|MEGACVS
Misc Info : |MSD8270|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:04 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAII.sub
Target Version: 3.50
Processing Host: hpclpl

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	199810	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	811715	40.0000	
* 46 Acenaphthene-d10	164	6.175	6.175	(1.000)	413629	40.0000	
* 67 Phenanthrene-d10	188	7.154	7.154	(1.000)	708218	40.0000	
* 91 Chrysene-d12	240	8.892	8.892	(1.000)	583275	40.0000	
* 98 Perylene-d12	264	10.507	10.507	(1.000)	517572	40.0000	
$ 3 2-Fluorophenol	112	3.222	3.222	(0.795)	227696	40.0000	41.2
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	279670	40.0000	41.0
$ 20 Nitrobenzene-d5	82	4.415	4.415	(0.897)	269510	40.0000	44.0
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	502405	40.0000	43.0
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.085)	63966	40.0000	45.2
$ 81 p-Terphenyl-d14	244	8.079	8.079	(0.909)	412696	40.0000	41.5
1 N-Methyl-N-nitrosomethylamine	74	2.522	2.522	(0.622)	139954	40.0000	40.9
2 Pyridine	79	2.554	2.554	(0.630)	181714	40.0000	39.6
4 Aniline	66	3.832	3.832	(0.946)	115039	40.0000	41.8
6 Phenol	94	3.763	3.763	(0.929)	283880	40.0000	40.8
7 bis(2-Chloroethyl) ether	63	3.848	3.848	(0.950)	210061	40.0000	41.3
8 2-Chlorophenol	128	3.912	3.912	(0.966)	246283	40.0000	41.7
203 n-Decane	43	3.896	3.896	(0.962)	316514	40.0000	41.1
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.992)	275252	40.0000	41.8
11 1,4-Dichlorobenzene	146	4.062	4.062	(1.003)	276628	40.0000	42.0
13 1,2-Dichlorobenzene	146	4.169	4.169	(1.029)	249841	40.0000	42.8
14 bis(2-Chloroisopropyl)ether	45	4.191	4.191	(1.034)	462868	40.0000	40.5
12 Benzyl alcohol	108	4.116	4.116	(1.016)	153920	40.0000	39.5
15 o-Cresol	107	4.164	4.164	(1.028)	188924	40.0000	43.6
18 m,p-Cresols	107	4.265	4.265	(1.053)	243638	40.0000	40.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.287	4.287	(1.058)	175629	40.0000	42.0
19 Hexachloroethane	117	4.399	4.399	(1.086)	103288	40.0000	42.2
21 Nitrobenzene	77	4.431	4.431	(0.900)	256221	40.0000	43.6
22 Isophorone	82	4.581	4.581	(0.930)	476073	40.0000	42.8
23 2-Nitrophenol	139	4.645	4.645	(0.944)	129123	40.0000	45.1
24 2,4-Dimethylphenol	122	4.635	4.635	(0.941)	334115	40.0000	45.7
25 bis(2-Chloroethoxy)methane	93	4.699	4.699	(0.954)	286420	40.0000	43.8
26 2,4-Dichlorophenol	162	4.811	4.811	(0.977)	197383	40.0000	44.7
27 Benzoic acid	105	4.683	4.683	(0.951)	133464	40.0000	46.6
28 1,2,4-Trichlorobenzene	180	4.875	4.875	(0.990)	222445	40.0000	43.1
30 Naphthalene	128	4.939	4.939	(1.003)	711828	40.0000	37.2
204 alpha-Terpineol	59	4.913	4.913	(0.998)	223542	40.0000	42.9
31 4-Chloroaniline	127	4.950	4.950	(1.005)	333349	40.0000	44.6
32 Hexachlorobutadiene	225	5.004	5.004	(1.016)	117159	40.0000	44.7
33 4-Chloro-3-methylphenol	107	5.260	5.260	(1.068)	186686	40.0000	41.8
34 2-Methylnaphthalene	142	5.421	5.421	(1.101)	444215	40.0000	40.0
35 1-Methylnaphthalene	142	5.496	5.496	(1.116)	460801	40.0000	39.6
36 Hexachlorocyclopentadiene	237	5.522	5.522	(0.894)	97278	40.0000	54.5
205 2,3-Dichloroaniline	161	5.619	5.619	(0.910)	240518	40.0000	43.5
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.908)	128762	40.0000	42.1
38 2,4,5-Trichlorophenol	196	5.635	5.635	(0.912)	160392	40.0000	45.4
40 2-Chloronaphthalene	162	5.779	5.779	(0.936)	427195	40.0000	42.1
42 o-Nitroaniline	65	5.827	5.827	(0.944)	135085	40.0000	43.8
41 m-Nitroaniline	138	6.116	6.116	(0.990)	110595	40.0000	44.8
43 Dimethylphthalate	163	5.940	5.940	(0.962)	494316	40.0000	42.0
44 2,6-Dinitrotoluene	165	5.993	5.993	(0.971)	121591	40.0000	42.7
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	152313	40.0000	43.0
45 Acenaphthylene	152	6.079	6.079	(0.984)	695882	40.0000	42.4
47 Acenaphthene	154	6.196	6.196	(1.003)	421529	40.0000	39.0
48 2,4-Dinitrophenol	184	6.186	6.186	(1.002)	48892	40.0000	50.6
49 Dibenzofuran	168	6.309	6.309	(1.022)	598768	40.0000	42.8
51 Diethylphthalate	149	6.416	6.416	(1.039)	483924	40.0000	42.2
52 4-Nitrophenol	139	6.196	6.196	(1.003)	75882	40.0000	43.7
53 Fluorene	166	6.544	6.544	(1.060)	477315	40.0000	40.7
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.055)	233426	40.0000	43.5
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	73697	40.0000	46.4
56 p-Nitroaniline	138	6.539	6.539	(1.059)	105296	40.0000	50.5
133 Diphenylamine	169	6.592	6.592	(0.921)	406256	40.0000	43.0
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.926)	512905	40.0000	41.7
61 4-Bromophenylphenylether	248	6.843	6.843	(0.957)	127503	40.0000	43.2
63 Hexachlorobenzene	284	6.902	6.902	(0.965)	142741	40.0000	43.8
65 Pentachlorophenol	266	7.015	7.015	(0.981)	76446	40.0000	44.7
206 n-Octadecane	57	6.993	6.993	(0.978)	385302	40.0000	39.5
68 Phenanthrene	178	7.170	7.170	(1.002)	690624	40.0000	41.0
69 Anthracene	178	7.202	7.202	(1.007)	671350	40.0000	41.3
72 Di-n-butylphthalate	149	7.432	7.432	(1.039)	784434	40.0000	41.8
76 Fluoranthene	202	7.886	7.886	(1.102)	663817	40.0000	42.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	8.031	8.031	(0.903)	705296	40.0000	40.6
85 Butylbenzylphthalate	149	8.357	8.357	(0.940)	305203	40.0000	42.1
89 Benzo(a)anthracene	228	8.881	8.881	(0.999)	578389	40.0000	40.8
92 Chrysene	228	8.919	8.919	(1.003)	564405	40.0000	41.2
93 bis(2-Ethylhexyl)phthalate	149	8.748	8.748	(0.984)	450729	40.0000	42.1
94 Di-n-octylphthalate	149	9.331	9.331	(0.888)	681920	40.0000	40.5
95 Benzo(b)fluoranthene	252	9.988	9.988	(0.951)	529067	40.0000	42.6
96 Benzo(k)fluoranthene	252	10.021	10.021	(0.954)	545726	40.0000	41.6
97 Benzo(a)pyrene	252	10.432	10.432	(0.993)	465032	40.0000	42.8
99 Indeno(1,2,3-cd)pyrene	276	12.337	12.337	(1.174)	433844	40.0000	41.6
100 Dibenzo(a,h)anthracene	278	12.342	12.342	(1.175)	353985	40.0000	42.3
101 Benzo(ghi)perylene	276	12.903	12.903	(1.228)	371775	40.0000	41.1
126 m-Dinitrobenzene	168	5.977	5.977	(0.968)	88512	40.0000	44.0
130 2,3,4,6-Tetrachlorophenol	232	6.378	6.378	(1.033)	120401	40.0000	42.4
143 Dinoseb	211	7.106	7.106	(0.993)	111950	40.0000	44.9
173 Carbazole	167	7.282	7.282	(1.018)	572249	40.0000	45.0
184 p-Benzoquinone	54	3.533	3.533	(0.872)	17749	40.0000	31.7
192 Methoxychlor	227	8.732	8.732	(0.982)	340355	40.0000	43.8
211 p-Toluidine	106	4.330	4.330	(1.069)	255898	40.0000	46.6
210 m-Toluidine	106	4.351	4.351	(1.074)	309331	40.0000	39.1
214 1,4-Dinitrobenzene	75	5.918	5.918	(0.958)	97604	40.0000	44.8
215 2-Ethoxyethanol	59	2.361	2.361	(0.583)	160185	40.0000	40.5
216 Methylenebis(2-chloroaniline)	231	8.801	8.801	(0.990)	80922	40.0000	42.7
179 Dibenzo(a,e)pyrene	302	17.289	17.289	(1.645)	204924	40.0000	39.1
26 Phthalic anhydride	104	5.453	5.453	(1.108)	82998	40.0000	43.2
M 222 Trichlorophenols	196				289154	80.0000	87.7
M 223 Tetrachlorophenols	232				120401	40.0000	42.4
M 224 Benzo(b,k)fluoranthene	252				1074793	80.0000	84.2

Data File: /chem/MSD2.i/s063009.b/s2f3002.d
Date : 30-JUN-2009 16:03
Client ID: MEGACVS
Sample Info: IWBN090626-05,3140 PPM11SVMF11MEGACVS
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

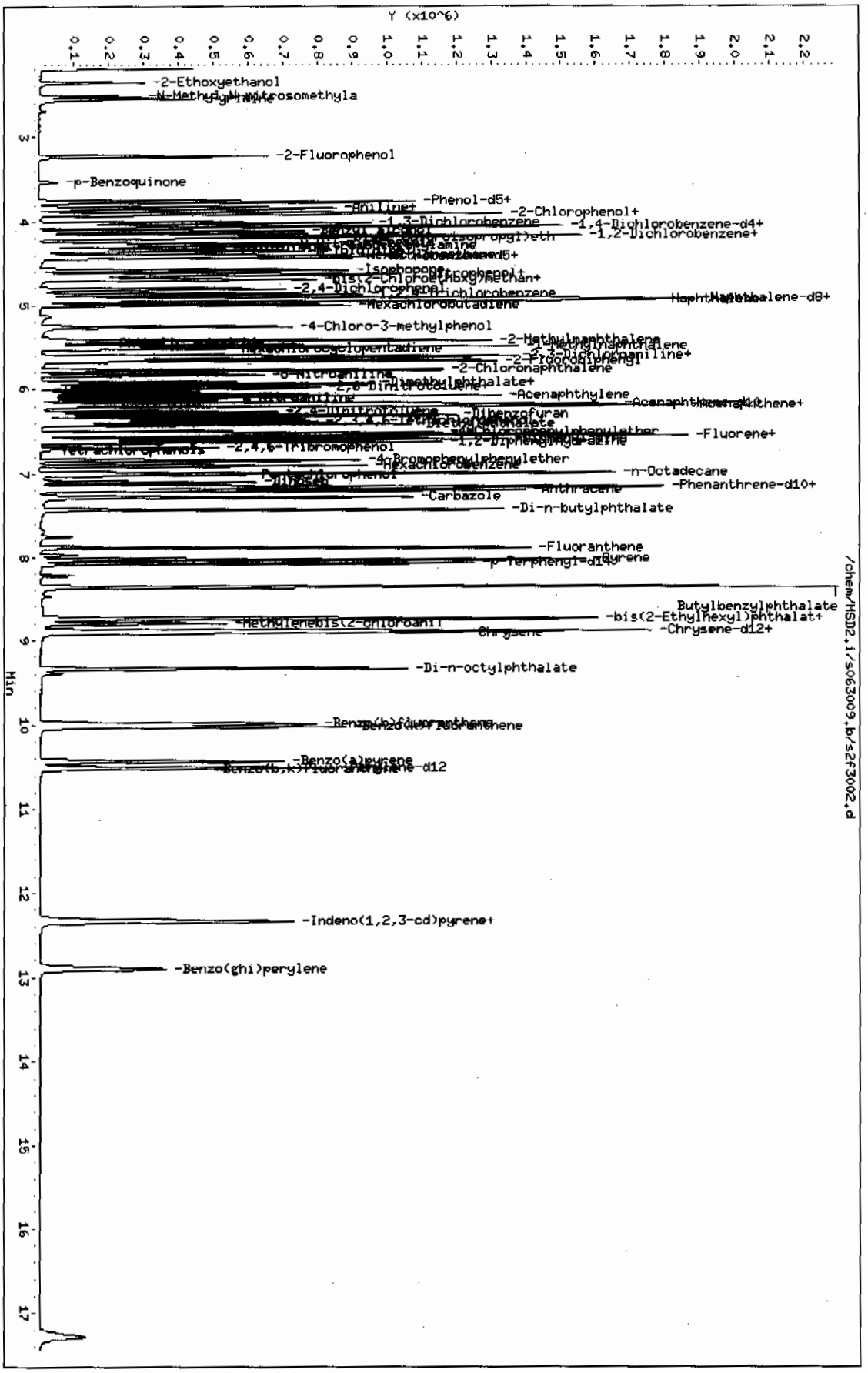

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2f3003.d
Analysis Type:
Lab Sample ID: WBN090619-01.2
Method: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m

Injection Date: 30-JUN-2009 16:27
Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Init. Cal. Times: 02:16 04:28
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.85512	0.91103	0.91103	0.000	6.53807	60.00000	Averaged
16 Acetophenone	1.19881	1.23895	1.23895	0.000	3.34818	60.00000	Averaged
189 Caprolactam	0.08601	0.09105	0.09105	0.000	5.86552	60.00000	Averaged
208 1,1'-Biphenyl	1.21152	1.27803	1.27803	0.000	5.48971	60.00000	Averaged
207 Atrazine	0.04406	0.04561	0.04561	0.000	3.53410	60.00000	Averaged
77 Benzidine	38.29454	40.00000	0.31832	0.000	-4.26366	60.00000	Linear
90 3,3'-Dichlorobenzidine	0.25863	0.27307	0.27307	0.000	5.58538	60.00000	Averaged
102 1,4-Dioxane	0.37452	0.38188	0.38188	0.000	1.96374	60.00000	Averaged
103 Methyl methacrylate	0.21046	0.22041	0.22041	0.000	4.72955	60.00000	Averaged
104 Ethyl methacrylate	0.80237	0.83089	0.83089	0.000	3.55459	60.00000	Averaged
105 2-Picoline	1.24101	1.26178	1.26178	0.000	1.67374	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.52937	0.51873	0.51873	0.000	-2.01043	60.00000	Averaged
107 Methyl methanesulfonate	0.47397	0.49416	0.49416	0.000	4.25884	60.00000	Averaged
108 N-Nitrosodiethylamine	0.54113	0.53349	0.53349	0.000	-1.41172	60.00000	Averaged
109 Ethyl Methanesulfonate	0.64600	0.65149	0.65149	0.000	0.84969	60.00000	Averaged
110 Pentachloroethane	0.31203	0.32561	0.32561	0.000	4.35417	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.54373	0.53934	0.53934	0.000	-0.80833	60.00000	Averaged
113 N-Nitrosomorpholine	0.72224	0.72667	0.72667	0.000	0.61299	60.00000	Averaged
114 o-Toluidine	1.79520	1.84526	1.84526	0.000	2.78871	60.00000	Averaged
115 N-Nitrosopiperidine	0.14845	0.15016	0.15016	0.000	1.15258	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.76945	0.73382	0.73382	0.000	-4.63017	60.00000	Averaged
118 2,6-Dichlorophenol	0.21644	0.22235	0.22235	0.000	2.73059	60.00000	Averaged
119 Hexachloropropene	0.09423	0.10236	0.10236	0.000	8.62419	60.00000	Averaged
120 p-Phenylenediamine	0.22216	0.23343	0.23343	0.000	5.07733	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.21235	0.24527	0.24527	0.000	15.50185	60.00000	Averaged
122 Safrole	0.19580	0.20942	0.20942	0.000	6.95462	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.40456	0.43668	0.43668	0.000	7.93976	60.00000	Averaged
124 Isosafrole	0.35137	0.36519	0.36519	0.000	3.93245	60.00000	Averaged
125 1,4-Naphthoquinone	0.33168	0.37174	0.37174	0.000	12.07601	60.00000	Averaged
127 Pentachlorobenzene	0.35632	0.38852	0.38852	0.000	9.03687	60.00000	Averaged
128 1-Naphthylamine	0.92126	0.97961	0.97961	0.000	6.33387	60.00000	Averaged
129 2-Naphthylamine	1.00463	1.06836	1.06836	0.000	6.34372	60.00000	Averaged
131 5-Nitro-o-toluidine	41.54142	40.00000	0.29526	0.000	3.85354	60.00000	Linear
136 1,3,5-Trinitrobenzene	42.03896	40.00000	0.10775	0.000	5.09740	60.00000	Linear
137 Phenacetin	0.24441	0.25400	0.25400	0.000	3.92176	60.00000	Averaged
138 Diallate	0.25943	0.25874	0.25874	0.000	-0.26783	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2f3003.d
Analysis Type:
Lab Sample ID: WBN090619-01.2
Method: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m

Injection Date: 30-JUN-2009 16:27
Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Init. Cal. Times: 02:16 04:28
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.28806	0.27515	0.27515	0.000	-4.48214	60.00000	Averaged
213 Trans Diallate	0.30493	0.30440	0.30440	0.000	-0.17389	60.00000	Averaged
140 4-Aminobiphenyl	0.49104	0.52349	0.52349	0.000	6.60820	60.00000	Averaged
141 Pentachloronitrobenzene	0.06168	0.06383	0.06383	0.000	3.48010	60.00000	Averaged
142 Pronamide	0.25232	0.26703	0.26703	0.000	5.82910	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	40.89612	40.00000	0.02597	0.000	2.24029	60.00000	Linear
147 Methapyrilene	0.44483	0.48156	0.48156	0.000	8.25733	60.00000	Averaged
148 Isodrin	0.10127	0.10252	0.10252	0.000	1.22789	60.00000	Averaged
149 Aramite	0.04612	0.04862	0.04862	0.000	5.42488	60.00000	Averaged
150 Kepone	0.07238	0.07841	0.07841	0.000	8.32870	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.31565	0.31704	0.31704	0.000	0.43940	60.00000	Averaged
152 Chlorobenzilate	0.26848	0.27753	0.27753	0.000	3.36924	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.49041	0.50404	0.50404	0.000	2.77969	60.00000	Averaged
155 2-Acetylaminofluorene	40.54919	40.00000	0.26977	0.000	1.37298	60.00000	Linear
157 7,12Dimethylbenz(a)anthrace	0.47287	0.48736	0.48736	0.000	3.06438	60.00000	Averaged
158 3-Methylcholanthrene	0.40330	0.40454	0.40454	0.000	0.30768	60.00000	Averaged

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Data file : /chem/MSD2.i/s063009.b/s2f3003.d
Lab Smp Id: WBN090619-01.2 Client Smp ID: APCVS
Inj Date : 30-JUN-2009 16:27
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090619-01.2|40 PPM|1|SVMF|1|APCVS
Misc Info : |MSD8270|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 17:57 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	144826	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	540455	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.170	(1.000)	304443	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.148	(1.000)	536321	40.0000	
* 91 Chrysene-d12	240	8.881	8.881	(1.000)	466151	40.0000	
* 98 Perylene-d12	264	10.491	10.491	(1.000)	377347	40.0000	
209 Benzaldehyde	77	3.773	3.773	(0.931)	131941	40.0000	42.6
16 Acetophenone	105	4.303	4.303	(1.062)	179432	40.0000	41.3
189 Caprolactam	113	5.185	5.185	(1.053)	49211	40.0000	42.3
208 1,1'-Biphenyl	154	5.742	5.742	(0.931)	389086	40.0000	42.2
207 Atrazine	173	6.908	6.908	(0.966)	24464	40.0000	41.4
77 Benzidine	184	7.929	7.929	(0.893)	148383	40.0000	38.3
90 3,3'-Dichlorobenzidine	252	8.801	8.801	(0.991)	127293	40.0000	42.2
102 1,4-Dioxane	88	2.356	2.356	(0.582)	55306	40.0000	40.8
103 Methyl methacrylate	100	2.345	2.345	(0.579)	31921	40.0000	41.9
104 Ethyl methacrylate	69	2.736	2.736	(0.675)	120335	40.0000	41.4
105 2-Picoline	93	2.934	2.934	(0.724)	182739	40.0000	40.7
106 N-Nitrosomethylethylamine	88	2.976	2.976	(0.735)	75125	40.0000	39.2
107 Methyl methanesulfonate	80	3.131	3.131	(0.773)	71567	40.0000	41.7
108 N-Nitrosodiethylamine	102	3.372	3.372	(0.832)	77263	40.0000	39.4
109 Ethyl Methanesulfonate	79	3.527	3.527	(0.871)	94353	40.0000	40.3
110 Pentachloroethane	167	3.875	3.875	(0.956)	47157	40.0000	41.7
111 N-Nitrosopyrrolidine	100	4.287	4.287	(1.058)	78110	40.0000	39.7
113 N-Nitrosomorpholine	56	4.308	4.308	(1.063)	105241	40.0000	40.2
114 o-Toluidine	106	4.330	4.330	(1.069)	267242	40.0000	41.1
115 N-Nitrosopiperidine	114	4.527	4.527	(0.920)	81157	40.0000	40.5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.779	4.779	(0.971)	396596	40.0000	38.1
118 2,6-Dichlorophenol	162	4.961	4.961	(1.008)	120168	40.0000	41.1
119 Hexachloropropene	213	4.993	4.993	(1.014)	55321	40.0000	43.4
120 p-Phenylenediamine	108	5.196	5.196	(1.055)	126161	40.0000	42.0
121 N-Nitrosodi-n-butylamine	84	5.164	5.164	(1.049)	132559	40.0000	46.2
122 Safrole	162	5.330	5.330	(1.083)	113181	40.0000	42.8
123 1,2,4,5-Tetrachlorobenzene	216	5.538	5.538	(0.898)	132944	40.0000	43.2
124 Isosafrole	162	5.704	5.704	(0.925)	111180	40.0000	41.6
125 1,4-Naphthoquinone	158	5.891	5.891	(0.955)	113173	40.0000	44.8
127 Pentachlorobenzene	250	6.282	6.282	(1.018)	118282	40.0000	43.6
128 1-Naphthylamine	143	6.357	6.357	(1.030)	298236	40.0000	42.5
129 2-Naphthylamine	143	6.410	6.410	(1.039)	325256	40.0000	42.5
131 5-Nitro-o-toluidine	152	6.528	6.528	(1.058)	89890	40.0000	41.5
136 1,3,5-Trinitrobenzene	75	6.731	6.731	(0.942)	57791	40.0000	42.0
137 Phenacetin	108	6.769	6.769	(0.947)	136223	40.0000	41.6
138 Diallate	86	6.763	6.763	(0.946)	138766	40.0000	39.9
212 Cis Diallate	86	6.827	6.827	(0.955)	22135	6.00000	5.7
213 Trans Diallate	86	6.763	6.763	(0.946)	138766	34.0000	33.9
140 4-Aminobiphenyl	169	7.004	7.004	(0.980)	280757	40.0000	42.6
141 Pentachloronitrobenzene	237	7.025	7.025	(0.983)	34232	40.0000	41.4
142 Pronamide	173	7.009	7.009	(0.981)	143214	40.0000	42.3
146 4-Nitroquinoline-1-oxide	101	7.614	7.614	(1.065)	13927	40.0000	40.9
147 Methapyrilene	58	7.624	7.624	(1.067)	258272	40.0000	43.3
148 Isodrin	193	7.796	7.796	(1.091)	54982	40.0000	40.5
149 Aramite	185	8.020	8.020	(1.122)	26078	40.0000	42.2
150 Kepone	272	8.480	8.480	(1.186)	42052	40.0000	43.3
151 p-(Dimethylamino)azobenzene	120	8.154	8.154	(0.918)	147787	40.0000	40.2
152 Chlorobenzilate	251	8.170	8.170	(0.920)	129369	40.0000	41.3
153 3,3'-Dimethylbenzidine	212	8.379	8.379	(0.943)	234958	40.0000	41.1
155 2-Acetylaminofluorene	181	8.571	8.571	(0.965)	125752	40.0000	40.5
157 7,12Dimethylbenz(a)anthracene	256	9.946	9.946	(0.948)	183904	40.0000	41.2
158 3-Methylcholanthrene	268	10.892	10.892	(1.038)	152652	40.0000	40.1

Data File: /chem/MSD2.i/s063009.b/s2f3003.d
Date : 30-JUN-2009 16:27
Client ID: APCVS
Sample Info: IWBN090619-01,2140 PPM|1|SVMF|1|APCVS

Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: AGS1
Column diameter: 0.20

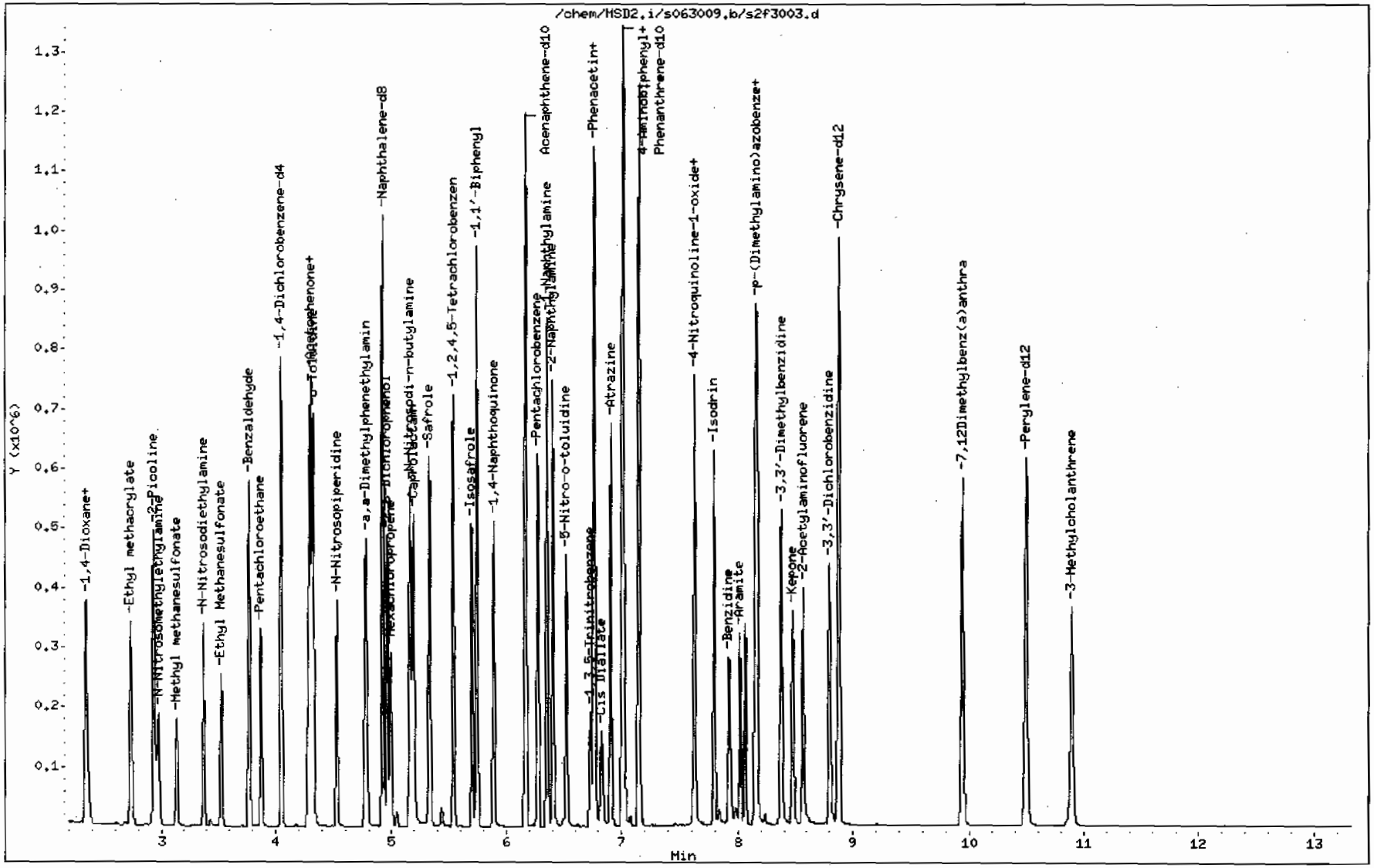

QC Data

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Page 1

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

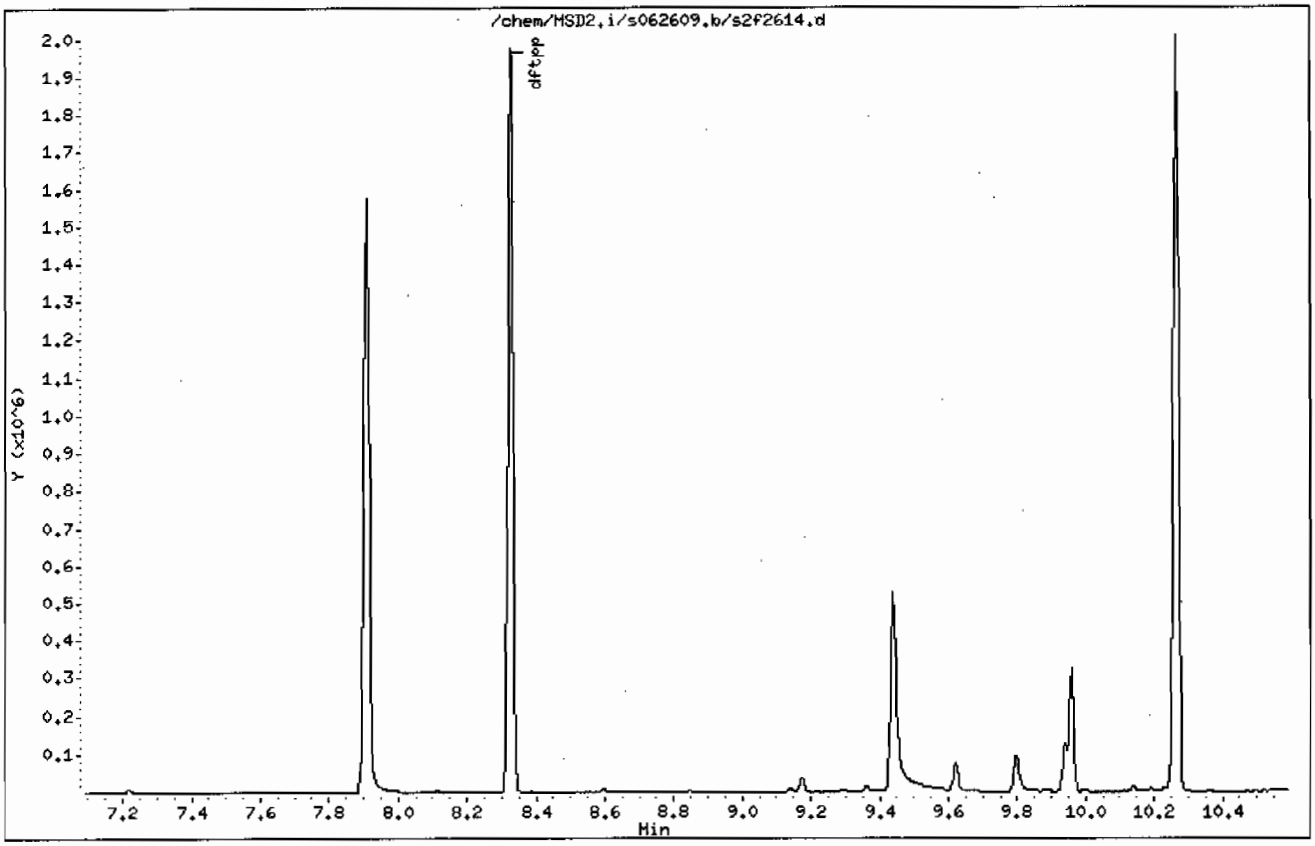

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

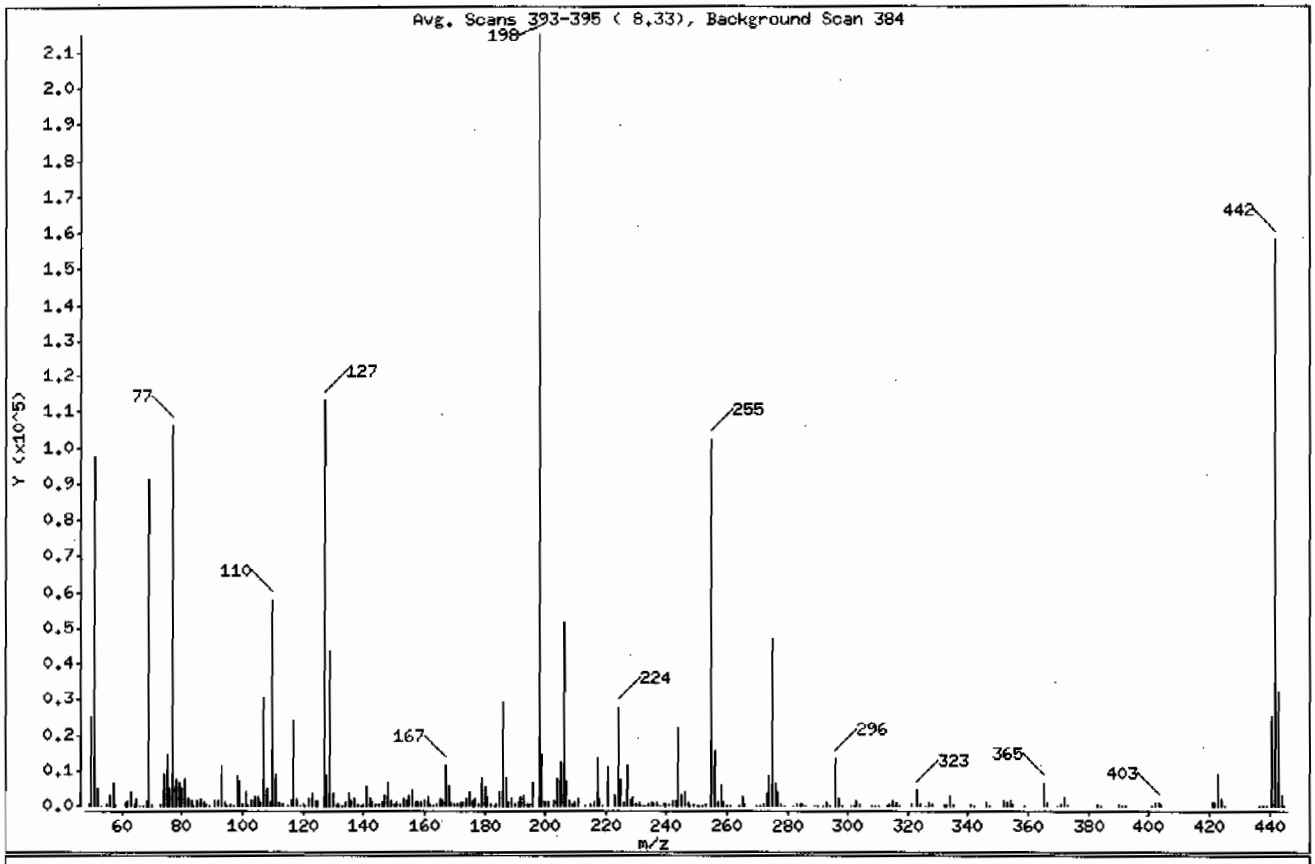

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	45.36
68	Less than 2.00% of mass 69	0.72 (1.70)
69	Mass 69 relative abundance	42.44
70	Less than 2.00% of mass 69	0.22 (0.52)
127	40.00 - 60.00% of mass 198	52.55
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.78
275	10.00 - 30.00% of mass 198	21.80
365	Greater than 1.00% of mass 198	2.92
441	Present, but less than mass 443	11.61
442	Greater than 40.00% of mass 198	73.53
443	17.00 - 23.00% of mass 442	14.99 (20.39)

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2614.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	614	128.00	8592	200.00	1143	284.00	310
50.00	25008	129.00	43336	201.00	1044	285.00	735
51.00	97448	130.00	3663	203.00	1400	286.00	119
52.00	4985	131.00	694	204.00	7284	289.00	146
53.00	190	132.00	351	205.00	12447	290.00	144
55.00	491	133.00	170	206.00	51520	292.00	190
56.00	2897	134.00	1204	207.00	6748	293.00	838
57.00	6609	135.00	3455	208.00	1648	294.00	213
58.00	305	136.00	1375	209.00	489	296.00	13138
61.00	1214	137.00	1780	210.00	807	297.00	1941
62.00	1343	138.00	387	211.00	2033	298.00	82
63.00	3769	139.00	227	213.00	120	301.00	181
64.00	526	140.00	566	215.00	553	302.00	230
65.00	1861	141.00	5437	216.00	1167	303.00	1569
66.00	121	142.00	1865	217.00	13546	304.00	428
67.00	111	143.00	1171	218.00	1809	308.00	186
68.00	1548	144.00	337	219.00	160	309.00	108
69.00	91176	145.00	287	221.00	10832	310.00	176
70.00	471	146.00	986	223.00	3042	313.00	114
73.00	721	147.00	2892	224.00	27504	314.00	658
74.00	9123	148.00	6325	225.00	7208	315.00	1379
75.00	14484	149.00	1310	226.00	756	316.00	774
76.00	5107	150.00	348	227.00	11424	317.00	136
77.00	106208	151.00	770	228.00	1587	321.00	432
78.00	7249	152.00	425	229.00	2297	323.00	4314
79.00	6623	153.00	1734	230.00	333	324.00	737
80.00	5066	154.00	1275	231.00	1016	326.00	35
81.00	7387	155.00	2954	232.00	174	327.00	788
82.00	1734	156.00	4464	233.00	183	328.00	405
83.00	1706	157.00	897	234.00	705	332.00	335
84.00	210	158.00	967	235.00	799	333.00	402
85.00	1366	159.00	745	236.00	546	334.00	2732
86.00	2092	160.00	1677	237.00	890	335.00	676
87.00	956	161.00	2489	238.00	74	341.00	464
88.00	379	162.00	685	239.00	420	342.00	139

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2614.d
Spectrum: Avg, Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	150	163.00	176	240.00	353	346.00	993
91.00	1589	164.00	315	241.00	654	347.00	138
92.00	1702	165.00	2043	242.00	1474	352.00	1407
93.00	11186	166.00	1560	243.00	1653	353.00	951
94.00	794	167.00	11200	244.00	21544	354.00	1340
95.00	181	168.00	5550	245.00	2866	355.00	255
96.00	559	169.00	967	246.00	4187	359.00	69
97.00	65	170.00	346	247.00	812	365.00	6266
98.00	8574	171.00	422	248.00	176	366.00	896
99.00	6953	172.00	970	249.00	716	370.00	83
100.00	621	173.00	1180	250.00	136	371.00	324
101.00	4062	174.00	2181	251.00	166	372.00	2367
102.00	222	175.00	4122	252.00	220	373.00	619
103.00	1381	176.00	1274	253.00	501	383.00	616
104.00	2630	177.00	1912	255.00	102400	384.00	139
105.00	2491	178.00	647	256.00	15378	390.00	299
106.00	776	179.00	7737	257.00	1232	391.00	220
107.00	30744	180.00	5302	258.00	6162	392.00	129
108.00	4922	181.00	2538	259.00	883	401.00	81
109.00	883	182.00	404	260.00	156	402.00	933
110.00	58008	183.00	203	261.00	175	403.00	1205
111.00	8805	184.00	589	264.00	183	404.00	414
112.00	1066	185.00	3711	265.00	2391	421.00	1187
113.00	324	186.00	28960	266.00	388	422.00	1178
115.00	121	187.00	7958	270.00	119	423.00	8795
116.00	1682	188.00	885	271.00	213	424.00	1900
117.00	24112	189.00	1751	272.00	316	425.00	166
118.00	1865	190.00	309	273.00	3233	437.00	78
119.00	222	191.00	879	274.00	8403	438.00	81
120.00	400	192.00	2552	275.00	46840	439.00	68
121.00	148	193.00	2752	276.00	6339	441.00	24944
122.00	2153	194.00	564	277.00	4030	442.00	157952
123.00	3238	195.00	328	278.00	616	443.00	32208
124.00	1466	196.00	6406	279.00	123	444.00	2899
125.00	1359	198.00	214848	282.00	33	445.00	156

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2614.d

Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384

Location of Maximum: 198.00

Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
127.00	112912	199.00	14557	283.00	443		

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

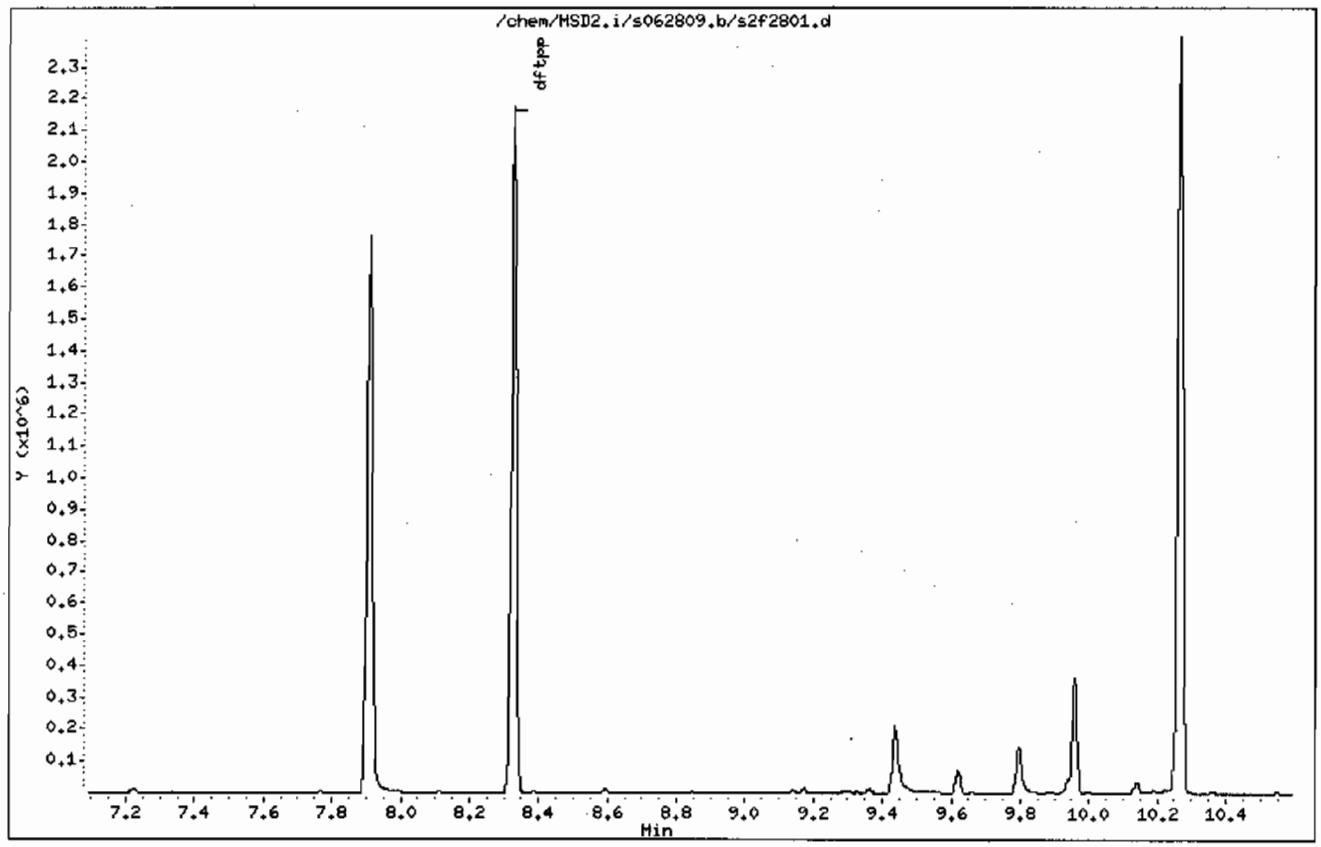

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

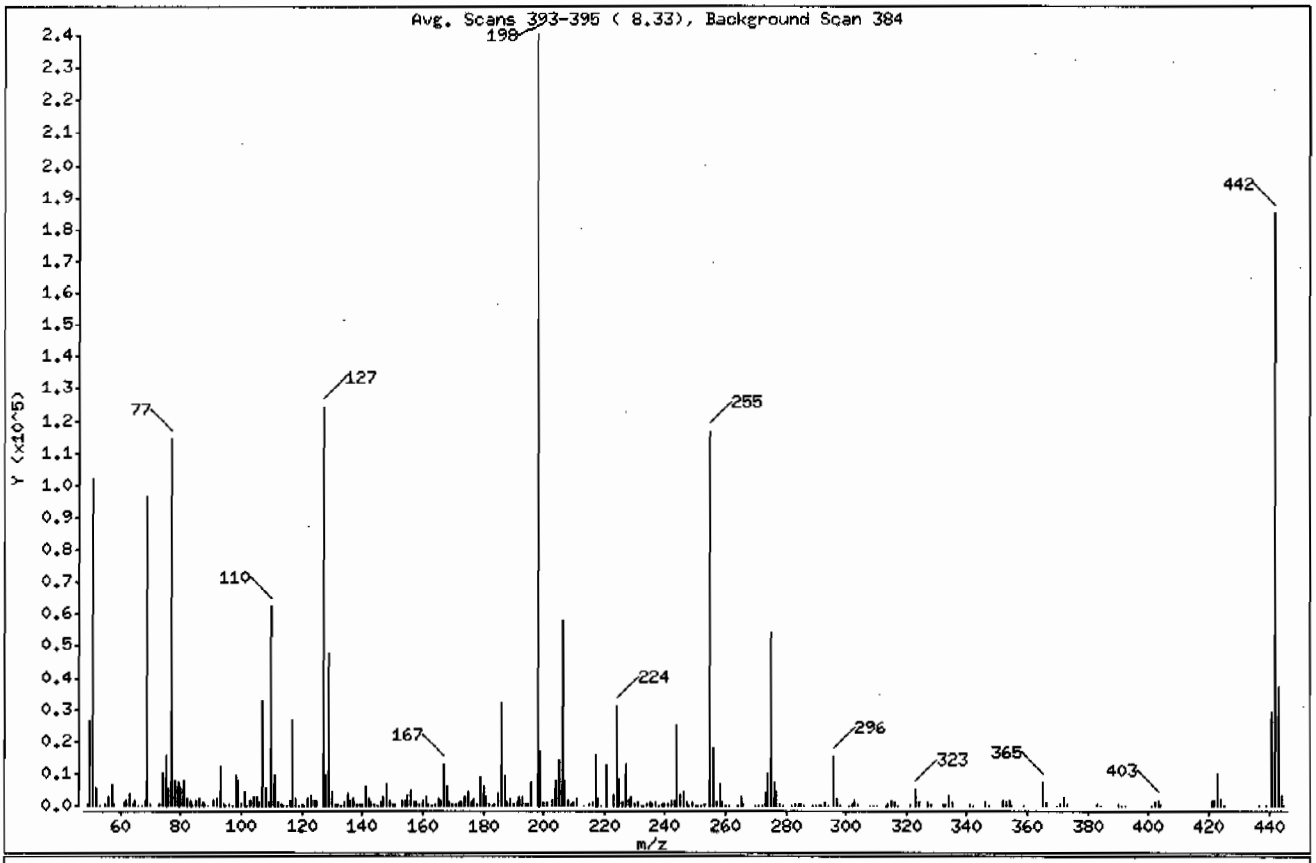

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.62
68	Less than 2.00% of mass 69	0.71 (1.76)
69	Mass 69 relative abundance	40.19
70	Less than 2.00% of mass 69	0.20 (0.50)
127	40.00 - 60.00% of mass 198	51.69
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.97
275	10.00 - 30.00% of mass 198	22.45
365	Greater than 1.00% of mass 198	2.94
441	Present, but less than mass 443	12.18
442	Greater than 40.00% of mass 198	76.96
443	17.00 - 23.00% of mass 442	15.40 (20.01)

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2801.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	636	127.00	124088	200.00	1261	284.00	322
50.00	26320	128.00	9638	201.00	1053	285.00	811
51.00	102312	129.00	47320	203.00	1556	286.00	90
52.00	5308	130.00	4152	204.00	7994	289.00	194
53.00	201	131.00	757	205.00	13846	290.00	175
55.00	496	132.00	411	206.00	58152	291.00	82
56.00	3006	133.00	143	207.00	7575	292.00	215
57.00	6853	134.00	1285	208.00	1929	293.00	1013
58.00	292	135.00	3912	209.00	629	294.00	260
61.00	1294	136.00	1523	210.00	975	296.00	14731
62.00	1456	137.00	2032	211.00	2273	297.00	2049
63.00	3980	138.00	415	213.00	151	298.00	125
64.00	549	139.00	328	215.00	600	301.00	159
65.00	1891	140.00	648	216.00	1223	302.00	299
66.00	112	141.00	5858	217.00	15209	303.00	1713
67.00	119	142.00	2040	218.00	2055	304.00	438
68.00	1696	143.00	1266	219.00	196	308.00	215
69.00	96480	144.00	318	221.00	12612	309.00	145
70.00	487	145.00	250	223.00	3385	310.00	190
73.00	740	146.00	1066	224.00	31128	313.00	135
74.00	10024	147.00	3032	225.00	8054	314.00	698
75.00	15526	148.00	6877	226.00	946	315.00	1696
76.00	5742	149.00	1461	227.00	12526	316.00	875
77.00	114344	150.00	387	228.00	1852	317.00	155
78.00	7971	151.00	769	229.00	2722	321.00	518
79.00	7075	153.00	1842	230.00	344	323.00	4765
80.00	5517	154.00	1462	231.00	1104	324.00	871
81.00	7750	155.00	3356	232.00	186	327.00	864
82.00	1963	156.00	4882	233.00	210	328.00	448
83.00	1916	157.00	912	234.00	789	332.00	367
84.00	251	158.00	1141	235.00	955	333.00	458
85.00	1386	159.00	819	236.00	608	334.00	3132
86.00	2224	160.00	1889	237.00	1001	335.00	862
87.00	1020	161.00	2810	238.00	171	341.00	554
88.00	415	162.00	741	239.00	499	342.00	90

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2801.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	170	163.00	188	240.00	363	346.00	1128
91.00	1736	164.00	300	241.00	698	347.00	204
92.00	1946	165.00	2270	242.00	1661	352.00	1582
93.00	12042	166.00	1896	243.00	1817	353.00	1093
94.00	785	167.00	12669	244.00	24936	354.00	1642
95.00	207	168.00	6276	245.00	3284	355.00	253
96.00	603	169.00	1053	246.00	4498	359.00	76
97.00	220	170.00	378	247.00	920	365.00	7046
98.00	9460	171.00	462	248.00	218	366.00	1044
99.00	7763	172.00	1099	249.00	837	370.00	133
100.00	654	173.00	1317	250.00	170	371.00	368
101.00	4442	174.00	2561	251.00	212	372.00	2645
102.00	233	175.00	4478	252.00	226	373.00	620
103.00	1506	176.00	1341	253.00	521	383.00	686
104.00	2693	177.00	2154	255.00	116384	384.00	174
105.00	2602	178.00	721	256.00	17392	390.00	312
106.00	899	179.00	8799	257.00	1370	391.00	251
107.00	32792	180.00	5795	258.00	6789	392.00	168
108.00	5314	181.00	2762	259.00	1104	401.00	162
109.00	1039	182.00	449	260.00	205	402.00	1111
110.00	62136	183.00	265	261.00	197	403.00	1532
111.00	9534	184.00	682	264.00	230	404.00	490
112.00	1232	185.00	4068	265.00	2707	421.00	1391
113.00	373	186.00	32232	266.00	452	422.00	1464
114.00	34	187.00	9194	270.00	135	423.00	10125
115.00	129	188.00	910	271.00	249	424.00	2189
116.00	1883	189.00	2044	272.00	101	425.00	234
117.00	26408	190.00	340	273.00	3643	437.00	84
118.00	2016	191.00	874	274.00	9719	439.00	181
119.00	245	192.00	2771	275.00	53880	441.00	29232
120.00	438	193.00	2950	276.00	7249	442.00	184704
121.00	150	194.00	640	277.00	4412	443.00	36960
122.00	2323	195.00	307	278.00	719	444.00	3426
123.00	3438	196.00	7325	279.00	134	445.00	185
124.00	1590	198.00	240064	282.00	73		

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2801.d

Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384

Location of Maximum: 198.00

Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	1554	199.00	16728	283.00	473		

Data File: /chem/MSD2.i/s063009.b/s2f3001.d

Date : 30-JUN-2009 15:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

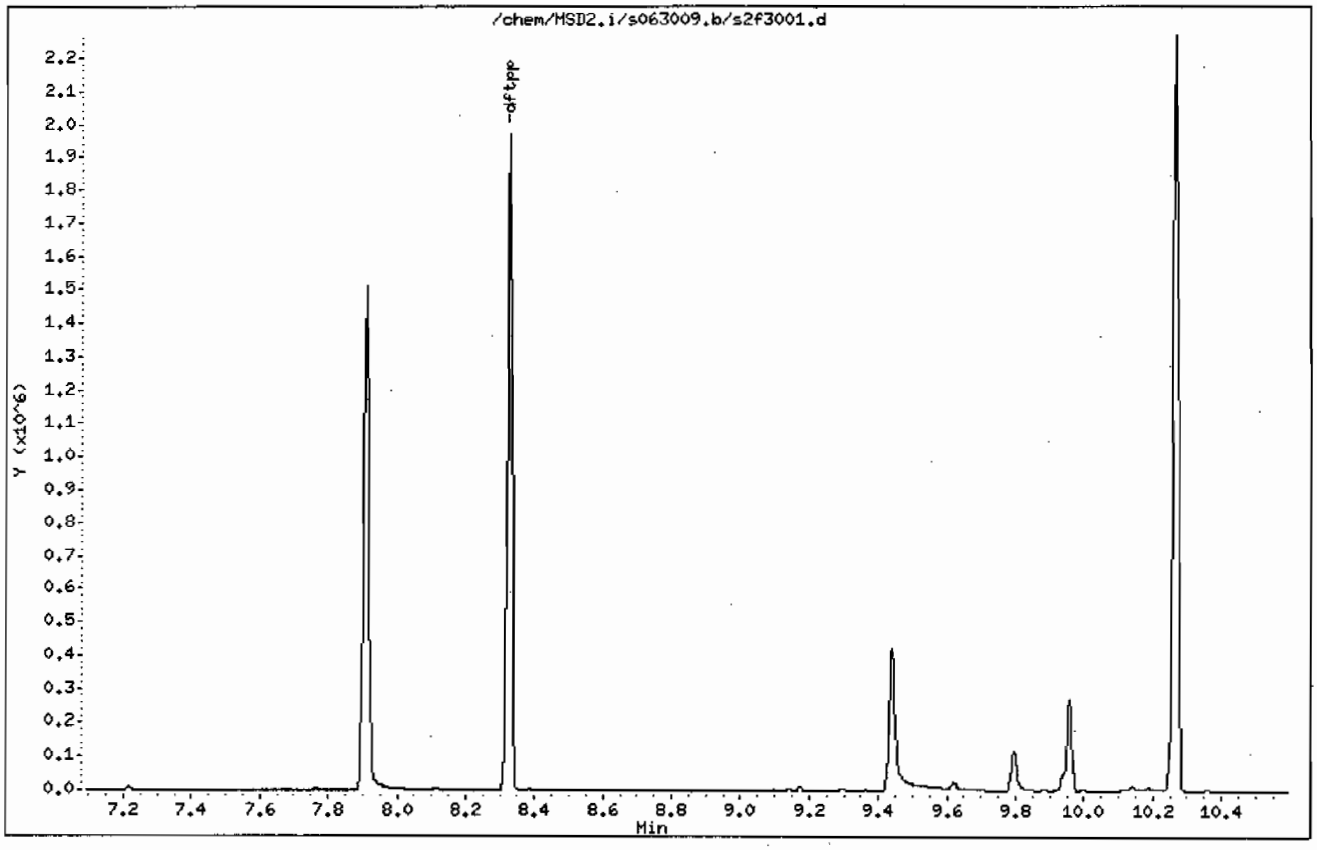

Data File: /chem/MSD2.i/s063009.b/s2f3001.d

Date : 30-JUN-2009 15:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

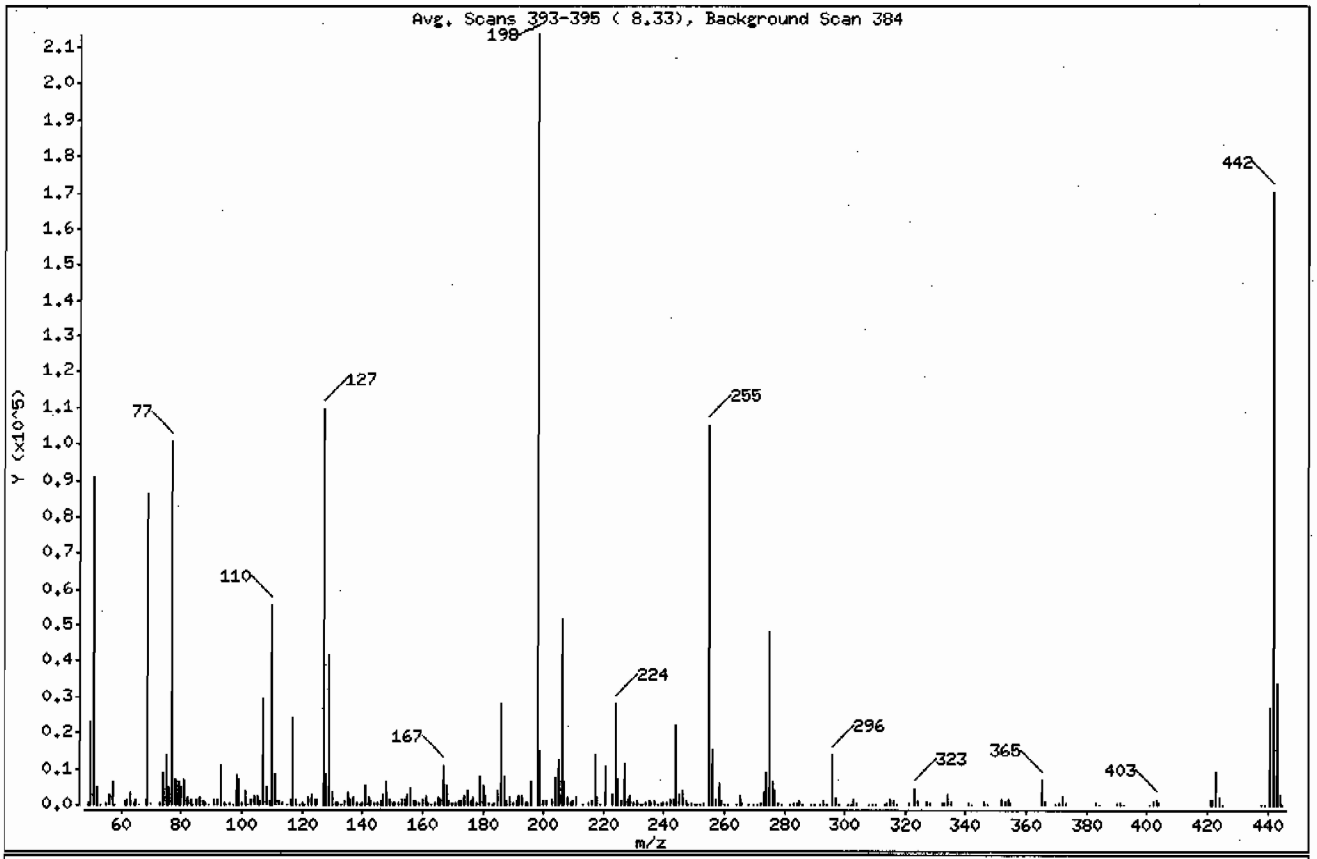

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.62
68	Less than 2.00% of mass 69	0.68 (1.68)
69	Mass 69 relative abundance	40.49
70	Less than 2.00% of mass 69	0.20 (0.50)
127	40.00 - 60.00% of mass 198	51.20
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.82
275	10.00 - 30.00% of mass 198	22.47
365	Greater than 1.00% of mass 198	3.18
441	Present, but less than mass 443	12.60
442	Greater than 40.00% of mass 198	79.82
443	17.00 - 23.00% of mass 442	15.87 (19.88)

Data File: /chem/MSD2.i/s063009.b/s2f3001.d

Date : 30-JUN-2009 15:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f3001.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 280

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	572	129.00	41928	201.00	1007	284.00	315
50.00	23168	130.00	3661	203.00	1393	285.00	738
51.00	90976	131.00	694	204.00	7326	286.00	124
52.00	4680	132.00	367	205.00	12142	289.00	159
53.00	171	133.00	132	206.00	51696	290.00	129
55.00	418	134.00	1200	207.00	6590	292.00	182
56.00	2762	135.00	3373	208.00	1740	293.00	920
57.00	6207	136.00	1371	209.00	486	294.00	204
58.00	241	137.00	1721	210.00	819	296.00	13677
61.00	1072	138.00	365	211.00	2039	297.00	1951
62.00	1264	139.00	217	213.00	145	298.00	128
63.00	3525	140.00	503	215.00	559	301.00	154
64.00	455	141.00	5349	216.00	1142	302.00	244
65.00	1715	142.00	1796	217.00	13829	303.00	1593
66.00	74	143.00	1132	218.00	1809	304.00	395
68.00	1455	144.00	291	219.00	183	308.00	192
69.00	86440	145.00	278	221.00	10880	309.00	116
70.00	434	146.00	1003	223.00	3000	310.00	176
73.00	677	147.00	2723	224.00	27856	313.00	125
74.00	9048	148.00	6202	225.00	7040	314.00	662
75.00	13727	149.00	1239	226.00	765	315.00	1568
76.00	4943	150.00	351	227.00	11295	316.00	827
77.00	100832	151.00	690	228.00	1672	317.00	85
78.00	6936	152.00	403	229.00	2408	321.00	442
79.00	6396	153.00	1646	230.00	317	323.00	4464
80.00	4783	154.00	1246	231.00	1029	324.00	801
81.00	6897	155.00	3034	232.00	167	327.00	860
82.00	1729	156.00	4438	233.00	178	328.00	422
83.00	1607	157.00	893	234.00	736	332.00	323
84.00	186	158.00	960	235.00	770	333.00	462
85.00	1516	159.00	694	236.00	506	334.00	2850
86.00	2039	160.00	1570	237.00	902	335.00	742
87.00	934	161.00	2410	238.00	82	341.00	490
88.00	336	162.00	670	239.00	433	342.00	118
89.00	158	163.00	163	240.00	351	346.00	1021

Data File: /chem/MSD2.i/s063009.b/s2f3001.d

Date : 30-JUN-2009 15:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f3001.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 280

m/z	Y	m/z	Y	m/z	Y	m/z	Y
91.00	1598	164.00	253	241.00	671	347.00	164
92.00	1702	165.00	1899	242.00	1467	352.00	1351
93.00	10640	166.00	1601	243.00	1616	353.00	1018
94.00	675	167.00	10849	244.00	22256	354.00	1513
95.00	176	168.00	5324	245.00	2853	355.00	271
96.00	513	169.00	949	246.00	4084	365.00	6791
97.00	188	170.00	324	247.00	855	366.00	920
98.00	8336	171.00	457	248.00	193	370.00	130
99.00	6762	172.00	894	249.00	725	371.00	335
100.00	537	173.00	1214	250.00	152	372.00	2501
101.00	4024	174.00	2266	251.00	180	373.00	633
102.00	210	175.00	4077	252.00	201	383.00	662
103.00	1302	176.00	1199	253.00	507	384.00	169
104.00	2411	177.00	1815	255.00	105048	390.00	296
105.00	2425	178.00	623	256.00	15348	391.00	262
106.00	755	179.00	7682	257.00	1276	392.00	157
107.00	29424	180.00	5338	258.00	6106	401.00	142
108.00	4768	181.00	2465	259.00	982	402.00	991
109.00	888	182.00	348	260.00	152	403.00	1381
110.00	55288	183.00	203	261.00	179	404.00	472
111.00	8352	184.00	578	264.00	238	421.00	1259
112.00	999	185.00	3704	265.00	2567	422.00	1297
113.00	362	186.00	28208	266.00	406	423.00	9318
115.00	117	187.00	7977	268.00	71	424.00	1871
116.00	1682	188.00	825	270.00	120	425.00	182
117.00	24288	189.00	1737	271.00	215	438.00	101
118.00	1711	190.00	274	272.00	341	439.00	78
119.00	203	191.00	767	273.00	3245	441.00	26888
120.00	393	192.00	2479	274.00	8587	442.00	170368
121.00	134	193.00	2684	275.00	47968	443.00	33880
122.00	2097	194.00	585	276.00	6479	444.00	3189
123.00	3143	195.00	349	277.00	3984	445.00	167
124.00	1398	196.00	6212	278.00	615		
125.00	1287	198.00	213440	279.00	138		
127.00	109280	199.00	14553	282.00	70		

Data File: /chem/MSD2.i/s063009.b/s2f3001.d

Date : 30-JUN-2009 15:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f3001.d

Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384

Location of Maximum: 198.00

Number of points: 280

m/z	Y	m/z	Y	m/z	Y	m/z	Y
128.00	8462	200.00	1145	283.00	450		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201871647**				
Client Sample:	**QC for batch 881317**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 881317**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881319**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 17:13**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 14:54**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s2f3005-1.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	33.3	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	66.7	333
87-86-5	Pentachlorophenol	U	333	ug/kg	66.7	333
129-00-0	Pyrene	U	33.3	ug/kg	10.5	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	133	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	333	ug/kg	66.7	333
99-09-2	3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477			**Matrix:**	SOIL
Lab Sample ID:	1201871647				
Client Sample:	QC for batch 881317	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881317	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 17:13	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s2f3005-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	33.3	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	33.3	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.14	424	ug/kg		J
	Unknown	2.27	168	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477			**Matrix:**	SOIL
Lab Sample ID:	1201871647				
Client Sample:	QC for batch 881317	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881317	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 17:13	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s2f3005-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.07	381	ug/kg		JA

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Data file : /chem/MSD2.i/s063009.b/s2f3005-2.d
Lab Smp Id: 1201871647 Client Smp ID: SBLK01
Inj Date : 30-JUN-2009 17:13
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201871647|881319|1|SVMF|1|MB
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.046	4.051	(1.000)	196202	40.0000	
* 29 Naphthalene-d8	136	4.918	4.923	(1.000)	735867	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	403005	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	671443	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	565609	40.0000	
* 98 Perylene-d12	264	10.496	10.507	(1.000)	464558	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.798)	376962	69.4330	2310
$ 5 Phenol-d5	99	3.752	3.757	(0.927)	462474	68.9813	2300
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.897)	192778	34.7223	1160
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	421247	37.0101	1230
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	101334	73.4142	2450
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	460182	47.7665	1590

GEL Laboratories LLC

GEL Laboratories, LLC

Data file : /chem/MSD2.i/s063009.b/s2f3005-2.d
Lab Smp Id: 1201871647 Client Smp ID: SBLK01
Inj Date : 30-JUN-2009 17:13
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201871647|881319|1|SVMF|1|MB
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.046	1184183	40.000

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.142	376817	12.7283431	424	0		0	10
Unknown				CAS #:			
2.270	149465	5.04872470	168	0		0	10

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown Aldol Condensate				CAS #:			
3.067	338509	11.4343443	381	0		0	10

Data File: /chem/MSD2.i/s063009.b/s2f3005-2.d
Date : 30-JUN-2009 17:13
Client ID: SBLK01
Sample Info: |1201871647|881319|1|SVMF|1|MB
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

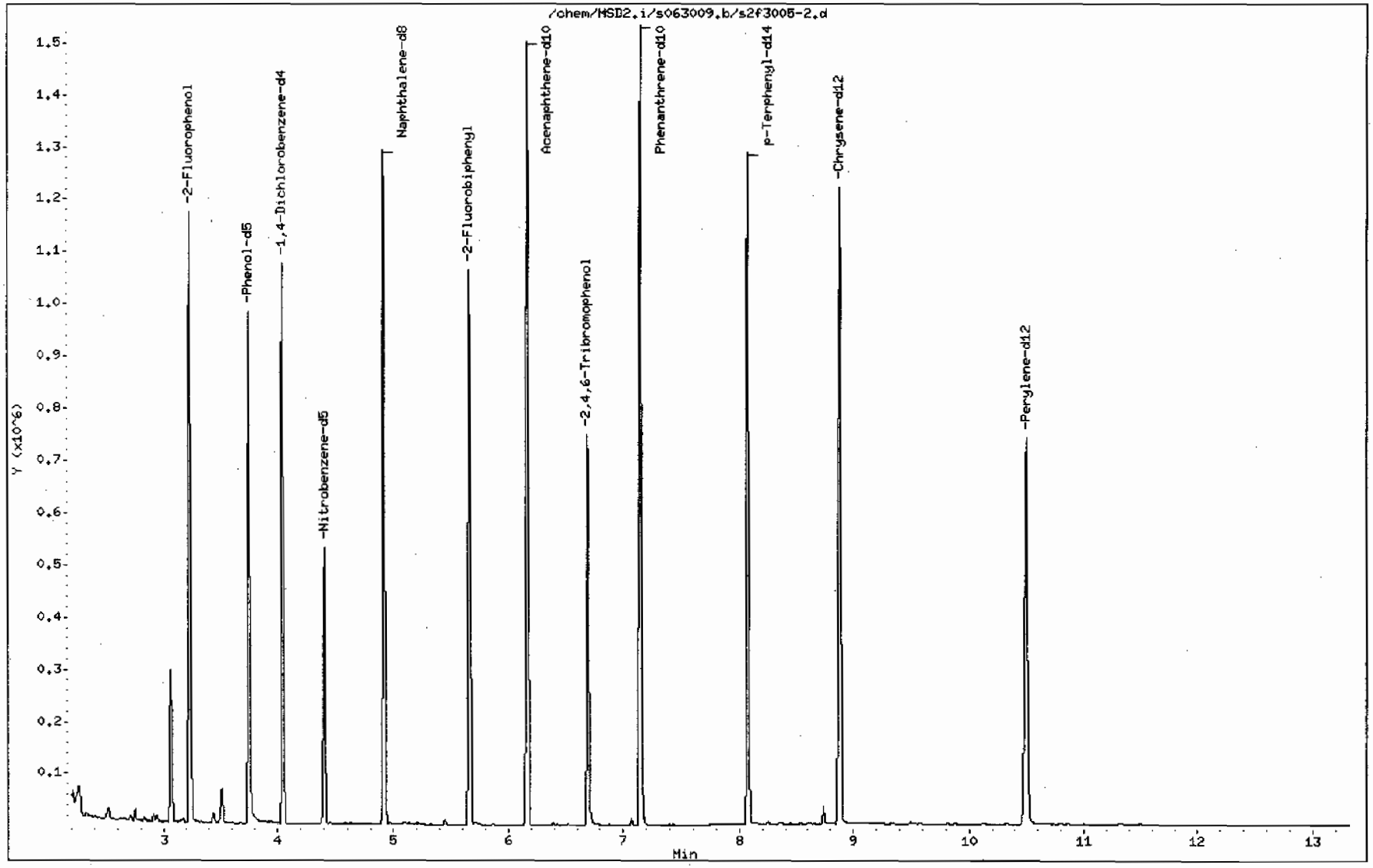

Data File: /chem/MSD2.i/s063009.b/s2f3005-2.d

Date : 30-JUN-2009 17:13

Client ID: SBLK01

Instrument: MSD2.i

Sample Info: |120187164718813191|1|SVHF|1|MB

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	42	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	40	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4658	36	C5H12O2	104

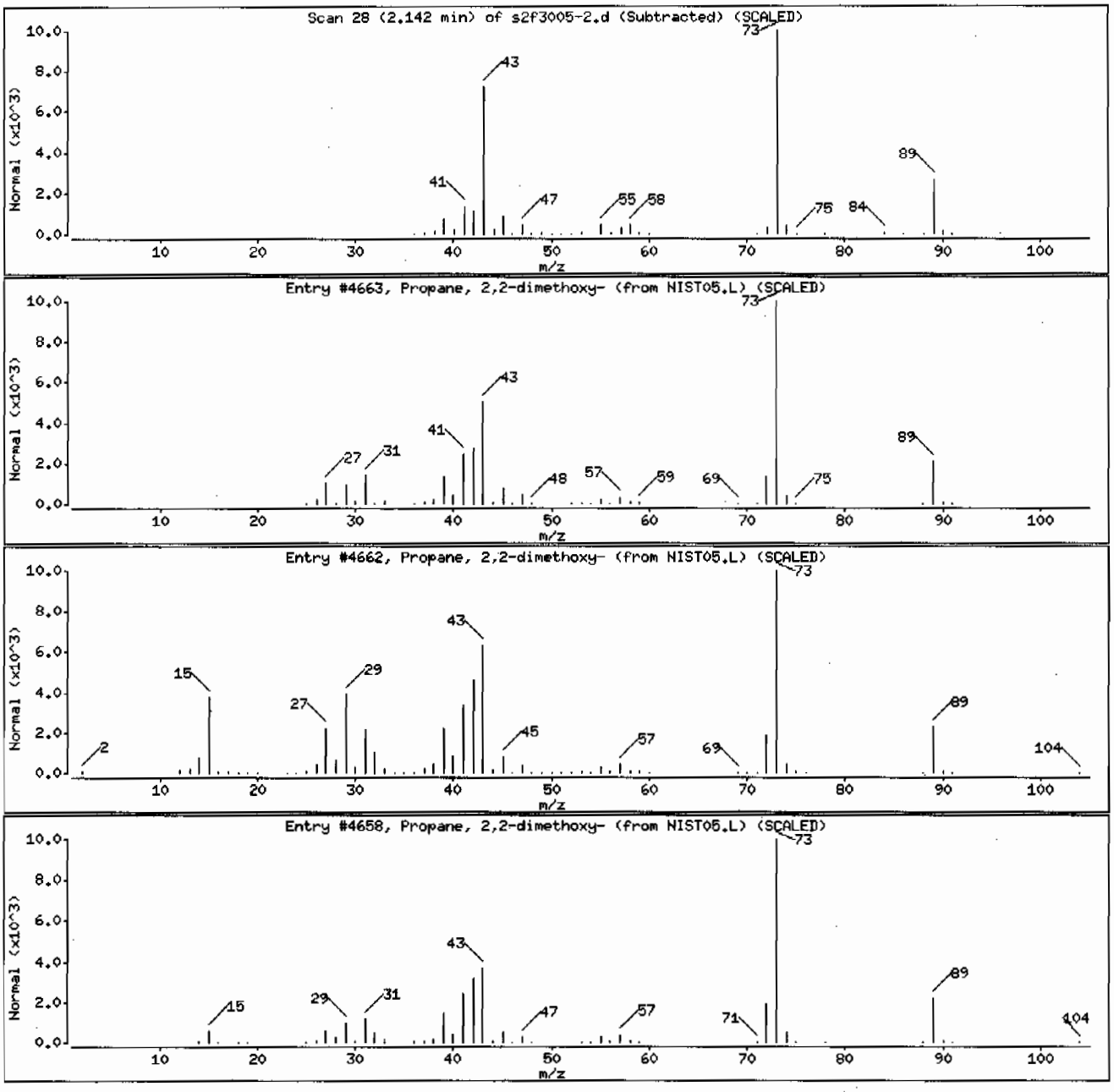

Data File: /chem/MSD2.i/s063009.b/s2f3005-2.d

Date : 30-JUN-2009 17:13

Client ID: SBLK01

Instrument: MSD2.i

Sample Info: |120187164718813191|SVMF|1|MB

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2355	49	C3H5ClO	92
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2356	47	C3H5ClO	92
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2354	43	C3H5ClO	92

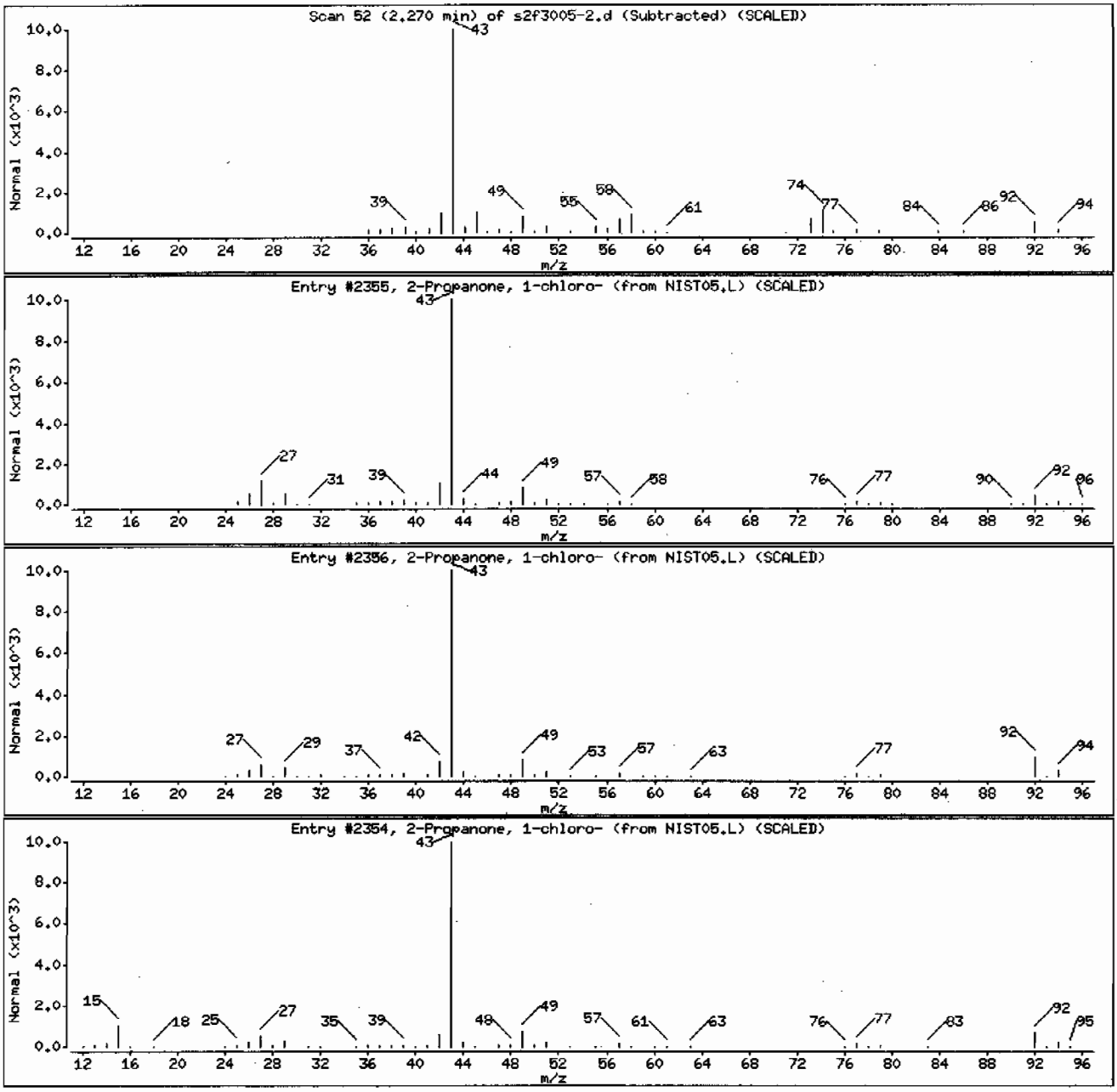

Data File: /chem/MSD2.i/s063009.b/s2f3005-2.d

Date : 30-JUN-2009 17:13

Client ID: SBLK01 Instrument: MSD2.i

Sample Info: |1201871647|881319|1|SVMF|1|MB

Volume Injected (uL): 0.5 Operator: AGS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	45	C6H12O2	116

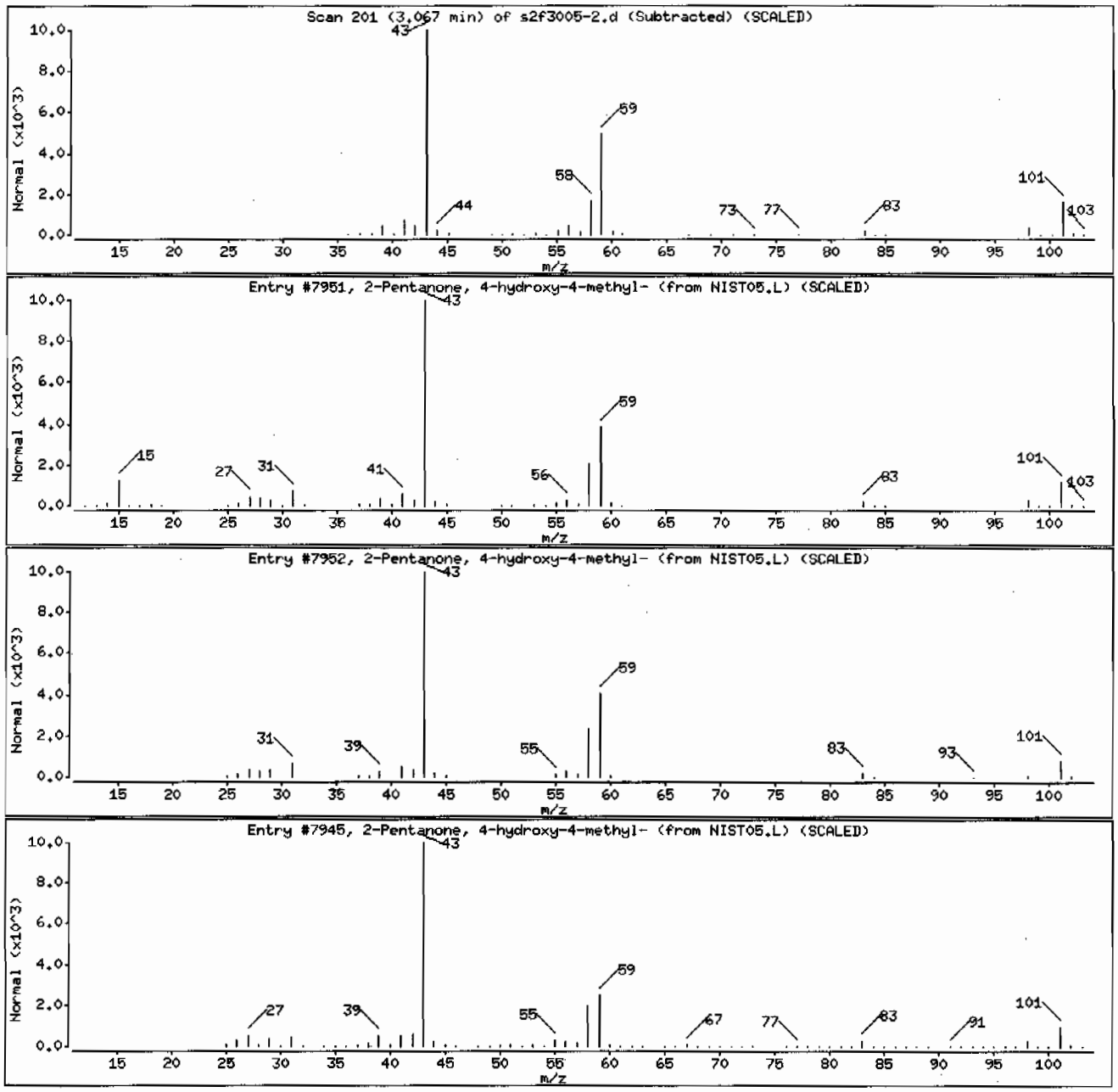

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477			**Matrix:**	SOIL
Lab Sample ID:	1201871648				
Client Sample:	QC for batch 881317	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881317	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 17:33	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s2f3006-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1200	ug/kg	66.7	333
108-95-2	Phenol		1230	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1290	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1190	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1250	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1410	ug/kg	33.3	333
83-32-9	Acenaphthene		1210	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene		1430	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1540	ug/kg	66.7	333
87-86-5	Pentachlorophenol		1500	ug/kg	66.7	333
129-00-0	Pyrene		1350	ug/kg	10.5	33.3
110-86-1	Pyridine		1150	ug/kg	66.7	333
62-53-3	Aniline		1380	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether		1180	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1180	ug/kg	66.7	333
100-51-6	Benzyl alcohol		1010	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1260	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1200	ug/kg	66.7	333
95-48-7	o-Cresol		1320	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1460	ug/kg	133	333
67-72-1	Hexachloroethane		1170	ug/kg	66.7	333
98-95-3	Nitrobenzene		1310	ug/kg	66.7	333
78-59-1	Isophorone		1310	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1340	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol		1420	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane		1290	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1350	ug/kg	66.7	333
65-85-0	Benzoic acid		1570	ug/kg	167	667
91-20-3	Naphthalene		1180	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1410	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1370	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1330	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1760	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1300	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1350	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1320	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline		1400	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline		1560	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477			**Matrix:**	SOIL
Lab Sample ID:	1201871648				
Client Sample:	QC for batch 881317	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881317	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 17:33	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s2f3006-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1310	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1300	ug/kg	33.3	333
208-96-8	Acenaphthylene		1320	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		1410	ug/kg	127	667
132-64-9	Dibenzofuran		1370	ug/kg	66.7	333
84-66-2	Diethylphthalate		1360	ug/kg	66.7	333
86-73-7	Fluorene		1240	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1370	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol		1480	ug/kg	66.7	333
100-01-6	4-Nitroaniline		1790	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1430	ug/kg	66.7	333
122-66-7	Azobenzene		1370	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1390	ug/kg	33.3	333
118-74-1	Hexachlorobenzene		1450	ug/kg	66.7	333
85-01-8	Phenanthrene		1320	ug/kg	10.0	33.3
120-12-7	Anthracene		1440	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1470	ug/kg	33.3	333
206-44-0	Fluoranthene		1560	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1510	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1440	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1590	ug/kg	100	333
218-01-9	Chrysene		1500	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1470	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1360	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1610	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1510	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1580	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1570	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1640	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1560	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1300	ug/kg	66.7	333

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Data file : /chem/MSD2.i/s063009.b/s2f3006-2.d
Lab Smp Id: 1201871648 Client Smp ID: SBLK01LCS
Inj Date : 30-JUN-2009 17:33
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201871648|881319|1|SVMF|1|LCS
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:04 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	151287	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	611419	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	323125	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	560782	40.0000	
* 91 Chrysene-d12	240	8.886	8.892	(1.000)	498899	40.0000	
* 98 Perylene-d12	264	10.502	10.507	(1.000)	442975	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	308657	73.7304	2460
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	358375	69.3240	2310
$ 20 Nitrobenzene-d5	82	4.415	4.415	(0.897)	175531	38.0510	1270
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	349134	38.2574	1280
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	94292	85.2000	2840
$ 81 p-Terphenyl-d14	244	8.073	8.079	(0.908)	388648	45.7355	1520

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.768	3.763	(0.930)	193618	36.7649	1220
8 2-Chlorophenol	128	3.912	3.912	(0.966)	173408	38.7688	1290
11 1,4-Dichlorobenzene	146	4.062	4.062	(1.003)	177984	35.7189	1190
17 N-Nitrosodipropylamine	70	4.281	4.287	(1.057)	118332	37.4016	1250(Q)
28 1,2,4-Trichlorobenzene	180	4.870	4.875	(0.989)	151750	39.0075	1300
33 4-Chloro-3-methylphenol	107	5.265	5.260	(1.070)	142171	42.2139	1410
47 Acenaphthene	154	6.196	6.196	(1.004)	306924	36.3969	1210
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	118836	42.9601	1430
52 4-Nitrophenol	139	6.201	6.196	(1.005)	62493	46.1220	1540
65 Pentachlorophenol	266	7.020	7.015	(0.982)	60776	44.9304	1500
79 Pyrene	202	8.031	8.031	(0.904)	600707	40.4483	1350
2 Pyridine	79	2.564	2.554	(0.633)	119438	34.3800	1150
4 Aniline	66	3.827	3.832	(0.945)	86388	41.4746	1380(Q)
7 bis(2-Chloroethyl) ether	63	3.843	3.848	(0.948)	136251	35.3638	1180
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.992)	177006	35.4819	1180
12 Benzyl alcohol	108	4.115	4.116	(1.016)	89133	30.2374	1010
13 1,2-Dichlorobenzene	146	4.169	4.169	(1.029)	166869	37.7270	1260
14 bis(2-Chloroisopropyl)ether	45	4.190	4.191	(1.034)	312517	36.1489	1200
15 o-Cresol	107	4.164	4.164	(1.028)	129474	39.4611	1320
18 m,p-Cresols	107	4.260	4.265	(1.051)	200203	43.8064	1460
19 Hexachloroethane	117	4.399	4.399	(1.086)	64939	35.0094	1170
21 Nitrobenzene	77	4.426	4.431	(0.899)	173147	39.1676	1300
22 Isophorone	82	4.581	4.581	(0.930)	329343	39.2783	1310
23 2-Nitrophenol	139	4.645	4.645	(0.944)	86464	40.0880	1340
24 2,4-Dimethylphenol	122	4.634	4.635	(0.941)	234794	42.6773	1420
25 bis(2-Chloroethoxy)methane	93	4.699	4.699	(0.954)	190479	38.6509	1290
26 2,4-Dichlorophenol	162	4.805	4.811	(0.976)	134859	40.5584	1350
27 Benzoic acid	105	4.672	4.683	(0.949)	101692	47.1002	1570(Q)
30 Naphthalene	128	4.939	4.939	(1.003)	508800	35.3378	1180
31 4-Chloroaniline	127	4.950	4.950	(1.005)	238755	42.3689	1410
32 Hexachlorobutadiene	225	5.003	5.004	(1.016)	81123	41.0998	1370
34 2-Methylnaphthalene	142	5.421	5.421	(1.101)	334342	39.9738	1330
36 Hexachlorocyclopentadiene	237	5.522	5.522	(0.895)	73759	52.8962	1760
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.909)	93215	39.0286	1300
38 2,4,5-Trichlorophenol	196	5.640	5.635	(0.914)	112206	40.6423	1350
40 2-Chloronaphthalene	162	5.774	5.779	(0.936)	314274	39.6837	1320
42 o-Nitroaniline	65	5.827	5.827	(0.944)	101291	42.0148	1400
41 m-Nitroaniline	138	6.116	6.116	(0.991)	90018	46.6845	1560
43 Dimethylphthalate	163	5.929	5.940	(0.961)	360209	39.1978	1310
44 2,6-Dinitrotoluene	165	5.988	5.993	(0.971)	86794	39.0233	1300
45 Acenaphthylene	152	6.078	6.079	(0.985)	508445	39.6245	1320
48 2,4-Dinitrophenol	184	6.185	6.186	(1.003)	30859	42.4154	1410(Q)
49 Dibenzofuran	168	6.308	6.309	(1.023)	447584	40.9913	1370
51 Diethylphthalate	149	6.410	6.416	(1.039)	367238	40.9459	1360
53 Fluorene	166	6.544	6.544	(1.061)	341306	37.2821	1240
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.056)	172491	41.1455	1370
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	55641	44.4075	1480

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.533	6.539	(1.059)	87639	53.7693	1790
133 Diphenylamine	169	6.592	6.592	(0.927)	320480	42.7900	1430
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.927)	398804	40.9854	1370
61 4-Bromophenylphenylether	248	6.843	6.843	(0.957)	97577	41.7652	1390
63 Hexachlorobenzene	284	6.902	6.902	(0.966)	112115	43.4836	1450
68 Phenanthrene	178	7.164	7.170	(1.002)	528804	39.5999	1320
69 Anthracene	178	7.196	7.202	(1.007)	557404	43.2803	1440
72 Di-n-butylphthalate	149	7.432	7.432	(1.040)	656889	44.1865	1470
76 Fluoranthene	202	7.881	7.886	(1.103)	576167	46.9027	1560
85 Butylbenzylphthalate	149	8.352	8.357	(0.940)	281035	45.2943	1510
89 Benzo(a)anthracene	228	8.876	8.881	(0.999)	525353	43.2803	1440
90 3,3'-Dichlorobenzidine	252	8.806	8.801	(0.991)	154189	47.7999	1590
92 Chrysene	228	8.908	8.919	(1.002)	527314	45.0145	1500
93 bis(2-Ethylhexyl)phthalate	149	8.742	8.748	(0.984)	402340	43.9617	1460
94 Di-n-octylphthalate	149	9.325	9.331	(0.888)	588861	40.8775	1360
95 Benzo(b)fluoranthene	252	9.983	9.988	(0.951)	512189	48.1645	1600
96 Benzo(k)fluoranthene	252	10.015	10.021	(0.954)	509609	45.4189	1510
97 Benzo(a)pyrene	252	10.427	10.432	(0.993)	439905	47.3468	1580
99 Indeno(1,2,3-cd)pyrene	276	12.331	12.337	(1.174)	420362	47.0985	1570
100 Dibenzo(a,h)anthracene	278	12.336	12.342	(1.175)	352827	49.2647	1640
101 Benzo(ghi)perylene	276	12.898	12.903	(1.228)	363305	46.8816	1560
1 N-Methyl-N-nitrosomethylamine	74	2.522	2.522	(0.622)	93148	35.9308	1200(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD2.i/s063009.b/s2f3006-2.d
Date : 30-JUN-2009 17:33
Client ID: SBLK01LCS
Sample Info: 1120187164818813191 1SVMF11LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

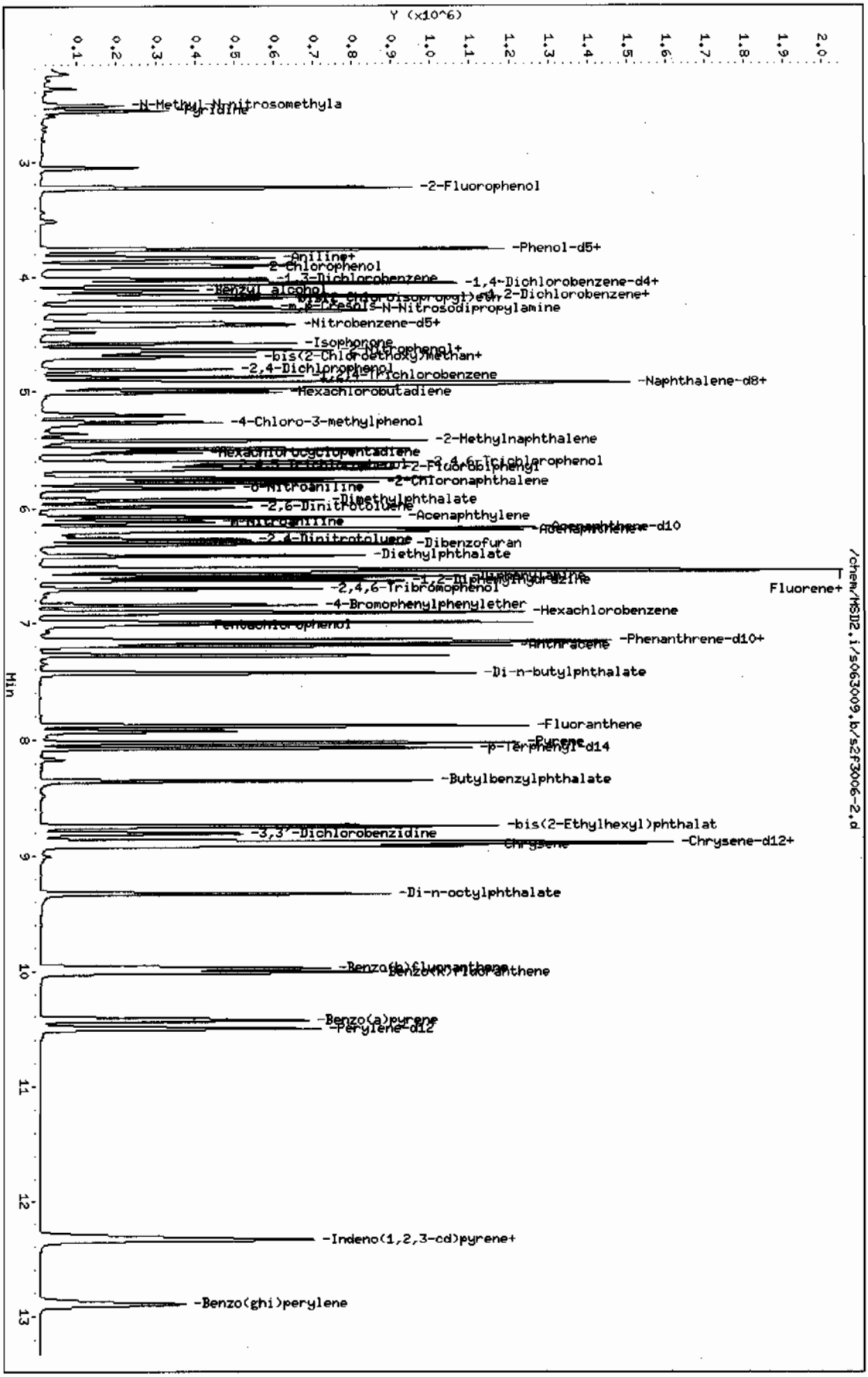

Page 1

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	1201871649	Date Received:	06/26/2009 08:40	%Moisture:	4.3
Client Sample:	QC for batch 881317	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-6007MS	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 19:13	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.09 g	Final Volume:	1 mL
Data File:	s2f3011.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		862	ug/kg	69.4	347
108-95-2	Phenol		915	ug/kg	69.4	347
95-57-8	2-Chlorophenol		951	ug/kg	69.4	347
106-46-7	1,4-Dichlorobenzene		835	ug/kg	69.4	347
621-64-7	N-Nitrosodipropylamine		928	ug/kg	69.4	347
59-50-7	4-Chloro-3-methylphenol		1150	ug/kg	34.7	347
83-32-9	Acenaphthene		933	ug/kg	11.6	34.7
121-14-2	2,4-Dinitrotoluene		1090	ug/kg	34.7	347
100-02-7	4-Nitrophenol		1250	ug/kg	69.4	347
87-86-5	Pentachlorophenol		1240	ug/kg	69.4	347
129-00-0	Pyrene		1080	ug/kg	10.9	34.7
110-86-1	Pyridine		727	ug/kg	69.4	347
62-53-3	Aniline		972	ug/kg	122	347
111-44-4	bis(2-Chloroethyl) ether		855	ug/kg	69.4	347
541-73-1	1,3-Dichlorobenzene		840	ug/kg	69.4	347
100-51-6	Benzyl alcohol		514	ug/kg	104	347
95-50-1	1,2-Dichlorobenzene		898	ug/kg	69.4	347
108-60-1	bis(2-Chloroisopropyl)ether		868	ug/kg	69.4	347
95-48-7	o-Cresol		1020	ug/kg	69.4	347
65794-96-9	m,p-Cresols		1130	ug/kg	139	347
67-72-1	Hexachloroethane		804	ug/kg	69.4	347
98-95-3	Nitrobenzene		986	ug/kg	69.4	347
78-59-1	Isophorone		977	ug/kg	69.4	347
88-75-5	2-Nitrophenol		1010	ug/kg	34.7	347
105-67-9	2,4-Dimethylphenol		1030	ug/kg	69.4	347
111-91-1	bis(2-Chloroethoxy)methane		973	ug/kg	69.4	347
120-83-2	2,4-Dichlorophenol		1020	ug/kg	69.4	347
65-85-0	Benzoic acid		1100	ug/kg	174	694
91-20-3	Naphthalene		882	ug/kg	10.4	34.7
106-47-8	4-Chloroaniline		1050	ug/kg	69.4	347
87-68-3	Hexachlorobutadiene		988	ug/kg	69.4	347
91-57-6	2-Methylnaphthalene		1010	ug/kg	6.94	34.7
77-47-4	Hexachlorocyclopentadiene		1160	ug/kg	69.4	347
88-06-2	2,4,6-Trichlorophenol		1010	ug/kg	69.4	347
95-95-4	2,4,5-Trichlorophenol		1130	ug/kg	69.4	347
91-58-7	2-Chloronaphthalene		1000	ug/kg	12.2	34.7
88-74-4	2-Nitroaniline		1090	ug/kg	69.4	347
	o-Nitroaniline					
99-09-2	3-Nitroaniline		1210	ug/kg	69.4	347

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201871649	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
Client Sample:	QC for batch 881317	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-6007MS	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 19:13	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.09 g	**Final Volume:**	1 mL
Data File:	s2f3011.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1050	ug/kg	69.4	347
606-20-2	2,6-Dinitrotoluene		1040	ug/kg	34.7	347
208-96-8	Acenaphthylene		1040	ug/kg	10.4	34.7
51-28-5	2,4-Dinitrophenol		765	ug/kg	132	694
132-64-9	Dibenzofuran		1090	ug/kg	69.4	347
84-66-2	Diethylphthalate		1080	ug/kg	69.4	347
86-73-7	Fluorene		1010	ug/kg	10.4	34.7
7005-72-3	4-Chlorophenylphenylether		1090	ug/kg	34.7	347
534-52-1	2-Methyl-4,6-dinitrophenol		877	ug/kg	69.4	347
100-01-6	4-Nitroaniline		1340	ug/kg	69.4	347
	p-Nitroaniline					
122-39-4	Diphenylamine		1120	ug/kg	69.4	347
122-66-7	Azobenzene		1100	ug/kg	69.4	347
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1110	ug/kg	34.7	347
118-74-1	Hexachlorobenzene		1170	ug/kg	69.4	347
85-01-8	Phenanthrene		1050	ug/kg	10.4	34.7
120-12-7	Anthracene		1140	ug/kg	6.94	34.7
84-74-2	Di-n-butylphthalate		1140	ug/kg	34.7	347
206-44-0	Fluoranthene		1180	ug/kg	10.4	34.7
85-68-7	Butylbenzylphthalate		1210	ug/kg	69.4	347
56-55-3	Benzo(a)anthracene		1120	ug/kg	10.4	34.7
91-94-1	3,3'-Dichlorobenzidine		770	ug/kg	104	347
218-01-9	Chrysene		1090	ug/kg	10.4	34.7
117-81-7	bis(2-Ethylhexyl)phthalate		1200	ug/kg	69.4	347
117-84-0	Di-n-octylphthalate		1160	ug/kg	69.4	347
205-99-2	Benzo(b)fluoranthene		1200	ug/kg	10.4	34.7
207-08-9	Benzo(k)fluoranthene		1180	ug/kg	10.4	34.7
50-32-8	Benzo(a)pyrene		1160	ug/kg	10.4	34.7
193-39-5	Indeno(1,2,3-cd)pyrene		983	ug/kg	10.4	34.7
53-70-3	Dibenzo(a,h)anthracene		1010	ug/kg	10.4	34.7
191-24-2	Benzo(ghi)perylene		902	ug/kg	10.4	34.7
120-82-1	1,2,4-Trichlorobenzene		956	ug/kg	69.4	347

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Data file : /chem/MSD2.i/s063009.b/s2f3011.d
Lab Smp Id: 1201871649 Client Smp ID: CAMO-09-6007MS
Inj Date : 30-JUN-2009 19:13
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201871649|881319|1|SVMF|1|MS
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 11 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.09000	weight of sample
M	4.26710	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	198371	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	784347	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	418050	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	718176	40.0000	
* 91 Chrysene-d12	240	8.887	8.892	(1.000)	605522	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	483563	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	294422	53.6369	1860
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	346804	51.1627	1780
$ 20 Nitrobenzene-d5	82	4.415	4.415	(0.897)	168382	28.4537	988
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	338231	28.6470	994
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	98941	69.1008	2400
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.908)	365578	35.4454	1230

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.768	3.763	(0.930)	182077	26.3674	915
8 2-Chlorophenol	128	3.912	3.912	(0.966)	160706	27.4012	951
11 1,4-Dichlorobenzene	146	4.062	4.062	(1.003)	157207	24.0609	835
17 N-Nitrosodipropylamine	70	4.281	4.287	(1.057)	110905	26.7339	928(Q)
28 1,2,4-Trichlorobenzene	180	4.870	4.875	(0.989)	137441	27.5402	956
33 4-Chloro-3-methylphenol	107	5.266	5.260	(1.070)	142871	33.0689	1150
47 Acenaphthene	154	6.196	6.196	(1.004)	293321	26.8855	933
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	112263	31.3687	1090
52 4-Nitrophenol	139	6.202	6.196	(1.005)	63345	36.1353	1250
65 Pentachlorophenol	266	7.020	7.015	(0.982)	61790	35.6689	1240
79 Pyrene	202	8.025	8.031	(0.903)	560513	31.0961	1080
2 Pyridine	79	2.575	2.554	(0.636)	95436	20.9508	727
4 Aniline	66	3.832	3.832	(0.946)	76453	27.9928	972
7 bis(2-Chloroethyl) ether	63	3.843	3.848	(0.948)	124430	24.6302	855
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.992)	158220	24.1882	840
12 Benzyl alcohol	108	4.116	4.116	(1.016)	57187	14.7954	514
13 1,2-Dichlorobenzene	146	4.169	4.169	(1.029)	150026	25.8682	898
14 bis(2-Chloroisopropyl)ether	45	4.190	4.191	(1.034)	283590	25.0170	868
15 o-Cresol	107	4.164	4.164	(1.028)	126956	29.5096	1020
18 m,p-Cresols	107	4.260	4.265	(1.051)	194467	32.4516	1130
19 Hexachloroethane	117	4.399	4.399	(1.086)	56315	23.1541	804
21 Nitrobenzene	77	4.426	4.431	(0.899)	161141	28.4150	986
22 Isophorone	82	4.581	4.581	(0.930)	302711	28.1425	977
23 2-Nitrophenol	139	4.645	4.645	(0.944)	80539	29.1082	1010
24 2,4-Dimethylphenol	122	4.634	4.635	(0.941)	208784	29.5827	1030
25 bis(2-Chloroethoxy)methane	93	4.699	4.699	(0.954)	177111	28.0149	972
26 2,4-Dichlorophenol	162	4.806	4.811	(0.976)	125570	29.4386	1020
27 Benzoic acid	105	4.667	4.683	(0.948)	87677	31.6557	1100(Q)
30 Naphthalene	128	4.939	4.939	(1.003)	469311	25.4088	882
31 4-Chloroaniline	127	4.950	4.950	(1.005)	219137	30.3139	1050
32 Hexachlorobutadiene	225	5.003	5.004	(1.016)	72071	28.4634	988
34 2-Methylnaphthalene	142	5.421	5.421	(1.101)	312086	29.0864	1010
36 Hexachlorocyclopentadiene	237	5.522	5.522	(0.895)	60459	33.5130	1160
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.909)	89577	28.9892	1010
38 2,4,5-Trichlorophenol	196	5.640	5.635	(0.914)	116609	32.6465	1130
40 2-Chloronaphthalene	162	5.774	5.779	(0.936)	295257	28.8169	1000
42 o-Nitroaniline	65	5.827	5.827	(0.944)	97775	31.3474	1090
41 m-Nitroaniline	138	6.116	6.116	(0.991)	86641	34.7303	1200
43 Dimethylphthalate	163	5.929	5.940	(0.961)	359159	30.2090	1050
44 2,6-Dinitrotoluene	165	5.988	5.993	(0.971)	86016	29.8921	1040
45 Acenaphthylene	152	6.079	6.079	(0.985)	495463	29.8451	1040
48 2,4-Dinitrophenol	184	6.186	6.186	(1.003)	16391	22.0324	765(Q)
49 Dibenzofuran	168	6.309	6.309	(1.023)	442238	31.3051	1090
51 Diethylphthalate	149	6.410	6.416	(1.039)	361280	31.1350	1080
53 Fluorene	166	6.539	6.544	(1.060)	344286	29.0682	1010
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.056)	170978	31.5238	1090
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	37458	25.2521	877

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.533	6.539	(1.059)	81138	38.4772	1340
133 Diphenylamine	169	6.592	6.592	(0.922)	309045	32.2200	1120
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.927)	393068	31.5428	1100
61 4-Bromophenylphenylether	248	6.843	6.843	(0.957)	95464	31.9058	1110
63 Hexachlorobenzene	284	6.902	6.902	(0.966)	111151	33.6619	1170
68 Phenanthrene	178	7.164	7.170	(1.002)	517903	30.2838	1050
69 Anthracene	178	7.196	7.202	(1.007)	540286	32.7572	1140
72 Di-n-butylphthalate	149	7.432	7.432	(1.040)	626352	32.8987	1140
76 Fluoranthene	202	7.881	7.886	(1.103)	535562	34.0426	1180
85 Butylbenzylphthalate	149	8.352	8.357	(0.940)	261804	34.7650	1210
89 Benzo(a)anthracene	228	8.871	8.881	(0.998)	475528	32.2774	1120
90 3,3'-Dichlorobenzidine	252	8.801	8.801	(0.990)	86839	22.1805	770
92 Chrysene	228	8.908	8.919	(1.002)	445918	31.3633	1090
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.983)	385082	34.6671	1200
94 Di-n-octylphthalate	149	9.320	9.331	(0.888)	525851	33.4395	1160
95 Benzo(b)fluoranthene	252	9.978	9.988	(0.951)	402287	34.6544	1200
96 Benzo(k)fluoranthene	252	10.010	10.021	(0.954)	416271	33.9862	1180
97 Benzo(a)pyrene	252	10.422	10.432	(0.993)	337991	33.3245	1160
99 Indeno(1,2,3-cd)pyrene	276	12.320	12.337	(1.174)	275944	28.3224	983
100 Dibenzo(a,h)anthracene	278	12.326	12.342	(1.174)	226659	28.9917	1010
101 Benzo(ghi)perylene	276	12.882	12.903	(1.227)	219698	25.9707	902
1 N-Methyl-N-nitrosomethylamine	74	2.527	2.522	(0.624)	84444	24.8420	862

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD2.i/s063009.b/s2f3011.d
Date : 30-JUN-2009 19:13
Client ID: CAMO-09-6007MS
Sample Info: 1120187164911881319111SVMF111MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

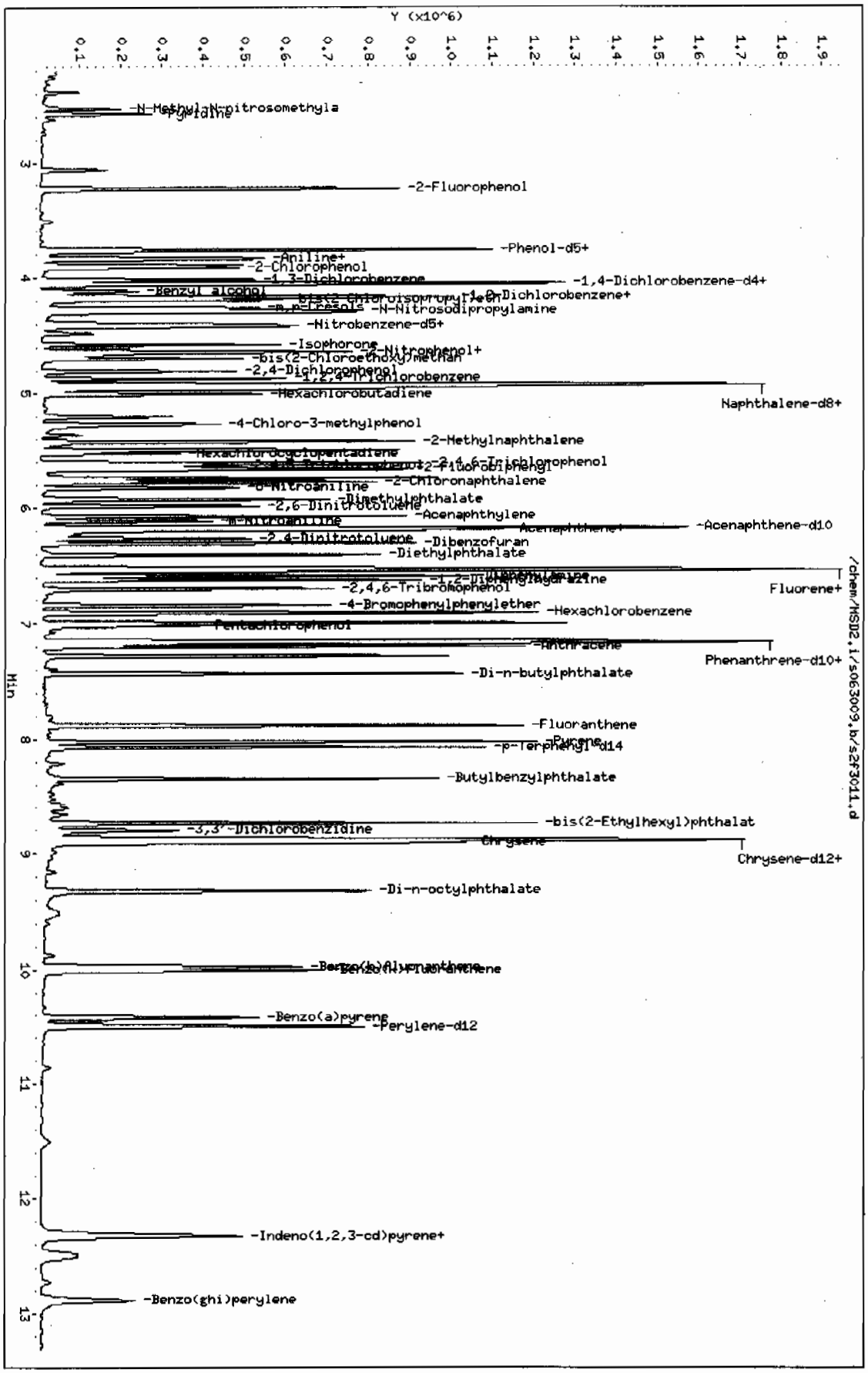

Page 1

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**1201871650**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**4.3**
Client Sample:	**QC for batch 881317**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**CAMO-09-6007MSD**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881319**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 19:32**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 14:54**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**s2f3012.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		793	ug/kg	69.6	348
108-95-2	Phenol		815	ug/kg	69.6	348
95-57-8	2-Chlorophenol		839	ug/kg	69.6	348
106-46-7	1,4-Dichlorobenzene		761	ug/kg	69.6	348
621-64-7	N-Nitrosodipropylamine		821	ug/kg	69.6	348
59-50-7	4-Chloro-3-methylphenol		1170	ug/kg	34.8	348
83-32-9	Acenaphthene		903	ug/kg	11.6	34.8
121-14-2	2,4-Dinitrotoluene		1160	ug/kg	34.8	348
100-02-7	4-Nitrophenol		1390	ug/kg	69.6	348
87-86-5	Pentachlorophenol		1360	ug/kg	69.6	348
129-00-0	Pyrene		1180	ug/kg	10.9	34.8
110-86-1	Pyridine		713	ug/kg	69.6	348
62-53-3	Aniline		888	ug/kg	122	348
111-44-4	bis(2-Chloroethyl) ether		760	ug/kg	69.6	348
541-73-1	1,3-Dichlorobenzene		755	ug/kg	69.6	348
100-51-6	Benzyl alcohol		421	ug/kg	104	348
95-50-1	1,2-Dichlorobenzene		818	ug/kg	69.6	348
108-60-1	bis(2-Chloroisopropyl)ether		781	ug/kg	69.6	348
95-48-7	o-Cresol		901	ug/kg	69.6	348
65794-96-9	m,p-Cresols		1020	ug/kg	139	348
67-72-1	Hexachloroethane		725	ug/kg	69.6	348
98-95-3	Nitrobenzene		879	ug/kg	69.6	348
78-59-1	Isophorone		888	ug/kg	69.6	348
88-75-5	2-Nitrophenol		891	ug/kg	34.8	348
105-67-9	2,4-Dimethylphenol		1020	ug/kg	69.6	348
111-91-1	bis(2-Chloroethoxy)methane		854	ug/kg	69.6	348
120-83-2	2,4-Dichlorophenol		952	ug/kg	69.6	348
65-85-0	Benzoic acid		1220	ug/kg	174	696
91-20-3	Naphthalene		795	ug/kg	10.4	34.8
106-47-8	4-Chloroaniline		1020	ug/kg	69.6	348
87-68-3	Hexachlorobutadiene		887	ug/kg	69.6	348
91-57-6	2-Methylnaphthalene		911	ug/kg	6.96	34.8
77-47-4	Hexachlorocyclopentadiene		982	ug/kg	69.6	348
88-06-2	2,4,6-Trichlorophenol		1010	ug/kg	69.6	348
95-95-4	2,4,5-Trichlorophenol		1170	ug/kg	69.6	348
91-58-7	2-Chloronaphthalene		927	ug/kg	12.2	34.8
88-74-4	2-Nitroaniline *o-Nitroaniline*		1120	ug/kg	69.6	348
99-09-2	3-Nitroaniline		1310	ug/kg	69.6	348

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**1201871650**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**4.3**
Client Sample:	**QC for batch 881317**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**CAMO-09-6007MSD**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881319**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 19:32**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 14:54**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**s2f3012.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1070	ug/kg	69.6	348
606-20-2	2,6-Dinitrotoluene		1060	ug/kg	34.8	348
208-96-8	Acenaphthylene		996	ug/kg	10.4	34.8
51-28-5	2,4-Dinitrophenol		737	ug/kg	132	696
132-64-9	Dibenzofuran		1080	ug/kg	69.6	348
84-66-2	Diethylphthalate		1160	ug/kg	69.6	348
86-73-7	Fluorene		1030	ug/kg	10.4	34.8
7005-72-3	4-Chlorophenylphenylether		1120	ug/kg	34.8	348
534-52-1	2-Methyl-4,6-dinitrophenol		910	ug/kg	69.6	348
100-01-6	4-Nitroaniline		1460	ug/kg	69.6	348
	p-Nitroaniline					
122-39-4	Diphenylamine		1180	ug/kg	69.6	348
122-66-7	Azobenzene		1140	ug/kg	69.6	348
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1190	ug/kg	34.8	348
118-74-1	Hexachlorobenzene		1230	ug/kg	69.6	348
85-01-8	Phenanthrene		1130	ug/kg	10.4	34.8
120-12-7	Anthracene		1210	ug/kg	6.96	34.8
84-74-2	Di-n-butylphthalate		1240	ug/kg	34.8	348
206-44-0	Fluoranthene		1290	ug/kg	10.4	34.8
85-68-7	Butylbenzylphthalate		1320	ug/kg	69.6	348
56-55-3	Benzo(a)anthracene		1190	ug/kg	10.4	34.8
91-94-1	3,3'-Dichlorobenzidine		1010	ug/kg	104	348
218-01-9	Chrysene		1230	ug/kg	10.4	34.8
117-81-7	bis(2-Ethylhexyl)phthalate		1280	ug/kg	69.6	348
117-84-0	Di-n-octylphthalate		1250	ug/kg	69.6	348
205-99-2	Benzo(b)fluoranthene		1370	ug/kg	10.4	34.8
207-08-9	Benzo(k)fluoranthene		1240	ug/kg	10.4	34.8
50-32-8	Benzo(a)pyrene		1310	ug/kg	10.4	34.8
193-39-5	Indeno(1,2,3-cd)pyrene		1140	ug/kg	10.4	34.8
53-70-3	Dibenzo(a,h)anthracene		1190	ug/kg	10.4	34.8
191-24-2	Benzo(ghi)perylene		1070	ug/kg	10.4	34.8
120-82-1	1,2,4-Trichlorobenzene		853	ug/kg	69.6	348

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s063009.b/s2f3012.d
Lab Smp Id: 1201871650 Client Smp ID: CAMO-09-6007MSD
Inj Date : 30-JUN-2009 19:32
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201871650|881319|1|SVMF|1|MSD
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 12 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	4.26710	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	180510	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	711148	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	382541	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	660262	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	560383	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	456500	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	231505	46.3480	1610
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	271728	44.0535	1530
$ 20 Nitrobenzene-d5	82	4.415	4.415	(0.897)	131678	24.5417	854
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	273557	25.3200	881
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	96021	73.2864	2550
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	358558	37.5651	1310

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.763	3.763	(0.929)	147262	23.4358	815
8 2-Chlorophenol	128	3.912	3.912	(0.966)	128731	24.1211	839
11 1,4-Dichlorobenzene	146	4.062	4.062	(1.003)	130035	21.8714	761
17 N-Nitrosodipropylamine	70	4.281	4.287	(1.057)	89138	23.6130	821(Q)
28 1,2,4-Trichlorobenzene	180	4.870	4.875	(0.989)	110956	24.5216	853
33 4-Chloro-3-methylphenol	107	5.266	5.260	(1.070)	131221	33.4986	1160
47 Acenaphthene	154	6.196	6.196	(1.004)	259286	25.9720	903
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	108993	33.2819	1160
52 4-Nitrophenol	139	6.207	6.196	(1.006)	64193	40.0181	1390
65 Pentachlorophenol	266	7.020	7.015	(0.982)	62389	39.1737	1360
79 Pyrene	202	8.025	8.031	(0.904)	563582	33.7849	1180
2 Pyridine	79	2.570	2.554	(0.634)	84934	20.4902	713
4 Aniline	66	3.827	3.832	(0.945)	63435	25.5245	888
7 bis(2-Chloroethyl) ether	63	3.843	3.848	(0.948)	100424	21.8452	760
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.992)	129136	21.6953	755
12 Benzyl alcohol	108	4.116	4.116	(1.016)	42580	12.1063	421
13 1,2-Dichlorobenzene	146	4.169	4.169	(1.029)	124130	23.5209	818
14 bis(2-Chloroisopropyl)ether	45	4.191	4.191	(1.034)	231487	22.4413	781
15 o-Cresol	107	4.164	4.164	(1.028)	101418	25.9061	901
18 m,p-Cresols	107	4.260	4.265	(1.051)	160622	29.4559	1020
19 Hexachloroethane	117	4.399	4.399	(1.086)	46125	20.8409	725
21 Nitrobenzene	77	4.426	4.431	(0.899)	129893	25.2625	879
22 Isophorone	82	4.576	4.581	(0.929)	249094	25.5415	888
23 2-Nitrophenol	139	4.645	4.645	(0.944)	64247	25.6101	891
24 2,4-Dimethylphenol	122	4.634	4.635	(0.941)	187040	29.2297	1020
25 bis(2-Chloroethoxy)methane	93	4.699	4.699	(0.954)	140805	24.5646	854
26 2,4-Dichlorophenol	162	4.806	4.811	(0.976)	105871	27.3752	952
27 Benzoic acid	105	4.667	4.683	(0.948)	88202	35.1231	1220(Q)
30 Naphthalene	128	4.939	4.939	(1.003)	382683	22.8513	795
31 4-Chloroaniline	127	4.950	4.950	(1.005)	192709	29.4019	1020
32 Hexachlorobutadiene	225	5.003	5.004	(1.016)	58563	25.5092	887
34 2-Methylnaphthalene	142	5.421	5.421	(1.101)	254846	26.1964	911
36 Hexachlorocyclopentadiene	237	5.522	5.522	(0.895)	46587	28.2207	982
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.909)	81895	28.9633	1010
38 2,4,5-Trichlorophenol	196	5.640	5.635	(0.914)	109836	33.6047	1170
40 2-Chloronaphthalene	162	5.774	5.779	(0.936)	249821	26.6456	927
42 o-Nitroaniline	65	5.827	5.827	(0.945)	92004	32.2352	1120
41 m-Nitroaniline	138	6.116	6.116	(0.991)	85847	37.6063	1310
43 Dimethylphthalate	163	5.929	5.940	(0.961)	334452	30.7421	1070
44 2,6-Dinitrotoluene	165	5.988	5.993	(0.971)	80004	30.3836	1060
45 Acenaphthylene	152	6.079	6.079	(0.985)	434790	28.6215	996
48 2,4-Dinitrophenol	184	6.186	6.186	(1.003)	14095	21.1770	737(Q)
49 Dibenzofuran	168	6.309	6.309	(1.023)	400188	30.9581	1080
51 Diethylphthalate	149	6.410	6.416	(1.039)	353577	33.2996	1160
53 Fluorene	166	6.539	6.544	(1.060)	320388	29.5614	1030
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.056)	160044	32.2469	1120
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	35903	26.1556	910

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.533	6.539	(1.059)	80983	41.9685	1460
133 Diphenylamine	169	6.592	6.592	(0.922)	299330	33.9445	1180
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.927)	374621	32.6994	1140
61 4-Bromophenylphenylether	248	6.843	6.843	(0.957)	94156	34.2289	1190
63 Hexachlorobenzene	284	6.902	6.902	(0.966)	107355	35.3640	1230
68 Phenanthrene	178	7.164	7.170	(1.002)	508631	32.3504	1120
69 Anthracene	178	7.196	7.202	(1.007)	528724	34.8680	1210
72 Di-n-butylphthalate	149	7.432	7.432	(1.040)	625214	35.7194	1240
76 Fluoranthene	202	7.881	7.886	(1.103)	537711	37.1772	1290
85 Butylbenzylphthalate	149	8.352	8.357	(0.940)	264003	37.8809	1320
89 Benzo(a)anthracene	228	8.871	8.881	(0.999)	466305	34.2009	1190
90 3,3'-Dichlorobenzidine	252	8.801	8.801	(0.991)	105550	29.1313	1010
92 Chrysene	228	8.908	8.919	(1.003)	466074	35.4214	1230
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.984)	377590	36.7307	1280
94 Di-n-octylphthalate	149	9.320	9.331	(0.888)	533246	35.9201	1250
95 Benzo(b)fluoranthene	252	9.972	9.988	(0.950)	432285	39.4462	1370
96 Benzo(k)fluoranthene	252	10.010	10.021	(0.954)	412209	35.6497	1240
97 Benzo(a)pyrene	252	10.416	10.432	(0.992)	360262	37.6261	1310
99 Indeno(1,2,3-cd)pyrene	276	12.315	12.337	(1.173)	301001	32.7258	1140
100 Dibenzo(a,h)anthracene	278	12.320	12.342	(1.174)	252812	34.2539	1190
101 Benzo(ghi)perylene	276	12.882	12.903	(1.227)	244928	30.6696	1070
1 N-Methyl-N-nitrosomethylamine	74	2.527	2.522	(0.624)	70557	22.8105	793

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD2.i/s063009.b/s2f3012.d
Date : 30-JUN-2009 19:32
Client ID: CAMO-09-6007MSD
Sample Info: I120187165018813191|1|SVHF|1|MSD
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

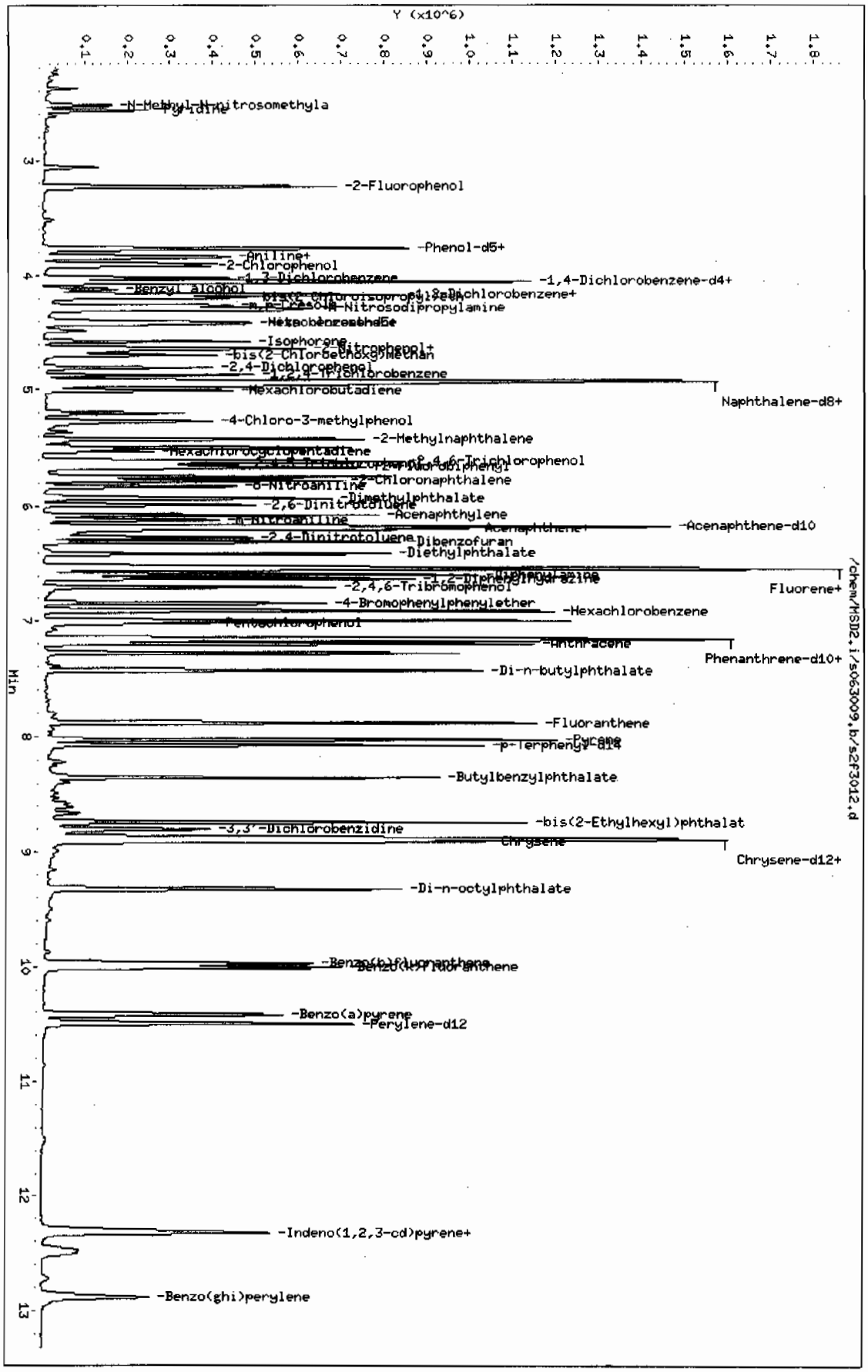

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 881317 **Verified by:** _____

Analyst: Robin Hunt

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201871647 MB	30-JUN-2009 14:54:29	30	1	0.03333
1201871648 LCS	30-JUN-2009 14:54:29	30	1	0.03333
232424001	30-JUN-2009 14:54:29	30.24	1	0.03307
232426001	30-JUN-2009 14:54:29	30.03	1	0.0333
232426002	30-JUN-2009 14:54:29	30.06	1	0.03327
232428001	30-JUN-2009 14:54:29	30.06	1	0.03327
1201871649 MS (232428001)	30-JUN-2009 14:54:29	30.09	1	0.03323
1201871650 MSD (232428001)	30-JUN-2009 14:54:29	30.03	1	0.0333
232428002	30-JUN-2009 14:54:29	30.08	1	0.03324
232428003	30-JUN-2009 14:54:29	30.15	1	0.03317
232428004	30-JUN-2009 14:54:29	30.17	1	0.03315
232428005	30-JUN-2009 14:54:29	30.12	1	0.0332
232428006	30-JUN-2009 14:54:29	30.17	1	0.03315
232428007	30-JUN-2009 14:54:29	30.19	1	0.03312
232428008	30-JUN-2009 14:54:29	30.15	1	0.03317
232428009	30-JUN-2009 14:54:29	30.01	1	0.03332
232428010	30-JUN-2009 14:54:29	30.25	1	0.03306
232428011	30-JUN-2009 14:54:29	30.02	1	0.03331
232428012	30-JUN-2009 14:54:29	30.16	1	0.03316
232428013	30-JUN-2009 14:54:29	30.16	1	0.03316
232428014	30-JUN-2009 14:54:29	30.19	1	0.03312
232428015	30-JUN-2009 14:54:29	30.12	1	0.0332

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201871648	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
LCS	1201871648	BENZIDINE LCS	UE090622-18	1	mL
MS	1201871649	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
MS	1201871649	BENZIDINE LCS	UE090622-18	1	mL
MSD	1201871650	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
MSD	1201871650	BENZIDINE LCS	UE090622-18	1	mL
SURR	All	BNA for all Surrogate	UE090506-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1143854-D	150	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: jda

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD2

DATE: 06/26/2009 METHOD:See raw data OPERATOR:ANN REVIEWED BY:_____ DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 3 on pg. 3 SOLVENT LOT 1116462-D
Multiplier Voltage: 941 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
SOP: GL-OA-E-009 Rev. 22

Sequence Number: /chem/MSD2.i/s062609.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s2f2601.d	WBN090624-01	AGS1	26-JUN-2009 20:54	50PPM	s062609	1.0	DFTPP	DUSE
s2f2602.d	WBN090624-01	AGS1	26-JUN-2009 21:09	50PPM	s062609	1.0	DFTPP	DUSE
s2f2603.d	INSTBLK	AGS1	26-JUN-2009 21:21	------	s062609	1.0	INSTBLK	DUSE
s2f2604.d	WBN090626-08	AGS1	26-JUN-2009 21:40	1 PPM	s062609	1.0	MEGA001	DUSE
s2f2605.d	WBN090626-07	AGS1	26-JUN-2009 22:04	10 PPM	s062609	1.0	MEGA010	DUSE
s2f2606.d	WBN090626-06	AGS1	26-JUN-2009 22:28	20 PPM	s062609	1.0	MEGA020	DUSE
s2f2607.d	WBN090626-05.1	AGS1	26-JUN-2009 22:53	40 PPM	s062609	1.0	MEGA040	DUSE
s2f2608.d	WBN090626-04	AGS1	26-JUN-2009 23:17	50 PPM	s062609	1.0	MEGA050	DUSE
s2f2609.d	WBN090626-03	AGS1	26-JUN-2009 23:41	80 PPM	s062609	1.0	MEGA080	DUSE
s2f2610.d	WBN090626-02	AGS1	27-JUN-2009 00:05	100 PPM	s062609	1.0	MEGA100	DUSE
s2f2611.d	WBN090626-01	AGS1	27-JUN-2009 00:29	120 PPM	s062609	1.0	MEGA120	DUSE
s2f2612.d	INSTBLK	AGS1	27-JUN-2009 00:54	------	s062609	1.0	INSTBLK	DUSE
s2f2613.d	WBN090626-09.1	AGS1	27-JUN-2009 01:18	40 PPM	s062609	1.0	MEGAICV	DUSE
s2f2614-D.d	WBN090624-01	AGS1	27-JUN-2009 01:45	50PPM	s062609	1.0	DFTPP	TUNE: 8270D - MEGA
s2f2614.d	WBN090624-01	AGS1	27-JUN-2009 01:45	50PPM	s062609	1.0	DFTPP	TUNE: 8270C - MEGA
s2f2615.d	INSTBLK	AGS1	27-JUN-2009 01:57	------	s062609	1.0	INSTBLK	
s2f2616.d	WBN090626-08	AGS1	27-JUN-2009 02:16	1 PPM	s062609	1.0	MEGA001	lev 1
s2f2617.d	WBN090626-07	AGS1	27-JUN-2009 02:40	10 PPM	s062609	1.0	MEGA010	lev 2
s2f2618.d	WBN090626-06	AGS1	27-JUN-2009 03:04	20 PPM	s062609	1.0	MEGA020	lev 3

s2f2619.d	WBN090626-05.1	AGS1	27-JUN-2009 03:29	40 PPM	s062609	1.0	MEGA040	lev 4
s2f2620.d	WBN090626-04	AGS1	27-JUN-2009 03:53	50 PPM	s062609	1.0	MEGA050	lev 5
s2f2621.d	WBN090626-03	AGS1	27-JUN-2009 04:17	80 PPM	s062609	1.0	MEGA080	lev 6
s2f2622.d	WBN090626-02	AGS1	27-JUN-2009 04:41	100 PPM	s062609	1.0	MEGA100	lev 7
s2f2623.d	WBN090626-01	AGS1	27-JUN-2009 05:05	120 PPM	s062609	1.0	MEGA120	lev 8
s2f2624.d	INSTBLK	AGS1	27-JUN-2009 05:30	------	s062609	1.0	INSTBLK	
s2f2625-625.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609	1.0	MEGAICV	625 some analytes failed- C55/C27/C179/C26-phthalic >20% drift
s2f2625-BOE.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609	1.0	MEGAICV	pass BOE
s2f2625-D.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609	1.0	MEGAICV	pass 8270D
s2f2625.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609	1.0	MEGAICV	ICV pass 205606

Instrument Batch: /chem/MSD2.i/s062609.b

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD2

DATE: 06/28/2009 METHOD:8270C MSD2-DFTPP8270D.m OPERATOR:AGS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 3 on pg. 3 SOLVENT LOT 1116462-D
Multiplier Voltage: 941 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
SOP: GL-OA-E-009 Rev. 22

Sequence Number: /chem/MSD2.i/s062809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s2f2801-D.d	WBN090624-01	AGS1	28-JUN-2009 18:00	50PPM	s062809	1.0	DFTPP	TUNE: 8270D - AP/PEST/HEX
s2f2801.d	WBN090624-01	AGS1	28-JUN-2009 18:00	50PPM	s062809	1.0	DFTPP	TUNE: 8270C - AP/PEST/HEX
s2f2802.d	INSTBLK	AGS1	28-JUN-2009 18:12	------	s062809	1.0	INSTBLK	
s2f2803-D.d	WBN090528-07	AGS1	28-JUN-2009 18:31	10 PPM	s062809	1.0	APICAL	8270D req. as sample for linear analytes; benzidine <70%
s2f2803.d	WBN090528-07	AGS1	28-JUN-2009 18:31	10 PPM	s062809	1.0	APICAL	lev 2
s2f2804.d	WBN090528-06	AGS1	28-JUN-2009 18:51	20 PPM	s062809	1.0	APICAL	lev 3
s2f2805.d	WBN090528-05.1	AGS1	28-JUN-2009 19:10	40 PPM	s062809	1.0	APICAL	lev 4
s2f2806.d	WBN090528-04	AGS1	28-JUN-2009 19:30	50 PPM	s062809	1.0	APICAL	lev 5
s2f2807.d	WBN090528-03	AGS1	28-JUN-2009 19:49	80 PPM	s062809	1.0	APICAL	lev 6
s2f2808.d	WBN090528-02	AGS1	28-JUN-2009 20:08	100 PPM	s062809	1.0	APICAL	lev 7
s2f2809.d	WBN090528-01	AGS1	28-JUN-2009 20:28	120 PPM	s062809	1.0	APICAL	lev 8
s2f2810.d	WBN090609-24	AGS1	28-JUN-2009 20:47	10 PPM	s062809	1.0	PESTICAL	lev 2
s2f2811.d	WBN090609-23	AGS1	28-JUN-2009 21:07	20 PPM	s062809	1.0	PESTICAL	lev 3
s2f2812.d	WBN090609-22.1	AGS1	28-JUN-2009 21:26	40 PPM	s062809	1.0	PESTICAL	lev 4
s2f2813.d	WBN090609-21	AGS1	28-JUN-2009 21:45	50 PPM	s062809	1.0	PESTICAL	lev 5
s2f2814.d	WBN090609-20	AGS1	28-JUN-2009 22:05	80 PPM	s062809	1.0	PESTICAL	lev 6
s2f2815.d	WBN090609-19	AGS1	28-JUN-2009 22:24	100 PPM	s062809	1.0	PESTICAL	lev 7
s2f2816.d	WBN090609-18	AGS1	28-JUN-2009 22:44	120 PPM	s062809	1.0	PESTICAL	lev 8
s2f2817.d	WBN090624-16	AGS1	28-JUN-2009 23:03	500 PPM	s062809	1.0	HEXICAL	lev 2

s2f2818.d	WBN090624-15	AGS1	28-JUN-2009 23:23	1000 PPM	s062809		1.0	HEXICAL	lev 3
s2f2819.d	WBN090624-14	AGS1	28-JUN-2009 23:42	1250 PPM	s062809		1.0	HEXICAL	lev 4
s2f2820.d	WBN090624-13	AGS1	29-JUN-2009 00:01	1500 PPM	s062809		1.0	HEXICAL	lev 5
s2f2821.d	WBN090624-12	AGS1	29-JUN-2009 00:21	1750 PPM	s062809		1.0	HEXICAL	lev 6
s2f2822.d	UBN090317-02.6	AGS1	29-JUN-2009 00:40	2000 PPM	s062809		1.0	HEXICAL	lev 7
s2f2823-D.d	WBN090528-8.1	AGS1	29-JUN-2009 00:59	40 PPM	s062809		1.0	APICV	8270D AP ICV: PASSES
s2f2823.d	WBN090528-8.1	AGS1	29-JUN-2009 00:59	40 PPM	s062809		1.0	APICV	8270C AP ICV: PASSES
s2f2824-D.d	WBN090609-25.1	AGS1	29-JUN-2009 01:19	40 PPM	s062809		1.0	PESTICV	8270D PEST ICV: PASSES
s2f2824.d	WBN090609-25.1	AGS1	29-JUN-2009 01:19	40 PPM	s062809		1.0	PESTICV	8270C PEST ICV: PASSES
s2f2825-D.d	WBN090624-10.1	AGS1	29-JUN-2009 01:38	1250 PPM	s062809		1.0	HEXICV	8270D HEX ICV: PASSES
s2f2825.d	WBN090624-10.1	AGS1	29-JUN-2009 01:38	1250 PPM	s062809		1.0	HEXICV	8270C HEX ICV: PASSES
s2f2826-D.d	WBN090624-01	AGS1	29-JUN-2009 02:01	50PPM	s062809		1.0	DFTPP	TUNE: 8270D - NEV
s2f2826.d	WBN090624-01	AGS1	29-JUN-2009 02:01	50PPM	s062809		1.0	DFTPP	TUNE: 8270C - NEV
s2f2827.d	INSTBLK	AGS1	29-JUN-2009 02:12	------	s062809		1.0	INSTBLK	
s2f2828-D.d	UBN090428-01	AGS1	29-JUN-2009 02:32	10 PPM	s062809		1.0	NEVICAL	8270D
s2f2828.d	UBN090428-01	AGS1	29-JUN-2009 02:32	10 PPM	s062809		1.0	NEVICAL	lev 2
s2f2829.d	UBN090428-02	AGS1	29-JUN-2009 02:51	20 PPM	s062809		1.0	NEVICAL	lev 3
s2f2830.d	UBN090428-03	AGS1	29-JUN-2009 03:11	40 PPM	s062809		1.0	NEVICAL	lev 4
s2f2831.d	UBN090428-04	AGS1	29-JUN-2009 03:30	50 PPM	s062809		1.0	NEVICAL	lev 5
s2f2832.d	UBN090428-05	AGS1	29-JUN-2009 03:49	80 PPM	s062809		1.0	NEVICAL	DUSE: disable level for all NEV analytes
s2f2833.d	UBN090428-06	AGS1	29-JUN-2009 04:09	100 PPM	s062809		1.0	NEVICAL	lev 7
s2f2834.d	UBN090428-07	AGS1	29-JUN-2009 04:28	120 PPM	s062809		1.0	NEVICAL	lev 8

Instrument Batch: /chem/MSD2.i/s062809.b

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD2

DATE: 06/30/2009 METHOD:8270C MSD2-DFTPP.m OPERATOR:AGS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 3 on pg. 3 SOLVENT LOT 1116462-D
Multiplier Voltage: 941 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
SOP: GL-OA-E-009 Rev. 22

Sequence Number: /chem/MSD2.i/s063009.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s2f3001.d	WBN090624-01	AGS1	30-JUN-2009 15:51	50PPM	s063009	1.0	DFTPP	TUNE: PASSES
s2f3002.d	WBN090626-05.3	AGS1	30-JUN-2009 16:03	40 PPM	s063009	1.0	MEGACVS	MEGA CVS: PASSES (IS1: 199810)
s2f3003.d	WBN090619-01.2	AGS1	30-JUN-2009 16:27	40 PPM	s063009	1.0	APCVS	AP CVS: PASSES
s2f3004.d	WBN090609-22.5	AGS1	30-JUN-2009 16:53	40 PPM	s063009	1.0	PESTCVS	PEST CVS: PASSES
s2f3005-1.d	1201871647	AGS1	30-JUN-2009 17:13	881319	09-2475	1.0	MB	REPORT
s2f3005-2.d	1201871647	AGS1	30-JUN-2009 17:13	881319	09-2477	1.0	MB	REPORT
s2f3005.d	1201871647	AGS1	30-JUN-2009 17:13	881319	09-2473	1.0	MB	REPORT
s2f3006-1.d	1201871648	AGS1	30-JUN-2009 17:33	881319	09-2475	1.0	LCS	REPORT
s2f3006-2.d	1201871648	AGS1	30-JUN-2009 17:33	881319	09-2477	1.0	LCS	REPORT
s2f3006.d	1201871648	AGS1	30-JUN-2009 17:33	881319	09-2473	1.0	LCS	REPORT
s2f3007.d	232424001	AGS1	30-JUN-2009 17:53	881319	09-2473	1.0	LANL	REPORT
s2f3008.d	232426001	AGS1	30-JUN-2009 18:12	881319	09-2475	1.0	LANL	REPORT
s2f3009.d	232426002	AGS1	30-JUN-2009 18:32	881319	09-2475	1.0	LANL	REPORT
s2f3010.d	232428001	AGS1	30-JUN-2009 18:53	881319	09-2477	1.0	LANL	REPORT
s2f3011.d	1201871649	AGS1	30-JUN-2009 19:13	881319	09-2477	1.0	MS	REPORT
s2f3012.d	1201871650	AGS1	30-JUN-2009 19:32	881319	09-2477	1.0	MSD	REPORT
s2f3013.d	232428002	AGS1	30-JUN-2009 19:53	881319	09-2477	1.0	LANL	REPORT
s2f3014.d	232428003	AGS1	30-JUN-2009 20:13	881319	09-2477	1.0	LANL	DUSE: fails surr - see rerun s2f3027
s2f3015.d	232428004	AGS1	30-JUN-2009 20:33	881319	09-2477	1.0	LANL	REPORT

s2f3016.d	232428005	AGS1	30-JUN-2009 20:53	881319	09-2477		1.0	LANL	REPORT
s2f3017.d	232428006	AGS1	30-JUN-2009 21:13	881319	09-2477		1.0	LANL	REPORT
s2f3018.d	232428007	AGS1	30-JUN-2009 21:33	881319	09-2477		1.0	LANL	REPORT
s2f3019.d	232428008	AGS1	30-JUN-2009 21:53	881319	09-2477		1.0	LANL	REPORT
s2f3020.d	232428009	AGS1	30-JUN-2009 22:12	881319	09-2477		1.0	LANL	REPORT
s2f3021.d	232428010	AGS1	30-JUN-2009 22:32	881319	09-2477		1.0	LANL	REPORT
s2f3022.d	232428011	AGS1	30-JUN-2009 22:52	881319	09-2477		1.0	LANL	REPORT
s2f3023.d	232428012	AGS1	30-JUN-2009 23:12	881319	09-2477		1.0	LANL	REPORT
s2f3024.d	232428013	AGS1	30-JUN-2009 23:32	881319	09-2477		1.0	LANL	REPORT
s2f3025.d	232428014	AGS1	30-JUN-2009 23:52	881319	09-2477		1.0	LANL	REPORT
s2f3026.d	232428015	AGS1	01-JUL-2009 00:12	881319	09-2477		1.0	LANL	REPORT
s2f3027.d	232428003	AGS1	01-JUL-2009 00:32	881319	09-2477		1.0	LANL	REPORT

Instrument Batch: /chem/MSD2.i/s063009.b

GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2477

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3550B
Analytical Batch Number:	881260
Prep Batch Number:	881259

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
232428001	CAMO-09-6007
232428002	CAMO-09-6006
232428003	CAMO-09-6008
232428004	CAMO-09-6009
232428012	CAMO-09-6038
232428015	CAMO-09-6049
1201871515	Method Blank (MB)
1201871516	Laboratory Control Sample (LCS)
1201871517	232064001(CAMO-09-10142) Matrix Spike (MS)
1201871518	232064001(CAMO-09-10142) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 13.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analytes in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846

method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
A LANL sample of similar matrix from another SDG (09-2403) was selected for the matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina.

Sample Dilutions
Sample 232428012 (CAMO-09-6038) was diluted at 1:5 prior to analysis due to the oily matrix of the extract.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
Nonconformance report (NCR) is for documentation of any procedural anomalies that may deviate from referenced SOP or contractual document. A NCR was not required for this SDG.

Manual Integration
Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD8A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide I)
ECD8A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticide II)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Jimmi Cao Date: 7/20/09

Roadmap for LANL 09-2477 PCB

This roadmap was analyzed by jen01212 on 07-01-2009, 14:32.
This roadmap was reviewed by jim01140 on 07-02-2009, 09:45.
This roadmap was packaged by sha01289 on 07-20-2009, 15:39.
This roadmap was validated by hea01125 on 07-20-2009, 19:40.
This roadmap was validated by jim01140 on 07-21-2009, 07:51.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/019f1901.d	232428001	sample	30-JUN-2009	14:52	09-2477.sub	CAMO-09-6007	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/020f2001.d	232428002	sample	30-JUN-2009	15:09	09-2477.sub	CAMO-09-6006	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/021f2101.d	232428003	sample	30-JUN-2009	15:25	09-2477.sub	CAMO-09-6008	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/024f2401.d	232428004	sample	30-JUN-2009	16:06	09-2477.sub	CAMO-09-6009	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/025f2501.d	232428012	sample	30-JUN-2009	16:23	09-2477.sub	CAMO-09-6038	5.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/026f2601.d	232428015	sample	30-JUN-2009	16:39	09-2477.sub	CAMO-09-6049	1.00000	881260	UPLOAD BOTH, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/019b1901.d	232428001	sample	30-JUN-2009	14:52	09-2477.sub	CAMO-09-6007	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/020b2001.d	232428002	sample	30-JUN-2009	15:09	09-2477.sub	CAMO-09-6006	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/021b2101.d	232428003	sample	30-JUN-2009	15:25	09-2477.sub	CAMO-09-6008	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/024b2401.d	232428004	sample	30-JUN-2009	16:06	09-2477.sub	CAMO-09-6009	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/025b2501.d	232428012	sample	30-JUN-2009	16:23	09-2477.sub	CAMO-09-6038	5.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/026b2601.d	232428015	sample	30-JUN-2009	16:39	09-2477.sub	CAMO-09-6049	1.00000	881260	UPLOAD BOTH, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/012f1201-2.d	1201871515	mb	30-JUN-2009	13:05	09-2477.sub	PBLK01	1.00000	881260	
☐	N	/chem/ecd8a.i/063009.b/013f1301-2.d	1201871516	lcs	30-JUN-2009	13:18	09-2477.sub	PBLK01LCS	1.00000	881260	

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/012b1201-2.d	1201871515	mb	30-JUN-2009	13:05	09-2477.sub	PBLK01	1.00000	881260	
☐	N	/chem/ecd8a.i/063009.b/013b1301-2.d	1201871516	lcs	30-JUN-2009	13:18	09-2477.sub	PBLK01LCS	1.00000	881260	

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428002	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6006	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 15:09	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	020f2001.d	**Column:**	1 CLP1	**Level:**	LOW
	020b2001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.76	ug/kg	1.25	3.76	1
11104-28-2	Aroclor-1221	U	3.76	ug/kg	1.25	3.76	1
11141-16-5	Aroclor-1232	U	3.76	ug/kg	1.25	3.76	1
53469-21-9	Aroclor-1242	U	3.76	ug/kg	1.25	3.76	1
12672-29-6	Aroclor-1248	U	3.76	ug/kg	1.25	3.76	1
11097-69-1	Aroclor-1254		4.80	ug/kg	1.25	3.76	2
11096-82-5	Aroclor-1260		5.60	ug/kg	1.25	3.76	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09–2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428001**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**4.3**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO–09–6007**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL–OA–E–040**
Batch ID:	**881260**	**Inst:**	**ECD8A.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 14:52**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/29/2009 23:24**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**019f1901.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	019b1901.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.48	ug/kg	1.16	3.48	1
11104–28–2	Aroclor–1221	U	3.48	ug/kg	1.16	3.48	1
11141–16–5	Aroclor–1232	U	3.48	ug/kg	1.16	3.48	1
53469–21–9	Aroclor–1242	U	3.48	ug/kg	1.16	3.48	1
12672–29–6	Aroclor–1248	U	3.48	ug/kg	1.16	3.48	1
11097–69–1	Aroclor–1254	U	3.48	ug/kg	1.16	3.48	1
11096–82–5	Aroclor–1260	U	3.48	ug/kg	1.16	3.48	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428003**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**23.1**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6008**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**881260**	**Inst:**	**ECD8A.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 15:25**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/29/2009 23:24**	**Aliquot:**	**30.08 g**	**Final Volume:**	**1 mL**
Data File:	**021f2101.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	021b2101.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.32	ug/kg	1.44	4.32	1
11104-28-2	Aroclor-1221	U	4.32	ug/kg	1.44	4.32	1
11141-16-5	Aroclor-1232	U	4.32	ug/kg	1.44	4.32	1
53469-21-9	Aroclor-1242	U	4.32	ug/kg	1.44	4.32	1
12672-29-6	Aroclor-1248	U	4.32	ug/kg	1.44	4.32	1
11097-69-1	Aroclor-1254	P	43.2	ug/kg	1.44	4.32	2
11096-82-5	Aroclor-1260		20.8	ug/kg	1.44	4.32	2

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428004	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6009	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 16:06	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	024f2401.d	**Column:**	1 CLP1	**Level:**	LOW
	024b2401.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.01	ug/kg	1.34	4.01	1
11104-28-2	Aroclor-1221	U	4.01	ug/kg	1.34	4.01	1
11141-16-5	Aroclor-1232	U	4.01	ug/kg	1.34	4.01	1
53469-21-9	Aroclor-1242	U	4.01	ug/kg	1.34	4.01	1
12672-29-6	Aroclor-1248	U	4.01	ug/kg	1.34	4.01	1
11097-69-1	Aroclor-1254	P	9.40	ug/kg	1.34	4.01	2
11096-82-5	Aroclor-1260		5.30	ug/kg	1.34	4.01	2

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428012	**Date Received:**	06/26/2009 08:40	**%Moisture:**	25.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6038	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 16:23	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	025f2501.d	**Column:**	1 CLP1	**Level:**	LOW
	025b2501.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	22.3	ug/kg	7.42	22.3	1
11104–28–2	Aroclor–1221	U	22.3	ug/kg	7.42	22.3	1
11141–16–5	Aroclor–1232	U	22.3	ug/kg	7.42	22.3	1
53469–21–9	Aroclor–1242	U	22.3	ug/kg	7.42	22.3	1
12672–29–6	Aroclor–1248	U	22.3	ug/kg	7.42	22.3	1
11097–69–1	Aroclor–1254		37.2	ug/kg	7.42	22.3	2
11096–82–5	Aroclor–1260		35.6	ug/kg	7.42	22.3	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232428015**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**11.6**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6049**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**881260**	**Inst:**	**ECD8A.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 16:39**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/29/2009 23:24**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**026f2601.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	026b2601.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.77	ug/kg	1.26	3.77	1
11104-28-2	Aroclor-1221	U	3.77	ug/kg	1.26	3.77	1
11141-16-5	Aroclor-1232	U	3.77	ug/kg	1.26	3.77	1
53469-21-9	Aroclor-1242	U	3.77	ug/kg	1.26	3.77	1
12672-29-6	Aroclor-1248	U	3.77	ug/kg	1.26	3.77	1
11097-69-1	Aroclor-1254		6.60	ug/kg	1.26	3.77	2
11096-82-5	Aroclor-1260		6.70	ug/kg	1.26	3.77	1

QUALITY CONTROL SUMMARY

PCB

Surrogate Recovery Report

SDG Number: 09–2477

Matrix Type: SOLID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1201871515	MB for batch 881259	76	71	85	77
1201871516	LCS for batch 881259	80	74	83	76
232428001	CAMO–09–6007	63	59	65	60
232428002	CAMO–09–6006	57	53	55	53
232428003	CAMO–09–6008	52	49	48	88
232428004	CAMO–09–6009	46	43	43	55
232428012	CAMO–09–6038	59 D	54 D	56 D	57 D
232428015	CAMO–09–6049	64	60	59	56

Surrogate	Acceptance Limits
4CMX = 4cmx	(34%–105%)
DCB = Decachlorobiphenyl	(33%–115%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D.Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2477
Client ID: LCS for batch 881259
Lab Sample ID: 1201871516
Instrument: ECD8A.I
Analyst: JAOC
Inj. Vol: 1 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 13:18
Prep Batch ID: 881259
Batch ID: 881260
Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	LCS Aroclor-1016	33.3	0.0	24.1	72	41-110
11096-82-5	LCS Aroclor-1260	33.3	0.0	32.0	96	48-110

PCB

Quality Control Summary
Spike Recovery Report

SDG Number:	**09–2477**	**Sample Type:**	**Matrix Spike**
Client ID:	**CAMO–09–10142MS**	**Matrix:**	**R**
Lab Sample ID:	**1201871517**	**%Moisture:**	**5.6**
Instrument:	**ECD8A.I**	**Analysis Date:**	**06/30/2009 13:46**
Analyst:	**JAOC**	**Prep Batch ID:**	**881259**
Inj. Vol:	**1 uL**	**Batch ID:**	**881260**

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674–11–2	MS	Aroclor–1016	35.3	0.00	U	18.7	53	23–117
11096–82–5	MS	Aroclor–1260	35.3	0.00	U	25.7	73	27–116

PCB

Quality Control Summary
Spike Recovery Report

SDG Number:	**09-2477**	**Sample Type:**	**Matrix Spike Duplicate**
Client ID:	**CAMO-09-10142MSD**	**Matrix:**	**R**
Lab Sample ID:	**1201871518**	**%Moisture:**	**5.6**
Instrument:	**ECD8A.I**	**Analysis Date:**	**06/30/2009 14:03**
Analyst:	**JAOC**	**Prep Batch ID:**	**881259**
Inj. Vol:	**1 uL**	**Batch ID:**	**881260**

Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674-11-2	MSD Aroclor-1016	35.3	0.00	U	18.9	54	23-117	1	0-30
11096-82-5	MSD Aroclor-1260	35.3	0.00	U	27.9	79	27-116	8	0-30

Method Blank Summary

SDG Number:	09-2477	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881259	Instrument ID:	ECD8A.I_2 ECD8A.I_1	Data File:	012b1201-1.d 012f1201-1.d
Lab Sample ID:	1201871515				
Column:	CLP2 CLP1	Prep Date:	06/29/2009 23:24	Analyzed:	06/30/09 13:05
		Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 881259	1201871516	013f1301-1.d 013b1301-1.d	06/30/09	1318
04 CAMO-09-6007	232428001	019f1901.d 019b1901.d	06/30/09	1452
05 CAMO-09-6006	232428002	020f2001.d 020b2001.d	06/30/09	1509
06 CAMO-09-6008	232428003	021f2101.d 021b2101.d	06/30/09	1525
07 CAMO-09-6009	232428004	024f2401.d 024b2401.d	06/30/09	1606
08 CAMO-09-6038	232428012	025f2501.d 025b2501.d	06/30/09	1623
09 CAMO-09-6049	232428015	026f2601.d 026b2601.d	06/30/09	1639

SAMPLE DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428002	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6006	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 15:09	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	020f2001.d	**Column:**	1 CLP1	**Level:**	LOW
	020b2001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.76	ug/kg	1.25	3.76	1
11104-28-2	Aroclor-1221	U	3.76	ug/kg	1.25	3.76	1
11141-16-5	Aroclor-1232	U	3.76	ug/kg	1.25	3.76	1
53469-21-9	Aroclor-1242	U	3.76	ug/kg	1.25	3.76	1
12672-29-6	Aroclor-1248	U	3.76	ug/kg	1.25	3.76	1
11097-69-1	Aroclor-1254		4.80	ug/kg	1.25	3.76	2
11096-82-5	Aroclor-1260		5.60	ug/kg	1.25	3.76	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/020f2001.d
Lab Smp Id: 232428002 Client Smp ID: CAMO-09-6006
Inj Date : 30-JUN-2009 15:09
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428002|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6006|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	11.42090	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	18268580	114.147	4.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	18554246	110.492	4.2	80.00- 120.00	100.00(M)
6 Aroclor-1254					CAS #: 11097-69-1		
3.784	3.786	-0.002	388784	80.5893	3.0	80.00- 120.00	100.00(M)
3.971	3.972	-0.001	461225	73.5786	2.8	111.24- 151.24	118.63
4.168	4.168	0.000	414359	87.0510	3.3	78.96- 118.96	106.58
4.252	4.254	-0.002	592940	74.6469	2.8	142.62- 182.62	152.51
4.577	4.581	-0.004	1504252	221.651	8.3	126.45- 166.45	386.91
Average of Peak Concentrations =					4.0		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	713755	100.129	3.8	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	1504252	149.105	5.6	122.54- 162.54	210.75
4.772	4.774	-0.002	2394325	208.526	7.8	138.26- 178.26	335.45
5.239	5.242	-0.003	1637161	122.218	4.6	171.16- 211.16	229.37
5.435	5.437	-0.002	1125958	171.857	6.4	74.08- 114.08	157.75
Average of Peak Concentrations =					5.6		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/020f2001.d
Date : 30-JUN-2009 15:09
Client ID: CAMD-09-6006
Sample Info: 1232428002111
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

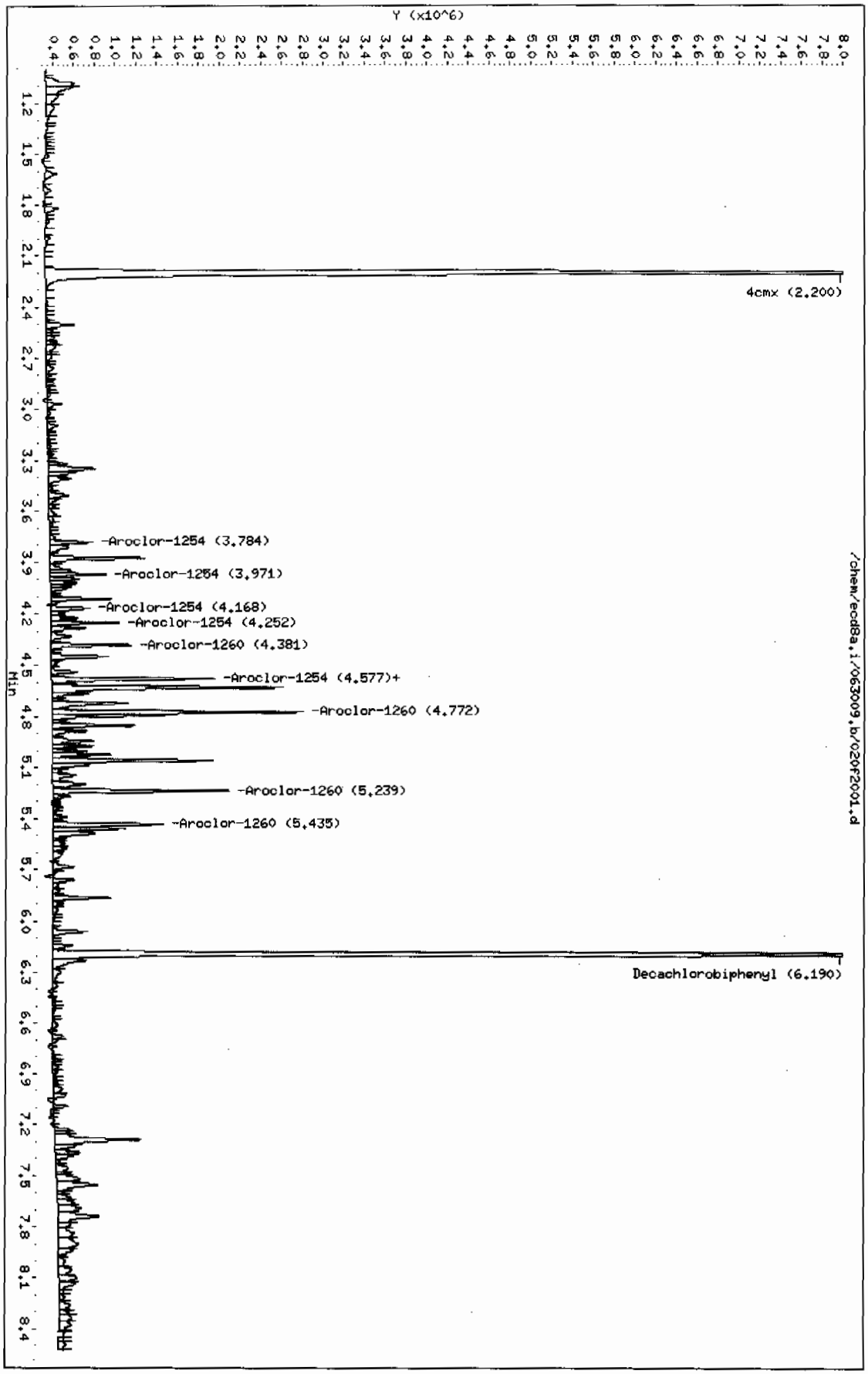

Page 1

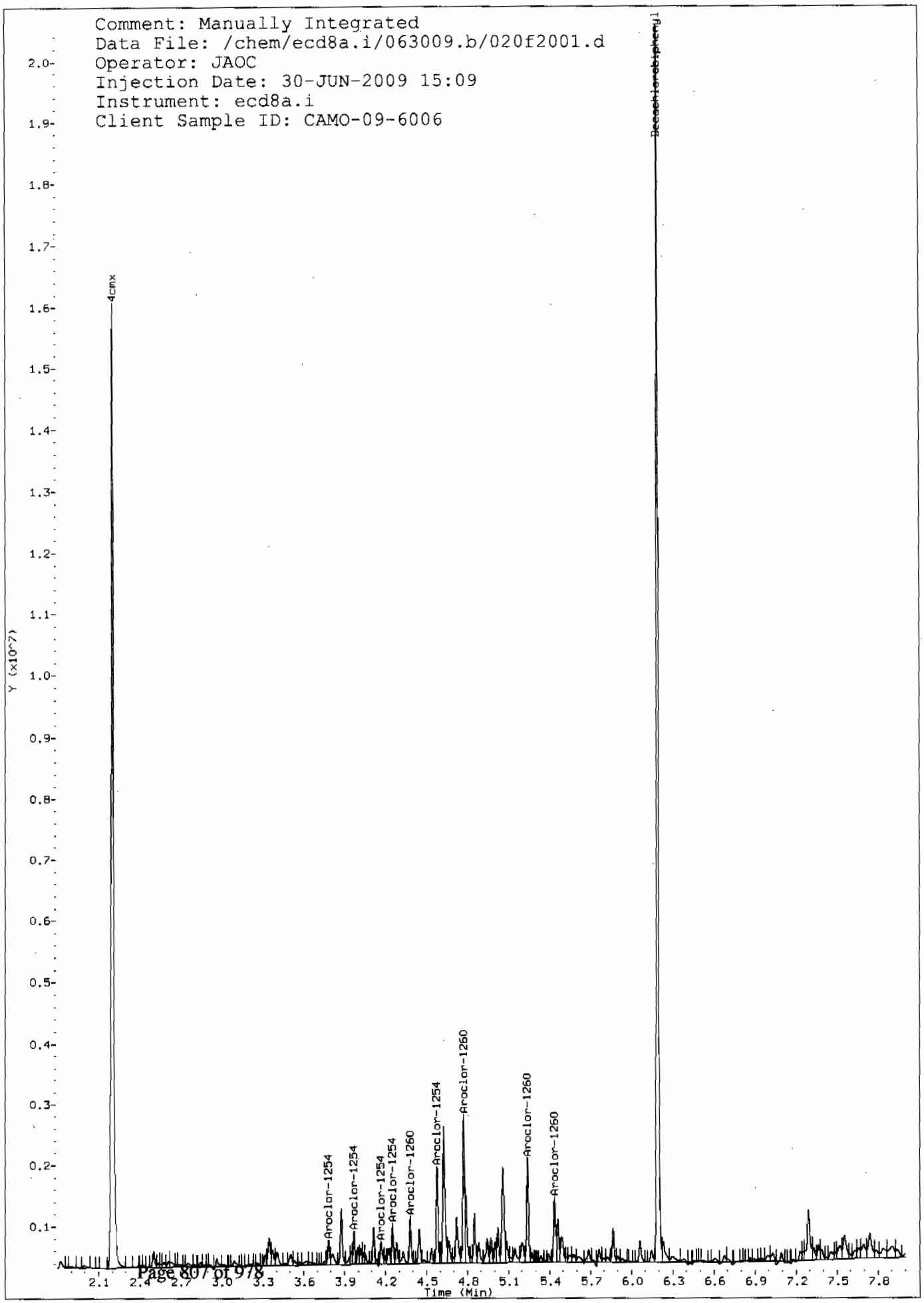
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/020f2001.d
Operator: JAOC
Injection Date: 30-JUN-2009 15:09
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6006
4cmx
Decachlorobiphenyl
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Y (x10^7)
Time (Min)

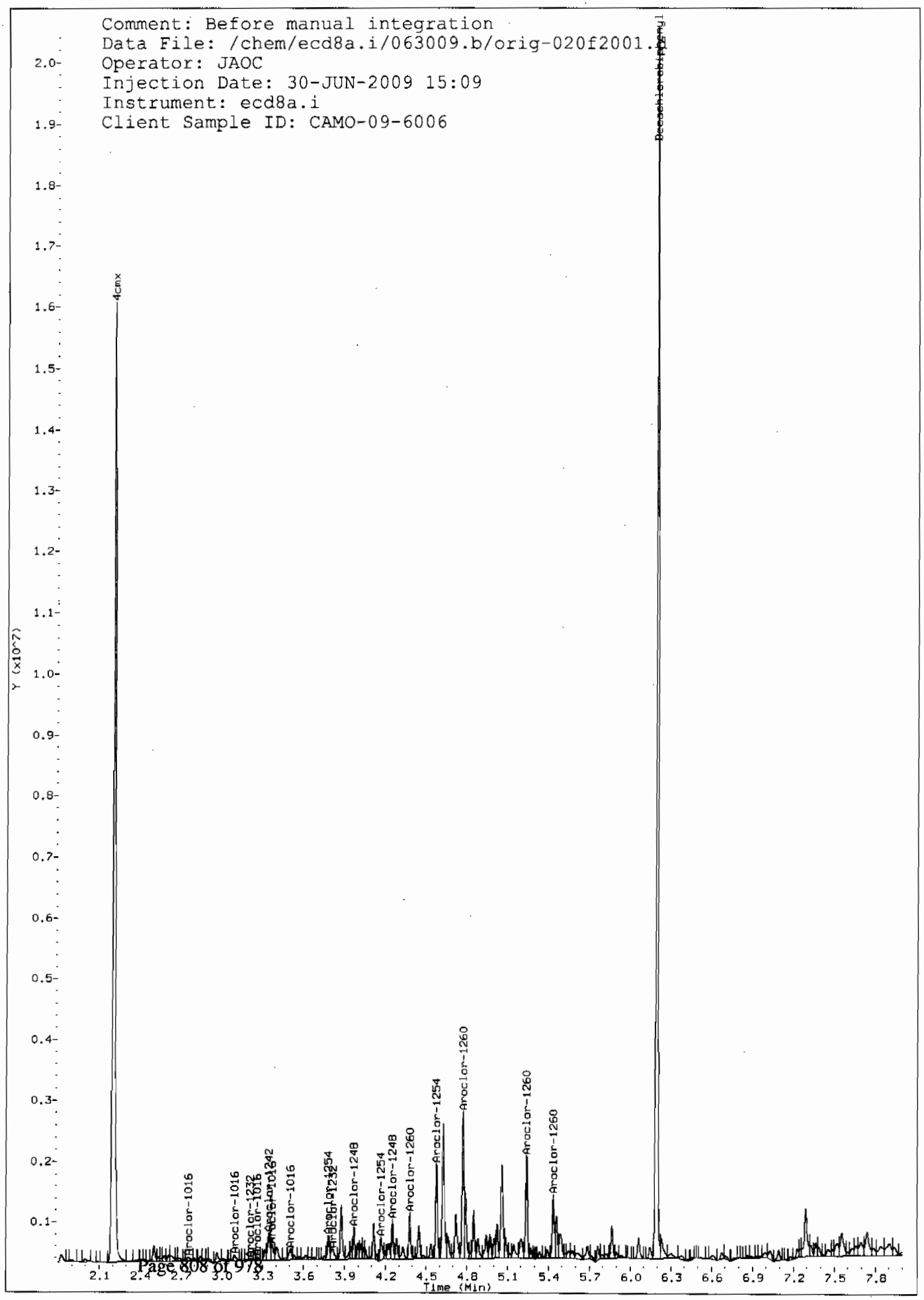
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-020f2001.
Operator: JAOC
Injection Date: 30-JUN-2009 15:09
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6006
4cmx
Decachlorobiphenyl
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1248
Aroclor-1260
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/020b2001.d
Lab Smp Id: 232428002 Client Smp ID: CAMO-09-6006
Inj Date : 30-JUN-2009 15:09
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428002|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6006|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	11.42090	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	6164805	106.870	4.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5928055	105.251	4.0	80.00- 120.00	100.00(M)
6 Aroclor-1254					CAS #: 11097-69-1		
4.329	4.331	-0.002	117990	56.2547	2.1	80.00- 120.00	100.00(M)
4.467	4.468	-0.001	163652	70.8651	2.7	88.71- 128.71	138.70
4.797	4.798	-0.001	249530	80.4626	3.0	126.32- 166.32	211.48
5.083	5.084	-0.001	486363	300.850	11.3	61.65- 101.65	412.21
5.204	5.206	-0.002	243674	131.442	4.9	70.78- 110.78	206.52
Average of Peak Concentrations =					4.8		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.934	4.936	-0.002	294803	102.289	3.8	80.00- 120.00	100.00(M)
5.083	5.083	0.000	486363	140.700	5.3	102.90- 142.90	164.98
5.204	5.199	0.005	243674	77.1478	2.9	90.92- 130.92	82.66
5.607	5.608	-0.001	237321	100.217	3.8	63.15- 103.15	80.50
6.039	6.041	-0.002	448113	118.853	4.5	114.09- 154.09	152.00
Average of Peak Concentrations =					4.1		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/020b2001.d
Date : 30-JUN-2009 15:09
Client ID: CAMO-09-6006
Sample Info: |232428002|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

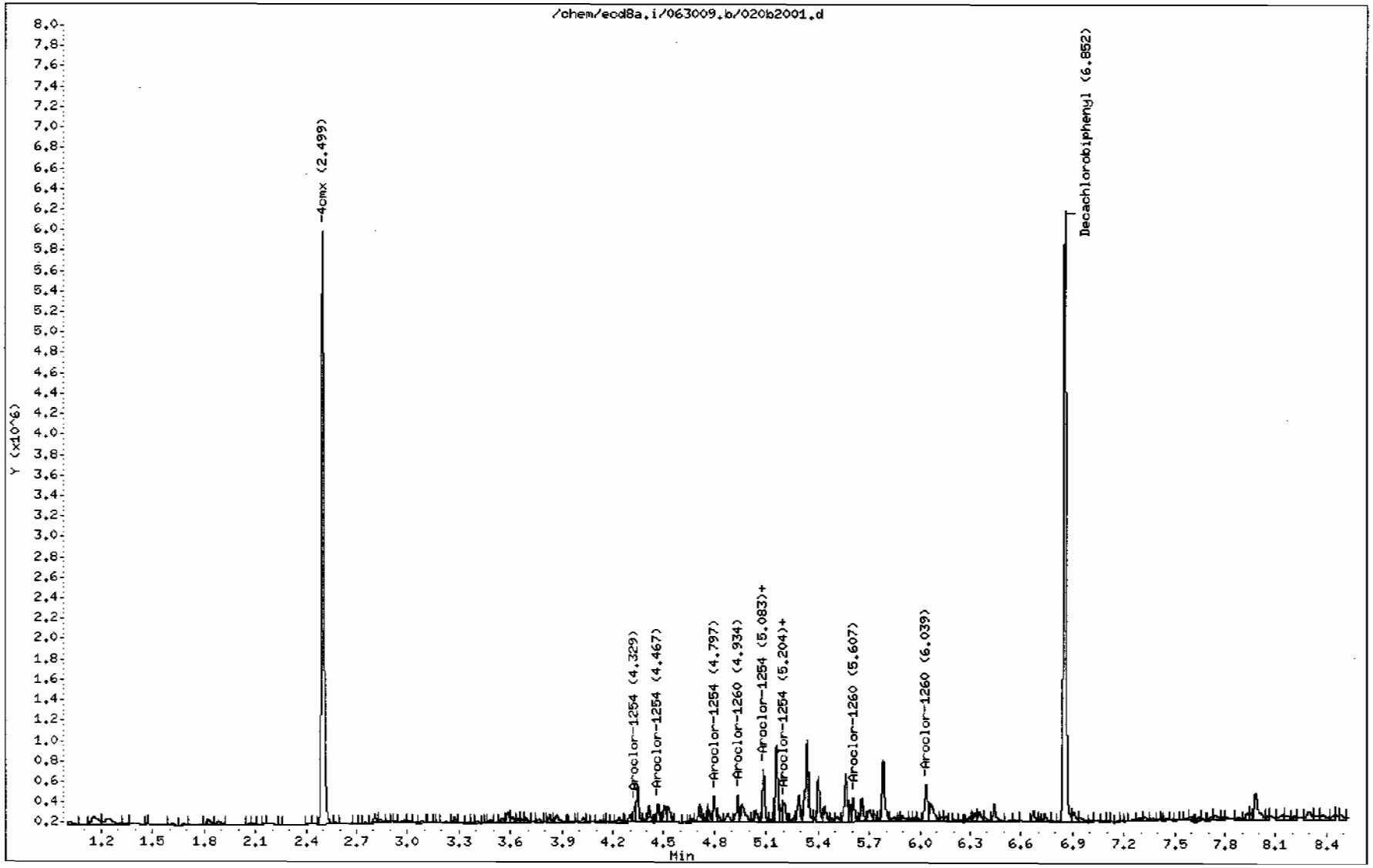

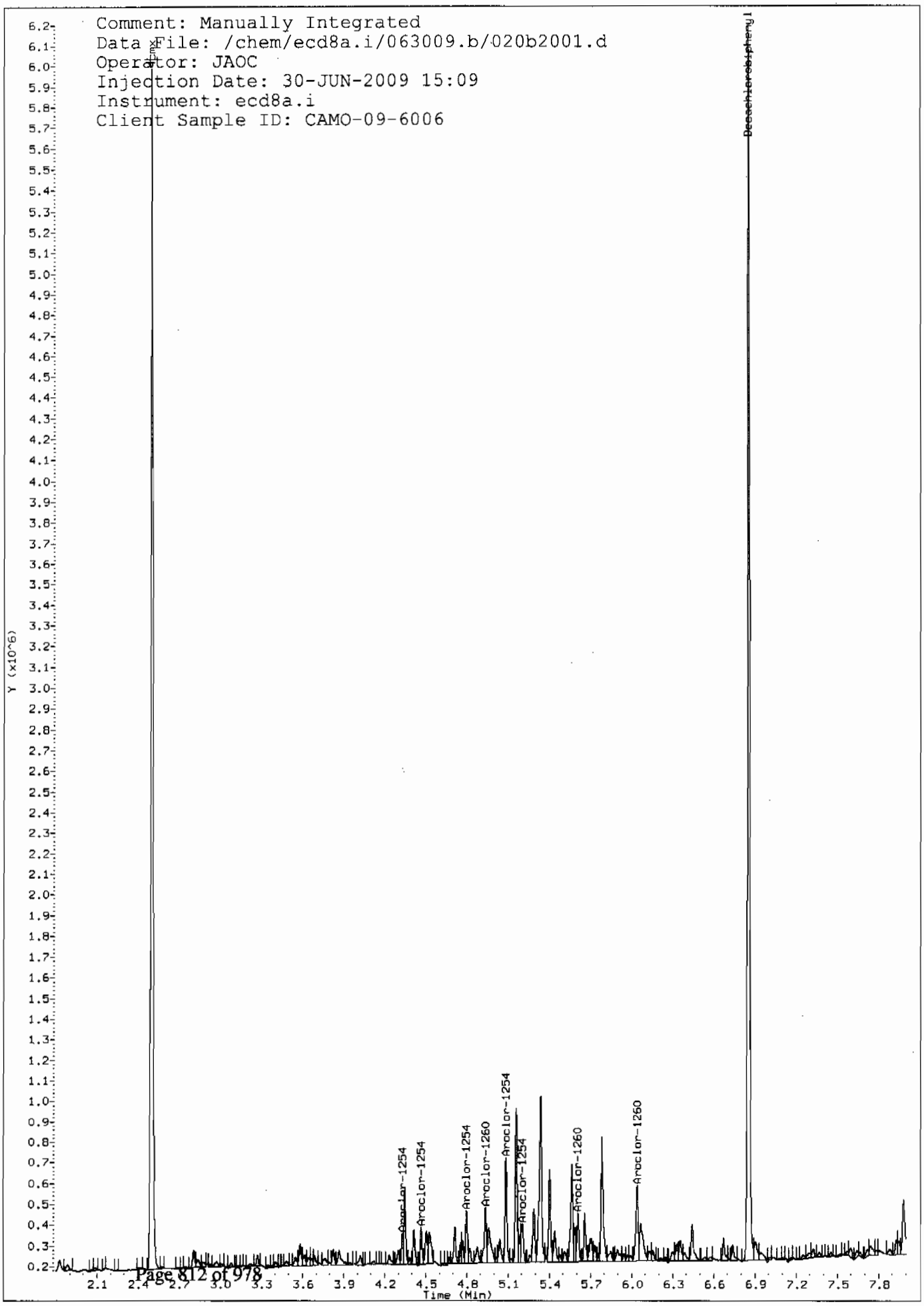
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/020b2001.d
Operator: JAOC
Injection Date: 30-JUN-2009 15:09
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6006
Decachlorobiphenyl
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1260
Y (x10^6)
Time (Min)

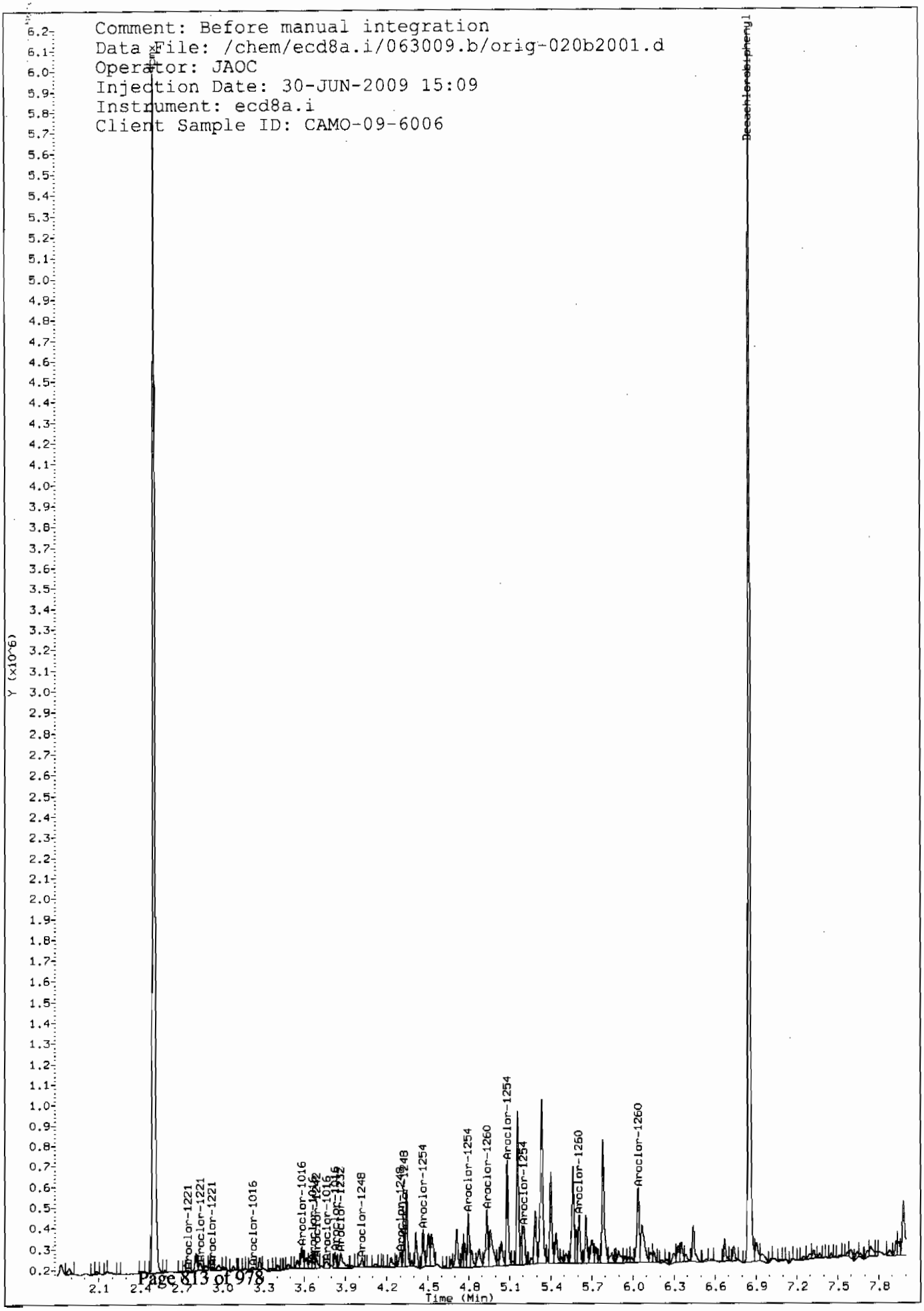
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-020b2001.d
Operator: JAOC
Injection Date: 30-JUN-2009 15:09
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6006
Decachlorobiphenyl
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1016
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1260
Y (x10^6)
Time (Min)

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6007	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 14:52	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	019f1901.d	**Column:**	1 CLP1	**Level:**	LOW
	019b1901.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.48	ug/kg	1.16	3.48	1
11104-28-2	Aroclor-1221	U	3.48	ug/kg	1.16	3.48	1
11141-16-5	Aroclor-1232	U	3.48	ug/kg	1.16	3.48	1
53469-21-9	Aroclor-1242	U	3.48	ug/kg	1.16	3.48	1
12672-29-6	Aroclor-1248	U	3.48	ug/kg	1.16	3.48	1
11097-69-1	Aroclor-1254	U	3.48	ug/kg	1.16	3.48	1
11096-82-5	Aroclor-1260	U	3.48	ug/kg	1.16	3.48	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/019f1901.d
Lab Smp Id: 232428001 Client Smp ID: CAMO-09-6007
Inj Date : 30-JUN-2009 14:52
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428001|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6007|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	4.26710	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	20248842	126.520	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.191	6.193	-0.002	21680743	129.110	4.5	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/019f1901.d

Date : 30-JUN-2009 14:52

Client ID: CAMO-09-6007

Sample Info: |232428001|1|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

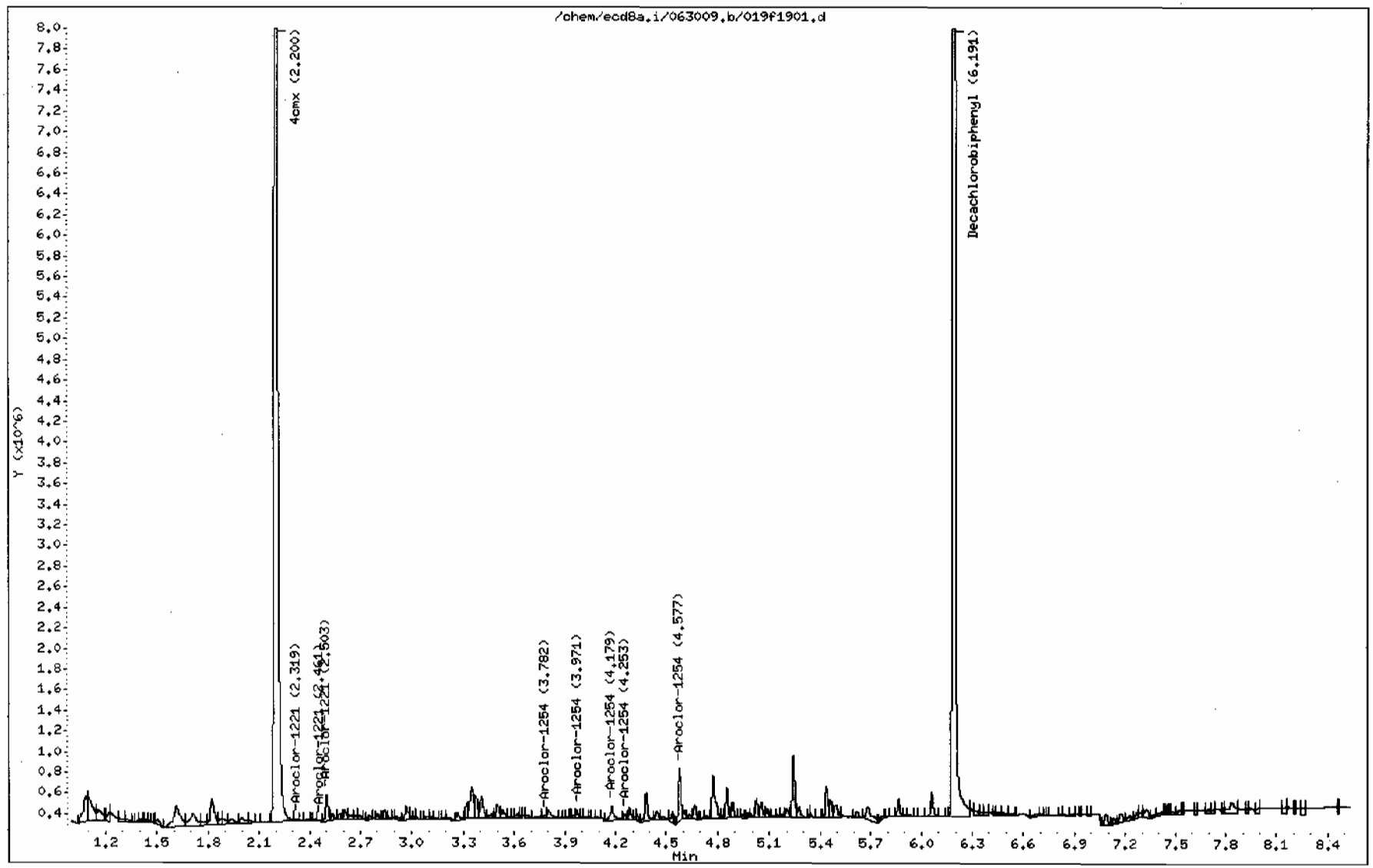

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/019b1901.d
Lab Smp Id: 232428001 Client Smp ID: CAMO-09-6007
Inj Date : 30-JUN-2009 14:52
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428001|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6007|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	4.26710	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	6815566	118.151	4.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	6747170	119.794	4.2	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/019b1901.d

Date : 30-JUN-2009 14:52

Client ID: CAMO-09-6007

Sample Info: |2324280011|1|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

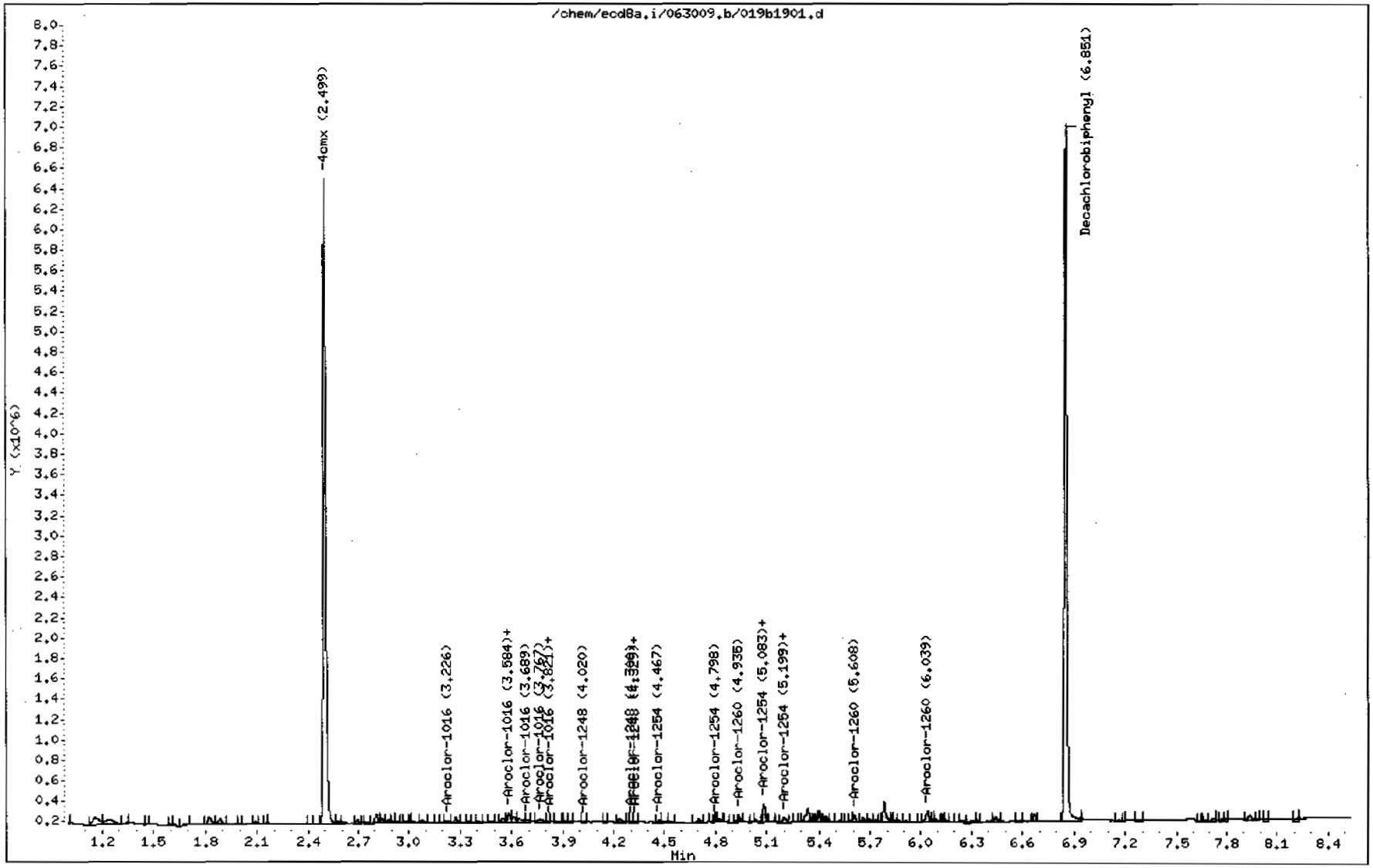

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428003	**Date Received:**	06/26/2009 08:40	**%Moisture:**	23.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6008	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 15:25	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	021f2101.d	**Column:**	1 CLP1	**Level:**	LOW
	021b2101.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.32	ug/kg	1.44	4.32	1
11104-28-2	Aroclor-1221	U	4.32	ug/kg	1.44	4.32	1
11141-16-5	Aroclor-1232	U	4.32	ug/kg	1.44	4.32	1
53469-21-9	Aroclor-1242	U	4.32	ug/kg	1.44	4.32	1
12672-29-6	Aroclor-1248	U	4.32	ug/kg	1.44	4.32	1
11097-69-1	Aroclor-1254	P	43.2	ug/kg	1.44	4.32	2
11096-82-5	Aroclor-1260		20.8	ug/kg	1.44	4.32	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/021f2101.d
Lab Smp Id: 232428003 Client Smp ID: CAMO-09-6008
Inj Date : 30-JUN-2009 15:25
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428003|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6008|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.08000	Weight of sample extracted (g)
M	23.12730	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.201	2.202	-0.001	16608931	103.777	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.191	6.193	-0.002	16108161	95.9251	4.1	80.00- 120.00	100.00(M)
6 Aroclor-1254					CAS #: 11097-69-1		
3.783	3.786	-0.003	1331060	275.910	11.9	80.00- 120.00	100.00(M)
3.972	3.972	0.000	3572943	569.987	24.6	111.24- 151.24	268.43
4.166	4.168	-0.002	1790895	376.242	16.3	78.96- 118.96	134.55
4.251	4.254	-0.003	4446632	559.799	24.2	142.62- 182.62	334.07
4.576	4.581	-0.005	3959992	583.505	25.2	126.45- 166.45	297.51

Average of Peak Concentrations = 20.4

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	1780818	249.822	10.8	80.00- 120.00	100.00(M)
4.576	4.579	-0.003	3959992	392.525	17.0	122.54- 162.54	222.37
4.771	4.774	-0.003	8652752	753.585	32.6	138.26- 178.26	485.89
5.238	5.242	-0.004	3456094	258.005	11.2	171.16- 211.16	194.07
5.434	5.437	-0.003	2151542	328.395	14.2	74.08- 114.08	120.82
			Average of Peak Concentrations =		17.2		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/021f2101.d
Date : 30-JUN-2009 15:25
Client ID: CAMO-09-6008
Sample Info: |232428003|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

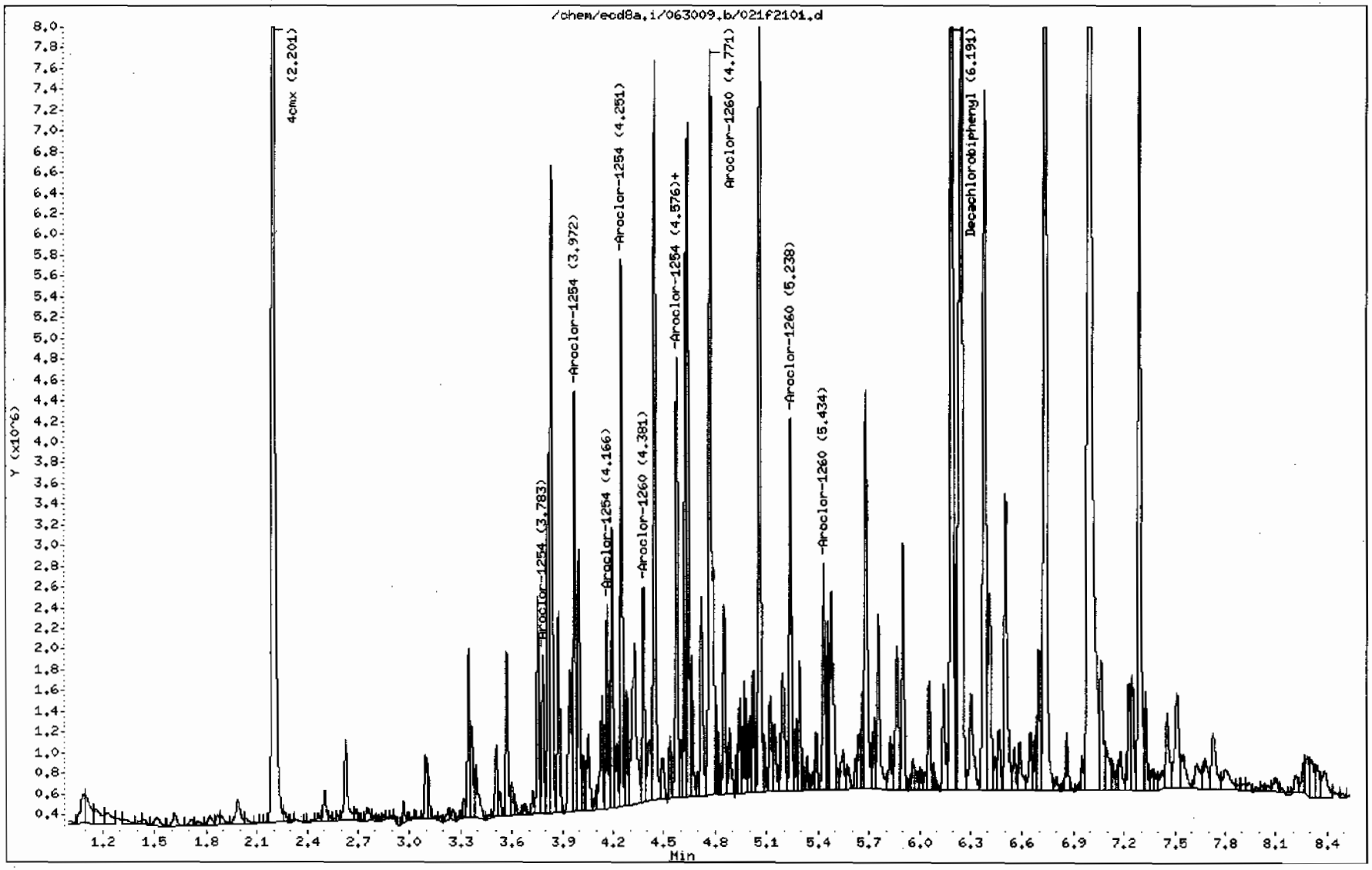

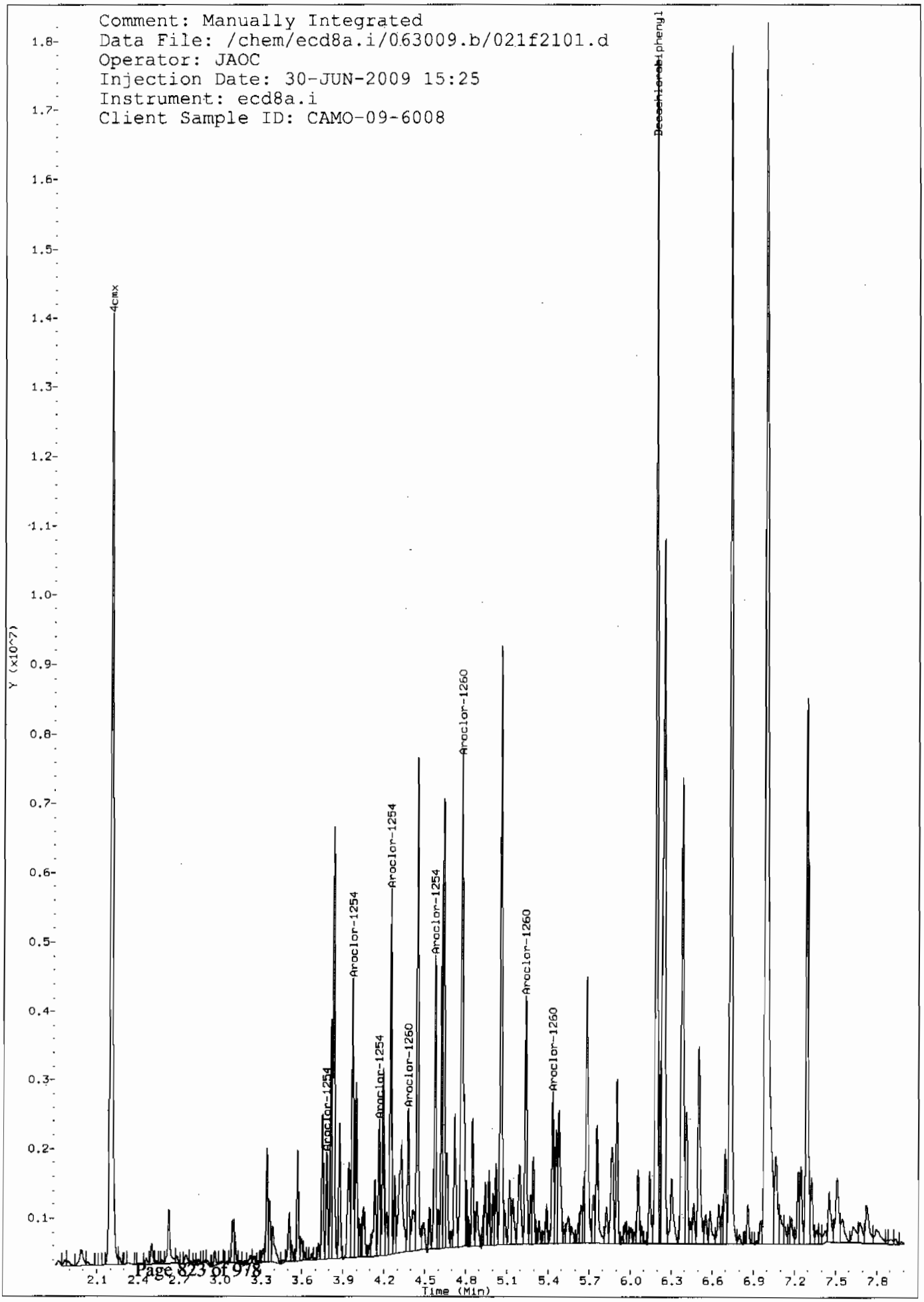
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/021f2101.d
Operator: JAOC
Injection Date: 30-JUN-2009 15:25
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6008
4cmx
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

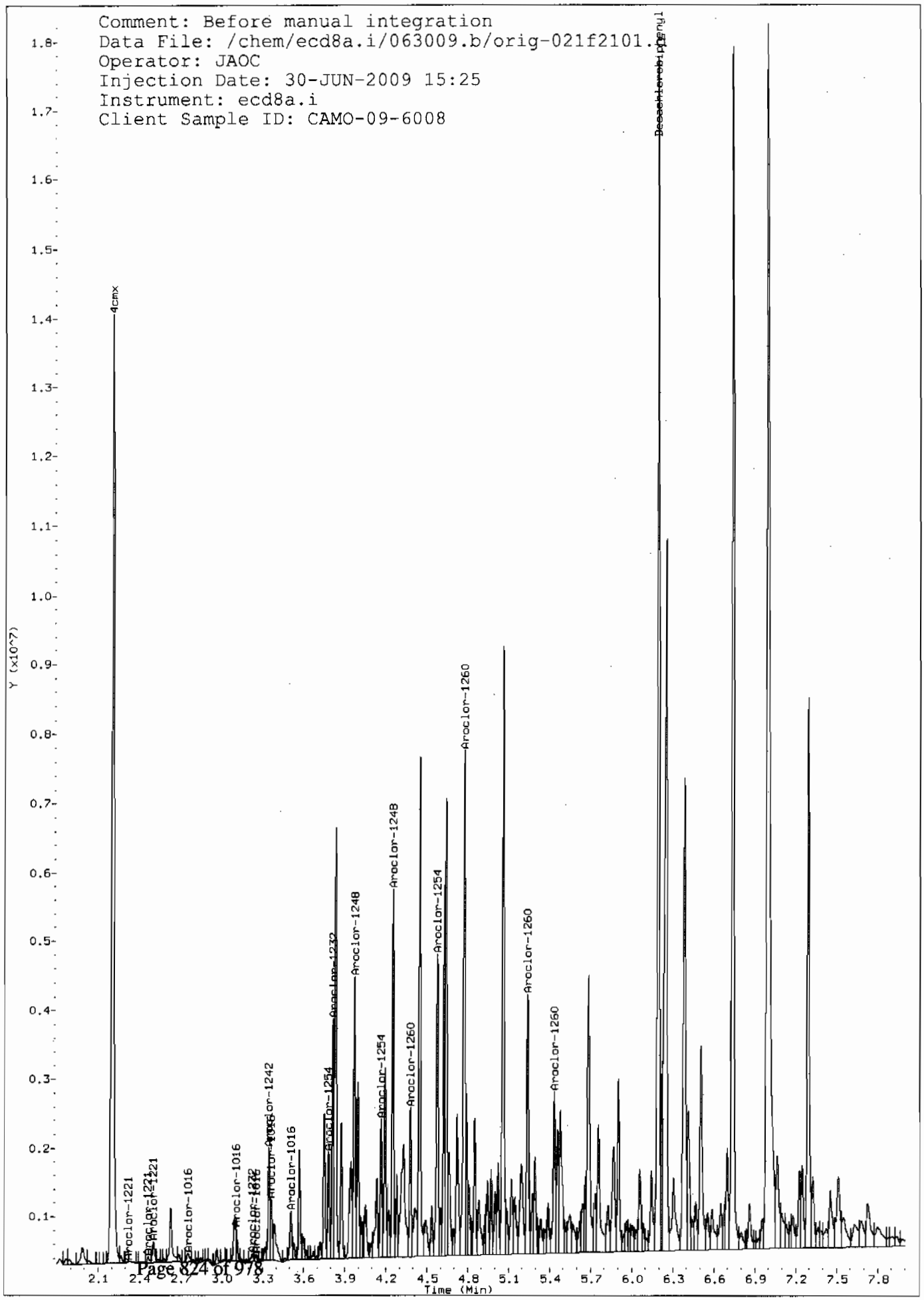
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-021f2101.
Operator: JAOC
Injection Date: 30-JUN-2009 15:25
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6008
4cmx
Aroclor-1221
Aroclor-1016
Aroclor-1016
Aroclor-1242
Aroclor-1016
Aroclor-1254
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/021b2101.d
Lab Smp Id: 232428003 Client Smp ID: CAMO-09-6008
Inj Date : 30-JUN-2009 15:25
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428003|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6008|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.08000	Weight of sample extracted (g)
M	23.12730	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5666522	98.2320	4.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.854	6.853	0.001	9894003	175.665	7.6	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.332	4.331	0.001	3144948	1499.43	64.8	80.00- 120.00	100.00
4.467	4.468	-0.001	906361	392.475	17.0	88.71- 128.71	28.82
4.797	4.798	-0.001	2038579	657.353	28.4	126.32- 166.32	64.82
5.082	5.084	-0.002	1431634	885.567	38.3	61.65- 101.65	45.52
5.204	5.206	-0.002	2892739	1560.39	67.5	70.78- 110.78	91.98
Average of Peak Concentrations =					43.2		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.934	4.936	-0.002	1086198	376.884	16.3	80.00- 120.00	100.00
5.082	5.083	-0.001	1431634	414.158	17.9	102.90- 142.90	131.80
5.204	5.199	0.005	2892739	915.848	39.6	90.92- 130.92	266.32
5.607	5.608	-0.001	1039736	439.063	19.0	63.15- 103.15	95.72
6.039	6.041	-0.002	985794	261.461	11.3	114.09- 154.09	90.76
Average of Peak Concentrations =					20.8		

Data File: /chem/ecd8a.i/063009.b/021b2101.d
Date : 30-JUN-2009 15:25
Client ID: CAMO-09-6008
Sample Info: |232428003|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

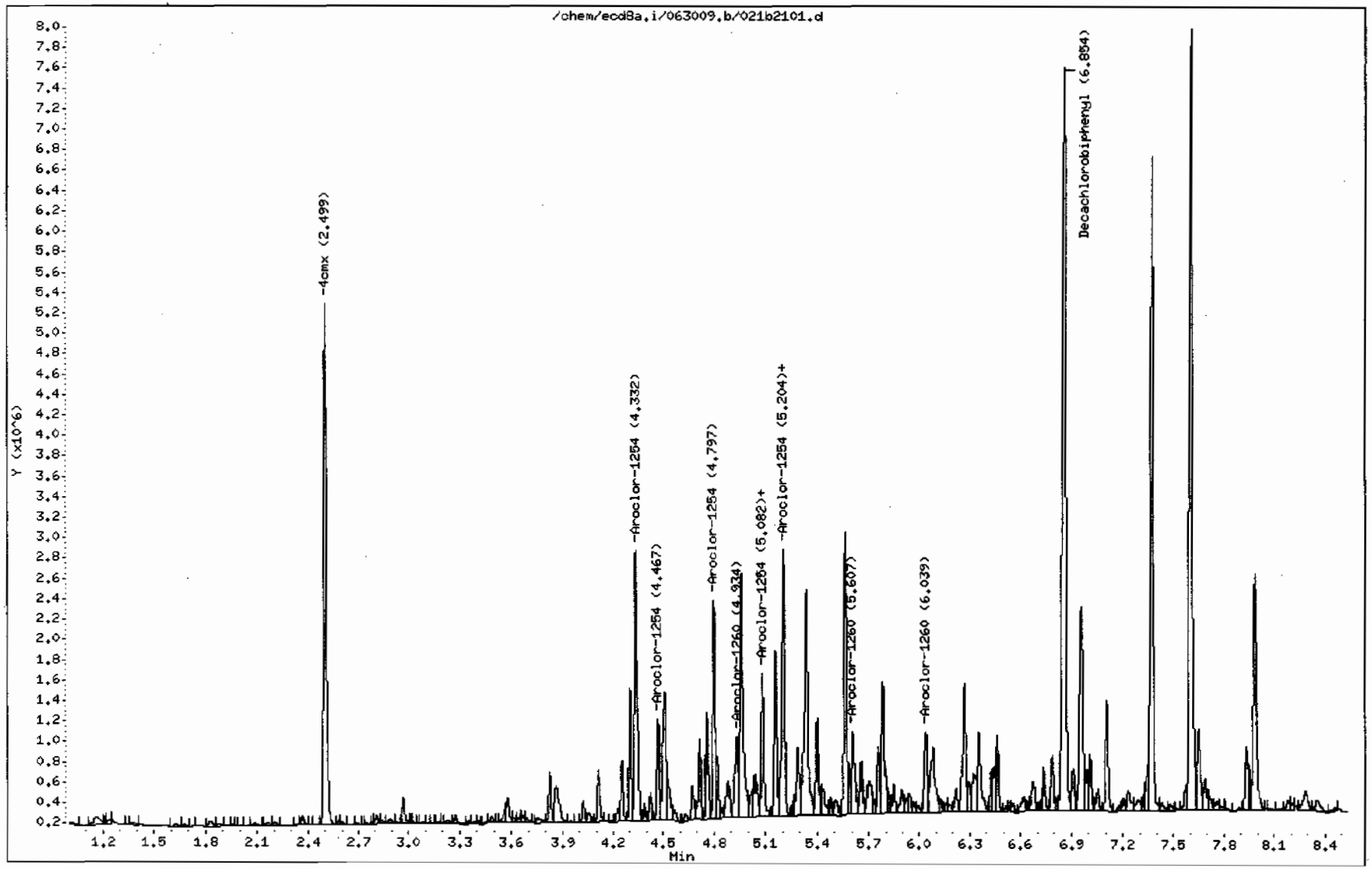

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428004	**Date Received:**	06/26/2009 08:40	**%Moisture:**	17
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6009	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 16:06	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	024f2401.d	**Column:**	1 CLP1	**Level:**	LOW
	024b2401.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.01	ug/kg	1.34	4.01	1
11104-28-2	Aroclor-1221	U	4.01	ug/kg	1.34	4.01	1
11141-16-5	Aroclor-1232	U	4.01	ug/kg	1.34	4.01	1
53469-21-9	Aroclor-1242	U	4.01	ug/kg	1.34	4.01	1
12672-29-6	Aroclor-1248	U	4.01	ug/kg	1.34	4.01	1
11097-69-1	Aroclor-1254	P	9.40	ug/kg	1.34	4.01	2
11096-82-5	Aroclor-1260		5.30	ug/kg	1.34	4.01	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/024f2401.d
Lab Smp Id: 232428004 Client Smp ID: CAMO-09-6009
Inj Date : 30-JUN-2009 16:06
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428004|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6009|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	17.00960	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	14801567	92.4843	3.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.192	6.193	-0.001	14316491	85.2556	3.4	80.00- 120.00	100.00(M)
6 Aroclor-1254					CAS #: 11097-69-1		
3.785	3.786	-0.001	387747	80.3744	3.2	80.00- 120.00	100.00(M)
3.973	3.972	0.001	894067	142.629	5.7	111.24- 151.24	230.58
4.168	4.168	0.000	386406	81.1785	3.2	78.96- 118.96	99.65
4.253	4.254	-0.001	1161823	146.265	5.9	142.62- 182.62	299.63
4.578	4.581	-0.003	1216109	179.194	7.2	126.45- 166.45	313.63
Average of Peak Concentrations =					5.0		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.383	4.383	0.000	560923	78.6891	3.2	80.00- 120.00	100.00(M)
4.578	4.579	-0.001	1216109	120.544	4.8	122.43- 162.43	216.80
4.773	4.774	-0.001	1957381	170.472	6.8	138.51- 178.51	429.75
5.240	5.242	-0.002	1224308	91.3974	3.7	171.28- 211.28	218.27
5.436	5.437	-0.001	722421	110.265	4.4	73.47- 113.47	128.79
			Average of Peak Concentrations =		4.6		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/024f2401.d
Date : 30-JUN-2009 16:06
Client ID: CAMO-09-6009
Sample Info: |232428004|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

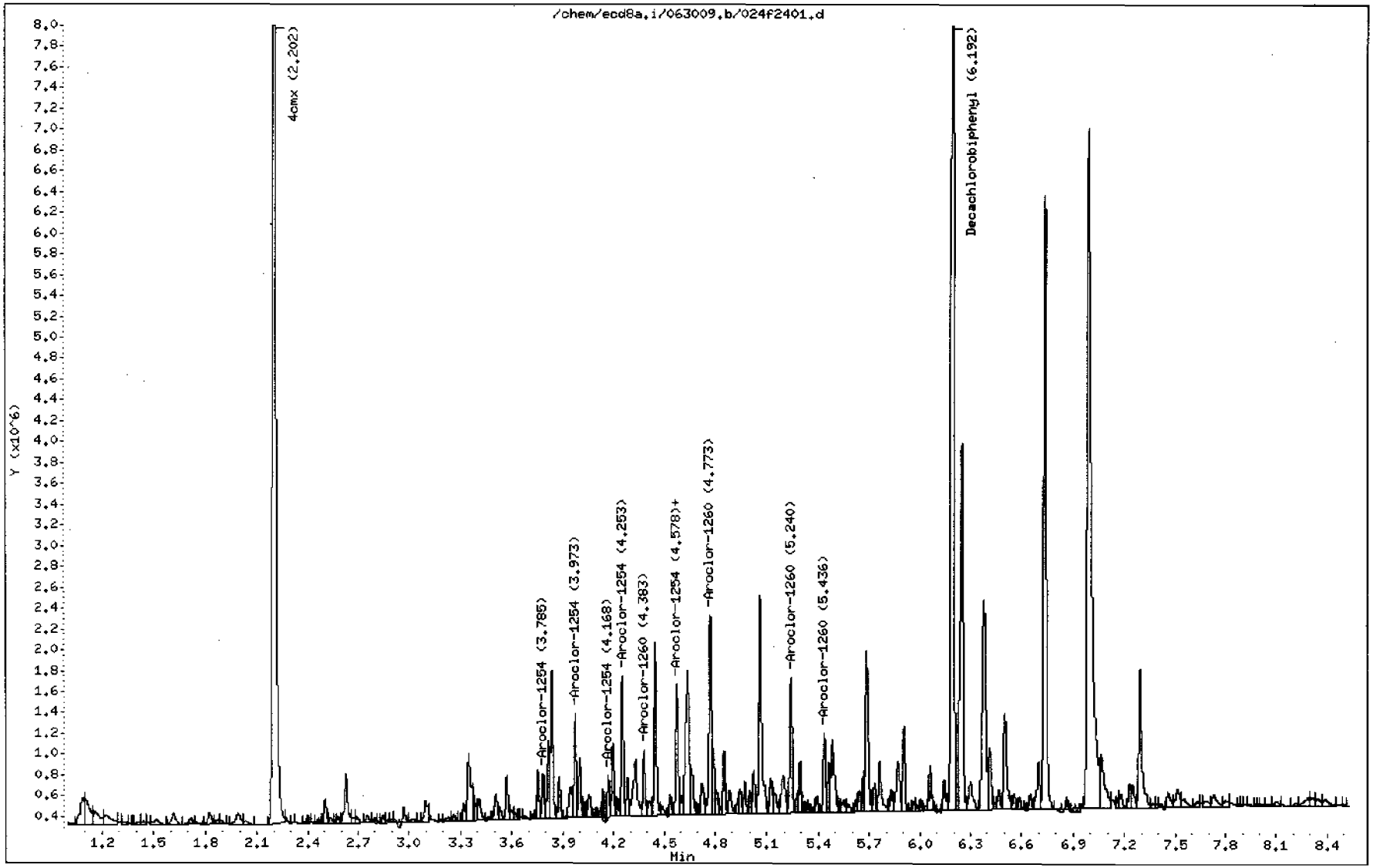

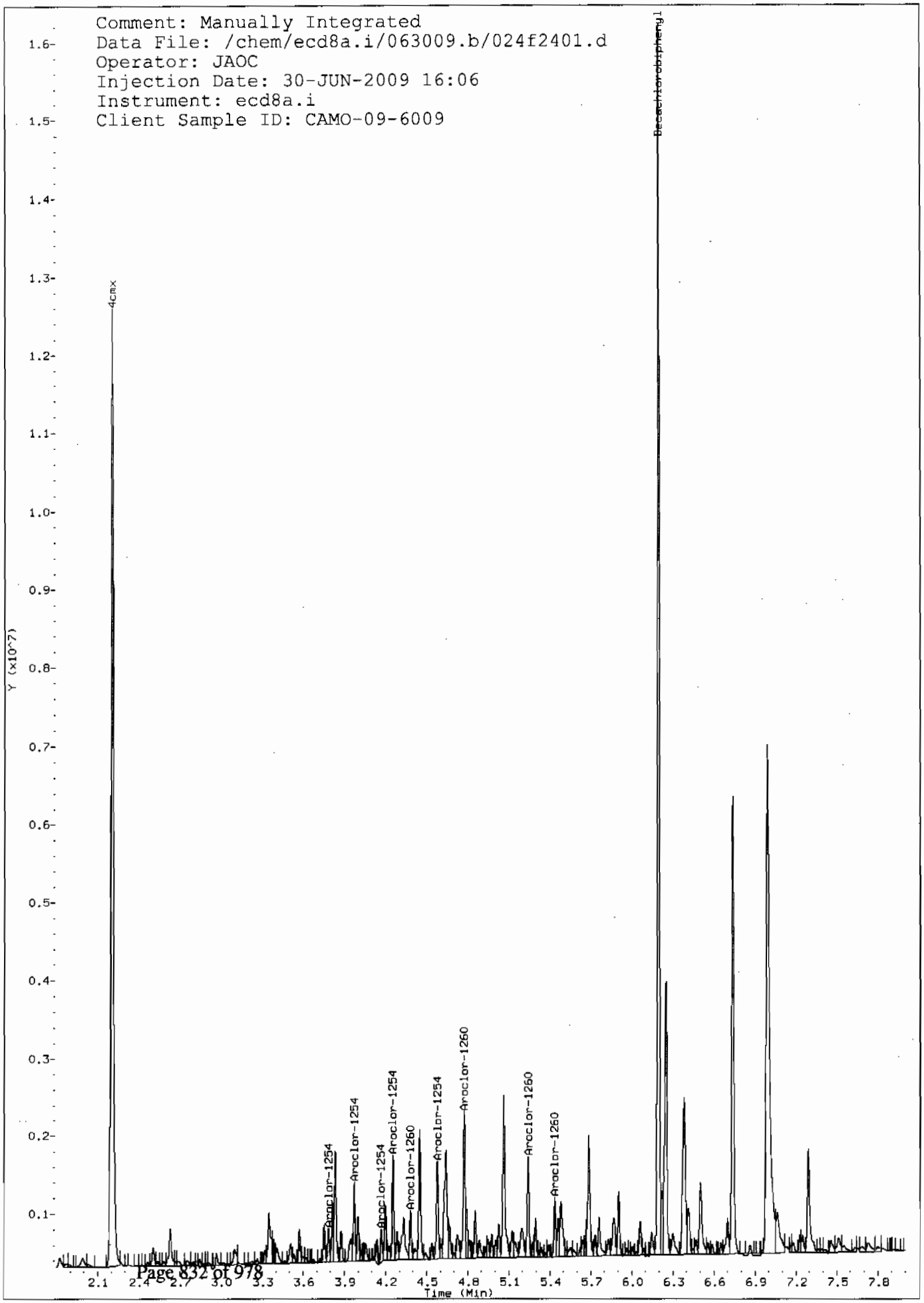
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/024f2401.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:06
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6009
4cmx
Decachlorobiphenyl
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Y (x10^7)
Time (Min)

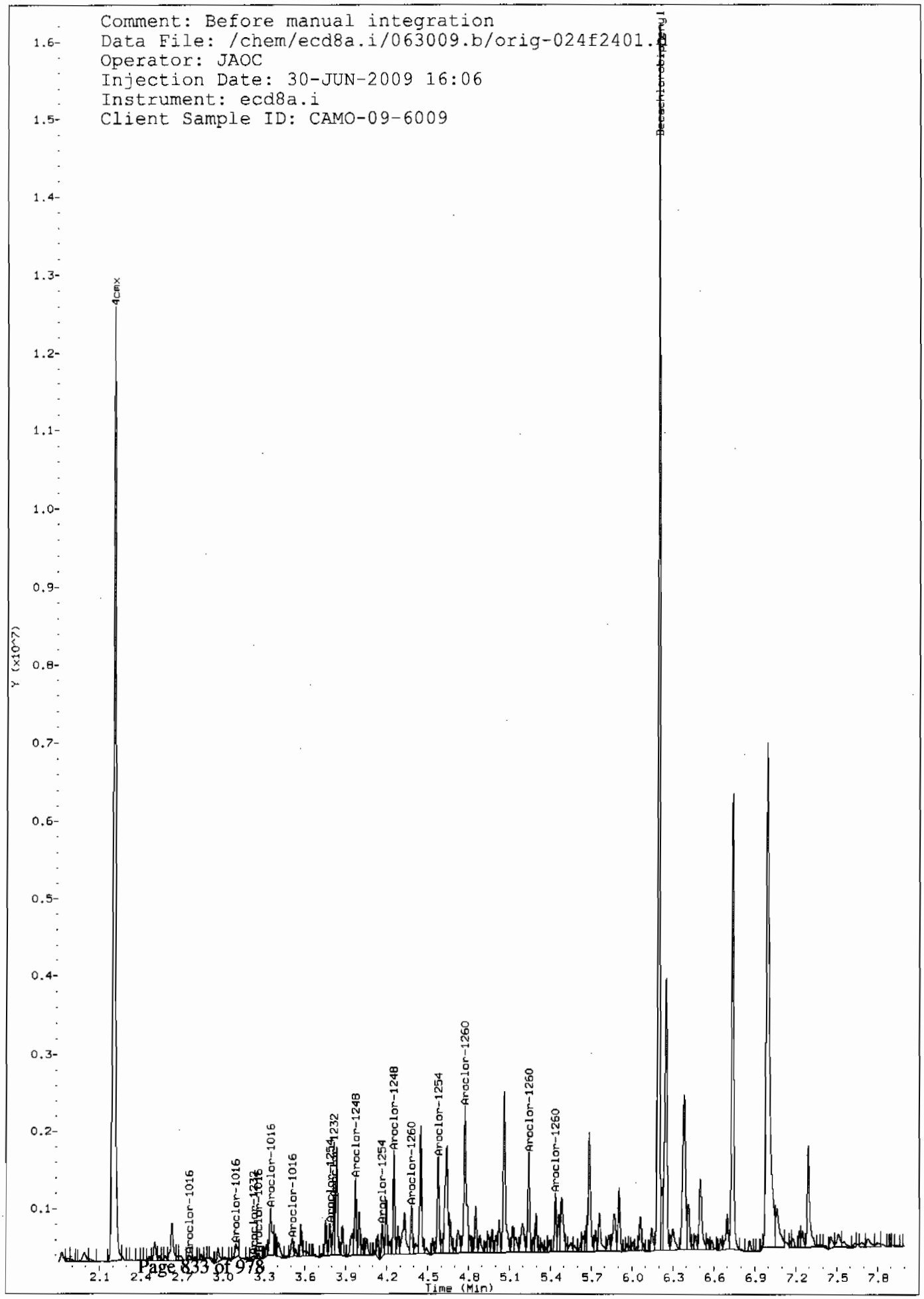
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-024f2401.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:06
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6009
Decachlorobiphenyl
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1248
Aroclor-1260
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/024b2401.d
Lab Smp Id: 232428004 Client Smp ID: CAMO-09-6009
Inj Date : 30-JUN-2009 16:06
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428004|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6009|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	17.00960	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	4986411	86.4419	3.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	6197556	110.036	4.4	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.333	4.331	0.002	572051	272.740	10.9	80.00- 120.00	100.00(M)
4.468	4.468	0.000	253189	109.637	4.4	88.71- 128.71	44.26
4.798	4.798	0.000	542940	175.075	7.0	126.32- 166.32	94.91
5.083	5.084	-0.001	444517	274.965	11.0	61.65- 101.65	77.71
5.205	5.206	-0.001	644576	347.696	13.9	70.78- 110.78	112.68

Average of Peak Concentrations = 9.4

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	243885	84.6221	3.4	80.00- 120.00	100.00(M)
5.083	5.083	0.000	444517	128.595	5.2	104.06- 144.06	182.26
5.205	5.199	0.006	644576	204.075	8.2	91.97- 131.97	264.30
5.608	5.608	0.000	356670	150.616	6.0	64.43- 104.43	146.25
6.039	6.041	-0.002	344997	91.5032	3.7	116.83- 156.83	141.46
Average of Peak Concentrations =					5.3		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/024b2401.d
Date : 30-JUN-2009 16:06
Client ID: CAMO-09-6009
Sample Info: |232428004|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

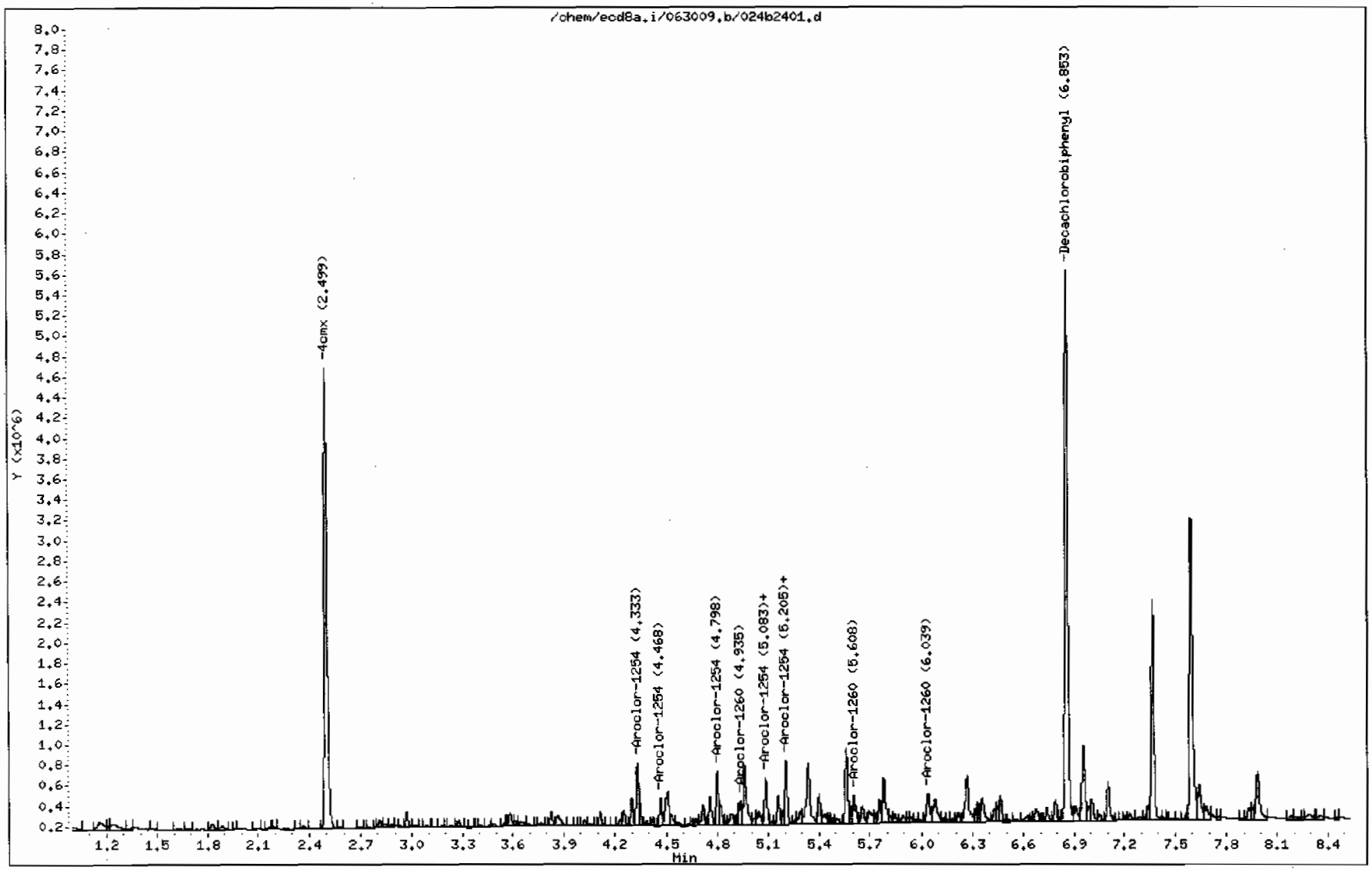

Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/024b2401.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:06
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6009

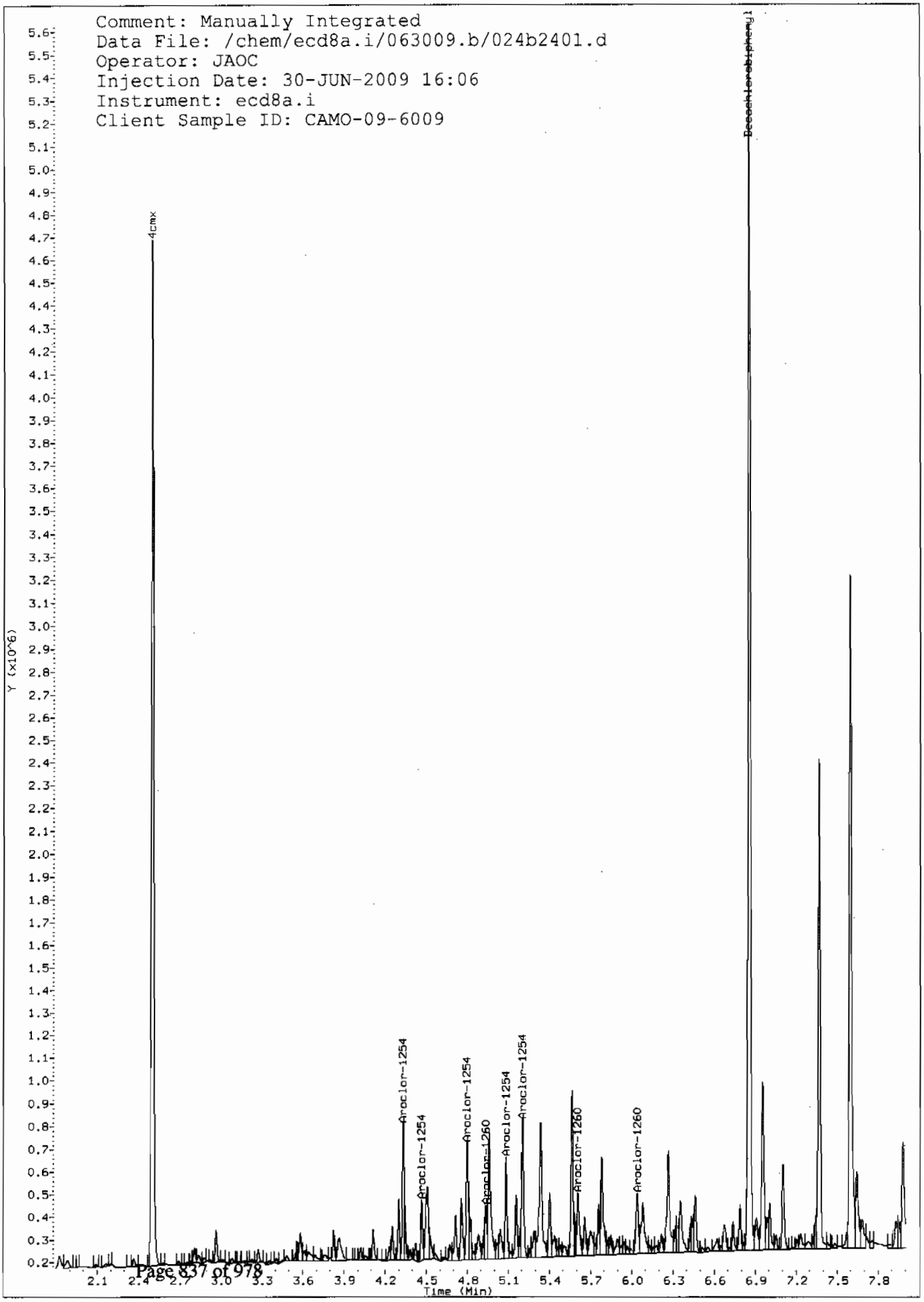

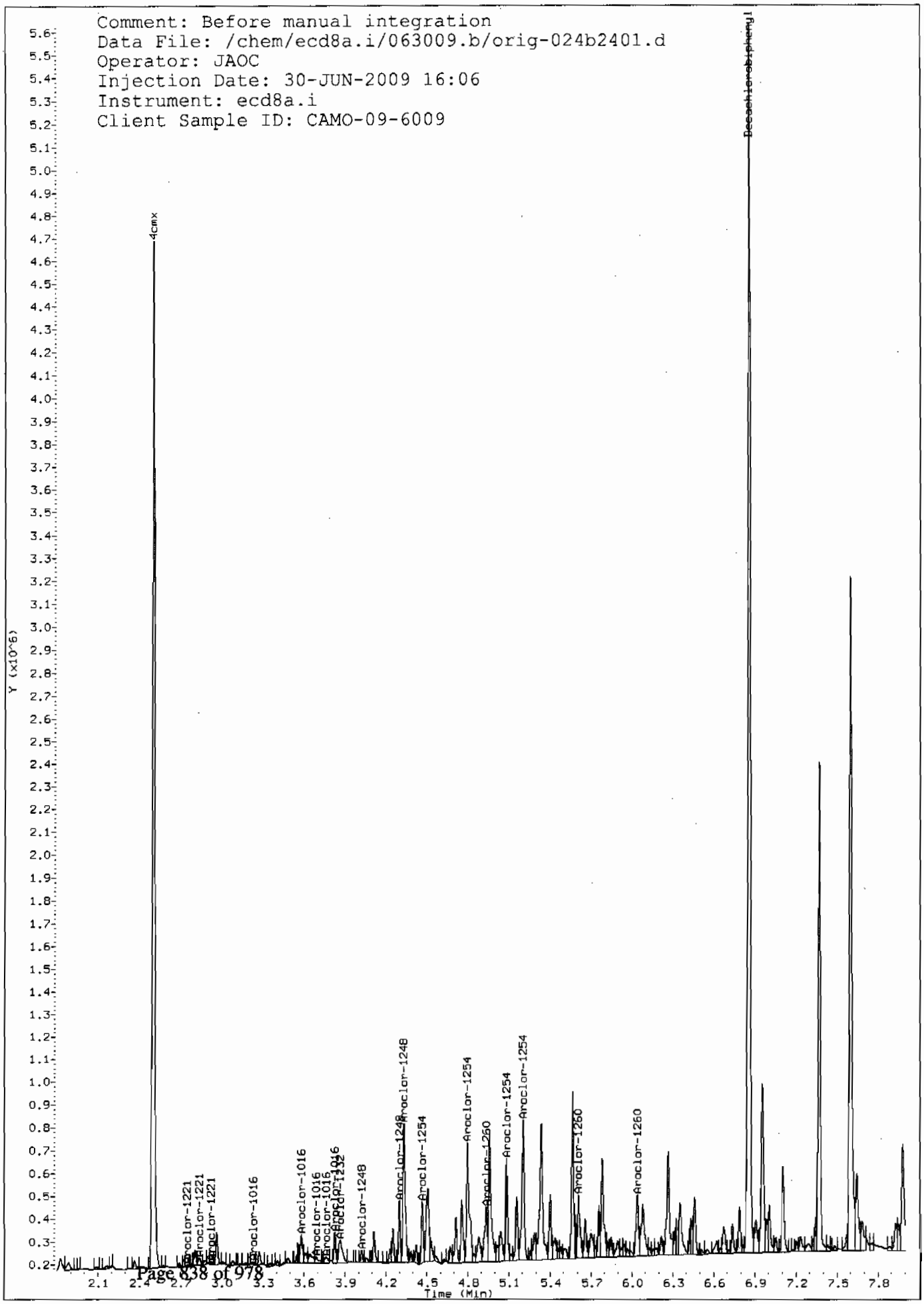
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-024b2401.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:06
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6009
4cmx
Decachlorobiphenyl
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1260
Y (x10^6)
Time (Min)

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428012	**Date Received:**	06/26/2009 08:40	**%Moisture:**	25.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6038	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 16:23	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	025f2501.d	**Column:**	1 CLP1	**Level:**	LOW
	025b2501.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	22.3	ug/kg	7.42	22.3	1
11104–28–2	Aroclor–1221	U	22.3	ug/kg	7.42	22.3	1
11141–16–5	Aroclor–1232	U	22.3	ug/kg	7.42	22.3	1
53469–21–9	Aroclor–1242	U	22.3	ug/kg	7.42	22.3	1
12672–29–6	Aroclor–1248	U	22.3	ug/kg	7.42	22.3	1
11097–69–1	Aroclor–1254		37.2	ug/kg	7.42	22.3	2
11096–82–5	Aroclor–1260		35.6	ug/kg	7.42	22.3	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/025f2501.d
Lab Smp Id: 232428012 Client Smp ID: CAMO-09-6038
Inj Date : 30-JUN-2009 16:23
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428012|5|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6038|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 25
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	25.20790	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	3804758	23.7732	5.3	80.00- 120.00	100.00(M)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	3738956	22.2657	5.0	80.00- 120.00	100.00(M)
6 Aroclor-1254					CAS #: 11097-69-1		
3.784	3.786	-0.002	358586	74.3297	16.6	80.00- 120.00	100.00(M)
3.970	3.972	-0.002	615118	98.1289	21.9	111.24- 151.24	171.54
4.172	4.168	0.004	510451	107.239	23.9	78.96- 118.96	142.35
4.252	4.254	-0.002	787333	99.1195	22.1	142.62- 182.62	219.57
4.577	4.581	-0.004	1460076	215.142	47.9	126.45- 166.45	407.18

Average of Peak Concentrations = 26.5

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	963289	135.135	30.1	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	1460076	144.727	32.2	122.43- 162.43	151.57
4.771	4.774	-0.003	2047611	178.330	39.7	138.51- 178.51	212.56
5.240	5.242	-0.002	1708663	127.556	28.4	171.28- 211.28	177.38
5.435	5.437	-0.002	1402019	213.993	47.7	73.47- 113.47	145.54
			Average of Peak Concentrations =		35.6		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/025f2501.d

Date : 30-JUN-2009 16:23

Client ID: CAMO-09-6038

Sample Info: 1232428012151

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

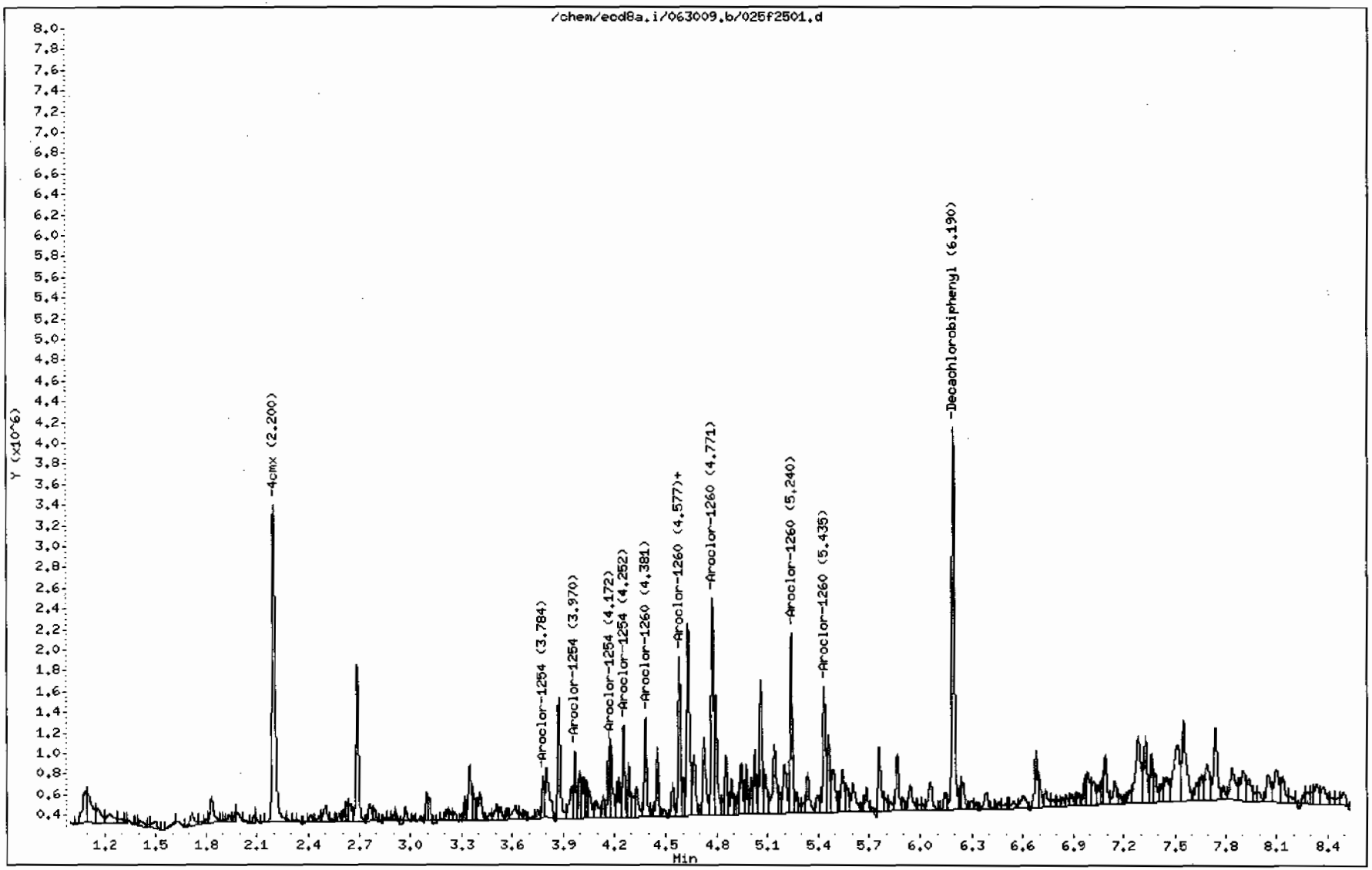

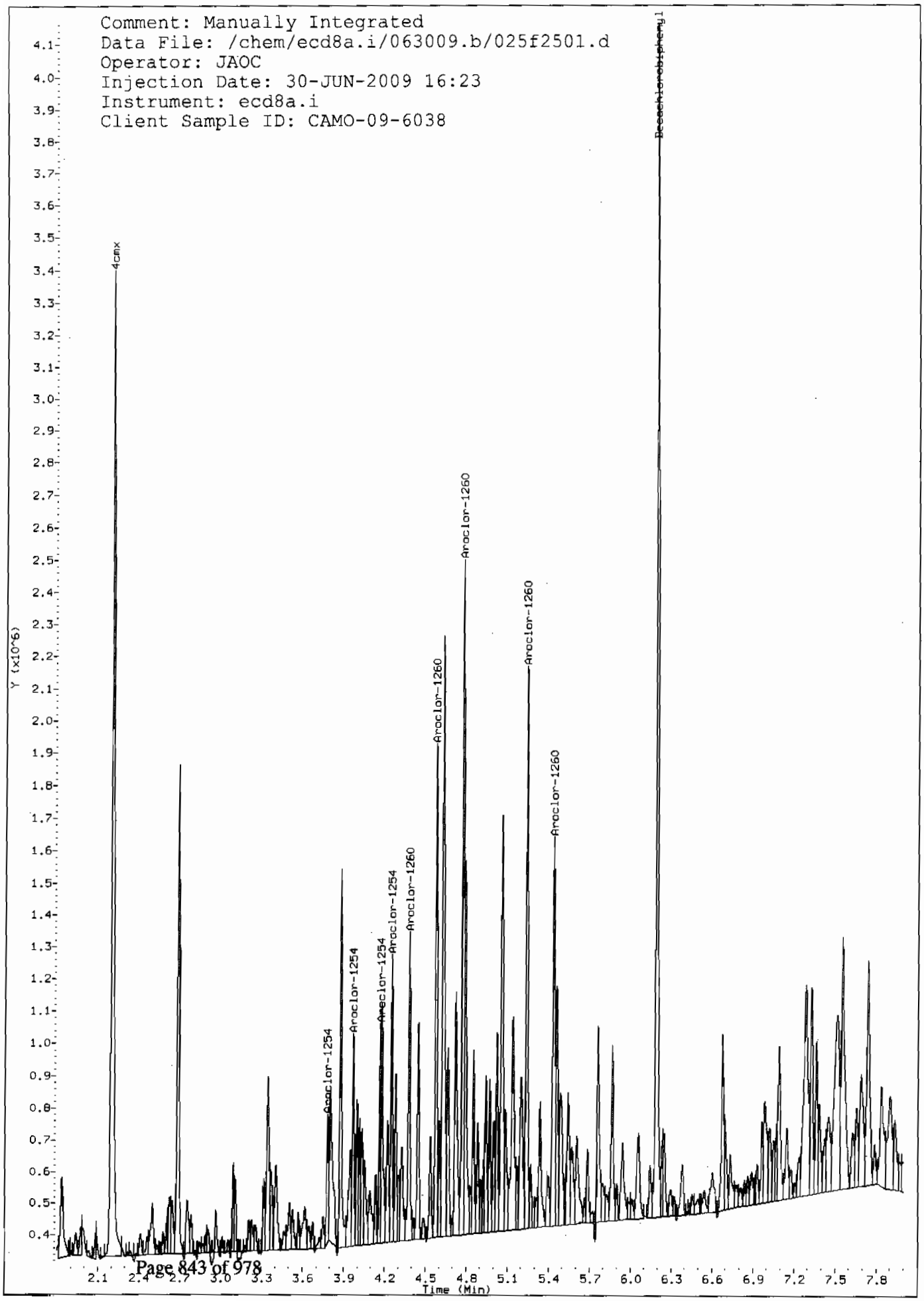
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/025f2501.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:23
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6038
4cmx
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1260
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Aroclor-1260
Decachlorobiphenyl
Y (x10^6)
Time (Min)

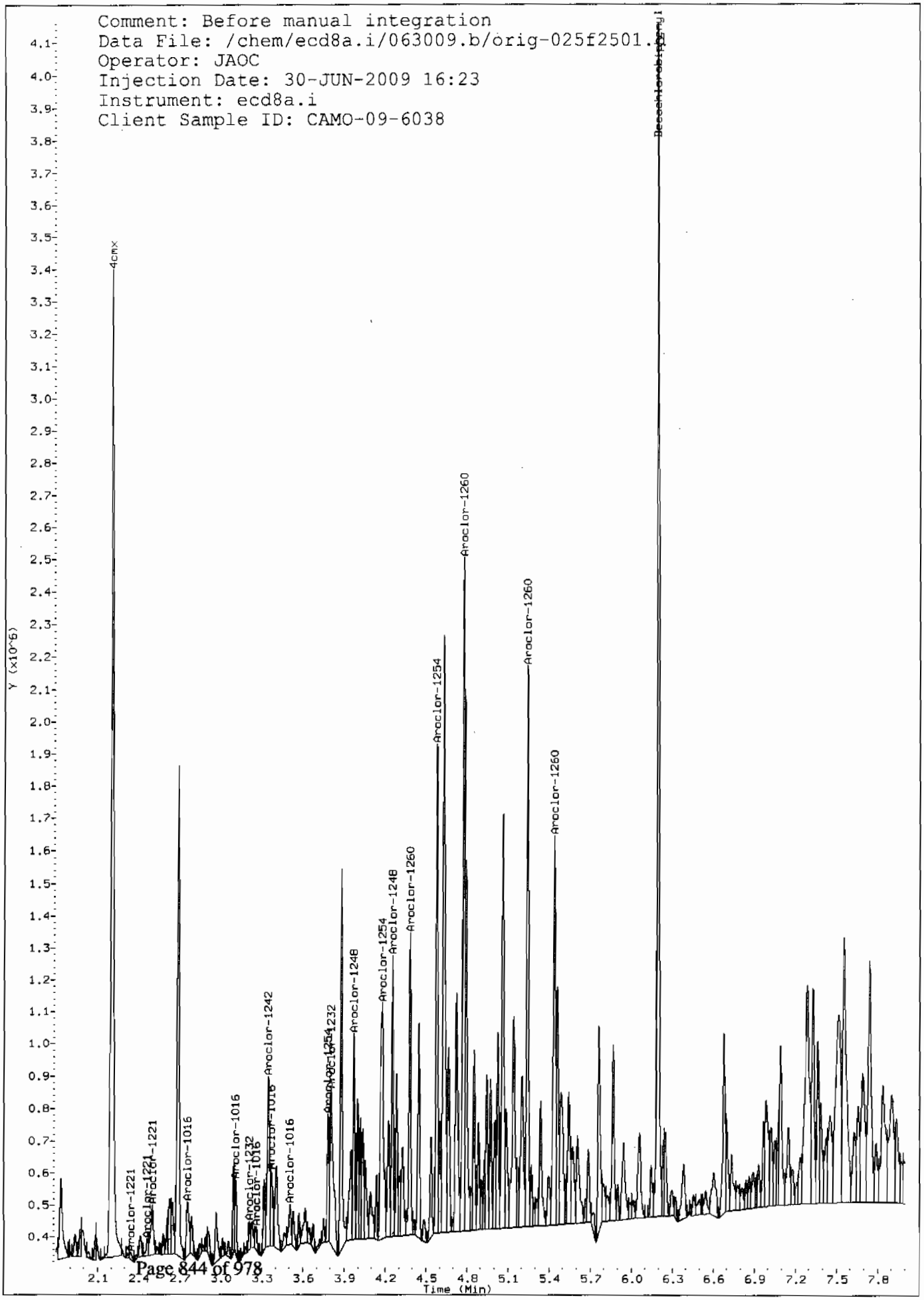
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-025f2501.
Operator: JAOC
Injection Date: 30-JUN-2009 16:23
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6038
Decachlorobiphenyl
4cmx
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Y (x10^6)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/025b2501.d
Lab Smp Id: 232428012 Client Smp ID: CAMO-09-6038
Inj Date : 30-JUN-2009 16:23
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428012|5|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6038|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 25
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	25.20790	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	1250732	21.6821	4.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	1285213	22.8186	5.1	80.00- 120.00	100.00(M)
6 Aroclor-1254					CAS #: 11097-69-1		
4.330	4.331	-0.001	135489	64.5978	14.4	80.00- 120.00	100.00(M)
4.467	4.468	-0.001	226000	97.8633	21.8	88.71- 128.71	166.80
4.797	4.798	-0.001	301898	97.3490	21.7	126.32- 166.32	222.82
5.083	5.084	-0.001	498380	308.283	68.7	61.65- 101.65	367.84
5.202	5.206	-0.004	494988	267.005	59.5	70.78- 110.78	365.33
		Average of Peak Concentrations =			37.2		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	366255	127.081	28.3	80.00- 120.00	100.00(M)
5.083	5.083	0.000	498380	144.177	32.1	104.06- 144.06	136.07
5.202	5.199	0.003	494988	156.714	34.9	91.97- 131.97	135.15
5.608	5.608	0.000	284386	120.091	26.8	64.43- 104.43	77.65
6.040	6.041	-0.001	471895	125.160	27.9	116.83- 156.83	128.84
Average of Peak Concentrations =					30.0		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/025b2501.d

Date : 30-JUN-2009 16:23

Client ID: CAMO-09-6038

Sample Info: |232428012151

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

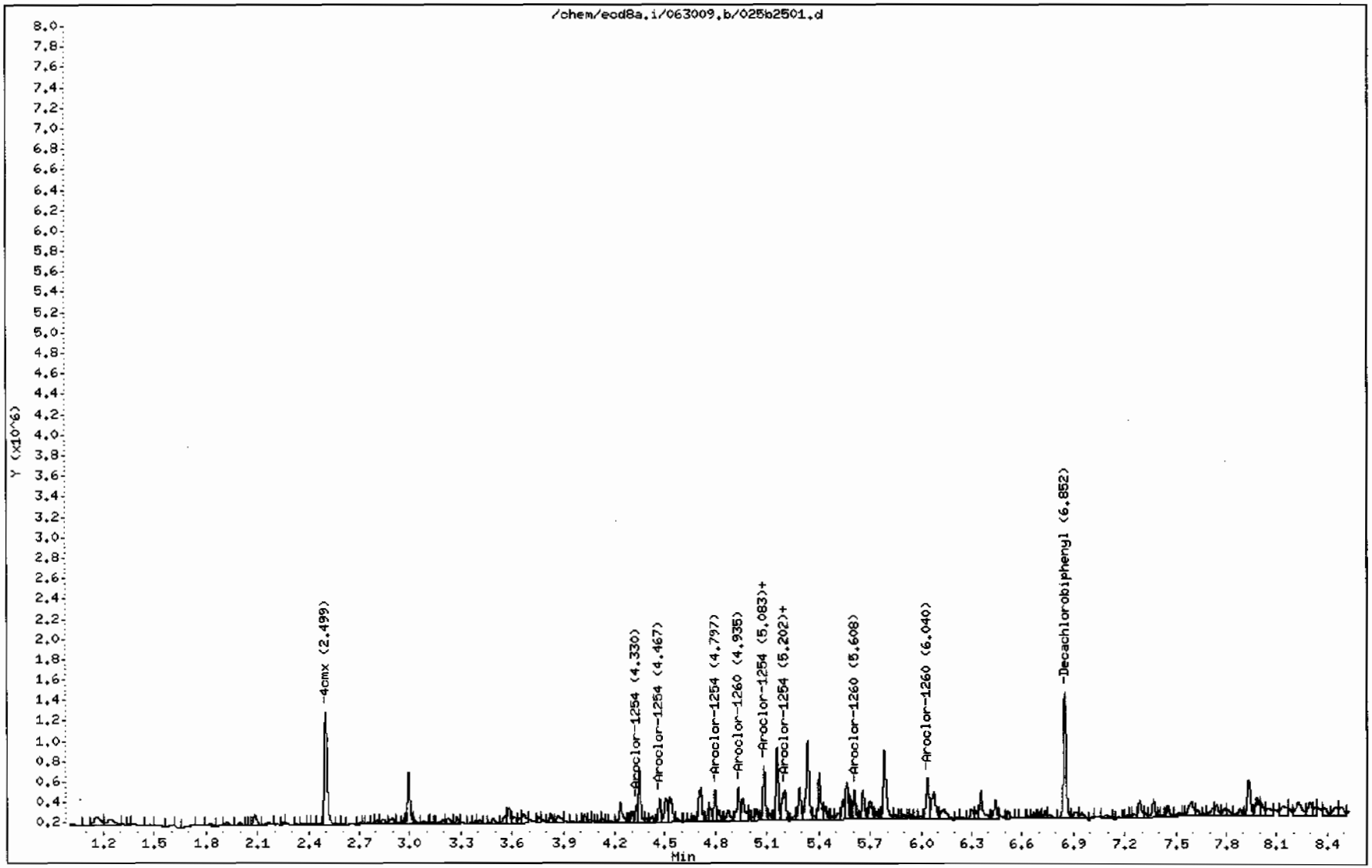

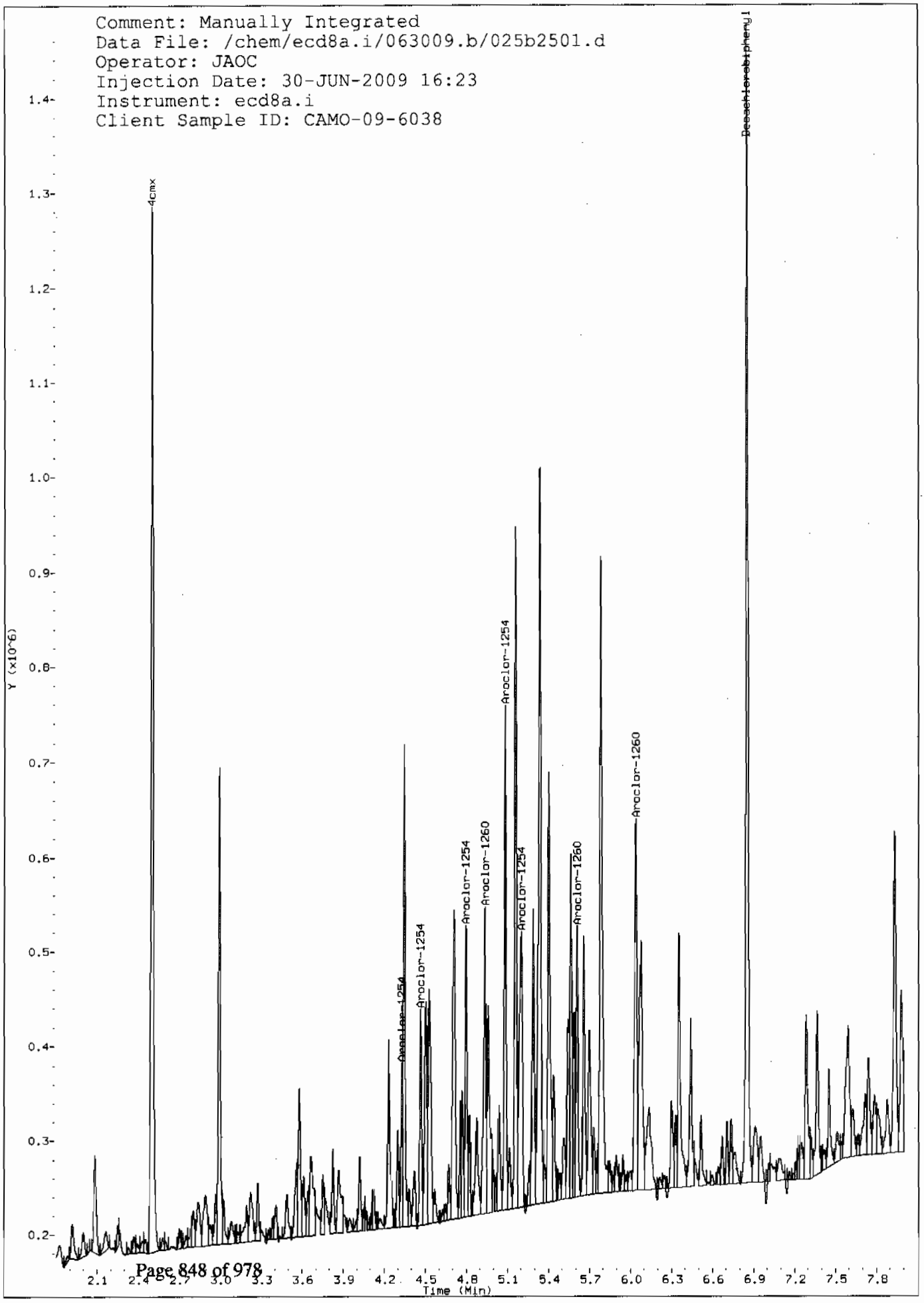
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/025b2501.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:23
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6038
4cmx
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^6)
Time (Min)

Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-025b2501.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:23
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6038

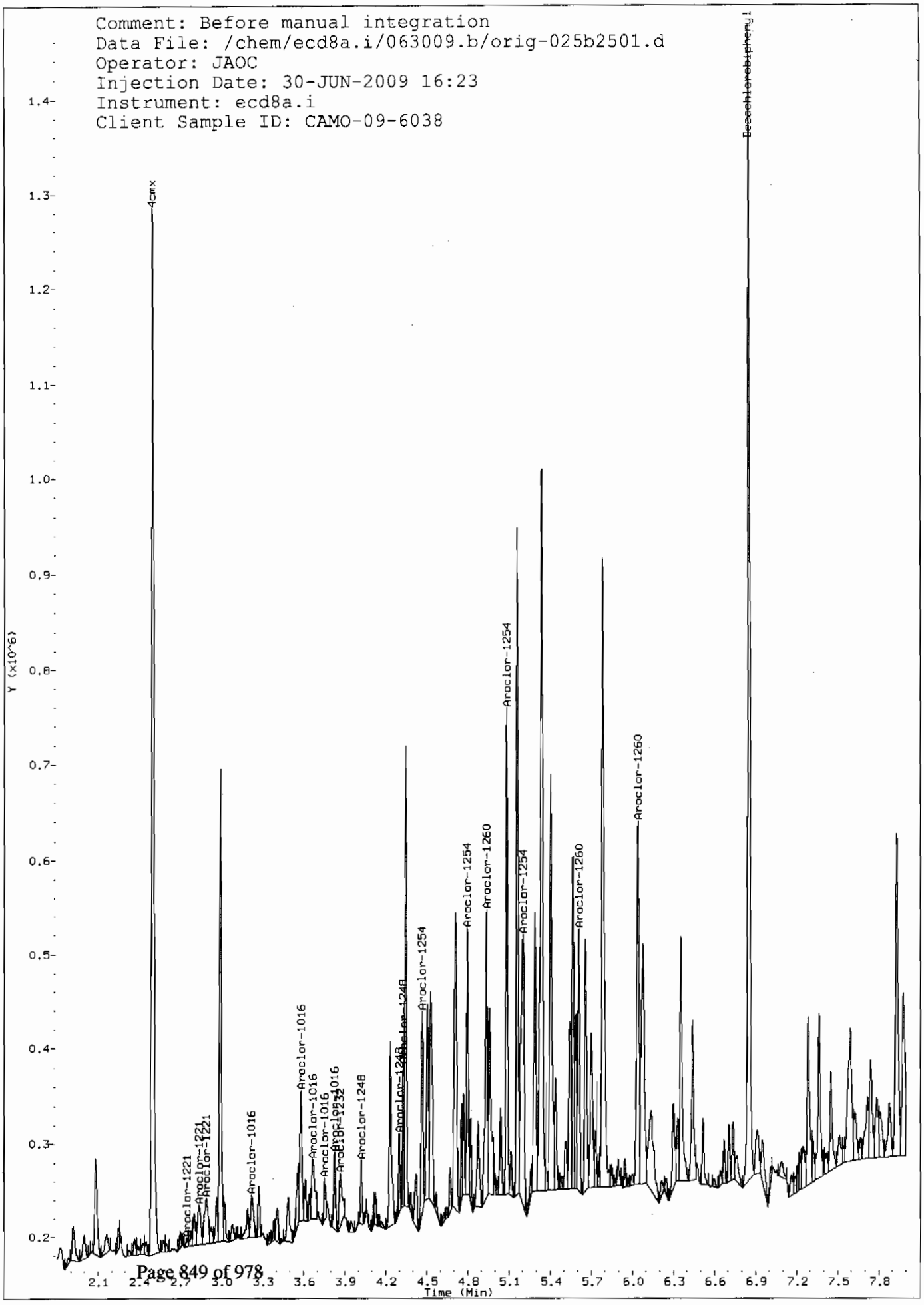

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2477	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232428015	**Date Received:**	06/26/2009 08:40	**%Moisture:**	11.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6049	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 16:39	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	026f2601.d	**Column:**	1 CLP1	**Level:**	LOW
	026b2601.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.77	ug/kg	1.26	3.77	1
11104–28–2	Aroclor–1221	U	3.77	ug/kg	1.26	3.77	1
11141–16–5	Aroclor–1232	U	3.77	ug/kg	1.26	3.77	1
53469–21–9	Aroclor–1242	U	3.77	ug/kg	1.26	3.77	1
12672–29–6	Aroclor–1248	U	3.77	ug/kg	1.26	3.77	1
11097–69–1	Aroclor–1254		6.60	ug/kg	1.26	3.77	2
11096–82–5	Aroclor–1260		6.70	ug/kg	1.26	3.77	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/026f2601.d
Lab Smp Id: 232428015 Client Smp ID: CAMO-09-6049
Inj Date : 30-JUN-2009 16:39
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428015|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6049|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	11.57260	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.201	2.202	-0.001	20507327	128.136	4.8	80.00- 120.00	100.00(M)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	19945782	118.778	4.5	80.00- 120.00	100.00(M)
6 Aroclor-1254					CAS #: 11097-69-1		
3.783	3.786	-0.003	652981	135.354	5.1	80.00- 120.00	100.00(M)
3.970	3.972	-0.002	777447	124.025	4.7	111.24- 151.24	119.06
4.167	4.168	-0.001	627691	131.869	5.0	78.96- 118.96	96.13
4.251	4.254	-0.003	954333	120.144	4.5	142.62- 182.62	146.15
4.576	4.581	-0.005	1836805	270.653	10.2	126.45- 166.45	281.30

Average of Peak Concentrations = 5.9

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	910158	127.682	4.8	80.00- 120.00	100.00(M)
4.576	4.579	-0.003	1836805	182.069	6.9	122.43- 162.43	201.81
4.771	4.774	-0.003	2867225	249.712	9.4	138.51- 178.51	315.02
5.238	5.242	-0.004	1789926	133.622	5.0	171.28- 211.28	196.66
5.435	5.437	-0.002	1281711	195.630	7.4	73.47- 113.47	140.82
		Average of Peak Concentrations =			6.7		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/026f2601.d
Date : 30-JUN-2009 16:39
Client ID: CAMO-09-6049
Sample Info: !232428015!1!
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

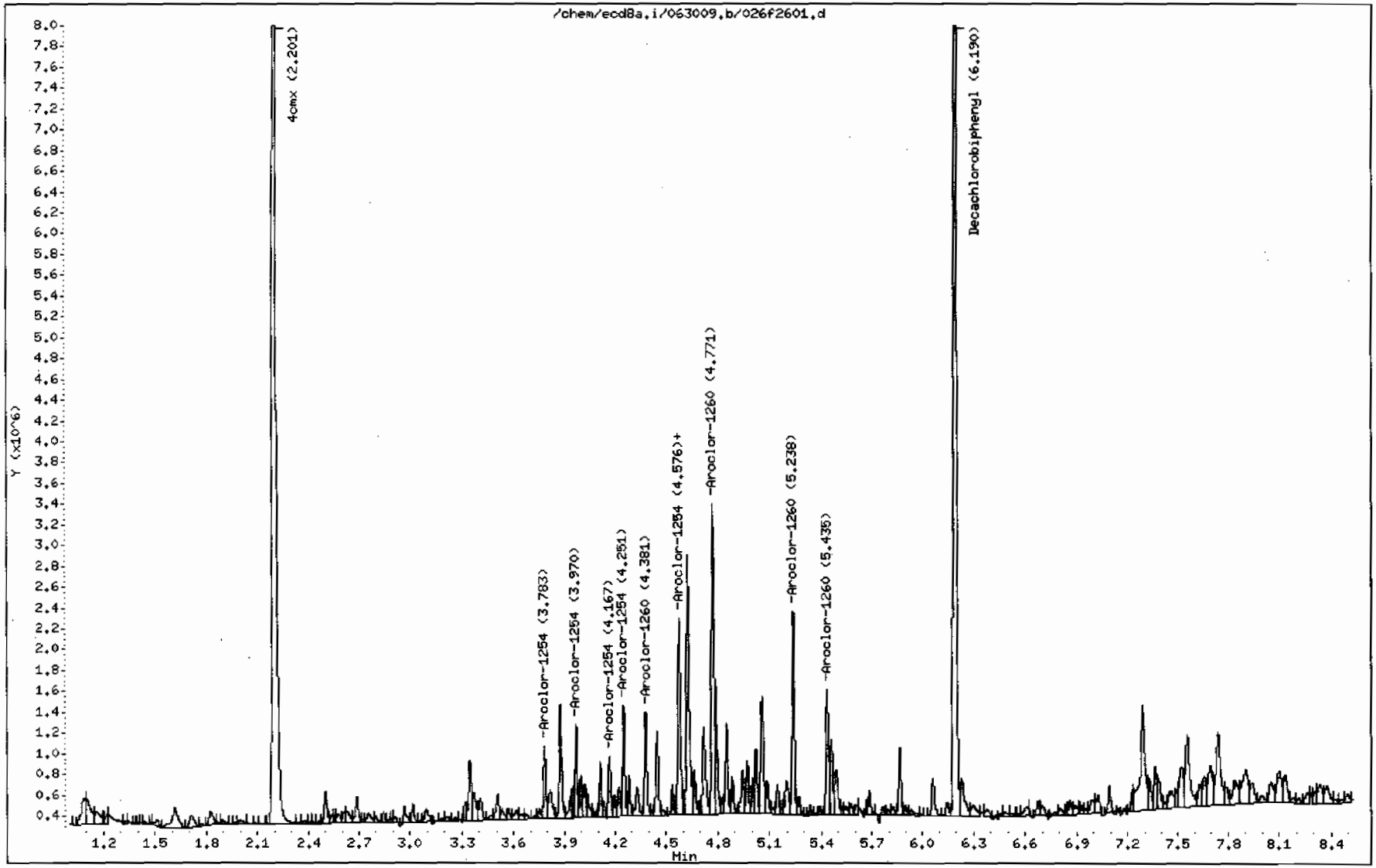

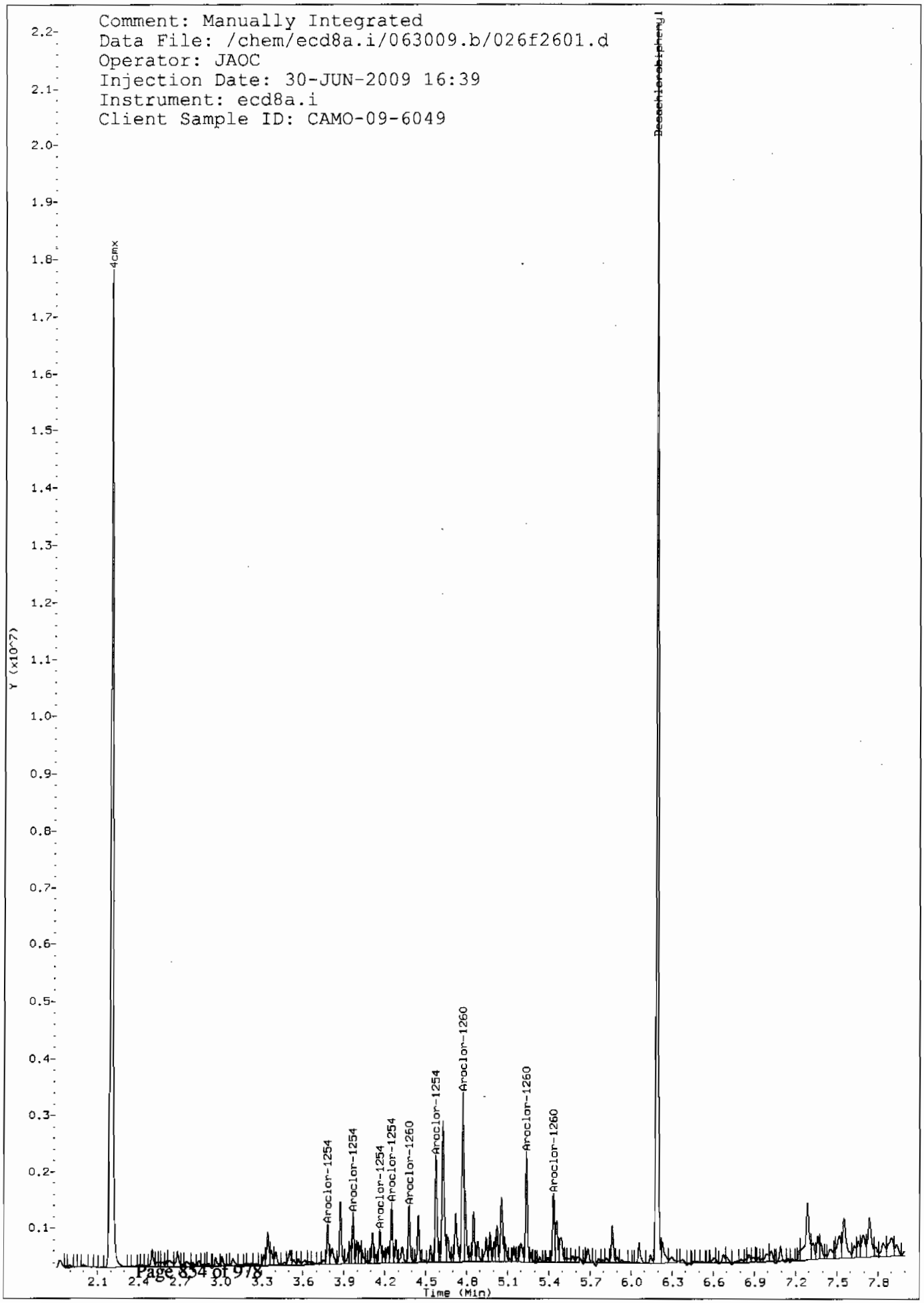
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/026f2601.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:39
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6049
4cmx
Decachlorobiphenyl
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1254
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Aroclor-1260
Aroclor-1260
Y (x10^7)
Time (Min)

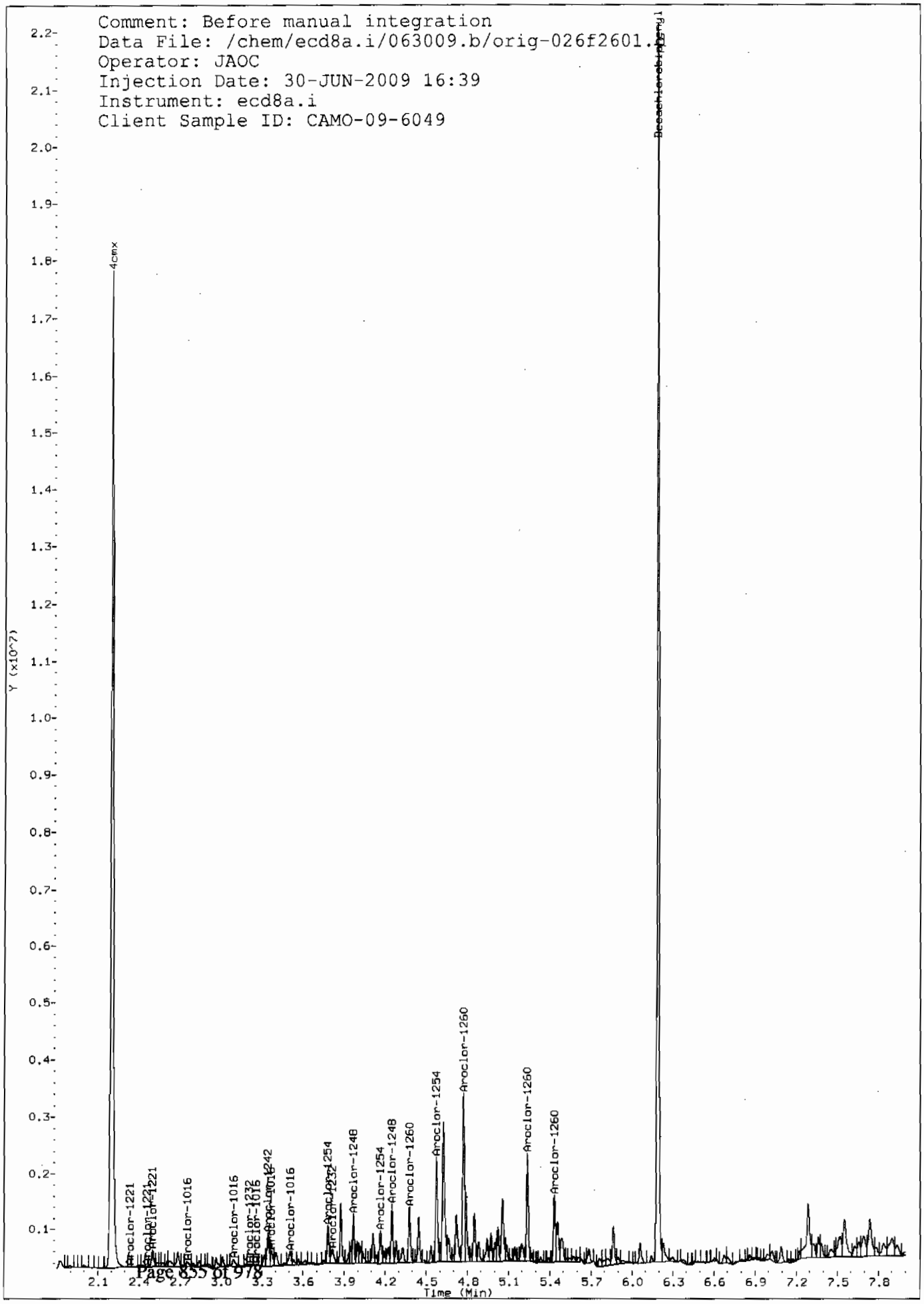
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-026f2601.
Operator: JAOC
Injection Date: 30-JUN-2009 16:39
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6049
4cmx
Aroclor-1221
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1254
Aroclor-1248
Aroclor-1254
Aroclor-1248
Aroclor-1260
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/026b2601.d
Lab Smp Id: 232428015 Client Smp ID: CAMO-09-6049
Inj Date : 30-JUN-2009 16:39
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232428015|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6049|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	11.57260	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	6891803	119.473	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	6295544	111.775	4.2	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.328	4.331	-0.003	205690	98.0679	3.7	80.00- 120.00	100.00
4.466	4.468	-0.002	289341	125.291	4.7	88.71- 128.71	140.67
4.796	4.798	-0.002	397366	128.133	4.8	126.32- 166.32	193.19
5.082	5.084	-0.002	579219	358.288	13.5	61.65- 101.65	281.60
5.202	5.206	-0.004	321570	173.460	6.5	70.78- 110.78	156.34
Average of Peak Concentrations =					6.6		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.934	4.936	-0.002	396153	137.455	5.2	80.00- 120.00	100.00
5.082	5.083	-0.001	579219	167.563	6.3	104.06- 144.06	146.21
5.202	5.199	0.003	321570	101.810	3.8	91.97- 131.97	81.17
5.606	5.608	-0.002	229808	97.0440	3.6	64.43- 104.43	58.01
6.038	6.041	-0.003	486097	128.927	4.8	116.83- 156.83	122.70
Average of Peak Concentrations =					4.7		

Data File: /chem/ecd8a.i/063009.b/026b2601.d

Date : 30-JUN-2009 16:39

Client ID: CAMO-09-6049

Sample Info: |2324280151|1|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

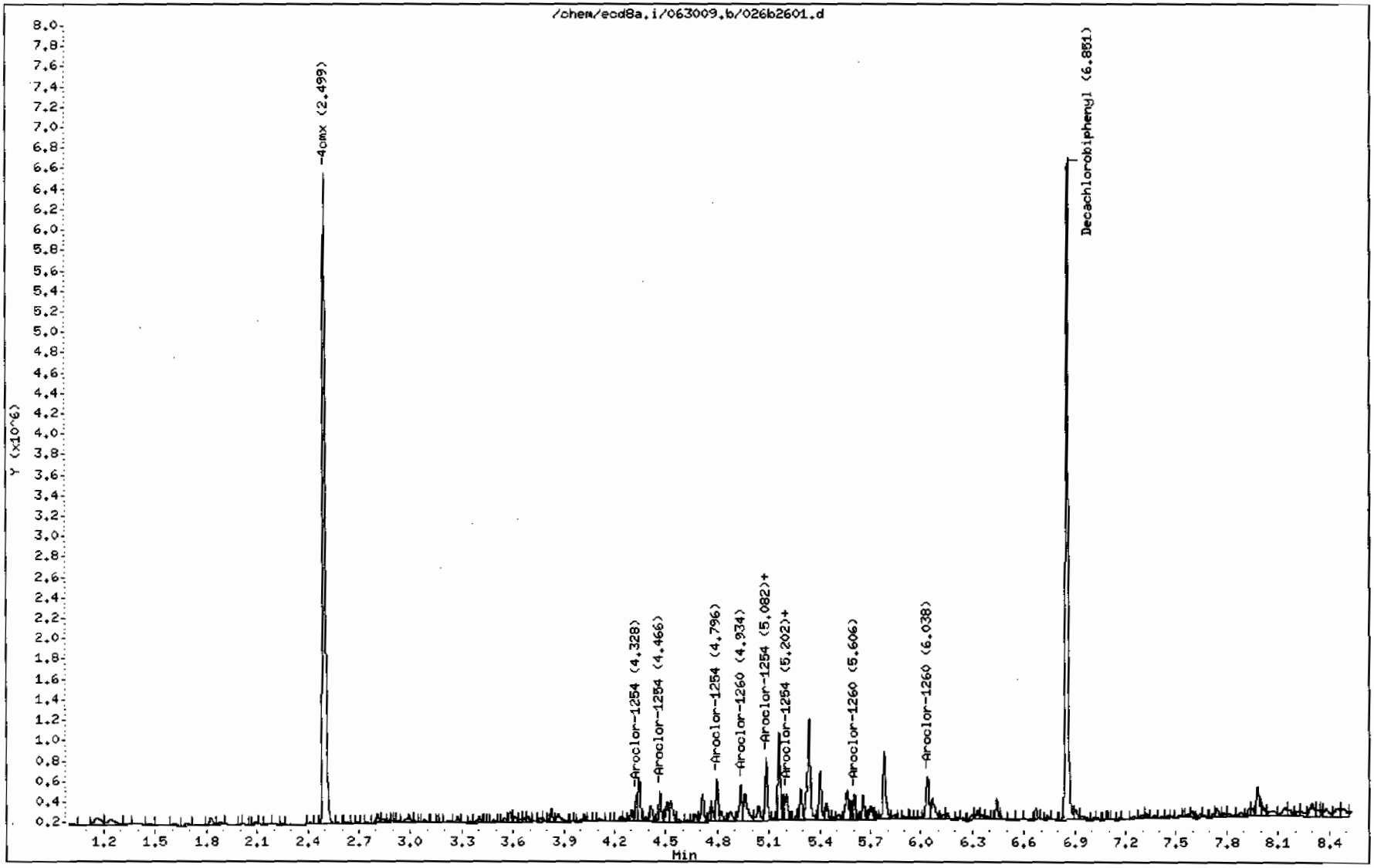

STANDARDS DATA

Report Date: 30-Jun-2009 14:24

Calibration History

Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Start Cal Date: 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
18-JUN-2009 11:27	AR1248	/chem/ecd8a.i/061809.b/014f1401.d
01-JUN-2009 14:05	AR1242	/chem/ecd8a.i/060109a.b/018f1801.d
18-JUN-2009 10:12	AR1254	/chem/ecd8a.i/061809.b/008f0801.d
16-JUN-2009 09:56	AR1660	/chem/ecd8a.i/061609.b/008f0801.d
Cal Level: 2 , Cal Amount: 250.00000		
18-JUN-2009 11:39	AR1248	/chem/ecd8a.i/061809.b/015f1501.d
01-JUN-2009 14:17	AR1242	/chem/ecd8a.i/060109a.b/019f1901.d
18-JUN-2009 10:25	AR1254	/chem/ecd8a.i/061809.b/009f0901.d
16-JUN-2009 10:09	AR1660	/chem/ecd8a.i/061609.b/009f0901.d
Cal Level: 3 , Cal Amount: 500.00000		
18-JUN-2009 11:51	AR1248	/chem/ecd8a.i/061809.b/016f1601.d
01-JUN-2009 14:30	AR1242	/chem/ecd8a.i/060109a.b/020f2001.d
18-JUN-2009 10:37	AR1254	/chem/ecd8a.i/061809.b/010f1001.d
16-JUN-2009 10:21	AR1660	/chem/ecd8a.i/061609.b/010f1001.d
Cal Level: 4 , Cal Amount: 1000.00000		
01-JUN-2009 19:51	DDT	/chem/ecd8a.i/060109a.b/046f4601.d
01-JUN-2009 19:39	AR1268	/chem/ecd8a.i/060109a.b/045f4501.d
01-JUN-2009 19:26	AR1262	/chem/ecd8a.i/060109a.b/044f4401.d
01-JUN-2009 19:14	AR1221	/chem/ecd8a.i/060109a.b/043f4301.d
01-JUN-2009 19:02	AR1232	/chem/ecd8a.i/060109a.b/042f4201.d
18-JUN-2009 12:04	AR1248	/chem/ecd8a.i/061809.b/017f1701.d
01-JUN-2009 14:42	AR1242	/chem/ecd8a.i/060109a.b/021f2101.d
18-JUN-2009 10:50	AR1254	/chem/ecd8a.i/061809.b/011f1101.d
16-JUN-2009 10:33	AR1660	/chem/ecd8a.i/061609.b/011f1101.d
Cal Level: 5 , Cal Amount: 4000.00000		
18-JUN-2009 12:16	AR1248	/chem/ecd8a.i/061809.b/018f1801.d
01-JUN-2009 14:54	AR1242	/chem/ecd8a.i/060109a.b/022f2201.d
18-JUN-2009 11:02	AR1254	/chem/ecd8a.i/061809.b/012f1201.d
16-JUN-2009 10:46	AR1660	/chem/ecd8a.i/061609.b/012f1201.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:28	AR1268	/chem/ecd8a.i/063009.b/009f0901.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:16	AR1262	/chem/ecd8a.i/063009.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:03	AR1221	/chem/ecd8a.i/063009.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:48	AR1232	/chem/ecd8a.i/063009.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:36	AR1248	/chem/ecd8a.i/063009.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:24	AR1242	/chem/ecd8a.i/063009.b/004f0401.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:11	AR1254	/chem/ecd8a.i/063009.b/003f0301.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 10:59	AR1660	/chem/ecd8a.i/063009.b/002f0201.d

Report Date: 30-Jun-2009 14:24

Calibration History

Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Start Cal Date: 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
18-JUN-2009 11:27	AR1248	/chem/ecd8a.i/061809.b/014b1401.d
01-JUN-2009 14:05	AR1242	/chem/ecd8a.i/060109a.b/018b1801.d
18-JUN-2009 10:12	AR1254	/chem/ecd8a.i/061809.b/008b0801.d
16-JUN-2009 09:56	AR1660	/chem/ecd8a.i/061609.b/008b0801.d
Cal Level: 2 , Cal Amount: 250.00000		
18-JUN-2009 11:39	AR1248	/chem/ecd8a.i/061809.b/015b1501.d
01-JUN-2009 14:17	AR1242	/chem/ecd8a.i/060109a.b/019b1901.d
18-JUN-2009 10:25	AR1254	/chem/ecd8a.i/061809.b/009b0901.d
16-JUN-2009 10:09	AR1660	/chem/ecd8a.i/061609.b/009b0901.d
Cal Level: 3 , Cal Amount: 500.00000		
18-JUN-2009 11:51	AR1248	/chem/ecd8a.i/061809.b/016b1601.d
01-JUN-2009 14:30	AR1242	/chem/ecd8a.i/060109a.b/020b2001.d
18-JUN-2009 10:37	AR1254	/chem/ecd8a.i/061809.b/010b1001.d
16-JUN-2009 10:21	AR1660	/chem/ecd8a.i/061609.b/010b1001.d
Cal Level: 4 , Cal Amount: 1000.00000		
01-JUN-2009 19:51	DDT	/chem/ecd8a.i/060109a.b/046b4601.d
01-JUN-2009 19:39	AR1268	/chem/ecd8a.i/060109a.b/045b4501.d
01-JUN-2009 19:26	AR1262	/chem/ecd8a.i/060109a.b/044b4401.d
01-JUN-2009 19:14	AR1221	/chem/ecd8a.i/060109a.b/043b4301.d
01-JUN-2009 19:02	AR1232	/chem/ecd8a.i/060109a.b/042b4201.d
18-JUN-2009 12:04	AR1248	/chem/ecd8a.i/061809.b/017b1701.d
01-JUN-2009 14:42	AR1242	/chem/ecd8a.i/060109a.b/021b2101.d
18-JUN-2009 10:50	AR1254	/chem/ecd8a.i/061809.b/011b1101.d
16-JUN-2009 10:33	AR1660	/chem/ecd8a.i/061609.b/011b1101.d
Cal Level: 5 , Cal Amount: 4000.00000		
18-JUN-2009 12:16	AR1248	/chem/ecd8a.i/061809.b/018b1801.d
01-JUN-2009 14:54	AR1242	/chem/ecd8a.i/060109a.b/022b2201.d
18-JUN-2009 11:02	AR1254	/chem/ecd8a.i/061809.b/012b1201.d
16-JUN-2009 10:46	AR1660	/chem/ecd8a.i/061609.b/012b1201.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:28	AR1268	/chem/ecd8a.i/063009.b/009b0901.d

Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:16	AR1262	/chem/ecd8a.i/063009.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:03	AR1221	/chem/ecd8a.i/063009.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:48	AR1232	/chem/ecd8a.i/063009.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:36	AR1248	/chem/ecd8a.i/063009.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:24	AR1242	/chem/ecd8a.i/063009.b/004b0401.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:11	AR1254	/chem/ecd8a.i/063009.b/003b0301.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 10:59	AR1660	/chem/ecd8a.i/063009.b/002b0201.d

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 30-Jun-2009 14:15 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	758.000000
Initial:End Threshold	379.000000
Initial:Area Threshold	734.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	1.500000
6.500:Bunch Factor	2.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.762	2.732-2.792	5.767e+03
	3.112	3.082-3.142	7.225e+03
	3.256	3.226-3.286	2.909e+03
	3.365	3.335-3.395	2.753e+03
	3.510	3.480-3.540	3.629e+03
2 Aroclor-1221	2.347	2.317-2.377	1.552e+03
	2.461	2.431-2.491	8.835e+02
	2.493	2.463-2.523	3.730e+03
3 Aroclor-1232	2.762	2.732-2.792	2.534e+03
	3.113	3.083-3.143	3.242e+03
	3.210	3.180-3.240	2.139e+03
	3.511	3.481-3.541	1.547e+03
	3.817	3.787-3.847	1.317e+03
4 Aroclor-1242	2.762	2.732-2.792	4.058e+03
	3.113	3.083-3.143	4.963e+03
	3.257	3.227-3.287	1.993e+03
	3.349	3.319-3.379	1.776e+03
	3.511	3.481-3.541	2.575e+03
5 Aroclor-1248	3.112	3.082-3.142	3.101e+03
	3.348	3.318-3.378	3.691e+03
	3.511	3.481-3.541	4.716e+03
	3.975	3.945-4.005	4.121e+03
	4.255	4.225-4.285	3.182e+03

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COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	3.786	3.756-3.816	4.824e+03
		3.972	3.942-4.002	6.268e+03
		4.168	4.138-4.198	4.760e+03
		4.254	4.224-4.284	7.943e+03
		4.581	4.551-4.611	6.787e+03
	7 Aroclor-1260	4.383	4.353-4.413	7.128e+03
		4.579	4.549-4.609	1.009e+04
		4.774	4.744-4.804	1.148e+04
		5.242	5.212-5.272	1.340e+04
		5.437	5.407-5.467	6.552e+03
	8 Aroclor-1262	4.384	4.354-4.414	4.497e+03
		4.580	4.550-4.610	7.643e+03
		4.855	4.825-4.885	1.033e+04
		5.026	4.996-5.056	6.240e+03
		5.242	5.212-5.272	2.010e+04
	9 Aroclor-1268	5.461	5.431-5.491	2.021e+04
		5.489	5.459-5.519	2.299e+04
		5.621	5.591-5.651	1.696e+04
		5.868	5.838-5.898	8.529e+03
		6.064	6.034-6.094	5.465e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	2.202	2.172-2.232	1.600e+05
$	12 Decachlorobiphenyl	6.193	6.163-6.223	1.679e+05
	13 4,4'-DDT	4.803	4.783-4.823	5.953e+04
	14 4,4'-DDD	4.610	4.590-4.630	1.238e+05
	15 4,4'-DDE	4.186	4.166-4.206	1.600e+05

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 30-Jun-2009 14:15 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	733.000000
Initial:End Threshold	366.500000
Initial:Area Threshold	522.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	2.000000
9.000:Bunch Factor	2.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	3.222	3.192-3.252	2.206e+03
	3.575	3.545-3.605	2.931e+03
	3.675	3.645-3.705	1.739e+03
	3.752	3.722-3.782	1.038e+03
	3.826	3.796-3.856	1.070e+03
2 Aroclor-1221	2.743	2.713-2.773	6.391e+02
	2.856	2.826-2.886	4.078e+02
	2.905	2.875-2.935	1.496e+03
3 Aroclor-1232	3.223	3.193-3.253	1.122e+03
	3.575	3.545-3.605	1.421e+03
	3.676	3.646-3.706	8.476e+02
	3.826	3.796-3.856	4.658e+02
	3.858	3.828-3.888	4.814e+02
4 Aroclor-1242	3.223	3.193-3.253	1.708e+03
	3.576	3.546-3.606	2.110e+03
	3.677	3.647-3.707	1.298e+03
	3.752	3.723-3.783	7.735e+02
	3.827	3.797-3.857	7.883e+02
5 Aroclor-1248	3.575	3.545-3.605	1.180e+03
	3.826	3.796-3.856	1.431e+03
	4.023	3.993-4.053	1.766e+03
	4.301	4.271-4.331	2.015e+03
	4.333	4.303-4.363	2.294e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	4.331	4.301-4.361	2.097e+03
		4.468	4.438-4.498	2.309e+03
		4.798	4.768-4.828	3.101e+03
		5.084	5.054-5.114	1.617e+03
		5.206	5.176-5.236	1.854e+03
	7 Aroclor-1260	4.936	4.906-4.966	2.882e+03
		5.083	5.053-5.113	3.457e+03
		5.199	5.169-5.229	3.159e+03
		5.608	5.578-5.638	2.368e+03
		6.041	6.011-6.071	3.770e+03
	8 Aroclor-1262	5.085	5.055-5.115	2.887e+03
		5.401	5.371-5.431	4.337e+03
		5.609	5.579-5.639	3.796e+03
		5.783	5.753-5.813	7.857e+03
		6.036	6.006-6.066	5.567e+03
	9 Aroclor-1268	6.035	6.005-6.065	8.266e+03
		6.068	6.038-6.098	8.012e+03
		6.246	6.216-6.276	6.337e+03
		6.443	6.413-6.473	2.993e+03
		6.672	6.642-6.702	1.951e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	2.499	2.469-2.529	5.769e+04
$	12 Decachlorobiphenyl	6.853	6.823-6.883	5.632e+04
	13 4,4'-DDT	5.344	5.324-5.364	1.533e+04
	14 4,4'-DDD	5.123	5.103-5.143	3.856e+04
	15 4,4'-DDE	4.712	4.691-4.731	5.854e+04

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd8a.i/061809.b/014f1401.d
Level 2: /chem/ecd8a.i/061809.b/015f1501.d
Level 3: /chem/ecd8a.i/061809.b/016f1601.d
Level 4: /chem/ecd8a.i/060109a.b/046f4601.d
Level 5: /chem/ecd8a.i/061809.b/018f1801.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	6382	6153	5903	5546	4852	5767	10.374
(2)	7612	7575	7256	6956	6725	7225	5.338
(3)	3028	3020	2943	2834	2722	2909	4.488
(4)	2996	2866	2782	2620	2501	2753	7.133
(5)	3855	3765	3658	3505	3360	3629	5.480
2 Aroclor-1221(1)	+++++	+++++	+++++	1552	+++++	1552	0.000
(2)	+++++	+++++	+++++	884	+++++	884	0.000
(3)	+++++	+++++	+++++	3730	+++++	3730	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	2534	+++++	2534	0.000
(2)	+++++	+++++	+++++	3242	+++++	3242	0.000
(3)	+++++	+++++	+++++	2139	+++++	2139	0.000
(4)	+++++	+++++	+++++	1547	+++++	1547	0.000
(5)	+++++	+++++	+++++	1317	+++++	1317	0.000
4 Aroclor-1242(1)	4799	4285	4051	3858	3298	4058	13.594
(2)	5376	5128	4935	4800	4573	4963	6.185
(3)	2187	2024	1984	1943	1830	1993	6.529
(4)	2101	1847	1735	1702	1495	1776	12.478
(5)	2954	2634	2536	2479	2273	2575	9.692
5 Aroclor-1248(1)	3403	3130	3072	3011	2890	3101	6.153
(2)	4054	3812	3643	3587	3362	3691	7.009
(3)	5032	4832	4709	4603	4406	4716	5.000
(4)	4199	4050	4133	4131	4094	4121	1.335
(5)	3259	3184	3247	3209	3012	3182	3.141
6 Aroclor-1254(1)	5068	4958	4838	4712	4546	4824	4.241
(2)	6310	6357	6231	6251	6194	6268	1.032
(3)	4574	4878	4790	4787	4770	4760	2.358
(4)	7476	7977	8002	8044	8218	7943	3.496
(5)	6713	7019	6939	6720	6541	6787	2.829

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

	Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
	7 Aroclor-1260(1)	7252	7304	7236	7087	6763	7128	3.081
	(2)	9666	10056	10152	10213	10356	10089	2.580
	(3)	11208	11407	11564	11701	11531	11482	1.618
	(4)	12350	13410	13592	13776	13850	13395	4.547
	(5)	6187	6485	6648	6623	6815	6552	3.591
	8 Aroclor-1262(1)	+++++	+++++	+++++	4497	+++++	4497	0.000
	(2)	+++++	+++++	+++++	7643	+++++	7643	0.000
	(3)	+++++	+++++	+++++	10334	+++++	10334	0.000
	(4)	+++++	+++++	+++++	6240	+++++	6240	0.000
	(5)	+++++	+++++	+++++	20101	+++++	20101	0.000
	9 Aroclor-1268(1)	+++++	+++++	+++++	20211	+++++	20211	0.000
	(2)	+++++	+++++	+++++	22988	+++++	22988	0.000
	(3)	+++++	+++++	+++++	16959	+++++	16959	0.000
	(4)	+++++	+++++	+++++	8529	+++++	8529	0.000
	(5)	+++++	+++++	+++++	54649	+++++	54649	0.000
M	10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	13 4,4'-DDT	+++++	+++++	+++++	59530	+++++	59530	0.000
	14 4,4'-DDD	+++++	+++++	+++++	123779	+++++	123779	0.000
	15 4,4'-DDE	+++++	+++++	+++++	160030	+++++	160030	0.000
$	11 4cmx	163405	164186	162254	160617	149759	160044	3.689
$	12 Decachlorobiphenyl	174419	173170	169471	166850	155711	167924	4.441

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd8a.i/061809.b/014b1401.d
Level 2: /chem/ecd8a.i/061809.b/015b1501.d
Level 3: /chem/ecd8a.i/061809.b/016b1601.d
Level 4: /chem/ecd8a.i/060109a.b/046b4601.d
Level 5: /chem/ecd8a.i/061809.b/018b1801.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	2354	2322	2239	2171	1943	2206	7.412
(2)	3013	3033	2968	2921	2719	2931	4.294
(3)	1838	1803	1751	1708	1595	1739	5.443
(4)	1076	1070	1043	1024	979	1038	3.769
(5)	1162	1111	1072	1038	970	1070	6.800
2 Aroclor-1221(1)	+++++	+++++	+++++	639	+++++	639	0.000
(2)	+++++	+++++	+++++	408	+++++	408	0.000
(3)	+++++	+++++	+++++	1496	+++++	1496	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	1122	+++++	1122	0.000
(2)	+++++	+++++	+++++	1421	+++++	1421	0.000
(3)	+++++	+++++	+++++	848	+++++	848	0.000
(4)	+++++	+++++	+++++	466	+++++	466	0.000
(5)	+++++	+++++	+++++	481	+++++	481	0.000
4 Aroclor-1242(1)	1987	1787	1698	1633	1432	1708	11.929
(2)	2309	2114	2133	2071	1921	2110	6.580
(3)	1488	1344	1282	1241	1137	1298	10.005
(4)	874	795	763	743	693	773	8.699
(5)	939	822	770	740	670	788	12.760
5 Aroclor-1248(1)	1246	1157	1192	1172	1136	1180	3.537
(2)	1568	1470	1429	1391	1295	1431	7.045
(3)	1893	1797	1762	1741	1635	1766	5.301
(4)	2119	2014	2009	2000	1931	2015	3.348
(5)	2414	2303	2295	2284	2171	2294	3.762
6 Aroclor-1254(1)	2236	2169	2093	2062	1927	2097	5.573
(2)	2413	2365	2312	2282	2175	2309	3.907
(3)	3072	3129	3135	3148	3022	3101	1.715
(4)	1650	1607	1604	1634	1588	1617	1.541
(5)	1860	1846	1817	1867	1880	1854	1.298

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

	Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
	7 Aroclor-1260(1)	2897	2953	2955	2898	2707	2882	3.531
	(2)	3393	3515	3573	3519	3285	3457	3.374
	(3)	3105	3221	3225	3197	3045	3159	2.529
	(4)	2359	2409	2408	2394	2270	2368	2.471
	(5)	3607	3812	3867	3865	3701	3770	3.008
	8 Aroclor-1262(1)	+++++	+++++	+++++	2887	+++++	2887	0.000
	(2)	+++++	+++++	+++++	4337	+++++	4337	0.000
	(3)	+++++	+++++	+++++	3796	+++++	3796	0.000
	(4)	+++++	+++++	+++++	7857	+++++	7857	0.000
	(5)	+++++	+++++	+++++	5567	+++++	5567	0.000
	9 Aroclor-1268(1)	+++++	+++++	+++++	8266	+++++	8266	0.000
	(2)	+++++	+++++	+++++	8012	+++++	8012	0.000
	(3)	+++++	+++++	+++++	6337	+++++	6337	0.000
	(4)	+++++	+++++	+++++	2993	+++++	2993	0.000
	(5)	+++++	+++++	+++++	19507	+++++	19507	0.000
M	10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	13 4,4'-DDT	+++++	+++++	+++++	15331	+++++	15331	0.000
	14 4,4'-DDD	+++++	+++++	+++++	38559	+++++	38559	0.000
	15 4,4'-DDE	+++++	+++++	+++++	58538	+++++	58538	0.000
$	11 4cmx	55520	58797	59142	59406	55559	57685	3.415
$	12 Decachlorobiphenyl	58551	58238	56883	56068	51876	56323	4.763

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1059

Lab File ID: 002F0201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6330.009	0.01	9.8	15.0
(2)	7224.724	7760.134	0.01	7.4	15.0
(3)	2909.461	3163.944	0.01	8.7	15.0
(4)	2752.769	2944.428	0.01	7.0	15.0
(5)	3628.674	3972.822	0.01	9.5	15.0
Aroclor-1260	7128.341	7537.503	0.01	5.7	15.0
(2)	10088.517	10760.077	0.01	6.6	15.0
(3)	11482.117	12267.009	0.01	6.8	15.0
(4)	13395.429	14219.270	0.01	6.2	15.0
(5)	6551.697	6850.457	0.01	4.6	15.0
4cmx	160044.04	157059.35	0.01	-1.9	15.0
Decachlorobiphenyl	167924.32	162129.64	0.01	-3.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1059

Lab File ID: 002B0201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2205.647	0.01	-0.0	15.0
(2)	2930.861	2901.199	0.01	-1.0	15.0
(3)	1739.079	1721.686	0.01	-1.0	15.0
(4)	1038.126	1037.560	0.01	-0.0	15.0
(5)	1070.250	1054.433	0.01	-1.5	15.0
Aroclor-1260	2882.050	2835.211	0.01	-1.6	15.0
(2)	3456.730	3472.058	0.01	0.4	15.0
(3)	3158.535	3145.666	0.01	-0.4	15.0
(4)	2368.081	2347.820	0.01	-0.8	15.0
(5)	3770.327	3768.651	0.01	-0.0	15.0
4cmx	57685.085	51468.730	0.01	-10.8	15.0
Decachlorobiphenyl	56323.158	49750.070	0.01	-11.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1111

Lab File ID: 003F0301 Init. Calib. Date(s): 06/18/09 06/18/09

Heated Purge: (Y/N) N Init. Calib. Times: 1012 1102

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1254	4824.261	4958.152	0.01	2.8	15.0
(2)	6268.469	6507.071	0.01	3.8	15.0
(3)	4759.959	4906.754	0.01	3.1	15.0
(4)	7943.267	8062.990	0.01	1.5	15.0
(5)	6786.566	7261.142	0.01	7.0	15.0
4cmx	160044.04	167764.49	0.01	4.8	15.0
Decachlorobiphenyl	167924.32	179960.48	0.01	7.2	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1111

Lab File ID: 003B0301 Init. Calib. Date(s): 06/18/09 06/18/09

Heated Purge: (Y/N) N Init. Calib. Times: 1012 1102

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1254	2097.425	2080.742	0.01	-0.8	15.0
(2)	2309.345	2261.890	0.01	-2.0	15.0
(3)	3101.194	3044.551	0.01	-1.8	15.0
(4)	1616.630	1698.880	0.01	5.1	15.0
(5)	1853.853	1888.935	0.01	1.9	15.0
4cmx	57685.085	55441.240	0.01	-3.9	15.0
Decachlorobiphenyl	56323.158	54468.920	0.01	-3.3	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1542

Lab File ID: 022F2201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6288.333	0.01	9.0	15.0
(2)	7224.724	7938.191	0.01	9.9	15.0
(3)	2909.461	3295.660	0.01	13.3	15.0
(4)	2752.769	2994.907	0.01	8.8	15.0
(5)	3628.674	3994.031	0.01	10.1	15.0
Aroclor-1260	7128.341	7712.097	0.01	8.2	15.0
(2)	10088.517	10992.438	0.01	9.0	15.0
(3)	11482.117	12204.910	0.01	6.3	15.0
(4)	13395.429	14742.255	0.01	10.0	15.0
(5)	6551.697	7255.615	0.01	10.7	15.0
4cmx	160044.04	155593.99	0.01	-2.8	15.0
Decachlorobiphenyl	167924.32	165058.59	0.01	-1.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1542

Lab File ID: 022B2201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2220.681	0.01	0.7	15.0
(2)	2930.861	2994.458	0.01	2.2	15.0
(3)	1739.079	1766.379	0.01	1.6	15.0
(4)	1038.126	1063.855	0.01	2.5	15.0
(5)	1070.250	1076.468	0.01	0.6	15.0
Aroclor-1260	2882.050	2885.170	0.01	0.1	15.0
(2)	3456.730	3545.820	0.01	2.6	15.0
(3)	3158.535	3200.191	0.01	1.3	15.0
(4)	2368.081	2398.901	0.01	1.3	15.0
(5)	3770.327	3868.799	0.01	2.6	15.0
4cmx	57685.085	51351.210	0.01	-11.0	15.0
Decachlorobiphenyl	56323.158	50351.420	0.01	-10.6	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1835

Lab File ID: 033F3301 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6222.594	0.01	7.9	15.0
(2)	7224.724	7909.896	0.01	9.5	15.0
(3)	2909.461	3197.458	0.01	9.9	15.0
(4)	2752.769	2899.955	0.01	5.3	15.0
(5)	3628.674	3898.569	0.01	7.4	15.0
Aroclor-1260	7128.341	7627.002	0.01	7.0	15.0
(2)	10088.517	10853.926	0.01	7.6	15.0
(3)	11482.117	12192.523	0.01	6.2	15.0
(4)	13395.429	14602.143	0.01	9.0	15.0
(5)	6551.697	7015.943	0.01	7.1	15.0
4cmx	160044.04	153639.80	0.01	-4.0	15.0
Decachlorobiphenyl	167924.32	165542.67	0.01	-1.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1835

Lab File ID: 033B3301 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2198.374	0.01	-0.3	15.0
(2)	2930.861	3024.556	0.01	3.2	15.0
(3)	1739.079	1743.998	0.01	0.3	15.0
(4)	1038.126	1055.236	0.01	1.6	15.0
(5)	1070.250	1063.993	0.01	-0.6	15.0
Aroclor-1260	2882.050	2880.731	0.01	-0.0	15.0
(2)	3456.730	3559.181	0.01	3.0	15.0
(3)	3158.535	3207.590	0.01	1.6	15.0
(4)	2368.081	2405.333	0.01	1.6	15.0
(5)	3770.327	3902.843	0.01	3.5	15.0
4cmx	57685.085	50702.800	0.01	-12.1	15.0
Decachlorobiphenyl	56323.158	51373.510	0.01	-8.8	15.0

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/002f0201.d
Lab Smp Id: WAR090629-04601 Client Smp ID: AR166001
Inj Date : 30-JUN-2009 10:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04601
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	15705935	100.000	98.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	16212964	100.000	96.5	80.00- 120.00	100.00(M)
1 Aroclor-1016					CAS #: 12674-11-2		
2.762	2.762	0.000	6330009	1000.00	1100	80.00- 120.00	100.00
3.112	3.112	0.000	7760134	1000.00	1070	102.59- 142.59	122.59
3.256	3.256	0.000	3163944	1000.00	1090	29.98- 69.98	49.98
3.365	3.365	0.000	2944428	1000.00	1070	26.52- 66.52	46.52
3.510	3.510	0.000	3972822	1000.00	1090	42.76- 82.76	62.76
Average of Peak Amounts =				1.08e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.383	4.383	0.000	7537503	1000.00	1060	80.00- 120.00	100.00(M)
4.579	4.579	0.000	10760077	1000.00	1070	122.75- 162.75	142.75
4.774	4.774	0.000	12267009	1000.00	1070	142.75- 182.75	162.75
5.242	5.242	0.000	14219270	1000.00	1060	168.65- 208.65	188.65
5.437	5.437	0.000	6850457	1000.00	1040	70.88- 110.88	90.88
Average of Peak Amounts =				1.06e+03			

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/002f0201.d
Date : 30-JUN-2009 10:59
Client ID: AR166001
Sample Info: IWAR090629-04601

Column phase: CLP1

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

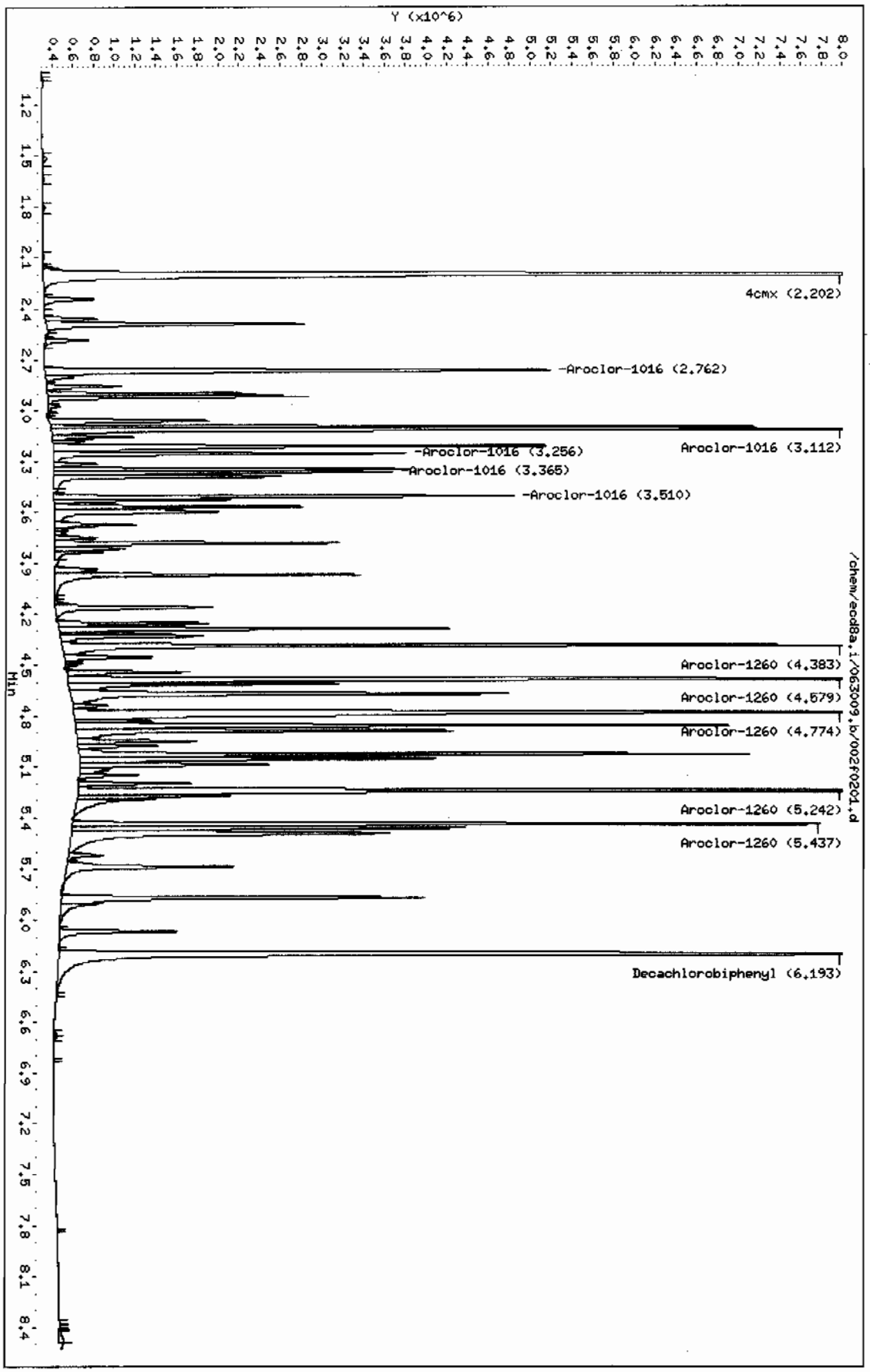

Page 1

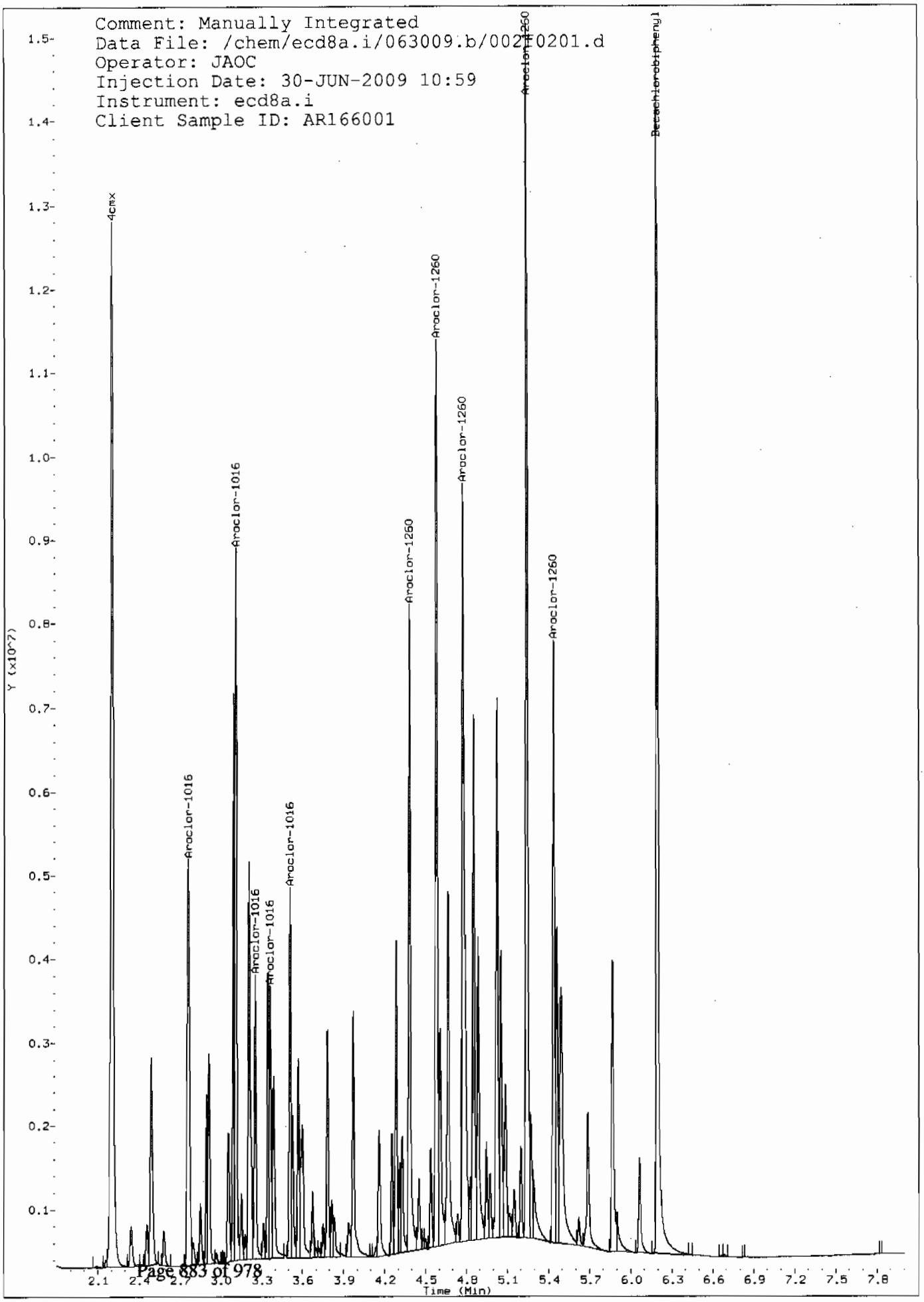
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Data File: /chem/ecd8a.i/063009.b/00210201.d
Operator: JAOC
Injection Date: 30-JUN-2009 10:59
Instrument: ecd8a.i
Client Sample ID: AR166001
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

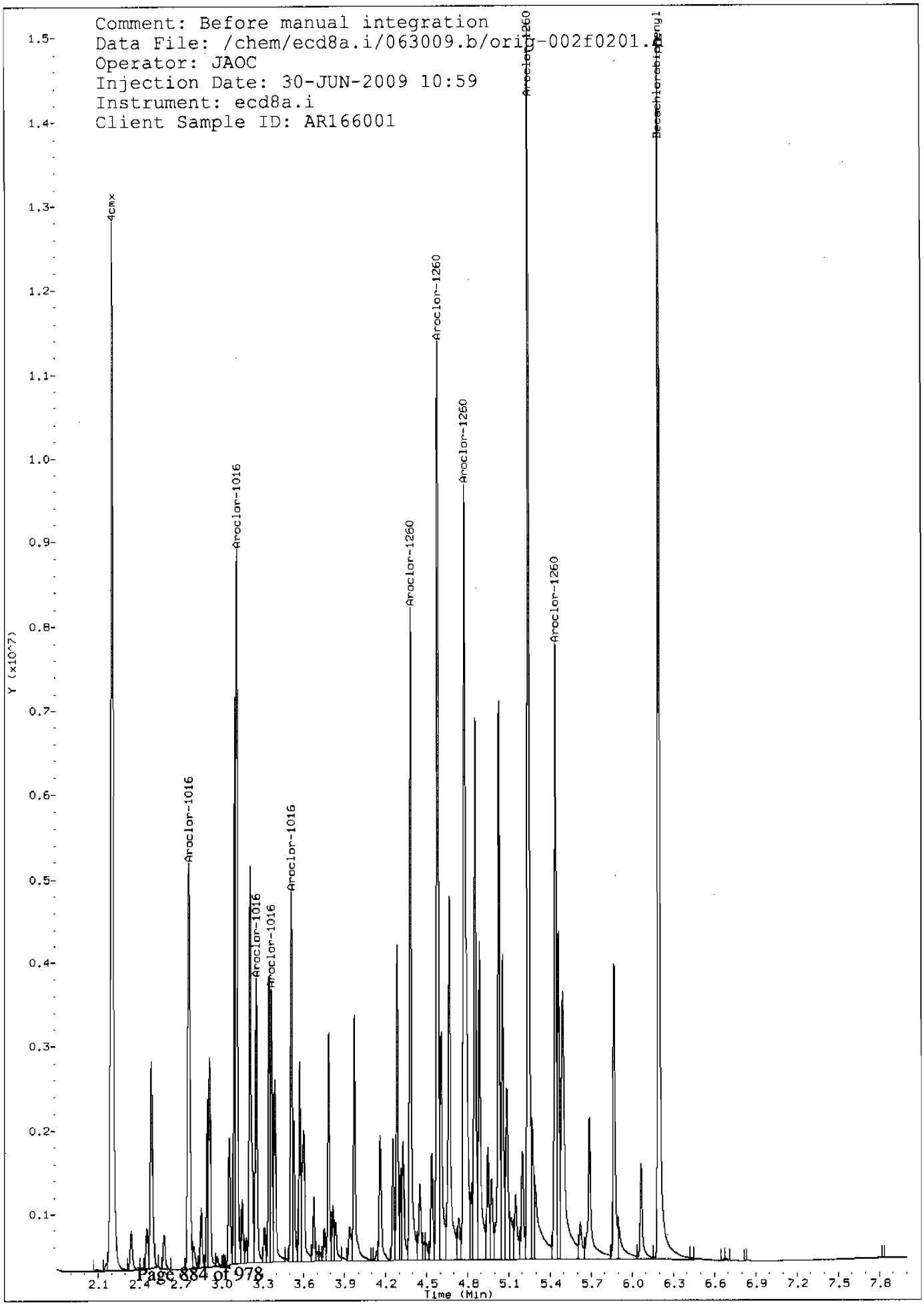
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-002f0201.
Operator: JAOC
Injection Date: 30-JUN-2009 10:59
Instrument: ecd8a.i
Client Sample ID: AR166001
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/002b0201.d
Lab Smp Id: WAR090629-04601 Client Smp ID: AR166001
Inj Date : 30-JUN-2009 10:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04601
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5146873	100.000	89.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	4975007	100.000	88.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	2205647	1000.00	1000	80.00- 120.00	100.00
3.575	3.575	0.000	2901198	1000.00	990	111.54- 151.54	131.54
3.675	3.675	0.000	1721686	1000.00	990	58.06- 98.06	78.06
3.752	3.752	0.000	1037559	1000.00	999	27.04- 67.04	47.04
3.826	3.826	0.000	1054433	1000.00	985	27.81- 67.81	47.81
Average of Peak Amounts =					993		
7 Aroclor-1260					CAS #: 11096-82-5		
4.936	4.936	0.000	2835210	1000.00	984	80.00- 120.00	100.00
5.083	5.083	0.000	3472058	1000.00	1000	102.46- 142.46	122.46
5.199	5.199	0.000	3145666	1000.00	996	90.95- 130.95	110.95
5.608	5.608	0.000	2347819	1000.00	991	62.81- 102.81	82.81
6.041	6.041	0.000	3768651	1000.00	1000	112.92- 152.92	132.92
Average of Peak Amounts =					995		

Data File: /chem/ecd8a.i/063009.b/002b0201.d
Date : 30-JUN-2009 10:59
Client ID: AR166061
Sample Info: IWAR090629-04601
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

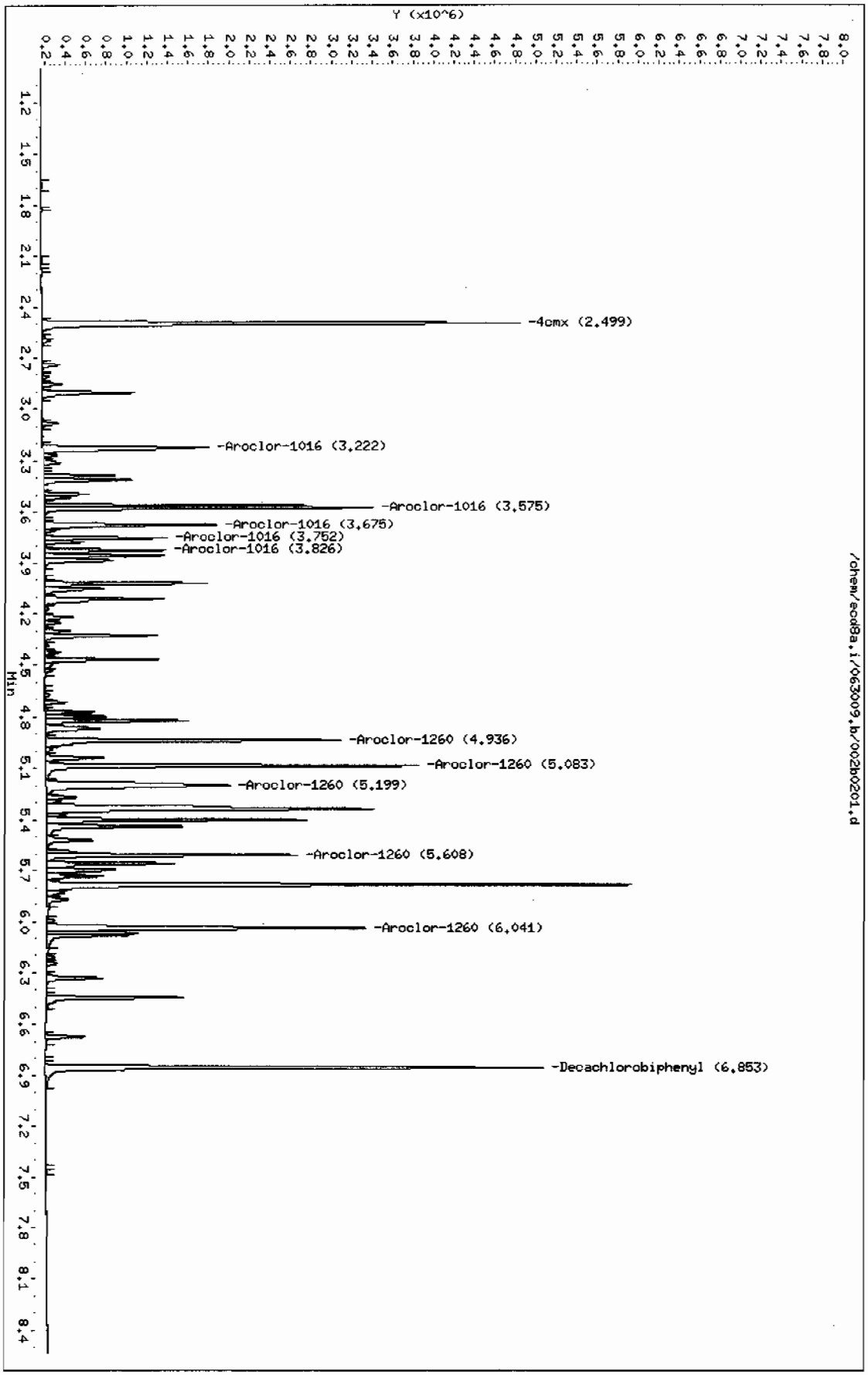

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/003f0301.d
Lab Smp Id: WAR090302-54 Client Smp ID: AR125401
Inj Date : 30-JUN-2009 11:11
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090302-54
Misc Info : |1254
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	16776449	100.000	105	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	17996048	100.000	107	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.786	3.786	0.000	4958151	1000.00	1030	80.00- 120.00	100.00
3.972	3.972	0.000	6507071	1000.00	1040	111.24- 151.24	131.24
4.168	4.168	0.000	4906754	1000.00	1030	78.96- 118.96	98.96
4.254	4.254	0.000	8062990	1000.00	1020	142.62- 182.62	162.62
4.581	4.581	0.000	7261142	1000.00	1070	126.45- 166.45	146.45

Average of Peak Amounts = 1.04e+03

Data File: /chem/ecd8a.i/063009.b/003f0301.d

Date : 30-JUN-2009 11:11

Client ID: AR125401

Sample Info: IWAR090302-54

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

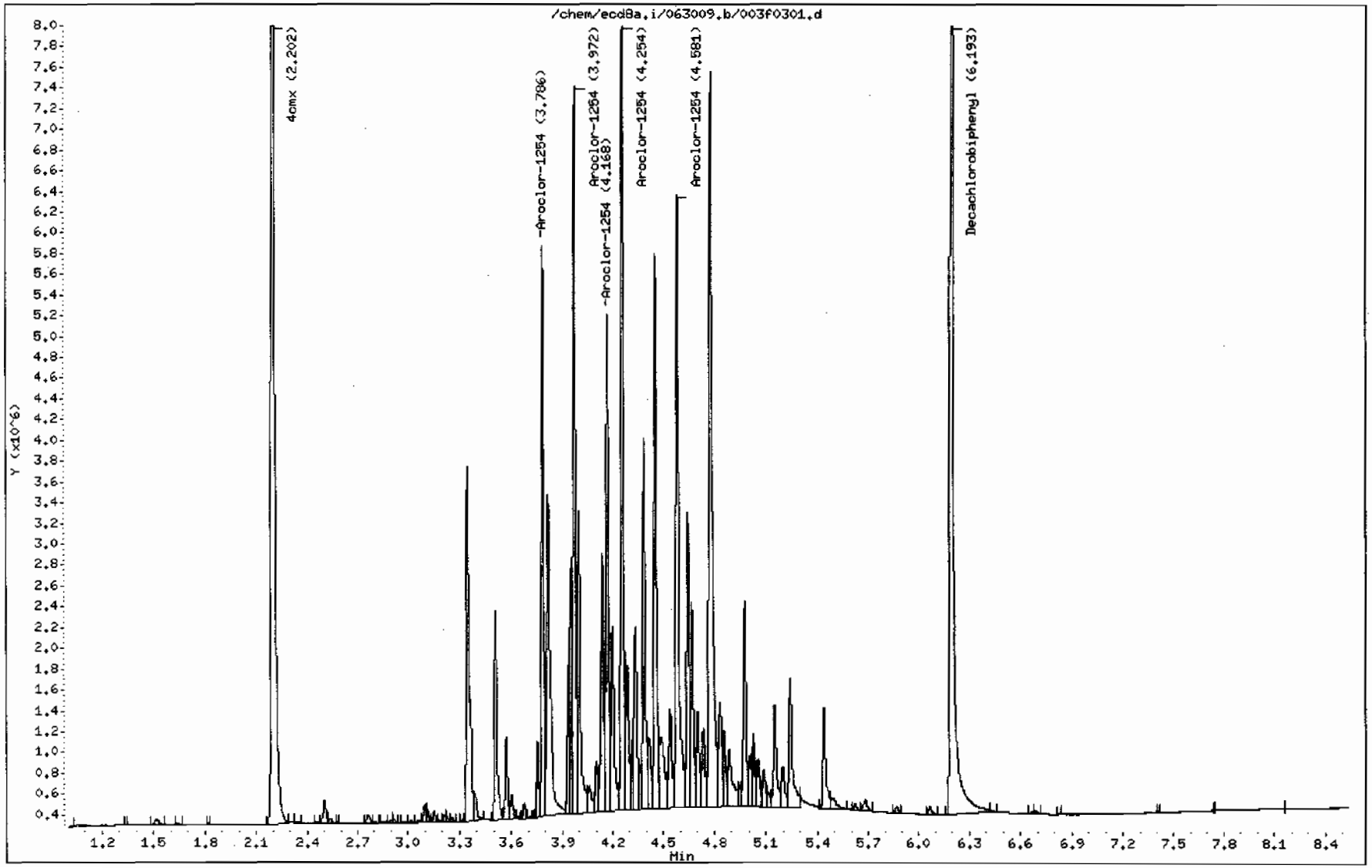

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/003b0301.d
Lab Smp Id: WAR090302-54 Client Smp ID: AR125401
Inj Date : 30-JUN-2009 11:11
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090302-54
Misc Info : |1254
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5544124	100.000	96.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5446892	100.000	96.7	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.331	4.331	0.000	2080742	1000.00	992	80.00- 120.00	100.00
4.468	4.468	0.000	2261889	1000.00	979	88.71- 128.71	108.71
4.798	4.798	0.000	3044551	1000.00	982	126.32- 166.32	146.32
5.084	5.084	0.000	1698880	1000.00	1050	61.65- 101.65	81.65
5.206	5.206	0.000	1888934	1000.00	1020	70.78- 110.78	90.78
		Average of Peak Amounts =			1e+03		

Data File: /chem/ecd8a.i/063009.b/003b0301.d

Date : 30-JUN-2009 11:11

Client ID: AR125401

Sample Info: IWAR090302-54

Column phase: CLP2

Instrument: ecd8a.i

Operator: JADC

Column diameter: 0.25

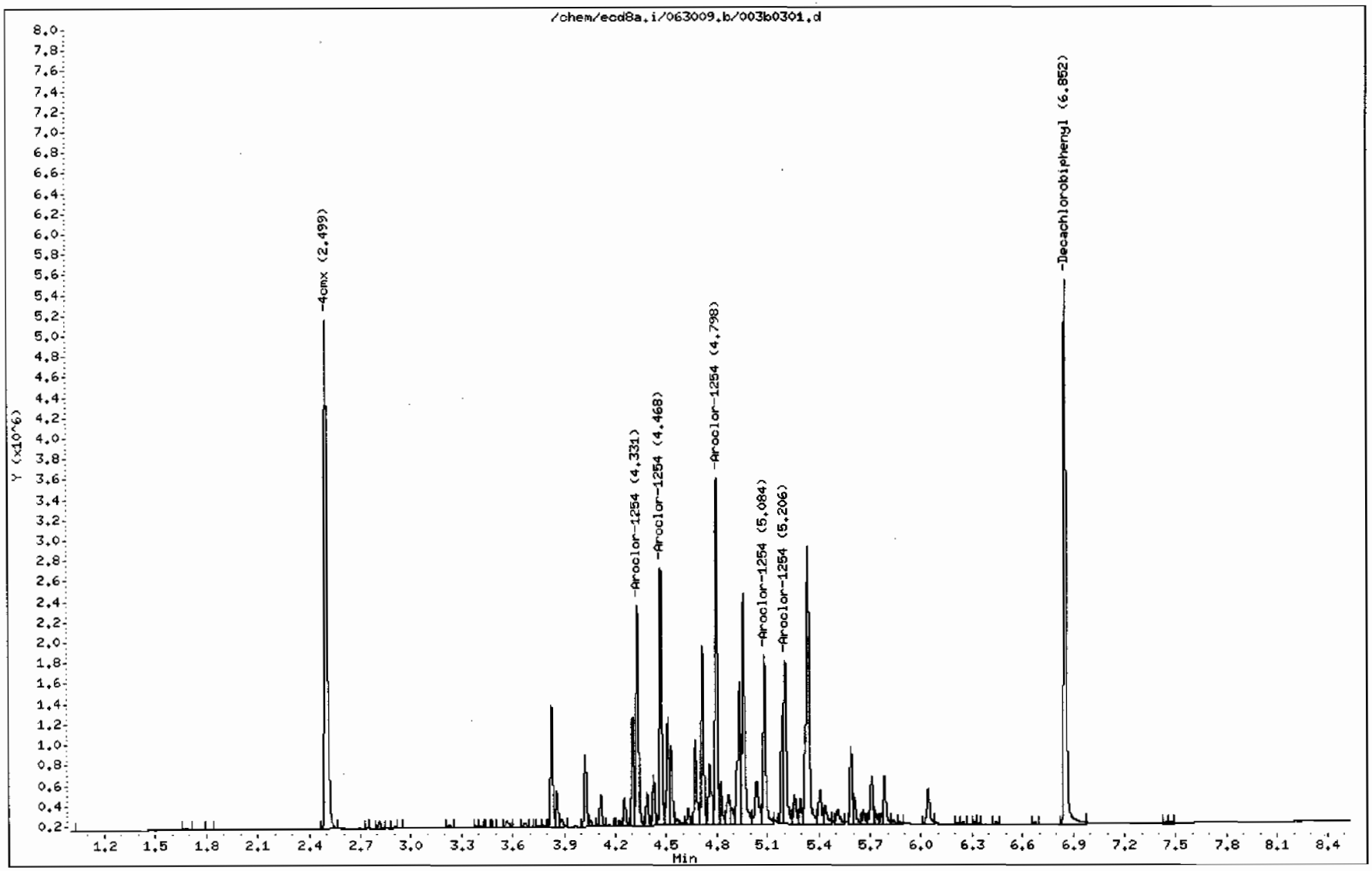

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/004f0401.d
Lab Smp Id: WAR090519-42 Client Smp ID: AR124201
Inj Date : 30-JUN-2009 11:24
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090519-42
Misc Info : |1242
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.203	2.202	0.001	17183284	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	17244477	100.000	103	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.762	2.762	0.000	4458179	1000.00	1100	80.00- 120.00	100.00(M)
3.113	3.113	0.000	5547736	1000.00	1120	104.44- 144.44	124.44
3.257	3.257	0.000	2191510	1000.00	1100	29.16- 69.16	49.16
3.349	3.349	0.000	1903092	1000.00	1070	22.69- 62.69	42.69
3.511	3.511	0.000	2802433	1000.00	1090	42.86- 82.86	62.86

Average of Peak Amounts = 1.1e+03

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/004f0401.d

Date : 30-JUN-2009 11:24

Client ID: AR124201

Sample Info: IWAR090519-42

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

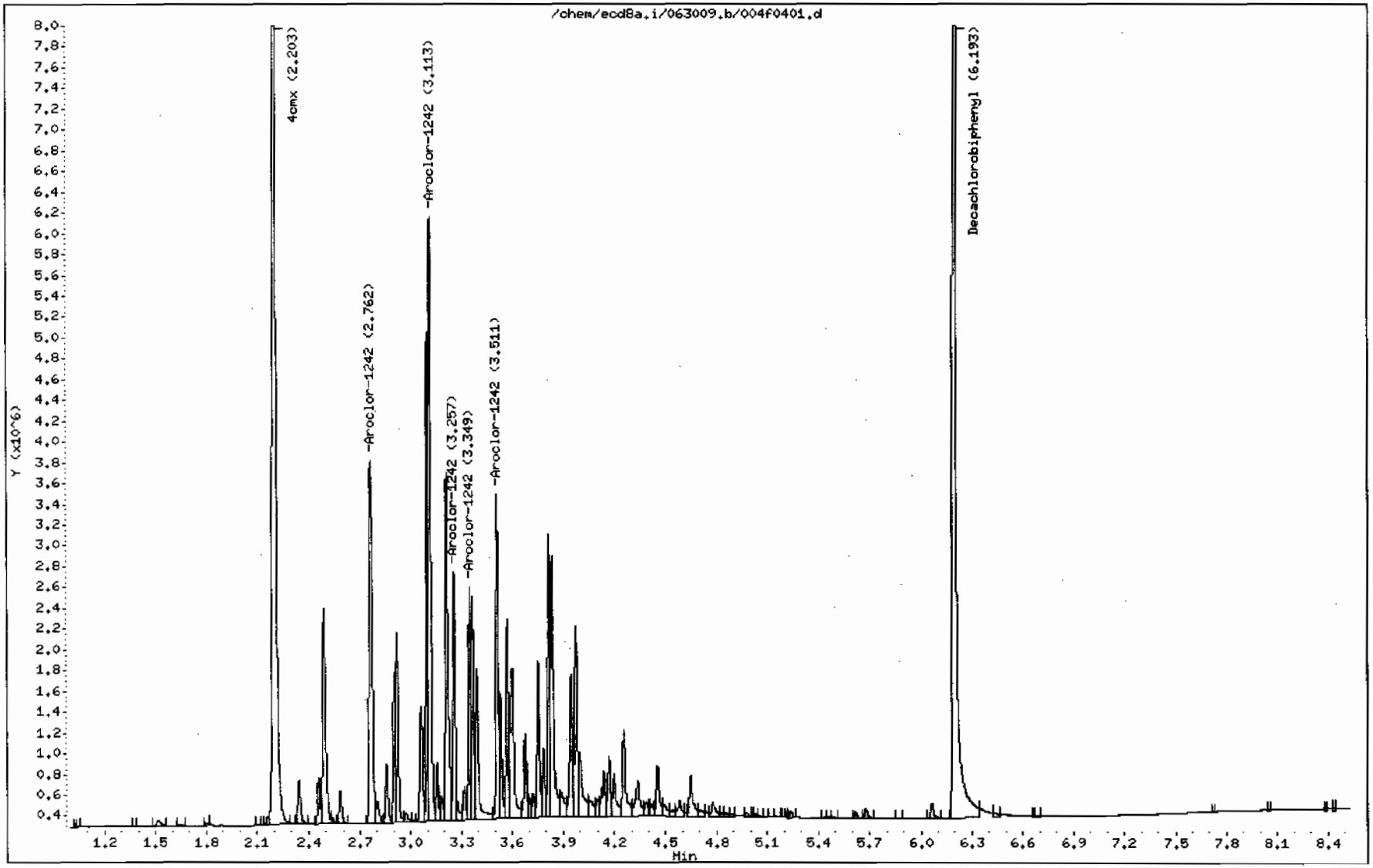

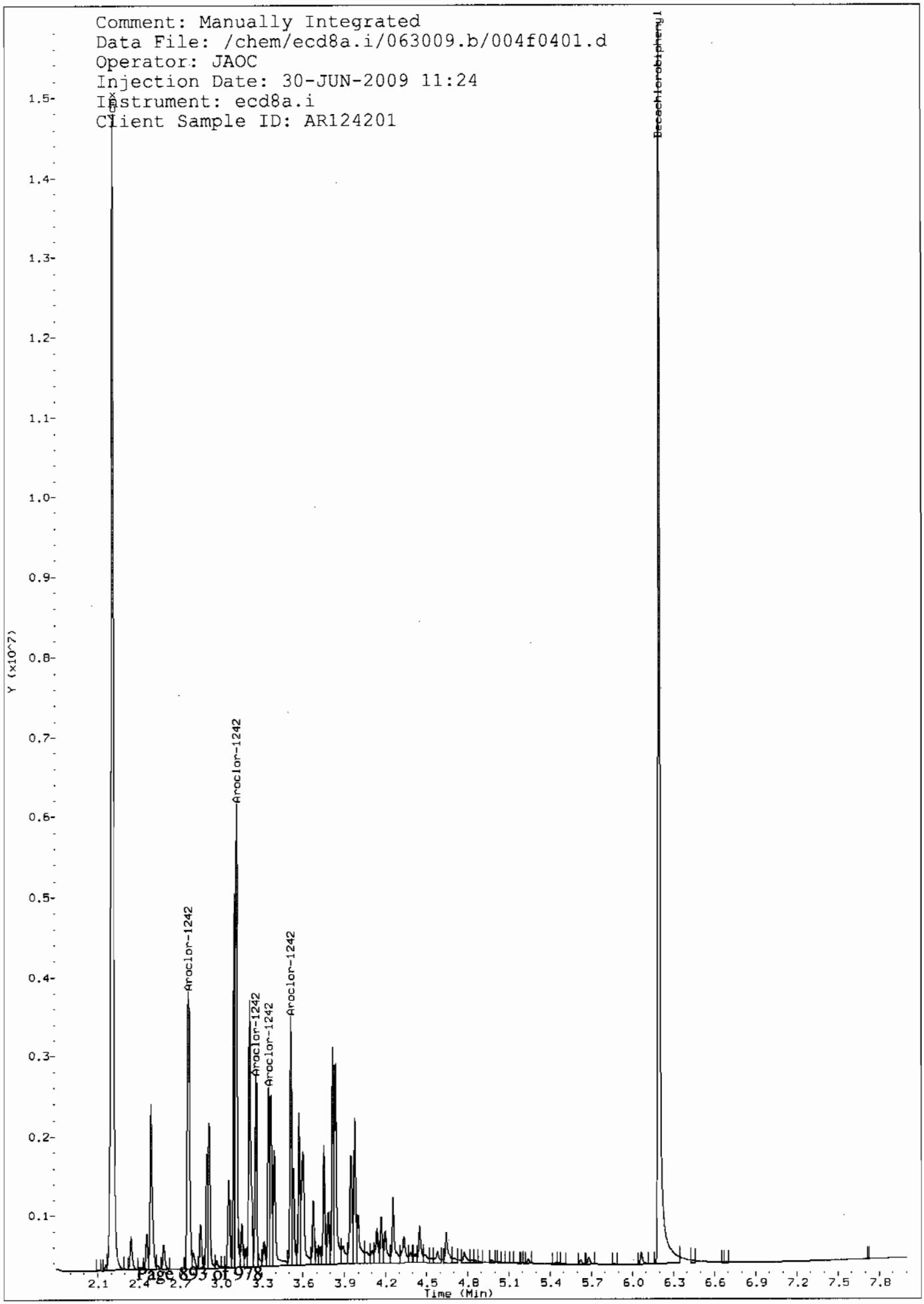
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/004f0401.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:24
Instrument: ecd8a.i
Client Sample ID: AR124201
Decachlorobiphenyl
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Y (x10^7)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8
5.1
5.4
5.7
6.0
6.3
6.6
6.9
7.2
7.5
7.8
Time (Min)

Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-004f0401.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:24
Instrument: ecd8a.i
Client Sample ID: AR124201

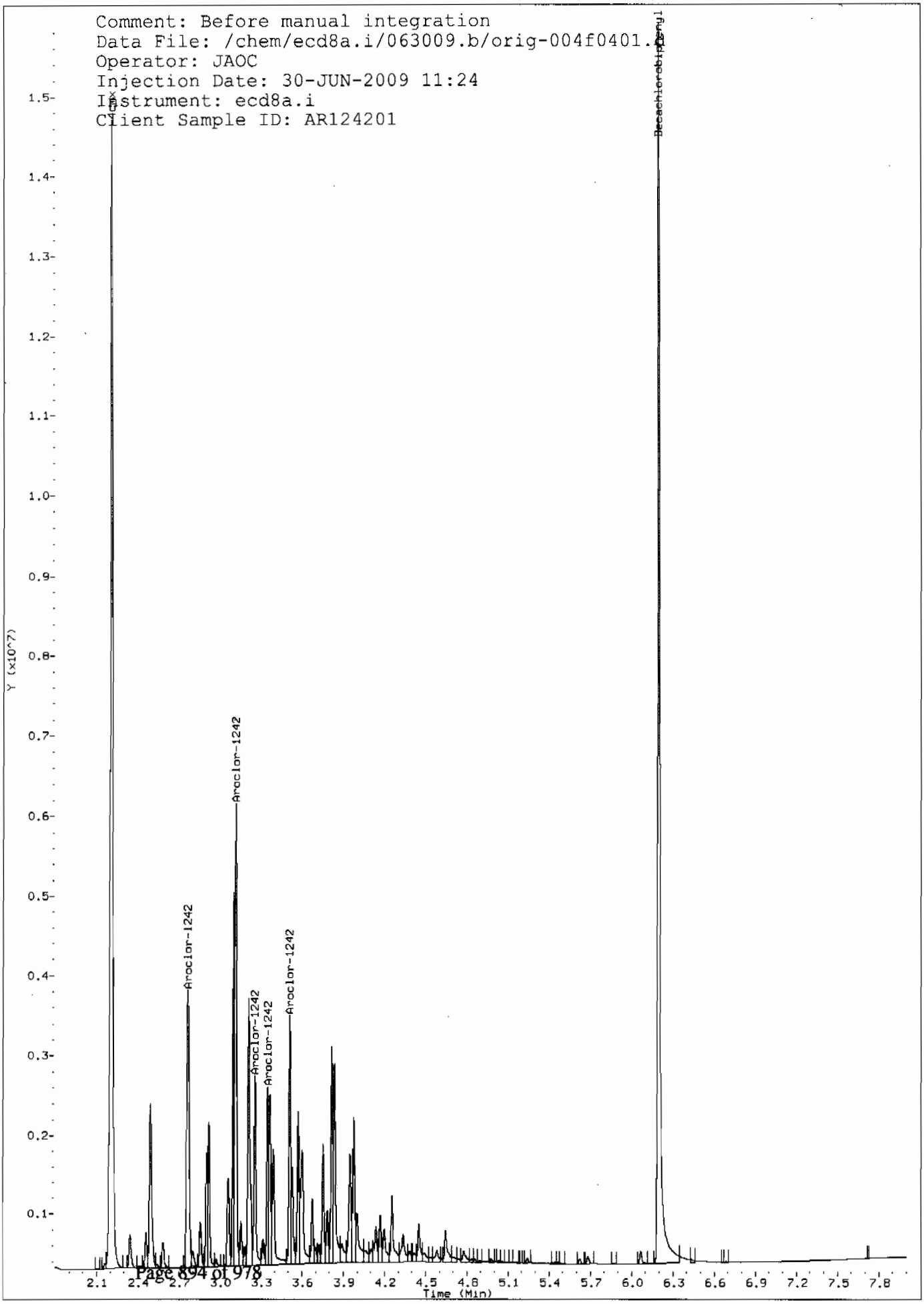

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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/004b0401.d
Lab Smp Id: WAR090519-42 Client Smp ID: AR124201
Inj Date : 30-JUN-2009 11:24
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090519-42
Misc Info : |1242
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5701783	100.000	98.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	5284675	100.000	93.8	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
3.223	3.223	0.000	1548150	1000.00	907	80.00- 120.00	100.00
3.576	3.576	0.000	1999336	1000.00	948	109.14- 149.14	129.14
3.677	3.677	0.000	1202620	1000.00	926	57.68- 97.68	77.68
3.752	3.752	0.000	731324	1000.00	945	27.24- 67.24	47.24
3.827	3.827	0.000	689725	1000.00	875	24.55- 64.55	44.55
Average of Peak Amounts =					920		

Data File: /chem/ecd8a.i/063009.b/004b0401.d

Date : 30-JUN-2009 11:24

Client ID: AR124201

Sample Info: IWAR090519-42

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

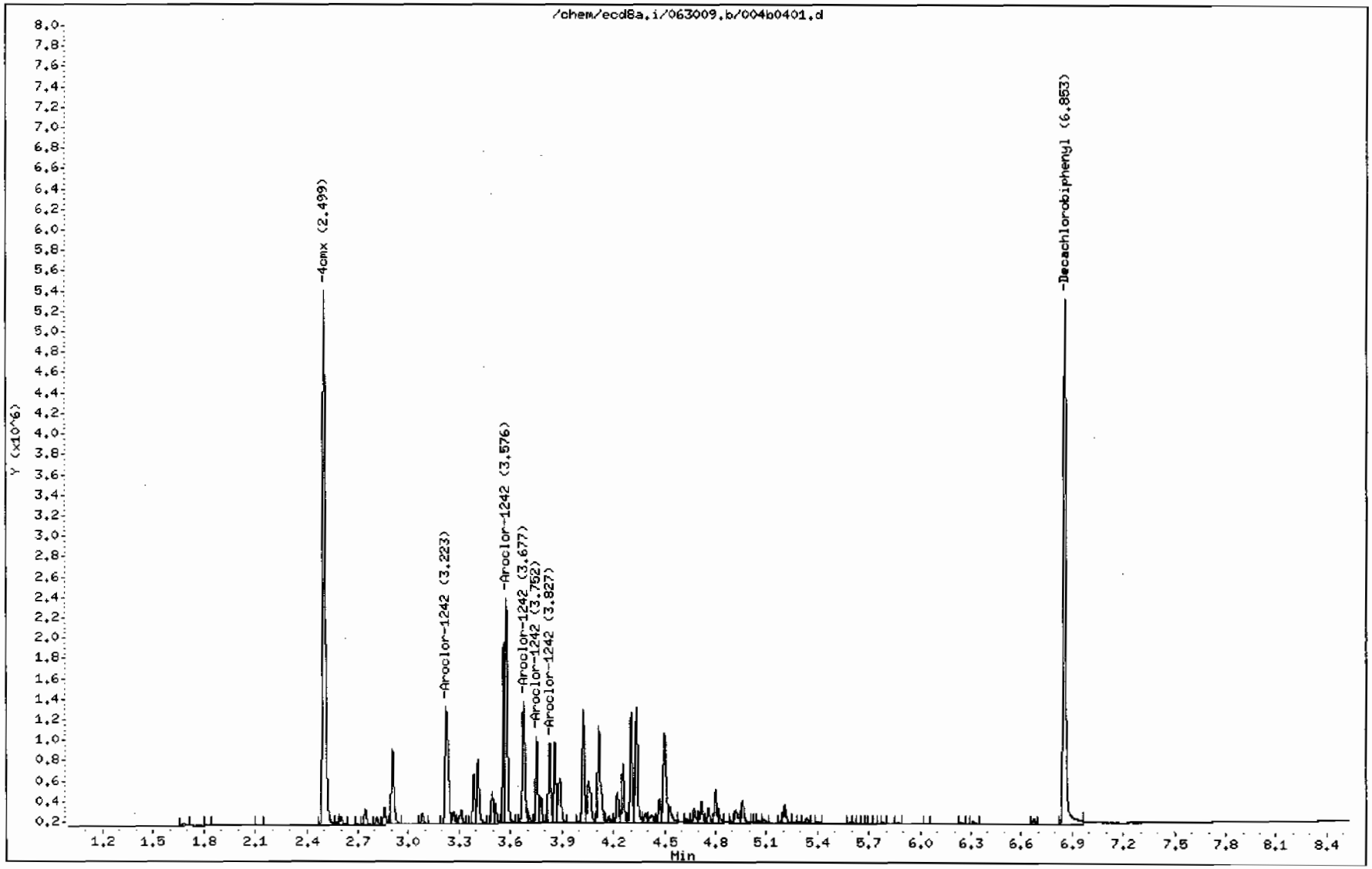

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/005f0501.d
Lab Smp Id: WAR090521-48 Client Smp ID: AR124801
Inj Date : 30-JUN-2009 11:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090521-48
Misc Info : |1248
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	18145027	100.000	113	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.192	6.193	-0.001	18386391	100.000	109	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.112	3.112	0.000	3486586	1000.00	1120	80.00- 120.00	100.00(M)
3.348	3.348	0.000	4009703	1000.00	1090	95.00- 135.00	115.00
3.511	3.511	0.000	5160786	1000.00	1090	128.02- 168.02	148.02
3.975	3.975	0.000	4377940	1000.00	1060	105.57- 145.57	125.57
4.255	4.255	0.000	3273014	1000.00	1030	73.87- 113.87	93.87

Average of Peak Amounts = 1.08e+03

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/005f0501.d

Date : 30-JUN-2009 11:36

Client ID: AR124801

Sample Info: IWAR090521-48

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

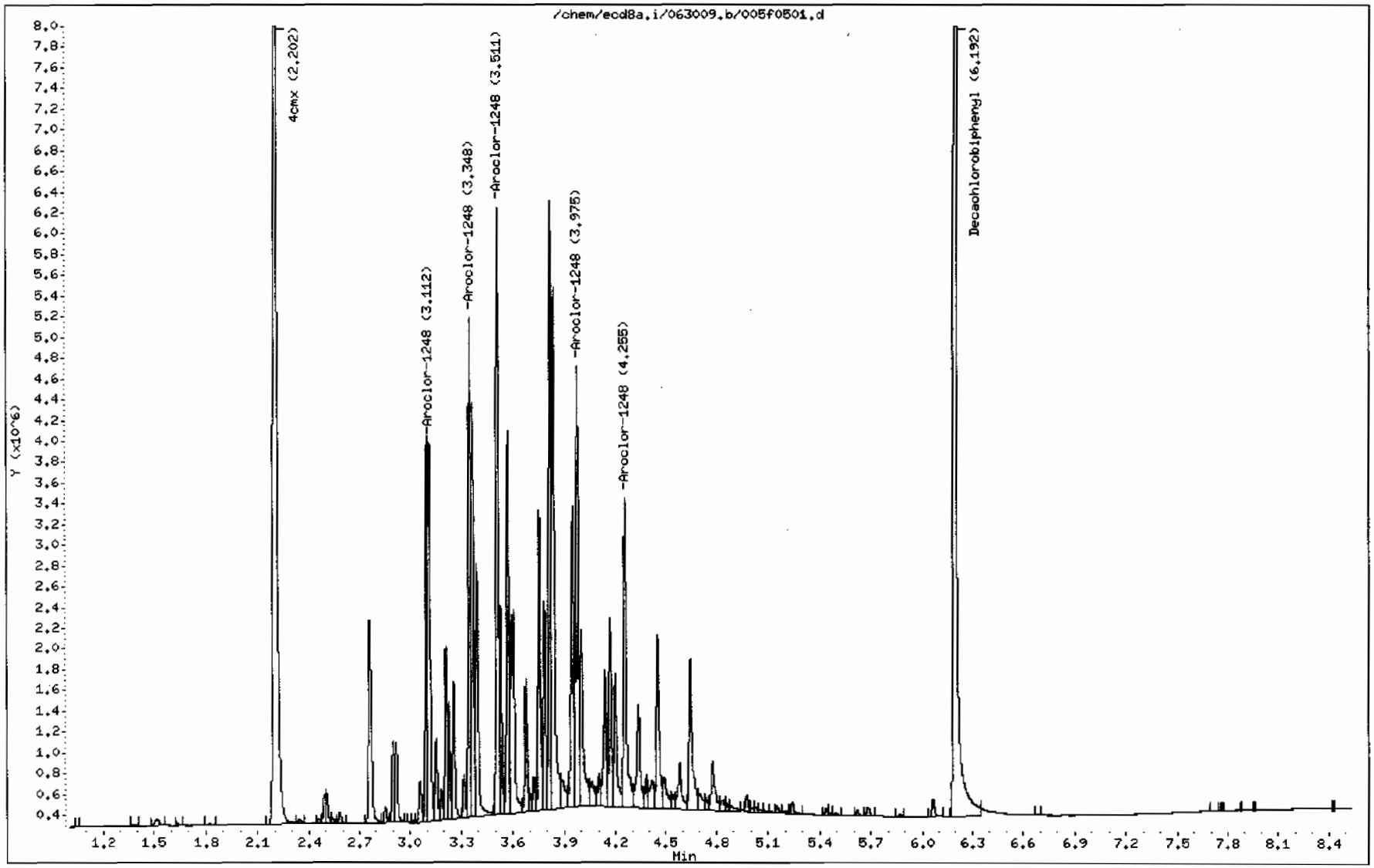

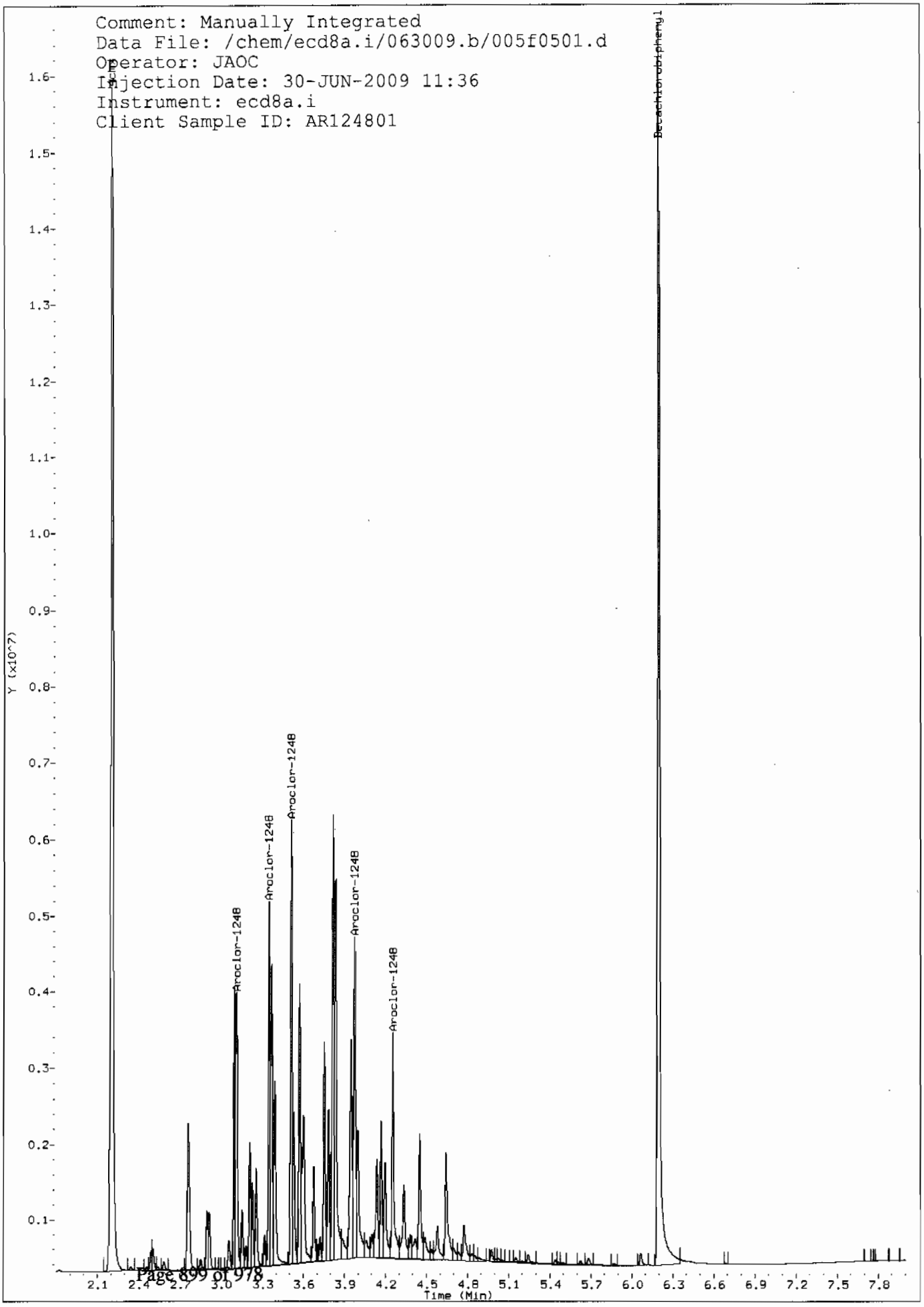
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/005f0501.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:36
Instrument: ecd8a.i
Client Sample ID: AR124801
Decachlorobiphenyl
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Y (x10^7)
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4 5.7 6.0 6.3 6.6 6.9 7.2 7.5 7.8
Time (Min)

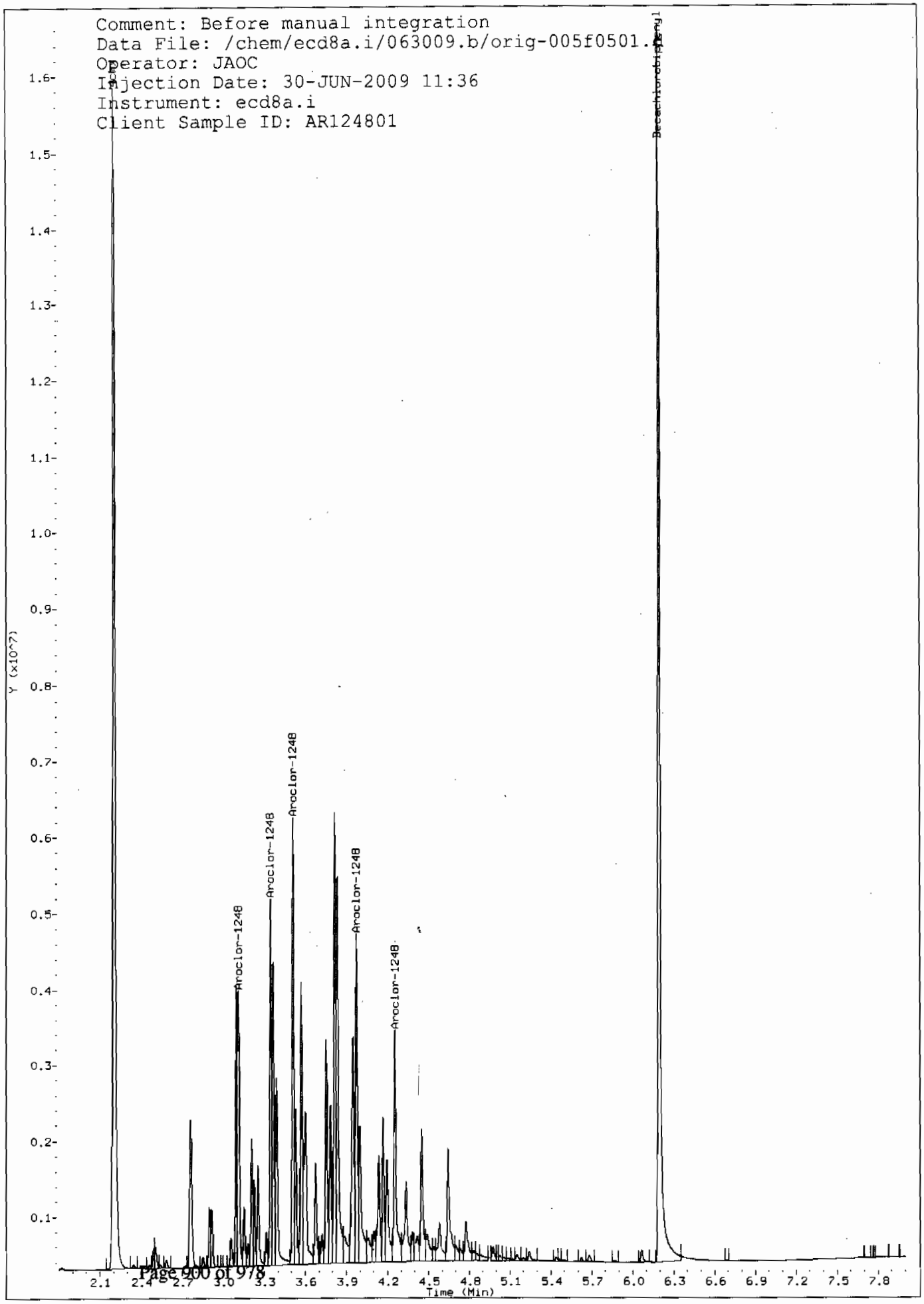
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-005f0501.
Operator: JAOC
Injection Date: 30-JUN-2009 11:36
Instrument: ecd8a.i
Client Sample ID: AR124801
Decachlorobiphenyl
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Y (x10^7)
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4 5.7 6.0 6.3 6.6 6.9 7.2 7.5 7.8
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/005b0501.d
Lab Smp Id: WAR090521-48 Client Smp ID: AR124801
Inj Date : 30-JUN-2009 11:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090521-48
Misc Info : |1248
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	6000575	100.000	104	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5603679	100.000	99.5	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.575	3.575	0.000	1178184	1000.00	998	80.00- 120.00	100.00
3.826	3.826	0.000	1472761	1000.00	1030	105.00- 145.00	125.00
4.023	4.023	0.000	1847626	1000.00	1050	136.82- 176.82	156.82
4.301	4.301	0.000	2075080	1000.00	1030	156.13- 196.13	176.13
4.333	4.333	0.000	2380793	1000.00	1040	182.07- 222.07	202.07

Average of Peak Amounts = 1.03e+03

Data File: /chem/ecd8a.i/063009.b/005b0501.d
Date : 30-JUN-2009 11:36
Client ID: AR124801
Sample Info: IWAR090521-48

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

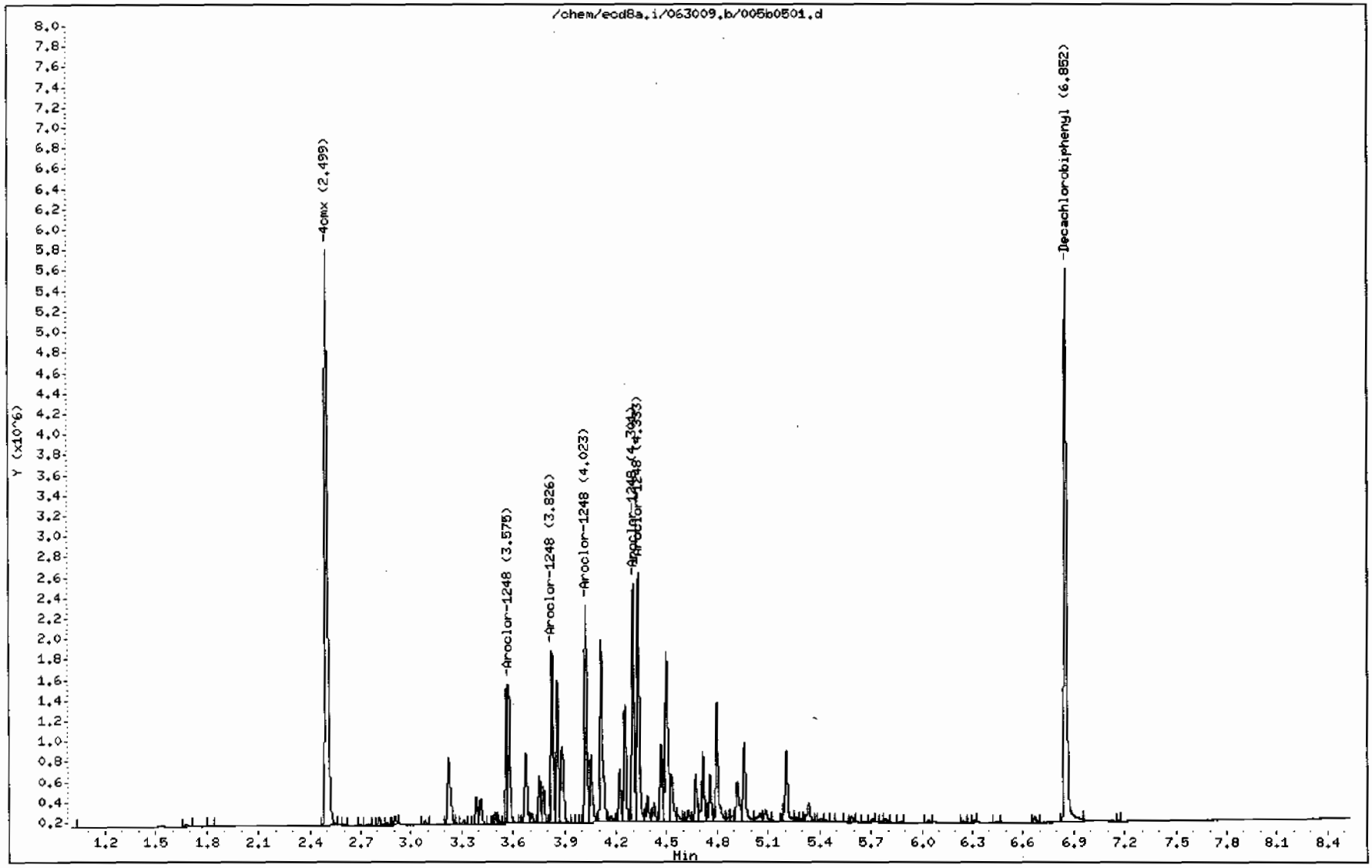

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/006f0601.d
Lab Smp Id: WAR090618-32 Client Smp ID: AR123201
Inj Date : 30-JUN-2009 11:48
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-32
Misc Info : |1232
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.203	2.202	0.001	16957655	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	18604315	100.000	111	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.762	2.762	0.000	2793110	1000.00	1100	80.00- 120.00	100.00
3.113	3.113	0.000	3336296	1000.00	1030	99.45- 139.45	119.45
3.210	3.210	0.000	2216909	1000.00	1040	59.37- 99.37	79.37
3.511	3.511	0.000	1562795	1000.00	1010	35.95- 75.95	55.95
3.817	3.817	0.000	1289064	1000.00	979	26.15- 66.15	46.15

Average of Peak Amounts = 1.03e+03

Data File: /chem/ecd8a.i/063009.b/006f0601.d
Date : 30-JUN-2009 11:48
Client ID: AR123201
Sample Info: IWAR090618-32

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

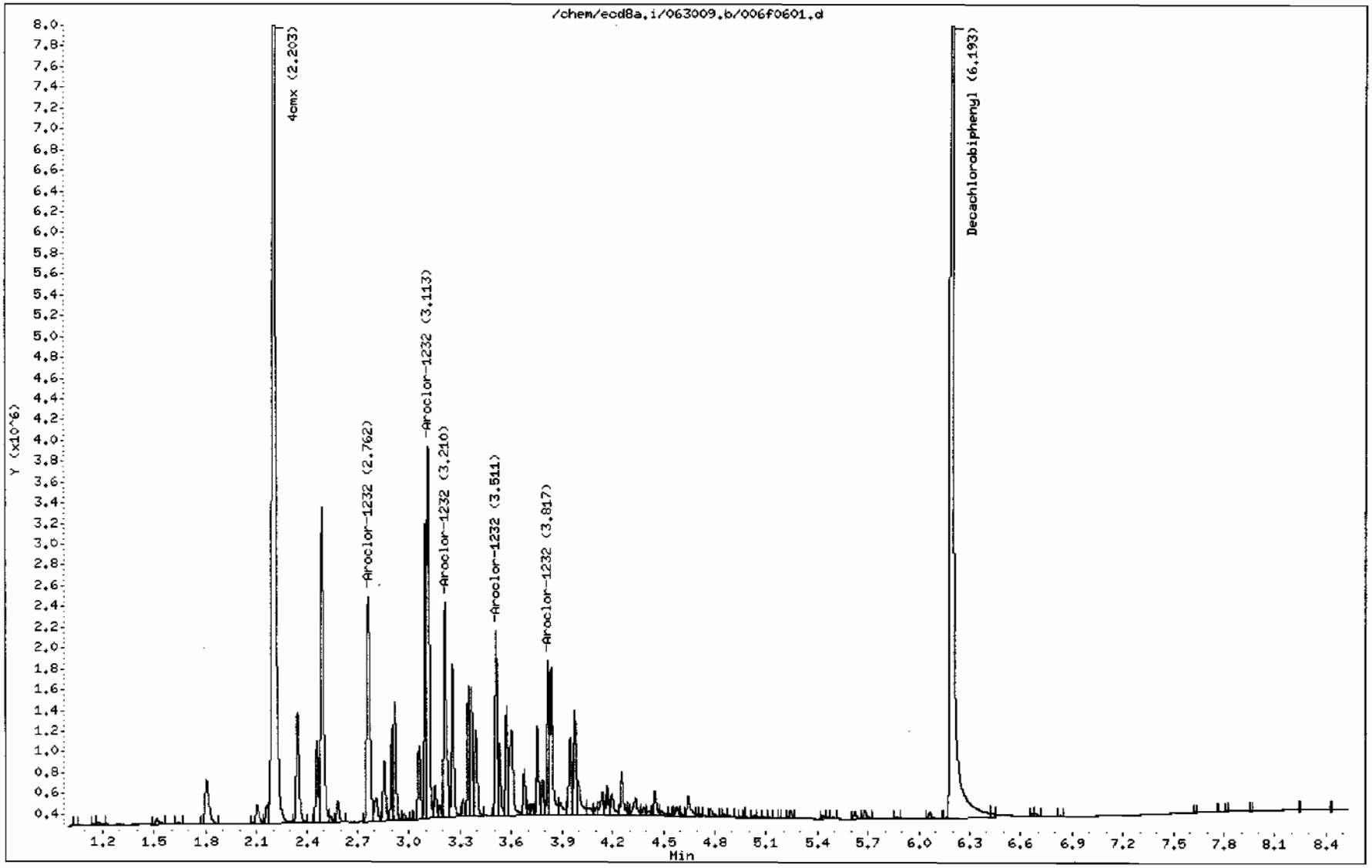

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/006b0601.d
Lab Smp Id: WAR090618-32 Client Smp ID: AR123201
Inj Date : 30-JUN-2009 11:48
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-32
Misc Info : |1232
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5607633	100.000	97.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	5526124	100.000	98.1	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
3.223	3.223	0.000	1015720	1000.00	905	80.00- 120.00	100.00
3.575	3.575	0.000	1258025	1000.00	885	103.86- 143.86	123.86
3.676	3.676	0.000	751147	1000.00	886	53.95- 93.95	73.95
3.826	3.826	0.000	397929	1000.00	854	19.18- 59.18	39.18
3.858	3.858	0.000	422363	1000.00	877	21.58- 61.58	41.58
			Average of Peak Amounts =		882		

Data File: /chem/ecd8a.i/063009.b/006b0601.d

Date : 30-JUN-2009 11:48

Client ID: AR123201

Sample Info: IWAR090618-32

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

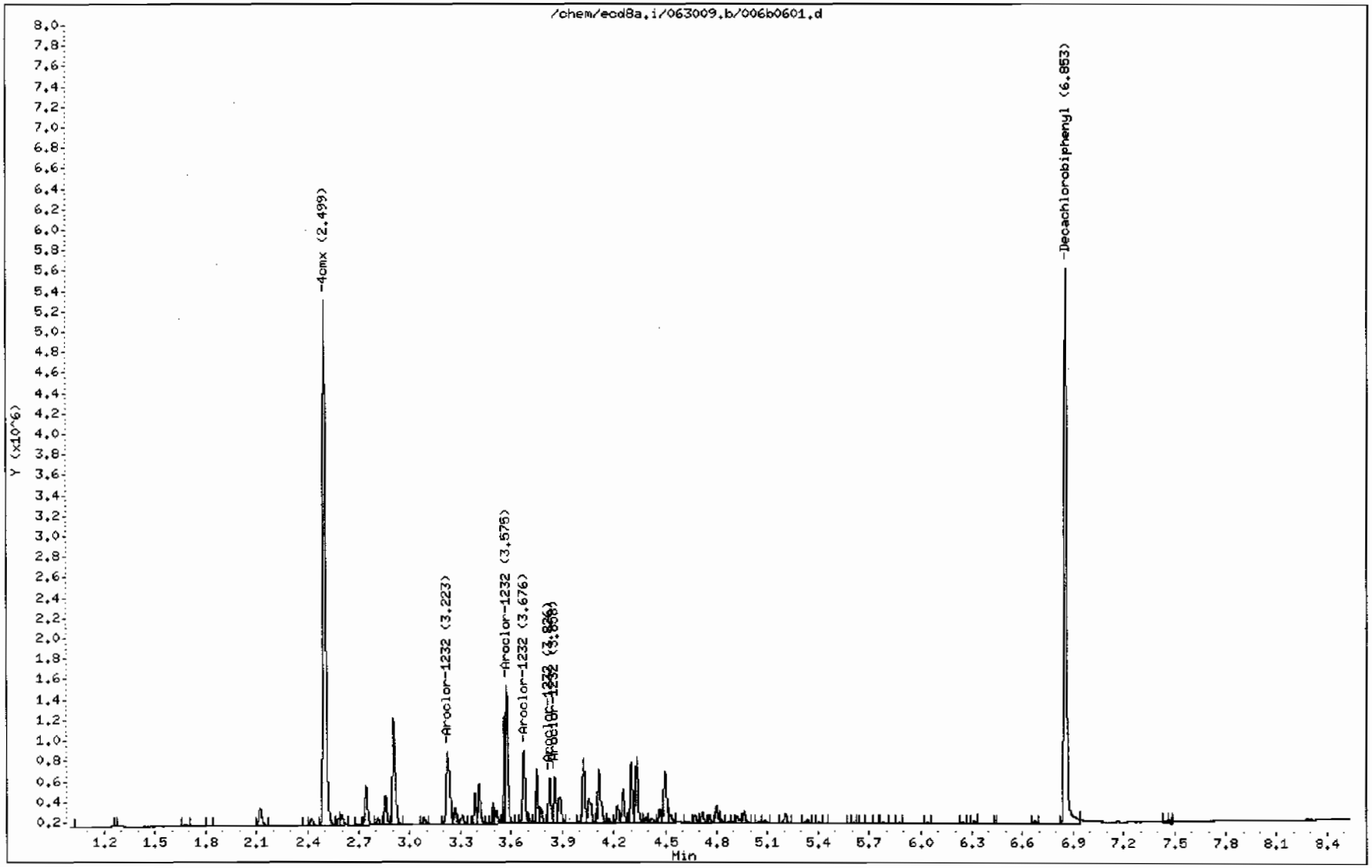

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/007f0701.d
Lab Smp Id: WAR090618-21 Client Smp ID: AR122101
Inj Date : 30-JUN-2009 12:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-21
Misc Info : |1221
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.205	2.202	0.003	16979532	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.196	6.193	0.003	19246506	100.000	115	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.347	2.347	0.000	1731266	1000.00	1120	80.00- 120.00	100.00
2.461	2.461	0.000	1014846	1000.00	1150	38.62- 78.62	58.62
2.493	2.493	0.000	4111480	1000.00	1100	217.48- 257.48	237.48

Average of Peak Amounts = 1.12e+03

Data File: /chem/ecd8a.i/063009.b/007f0701.d
Date : 30-JUN-2009 12:03
Client ID: AR122101
Sample Info: IWAR090618-21

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

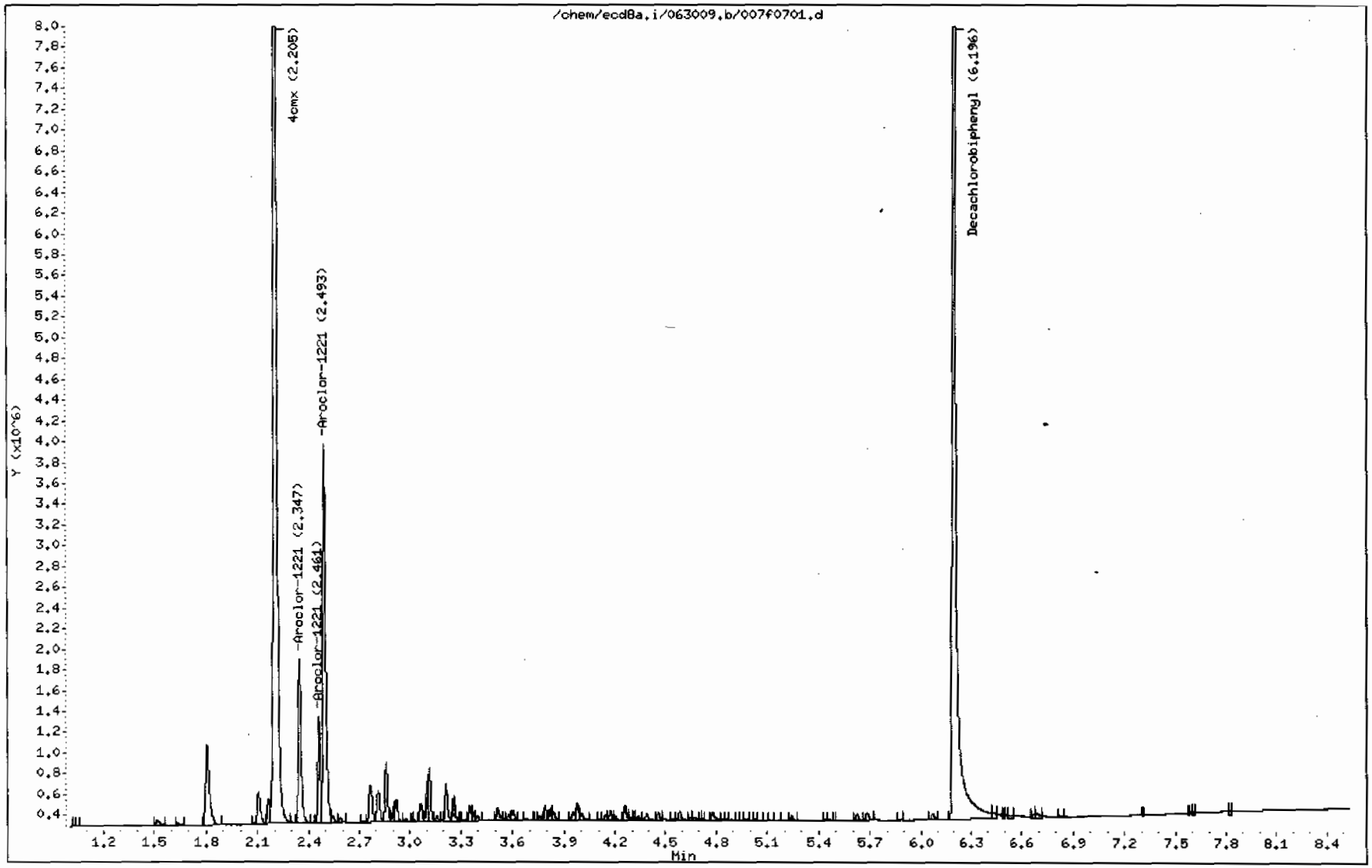

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/007b0701.d
Lab Smp Id: WAR090618-21 Client Smp ID: AR122101
Inj Date : 30-JUN-2009 12:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-21
Misc Info : |1221
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.500	2.499	0.001	5572682	100.000	96.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.855	6.853	0.002	5741006	100.000	102	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.743	2.743	0.000	570806	1000.00	893	80.00- 120.00	100.00
2.856	2.856	0.000	360134	1000.00	883	43.09- 83.09	63.09
2.905	2.905	0.000	1331894	1000.00	890	213.34- 253.34	233.34
Average of Peak Amounts =					889		

Data File: /chem/ecd8a.i/063009.b/007b0701.d
Date : 30-JUN-2009 12:03
Client ID: AR122101
Sample Info: IWAR090618-21

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

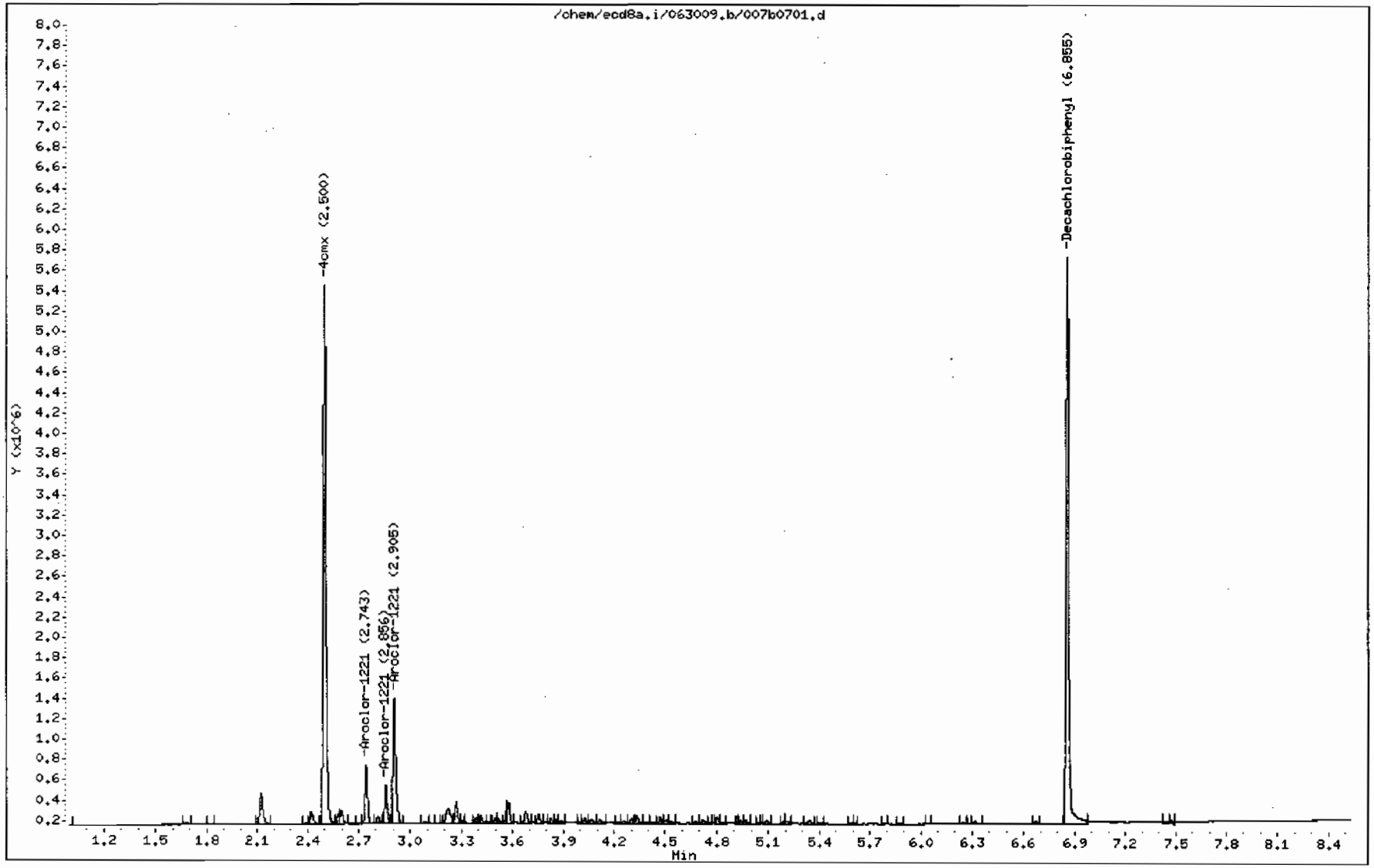

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/022f2201.d
Lab Smp Id: WAR090629-04602 Client Smp ID: AR166002
Inj Date : 30-JUN-2009 15:42
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04602
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.201	2.202	-0.001	15559399	100.000	97.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.191	6.193	-0.002	16505859	100.000	98.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.760	2.762	-0.002	6288333	1000.00	1090	80.00- 120.00	100.00
3.111	3.112	-0.001	7938191	1000.00	1100	106.24- 146.24	126.24
3.254	3.256	-0.002	3295660	1000.00	1130	32.41- 72.41	52.41
3.363	3.365	-0.002	2994907	1000.00	1090	27.63- 67.63	47.63
3.508	3.510	-0.002	3994031	1000.00	1100	43.51- 83.51	63.51
Average of Peak Amounts =					1.1e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	7712097	1000.00	1080	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	10992438	1000.00	1090	122.54- 162.54	142.54
4.772	4.774	-0.002	12204910	1000.00	1060	138.26- 178.26	158.26
5.240	5.242	-0.002	14742255	1000.00	1100	171.16- 211.16	191.16
5.436	5.437	-0.001	7255615	1000.00	1110	74.08- 114.08	94.08
Average of Peak Amounts =					1.09e+03		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/022f2201.d

Date : 30-JUN-2009 15:42

Client ID: AR166002

Sample Info: IWAR090629-04602

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

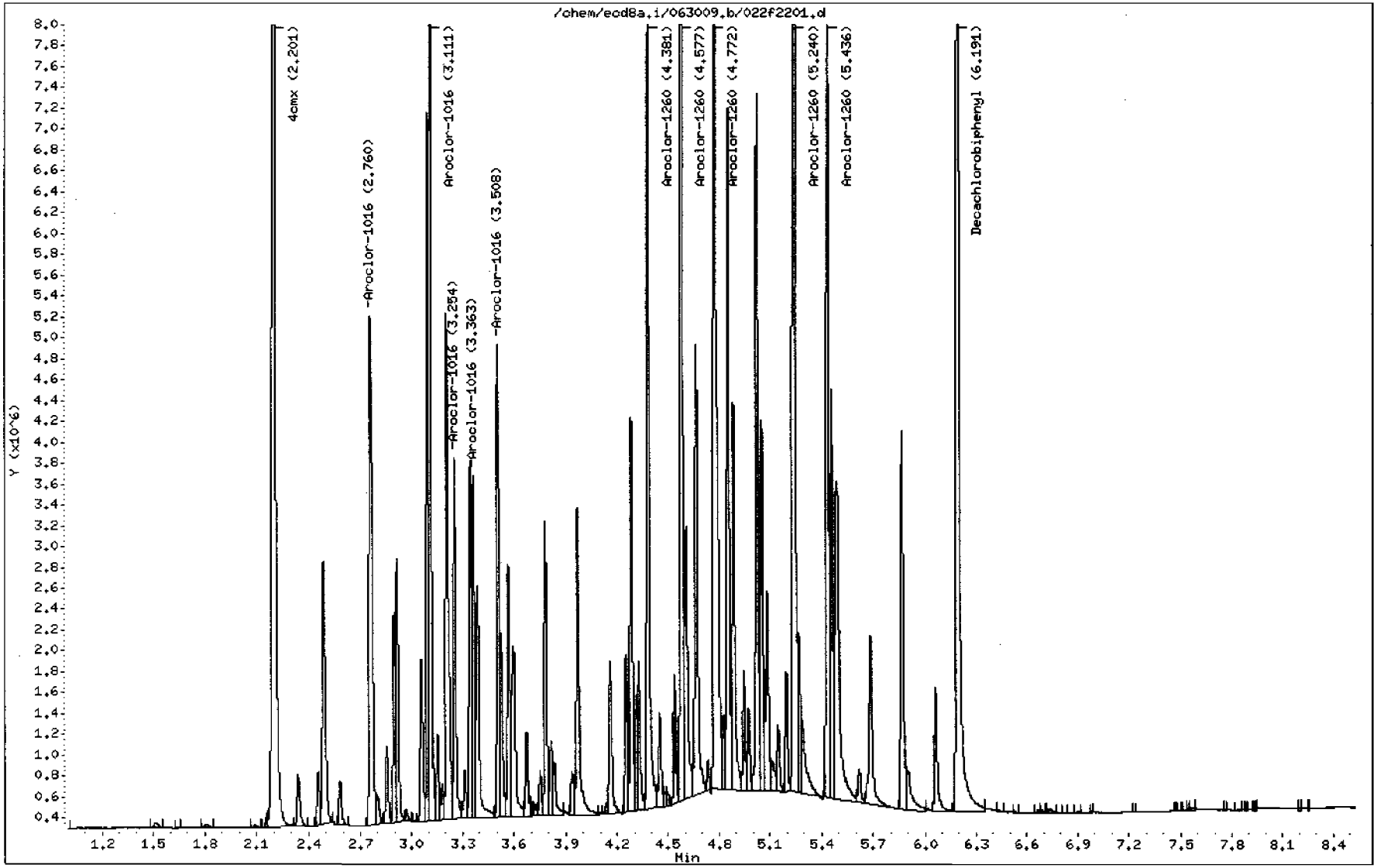

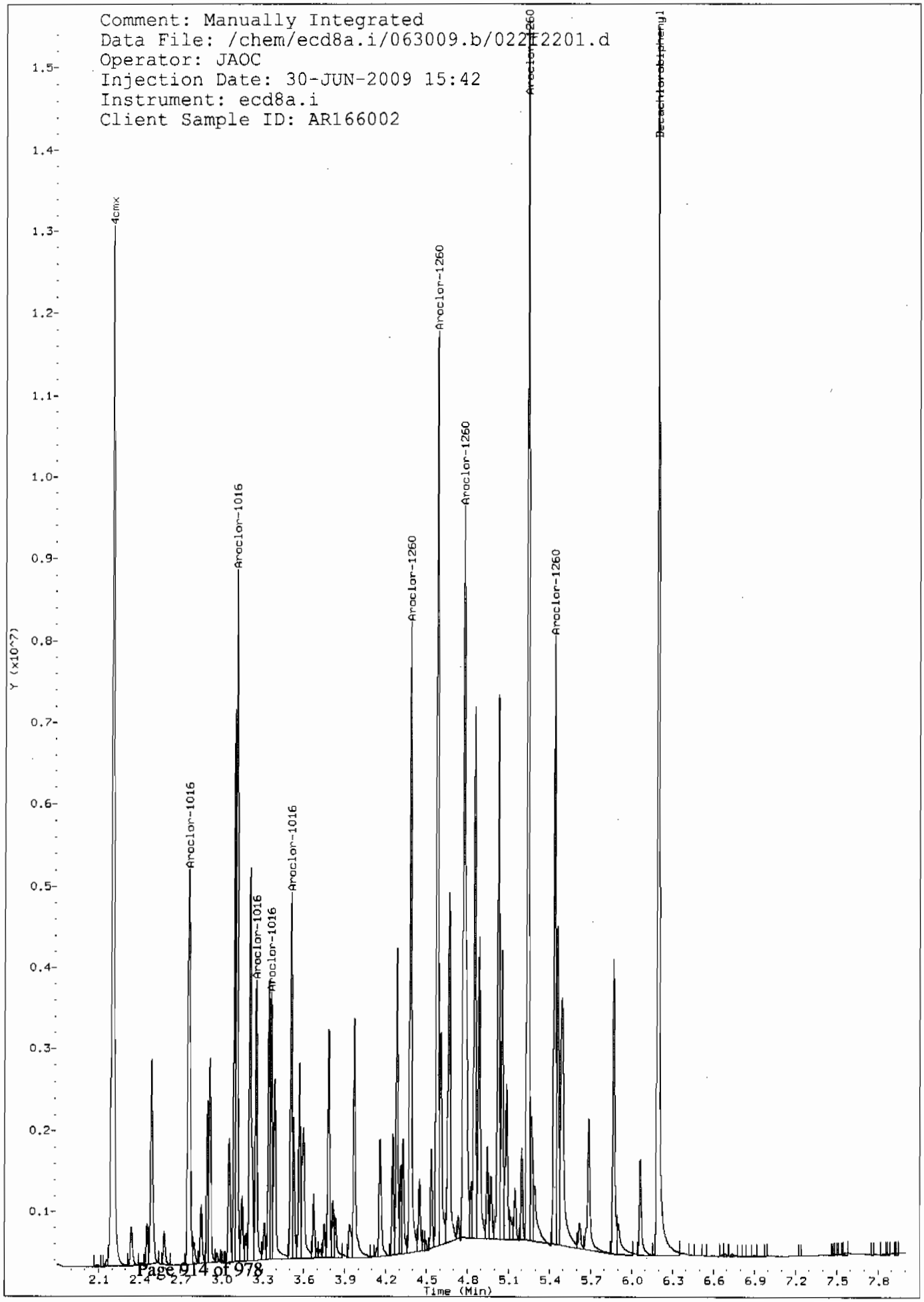
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/022F2201.d
Operator: JAOC
Injection Date: 30-JUN-2009 15:42
Instrument: ecd8a.i
Client Sample ID: AR166002
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

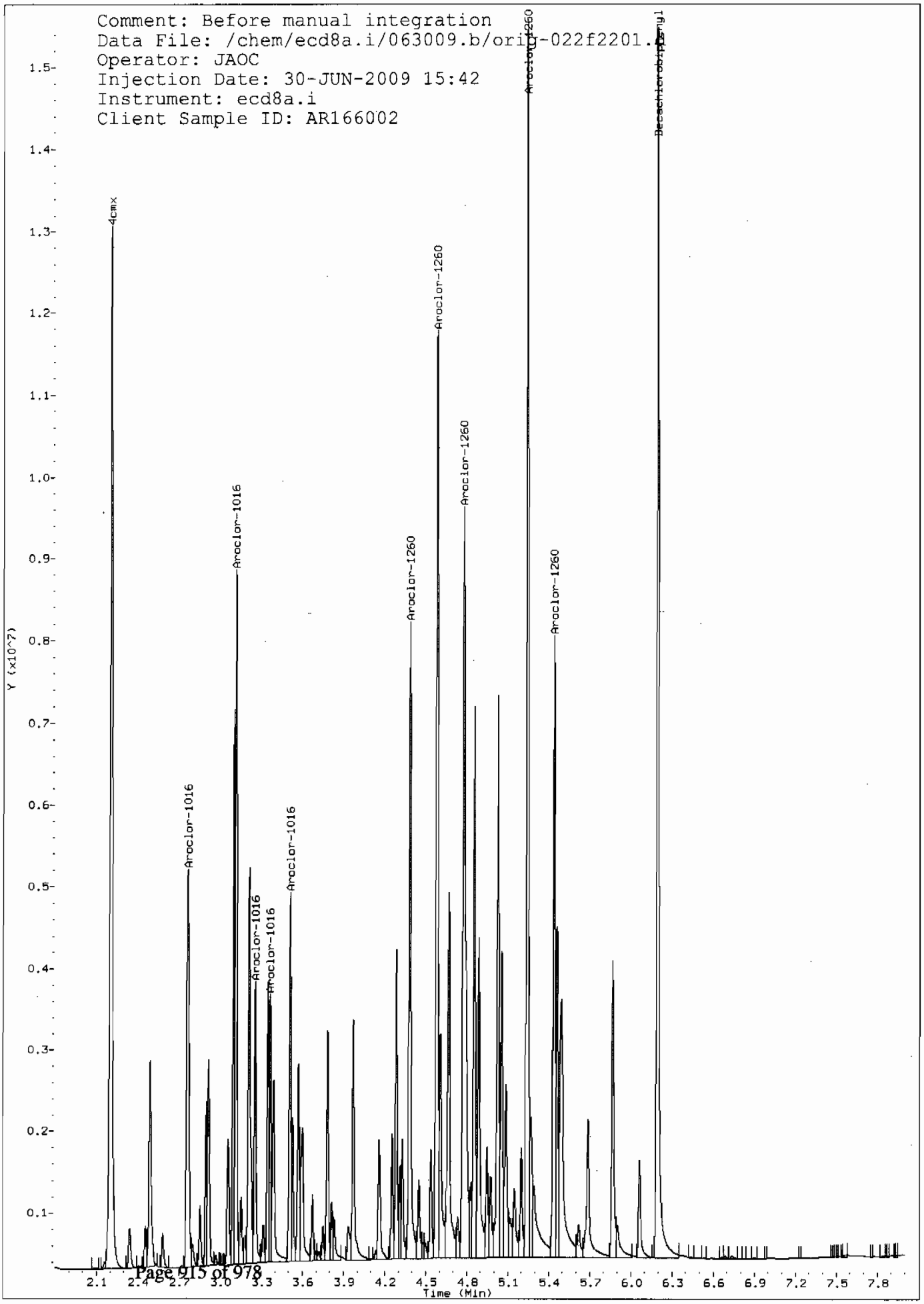
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Operator: JAOC
Injection Date: 30-JUN-2009 15:42
Instrument: ecd8a.i
Client Sample ID: AR166002
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/022b2201.d
Lab Smp Id: WAR090629-04602 Client Smp ID: AR166002
Inj Date : 30-JUN-2009 15:42
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04602
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	5135121	100.000	89.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5035142	100.000	89.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.221	3.222	-0.001	2220681	1000.00	1010	80.00- 120.00	100.00
3.574	3.575	-0.001	2994458	1000.00	1020	114.84- 154.84	134.84
3.675	3.675	0.000	1766378	1000.00	1020	59.54- 99.54	79.54
3.751	3.752	-0.001	1063854	1000.00	1020	27.91- 67.91	47.91
3.825	3.826	-0.001	1076468	1000.00	1000	28.47- 68.47	48.47
Average of Peak Amounts =				1.01e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	2885170	1000.00	1000	80.00- 120.00	100.00
5.083	5.083	0.000	3545820	1000.00	1020	102.90- 142.90	122.90
5.198	5.199	-0.001	3200191	1000.00	1010	90.92- 130.92	110.92
5.607	5.608	-0.001	2398900	1000.00	1010	63.15- 103.15	83.15
6.040	6.041	-0.001	3868799	1000.00	1030	114.09- 154.09	134.09
Average of Peak Amounts =				1.02e+03			

Data File: /chem/ecd8a.i/063009.b/022b2201.d
Date : 30-JUN-2009 15:42
Client ID: AR166002
Sample Info: IWAR090629-04602
Column phase: CLP2

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

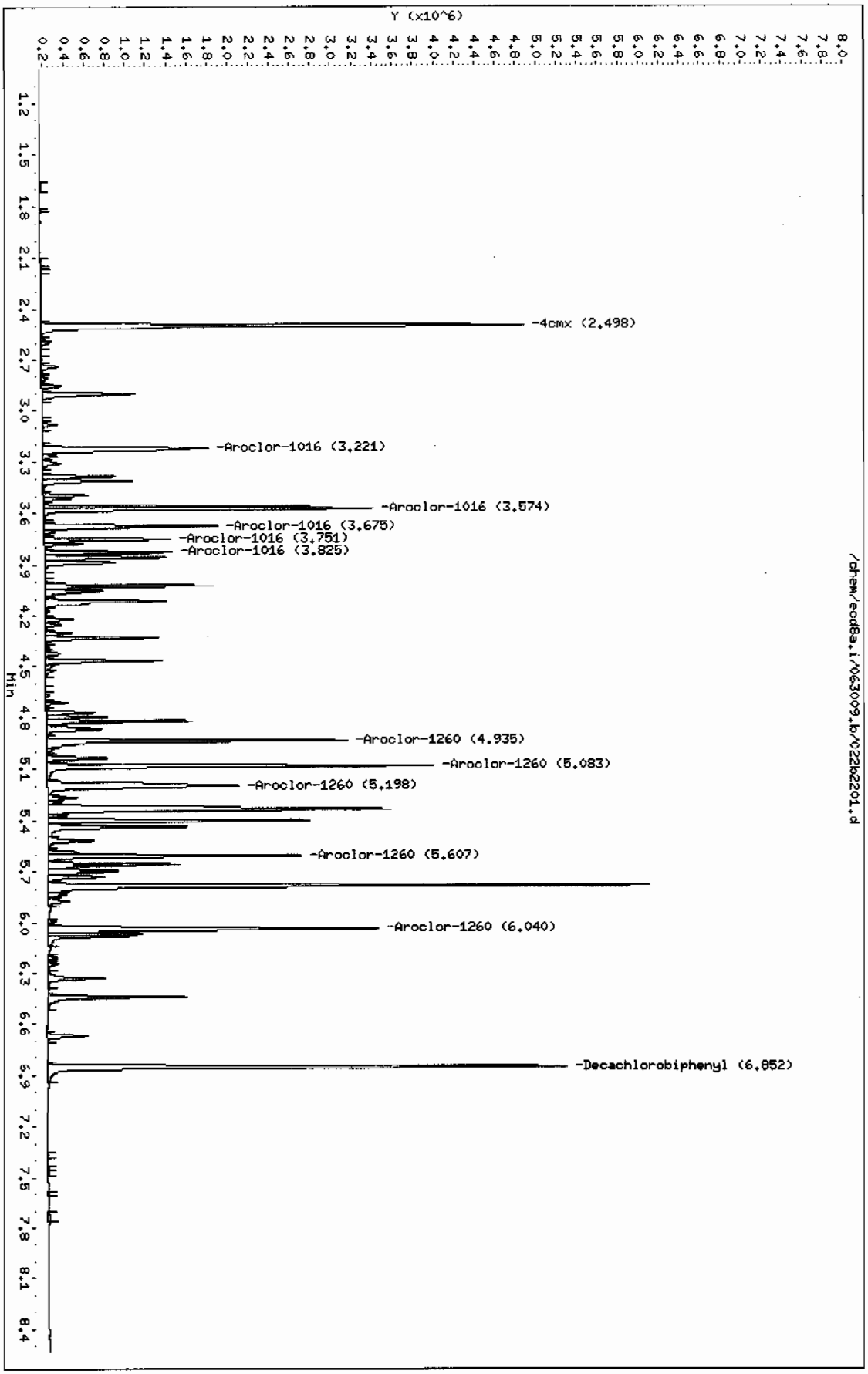

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/033f3301.d
Lab Smp Id: WAR090629-04603 Client Smp ID: AR166003
Inj Date : 30-JUN-2009 18:35
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04603
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	15363980	100.000	96.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	16554267	100.000	98.6	80.00- 120.00	100.00(M)
1 Aroclor-1016					CAS #: 12674-11-2		
2.760	2.762	-0.002	6222594	1000.00	1080	80.00- 120.00	100.00
3.110	3.112	-0.002	7909896	1000.00	1090	104.26- 144.26	127.12
3.254	3.256	-0.002	3197458	1000.00	1100	31.13- 71.13	51.38
3.364	3.365	-0.001	2899955	1000.00	1050	27.14- 67.14	46.60
3.508	3.510	-0.002	3898569	1000.00	1070	42.84- 82.84	62.65
Average of Peak Amounts =				1.08e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	7627002	1000.00	1070	80.00- 120.00	100.00(M)
4.578	4.579	-0.001	10853926	1000.00	1080	122.43- 162.43	142.31
4.772	4.774	-0.002	12192523	1000.00	1060	138.51- 178.51	159.86
5.240	5.242	-0.002	14602143	1000.00	1090	171.28- 211.28	191.45
5.435	5.437	-0.002	7015943	1000.00	1070	73.47- 113.47	91.99
Average of Peak Amounts =				1.07e+03			

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/033f3301.d
Date : 30-JUN-2009 18:35
Client ID: AR166003
Sample Info: IWAR090629-04603

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

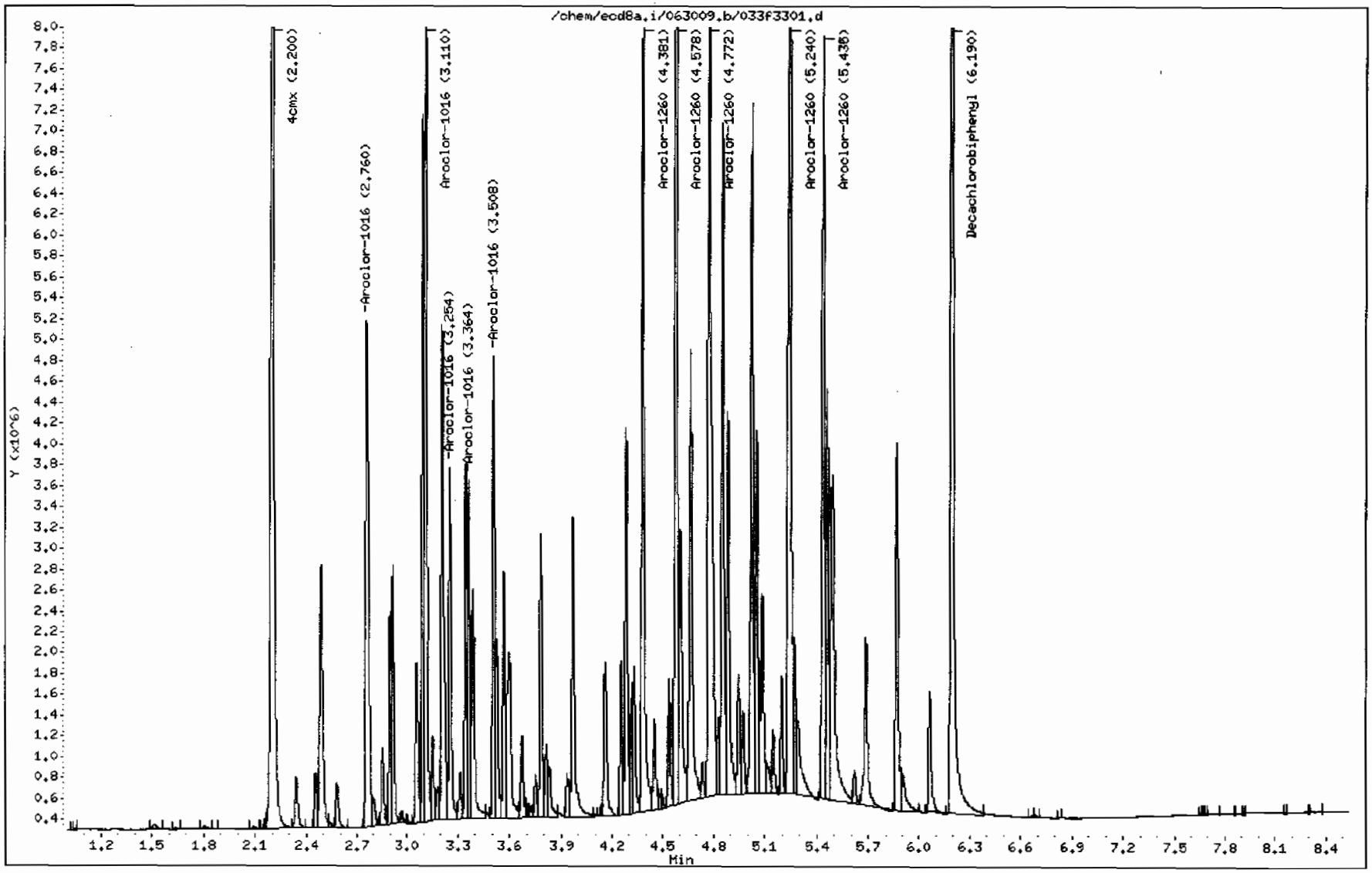

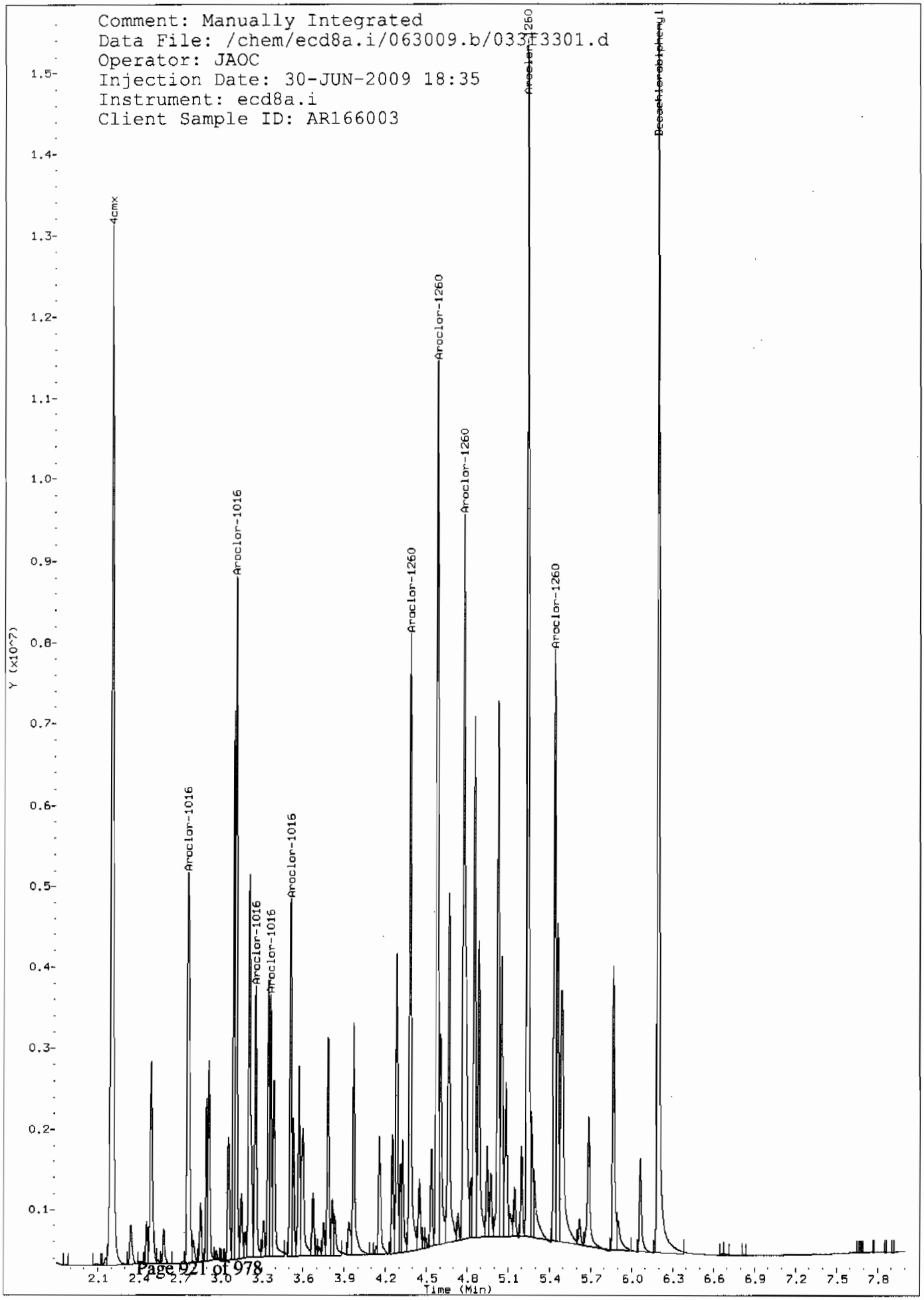
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Operator: JAOC
Injection Date: 30-JUN-2009 18:35
Instrument: ecd8a.i
Client Sample ID: AR166003
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

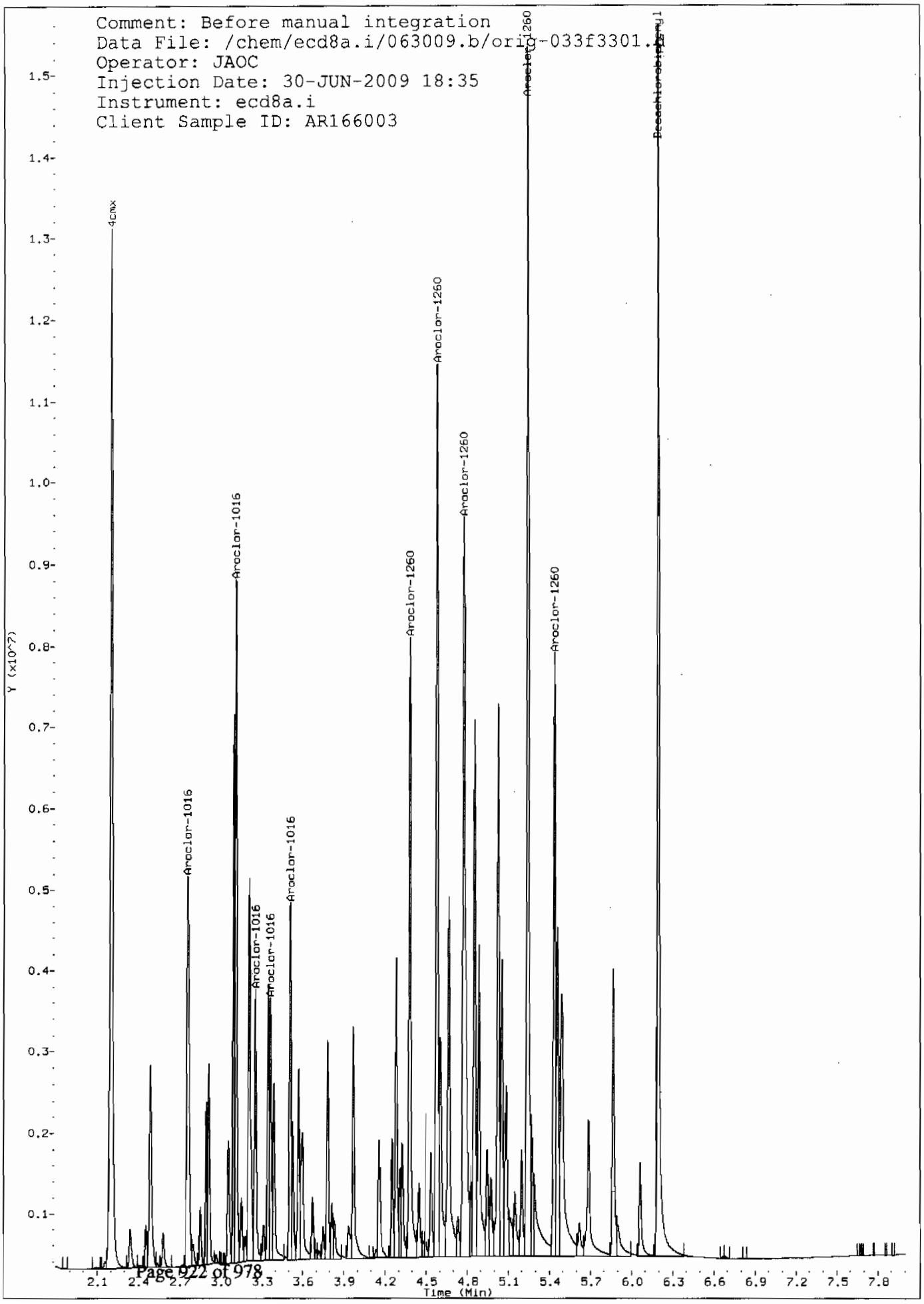
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-033f3301.
Operator: JAOC
Injection Date: 30-JUN-2009 18:35
Instrument: ecd8a.i
Client Sample ID: AR166003
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/033b3301.d
Lab Smp Id: WAR090629-04603 Client Smp ID: AR166003
Inj Date : 30-JUN-2009 18:35
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04603
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5070280	100.000	87.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	5137351	100.000	91.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	2198374	1000.00	997	80.00- 120.00	100.00
3.575	3.575	0.000	3024555	1000.00	1030	118.74- 158.74	137.58
3.675	3.675	0.000	1743998	1000.00	1000	60.26- 100.26	79.33
3.751	3.752	-0.001	1055236	1000.00	1020	28.23- 68.23	48.00
3.825	3.826	-0.001	1063993	1000.00	994	28.70- 68.70	48.40
Average of Peak Amounts =				1.01e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	2880730	1000.00	1000	80.00- 120.00	100.00
5.083	5.083	0.000	3559181	1000.00	1030	104.06- 144.06	123.55
5.198	5.199	-0.001	3207589	1000.00	1020	91.97- 131.97	111.35
5.607	5.608	-0.001	2405333	1000.00	1020	64.43- 104.43	83.50
6.040	6.041	-0.001	3902843	1000.00	1040	116.83- 156.83	135.48
Average of Peak Amounts =				1.02e+03			

Data File: /chem/ecd8a.i/063009.b/033b3301.d

Date : 30-JUN-2009 18:35

Client ID: AR166003

Sample Info: HWAR090629-04603

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

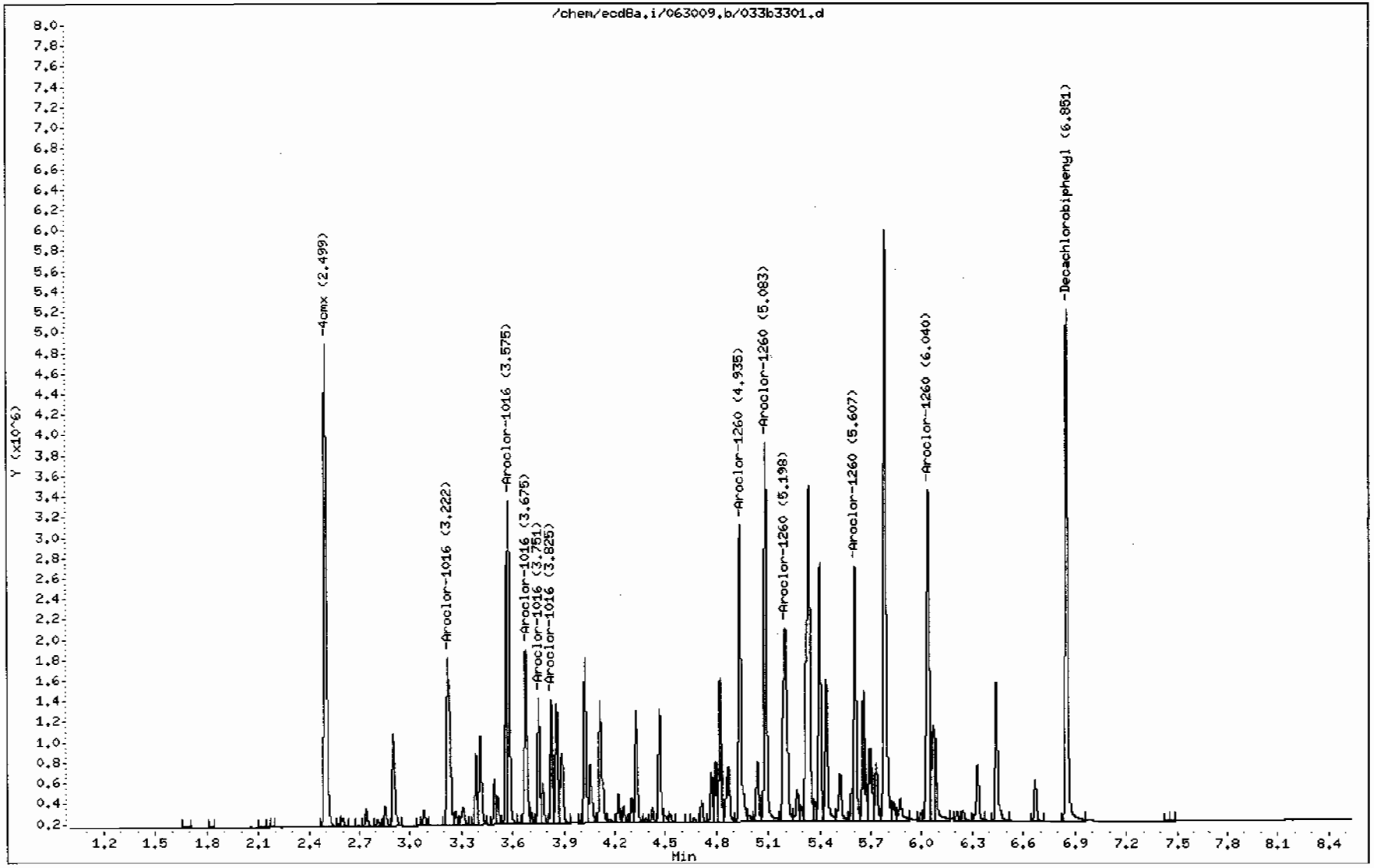

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/16/09	0823	2.20	6.19
02	AR166001	WAR090522-60	06/16/09	0836	2.20	6.19
03	AR125401	WAR090302-54	06/16/09	0848	2.20	6.19
04	AR124201	WAR090519-42	06/16/09	0901	2.20	6.19
05	AR124801	WAR090521-48	06/16/09	0913	2.20	6.19
06	AR166001	WAR090522-60	06/16/09	0925	2.20	6.19
07	AR124801	WAR090521-48	06/16/09	0943	2.21	6.20
08	AR166001	WAR090616-01	06/16/09	0956	2.21	6.20
09	AR166002	WAR090616-02	06/16/09	1009	2.20	6.19
10	AR166003	WAR090616-03	06/16/09	1021	2.20	6.19
11	AR166004	WAR090616-04	06/16/09	1033	2.20	6.19
12	AR166005	IAR090601-01	06/16/09	1046	2.20	6.19
13	AR166001	WAR090616-60	06/16/09	1058	2.20	6.19
14	AR123201	WAR090326-32	06/16/09	1110	2.20	6.19
15	AR122101	WAR090320-21	06/16/09	1123	2.20	6.19
16	AR126201	WAR090608-62	06/16/09	1135	2.20	6.19
17	AR126801	WAR090424-68	06/16/09	1147	2.20	6.19
18	DDTANALOGSTD	WAR090416-DD	06/16/09	1200	2.20	6.20
19	PIBLK02	WAR090519-99	06/16/09	1212	2.20	6.19
20	ZZZZZ	ZZZZZ	06/16/09	1224	2.20	6.19
21	ZZZZZ	ZZZZZ	06/16/09	1241	2.20	6.19
22	ZZZZZ	ZZZZZ	06/16/09	1253	2.20	6.19
23	ZZZZZ	ZZZZZ	06/16/09	1306	2.20	6.19
24	ZZZZZ	ZZZZZ	06/16/09	1322	2.20	6.19
25	ZZZZZ	ZZZZZ	06/16/09	1339	2.20	6.19
26	ZZZZZ	ZZZZZ	06/16/09	1355	2.20	6.19
27	ZZZZZ	ZZZZZ	06/16/09	1412	2.20	6.19
28	ZZZZZ	ZZZZZ	06/16/09	1428	2.20	6.19
29	AR166002	WAR090616-60	06/16/09	1445	2.20	6.19
30	PIBLK03	WAR090519-99	06/16/09	1457	2.20	6.19
31	ZZZZZ	ZZZZZ	06/16/09	1509	2.20	6.19
32	ZZZZZ	ZZZZZ	06/16/09	1526	2.20	6.19

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.86

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/16/09	0823	2.50	6.85
02	AR166001	WAR090522-60	06/16/09	0836	2.50	6.86
03	AR125401	WAR090302-54	06/16/09	0848	2.50	6.86
04	AR124201	WAR090519-42	06/16/09	0901	2.50	6.86
05	AR124801	WAR090521-48	06/16/09	0913	2.50	6.86
06	AR166001	WAR090522-60	06/16/09	0925	2.50	6.86
07	AR124801	WAR090521-48	06/16/09	0943	2.50	6.86
08	AR166001	WAR090616-01	06/16/09	0956	2.50	6.86
09	AR166002	WAR090616-02	06/16/09	1009	2.50	6.86
10	AR166003	WAR090616-03	06/16/09	1021	2.50	6.86
11	AR166004	WAR090616-04	06/16/09	1033	2.50	6.86
12	AR166005	IAR090601-01	06/16/09	1046	2.50	6.86
13	AR166001	WAR090616-60	06/16/09	1058	2.50	6.86
14	AR123201	WAR090326-32	06/16/09	1110	2.50	6.86
15	AR122101	WAR090320-21	06/16/09	1123	2.50	6.86
16	AR126201	WAR090608-62	06/16/09	1135	2.50	6.86
17	AR126801	WAR090424-68	06/16/09	1147	2.50	6.86
18	DDTANALOGSTD	WAR090416-DD	06/16/09	1200	2.50	6.86
19	PIBLK02	WAR090519-99	06/16/09	1212	2.50	6.86
20	ZZZZZ	ZZZZZ	06/16/09	1224	2.50	6.86
21	ZZZZZ	ZZZZZ	06/16/09	1241	2.50	6.86
22	ZZZZZ	ZZZZZ	06/16/09	1253	2.50	6.86
23	ZZZZZ	ZZZZZ	06/16/09	1306	2.50	6.86
24	ZZZZZ	ZZZZZ	06/16/09	1322	2.50	6.86
25	ZZZZZ	ZZZZZ	06/16/09	1339	2.50	6.85
26	ZZZZZ	ZZZZZ	06/16/09	1355	2.50	6.85
27	ZZZZZ	ZZZZZ	06/16/09	1412	2.50	6.85
28	ZZZZZ	ZZZZZ	06/16/09	1428	2.50	6.85
29	AR166002	WAR090616-60	06/16/09	1445	2.50	6.86
30	PIBLK03	WAR090519-99	06/16/09	1457	2.50	6.86
31	ZZZZZ	ZZZZZ	06/16/09	1509	2.50	6.86
32	ZZZZZ	ZZZZZ	06/16/09	1526	2.50	6.85

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/18/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/18/09	0842	2.20	6.19
02	AR166001	WAR090616-60	06/18/09	0854	2.20	6.19
03	AR125401	WAR090302-54	06/18/09	0907	2.20	6.19
04	AR124201	WAR090519-42	06/18/09	0919	2.20	6.19
05	AR124801	WAR090521-48	06/18/09	0931	2.20	6.19
06	AR125401	WAR090302-54	06/18/09	0945	2.20	6.20
07	AR124801	WAR090521-48	06/18/09	0958	2.20	6.19
08	AR125401	WAR090618-01	06/18/09	1012	2.21	6.20
09	AR125402	WAR090618-02	06/18/09	1025	2.20	6.19
10	AR125403	WAR090618-03	06/18/09	1037	2.20	6.19
11	AR125404	WAR090618-04	06/18/09	1050	2.20	6.19
12	AR125405	IAR090505-01	06/18/09	1102	2.20	6.19
13	AR125401	WAR090302-54	06/18/09	1114	2.20	6.19
14	AR124801	WAR090618-05	06/18/09	1127	2.20	6.19
15	AR124802	WAR090618-06	06/18/09	1139	2.20	6.19
16	AR124803	WAR090618-07	06/18/09	1151	2.20	6.19
17	AR124804	WAR090618-08	06/18/09	1204	2.20	6.19
18	AR124805	IAR090601-02	06/18/09	1216	2.20	6.19
19	AR124801	WAR090521-48	06/18/09	1232	2.21	6.20
20	AR123201	WAR090618-32	06/18/09	1245	2.20	6.19
21	AR122101	WAR090618-21	06/18/09	1257	2.20	6.19
22	AR126201	WAR090608-62	06/18/09	1310	2.20	6.19
23	AR126801	WAR090424-68	06/18/09	1322	2.20	6.19
24	DDTANALOGSTD	WAR090416-DD	06/18/09	1334	2.18	6.19
25	PIBLK02	WAR090519-99	06/18/09	1347	2.20	6.19
26	ZZZZZ	ZZZZZ	06/18/09	1359	2.20	6.19
27	ZZZZZ	ZZZZZ	06/18/09	1411	2.20	6.19
28	ZZZZZ	ZZZZZ	06/18/09	1424	2.21	6.20
29	ZZZZZ	ZZZZZ	06/18/09	1440	2.20	6.19
30	ZZZZZ	ZZZZZ	06/18/09	1457	2.20	6.19
31	ZZZZZ	ZZZZZ	06/18/09	1513	2.20	6.19
32	ZZZZZ	ZZZZZ	06/18/09	1530	2.20	6.19

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/18/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.86

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/18/09	0842	2.50	6.85
02	AR166001	WAR090616-60	06/18/09	0854	2.50	6.85
03	AR125401	WAR090302-54	06/18/09	0907	2.50	6.86
04	AR124201	WAR090519-42	06/18/09	0919	2.50	6.86
05	AR124801	WAR090521-48	06/18/09	0931	2.50	6.86
06	AR125401	WAR090302-54	06/18/09	0945	2.50	6.86
07	AR124801	WAR090521-48	06/18/09	0958	2.50	6.86
08	AR125401	WAR090618-01	06/18/09	1012	2.50	6.86
09	AR125402	WAR090618-02	06/18/09	1025	2.50	6.85
10	AR125403	WAR090618-03	06/18/09	1037	2.50	6.86
11	AR125404	WAR090618-04	06/18/09	1050	2.50	6.86
12	AR125405	IAR090505-01	06/18/09	1102	2.50	6.86
13	AR125401	WAR090302-54	06/18/09	1114	2.50	6.86
14	AR124801	WAR090618-05	06/18/09	1127	2.50	6.86
15	AR124802	WAR090618-06	06/18/09	1139	2.50	6.86
16	AR124803	WAR090618-07	06/18/09	1151	2.50	6.86
17	AR124804	WAR090618-08	06/18/09	1204	2.50	6.86
18	AR124805	IAR090601-02	06/18/09	1216	2.50	6.86
19	AR124801	WAR090521-48	06/18/09	1232	2.50	6.86
20	AR123201	WAR090618-32	06/18/09	1245	2.50	6.86
21	AR122101	WAR090618-21	06/18/09	1257	2.50	6.86
22	AR126201	WAR090608-62	06/18/09	1310	2.50	6.85
23	AR126801	WAR090424-68	06/18/09	1322	2.50	6.86
24	DDTANALOGSTD	WAR090416-DD	06/18/09	1334		6.86
25	PIBLK02	WAR090519-99	06/18/09	1347	2.50	6.86
26	ZZZZZ	ZZZZZ	06/18/09	1359	2.50	6.86
27	ZZZZZ	ZZZZZ	06/18/09	1411	2.50	6.86
28	ZZZZZ	ZZZZZ	06/18/09	1424	2.51	6.86
29	ZZZZZ	ZZZZZ	06/18/09	1440	2.50	6.86
30	ZZZZZ	ZZZZZ	06/18/09	1457	2.50	6.86
31	ZZZZZ	ZZZZZ	06/18/09	1513	2.50	6.86
32	ZZZZZ	ZZZZZ	06/18/09	1530	2.50	6.85

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/30/09	1046	2.20	6.19
02	AR166001	WAR090629-04	06/30/09	1059	2.20	6.19
03	AR125401	WAR090302-54	06/30/09	1111	2.20	6.19
04	AR124201	WAR090519-42	06/30/09	1124	2.20	6.19
05	AR124801	WAR090521-48	06/30/09	1136	2.20	6.19
06	AR123201	WAR090618-32	06/30/09	1148	2.20	6.19
07	AR122101	WAR090618-21	06/30/09	1203	2.20	6.20
08	AR126201	WAR090608-62	06/30/09	1216	2.20	6.19
09	AR126801	WAR090424-68	06/30/09	1228	2.20	6.19
10	DDTANALOGSTD	WAR090618-DD	06/30/09	1240	2.20	6.19
11	PIBLK02	WAR090519-99	06/30/09	1253	2.20	6.19
12	PBLK01	1201871515	06/30/09	1305	2.20	6.19
13	PBLK01LCS	1201871516	06/30/09	1318	2.20	6.19
14	ZZZZZ	ZZZZZ	06/30/09	1330	2.20	6.19
15	ZZZZZ	ZZZZZ	06/30/09	1346	2.20	6.19
16	ZZZZZ	ZZZZZ	06/30/09	1403	2.20	6.19
17	ZZZZZ	ZZZZZ	06/30/09	1419	2.20	6.19
18	ZZZZZ	ZZZZZ	06/30/09	1436	2.20	6.19
19	CAMO-09-6007	232428001	06/30/09	1452	2.20	6.19
20	CAMO-09-6006	232428002	06/30/09	1509	2.20	6.19
21	CAMO-09-6008	232428003	06/30/09	1525	2.20	6.19
22	AR166002	WAR090629-04	06/30/09	1542	2.20	6.19
23	PIBLK03	WAR090519-99	06/30/09	1554	2.20	6.19
24	CAMO-09-6009	232428004	06/30/09	1606	2.20	6.19
25	CAMO-09-6038	232428012	06/30/09	1623	2.20	6.19
26	CAMO-09-6049	232428015	06/30/09	1639	2.20	6.19
27	ZZZZZ	ZZZZZ	06/30/09	1656	2.20	6.19
28	ZZZZZ	ZZZZZ	06/30/09	1712	2.20	6.19
29	ZZZZZ	ZZZZZ	06/30/09	1729	2.20	6.19
30	ZZZZZ	ZZZZZ	06/30/09	1745	2.20	6.19
31	ZZZZZ	ZZZZZ	06/30/09	1802	2.20	6.19
32	ZZZZZ	ZZZZZ	06/30/09	1818	2.20	6.19

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR166003	WAR090629-04	06/30/09	1835	2.20	6.19
02	PIBLK04	WAR090519-99	06/30/09	1847	2.20	6.19
03	ZZZZZ	ZZZZZ	06/30/09	1859	2.20	6.19
04	ZZZZZ	ZZZZZ	06/30/09	1912	2.20	6.19
05	ZZZZZ	ZZZZZ	06/30/09	1924	2.20	6.19
06	ZZZZZ	ZZZZZ	06/30/09	1941	2.20	6.19
07	ZZZZZ	ZZZZZ	06/30/09	1957	2.20	6.19
08	ZZZZZ	ZZZZZ	06/30/09	2014	2.20	6.19
09	ZZZZZ	ZZZZZ	06/30/09	2030	2.20	6.19
10	ZZZZZ	ZZZZZ	06/30/09	2047	2.20	6.19
11	ZZZZZ	ZZZZZ	06/30/09	2103	2.20	6.19
12	ZZZZZ	ZZZZZ	06/30/09	2120	2.20	6.19
13	AR166004	WAR090629-04	06/30/09	2136	2.20	6.19
14	PIBLK05	WAR090519-99	06/30/09	2148	2.20	6.19
15	ZZZZZ	ZZZZZ	06/30/09	2201	2.20	6.19
16	ZZZZZ	ZZZZZ	06/30/09	2213	2.21	6.19
17	ZZZZZ	ZZZZZ	06/30/09	2226	2.21	6.19
18	ZZZZZ	ZZZZZ	06/30/09	2242	2.20	6.19
19	ZZZZZ	ZZZZZ	06/30/09	2259	2.20	6.19
20	ZZZZZ	ZZZZZ	06/30/09	2315	2.20	6.19
21	AR166005	WAR090629-04	06/30/09	2331	2.20	6.19
22	PIBLK06	WAR090519-99	06/30/09	2344	2.20	6.19
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobipheny1	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.85

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/30/09	1046	2.50	6.85
02	AR166001	WAR090629-04	06/30/09	1059	2.50	6.85
03	AR125401	WAR090302-54	06/30/09	1111	2.50	6.85
04	AR124201	WAR090519-42	06/30/09	1124	2.50	6.85
05	AR124801	WAR090521-48	06/30/09	1136	2.50	6.85
06	AR123201	WAR090618-32	06/30/09	1148	2.50	6.85
07	AR122101	WAR090618-21	06/30/09	1203	2.50	6.85
08	AR126201	WAR090608-62	06/30/09	1216	2.50	6.85
09	AR126801	WAR090424-68	06/30/09	1228	2.50	6.85
10	DDTANALOGSTD	WAR090618-DD	06/30/09	1240	2.50	6.85
11	PIBLK02	WAR090519-99	06/30/09	1253	2.50	6.85
12	PBLK01	1201871515	06/30/09	1305	2.50	6.85
13	PBLK01LCS	1201871516	06/30/09	1318	2.50	6.85
14	ZZZZZ	ZZZZZ	06/30/09	1330	2.50	6.85
15	ZZZZZ	ZZZZZ	06/30/09	1346	2.50	6.85
16	ZZZZZ	ZZZZZ	06/30/09	1403	2.50	6.85
17	ZZZZZ	ZZZZZ	06/30/09	1419	2.50	6.85
18	ZZZZZ	ZZZZZ	06/30/09	1436	2.50	6.85
19	CAMO-09-6007	232428001	06/30/09	1452	2.50	6.85
20	CAMO-09-6006	232428002	06/30/09	1509	2.50	6.85
21	CAMO-09-6008	232428003	06/30/09	1525	2.50	6.85
22	AR166002	WAR090629-04	06/30/09	1542	2.50	6.85
23	PIBLK03	WAR090519-99	06/30/09	1554	2.50	6.85
24	CAMO-09-6009	232428004	06/30/09	1606	2.50	6.85
25	CAMO-09-6038	232428012	06/30/09	1623	2.50	6.85
26	CAMO-09-6049	232428015	06/30/09	1639	2.50	6.85
27	ZZZZZ	ZZZZZ	06/30/09	1656	2.50	6.85
28	ZZZZZ	ZZZZZ	06/30/09	1712	2.50	6.85
29	ZZZZZ	ZZZZZ	06/30/09	1729	2.50	6.85
30	ZZZZZ	ZZZZZ	06/30/09	1745	2.50	6.85
31	ZZZZZ	ZZZZZ	06/30/09	1802	2.50	6.85
32	ZZZZZ	ZZZZZ	06/30/09	1818	2.50	6.85

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2477

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.85

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR166003	WAR090629-04	06/30/09	1835	2.50	6.85
02	PIBLK04	WAR090519-99	06/30/09	1847	2.50	6.85
03	ZZZZZ	ZZZZZ	06/30/09	1859	2.50	6.85
04	ZZZZZ	ZZZZZ	06/30/09	1912	2.50	6.85
05	ZZZZZ	ZZZZZ	06/30/09	1924	2.50	6.85
06	ZZZZZ	ZZZZZ	06/30/09	1941	2.50	6.85
07	ZZZZZ	ZZZZZ	06/30/09	1957	2.50	6.85
08	ZZZZZ	ZZZZZ	06/30/09	2014	2.50	6.85
09	ZZZZZ	ZZZZZ	06/30/09	2030	2.50	6.85
10	ZZZZZ	ZZZZZ	06/30/09	2047	2.50	6.85
11	ZZZZZ	ZZZZZ	06/30/09	2103	2.50	6.85
12	ZZZZZ	ZZZZZ	06/30/09	2120	2.50	6.85
13	AR166004	WAR090629-04	06/30/09	2136	2.50	6.85
14	PIBLK05	WAR090519-99	06/30/09	2148	2.50	6.85
15	ZZZZZ	ZZZZZ	06/30/09	2201	2.50	6.85
16	ZZZZZ	ZZZZZ	06/30/09	2213	2.50	6.85
17	ZZZZZ	ZZZZZ	06/30/09	2226	2.50	6.85
18	ZZZZZ	ZZZZZ	06/30/09	2242	2.50	6.85
19	ZZZZZ	ZZZZZ	06/30/09	2259	2.50	6.85
20	ZZZZZ	ZZZZZ	06/30/09	2315	2.50	6.85
21	AR166005	WAR090629-04	06/30/09	2331	2.50	6.85
22	PIBLK06	WAR090519-99	06/30/09	2344	2.50	6.85
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Identification Summary

SDG Number: 09-2477 **Client ID:** CAMO-09-6006

Lab Sample ID: 232428002

Data File:	020f2001.d	**Data File:**	020b2001.d
Inst:	ECD8A.I_1	**Inst:**	ECD8A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	30-JUN-09 15:09	**Analyzed:**	30-JUN-09 15:09

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1254							17.4
Column 1	1	3.78	3.76 – 3.82	3.03		ug/kg	
	2	3.97	3.94 – 4	2.76		ug/kg	
	3	4.17	4.14 – 4.2	3.27		ug/kg	
	4	4.25	4.22 – 4.28	2.8		ug/kg	
	5	4.58	4.55 – 4.61	8.33		ug/kg	
					4.04		
Column 2	1	4.33	4.3 – 4.36	2.11		ug/kg	
	2	4.47	4.44 – 4.5	2.66		ug/kg	
	3	4.8	4.77 – 4.83	3.02		ug/kg	
	4	5.08	5.05 – 5.11	11.3		ug/kg	
	5	5.2	5.18 – 5.24	4.94		ug/kg	
					4.81		
Aroclor-1260							32.9
Column 1	1	4.38	4.35 – 4.41	3.76		ug/kg	
	2	4.58	4.55 – 4.61	5.6		ug/kg	
	3	4.77	4.74 – 4.8	7.83		ug/kg	
	4	5.24	5.21 – 5.27	4.59		ug/kg	
	5	5.44	5.41 – 5.47	6.46		ug/kg	
					5.65		
Column 2	1	4.93	4.91 – 4.97	3.84		ug/kg	
	2	5.08	5.05 – 5.11	5.29		ug/kg	
	3	5.2	5.17 – 5.23	2.9		ug/kg	
	4	5.61	5.58 – 5.64	3.77		ug/kg	
	5	6.04	6.01 – 6.07	4.47		ug/kg	
					4.05		

Identification Summary

SDG Number: 09-2477 **Client ID:** CAMO-09-6008

Lab Sample ID: 232428003

Data File: 021f2101.d **Data File:** 021b2101.d

Inst: ECD8A.I_1 **Inst:** ECD8A.I_2

Column: CLP1 **Column:** CLP2

Analyzed: 30-JUN-09 15:25 **Analyzed:** 30-JUN-09 15:25

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1254							71.5
Column 1	1	3.78	3.76 – 3.82	11.9		ug/kg	
	2	3.97	3.94 – 4	24.6		ug/kg	
	3	4.17	4.14 – 4.2	16.3		ug/kg	
	4	4.25	4.22 – 4.28	24.2		ug/kg	
	5	4.58	4.55 – 4.61	25.2		ug/kg	
					20.5		
Column 2	1	4.33	4.3 – 4.36	64.8		ug/kg	
	2	4.47	4.44 – 4.5	17		ug/kg	
	3	4.8	4.77 – 4.83	28.4		ug/kg	
	4	5.08	5.05 – 5.11	38.3		ug/kg	
	5	5.2	5.18 – 5.24	67.5		ug/kg	
					43.2		
Aroclor-1260							19.4
Column 1	1	4.38	4.35 – 4.41	10.8		ug/kg	
	2	4.58	4.55 – 4.61	17		ug/kg	
	3	4.77	4.74 – 4.8	32.6		ug/kg	
	4	5.24	5.21 – 5.27	11.2		ug/kg	
	5	5.43	5.41 – 5.47	14.2		ug/kg	
					17.1		
Column 2	1	4.93	4.91 – 4.97	16.3		ug/kg	
	2	5.08	5.05 – 5.11	17.9		ug/kg	
	3	5.2	5.17 – 5.23	39.6		ug/kg	
	4	5.61	5.58 – 5.64	19		ug/kg	
	5	6.04	6.01 – 6.07	11.3		ug/kg	
					20.8		

Identification Summary

SDG Number: 09-2477 **Client ID:** CAMO-09-6009

Lab Sample ID: 232428004

Data File:	024f2401.d	**Data File:**	024h2401.d
Inst:	ECD8A.I_1	**Inst:**	ECD8A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	30-JUN-09 16:06	**Analyzed:**	30-JUN-09 16:06

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1254							60.8
Column 1	1	3.79	3.76 – 3.82	3.22		ug/kg	
	2	3.97	3.94 – 4	5.72		ug/kg	
	3	4.17	4.14 – 4.2	3.26		ug/kg	
	4	4.25	4.22 – 4.28	5.87		ug/kg	
	5	4.58	4.55 – 4.61	7.19		ug/kg	
					5.05		
Column 2	1	4.33	4.3 – 4.36	10.9		ug/kg	
	2	4.47	4.44 – 4.5	4.4		ug/kg	
	3	4.8	4.77 – 4.83	7.02		ug/kg	
	4	5.08	5.05 – 5.11	11		ug/kg	
	5	5.21	5.18 – 5.24	13.9		ug/kg	
					9.46		
Aroclor-1260							14.3
Column 1	1	4.38	4.35 – 4.41	3.16		ug/kg	
	2	4.58	4.55 – 4.61	4.83		ug/kg	
	3	4.77	4.74 – 4.8	6.84		ug/kg	
	4	5.24	5.21 – 5.27	3.67		ug/kg	
	5	5.44	5.41 – 5.47	4.42		ug/kg	
					4.58		
Column 2	1	4.94	4.91 – 4.97	3.39		ug/kg	
	2	5.08	5.05 – 5.11	5.16		ug/kg	
	3	5.21	5.17 – 5.23	8.18		ug/kg	
	4	5.61	5.58 – 5.64	6.04		ug/kg	
	5	6.04	6.01 – 6.07	3.67		ug/kg	
					5.29		

Identification Summary

SDG Number: 09-2477 **Client ID:** CAMO-09-6038

Lab Sample ID: 232428012

Data File:	025f2501.d	**Data File:**	025b2501.d
Inst:	ECD8A.I_1	**Inst:**	ECD8A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	30-JUN-09 16:23	**Analyzed:**	30-JUN-09 16:23

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1254							33.7
Column 1	1	3.78	3.76 – 3.82	16.6		ug/kg	
	2	3.97	3.94 – 4	21.9		ug/kg	
	3	4.17	4.14 – 4.2	23.9		ug/kg	
	4	4.25	4.22 – 4.28	22.1		ug/kg	
	5	4.58	4.55 – 4.61	47.9		ug/kg	
					26.5		
Column 2	1	4.33	4.3 – 4.36	14.4		ug/kg	
	2	4.47	4.44 – 4.5	21.8		ug/kg	
	3	4.8	4.77 – 4.83	21.7		ug/kg	
	4	5.08	5.05 – 5.11	68.7		ug/kg	
	5	5.2	5.18 – 5.24	59.5		ug/kg	
					37.2		
Aroclor-1260							17.2
Column 1	1	4.38	4.35 – 4.41	30.1		ug/kg	
	2	4.58	4.55 – 4.61	32.2		ug/kg	
	3	4.77	4.74 – 4.8	39.7		ug/kg	
	4	5.24	5.21 – 5.27	28.4		ug/kg	
	5	5.44	5.41 – 5.47	47.7		ug/kg	
					35.6		
Column 2	1	4.93	4.91 – 4.97	28.3		ug/kg	
	2	5.08	5.05 – 5.11	32.1		ug/kg	
	3	5.2	5.17 – 5.23	34.9		ug/kg	
	4	5.61	5.58 – 5.64	26.8		ug/kg	
	5	6.04	6.01 – 6.07	27.9		ug/kg	
					30		

Identification Summary

SDG Number: 09-2477

Client ID: CAMO-09-6049

Lab Sample ID: 232428015

Data File: 026f2601.d
Inst: ECD8A.I_1
Column: CLP1
Analyzed: 30-JUN-09 16:39

Data File: 026b2601.d
Inst: ECD8A.I_2
Column: CLP2
Analyzed: 30-JUN-09 16:39

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1254							12.2
Column 1	1	3.78	3.76 – 3.82	5.1		ug/kg	
	2	3.97	3.94 – 4	4.67		ug/kg	
	3	4.17	4.14 – 4.2	4.97		ug/kg	
	4	4.25	4.22 – 4.28	4.53		ug/kg	
	5	4.58	4.55 – 4.61	10.2		ug/kg	
					5.9		
Column 2	1	4.33	4.3 – 4.36	3.7		ug/kg	
	2	4.47	4.44 – 4.5	4.72		ug/kg	
	3	4.8	4.77 – 4.83	4.83		ug/kg	
	4	5.08	5.05 – 5.11	13.5		ug/kg	
	5	5.2	5.18 – 5.24	6.54		ug/kg	
					6.66		
Aroclor-1260							33.6
Column 1	1	4.38	4.35 – 4.41	4.81		ug/kg	
	2	4.58	4.55 – 4.61	6.86		ug/kg	
	3	4.77	4.74 – 4.8	9.41		ug/kg	
	4	5.24	5.21 – 5.27	5.04		ug/kg	
	5	5.43	5.41 – 5.47	7.37		ug/kg	
					6.7		
Column 2	1	4.93	4.91 – 4.97	5.18		ug/kg	
	2	5.08	5.05 – 5.11	6.32		ug/kg	
	3	5.2	5.17 – 5.23	3.84		ug/kg	
	4	5.61	5.58 – 5.64	3.66		ug/kg	
	5	6.04	6.01 – 6.07	4.86		ug/kg	
					4.77		

Identification Summary

SDG Number: 09-2477 **Client ID:** LCS for batch 881259

Lab Sample ID: 1201871516

Data File:	013f1301.d	**Data File:**	013b1301.d
Inst:	ECD8A.I_1	**Inst:**	ECD8A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	30-JUN-09 13:18	**Analyzed:**	30-JUN-09 13:18

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							10.3
Column 1	1	2.76	2.73 – 2.79	22.9		ug/kg	
	2	3.11	3.08 – 3.14	23.2		ug/kg	
	3	3.26	3.23 – 3.29	24.4		ug/kg	
	4	3.37	3.33 – 3.39	24.8		ug/kg	
	5	3.51	3.48 – 3.54	25.3		ug/kg	
					24.1		
Column 2	1	3.22	3.19 – 3.25	20.8		ug/kg	
	2	3.58	3.54 – 3.6	22.5		ug/kg	
	3	3.68	3.64 – 3.7	22		ug/kg	
	4	3.75	3.72 – 3.78	21.9		ug/kg	
	5	3.83	3.8 – 3.86	21.5		ug/kg	
					21.7		
Aroclor-1260							10.4
Column 1	1	4.38	4.35 – 4.41	29.1		ug/kg	
	2	4.58	4.55 – 4.61	30.3		ug/kg	
	3	4.77	4.74 – 4.8	29.3		ug/kg	
	4	5.24	5.21 – 5.27	36.7		ug/kg	
	5	5.44	5.41 – 5.47	34.4		ug/kg	
					32		
Column 2	1	4.94	4.91 – 4.97	26.7		ug/kg	
	2	5.08	5.05 – 5.11	27.8		ug/kg	
	3	5.2	5.17 – 5.23	26.9		ug/kg	
	4	5.61	5.58 – 5.64	31.1		ug/kg	
	5	6.04	6.01 – 6.07	31.5		ug/kg	
					28.8		

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201871515**				
Client Sample:	**QC for batch 881259**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 881259**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**881260**	**Inst:**	**ECD8A.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 13:05**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/29/2009 23:24**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**012f1201-1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	012b1201-1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.33	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/012f1201-2.d
Lab Smp Id: 1201871515 Client Smp ID: PBLK01
Inj Date : 30-JUN-2009 13:05
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871515|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 12 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	24253194	151.541	5.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	28646493	170.592	5.7	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/012f1201-2.d
Date : 30-JUN-2009 13:05
Client ID: PBLK01
Sample Info: 1120187151511
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

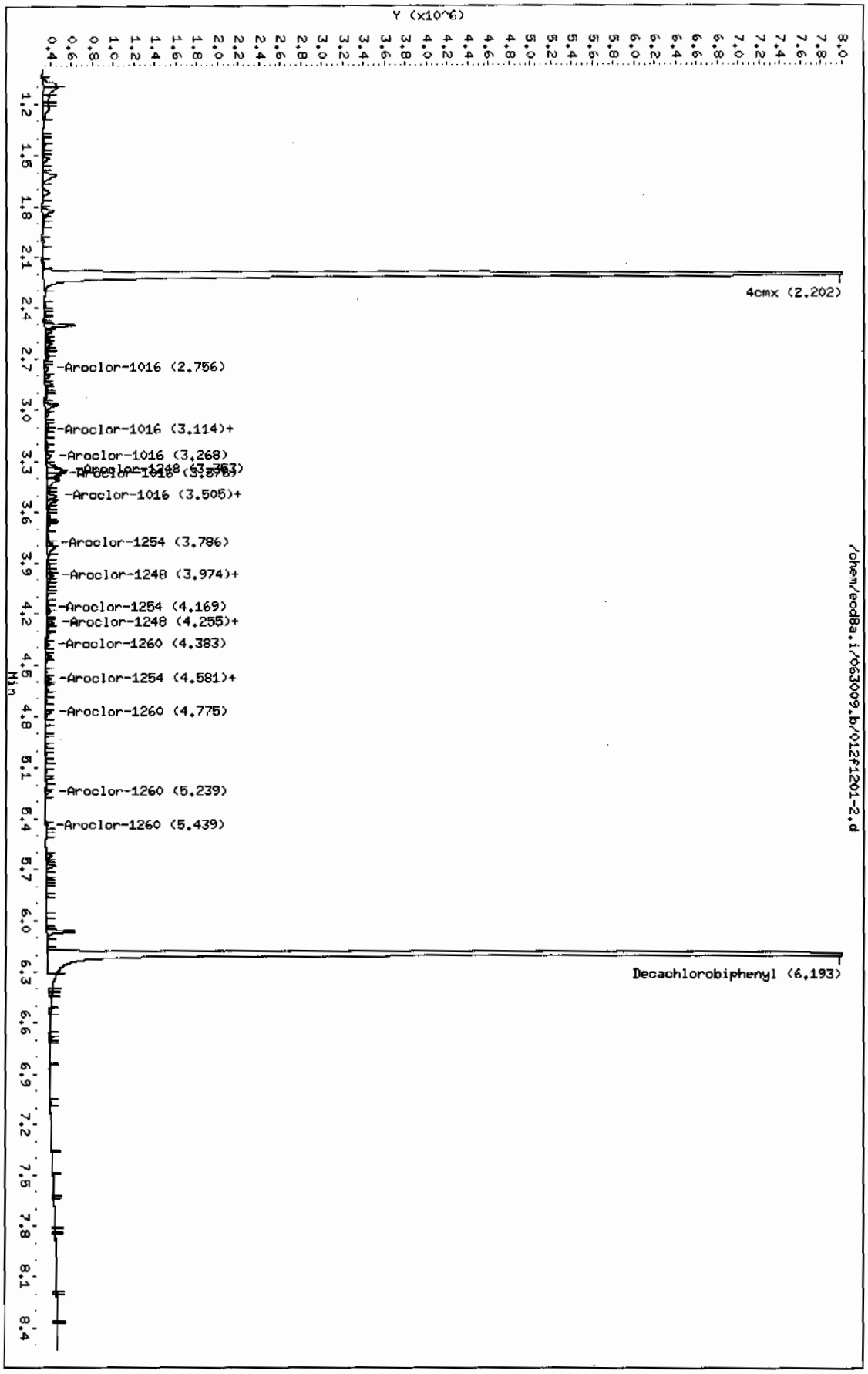

Page 1

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/012b1201-2.d
Lab Smp Id: 1201871515 Client Smp ID: PBLK01
Inj Date : 30-JUN-2009 13:05
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871515|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 12 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	8145955	141.214	4.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	8718177	154.788	5.2	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/012b1201-2.d

Date : 30-JUN-2009 13:05

Client ID: PBLK01

Sample Info: |120187151511|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

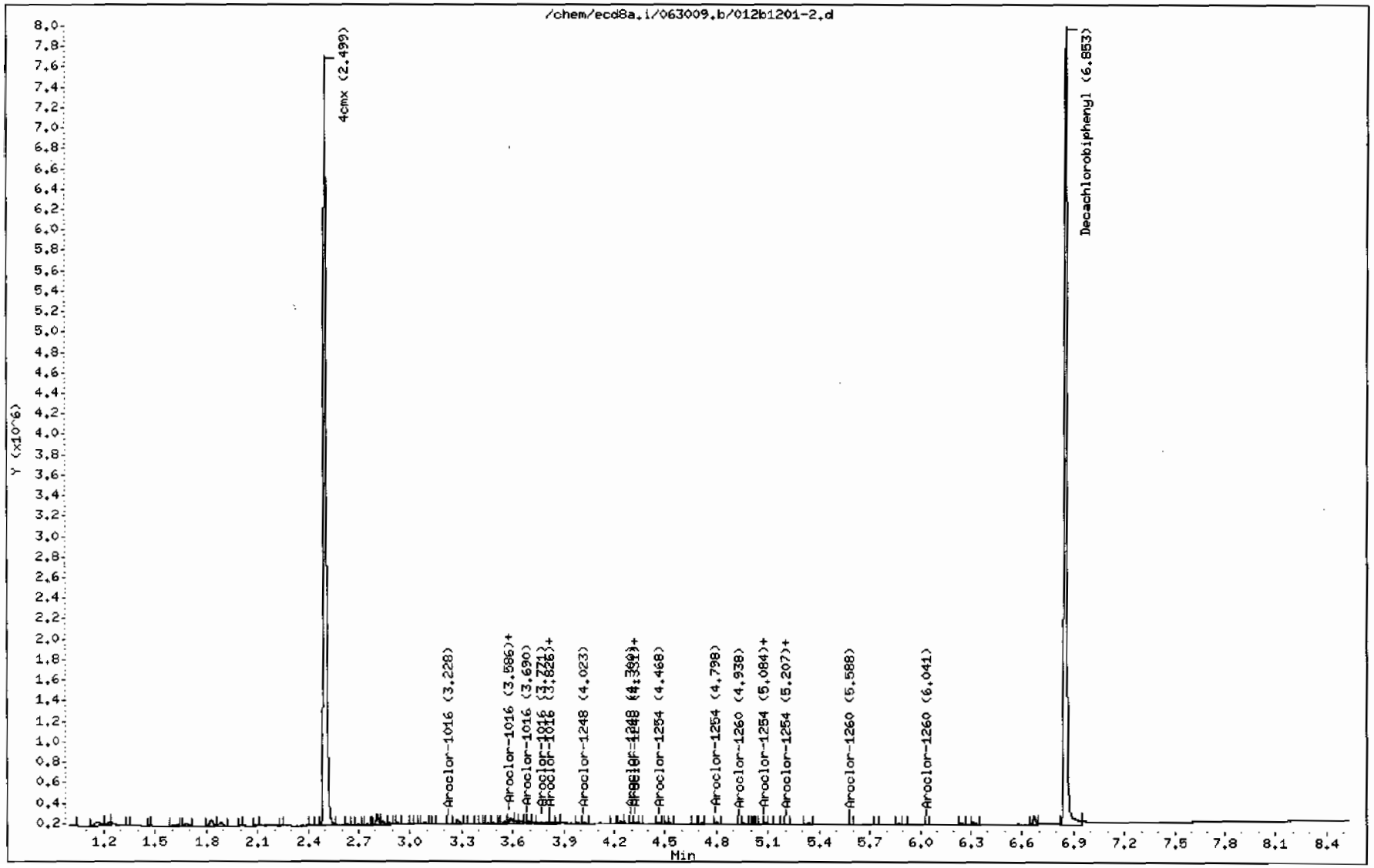

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2477**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201871516**				
Client Sample:	**QC for batch 881259**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 881259**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**881260**	**Inst:**	**ECD8A.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 13:18**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/29/2009 23:24**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**013f1301-1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	013b1301-1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		24.1	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260		32.0	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/013f1301-2.d
Lab Smp Id: 1201871516 Client Smp ID: PBLK01LCS
Inj Date : 30-JUN-2009 13:18
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871516|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 13 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	25618046	160.069	5.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.192	6.193	-0.001	27956102	166.480	5.5	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.762	2.762	0.000	3956290	685.998	22.9	80.00- 120.00	100.00
3.112	3.112	0.000	5037423	697.248	23.2	106.24- 146.24	127.33
3.256	3.256	0.000	2128399	731.544	24.4	32.41- 72.41	53.80
3.366	3.365	0.001	2048256	744.071	24.8	27.63- 67.63	51.77

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.511	3.510	0.001	2749706	757.772	25.2	43.51- 83.51	69.50
Average of Peak Concentrations =					24.1		
7 Aroclor-1260					CAS #: 11096-82-5		
4.383	4.383	0.000	6228030	873.700	29.1	80.00- 120.00	100.00(M)
4.579	4.579	0.000	9160566	908.019	30.3	122.54- 162.54	147.09
4.774	4.774	0.000	10107215	880.257	29.3	138.26- 178.26	162.29
5.241	5.242	-0.001	14734767	1099.98	36.7	171.16- 211.16	236.59
5.437	5.437	0.000	6758663	1031.59	34.4	74.08- 114.08	108.52
Average of Peak Concentrations =					32.0		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/013f1301-2.d

Date : 30-JUN-2009 13:18

Client ID: PBLK01LCS

Sample Info: |120187151611|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

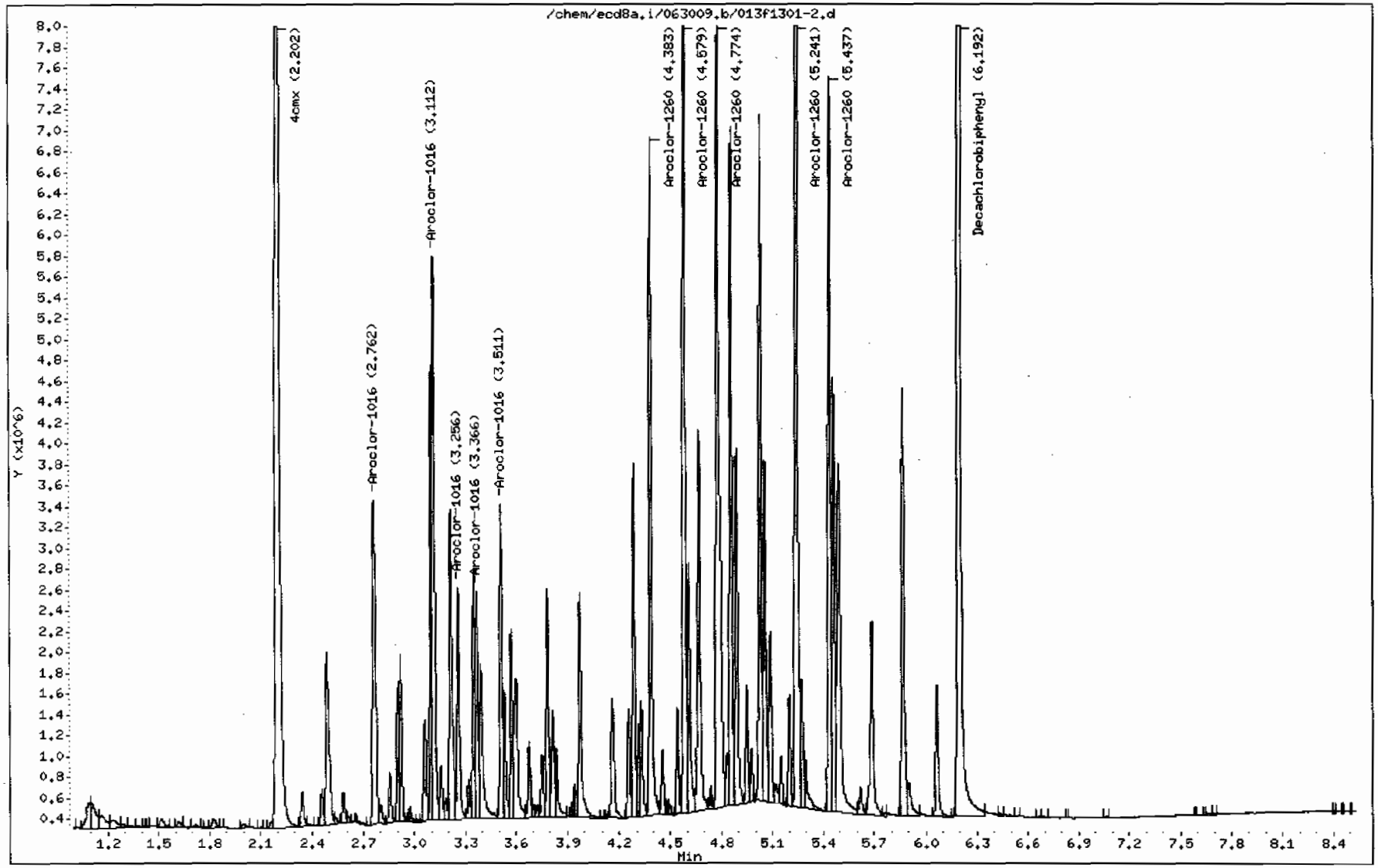

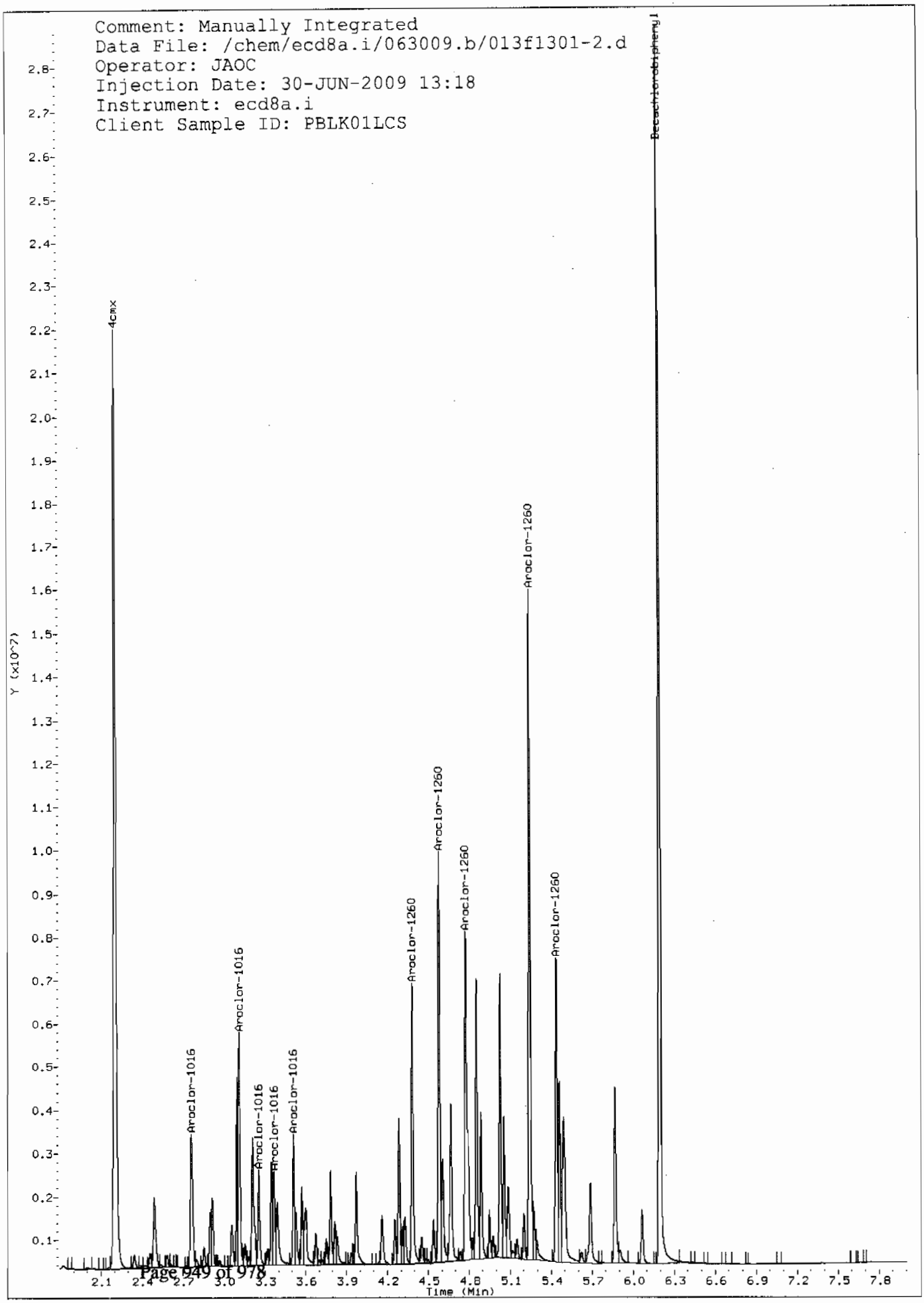
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/013f1301-2.d
Operator: JAOC
Injection Date: 30-JUN-2009 13:18
Instrument: ecd8a.i
Client Sample ID: PBLK01LCS
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

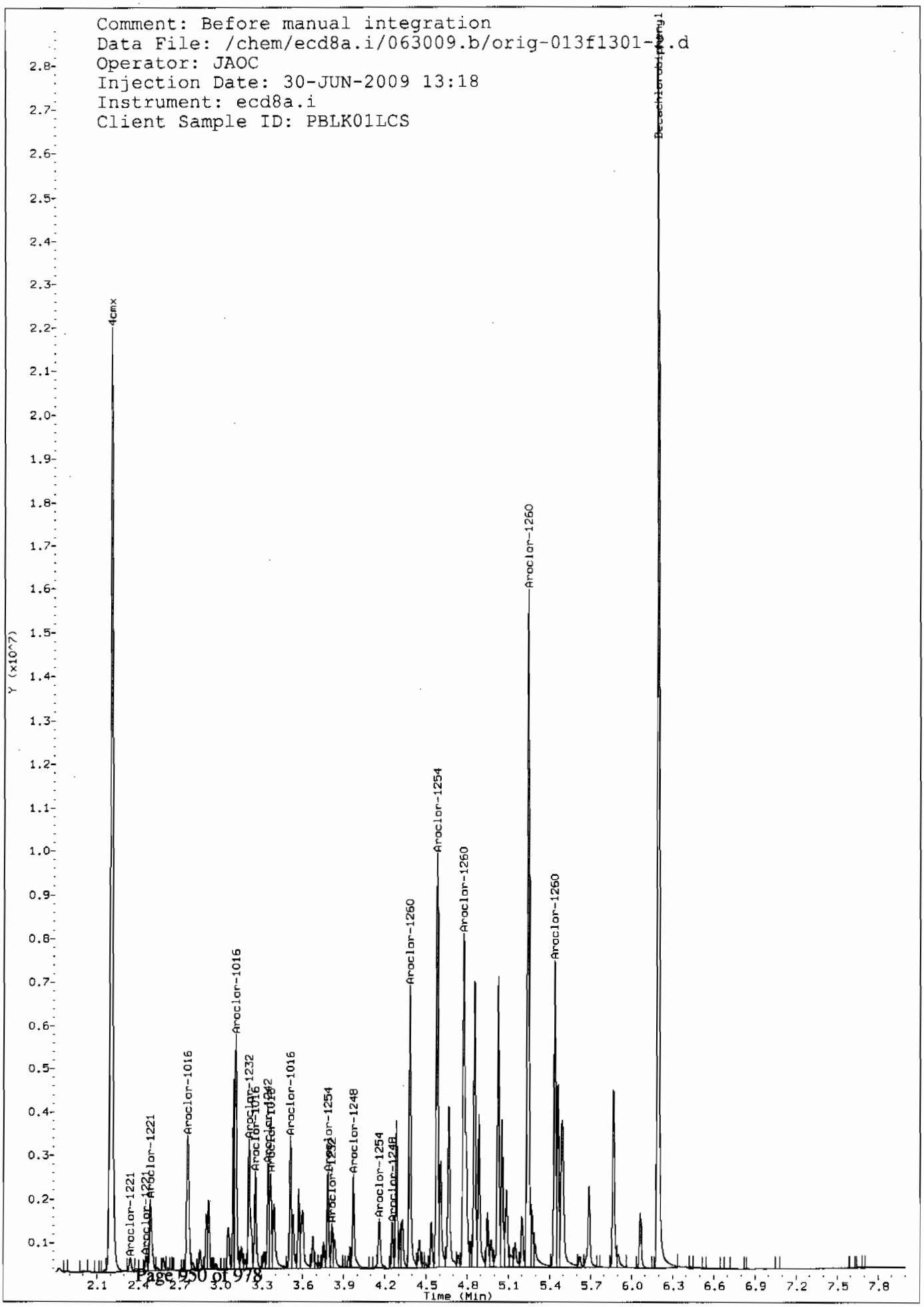
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-013f1301-[illegible].d
Operator: JAOC
Injection Date: 30-JUN-2009 13:18
Instrument: ecd8a.i
Client Sample ID: PBLK01LCS
Decachlorobiphenyl
4cmx
Aroclor-1260
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1248
Aroclor-1016
Aroclor-1232
Aroclor-1016
Aroclor-1221
Aroclor-1221
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/013b1301-2.d
Lab Smp Id: 1201871516 Client Smp ID: PBLK01LCS
Inj Date : 30-JUN-2009 13:18
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871516|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 13 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2477.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.500	2.499	0.001	8579893	148.737	5.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	8601144	152.711	5.1	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	1374418	623.106	20.8	80.00- 120.00	100.00
3.576	3.575	0.001	1981694	676.147	22.5	114.84- 154.84	144.18
3.676	3.675	0.001	1148306	660.295	22.0	59.54- 99.54	83.55
3.752	3.752	0.000	683582	658.477	21.9	27.91- 67.91	49.74

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.826	3.826	0.000	690070	644.775	21.5	28.47- 68.47	50.21
Average of Peak Concentrations =					21.8		
7 Aroclor-1260					CAS #: 11096-82-5		
4.937	4.936	0.001	2306368	800.252	26.7	80.00- 120.00	100.00
5.084	5.083	0.001	2879524	833.020	27.8	102.90- 142.90	124.85
5.199	5.199	0.000	2552639	808.172	26.9	90.92- 130.92	110.68
5.609	5.608	0.001	2212322	934.226	31.1	63.15- 103.15	95.92
6.040	6.041	-0.001	3562824	944.964	31.5	114.09- 154.09	154.48
Average of Peak Concentrations =					28.8		

Data File: /chem/ecd8a.i/063009.b/013b1301-2.d
Date : 30-JUN-2009 13:18
Client ID: PBLK01LCS
Sample Info: 1120187151611
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

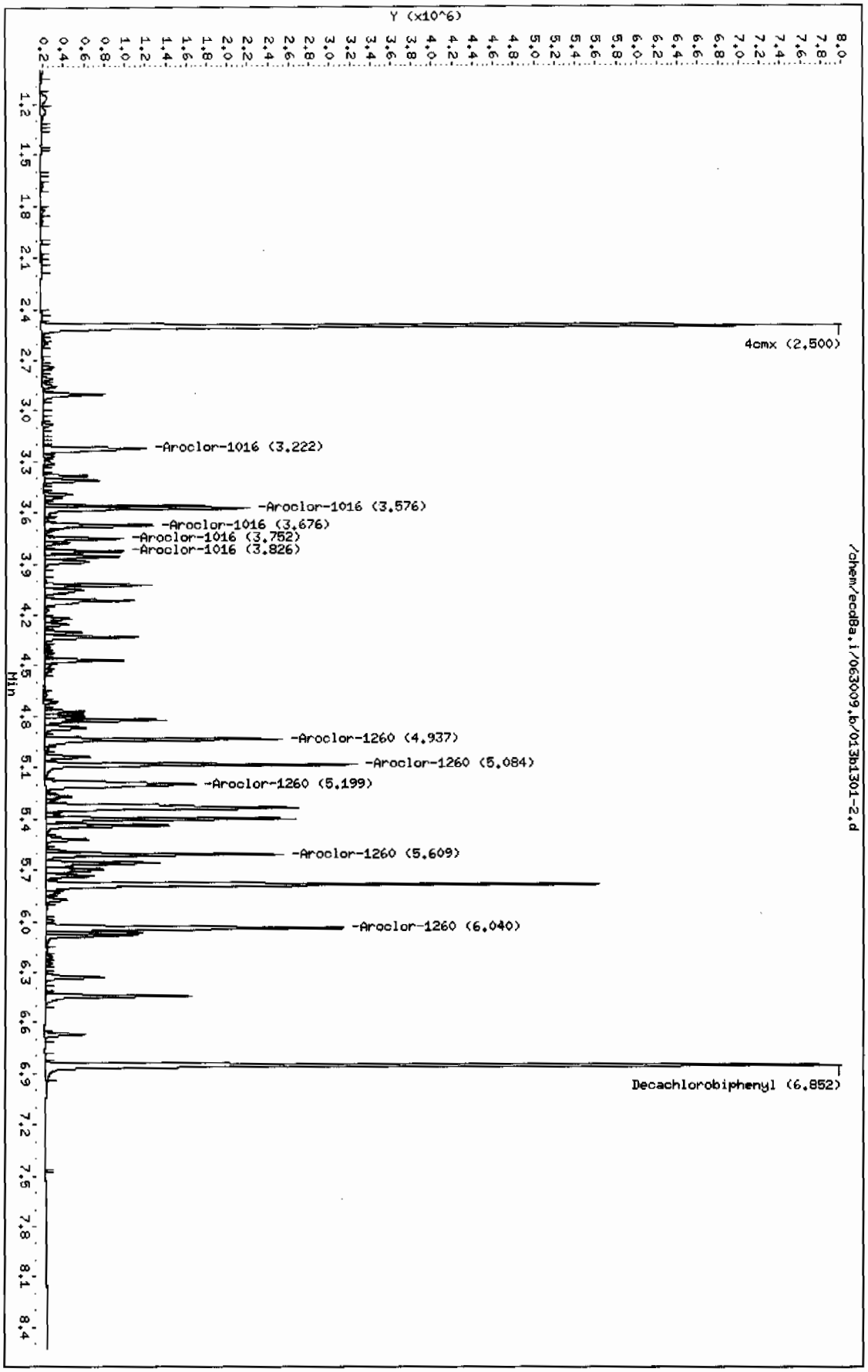

Page 1

MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD8

DATE: 06/17/2009 METHOD: ECD8-F-8082-060109.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT CY613
ALUMINA LOT 090409-A
COPPER LOT 090324-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: /chem/ecd8a.i/061609.b Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99 1	JAOC	16-JUN-2009 08:23		061609	1.0		CLEAN
002f0201.d	WAR090522-60 1	JAOC	16-JUN-2009 08:36		061609	1.0		DUSE
003f0301.d	WAR090302-54	JAOC	16-JUN-2009 08:48		061609	1.0		PASSES AVG
004f0401.d	WAR090519-42	JAOC	16-JUN-2009 09:01		061609	1.0		PASSES AVG
005f0501.d	WAR090521-48	JAOC	16-JUN-2009 09:13		061609	1.0		DUSE
006f0601.d	WAR090522-60 1	JAOC	16-JUN-2009 09:25		061609	1.0		DUSE
007f0701.d	WAR090521-48	JAOC	16-JUN-2009 09:43		061609	1.0		PASSES AVG
008f0801.d	WAR090616-01 60	JAOC	16-JUN-2009 09:56		061609	1.0		1660 LEVEL 1
009f0901.d	WAR090616-02 60	JAOC	16-JUN-2009 10:09		061609	1.0		1660 LEVEL 2
010f1001.d	WAR090616-03 60	JAOC	16-JUN-2009 10:21		061609	1.0		1660 LEVEL 3
011f1101.d	WAR090616-04 60	JAOC	16-JUN-2009 10:33		061609	1.0		1660 LEVEL 4
012f1201.d	IAR090601-01 60	JAOC	16-JUN-2009 10:46		061609	1.0		1660 LEVEL 5
013f1301.d	WAR090616-60 1	JAOC	16-JUN-2009 10:58		061609	1.0		PASSES BOTH COLUMNS
014f1401.d	WAR090326-32	JAOC	16-JUN-2009 11:10		061609	1.0		PATTERN ONLY
015f1501.d	WAR090320-21	JAOC	16-JUN-2009 11:23		061609	1.0		PATTERN ONLY

Instrument Batch: /chem/ecd8a.i/061609.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	WAR090608-62	JAOC	16-JUN-2009 11:35		061609	1.0		PATTERN ONLY
017f1701.d	WAR090424-68	JAOC	16-JUN-2009 11:47		061609	1.0		PATTERN ONLY

018f1801.d	WAR090416-DDT	JAOC	16-JUN-2009 12:00		061609	1.0		DDT
019f1901.d	WAR090519-99 2	JAOC	16-JUN-2009 12:12		061609	1.0		CLEAN
020f2001.d	231401001	JAOC	16-JUN-2009 12:24	875581	09-2220	50.0	LANL	UPLOAD BOTH, USE HIGHER
021f2101.d	1201861052	JAOC	16-JUN-2009 12:41	876831	09-2210	1.0	QC A	UPLOAD BOTH, USE HIGHER
022f2201.d	1201861053	JAOC	16-JUN-2009 12:53	876831	09-2210	1.0	QC A	UPLOAD BOTH, USE HIGHER
023f2301.d	231313016	JAOC	16-JUN-2009 13:06	876831	09-2210	10.0	LANL	UPLOAD BOTH, USE HIGHER
024f2401.d	1201861054	JAOC	16-JUN-2009 13:22	876831	09-2210	10.0	QC A	UPLOAD BOTH, USE HIGHER
025f2501.d	1201861055	JAOC	16-JUN-2009 13:39	876831	09-2210	10.0	QC A	UPLOAD BOTH, USE HIGHER
026f2601.d	231401009	JAOC	16-JUN-2009 13:55	876831	09-2220	5.0	LANL	UPLOAD BOTH, USE HIGHER
027f2701.d	231483001	JAOC	16-JUN-2009 14:12	876831	09-2245	1.0	LANL	UPLOAD BOTH, USE HIGHER
028f2801.d	231483002	JAOC	16-JUN-2009 14:28	876831	09-2245	1.0	LANL	UPLOAD BOTH, USE HIGHER
029f2901.d	WAR090616-60 2	JAOC	16-JUN-2009 14:45		061609	1.0		PASSES AVG
030f3001.d	WAR090519-99 3	JAOC	16-JUN-2009 14:57		061609	1.0		CLEAN
031f3101.d	231488001	JAOC	16-JUN-2009 15:09	876831	09-2247	5.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	231488002	JAOC	16-JUN-2009 15:26	876831	09-2247	1.0	LANL	UPLOAD BOTH, USE HIGHER
033f3301.d	231488003	JAOC	16-JUN-2009 15:42	876831	09-2247	1.0	LANL	UPLOAD BOTH, USE HIGHER
034f3401.d	231494001	JAOC	16-JUN-2009 15:59	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
035f3501.d	231494002	JAOC	16-JUN-2009 16:15	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/061609.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	231494003	JAOC	16-JUN-2009 16:32	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
037f3701.d	231494004	JAOC	16-JUN-2009 16:48	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
038f3801.d	231494006	JAOC	16-JUN-2009 17:05	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
039f3901.d	231494007	JAOC	16-JUN-2009 17:21	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
040f4001.d	231494010	JAOC	16-JUN-2009 17:38	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
041f4101.d	WAR090616-60 3	JAOC	16-JUN-2009 17:54		061609	1.0		PASSES AVG, DCB LOW

|042f4201.d |WAR090519-99 4 |JAOC |16-JUN-2009 18:06 | |061609 | 1.0| | CLEAN

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD8

DATE: 06/19/2009 METHOD: ECD8-F-8082-060109.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT CY613
ALUMINA LOT 090409-A
COPPER LOT 090324-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: /chem/ecd8a.i/061809.b Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99 1	JAOC	18-JUN-2009 08:42		061809	1.0		CLEAN
002f0201.d	WAR090616-60 1	JAOC	18-JUN-2009 08:54		061809	1.0		PASSES BOTH COLUMNS
003f0301.d	WAR090302-54	JAOC	18-JUN-2009 09:07		061809	1.0		DUSE
004f0401.d	WAR090519-42	JAOC	18-JUN-2009 09:19		061809	1.0		PASSES BOTH COLUMNS
005f0501.d	WAR090521-48	JAOC	18-JUN-2009 09:31		061809	1.0		DUSE
006f0601.d	WAR090302-54	JAOC	18-JUN-2009 09:45		061809	1.0		DUSE
007f0701.d	WAR090521-48	JAOC	18-JUN-2009 09:58		061809	1.0		DUSE
008f0801.d	WAR090618-01 54	JAOC	18-JUN-2009 10:12		061809	1.0		1254 LEVEL 1
009f0901.d	WAR090618-02 54	JAOC	18-JUN-2009 10:25		061809	1.0		1254 LEVEL 2
010f1001.d	WAR090618-03 54	JAOC	18-JUN-2009 10:37		061809	1.0		1254 LEVEL 3
011f1101.d	WAR090618-04 54	JAOC	18-JUN-2009 10:50		061809	1.0		1254 LEVEL 4
012f1201.d	IAR090505-01 54	JAOC	18-JUN-2009 11:02		061809	1.0		1254 LEVEL 5
013f1301.d	WAR090302-54	JAOC	18-JUN-2009 11:14		061809	1.0		PASSES BOTH COLUMNS
014f1401.d	WAR090618-05 48	JAOC	18-JUN-2009 11:27		061809	1.0		1248 LEVEL 1
015f1501.d	WAR090618-06 48	JAOC	18-JUN-2009 11:39		061809	1.0		1248 LEVEL 2

Instrument Batch: /chem/ecd8a.i/061809.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	WAR090618-07 48	JAOC	18-JUN-2009 11:51		061809	1.0		1248 LEVEL 3
017f1701.d	WAR090618-08 48	JAOC	18-JUN-2009 12:04		061809	1.0		1248 LEVEL 4

018f1801.d	IAR090601-02 48	JAOC	18-JUN-2009 12:16		061809		1.0		1248 LEVEL 5
019f1901.d	WAR090521-48	JAOC	18-JUN-2009 12:32		061809		1.0		PASSES BOTH COLUMNS
020f2001.d	WAR090618-32	JAOC	18-JUN-2009 12:45		061809		1.0		PATTERN ONLY
021f2101.d	WAR090618-21	JAOC	18-JUN-2009 12:57		061809		1.0		PATTERN ONLY
022f2201.d	WAR090608-62	JAOC	18-JUN-2009 13:10		061809		1.0		PATTERN ONLY
023f2301.d	WAR090424-68	JAOC	18-JUN-2009 13:22		061809		1.0		PATTERN ONLY
024f2401.d	WAR090416-DDT	JAOC	18-JUN-2009 13:34		061809		1.0		DDT
025f2501.d	WAR090519-99 2	JAOC	18-JUN-2009 13:47		061809		1.0		CLEAN
026f2601.d	1201859275	JAOC	18-JUN-2009 13:59	876127	09-2252		1.0	QC A	UPLOAD BOTH, USE HIGHER
027f2701.d	1201859276	JAOC	18-JUN-2009 14:11	876127	09-2252		1.0	QC A	UPLOAD BOTH, USE HIGHER
028f2801.d	231494005	JAOC	18-JUN-2009 14:24	876127	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER
029f2901.d	231494008	JAOC	18-JUN-2009 14:40	876127	09-2252		1.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER
030f3001.d	231494009	JAOC	18-JUN-2009 14:57	876127	09-2252		1.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER
031f3101.d	231494011	JAOC	18-JUN-2009 15:13	876127	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	231494012	JAOC	18-JUN-2009 15:30	876127	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER
033f3301.d	231494013	JAOC	18-JUN-2009 15:46	876127	09-2252		1.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER
034f3401.d	231494014	JAOC	18-JUN-2009 16:02	876127	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER
035f3501.d	WAR090616-60 2	JAOC	18-JUN-2009 16:19		061809		1.0		PASSES BOTH COLUMNS

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	WAR090519-99 3	JAOC	18-JUN-2009 16:31		061809		1.0		CLEAN
037f3701.d	231495005	JAOC	18-JUN-2009 16:43	876127	09-2253		1.0	LANL	UPLOAD BOTH, USE HIGHER
038f3801.d	1201859277	JAOC	18-JUN-2009 17:00	876127	09-2253		5.0	QC A	UPLOAD BOTH, USE HIGHER
039f3901.d	1201859278	JAOC	18-JUN-2009 17:16	876127	09-2253		5.0	QC A	UPLOAD BOTH, USE HIGHER
040f4001.d	231495006	JAOC	18-JUN-2009 17:33	876127	09-2253		5.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER
041f4101.d	231495007	JAOC	18-JUN-2009 17:49	876127	09-2253		1.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER

042f4201.d	231495008	JAOC	18-JUN-2009 18:06	876127	09-2253		5.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER
043f4301.d	GPC BLANK	JAOC	18-JUN-2009 18:22		09-2252		1.0		CLEAN
044f4401.d	WAR090616-60 3	JAOC	18-JUN-2009 18:39		061809		1.0		PASSES BOTH COLUMNS
045f4501.d	WAR090519-99 4	JAOC	18-JUN-2009 18:51		061809		1.0		CLEAN
046f4601.d	1201862201	JAOC	18-JUN-2009 19:03	877322	09-2253		1.0	QC A	UPLOAD BOTH, USE HIGHER
047f4701.d	1201862202	JAOC	18-JUN-2009 19:20	877322	09-2253		1.0	QC A	UPLOAD BOTH, USE HIGHER
048f4801.d	231495001	JAOC	18-JUN-2009 19:36	877322	09-2253		1.0	LANL	UPLOAD BOTH, USE HIGHER
049f4901.d	231495002	JAOC	18-JUN-2009 19:53	877322	09-2253		1.0	LANL	UPLOAD BOTH, USE HIGHER
050f5001.d	231495003	JAOC	18-JUN-2009 20:09	877322	09-2253		1.0	LANL	UPLOAD BOTH, USE HIGHER
051f5101.d	231495004	JAOC	18-JUN-2009 20:26	877322	09-2253		1.0	LANL	UPLOAD BOTH, USE HIGHER
052f5201.d	231561001	JAOC	18-JUN-2009 20:42	877322	09-2265		1.0	LANL	UPLOAD BOTH, USE HIGHER
053f5301.d	231561002	JAOC	18-JUN-2009 20:59	877322	09-2265		1.0	LANL	UPLOAD BOTH, USE HIGHER
054f5401.d	231561003	JAOC	18-JUN-2009 21:15	877322	09-2265		1.0	LANL	UPLOAD BOTH, USE HIGHER
055f5501.d	231561004	JAOC	18-JUN-2009 21:32	877322	09-2265		1.0	LANL	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/061809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
056f5601.d	WAR090616-60 4	JAOC	18-JUN-2009 21:48		061809	1.0		PASSES BOTH COLUMNS
057f5701.d	WAR090519-99 5	JAOC	18-JUN-2009 22:01		061809	1.0		CLEAN
058f5801.d	231567005	JAOC	18-JUN-2009 22:13	877322	09-2269	1.0	LANL	DUSE, PARENT AND MS/MSD DO NOT MATCH
059f5901.d	1201862203	JAOC	18-JUN-2009 22:29	877322	09-2269	1.0	QC A	DUSE, PARENT AND MS/MSD DO NOT MATCH
060f6001.d	1201862204	JAOC	18-JUN-2009 22:46	877322	09-2269	1.0	QC A	DUSE, PARENT AND MS/MSD DO NOT MATCH
061f6101.d	231567006	JAOC	18-JUN-2009 23:02	877322	09-2269	1.0	LANL	UPLOAD BOTH, USE HIGHER
062f6201.d	231567007	JAOC	18-JUN-2009 23:19	877322	09-2269	1.0	LANL	UPLOAD BOTH, USE HIGHER
063f6301.d	231567008	JAOC	18-JUN-2009 23:35	877322	09-2269	1.0	LANL	UPLOAD BOTH, USE HIGHER
064f6401.d	WAR090616-60 5	JAOC	18-JUN-2009 23:52		061809	1.0		PASSES BOTH COLUMNS
065f6501.d	WAR090519-99 6	JAOC	19-JUN-2009 00:04		061809	1.0		CLEAN
066f6601.d	1201862759	JAOC	19-JUN-2009 00:17	877528	09-2292	1.0	QC A	UPLOAD BOTH, USE HIGHER

067f6701.d	1201862760	JAOC	19-JUN-2009 00:29	877528	09-2292	1.0	QC A	UPLOAD BOTH, USE HIGHER
068f6801.d	231655001	JAOC	19-JUN-2009 00:41	877528	09-2292	1.0	LANL	UPLOAD BOTH, USE HIGHER
069f6901.d	231655002	JAOC	19-JUN-2009 00:58	877528	09-2292	1.0	LANL	UPLOAD BOTH, USE HIGHER
070f7001.d	231655003	JAOC	19-JUN-2009 01:14	877528	09-2292	1.0	LANL	UPLOAD BOTH, USE HIGHER
071f7101.d	231655004	JAOC	19-JUN-2009 01:31	877528	09-2292	1.0	LANL	UPLOAD BOTH, USE HIGHER
072f7201.d	231655005	JAOC	19-JUN-2009 01:47	877528	09-2292	1.0	LANL	UPLOAD BOTH, USE HIGHER
073f7301.d	231655006	JAOC	19-JUN-2009 02:04	877528	09-2292	1.0	LANL	DUSE, RE-RUN AT 20X
074f7401.d	231655007	JAOC	19-JUN-2009 02:20	877528	09-2292	1.0	LANL	UPLOAD BOTH, USE HIGHER (NO HITS)
075f7501.d	231655008	JAOC	19-JUN-2009 02:37	877528	09-2292	1.0	LANL	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/061809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
076f7601.d	WAR090616-60 6	JAOC	19-JUN-2009 02:53		061809	1.0		PASSES BOTH COLUMNS
077f7701.d	WAR090519-99 7	JAOC	19-JUN-2009 03:06		061809	1.0		CLEAN
078f7801.d	231671002	JAOC	19-JUN-2009 03:18	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER
079f7901.d	231671003	JAOC	19-JUN-2009 03:35	877528	09-2287	5.0	LANL	UPLOAD BOTH, USE HIGHER
080f8001.d	231671004	JAOC	19-JUN-2009 03:51	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER
081f8101.d	231671005	JAOC	19-JUN-2009 04:08	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER
082f8201.d	231671006	JAOC	19-JUN-2009 04:24	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER
083f8301.d	231671007	JAOC	19-JUN-2009 04:41	877528	09-2287	5.0	LANL	UPLOAD BOTH, USE HIGHER
084f8401.d	231671008	JAOC	19-JUN-2009 04:57	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER
085f8501.d	231671009	JAOC	19-JUN-2009 05:14	877528	09-2287	1.0	LANL	DUSE, RE-RUN AT 20X
086f8601.d	231671010	JAOC	19-JUN-2009 05:30	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER (NO HITS
087f8701.d	WAR090616-60 7	JAOC	19-JUN-2009 05:47		061809	1.0		PASSES BOTH COLUMNS
088f8801.d	WAR090519-99 8	JAOC	19-JUN-2009 05:59		061809	1.0		CLEAN
089f8901.d	231739001	JAOC	19-JUN-2009 06:11	877528	09-2307	1.0	LANL	UPLOAD BOTH, USE HIGHER
090f9001.d	1201862761	JAOC	19-JUN-2009 06:28	877528	09-2307	1.0	QC A	UPLOAD BOTH, USE HIGHER

091f9101.d	1201862762	JAOC	19-JUN-2009 06:44	877528	09-2307		1.0	QC A	UPLOAD BOTH, USE HIGHER
092f9201.d	231739002	JAOC	19-JUN-2009 07:01	877528	09-2307		5.0	LANL	UPLOAD BOTH, USE HIGHER
093f9301.d	WAR090616-60 8	JAOC	19-JUN-2009 07:13		061809		1.0		PASSES BOTH COLUMNS, DCB LOW
094f9401.d	WAR090519-99 9	JAOC	19-JUN-2009 07:26		061809		1.0		CLEAN

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD8

DATE: 07/01/2009 METHOD: ECD8-F-8082-060109.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT CY264
ALUMINA LOT 1134110-A
COPPER LOT 090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: /chem/ecd8a.i/063009.b Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99 1	JAOC	30-JUN-2009 10:46		063009	1.0		CLEAN
002f0201.d	WAR090629-04601	JAOC	30-JUN-2009 10:59		063009	1.0		PASSES BOTH COLUMNS
003f0301.d	WAR090302-54	JAOC	30-JUN-2009 11:11		063009	1.0		PASSES BOTH COLUMNS
004f0401.d	WAR090519-42	JAOC	30-JUN-2009 11:24		063009	1.0		PASSES BOTH COLUMNS
005f0501.d	WAR090521-48	JAOC	30-JUN-2009 11:36		063009	1.0		PASSES BOTH COLUMNS
006f0601.d	WAR090618-32	JAOC	30-JUN-2009 11:48		063009	1.0		PATTERN ONLY
007f0701.d	WAR090618-21	JAOC	30-JUN-2009 12:03		063009	1.0		PATTERN ONLY
008f0801.d	WAR090608-62	JAOC	30-JUN-2009 12:16		063009	1.0		PATTERN ONLY
009f0901.d	WAR090424-68	JAOC	30-JUN-2009 12:28		063009	1.0		PATTERN ONLY
010f1001.d	WAR090618-DDT	JAOC	30-JUN-2009 12:40		063009	1.0		DDT
011f1101.d	WAR090519-99 2	JAOC	30-JUN-2009 12:53		063009	1.0		CLEAN
012f1201.d	1201871515	JAOC	30-JUN-2009 13:05	881260	09-2475	1.0	QC A	UPLOAD BOTH, USE HIGHER
013f1301.d	1201871516	JAOC	30-JUN-2009 13:18	881260	09-2475	1.0	QC A	UPLOAD BOTH, USE HIGHER
014f1401.d	232064001	JAOC	30-JUN-2009 13:30	881260	09-2403	1.0	LANL	UPLOAD BOTH, USE HIGHER
015f1501.d	1201871517	JAOC	30-JUN-2009 13:46	881260	09-2403	1.0	QC A	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/063009.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	1201871518	JAOC	30-JUN-2009 14:03	881260	09-2403	1.0	QC A	UPLOAD BOTH, USE HIGHER
017f1701.d	232426001	JAOC	30-JUN-2009 14:19	881260	09-2475	5.0	LANL	UPLOAD BOTH, USE HIGHER

018f1801.d	232426002	JAOC	30-JUN-2009 14:36	881260	09-2475	5.0	LANL	UPLOAD BOTH, USE HIGHER
019f1901.d	232428001	JAOC	30-JUN-2009 14:52	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
020f2001.d	232428002	JAOC	30-JUN-2009 15:09	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
021f2101.d	232428003	JAOC	30-JUN-2009 15:25	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
022f2201.d	WAR090629-04602	JAOC	30-JUN-2009 15:42		063009	1.0		PASSES BOTH COLUMNS
023f2301.d	WAR090519-99 3	JAOC	30-JUN-2009 15:54		063009	1.0		CLEAN
024f2401.d	232428004	JAOC	30-JUN-2009 16:06	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
025f2501.d	232428012	JAOC	30-JUN-2009 16:23	881260	09-2477	5.0	LANL	UPLOAD BOTH, USE HIGHER
026f2601.d	232428015	JAOC	30-JUN-2009 16:39	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
027f2701.d	232507001	JAOC	30-JUN-2009 16:56	881260	09-2499	1.0	LANL	UPLOAD BOTH, USE HIGHER
028f2801.d	232507002	JAOC	30-JUN-2009 17:12	881260	09-2499	5.0	LANL	UPLOAD BOTH, USE HIGHER
029f2901.d	232507003	JAOC	30-JUN-2009 17:29	881260	09-2499	1.0	LANL	UPLOAD BOTH, USE HIGHER
030f3001.d	232507004	JAOC	30-JUN-2009 17:45	881260	09-2499	1.0	LANL	UPLOAD BOTH, USE HIGHER
031f3101.d	232507005	JAOC	30-JUN-2009 18:02	881260	09-2499	5.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	232507006	JAOC	30-JUN-2009 18:18	881260	09-2499	5.0	LANL	UPLOAD BOTH, USE HIGHER
033f3301.d	WAR090629-04603	JAOC	30-JUN-2009 18:35		063009	1.0		PASSES BOTH COLUMNS
034f3401.d	WAR090519-99 4	JAOC	30-JUN-2009 18:47		063009	1.0		CLEAN
035f3501.d	1201870209	JAOC	30-JUN-2009 18:59	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/063009.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	1201870210	JAOC	30-JUN-2009 19:12	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
037f3701.d	232348004	JAOC	30-JUN-2009 19:24	880783	09-2457	1.0	LANL	UPLOAD BOTH, USE HIGHER
038f3801.d	1201870211	JAOC	30-JUN-2009 19:41	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
039f3901.d	1201870212	JAOC	30-JUN-2009 19:57	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
040f4001.d	232357001	JAOC	30-JUN-2009 20:14	880783	09-2455	1.0	LANL	UPLOAD BOTH, USE HIGHER
041f4101.d	232357002	JAOC	30-JUN-2009 20:30	880783	09-2455	1.0	LANL	UPLOAD BOTH, USE HIGHER

042f4201.d	232363001	JAOC	30-JUN-2009 20:47	880783	09-2451		1.0 LANL	UPLOAD BOTH, USE HIGHER
043f4301.d	232363010	JAOC	30-JUN-2009 21:03	880783	09-2451		1.0 LANL	UPLOAD BOTH, USE HIGHER
044f4401.d	232363011	JAOC	30-JUN-2009 21:20	880783	09-2451		1.0 LANL	UPLOAD BOTH, USE HIGHER
045f4501.d	WAR090629-04604	JAOC	30-JUN-2009 21:36		063009		1.0	PASSES BOTH COLUMNS
046f4601.d	WAR090519-99 5	JAOC	30-JUN-2009 21:48		063009		1.0	CLEAN
047f4701.d	1201871656	JAOC	30-JUN-2009 22:01	881324	EUI-7181		1.0 QC A	UPLOAD BOTH, USE HIGHER
048f4801.d	1201871657	JAOC	30-JUN-2009 22:13	881324	EUI-7181		1.0 QC A	UPLOAD BOTH, USE HIGHER
049f4901.d	232126001	JAOC	30-JUN-2009 22:26	881324	EUI-7181		1.0 CARE	SENT FOR RE, DCB LOW, UPLOAD BOTH, USE HIGHER
050f5001.d	232141009	JAOC	30-JUN-2009 22:42	881324	232141		1.0 WASP	UPLOAD BOTH, USE HIGHER (MS/MSD CONFIRM LOW DCB)
051f5101.d	1201871658	JAOC	30-JUN-2009 22:59	881324	232141		1.0 QC A	UPLOAD BOTH, USE HIGHER
052f5201.d	1201871659	JAOC	30-JUN-2009 23:15	881324	232141		1.0 QC A	UPLOAD BOTH, USE HIGHER
053f5301.d	WAR090629-04605	JAOC	30-JUN-2009 23:31		063009		1.0	PASSES BOTH COLUMNS
054f5401.d	WAR090519-99 6	JAOC	30-JUN-2009 23:44		063009		1.0	CLEAN

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/015b1501.d
Lab Smp Id: 1201871517 Client Smp ID: CAMO-09-10142MS
Inj Date : 30-JUN-2009 13:46
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871517|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 15 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2403.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	5.60660	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	5432932	94.1826	3.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	6142182	109.053	3.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	988853	448.307	15.8	80.00- 120.00	100.00(M)
3.575	3.575	0.000	1440601	491.528	17.3	114.84- 154.84	145.68
3.675	3.675	0.000	848362	487.822	17.2	59.54- 99.54	85.79
3.751	3.752	-0.001	510827	492.066	17.4	27.91- 67.91	51.66
3.825	3.826	-0.001	509880	476.412	16.8	28.47- 68.47	51.56
Average of Peak Concentrations =					16.9		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	1699538	589.698	20.8	80.00- 120.00	100.00(M)
5.083	5.083	0.000	2146322	620.911	21.9	102.90- 142.90	126.29
5.198	5.199	-0.001	1875547	593.803	20.9	90.92- 130.92	110.36
5.607	5.608	-0.001	1659011	700.572	24.7	63.15- 103.15	97.62
6.038	6.041	-0.003	2701932	716.631	25.3	114.09- 154.09	158.98
Average of Peak Concentrations =					22.7		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/015b1501.d
Date : 30-JUN-2009 13:46
Client ID: CAMD-09-10142MS
Sample Info: 1120187151711
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

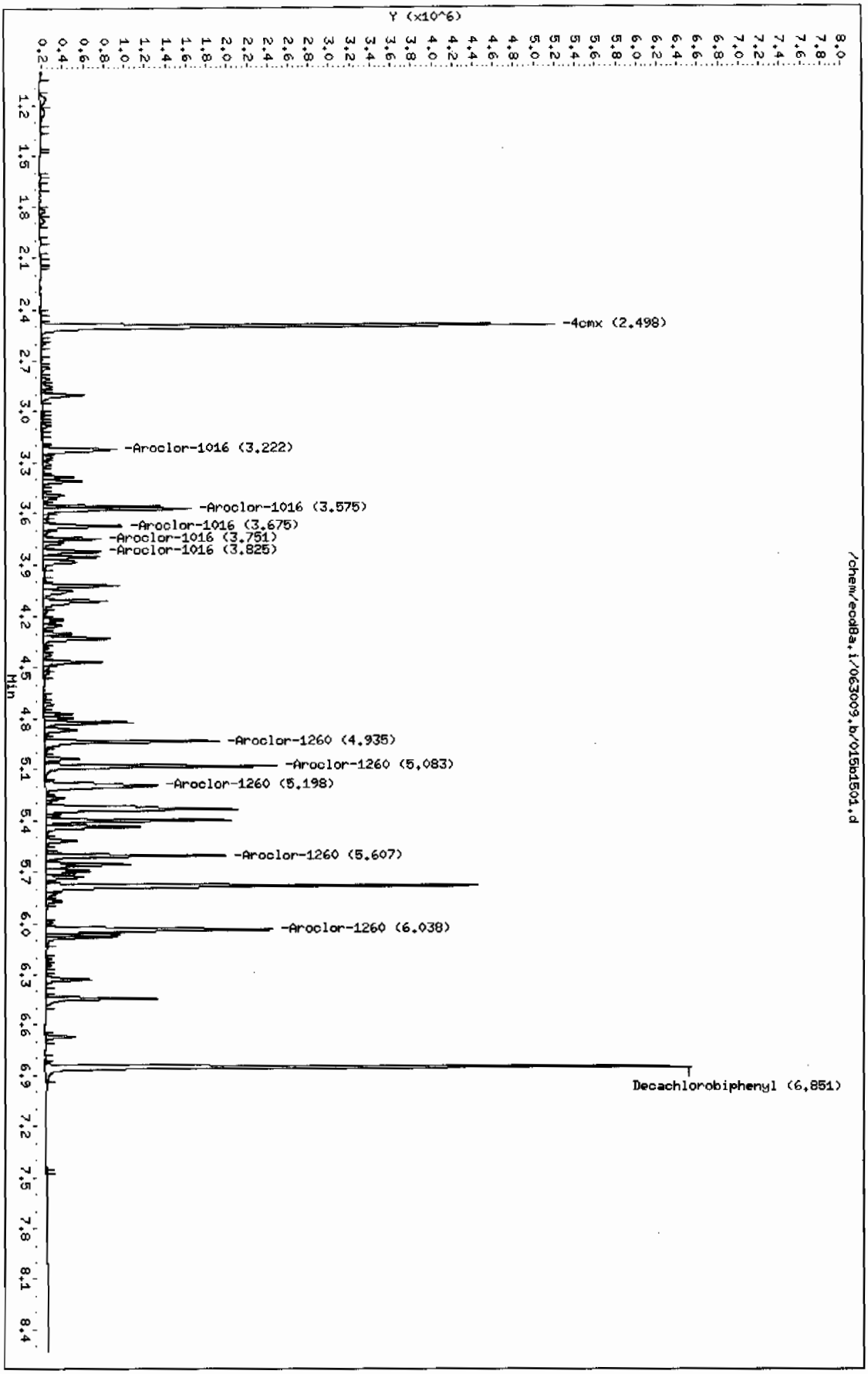

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/015f1501.d
Lab Smp Id: 1201871517 Client Smp ID: CAMO-09-10142MS
Inj Date : 30-JUN-2009 13:46
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871517|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 15 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2403.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	5.60660	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	16167504	101.019	3.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.191	6.193	-0.002	19881810	118.397	4.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.760	2.762	-0.002	2839774	492.401	17.4	80.00- 120.00	100.00
3.111	3.112	-0.001	3579332	495.428	17.5	106.24- 146.24	126.04
3.254	3.256	-0.002	1580922	543.373	19.2	32.41- 72.41	55.67
3.364	3.365	-0.001	1535604	557.840	19.7	27.63- 67.63	54.07
3.508	3.510	-0.002	2022416	557.343	19.7	43.51- 83.51	71.22
			Average of Peak Concentrations =		18.7		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.382	4.383	-0.001	4691649	658.168	23.2	80.00- 120.00	100.00
4.578	4.579	-0.001	6941552	688.065	24.3	122.54- 162.54	147.96
4.773	4.774	-0.001	7792548	678.668	23.9	138.26- 178.26	166.09
5.238	5.242	-0.004	11289471	842.785	29.7	171.16- 211.16	240.63
5.435	5.437	-0.002	5124782	782.207	27.6	74.08- 114.08	109.23
Average of Peak Concentrations =					25.7		

Data File: /chem/ecd8a.i/063009.b/015f1501.d
Date : 30-JUN-2009 13:46
Client ID: CAMO-09-10142MS
Sample Info: |120187151711|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

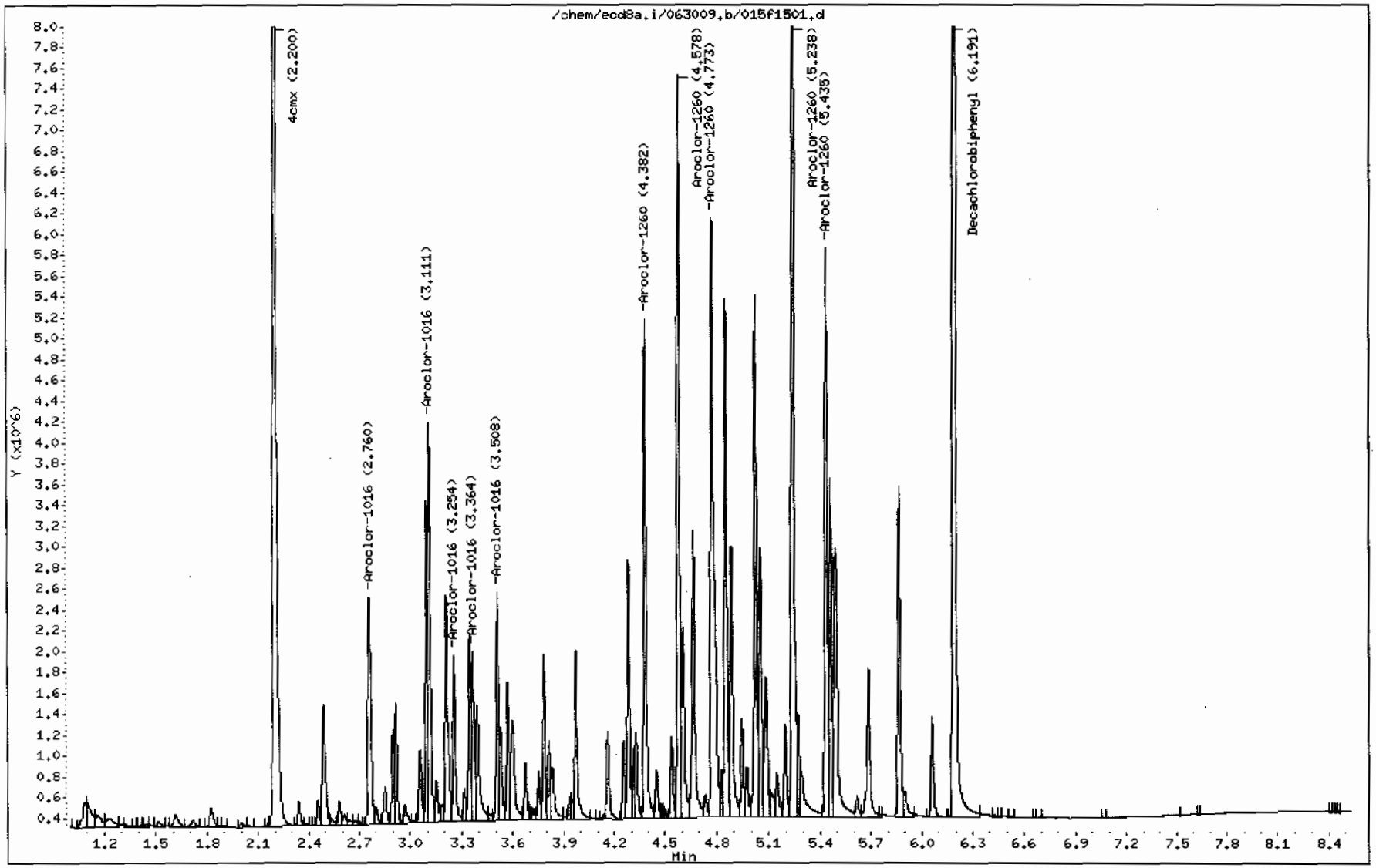

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/016b1601.d
Lab Smp Id: 1201871518 Client Smp ID: CAMO-09-10142MSD
Inj Date : 30-JUN-2009 14:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871518|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 16 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2403.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	5.60660	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5441689	94.3344	3.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	6980861	123.943	4.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	937354	424.959	15.0	80.00- 120.00	100.00
3.575	3.575	0.000	1401090	478.047	16.9	114.84- 154.84	149.47
3.674	3.675	-0.001	845408	486.124	17.1	59.54- 99.54	90.19
3.751	3.752	-0.001	508733	490.049	17.3	27.91- 67.91	54.27
3.825	3.826	-0.001	521315	487.096	17.2	28.47- 68.47	55.62
			Average of Peak Concentrations =		16.7		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.934	4.936	-0.002	1825368	633.357	22.3	80.00- 120.00	100.00
5.083	5.083	0.000	2322925	672.001	23.7	102.90- 142.90	127.26
5.198	5.199	-0.001	2038951	645.537	22.8	90.92- 130.92	111.70
5.607	5.608	-0.001	1767285	746.294	26.3	63.15- 103.15	96.82
6.039	6.041	-0.002	2859463	758.412	26.8	114.09- 154.09	156.65
			Average of Peak Concentrations =		24.4		

Data File: /chem/ecd8a.i/063009.b/016b1601.d

Date : 30-JUN-2009 14:03

Client ID: CAMO-09-10142MSD

Sample Info: |120187151811|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

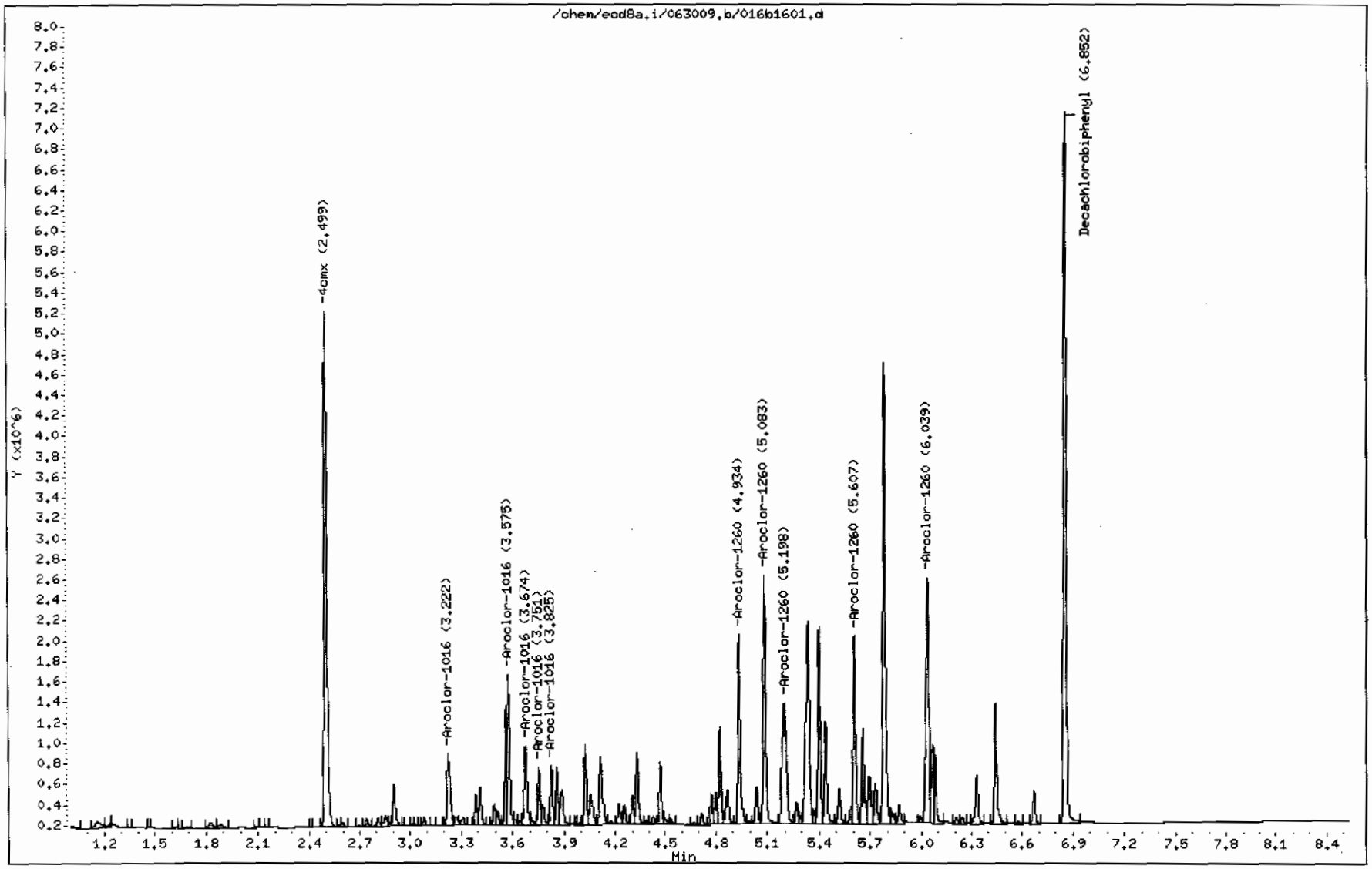

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/016f1601.d
Lab Smp Id: 1201871518 Client Smp ID: CAMO-09-10142MSD
Inj Date : 30-JUN-2009 14:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871518|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 16 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2403.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	5.60660	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	16214220	101.311	3.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	22534617	134.195	4.7	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.760	2.762	-0.002	2713575	470.519	16.6	80.00- 120.00	100.00
3.111	3.112	-0.001	3706272	512.998	18.1	106.24- 146.24	136.58
3.254	3.256	-0.002	1599576	549.784	19.4	32.41- 72.41	58.95
3.364	3.365	-0.001	1600981	581.589	20.5	27.63- 67.63	59.00
3.509	3.510	-0.001	2067805	569.851	20.1	43.51- 83.51	76.20
		Average of Peak Concentrations =			18.9		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	5053538	708.936	25.0	80.00- 120.00	100.00
4.578	4.579	-0.001	7615154	754.834	26.6	122.54- 162.54	150.69
4.772	4.774	-0.002	8429600	734.150	25.9	138.26- 178.26	166.81
5.239	5.242	-0.003	12220582	912.295	32.2	171.16- 211.16	241.82
5.434	5.437	-0.003	5504637	840.185	29.6	74.08- 114.08	108.93
		Average of Peak Concentrations =			27.9		

Data File: /chem/ecd8a.i/063009.b/016f1601.d
Date : 30-JUN-2009 14:03
Client ID: CAMO-09-10142MSD
Sample Info: |12018715181|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

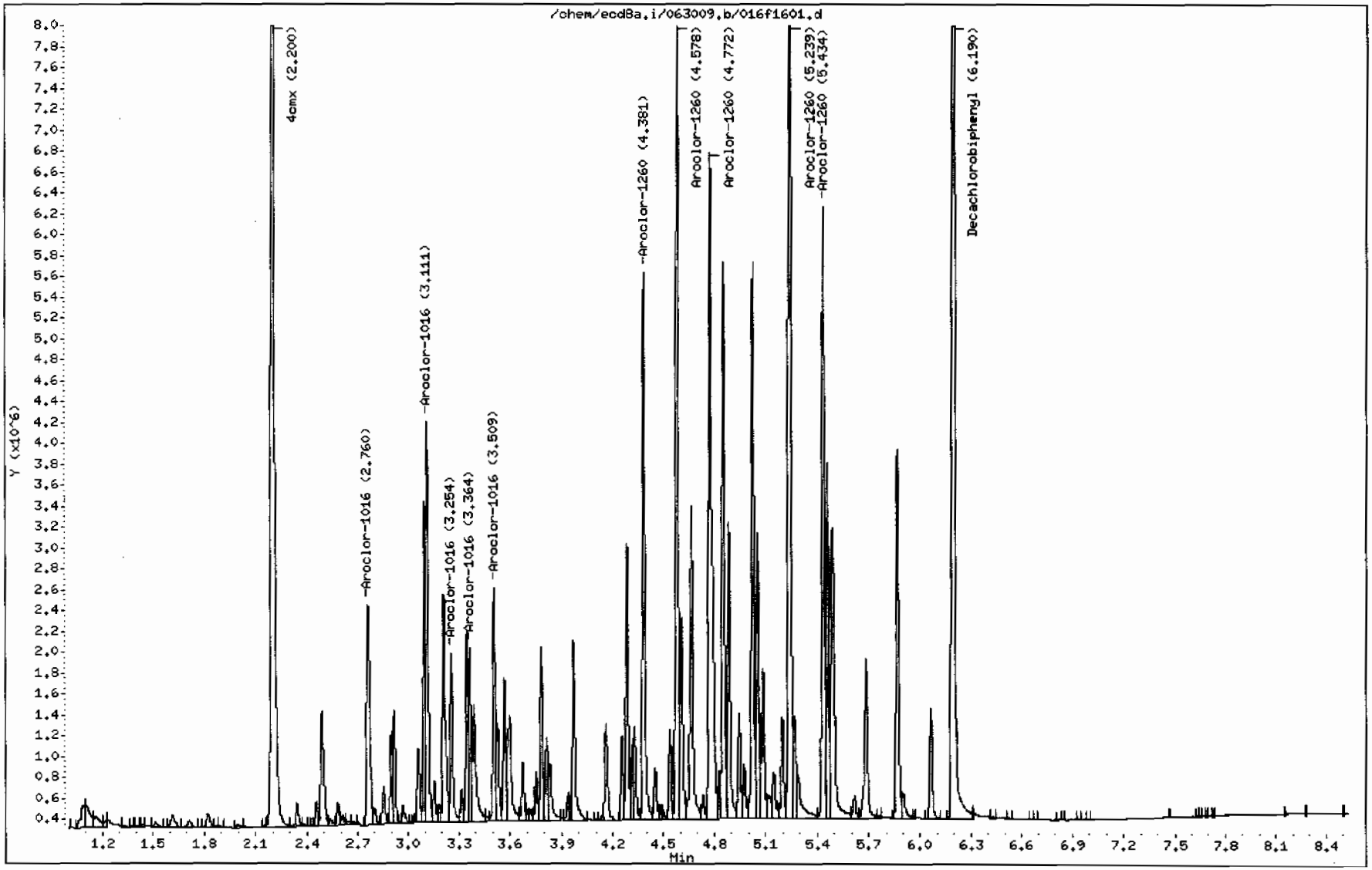

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 881259 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201871515 MB	29-JUN-2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
1201871516 LCS	29-JUN-2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
232064001 - 2	29-JUN-2009 23:24:27	30.08	H2SO4/KMn2		2	9	1	0.03324
1201871517 - 2 MS (232064001)	29-JUN-2009 23:24:27	30.03	H2SO4/KMn2		2	9	1	0.0333
1201871518 - 2 MSD (232064001)	29-JUN-2009 23:24:27	30.03	H2SO4/KMn2		2	9	1	0.0333
232426001	29-JUN-2009 23:24:27	30.04	H2SO4/KMn2		2	9	1	0.03329
232426002	29-JUN-2009 23:24:27	30.04	H2SO4/KMn2		2	9	1	0.03329
232428001	29-JUN-2009 23:24:27	30.03	H2SO4/KMn2		2	9	1	0.0333
232428002	29-JUN-2009 23:24:27	30.05	H2SO4/KMn2		2	9	1	0.03328
232428003	29-JUN-2009 23:24:27	30.08	H2SO4/KMn2		2	9	1	0.03324
232428004	29-JUN-2009 23:24:27	30.05	H2SO4/KMn2		2	9	1	0.03328
232428012	29-JUN-2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
232428015	29-JUN-2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
232507001	29-JUN-2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
232507002	29-JUN-2009 23:24:27	30.01	H2SO4/KMn2		2	9	1	0.03332
232507003	29-JUN-2009 23:24:27	30.04	H2SO4/KMn2		2	9	1	0.03329
232507004	29-JUN-2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
232507005	29-JUN-2009 23:24:27	30.01	H2SO4/KMn2		2	9	1	0.03332
232507006	29-JUN-2009 23:24:27	30.08	H2SO4/KMn2		2	9	1	0.03324

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201871516	PCB Laboratory Control	WE090610-07	1	mL
MS	1201871517	PCB Laboratory Control	WE090610-07	1	mL
MSD	1201871518	PCB Laboratory Control	WE090610-07	1	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE090619-14	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	1:1 sulfuric acid	1133264a	5	mL
REGNT	All	Hexane	1135278-B2	150	mL
REGNT	All	5% Potassium Permanganate	B1133159-F	5	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Clean up Date: 06/29/09

Clean up Initials: NBP

Verified By: AAW

Final Solvent: Hexane

Clean Up SOP: GL-OA-E-037

Thursday, June 25, 2009

REQUEST NUMBER: 09-2476

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2476
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009
TURNAROUND/REPORT DUE: 7/10/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-6006	R	6/23/2009	
		2	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		2	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		2	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		2	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2476

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	2	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2476

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2476

REQUEST NUMBER: 09-2476

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	GLASS	8290	Ice	R
CAMO-09-6007	2	GLASS	8290	Ice	R
CAMO-09-6006	1	GLASS	8290	Ice	R
CAMO-09-6006	2	GLASS	8290	Ice	R
CAMO-09-6008	1	GLASS	8290	Ice	R
CAMO-09-6008	2	GLASS	8290	Ice	R
CAMO-09-6009	1	GLASS	8290	Ice	R
CAMO-09-6009	2	GLASS	8290	Ice	R
CAMO-09-6049	1	GLASS	8290	Ice	R
CAMO-09-6049	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		6/25/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6006

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Alln
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	03-047(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604950	ok	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA **COMPOSITE TIME INTERVAL:** NA **WATER FLOWING:** YES / (NO) / NA

BOREHOLE: YES / (NO) / NA **BOREHOLE DECLINATION:** NA **BOREHOLE DIRECTION:** NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Light brown dry Loamy → sand soil, some root material & tuff fragments

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)- ~~07~~ AG 6.16.09 above drainage (5) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 17$ dpm

$\beta/\gamma \leq 929$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gowmas **REVIEWED BY (PRINT)** Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.23.09	(Printed Name)	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	1509

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6007

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		1253	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604950	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	1.0.	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	2.0	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan, indurated tuff

FTB: CAMO-09-6059

SAMPLE COMMENTS: Interface @ 1.0' bgs

LOCATION DESC: 03-049(a) 07 ~~AA~~ AG 6.17.09, above drainage (5) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 920 dpm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.23.09	(Printed Name)	6/23/09
(Signature)	1505	(Signature)	1505

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6008

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		0850	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	AG 6.23.09 ok 03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604951	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	AG 6.23.09 Req 15 Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sediment from wetland, moist → wet, brown, w/ cobbles

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) - 04 ~~05~~ AG 6.17.09, drainage (6) of Sigma, in wetland

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 343 dpm

PID Ambient / Reading = 0.0 / 5.7 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 1505	(Printed Name) [signature] (Signature)	6/23/09 1509

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6009

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		0908	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	NA 6.23.09 ok 03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604951		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	NO 6.25.09 Rasy 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/tan moist indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a) 04 ~~05~~ 6.17.09

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq$ 23 dpm

$\beta/\gamma \leq$ 520 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{3.2}$ ppm

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature) [signature]	6.23.09 1505	(Printed Name) [illegible] (Signature) [signature]	6/23/09 1505

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6034

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1020	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604981	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.23.09	N	
1	~~Reg~~ 15 - DAY	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Moist, light brown loamy sediment

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) 00, drainage (S) of Sigmas

FIELD SCREENING/MEASUREMENT RESULTS:

α ≈ 29 dpm

β/γ ≈ 656 dpm

PID Ambient Reading = 0.0 / 5.6 ppm

COLLECTED BY (PRINT) A. Goumaj

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumaj (Signature)	6.23.09 15.05	(Printed Name) (Signature)	6/23/09 1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6035

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		1032	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604981	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Aug 6.2009 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan/Pink highly indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-06, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α: 17 dpm

β/γ: 452 dpm

PID Ambient / Reading = 0.0 / 4.0 ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature)	6.23.09 15.05	(Printed Name) (Signature)	6/23/09
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6038

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Mlh
TIME COLLECTED (HH:MM)		0945	SUB-MEDIA:	UA	OK
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604983	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	Rec 6.23.09 Rec 15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: light brown, moist, loamy soil

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-09, in drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ Ø dpm

β/γ ≤ 704 dpm

PID ambient Reading = 0.0 / 4.3 ppm

COLLECTED BY (PRINT) A. Gonmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonmas	6.23.09	(Printed Name)	6/23/09
(Signature)	1509	(Signature)	1509
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6039

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		AG 6.22.09 ~~0850~~ 0954	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604983	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	AG 6.22.09 Rec 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Highly indurated tan tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-09

FIELD SCREENING/MEASUREMENT RESULTS:

α/β 4 dpm

β/γ 493 dpm

PID Ambient Reading 0.0 / 6.7 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Melissa Martyn	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	305
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6040

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		0925	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604984	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.23.09	N	
1	AG 6.23.09 15 Day Rect	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Brown moist sediment w/ some root material, light & loamy

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a) · 10, drainage (E) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 622 dpm

PID Ambient Reading = 0.0 / 8.2 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature) [signature]	6.23.09 1505	(Printed Name) (Signature) [signature]	6/23/09 1509
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6041

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		0936	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604984	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	AG 6.23.09 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Tan/gray indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-10, drainage (S) of Sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 622 dpm

PID Ambient Reading = 0.0 / 2.4 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.23.09	(Printed Name)	6/23/09
(Signature)	1505	(Signature)	1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6042

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2006	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1355	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604985	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AUG. 23, 2009	N	
1	15-Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sediment, brown → light brown eroded tuff & duff

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-11

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

β/γ ≤ 343 dpm

PID Ambient / Reading = 0.0 / 5.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Melissa Martin	6/23/09
(Signature) [signature]	1505	(Signature) [signature]	3:04
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6043

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	OBT3
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604985	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS+7196	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/gray/tan weathered tuff → indurated tuff

FTB: CAMO-09-6060

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a)-11

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 1331 dpm

PID $\frac{\text{ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.23.09	(Printed Name) Sherri Sherwood	6/23/09
(Signature) [signature]	1505	(Signature) Sherri Sherwood	3:25
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6044

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	SED
TIME COLLECTED (HH:MM)		1405	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-604986	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~	~~15-Day~~	~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	15 Day	8270C	250 ML AMBER GLASS	Ice	Y	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Eroded tuff sediment tan/brown with duff material

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-12, in drainage (5) of sigma

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 1419 dpm

PID Ambient Reading = 0.0 / 2.1 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature) [signature]	6.23.09 1505	(Printed Name) (Signature) [signature]	6/23/09 1505
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6045

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	QbT3
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-604986	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Pink/gray indurated tuff

FR: CAMO-09-6054

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 03-049(a) 12, in drainage below Sigma (S)

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 23$ dpm

$\beta/\gamma \leq 1324$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature)	6.23.09 1505	(Printed Name) (Signature)	6/23/09 1509
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6049

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	Alluv
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	ok
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	UNK	MO-604960	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.23.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1	↓	GAMMA SPEC+ISOU	500 ML POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS+7196	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: QC Sample of CAMO-09-6006

~~Light brown, Loamy~~ → Sand soil, some root material & tuff material

OK AG 6.23.09

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-07

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 929 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Luna

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 15.05	(Printed Name) [signature] (Signature)	6/23/09 1509

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6054

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1430	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	OK	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-6041986	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~7196A~~	~~250 ML POLY~~	~~Ice~~ AG 6.23.09	N	
~~2~~		~~8290~~	~~1 LITER AMBER GLASS~~	~~Ice~~ AG 3/31/09	N	
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-6045

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-12

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gouveia

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gouveia (Signature)	6.23.09 1505	(Printed Name) (Signature)	6/23/09 1505
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6059

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1253	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	03-049(a)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604950	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ot	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 - Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

AG 6.23.09

SAMPLE DESC: QC Sample of CAMO-09-6007
tan indurated tuff

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-07

FIELD SCREENING/MEASUREMENT RESULTS: NA

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Luyian

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 1505	(Printed Name) Sherri Sherwood (Signature) [signature]	6/23/09 3:30
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 719 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: 03-045(h)-00

SAMPLE ID: CAMO-09-6060

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	OTHER	
PRS ID:	03-045(h)-00	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	mo-604985	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
AG 6.23.09 1	2 Reg	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6043

SAMPLE COMMENTS: None

LOCATION DESC: 03-049(a)-11

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.23.09 1505	(Printed Name) Sherri Sherwood (Signature) [signature]	6/23/09 3:30
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6006
Sample Collection Date: 06/23/09 12:45
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-001
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	36.36	71.52	133.66	71.66	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	38.24	15.97	19.95	16.64		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	18.87	7.43	1.65	7.48		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.14	0.19	0.11	0.19		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.02	0.05	0.08	0.05	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.24	0.20	0.07	0.20		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.20	0.13	11.20	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.28	0.53	0.19	0.53		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.38	0.77	0.20	0.78		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.63	1.32	0.38	1.32		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	0.76	1.87	1.03	1.88	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.03	0.13	0.08	0.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.19

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6007	ARS Sample ID:	ARS2-09-00074-002
Sample Collection Date:	06/23/09 12:53	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 16:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	40.17	70.68	127.53	70.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	24.88	14.72	20.61	15.04		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	31.24	11.09	2.24	11.12		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.09	0.10	0.15	0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.26	0.22	0.11	0.22	SY	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.00	-0.04	0.09	-0.04	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	15.25	0.17	15.25	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.34	0.59	0.19	0.59		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	3.44	1.68	0.39	1.88		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.58	1.03	0.45	1.03		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	4.27	4.99	2.02	5.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.03	0.12	0.07	0.12	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.32

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6008	ARS Sample ID:	ARS2-09-00074-003
Sample Collection Date:	06/23/09 08:50	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-5.38	40.13	128.32	40.13	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	44.77	17.27	21.30	18.12		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	22.94	8.35	1.81	8.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	11.82	0.12	11.82	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	15.46	0.07	15.46	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.99	0.57	0.14	0.58	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.32	0.51	0.16	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.84	0.70	0.32	0.80		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.76	1.01	0.33	1.01		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.02	2.64	1.33	2.68		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.34	0.62	0.21	0.62		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 3.34

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6009
Sample Collection Date: 06/23/09 09:08
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-004
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Result	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	43.37	74.66	133.72	74.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	49.40	17.43	20.15	18.45		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.06	0.11	0.09	0.11	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	25.46	8.08	1.48	8.11		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	0.07	0.10	0.07	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.07	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.10	0.13	0.06	0.13		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.30	0.48	0.17	0.48	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.40	0.30	0.16	0.50		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.30	0.32	0.28	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	-0.06	86.23	0.19	86.23	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.27	3.20	1.19	3.42		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.04	0.09	0.04	0.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.89

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6034	ARS Sample ID:	ARS2-09-00074-005
Sample Collection Date:	06/22/09 10:20	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 16:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.11	87.03	133.66	87.47	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	39.92	16.41	19.98	17.12		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.18	0.26	0.15	0.26	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.31	-19.95	4.04	-19.95	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	15.47	0.16	15.47	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.13	0.11	0.13	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.70	0.41	0.10	0.41		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.26	0.38	0.18	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.32	0.64	0.19	0.64		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.66	0.66	0.54	0.66		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.99	0.87	0.40	0.87		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	7.19	4.21	1.68	4.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.10	0.42	0.20	0.42	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.43

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6035
Sample Collection Date: 06/23/09 10:32
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-006
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	111.18	99.15	127.53	100.08	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	32.01	16.15	20.61	16.62		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	1.12	7.61	4.21	7.61	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO 60	0.00	11.98	0.12	11.98	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	15.68	0.08	15.68	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	63.35	0.14	63.35	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.36	0.55	0.18	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.69	0.68	0.48	0.69		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.19	1.05	0.53	1.06		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.93	3.27	1.41	3.34		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.10	0.32	0.15	0.32	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.47

Quality Assurance Review

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ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00074
Client Sample ID: CAMO-09-6038
Sample Collection Date: 06/23/09 09:45
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00074-007
Date Received: 06/24/09 00:00
Report Date: 06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	53.28	77.58	128.32	77.85	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	48.71	18.22	21.30	19.16		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.65	-28.61	4.37	-28.61	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	14.10	0.14	14.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	1.24	0.52	0.09	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.47	0.42	0.17	0.42	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.42	0.58	0.17	0.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.46	0.33	0.63	0.33	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.35	1.09	0.22	1.09		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.46	3.13	1.47	3.23		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.48	0.41	0.12	0.41		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.50

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6039	ARS Sample ID:	ARS2-09-00074-008
Sample Collection Date:	06/23/09 09:54	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	76.84	87.88	133.72	88.39	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	42.51	18.91	30.15	17.69		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	1.00	9.18	5.09	9.16	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	13.72	0.14	13.72	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.23	0.21	0.10	0.21	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.81	0.33	0.09	0.33		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	14.27	0.16	14.27	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.60	0.58	0.15	0.58		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	2.37	0.99	0.37	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.23	0.37	0.29	0.37	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	4.86	4.48	1.88	4.61		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.00	-0.10	0.14	-0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.87

Quality Assurance Review

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6040	ARS Sample ID:	ARS2-09-00074-009
Sample Collection Date:	06/23/09 09:25	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	90.02	93.81	133.66	94.46	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	35.56	16.05	19.98	16.63		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.15	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-1.11	-18.37	3.52	-18.37	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.20	0.21	0.12	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.20	0.11	0.20	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.16	0.20	0.09	0.20		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.53	0.58	0.17	0.58	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.21	0.59	0.21	0.59		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.00	1.00	0.40	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.74	1.00	0.40	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.95	2.91	1.43	2.97		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.57	0.57	0.21	0.57		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 3.28

Quality Assurance Review

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LELAP Certificate # 30558 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6041	ARS Sample ID:	ARS2-09-00074-010
Sample Collection Date:	06/23/09 09:36	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	57.98	78.78	127.53	79.10	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	31.92	15.72	20.61	16.20		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	0.24	4.79	2.96	4.79	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.14	0.21	0.12	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.11	0.15	0.09	0.18	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	37.23	0.08	37.23	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	12.46	0.14	12.46	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.39	0.49	0.11	0.50		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.58	0.39	0.53	0.38		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.38	0.49	0.21	0.49		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	6.65	3.88	1.44	4.16		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.28	0.27	0.12	0.27		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.65

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6042	ARS Sample ID:	ARS2-09-00074-011
Sample Collection Date:	06/23/09 13:55	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	14.17	55.49	128.32	55.52	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	39.84	16.88	21.30	17.57		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-0.91	-13.77	2.91	-13.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.18	0.21	0.13	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.51	0.31	0.08	0.31		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.50	0.38	0.14	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.46	0.54	0.16	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	0.32	0.71	0.33	0.71	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.90	0.96	0.19	0.96		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.11	4.22	1.59	4.38		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.42	0.34	0.12	0.34		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 2.02

Quality Assurance Review

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LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6043	ARS Sample ID:	ARS2-09-00074-012
Sample Collection Date:	06/23/09 14:00	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	RPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	9.94	88.52	133.72	58.53	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	42.67	16.43	20.15	17.26		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-2.15	-39.09	4.20	-39.09	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	10.77	0.11	10.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.22	0.08	0.22	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.20	0.16	0.07	0.18		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.20	0.13	11.20	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.51	0.52	0.16	0.53		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.03	0.01	0.20	0.82		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.80	1.04	0.23	1.04		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.71	2.93	1.27	3.05		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.31	0.23	0.07	0.23		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.80

Quality Assurance Review

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LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9524

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6044	ARS Sample ID:	ARS2-09-00074-013
Sample Collection Date:	06/23/09 14:05	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	LLD	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	36.21	71.59	133.66	71.73	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	58.06	18.08	19.98	19.43		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	28.36	10.23	2.10	10.26		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	13.72	0.14	13.72	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.13	0.10	0.13	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.04	0.18	0.10	0.18	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.24	0.38	0.16	0.38	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.58	0.56	0.13	0.56		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-228	-0.10	137.77	0.07	137.77	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	1.06	0.70	0.26	0.70		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	2.86	3.03	1.45	3.08		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.16	0.26	0.12	0.26		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.59

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6045	ARS Sample ID:	ARS2-09-00074-014
Sample Collection Date:	06/23/09 14:10	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	93.40	92.88	127.83	93.58	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	46.96	17.64	20.61	18.58		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.07	0.14	0.11	0.14	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	29.56	9.50	1.76	9.54		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.02	0.08	0.13	0.08	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.25	0.22	0.08	0.22	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.03	0.13	0.09	0.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.00	11.96	0.13	11.96	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.18	0.52	0.19	0.52		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	2.21	0.85	0.31	0.86		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	2.09	1.00	0.29	1.00		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.42	3.28	1.43	3.38		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.08	0.27	0.14	0.27	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.16

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-6049	ARS Sample ID:	ARS2-09-00074-015
Sample Collection Date:	06/23/09 12:45	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	14.17	55.49	128.32	55.52	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	27.37	15.33	21.30	15.69		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.18	0.21	0.10	0.21	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	-2.13	-31.44	3.53	-31.44	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	10.13	0.10	10.13	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.13	0.14	0.07	0.14	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	0.25	0.21	0.06	0.21		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.89	0.51	0.12	0.51	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.59	0.48	0.10	0.49		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	-0.12	101.66	0.27	101.66	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	0.86	0.86	0.42	0.86		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	5.93	3.29	1.15	3.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.02	0.10	0.06	0.10	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 1.15

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # EB7558

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-6006 → 6009
6034 → 6035
6038 → 6045
6049
10463
7143
7144

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-6059
6060
6054
10468
9118
9119

Reason: QC of Samples

Print Last Name Gouveia Signature [signature] Date 6.23.09

DATA VALIDATION COVER SHEET

5123-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2476 VALIDATION DATE: 08/04/09 LAB CODE: ALTC

CONTRACT LABORATORY NAME: Vista Analytical Laboratory

VALIDATOR: Ellen McEntee ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☒ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The RT for 1,2,3,7,8,9-HxCDF in sample CAMO-09-6049 was >0.05 minute from the IS RT. The assbciated result was qualified R,DF0.
2. The 2,3,7,8-TCDF results for samples -6006, -6009, and -6049 were detects. However, the results were not confirmed on a second column nor was TCDF GC resolution data provided. Thus, the associated sample results were qualified U,DF8c. No explanation was provided by the laboratory as to why these sample results were not confirmed and others were.
3. The samples from this RN were not analyzed within 30 days of the ICAL. Based on professional judgment, no sample results were qualified.
4. The ICV %D was >20% with positive bias for 1,2,3,4,7,8-HxCDD. The associated results for samples -6008 and -6009 were detects and, thus, were qualified J,DF7c. All other associated results were NDs and, thus, were not

DATA VALIDATION COVER SHEET

5123-1

Records Use only

Data Validation Cover Sheet

qualified. It should be noted that ICV standards are not available for 13C-OCDF and 13C-1,2,3,4-TCDF, which are used in the quantitation of OCDF, 13C-2,3,7,8-TCDF; 13C-1,2,3,7,8-PeCDF and 13C-2,3,4,7,8-PeCDF. Thus, ICV %Ds could not be evaluated for these compounds. No sample data were qualified as a result.

5. It should be noted that the 1,2,3,4,6,7,8-HpCDD result for sample -6008 was reported as an over-range detect ("E" flagged by the laboratory) and that no diluted re-analysis was performed. No sample results were qualified.
6. It should be noted that laboratory ion abundance limits were used for evaluation of the PeCDD compounds since the laboratory uses an alternate ion for these masses due to interferences.
7. MS/MSD analyses were not performed with the samples from this RN. No sample results were qualified.

Reviewed by: Mary Donivan Level: I Date: 08/04/09

VALIDATOR'S SIGNATURE: Ellen McCutter DATE: 08/04/09

Form 5123-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☒	☐	☐	1. The IS retention time and qualitative criteria for target compound identification were not met.	R, DF0	R, DF0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF0b	R, DF0b
☐	☒	☐	3. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF1d	R, DF1d
☐	☒	☐	4. The sample result is ≤5 times the concentration of the related analyte in the method blank.	N/A	U, DF4
☐	☒	☐	5. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, DF4a
☐	☐	☒	6. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	N/A	U, DF4d
☐	☒	☐	7. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF4e	R, DF4e
☐	☒	☐	8. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, DF7	J, DF7
☐	☒	☐	9. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria.	UJ, R, DF7a	J, DF7a
☐	☒	☐	10. The affected analytes were analyzed with an out of range ion abundance in the initial calibration and/or CCV.	R, DF7b	R, DF7b
☒	☐	☐	11. The ICV and/or CCV were recovered outside the method specific limits.	UJ, R, DF7c	J, R, DF7c
☐	☒	☐	12. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DF7d	J, DF7d

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DF7f	R, DF7f
☐	☒	☐	14. The affected analyte is considered rejected because the ion abundances did not meet specifications.	N/A	R, DF8
☐	☒	☐	15. The ion abundance documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF8a	R, DF8a
☐	☒	☐	16. If GC column performance was not evaluated at the required frequency or if method criteria were not met, qualify all associated detects as J and all associated non-detects as UJ.	UJ, DF8b	J, DF8b
☒	☐	☐	17. If 2, 3, 7, 8-TCDF was detected in a sample and the result was not confirmed on a second column with successful analysis of the GC column performance mix, qualify all associated detects as U.	N/A	U, DF8c
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, DF9	J-, DF9
☐	☒	☐	19. The holding time was >2 times the applicable holding time requirement.	R, DF9a	J-, DF9a
☐	☒	☐	20. The LCS percent recovery was <10%.	R, DF12	J-, DF12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, DF12a	J-, DF12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DF12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12c	R, DF12c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	24. The MS/MSD percent recovery was <10%.	R, DF12d	R, DF12d
☐	☐	☒	25. The MS/MSD percent recovery was >10% but <70%.	UJ, DF12e	J, DF12e
☐	☐	☒	26. The MS/MSD percent recovery was >70%	N/A	J+, DF12f
☐	☐	☒	27. The MS/MSD relative percent difference was >30%.	UJ, DF12g	J, DF12g
☐	☒	☐	28. The fortification sample percent recovery was <10%.	R, DF12h	J-, DF12h
☐	☒	☐	29. The fortification sample percent recovery was <40% but >10%	UJ, DF12i	J-, DF12i
☐	☒	☐	30. The fortification sample percent recovery was >135%.	N/A	J+, DF12j
☐	☒	☐	31. The fortification sample documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12k	R, DF12k
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference.	R, DF15	UJ, DF15
☐	☒	☐	33. Sample clean-up was not performed. If run log notations, spectral data and/or internal standard or labeled compound recoveries indicate interferences and extract cleanup was not performed, qualify all associated detects as J and all non-detects as UJ.	RJ, DF15a	J, DF15a
☐	☒	☐	34. The instrument performance sample did not pass method acceptance criteria.	R, DF16	R, DF16
☐	☒	☐	35. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, DF16c	R, DF16c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, DF19	J, R, DR19
☐	☒	☐	37. Duplicate, dilution, or reanalysis.	UJ, DF88	J, DF88

Sample ID: CAMO-09-6006 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31837-001	Date Received:	26-Jun-09
Project:	09-2476	Sample Size:	11.3 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	88.7	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1245						

Analyte	Conc. (pg/g)		DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.0631		
1,2,3,7,8-PeCDD	ND		0.0846		
1,2,3,4,7,8-HxCDD	ND		0.231		
1,2,3,6,7,8-HxCDD	0.402				J
1,2,3,7,8,9-HxCDD	0.445				J
1,2,3,4,6,7,8-HpCDD	9.15				
OCDD	80.2				
2,3,7,8-TCDF	0.435	U,DF8c			J
1,2,3,7,8-PeCDF	ND			0.0741	
2,3,4,7,8-PeCDF	0.220				J
1,2,3,4,7,8-HxCDF	0.139				J
1,2,3,6,7,8-HxCDF	0.147				J
2,3,4,6,7,8-HxCDF	0.148				J
1,2,3,7,8,9-HxCDF	ND		0.125		
1,2,3,4,6,7,8-HpCDF	1.22				J
1,2,3,4,7,8,9-HpCDF	ND		0.198		
OCDF	1.98				J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	94.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	93.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	81.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	105	40 - 135	
	13C-OCDD	115	40 - 135	
	13C-2,3,7,8-TCDF	97.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	101	40 - 135	
	13C-2,3,4,7,8-PeCDF	97.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	94.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.2	40 - 135	
	13C-OCDF	101	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.7	40 - 135	

Totals			
Total TCDD	ND		0.192
Total PeCDD	ND	0.0846	
Total HxCDD	3.29		
Total HpCDD	18.2		
Total TCDF	1.41		1.55
Total PeCDF	1.05		
Total HxCDF	1.90		
Total HpCDF	2.74		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.467

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 02-Jul-2009 14:36

EJM
08/04/09

Sample ID: CAMO-09-6007 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31837-002	Date Received:	26-Jun-09
Project:	09-2476	Sample Size:	10.4 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	96.4	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1253						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0461		
1,2,3,7,8-PeCDD	ND	0.0593		
1,2,3,4,7,8-HxCDD	ND	0.169		
1,2,3,6,7,8-HxCDD	ND	0.173		
1,2,3,7,8,9-HxCDD	ND	0.165		
1,2,3,4,6,7,8-HpCDD	0.496			J
OCDD	4.55			J
2,3,7,8-TCDF	ND	0.0374		
1,2,3,7,8-PeCDF	ND	0.0403		
2,3,4,7,8-PeCDF	ND	0.0419		
1,2,3,4,7,8-HxCDF	ND	0.0525		
1,2,3,6,7,8-HxCDF	ND	0.0568		
2,3,4,6,7,8-HxCDF	ND	0.0686		
1,2,3,7,8,9-HxCDF	ND	0.0864		
1,2,3,4,6,7,8-HpCDF	ND	0.106		
1,2,3,4,7,8,9-HpCDF	ND	0.115		
OCDF	ND	0.0948		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	92.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	107	40 - 135	
	13C-OCDD	122	40 - 135	
	13C-2,3,7,8-TCDF	97.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.7	40 - 135	
	13C-2,3,4,7,8-PeCDF	93.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	79.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	81.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	97.2	40 - 135	
	13C-OCDF	103	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.0	40 - 135	

Totals		
Total TCDD	ND	0.0461
Total PeCDD	ND	0.0593
Total HxCDD	ND	0.169
Total HpCDD	0.991	
Total TCDF	ND	0.0374
Total PeCDF	ND	0.0411
Total HxCDF	ND	0.0661
Total HpCDF	ND	0.110

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.00951

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 02-Jul-2009 14:36

EJM
08/04/09

Sample ID: **CAMO-09-6008** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31837-003	Date Received:	26-Jun-09
Project:	09-2476	Sample Size:	13.1 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	75.7	Date Analyzed DB-5:	30-Jun-09	Dates Analyzed DB-225:	30-Jun-09
Time Collected:	0850						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	1.14			
1,2,3,7,8-PeCDD	7.80			
1,2,3,4,7,8-HxCDD	14.0	J;DF7c		
1,2,3,6,7,8-HxCDD	78.9			
1,2,3,7,8,9-HxCDD	31.4			
1,2,3,4,6,7,8-HpCDD	2340			E
OCDD	29400			D
2,3,7,8-TCDF	0.904			
1,2,3,7,8-PeCDF	0.897			J
2,3,4,7,8-PeCDF	2.99			
1,2,3,4,7,8-HxCDF	10.5			
1,2,3,6,7,8-HxCDF	7.27			
2,3,4,6,7,8-HxCDF	15.6			
1,2,3,7,8,9-HxCDF	3.13			
1,2,3,4,6,7,8-HpCDF	310			
1,2,3,4,7,8,9-HpCDF	28.4			
OCDF	1130			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	116	40 - 135	
	13C-OCDD	124	40 - 135	D
	13C-2,3,7,8-TCDF	98.6	40 - 135	
	13C-1,2,3,7,8-PeCDF	100	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	80.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	96.2	40 - 135	
	13C-OCDF	111	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.3	40 - 135	

Totals		
Total TCDD	14.0	14.7
Total PeCDD	52.5	
Total HxCDD	484	
Total HpCDD	4760	
Total TCDF	20.2	
Total PeCDF	23.1	72.0
Total HxCDF	395	
Total HpCDF	1280	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **80.1**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 03-Jul-2009 07:41

EJM
08/04/09

Sample ID: CAMO-09-6009 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31837-004	Date Received:	26-Jun-09
Project:	09-2476	Sample Size:	12.2 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	81.9	Date Analyzed DB-5:	30-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	0908						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	0.468			J
1,2,3,7,8-PeCDD	2.97			
1,2,3,4,7,8-HxCDD	5.72	J,DF7c		
1,2,3,6,7,8-HxCDD	31.9			
1,2,3,7,8,9-HxCDD	12.6			
1,2,3,4,6,7,8-HpCDD	935			
OCDD	11200			D
2,3,7,8-TCDF	0.343	U,DF8c		J
1,2,3,7,8-PeCDF	0.337			J
2,3,4,7,8-PeCDF	1.23			J
1,2,3,4,7,8-HxCDF	4.30			
1,2,3,6,7,8-HxCDF	2.86			
2,3,4,6,7,8-HxCDF	6.41			
1,2,3,7,8,9-HxCDF	1.24			J
1,2,3,4,6,7,8-HpCDF	120			
1,2,3,4,7,8,9-HpCDF	11.3			
OCDF	437			

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	89.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	82.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	113	40 - 135	
	13C-OCDD	117	40 - 135	D
	13C-2,3,7,8-TCDF	96.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	107	40 - 135	
	13C-2,3,4,7,8-PeCDF	91.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	100	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	90.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	100	40 - 135	
	13C-OCDF	112	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.8	40 - 135	

Totals		
Total TCDD	4.79	5.03
Total PeCDD	17.7	20.1
Total HxCDD	192	
Total HpCDD	1880	
Total TCDF	7.09	7.78
Total PeCDF	28.9	29.0
Total HxCDF	147	
Total HpCDF	483	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **31.4**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 02-Jul-2009 14:36

EJM
08/04/09

Sample ID: CAMO-09-6049 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31837-005	Date Received:	26-Jun-09
Project:	09-2476	Sample Size:	11.2 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	89.5	Date Analyzed DB-5:	30-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1245						

Analyte	Conc. (pg/g)		DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.0547		
1,2,3,7,8-PeCDD	ND		0.0711		
1,2,3,4,7,8-HxCDD	ND		0.185		
1,2,3,6,7,8-HxCDD	0.431				J
1,2,3,7,8,9-HxCDD	0.424				J
1,2,3,4,6,7,8-HpCDD	7.54				
OCDD	52.2				
2,3,7,8-TCDF	0.490	U,DF8c			J
1,2,3,7,8-PeCDF	0.121				J
2,3,4,7,8-PeCDF	0.266				J
1,2,3,4,7,8-HxCDF	0.224				J
1,2,3,6,7,8-HxCDF	0.149				J
2,3,4,6,7,8-HxCDF	0.157				J
1,2,3,7,8,9-HxCDF	0.0861	R,DF0			J
1,2,3,4,6,7,8-HpCDF	1.15				J
1,2,3,4,7,8,9-HpCDF	ND		0.183		
OCDF	2.35				J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	84.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
	13C-OCDD	112	40 - 135	
	13C-2,3,7,8-TCDF	92.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	88.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	88.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	86.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.3	40 - 135	
	13C-OCDF	101	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	86.5	40 - 135	

Totals		
Total TCDD	ND	0.0547
Total PeCDD	0.279	0.600
Total HxCDD	3.54	
Total HpCDD	15.3	
Total TCDF	1.50	
Total PeCDF	1.83	
Total HxCDF	2.23	
Total HpCDF	2.79	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.477

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 02-Jul-2009 14:36

EJM
08/04/09

Thursday, June 25, 2009

REQUEST NUMBER: 09-2476

31837

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on: 2-3°C
LANL Request Number:09-2476
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009
TURNAROUND/REPORT DUE: 7/10/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-6006	R	6/23/2009	
		2	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		2	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		2	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		2	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

31837

Thursday, June 25, 2009

REQUEST NUMBER: 09-2476

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	2	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2476

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2476

REQUEST NUMBER: 09-2476

31837

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	GLASS	8290	Ice	R
CAMO-09-6007	2	GLASS	8290	Ice	R
CAMO-09-6006	1	GLASS	8290	Ice	R
CAMO-09-6006	2	GLASS	8290	Ice	R
CAMO-09-6008	1	GLASS	8290	Ice	R
CAMO-09-6008	2	GLASS	8290	Ice	R
CAMO-09-6009	1	GLASS	8290	Ice	R
CAMO-09-6009	2	GLASS	8290	Ice	R
CAMO-09-6049	1	GLASS	8290	Ice	R
CAMO-09-6049	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/25/09	1400	B. Benedict	B. Benedict	6/26/09	0951
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Vista
Analytical Laboratory

July 03, 2009

Vista Project I.D.: 31837

Mr. Keith Greene
Los Alamos National Laboratory
ER Sample Management Office
TA-3, Building 271, DP O1-U
Los Alamos, NM 87545

Dear Mr. Greene,

Enclosed are the results for the five soil samples received at Vista Analytical Laboratory on June 26, 2009 under your Project Name "09-2476". These samples were extracted and analyzed using EPA Method 8290 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier

Martha M. Maier
Laboratory Director

ACCREDITED IN ACCORDANCE WITH nelac

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Vista

Section I: Sample Inventory Report

Date Received: **6/26/2009**

Vista Lab. ID	Client Sample ID
31837-001	CAMO-09-6006
31837-002	CAMO-09-6007
31837-003	CAMO-09-6008
31837-004	CAMO-09-6009
31837-005	CAMO-09-6049

SECTION II

Vista

Method Blank | **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2207	Lab Sample:	0-MB001
Sample Size:	10.0 g	Date Extracted:	27-Jun-09	Date Analyzed DB-5:	29-Jun-09
				Date Analyzed DB-225:	NA

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0620		
1,2,3,7,8-PeCDD	ND	0.0656		
1,2,3,4,7,8-HxCDD	ND	0.104		
1,2,3,6,7,8-HxCDD	ND	0.107		
1,2,3,7,8,9-HxCDD	ND	0.102		
1,2,3,4,6,7,8-HpCDD	ND	0.110		
OCDD	ND		0.581	
2,3,7,8-TCDF	ND	0.0489		
1,2,3,7,8-PeCDF	ND	0.0551		
2,3,4,7,8-PeCDF	ND	0.0576		
1,2,3,4,7,8-HxCDF	ND	0.0437		
1,2,3,6,7,8-HxCDF	ND	0.0480		
2,3,4,6,7,8-HxCDF	ND	0.0560		
1,2,3,7,8,9-HxCDF	ND	0.0699		
1,2,3,4,6,7,8-HpCDF	ND	0.0793		
1,2,3,4,7,8,9-HpCDF	ND	0.0857		
OCDF	ND	0.114		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	97.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	99.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	94.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	94.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	97.7	40 - 135	
	13C-OCDF	97.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.3	40 - 135	

Totals		
Total TCDD	ND	0.0620
Total PeCDD	ND	0.0656
Total HxCDD	ND	0.104
Total HpCDD	ND	0.110
Total TCDF	ND	0.0489
Total PeCDF	ND	0.0564
Total HxCDF	ND	0.0544
Total HpCDF	ND	0.0825

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 02-Jul-2009 14:36

Vista

OPR Results **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2207	Lab Sample:	0-OPR001
Sample Size:	10.0 g	Date Extracted:	27-Jun-09	Date Analyzed DB-5: 29-Jun-09	Date Analyzed DB-225: NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits
2,3,7,8-TCDD	10.0	9.72	7 - 13
1,2,3,7,8-PeCDD	50.0	47.6	35 - 65
1,2,3,4,7,8-HxCDD	50.0	47.1	35 - 65
1,2,3,6,7,8-HxCDD	50.0	47.5	35 - 65
1,2,3,7,8,9-HxCDD	50.0	50.3	35 - 65
1,2,3,4,6,7,8-HpCDD	50.0	45.9	35 - 65
OCDD	100	91.7	70 - 130
2,3,7,8-TCDF	10.0	8.93	7 - 13
1,2,3,7,8-PeCDF	50.0	44.8	35 - 65
2,3,4,7,8-PeCDF	50.0	42.9	35 - 65
1,2,3,4,7,8-HxCDF	50.0	45.9	35 - 65
1,2,3,6,7,8-HxCDF	50.0	45.1	35 - 65
2,3,4,6,7,8-HxCDF	50.0	46.1	35 - 65
1,2,3,7,8,9-HxCDF	50.0	46.2	35 - 65
1,2,3,4,6,7,8-HpCDF	50.0	46.6	35 - 65
1,2,3,4,7,8,9-HpCDF	50.0	48.2	35 - 65
OCDF	100	91.2	70 - 130

	Labeled Standard	%R	LCL-UCL	Qualifier
IS	13C-2,3,7,8-TCDD	94.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	89.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	98.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	106	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	85.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.2	40 - 135	
	13C-OCDF	99.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	90.4	40 - 135	

Analyst: JMH

Approved By: William J. Luksemburg 02-Jul-2009 14:36

Vista

Sample ID: CAMO-09-6006 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31837-001	Date Received:	26-Jun-09
Project:	09-2476	Sample Size:	11.3 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	88.7	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1245						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0631		
1,2,3,7,8-PeCDD	ND	0.0846		
1,2,3,4,7,8-HxCDD	ND	0.231		
1,2,3,6,7,8-HxCDD	0.402			J
1,2,3,7,8,9-HxCDD	0.445			J
1,2,3,4,6,7,8-HpCDD	9.15			
OCDD	80.2			
2,3,7,8-TCDF	0.435			J
1,2,3,7,8-PeCDF	ND		0.0741	
2,3,4,7,8-PeCDF	0.220			J
1,2,3,4,7,8-HxCDF	0.139			J
1,2,3,6,7,8-HxCDF	0.147			J
2,3,4,6,7,8-HxCDF	0.148			J
1,2,3,7,8,9-HxCDF	ND	0.125		
1,2,3,4,6,7,8-HpCDF	1.22			J
1,2,3,4,7,8,9-HpCDF	ND	0.198		
OCDF	1.98			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	94.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	93.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	81.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	105	40 - 135	
	13C-OCDD	115	40 - 135	
	13C-2,3,7,8-TCDF	97.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	101	40 - 135	
	13C-2,3,4,7,8-PeCDF	97.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	94.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.2	40 - 135	
	13C-OCDF	101	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.7	40 - 135	

Totals			
Total TCDD	ND		0.192
Total PeCDD	ND	0.0846	
Total HxCDD	3.29		
Total HpCDD	18.2		
Total TCDF	1.41		1.55
Total PeCDF	1.05		
Total HxCDF	1.90		
Total HpCDF	2.74		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.467

a. Sample specific estimated detection limit

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 02-Jul-2009 14:36

Vista

Sample ID: CAMO-09-6007 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31837-002	Date Received:	26-Jun-09
Project:	09-2476	Sample Size:	10.4 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	96.4	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1253						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0461		
1,2,3,7,8-PeCDD	ND	0.0593		
1,2,3,4,7,8-HxCDD	ND	0.169		
1,2,3,6,7,8-HxCDD	ND	0.173		
1,2,3,7,8,9-HxCDD	ND	0.165		
1,2,3,4,6,7,8-HpCDD	0.496			J
OCDD	4.55			J
2,3,7,8-TCDF	ND	0.0374		
1,2,3,7,8-PeCDF	ND	0.0403		
2,3,4,7,8-PeCDF	ND	0.0419		
1,2,3,4,7,8-HxCDF	ND	0.0525		
1,2,3,6,7,8-HxCDF	ND	0.0568		
2,3,4,6,7,8-HxCDF	ND	0.0686		
1,2,3,7,8,9-HxCDF	ND	0.0864		
1,2,3,4,6,7,8-HpCDF	ND	0.106		
1,2,3,4,7,8,9-HpCDF	ND	0.115		
OCDF	ND	0.0948		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	92.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	107	40 - 135	
	13C-OCDD	122	40 - 135	
	13C-2,3,7,8-TCDF	97.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.7	40 - 135	
	13C-2,3,4,7,8-PeCDF	93.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	79.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	81.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	97.2	40 - 135	
	13C-OCDF	103	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.0	40 - 135	

Totals		
Total TCDD	ND	0.0461
Total PeCDD	ND	0.0593
Total HxCDD	ND	0.169
Total HpCDD	0.991	
Total TCDF	ND	0.0374
Total PeCDF	ND	0.0411
Total HxCDF	ND	0.0661
Total HpCDF	ND	0.110

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.00951

a. Sample specific estimated detection limit

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 02-Jul-2009 14:36

Vista

Sample ID: CAMO-09-6008 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31837-003	Date Received:	26-Jun-09
Project:	09-2476	Sample Size:	13.1 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	75.7	Date Analyzed DB-5:	30-Jun-09	Dates Analyzed DB-225:	30-Jun-09
Time Collected:	0850						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	1.14			
1,2,3,7,8-PeCDD	7.80			
1,2,3,4,7,8-HxCDD	14.0			
1,2,3,6,7,8-HxCDD	78.9			
1,2,3,7,8,9-HxCDD	31.4			
1,2,3,4,6,7,8-HpCDD	2340			E
OCDD	29400			D
2,3,7,8-TCDF	0.904			
1,2,3,7,8-PeCDF	0.897			J
2,3,4,7,8-PeCDF	2.99			
1,2,3,4,7,8-HxCDF	10.5			
1,2,3,6,7,8-HxCDF	7.27			
2,3,4,6,7,8-HxCDF	15.6			
1,2,3,7,8,9-HxCDF	3.13			
1,2,3,4,6,7,8-HpCDF	310			
1,2,3,4,7,8,9-HpCDF	28.4			
OCDF	1130			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	116	40 - 135	
	13C-OCDD	124	40 - 135	D
	13C-2,3,7,8-TCDF	98.6	40 - 135	
	13C-1,2,3,7,8-PeCDF	100	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	80.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	96.2	40 - 135	
	13C-OCDF	111	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.3	40 - 135	

Totals		
Total TCDD	14.0	14.7
Total PeCDD	52.5	
Total HxCDD	484	
Total HpCDD	4760	
Total TCDF	20.2	
Total PeCDF	23.1	72.0
Total HxCDF	395	
Total HpCDF	1280	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 80.1

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 03-Jul-2009 07:41

Vista

Sample ID: CAMO-09-6009 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31837-004	Date Received:	26-Jun-09
Project:	09-2476	Sample Size:	12.2 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	81.9	Date Analyzed DB-5:	30-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	0908						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.468			J
1,2,3,7,8-PeCDD	2.97			
1,2,3,4,7,8-HxCDD	5.72			
1,2,3,6,7,8-HxCDD	31.9			
1,2,3,7,8,9-HxCDD	12.6			
1,2,3,4,6,7,8-HpCDD	935			
OCDD	11200			D
2,3,7,8-TCDF	0.343			J
1,2,3,7,8-PeCDF	0.337			J
2,3,4,7,8-PeCDF	1.23			J
1,2,3,4,7,8-HxCDF	4.30			
1,2,3,6,7,8-HxCDF	2.86			
2,3,4,6,7,8-HxCDF	6.41			
1,2,3,7,8,9-HxCDF	1.24			J
1,2,3,4,6,7,8-HpCDF	120			
1,2,3,4,7,8,9-HpCDF	11.3			
OCDF	437			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	89.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	82.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	113	40 - 135	
	13C-OCDD	117	40 - 135	D
	13C-2,3,7,8-TCDF	96.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	107	40 - 135	
	13C-2,3,4,7,8-PeCDF	91.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	100	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	90.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	100	40 - 135	
	13C-OCDF	112	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.8	40 - 135	

Totals		
Total TCDD	4.79	5.03
Total PeCDD	17.7	20.1
Total HxCDD	192	
Total HpCDD	1880	
Total TCDF	7.09	7.78
Total PeCDF	28.9	29.0
Total HxCDF	147	
Total HpCDF	483	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 31.4

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 02-Jul-2009 14:36

Vista

Sample ID: CAMO-09-6049 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31837-005	Date Received:	26-Jun-09
Project:	09-2476	Sample Size:	11.2 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	89.5	Date Analyzed DB-5:	30-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1245						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0547		
1,2,3,7,8-PeCDD	ND	0.0711		
1,2,3,4,7,8-HxCDD	ND	0.185		
1,2,3,6,7,8-HxCDD	0.431			J
1,2,3,7,8,9-HxCDD	0.424			J
1,2,3,4,6,7,8-HpCDD	7.54			
OCDD	52.2			
2,3,7,8-TCDF	0.490			J
1,2,3,7,8-PeCDF	0.121			J
2,3,4,7,8-PeCDF	0.266			J
1,2,3,4,7,8-HxCDF	0.224			J
1,2,3,6,7,8-HxCDF	0.149			J
2,3,4,6,7,8-HxCDF	0.157			J
1,2,3,7,8,9-HxCDF	0.0861			J
1,2,3,4,6,7,8-HpCDF	1.15			J
1,2,3,4,7,8,9-HpCDF	ND	0.183		
OCDF	2.35			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	84.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
	13C-OCDD	112	40 - 135	
	13C-2,3,7,8-TCDF	92.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	88.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	88.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	86.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.3	40 - 135	
	13C-OCDF	101	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	86.5	40 - 135	

Totals			
Total TCDD	ND	0.0547	
Total PeCDD	0.279		0.600
Total HxCDD	3.54		
Total HpCDD	15.3		
Total TCDF	1.50		
Total PeCDF	1.83		
Total HxCDF	2.23		
Total HpCDF	2.79		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.477

a. Sample specific estimated detection limit

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 02-Jul-2009 14:36

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

Thursday, June 25, 2009

REQUEST NUMBER: 09-2476

31837

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on: 2.3°C
LANL Request Number:09-2476
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009
TURNAROUND/REPORT DUE: 7/10/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-6006	R	6/23/2009	
		2	CAMO-09-6006	R	6/23/2009	
		1	CAMO-09-6007	R	6/23/2009	
		2	CAMO-09-6007	R	6/23/2009	
		1	CAMO-09-6008	R	6/23/2009	
		2	CAMO-09-6008	R	6/23/2009	
		1	CAMO-09-6009	R	6/23/2009	
		2	CAMO-09-6009	R	6/23/2009	
		1	CAMO-09-6049	R	6/23/2009	

31837

Thursday, June 25, 2009

REQUEST NUMBER: 09-2476

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	2	CAMO-09-6049	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2476

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2476

REQUEST NUMBER: 09-2476

31837

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6007	1	GLASS	8290	Ice	R
CAMO-09-6007	2	GLASS	8290	Ice	R
CAMO-09-6006	1	GLASS	8290	Ice	R
CAMO-09-6006	2	GLASS	8290	Ice	R
CAMO-09-6008	1	GLASS	8290	Ice	R
CAMO-09-6008	2	GLASS	8290	Ice	R
CAMO-09-6009	1	GLASS	8290	Ice	R
CAMO-09-6009	2	GLASS	8290	Ice	R
CAMO-09-6049	1	GLASS	8290	Ice	R
CAMO-09-6049	2	GLASS	8290	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[illegible]	6/25/09	1400	B. Benedict [illegible]	6/26/09	0951
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By:	Date	Time	Remarks:
Printed Name / Signature			

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31837 TAT 15

Samples Arrival:	Date/Time 6/26/09 0858	Initials: UBB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 6/26/09 0947	Initials: UBB	Location: WR-2 Shelf/Rack: G3

Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C 2.3°C	Time: 0914	Thermometer ID: IR-1				

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7209 7847 5620	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?	✓		
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	None		
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

CAMO-09-6006	date 6/23/09	time 1245	A&B jars
-6007		1253	
-6008		0850	
-6009		0908	
-6049		1245	

Sample Login 3/2007 rmh

PROCESS SHEET

Project No.-AR: 31837-1 of 1

RUSH

Prep Due: 7/4/2009

Hold Due: 7/23/2009

Client: Los Alamos National Laboratory(LOANM01F

Client Manager: Martha M. Maier

Method: EPA Method 8290 | PCDD/F (Tetra - Octa)

Project Due: 7/10/2009

TAT: 14

Split Type:

Matrix: Soil

LabID	Recon	Client-ID	Description	Date Received	SLoc	Shelf
001	☑	CAMO-09-6006		6/26/2009	WR-2	G-3
002	☑	CAMO-09-6007		6/26/2009	WR-2	G-3
003	☑	CAMO-09-6008		6/26/2009	WR-2	G-3
004	☑	CAMO-09-6009		6/26/2009	WR-2	G-3
005	☑	CAMO-09-6049		6/26/2009	WR-2	G-3

% SOLIDS EG 6/26/09

Instructions:

Report Options

Report Level:

EDD Type:

Report Group: Dioxins NoMDL with %Solid

TEQ Type: EPA(Default) : Min

Samples Reconciled By: EG 6/26/09

Vial Box ID: MAXI

Date Requested 7/3/2009

Percent Solids

Vista Analytical Laboratory

Project: 31837 - 1 of 1

Sample ID	Chemist/Date EJ 6/24/09		Chemist/Date DB 6/27/09	Comments
	Boat Wt.	Sample + Boat Wt.	Residue + Boat Wt.	
001	1.33	5.30	4.85	
002	1.34	4.40	4.29	
003	1.32	5.69	4.63	
004	1.32	6.89	5.88	
005	1.35	6.51	5.97	

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

%Solids 3/2007 rmh

Project: 31837

Extraction Set: 2207

Chemist: F. Bishop 6/27/09

Method(s): EPA Method 8290 | PCDD/F (Tetra - Octa)

C	ALTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/ WIT DATE	CRS CHEM/WIT DATE	AP CHEM/Date	ABSG CHEM/Date	AA CHEM/Date	Florisil CHEM/Date	RS CHEM/WIT DATE
☐	0_2207_MB001	10.00	(10.00)	FEB 08 6/27/09	TEH 08 6/28/09	NA	TEH 6/28/09	TEH 6/28/09	TEH 6/28/09	TEH 08 6/28/09
☐	0_2207_OPR001	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	31837_2207_001	11.28	11.31	↓	↓	↓	↓	↓	↓	↓
☐	31837_2207_002	10.37	10.42	↓	↓	↓	↓	↓	↓	↓
☐	31837_2207_003	13.20	13.14	↓	↓	↓	↓	↓	↓	↓
☐	31837_2207_004	12.22	12.25	↓	↓	↓	↓	↓	↓	↓
☐	31837_2207_005	11.17	11.23	↓	↓	↓	↓	↓	↓	↓

IS Name	NS Name	CRS Name	RS Name
(V4)	(V9)	(V6)	(V4)
PCDD/F 080910A, 10ml	PCDD/F 080916B, 10ml	PCDD/F 1/4 1/80910C	PCDD/F 1/4 1/80910D
PCB	PCB	PCB	PCB
PAH	PAH	PAH	PAH

Cycle Time 6/27
Start: 1430
Stop: 0800
6/28

APP.: SEFUN SOX (SDS)
SOLV: Tol
Other: N/A
Final Volume(s): 20ml C14

Check Out:
Chemist: FEB 6/27/09

Check-In:
Chemist: ↓ ↓

Comments:

SAMPLE DATA

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qid

Last Altered: Tuesday, June 30, 2009 12:26:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:26:55 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1	2,3,7,8-TCDD			NO	1.08	10.000					0.0620	
2	1,2,3,7,8-PeCDD			NO	1.03	10.000					0.0656	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.104	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.107	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.102	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.110	
7	OCDD	1.71e3	0.73	YES	1.18	10.000	41.69	1.001	~~0.04876~~	NO	0.134	0.58063
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0489	
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.0551	
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0576	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.0437	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.0480	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.0560	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.0699	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.0793	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.0857	
17	OCDF			NO	1.10	10.000					0.114	
18	13C-2,3,7,8-TCDD	1.00e6	0.79	NO	1.01	10.000	26.09	1.023	190.31	95.2	0.347	
19	13C-1,2,3,7,8-PeCDD	7.78e5	0.63	NO	0.827	10.000	30.73	1.205	181.09	90.5	0.293	
20	13C-1,2,3,4,7,8-HxCDD	7.00e5	1.26	NO	0.916	10.000	34.17	0.988	184.79	92.4	0.442	
21	13C-1,2,3,6,7,8-HxCDD	6.42e5	1.24	NO	0.921	10.000	34.28	0.991	168.53	84.3	0.440	
22	13C-1,2,3,4,6,7,8-HpCDD	6.02e5	1.06	NO	0.708	10.000	38.21	1.105	205.61	103	0.764	
23	13C-OCDD	8.95e5	0.89	NO	0.503	10.000	41.66	1.204	430.56	108	0.514	
24	13C-2,3,7,8-TCDF	1.39e6	0.79	NO	0.977	10.000	25.33	0.993	195.62	97.8	0.209	
25	13C-1,2,3,7,8-PeCDF	1.30e6	1.58	NO	0.896	10.000	29.51	1.157	199.16	99.6	0.361	
26	13C-2,3,4,7,8-PeCDF	1.24e6	1.57	NO	0.900	10.000	30.46	1.194	188.73	94.4	0.359	
27	13C-1,2,3,4,7,8-HxCDF	9.06e5	0.52	NO	1.17	10.000	33.25	0.961	187.46	93.7	0.521	
28	13C-1,2,3,6,7,8-HxCDF	1.04e6	0.52	NO	1.52	10.000	33.37	0.965	165.20	82.6	0.401	
29	13C-2,3,4,6,7,8-HxCDF	8.51e5	0.53	NO	1.25	10.000	34.00	0.983	164.84	82.4	0.487	
30	13C-1,2,3,7,8,9-HxCDF	8.19e5	0.52	NO	1.05	10.000	35.00	1.012	188.05	94.0	0.578	

6/30/09

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 12:26:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:26:55 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

31	13C-1,2,3,4,6,7,8-HpCDF	6.24e5	0.44	NO	0.868	10.000	36.87	1.066	173.82	86.9	0.617
32	13C-1,2,3,4,7,8,9-HpCDF	5.87e5	0.45	NO	0.727	10.000	38.78	1.121	195.36	97.7	0.737
33	13C-OCDF	1.22e6	0.91	NO	0.760	10.000	41.90	1.211	389.70	97.4	0.310
34	37Cl-2,3,7,8-TCDD	2.48e5			0.668	10.000	26.12	1.024	71.447	89.3	0.0919
35	13C-1,2,3,4-TCDD	1.04e6	0.80	NO	1.00	10.000	25.51	0.000	200.00	100	0.353
36	13C-1,2,3,4-TCDF	1.46e6	0.78	NO	1.00	10.000	24.10	0.000	200.00	100	0.204
37	13C-1,2,3,7,8,9-HxCDD	8.27e5	1.24	NO	1.00	10.000	34.59	0.000	200.00	100	0.405
38	Total Tetra-Dioxins				1.08	10.000					0.0289
39	Total Penta-Dioxins				1.03	10.000					0.0223
40	Total Hexa-Dioxins				1.13	10.000					0.0402
41	Total Hepta-Dioxins				1.06	10.000					0.0600
42	Total Tetra-Furans				1.09	10.000					0.0189
43	1st Func. Penta-Furans				1.16	10.000					0.0152
44	Total Penta-Furans				1.16	10.000					0.0218
45	Total Hexa-Furans				1.28	10.000					0.0283
46	Total Hepta-Furans				1.69	10.000					0.0395

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

2,3,7,8-TCDD

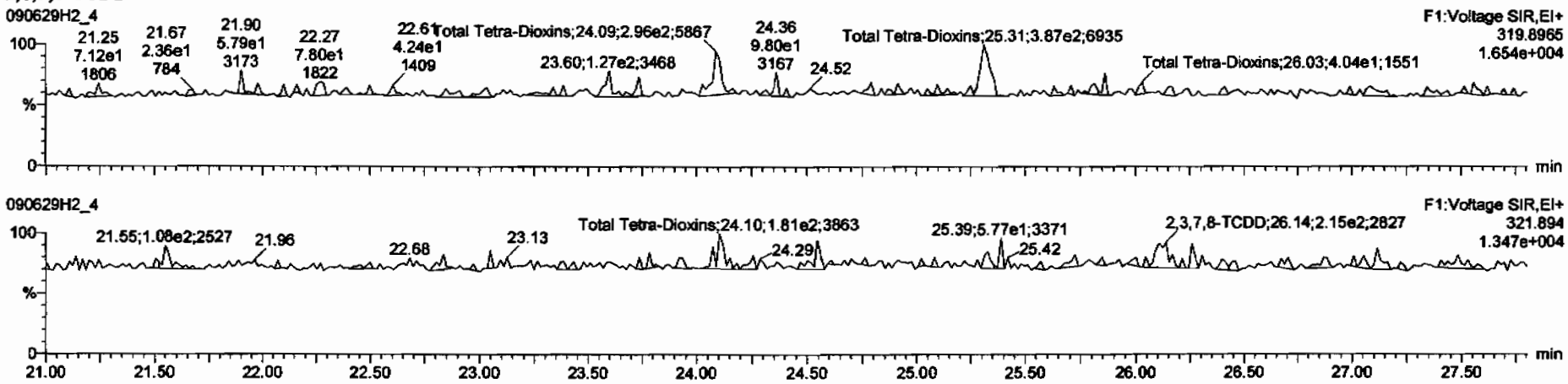

13C-2,3,7,8-TCDD

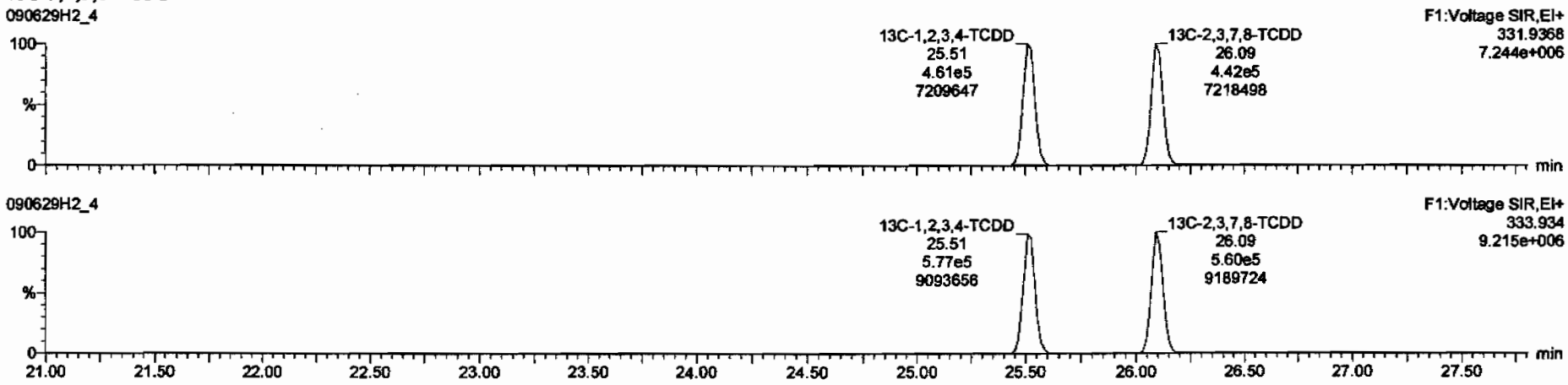

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

37Cl-2,3,7,8-TCDD

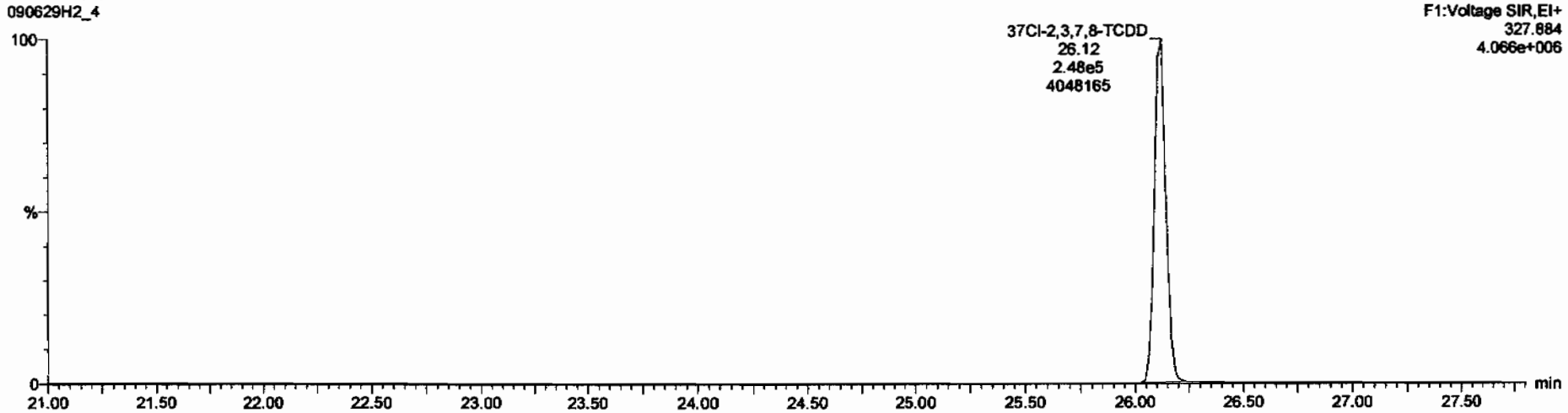

13C-1,2,3,4-TCDD

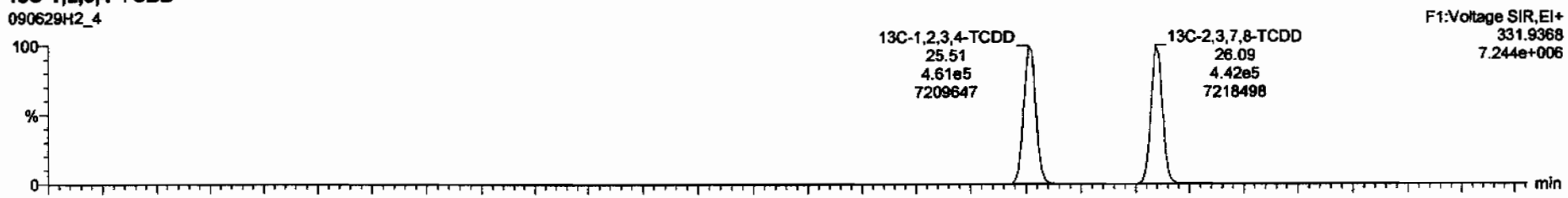

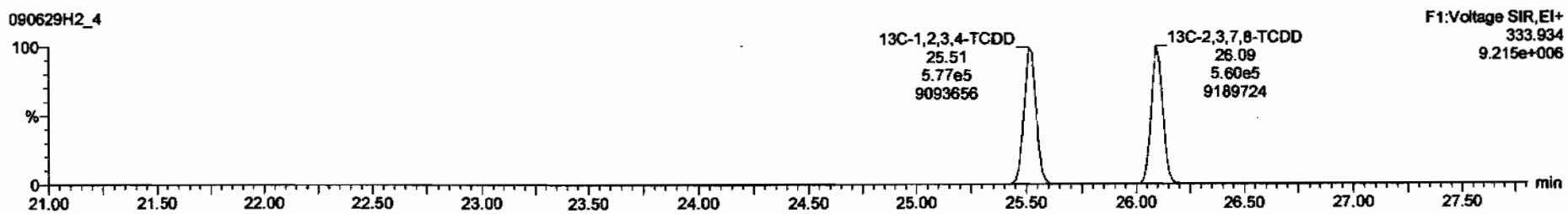

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,7,8-PeCDD

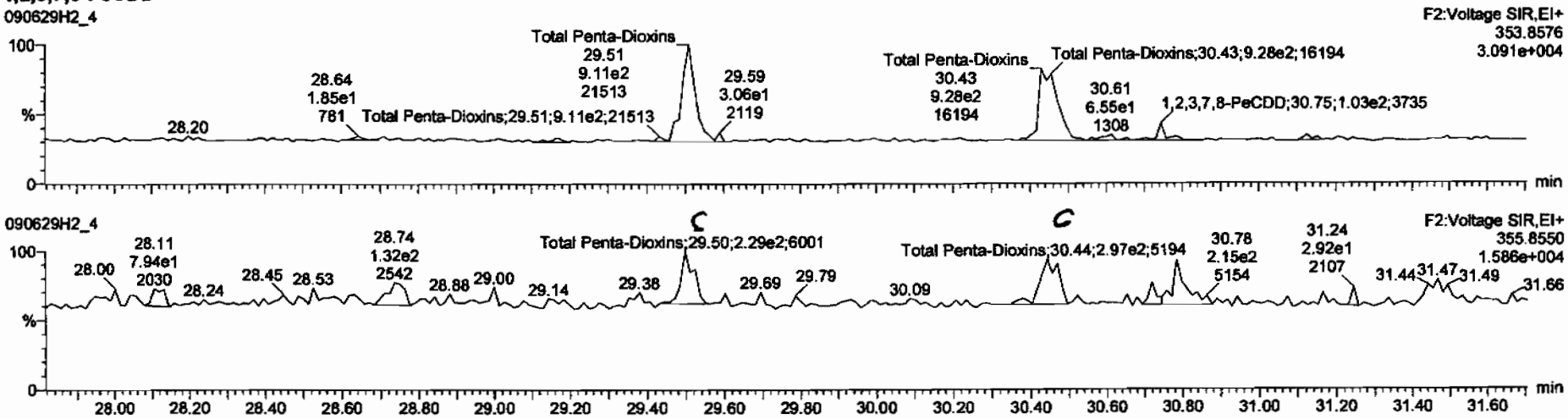

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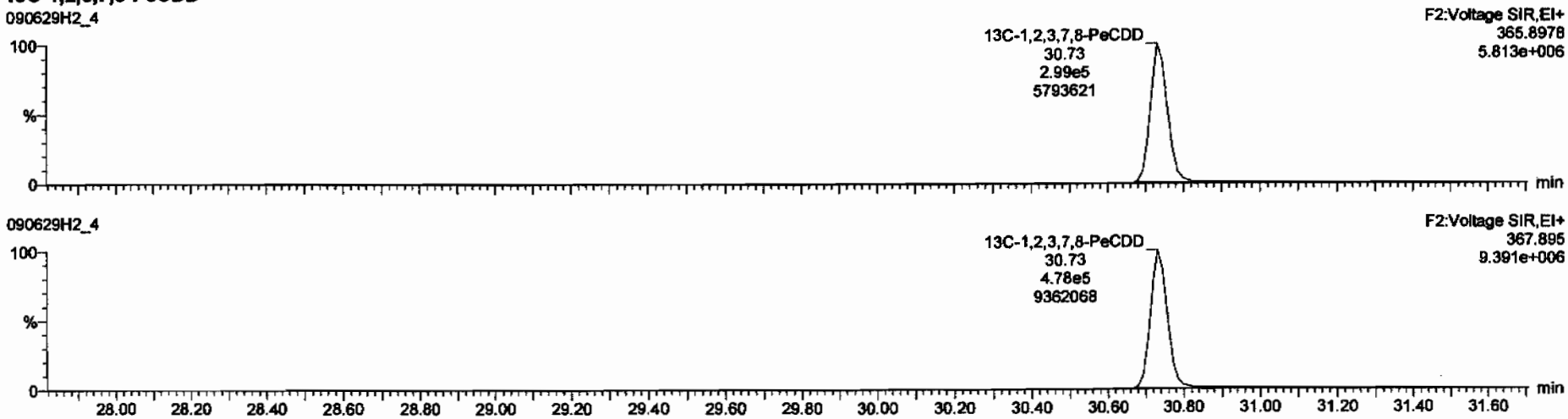

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,7,8-HxCDD

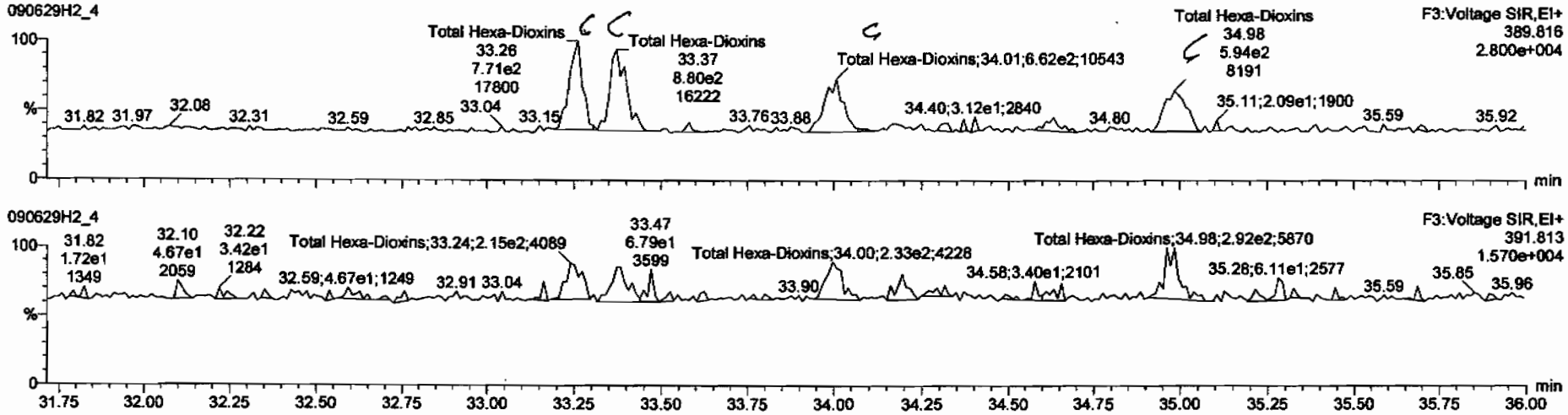

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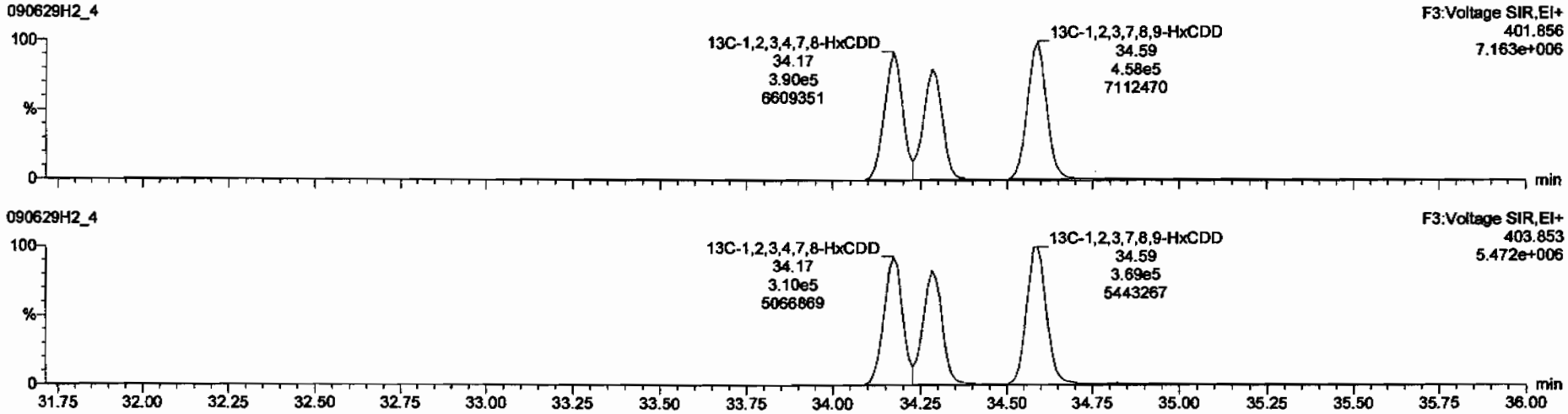

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,6,7,8-HpCDD

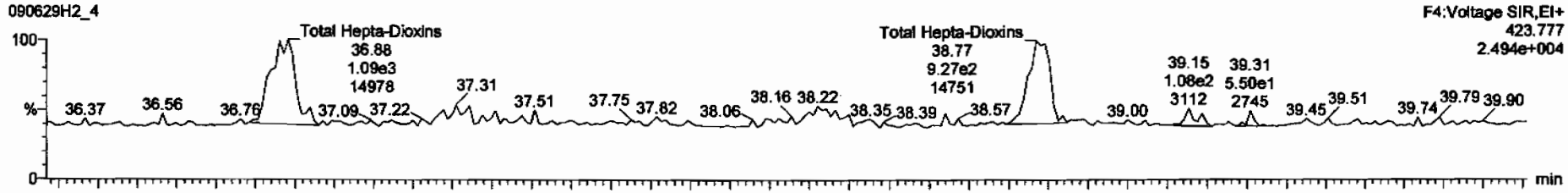

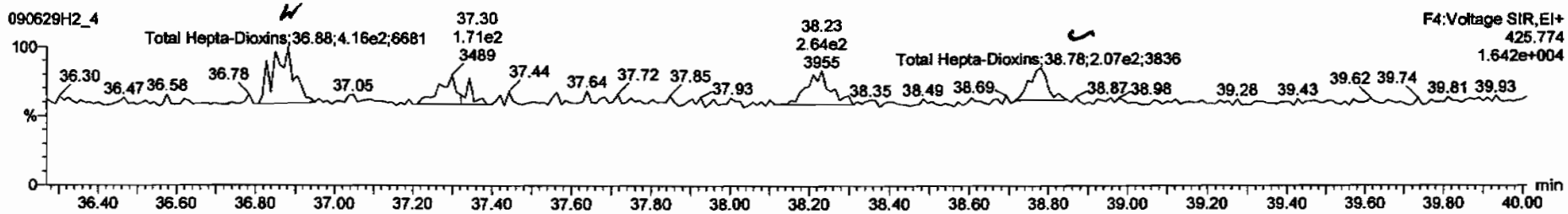

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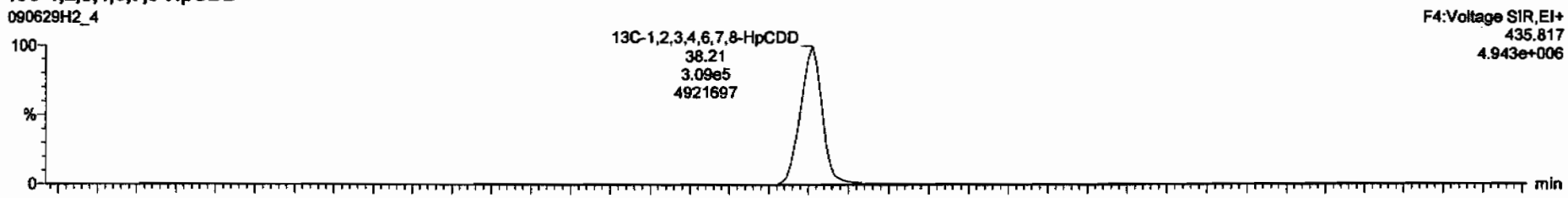

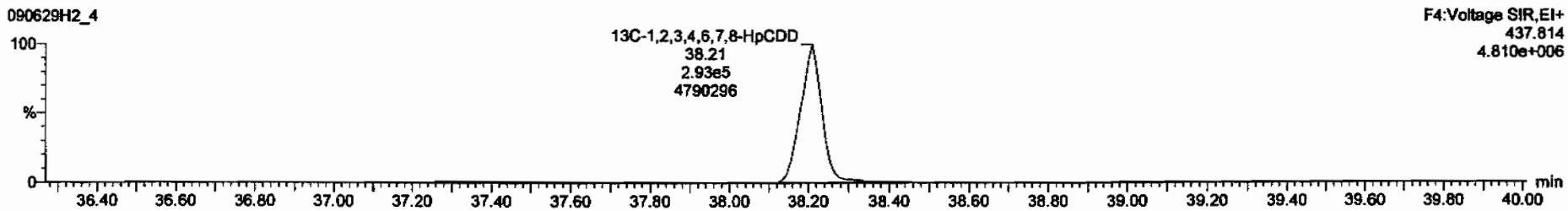

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

OCDD

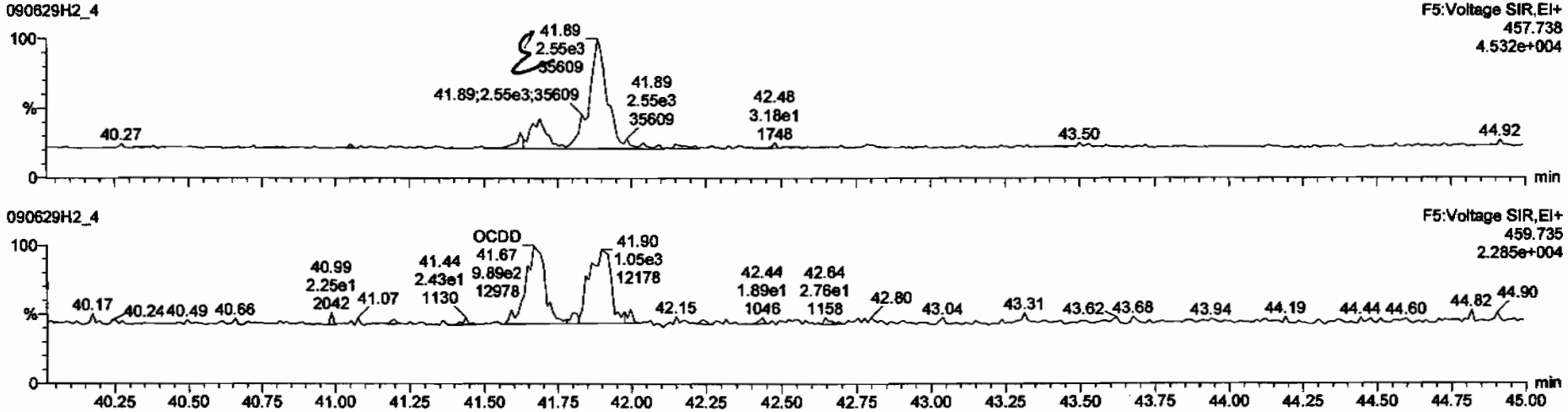

13C-OCDD

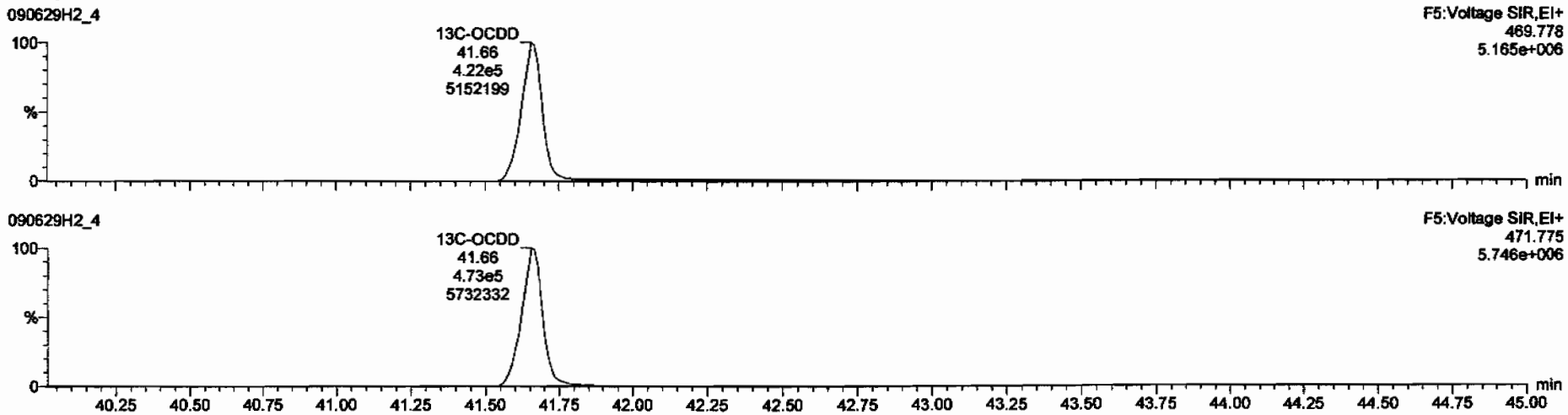

TargetLynx - 090629f2-4.qld * - [Chromatogram]

090629H2_4 - 0_2207_MB001 - 0_2207_MB001

4	1,2,3,6,7,8-HxCDD	9.12e1	1.14	NO	1.13	10.000	34.31	1.001	0.0253		0.107	0.0253
5	1,2,3,7,8,9-HxCDD	1.85e2	2.28	YES	1.10	10.000	34.63	1.010	0.0501		0.102	0.0342
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.110	
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0489	

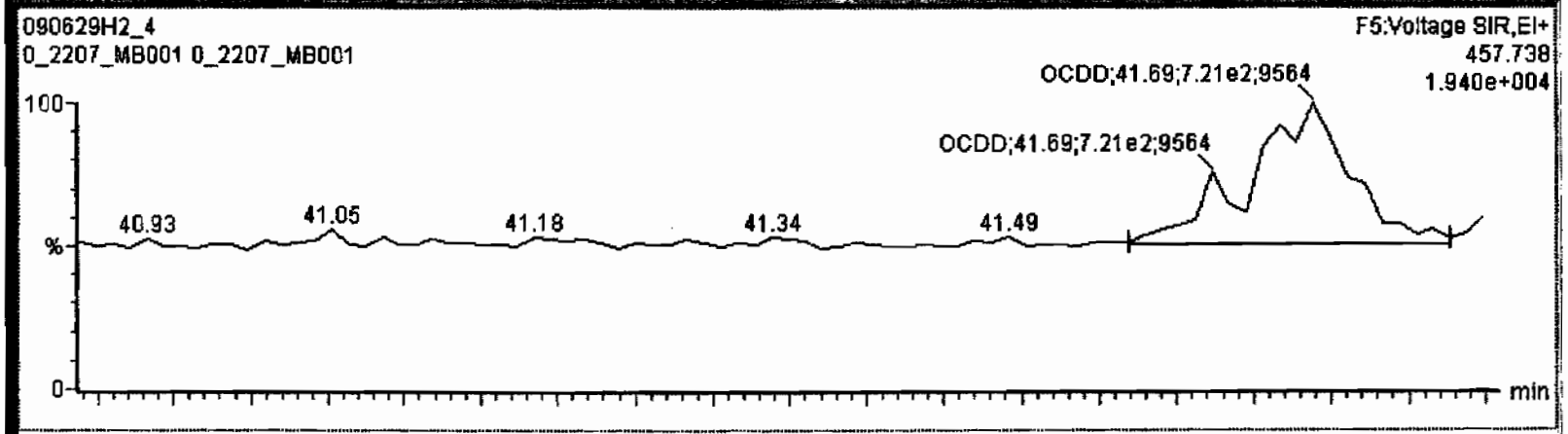

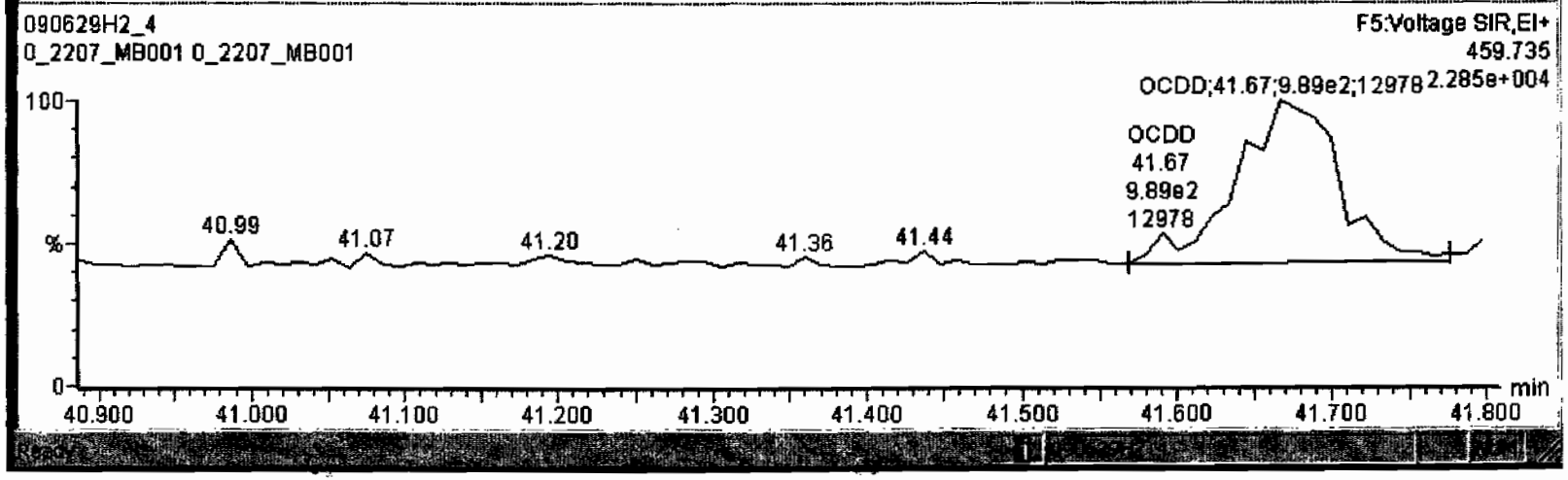

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

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2,3,7,8-TCDF

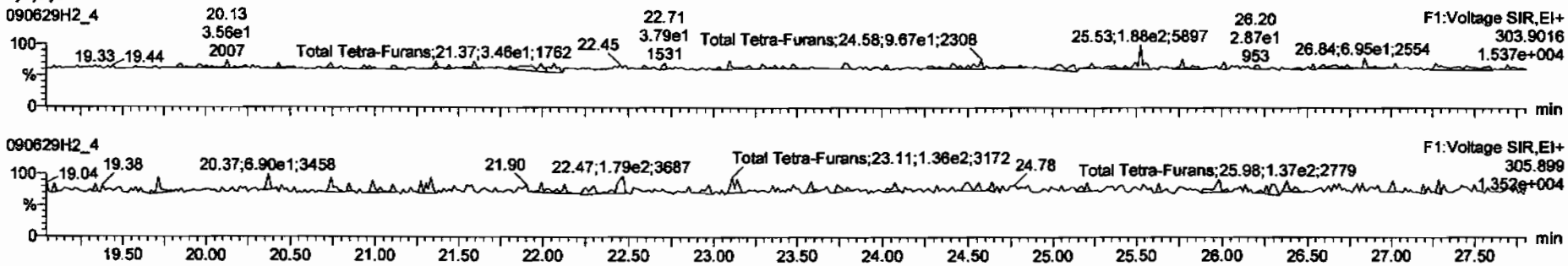

13C-2,3,7,8-TCDF

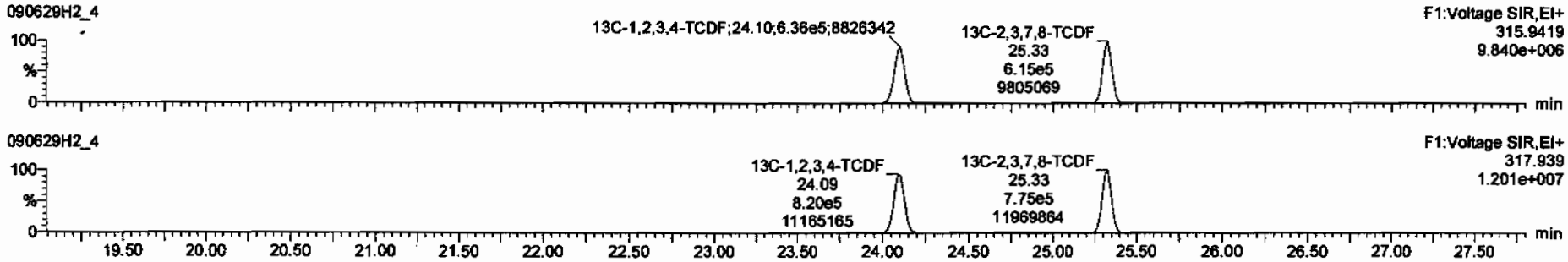

DPE1

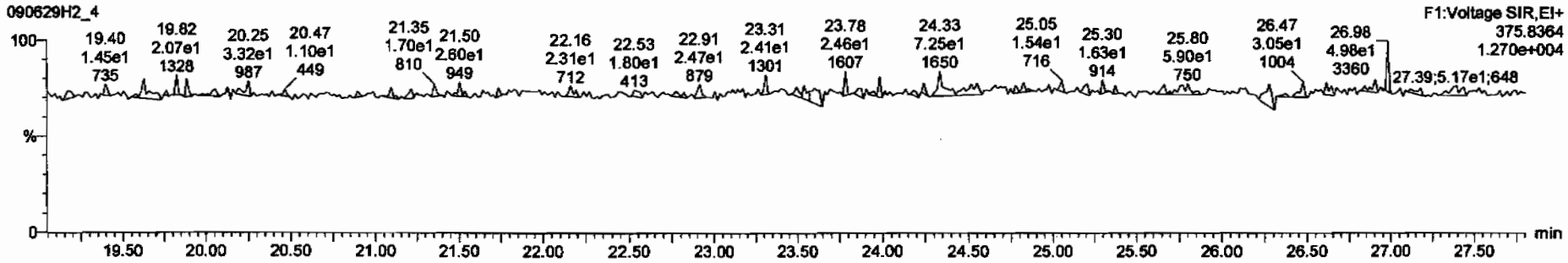

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

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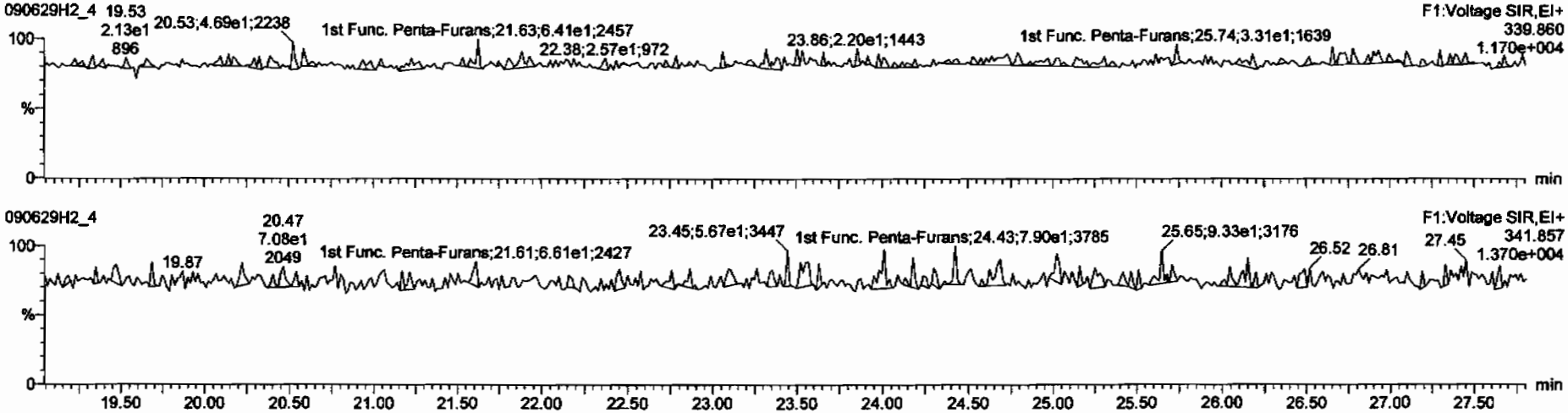

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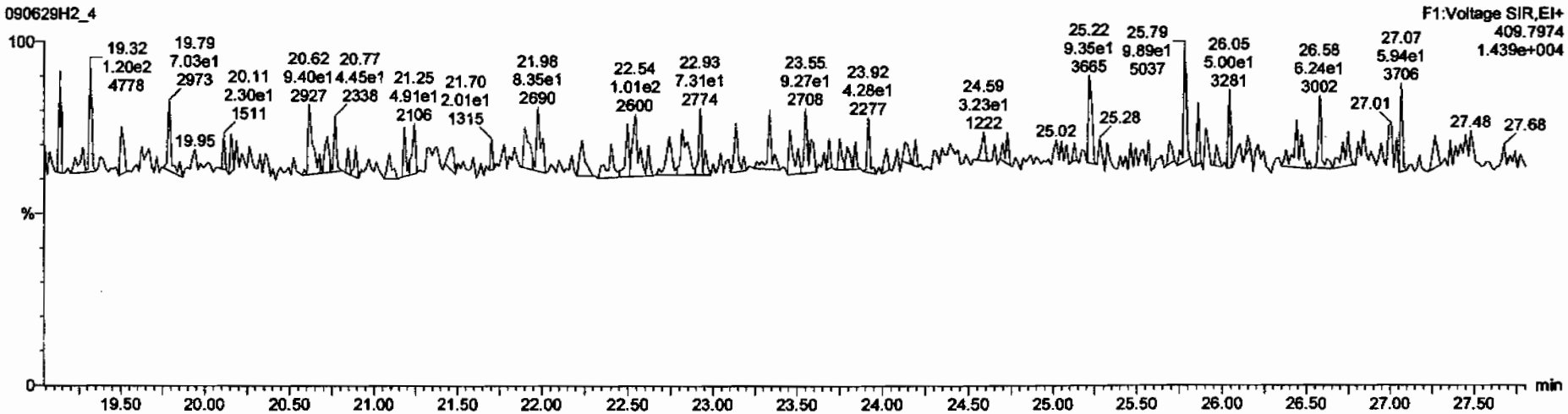

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,7,8-PeCDF

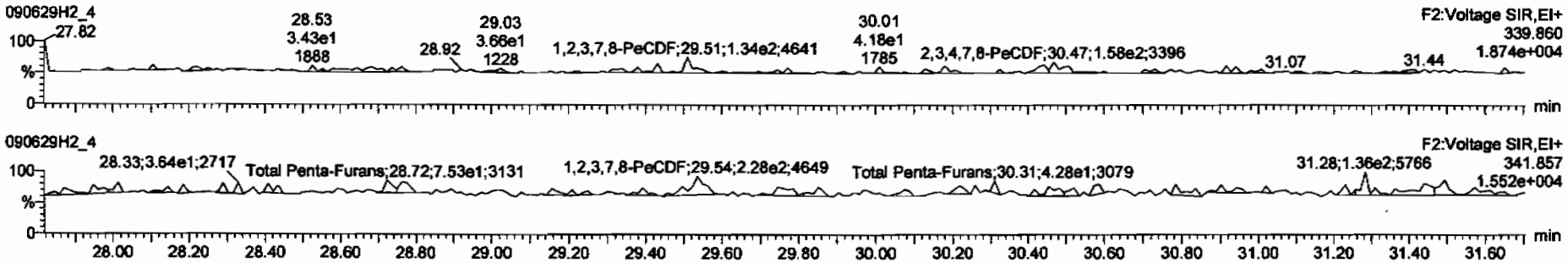

13C-1,2,3,7,8-PeCDF

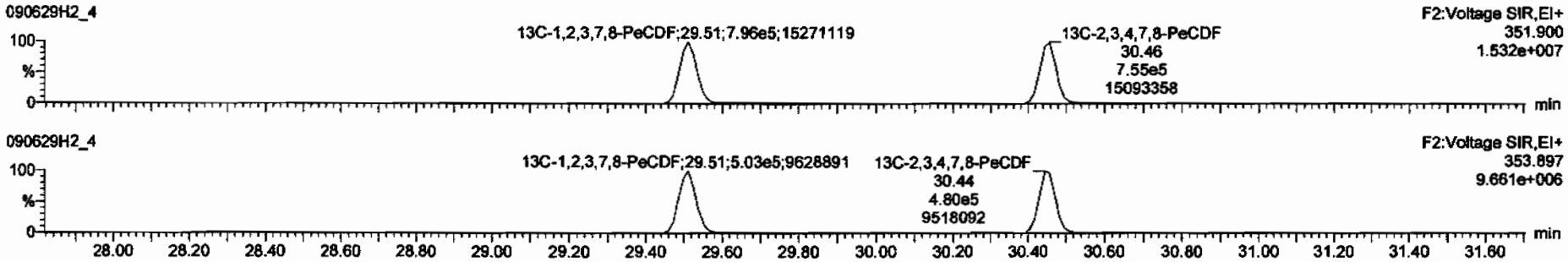

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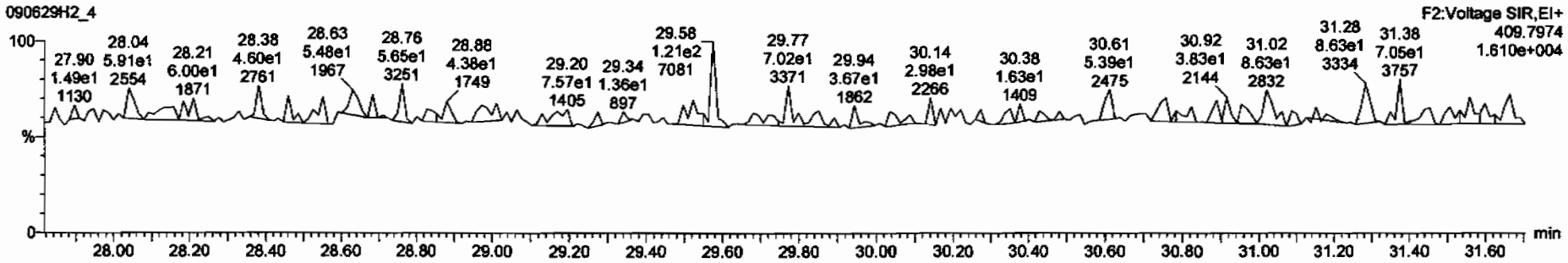

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,7,8-HxCDF

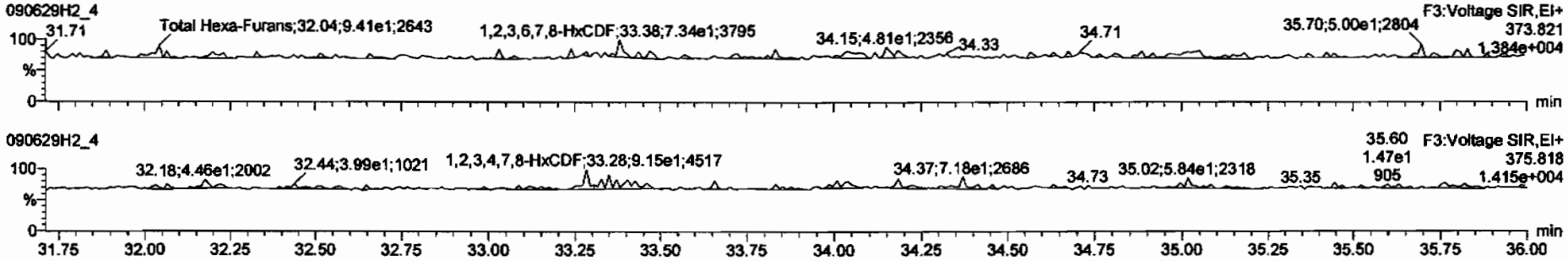

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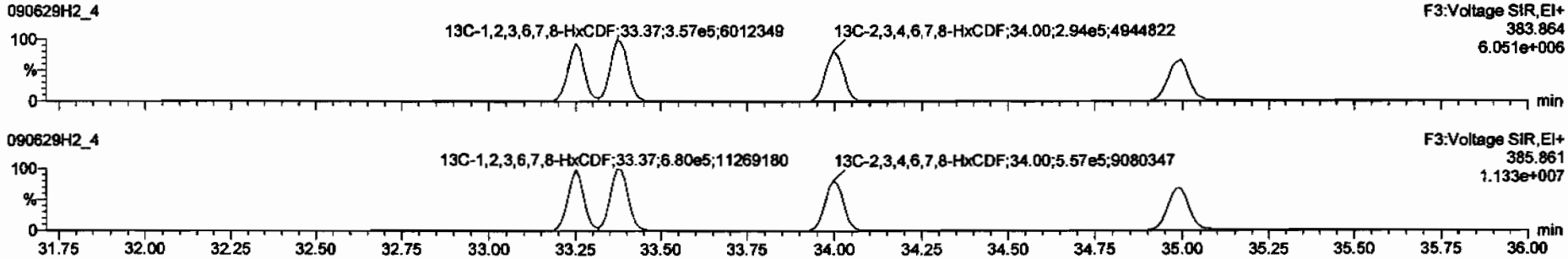

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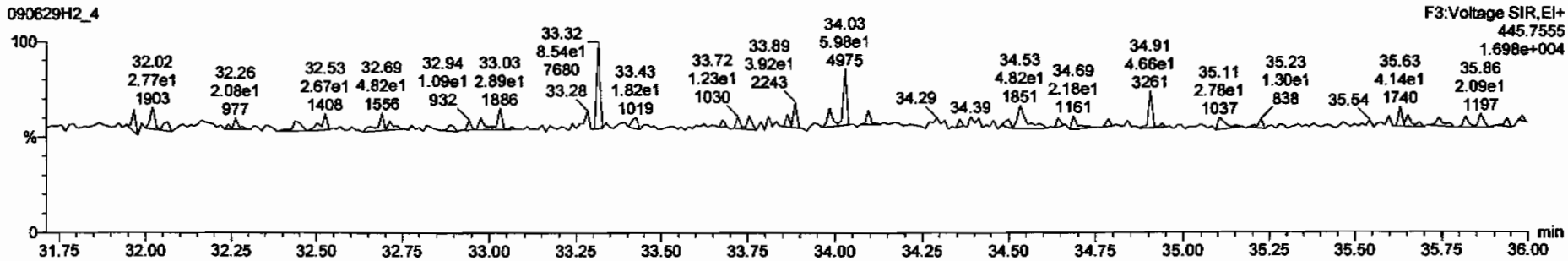

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,6,7,8-HpCDF

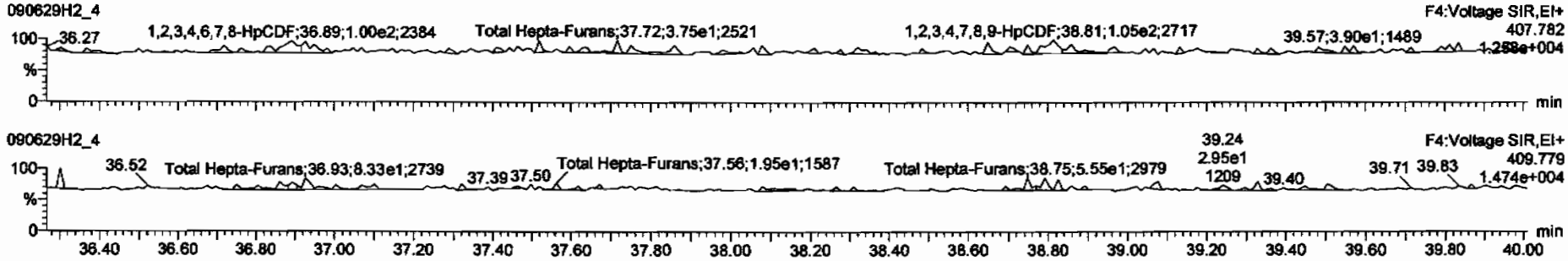

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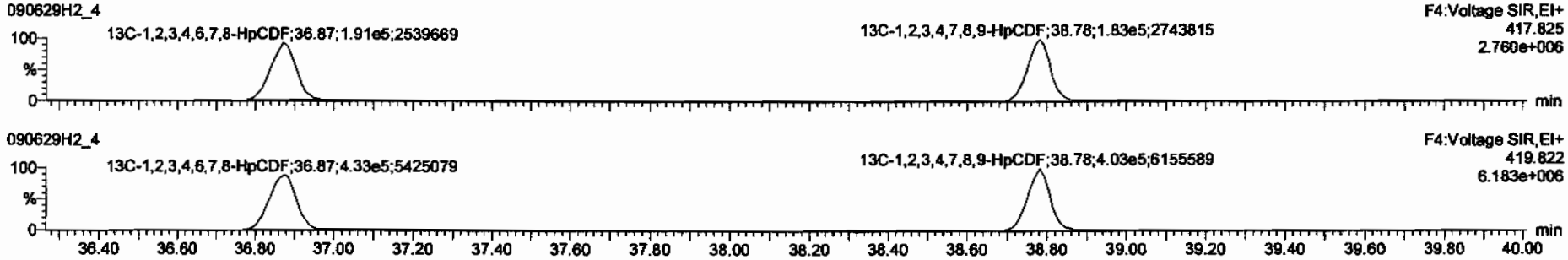

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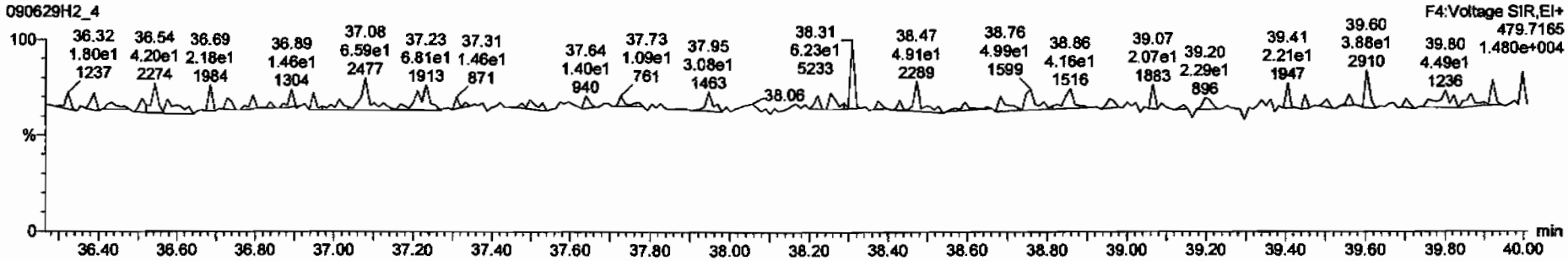

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

OCDF

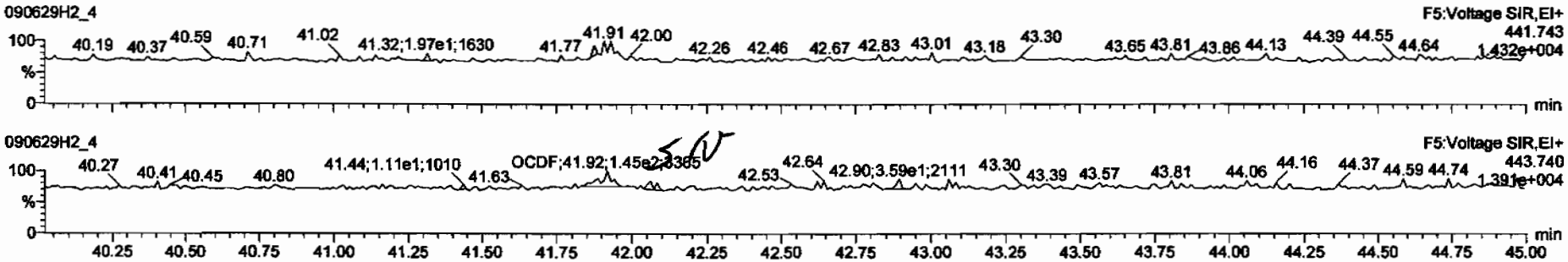

13C-OCDF

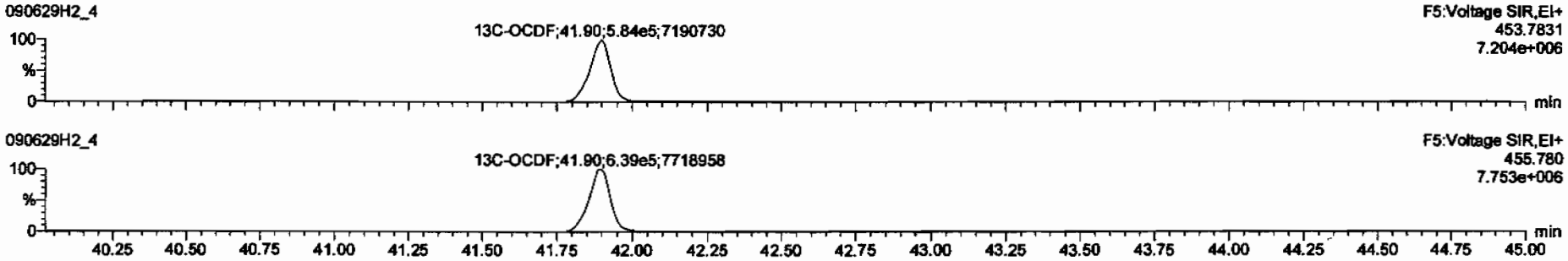

DPE5

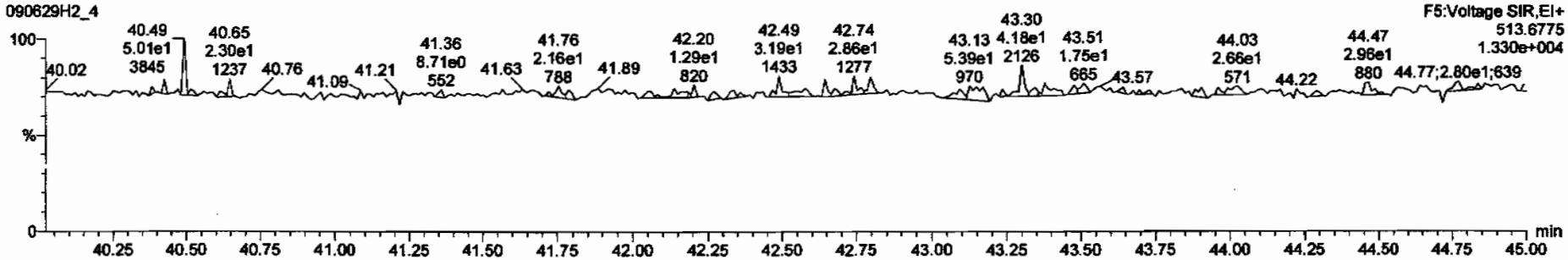

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

PFK1

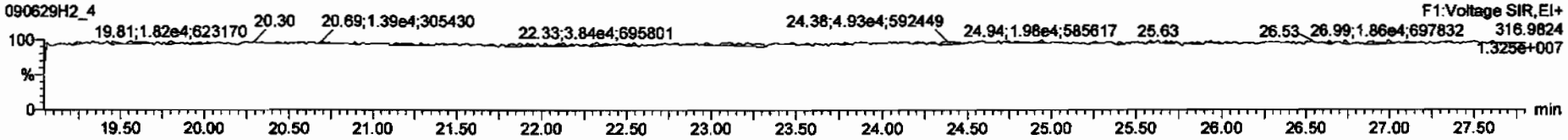

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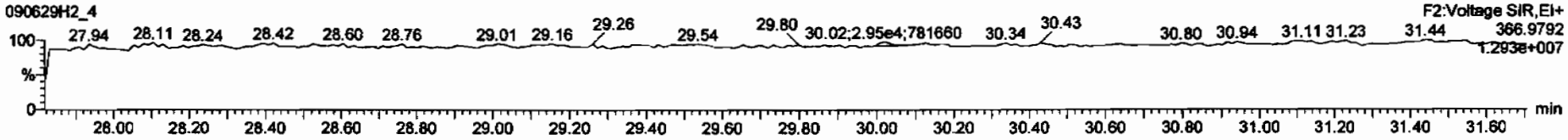

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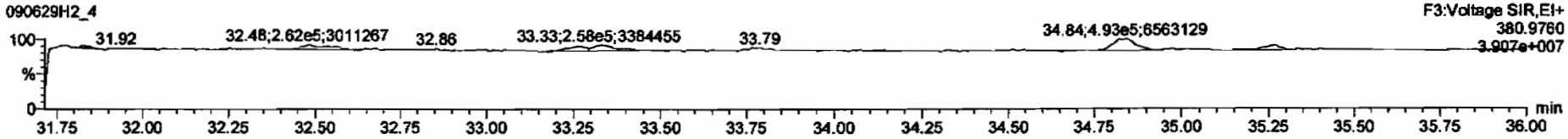

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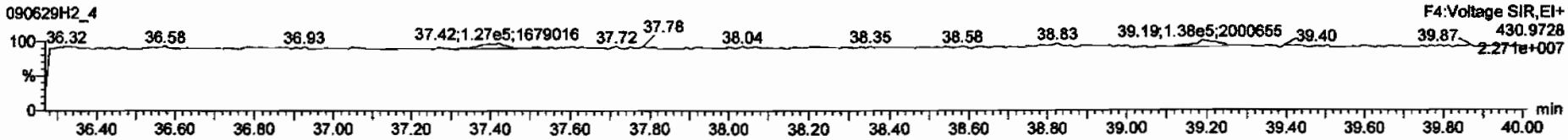

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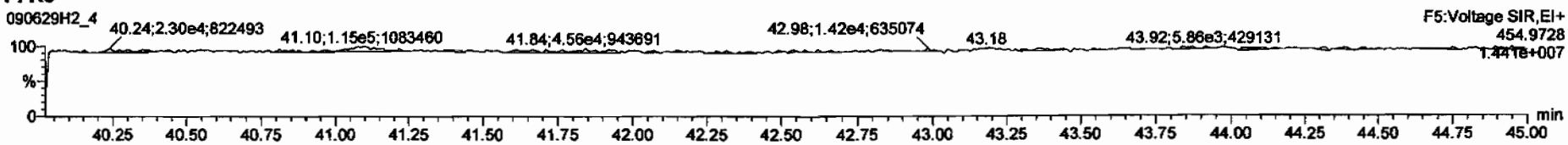

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 12:18:05 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:18:32 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1	2,3,7,8-TCDD	1.02e5	0.78	NO	1.08	1.000	26.11	1.001	9.7213	97.2	0.0303	9.7213
2	1,2,3,7,8-PeCDD	3.71e5	0.62	NO	1.03	1.000	30.75	1.000	47.556	95.1	0.0495	47.556
3	1,2,3,4,7,8-HxCDD	3.18e5	1.25	NO	1.00	1.000	34.18	1.001	47.134	94.3	0.122	47.134
4	1,2,3,6,7,8-HxCDD	3.36e5	1.27	NO	1.13	1.000	34.29	1.001	47.464	94.9	0.119	47.464
5	1,2,3,7,8,9-HxCDD	3.61e5	1.25	NO	1.10	1.000	34.59	1.009	50.262	101	0.116	50.262
6	1,2,3,4,6,7,8-HpCDD	2.93e5	1.04	NO	1.06	1.000	38.22	1.000	45.856	91.7	0.202	45.856
7	OCDD	4.84e5	0.85	NO	1.18	1.000	41.68	1.000	91.654	91.7	0.154	91.654
8	2,3,7,8-TCDF	1.30e5	0.77	NO	1.09	1.000	25.33	1.001	8.9329	89.3	0.0247	8.9329
9	1,2,3,7,8-PeCDF	6.87e5	1.57	NO	1.16	1.000	29.51	1.000	44.778	89.6	0.0478	44.778
10	2,3,4,7,8-PeCDF	5.78e5	1.56	NO	1.12	1.000	30.46	1.000	42.923	85.8	0.0519	42.923
11	1,2,3,4,7,8-HxCDF	5.70e5	1.26	NO	1.41	1.000	33.26	1.001	45.926	91.9	0.0809	45.926
12	1,2,3,6,7,8-HxCDF	5.86e5	1.27	NO	1.22	1.000	33.38	1.000	45.078	90.2	0.0821	45.078
13	2,3,4,6,7,8-HxCDF	4.82e5	1.25	NO	1.28	1.000	34.01	1.001	46.095	92.2	0.107	46.095
14	1,2,3,7,8,9-HxCDF	4.56e5	1.30	NO	1.26	1.000	35.00	1.000	46.233	92.5	0.127	46.233
15	1,2,3,4,6,7,8-HpCDF	4.97e5	1.05	NO	1.69	1.000	36.88	1.001	46.551	93.1	0.146	46.551
16	1,2,3,4,7,8,9-HpCDF	4.06e5	1.03	NO	1.48	1.000	38.79	1.000	48.188	96.4	0.175	48.188
17	OCDF	6.20e5	0.92	NO	1.10	1.000	41.91	1.000	91.187	91.2	0.0934	91.187
18	13C-2,3,7,8-TCDD	9.75e5	0.79	NO	1.01	1.000	26.09	1.023	94.464	94.5	0.185	
19	13C-1,2,3,7,8-PeCDD	7.54e5	0.63	NO	0.827	1.000	30.73	1.205	89.641	89.6	0.0957	
20	13C-1,2,3,4,7,8-HxCDD	6.73e5	1.27	NO	0.916	1.000	34.16	0.988	89.402	89.4	0.284	
21	13C-1,2,3,6,7,8-HxCDD	6.29e5	1.26	NO	0.921	1.000	34.27	0.991	83.057	83.1	0.282	
22	13C-1,2,3,4,6,7,8-HpCDD	6.00e5	1.07	NO	0.708	1.000	38.21	1.105	102.98	103	0.369	
23	13C-OCDD	8.96e5	0.92	NO	0.503	1.000	41.67	1.205	216.81	108	0.300	
24	13C-2,3,7,8-TCDF	1.34e6	0.79	NO	0.977	1.000	25.31	0.992	98.459	98.5	0.111	
25	13C-1,2,3,7,8-PeCDF	1.32e6	1.56	NO	0.896	1.000	29.50	1.156	106.13	106	0.179	
26	13C-2,3,4,7,8-PeCDF	1.21e6	1.58	NO	0.900	1.000	30.44	1.193	96.249	96.2	0.178	
27	13C-1,2,3,4,7,8-HxCDF	8.80e5	0.53	NO	1.17	1.000	33.24	0.961	91.572	91.6	0.293	
28	13C-1,2,3,6,7,8-HxCDF	1.06e6	0.52	NO	1.52	1.000	33.37	0.965	85.133	85.1	0.225	
29	13C-2,3,4,6,7,8-HxCDF	8.17e5	0.52	NO	1.25	1.000	33.99	0.983	79.507	79.5	0.274	
30	13C-1,2,3,7,8,9-HxCDF	7.85e5	0.52	NO	1.05	1.000	34.99	1.012	90.673	90.7	0.325	

6/30/09
6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 12:18:05 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:18:32 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

31	13C-1,2,3,4,6,7,8-HpCDF	6.32e5	0.45	NO	0.868	1.000	36.86	1.066	88.541	88.5	0.426
32	13C-1,2,3,4,7,8,9-HpCDF	5.69e5	0.44	NO	0.727	1.000	38.78	1.122	95.182	95.2	0.509
33	13C-OCDF	1.24e6	0.89	NO	0.760	1.000	41.90	1.212	198.73	99.4	0.199
34	37Cl-2,3,7,8-TCDD	2.46e5			0.668	1.000	26.11	1.023	36.149	90.4	0.0332
35	13C-1,2,3,4-TCDD	1.02e6	0.79	NO	1.00	1.000	25.51	0.000	100.00	100	0.188
36	13C-1,2,3,4-TCDF	1.39e6	0.77	NO	1.00	1.000	24.09	0.000	100.00	100	0.108
37	13C-1,2,3,7,8,9-HxCDD	8.22e5	1.23	NO	1.00	1.000	34.58	0.000	100.00	100	0.260

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

2,3,7,8-TCDD

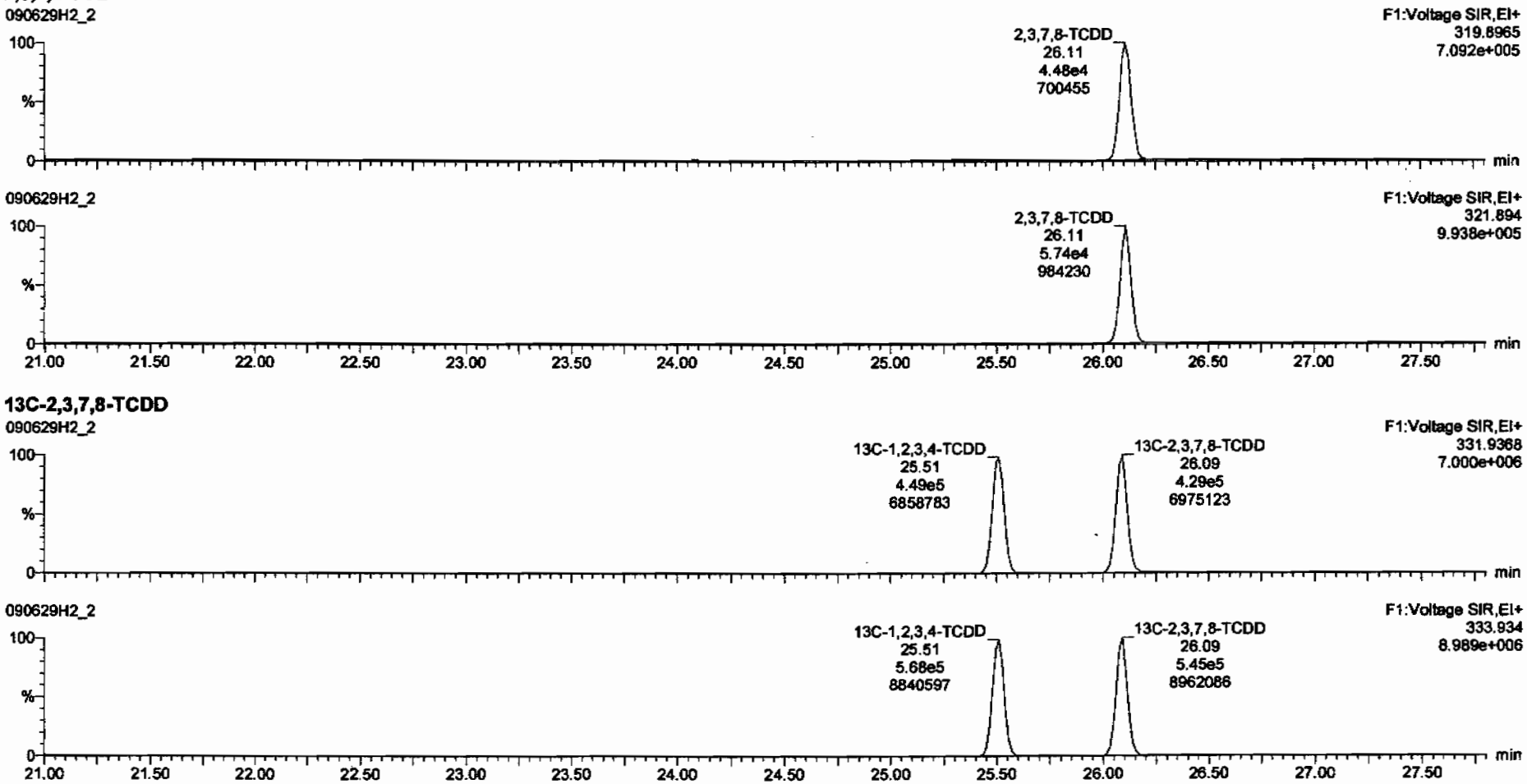

13C-2,3,7,8-TCDD

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

37Cl-2,3,7,8-TCDD

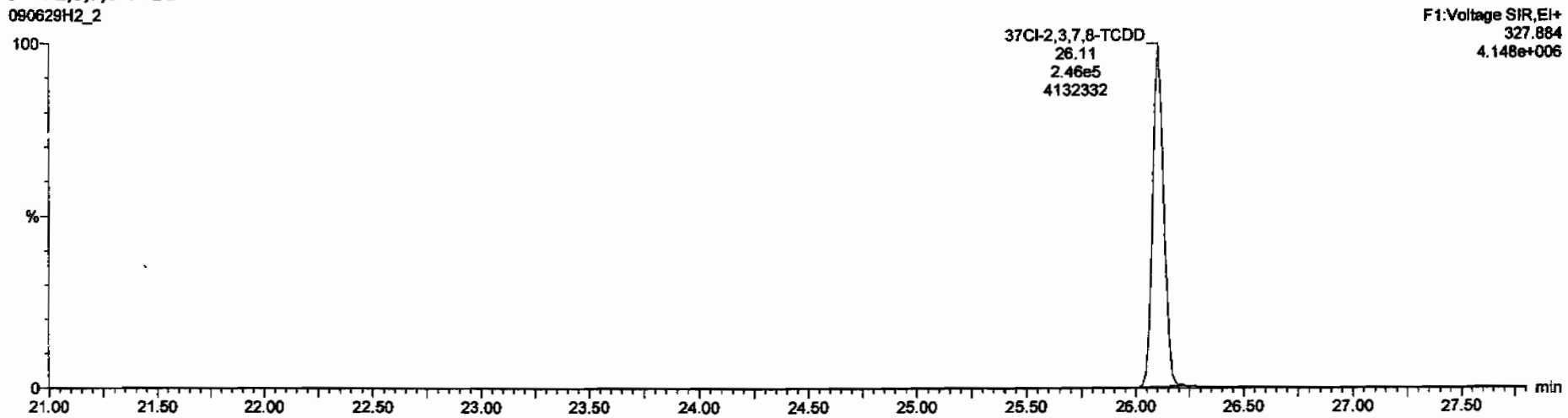

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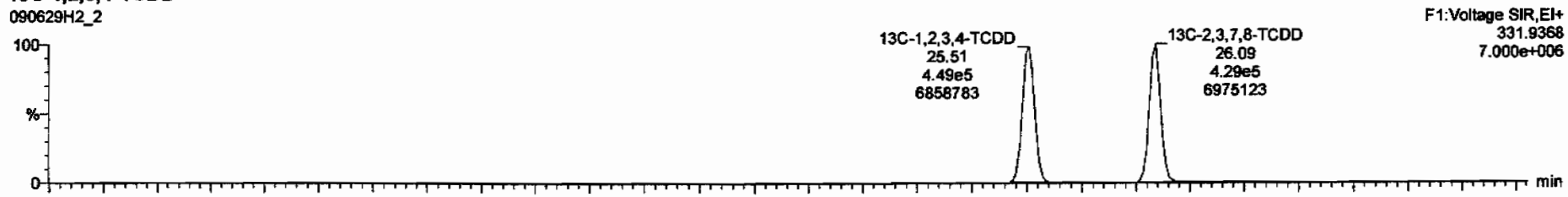

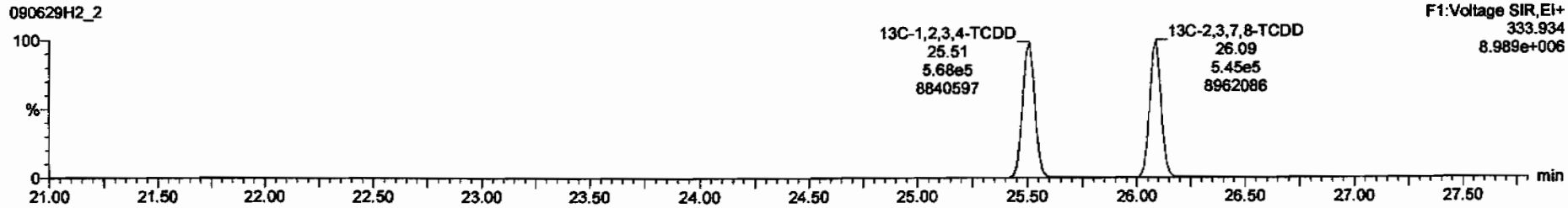

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,7,8-PeCDD

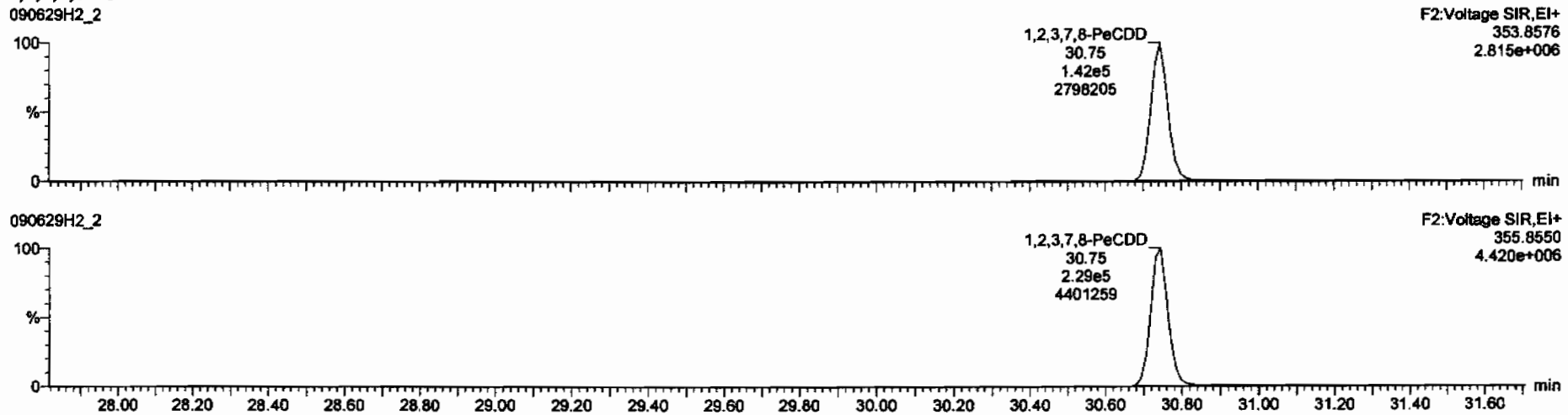

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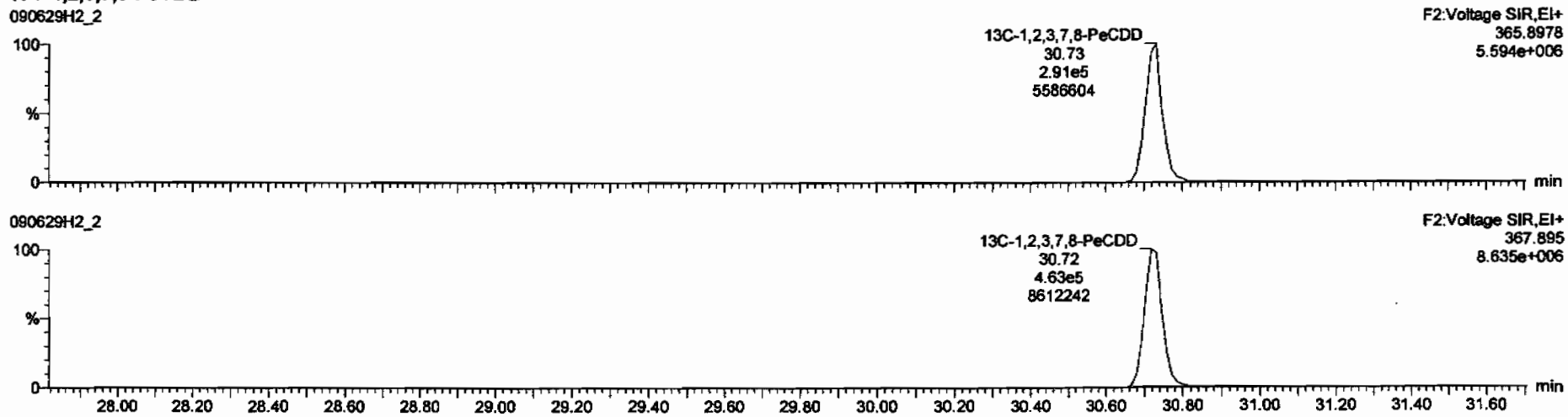

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,7,8-HxCDD

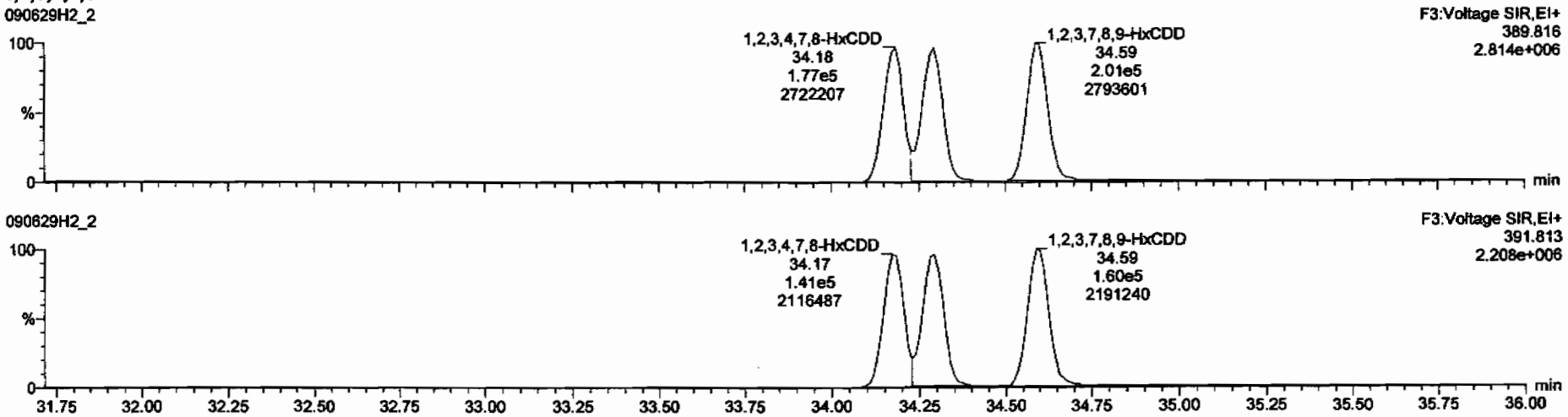

13C-1,2,3,4,7,8-HxCDD

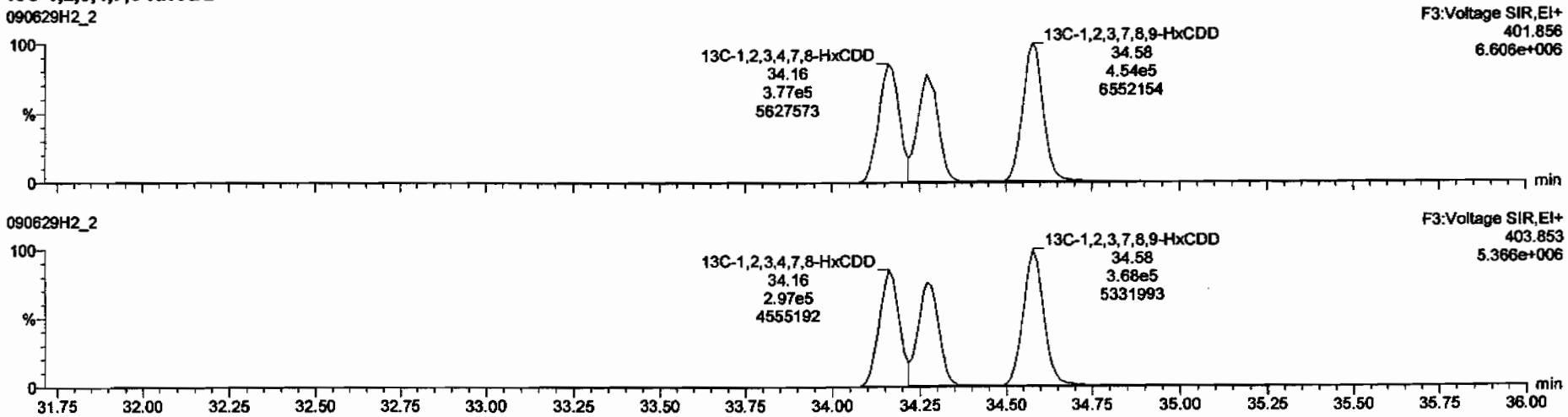

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,6,7,8-HpCDD

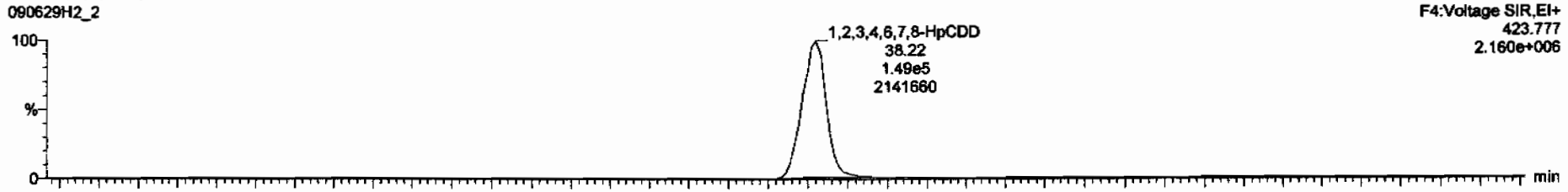

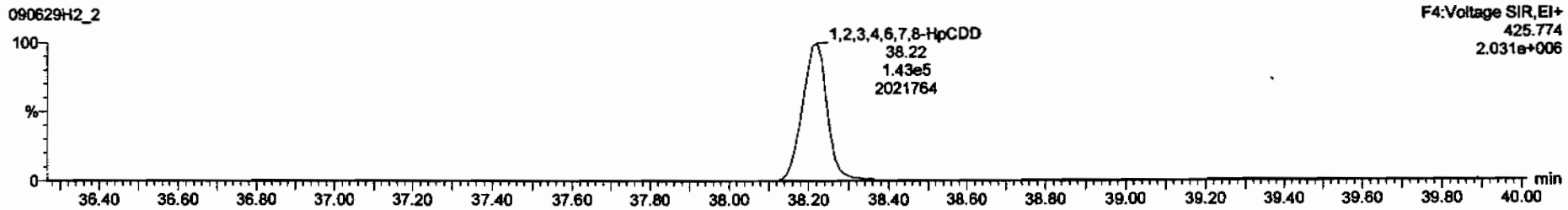

13C-1,2,3,4,6,7,8-HpCDD

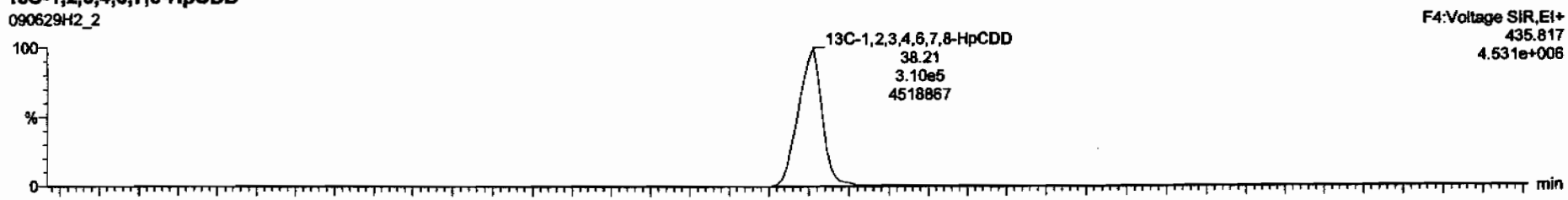

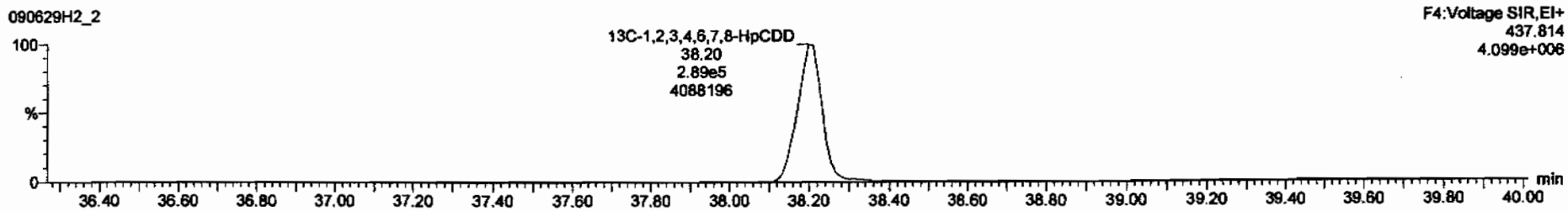

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

OCDD

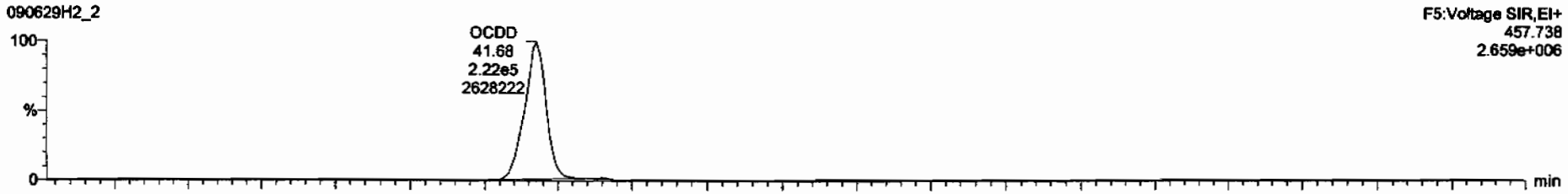

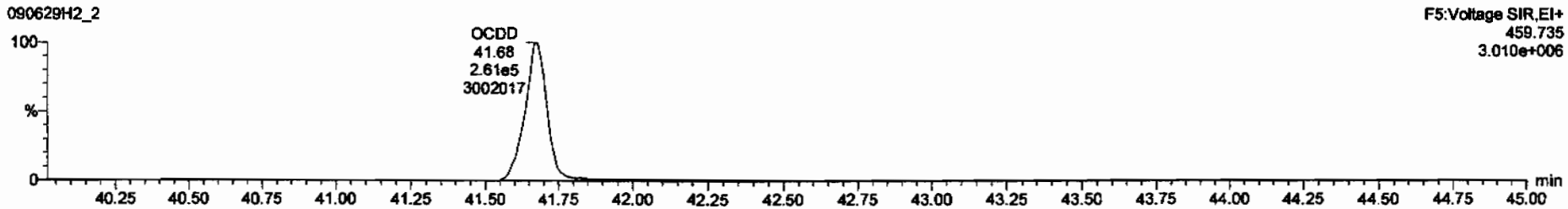

13C-OCDD

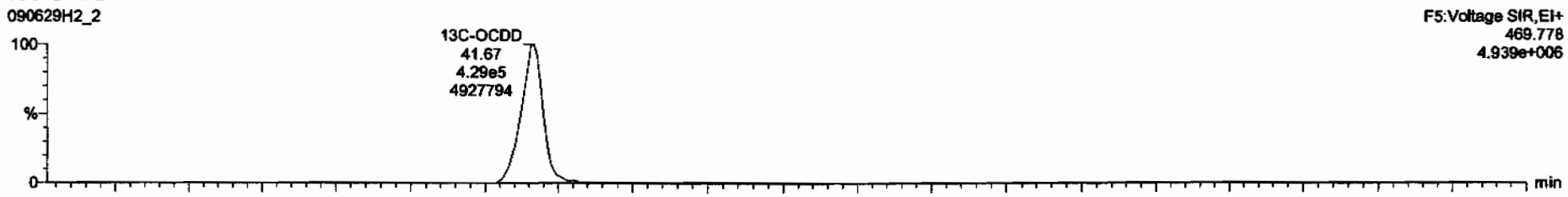

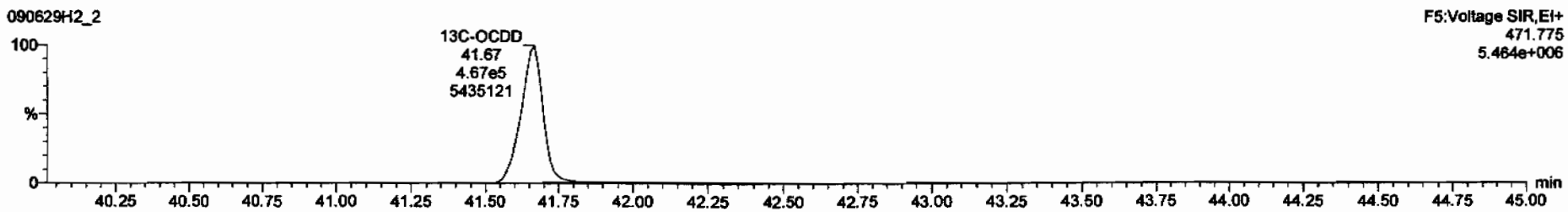

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

2,3,7,8-TCDF

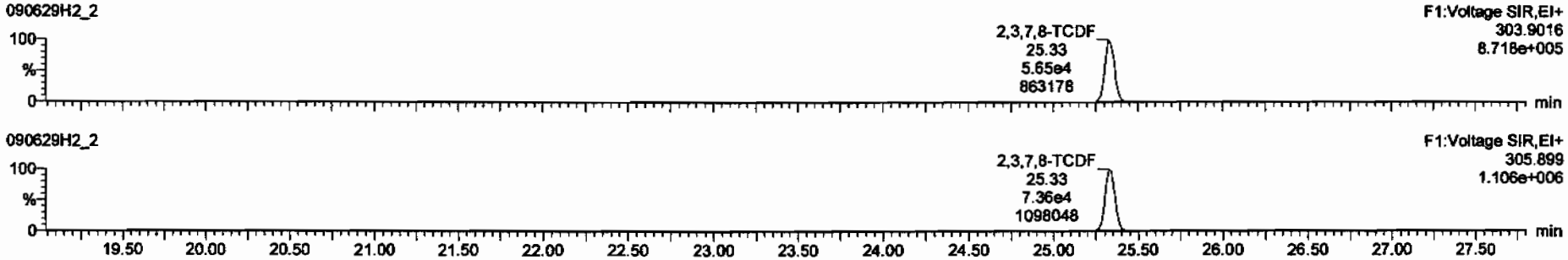

13C-2,3,7,8-TCDF

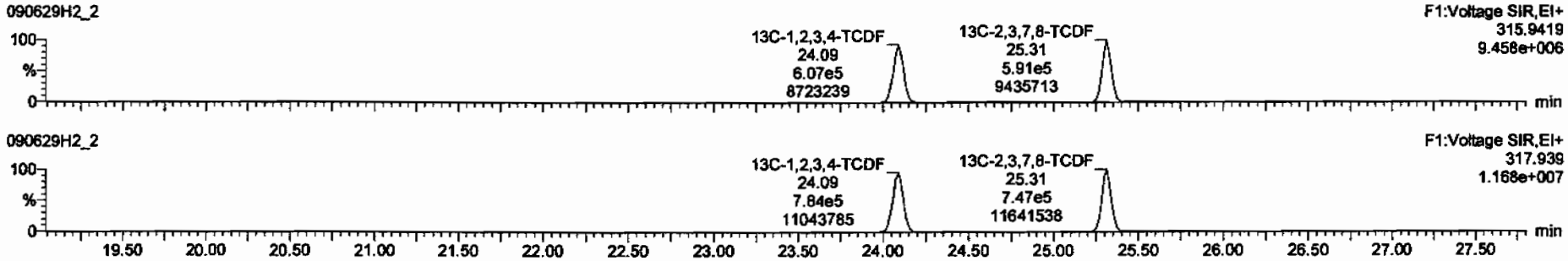

DPE1

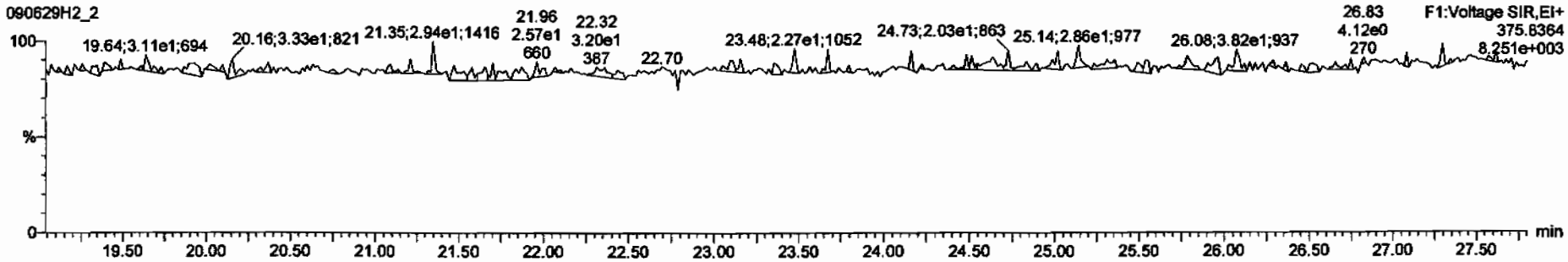

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

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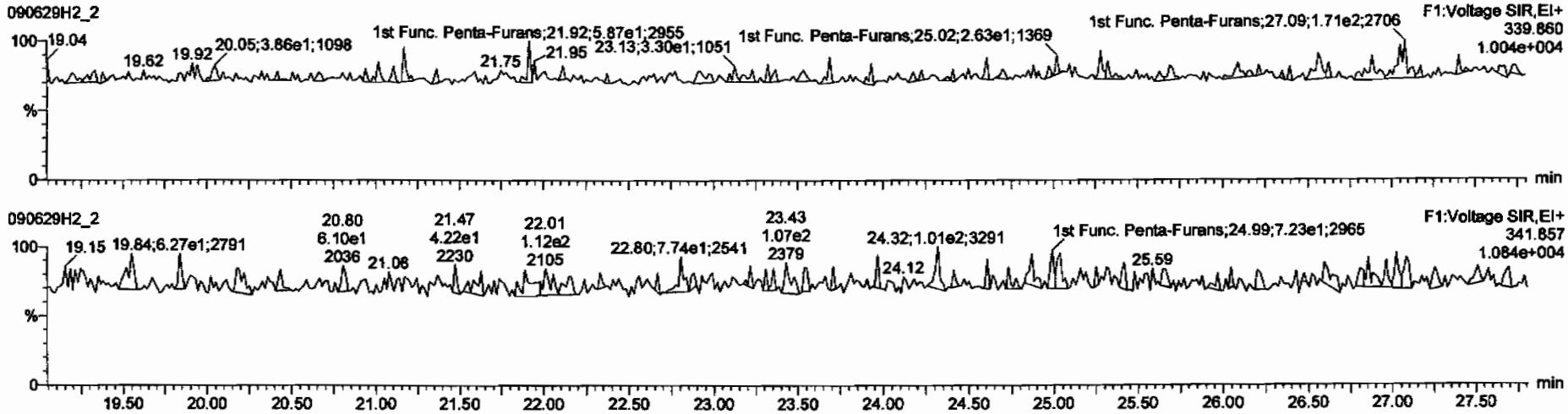

DPE6

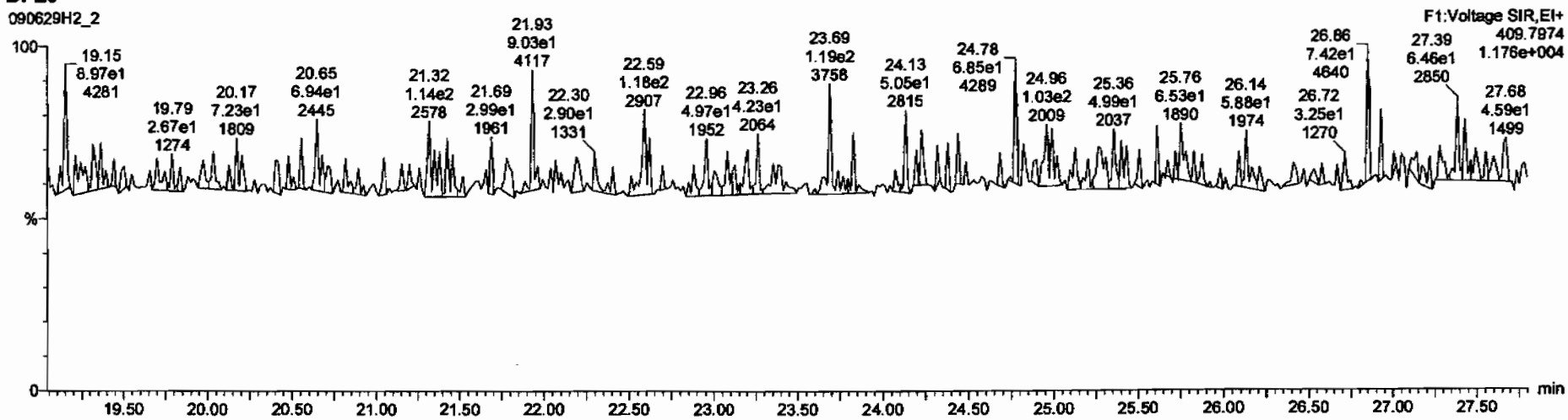

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,7,8-PeCDF

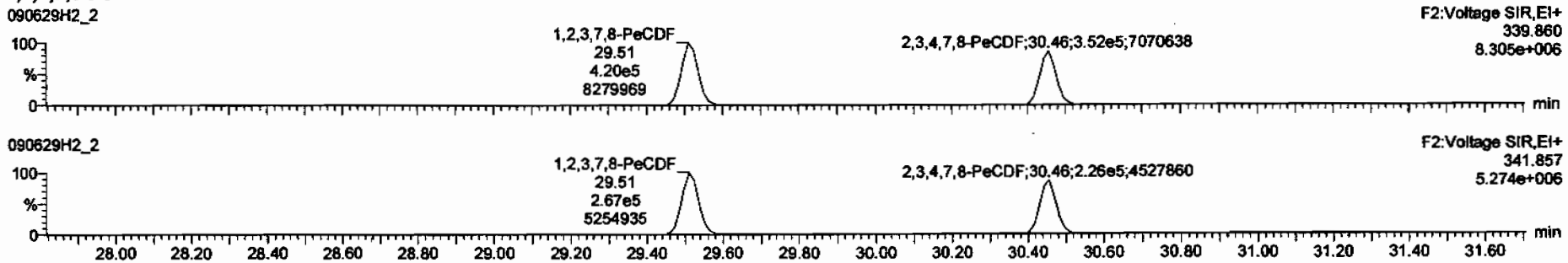

13C-1,2,3,7,8-PeCDF

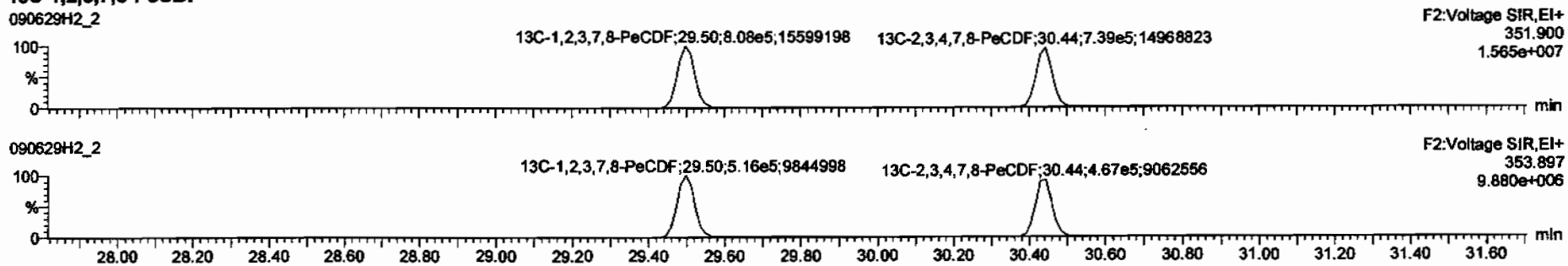

DPE2

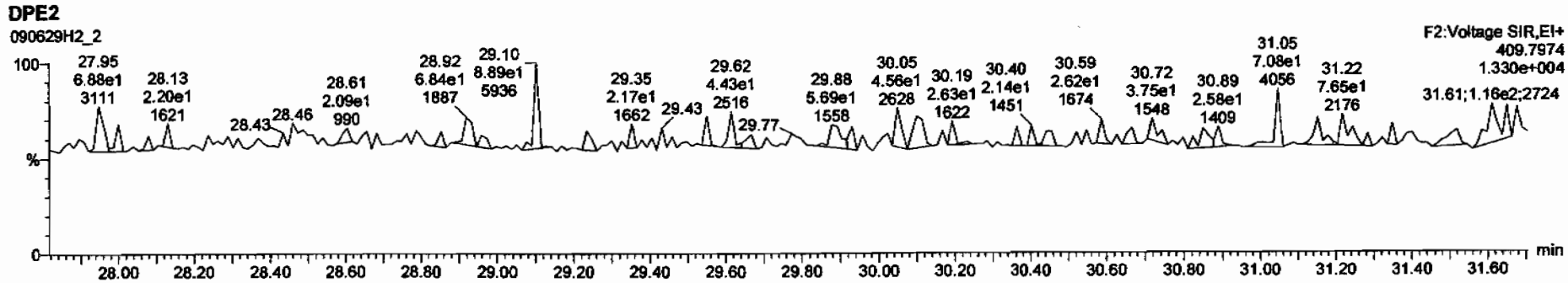

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,7,8-HxCDF

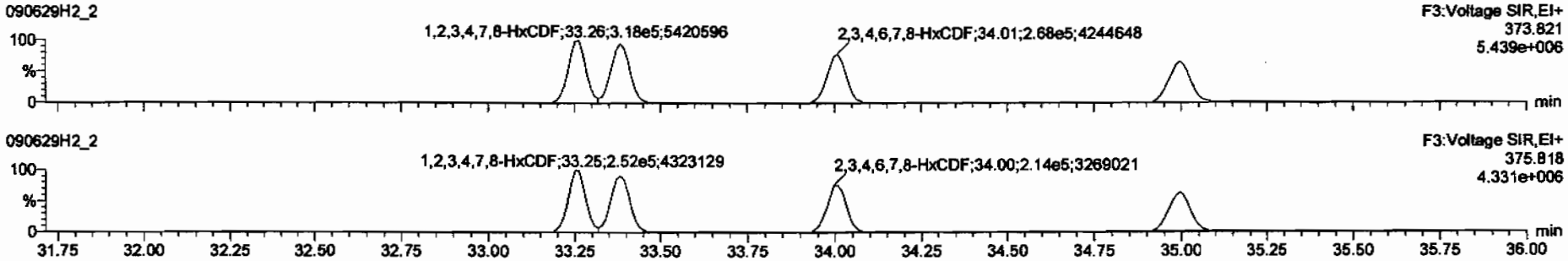

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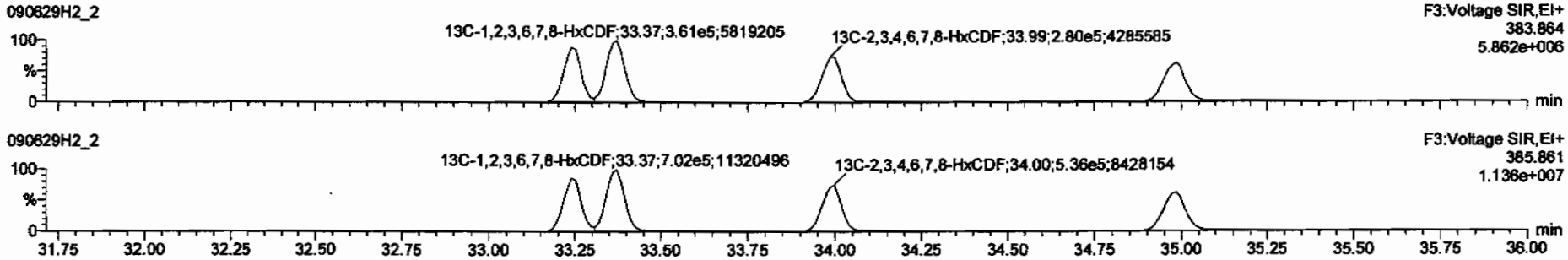

DPE3

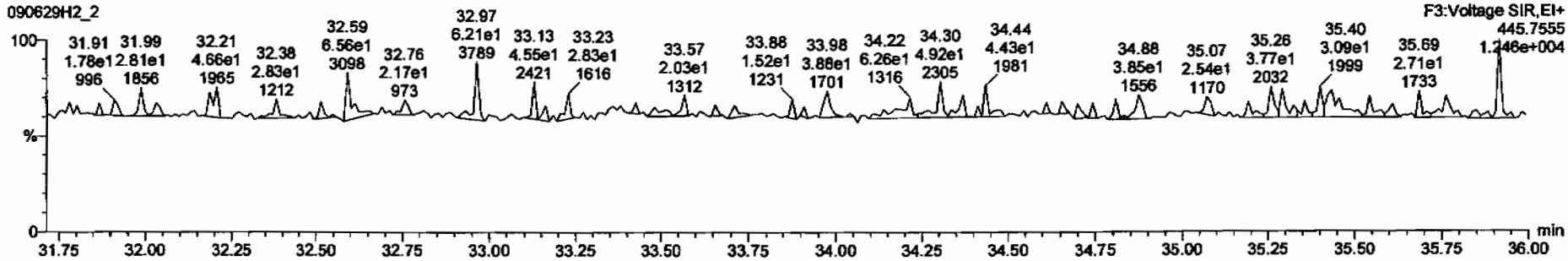

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,6,7,8-HpCDF

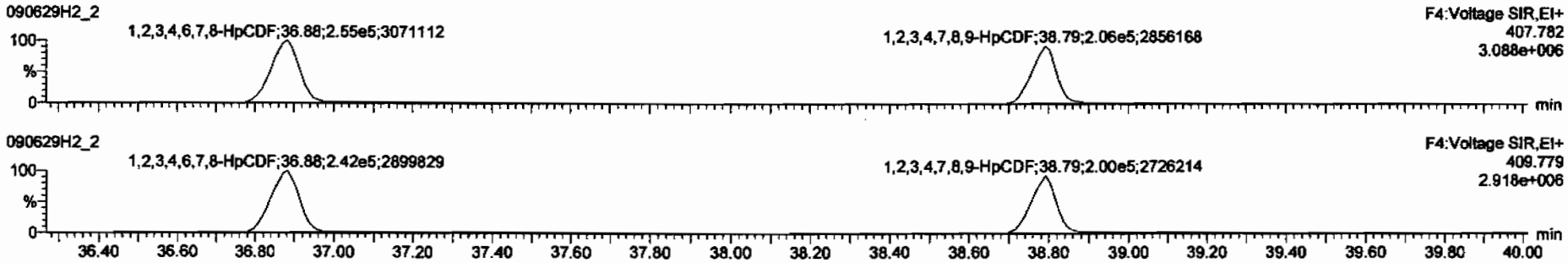

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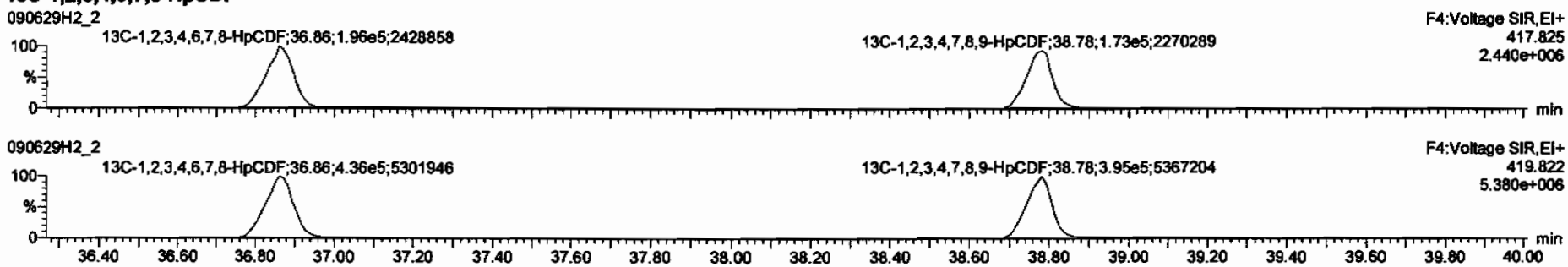

DPE4

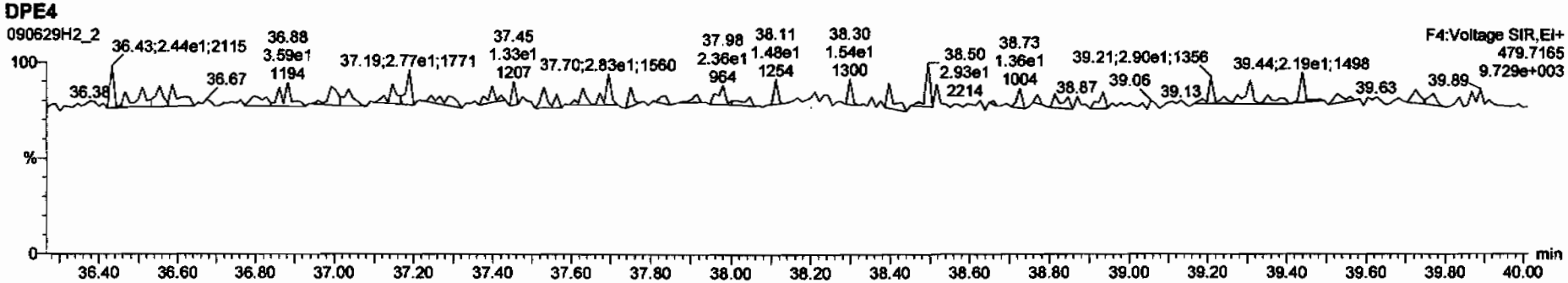

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

OCDF

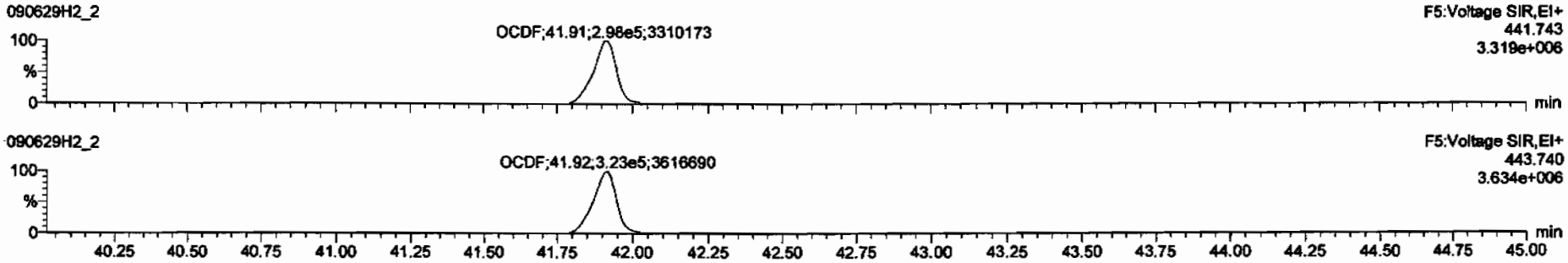

13C-OCDF

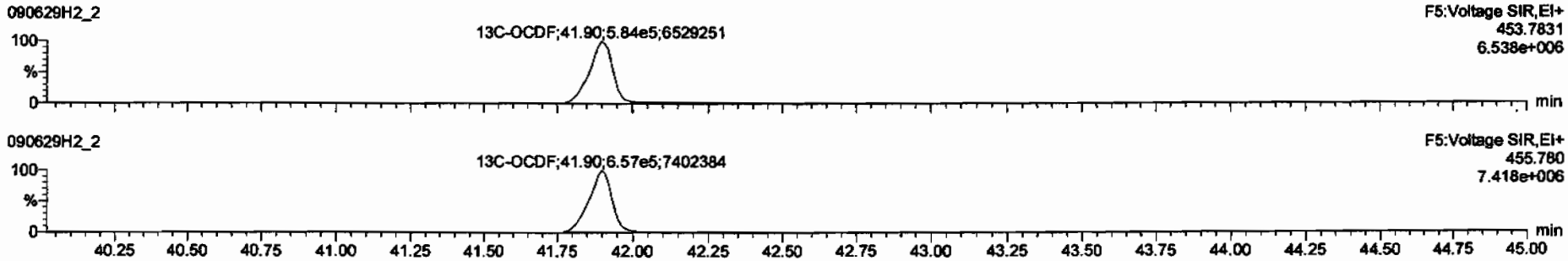

DPE5

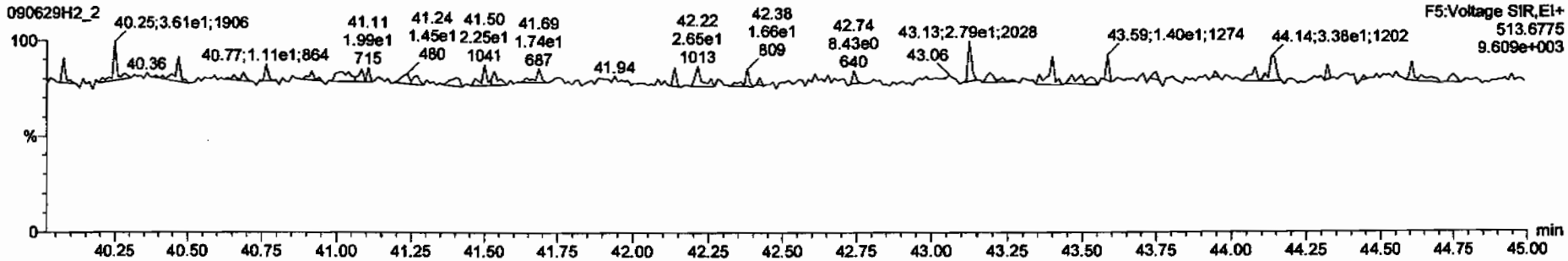

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

PFK1

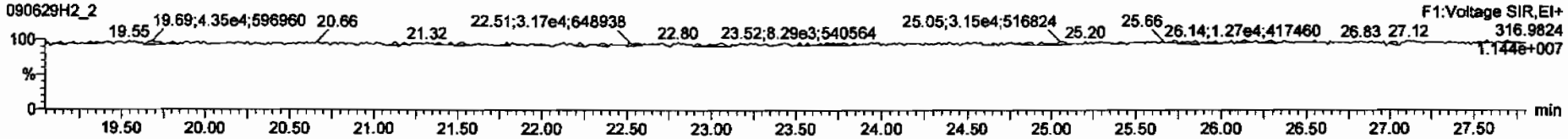

PFK2

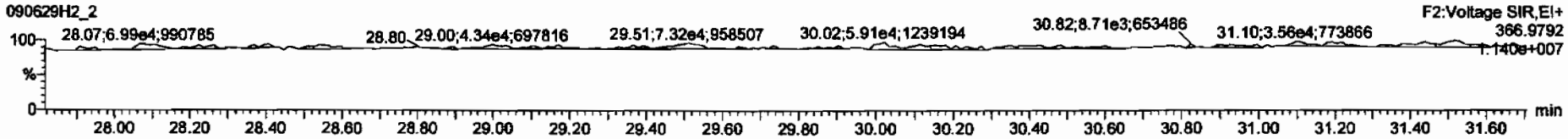

PFK3

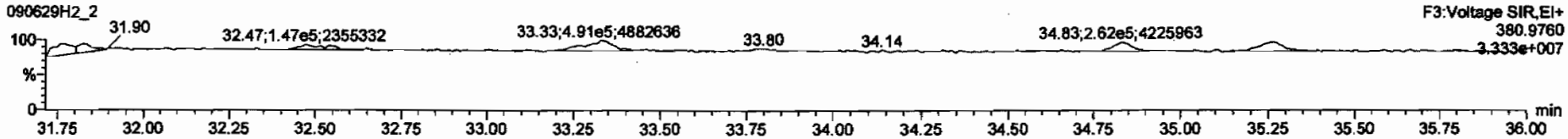

PFK4

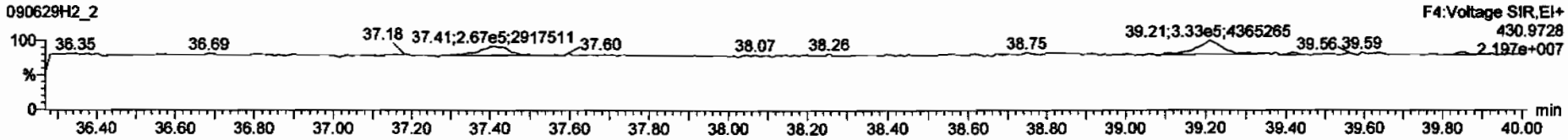

PFK5

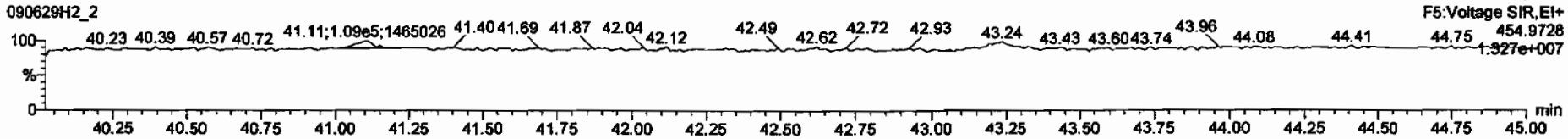

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 3:22:49 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:24:04 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

1	2,3,7,8-TCDD			NO	1.08	10.030					0.0631	
2	1,2,3,7,8-PeCDD			NO	1.03	10.030					0.0846	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.030					0.231	
4	1,2,3,6,7,8-HxCDD	1.53e3	1.29	NO	1.13	10.030	34.30	1.001	0.40173		0.236	~~0.40173~~
5	1,2,3,7,8,9-HxCDD	1.76e3	1.11	NO	1.10	10.030	34.61	1.010	0.44529		0.225	0.44529
6	1,2,3,4,6,7,8-HpCDD	3.27e4	1.00	NO	1.06	10.030	38.22	1.001	9.1484		0.293	9.1484
7	OCDD	2.46e5	0.89	NO	1.18	10.030	41.68	1.001	80.153		0.373	80.153
8	2,3,7,8-TCDF	3.44e3	0.86	NO	1.09	10.030	25.33	1.001	0.43475		0.0886	~~0.43475~~
9	1,2,3,7,8-PeCDF	6.61e2	1.20	YES	1.16	10.030	29.52	1.001	~~0.062718~~	ND	0.0545	0.074109
10	2,3,4,7,8-PeCDF	1.65e3	1.71	NO	1.12	10.030	30.46	1.000	0.22000		0.0532	~~0.22000~~
11	1,2,3,4,7,8-HxCDF	9.63e2	1.32	NO	1.41	10.030	33.26	1.000	0.13870		0.0822	0.13870
12	1,2,3,6,7,8-HxCDF	1.01e3	1.33	NO	1.22	10.030	33.38	1.000	0.14696		0.0875	0.14696
13	2,3,4,6,7,8-HxCDF	8.50e2	1.42	NO	1.28	10.030	34.00	1.000	0.14762		0.116	~~0.14762~~
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.030					0.125	
15	1,2,3,4,6,7,8-HpCDF	6.97e3	1.11	NO	1.69	10.030	36.88	1.001	1.2152		0.178	~~1.2152~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.030					0.198	
17	OCDF	7.47e3	0.81	NO	1.10	10.030	41.91	1.000	1.9796		0.127	~~1.9796~~
18	13C-2,3,7,8-TCDD	1.07e6	0.80	NO	1.01	10.030	26.09	1.023	189.32	94.9	0.299	
19	13C-1,2,3,7,8-PeCDD	8.59e5	0.62	NO	0.827	10.030	30.73	1.205	186.15	93.4	0.262	
20	13C-1,2,3,4,7,8-HxCDD	7.51e5	1.24	NO	0.916	10.030	34.17	0.988	181.89	91.2	0.426	
21	13C-1,2,3,6,7,8-HxCDD	6.76e5	1.25	NO	0.921	10.030	34.28	0.991	162.92	81.7	0.424	
22	13C-1,2,3,4,6,7,8-HpCDD	6.69e5	1.06	NO	0.708	10.030	38.20	1.104	209.67	105	0.698	
23	13C-OCDD	1.04e6	0.90	NO	0.503	10.030	41.66	1.204	458.62	115	0.587	
24	13C-2,3,7,8-TCDF	1.45e6	0.78	NO	0.977	10.030	25.31	0.992	194.76	97.7	0.218	
25	13C-1,2,3,7,8-PeCDF	1.37e6	1.58	NO	0.896	10.030	29.50	1.156	201.20	101	0.388	
26	13C-2,3,4,7,8-PeCDF	1.33e6	1.57	NO	0.900	10.030	30.44	1.193	194.51	97.5	0.386	
27	13C-1,2,3,4,7,8-HxCDF	9.82e5	0.52	NO	1.17	10.030	33.25	0.961	186.31	93.4	0.590	
28	13C-1,2,3,6,7,8-HxCDF	1.12e6	0.52	NO	1.52	10.030	33.37	0.965	163.19	81.8	0.454	
29	13C-2,3,4,6,7,8-HxCDF	8.97e5	0.52	NO	1.25	10.030	34.00	0.983	159.28	79.9	0.552	
30	13C-1,2,3,7,8,9-HxCDF	8.97e5	0.53	NO	1.05	10.030	34.99	1.011	189.07	94.8	0.655	

6/30/09
7/2/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 3:22:49 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:24:04 PM Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

31	13C-1,2,3,4,6,7,8-HpCDF	6.77e5	0.45	NO	0.868	10.030	36.86	1.066	173.14	86.8	0.708	
32	13C-1,2,3,4,7,8,9-HpCDF	6.15e5	0.44	NO	0.727	10.030	38.77	1.121	187.89	94.2	0.846	
33	13C-OCDF	1.37e6	0.90	NO	0.760	10.030	41.90	1.211	401.29	101	0.334	
34	37Cl-2,3,7,8-TCDD	2.64e5			0.668	10.030	26.11	1.023	70.732	88.7	0.0836	
35	13C-1,2,3,4-TCDD	1.11e6	0.79	NO	1.00	10.030	25.51	0.000	199.40	100	0.303	
36	13C-1,2,3,4-TCDF	1.52e6	0.78	NO	1.00	10.030	24.09	0.000	199.40	100	0.213	
37	13C-1,2,3,7,8,9-HxCDD	8.99e5	1.26	NO	1.00	10.030	34.59	0.000	199.40	100	0.391	
38	Total Tetra-Dioxins				1.08	10.030					0.0293	
39	Total Penta-Dioxins				1.03	10.030			0.00000 ND		0.0316	0.19209 ✓
40	Total Hexa-Dioxins				1.13	10.030			3.2917		0.220	~~3.2917~~
41	Total Hepta-Dioxins				1.06	10.030			18.192		0.293	~~18.192~~
42	Total Tetra-Furans				1.09	10.030			1.2765		0.0886	~~1.2765~~
43	1st Func. Penta-Furans				1.16	10.030			~~0.35719~~ 1.41		0.0327	~~0.35719~~ 1.55
44	Total Penta-Furans				1.16	10.030			~~1.0496~~		0.0529	~~4.1882~~
45	Total Hexa-Furans				1.28	10.030			1.8988		0.102	~~4.8988~~
46	Total Hepta-Furans				1.69	10.030			2.7410		0.176	~~2.7410~~

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 3:22:49 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:24:04 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

Tetra-Dioxins

Penta-Dioxins

	Total Penta-Dioxins	28.62	8.879e3	7.650e3	4.015e2	5.244e2	0.77	YES	0.000e0	0.00000	0.19209	0.0846

Hexa-Dioxins

	Total Hexa-Dioxins	32.58	4.793e4	3.717e4	2.470e3	2.053e3	1.20	NO	4.524e3	1.1233	1.1233	0.220
	Total Hexa-Dioxins	33.46	3.923e4	3.129e4	3.025e3	2.297e3	1.32	NO	5.322e3	1.3214	1.3214	0.220
	1,2,3,6,7,8-HxCDD	34.30	1.816e4	9.988e3	8.622e2	6.707e2	1.29	NO	1.533e3	0.40173	0.40173	0.236
	1,2,3,7,8,9-HxCDD	34.61	1.407e4	1.324e4	9.254e2	8.306e2	1.11	NO	1.756e3	0.44529	0.44529	0.225

Hepta-Dioxins

	Total Hepta-Dioxins	37.30	1.852e5	1.962e5	1.641e4	1.589e4	1.03	NO	3.230e4	9.0433	9.0433	0.293
	1,2,3,4,6,7,8-HpCDD	38.22	2.384e5	2.292e5	1.638e4	1.630e4	1.00	NO	3.268e4	9.1484	9.1484	0.293

Tetra-Furans

	Total Tetra-Furans	23.40	7.800e3	8.122e3	6.081e2	7.242e2	0.84	NO	1.332e3	0.16845	0.16845	0.0886
	Total Tetra-Furans	24.53	1.101e4	7.948e3	5.275e2	6.761e2	0.78	NO	1.204e3	0.15218	0.15218	0.0886
	2,3,7,8-TCDF	25.33	2.456e4	2.823e4	1.592e3	1.847e3	0.86	NO	3.439e3	0.43475	0.43475	0.0886
	Total Tetra-Furans	25.66	2.948e4	3.275e4	1.864e3	2.257e3	0.83	NO	4.122e3	0.52109	0.52109	0.0886

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 3:22:49 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:24:04 PM Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

Penta-Furans function 1

1st Func. Penta-Furans	27.10	2.649e4	1.925e4	1.696e3	1.115e3	1.52	NO	2.811e3	0.35719	0.35719	0.0327

Penta-Furans

Total Penta-Furans	28.43	1.905e4	1.269e4	1.191e3	7.798e2	1.53	NO	1.971e3	0.25047	0.25047	0.0529
Total Penta-Furans	28.58	4.182e4	2.570e4	2.866e3	1.691e3	1.70	NO	4.557e3	0.57914	0.57914	0.0529
1,2,3,7,8-PeCDF	29.52	8.262e3	9.393e3	3.598e2	3.009e2	1.20	YES	6.606e2	0.00000	0.074109	0.0545
Total Penta-Furans	30.36	7.526e3	8.520e3	3.083e2	2.922e2	1.06	YES	0.000e0	0.00000	0.064461	0.0529
2,3,4,7,8-PeCDF	30.46	1.962e4	1.126e4	1.038e3	6.071e2	1.71	NO	1.645e3	0.22000	0.22000	0.0532

Hexa-Furans

Total Hexa-Furans	32.02	1.912e4	1.657e4	9.206e2	8.214e2	1.12	NO	1.742e3	0.27882	0.27882	0.102
Total Hexa-Furans	32.20	5.214e4	4.457e4	2.801e3	2.361e3	1.19	NO	5.162e3	0.82624	0.82624	0.102
Total Hexa-Furans	32.77	2.004e4	2.083e4	1.173e3	1.079e3	1.09	NO	2.252e3	0.36044	0.36044	0.102
1,2,3,4,7,8-HxCDF	33.26	1.494e4	9.150e3	5.489e2	4.145e2	1.32	NO	9.634e2	0.13870	0.13870	0.0822
1,2,3,6,7,8-HxCDF	33.38	9.684e3	6.964e3	5.750e2	4.313e2	1.33	NO	1.006e3	0.14696	0.14696	0.0875
2,3,4,6,7,8-HxCDF	34.00	9.014e3	5.697e3	4.991e2	3.507e2	1.42	NO	8.498e2	0.14762	0.14762	0.116

Hepta-Furans

1,2,3,4,6,7,8-HpCDF	36.88	4.478e4	4.223e4	3.662e3	3.310e3	1.11	NO	6.973e3	1.2152	1.2152	0.178
Total Hepta-Furans	37.52	5.130e4	6.008e4	4.344e3	4.008e3	1.08	NO	8.352e3	1.5258	1.5258	0.176

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

2,3,7,8-TCDD

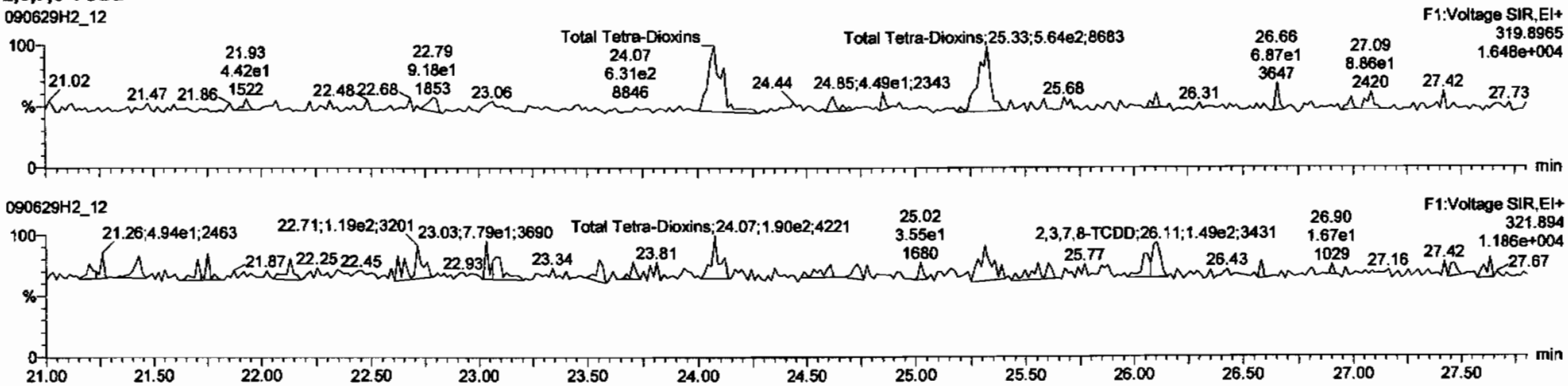

13C-2,3,7,8-TCDD

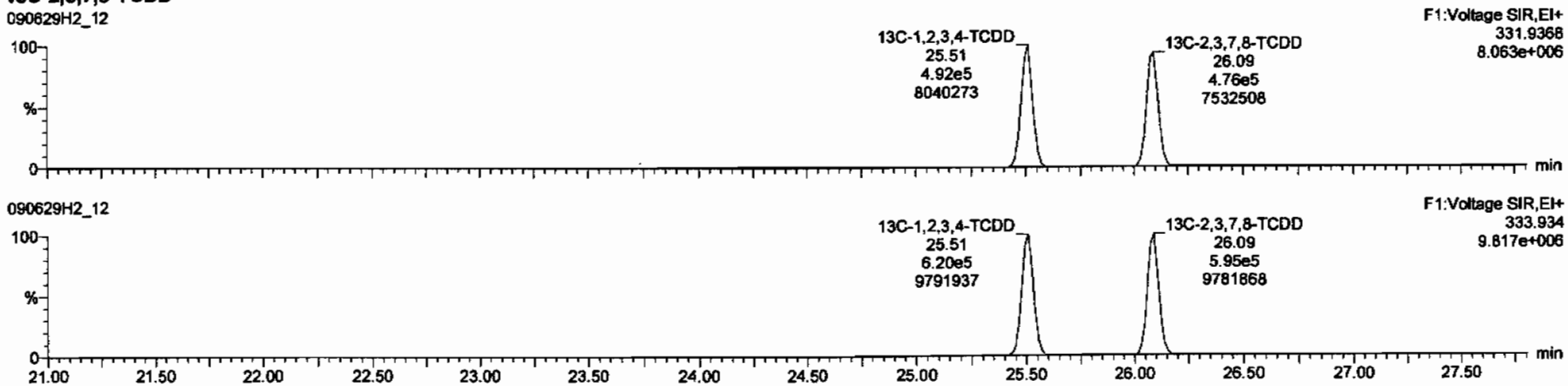

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Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

37Cl-2,3,7,8-TCDD

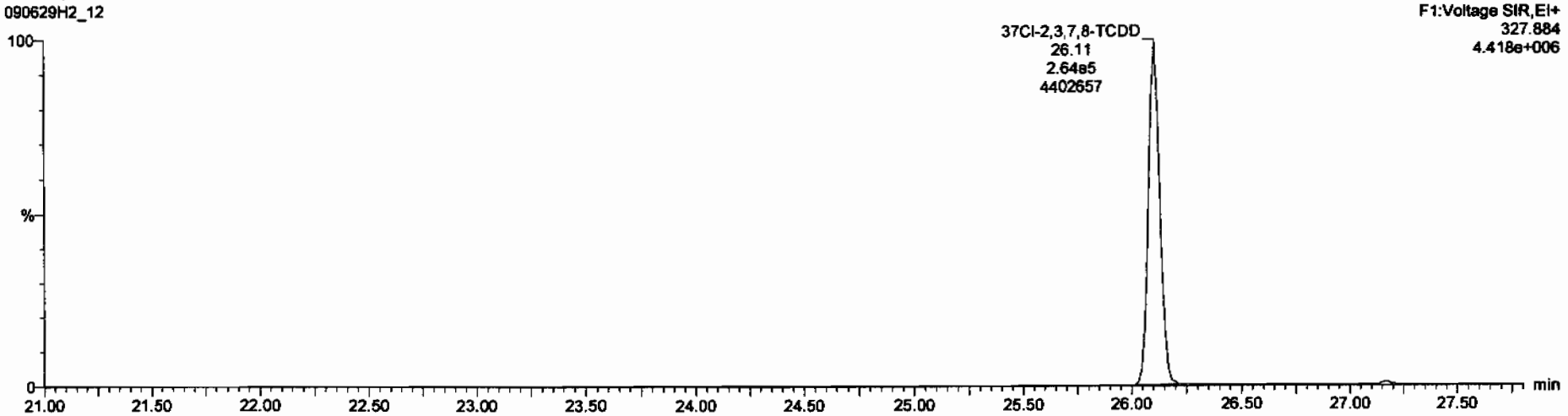

13C-1,2,3,4-TCDD

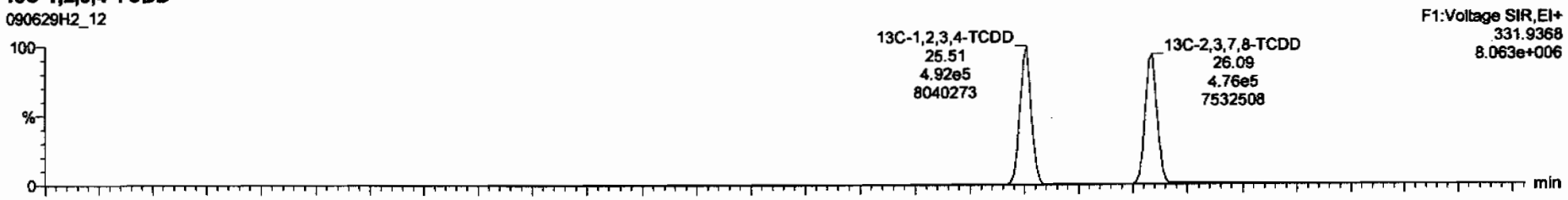

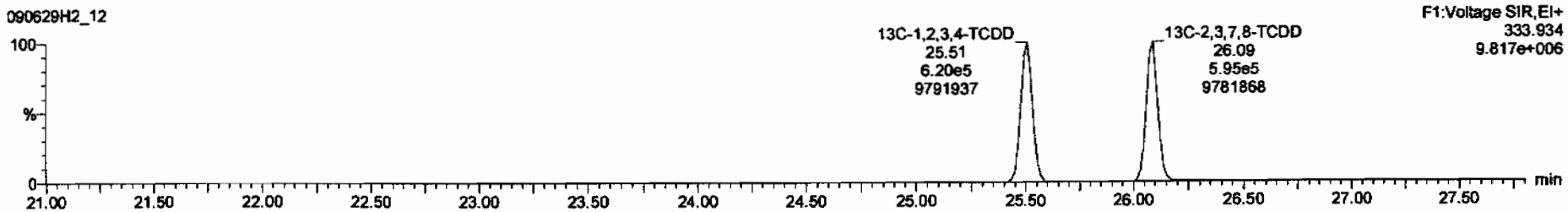

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Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

1,2,3,7,8-PeCDD

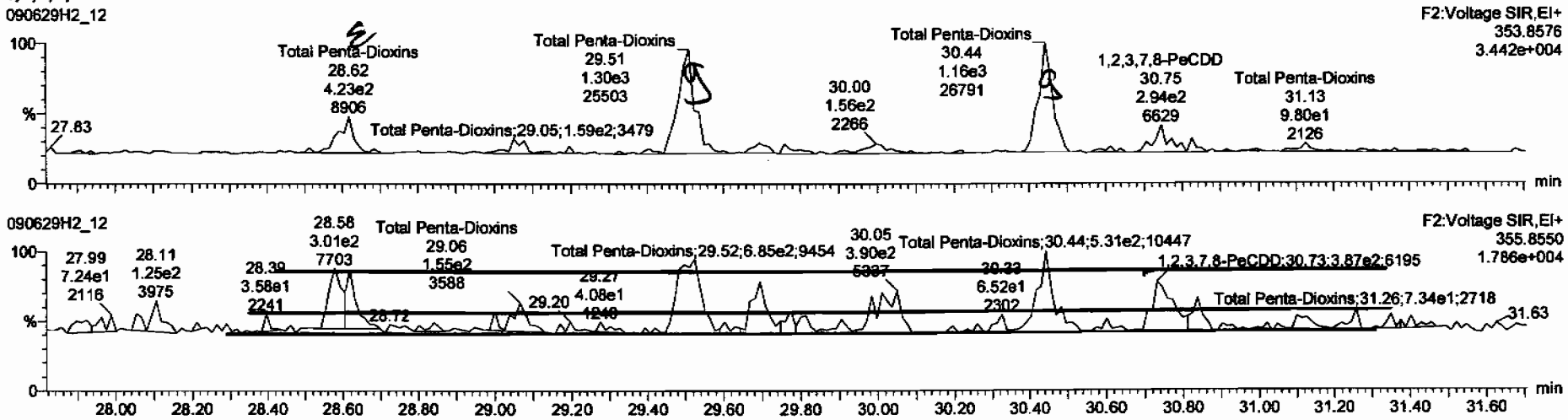

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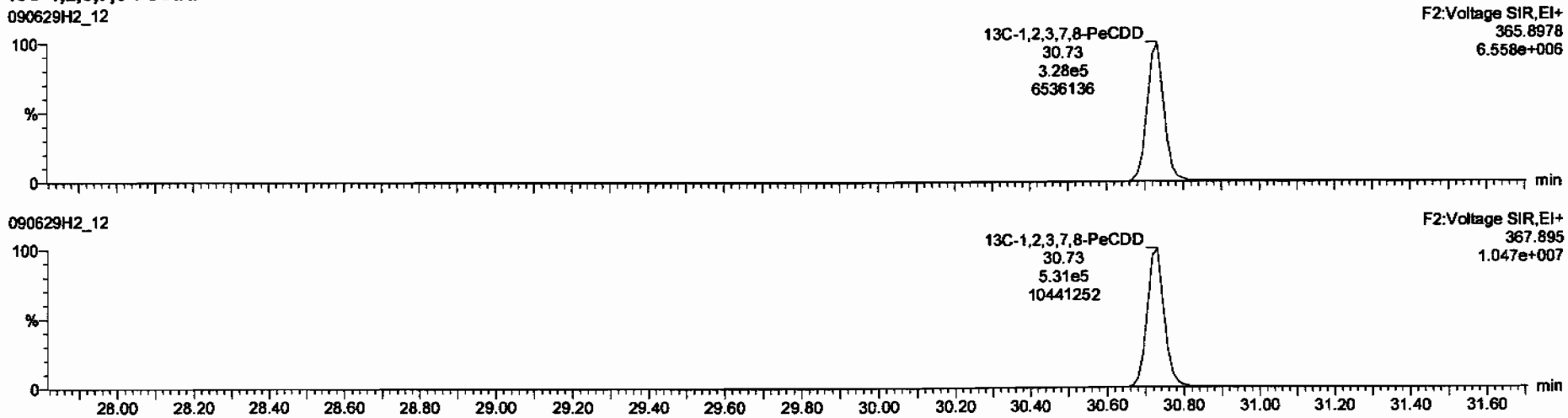

TargetLynx - 090629f2-12.qld * - [Chromatogram]

090629H2_12 - 31837_2207_001 CAMO-09-6006 11.31 - CAMO-09-6006

Total Penta-Dioxins	28.62	4.015e2	5.244e2	0.77	YES	0.19209	0.00000

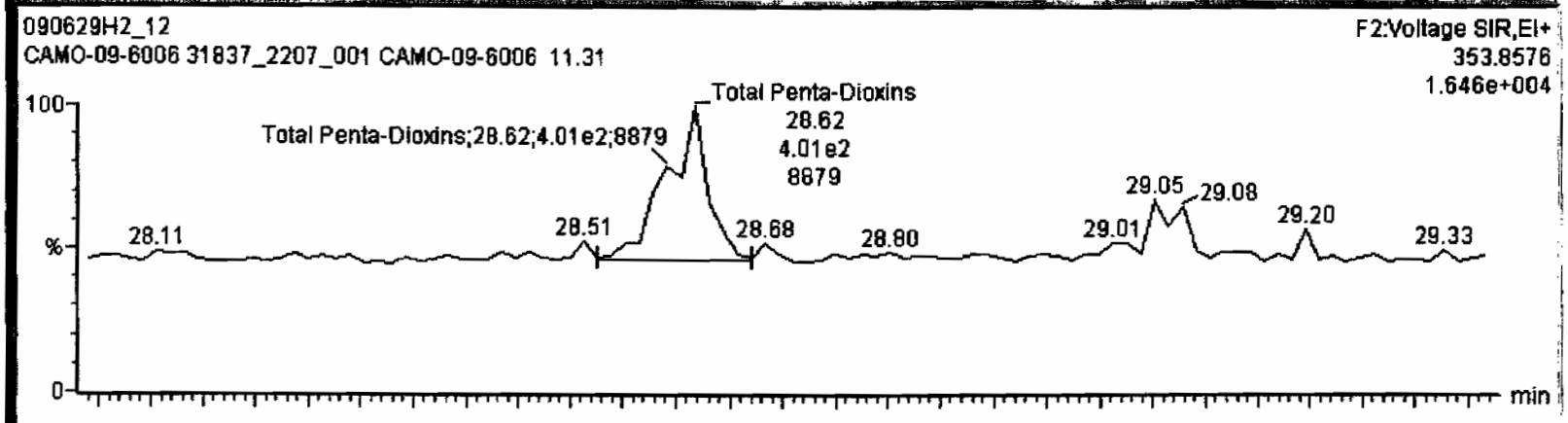

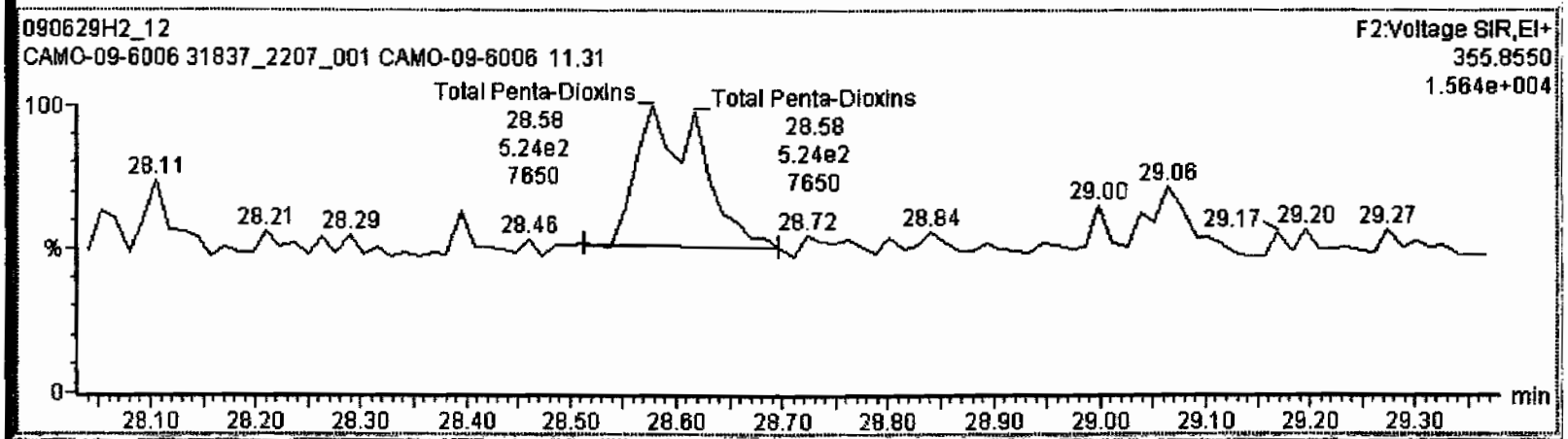

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

1,2,3,4,7,8-HxCDD

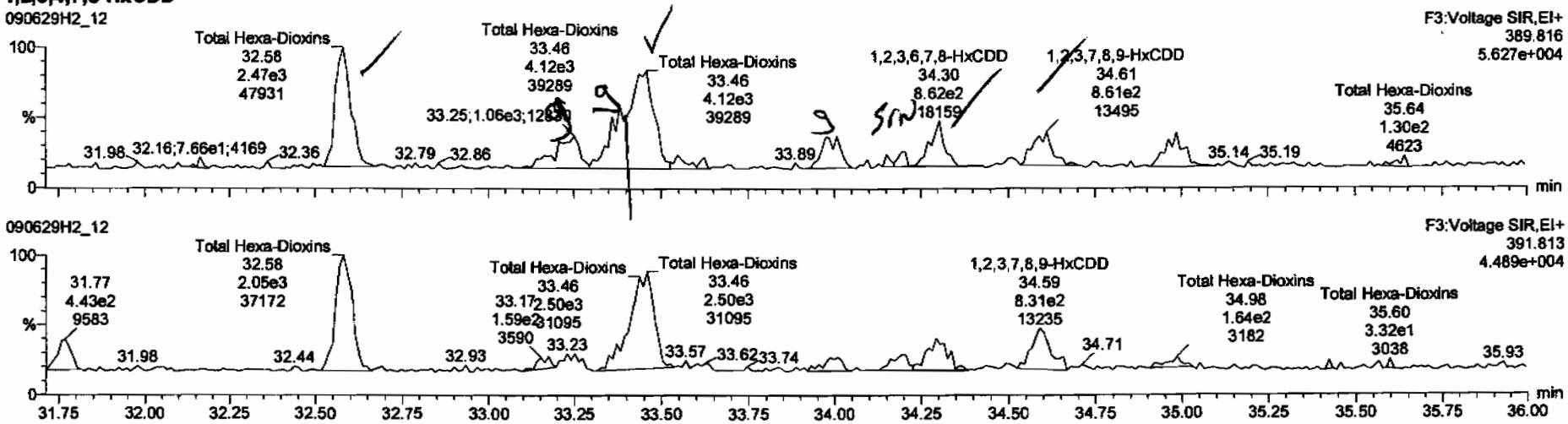

13C-1,2,3,4,7,8-HxCDD

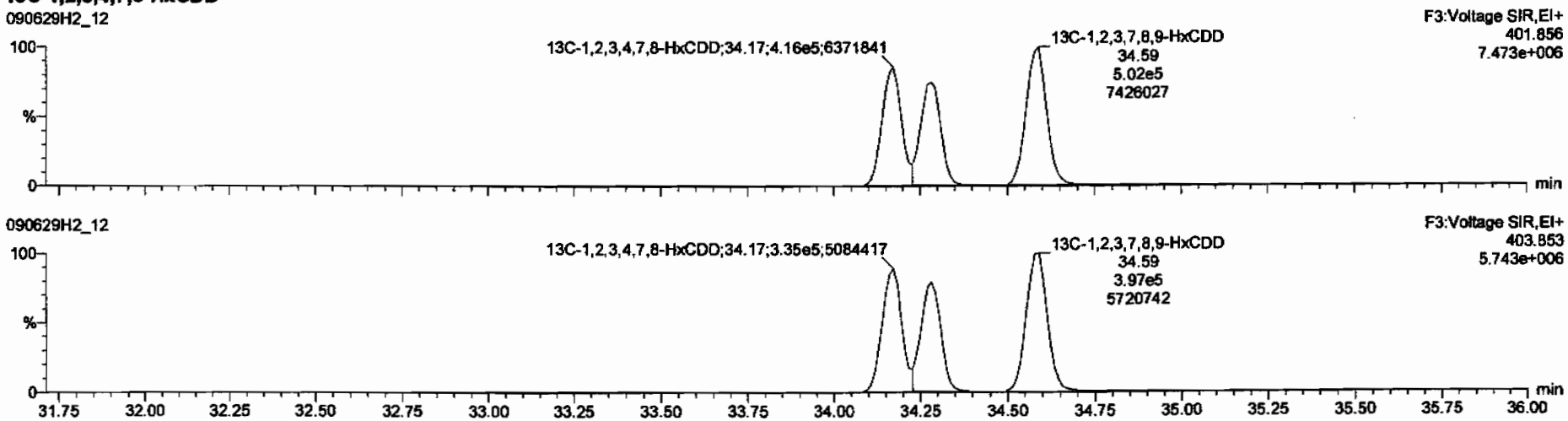

Targetlynx - 090629f2-12.qld * - [Chromatogram]

090629H2_12 - 31837_2207_001 CAMO-09-6006 11.31 - CAMO-09-6006

Total Hexa-Dioxins	32.58	2.470e3	2.053e3	1.20	NO	1.1233	1.1233
Total Hexa-Dioxins	33.46	3.025e3	2.297e3	1.32	NO	1.3214	1.3214
1,2,3,6,7,8-HxCDD	34.30	8.622e2	6.707e2	1.29	NO	0.40173	0.40173
1,2,3,7,8,9-HxCDD	34.61	9.254e2	8.306e2	1.11	NO	0.44529	0.44529

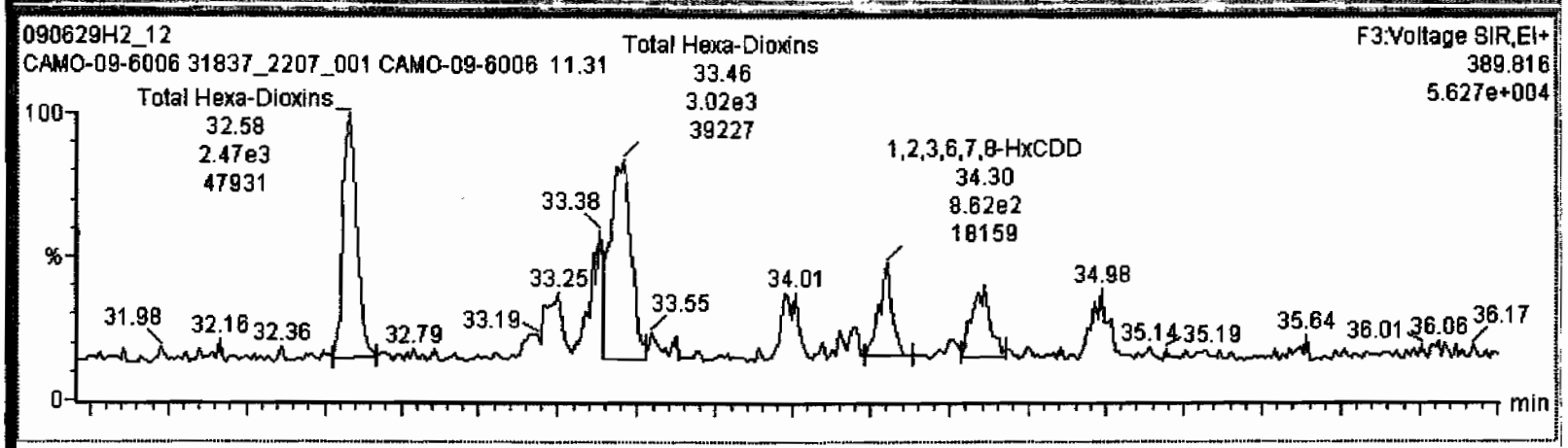

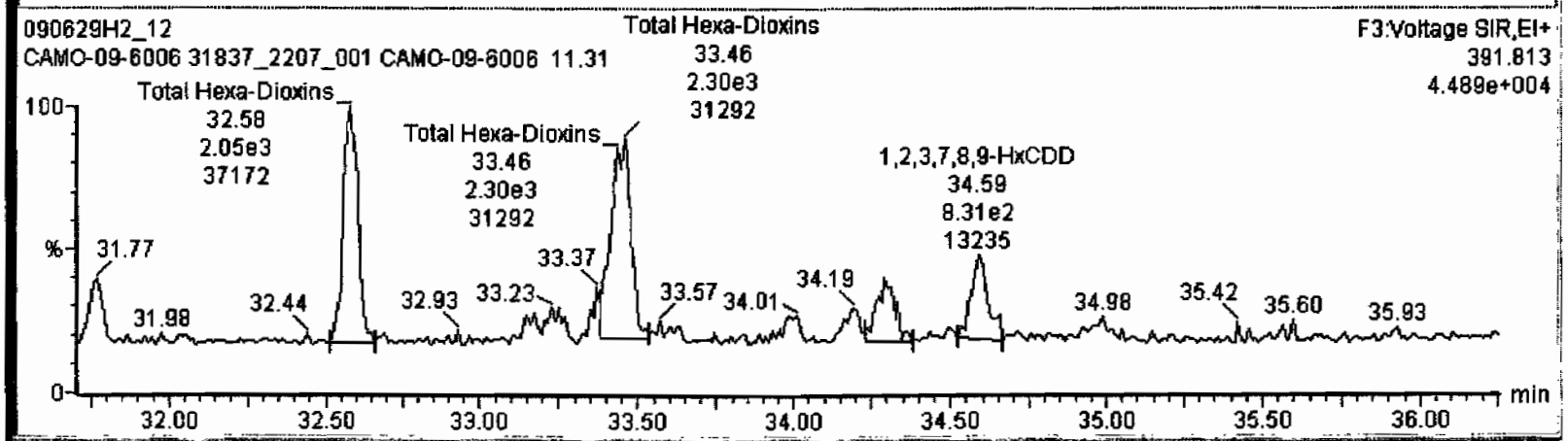

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Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

1,2,3,4,6,7,8-HpCDD

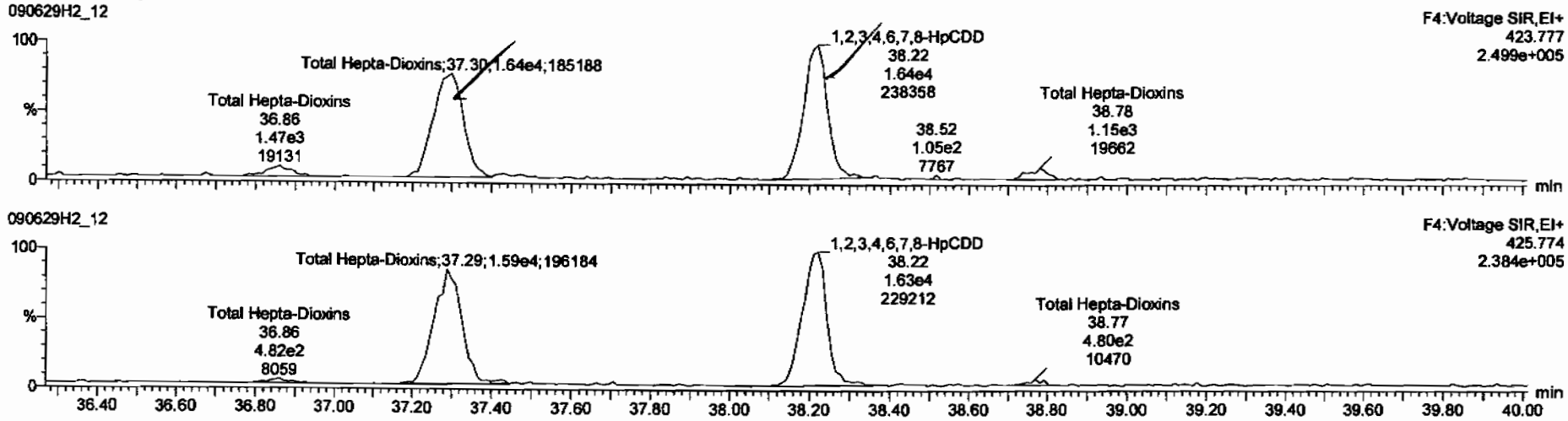

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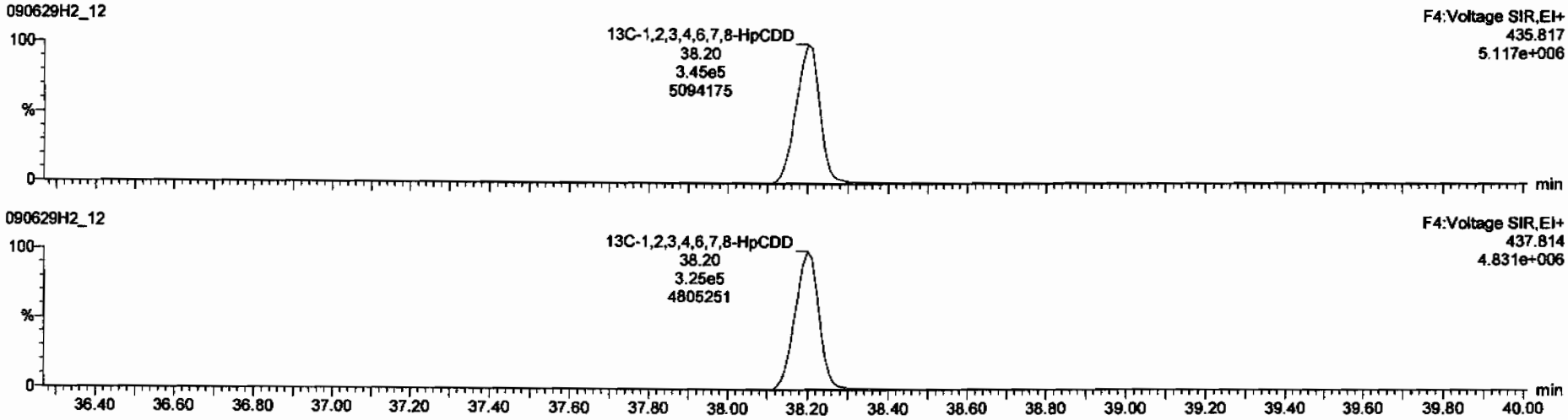

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Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

OCDD

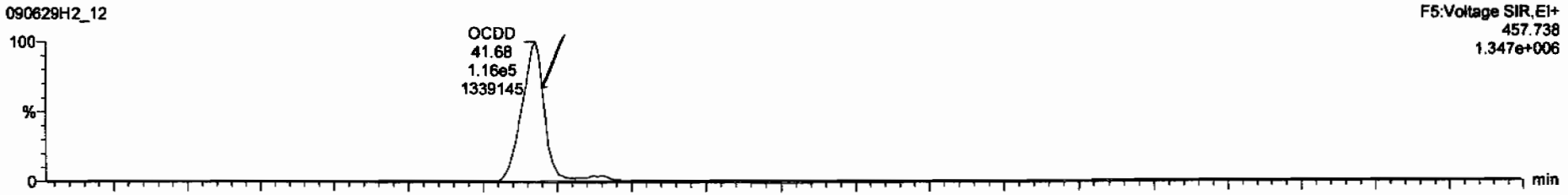

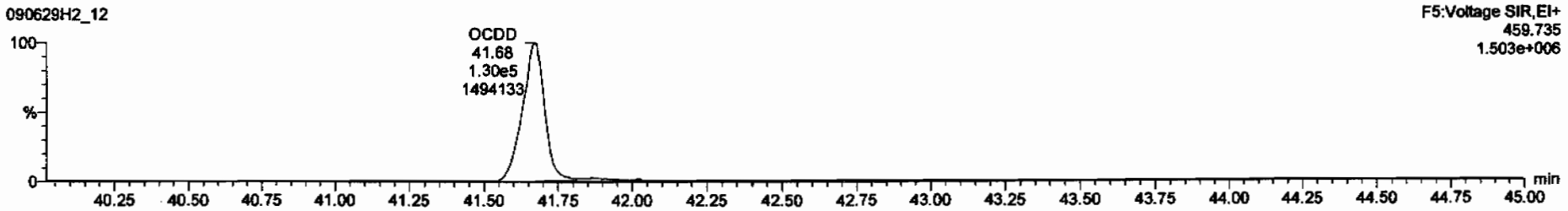

13C-OCDD

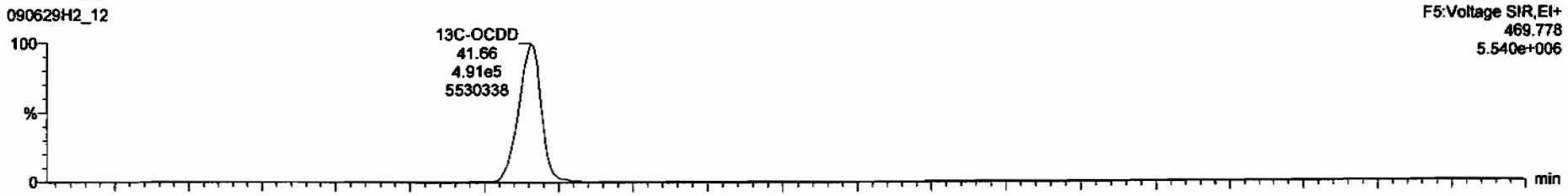

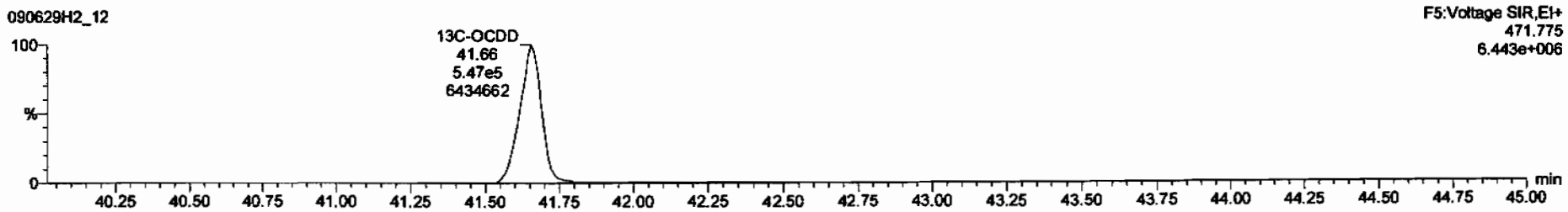

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Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

2,3,7,8-TCDF

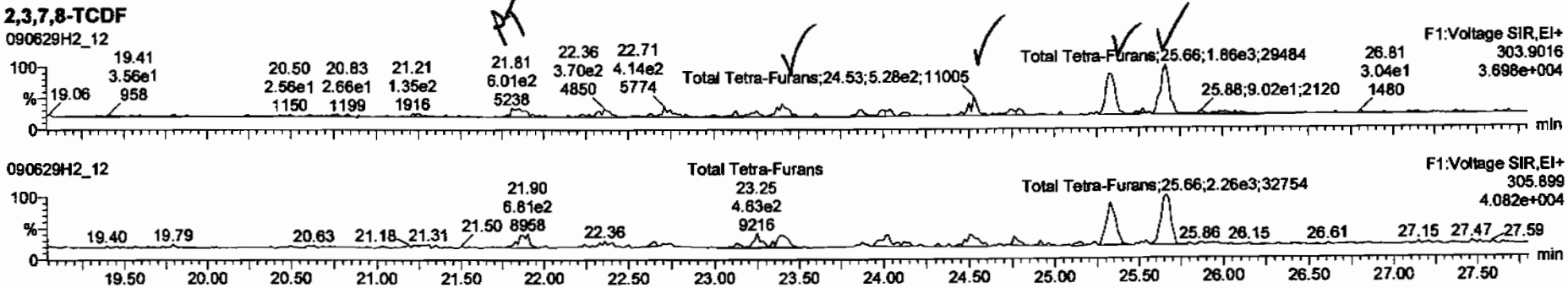

13C-2,3,7,8-TCDF

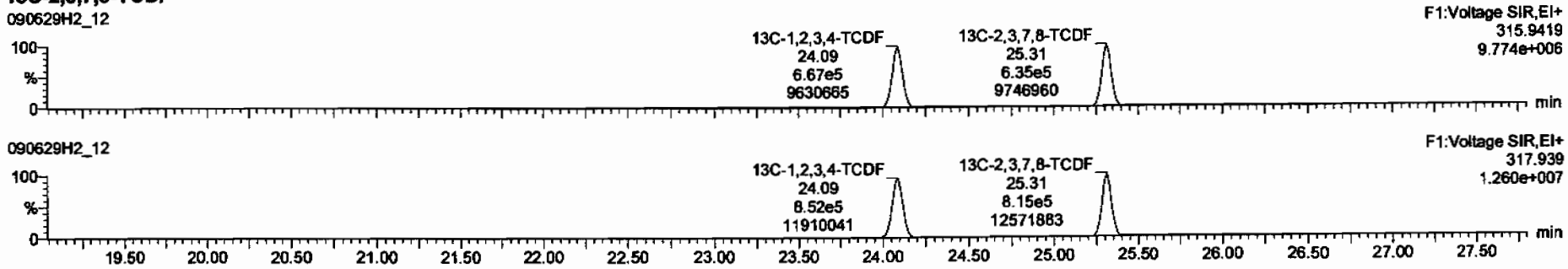

DPE1

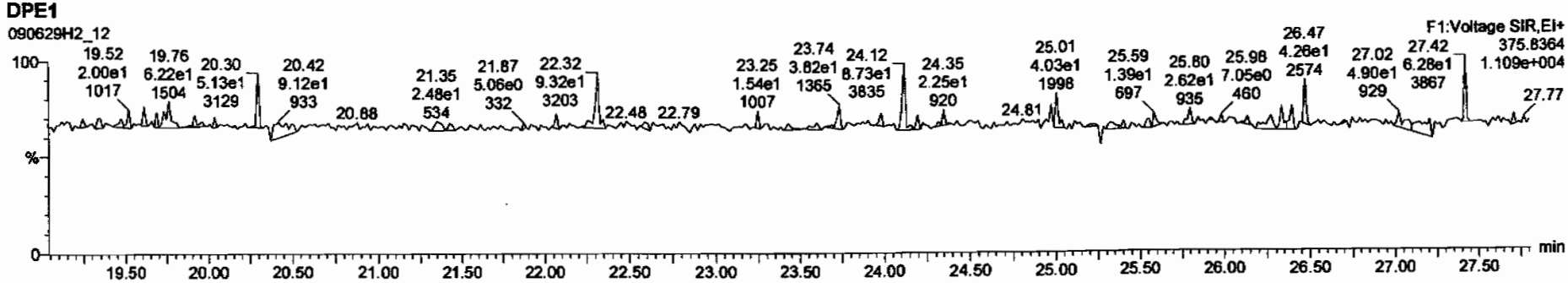

TargetLynx - 090629f2-12.qld * - [Chromatogram]

090629H2_12 - 31837_2207_001 CAMO-09-6006 11.31 - CAMO-09-6006

Total Tetra-Furans	23.40	6.081e2	7.242e2	0.84	NO	0.16845	0.16845
Total Tetra-Furans	24.53	5.275e2	6.761e2	0.78	NO	0.15218	0.15218
2,3,7,8-TCDF	25.33	1.592e3	1.847e3	0.86	NO	0.43475	0.43475
Total Tetra-Furans	25.66	1.864e3	2.257e3	0.83	NO	0.52109	0.52109

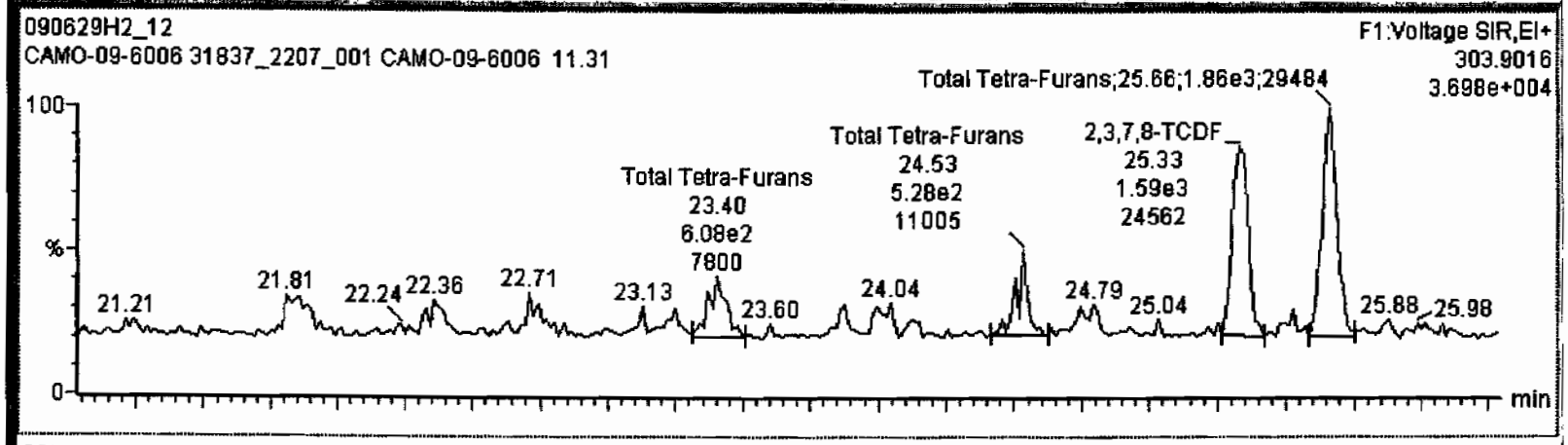

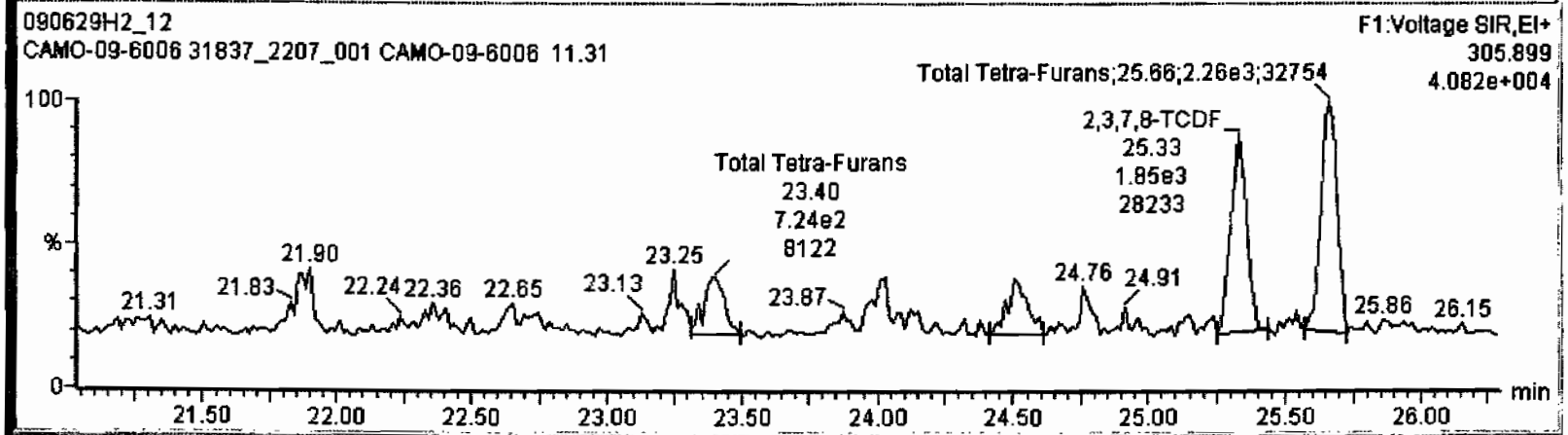

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

1st Func. Penta-Furans

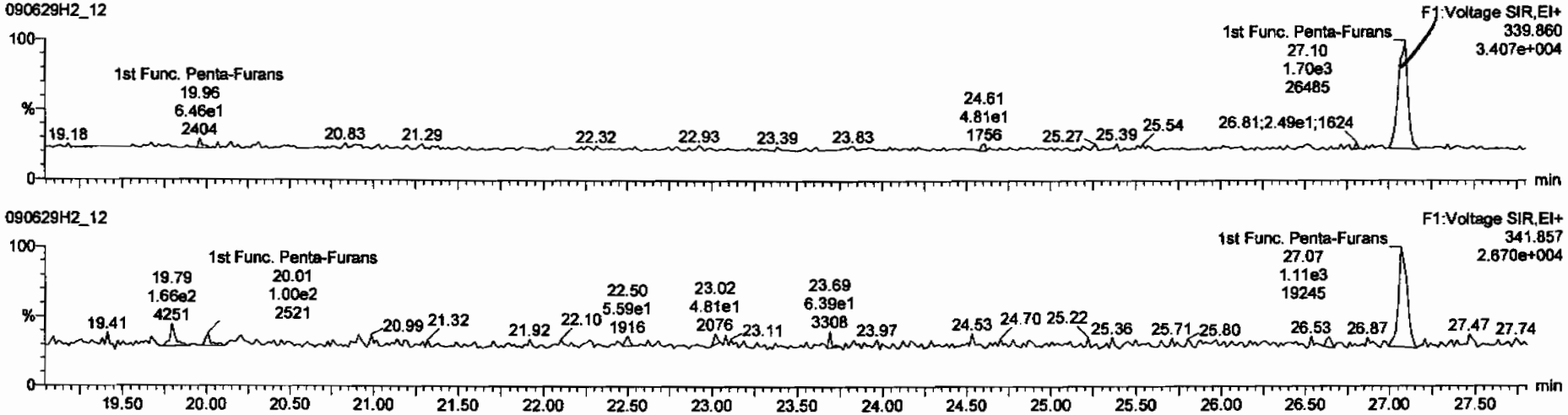

DPE6

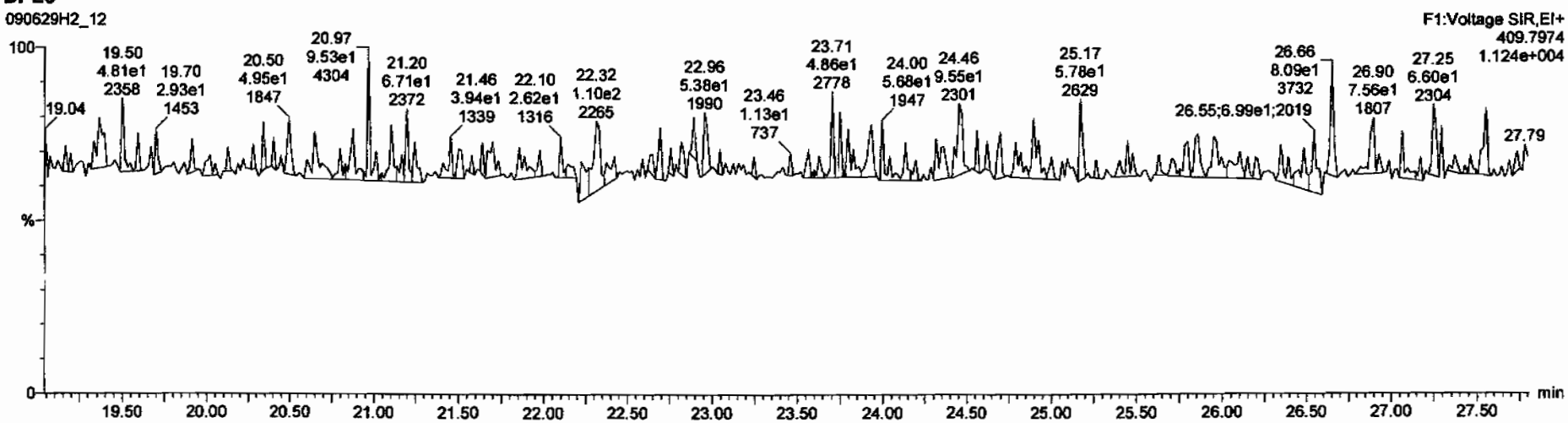

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Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

1,2,3,7,8-PeCDF

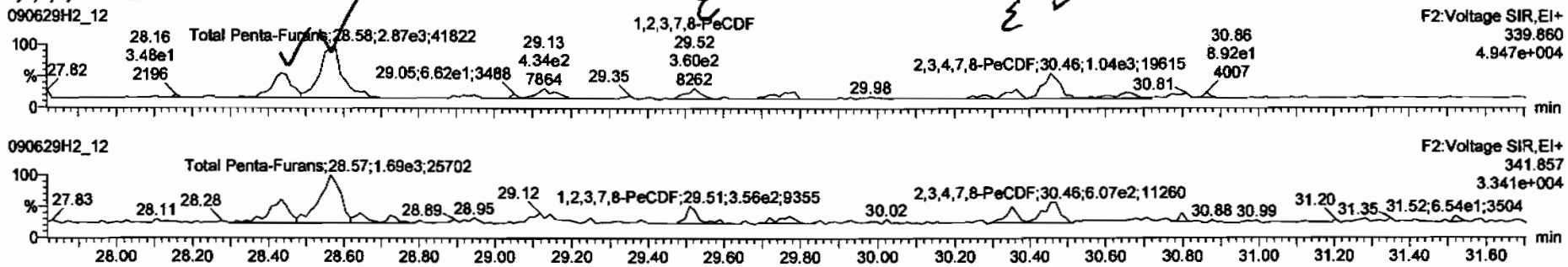

13C-1,2,3,7,8-PeCDF

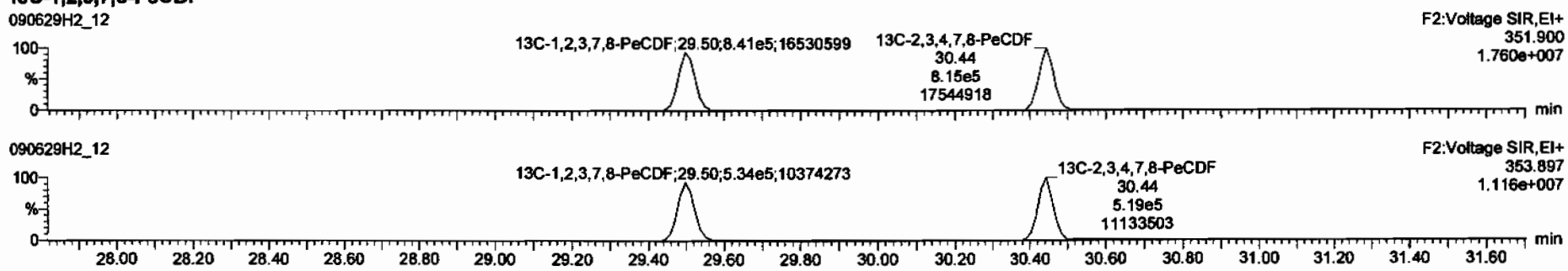

DPE2

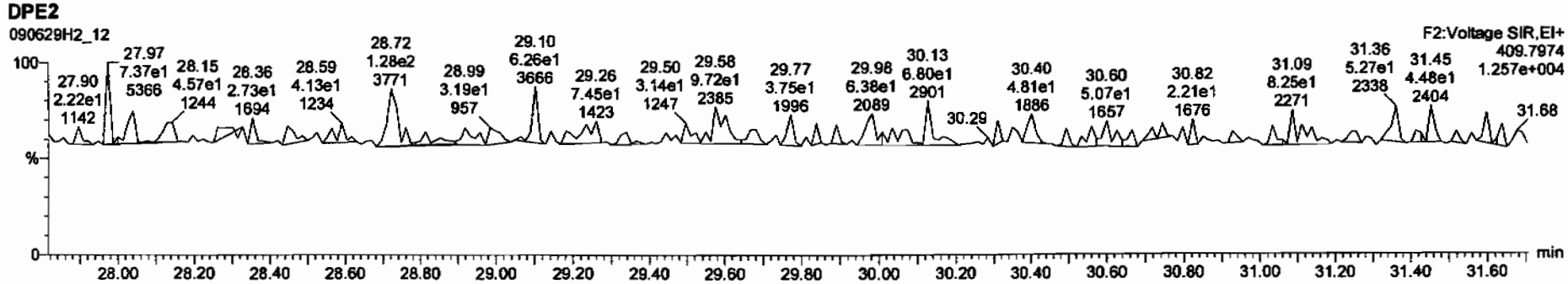

TargetLynx - 090629f2-12.qld * [Chromatogram]

090629H2_12 - 31837_2207_001 CAMO-09-6006 11.31 - CAMO-09-6006

Total Penta-Furans	28.43	1.191e3	7.798e2	1.53	NO	0.25047	0.25047
Total Penta-Furans	28.58	2.866e3	1.691e3	1.70	NO	0.57914	0.57914
1,2,3,7,8-PeCDF	29.52	3.598e2	3.009e2	1.20	YES	0.074109	0.00000
Total Penta-Furans	30.36	3.083e2	2.922e2	1.06	YES	0.064461	0.00000
2,3,4,7,8-PeCDF	30.46	1.038e3	6.071e2	1.71	NO	0.22000	0.22000

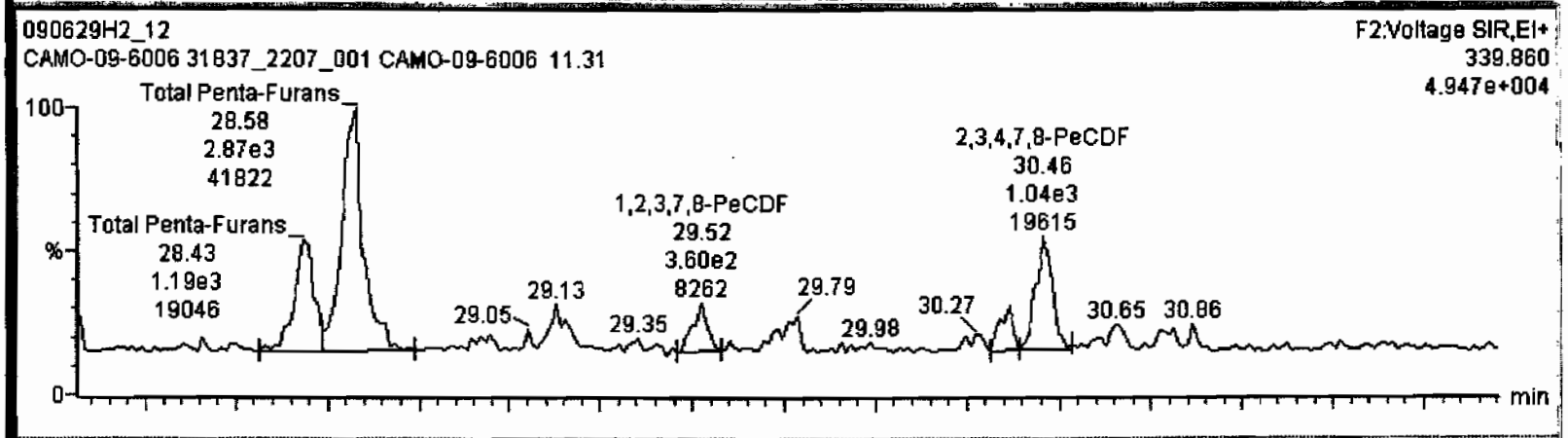

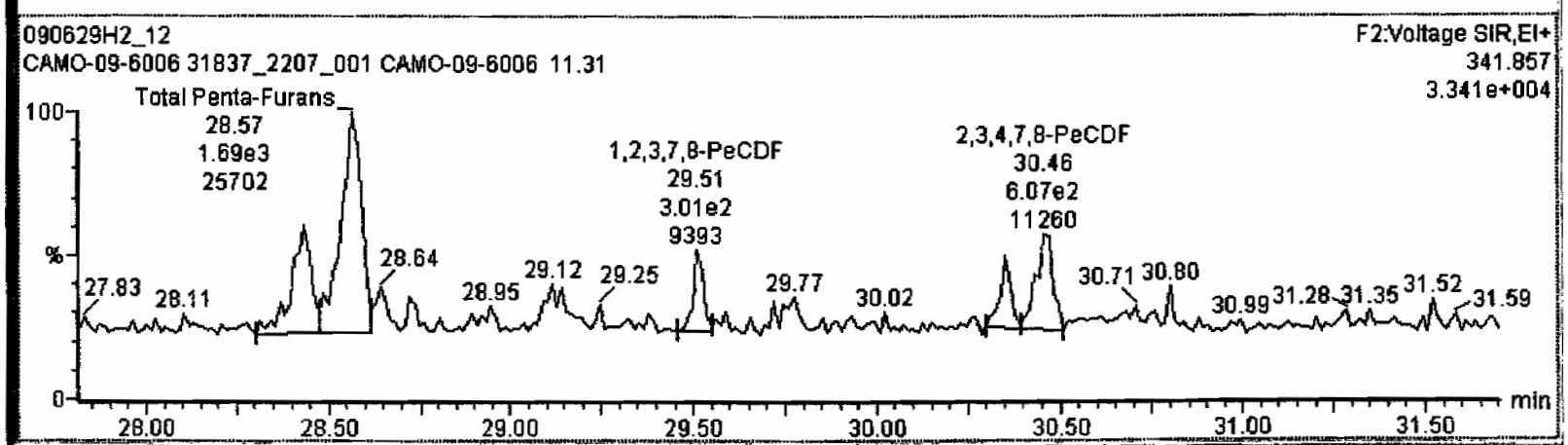

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

1,2,3,4,7,8-HxCDF

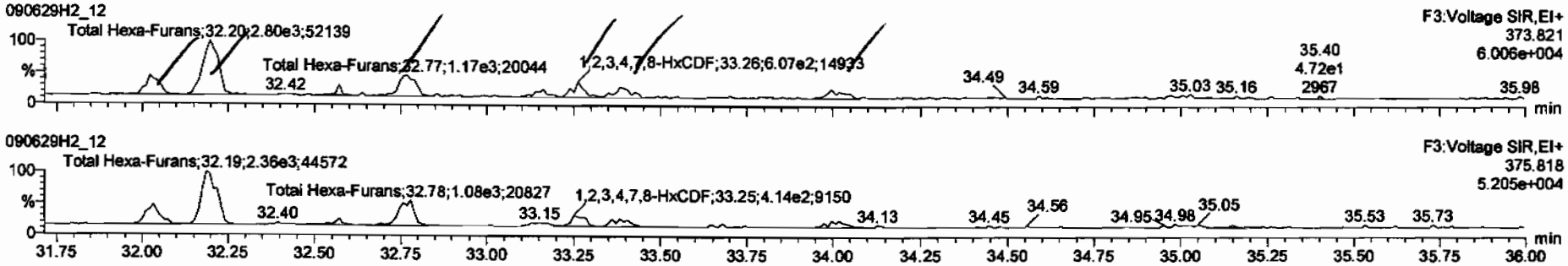

13C-1,2,3,4,7,8-HxCDF

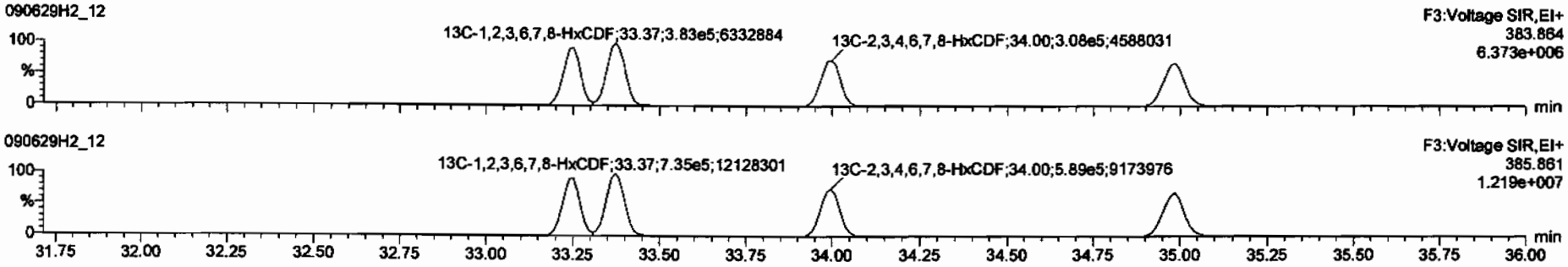

DPE3

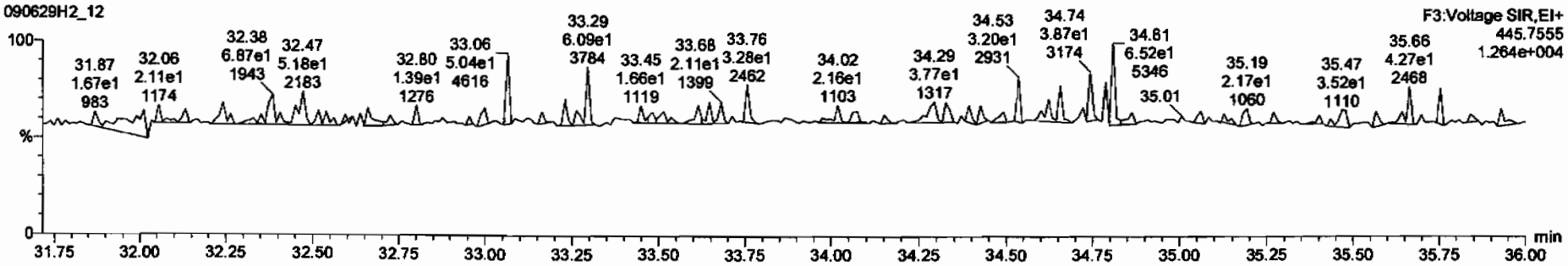

TargetLynx - 09062912-12.qld * [Chromatogram]

090629H2_12 - 31837_2207_001 CAMO-09-6006 11.31 - CAMO-09-6006

Total Hexa-Furans	32.02	9.206e2	8.214e2	1.12	NO	0.27882	0.27882
Total Hexa-Furans	32.20	2.801e3	2.361e3	1.19	NO	0.82624	0.82624
Total Hexa-Furans	32.57	1.937e2	1.788e2	1.08	NO	0.059625	0.059625
Total Hexa-Furans	32.77	1.173e3	1.079e3	1.09	NO	0.36044	0.36044
1,2,3,4,7,8-HxCDF	33.26	6.069e2	4.145e2	1.46	YES	0.13367	0.00000

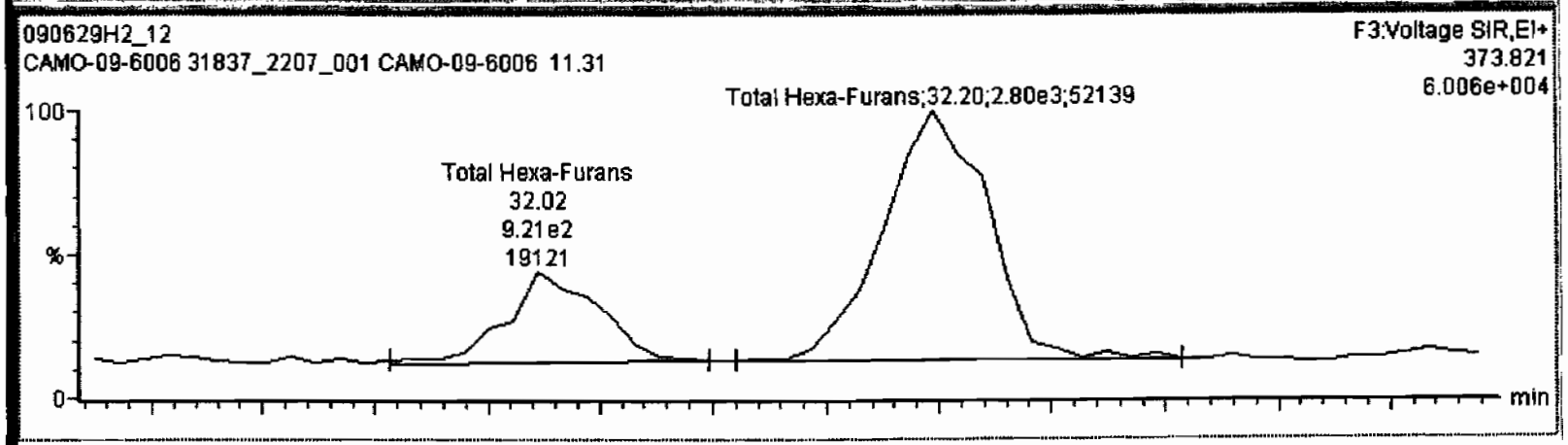

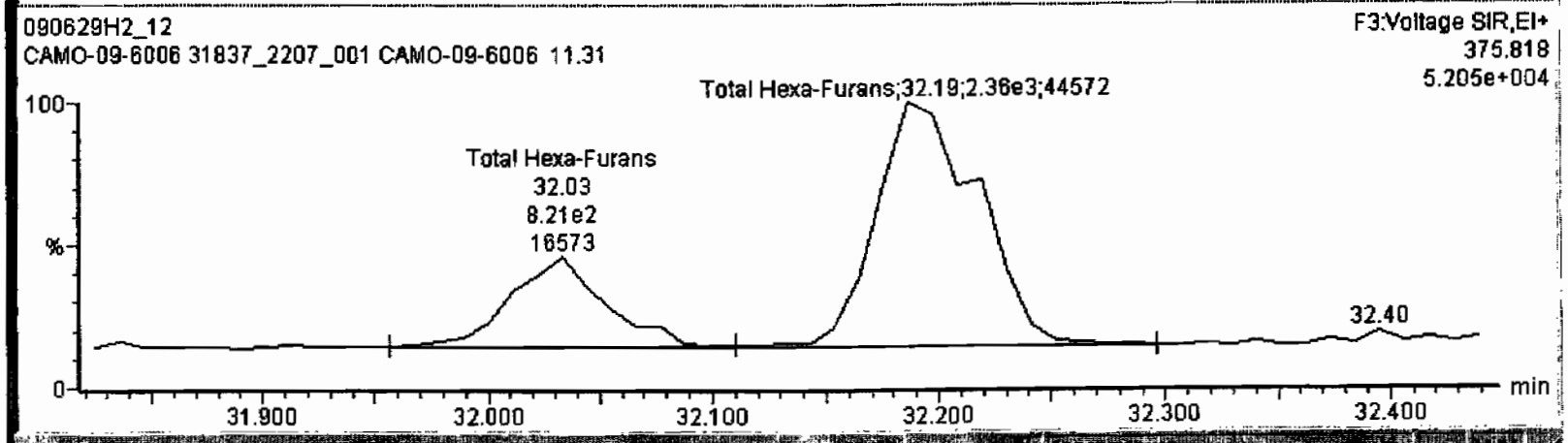

TargetLynx - 090629f2-12.qld * - [Chromatogram]

090629H2_12 - 31837_2207_001 CAMO-09-6006 11.31 - CAMO-09-6006

Total Hexa-Furans	32.77	1.173e3	1.079e3	1.09	NO	0.36044	0.36044
1,2,3,4,7,8-HxCDF	33.26	5.489e2	4.145e2	1.32	NO	0.13870	0.13870
1,2,3,6,7,8-HxCDF	33.38	5.750e2	4.313e2	1.33	NO	0.14696	0.14696
2,3,4,6,7,8-HxCDF	34.00	4.991e2	3.507e2	1.42	NO	0.14762	0.14762

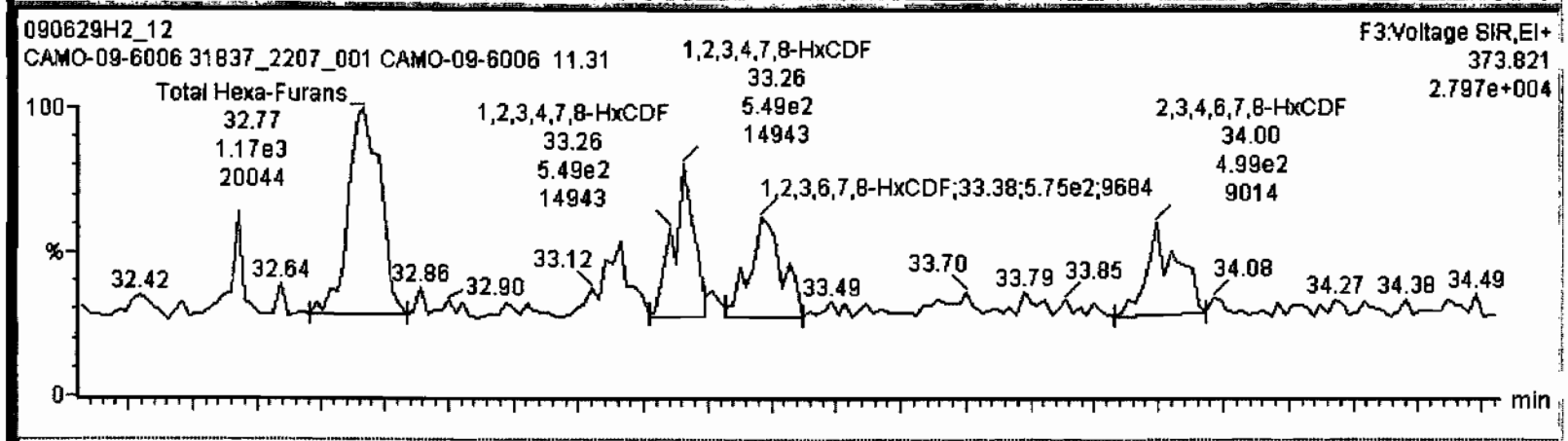

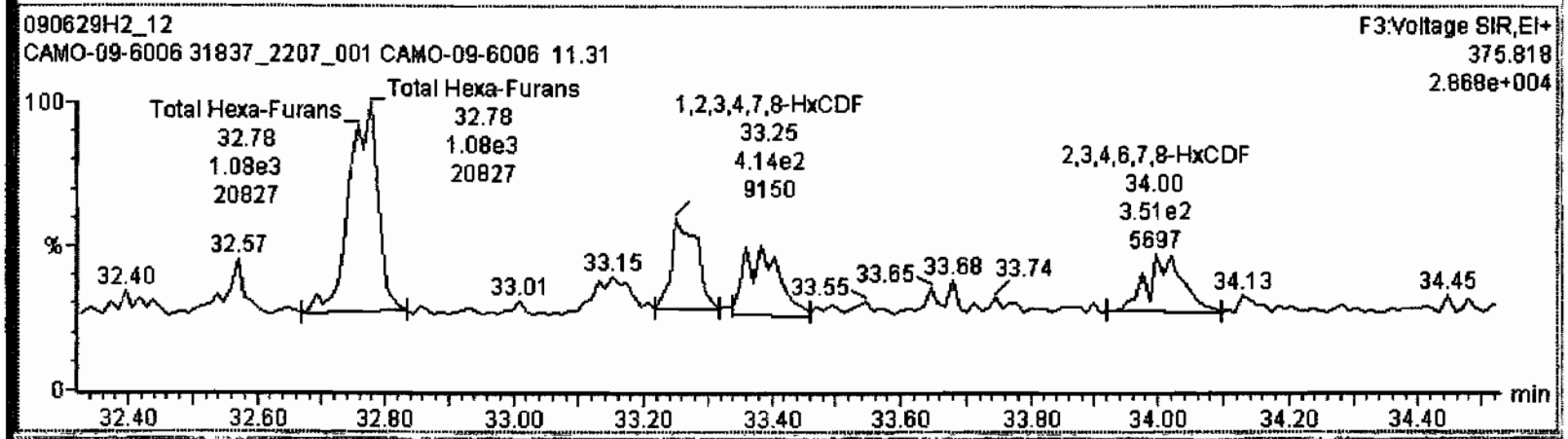

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

1,2,3,4,6,7,8-HpCDF

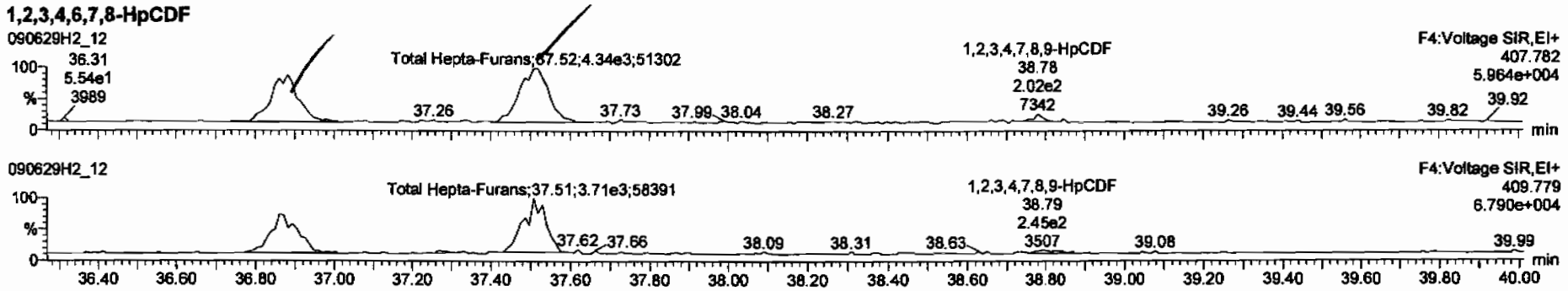

13C-1,2,3,4,6,7,8-HpCDF

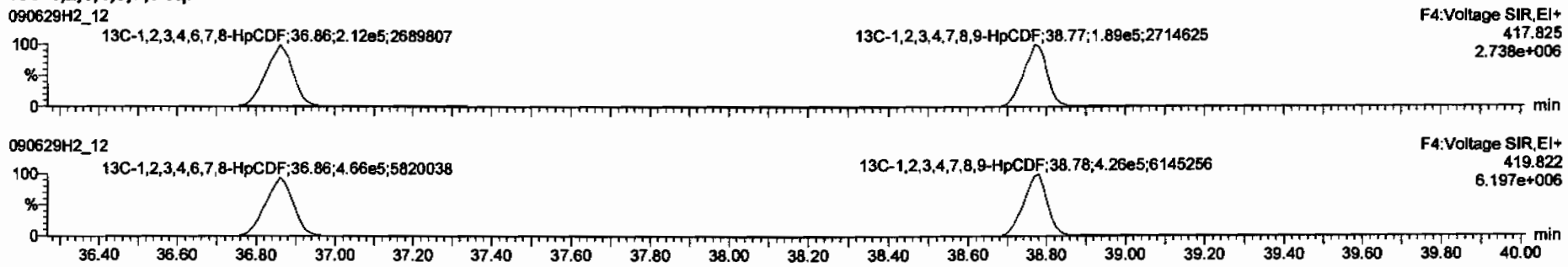

DPE4

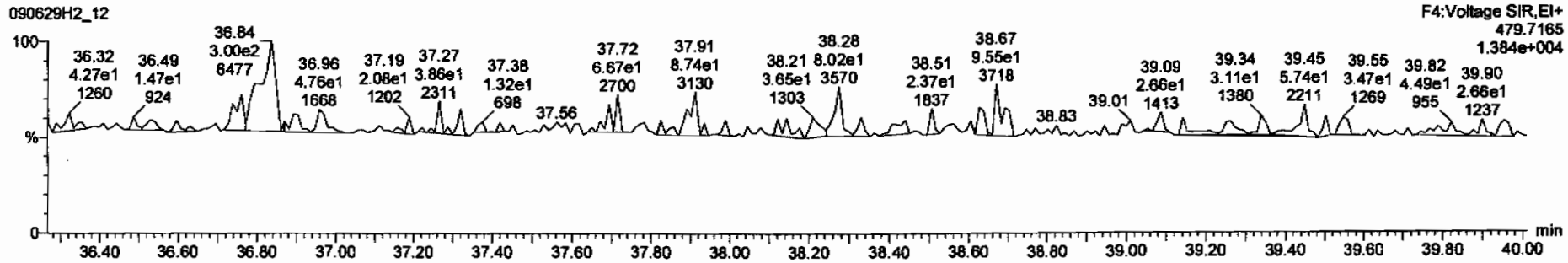

TargetLynx - 090629f2-12.qld * - [Chromatogram]

090629H2_12 - 31837_2207_001 CAMO-09-6006 11.31 - CAMO-09-6006

1,2,3,4,6,7,8-HpCDF	36.88	3.662e3	3.310e3	1.11	NO	1.2152	1.2152
Total Hepta-Furans	37.52	4.344e3	4.008e3	1.08	NO	1.5258	1.5258

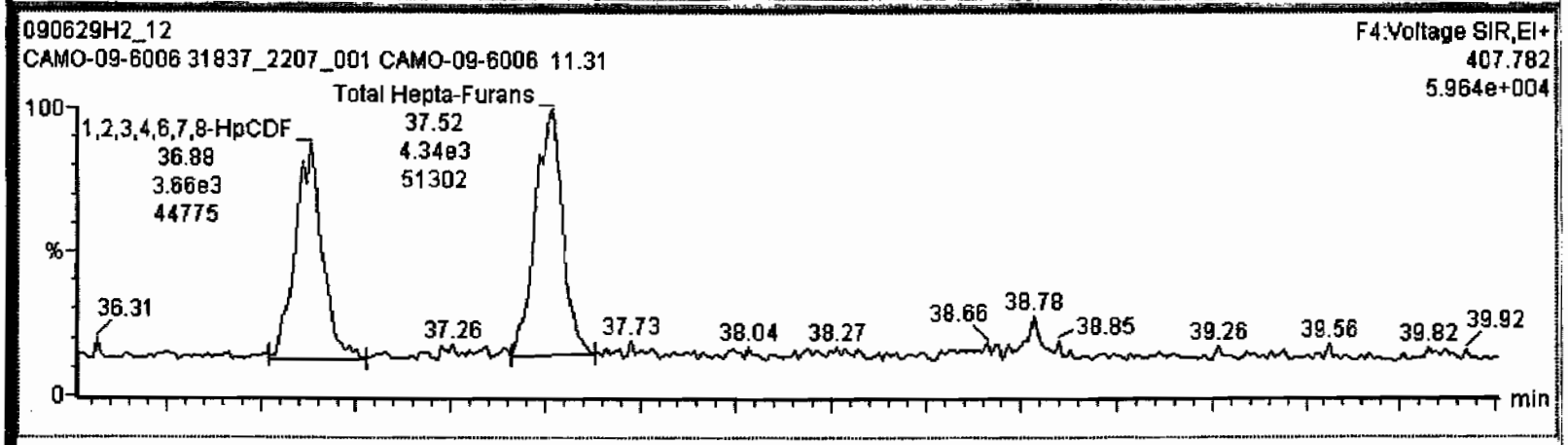

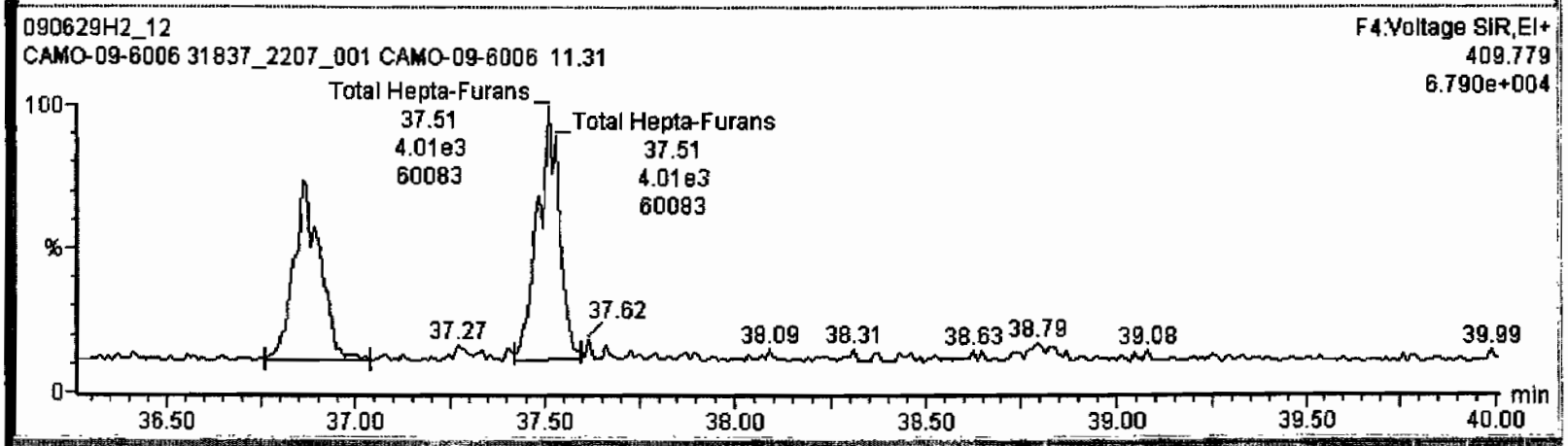

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
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Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

OCDF

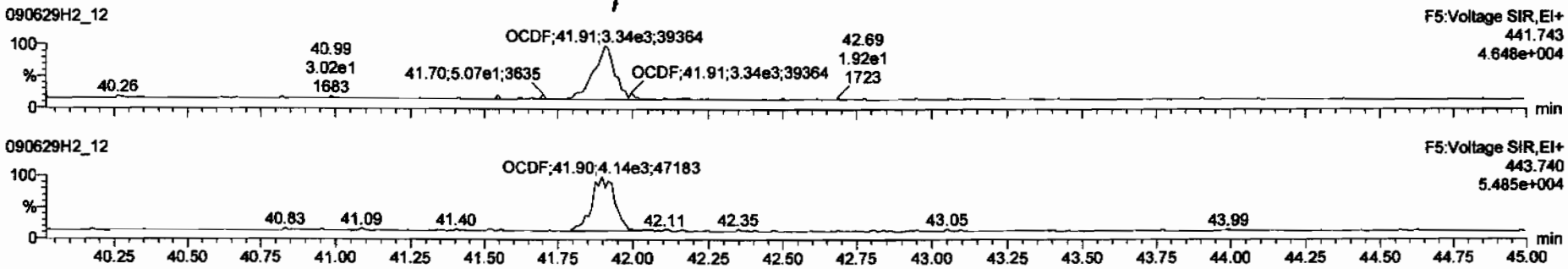

13C-OCDF

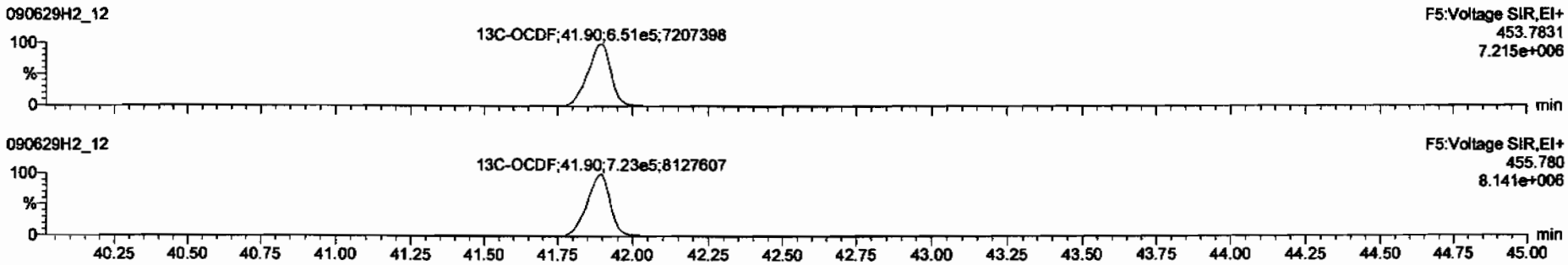

DPE5

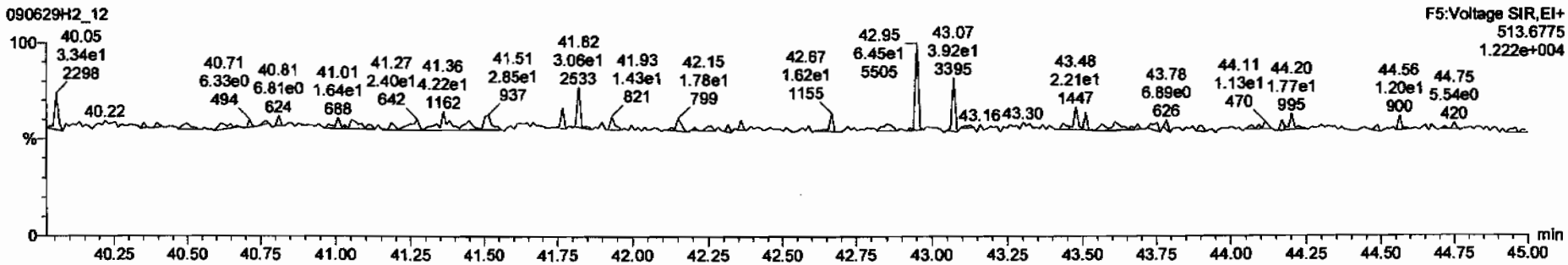

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-12.qld

Last Altered: Tuesday, June 30, 2009 08:16:21 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:16:42 Pacific Daylight Time

Name: 090629H2_12, Date: 29-Jun-2009, Time: 23:07:29, ID: 31837_2207_001 CAMO-09-6006 11.31, Description: CAMO-09-6006

PFK1

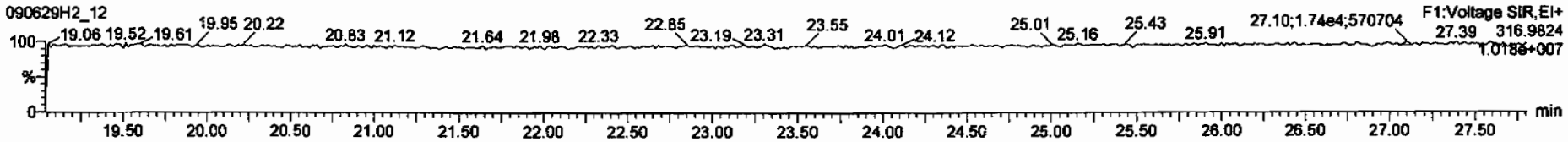

PFK2

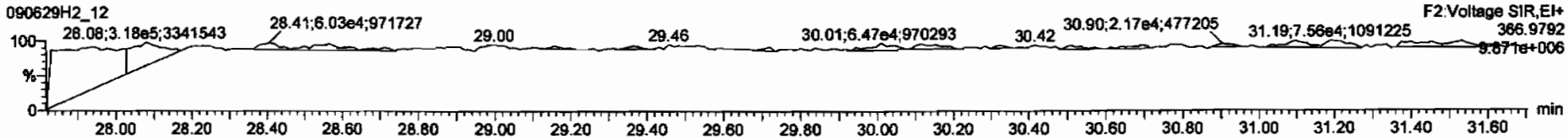

PFK3

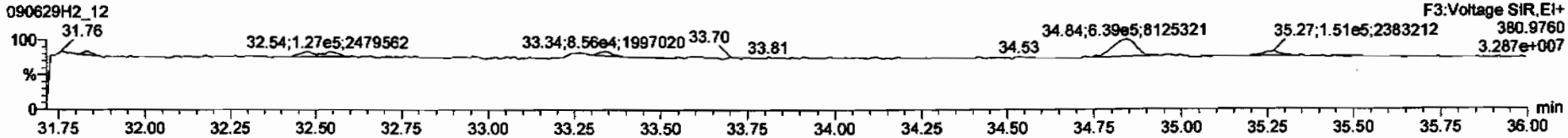

PFK4

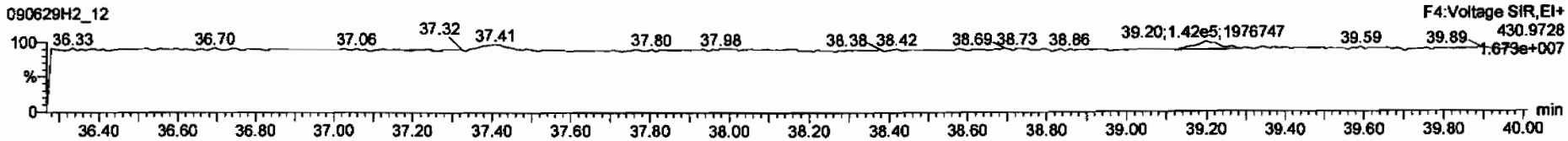

PFK5

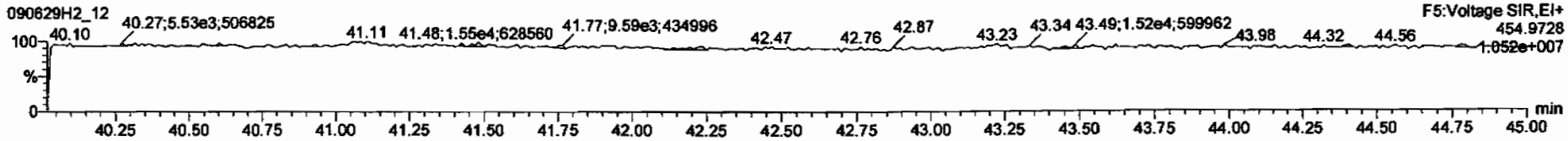

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 3:32:54 PM Pacific Daylight Time
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Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

1	2,3,7,8-TCDD			NO	1.08	10.050					0.0461	
2	1,2,3,7,8-PeCDD			NO	1.03	10.050					0.0593	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.050					0.169	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.050					0.173	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.050					0.165	
6	1,2,3,4,6,7,8-HpCDD	1.85e3	1.18	NO	1.06	10.050	38.20	1.000	0.49605		0.237	~~0.49605~~
7	OCDD	1.53e4	0.88	NO	1.18	10.050	41.71	1.001	4.5479		0.221	~~4.5479~~
8	2,3,7,8-TCDF			NO	1.09	10.050					0.0374	
9	1,2,3,7,8-PeCDF			NO	1.16	10.050					0.0403	
10	2,3,4,7,8-PeCDF			NO	1.12	10.050					0.0419	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.050					0.0525	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.050					0.0568	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.050					0.0686	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.050					0.0864	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.050					0.106	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.050					0.115	
17	OCDF			NO	1.10	10.050					0.0948	
18	13C-2,3,7,8-TCDD	1.12e6	0.80	NO	1.01	10.050	26.09	1.023	190.10	95.5	0.247	
19	13C-1,2,3,7,8-PeCDD	8.87e5	0.63	NO	0.827	10.050	30.72	1.204	184.14	92.5	0.184	
20	13C-1,2,3,4,7,8-HxCDD	7.80e5	1.25	NO	0.916	10.050	34.17	0.988	183.21	92.1	0.472	
21	13C-1,2,3,6,7,8-HxCDD	7.24e5	1.26	NO	0.921	10.050	34.28	0.991	169.17	85.0	0.470	
22	13C-1,2,3,4,6,7,8-HpCDD	6.98e5	1.07	NO	0.708	10.050	38.21	1.105	212.11	107	0.767	
23	13C-OCDD	1.13e6	0.89	NO	0.503	10.050	41.68	1.205	485.25	122	0.562	
24	13C-2,3,7,8-TCDF	1.53e6	0.78	NO	0.977	10.050	25.31	0.992	194.65	97.8	0.170	
25	13C-1,2,3,7,8-PeCDF	1.40e6	1.54	NO	0.896	10.050	29.50	1.156	194.38	97.7	0.252	
26	13C-2,3,4,7,8-PeCDF	1.34e6	1.55	NO	0.900	10.050	30.44	1.193	185.46	93.2	0.251	
27	13C-1,2,3,4,7,8-HxCDF	9.87e5	0.53	NO	1.17	10.050	33.24	0.961	181.70	91.3	0.485	
28	13C-1,2,3,6,7,8-HxCDF	1.11e6	0.52	NO	1.52	10.050	33.37	0.965	157.91	79.3	0.374	
29	13C-2,3,4,6,7,8-HxCDF	9.41e5	0.52	NO	1.25	10.050	34.00	0.983	162.15	81.5	0.454	
30	13C-1,2,3,7,8,9-HxCDF	8.79e5	0.52	NO	1.05	10.050	34.98	1.012	179.70	90.3	0.539	

6/30/09

7/2/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 3:32:54 PM Pacific Daylight Time
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Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

31 13C-1,2,3,4,6,7,8-HpCDF	7.09e5	0.45	NO	0.868	10.050	36.87	1.066	175.73	88.3	0.716	
32 13C-1,2,3,4,7,8,9-HpCDF	6.53e5	0.44	NO	0.727	10.050	38.79	1.122	193.48	97.2	0.855	
33 13C-OCDF	1.45e6	0.89	NO	0.760	10.050	41.92	1.212	410.13	103	0.334	
34 37Cl-2,3,7,8-TCDD	2.76e5			0.668	10.050	26.11	1.023	70.864	89.0	0.0659	
35 13C-1,2,3,4-TCDD	1.16e6	0.80	NO	1.00	10.050	25.51	0.000	199.00	100	0.251	
36 13C-1,2,3,4-TCDF	1.60e6	0.78	NO	1.00	10.050	24.10	0.000	199.00	100	0.167	
37 13C-1,2,3,7,8,9-HxCDD	9.24e5	1.24	NO	1.00	10.050	34.58	0.000	199.00	100	0.433	
38 Total Tetra-Dioxins				1.08	10.050					0.0222	
39 Total Penta-Dioxins				1.03	10.050					0.0188	
40 Total Hexa-Dioxins				1.13	10.050					0.107	
41 Total Hepta-Dioxins				1.06	10.050			0.99068		0.237	~~0.99068~~
42 Total Tetra-Furans				1.09	10.050					0.0145	
43 1st Func. Penta-Furans				1.16	10.050					0.0110	
44 Total Penta-Furans				1.16	10.050					0.0158	
45 Total Hexa-Furans				1.28	10.050					0.0405	
46 Total Hepta-Furans				1.69	10.050					0.0572	

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 3:32:54 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:33:16 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Hepta-Dioxins

	Total Hepta-Dioxins	37.29	1.213e4	1.114e4	8.922e2	9.536e2	0.94	NO	1.846e3	0.49462	0.49462	0.237
	1,2,3,4,6,7,8-HpCDD	38.20	1.249e4	1.390e4	1.004e3	8.476e2	1.18	NO	1.851e3	0.49605	0.49605	0.237

Tetra-Furans

Penta-Furans function 1

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 3:32:54 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:33:16 PM Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

Penta-Furans

[redacted]

Hexa-Furans

[redacted]

Hepta-Furans

[redacted]

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

2,3,7,8-TCDD

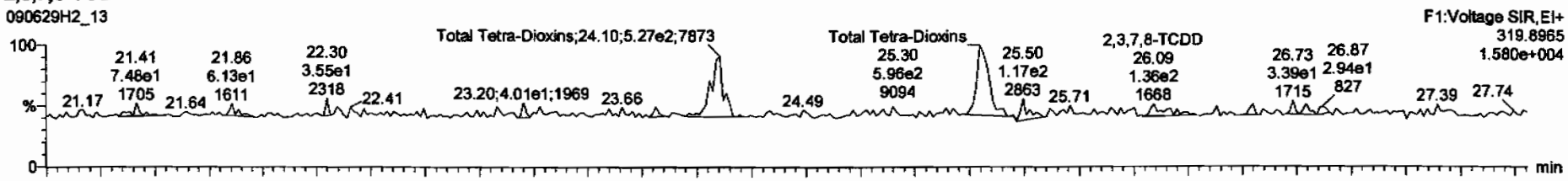

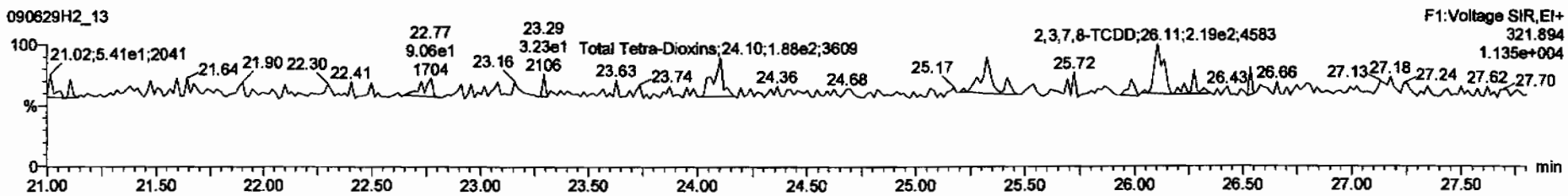

13C-2,3,7,8-TCDD

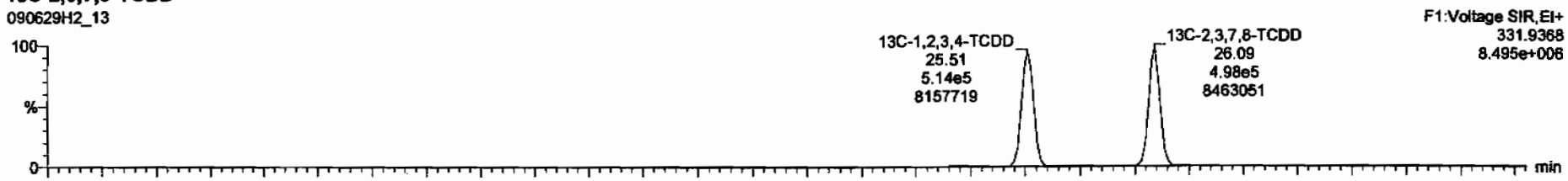

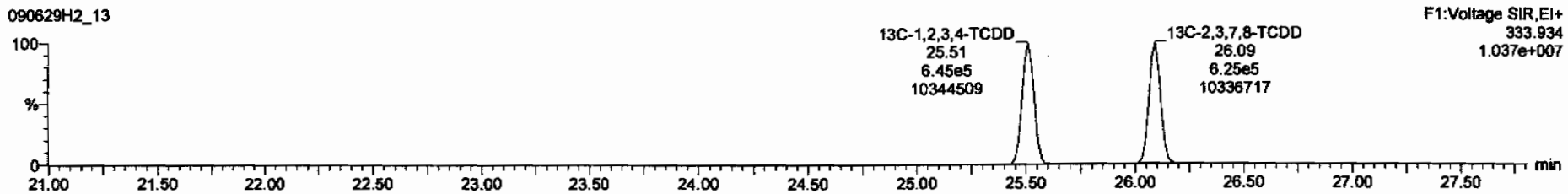

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

37Cl-2,3,7,8-TCDD

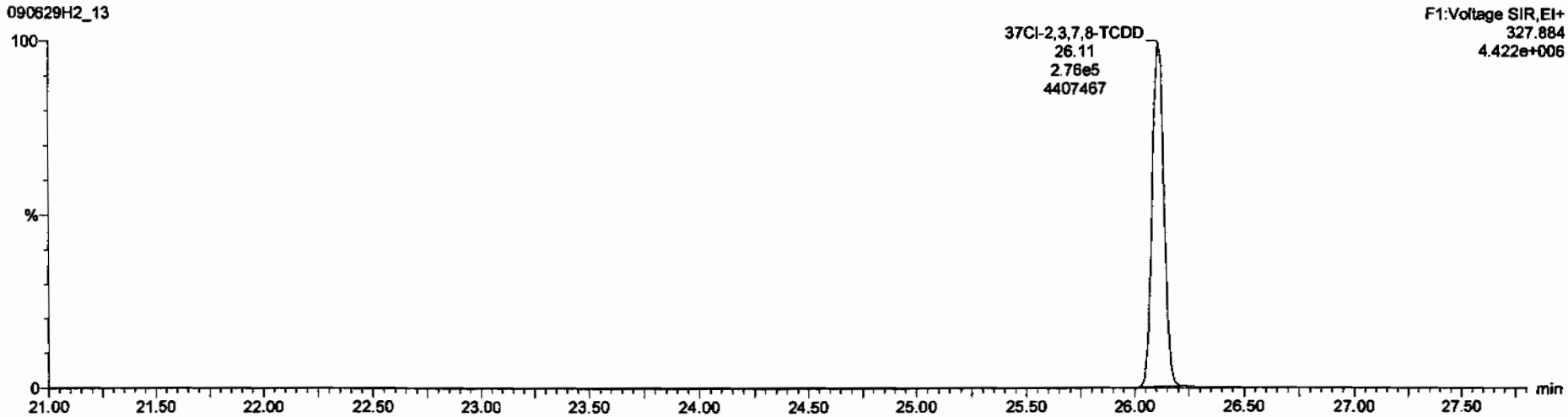

13C-1,2,3,4-TCDD

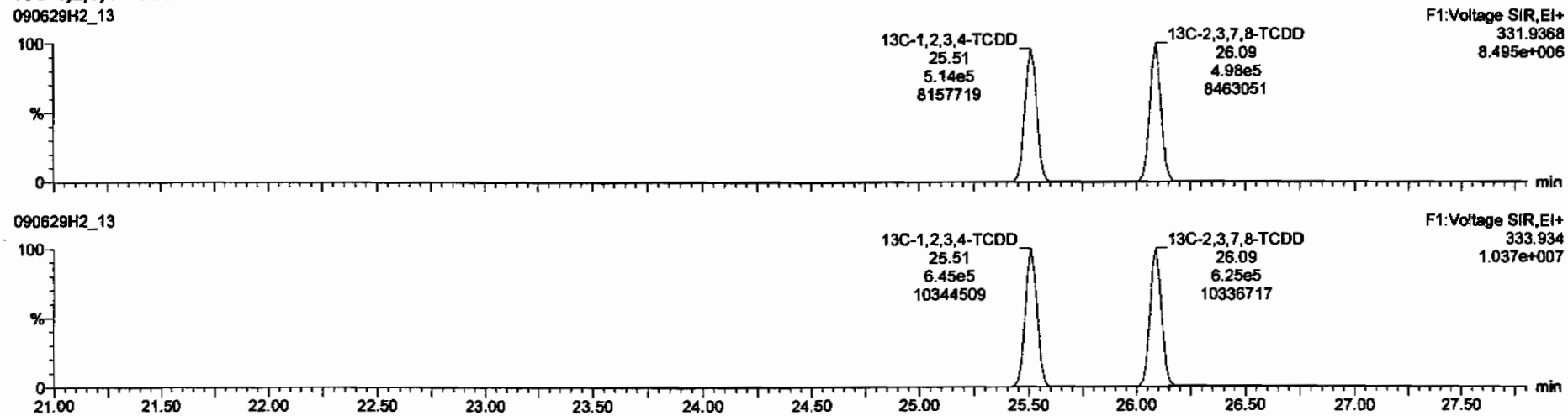

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Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

1,2,3,7,8-PeCDD

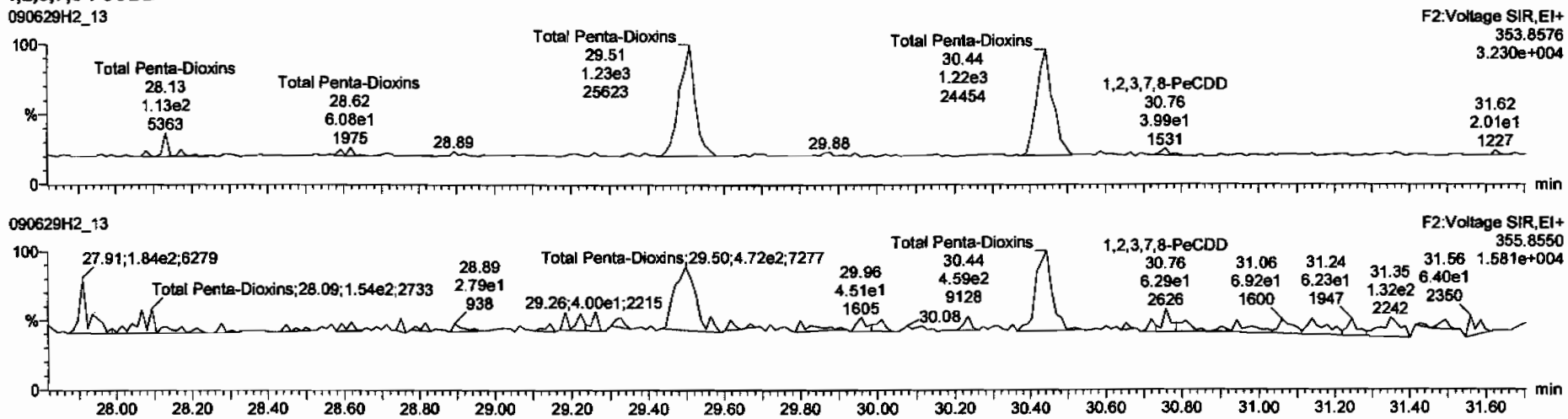

13C-1,2,3,7,8-PeCDD

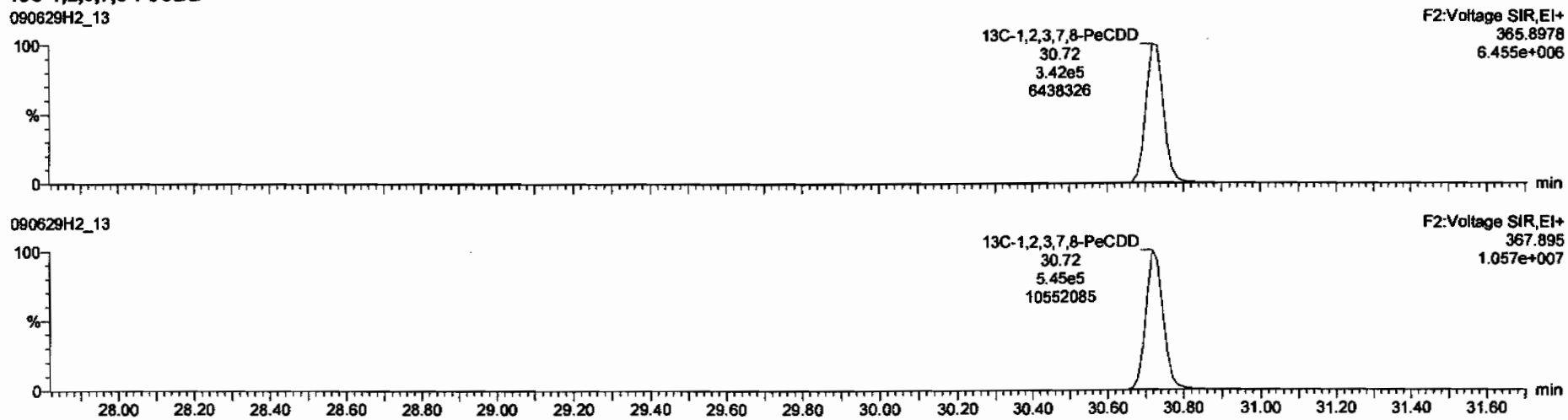

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

1,2,3,4,7,8-HxCDD

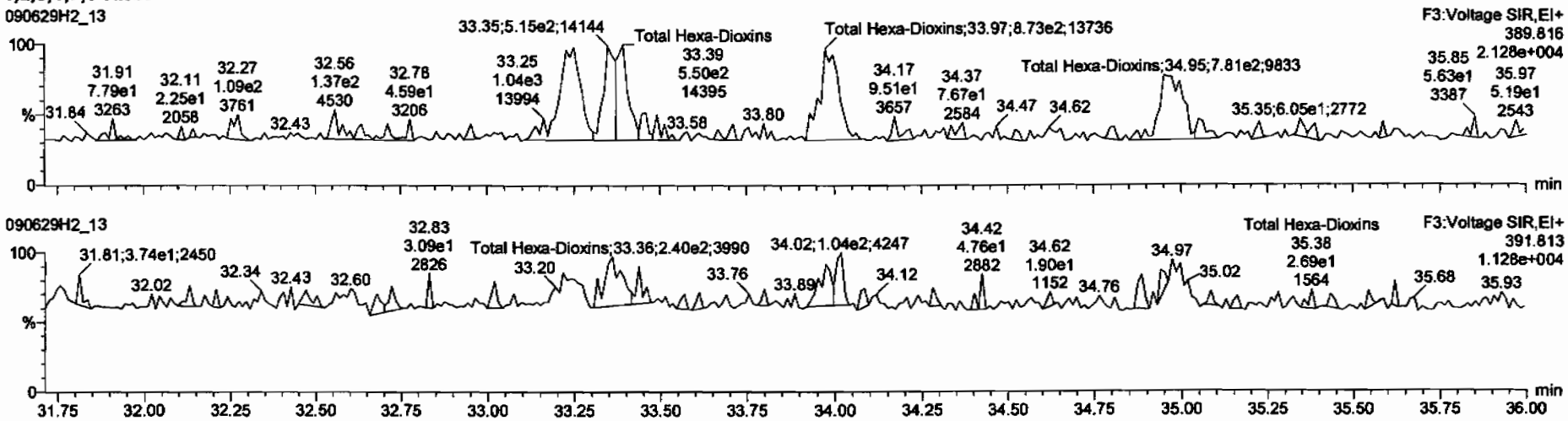

13C-1,2,3,4,7,8-HxCDD

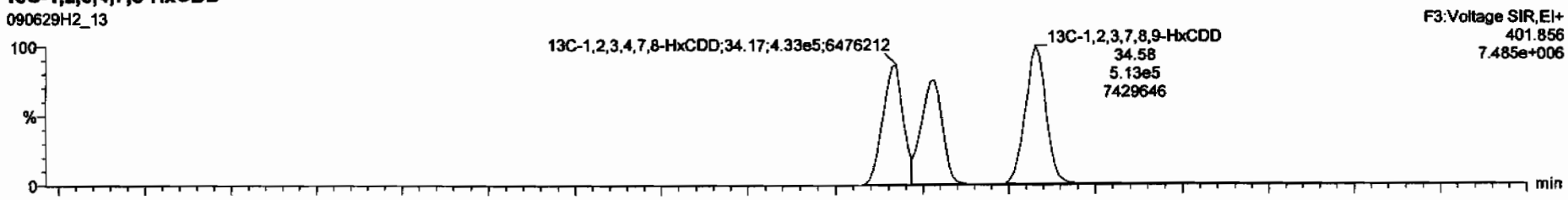

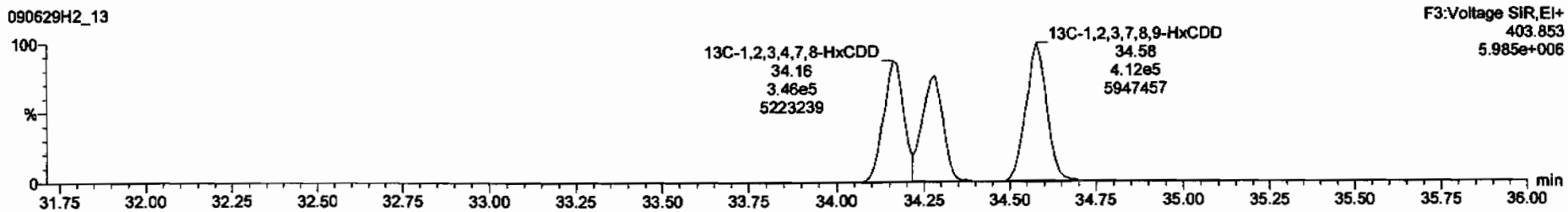

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Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

1,2,3,4,6,7,8-HpCDD

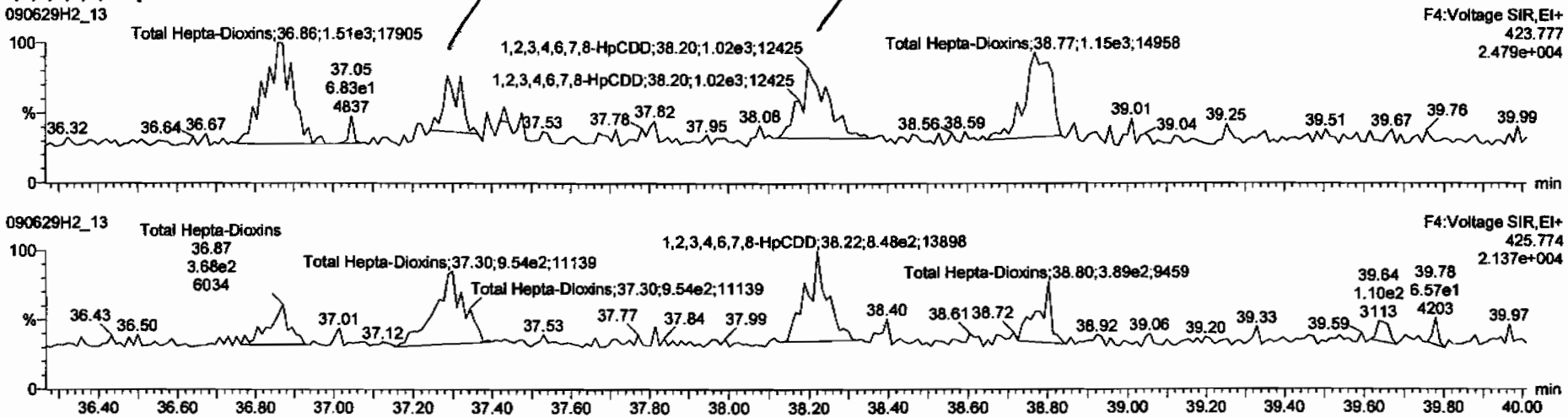

13C-1,2,3,4,6,7,8-HpCDD

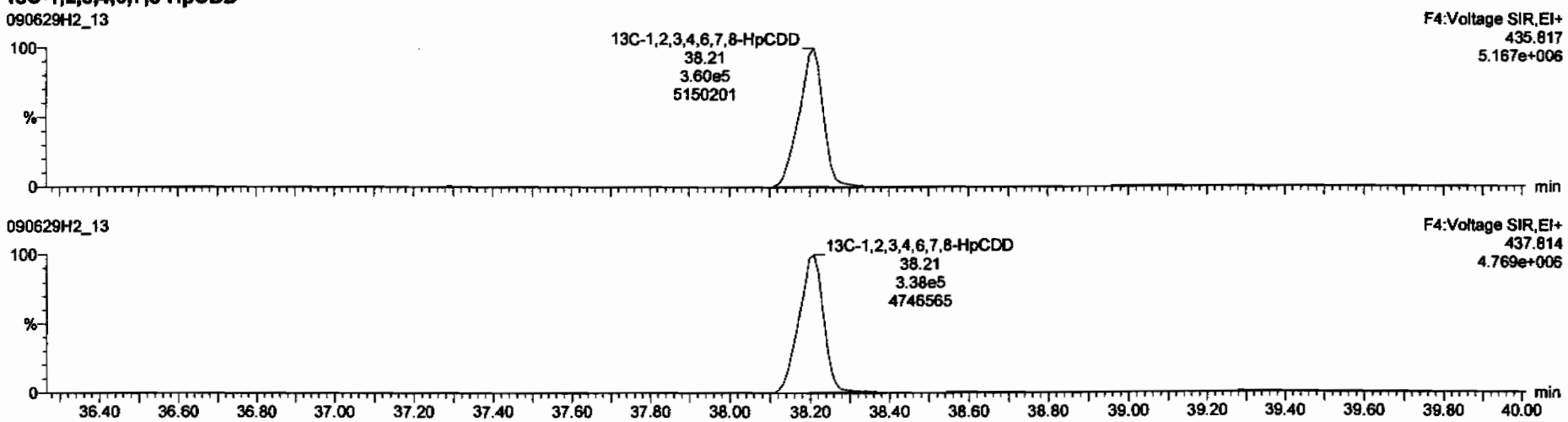

TargetLynx - 090629f2-13.qld * - [Chromatogram]

090629H2_13 - 31837_2207_002 CAMO-09-6007 10.42 - CAMO-09-6007

Total Hepta-Dioxins	37.29	8.922e2	9.536e2	0.94	NO	0.49462	0.49462
1,2,3,4,6,7,8-HpCDD	38.20	1.004e3	8.476e2	1.18	NO	0.49605	0.49605

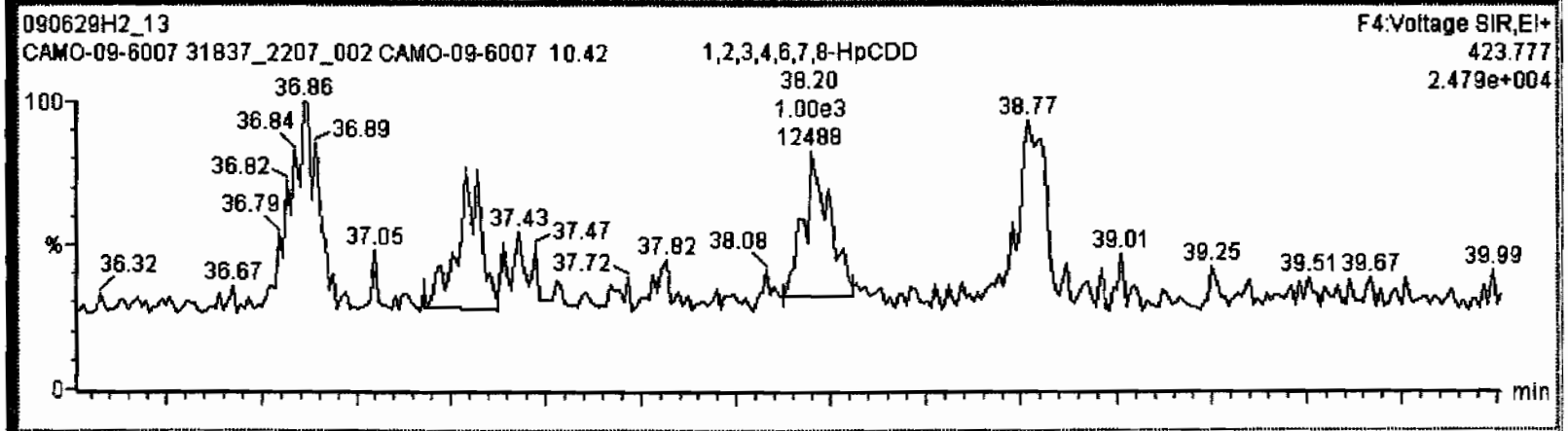

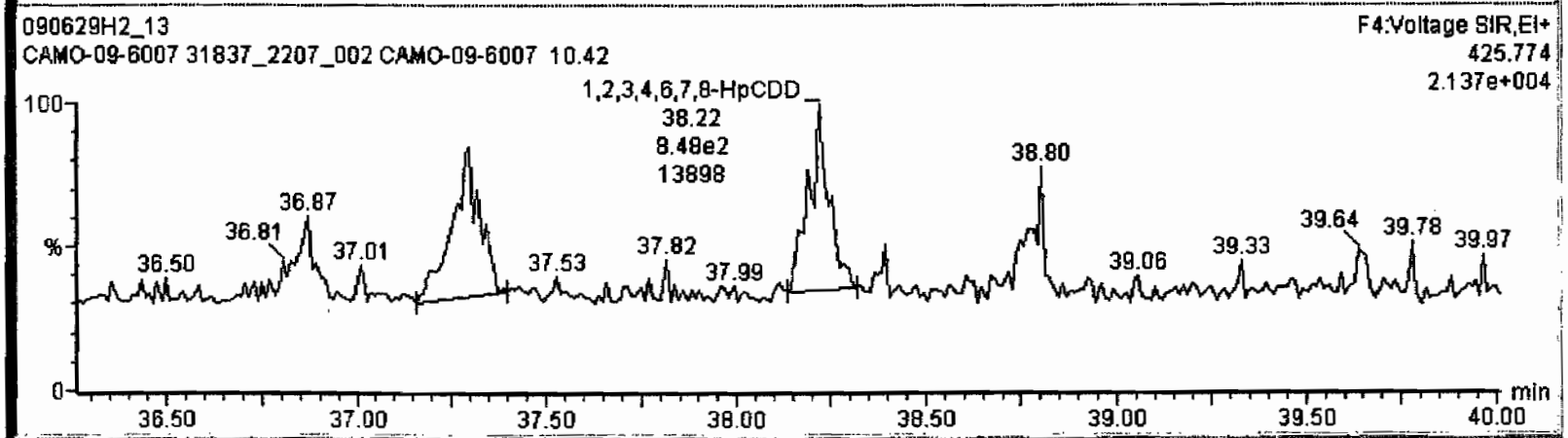

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

OCDD

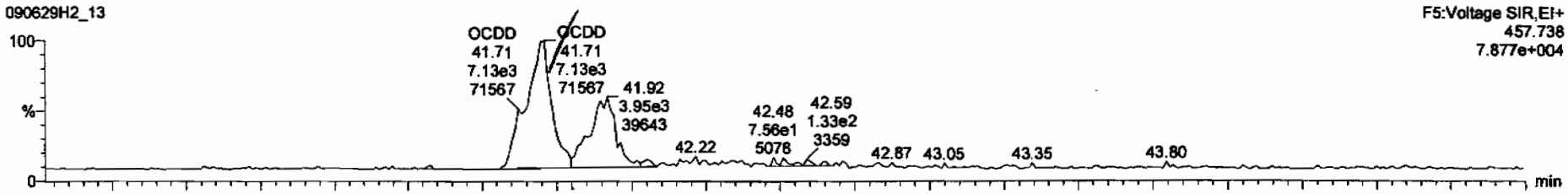

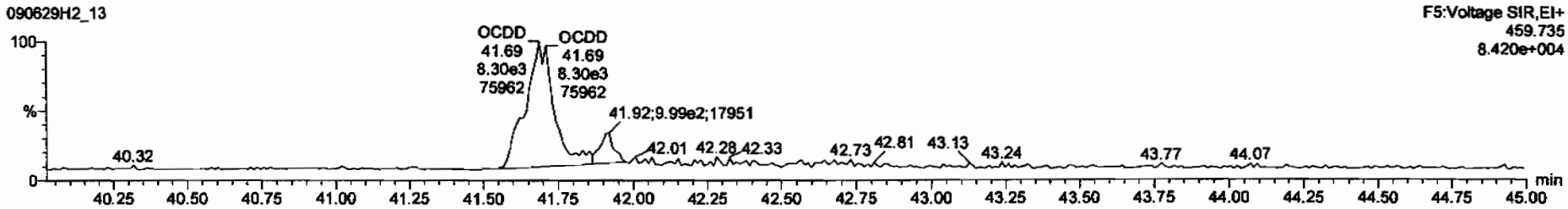

13C-OCDD

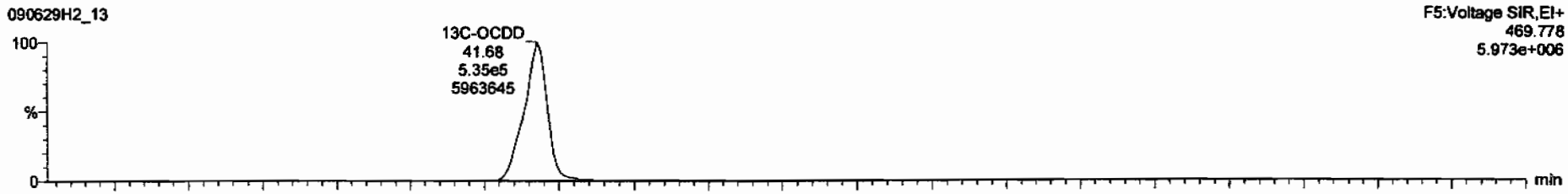

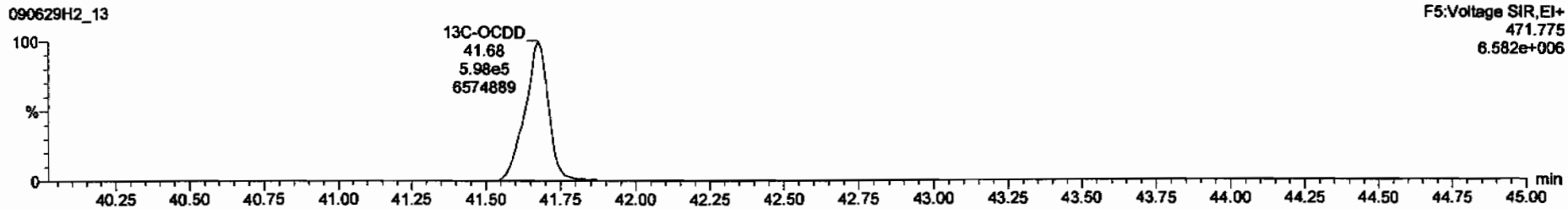

TargetLynx - 090629f2-13.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090629H2_13 - 31837_2207_002 CAMO-09-6007 10:42 - CAMO-09-6007

	2,3,7,8-TCDF			NO	1.09	10.050					0.0374	
	1,2,3,7,8-PeCDF	6.09e1	2.66	YES	1.16	10.050	29.51	1.000	0.00992		0.0403	0.00691
	2,3,4,7,8-PeCDF	1.39e2	0.65	YES	1.12	10.050	30.43	1.000	0.0184		0.0419	0.0119
	1,2,3,4,7,8-HxCDF	1.56e2	3.91	YES	1.41	10.050	33.22	0.999	0.0222		0.0525	0.0101

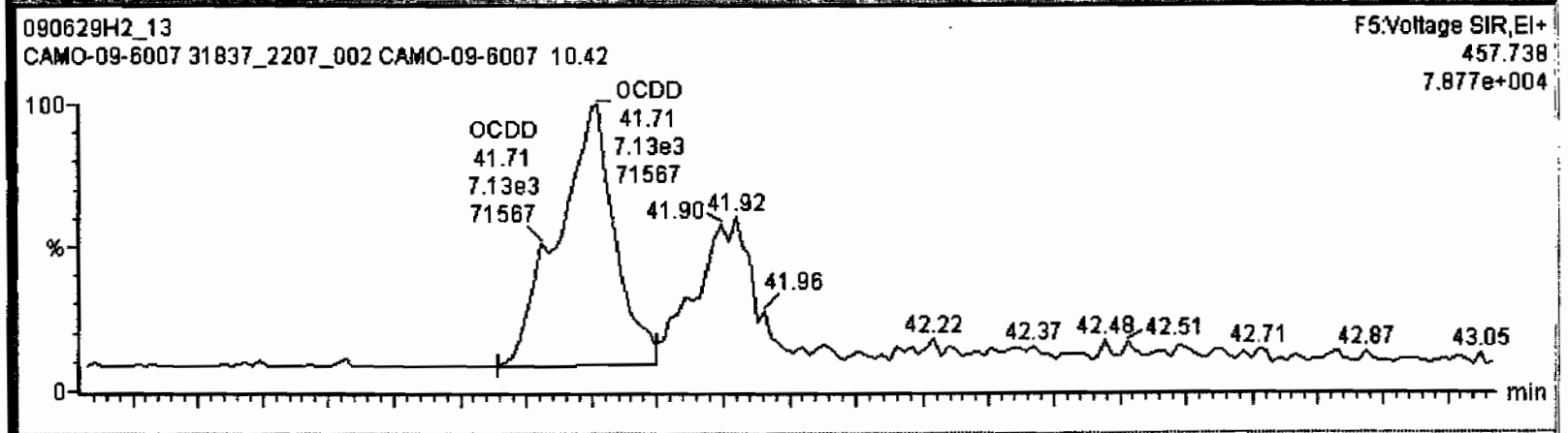

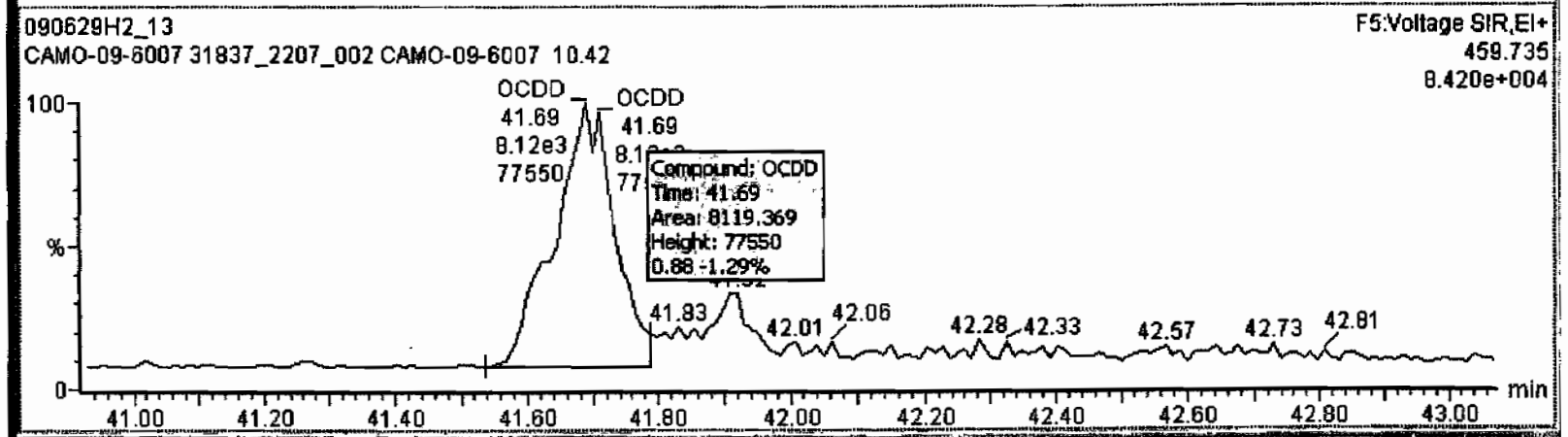

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Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

2,3,7,8-TCDF

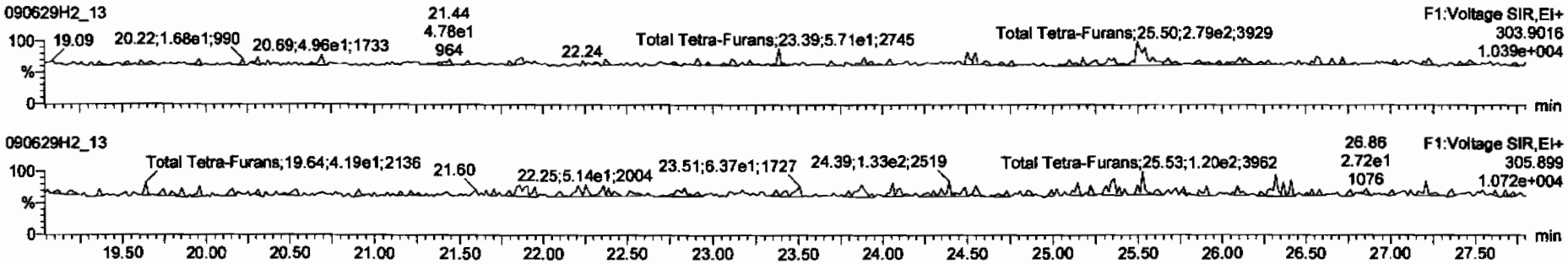

13C-2,3,7,8-TCDF

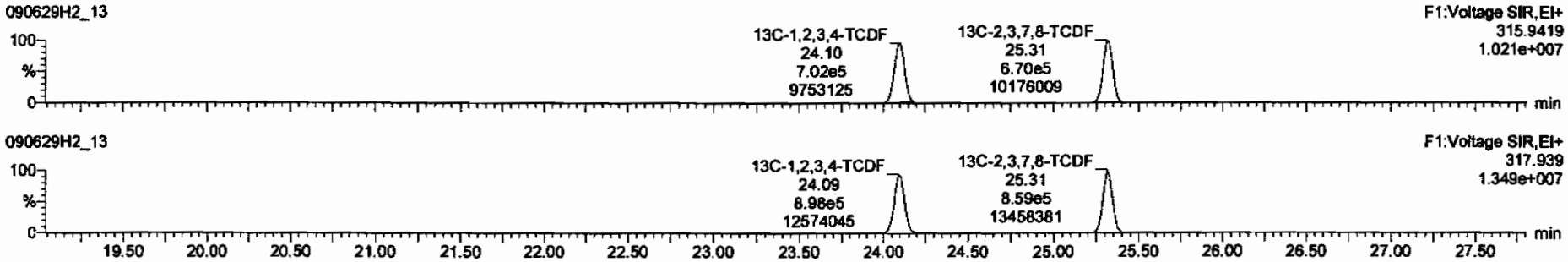

DPE1

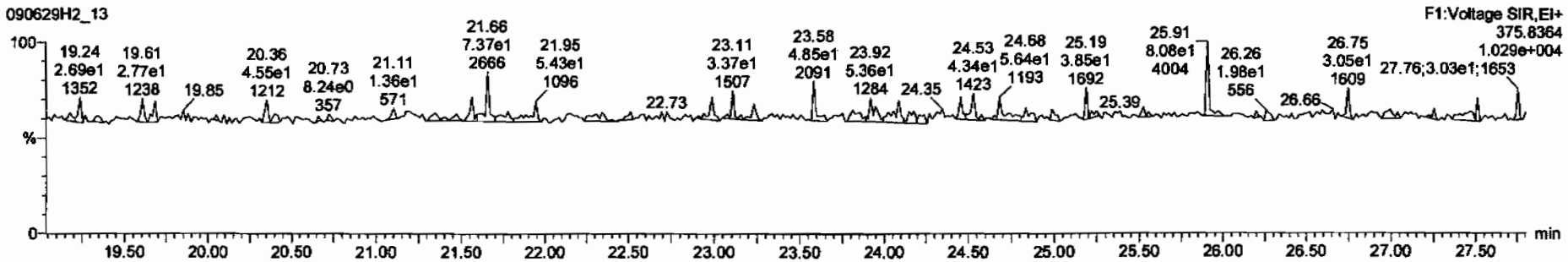

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

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Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

1st Func. Penta-Furans

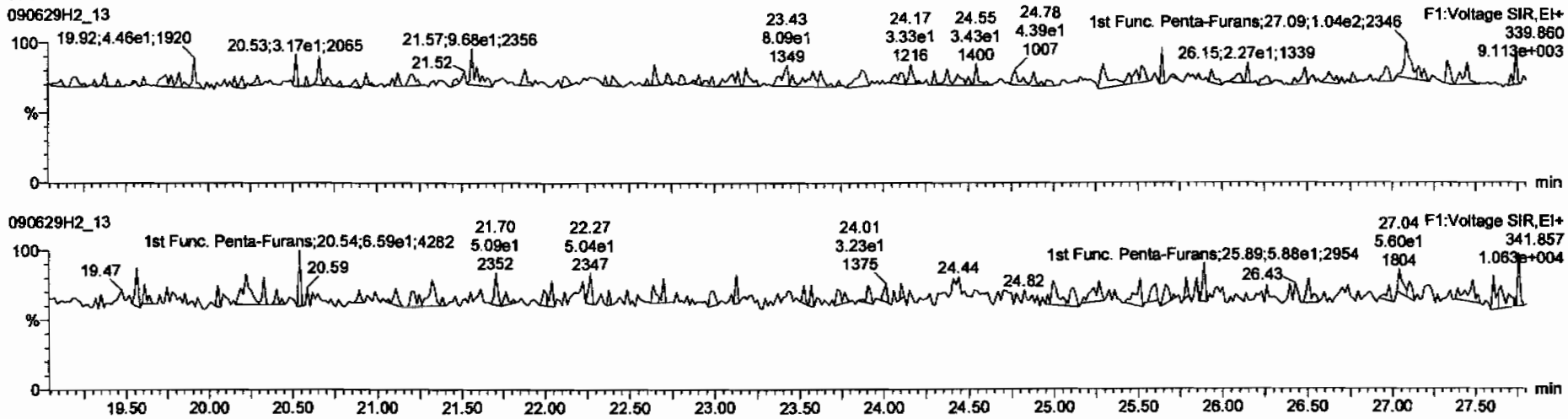

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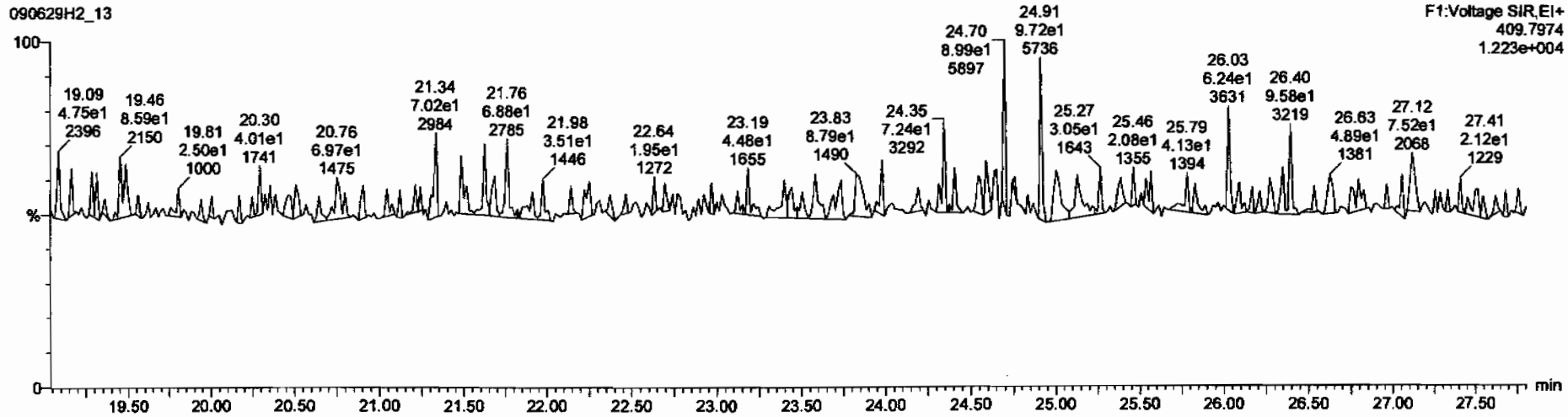

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

1,2,3,7,8-PeCDF

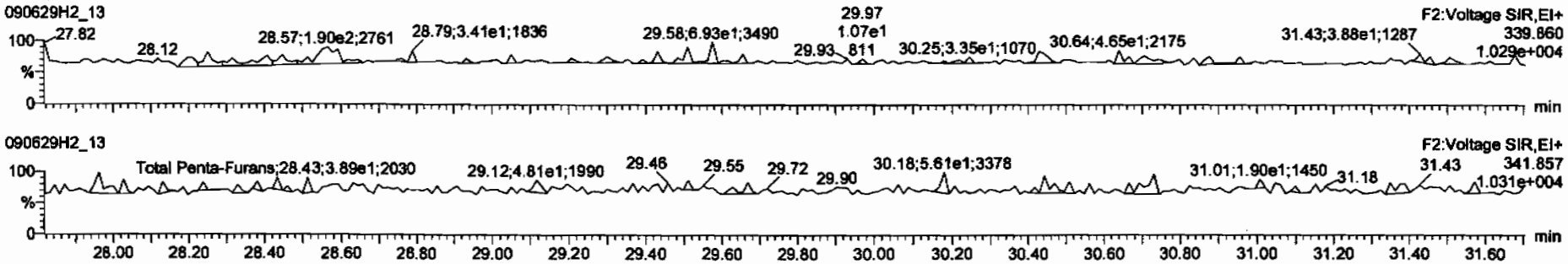

13C-1,2,3,7,8-PeCDF

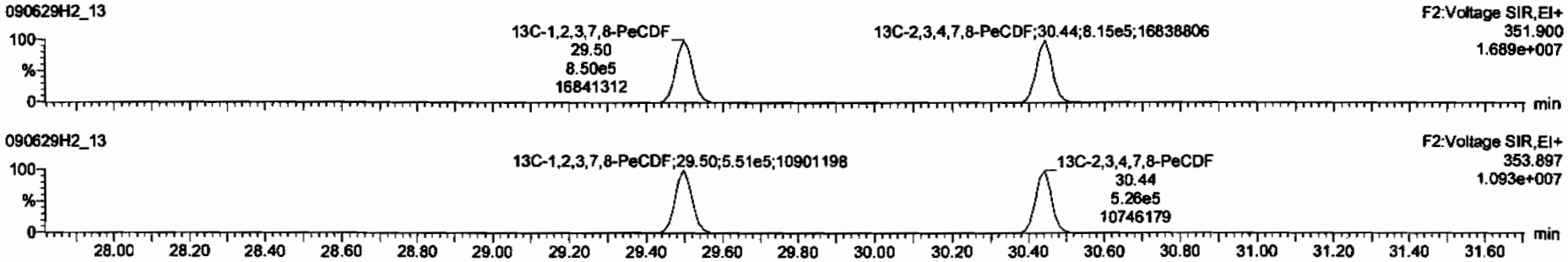

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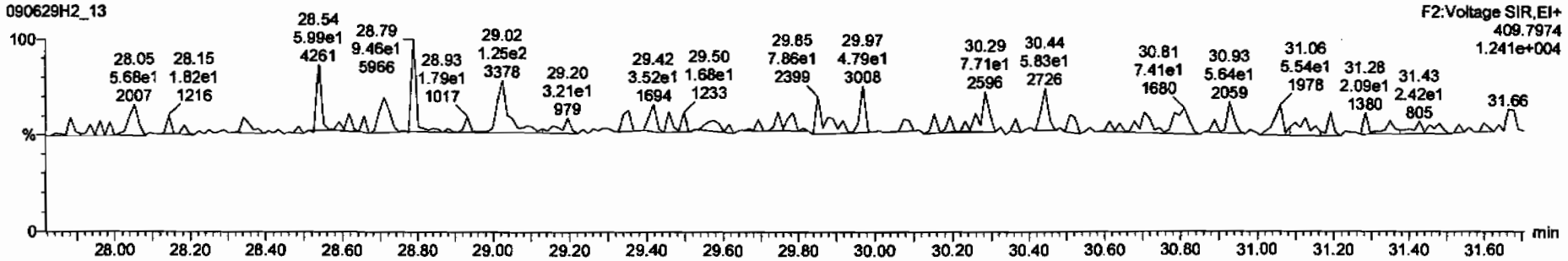

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Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

1,2,3,4,7,8-HxCDF

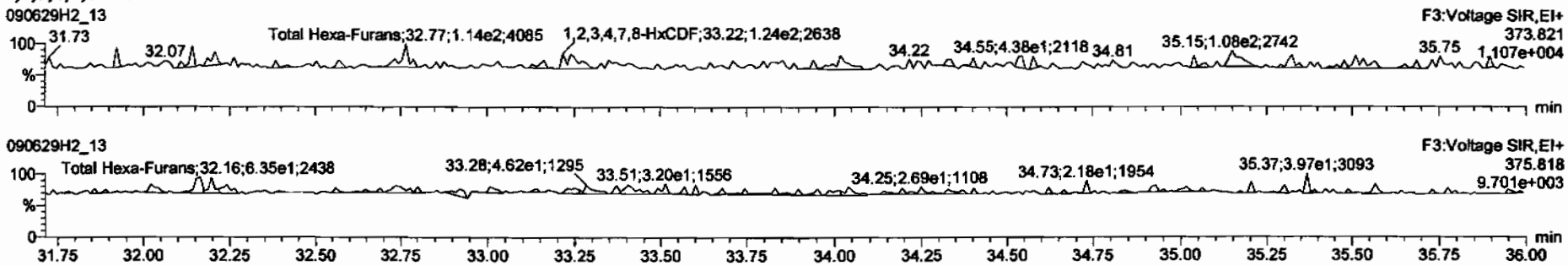

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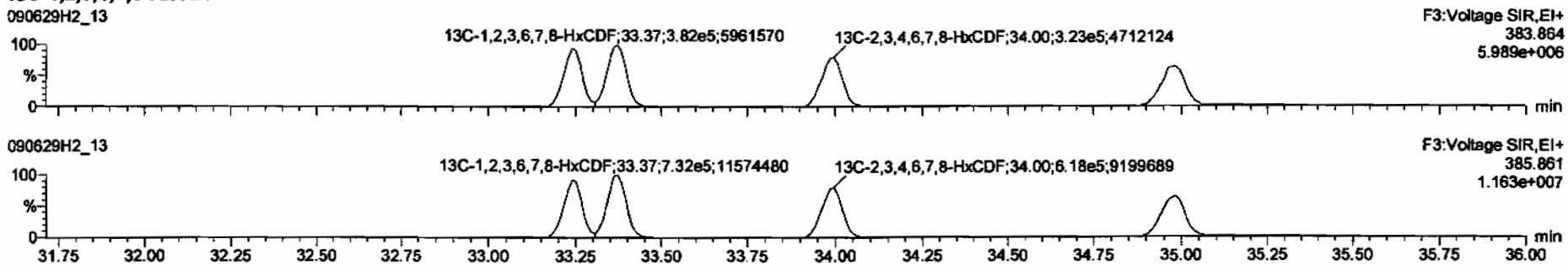

DPE3

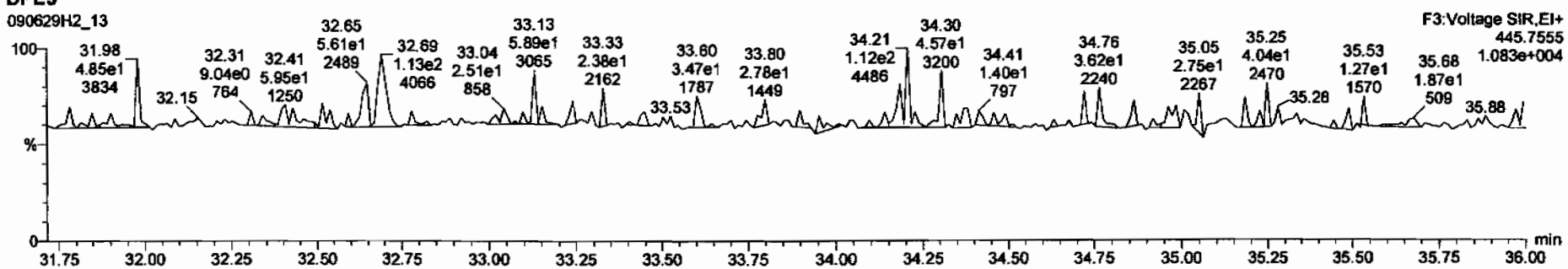

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

1,2,3,4,6,7,8-HpCDF

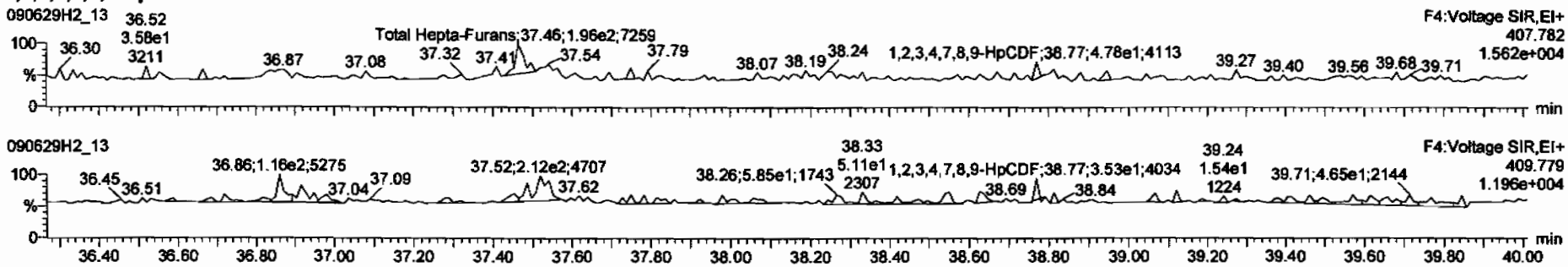

13C-1,2,3,4,6,7,8-HpCDF

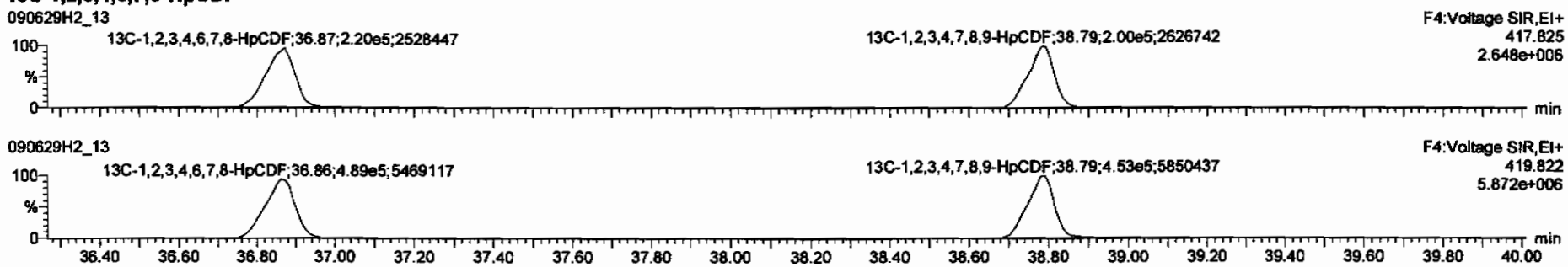

DPE4

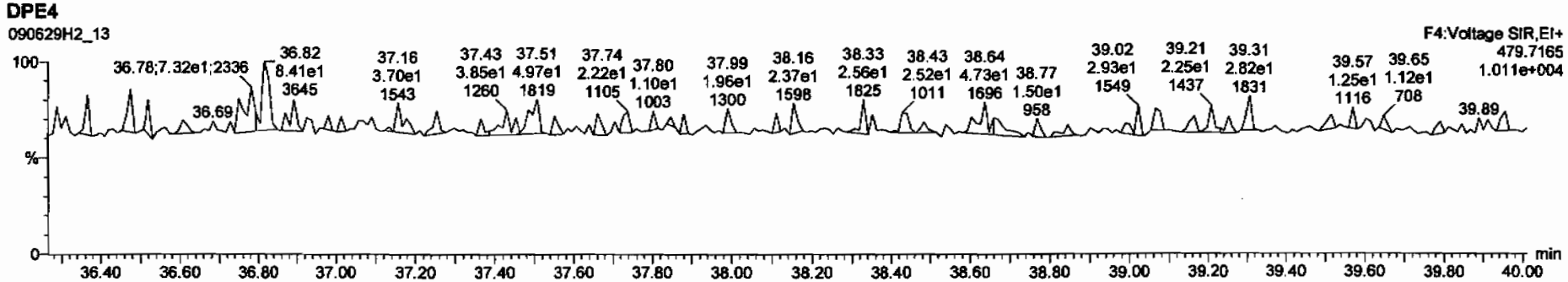

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

OCDF

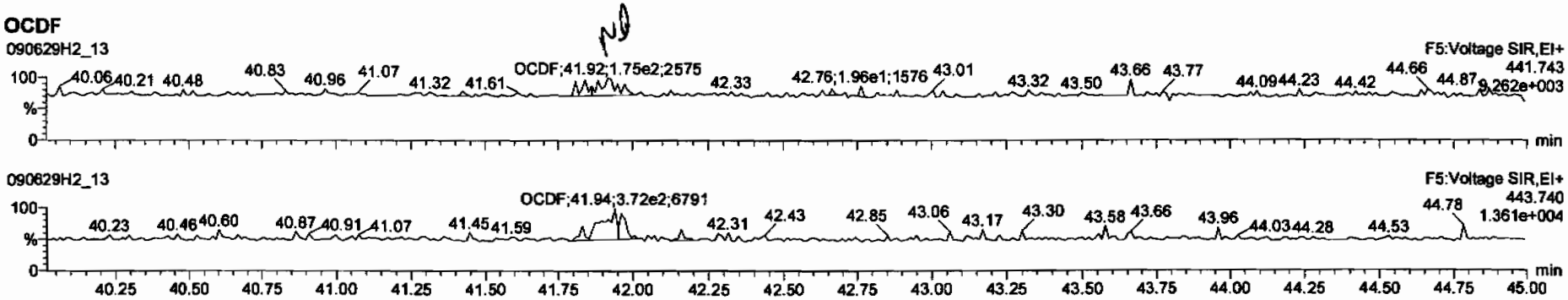

13C-OCDF

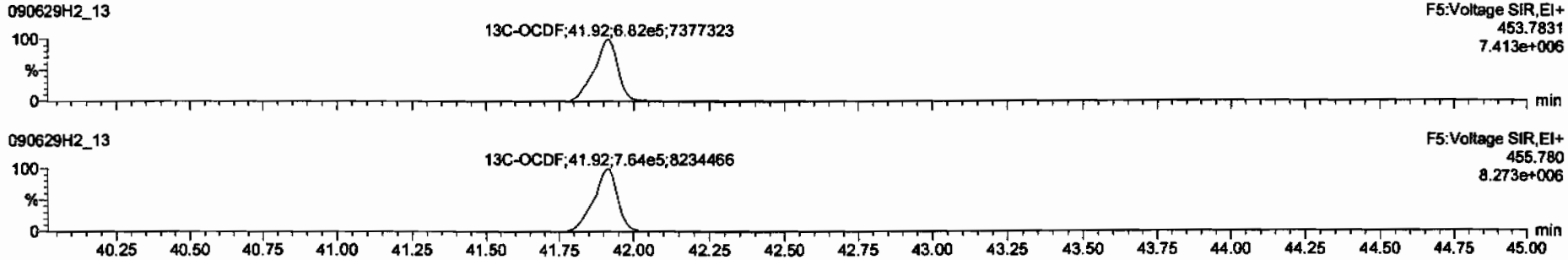

DPE5

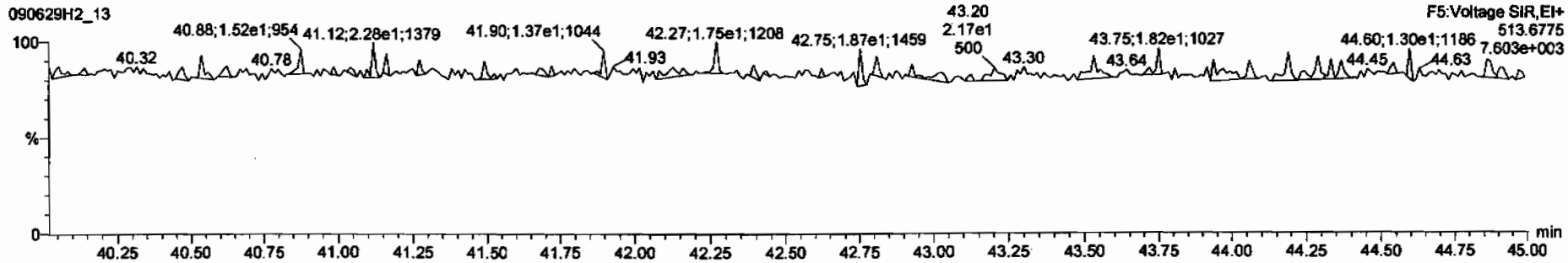

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-13.qld

Last Altered: Tuesday, June 30, 2009 08:16:53 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:17:26 Pacific Daylight Time

Name: 090629H2_13, Date: 29-Jun-2009, Time: 23:56:59, ID: 31837_2207_002 CAMO-09-6007 10.42, Description: CAMO-09-6007

PFK1

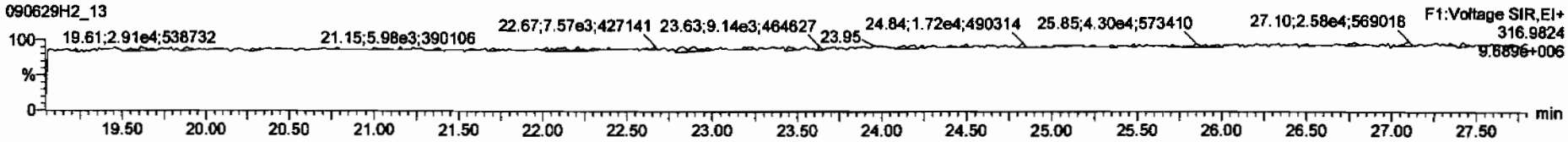

PFK2

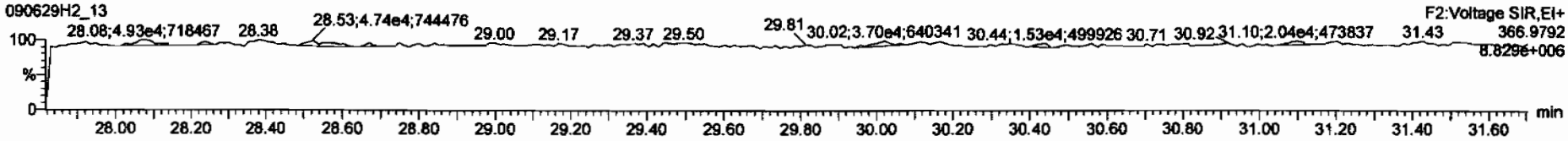

PFK3

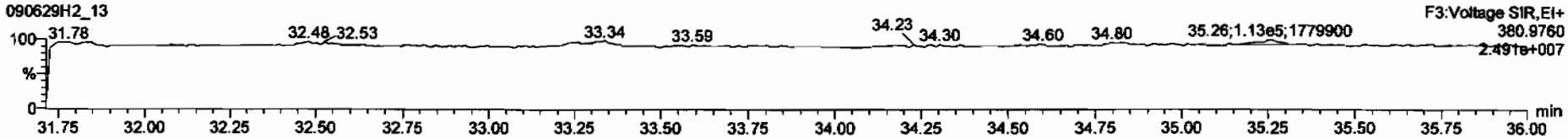

PFK4

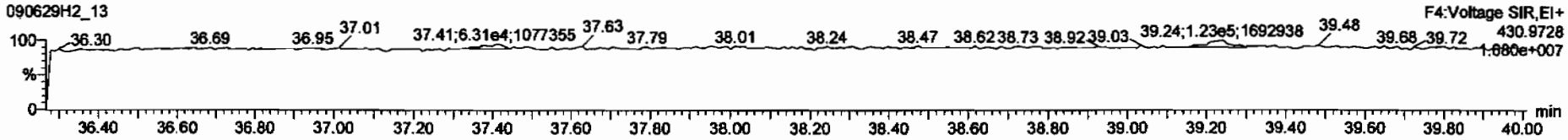

PFK5

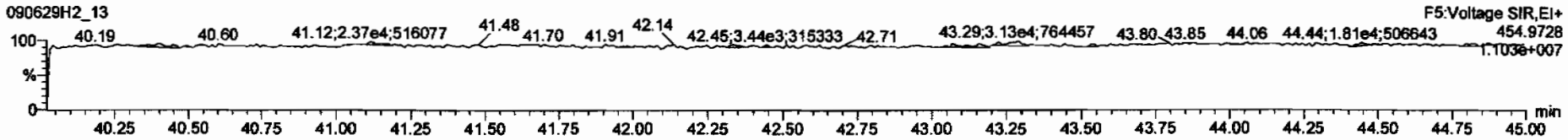

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qld

Last Altered: Tuesday, June 30, 2009 3:49:27 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:49:58 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

1	2,3,7,8-TCDD	6.17e3	0.74	NO	1.08	9.953	26.09	1.001	1.1426		0.0813	~~1.1426~~
2	1,2,3,7,8-PeCDD	3.27e4	0.62	NO	1.03	9.953	30.73	1.000	7.8043		0.0973	7.8043
3	1,2,3,4,7,8-HxCDD	5.01e4	1.28	NO	1.00	9.953	34.17	1.001	14.019		0.729	14.019
4	1,2,3,6,7,8-HxCDD	2.86e5	1.23	NO	1.13	9.953	34.28	1.000	78.915		0.719	78.915
5	1,2,3,7,8,9-HxCDD	1.17e5	1.24	NO	1.10	9.953	34.59	1.009	31.374		0.696	31.374
6	1,2,3,4,6,7,8-HpCDD	8.60e6	1.03	NO	1.06	9.953	38.21	1.000	2340.9		2.83	2340.9
7	OCDD	1.26e8	0.89	NO	1.18	9.953	41.73	1.001	29184	29,400 *	0.789	29184
8	2,3,7,8-TCDF	6.67e3	0.82	NO	1.09	9.953	25.33	1.001	0.90356	ok	0.0757	0.90356
9	1,2,3,7,8-PeCDF	6.60e3	1.54	NO	1.16	9.953	29.51	1.000	0.89688		0.110	0.89688
10	2,3,4,7,8-PeCDF	2.04e4	1.55	NO	1.12	9.953	30.47	1.001	2.9888		0.111	2.9888
11	1,2,3,4,7,8-HxCDF	6.70e4	1.26	NO	1.41	9.953	33.25	1.000	10.544		0.336	10.544
12	1,2,3,6,7,8-HxCDF	4.57e4	1.29	NO	1.22	9.953	33.37	1.000	7.2662		0.344	7.2662
13	2,3,4,6,7,8-HxCDF	8.36e4	1.28	NO	1.28	9.953	34.01	1.001	15.597		0.444	15.597
14	1,2,3,7,8,9-HxCDF	1.58e4	1.18	NO	1.26	9.953	35.02	1.001	3.1288		0.514	3.1288
15	1,2,3,4,6,7,8-HpCDF	1.68e6	1.05	NO	1.69	9.953	36.87	1.000	309.67		0.549	309.67
16	1,2,3,4,7,8,9-HpCDF	1.24e5	1.04	NO	1.48	9.953	38.78	1.000	28.404		0.598	28.404
17	OCDF	4.42e6	0.89	NO	1.10	9.953	41.94	1.001	1132.2		0.348	~~1132.2~~
18	13C-2,3,7,8-TCDD	1.01e6	0.78	NO	1.01	9.953	26.08	1.023	191.96	95.5	0.320	
19	13C-1,2,3,7,8-PeCDD	8.14e5	0.62	NO	0.827	9.953	30.72	1.205	190.34	94.7	0.221	
20	13C-1,2,3,4,7,8-HxCDD	7.17e5	1.28	NO	0.916	9.953	34.15	0.988	185.70	92.4	0.576	
21	13C-1,2,3,6,7,8-HxCDD	6.47e5	1.19	NO	0.921	9.953	34.27	0.991	166.87	83.0	0.573	
22	13C-1,2,3,4,6,7,8-HpCDD	6.93e5	1.05	NO	0.708	9.953	38.20	1.105	232.46	116	0.629	
23	13C-OCDD	1.47e6	0.89	NO	0.503	9.953	41.71	1.207	695.44	~~173~~ 124 *	0.618	
24	13C-2,3,7,8-TCDF	1.36e6	0.78	NO	0.977	9.953	25.31	0.993	198.17	98.6	0.231	
25	13C-1,2,3,7,8-PeCDF	1.28e6	1.59	NO	0.896	9.953	29.50	1.157	201.84	100	0.426	
26	13C-2,3,4,7,8-PeCDF	1.22e6	1.59	NO	0.900	9.953	30.43	1.194	193.09	96.1	0.424	
27	13C-1,2,3,4,7,8-HxCDF	9.05e5	0.52	NO	1.17	9.953	33.24	0.962	183.83	91.5	0.617	
28	13C-1,2,3,6,7,8-HxCDF	1.03e6	0.52	NO	1.52	9.953	33.36	0.965	161.52	80.4	0.475	
29	13C-2,3,4,6,7,8-HxCDF	8.41e5	0.52	NO	1.25	9.953	33.99	0.983	159.95	79.6	0.577	
30	13C-1,2,3,7,8,9-HxCDF	8.07e5	0.52	NO	1.05	9.953	34.97	1.012	181.94	90.5	0.685	

6/30/09
7/2/09

* See 1:10

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qld

Last Altered: Tuesday, June 30, 2009 3:49:27 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:49:58 PM Pacific Daylight Time

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

31	13C-1,2,3,4,6,7,8-HpCDF	6.47e5	0.45	NO	0.868	9.953	36.86	1.066	177.05	88.1	0.807	
32	13C-1,2,3,4,7,8,9-HpCDF	5.92e5	0.44	NO	0.727	9.953	38.77	1.122	193.37	96.2	0.964	
33	13C-OCDF	1.43e6	0.90	NO	0.760	9.953	41.92	1.213	447.71	111	0.401	
34	37Cl-2,3,7,8-TCDD	2.45e5			0.668	9.953	26.09	1.023	71.013	88.3	0.103	
35	13C-1,2,3,4-TCDD	1.04e6	0.82	NO	1.00	9.953	25.50	0.000	200.94	100	0.325	
36	13C-1,2,3,4-TCDF	1.42e6	0.77	NO	1.00	9.953	24.07	0.000	200.94	100	0.226	
37	13C-1,2,3,7,8,9-HxCDD	8.46e5	1.25	NO	1.00	9.953	34.57	0.000	200.94	100	0.528	
38	Total Tetra-Dioxins				1.08	9.953			14.024		0.0813	14.799
39	Total Penta-Dioxins				1.03	9.953			52.482		0.0973	~~52.482~~
40	Total Hexa-Dioxins				1.13	9.953			484.31		0.682	~~484.31~~
41	Total Hepta-Dioxins				1.06	9.953			4757.9		2.83	~~4757.9~~
42	Total Tetra-Furans				1.09	9.953			20.174		0.0757	22.114
43	1st Func. Penta-Furans				1.16	9.953			~~46.920~~ 72.0		0.0403	~~48.920~~
44	Total Penta-Furans				1.16	9.953			~~23.123~~		0.108	~~23.123~~
45	Total Hexa-Furans				1.28	9.953			395.33		0.406	~~395.33~~
46	Total Hepta-Furans				1.69	9.953			1282.9		0.537	~~1282.9~~

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qid

Last Altered: Tuesday, June 30, 2009 3:49:27 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:49:58 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

Tetra-Dioxins

Total Tetra-Dioxins	22.73	1.585e5	1.960e5	1.233e4	1.574e4	0.78	NO	2.807e4	5.1946	5.1946	0.0813
Total Tetra-Dioxins	23.08	1.368e5	1.777e5	1.106e4	1.367e4	0.81	NO	2.473e4	4.5760	4.5760	0.0813
Total Tetra-Dioxins	23.48	1.734e4	1.915e4	1.319e3	1.493e3	0.88	NO	2.812e3	0.52036	0.52036	0.0813
Total Tetra-Dioxins	24.20	1.319e4	1.815e4	8.317e2	1.115e3	0.75	NO	1.947e3	0.36030	0.36030	0.0813
Total Tetra-Dioxins	24.44	1.216e4	2.047e4	1.021e3	1.664e3	0.61	YES	0.000e0	0.00000	0.43443	0.0813
Total Tetra-Dioxins	24.59	4.624e4	6.254e4	3.331e3	4.490e3	0.74	NO	7.821e3	1.4474	1.4474	0.0813
Total Tetra-Dioxins	24.79	6.576e3	1.144e4	4.575e2	6.580e2	0.70	NO	1.116e3	0.20643	0.20643	0.0813
Total Tetra-Dioxins	25.02	5.303e3	7.470e3	2.747e2	4.995e2	0.55	YES	0.000e0	0.00000	0.11686	0.0813
Total Tetra-Dioxins	25.17	8.974e3	1.333e4	5.275e2	9.962e2	0.53	YES	0.000e0	0.00000	0.22439	0.0813
Total Tetra-Dioxins	25.50	9.000e3	9.595e3	5.235e2	7.790e2	0.67	NO	1.302e3	0.24103	0.24103	0.0813
2,3,7,8-TCDD	26.09	4.008e4	5.903e4	2.631e3	3.543e3	0.74	NO	6.174e3	1.1426	1.1426	0.0813
Total Tetra-Dioxins	26.40	1.420e4	1.405e4	8.031e2	1.006e3	0.80	NO	1.809e3	0.33474	0.33474	0.0813

Penta-Dioxins

Total Penta-Dioxins	28.58	4.656e5	7.479e5	3.551e4	5.912e4	0.60	NO	9.463e4	22.603	22.603	0.0973
Total Penta-Dioxins	29.05	1.093e5	1.732e5	5.247e3	8.491e3	0.62	NO	1.374e4	3.2816	3.2816	0.0973
Total Penta-Dioxins	29.52	1.463e5	2.063e5	7.479e3	1.115e4	0.67	NO	1.863e4	4.4503	4.4503	0.0973
Total Penta-Dioxins	29.69	1.596e5	2.663e5	8.556e3	1.326e4	0.65	NO	2.181e4	5.2106	5.2106	0.0973
Total Penta-Dioxins	29.77	6.754e4	1.125e5	3.348e3	6.106e3	0.55	NO	9.454e3	2.2582	2.2582	0.0973
Total Penta-Dioxins	30.00	8.381e4	1.343e5	7.216e3	1.072e4	0.67	NO	1.794e4	4.2851	4.2851	0.0973
Total Penta-Dioxins	30.33	1.758e4	2.811e4	8.166e2	1.394e3	0.59	NO	2.210e3	0.52796	0.52796	0.0973
1,2,3,7,8-PeCDD	30.73	2.491e5	4.041e5	1.253e4	2.014e4	0.62	NO	3.267e4	7.8043	7.8043	0.0973
Total Penta-Dioxins	30.82	2.983e4	4.079e4	1.150e3	1.651e3	0.70	NO	2.801e3	0.66911	0.66911	0.0973
Total Penta-Dioxins	31.11	4.630e4	6.764e4	2.330e3	3.498e3	0.67	NO	5.828e3	1.3921	1.3921	0.0973

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qld

Last Altered: Tuesday, June 30, 2009 3:49:27 PM Pacific Daylight Time
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Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

Hexa-Dioxins

	Total Hexa-Dioxins	32.57	6.175e6	5.060e6	3.386e5	2.747e5	1.23	NO	6.133e5	160.60	160.60	0.682
	Total Hexa-Dioxins	33.16	7.026e5	5.361e5	3.867e4	3.080e4	1.26	NO	6.947e4	18.194	18.194	0.682
	Total Hexa-Dioxins	33.45	4.848e6	4.091e6	3.628e5	2.934e5	1.24	NO	6.562e5	171.85	171.85	0.682
	Total Hexa-Dioxins	33.56	1.463e5	1.213e5	1.006e4	7.844e3	1.28	NO	1.791e4	4.6895	4.6895	0.682
	1,2,3,4,7,8-HxCDD	34.17	4.590e5	3.706e5	2.807e4	2.199e4	1.28	NO	5.007e4	14.019	14.019	0.729
	1,2,3,6,7,8-HxCDD	34.28	2.486e6	1.985e6	1.576e5	1.284e5	1.23	NO	2.860e5	78.915	78.915	0.719
	Total Hexa-Dioxins	34.49	1.660e5	1.380e5	9.600e3	8.196e3	1.17	NO	1.780e4	4.6605	4.6605	0.682
	1,2,3,7,8,9-HxCDD	34.59	9.224e5	7.554e5	6.490e4	5.242e4	1.24	NO	1.173e5	31.374	31.374	0.696

Hepta-Dioxins

	Total Hepta-Dioxins	37.29	5.855e7	5.672e7	4.530e6	4.345e6	1.04	NO	8.875e6	2417.0	2417.0	2.83
	1,2,3,4,6,7,8-HpCDD	38.21	6.770e7	6.605e7	4.367e6	4.228e6	1.03	NO	8.595e6	2340.9	2340.9	2.83

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qld

Last Altered: Tuesday, June 30, 2009 3:49:27 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:49:58 PM Pacific Daylight Time

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

Tetra-Furans

	Total Tetra-Furans	20.65	1.371e4	1.945e4	1.207e3	1.940e3	0.62	YES	0.000e0	0.00000	0.37576	0.0757
	Total Tetra-Furans	21.22	3.406e4	4.452e4	3.128e3	4.328e3	0.72	NO	7.456e3	1.0093	1.0093	0.0757
	Total Tetra-Furans	21.86	3.067e5	3.684e5	2.634e4	3.446e4	0.76	NO	6.080e4	8.2308	8.2308	0.0757
	Total Tetra-Furans	22.28	3.565e4	4.193e4	3.280e3	3.958e3	0.83	NO	7.238e3	0.97989	0.97989	0.0757
	Total Tetra-Furans	22.39	1.967e4	2.207e4	1.399e3	1.593e3	0.88	NO	2.992e3	0.40502	0.40502	0.0757
	Total Tetra-Furans	22.71	5.218e4	7.004e4	4.195e3	5.764e3	0.73	NO	9.959e3	1.3483	1.3483	0.0757
	Total Tetra-Furans	23.09	4.766e4	7.517e4	3.719e3	5.461e3	0.68	NO	9.181e3	1.2429	1.2429	0.0757
	Total Tetra-Furans	23.25	2.934e4	3.487e4	1.827e3	2.146e3	0.85	NO	3.973e3	0.53789	0.53789	0.0757
	Total Tetra-Furans	23.39	4.529e4	6.023e4	3.445e3	4.483e3	0.77	NO	7.928e3	1.0732	1.0732	0.0757
	Total Tetra-Furans	23.86	1.558e4	2.232e4	1.125e3	1.587e3	0.71	NO	2.712e3	0.36714	0.36714	0.0757
	Total Tetra-Furans	24.00	6.767e4	8.271e4	5.023e3	6.522e3	0.77	NO	1.154e4	1.5629	1.5629	0.0757
	Total Tetra-Furans	24.12	1.873e4	2.741e4	1.223e3	1.819e3	0.67	NO	3.042e3	0.41178	0.41178	0.0757
	Total Tetra-Furans	24.52	1.859e4	1.982e4	1.234e3	1.400e3	0.88	NO	2.633e3	0.35652	0.35652	0.0757
	Total Tetra-Furans	24.78	1.320e4	2.017e4	8.820e2	1.016e3	0.87	NO	1.898e3	0.25691	0.25691	0.0757
	Total Tetra-Furans	25.14	1.544e4	1.715e4	9.067e2	1.165e3	0.78	NO	2.072e3	0.28047	0.28047	0.0757
	Total Tetra-Furans	25.24	1.379e4	1.214e4	8.398e2	8.391e2	1.00	YES	0.000e0	0.00000	0.20107	0.0757
	2,3,7,8-TCDF	25.33	4.827e4	5.410e4	3.010e3	3.664e3	0.82	NO	6.674e3	0.90356	0.90356	0.0757
	Total Tetra-Furans	25.65	5.788e4	7.937e4	4.043e3	4.878e3	0.83	NO	8.921e3	1.2077	1.2077	0.0757
	Total Tetra-Furans	25.89	9.773e3	1.577e4	5.940e2	1.119e3	0.53	YES	0.000e0	0.00000	0.18484	0.0757
	Total Tetra-Furans	27.08	1.177e5	8.509e4	6.288e3	4.914e3	1.28	YES	0.000e0	0.00000	1.1776	0.0757

Penta-Furans function 1

	1st Func. Penta-Furans	27.07	3.864e6	2.391e6	2.165e5	1.361e5	1.59	NO	3.526e5	48.920	48.920	0.0403

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qld

Last Altered: Tuesday, June 30, 2009 3:49:27 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 3:49:58 PM Pacific Daylight Time

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

Penta-Furans

	Total Penta-Furans	28.43	8.130e4	4.886e4	4.500e3	2.817e3	1.60	NO	7.318e3	1.0152	1.0152	0.108
	Total Penta-Furans	28.57	6.068e5	3.868e5	4.448e4	2.854e4	1.56	NO	7.302e4	10.130	10.130	0.108
	Total Penta-Furans	28.93	3.813e4	2.420e4	2.082e3	1.396e3	1.49	NO	3.478e3	0.48251	0.48251	0.108
	Total Penta-Furans	29.12	3.835e5	2.257e5	2.404e4	1.536e4	1.56	NO	3.940e4	5.4671	5.4671	0.108
	Total Penta-Furans	29.33	3.189e4	2.550e4	1.909e3	1.363e3	1.40	NO	3.273e3	0.45408	0.45408	0.108
	1,2,3,7,8-PeCDF	29.51	7.005e4	4.697e4	4.002e3	2.593e3	1.54	NO	6.595e3	0.89688	0.89688	0.110
	Total Penta-Furans	29.76	1.104e5	7.384e4	5.739e3	3.726e3	1.54	NO	9.465e3	1.3131	1.3131	0.108
	Total Penta-Furans	30.35	3.547e4	2.249e4	1.654e3	1.048e3	1.58	NO	2.700e3	0.37461	0.37461	0.108
	2,3,4,7,8-PeCDF	30.47	1.570e5	1.002e5	1.238e4	7.981e3	1.55	NO	2.036e4	2.9888	2.9888	0.111

Hexa-Furans

	Total Hexa-Furans	32.02	2.464e6	1.962e6	1.237e5	9.674e4	1.28	NO	2.204e5	38.585	38.585	0.406
	Total Hexa-Furans	32.19	7.348e6	5.675e6	3.738e5	2.950e5	1.27	NO	6.688e5	117.09	117.09	0.406
	Total Hexa-Furans	32.56	1.631e5	1.263e5	8.967e3	6.673e3	1.34	NO	1.564e4	2.7382	2.7382	0.406
	Total Hexa-Furans	32.76	1.123e7	8.976e6	6.305e5	5.004e5	1.26	NO	1.131e6	197.99	197.99	0.406
	Total Hexa-Furans	33.14	6.165e4	5.775e4	3.283e3	2.882e3	1.14	NO	6.165e3	1.0793	1.0793	0.406
	1,2,3,4,7,8-HxCDF	33.25	6.809e5	5.413e5	3.730e4	2.971e4	1.26	NO	6.701e4	10.544	10.544	0.336
	1,2,3,6,7,8-HxCDF	33.37	4.434e5	3.344e5	2.575e4	1.991e4	1.29	NO	4.567e4	7.2662	7.2662	0.344
	Total Hexa-Furans	33.68	7.221e4	5.631e4	4.353e3	3.126e3	1.39	NO	7.479e3	1.3094	1.3094	0.406
	2,3,4,6,7,8-HxCDF	34.01	7.852e5	5.895e5	4.690e4	3.670e4	1.28	NO	8.360e4	15.597	15.597	0.444
	1,2,3,7,8,9-HxCDF	35.02	1.097e5	9.267e4	8.550e3	7.247e3	1.18	NO	1.580e4	3.1288	3.1288	0.514

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.87	1.061e7	1.001e7	8.639e5	8.210e5	1.05	NO	1.685e6	309.67	309.67	0.549
	Total Hepta-Furans	37.31	2.270e5	2.122e5	1.648e4	1.462e4	1.13	NO	3.109e4	5.9724	5.9724	0.537
	Total Hepta-Furans	37.51	3.467e7	3.338e7	2.501e6	2.386e6	1.05	NO	4.888e6	938.82	938.82	0.537
	1,2,3,4,7,8,9-HpCDF	38.78	9.086e5	8.757e5	6.307e4	6.074e4	1.04	NO	1.238e5	28.404	28.404	0.598

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qld

Last Altered: Tuesday, June 30, 2009 08:17:47 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:18:35 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

2,3,7,8-TCDD

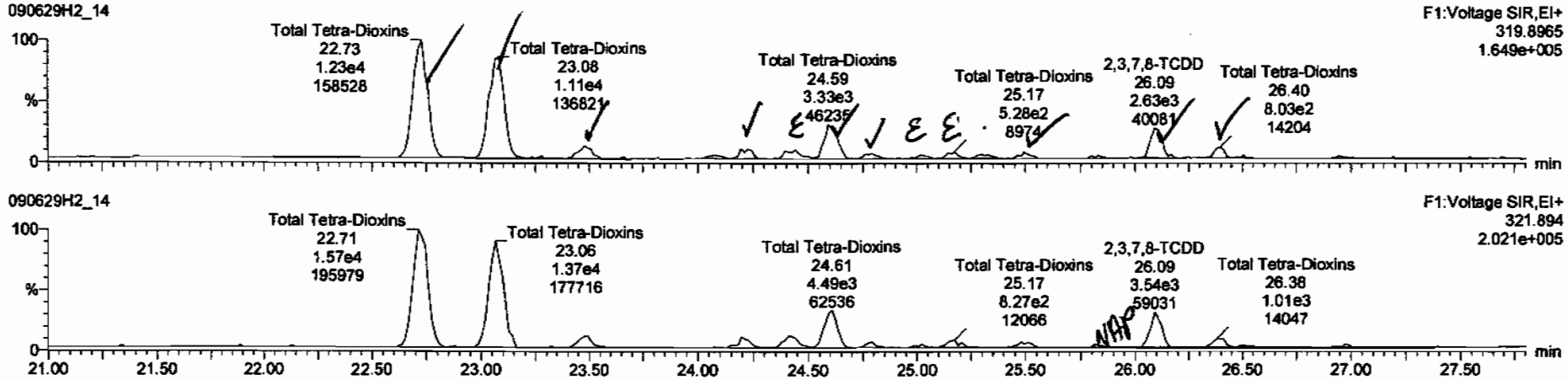

13C-2,3,7,8-TCDD

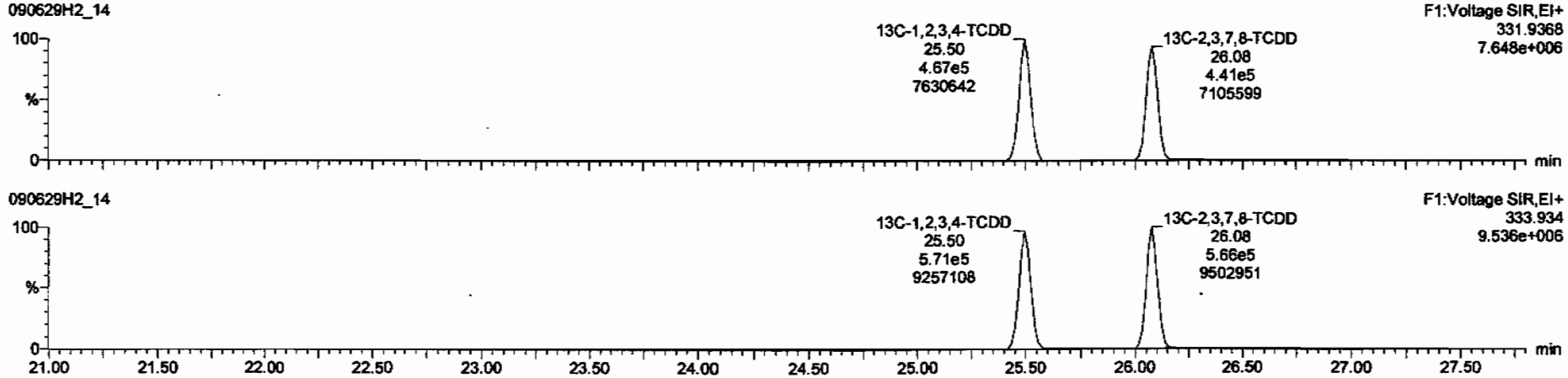

TargetLynx - 090629f2-14.qld * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

Total Tetra-Dioxins	25.02	2.747e2	4.995e2	0.55	YES	0.11686	0.00000
Total Tetra-Dioxins	25.17	5.275e2	9.962e2	0.53	YES	0.22439	0.00000
Total Tetra-Dioxins	25.50	5.235e2	7.790e2	0.67	NO	0.24103	0.24103
2,3,7,8-TCDD	26.09	2.631e3	3.543e3	0.74	NO	1.1426	1.1426
Total Tetra-Dioxins	26.40	8.031e2	1.006e3	0.80	NO	0.33474	0.33474

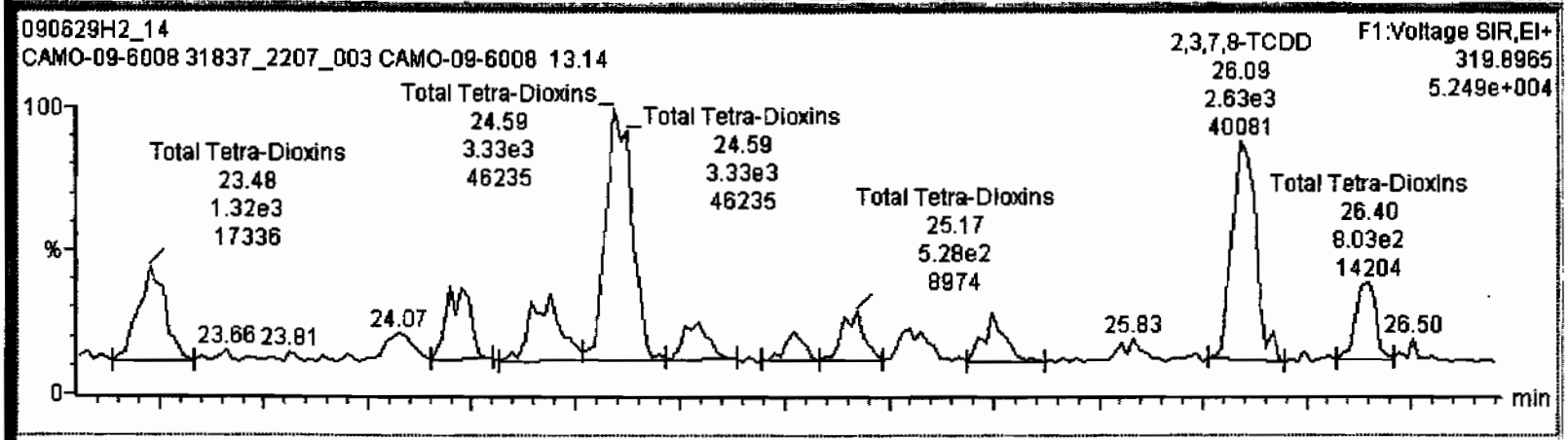

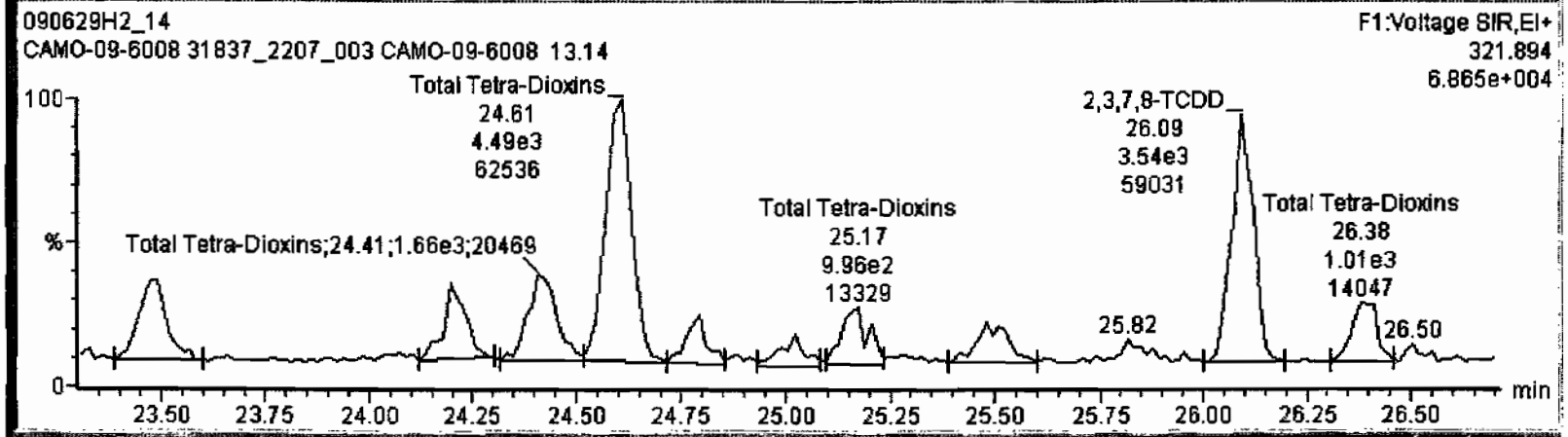

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Last Altered: Tuesday, June 30, 2009 08:17:47 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:18:35 Pacific Daylight Time

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

37Cl-2,3,7,8-TCDD

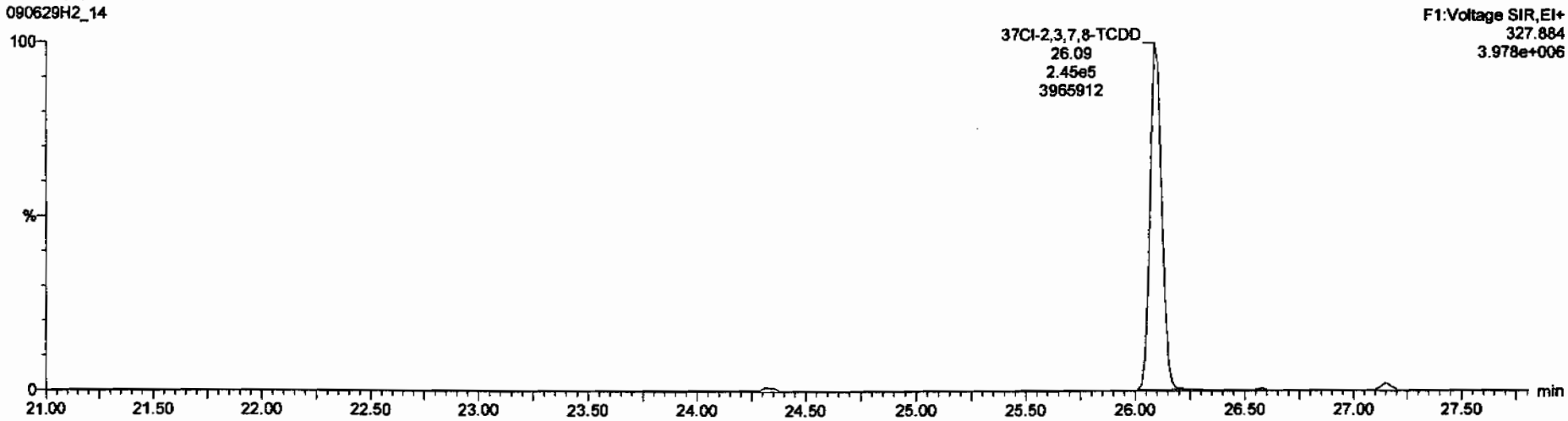

13C-1,2,3,4-TCDD

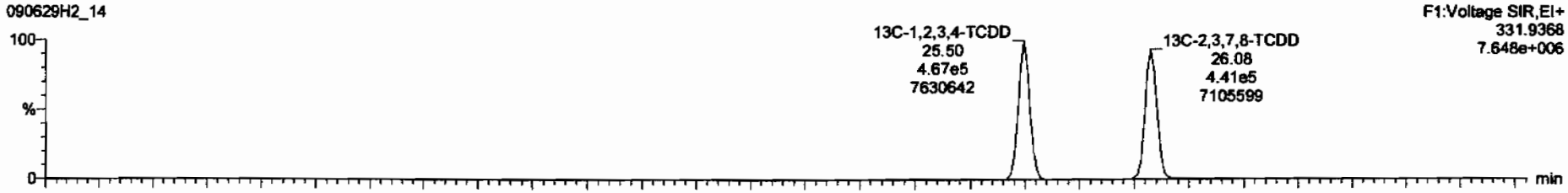

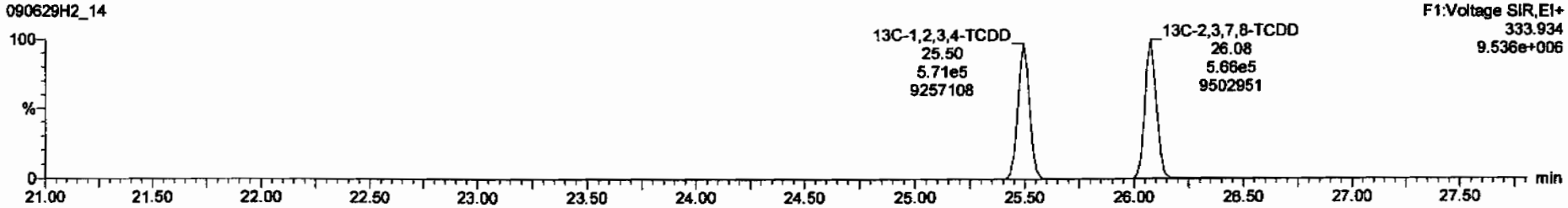

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Printed: Tuesday, June 30, 2009 08:18:35 Pacific Daylight Time

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

1,2,3,7,8-PeCDD

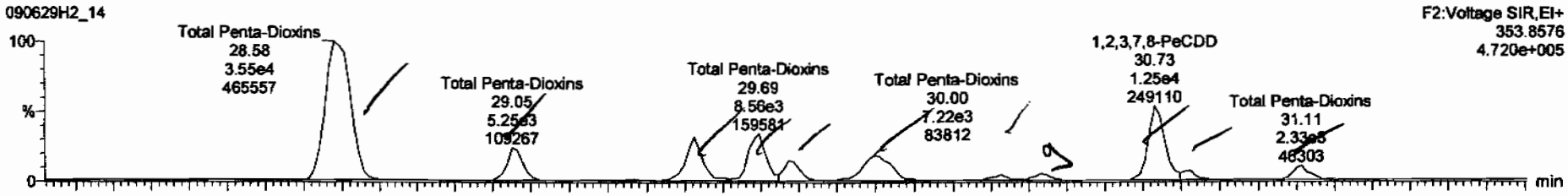

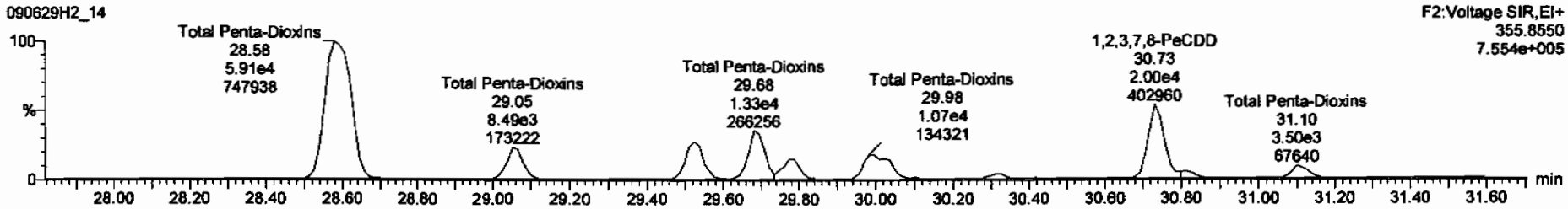

13C-1,2,3,7,8-PeCDD

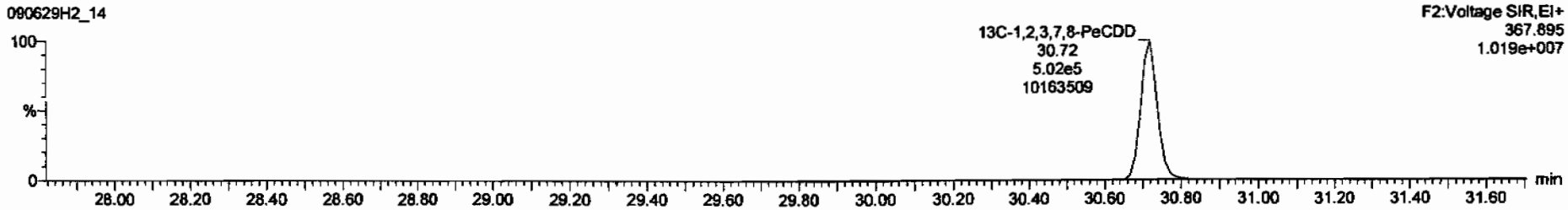

TargetLynx - 09062912-14.qld * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

Total Penta-Dioxins	30.33	8.166e2	1.394e3	0.59	NO	0.52796	0.52796
1,2,3,7,8-PeCDD	30.73	1.253e4	2.014e4	0.62	NO	7.8043	7.8043
Total Penta-Dioxins	30.82	1.150e3	1.651e3	0.70	NO	0.66911	0.66911
Total Penta-Dioxins	31.11	2.330e3	3.498e3	0.67	NO	1.3921	1.3921

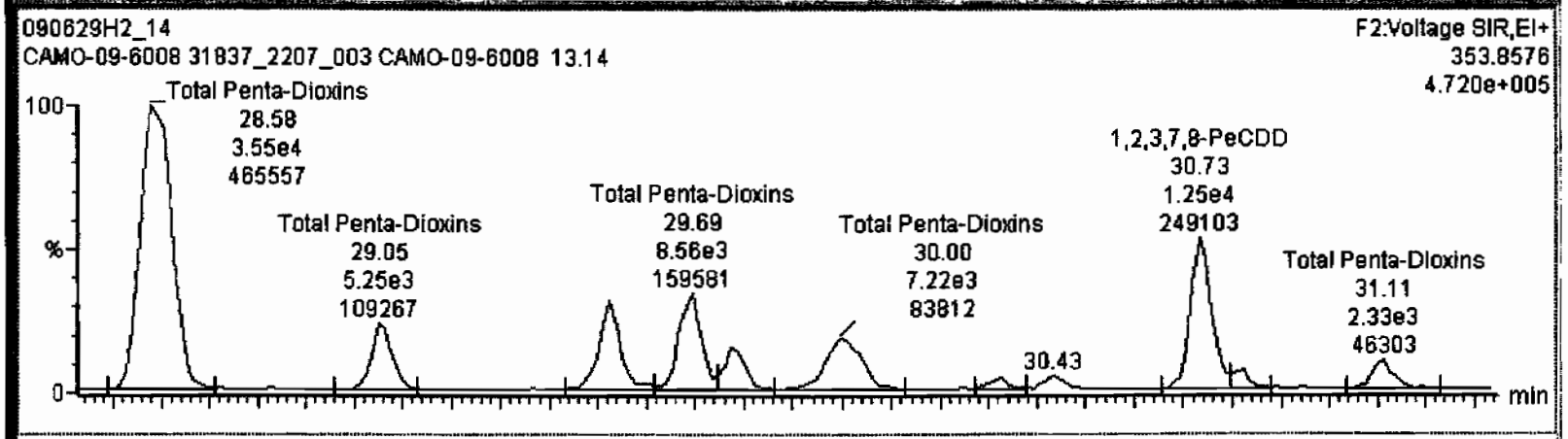

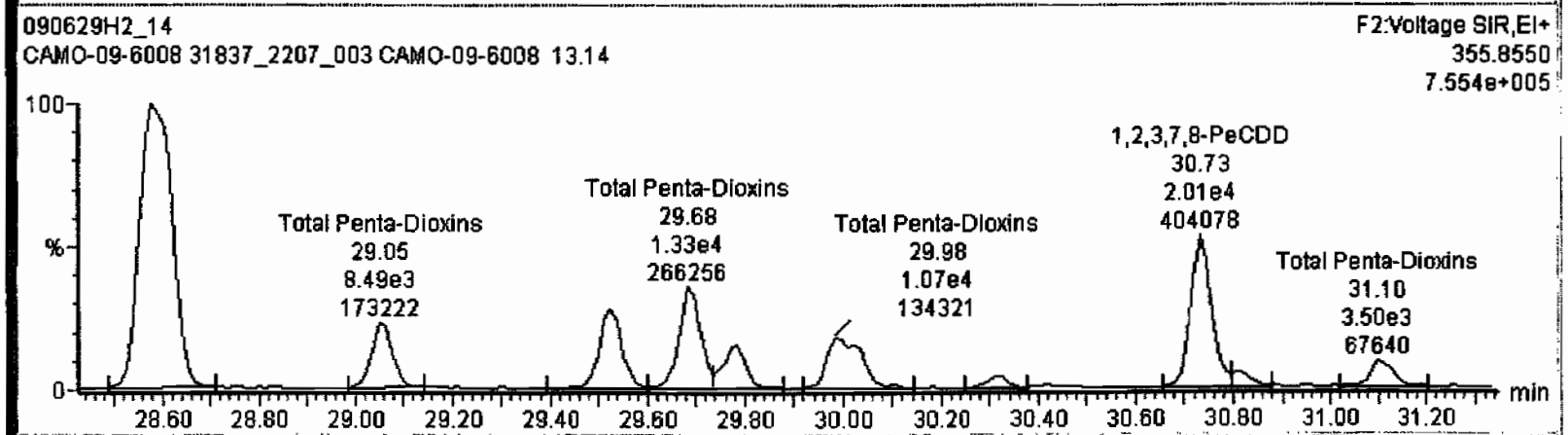

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qid

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Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

1,2,3,4,7,8-HxCDD

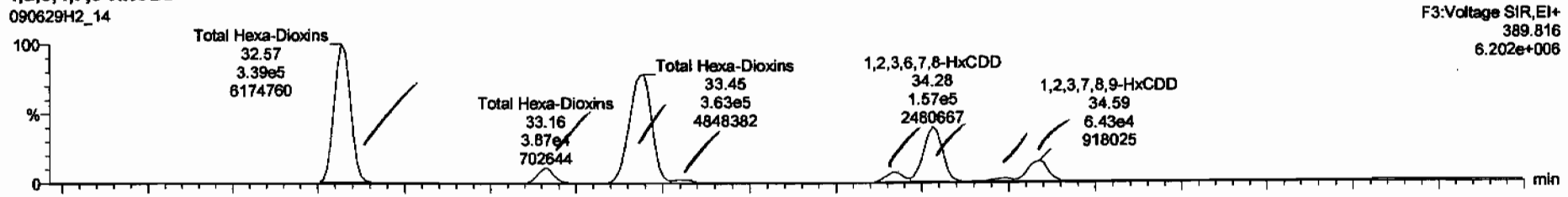

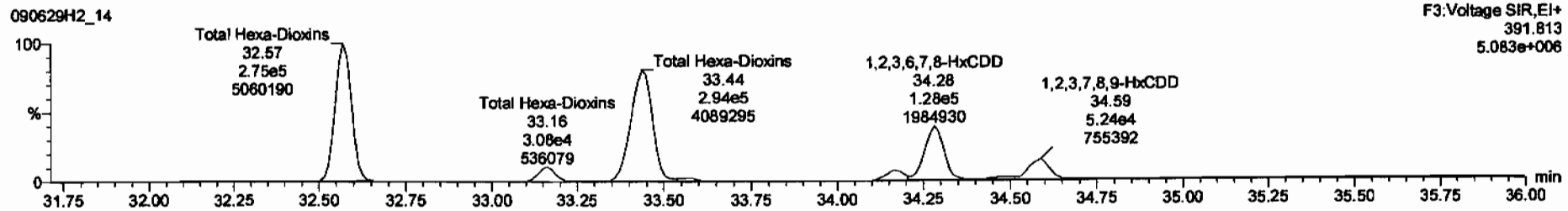

13C-1,2,3,4,7,8-HxCDD

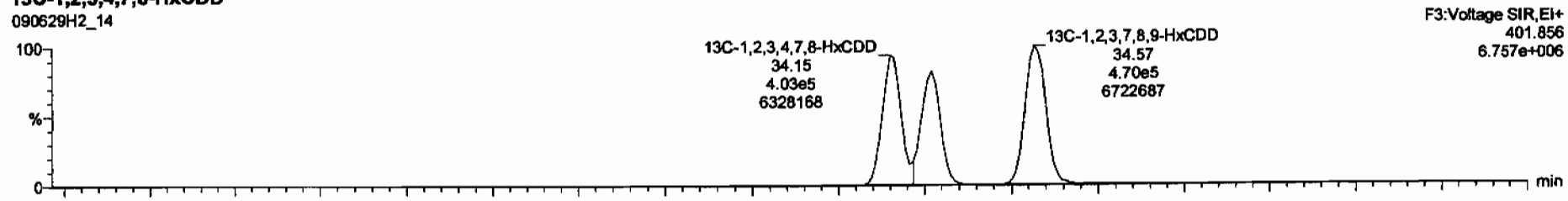

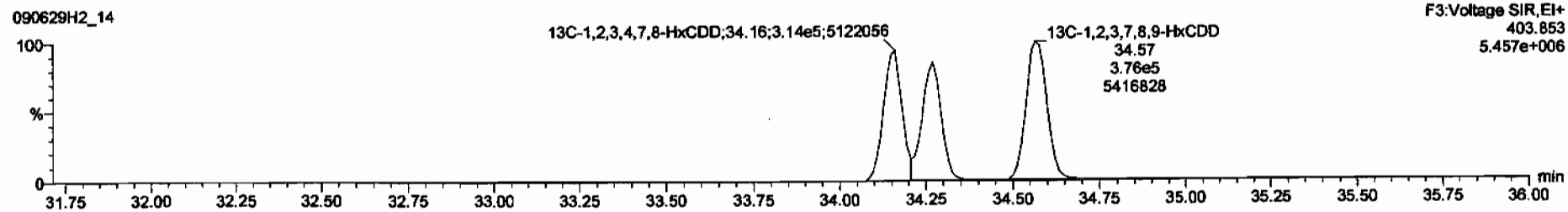

TargetLynx - 090629f2-14.qld * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

Total Hexa-Dioxins	32.57	3.386e5	2.747e5	1.23	NO	160.60	160.60
Total Hexa-Dioxins	33.16	3.867e4	3.080e4	1.26	NO	18.194	18.194
Total Hexa-Dioxins	33.45	3.628e5	2.934e5	1.24	NO	171.85	171.85
Total Hexa-Dioxins	33.56	1.006e4	7.844e3	1.28	NO	4.6895	0.00000
1,2,3,4,7,8-HxCDD	34.17	2.807e4	2.199e4	1.28	NO	14.019	14.019

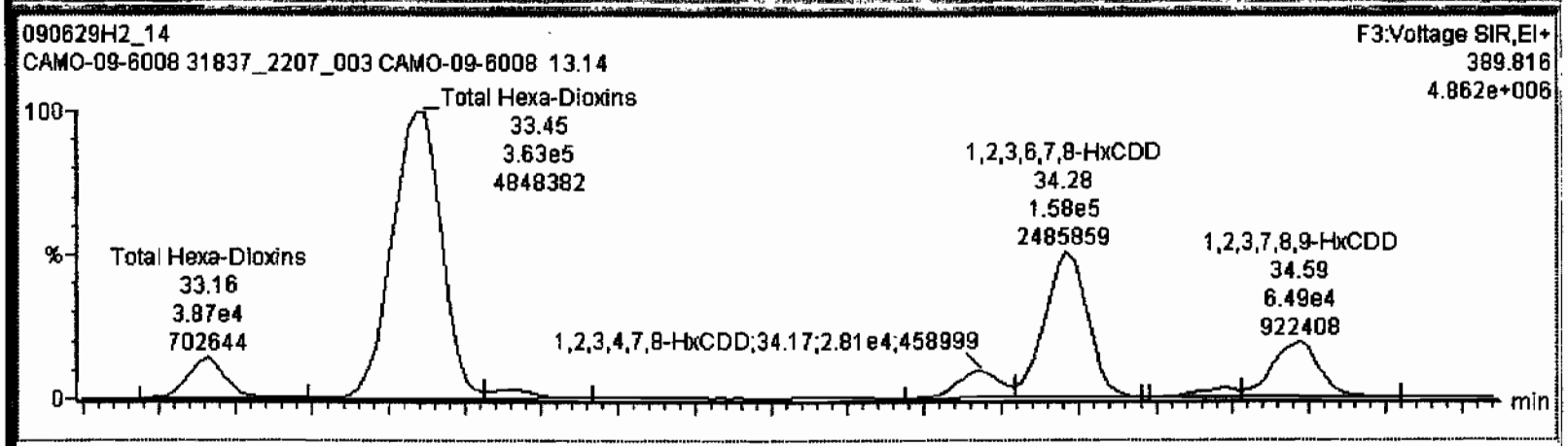

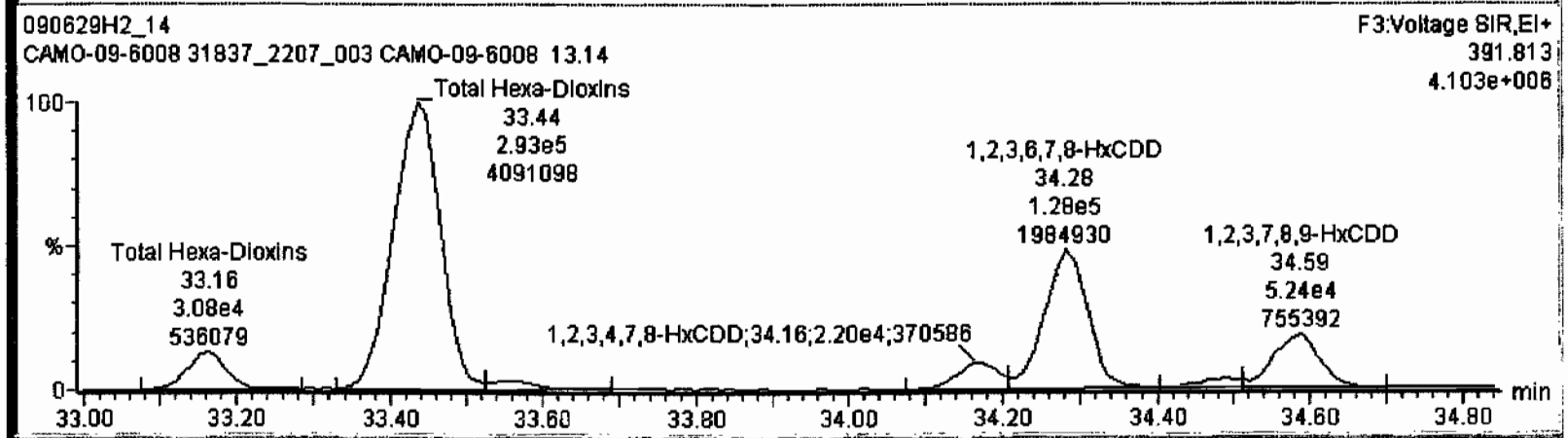

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Printed: Tuesday, June 30, 2009 08:18:35 Pacific Daylight Time

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

1,2,3,4,6,7,8-HpCDD

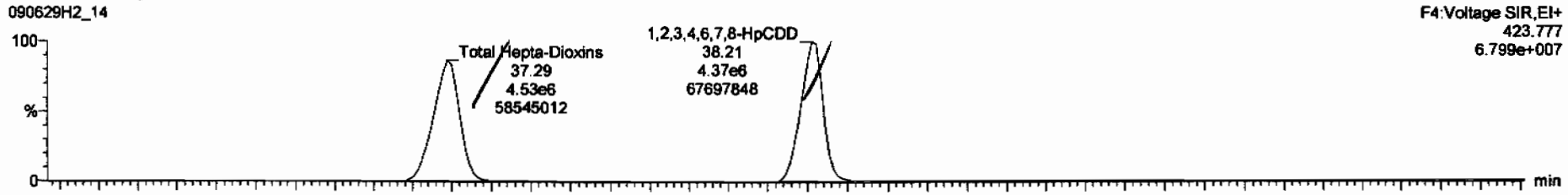

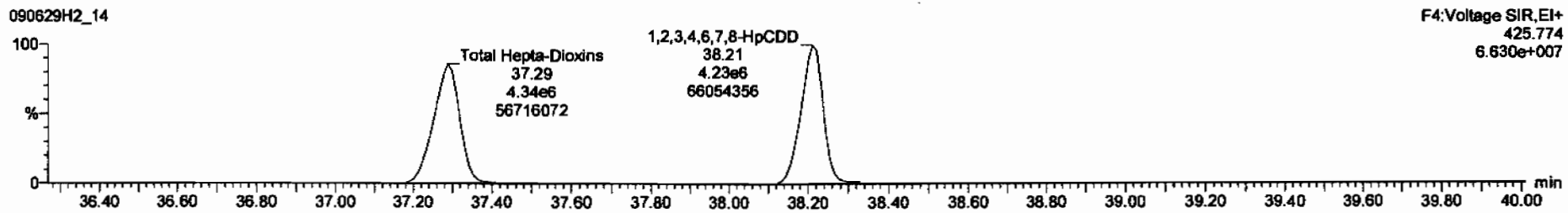

13C-1,2,3,4,6,7,8-HpCDD

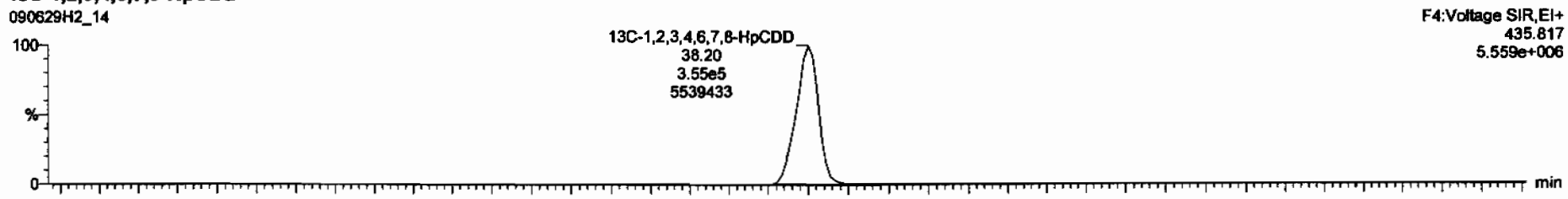

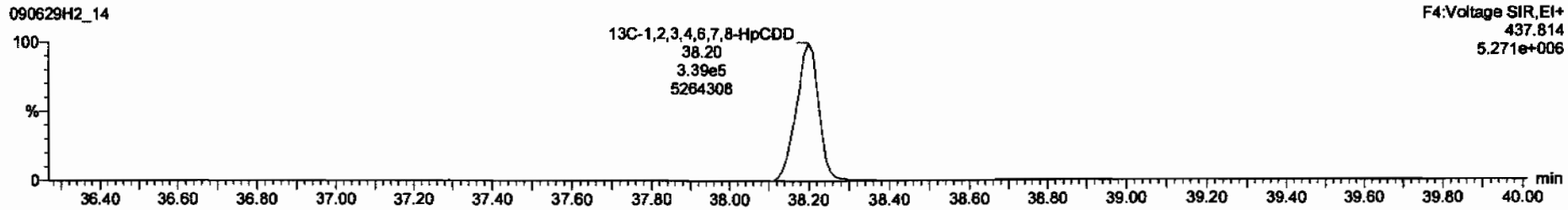

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Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

OCDD

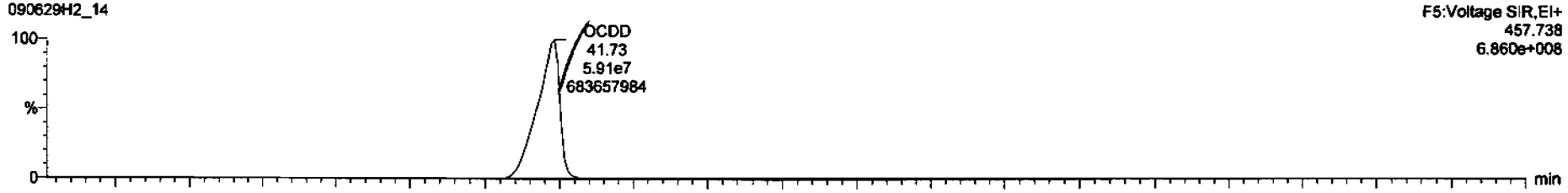

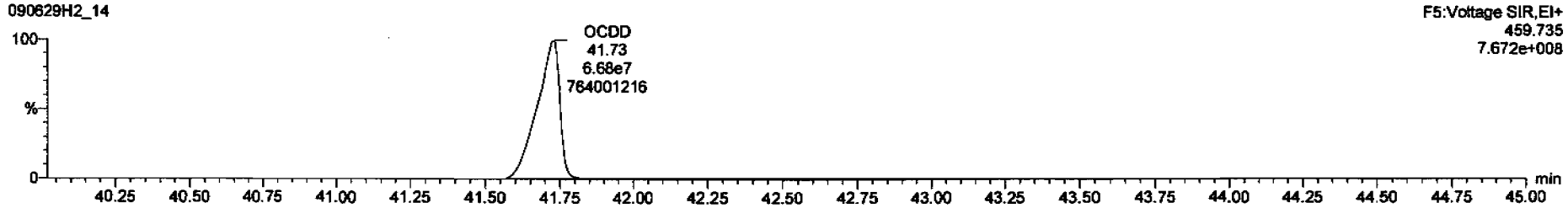

13C-OCDD

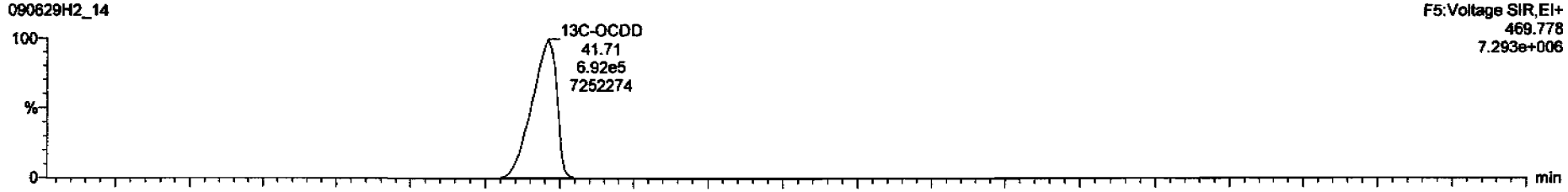

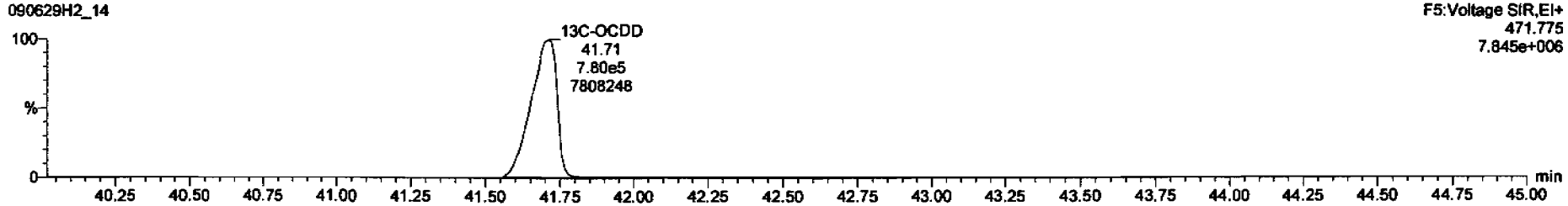

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Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

2,3,7,8-TCDF

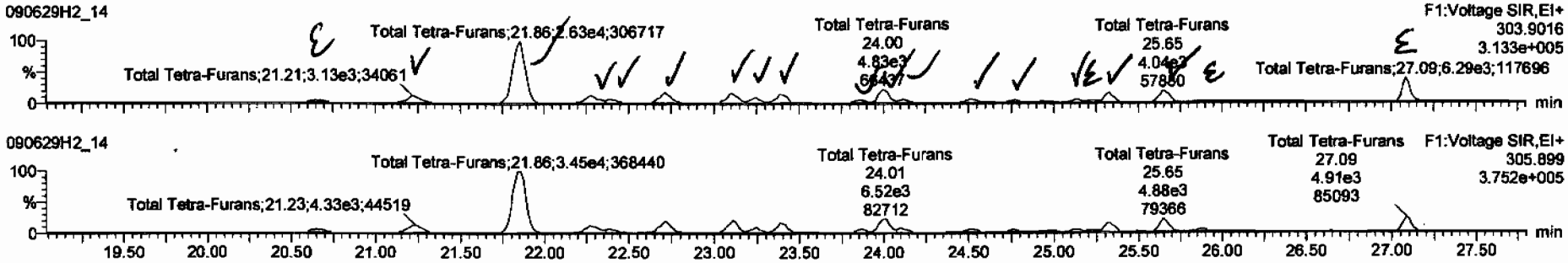

13C-2,3,7,8-TCDF

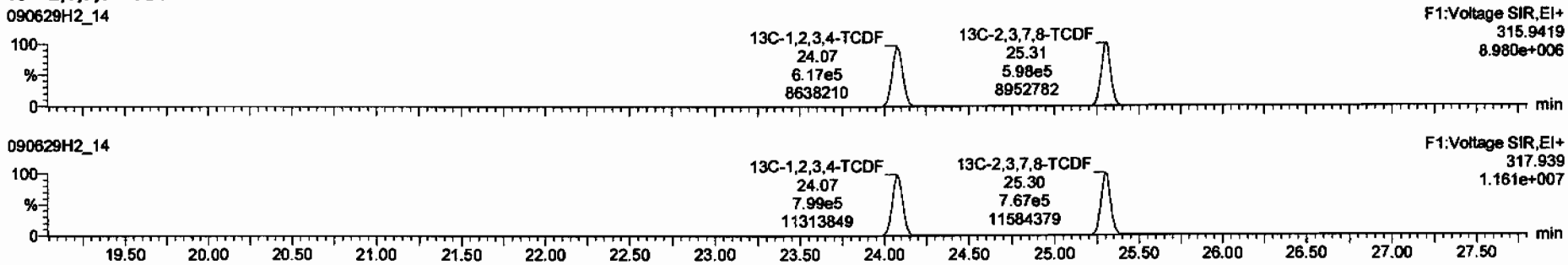

DPE1

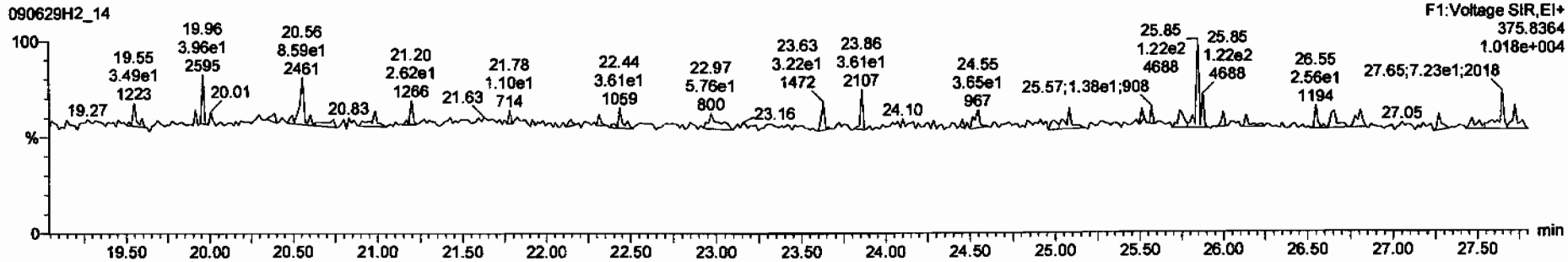

TargetLynx - 090629f2-14.qld * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

Total Tetra-Furans	23.39	3.445e3	4.483e3	0.77	NO	1.0732	1.0732
Total Tetra-Furans	23.86	9.771e2	1.916e3	0.51	YES	0.30407	0.00000
Total Tetra-Furans	24.00	4.835e3	6.522e3	0.74	NO	1.5374	1.5374
Total Tetra-Furans	24.12	1.128e3	1.819e3	0.62	YES	0.35116	0.00000
Total Tetra-Furans	24.52	1.336e3	1.312e3	1.02	YES	0.31444	0.00000

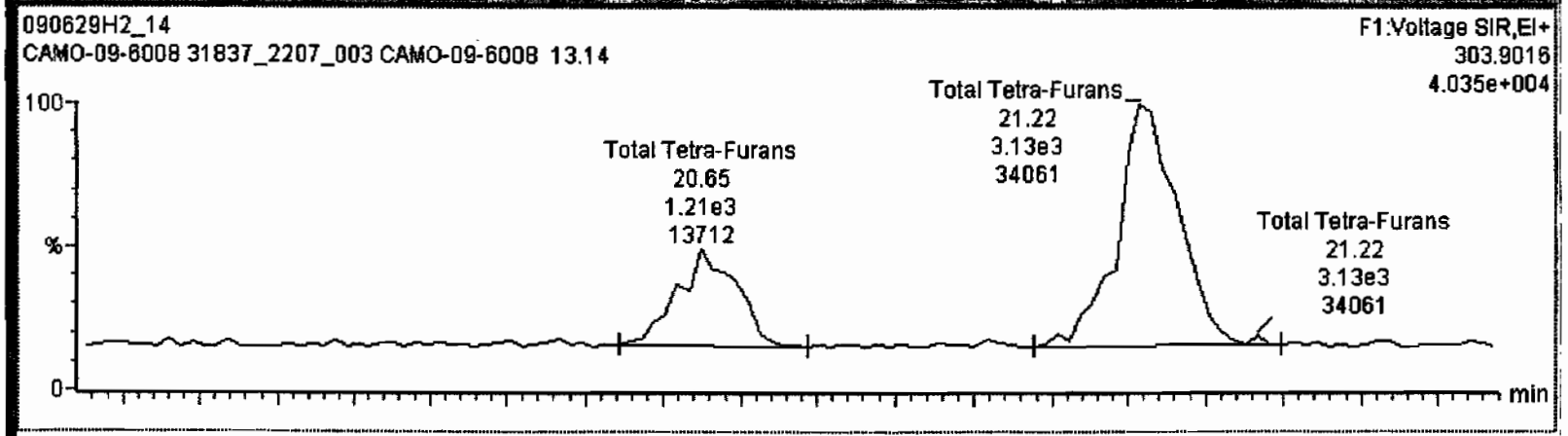

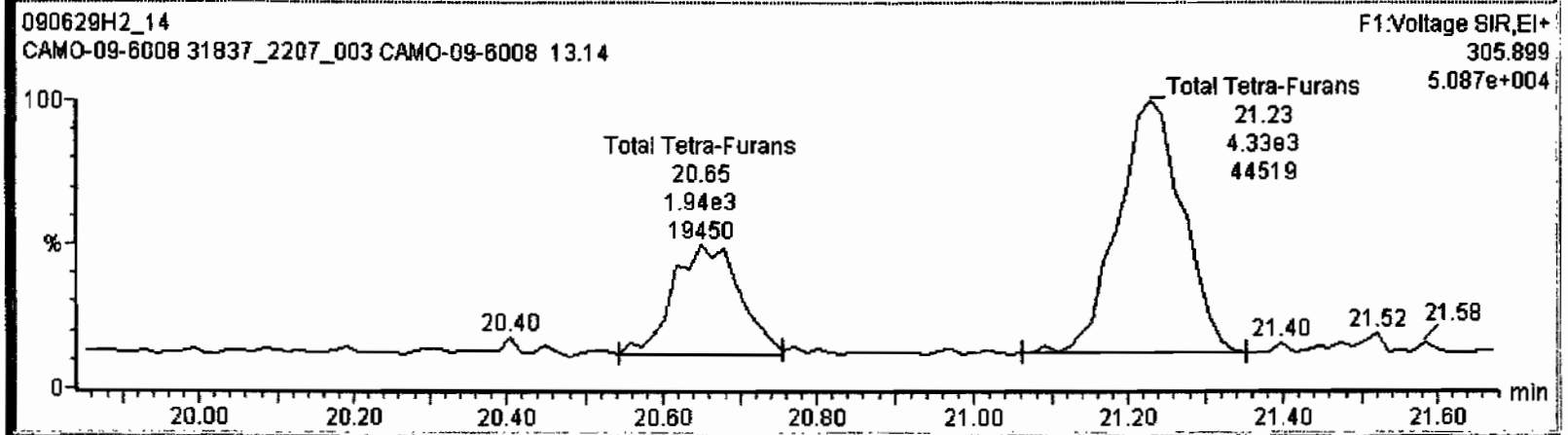

TargetLynx - 090629f2-14.qld * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

Name	RT	Area	Ion Resp	Ratio	Qual	Conc	Amount
Total Tetra-Furans	24.52	1.234e3	1.400e3	0.88	NO	0.35652	0.35652
Total Tetra-Furans	24.78	8.820e2	1.016e3	0.87	NO	0.25691	0.25691
Total Tetra-Furans	25.14	9.067e2	1.165e3	0.78	NO	0.28047	0.28047
Total Tetra-Furans	25.24	8.398e2	6.854e2	1.23	YES	0.16423	0.00000
2,3,7,8-TCDF	25.33	3.010e3	3.836e3	0.78	NO	0.92674	0.92674

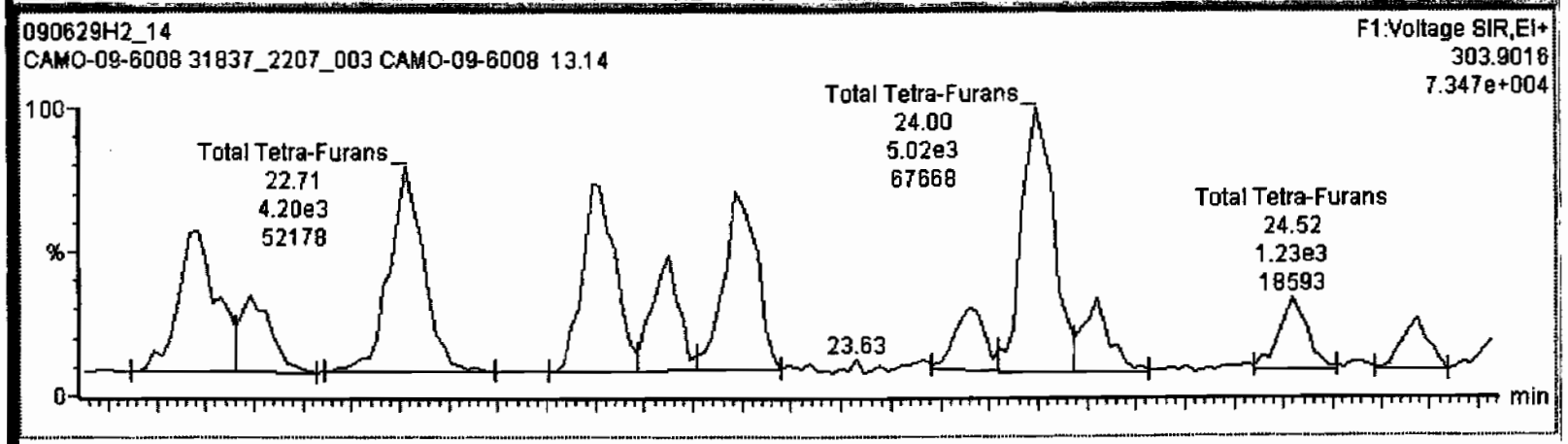

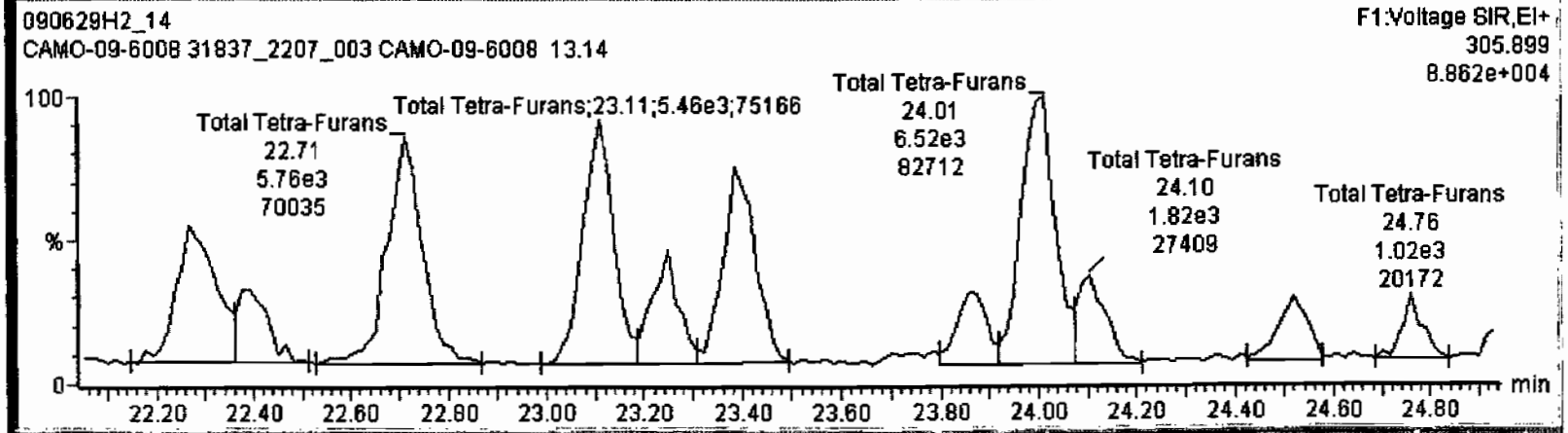

TargetLynx - 090629f2-14.qld * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

Total Tetra-Furans	25.24	8.398e2	8.391e2	1.00	YES	0.20107	0.00000
2,3,7,8-TCDF	25.33	3.010e3	3.664e3	0.82	NO	0.90356	0.90356
Total Tetra-Furans	25.65	4.043e3	4.878e3	0.83	NO	1.2077	1.2077
Total Tetra-Furans	25.89	5.940e2	1.119e3	0.53	YES	0.18484	0.00000
Total Tetra-Furans	27.08	6.288e3	4.914e3	1.28	YES	1.1776	0.00000

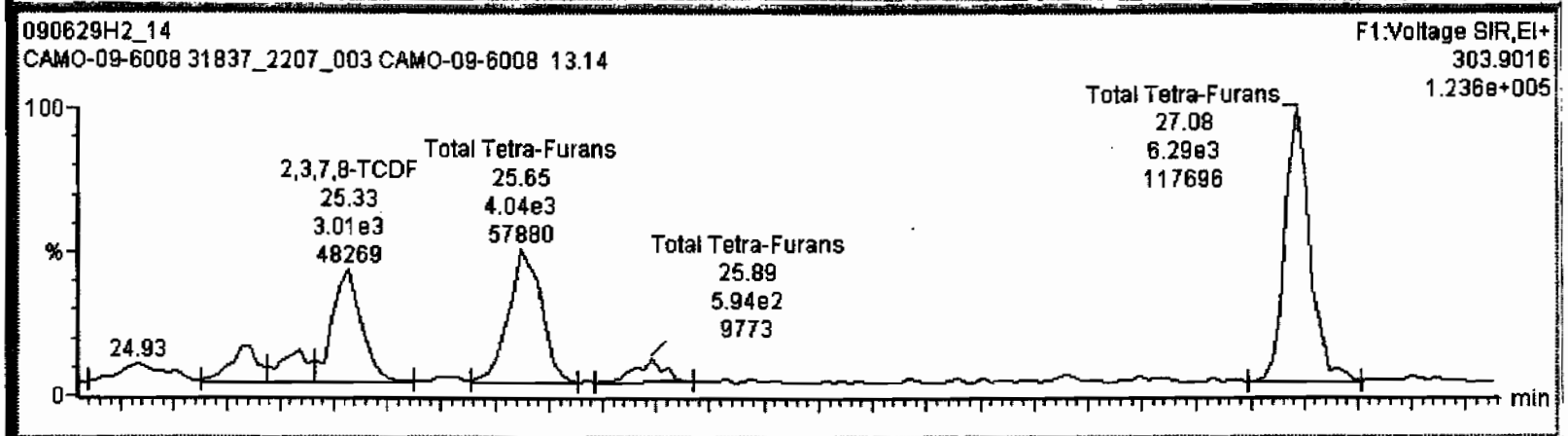

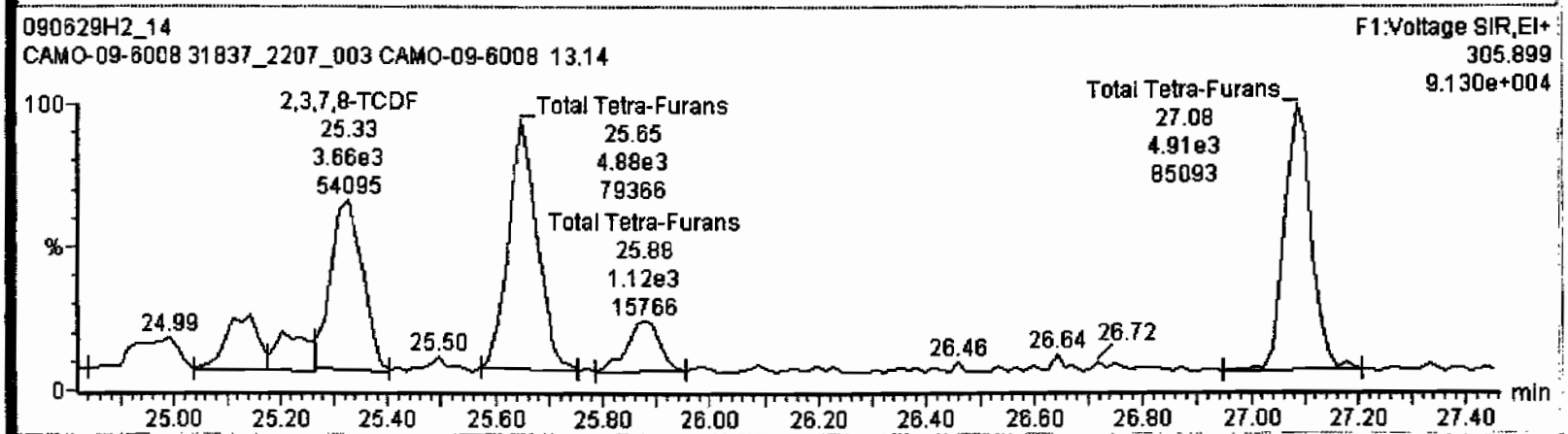

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qld

Last Altered: Tuesday, June 30, 2009 08:17:47 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:18:35 Pacific Daylight Time

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

1st Func. Penta-Furans

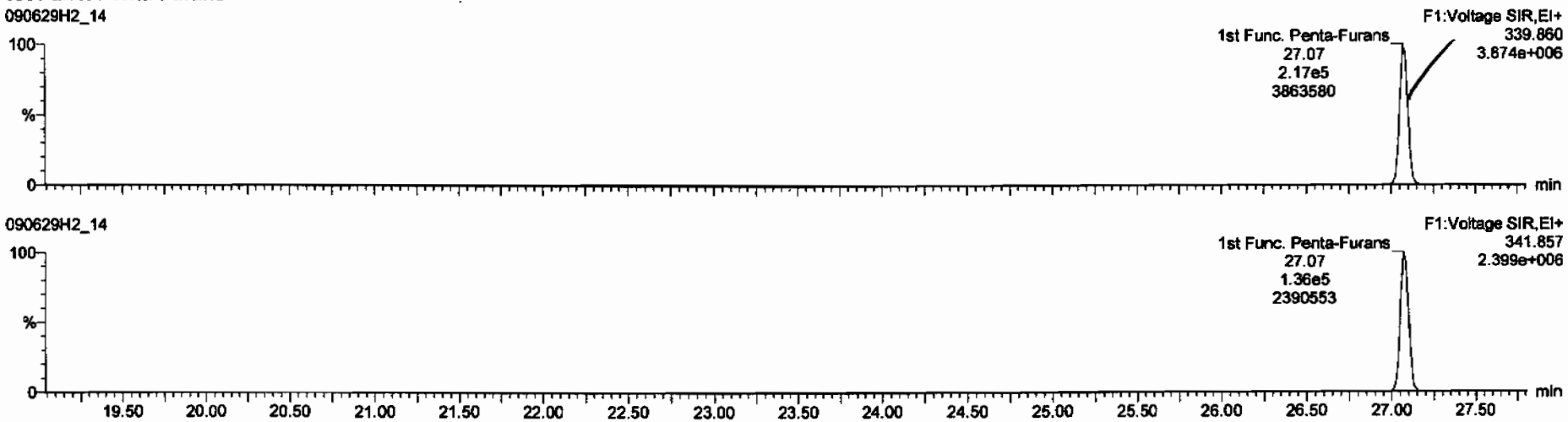

DPE6

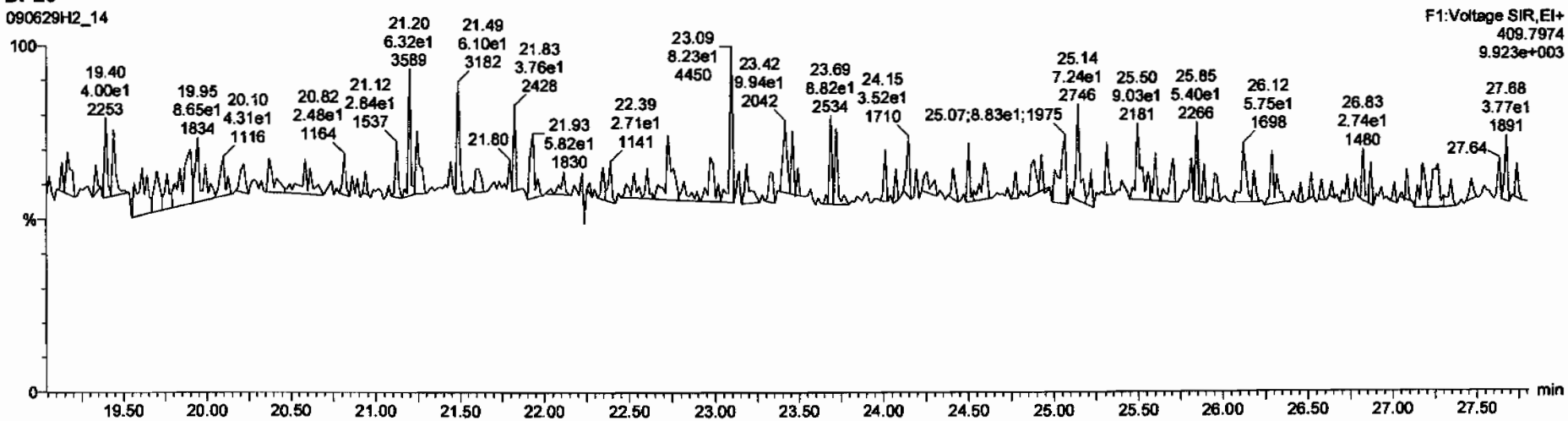

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Last Altered: Tuesday, June 30, 2009 08:17:47 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:18:35 Pacific Daylight Time

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

1,2,3,7,8-PeCDF

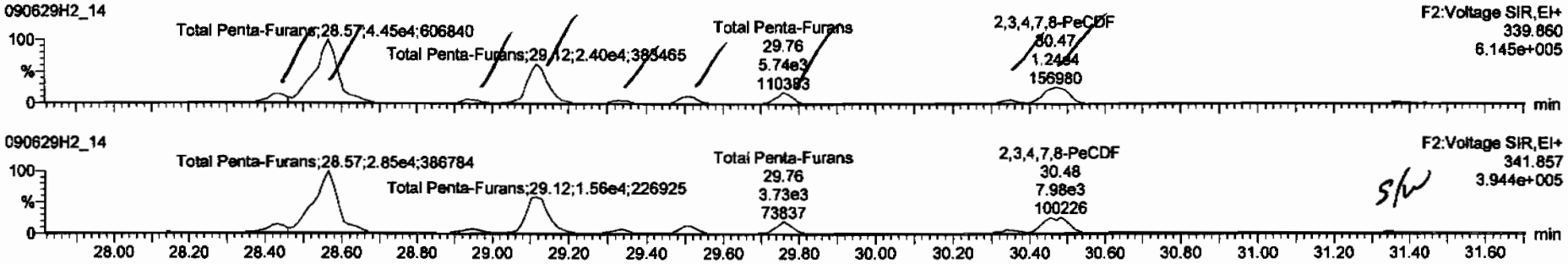

13C-1,2,3,7,8-PeCDF

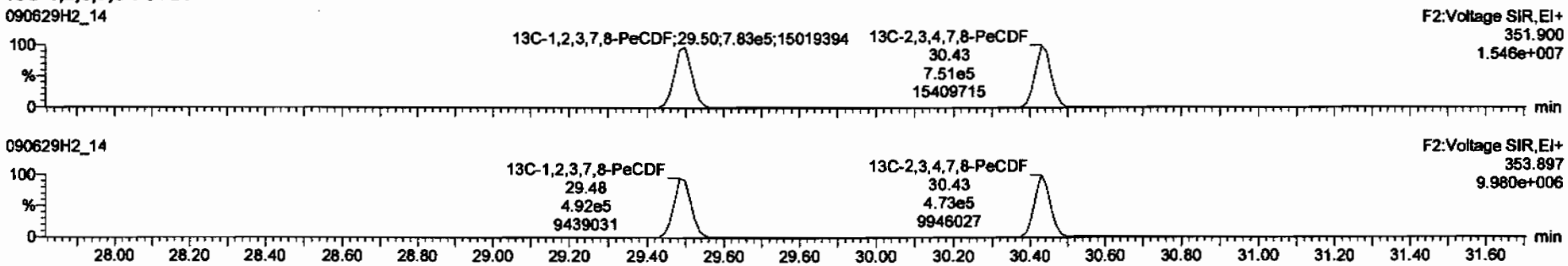

DPE2

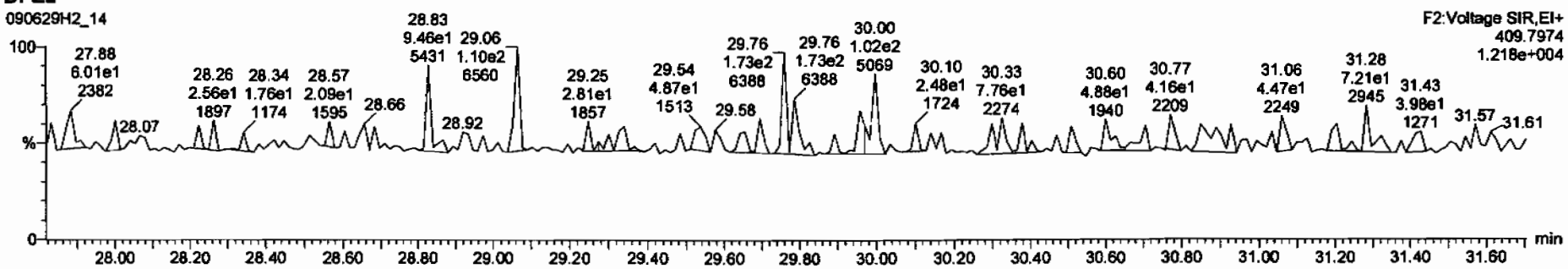

TargetLynx - 090629f2-14.qtd * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

Total Penta-Furans	28.43	4.500e3	2.817e3	1.60	NO	1.0152	1.0152
Total Penta-Furans	28.57	4.448e4	2.854e4	1.56	NO	10.130	10.130
Total Penta-Furans	28.93	2.082e3	1.396e3	1.49	NO	0.48251	0.48251
Total Penta-Furans	29.12	2.404e4	1.536e4	1.56	NO	5.4671	5.4671
Total Penta-Furans	29.33	1.909e3	1.363e3	1.40	NO	0.45408	0.45408

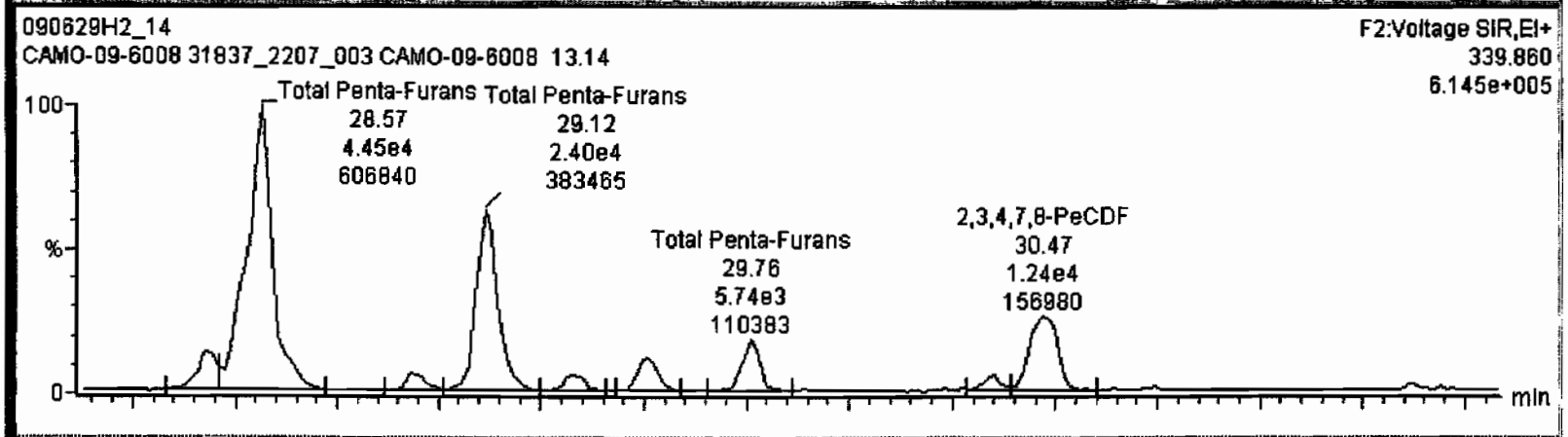

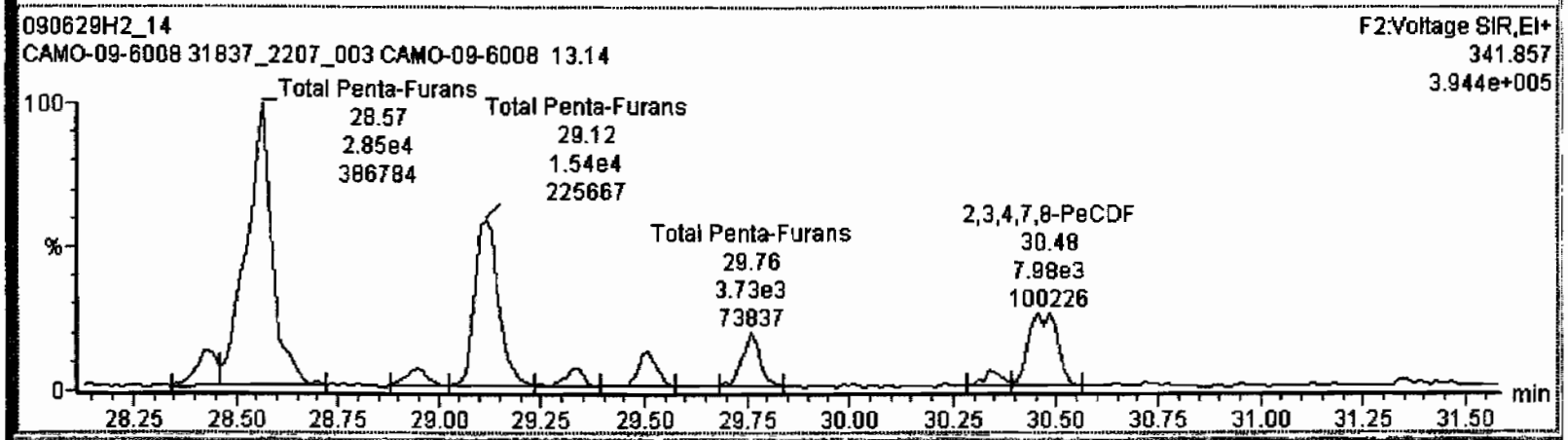

Ready

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qld

Last Altered: Tuesday, June 30, 2009 08:17:47 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:18:35 Pacific Daylight Time

Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

1,2,3,4,7,8-HxCDF

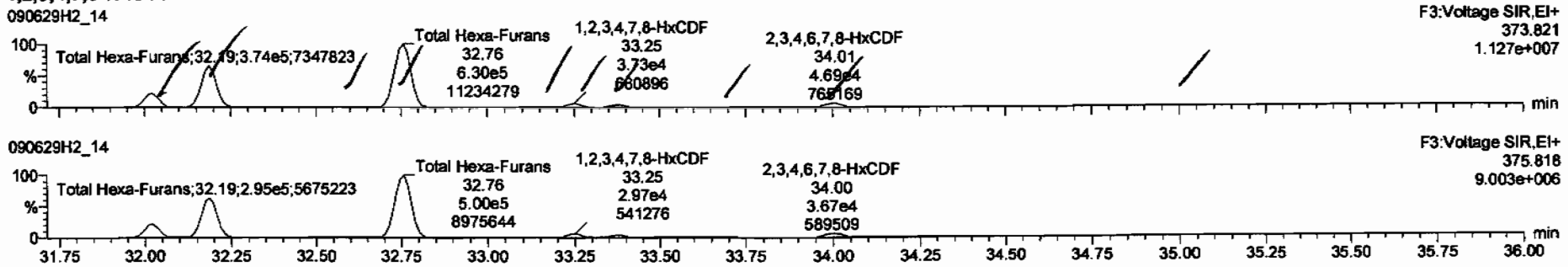

13C-1,2,3,4,7,8-HxCDF

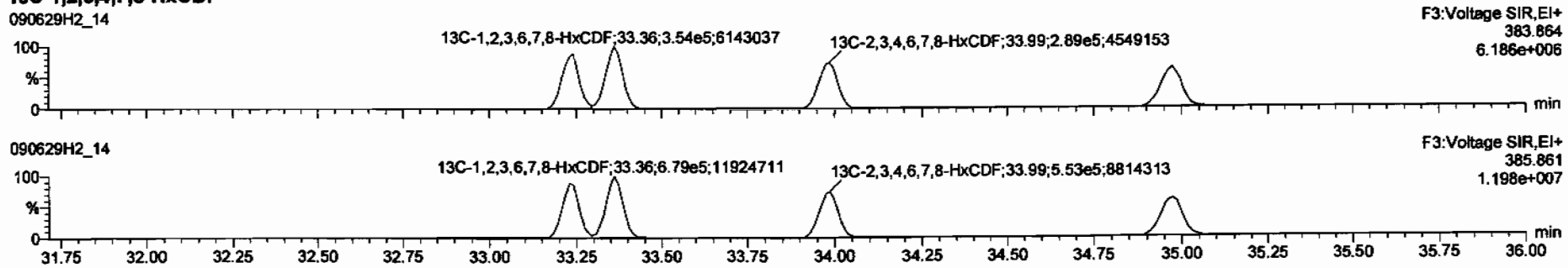

DPE3

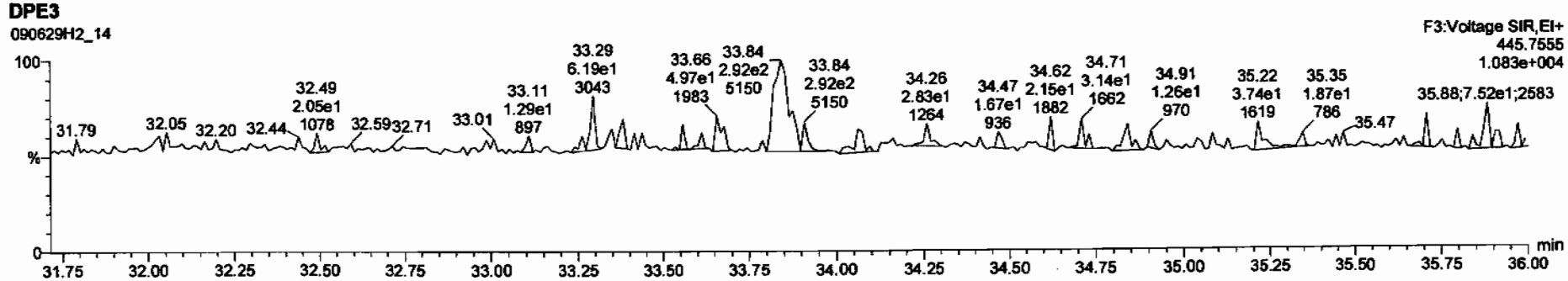

TargetLynx - 090629f2-14.qld * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

1,2,3,6,7,8-HxCDF	33.37	2.575e4	1.991e4	1.29	NO	7.2662	7.2662
Total Hexa-Furans	33.68	4.353e3	3.126e3	1.39	NO	1.3094	1.3094
2,3,4,6,7,8-HxCDF	34.01	4.690e4	3.670e4	1.28	NO	15.597	15.597
1,2,3,7,8,9-HxCDF	35.02	8.550e3	7.247e3	1.18	NO	3.1288	3.1288

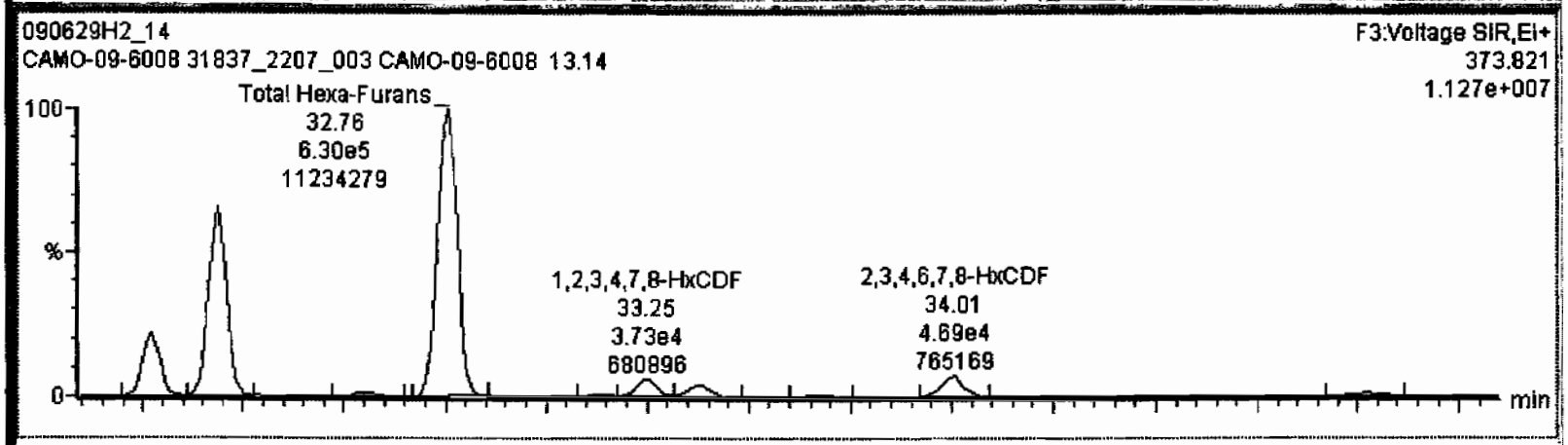

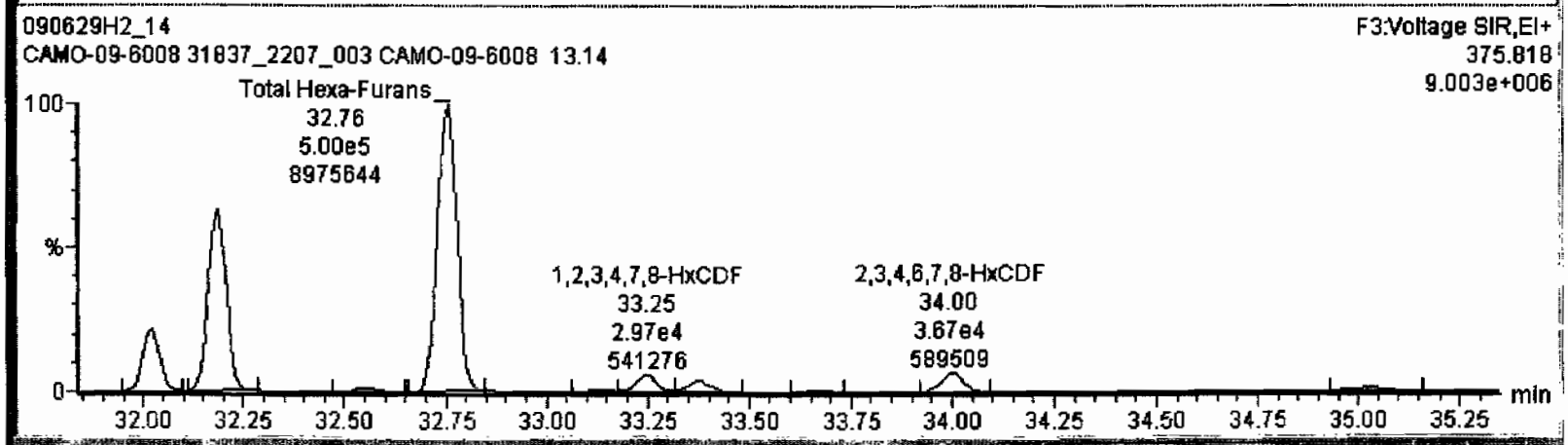

TargetLynx - 090629f2-14.qld * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

1,2,3,6,7,8-HxCDF	33.37	2.575e4	1.991e4	1.29	NO	7.2662	7.2662
Total Hexa-Furans	33.68	4.353e3	3.126e3	1.39	NO	1.3094	1.3094
2,3,4,6,7,8-HxCDF	34.01	4.690e4	3.670e4	1.28	NO	15.597	15.597
1,2,3,7,8,9-HxCDF	35.02	8.550e3	7.247e3	1.18	NO	3.1288	3.1288

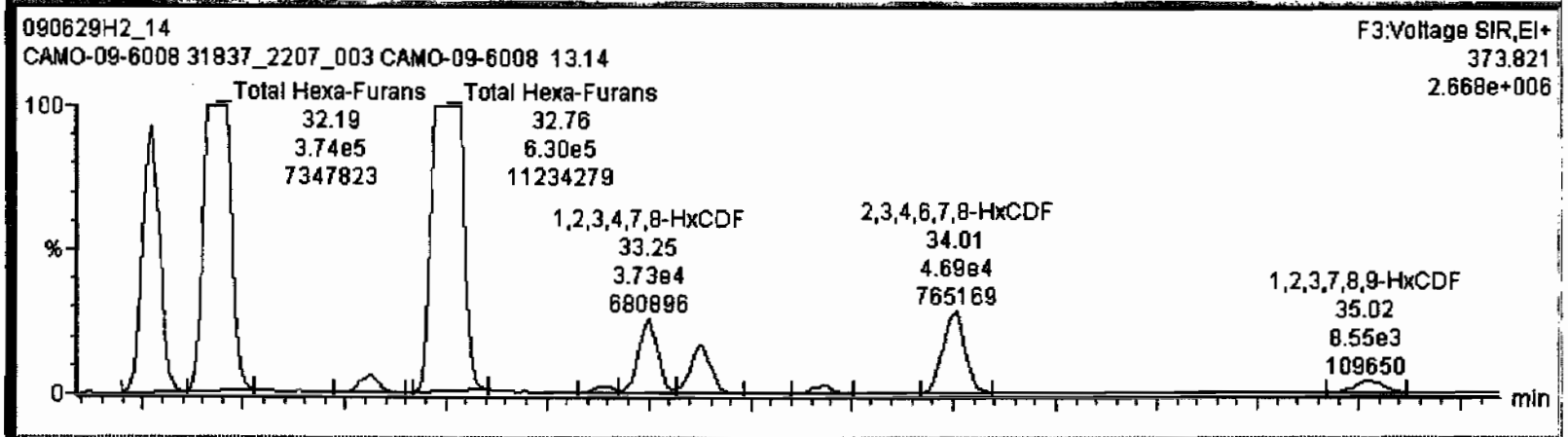

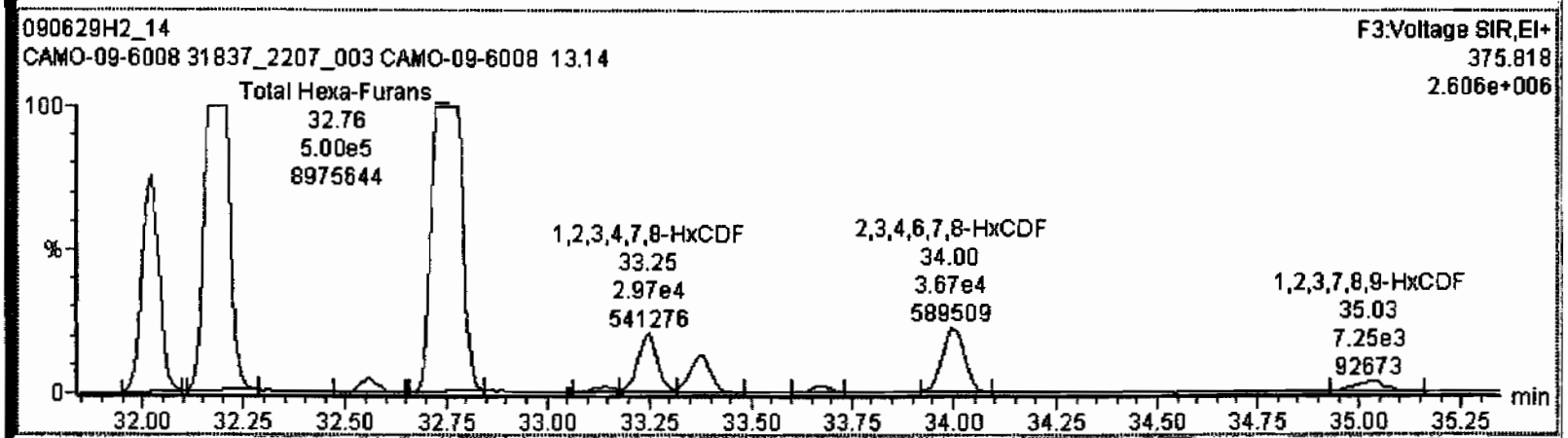

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Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

1,2,3,4,6,7,8-HpCDF

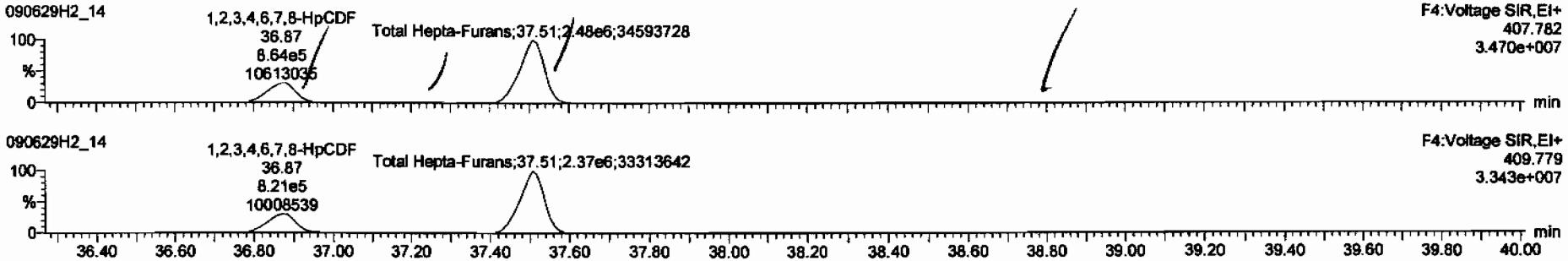

13C-1,2,3,4,6,7,8-HpCDF

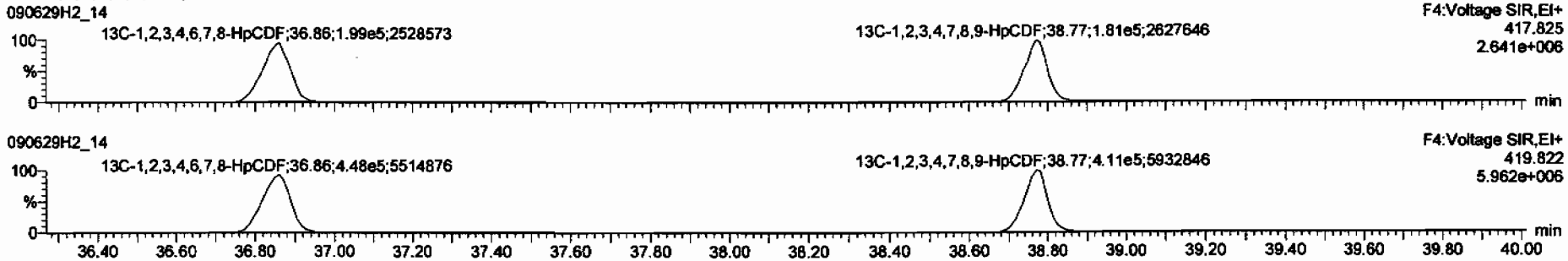

DPE4

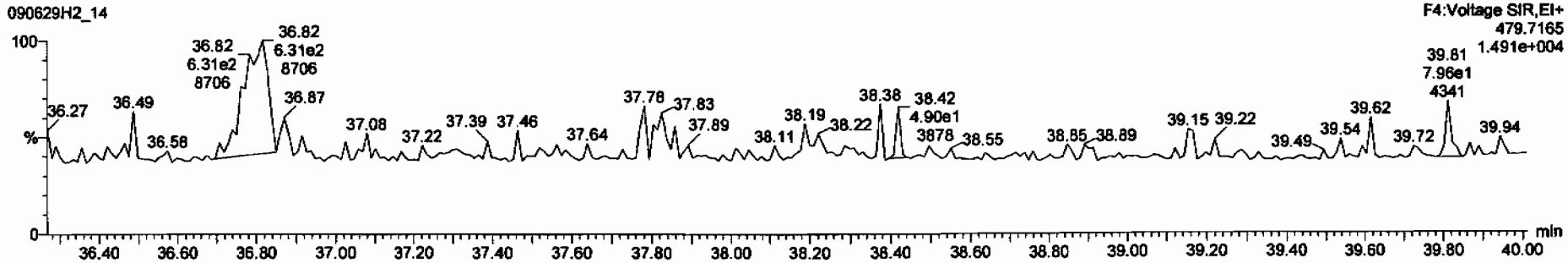

TargetLynx - 090629f2-14.qld * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

1,2,3,4,6,7,8-HpCDF	36.87	8.639e5	8.210e5	1.05	NO	309.67	309.67
Total Hepta-Furans	37.31	1.648e4	1.462e4	1.13	NO	5.9724	5.9724
Total Hepta-Furans	37.51	2.501e6	2.366e6	1.05	NO	938.82	938.82
1,2,3,4,7,8,9-HpCDF	38.78	6.307e4	6.074e4	1.04	NO	28.404	28.404

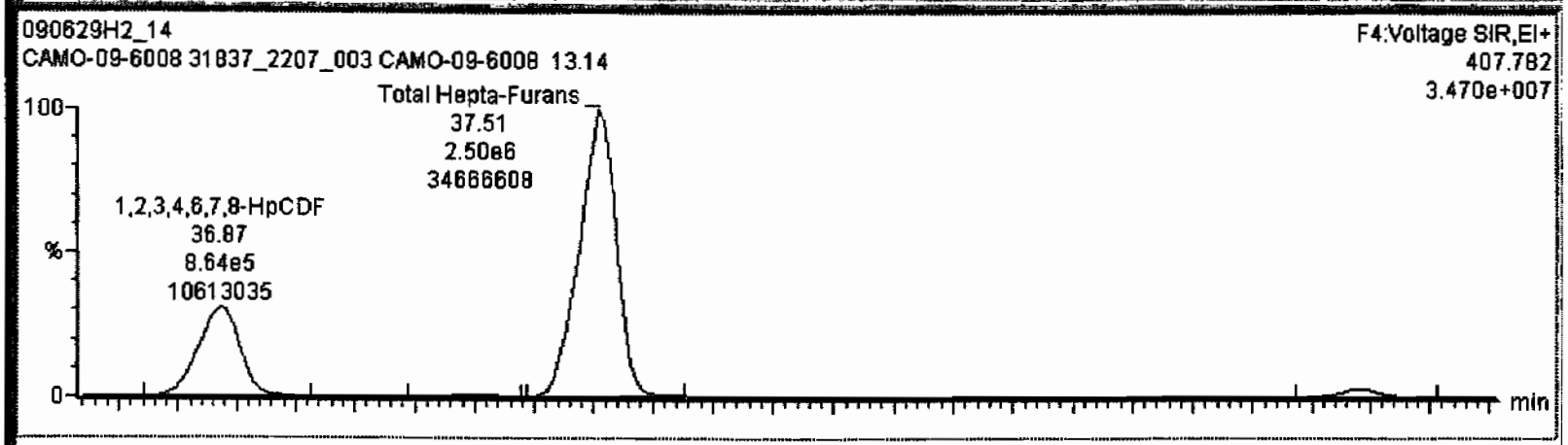

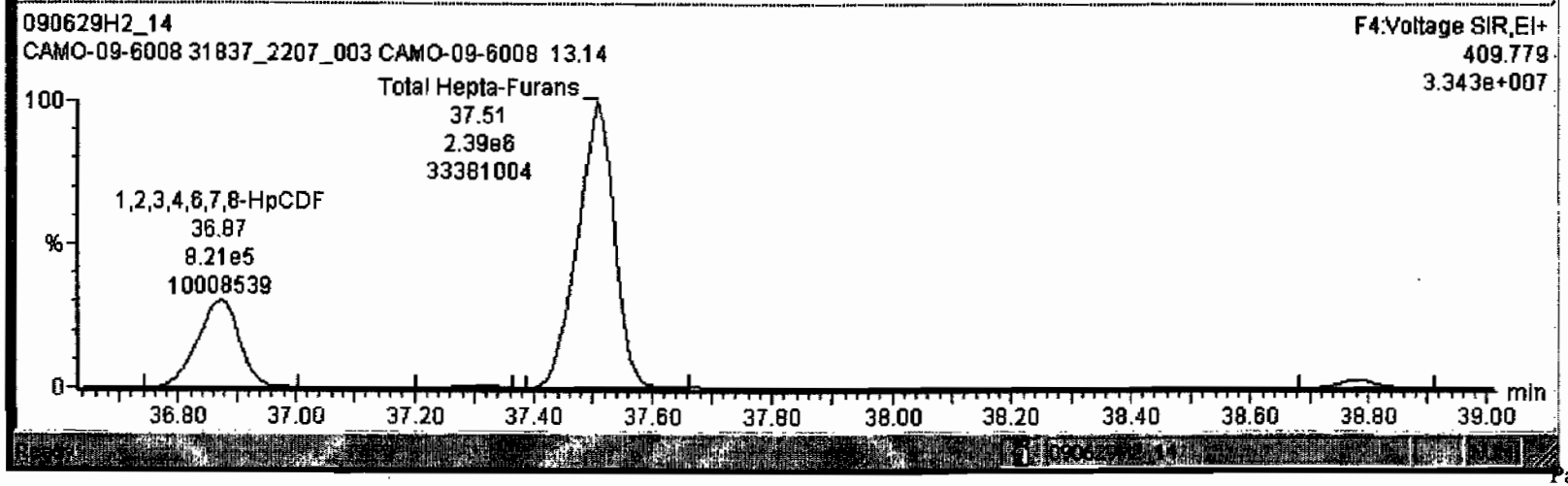

TargetLynx - 090629f2-14.qld * - [Chromatogram]

090629H2_14 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

1,2,3,4,6,7,8-HpCDF	36.87	8.639e5	8.210e5	1.05	NO	309.67	309.67
Total Hepta-Furans	37.31	1.648e4	1.462e4	1.13	NO	5.9724	5.9724
Total Hepta-Furans	37.51	2.501e6	2.386e6	1.05	NO	938.82	938.82
1,2,3,4,7,8,9-HpCDF	38.78	6.307e4	6.074e4	1.04	NO	28.404	28.404

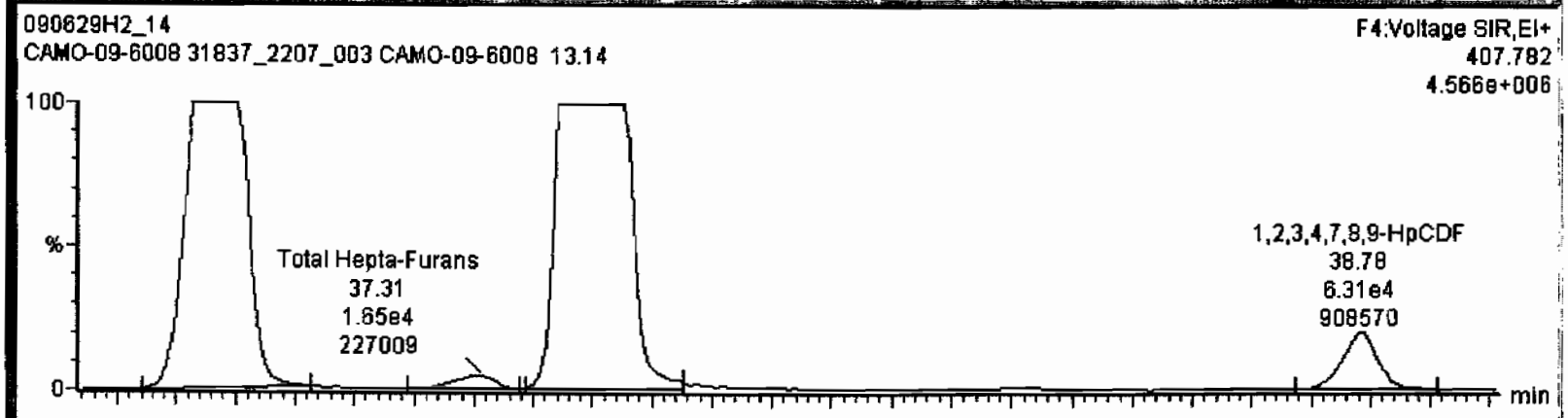

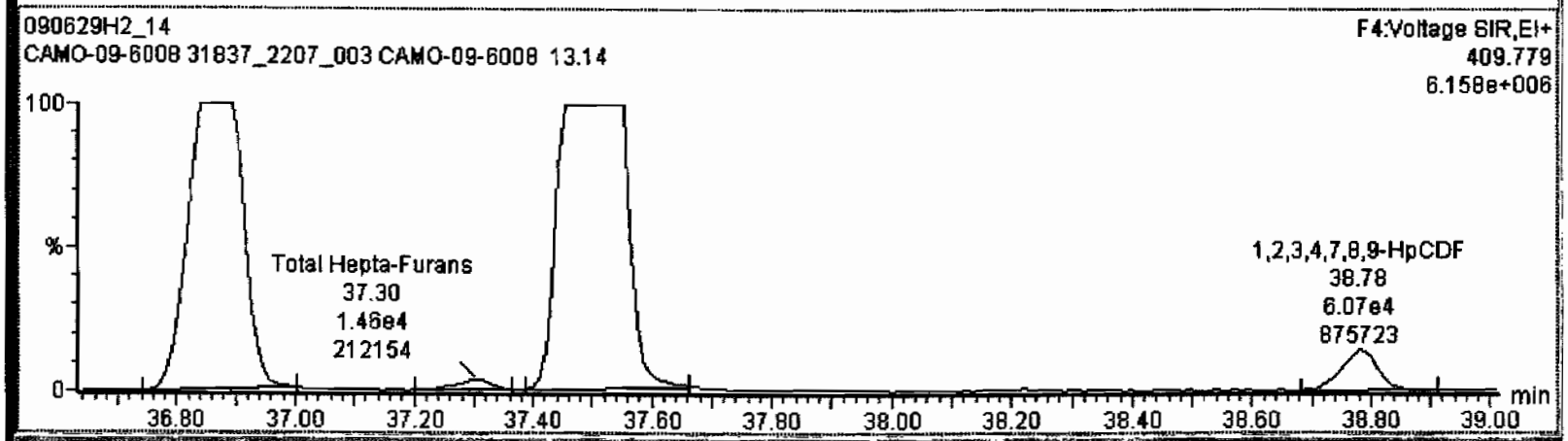

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Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

OCDF

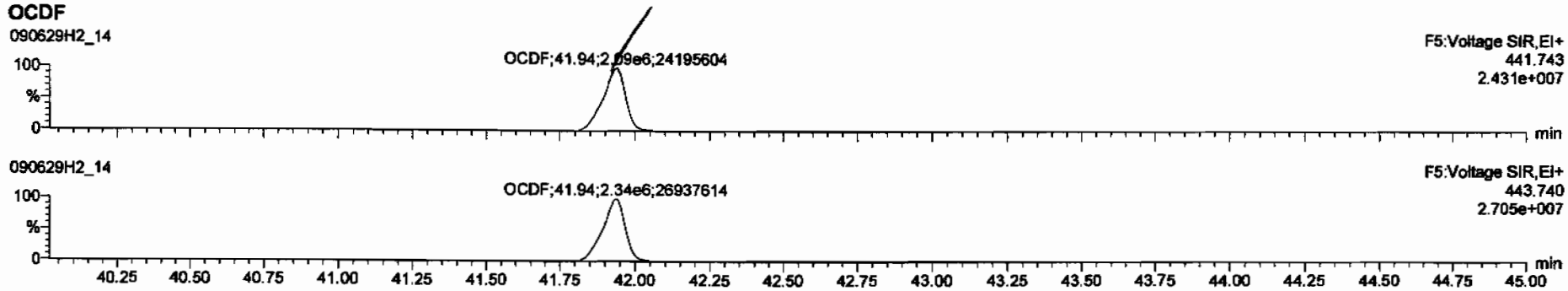

13C-OCDF

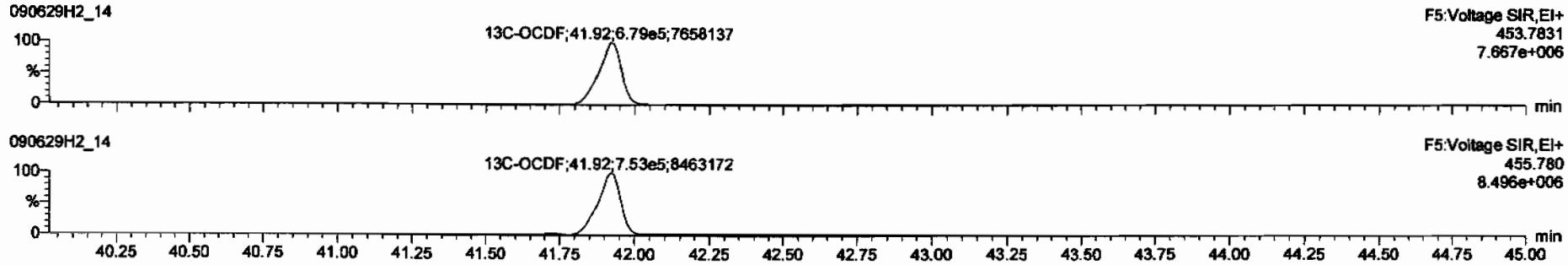

DPE5

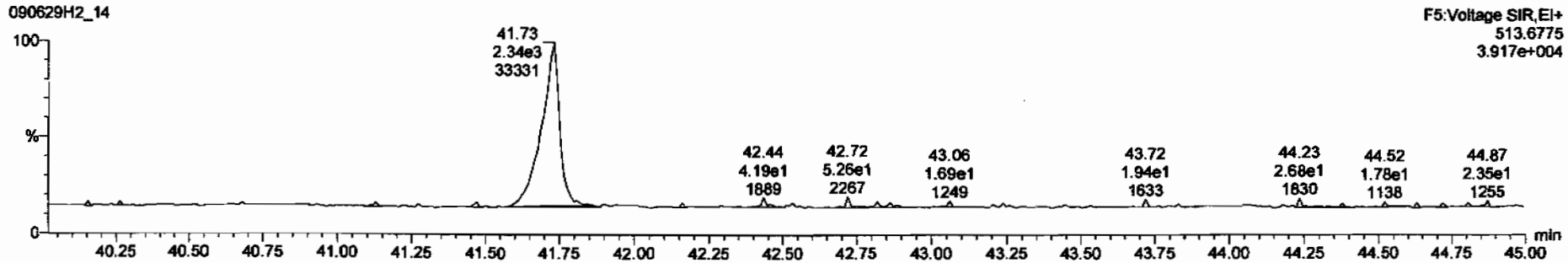

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-14.qld

Last Altered: Tuesday, June 30, 2009 08:17:47 Pacific Daylight Time
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Name: 090629H2_14, Date: 30-Jun-2009, Time: 00:46:29, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

PFK1

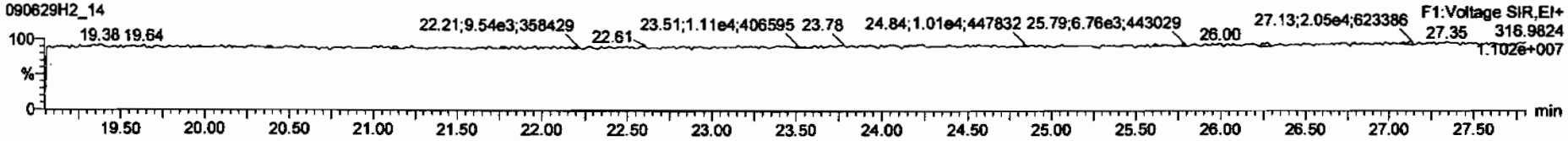

PFK2

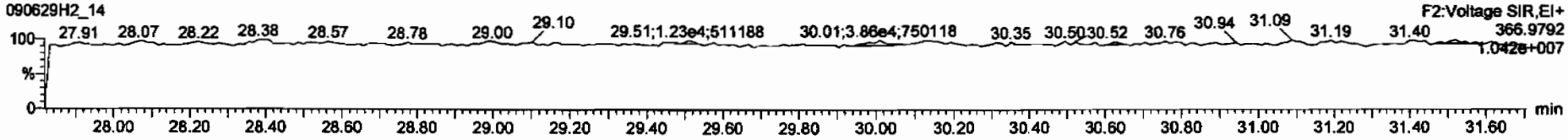

PFK3

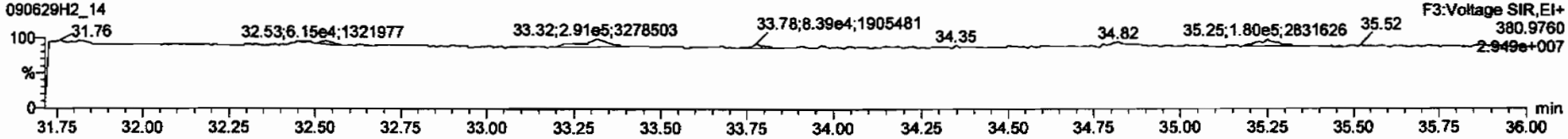

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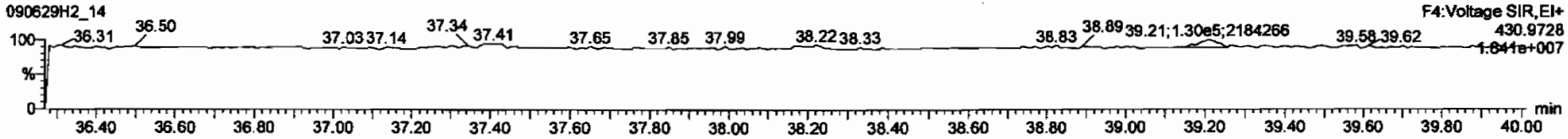

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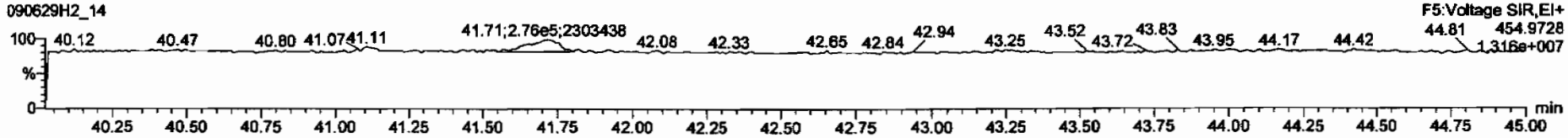

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\090701h1\090701h1-3.qld

Last Altered: Wednesday, July 01, 2009 3:23:26 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:27:28 PM Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

7	OCDD	4.18e6	0.88	NO	1.18	9.953	41.69	1.000	29402		8.88	29402
23	13C-OCDD	4.85e4	0.86	NO	0.503	9.953	41.68	1.205	497.56	124	4.51	
37	13C-1,2,3,7,8,9-HxCDD	3.90e4	1.36	NO	1.00	9.953	34.58	0.000	200.94	100	2.78	

7/1/09
9/2/09

Dataset: C:\MassLynx\Default.pro\Results\090701h1\090701h1-3.qld

Last Altered: Wednesday, July 01, 2009 3:23:26 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:26:41 PM Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

2,3,7,8-TCDD

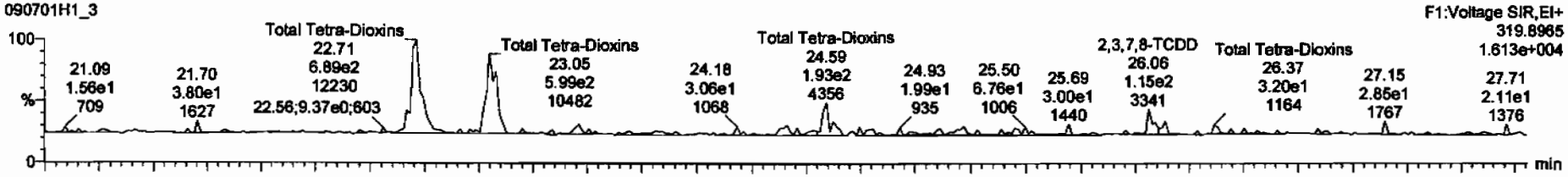

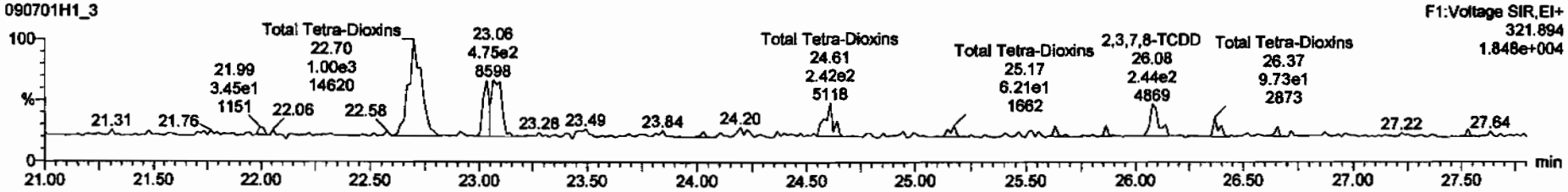

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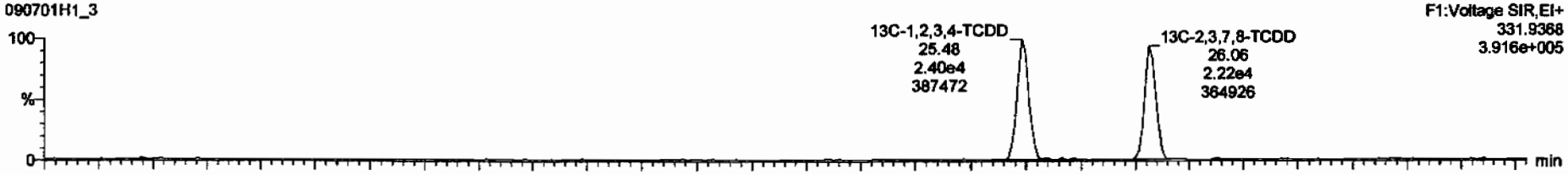

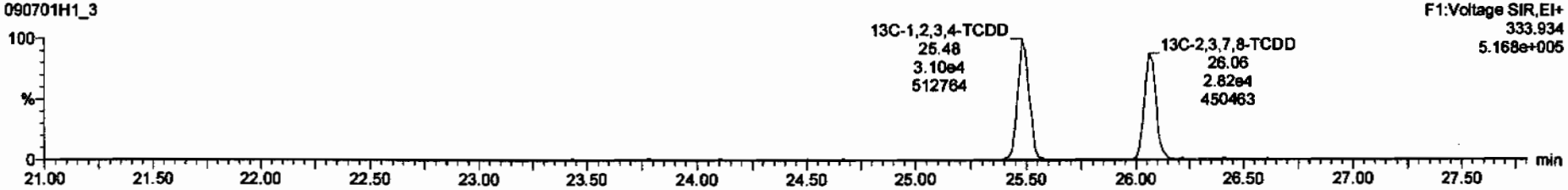

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Printed: Wednesday, July 01, 2009 3:26:41 PM Pacific Daylight Time

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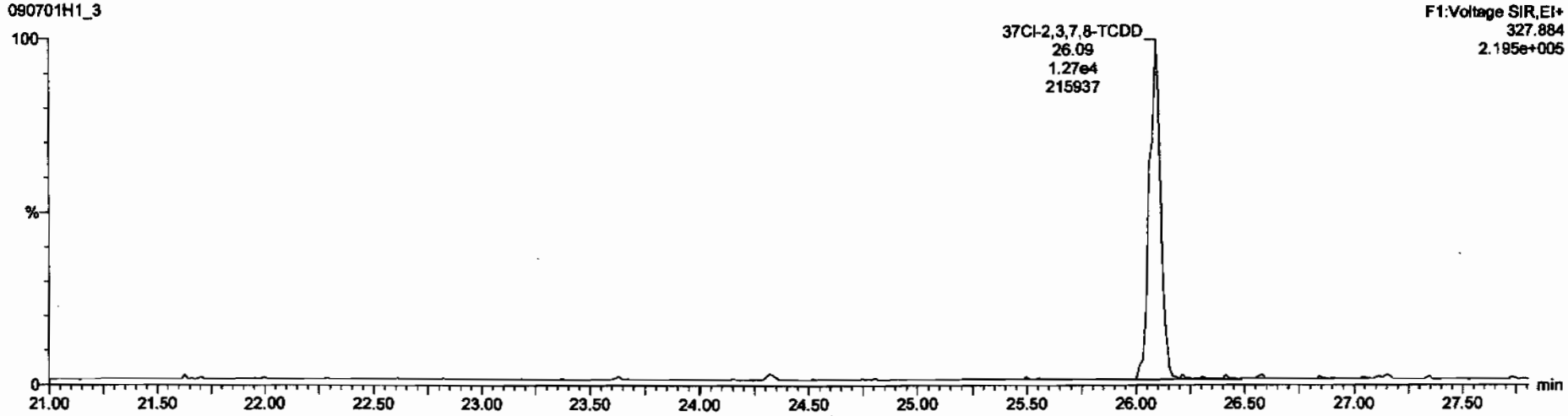

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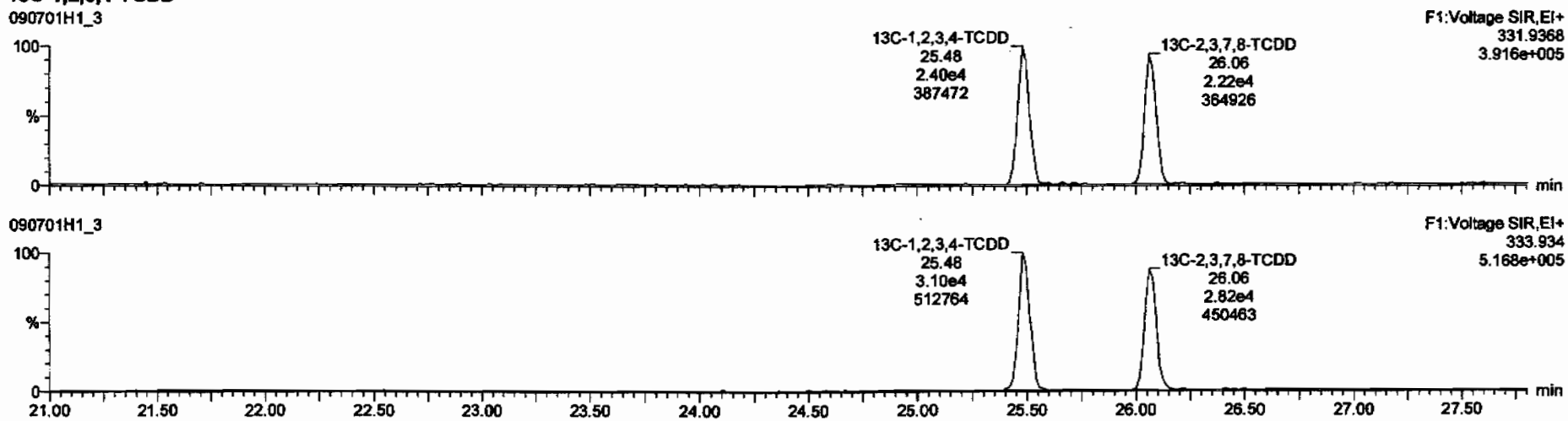

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Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

1,2,3,7,8-PeCDD

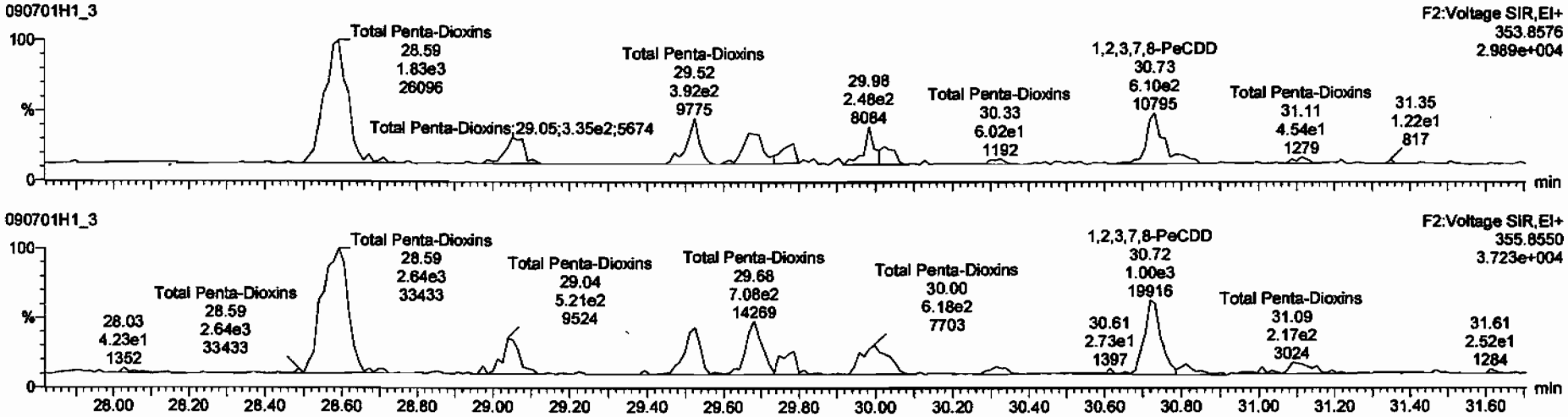

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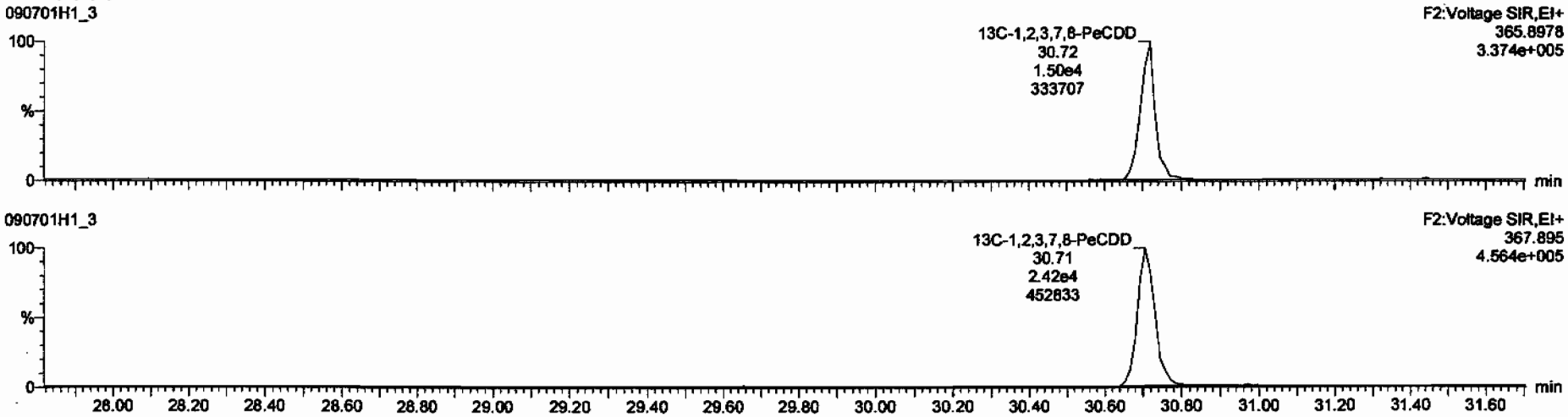

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Printed: Wednesday, July 01, 2009 3:26:41 PM Pacific Daylight Time

Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

1,2,3,4,7,8-HxCDD

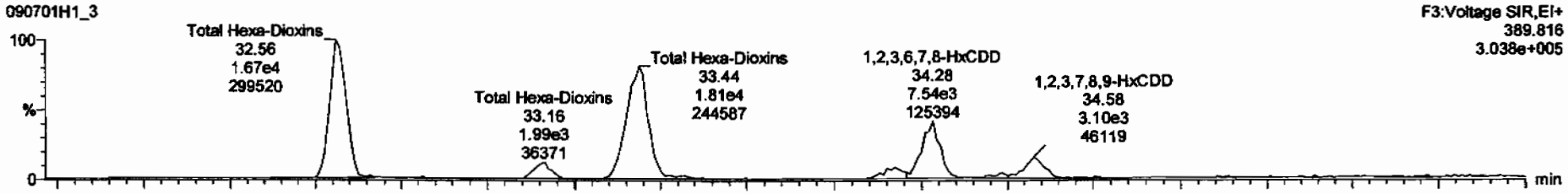

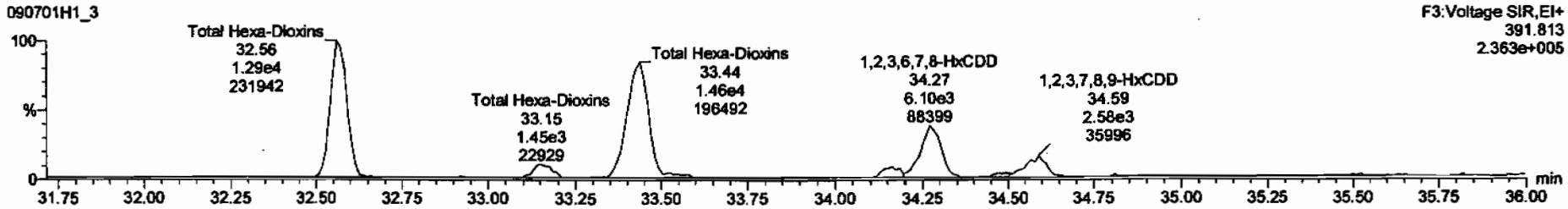

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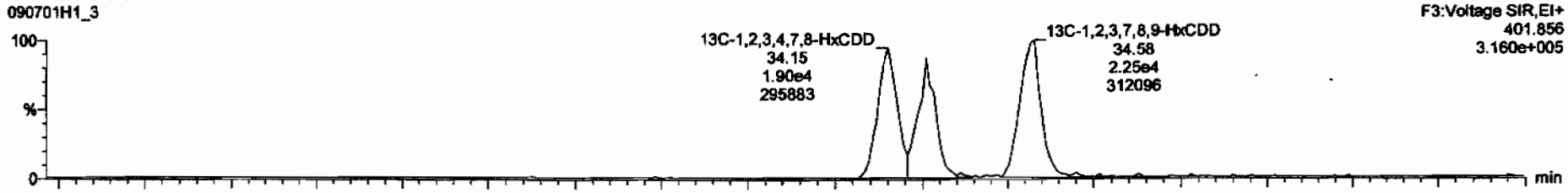

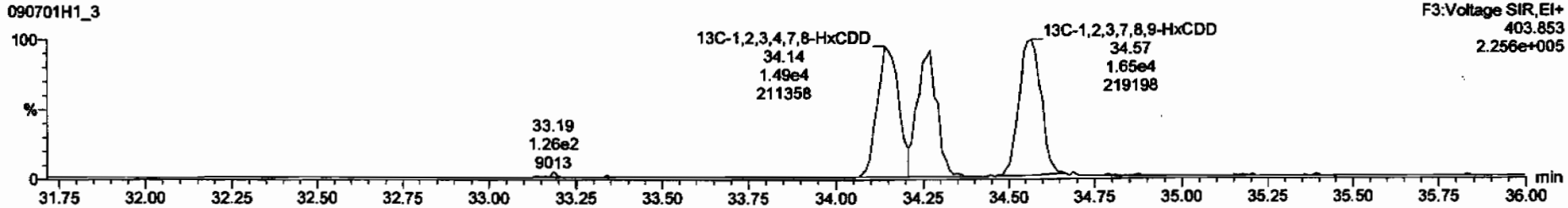

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Last Altered: Wednesday, July 01, 2009 3:23:26 PM Pacific Daylight Time
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Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

1,2,3,4,6,7,8-HpCDD

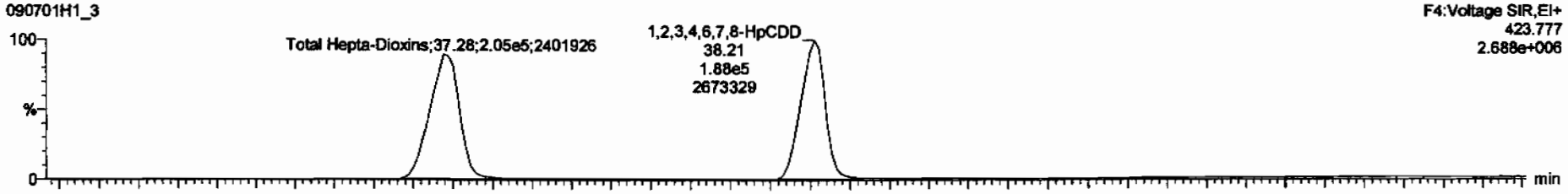

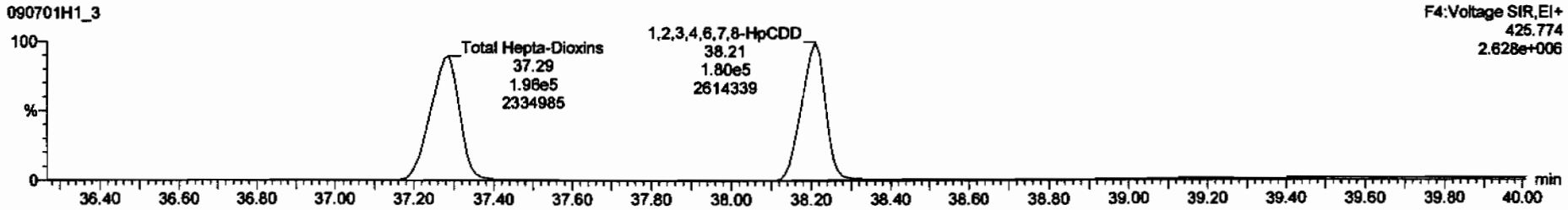

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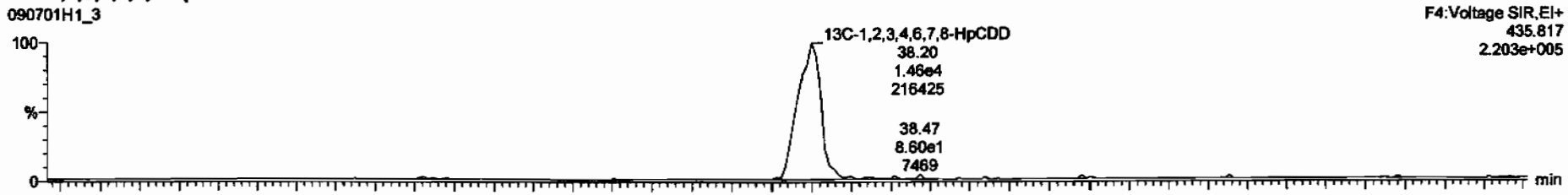

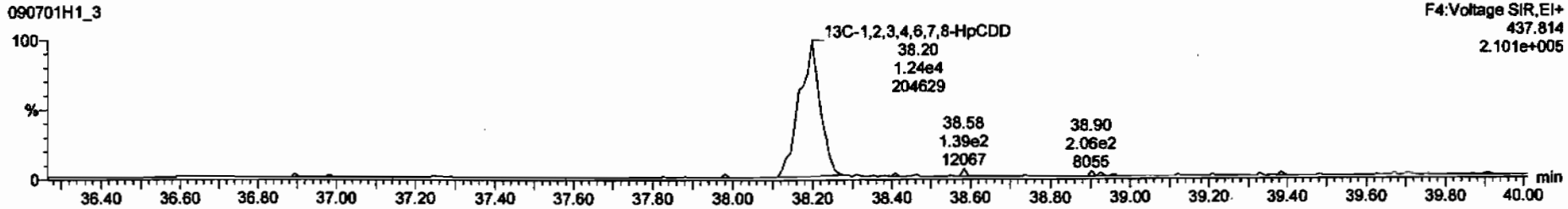

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OCDD

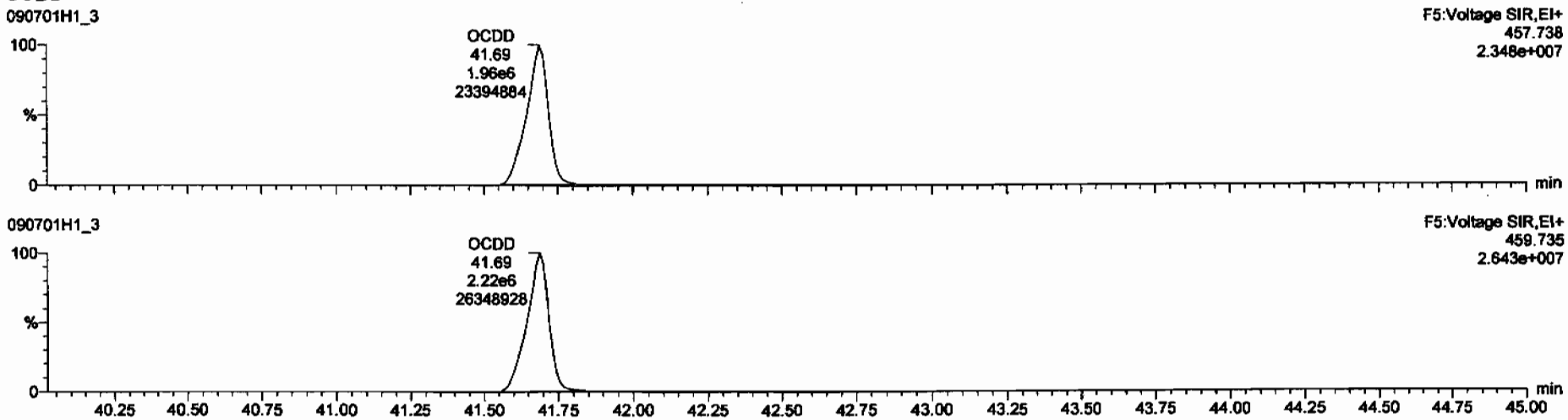

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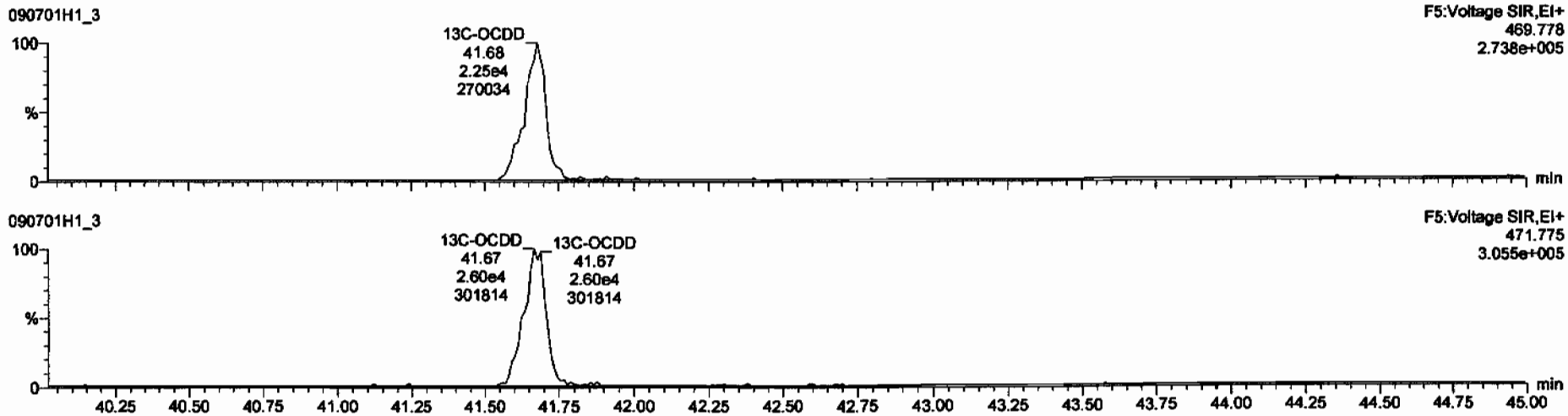

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Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

2,3,7,8-TCDF

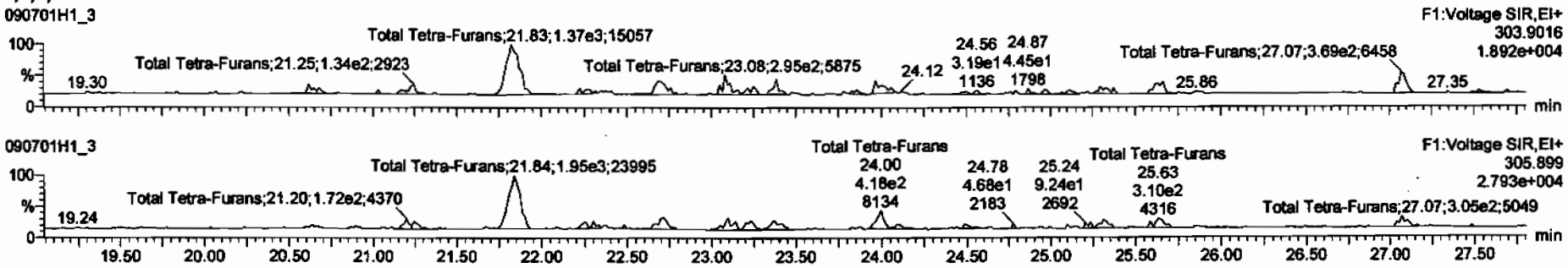

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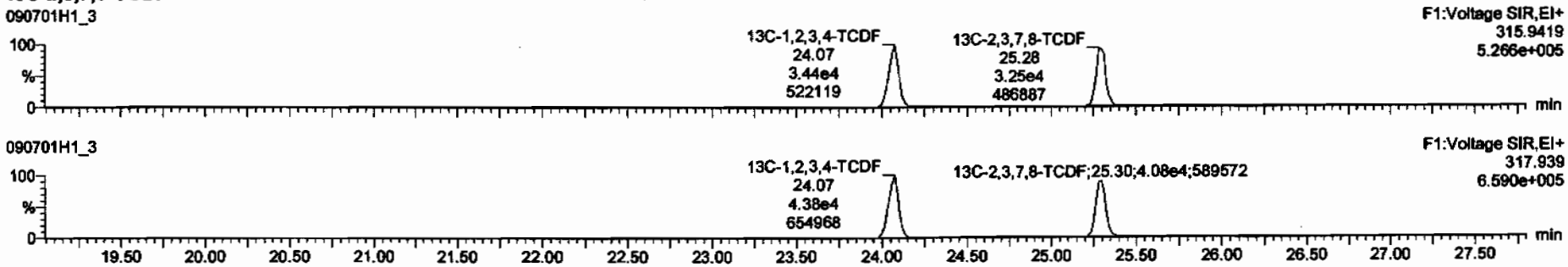

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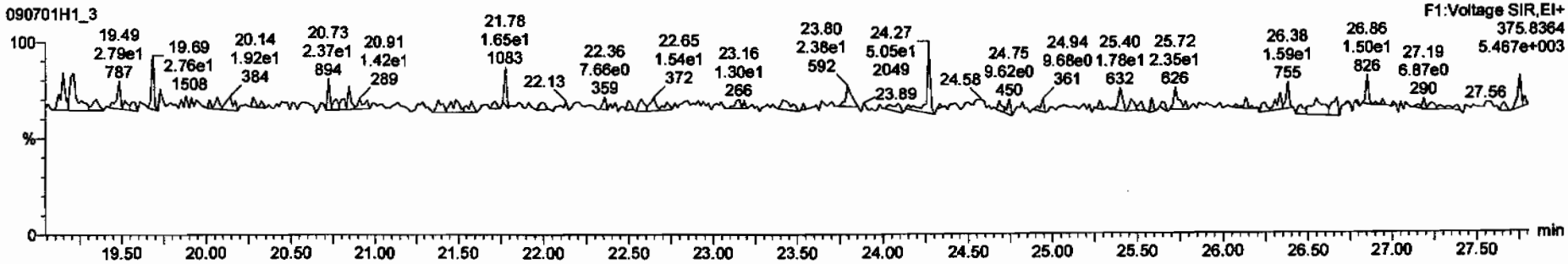

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Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

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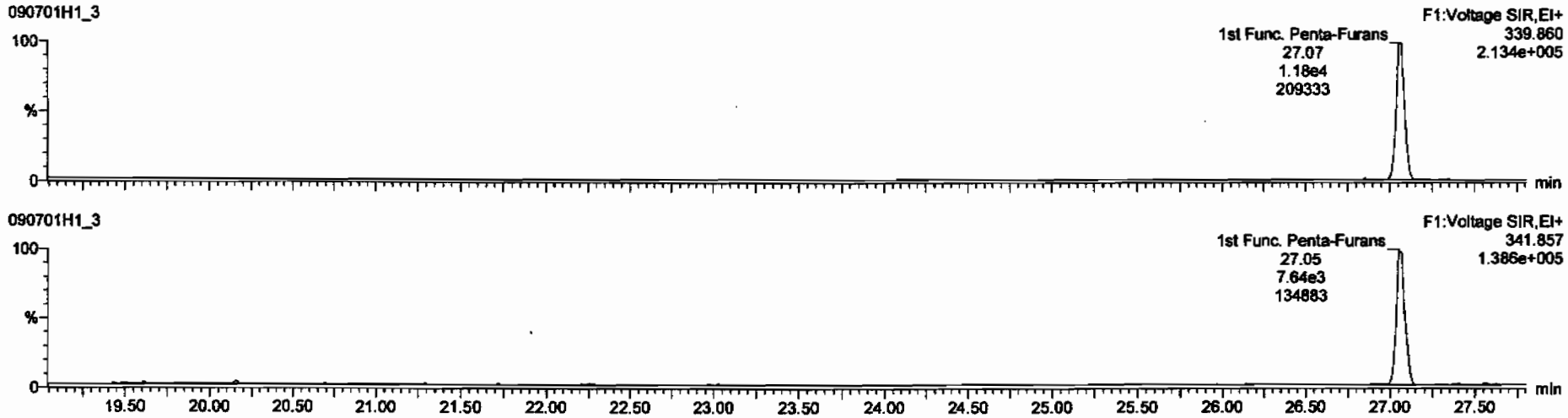

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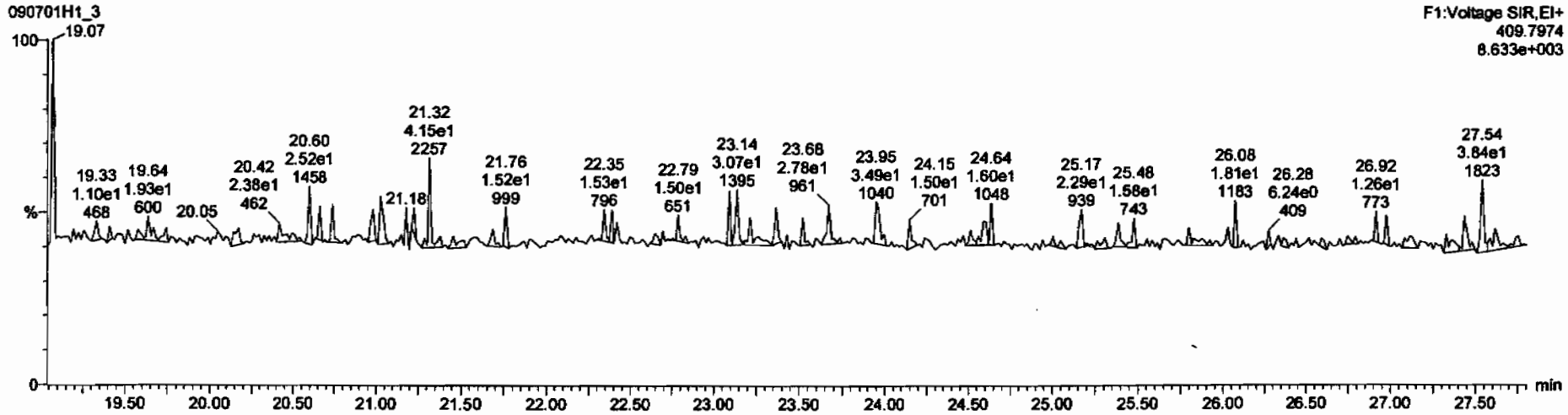

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Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

1,2,3,7,8-PeCDF

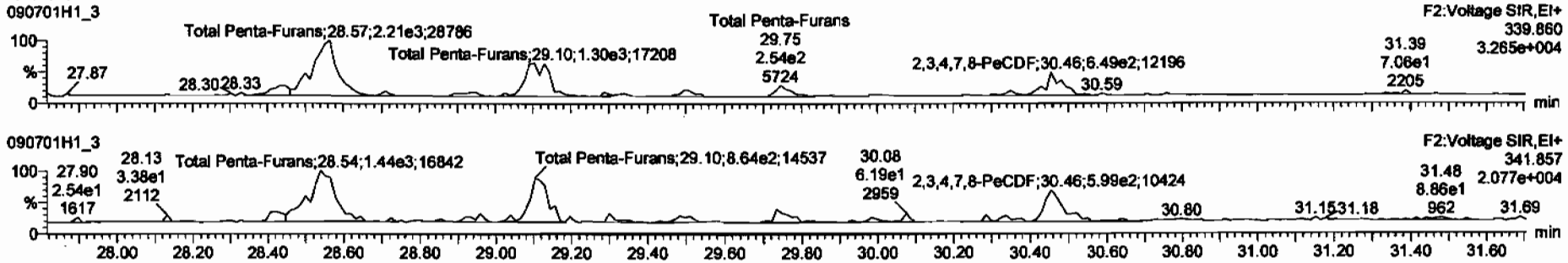

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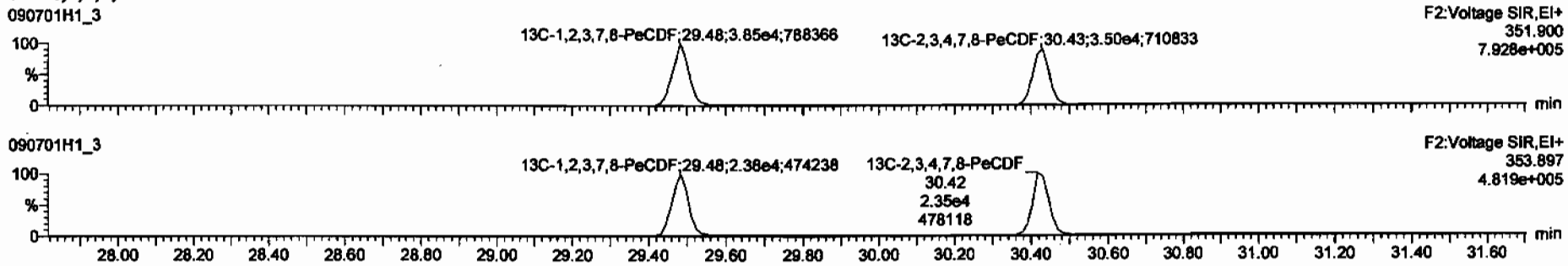

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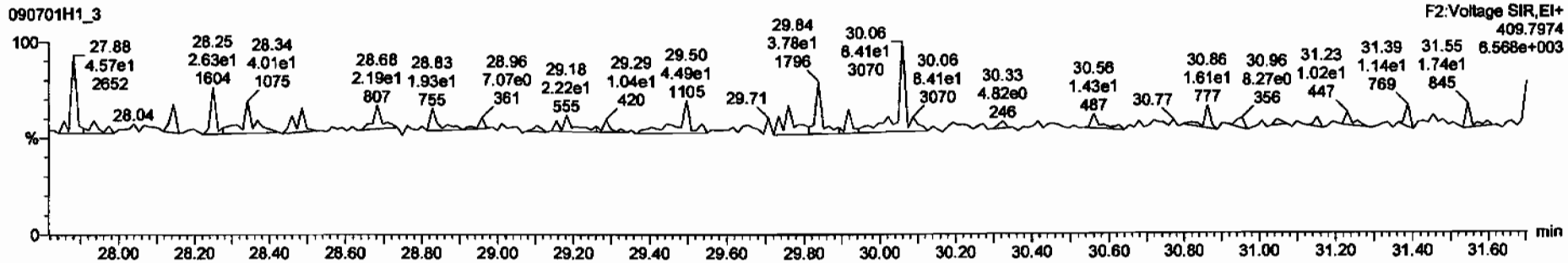

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Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

1,2,3,4,7,8-HxCDF

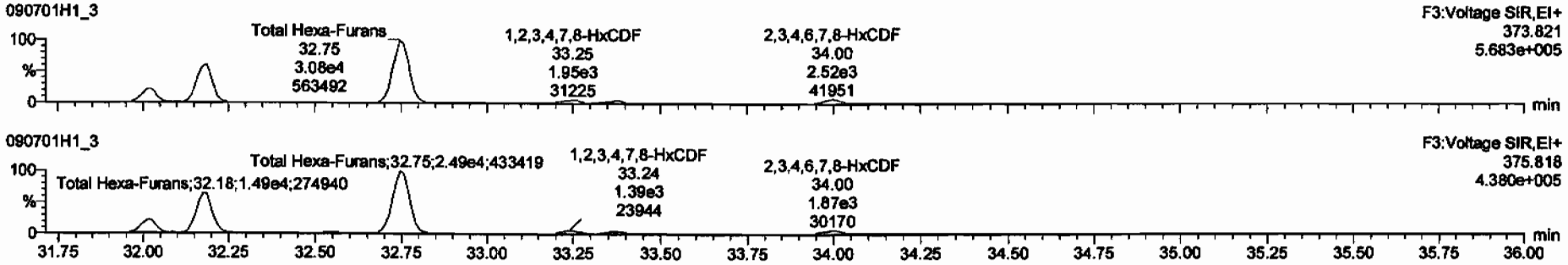

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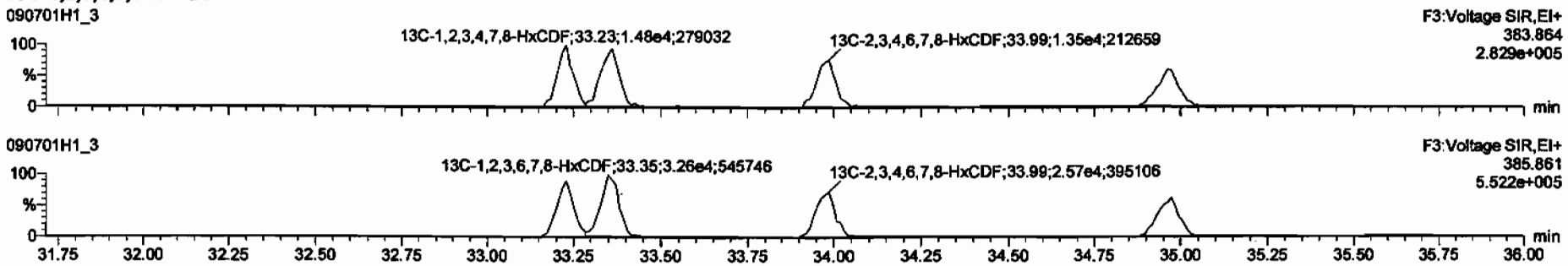

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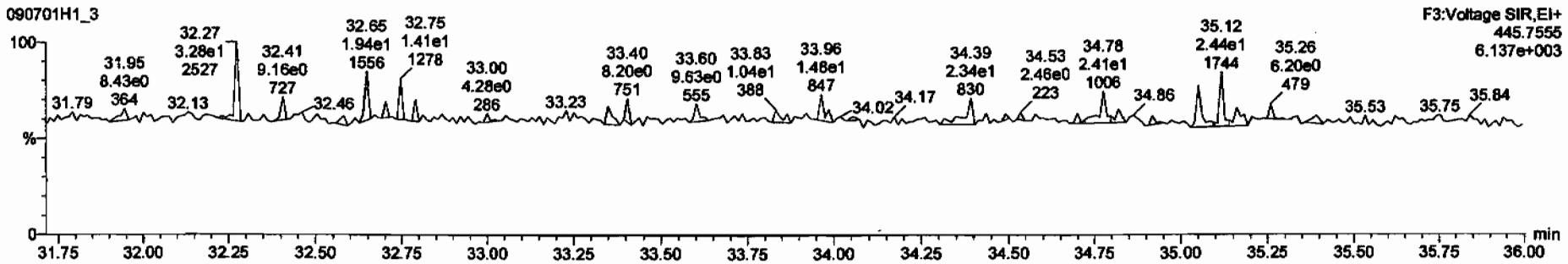

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Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

1,2,3,4,6,7,8-HpCDF

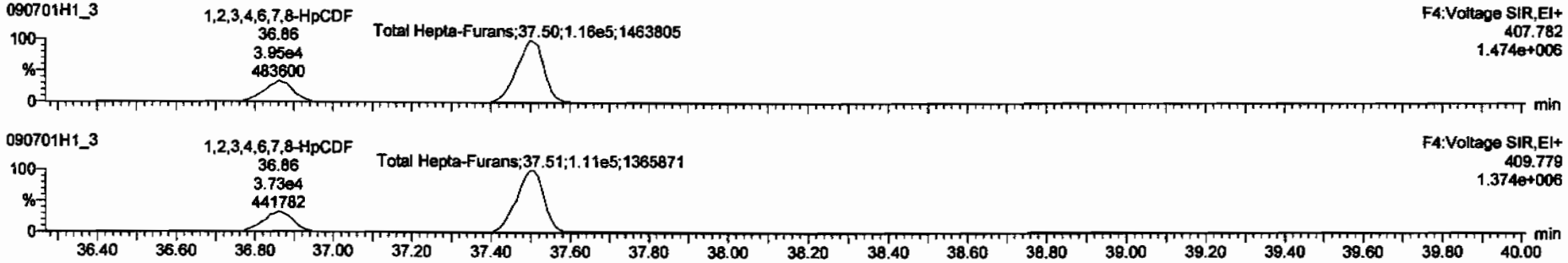

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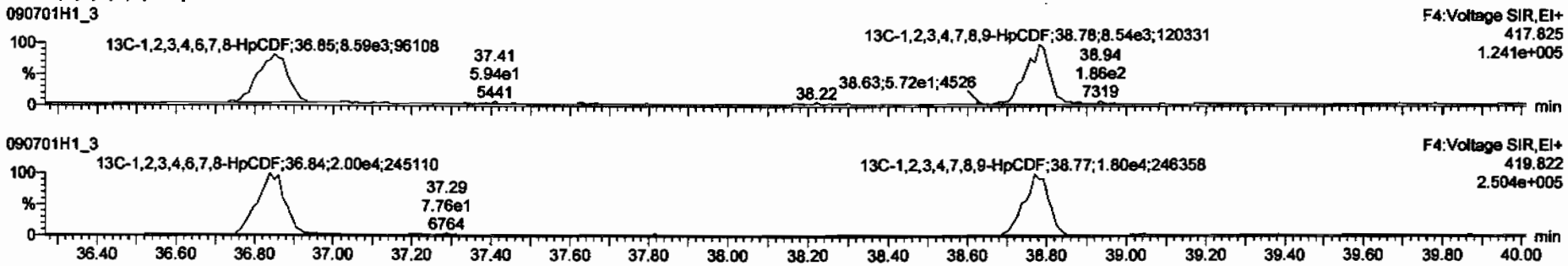

DPE4

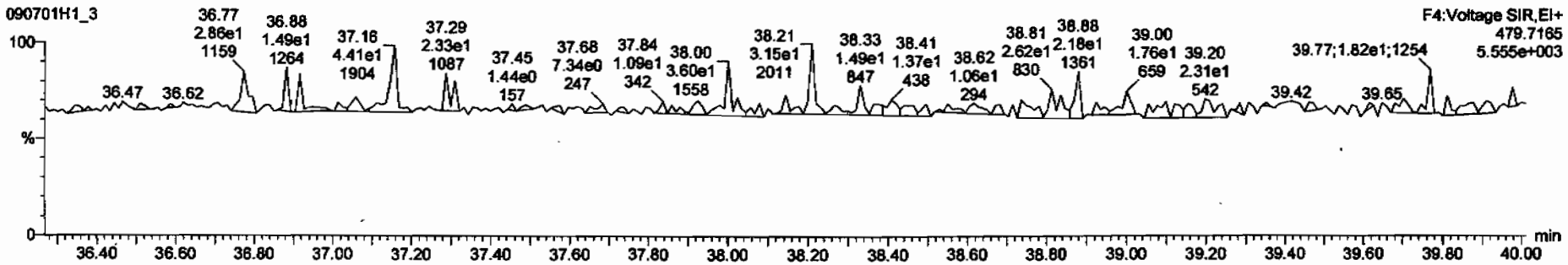

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Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

OCDF

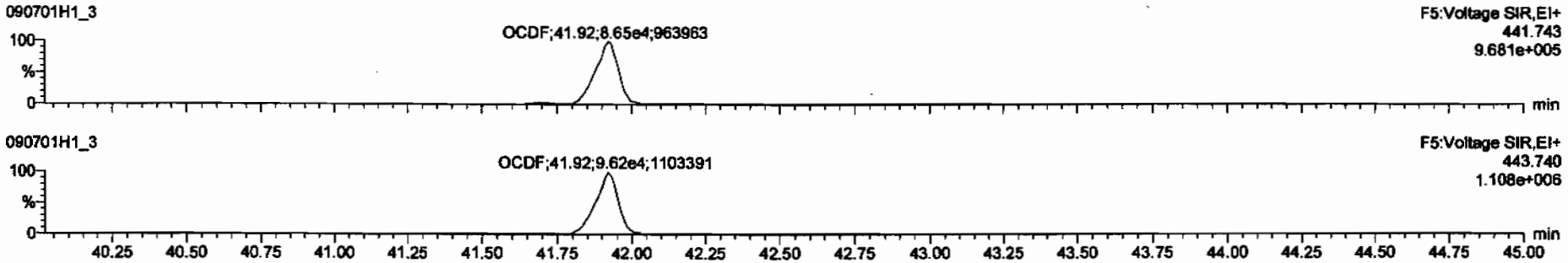

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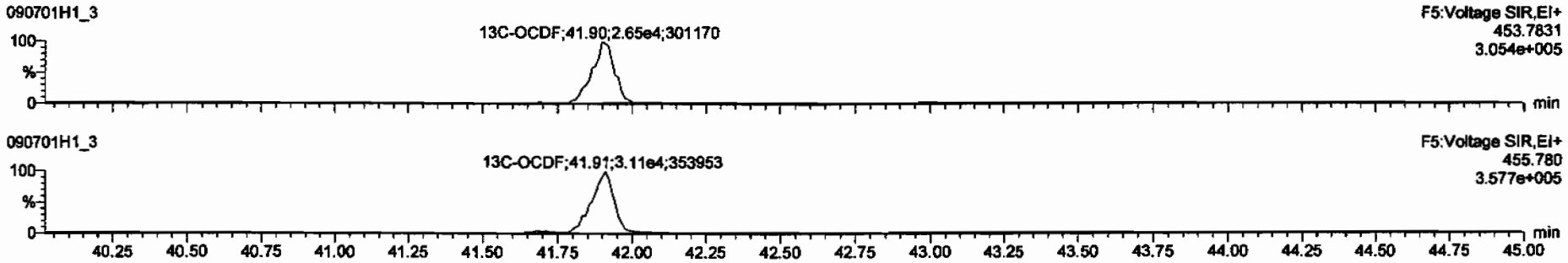

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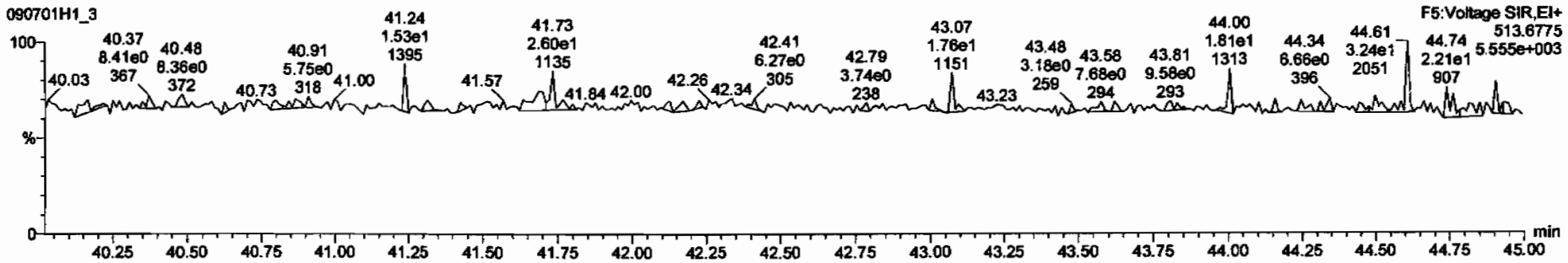

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090701h1\090701h1-3.qid

Last Altered: Wednesday, July 01, 2009 3:23:26 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:26:41 PM Pacific Daylight Time

Name: 090701H1_3, Date: 01-Jul-2009, Time: 13:17:19, ID: 31837_2207_003 CAMO-09-6008 13.14 1:10, Description: CAMO-09-6008

PFK1

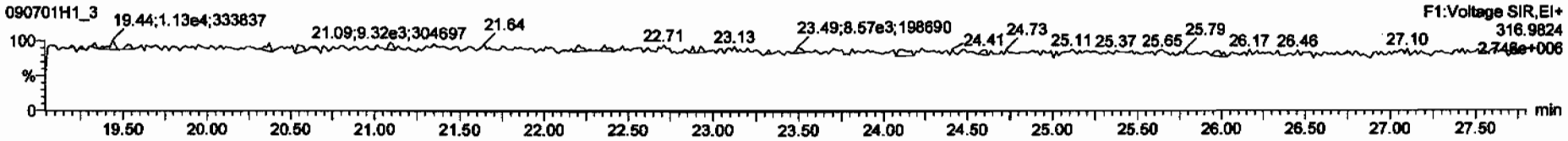

PFK2

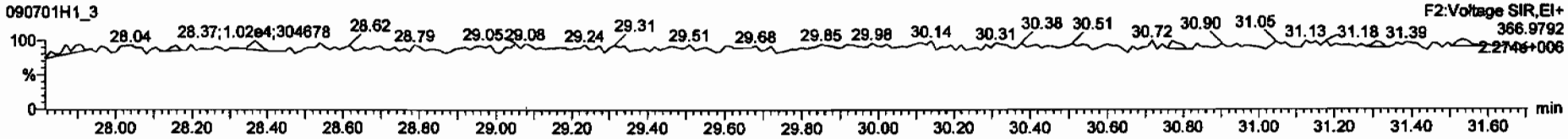

PFK3

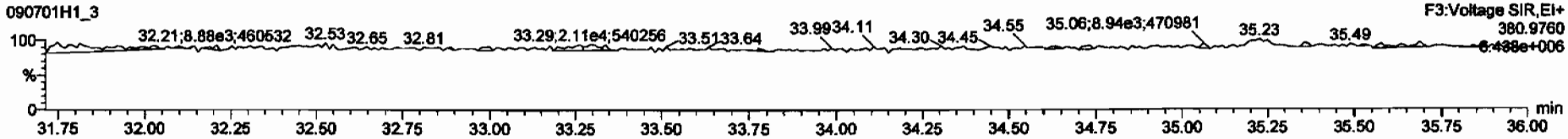

PFK4

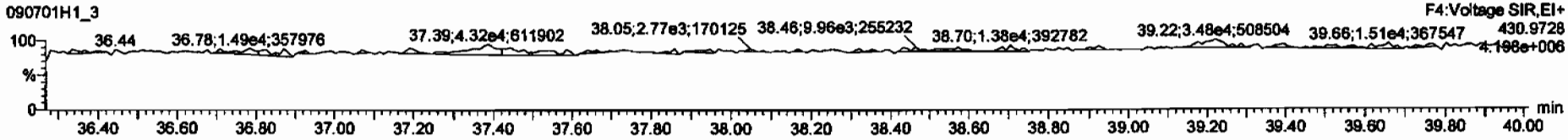

PFK5

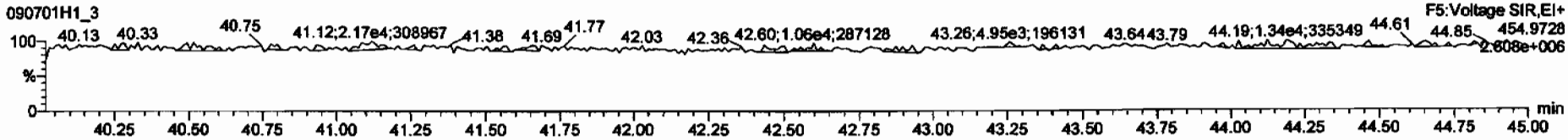

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 4:13:28 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 4:14:10 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

1	2,3,7,8-TCDD	2.47e3	0.66	NO	1.08	10.030	26.11	1.001	0.46806		0.0950	~~0.46806~~
2	1,2,3,7,8-PeCDD	1.18e4	0.60	NO	1.03	10.030	30.75	1.000	2.9702		0.0983	2.9702
3	1,2,3,4,7,8-HxCDD	2.00e4	1.29	NO	1.00	10.030	34.18	1.001	5.7213		0.467	5.7213
4	1,2,3,6,7,8-HxCDD	1.16e5	1.25	NO	1.13	10.030	34.29	1.001	31.908		0.470	31.908
5	1,2,3,7,8,9-HxCDD	4.66e4	1.21	NO	1.10	10.030	34.60	1.010	12.583		0.451	12.583
6	1,2,3,4,6,7,8-HpCDD	3.40e6	1.04	NO	1.06	10.030	38.22	1.000	934.91		1.74	934.91
7	OCDD	4.16e7	0.88	NO	1.18	10.030	41.72	1.000	10788	11200 *	0.919	10788
8	2,3,7,8-TCDF	2.49e3	0.86	NO	1.09	10.030	25.33	1.001	0.34301		0.0863	0.34301
9	1,2,3,7,8-PeCDF	2.65e3	1.69	NO	1.16	10.030	29.51	1.000	0.33698		0.0679	0.33698
10	2,3,4,7,8-PeCDF	7.93e3	1.55	NO	1.12	10.030	30.47	1.001	1.2273		0.0795	1.2273
11	1,2,3,4,7,8-HxCDF	2.65e4	1.22	NO	1.41	10.030	33.25	1.000	4.2992		0.223	4.2992
12	1,2,3,6,7,8-HxCDF	1.97e4	1.21	NO	1.22	10.030	33.38	1.001	2.8631		0.206	2.8631
13	2,3,4,6,7,8-HxCDF	3.50e4	1.30	NO	1.28	10.030	34.01	1.000	6.4115		0.276	6.4115
14	1,2,3,7,8,9-HxCDF	7.03e3	1.36	NO	1.26	10.030	35.04	1.002	1.2432		0.295	1.2432
15	1,2,3,4,6,7,8-HpCDF	6.80e5	1.05	NO	1.69	10.030	36.88	1.001	120.09		0.456	120.09
16	1,2,3,4,7,8,9-HpCDF	5.21e4	1.08	NO	1.48	10.030	38.80	1.000	11.339		0.465	11.339
17	OCDF	1.74e6	0.89	NO	1.10	10.030	41.94	1.000	437.40		0.272	~~437.40~~
18	13C-2,3,7,8-TCDD	9.76e5	0.80	NO	1.01	10.030	26.08	1.022	185.84	93.2	0.329	
19	13C-1,2,3,7,8-PeCDD	7.64e5	0.62	NO	0.827	10.030	30.73	1.205	178.46	89.5	0.185	
20	13C-1,2,3,4,7,8-HxCDD	6.98e5	1.26	NO	0.916	10.030	34.16	0.988	178.12	89.3	0.531	
21	13C-1,2,3,6,7,8-HxCDD	6.44e5	1.26	NO	0.921	10.030	34.27	0.991	163.62	82.1	0.528	
22	13C-1,2,3,4,6,7,8-HpCDD	6.81e5	1.06	NO	0.708	10.030	38.21	1.105	224.92	113	0.705	
23	13C-OCDD	1.31e6	0.90	NO	0.503	10.030	41.71	1.206	608.18	~~152~~ 117 *	0.548	
24	13C-2,3,7,8-TCDF	1.33e6	0.78	NO	0.977	10.030	25.31	0.992	193.08	96.8	0.218	
25	13C-1,2,3,7,8-PeCDF	1.35e6	1.57	NO	0.896	10.030	29.50	1.156	214.05	107	0.266	
26	13C-2,3,4,7,8-PeCDF	1.15e6	1.55	NO	0.900	10.030	30.44	1.193	181.55	91.0	0.265	
27	13C-1,2,3,4,7,8-HxCDF	8.71e5	0.51	NO	1.17	10.030	33.24	0.961	174.35	87.4	0.545	
28	13C-1,2,3,6,7,8-HxCDF	1.12e6	0.52	NO	1.52	10.030	33.36	0.965	173.19	86.9	0.420	
29	13C-2,3,4,6,7,8-HxCDF	8.49e5	0.51	NO	1.25	10.030	34.00	0.983	159.04	79.8	0.510	
30	13C-1,2,3,7,8,9-HxCDF	8.97e5	0.52	NO	1.05	10.030	34.99	1.012	199.33	100	0.605	

6/30/09
7/2/09
* See 1410

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 4:13:28 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 4:14:10 PM Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

31	13C-1,2,3,4,6,7,8-HpCDF	6.68e5	0.44	NO	0.868	10.030	36.86	1.066	180.14	90.3	0.703	
32	13C-1,2,3,4,7,8,9-HpCDF	6.19e5	0.44	NO	0.727	10.030	38.79	1.122	199.44	100	0.840	
33	13C-OCDF	1.45e6	0.90	NO	0.760	10.030	41.93	1.213	446.30	112	0.365	
34	37Cl-2,3,7,8-TCDD	2.45e5			0.668	10.030	26.09	1.023	70.824	88.8	0.123	
35	13C-1,2,3,4-TCDD	1.03e6	0.79	NO	1.00	10.030	25.51	0.000	199.40	100	0.334	
36	13C-1,2,3,4-TCDF	1.41e6	0.79	NO	1.00	10.030	24.07	0.000	199.40	100	0.213	
37	13C-1,2,3,7,8,9-HxCDD	8.52e5	1.26	NO	1.00	10.030	34.58	0.000	199.40	100	0.486	
38	Total Tetra-Dioxins				1.08	10.030			4.7949		0.0950	5.0265
39	Total Penta-Dioxins				1.03	10.030			17.713		0.0983	20.097
40	Total Hexa-Dioxins				1.13	10.030			191.59		0.442	~~191.59~~
41	Total Hepta-Dioxins				1.06	10.030			1875.5		1.74	~~1875.5~~
42	Total Tetra-Furans				1.09	10.030			7.0872		0.0863	7.7775
43	1st Func. Penta-Furans				1.16	10.030			~~29.144~~ 28.9		0.0407	~~29.144~~ 29.0
44	Total Penta-Furans				1.16	10.030			~~8.7855~~		0.0719	~~8.8896~~
45	Total Hexa-Furans				1.28	10.030			146.62		0.248	~~146.62~~
46	Total Hepta-Furans				1.69	10.030			483.13		0.433	~~483.13~~

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 4:13:28 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 4:14:10 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

Tetra-Dioxins

Total Tetra-Dioxins	22.73	4.970e4	7.729e4	4.012e3	5.170e3	0.78	NO	9.182e3	1.7391	1.7391	0.0950
Total Tetra-Dioxins	23.08	4.182e4	5.696e4	3.446e3	4.251e3	0.81	NO	7.697e3	1.4578	1.4578	0.0950
Total Tetra-Dioxins	23.51	6.190e3	8.573e3	5.081e2	6.403e2	0.79	NO	1.148e3	0.21750	0.21750	0.0950
Total Tetra-Dioxins	24.21	5.252e3	6.637e3	3.110e2	5.197e2	0.60	YES	0.000e0	0.00000	0.13542	0.0950
Total Tetra-Dioxins	24.43	8.346e3	8.393e3	5.317e2	7.798e2	0.68	NO	1.311e3	0.24838	0.24838	0.0950
Total Tetra-Dioxins	24.59	1.889e4	2.250e4	1.273e3	1.687e3	0.75	NO	2.959e3	0.56047	0.56047	0.0950
Total Tetra-Dioxins	25.17	6.478e3	4.941e3	3.332e2	2.869e2	1.16	YES	0.000e0	0.00000	0.096182	0.0950
2,3,7,8-TCDD	26.11	1.671e4	2.705e4	9.783e2	1.493e3	0.66	NO	2.471e3	0.46806	0.46806	0.0950
Total Tetra-Dioxins	26.41	3.977e3	6.511e3	2.212e2	3.259e2	0.68	NO	5.471e2	0.10362	0.10362	0.0950

Penta-Dioxins

Total Penta-Dioxins	28.59	1.605e5	2.513e5	1.190e4	1.958e4	0.61	NO	3.148e4	7.9462	7.9462	0.0983
Total Penta-Dioxins	29.07	4.537e4	7.239e4	2.364e3	3.779e3	0.63	NO	6.143e3	1.5507	1.5507	0.0983
Total Penta-Dioxins	29.54	6.843e4	9.905e4	3.177e3	4.481e3	0.71	NO	7.659e3	1.9332	1.9332	0.0983
Total Penta-Dioxins	29.69	7.107e4	1.037e5	3.131e3	5.264e3	0.59	NO	8.395e3	2.1190	2.1190	0.0983
Total Penta-Dioxins	29.79	2.594e4	4.569e4	1.290e3	2.187e3	0.59	NO	3.477e3	0.87766	0.87766	0.0983
Total Penta-Dioxins	30.00	3.599e4	5.899e4	2.611e3	4.006e3	0.65	NO	0.000e0	0.00000	1.6703	0.0983
Total Penta-Dioxins	30.34	6.685e3	1.174e4	3.116e2	6.266e2	0.50	YES	0.000e0	0.00000	0.20353	0.0983
1,2,3,7,8-PeCDD	30.75	8.757e4	1.455e5	4.394e3	7.373e3	0.60	NO	1.177e4	2.9702	2.9702	0.0983
Total Penta-Dioxins	30.84	1.013e4	1.846e4	4.640e2	7.877e2	0.59	NO	1.252e3	0.31596	0.31596	0.0983
Total Penta-Dioxins	31.13	1.774e4	2.492e4	9.111e2	1.239e3	0.74	YES	0.000e0	0.00000	0.50983	0.0983

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 4:13:28 PM Pacific Daylight Time
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Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

Hexa-Dioxins

	Total Hexa-Dioxins	32.58	2.344e6	1.860e6	1.250e5	1.007e5	1.24	NO	2.258e5	59.632	59.632	0.442
	Total Hexa-Dioxins	33.17	2.556e5	2.092e5	1.539e4	1.182e4	1.32	NO	2.701e4	7.1350	7.1350	0.442
	Total Hexa-Dioxins	33.45	2.079e6	1.643e6	1.480e5	1.199e5	1.23	NO	2.679e5	70.770	70.770	0.442
	Total Hexa-Dioxins	33.58	5.418e4	4.646e4	3.394e3	2.940e3	1.15	NO	6.333e3	1.6729	1.6729	0.442
	1,2,3,4,7,8-HxCDD	34.18	1.917e5	1.350e5	1.130e4	8.750e3	1.29	NO	2.005e4	5.7213	5.7213	0.467
	1,2,3,6,7,8-HxCDD	34.29	9.404e5	7.677e5	6.451e4	5.147e4	1.25	NO	1.160e5	31.908	31.908	0.470
	Total Hexa-Dioxins	34.50	7.372e4	6.603e4	4.413e3	3.793e3	1.16	NO	8.206e3	2.1675	2.1675	0.442
	1,2,3,7,8,9-HxCDD	34.60	3.555e5	3.071e5	2.550e4	2.115e4	1.21	NO	4.665e4	12.583	12.583	0.451

Hepta-Dioxins

	Total Hepta-Dioxins	37.30	2.110e7	2.091e7	1.738e6	1.680e6	1.03	NO	3.418e6	940.55	940.55	1.74
	1,2,3,4,6,7,8-HpCDD	38.22	2.560e7	2.492e7	1.729e6	1.668e6	1.04	NO	3.397e6	934.91	934.91	1.74

Tetra-Furans

	Total Tetra-Furans	21.26	1.625e4	2.439e4	1.705e3	2.119e3	0.80	NO	3.825e3	0.52677	0.52677	0.0863
	Total Tetra-Furans	21.86	1.143e5	1.554e5	9.254e3	1.240e4	0.75	NO	2.165e4	2.9822	2.9822	0.0863
	Total Tetra-Furans	22.30	1.388e4	1.809e4	1.719e3	2.169e3	0.79	NO	3.888e3	0.53550	0.53550	0.0863
	Total Tetra-Furans	22.71	1.535e4	2.622e4	1.719e3	2.140e3	0.80	NO	3.859e3	0.53155	0.53155	0.0863
	Total Tetra-Furans	23.11	1.890e4	2.891e4	1.559e3	2.001e3	0.78	NO	3.560e3	0.49038	0.49038	0.0863
	Total Tetra-Furans	23.25	1.580e4	1.001e4	6.950e2	5.577e2	1.25	YES	0.000e0	0.00000	0.13595	0.0863
	Total Tetra-Furans	23.39	1.843e4	1.876e4	1.133e3	1.494e3	0.76	NO	2.628e3	0.36193	0.36193	0.0863
	Total Tetra-Furans	23.86	7.034e3	7.295e3	4.854e2	4.533e2	1.07	YES	0.000e0	0.00000	0.11051	0.0863
	Total Tetra-Furans	24.00	2.462e4	2.913e4	2.384e3	3.025e3	0.79	NO	5.409e3	0.74494	0.74494	0.0863
	Total Tetra-Furans	24.53	6.710e3	8.981e3	4.105e2	6.112e2	0.67	NO	1.022e3	0.14072	0.14072	0.0863
	2,3,7,8-TCDF	25.33	1.770e4	1.912e4	1.152e3	1.339e3	0.86	NO	2.490e3	0.34301	0.34301	0.0863
	Total Tetra-Furans	25.66	1.851e4	3.110e4	1.358e3	1.768e3	0.77	NO	3.124e3	0.43030	0.43030	0.0863
	Total Tetra-Furans	27.10	3.491e4	3.579e4	1.999e3	1.821e3	1.10	YES	0.000e0	0.00000	0.44383	0.0863

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 4:13:28 PM Pacific Daylight Time
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Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

Penta-Furans function 1

	1st Func. Penta-Furans	27.09	1.784e6	1.097e6	8.936e4	5.734e4	1.56	NO	1.467e5	20.144	20.144	0.0407

Penta-Furans

	Total Penta-Furans	28.43	3.265e4	1.787e4	1.770e3	1.066e3	1.66	NO	2.836e3	0.38941	0.38941	0.0719
	Total Penta-Furans	28.58	2.120e5	1.442e5	1.654e4	1.101e4	1.50	NO	2.754e4	3.7819	3.7819	0.0719
	Total Penta-Furans	28.96	1.618e4	1.150e4	9.462e2	5.975e2	1.58	NO	1.544e3	0.21199	0.21199	0.0719
	Total Penta-Furans	29.12	1.478e5	9.158e4	9.305e3	5.854e3	1.59	NO	1.516e4	2.0816	2.0816	0.0719
	Total Penta-Furans	29.33	1.433e4	1.292e4	8.198e2	5.478e2	1.50	NO	1.368e3	0.18779	0.18779	0.0719
	1,2,3,7,8-PeCDF	29.51	3.577e4	1.994e4	1.667e3	9.840e2	1.69	NO	2.651e3	0.33698	0.33698	0.0679
	Total Penta-Furans	29.77	4.952e4	3.631e4	2.497e3	1.643e3	1.52	NO	4.141e3	0.56857	0.56857	0.0719
	Total Penta-Furans	30.35	1.109e4	7.681e3	4.608e2	4.088e2	1.13	YES	0.000e0	0.00000	0.10410	0.0719
	2,3,4,7,8-PeCDF	30.47	6.065e4	3.791e4	4.827e3	3.104e3	1.55	NO	7.931e3	1.2273	1.2273	0.0795

Hexa-Furans

	Total Hexa-Furans	32.03	9.721e5	7.503e5	5.037e4	3.898e4	1.29	NO	8.935e4	14.878	14.878	0.248
	Total Hexa-Furans	32.20	2.797e6	2.243e6	1.457e5	1.159e5	1.26	NO	2.616e5	43.566	43.566	0.248
	Total Hexa-Furans	32.56	6.401e4	5.301e4	3.497e3	2.674e3	1.31	NO	6.171e3	1.0276	1.0276	0.248
	Total Hexa-Furans	32.77	4.191e6	3.341e6	2.377e5	1.911e5	1.24	NO	4.287e5	71.390	71.390	0.248
	Total Hexa-Furans	33.15	3.267e4	2.435e4	1.305e3	1.136e3	1.15	NO	2.442e3	0.40655	0.40655	0.248
	1,2,3,4,7,8-HxCDF	33.25	2.429e5	2.151e5	1.456e4	1.195e4	1.22	NO	2.650e4	4.2992	4.2992	0.223
	1,2,3,6,7,8-HxCDF	33.38	1.741e5	1.428e5	1.079e4	8.941e3	1.21	NO	1.973e4	2.8631	2.8631	0.206
	Total Hexa-Furans	33.68	2.841e4	2.303e4	1.829e3	1.386e3	1.32	NO	3.216e3	0.53545	0.53545	0.248
	2,3,4,6,7,8-HxCDF	34.01	3.086e5	2.709e5	1.975e4	1.520e4	1.30	NO	3.495e4	6.4115	6.4115	0.276
	1,2,3,7,8,9-HxCDF	35.04	5.844e4	3.741e4	4.055e3	2.979e3	1.36	NO	7.034e3	1.2432	1.2432	0.295

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 4:13:28 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 4:14:10 PM Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.88	4.154e6	4.025e6	3.478e5	3.321e5	1.05	NO	6.800e5	120.09	120.09	0.456
	Total Hepta-Furans	37.32	8.012e4	8.167e4	6.008e3	5.981e3	1.00	NO	1.199e4	2.1985	2.1985	0.433
	Total Hepta-Furans	37.52	1.302e7	1.249e7	9.712e5	9.348e5	1.04	NO	1.906e6	349.50	349.50	0.433
	1,2,3,4,7,8,9-HpCDF	38.80	3.900e5	3.434e5	2.708e4	2.506e4	1.08	NO	5.214e4	11.339	11.339	0.465

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:19:50 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

2,3,7,8-TCDD

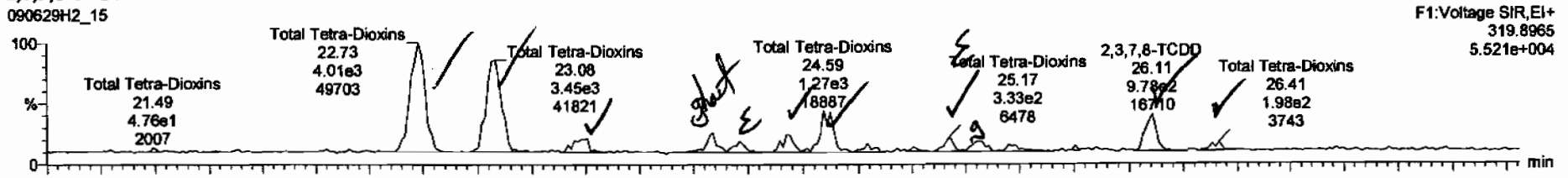

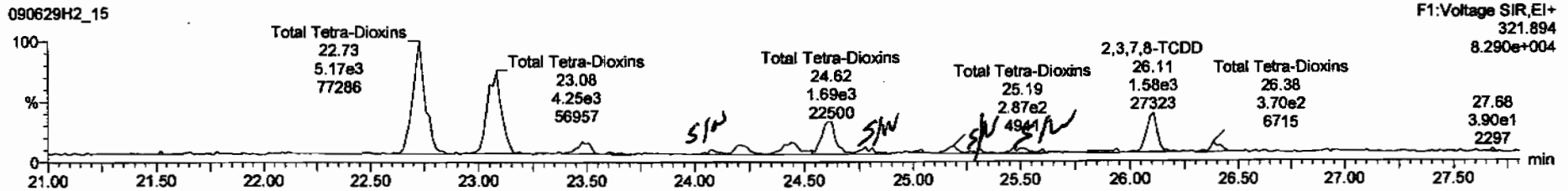

13C-2,3,7,8-TCDD

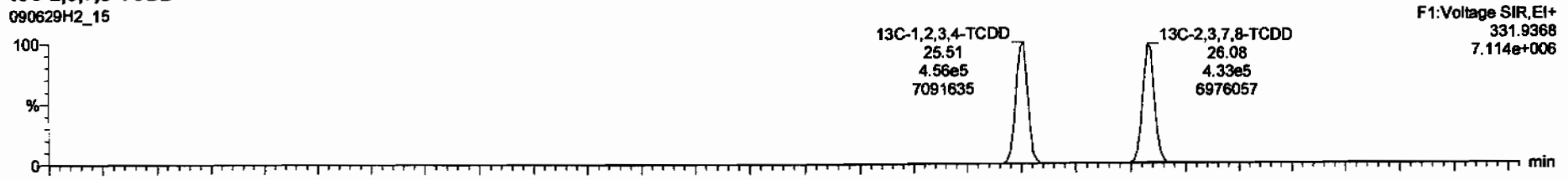

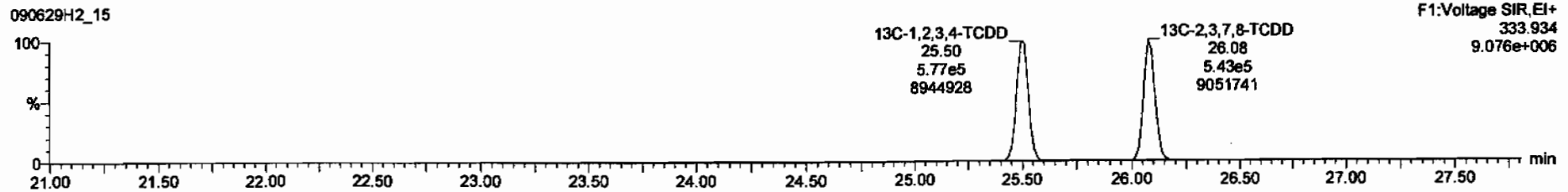

TargetLynx - 090629f2-15.qld * - [Chromatogram]

090629H2_15 - 31837_2207_004 CAMO-09-6009 12.25 - CAMO-09-6009

Name	RT	Total Ht	Total Area	Ratio	Flag	Conc	Rsd
Total Tetra-Dioxins	24.59	1.273e3	1.687e3	0.75	NO	0.56047	0.56047
Total Tetra-Dioxins	25.17	3.332e2	2.669e2	1.16	YES	0.096162	0.00000
2,3,7,8-TCDD	26.11	9.783e2	1.493e3	0.66	NO	0.46806	0.46806
Total Tetra-Dioxins	26.41	2.212e2	3.259e2	0.68	NO	0.10362	0.10362

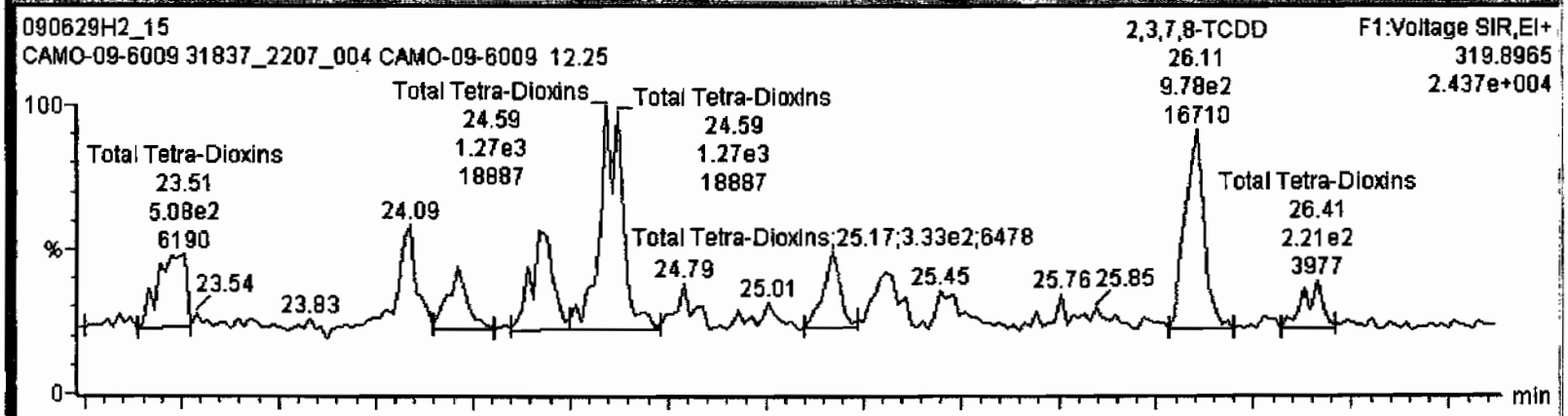

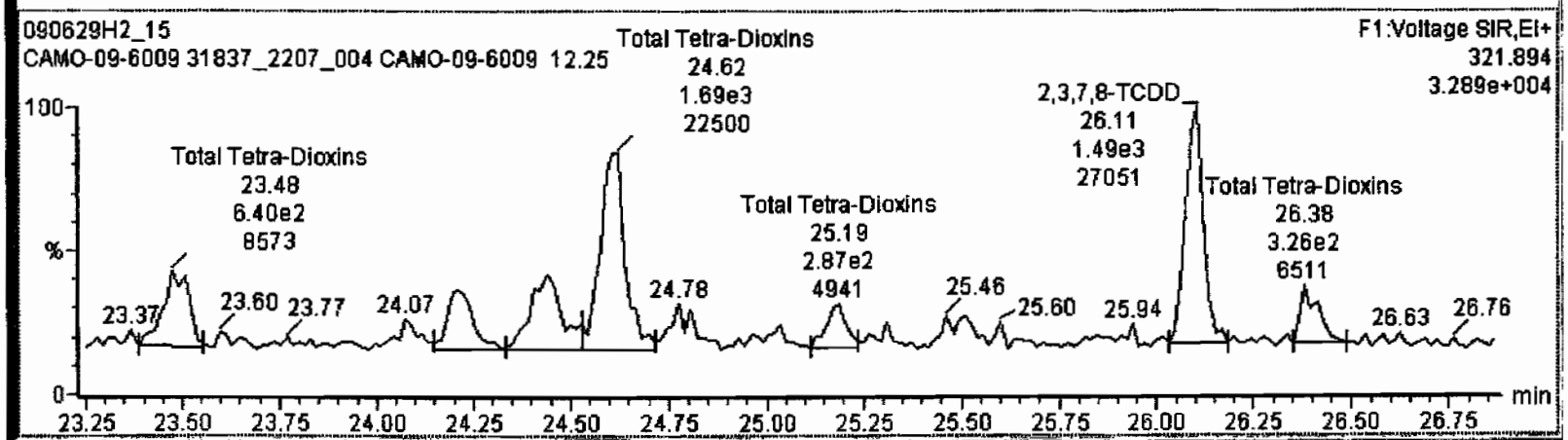

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:19:50 Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

37Cl-2,3,7,8-TCDD

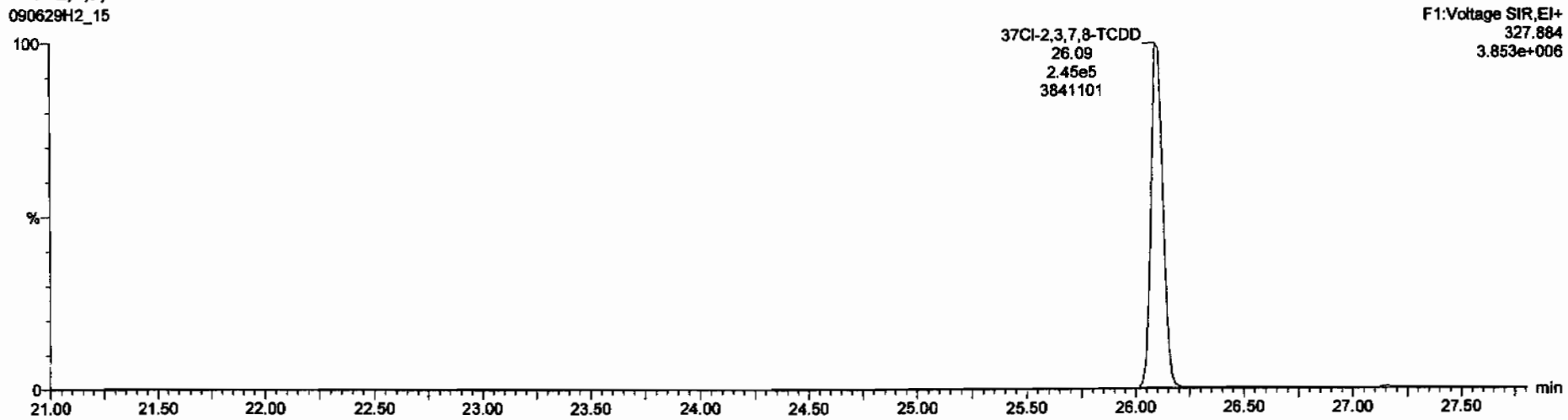

13C-1,2,3,4-TCDD

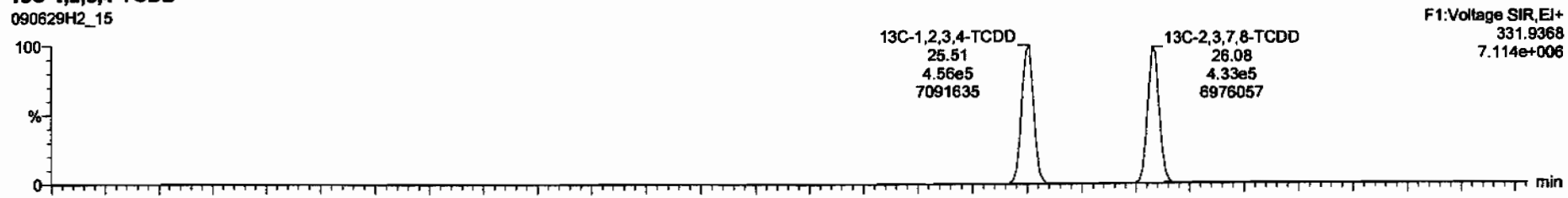

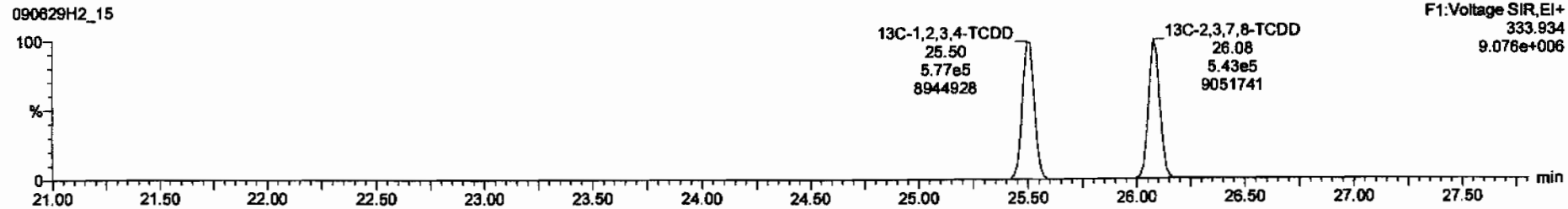

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Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:19:50 Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

1,2,3,7,8-PeCDD

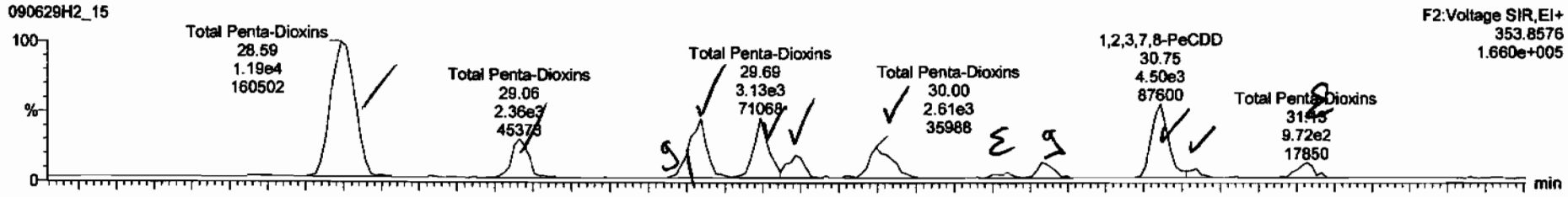

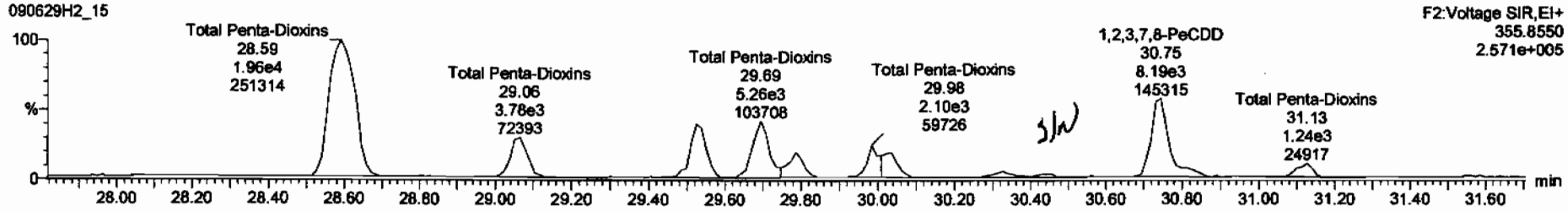

13C-1,2,3,7,8-PeCDD

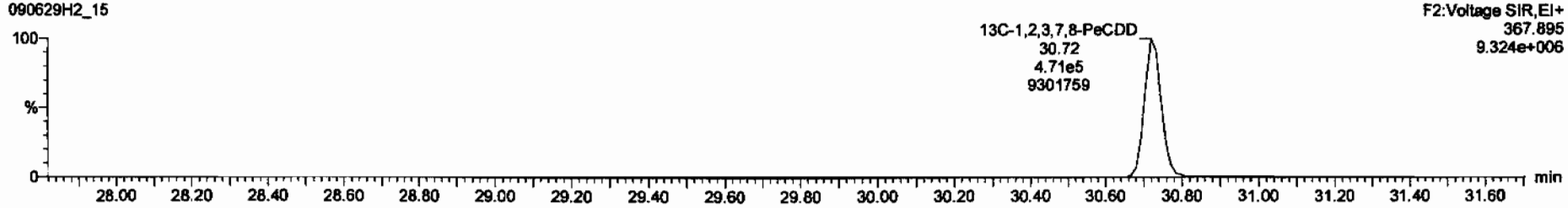

TargetLynx - 090629f2-15.qld * - [Chromatogram]

090629H2_15 - 31837_2207_004 CAMO-09-6009 12.25 - CAMO-09-6009

Total Penta-Dioxins	30.34	3.116e2	6.266e2	0.50	YES	0.20353	0.00000
1,2,3,7,8-PeCDD	30.75	4.394e3	7.373e3	0.60	NO	2.9702	2.9702
Total Penta-Dioxins	30.84	4.640e2	7.877e2	0.59	NO	0.31596	0.31596
Total Penta-Dioxins	31.13	9.111e2	1.239e3	0.74	YES	0.50983	0.00000

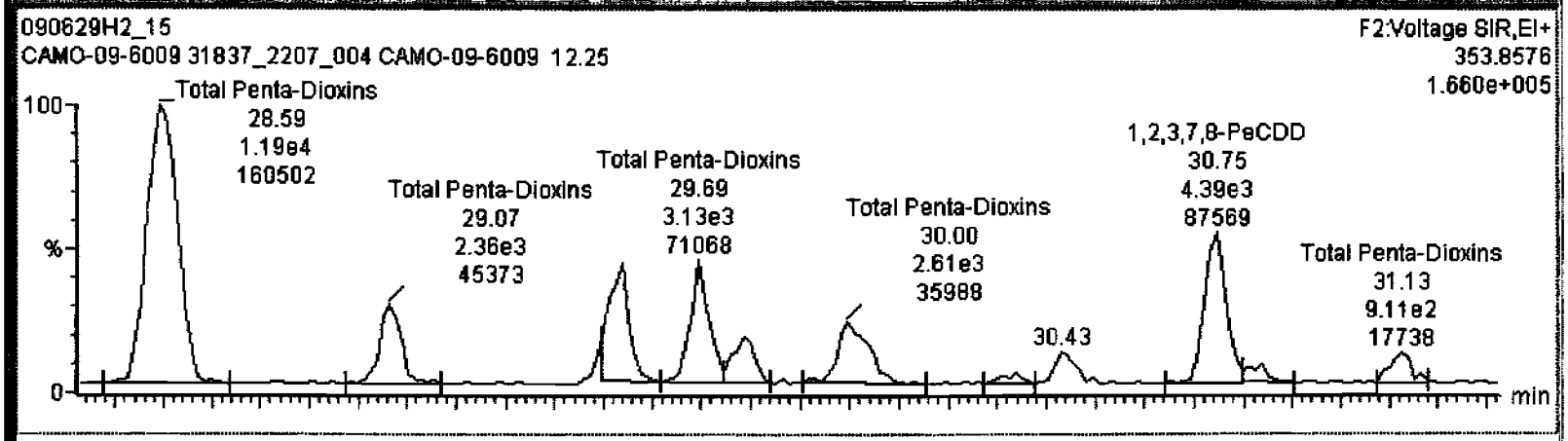

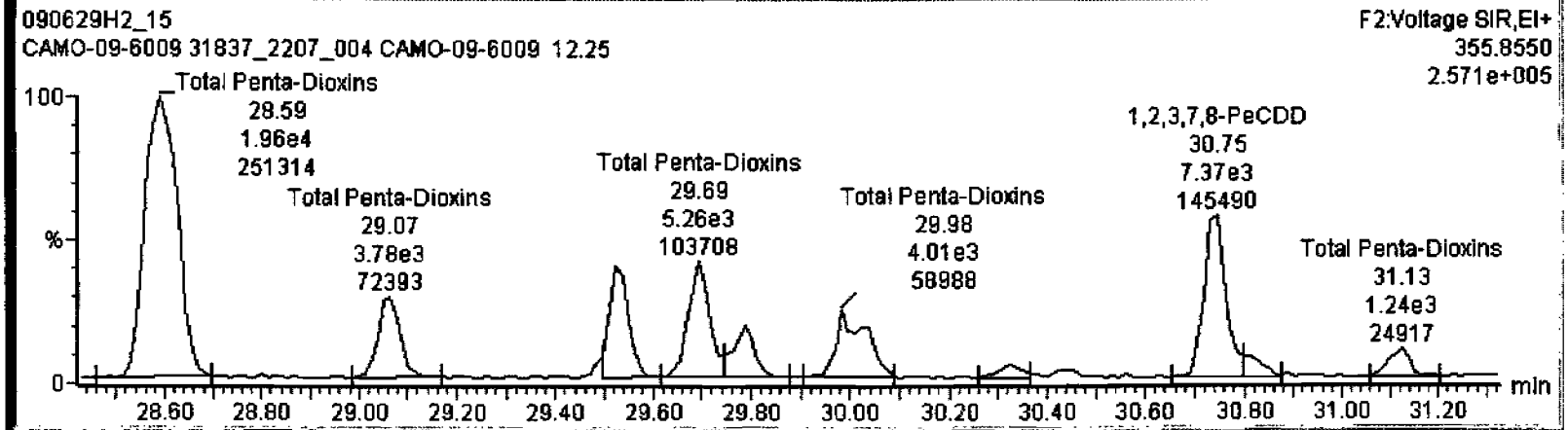

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Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:19:50 Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

1,2,3,4,7,8-HxCDD

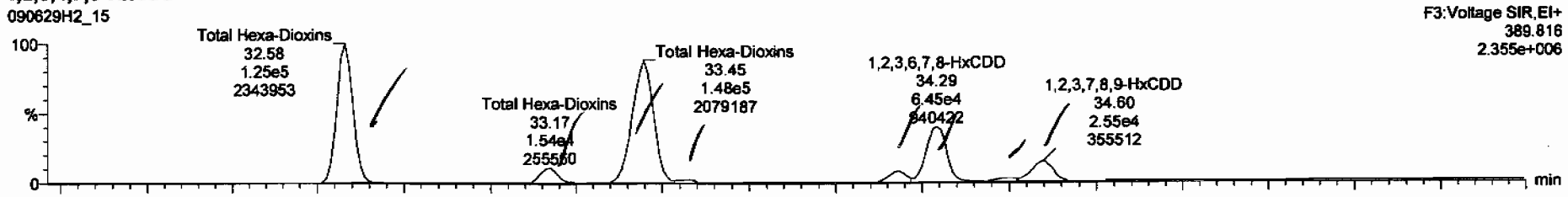

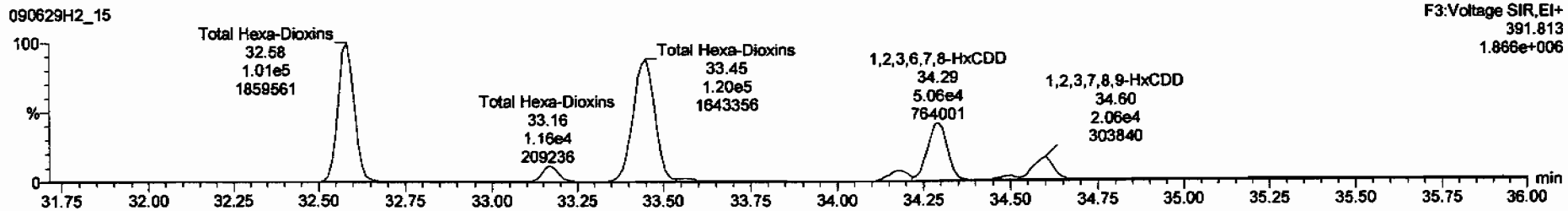

13C-1,2,3,4,7,8-HxCDD

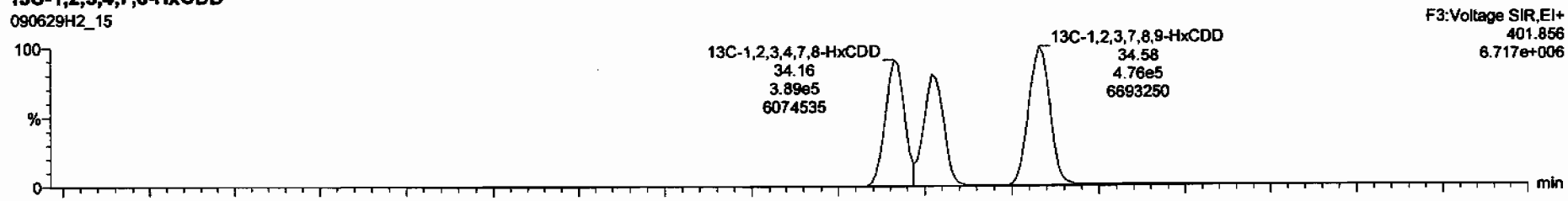

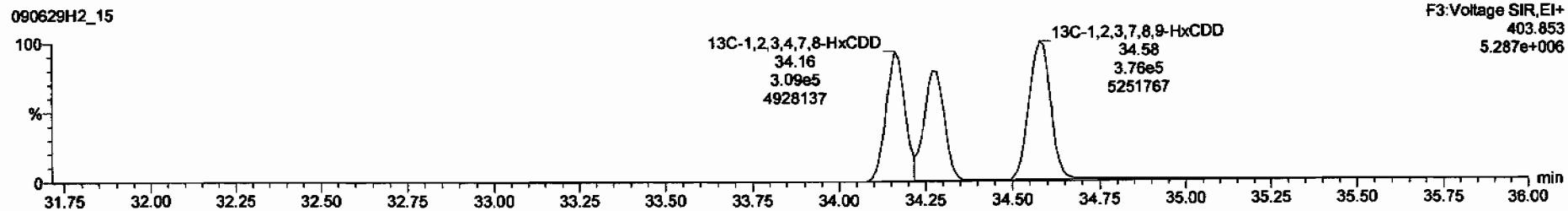

TargetLynx - 090629f2-15.qld * - [Chromatogram]

090629H2_15 - 31837_2207_004 CAMO-09-6009 12.25 - CAMO-09-6009

1,2,3,4,7,8-HxCDD	34.18	1.130e4	8.750e3	1.29	NO	5.7213	5.7213
1,2,3,6,7,8-HxCDD	34.29	6.451e4	5.147e4	1.25	NO	31.908	31.908
Total Hexa-Dioxins	34.50	4.413e3	3.793e3	1.16	NO	2.1675	2.1675
1,2,3,7,8,9-HxCDD	34.60	2.550e4	2.115e4	1.21	NO	12.583	12.583

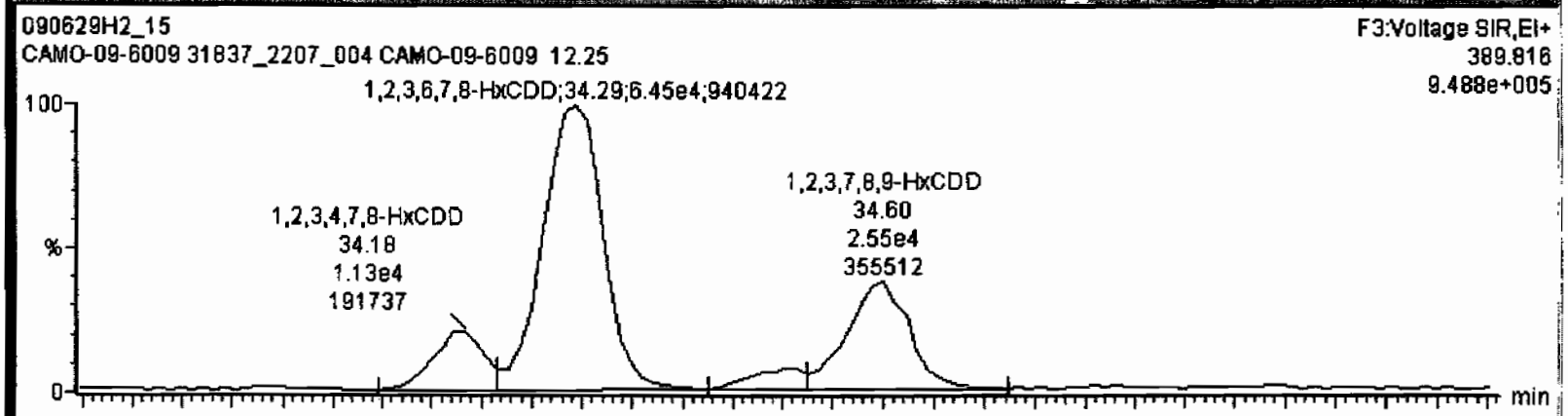

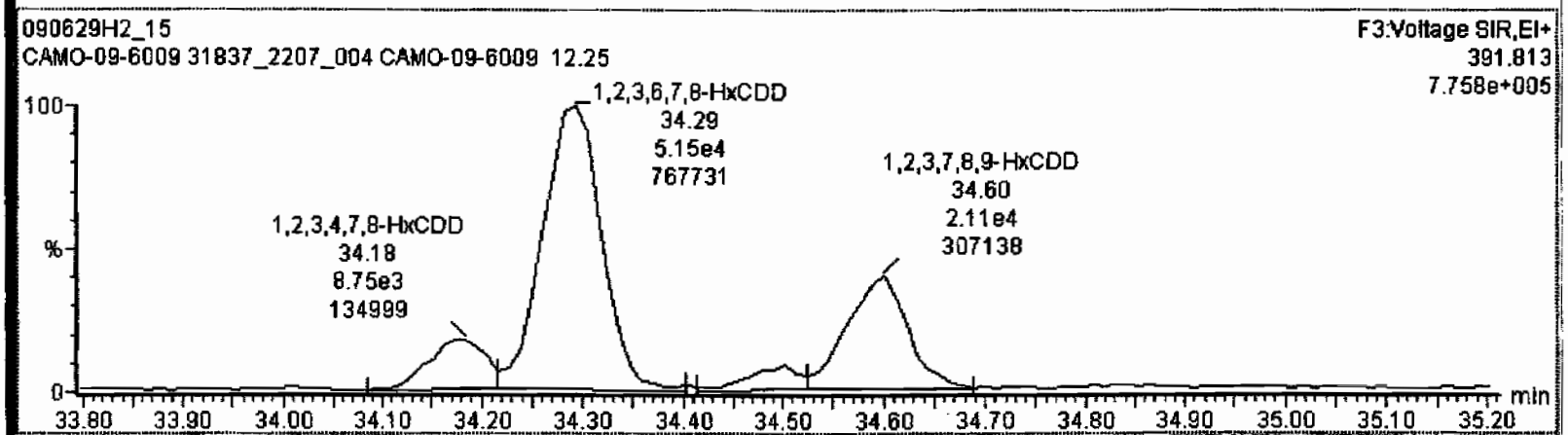

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Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:19:50 Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

1,2,3,4,6,7,8-HpCDD

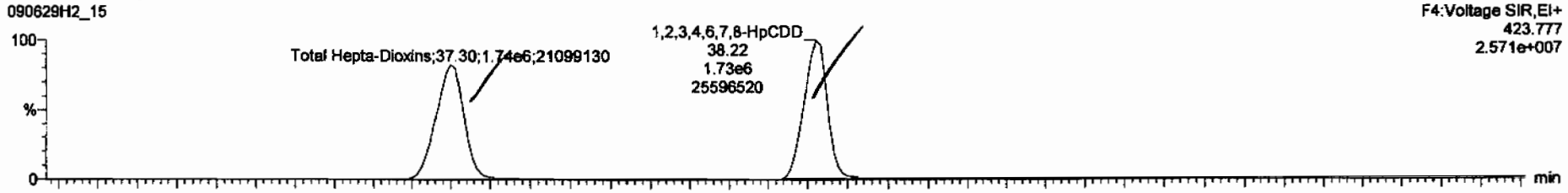

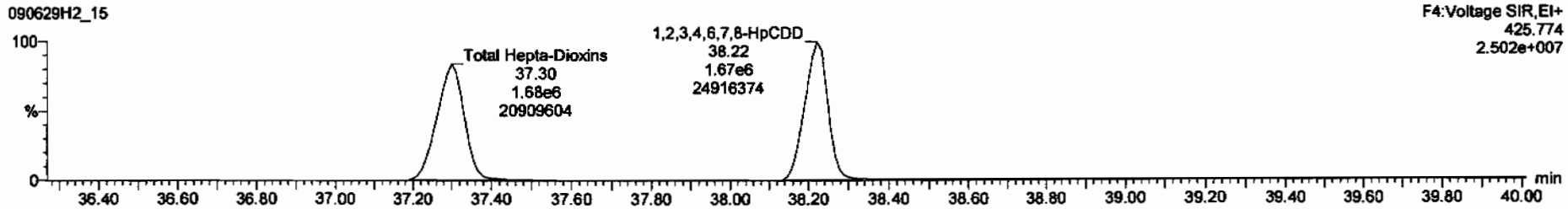

13C-1,2,3,4,6,7,8-HpCDD

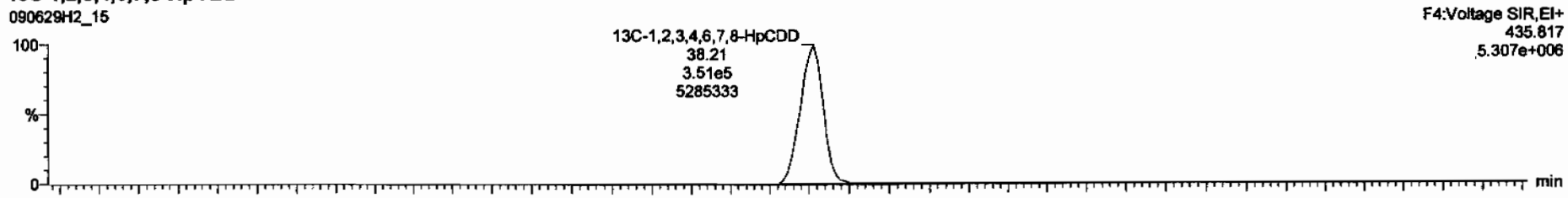

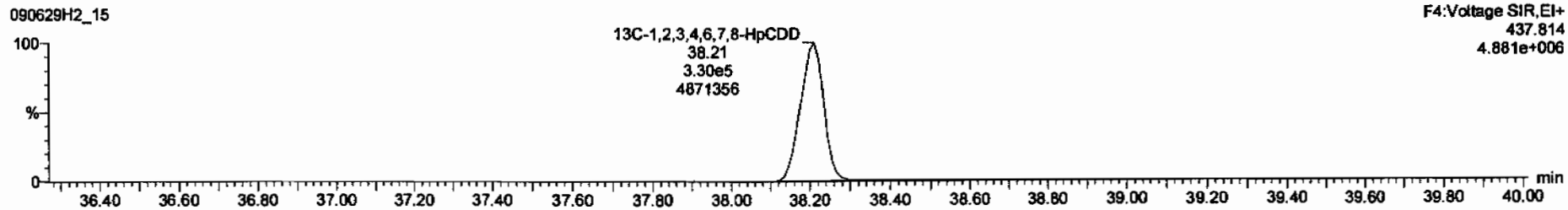

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Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

OCDD

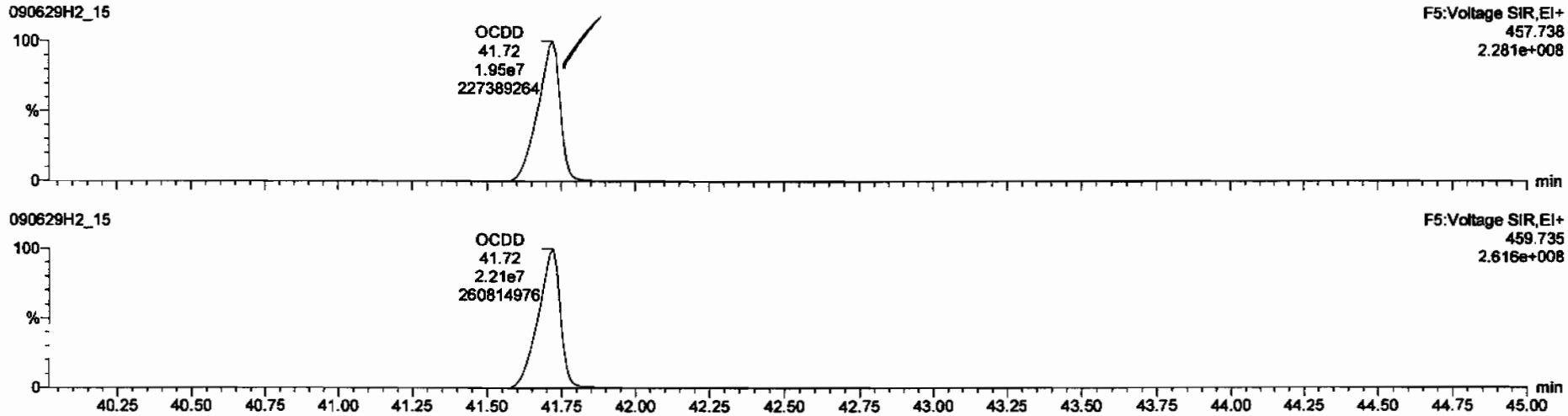

13C-OCDD

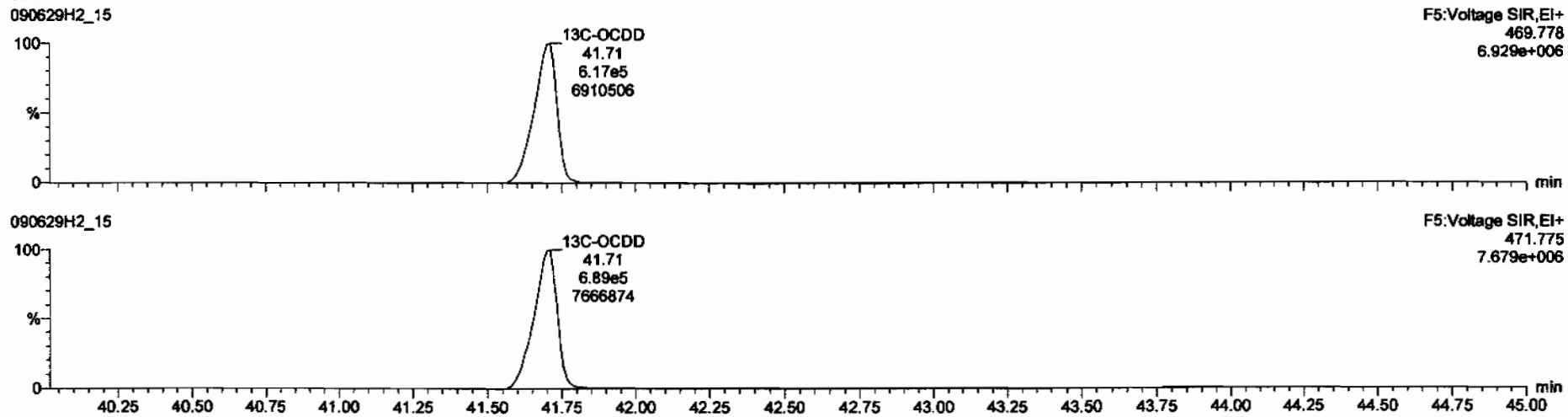

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Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

2,3,7,8-TCDF

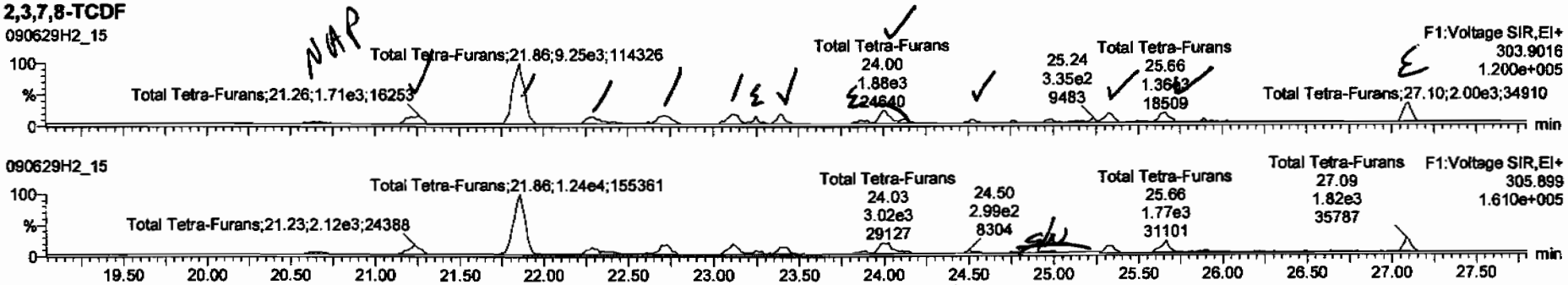

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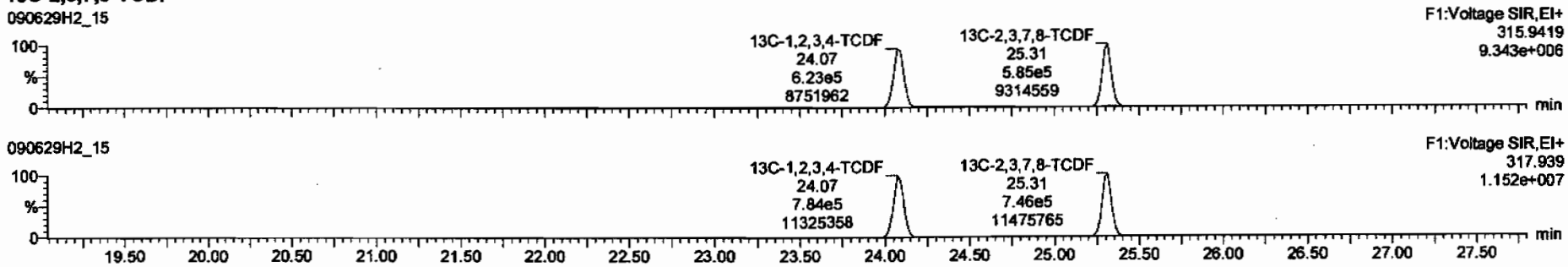

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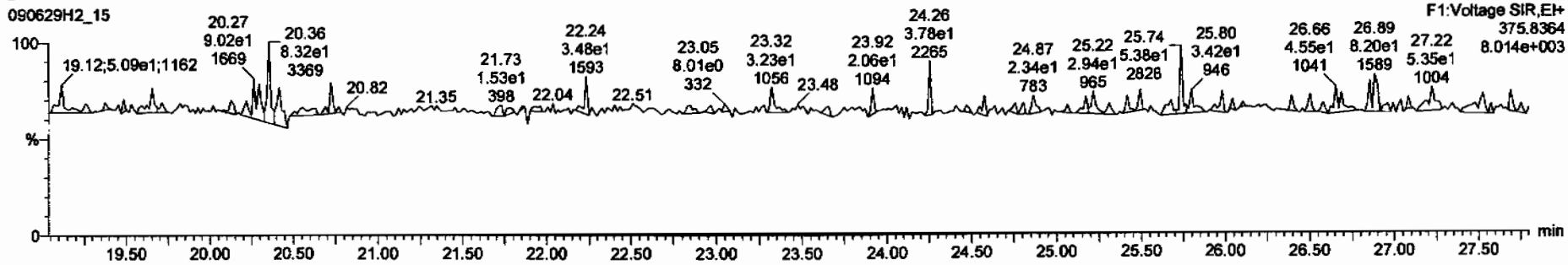

TargetLynx - 090629f2-15.qld * - [Chromatogram]

090629H2_15 - 31837_2207_004 CAMO-09-6009 12.25 - CAMO-09-6009

Total Tetra-Furans	24.53	4.105e2	6.112e2	0.67	NO	0.14072	0.14072
2,3,7,8-TCDF	25.33	1.152e3	1.339e3	0.86	NO	0.34301	0.34301
Total Tetra-Furans	25.66	1.356e3	1.768e3	0.77	NO	0.43030	0.43030
Total Tetra-Furans	27.10	1.999e3	1.821e3	1.10	YES	0.44383	0.00000

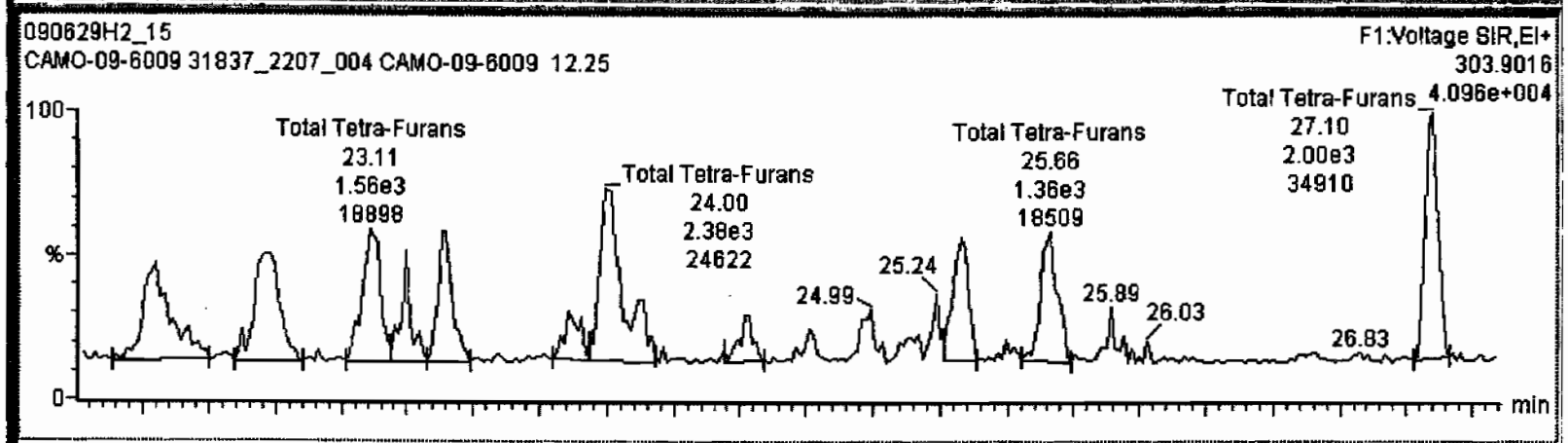

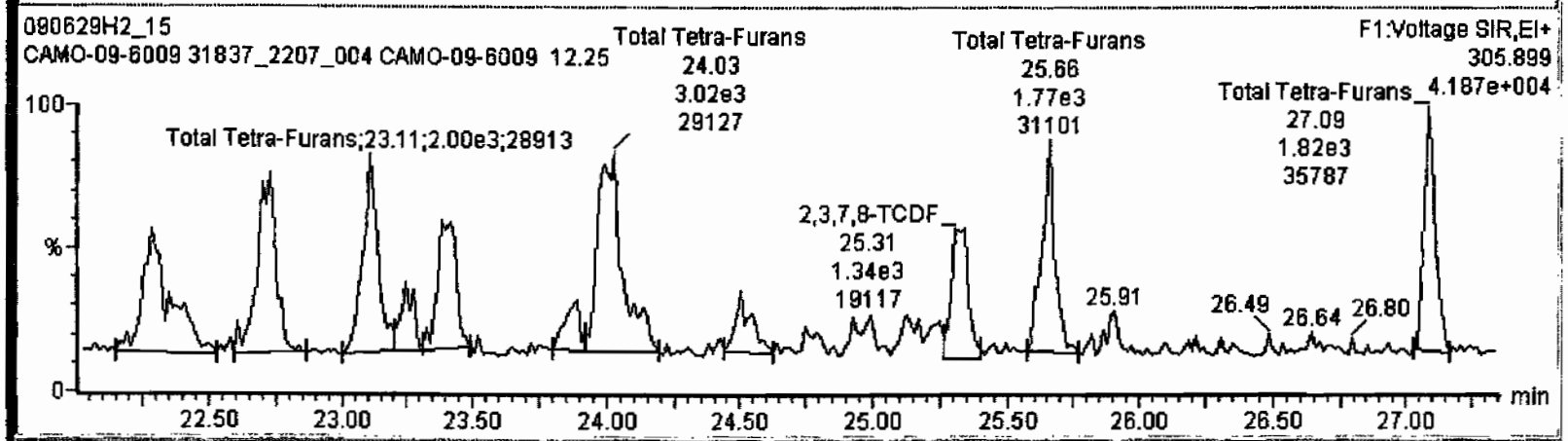

TargetLynx - 090629f2-15.qld * - [Chromatogram]

090629H2_15 - 31837_2207_004 CAMO-09-6009 12.25 - CAMO-09-6009

Total Tetra-Furans	24.53	4.105e2	6.112e2	0.67	NO	0.14072	0.14072
2,3,7,8-TCDF	25.33	1.152e3	1.339e3	0.86	NO	0.34301	0.34301
Total Tetra-Furans	25.66	1.356e3	1.768e3	0.77	NO	0.43030	0.43030
Total Tetra-Furans	27.10	1.999e3	1.821e3	1.10	YES	0.44383	0.00000

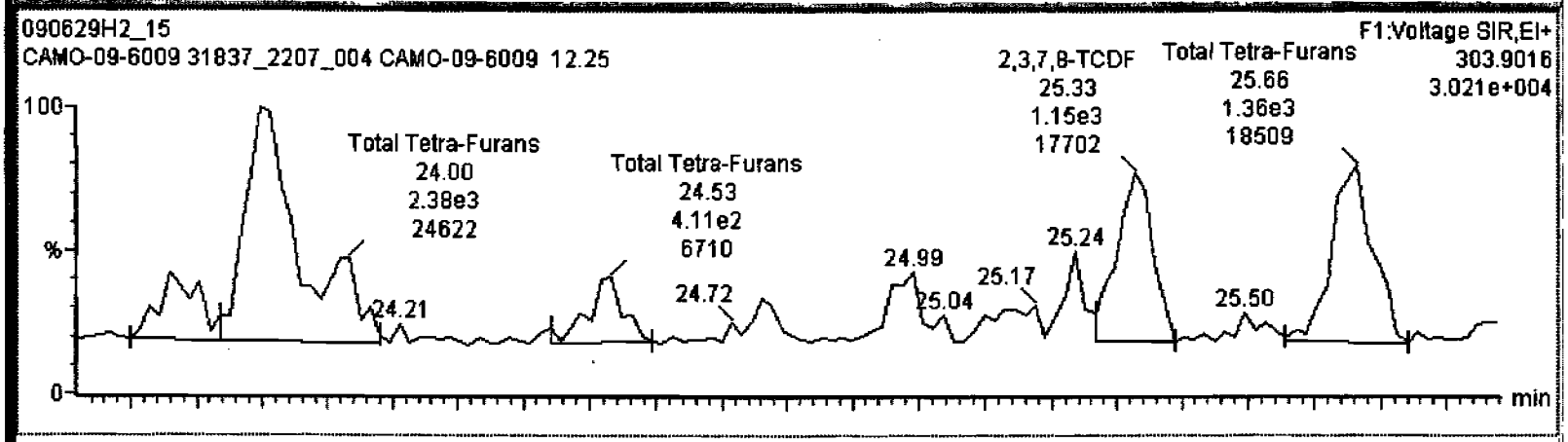

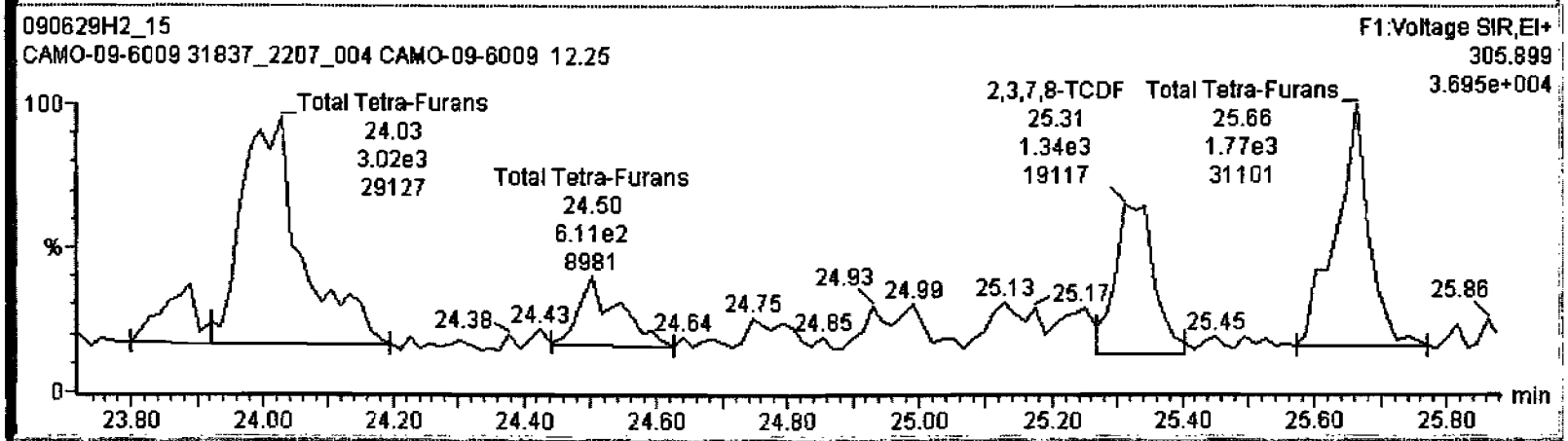

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Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
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Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

1st Func. Penta-Furans

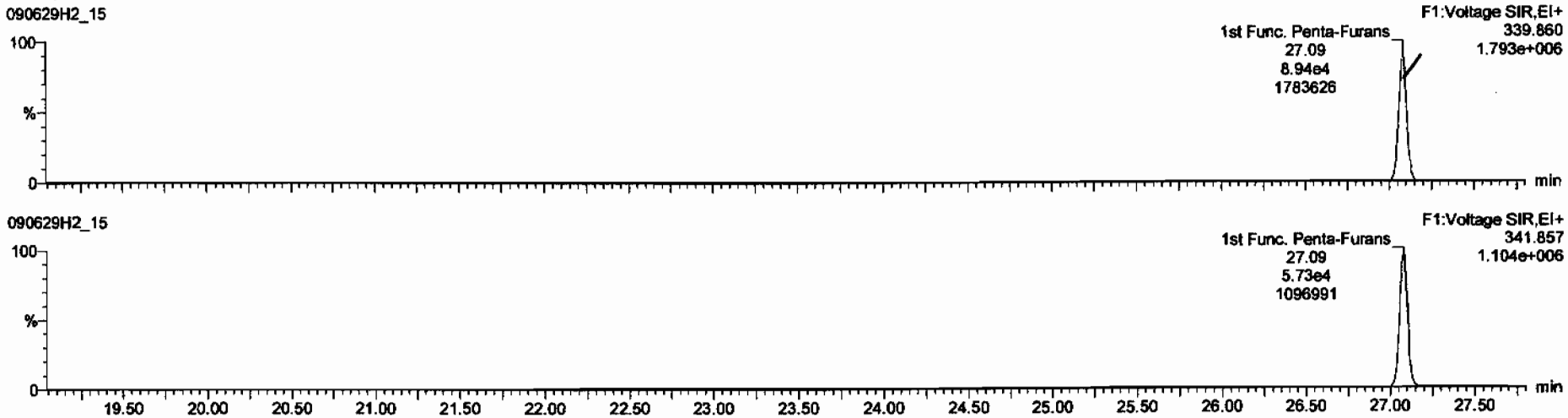

DPE6

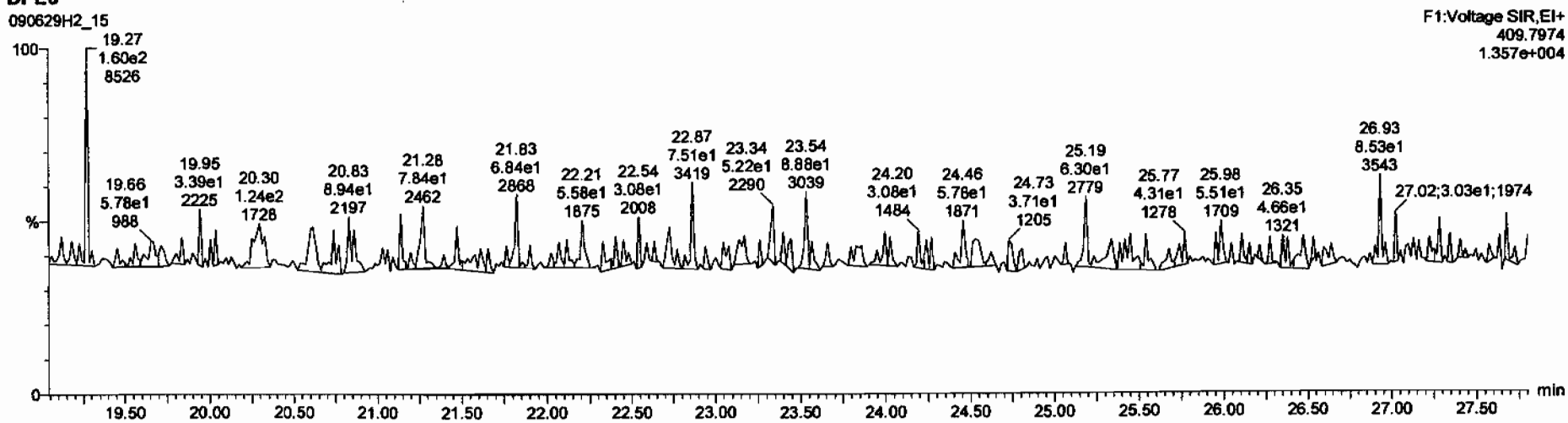

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:19:50 Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

1,2,3,7,8-PeCDF

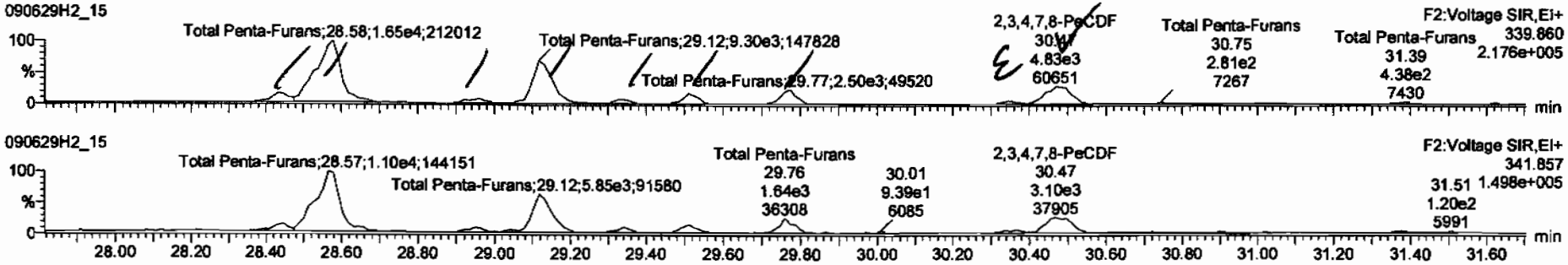

13C-1,2,3,7,8-PeCDF

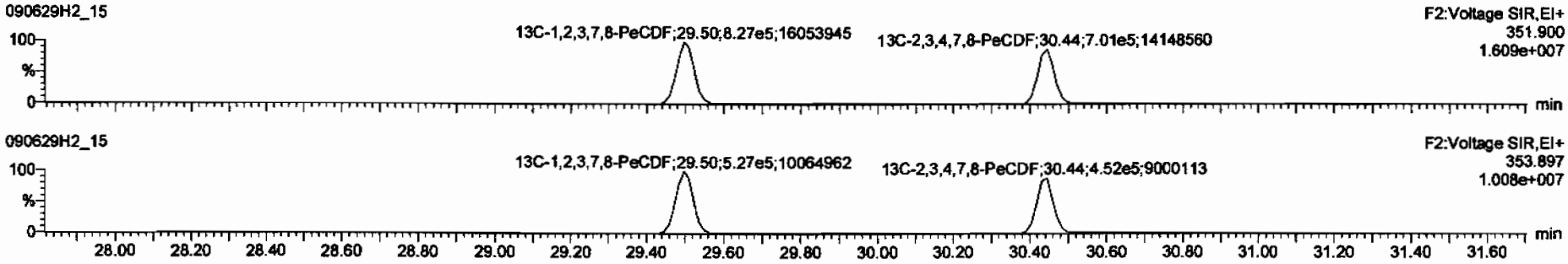

DPE2

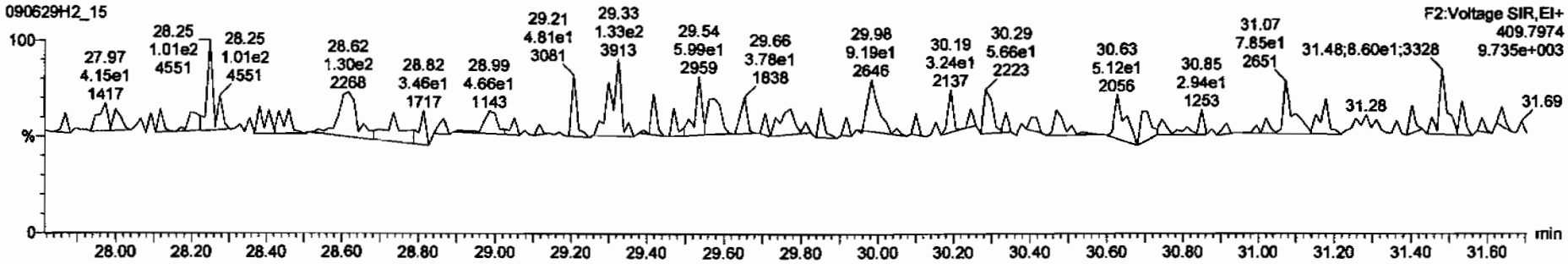

TargetLynx - 090629f2-15.qld * - [Chromatogram]

090629H2_15 - 31837_2207_004 CAMO-09-6009 12.25 - CAMO-09-6009

Total Penta-Furans	28.43	1.770e3	1.066e3	1.66	NO	0.38941	0.38941
Total Penta-Furans	28.58	1.654e4	1.101e4	1.50	NO	3.7819	3.7819
Total Penta-Furans	28.96	9.462e2	5.975e2	1.58	NO	0.21199	0.21199
Total Penta-Furans	29.12	9.305e3	5.854e3	1.59	NO	2.0816	2.0816
Total Penta-Furans	29.33	8.198e2	5.478e2	1.50	NO	0.18779	0.18779

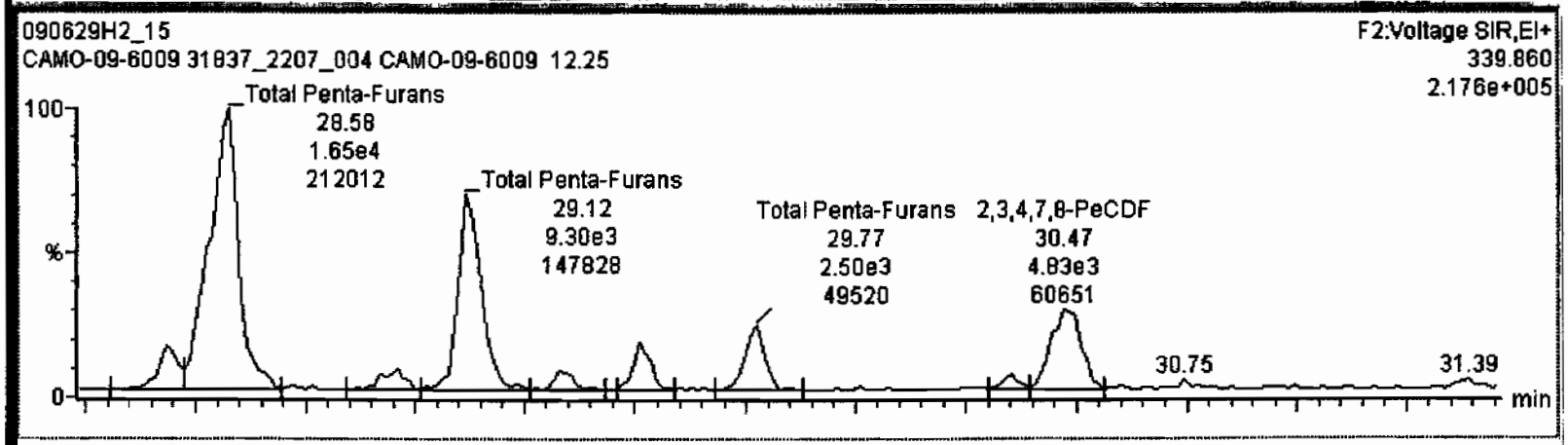

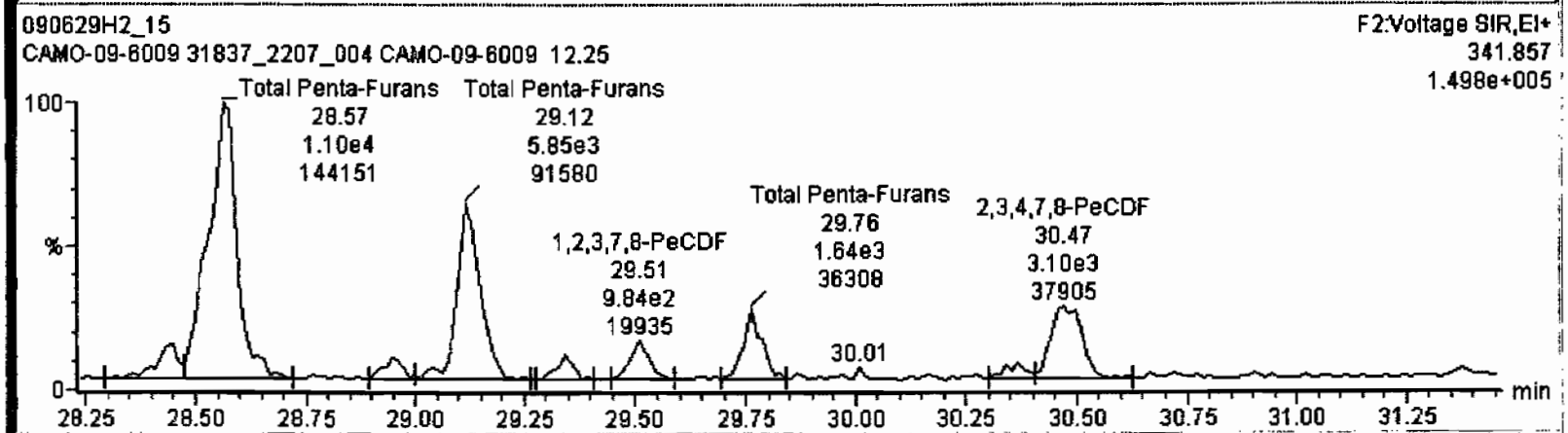

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Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:19:50 Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

1,2,3,4,7,8-HxCDF

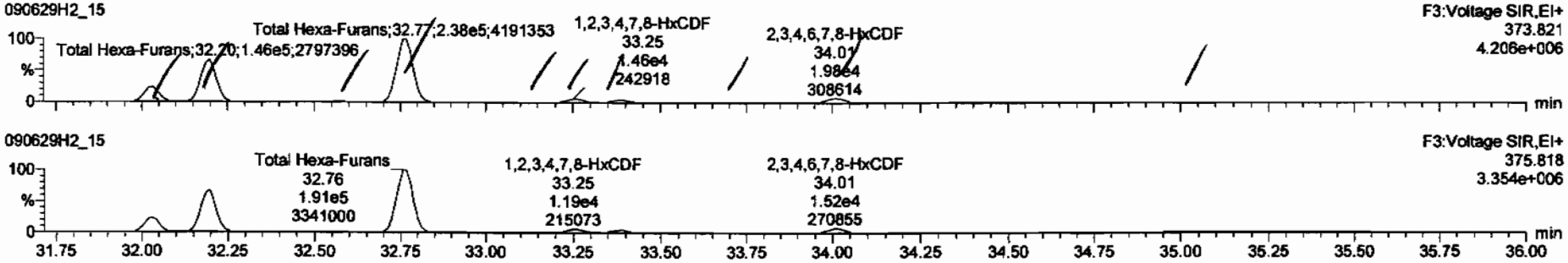

13C-1,2,3,4,7,8-HxCDF

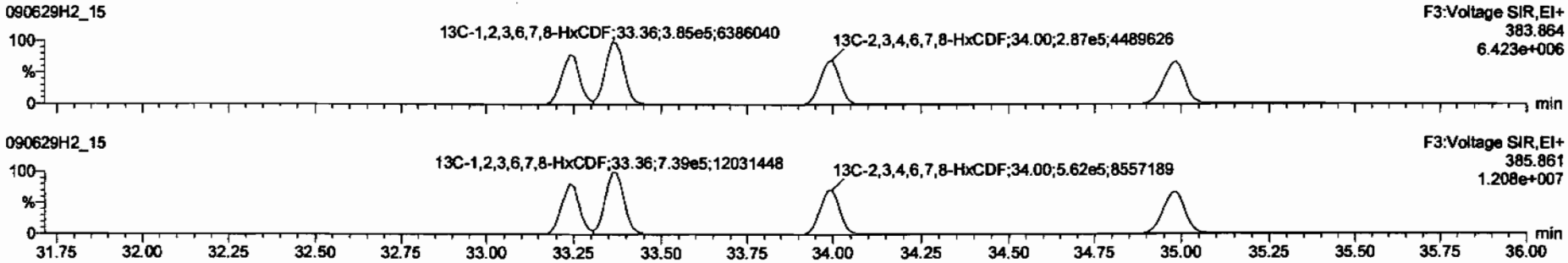

DPE3

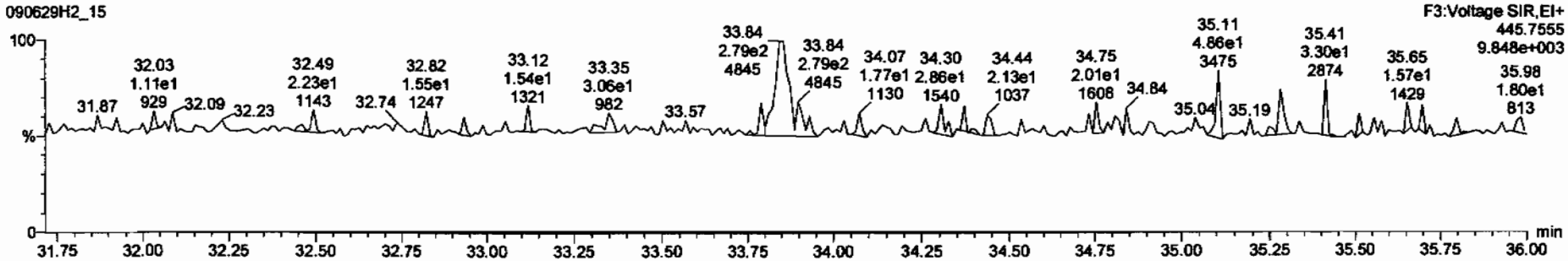

TargetLynx - 090629f2-15.qld * - [Chromatogram]

090629H2_15 - 31837_2207_004 CAMO-09-6009 12.25 - CAMO-09-6009

1,2,3,6,7,8-HxCDF	33.38	1.079e4	8.941e3	1.21	NO	2.8631	2.8631
Total Hexa-Furans	33.68	1.629e3	1.386e3	1.32	NO	0.53545	0.53545
2,3,4,6,7,8-HxCDF	34.01	1.975e4	1.520e4	1.30	NO	6.4115	6.4115
1,2,3,7,8,9-HxCDF	35.04	4.055e3	2.979e3	1.36	NO	1.2432	1.2432

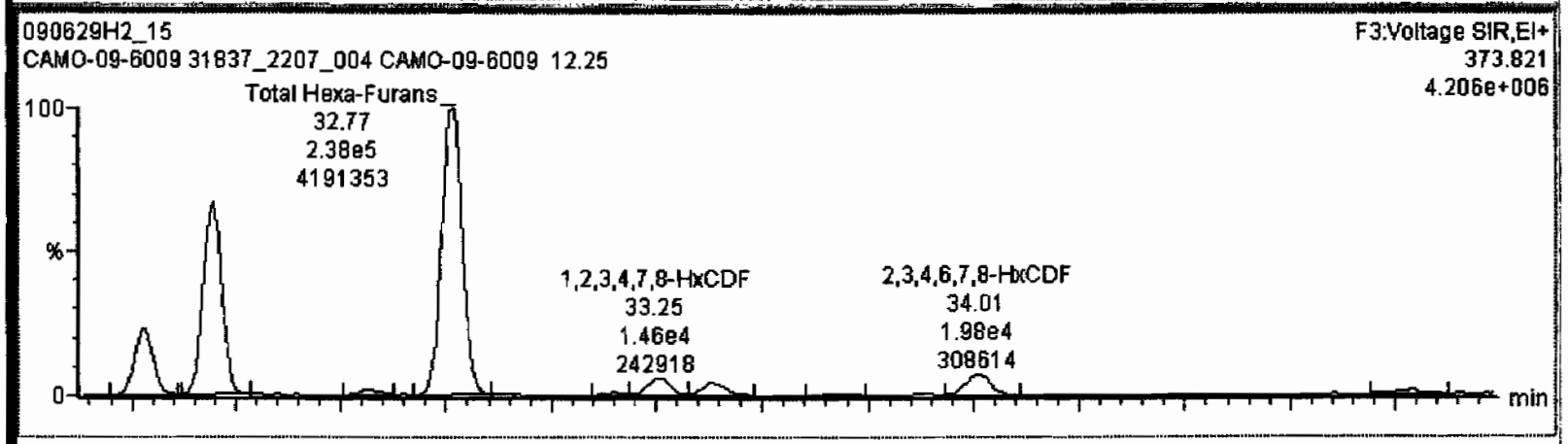

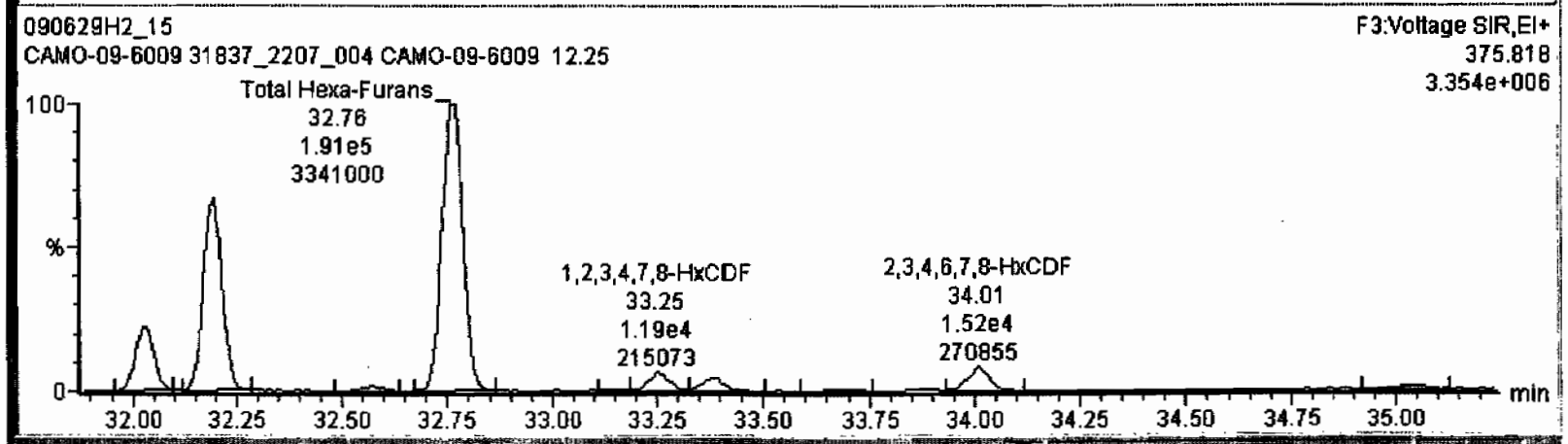

TargetLynx - 090629f2-15.qld * - [Chromatogram]

090629H2_15 - 31837_2207_004 CAMO-09-6009 12.25 - CAMO-09-6009

1,2,3,6,7,8-HxCDF	33.38	1.079e4	8.941e3	1.21	NO	2.8631	2.8631
Total Hexa-Furans	33.68	1.829e3	1.386e3	1.32	NO	0.53545	0.53545
2,3,4,6,7,8-HxCDF	34.01	1.975e4	1.520e4	1.30	NO	6.4115	6.4115
1,2,3,7,8,9-HxCDF	35.04	4.055e3	2.979e3	1.36	NO	1.2432	1.2432

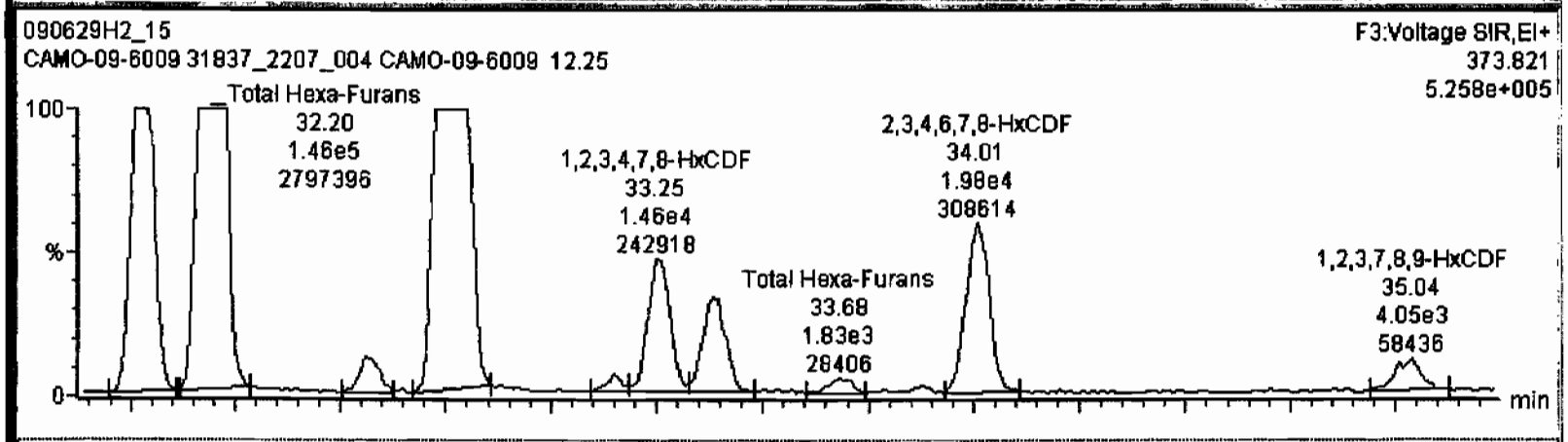

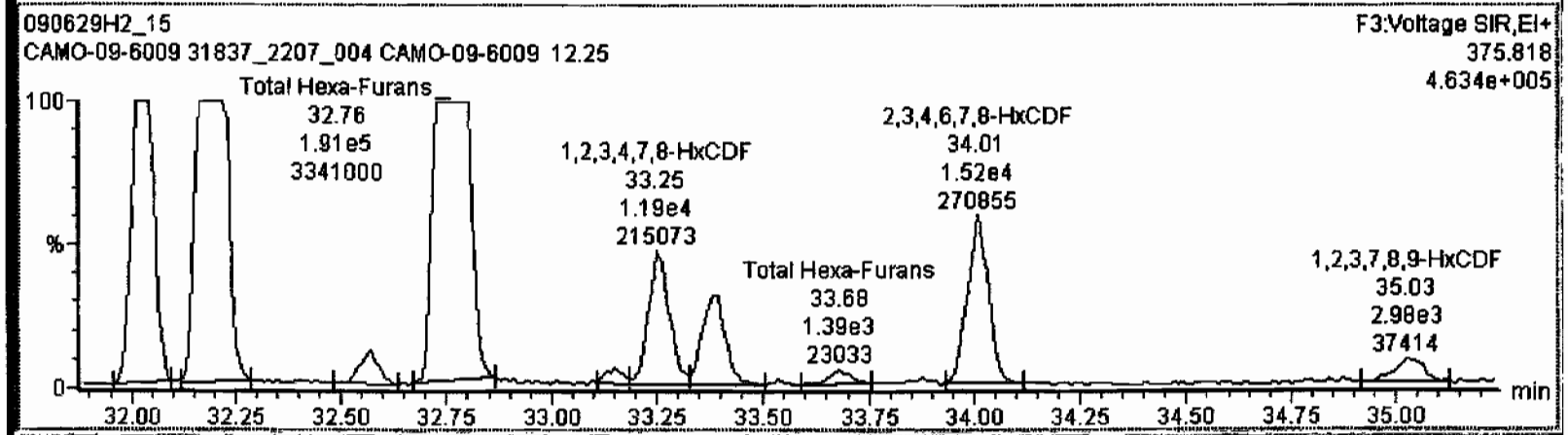

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:19:50 Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

1,2,3,4,6,7,8-HpCDF

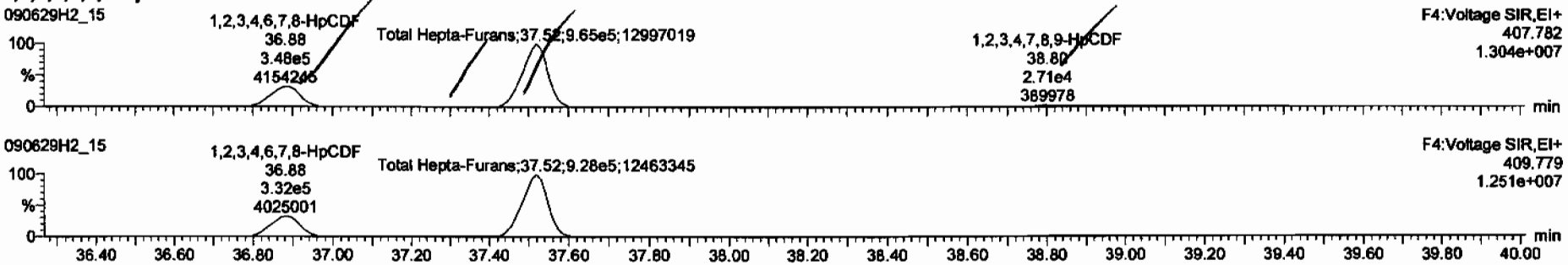

13C-1,2,3,4,6,7,8-HpCDF

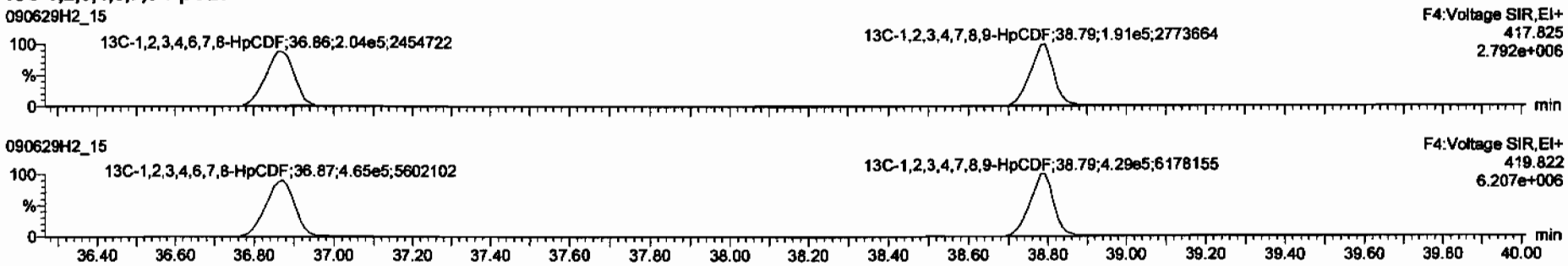

DPE4

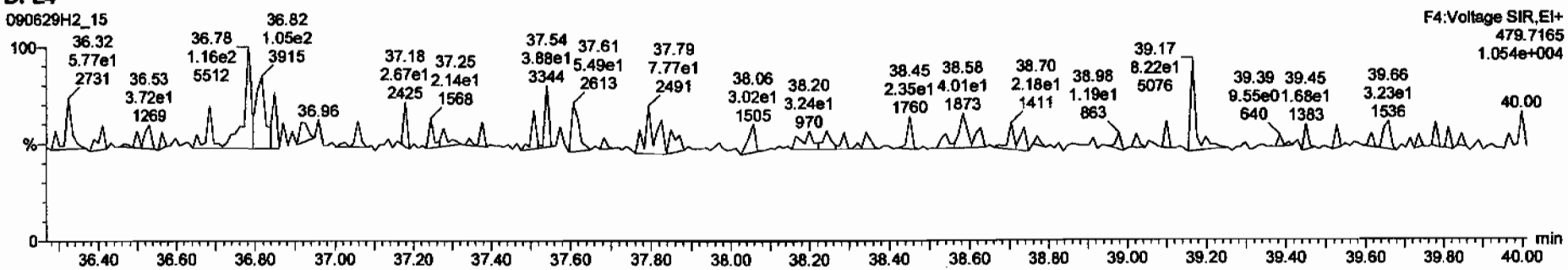

TargetLynx - 090629f2-15.qld * - [Chromatogram]

090629H2_15 - 31837_2207_004 CAMO-09-6009 12.25 - CAMO-09-6009

1,2,3,4,6,7,8-HpCDF	36.88	3.478e5	3.321e5	1.05	NO	120.09	120.09
Total Hepta-Furans	37.32	6.008e3	5.981e3	1.00	NO	2.1985	2.1985
Total Hepta-Furans	37.52	9.712e5	9.348e5	1.04	NO	349.50	349.50
1,2,3,4,7,8,9-HpCDF	38.80	2.708e4	2.506e4	1.08	NO	11.339	11.339

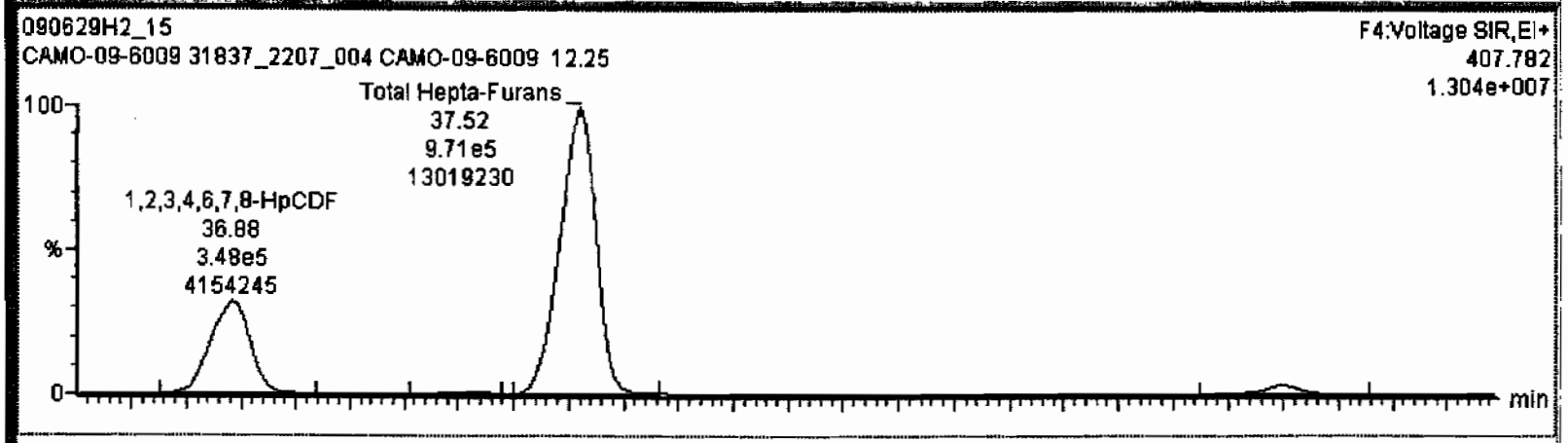

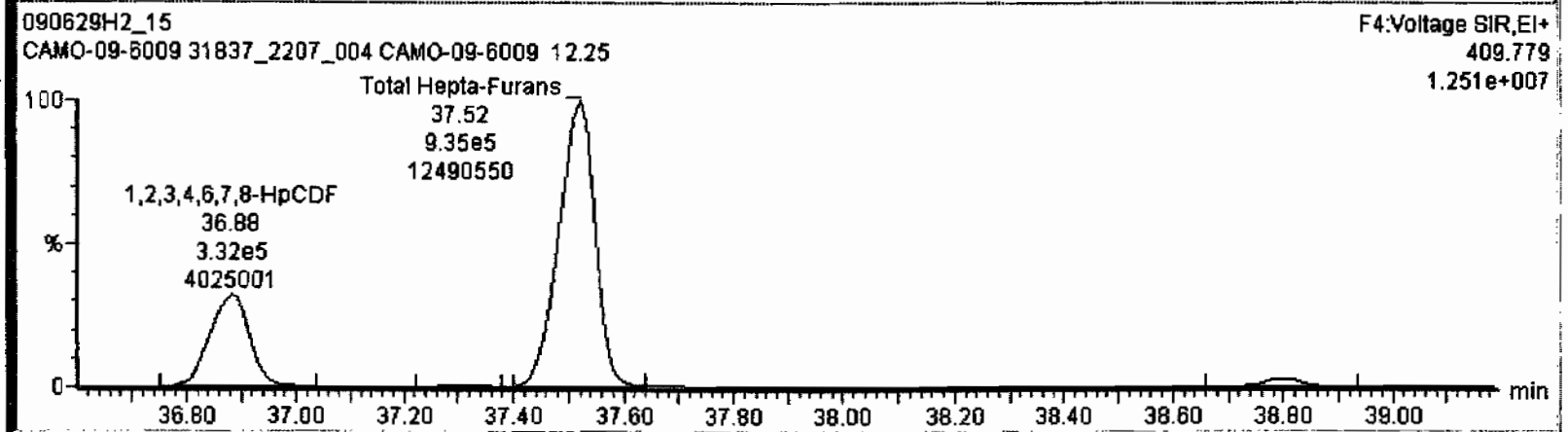

Target1.ynx - 090629f2-15.qld * - [Chromatogram]

090629H2_15 - 31837_2207_004 CAMO-09-6009 12.25 - CAMO-09-6009

1,2,3,4,6,7,8-HpCDF	36.88	3.478e5	3.321e5	1.05	NO	120.09	120.09
Total Hepta-Furans	37.32	6.008e3	5.981e3	1.00	NO	2.1985	2.1985
Total Hepta-Furans	37.52	9.712e5	9.348e5	1.04	NO	349.50	349.50
1,2,3,4,7,8,9-HpCDF	38.80	2.708e4	2.506e4	1.08	NO	11.339	11.339

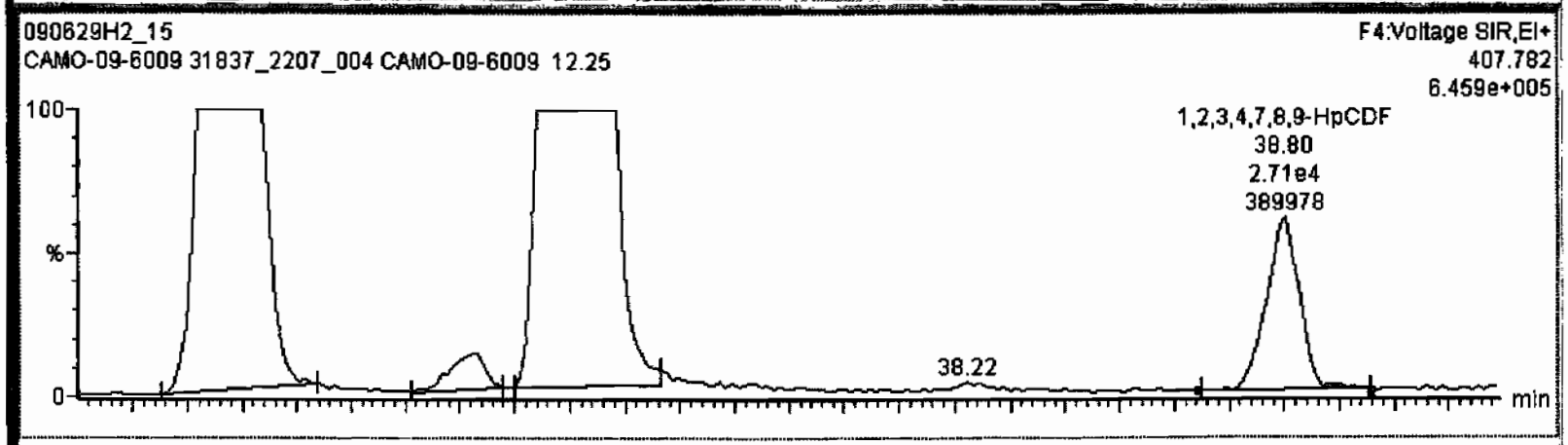

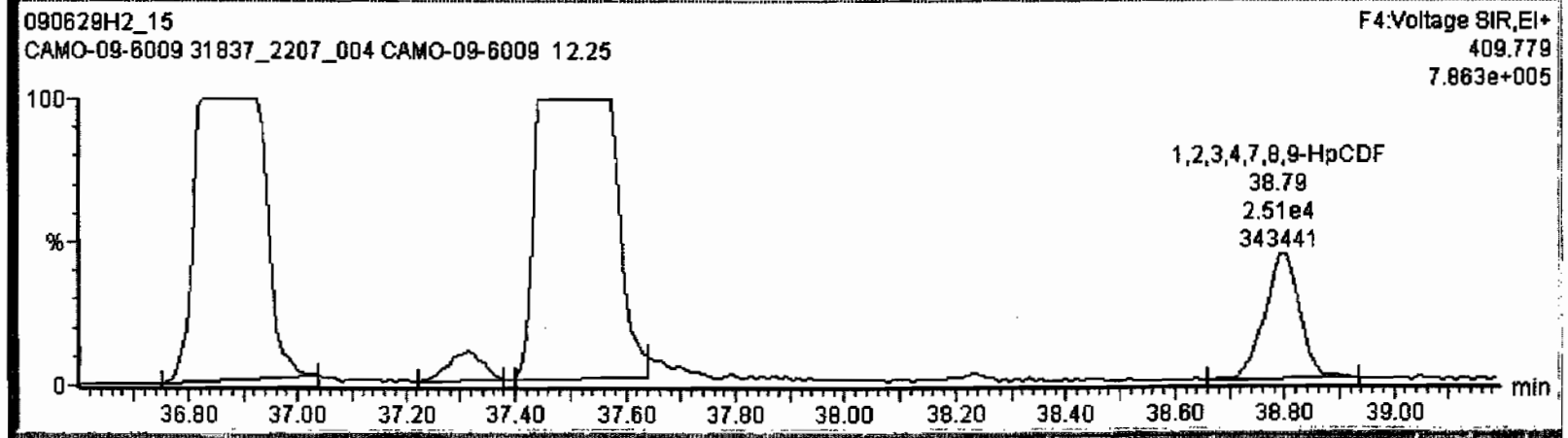

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:19:50 Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

OCDF

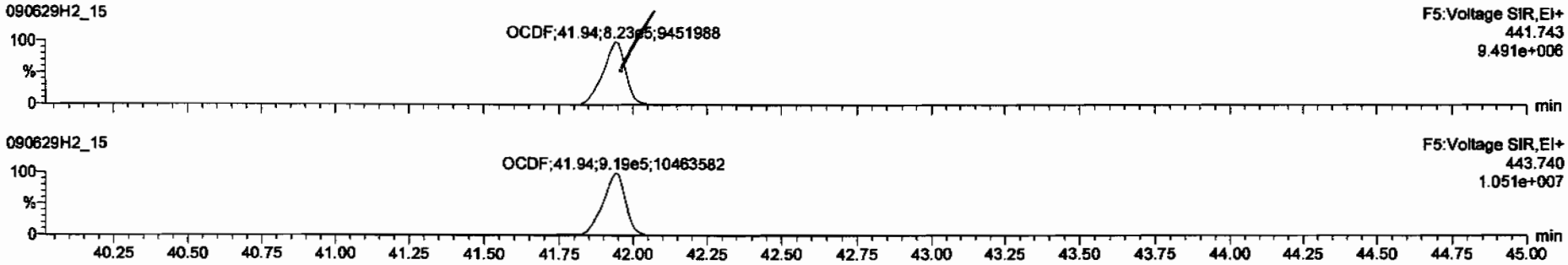

13C-OCDF

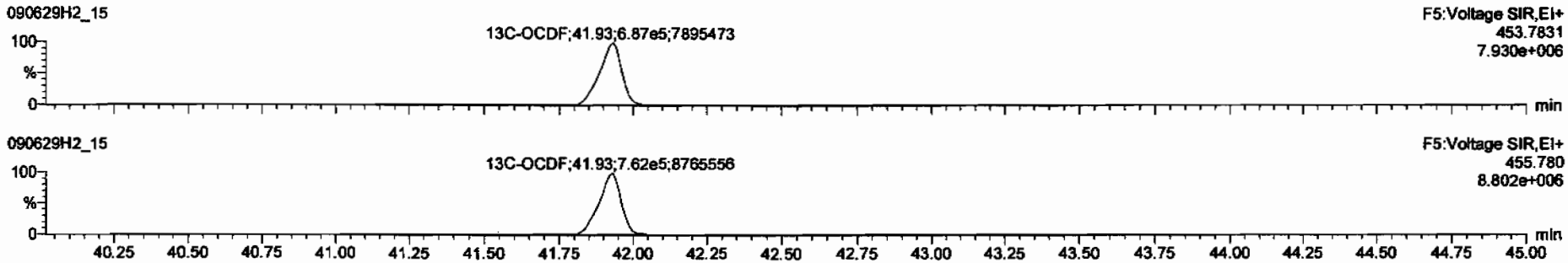

DPE5

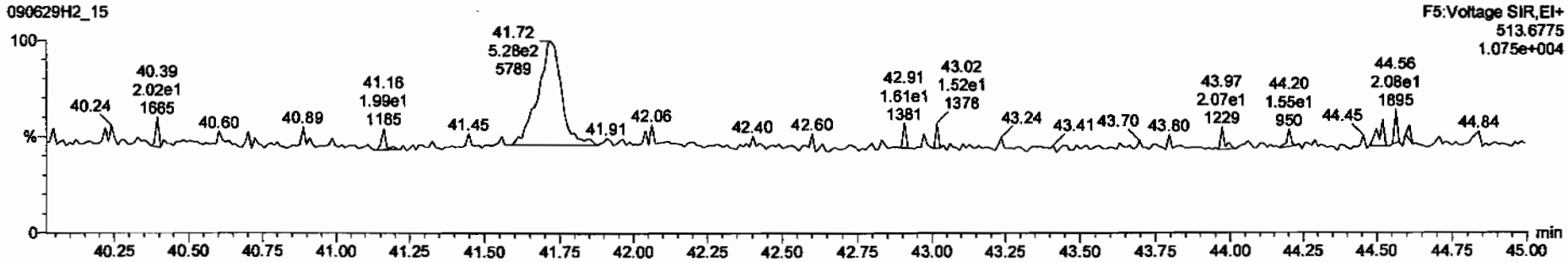

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-15.qld

Last Altered: Tuesday, June 30, 2009 08:19:30 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:19:50 Pacific Daylight Time

Name: 090629H2_15, Date: 30-Jun-2009, Time: 01:36:02, ID: 31837_2207_004 CAMO-09-6009 12.25, Description: CAMO-09-6009

PFK1

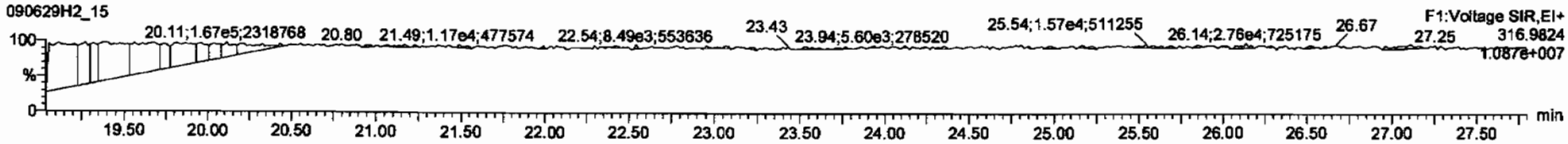

PFK2

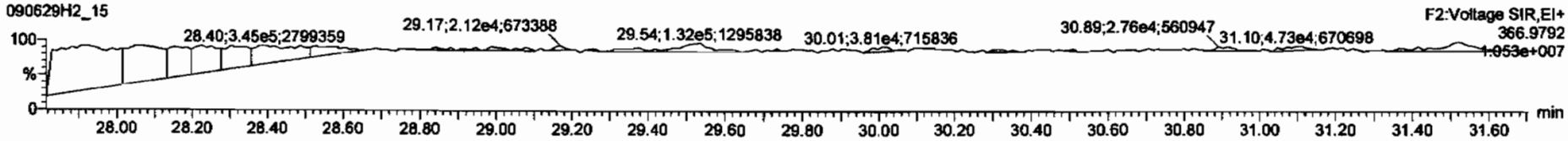

PFK3

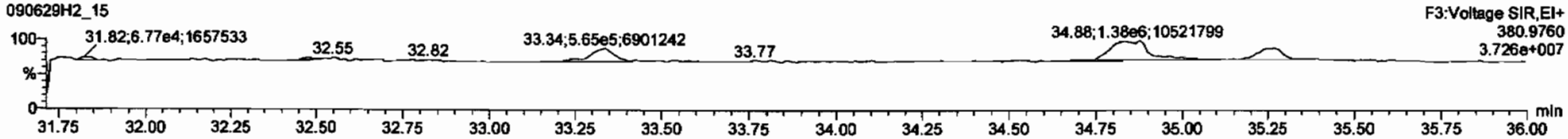

PFK4

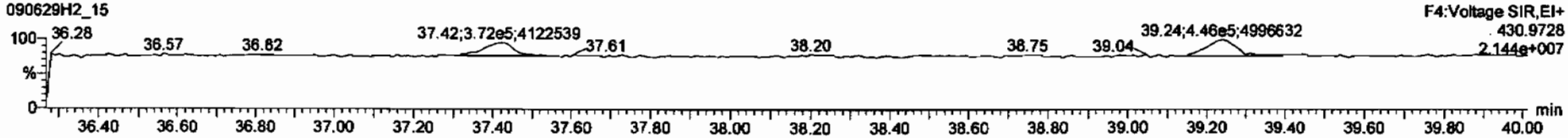

PFK5

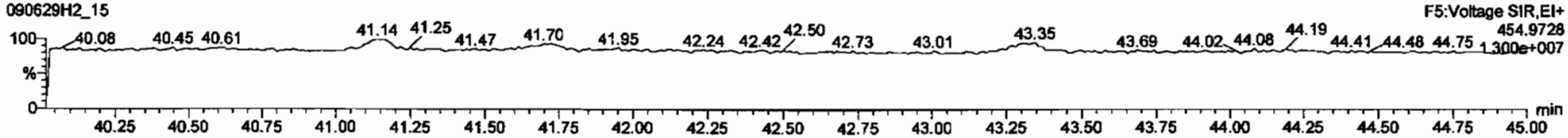

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\090701h1\090701h1-4.qld

Last Altered: Wednesday, July 01, 2009 3:28:21 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:29:51 PM Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

7 OCDD	1.90e6	0.88	NO	1.18	10.030	41.69	1.000	11203			7.12	11203
23 13C-OCDD	5.75e4	0.87	NO	0.503	10.030	41.68	1.205	467.91	117		3.52	
37 13C-1,2,3,7,8,9-HxCDD	4.88e4	1.30	NO	1.00	10.030	34.58	0.000	199.40	100		2.77	

7/1/09
7/2/09

Dataset: C:\MassLynx\Default.pro\Results\090701h1\090701h1-4.qld

Last Altered: Wednesday, July 01, 2009 3:28:21 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

2,3,7,8-TCDD

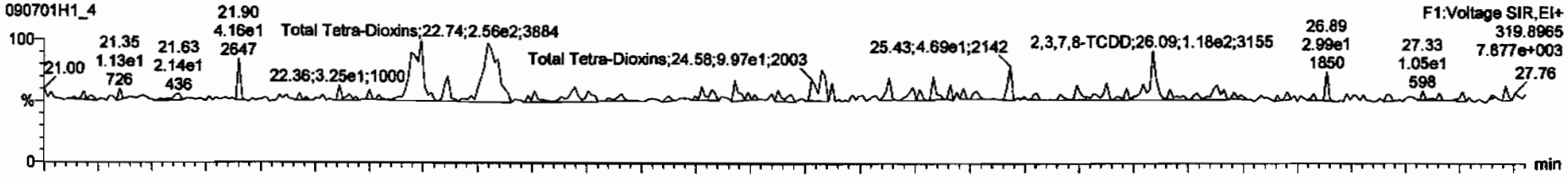

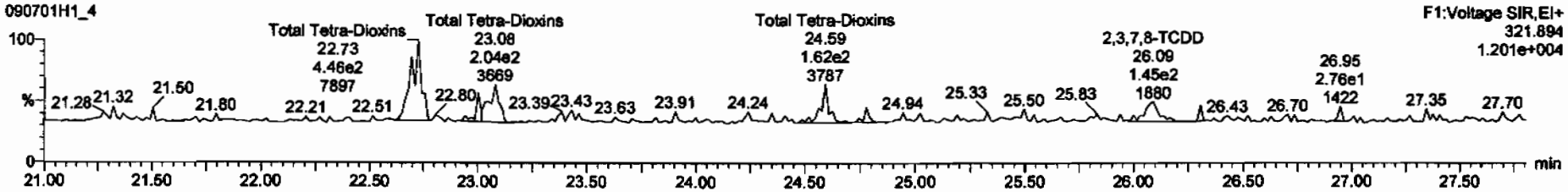

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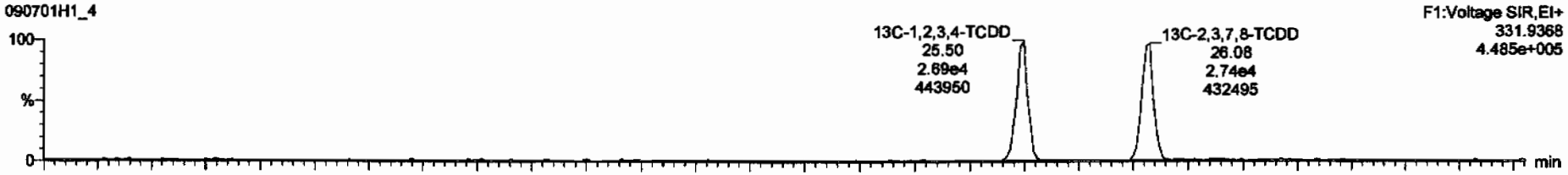

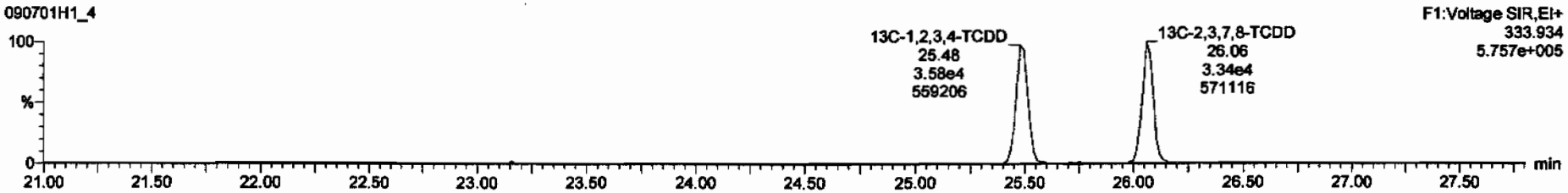

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Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

37Cl-2,3,7,8-TCDD

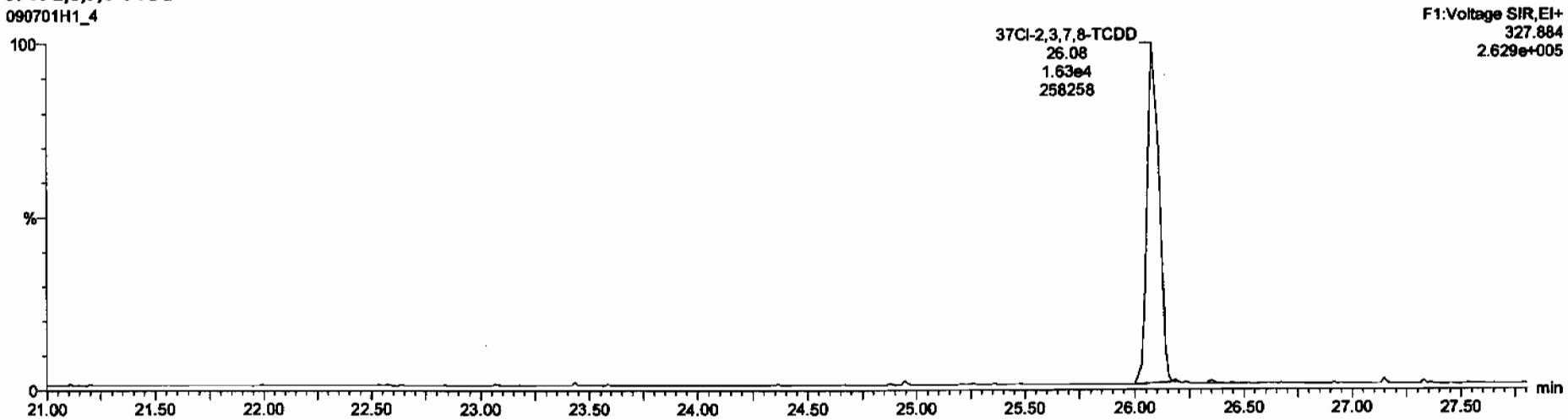

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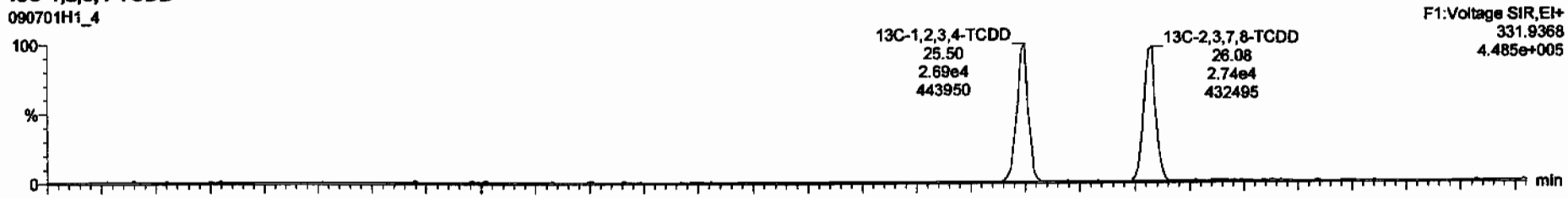

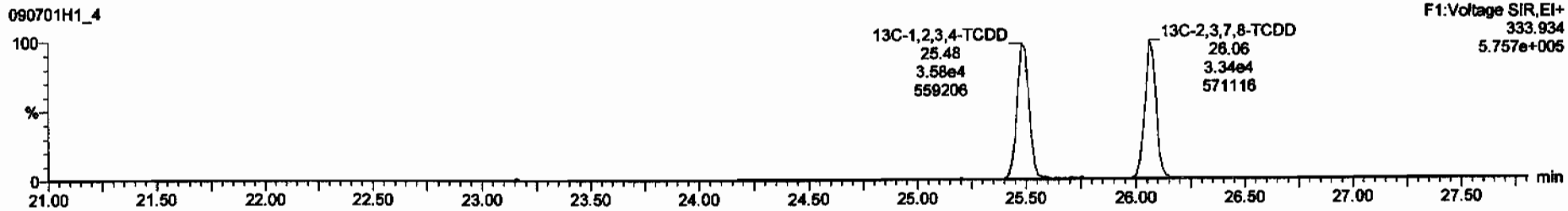

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Last Altered: Wednesday, July 01, 2009 3:28:21 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

1,2,3,7,8-PeCDD

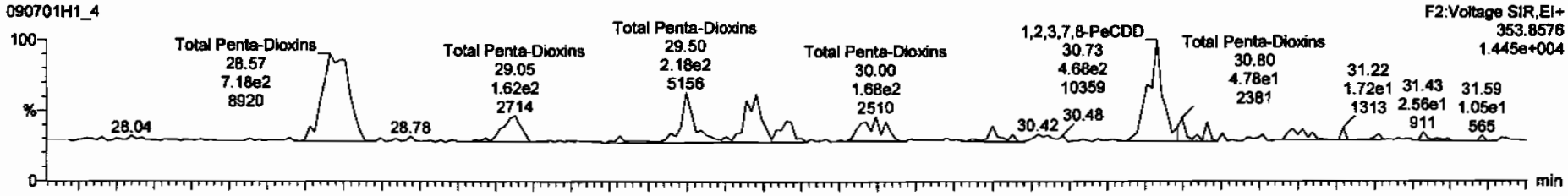

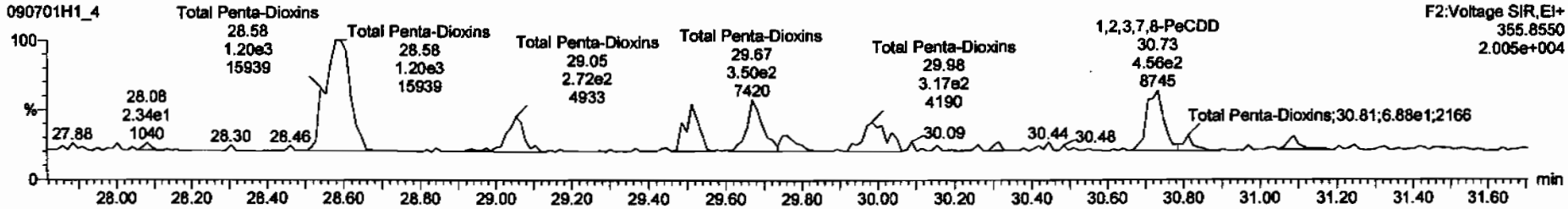

13C-1,2,3,7,8-PeCDD

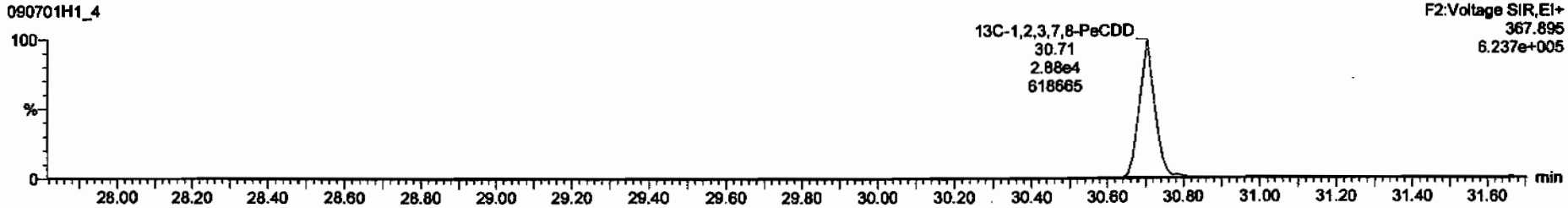

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Last Altered: Wednesday, July 01, 2009 3:28:21 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

1,2,3,4,7,8-HxCDD

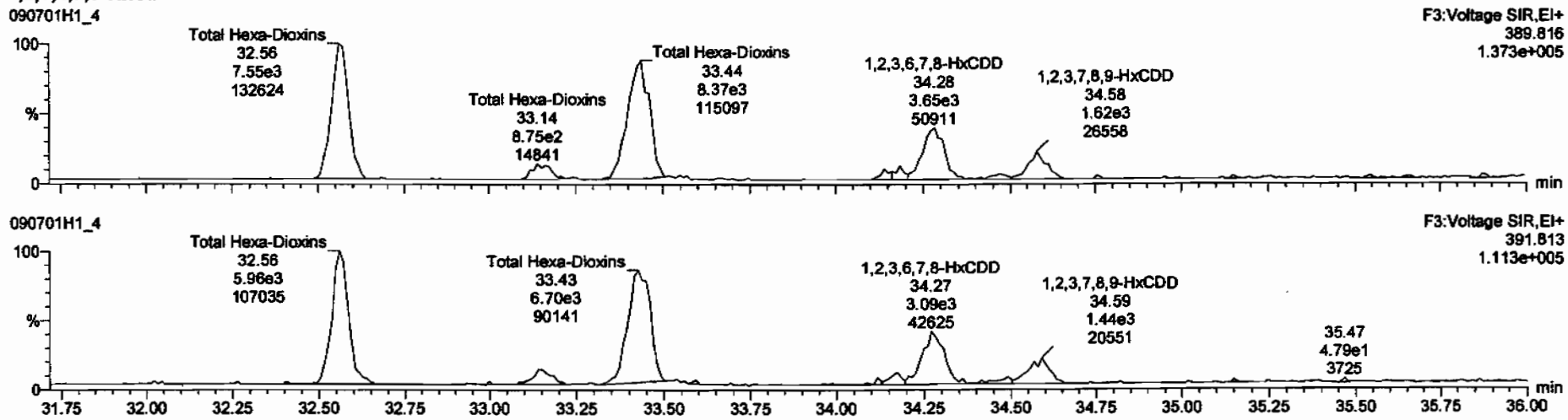

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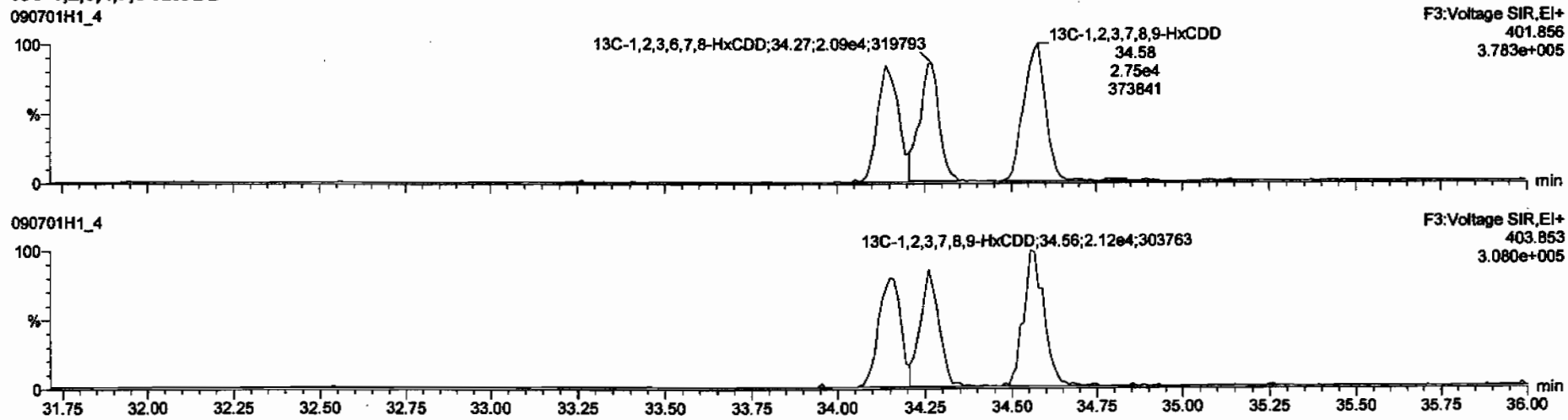

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Last Altered: Wednesday, July 01, 2009 3:28:21 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

1,2,3,4,6,7,8-HpCDD

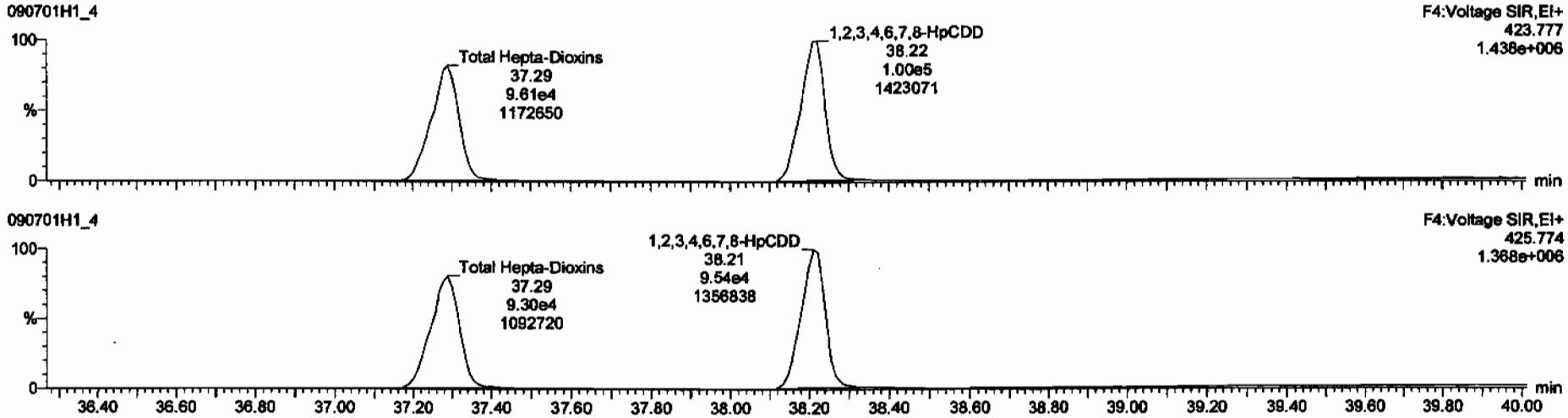

13C-1,2,3,4,6,7,8-HpCDD

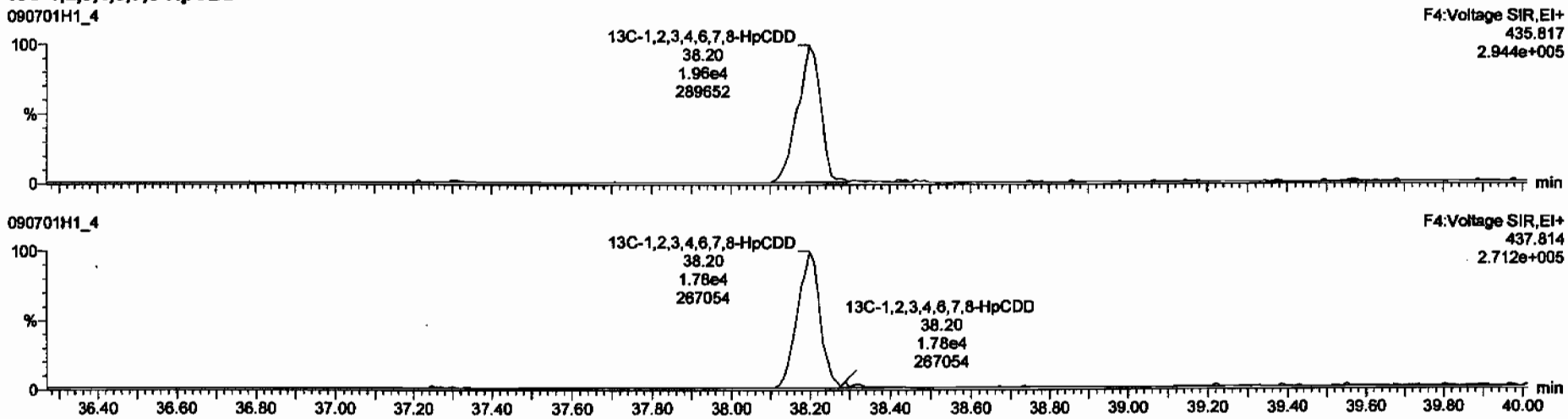

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Last Altered: Wednesday, July 01, 2009 3:28:21 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

OCDD

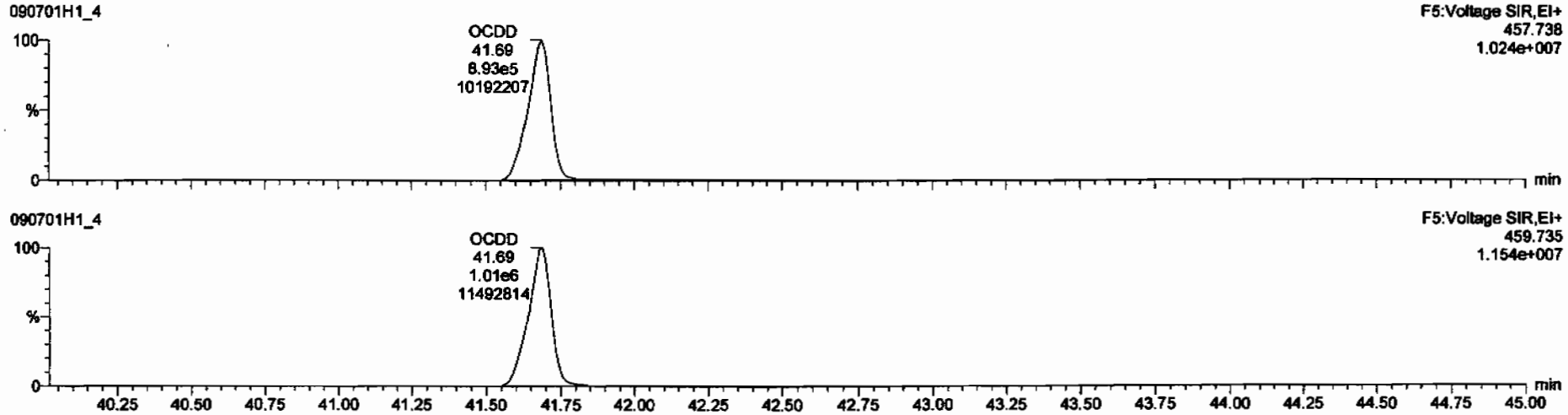

13C-OCDD

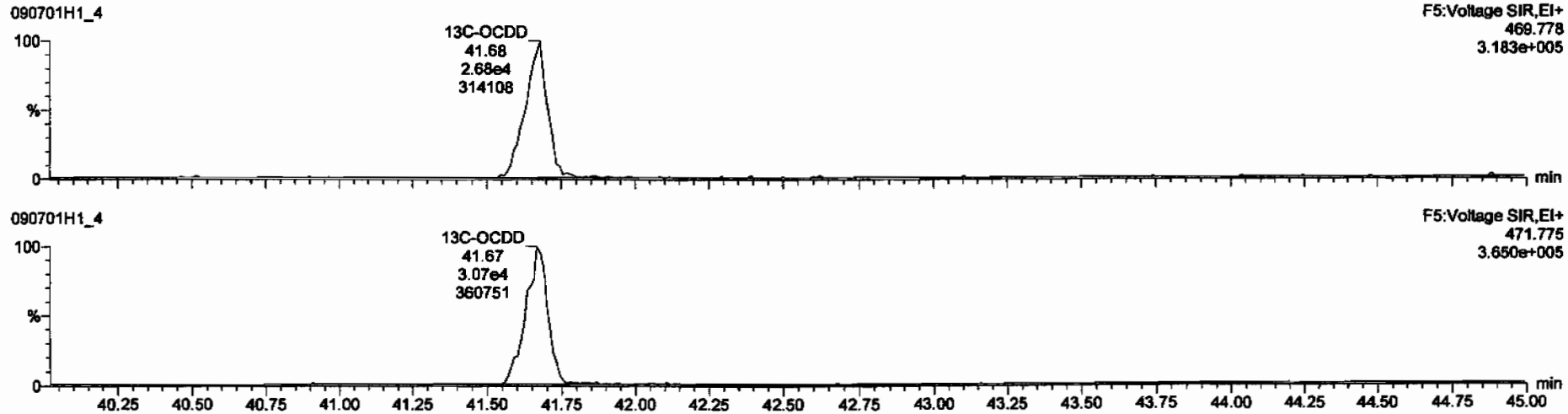

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Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

2,3,7,8-TCDF

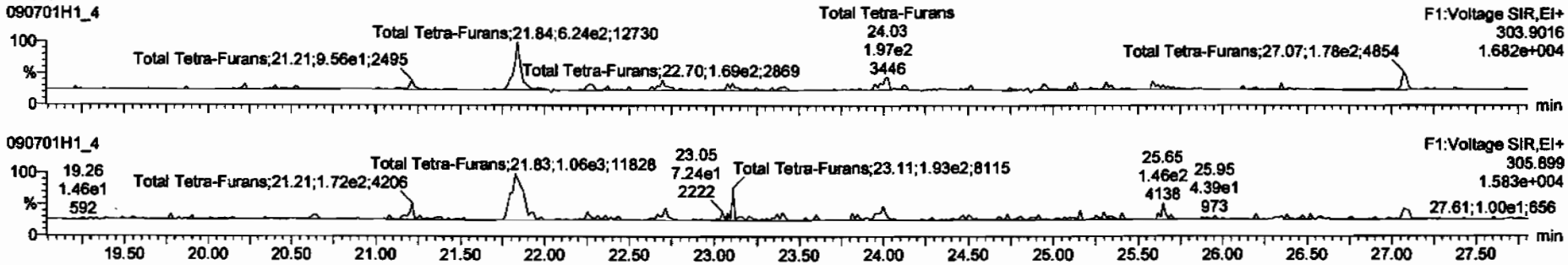

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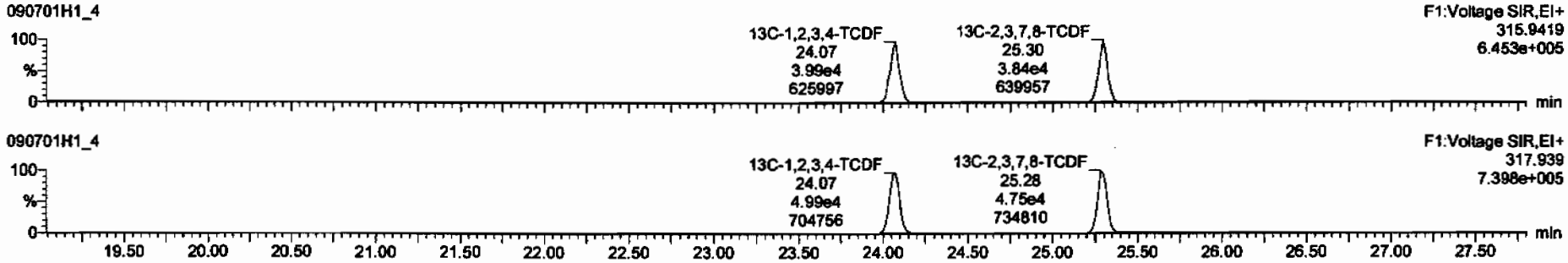

DPE1

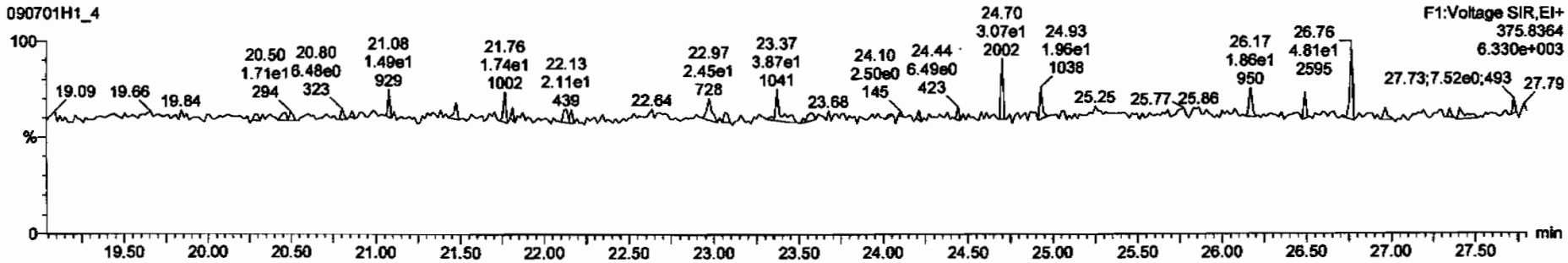

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Last Altered: Wednesday, July 01, 2009 3:28:21 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

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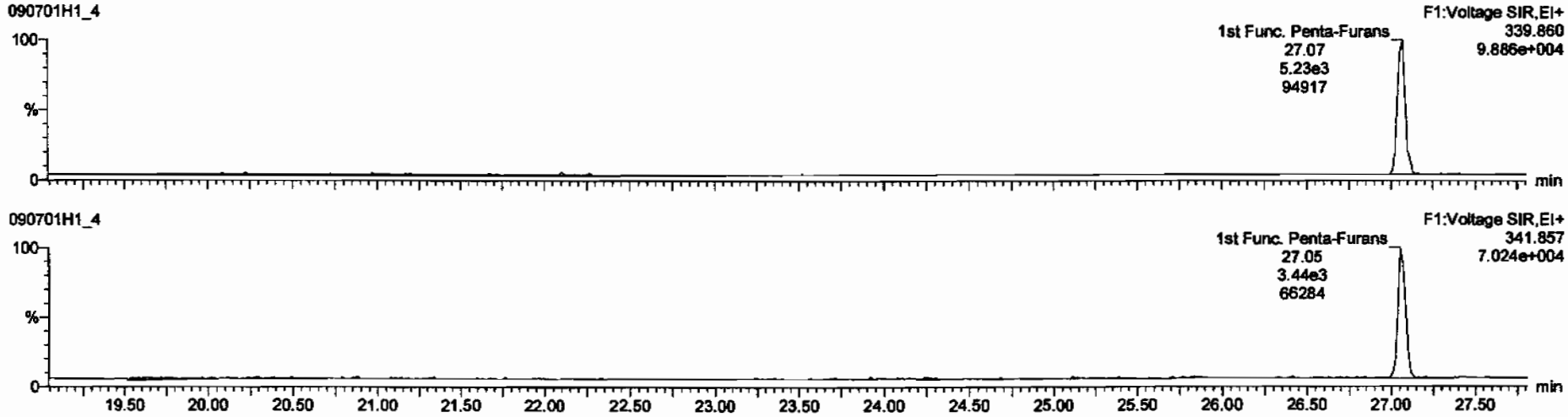

DPE6

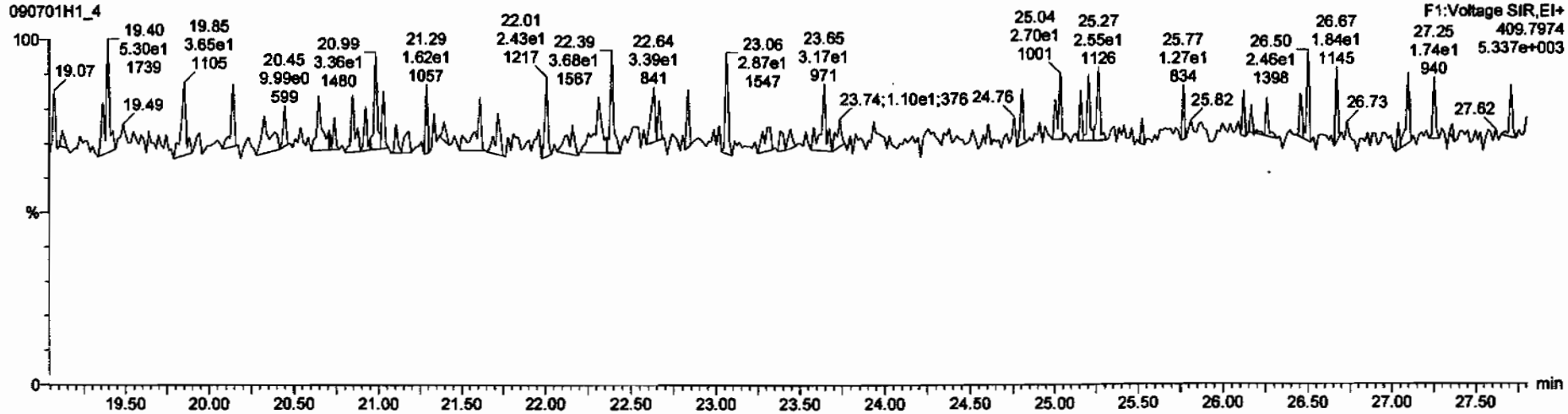

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Last Altered: Wednesday, July 01, 2009 3:28:21 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

1,2,3,7,8-PeCDF

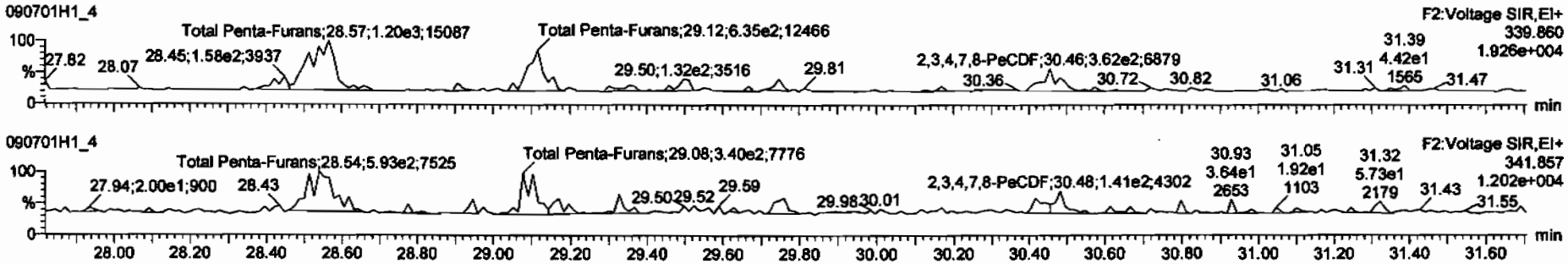

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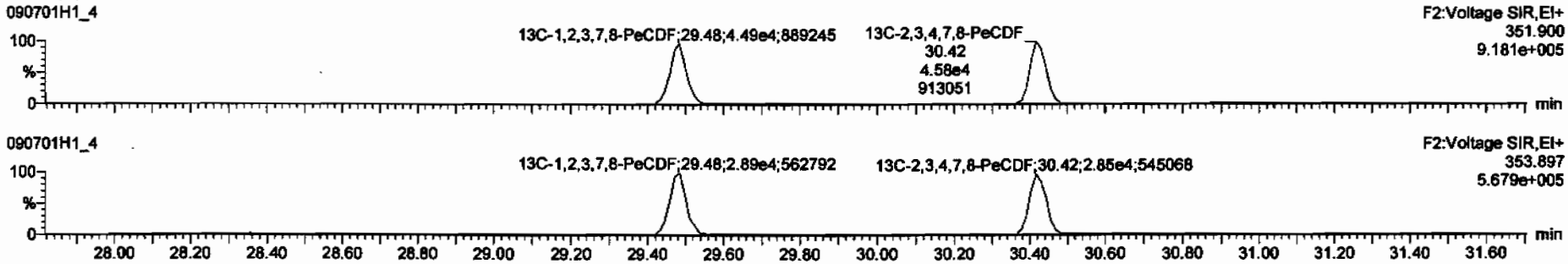

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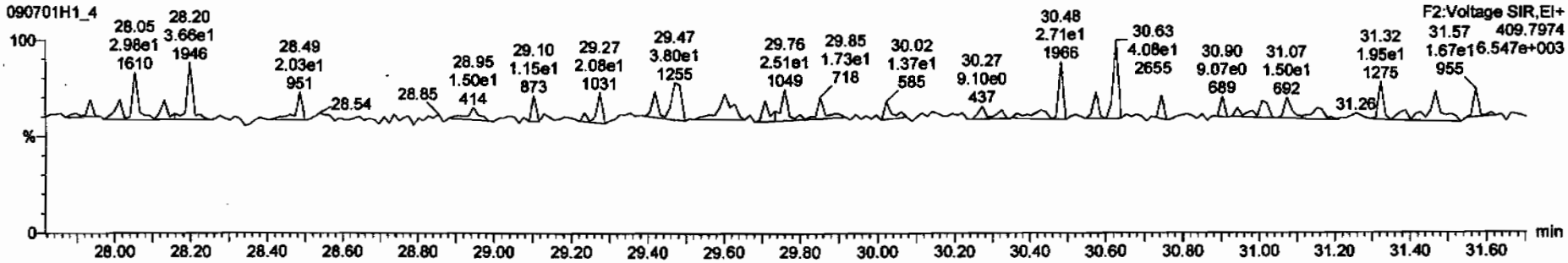

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Last Altered: Wednesday, July 01, 2009 3:28:21 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

1,2,3,4,7,8-HxCDF

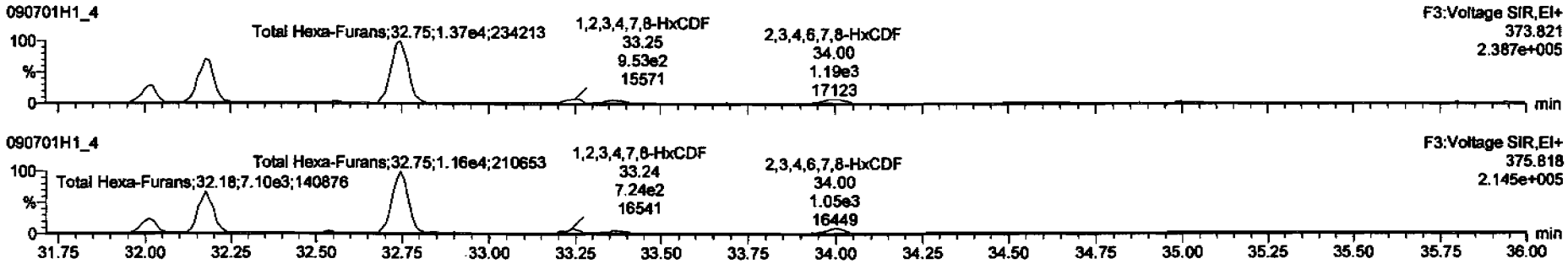

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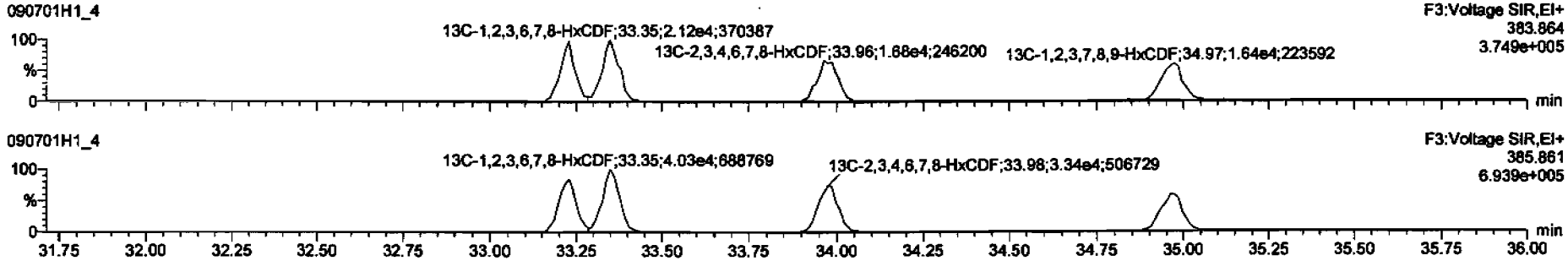

DPE3

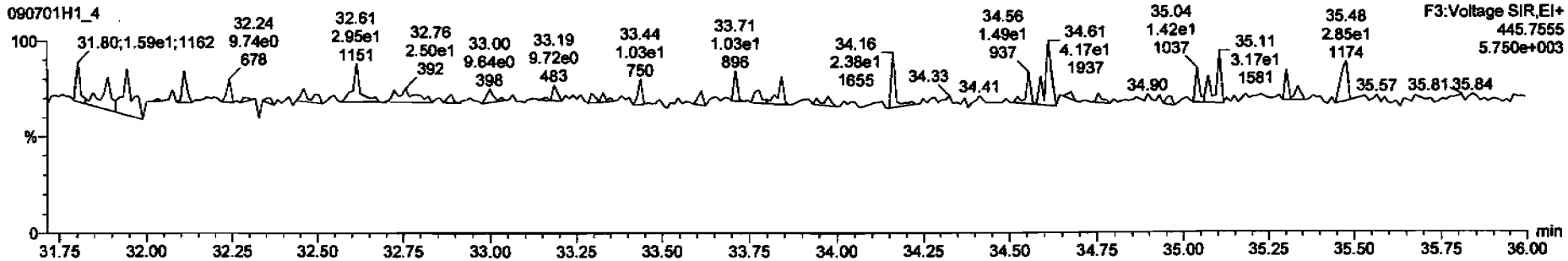

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Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

1,2,3,4,6,7,8-HpCDF

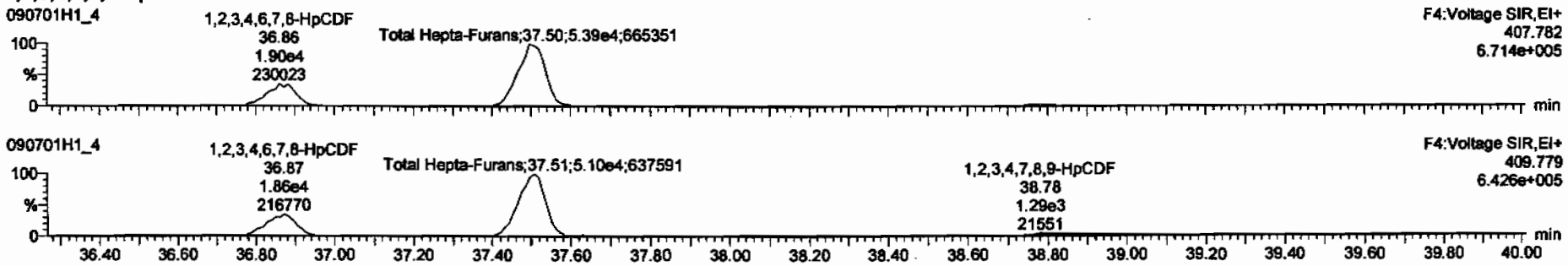

13C-1,2,3,4,6,7,8-HpCDF

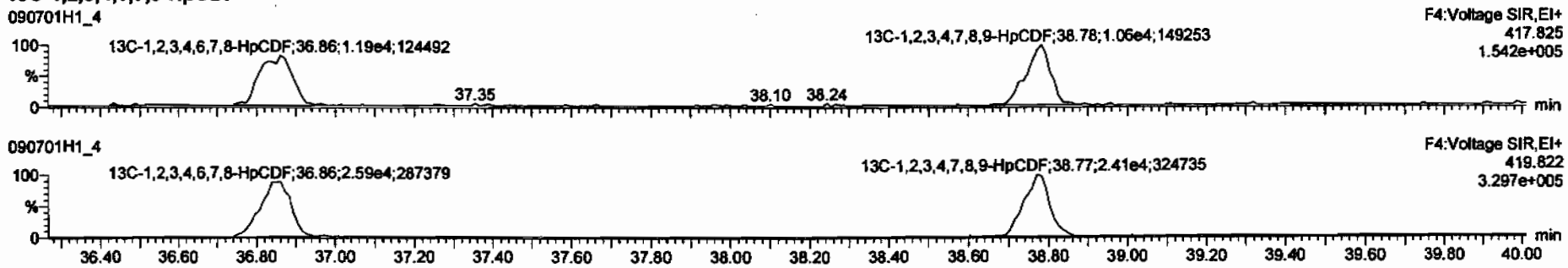

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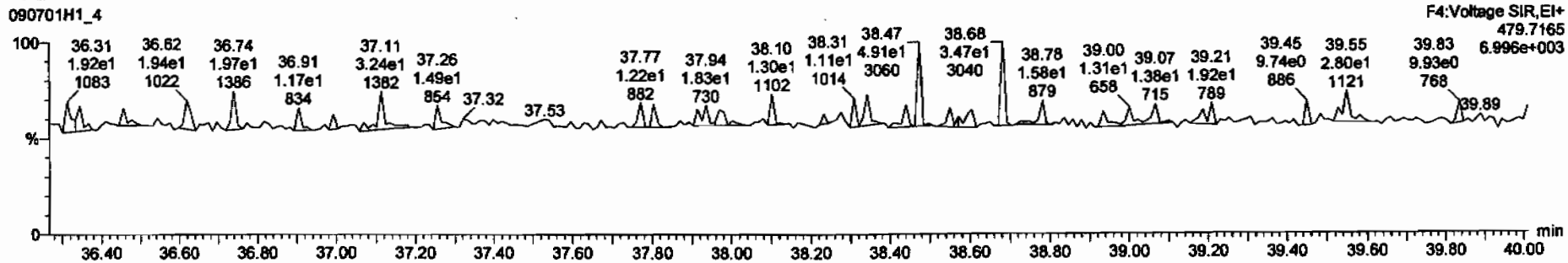

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Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

OCDF

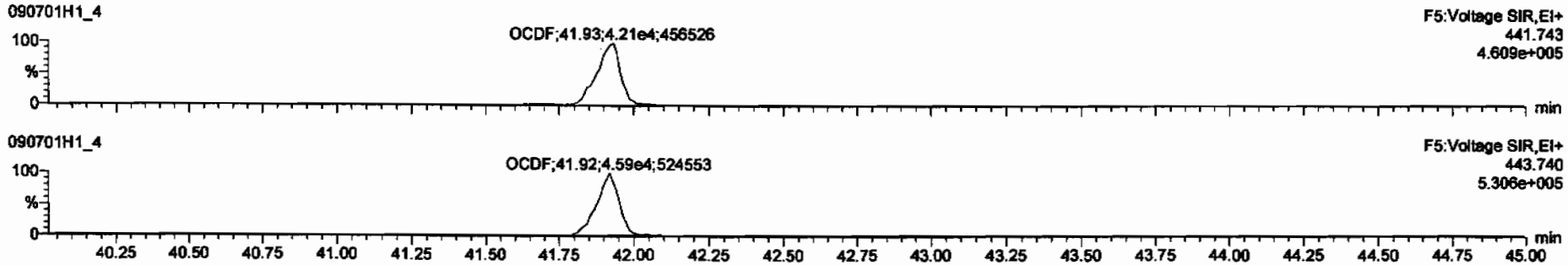

13C-OCDF

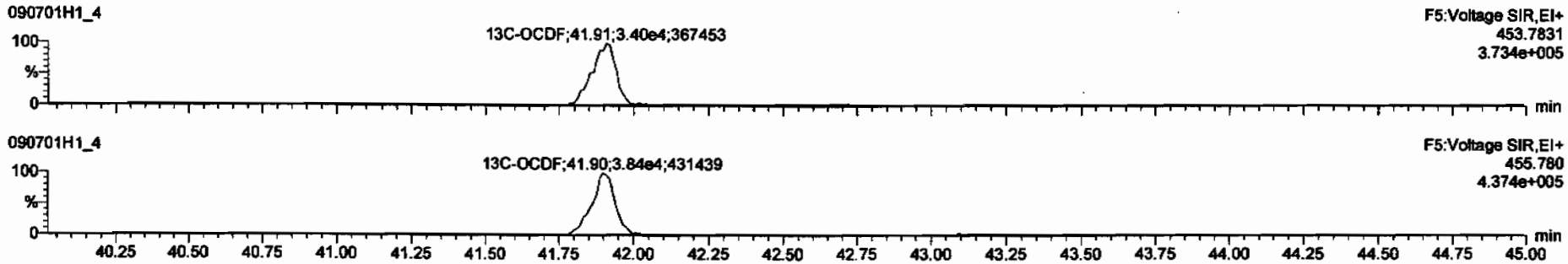

DPE5

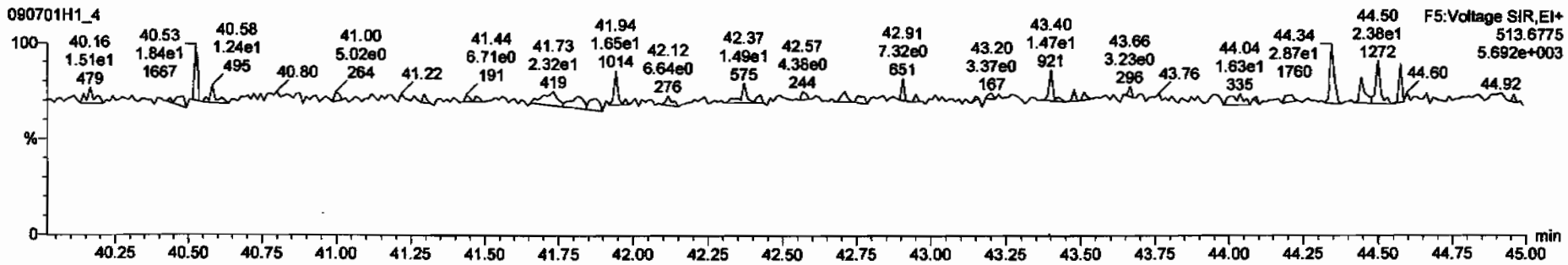

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Printed: Wednesday, July 01, 2009 3:30:03 PM Pacific Daylight Time

Name: 090701H1_4, Date: 01-Jul-2009, Time: 14:06:54, ID: 31837_2207_004 CAMO-09-6009 12.25 1:10, Description: CAMO-09-6009

PFK1

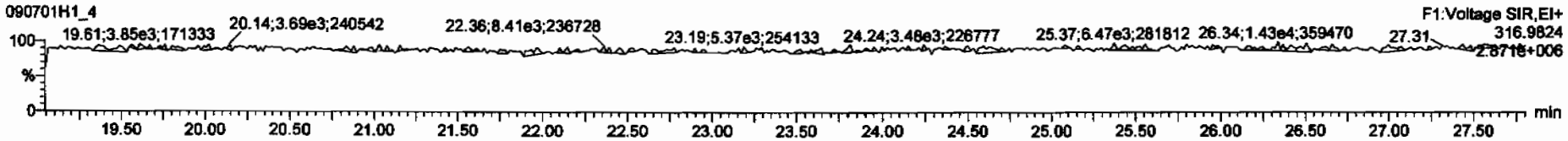

PFK2

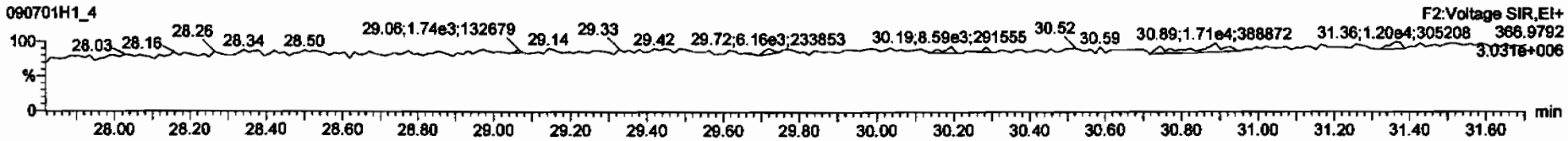

PFK3

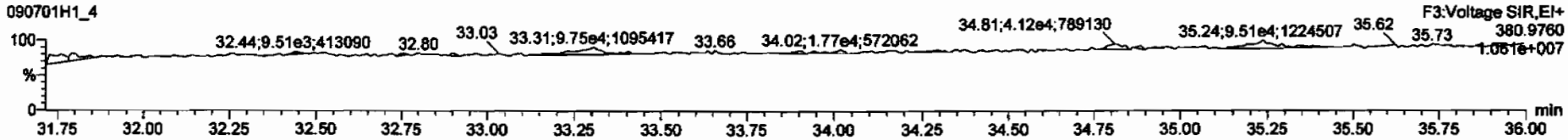

PFK4

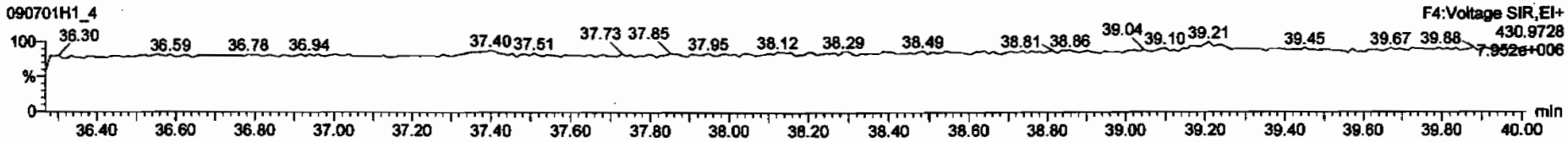

PFK5

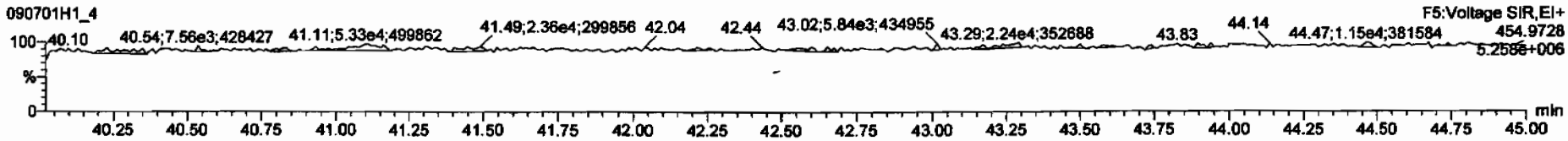

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-3.qld

Last Altered: Tuesday, June 30, 2009 2:07:31 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 2:08:08 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

1	2,3,7,8-TCDD			NO	1.08	10.050					0.0547	
2	1,2,3,7,8-PeCDD			NO	1.03	10.050					0.0711	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.050					0.185	
4	1,2,3,6,7,8-HxCDD	1.41e3	1.39	NO	1.13	10.050	34.30	1.001	0.43090		0.183	~~0.43090~~
5	1,2,3,7,8,9-HxCDD	1.41e3	1.06	NO	1.10	10.050	34.60	1.010	0.42441		0.177	0.42441
6	1,2,3,4,6,7,8-HpCDD	2.22e4	1.00	NO	1.06	10.050	38.22	1.000	7.5358		0.189	7.5358
7	OCDD	1.31e5	0.89	NO	1.18	10.050	41.70	1.001	52.197		0.260	52.197
8	2,3,7,8-TCDF	3.20e3	0.81	NO	1.09	10.050	25.31	1.001	0.49000		0.0693	0.49000
9	1,2,3,7,8-PeCDF	8.14e2	1.55	NO	1.16	10.050	29.51	1.001	0.12109		0.0665	0.12109
10	2,3,4,7,8-PeCDF	1.56e3	1.65	NO	1.12	10.050	30.44	1.000	0.26578		0.0709	0.26578
11	1,2,3,4,7,8-HxCDF	1.24e3	1.14	NO	1.41	10.050	33.24	1.000	0.22393		0.0592	0.22393
12	1,2,3,6,7,8-HxCDF	8.48e2	1.42	NO	1.22	10.050	33.37	1.000	0.14876		0.0601	0.14876
13	2,3,4,6,7,8-HxCDF	7.52e2	1.24	NO	1.28	10.050	34.01	1.001	0.15651		0.0730	0.15651
14	1,2,3,7,8,9-HxCDF	3.73e2	1.40	NO	1.26	10.050	35.03	1.002	0.086140		0.0928	0.086140
15	1,2,3,4,6,7,8-HpCDF	5.53e3	0.95	NO	1.69	10.050	36.88	1.001	1.1453		0.169	~~1.1453~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.050					0.183	
17	OCDF	7.48e3	0.89	NO	1.10	10.050	41.93	1.001	2.3486		0.105	~~2.3486~~
18	13C-2,3,7,8-TCDD	8.84e5	0.78	NO	1.01	10.050	26.06	1.023	181.53	91.2	0.300	
19	13C-1,2,3,7,8-PeCDD	6.70e5	0.63	NO	0.827	10.050	30.72	1.206	168.83	84.8	0.283	
20	13C-1,2,3,4,7,8-HxCDD	6.17e5	1.26	NO	0.916	10.050	34.15	0.988	177.65	89.3	0.464	
21	13C-1,2,3,6,7,8-HxCDD	5.80e5	1.26	NO	0.921	10.050	34.27	0.991	166.10	83.5	0.461	
22	13C-1,2,3,4,6,7,8-HpCDD	5.52e5	1.06	NO	0.708	10.050	38.21	1.105	205.42	103	0.976	
23	13C-OCDD	8.45e5	0.88	NO	0.503	10.050	41.68	1.205	443.63	111	0.525	
24	13C-2,3,7,8-TCDF	1.20e6	0.78	NO	0.977	10.050	25.30	0.993	184.15	92.5	0.208	
25	13C-1,2,3,7,8-PeCDF	1.15e6	1.58	NO	0.896	10.050	29.49	1.157	193.80	97.4	0.426	
26	13C-2,3,4,7,8-PeCDF	1.05e6	1.57	NO	0.900	10.050	30.43	1.194	175.28	88.1	0.425	
27	13C-1,2,3,4,7,8-HxCDF	7.84e5	0.51	NO	1.17	10.050	33.23	0.961	176.86	88.9	0.568	
28	13C-1,2,3,6,7,8-HxCDF	9.28e5	0.52	NO	1.52	10.050	33.36	0.965	161.16	81.0	0.437	
29	13C-2,3,4,6,7,8-HxCDF	7.47e5	0.52	NO	1.25	10.050	33.97	0.983	157.82	79.3	0.531	
30	13C-1,2,3,7,8,9-HxCDF	6.85e5	0.51	NO	1.05	10.050	34.97	1.011	171.71	86.3	0.630	

6/30/09
7/2/09

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-3.qld

Last Altered: Tuesday, June 30, 2009 2:07:31 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 2:08:08 PM Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

31	13C-1,2,3,4,6,7,8-HpCDF	5.68e5	0.44	NO	0.868	10.050	36.86	1.066	172.75	86.8	0.765	
32	13C-1,2,3,4,7,8,9-HpCDF	5.22e5	0.44	NO	0.727	10.050	38.78	1.122	189.75	95.3	0.915	
33	13C-OCDF	1.16e6	0.89	NO	0.760	10.050	41.91	1.212	401.46	101	0.401	
34	37Cl-2,3,7,8-TCDD	2.21e5			0.668	10.050	26.09	1.024	68.844	86.5	0.0803	
35	13C-1,2,3,4-TCDD	9.55e5	0.78	NO	1.00	10.050	25.48	0.000	199.00	100	0.305	
36	13C-1,2,3,4-TCDF	1.32e6	0.80	NO	1.00	10.050	24.07	0.000	199.00	100	0.204	
37	13C-1,2,3,7,8,9-HxCDD	7.54e5	1.28	NO	1.00	10.050	34.58	0.000	199.00	100	0.425	
38	Total Tetra-Dioxins				1.08	10.050					0.0265	
39	Total Penta-Dioxins				1.03	10.050			0.27852		0.0711	0.60021
40	Total Hexa-Dioxins				1.13	10.050			3.5432		0.174	~~3.5432~~
41	Total Hepta-Dioxins				1.06	10.050			15.306		0.189	~~15.306~~
42	Total Tetra-Furans				1.09	10.050			1.5036		0.0693	~~1.5036~~
43	1st Func. Penta-Furans				1.16	10.050			~~0.51361~~ 1.83		0.0366	~~0.51361~~
44	Total Penta-Furans				1.16	10.050			~~1.3218~~		0.0674	~~1.3218~~
45	Total Hexa-Furans				1.28	10.050			2.2285		0.0704	~~2.2285~~
46	Total Hepta-Furans				1.69	10.050			2.7856		0.165	~~2.7856~~

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-3.qld

Last Altered: Tuesday, June 30, 2009 2:07:31 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 2:08:08 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

Tetra-Dioxins

Penta-Dioxins

Total Penta-Dioxins	28.59	5.021e3	7.094e3	3.969e2	5.726e2	0.69	NO	9.695e2	0.27852	0.27852	0.0711
Total Penta-Dioxins	29.49	1.426e4	8.057e3	7.385e2	4.426e2	1.67	YES	0.000e0	0.00000	0.20724	0.0711
Total Penta-Dioxins	30.43	1.730e4	4.551e3	6.380e2	2.444e2	2.61	YES	0.000e0	0.00000	0.11445	0.0711

Hexa-Dioxins

Total Hexa-Dioxins	32.57	5.216e4	3.668e4	2.531e3	1.936e3	1.31	NO	4.466e3	1.3200	1.3200	0.174
Total Hexa-Dioxins	33.45	3.586e4	2.698e4	2.691e3	1.937e3	1.39	NO	4.628e3	1.3679	1.3679	0.174
1,2,3,6,7,8-HxCDD	34.30	1.223e4	1.043e4	8.218e2	5.909e2	1.39	NO	1.413e3	0.43090	0.43090	0.183
1,2,3,7,8,9-HxCDD	34.60	1.271e4	1.334e4	7.242e2	6.820e2	1.06	NO	1.406e3	0.42441	0.42441	0.177

Hepta-Dioxins

Total Hepta-Dioxins	37.29	1.541e5	1.399e5	1.161e4	1.130e4	1.03	NO	2.291e4	7.7701	7.7701	0.189
1,2,3,4,6,7,8-HpCDD	38.22	1.614e5	1.654e5	1.110e4	1.112e4	1.00	NO	2.222e4	7.5358	7.5358	0.189

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-3.qld

Last Altered: Tuesday, June 30, 2009 2:07:31 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 2:08:08 PM Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

Tetra-Furans

	Total Tetra-Furans	23.37	8.036e3	1.096e4	5.768e2	8.107e2	0.71	NO	1.387e3	0.21233	0.21233	0.0693
	Total Tetra-Furans	24.50	5.204e3	7.084e3	3.776e2	4.353e2	0.87	NO	8.129e2	0.12440	0.12440	0.0693
	2,3,7,8-TCDF	25.31	2.471e4	2.917e4	1.431e3	1.771e3	0.81	NO	3.202e3	0.49000	0.49000	0.0693
	Total Tetra-Furans	25.63	3.195e4	3.959e4	1.894e3	2.529e3	0.75	NO	4.423e3	0.67687	0.67687	0.0693

Penta-Furans function 1

	1st Func. Penta-Furans	27.07	3.616e4	2.421e4	1.944e3	1.349e3	1.44	NO	3.293e3	0.51361	0.51361	0.0366

Penta-Furans

	Total Penta-Furans	28.42	1.804e4	9.561e3	1.154e3	6.801e2	1.70	NO	1.834e3	0.28603	0.28603	0.0674
	Total Penta-Furans	28.55	3.439e4	3.025e4	2.407e3	1.753e3	1.37	NO	4.160e3	0.64887	0.64887	0.0674
	1,2,3,7,8-PeCDF	29.51	1.133e4	6.844e3	4.941e2	3.197e2	1.55	NO	8.139e2	0.12109	0.12109	0.0665
	2,3,4,7,8-PeCDF	30.44	1.851e4	1.257e4	9.743e2	5.903e2	1.65	NO	1.565e3	0.26578	0.26578	0.0709

Hexa-Furans

	Total Hexa-Furans	32.01	1.406e4	1.727e4	7.797e2	6.772e2	1.15	NO	1.457e3	0.28816	0.28816	0.0704
	Total Hexa-Furans	32.19	4.671e4	3.841e4	2.521e3	1.933e3	1.30	NO	4.453e3	0.88082	0.88082	0.0704
	Total Hexa-Furans	32.75	1.772e4	1.462e4	9.156e2	7.639e2	1.20	NO	1.680e3	0.33218	0.33218	0.0704
	Total Hexa-Furans	33.15	6.658e3	5.787e3	3.077e2	2.584e2	1.19	NO	5.661e2	0.11197	0.11197	0.0704
	1,2,3,4,7,8-HxCDF	33.24	1.125e4	1.212e4	6.630e2	5.813e2	1.14	NO	1.244e3	0.22393	0.22393	0.0592
	1,2,3,6,7,8-HxCDF	33.37	8.978e3	7.103e3	4.978e2	3.499e2	1.42	NO	8.477e2	0.14876	0.14876	0.0601
	2,3,4,6,7,8-HxCDF	34.01	7.456e3	6.869e3	4.170e2	3.352e2	1.24	NO	7.522e2	0.15651	0.15651	0.0730
	1,2,3,7,8,9-HxCDF	35.03	3.398e3	3.518e3	2.176e2	1.554e2	1.40	NO	3.730e2	0.086140	0.086140	0.0928

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-3.qld

Last Altered: Tuesday, June 30, 2009 2:07:31 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 2:08:08 PM Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.88	3.514e4	3.616e4	2.695e3	2.830e3	0.95	NO	5.525e3	1.1453	1.1453	0.189
	Total Hepta-Furans	37.51	5.122e4	5.823e4	3.947e3	3.646e3	1.08	NO	7.593e3	1.6403	1.6403	0.165

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

2,3,7,8-TCDD

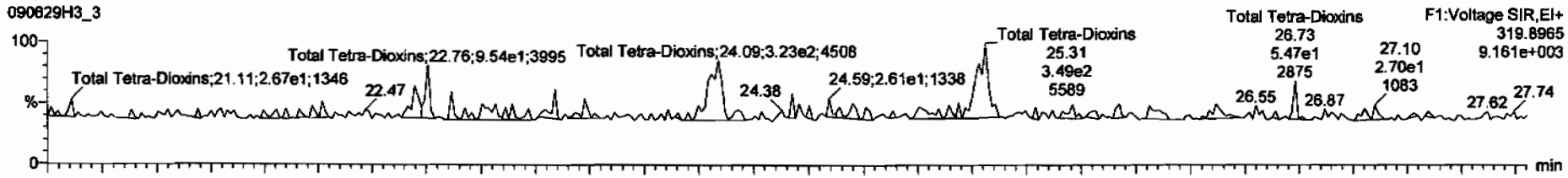

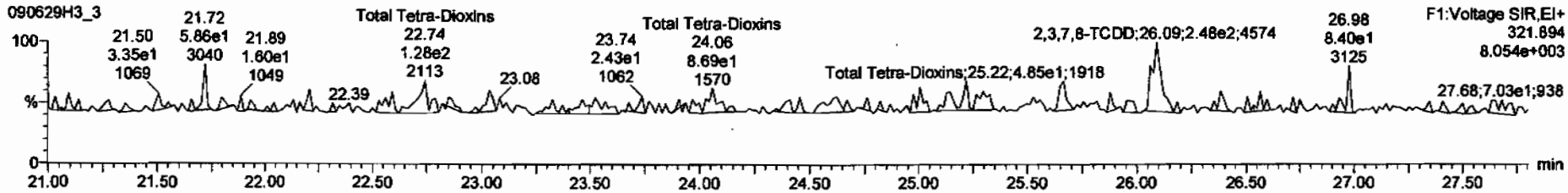

13C-2,3,7,8-TCDD

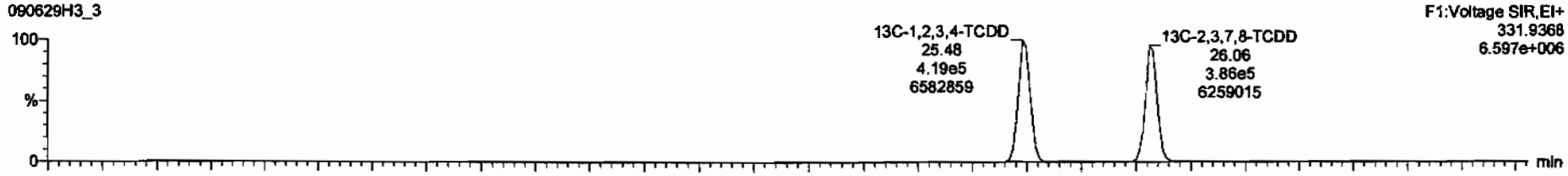

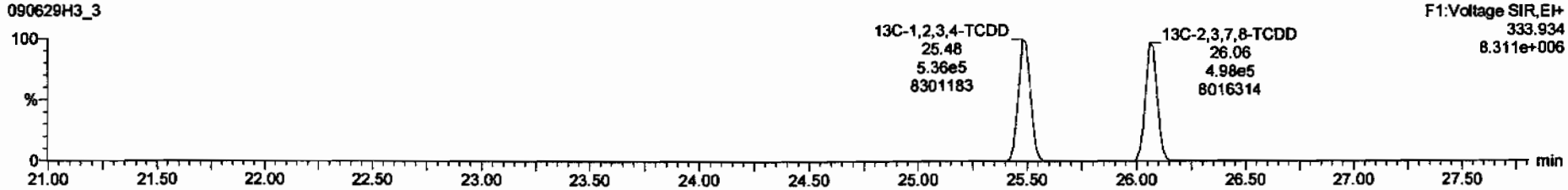

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Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

37Cl-2,3,7,8-TCDD

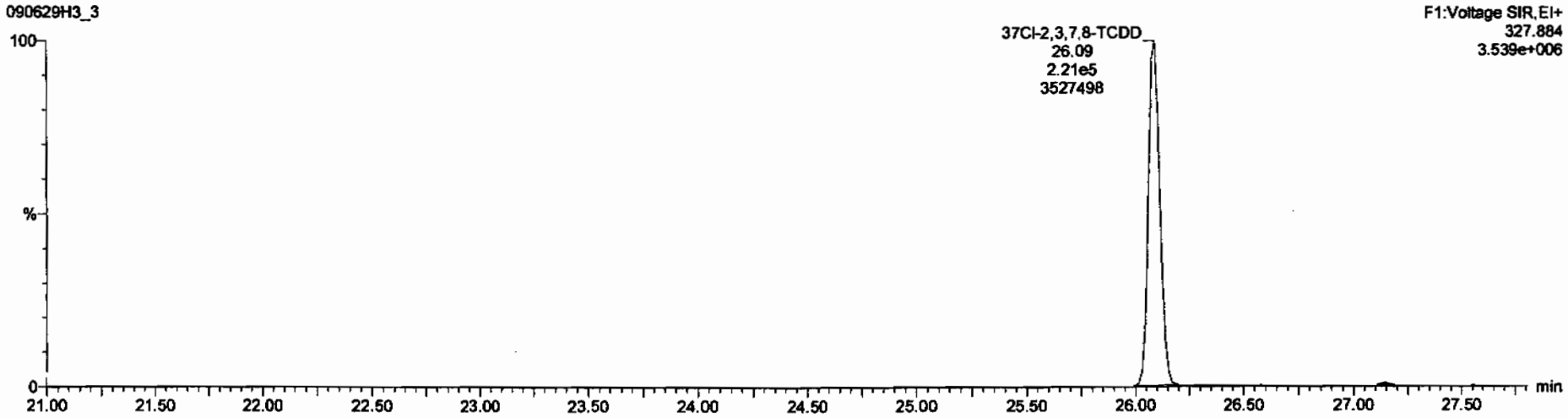

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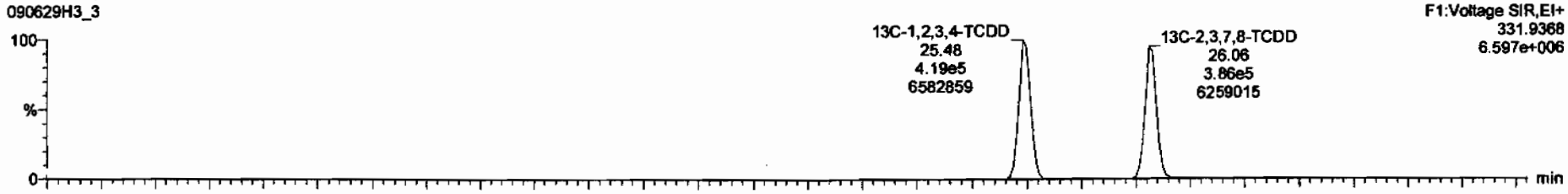

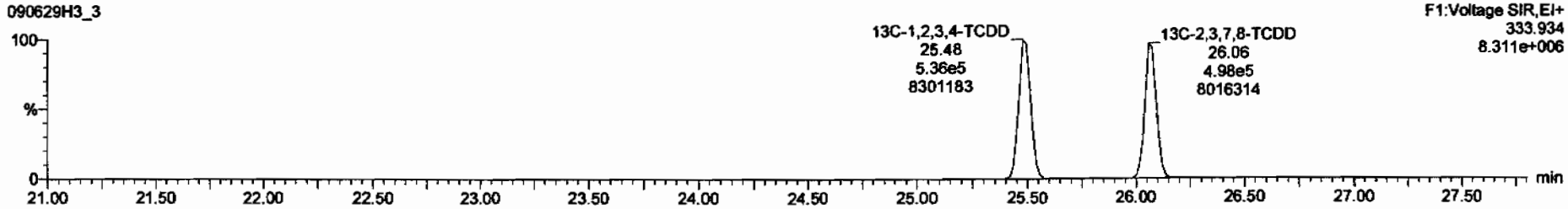

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Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

1,2,3,7,8-PeCDD

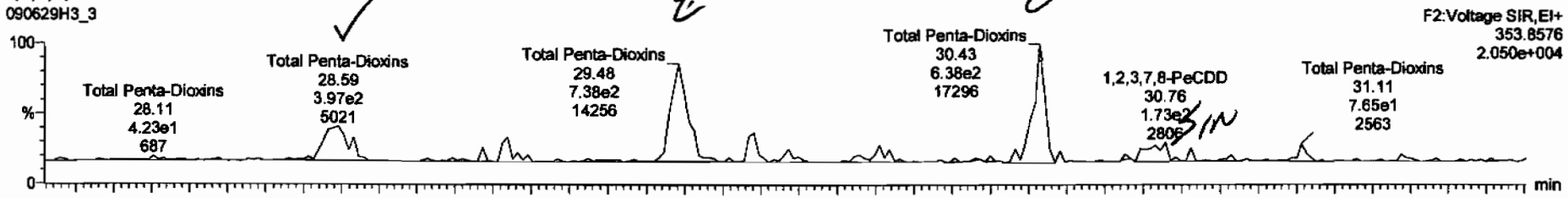

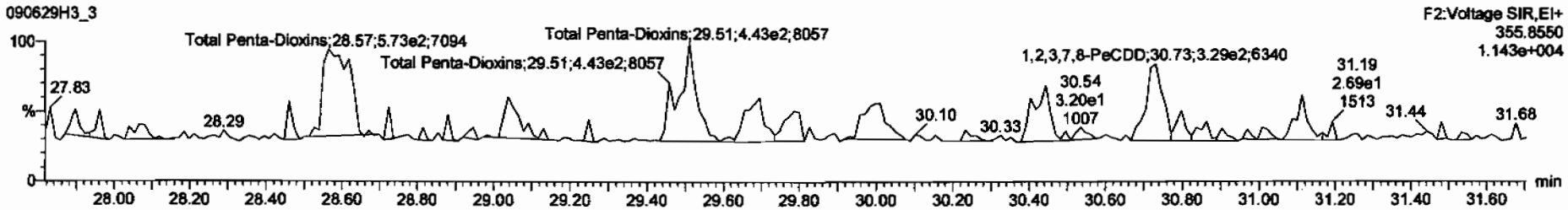

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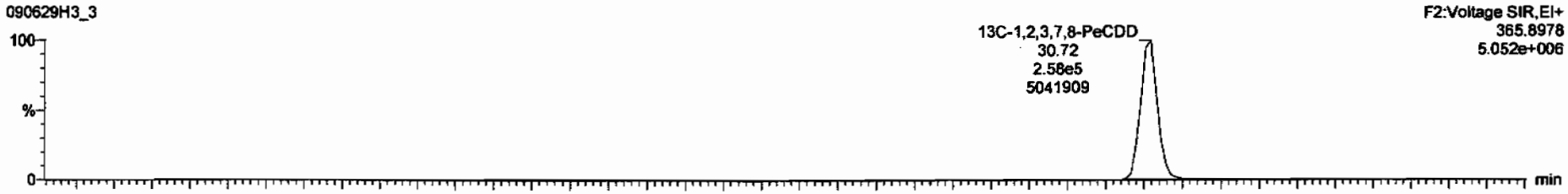

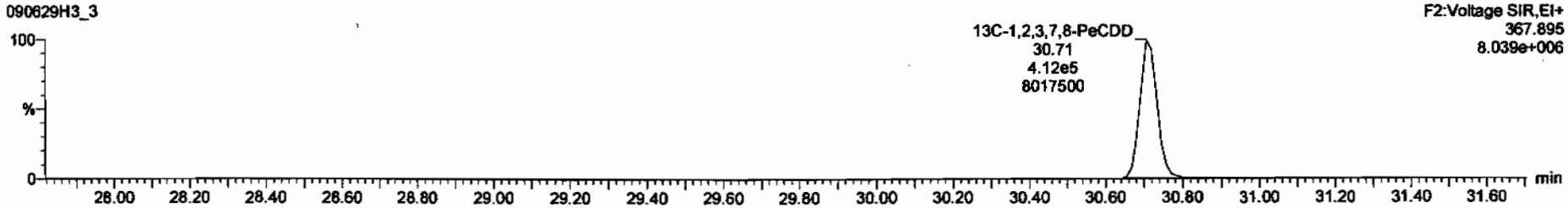

TargetLynx - 090629h3-3.qld * - [Chromatogram]

090629H3_3 - 31837_2207_005 CAMO-09-6049 11.23 - CAMO-09-6049

Total Penta-Dioxins		3.969e2	5.726e2	0.69	NO	0.27852	0.27852
Total Penta-Dioxins		7.385e2	4.426e2	1.67	YES	0.20724	0.00000
Total Penta-Dioxins		6.380e2	2.444e2	2.61	YES	0.11445	0.00000

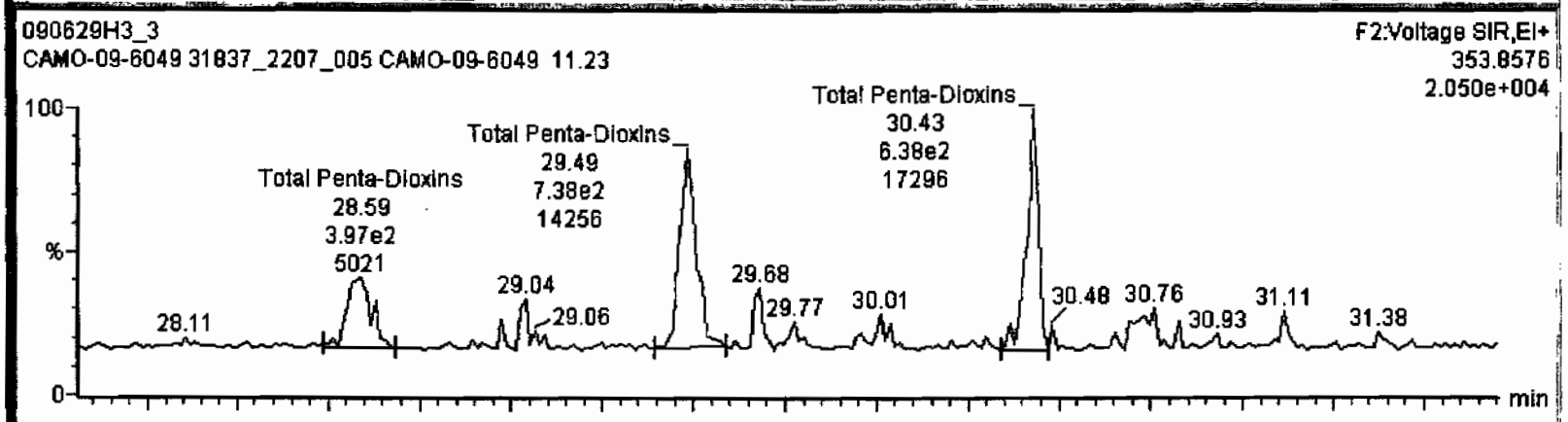

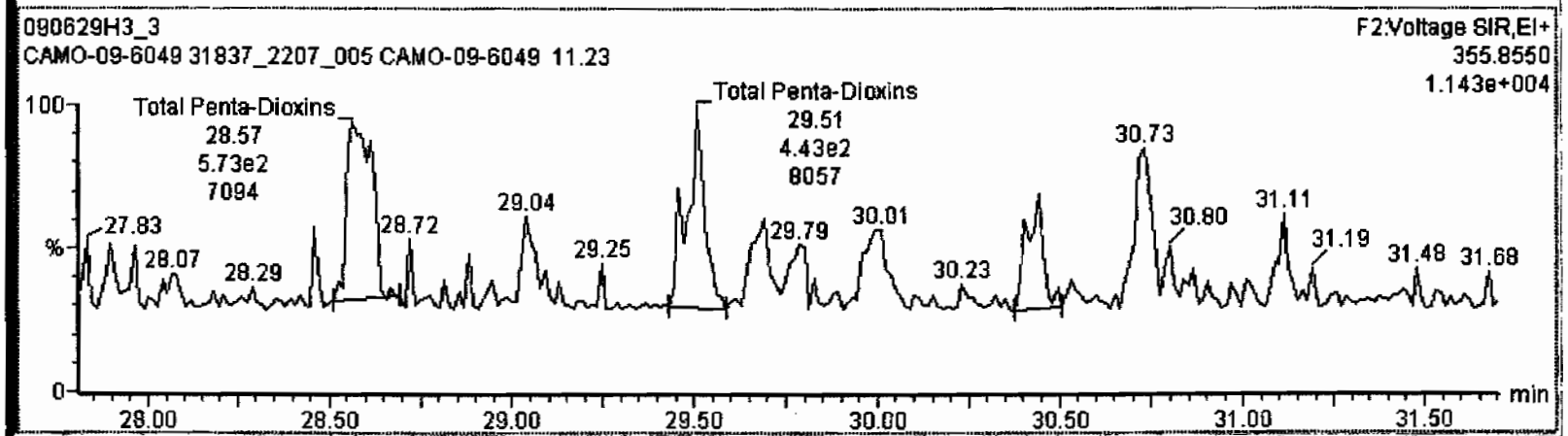

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

1,2,3,4,7,8-HxCDD

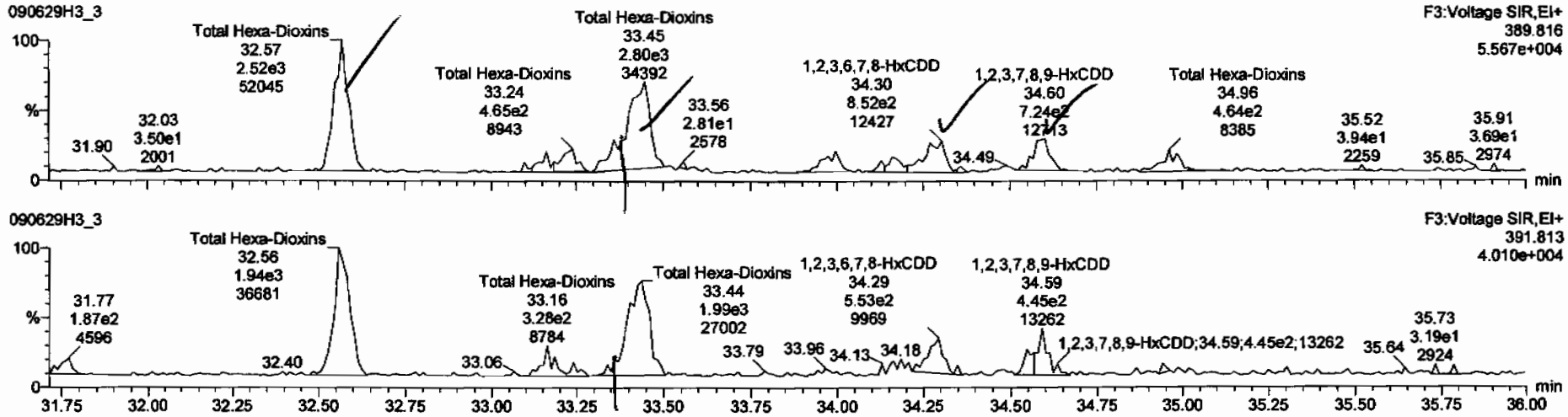

13C-1,2,3,4,7,8-HxCDD

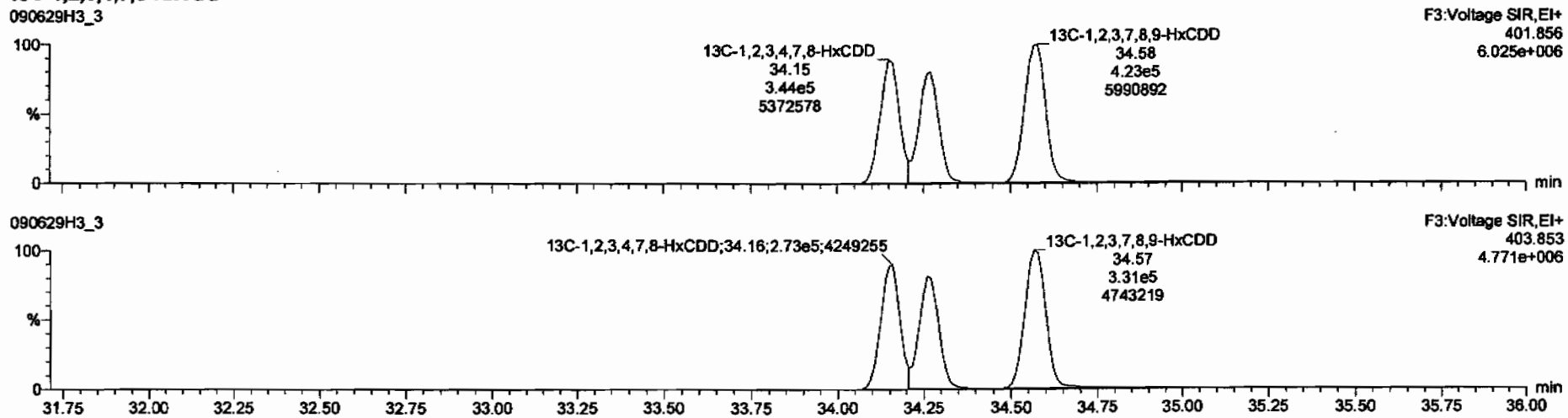

TargetLynx - 090629h3-3.qld * - [Chromatogram]

090629H3_3 - 31837_2207_005 CAMO-09-6049 11.23 - CAMO-09-6049

Total Hexa-Dioxins	32.57	2.531e3	1.936e3	1.31	NO	1.3200	1.3200
Total Hexa-Dioxins	33.45	2.691e3	1.937e3	1.39	NO	1.3679	1.3679
1,2,3,6,7,8-HxCDD	34.30	8.218e2	5.909e2	1.39	NO	0.43090	0.43090
1,2,3,7,8,9-HxCDD	34.60	7.242e2	6.820e2	1.06	NO	0.42441	0.42441

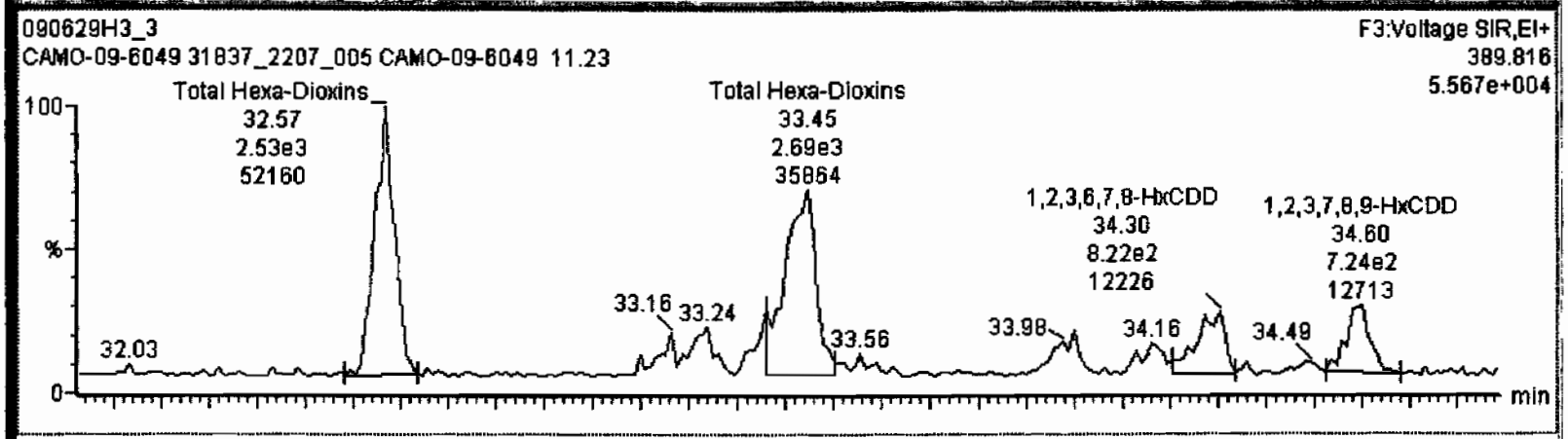

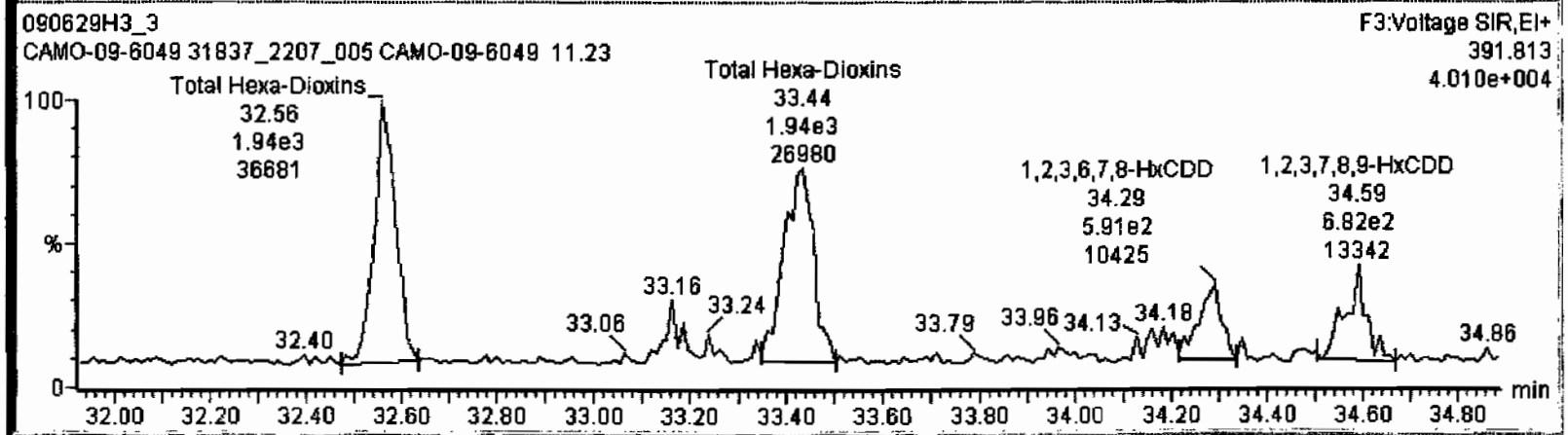

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

1,2,3,4,6,7,8-HpCDD

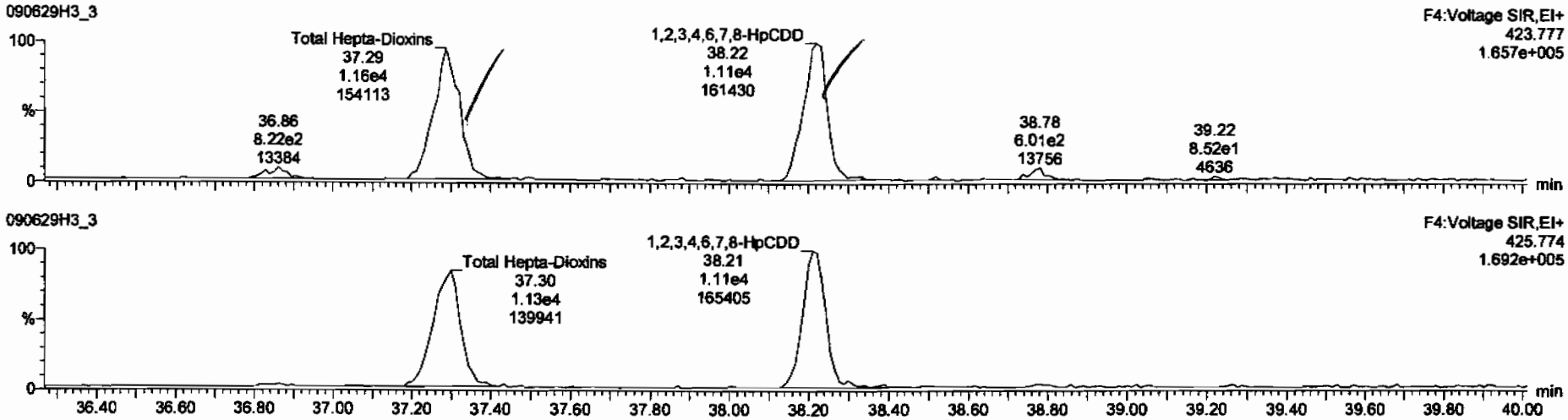

13C-1,2,3,4,6,7,8-HpCDD

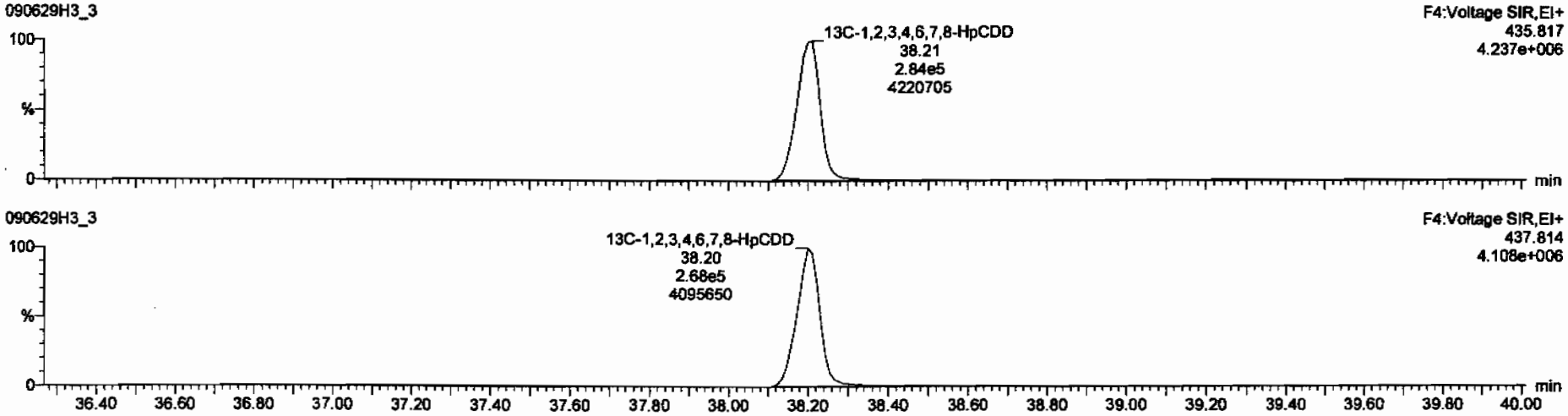

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Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

OCDD

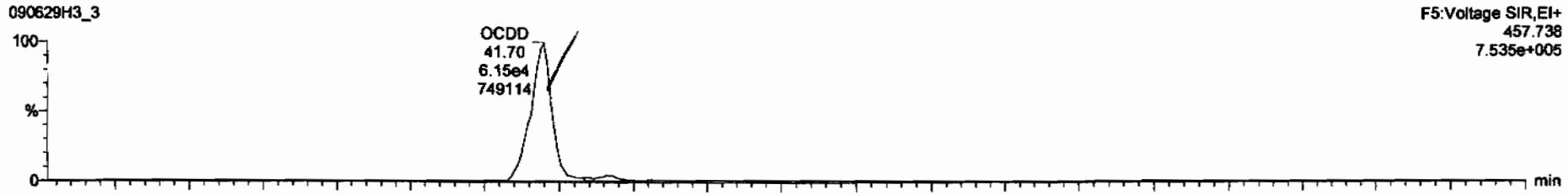

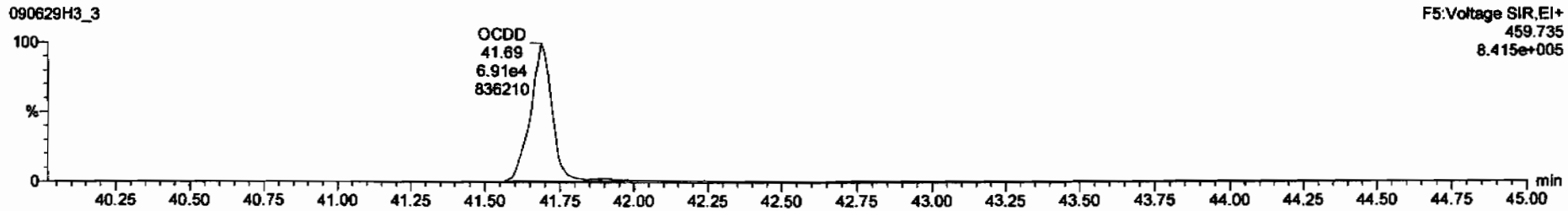

13C-OCDD

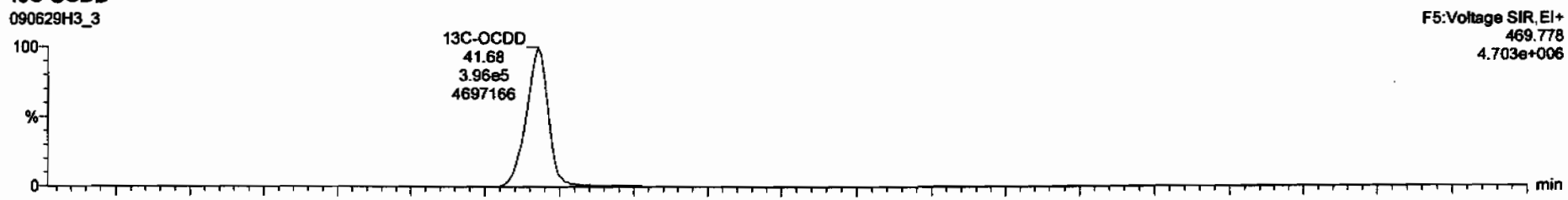

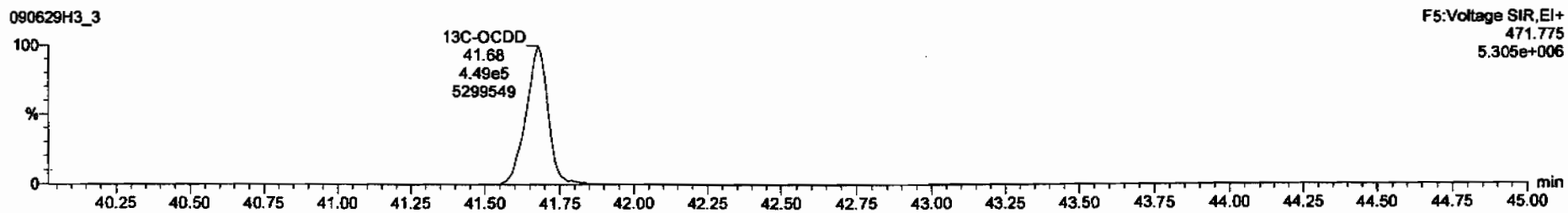

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Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

2,3,7,8-TCDF

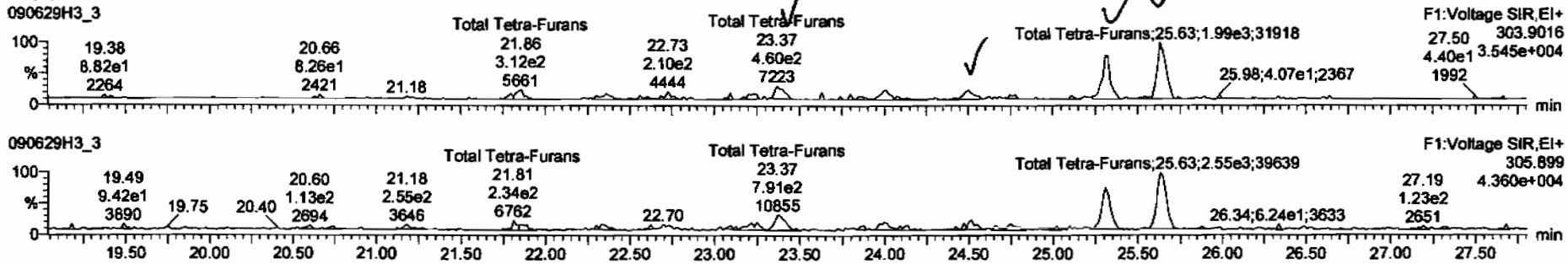

13C-2,3,7,8-TCDF

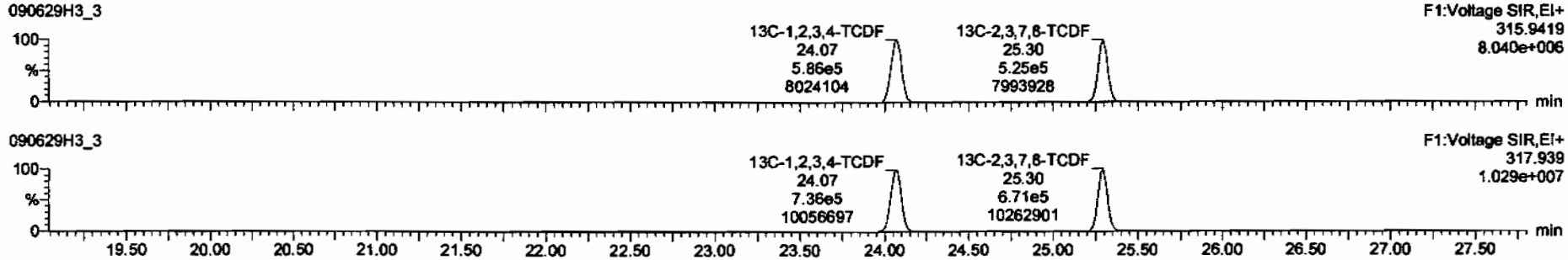

DPE1

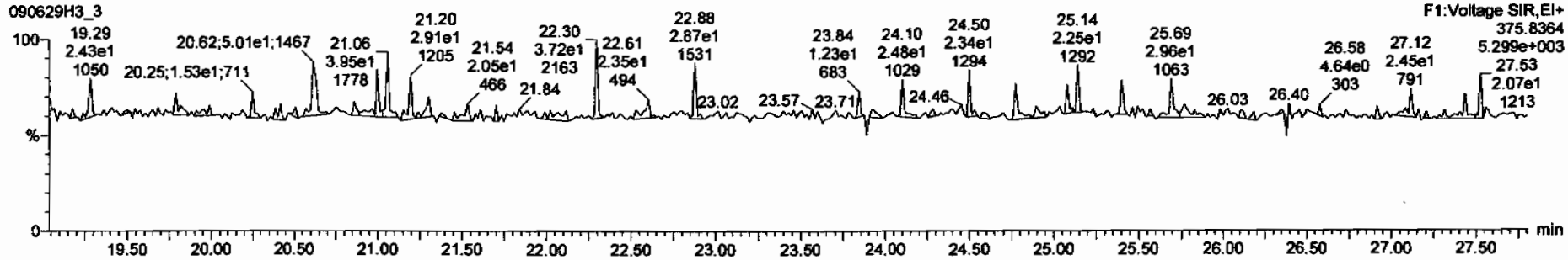

TargetLynx - 090629h3-3.qld * - [Chromatogram]

090629H3_3 - 31837_2207_005 CAMO-09-6049 11.23 - CAMO-09-6049

Total Tetra-Furans	23.37	5.768e2	8.107e2	0.71	NO	0.21233	0.21233
Total Tetra-Furans	24.50	3.776e2	4.353e2	0.87	NO	0.12440	0.12440
2,3,7,8-TCDF	25.31	1.431e3	1.771e3	0.81	NO	0.49000	0.49000
Total Tetra-Furans	25.63	1.894e3	2.529e3	0.75	NO	0.67687	0.67687

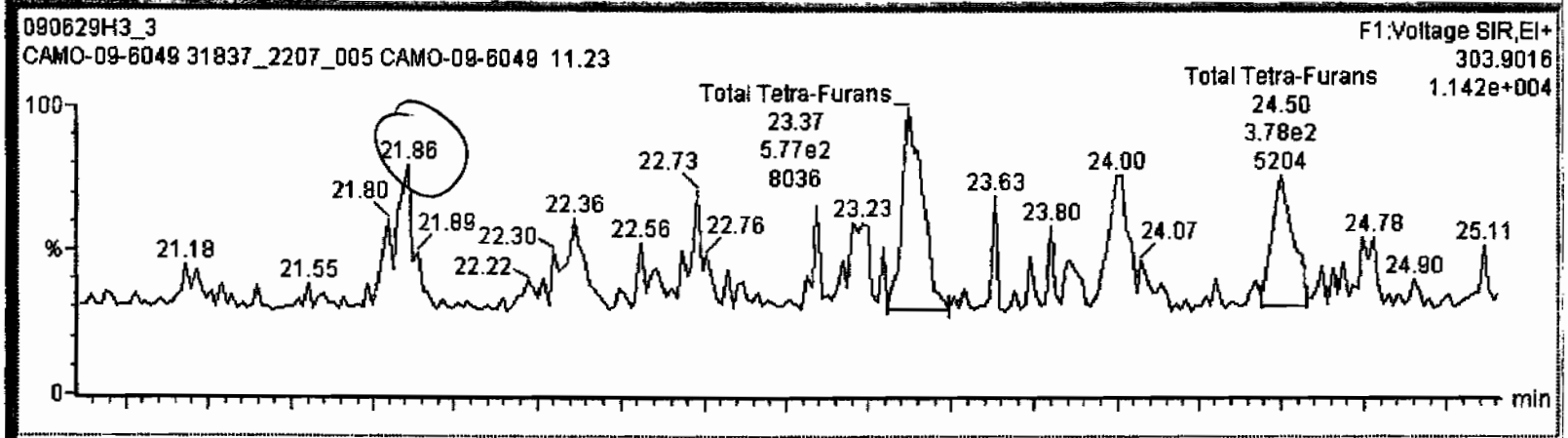

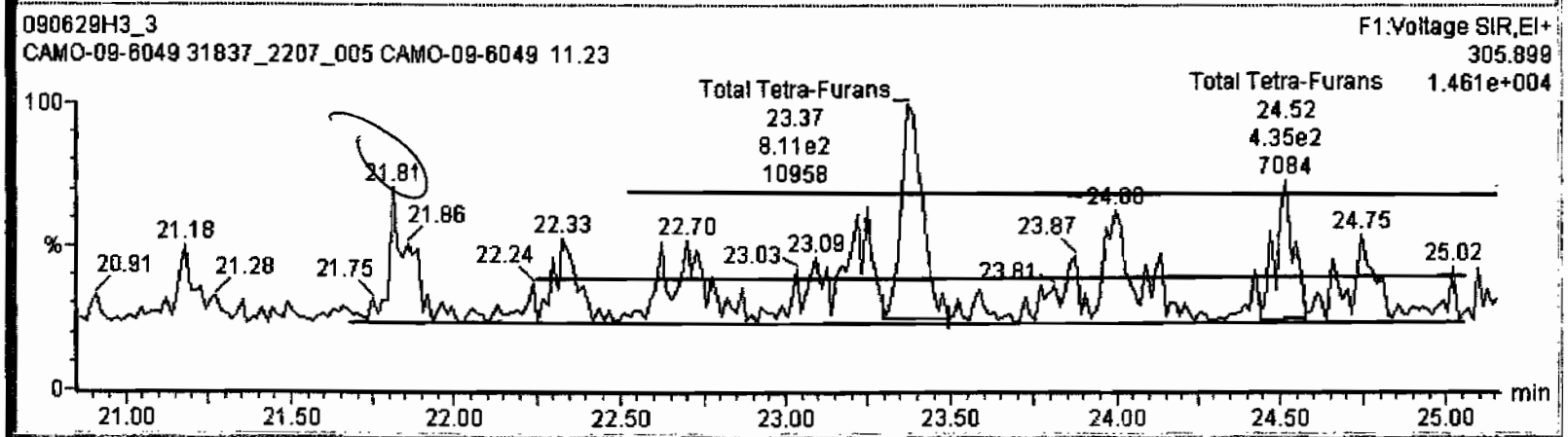

TargetLynx - 090629h3-3.qld * - [Chromatogram]

090629H3_3 - 31837_2207_005 CAMO-09-6049 11.23 - CAMO-09-6049

Total Tetra-Furans	23.37	5.768e2	8.107e2	0.71	NO	0.21233	0.21233
Total Tetra-Furans	24.50	3.776e2	4.353e2	0.87	NO	0.12440	0.12440
2,3,7,8-TCDF	25.31	1.431e3	1.771e3	0.81	NO	0.49000	0.49000
Total Tetra-Furans	25.63	1.894e3	2.529e3	0.75	NO	0.67687	0.67687

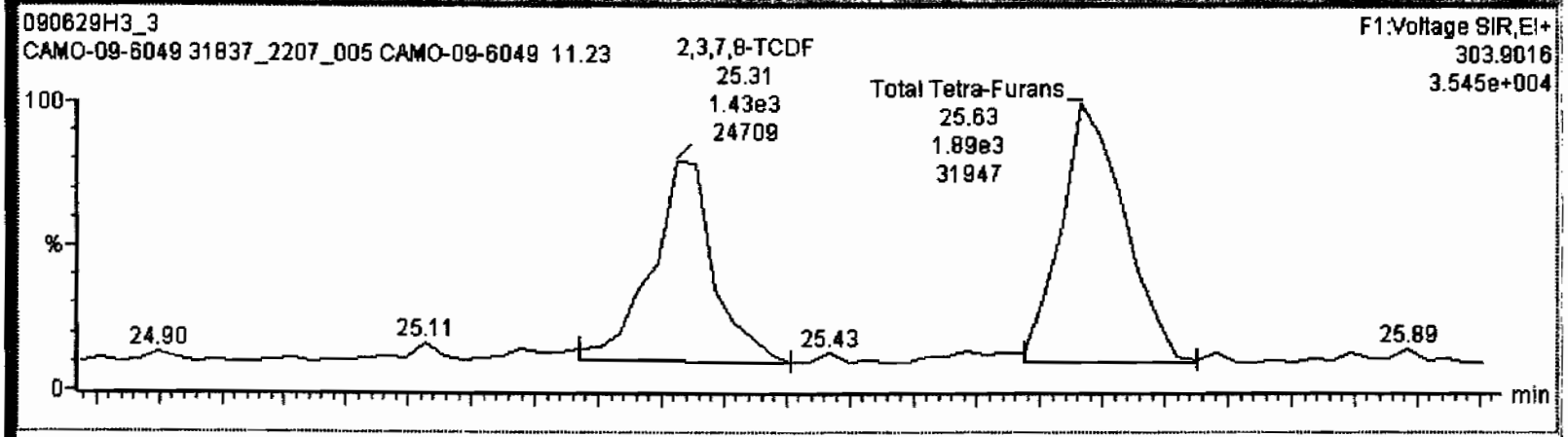

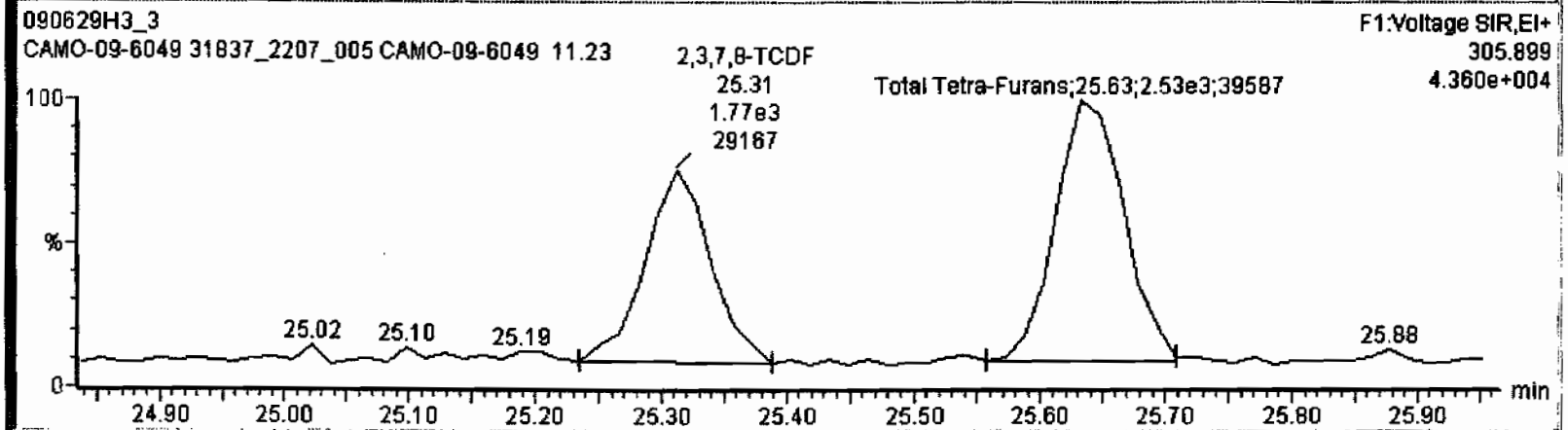

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Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

1st Func. Penta-Furans

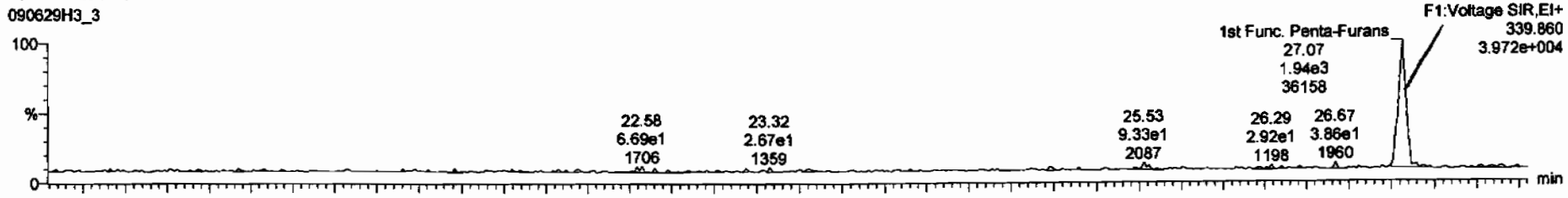

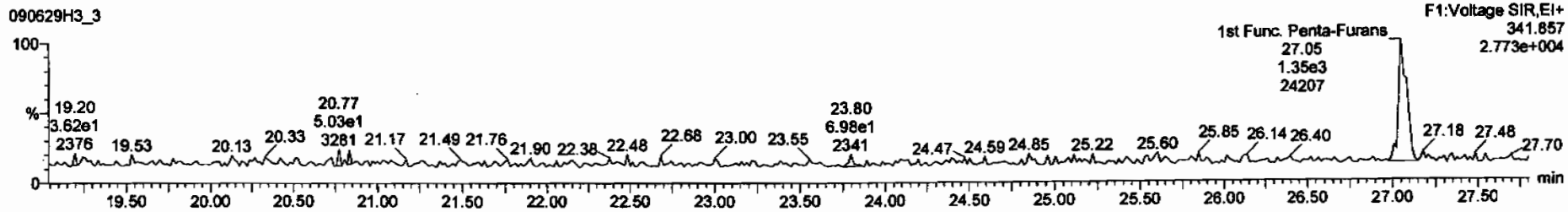

DPE6

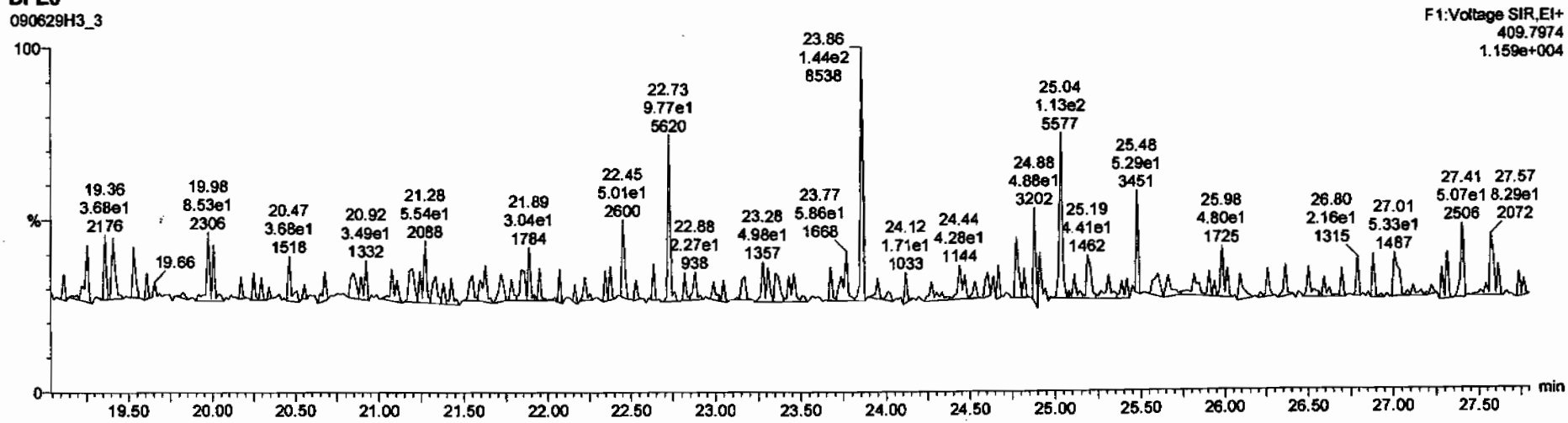

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

1,2,3,7,8-PeCDF

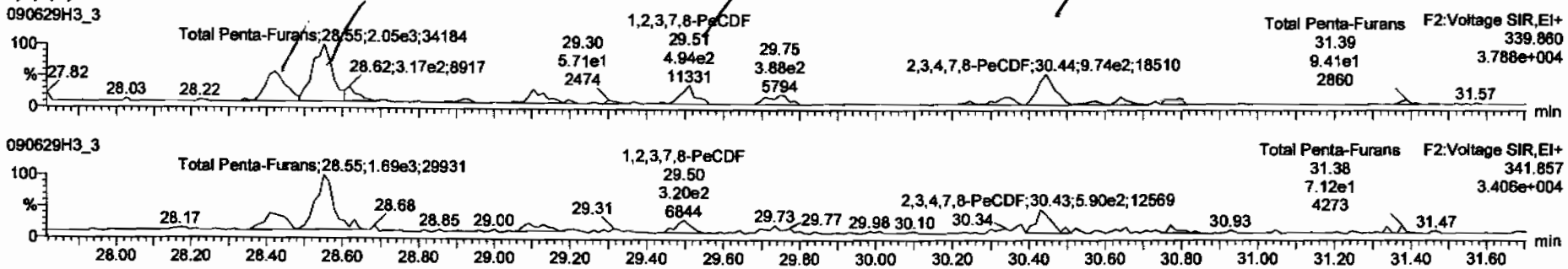

13C-1,2,3,7,8-PeCDF

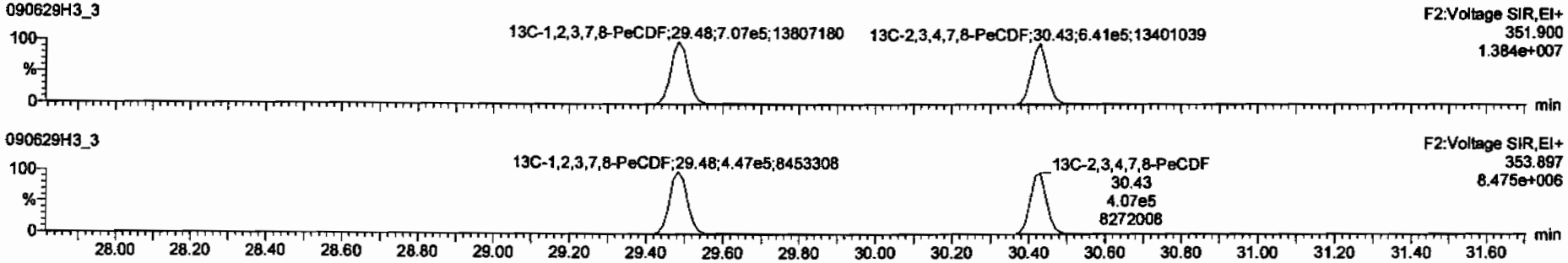

DPE2

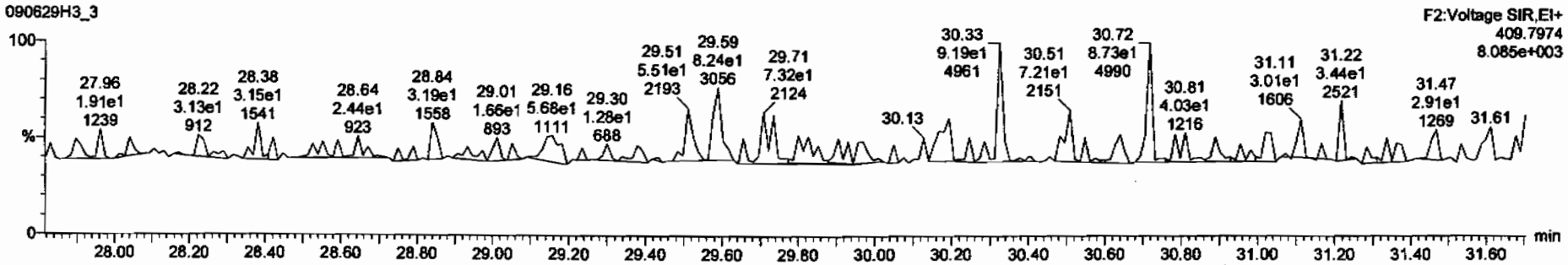

TargetLynx - 090629h3-3.qld * - [Chromatogram]

090629H3_3 - 31837_2207_005 CAMO-09-6049 11.23 - CAMO-09-6049

Name	RT	Area	Height	S/N	Flag	Conc.	Resp.
Total Penta-Furans	28.42	1.154e3	6.801e2	1.70	NO	0.28603	0.00000
Total Penta-Furans	28.55	2.407e3	1.753e3	1.37	NO	0.64887	0.64887
1,2,3,7,8-PeCDF	29.51	4.941e2	3.197e2	1.55	NO	0.12109	0.12109
2,3,4,7,8-PeCDF	30.44	9.743e2	5.903e2	1.65	NO	0.26578	0.26578

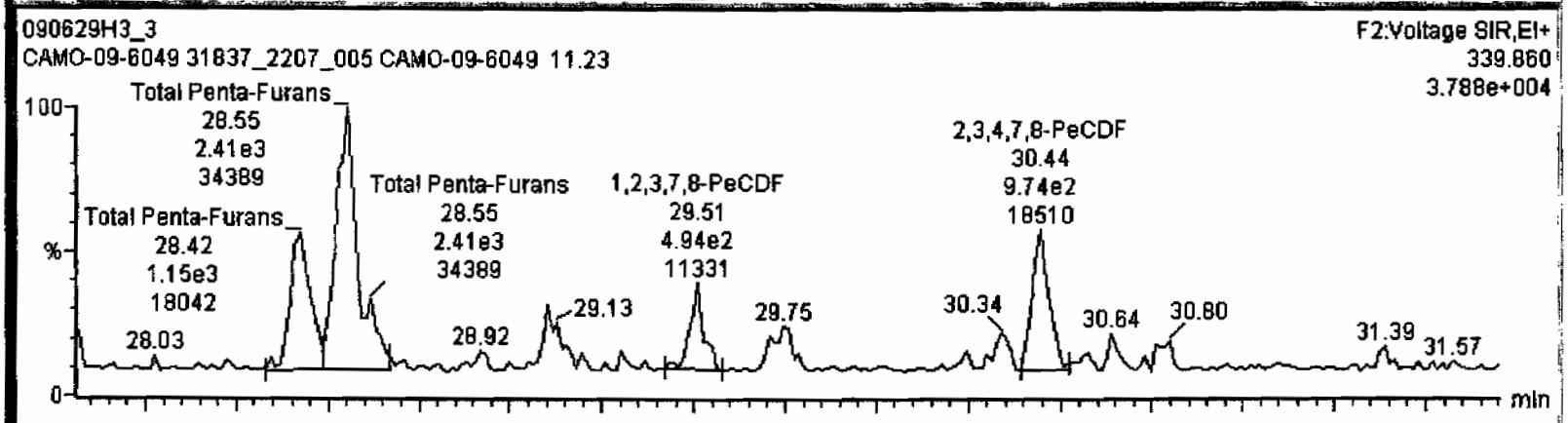

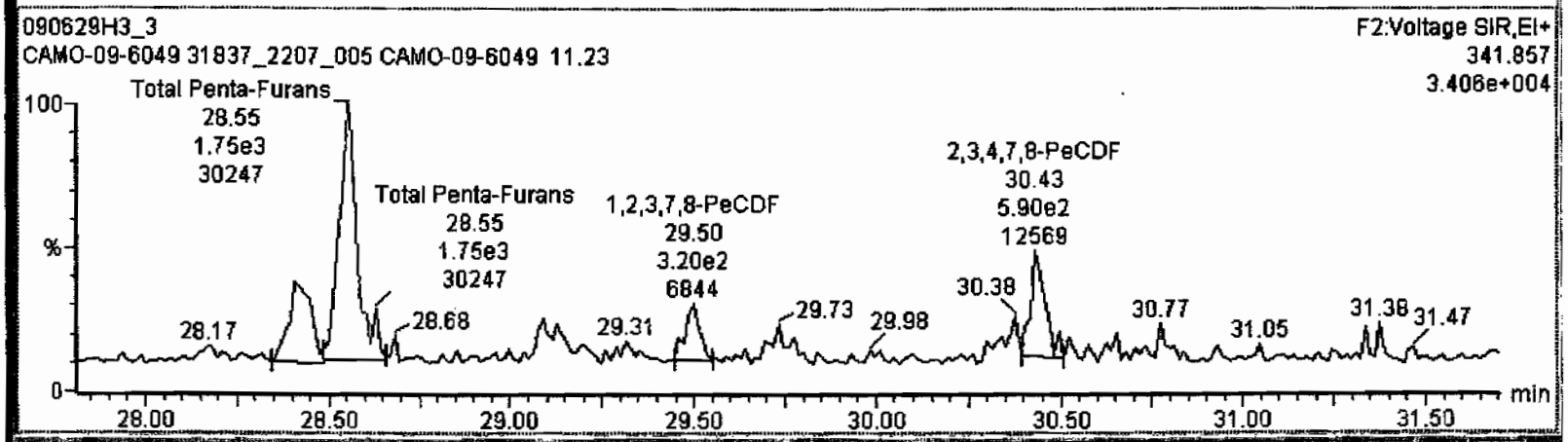

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

1,2,3,4,7,8-HxCDF

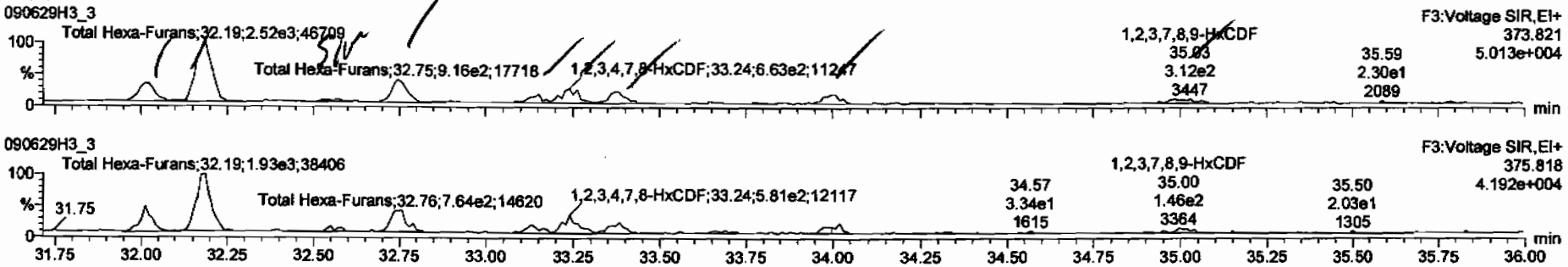

13C-1,2,3,4,7,8-HxCDF

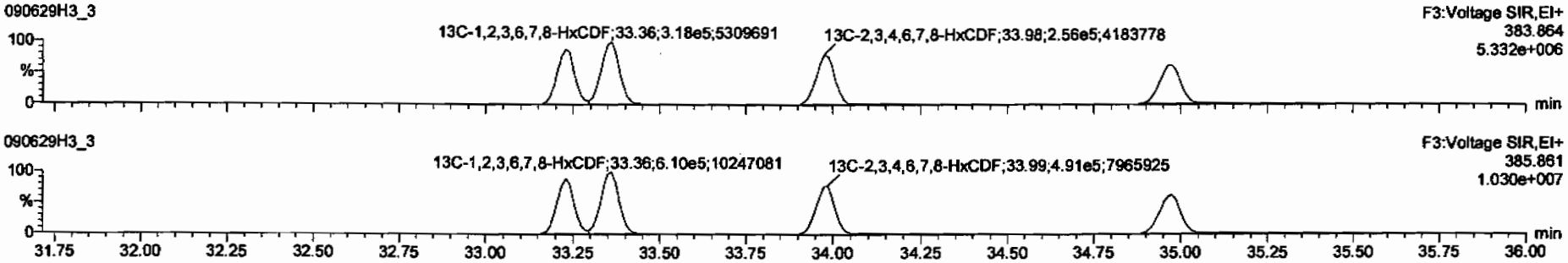

DPE3

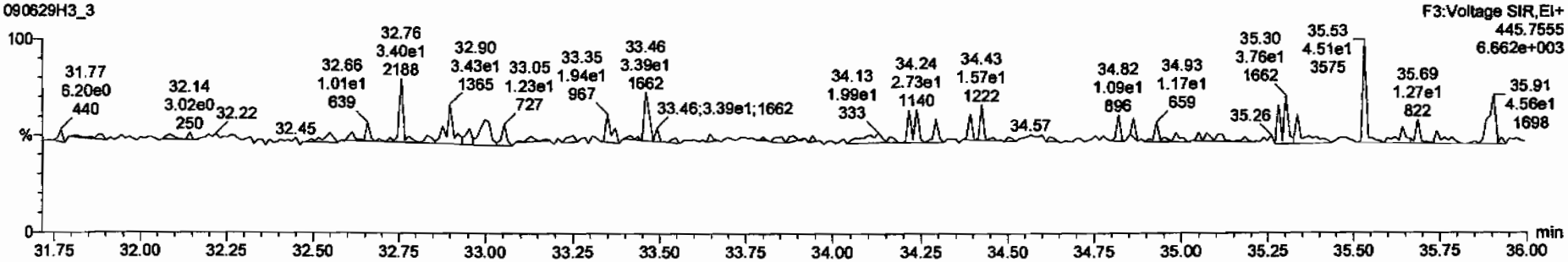

TargetLynx - 090629h3-3.qld * - [Chromatogram]

090629H3_3 - 31837_2207_005 CAMO-09-6049 11.23 - CAMO-09-6049

Name	RT	Total Area	Total Height	Ratio	Flag	Amount	Conc.
1,2,3,4,7,8-HxCDF	33.24	6.630e2	5.813e2	1.14	NO	0.22393	0.22393
1,2,3,6,7,8-HxCDF	33.37	4.978e2	3.499e2	1.42	NO	0.14876	0.14876
2,3,4,6,7,8-HxCDF	34.01	4.170e2	3.352e2	1.24	NO	0.15651	0.15651
1,2,3,7,8,9-HxCDF	35.03	2.176e2	1.554e2	1.40	NO	0.086140	0.086140

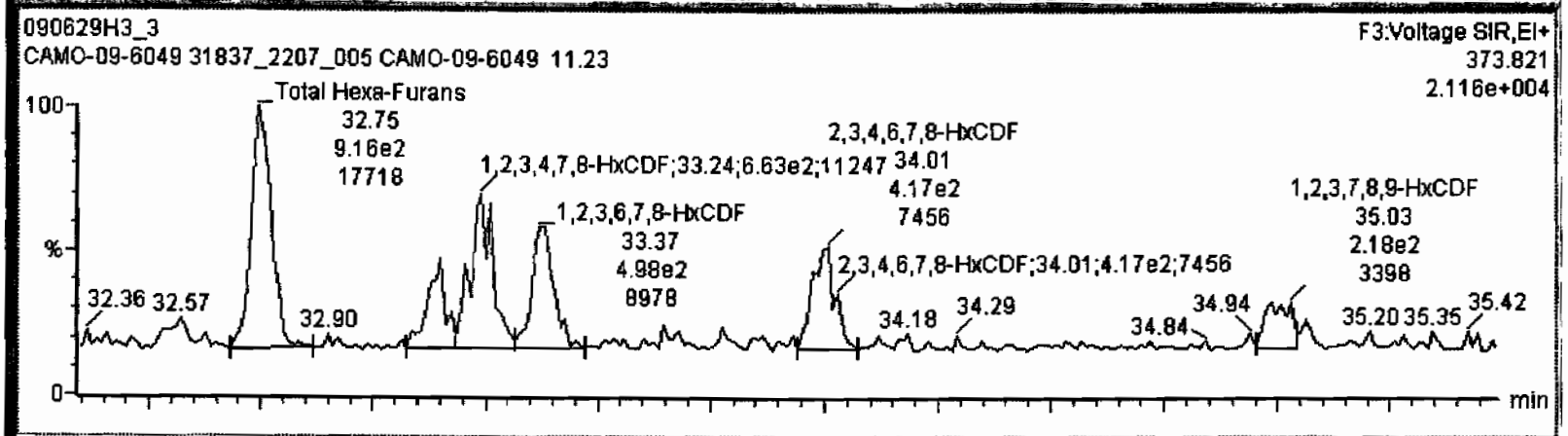

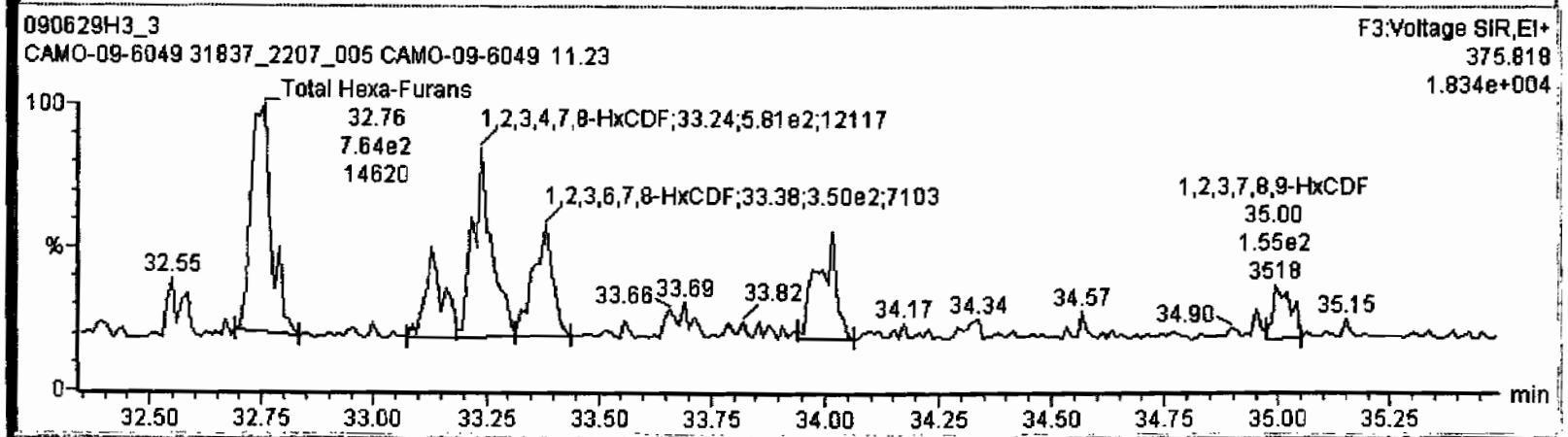

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

1,2,3,4,6,7,8-HpCDF

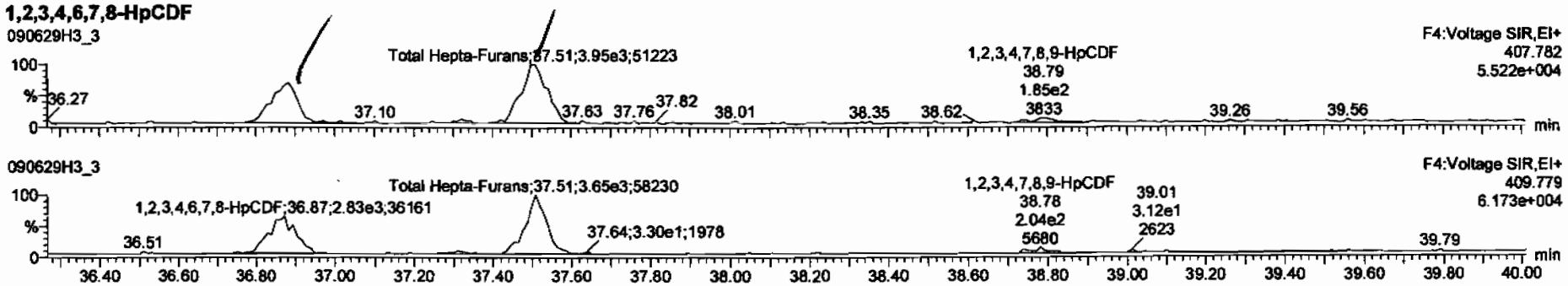

13C-1,2,3,4,6,7,8-HpCDF

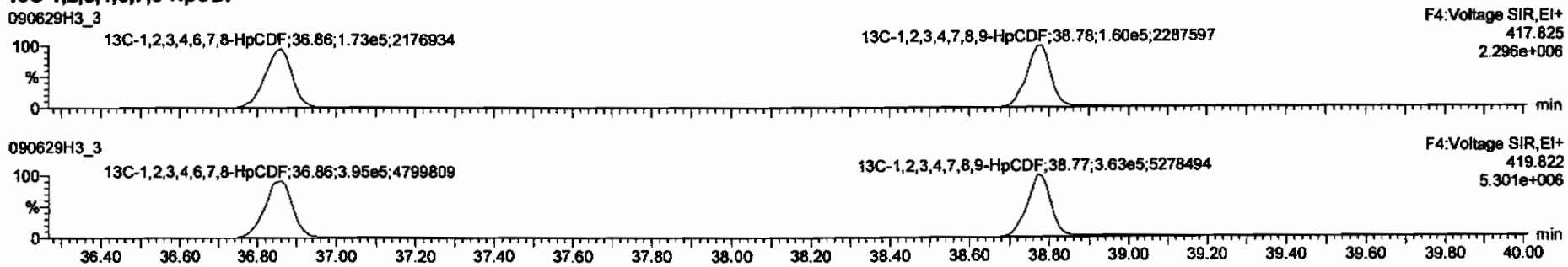

DPE4

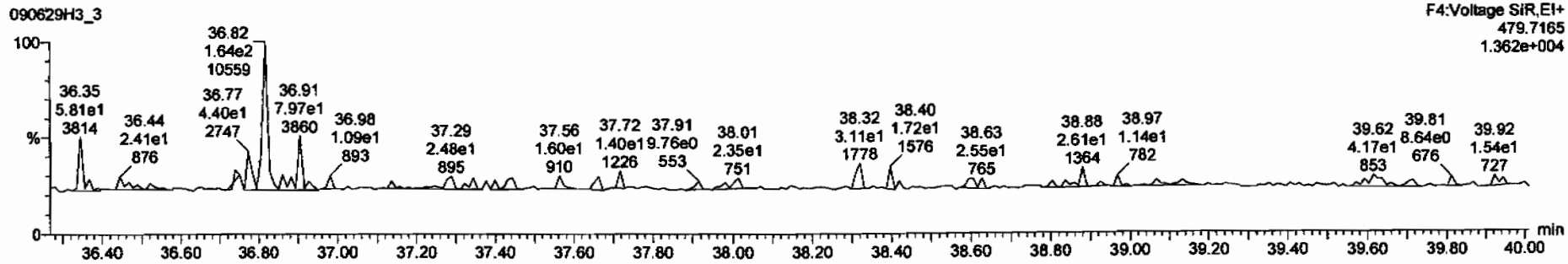

TargetLynx - 090629h3-3.qld * - [Chromatogram]

090629H3_3 - 31837_2207_005 CAMO-09-6049 11.23 - CAMO-09-6049

1,2,3,4,6,7,8-HpCDF	36.86	2.695e3	2.830e3	0.95	NO	1.1453	1.1453
Total Hepta-Furans	37.51	3.947e3	3.646e3	1.08	NO	1.6403	1.6403

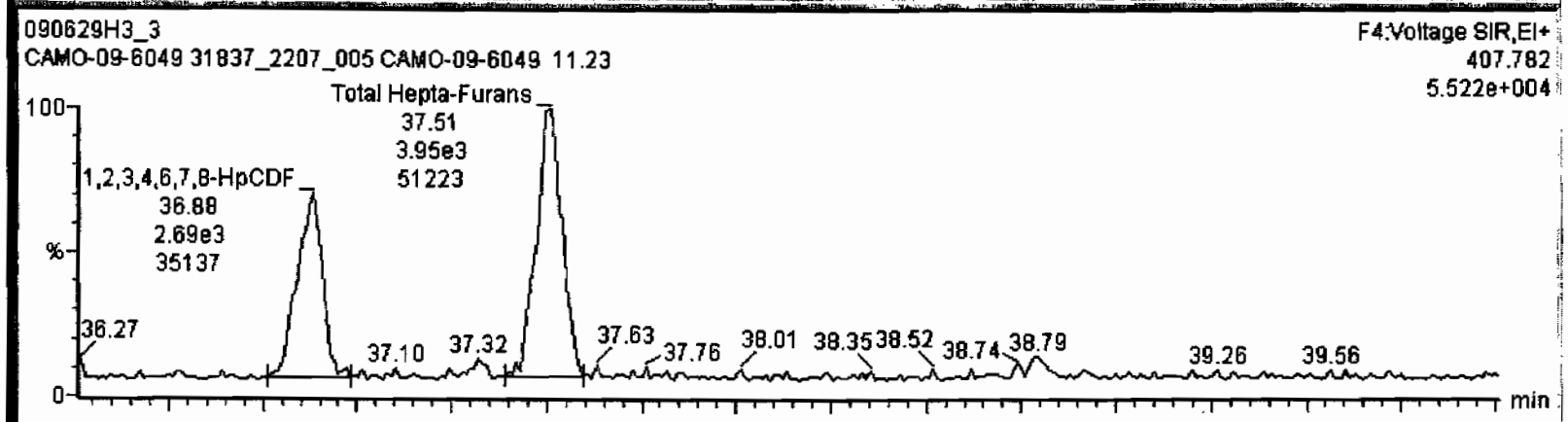

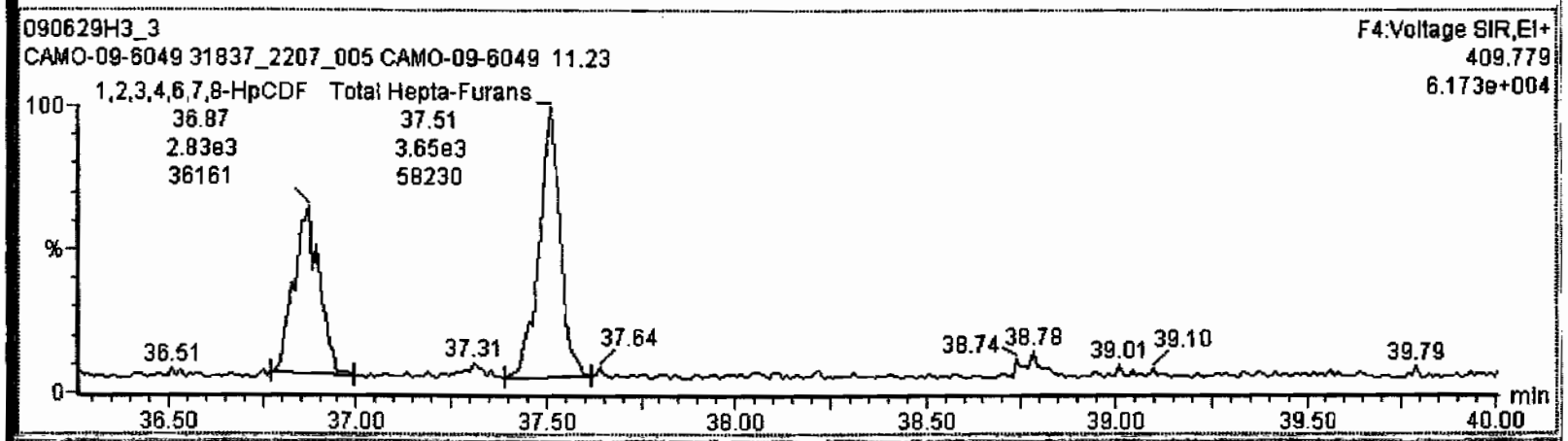

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:20:36 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

OCDF

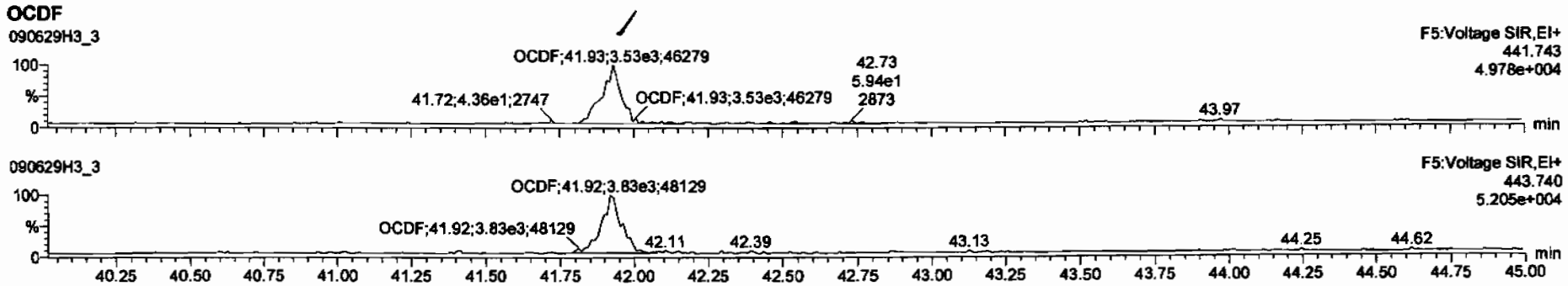

13C-OCDF

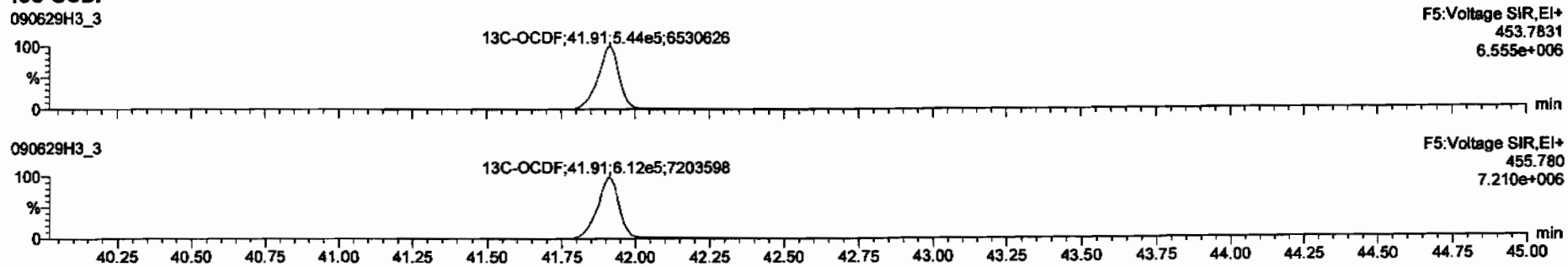

DPE5

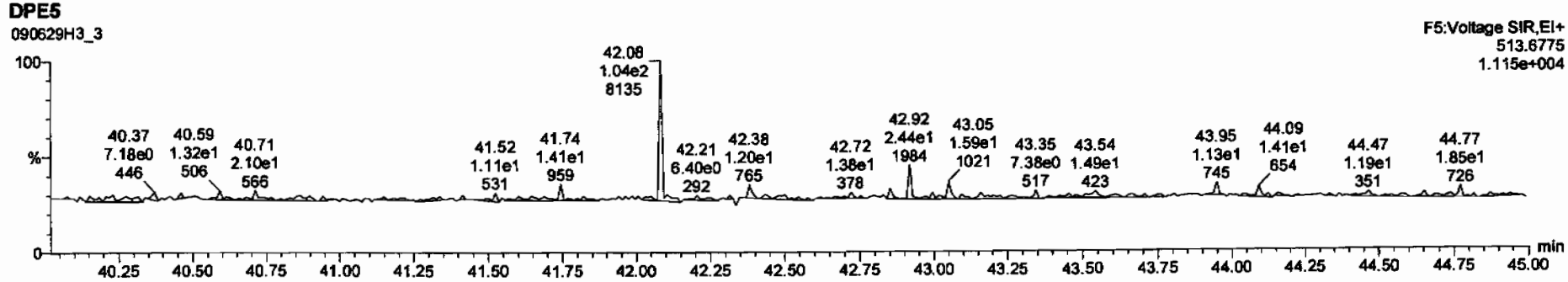

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Printed: Tuesday, June 30, 2009 08:20:55 Pacific Daylight Time

Name: 090629H3_3, Date: 30-Jun-2009, Time: 05:52:25, ID: 31837_2207_005 CAMO-09-6049 11.23, Description: CAMO-09-6049

PFK1

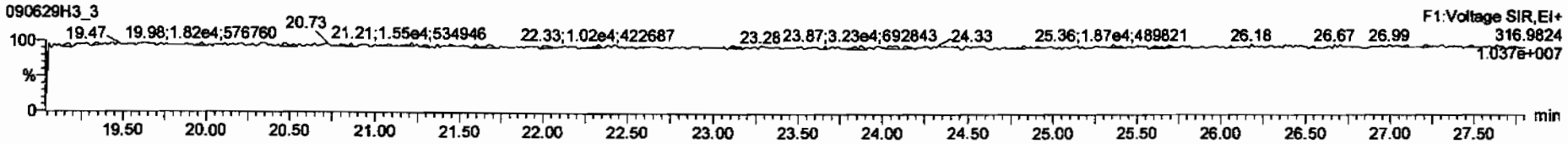

PFK2

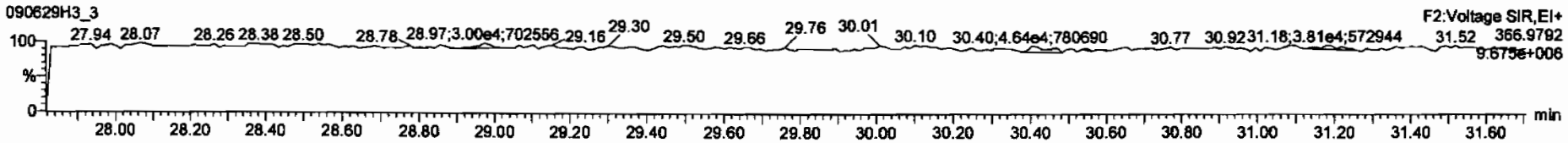

PFK3

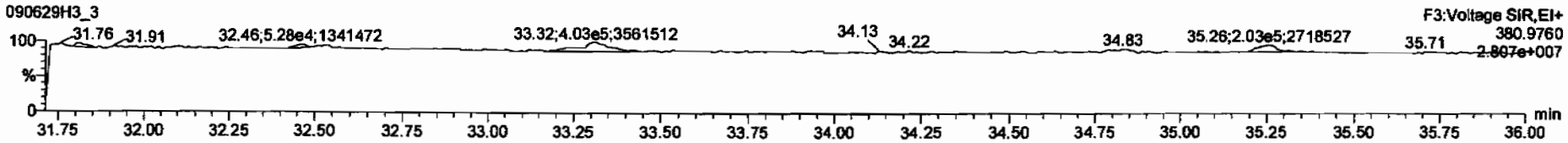

PFK4

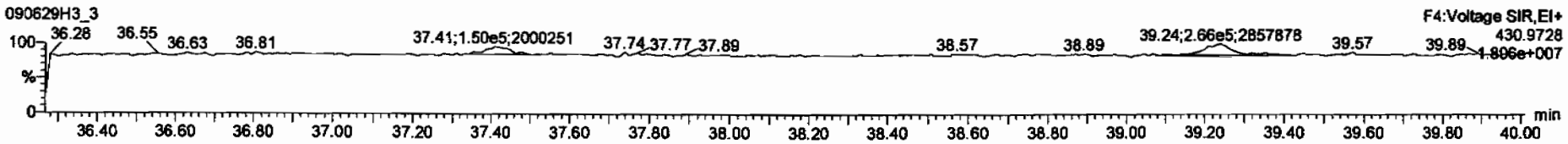

PFK5

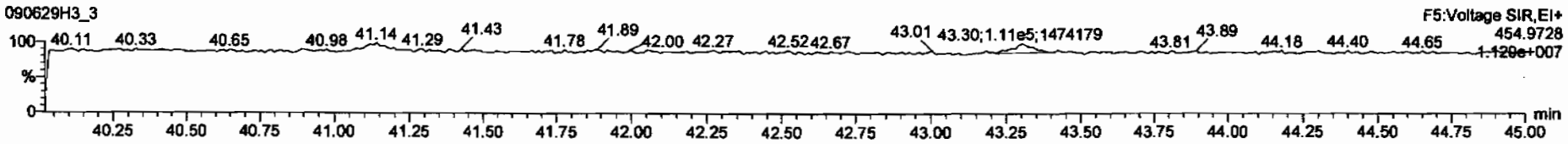

TargetLynx - 090629h3-3.qld * - [Chromatogram]

090629H3_3 - 31837_2207_005 CAMO-09-6049 11.23 - CAMO-09-6049

13C-2,3,7,8-TCDD	8.84e5	0.78	NO	1.01	10.050	26.06	1.023	182	91.2	0.300	
13C-1,2,3,7,8-PeCDD	6.70e5	0.63	NO	0.83	10.050	30.72	1.206	169	84.8	0.283	
13C-1,2,3,4,7,8-HxCDD	6.17e5	1.26	NO	0.92	10.050	34.15	0.988	178	89.3	0.464	
13C-1,2,3,6,7,8-HxCDD	5.80e5	1.26	NO	0.92	10.050	34.27	0.991	166	83.5	0.461	

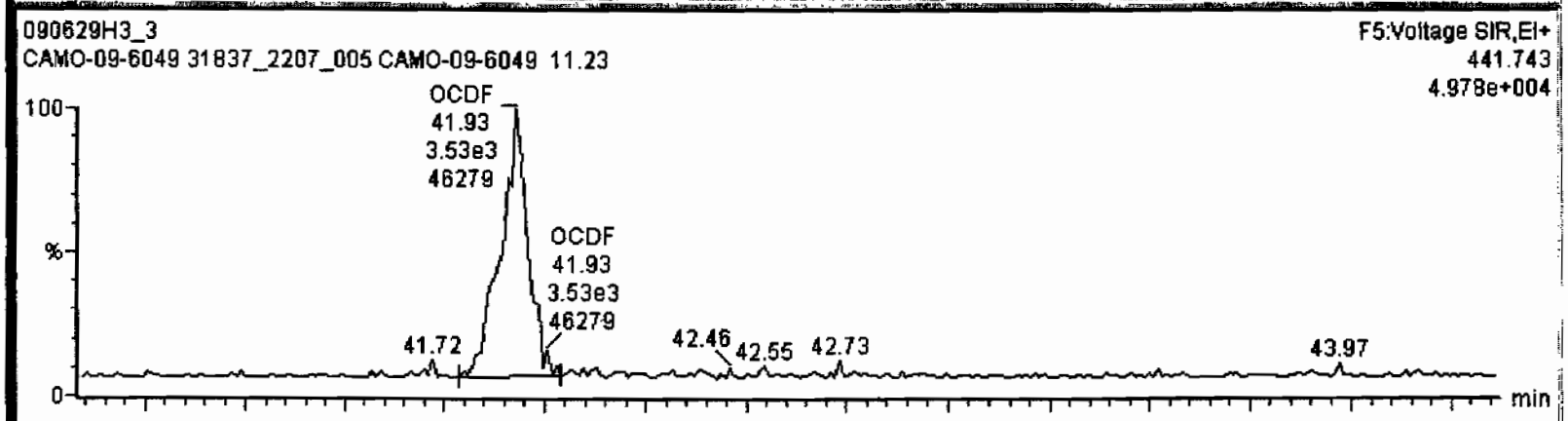

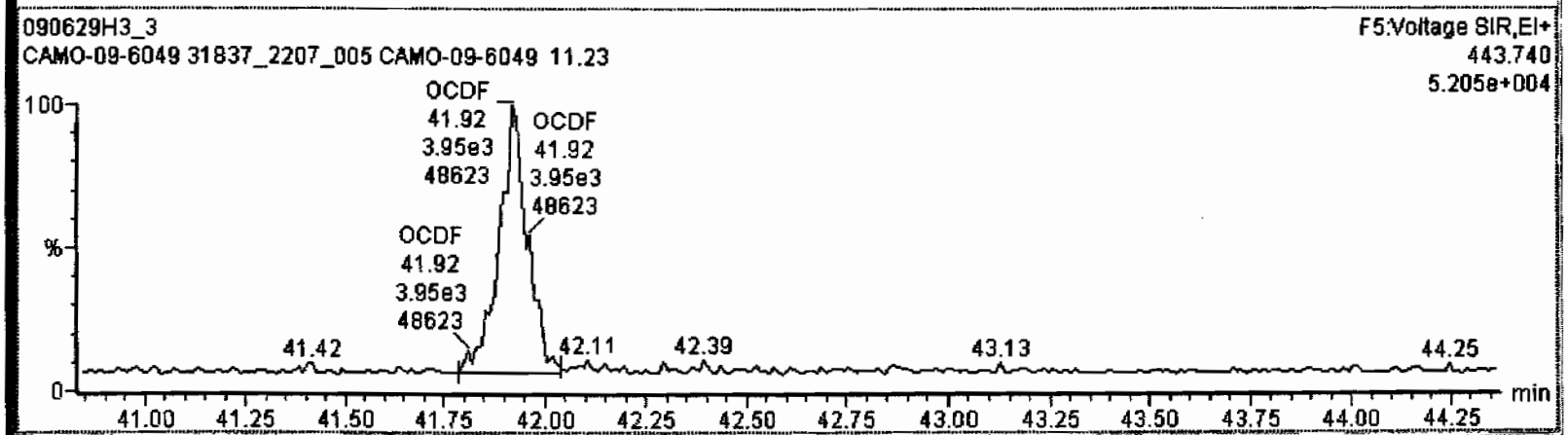

Quantify Sample Summary Report **MassLynx 4.1**

Dataset: C:\MassLynx\Default.pro\Results\090630f1\090630f1-11.qld

Last Altered: Wednesday, July 01, 2009 07:20:50 Pacific Standard Time
Printed: Wednesday, July 01, 2009 07:21:18 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 30 Jun 2009 11:52:43
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090630F2_11, Date: 30-Jun-2009, Time: 16:52:51, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

	#	Name	Resp	RA	Qual	RRF/M	wVol	RT	Conc	Resp	DL
1	1	2,3,7,8-TCDF	4.96e3	0.84	NO	0.857	9.953	17.48	1.0437		0.123
2	2	13C-2,3,7,8-TCDF	1.11e6	0.78	NO	1.06	9.953	17.46	184.22	91.7	0.446
3	3	13C-1,2,3,4-TCDF	1.15e6	0.79	NO	1.00	9.953	15.35	200.94	100	0.471

7/1/09
7/2/09

Dataset: C:\MassLynx\Default.pro\Results\090630f1\090630f1-11.qld

Last Altered: Wednesday, July 01, 2009 07:20:50 Pacific Standard Time
Printed: Wednesday, July 01, 2009 07:21:18 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 30 Jun 2009 11:52:43
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090630F2_11, Date: 30-Jun-2009, Time: 16:52:51, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

2,3,7,8-TCDF

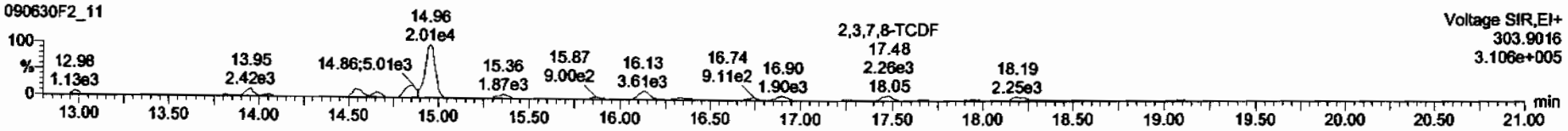

2,3,7,8-TCDF

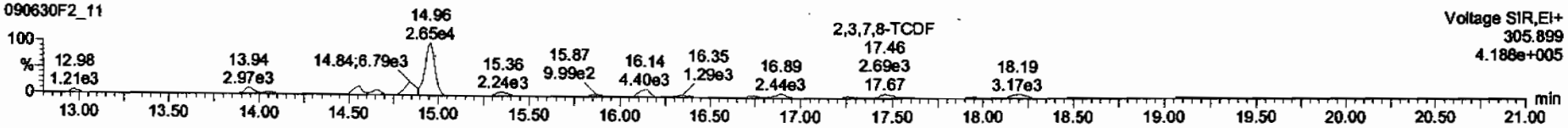

13C-2,3,7,8-TCDF

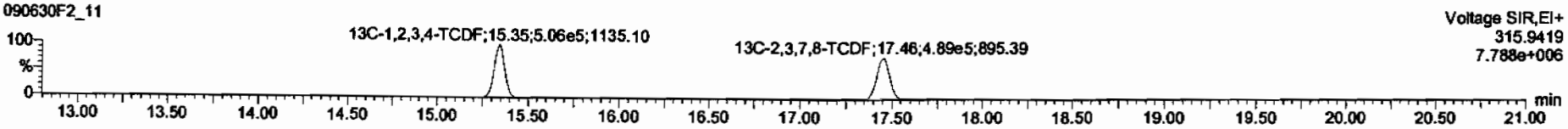

13C-2,3,7,8-TCDF

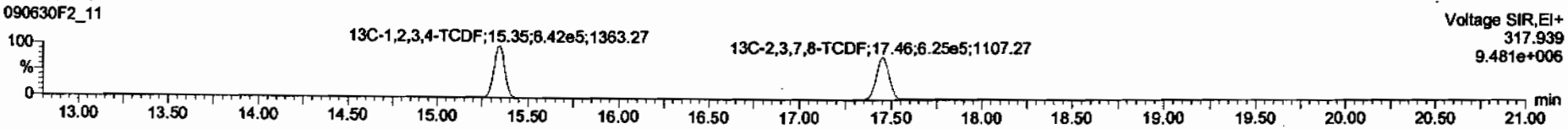

TargetLynx - 090630f1-11 - [Chromatogram]

File Edit View Display Processing Window Help

090630F2_11 - 31837_2207_003 CAMO-09-6008 13.14 - CAMO-09-6008

	#	Name	Resp.	RA	IdY	RT	CONC	%RC	DL
1	1	2,3,7,8-TCDF	[illegible]	[illegible]	NO	17.46	[illegible]	[illegible]	[illegible]
2	2	13C-2,3,7,8-TCDF	[illegible]	[illegible]	NO	17.46	[illegible]	[illegible]	[illegible]
3	3	13C-1,2,3,4-TCDF	[illegible]	[illegible]	NO	15.95	[illegible]	101	[illegible]
4	4	PFK1				1.000			
5	5	DBF1				1.000			

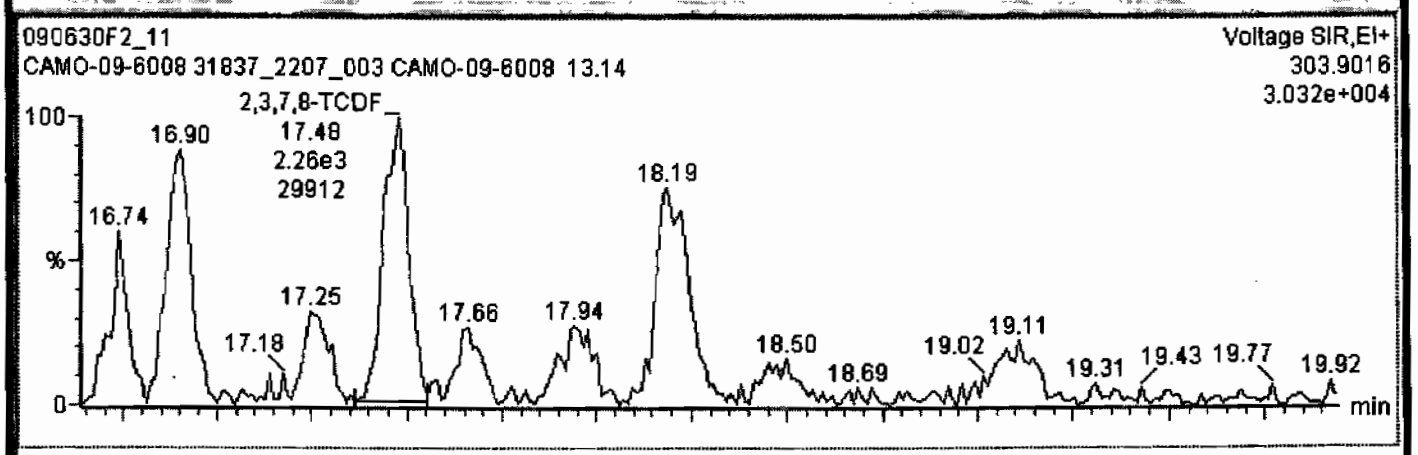

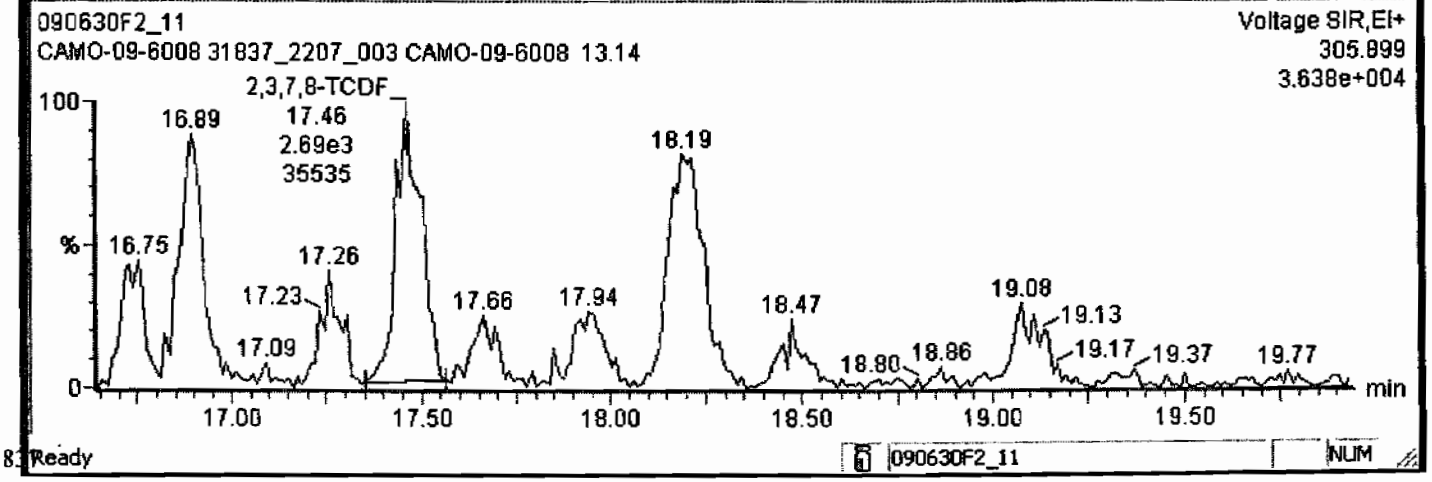

Ready 090630F2_11 NUM

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Printed: Wednesday, July 01, 2009 07:21:18 Pacific Standard Time

Name: 090630F2_11, Date: 30-Jun-2009, Time: 16:52:51, ID: 31837_2207_003 CAMO-09-6008 13.14, Description: CAMO-09-6008

PFK1

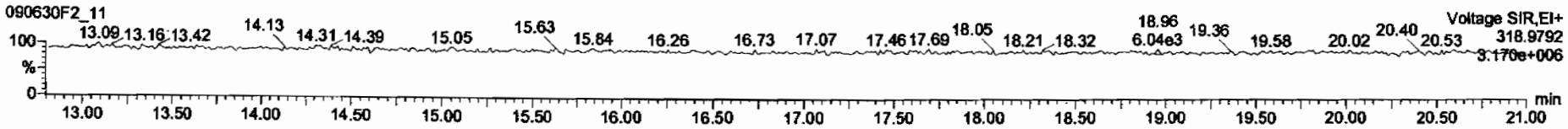

DPE1

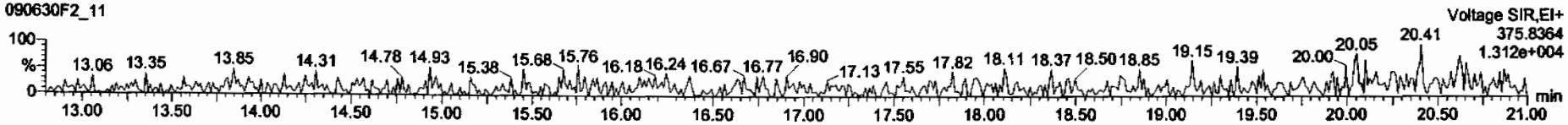

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1

GC Column ID: DB-5
Analysis Date: 29-Jun-09 Analysis Time: 14:01:48

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	NO	9.71	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	46.2	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	NO	46.2	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	NO	44.8	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	46.5	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	46.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.89	0.76-1.02	NO	88.2	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.74	0.65-0.89	NO	8.51	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	42.8	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	42.3	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.6	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	45.2	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	NO	44.6	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	45.5	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	46.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	87.4	63.0	159.0	Yes	80.0	120.0	Yes

8290 only

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/25/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1

GC Column ID: DB-5
Analysis Date: 29-Jun-09 Analysis Time: 14:01:48

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	100	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	97.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	111	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	257	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	108	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	103	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	NO	102	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	98.9	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	92.1	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	92.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	96.1	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	NO	99.7	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	103	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	224	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					10.0	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

8290 only

Analyst: [signature]
Date: 6/29/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, June 29, 2009 14:58:46 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:59:04 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.73
2	1,2,8,9-TCDD (Last)	26.98
3	1,2,4,7,9-PeCDD (First)	28.62
4	1,2,3,8,9-PeCDD (Last)	31.13
5	12,4,6,7,9-HxCDD (First)	32.59
6	1,2,3,7,8,9-HxCDD (Last)	34.60
7	1,2,3,4,6,7,9-HpCDD (First)	37.30
8	1,2,3,4,6,7,8-HpCDD (Last)	38.22
9	1,3,6,8-TCDF (First)	20.65
10	1,2,8,9-TCDF (Last)	27.15
11	1,3,4,6,8-PeCDF (First)	27.07
12	1,2,3,8,9-PeCDF (Last)	31.39
13	1,2,3,4,6,8-HxCDF (First)	32.03
14	1,2,3,4,8,9-HxCDF (Last)	35.00
15	1,2,3,4,6,7,8-HpCDF (First)	36.89
16	1,2,3,4,7,8,9-HpCDF (Last)	38.79

6/29/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090629H2-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090629H2_1

Analysis Date: 29-Jun-09

Analysis Time: 14:01:48

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.024	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [illegible]

Date: 6/29/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1

GC Column ID: DB-5
Analysis Date: 29-Jun-09

Analysis Time: 14:01:48

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.121	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.211	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]
Date: 6/29/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:22 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.17e4	0.81	NO	1.08	1.000	26.12	1.001	9.7118	97.1	0.0460	9.7118
2	1,2,3,7,8-PeCDD	2.60e5	0.61	NO	1.03	1.000	30.76	1.001	46.227	92.5	0.121	46.227
3	1,2,3,4,7,8-HxCDD	2.30e5	1.29	NO	1.00	1.000	34.19	1.001	46.188	92.4	0.161	46.188
4	1,2,3,6,7,8-HxCDD	2.39e5	1.22	NO	1.13	1.000	34.30	1.001	44.764	89.5	0.165	44.764
5	1,2,3,7,8,9-HxCDD	2.49e5	1.23	NO	1.10	1.000	34.60	1.009	46.510	93.0	0.158	46.510
6	1,2,3,4,6,7,8-HpCDD	2.03e5	1.05	NO	1.06	1.000	38.22	1.000	46.004	92.0	0.227	46.004
7	OCDD	3.54e5	0.89	NO	1.18	1.000	41.69	1.000	88.157	88.2	0.122	88.157
8	2,3,7,8-TCDF	9.14e4	0.74	NO	1.09	1.000	25.34	1.001	8.5130	85.1	0.0431	8.5130
9	1,2,3,7,8-PeCDF	4.26e5	1.60	NO	1.16	1.000	29.52	1.000	42.829	85.7	0.0905	42.829
10	2,3,4,7,8-PeCDF	4.04e5	1.56	NO	1.12	1.000	30.47	1.000	42.300	84.6	0.0888	42.300
11	1,2,3,4,7,8-HxCDF	3.75e5	1.27	NO	1.41	1.000	33.26	1.000	43.569	87.1	0.132	43.569
12	1,2,3,6,7,8-HxCDF	4.08e5	1.29	NO	1.22	1.000	33.39	1.000	45.197	90.4	0.132	45.197
13	2,3,4,6,7,8-HxCDF	3.49e5	1.24	NO	1.28	1.000	34.02	1.001	44.630	89.3	0.156	44.630
14	1,2,3,7,8,9-HxCDF	3.01e5	1.27	NO	1.26	1.000	35.00	1.000	44.852	89.7	0.212	44.852
15	1,2,3,4,6,7,8-HpCDF	3.51e5	1.04	NO	1.69	1.000	36.89	1.001	45.504	91.0	0.164	45.504
16	1,2,3,4,7,8,9-HpCDF	2.71e5	1.06	NO	1.48	1.000	38.79	1.000	46.451	92.9	0.194	46.451
17	OCDF	4.29e5	0.91	NO	1.10	1.000	41.92	1.001	87.361	87.4	0.166	87.361
18	13C-2,3,7,8-TCDD	6.85e5	0.79	NO	1.01	1.000	26.09	1.023	102.81	103	0.182	
19	13C-1,2,3,7,8-PeCDD	5.45e5	0.64	NO	0.827	1.000	30.73	1.205	100.32	100	0.177	
20	13C-1,2,3,4,7,8-HxCDD	4.98e5	1.24	NO	0.916	1.000	34.17	0.988	103.08	103	0.348	
21	13C-1,2,3,6,7,8-HxCDD	4.75e5	1.24	NO	0.921	1.000	34.28	0.991	97.757	97.8	0.346	
22	13C-1,2,3,4,6,7,8-HpCDD	4.14e5	1.07	NO	0.708	1.000	38.21	1.105	110.81	111	0.366	
23	13C-OCDD	6.81e5	0.89	NO	0.503	1.000	41.68	1.205	256.92	128	0.308	
24	13C-2,3,7,8-TCDF	9.87e5	0.78	NO	0.977	1.000	25.31	0.992	108.47	108	0.129	
25	13C-1,2,3,7,8-PeCDF	8.58e5	1.56	NO	0.896	1.000	29.51	1.157	102.85	103	0.256	
26	13C-2,3,4,7,8-PeCDF	8.53e5	1.55	NO	0.900	1.000	30.46	1.194	101.87	102	0.255	
27	13C-1,2,3,4,7,8-HxCDF	6.10e5	0.53	NO	1.17	1.000	33.25	0.961	98.948	98.9	0.314	
28	13C-1,2,3,6,7,8-HxCDF	7.38e5	0.53	NO	1.52	1.000	33.38	0.965	92.136	92.1	0.242	
29	13C-2,3,4,6,7,8-HxCDF	6.12e5	0.52	NO	1.25	1.000	34.00	0.983	92.862	92.9	0.294	
30	13C-1,2,3,7,8,9-HxCDF	5.34e5	0.51	NO	1.05	1.000	34.98	1.011	96.148	96.1	0.348	

6/29/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:22 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	4.56e5	0.45	NO	0.868	1.000	36.87	1.066	99.653	99.7	0.432
32	13C-1,2,3,4,7,8,9-HpCDF	3.93e5	0.45	NO	0.727	1.000	38.79	1.121	102.70	103	0.516
33	13C-OCDF	8.97e5	0.88	NO	0.760	1.000	41.90	1.211	223.90	112	0.228
34	37Cl-2,3,7,8-TCDD	4.39e4			0.668	1.000	26.12	1.024	9.9972	100	0.0673
35	13C-1,2,3,4-TCDD	6.56e5	0.78	NO	1.00	1.000	25.51	0.000	100.00	100	0.184
36	13C-1,2,3,4-TCDF	9.31e5	0.78	NO	1.00	1.000	24.09	0.000	100.00	100	0.126
37	13C-1,2,3,7,8,9-HxCDD	5.27e5	1.24	NO	1.00	1.000	34.59	0.000	100.00	100	0.319

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 8:02:11 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:02:26 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

090629H2_1	ST090629H2-1 1613 CS3 080917I		29-Jun-09	14:01:48
090629H2_2	0_2207_OPR001		29-Jun-09	14:52:10
090629H2_3	solvent blank		29-Jun-09	15:41:42
090629H2_4	0_2207_MB001		29-Jun-09	16:31:15
090629H2_5	31831_2207_001 CAMO-09-10460	10.45	29-Jun-09	17:20:45
090629H2_6	31831_2207_002 CAMO-09-10461	11.42	29-Jun-09	18:10:16
090629H2_7	31831_2207_003 CAMO-09-10462	10.55	29-Jun-09	18:59:49
090629H2_8	31831_2207_004 CAMO-09-10467	10.57	29-Jun-09	19:49:21
090629H2_9	31832_2207_001 CAMO-09-10480	11.15	29-Jun-09	20:38:54
090629H2_10	31833_2207_001 CAMO-09-6005	12.18	29-Jun-09	21:28:25
090629H2_11	31833_2207_002 CAMO-09-6047	12.12	29-Jun-09	22:17:56
090629H2_12	31837_2207_001 CAMO-09-6006	11.31	29-Jun-09	23:07:29
090629H2_13	31837_2207_002 CAMO-09-6007	10.42	29-Jun-09	23:56:59
090629H2_14	31837_2207_003 CAMO-09-6008	13.14	30-Jun-09	00:46:29
090629H2_15	31837_2207_004 CAMO-09-6009	12.25	30-Jun-09	01:36:02
090629H2_16	solvent blank		30-Jun-09	02:25:34
090629H2_17	ST090629H2-2 1613 CS3 080917I		30-Jun-09	03:15:05

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090629H2-1 End Calibration ID: ST090629H2-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range? (A)	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits	NA	
-S/N > 2.5:1	✓	
-CS1 within 12-hour clock	✓	

Comments: (A) 8290 only JL 6/30/09

Reviewed by: DMS 6/30/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 mh

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, June 29, 2009 13:58:42 Pacific Daylight Time

M 292.9824 R 12499

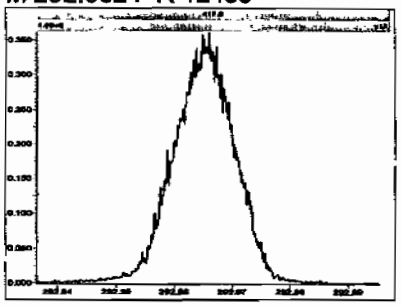

M 304.9824 R 12687

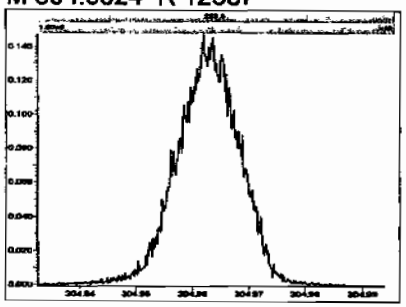

M 318.9792 R 12628

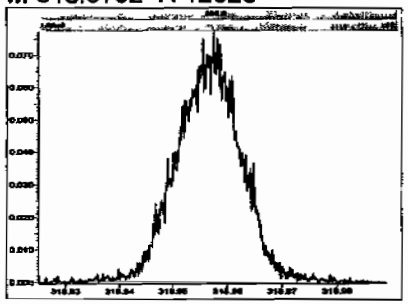

M 330.9792 R 11904

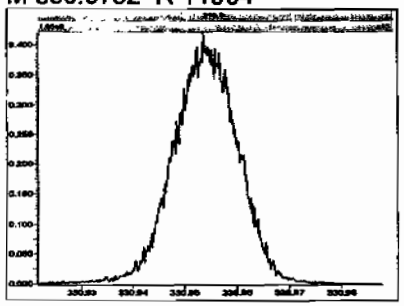

M 342.9792 R 11734

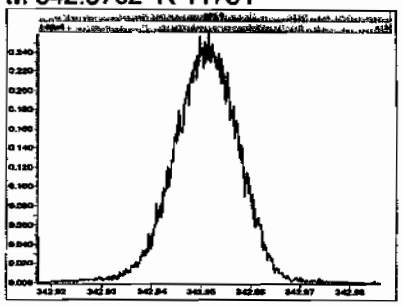

M 354.9792 R 11416

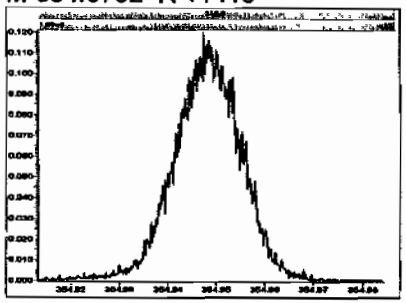

M 366.9792 R 11573

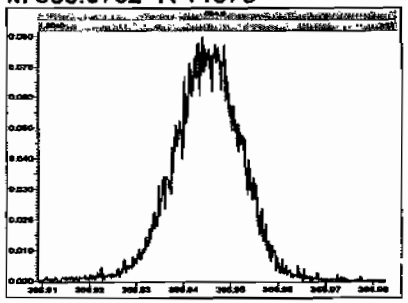

M 380.9760 R 11064

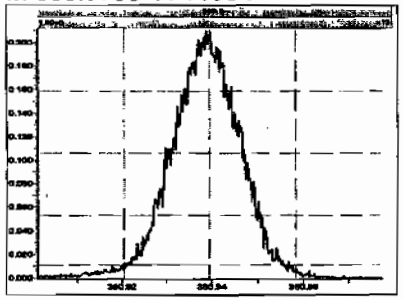

M 392.9760 R 11468

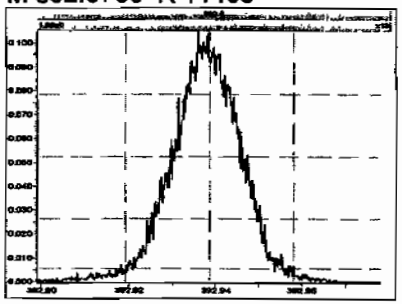

M 404.9760 R 10964

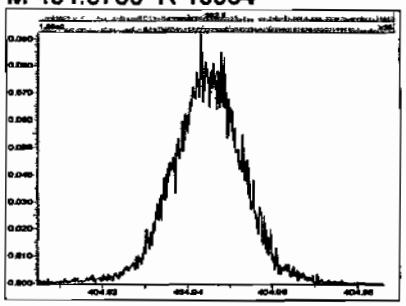

M 416.9760 R 10681

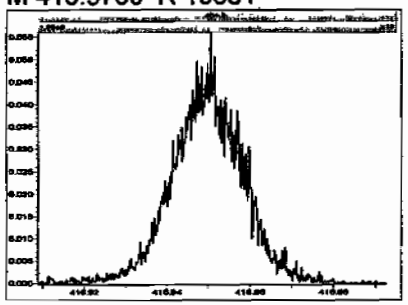

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, June 29, 2009 13:59:22 Pacific Daylight Time

M 330.9792 R 12376

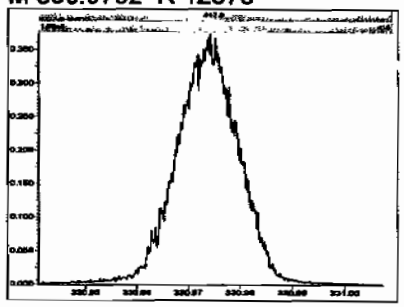

M 342.9792 R 12624

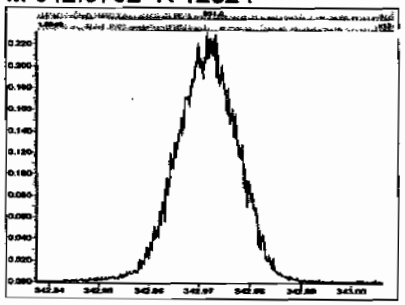

M 354.9792 R 12137

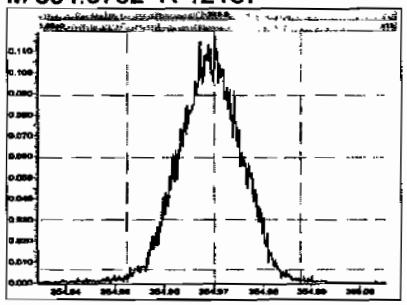

M 366.9792 R 11848

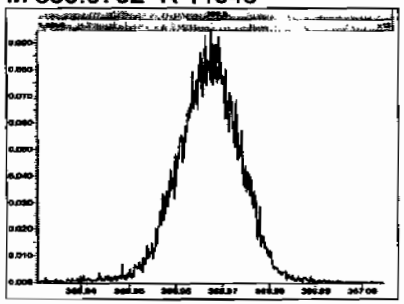

M 380.9760 R 12075

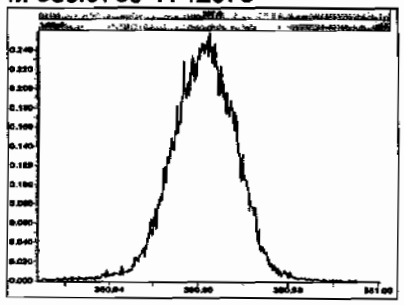

M 392.9760 R 11570

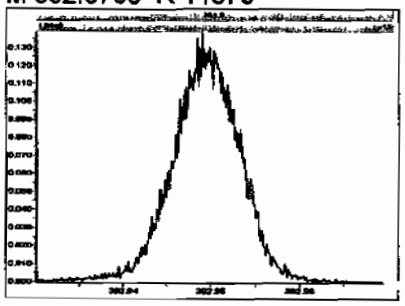

M 404.9760 R 11736

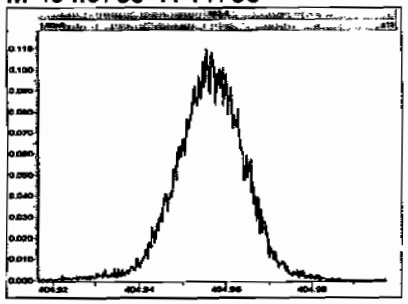

M 416.9760 R 11850

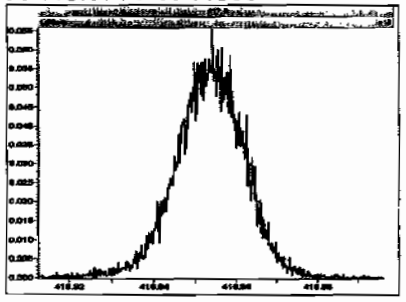

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, June 29, 2009 14:00:04 Pacific Daylight Time

M 366.9792 R 12500

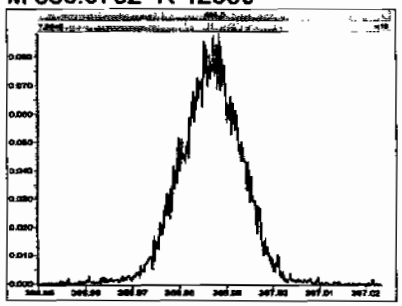

M 380.9760 R 12134

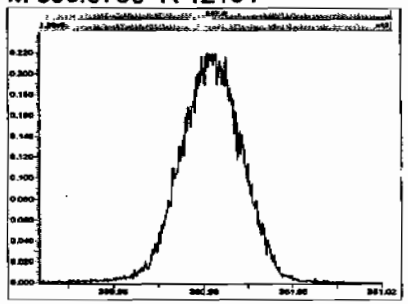

M 392.9760 R 12079

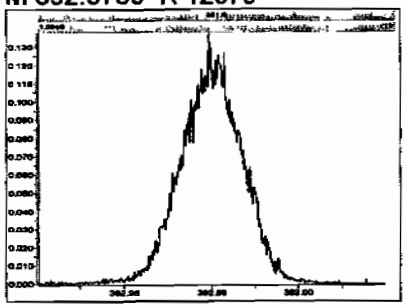

M 404.9760 R 12136

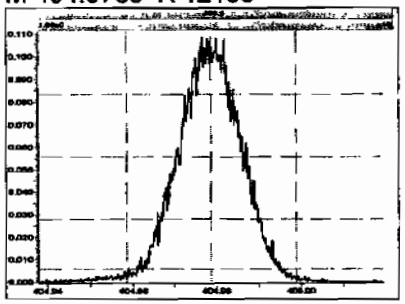

M 416.9760 R 12379

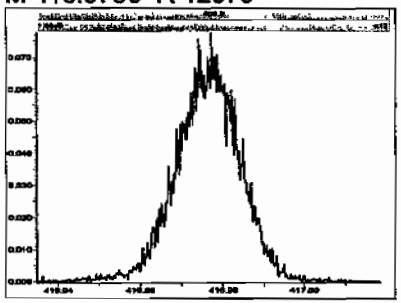

M 430.9728 R 11789

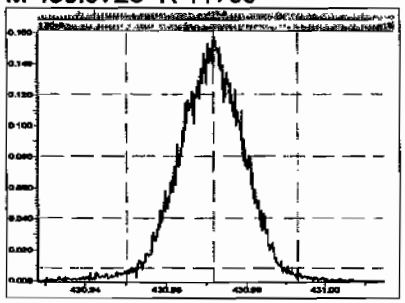

M 442.9728 R 12077

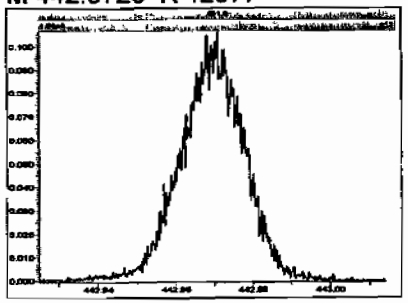

M 454.9728 R 12379

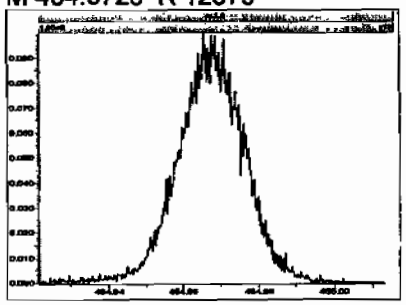

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Printed: Monday, June 29, 2009 14:00:39 Pacific Daylight Time

M 404.9760 R 13086

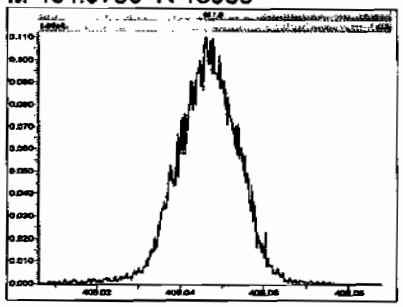

M 416.9760 R 13021

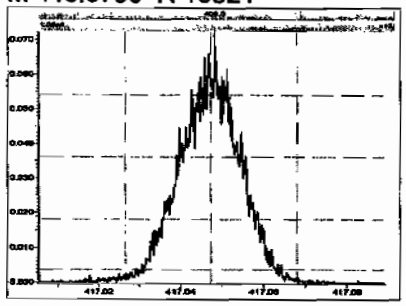

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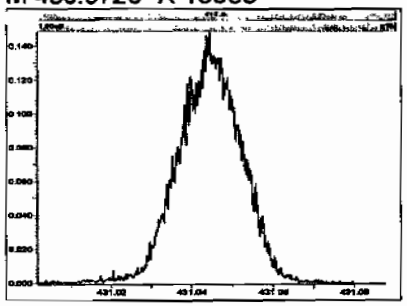

M 442.9728 R 12692

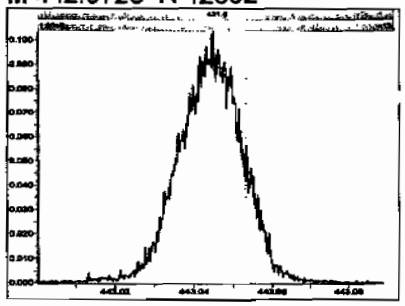

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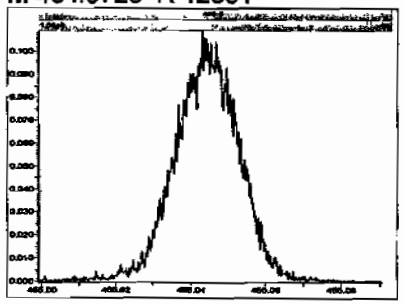

M 466.9728 R 12952

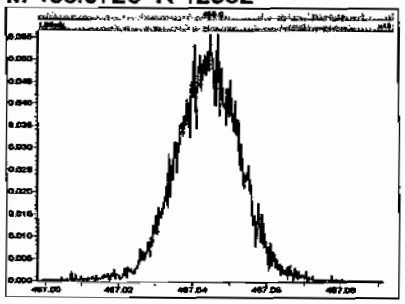

M 480.9696 R 12628

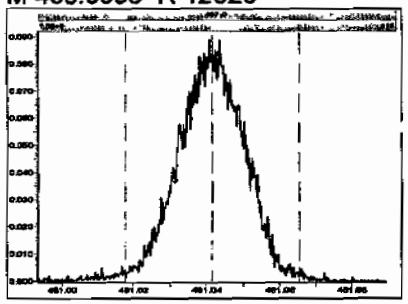

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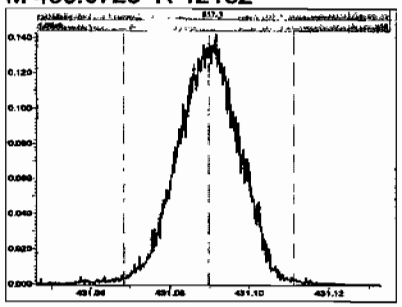

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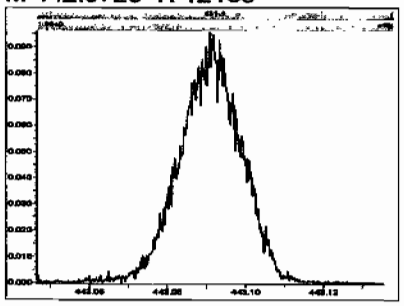

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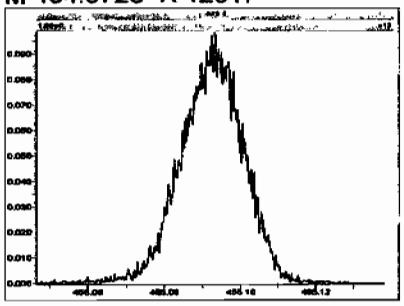

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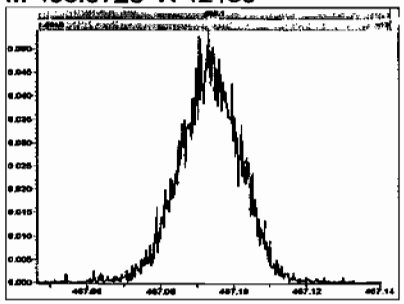

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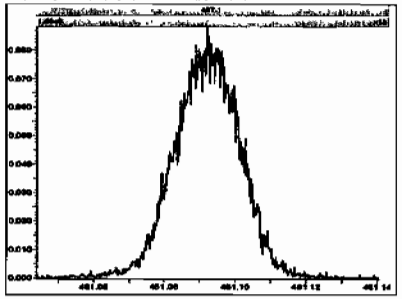

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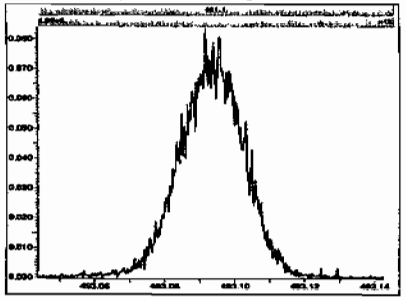

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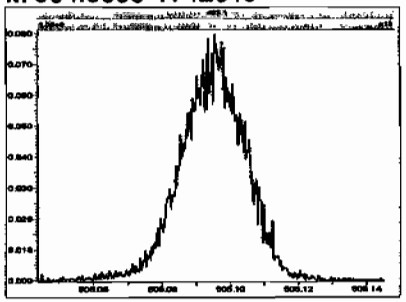

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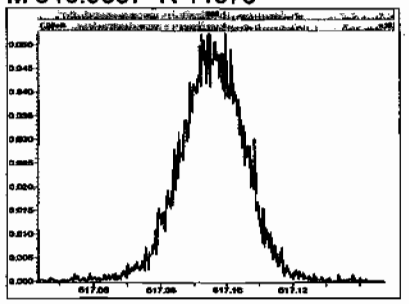

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

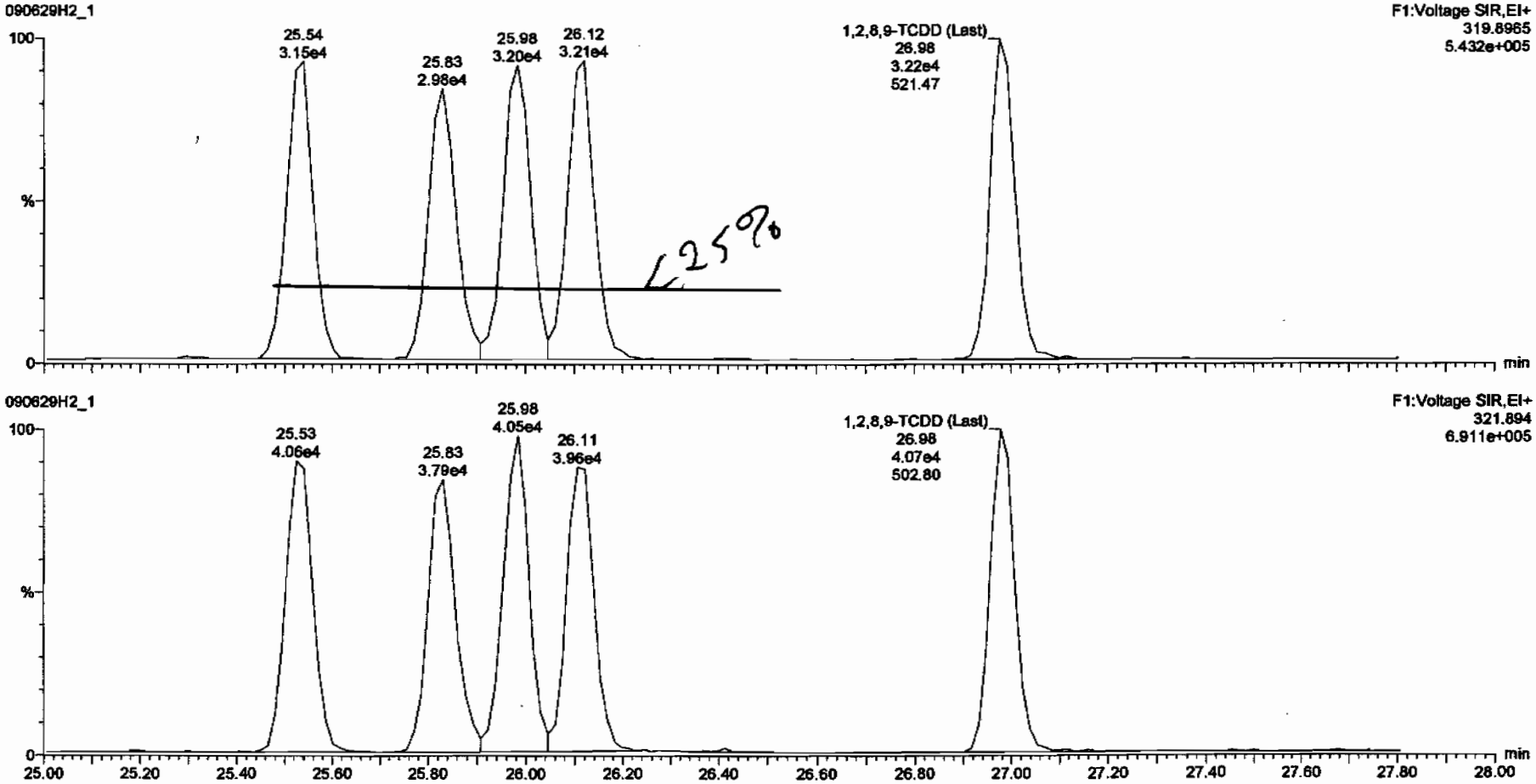

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

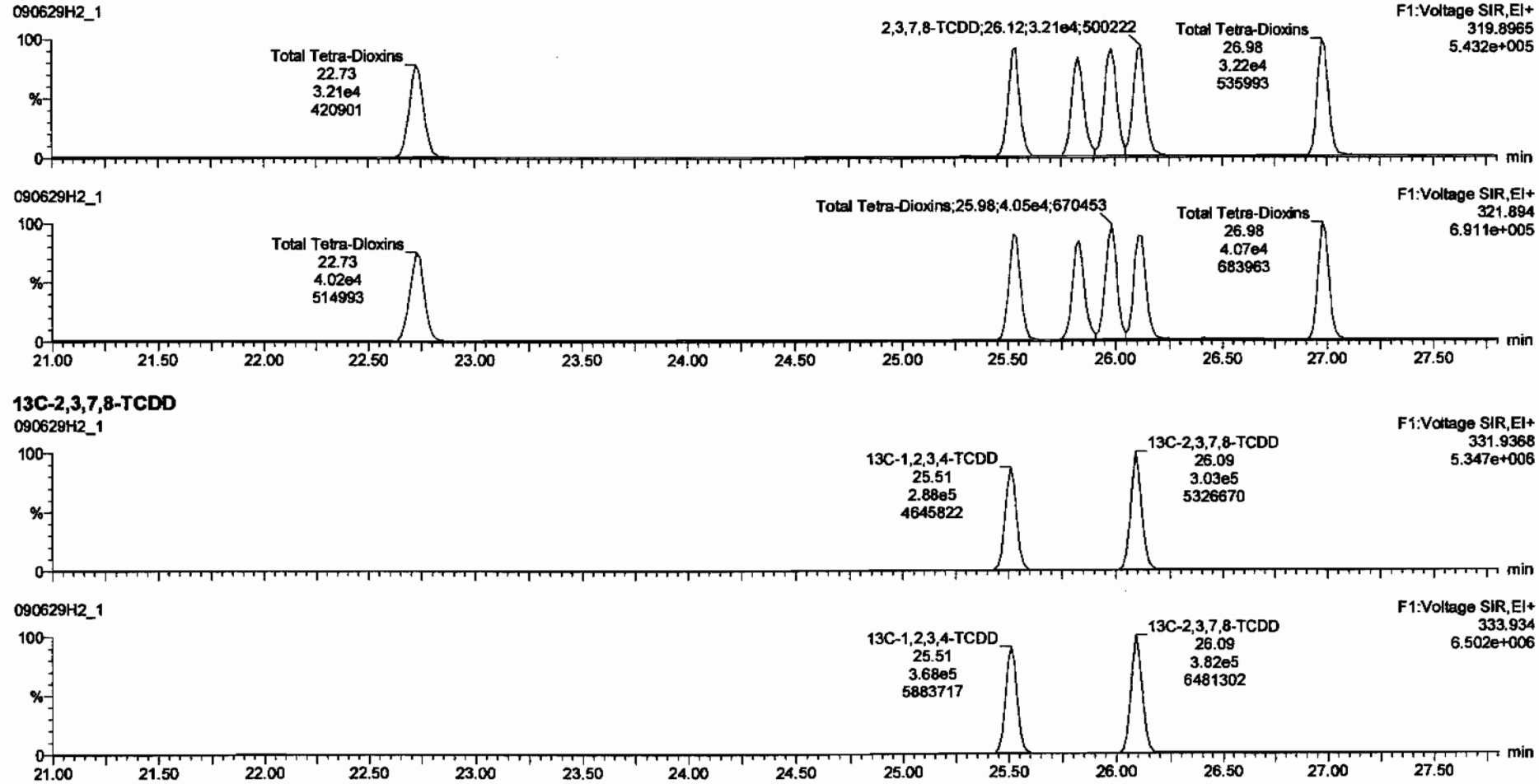

13C-2,3,7,8-TCDD

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37Cl-2,3,7,8-TCDD

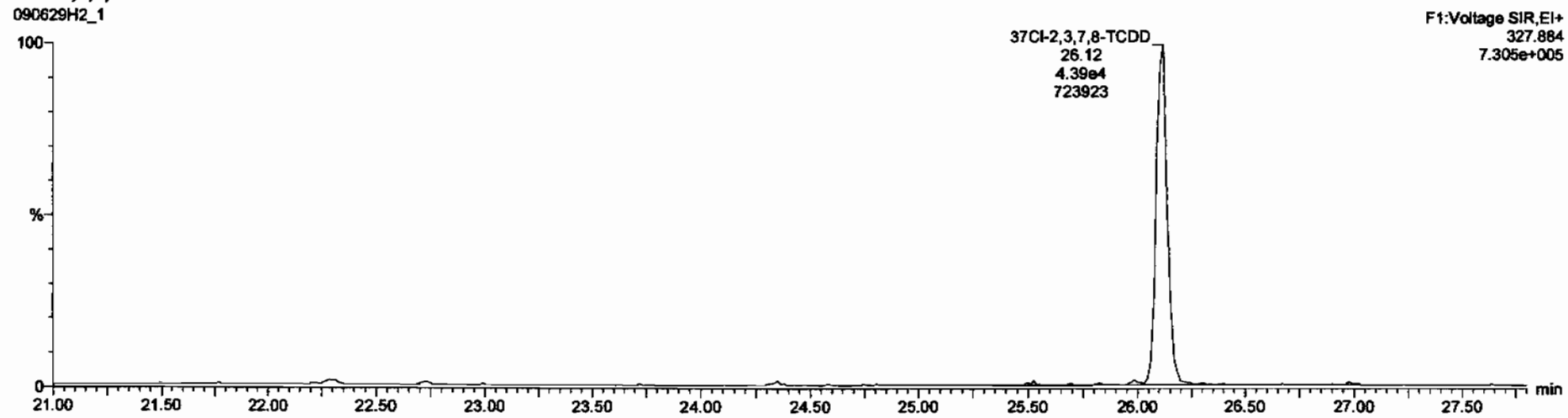

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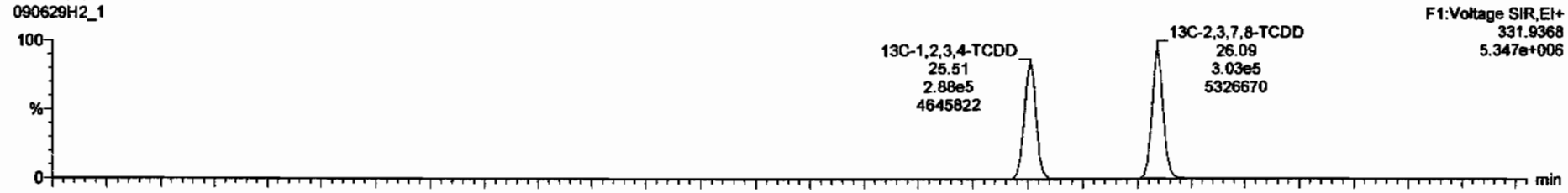

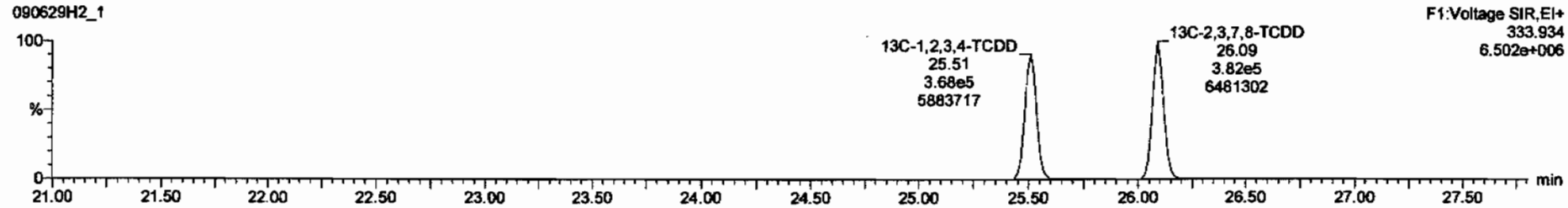

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

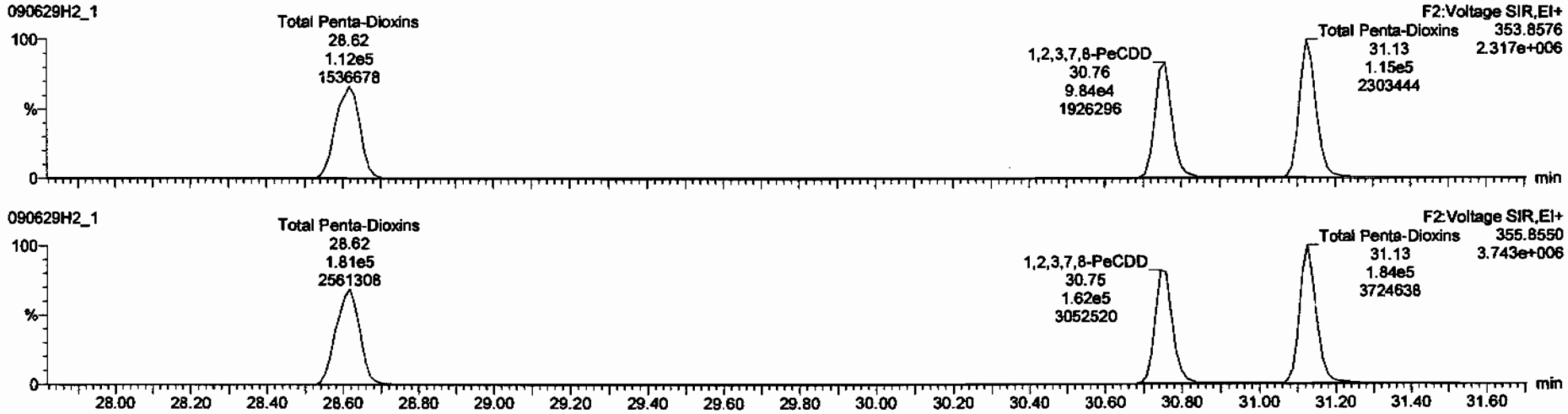

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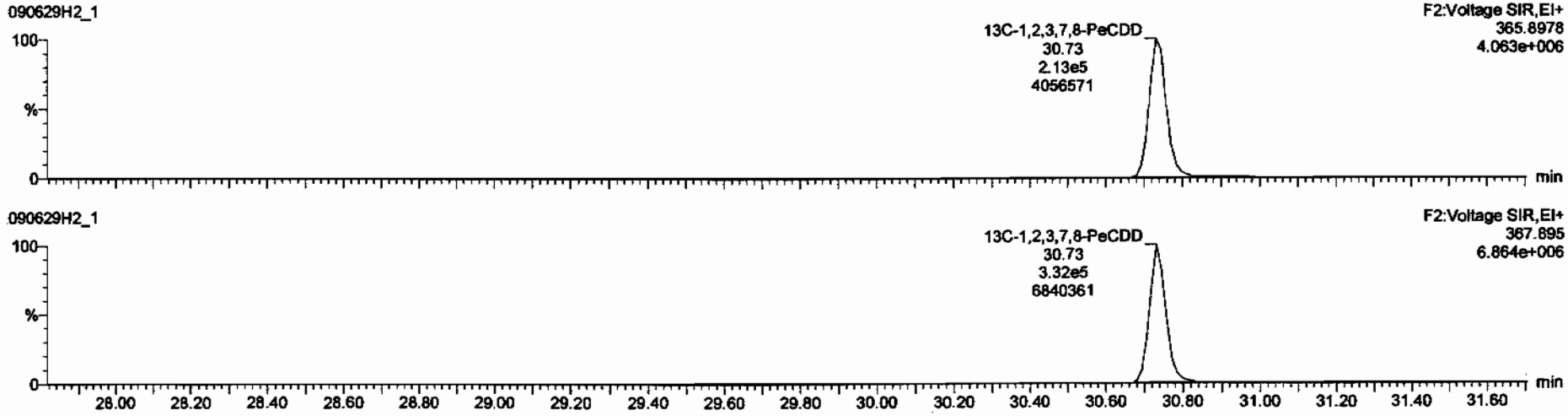

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

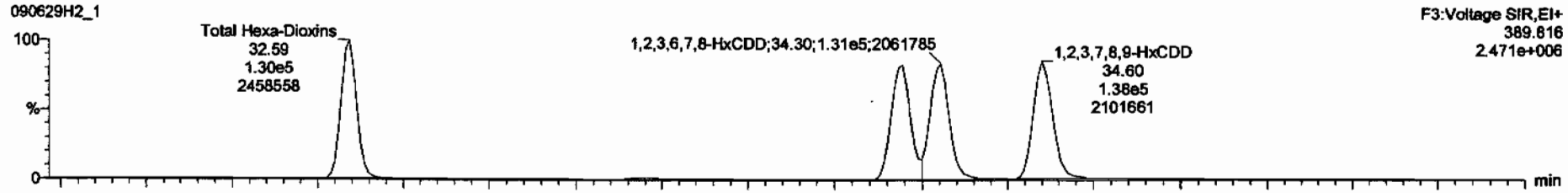

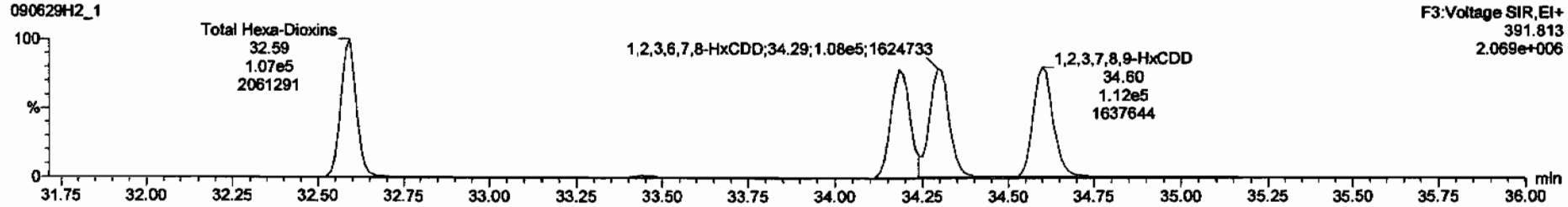

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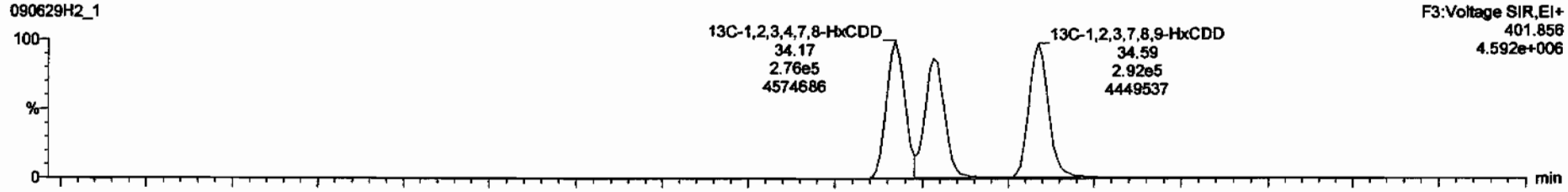

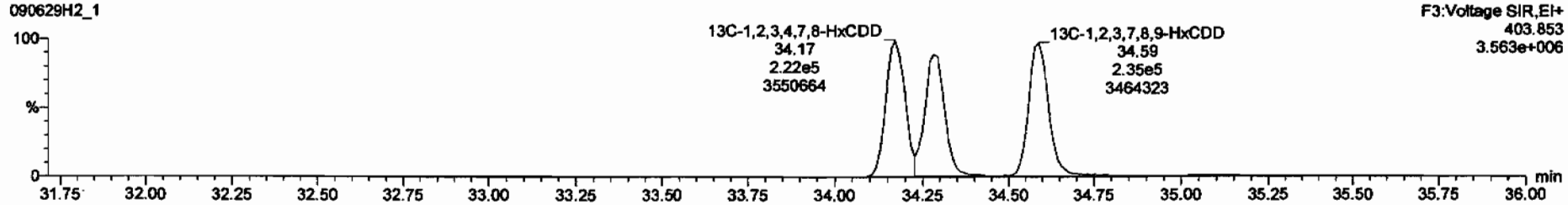

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

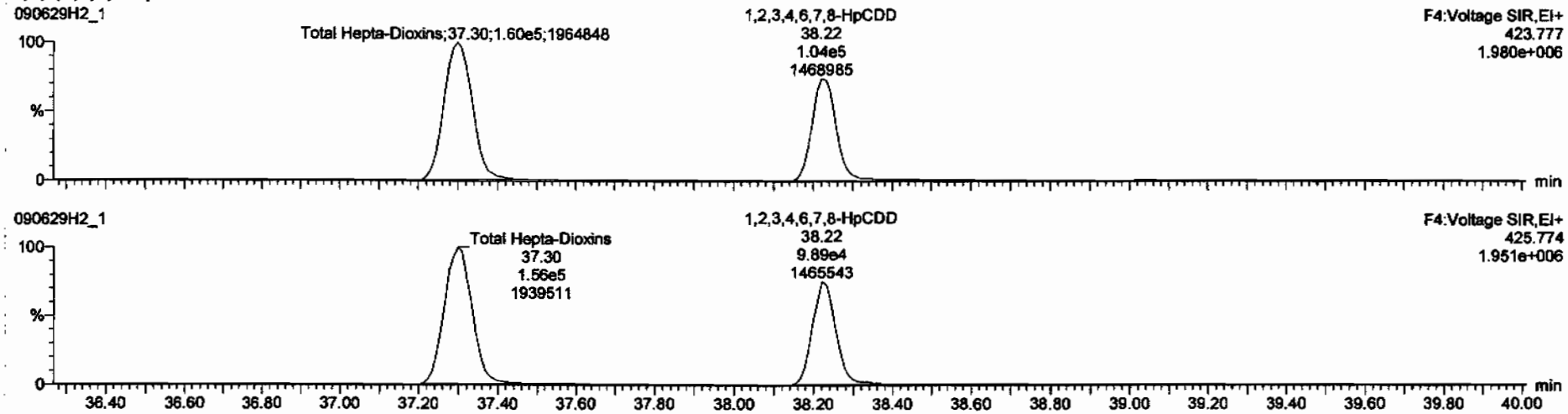

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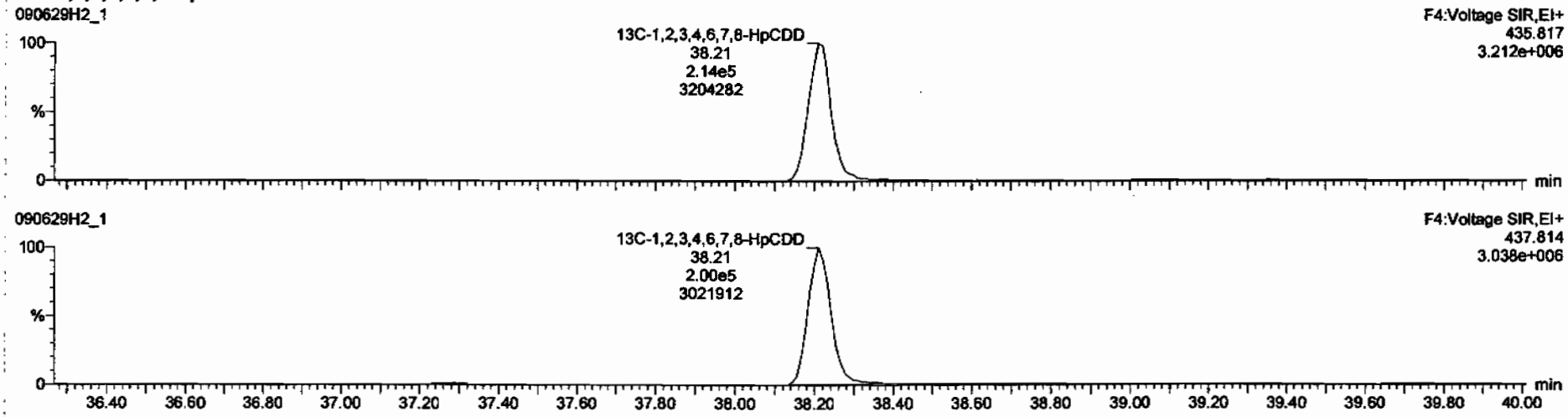

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

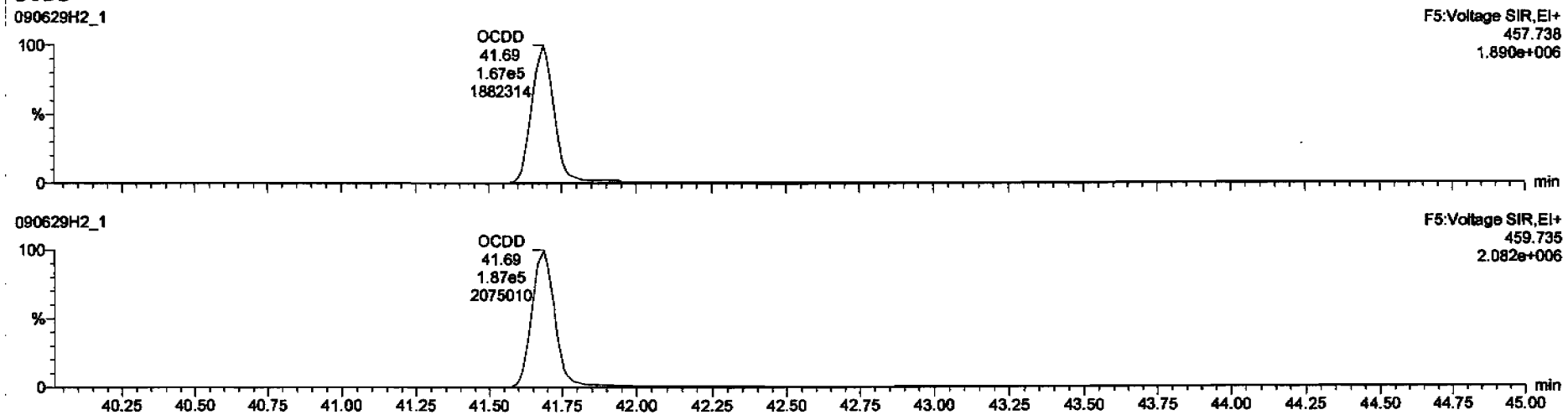

13C-OCDD

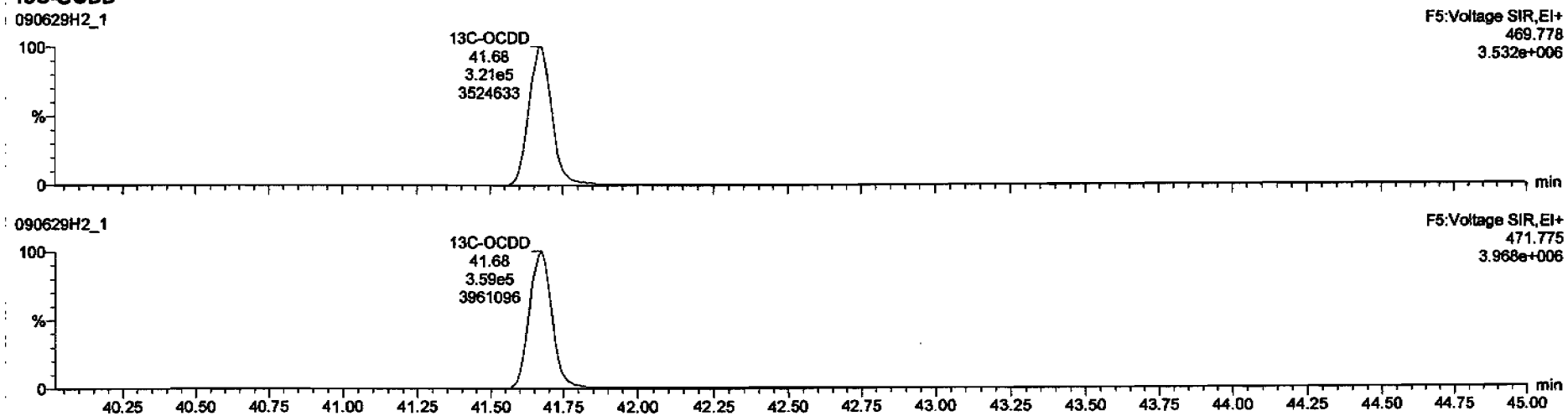

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

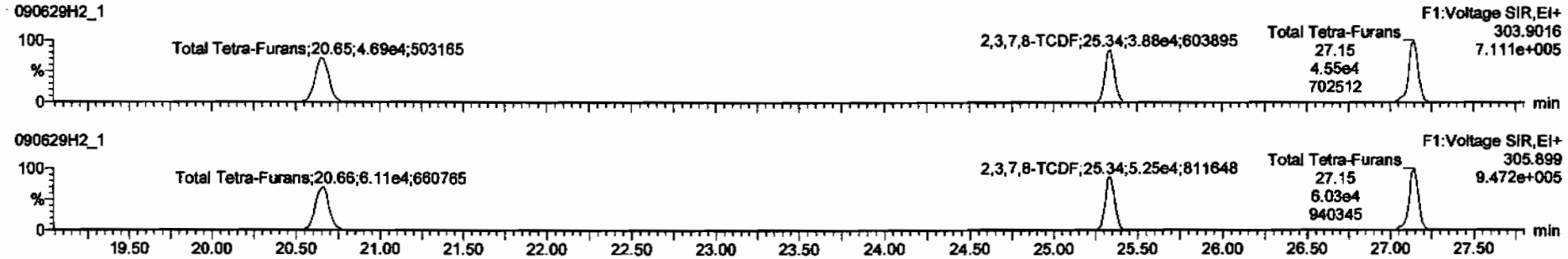

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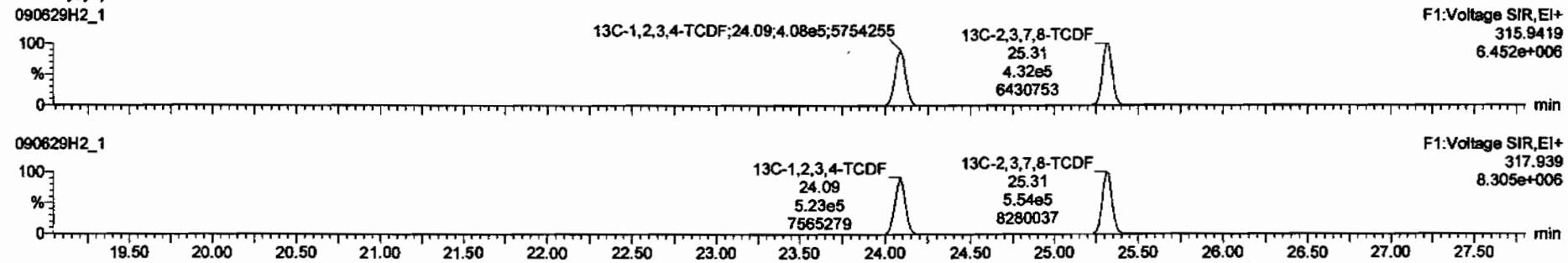

DPE1

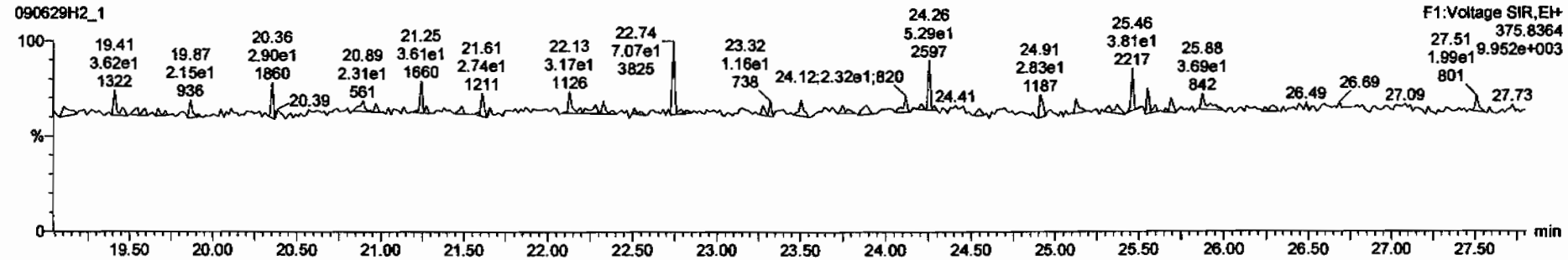

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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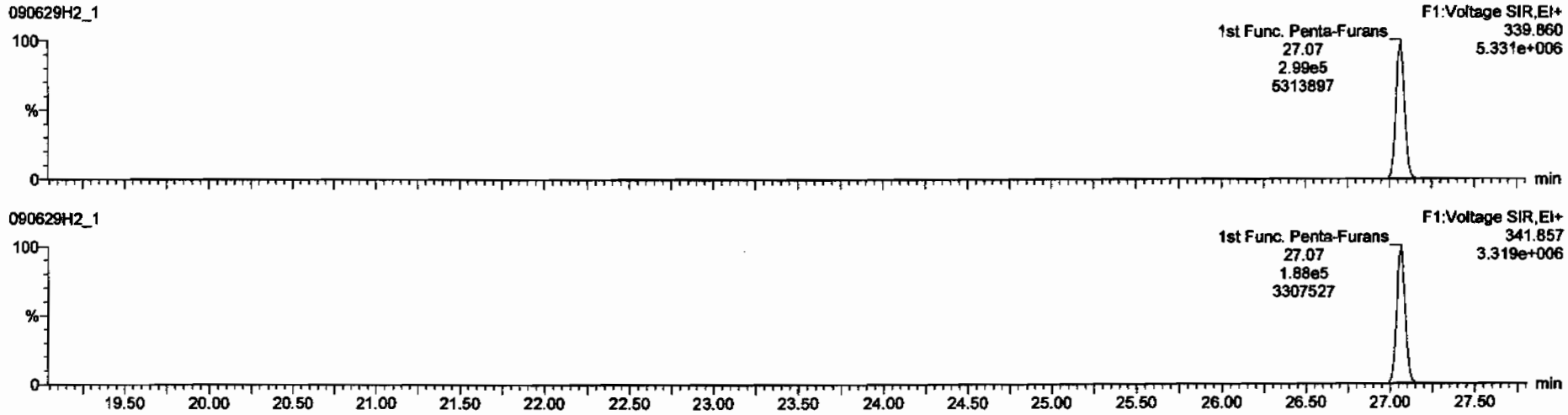

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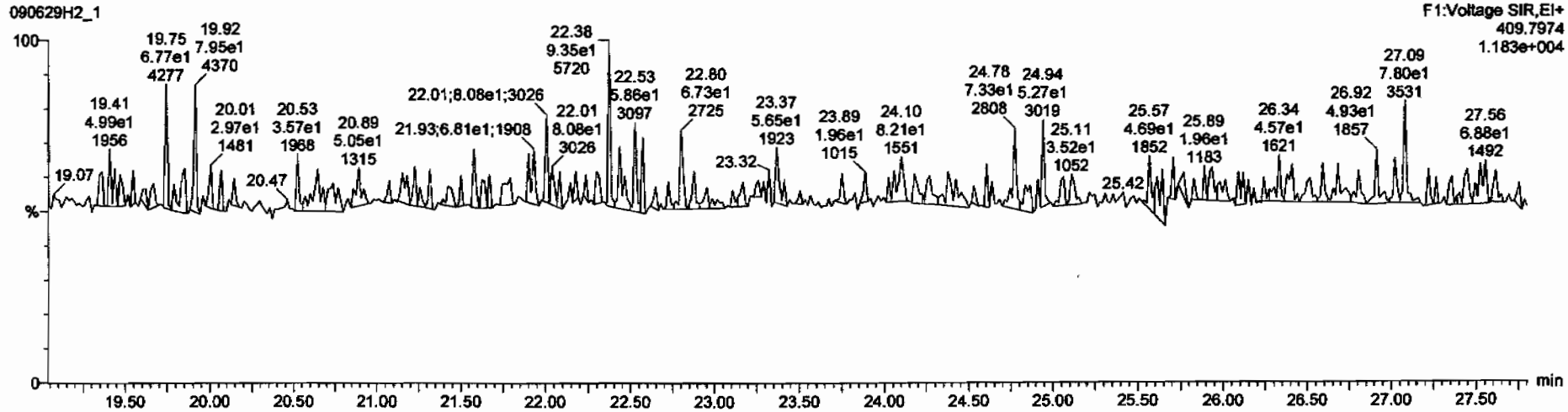

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

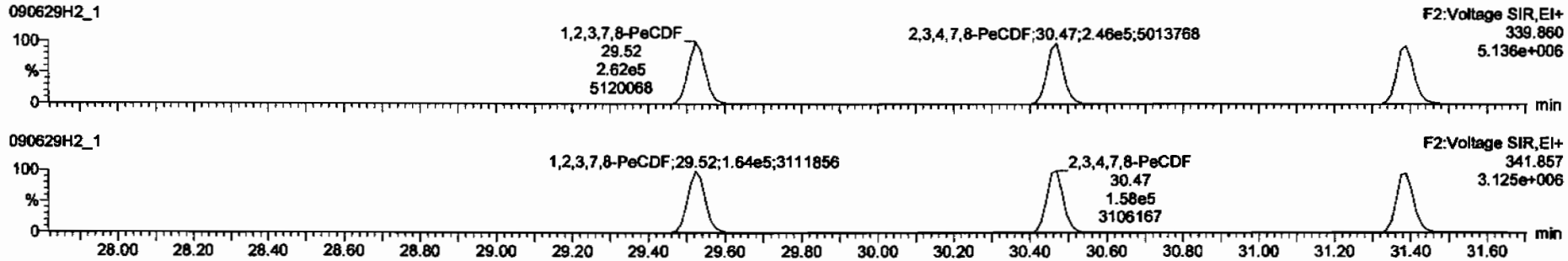

13C-1,2,3,7,8-PeCDF

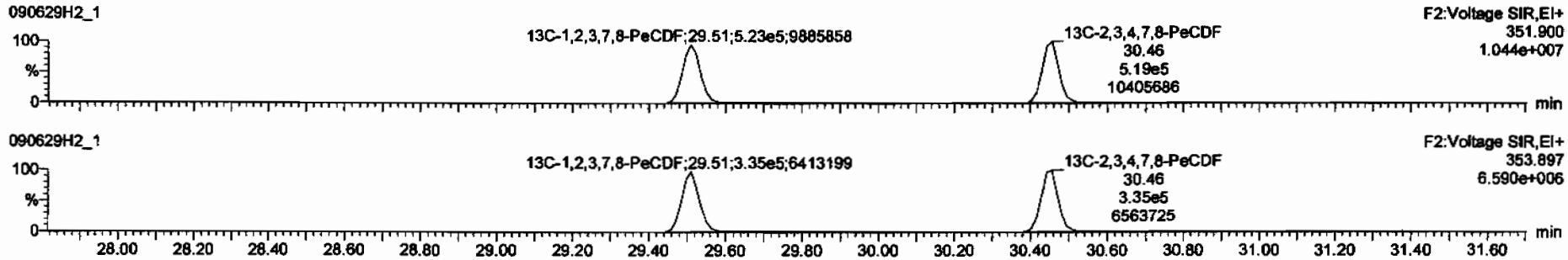

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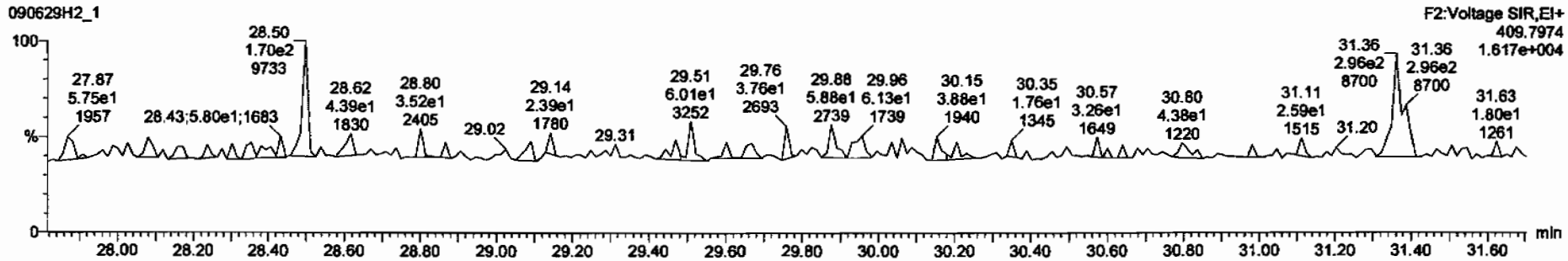

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1,2,3,4,7,8-HxCDF

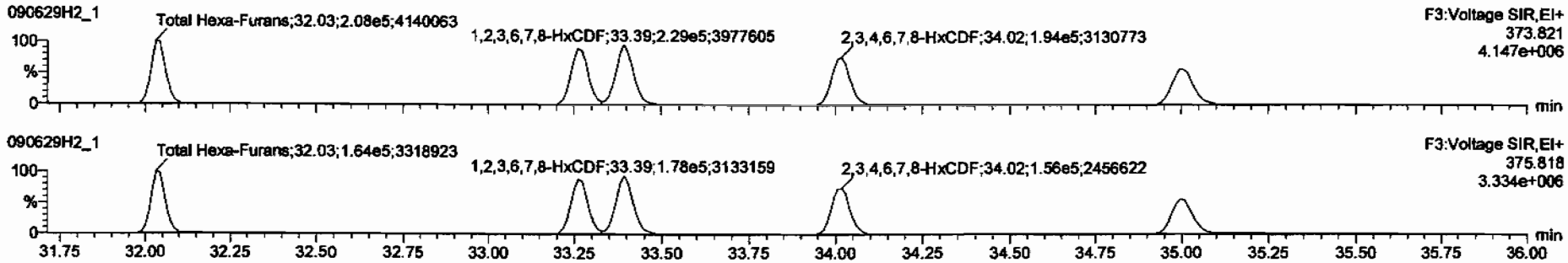

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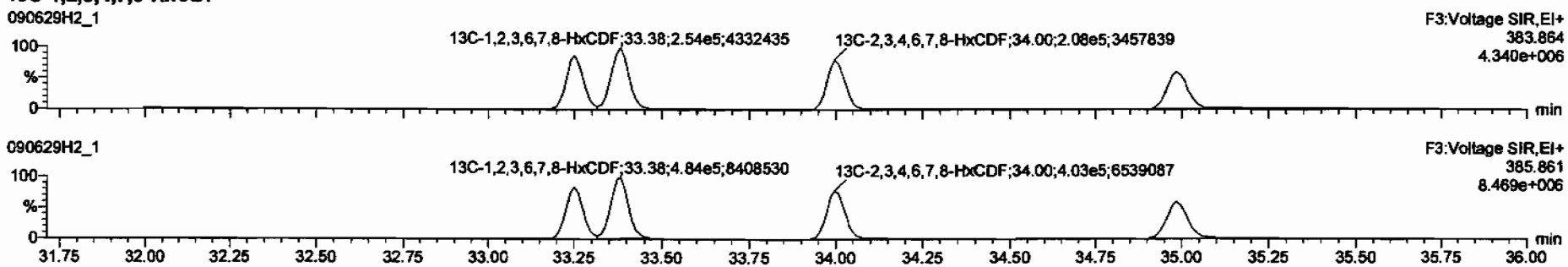

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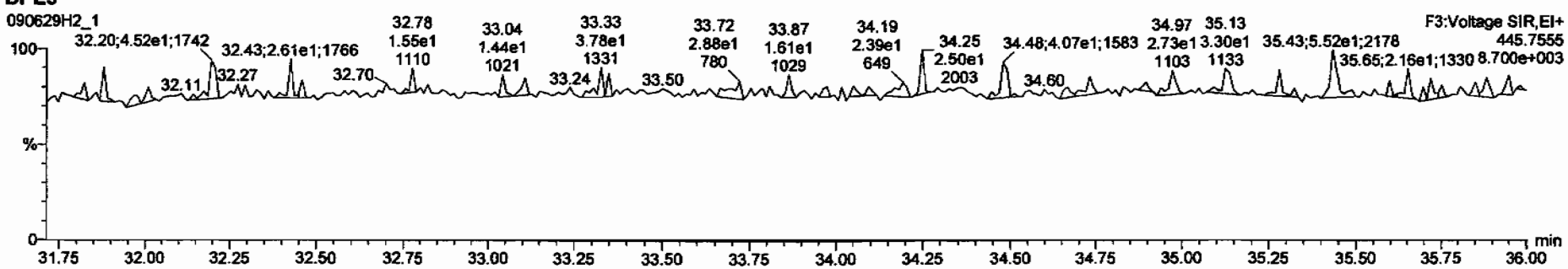

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1,2,3,4,6,7,8-HpCDF

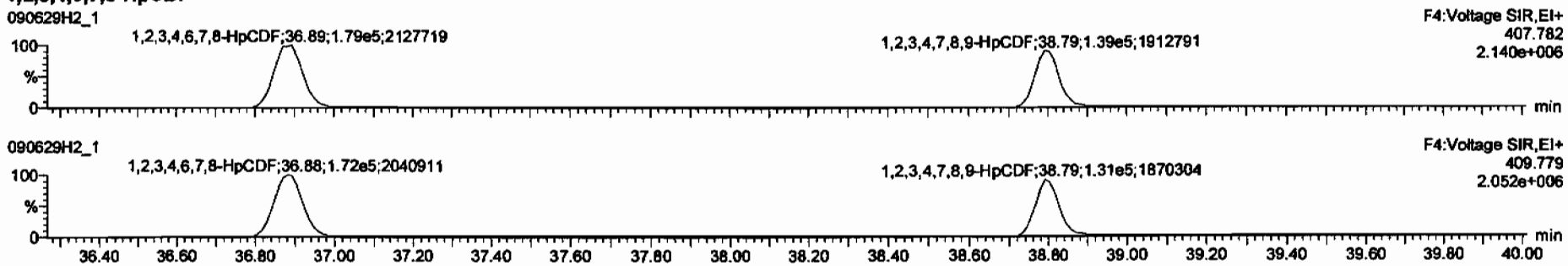

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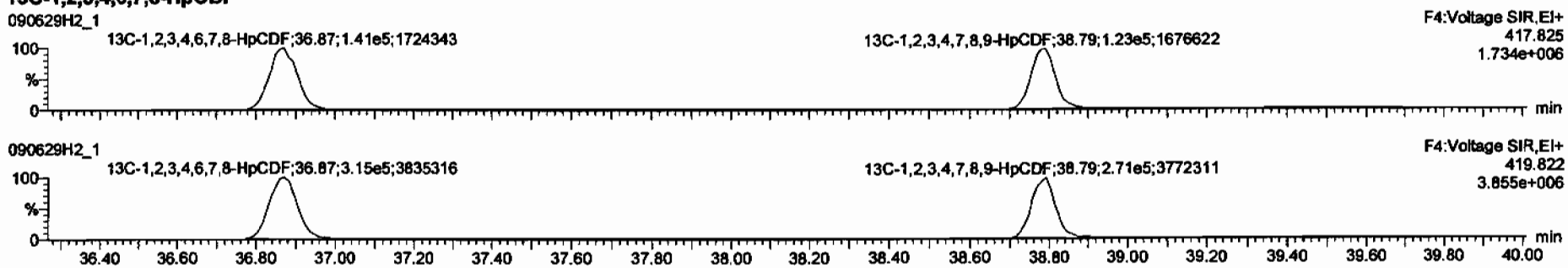

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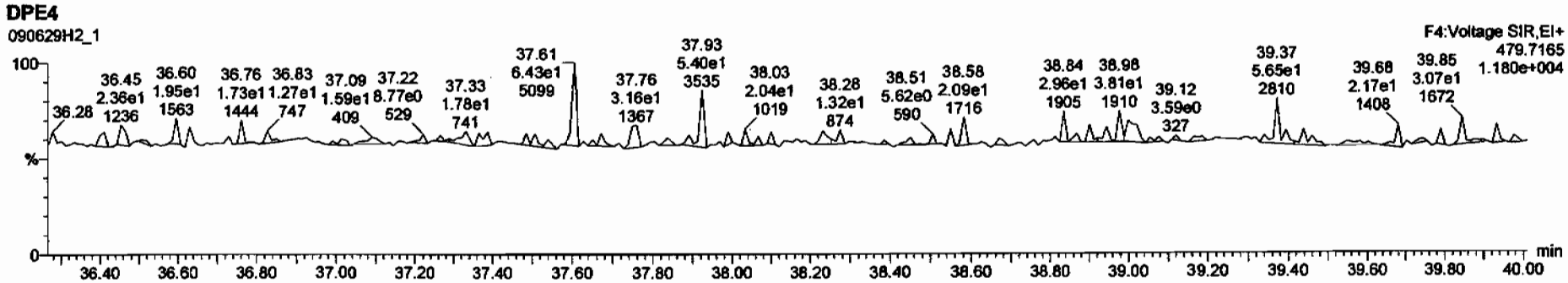

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OCDF

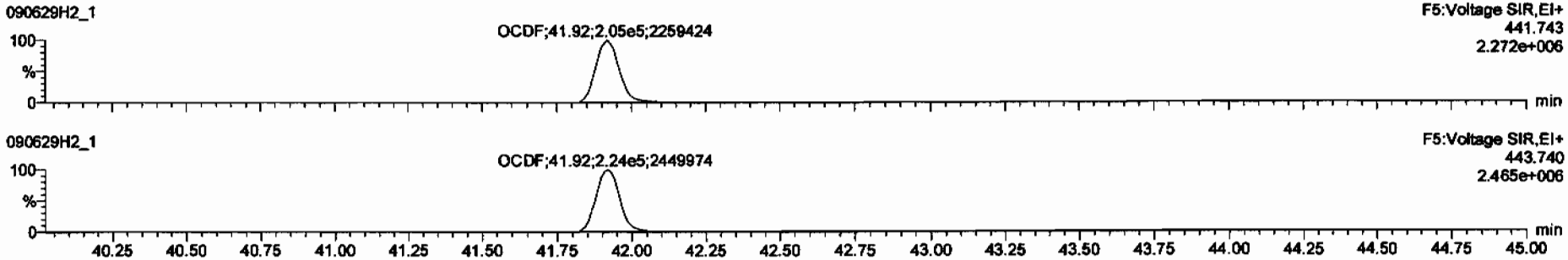

13C-OCDF

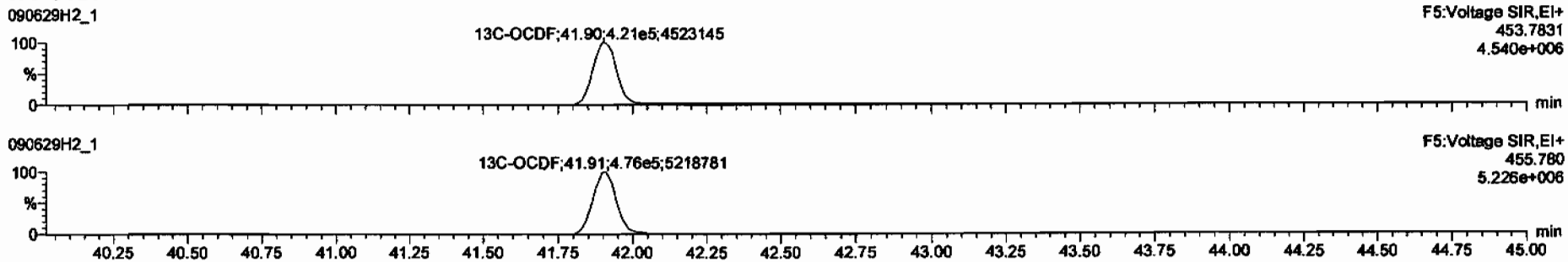

DPE5

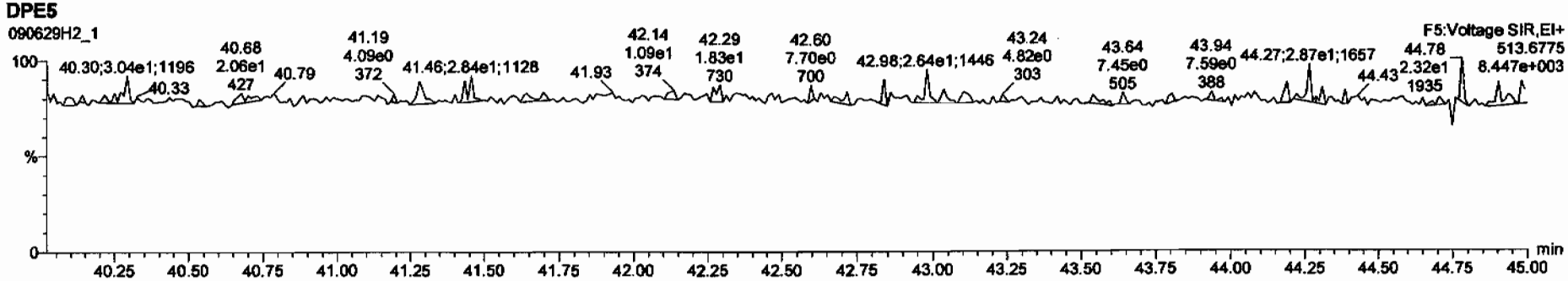

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

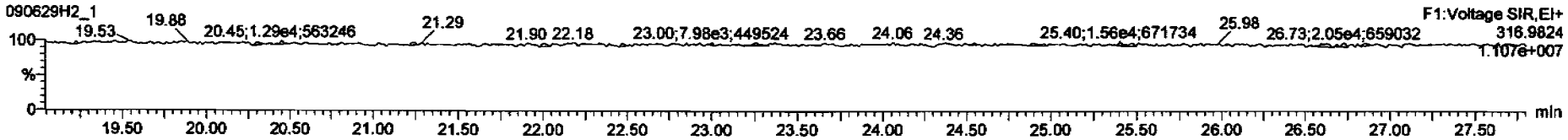

PFK2

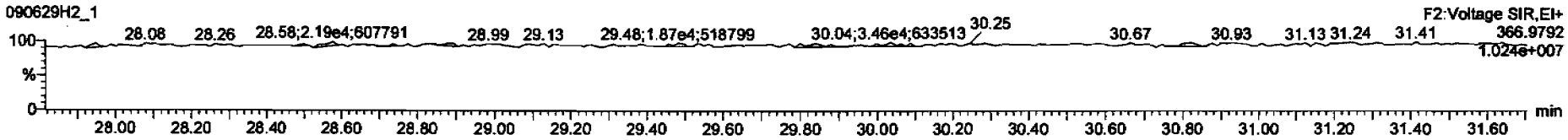

PFK3

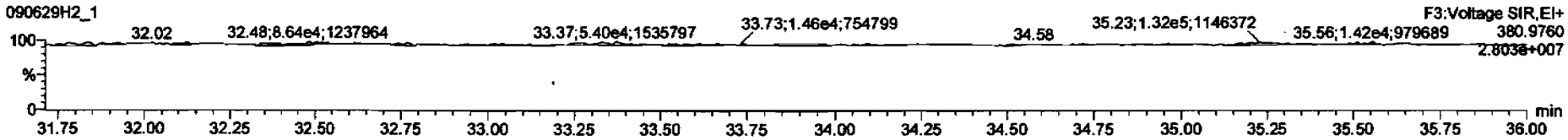

PFK4

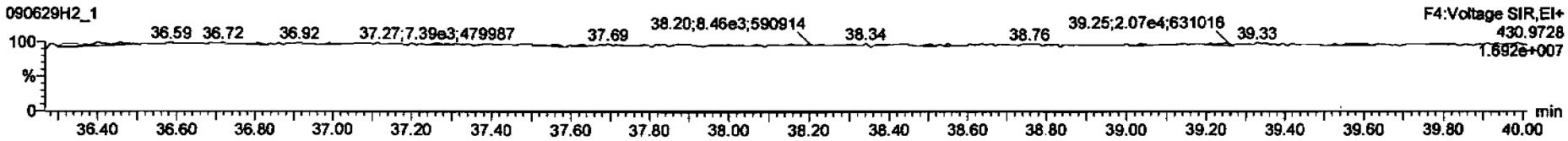

PFK5

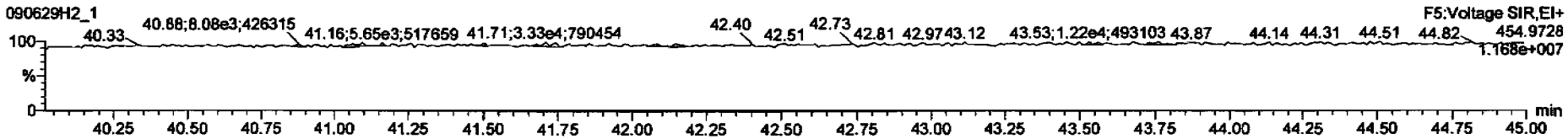

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 03:15:05

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	9.31	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	46.1	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	NO	45.9	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	NO	45.8	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	94.5	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	8.56	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	42.0	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	41.9	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.0	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.1	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	NO	45.2	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	NO	46.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	87.9	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

8290 only

Analyst: [signature]
Date: 6/30/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 03:15:05

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	102	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	98.6	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	95.4	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	111	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	253	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	99.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	99.5	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	104	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	88.2	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	92.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	96.9	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	NO	97.6	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.37-0.51	NO	102	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	220	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.28	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/30/09

8290 only

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 07:53:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:53:59 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.71
2	1,2,8,9-TCDD (Last)	26.96
3	1,2,4,7,9-PeCDD (First)	28.60
4	1,2,3,8,9-PeCDD (Last)	31.11
5	12,4,6,7,9-HxCDD (First)	32.57
6	1,2,3,7,8,9-HxCDD (Last)	34.59
7	1,2,3,4,6,7,9-HpCDD (First)	37.28
8	1,2,3,4,6,7,8-HpCDD (Last)	38.21
9	1,3,6,8-TCDF (First)	20.65
10	1,2,8,9-TCDF (Last)	27.13
11	1,3,4,6,8-PeCDF (First)	27.05
12	1,2,3,8,9-PeCDF (Last)	31.38
13	1,2,3,4,6,8-HxCDF (First)	32.02
14	1,2,3,4,8,9-HxCDF (Last)	34.98
15	1,2,3,4,6,7,8-HpCDF (First)	36.87
16	1,2,3,4,7,8,9-HpCDF (Last)	38.78

6/30/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09

Analysis Time: 03:15:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.156	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 6/30/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09

Analysis Time: 03:15:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 6/30/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qid

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:52:16 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.64e4	0.78	NO	1.08	1.000	26.09	1.001	9.3054	93.1	0.0520	9.3054
2	1,2,3,7,8-PeCDD	2.85e5	0.62	NO	1.03	1.000	30.73	1.000	46.057	92.1	0.0816	46.057
3	1,2,3,4,7,8-HxCDD	2.47e5	1.29	NO	1.00	1.000	34.17	1.001	45.946	91.9	0.162	45.946
4	1,2,3,6,7,8-HxCDD	2.55e5	1.22	NO	1.13	1.000	34.28	1.000	45.285	90.6	0.163	45.285
5	1,2,3,7,8,9-HxCDD	2.69e5	1.27	NO	1.10	1.000	34.59	1.009	47.002	94.0	0.156	47.002
6	1,2,3,4,6,7,8-HpCDD	2.18e5	1.02	NO	1.06	1.000	38.21	1.001	45.782	91.6	0.225	45.782
7	OCDD	4.03e5	0.90	NO	1.18	1.000	41.68	1.001	94.461	94.5	0.308	94.461
8	2,3,7,8-TCDF	1.00e5	0.78	NO	1.09	1.000	25.31	1.001	8.5616	85.6	0.0417	8.5616
9	1,2,3,7,8-PeCDF	4.47e5	1.59	NO	1.16	1.000	29.51	1.001	42.017	84.0	0.0688	42.017
10	2,3,4,7,8-PeCDF	4.33e5	1.59	NO	1.12	1.000	30.44	1.000	41.931	83.9	0.0650	41.931
11	1,2,3,4,7,8-HxCDF	4.19e5	1.26	NO	1.41	1.000	33.25	1.001	43.046	86.1	0.106	43.046
12	1,2,3,6,7,8-HxCDF	4.09e5	1.27	NO	1.22	1.000	33.38	1.001	43.960	87.9	0.117	43.960
13	2,3,4,6,7,8-HxCDF	3.72e5	1.26	NO	1.28	1.000	34.00	1.000	44.070	88.1	0.134	44.070
14	1,2,3,7,8,9-HxCDF	3.30e5	1.30	NO	1.26	1.000	34.98	1.001	45.199	90.4	0.175	45.199
15	1,2,3,4,6,7,8-HpCDF	3.65e5	1.05	NO	1.69	1.000	36.87	1.001	44.842	89.7	0.169	44.842
16	1,2,3,4,7,8,9-HpCDF	2.92e5	1.01	NO	1.48	1.000	38.78	1.000	46.704	93.4	0.202	46.704
17	OCDF	4.59e5	0.91	NO	1.10	1.000	41.91	1.000	87.929	87.9	0.141	87.929
18	13C-2,3,7,8-TCDD	7.61e5	0.78	NO	1.01	1.000	26.08	1.023	102.46	102	0.194	
19	13C-1,2,3,7,8-PeCDD	5.98e5	0.62	NO	0.827	1.000	30.72	1.205	98.644	98.6	0.140	
20	13C-1,2,3,4,7,8-HxCDD	5.38e5	1.24	NO	0.916	1.000	34.15	0.988	103.25	103	0.299	
21	13C-1,2,3,6,7,8-HxCDD	4.99e5	1.27	NO	0.921	1.000	34.27	0.991	95.445	95.4	0.297	
22	13C-1,2,3,4,6,7,8-HpCDD	4.48e5	1.06	NO	0.708	1.000	38.19	1.105	111.41	111	0.357	
23	13C-OCDD	7.24e5	0.89	NO	0.503	1.000	41.66	1.205	253.46	127	0.358	
24	13C-2,3,7,8-TCDF	1.08e6	0.80	NO	0.977	1.000	25.30	0.992	106.74	107	0.133	
25	13C-1,2,3,7,8-PeCDF	9.19e5	1.60	NO	0.896	1.000	29.48	1.156	99.409	99.4	0.213	
26	13C-2,3,4,7,8-PeCDF	9.23e5	1.60	NO	0.900	1.000	30.43	1.194	99.514	99.5	0.212	
27	13C-1,2,3,4,7,8-HxCDF	6.90e5	0.51	NO	1.17	1.000	33.23	0.961	103.81	104	0.358	
28	13C-1,2,3,6,7,8-HxCDF	7.61e5	0.54	NO	1.52	1.000	33.36	0.965	88.199	88.2	0.275	
29	13C-2,3,4,6,7,8-HxCDF	6.60e5	0.51	NO	1.25	1.000	33.99	0.983	92.908	92.9	0.335	
30	13C-1,2,3,7,8,9-HxCDF	5.80e5	0.53	NO	1.05	1.000	34.96	1.011	96.898	96.9	0.397	

JG 6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:52:16 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	4.82e5	0.43	NO	0.868	1.000	36.85	1.066	97.619	97.6	0.442
32	13C-1,2,3,4,7,8,9-HpCDF	4.22e5	0.43	NO	0.727	1.000	38.77	1.122	102.27	102	0.529
33	13C-OCDF	9.51e5	0.91	NO	0.760	1.000	41.90	1.212	220.45	110	0.289
34	37Cl-2,3,7,8-TCDD	4.54e4			0.668	1.000	26.09	1.023	9.2813	92.8	0.0686
35	13C-1,2,3,4-TCDD	7.32e5	0.79	NO	1.00	1.000	25.50	0.000	100.00	100	0.196
36	13C-1,2,3,4-TCDF	1.03e6	0.78	NO	1.00	1.000	24.07	0.000	100.00	100	0.130
37	13C-1,2,3,7,8,9-HxCDD	5.68e5	1.27	NO	1.00	1.000	34.57	0.000	100.00	100	0.274

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 8:02:11 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:02:26 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

090629H2_1	ST090629H2-1 1613 CS3 080917I		29-Jun-09	14:01:48
090629H2_2	0_2207_OPR001		29-Jun-09	14:52:10
090629H2_3	solvent blank		29-Jun-09	15:41:42
090629H2_4	0_2207_MB001		29-Jun-09	16:31:15
090629H2_5	31831_2207_001 CAMO-09-10460	10.45	29-Jun-09	17:20:45
090629H2_6	31831_2207_002 CAMO-09-10461	11.42	29-Jun-09	18:10:16
090629H2_7	31831_2207_003 CAMO-09-10462	10.55	29-Jun-09	18:59:49
090629H2_8	31831_2207_004 CAMO-09-10467	10.57	29-Jun-09	19:49:21
090629H2_9	31832_2207_001 CAMO-09-10480	11.15	29-Jun-09	20:38:54
090629H2_10	31833_2207_001 CAMO-09-6005	12.18	29-Jun-09	21:28:25
090629H2_11	31833_2207_002 CAMO-09-6047	12.12	29-Jun-09	22:17:56
090629H2_12	31837_2207_001 CAMO-09-6006	11.31	29-Jun-09	23:07:29
090629H2_13	31837_2207_002 CAMO-09-6007	10.42	29-Jun-09	23:56:59
090629H2_14	31837_2207_003 CAMO-09-6008	13.14	30-Jun-09	00:46:29
090629H2_15	31837_2207_004 CAMO-09-6009	12.25	30-Jun-09	01:36:02
090629H2_16	solvent blank		30-Jun-09	02:25:34
090629H2_17	ST090629H2-2 1613 CS3 080917I		30-Jun-09	03:15:05

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:00:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:00:29 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

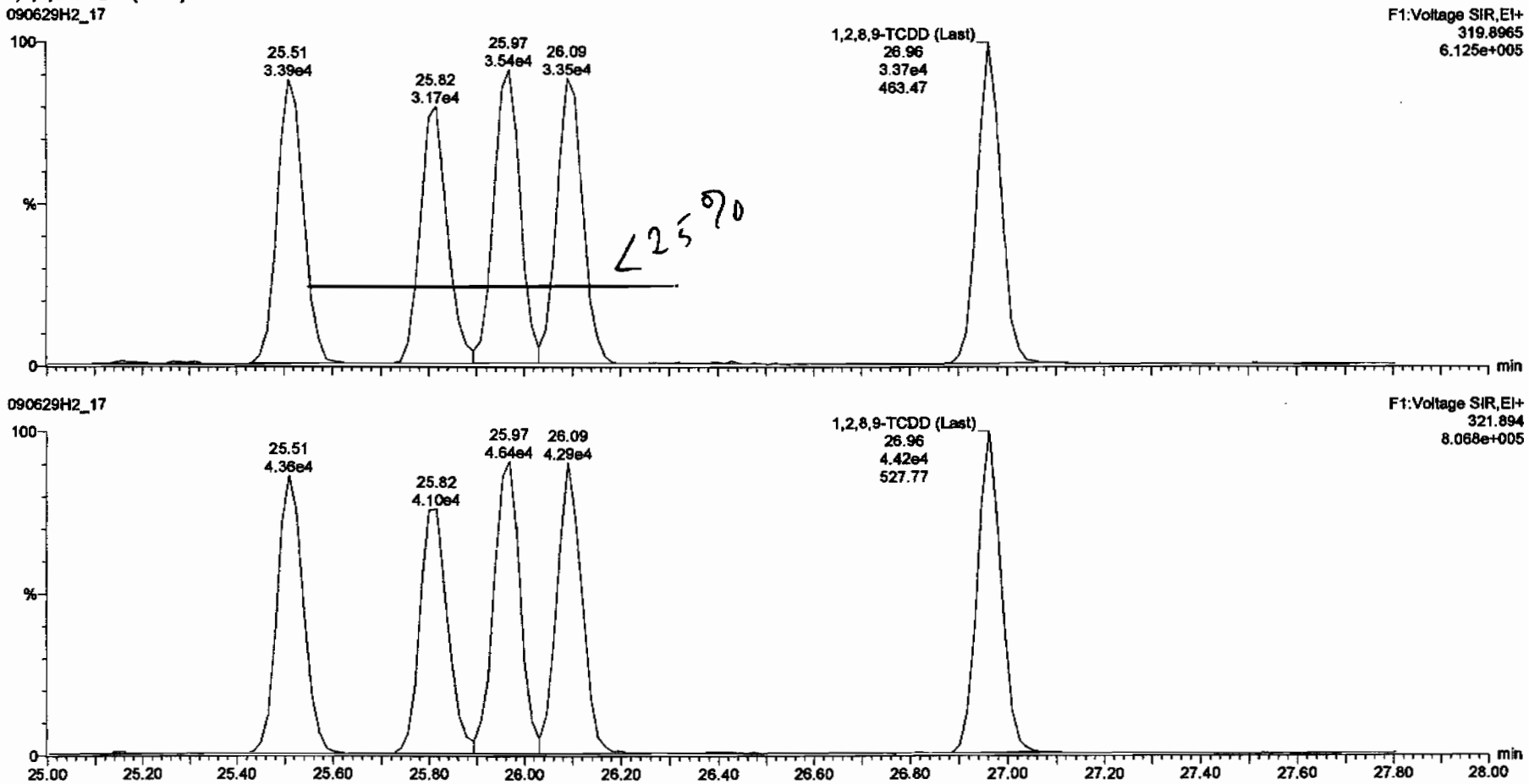

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

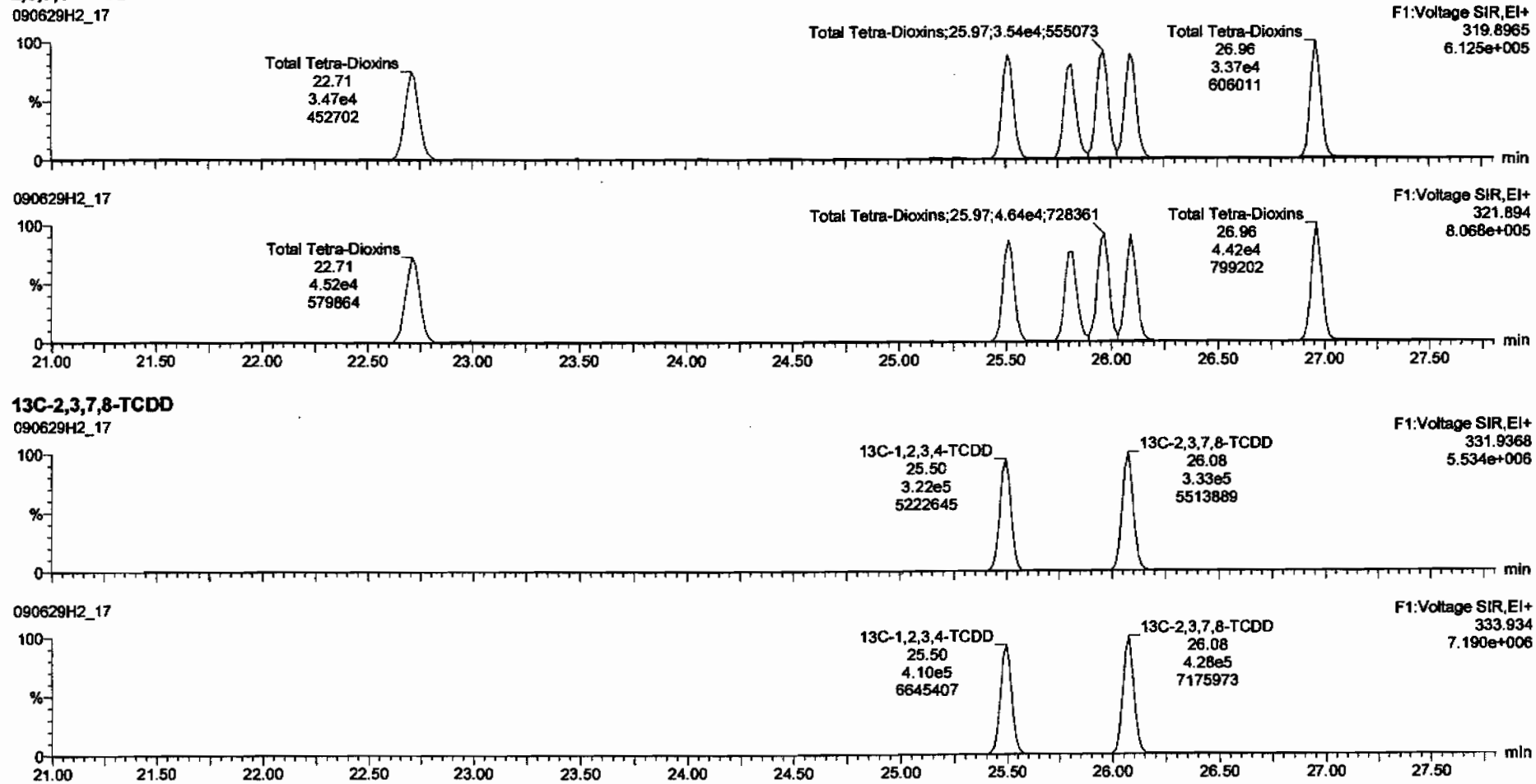

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

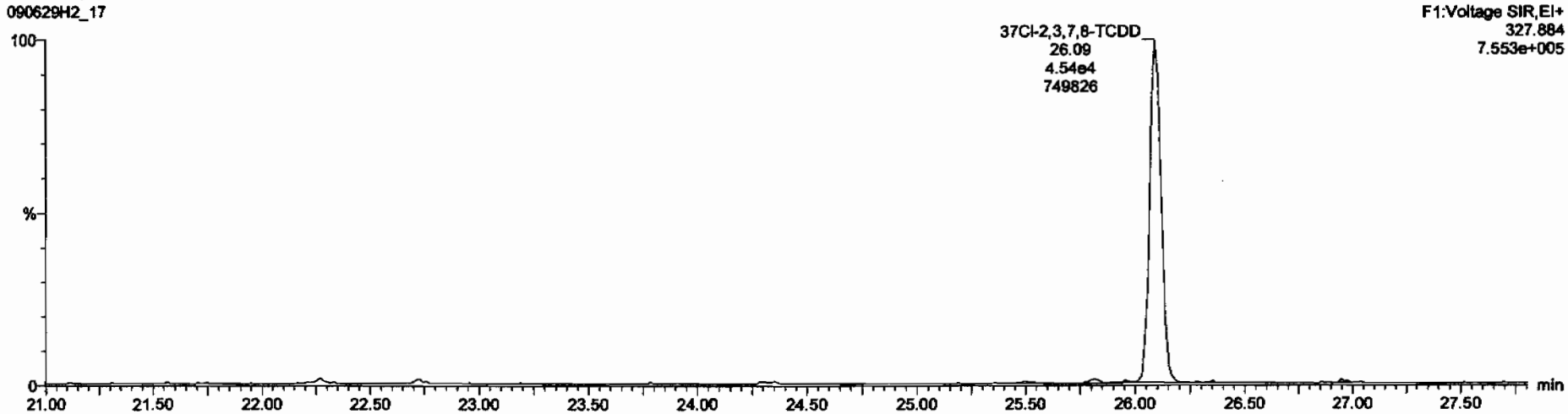

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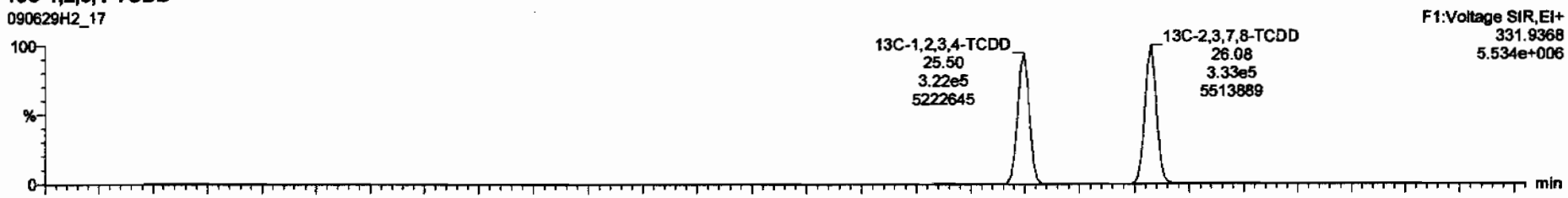

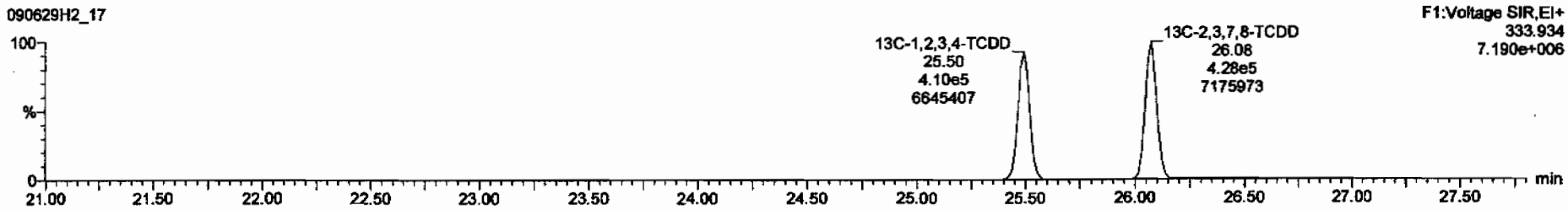

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

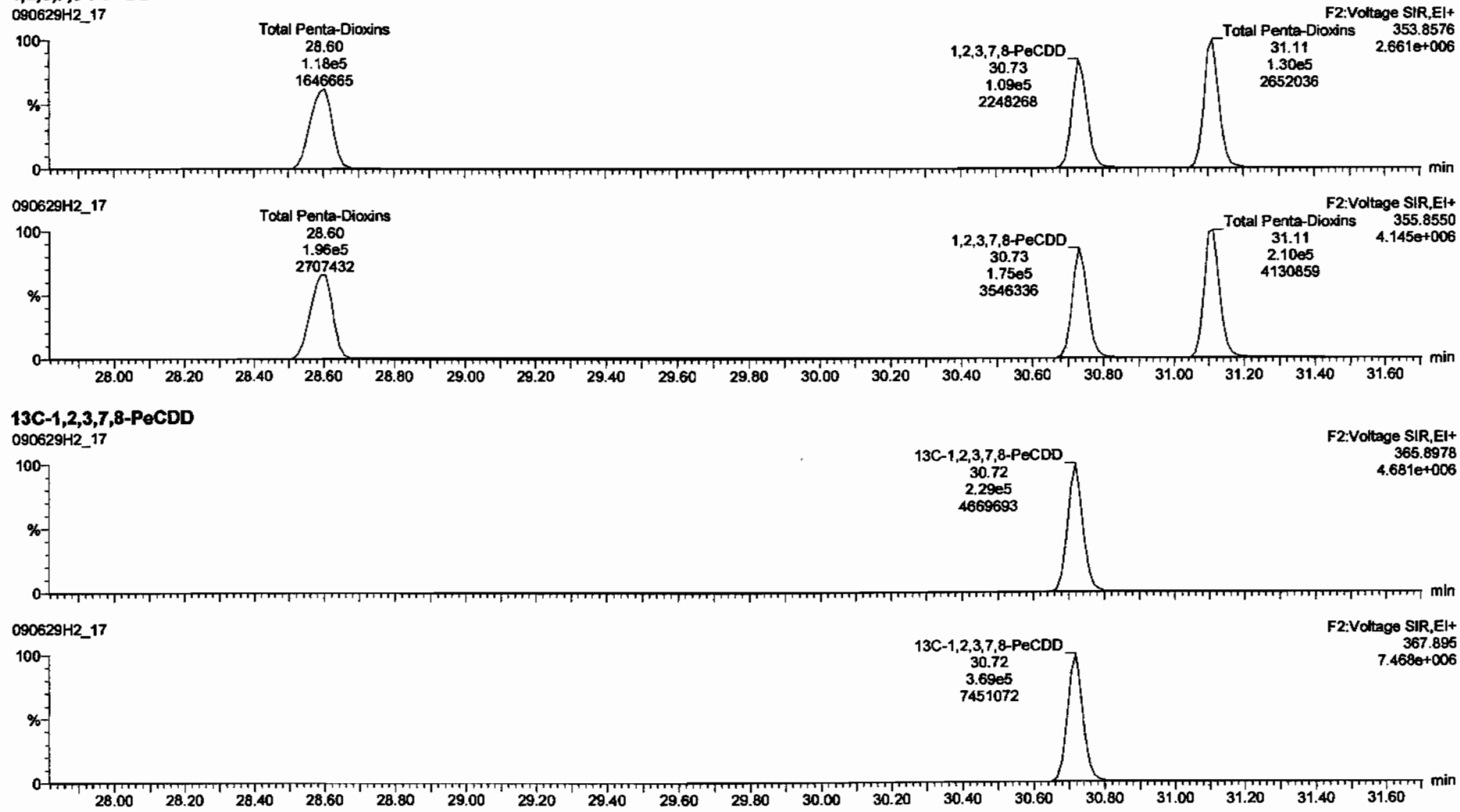

13C-1,2,3,7,8-PeCDD

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Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

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1,2,3,4,7,8-HxCDD

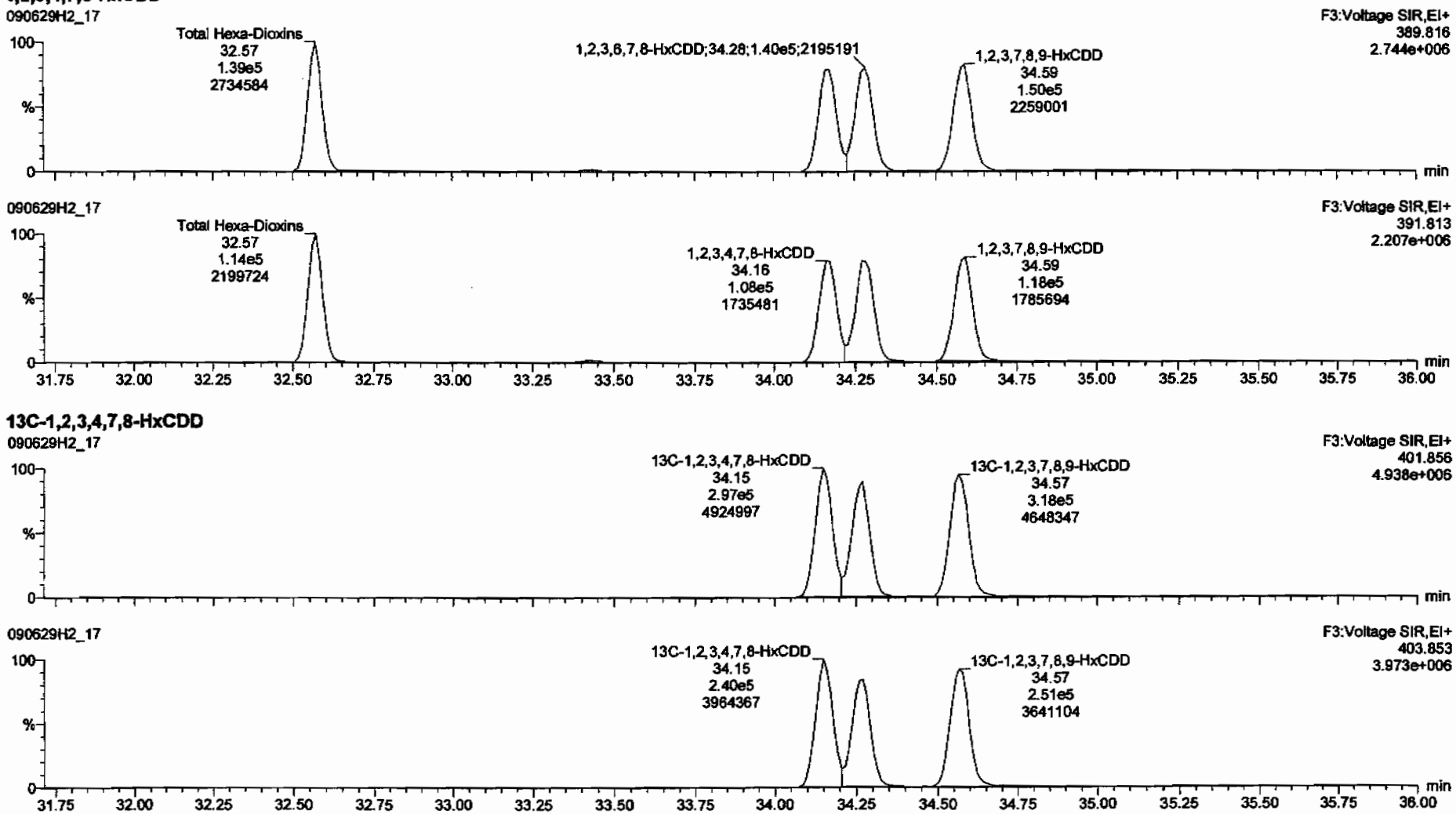

13C-1,2,3,4,7,8-HxCDD

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

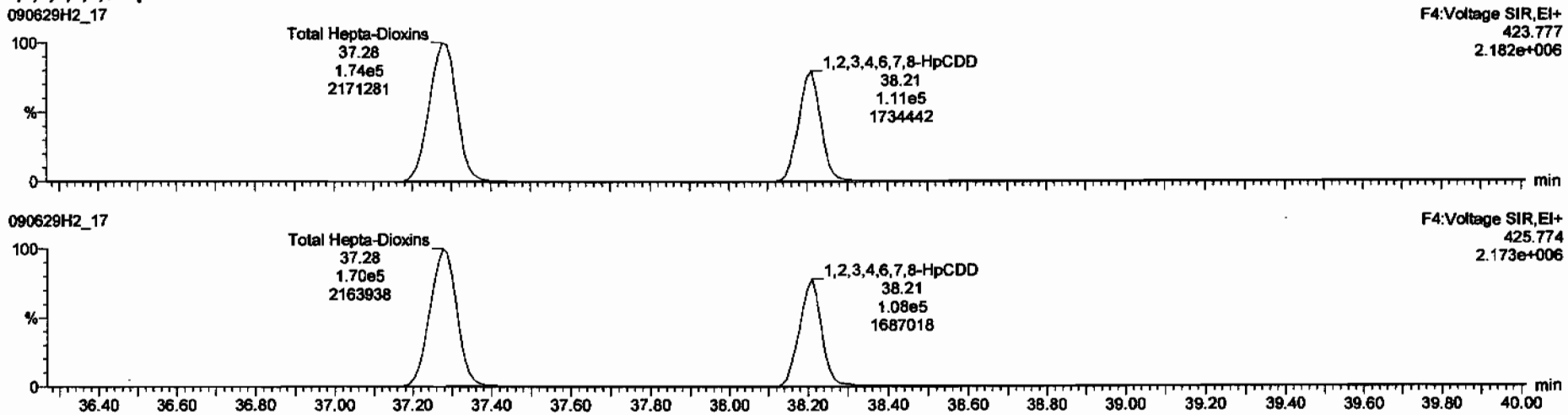

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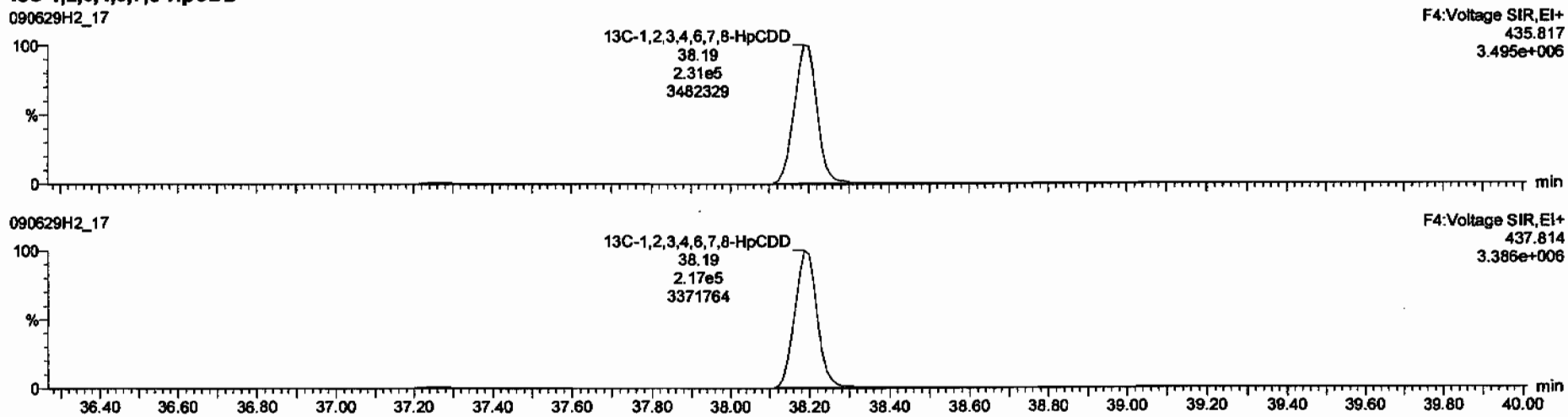

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
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Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

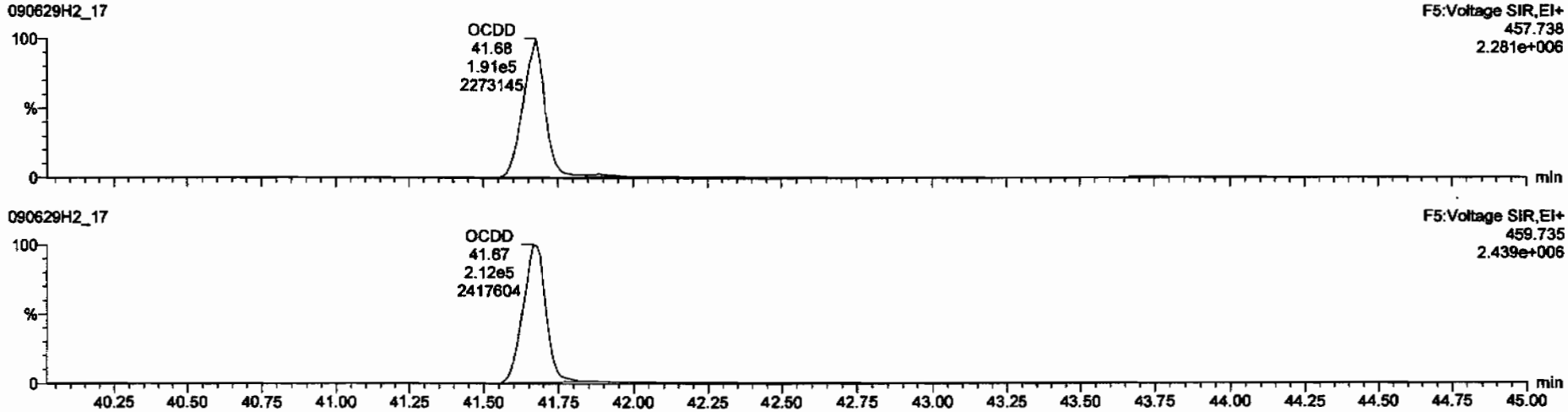

13C-OCDD

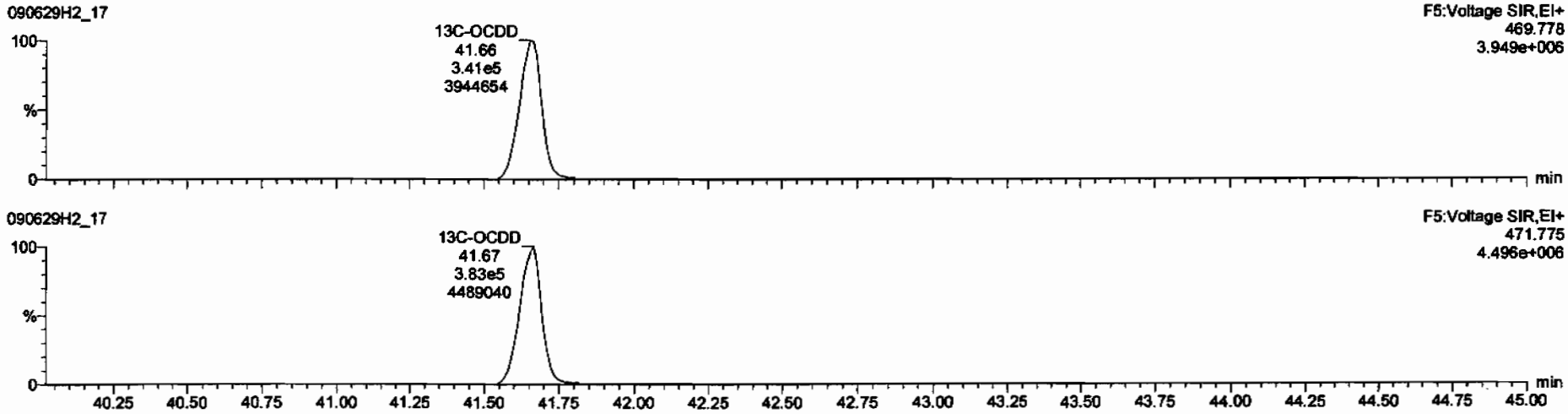

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Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

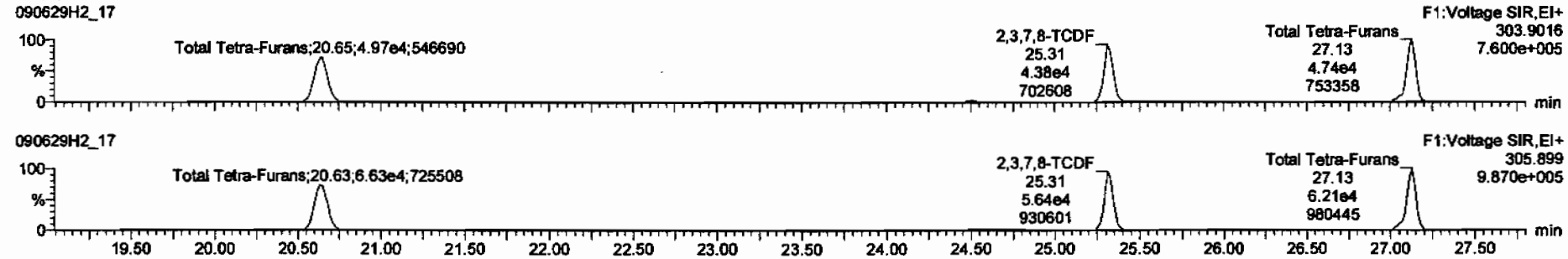

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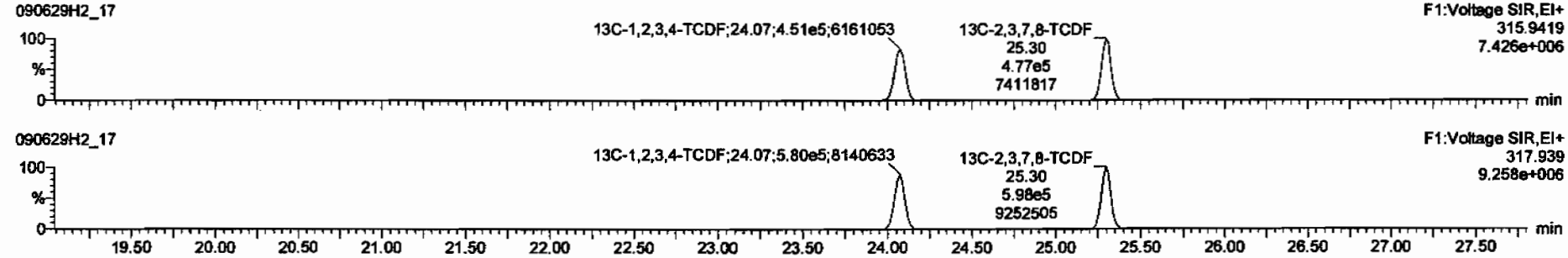

DPE1

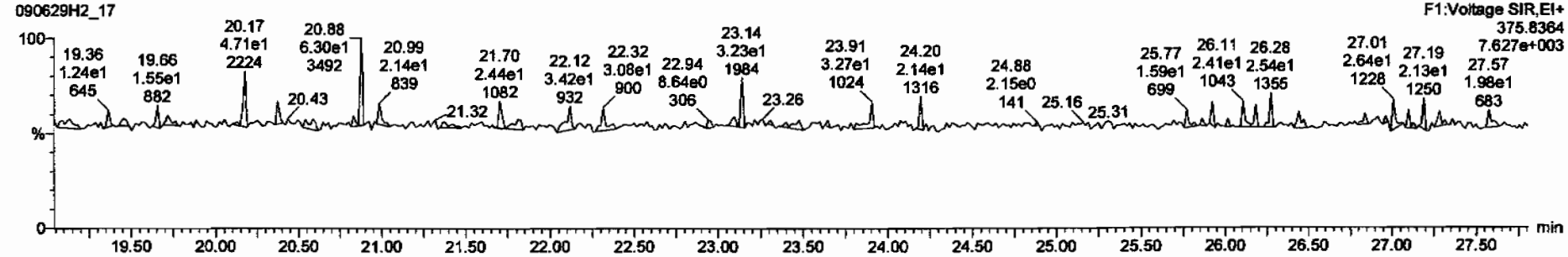

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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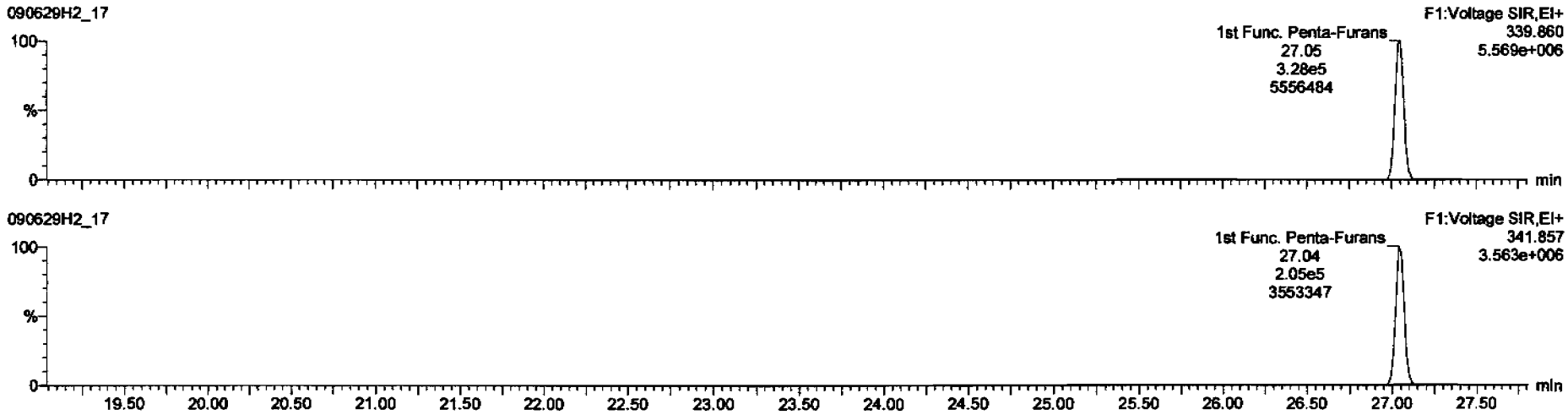

DPE6

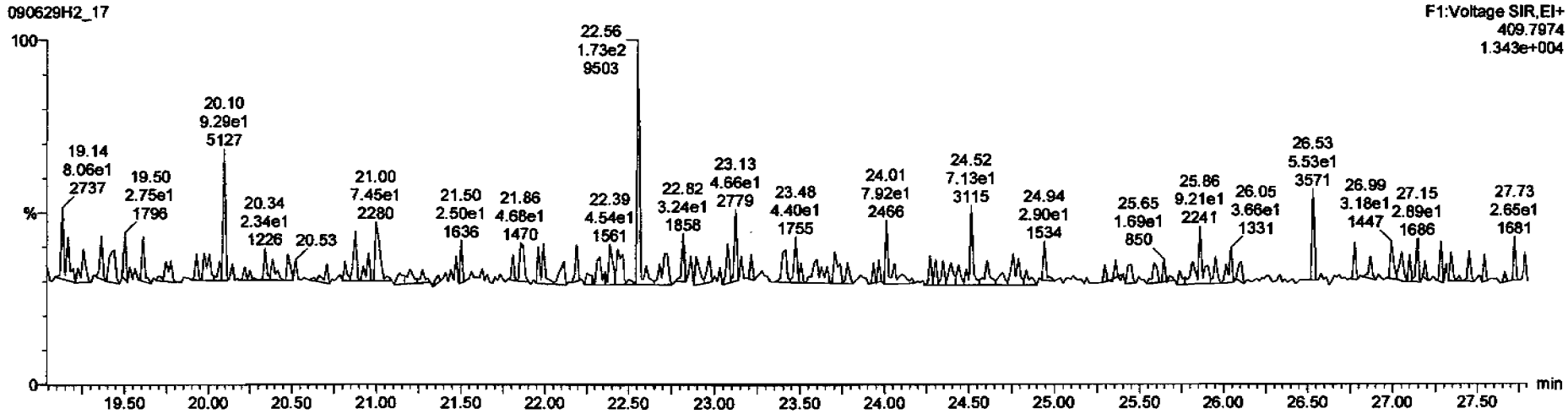

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Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

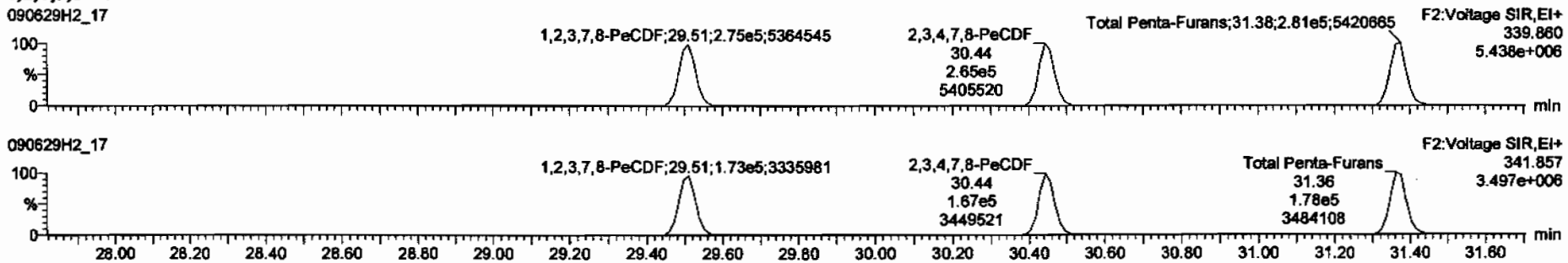

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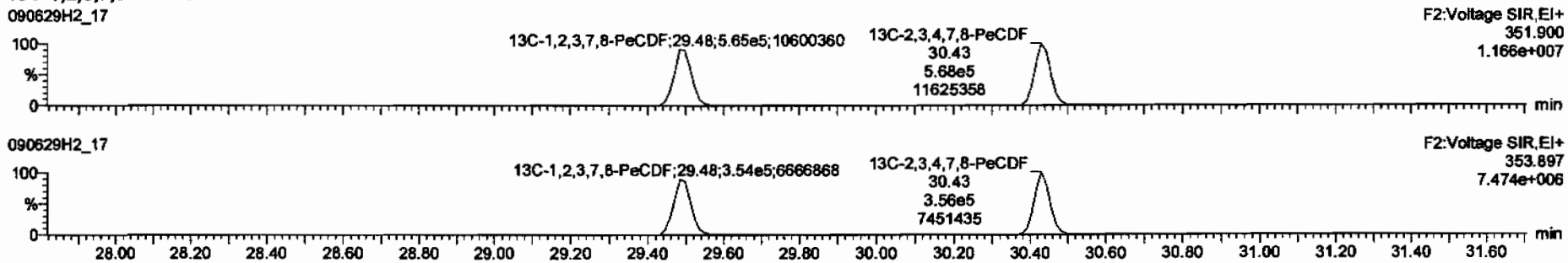

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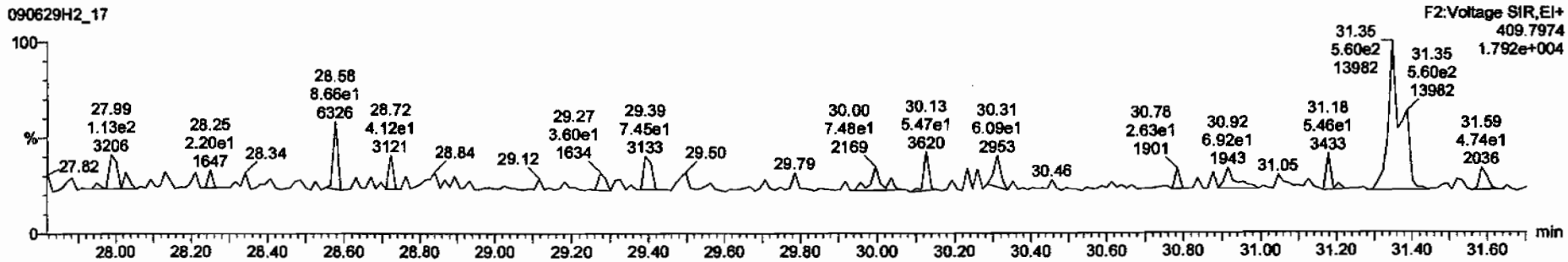

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Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDF

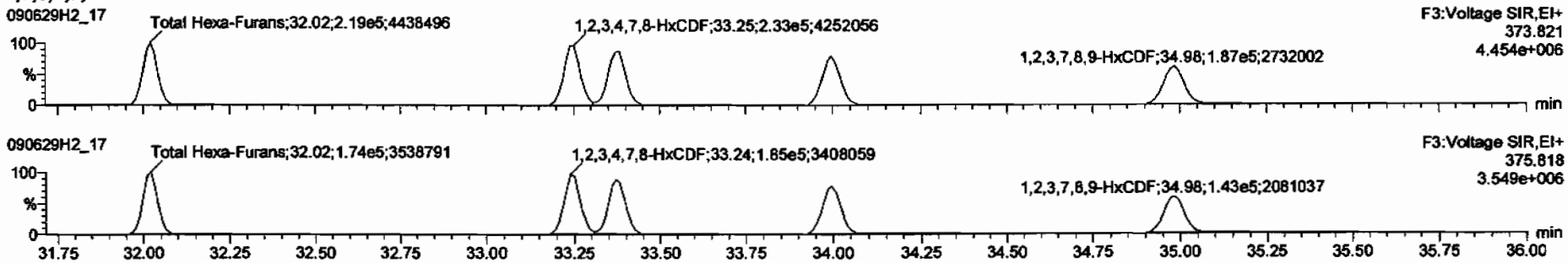

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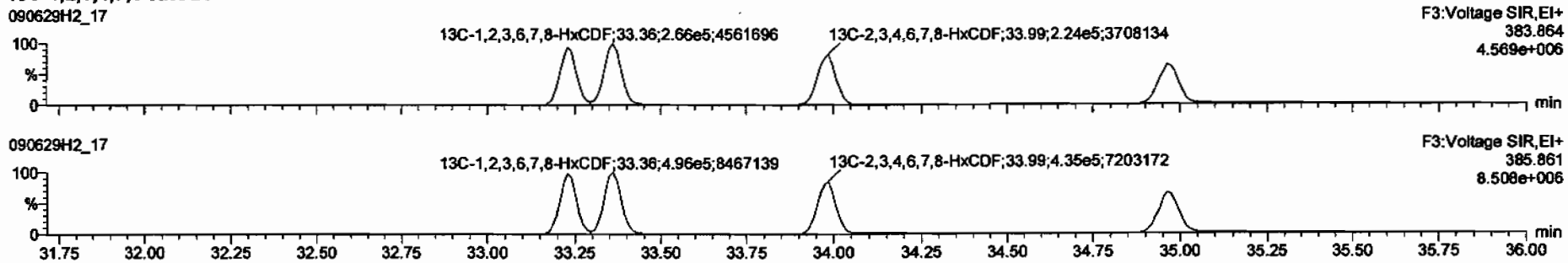

DPE3

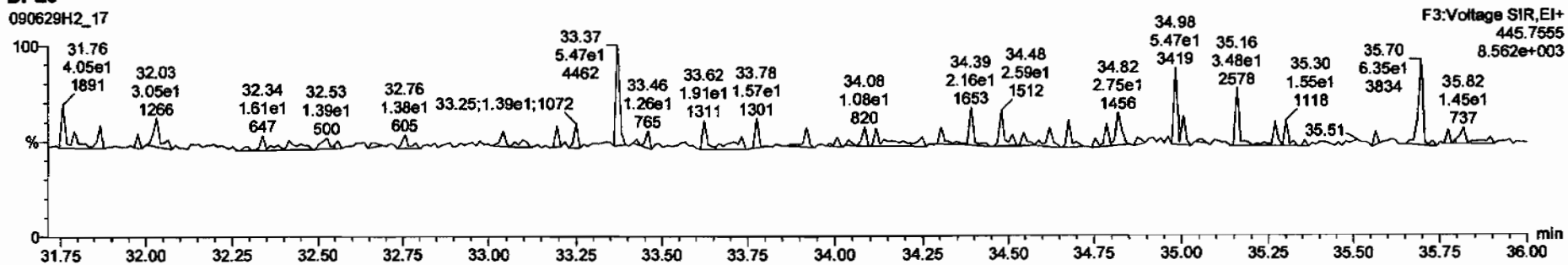

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1,2,3,4,6,7,8-HpCDF

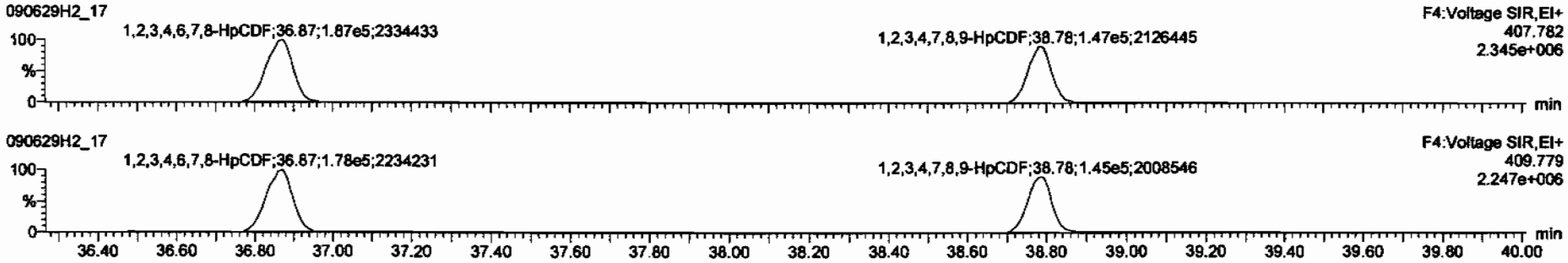

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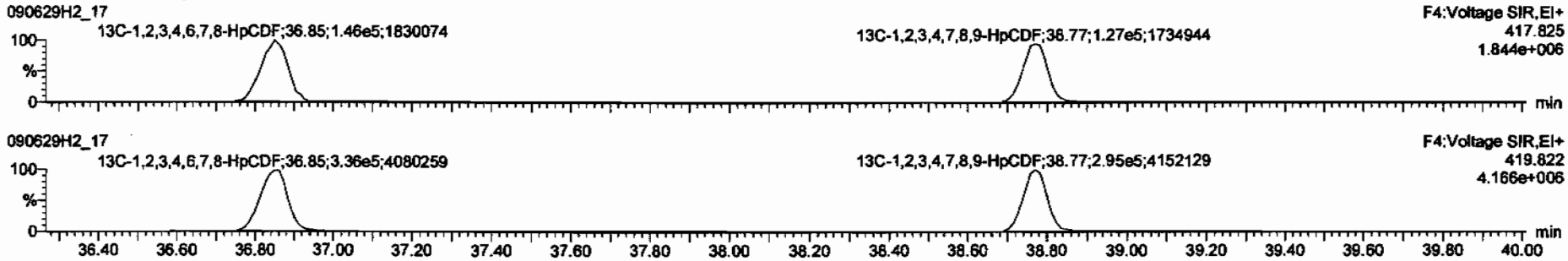

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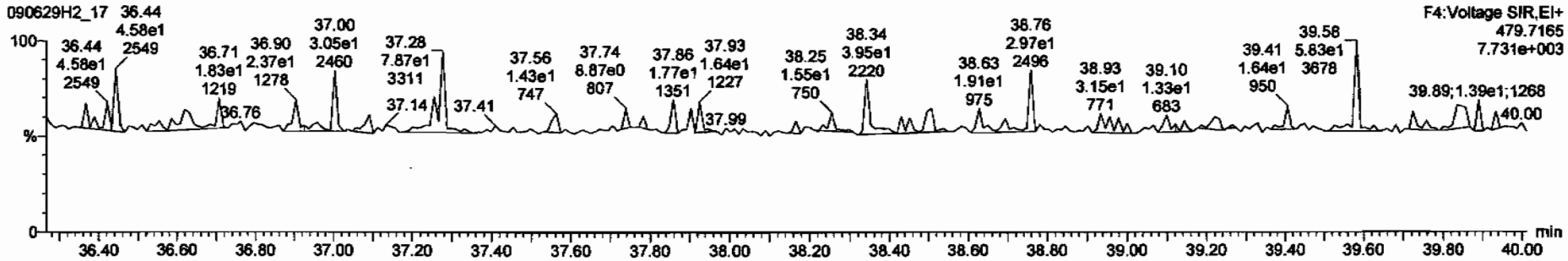

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Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDF

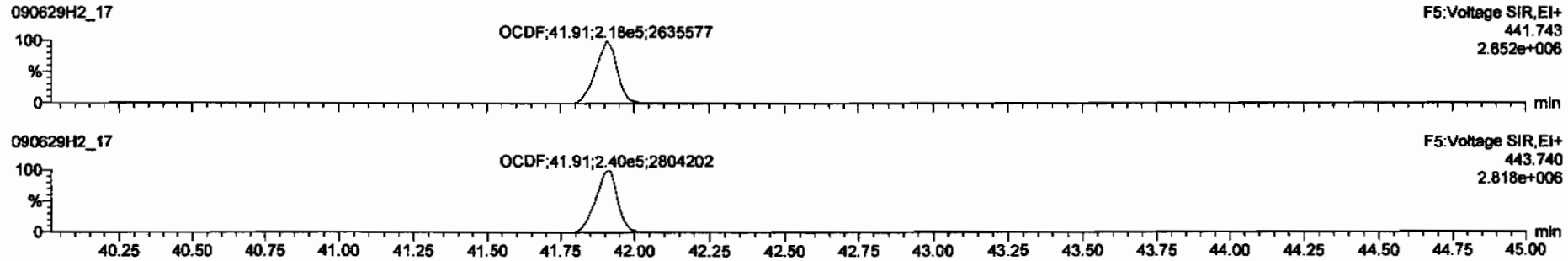

13C-OCDF

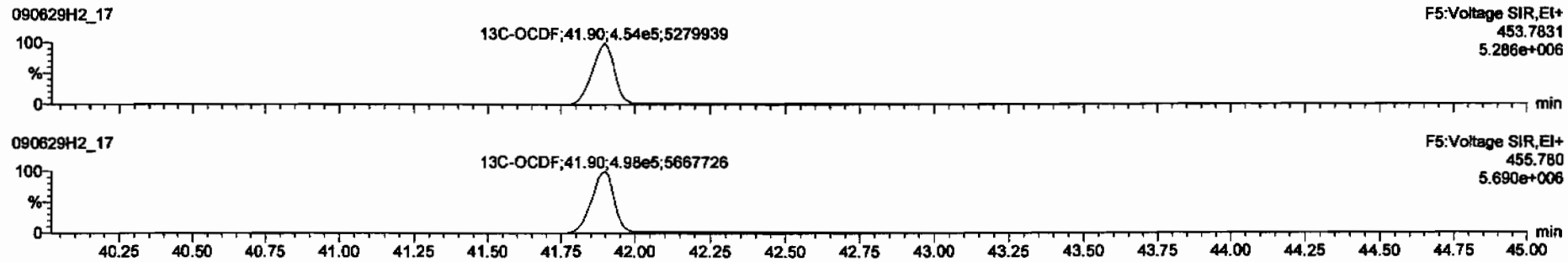

DPE5

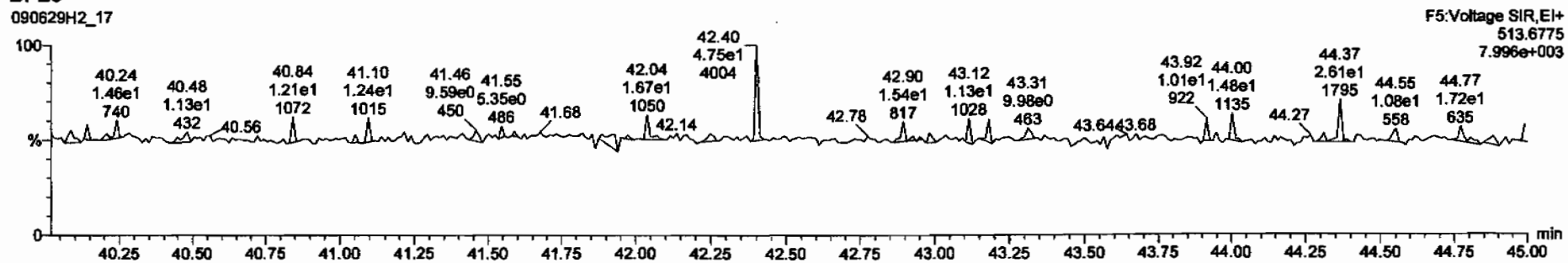

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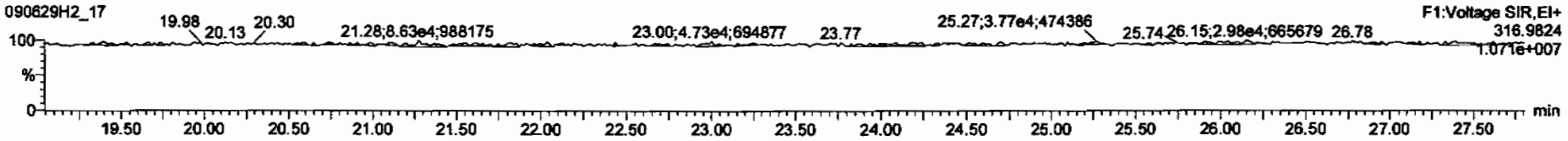

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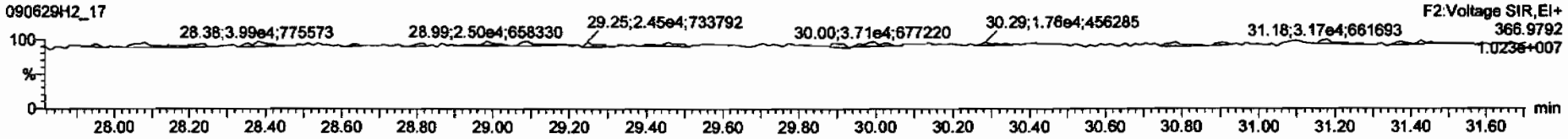

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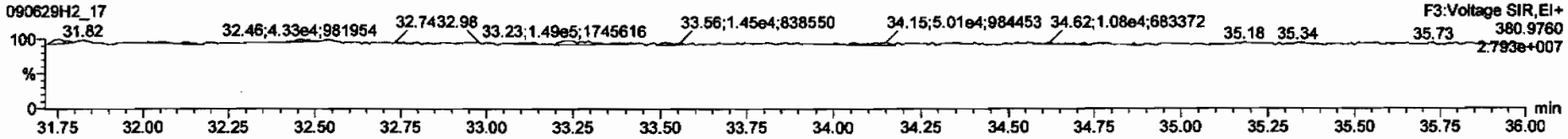

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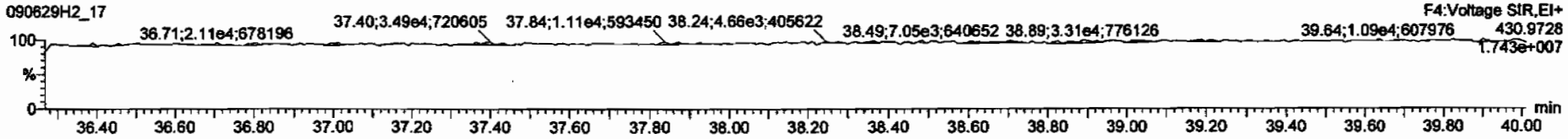

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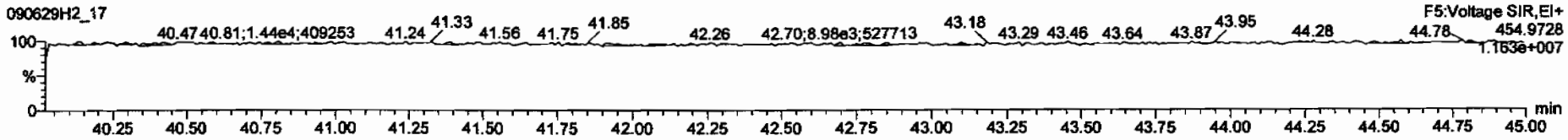

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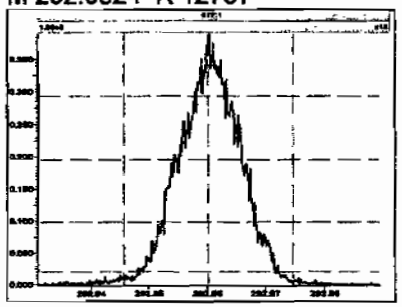

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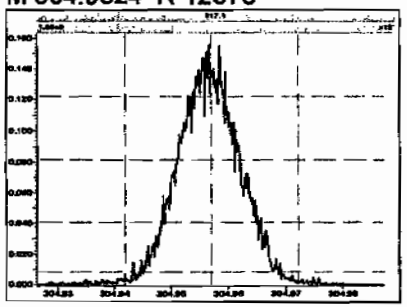

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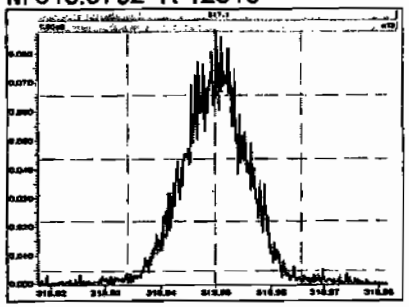

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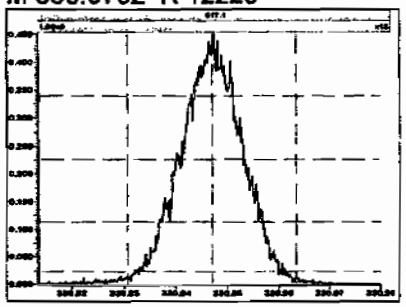

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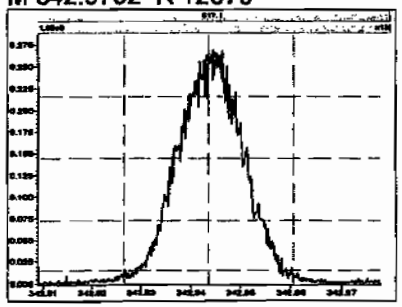

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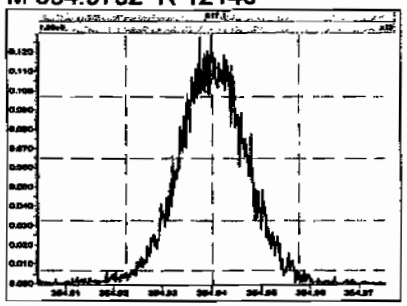

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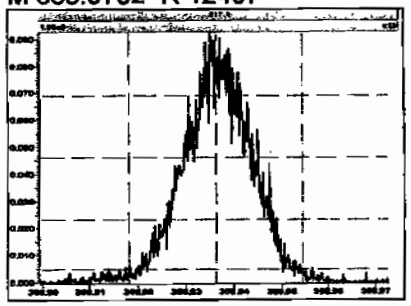

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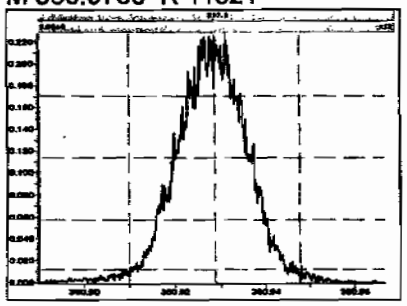

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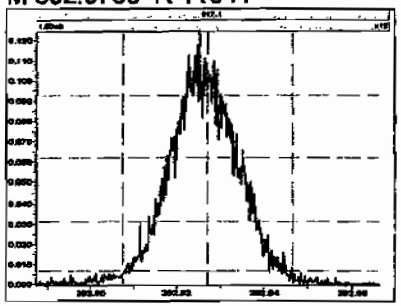

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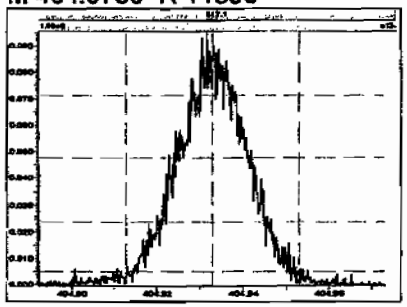

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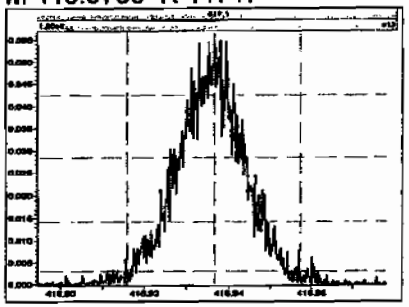

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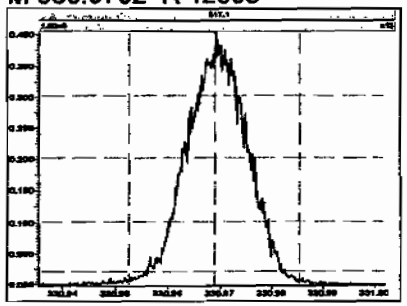

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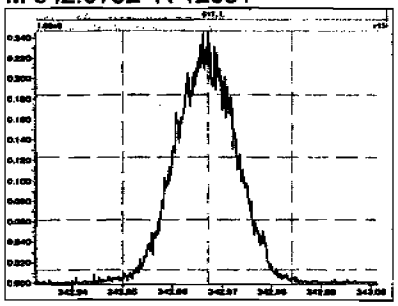

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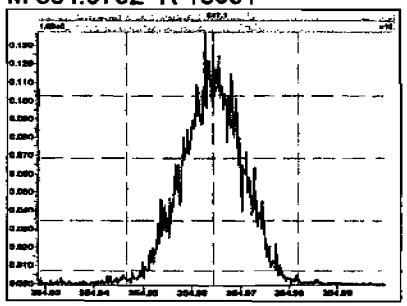

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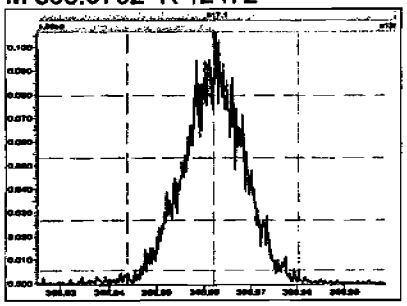

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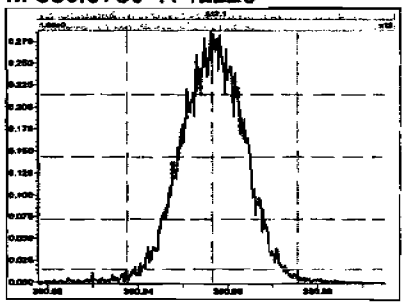

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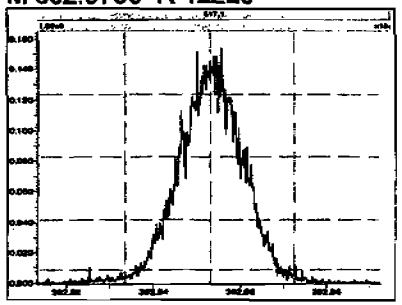

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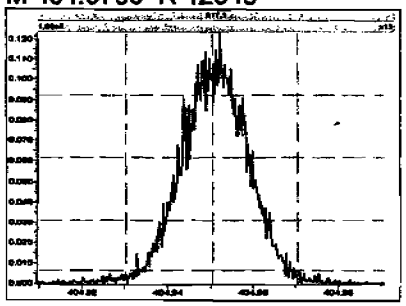

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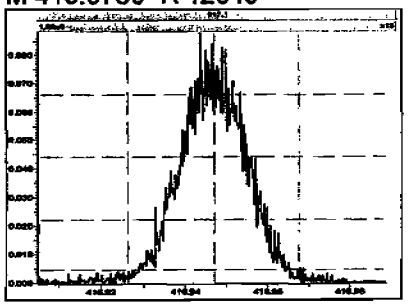

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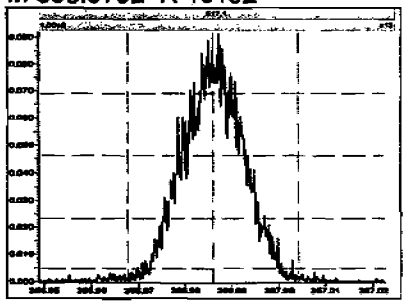

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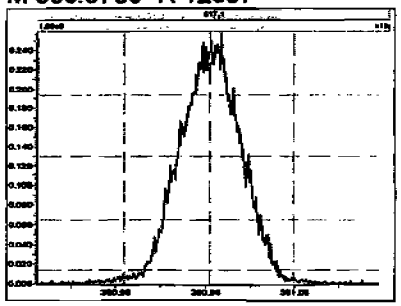

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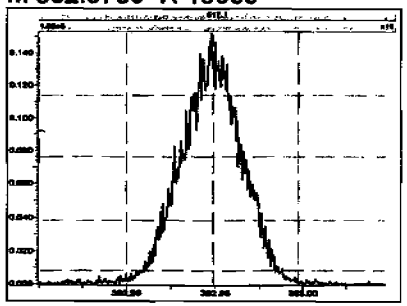

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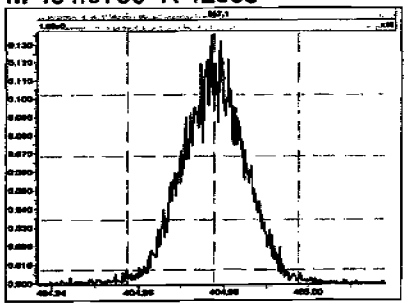

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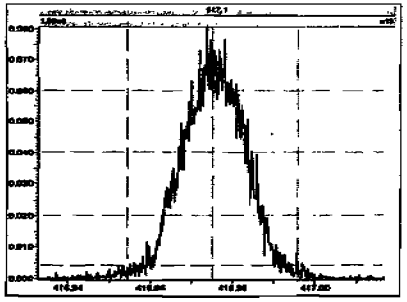

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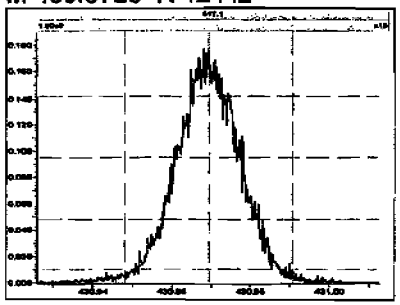

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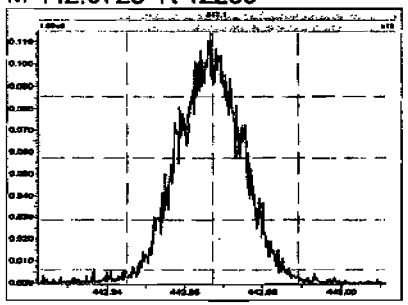

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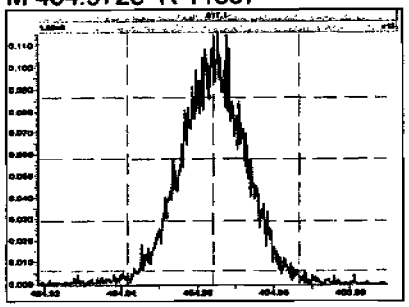

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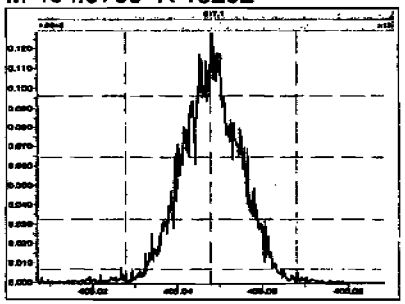

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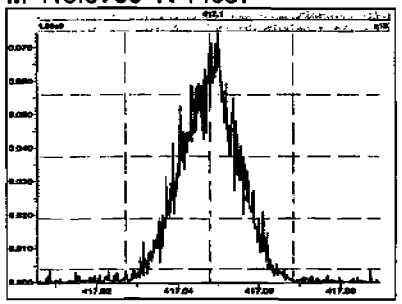

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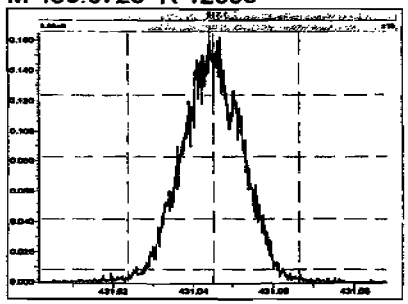

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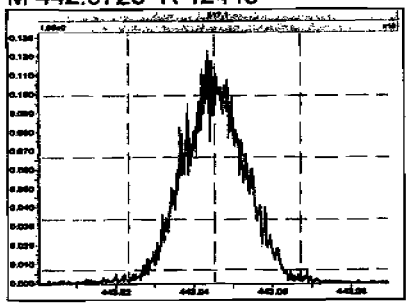

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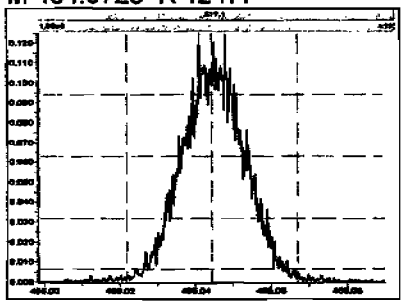

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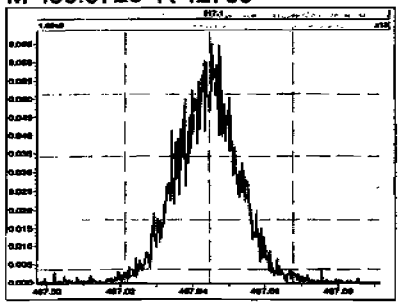

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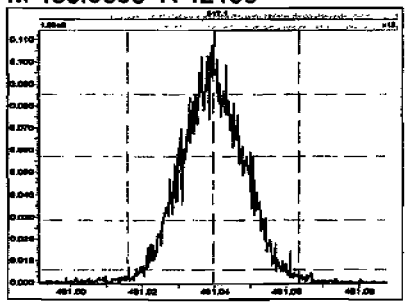

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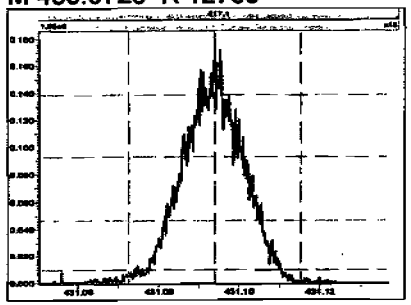

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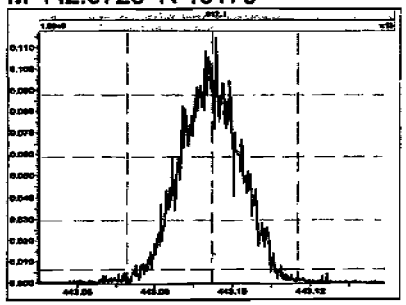

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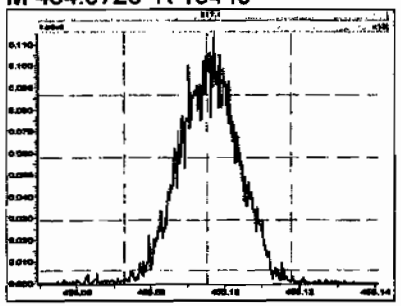

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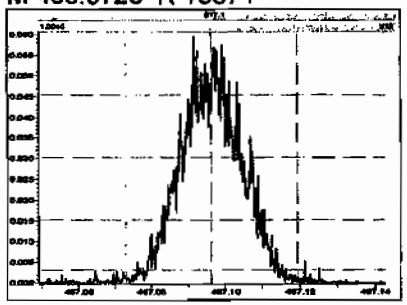

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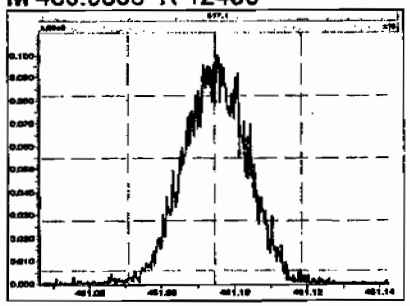

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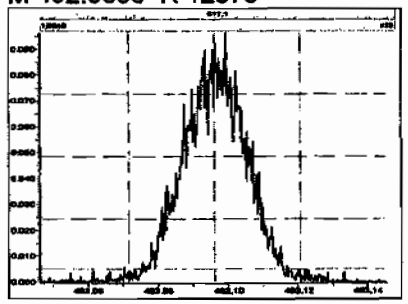

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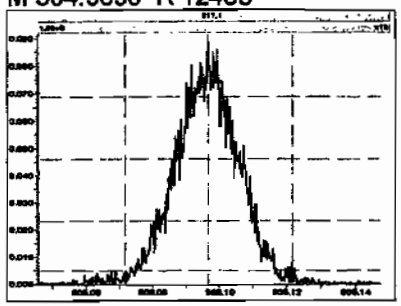

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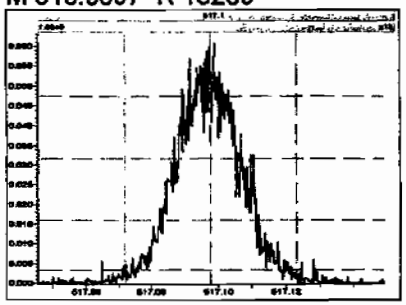

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_1

CCAL ID: ST090629H3-1

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 04:13:15

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	9.16	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	45.7	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	44.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	46.4	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	45.3	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.89	0.76-1.02	NO	95.2	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	NO	8.44	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	42.2	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	41.8	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.5	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	45.0	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	45.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.92	0.76-1.02	NO	89.1	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/30/09

8290 only

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_1

CCAL ID: ST090629H3-1

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 04:13:15

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	99.2	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	106	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	96.2	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	110	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	249	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	108	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	100	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	101	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	101	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	87.6	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	92.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	NO	95.7	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	96.1	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	NO	102	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.89	0.76-1.02	NO	216	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.34	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/30/09

8290 only

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 07:54:09 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:54:16 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.73
2	1,2,8,9-TCDD (Last)	26.96
3	1,2,4,7,9-PeCDD (First)	28.60
4	1,2,3,8,9-PeCDD (Last)	31.11
5	12,4,6,7,9-HxCDD (First)	32.57
6	1,2,3,7,8,9-HxCDD (Last)	34.59
7	1,2,3,4,6,7,9-HpCDD (First)	37.29
8	1,2,3,4,6,7,8-HpCDD (Last)	38.22
9	1,3,6,8-TCDF (First)	20.63
10	1,2,8,9-TCDF (Last)	27.13
11	1,3,4,6,8-PeCDF (First)	27.05
12	1,2,3,8,9-PeCDF (Last)	31.38
13	1,2,3,4,6,8-HxCDF (First)	32.02
14	1,2,3,4,8,9-HxCDF (Last)	34.98
15	1,2,3,4,6,7,8-HpCDF (First)	36.87
16	1,2,3,4,7,8,9-HpCDF (Last)	38.79

J 6/30/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_1

CCAL ID: ST090629H3-1
GC Column ID: DB-5
Analysis Date: 30-Jun-09
Analysis Time: 04:13:15

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]
Date: 6/30/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_1

CCAL ID: ST090629H3-1

GC Column ID: DB-5
Analysis Date: 30-Jun-09

Analysis Time: 04:13:15

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 6/31/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629h3-1.qld

Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:05:06 AM Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	6.81e4	0.77	NO	1.08	1.000	26.09	1.001	9.1602	91.6	0.0622	9.1602
2	1,2,3,7,8-PeCDD	2.56e5	0.62	NO	1.03	1.000	30.75	1.001	45.670	91.3	0.105	45.670
3	1,2,3,4,7,8-HxCDD	2.21e5	1.24	NO	1.00	1.000	34.17	1.000	44.644	89.3	0.182	44.644
4	1,2,3,6,7,8-HxCDD	2.30e5	1.28	NO	1.13	1.000	34.28	1.000	45.273	90.5	0.193	45.273
5	1,2,3,7,8,9-HxCDD	2.42e5	1.23	NO	1.10	1.000	34.59	1.009	46.438	92.9	0.180	46.438
6	1,2,3,4,6,7,8-HpCDD	1.93e5	1.07	NO	1.06	1.000	38.22	1.001	45.323	90.6	0.201	45.323
7	OCDD	3.58e5	0.89	NO	1.18	1.000	41.69	1.001	95.191	95.2	0.253	95.191
8	2,3,7,8-TCDF	8.94e4	0.76	NO	1.09	1.000	25.33	1.001	8.4359	84.4	0.0427	8.4359
9	1,2,3,7,8-PeCDF	4.05e5	1.57	NO	1.16	1.000	29.51	1.000	42.152	84.3	0.0702	42.152
10	2,3,4,7,8-PeCDF	3.91e5	1.59	NO	1.12	1.000	30.46	1.000	41.823	83.6	0.0709	41.823
11	1,2,3,4,7,8-HxCDF	3.75e5	1.26	NO	1.41	1.000	33.25	1.000	43.990	88.0	0.136	43.990
12	1,2,3,6,7,8-HxCDF	3.69e5	1.26	NO	1.22	1.000	33.38	1.000	44.476	89.0	0.141	44.476
13	2,3,4,6,7,8-HxCDF	3.39e5	1.26	NO	1.28	1.000	34.00	1.000	44.983	90.0	0.164	44.983
14	1,2,3,7,8,9-HxCDF	2.91e5	1.29	NO	1.26	1.000	34.98	1.000	44.943	89.9	0.213	44.943
15	1,2,3,4,6,7,8-HpCDF	3.22e5	1.05	NO	1.69	1.000	36.87	1.000	44.798	89.6	0.183	44.798
16	1,2,3,4,7,8,9-HpCDF	2.56e5	1.04	NO	1.48	1.000	38.79	1.000	45.687	91.4	0.220	45.687
17	OCDF	4.10e5	0.92	NO	1.10	1.000	41.92	1.001	89.058	89.1	0.130	89.058
18	13C-2,3,7,8-TCDD	6.90e5	0.78	NO	1.01	1.000	26.08	1.023	102.96	103	0.223	
19	13C-1,2,3,7,8-PeCDD	5.42e5	0.63	NO	0.827	1.000	30.72	1.205	99.238	99.2	0.194	
20	13C-1,2,3,4,7,8-HxCDD	4.95e5	1.27	NO	0.916	1.000	34.16	0.988	105.69	106	0.378	
21	13C-1,2,3,6,7,8-HxCDD	4.52e5	1.24	NO	0.921	1.000	34.27	0.991	96.150	96.2	0.376	
22	13C-1,2,3,4,6,7,8-HpCDD	4.00e5	1.05	NO	0.708	1.000	38.20	1.105	110.42	110	0.441	
23	13C-OCDD	6.38e5	0.89	NO	0.503	1.000	41.67	1.205	248.57	124	0.429	
24	13C-2,3,7,8-TCDF	9.75e5	0.78	NO	0.977	1.000	25.30	0.992	107.82	108	0.146	
25	13C-1,2,3,7,8-PeCDF	8.29e5	1.58	NO	0.896	1.000	29.50	1.157	99.974	100	0.253	
26	13C-2,3,4,7,8-PeCDF	8.37e5	1.57	NO	0.900	1.000	30.44	1.194	100.51	101	0.252	
27	13C-1,2,3,4,7,8-HxCDF	6.05e5	0.52	NO	1.17	1.000	33.24	0.961	101.28	101	0.369	
28	13C-1,2,3,6,7,8-HxCDF	6.80e5	0.52	NO	1.52	1.000	33.37	0.965	87.588	87.6	0.284	
29	13C-2,3,4,6,7,8-HxCDF	5.89e5	0.52	NO	1.25	1.000	33.99	0.983	92.271	92.3	0.346	
30	13C-1,2,3,7,8,9-HxCDF	5.15e5	0.52	NO	1.05	1.000	34.97	1.011	95.715	95.7	0.410	

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629h3-1.qld

Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:05:06 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	4.26e5	0.44	NO	0.868	1.000	36.86	1.066	96.066	96.1	0.455
32	13C-1,2,3,4,7,8,9-HpCDF	3.78e5	0.44	NO	0.727	1.000	38.78	1.122	101.86	102	0.544
33	13C-OCDF	8.40e5	0.89	NO	0.760	1.000	41.90	1.212	216.42	108	0.266
34	37Cl-2,3,7,8-TCDD	4.12e4			0.668	1.000	26.09	1.023	9.3397	93.4	0.0588
35	13C-1,2,3,4-TCDD	6.60e5	0.79	NO	1.00	1.000	25.50	0.000	100.00	100	0.227
36	13C-1,2,3,4-TCDF	9.26e5	0.78	NO	1.00	1.000	24.07	0.000	100.00	100	0.142
37	13C-1,2,3,7,8,9-HxCDD	5.11e5	1.23	NO	1.00	1.000	34.58	0.000	100.00	100	0.347

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 9:23:40 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 9:23:58 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

	090629H3_1	ST090629H3-1 1613 CS3 080917I	30-Jun-09	04:13:15
	090629H3_2	solvent blank	30-Jun-09	05:02:50
	090629H3_3	31837_2207_005 CAMO-09-6049 11.23	30-Jun-09	05:52:25
	090629H3_4	31838_2207_001 CAMO-09-10463 10.43	30-Jun-09	06:41:59
	090629H3_5	solvent blank	30-Jun-09	07:31:32
	090629H3_6	ST090629H3-2 1613 CS3 080917I	30-Jun-09	08:21:05

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090629H3-1 End Calibration ID: ST090629H3-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range? (A)	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits	NA	
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments: (A) 8290 only 6/30/09

Reviewed by: DMS 6/30/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 rmh

Printed: Tuesday, June 30, 2009 04:13:13 Pacific Daylight Time

M 292.9824 R 12757

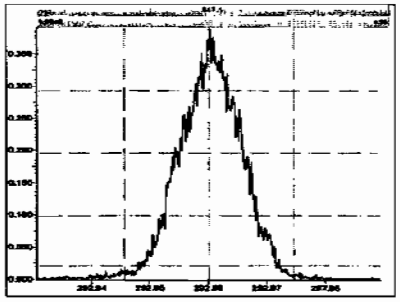

M 304.9824 R 12376

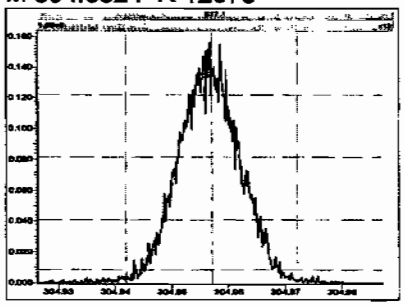

M 318.9792 R 12316

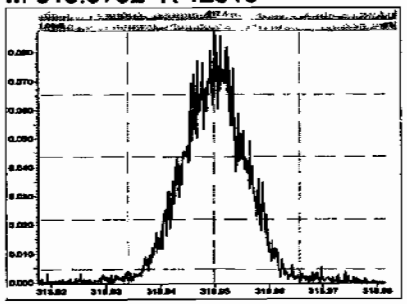

M 330.9792 R 12225

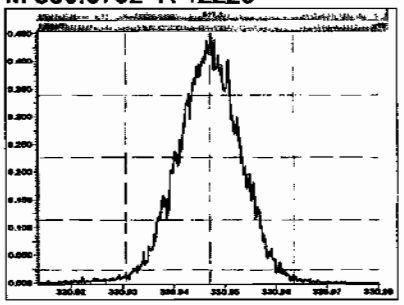

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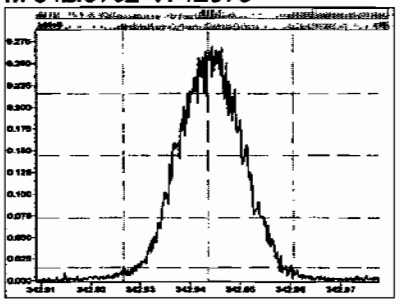

M 354.9792 R 12140

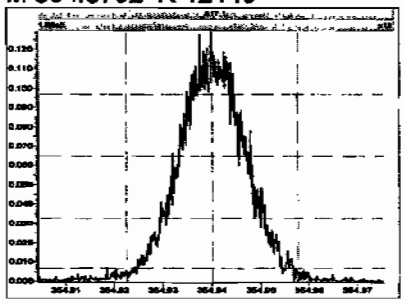

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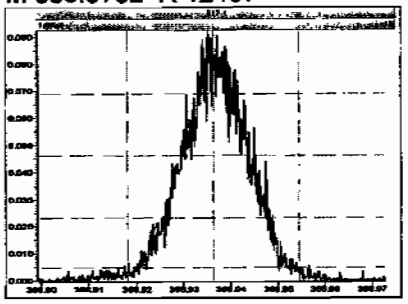

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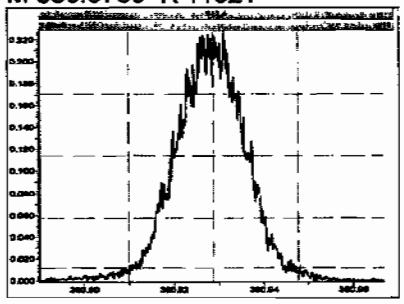

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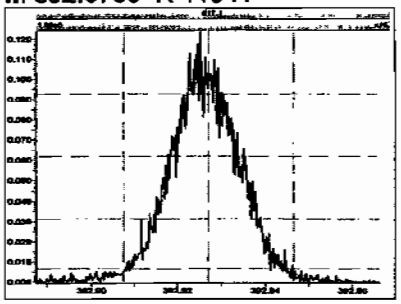

M 404.9760 R 11893

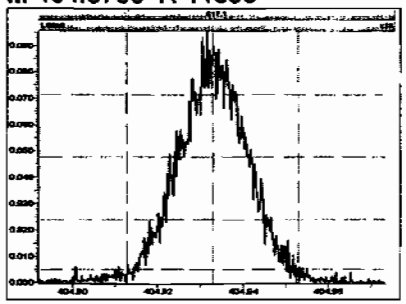

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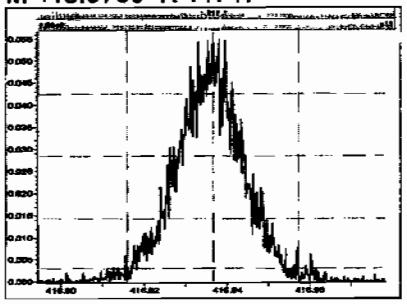

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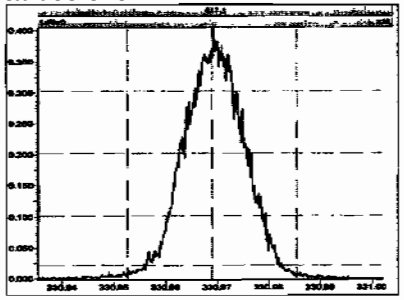

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M 342.9792 R 12531

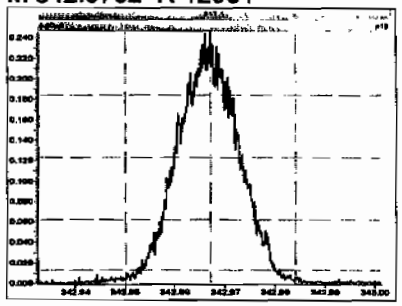

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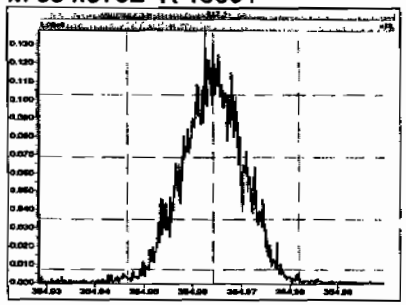

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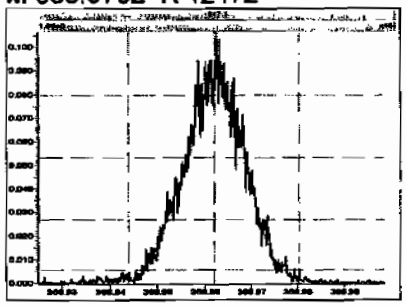

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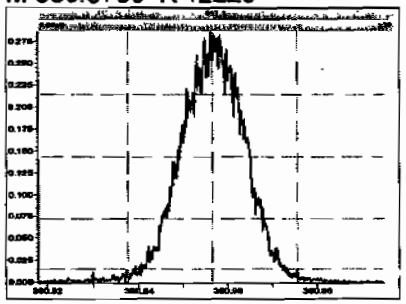

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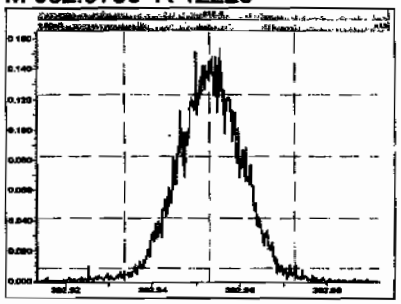

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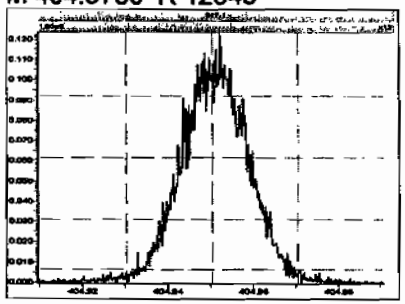

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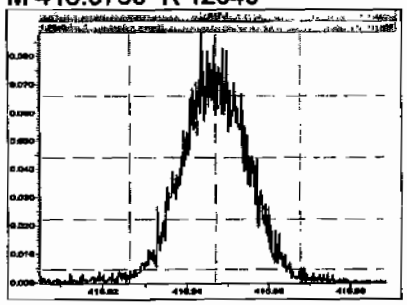

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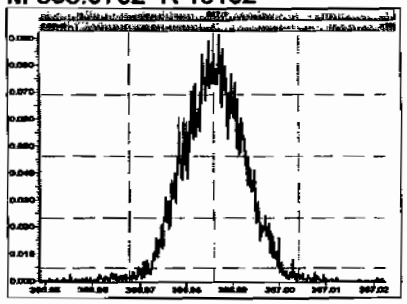

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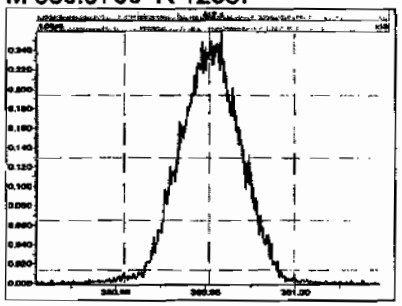

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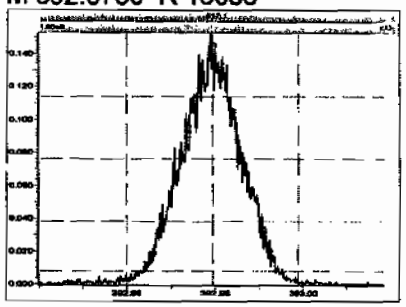

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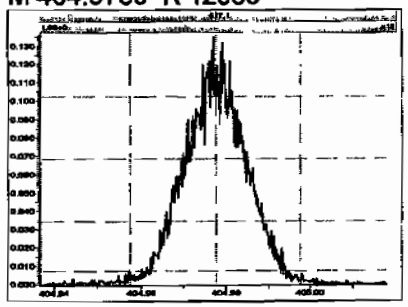

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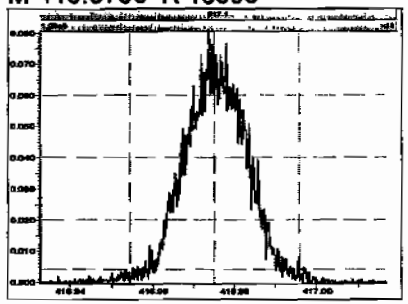

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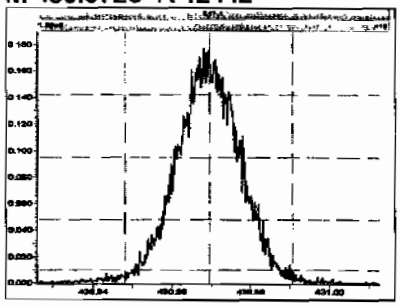

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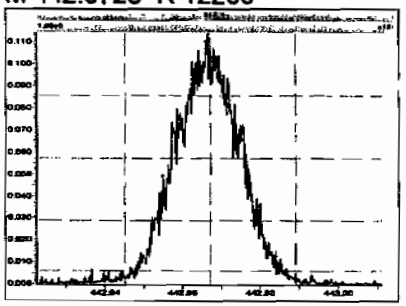

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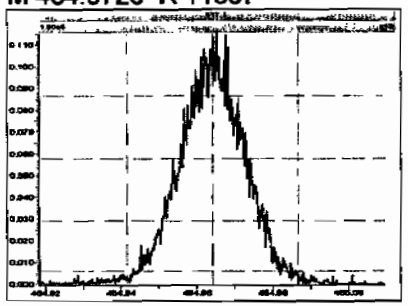

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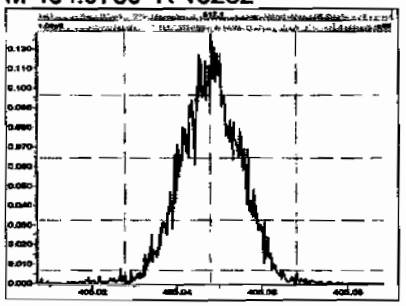

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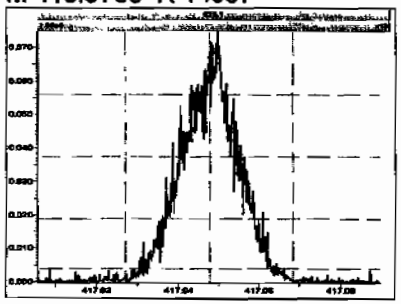

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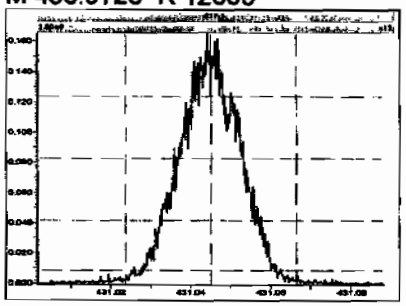

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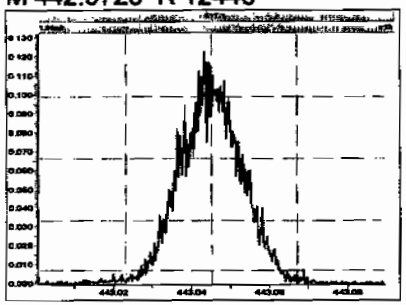

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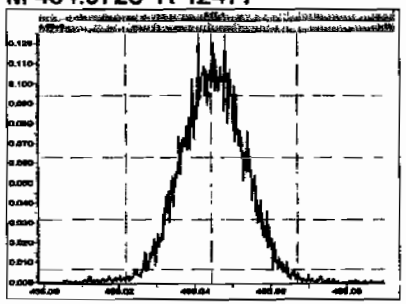

M 466.9728 R 12756

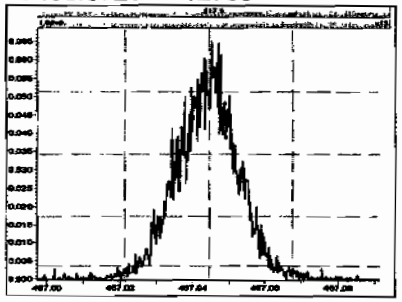

M 480.9696 R 12196

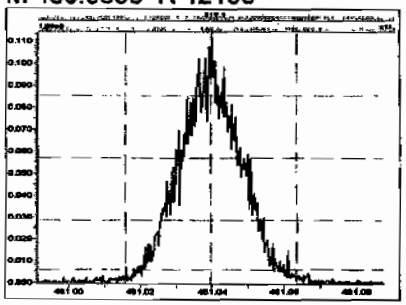

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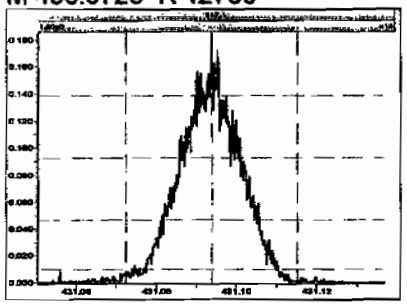

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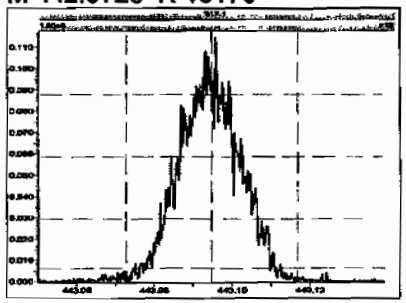

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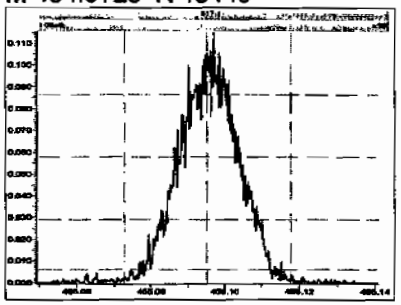

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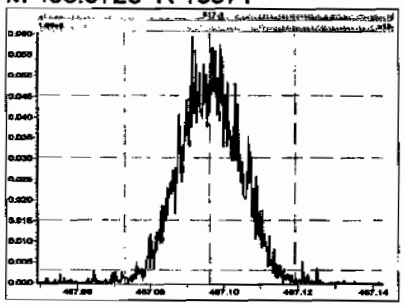

M 480.9696 R 12490

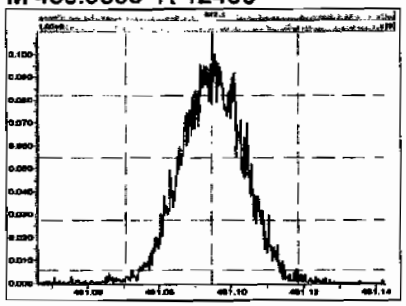

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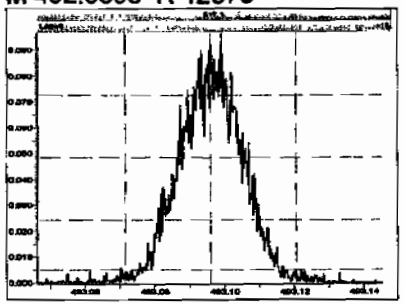

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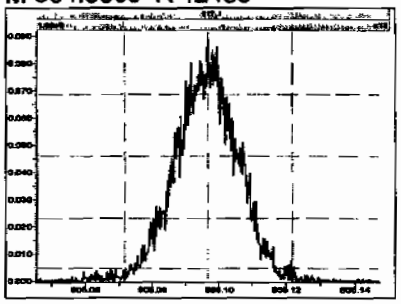

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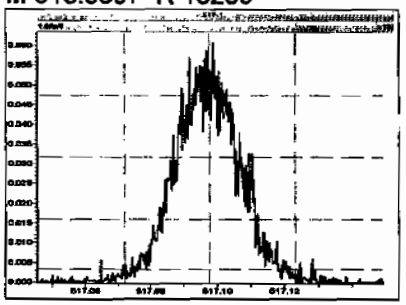

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

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Printed: Tuesday, June 30, 2009 07:54:16 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

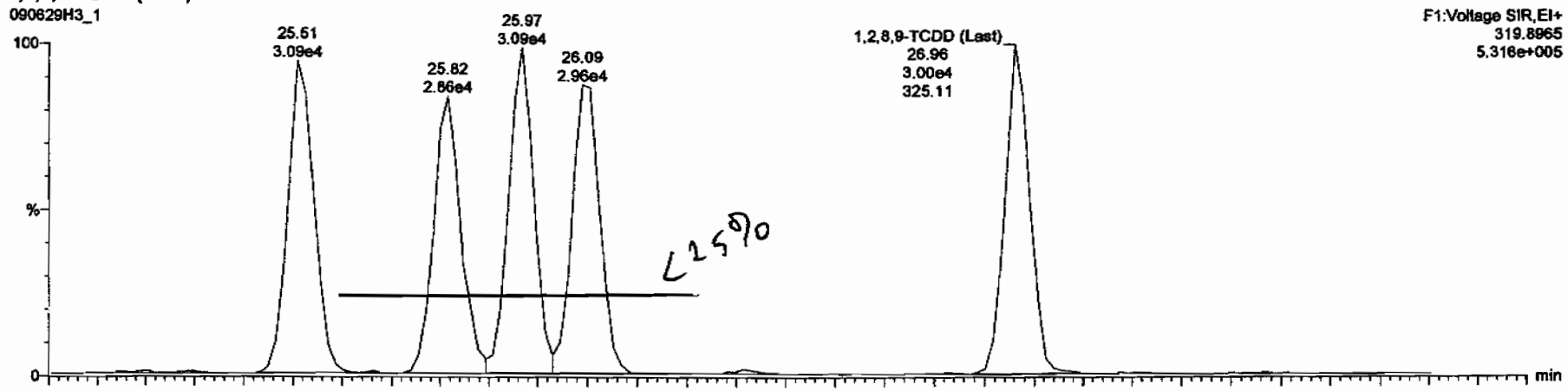

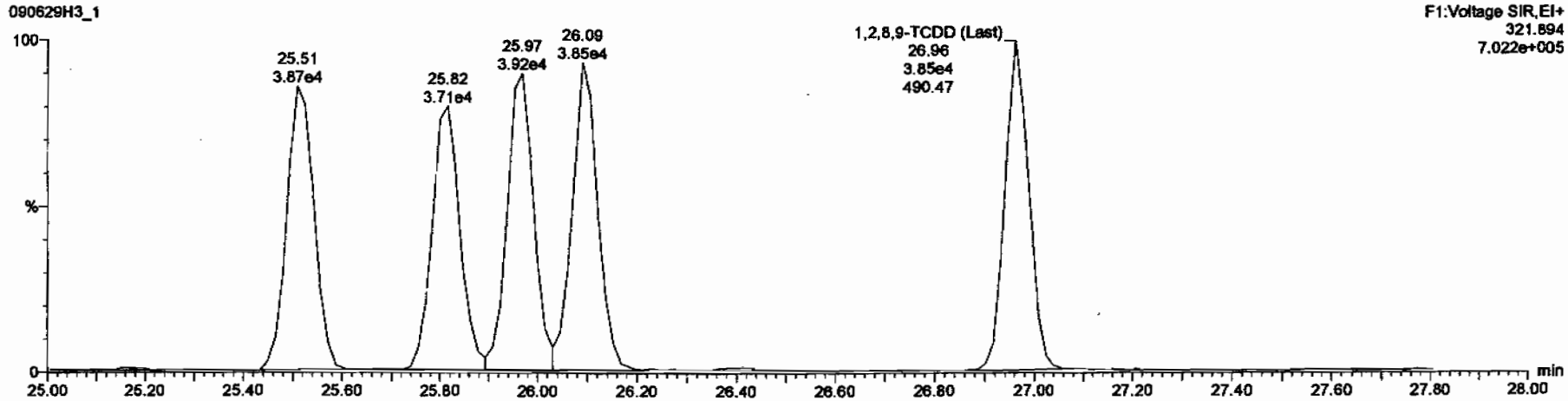

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629h3-1.qld

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Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

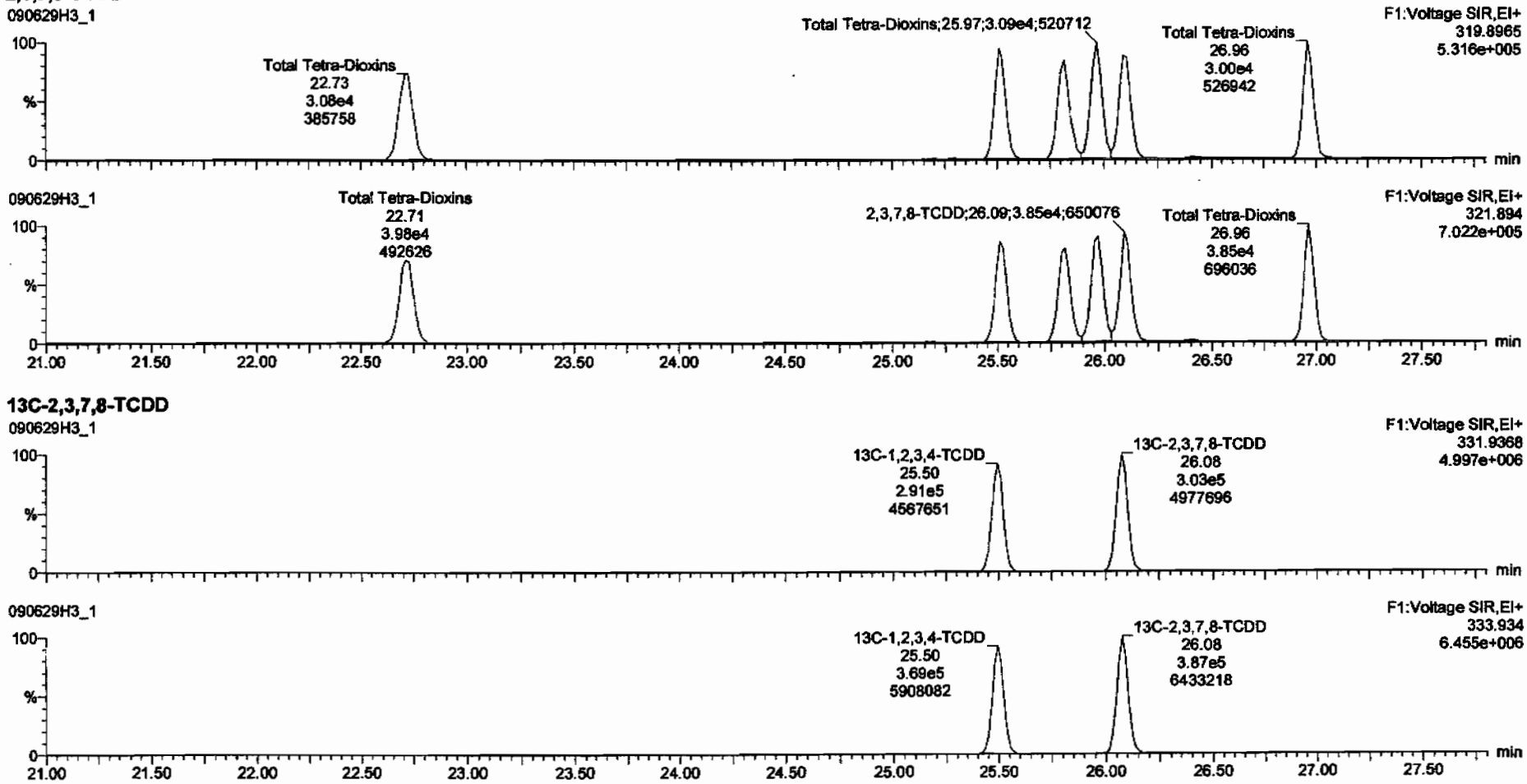

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37Cl-2,3,7,8-TCDD

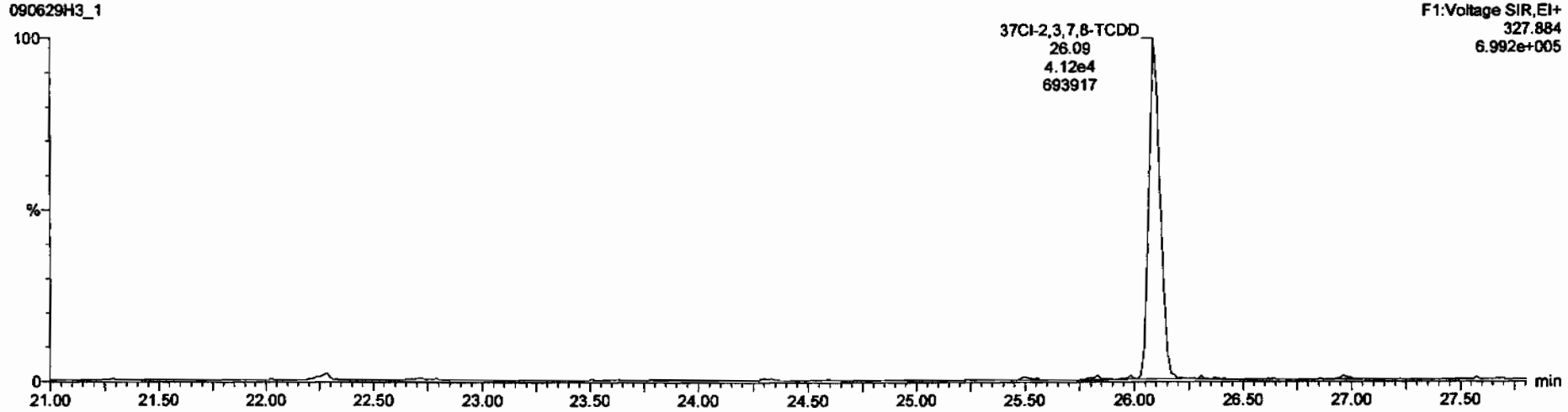

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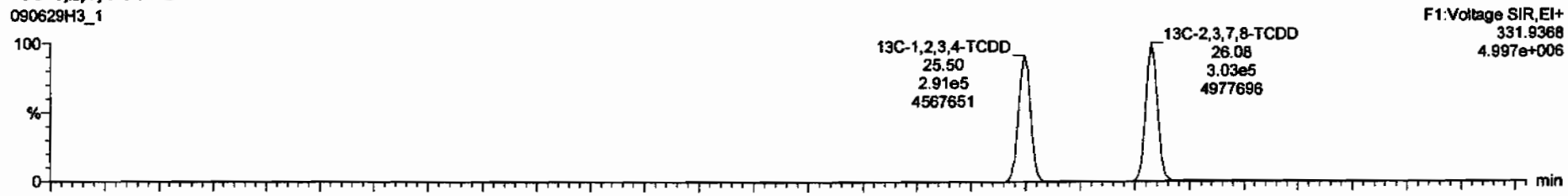

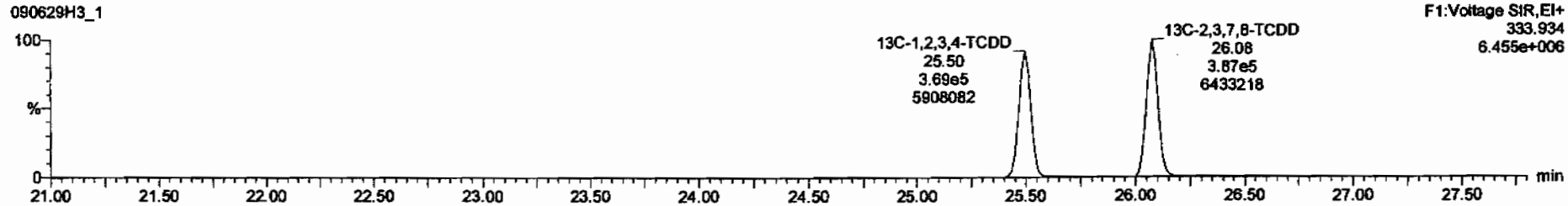

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629h3-1.qld

Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

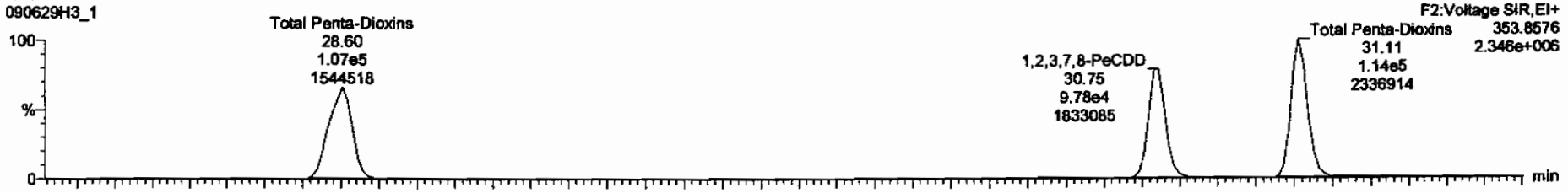

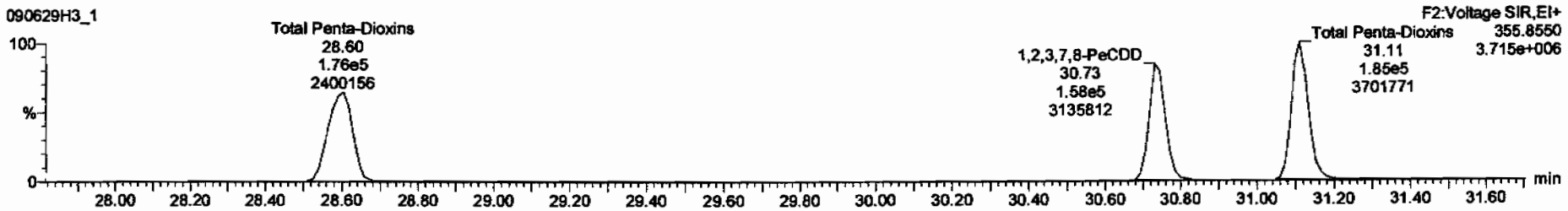

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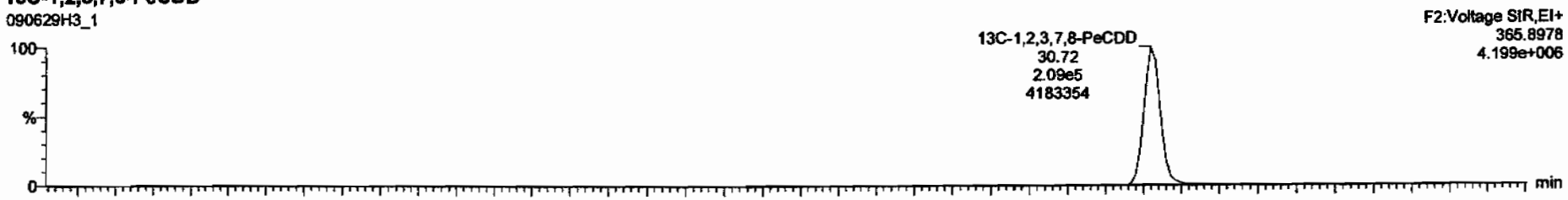

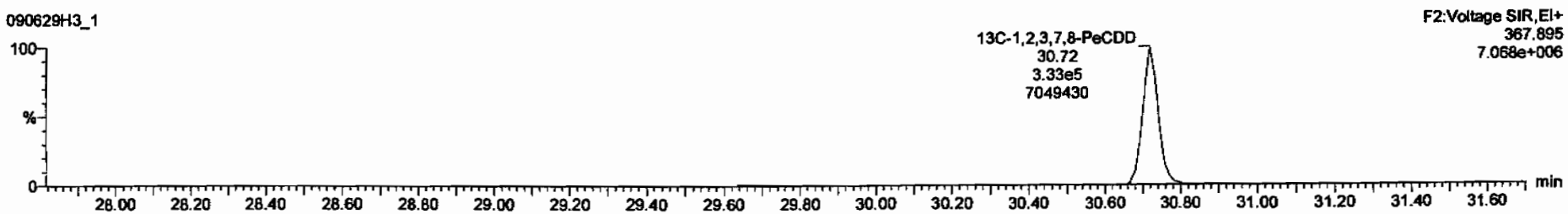

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Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

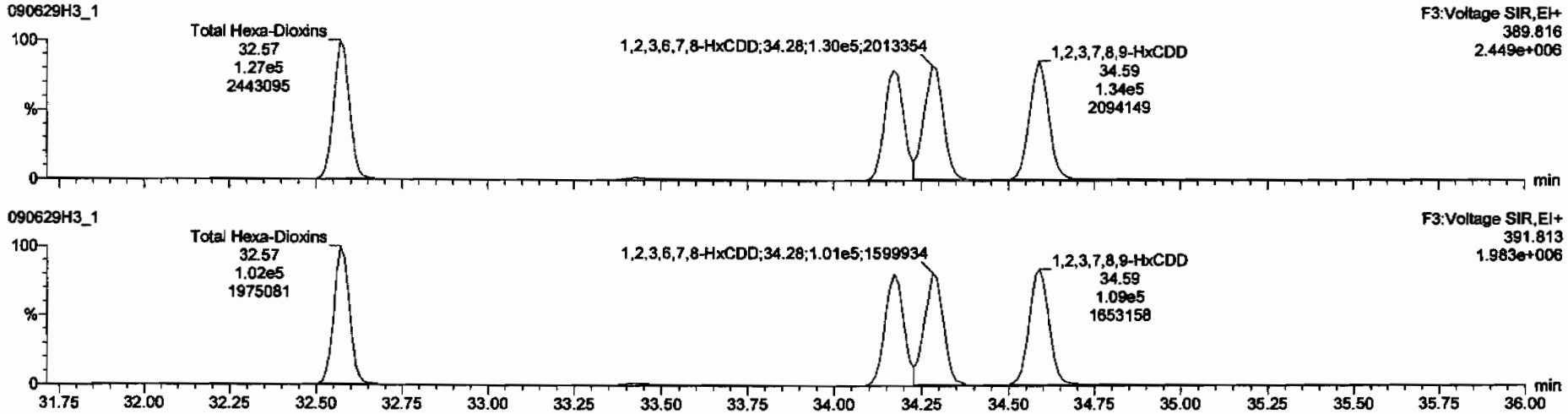

13C-1,2,3,4,7,8-HxCDD

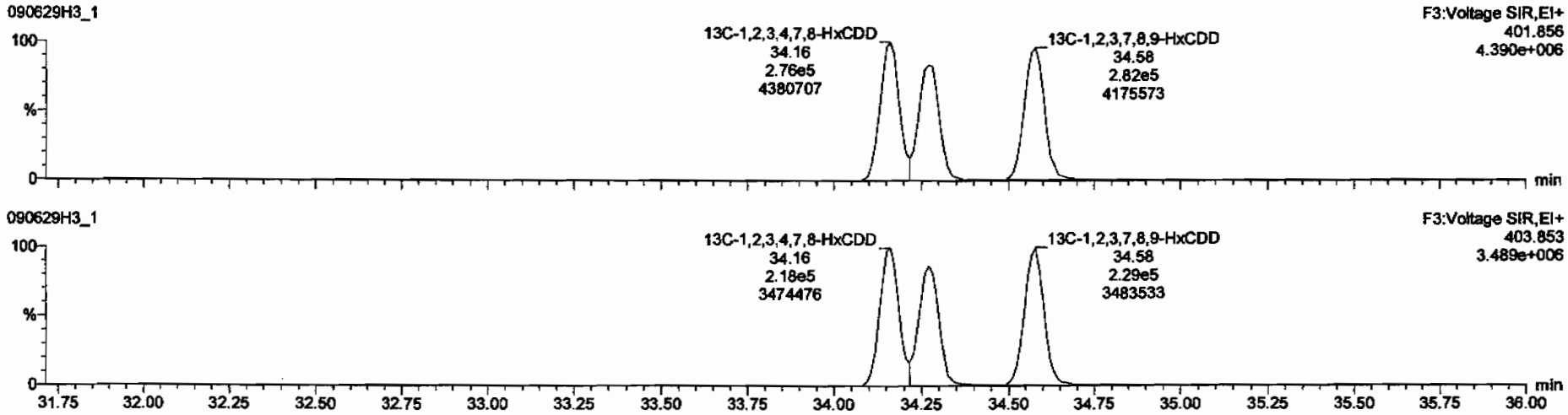

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Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

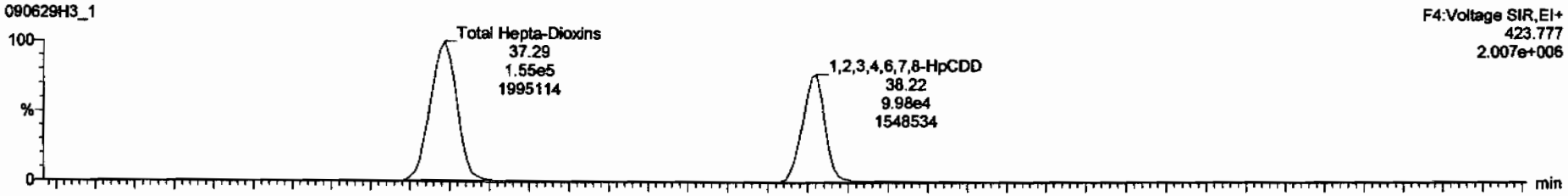

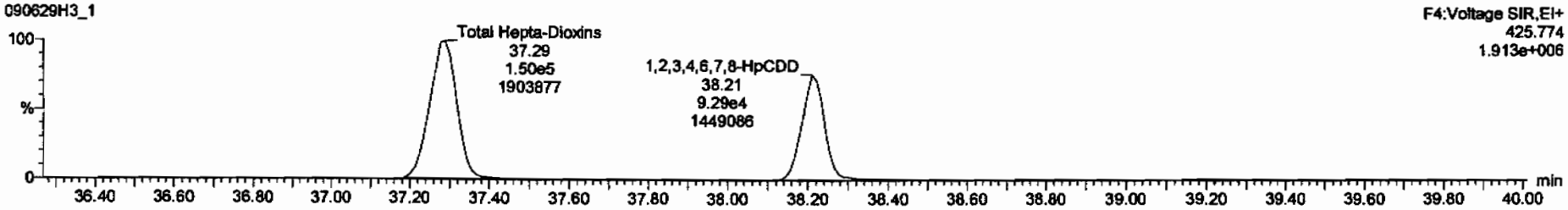

13C-1,2,3,4,6,7,8-HpCDD

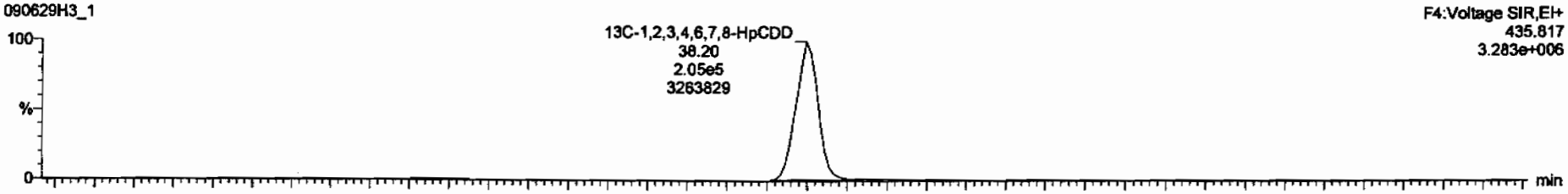

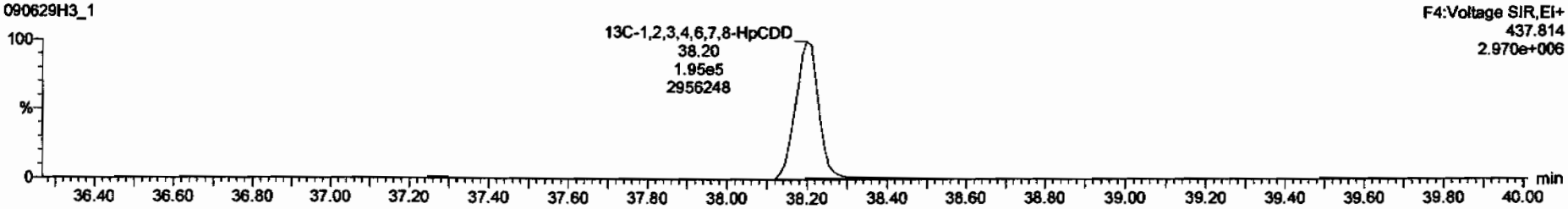

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Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

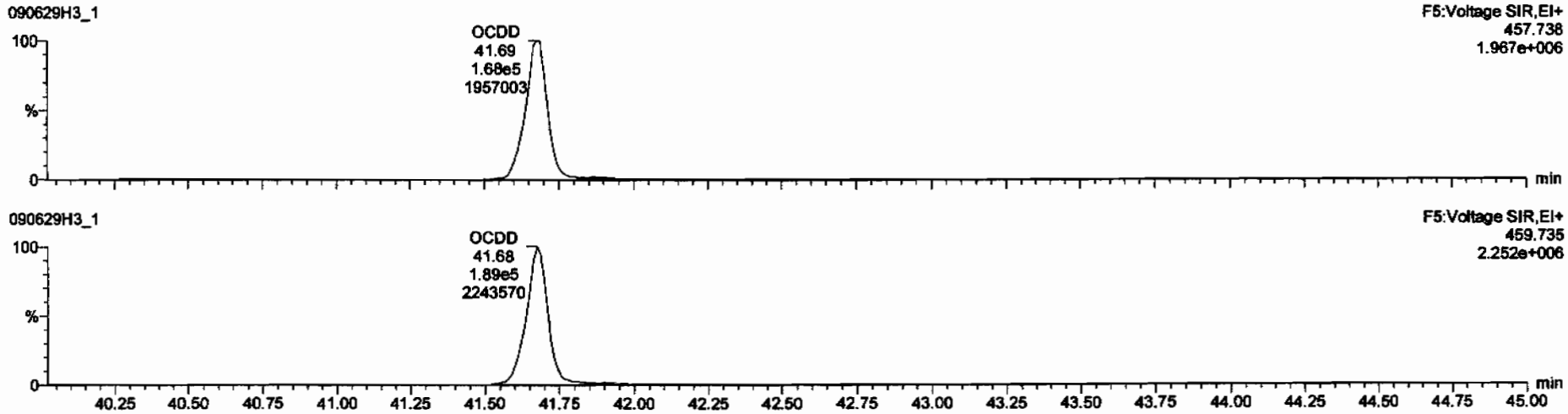

13C-OCDD

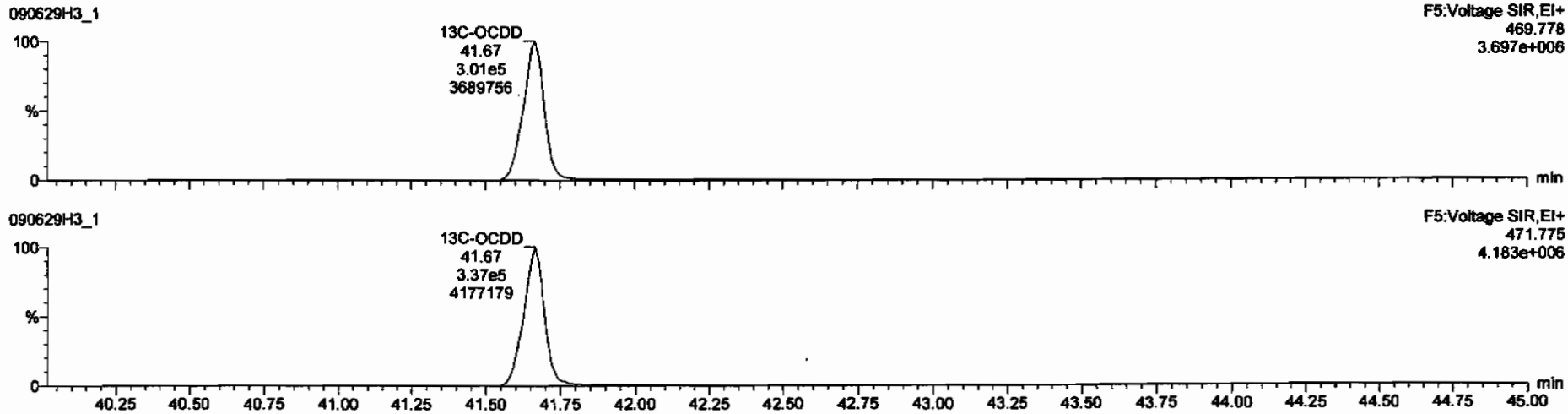

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2,3,7,8-TCDF

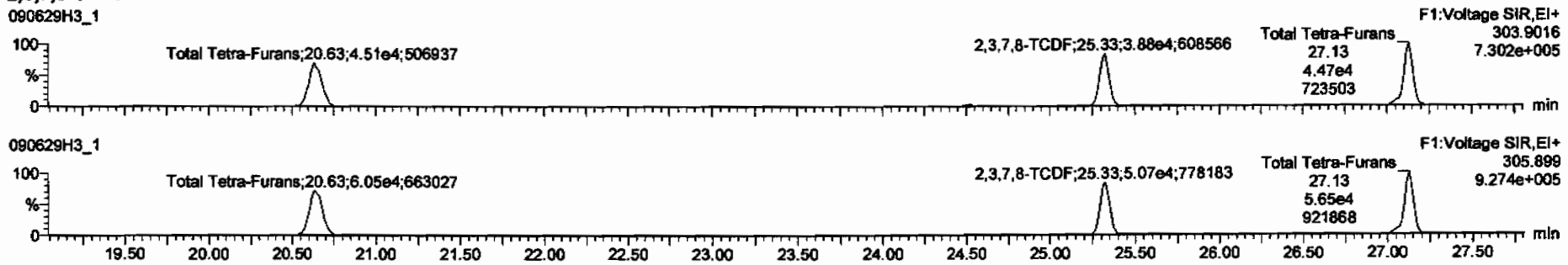

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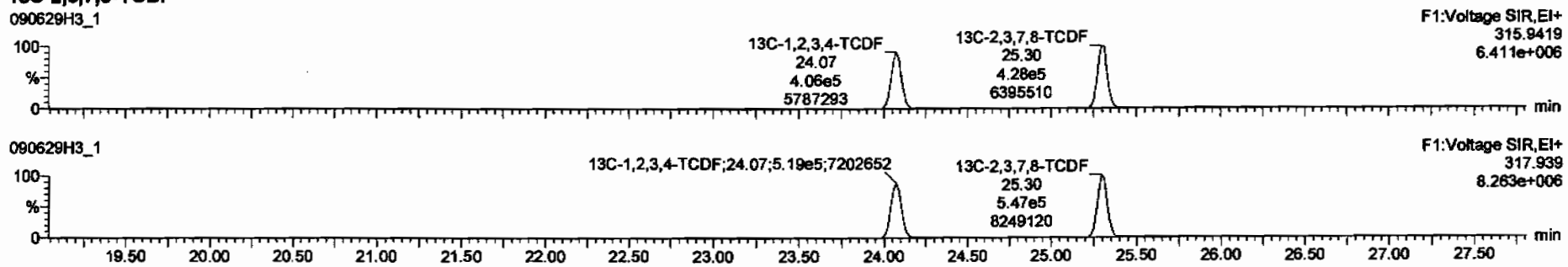

DPE1

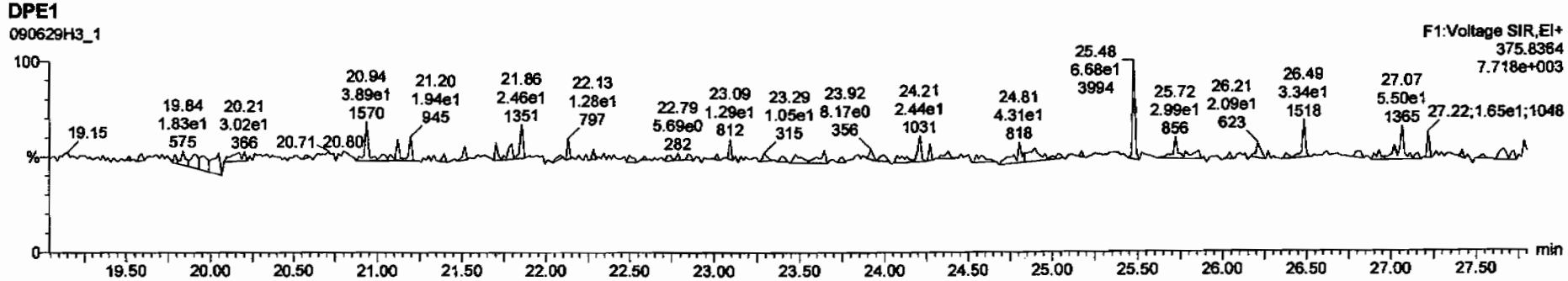

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Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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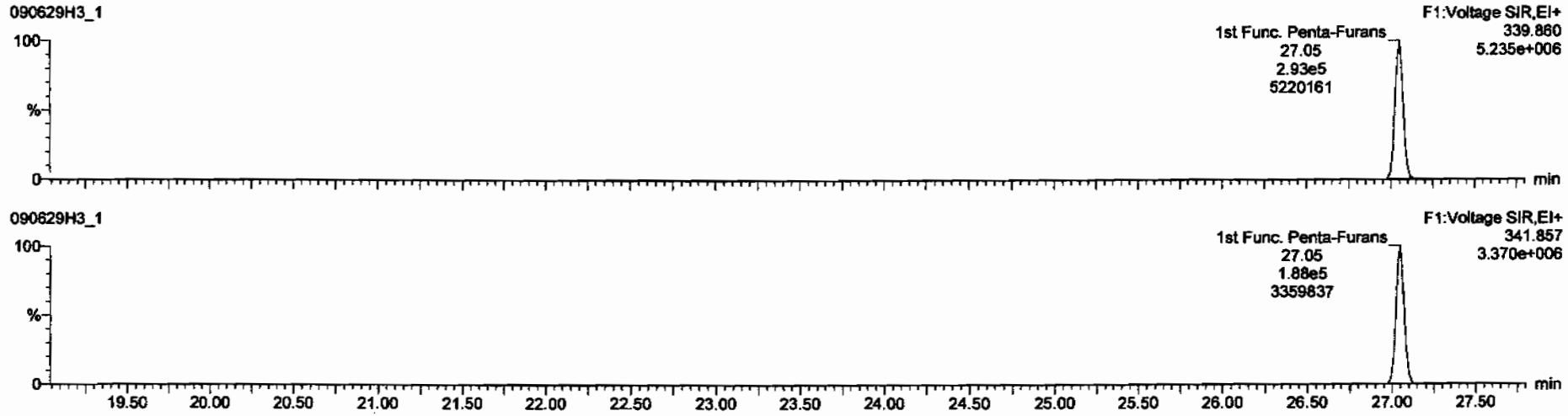

DPE6

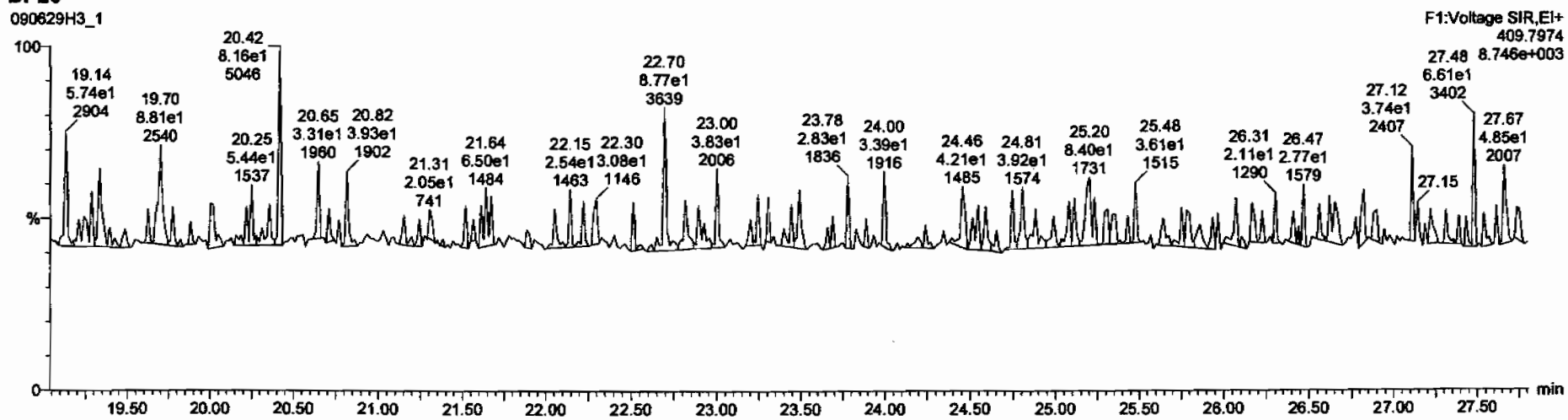

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Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

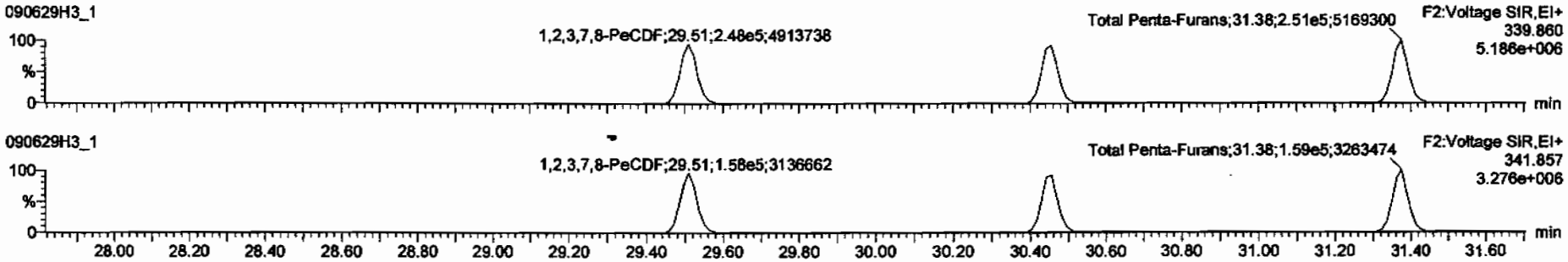

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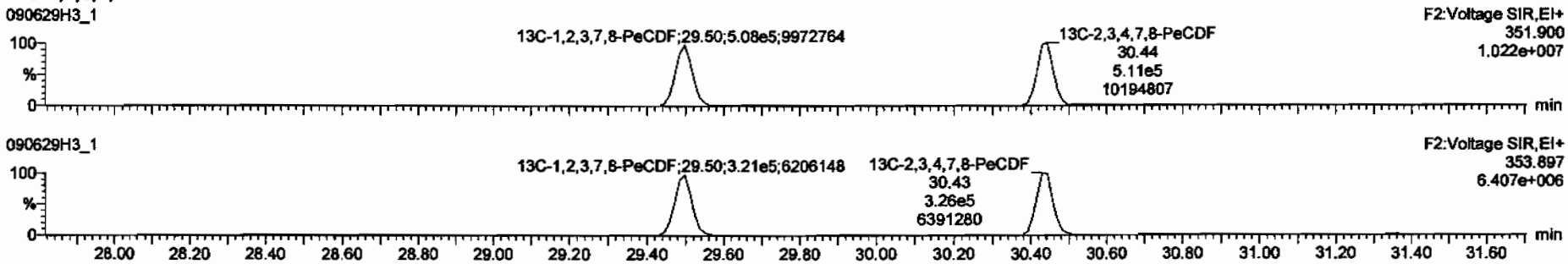

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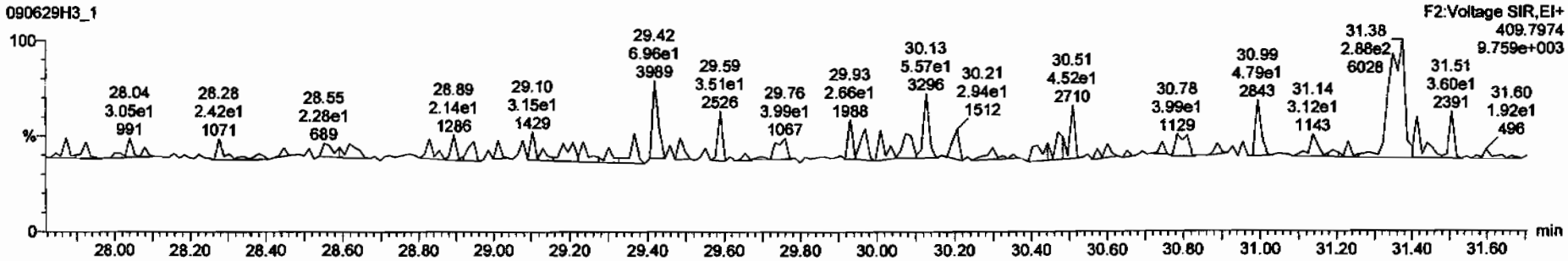

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Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDF

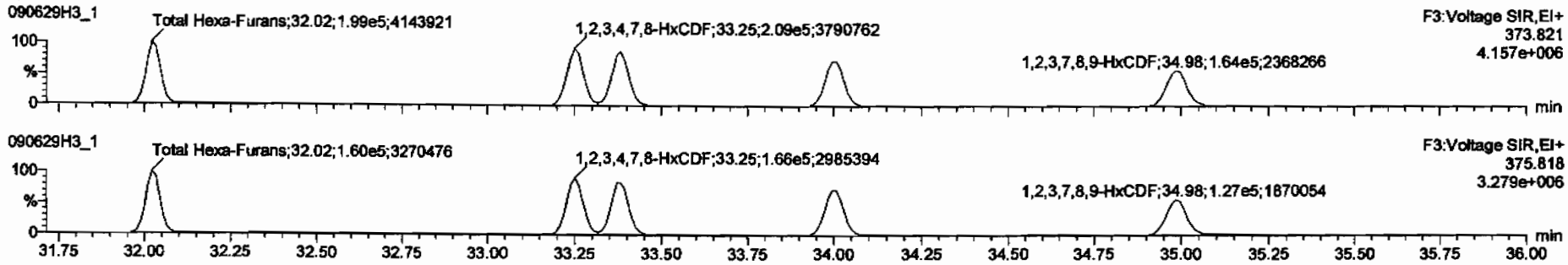

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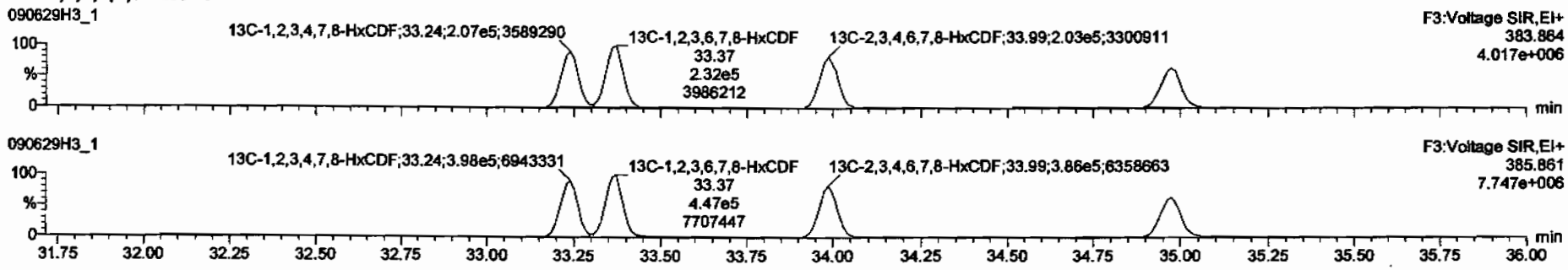

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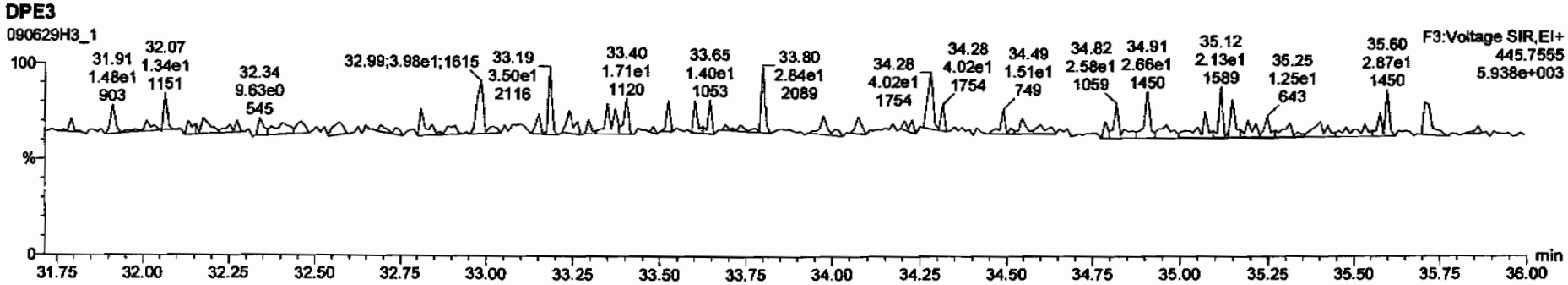

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Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDF

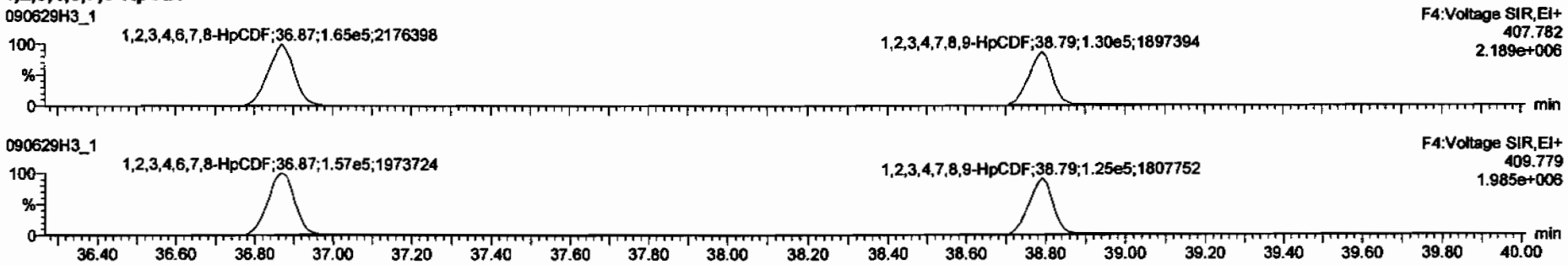

13C-1,2,3,4,6,7,8-HpCDF

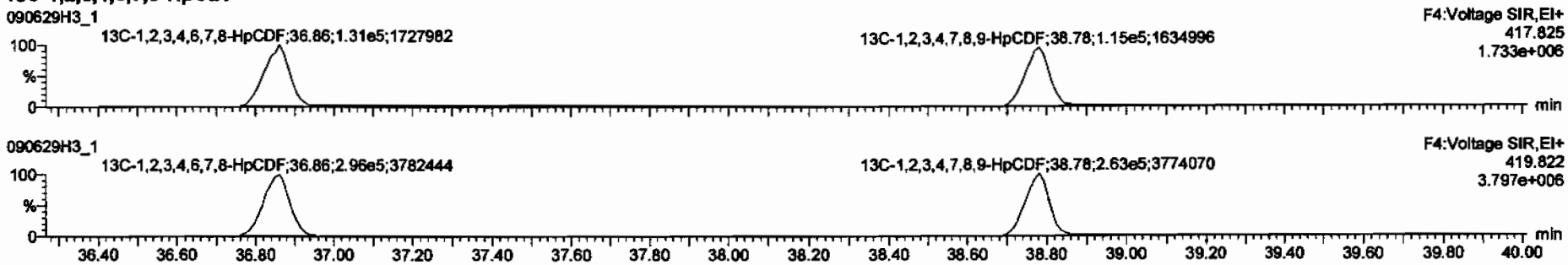

DPE4

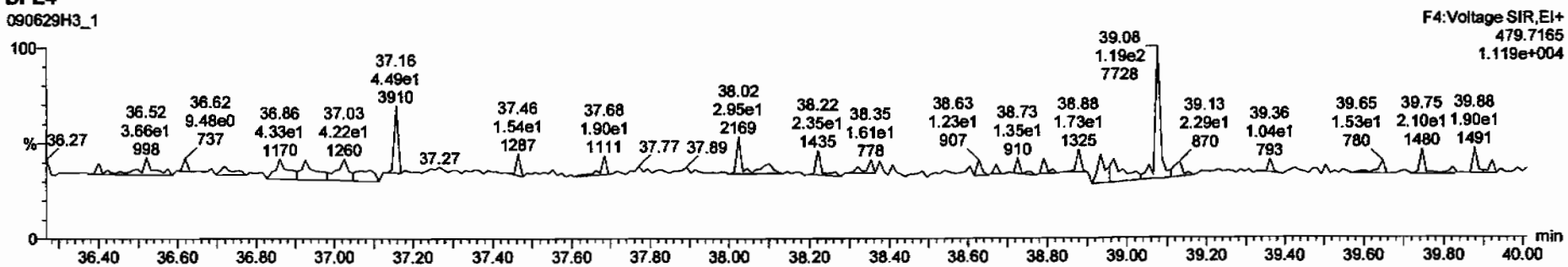

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OCDF

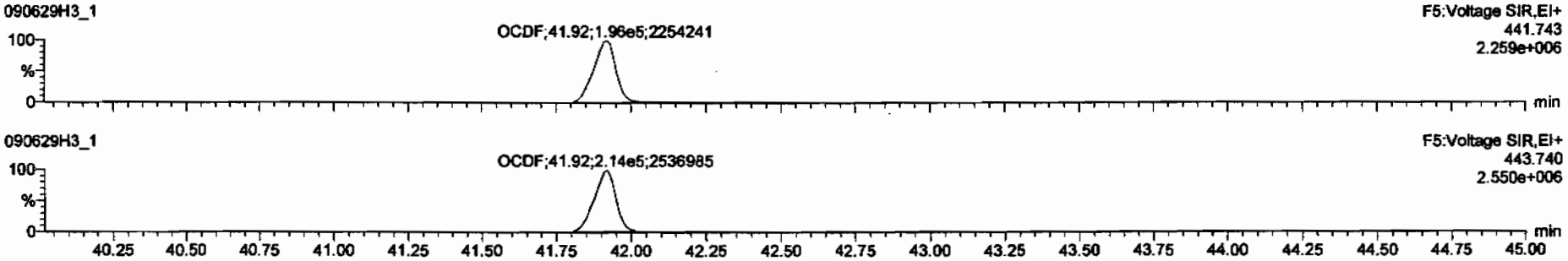

13C-OCDF

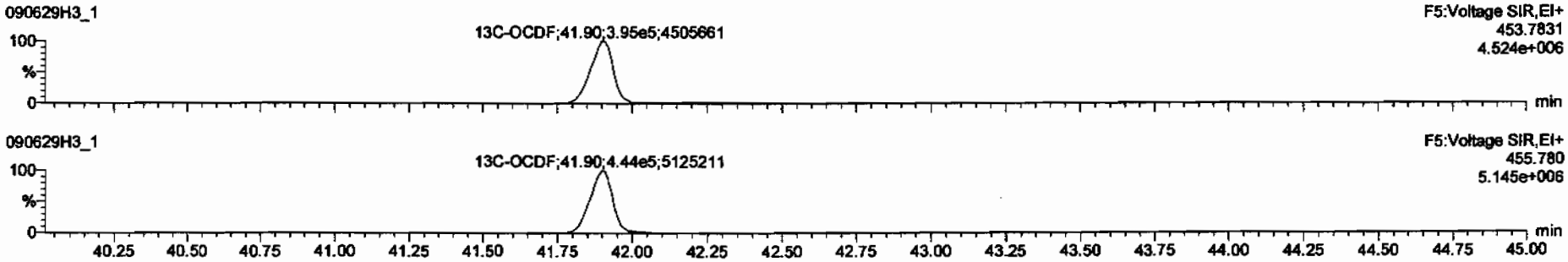

DPE5

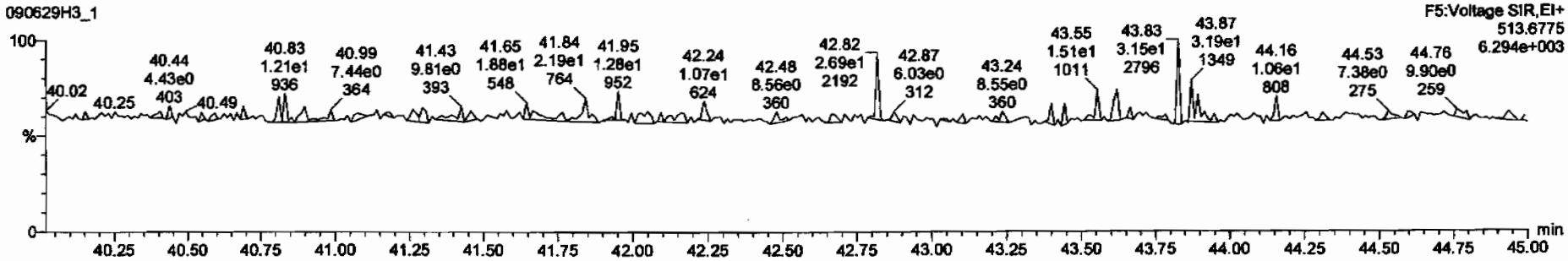

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Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
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Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

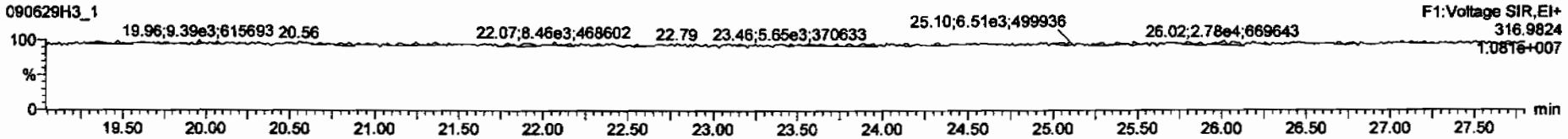

PFK2

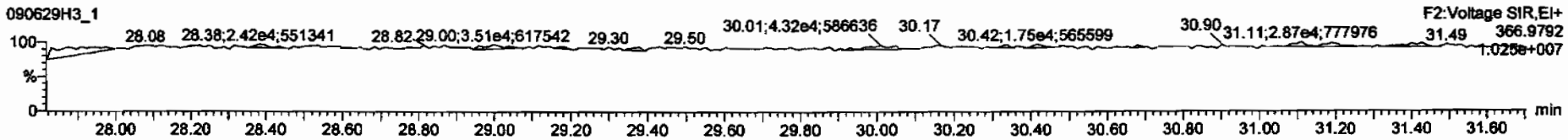

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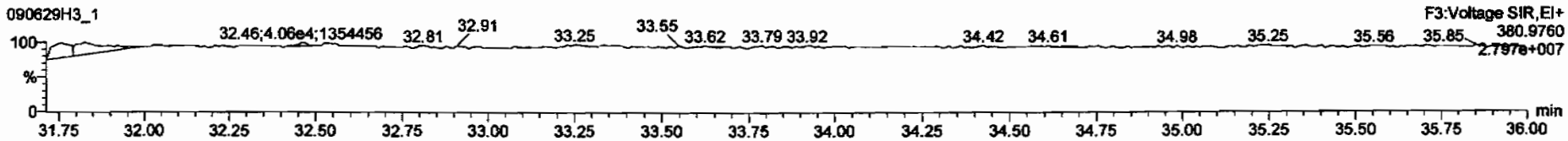

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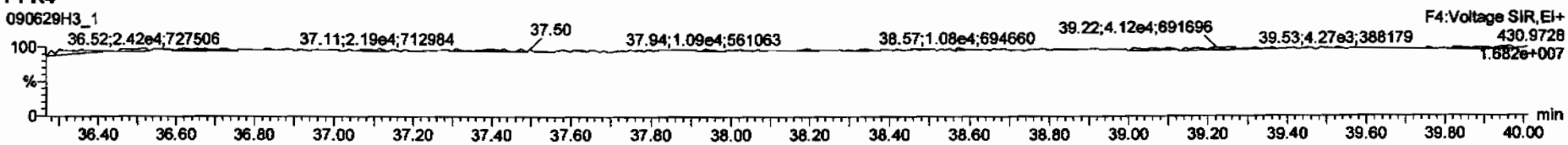

PFK5

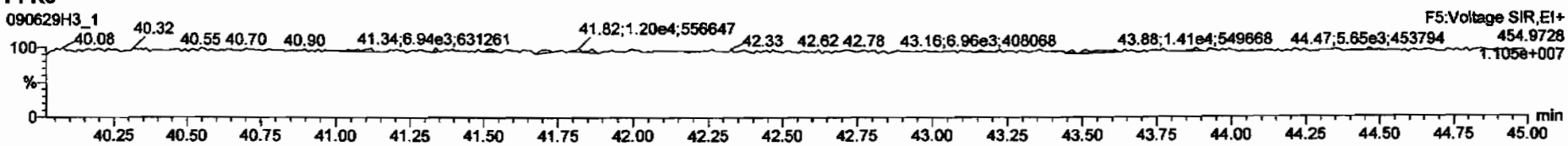

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_6

CCAL ID: ST090629H3-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 08:21:05

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	NO	8.99	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	45.9	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	45.1	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	45.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	44.6	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.87	0.76-1.02	NO	89.9	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	8.51	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	42.3	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	42.1	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.6	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.9	44.0	57.0	No	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	45.1	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.9	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	45.3	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.90	0.76-1.02	NO	86.9	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/30/09

8290 only

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_6

CCAL ID: ST090629H3-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 08:21:05

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	104	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	98.3	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	105	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	96.3	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	NO	109	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.92	0.76-1.02	NO	243	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	99.3	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	99.9	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	103	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	89.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	93.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	97.9	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	95.0	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	NO	101	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	215	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.21	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290 only
Date: 6/30/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 09:23:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:23:21 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.71
2	1,2,8,9-TCDD (Last)	26.96
3	1,2,4,7,9-PeCDD (First)	28.60
4	1,2,3,8,9-PeCDD (Last)	31.11
5	12,4,6,7,9-HxCDD (First)	32.58
6	1,2,3,7,8,9-HxCDD (Last)	34.59
7	1,2,3,4,6,7,9-HpCDD (First)	37.29
8	1,2,3,4,6,7,8-HpCDD (Last)	38.22
9	1,3,6,8-TCDF (First)	20.63
10	1,2,8,9-TCDF (Last)	27.13
11	1,3,4,6,8-PeCDF (First)	27.05
12	1,2,3,8,9-PeCDF (Last)	31.38
13	1,2,3,4,6,8-HxCDF (First)	32.02
14	1,2,3,4,8,9-HxCDF (Last)	34.98
15	1,2,3,4,6,7,8-HpCDF (First)	36.88
16	1,2,3,4,7,8,9-HpCDF (Last)	38.80

6/30/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_6

CCAL ID: ST090629H3-2
GC Column ID: DB-5
Analysis Date: 30-Jun-09
Analysis Time: 08:21:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]
Date: 6/30/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090629H3-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090629H3_6

Analysis Date: 30-Jun-09

Analysis Time: 08:21:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 6/30/05

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-7.qld

Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:22:05 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	5.79e4	0.81	NO	1.08	1.000	26.09	1.001	8.9857	89.9	0.0570	8.9857
2	1,2,3,7,8-PeCDD	2.19e5	0.63	NO	1.03	1.000	30.75	1.001	45.890	91.8	0.128	45.890
3	1,2,3,4,7,8-HxCDD	1.88e5	1.24	NO	1.00	1.000	34.17	1.000	45.053	90.1	0.196	45.053
4	1,2,3,6,7,8-HxCDD	1.98e5	1.28	NO	1.13	1.000	34.28	1.000	45.618	91.2	0.204	45.618
5	1,2,3,7,8,9-HxCDD	2.07e5	1.28	NO	1.10	1.000	34.59	1.009	46.981	94.0	0.193	46.981
6	1,2,3,4,6,7,8-HpCDD	1.59e5	1.05	NO	1.06	1.000	38.22	1.000	44.620	89.2	0.213	44.620
7	OCDD	2.81e5	0.87	NO	1.18	1.000	41.69	1.000	89.865	89.9	0.201	89.865
8	2,3,7,8-TCDF	7.70e4	0.77	NO	1.09	1.000	25.33	1.001	8.5069	85.1	0.0505	8.5069
9	1,2,3,7,8-PeCDF	3.47e5	1.59	NO	1.16	1.000	29.51	1.000	42.308	84.6	0.107	42.308
10	2,3,4,7,8-PeCDF	3.36e5	1.59	NO	1.12	1.000	30.46	1.000	42.070	84.1	0.108	42.070
11	1,2,3,4,7,8-HxCDF	3.21e5	1.26	NO	1.41	1.000	33.26	1.001	43.631	87.3	0.113	43.631
12	1,2,3,6,7,8-HxCDF	3.15e5	1.27	NO	1.22	1.000	33.38	1.000	43.888	87.8	0.117	43.888
13	2,3,4,6,7,8-HxCDF	2.94e5	1.29	NO	1.28	1.000	34.01	1.000	45.062	90.1	0.138	45.062
14	1,2,3,7,8,9-HxCDF	2.53e5	1.30	NO	1.26	1.000	34.98	1.000	44.854	89.7	0.178	44.854
15	1,2,3,4,6,7,8-HpCDF	2.72e5	1.05	NO	1.69	1.000	36.88	1.001	44.945	89.9	0.242	44.945
16	1,2,3,4,7,8,9-HpCDF	2.14e5	1.04	NO	1.48	1.000	38.80	1.000	45.285	90.6	0.281	45.285
17	OCDF	3.39e5	0.90	NO	1.10	1.000	41.93	1.000	86.944	86.9	0.130	86.944
18	13C-2,3,7,8-TCDD	5.98e5	0.78	NO	1.01	1.000	26.08	1.023	103.62	104	0.222	
19	13C-1,2,3,7,8-PeCDD	4.62e5	0.61	NO	0.827	1.000	30.72	1.205	98.251	98.3	0.135	
20	13C-1,2,3,4,7,8-HxCDD	4.16e5	1.25	NO	0.916	1.000	34.16	0.988	104.52	105	0.387	
21	13C-1,2,3,6,7,8-HxCDD	3.85e5	1.23	NO	0.921	1.000	34.27	0.991	96.340	96.3	0.385	
22	13C-1,2,3,4,6,7,8-HpCDD	3.35e5	1.04	NO	0.708	1.000	38.21	1.105	108.73	109	0.540	
23	13C-OCDD	5.30e5	0.92	NO	0.503	1.000	41.68	1.205	242.98	121	0.462	
24	13C-2,3,7,8-TCDF	8.32e5	0.79	NO	0.977	1.000	25.30	0.992	107.12	107	0.143	
25	13C-1,2,3,7,8-PeCDF	7.07e5	1.58	NO	0.896	1.000	29.50	1.157	99.294	99.3	0.229	
26	13C-2,3,4,7,8-PeCDF	7.14e5	1.57	NO	0.900	1.000	30.44	1.194	99.859	99.9	0.229	
27	13C-1,2,3,4,7,8-HxCDF	5.21e5	0.52	NO	1.17	1.000	33.24	0.961	102.63	103	0.437	
28	13C-1,2,3,6,7,8-HxCDF	5.87e5	0.52	NO	1.52	1.000	33.37	0.965	88.977	89.0	0.336	
29	13C-2,3,4,6,7,8-HxCDF	5.09e5	0.52	NO	1.25	1.000	34.00	0.983	93.858	93.9	0.409	
30	13C-1,2,3,7,8,9-HxCDF	4.48e5	0.51	NO	1.05	1.000	34.97	1.011	97.933	97.9	0.485	

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-7.qld

Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:22:05 Pacific Daylight Time

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

31 13C-1,2,3,4,6,7,8-HpCDF	3.58e5	0.44	NO	0.868	1.000	36.85	1.066	95.023	95.0	0.457
32 13C-1,2,3,4,7,8,9-HpCDF	3.19e5	0.44	NO	0.727	1.000	38.79	1.122	101.22	101	0.546
33 13C-OCDF	7.10e5	0.88	NO	0.760	1.000	41.92	1.212	215.35	108	0.318
34 37Cl-2,3,7,8-TCDD	3.50e4			0.668	1.000	26.09	1.023	9.2112	92.1	0.0689
35 13C-1,2,3,4-TCDD	5.68e5	0.80	NO	1.00	1.000	25.50	0.000	100.00	100	0.226
36 13C-1,2,3,4-TCDF	7.95e5	0.79	NO	1.00	1.000	24.07	0.000	100.00	100	0.140
37 13C-1,2,3,7,8,9-HxCDD	4.34e5	1.23	NO	1.00	1.000	34.58	0.000	100.00	100	0.355

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 9:23:40 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 9:23:58 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

	090629H3_1	ST090629H3-1 1613 CS3 080917I	30-Jun-09	04:13:15
	090629H3_2	solvent blank	30-Jun-09	05:02:50
	090629H3_3	31837_2207_005 CAMO-09-6049 11.23	30-Jun-09	05:52:25
	090629H3_4	31838_2207_001 CAMO-09-10463 10.43	30-Jun-09	06:41:59
	090629H3_5	solvent blank	30-Jun-09	07:31:32
	090629H3_6	ST090629H3-2 1613 CS3 080917I	30-Jun-09	08:21:05

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 09:23:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:23:21 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

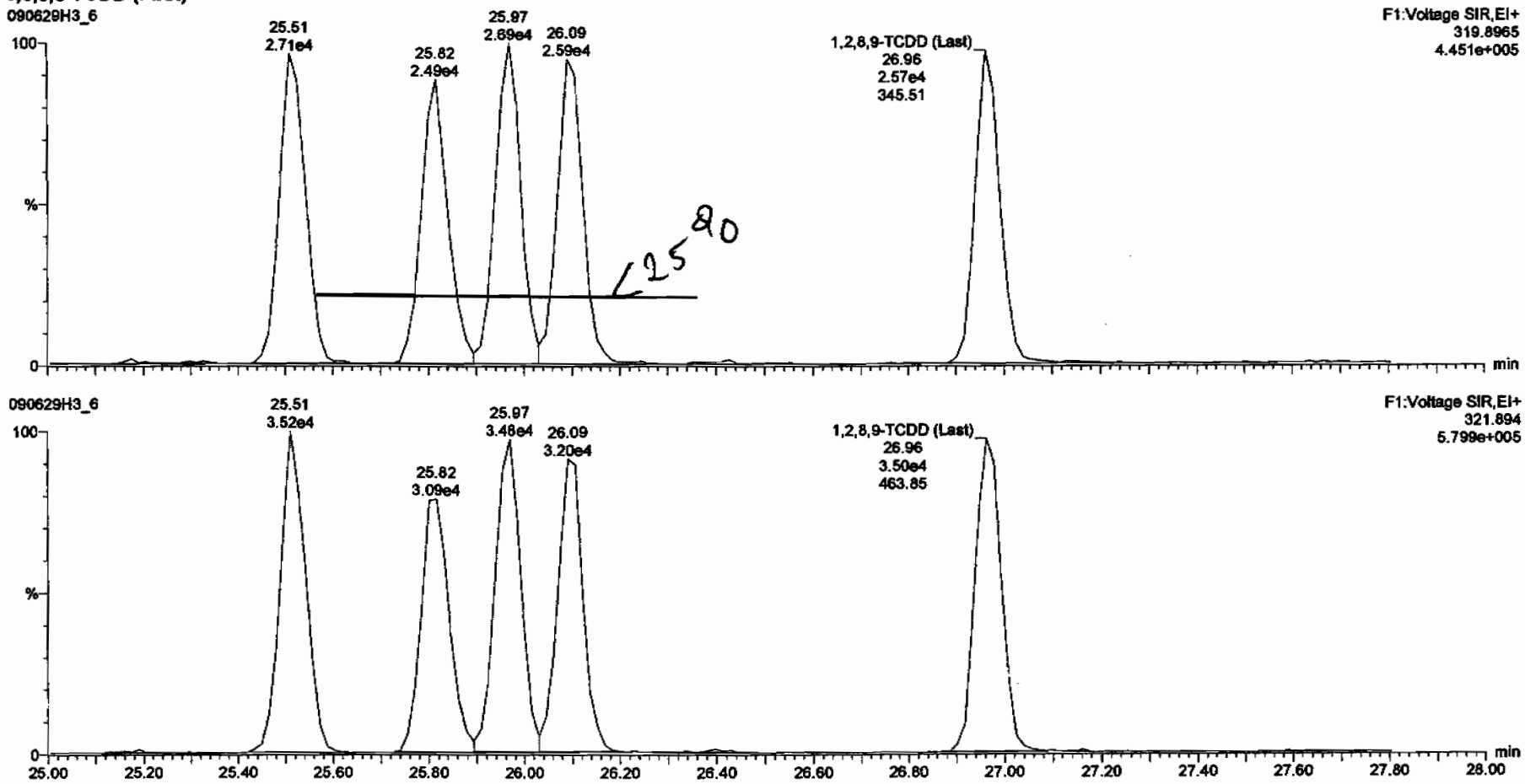

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-7.qld

Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:21:49 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

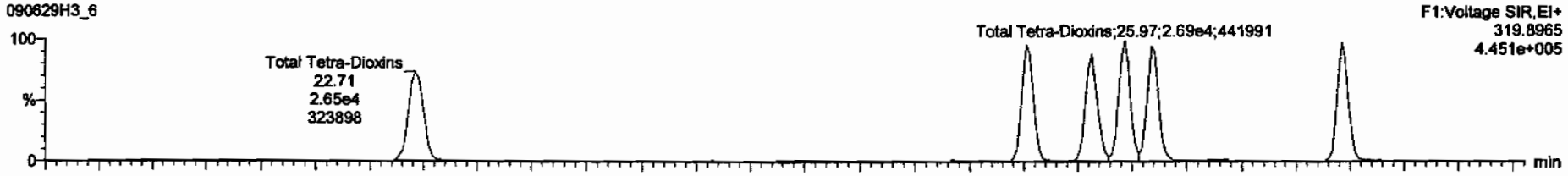

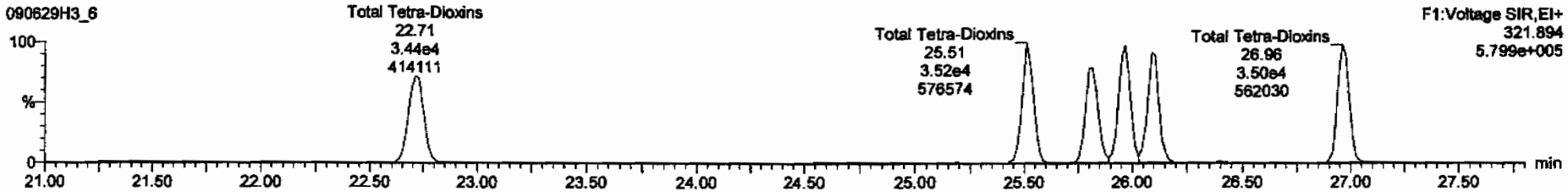

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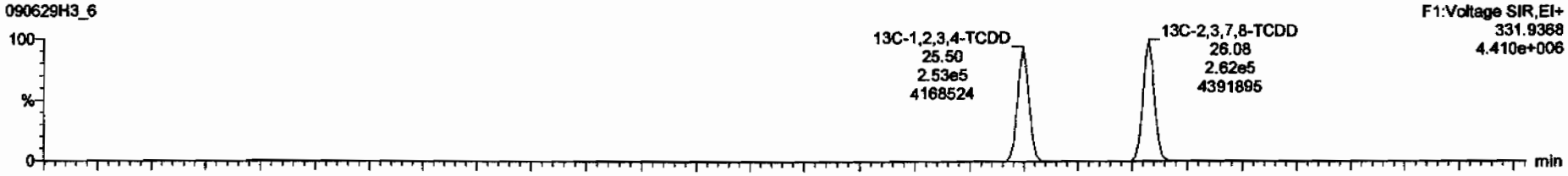

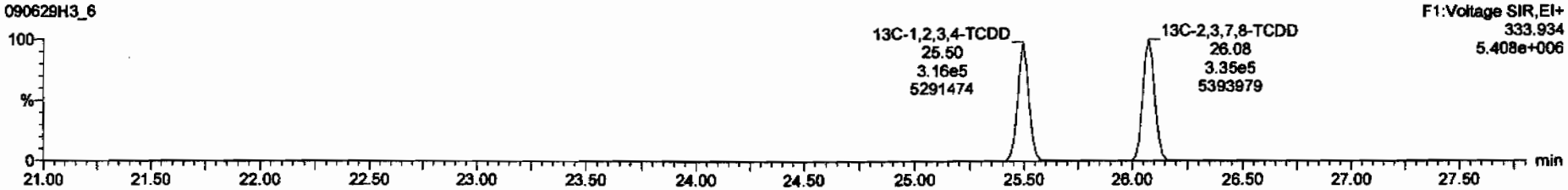

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Printed: Tuesday, June 30, 2009 09:21:49 Pacific Daylight Time

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

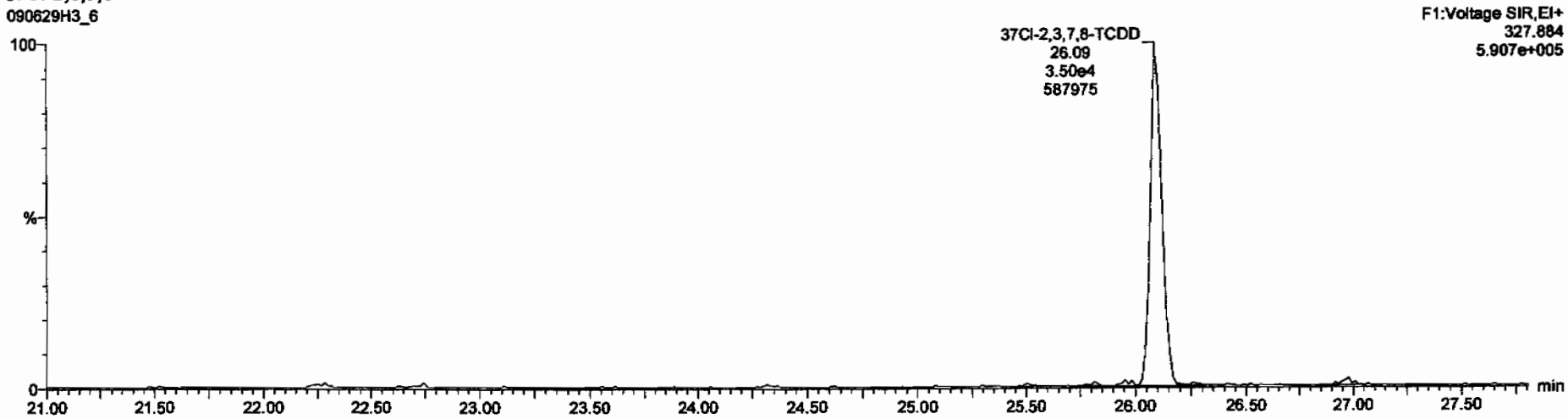

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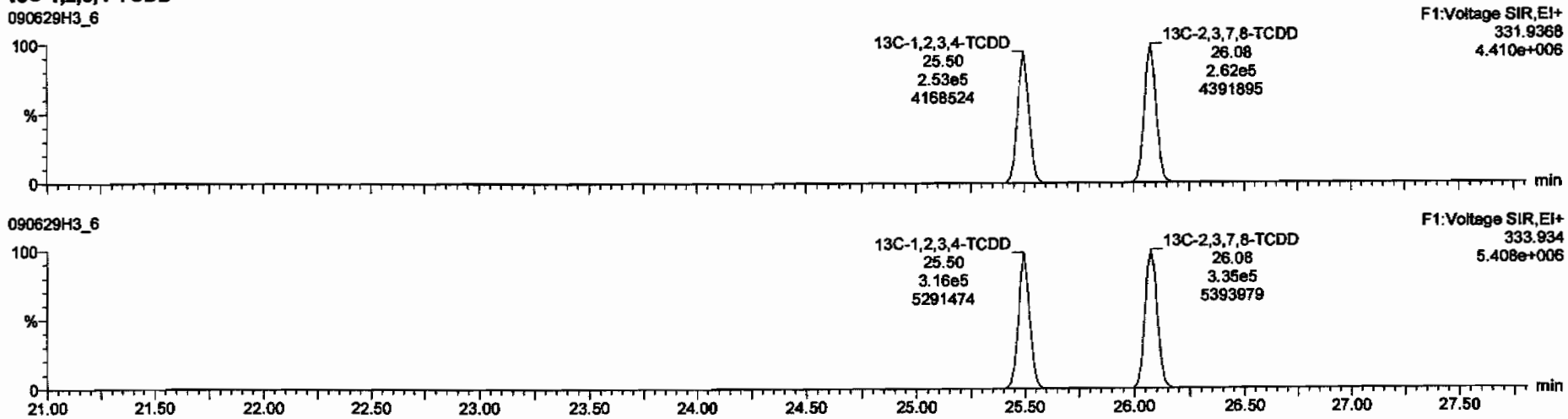

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1,2,3,7,8-PeCDD

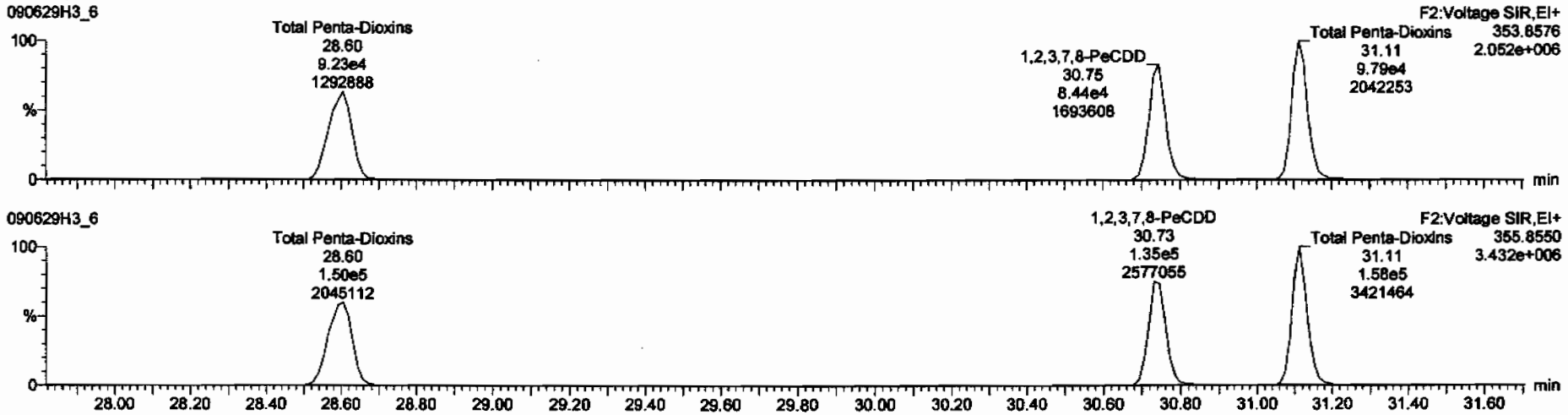

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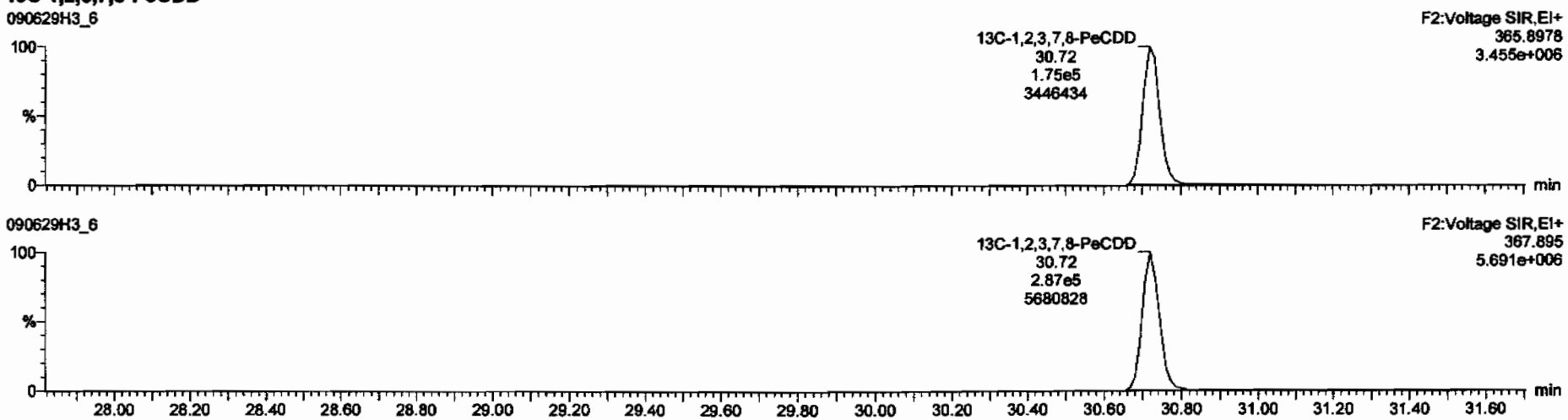

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1,2,3,4,7,8-HxCDD

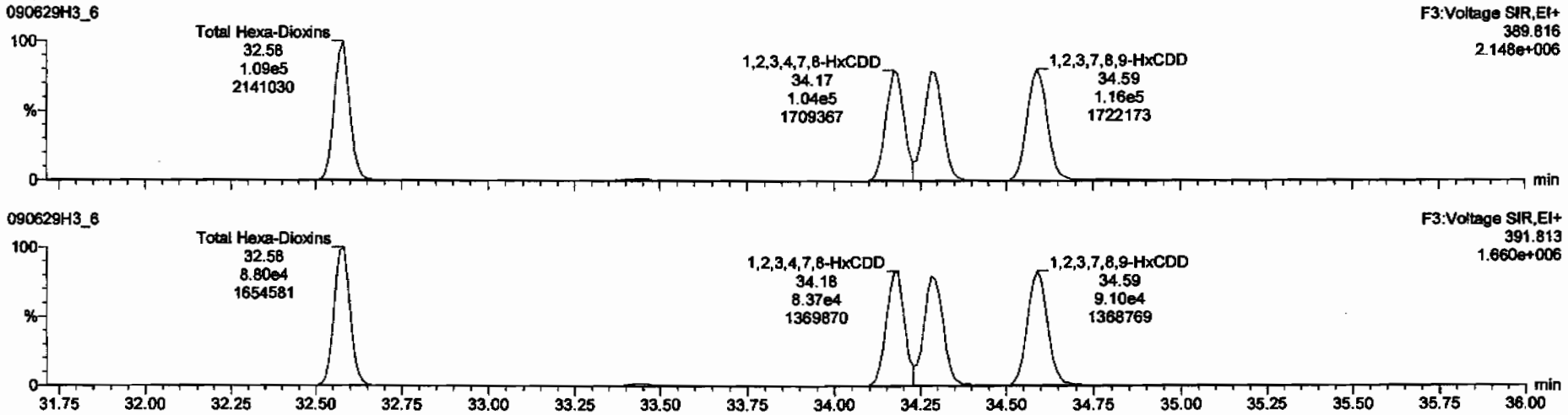

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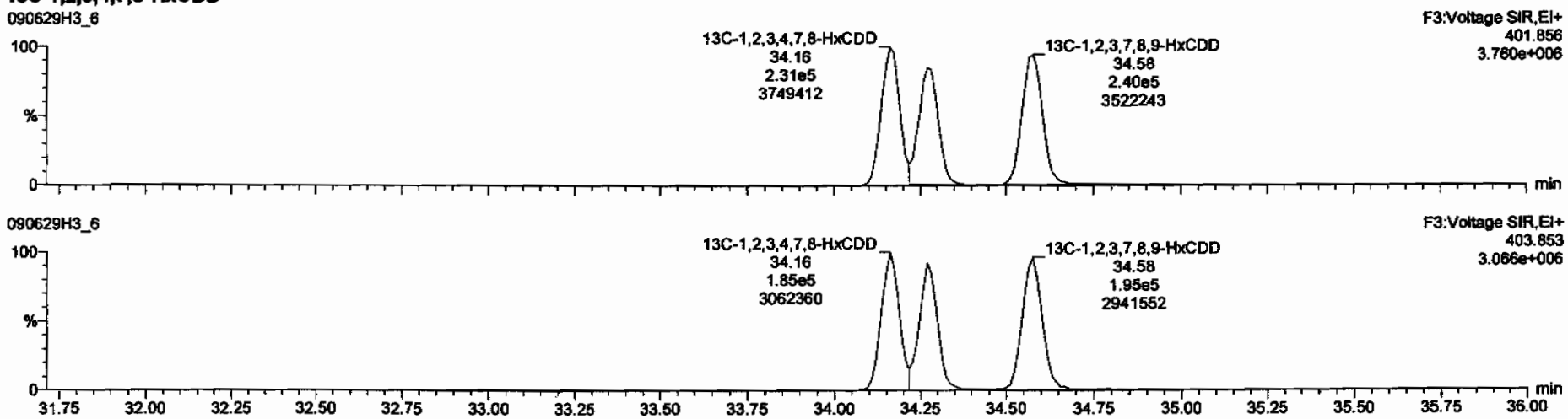

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1,2,3,4,6,7,8-HpCDD

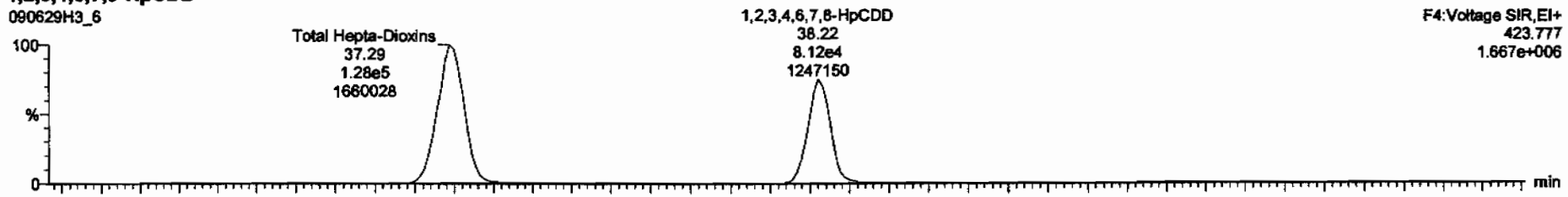

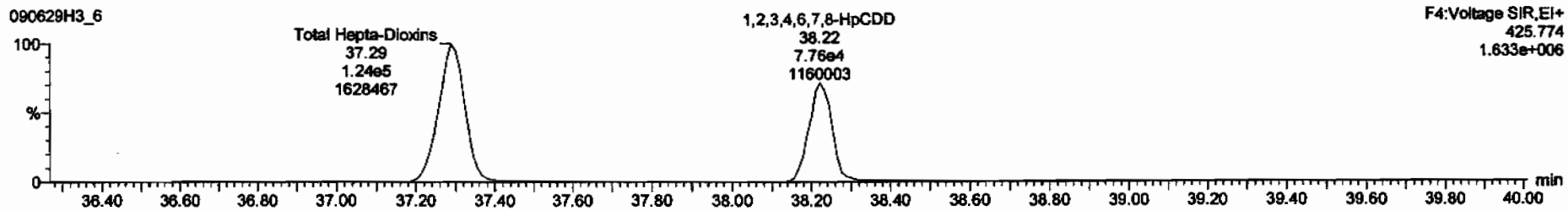

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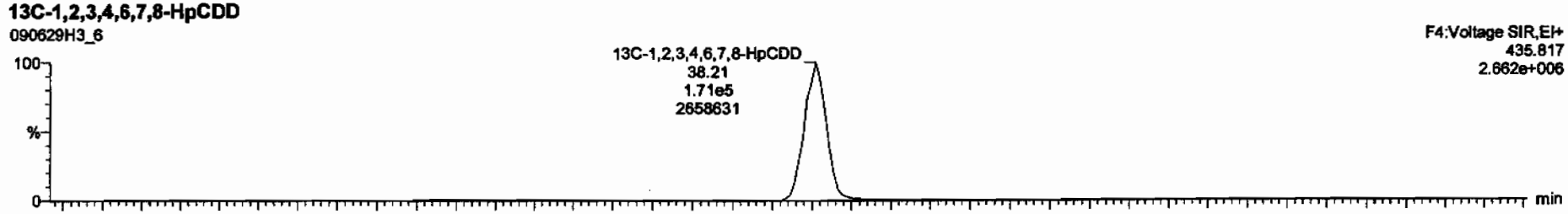

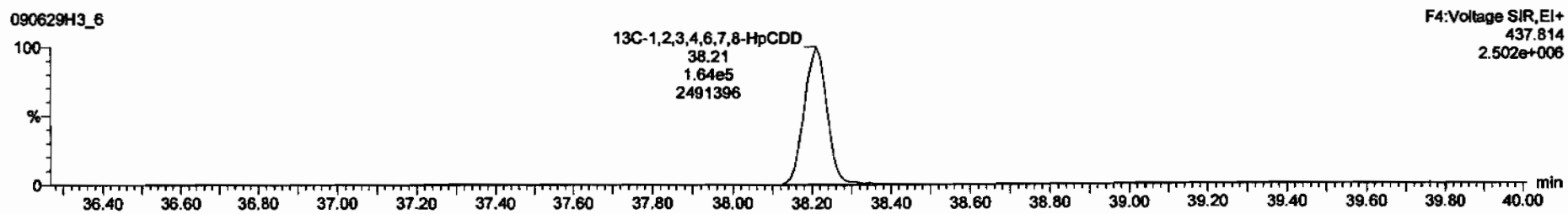

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Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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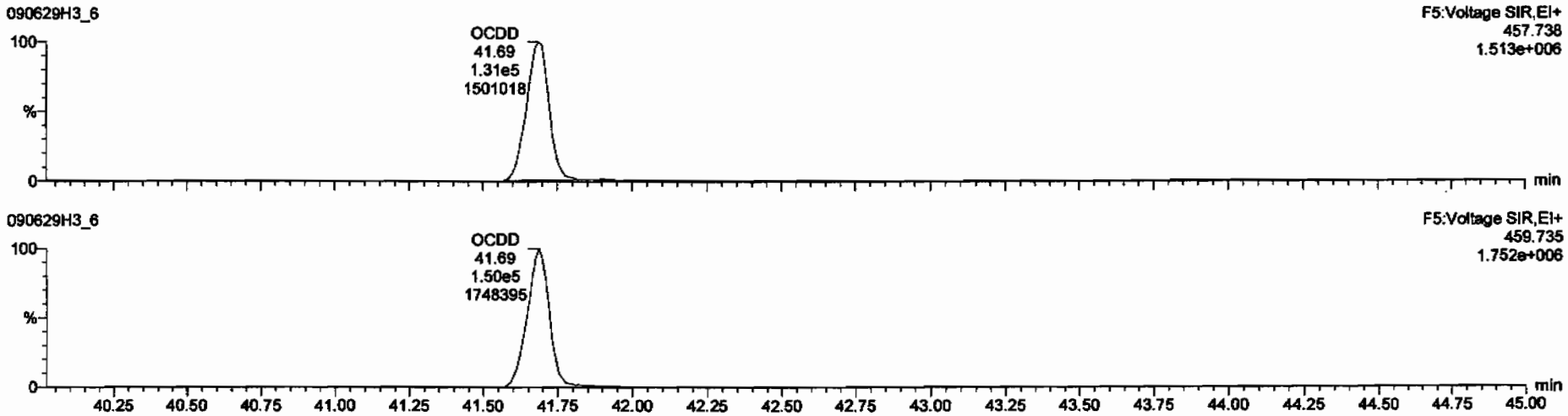

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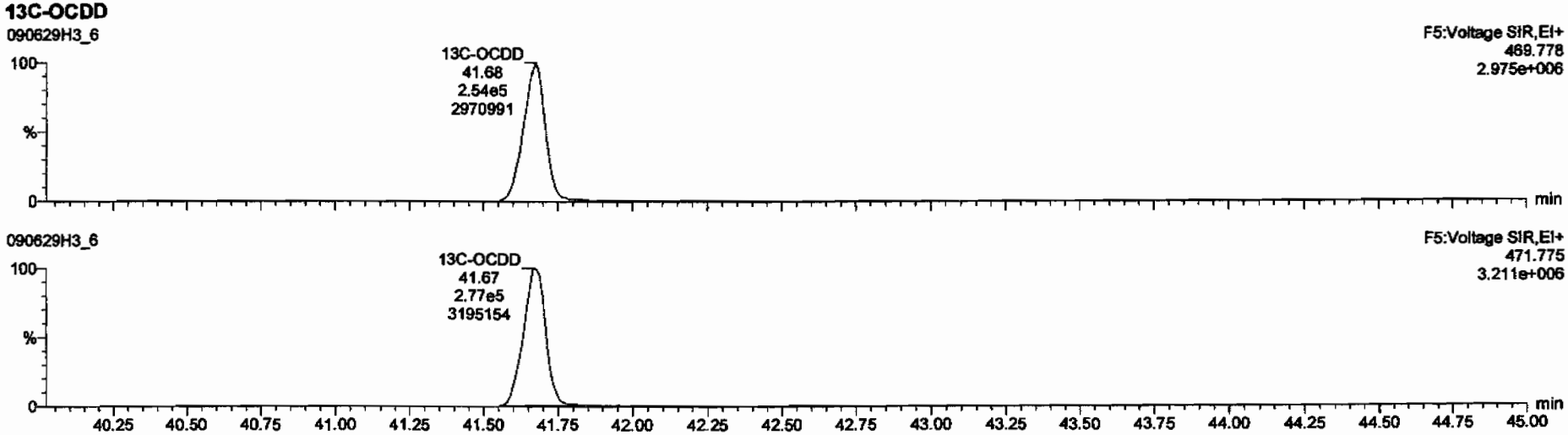

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2,3,7,8-TCDF

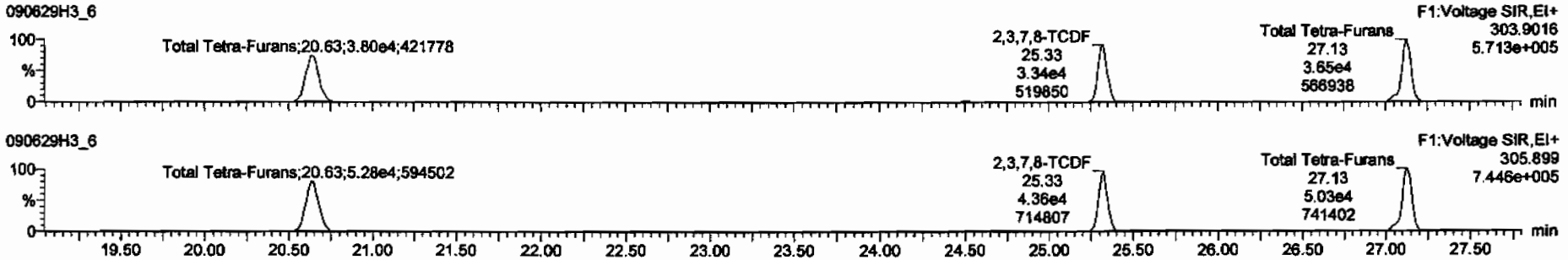

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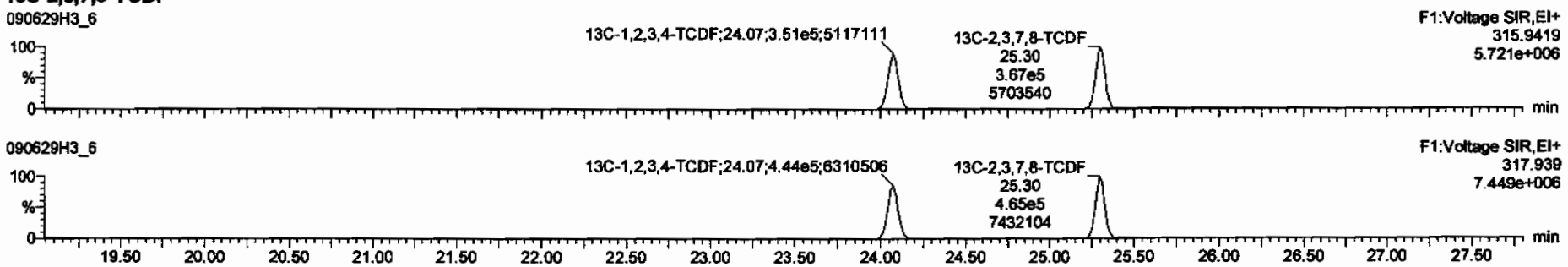

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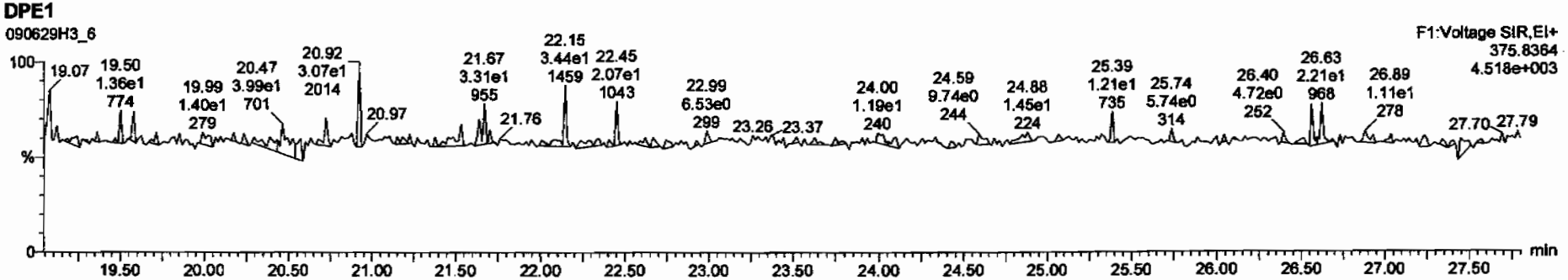

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Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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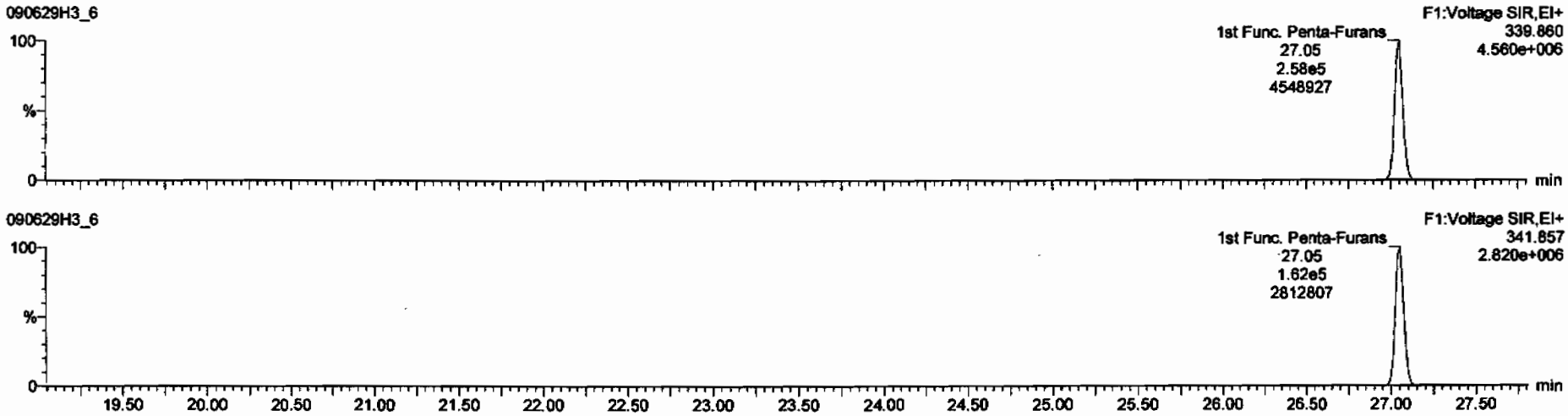

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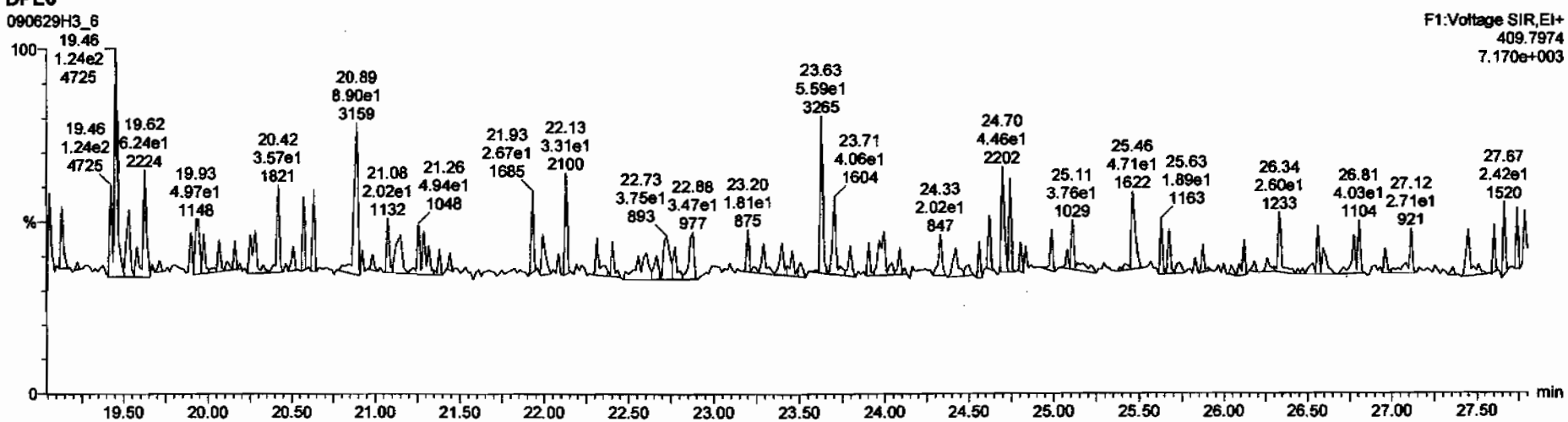

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1,2,3,7,8-PeCDF

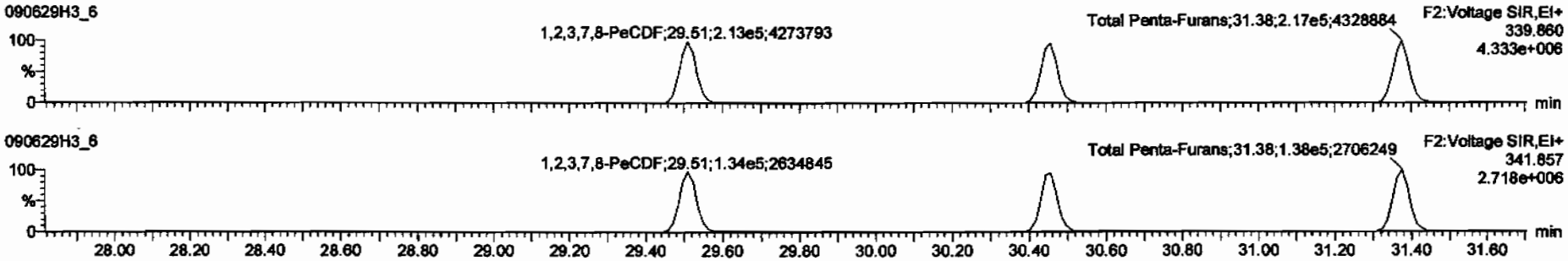

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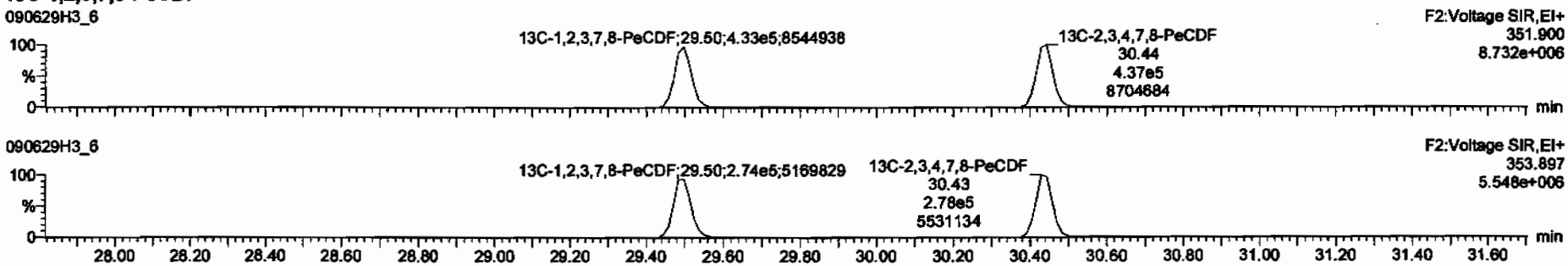

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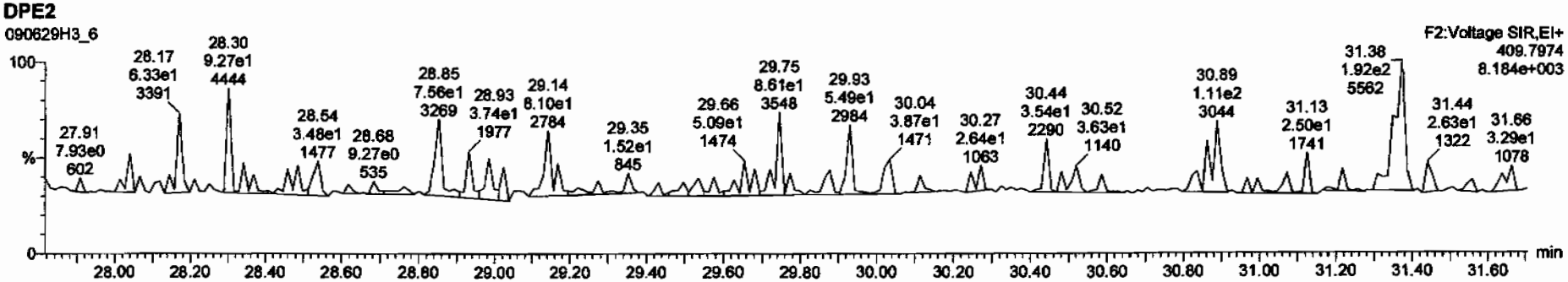

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1,2,3,4,7,8-HxCDF

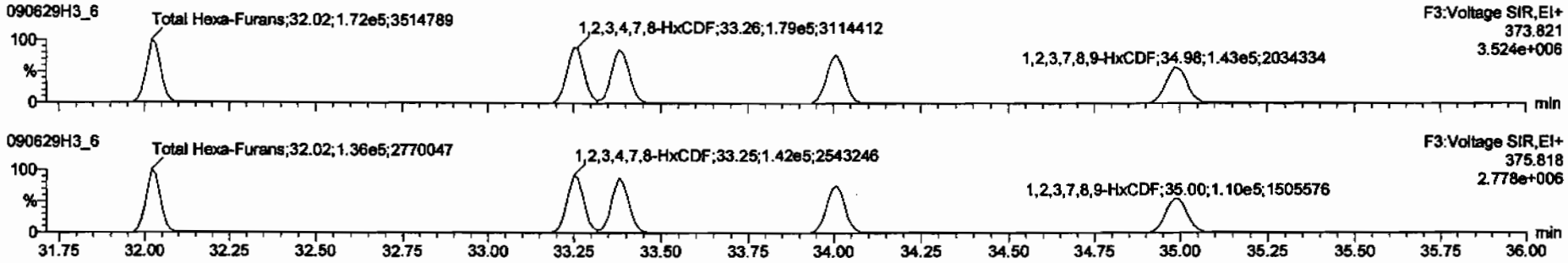

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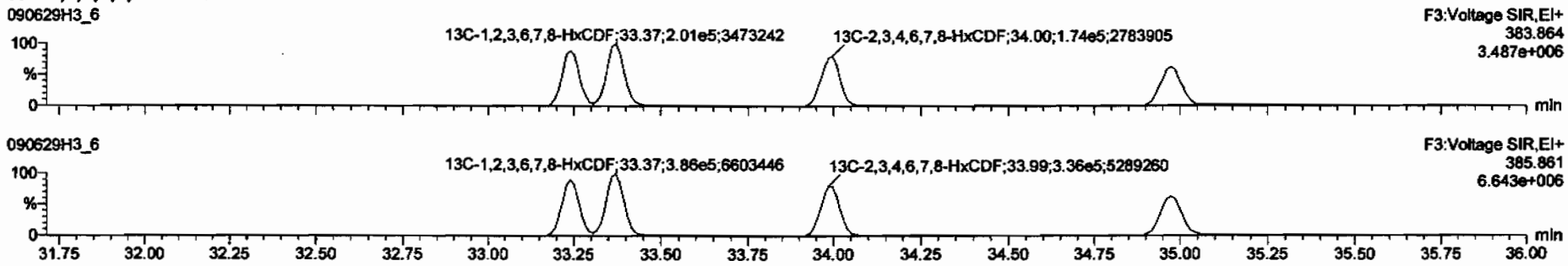

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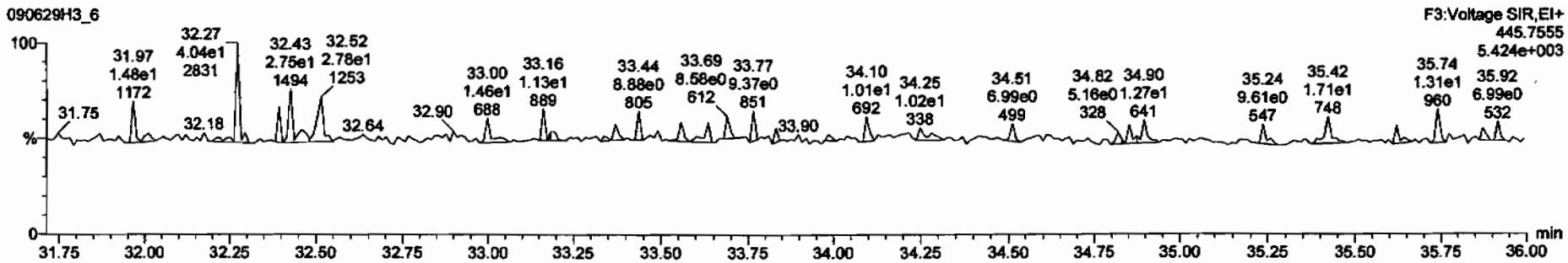

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1,2,3,4,6,7,8-HpCDF

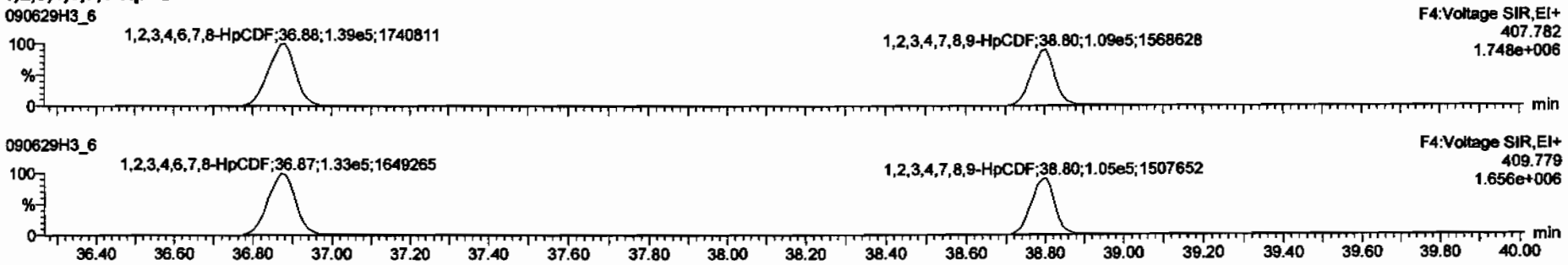

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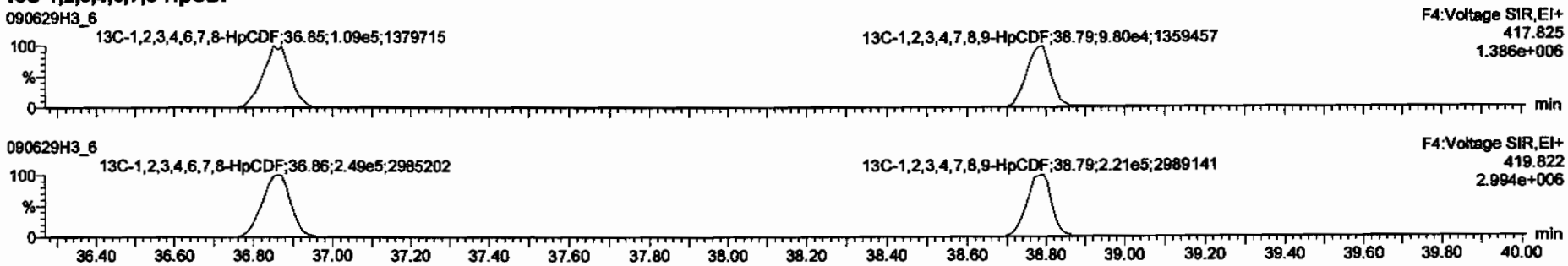

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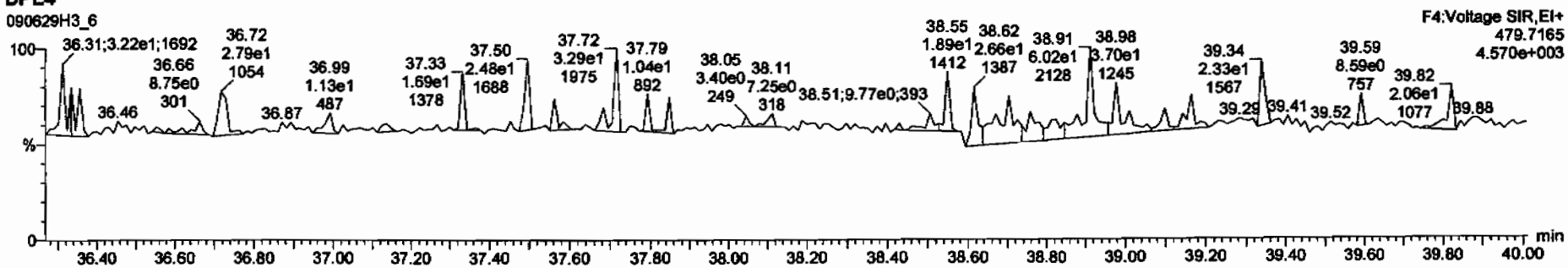

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OCDF

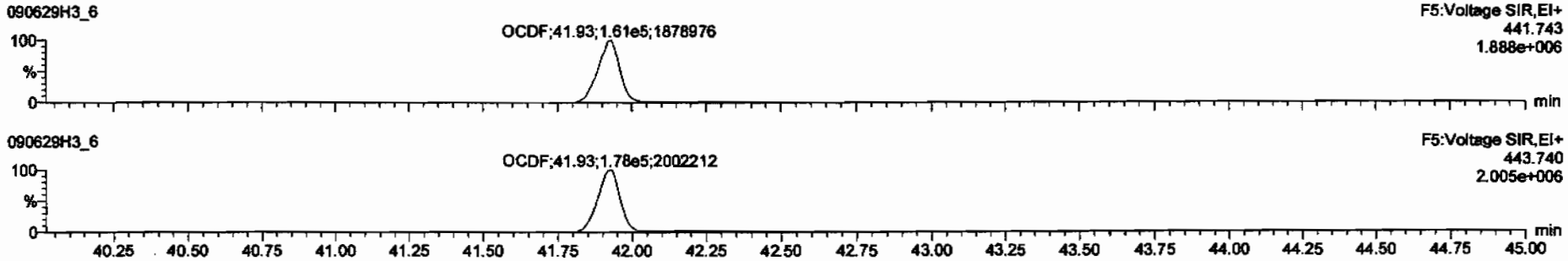

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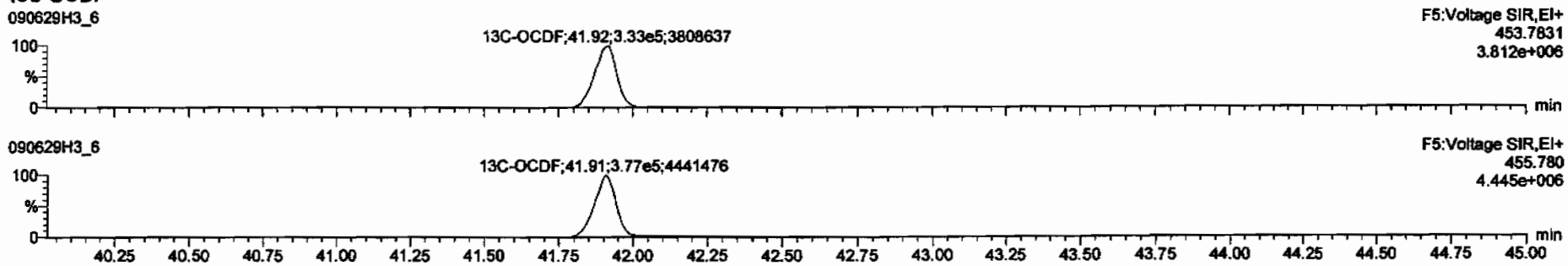

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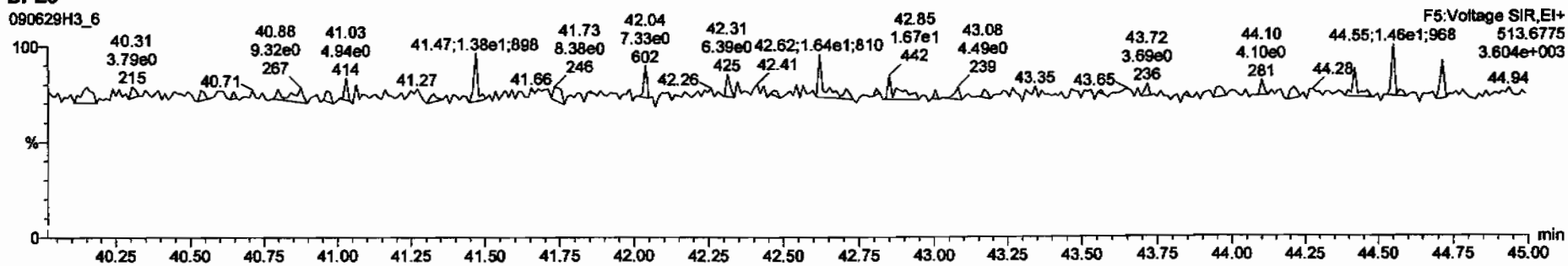

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Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

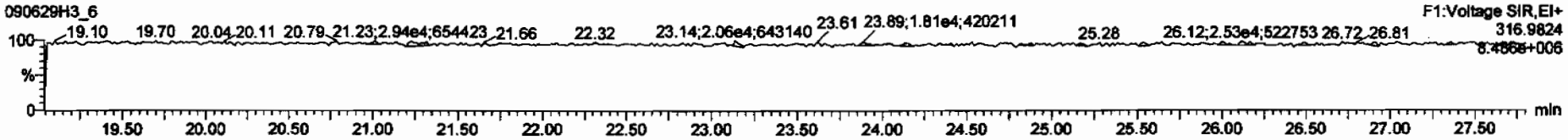

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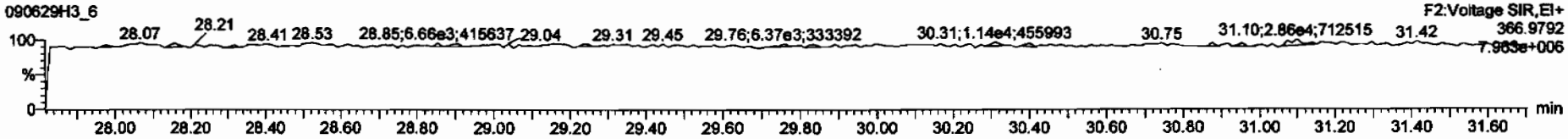

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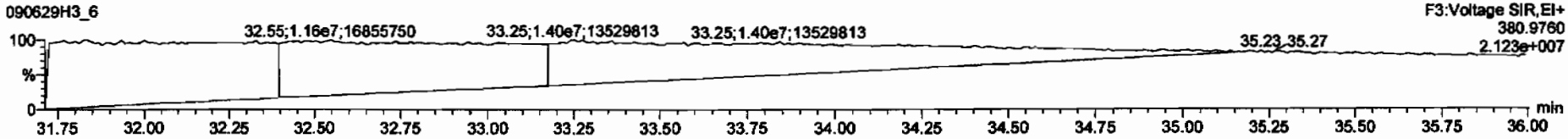

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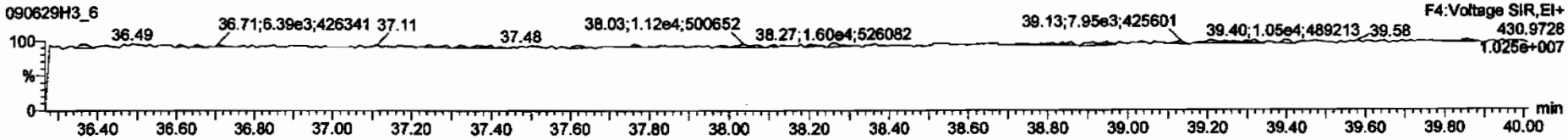

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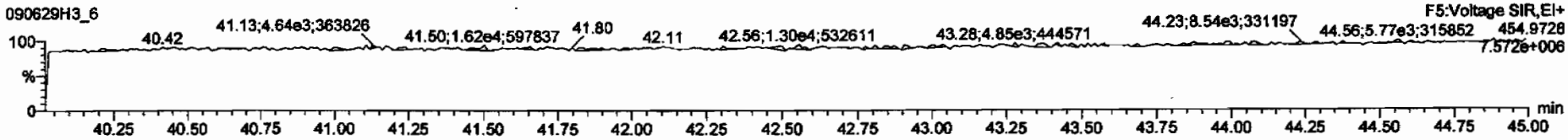

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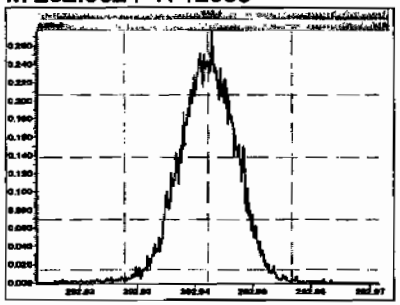

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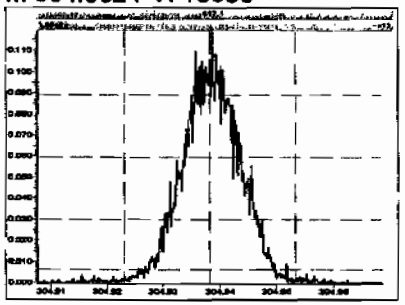

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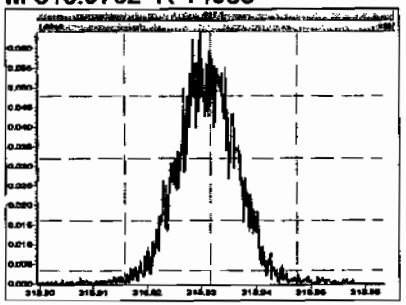

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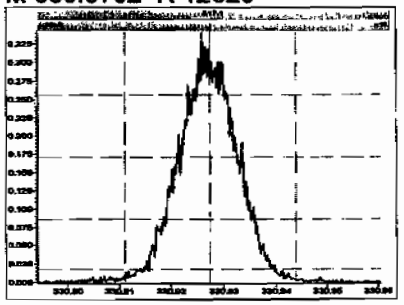

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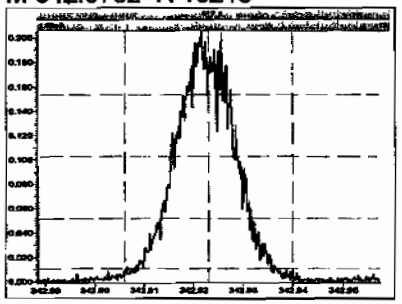

M 354.9792 R 13123

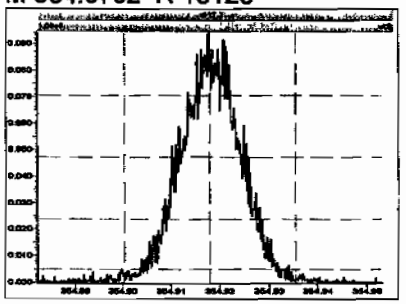

M 366.9792 R 13262

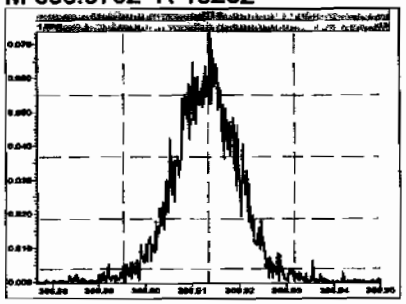

M 380.9760 R 11990

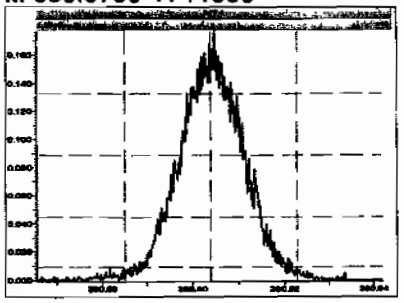

M 392.9760 R 12154

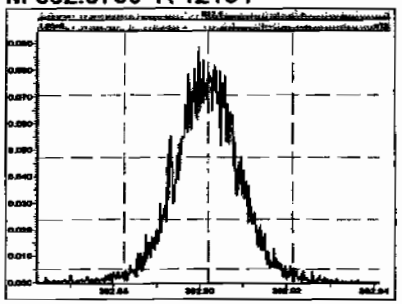

M 404.9760 R 11876

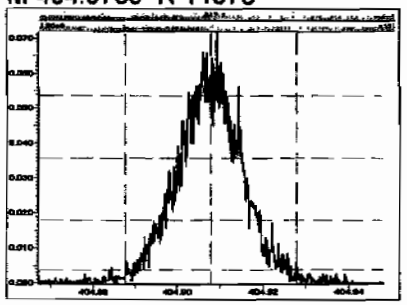

M 416.9760 R 13029

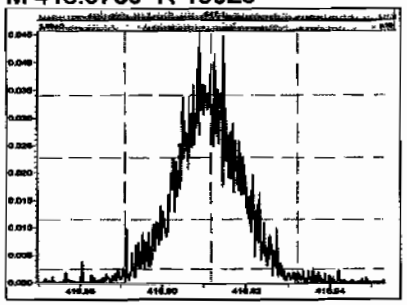

M 330.9792 R 13858

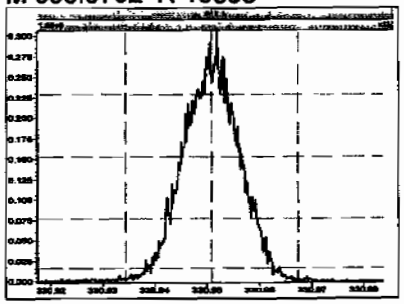

M 342.9792 R 13774

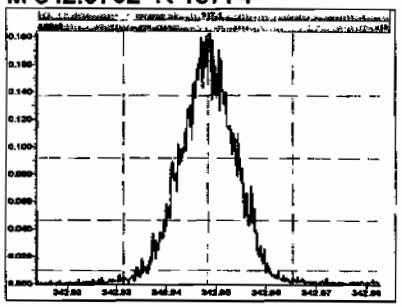

M 354.9792 R 13774

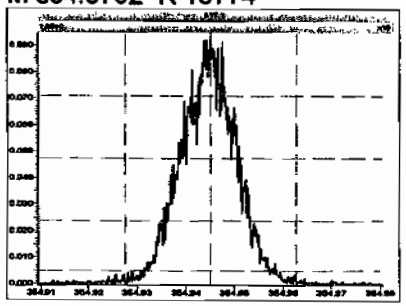

M 366.9792 R 13769

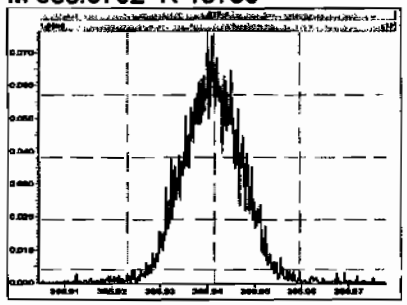

M 380.9760 R 12821

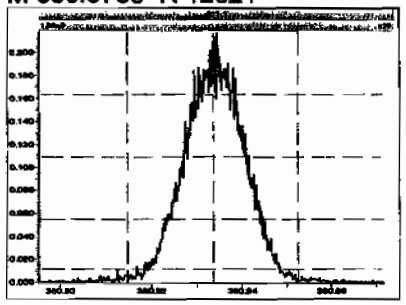

M 392.9760 R 13298

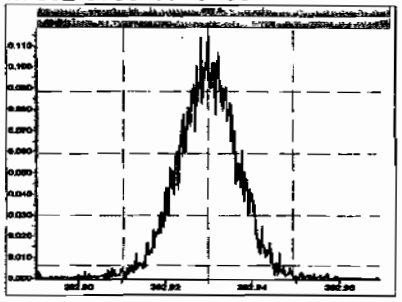

M 404.9760 R 13832

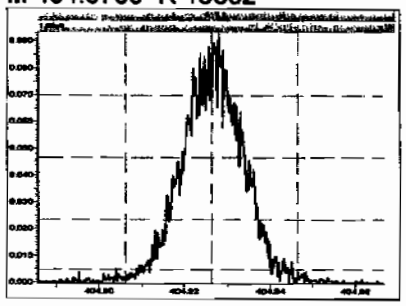

M 416.9760 R 12991

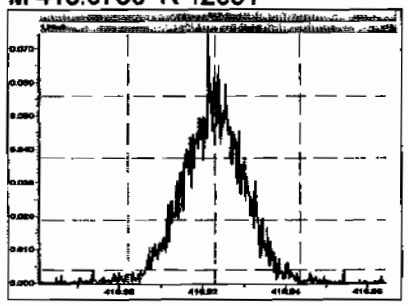

M 366.9792 R 14592

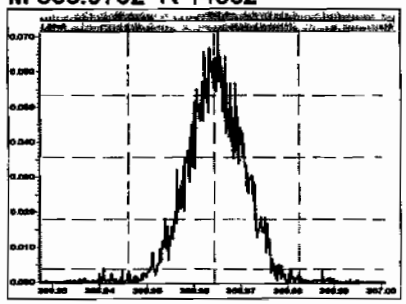

M 380.9760 R 13699

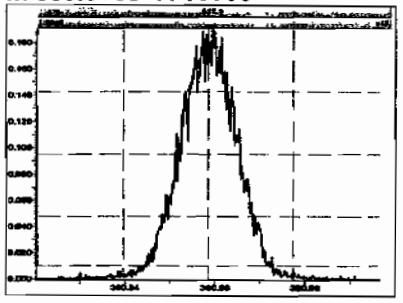

M 392.9760 R 13791

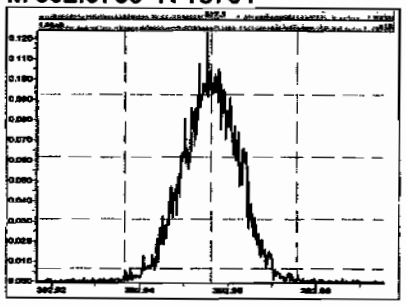

M 404.9760 R 13426

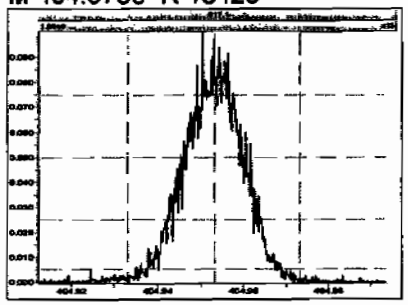

M 416.9760 R 14204

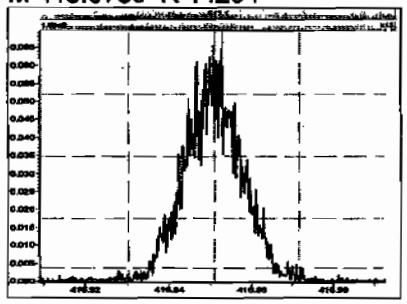

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M 430.9728 R 13706

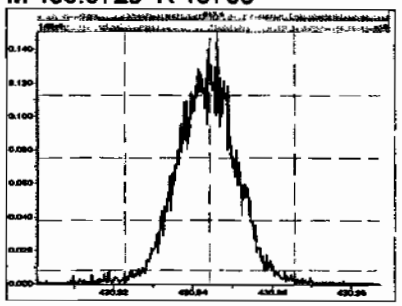

M 442.9728 R 13640

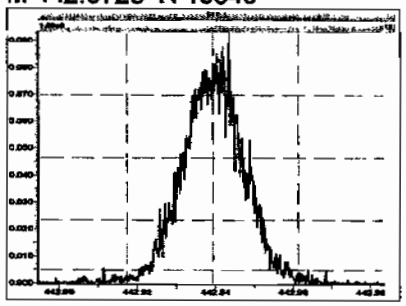

M 454.9728 R 13124

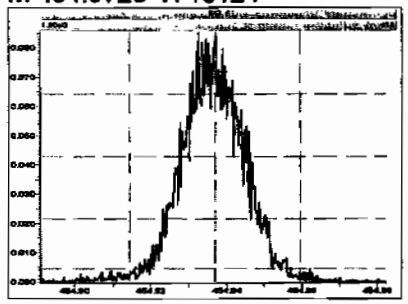

M 404.9760 R 14089

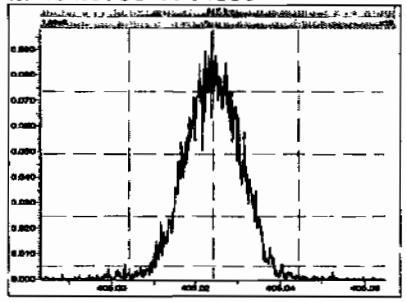

M 416.9760 R 14970

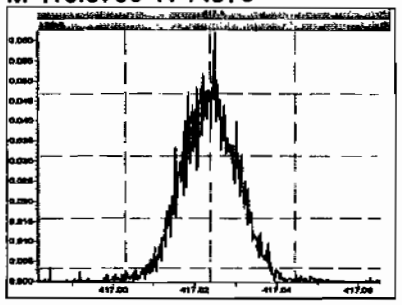

M 430.9728 R 13662

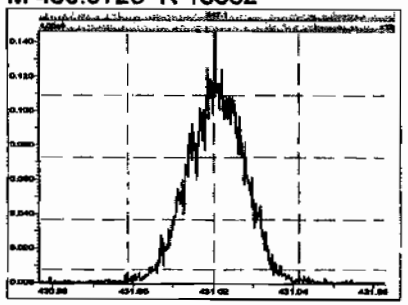

M 442.9728 R 13970

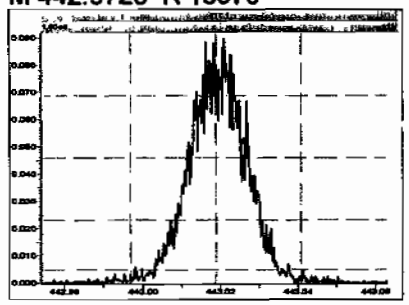

M 454.9728 R 13409

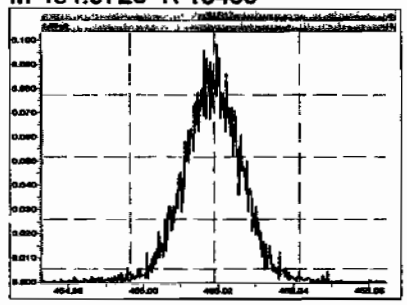

M 466.9728 R 14619

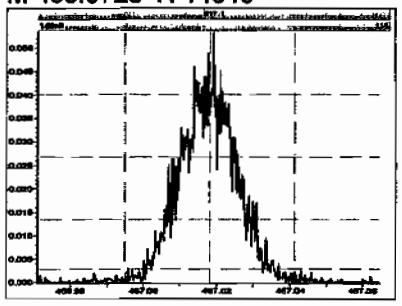

M 480.9696 R 13932

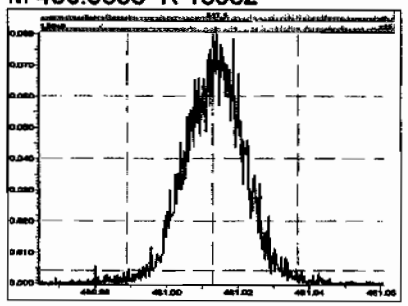

M 430.9728 R 13791

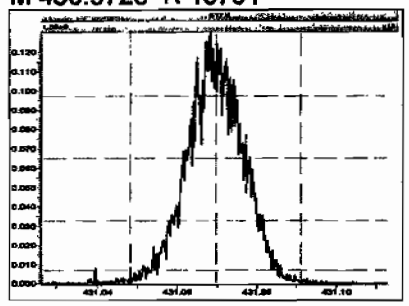

M 442.9728 R 13670

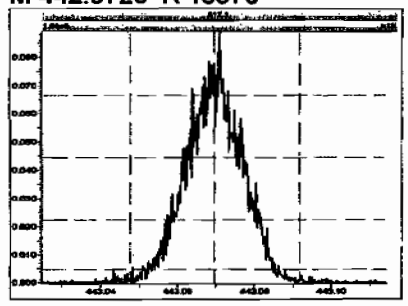

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M 454.9728 R 13378

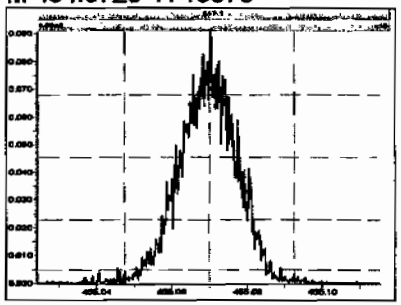

M 466.9728 R 13791

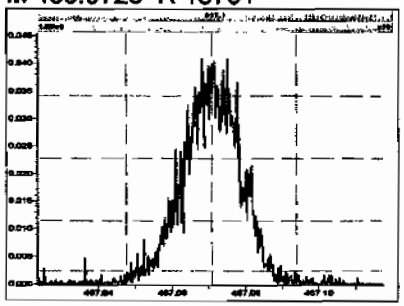

M 480.9696 R 13450

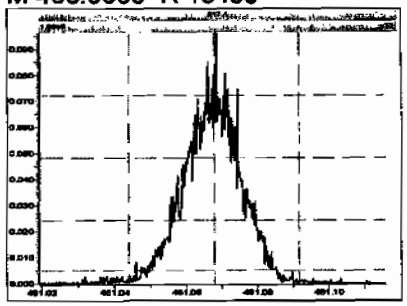

M 492.9696 R 13578

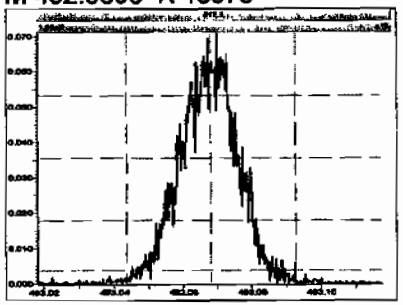

M 504.9696 R 13940

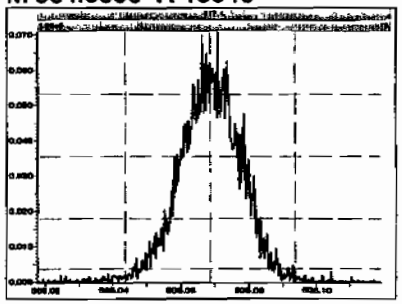

M 516.9697 R 13596

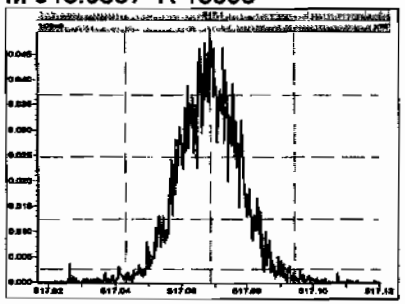

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
CCAL ID: ST090630F2-1
Initial Calibration Date: 06/04/2009
Instrument ID: VG-9
GC Column ID: DB-225
VER Data file name: 090630F2_2
Analysis Date: 30-Jun-09
Analysis Time: 11:33:56

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	NO	9.74	8.4 8.6	12.0 11.6 (4)	Yes	8.00	12.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/2/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 06/04/2009
Instrument ID: VG-9
VER Data file name: 090630F2_2

CCAL ID: ST090630F2-1

GC Column ID: DB-225
Analysis Date: 30-Jun-09 Analysis Time: 11:33:56

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	99.4	71.0 76.0	140.0 131.0 (5)	Yes	70.0	130.0	Yes

7/2/09

Quantify Sample Summary Report **MassLynx 4.1**

Dataset: C:\MassLynx\Default.pro\Results\090630f2\090630f1-2.qld

Last Altered: Thursday, July 02, 2009 15:10:19 Pacific Standard Time
Printed: Thursday, July 02, 2009 15:10:45 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\tcdf.mdb 30 Jun 2009 11:52:43
Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090630F2_2, Date: 30-Jun-2009, Time: 11:33:56, ID: ST090630F2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

[redacted]	[redacted]	# Name	[redacted]	Resp	RA	[redacted]	RRF Mix	[redacted]	RT	[redacted]	% Rec	[redacted]	DL
[redacted]		1 2,3,7,8-TCDF		1.09e5	0.80	NO	0.857	1.000	17.49	9.7414	97.4		0.0505
[redacted]		2 13C-2,3,7,8-TCDF		1.30e6	0.78	NO	1.06	1.000	17.48	99.416	99.4		0.183
[redacted]		3 13C-1,2,3,4-TCDF		1.24e6	0.79	NO	1.00	1.000	15.36	100.00	100		0.194

7/2/09

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 3:13:32 PM Pacific Standard Time
Printed: Thursday, July 02, 2009 3:13:48 PM Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 30 Jun 2009 11:52:43
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Compound name: 2,3,7,8-TCDF

	Name	ID		Acq Date	Acq Time
1	090630F2_1	CP090630F2-1 DB-225 CPSM		30-Jun-09	10:58:26
2	090630F2_2	ST090630F2-1 1613 CS3 080917I		30-Jun-09	11:33:56
3	090630F2_3	SOLVENT BLANK		30-Jun-09	12:09:22
4	090630F2_4	31765_2202_001 CAMO-09-6212	12.5	30-Jun-09	12:44:47
5	090630F2_5	31791_2204_001 CAMO-09-6145	13.29	30-Jun-09	13:20:14
6	090630F2_6	31791_2204_003 CAMO-09-6147	13.11	30-Jun-09	13:55:40
7	090630F2_7	31791_2204_005 CAMO-09-6151	13.27	30-Jun-09	14:31:06
8	090630F2_8	31793_2204_001 CAMO-09-6010	11.77	30-Jun-09	15:06:31
9	090630F2_9	31795_2204_001 CAMO-09-6209	11.92	30-Jun-09	15:41:58
10	090630F2_10	31833_2207_002 CAMO-09-6047	12.12	30-Jun-09	16:17:25
11	090630F2_11	31837_2207_003 CAMO-09-6008	13.14	30-Jun-09	16:52:51
12	090630F2_12	SOLVENT BLANK		30-Jun-09	17:28:17
13	090630F2_13	ST090630F2-2 1613 CS3 080917I		30-Jun-09	18:03:43

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090630F2-1

End Calibration ID: ST090630F2-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range?	✓	✓
First and last eluters present?	No	No
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	No
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits		NA
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments:

Reviewed by: DMS 7/1/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 mh

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: tcdf_db225.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Tuesday, June 30, 2009 10:58:04 Pacific Standard Time

M 292.9824 R 10687

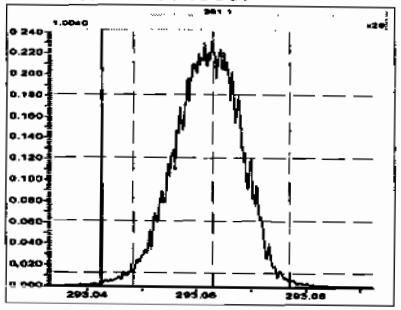

M 304.9824 R 11212

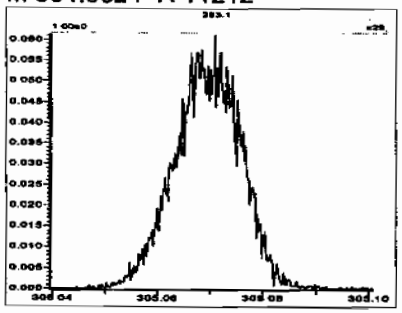

M 318.9792 R 11364

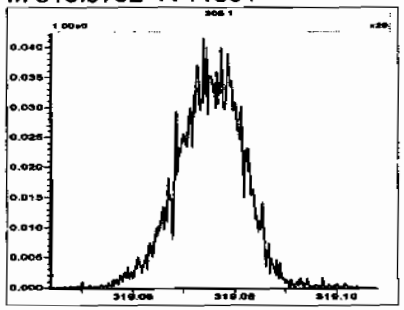

M 330.9792 R 10547

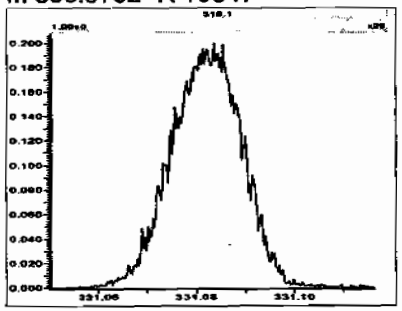

M 342.9792 R 10414

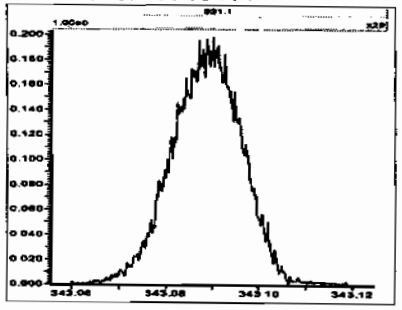

M 354.9792 R 10456

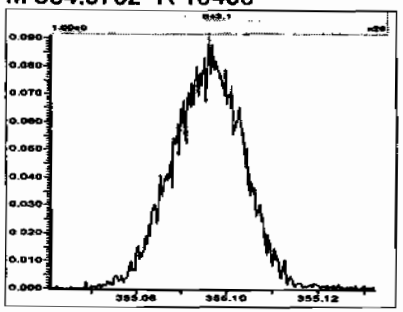

M 366.9792 R 9959

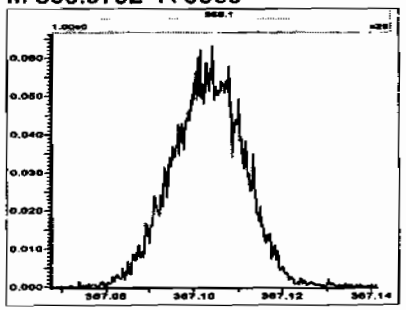

M 380.9760 R 9879

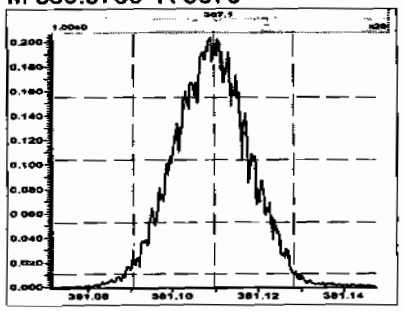

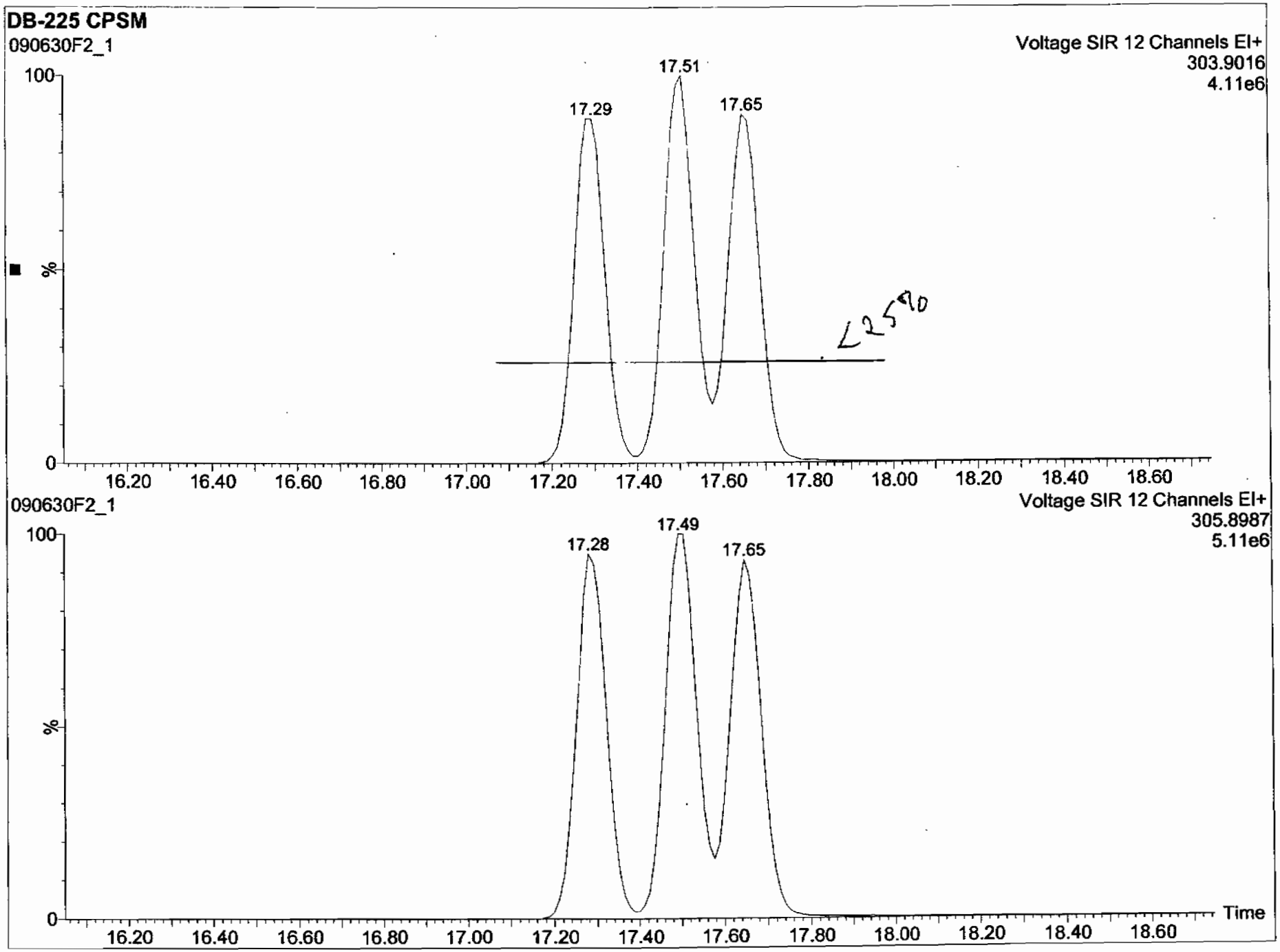
DB-225 CPSM
090630F2_1
Voltage SIR 12 Channels EI+
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4.11e6
17.29
17.51
17.65
L2590
100
%
0
16.20
16.40
16.60
16.80
17.00
17.20
17.40
17.60
17.80
18.00
18.20
18.40
18.60
090630F2_1
Voltage SIR 12 Channels EI+
305.8987
5.11e6
17.28
17.49
17.65
100
%
0
Time
16.20
16.40
16.60
16.80
17.00
17.20
17.40
17.60
17.80
18.00
18.20
18.40
18.60

Dataset: C:\MassLynx\Default.pro\Results\090630f2\090630f1-2.qld

Last Altered: Thursday, July 02, 2009 15:10:19 Pacific Standard Time
Printed: Thursday, July 02, 2009 15:10:45 Pacific Standard Time

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Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

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2,3,7,8-TCDF

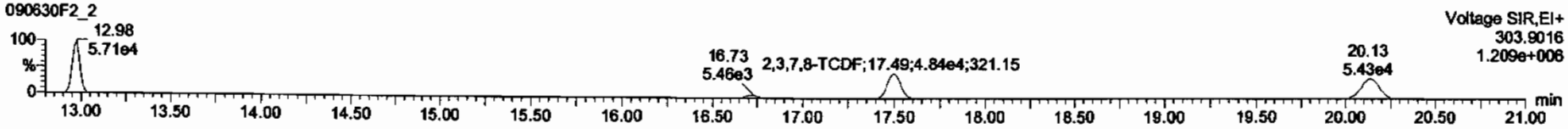

2,3,7,8-TCDF

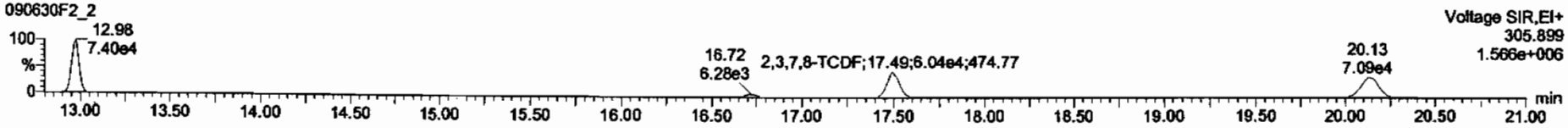

13C-2,3,7,8-TCDF

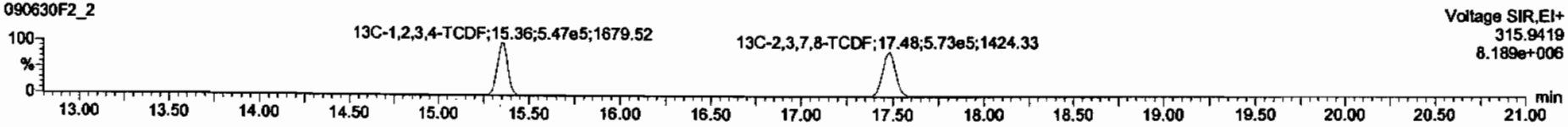

13C-2,3,7,8-TCDF

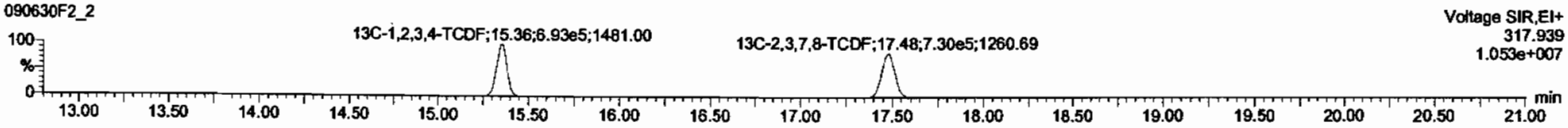

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Last Altered: Thursday, July 02, 2009 15:10:19 Pacific Standard Time
Printed: Thursday, July 02, 2009 15:10:45 Pacific Standard Time

Name: 090630F2_2, Date: 30-Jun-2009, Time: 11:33:56, ID: ST090630F2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

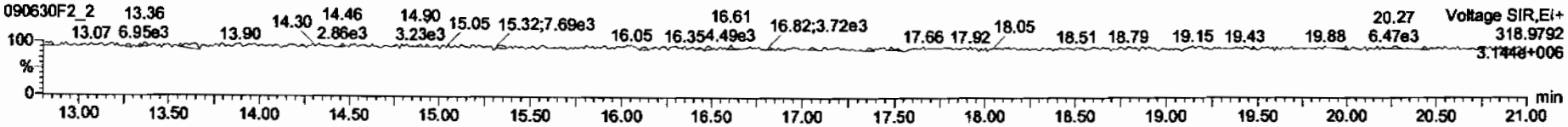

DPE1

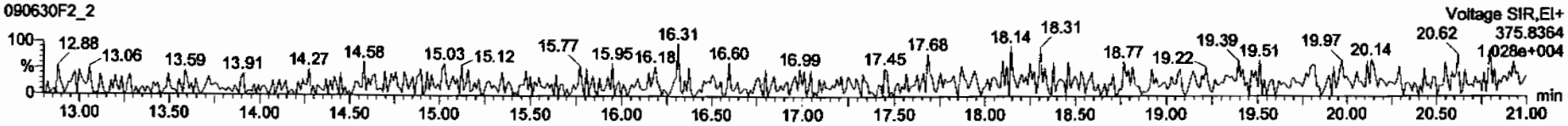

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
CCAL ID: ST090630F2-2

Initial Calibration Date: 06/04/2009
Instrument ID: VG-9
GC Column ID: DB-225
VER Data file name: 090630F2_13
Analysis Date: 30-Jun-09
Analysis Time: 18:03:43

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	NO	9.81	8.4 8.6	12.0 11.6 (4)	Yes	8.00	12.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: _____
Date: 7/2/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 06/04/2009
Instrument ID: VG-9
VER Data file name: 090630F2_13

CCAL ID: ST090630F2-2

GC Column ID: DB-225
Analysis Date: 30-Jun-09 Analysis Time: 18:03:43

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	NO	101	71.0 76.0	140.0 131.0 (5)	Yes	70.0	130.0	Yes

7/2/09

Quantify Sample Summary Report **MassLynx 4.1**

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:10:52 Pacific Standard Time
Printed: Thursday, July 02, 2009 15:11:01 Pacific Standard Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090630F2_13, Date: 30-Jun-2009, Time: 18:03:43, ID: ST090630F2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

#	Name	Resp	RA	[illegible]	RF	[illegible]	RT	Conc	%Rec	DL
1	2,3,7,8-TCDF	9.43e4	0.79	NO	0.857	1.000	17.45	9.8145	98.1	0.0671
2	13C-2,3,7,8-TCDF	1.12e6	0.79	NO	1.06	1.000	17.45	100.53	101	0.213
3	13C-1,2,3,4-TCDF	1.05e6	0.78	NO	1.00	1.000	15.32	100.00	100	0.225

7/2/09

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 3:13:32 PM Pacific Standard Time
Printed: Thursday, July 02, 2009 3:13:48 PM Pacific Standard Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Compound name: 2,3,7,8-TCDF

	Name	ID	Acq Date	Acq Time
[redacted]	090630F2_1	CP090630F2-1 DB-225 CPSM	30-Jun-09	10:58:26
[redacted]	090630F2_2	ST090630F2-1 1613 CS3 080917I	30-Jun-09	11:33:56
[redacted]	090630F2_3	SOLVENT BLANK	30-Jun-09	12:09:22
[redacted]	090630F2_4	31765_2202_001 CAMO-09-6212 12.5	30-Jun-09	12:44:47
[redacted]	090630F2_5	31791_2204_001 CAMO-09-6145 13.29	30-Jun-09	13:20:14
[redacted]	090630F2_6	31791_2204_003 CAMO-09-6147 13.11	30-Jun-09	13:55:40
[redacted]	090630F2_7	31791_2204_005 CAMO-09-6151 13.27	30-Jun-09	14:31:06
[redacted]	090630F2_8	31793_2204_001 CAMO-09-6010 11.77	30-Jun-09	15:06:31
[redacted]	090630F2_9	31795_2204_001 CAMO-09-6209 11.92	30-Jun-09	15:41:58
[redacted]	090630F2_10	31833_2207_002 CAMO-09-6047 12.12	30-Jun-09	16:17:25
[redacted]	090630F2_11	31837_2207_003 CAMO-09-6008 13.14	30-Jun-09	16:52:51
[redacted]	090630F2_12	SOLVENT BLANK	30-Jun-09	17:28:17
[redacted]	090630F2_13	ST090630F2-2 1613 CS3 080917I	30-Jun-09	18:03:43

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:10:52 Pacific Standard Time
Printed: Thursday, July 02, 2009 15:11:01 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 30 Jun 2009 11:52:43
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090630F2_13, Date: 30-Jun-2009, Time: 18:03:43, ID: ST090630F2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

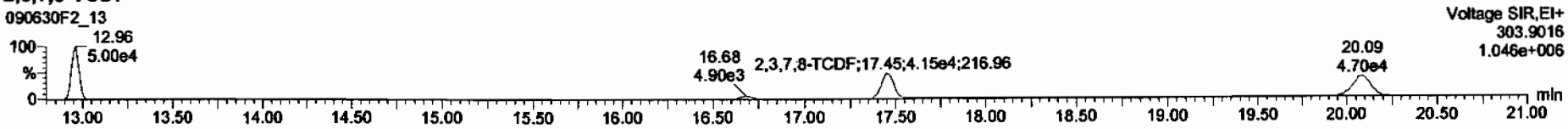

2,3,7,8-TCDF

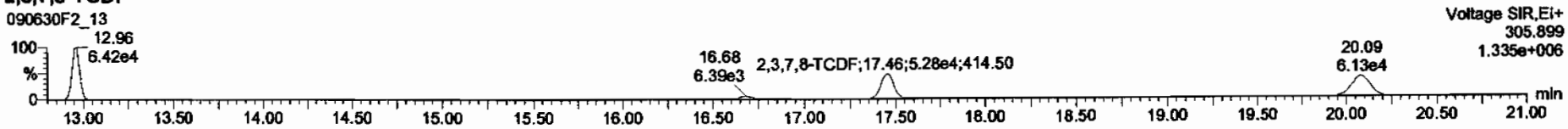

13C-2,3,7,8-TCDF

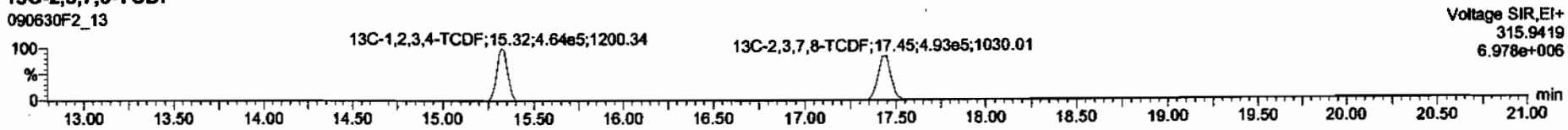

13C-2,3,7,8-TCDF

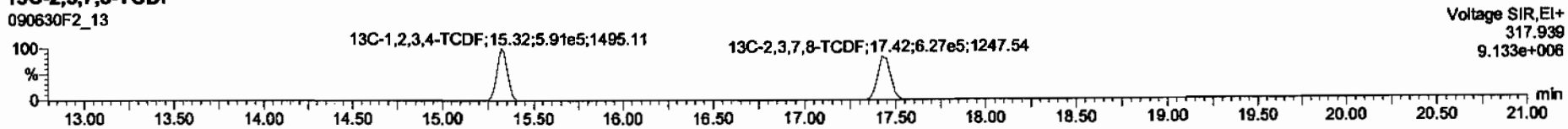

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:10:52 Pacific Standard Time
Printed: Thursday, July 02, 2009 15:11:01 Pacific Standard Time

Name: 090630F2_13, Date: 30-Jun-2009, Time: 18:03:43, ID: ST090630F2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

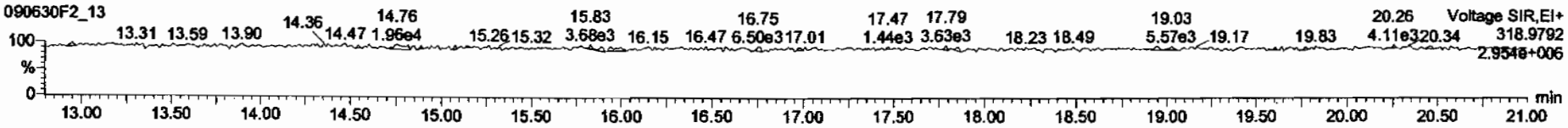

DPE1

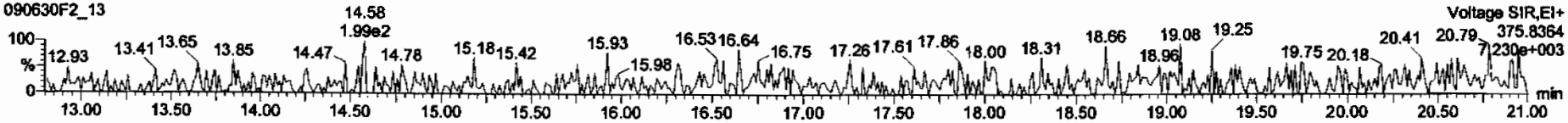

Printed: Tuesday, June 30, 2009 18:40:58 Pacific Standard Time

M 292.9824 R 11286

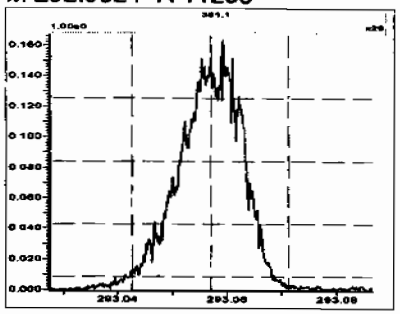

M 304.9824 R 12186

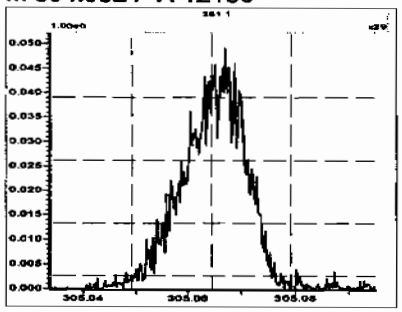

M 318.9792 R 14335

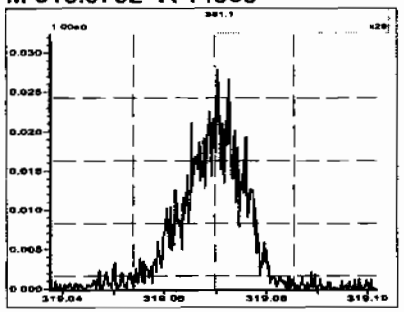

M 330.9792 R 11320

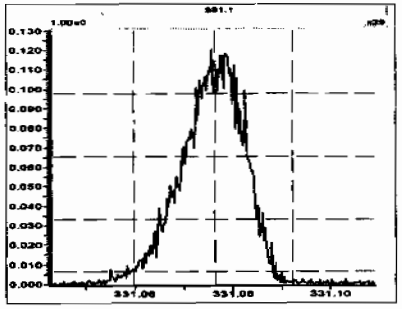

M 342.9792 R 11520

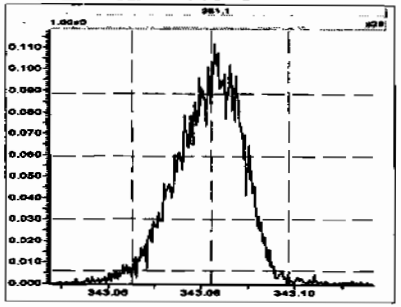

M 354.9792 R 11769

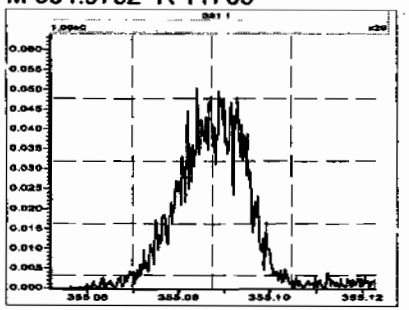

M 366.9792 R 11458

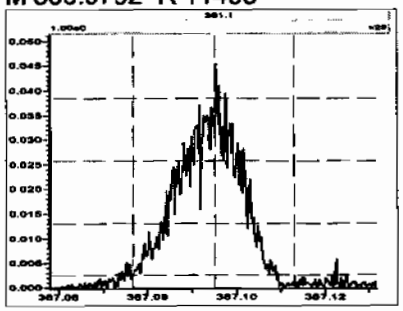

M 380.9760 R 11299

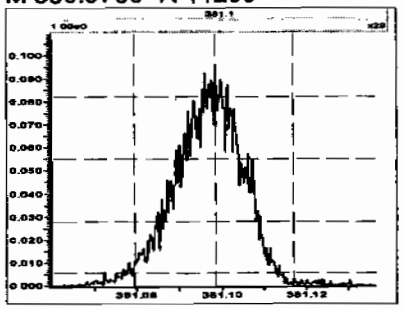

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090701H1_1

CCAL ID: ST090701H1-1

GC Column ID: DB-5
Analysis Date: 01-Jul-09 Analysis Time: 11:38:08

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	9.23	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	46.5	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	45.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	46.7	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	NO	44.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.87	0.76-1.02	NO	88.4	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	8.83	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	43.3	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	42.3	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	NO	44.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	43.3	44.0	57.0	No	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	NO	44.3	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	45.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	45.1	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.03	0.88-1.20	NO	46.2	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	89.4	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

8290 OCDD only

Analyst: [signature]
Date: 7/1/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090701H1_1

CCAL ID: ST090701H1-1

GC Column ID: DB-5
Analysis Date: 01-Jul-09 Analysis Time: 11:38:08

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	101	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	95.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	106	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	96.0	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	NO	116	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.87	0.76-1.02	NO	252	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	NO	106	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	95.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	NO	96.7	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	106	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	92.2	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	96.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	97.4	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	NO	98.9	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	107	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	221	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.57	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

8250
OCDD
only

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/1/09

Quantify Sample Summary Report · **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 01, 2009 1:23:41 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 1:24:02 PM Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_1, Date: 01-Jul-2009, Time: 11:38:08, ID: ST090701H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.70
2	1,2,8,9-TCDD (Last)	26.95
3	1,2,4,7,9-PeCDD (First)	28.59
4	1,2,3,8,9-PeCDD (Last)	31.10
5	12,4,6,7,9-HxCDD (First)	32.56
6	1,2,3,7,8,9-HxCDD (Last)	34.58
7	1,2,3,4,6,7,9-HpCDD (First)	37.28
8	1,2,3,4,6,7,8-HpCDD (Last)	38.21
9	1,3,6,8-TCDF (First)	20.62
10	1,2,8,9-TCDF (Last)	27.12
11	1,3,4,6,8-PeCDF (First)	27.04
12	1,2,3,8,9-PeCDF (Last)	31.36
13	1,2,3,4,6,8-HxCDF (First)	32.01
14	1,2,3,4,8,9-HxCDF (Last)	34.98
15	1,2,3,4,6,7,8-HpCDF (First)	36.86
16	1,2,3,4,7,8,9-HpCDF (Last)	38.78

7/1/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090701H1_1

CCAL ID: ST090701H1-1

GC Column ID: DB-5
Analysis Date: 01-Jul-09

Analysis Time: 11:38:08

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/1/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090701H1_1

CCAL ID: ST090701H1-1

GC Column ID: DB-5
Analysis Date: 01-Jul-09

Analysis Time: 11:38:08

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.012	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/1/05

Dataset: C:\MassLynx\Default.pro\Results\New Folder (2)\090701h1-1.qld

Last Altered: Wednesday, July 01, 2009 1:21:13 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 1:22:24 PM Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_1, Date: 01-Jul-2009, Time: 11:38:08, ID: ST090701H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	5.64e4	0.78	NO	1.08	1.000	26.08	1.001	9.2266	92.3	0.0480	9.2266
2	1,2,3,7,8-PeCDD	2.10e5	0.61	NO	1.03	1.000	30.73	1.001	46.462	92.9	0.117	46.462
3	1,2,3,4,7,8-HxCDD	1.78e5	1.25	NO	1.00	1.000	34.16	1.000	45.551	91.1	0.200	45.551
4	1,2,3,6,7,8-HxCDD	1.81e5	1.27	NO	1.13	1.000	34.27	1.000	45.251	90.5	0.207	45.251
5	1,2,3,7,8,9-HxCDD	1.92e5	1.25	NO	1.10	1.000	34.58	1.009	46.668	93.3	0.196	46.668
6	1,2,3,4,6,7,8-HpCDD	1.55e5	1.04	NO	1.06	1.000	38.21	1.001	44.050	88.1	0.239	44.050
7	OCDD	2.66e5	0.87	NO	1.18	1.000	41.67	1.001	88.362	88.4	0.181	88.362
8	2,3,7,8-TCDF	7.80e4	0.77	NO	1.09	1.000	25.30	1.001	8.8294	88.3	0.0388	8.8294
9	1,2,3,7,8-PeCDF	3.35e5	1.59	NO	1.16	1.000	29.50	1.000	43.332	86.7	0.0963	43.332
10	2,3,4,7,8-PeCDF	3.21e5	1.59	NO	1.12	1.000	30.44	1.000	42.273	84.5	0.0989	42.273
11	1,2,3,4,7,8-HxCDF	3.09e5	1.28	NO	1.41	1.000	33.24	1.001	43.976	88.0	0.118	43.976
12	1,2,3,6,7,8-HxCDF	2.99e5	1.25	NO	1.22	1.000	33.36	1.000	43.342	86.7	0.125	43.342
13	2,3,4,6,7,8-HxCDF	2.74e5	1.28	NO	1.28	1.000	33.99	1.000	44.258	88.5	0.149	44.258
14	1,2,3,7,8,9-HxCDF	2.36e5	1.29	NO	1.26	1.000	34.98	1.001	45.462	90.9	0.198	45.462
15	1,2,3,4,6,7,8-HpCDF	2.63e5	1.06	NO	1.69	1.000	36.86	1.001	45.059	90.1	0.270	45.059
16	1,2,3,4,7,8,9-HpCDF	2.13e5	1.03	NO	1.48	1.000	38.78	1.001	46.169	92.3	0.330	46.169
17	OCDF	3.31e5	0.91	NO	1.10	1.000	41.91	1.000	89.372	89.4	0.105	89.372
18	13C-2,3,7,8-TCDD	5.67e5	0.77	NO	1.01	1.000	26.06	1.023	101.31	101	0.130	
19	13C-1,2,3,7,8-PeCDD	4.37e5	0.63	NO	0.827	1.000	30.71	1.205	95.670	95.7	0.215	
20	13C-1,2,3,4,7,8-HxCDD	3.90e5	1.26	NO	0.916	1.000	34.15	0.988	105.93	106	0.285	
21	13C-1,2,3,6,7,8-HxCDD	3.56e5	1.28	NO	0.921	1.000	34.26	0.991	95.987	96.0	0.283	
22	13C-1,2,3,4,6,7,8-HpCDD	3.31e5	1.04	NO	0.708	1.000	38.19	1.105	116.32	116	0.568	
23	13C-OCDD	5.10e5	0.87	NO	0.503	1.000	41.65	1.205	252.28	126	0.384	
24	13C-2,3,7,8-TCDF	8.12e5	0.80	NO	0.977	1.000	25.28	0.992	106.37	106	0.135	
25	13C-1,2,3,7,8-PeCDF	6.68e5	1.59	NO	0.896	1.000	29.48	1.157	95.353	95.4	0.344	
26	13C-2,3,4,7,8-PeCDF	6.80e5	1.54	NO	0.900	1.000	30.43	1.194	96.705	96.7	0.343	
27	13C-1,2,3,4,7,8-HxCDF	4.99e5	0.52	NO	1.17	1.000	33.22	0.961	106.00	106	0.423	
28	13C-1,2,3,6,7,8-HxCDF	5.64e5	0.52	NO	1.52	1.000	33.35	0.965	92.248	92.2	0.326	
29	13C-2,3,4,6,7,8-HxCDF	4.84e5	0.52	NO	1.25	1.000	33.98	0.983	96.339	96.3	0.396	
30	13C-1,2,3,7,8,9-HxCDF	4.13e5	0.51	NO	1.05	1.000	34.96	1.012	97.448	97.4	0.470	

7/1/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder (2)\090701h1-1.qld

Last Altered: Wednesday, July 01, 2009 1:21:13 PM Pacific Daylight Time
Printed: Wednesday, July 01, 2009 1:22:24 PM Pacific Daylight Time

Name: 090701H1_1, Date: 01-Jul-2009, Time: 11:38:08, ID: ST090701H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	3.45e5	0.45	NO	0.868	1.000	36.84	1.066	98.900	98.9	0.465
32	13C-1,2,3,4,7,8,9-HpCDF	3.12e5	0.45	NO	0.727	1.000	38.76	1.122	106.66	107	0.555
33	13C-OCDF	6.77e5	0.88	NO	0.760	1.000	41.90	1.212	221.43	111	0.319
34	37Cl-2,3,7,8-TCDD	3.53e4			0.668	1.000	26.08	1.023	9.5716	95.7	0.0575
35	13C-1,2,3,4-TCDD	5.52e5	0.78	NO	1.00	1.000	25.48	0.000	100.00	100	0.131
36	13C-1,2,3,4-TCDF	7.82e5	0.77	NO	1.00	1.000	24.06	0.000	100.00	100	0.131
37	13C-1,2,3,7,8,9-HxCDD	4.02e5	1.25	NO	1.00	1.000	34.56	0.000	100.00	100	0.261

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 7:48:46 AM Pacific Daylight Time
Printed: Thursday, July 02, 2009 7:49:02 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

	090701H1_1	ST090701H1-1 1613 CS3 080917I	01-Jul-09	11:38:08
	090701H1_2	solvent blank	01-Jul-09	12:27:45
	090701H1_3	31837_2207_003 CAMO-09-6008 13.14 1:10	01-Jul-09	13:17:19
	090701H1_4	31837_2207_004 CAMO-09-6009 12.25 1:10	01-Jul-09	14:06:54
	090701H1_5	solvent blank	01-Jul-09	14:56:26
	090701H1_6	solvent blank	01-Jul-09	15:46:02
	090701H1_7	ST090701H1-2 1613 CS3 080917I	01-Jul-09	16:35:47

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090701H1-1 End Calibration ID: ST090701H1-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range?	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits		n/a
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: DMS 7/2/09
Initials & Date

** Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 rmh

Printed: Wednesday, July 01, 2009 11:38:04 Pacific Daylight Time

M 292.9824 R 13791

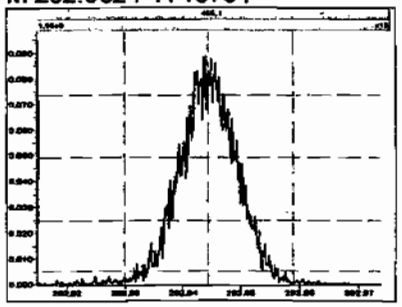

M 304.9824 R 14800

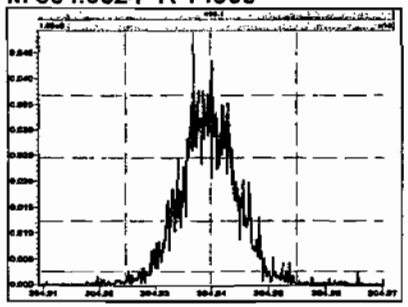

M 318.9792 R 15436

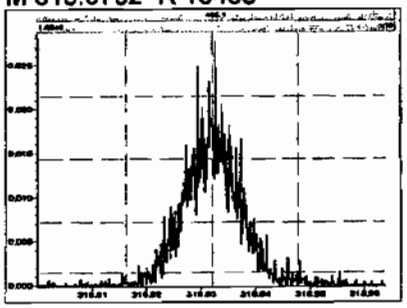

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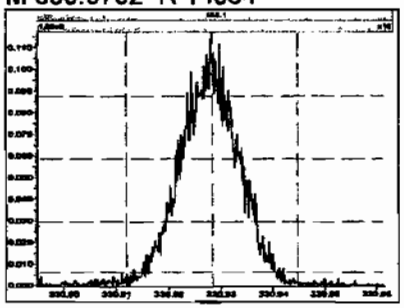

M 342.9792 R 14018

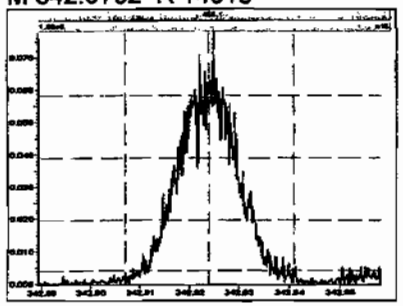

M 354.9792 R 14327

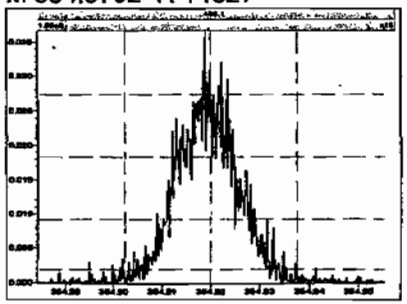

M 366.9792 R 14183

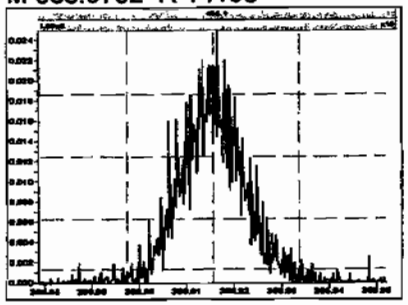

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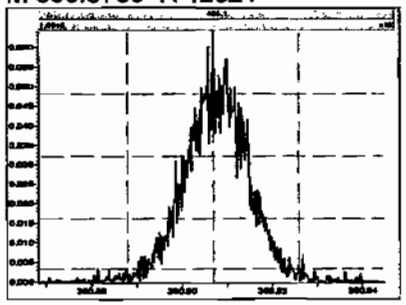

M 392.9760 R 13791

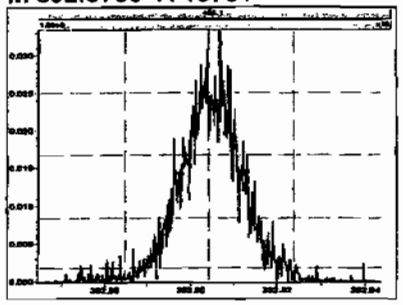

M 404.9760 R 14220

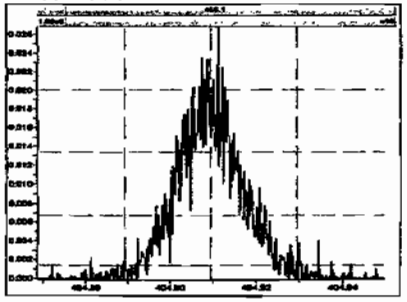

M 416.9760 R 16615

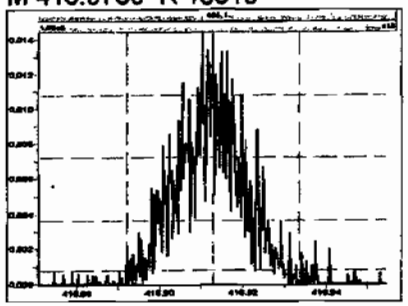

M 330.9792 R 14051

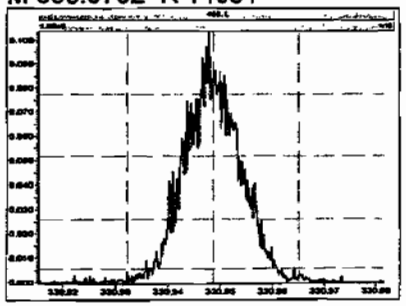

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M 342.9792 R 14805

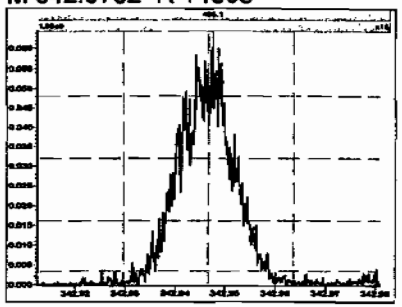

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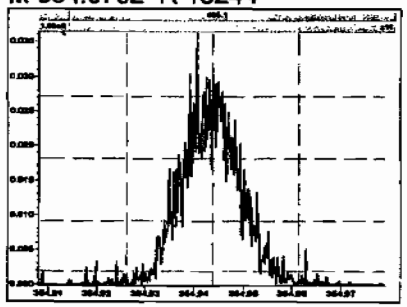

M 366.9792 R 15838

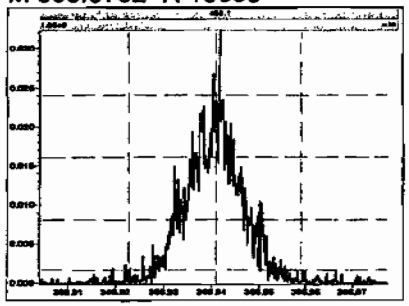

M 380.9760 R 13635

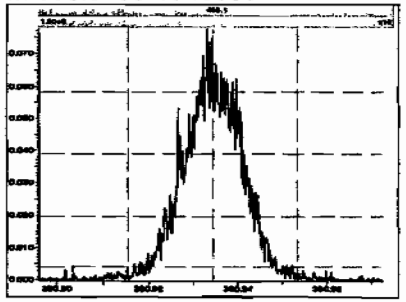

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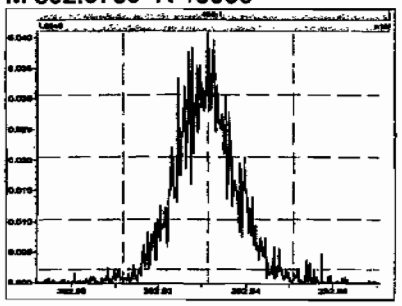

M 404.9760 R 14519

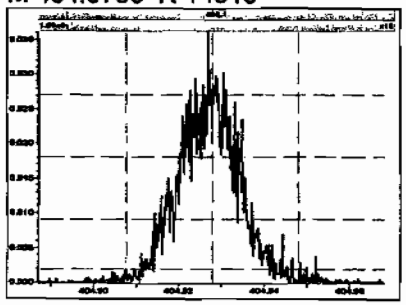

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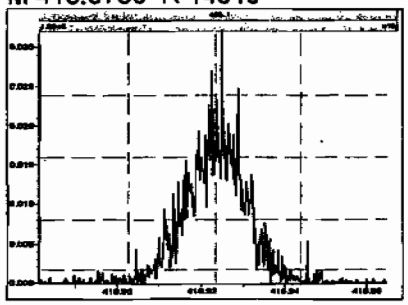

M 366.9792 R 16869

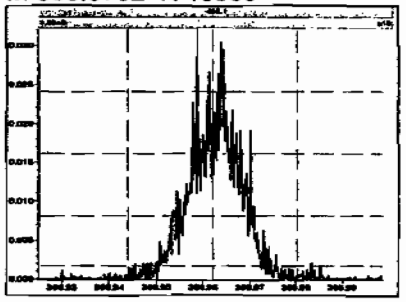

M 380.9760 R 13778

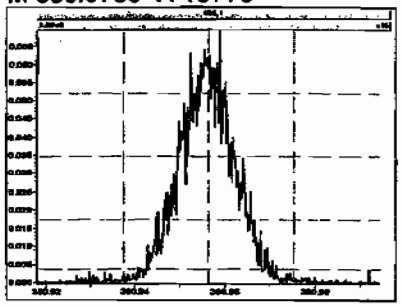

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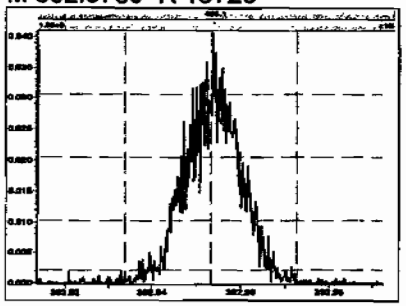

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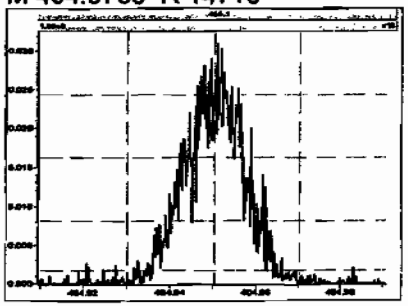

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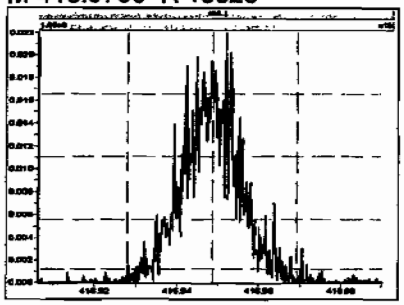

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M 430.9728 R 14538

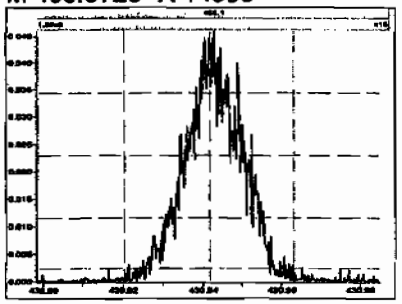

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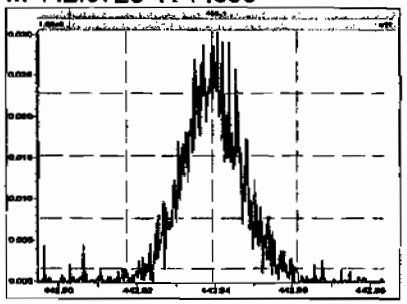

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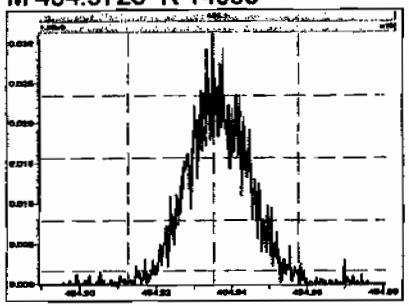

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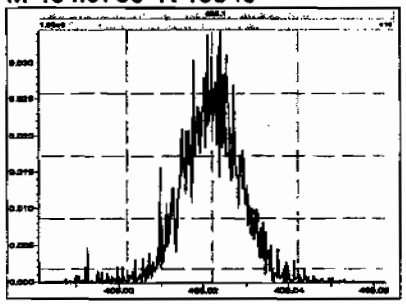

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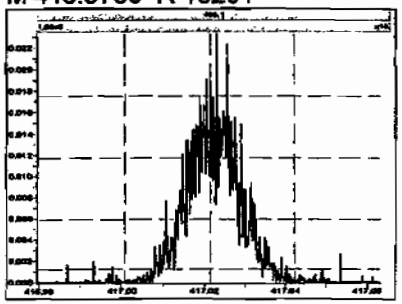

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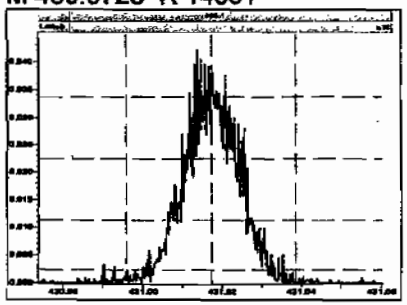

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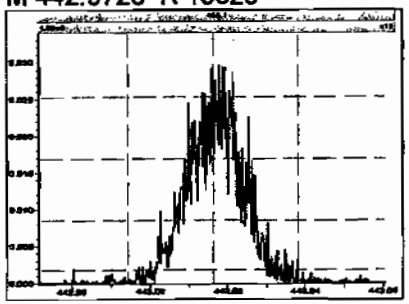

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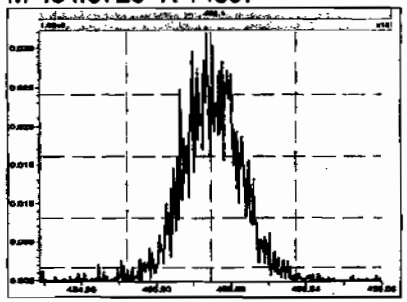

M 466.9728 R 16619

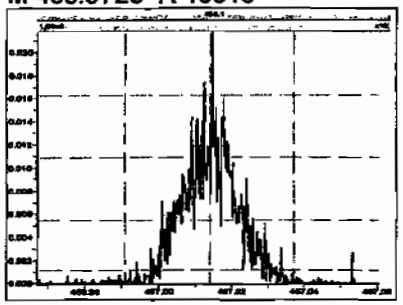

M 480.9696 R 15733

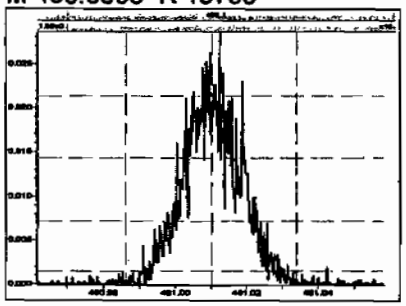

M 430.9728 R 15153

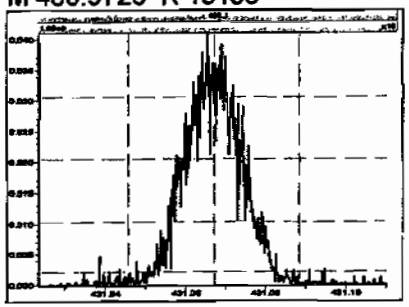

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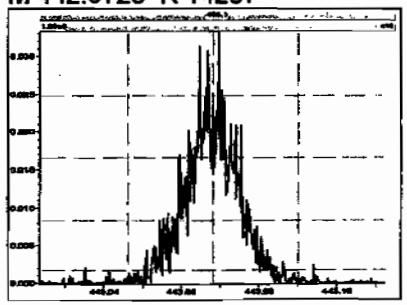

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M 454.9728 R 15401

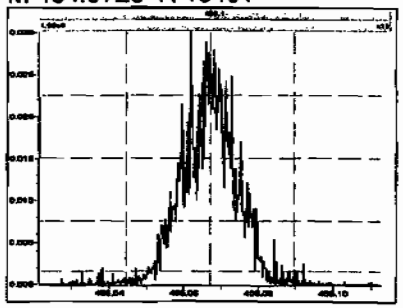

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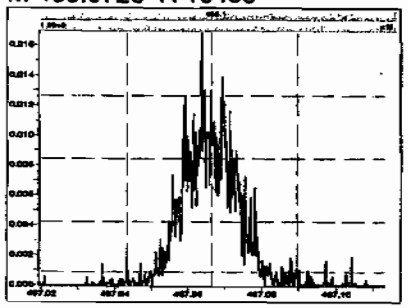

M 480.9696 R 15773

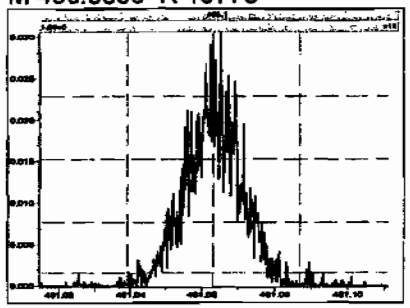

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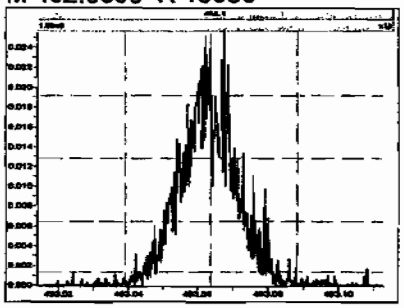

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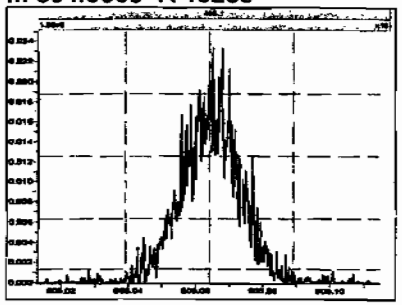

M 516.9697 R 18316

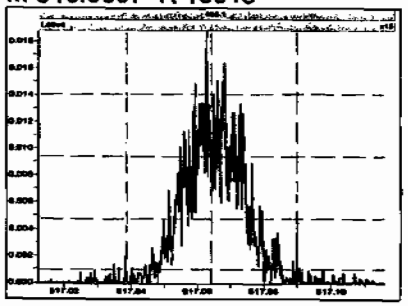

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

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Printed: Wednesday, July 01, 2009 1:24:02 PM Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_1, Date: 01-Jul-2009, Time: 11:38:08, ID: ST090701H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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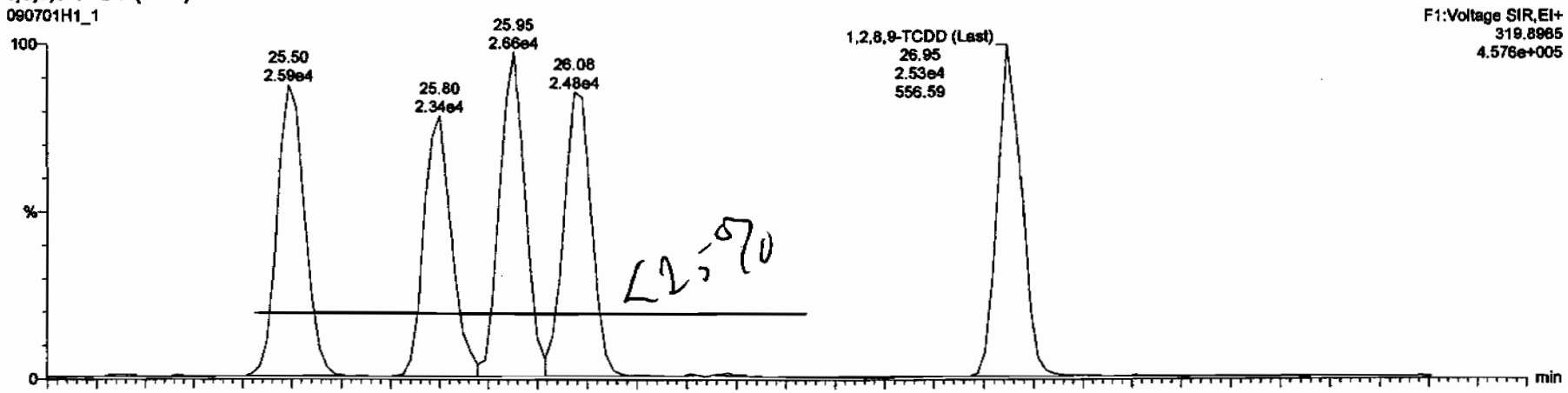

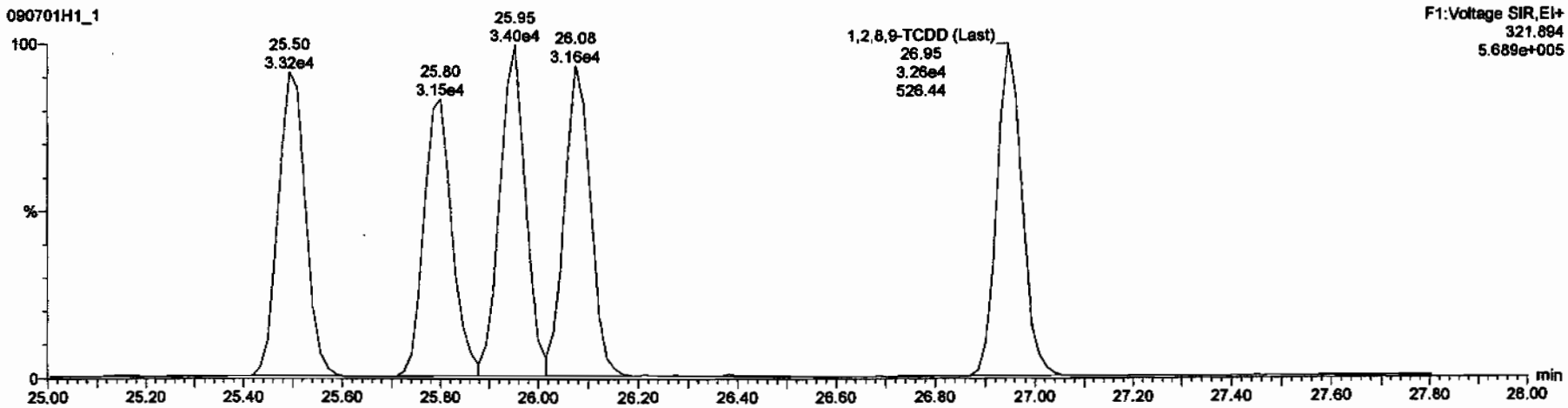

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder (2)\090701h1-1.qld

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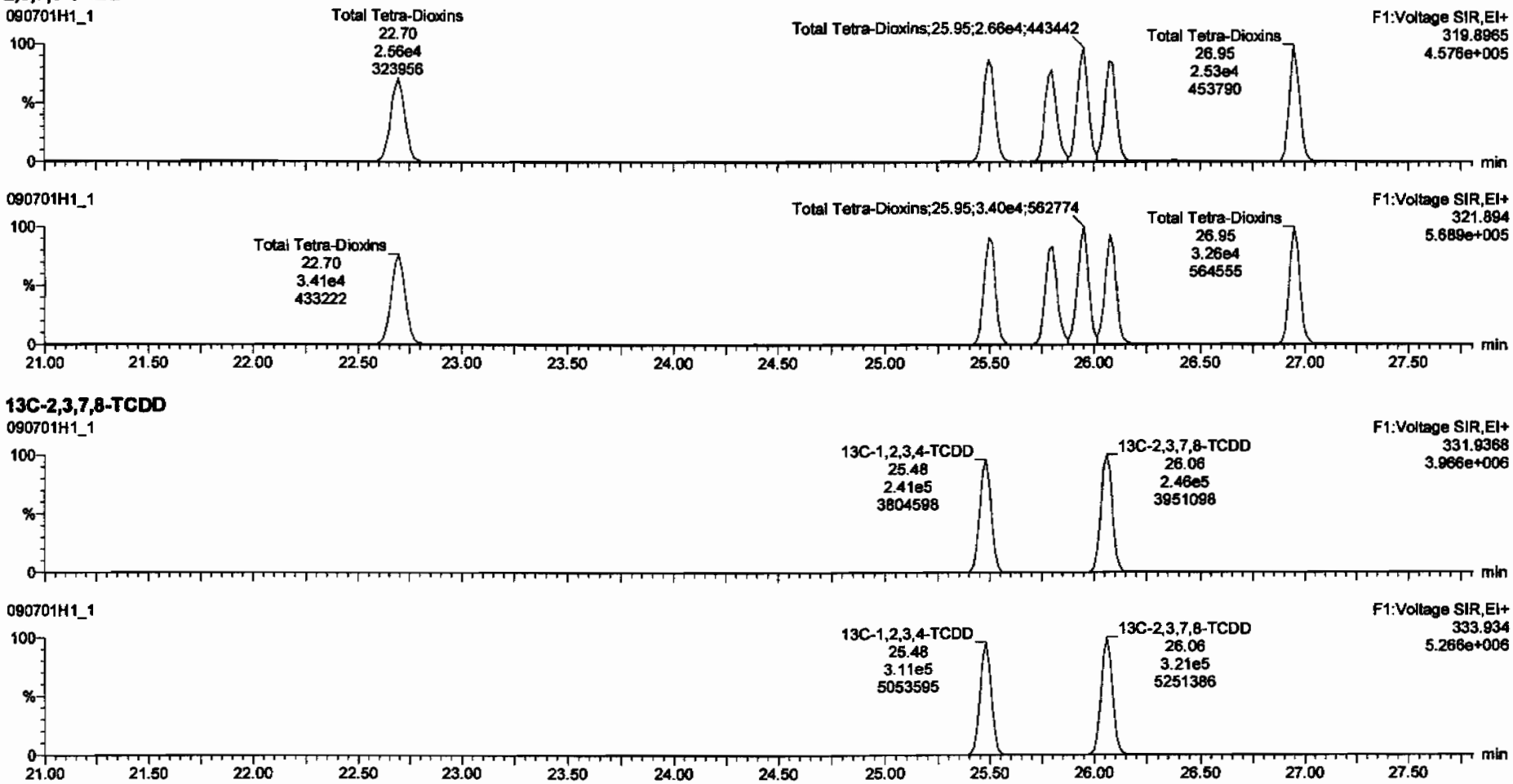

13C-2,3,7,8-TCDD

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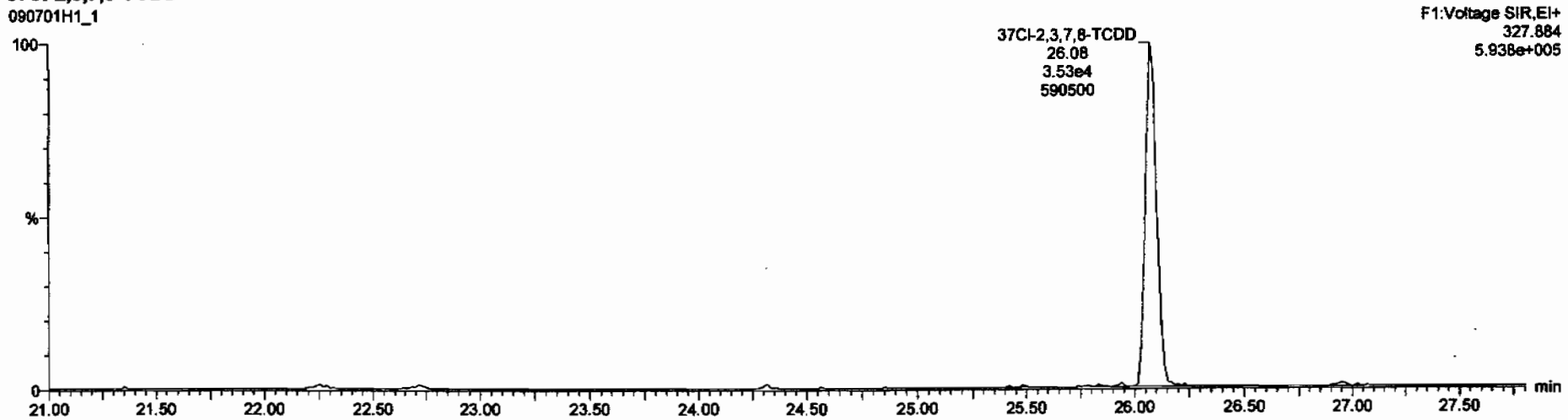

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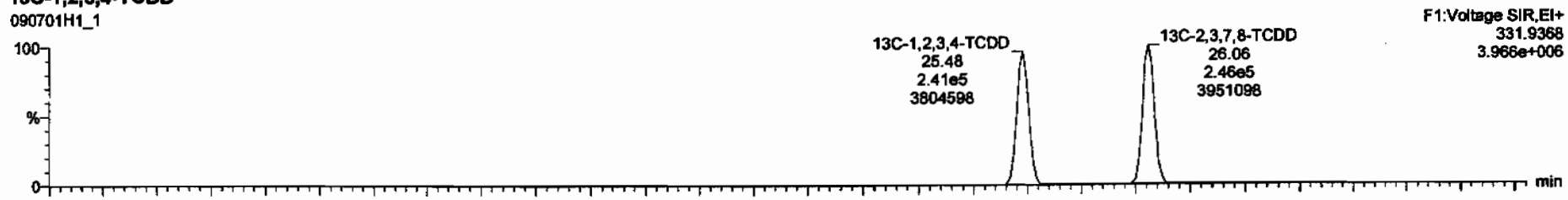

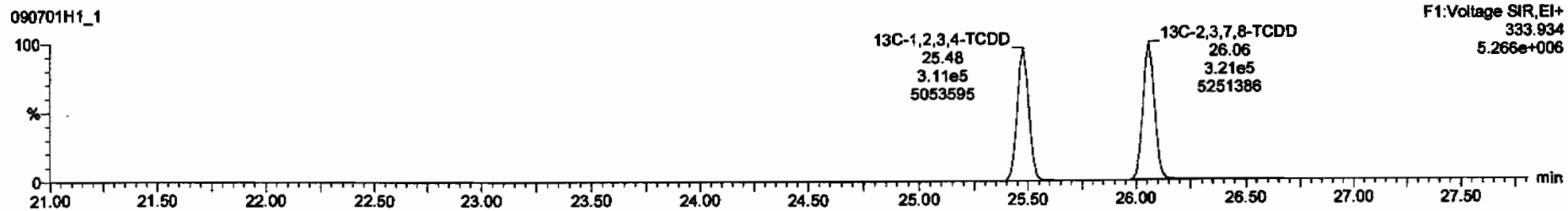

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Name: 090701H1_1, Date: 01-Jul-2009, Time: 11:38:08, ID: ST090701H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

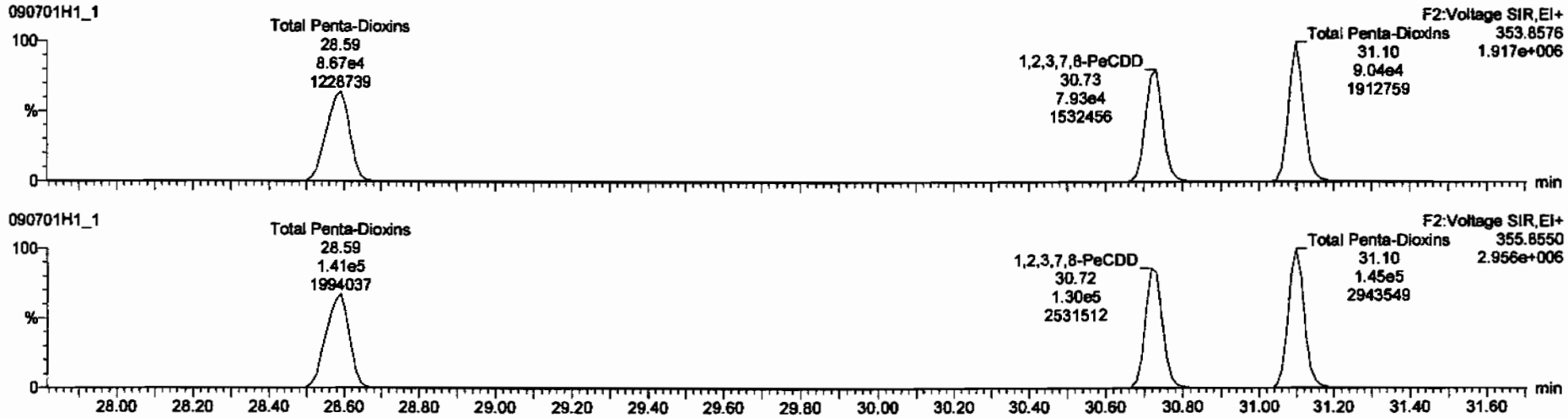

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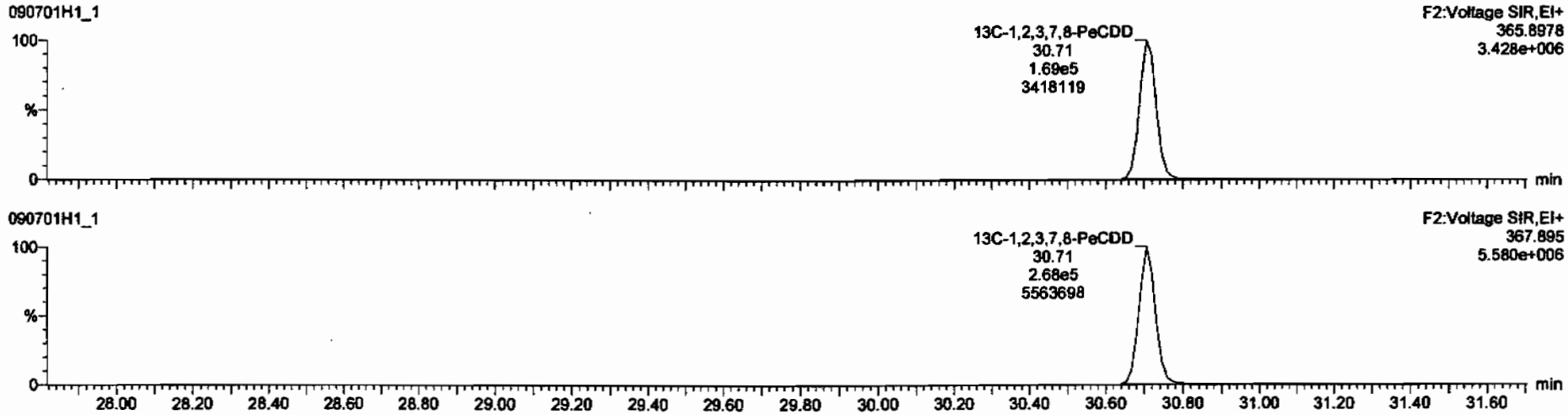

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1,2,3,4,7,8-HxCDD

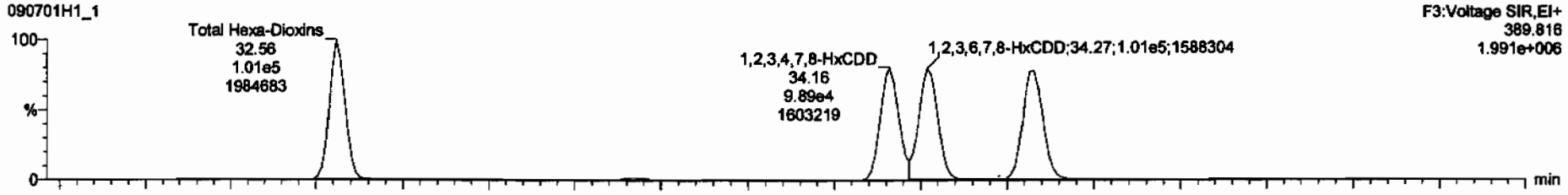

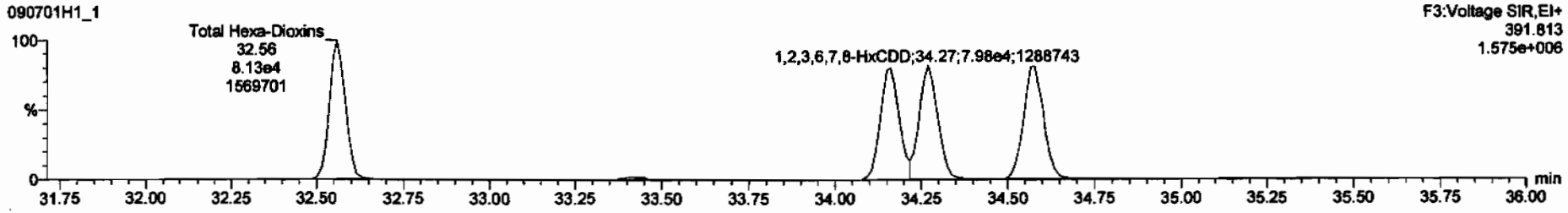

13C-1,2,3,4,7,8-HxCDD

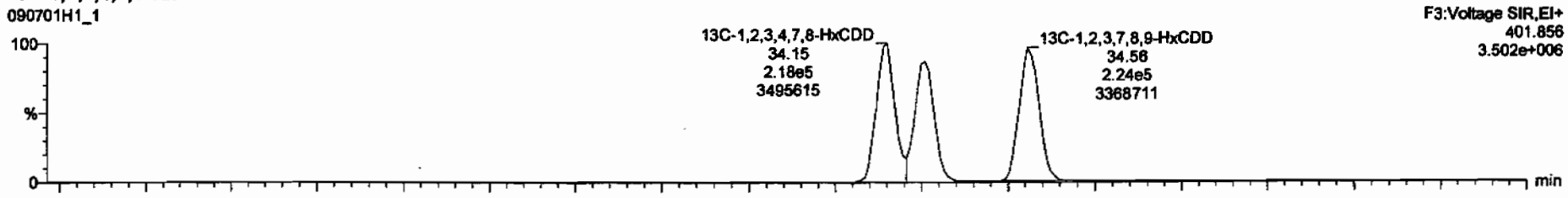

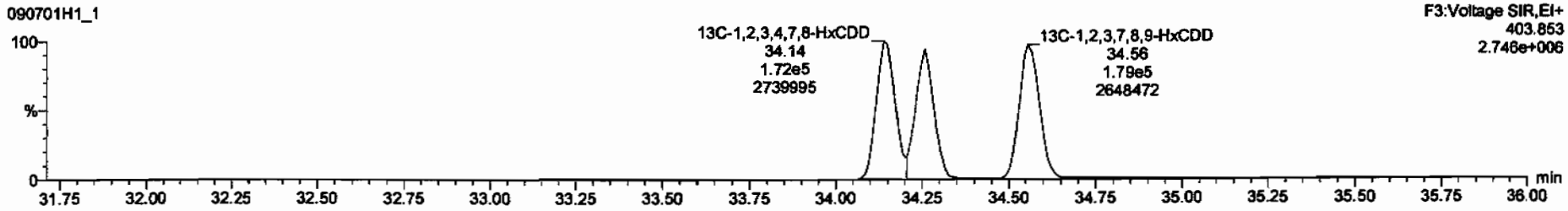

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1,2,3,4,6,7,8-HpCDD

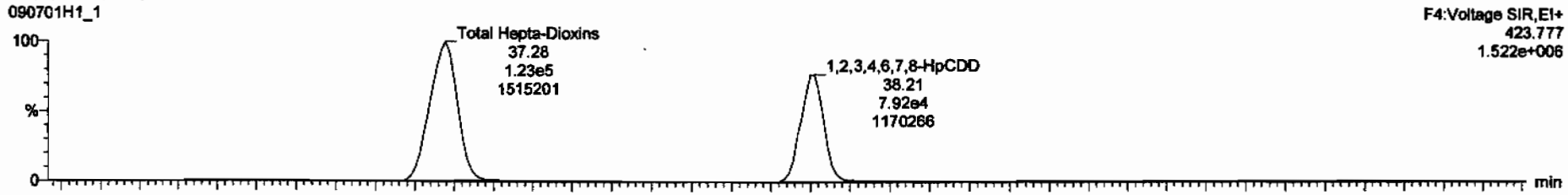

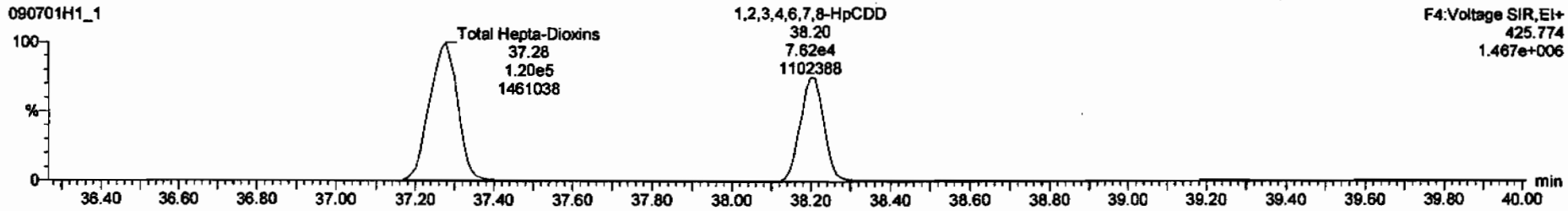

13C-1,2,3,4,6,7,8-HpCDD

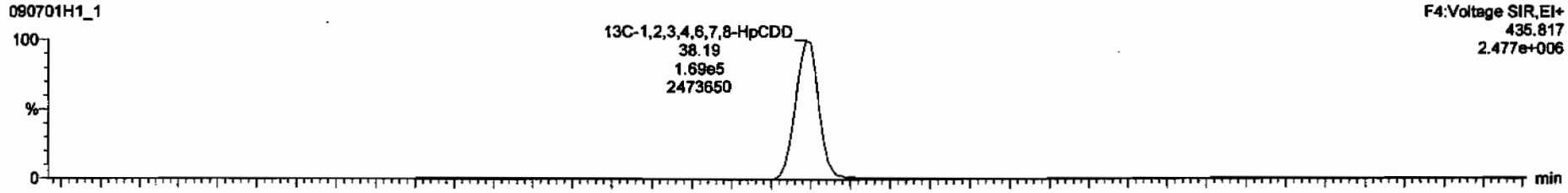

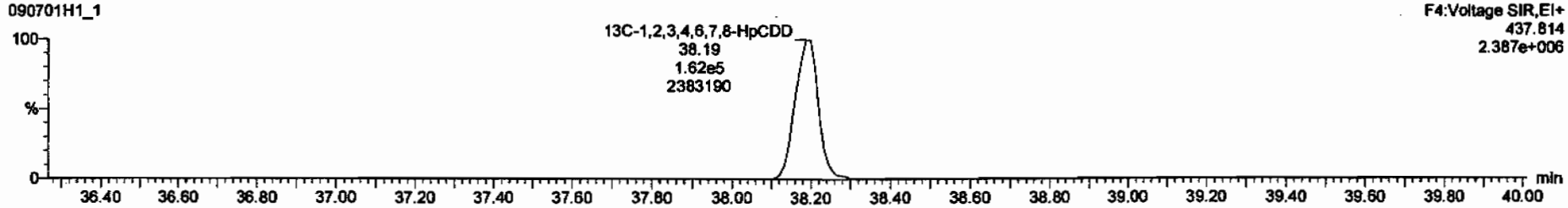

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Name: 090701H1_1, Date: 01-Jul-2009, Time: 11:38:08, ID: ST090701H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

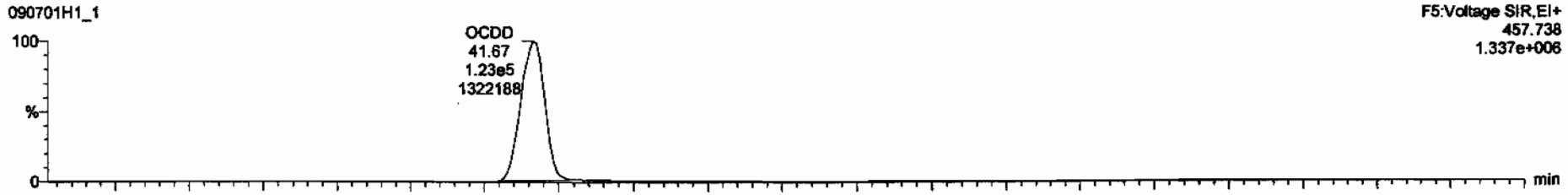

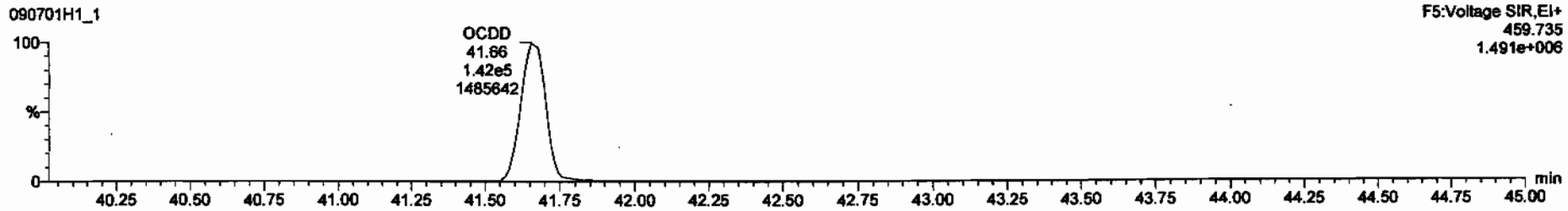

13C-OCDD

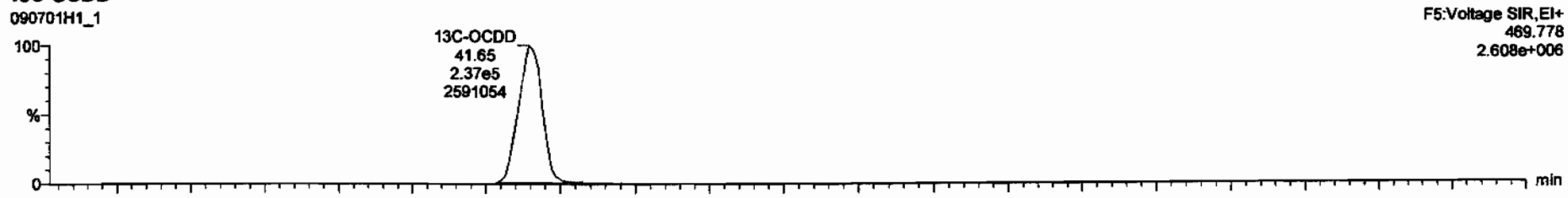

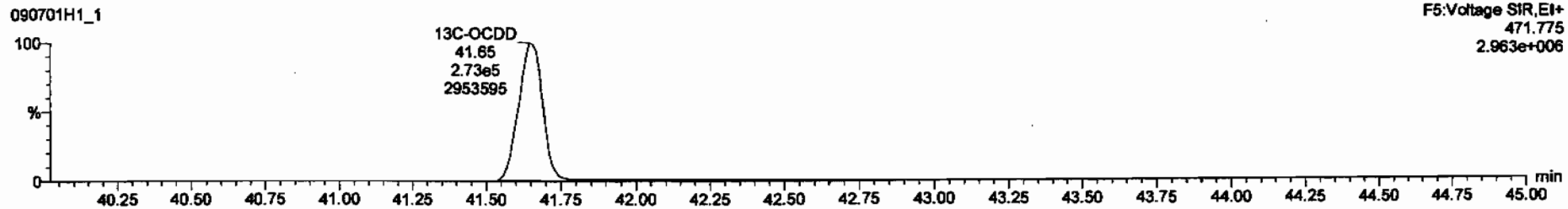

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2,3,7,8-TCDF

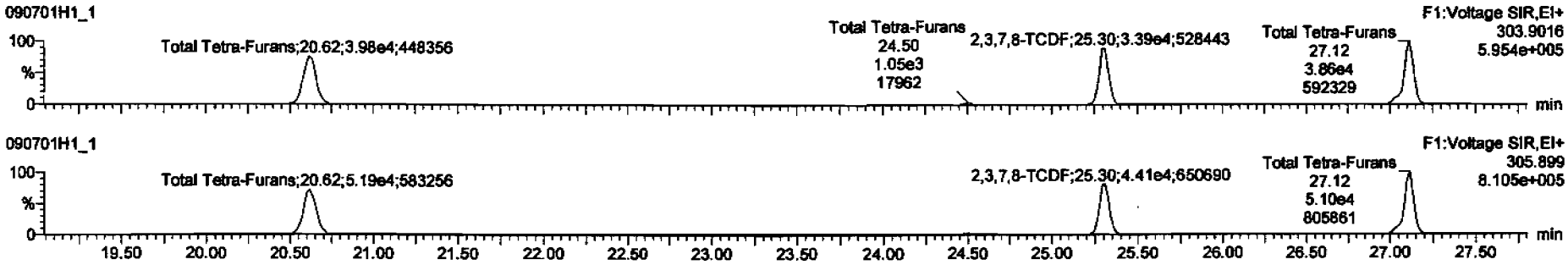

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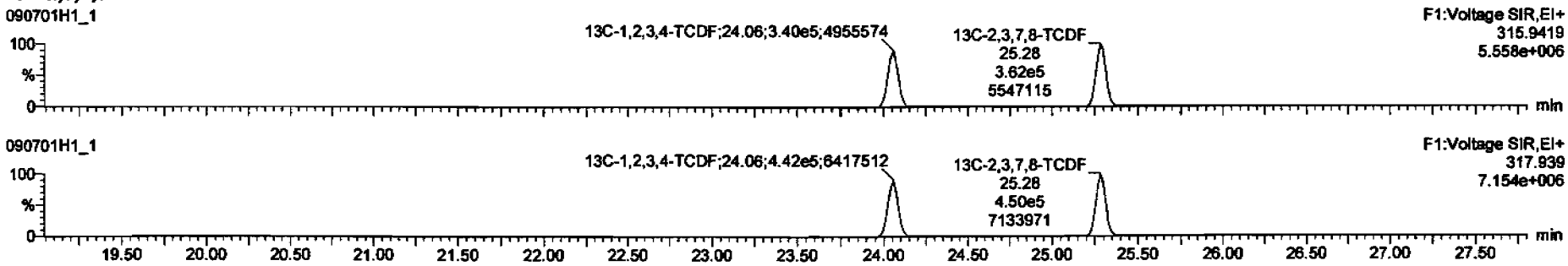

DPE1

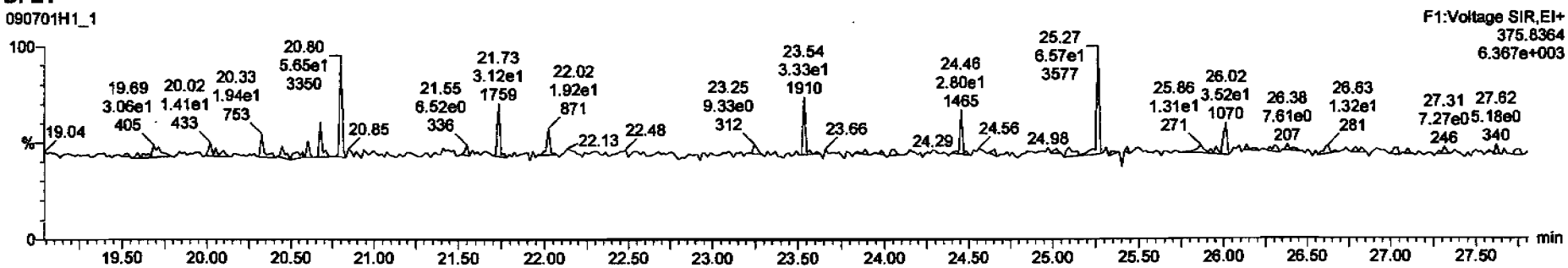

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Name: 090701H1_1, Date: 01-Jul-2009, Time: 11:38:08, ID: ST090701H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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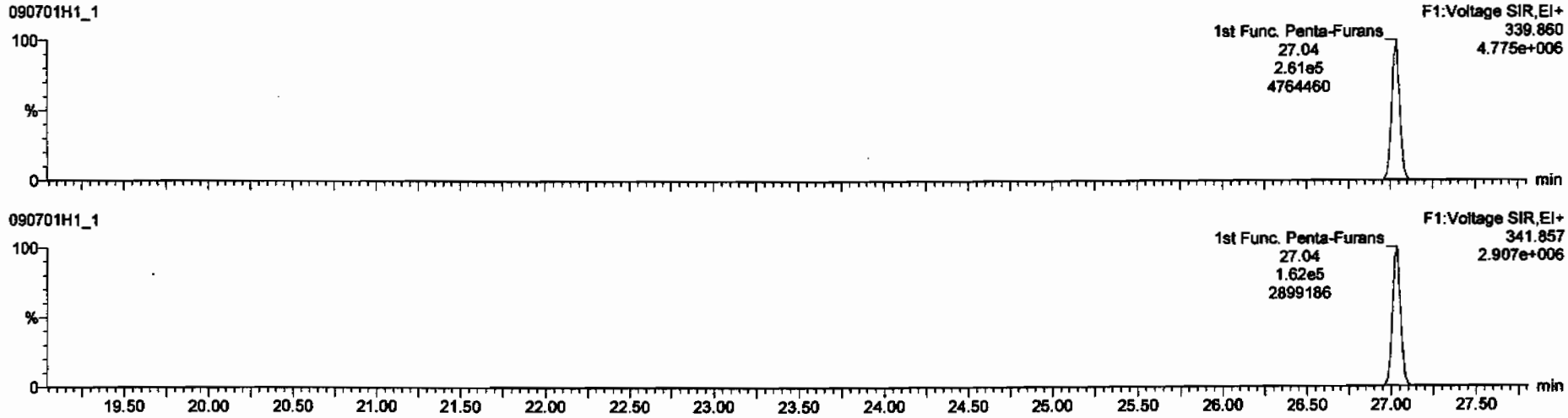

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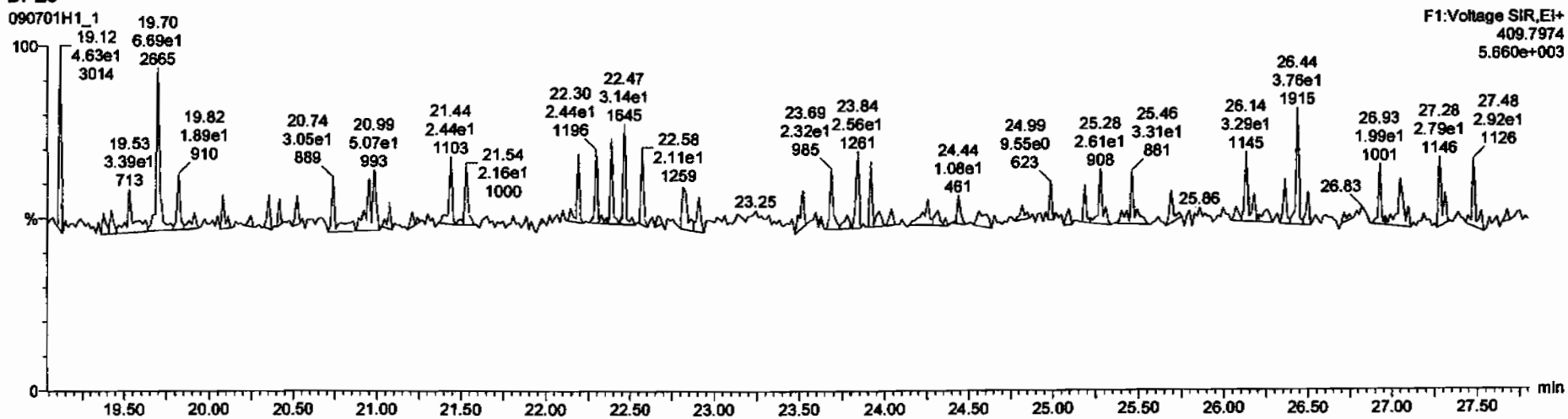

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1,2,3,7,8-PeCDF

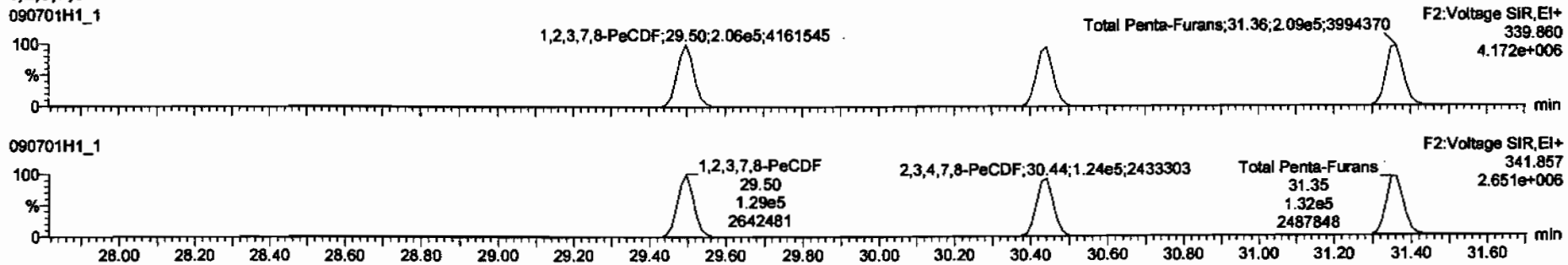

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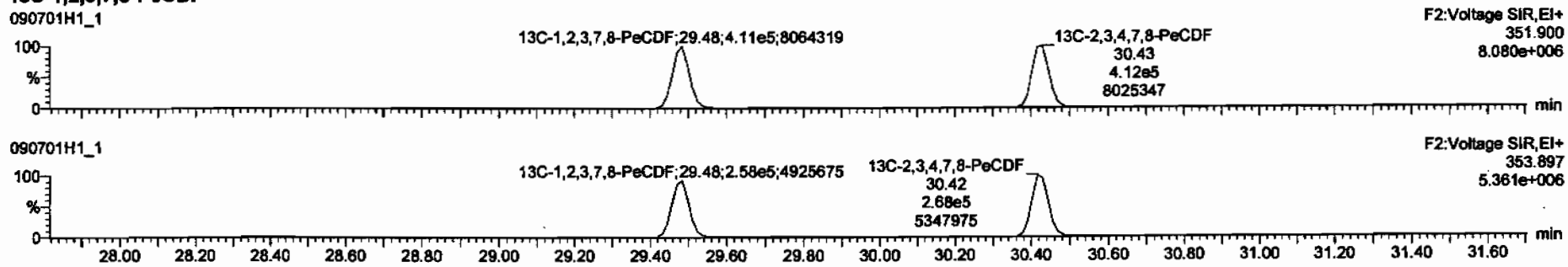

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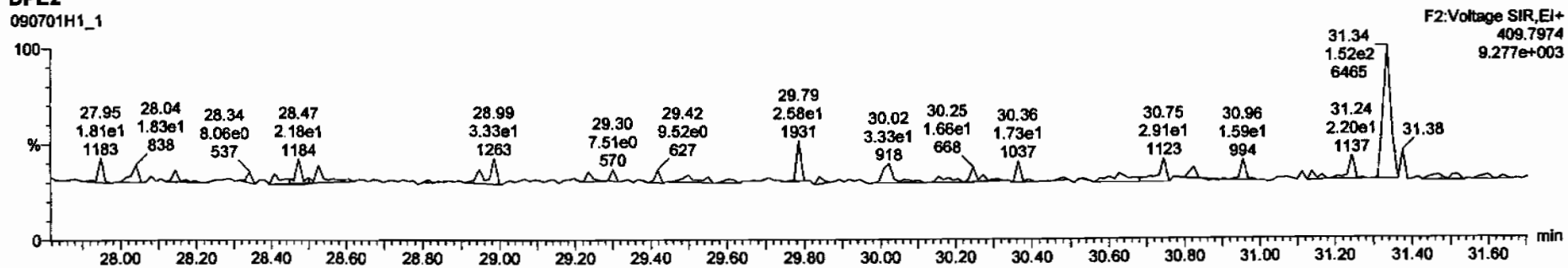

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1,2,3,4,7,8-HxCDF

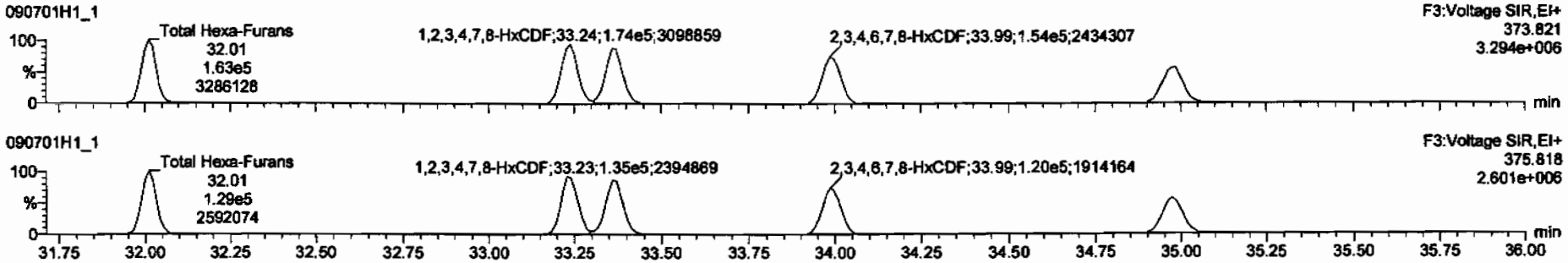

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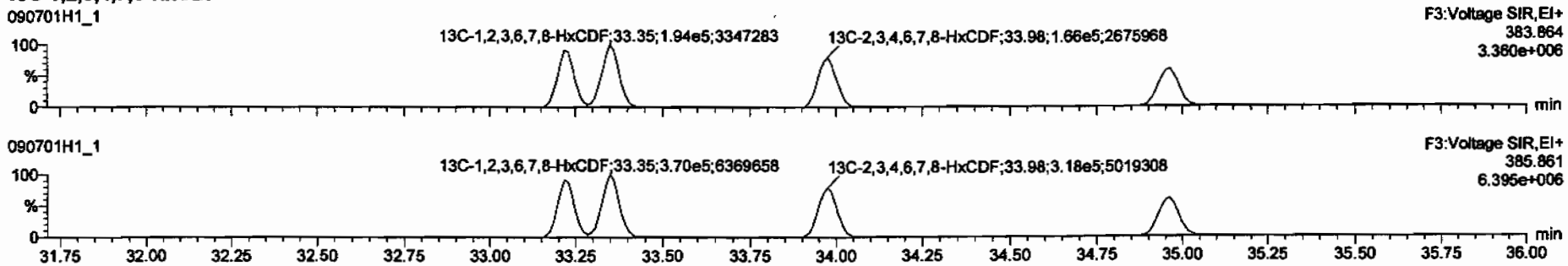

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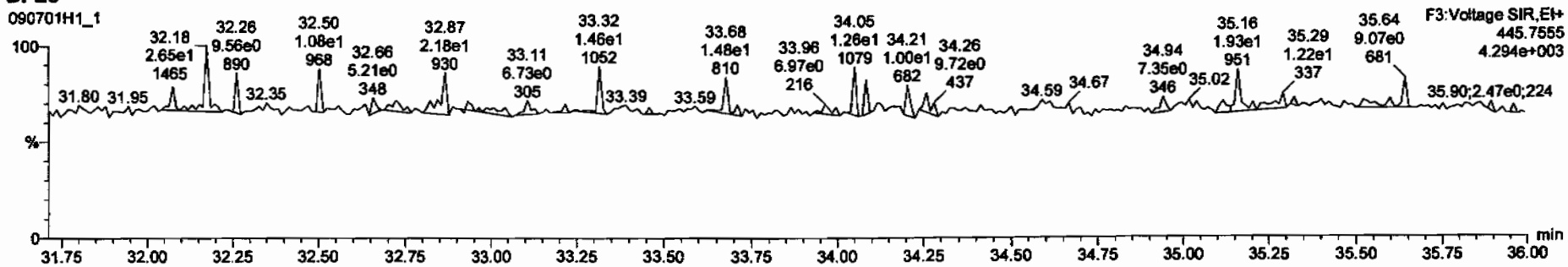

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1,2,3,4,6,7,8-HpCDF

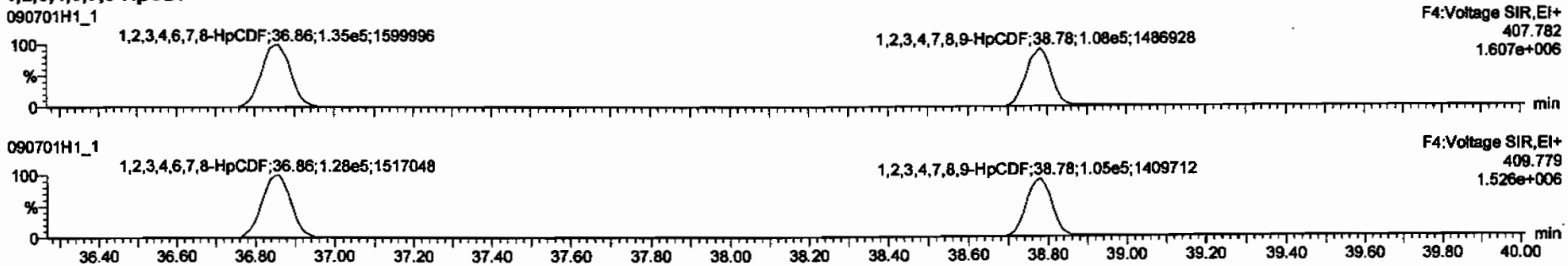

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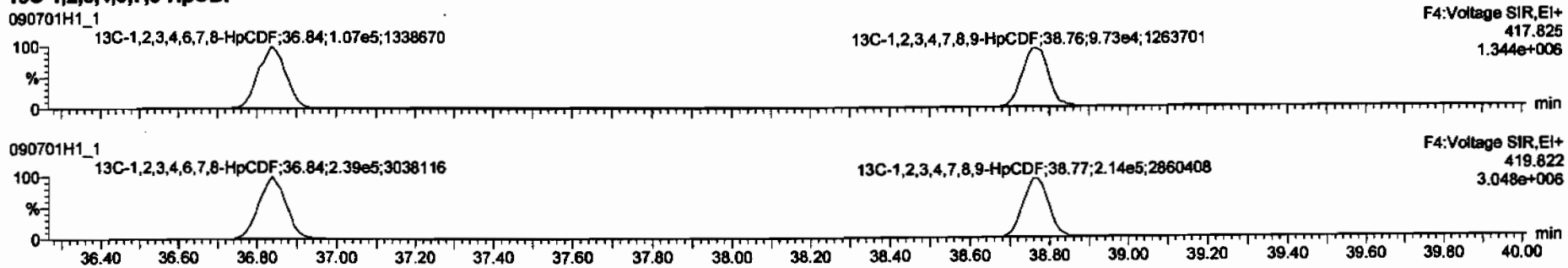

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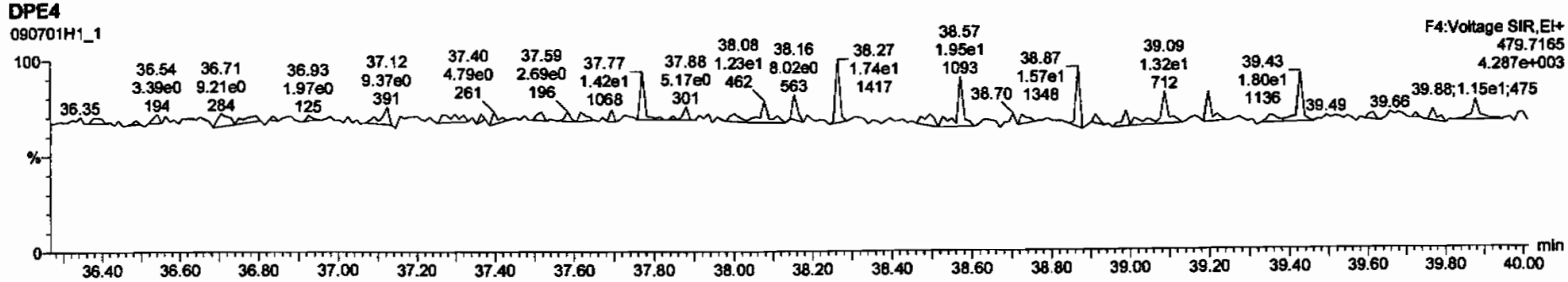

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OCDF

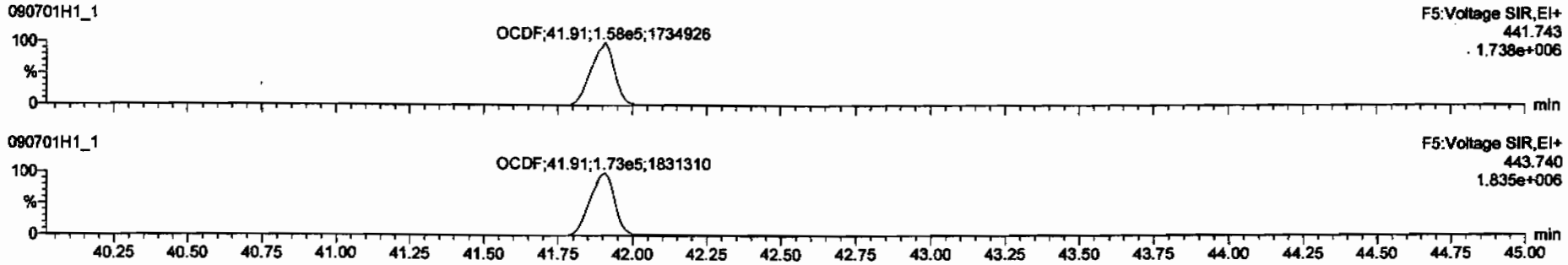

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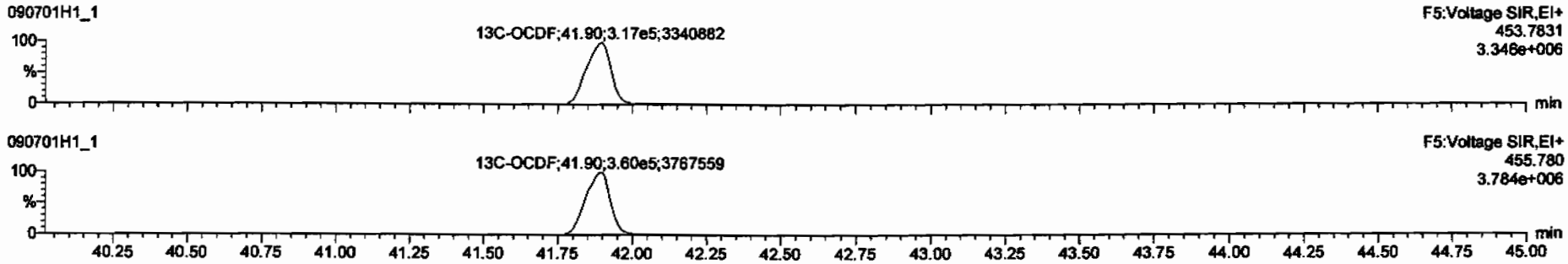

DPE5

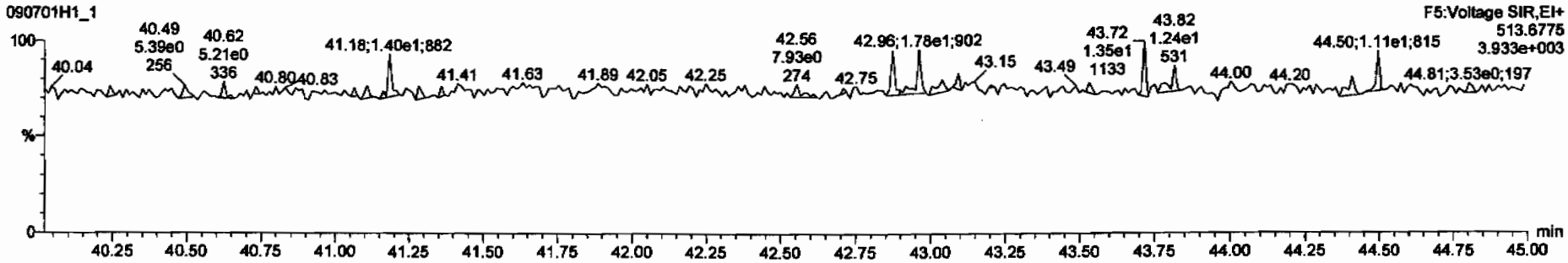

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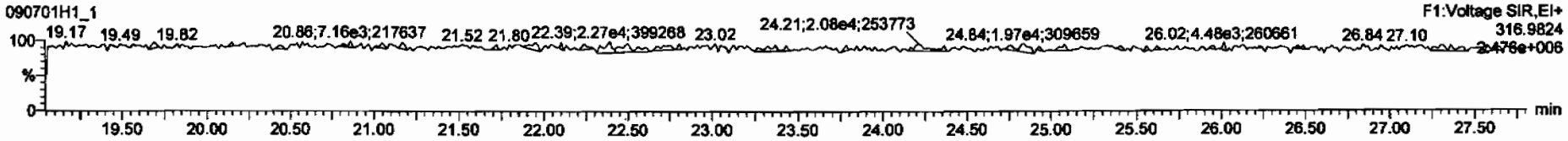

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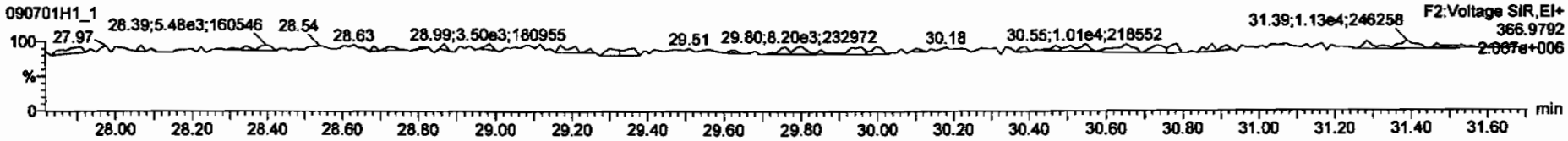

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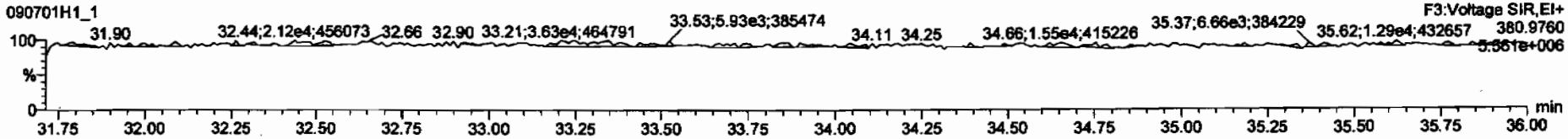

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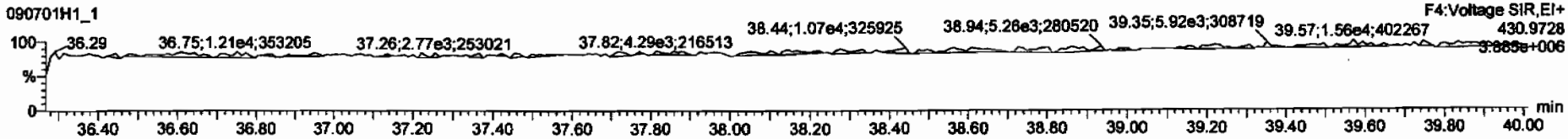

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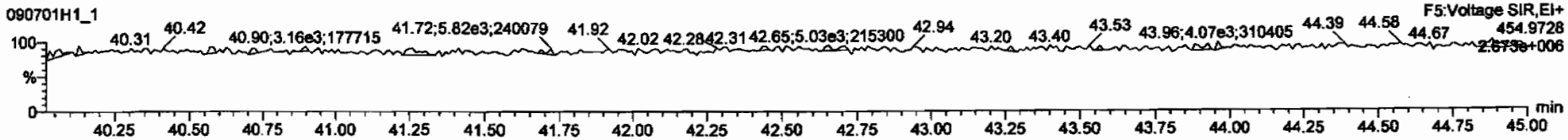

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090701H1_7

CCAL ID: ST090701H1-2

GC Column ID: DB-5
Analysis Date: 01-Jul-09 Analysis Time: 16:35:47

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	9.28	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	45.5	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	45.1	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	46.1	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	47.3	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	46.1	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.88	0.76-1.02	NO	88.7	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	NO	8.86	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	42.0	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	41.3	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	43.7	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.4	44.0	57.0	No	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.6	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.28	1.05-1.43	NO	44.1	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	45.7	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	46.3	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	88.9	63.0	159.0	Yes	80.0	120.0	Yes

OCDD 8290 only

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/2/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090701H1_7

CCAL ID: ST090701H1-2

GC Column ID: DB-5
Analysis Date: 01-Jul-09 Analysis Time: 16:35:47

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	102	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	98.6	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	107	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	94.2	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	110	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.90	0.76-1.02	NO	247	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	99.1	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	99.2	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	102	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	88.6	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	93.2	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	NO	98.8	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	97.5	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	NO	103	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	217	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.35	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

OCDD 8290 only

Analyst: [signature]
Date: 7/2/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 07:48:24 Pacific Daylight Time
Printed: Thursday, July 02, 2009 07:48:35 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_7, Date: 01-Jul-2009, Time: 16:35:47, ID: ST090701H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.70
2	1,2,8,9-TCDD (Last)	26.96
3	1,2,4,7,9-PeCDD (First)	28.59
4	1,2,3,8,9-PeCDD (Last)	31.11
5	12,4,6,7,9-HxCDD (First)	32.57
6	1,2,3,7,8,9-HxCDD (Last)	34.59
7	1,2,3,4,6,7,9-HpCDD (First)	37.29
8	1,2,3,4,6,7,8-HpCDD (Last)	38.22
9	1,3,6,8-TCDF (First)	20.63
10	1,2,8,9-TCDF (Last)	27.12
11	1,3,4,6,8-PeCDF (First)	27.04
12	1,2,3,8,9-PeCDF (Last)	31.36
13	1,2,3,4,6,8-HxCDF (First)	32.02
14	1,2,3,4,8,9-HxCDF (Last)	35.00
15	1,2,3,4,6,7,8-HpCDF (First)	36.88
16	1,2,3,4,7,8,9-HpCDF (Last)	38.79

7/2/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090701H1-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090701H1_7

Analysis Date: 01-Jul-09

Analysis Time: 16:35:47

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.156	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/2/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090701H1-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090701H1_7

Analysis Date: 01-Jul-09

Analysis Time: 16:35:47

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/2/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090701h1\090701h1-7.qld

Last Altered: Thursday, July 02, 2009 07:43:50 Pacific Daylight Time
Printed: Thursday, July 02, 2009 07:44:41 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_7, Date: 01-Jul-2009, Time: 16:35:47, ID: ST090701H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	8.60e4	0.77	NO	1.08	1.000	26.09	9.28	92.8	0.0445
2	1,2,3,7,8-PeCDD	3.20e5	0.62	NO	1.03	1.000	30.73	45.5	91.0	0.0664
3	1,2,3,4,7,8-HxCDD	2.79e5	1.28	NO	1.00	1.000	34.17	45.1	90.1	0.138
4	1,2,3,6,7,8-HxCDD	2.84e5	1.24	NO	1.13	1.000	34.28	46.1	92.2	0.141
5	1,2,3,7,8,9-HxCDD	3.04e5	1.25	NO	1.10	1.000	34.59	47.3	94.6	0.134
6	1,2,3,4,6,7,8-HpCDD	2.40e5	1.05	NO	1.06	1.000	38.22	46.1	92.2	0.198
7	OCDD	4.09e5	0.88	NO	1.18	1.000	41.69	88.7	88.7	0.135
8	2,3,7,8-TCDF	1.15e5	0.80	NO	1.09	1.000	25.31	8.86	88.6	0.0326
9	1,2,3,7,8-PeCDF	4.93e5	1.57	NO	1.16	1.000	29.50	42.0	84.0	0.0663
10	2,3,4,7,8-PeCDF	4.70e5	1.61	NO	1.12	1.000	30.44	41.3	82.5	0.0626
11	1,2,3,4,7,8-HxCDF	4.64e5	1.25	NO	1.41	1.000	33.25	43.7	87.3	0.0974
12	1,2,3,6,7,8-HxCDF	4.50e5	1.27	NO	1.22	1.000	33.38	43.4	86.8	0.103
13	2,3,4,6,7,8-HxCDF	4.19e5	1.27	NO	1.28	1.000	34.00	44.6	89.2	0.127
14	1,2,3,7,8,9-HxCDF	3.63e5	1.28	NO	1.26	1.000	35.00	44.1	88.2	0.157
15	1,2,3,4,6,7,8-HpCDF	4.12e5	1.05	NO	1.69	1.000	36.88	45.7	91.4	0.159
16	1,2,3,4,7,8,9-HpCDF	3.23e5	1.06	NO	1.48	1.000	38.79	46.3	92.5	0.180
17	OCDF	5.07e5	0.91	NO	1.10	1.000	41.93	88.9	88.9	0.0930
18	13C-2,3,7,8-TCDD	8.60e5	0.79	NO	1.01	1.000	26.06	102	102	0.179
19	13C-1,2,3,7,8-PeCDD	6.81e5	0.62	NO	0.827	1.000	30.72	98.6	98.6	0.176
20	13C-1,2,3,4,7,8-HxCDD	6.18e5	1.26	NO	0.916	1.000	34.16	107	107	0.251
21	13C-1,2,3,6,7,8-HxCDD	5.47e5	1.25	NO	0.921	1.000	34.27	94.2	94.2	0.250
22	13C-1,2,3,4,6,7,8-HpCDD	4.90e5	1.03	NO	0.708	1.000	38.21	110	110	0.374
23	13C-OCDD	7.82e5	0.90	NO	0.503	1.000	41.68	247	124	0.295
24	13C-2,3,7,8-TCDF	1.20e6	0.79	NO	0.977	1.000	25.30	107	107	0.0979
25	13C-1,2,3,7,8-PeCDF	1.01e6	1.56	NO	0.896	1.000	29.48	99.1	99.1	0.178
26	13C-2,3,4,7,8-PeCDF	1.02e6	1.56	NO	0.900	1.000	30.43	99.2	99.2	0.178
27	13C-1,2,3,4,7,8-HxCDF	7.53e5	0.53	NO	1.17	1.000	33.24	102	102	0.334
28	13C-1,2,3,6,7,8-HxCDF	8.49e5	0.53	NO	1.52	1.000	33.36	88.6	88.6	0.257
29	13C-2,3,4,6,7,8-HxCDF	7.34e5	0.53	NO	1.25	1.000	33.99	93.2	93.2	0.312
30	13C-1,2,3,7,8,9-HxCDF	6.55e5	0.52	NO	1.05	1.000	34.97	98.8	98.8	0.370

7/2/09

Dataset: C:\MassLynx\Default.pro\Results\090701h1\090701h1-7.qld

Last Altered: Thursday, July 02, 2009 07:43:50 Pacific Daylight Time
Printed: Thursday, July 02, 2009 07:44:41 Pacific Daylight Time

Name: 090701H1_7, Date: 01-Jul-2009, Time: 16:35:47, ID: ST090701H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	5.33e5	0.44	NO	0.868	1.000	36.86	97.5	97.5	0.319
32	13C-1,2,3,4,7,8,9-HpCDF	4.71e5	0.44	NO	0.727	1.000	38.78	103	103	0.381
33	13C-OCDF	1.04e6	0.88	NO	0.760	1.000	41.92	217	109	0.161
34	37Cl-2,3,7,8-TCDD	5.21e4			0.668	1.000	26.09	9.35	93.5	0.0428
35	13C-1,2,3,4-TCDD	8.34e5	0.78	NO	1.00	1.000	25.50	100	100	0.182
36	13C-1,2,3,4-TCDF	1.14e6	0.78	NO	1.00	1.000	24.06	100	100	0.0956
37	13C-1,2,3,7,8,9-HxCDD	6.30e5	1.26	NO	1.00	1.000	34.58	100	100	0.230

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 7:48:46 AM Pacific Daylight Time
Printed: Thursday, July 02, 2009 7:49:02 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

	090701H1_1	ST090701H1-1 1613 CS3 080917I	01-Jul-09	11:38:08
	090701H1_2	solvent blank	01-Jul-09	12:27:45
	090701H1_3	31837_2207_003 CAMO-09-6008 13.14 1:10	01-Jul-09	13:17:19
	090701H1_4	31837_2207_004 CAMO-09-6009 12.25 1:10	01-Jul-09	14:06:54
	090701H1_5	solvent blank	01-Jul-09	14:56:26
	090701H1_6	solvent blank	01-Jul-09	15:46:02
	090701H1_7	ST090701H1-2 1613 CS3 080917I	01-Jul-09	16:35:47

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 07:48:24 Pacific Daylight Time
Printed: Thursday, July 02, 2009 07:48:35 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_7, Date: 01-Jul-2009, Time: 16:35:47, ID: ST090701H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

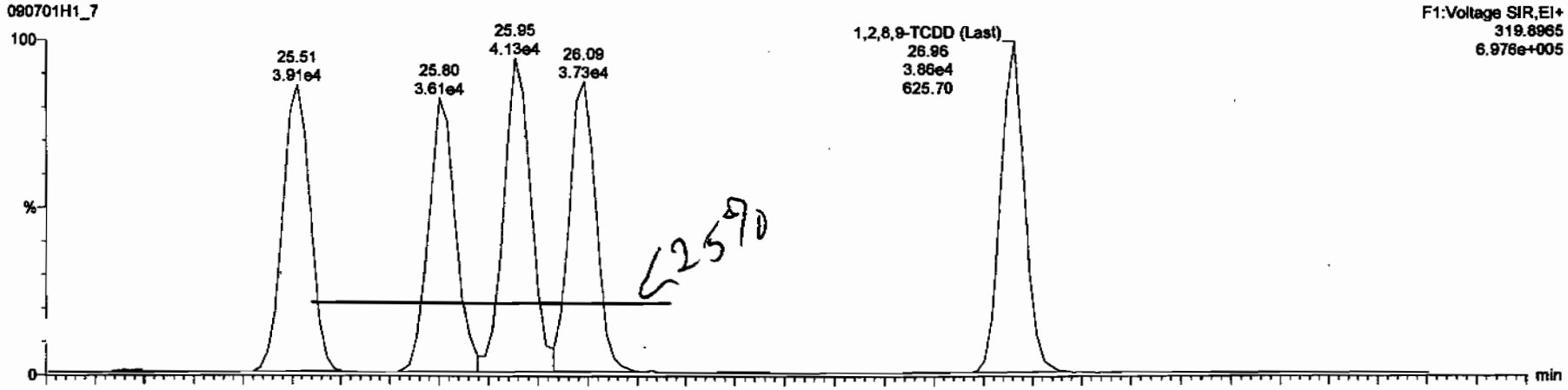

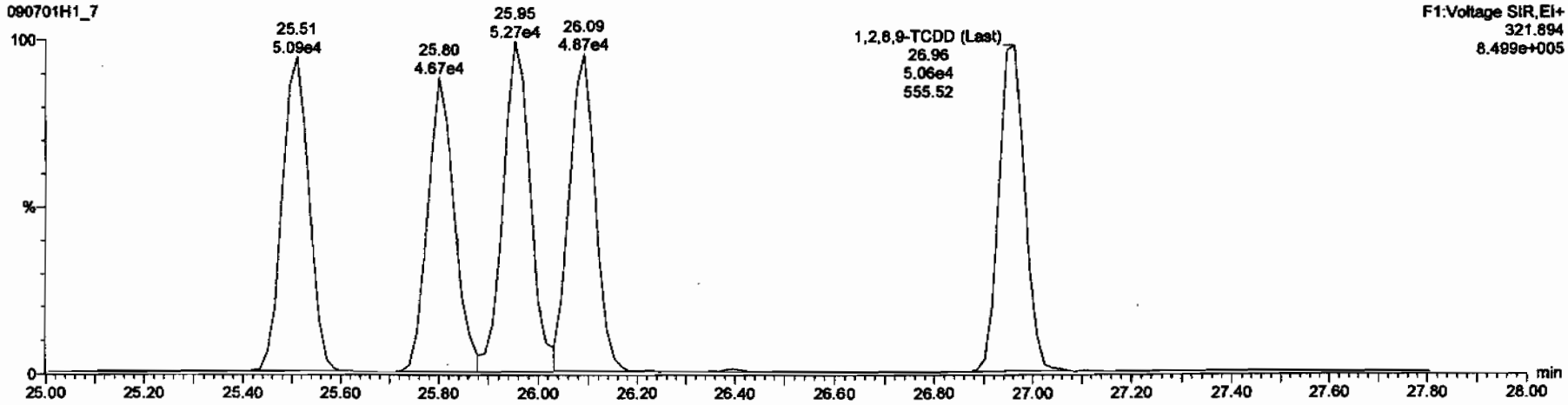

Dataset: C:\MassLynx\Default.pro\Results\090701h1\090701h1-7.qld

Last Altered: Thursday, July 02, 2009 07:43:50 Pacific Daylight Time
Printed: Thursday, July 02, 2009 07:44:25 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090701H1_7, Date: 01-Jul-2009, Time: 16:35:47, ID: ST090701H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

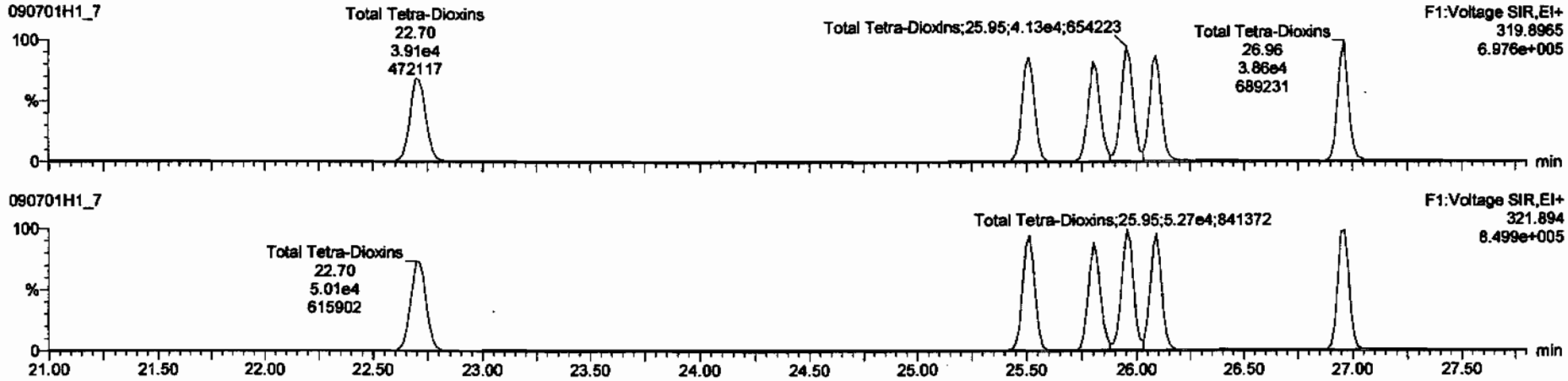

13C-2,3,7,8-TCDD

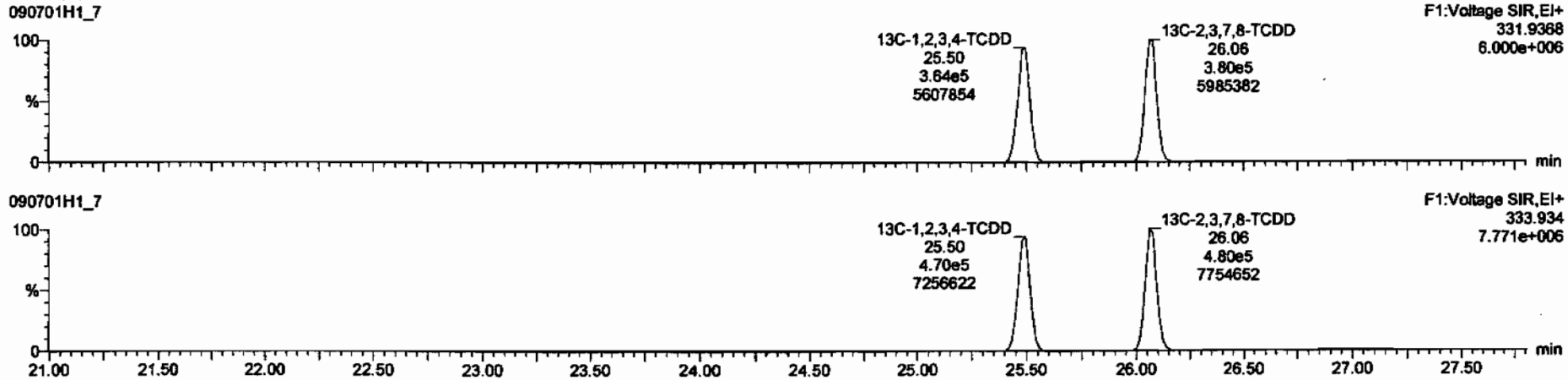

Dataset: C:\MassLynx\Default.pro\Results\090701h1\090701h1-7.qld

Last Altered: Thursday, July 02, 2009 07:43:50 Pacific Daylight Time
Printed: Thursday, July 02, 2009 07:44:25 Pacific Daylight Time

Name: 090701H1_7, Date: 01-Jul-2009, Time: 16:35:47, ID: ST090701H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

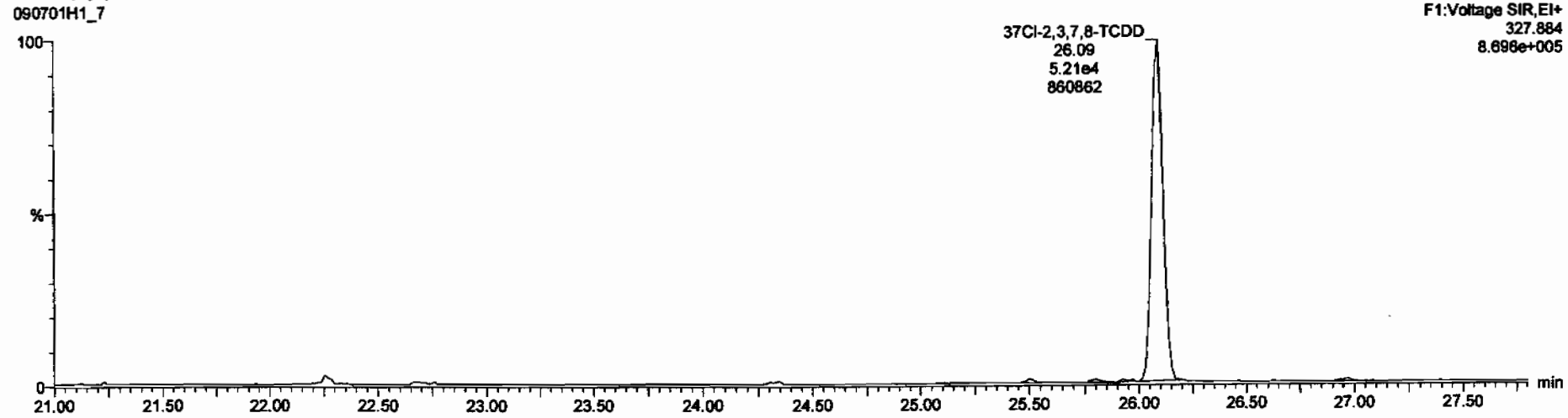

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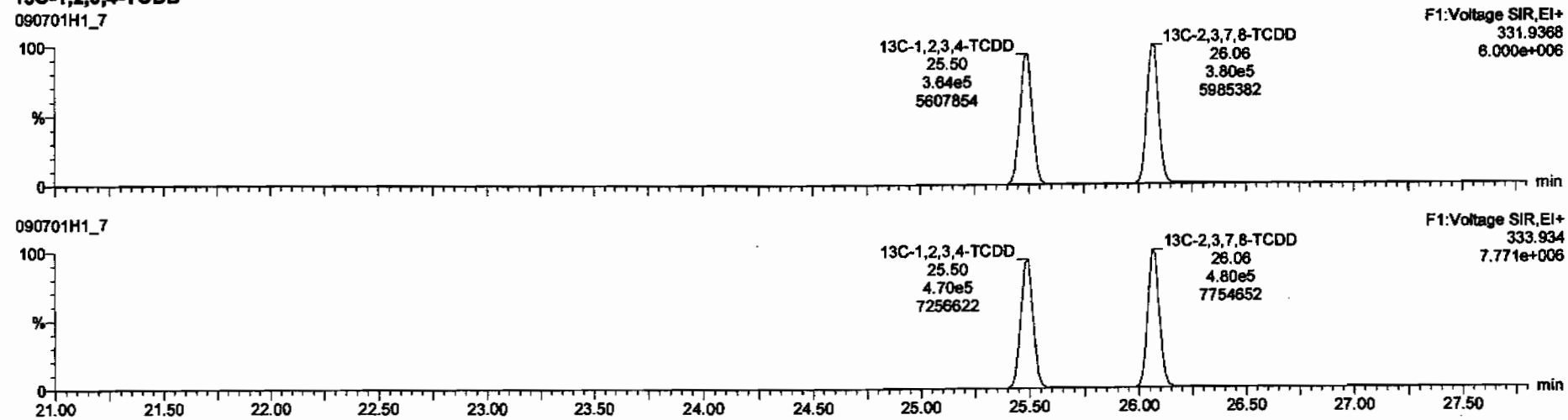

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1,2,3,7,8-PeCDD

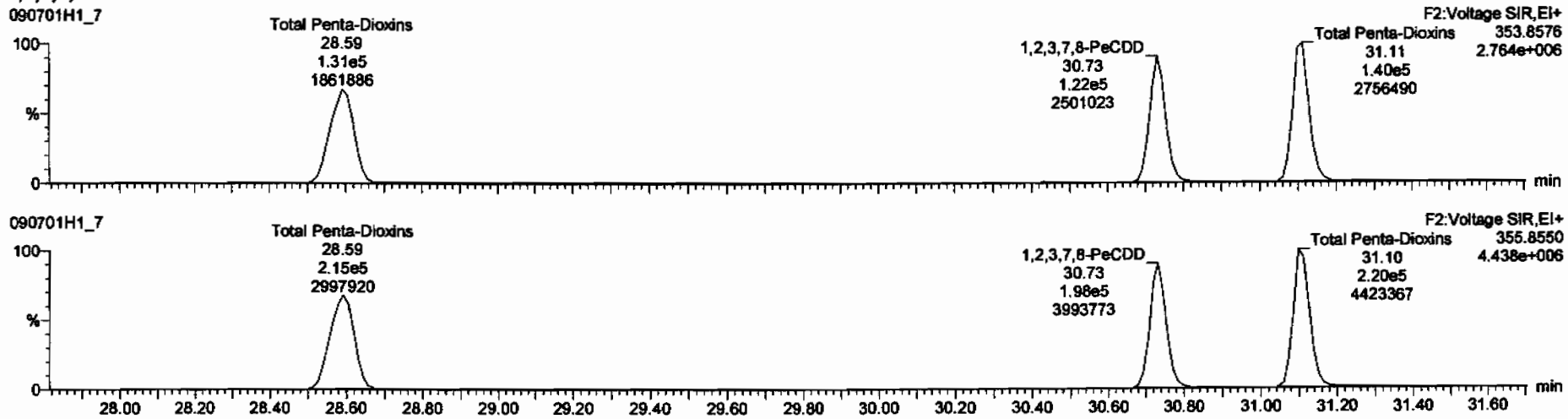

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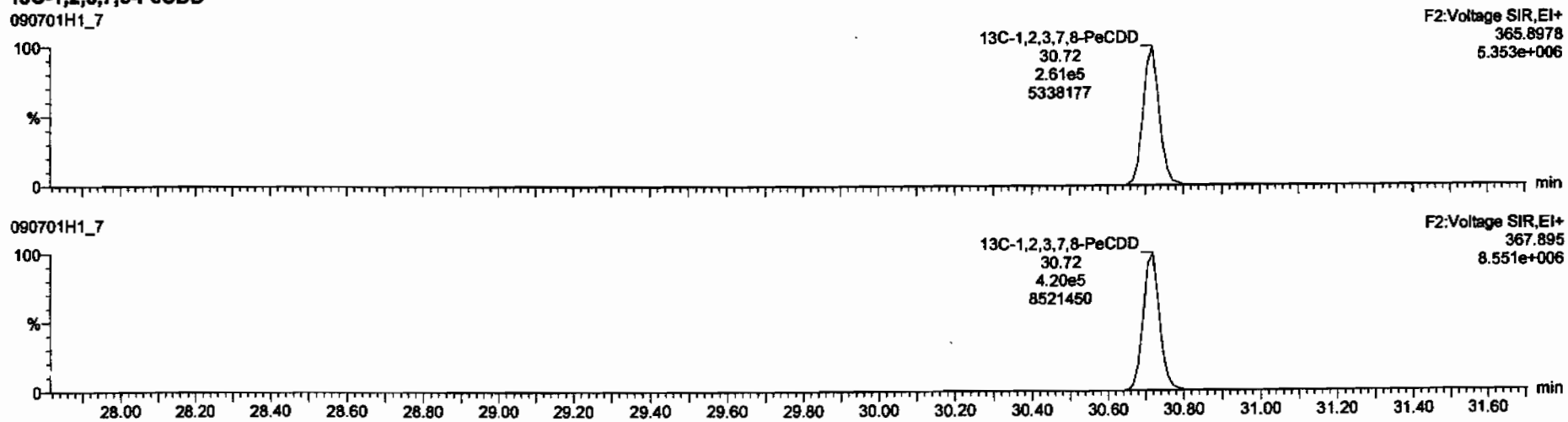

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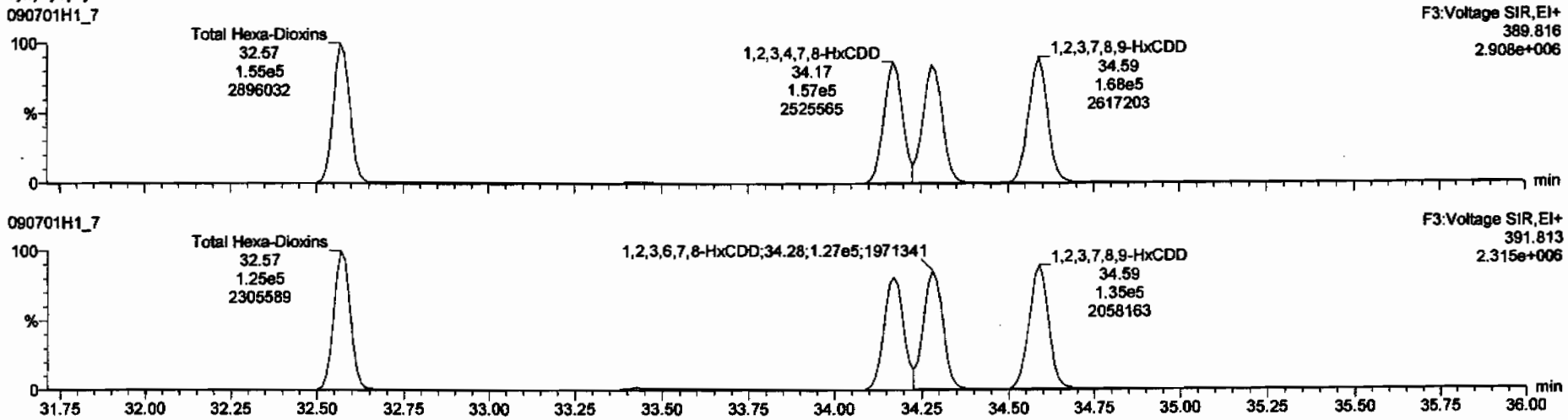

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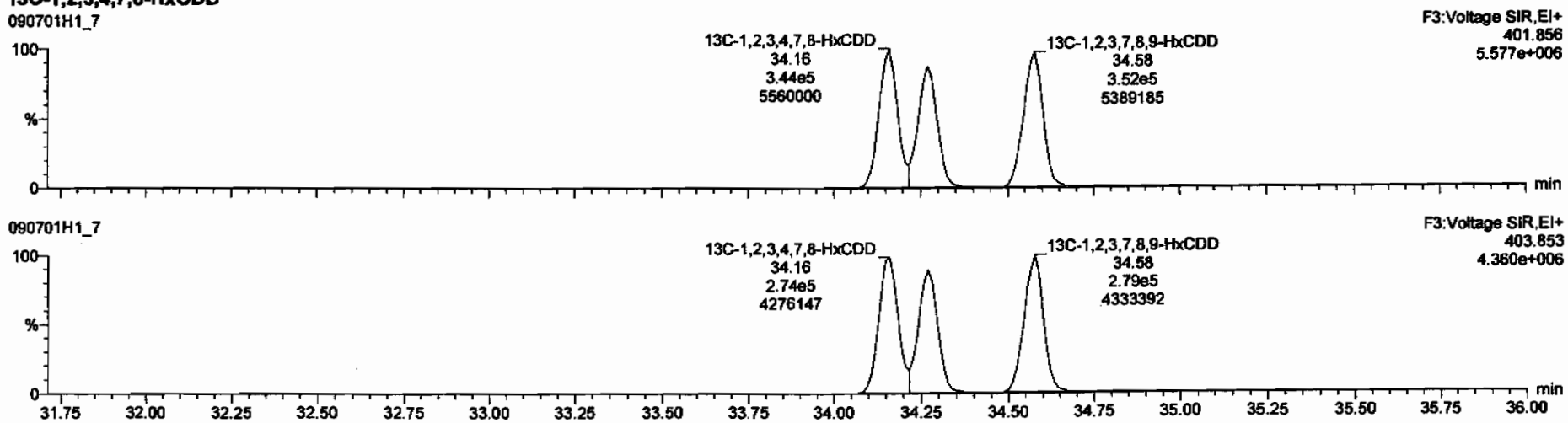

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1,2,3,4,6,7,8-HpCDD

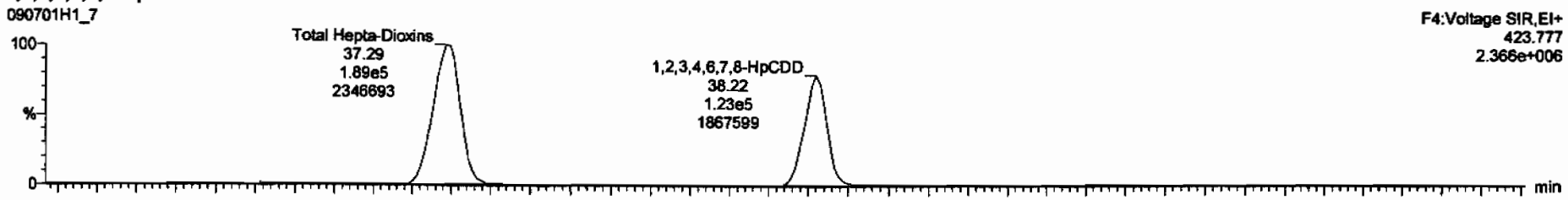

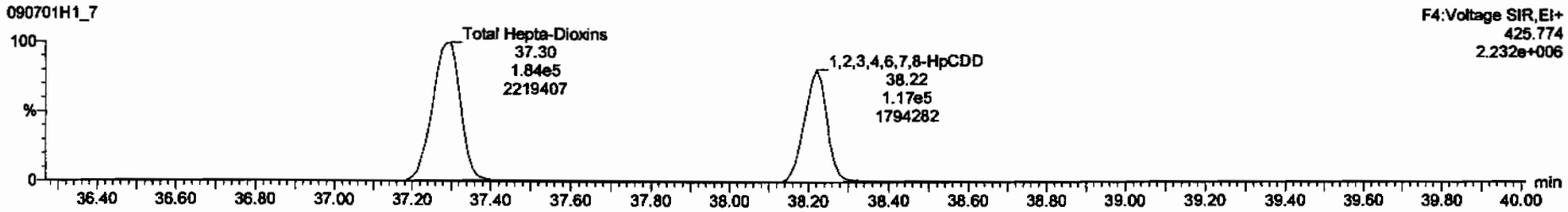

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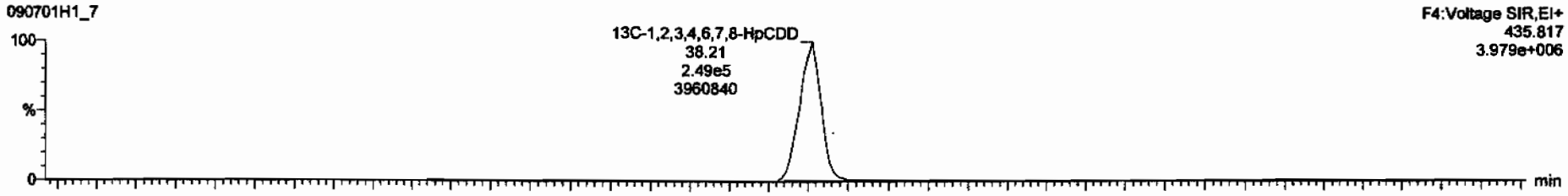

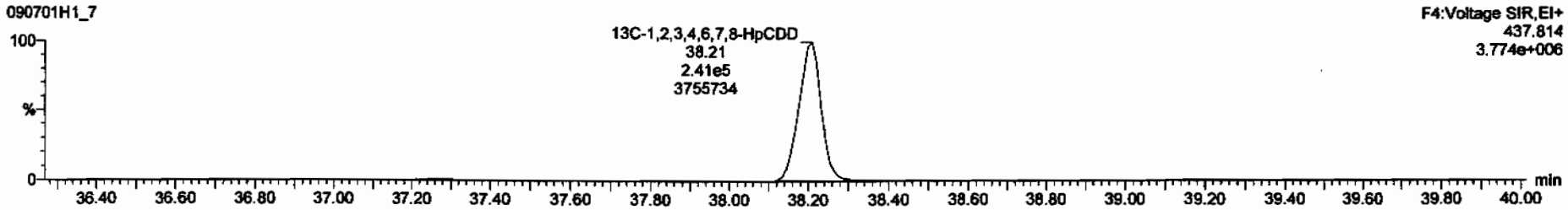

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OCDD

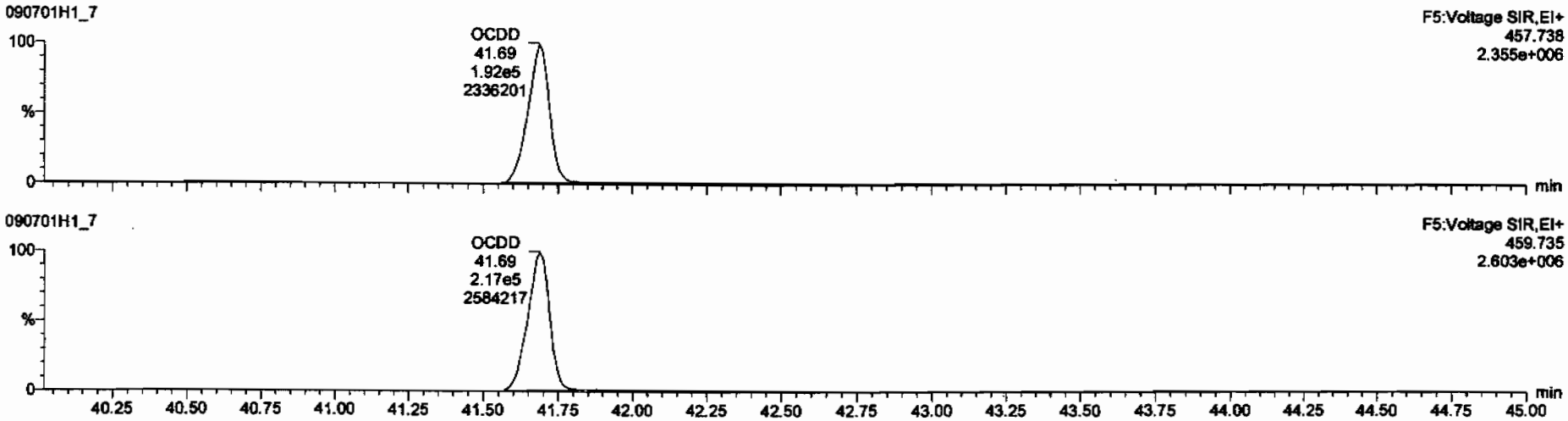

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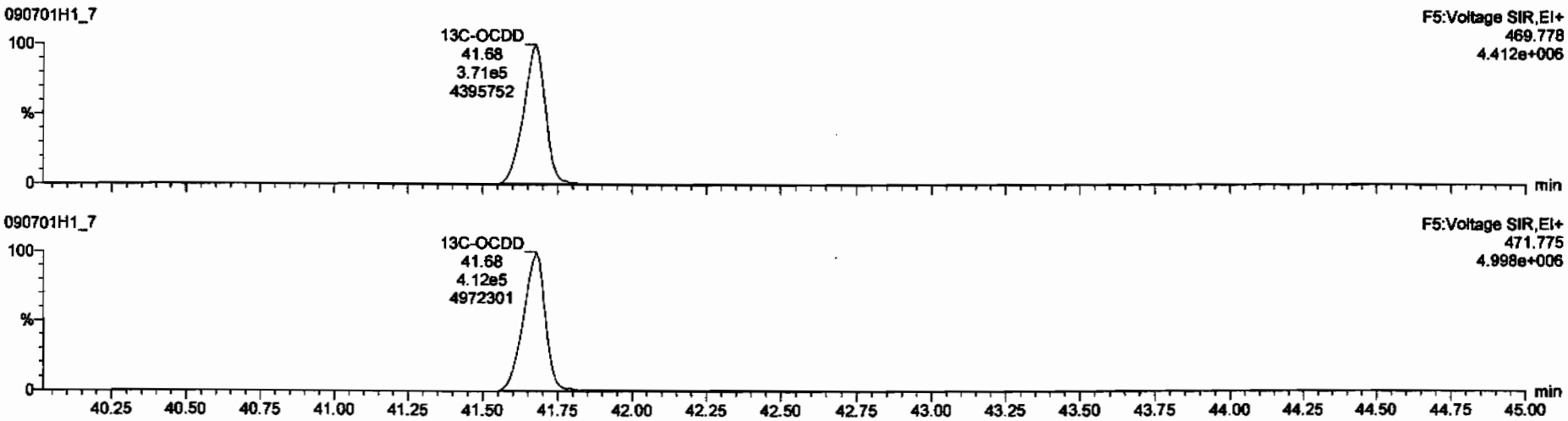

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2,3,7,8-TCDF

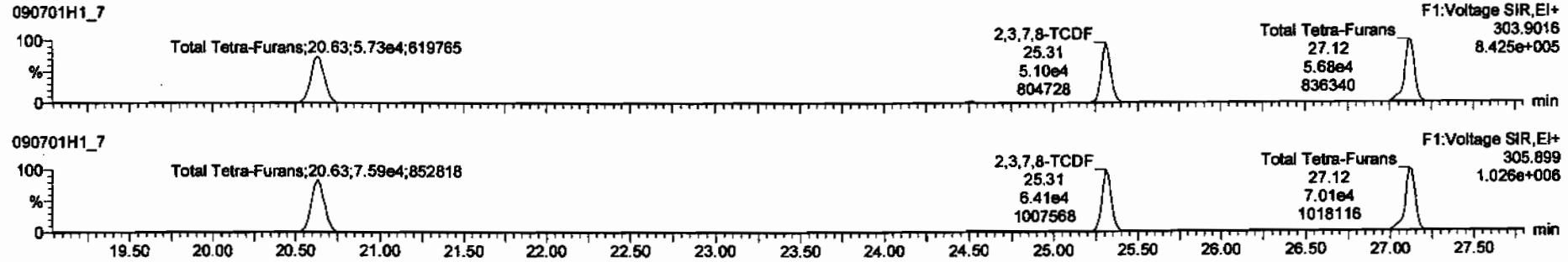

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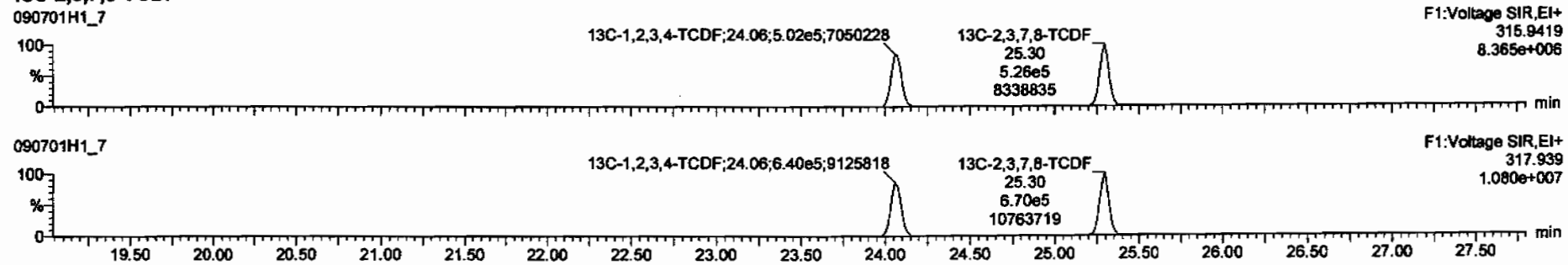

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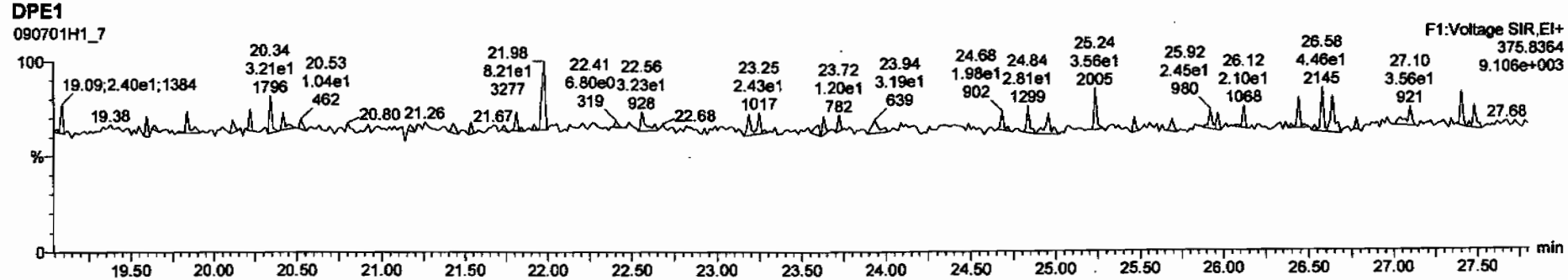

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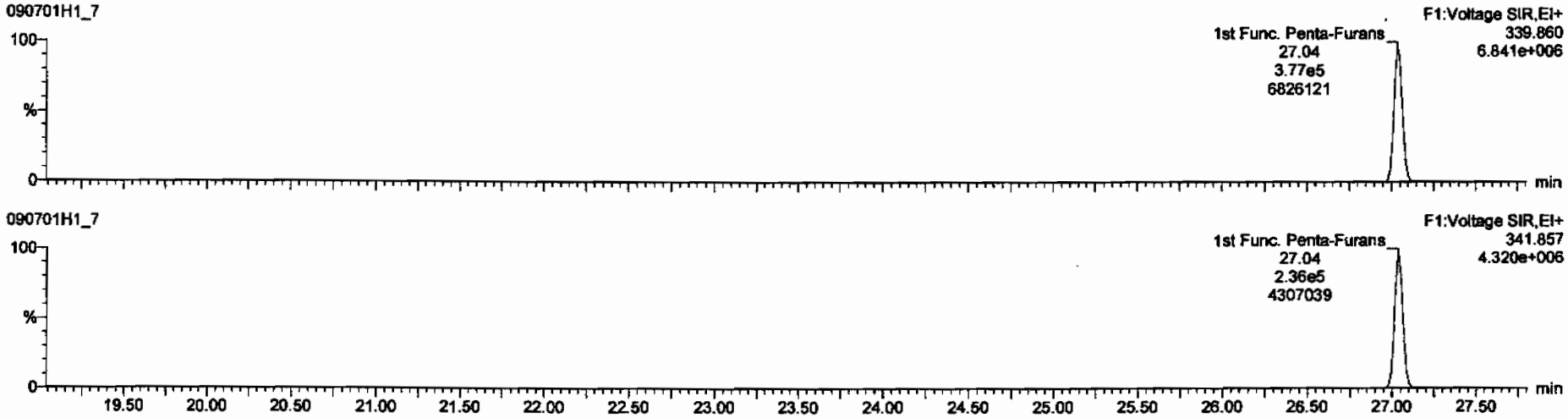

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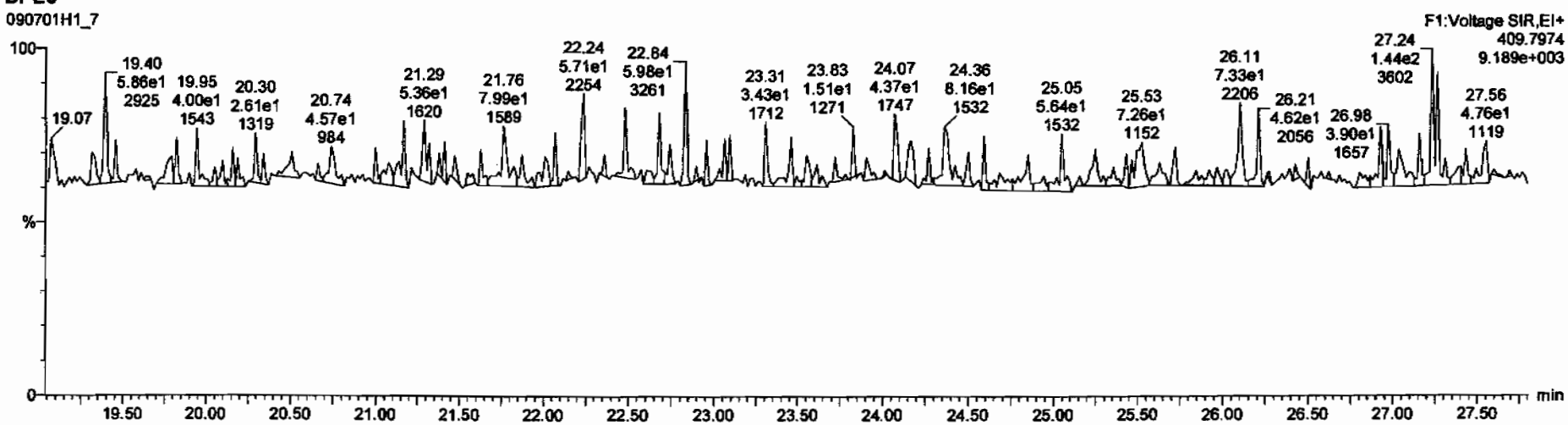

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1,2,3,7,8-PeCDF

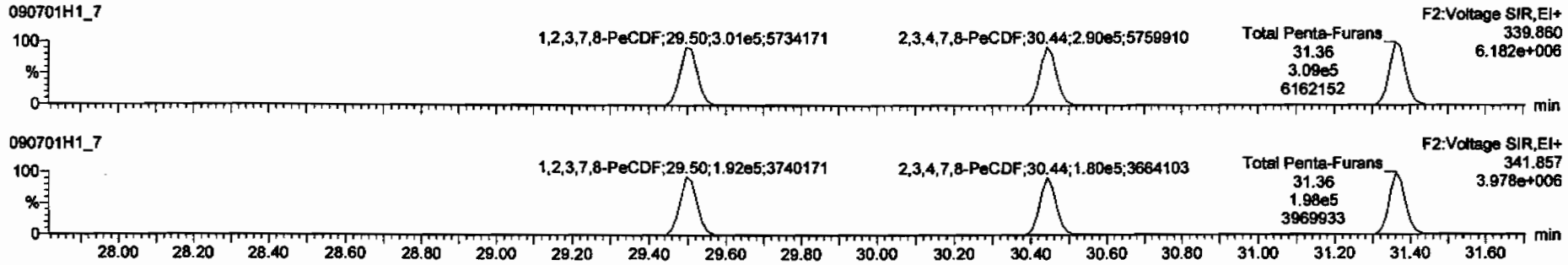

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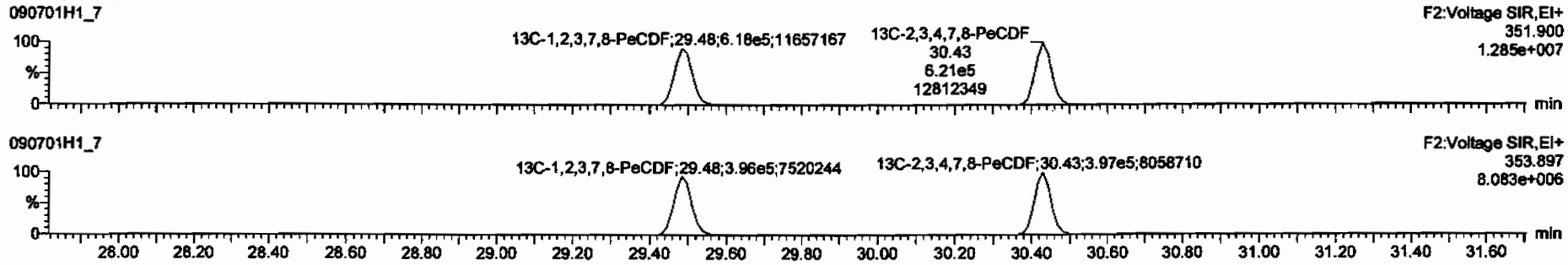

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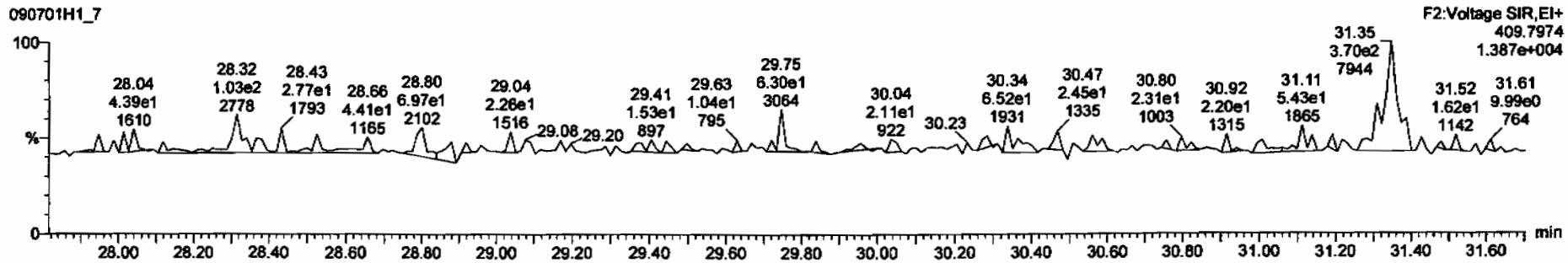

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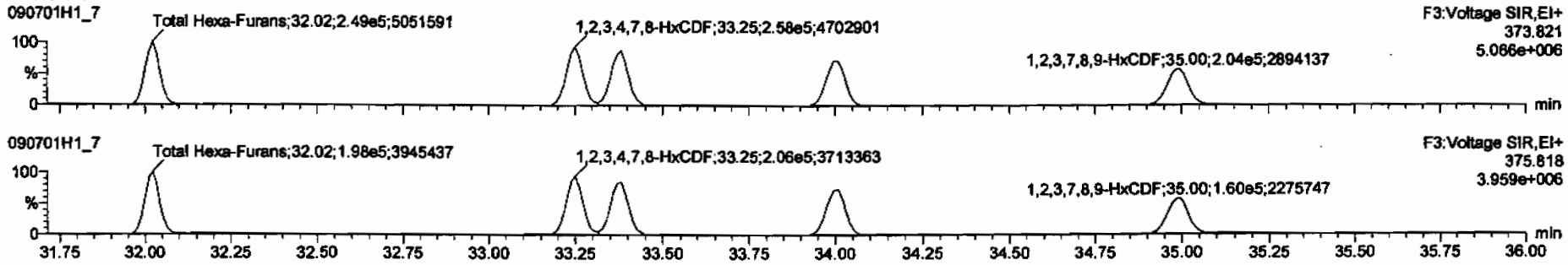

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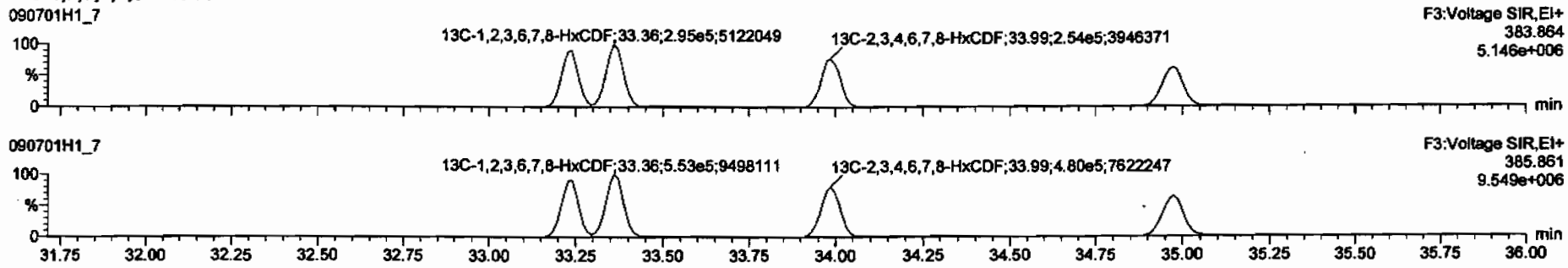

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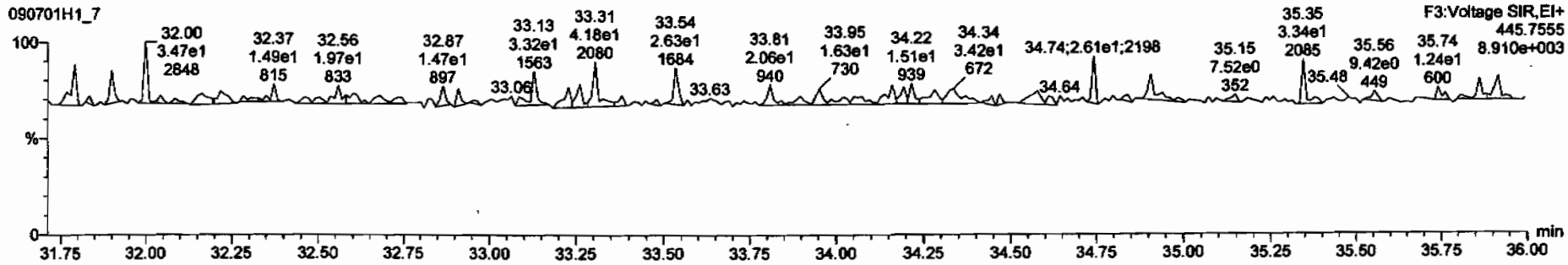

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1,2,3,4,6,7,8-HpCDF

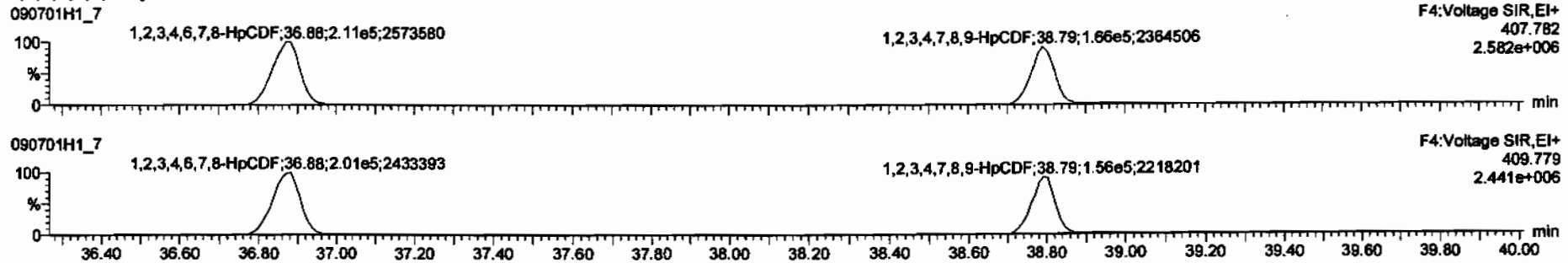

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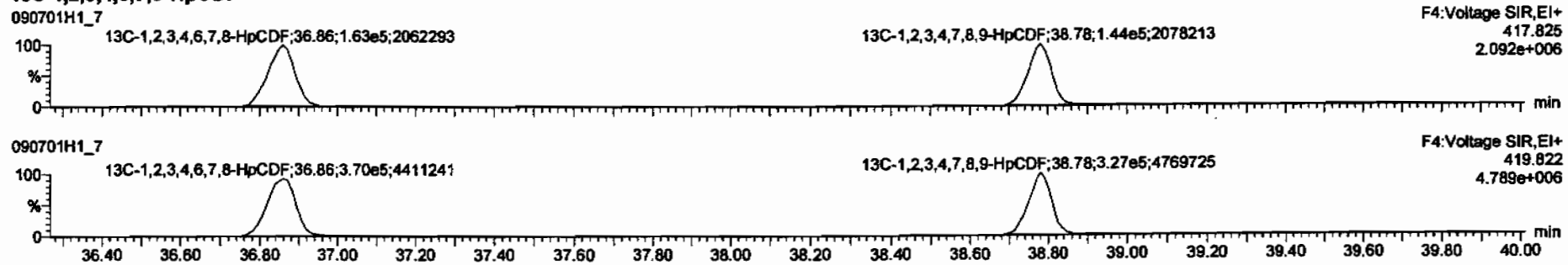

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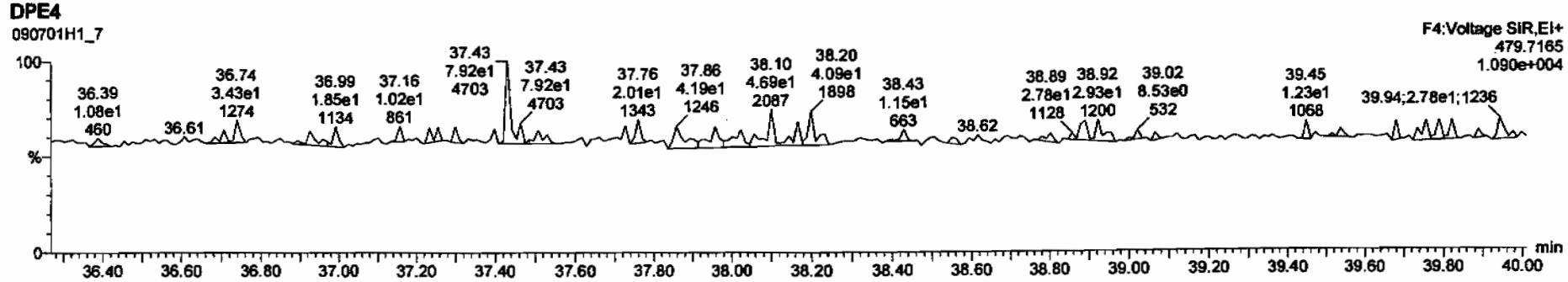

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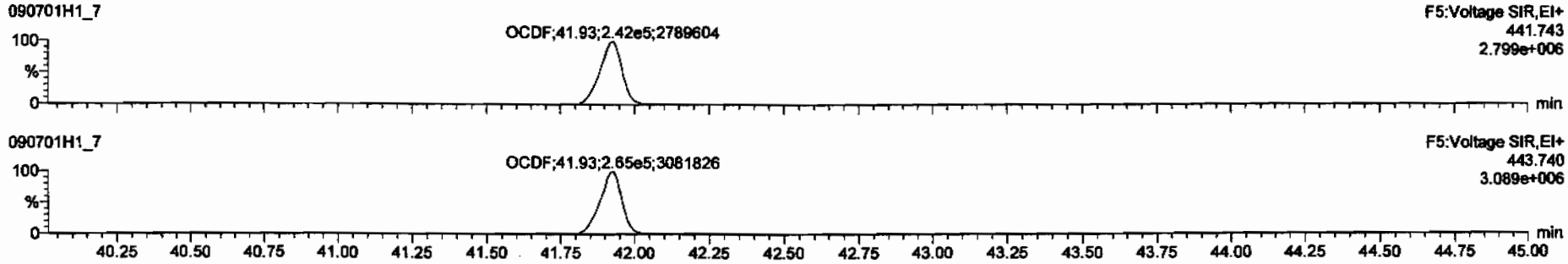

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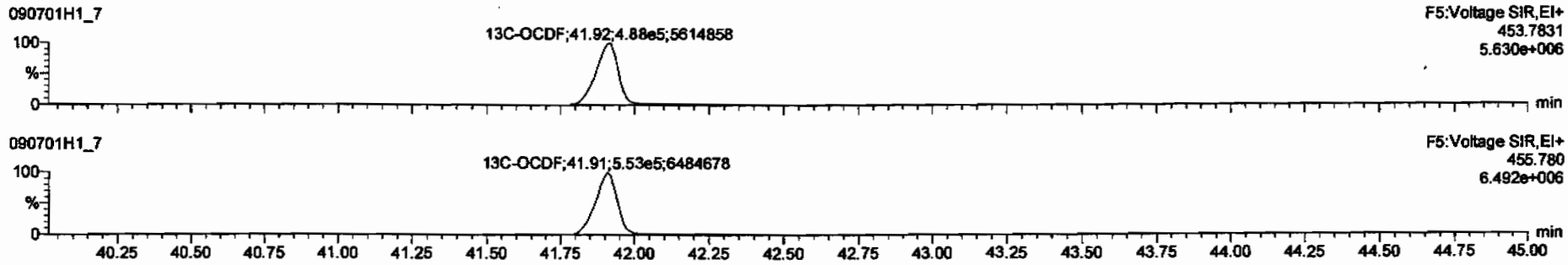

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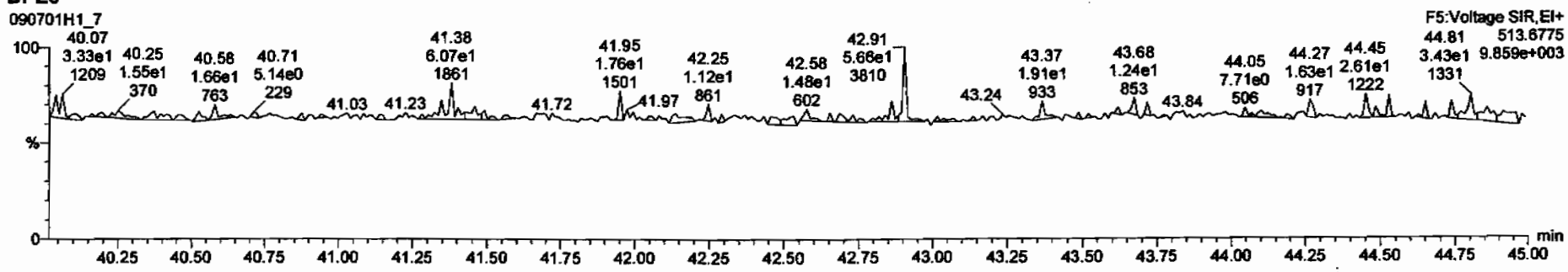

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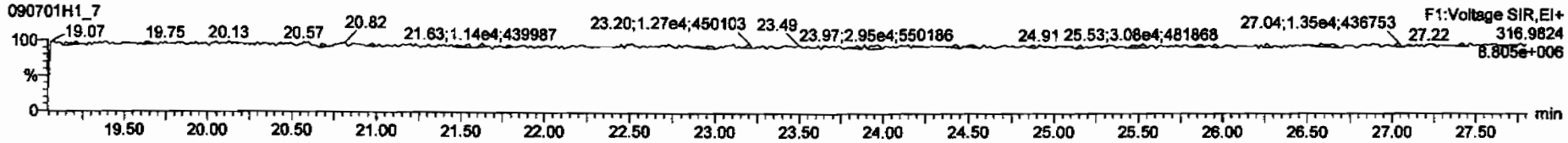

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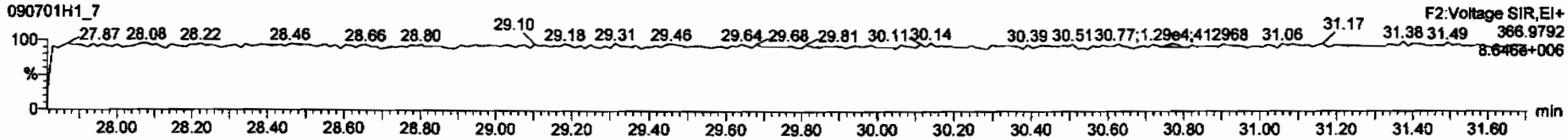

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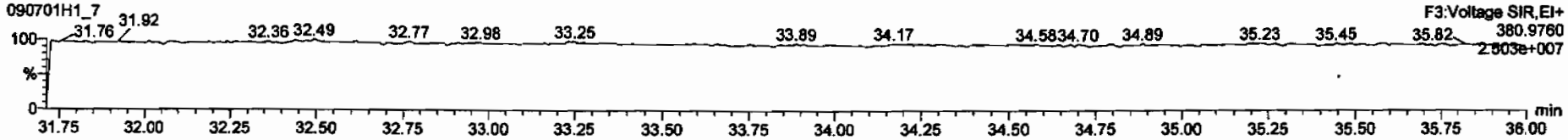

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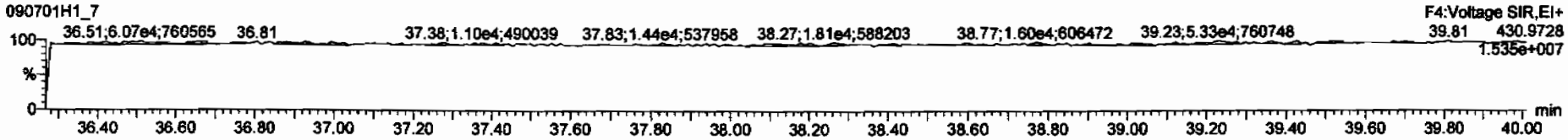

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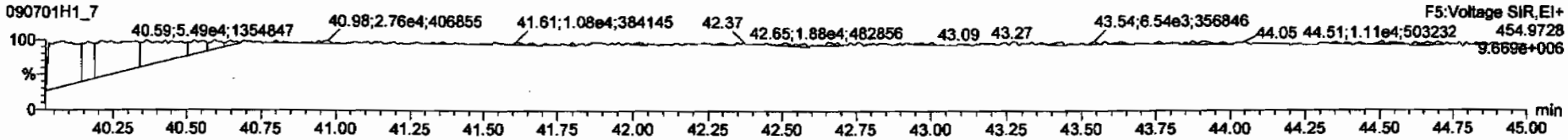

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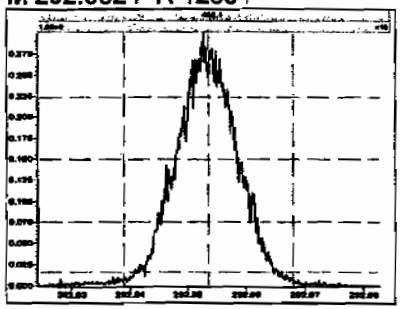

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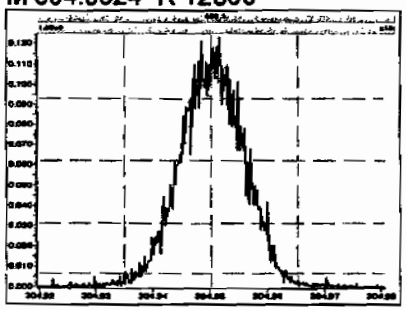

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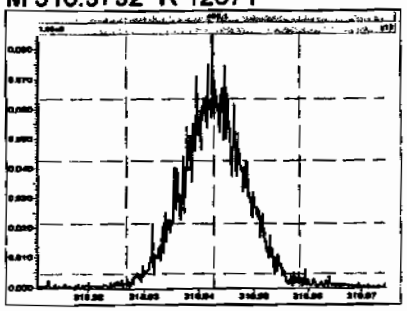

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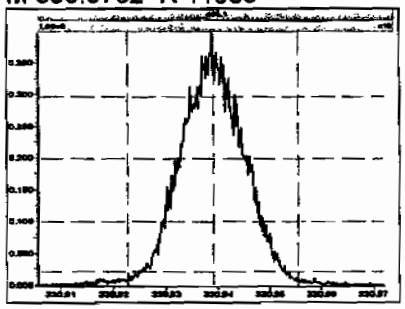

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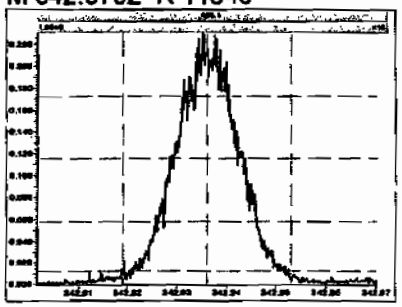

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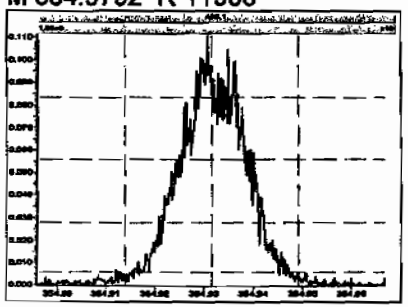

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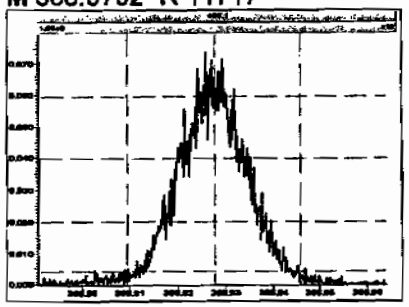

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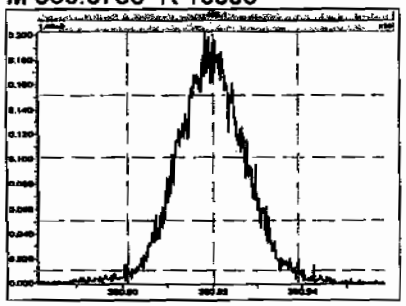

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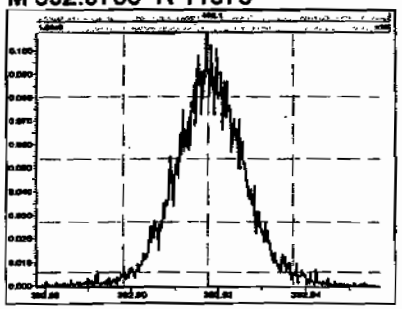

M 404.9760 R 11192

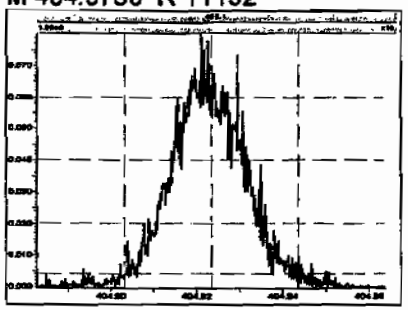

M 416.9760 R 11756

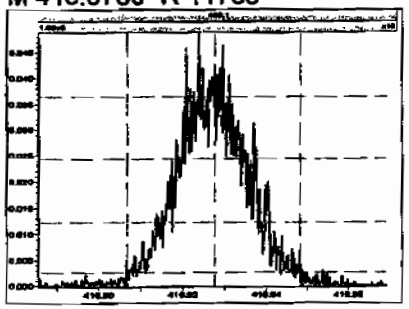

M 330.9792 R 12986

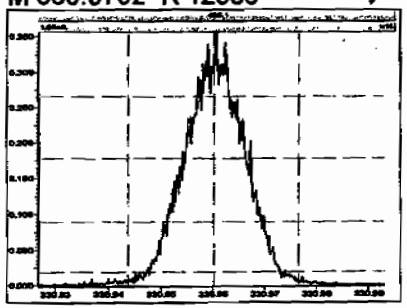

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M 342.9792 R 12787

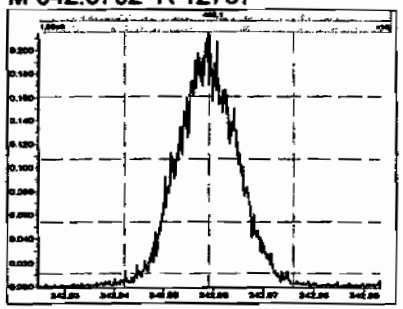

M 354.9792 R 13230

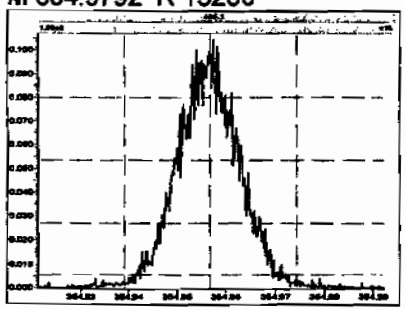

M 366.9792 R 12504

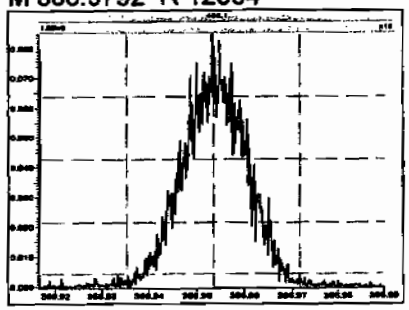

M 380.9760 R 11574

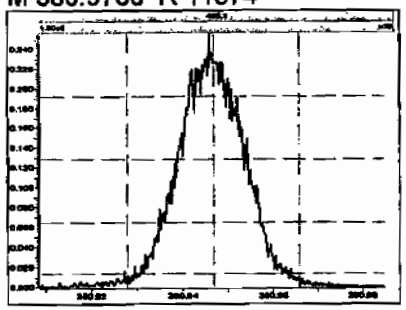

M 392.9760 R 11684

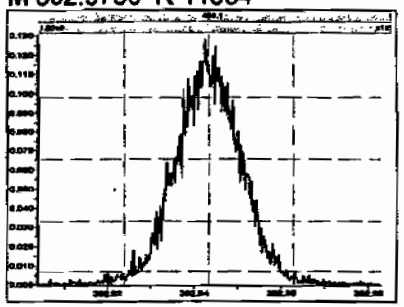

M 404.9760 R 11261

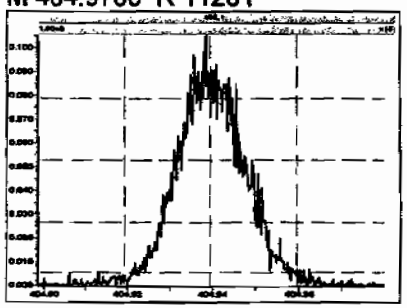

M 416.9760 R 12048

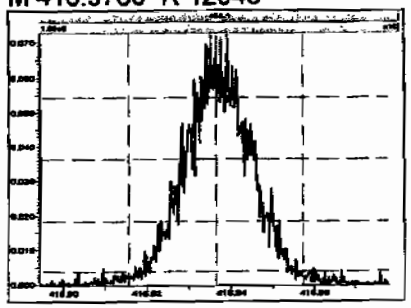

M 366.9792 R 13405

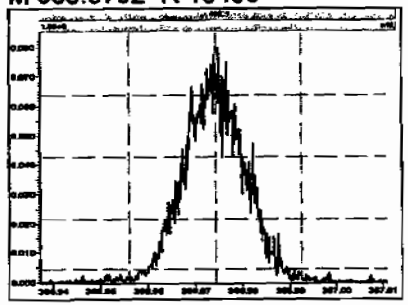

M 380.9760 R 12698

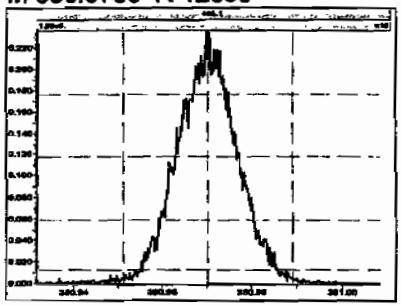

M 392.9760 R 12886

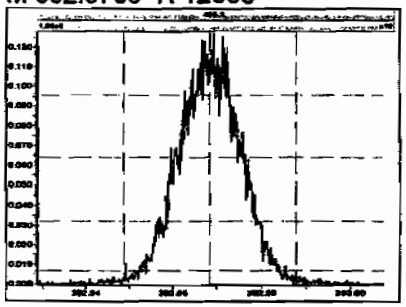

M 404.9760 R 12507

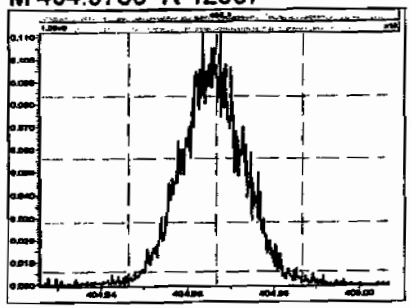

M 416.9760 R 12886

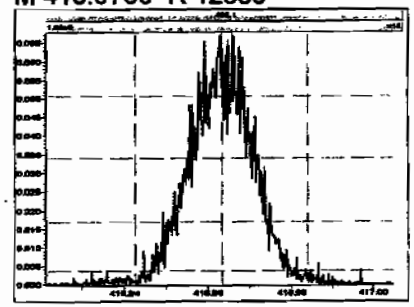

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M 430.9728 R 11848

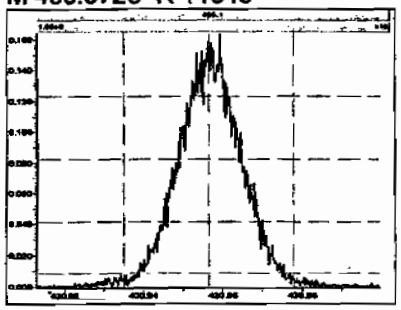

M 442.9728 R 12387

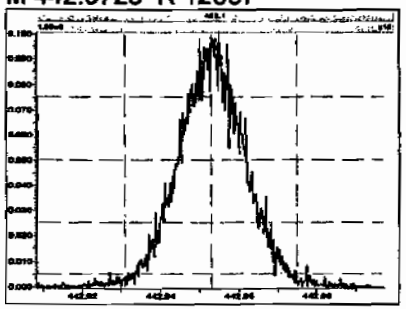

M 454.9728 R 12145

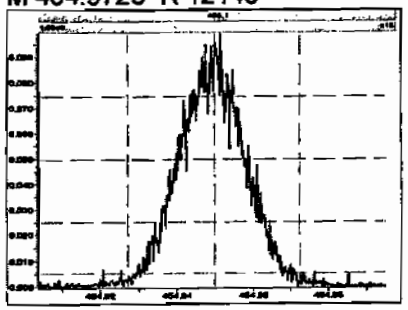

M 404.9760 R 13387

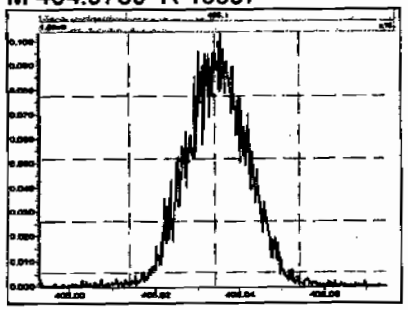

M 416.9760 R 13552

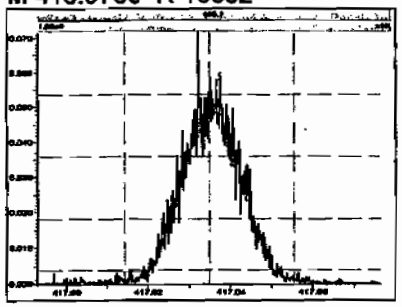

M 430.9728 R 12118

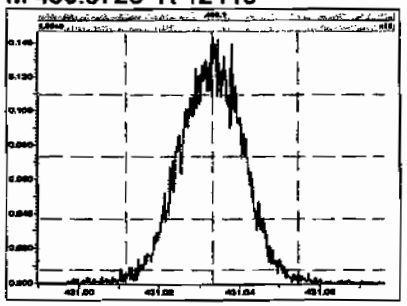

M 442.9728 R 12755

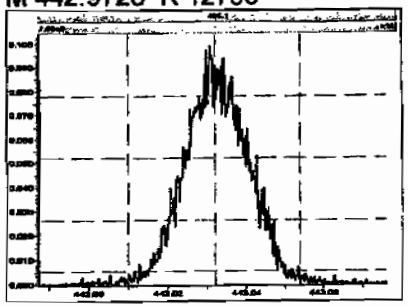

M 454.9728 R 12857

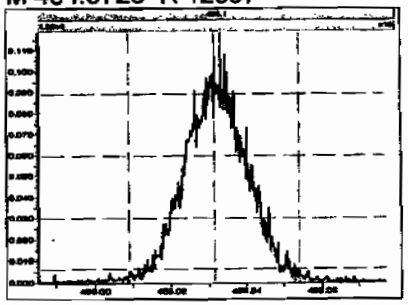

M 466.9728 R 12588

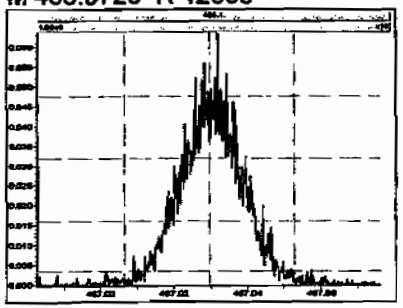

M 480.9696 R 12935

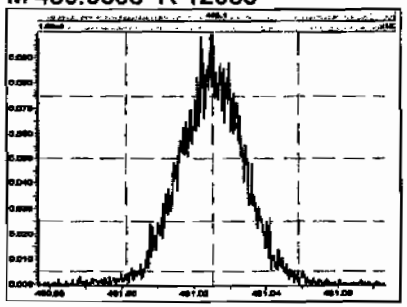

M 430.9728 R 12563

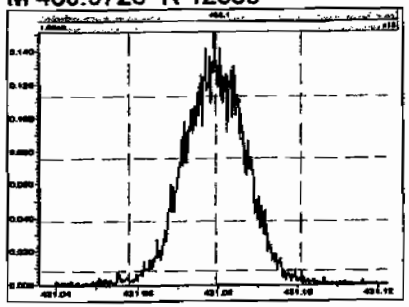

M 442.9728 R 13514

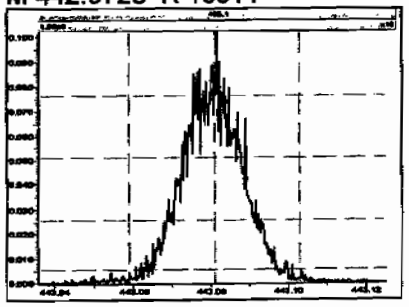

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M 454.9728 R 12233

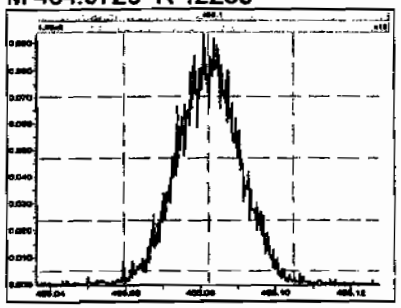

M 466.9728 R 13817

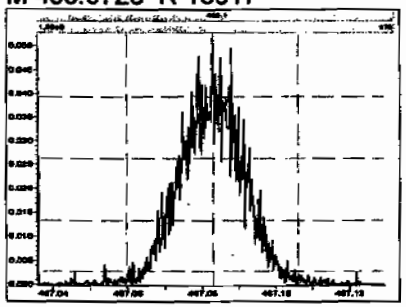

M 480.9696 R 12553

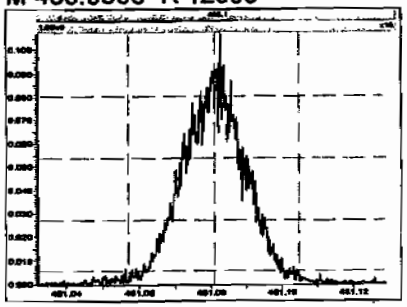

M 492.9696 R 12791

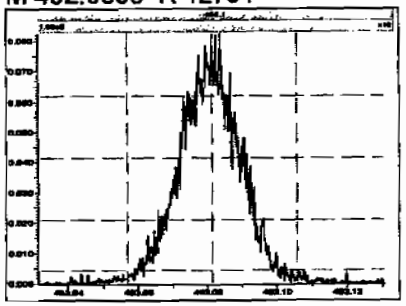

M 504.9696 R 12440

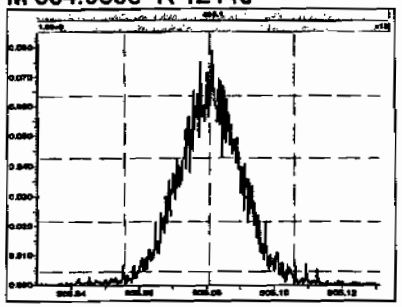

M 516.9697 R 12100

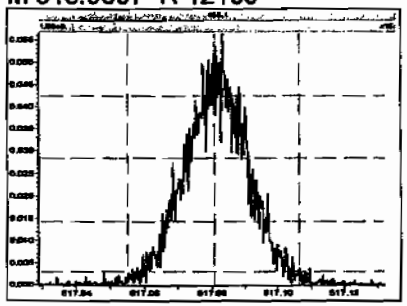

ICAL

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Compound name: 2,3,7,8-TCDD
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RT	Flag	IS RT	RRT	Response	IS Resp.	Conc.	Dev.	RRF
090212H1_1	10.0	0.82	NO	25.98	1.001	7.90e4	7.49e5	9.78	-2.2	1.05
090212H1_3	0.250	0.85	NO	26.00	1.001	1.54e3	5.94e5	0.240	-4.1	1.03
090212H1_4	0.500	0.71	NO	25.98	1.001	3.65e3	6.33e5	0.536	7.1	1.16
090212H1_5	2.00	0.72	NO	26.00	1.001	1.40e4	6.64e5	1.95	-2.5	1.05
090212H1_6	40.0	0.77	NO	25.98	1.001	3.33e5	7.81e5	39.5	-1.3	1.06
090212H1_7	200	0.78	NO	26.00	1.001	1.92e6	8.66e5	206	3.0	1.11

Compound name: 1,2,3,7,8-PeCDD
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RT	Flag	IS RT	RRT	Response	IS Resp.	Conc.	Dev.	RRF
090212H1_1	50.0	0.63	NO	30.65	1.000	3.03e5	6.02e5	48.6	-2.7	1.01
090212H1_3	1.25	0.69	NO	30.67	1.000	6.36e3	4.83e5	1.27	1.9	1.05
090212H1_4	2.50	0.60	NO	30.67	1.000	1.30e4	4.97e5	2.53	1.1	1.04
090212H1_5	10.0	0.61	NO	30.67	1.000	5.28e4	5.23e5	9.77	-2.3	1.01
090212H1_6	200	0.63	NO	30.67	1.000	1.31e6	6.35e5	200	-0.1	1.03
090212H1_7	1000	0.63	NO	30.67	1.000	8.09e6	7.66e5	1020	2.2	1.06

2/13/09
MS 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.00153
RRF SD: 0.0317187, Relative SD: 3.16702
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Response	IS Area	Conc	%D	RRF
090212H1_1	50.0	1.26	NO	34.10	1.000	2.54e5	5.27e5	48.0	-3.9	0.962
090212H1_3	1.25	1.42	NO	34.11	1.000	5.16e3	4.08e5	1.26	1.0	1.01
090212H1_4	2.50	1.28	NO	34.11	1.001	1.10e4	4.22e5	2.61	4.2	1.04
090212H1_5	10.0	1.32	NO	34.12	1.000	4.31e4	4.47e5	9.64	-3.6	0.965
090212H1_6	200	1.27	NO	34.11	1.000	1.12e6	5.53e5	203	1.4	1.02
090212H1_7	1000	1.25	NO	34.12	1.000	7.63e6	7.54e5	1010	1.0	1.01

Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Response	IS Area	Conc	%D	RRF
090212H1_1	50.0	1.27	NO	34.21	1.000	2.90e5	5.42e5	47.6	-4.8	1.07
090212H1_3	1.25	1.20	NO	34.23	1.001	6.02e3	4.14e5	1.29	3.4	1.16
090212H1_4	2.50	1.24	NO	34.23	1.001	1.23e4	4.20e5	2.60	3.9	1.17
090212H1_5	10.0	1.26	NO	34.24	1.001	4.91e4	4.60e5	9.48	-5.2	1.07
090212H1_6	200	1.30	NO	34.22	1.000	1.29e6	5.59e5	205	2.7	1.16
090212H1_7	1000	1.26	NO	34.23	1.000	8.08e6	7.18e5	1000	0.0	1.13

Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.10201
RRF SD: 0.0447729, Relative SD: 4.06282
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Response	IS Area	Conc	%D	RRF
090212H1_1	50.0	1.28	NO	34.51	1.009	2.83e5	0.00e0	48.1	-3.9	1.06
090212H1_3	1.25	1.27	NO	34.53	1.010	5.79e3	0.00e0	1.28	2.4	1.13

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1,2,3,7,8,9-HxCDD

Name	Std Conc	RF	Int	RT	RRT	RF	IS RF	Conc	Dev	RRF
090212H1_4	2.50	1.28	NO	34.52	1.009	1.21e4	0.00e0	2.60	4.0	1.15
090212H1_5	10.0	1.22	NO	34.53	1.009	4.70e4	0.00e0	9.41	-5.9	1.04
090212H1_6	200	1.32	NO	34.52	1.009	1.26e6	0.00e0	207	3.3	1.14
090212H1_7	1000	1.25	NO	34.53	1.009	8.13e6	0.00e0	1000	0.2	1.10

Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	Int	RT	RRT	RF	IS RF	Conc	Dev	RRF
090212H1_1	50.0	1.03	NO	38.17	1.000	2.11e5	4.13e5	48.0	-4.0	1.02
090212H1_3	1.25	1.15	NO	38.18	1.000	4.52e3	3.21e5	1.32	5.7	1.12
090212H1_4	2.50	1.07	NO	38.18	1.000	8.68e3	3.21e5	2.54	1.7	1.08
090212H1_5	10.0	1.07	NO	38.19	1.001	3.41e4	3.36e5	9.55	-4.5	1.02
090212H1_6	200	1.07	NO	38.19	1.000	9.19e5	4.29e5	201	0.7	1.07
090212H1_7	1000	1.05	NO	38.19	1.001	6.29e6	5.88e5	1000	0.5	1.07

Compound name: OCDD
Response Factor: 1.17831
RRF SD: 0.0736447, Relative SD: 6.25001
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	Int	RT	RRT	RF	IS RF	Conc	Dev	RRF
090212H1_1	100	0.91	NO	41.63	1.000	3.30e5	5.87e5	95.3	-4.7	1.12
090212H1_3	2.50	0.89	NO	41.67	1.001	7.09e3	4.40e5	2.74	9.5	1.29
090212H1_4	5.00	0.87	NO	41.65	1.000	1.25e4	4.37e5	4.85	-3.0	1.14
090212H1_5	20.0	0.85	NO	41.66	1.000	5.10e4	4.67e5	18.5	-7.3	1.09
090212H1_6	400	0.92	NO	41.68	1.000	1.48e6	6.21e5	404	1.1	1.19
090212H1_7	2000	0.89	NO	41.67	1.001	1.10e7	8.92e5	2090	4.4	1.23

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Compound name: 2,3,7,8-TCDF
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	Int	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	10.0	0.78	NO	25.19	1.001	1.14e5	1.07e6	9.75	-2.5	1.06
090212H1_3	0.250	0.83	NO	25.19	1.001	2.44e3	8.63e5	0.260	4.1	1.13
090212H1_4	0.500	0.84	NO	25.20	1.001	4.98e3	9.06e5	0.506	1.2	1.10
090212H1_5	2.00	0.81	NO	25.20	1.001	1.97e4	9.70e5	1.87	-6.4	1.02
090212H1_6	40.0	0.79	NO	25.20	1.001	4.71e5	1.08e6	40.1	0.3	1.09
090212H1_7	200	0.79	NO	25.20	1.001	2.66e6	1.18e6	207	3.4	1.12

Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	Int	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0	1.61	NO	29.42	1.000	5.65e5	9.82e5	49.6	-0.7	1.15
090212H1_3	1.25	1.63	NO	29.43	1.000	1.11e4	7.63e5	1.25	0.1	1.16
090212H1_4	2.50	1.74	NO	29.43	1.000	2.29e4	7.80e5	2.53	1.3	1.17
090212H1_5	10.0	1.61	NO	29.43	1.000	9.64e4	8.78e5	9.48	-5.2	1.10
090212H1_6	200	1.62	NO	29.43	1.000	2.36e6	9.96e5	204	2.0	1.18
090212H1_7	1000	1.60	NO	29.45	1.000	1.42e7	1.20e6	1030	2.5	1.19

Compound name: 2,3,4,7,8-PeCDF
Response Factor: 1.11789
RRF SD: 0.0264655, Relative SD: 2.36745
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	Int	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0	1.56	NO	30.35	1.000	5.35e5	9.65e5	49.6	-0.8	1.11
090212H1_3	1.25	1.51	NO	30.36	1.000	1.08e4	7.68e5	1.25	0.4	1.12

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Compound name: 2,3,4,7,8-PeCDF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50	1.61	NO	30.36	1.000	2.28e4	7.94e5	2.57	2.6	1.15
090212H1_5	10.0	1.64	NO	30.38	1.000	9.28e4	8.67e5	9.58	-4.2	1.07
090212H1_6	200	1.60	NO	30.36	1.000	2.28e6	1.01e6	203	1.5	1.13
090212H1_7	1000	1.59	NO	30.38	1.000	1.37e7	1.22e6	1010	0.5	1.12

Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.41088
RRF SD: 0.0512913, Relative SD: 3.6354
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.27	NO	33.19	1.001	4.59e5	6.74e5	48.3	-3.3	1.36
090212H1_3	1.25	1.35	NO	33.19	1.000	9.88e3	5.28e5	1.33	6.0	1.50
090212H1_4	2.50	1.32	NO	33.19	1.000	1.96e4	5.45e5	2.54	1.8	1.44
090212H1_5	10.0	1.31	NO	33.20	1.000	7.94e4	5.86e5	9.61	-3.9	1.36
090212H1_6	200	1.27	NO	33.20	1.001	1.99e6	7.08e5	199	-0.5	1.40
090212H1_7	1000	1.27	NO	33.20	1.000	1.28e7	9.05e5	1000	-0.0	1.41

Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.22218
RRF SD: 0.0229408, Relative SD: 1.87703
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.25	NO	33.31	1.000	5.49e5	9.02e5	49.8	-0.4	1.22
090212H1_3	1.25	1.21	NO	33.32	1.000	1.07e4	6.79e5	1.29	3.1	1.26
090212H1_4	2.50	1.37	NO	33.31	1.000	2.16e4	6.99e5	2.52	1.0	1.23
090212H1_5	10.0	1.34	NO	33.33	1.000	8.96e4	7.51e5	9.76	-2.4	1.19
090212H1_6	200	1.27	NO	33.32	1.000	2.27e6	9.34e5	199	-0.5	1.22
090212H1_7	1000	1.27	NO	33.33	1.001	1.41e7	1.17e6	992	-0.8	1.21

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Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	Use	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.29	NO	33.92	1.000	4.53e5	7.19e5	49.2	-1.6	1.26
090212H1_3	1.25	1.38	NO	33.93	1.000	9.11e3	5.78e5	1.23	-1.5	1.26
090212H1_4	2.50	1.28	NO	33.93	1.001	1.91e4	5.74e5	2.60	3.9	1.33
090212H1_5	10.0	1.25	NO	33.94	1.000	7.70e4	6.20e5	9.71	-2.9	1.24
090212H1_6	200	1.26	NO	33.93	1.000	1.95e6	7.64e5	200	-0.2	1.28
090212H1_7	1000	1.30	NO	33.94	1.000	1.26e7	9.59e5	1020	2.3	1.31

Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.25756
RRF SD: 0.0204635, Relative SD: 1.62723
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	Use	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.25	NO	34.91	1.000	3.76e5	6.05e5	49.5	-1.0	1.24
090212H1_3	1.25	1.37	NO	34.91	1.000	7.41e3	4.73e5	1.24	-0.4	1.25
090212H1_4	2.50	1.24	NO	34.92	1.001	1.51e4	4.79e5	2.50	0.2	1.26
090212H1_5	10.0	1.28	NO	34.93	1.000	6.29e4	5.10e5	9.81	-1.9	1.23
090212H1_6	200	1.25	NO	34.92	1.001	1.68e6	6.50e5	206	2.9	1.29
090212H1_7	1000	1.28	NO	34.92	1.000	1.08e7	8.57e5	1000	0.3	1.26

Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	Use	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.05	NO	36.81	1.000	4.18e5	5.07e5	48.8	-2.3	1.65
090212H1_3	1.25	1.05	NO	36.84	1.001	8.84e3	3.97e5	1.32	5.5	1.78

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Compound name: 1,2,3,4,6,7,8-HpCDF

Name	Std Conc	RF	IS	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_4	2.50	1.04	NO	36.82	1.000	1.73e4	3.94e5	2.60	4.0	1.76
090212H1_5	10.0	1.05	NO	36.84	1.001	6.64e4	4.25e5	9.25	-7.5	1.56
090212H1_6	200	1.06	NO	36.83	1.000	1.78e6	5.26e5	200	-0.1	1.69
090212H1_7	1000	1.06	NO	36.83	1.000	1.17e7	6.89e5	1010	0.5	1.70

Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.48054
RRF SD: 0.0286004, Relative SD: 1.93175
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	IS	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	50.0	1.05	NO	38.73	1.000	3.09e5	4.20e5	49.7	-0.5	1.47
090212H1_3	1.25	0.89	NO	38.75	1.001	6.11e3	3.26e5	1.27	1.3	1.50
090212H1_4	2.50	0.99	NO	38.73	1.000	1.20e4	3.25e5	2.49	-0.4	1.47
090212H1_5	10.0	1.07	NO	38.74	1.000	4.97e4	3.47e5	9.66	-3.4	1.43
090212H1_6	200	1.04	NO	38.75	1.000	1.34e6	4.47e5	202	0.9	1.49
090212H1_7	1000	1.03	NO	38.75	1.000	9.18e6	6.08e5	1020	2.1	1.51

Compound name: OCDF
Response Factor: 1.09622
RRF SD: 0.0644136, Relative SD: 5.87597
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	IS	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	100	0.93	NO	41.88	1.001	4.66e5	8.78e5	96.7	-3.3	1.06
090212H1_3	2.50	0.90	NO	41.89	1.001	1.01e4	6.65e5	2.76	10.6	1.21
090212H1_4	5.00	0.84	NO	41.88	1.001	1.79e4	6.44e5	5.08	1.6	1.11
090212H1_5	20.0	0.95	NO	41.88	1.000	7.14e4	6.95e5	18.8	-6.2	1.03
090212H1_6	400	0.94	NO	41.90	1.000	2.10e6	9.52e5	402	0.4	1.10
090212H1_7	2000	0.92	NO	41.89	1.000	1.48e7	1.39e6	1940	-3.1	1.06

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Compound name: 13C-2,3,7,8-TCDD
Response Factor: 1.01489
RRF SD: 0.0275825, Relative SD: 2.71777
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.95	1.022	7.49e5	7.37e5	100	0.1	1.02
090212H1_3	100	0.80	NO	25.97	1.022	5.94e5	6.03e5	97.2	-2.8	0.986
090212H1_4	100	0.78	NO	25.97	1.022	6.33e5	6.33e5	98.5	-1.5	1.00
090212H1_5	100	0.78	NO	25.97	1.022	6.64e5	6.68e5	97.9	-2.1	0.994
090212H1_6	100	0.79	NO	25.97	1.022	7.81e5	7.54e5	102	2.0	1.04
090212H1_7	100	0.79	NO	25.97	1.022	8.66e5	8.18e5	104	4.3	1.06

Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.827461
RRF SD: 0.0577323, Relative SD: 6.97704
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.64	NO	30.64	1.207	6.02e5	7.37e5	98.7	-1.3	0.817
090212H1_3	100	0.63	NO	30.65	1.207	4.83e5	6.03e5	96.8	-3.2	0.801
090212H1_4	100	0.61	NO	30.65	1.207	4.97e5	6.33e5	94.9	-5.1	0.786
090212H1_5	100	0.64	NO	30.65	1.207	5.23e5	6.68e5	94.6	-5.4	0.783
090212H1_6	100	0.65	NO	30.65	1.207	6.35e5	7.54e5	102	1.7	0.842
090212H1_7	100	0.64	NO	30.65	1.207	7.66e5	8.18e5	113	13.2	0.937

Compound name: 13C-1,2,3,4,7,8-HxCDD
Response Factor: 0.916247
RRF SD: 0.0122736, Relative SD: 1.33955
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.08	0.988	5.27e5	5.79e5	99.4	-0.6	0.911
090212H1_3	100	1.26	NO	34.10	0.988	4.08e5	4.37e5	102	2.0	0.934

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Compound name: 13C-1,2,3,4,7,8-HxCDD

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	100	1.26	NO	34.08	0.988	4.22e5	4.66e5	98.7	-1.3	0.904
090212H1_5	100	1.24	NO	34.11	0.988	4.47e5	4.90e5	99.6	-0.4	0.913
090212H1_6	100	1.25	NO	34.10	0.988	5.53e5	6.10e5	98.9	-1.1	0.907
090212H1_7	100	1.25	NO	34.11	0.988	7.54e5	8.12e5	101	1.4	0.929

Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.920893
RRF SD: 0.0250009, Relative SD: 2.71486
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.19	0.991	5.42e5	5.79e5	102	1.7	0.936
090212H1_3	100	1.23	NO	34.21	0.991	4.14e5	4.37e5	103	2.9	0.948
090212H1_4	100	1.29	NO	34.21	0.991	4.20e5	4.66e5	97.7	-2.3	0.900
090212H1_5	100	1.25	NO	34.22	0.991	4.60e5	4.90e5	102	2.1	0.940
090212H1_6	100	1.27	NO	34.21	0.991	5.59e5	6.10e5	99.5	-0.5	0.916
090212H1_7	100	1.23	NO	34.22	0.991	7.18e5	8.12e5	96.0	-4.0	0.884

Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.708388
RRF SD: 0.019948, Relative SD: 2.81596
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.07	NO	38.16	1.106	4.13e5	5.79e5	101	0.7	0.713
090212H1_3	100	1.09	NO	38.17	1.106	3.21e5	4.37e5	104	3.9	0.736
090212H1_4	100	1.05	NO	38.17	1.106	3.21e5	4.66e5	97.1	-2.9	0.688
090212H1_5	100	1.06	NO	38.17	1.106	3.36e5	4.90e5	96.8	-3.2	0.686
090212H1_6	100	1.06	NO	38.18	1.106	4.29e5	6.10e5	99.3	-0.7	0.703
090212H1_7	100	1.04	NO	38.17	1.106	5.88e5	8.12e5	102	2.2	0.724

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Compound name: 13C-OCDD
Response Factor: 0.502588
RRF SD: 0.0283515, Relative SD: 5.6411
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Response	IS Resp	Conc	%Dev	RRF
090212H1_1	200	0.89	NO	41.62	1.206	5.87e5	5.79e5	202	0.9	0.507
090212H1_3	200	0.92	NO	41.65	1.207	4.40e5	4.37e5	200	0.2	0.504
090212H1_4	200	0.90	NO	41.63	1.206	4.37e5	4.66e5	187	-6.7	0.469
090212H1_5	200	0.89	NO	41.65	1.206	4.67e5	4.90e5	190	-5.0	0.477
090212H1_6	200	0.91	NO	41.67	1.207	6.21e5	6.10e5	203	1.4	0.510
090212H1_7	200	0.93	NO	41.65	1.206	8.92e5	8.12e5	219	9.3	0.549

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.976814
RRF SD: 0.0185774, Relative SD: 1.90184
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Response	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.16	0.991	1.07e6	1.11e6	98.8	-1.2	0.965
090212H1_3	100	0.79	NO	25.17	0.991	8.63e5	9.05e5	97.5	-2.5	0.953
090212H1_4	100	0.78	NO	25.17	0.991	9.06e5	9.34e5	99.3	-0.7	0.970
090212H1_5	100	0.79	NO	25.17	0.991	9.70e5	9.83e5	101	1.1	0.987
090212H1_6	100	0.77	NO	25.17	0.991	1.08e6	1.10e6	100	0.4	0.980
090212H1_7	100	0.76	NO	25.17	0.991	1.18e6	1.18e6	103	2.9	1.01

Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 0.896189
RRF SD: 0.0663113, Relative SD: 7.39926
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Response	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.58	NO	29.41	1.158	9.82e5	1.11e6	98.4	-1.6	0.882
090212H1_3	100	1.57	NO	29.42	1.158	7.63e5	9.05e5	94.0	-6.0	0.842

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Compound name: 13C-1,2,3,7,8-PeCDF

Name	Sig. Conc.	RA	Int.	RT	RRT	Resp.	S.Resp.	Conc.	Dev.	RRF
090212H1_4	100	1.57	NO	29.42	1.158	7.80e5	9.34e5	93.1	-6.9	0.835
090212H1_5	100	1.58	NO	29.42	1.158	8.78e5	9.83e5	99.7	-0.3	0.894
090212H1_6	100	1.56	NO	29.42	1.158	9.96e5	1.10e6	101	1.0	0.905
090212H1_7	100	1.52	NO	29.43	1.159	1.20e6	1.18e6	114	13.7	1.02

Compound name: 13C-2,3,4,7,8-PeCDF
Response Factor: 0.899625
RRF SD: 0.0716088, Relative SD: 7.95986
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Sig. Conc.	RA	Int.	RT	RRT	Resp.	S.Resp.	Conc.	Dev.	RRF
090212H1_1	100	1.57	NO	30.34	1.195	9.65e5	1.11e6	96.3	-3.7	0.866
090212H1_3	100	1.54	NO	30.35	1.195	7.68e5	9.05e5	94.2	-5.8	0.848
090212H1_4	100	1.52	NO	30.35	1.195	7.94e5	9.34e5	94.5	-5.5	0.850
090212H1_5	100	1.59	NO	30.36	1.195	8.67e5	9.83e5	98.1	-1.9	0.882
090212H1_6	100	1.55	NO	30.35	1.195	1.01e6	1.10e6	102	1.6	0.914
090212H1_7	100	1.54	NO	30.36	1.195	1.22e6	1.18e6	115	15.3	1.04

Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.16919
RRF SD: 0.0331609, Relative SD: 2.83622
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Sig. Conc.	RA	Int.	RT	RRT	Resp.	S.Resp.	Conc.	Dev.	RRF
090212H1_1	100	0.54	NO	33.16	0.961	6.74e5	5.79e5	99.5	-0.5	1.16
090212H1_3	100	0.54	NO	33.17	0.961	5.28e5	4.37e5	104	3.5	1.21
090212H1_4	100	0.52	NO	33.17	0.961	5.45e5	4.66e5	99.9	-0.1	1.17
090212H1_5	100	0.54	NO	33.19	0.961	5.86e5	4.90e5	102	2.3	1.20
090212H1_6	100	0.53	NO	33.17	0.961	7.08e5	6.10e5	99.4	-0.6	1.16
090212H1_7	100	0.53	NO	33.19	0.961	9.05e5	8.12e5	95.3	-4.7	1.11

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Compound name: 13C-1,2,3,6,7,8-HxCDF
Response Factor: 1.51914
RRF SD: 0.0457416, Relative SD: 3.01103
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IN	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.55	NO	33.29	0.965	9.02e5	5.79e5	103	2.5	1.56
090212H1_3	100	0.52	NO	33.31	0.965	6.79e5	4.37e5	102	2.4	1.56
090212H1_4	100	0.53	NO	33.29	0.965	6.99e5	4.66e5	98.7	-1.3	1.50
090212H1_5	100	0.53	NO	33.32	0.965	7.51e5	4.90e5	101	1.0	1.53
090212H1_6	100	0.52	NO	33.31	0.965	9.34e5	6.10e5	101	0.8	1.53
090212H1_7	100	0.54	NO	33.31	0.965	1.17e6	8.12e5	94.6	-5.4	1.44

Compound name: 13C-2,3,4,6,7,8-HxCDF
Response Factor: 1.24921
RRF SD: 0.0473005, Relative SD: 3.78643
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IN	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.54	NO	33.91	0.983	7.19e5	5.79e5	99.3	-0.7	1.24
090212H1_3	100	0.53	NO	33.92	0.983	5.78e5	4.37e5	106	6.0	1.32
090212H1_4	100	0.55	NO	33.91	0.983	5.74e5	4.66e5	98.4	-1.6	1.23
090212H1_5	100	0.55	NO	33.93	0.983	6.20e5	4.90e5	101	1.3	1.27
090212H1_6	100	0.53	NO	33.92	0.983	7.64e5	6.10e5	100	0.4	1.25
090212H1_7	100	0.53	NO	33.93	0.983	9.59e5	8.12e5	94.5	-5.5	1.18

Compound name: 13C-1,2,3,7,8,9-HxCDF
Response Factor: 1.05297
RRF SD: 0.0198461, Relative SD: 1.88477
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IN	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.53	NO	34.90	1.011	6.05e5	5.79e5	99.2	-0.8	1.04
090212H1_3	100	0.52	NO	34.90	1.011	4.73e5	4.37e5	103	2.9	1.08

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Compound name: 13C-1,2,3,7,8,9-HxCDF

Name	Std Conc	RF	IW	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	100	0.53	NO	34.90	1.011	4.79e5	4.66e5	97.6	-2.4	1.03
090212H1_5	100	0.54	NO	34.92	1.011	5.10e5	4.90e5	98.9	-1.1	1.04
090212H1_6	100	0.52	NO	34.90	1.011	6.50e5	6.10e5	101	1.2	1.07
090212H1_7	100	0.53	NO	34.91	1.011	8.57e5	8.12e5	100	0.2	1.05

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 0.868264
RRF SD: 0.0231201, Relative SD: 2.6628
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	IW	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.46	NO	36.80	1.066	5.07e5	5.79e5	101	0.8	0.875
090212H1_3	100	0.44	NO	36.81	1.066	3.97e5	4.37e5	105	4.7	0.909
090212H1_4	100	0.44	NO	36.81	1.066	3.94e5	4.66e5	97.3	-2.7	0.845
090212H1_5	100	0.44	NO	36.82	1.066	4.25e5	4.90e5	99.9	-0.1	0.868
090212H1_6	100	0.46	NO	36.82	1.066	5.26e5	6.10e5	99.5	-0.5	0.864
090212H1_7	100	0.45	NO	36.82	1.066	6.89e5	8.12e5	97.7	-2.3	0.849

Compound name: 13C-1,2,3,4,7,8,9-HpCDF
Response Factor: 0.726514
RRF SD: 0.0207066, Relative SD: 2.85014
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	IW	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.46	NO	38.72	1.122	4.20e5	5.79e5	99.8	-0.2	0.725
090212H1_3	100	0.45	NO	38.73	1.122	3.26e5	4.37e5	103	2.8	0.747
090212H1_4	100	0.45	NO	38.72	1.122	3.25e5	4.66e5	95.9	-4.1	0.696
090212H1_5	100	0.44	NO	38.73	1.122	3.47e5	4.90e5	97.6	-2.4	0.709
090212H1_6	100	0.45	NO	38.74	1.122	4.47e5	6.10e5	101	1.0	0.734
090212H1_7	100	0.44	NO	38.74	1.122	6.08e5	8.12e5	103	3.0	0.748

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Compound name: 13C-OCDF
Response Factor: 0.759527
RRF SD: 0.058777, Relative SD: 7.73863
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	ID	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	200	0.91	NO	41.85	1.213	8.78e5	5.79e5	200	-0.2	0.758
090212H1_3	200	0.88	NO	41.86	1.213	6.65e5	4.37e5	200	0.2	0.761
090212H1_4	200	0.90	NO	41.85	1.213	6.44e5	4.66e5	182	-9.1	0.690
090212H1_5	200	0.90	NO	41.86	1.213	6.95e5	4.90e5	187	-6.6	0.710
090212H1_6	200	0.90	NO	41.89	1.213	9.52e5	6.10e5	206	2.8	0.781
090212H1_7	200	0.90	NO	41.88	1.213	1.39e6	8.12e5	226	12.8	0.857

Compound name: 37Cl-2,3,7,8-TCDD
Response Factor: 0.668396
RRF SD: 0.0327668, Relative SD: 4.90231
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	ID	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	10.0			25.98	1.023	4.66e4	7.37e5	9.46	-5.4	0.632
090212H1_3	0.250			25.97	1.022	1.08e3	6.03e5	0.269	7.5	0.718
090212H1_4	0.500			25.98	1.023	2.17e3	6.33e5	0.512	2.4	0.685
090212H1_5	2.00			25.98	1.023	8.69e3	6.68e5	1.95	-2.7	0.650
090212H1_6	40.0			25.98	1.023	1.93e5	7.54e5	38.4	-4.1	0.641
090212H1_7	200			25.98	1.023	1.12e6	8.18e5	205	2.3	0.684

Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	ID	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.81	NO	25.39	0.000	7.37e5	7.37e5	100	0.0	1.00
090212H1_3	100	0.79	NO	25.40	0.000	6.03e5	6.03e5	100	0.0	1.00

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Compound name: 13C-1,2,3,4-TCDD

Name	SI	Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	100	0.79	NO	25.40	0.000	6.33e5	6.33e5	100	0.0	1.00
090212H1_5	100	0.78	NO	25.40	0.000	6.68e5	6.68e5	100	0.0	1.00
090212H1_6	100	0.78	NO	25.40	0.000	7.54e5	7.54e5	100	0.0	1.00
090212H1_7	100	0.79	NO	25.40	0.000	8.18e5	8.18e5	100	0.0	1.00

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 4.96507e-017, Relative SD: 4.96507e-015
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	SI	Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.78	NO	23.95	0.000	1.11e6	1.11e6	100	0.0	1.00
090212H1_3	100	0.77	NO	23.95	0.000	9.05e5	9.05e5	100	0.0	1.00
090212H1_4	100	0.77	NO	23.95	0.000	9.34e5	9.34e5	100	0.0	1.00
090212H1_5	100	0.76	NO	23.97	0.000	9.83e5	9.83e5	100	0.0	1.00
090212H1_6	100	0.77	NO	23.97	0.000	1.10e6	1.10e6	100	-0.0	1.00
090212H1_7	100	0.78	NO	23.97	0.000	1.18e6	1.18e6	100	0.0	1.00

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	SI	Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	1.22	NO	34.50	0.000	5.79e5	5.79e5	100	0.0	1.00
090212H1_3	100	1.23	NO	34.51	0.000	4.37e5	4.37e5	100	0.0	1.00
090212H1_4	100	1.25	NO	34.51	0.000	4.66e5	4.66e5	100	0.0	1.00
090212H1_5	100	1.18	NO	34.52	0.000	4.90e5	4.90e5	100	0.0	1.00
090212H1_6	100	1.26	NO	34.52	0.000	6.10e5	6.10e5	100	0.0	1.00
090212H1_7	100	1.22	NO	34.52	0.000	8.12e5	8.12e5	100	0.0	1.00

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Compound name: Total Tetra-Dioxins
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	RRT	Area	IS Area	Conc	Dev	RRF
090212H1_1	10.0				7.49e5	60.1		
090212H1_3	0.250				5.94e5	0.240		
090212H1_4	0.500				6.33e5	0.536		
090212H1_5	2.00				6.64e5	1.95		
090212H1_6	40.0				7.81e5	39.5		
090212H1_7	200				8.66e5	206		

Compound name: Total Penta-Dioxins
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	RRT	Area	IS Area	Conc	Dev	RRF
090212H1_1	50.0				6.02e5	159		
090212H1_3	1.25				4.83e5	1.30		
090212H1_4	2.50				4.97e5	2.53		
090212H1_5	10.0				5.23e5	9.77		
090212H1_6	200				6.35e5	200		
090212H1_7	1000				7.66e5	1020		

Compound name: Total Hexa-Dioxins
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	RRT	Area	IS Area	Conc	Dev	RRF
090212H1_1	50.0				0.00e0	191		
090212H1_3	1.25				0.00e0	3.85		

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Compound name: Total Hexa-Dioxins

Name	Std. Conc.	RF	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_4	2.50					0.00e0	7.81		
090212H1_5	10.0					0.00e0	28.5		
090212H1_6	200					0.00e0	615		
090212H1_7	1000					0.00e0	3010		

Compound name: Total Hepta-Dioxins
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RF	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0					4.13e5	127		
090212H1_3	1.25					3.21e5	1.38		
090212H1_4	2.50					3.21e5	2.60		
090212H1_5	10.0					3.36e5	9.55		
090212H1_6	200					4.29e5	203		
090212H1_7	1000					5.88e5	1010		

Compound name: Total Tetra-Furans
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RF	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	10.0					1.07e6	35.3		
090212H1_3	0.250					8.63e5	0.269		
090212H1_4	0.500					9.06e5	0.506		
090212H1_5	2.00					9.70e5	1.88		
090212H1_6	40.0					1.08e6	40.6		
090212H1_7	200					1.18e6	209		

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Compound name: 1st Func. Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Area	RT	RRT	Resp	IS Resp	Conc	Accuracy	RRF
090212H1_1	50.0						0.00e0	46.2		
090212H1_3	1.25						0.00e0	0.00241		
090212H1_4	2.50						0.00e0	0.0270		
090212H1_5	10.0						0.00e0	0.0198		
090212H1_6	200						0.00e0	0.00694		
090212H1_7	1000						0.00e0	0.00731		

Compound name: Total Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Area	RT	RRT	Resp	IS Resp	Conc	Accuracy	RRF
090212H1_1	50.0						0.00e0	147		
090212H1_3	1.25						0.00e0	2.51		
090212H1_4	2.50						0.00e0	5.10		
090212H1_5	10.0						0.00e0	19.1		
090212H1_6	200						0.00e0	412		
090212H1_7	1000						0.00e0	2040		

Compound name: Total Hexa-Furans
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Area	RT	RRT	Resp	IS Resp	Conc	Accuracy	RRF
090212H1_1	50.0						0.00e0	250		
090212H1_3	1.25						0.00e0	5.09		

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Compound name: Total Hexa-Furans

Name	Std Conc	IS Area	Conc
090212H1_4	2.50	0.00e0	10.2
090212H1_5	10.0	0.00e0	38.9
090212H1_6	200	0.00e0	804
090212H1_7	1000	0.00e0	4020

Compound name: Total Hepta-Furans
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	IS Area	Conc
090212H1_1	50.0	0.00e0	98.6
090212H1_3	1.25	0.00e0	2.59
090212H1_4	2.50	0.00e0	5.09
090212H1_5	10.0	0.00e0	18.9
090212H1_6	200	0.00e0	403
090212H1_7	1000	0.00e0	2030

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

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Compound name: PFK2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: PFK4

Name	Std. Conc.	RA	IA	RT	RRT	Resp.	S/N	Conc.	Dev.	RRT
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: PFK5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RA	IA	RT	RRT	Resp.	S/N	Conc.	Dev.	RRT
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RA	IA	RT	RRT	Resp.	S/N	Conc.	Dev.	RRT
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	RF	Resp	Dev	%D	RRF
090212H1_1	1.00						
090212H1_3	1.00						
090212H1_4	1.00						
090212H1_5	1.00						
090212H1_6	1.00						
090212H1_7	1.00						

Compound name: DPE3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	RF	Resp	Dev	%D	RRF
090212H1_1	1.00						
090212H1_3	1.00						
090212H1_4	1.00						
090212H1_5	1.00						
090212H1_6	1.00						
090212H1_7	1.00						

Compound name: DPE4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	RF	Resp	Dev	%D	RRF
090212H1_1	1.00						
090212H1_3	1.00						
090212H1_4	1.00						
090212H1_5	1.00						

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE4

Name	Std Conc	RF	RT	RRT	Resp	S/N	Conc	RRF
090212H1_6	1.00							
090212H1_7	1.00							

Compound name: DPE5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RF	RT	RRT	Resp	S/N	Conc	RRF
090212H1_1	1.00							
090212H1_3	1.00							
090212H1_4	1.00							
090212H1_5	1.00							
090212H1_6	1.00							
090212H1_7	1.00							

Compound name: DPE6
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RF	RT	RRT	Resp	S/N	Conc	RRF
090212H1_1	1.00							
090212H1_3	1.00							
090212H1_4	1.00							
090212H1_5	1.00							
090212H1_6	1.00							
090212H1_7	1.00							

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090212H1-1

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	NO	9.78	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	48.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	48.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	48.1	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	48.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.91	0.76-1.02	NO	95.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	9.75	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	48.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	49.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	48.8	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	49.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.93	0.76-1.02	NO	96.7	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	100	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	98.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	99.4	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	102	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	98.8	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.5	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	NO	103	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	99.2	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	101	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	99.8	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	200	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.46	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.58
2	1,2,8,9-TCDD (Last)	26.86
3	1,2,4,7,9-PeCDD (First)	28.51
4	1,2,3,8,9-PeCDD (Last)	31.03
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.01
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.28
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.91
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

2/13/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090212H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090212H1_1

Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.90e4	0.82	NO	1.08	1.000	25.98	1.001	9.7764	97.8	0.0390	9.7764
2	1,2,3,7,8-PeCDD	3.03e5	0.63	NO	1.03	1.000	30.65	1.000	48.635	97.3	0.124	48.635
3	1,2,3,4,7,8-HxCDD	2.54e5	1.26	NO	1.00	1.000	34.10	1.000	48.035	96.1	0.187	48.035
4	1,2,3,6,7,8-HxCDD	2.90e5	1.27	NO	1.13	1.000	34.21	1.000	47.595	95.2	0.184	47.595
5	1,2,3,7,8,9-HxCDD	2.83e5	1.28	NO	1.10	1.000	34.51	1.009	48.051	96.1	0.180	48.051
6	1,2,3,4,6,7,8-HpCDD	2.11e5	1.03	NO	1.06	1.000	38.17	1.000	47.989	96.0	0.341	47.989
7	OCDD	3.30e5	0.91	NO	1.18	1.000	41.63	1.000	95.331	95.3	0.179	95.331
8	2,3,7,8-TCDF	1.14e5	0.78	NO	1.09	1.000	25.19	1.001	9.7515	97.5	0.0409	9.7515
9	1,2,3,7,8-PeCDF	5.65e5	1.61	NO	1.16	1.000	29.42	1.000	49.643	99.3	0.123	49.643
10	2,3,4,7,8-PeCDF	5.35e5	1.56	NO	1.12	1.000	30.35	1.000	49.591	99.2	0.120	49.591
11	1,2,3,4,7,8-HxCDF	4.59e5	1.27	NO	1.41	1.000	33.19	1.001	48.331	96.7	0.150	48.331
12	1,2,3,6,7,8-HxCDF	5.49e5	1.25	NO	1.22	1.000	33.31	1.000	49.809	99.6	0.137	49.809
13	2,3,4,6,7,8-HxCDF	4.53e5	1.29	NO	1.28	1.000	33.92	1.000	49.224	98.4	0.172	49.224
14	1,2,3,7,8,9-HxCDF	3.76e5	1.25	NO	1.26	1.000	34.91	1.000	49.483	99.0	0.252	49.483
15	1,2,3,4,6,7,8-HpCDF	4.18e5	1.05	NO	1.69	1.000	36.81	1.000	48.842	97.7	0.180	48.842
16	1,2,3,4,7,8,9-HpCDF	3.09e5	1.05	NO	1.48	1.000	38.73	1.000	49.738	99.5	0.251	49.738
17	OCDF	4.66e5	0.93	NO	1.10	1.000	41.88	1.001	96.743	96.7	0.177	96.743
18	13C-2,3,7,8-TCDD	7.49e5	0.77	NO	1.01	1.000	25.95	1.022	100.15	100	0.141	
19	13C-1,2,3,7,8-PeCDD	6.02e5	0.64	NO	0.827	1.000	30.64	1.207	98.735	98.7	0.269	
20	13C-1,2,3,4,7,8-HxCDD	5.27e5	1.26	NO	0.916	1.000	34.08	0.988	99.432	99.4	0.335	
21	13C-1,2,3,6,7,8-HxCDD	5.42e5	1.26	NO	0.921	1.000	34.19	0.991	101.67	102	0.334	
22	13C-1,2,3,4,6,7,8-HpCDD	4.13e5	1.07	NO	0.708	1.000	38.16	1.106	100.67	101	0.425	
23	13C-OCDD	5.87e5	0.89	NO	0.503	1.000	41.62	1.206	201.71	101	0.424	
24	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	0.977	1.000	25.16	0.991	98.780	98.8	0.129	
25	13C-1,2,3,7,8-PeCDF	9.82e5	1.58	NO	0.896	1.000	29.41	1.158	98.441	98.4	0.304	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.57	NO	0.900	1.000	30.34	1.195	96.306	96.3	0.303	
27	13C-1,2,3,4,7,8-HxCDF	6.74e5	0.54	NO	1.17	1.000	33.16	0.961	99.512	99.5	0.469	
28	13C-1,2,3,6,7,8-HxCDF	9.02e5	0.55	NO	1.52	1.000	33.29	0.965	102.54	103	0.361	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.54	NO	1.25	1.000	33.91	0.983	99.345	99.3	0.439	
30	13C-1,2,3,7,8,9-HxCDF	6.05e5	0.53	NO	1.05	1.000	34.90	1.011	99.208	99.2	0.521	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.46	NO	0.868	1.000	36.80	1.066	100.83	101	0.602
32	13C-1,2,3,4,7,8,9-HpCDF	4.20e5	0.46	NO	0.727	1.000	38.72	1.122	99.796	99.8	0.719
33	13C-OCDF	8.78e5	0.91	NO	0.760	1.000	41.85	1.213	199.65	99.8	0.296
34	37Cl-2,3,7,8-TCDD	4.66e4			0.668	1.000	25.98	1.023	9.4592	94.6	0.0533
35	13C-1,2,3,4-TCDD	7.37e5	0.81	NO	1.00	1.000	25.39	0.000	100.00	100	0.144
36	13C-1,2,3,4-TCDF	1.11e6	0.78	NO	1.00	1.000	23.95	0.000	100.00	100	0.126
37	13C-1,2,3,7,8,9-HxCDD	5.79e5	1.22	NO	1.00	1.000	34.50	0.000	100.00	100	0.307

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 7:21:09 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:21:55 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Compound name: 1,3,6,8-TCDD (First)

	ID		
090212H1_1	ST090212H1-1 1613 CS3 080917I	12-Feb-09	11:10:11
090212H1_2	solvent blank	12-Feb-09	11:59:18
090212H1_3	ST090212H1-2 1613 CS0 080917F	12-Feb-09	12:49:08
090212H1_4	ST090212H1-3 1613 CS1 080917CG	12-Feb-09	13:38:34
090212H1_5	ST090212H1-4 1613 CS2 080917H	12-Feb-09	14:28:11
090212H1_6	ST090212H1-5 1613 CS4 080917J	12-Feb-09	15:17:39
090212H1_7	ST090212H1-6 1613 CS5 080917K	12-Feb-09	16:07:03
090212H1_8	solvent blank	12-Feb-09	16:56:26
090212H1_9	SSS090212H1-1 Sec Src Std L070913A	12-Feb-09	17:45:49

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:13 Pacific Standard Time

M 292.9824 R 13157

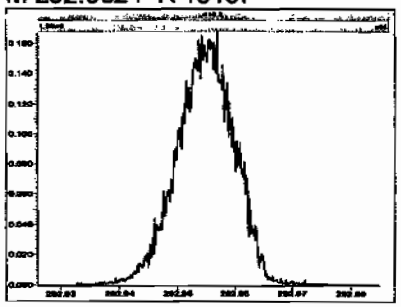

M 304.9824 R 14289

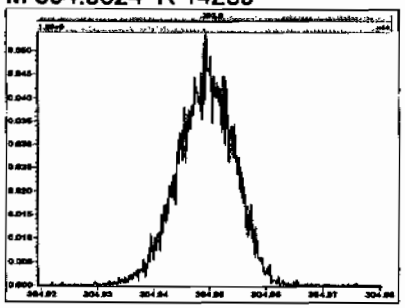

M 318.9792 R 13655

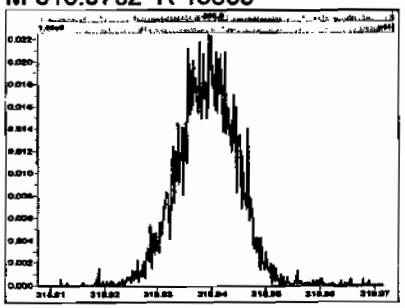

M 330.9792 R 12819

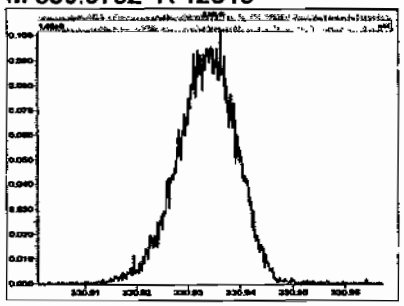

M 342.9792 R 13085

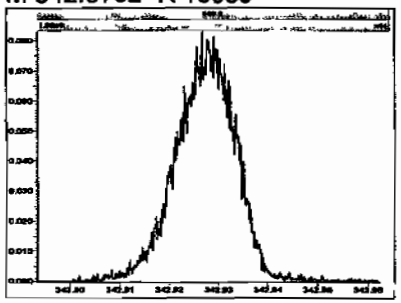

M 354.9792 R 13440

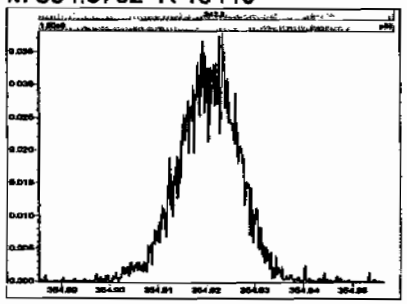

M 366.9792 R 11572

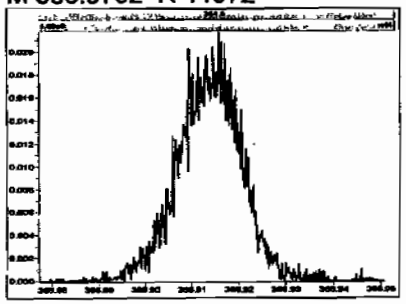

M 380.9760 R 13365

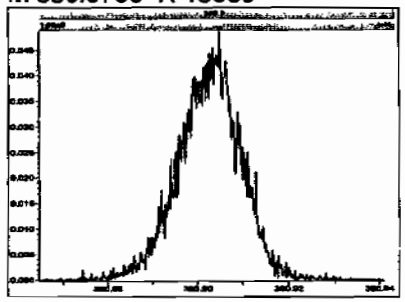

M 392.9760 R 13660

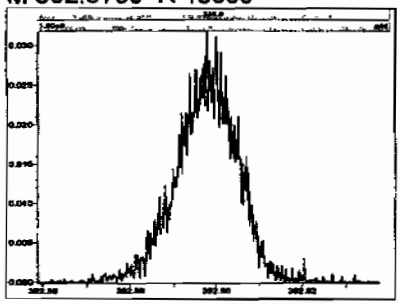

M 404.9760 R 13160

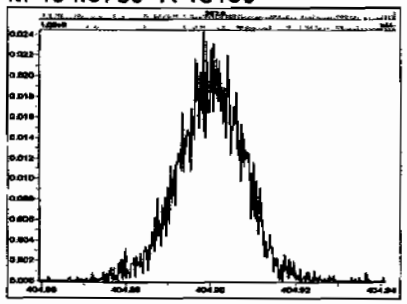

M 416.9760 R 15061

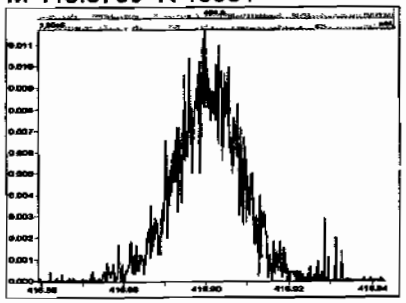

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:36 Pacific Standard Time

M 330.9792 R 13661

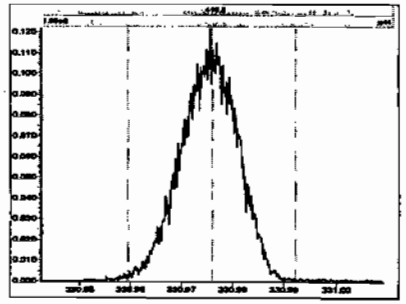

M 342.9792 R 12688

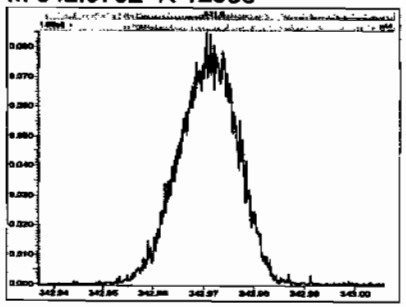

M 354.9792 R 13813

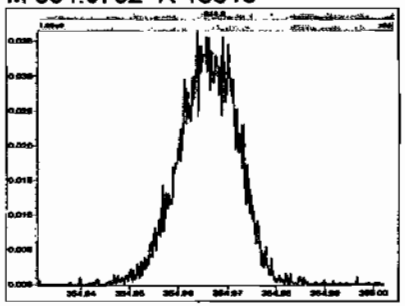

M 366.9792 R 13735

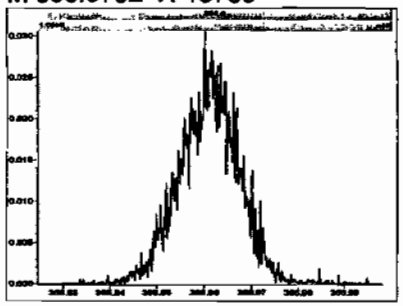

M 380.9760 R 13225

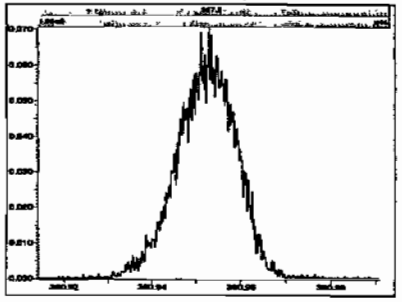

M 392.9760 R 13090

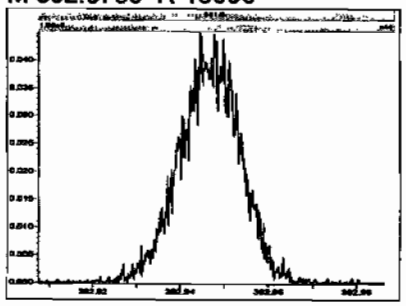

M 404.9760 R 13368

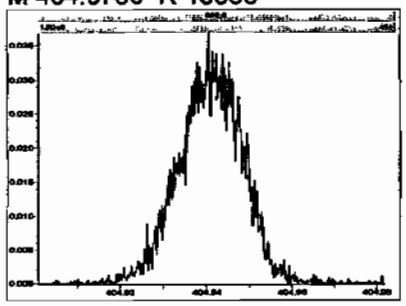

M 416.9760 R 13510

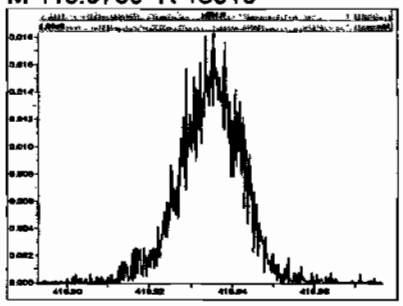

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:57 Pacific Standard Time

M 366.9792 R 13441

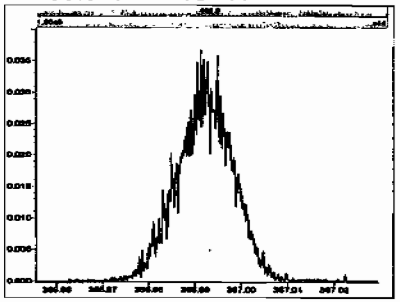

M 380.9760 R 13367

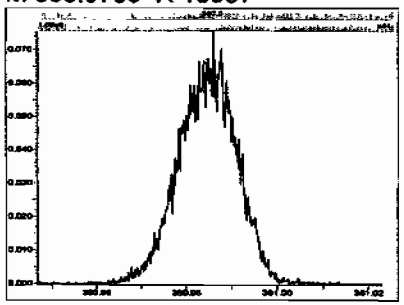

M 392.9760 R 13733

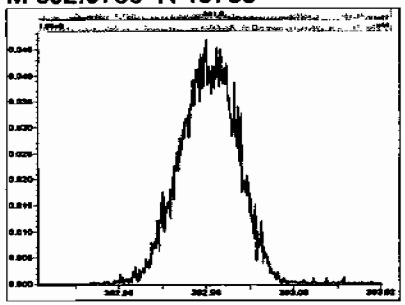

M 404.9760 R 12136

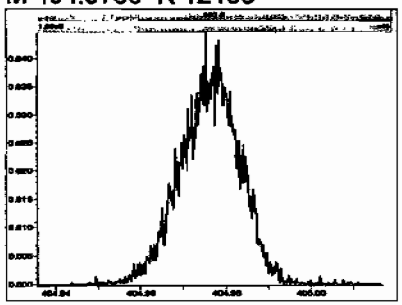

M 416.9760 R 13887

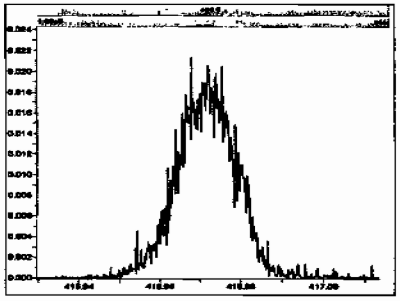

M 430.9728 R 13515

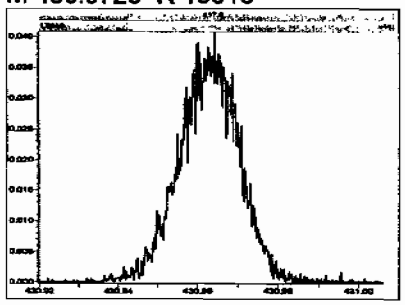

M 442.9728 R 14124

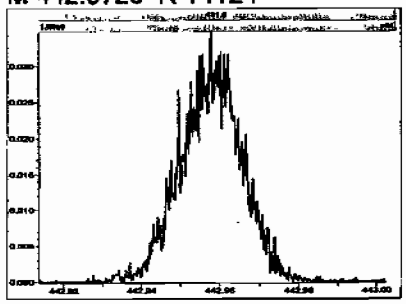

M 454.9728 R 13225

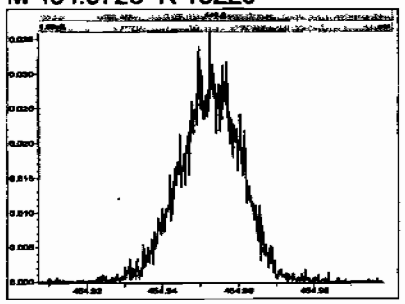

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:16 Pacific Standard Time

M 404.9760 R 13299

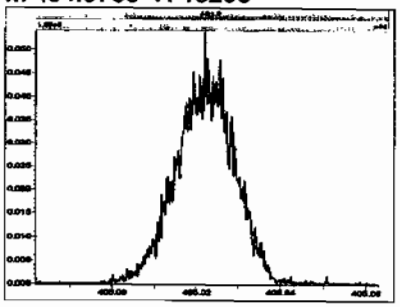

M 416.9760 R 14124

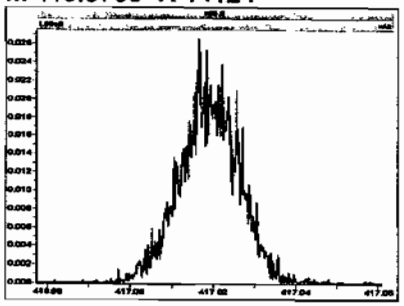

M 430.9728 R 13019

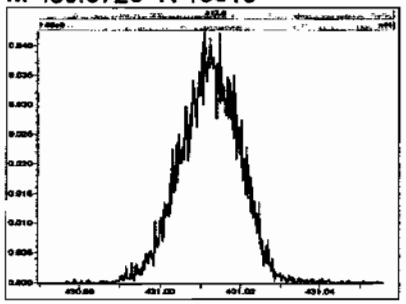

M 442.9728 R 13022

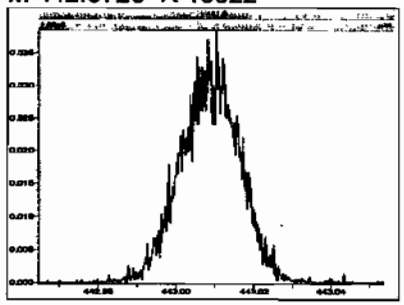

M 454.9728 R 12953

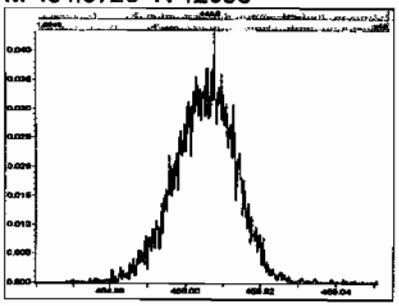

M 466.9728 R 12692

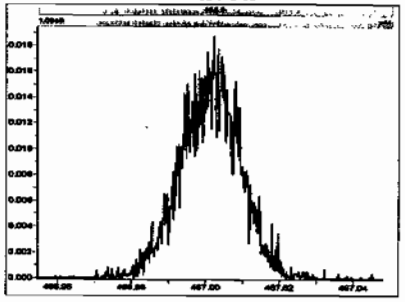

M 480.9696 R 14882

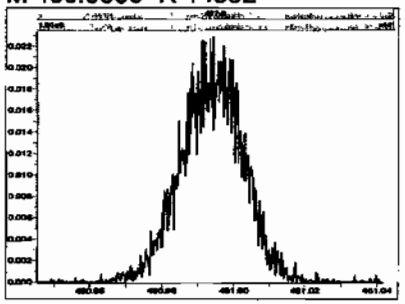

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:41 Pacific Standard Time

M 430.9728 R 12434

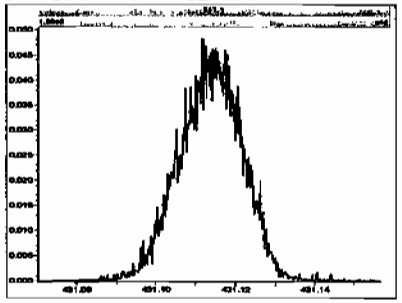

M 442.9728 R 12886

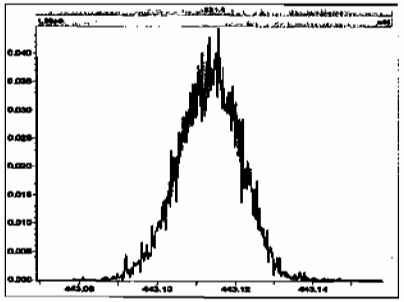

M 454.9728 R 12021

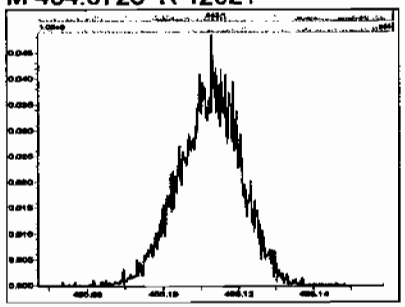

M 466.9728 R 12954

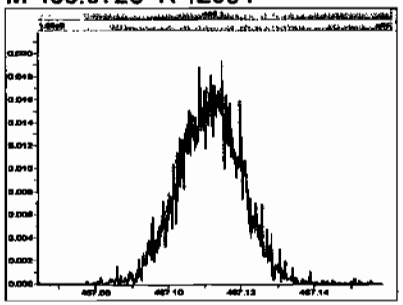

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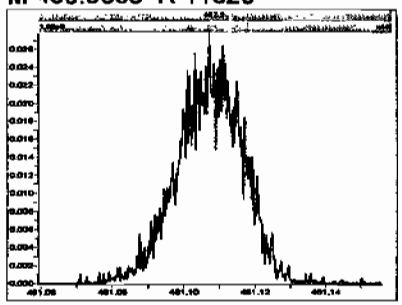

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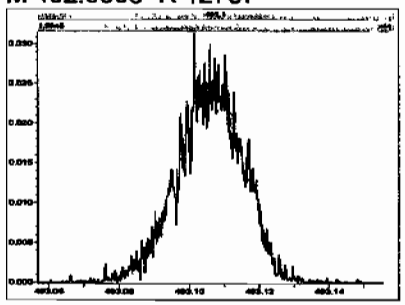

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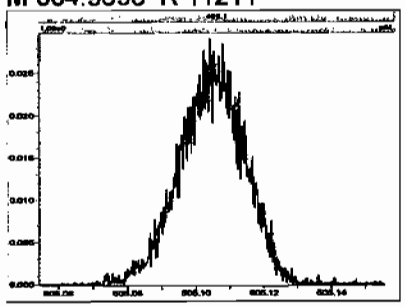

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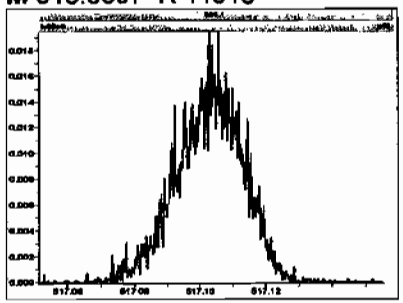

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

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Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

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Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

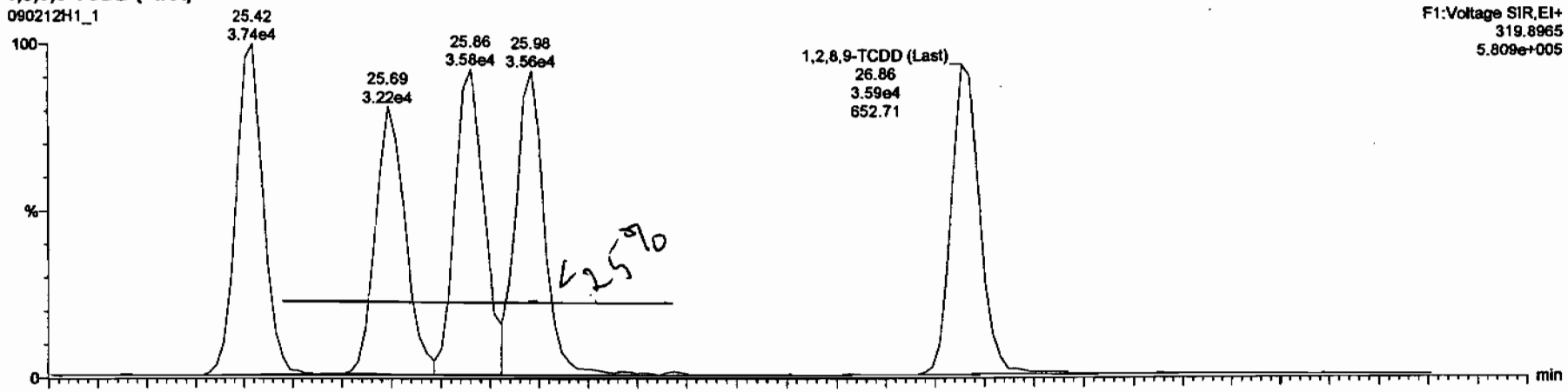

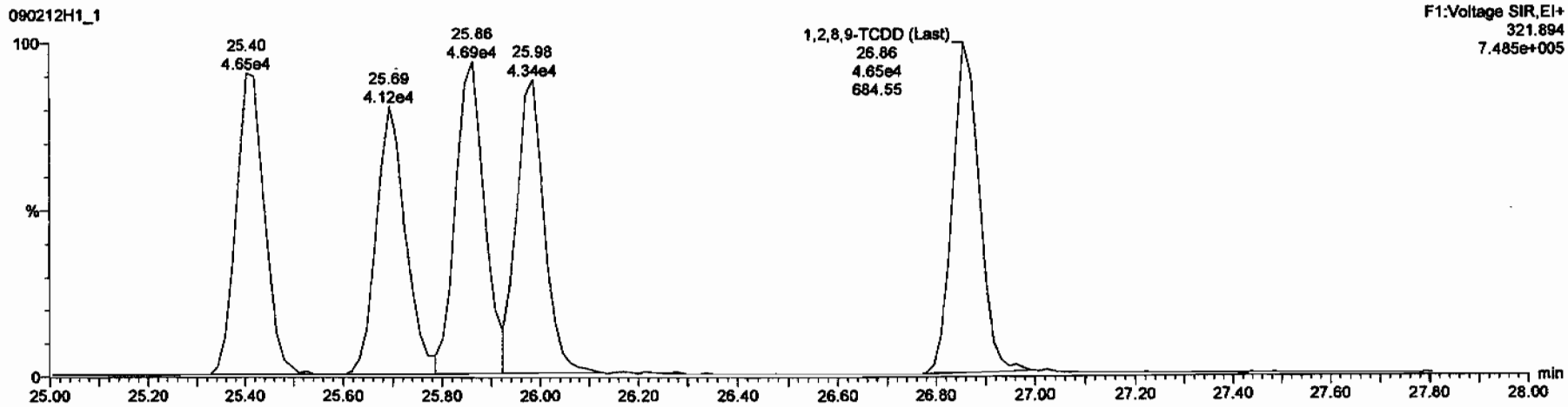

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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2,3,7,8-TCDD

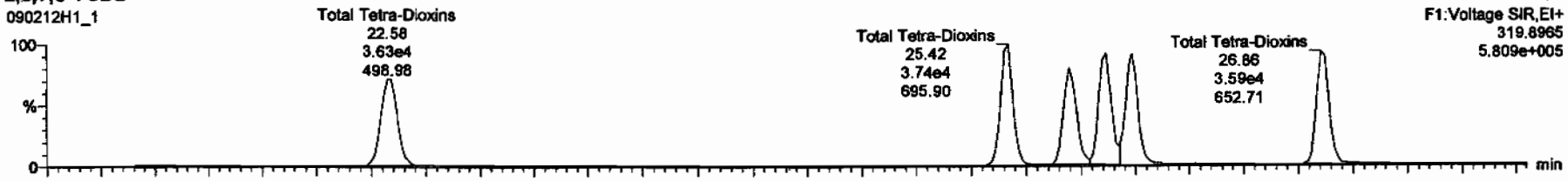

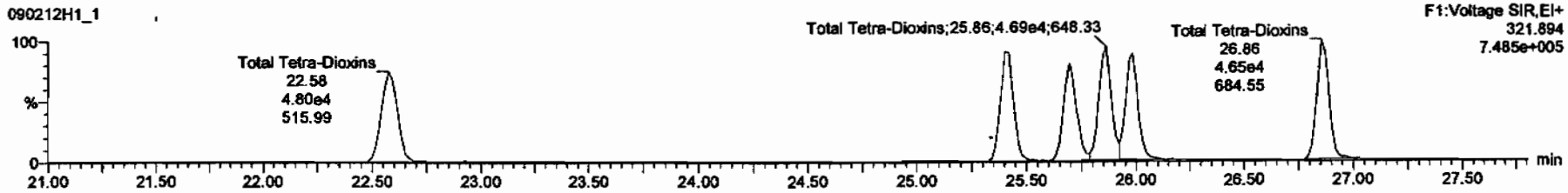

13C-2,3,7,8-TCDD

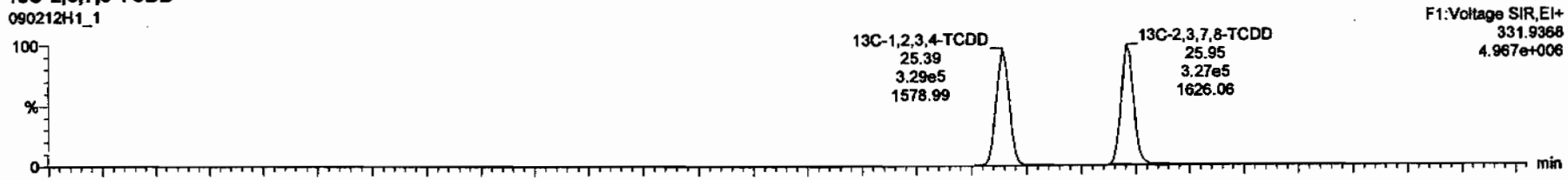

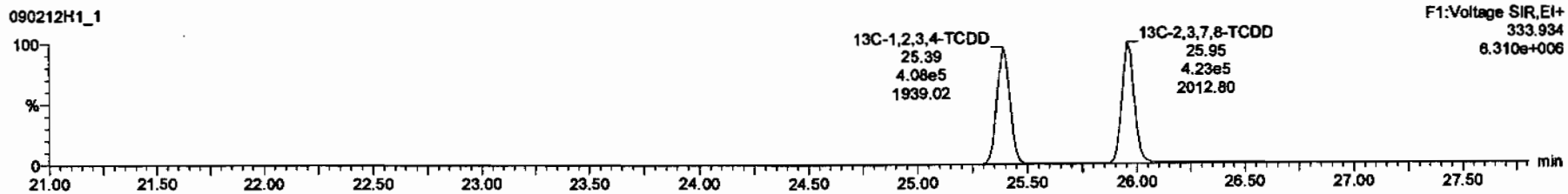

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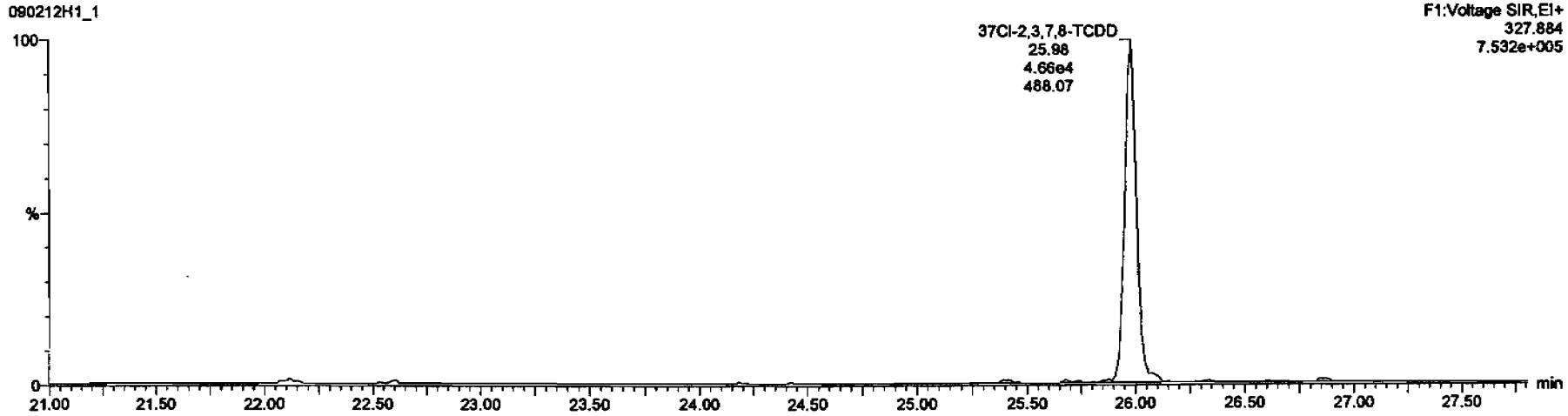

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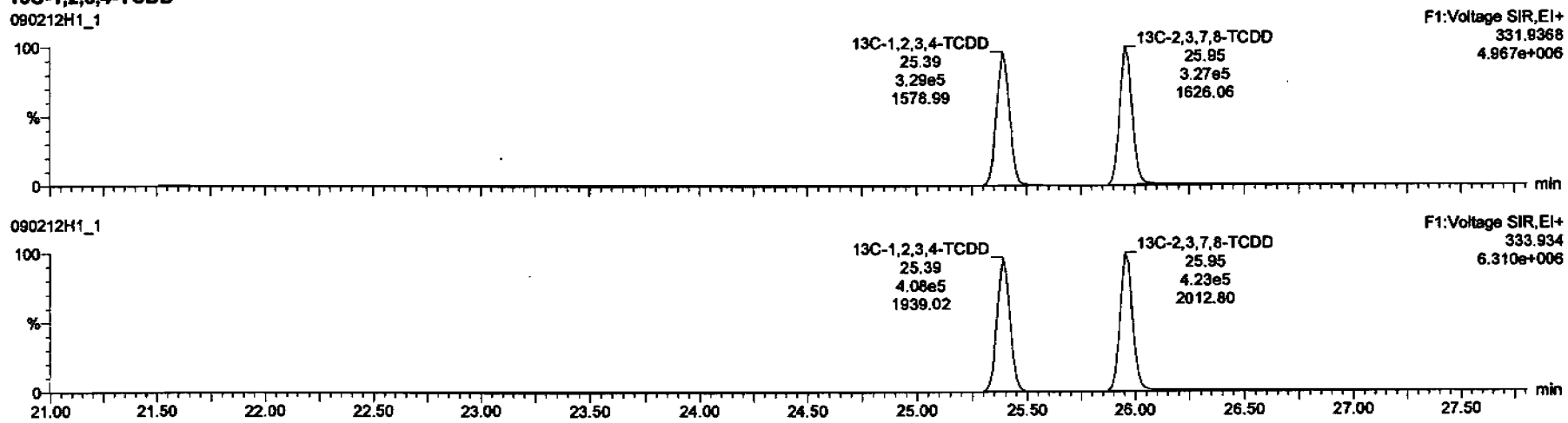

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1,2,3,7,8-PeCDD

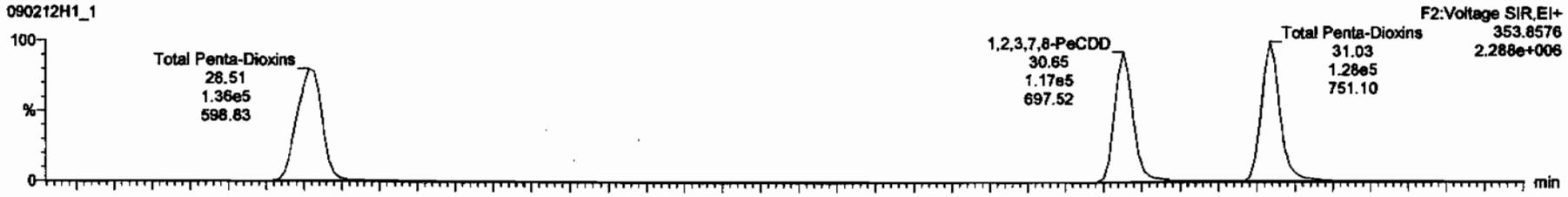

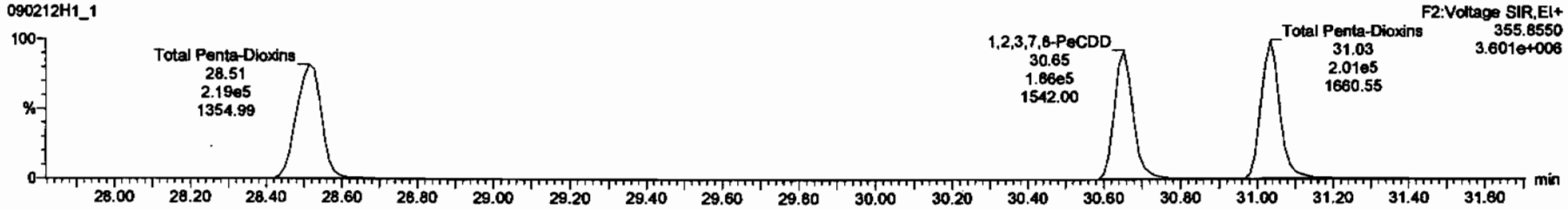

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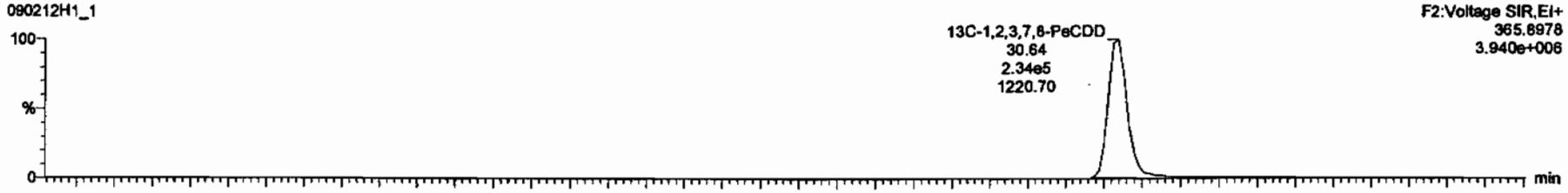

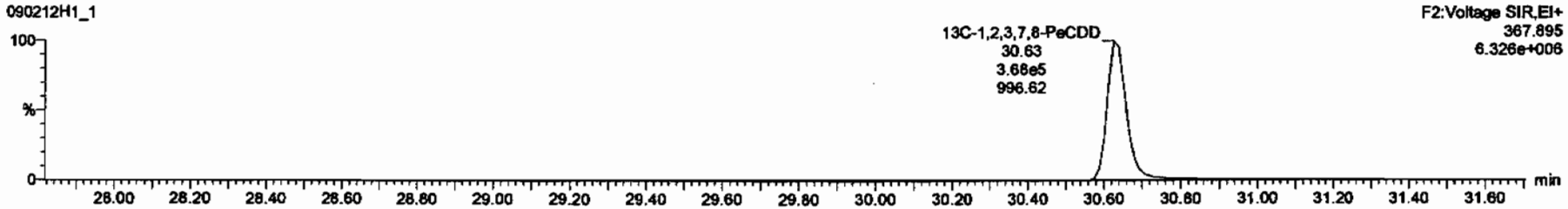

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1,2,3,4,7,8-HxCDD

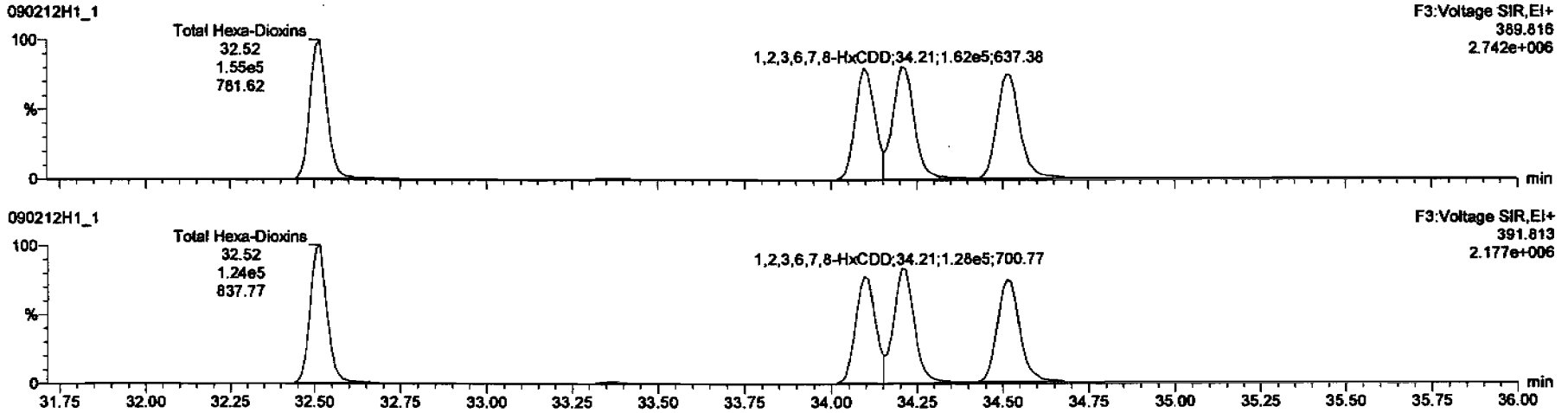

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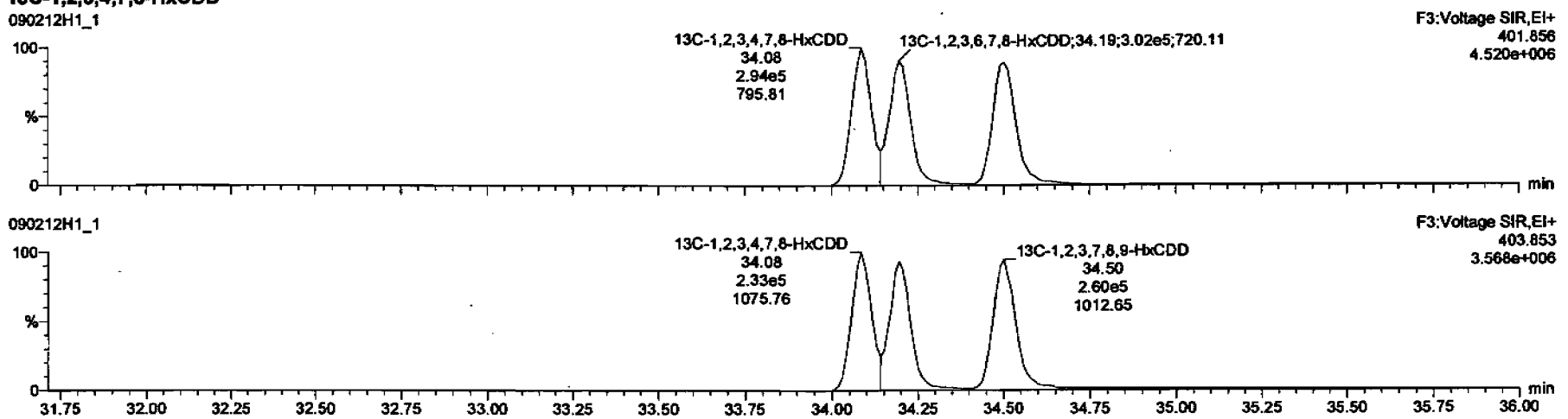

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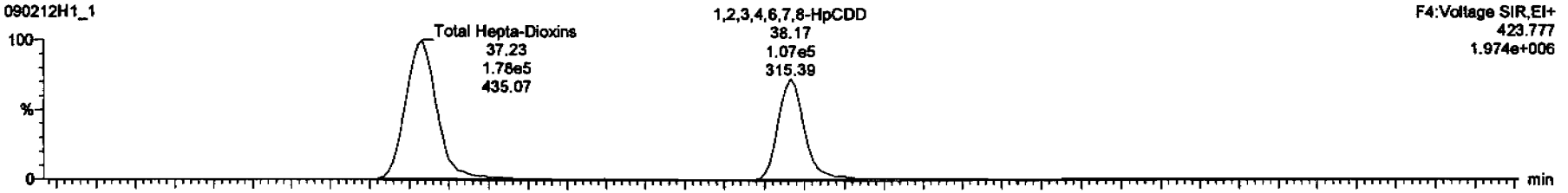

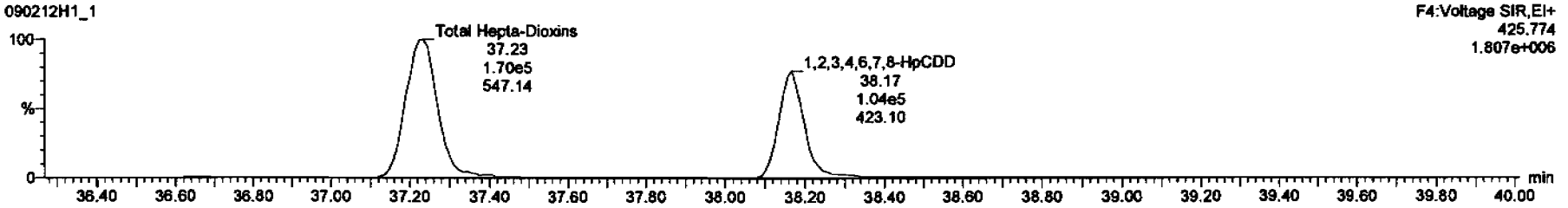

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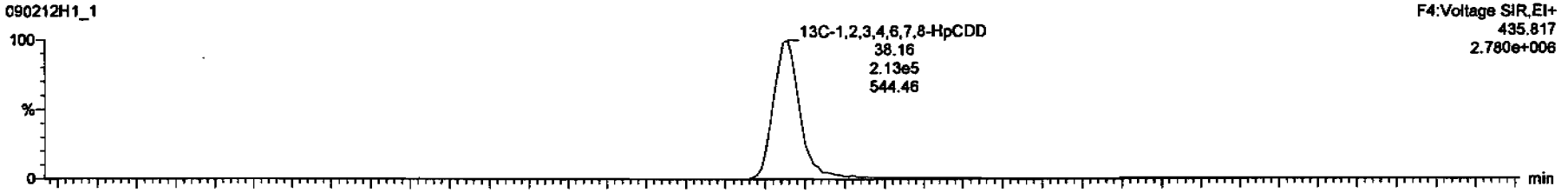

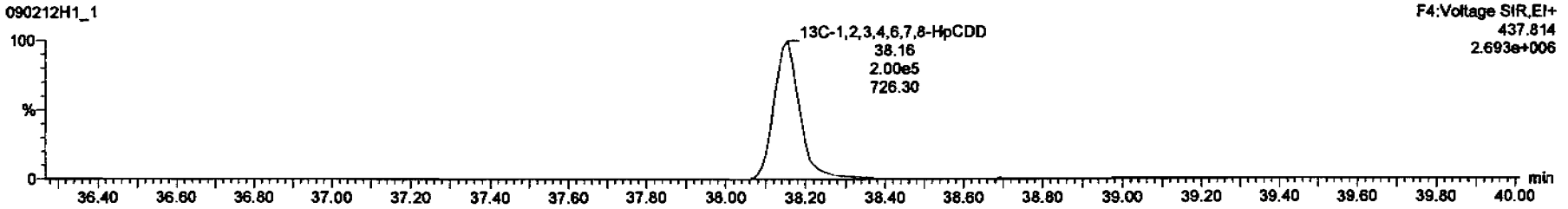

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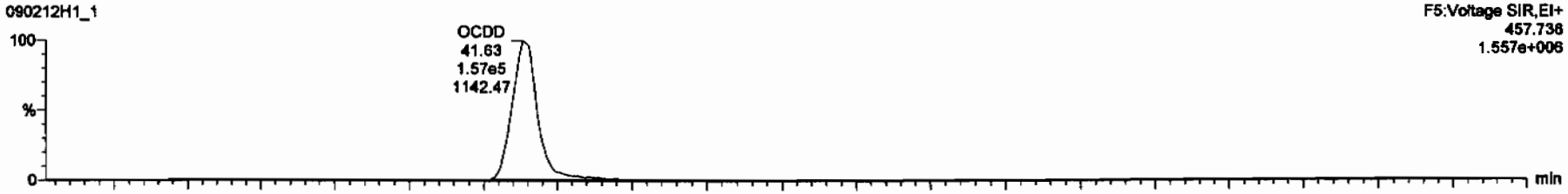

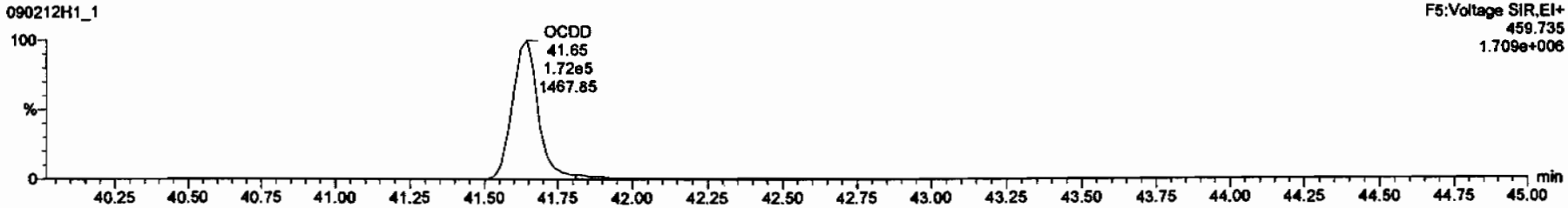

13C-OCDD

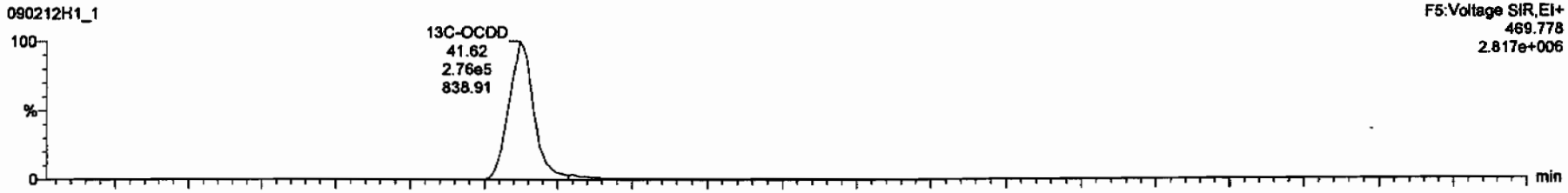

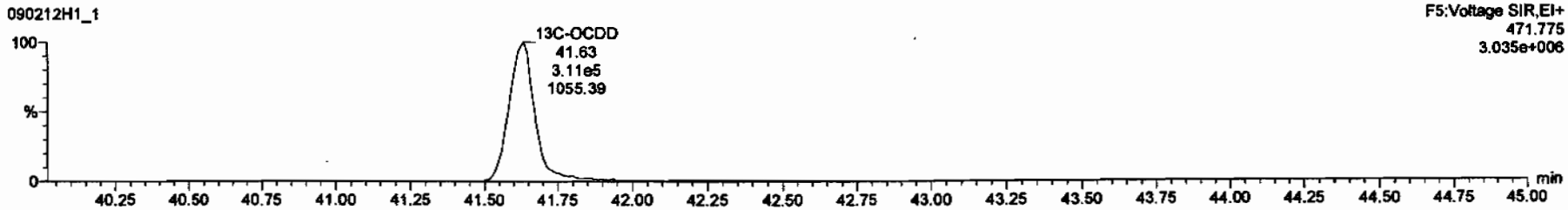

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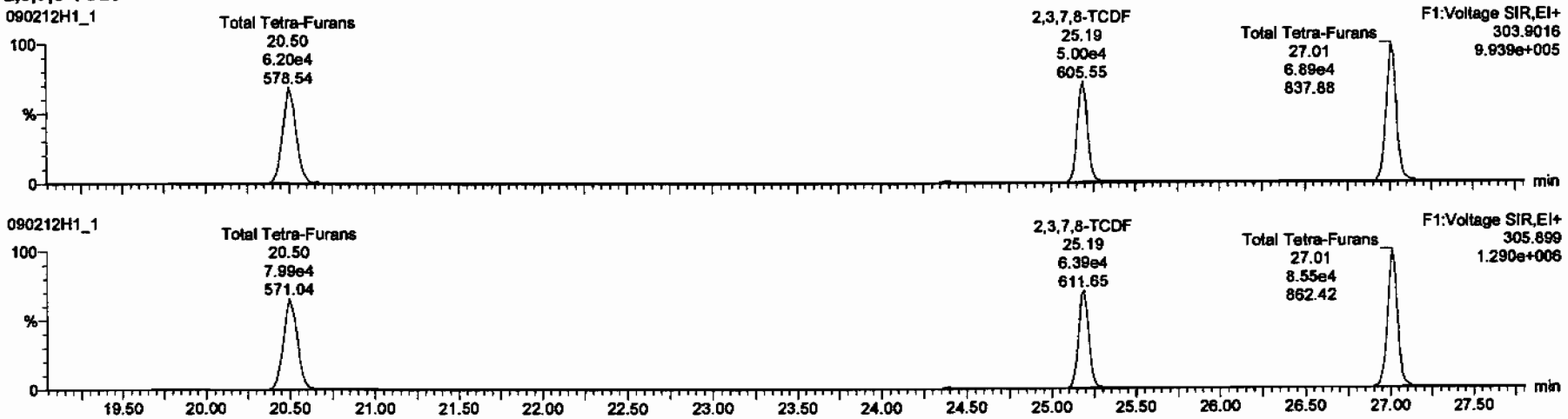

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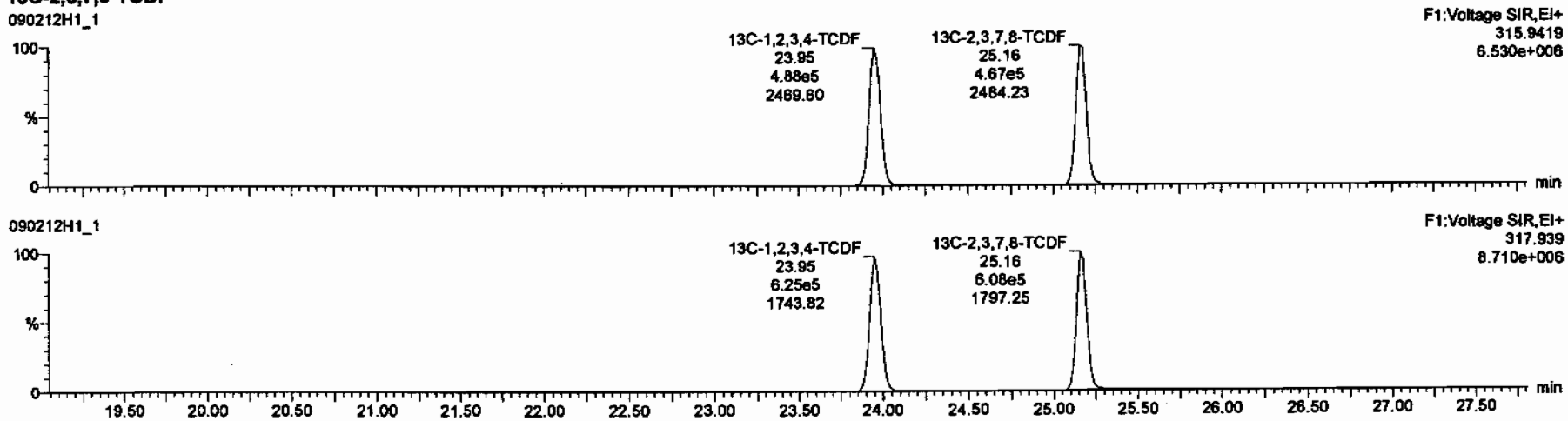

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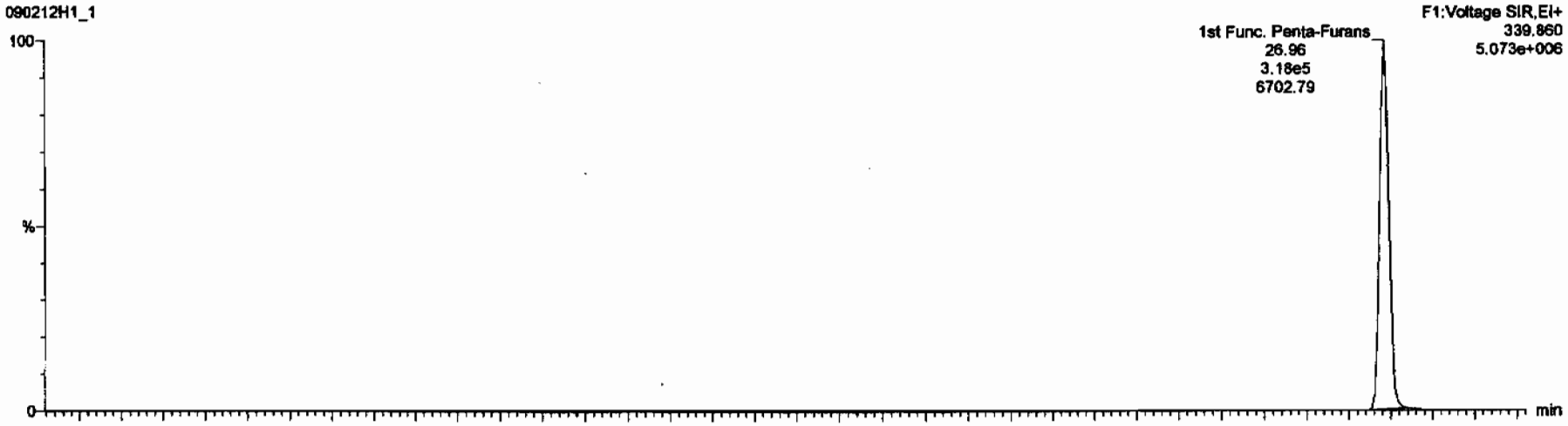

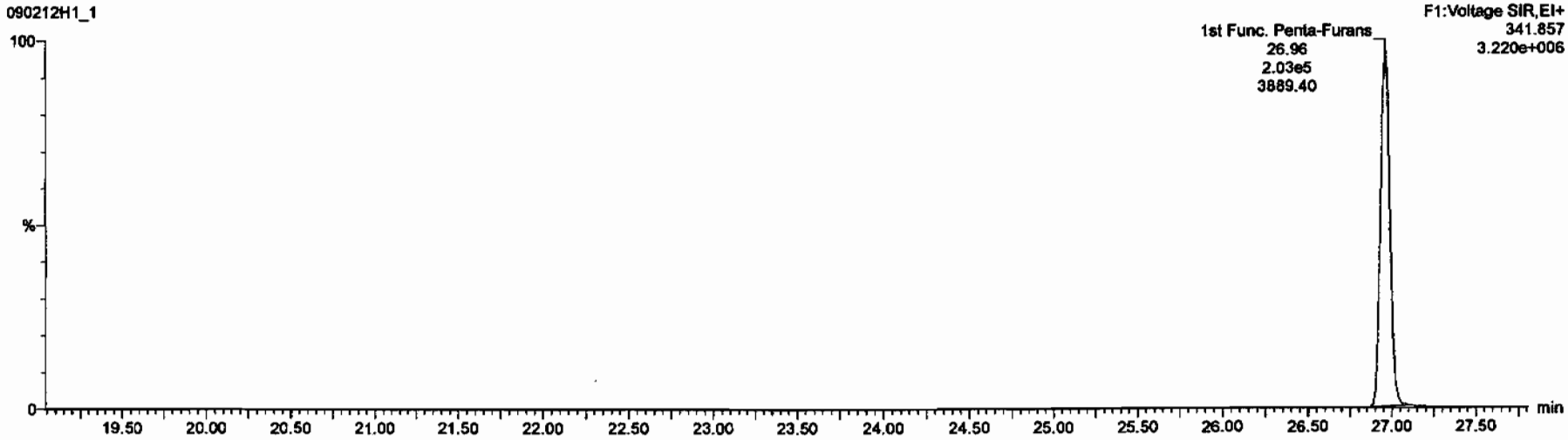

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1,2,3,7,8-PeCDF

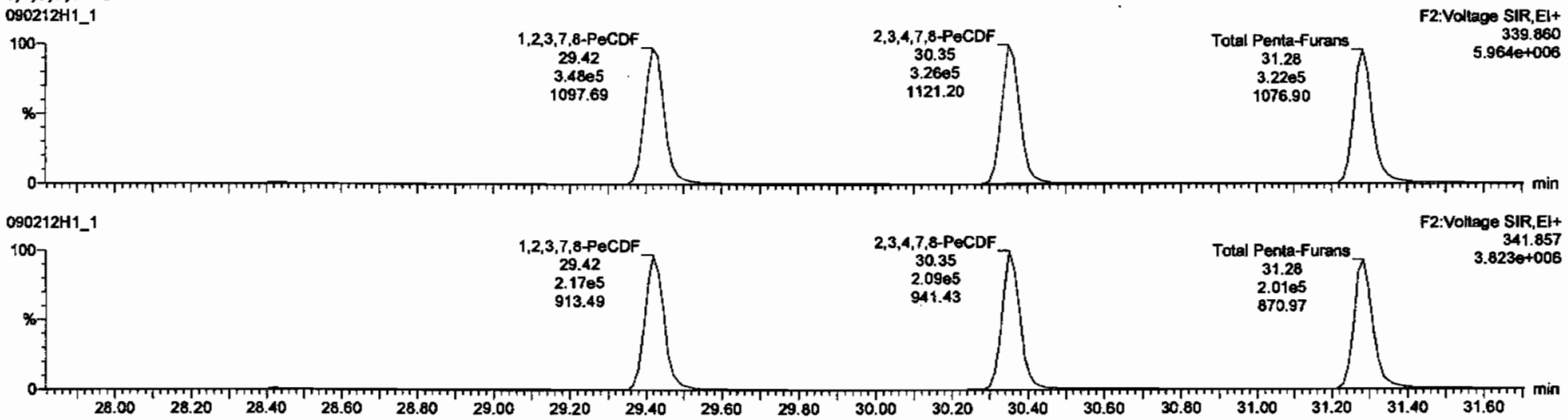

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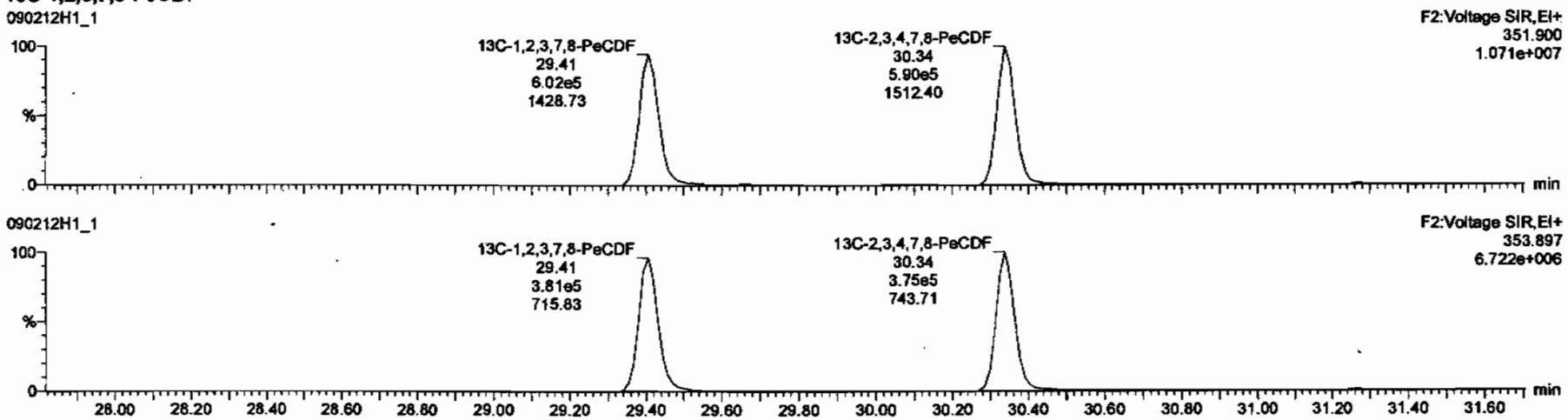

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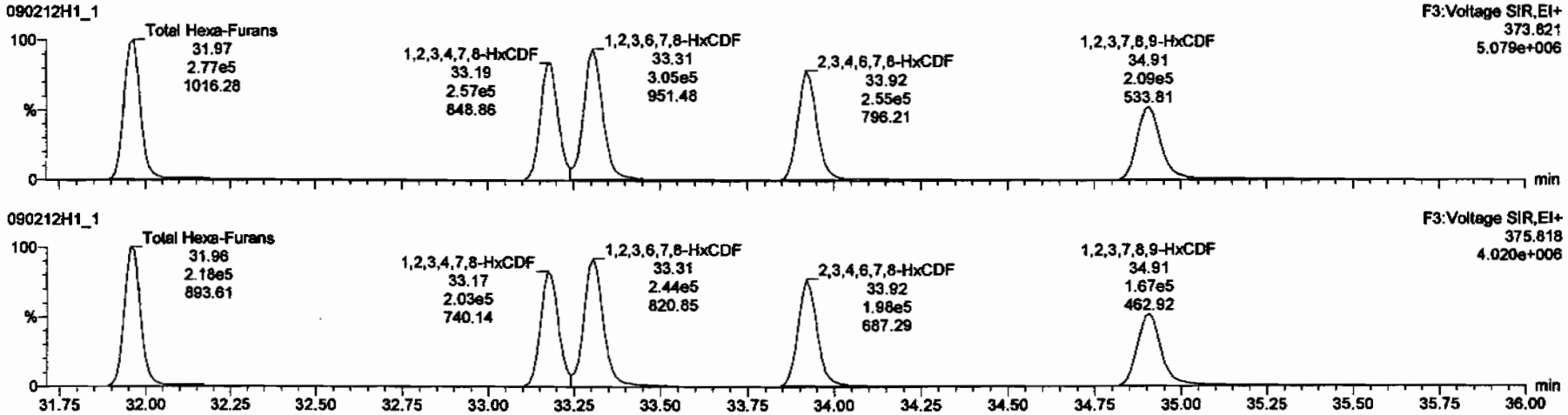

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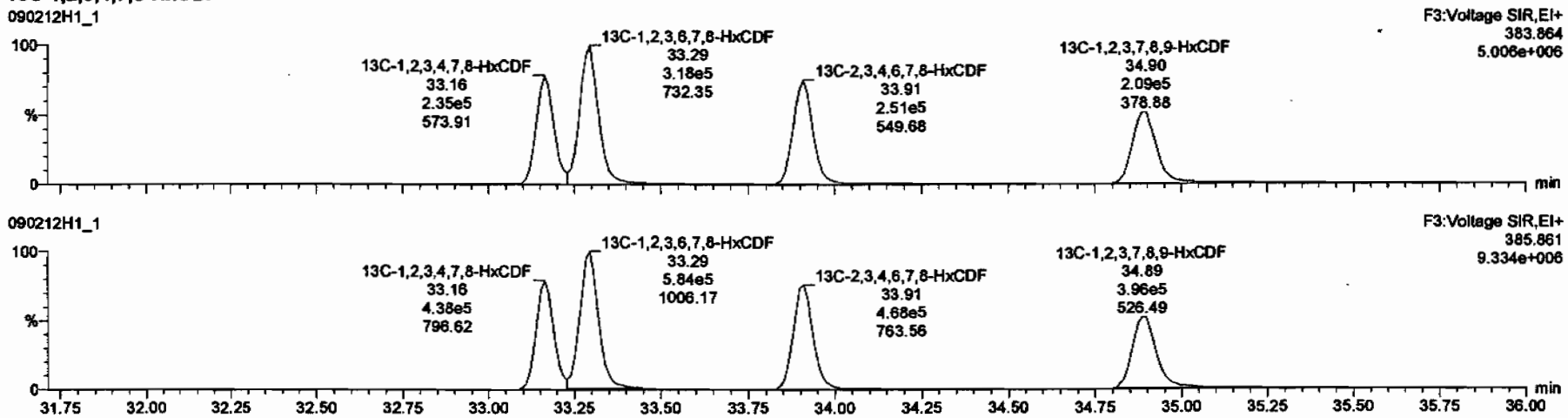

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1,2,3,4,6,7,8-HpCDF

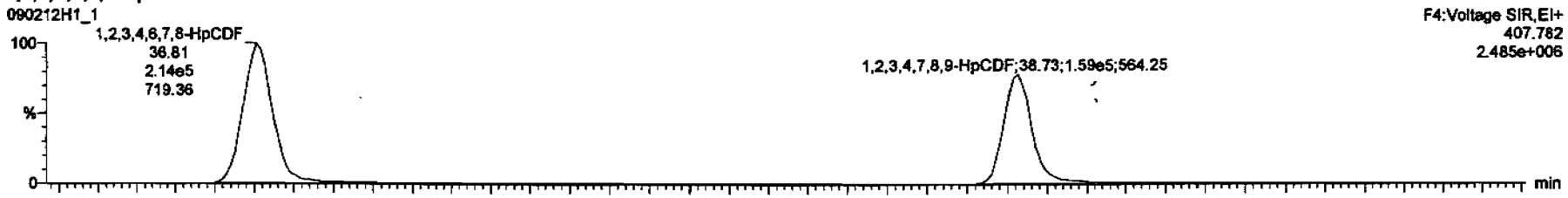

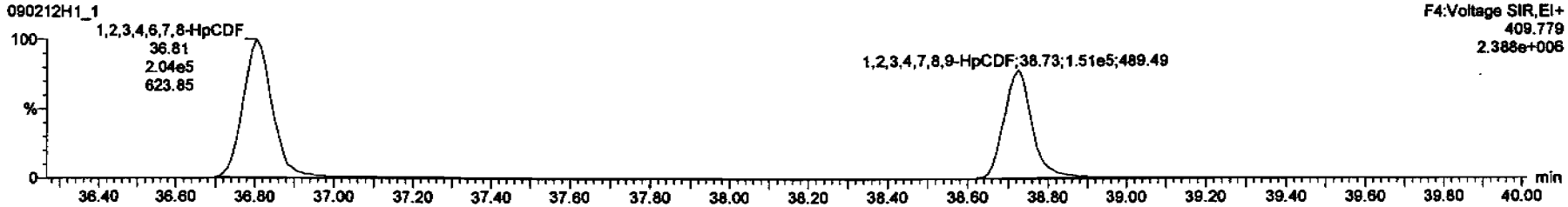

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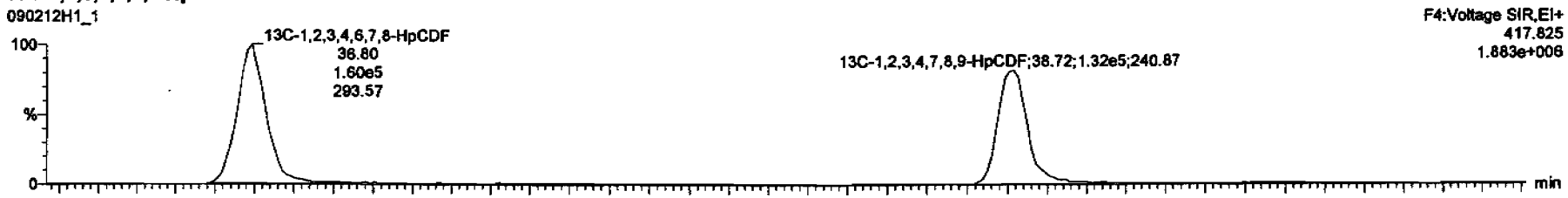

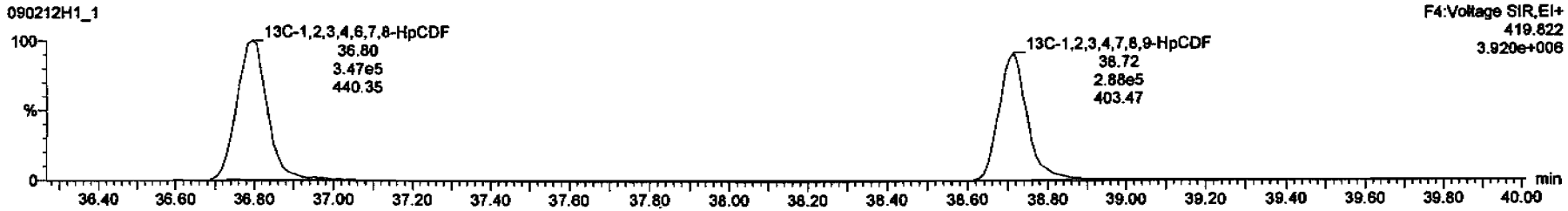

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OCDF

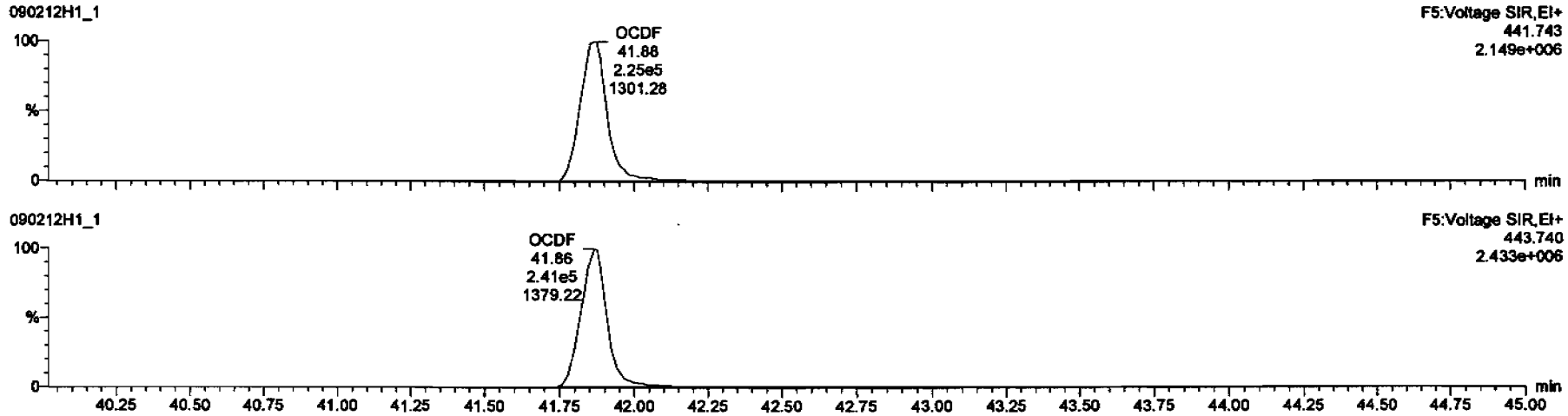

13C-OCDF

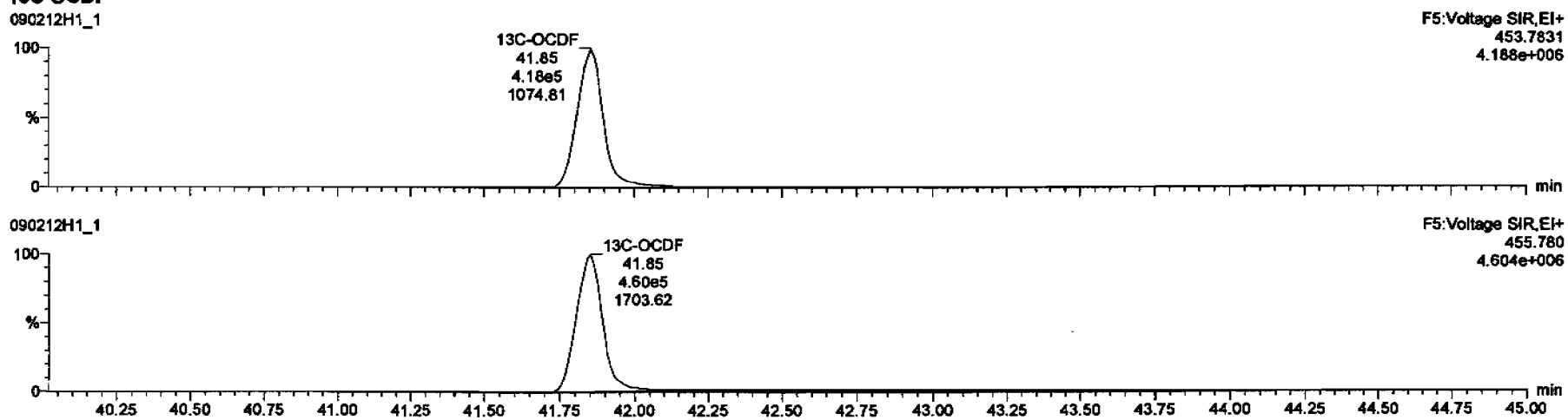

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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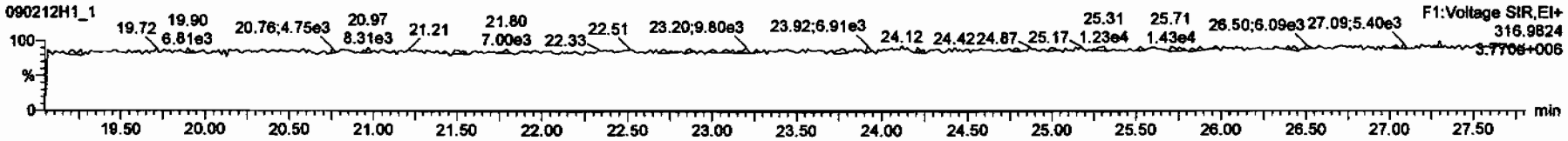

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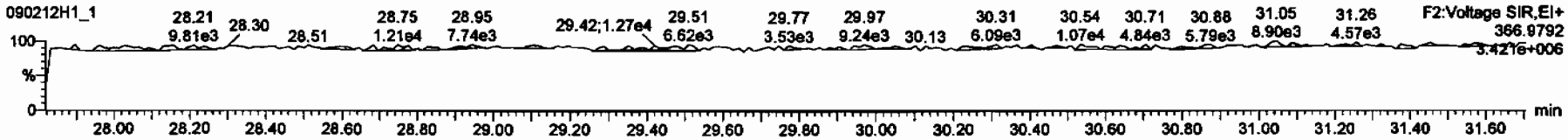

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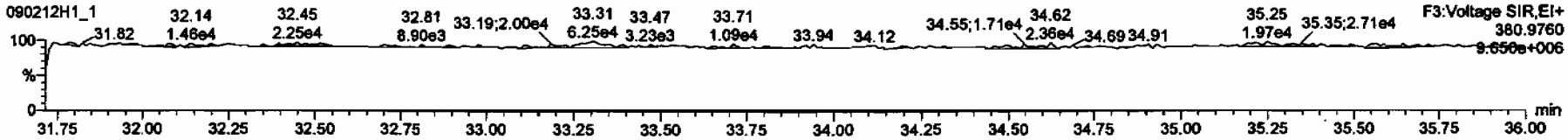

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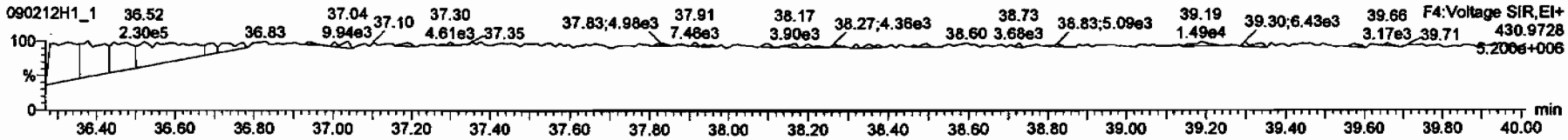

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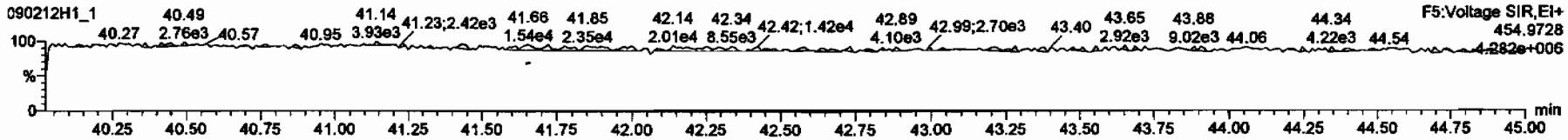

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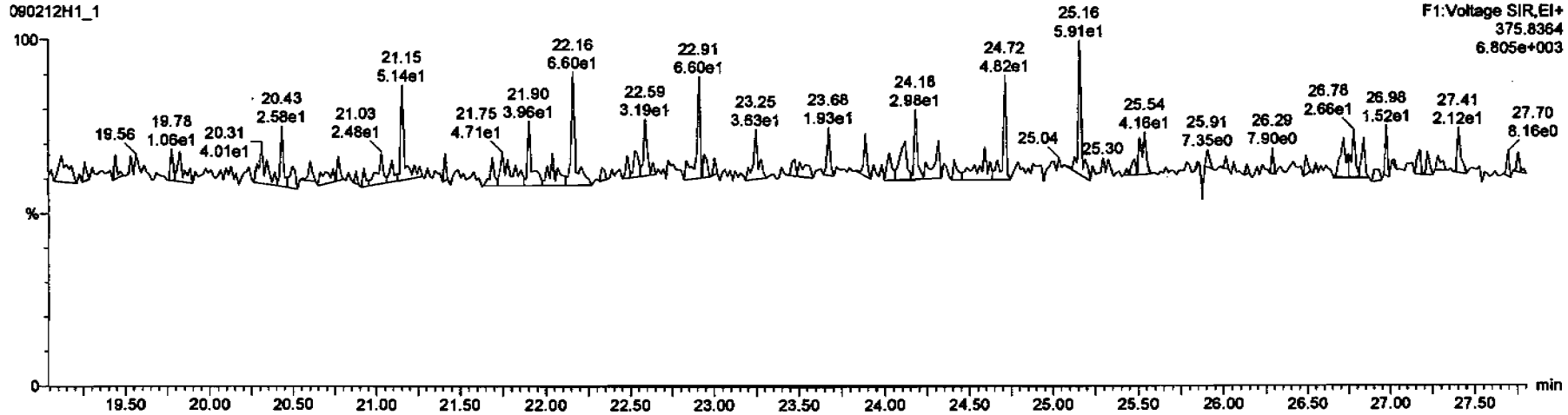

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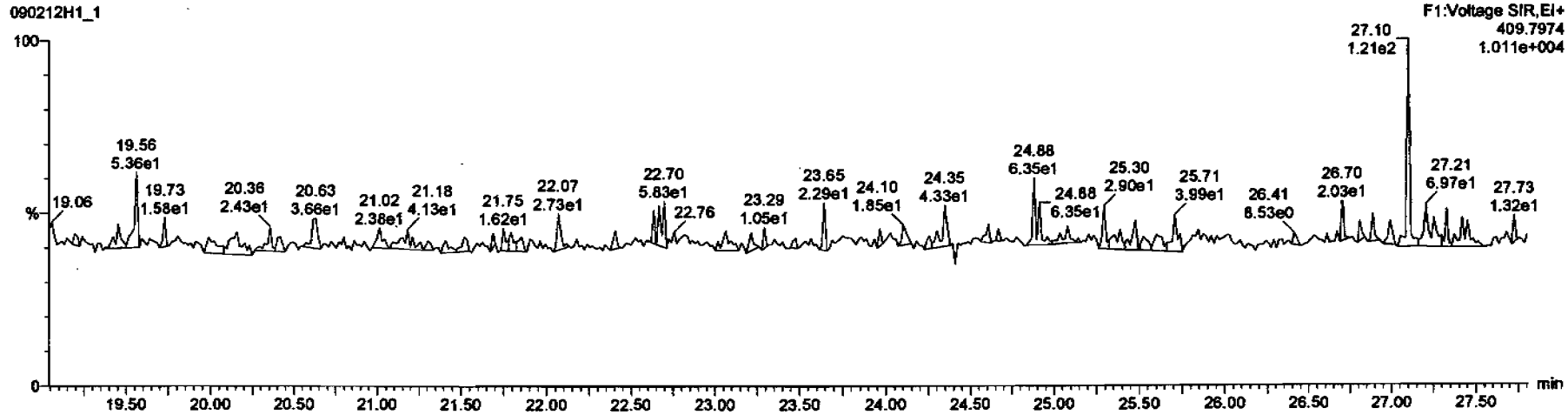

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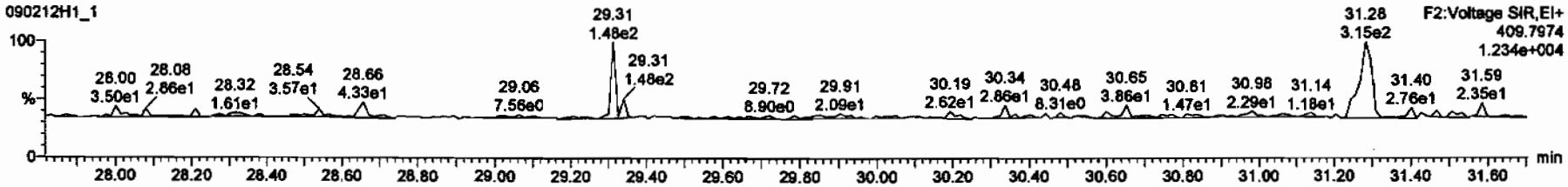

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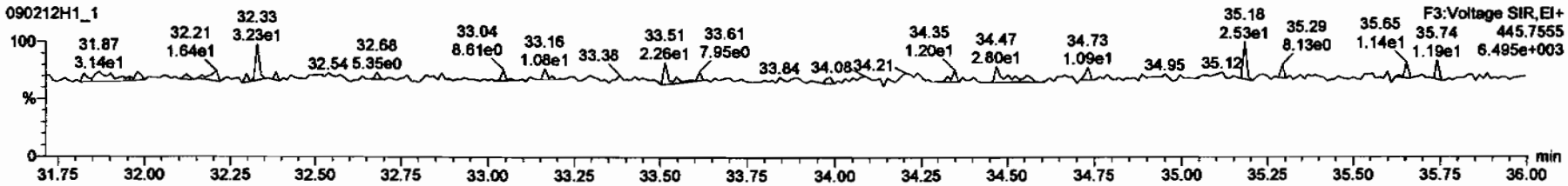

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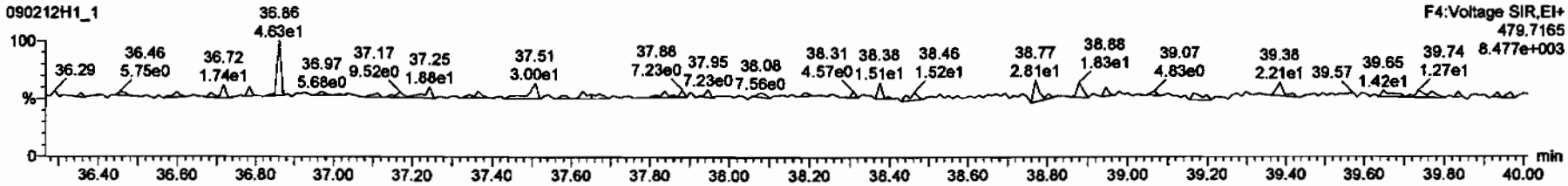

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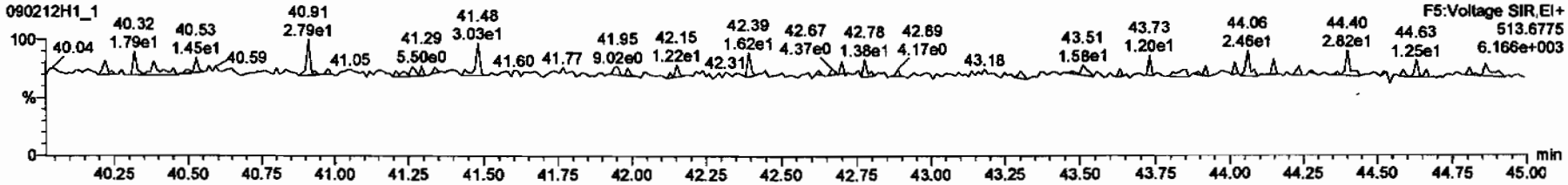

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2,3,7,8-TCDD

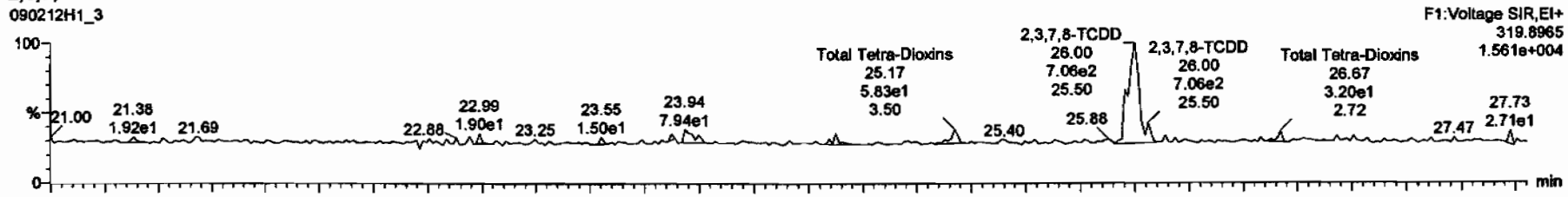

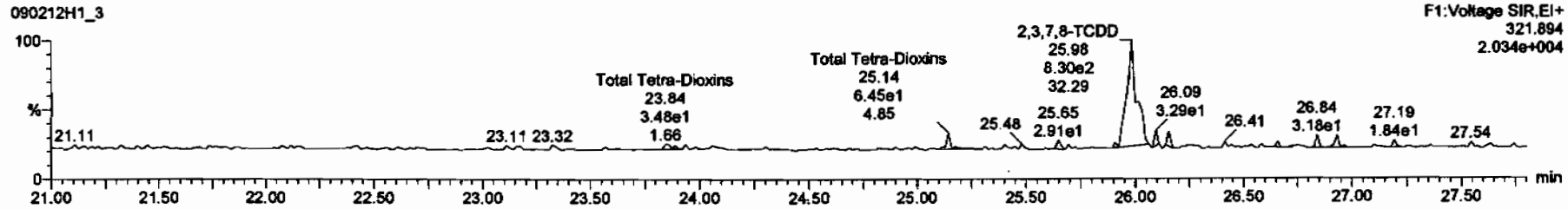

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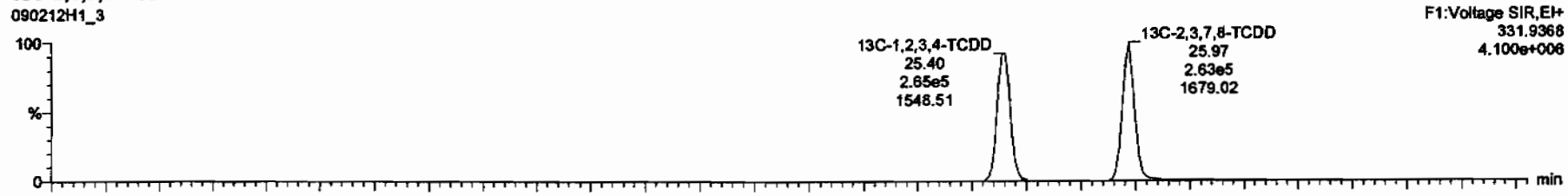

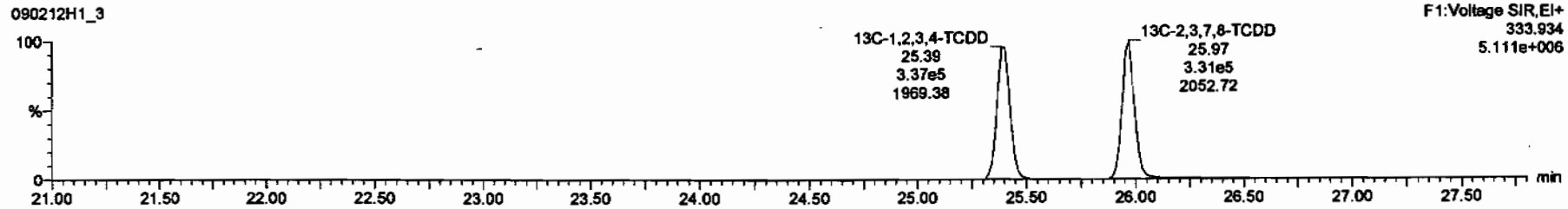

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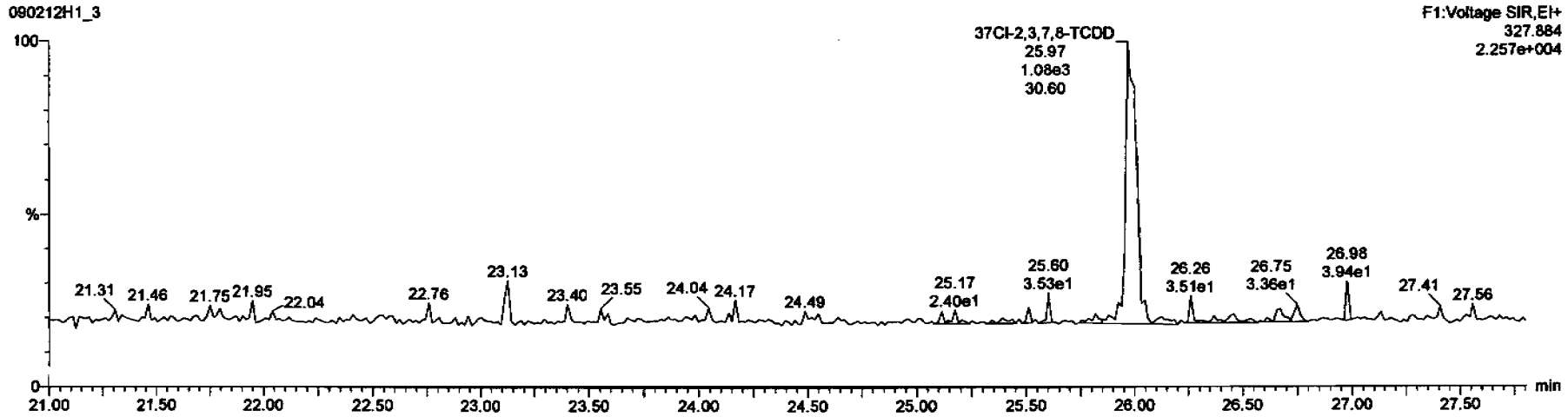

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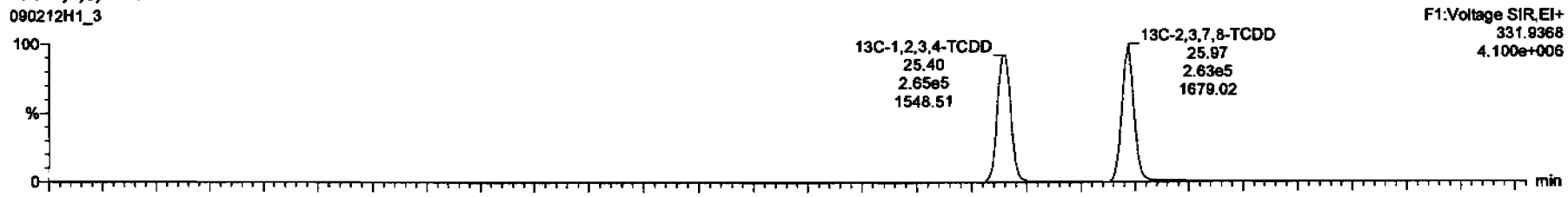

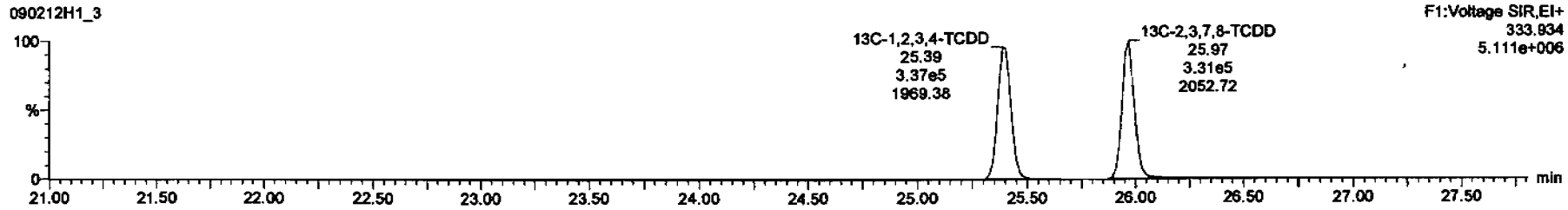

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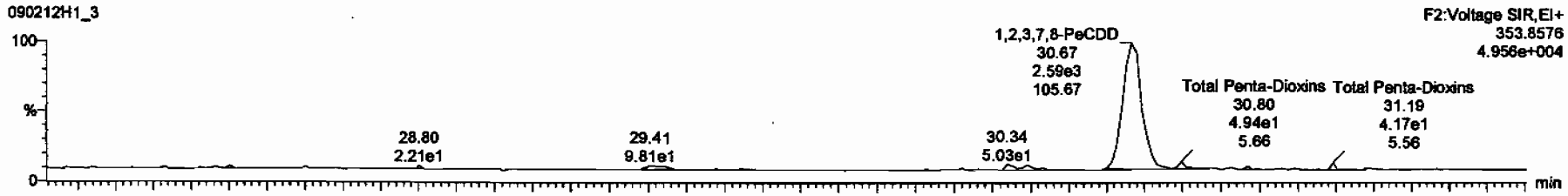

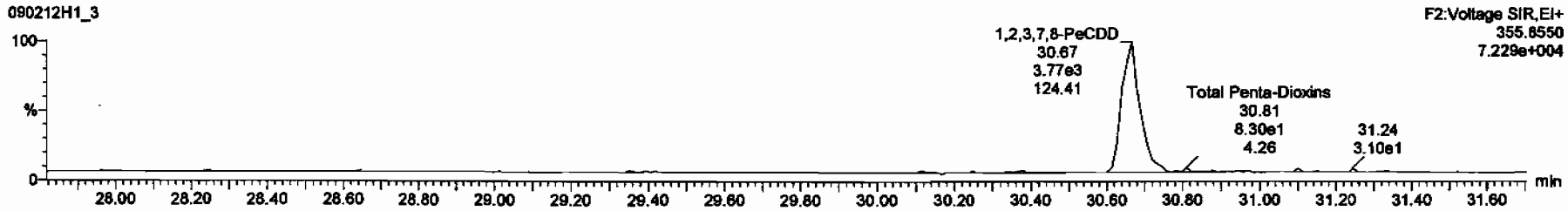

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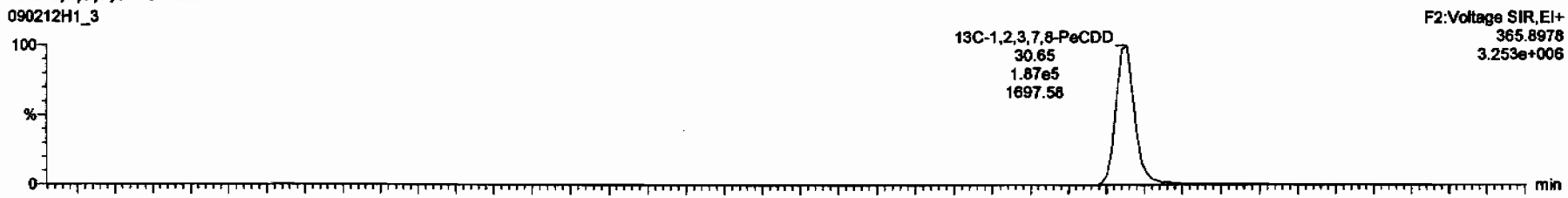

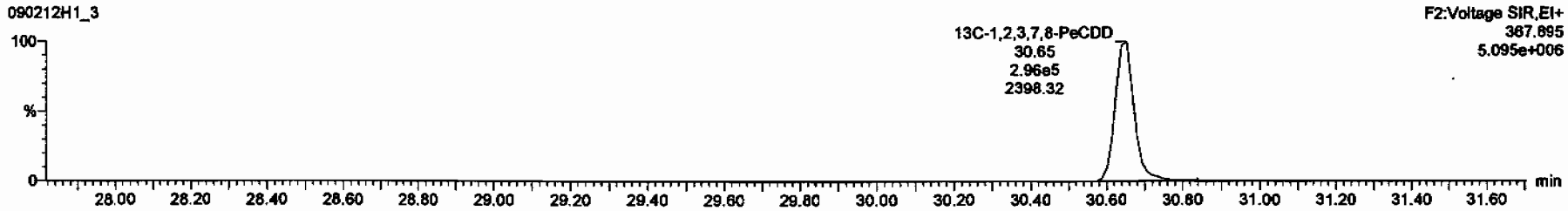

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1,2,3,4,7,8-HxCDD

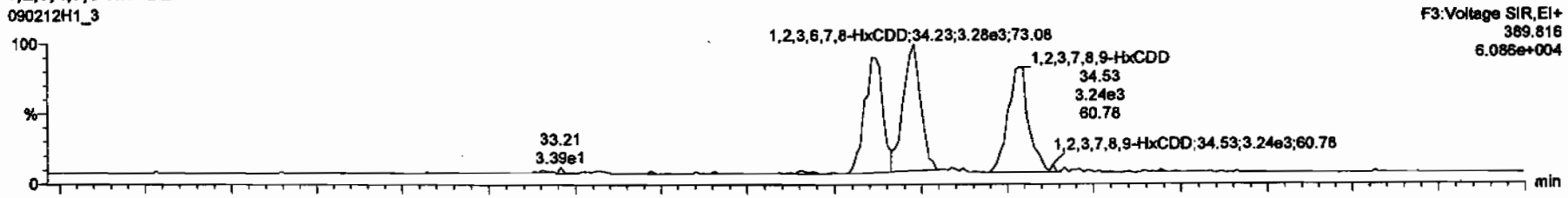

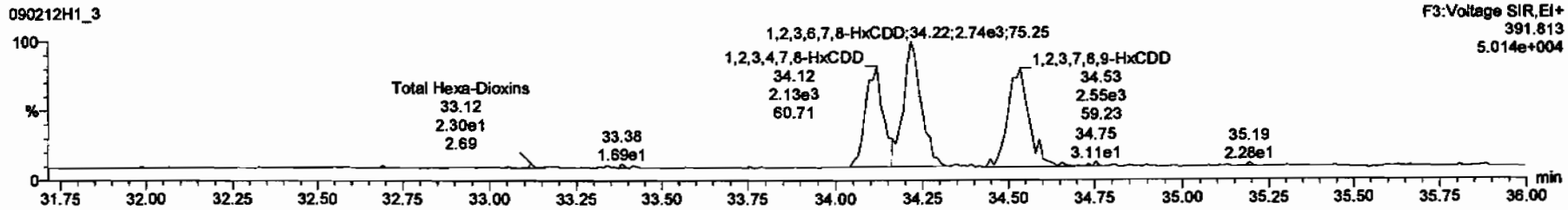

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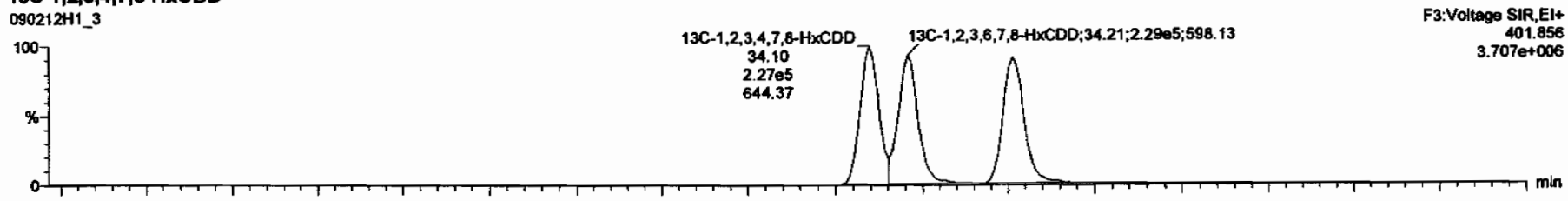

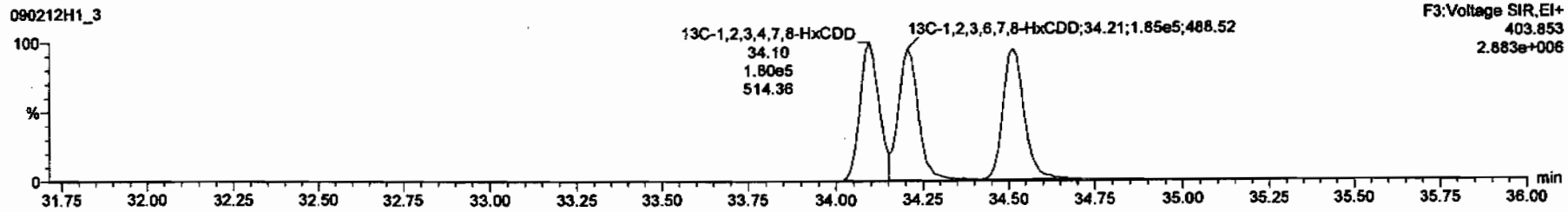

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1,2,3,4,6,7,8-HpCDD

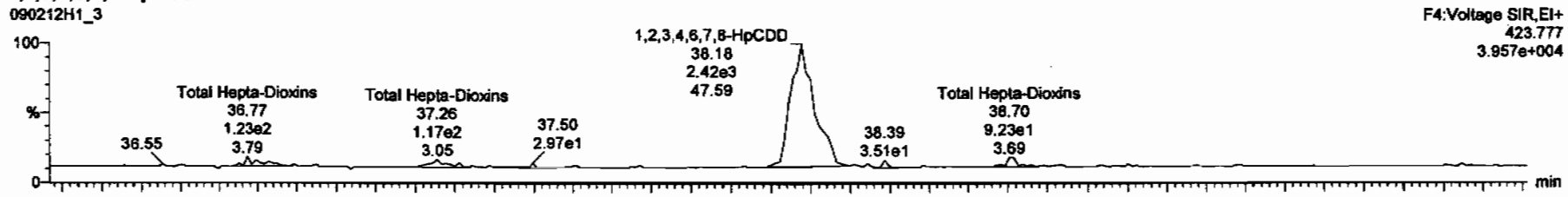

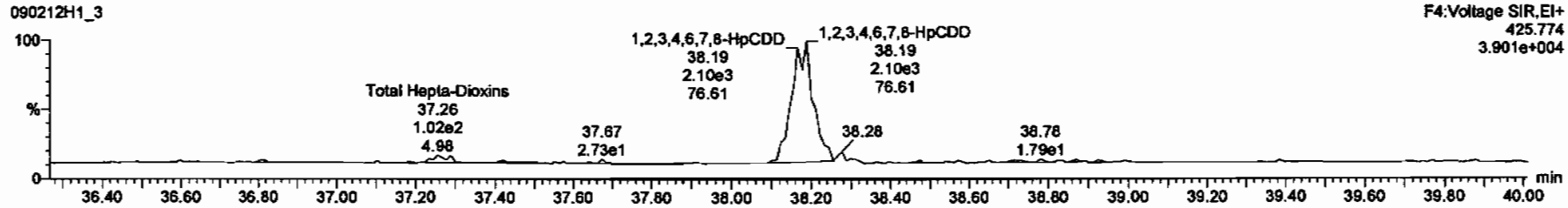

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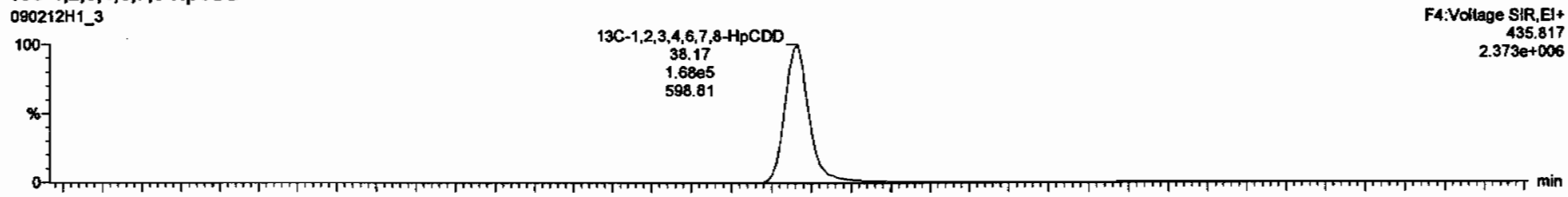

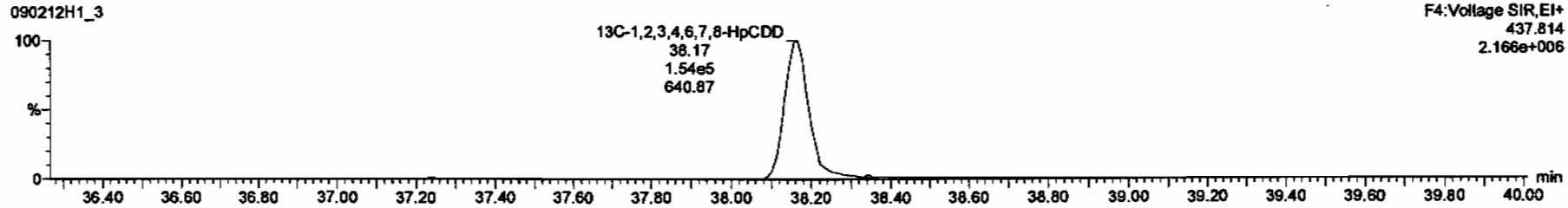

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OCDD

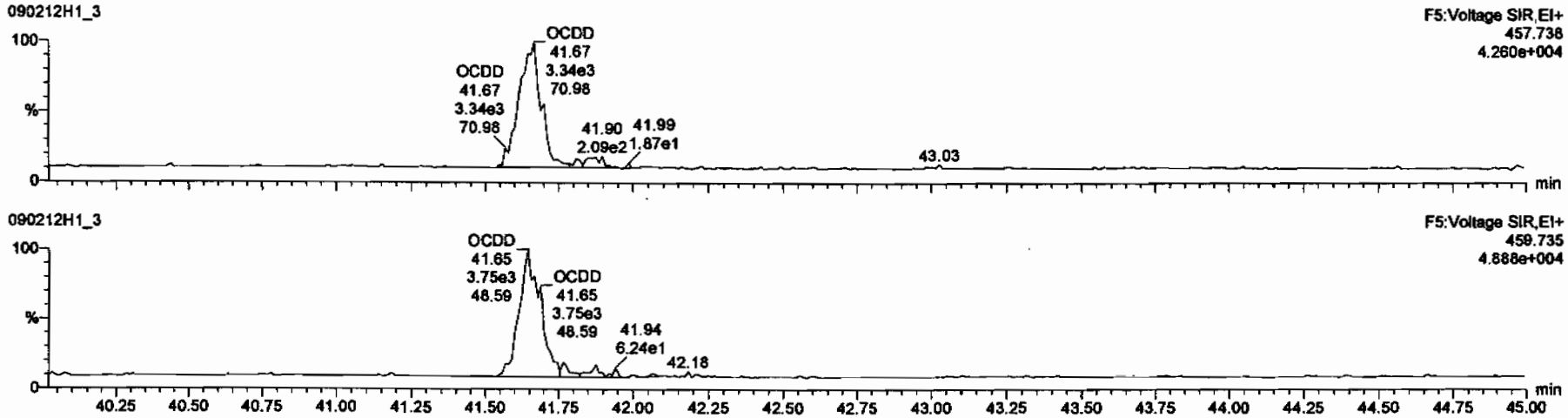

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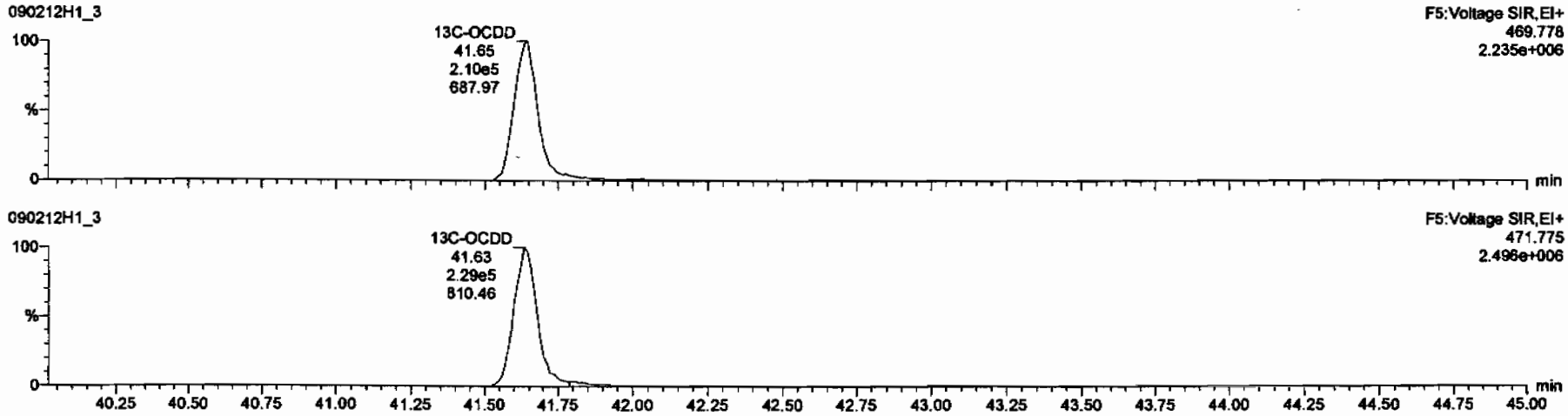

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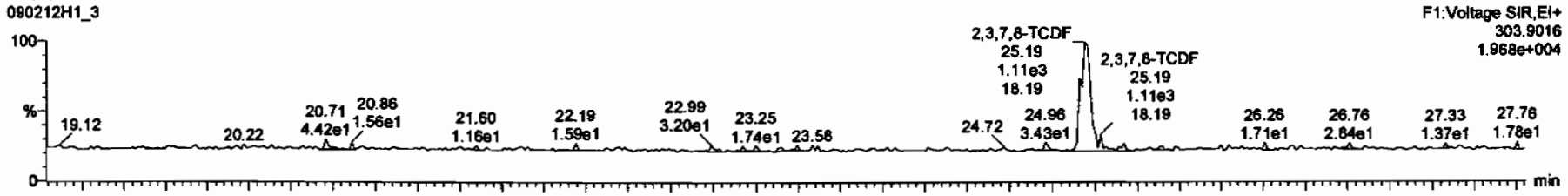

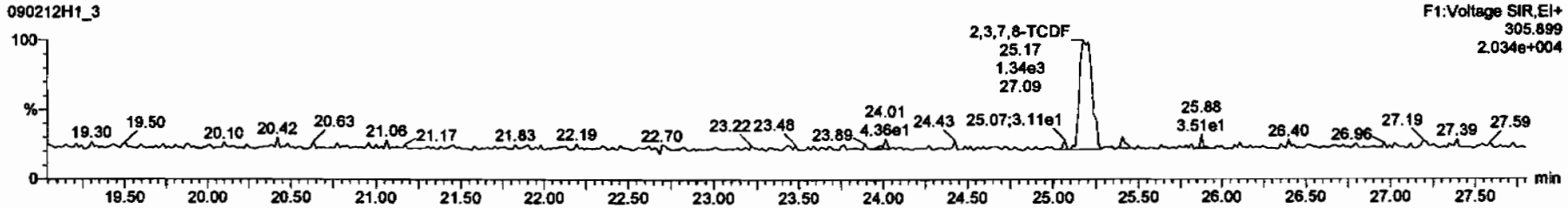

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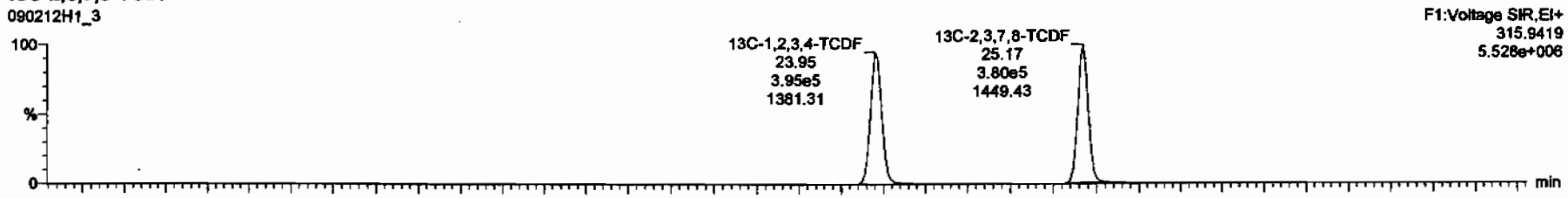

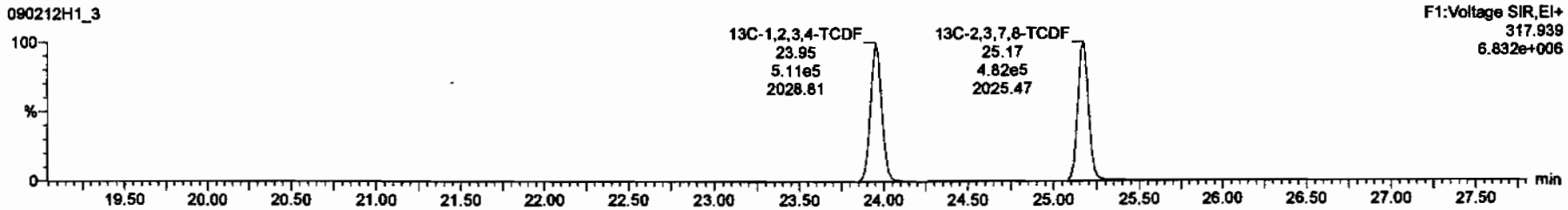

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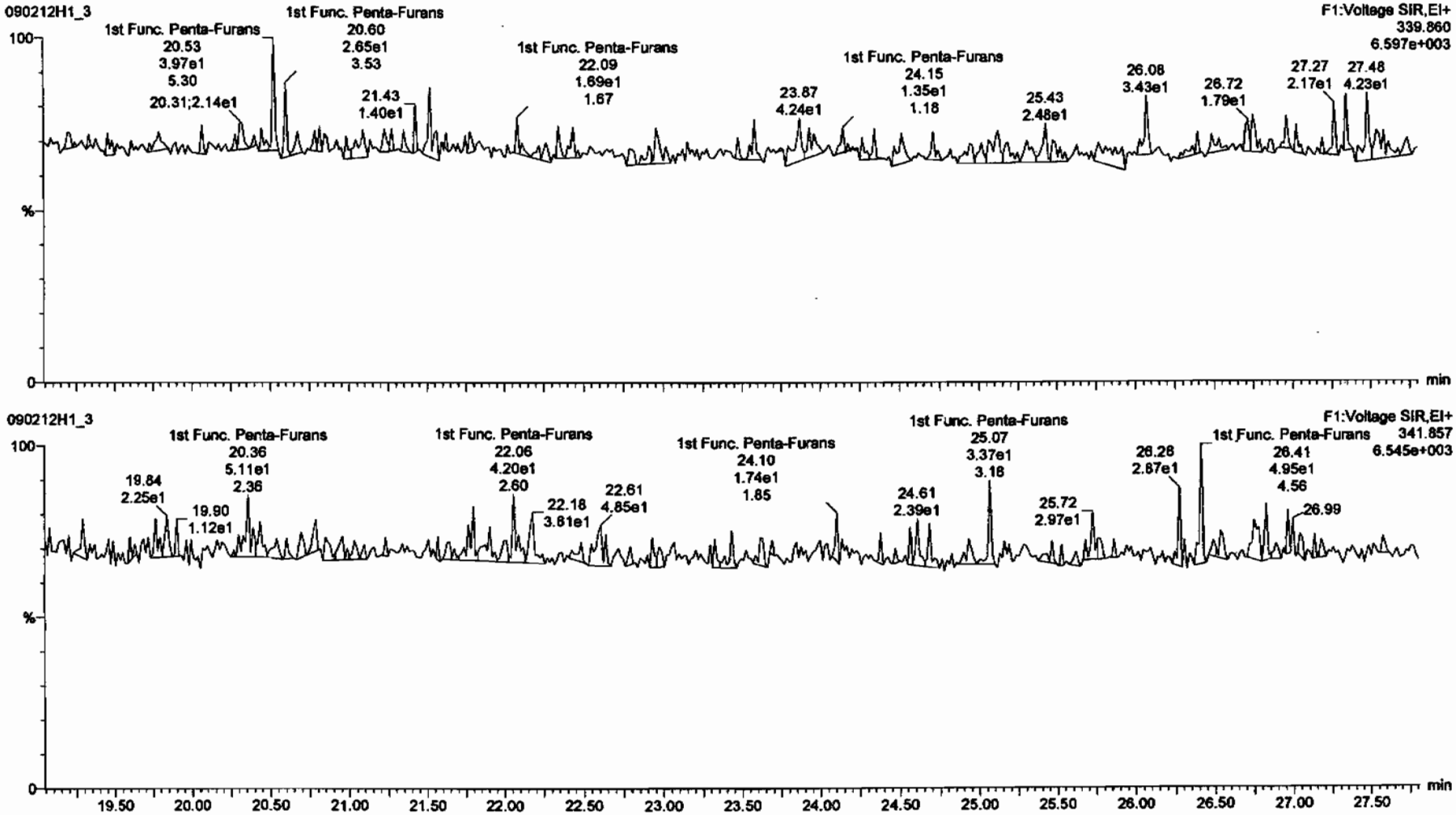

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1,2,3,7,8-PeCDF

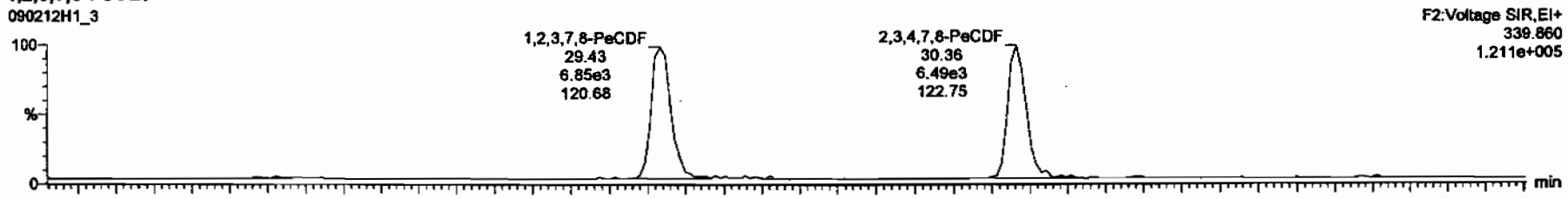

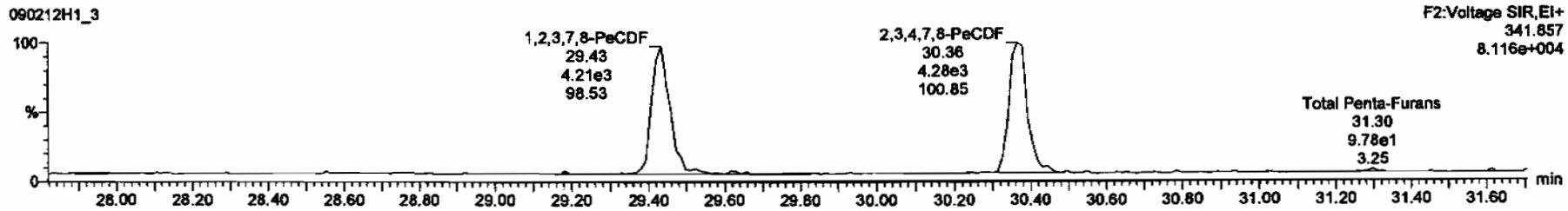

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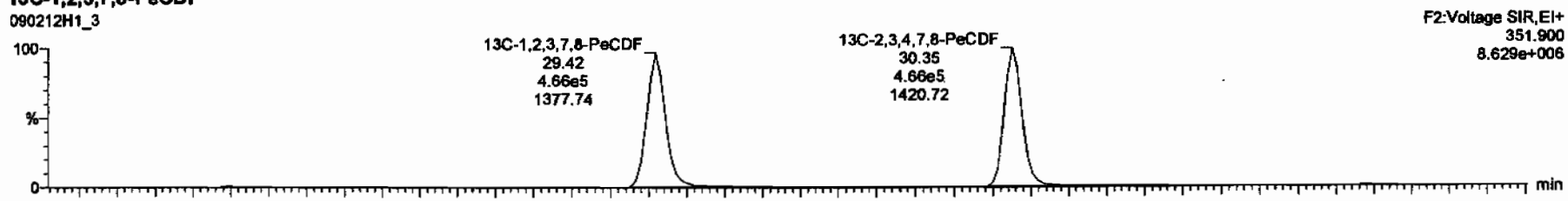

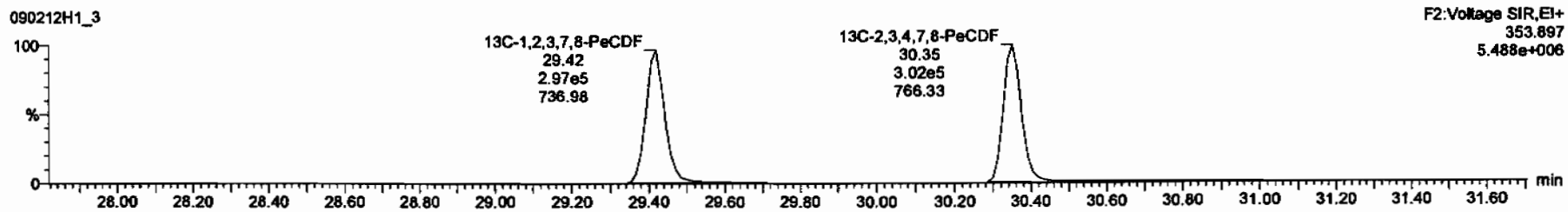

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1,2,3,4,7,8-HxCDF

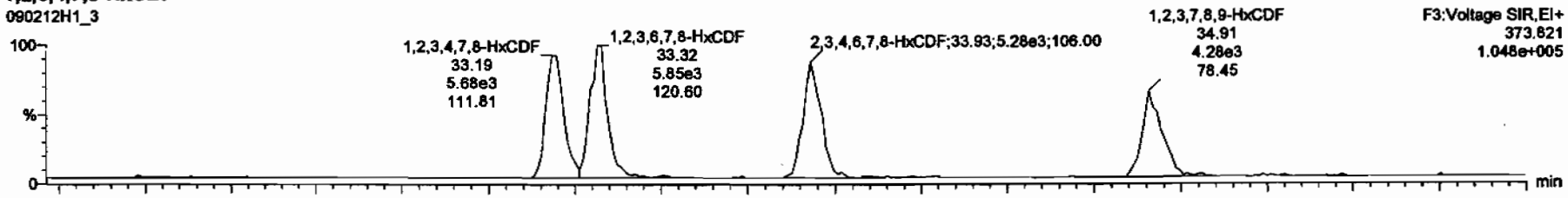

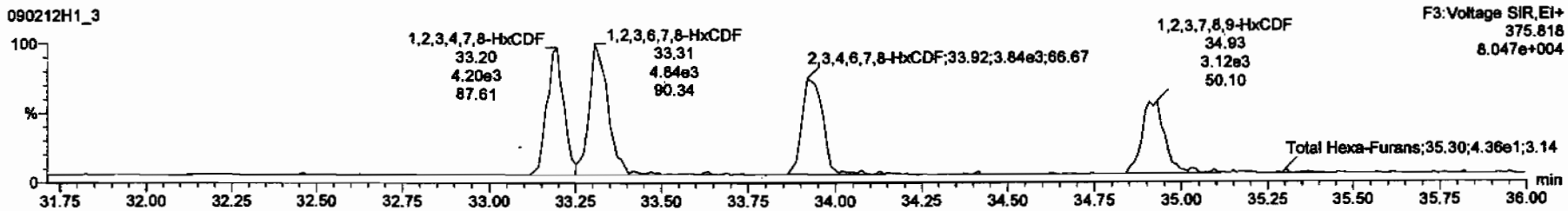

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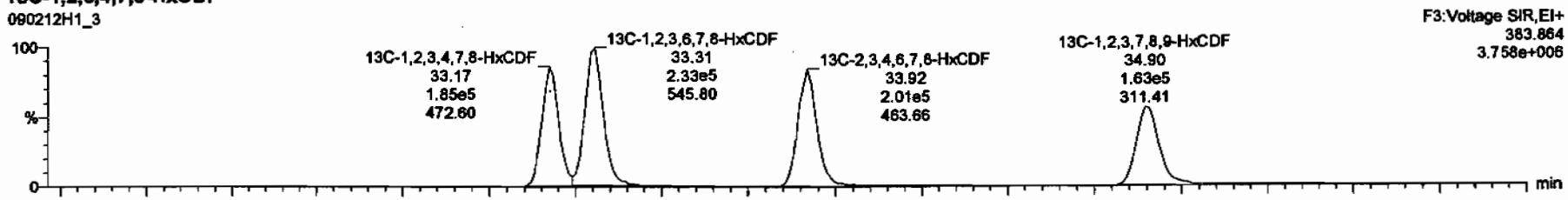

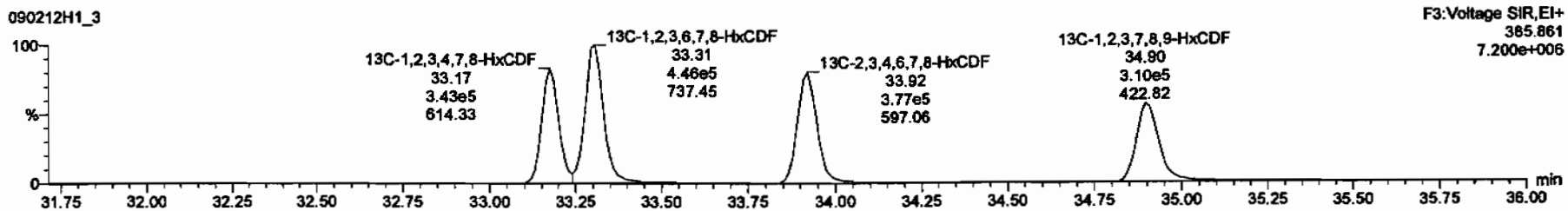

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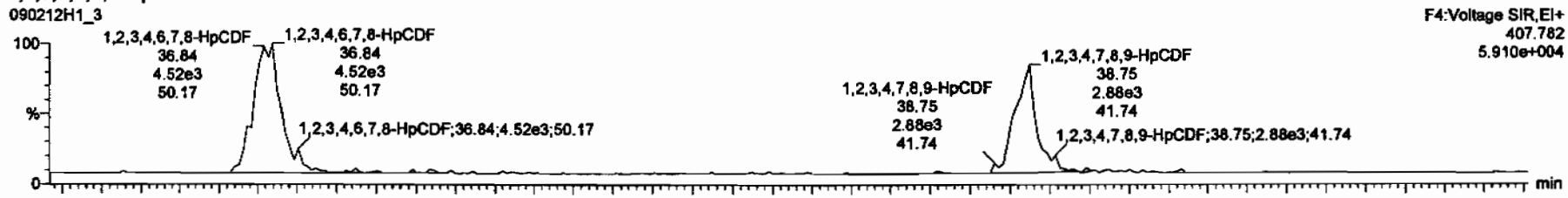

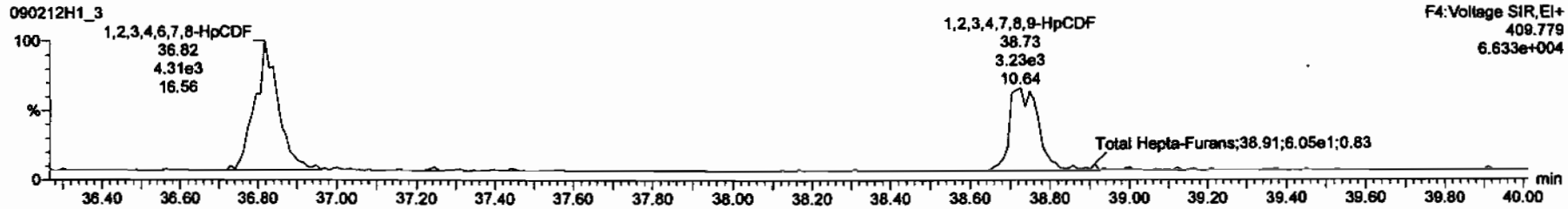

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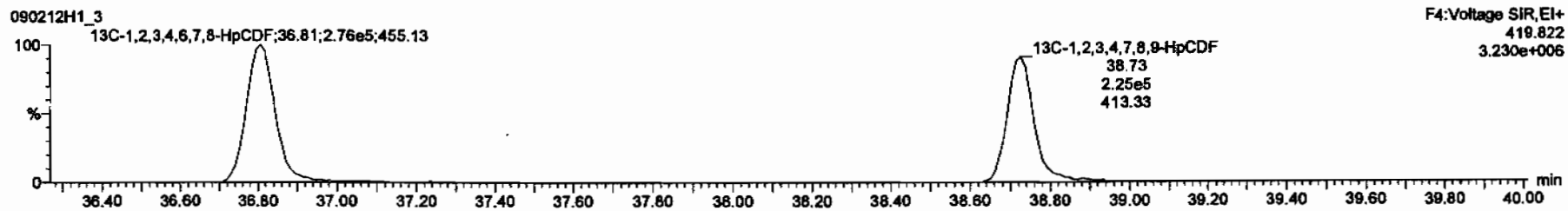

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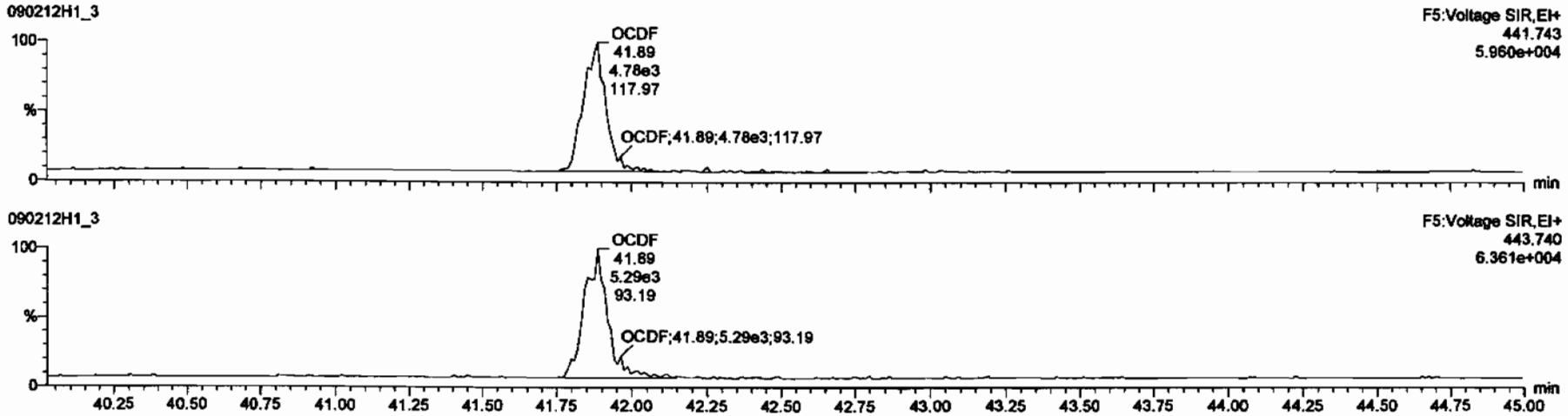

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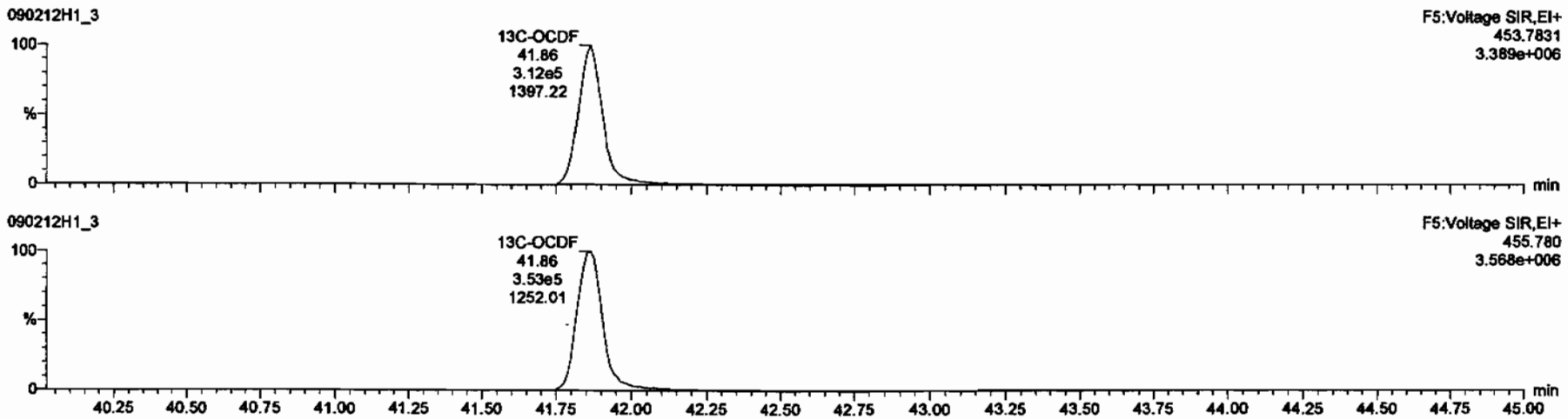

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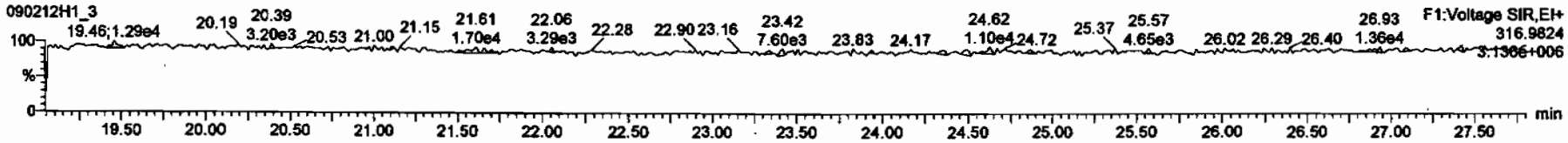

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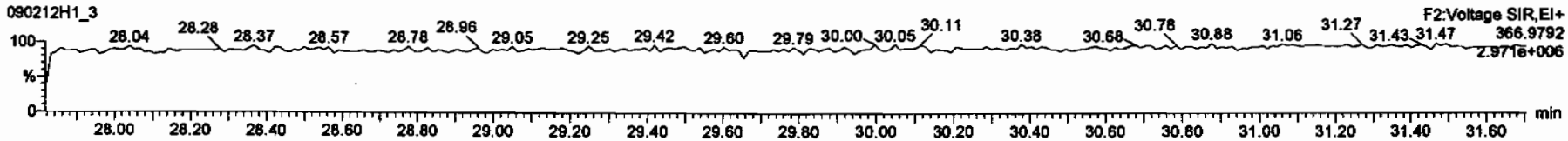

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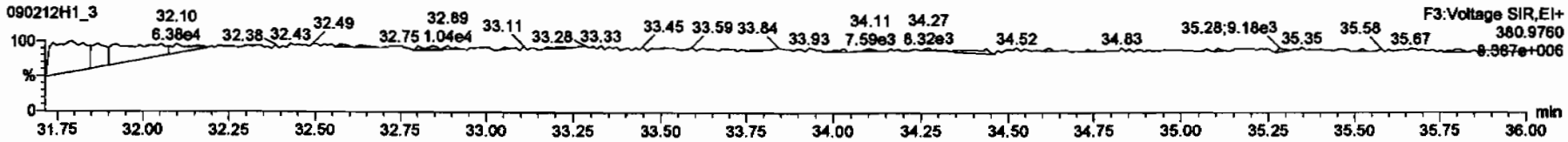

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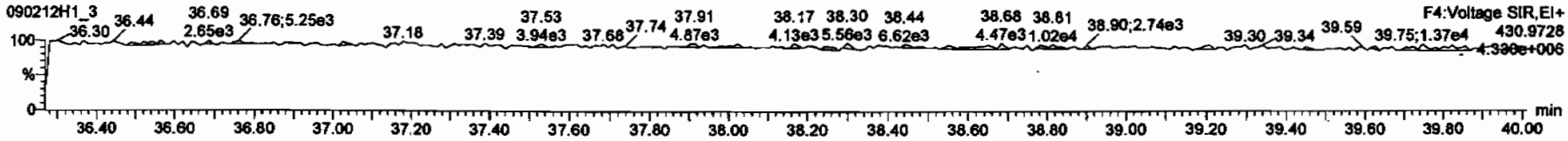

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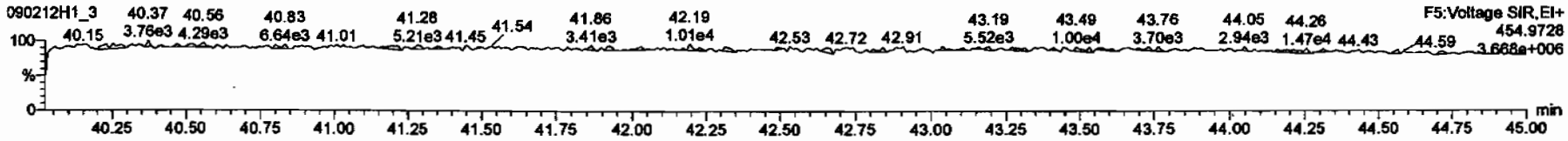

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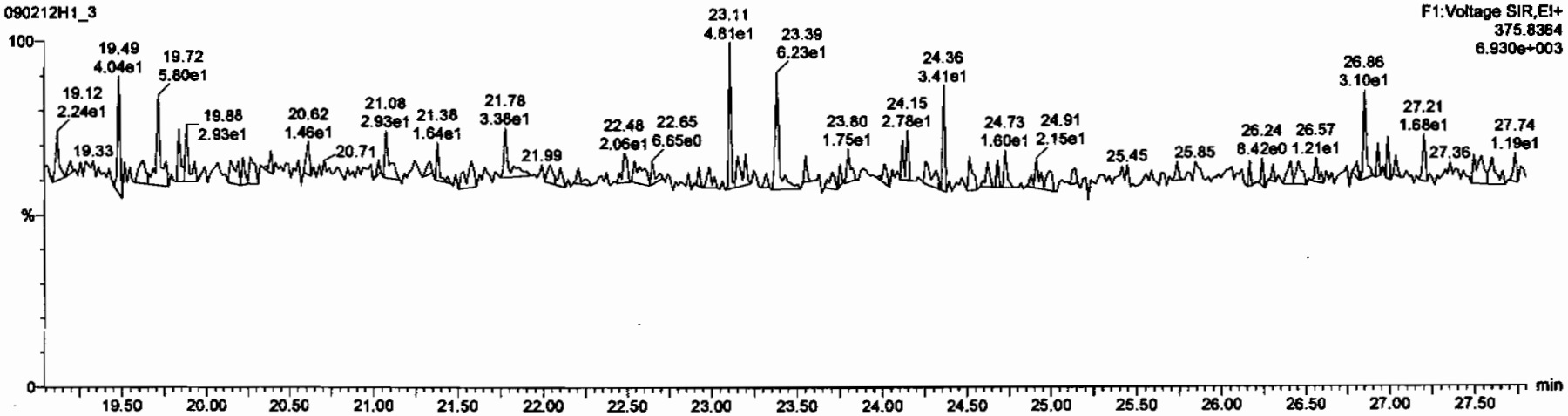

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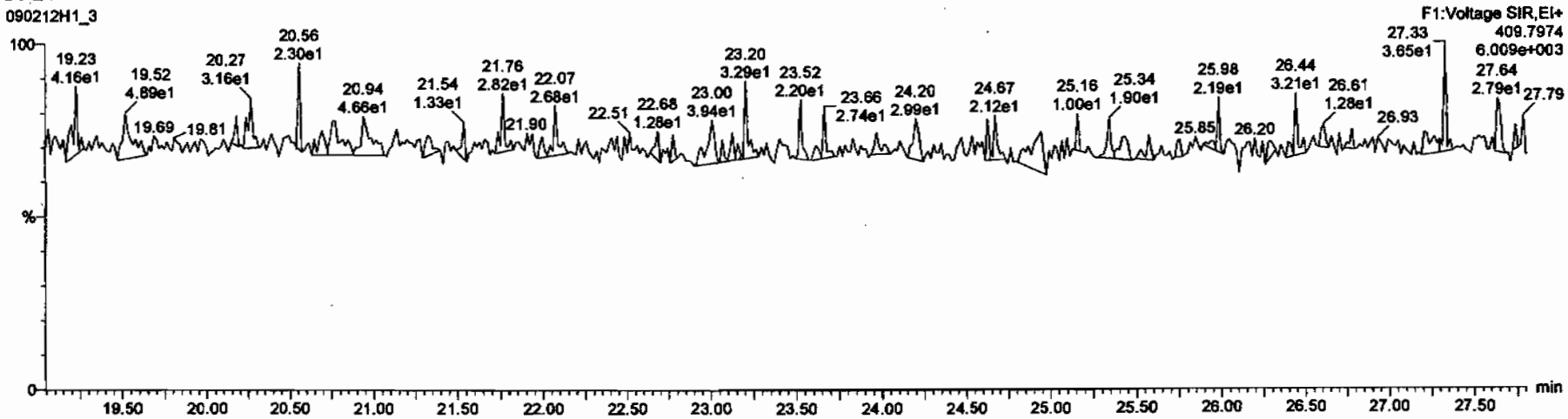

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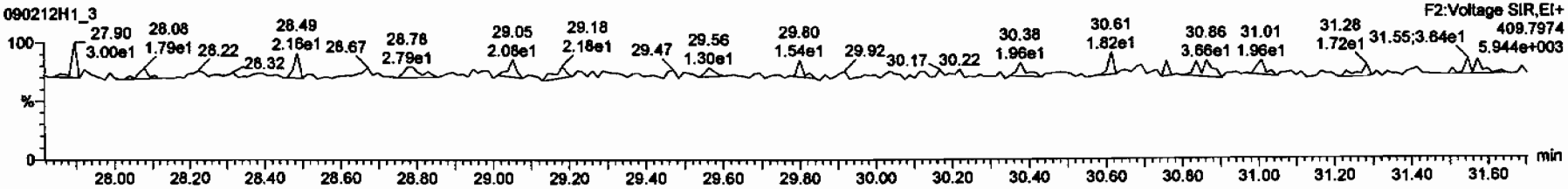

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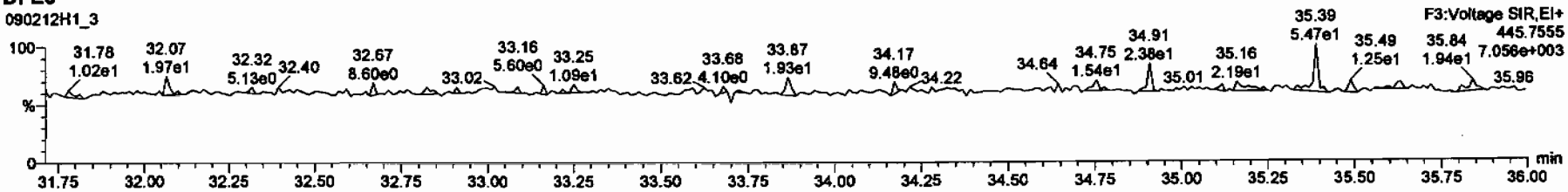

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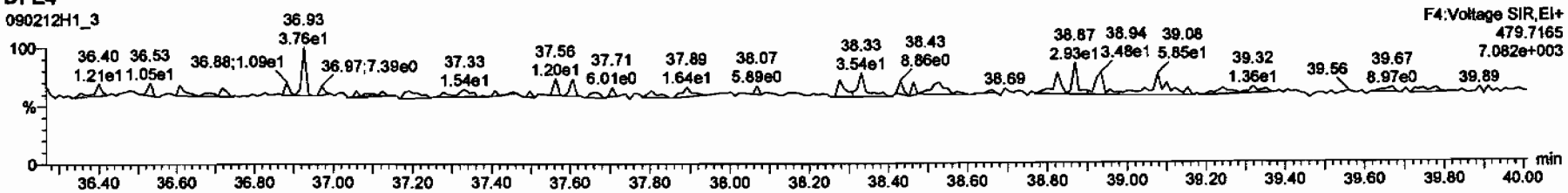

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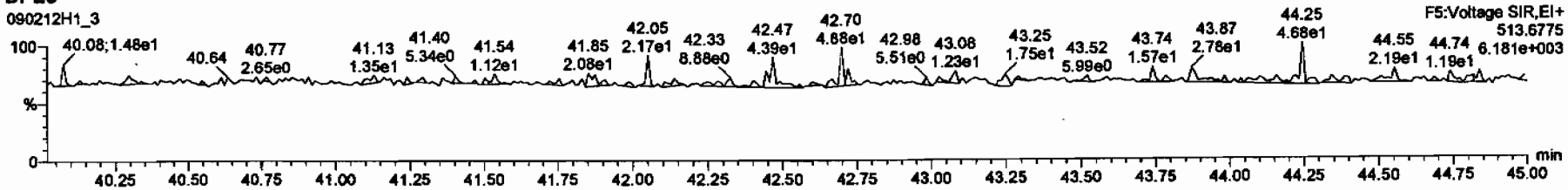

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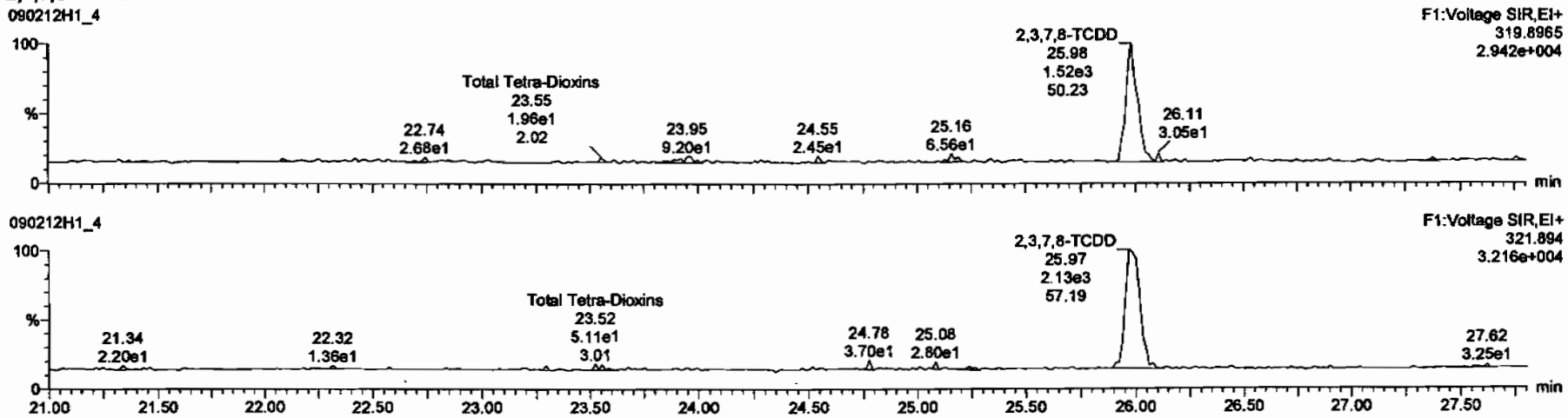

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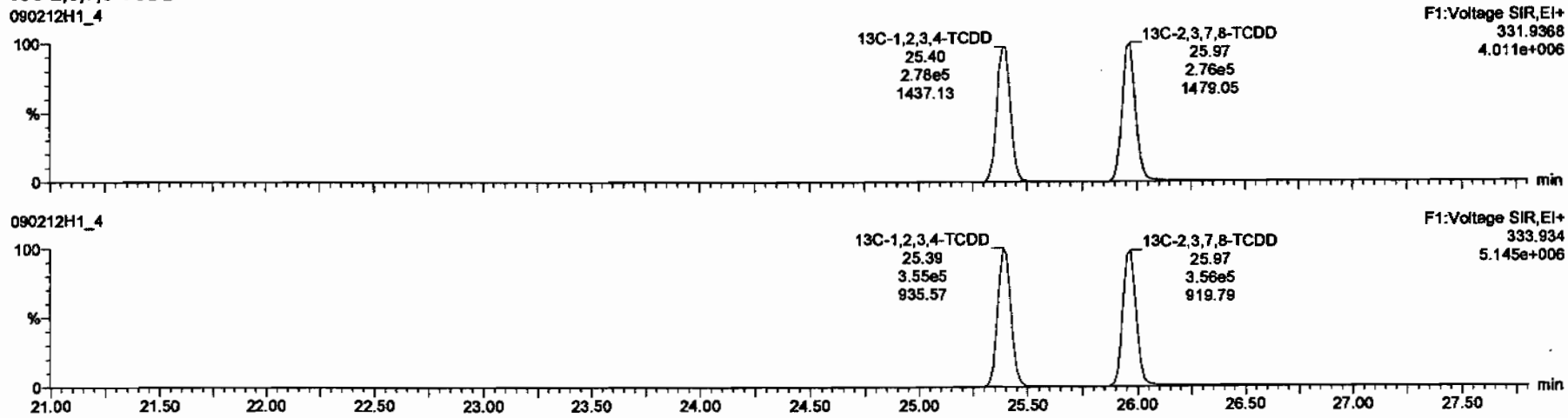

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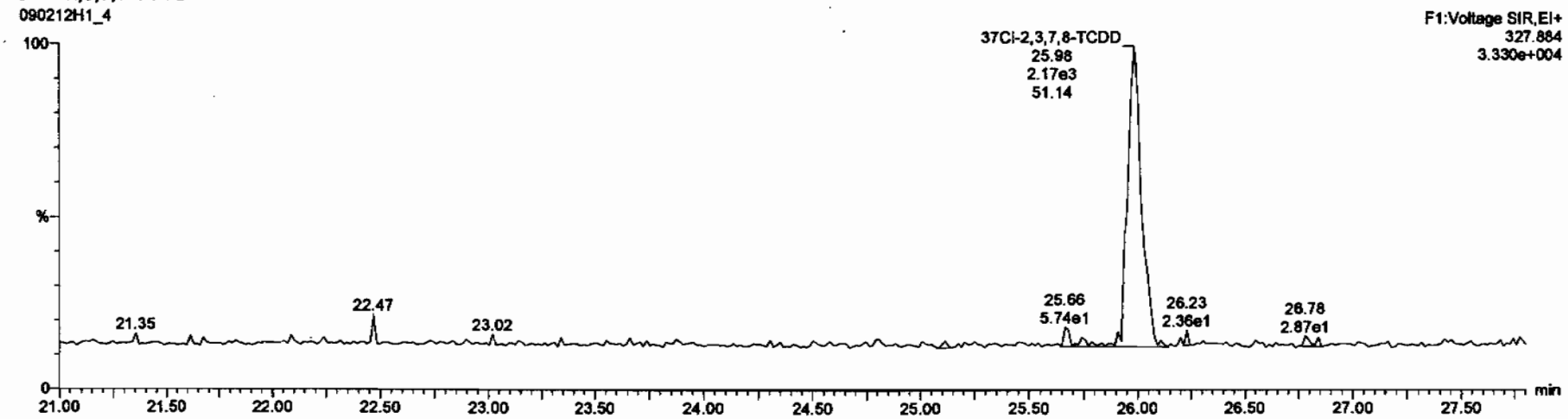

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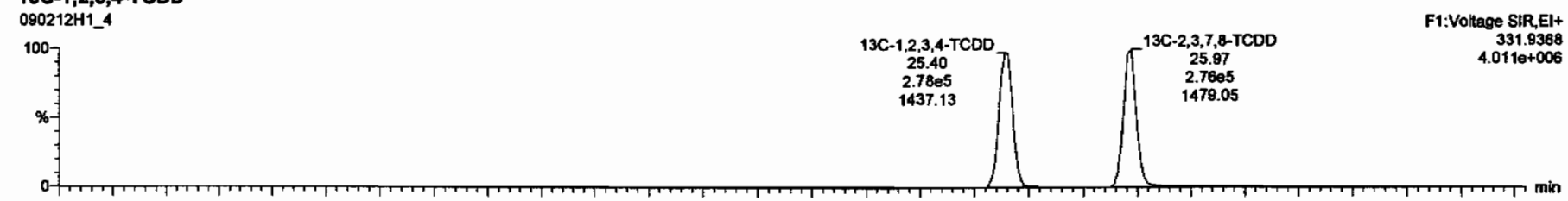

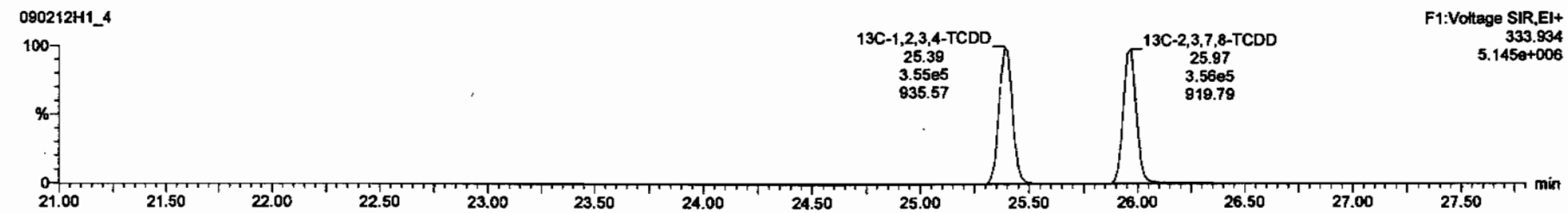

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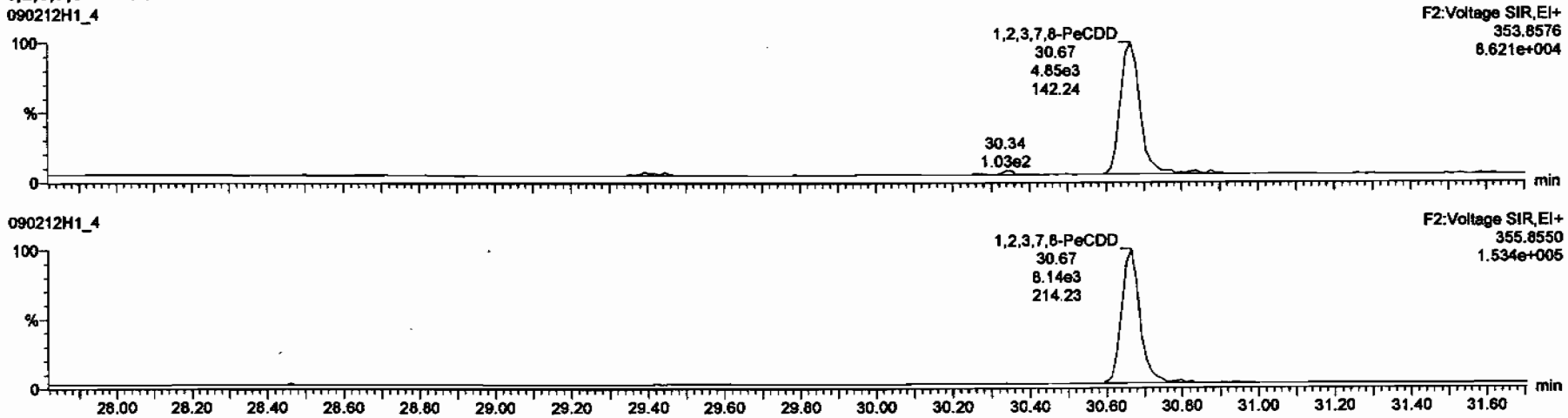

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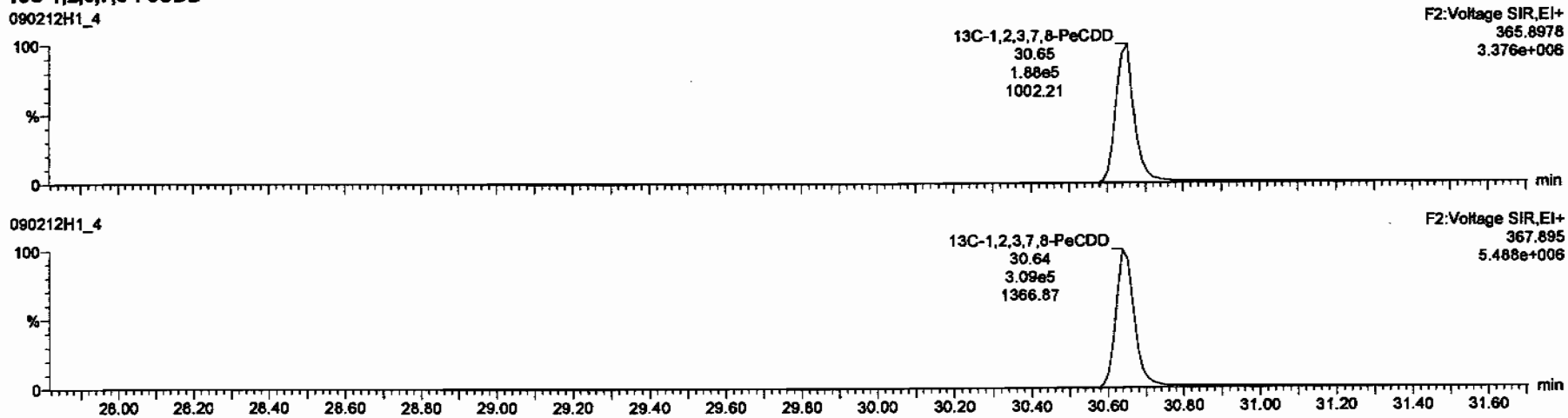

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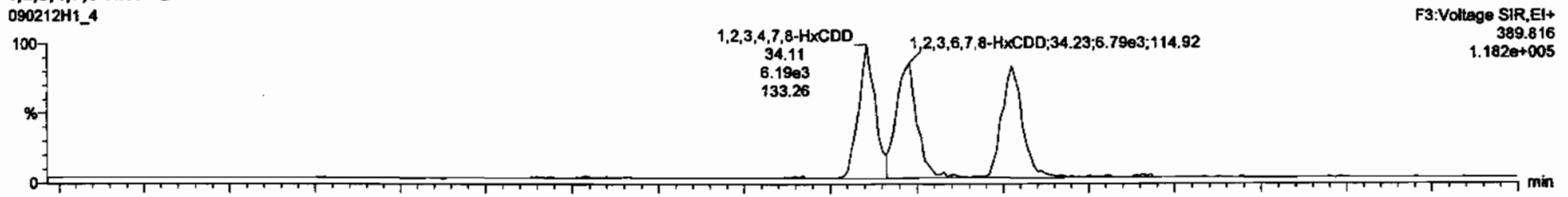

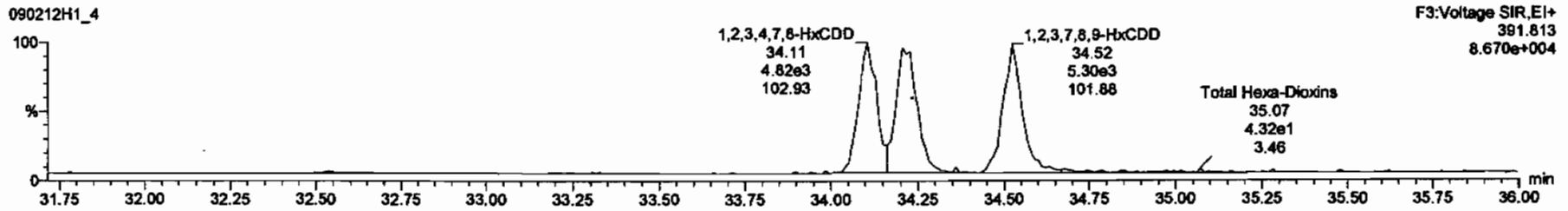

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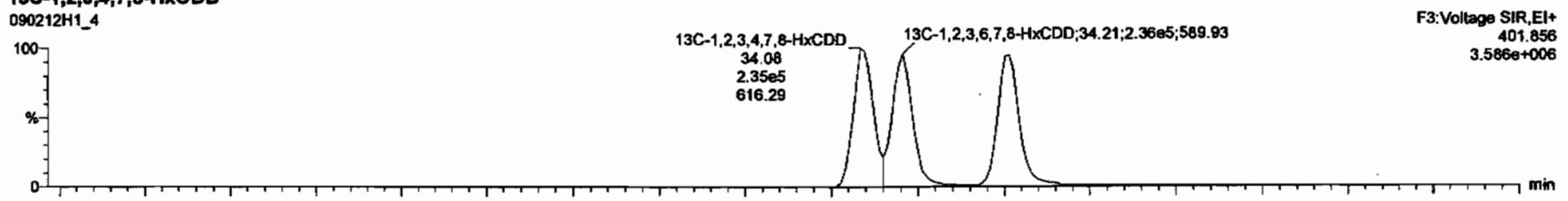

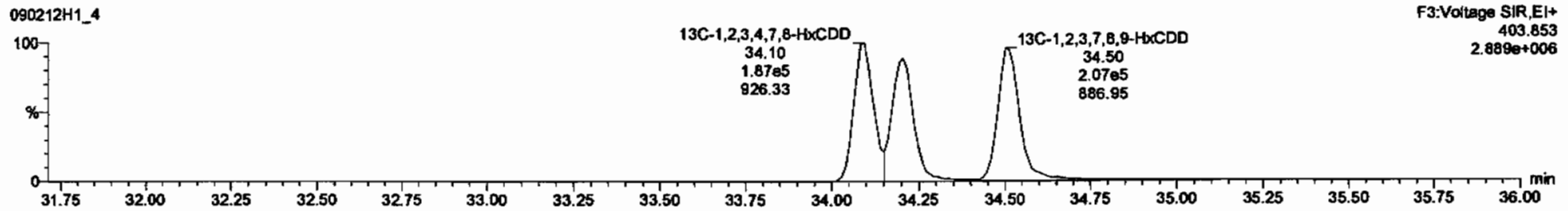

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1,2,3,4,6,7,8-HpCDD

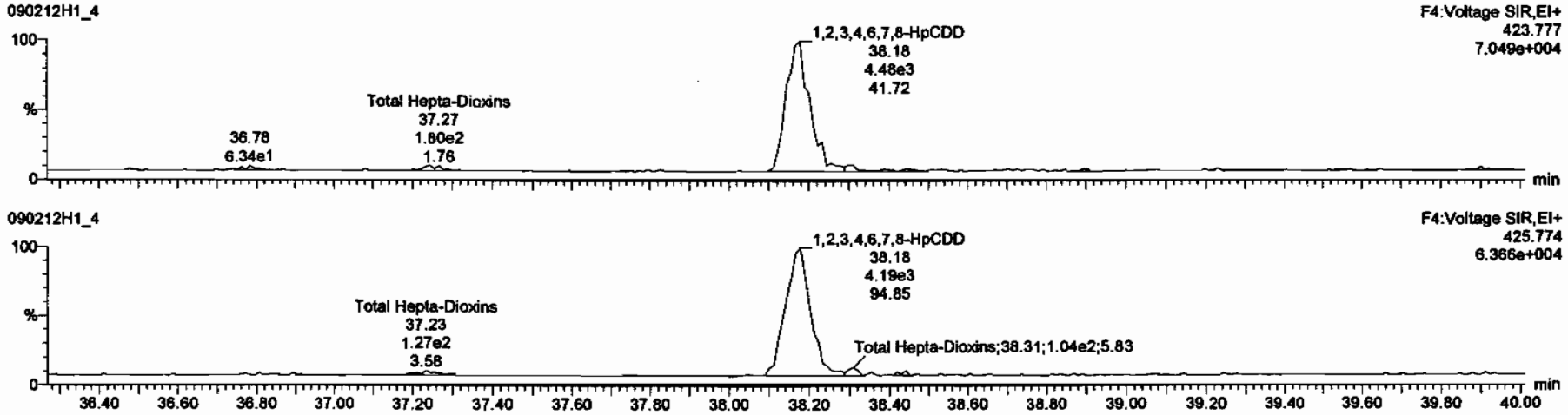

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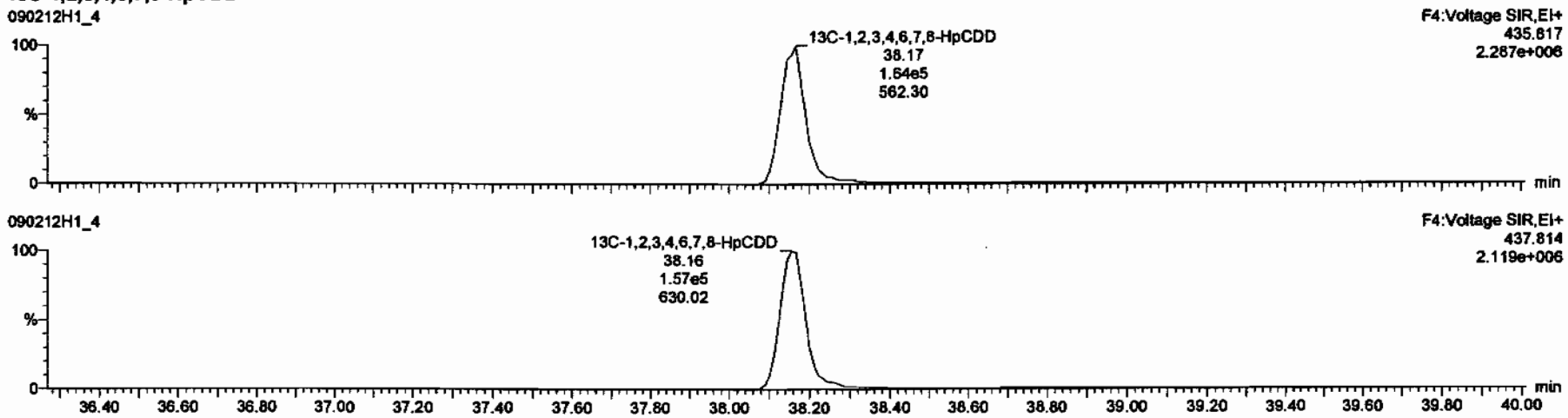

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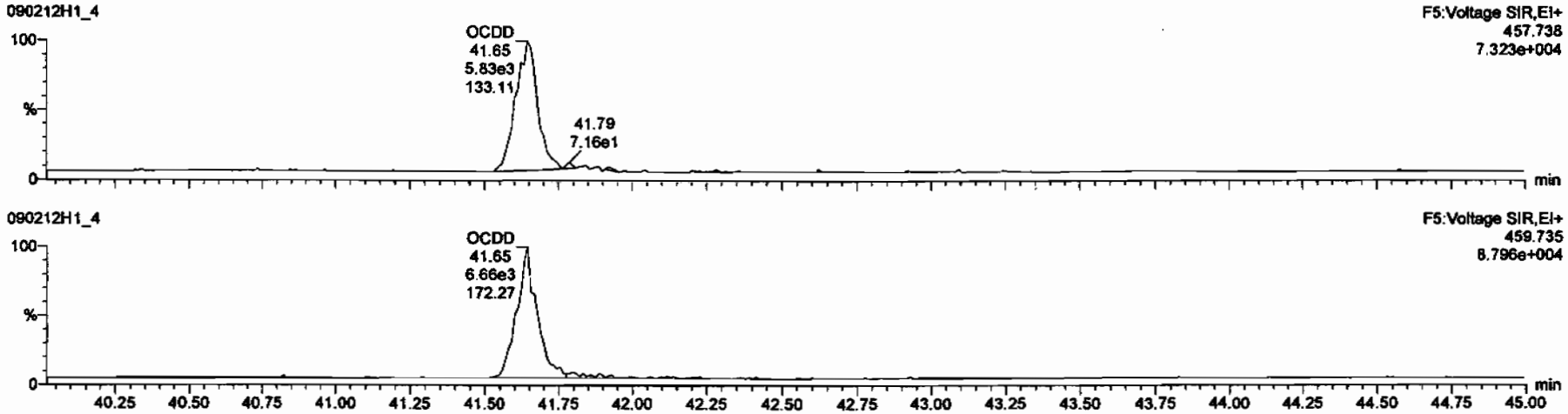

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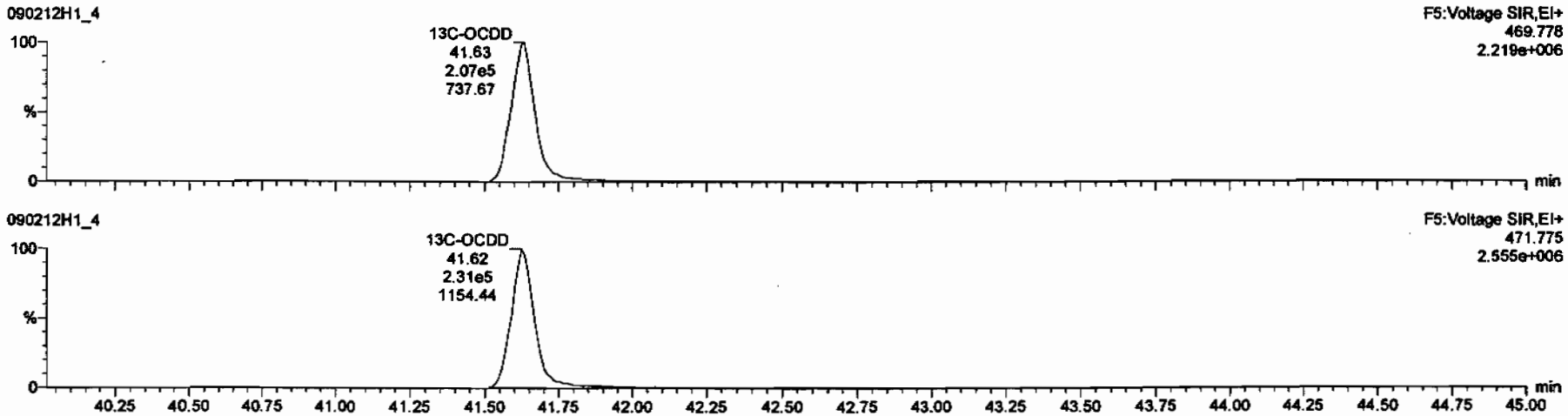

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2,3,7,8-TCDF

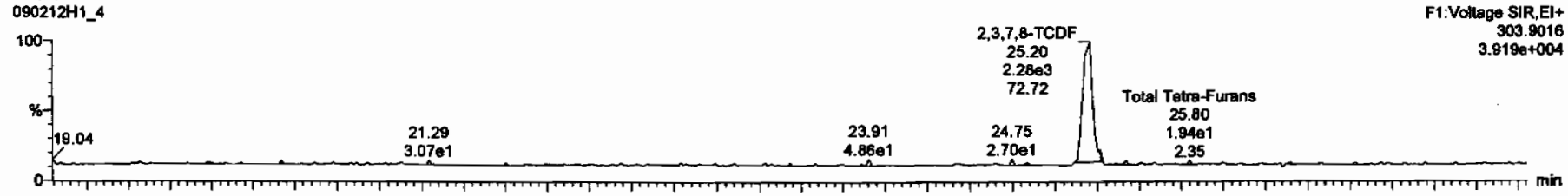

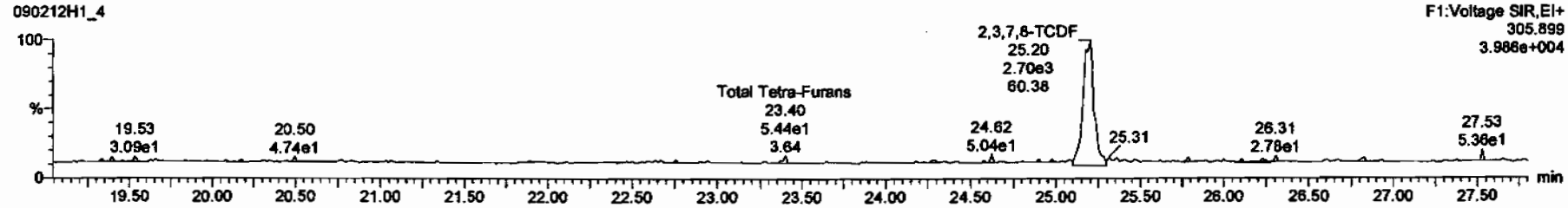

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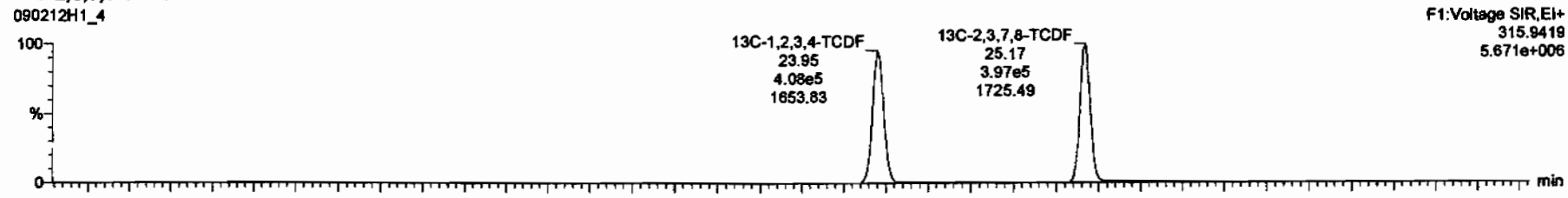

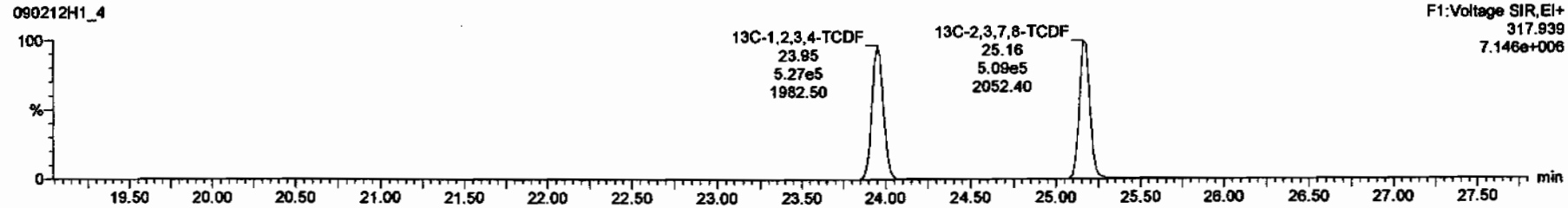

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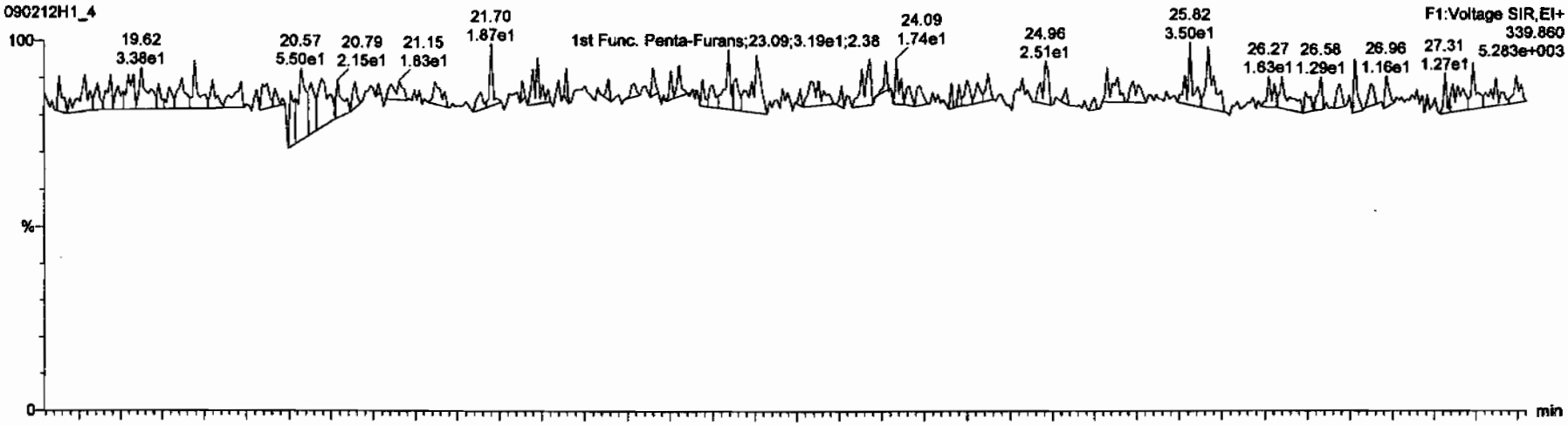

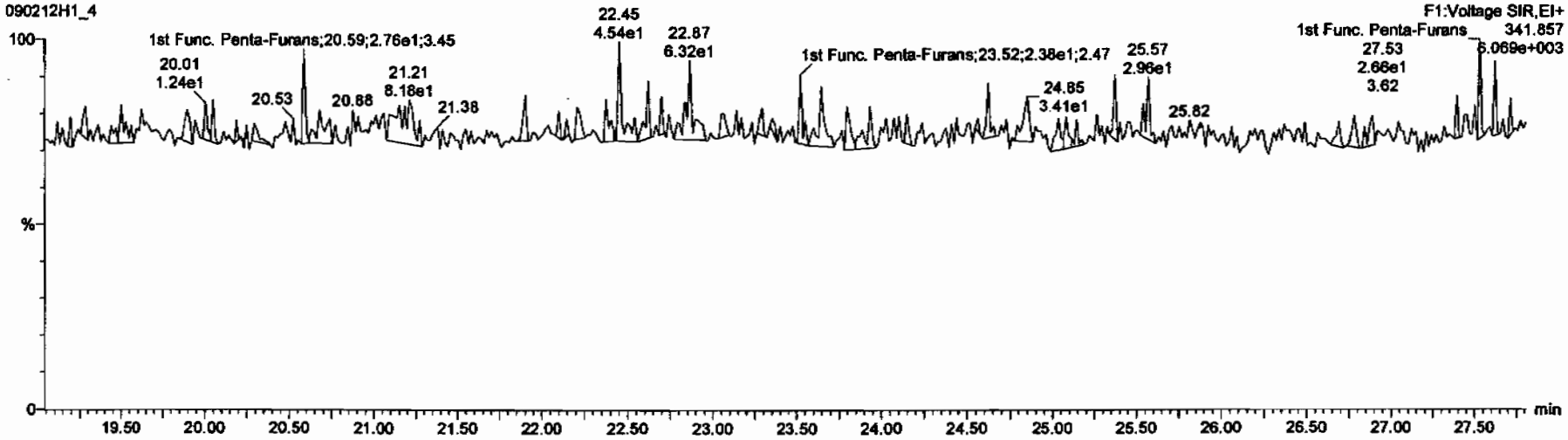

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1,2,3,7,8-PeCDF

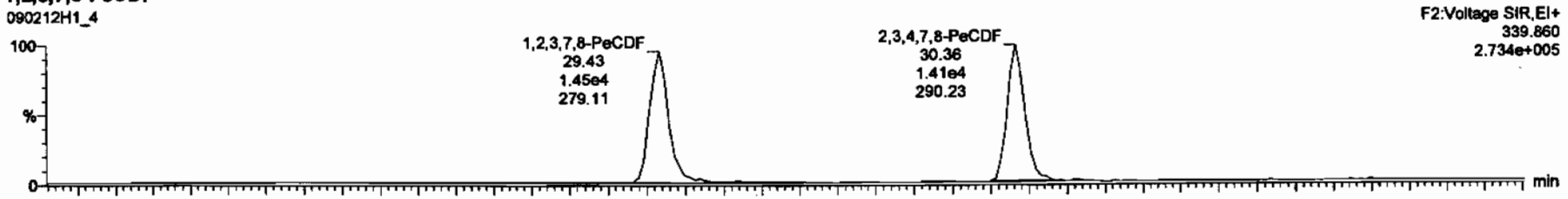

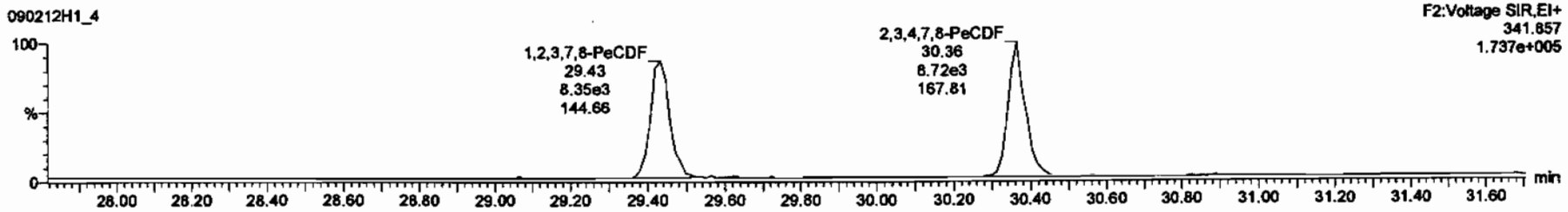

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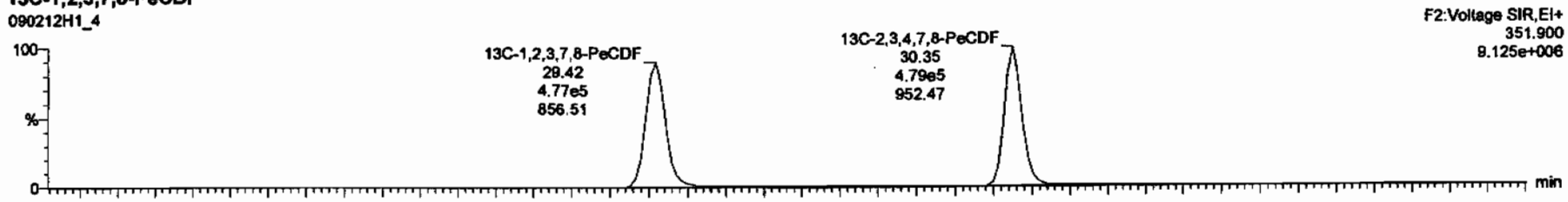

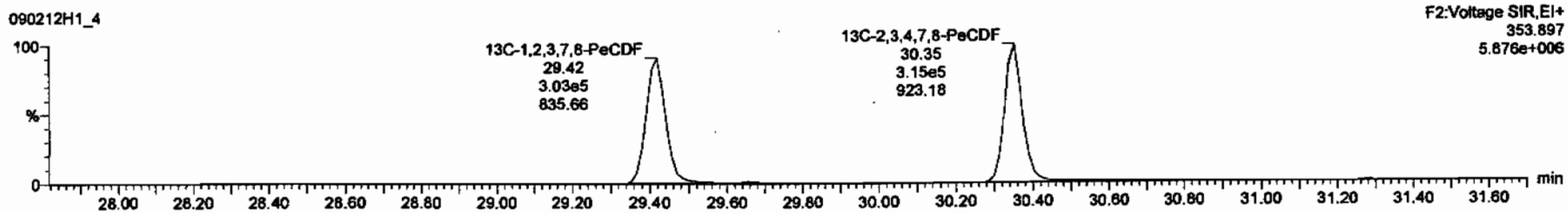

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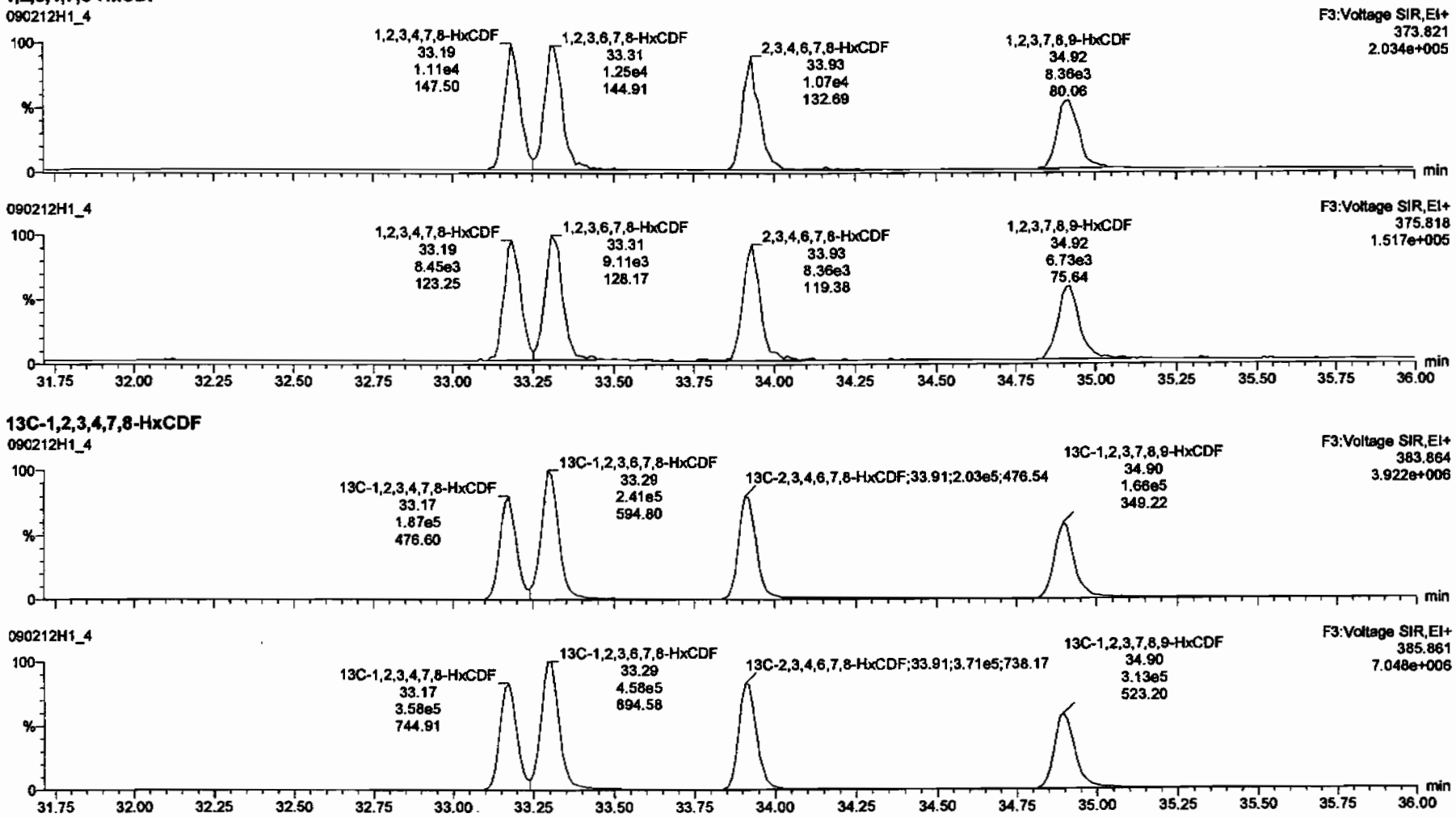

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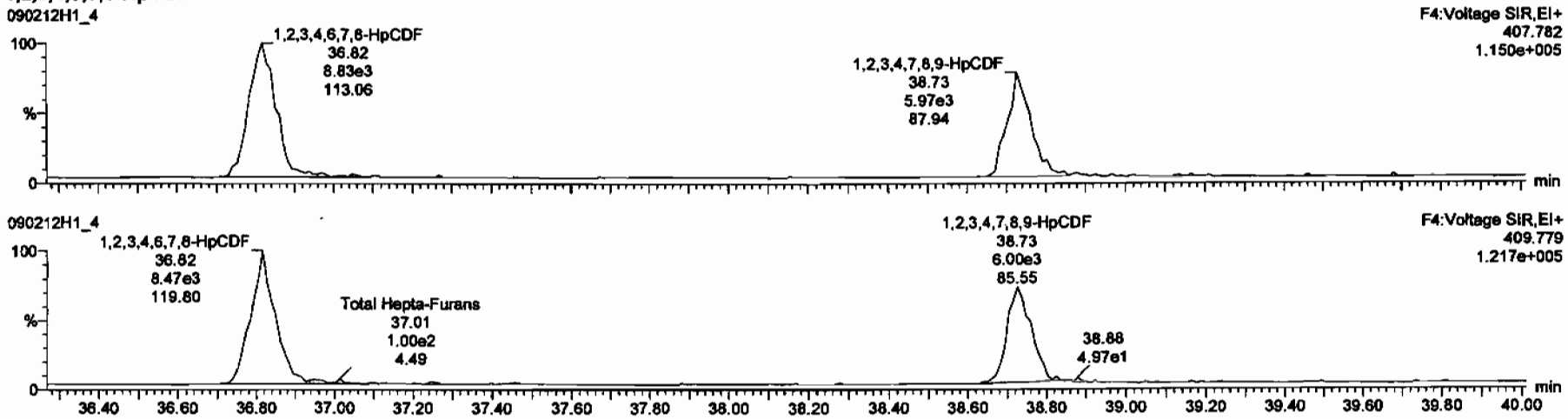

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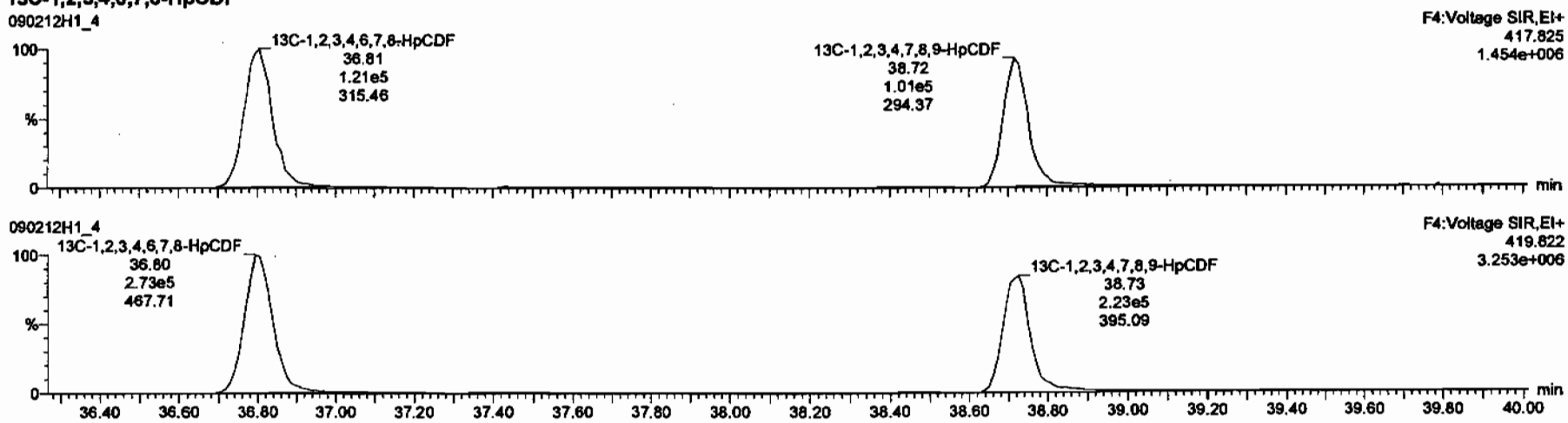

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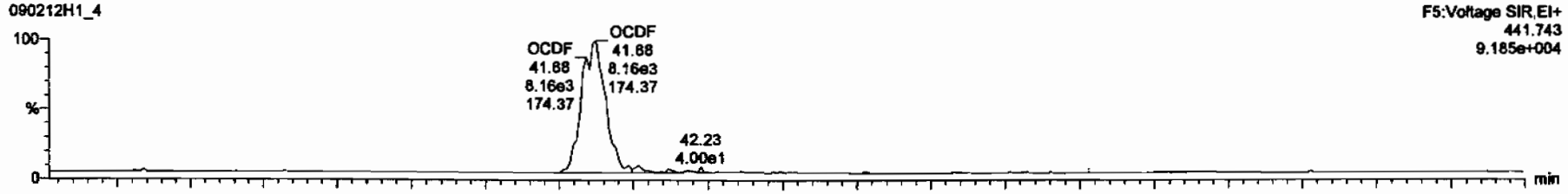

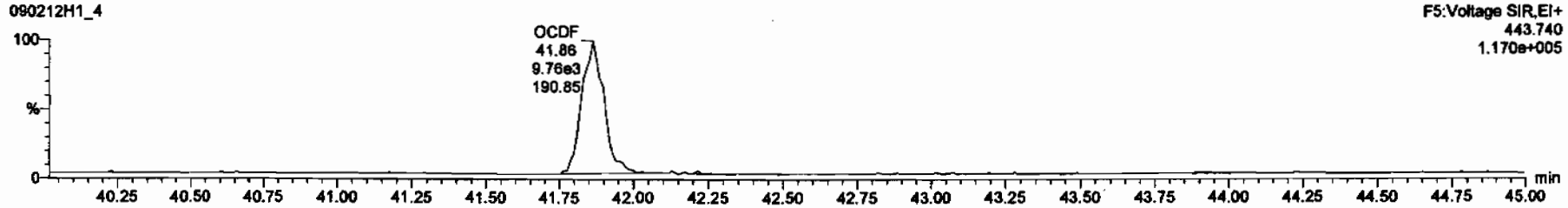

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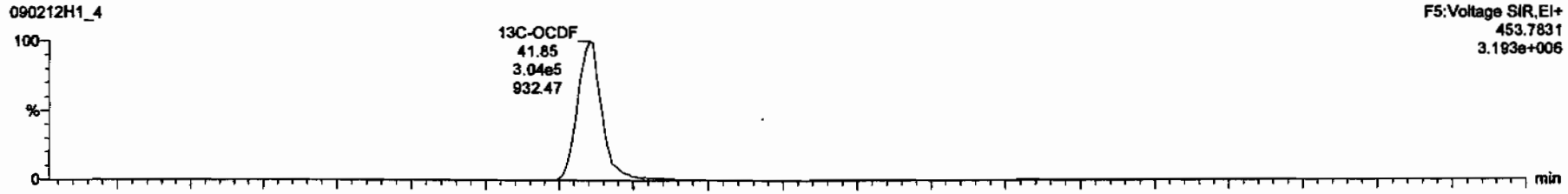

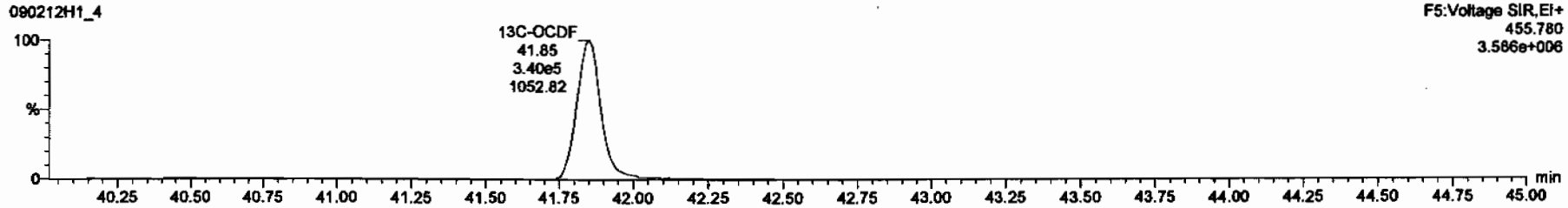

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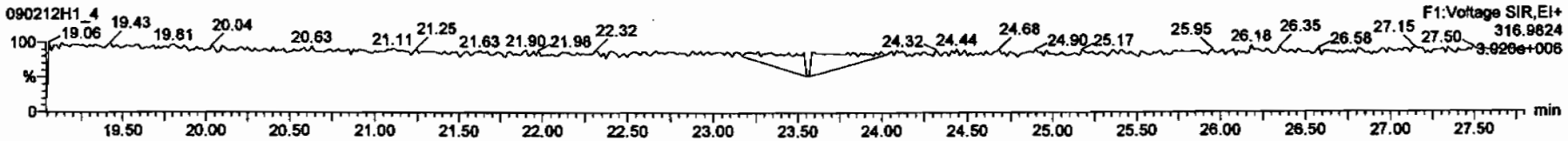

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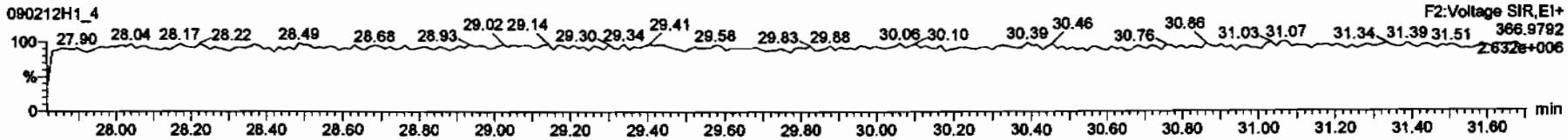

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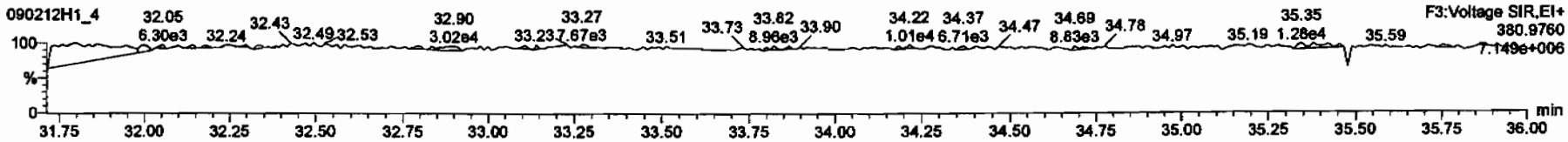

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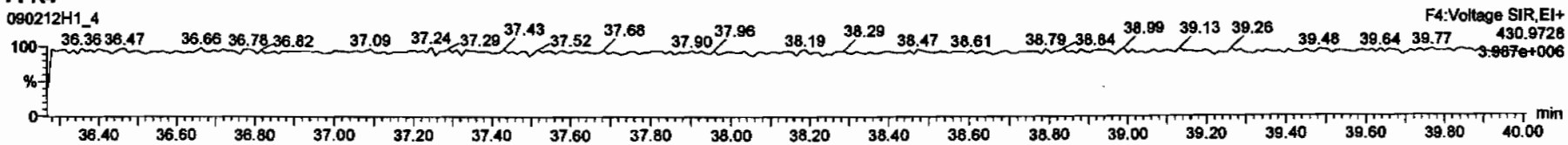

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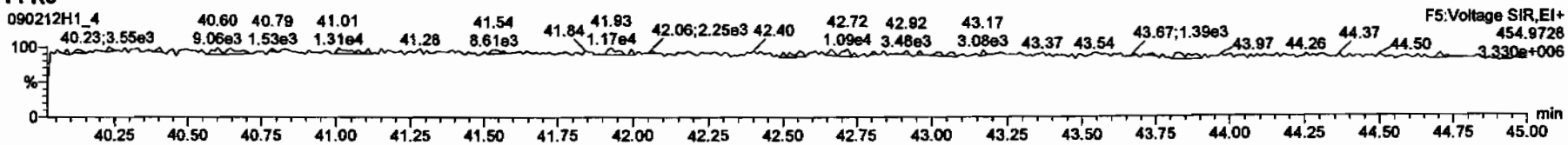

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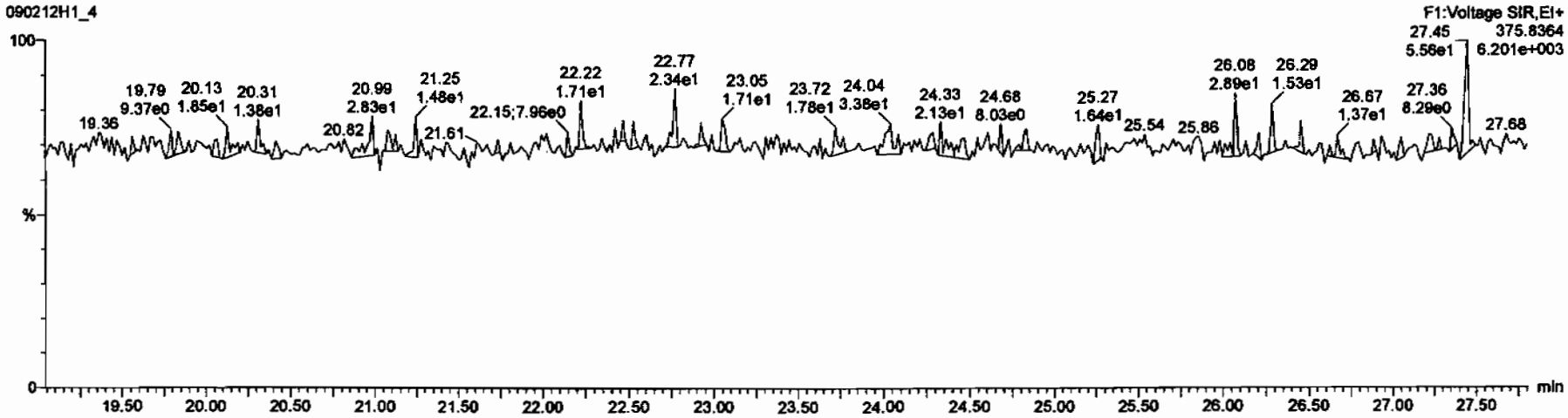

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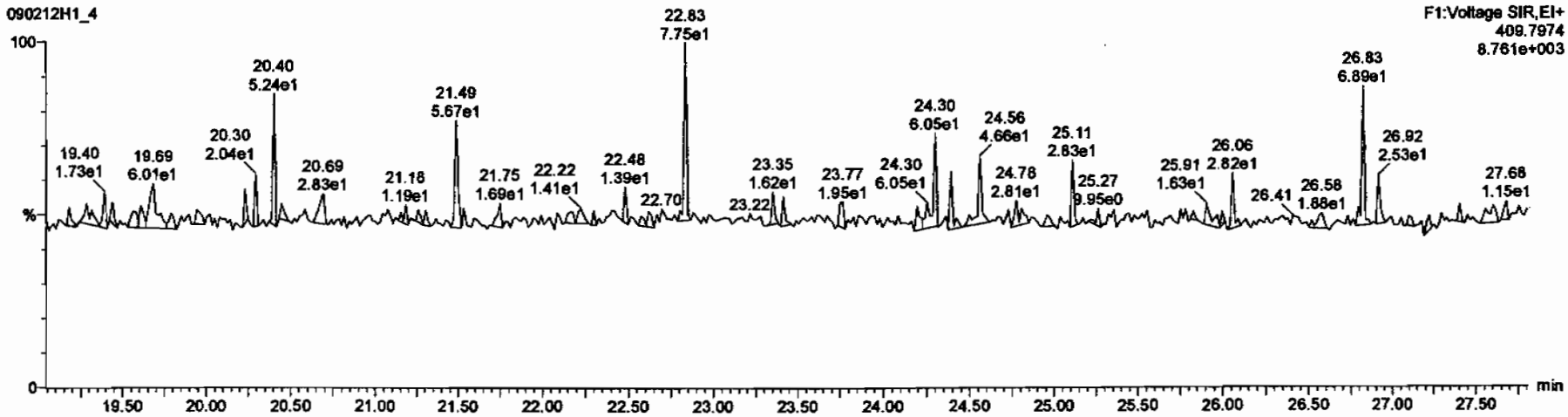

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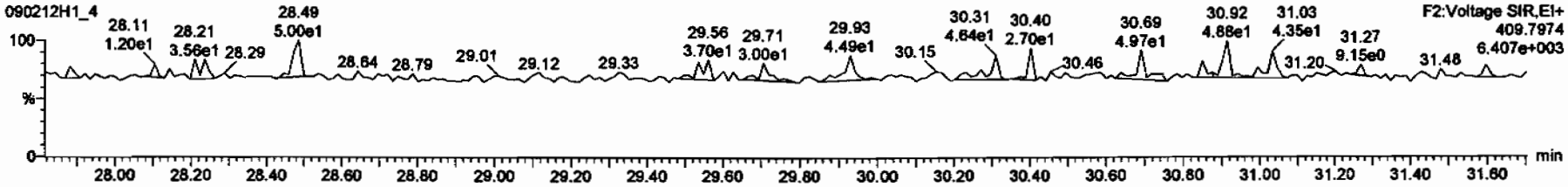

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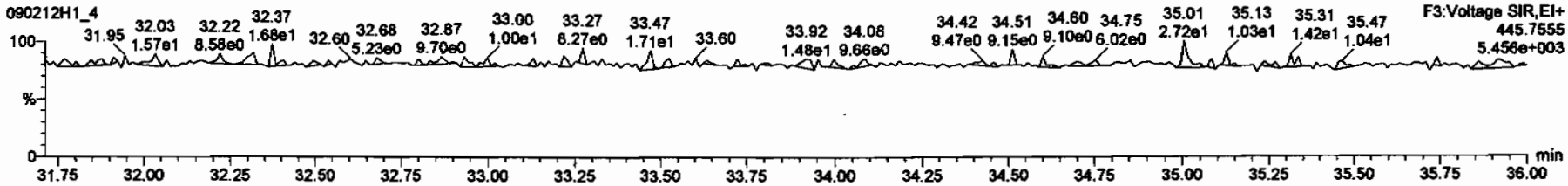

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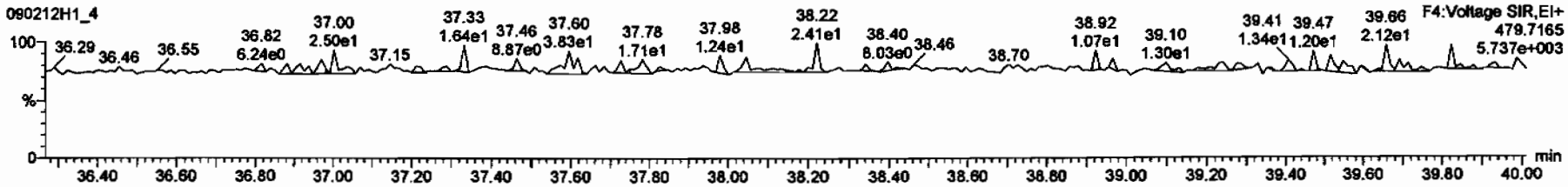

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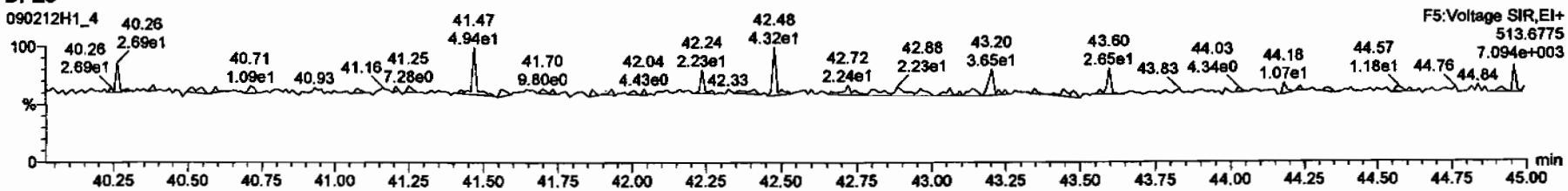

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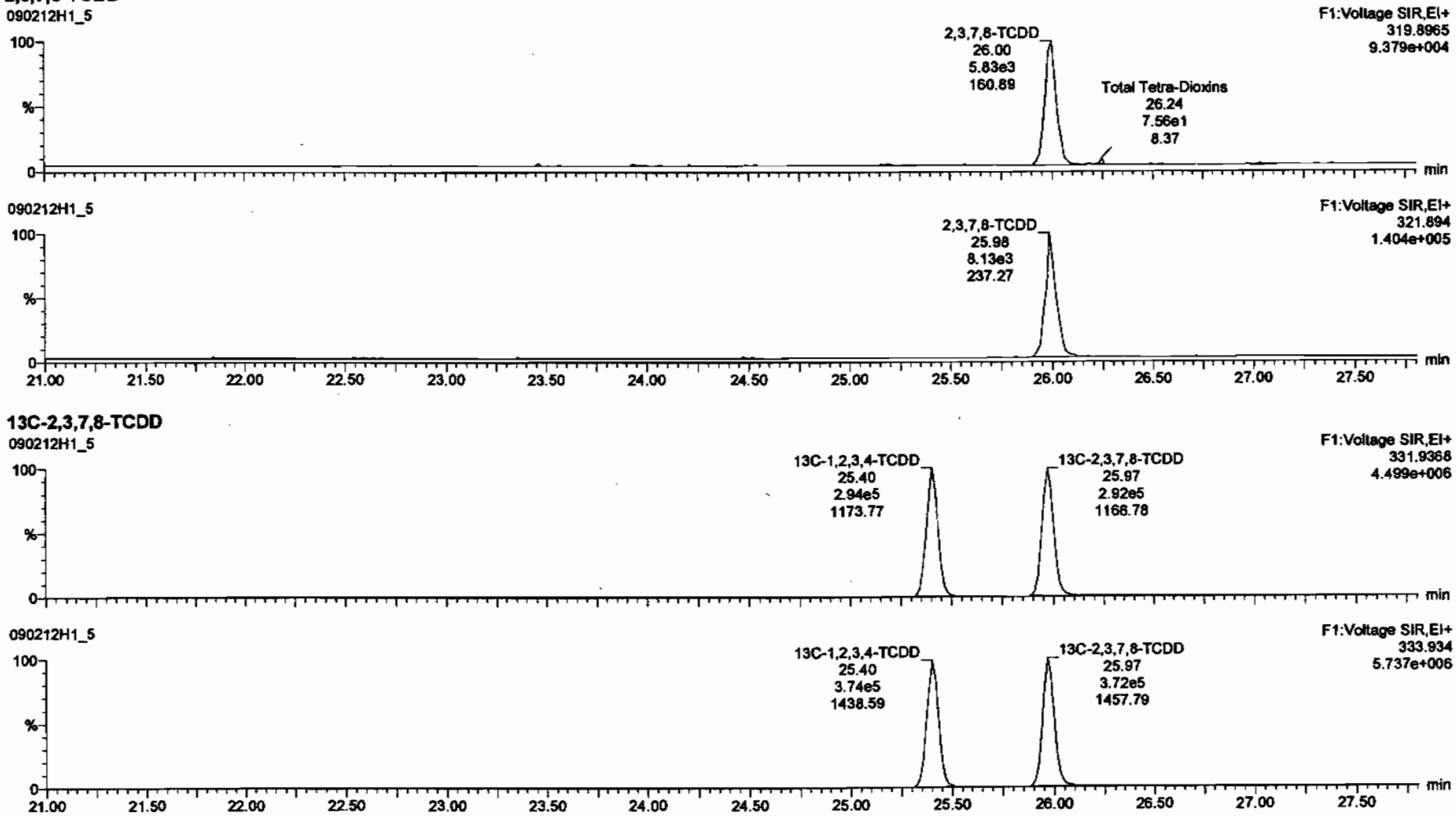

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37Cl-2,3,7,8-TCDD

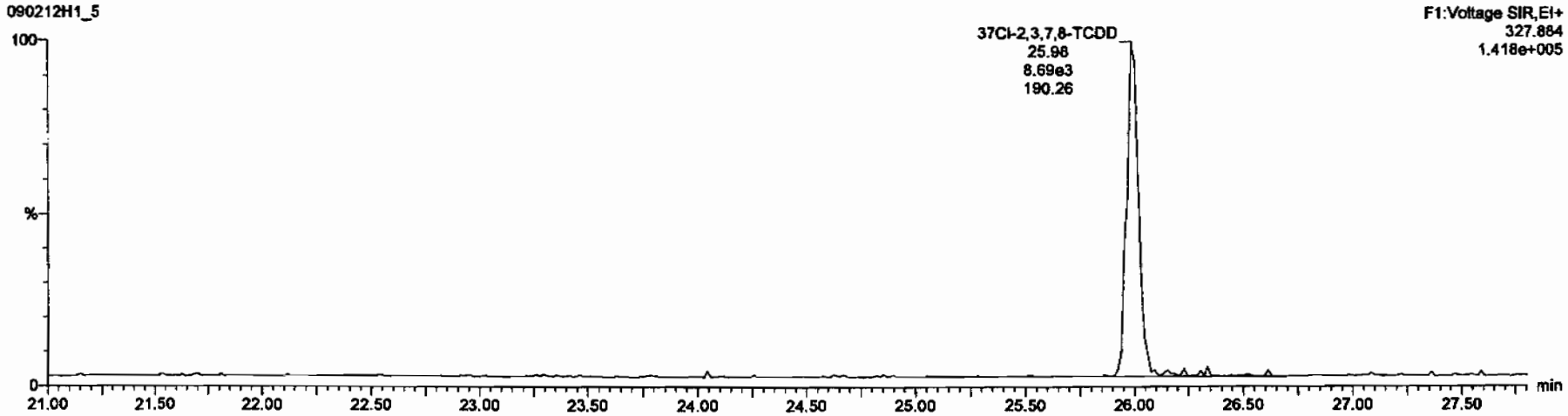

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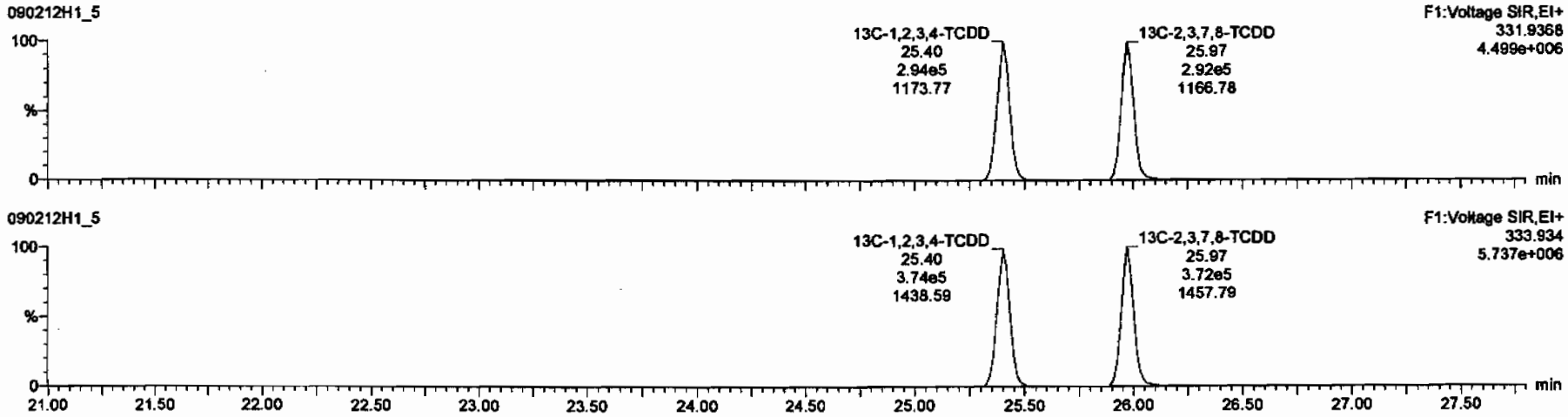

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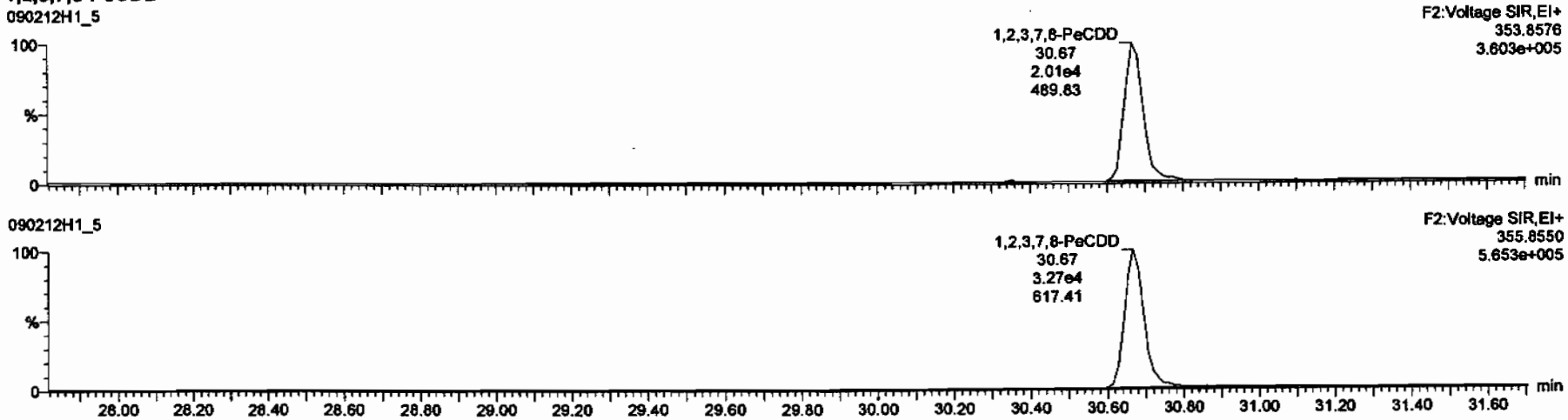

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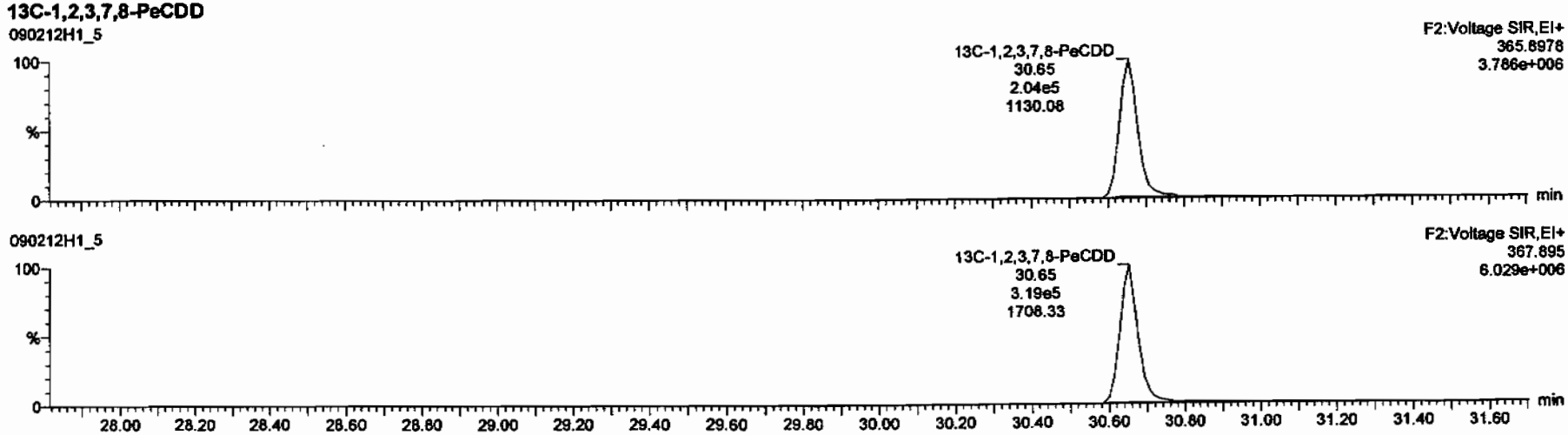

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1,2,3,4,7,8-HxCDD

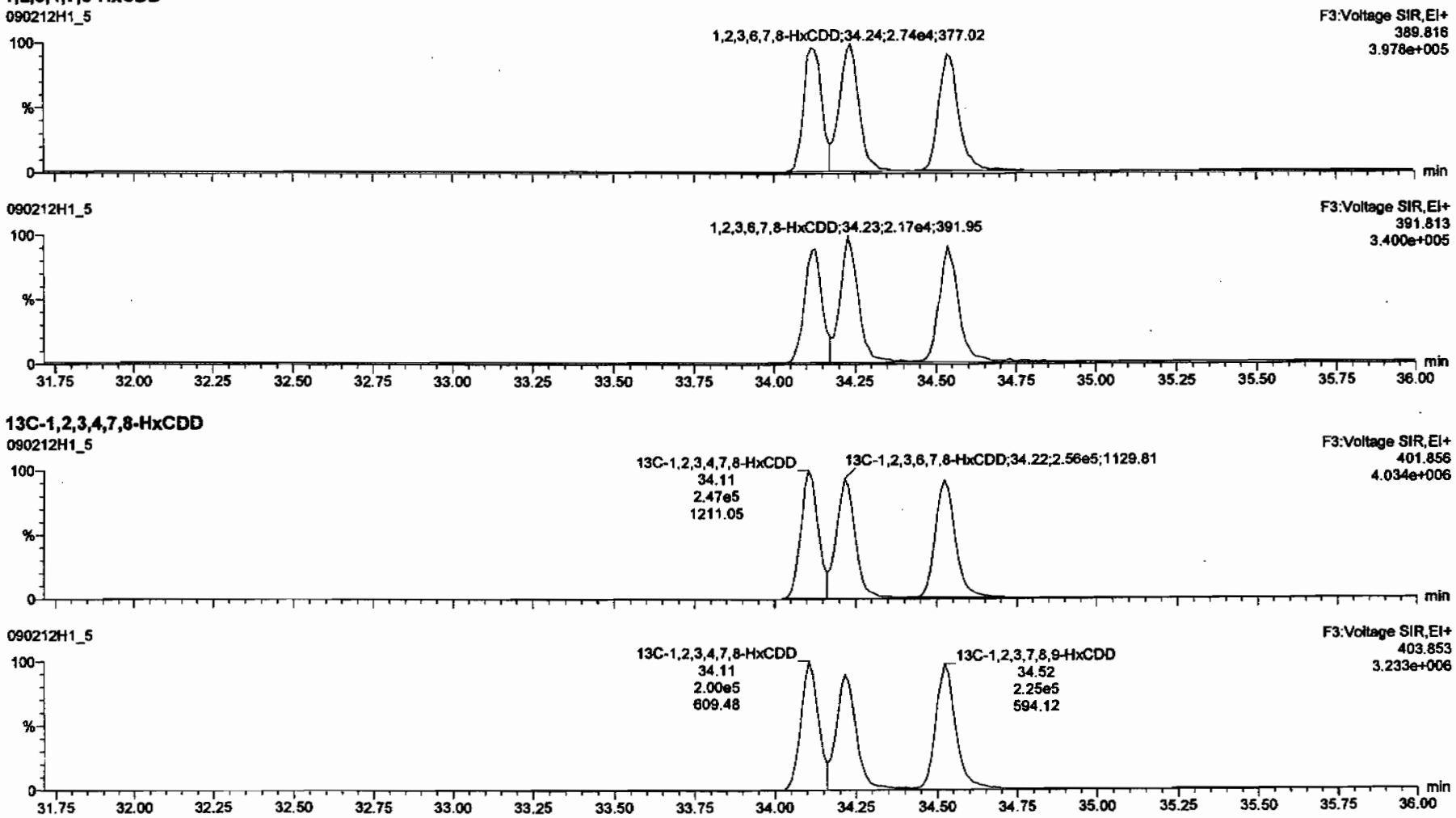

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1,2,3,4,6,7,8-HpCDD

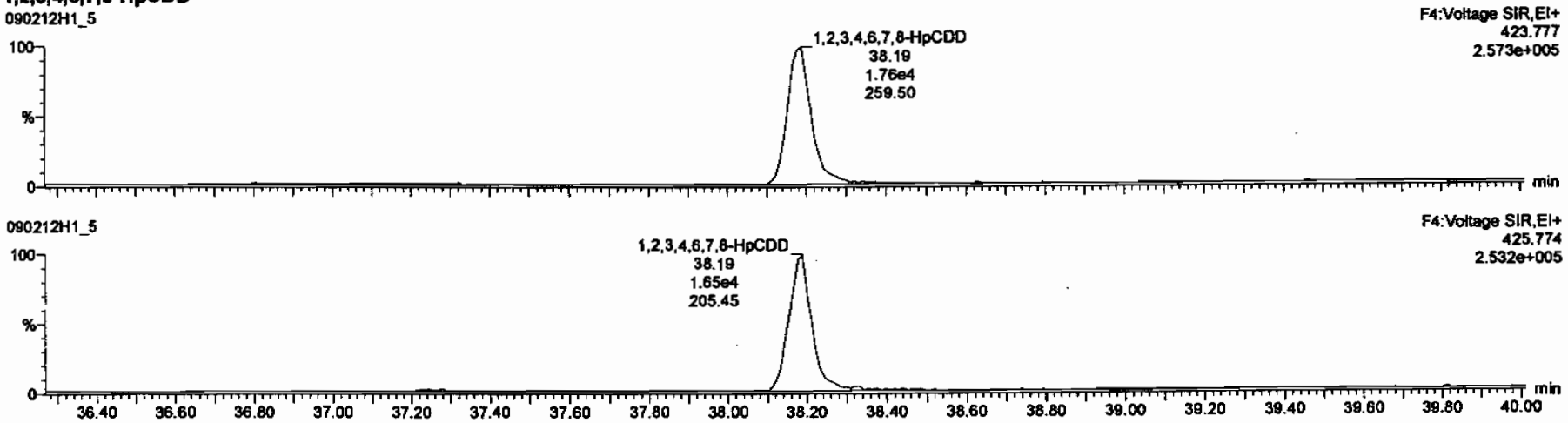

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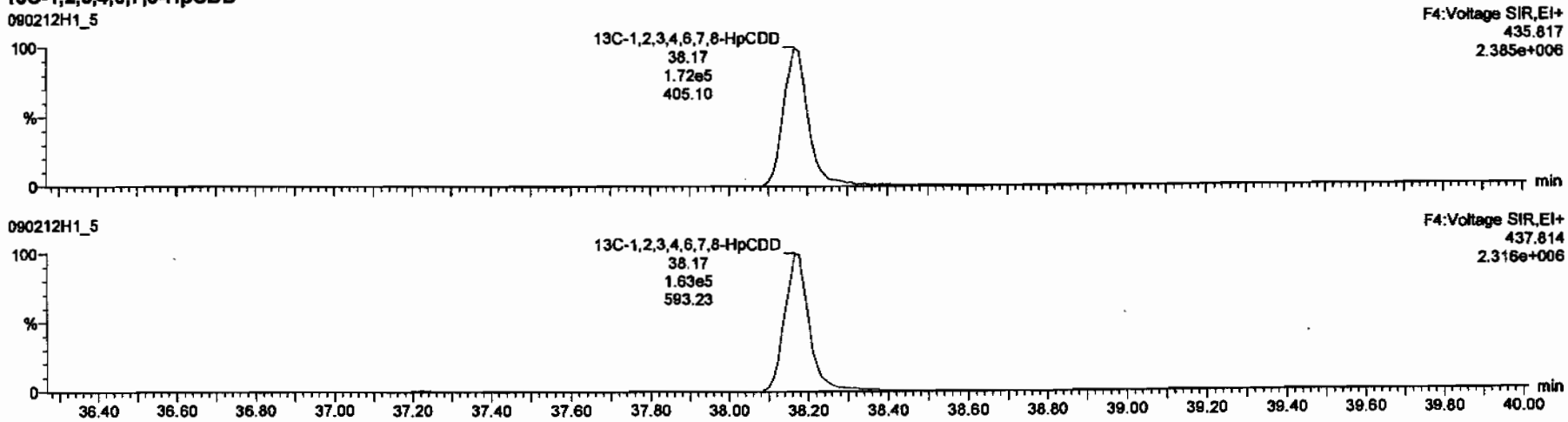

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OCDD

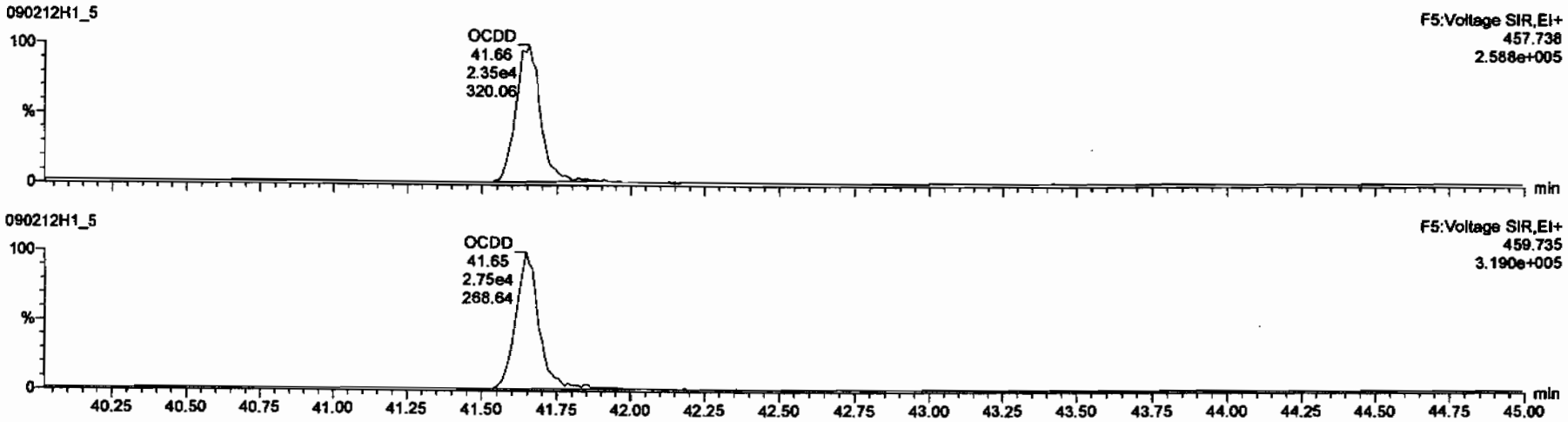

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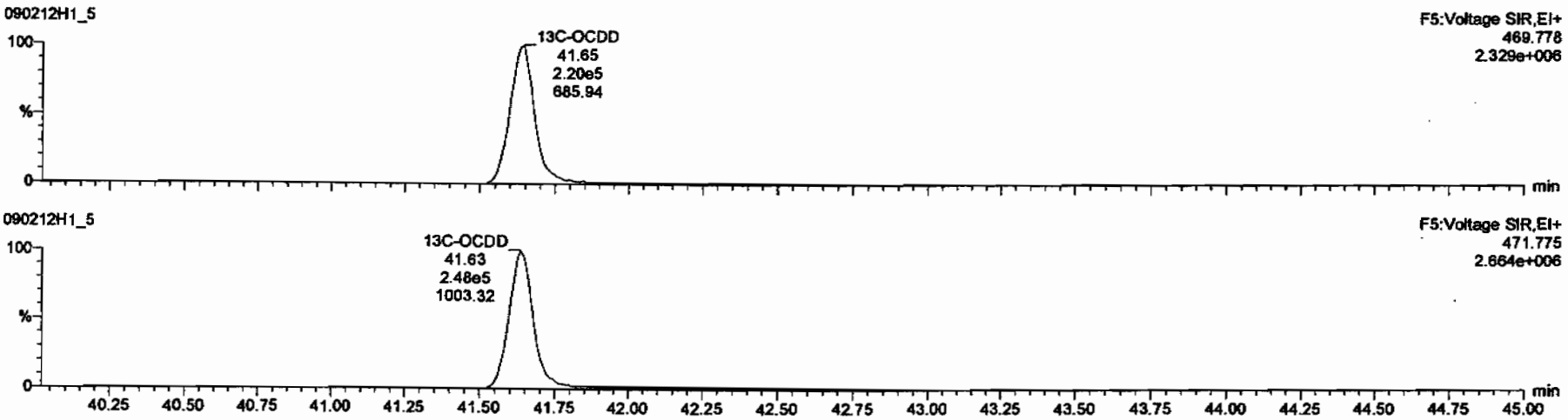

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2,3,7,8-TCDF

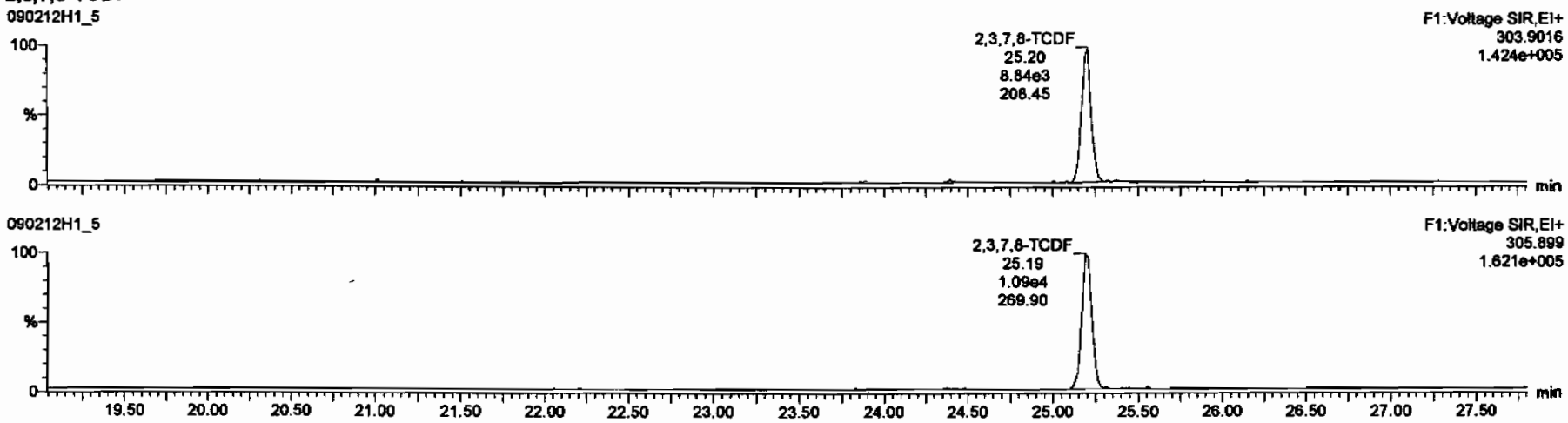

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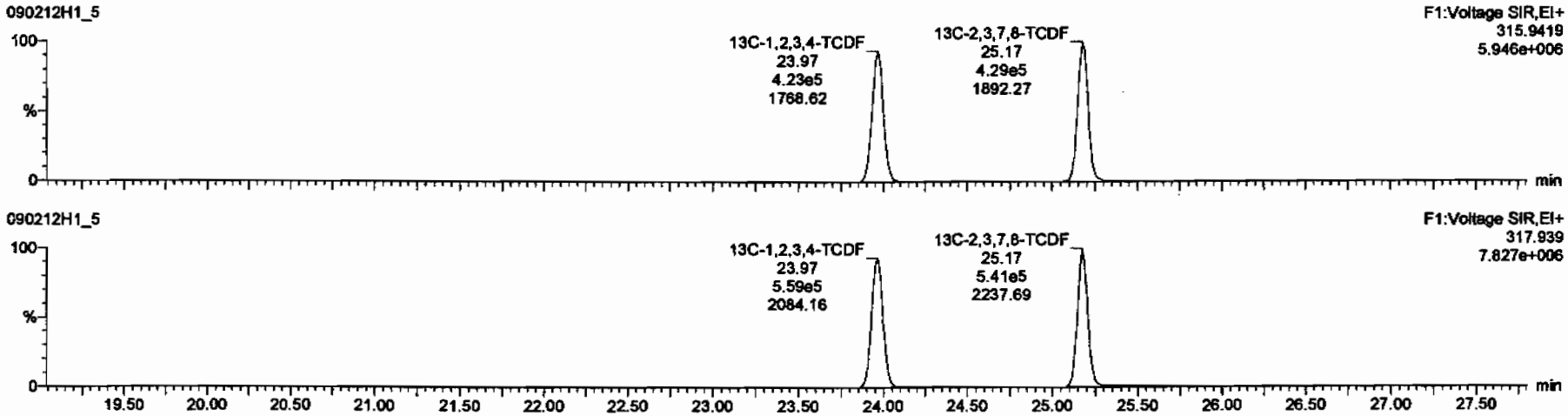

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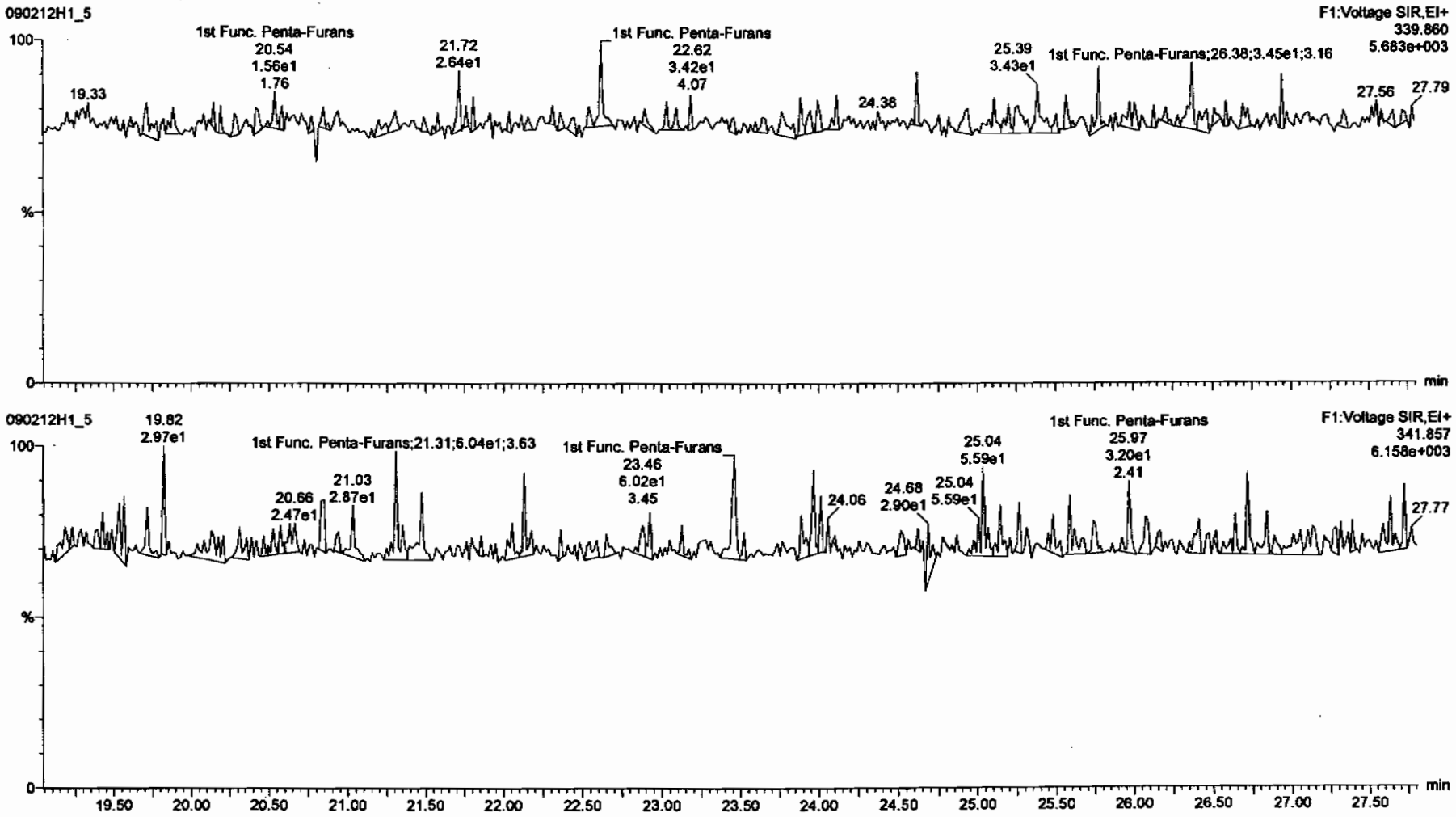

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1,2,3,7,8-PeCDF

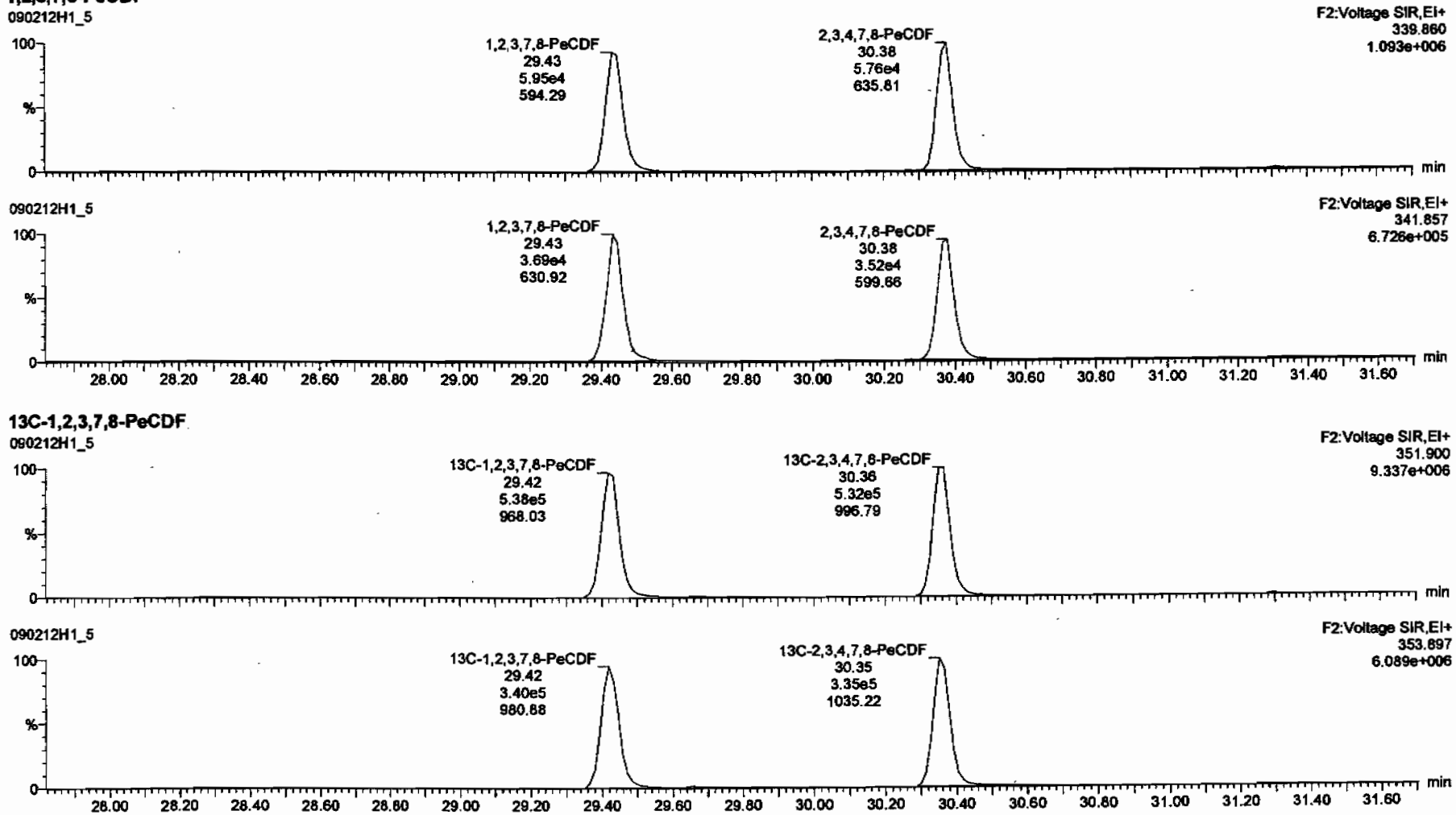

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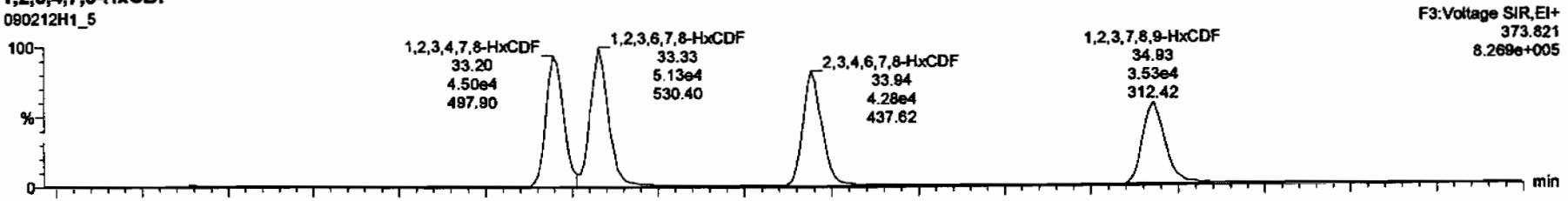

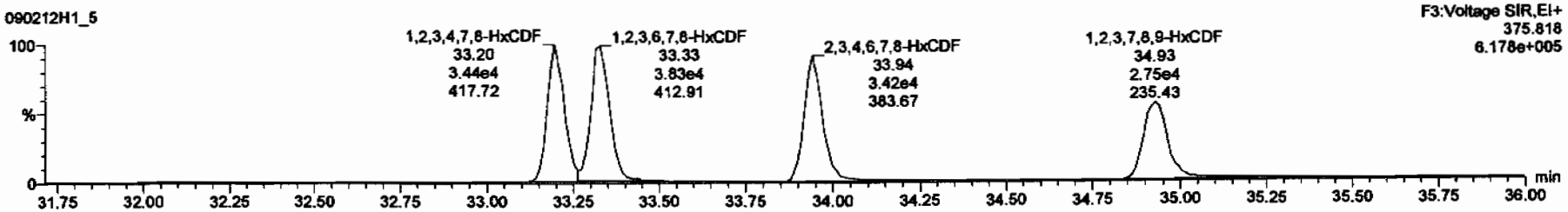

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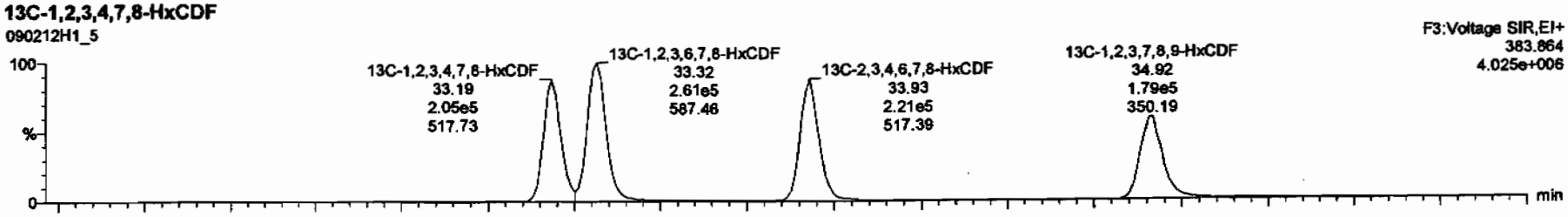

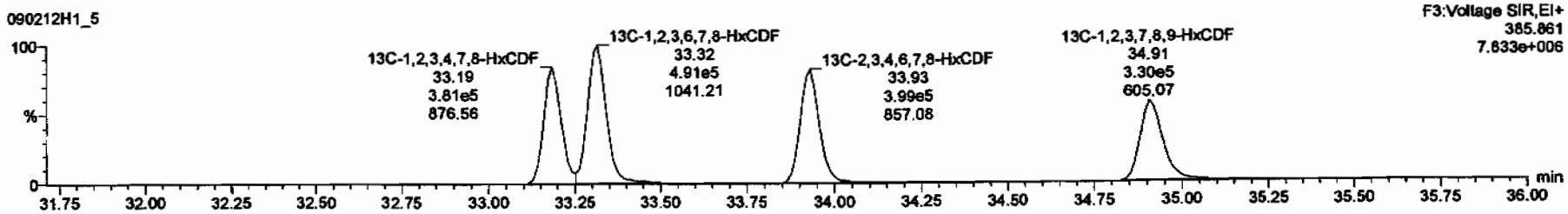

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1,2,3,4,6,7,8-HpCDF

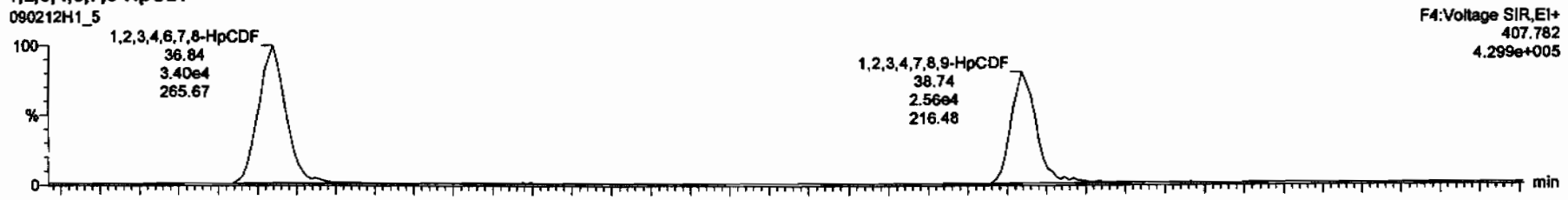

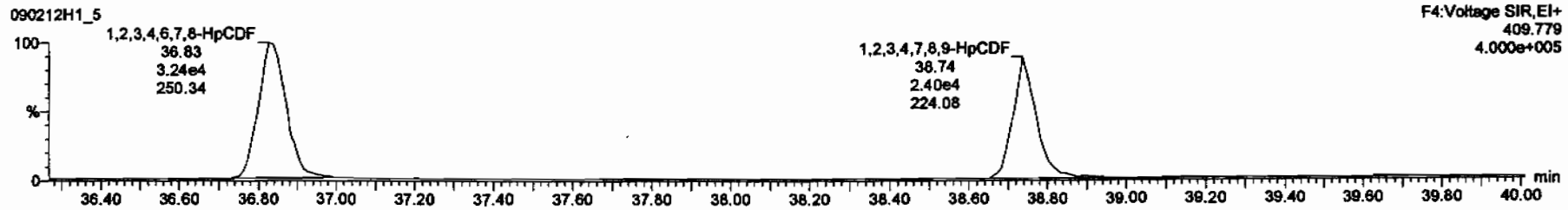

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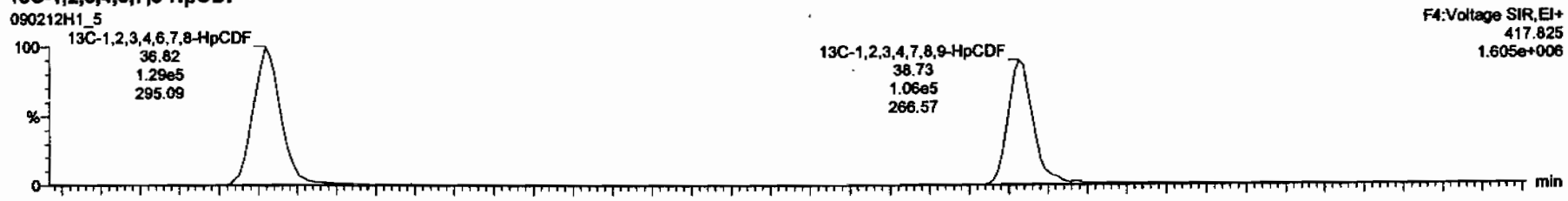

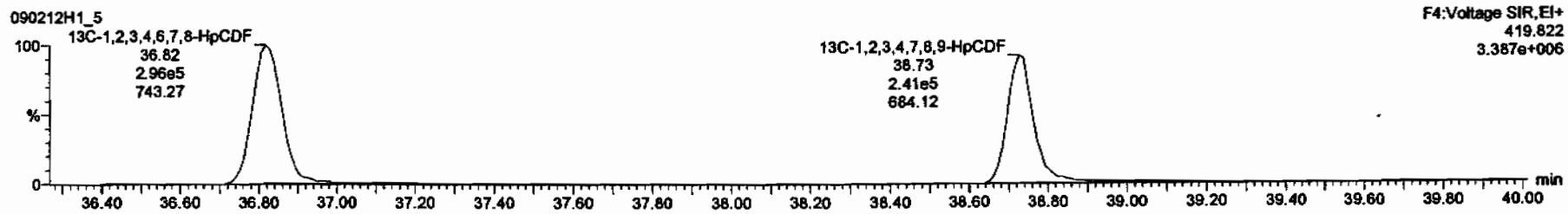

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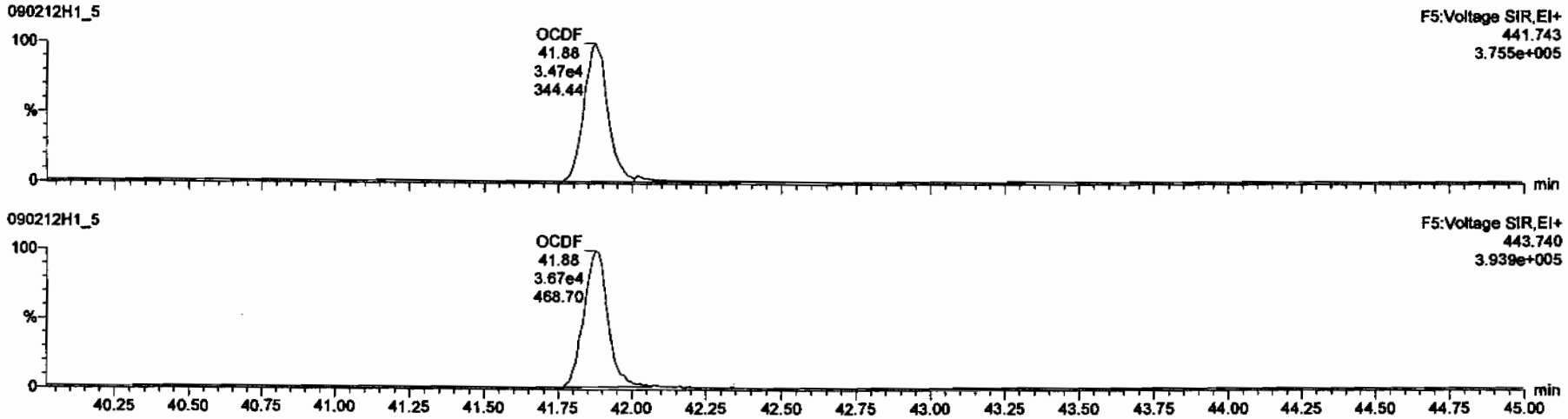

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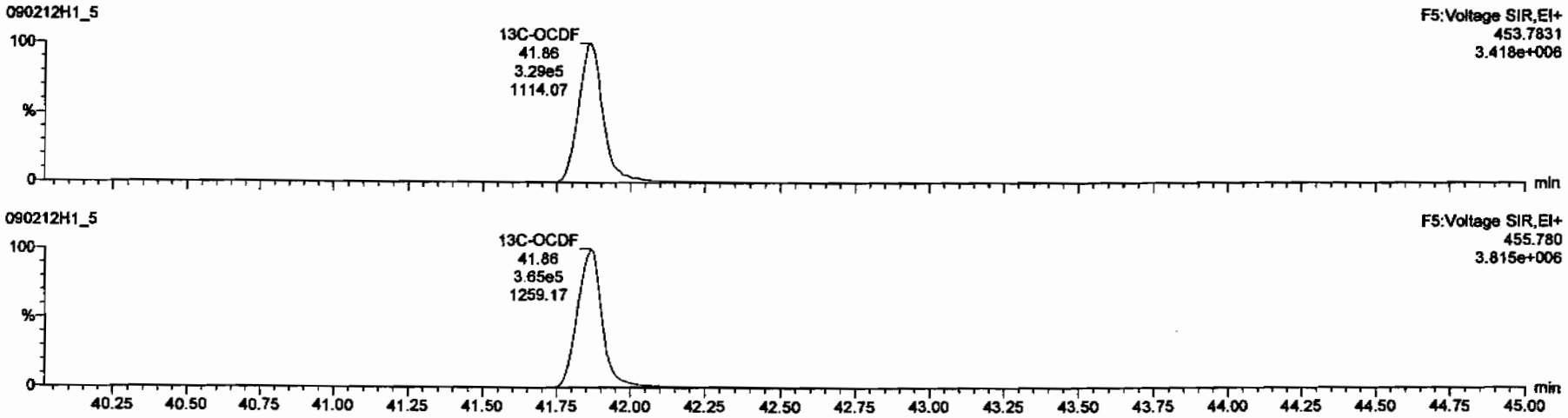

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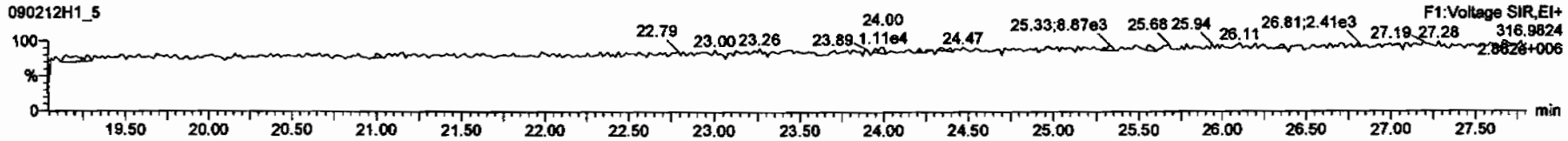

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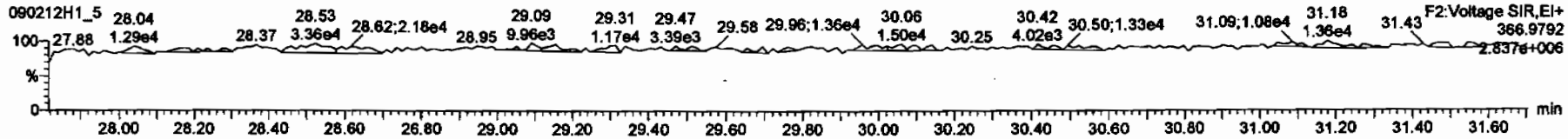

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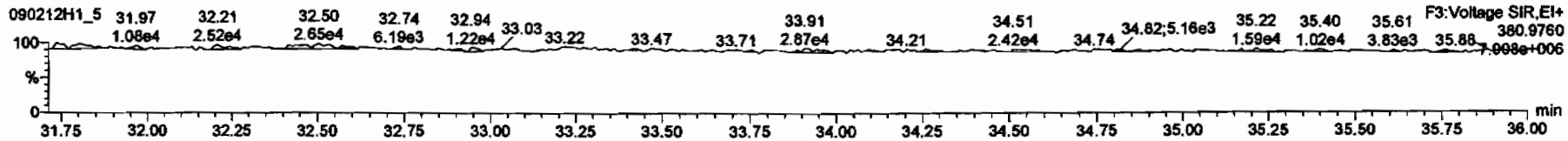

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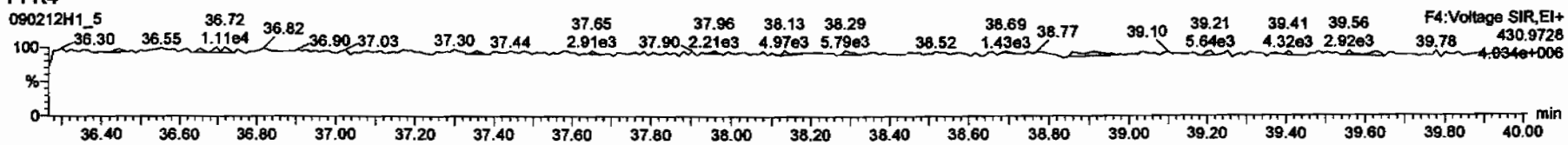

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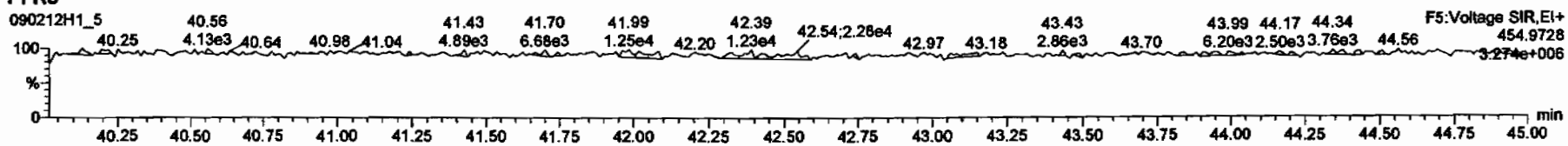

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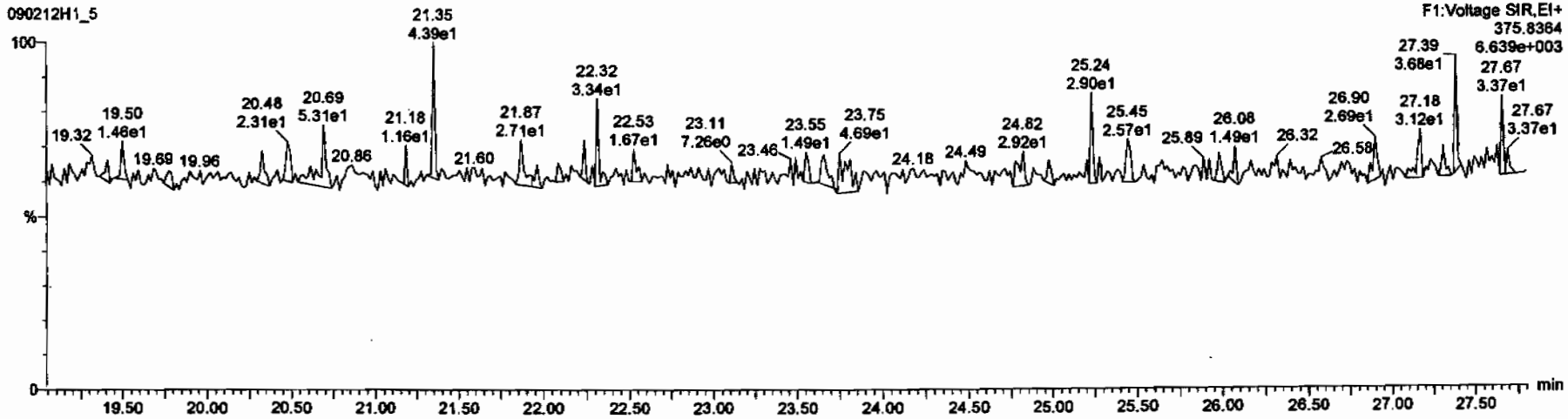

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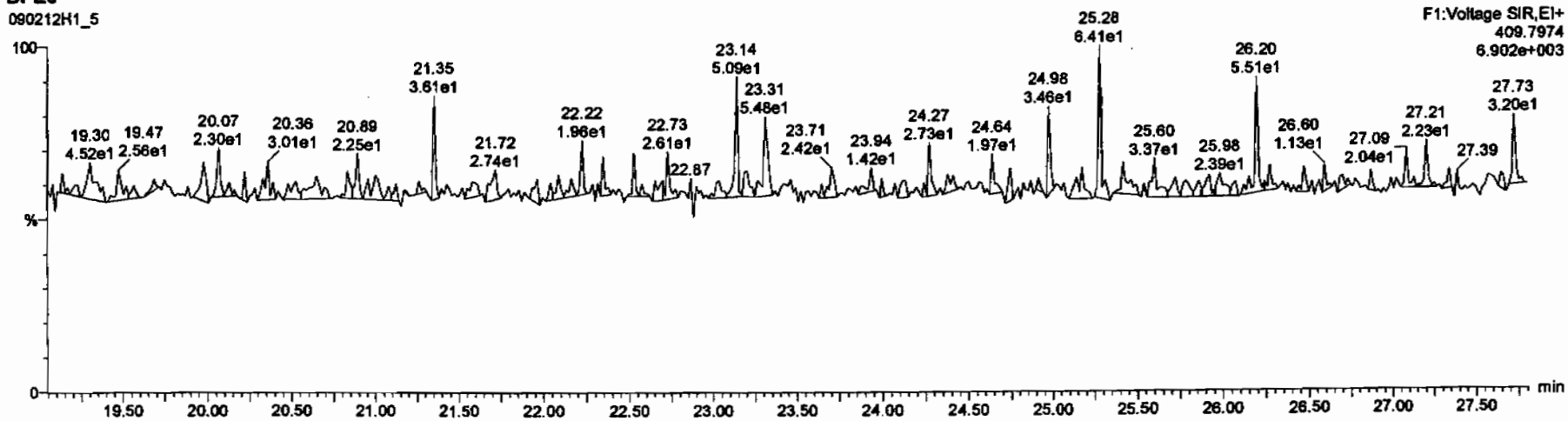

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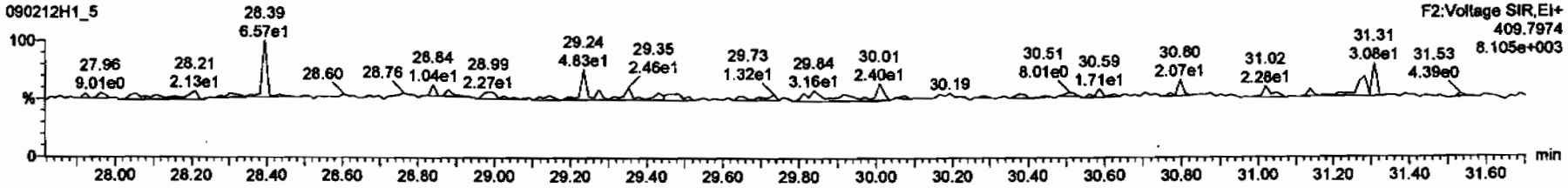

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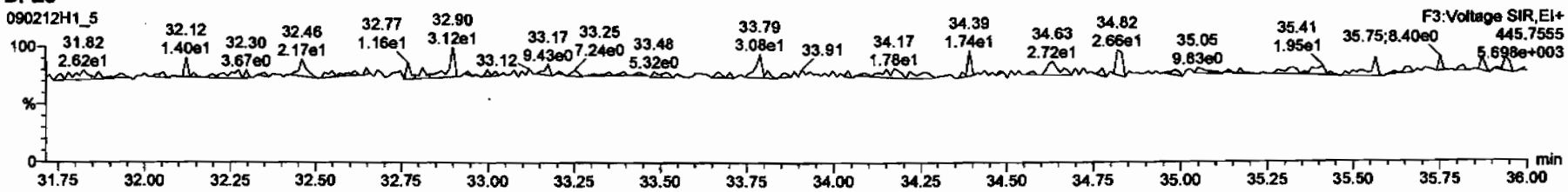

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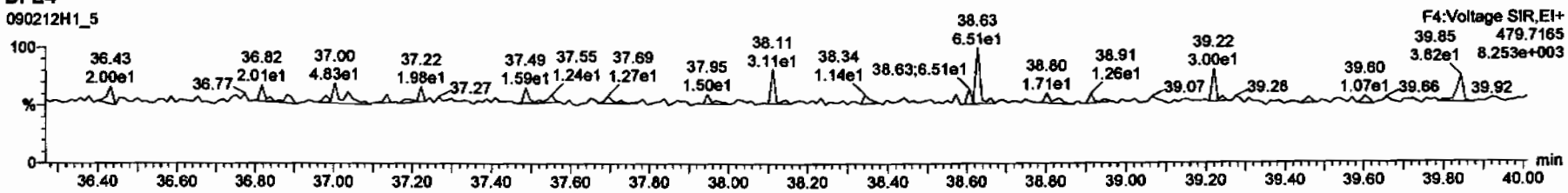

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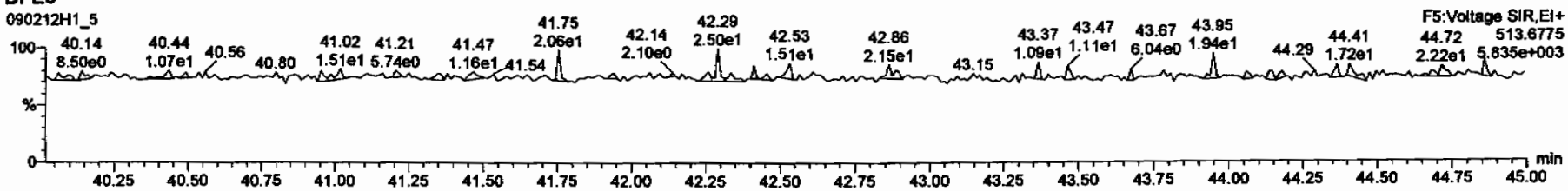

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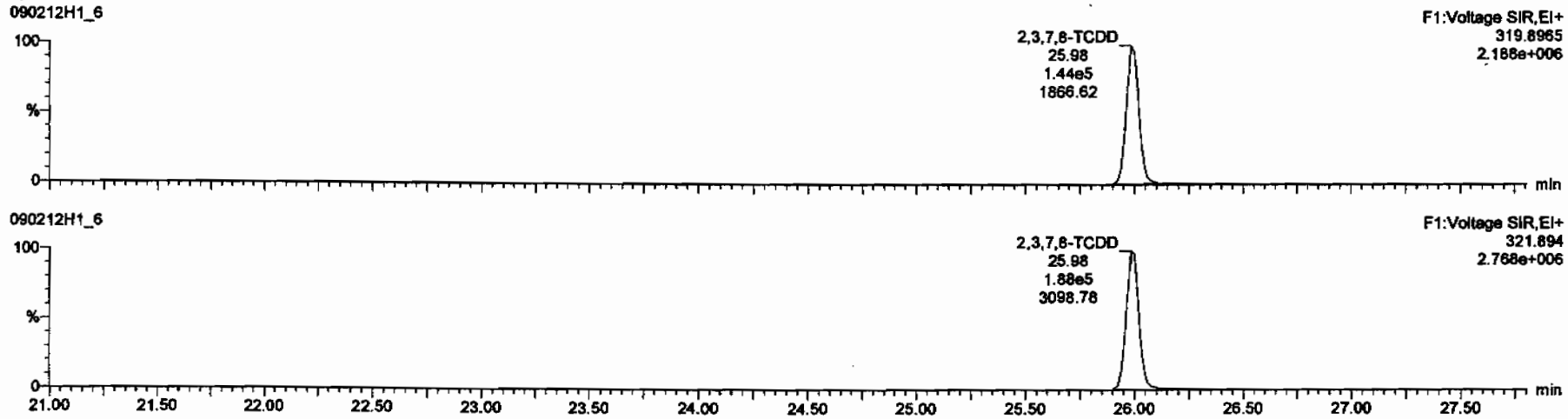

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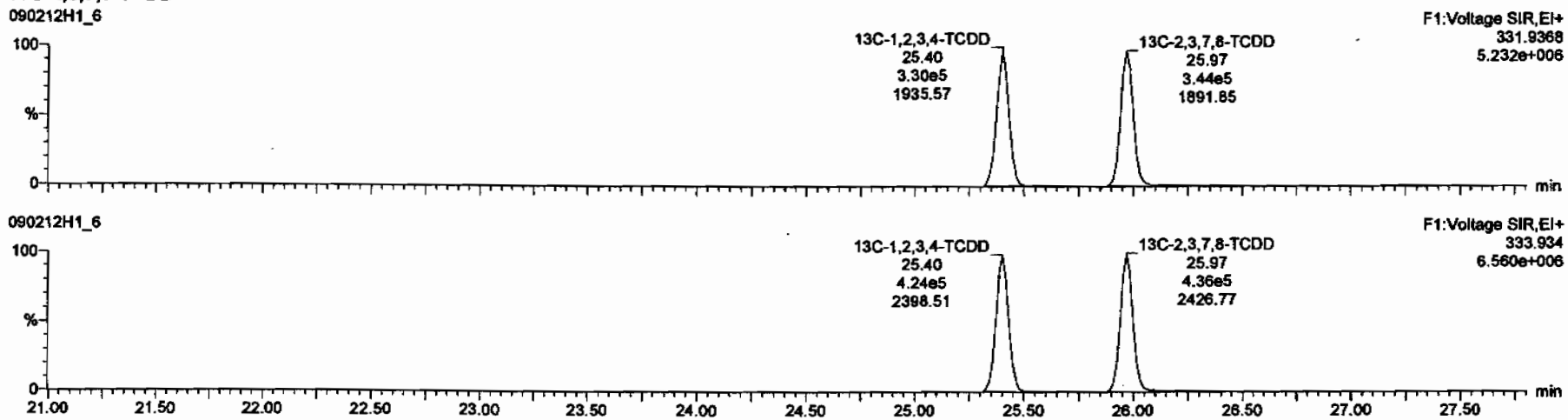

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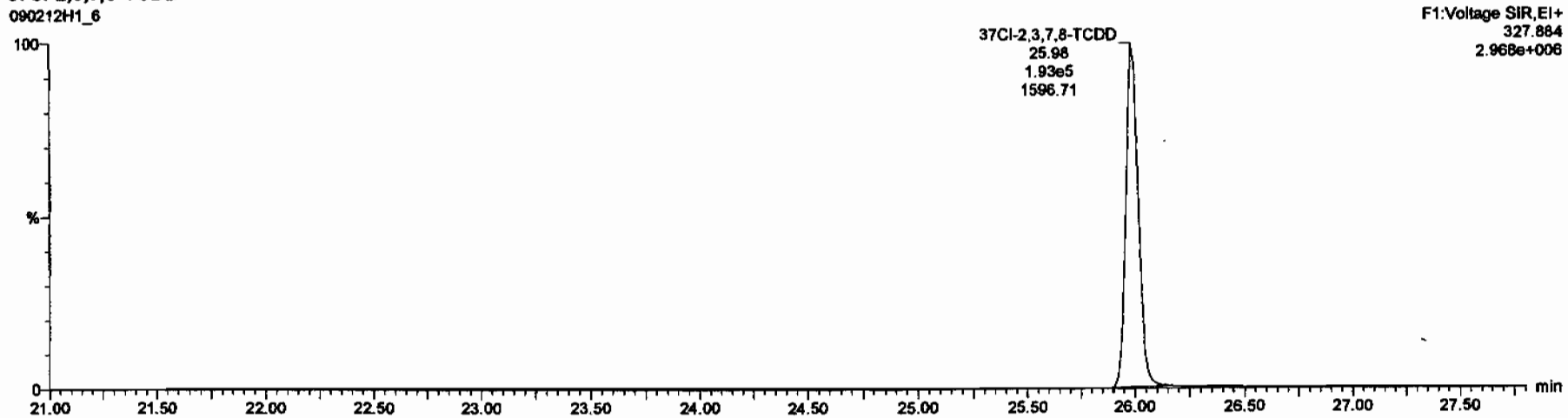

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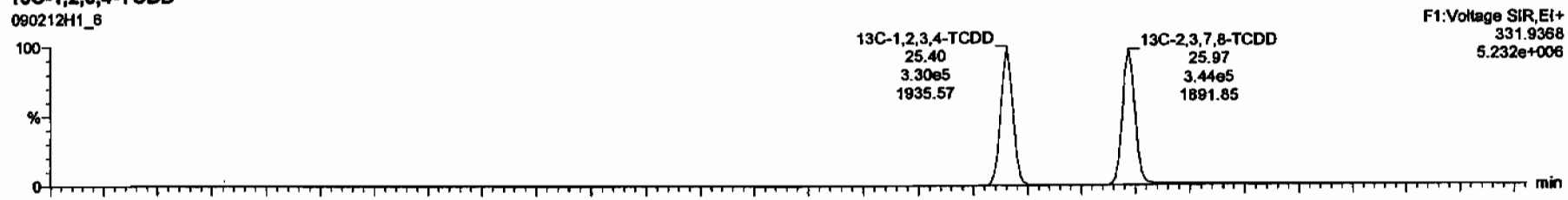

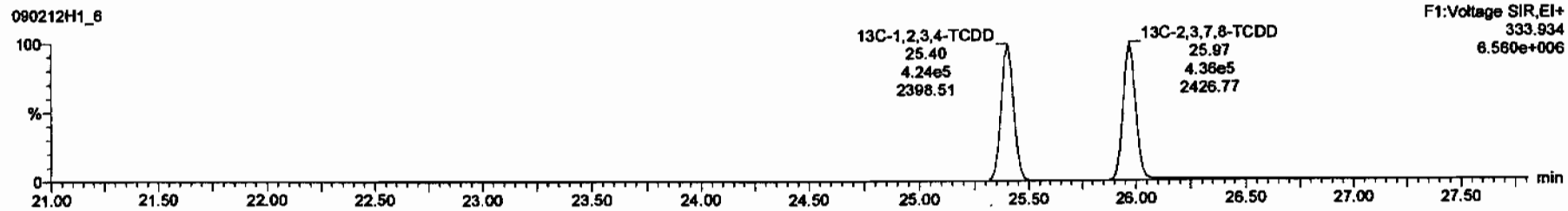

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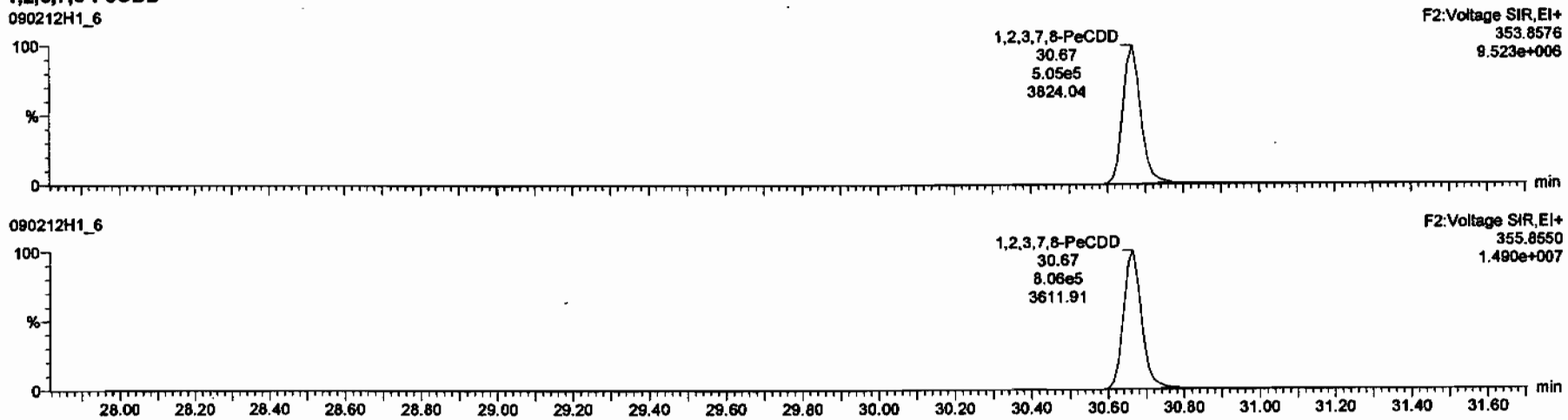

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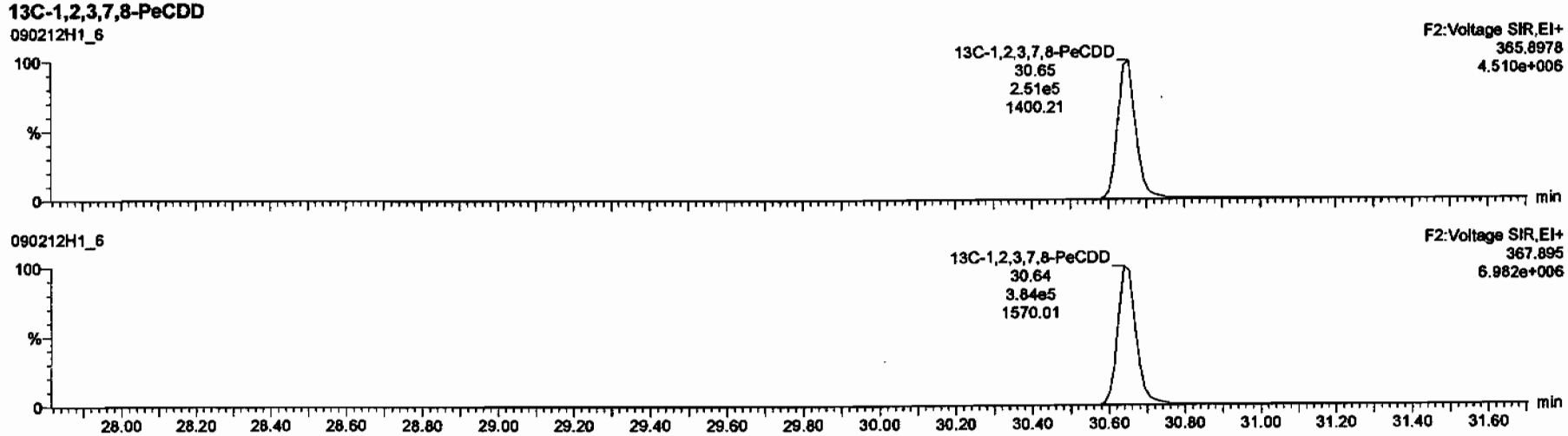

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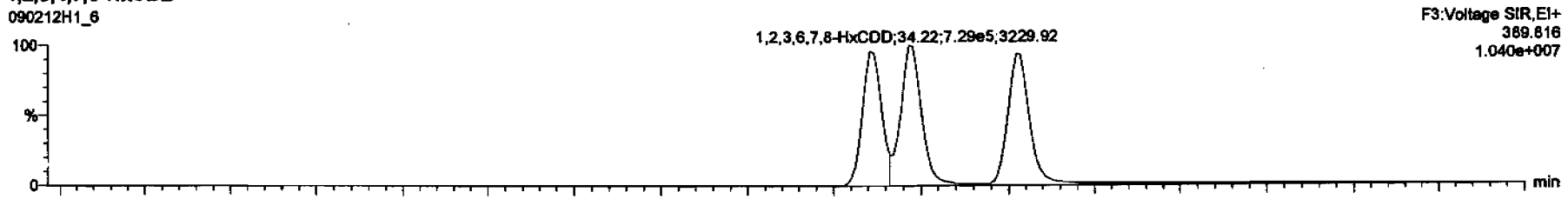

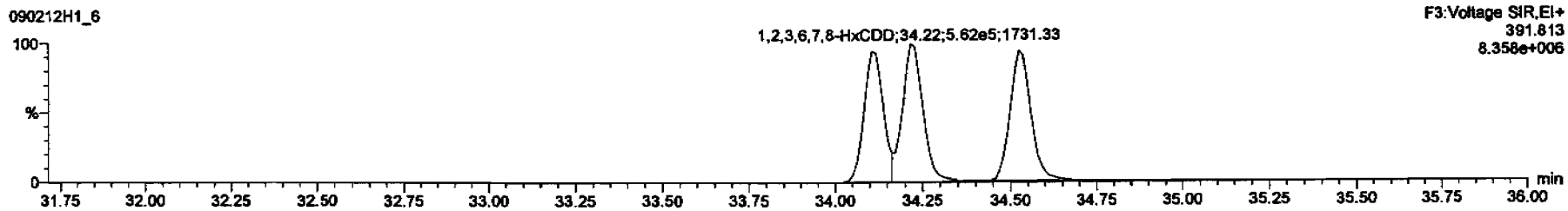

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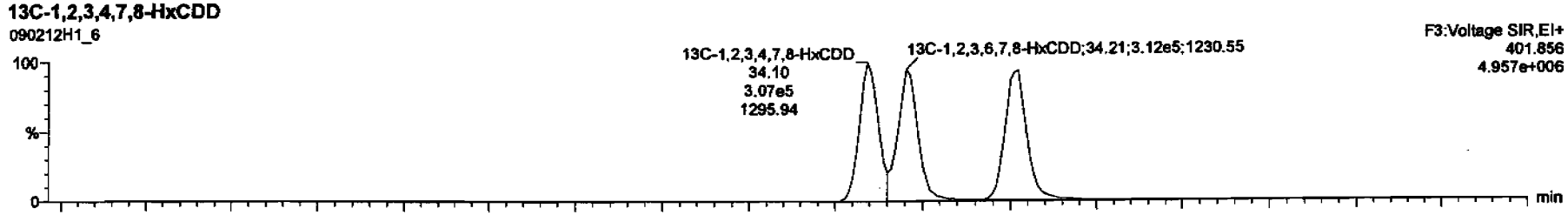

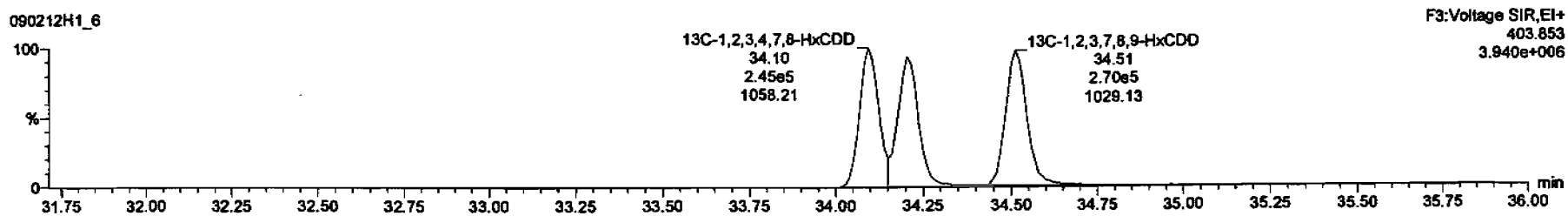

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1,2,3,4,6,7,8-HpCDD

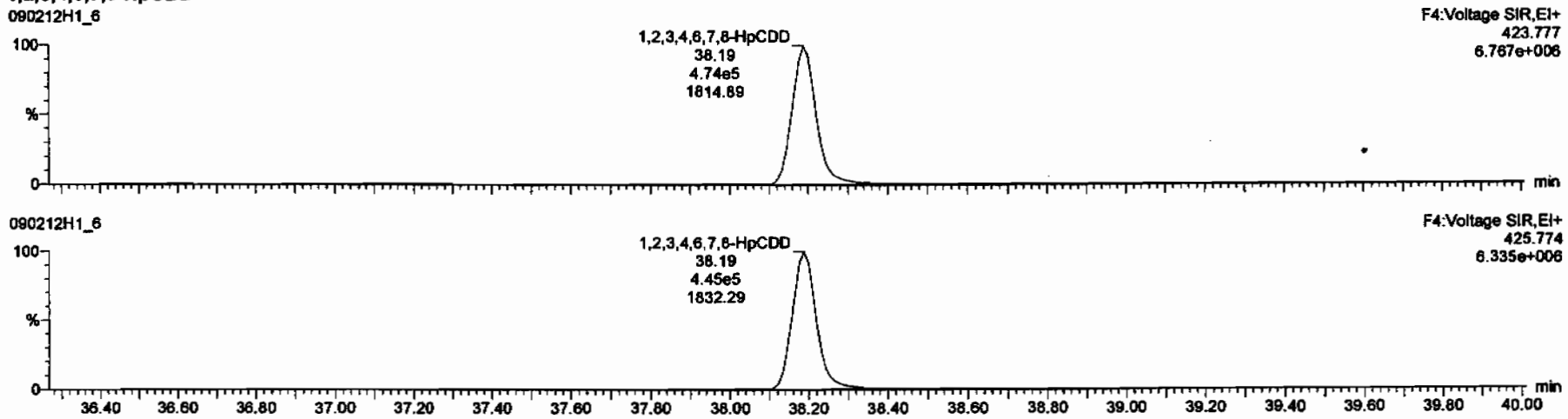

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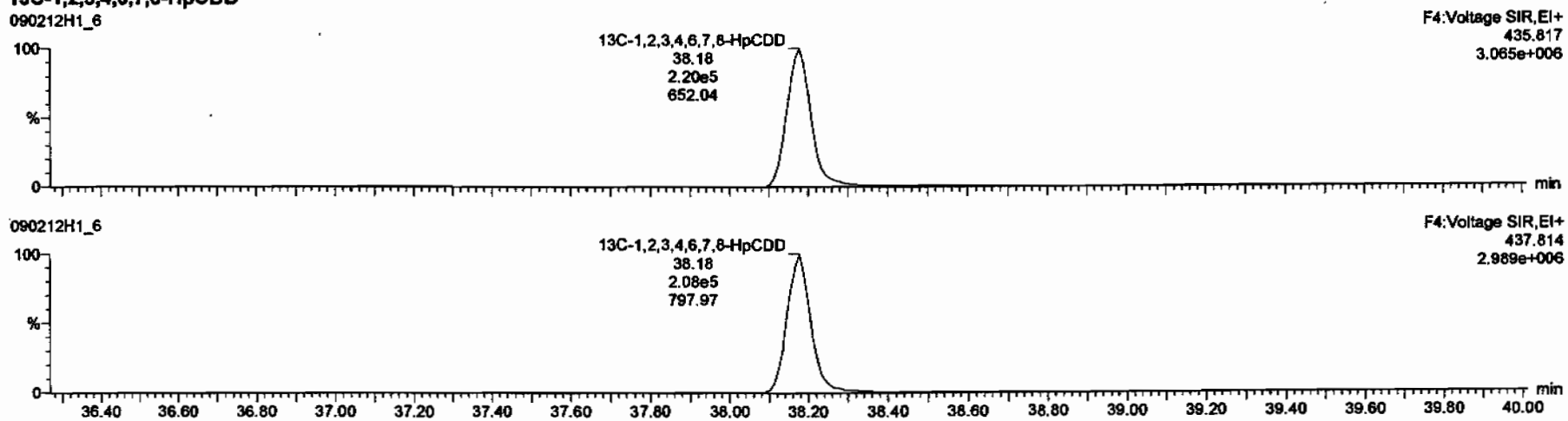

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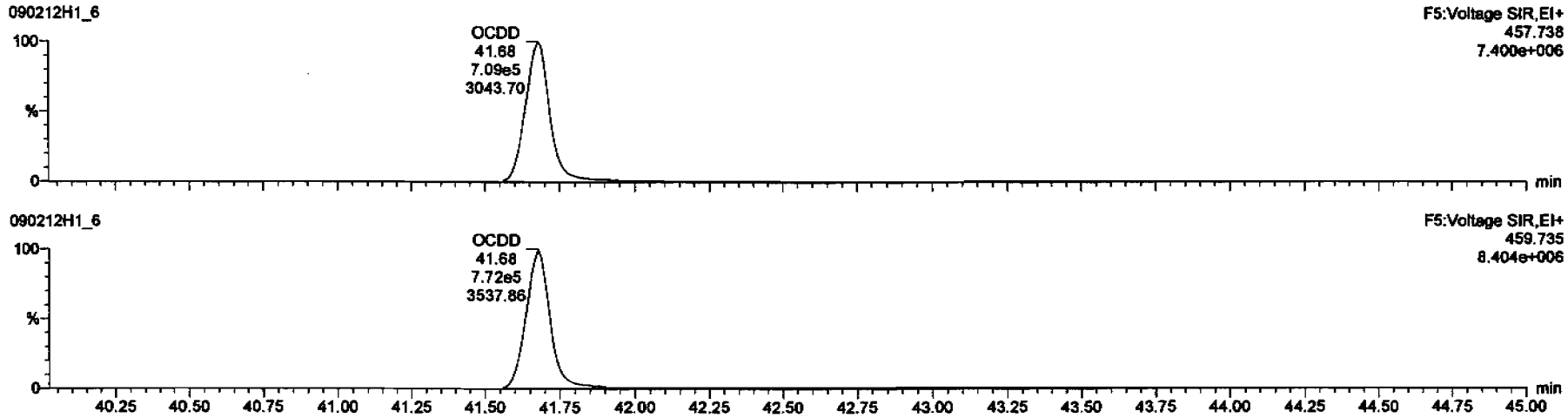

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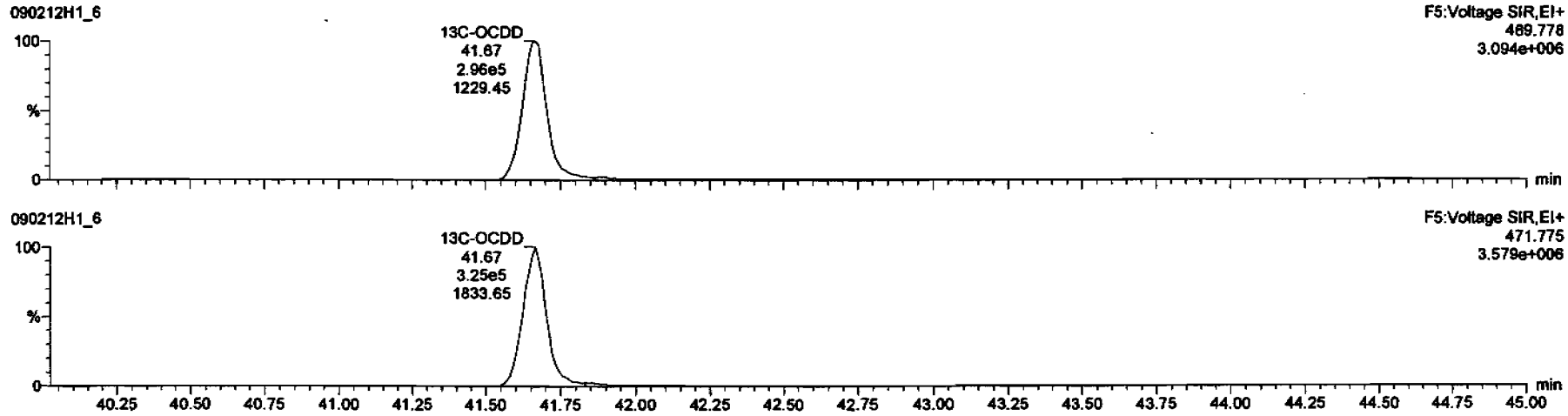

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2,3,7,8-TCDF

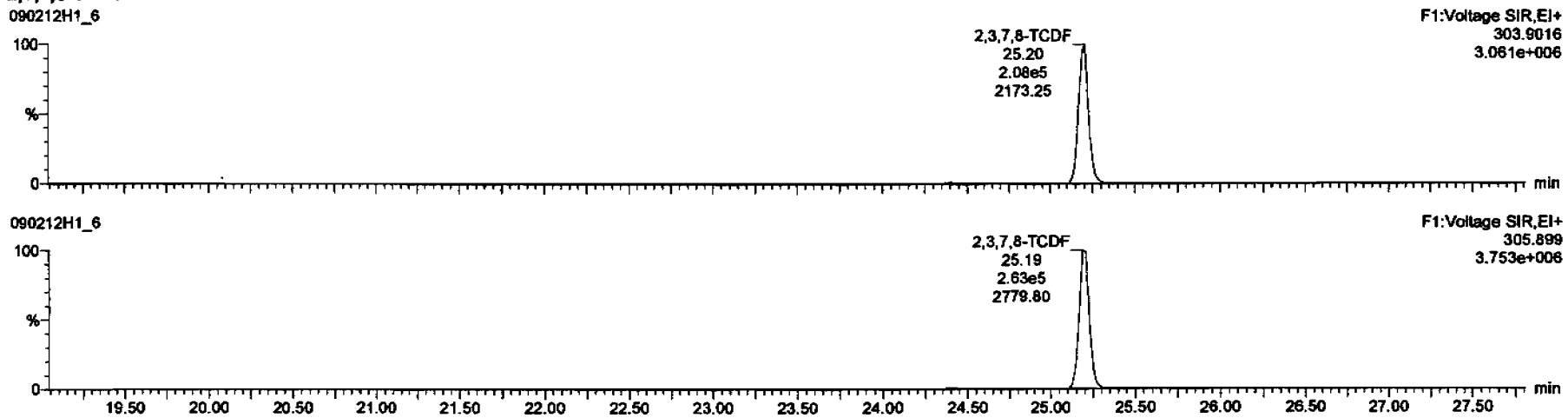

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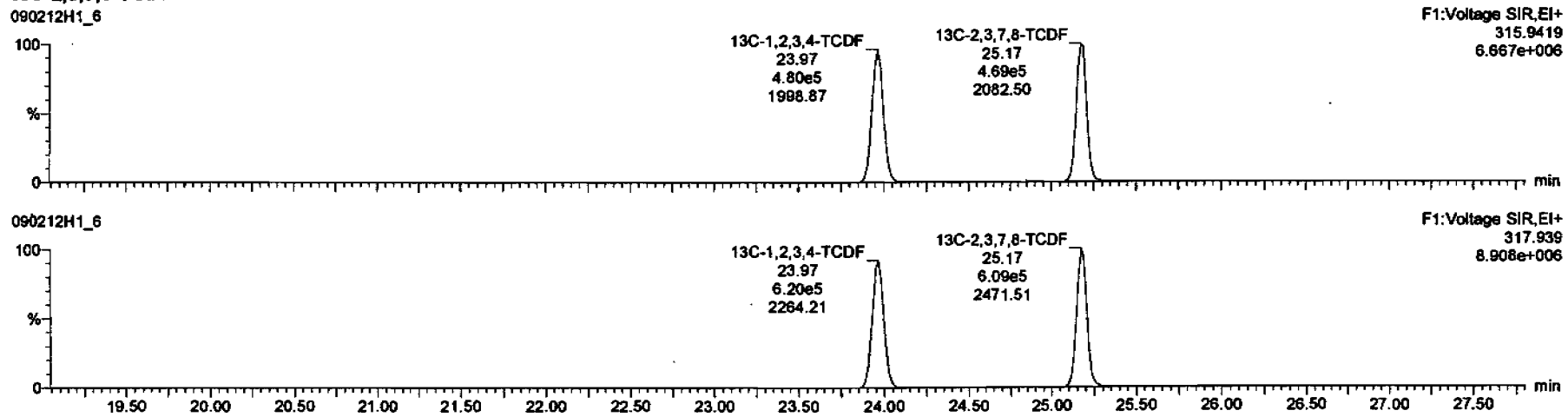

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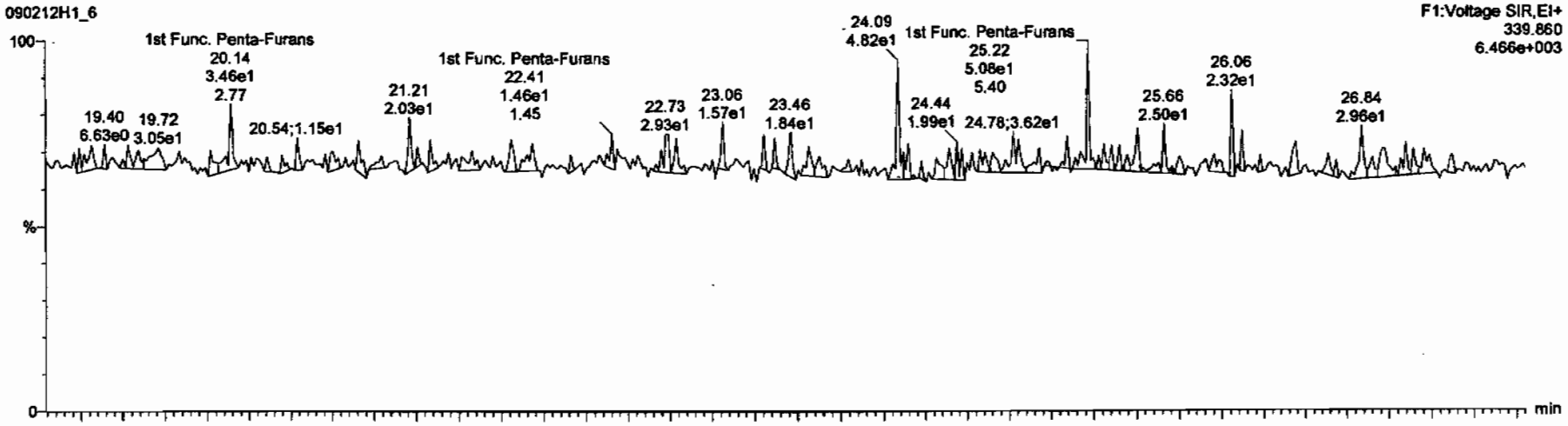

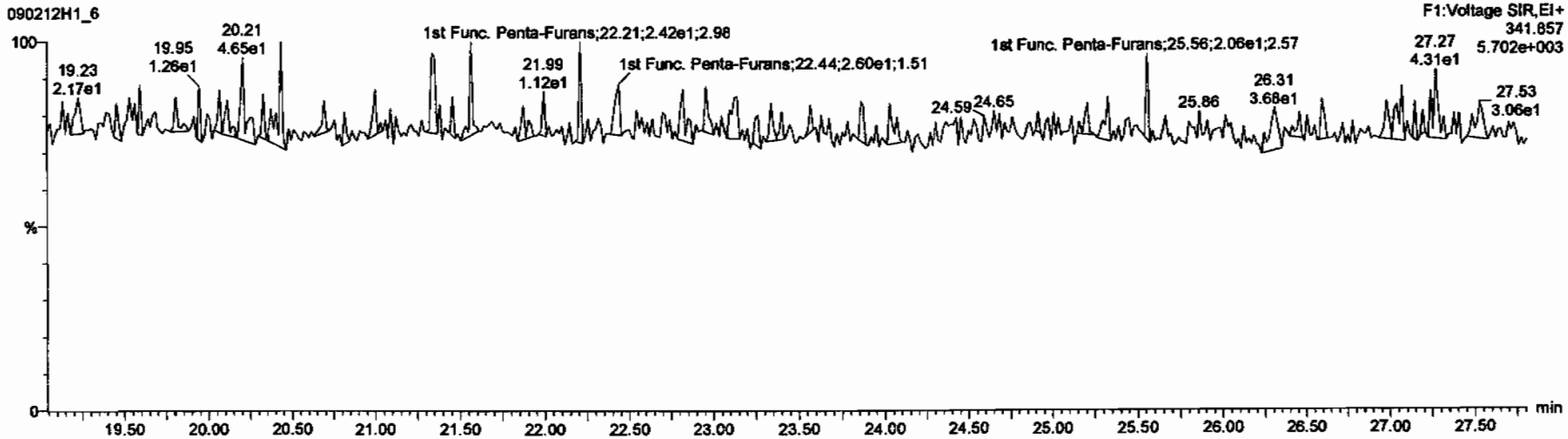

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1,2,3,7,8-PeCDF

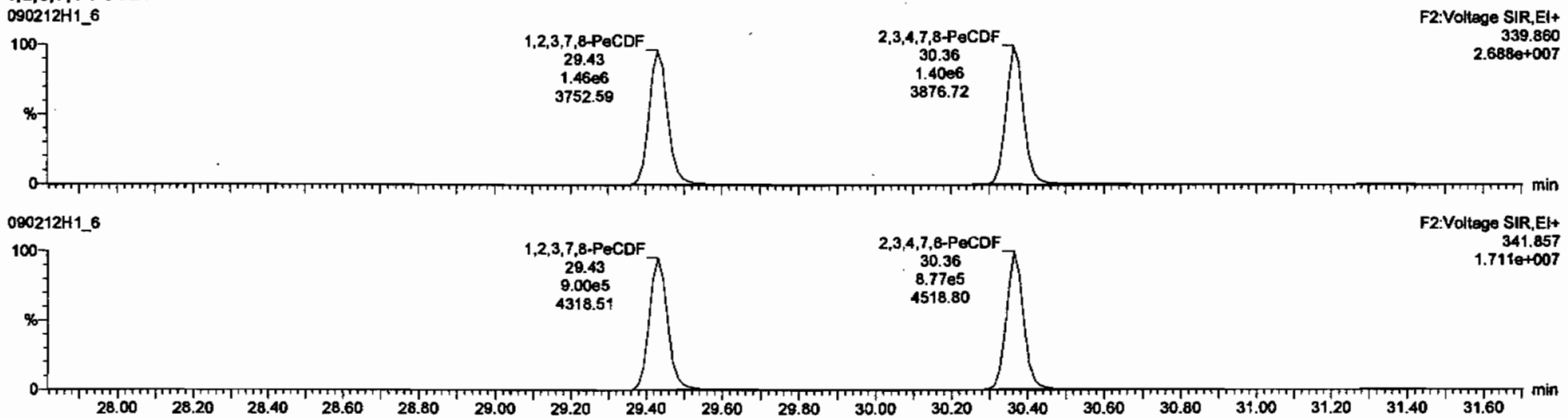

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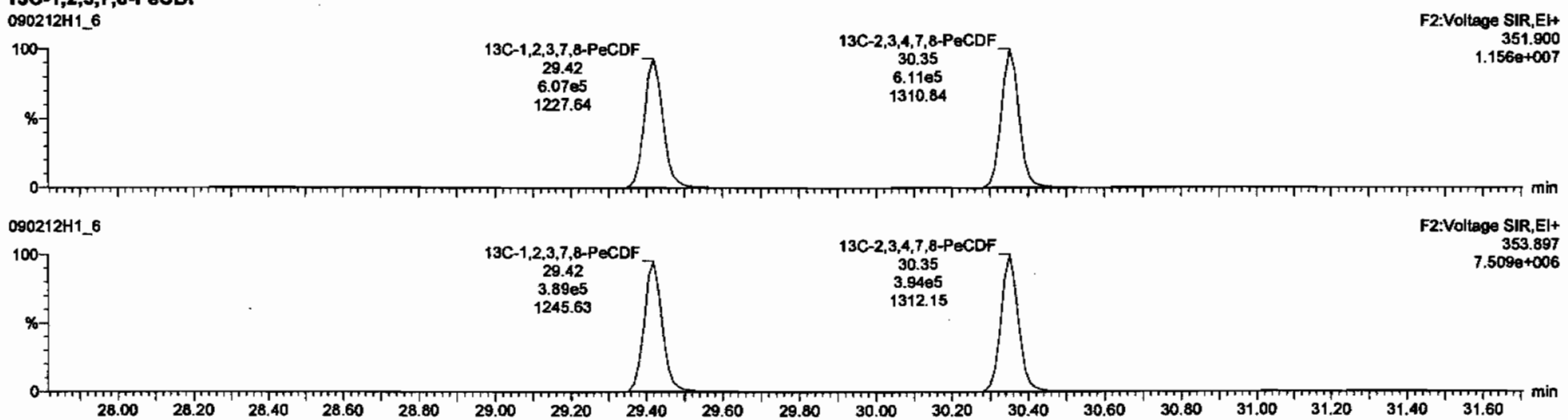

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1,2,3,4,7,8-HxCDF

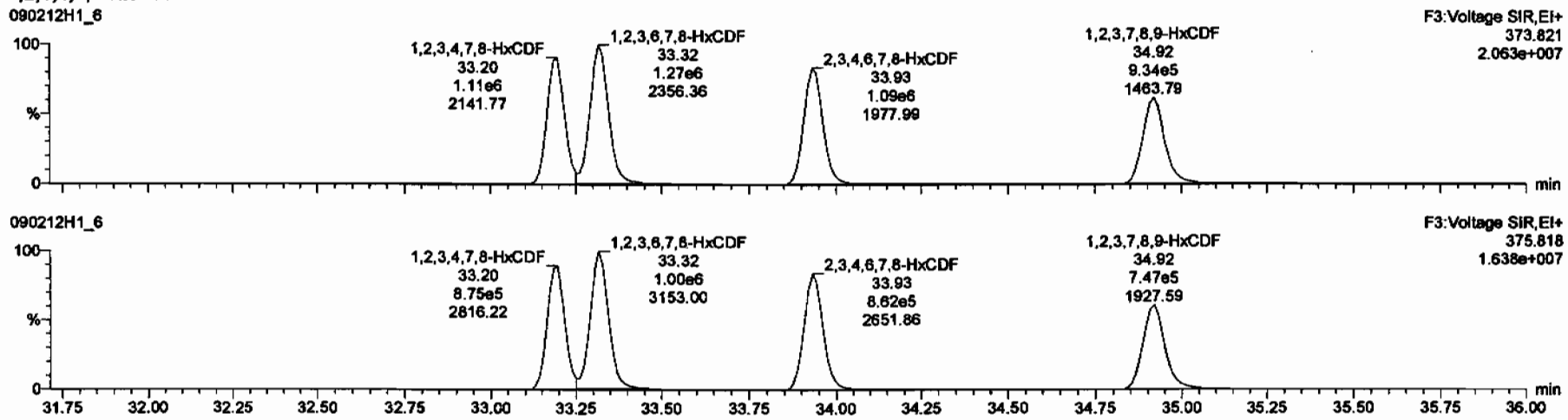

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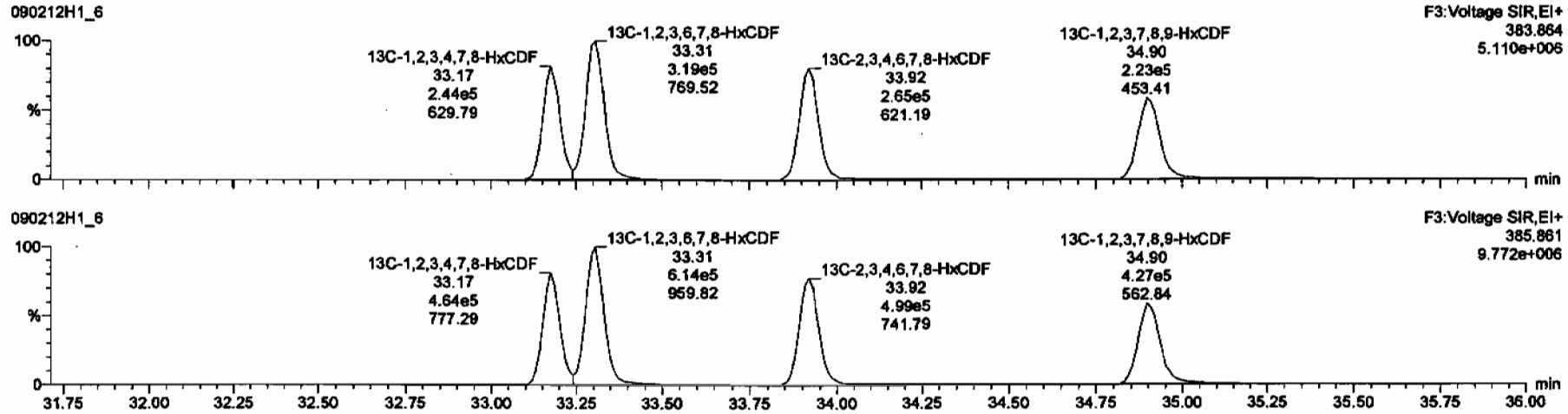

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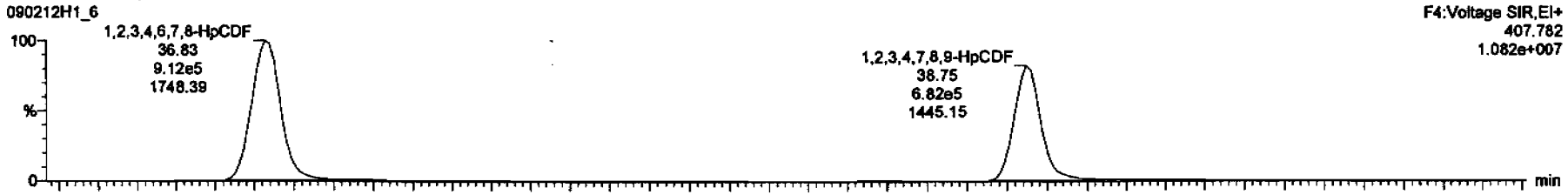

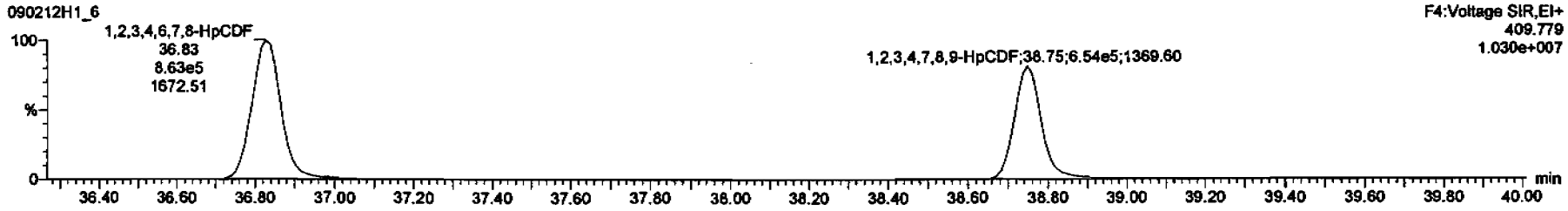

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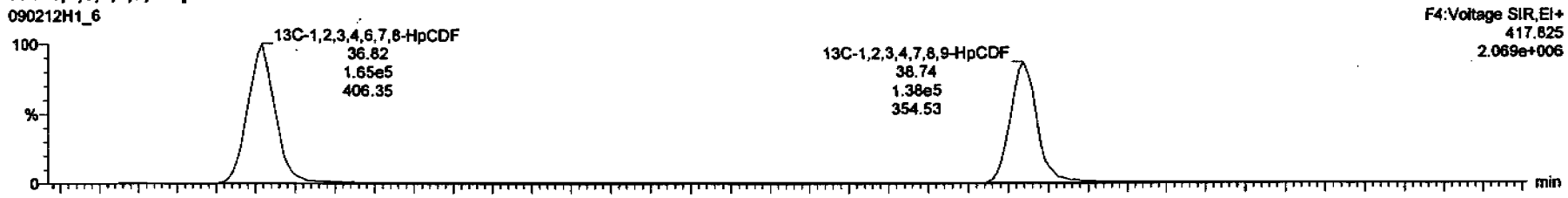

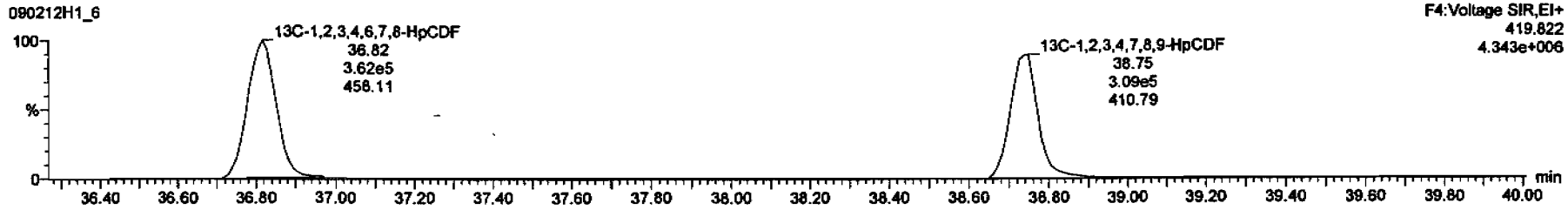

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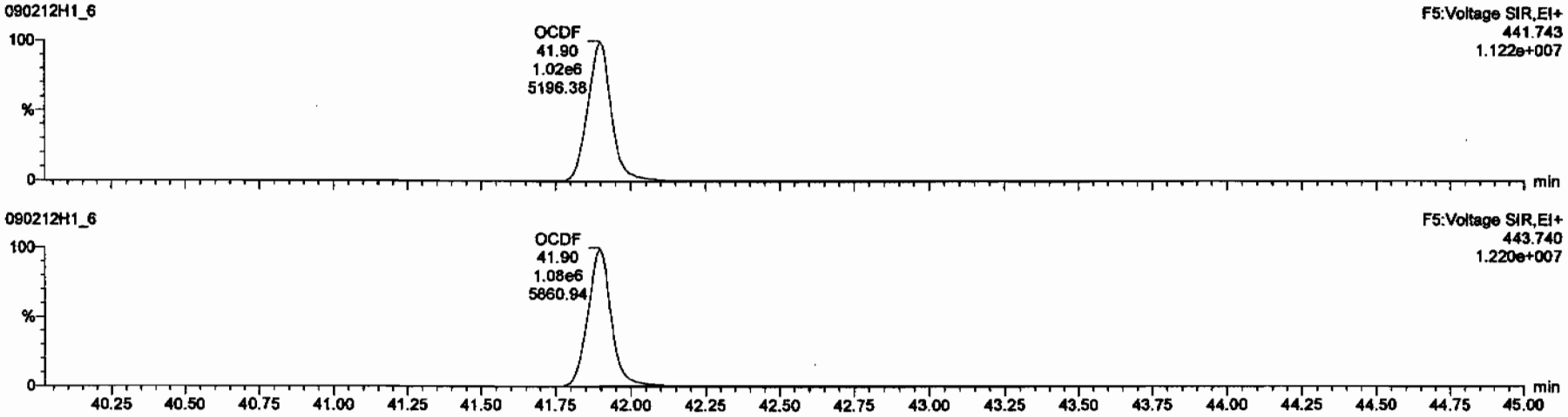

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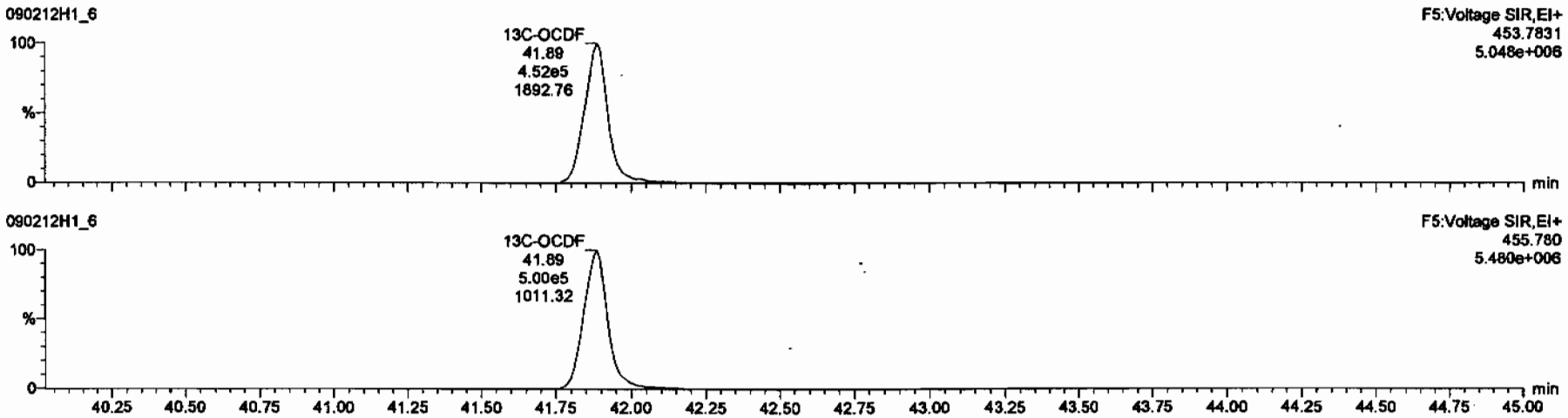

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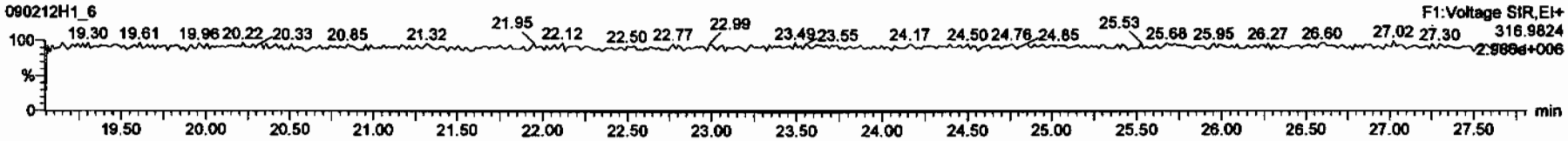

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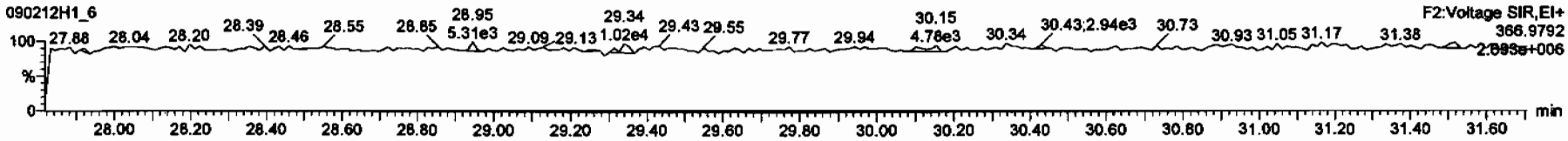

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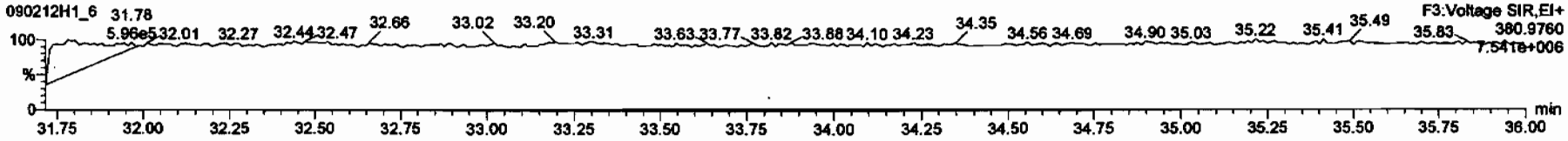

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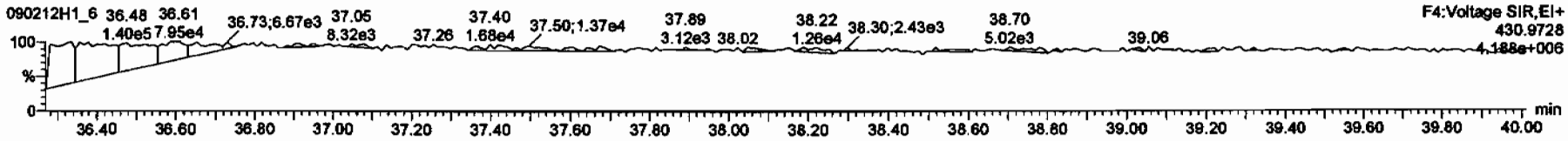

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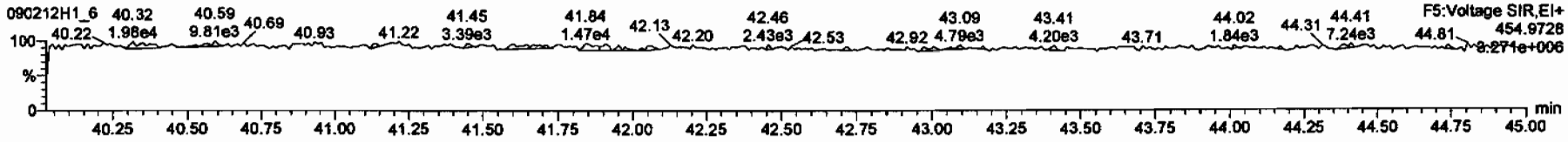

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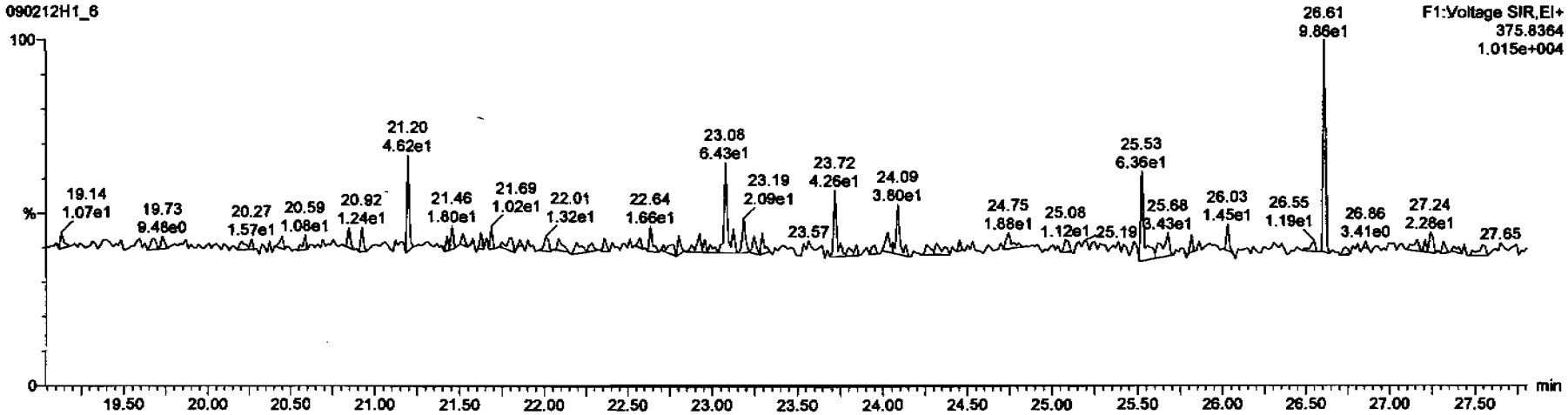

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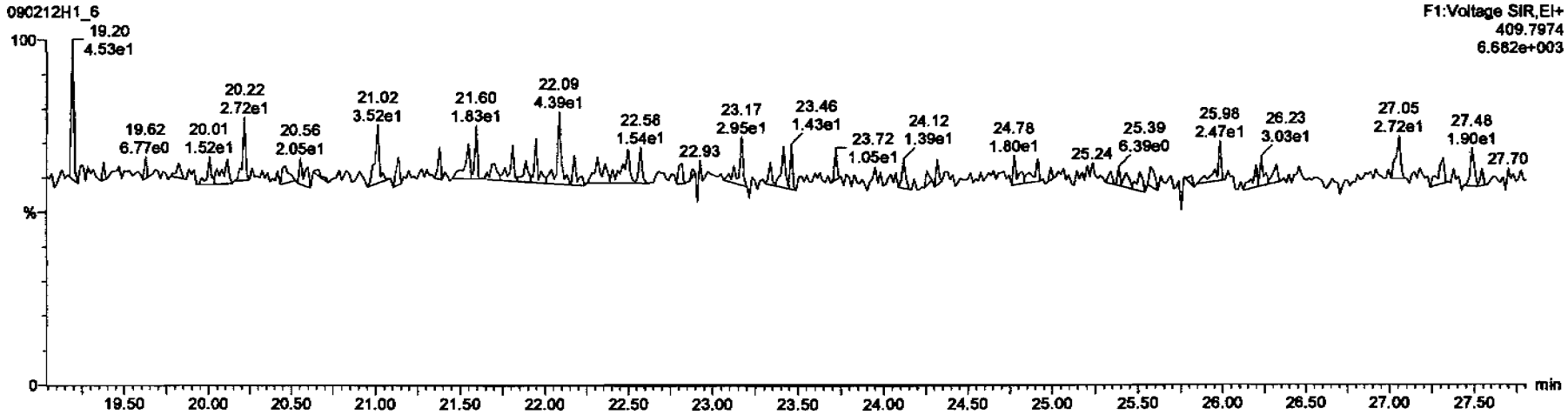

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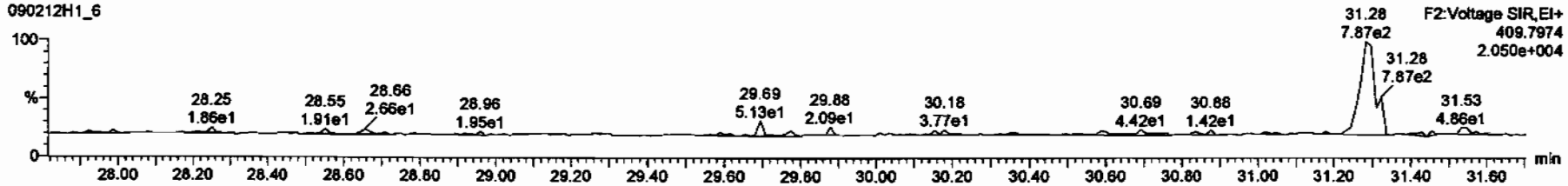

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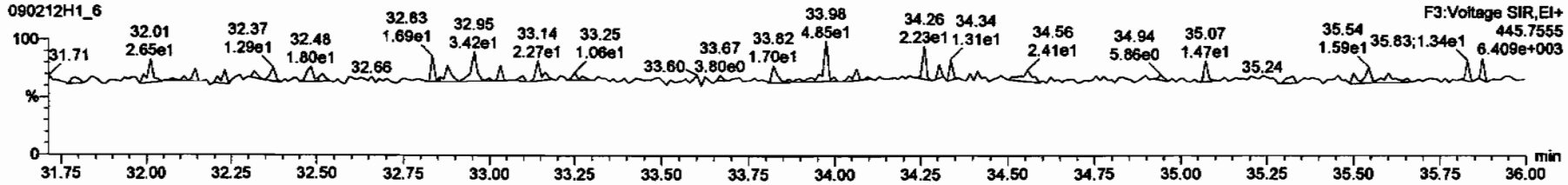

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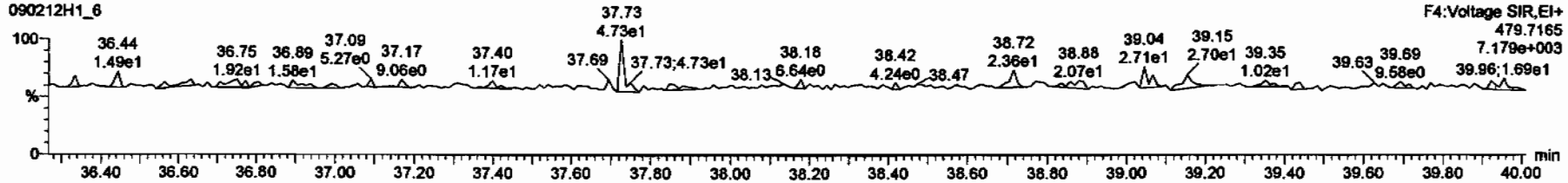

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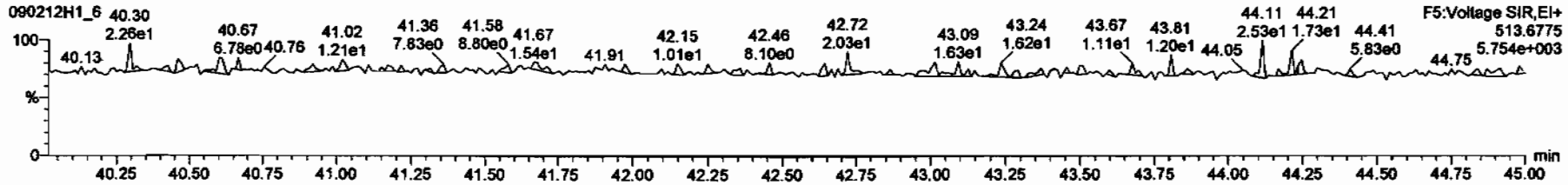

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2,3,7,8-TCDD

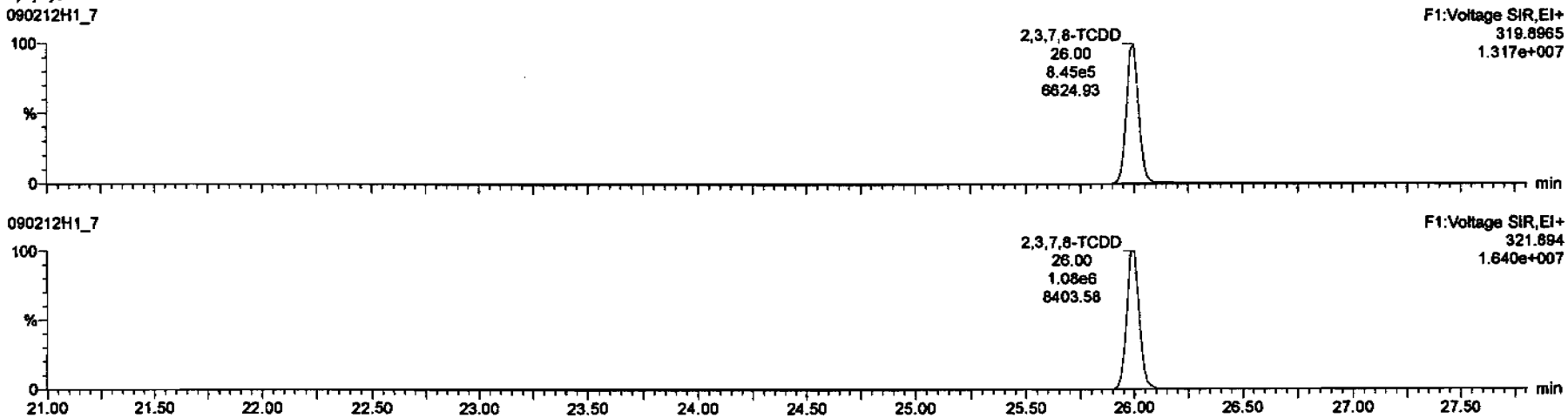

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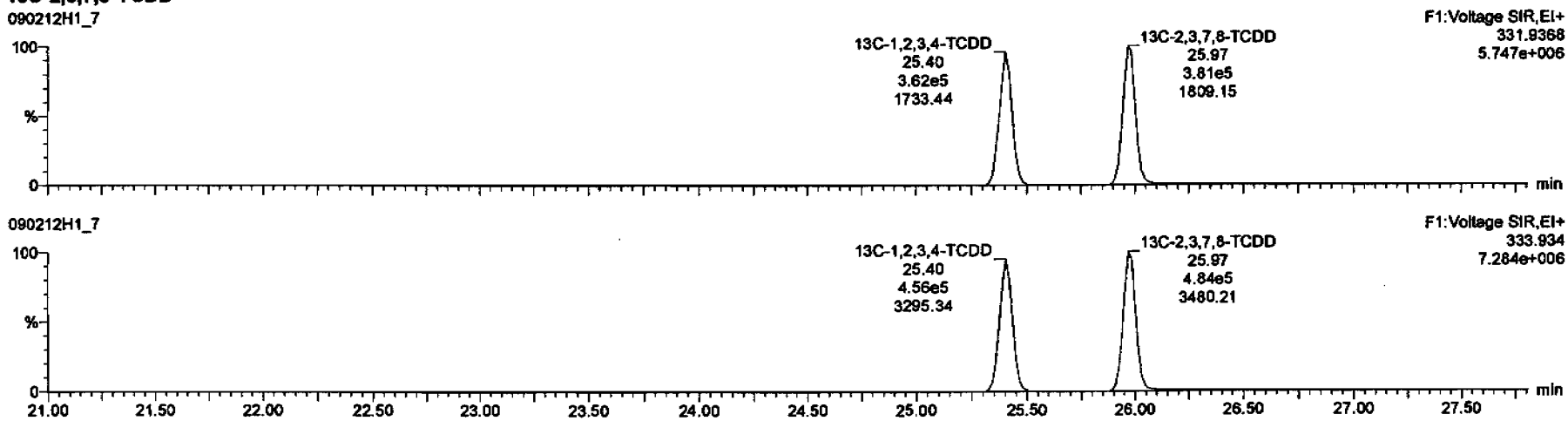

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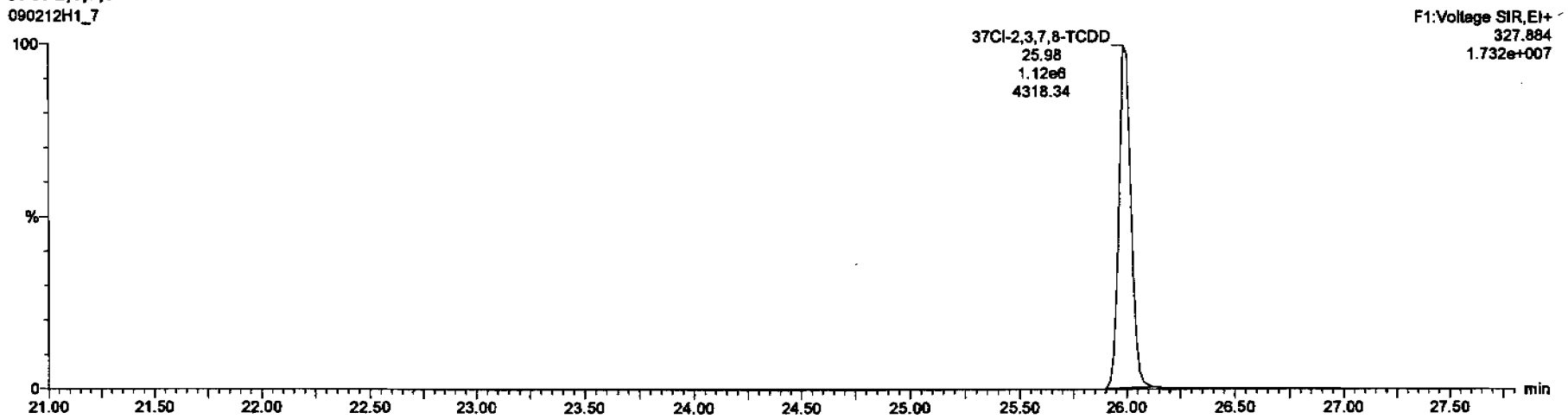

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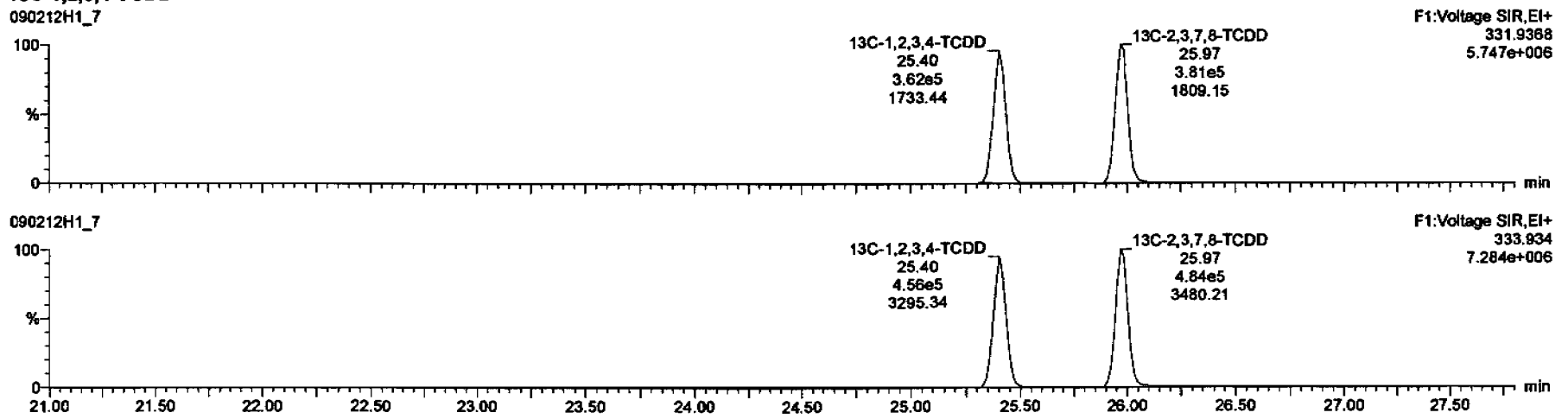

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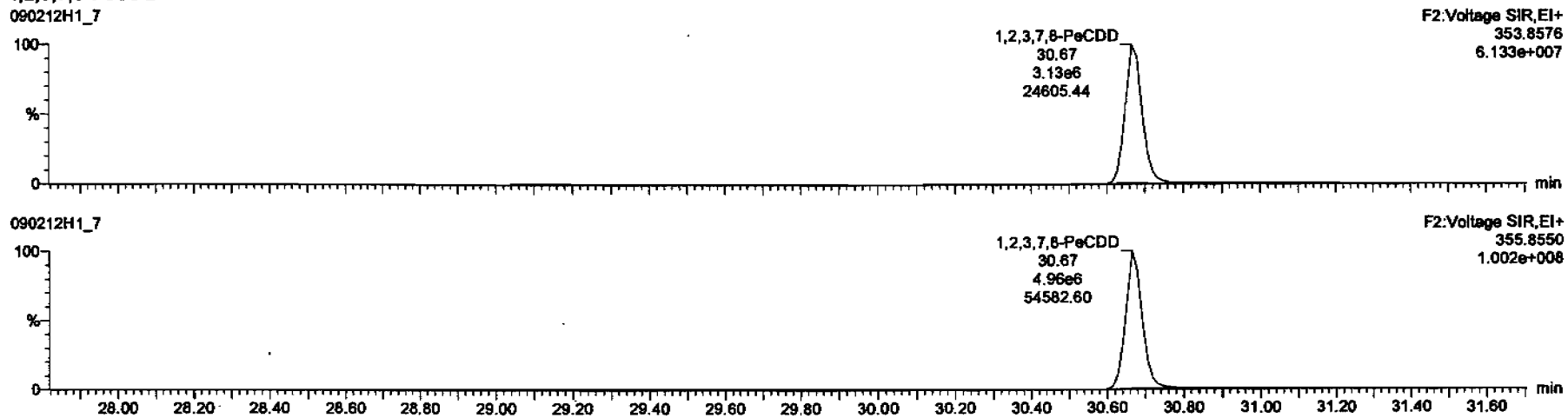

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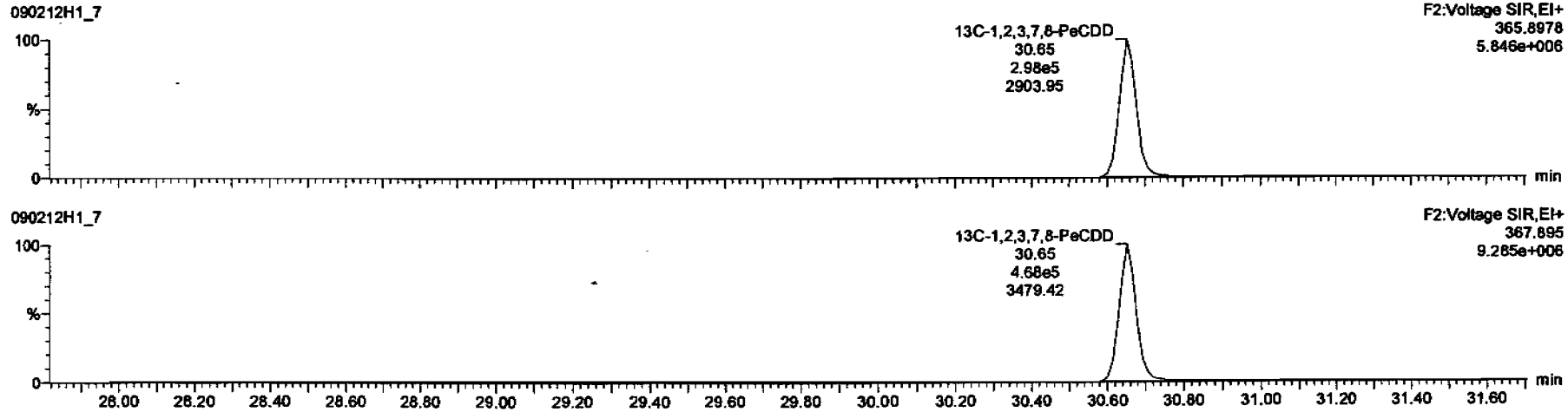

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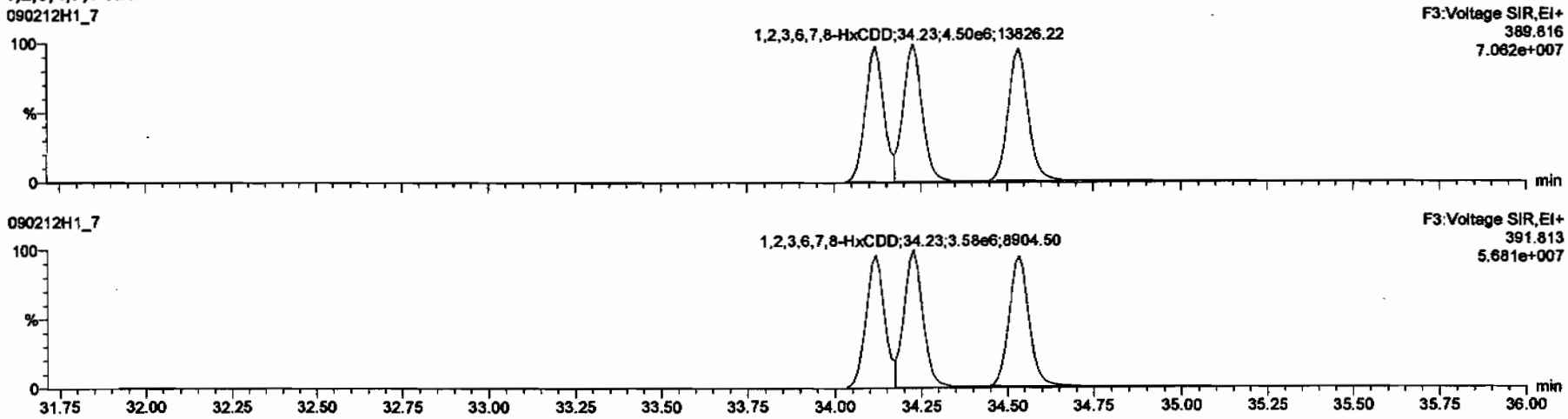

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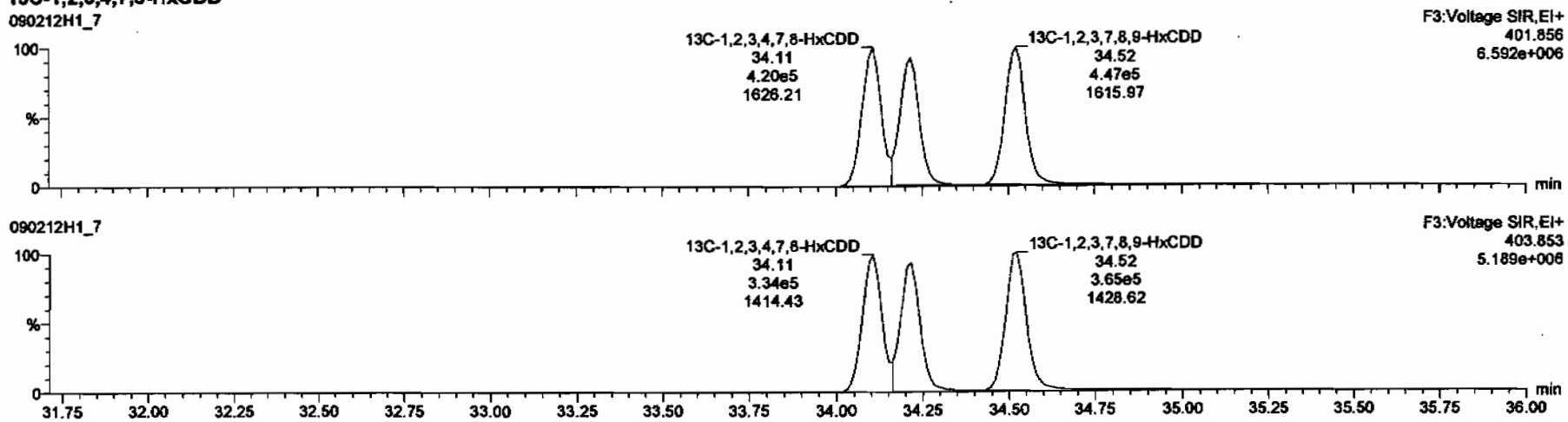

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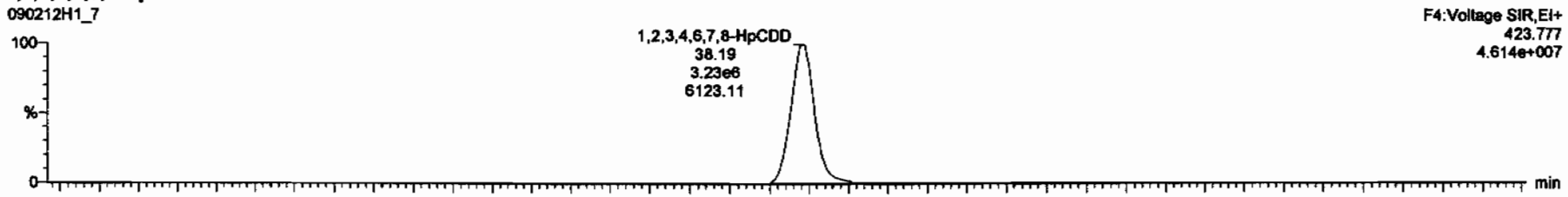

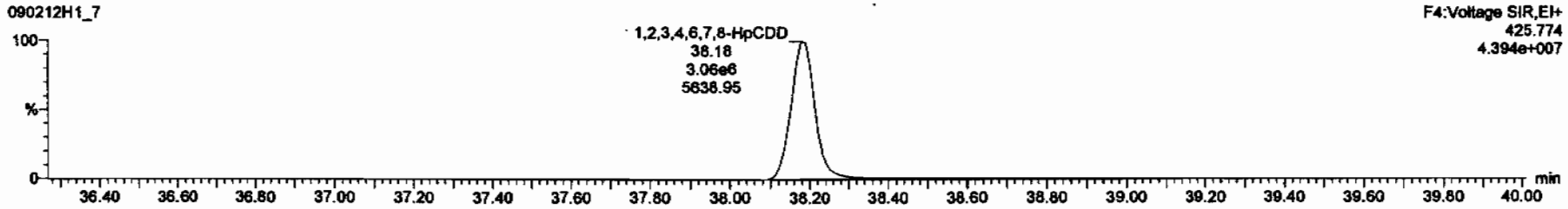

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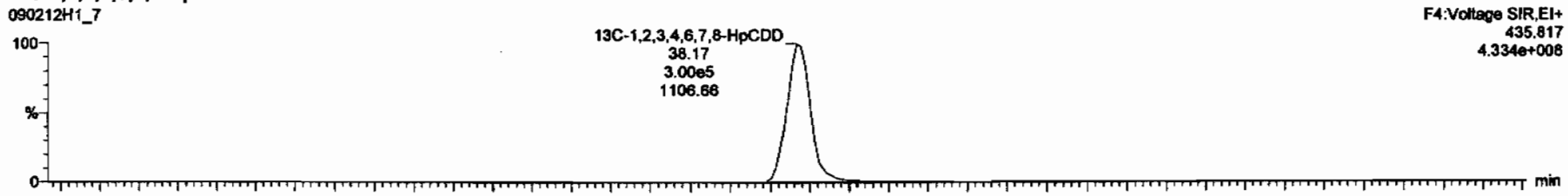

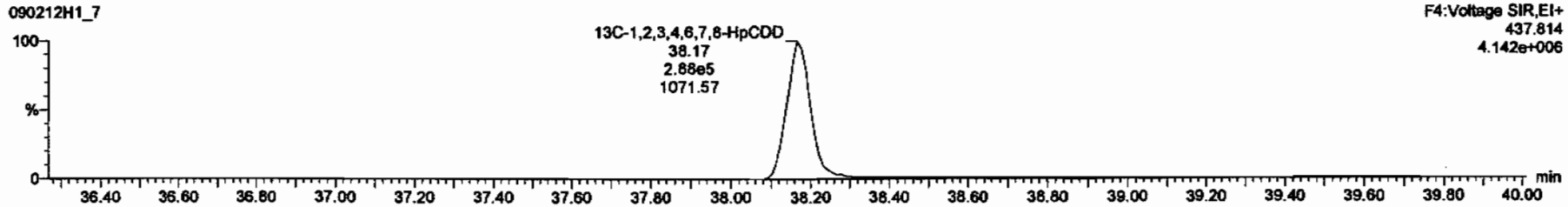

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OCDD

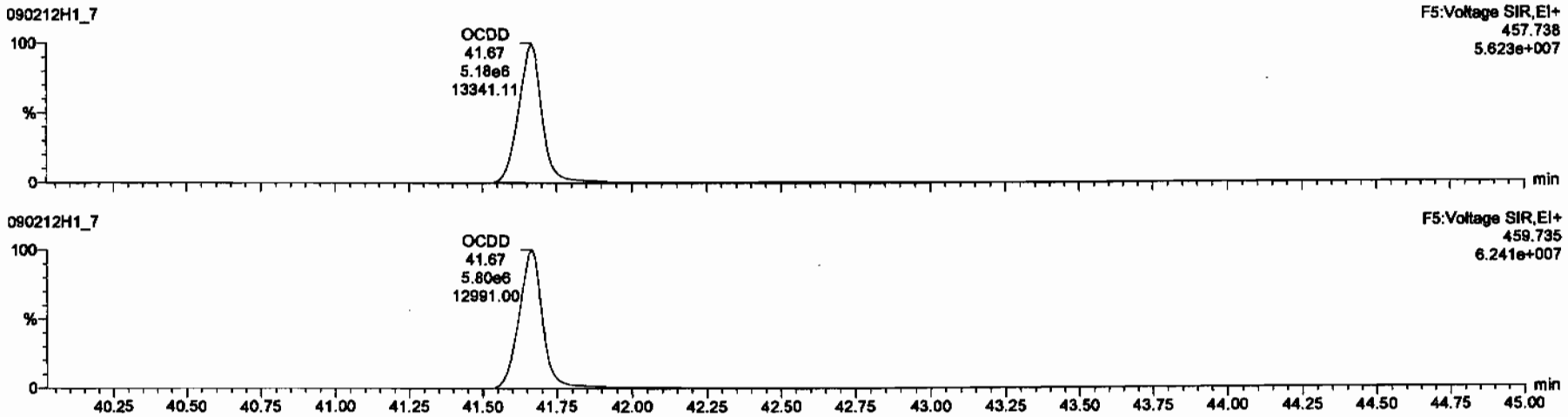

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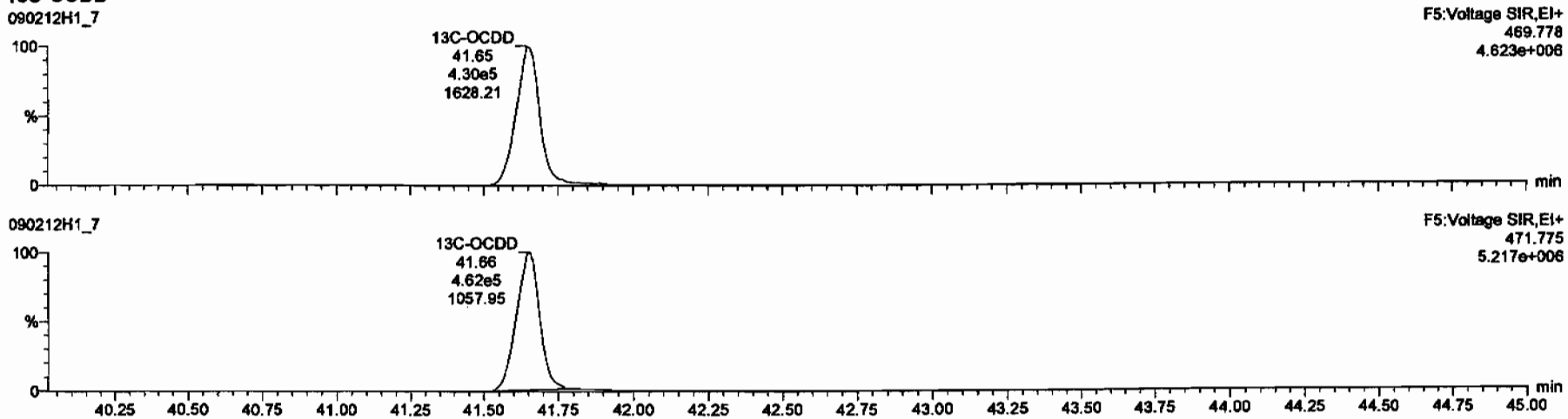

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2,3,7,8-TCDF

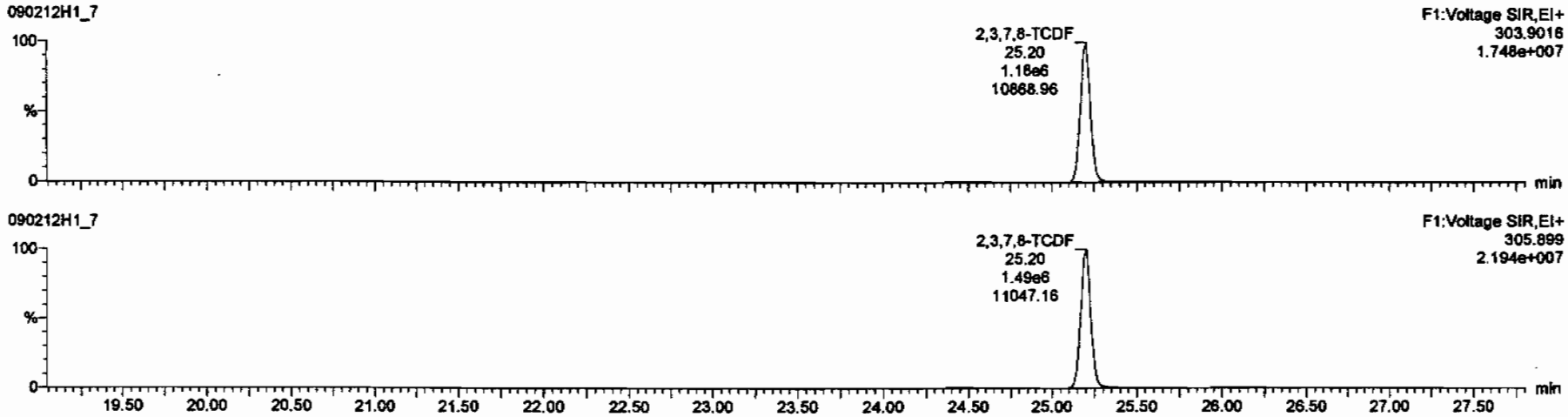

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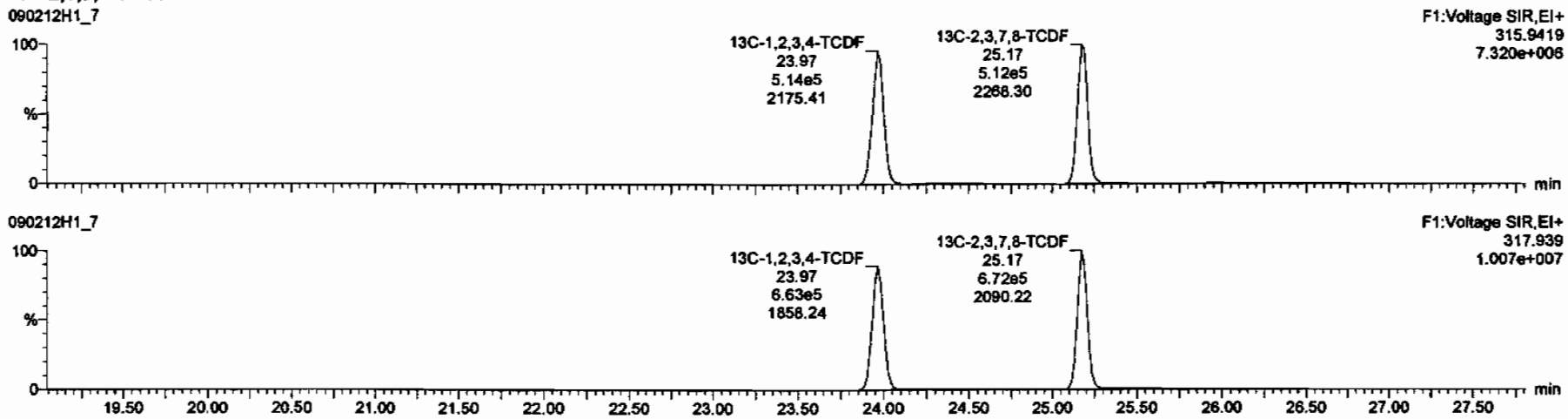

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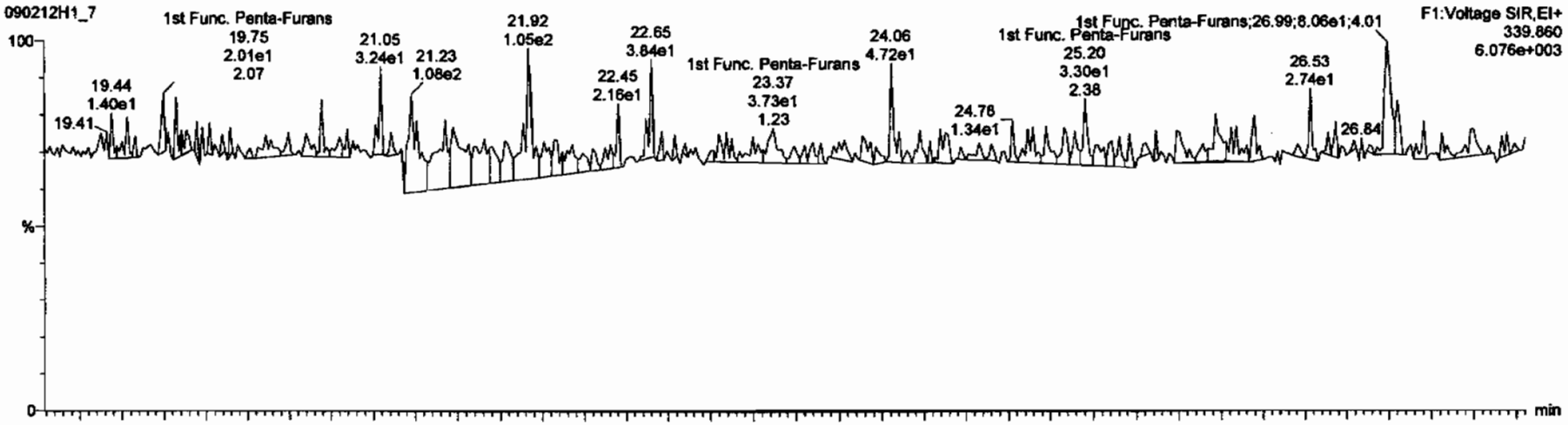

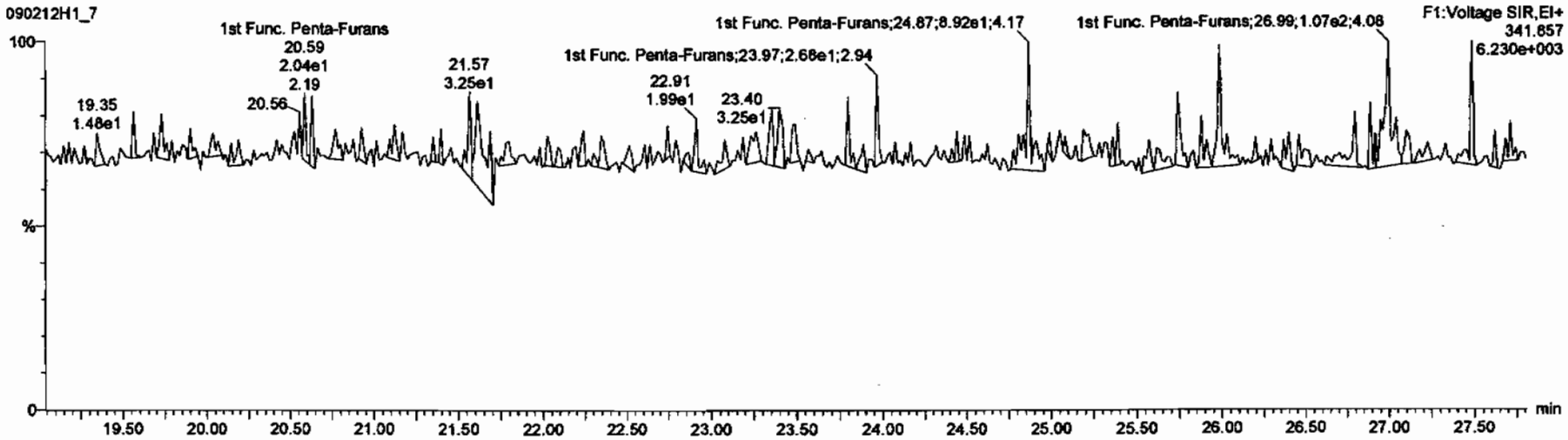

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1,2,3,7,8-PeCDF

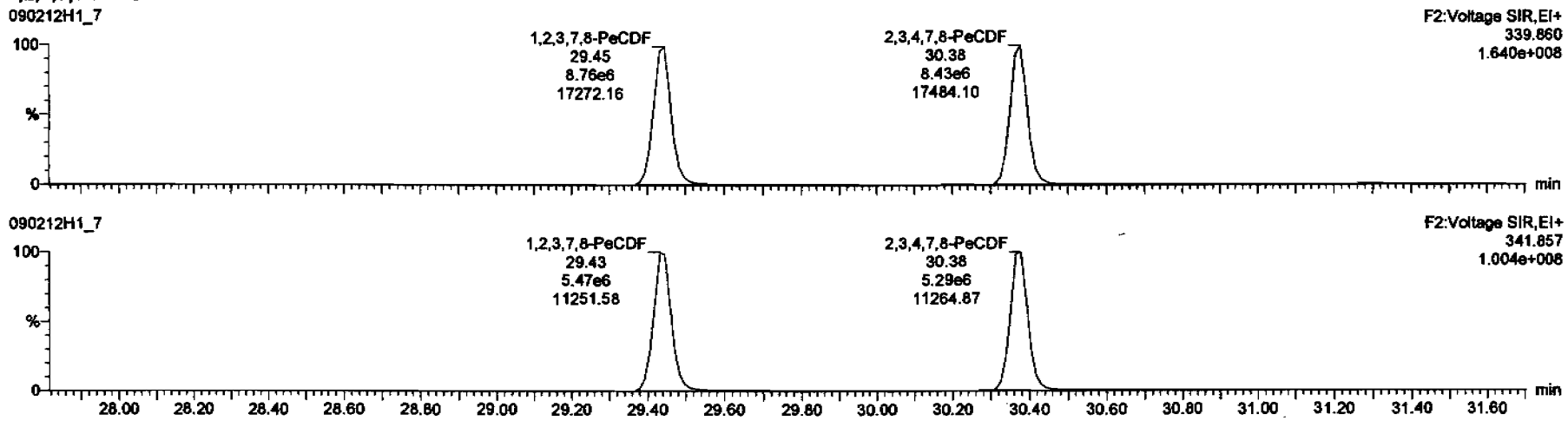

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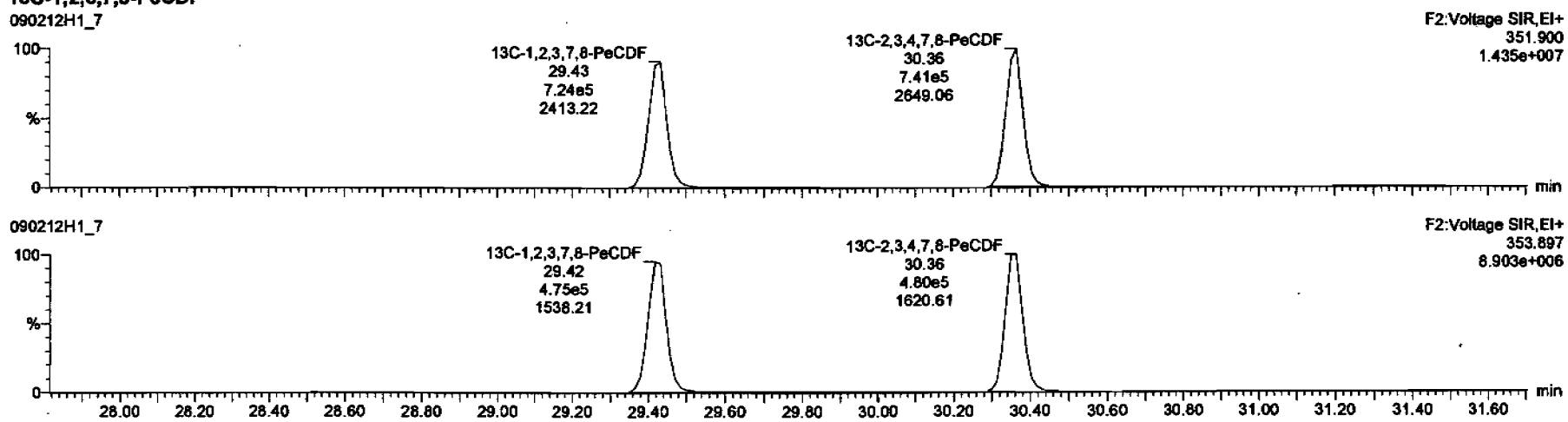

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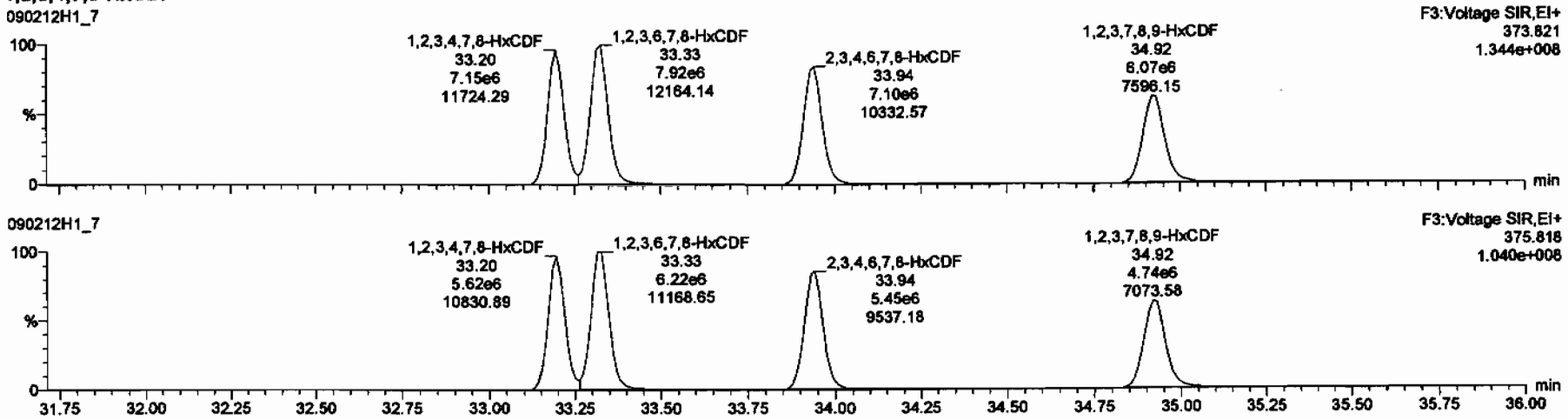

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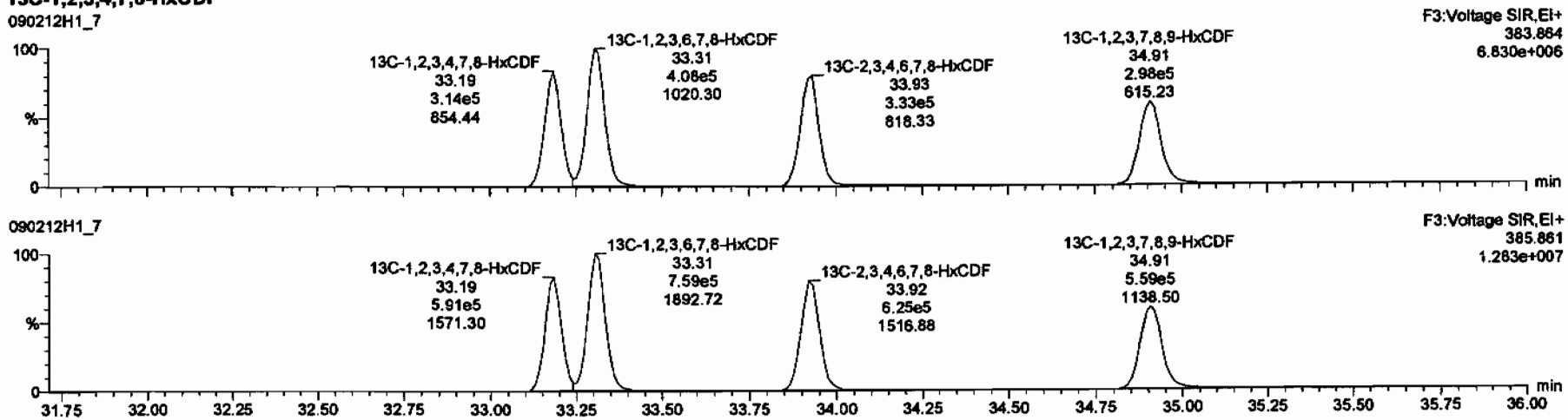

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Name: 090212H1_7, Date: 12-Feb-2009, Time: 16:07:03, ID: ST090212H1-6 1613 CS5 080917K, Description: 1613 CS5 080917K

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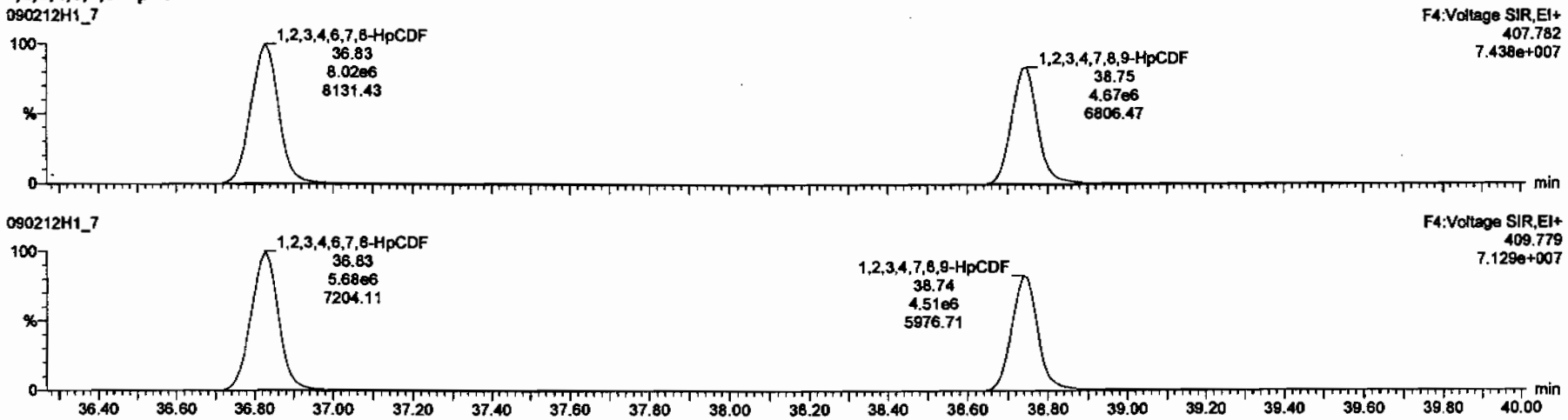

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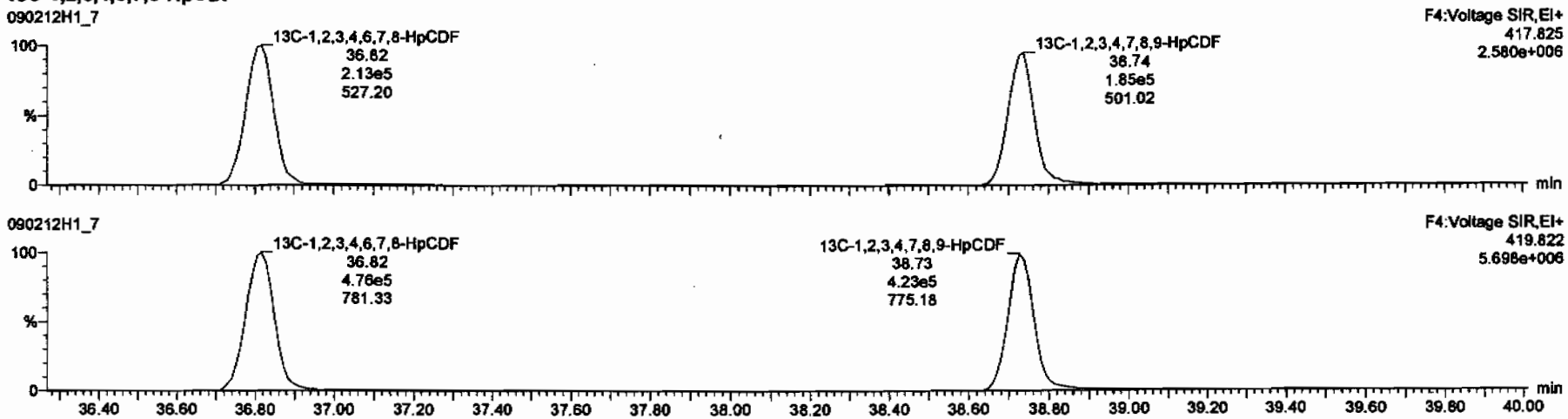

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OCDF

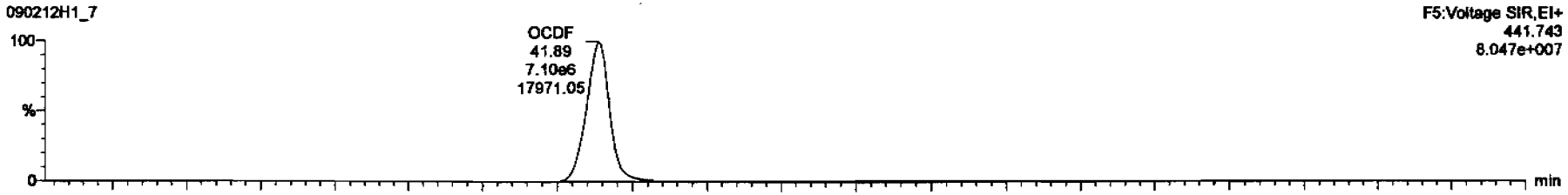

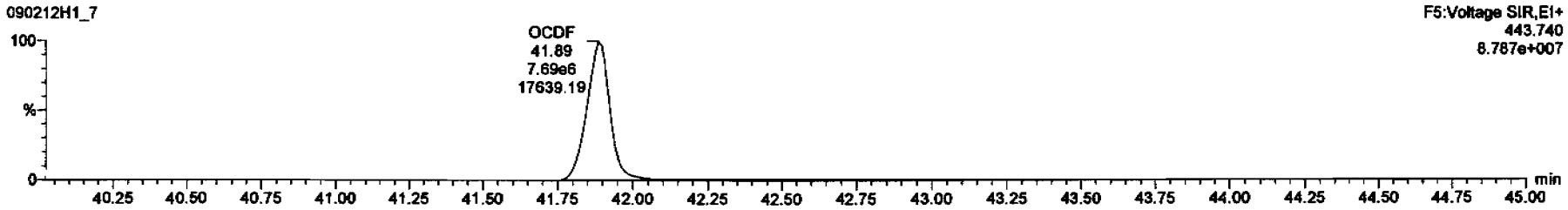

13C-OCDF

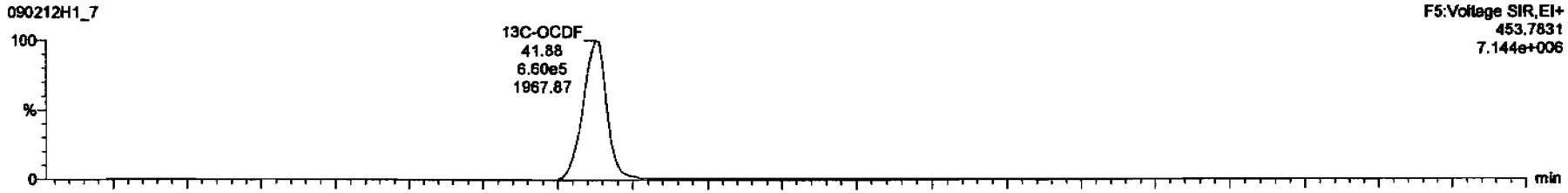

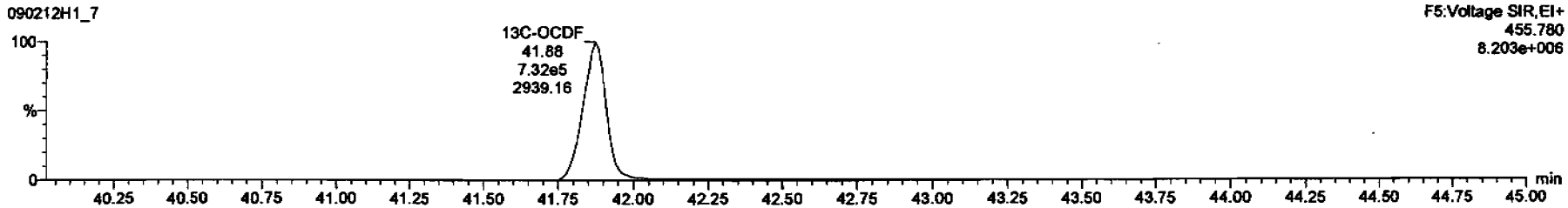

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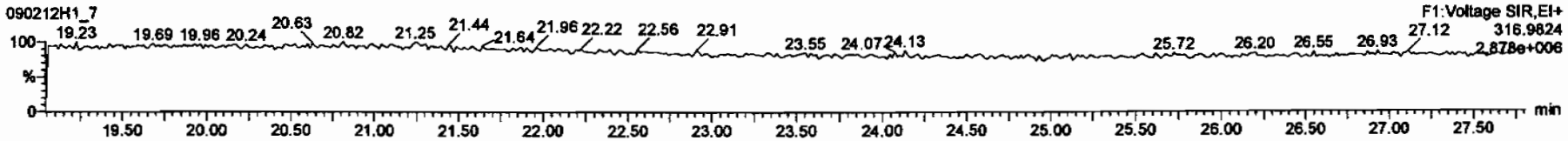

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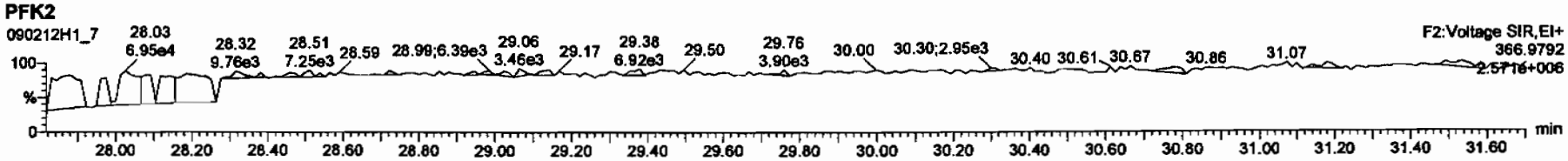

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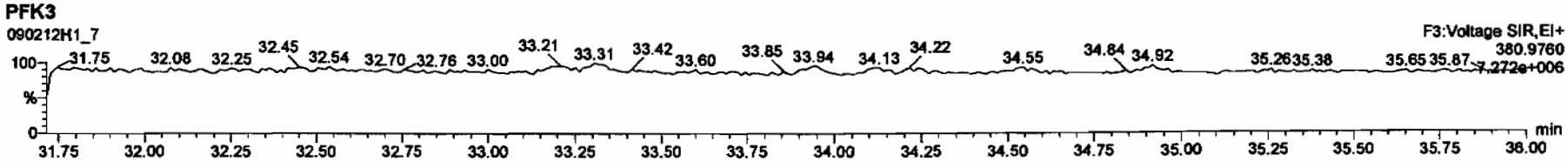

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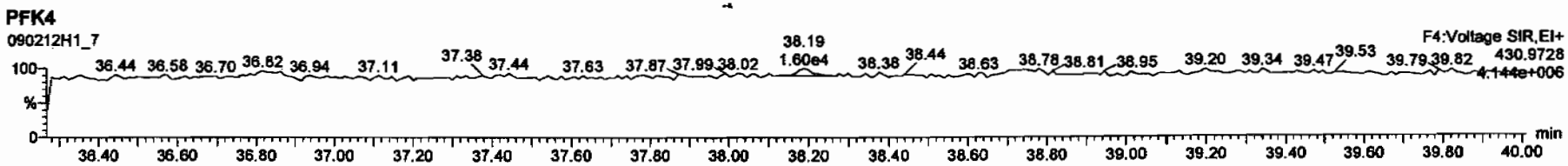

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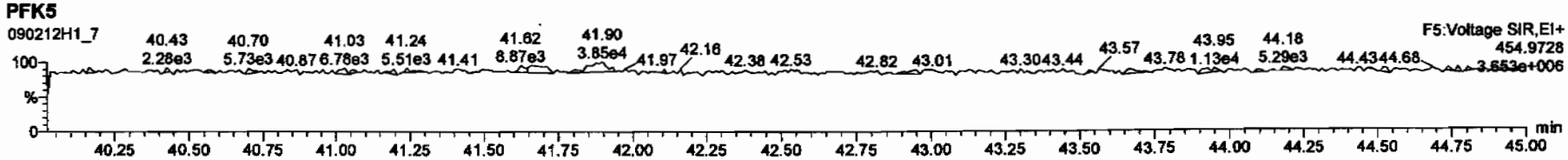

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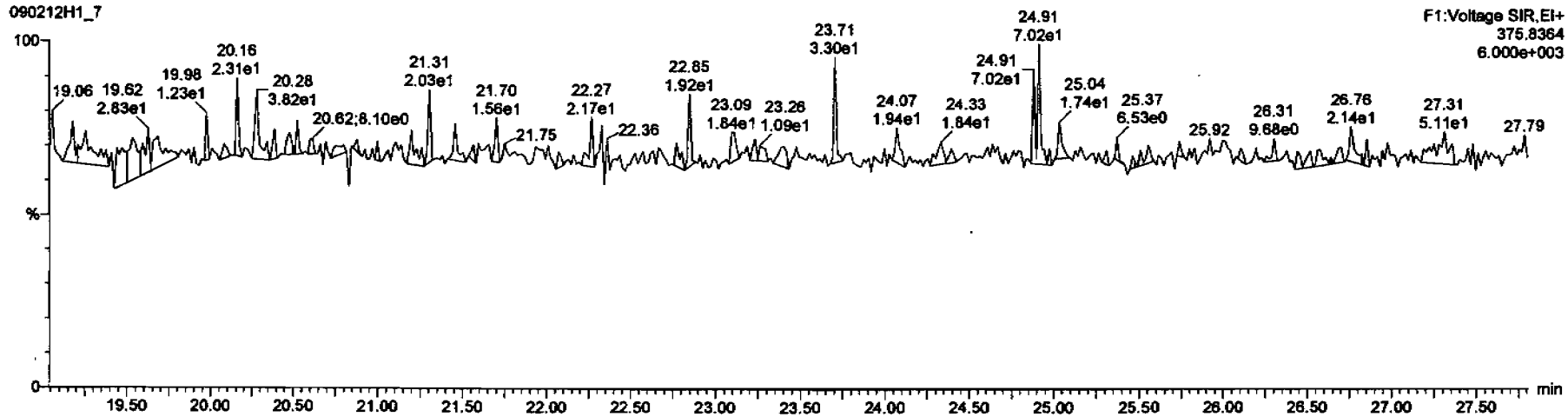

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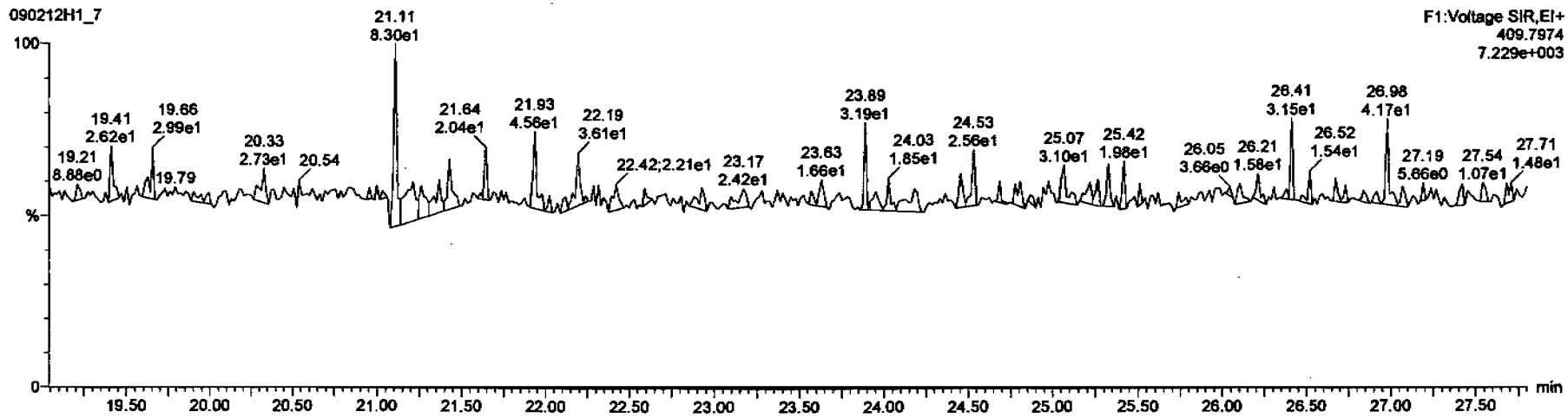

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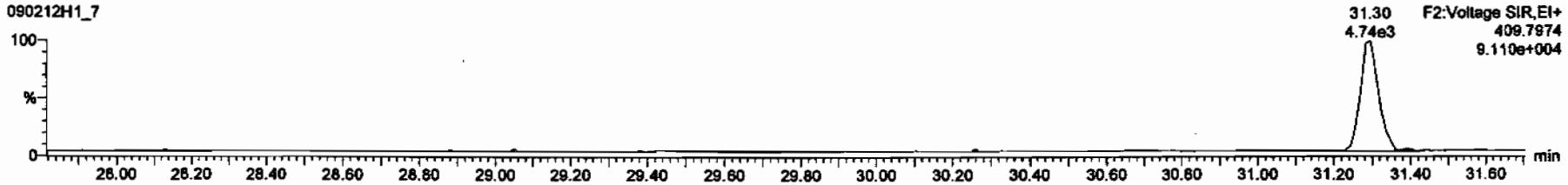

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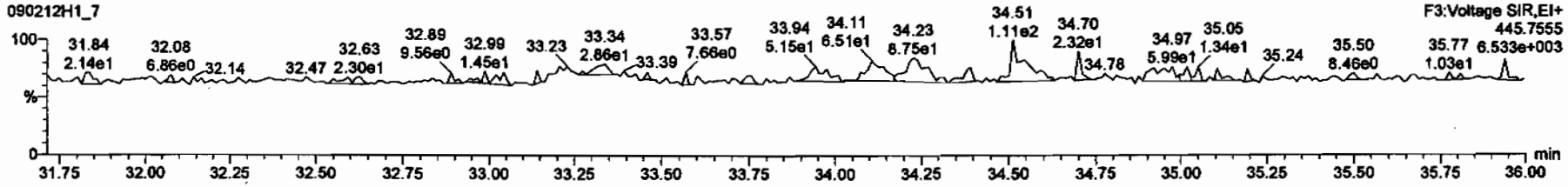

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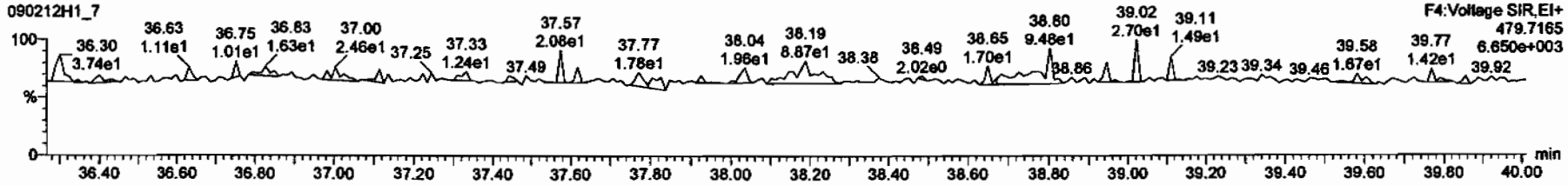

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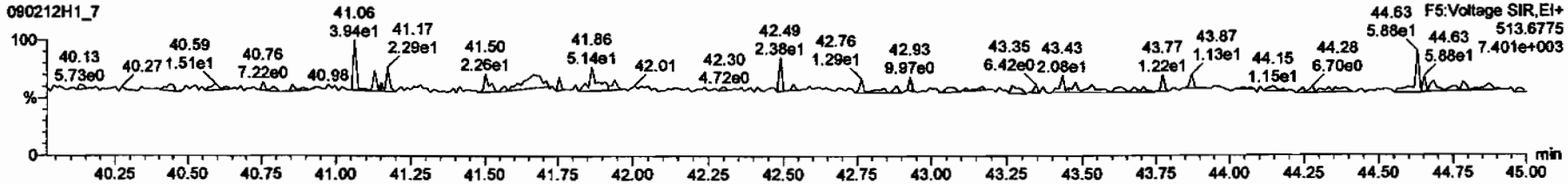

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M 292.9824 R 13769

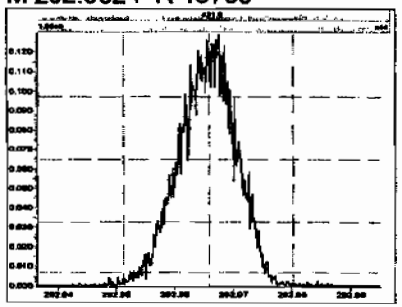

M 304.9824 R 14205

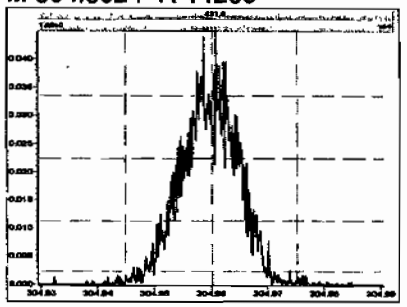

M 318.9792 R 15079

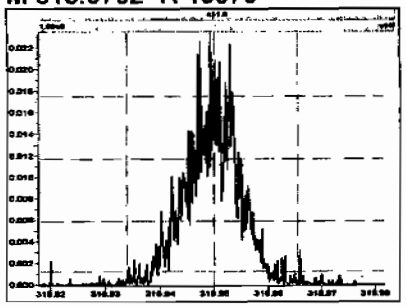

M 330.9792 R 13699

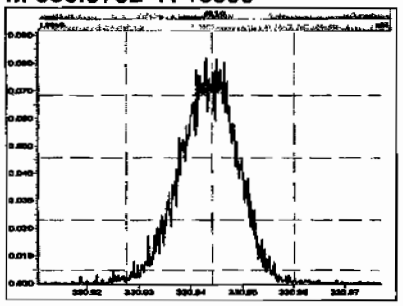

M 342.9792 R 13710

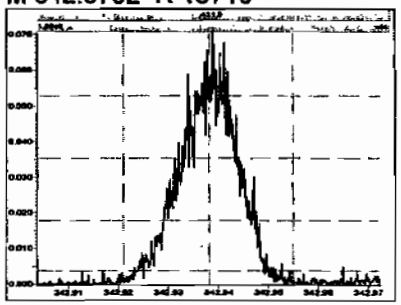

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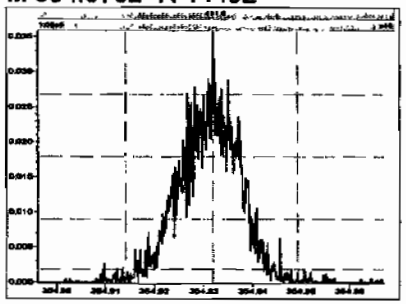

M 366.9792 R 14631

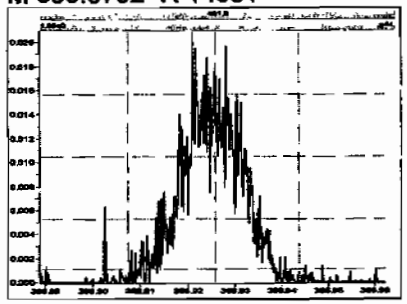

M 380.9760 R 13026

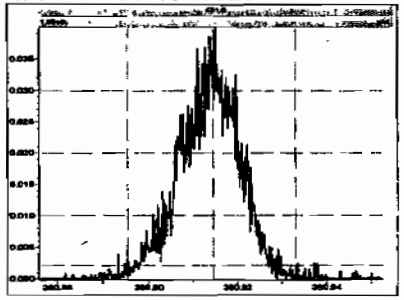

M 392.9760 R 14233

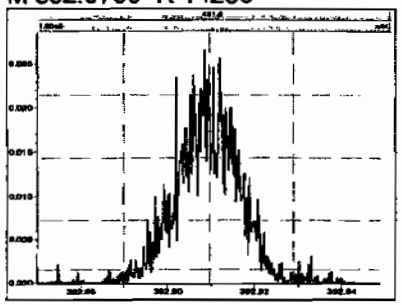

M 404.9760 R 15184

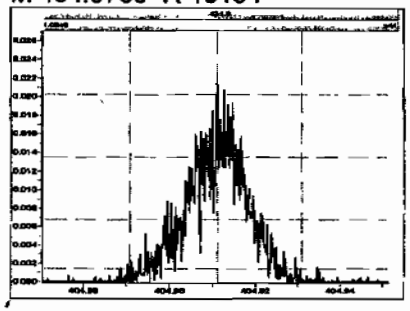

M 416.9760 R 15880

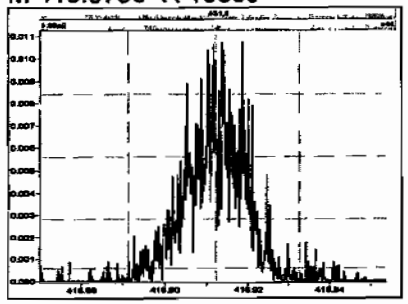

M 330.9792 R 13440

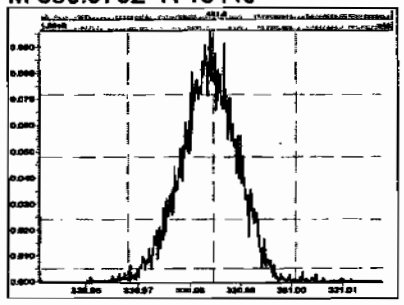

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M 342.9792 R 13880

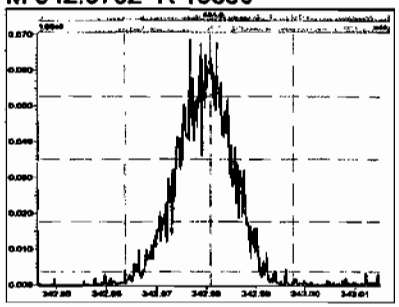

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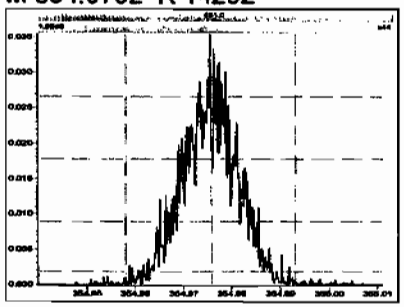

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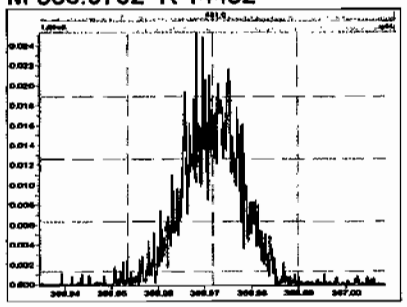

M 380.9760 R 13928

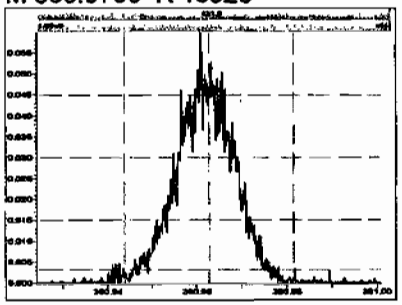

M 392.9760 R 14536

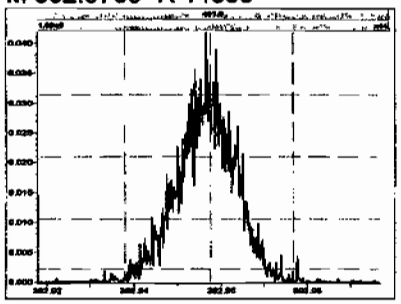

M 404.9760 R 14536

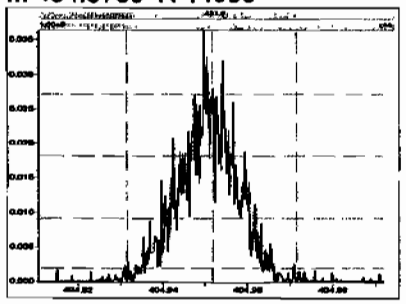

M 416.9760 R 15053

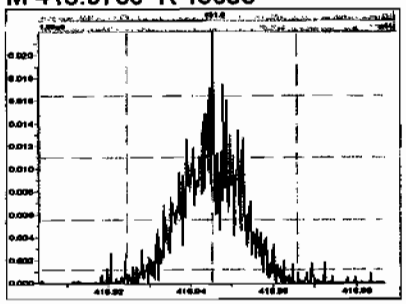

M 366.9792 R 15433

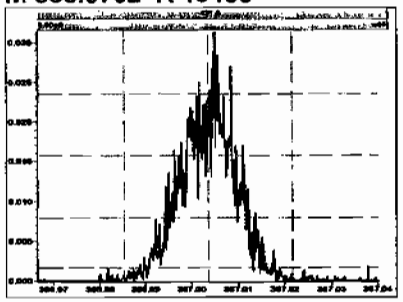

M 380.9760 R 14220

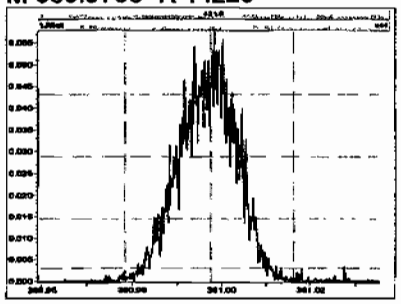

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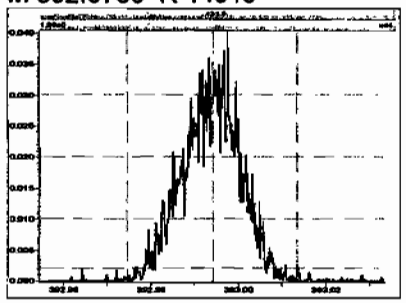

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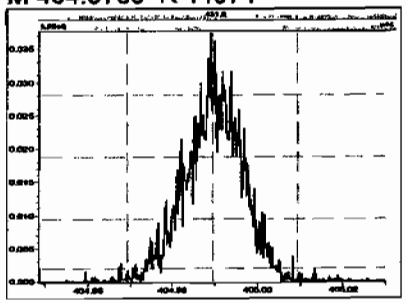

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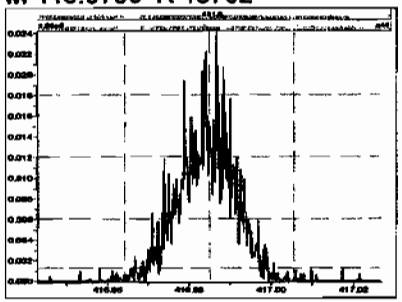

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M 430.9728 R 14874

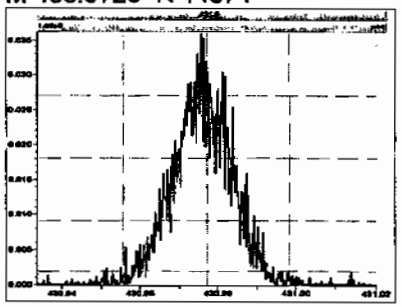

M 442.9728 R 15394

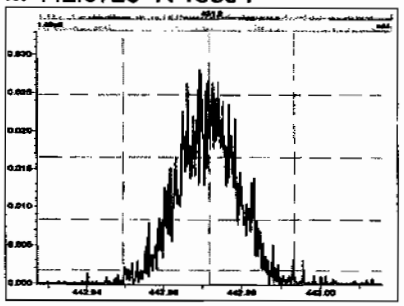

M 454.9728 R 13981

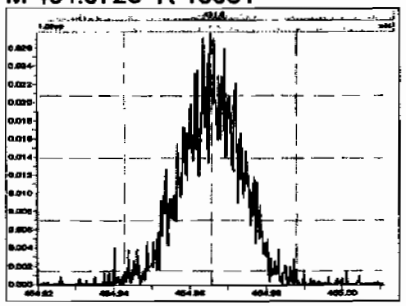

M 404.9760 R 14384

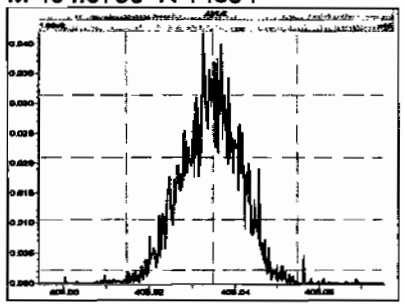

M 416.9760 R 16486

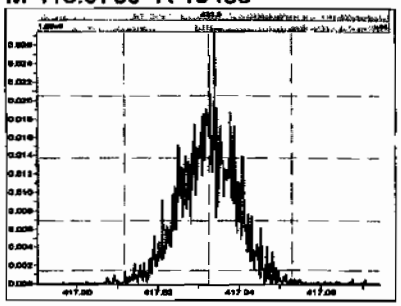

M 430.9728 R 14520

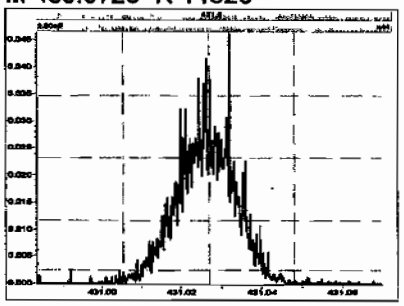

M 442.9728 R 14332

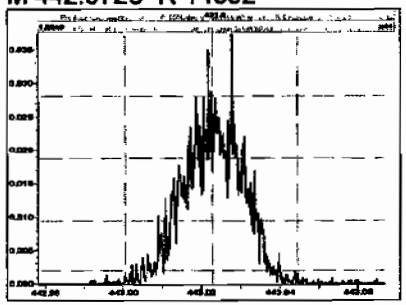

M 454.9728 R 13746

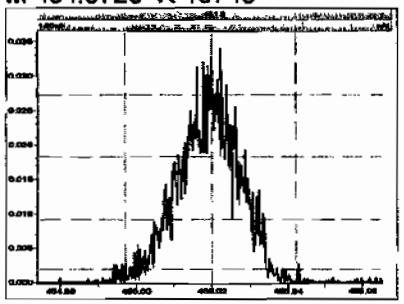

M 466.9728 R 16090

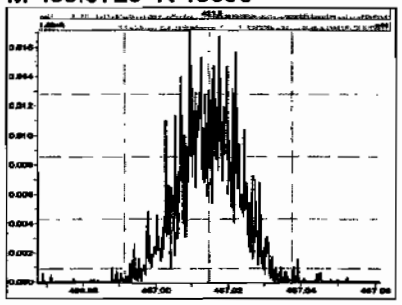

M 480.9696 R 13927

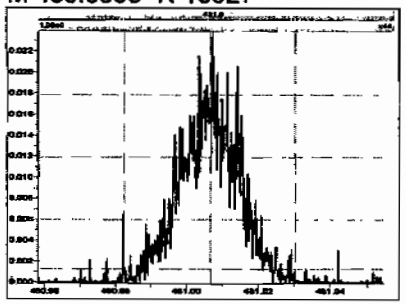

M 430.9728 R 12991

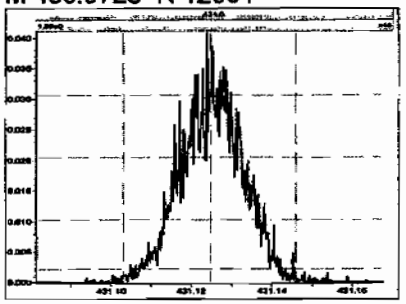

M 442.9728 R 13058

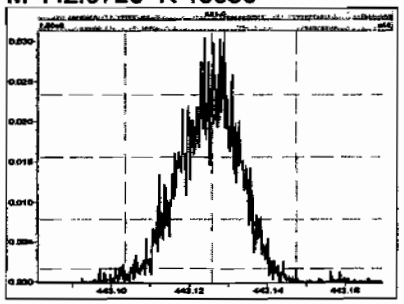

Printed: Thursday, February 12, 2009 18:43:49 Pacific Standard Time

M 454.9728 R 12791

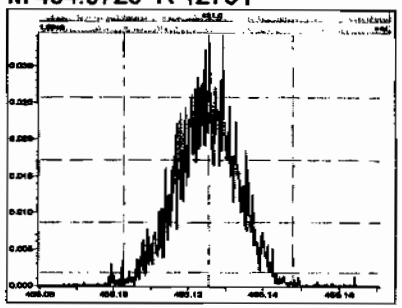

M 466.9728 R 14943

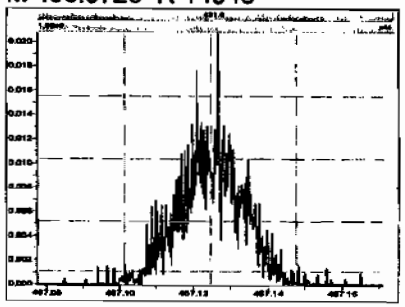

M 480.9696 R 12740

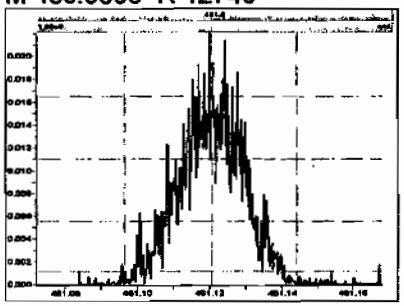

M 492.9696 R 15128

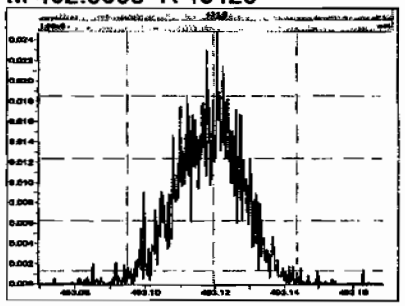

M 504.9696 R 13236

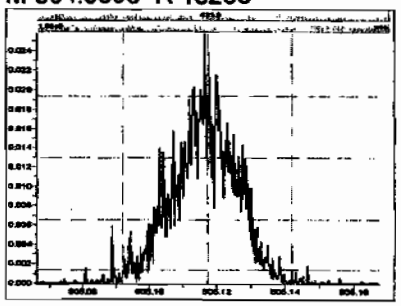

M 516.9697 R 17182

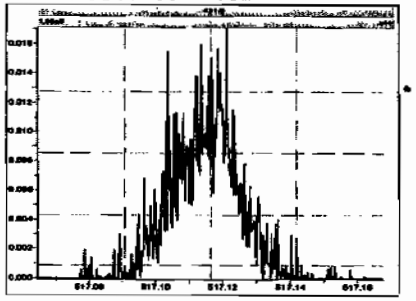

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1	2,3,7,8-TCDD	2.66e4	0.81	NO	1.08	1.000	25.98	1.001	9.5090		0.0723	9.5090
2	1,2,3,7,8-PeCDD	1.01e5	0.61	NO	1.03	1.000	30.65	1.000	47.444		0.172	47.444
3	1,2,3,4,7,8-HxCDD	9.43e4	1.26	NO	1.00	1.000	34.11	1.001	60.533		0.392	60.533
4	1,2,3,6,7,8-HxCDD	8.97e4	1.28	NO	1.13	1.000	34.22	1.000	41.292		0.312	41.292
5	1,2,3,7,8,9-HxCDD	9.40e4	1.29	NO	1.10	1.000	34.52	1.009	48.966		0.335	48.966
6	1,2,3,4,6,7,8-HpCDD	7.06e4	1.02	NO	1.06	1.000	38.18	1.001	47.757		0.360	47.757
7	OCDD	1.05e5	0.91	NO	1.18	1.000	41.66	1.000	87.851		0.375	87.851
8	2,3,7,8-TCDF	3.59e4	0.80	NO	1.09	1.000	25.20	1.001	9.2692		0.0713	9.2692
9	1,2,3,7,8-PeCDF	1.90e5	1.60	NO	1.16	1.000	29.43	1.001	47.569		0.197	47.569
10	2,3,4,7,8-PeCDF	1.76e5	1.60	NO	1.12	1.000	30.36	1.001	49.959		0.207	49.959
11	1,2,3,4,7,8-HxCDF	1.51e5	1.22	NO	1.41	1.000	33.19	1.000	47.242		0.234	47.242
12	1,2,3,6,7,8-HxCDF	1.99e5	1.24	NO	1.22	1.000	33.31	1.000	52.247		0.205	52.247
13	2,3,4,6,7,8-HxCDF	1.49e5	1.26	NO	1.28	1.000	33.93	1.001	48.194		0.285	48.194
14	1,2,3,7,8,9-HxCDF	1.18e5	1.28	NO	1.26	1.000	34.91	1.000	50.089		0.402	50.089
15	1,2,3,4,6,7,8-HpCDF	1.26e5	1.05	NO	1.69	1.000	36.81	1.000	45.609		0.324	45.609
16	1,2,3,4,7,8,9-HpCDF	9.92e4	1.09	NO	1.48	1.000	38.74	1.000	53.044		0.451	53.044
17	OCDF	1.36e5	0.92	NO	1.10	1.000	41.88	1.001	~~77825~~		102	77825
18	13C-2,3,7,8-TCDD	2.60e5	0.79	NO	1.01	1.000	25.97	1.022	100.68	101	0.251	
19	13C-1,2,3,7,8-PeCDD	2.07e5	0.62	NO	0.827	1.000	30.64	1.206	98.194	98.2	0.366	
20	13C-1,2,3,4,7,8-HxCDD	1.56e5	1.23	NO	0.916	1.000	34.08	0.988	96.272	96.3	1.12	
21	13C-1,2,3,6,7,8-HxCDD	1.93e5	1.30	NO	0.921	1.000	34.21	0.991	118.79	119	1.12	
22	13C-1,2,3,4,6,7,8-HpCDD	1.39e5	1.04	NO	0.708	1.000	38.16	1.106	111.12	111	0.936	
23	13C-OCDD	2.03e5	0.90	NO	0.503	1.000	41.65	1.207	229.27	115	1.10	
24	13C-2,3,7,8-TCDF	3.56e5	0.77	NO	0.977	1.000	25.17	0.991	47241	~~47200~~	47.8	
25	13C-1,2,3,7,8-PeCDF	3.45e5	1.53	NO	0.896	1.000	29.41	1.158	49875	~~49900~~	135	
26	13C-2,3,4,7,8-PeCDF	3.15e5	1.57	NO	0.900	1.000	30.34	1.194	45355	~~45400~~	135	
27	13C-1,2,3,4,7,8-HxCDF	2.27e5	0.52	NO	1.17	1.000	33.17	0.962	110.01	110	1.09	
28	13C-1,2,3,6,7,8-HxCDF	3.11e5	0.53	NO	1.52	1.000	33.29	0.965	116.12	116	0.841	
29	13C-2,3,4,6,7,8-HxCDF	2.41e5	0.53	NO	1.25	1.000	33.91	0.983	109.27	109	1.02	
30	13C-1,2,3,7,8,9-HxCDF	1.87e5	0.53	NO	1.05	1.000	34.90	1.011	100.48	100	1.21	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	31 13C-1,2,3,4,6,7,8-HpCDF	1.64e5	0.42	NO	0.868	1.000	36.80	1.066	107.17	107	0.875
	32 13C-1,2,3,4,7,8,9-HpCDF	1.26e5	0.43	NO	0.727	1.000	38.73	1.122	98.571	98.6	1.05
	33 13C-OCDF	3.18e2	0.17	YES	0.760	1.000	41.82	1.212	0.23753	~~0.119~~	0.197
	34 37Cl-2,3,7,8-TCDD	2.82e4			0.668	1.000	25.98	1.023	16.616	166	0.0976
	35 13C-1,2,3,4-TCDD	2.54e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.254
	36 13C-1,2,3,4-TCDF	7.72e2	0.44	YES	1.00	1.000	23.92	0.000	100.00	100	46.7
	37 13C-1,2,3,7,8,9-HxCDD	1.76e5	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	1.03

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

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2,3,7,8-TCDD

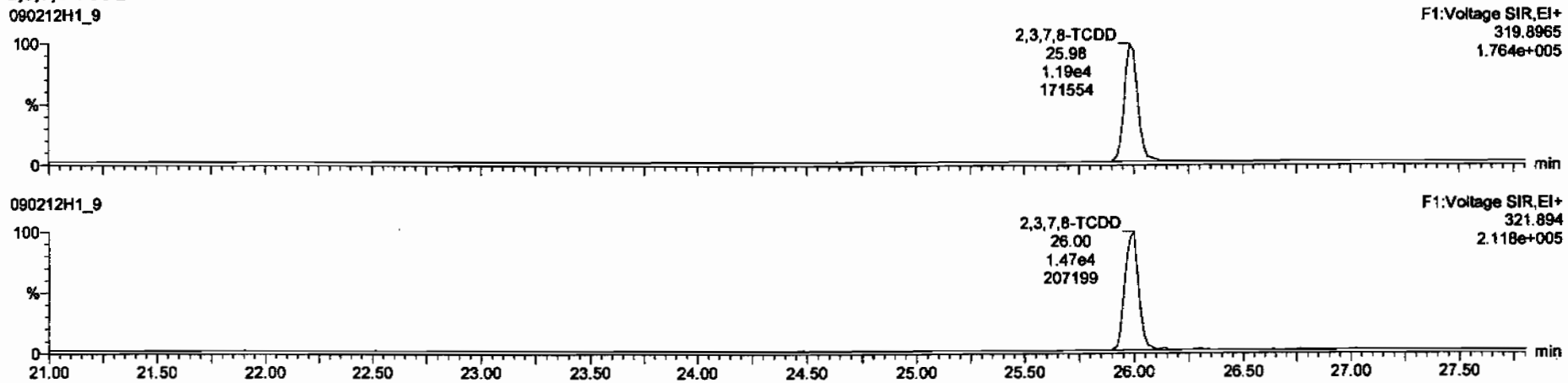

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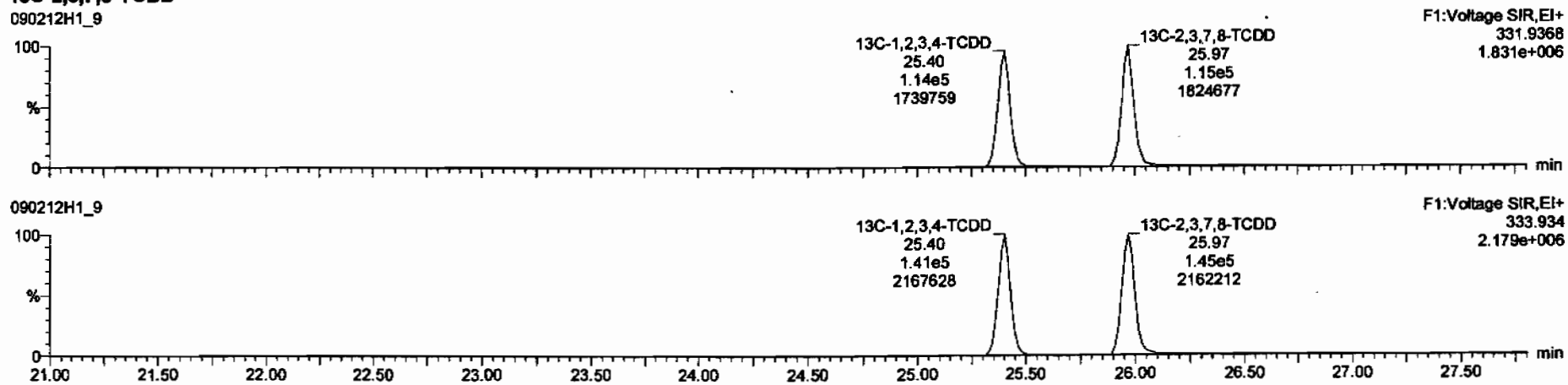

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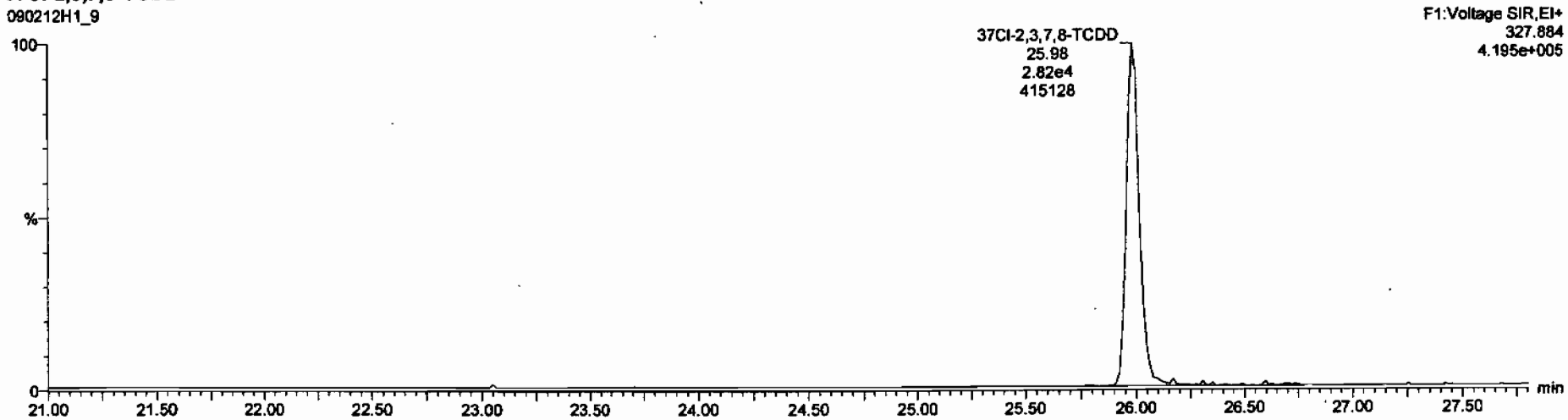

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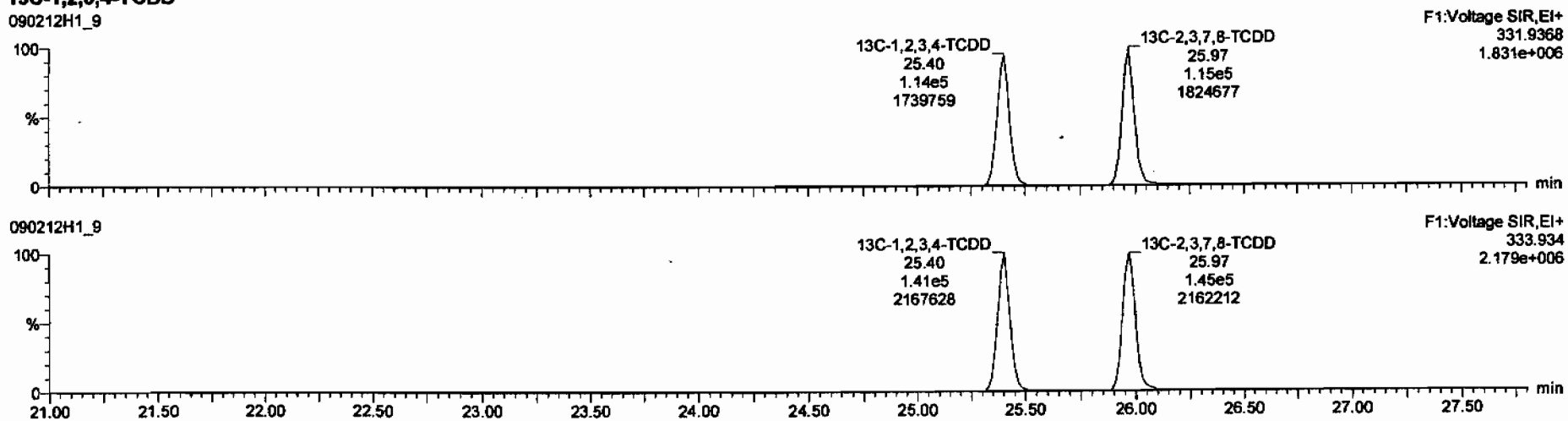

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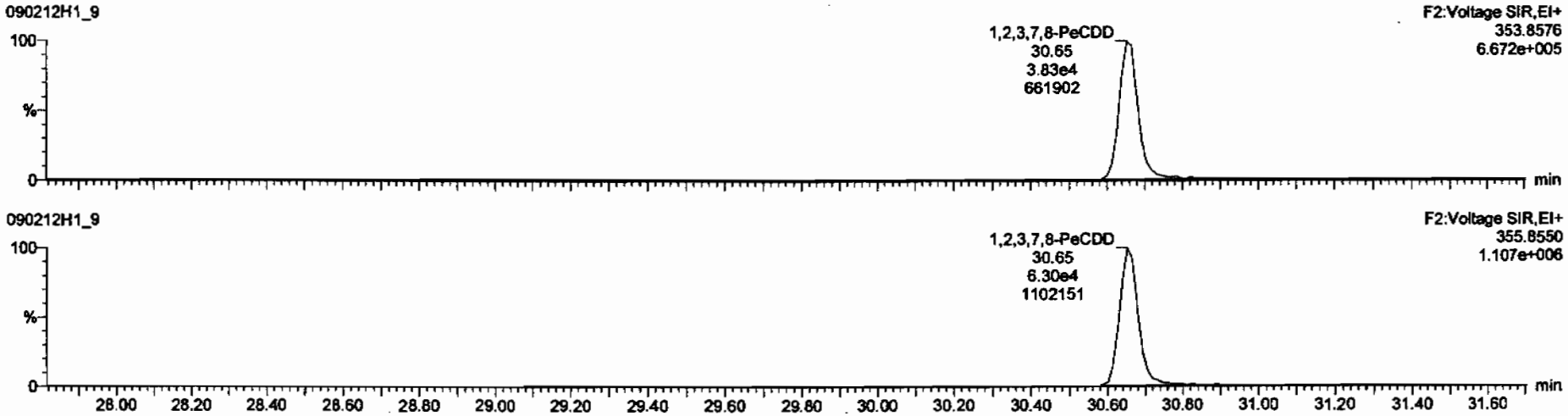

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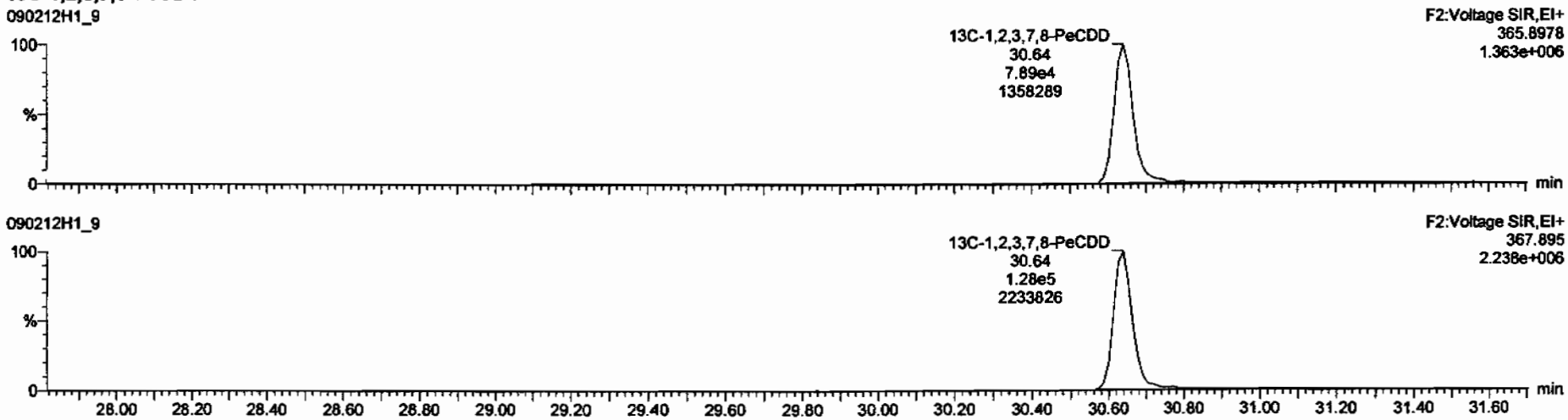

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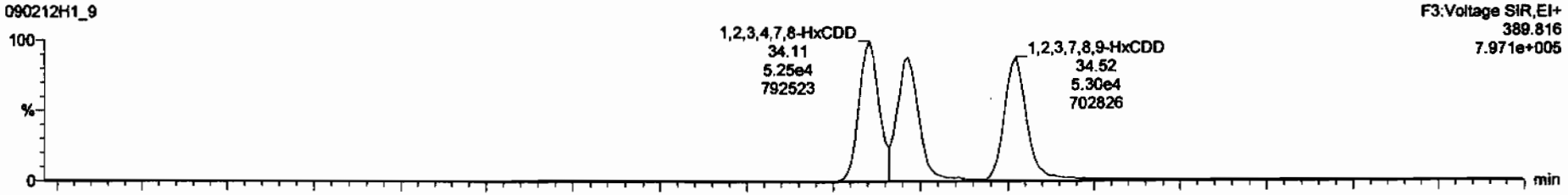

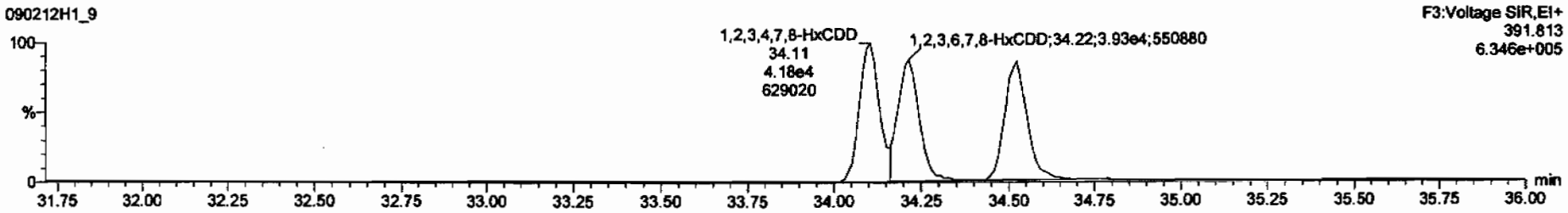

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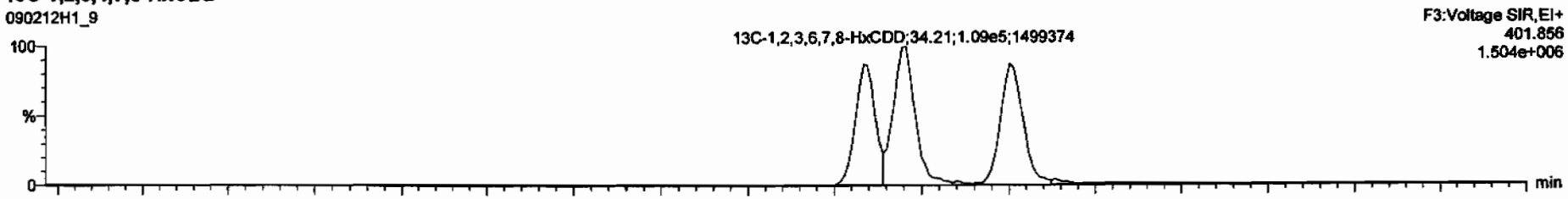

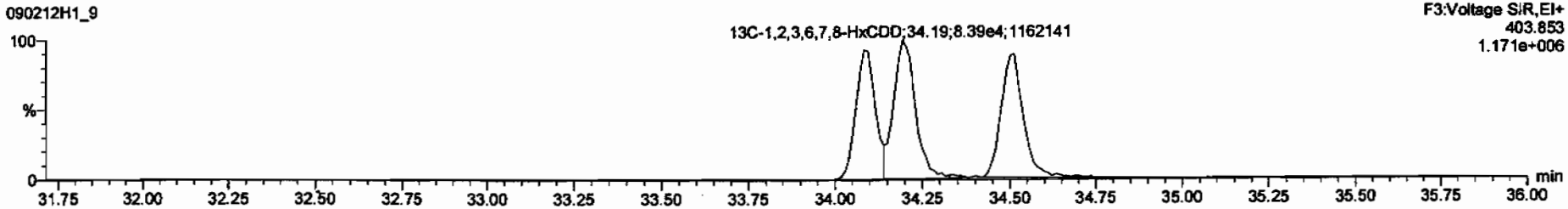

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1,2,3,4,6,7,8-HpCDD

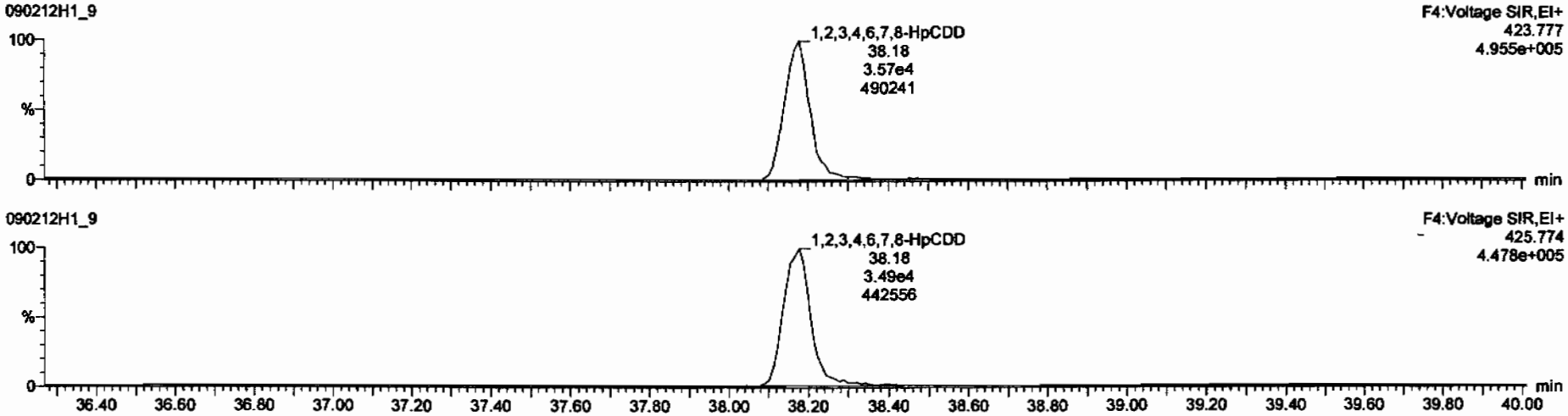

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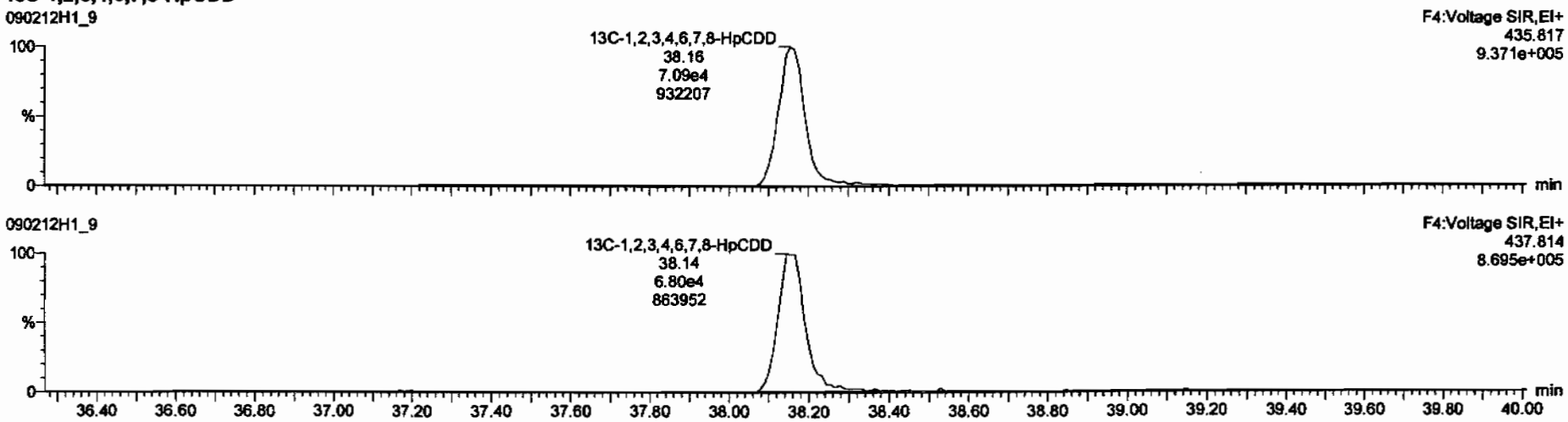

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

OCDD

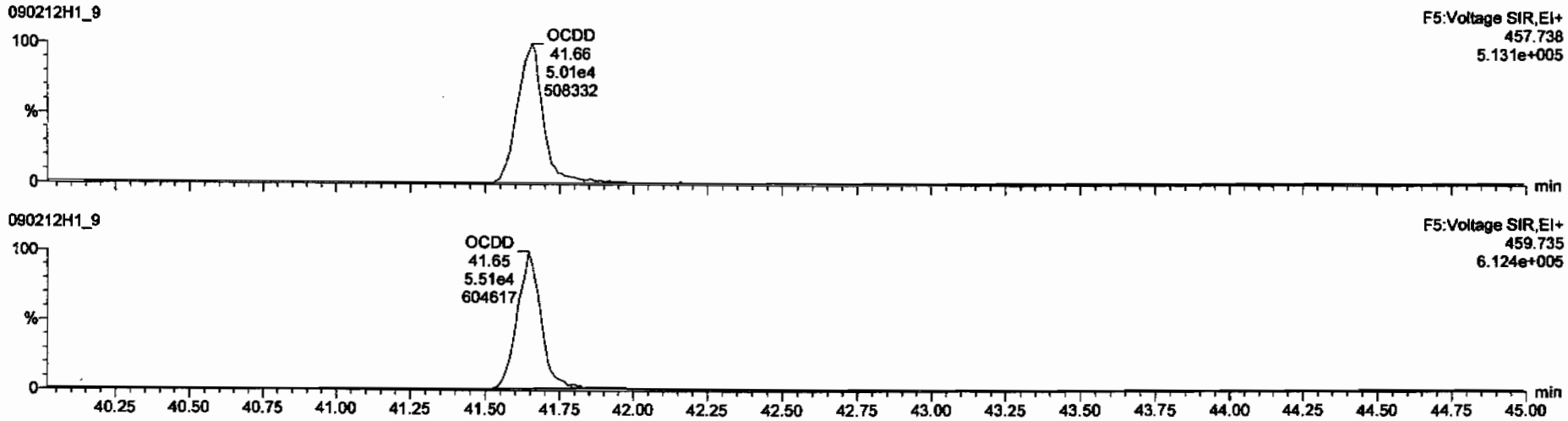

13C-OCDD

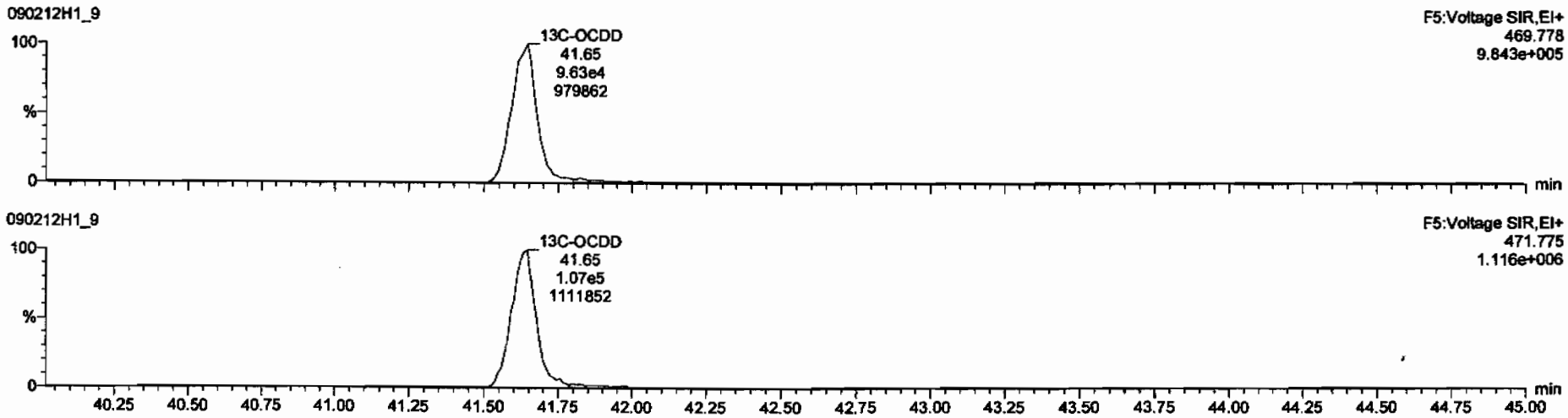

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2,3,7,8-TCDF

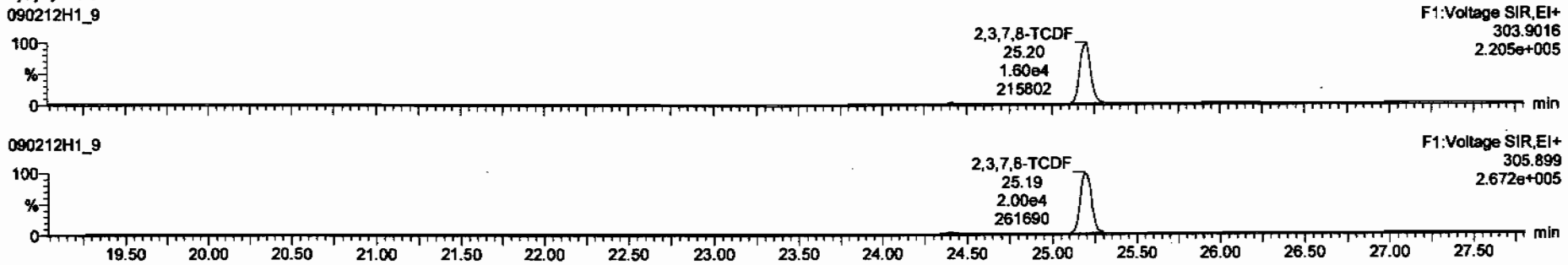

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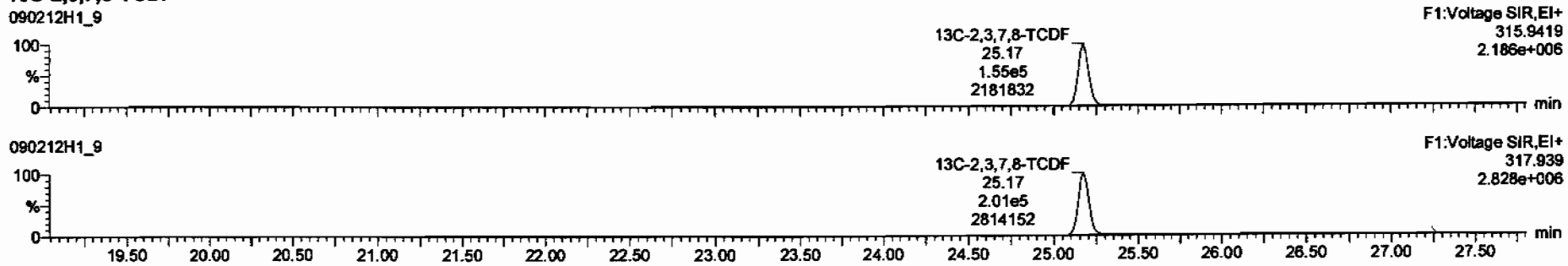

DPE1

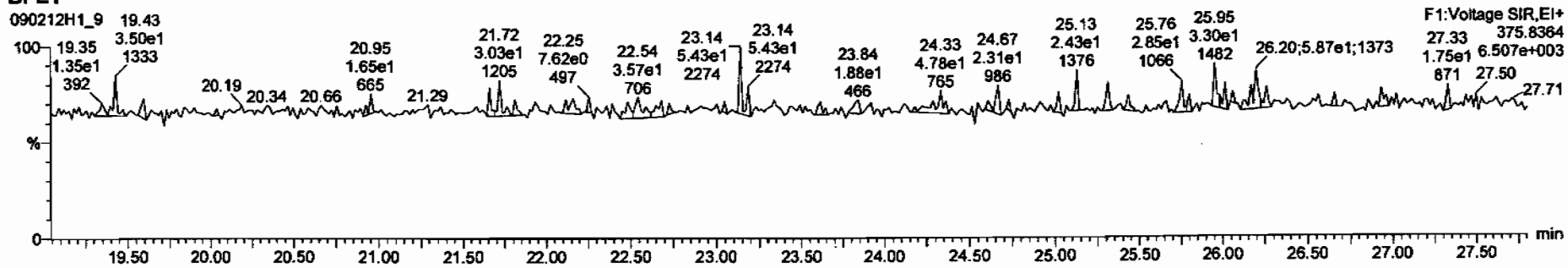

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1st Func. Penta-Furans

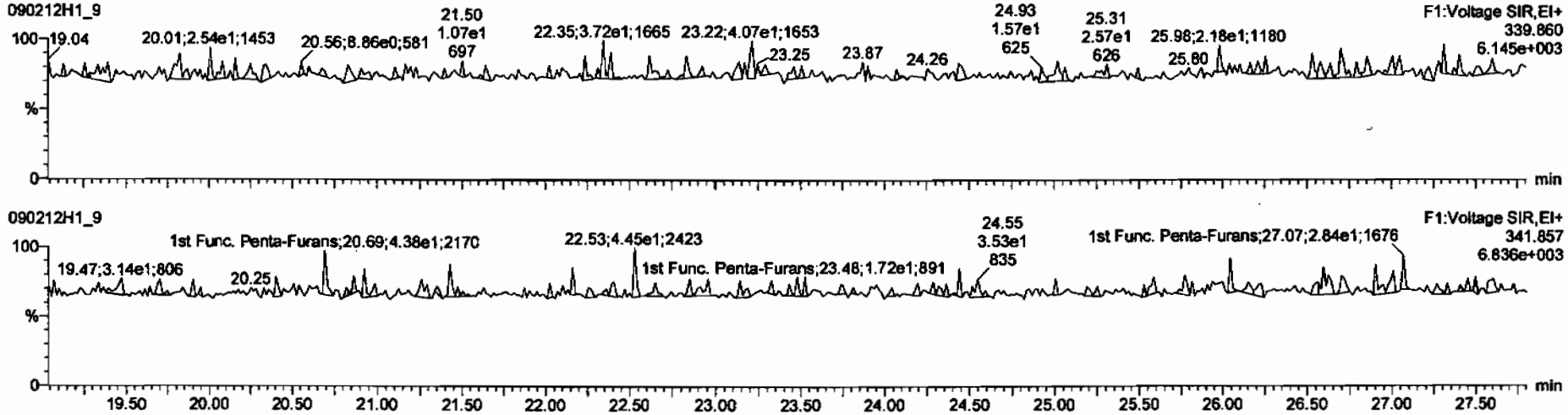

DPE6

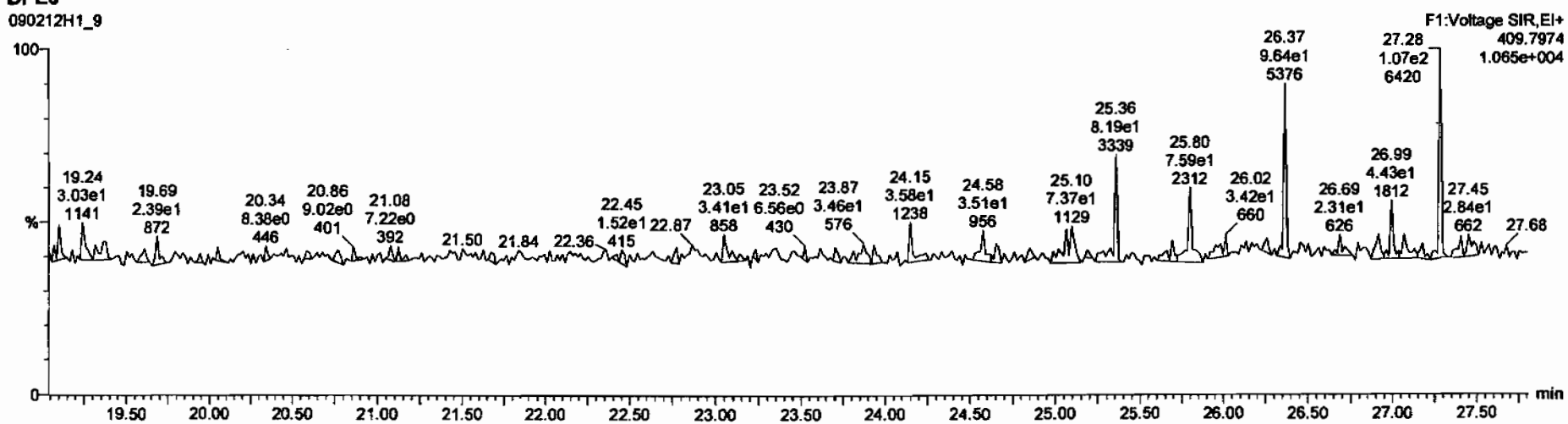

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,7,8-PeCDF

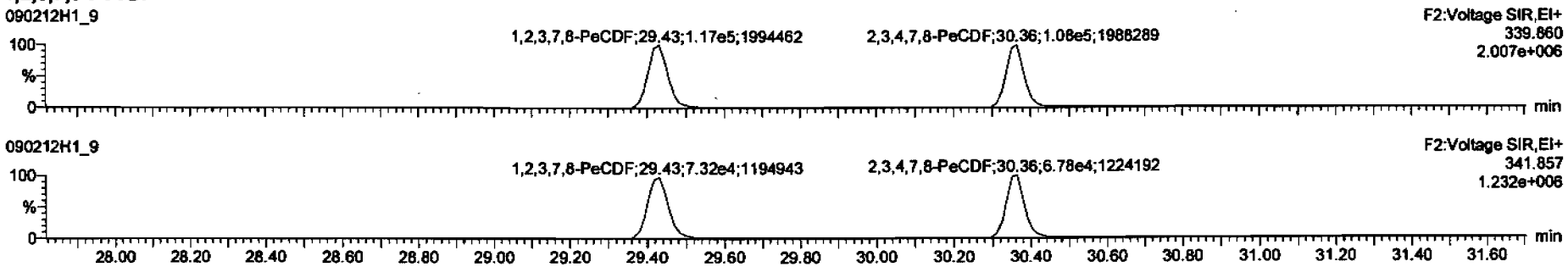

13C-1,2,3,7,8-PeCDF

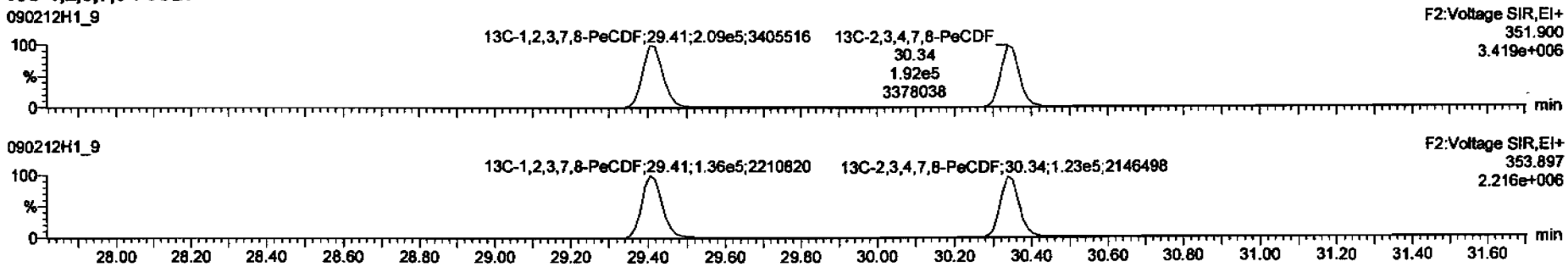

DPE2

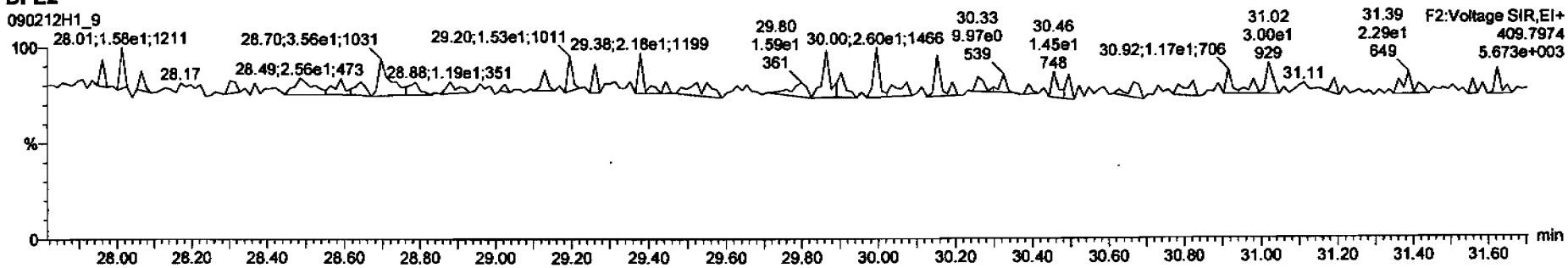

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,7,8-HxCDF

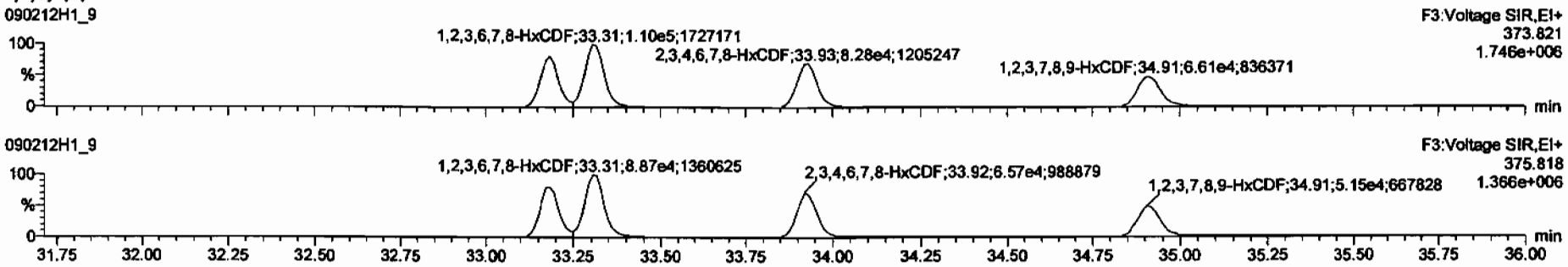

13C-1,2,3,4,7,8-HxCDF

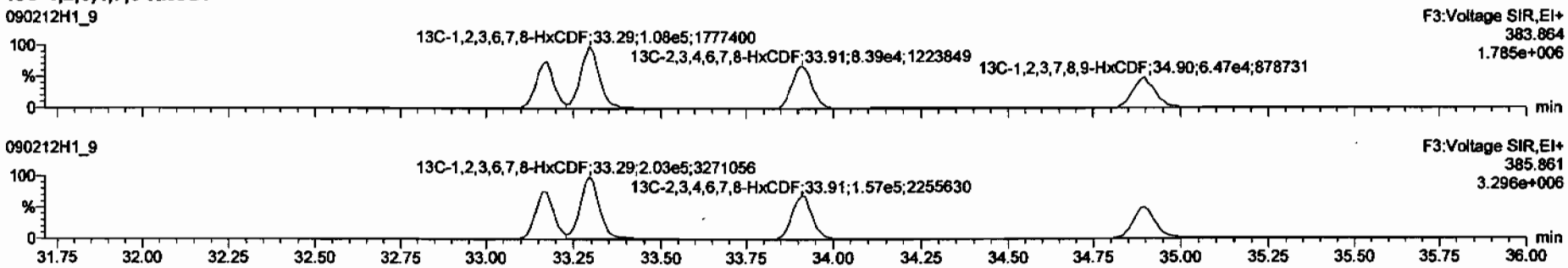

DPE3

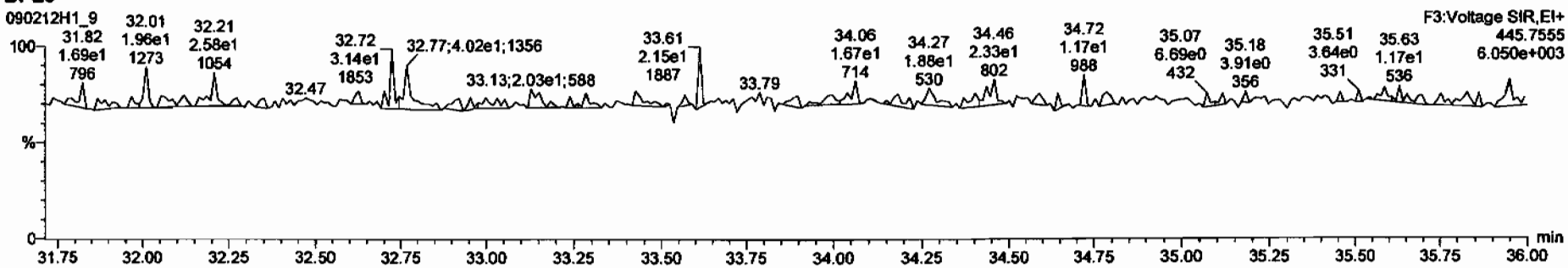

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,6,7,8-HpCDF

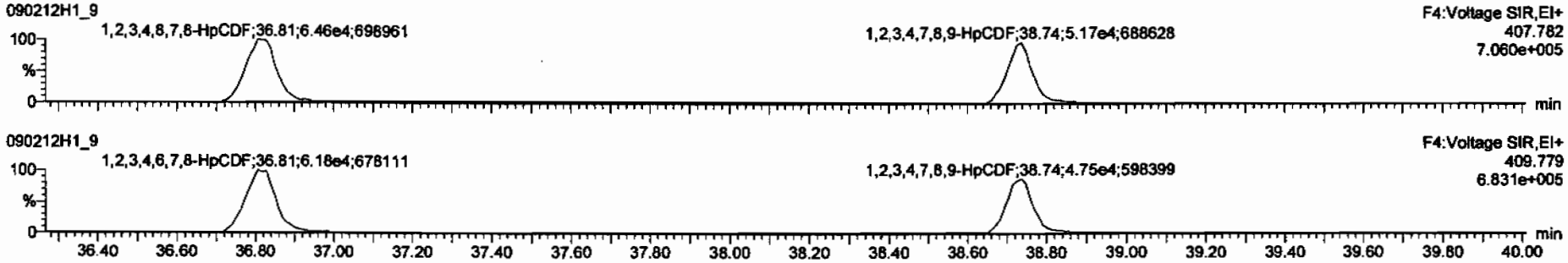

13C-1,2,3,4,6,7,8-HpCDF

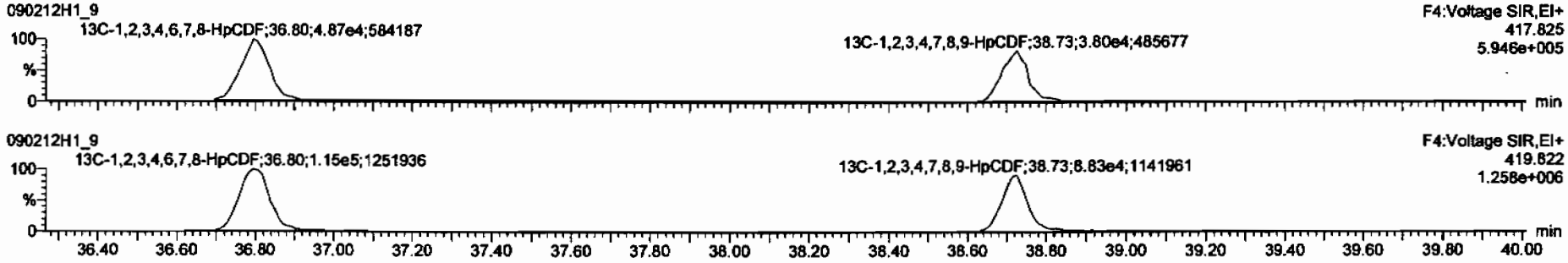

DPE4

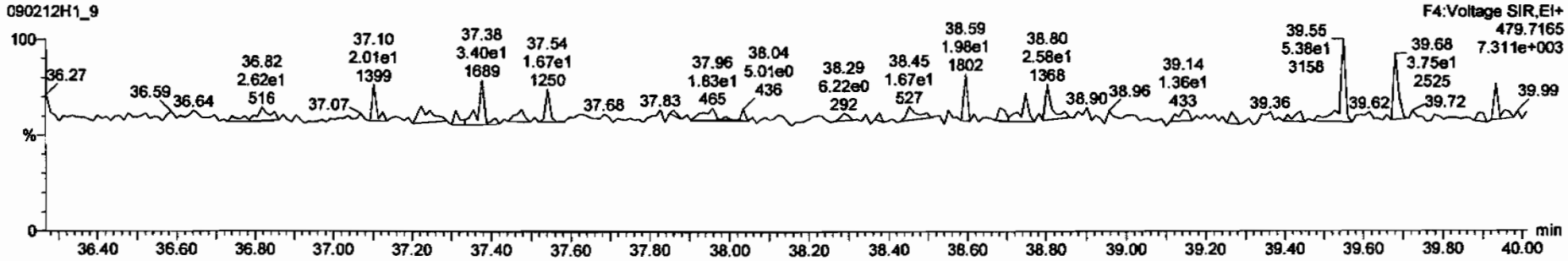

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

OCDF

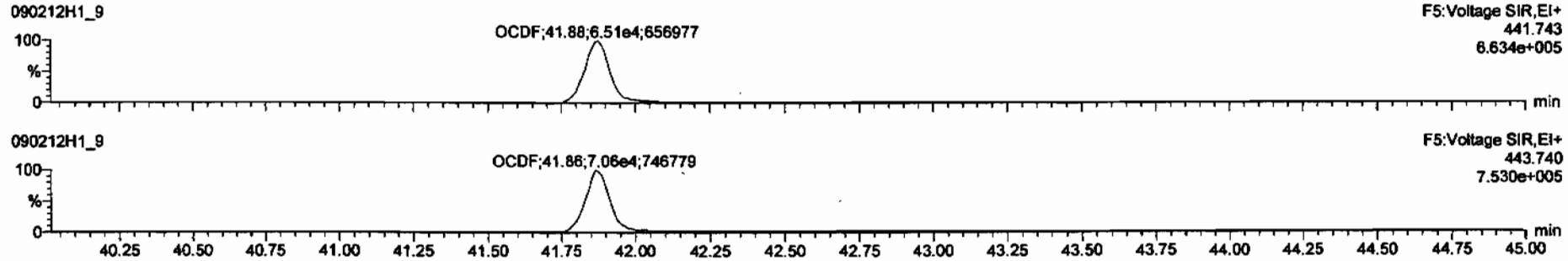

13C-OCDF

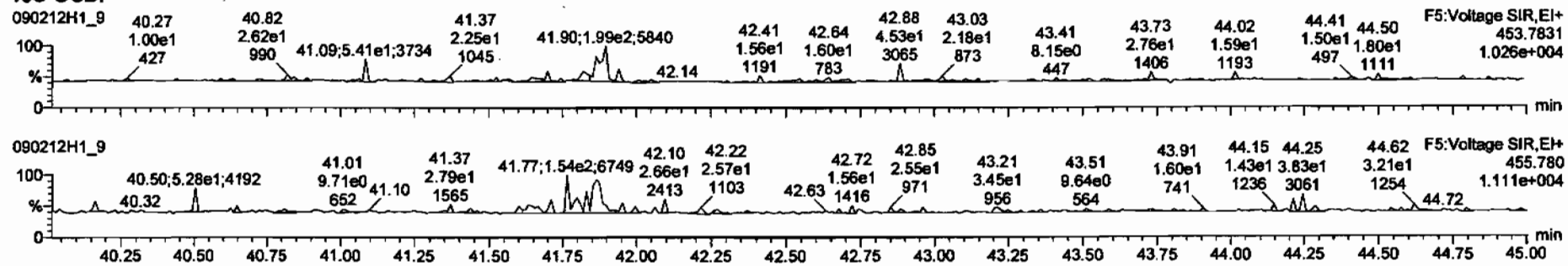

DPE5

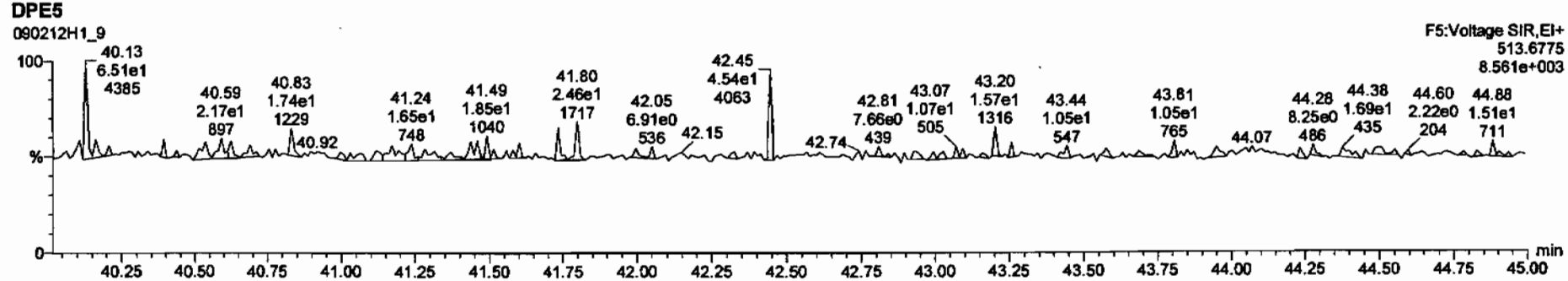

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

PFK1

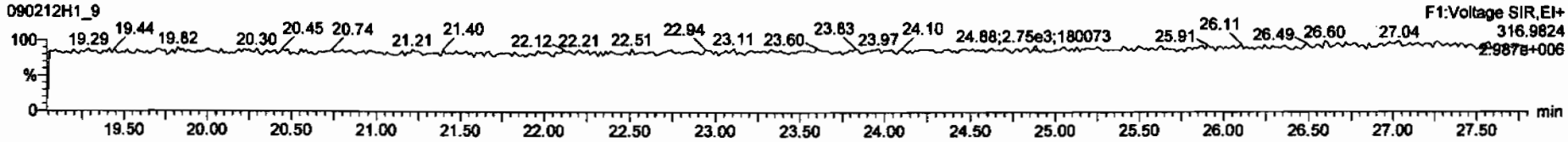

PFK2

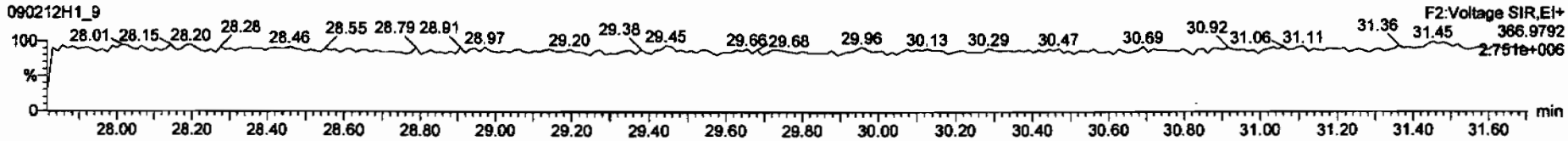

PFK3

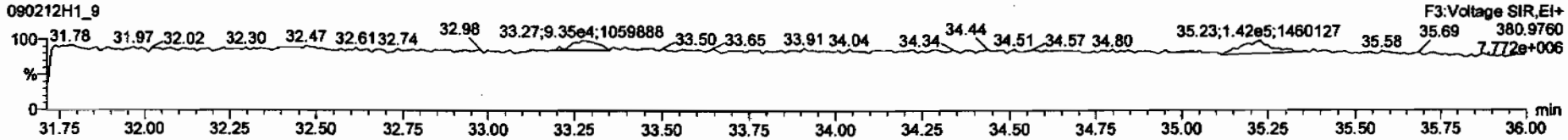

PFK4

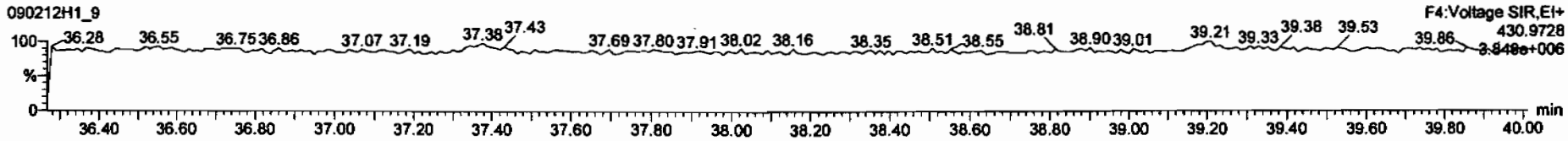

PFK5

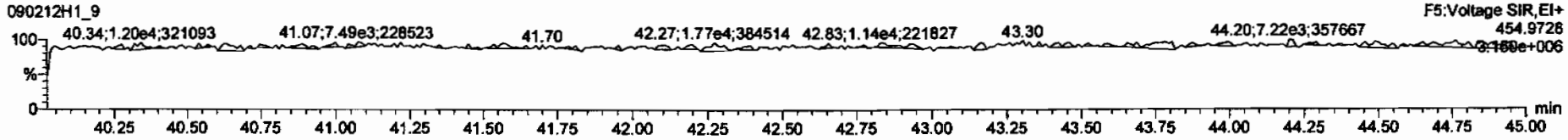

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Compound name: 2,3,7,8-TCDF
Response Factor: 0.857366
RRF SD: 0.11136, Relative SD: 12.9886
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std Conc	RA	n/y	RT	Resp	IS Resp	Conc	RRF
1	1	090604F1-3	0.250	0.79	NO	17.68	1.73e3	7.39e5	0.273	0.935
2	2	090604F1-4	0.500	0.77	NO	17.69	2.34e3	4.66e5	0.585	1.00
3	3	090604F1-5	2.00	0.81	NO	17.68	1.01e4	6.95e5	1.70	0.728
4	4	090604F1-6	10.0	0.78	NO	17.68	6.35e4	8.49e5	8.73	0.748
5	5	090604F1-7	40.0	0.76	NO	17.69	2.15e5	6.64e5	37.8	0.810
6	6	090604F1-8	200	0.78	NO	17.69	1.17e6	6.34e5	214	0.919

MS 6/5/09

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 1.05695
RRF SD: 0.0199226, Relative SD: 1.88492
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: RF

OK'D DMS 6/5/09

	#	Name	Std Conc	RA	n/y	RT	Resp	IS Resp	Conc	RRF
1	1	090604F1-3	100	0.77	NO	17.66	7.39e5	7.05e5	99.2	1.05
2	2	090604F1-4	100	0.75	NO	17.66	4.66e5	4.54e5	97.1	1.03
3	3	090604F1-5	100	0.77	NO	17.67	6.95e5	6.55e5	100	1.06
4	4	090604F1-6	100	0.76	NO	17.67	8.49e5	7.82e5	103	1.09
5	5	090604F1-7	100	0.76	NO	17.67	6.64e5	6.32e5	99.4	1.05
6	6	090604F1-8	100	0.75	NO	17.68	6.34e5	5.94e5	101	1.07

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc	RRF
1	1	090604F1-3	100	0.75	NO	15.43	7.05e5	7.05e5	100	1.00
2	2	090604F1-4	100	0.73	NO	15.43	4.54e5	4.54e5	100	1.00
3	3	090604F1-5	100	0.75	NO	15.43	6.55e5	6.55e5	100	1.00
4	4	090604F1-6	100	0.76	NO	15.44	7.82e5	7.82e5	100	1.00
5	5	090604F1-7	100	0.75	NO	15.44	6.32e5	6.32e5	100	1.00
6	6	090604F1-8	100	0.76	NO	15.44	5.94e5	5.94e5	100	1.00

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

	#	Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc	RRF
1	1	090604F1-3	1.00							
2	2	090604F1-4	1.00							
3	3	090604F1-5	1.00							
4	4	090604F1-6	1.00							
5	5	090604F1-7	1.00							
6	6	090604F1-8	1.00							

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

	#	Name	Std. Conc	RA	n/y	RT	Resp	IS Resp	Conc	RRF
1	1	090604F1-3	1.00							
2	2	090604F1-4	1.00							
3	3	090604F1-5	1.00							
4	4	090604F1-6	1.00							

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Compound name: DPE1

#	Name	Std Conc	RA	Injnry	RT	Resp	IS Resp	Conc	RRF
5	5 090604F1-7	1.00							
6	6 090604F1-8	1.00							

Quantify Sample Summary Report **MassLynx 4.1**

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1-6.qld

Last Altered: Friday, June 05, 2009 9:28:52 AM Pacific Standard Time
Printed: Friday, June 05, 2009 10:34:20 AM Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090604F1-6, Date: 04-Jun-2009, Time: 14:04:16, ID: ST090604F1-4 1613 CS3 080917I, Description: 1613 CS3 080917I

#	Name	Resp	RA	n/y	RRF	w/vol	RT	Conc	%Rec	DL
1	2,3,7,8-TCDF	6.35e4	0.78	NO	0.857	1.000	17.68	8.7302	87.3	0.132
2	13C-2,3,7,8-TCDF	8.49e5	0.76	NO	1.06	1.000	17.67	102.70	103	0.226
3	13C-1,2,3,4-TCDF	7.82e5	0.76	NO	1.00	1.000	15.44	100.00	100	0.239

8.6-11.6
76.0-131.0

WL 6/5/09

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Friday, June 05, 2009 9:30:12 AM Pacific Standard Time
Printed: Friday, June 05, 2009 9:30:34 AM Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Compound name: 2,3,7,8-TCDF

	Name	ID	Acq.Date	Acq.Time
1	090604F1-1	CP090604F1-1 DB-225 CPSM	04-Jun-09	11:06:21
2	090604F1-2	SOLVENT BLANK	04-Jun-09	11:42:10
3	090604F1-3	ST090604F1-1 1613 CS0 080917F	04-Jun-09	12:17:41
4	090604F1-4	ST090604F1-2 1613 CS1 080917G	04-Jun-09	12:53:12
5	090604F1-5	ST090604F1-3 1613 CS2 080917H	04-Jun-09	13:28:44
6	090604F1-6	ST090604F1-4 1613 CS3 080917I	04-Jun-09	14:04:16
7	090604F1-7	ST090604F1-5 1613 CS4 080917J	04-Jun-09	14:39:42
8	090604F1-8	ST090604F1-6 1613 CS5 080917K	04-Jun-09	15:15:08
9	090604F1-9	SOLVENT BLANK	04-Jun-09	15:50:34
10	090604F1-10	SS090604F1-1 Second Source 090219C	04-Jun-09	16:26:00
11	090604F1-11	SOLVENT BLANK	04-Jun-09	17:01:32

File: Experiment: tcdf_db225.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, June 04, 2009 11:05:34 Pacific Standard Time

M 292.9824 R 10634

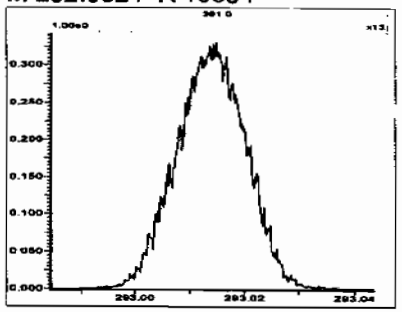

M 304.9824 R 10504

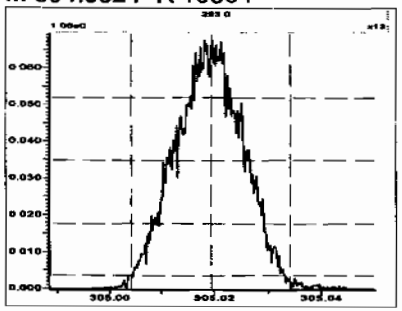

M 318.9792 R 10642

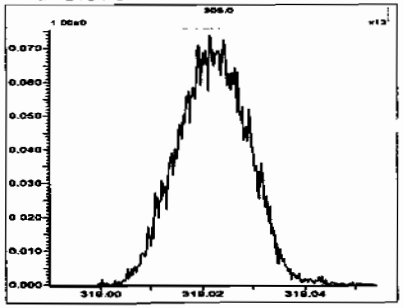

M 330.9792 R 10871

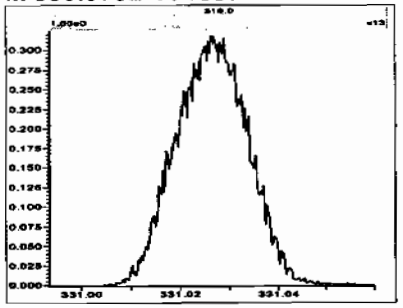

M 342.9792 R 10373

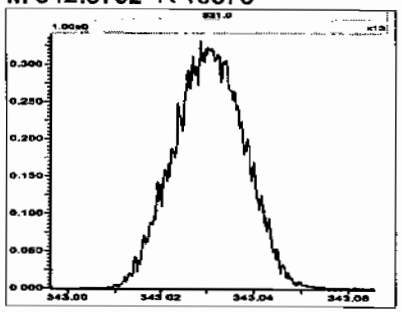

M 354.9792 R 10551

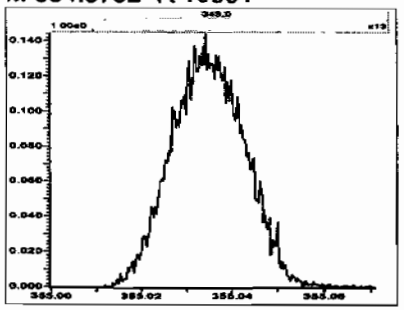

M 366.9792 R 10205

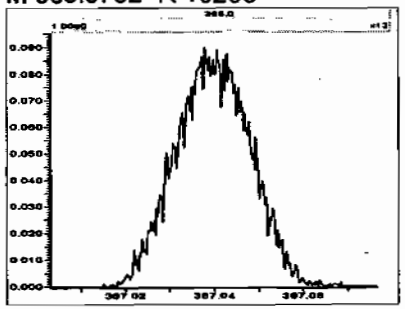

M 380.9760 R 10204

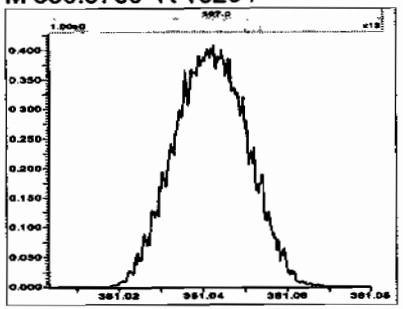

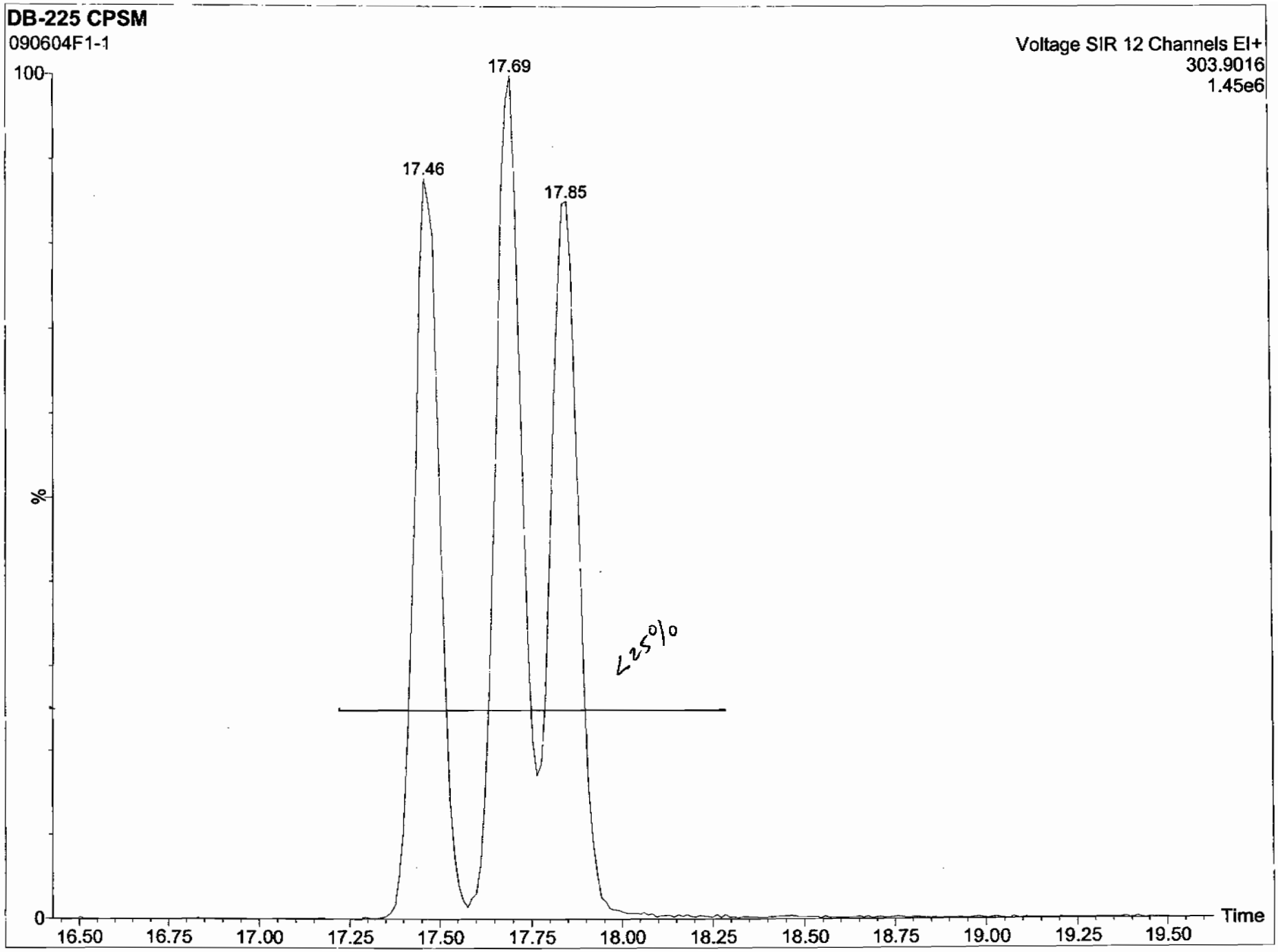
DB-225 CPSM
090604F1-1
Voltage SIR 12 Channels EI+
303.9016
1.45e6
100
%
0
17.46
17.69
17.85
<25%
16.50
16.75
17.00
17.25
17.50
17.75
18.00
18.25
18.50
18.75
19.00
19.25
19.50
Time

Vista Analytical Laboratory VG-9

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090604F1-3, Date: 04-Jun-2009, Time: 12:17:41, ID: ST090604F1-1 1613 CS0 080917F, Description: 1613 CS0 080917F

2,3,7,8-TCDF
090604F1-3

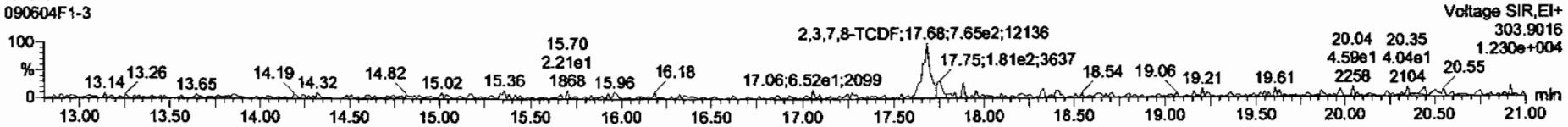

2,3,7,8-TCDF
090604F1-3

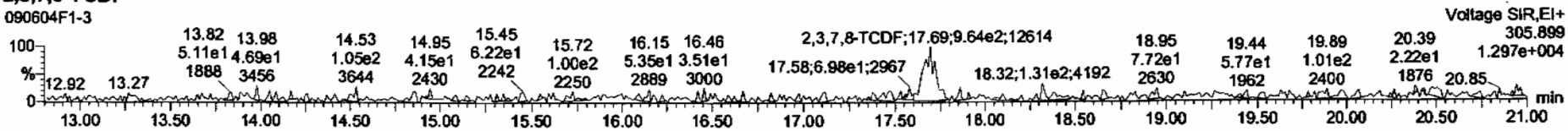

13C-2,3,7,8-TCDF
090604F1-3

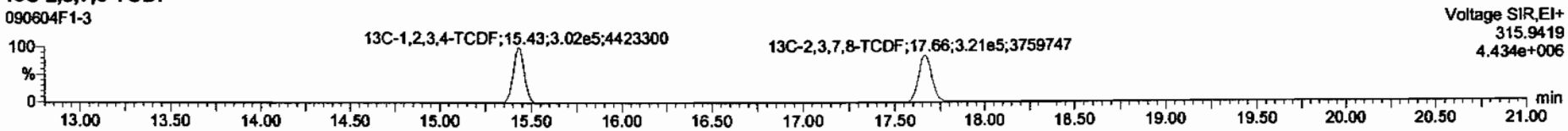

13C-2,3,7,8-TCDF
090604F1-3

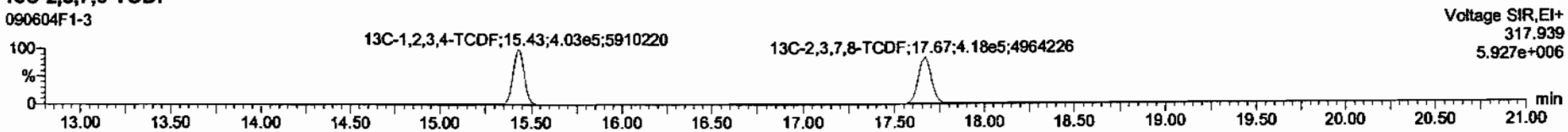

TargetLynx - 090604F1 * - [Chromatogram]

File Edit View Display Processing Window Help

090604F1-3 - ST090604F1-1 1613 CS0 080917F - 1613 CS0 080917F

	#	Name	Resp	RA	n/y	RRF	wt/vol	RT	Conc	%Rec	DL
1	1	2,3,7,8-TCDF	1.73e3	0.79	NO	0.81	1.000	17.68	0.290	116	0.112
2	2	13C-2,3,7,8-TCDF	7.39e5	0.77	NO	1.06	1.000	17.66	99.2	99.2	0.255
3	3	13C-1,2,3,4-TCDF	7.05e5	0.75	NO	1.00	1.000	15.43	100	100	0.269
4	4	PFK1					1.000				
5	5	DPE1					1.000				

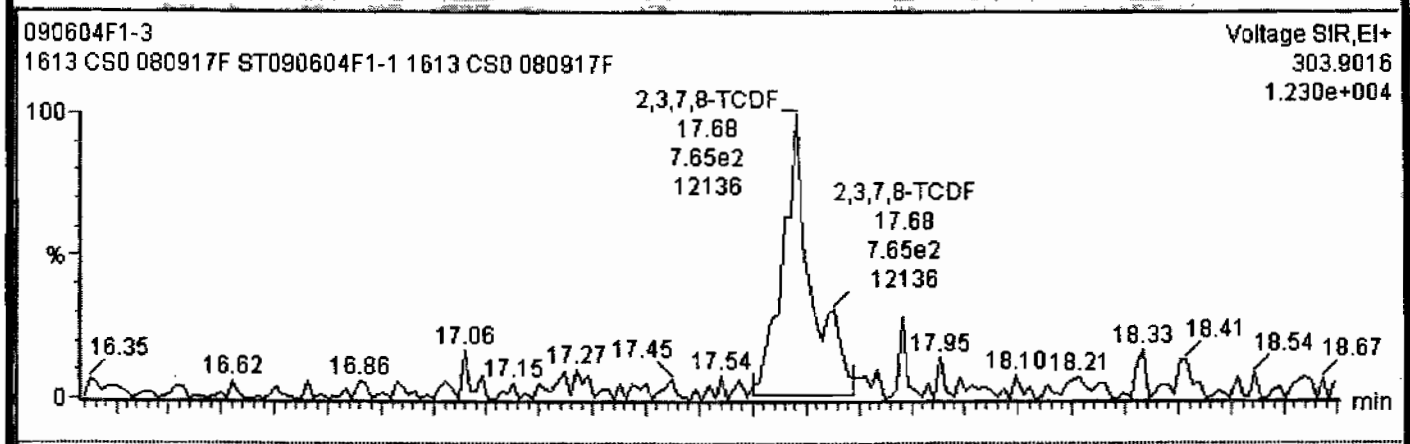

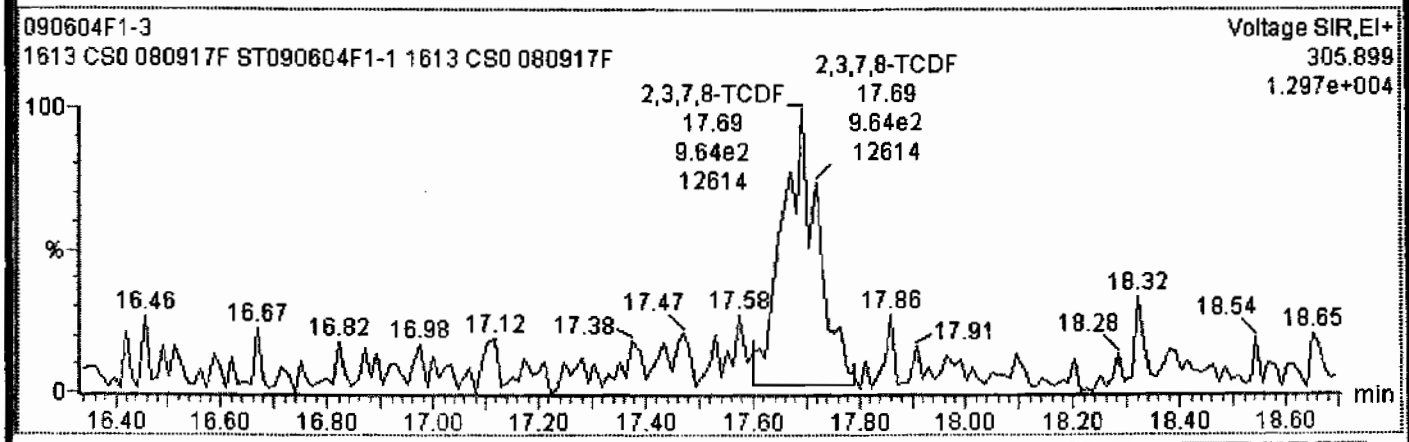

Ready 090604F1-3 CAP NUM

wt/vol	
1.000	tcc
1.000	tcc
1.000	tcc
1.000	tcc
1.000	tcc
1.000	tcc
1.000	tcc
1.000	tcc
1.000	tcc
1.000	tcc
10.040	tcc
10.050	tcc
10.000	tcc
10.100	tcc
1.000	tcc

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-3, Date: 04-Jun-2009, Time: 12:17:41, ID: ST090604F1-1 1613 CS0 080917F, Description: 1613 CS0 080917F

PFK1

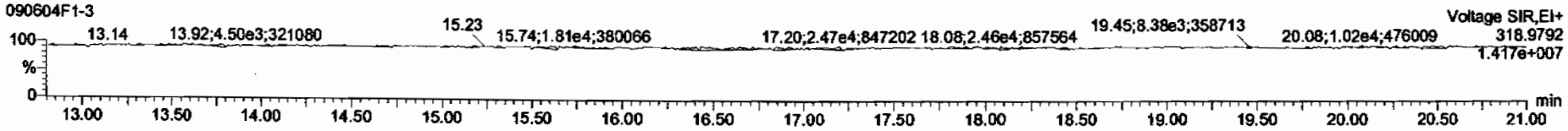

DPE1

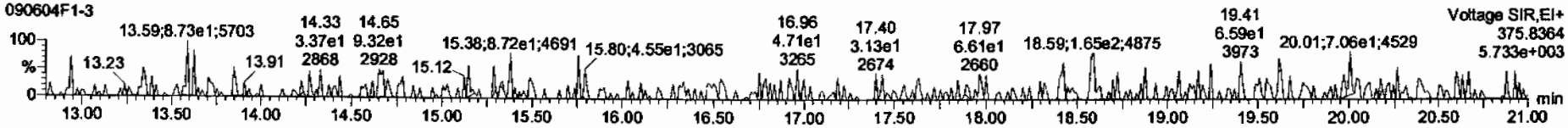

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-4, Date: 04-Jun-2009, Time: 12:53:12, ID: ST090604F1-2 1613 CS1 080917G, Description: 1613 CS1 080917G

2,3,7,8-TCDF

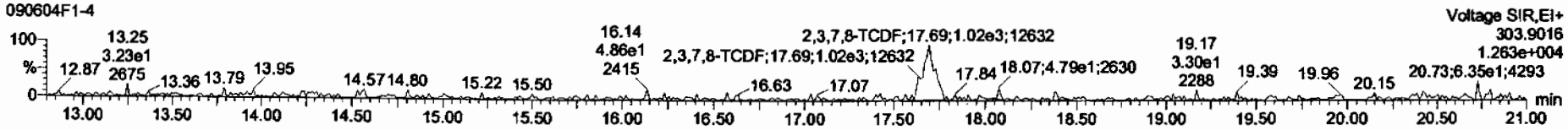

2,3,7,8-TCDF

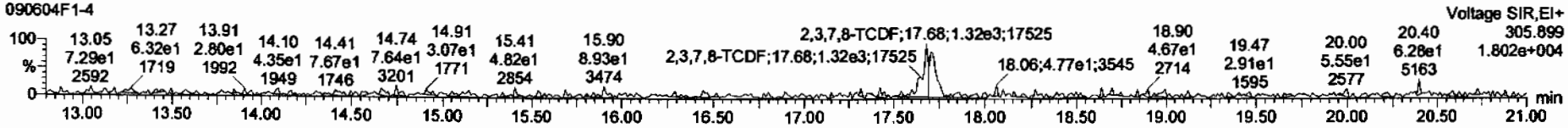

13C-2,3,7,8-TCDF

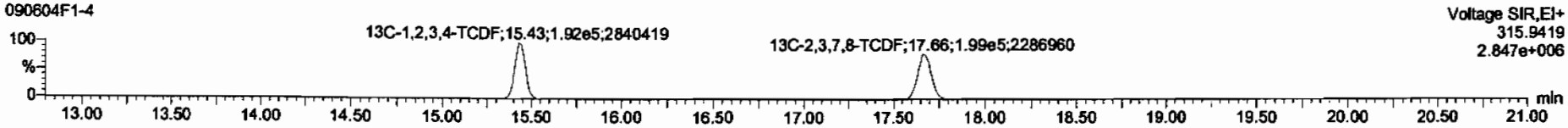

13C-2,3,7,8-TCDF

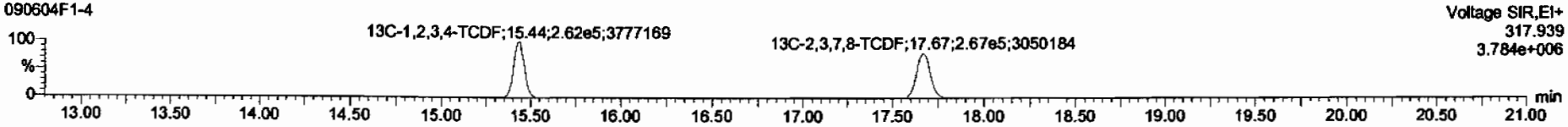

TargetLynx - 090604F1 * - [Chromatogram]

File Edit View Display Processing Window Help

090604F1-4 - ST090604F1-2 1613 CS1 080917G - 1613 CS1 080917G

	#	Name	Resp	RA	Only	RRF	wt/vol	RT	Conc.	%Rec	DL
1	1	2,3,7,8-TCDF	2.34e3	0.77	NO	0.86	1.000	17.69	0.585	117	0.200
2	2	13C-2,3,7,8-TCDF	4.66e5	0.75	NO	1.06	1.000	17.66	97.1	97.1	0.441
3	3	13C-1,2,3,4-TCDF	4.54e5	0.73	NO	1.00	1.000	15.43	100	100	0.466
4	4	PFK1					1.000				
5	5	DPE1					1.000				

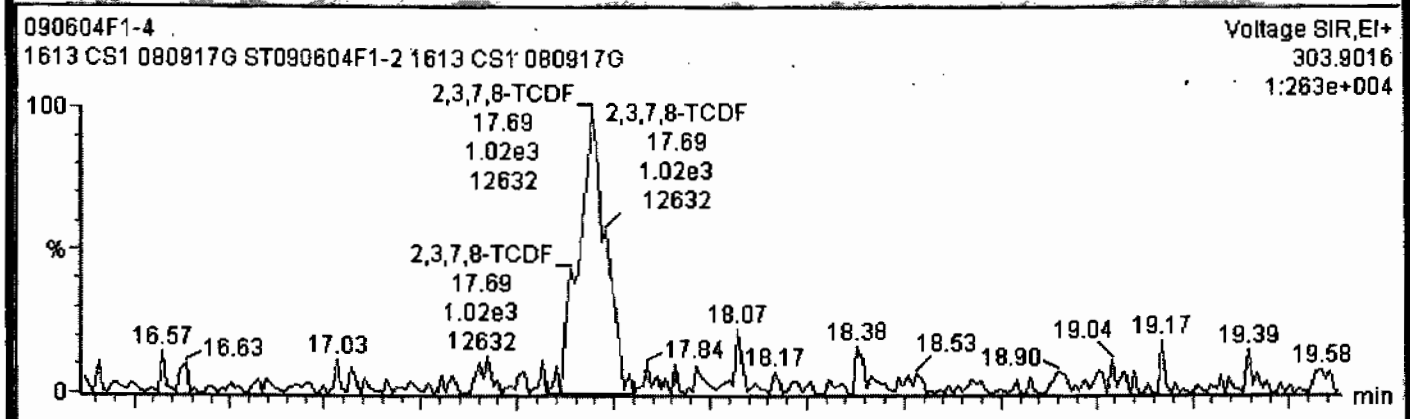

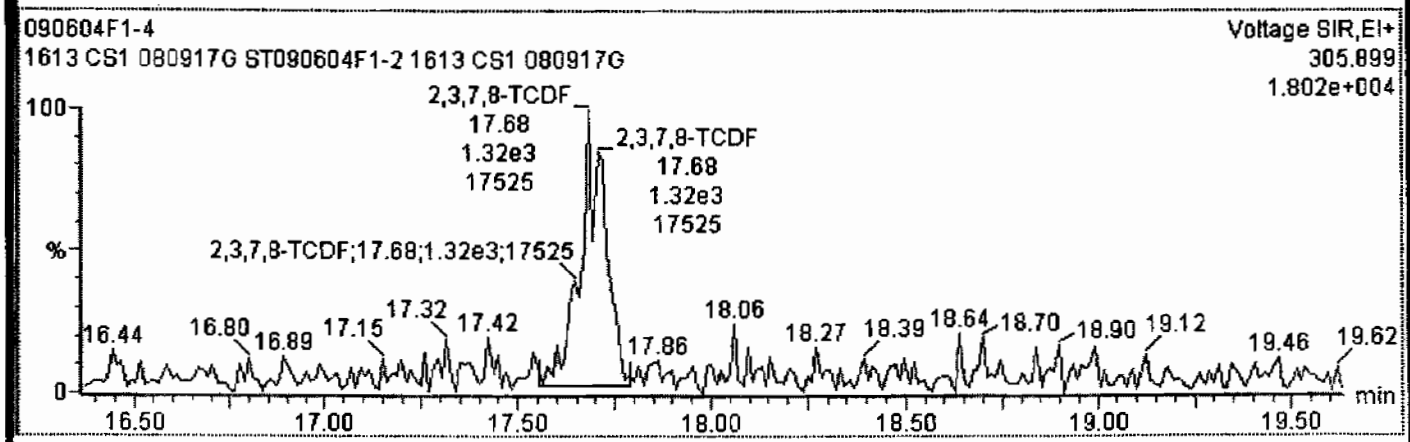

Ready 090604F1-4 CAP NUM

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-4, Date: 04-Jun-2009, Time: 12:53:12, ID: ST090604F1-2 1613 CS1 080917G, Description: 1613 CS1 080917G

PFK1

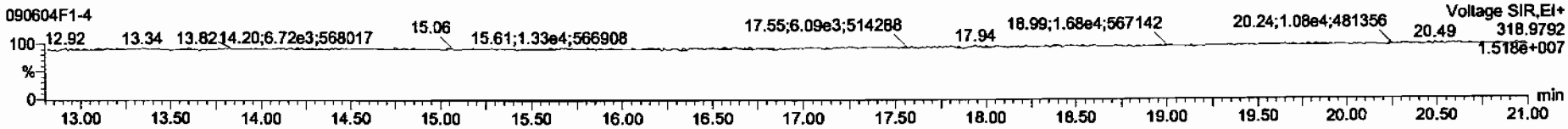

DPE1

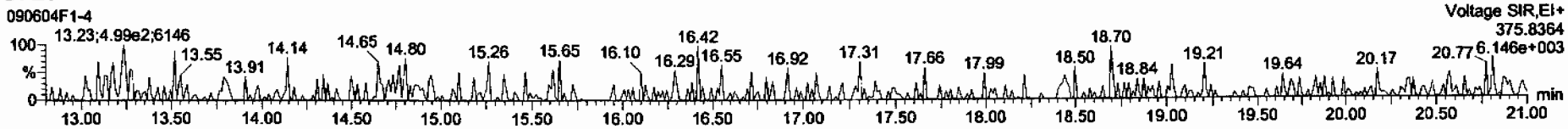

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-5, Date: 04-Jun-2009, Time: 13:28:44, ID: ST090604F1-3 1613 CS2 080917H, Description: 1613 CS2 080917H

2,3,7,8-TCDF
090604F1-5

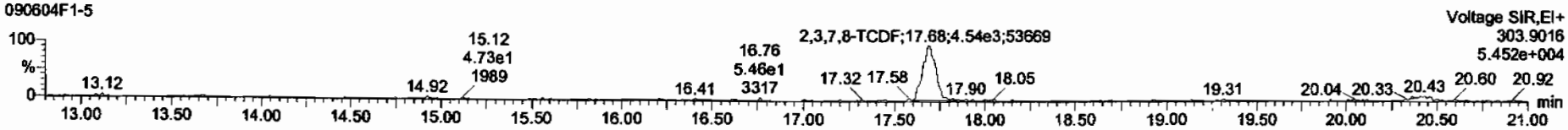

2,3,7,8-TCDF
090604F1-5

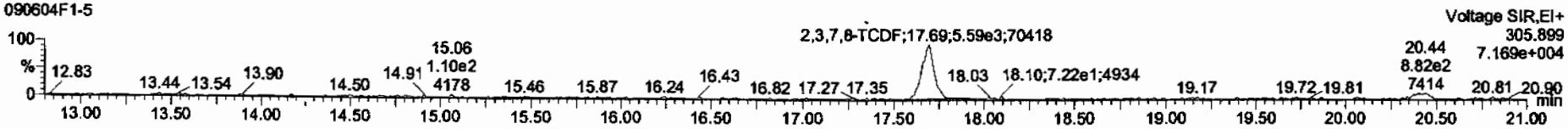

13C-2,3,7,8-TCDF
090604F1-5

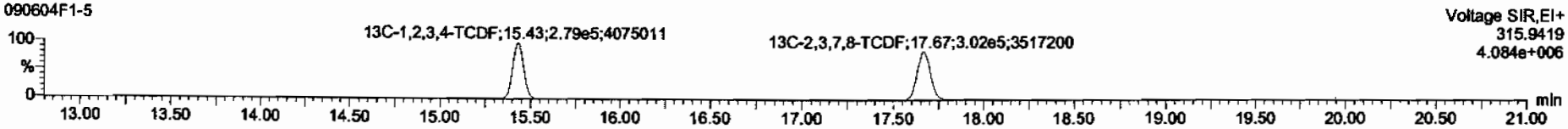

13C-2,3,7,8-TCDF
090604F1-5

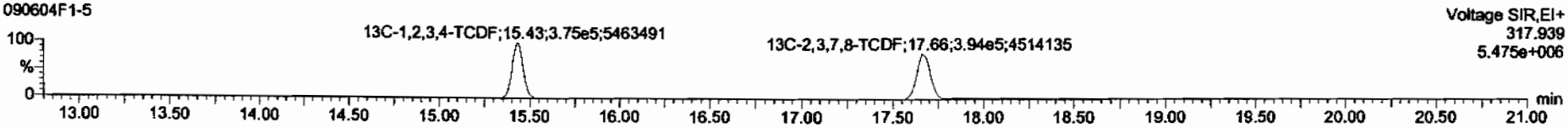

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Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-5, Date: 04-Jun-2009, Time: 13:28:44, ID: ST090604F1-3 1613 CS2 080917H, Description: 1613 CS2 080917H

PFK1

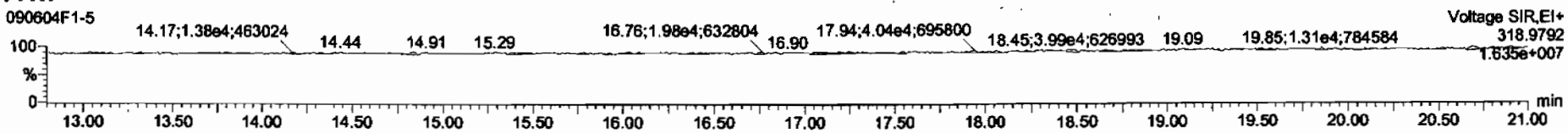

DPE1

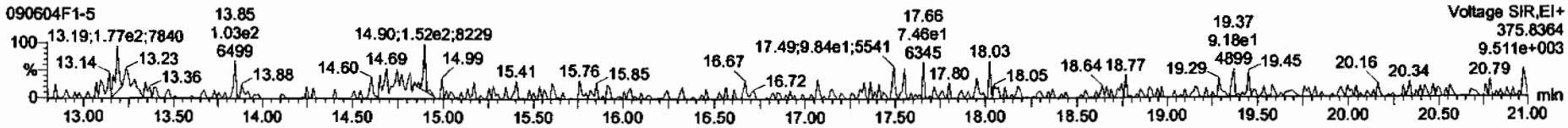

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Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-6, Date: 04-Jun-2009, Time: 14:04:16, ID: ST090604F1-4 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

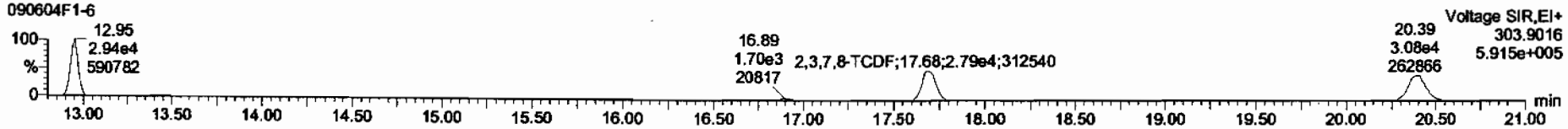

2,3,7,8-TCDF

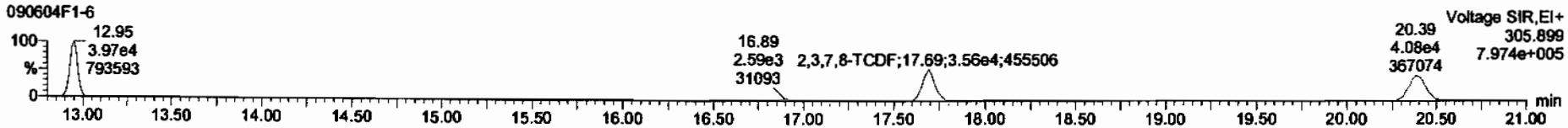

13C-2,3,7,8-TCDF

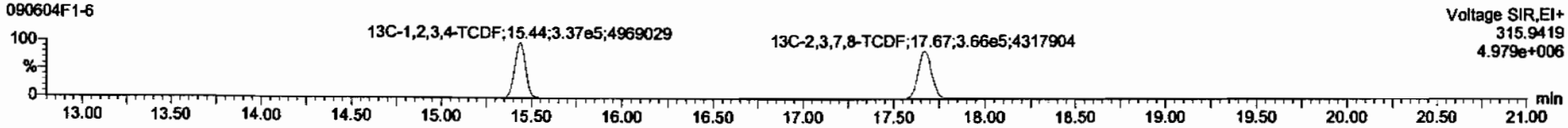

13C-2,3,7,8-TCDF

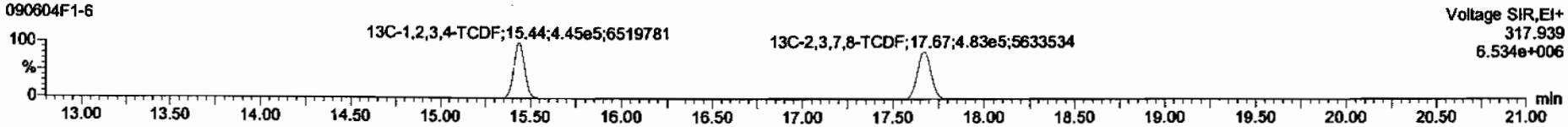

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
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Name: 090604F1-6, Date: 04-Jun-2009, Time: 14:04:16, ID: ST090604F1-4 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

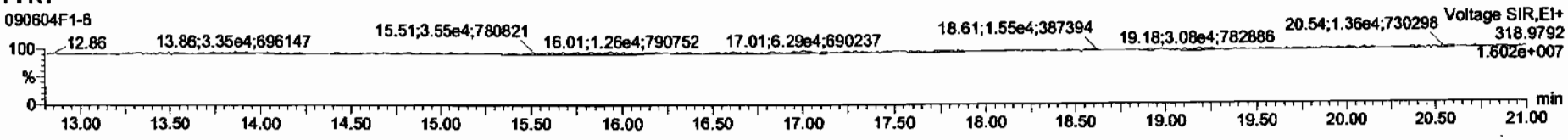

DPE1

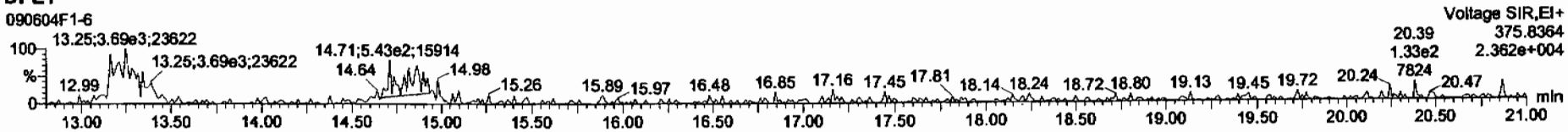

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Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-7, Date: 04-Jun-2009, Time: 14:39:42, ID: ST090604F1-5 1613 CS4 080917J, Description: 1613 CS4 080917J

2,3,7,8-TCDF

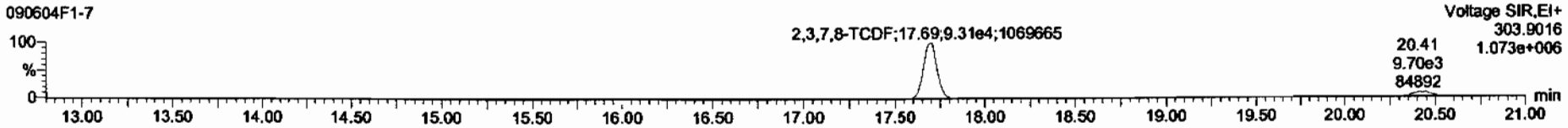

2,3,7,8-TCDF

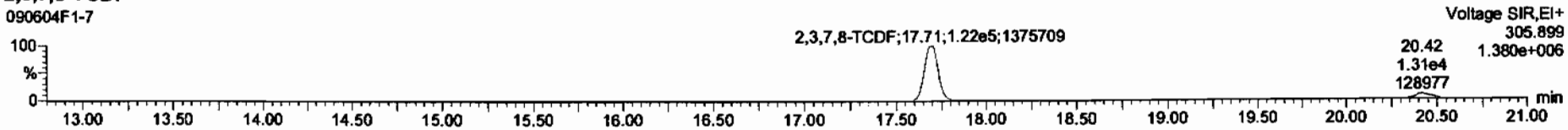

13C-2,3,7,8-TCDF

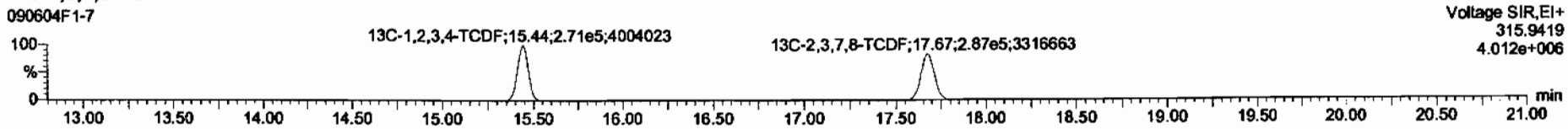

13C-2,3,7,8-TCDF

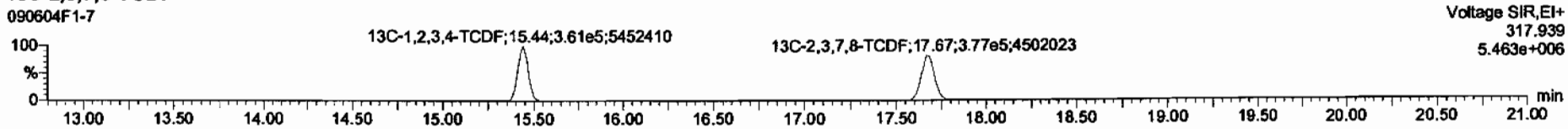

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Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-7, Date: 04-Jun-2009, Time: 14:39:42, ID: ST090604F1-5 1613 CS4 080917J, Description: 1613 CS4 080917J

PFK1

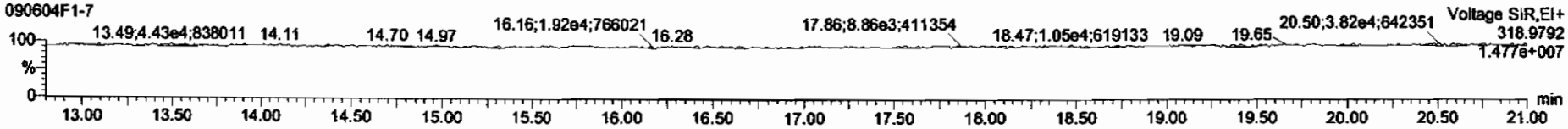

DPE1

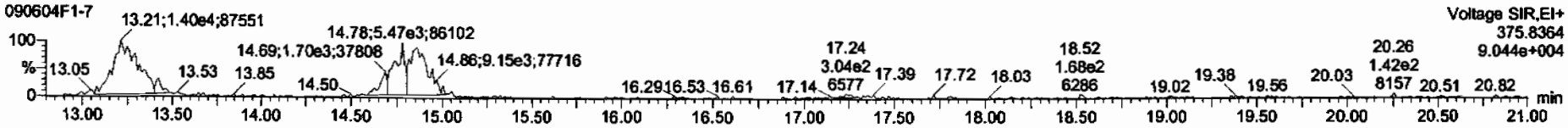

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-8, Date: 04-Jun-2009, Time: 15:15:08, ID: ST090604F1-6 1613 CS5 080917K, Description: 1613 CS5 080917K

2,3,7,8-TCDF
090604F1-8

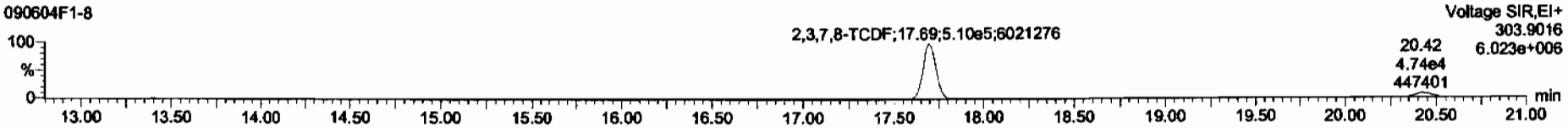

2,3,7,8-TCDF
090604F1-8

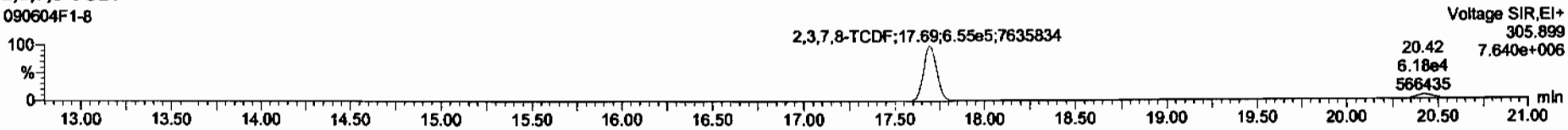

13C-2,3,7,8-TCDF
090604F1-8

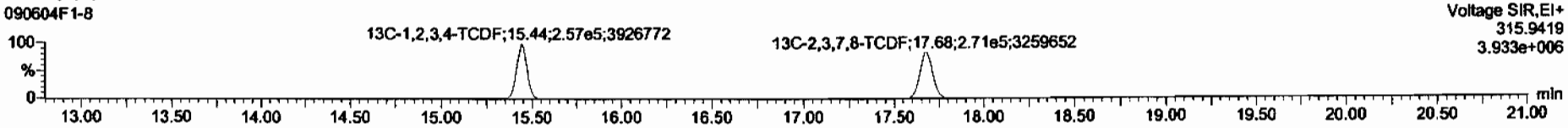

13C-2,3,7,8-TCDF
090604F1-8

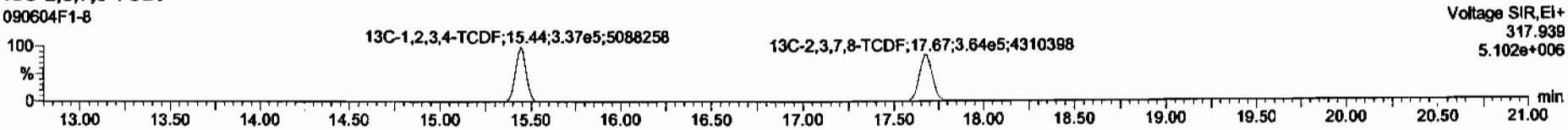

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Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-8, Date: 04-Jun-2009, Time: 15:15:08, ID: ST090604F1-6 1613 CS5 080917K, Description: 1613 CS5 080917K

PFK1

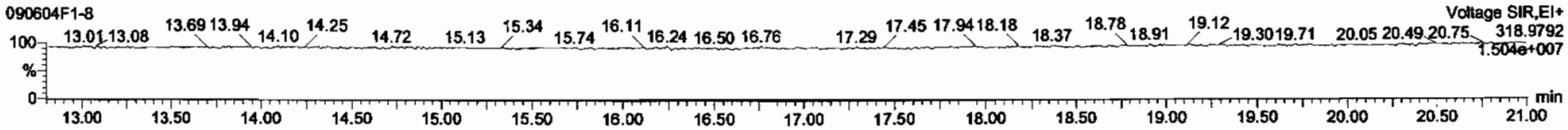

DPE1

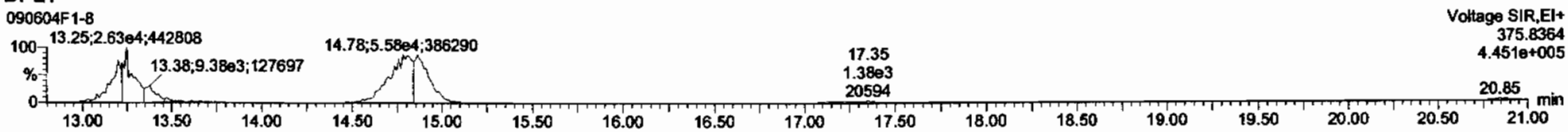

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M 292.9824 R 10330

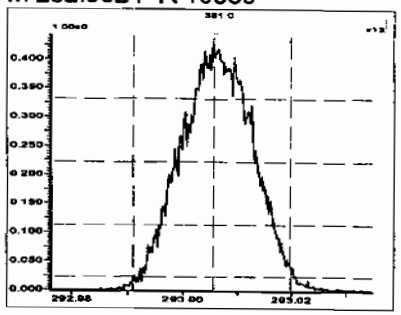

M 304.9824 R 10451

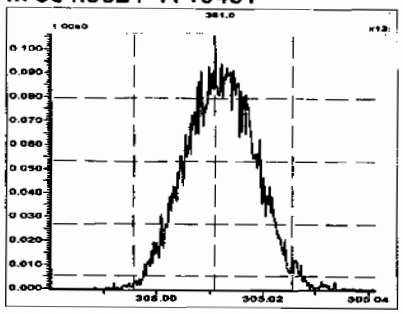

M 318.9792 R 10549

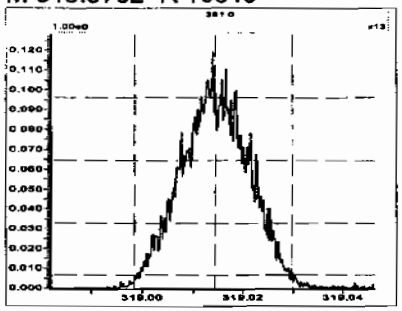

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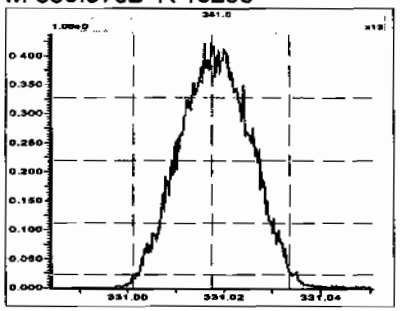

M 342.9792 R 9881

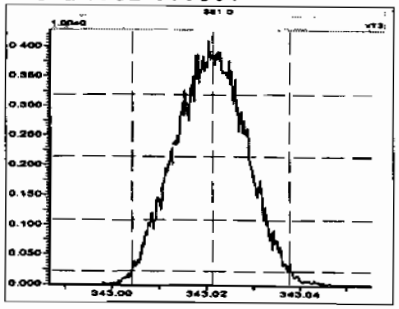

M 354.9792 R 9940

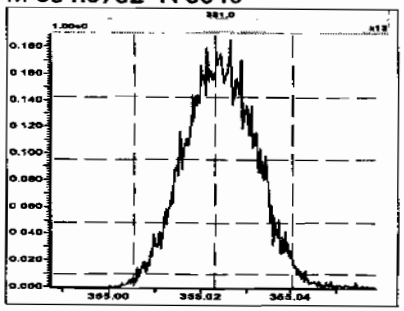

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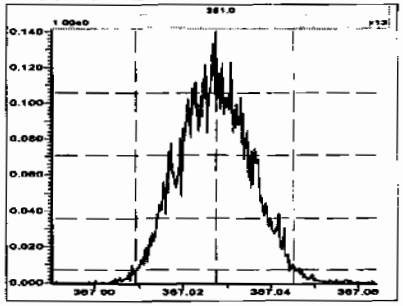

M 380.9760 R 9542

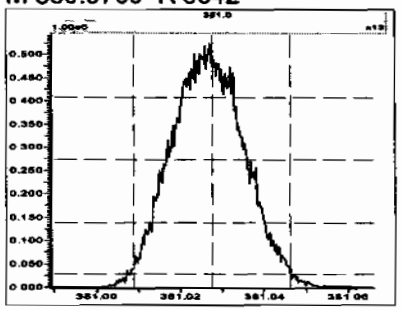

Quantify Sample Summary Report **MassLynx 4.1**

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Printed: Friday, June 05, 2009 9:32:15 AM Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090604F1-10, Date: 04-Jun-2009, Time: 16:26:00, ID: SS090604F1-1 Second Source 090219C, Description: Second Source 090219C

	Name	Resp	RA	IsM	RRF M	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	6.66e4	0.77	NO	0.857	1.000	17.68	8.1466	81.5	0.0996
2	2 13C-2,3,7,8-TCDF	9.54e5	0.75	NO	1.06	1.000	17.66	103.55	104	0.226
3	3 13C-1,2,3,4-TCDF	8.71e5	0.77	NO	1.00	1.000	15.43	100.00	100	0.239

MJ 6/4/09

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1-10.qld

Last Altered: Friday, June 05, 2009 9:31:37 AM Pacific Standard Time
Printed: Friday, June 05, 2009 9:32:15 AM Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090604F1-10, Date: 04-Jun-2009, Time: 16:26:00, ID: SS090604F1-1 Second Source 090219C, Description: Second Source 090219C

2,3,7,8-TCDF
090604F1-10

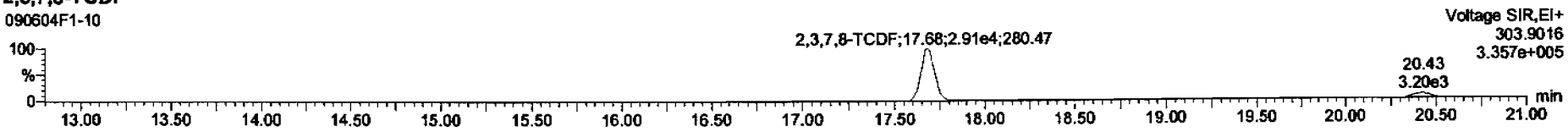

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090604F1-10

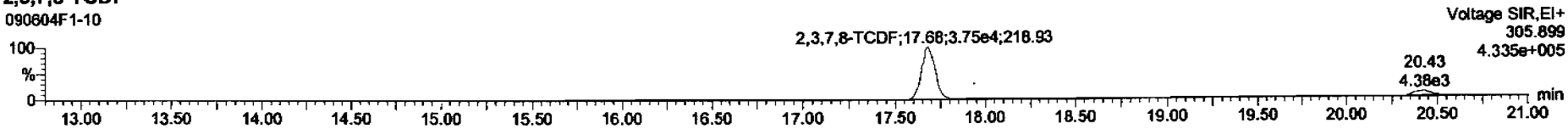

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090604F1-10

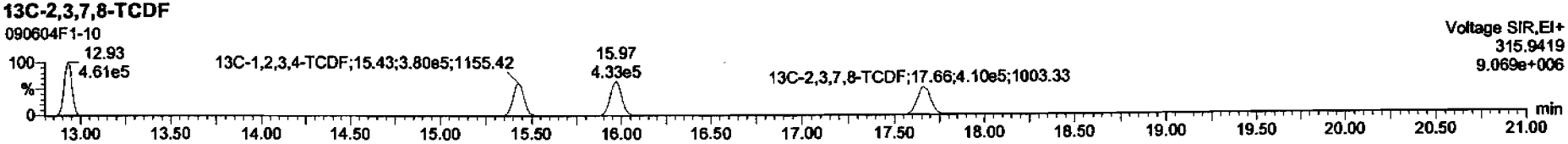

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090604F1-10

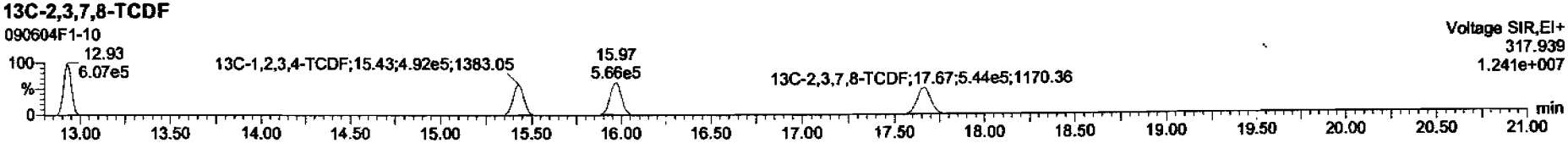

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Last Altered: Friday, June 05, 2009 9:31:37 AM Pacific Standard Time
Printed: Friday, June 05, 2009 9:32:15 AM Pacific Standard Time

Name: 090604F1-10, Date: 04-Jun-2009, Time: 16:26:00, ID: SS090604F1-1 Second Source 090219C, Description: Second Source 090219C

PFK1

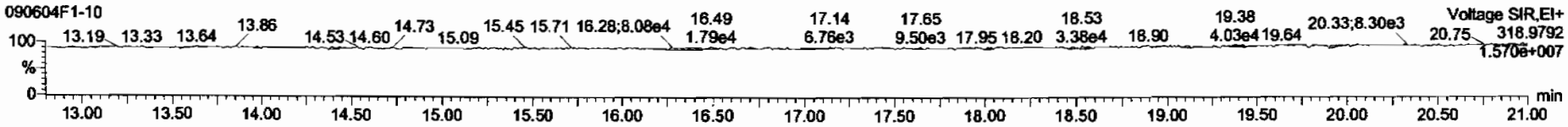

DPE1

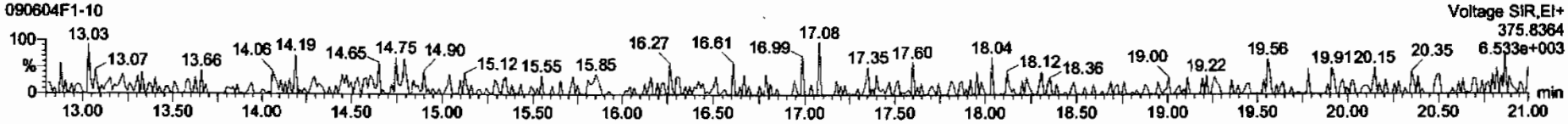

Thursday, June 25, 2009

REQUEST NUMBER: 09-2473

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2473

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10463	R	6/23/2009	
	EPA:353.2	1	CAMO-09-10468	W	6/23/2009	
	EPA:906.0	1	CAMO-09-10463	R	6/23/2009	
	HASL-300:ISOPU	1	CAMO-09-10463	R	6/23/2009	
	HASL-300:ISOU	1	CAMO-09-10463	R	6/23/2009	
	SW-846:6010B	1	CAMO-09-10463	R	6/23/2009	
		1	CAMO-09-10468	W	6/23/2009	
	SW-846:6020	1	CAMO-09-10468	W	6/23/2009	
	SW-846:6850	1	CAMO-09-10463	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2473

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6850	1	CAMO-09-10468	W	6/23/2009	
	SW-846:8260B	1	CAMO-09-10463	R	6/23/2009	
	SW-846:8270C	1	CAMO-09-10463	R	6/23/2009	
	SW-846:8321A_MOD	1	CAMO-09-10463	R	6/23/2009	
	SW-846:9012A	1	CAMO-09-10463	R	6/23/2009	
		1	CAMO-09-10468	W	6/23/2009	
	SW-846:9045C	1	CAMO-09-10463	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2473

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2473

REQUEST NUMBER: 09-2473

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10463	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10463	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10463	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10463	1	POLY	H3	Ice	R
CAMO-09-10463	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10463	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10463	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10468	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10468	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-10468	1	POLY	SW-846:6850	Ice	W
CAMO-09-10468	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:		Date	Time	Received By:		Date	Time
		6/25/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10463

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	OBT4	ok
TIME COLLECTED (HH:MM)		0915	SUB-MEDIA:	UA	
PRS ID:	03-007	ok	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	MO-605001	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	5.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	7.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~15 Day~~ Rejected J.B. 6/23/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Brown / Tan, indurated, dry tuff w/ brown claylike intrusio

FR; CAMO-09-10468

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 03-007-09 (S) of Sigma fence and bldg. 3-159.

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 6$ dpm

$\beta/\gamma \leq 1326$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Nickolas Gallegos

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/23/09 1505	(Printed Name) Sheri Sherwood	6/23/09 3:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10468

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1000	SUB-MEDIA:	OTHER	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605001	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	UF	
TOP DEPTH:	0	OK	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	W		EXCAVATED: YES / NO / (NA)		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / (NA)

BOREHOLE: YES / NO / (NA) BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
2		8290	1 LITER AMBER GLASS	Ice J. 06/27/09	N	
1	15-Day ~~Routine~~ J. 07/27/09	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-10463

SAMPLE COMMENTS: None

LOCATION DESC: 03-007-09

FIELD SCREENING/MEASUREMENT RESULTS: None

COLLECTED BY (PRINT) J. Branch REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature)	6.23.09 1505	(Printed Name) (Signature)	6/23/09 1509
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-10463	ARS Sample ID:	ARS2-09-00074-016
Sample Collection Date:	06/23/09 09:15	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	26.68	67.07	133.72	67.15	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	35.33	15.72	20.15	16.31		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	23.06	9.78	2.24	9.80		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	14.67	0.15	14.67	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.32	0.28	0.11	0.28	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	45.58	0.10	45.58	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.28	0.50	0.20	0.50	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.02	0.56	0.21	0.56		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.06	0.55	0.30	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	-0.09	130.83	0.29	130.83	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.58	3.33	1.89	3.43		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.21	0.27	0.12	0.27		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.36

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2473 VALIDATION DATE: 7/22/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☒ OTHER (DESCRIBE): VOC

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. The ICV or CCV %Ds were >20% for 1,2-dibromo-3-chloropropane; methylene chloride; 2-butanone; 1,2-dichloroethane and isopropylbenzene. The associated sample results were NDs and, thus, were qualified UJ,V7c.
3. It should be noted that the MS and MSD were not spiked with trichlorotrifluoroethane. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/24/09

VALIDATOR'S SIGNATURE: Chandra Lewis	DATE: 7/22/09
Form 5114-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☐	☒	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☐	☐	☒	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☐	☒	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

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Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☐	☒	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☐	☒	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

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Volatile Organic Compound (VOC) Analytical Data Validation Checklist

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☐	☒	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☐	☒	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☒	☐	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232424001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10463	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 15:22	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:16	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s111.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.04	ug/kg	0.355	1.04	
74-87-3	Chloromethane	U	1.04	ug/kg	0.313	1.04	
75-01-4	Vinyl chloride	U	1.04	ug/kg	0.313	1.04	
74-83-9	Bromomethane	U	1.04	ug/kg	0.313	1.04	
75-00-3	Chloroethane	U	1.04	ug/kg	0.313	1.04	
75-69-4	Trichlorofluoromethane	U	1.04	ug/kg	0.595	1.04	
67-64-1	Acetone	U	5.22	ug/kg	1.73	5.22	
75-35-4	1,1-Dichloroethylene	U	1.04	ug/kg	0.313	1.04	
74-88-4	Iodomethane	U	5.22	ug/kg	1.67	5.22	
75-09-2	Methylene chloride	U	5.22	ug/kg	2.09	5.22	UJ,V7c
75-15-0	Carbon disulfide	U	5.22	ug/kg	1.30	5.22	
156-60-5	trans-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04	
75-34-3	1,1-Dichloroethane	U	1.04	ug/kg	0.313	1.04	
78-93-3	2-Butanone	U	5.22	ug/kg	1.57	5.22	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04	
594-20-7	2,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04	
67-66-3	Chloroform	U	1.04	ug/kg	0.313	1.04	
74-97-5	Bromochloromethane	U	1.04	ug/kg	0.344	1.04	
71-55-6	1,1,1-Trichloroethane	U	1.04	ug/kg	0.313	1.04	
563-58-6	1,1-Dichloropropene	U	1.04	ug/kg	0.313	1.04	
56-23-5	Carbon tetrachloride	U	1.04	ug/kg	0.313	1.04	
107-06-2	1,2-Dichloroethane	U	1.04	ug/kg	0.313	1.04	UJ,V7c
71-43-2	Benzene	U	1.04	ug/kg	0.313	1.04	
79-01-6	Trichloroethylene	U	1.04	ug/kg	0.344	1.04	
78-87-5	1,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04	
75-27-4	Bromodichloromethane	U	1.04	ug/kg	0.313	1.04	
74-95-3	Dibromomethane	U	1.04	ug/kg	0.313	1.04	
108-10-1	4-Methyl-2-pentanone	U	5.22	ug/kg	1.30	5.22	
10061-01-5	cis-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04	
108-88-3	Toluene	U	1.04	ug/kg	0.313	1.04	
10061-02-6	trans-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04	
79-00-5	1,1,2-Trichloroethane	U	1.04	ug/kg	0.313	1.04	
591-78-6	2-Hexanone	U	5.22	ug/kg	1.57	5.22	
142-28-9	1,3-Dichloropropane	U	1.04	ug/kg	0.313	1.04	
127-18-4	Tetrachloroethylene	U	1.04	ug/kg	0.313	1.04	
124-48-1	Dibromochloromethane	U	1.04	ug/kg	0.313	1.04	
106-93-4	1,2-Dibromoethane	U	1.04	ug/kg	0.313	1.04	
108-90-7	Chlorobenzene	U	1.04	ug/kg	0.313	1.04	

CLL
7/22/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232424001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10463	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 15:22	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:16	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s111.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.04	ug/kg	0.313	1.04	
179601-23-1	m,p-Xylenes	U	2.09	ug/kg	0.313	2.09	
95-47-6	o-Xylene	U	1.04	ug/kg	0.313	1.04	
100-42-5	Styrene	U	1.04	ug/kg	0.313	1.04	
75-25-2	Bromoform	U	1.04	ug/kg	0.313	1.04	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04	
96-18-4	1,2,3-Trichloropropane	U	1.04	ug/kg	0.313	1.04	
108-86-1	Bromobenzene	U	1.04	ug/kg	0.313	1.04	
103-65-1	n-Propylbenzene	U	1.04	ug/kg	0.313	1.04	
95-49-8	2-Chlorotoluene	U	1.04	ug/kg	0.313	1.04	
98-82-8	Isopropylbenzene	U	1.04	ug/kg	0.313	1.04	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04	
106-43-4	4-Chlorotoluene	U	1.04	ug/kg	0.313	1.04	
98-06-6	tert-Butylbenzene	U	1.04	ug/kg	0.313	1.04	
95-63-6	1,2,4-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04	
135-98-8	sec-Butylbenzene	U	1.04	ug/kg	0.313	1.04	
99-87-6	4-Isopropyltoluene	U	1.04	ug/kg	0.313	1.04	
541-73-1	1,3-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04	
106-46-7	1,4-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04	
104-51-8	n-Butylbenzene	U	1.04	ug/kg	0.313	1.04	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.04	ug/kg	0.313	1.04	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.22	ug/kg	1.67	5.22	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04	
95-50-1	1,2-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	222	ug/kg		J
	Unknown Siloxane	16.17	63.6	ug/kg		J

CLL
7/22/09

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2473 VALIDATION DATE: 7/23/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): SVOC

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. The ICV/CCV %Ds were >20% for benzoic acid; 2-methyl-4,6-dinitrophenol; butylbenzylphthalate; hexachlorocyclopentadiene; 2,4-dinitrophenol and p-nitroaniline. The associated sample results were NDs and, thus, were qualified UJ,SV7c.

Reviewed by: JEJ Level: 1 Date: 7/24/09

VALIDATOR'S SIGNATURE: Chandra Lewis	DATE: 7/23/09
Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

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Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

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Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☐	☒	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☐	☒	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☐	☒	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5115-2 **Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	**38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.**	**UJ, R, SV19**	**J, R, SV19**

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2473**	**Date Collected:**	**06/23/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232424001**	**Date Received:**	**06/26/2009 08:40**	**%Moisture:**	**4.2**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10463**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881319**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 17:53**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 14:54**	**Aliquot:**	**30.24 g**	**Final Volume:**	**1 mL**
Data File:	**s2f3007.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	345	ug/kg	69.0	345	
108-95-2	Phenol	U	345	ug/kg	69.0	345	
95-57-8	2-Chlorophenol	U	345	ug/kg	69.0	345	
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	69.0	345	
621-64-7	N-Nitrosodipropylamine	U	345	ug/kg	69.0	345	
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	34.5	345	
83-32-9	Acenaphthene	U	34.5	ug/kg	11.5	34.5	
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345	
100-02-7	4-Nitrophenol	U	345	ug/kg	69.0	345	
87-86-5	Pentachlorophenol	U	345	ug/kg	69.0	345	
129-00-0	Pyrene	U	34.5	ug/kg	10.8	34.5	
110-86-1	Pyridine	U	345	ug/kg	69.0	345	
62-53-3	Aniline	U	345	ug/kg	121	345	
111-44-4	bis(2-Chloroethyl) ether	U	345	ug/kg	69.0	345	
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	69.0	345	
100-51-6	Benzyl alcohol	U	345	ug/kg	104	345	
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	69.0	345	
108-60-1	bis(2-Chloroisopropyl)ether	U	345	ug/kg	69.0	345	
95-48-7	o-Cresol	U	345	ug/kg	69.0	345	
65794-96-9	m,p-Cresols	U	345	ug/kg	138	345	
67-72-1	Hexachloroethane	U	345	ug/kg	69.0	345	
98-95-3	Nitrobenzene	U	345	ug/kg	69.0	345	
78-59-1	Isophorone	U	345	ug/kg	69.0	345	
88-75-5	2-Nitrophenol	U	345	ug/kg	34.5	345	
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	69.0	345	
111-91-1	bis(2-Chloroethoxy)methane	U	345	ug/kg	69.0	345	
120-83-2	2,4-Dichlorophenol	U	345	ug/kg	69.0	345	
65-85-0	Benzoic acid	U	690	ug/kg	173	690	UJ,SV7c
91-20-3	Naphthalene	U	34.5	ug/kg	10.4	34.5	
106-47-8	4-Chloroaniline	U	345	ug/kg	69.0	345	
87-68-3	Hexachlorobutadiene	U	345	ug/kg	69.0	345	
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.90	34.5	
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	69.0	345	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	69.0	345	
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	69.0	345	
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	12.1	34.5	
88-74-4	2-Nitroaniline	U	345	ug/kg	69.0	345	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	345	ug/kg	69.0	345	

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7/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232424001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10463	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 17:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.24 g	**Final Volume:**	1 mL
Data File:	s2f3007.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	345	ug/kg	69.0	345	
606-20-2	2,6-Dinitrotoluene	U	345	ug/kg	34.5	345	
208-96-8	Acenaphthylene	U	34.5	ug/kg	10.4	34.5	
51-28-5	2,4-Dinitrophenol	U	690	ug/kg	131	690	UJ,SV7c
132-64-9	Dibenzofuran	U	345	ug/kg	69.0	345	
84-66-2	Diethylphthalate	U	345	ug/kg	69.0	345	
86-73-7	Fluorene	U	34.5	ug/kg	10.4	34.5	
7005-72-3	4-Chlorophenylphenylether	U	345	ug/kg	34.5	345	
534-52-1	2-Methyl-4,6-dinitrophenol	U	345	ug/kg	69.0	345	UJ,SV7c
100-01-6	4-Nitroaniline	U	345	ug/kg	69.0	345	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	345	ug/kg	69.0	345	
122-66-7	Azobenzene	U	345	ug/kg	69.0	345	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	345	ug/kg	34.5	345	
118-74-1	Hexachlorobenzene	U	345	ug/kg	69.0	345	
85-01-8	Phenanthrene	U	34.5	ug/kg	10.4	34.5	
120-12-7	Anthracene	U	34.5	ug/kg	6.90	34.5	
84-74-2	Di-n-butylphthalate	U	345	ug/kg	34.5	345	
206-44-0	Fluoranthene	U	34.5	ug/kg	10.4	34.5	
85-68-7	Butylbenzylphthalate	U	345	ug/kg	69.0	345	UJ,SV7c
56-55-3	Benzo(a)anthracene	U	34.5	ug/kg	10.4	34.5	
91-94-1	3,3'-Dichlorobenzidine	U	345	ug/kg	104	345	
218-01-9	Chrysene	U	34.5	ug/kg	10.4	34.5	
117-81-7	bis(2-Ethylhexyl)phthalate	U	345	ug/kg	69.0	345	
117-84-0	Di-n-octylphthalate	U	345	ug/kg	69.0	345	
205-99-2	Benzo(b)fluoranthene	U	34.5	ug/kg	10.4	34.5	
207-08-9	Benzo(k)fluoranthene	U	34.5	ug/kg	10.4	34.5	
50-32-8	Benzo(a)pyrene	U	34.5	ug/kg	10.4	34.5	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.4	34.5	
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.4	34.5	
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.4	34.5	
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	69.0	345	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	259	ug/kg		JA

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7/23/09

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2473 VALIDATION DATE: 7/23/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☒ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards for both soil and water were not provided in the data package. No sample data were qualified.
2. It should be noted that the MS/MSD %R calculations for both soil and water were performed incorrectly. The parent sample results were < the MDLs and, thus, results of 0 µg/kg or 0 µg/L should have been used to calculate the %Rs. The laboratory subtracted the parent sample concentrations. The %Rs were within the acceptance limits when calculated correctly. No sample results were qualified.

   It should also be noted that the MS/MSD analyses for both soil and water were performed on a parent samples from another LANL RN. The parent sample raw data were not included in the data package. No sample data were qualified.

Reviewed by: JEJ Level: 1 Date: 7/24/09

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

VALIDATOR'S SIGNATURE: Charisse Lewis

DATE: 7/23/09

Form 5121-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☒	☐	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☐	☒	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☐	☒	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☒	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10463

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2473

GEL Sample ID: 232424001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 95.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	0.522	ug/kg	U	1	07-JUL-09 12:38	per0707015a
	Perchlorate-O(18)			5.38	ug/kg		1	07-JUL-09 12:38	per0707015a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

CLL
7/23/09

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10468

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2473-1

GEL Sample ID: 232425001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:28	per0630061a
	Perchlorate Isotope Ratio						1	30-JUN-09 18:28	per0630061a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:28	per0630061a
	Perchlorate-O(18)			0.438	ug/L		1	30-JUN-09 18:28	per0630061a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

CLL
7/23/09

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DATA VALIDATION COVER SHEET

5122-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2473 VALIDATION DATE: 7/23/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☒ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw ICAL data from the instrument used for the secondary HE analysis were not reported in the data package for both batches. Thus, the surrogate retention time criteria could not be evaluated. In addition, the raw ICAL data from the instrument used for the primary HE analysis were also not reported. No sample data were qualified as a result.
2. The CCV %D was >20% with positive bias for 2-amino-4,6-dinitrotoluene. The associated sample result was an ND and, thus, was not qualified.

Reviewed by: JEJ Level: 1 Date: 7/24/09

VALIDATOR'S SIGNATURE: Chandoo Lewis	DATE: 7/23/09
Form 5122-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time has shifted by more than 30 seconds.	R, UJ, HE0	J, HE0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE0b	R, HE0b
☐	☒	☐	3. The quantitating IS area count is <25% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow the method-specific windows.	R, HE1a	J, HE1a
☐	☒	☐	4. The IS area count for the quantitating IS is <70% but >25% of the average of that obtained from the calibration standards.	UJ, HE1b	J+, HE1b
☐	☒	☐	5. The IS area count for the quantitating IS is >130% of the average of that obtained from the calibration standards.	UJ, HE1c	J-, HE1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE1d	R, HE1d
☐	☒	☐	7. The surrogate is <10%R. Follow the external laboratory limits.	R, HE3	J-, HE3
☐	☒	☐	8. The surrogate is < the Lower Acceptance Limit but ≥10% recovery. Follow the external laboratory limits.	UJ, HE3a	J-, HE3a
☐	☒	☐	9. The surrogate %R value is > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE3b
☐	☐	☒	10. At least one surrogate is > the Upper Acceptance Limit and one surrogate is < the Lower Acceptance Limit. Follow the external laboratory limits.	UJ, HE3c	J, HE3c

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST	
5122-2 LC/MS/MS High Explosive Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	11. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE3d	R, HE3d
☐	☒	☐	12. The sample result is ≤5 times the concentration of the related analyte in the method blank.	U, HE4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, HE4a
☐	☐	☒	14. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, HE4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE4e	R, HE4e
☐	☒	☐	16. The absence of sample carry-over must be determined and verified.	N/A	R, N, HE4f
☐	☒	☐	17. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, HE7	J, HE7
☐	☒	☐	18. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is less < 0.99.	UJ, R, HE7a	J, HE7a
☐	☒	☐	19. The affected analytes were analyzed with a RRF of <0.05 in the initial calibration and/or CCV.	UJ, R, HE7b	J, HE7b
☒	☐	☐	20. The ICV and/or CCV were recovered outside the method limits.	UJ, R, HE7c	J, HE7c
☐	☒	☐	21. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, HE7d	J, HE7d
☐	☒	☐	22. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, HE7f	R, HE7f

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST	
5122-2 **LC/MS/MS High Explosive Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	23. The mass spectral documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE8a	R, HE8a
☐	☒	☐	24. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, HE9	J-, HE9
☐	☒	☐	25. The holding time was >2 times the applicable holding time requirement.	R, HE9a	J-, HE9a
☐	☒	☐	26. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, HE12	J-, HE12
☐	☒	☐	27. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, HE12a	J-, HE12a
☐	☒	☐	28. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE12b
☐	☒	☐	29. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE12c	R, HE12c
☐	☒	☐	30. The MS/MSD percent recovery was <10%.	R, HE12d	R, HE12d
☐	☒	☐	31. The MS/MSD percent recovery was >10% but <70%.	UJ, HE12e	J, HE12e
☐	☒	☐	32. The MS/MSD percent recover was >70%.	N/A	J+, HE12f
☐	☒	☐	33. The MS/MSD relative percent difference was >30%.	UJ, HE12g	J, HE12g
☐	☒	☐	34. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. (Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.)	UJ, R, HE15	R, HE15
☐	☒	☐	35. The sample was diluted because target analytes were > the initial verification calibration.	UJ, HE15a	J, HE15a

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST	
5122-2 **LC/MS/MS High Explosive Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The Contract Required Detection Limit Check Standard (CRI) sample did not pass method acceptance criteria.	UJ, R, HE16	J, HE16
☐	☒	☐	37. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, HE16c	R, HE16c
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, HE19	J, R, HE19
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, HE88	J, HE88

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10463

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 232424001

Sample Amount 2

Moisture: 4.2

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713014a

Date Analyzed: 13-JUL-09 21:19

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

CLL
7/23/09

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10463

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 232424001

Sample Amount 2

Moisture: 4.2

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0701018.wiff

Date Analyzed: 01-JUL-09 15:15

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

CLL
7/23/09

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2473 VALIDATION DATE: 7/24/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☒ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the soil MB, Sb, Ca, Zn, Fe and Tl were detected. The soil sample results for Sb and Tl were detects ≤5X the MB concentrations and, thus, were qualified U,I4. The remaining associated sample results were detects >50X the MB concentrations and, thus, were not qualified, based on professional judgment. In the water MB, Sb was detected. The associated sample result was an ND and, thus, was not qualified.
2. In the soil ICB/CCBs, Sb and Tl were detected. The associated sample results were detects ≤5X the greatest blank concentration and, thus, were qualified U,I4b. In the water CCB, Tl was detected. The associated sample result was an ND and, was not qualified.
3. In the FR blank, sample CAMO-09-10468, associated with the soil sample, K and Na were detected. The associated soil sample results were detects >5X the FR blank concentrations and, thus, were not qualified.
4. The soil MS %R was < the laboratory LAL but ≥10% for Mn. The associated sample result was a detect and, thus,

DATA VALIDATION COVER SHEET

5118-1

Records Use only

Data Validation Cover Sheet

was qualified J-,I6a. The water MS %R was < the laboratory LAL but ≥10% for Tl. The associated sample result was an ND and, thus, was qualified UJ,I6a. The soil MS %R was <10% for Fe. However, the associated parent sample concentration was >4X the spike concentration. Thus, no sample data were qualified, based on professional judgment.

5. It should be noted that the soil matrix QC for Hg and the water matrix QC for all analyses <u>except</u> Hg were performed on parent samples from other LANL RNs. No sample data were qualified as a result.
6. Results > the MDLs but < the PQLs were "J" flagged by the laboratory and, thus, were not further qualified J,I1.

Reviewed by: JEJ Level: 1 Date: 7/24/09

VALIDATOR'S SIGNATURE: Charisse Lewis DATE: 7/24/09

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☒	☐	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☒	☐	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☒	☐	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☐	☒	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☐	☒	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2473 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232424001 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-10463 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1560000	ug/Kg	N	7020	20700	20700	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-36-0	Antimony U,I4	905	ug/Kg	J	320	1030	1030	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-38-2	Arsenic	612	ug/kg	J	298	994	994	2	MS	BAJ	06/30/09 21:39	090630-2	880943
7440-39-3	Barium	12700	ug/Kg		103	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-41-7	Beryllium	338	ug/kg		19.9	99.4	99.4	2	MS	BAJ	07/01/09 08:42	090630-4	880943
7440-43-9	Cadmium	517	ug/Kg	U	103	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-70-2	Calcium	693000	ug/Kg		3100	10300	10300	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-47-3	Chromium	4070	ug/Kg		103	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-48-4	Cobalt	829	ug/Kg		207	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-50-8	Copper	3140	ug/Kg		310	1030	1030	1	P	JWJ	06/30/09 06:11	063009-1	880930
7439-89-6	Iron	9560000	ug/Kg		2580	10300	10300	1	P	JWJ	06/30/09 06:11	063009-1	880930
7439-92-1	Lead	15400	ug/Kg		258	1030	1030	1	P	JWJ	06/30/09 06:11	063009-1	880930
7439-95-4	Magnesium	850000	ug/Kg		8780	31000	31000	1	P	JWJ	06/30/09 06:11	063009-1	880930
7439-96-5	Manganese J-,I6a	190000	ug/Kg	N	207	1030	1030	1	P	JWJ	06/30/09 06:11	063009-1	880930
7439-97-6	Mercury	12	ug/kg	U	4.07	12	12	1	AV	JXL1	07/13/09 10:02	071309S2-5	880997
7440-02-0	Nickel	1930	ug/kg		99.4	397	397	2	MS	BAJ	06/30/09 21:39	090630-2	880943
7440-09-7	Potassium	472000	ug/Kg		5170	15500	15500	1	P	JWJ	06/30/09 06:11	063009-1	880930
7782-49-2	Selenium	994	ug/kg	U	497	994	994	2	MS	BAJ	06/30/09 21:39	090630-2	880943
7440-22-4	Silver	225	ug/Kg	J	103	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-23-5	Sodium	225000	ug/Kg		4650	15500	15500	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-28-0	Thallium U,I4	193	ug/kg	J	39.7	199	199	2	MS	BAJ	06/30/09 21:39	090630-2	880943
7440-62-2	Vanadium	5850	ug/Kg		103	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-66-6	Zinc	44400	ug/Kg		207	1030	1030	1	P	JWJ	06/30/09 06:11	063009-1	880930

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880930	880929	SW846 3050B	0.505	g	50	mL	06/29/09	BXA1
880943	880942	SW846 3050B	0.525	g	50	mL	06/29/09	BXA1
880997	880994	SW846 7471A Prep	0.523	g	30	mL	07/10/09	AXG2

CLL
7/24/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2473-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232425001 **BASIS:** As Received **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-10468 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/04/09 02:32	090703-2	881357
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/04/09 02:32	090703-2	881357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/04/09 02:32	090703-2	881357
7440-70-2	Calcium	100	ug/L	U	30	100	100	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-47-3	Chromium	5	ug/L	U	2	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	06/30/09 18:53	063009-1	881354
7439-89-6	Iron	100	ug/L	U	25	100	100	1	P	HSC	06/30/09 18:53	063009-1	881354
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/04/09 02:32	090703-2	881357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	06/30/09 18:53	063009-1	881354
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/04/09 02:32	090703-2	881357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	ETL	07/02/09 10:42	070209W1-4	881393
7440-02-0	Nickel	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-09-7	Potassium	126	ug/L	J	50	150	150	1	P	HSC	06/30/09 18:53	063009-1	881354
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-23-5	Sodium	138	ug/L	J	45	150	150	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-28-0	Thallium UJ,I6a	1	ug/L	U	0.3	1	1	1	MS	PRB	07/04/09 15:11	090703-3	881357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-66-6	Zinc	10	ug/L	U	2	10	10	1	P	HSC	06/30/09 18:53	063009-1	881354

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881354	881353	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881357	881356	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881393	881392	SW846 7470A Prep	20	mL	20	mL	07/01/09	TXB3

CLL
7/24/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2473 VALIDATION DATE: 7/24/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☒ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the water MB, nitrate/nitrite was detected. The associated sample result was a detect ≤5X the blank concentration and, thus, was qualified U,I4.
2. In the FR blank, sample CAMO-09-10468, associated with the soil sample, total cyanide was detected. The associated field sample result was an ND and, thus, was not qualified.
3. The soil MS %R was < the laboratory LAL but ≥10% for nitrate-N. The associated sample result was an ND and, thus, was qualified UJ,I6a.
4. It should be noted that the matrix QC analyses for all analyses <u>except</u> soil pH were performed on parent samples from other LANL RNs. No sample data were qualified.

Reviewed by: JEJ Level: 1 Date: 7/24/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

VALIDATOR'S SIGNATURE: Chandra Lewis

DATE: 7/24/09

Form 5120-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☒	☐	☐	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 16, 2009

Client SDG: 09-2473

Client Sample ID:	CAMO-09-10463	Project:	LANL01004
Sample ID:	232424001	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	4.16%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 22.1C	H	9.17		0.010	0.100	SU	1	RXG2 06/29/09	1215	881124	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		71.0	261	ug/kg	1	AXC2 07/06/09	1305	881032	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.313	1.04	mg/kg	1	MAR1 07/10/09	0431	880973	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0855	880972
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

CLL
7/24/09

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2473-1

Client Sample ID:	CAMO-09-10468	Project:	LANL01004
Sample ID:	232425001	Client ID:	LANL010
Matrix:	W		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal											
SW9012A Cyanide, Total "As Received"											
Cyanide, Total	J	2.25		1.66	5.00	ug/L	1	AXC2 07/02/09	0947	881036	1
Nutrient Analysis											
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"											
Nitrogen, Nitrate/Nitrite	J	0.0775	U,I4	0.050	0.250	mg/L	5	AXH3 06/29/09	1453	881227	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0847	881035

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

CLL
7/24/09

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2473 VALIDATION DATE: 7/24/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☒ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The gamma spec results that were rejected by the laboratory due to high peak-width, interference or low abundance were qualified R,R5a. In the QC samples, several results were also rejected by the laboratory due to interference or low abundance. No sample data were qualified as a result.
2. The reported results that were ≤ the MDCs were qualified U,R5.
3. It should be noted than an MS was not analyzed for tritium. However, an LCS was analyzed and met acceptance criteria. Therefore, no sample data were qualified.
4. It should be noted that the duplicate parent samples for all analyses except gamma spec were from another LANL RN. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/24/09

VALIDATOR'S SIGNATURE: Chantsa Lewis	DATE: 7/24/09
Form 5119-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☐	☒	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 16, 2009

Client Sample ID:	CAMO-09-10463	Project:	LANL01004
Sample ID:	232424001	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	4.16%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	-1.47E-10	U,R5	0.0226	+/-0.00174	0.050	pCi/g		AXD2	07/09/09	1737	882525	2
Plutonium-239/240	U	-0.00369	U,R5	0.0272	+/-0.00275	0.050	pCi/g						
ISOTH "Dry Weight Corrected"													
Thorium-228		0.822		0.389	+/-0.106	0.100	pCi/g		HAKB	07/08/09	1919	882541	3
Thorium-230		0.437		0.298	+/-0.067	0.100	pCi/g						
Thorium-232		0.759		0.110	+/-0.0951	0.100	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.511		0.290	+/-0.0686	0.100	pCi/g		AXD2	07/15/09	2113	885014	4
Uranium-235/236	U	0.0394	U,R5	0.133	+/-0.0178	0.100	pCi/g						
Uranium-238		0.350		0.113	+/-0.0555	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.221	U,R5	0.306	+/-0.0961	0.200	pCi/g		MXR1	07/07/09	0603	881219	7
Bismuth-211	UI	3.10	R,R5a	0.379	+/-0.279		pCi/g						
Bismuth-214		1.01		0.129	+/-0.0988	0.200	pCi/g						
Cadmium-109	UI	2.45	R,R5a	1.65	+/-0.506		pCi/g						
Cerium-139	U	-0.0127	U,R5	0.0558	+/-0.0165	0.050	pCi/g						
Cesium-134	UI	0.133	R,R5a	0.115	+/-0.030	0.100	pCi/g						
Cesium-137	U	-0.0572	U,R5	0.0671	+/-0.0226	0.100	pCi/g						
Cobalt-60	U	-0.00257		0.0809	+/-0.0245	0.100	pCi/g						
Europium-152	U	-0.0428		0.196	+/-0.066	0.200	pCi/g						
Lanthanum-140	U	-0.0476		0.165	+/-0.054		pCi/g						
Lead-212		1.55		0.103	+/-0.0837	0.100	pCi/g						
Lead-214		1.08		0.130	+/-0.101	0.100	pCi/g						
Mercury-203	U	0.0241	U,R5	0.0798	+/-0.0232	0.100	pCi/g						
Potassium-40		36.5		0.537	+/-1.70	1.00	pCi/g						
Radium-223	U	-0.304	U,R5	1.26	+/-0.391		pCi/g						
Radium-224	UI	3.30	R,R5a	1.18	+/-0.778		pCi/g						
Radium-226		1.01		0.129	+/-0.0988		pCi/g						
Radium-228		1.71		0.264	+/-0.182	0.500	pCi/g						
Ruthenium-106	U	0.328	U,R5	0.691	+/-0.193	0.800	pCi/g						
Sodium-22	U	0.000929	U,R5	0.092	+/-0.0276	0.080	pCi/g						
Strontium-85	UI	0.107	R,R5a	0.0856	+/-0.0254		pCi/g						

CLL
7/24/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 16, 2009

Client Sample ID: CAMO-09-10463
Sample ID: 232424001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Thallium-208		0.512		0.0664	+/-0.0437	0.080	pCi/g						
Thorium-227	U	0.157	U,R5	0.770	+/-0.225		pCi/g						
Thorium-231	U	-0.304		1.26	+/-0.391		pCi/g						
Thorium-234	U	2.03		2.44	+/-1.24	2.00	pCi/g						
Tin-113	U	-0.0181		0.0854	+/-0.0267	0.100	pCi/g						
Uranium-235	UI	0.424	R,R5a	0.394	+/-0.247	0.500	pCi/g						
Yttrium-88	U	0.00321	U,R5	0.0532	+/-0.016	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		1140		154	+/-103	250	pCi/L	KXK2		07/14/09	1442	883013	8

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Th-01-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	EML HASL 300, 4.5.2.3
8	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	93.0	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	86.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.0	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.

CLL
7/24/09

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2473

REQUEST NUMBER: 09-2473

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232424, 232425 ✓.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10463	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10463	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10463	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10463	1	POLY	H3	Ice	R
CAMO-09-10463	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10463	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10463	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10468	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10468	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-10468	1	POLY	SW-846:6850	Ice	W
CAMO-09-10468	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/25/09	1700	Patricia Dent	P Dent	6/26/09	08:40
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Thursday, June 25, 2009

REQUEST NUMBER: 09-2473

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2473
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009
TURNAROUND/REPORT DUE: 7/10/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10463	R	6/23/2009	
	EPA:353.2	1	CAMO-09-10468	W	6/23/2009	
	EPA:906.0	1	CAMO-09-10463	R	6/23/2009	
	HASL-300:ISOPU	1	CAMO-09-10463	R	6/23/2009	
	HASL-300:ISOU	1	CAMO-09-10463	R	6/23/2009	
	SW-846:6010B	1	CAMO-09-10463	R	6/23/2009	
		1	CAMO-09-10468	W	6/23/2009	
	SW-846:6020	1	CAMO-09-10468	W	6/23/2009	
	SW-846:6850	1	CAMO-09-10463	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2473

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6850	1	CAMO-09-10468	W	6/23/2009	
	SW-846:8260B	1	CAMO-09-10463	R	6/23/2009	
	SW-846:8270C	1	CAMO-09-10463	R	6/23/2009	
	SW-846:8321A_MOD	1	CAMO-09-10463	R	6/23/2009	
	SW-846:9012A	1	CAMO-09-10463	R	6/23/2009	
		1	CAMO-09-10468	W	6/23/2009	
	SW-846:9045C	1	CAMO-09-10463	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2473

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

June 27, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Orders: 232424 232425
SDG: 09-2473

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 26, 2009, and analyzed for Explosives by LCMSMS, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2473
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232424 and 232425
SDG: 09-2473

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Quality Control Summary 277
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Miscellaneous Data 318

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Standards 703
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Miscellaneous 968

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Sample Data Summary 1004
Quality Control Summary 1006
Standards 1054
Raw Data 1066
Miscellaneous 1344

General Chemistry Analysis 1380
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Instrument QC Data Summary 1397
Cyanide, Total 1400
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Standards Data 1825
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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232424 and 232425
SDG # : 09-2473

June 27, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 26, 2009 for analysis. The sample was prepared/analyzed within the required holding time. Shipping container temperature was checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The sample was delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232424001	CAMO-09-10463
232425001	CAMO-09-10468

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Explosives by LCMSMS, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

List of current GEL Certifications as of 27 June 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2473

REQUEST NUMBER: 09-2473

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232424, 232425 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10463	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10463	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10463	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10463	1	POLY	H3	Ice	R
CAMO-09-10463	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10463	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10463	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10468	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10468	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-10468	1	POLY	SW-846:6850	Ice	W
CAMO-09-10468	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/25/09	1700	Patricia Dent	P. Dent	6/26/09	08:40
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Thursday, June 25, 2009

REQUEST NUMBER: 09-2473

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2473

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10463	R	6/23/2009	
	EPA:353.2	1	CAMO-09-10468	W	6/23/2009	
	EPA:906.0	1	CAMO-09-10463	R	6/23/2009	
	HASL-300:ISOPU	1	CAMO-09-10463	R	6/23/2009	
	HASL-300:ISOU	1	CAMO-09-10463	R	6/23/2009	
	SW-846:6010B	1	CAMO-09-10463	R	6/23/2009	
		1	CAMO-09-10468	W	6/23/2009	
	SW-846:6020	1	CAMO-09-10468	W	6/23/2009	
	SW-846:6850	1	CAMO-09-10463	R	6/23/2009	

Thursday, June 25, 2009

REQUEST NUMBER: 09-2473

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6850	1	CAMO-09-10468	W	6/23/2009	
	SW-846:8260B	1	CAMO-09-10463	R	6/23/2009	
	SW-846:8270C	1	CAMO-09-10463	R	6/23/2009	
	SW-846:8321A_MOD	1	CAMO-09-10463	R	6/23/2009	
	SW-846:9012A	1	CAMO-09-10463	R	6/23/2009	
		1	CAMO-09-10468	W	6/23/2009	
	SW-846:9045C	1	CAMO-09-10463	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2473

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2473**
Received By: Patricia Dent	**Date Received: JUNE 26, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) 2,3,6,23,24C
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5664 6C
7209 7847 5642 2C
7209 7847 5572 24C
7209 7847 5609 3C
7209 7847 5561 23C
7209 7847 5594 3C
7209 7847 5583 3C
7209 7847 5653 2C

PM (or PMA) review: Initials PDC Date 27 JUN 09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 56.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5664 Form 0201

FRI
Deliver By:
26JUN09

CHS
A1

29407 -SC-US XX CHSA

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 18.0 LB MA
System#: 0014176/C
Account: S *******

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

2°C

Ref: 6b010amr2a0512bgdo

Delivery Bar

BILL S

PRIORITY OVERNIGHT

TRK# 7209 7847 5642 Form 0201

CHS

29407 -SC-US XX CHS

Part # 156140-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 29.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

(843) 556-8171
FedEx
Express

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

Ref: 6b010amr1a05101ccc

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5572 Form 0201

FRI
Deliver By:
26JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 150148-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 51.0 LB MAN
System#: 8014176/CAF
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-
Fed
E

Ref: 6b010amr1a015agumc

Delivery Add
Barcode

3°C

BILL SENDE

PRIORITY OVERNIGHT

TRK# 7209 7847 5609 Form 0201

FRI
Deliver
26JUN

CHS A:

29407 -SC-US XX CHSA

Part # 150148-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 55.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

CLS08181/7/22/23

Ref: 6b018aur1a05101cce

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

FRI
Deliver By:
26JUN09

TRK# 7209 7847 5561 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 52.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

CLS08181/7/22/23

Ref: 6b018auu61115700

Delivery Address Barcode

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BILL SENDER

PRIORITY OVERNIGHT

FRI
Deliver By:
26JUN09

TRK# 7209 7847 5594 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 25JUN09
ActWgt: 53.0 LB MAN
System#: 8014176/CAFE2361
Account: 5 *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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Ref: 0b018aue61115700

Delivery Address Barcode

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BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5583 Form 0201

FRI
Deliver By:
26JUN09

29407 -SC-US XX CHSA

Part # 156148-434 NRRT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
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TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 0b018aur2a0512bgdo

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5853 Form 0201

FRI
Deliver By:
26JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRRT V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

GC/MS Volatile Organics
Los Alamos National Laboratory (LANL)
SDG 09-2473

Method/Analysis Information

Procedure:	Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
Analytical Method:	SW846 8260B
Prep Method:	SW846 5030
Analytical Batch Number:	882743
Prep Batch Number:	882741

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232424001	CAMO-09-10463
1201874911	Method Blank (MB)
1201874914	Laboratory Control Sample (LCS)
1201874915	Laboratory Control Sample (LCS)
1201874912	232424001(CAMO-09-10463) Post Spike (PS)
1201874913	232424001(CAMO-09-10463) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 19.1.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232424001 (CAMO-09-10463) was designated for spike analysis in this SDG.

Matrix Spike (PS) Recovery Statement
The spike recoveries for this SDG were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate recoveries for this SDG were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-analyses were not required for samples in this SDG.

Miscellaneous Information

Electronic Package Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
A nonconformance report was not required for this SDG.

Manual Integrations
Data files associated with the initial calibration, continuing calibration check, and samples did not require manual integrations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA6.I	Gas Chromatograph/Mass Spectrometer	HP6890N/HP5975	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Erin Haubert Date: 07/16/09

Roadmap for LANL 09-2473 VOA

This roadmap was analyzed by alc01592 on 07-09-2009, 16:12.
This roadmap was reviewed by kel00587 on 07-12-2009, 10:56.

Sample

exclude	manual	datafile	smpid	clientid	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA6.i/070609v6/6s111.d	232424001	CAMO-09-10463	06-JUL-2009	15:22	09-2473.sub	1	882743	

QC Sample

exclude	manual	datafile	smpid	clientid	sampletype	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA6.i/070609v6/6s104L2.d	1201874914	LCS	lcs	06-JUL-2009	11:17	all.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s106L2.d	1201874915	LCS	lcs	06-JUL-2009	12:12	all.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s108B1.d	1201874911	BLANK	mb	06-JUL-2009	13:07	all.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s125.d	1201874912	CAMO-09-10463MS	ms	06-JUL-2009	21:51	09-2473.sub	1	882743	
☐	N	/chem/VOA6.i/070609v6/6s126.d	1201874913	CAMO 09 10463MSD	msd	06-JUL-2009	22:18	09 2473.sub	1	882743	

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232424001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10463	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 15:22	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:16	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s111.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.04	ug/kg	0.355	1.04
74-87-3	Chloromethane	U	1.04	ug/kg	0.313	1.04
75-01-4	Vinyl chloride	U	1.04	ug/kg	0.313	1.04
74-83-9	Bromomethane	U	1.04	ug/kg	0.313	1.04
75-00-3	Chloroethane	U	1.04	ug/kg	0.313	1.04
75-69-4	Trichlorofluoromethane	U	1.04	ug/kg	0.595	1.04
67-64-1	Acetone	U	5.22	ug/kg	1.73	5.22
75-35-4	1,1-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
74-88-4	Iodomethane	U	5.22	ug/kg	1.67	5.22
75-09-2	Methylene chloride	U	5.22	ug/kg	2.09	5.22
75-15-0	Carbon disulfide	U	5.22	ug/kg	1.30	5.22
156-60-5	trans-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
75-34-3	1,1-Dichloroethane	U	1.04	ug/kg	0.313	1.04
78-93-3	2-Butanone	U	5.22	ug/kg	1.57	5.22
156-59-2	cis-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
594-20-7	2,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04
67-66-3	Chloroform	U	1.04	ug/kg	0.313	1.04
74-97-5	Bromochloromethane	U	1.04	ug/kg	0.344	1.04
71-55-6	1,1,1-Trichloroethane	U	1.04	ug/kg	0.313	1.04
563-58-6	1,1-Dichloropropene	U	1.04	ug/kg	0.313	1.04
56-23-5	Carbon tetrachloride	U	1.04	ug/kg	0.313	1.04
107-06-2	1,2-Dichloroethane	U	1.04	ug/kg	0.313	1.04
71-43-2	Benzene	U	1.04	ug/kg	0.313	1.04
79-01-6	Trichloroethylene	U	1.04	ug/kg	0.344	1.04
78-87-5	1,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04
75-27-4	Bromodichloromethane	U	1.04	ug/kg	0.313	1.04
74-95-3	Dibromomethane	U	1.04	ug/kg	0.313	1.04
108-10-1	4-Methyl-2-pentanone	U	5.22	ug/kg	1.30	5.22
10061-01-5	cis-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04
108-88-3	Toluene	U	1.04	ug/kg	0.313	1.04
10061-02-6	trans-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04
79-00-5	1,1,2-Trichloroethane	U	1.04	ug/kg	0.313	1.04
591-78-6	2-Hexanone	U	5.22	ug/kg	1.57	5.22
142-28-9	1,3-Dichloropropane	U	1.04	ug/kg	0.313	1.04
127-18-4	Tetrachloroethylene	U	1.04	ug/kg	0.313	1.04
124-48-1	Dibromochloromethane	U	1.04	ug/kg	0.313	1.04
106-93-4	1,2-Dibromoethane	U	1.04	ug/kg	0.313	1.04
108-90-7	Chlorobenzene	U	1.04	ug/kg	0.313	1.04

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232424001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10463	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 15:22	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:16	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s111.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.04	ug/kg	0.313	1.04
179601-23-1	m,p-Xylenes	U	2.09	ug/kg	0.313	2.09
95-47-6	o-Xylene	U	1.04	ug/kg	0.313	1.04
100-42-5	Styrene	U	1.04	ug/kg	0.313	1.04
75-25-2	Bromoform	U	1.04	ug/kg	0.313	1.04
79-34-5	1,1,2,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04
96-18-4	1,2,3-Trichloropropane	U	1.04	ug/kg	0.313	1.04
108-86-1	Bromobenzene	U	1.04	ug/kg	0.313	1.04
103-65-1	n-Propylbenzene	U	1.04	ug/kg	0.313	1.04
95-49-8	2-Chlorotoluene	U	1.04	ug/kg	0.313	1.04
98-82-8	Isopropylbenzene	U	1.04	ug/kg	0.313	1.04
108-67-8	1,3,5-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04
106-43-4	4-Chlorotoluene	U	1.04	ug/kg	0.313	1.04
98-06-6	tert-Butylbenzene	U	1.04	ug/kg	0.313	1.04
95-63-6	1,2,4-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04
135-98-8	sec-Butylbenzene	U	1.04	ug/kg	0.313	1.04
99-87-6	4-Isopropyltoluene	U	1.04	ug/kg	0.313	1.04
541-73-1	1,3-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04
106-46-7	1,4-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04
104-51-8	n-Butylbenzene	U	1.04	ug/kg	0.313	1.04
96-12-8	1,2-Dibromo-3-chloropropane	U	1.04	ug/kg	0.313	1.04
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.22	ug/kg	1.67	5.22
630-20-6	1,1,1,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04
95-50-1	1,2-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	222	ug/kg		J
	Unknown Siloxane	16.17	63.6	ug/kg		J

QC Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2473

Matrix Type: SOLID

CAP Column (1) : DB-624

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201874914	LCS for batch 882741	101	101	103
1201874915	LCS for batch 882741	99	99	101
1201874911	MB for batch 882741	98	101	101
232424001	CAMO-09-10463	99	98	101
1201874912	CAMO-09-10463PS	101	98	98
1201874913	CAMO-09-10463PSD	97	100	99

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-10463PS
Lab Sample ID: 1201874912
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 21:51
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	48.4	97	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	38.3	77	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	38.9	78	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	38.3	77	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	37.8	76	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	40.0	80	51-151
67-64-1	PS	Acetone	250	0.00	U	253	101	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	36.7	73	61-125
74-88-4	PS	Iodomethane	250	0.00	U	187	75	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	31.4	63	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	203	81	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	34.3	69	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	35.5	71	62-125
78-93-3	PS	2-Butanone	250	0.00	U	308	123	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	36.7	73	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	36.8	74	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	35.5	71	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	37.9	76	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	37.3	75	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	36.4	73	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	38.1	76	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	34.2	68	58-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-10463PS
Lab Sample ID: 1201874912
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 21:51
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	34.7	69	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	36.8	74	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	36.4	73	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	39.1	78	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	37.3	75	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	208	83	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	39.2	78	54-133
108-88-3	PS	Toluene	50.0	0.00	U	33.1	66	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	38.6	77	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	37.4	75	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	248	99	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	36.7	73	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	36.1	72	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	39.9	80	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	38.8	78	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	35.5	71	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	34.4	69	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	69.8	70	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	35.9	72	52-127
100-42-5	PS	Styrene	50.0	0.00	U	37.2	74	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	35.2	70	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	36.8	74	63-127

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-10463PS
Lab Sample ID: 1201874912
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 21:51
Prep Batch ID: 882741
Batch ID: 882743
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	40.7	81	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	34.9	70	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	32.5	65	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	33.5	67	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	28.3	57	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	33.0	66	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	33.4	67	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	33.7	67	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	33.3	67	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	33.2	66	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	34.2	68	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	35.0	70	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	34.1	68	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	33.1	66	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	49.6	99	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	38.7	77	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	35.2	70	43-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-10463PSD
Lab Sample ID: 1201874913
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 22:18
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	56.2	112	25-149	15	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	43.3	87	39-140	12	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	43.9	88	47-129	12	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	42.7	85	31-135	11	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	42.9	86	53-128	13	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	46.2	92	51-151	14	0-25
67-64-1	PSD	Acetone	250	0.00	U	260	104	21-153	3	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	41.9	84	61-125	13	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	214	86	53-142	14	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	36.4	73	59-136	15	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	228	91	46-129	12	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	39.5	79	56-126	14	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	40.6	81	62-125	14	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	318	127	26-152	3	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	42.2	84	60-130	14	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	42.6	85	55-135	15	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	41.1	82	60-127	15	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	43.1	86	61-131	13	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	43.5	87	59-131	15	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	42.2	84	57-128	15	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	44.3	89	58-136	15	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	38.6	77	58-126	12	0-25

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-10463PSD
Lab Sample ID: 1201874913
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 22:18
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	40.1	80	56-123	14	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	43.4	87	51-137	16	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	41.9	84	60-126	14	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	45.2	90	55-138	15	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	42.2	84	60-132	12	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	227	91	58-136	9	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	44.9	90	54-133	14	0-25
108-88-3	PSD	Toluene	50.0	0.00	U	39.2	78	52-128	17	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	45.0	90	53-137	15	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	43.3	87	59-130	15	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	263	105	31-148	6	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	41.9	84	57-127	13	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	42.9	86	51-128	17	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	46.1	92	59-139	14	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	44.0	88	57-133	13	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	41.9	84	53-122	17	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	40.5	81	51-125	16	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	82.7	83	50-126	17	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	42.0	84	52-127	16	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	43.6	87	49-135	16	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	40.0	80	57-149	13	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	41.1	82	63-127	11	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-10463PSD
Lab Sample ID: 1201874913
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 4.2
Analysis Date: 07/06/2009 22:18
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	46.7	93	57-149	14	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	41.8	84	49-131	18	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	39.5	79	40-136	19	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	40.3	81	44-135	18	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	34.3	69	44-140	19	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	40.2	80	42-140	20	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	40.5	81	44-132	19	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	41.5	83	42-142	21	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	40.3	81	43-137	19	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	40.8	82	39-139	21	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	42.1	84	38-145	21	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	41.8	84	43-129	18	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	40.8	82	44-125	18	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	40.5	81	36-141	20	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	55.3	111	47-151	11	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	45.9	92	59-131	17	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	41.9	84	43-129	18	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882741 **Matrix:** SOIL

Lab Sample ID: 1201874914

Instrument: VOA6.I **Analysis Date:** 07/06/2009 11:17 **Dilution:** 1

Analyst: RXD1 **Prep Batch ID:** 882741

Purge Vol: 5 mL **Batch ID:** 882743

CAS No	Parmname		Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	60.2	120	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	45.7	91	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	46.0	92	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	44.4	89	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	45.3	91	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	49.2	98	67-151
67-64-1	LCS	Acetone	250	0.0	293	117	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	45.1	90	70-125
74-88-4	LCS	Iodomethane	250	0.0	226	90	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	39.2	78	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	242	97	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	42.3	85	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	43.2	86	75-120
78-93-3	LCS	2-Butanone	250	0.0	366	146	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	45.2	90	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	46.7	93	74-135
67-66-3	LCS	Chloroform	50.0	0.0	43.7	87	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	46.1	92	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	46.6	93	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	45.7	91	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	47.4	95	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	41.2	82	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: LCS for batch 882741
Lab Sample ID: 1201874914
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/06/2009 11:17
Dilution: 1
Prep Batch ID: 882741
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	42.9	86	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	46.0	92	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	45.0	90	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	48.9	98	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	45.0	90	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	255	102	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	49.6	99	80-125
108-88-3	LCS	Toluene	50.0	0.0	42.3	85	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	49.2	98	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	46.4	93	76-120
591-78-6	LCS	2-Hexanone	250	0.0	303	121	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	44.9	90	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	45.8	92	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	50.5	101	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	47.8	96	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	45.0	90	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	44.0	88	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	89.9	90	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	45.7	91	74-120
100-42-5	LCS	Styrene	50.0	0.0	47.6	95	76-125
75-25-2	LCS	Bromoform	50.0	0.0	45.5	91	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	46.5	93	72-122

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 882741
Matrix: SOIL
Lab Sample ID: 1201874914
Instrument: VOA6.I
Analysis Date: 07/06/2009 11:17
Dilution: 1
Analyst: RXD1
Prep Batch ID: 882741
Purge Vol: 5 mL
Batch ID: 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	51.3	103	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	45.3	91	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	43.3	87	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	44.2	88	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	37.7	75	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	44.0	88	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	44.8	90	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	45.0	90	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	44.2	88	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	44.4	89	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	46.3	93	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	45.9	92	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	44.9	90	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	45.7	91	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	63.1	126	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	48.9	98	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	45.4	91	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882741 **Matrix:** SOIL

Lab Sample ID: 1201874915

Instrument: VOA6.I **Analysis Date:** 07/06/2009 12:12 **Dilution:** 1

Analyst: RXD1 **Prep Batch ID:** 882741

Purge Vol: 5 mL **Batch ID:** 882743

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	221	88	52-139

Method Blank Summary

SDG Number:	09-2473	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882741	Instrument ID:	VOA6.I	Data File:	6s108B1.d
Lab Sample ID:	1201874911	Prep Date:	07/06/2009 10:30	Analyzed:	07/06/09 13:07
Column:	DB-624	Heated Purge:	Yes		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 882741	1201874914	6s104L2.d	07/06/09	1117
02 LCS for batch 882741	1201874915	6s106L2.d	07/06/09	1212
03 CAMO-09-10463	232424001	6s111.d	07/06/09	1522
04 CAMO-09-10463PS	1201874912	6s125.d	07/06/09	2151
05 CAMO-09-10463PSD	1201874913	6s126.d	07/06/09	2218

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2473

Instrument ID: VOA6.I **Injection Date/Time:** 06-JUL-09 10:49

Column Description: DB-624 **Lab File ID** /070609v6/6s103BFB.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	15
75	30.0 - 60.0% of mass 95	44.3
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.5
174	50.0 - 100.0% of mass 95	92.7
175	5.0 -9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	97.3
177	5.0 - 9.0% of mass 176	6.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD050	W6VM090706-02	/070609v6/6s103.d	06-JUL-09 10:49
LCS	1201874914	/070609v6/6s104L2.d	06-JUL-09 11:17
VSTD250S	UVM090601-08B	/070609v6/6s105.d	06-JUL-09 11:44
LCS	1201874915	/070609v6/6s106L2.d	06-JUL-09 12:12
BLANK	1201874911	/070609v6/6s108B1.d	06-JUL-09 13:07
CAMO-09-10463	232424001	/070609v6/6s111.d	06-JUL-09 15:22
CAMO-09-10463MS	1201874912	/070609v6/6s125.d	06-JUL-09 21:51
CAMO-09-10463MSD	1201874913	/070609v6/6s126.d	06-JUL-09 22:18

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2473

Instrument ID: VOA6.I **Injection Date/Time:** 15-JUN-09 16:10

Column Description: DB-624 **Lab File ID** /061509v6/6p111.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	16
75	30.0 - 60.0% of mass 95	46.2
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.5
174	50.0 - 100.0% of mass 95	89.7
175	5.0 -9.0% of mass 174	6.9
176	95.0 - 101.0% of mass 174	97.8
177	5.0 - 9.0% of mass 176	6.4

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD001	W6VM090615-08	/061509v6/6p112.d	15-JUN-09 16:38
VSTD002	W6VM090615-09	/061509v6/6p113.d	15-JUN-09 17:06
VSTD005	W6VM090615-10	/061509v6/6p114.d	15-JUN-09 17:34
VSTD010	W6VM090615-11	/061509v6/6p115.d	15-JUN-09 18:02
VSTD050	W6VM090615-13	/061509v6/6p117.d	15-JUN-09 18:58
VSTD100	W6VM090615-14	/061509v6/6p118.d	15-JUN-09 19:25
VSTD0005	W6VM090615-15	/061509v6/6p120.d	15-JUN-09 20:21
SECONDSOURCE	W6VM090615-17	/061509v6/6p122.d	15-JUN-09 21:17
VSTD005S	W6VM090615-18	/061509v6/6p123.d	15-JUN-09 21:45
VSTD010S	W6VM090615-19	/061509v6/6p124.d	15-JUN-09 22:12
VSTD025S	W6VM090615-20	/061509v6/6p125.d	15-JUN-09 22:40
VSTD050S	W6VM090615-21	/061509v6/6p126.d	15-JUN-09 23:07
VSTD100S	W6VM090615-22	/061509v6/6p127.d	15-JUN-09 23:35
VSTD250S	W6VM090615-23	/061509v6/6p128.d	16-JUN-09 00:03
SECONDSOURCE	W6VM090615-25	/061509v6/6p131.d	16-JUN-09 01:27

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA6.I

GC Column: DB-624

Client SDG: 09-2473

STD Analysis Time: 06-JUL-09 10:49

Data File: 6s103.d

	Fluorobenzene				Chlorobenzene-d5				1,4-Dichlorobenzene-d4			
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 Hour STD	1821350		9.98		1341131		13.2		745869		15.6	
Upper Limit	3642700		10.5		2682262		13.7		1491738		16.1	
Lower Limit	910675		9.48		670566		12.7		372935		15.1	
Sample ID												
BLK01LCS	1801365		9.98		1349530		13.2		754705		15.6	
BLK01SLCS	1725562		9.98		1306571		13.2		741299		15.6	
BLK01	1676832		9.98		1236965		13.2		686146		15.6	
CAMO-09-10463	1443998		9.98		1093849		13.2		605914		15.6	
CAMO-09-10463MS	1565823		9.98		1199918		13.2		698015		15.6	
CAMO-09-10463MSD	1375439		9.98		1025343		13.2		583234		15.6	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232424001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10463	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 15:22	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:16	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s111.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.04	ug/kg	0.355	1.04
74-87-3	Chloromethane	U	1.04	ug/kg	0.313	1.04
75-01-4	Vinyl chloride	U	1.04	ug/kg	0.313	1.04
74-83-9	Bromomethane	U	1.04	ug/kg	0.313	1.04
75-00-3	Chloroethane	U	1.04	ug/kg	0.313	1.04
75-69-4	Trichlorofluoromethane	U	1.04	ug/kg	0.595	1.04
67-64-1	Acetone	U	5.22	ug/kg	1.73	5.22
75-35-4	1,1-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
74-88-4	Iodomethane	U	5.22	ug/kg	1.67	5.22
75-09-2	Methylene chloride	U	5.22	ug/kg	2.09	5.22
75-15-0	Carbon disulfide	U	5.22	ug/kg	1.30	5.22
156-60-5	trans-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
75-34-3	1,1-Dichloroethane	U	1.04	ug/kg	0.313	1.04
78-93-3	2-Butanone	U	5.22	ug/kg	1.57	5.22
156-59-2	cis-1,2-Dichloroethylene	U	1.04	ug/kg	0.313	1.04
594-20-7	2,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04
67-66-3	Chloroform	U	1.04	ug/kg	0.313	1.04
74-97-5	Bromochloromethane	U	1.04	ug/kg	0.344	1.04
71-55-6	1,1,1-Trichloroethane	U	1.04	ug/kg	0.313	1.04
563-58-6	1,1-Dichloropropene	U	1.04	ug/kg	0.313	1.04
56-23-5	Carbon tetrachloride	U	1.04	ug/kg	0.313	1.04
107-06-2	1,2-Dichloroethane	U	1.04	ug/kg	0.313	1.04
71-43-2	Benzene	U	1.04	ug/kg	0.313	1.04
79-01-6	Trichloroethylene	U	1.04	ug/kg	0.344	1.04
78-87-5	1,2-Dichloropropane	U	1.04	ug/kg	0.313	1.04
75-27-4	Bromodichloromethane	U	1.04	ug/kg	0.313	1.04
74-95-3	Dibromomethane	U	1.04	ug/kg	0.313	1.04
108-10-1	4-Methyl-2-pentanone	U	5.22	ug/kg	1.30	5.22
10061-01-5	cis-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04
108-88-3	Toluene	U	1.04	ug/kg	0.313	1.04
10061-02-6	trans-1,3-Dichloropropylene	U	1.04	ug/kg	0.313	1.04
79-00-5	1,1,2-Trichloroethane	U	1.04	ug/kg	0.313	1.04
591-78-6	2-Hexanone	U	5.22	ug/kg	1.57	5.22
142-28-9	1,3-Dichloropropane	U	1.04	ug/kg	0.313	1.04
127-18-4	Tetrachloroethylene	U	1.04	ug/kg	0.313	1.04
124-48-1	Dibromochloromethane	U	1.04	ug/kg	0.313	1.04
106-93-4	1,2-Dibromoethane	U	1.04	ug/kg	0.313	1.04
108-90-7	Chlorobenzene	U	1.04	ug/kg	0.313	1.04

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232424001	Date Received:	06/26/2009 08:40	%Moisture:	4.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10463	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882743	Inst:	VOA6.I	Dilution:	1
Run Date:	07/06/2009 15:22	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/06/2009 13:16	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6s111.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.04	ug/kg	0.313	1.04
179601-23-1	m,p-Xylenes	U	2.09	ug/kg	0.313	2.09
95-47-6	o-Xylene	U	1.04	ug/kg	0.313	1.04
100-42-5	Styrene	U	1.04	ug/kg	0.313	1.04
75-25-2	Bromoform	U	1.04	ug/kg	0.313	1.04
79-34-5	1,1,2,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04
96-18-4	1,2,3-Trichloropropane	U	1.04	ug/kg	0.313	1.04
108-86-1	Bromobenzene	U	1.04	ug/kg	0.313	1.04
103-65-1	n-Propylbenzene	U	1.04	ug/kg	0.313	1.04
95-49-8	2-Chlorotoluene	U	1.04	ug/kg	0.313	1.04
98-82-8	Isopropylbenzene	U	1.04	ug/kg	0.313	1.04
108-67-8	1,3,5-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04
106-43-4	4-Chlorotoluene	U	1.04	ug/kg	0.313	1.04
98-06-6	tert-Butylbenzene	U	1.04	ug/kg	0.313	1.04
95-63-6	1,2,4-Trimethylbenzene	U	1.04	ug/kg	0.313	1.04
135-98-8	sec-Butylbenzene	U	1.04	ug/kg	0.313	1.04
99-87-6	4-Isopropyltoluene	U	1.04	ug/kg	0.313	1.04
541-73-1	1,3-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04
106-46-7	1,4-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04
104-51-8	n-Butylbenzene	U	1.04	ug/kg	0.313	1.04
96-12-8	1,2-Dibromo-3-chloropropane	U	1.04	ug/kg	0.313	1.04
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.22	ug/kg	1.67	5.22
630-20-6	1,1,1,2-Tetrachloroethane	U	1.04	ug/kg	0.313	1.04
95-50-1	1,2-Dichlorobenzene	U	1.04	ug/kg	0.313	1.04

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	222	ug/kg		J
	Unknown Siloxane	16.17	63.6	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s111.d
Lab Smp Id: 232424001 Client Smp ID: CAMO-09-10463
Inj Date : 06-JUL-2009 15:22
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232424001|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.16030	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1443998	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1093849	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	605914	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	357453	49.4026	51.5
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1423986	49.1406	51.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	564002	50.3988	52.6

ION RATIO REPORT

VOA REPORT

Data file: 6s111.d
Report Date: 07/07/2009 07:51
Lab. ID: 232424001 SampleType: SAMPLE
Injection Date: 06-JUL-2009 15:22
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232424001|882743|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2473
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	16311	9.98	9.71	80-120	100	(T)
64	2596	9.98	9.71	2- 62	16	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	9851	11.63	11.41	80-120	100	(T)
43	4559	11.63	11.41	199-259	46	(QT)
100	959332	11.63	11.41	11- 71	9738	(QT)
82 Bromoform				CAS#: 75-25-2		
173	2383	14.36	14.06	80-120	100	(T)
175	35599	14.36	14.06	19- 79	1494	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	11752	14.23	14.16	80-120	100	(T)
120	5994	14.23	14.16	0- 58	51	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	15767	14.24	14.53	80-120	100	(T)
75	32912	14.24	14.53	248-308	209	(QT)
77	1499	14.22	14.56	683-743	10	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s111.d
Lab Smp Id: 232424001 Client Smp ID: CAMO-09-10463
Inj Date : 06-JUL-2009 15:22
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232424001|882743|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.16030	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3013361	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3271202	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	12849527	213.209190	222	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	==========	======
Unknown Siloxane					CAS #:		
16.174	3986937	60.9399300	63.6	0		0	101

Data File: /chem/VOA6.i/070609v6/6s111.d
Date : 06-JUL-2009 15:22
Client ID: CAMO-09-10463
Sample Info: |2324240011882743|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

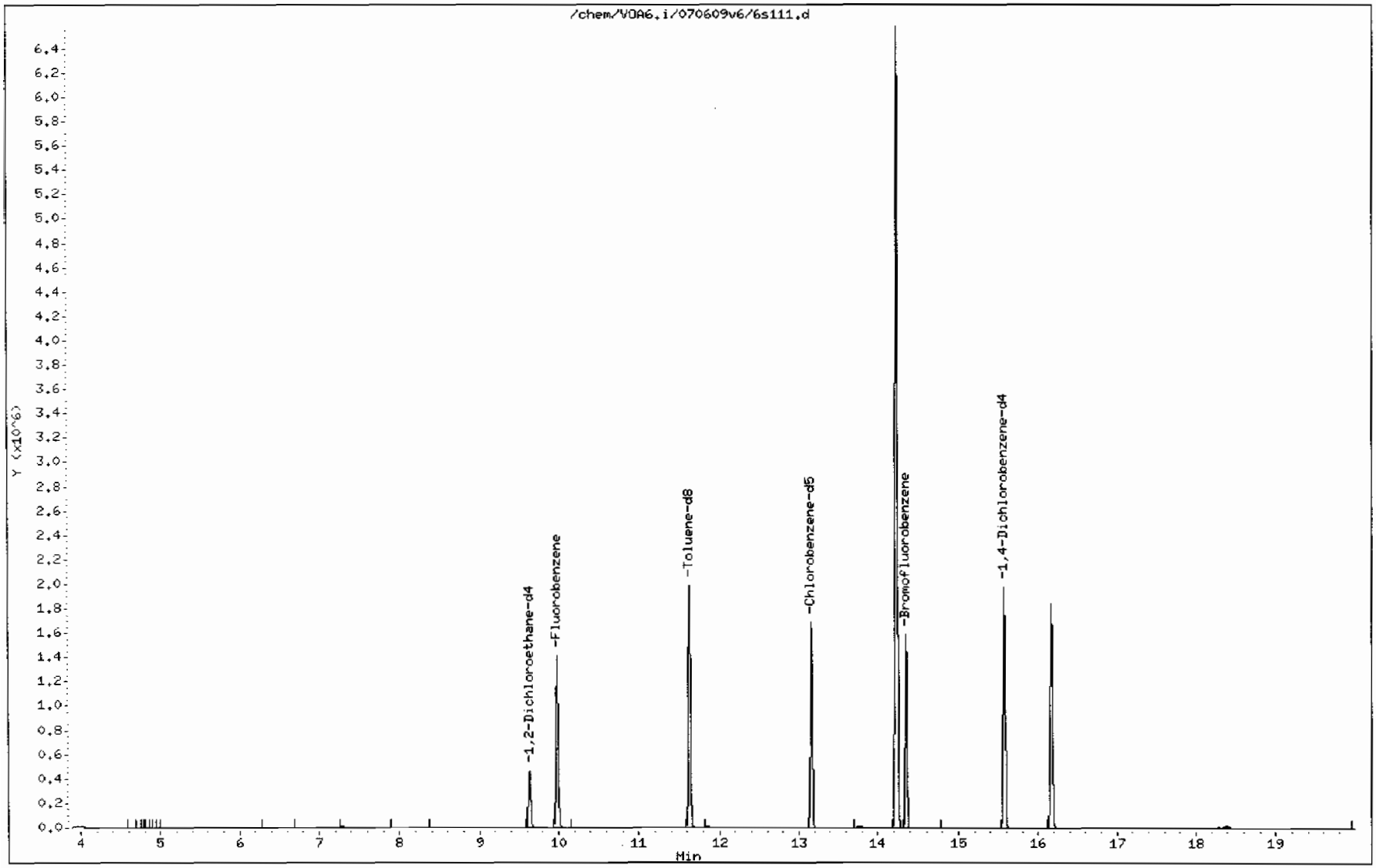

Data File: /chem/VOA6.i/070609v6/6s111.d

Date : 06-JUL-2009 15:22

Client ID: CAMO-09-10463

Instrument: VOA6.i

Sample Info: |2324240001|882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122479	78	C8H24O4Si4	296

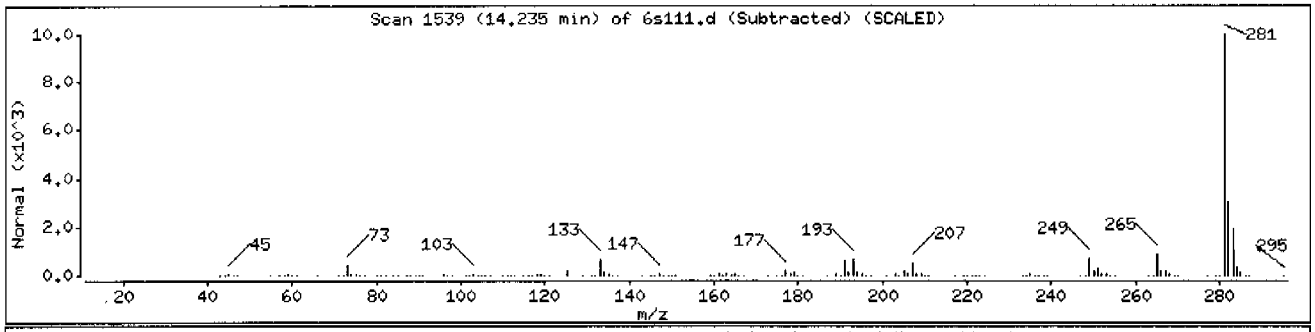

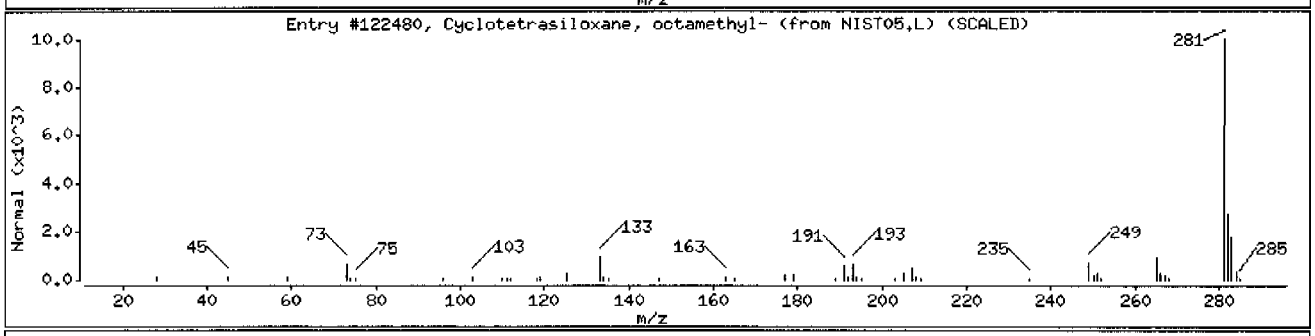

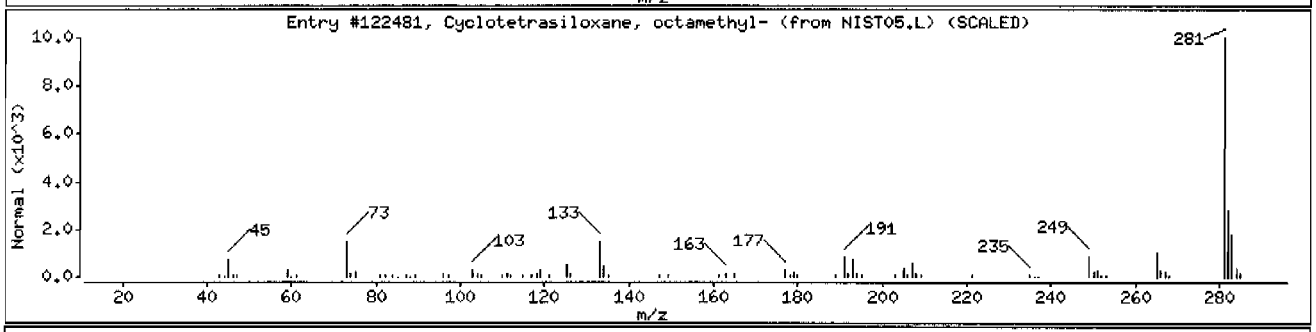

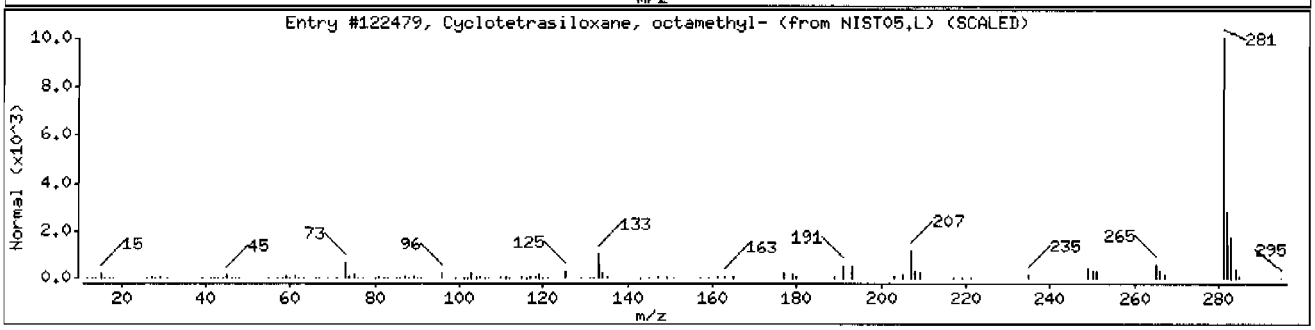

Data File: /chem/VOA6.i/070609v6/6s111.d

Date : 06-JUL-2009 15:22

Client ID: CAMO-09-10463

Instrument: VOA6.i

Sample Info: |2324240011882743|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	72	C18H3404Si3	398
p-Trimethylsilyloxyphenyl-bis(trimethyls	1000079-08-1	NIST05.L	161171	72	C17H3403Si3	370
Benzaldehyde, 2,4-bis(trimethylsiloxy)-	33617-38-8	NIST05.L	112902	72	C13H2203Si2	282

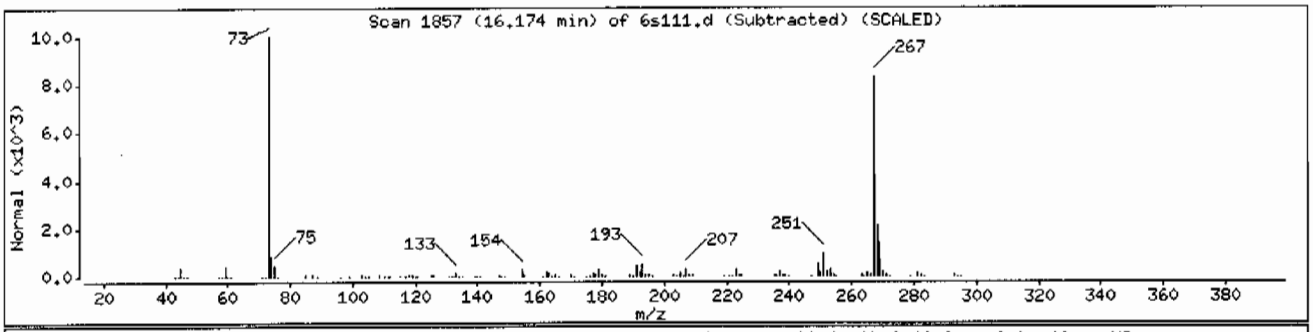

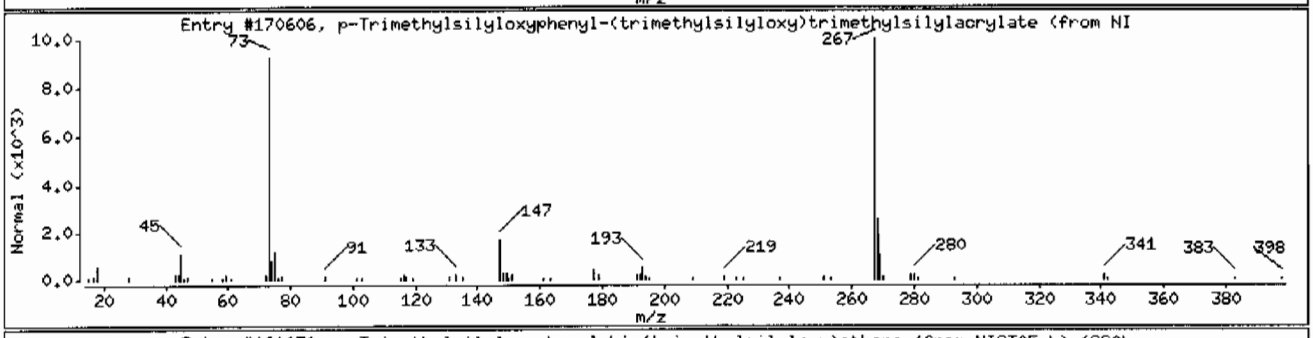

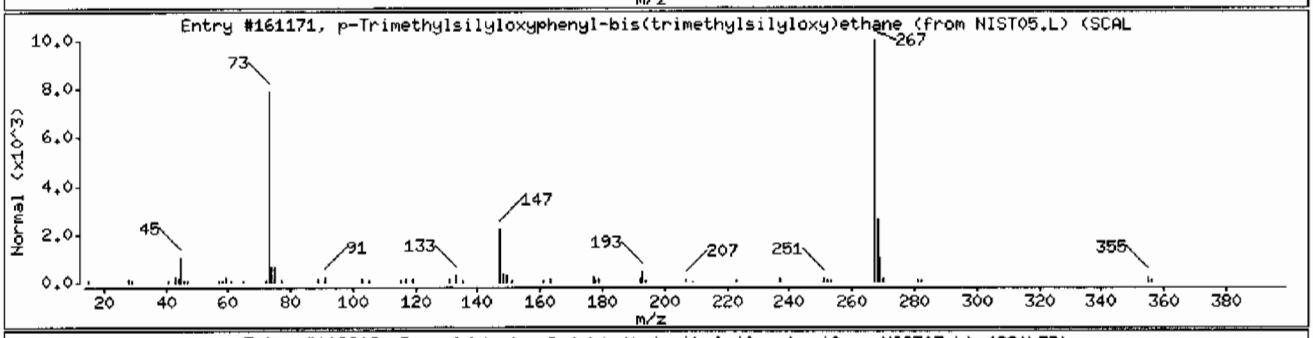

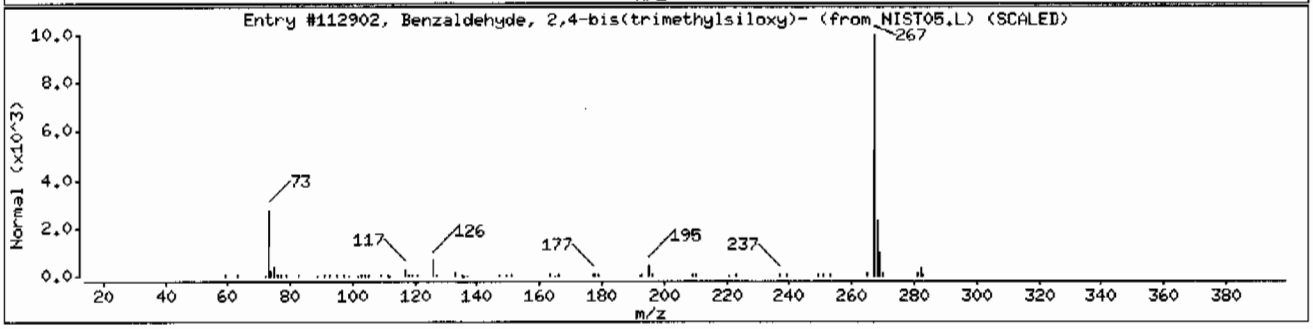

Standard Data

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
Fluorobenzene (IS)									
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Chlorobenzene-d5 (IS)									
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Report Date: 08-Jul-2009 15:47

Calibration History

Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Start Cal Date: 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
15-JUN-2009 21:45	ICALsubS	/chem/VOA6.i/061509v6/6p123.d
15-JUN-2009 16:38	ICALsubL+	/chem/VOA6.i/061509v6/6p112.d
Cal Level: 2 , Cal Amount: 2.00000		
15-JUN-2009 22:12	ICALsubS	/chem/VOA6.i/061509v6/6p124.d
15-JUN-2009 17:06	ICALsubL+	/chem/VOA6.i/061509v6/6p113.d
Cal Level: 3 , Cal Amount: 5.00000		
15-JUN-2009 22:40	ICALsubS	/chem/VOA6.i/061509v6/6p125.d
15-JUN-2009 17:34	ICALsubL+	/chem/VOA6.i/061509v6/6p114.d
Cal Level: 4 , Cal Amount: 10.00000		
15-JUN-2009 23:07	ICALsubS	/chem/VOA6.i/061509v6/6p126.d
15-JUN-2009 18:02	ICALsubL+	/chem/VOA6.i/061509v6/6p115.d
Cal Level: 5 , Cal Amount: 20.00000		
15-JUN-2009 23:35	ICALsubS	/chem/VOA6.i/061509v6/6p127.d
Cal Level: 6 , Cal Amount: 50.00000		
16-JUN-2009 00:03	ICALsubS	/chem/VOA6.i/061509v6/6p128.d
15-JUN-2009 18:58	ICALsubL+	/chem/VOA6.i/061509v6/6p117.d
Cal Level: 7 , Cal Amount: 100.00000		
16-JUN-2009 00:31	ICALsubS	/chem/VOA6.i/061509v6/6p129.d
15-JUN-2009 19:25	ICALsubL+	/chem/VOA6.i/061509v6/6p118.d
Cal Level: 8 , Cal Amount: 200.00000		
15-JUN-2009 20:21	BENZENE+	/chem/VOA6.i/061509v6/6p120.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

Ccal Level: 6 , Ccal Amount: 50.0

06-JUL-2009 10:49	CALsubL+	/chem/VOA6.i/070609v6/6s103.d
Ccal Level: 6 , Ccal Amount: 50.0		
06-JUL-2009 10:21	CALsubL+	/chem/VOA6.i/070609v6/6s102.d
Ccal Level: 6 , Ccal Amount: 50.0		
06-JUL-2009 11:44	CALsubS+SS	/chem/VOA6.i/070609v6/6s105.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Calibration File Names:
Level 1: /chem/VOA6.i/061509v6/6p123.d
Level 2: /chem/VOA6.i/061509v6/6p124.d
Level 3: /chem/VOA6.i/061509v6/6p125.d
Level 4: /chem/VOA6.i/061509v6/6p126.d
Level 5: /chem/VOA6.i/061509v6/6p127.d
Level 6: /chem/VOA6.i/061509v6/6p128.d
Level 7: /chem/VOA6.i/061509v6/6p129.d
Level 8: /chem/VOA6.i/061509v6/6p120.d

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
M 1 1,3-Dichloropropylene	0.27544	0.29033	0.30650	0.32107	+++++	0.34011						
	0.35889	+++++					AVRG		0.31539		9.86340	<-
M 2 Xylenes (total)	0.59566	0.59657	0.59601	0.58227	+++++	0.58411						
	0.59134	+++++					AVRG		0.59099		1.07471	<-
M 3 1,2-Dichloroethylene (total)	0.32414	0.32656	0.33087	0.32600	+++++	0.32023						
	0.34084	+++++					AVRG		0.32811		2.17323	<-
149 2-Chloro-1,1,1-trifluoroethan	+++++	0.29734	0.28267	0.29451	0.29820	0.30590						
	0.30582	+++++					AVRG		0.29741		2.88857	
150 Chlorotrifluoroethylene	+++++	43935	101652	246383	646724	1109403						
	1509962	+++++					LINR	0.24340	0.20463		0.99518	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
4 Dichlorodifluoromethane	0.13161	0.14094	0.11922	0.13531	+++++	0.17053						
	+++++	+++++					AVRG		0.13952		13.67384	<-
5 Chloromethane	0.23779	0.24450	0.21508	0.21165	+++++	0.23513						
	0.24826	+++++					AVRG		0.23207		6.57592	<-
6 Vinyl chloride	0.24395	0.23708	0.22059	0.22101	+++++	0.23679						
	0.25049	+++++					AVRG		0.23499		5.14524	<-
7 Bromomethane	0.18105	0.18725	0.18116	0.17766	+++++	0.18863						
	0.19753	+++++					AVRG		0.18554		3.86954	<-
8 Chloroethane	0.16454	0.16546	0.16079	0.15800	+++++	0.16887						
	0.17831	+++++					AVRG		0.16599		4.28991	<-
9 Trichlorofluoromethane	0.30693	0.30576	0.29943	0.29506	+++++	0.32090						
	0.33843	+++++					AVRG		0.31108		5.14818	<-
10 Ethyl Ether	0.22129	0.22569	0.20788	0.20815	+++++	0.19747						
	0.20146	+++++					AVRG		0.21032		5.25454	<-
11 Acrolein	0.01031	0.01206	0.01277	0.01270	0.01290	0.01304						
	+++++	+++++					AVRG		0.01230		8.36598	
12 Trichlorotrifluoroethane	0.08392	0.08432	0.08499	0.08626	0.08832	0.08660						
	+++++	+++++					AVRG		0.08574		1.92299	

GEL Laboratories LLC

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Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	r2	%RSD or R^2	
	100 Level 7	200 Level 8										
13 Acetone	12618	16737	37799	72872	+++++	356585						
	775871	+++++					LINR	0.03377	0.03909		0.99837	<-
14 1,1-Dichloroethylene	0.30080	0.31032	0.30296	0.30718	++-++	0.30016						
	0.32939	++-++					AVRG		0.30847		3.55406	<-
15 Iodomethane	0.35239	0.37137	0.37392	0.37331	+++++	0.35631						
	0.37445	++-++					AVRG		0.36696		2.69739	<-
16 Acetonitrile	0.02590	0.02605	0.02566	0.02490	+-+++	0.02959						
	0.02427	+++++					AVRG		0.02606		7.11268	<-
17 Methyl acetate	0.16580	0.16150	0.15871	0.15195	+++++	0.13909						
	0.13727	+++++					AVRG		0.15239		7.81037	<-
18 Carbon disulfide	0.58961	0.67421	0.69354	0.68468	+++++	0.64591						
	0.68305	+-+++					AVRG		0.66184		5.89088	<-
19 Allyl chloride	0.28034	0.27716	0.28272	0.28775	0.29694	0.28814						
	+++++	++++-					AVRG		0.28551		2.46062	
20 Methylene chloride	+++++	74487	98882	133235	+++++	482869						
	985874	+++++					LINR	-0.09825	0.23638		0.99835	
21 Acrylonitrile	0.06301	0.06531	0.06785	0.07037	0.07088	0.07138						
	+++++	+++++					AVRG		0.06813		4.97324	

GEL Laboratories LLC

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Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
22 tert-Butyl methyl ether	0.58721	0.70504	0.60204	0.59953	++-++	0.57924					
	0.61984	++++-					AVRG		0.61548		7.47666 <-
23 trans-1,2-Dichloroethylene	0.30317	0.31236	0.31106	0.30953	--+++	0.30215					
	0.32350	++-++					AVRG		0.31030		2.48329 <-
24 Vinyl acetate	0.29540	0.31030	0.36823	0.36492	+++++	0.36861					
	0.37071	+++++					AVRG		0.34636		9.84000 <-
25 1,1-Dichloroethane	0.39871	0.39339	0.39239	0.38898	+++++	0.37872					
	0.39998	-++++					AVRG		0.39203		1.96321 <-
26 Isopropyl Alcohol	0.01177	0.01177	0.01204	0.01258	0.01281	0.01381					
	0.01310	-++++					AVRG		0.01255		6.01789
27 2-Chloro-1,3-butadiene	0.22911	0.24432	0.24771	0.26154	0.27530	0.28081					
	+++++-	+++++					AVRG		0.25646		7.69184
28 tert-butyl Alcohol	0.01975	0.01978	0.02037	0.02092	0.02147	0.02321					
	0.02205	++++-					AVRG		0.02108		6.00892
29 Ethyl acetate	0.21882	0.19255	0.18745	0.18595	0.18581	0.18189					
	+++++	++++-					AVRG		0.19208		7.05201
30 2-Butanone	0.05539	0.05429	0.05391	0.05513	+++++	0.05255					
	0.05006	+++-+					AVRG		0.05356		3.70852 <-

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Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
31 cis-1,2-Dichloroethylene	0.34510	0.34077	0.35068	0.34247	++++-	0.33832						
	0.35817	+-+++					AVRG		0.34592		2.12285	<-
32 Propionitrile	0.02501	0.02566	0.02758	0.02803	0.02842	0.02858						
	+-+++	+++++					AVRG		0.02721		5.54678	
33 2,2-Dichloropropane	0.28560	0.27796	0.28689	0.29051	+++++	0.30049						
	0.32415	+++++					AVRG		0.29427		5.56597	<-
34 Isopropyl ether	-++++	0.69275	0.68132	0.69967	0.71415	0.73228						
	0.72086	+++++					AVRG		0.70684		2.68289	
35 Bromochloromethane	0.10578	0.11321	0.11574	0.11774	+++++	0.11580						
	0.12389	+++++					AVRG		0.11536		5.13085	<-
36 Chloroform	0.38994	0.37237	0.37763	0.37588	+++++	0.36743						
	0.38772	+++++					AVRG		0.37849		2.31445	<-
37 Methacrylonitrile	0.10026	0.10191	0.10789	0.11008	0.11174	0.11065						
	-++++-	+++++					AVRG		0.10709		4.52446	
38 Tetrahydrofuran	0.13539	0.13746	0.13935	0.13956	0.14219	0.13620						
	+++++	+++++					AVRG		0.13836		1.81013	
40 1,1,1-Trichloroethane	0.28710	0.29716	0.30179	0.30737	+++++	0.31269						
	0.33548	+++++					AVRG		0.30693		5.37992	<-

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
41 Ethyl tert-butyl ether	-++++	0.64322	0.64224	0.66405	0.68271	0.71454						
	0.70716	-++++					AVRG		0.67565		4.61349	
42 Isobutyl alcohol	0.00517	0.00549	0.00646	0.00666	0.00674	0.00714						
	+++++	+-+++					AVRG		0.00627		12.31212	
43 Cyclohexane	0.38774	0.39266	0.39439	0.38663	+++++	0.37663						
	0.40197	+++++					AVRG		0.39000		2.19048	<-
44 1,1-Dichloropropene	0.30021	0.30299	0.30288	0.29906	-++++	0.29567						
	0.31351	++-++					AVRG		0.30239		2.01290	<-
45 Methyl tert-amyl ether	++-++	0.22564	0.22058	0.22051	0.22550	0.22978						
	++-++	+-+++					AVRG		0.22440		1.74568	
46 Carbon tetrachloride	0.25744	0.26327	0.27164	0.27724	+++++	0.28867						
	0.31202	+++++					AVRG		0.27838		7.09602	<-
48 1,2-Dichloroethane	0.30458	0.28647	0.28717	0.27935	-++++	0.27221						
	0.28159	+++++					AVRG		0.28523		3.83066	<-
49 Benzene	0.94902	0.94585	0.93468	0.91611	+++++	0.87809						
	0.90863	1.00168					AVRG		0.93344		4.15708	<-
50 Cyclohexene	0.46008	0.46538	0.45929	0.44925	+-+++	0.44053						
	0.46736	+++++					AVRG		0.45698		2.23954	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
52 n-Butyl alcohol	0.00464	0.00511	0.00573	0.00608	+++++	0.00637						
	0.00665	0.00471					AVRG		0.00561		14.33859	<-
53 Trichloroethylene	0.23971	0.23898	0.23297	0.22707	+++++	0.22648						
	0.23867	+++++					AVRG		0.23398		2.59771	<-
54 Methyl methacrylate	0.12364	0.12892	0.14080	0.14739	0.15260	0.15458						
	+++++	+++++					AVRG		0.14132		8.98754	
55 1,2-Dichloropropane	0.22783	0.22324	0.22920	0.22835	+++++	0.22693						
	0.23499	+++++					AVRG		0.22842		1.67529	<-
56 Methylcyclohexane	0.42477	0.42266	0.42289	0.42194	+++++	0.41506						
	0.43822	+++++					AVRG		0.42426		1.79331	<-
57 1,4-Dioxane	0.00262	0.00248	0.00220	0.00221	0.00222	0.00220						
	+++++	+++++					AVRG		0.00232		7.70555	
58 Dibromomethane	0.12754	0.12546	0.12824	0.12867	+++++	0.12934						
	0.13533	+++++					AVRG		0.12910		2.58075	<-
59 Bromodichloromethane	0.22808	0.23977	0.24709	0.25744	+++++	0.27278						
	0.28977	+++++					AVRG		0.25582		8.82140	<-
60 2-Nitropropane	7384	14872	43071	93438	205860	564432						
	+++++	+++++					LINR	0.10732	0.05907		0.99899	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
61 2-Chloroethylvinyl ether	727	38503	140819	281361	++-++	1407499						
	2845999	++-++					LINR	0.04757	0.14555		0.99992	<-
62 cis-1,3-Dichloropropylene	0.29610	0.30995	0.32631	0.34009	+-+-+	0.35815						
	0.37687	+++++					AVRG		0.33458		8.99690	<-
63 4-Methyl-2-pentanone	0.09341	0.09495	0.10248	0.10385	++++++	0.10341						
	0.10313	+++++					AVRG		0.10020		4.70281	<-
65 Toluene	0.91141	0.84023	0.82843	0.78906	+++++	0.76864						
	0.78836	+++++					AVRG		0.82102		6.31180	<-
66 Ethyl methacrylate	0.29682	0.32657	0.36240	0.38265	0.39208	0.39346						
	++-++	+++++					AVRG		0.35900		10.98089	
67 trans-1,3-Dichloropropylene	0.34306	0.36562	0.38776	0.40296	+++++	0.43261						
	0.45413	+++++					AVRG		0.39769		10.39506	<-
68 1,1,2-Trichloroethane	0.21171	0.20945	0.21496	0.21094	+++++	0.21279						
	0.21762	+++++					AVRG		0.21291		1.38840	<-
69 2-Hexanone	0.13006	0.13152	0.14213	0.14432	+-+-+	0.14625						
	0.13455	++-++					AVRG		0.13814		5.03470	<-
70 1,3-Dichloropropane	0.44162	0.45818	0.46027	0.45022	++-+-	0.44737						
	0.45495	++++-					AVRG		0.45210		1.55643	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
71 Tetrachloroethylene	0.30112	0.29098	0.28869	0.27504	++++	0.27688						
	0.28831	++++					AVRG		0.28684		3.36264	<-
72 Dibromochloromethane	0.21794	0.22938	0.24750	0.26041	+++++	0.29497						
	0.31636	+++++					AVRG		0.26109		14.59011	<-
73 1,2-Dibromoethane	0.23390	0.23870	0.25246	0.24801	++++	0.25726						
	0.26624	+++++					AVRG		0.24943		4.78240	<-
74 1-Chlorohexane	0.27211	0.28382	0.28170	0.29483	0.29776	0.30314						
	0.30570	+++++					AVRG		0.29129		4.24604	
76 Chlorobenzene	0.93302	0.90631	0.89655	0.86163	+++++	0.84895						
	0.86484	+++++					AVRG		0.88521		3.62382	<-
77 1,1,1,2-Tetrachloroethane	0.25774	0.27070	0.28261	0.28601	++++	0.31034						
	0.32535	++++					AVRG		0.28879		8.67474	<-
78 Ethylbenzene	1.50952	1.50823	1.50550	1.46571	++++	1.44903						
	1.45710	++++					AVRG		1.48252		1.90027	<-
79 m,p-Xylenes	0.60558	0.60238	0.60019	0.58619	++++	0.58691						
	0.59058	+++++					AVRG		0.59530		1.41623	<-
80 o-Xylene	0.57582	0.58496	0.58765	0.57442	+++++	0.57852						
	0.59287	+++++					AVRG		0.58237		1.25186	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
81 Styrene	0.83211	0.84335	0.89085	0.90791	+++++	0.96971						
	0.99167	+++++					AVRG		0.90594		7.15648	<-
82 Bromoform	3930	8536	22967	49700	+++++	300303						
	666165	+++++					LINR	0.03001	0.39998		0.99857	<-
83 Isopropylbenzene	2.82803	2.81708	2.83379	2.74979	+++++	2.63965						
	2.62290	+++++					AVRG		2.74854		3.48702	<-
84 cis-1,4-Dichloro-2-butene	0.14199	0.14772	0.16651	0.17591	0.18262	0.19117						
	++++	+++++					AVRG		0.16765		11.63406	
86 Cyclohexanone	0.00869	0.00872	0.00979	0.00999	0.00983	0.01089						
	+++++	+++++					AVRG		0.00965		8.68313	<-
87 1,1,2,2-Tetrachloroethane	0.56987	0.59990	0.59690	0.60070	+++++	0.59304						
	0.60455	+++++					AVRG		0.59416		2.10532	<-
88 1,2,3-Trichloropropane	0.14867	0.17230	0.16934	0.16685	+++++	0.16003						
	0.16602	+++++					AVRG		0.16387		5.18064	<-
89 trans-1,4-Dichloro-2-butene	0.13729	0.14472	0.16105	0.17234	0.17490	0.17969						
	+++++	+++++					AVRG		0.16166		10.69889	
90 Bromobenzene	0.72430	0.71936	0.70991	0.68619	+++++	0.68341						
	0.70677	+++++					AVRG		0.70499		2.39534	<-

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INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
91 n-Propylbenzene	3.38011	3.26003	3.25004	3.15198	++-+-	3.05541						
	3.00928	+++++					AVRG		3.18448		4.36680	<-
92 1,3,5-Trimethylbenzene	2.37062	2.30275	2.34618	2.28625	+++++	2.27945						
	2.26106	+++++					AVRG		2.30772		1.82802	<-
93 2-Chlorotoluene	2.24392	2.20790	2.22098	2.13610	+++++	2.08581						
	2.07594	+++++					AVRG		2.16177		3.34713	<-
94 4-Chlorotoluene	2.02892	1.97483	1.94704	1.89262	+++++	1.85123						
	1.86981	+++++					AVRG		1.92741		3.53942	<-
95 tert-Butylbenzene	2.29265	2.21171	2.11549	2.15275	+++++	2.11883						
	2.13761	++-++					AVRG		2.17151		3.17087	<-
96 1,2,4-Trimethylbenzene	2.39024	2.33362	2.38151	2.31035	+++++	2.28740						
	2.28977	++-++					AVRG		2.33215		1.92598	<-
97 Pentachloroethane	0.25931	0.27148	0.29993	0.31670	0.34331	0.35584						
	++++-	+++++					AVRG		0.30776		12.48378	
98 sec-Butylbenzene	3.25024	3.15460	3.11345	3.04554	+++++	2.98216						
	2.92964	++++-					AVRG		3.07927		3.81587	<-
99 4-Isopropyltoluene	2.61296	2.54519	2.56829	2.50275	+++++	2.49418						
	2.46863	+-+++					AVRG		2.53200		2.11564	<-

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INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
100 1,3-Dichlorobenzene	1.48980	1.37353	1.35950	1.31086	+++++	1.29451						
	1.32022	+++++					AVRG		1.35807		5.23744	<-
102 1,4-Dichlorobenzene	1.54639	1.45608	1.39583	1.35328	+++++	1.31084						
	1.34330	+++++					AVRG		1.40095		6.21728	<-
103 Benzyl chloride	56588	120138	377253	804087	1690242	4513803						
	+++++	+++++					LINR	0.06055	1.12590		0.99993	
104 n-Butylbenzene	1.33898	1.28517	1.29407	1.25362	+++++	1.26482						
	1.27441	+++++					AVRG		1.28528		2.33440	<-
105 bis(2-Chloroisopropyl)ether	0.06271	0.06955	0.07355	0.07817	0.07996	0.08395						
	++++	+++++					AVRG		0.07465		10.32263	
106 1,2-Dichlorobenzene	1.38639	1.32225	1.29005	1.26309	+++++	1.22901						
	1.26443	+++++					AVRG		1.29254		4.29218	<-
107 1,2-Dibromo-3-chloropropane	0.08418	0.09329	0.10160	0.10732	++++	0.12304						
	++++	++++					AVRG		0.10188		14.43017	<-
108 1,2,4-Trichlorobenzene	1.10291	1.04218	0.97103	0.94356	++++	0.92339						
	0.92509	+++++					AVRG		0.98469		7.38894	<-
109 Hexachlorobutadiene	0.69601	0.68171	0.65202	0.62129	+++++	0.63636						
	0.64498	+++++					AVRG		0.65540		4.30874	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
110 Naphthalene	1.98961	1.87703	1.89516	1.85127	+++++	1.87045						
	1.88443	++++-					AVRG		1.89466		2.57499	<-
111 1,2,3-Trichlorobenzene	0.91962	0.87421	0.83927	0.80898	+++++	0.79143						
	0.79782	+++++					AVRG		0.83855		5.98571	<-
$ 47 1,2-Dichloroethane-d4	0.25044	0.25093	0.25260	0.25463	++++-	0.24546						
	0.24916	+++++					AVRG		0.25054		1.24761	<-
$ 64 Toluene-d8	1.31559	1.33322	1.32829	1.31898	+++++	1.32742						
	1.32397	+++++					AVRG		1.32458		0.48818	<-
$ 85 Bromofluorobenzene	0.92807	0.92580	0.93226	0.92712	+++++	0.91268						
	0.91485	++-++					AVRG		0.92346		0.84952	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Cal Date : 08-Jul-2009 15:32 ale01592

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

Data File: /chem/VOA6.i/061509v6/6p122.d
Report Date: 02-Jul-2009 18:45

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6p122.d
Analysis Type: WATER
Lab Sample ID: W6VM090615-17 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Injection Date: 15-JUN-2009 21:17
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	2 Xylenes (total)	0.59099	0.59137	0.59137	0.050	0.06414	60.00000	Averaged	
M	3 1,2-Dichloroethylene (total	0.32811	0.32999	0.32999	0.050	0.57430	60.00000	Averaged	
M	1 1,3-Dichloropropylene	0.31539	0.34893	0.34893	0.050	10.63563	60.00000	Averaged	
	4 Dichlorodifluoromethane	0.13952	0.13683	0.13683	0.050	-1.92704	60.00000	Averaged	
	5 Chloromethane	0.23207	0.20931	0.20931	0.100	-9.80892	60.00000	Averaged	spcc
	6 Vinyl chloride	0.23499	0.21065	0.21065	0.050	-10.35677	20.00000	Averaged	ccc
	7 Bromomethane	0.18554	0.17499	0.17499	0.050	-5.68766	60.00000	Averaged	
	8 Chloroethane	0.16599	0.15689	0.15689	0.050	-5.48267	60.00000	Averaged	
	9 Trichlorofluoromethane	0.31108	0.30390	0.30390	0.050	-2.31006	60.00000	Averaged	
	10 Ethyl Ether	0.21032	0.19242	0.19242	0.001	-8.51391	60.00000	Averaged	
	13 Acetone	257	250	0.03987	0.050	2.68916	60.00000	Linear	<-
	16 Acetonitrile	0.02606	0.02962	0.02962	0.010	13.65231	60.00000	Averaged	
	14 1,1-Dichloroethylene	0.30847	0.30569	0.30569	0.050	-0.90003	20.00000	Averaged	ccc
	17 Methyl acetate	0.15239	0.19141	0.19141	0.010	25.60532	60.00000	Averaged	
	15 Iodomethane	0.36696	0.39025	0.39025	0.050	6.34848	60.00000	Averaged	
	20 Methylene chloride	47.66806	50.00000	0.24858	0.050	-4.66388	60.00000	Linear	
	18 Carbon disulfide	0.66184	0.71375	0.71375	0.050	7.84456	60.00000	Averaged	
	22 tert-Butyl methyl ether	0.61548	0.59095	0.59095	0.050	-3.98627	60.00000	Averaged	
	23 trans-1,2-Dichloroethylene	0.31030	0.30642	0.30642	0.050	-1.24902	60.00000	Averaged	
	24 Vinyl acetate	0.34636	0.18977	0.18977	0.010	-45.20998	60.00000	Averaged	
	25 1,1-Dichloroethane	0.39203	0.38761	0.38761	0.100	-1.12735	60.00000	Averaged	spcc
	30 2-Butanone	0.05356	0.06090	0.06090	0.030	13.71574	60.00000	Averaged	
	31 cis-1,2-Dichloroethylene	0.34592	0.35356	0.35356	0.050	2.20986	60.00000	Averaged	
	33 2,2-Dichloropropane	0.29427	0.30847	0.30847	0.050	4.82609	60.00000	Averaged	
	36 Chloroform	0.37849	0.37956	0.37956	0.010	0.28266	20.00000	Averaged	ccc
	35 Bromochloromethane	0.11536	0.12034	0.12034	0.010	4.31878	60.00000	Averaged	
	40 1,1,1-Trichloroethane	0.30693	0.32094	0.32094	0.010	4.56461	60.00000	Averaged	
	43 Cyclohexane	0.39000	0.38799	0.38799	0.010	-0.51659	60.00000	Averaged	
	44 1,1-Dichloropropene	0.30239	0.30591	0.30591	0.010	1.16514	60.00000	Averaged	
	52 n-Butyl alcohol	0.00561	0.00636	0.00636	0.001	13.37079	60.00000	Averaged	
	46 Carbon tetrachloride	0.27838	0.29450	0.29450	0.010	5.79087	60.00000	Averaged	
$	47 1,2-Dichloroethane-d4	0.25054	0.24537	0.24537	0.001	-2.06059	60.00000	Averaged	
	48 1,2-Dichloroethane	0.28523	0.27846	0.27846	0.010	-2.37525	60.00000	Averaged	
	49 Benzene	0.93344	0.89669	0.89669	0.010	-3.93695	60.00000	Averaged	
	50 Cyclohexene	0.45698	0.43774	0.43774	0.001	-4.21100	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6p122.d
Analysis Type: WATER
Lab Sample ID: W6VM090615-17 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Injection Date: 15-JUN-2009 21:17
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	53 Trichloroethylene	0.23398	0.23348	0.23348	0.010	-0.21210	60.00000	Averaged	
	55 1,2-Dichloropropane	0.22842	0.23301	0.23301	0.010	2.00615	20.00000	Averaged	ccc
	56 Methylcyclohexane	0.42426	0.42715	0.42715	0.010	0.68171	60.00000	Averaged	
	59 Bromodichloromethane	0.25582	0.27654	0.27654	0.010	8.09629	60.00000	Averaged	
	58 Dibromomethane	0.12910	0.13156	0.13156	0.010	1.90860	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	203	250	0.11674	0.010	-18.83979	60.00000	Linear	
	63 4-Methyl-2-pentanone	0.10020	0.11086	0.11086	0.010	10.63751	60.00000	Averaged	
	62 cis-1,3-Dichloropropylene	0.33458	0.37060	0.37060	0.010	10.76660	60.00000	Averaged	
$	64 Toluene-d8	1.32458	1.32091	1.32091	0.010	-0.27688	60.00000	Averaged	
	65 Toluene	0.82102	0.77893	0.77893	0.010	-5.12616	20.00000	Averaged	ccc
	67 trans-1,3-Dichloropropylene	0.39769	0.43972	0.43972	0.010	10.56820	60.00000	Averaged	
	68 1,1,2-Trichloroethane	0.21291	0.21809	0.21809	0.010	2.43311	60.00000	Averaged	
	69 2-Hexanone	0.13814	0.16199	0.16199	0.010	17.26788	60.00000	Averaged	
	70 1,3-Dichloropropane	0.45210	0.45865	0.45865	0.010	1.44875	60.00000	Averaged	
	71 Tetrachloroethylene	0.28684	0.28699	0.28699	0.010	0.05439	60.00000	Averaged	
	72 Dibromochloromethane	0.26109	0.30154	0.30154	0.010	15.49125	60.00000	Averaged	
	73 1,2-Dibromoethane	0.24943	0.26313	0.26313	0.010	5.49468	60.00000	Averaged	
	76 Chlorobenzene	0.88521	0.88707	0.88707	0.300	0.21000	60.00000	Averaged	spcc
	77 1,1,1,2-Tetrachloroethane	0.28879	0.31792	0.31792	0.010	10.08760	60.00000	Averaged	
	78 Ethylbenzene	1.48252	1.45927	1.45927	0.010	-1.56790	20.00000	Averaged	ccc
	79 m,p-Xylenes	0.59530	0.59207	0.59207	0.010	-0.54358	60.00000	Averaged	
	80 o-Xylene	0.58237	0.58998	0.58998	0.010	1.30655	60.00000	Averaged	
	81 Styrene	0.90594	0.97253	0.97253	0.010	7.35079	60.00000	Averaged	
	82 Bromoform	48.27471	50.00000	0.37417	0.100	-3.45058	60.00000	Linear	spcc
	83 Isopropylbenzene	2.74854	2.68539	2.68539	0.010	-2.29746	60.00000	Averaged	
	87 1,1,2,2-Tetrachloroethane	0.59416	0.60116	0.60116	0.300	1.17786	60.00000	Averaged	spcc
$	85 Bromofluorobenzene	0.92346	0.91176	0.91176	0.010	-1.26671	60.00000	Averaged	
	88 1,2,3-Trichloropropane	0.16387	0.16327	0.16327	0.010	-0.36663	60.00000	Averaged	
	90 Bromobenzene	0.70499	0.71427	0.71427	0.010	1.31641	60.00000	Averaged	
	91 n-Propylbenzene	3.18448	3.08790	3.08790	0.010	-3.03263	60.00000	Averaged	
	93 2-Chlorotoluene	2.16177	2.15596	2.15596	0.010	-0.26908	60.00000	Averaged	
	92 1,3,5-Trimethylbenzene	2.30772	2.30229	2.30229	0.010	-0.23512	60.00000	Averaged	
	94 4-Chlorotoluene	1.92741	1.92043	1.92043	0.010	-0.36226	60.00000	Averaged	
	95 tert-Butylbenzene	2.17151	2.17106	2.17106	0.010	-0.02069	60.00000	Averaged	
	96 1,2,4-Trimethylbenzene	2.33215	2.32054	2.32054	0.010	-0.49755	60.00000	Averaged	
	98 sec-Butylbenzene	3.07927	3.03817	3.03817	0.010	-1.33484	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6p122.d
Analysis Type: WATER
Lab Sample ID: W6VM090615-17
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Injection Date: 15-JUN-2009 21:17
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
99 4-Isopropyltoluene	2.53200	2.51684	2.51684	0.010	-0.59887	60.00000	Averaged
100 1,3-Dichlorobenzene	1.35807	1.33772	1.33772	0.010	-1.49857	60.00000	Averaged
102 1,4-Dichlorobenzene	1.40095	1.36268	1.36268	0.010	-2.73177	60.00000	Averaged
104 n-Butylbenzene	1.28518	1.26881	1.26881	0.010	-1.27351	60.00000	Averaged
106 1,2-Dichlorobenzene	1.29254	1.29006	1.29006	0.010	-0.19132	60.00000	Averaged
107 1,2-Dibromo-3-chloropropane	0.10188	0.12483	0.12483	0.010	22.52469	60.00000	Averaged
108 1,2,4-Trichlorobenzene	0.98469	0.95045	0.95045	0.010	-3.47769	60.00000	Averaged
109 Hexachlorobutadiene	0.65540	0.66095	0.66095	0.010	0.84703	60.00000	Averaged
110 Naphthalene	1.89466	1.90575	1.90575	0.010	0.58575	60.00000	Averaged
111 1,2,3-Trichlorobenzene	0.83855	0.85498	0.85498	0.010	1.95828	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.13178
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/061509v6/6p122.d
Lab Smp Id: W6VM090615-17 Client Smp ID: SECONDSOURCE
Inj Date : 15-JUN-2009 21:17
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090615-17|L-ICV|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090527-01C+IVM090611-01
Comment :
Method : /chem/VOA6.i/061509v6/VOA6-8260B-061509.m
Meth Date : 02-Jul-2009 18:45 dav01267 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M	2 Xylenes (total)	106				2594405	150.000	150
M	3 1,2-Dichloroethylene (total)	96				1296763	100.000	100
M	1 1,3-Dichloropropylene	75				1371197	100.000	111
	4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	268854	50.0000	49.0
	5 Chloromethane	50	4.713	4.713	(0.472)	411251	50.0000	45.1
	6 Vinyl chloride	62	4.934	4.934	(0.494)	413890	50.0000	44.8
	7 Bromomethane	94	5.498	5.498	(0.551)	343829	50.0000	47.2
	8 Chloroethane	64	5.619	5.619	(0.563)	308271	50.0000	47.2
	9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	597111	50.0000	48.8
	10 Ethyl Ether	59	6.334	6.334	(0.635)	378067	50.0000	45.7
	13 Acetone	43	6.718	6.718	(0.673)	391734	250.000	257
	16 Acetonitrile	41	7.078	7.078	(0.709)	1163904	1000.00	1140
	14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	600635	50.0000	49.5
	17 Methyl acetate	43	7.102	7.102	(0.712)	1880412	250.000	314
	15 Iodomethane	142	6.968	6.968	(0.698)	3833936	250.000	266

	Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	20 Methylene chloride	84	7.291	7.291	(0.731)	488418	50.0000	47.7
	18 Carbon disulfide	76	7.096	7.096	(0.711)	7012062	250.000	270
	22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	1161117	50.0000	48.0
	23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	602067	50.0000	49.4
	24 Vinyl acetate	43	8.066	8.066	(0.808)	1864356	250.000	137
	25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	761592	50.0000	49.4
	30 2-Butanone	43	8.694	8.694	(0.871)	598302	250.000	284
	31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	694696	50.0000	51.1
	33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	606092	50.0000	52.4
	36 Chloroform	83	9.053	9.053	(0.907)	745784	50.0000	50.1
	35 Bromochloromethane	128	9.023	9.023	(0.904)	236448	50.0000	52.2
	40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	630600	50.0000	52.3
	43 Cyclohexane	56	9.413	9.413	(0.943)	762333	50.0000	49.7
	44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	601062	50.0000	50.6
	52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1250337	5000.00	5670
	46 Carbon tetrachloride	117	9.517	9.517	(0.954)	578645	50.0000	52.9
$	47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	482122	50.0000	49.0
	48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	547120	50.0000	48.8
	49 Benzene	78	9.724	9.724	(0.974)	1761848	50.0000	48.0
	50 Cyclohexene	67	9.834	9.834	(0.985)	860085	50.0000	47.9
*	51 Fluorobenzene	96	9.980	9.980	(1.000)	1964840	50.0000	
	53 Trichloroethylene	95	10.364	10.364	(1.038)	458759	50.0000	49.9
	55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	457819	50.0000	51.0
	56 Methylcyclohexane	83	10.608	10.608	(1.063)	839279	50.0000	50.3
	59 Bromodichloromethane	83	10.864	10.864	(1.089)	543350	50.0000	54.0
	58 Dibromomethane	93	10.754	10.754	(1.078)	258499	50.0000	51.0
	61 2-Chloroethylvinyl ether	63	11.089	11.089	(1.111)	1146913	250.000	203
	63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	810617	250.000	276
	62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	728169	50.0000	55.4
$	64 Toluene-d8	98	11.626	11.626	(0.884)	1931653	50.0000	49.9
	65 Toluene	92	11.699	11.699	(0.889)	1139085	50.0000	47.4
	67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	643028	50.0000	55.3
	68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	318929	50.0000	51.2
	69 2-Hexanone	43	12.260	12.260	(0.932)	1184446	250.000	293
	70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	670714	50.0000	50.7
	71 Tetrachloroethylene	164	12.290	12.290	(0.934)	419688	50.0000	50.0
	72 Dibromochloromethane	129	12.540	12.540	(0.953)	440961	50.0000	57.7
	73 1,2-Dibromoethane	107	12.705	12.705	(0.966)	384796	50.0000	52.7
*	75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1462363	50.0000	
	76 Chlorobenzene	112	13.193	13.193	(1.003)	1297224	50.0000	50.1
	77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	464920	50.0000	55.0
	78 Ethylbenzene	91	13.254	13.254	(1.007)	2133985	50.0000	49.2
	79 m,p-Xylenes	106	13.363	13.363	(1.016)	1731637	100.000	99.4
	80 o-Xylene	106	13.796	13.796	(1.049)	862768	50.0000	50.6
	81 Styrene	104	13.802	13.802	(1.049)	1422191	50.0000	53.7
	82 Bromoform	173	14.058	14.058	(0.903)	306428	50.0000	48.3
	83 Isopropylbenzene	105	14.156	14.156	(0.909)	2199194	50.0000	48.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
87 1,1,2,2-Tetrachloroethane	83	14.436	14.436	(0.927)	492318	50.0000	50.6
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	746687	50.0000	49.4
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	133708	50.0000	49.8
90 Bromobenzene	156	14.564	14.564	(0.935)	584949	50.0000	50.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2528829	50.0000	48.5
93 2-Chlorotoluene	91	14.729	14.729	(0.946)	1765614	50.0000	49.9
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1885454	50.0000	49.9
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1572728	50.0000	49.8
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1777982	50.0000	50.0
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1900403	50.0000	49.8
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	2488099	50.0000	49.3
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	2061156	50.0000	49.7
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	1095522	50.0000	49.2
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	818947	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	1115963	50.0000	48.6
104 n-Butylbenzene	92	15.887	15.887	(1.020)	1039089	50.0000	49.4
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	1056493	50.0000	49.9
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	102232	50.0000	61.3
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	778368	50.0000	48.3
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	541281	50.0000	50.4
110 Naphthalene	128	18.289	18.289	(1.174)	1560712	50.0000	50.3
111 1,2,3-Trichlorobenzene	180	18.619	18.619	(1.195)	700180	50.0000	51.0

Data File: /chem/VOA6.i/061509v6/6p122.d
Date : 15-JUN-2009 21:17
Client ID: SECONDSOURCE
Sample Info: IW6VH090615-171L-ICV11VOAF11
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

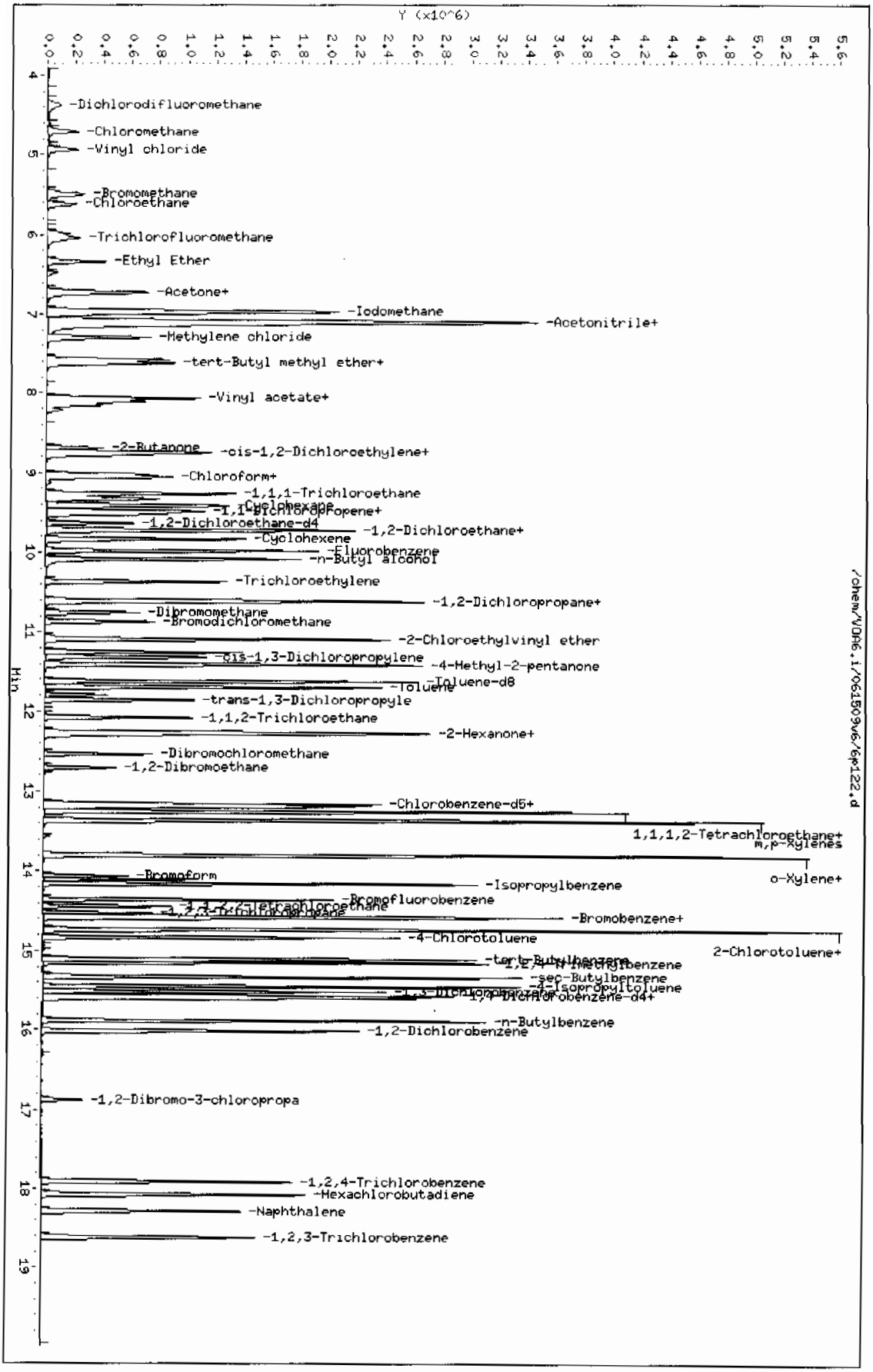

Page 1

Data File: /chem/VOA6.i/061509v6/6p131.d
Report Date: 02-Jul-2009 18:45

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6p131.d
Analysis Type: WATER
Lab Sample ID: W6VM090615-25
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Injection Date: 16-JUN-2009 01:27
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
150 Chlorotrifluoroethylene	132	150	0.16345	0.010	-12.01248	60.00000	Linear	
149 2-Chloro-1,1,1-trifluoroeth	0.29741	0.30007	0.30007	0.010	0.89348	60.00000	Averaged	
11 Acrolein	0.01230	0.01826	0.01826	0.001	48.47787	60.00000	Averaged	
12 Trichlorotrifluoroethane	0.08574	0.08796	0.08796	0.050	2.59338	60.00000	Averaged	
26 Isopropyl Alcohol	0.01255	0.01416	0.01416	0.001	12.77310	60.00000	Averaged	
19 Allyl chloride	0.28551	0.25781	0.25781	0.010	-9.70101	60.00000	Averaged	
28 tert-butyl Alcohol	0.02108	0.02335	0.02335	0.001	10.78685	60.00000	Averaged	
21 Acrylonitrile	0.06813	0.06670	0.06670	0.010	-2.10050	60.00000	Averaged	
34 Isopropyl ether	0.70684	0.71757	0.71757	0.001	1.51850	60.00000	Averaged	
27 2-Chloro-1,3-butadiene	0.25646	0.27873	0.27873	0.010	8.68301	60.00000	Averaged	
41 Ethyl tert-butyl ether	0.67565	0.69616	0.69616	0.001	3.03559	60.00000	Averaged	
32 Propionitrile	0.02721	0.02683	0.02683	0.010	-1.42290	60.00000	Averaged	
29 Ethyl acetate	0.19208	0.16826	0.16826	0.010	-12.40188	60.00000	Averaged	
37 Methacrylonitrile	0.10709	0.10354	0.10354	0.010	-3.31123	60.00000	Averaged	
38 Tetrahydrofuran	0.13836	0.13346	0.13346	0.010	-3.54546	60.00000	Averaged	
42 Isobutyl alcohol	0.00627	0.00655	0.00655	0.005	4.39065	60.00000	Averaged	
45 Methyl tert-amyl ether	0.22440	0.18558	0.18558	0.001	-17.30149	60.00000	Averaged	
54 Methyl methacrylate	0.14132	0.14393	0.14393	0.010	1.84815	60.00000	Averaged	
57 1,4-Dioxane	0.00232	0.00205	0.00205	0.001	-11.52266	60.00000	Averaged	
60 2-Nitropropane	230	250	0.05311	0.010	-7.93335	60.00000	Linear	
66 Ethyl methacrylate	0.35900	0.34939	0.34939	0.010	-2.67735	60.00000	Averaged	
74 1-Chlorohexane	0.29129	0.30067	0.30067	0.001	3.21786	60.00000	Averaged	
84 cis-1,4-Dichloro-2-butene	0.16765	0.16758	0.16758	0.010	-0.04286	60.00000	Averaged	
86 Cyclohexanone	0.00965	0.00953	0.00953	0.010	-1.25952	60.00000	Averaged	<-
89 trans-1,4-Dichloro-2-butene	0.16166	0.16037	0.16037	0.010	-0.80088	60.00000	Averaged	
97 Pentachloroethane	0.30776	0.31329	0.31329	0.010	1.79668	60.00000	Averaged	
103 Benzyl chloride	204	250	0.90663	0.010	-18.26389	60.00000	Linear	
105 bis(2-Chloroisopropyl)ether	0.07465	0.07123	0.07123	0.010	-4.58560	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 16-JUN-2009 01:27
Lab File ID: 6p131.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-25 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Average %D / Drift Results.	
Calculated Average %D/Drift =	7.46065
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/061509v6/6p131.d
Lab Smp Id: W6VM090615-25 Client Smp ID: SECONDSOURCE
Inj Date : 16-JUN-2009 01:27
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090615-25|S-ICV|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090601-08A+UVM090528-01C
Comment :
Method : /chem/VOA6.i/061509v6/VOA6-8260B-061509.m
Meth Date : 02-Jul-2009 18:45 dav01267 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALsubS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
150 Chlorotrifluoroethylene	116	4.290	4.290	(0.430)	924962	150.000	132
149 2-Chloro-1,1,1-trifluoroethane	118	5.065	5.065	(0.508)	1698102	150.000	151
11 Acrolein	56	6.542	6.542	(0.655)	172193	250.000	371
12 Trichlorotrifluoroethane	85	6.700	6.700	(0.671)	829627	250.000	256
26 Isopropyl Alcohol	45	6.791	6.791	(0.680)	1335415	2500.00	2820
19 Allyl chloride	41	7.145	7.145	(0.716)	2431624	250.000	226
28 tert-butyl alcohol	59	7.291	7.291	(0.731)	2202614	2500.00	2770
21 Acrylonitrile	53	7.547	7.547	(0.756)	629130	250.000	245
34 Isopropyl ether	45	8.078	8.078	(0.809)	1353604	50.0000	50.8
27 2-Chloro-1,3 butadiene	53	8.212	8.212	(0.823)	525791	50.0000	54.3
41 Ethyl tert-butyl ether	59	8.486	8.486	(0.850)	1313221	50.0000	51.5
32 Propionitrile	54	8.779	8.779	(0.880)	253020	250.000	246
29 Ethyl acetate	43	8.706	8.706	(0.872)	1586974	250.000	219
37 Methacrylonitrile	41	8.950	8.950	(0.897)	976596	250.000	242
38 Tetrahydrofuran	42	9.065	9.065	(0.582)	519500	250.000	241

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42 Isobutyl alcohol	41	9.389	9.389	(0.941)	617828	2500.00	2610
45 Methyl tert-amyl ether	55	9.742	9.742	(0.976)	350066	50.0000	41.3
54 Methyl methacrylate	69	10.589	10.589	(1.061)	1357561	250.000	255
57 1,4-Dioxane	88	10.699	10.699	(1.072)	193767	2500.00	2210
60 2-Nitropropane	43	11.071	11.071	(1.109)	500944	250.000	230
66 Ethyl methacrylate	69	11.858	11.858	(0.901)	2460727	250.000	243
74 1-Chlorohexane	55	13.052	13.052	(0.992)	423520	50.0000	51.6
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	652342	250.000	250
86 Cyclohexanone	55	14.320	14.320	(1.089)	335574	1250.00	1230
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	624266	250.000	248
97 Pentachloroethane	167	15.180	15.180	(0.975)	1219540	250.000	254
103 Benzyl chloride	91	15.717	15.717	(1.009)	3529240	250.000	204
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	277260	250.000	238
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1886367	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1408600	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	778539	50.0000	

Data File: /chem/VOA6.i/061509v6/6p131.d
Date : 16-JUN-2009 01:27
Client ID: SECONDSOURCE
Sample Info: IN6VM090615-251S-ICV11VOAF11
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

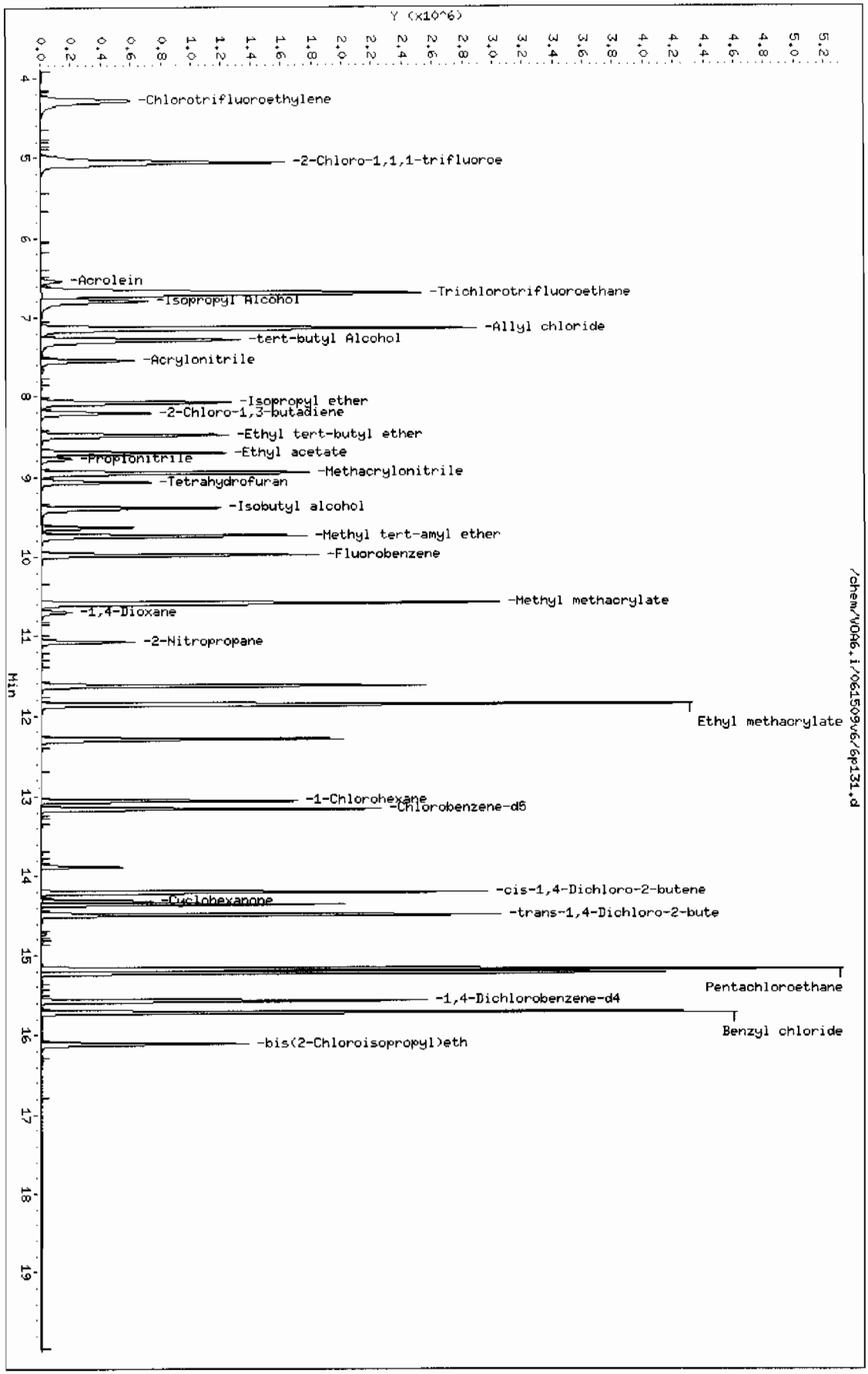

Page 1

Data File: /chem/VOA6.i/070609v6/6s103.d
Report Date: 12-Jul-2009 09:46

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 06-JUL-2009 10:49
Lab File ID: 6s103.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090706-02 Quant Type: ISTD
Method: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	2 Xylenes (total)	0.59099	0.52782	0.52782	0.050	-10.68976	60.00000	Averaged	
M	3 1,2-Dichloroethylene (total	0.32811	0.28224	0.28224	0.050	-13.97876	60.00000	Averaged	
M	1 1,3-Dichloropropylene	0.31539	0.29847	0.29847	0.050	-5.36600	60.00000	Averaged	
	4 Dichlorodifluoromethane	0.13952	0.16425	0.16425	0.050	17.72262	60.00000	Averaged	
	5 Chloromethane	0.23207	0.20706	0.20706	0.100	-10.77628	60.00000	Averaged	spcc
	6 Vinyl chloride	0.23499	0.21385	0.21385	0.050	-8.99415	20.00000	Averaged	ccc
	7 Bromomethane	0.18554	0.16201	0.16201	0.050	-12.68255	60.00000	Averaged	
	8 Chloroethane	0.16599	0.14733	0.14733	0.050	-11.24560	60.00000	Averaged	
	9 Trichlorofluoromethane	0.31108	0.30082	0.30082	0.050	-3.29907	60.00000	Averaged	
	10 Ethyl Ether	0.21032	0.17558	0.17558	0.001	-16.51847	60.00000	Averaged	
	13 Acetone	264	250	0.04107	0.050	5.75690	60.00000	Linear	<-
	16 Acetonitrile	0.02606	0.02563	0.02563	0.010	-1.65106	60.00000	Averaged	
	14 1,1-Dichloroethylene	0.30847	0.27337	0.27337	0.050	-11.37749	20.00000	Averaged	ccc
	17 Methyl acetate	0.15239	0.12044	0.12044	0.010	-20.96148	60.00000	Averaged	
	15 Iodomethane	0.36696	0.32392	0.32392	0.050	-11.72711	60.00000	Averaged	
	20 Methylene chloride	38.26401	50.00000	0.20412	0.050	-23.47198	60.00000	Linear	
	18 Carbon disulfide	0.66184	0.62955	0.62955	0.050	-4.87809	60.00000	Averaged	
	22 tert-Butyl methyl ether	0.61548	0.50476	0.50476	0.050	-17.98884	60.00000	Averaged	
	23 trans-1,2-Dichloroethylene	0.31030	0.25800	0.25800	0.050	-16.85488	60.00000	Averaged	
	24 Vinyl acetate	0.34636	0.26990	0.26990	0.010	-22.07495	60.00000	Averaged	
	25 1,1-Dichloroethane	0.39203	0.33143	0.33143	0.100	-15.45697	60.00000	Averaged	spcc
	30 2-Butanone	0.05356	0.06967	0.06967	0.030	30.08499	60.00000	Averaged	
	31 cis-1,2-Dichloroethylene	0.34592	0.30649	0.30649	0.050	-11.39882	60.00000	Averaged	
	33 2,2-Dichloropropane	0.29427	0.27242	0.27242	0.050	-7.42470	60.00000	Averaged	
	36 Chloroform	0.37849	0.32160	0.32160	0.010	-15.03263	20.00000	Averaged	ccc
	35 Bromochloromethane	0.11536	0.10308	0.10308	0.010	-10.64672	60.00000	Averaged	
	40 1,1,1-Trichloroethane	0.30693	0.27871	0.27871	0.010	-9.19528	60.00000	Averaged	
	43 Cyclohexane	0.39000	0.34852	0.34852	0.010	-10.63551	60.00000	Averaged	
	44 1,1-Dichloropropene	0.30239	0.27053	0.27053	0.010	-10.53565	60.00000	Averaged	
	52 n-Butyl alcohol	0.00561	0.00564	0.00564	0.001	0.53638	60.00000	Averaged	
	46 Carbon tetrachloride	0.27838	0.25837	0.25837	0.010	-7.18721	60.00000	Averaged	
$	47 1,2-Dichloroethane-d4	0.25054	0.25530	0.25530	0.001	1.90241	60.00000	Averaged	
	48 1,2-Dichloroethane	0.28523	0.22591	0.22591	0.010	-20.79887	60.00000	Averaged	
	49 Benzene	0.93344	0.77726	0.77726	0.010	-16.73098	60.00000	Averaged	
	50 Cyclohexene	0.45698	0.41254	0.41254	0.001	-9.72412	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 06-JUL-2009 10:49
Lab File ID: 6s103.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090706-02 Quant Type: ISTD
Method: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	53 Trichloroethylene	0.23398	0.20704	0.20704	0.010	-11.51286	60.00000	Averaged	
	55 1,2-Dichloropropane	0.22842	0.19943	0.19943	0.010	-12.69177	20.00000	Averaged	ccc
	56 Methylcyclohexane	0.42426	0.39198	0.39198	0.010	-7.60802	60.00000	Averaged	
	59 Bromodichloromethane	0.25582	0.24077	0.24077	0.010	-5.88427	60.00000	Averaged	
	58 Dibromomethane	0.12910	0.11017	0.11017	0.010	-14.65907	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	188	250	0.10783	0.010	-24.96436	60.00000	Linear	
	63 4-Methyl-2-pentanone	0.10020	0.09209	0.09209	0.010	-8.09319	60.00000	Averaged	
	62 cis-1,3-Dichloropropylene	0.33458	0.31755	0.31755	0.010	-5.09023	60.00000	Averaged	
$	64 Toluene-d8	1.32458	1.38189	1.38189	0.010	4.32672	60.00000	Averaged	
	65 Toluene	0.82102	0.68368	0.68368	0.010	-16.72870	20.00000	Averaged	ccc
	67 trans-1,3-Dichloropropylene	0.39769	0.37943	0.37943	0.010	-4.59265	60.00000	Averaged	
	68 1,1,2-Trichloroethane	0.21291	0.19013	0.19013	0.010	-10.69958	60.00000	Averaged	
	69 2-Hexanone	0.13814	0.14915	0.14915	0.010	7.97309	60.00000	Averaged	
	70 1,3-Dichloropropane	0.45210	0.39085	0.39085	0.010	-13.54892	60.00000	Averaged	
	71 Tetrachloroethylene	0.28684	0.26257	0.26257	0.010	-8.45911	60.00000	Averaged	
	72 Dibromochloromethane	0.26109	0.25400	0.25400	0.010	-2.71803	60.00000	Averaged	
	73 1,2-Dibromoethane	0.24943	0.22823	0.22823	0.010	-8.49956	60.00000	Averaged	
	76 Chlorobenzene	0.88521	0.78971	0.78971	0.300	-10.78869	60.00000	Averaged	spcc
	77 1,1,1,2-Tetrachloroethane	0.28879	0.27822	0.27822	0.010	-3.66077	60.00000	Averaged	
	78 Ethylbenzene	1.48252	1.28749	1.28749	0.010	-13.15516	20.00000	Averaged	ccc
	79 m,p-Xylenes	0.59530	0.52959	0.52959	0.010	-11.03925	60.00000	Averaged	
	80 o-Xylene	0.58237	0.52428	0.52428	0.010	-9.97526	60.00000	Averaged	
	81 Styrene	0.90594	0.85268	0.85268	0.010	-5.87877	60.00000	Averaged	
	82 Bromoform	43.48472	50.00000	0.33586	0.100	-13.03056	60.00000	Linear	spcc
	83 Isopropylbenzene	2.74854	2.07174	2.07174	0.010	-24.62403	60.00000	Averaged	
	87 1,1,2,2-Tetrachloroethane	0.59416	0.52699	0.52699	0.300	-11.30558	60.00000	Averaged	spcc
$	85 Bromofluorobenzene	0.92346	0.95594	0.95594	0.010	3.51651	60.00000	Averaged	
	88 1,2,3-Trichloropropane	0.16387	0.16014	0.16014	0.010	-2.27679	60.00000	Averaged	
	90 Bromobenzene	0.70499	0.63701	0.63701	0.010	-9.64296	60.00000	Averaged	
	91 n-Propylbenzene	3.18448	2.75675	2.75675	0.010	-13.43146	60.00000	Averaged	
	93 2-Chlorotoluene	2.16177	1.90449	1.90449	0.010	-11.90149	60.00000	Averaged	
	92 1,3,5-Trimethylbenzene	2.30772	2.03791	2.03791	0.010	-11.69143	60.00000	Averaged	
	94 4-Chlorotoluene	1.92741	1.72370	1.72370	0.010	-10.56910	60.00000	Averaged	
	95 tert-Butylbenzene	2.17151	1.97023	1.97023	0.010	-9.26913	60.00000	Averaged	
	96 1,2,4-Trimethylbenzene	2.33215	2.06799	2.06799	0.010	-11.32696	60.00000	Averaged	
	98 sec-Butylbenzene	3.07927	2.78051	2.78051	0.010	-9.70240	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 06-JUL-2009 10:49
Lab File ID: 6s103.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090706-02 Quant Type: ISTD
Method: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
99 4-Isopropyltoluene	2.53200	2.37142	2.37142	0.010	-6.34207	60.00000	Averaged
100 1,3-Dichlorobenzene	1.35807	1.24969	1.24969	0.010	-7.98028	60.00000	Averaged
102 1,4-Dichlorobenzene	1.40095	1.26366	1.26366	0.010	-9.79993	60.00000	Averaged
104 n-Butylbenzene	1.28518	1.19960	1.19960	0.010	-6.65868	60.00000	Averaged
106 1,2-Dichlorobenzene	1.29254	1.18142	1.18142	0.010	-8.59688	60.00000	Averaged
107 1,2-Dibromo-3-chloropropane	0.10188	0.11837	0.11837	0.010	16.18008	60.00000	Averaged
108 1,2,4-Trichlorobenzene	0.98469	0.91108	0.91108	0.010	-7.47618	60.00000	Averaged
109 Hexachlorobutadiene	0.65540	0.62448	0.62448	0.010	-4.71784	60.00000	Averaged
110 Naphthalene	1.89466	1.76443	1.76443	0.010	-6.87355	60.00000	Averaged
111 1,2,3-Trichlorobenzene	0.83855	0.81638	0.81638	0.010	-2.64496	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 10.70882
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s103.d
Lab Smp Id: W6VM090706-02 Client Smp ID: VSTD050
Inj Date : 06-JUL-2009 10:49
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090706-02|change|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090605-01D+IVM090630-01
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 2 Xylenes (total)	106				2123619	150.000	134
M 3 1,2-Dichloroethylene (total)	96				1028124	100.000	85.9
M 1 1,3-Dichloropropylene	75				1087222	100.000	95.2
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	299153	50.0000	58.9
5 Chloromethane	50	4.713	4.713	(0.472)	377129	50.0000	44.6
6 Vinyl chloride	62	4.934	4.934	(0.494)	389496	50.0000	45.5
7 Bromomethane	94	5.508	5.508	(0.552)	295081	50.0000	43.6
8 Chloroethane	64	5.629	5.629	(0.564)	268335	50.0000	44.4
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	547901	50.0000	48.4
10 Ethyl Ether	59	6.340	6.340	(0.635)	319794	50.0000	41.7
13 Acetone	43	6.718	6.718	(0.673)	374046	250.000	264
16 Acetonitrile	41	7.078	7.078	(0.709)	933630	1000.00	983
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	497906	50.0000	44.3
17 Methyl acetate	43	7.103	7.103	(0.712)	1096857	250.000	198
15 Iodomethane	142	6.968	6.968	(0.698)	2949899	250.000	221

	Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	20 Methylene chloride	84	7.298	7.298	(0.731)	371775	50.0000	38.3
	18 Carbon disulfide	76	7.096	7.096	(0.711)	5733163	250.000	238
	22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	919352	50.0000	41.0
	23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	469901	50.0000	41.6
	24 Vinyl acetate	43	8.066	8.066	(0.808)	2457937	250.000	195
	25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	603657	50.0000	42.3
	30 2-Butanone	43	8.694	8.694	(0.871)	634444	250.000	325
	31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	558223	50.0000	44.3
	33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	496170	50.0000	46.3
	36 Chloroform	83	9.059	9.059	(0.908)	585741	50.0000	42.5
	35 Bromochloromethane	128	9.023	9.023	(0.904)	187737	50.0000	44.7
	40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	507626	50.0000	45.4
	43 Cyclohexane	56	9.413	9.413	(0.943)	634783	50.0000	44.7
	44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	492725	50.0000	44.7
	52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1027816	5000.00	5030
	46 Carbon tetrachloride	117	9.517	9.517	(0.954)	470585	50.0000	46.4
$	47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	464997	50.0000	51.0
	48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	411453	50.0000	39.6
	49 Benzene	78	9.724	9.724	(0.974)	1415669	50.0000	41.6
	50 Cyclohexene	67	9.834	9.834	(0.985)	751387	50.0000	45.1
*	51 Fluorobenzene	96	9.980	9.980	(1.000)	1821350	50.0000	
	53 Trichloroethylene	95	10.364	10.364	(1.038)	377097	50.0000	44.2
	55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	363236	50.0000	43.6
	56 Methylcyclohexane	83	10.608	10.608	(1.063)	713931	50.0000	46.2
	59 Bromodichloromethane	83	10.864	10.864	(1.089)	438528	50.0000	47.0
	58 Dibromomethane	93	10.754	10.754	(1.078)	200665	50.0000	42.7
	61 2-Chloroethylvinyl ether	63	11.090	11.090	(1.111)	981975	250.000	188
	63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	617557	250.000	230
	62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	578363	50.0000	47.4
$	64 Toluene-d8	98	11.626	11.626	(0.884)	1853296	50.0000	52.2
	65 Toluene	92	11.699	11.699	(0.889)	916898	50.0000	41.6
	67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	508859	50.0000	47.7
	68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	254990	50.0000	44.6
	69 2-Hexanone	43	12.260	12.260	(0.932)	1000156	250.000	270
	70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	524176	50.0000	43.2
	71 Tetrachloroethylene	164	12.291	12.291	(0.934)	352145	50.0000	45.8
	72 Dibromochloromethane	129	12.540	12.540	(0.953)	340643	50.0000	48.6
	73 1,2-Dibromoethane	107	12.711	12.711	(0.966)	306083	50.0000	45.8
*	75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1341131	50.0000	
	76 Chlorobenzene	112	13.193	13.193	(1.003)	1059107	50.0000	44.6
	77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	373129	50.0000	48.2
	78 Ethylbenzene	91	13.254	13.254	(1.007)	1726691	50.0000	43.4
	79 m,p-Xylenes	106	13.363	13.363	(1.016)	1420491	100.000	89.0
	80 o-Xylene	106	13.796	13.796	(1.049)	703128	50.0000	45.0
	81 Styrene	104	13.802	13.802	(1.049)	1143553	50.0000	47.1
	82 Bromoform	173	14.065	14.065	(0.903)	250504	50.0000	43.5
	83 Isopropylbenzene	105	14.156	14.156	(0.909)	1545245	50.0000	37.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
87 1,1,2,2-Tetrachloroethane	83	14.443	14.443	(0.927)	393064	50.0000	44.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	713003	50.0000	51.8
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	119442	50.0000	48.9
90 Bromobenzene	156	14.564	14.564	(0.935)	475124	50.0000	45.2
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2056178	50.0000	43.3
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1420500	50.0000	44.0
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1520015	50.0000	44.2
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1285654	50.0000	44.7
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1469532	50.0000	45.4
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1542447	50.0000	44.3
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	2073895	50.0000	45.1
99 4-Isopropyltoluene	119	15.455	15.455	(0.992)	1768768	50.0000	46.8
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	932108	50.0000	46.0
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	745869	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	942524	50.0000	45.1
104 n-Butylbenzene	92	15.887	15.887	(1.020)	894746	50.0000	46.7
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	881183	50.0000	45.7
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	88288	50.0000	58.1
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	679544	50.0000	46.3
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	465777	50.0000	47.6
110 Naphthalene	128	18.289	18.289	(1.174)	1316031	50.0000	46.6
111 1,2,3-Trichlorobenzene	180	18.625	18.625	(1.196)	608909	50.0000	48.7

Data File: /chem/VOA6.i/070609v6/6s103.d
Date : 06-JUL-2009 10:49
Client ID: WSTD050
Sample Info: IW6VH090706-021change11VOAFI1
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

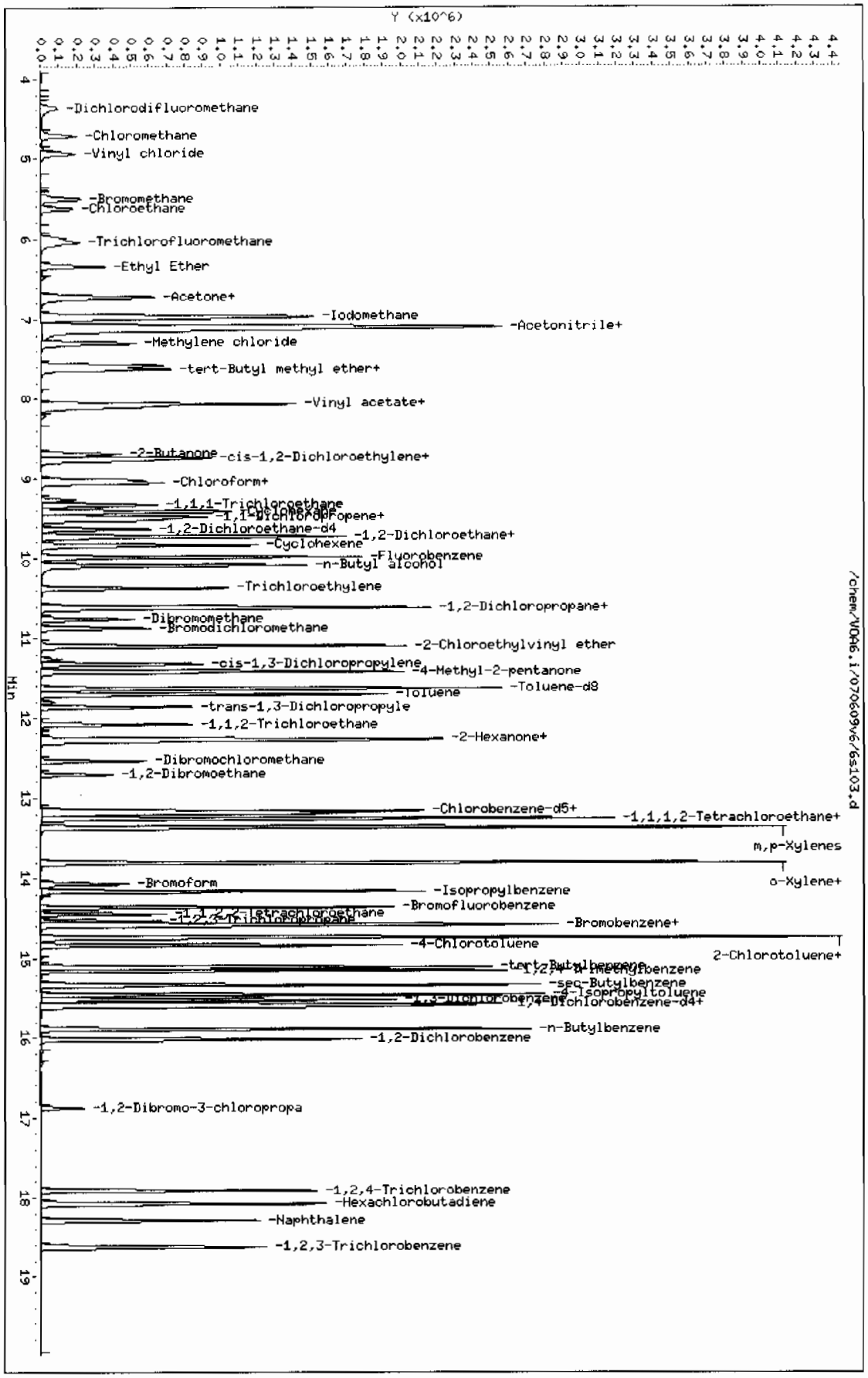

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 06-JUL-2009 11:44
Lab File ID: 6s105.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: UVM090601-08B Quant Type: ISTD
Method: /chem/VOA6.i/070609v6/VOA6-8260B-061509.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
11 Acrolein	0.01230	0.01860	0.01860	0.001	51.25216	60.00000	Averaged
12 Trichlorotrifluoroethane	0.08574	0.07419	0.07419	0.050	-13.46632	60.00000	Averaged
19 Allyl chloride	0.28551	0.21605	0.21605	0.010	-24.32748	60.00000	Averaged
21 Acrylonitrile	0.06813	0.05672	0.05672	0.010	-16.75226	60.00000	Averaged
27 2-Chloro-1,3-butadiene	0.25646	0.23272	0.23272	0.010	-9.25632	60.00000	Averaged
32 Propionitrile	0.02721	0.02282	0.02282	0.010	-16.14645	60.00000	Averaged
29 Ethyl acetate	0.19208	0.13817	0.13817	0.010	-28.06482	60.00000	Averaged
37 Methacrylonitrile	0.10709	0.08389	0.08389	0.010	-21.66715	60.00000	Averaged
38 Tetrahydrofuran	0.13836	0.10682	0.10682	0.010	-22.79439	60.00000	Averaged
42 Isobutyl alcohol	0.00627	0.00556	0.00556	0.005	-11.45680	60.00000	Averaged
54 Methyl methacrylate	0.14132	0.12077	0.12077	0.010	-14.54172	60.00000	Averaged
66 Ethyl methacrylate	0.35900	0.29274	0.29274	0.010	-18.45547	60.00000	Averaged
57 1,4-Dioxane	0.00232	0.00188	0.00188	0.001	-19.17604	60.00000	Averaged
60 2-Nitropropane	186	250	0.04266	0.010	-25.63423	60.00000	Linear
84 cis-1,4-Dichloro-2-butene	0.16765	0.14700	0.14700	0.010	-12.31627	60.00000	Averaged
86 Cyclohexanone	0.00965	0.01129	0.01129	0.010	17.00190	60.00000	Averaged <-
89 trans-1,4-Dichloro-2-butene	0.16166	0.13982	0.13982	0.010	-13.51425	60.00000	Averaged
97 Pentachloroethane	0.30776	0.26119	0.26119	0.010	-15.13125	60.00000	Averaged
103 Benzyl chloride	219	250	0.97378	0.010	-12.29955	60.00000	Linear
105 bis(2-Chloroisopropyl)ether	0.07465	0.06560	0.06560	0.010	-12.11770	60.00000	Averaged
$ 47 1,2-Dichloroethane-d4	0.25054	0.24483	0.24483	0.001	-2.27789	60.00000	Averaged
$ 64 Toluene-d8	1.32458	1.33471	1.33471	0.010	0.76517	60.00000	Averaged
$ 85 Bromofluorobenzene	0.92346	0.94766	0.94766	0.010	2.62082	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 21.20893
Maximun Average %D/Drift = 20.00000
* Failed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s105.d
Lab Smp Id: UVM090601-08B Client Smp ID: VSTD250S
Inj Date : 06-JUL-2009 11:44
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |UVM090601-08B|SHORT/LCS|1|VOAF|1|
Misc Info : GEL 5uL N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:57 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
11 Acrolein	56	6.541	6.541	(0.655)	161497	250.000	378
12 Trichlorotrifluoroethane	85	6.706	6.706	(0.672)	644255	250.000	216
19 Allyl chloride	41	7.145	7.145	(0.716)	1876121	250.000	189
21 Acrylonitrile	53	7.547	7.547	(0.756)	492540	250.000	208
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	404182	50.0000	45.4
32 Propionitrile	54	8.779	8.779	(0.880)	198157	250.000	210
29 Ethyl acetate	43	8.706	8.706	(0.872)	1199846	250.000	180
37 Methacrylonitrile	41	8.956	8.956	(0.897)	728437	250.000	196
38 Tetrahydrofuran	42	9.065	9.065	(0.582)	388290	250.000	193
42 Isobutyl alcohol	41	9.395	9.395	(0.941)	482470	2500.00	2210
54 Methyl methacrylate	69	10.589	10.589	(1.061)	1048744	250.000	214
66 Ethyl methacrylate	69	11.864	11.864	(0.902)	1896886	250.000	204
57 1,4-Dioxane	88	10.699	10.699	(1.072)	162966	2500.00	2020
60 2-Nitropropane	43	11.077	11.077	(1.110)	370420	250.000	186
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	534349	250.000	219
86 Cyclohexanone	55	14.320	14.320	(1.089)	365833	1250.00	1460

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	508219	250.000	216
97 Pentachloroethane	167	15.180	15.180	(0.975)	949412	250.000	212
103 Benzyl chloride	91	15.717	15.717	(1.009)	3539627	250.000	219
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	238462	250.000	220
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1736742	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1295939	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	726984	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	425207	50.0000	48.9
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1729709	50.0000	50.4
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	688937	50.0000	51.3

Data File: /chem/VOA6.i/070609v6/6s105.d
Date : 06-JUL-2009 11:44
Client ID: VSTB250S
Sample Info: IUWH090601-08B|SHORT/LCS|1|VOAF1|1
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

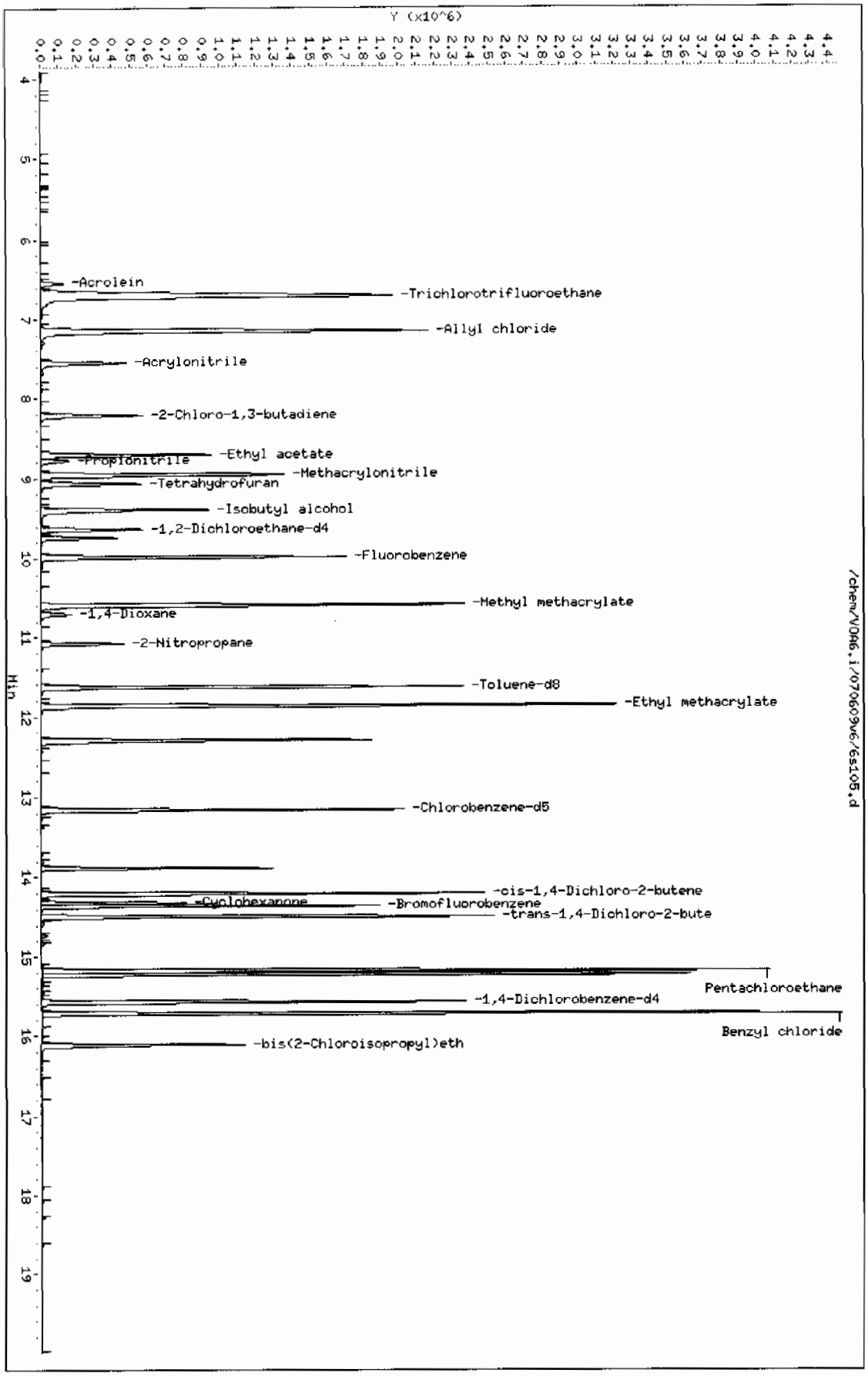

Page 1

QC Data

Data File: /chem/VOA6.i/061509v6/6p111.d

Date : 15-JUN-2009 16:10

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

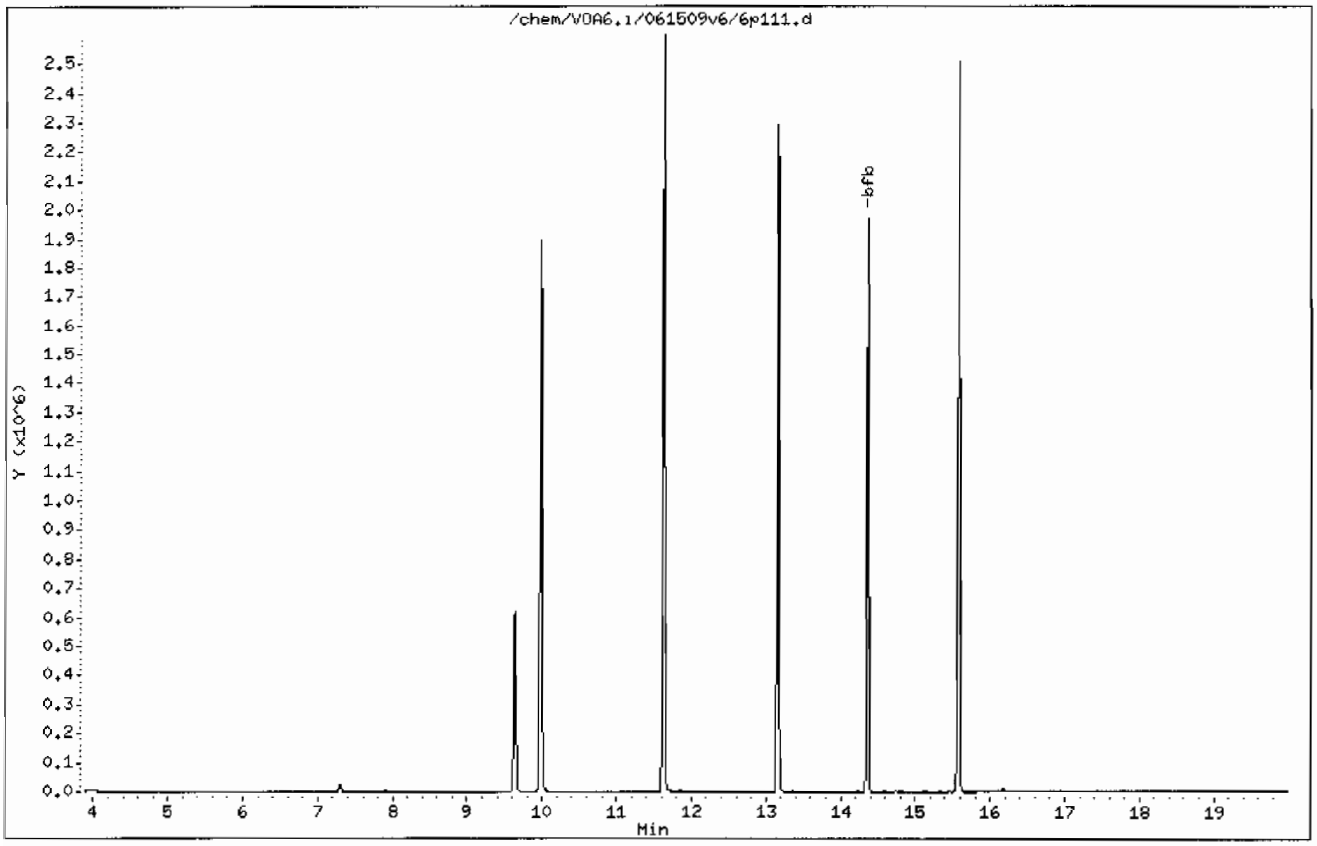

Data File: /chem/VOA6.i/061509v6/6p111.d

Date : 15-JUN-2009 16:10

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

1 bfb

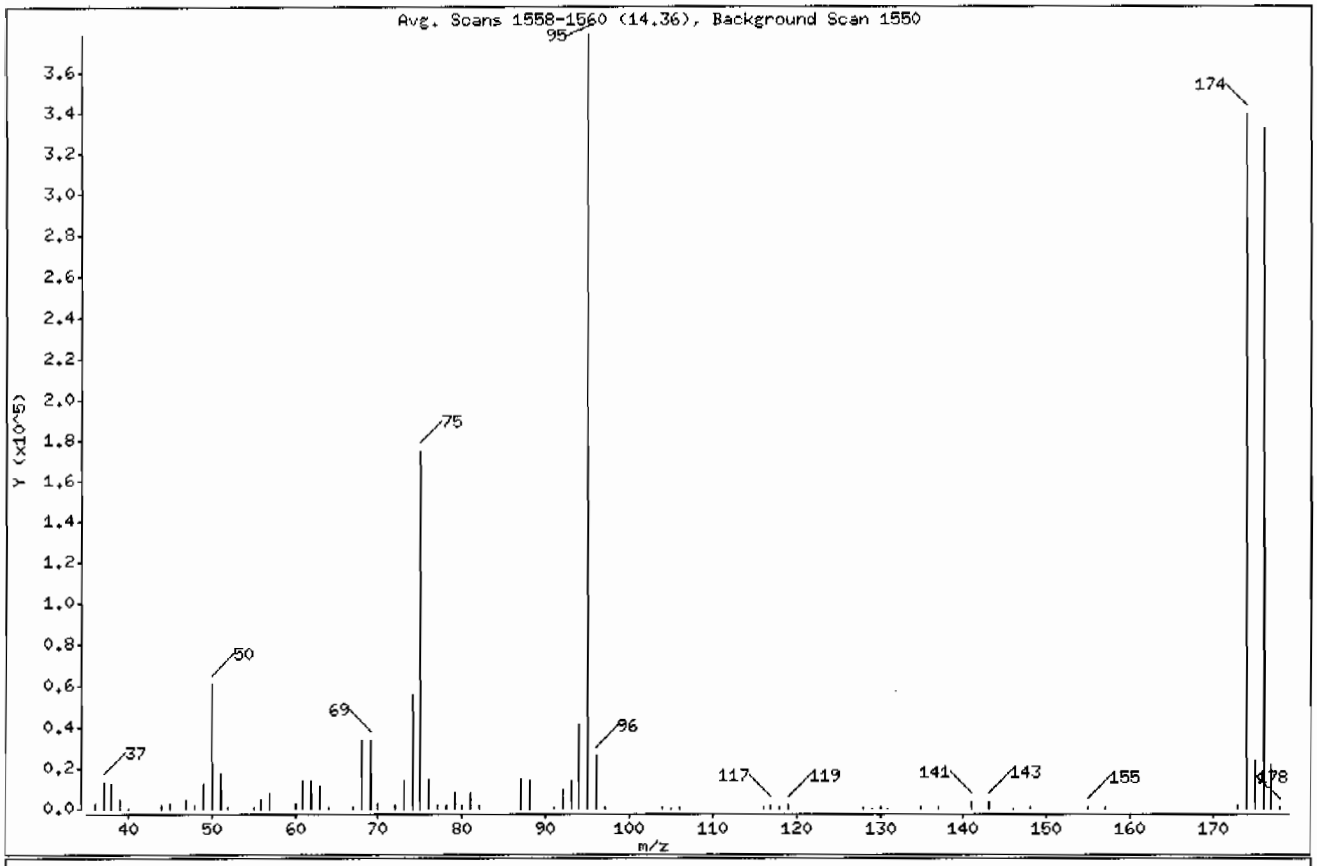

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.99
75	30.00 - 60.00% of mass 95	46.24
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.49 (0.54)
174	50.00 - 100.00% of mass 95	89.71
175	5.00 - 9.00% of mass 174	6.23 (6.94)
176	95.00 - 101.00% of mass 174	87.72 (97.77)
177	5.00 - 9.00% of mass 176	5.64 (6.43)

Data File: /chem/VOA6.i/061509v6/6p111.d

Date : 15-JUN-2009 16:10

Client ID: BFB01 Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Data File: 6p111.d

Spectrum: Avg. Scans 1558-1560 (14.36), Background Scan 1550

Location of Maximum: 95.00

Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2269	62.00	13935	87.00	15033	130.00	1206
37.00	13180	63.00	10916	88.00	14161	131.00	168
38.00	12293	64.00	960	91.00	1067	135.00	629
39.00	4779	67.00	849	92.00	9277	137.00	637
40.00	185	68.00	33536	93.00	13940	141.00	3085
44.00	1434	69.00	34232	94.00	40720	143.00	3197
45.00	2465	70.00	2699	95.00	378240	146.00	201
47.00	4159	72.00	1532	96.00	25712	148.00	871
48.00	1584	73.00	13567	97.00	790	155.00	942
49.00	12246	74.00	55256	104.00	1142	157.00	649
50.00	60496	75.00	174912	105.00	187	173.00	1835
51.00	17576	76.00	15006	106.00	1232	174.00	339328
52.00	838	77.00	1958	116.00	1147	175.00	23552
55.00	715	78.00	1408	117.00	1930	176.00	331776
56.00	4247	79.00	7489	118.00	1112	177.00	21320
57.00	8192	80.00	2165	119.00	1755	178.00	704
60.00	2578	81.00	7460	128.00	1279		
61.00	13830	82.00	1674	129.00	402		

Data File: /chem/VOA6.i/070609v6/6s103BFB.d

Page 1

Date : 06-JUL-2009 10:49

Client ID: BFB01

Instrument: VOA6.i

Sample Info: IW6VM090706-02ICCV/BFB/LCS!1!VOAF!1!

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

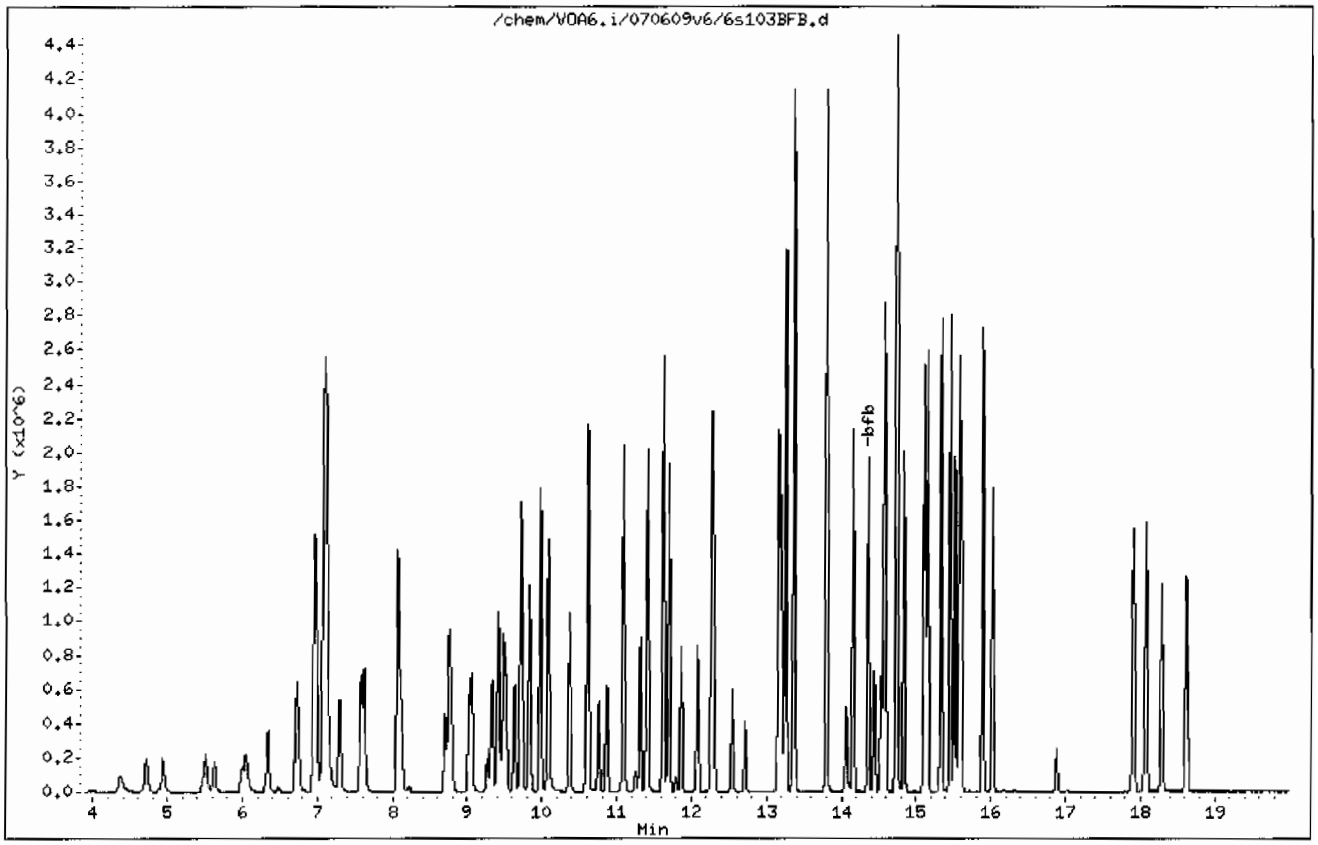

Data File: /chem/VOA6.i/070609v6/6s103BFB.d

Date : 06-JUL-2009 10:49

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |W6VM090706-02|CCV/BFB/LCS|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

1 bfb

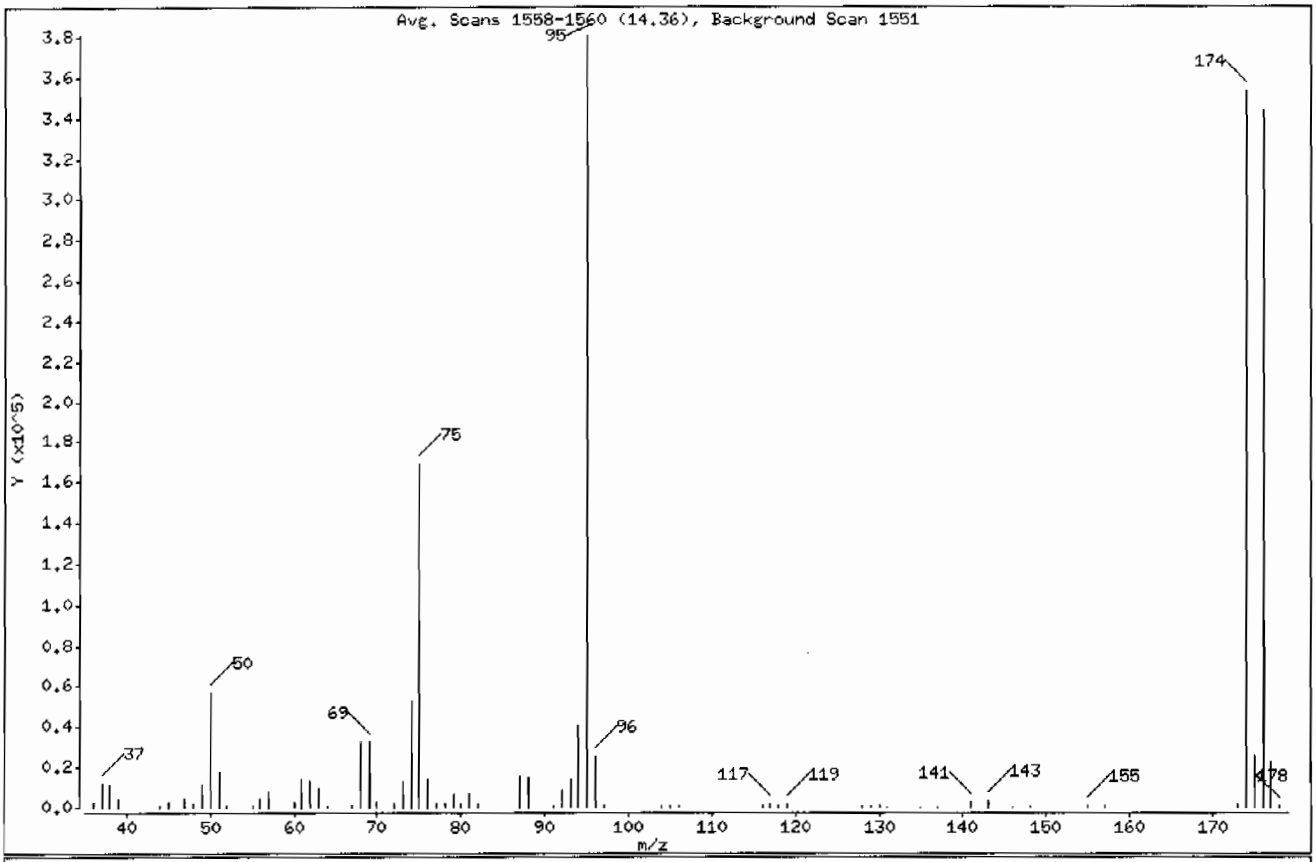

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.05
75	30.00 - 60.00% of mass 95	44.31
96	5.00 - 9.00% of mass 95	6.61
173	Less than 2.00% of mass 174	0.47 (0.51)
174	50.00 - 100.00% of mass 95	92.66
175	5.00 - 9.00% of mass 174	6.64 (7.16)
176	95.00 - 101.00% of mass 174	90.14 (97.28)
177	5.00 - 9.00% of mass 176	6.00 (6.65)

Data File: /chem/VOA6.i/070609v6/6s103BFB.d

Date : 06-JUL-2009 10:49

Client ID: BFB01 Instrument: VOA6.i

Sample Info: IW6VM090706-02|CCV/BFB/LCS|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Data File: 6s103BFB.d

Spectrum: Avg. Scans 1558-1560 (14.36), Background Scan 1551

Location of Maximum: 95.00

Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2424	63.00	10057	88.00	14917	131.00	394
37.00	12190	64.00	991	91.00	999	135.00	376
38.00	11260	67.00	795	92.00	8910	137.00	367
39.00	4435	68.00	31800	93.00	13877	141.00	2856
44.00	1050	69.00	32216	94.00	40192	143.00	3216
45.00	2386	70.00	2448	95.00	380864	146.00	367
47.00	4262	72.00	1634	96.00	25184	148.00	870
48.00	1563	73.00	13284	97.00	525	155.00	956
49.00	11572	74.00	52872	104.00	1268	157.00	662
50.00	57312	75.00	168768	105.00	585	173.00	1791
51.00	17464	76.00	14212	106.00	1237	174.00	352896
52.00	792	77.00	2096	116.00	1041	175.00	25280
55.00	730	78.00	1386	117.00	1910	176.00	343296
56.00	4032	79.00	6381	118.00	1059	177.00	22840
57.00	7802	80.00	2129	119.00	1469	178.00	699
60.00	2708	81.00	6687	128.00	1234		
61.00	13821	82.00	1582	129.00	606		
62.00	13336	87.00	15778	130.00	1266		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			**Matrix:**	SOIL
Lab Sample ID:	1201874911				
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882741	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 13:07	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 10:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s108B1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			**Matrix:**	SOIL
Lab Sample ID:	1201874911				
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882741	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 13:07	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 10:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s108B1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s108B1.d
Lab Smp Id: 1201874911 Client Smp ID: BLANK
Inj Date : 06-JUL-2009 13:07
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874911|882743|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 09-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	413301	49.1898	49.2
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1676832	50.0000	
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1646939	50.2588	50.2
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1236965	50.0000	
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	638213	50.3616	50.4
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	686146	50.0000	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s108B1.d
Lab Smp Id: 1201874911 Client Smp ID: BLANK
Inj Date : 06-JUL-2009 13:07
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874911|882743|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 09-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA6.i/070609v6/6s108B1.d
Date : 06-JUL-2009 13:07
Client ID: BLANK
Sample Info: |120187491|882743|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

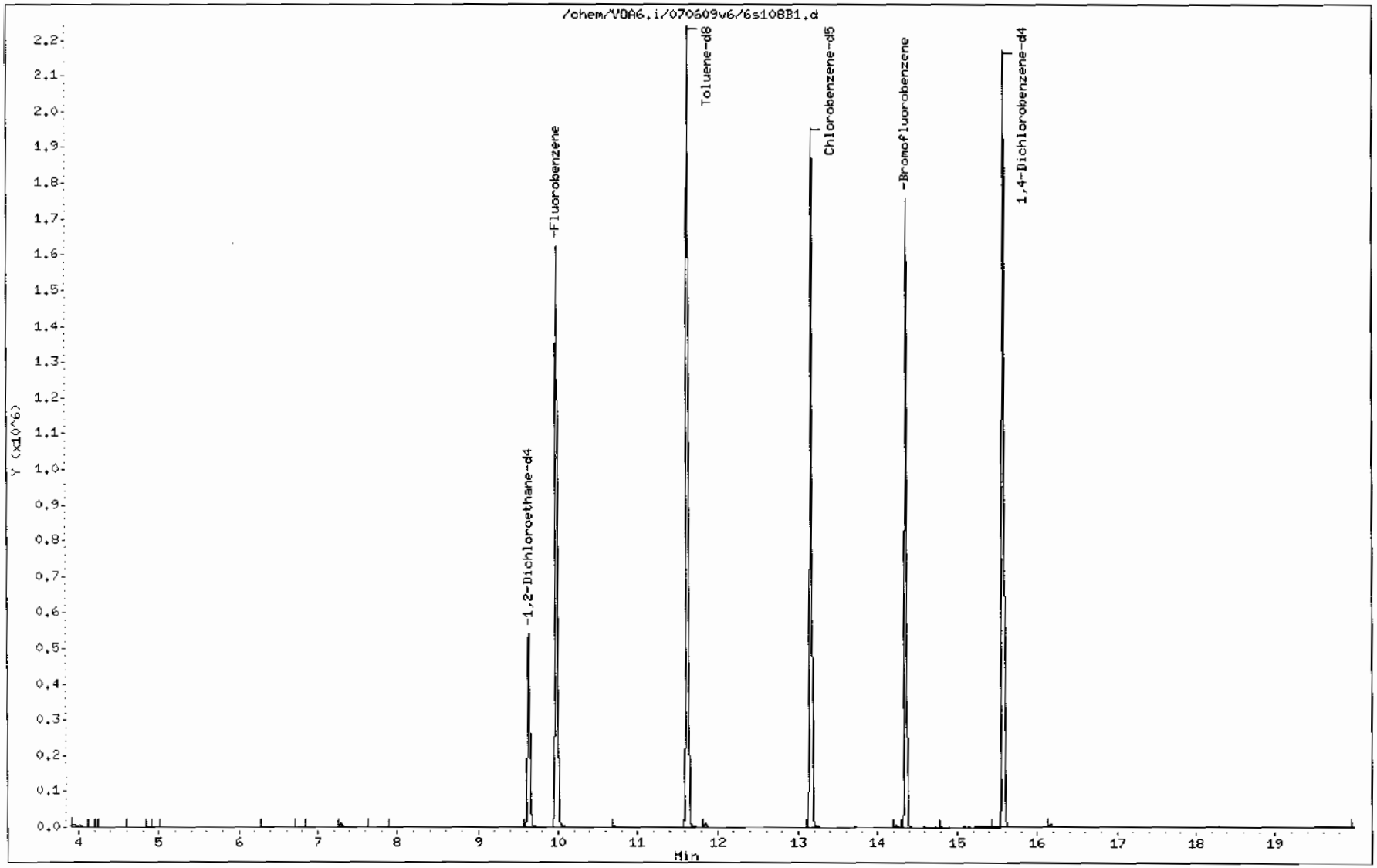

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			**Matrix:**	SOIL
Lab Sample ID:	1201874914				
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882741	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 11:17	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 10:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s104L2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		60.2	ug/kg	0.340	1.00
74-87-3	Chloromethane		45.7	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		46.0	ug/kg	0.300	1.00
74-83-9	Bromomethane		44.4	ug/kg	0.300	1.00
75-00-3	Chloroethane		45.3	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		49.2	ug/kg	0.570	1.00
67-64-1	Acetone		293	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		45.1	ug/kg	0.300	1.00
74-88-4	Iodomethane		226	ug/kg	1.60	5.00
75-09-2	Methylene chloride		39.2	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		242	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		42.3	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		43.2	ug/kg	0.300	1.00
78-93-3	2-Butanone		366	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		45.2	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		46.7	ug/kg	0.300	1.00
67-66-3	Chloroform		43.7	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		46.1	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		46.6	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		45.7	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		47.4	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		41.2	ug/kg	0.300	1.00
71-43-2	Benzene		42.9	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		46.0	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		45.0	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		48.9	ug/kg	0.300	1.00
74-95-3	Dibromomethane		45.0	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		255	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		49.6	ug/kg	0.300	1.00
108-88-3	Toluene		42.3	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		49.2	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		46.4	ug/kg	0.300	1.00
591-78-6	2-Hexanone		303	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		44.9	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		45.8	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		50.5	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		47.8	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		45.0	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			**Matrix:**	SOIL
Lab Sample ID:	1201874914				
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882741	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 11:17	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 10:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s104L2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		44.0	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		89.9	ug/kg	0.300	2.00
95-47-6	o-Xylene		45.7	ug/kg	0.300	1.00
100-42-5	Styrene		47.6	ug/kg	0.300	1.00
75-25-2	Bromoform		45.5	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		46.5	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		51.3	ug/kg	0.300	1.00
108-86-1	Bromobenzene		45.3	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		43.3	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		44.2	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		37.7	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		44.0	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		44.8	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		45.0	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		44.2	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		44.4	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		46.3	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		45.9	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		44.9	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		45.7	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		63.1	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		48.9	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		45.4	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s104L2.d
Lab Smp Id: 1201874914 Client Smp ID: LCS
Inj Date : 06-JUL-2009 11:17
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874914|882743|1|VOAF|1|
Misc Info : GEL 5g N/A UVM090605-01D+IVM090630-01
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 09-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1 1,3-Dichloropropylene	75				1126326	98.8285	98.8
M 2 Xylenes (total)	106				2162689	135.592	136
M 3 1,2-Dichloroethylene (total)	96				1036505	87.5237	87.5
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	302513	60.1828	60.2
5 Chloromethane	50	4.713	4.713	(0.472)	381922	45.6801	45.7
6 Vinyl chloride	62	4.934	4.934	(0.494)	389266	45.9806	46.0
7 Bromomethane	94	5.508	5.508	(0.552)	296521	44.3585	44.4
8 Chloroethane	64	5.629	5.629	(0.564)	271203	45.3491	45.3
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	550993	49.1628	49.2
10 Ethyl Ether	59	6.340	6.340	(0.635)	329970	43.5468	43.5
13 Acetone	43	6.718	6.718	(0.673)	410915	293.488	293
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	501666	45.1412	45.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
	15 Iodomethane	142	6.968	6.968	(0.698)	2986356	225.888	226
	16 Acetonitrile	41	7.078	7.078	(0.709)	1007675	1073.27	1070
	17 Methyl acetate	43	7.102	7.103	(0.712)	1191778	217.078	217
	18 Carbon disulfide	76	7.090	7.096	(0.710)	5764729	241.767	242
	20 Methylene chloride	84	7.297	7.298	(0.731)	375888	39.2260	39.2
	22 tert-Butyl methyl ether	73	7.584	7.578	(0.760)	968649	43.6837	43.7
	23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	472650	42.2797	42.3
	24 Vinyl acetate	43	8.066	8.066	(0.808)	2460798	197.203	197
	25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	609667	43.1660	43.2
	30 2-Butanone	43	8.693	8.694	(0.871)	706183	366.001	366
	31 cis-1,2-Dichloroethylene	61	8.748	8.742	(0.877)	563855	45.2440	45.2
	33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	495339	46.7228	46.7
	35 Bromochloromethane	128	9.023	9.023	(0.904)	191561	46.0924	46.1
	36 Chloroform	83	9.059	9.059	(0.908)	596464	43.7414	43.7
	40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	515451	46.6137	46.6
	43 Cyclohexane	56	9.419	9.413	(0.944)	637757	45.3896	45.4
	44 1,1-Dichloropropene	75	9.486	9.480	(0.951)	497962	45.7092	45.7
	46 Carbon tetrachloride	117	9.517	9.517	(0.954)	475801	47.4413	47.4
$	47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	455832	50.5011	50.5
	48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	423243	41.1872	41.2
	49 Benzene	78	9.724	9.724	(0.974)	1441602	42.8676	42.9
	50 Cyclohexene	67	9.834	9.834	(0.985)	759618	46.1387	46.1
*	51 Fluorobenzene	96	9.980	9.980	(1.000)	1801365	50.0000	
	52 n-Butyl alcohol	56	10.083	10.084	(1.010)	1193119	5900.02	5900
	53 Trichloroethylene	95	10.364	10.364	(1.038)	388103	46.0400	46.0
	55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	370640	45.0381	45.0
	56 Methylcyclohexane	83	10.608	10.608	(1.063)	712470	46.6129	46.6
	58 Dibromomethane	93	10.754	10.754	(1.078)	209454	45.0335	45.0
	59 Bromodichloromethane	83	10.864	10.864	(1.089)	450985	48.9315	48.9
	61 2-Chloroethylvinyl ether	63	11.089	11.090	(1.111)	1043599	201.396	201
	62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	598230	49.6295	49.6
	63 4-Methyl-2-pentanone	58	11.412	11.413	(0.867)	690388	255.266	255
$	64 Toluene-d8	98	11.626	11.626	(0.884)	1812403	50.6949	50.7
	65 Toluene	92	11.699	11.699	(0.889)	937312	42.2977	42.3
	67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	528096	49.1990	49.2
	68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	266626	46.3972	46.4
	69 2-Hexanone	43	12.260	12.260	(0.932)	1128064	302.559	302
	70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	547957	44.9054	44.9
	71 Tetrachloroethylene	164	12.290	12.291	(0.934)	354931	45.8454	45.8
	72 Dibromochloromethane	129	12.540	12.540	(0.953)	355740	50.4806	50.5
	73 1,2-Dibromoethane	107	12.711	12.711	(0.966)	321689	47.7836	47.8
*	75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1349530	50.0000	
	76 Chlorobenzene	112	13.193	13.193	(1.003)	1076153	45.0415	45.0
	77 1,1,1,2-Tetrachloroethane	131	13.247	13.248	(1.007)	380785	48.8520	48.8
	78 Ethylbenzene	91	13.254	13.254	(1.007)	1760207	43.9898	44.0
	79 m,p-Xylenes	106	13.363	13.363	(1.016)	1444337	89.8912	89.9
	80 o-Xylene	106	13.796	13.796	(1.049)	718352	45.7008	45.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
81 Styrene	104	13.802	13.802	(1.049)	1164746	47.6345	47.6
82 Bromoform	173	14.064	14.065	(0.903)	265410	45.4621	45.5
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1563498	37.6867	37.7
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	714535	51.2622	51.3
87 1,1,2,2-Tetrachloroethane	83	14.442	14.443	(0.927)	416854	46.4807	46.5
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	126920	51.3128	51.3
90 Bromobenzene	156	14.564	14.564	(0.935)	481985	45.2943	45.3
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2079002	43.2523	43.2
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1532780	44.0038	44.0
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1441556	44.1788	44.2
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1304689	44.8462	44.8
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1475112	45.0045	45.0
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1557443	44.2434	44.2
98 sec-Butylbenzene	105	15.332	15.333	(0.984)	2063803	44.4031	44.4
99 4-Isopropyltoluene	119	15.454	15.455	(0.992)	1770761	46.3328	46.3
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	941164	45.9130	45.9
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	754705	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	949187	44.8871	44.9
104 n-Butylbenzene	92	15.887	15.887	(1.020)	885963	45.6715	45.7
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	886105	45.4188	45.4
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	97078	63.1257	63.1
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	684771	46.0720	46.1
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	449579	45.4459	45.4
110 Naphthalene	128	18.289	18.289	(1.174)	1386972	48.4987	48.5
111 1,2,3-Trichlorobenzene	180	18.624	18.625	(1.196)	623005	49.2213	49.2

Data File: /chem/VOA6.i/070609v6/6s104L2.d
Date : 06-JUL-2009 11:17
Client ID: LCS
Sample Info: 1120187491418827431|VOAF11|

Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

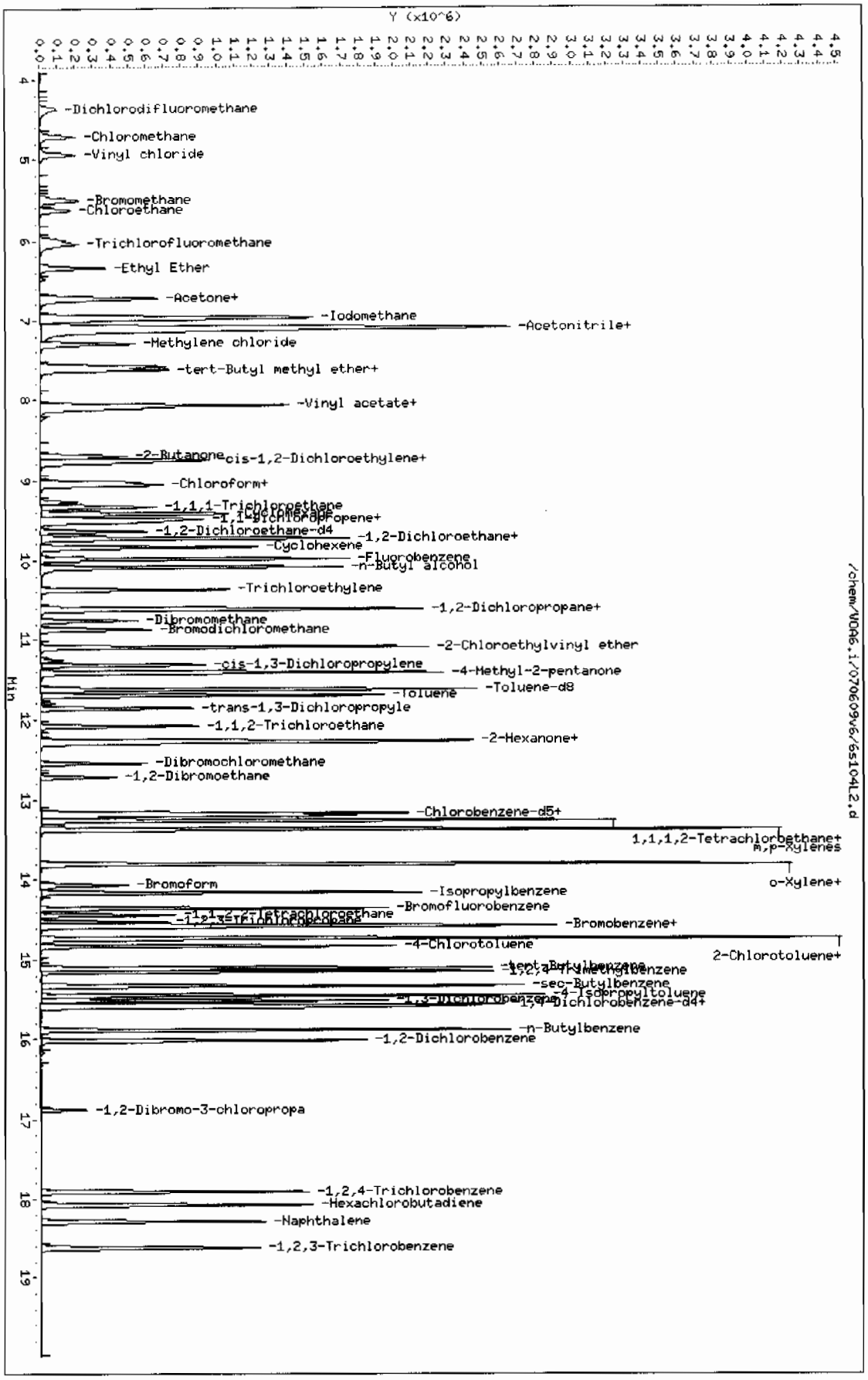

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			**Matrix:**	SOIL
Lab Sample ID:	1201874915				
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882741	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 12:12	**Analyst:**	RXDI	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 10:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s106L2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			**Matrix:**	SOIL
Lab Sample ID:	1201874915				
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882741	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 12:12	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 10:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s106L2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		221	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s106L2.d
Lab Smp Id: 1201874915 Client Smp ID: LCS
Inj Date : 06-JUL-2009 12:12
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874915|882743|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 09-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
11 Acrolein	56	6.542	6.541	(0.655)	167141	393.881	394(R)
12 Trichlorotrifluoroethane	85	6.706	6.706	(0.672)	652880	220.651	221
19 Allyl chloride	41	7.145	7.145	(0.716)	1864235	189.201	189
21 Acrylonitrile	53	7.548	7.547	(0.756)	510600	217.148	217
26 Isopropyl Alcohol	45	6.804	6.804	(0.682)	16061	37.0679	37.1(aR)
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	408200	46.1198	46.1
29 Ethyl acetate	43	8.706	8.706	(0.872)	1248823	188.392	188
32 Propionitrile	54	8.779	8.779	(0.880)	207535	220.978	221
37 Methacrylonitrile	41	8.956	8.956	(0.897)	750082	202.958	203
38 Tetrahydrofuran	42	9.066	9.065	(0.582)	408004	198.897	199
42 Isobutyl alcohol	41	9.389	9.395	(0.941)	514762	2377.04	2380
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	426039	49.2739	49.3

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1725562	50.0000	
54 Methyl methacrylate	69	10.590	10.589	(1.061)	1083530	222.162	222
57 1,4-Dioxane	88	10.699	10.699	(1.072)	169213	2111.65	2110
60 2-Nitropropane	43	11.077	11.077	(1.110)	386792	195.116	195
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1713875	49.5151	49.5
66 Ethyl methacrylate	69	11.858	11.864	(0.901)	1959810	208.910	209
74 1-Chlorohexane	55	13.156	13.156	(1.000)	10682	1.40332	1.4(aR)
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1306571	50.0000	
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	549724	221.162	221
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	693214	50.6320	50.6
86 Cyclohexanone	55	14.321	14.320	(1.089)	398534	1580.29	1580
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	525553	219.271	219
97 Pentachloroethane	167	15.180	15.180	(0.975)	755431	165.561	166
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	741299	50.0000	
103 Benzyl chloride	91	15.717	15.717	(1.009)	3582943	217.671	218
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	259683	234.637	235

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA6.i/070609v6/6s106L2.d
Date : 06-JUL-2009 12:12
Client ID: LCS
Sample Info: 1120187491518827431IVOAF1I1
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

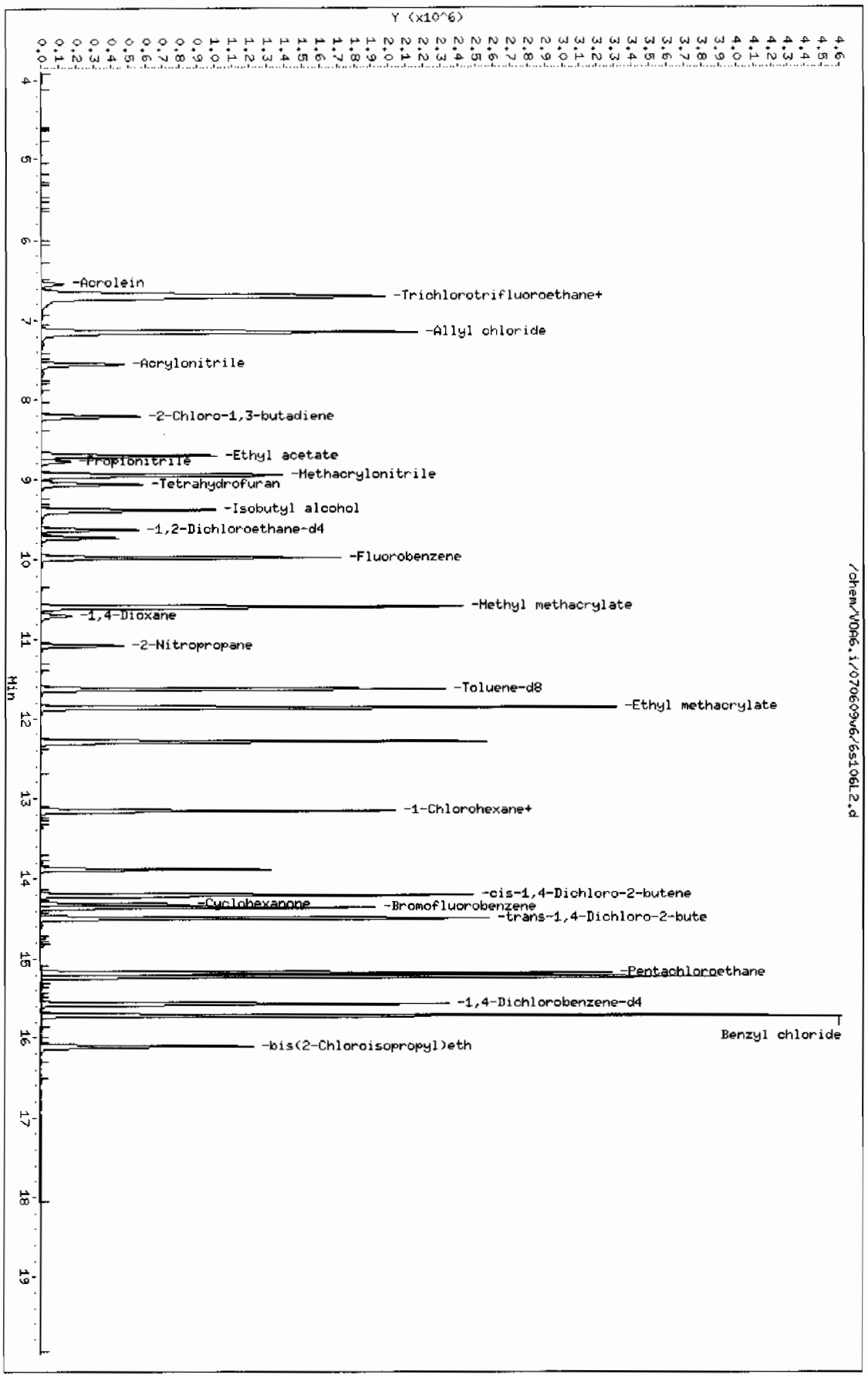

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874912	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10463PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 21:51	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:31	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s125.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		50.5	ug/kg	0.355	1.04
74-87-3	Chloromethane		39.9	ug/kg	0.313	1.04
75-01-4	Vinyl chloride		40.6	ug/kg	0.313	1.04
74-83-9	Bromomethane		40.0	ug/kg	0.313	1.04
75-00-3	Chloroethane		39.4	ug/kg	0.313	1.04
75-69-4	Trichlorofluoromethane		41.8	ug/kg	0.595	1.04
67-64-1	Acetone		264	ug/kg	1.73	5.22
75-35-4	1,1-Dichloroethylene		38.3	ug/kg	0.313	1.04
74-88-4	Iodomethane		195	ug/kg	1.67	5.22
75-09-2	Methylene chloride		32.8	ug/kg	2.09	5.22
75-15-0	Carbon disulfide		211	ug/kg	1.30	5.22
156-60-5	trans-1,2-Dichloroethylene		35.8	ug/kg	0.313	1.04
75-34-3	1,1-Dichloroethane		37.1	ug/kg	0.313	1.04
78-93-3	2-Butanone		321	ug/kg	1.57	5.22
156-59-2	cis-1,2-Dichloroethylene		38.3	ug/kg	0.313	1.04
594-20-7	2,2-Dichloropropane		38.4	ug/kg	0.313	1.04
67-66-3	Chloroform		37.0	ug/kg	0.313	1.04
74-97-5	Bromochloromethane		39.6	ug/kg	0.344	1.04
71-55-6	1,1,1-Trichloroethane		39.0	ug/kg	0.313	1.04
563-58-6	1,1-Dichloropropene		38.0	ug/kg	0.313	1.04
56-23-5	Carbon tetrachloride		39.8	ug/kg	0.313	1.04
107-06-2	1,2-Dichloroethane		35.6	ug/kg	0.313	1.04
71-43-2	Benzene		36.2	ug/kg	0.313	1.04
79-01-6	Trichloroethylene		38.4	ug/kg	0.344	1.04
78-87-5	1,2-Dichloropropane		37.9	ug/kg	0.313	1.04
75-27-4	Bromodichloromethane		40.8	ug/kg	0.313	1.04
74-95-3	Dibromomethane		39.0	ug/kg	0.313	1.04
108-10-1	4-Methyl-2-pentanone		217	ug/kg	1.30	5.22
10061-01-5	cis-1,3-Dichloropropylene		40.9	ug/kg	0.313	1.04
108-88-3	Toluene		34.5	ug/kg	0.313	1.04
10061-02-6	trans-1,3-Dichloropropylene		40.3	ug/kg	0.313	1.04
79-00-5	1,1,2-Trichloroethane		39.1	ug/kg	0.313	1.04
591-78-6	2-Hexanone		259	ug/kg	1.57	5.22
142-28-9	1,3-Dichloropropane		38.3	ug/kg	0.313	1.04
127-18-4	Tetrachloroethylene		37.7	ug/kg	0.313	1.04
124-48-1	Dibromochloromethane		41.7	ug/kg	0.313	1.04
106-93-4	1,2-Dibromoethane		40.5	ug/kg	0.313	1.04
108-90-7	Chlorobenzene		37.1	ug/kg	0.313	1.04

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874912	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10463PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 21:51	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:31	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s125.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		35.9	ug/kg	0.313	1.04
179601-23-1	m,p-Xylenes		72.8	ug/kg	0.313	2.09
95-47-6	o-Xylene		37.5	ug/kg	0.313	1.04
100-42-5	Styrene		38.9	ug/kg	0.313	1.04
75-25-2	Bromoform		36.7	ug/kg	0.313	1.04
79-34-5	1,1,2,2-Tetrachloroethane		38.4	ug/kg	0.313	1.04
96-18-4	1,2,3-Trichloropropane		42.5	ug/kg	0.313	1.04
108-86-1	Bromobenzene		36.4	ug/kg	0.313	1.04
103-65-1	n-Propylbenzene		33.9	ug/kg	0.313	1.04
95-49-8	2-Chlorotoluene		34.9	ug/kg	0.313	1.04
98-82-8	Isopropylbenzene		29.5	ug/kg	0.313	1.04
108-67-8	1,3,5-Trimethylbenzene		34.4	ug/kg	0.313	1.04
106-43-4	4-Chlorotoluene		34.9	ug/kg	0.313	1.04
98-06-6	tert-Butylbenzene		35.2	ug/kg	0.313	1.04
95-63-6	1,2,4-Trimethylbenzene		34.7	ug/kg	0.313	1.04
135-98-8	sec-Butylbenzene		34.6	ug/kg	0.313	1.04
99-87-6	4-Isopropyltoluene		35.7	ug/kg	0.313	1.04
541-73-1	1,3-Dichlorobenzene		36.5	ug/kg	0.313	1.04
106-46-7	1,4-Dichlorobenzene		35.6	ug/kg	0.313	1.04
104-51-8	n-Butylbenzene		34.5	ug/kg	0.313	1.04
96-12-8	1,2-Dibromo-3-chloropropane		51.8	ug/kg	0.313	1.04
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.22	ug/kg	1.67	5.22
630-20-6	1,1,1,2-Tetrachloroethane		40.3	ug/kg	0.313	1.04
95-50-1	1,2-Dichlorobenzene		36.7	ug/kg	0.313	1.04

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s125.d
Lab Smp Id: 1201874912 Client Smp ID: CAMO-09-10463MS
Inj Date : 06-JUL-2009 21:51
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874912|882743|1|VOAF|1|
Misc Info : LANL 5g N/A 232424001MS
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 25 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.16030	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1565823	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1199918	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	698015	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	396420	50.5255	52.7
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1563680	49.1913	51.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	633473	49.1376	51.3
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	211517	48.4097	50.5
5 Chloromethane	50	4.713	4.713	(0.472)	278129	38.2699	39.9
6 Vinyl chloride	62	4.934	4.934	(0.494)	286167	38.8872	40.6
7 Bromomethane	94	5.498	5.508	(0.551)	222628	38.3143	40.0
8 Chloroethane	64	5.619	5.629	(0.563)	196398	37.7807	39.4
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	389812	40.0133	41.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.718	6.718	(0.673)	307290	252.727	264
14 1,1-Dichloroethylene	61	6.725	6.718	(0.674)	354992	36.7482	38.3
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	667095	34.1091	35.6
15 Iodomethane	142	6.968	6.968	(0.698)	2152933	187.345	195
20 Methylene chloride	84	7.292	7.298	(0.731)	268761	31.3940	32.8
18 Carbon disulfide	76	7.103	7.096	(0.712)	4199002	202.592	211
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	332966	34.2650	35.8
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	436053	35.5179	37.0
30 2-Butanone	43	8.694	8.694	(0.871)	516168	307.763	321
31 cis-1,2-Dichloroethylene	61	8.749	8.742	(0.877)	397364	36.6810	38.3
100 1,3-Dichlorobenzene	146	15.516	15.515	(0.996)	663075	34.9740	36.5
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	338958	36.7817	38.4
36 Chloroform	83	9.053	9.059	(0.907)	420503	35.4761	37.0
106 1,2-Dichlorobenzene	146	16.022	16.021	(1.029)	634617	35.1702	36.7
35 Bromochloromethane	128	9.023	9.023	(0.904)	136978	37.9168	39.6
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	358835	37.3319	39.0
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	344515	36.3810	38.0
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	332495	38.1396	39.8
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	305079	34.1542	35.6
49 Benzene	78	9.724	9.724	(0.974)	1014349	34.7000	36.2
53 Trichloroethylene	95	10.364	10.364	(1.038)	269947	36.8406	38.4
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	260058	36.3544	37.9
59 Bromodichloromethane	83	10.864	10.864	(1.089)	313368	39.1147	40.8
58 Dibromomethane	93	10.754	10.754	(1.078)	151002	37.3499	39.0
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	499338	207.647	217
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	410563	39.1842	40.9
65 Toluene	92	11.699	11.699	(0.889)	651953	33.0887	34.5
67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	368285	38.5885	40.3
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	191318	37.4434	39.1
69 2-Hexanone	43	12.260	12.260	(0.932)	821851	247.914	259
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	397996	36.6827	38.3
71 Tetrachloroethylene	164	12.291	12.291	(0.934)	248453	36.0934	37.7
72 Dibromochloromethane	129	12.541	12.540	(0.953)	250289	39.9452	41.7
73 1,2-Dibromoethane	107	12.711	12.711	(0.966)	232126	38.7791	40.5
76 Chlorobenzene	112	13.193	13.193	(1.003)	754345	35.5091	37.0
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	267923	38.6584	40.3
78 Ethylbenzene	91	13.254	13.254	(1.007)	1223899	34.4005	35.9
79 m,p-Xylenes	106	13.364	13.363	(1.016)	996849	69.7765	72.8
80 o-Xylene	106	13.796	13.796	(1.049)	501874	35.9097	37.5
81 Styrene	104	13.802	13.802	(1.049)	809794	37.2474	38.9
82 Bromoform	173	14.065	14.065	(0.903)	188163	35.1985	36.7
87 1,1,2,2-Tetrachloroethane	83	14.436	14.443	(0.927)	304880	36.7561	38.4
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	93145	40.7163	42.5(Q)
90 Bromobenzene	156	14.565	14.564	(0.935)	343538	34.9058	36.4
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1446110	32.5288	33.9
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1009891	33.4634	34.9
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1086424	28.3141	29.5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1061934	32.9625	34.4
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	899124	33.4157	34.9
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1022325	33.7235	35.2
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1083715	33.2862	34.7
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	1426459	33.1831	34.6
99 4-Isopropyltoluene	119	15.455	15.455	(0.992)	1210060	34.2333	35.7
104 n-Butylbenzene	92	15.887	15.887	(1.020)	593431	33.0759	34.5
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	70617	49.6486	51.8

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070609v6/6s125.d
Date : 06-JUL-2009 21:51
Client ID: CAMO-09-10463MS
Sample Info: 1120187491218827431|1|VOAF|1|
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

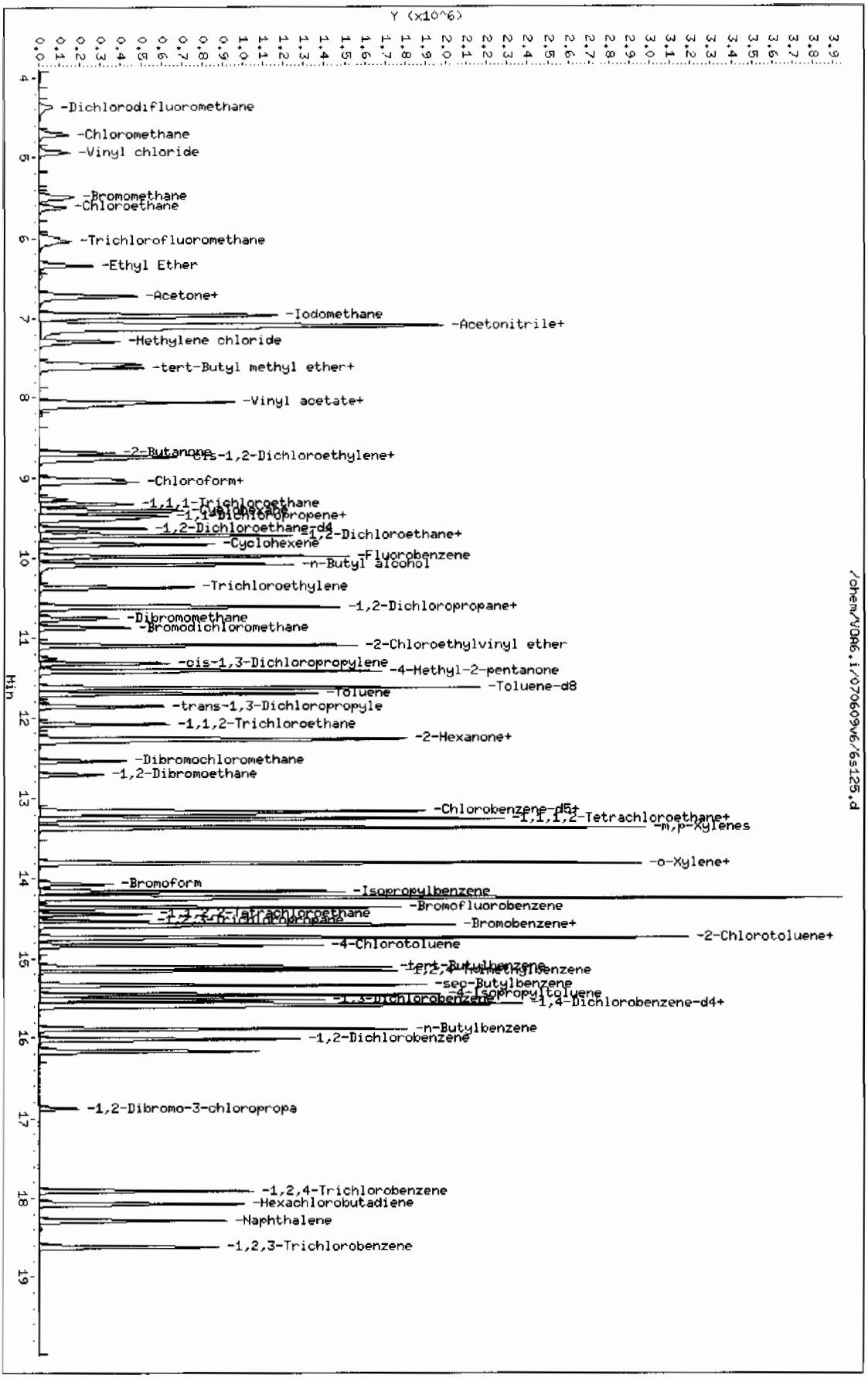

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874913	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10463PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 22:18	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s126.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		58.7	ug/kg	0.355	1.04
74-87-3	Chloromethane		45.2	ug/kg	0.313	1.04
75-01-4	Vinyl chloride		45.8	ug/kg	0.313	1.04
74-83-9	Bromomethane		44.5	ug/kg	0.313	1.04
75-00-3	Chloroethane		44.7	ug/kg	0.313	1.04
75-69-4	Trichlorofluoromethane		48.2	ug/kg	0.595	1.04
67-64-1	Acetone		271	ug/kg	1.73	5.22
75-35-4	1,1-Dichloroethylene		43.7	ug/kg	0.313	1.04
74-88-4	Iodomethane		224	ug/kg	1.67	5.22
75-09-2	Methylene chloride		38.0	ug/kg	2.09	5.22
75-15-0	Carbon disulfide		238	ug/kg	1.30	5.22
156-60-5	trans-1,2-Dichloroethylene		41.2	ug/kg	0.313	1.04
75-34-3	1,1-Dichloroethane		42.4	ug/kg	0.313	1.04
78-93-3	2-Butanone		332	ug/kg	1.57	5.22
156-59-2	cis-1,2-Dichloroethylene		44.0	ug/kg	0.313	1.04
594-20-7	2,2-Dichloropropane		44.5	ug/kg	0.313	1.04
67-66-3	Chloroform		42.9	ug/kg	0.313	1.04
74-97-5	Bromochloromethane		45.0	ug/kg	0.344	1.04
71-55-6	1,1,1-Trichloroethane		45.4	ug/kg	0.313	1.04
563-58-6	1,1-Dichloropropene		44.0	ug/kg	0.313	1.04
56-23-5	Carbon tetrachloride		46.3	ug/kg	0.313	1.04
107-06-2	1,2-Dichloroethane		40.3	ug/kg	0.313	1.04
71-43-2	Benzene		41.8	ug/kg	0.313	1.04
79-01-6	Trichloroethylene		45.3	ug/kg	0.344	1.04
78-87-5	1,2-Dichloropropane		43.7	ug/kg	0.313	1.04
75-27-4	Bromodichloromethane		47.2	ug/kg	0.313	1.04
74-95-3	Dibromomethane		44.0	ug/kg	0.313	1.04
108-10-1	4-Methyl-2-pentanone		237	ug/kg	1.30	5.22
10061-01-5	cis-1,3-Dichloropropylene		46.9	ug/kg	0.313	1.04
108-88-3	Toluene		40.9	ug/kg	0.313	1.04
10061-02-6	trans-1,3-Dichloropropylene		46.9	ug/kg	0.313	1.04
79-00-5	1,1,2-Trichloroethane		45.2	ug/kg	0.313	1.04
591-78-6	2-Hexanone		274	ug/kg	1.57	5.22
142-28-9	1,3-Dichloropropane		43.8	ug/kg	0.313	1.04
127-18-4	Tetrachloroethylene		44.7	ug/kg	0.313	1.04
124-48-1	Dibromochloromethane		48.1	ug/kg	0.313	1.04
106-93-4	1,2-Dibromoethane		46.0	ug/kg	0.313	1.04
108-90-7	Chlorobenzene		43.7	ug/kg	0.313	1.04

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874913	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
Client Sample:	QC for batch 882741	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10463PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882743	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/06/2009 22:18	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 13:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6s126.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		42.3	ug/kg	0.313	1.04
179601-23-1	m,p-Xylenes		86.2	ug/kg	0.313	2.09
95-47-6	o-Xylene		43.8	ug/kg	0.313	1.04
100-42-5	Styrene		45.5	ug/kg	0.313	1.04
75-25-2	Bromoform		41.8	ug/kg	0.313	1.04
79-34-5	1,1,2,2-Tetrachloroethane		42.9	ug/kg	0.313	1.04
96-18-4	1,2,3-Trichloropropane		48.7	ug/kg	0.313	1.04
108-86-1	Bromobenzene		43.6	ug/kg	0.313	1.04
103-65-1	n-Propylbenzene		41.2	ug/kg	0.313	1.04
95-49-8	2-Chlorotoluene		42.0	ug/kg	0.313	1.04
98-82-8	Isopropylbenzene		35.8	ug/kg	0.313	1.04
108-67-8	1,3,5-Trimethylbenzene		41.9	ug/kg	0.313	1.04
106-43-4	4-Chlorotoluene		42.3	ug/kg	0.313	1.04
98-06-6	tert-Butylbenzene		43.3	ug/kg	0.313	1.04
95-63-6	1,2,4-Trimethylbenzene		42.1	ug/kg	0.313	1.04
135-98-8	sec-Butylbenzene		42.6	ug/kg	0.313	1.04
99-87-6	4-Isopropyltoluene		43.9	ug/kg	0.313	1.04
541-73-1	1,3-Dichlorobenzene		43.6	ug/kg	0.313	1.04
106-46-7	1,4-Dichlorobenzene		42.6	ug/kg	0.313	1.04
104-51-8	n-Butylbenzene		42.3	ug/kg	0.313	1.04
96-12-8	1,2-Dibromo-3-chloropropane		57.7	ug/kg	0.313	1.04
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.22	ug/kg	1.67	5.22
630-20-6	1,1,1,2-Tetrachloroethane		47.9	ug/kg	0.313	1.04
95-50-1	1,2-Dichlorobenzene		43.7	ug/kg	0.313	1.04

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070609v6/6s126.d
Lab Smp Id: 1201874913 Client Smp ID: CAMO-09-10463MSD
Inj Date : 06-JUL-2009 22:18
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201874913|882743|1|VOAF|1|
Misc Info : LANL 5g N/A 232424001MSD
Comment :
Method : /chem/VOA6.i/070609v6/VOA6-8260B-061509.m
Meth Date : 12-Jul-2009 09:46 kel00587 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 26 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.16030	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1375439	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1025343	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	583234	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	334690	48.5623	50.7
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1353251	49.8197	52.0
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	532960	49.4769	51.6
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	215742	56.2113	58.6
5 Chloromethane	50	4.713	4.713	(0.472)	276604	43.3282	45.2
6 Vinyl chloride	62	4.934	4.934	(0.494)	283578	43.8693	45.8
7 Bromomethane	94	5.488	5.508	(0.550)	217766	42.6650	44.5
8 Chloroethane	64	5.629	5.629	(0.564)	195828	42.8854	44.7
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	395015	46.1598	48.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.718	6.718	(0.673)	277925	260.165	271
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	355626	41.9095	43.7
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	667000	40.8160	42.6
15 Iodomethane	142	6.968	6.968	(0.698)	2164125	214.385	224
20 Methylene chloride	84	7.298	7.298	(0.731)	268766	36.4202	38.0
18 Carbon disulfide	76	7.090	7.096	(0.710)	4150869	227.991	238
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	337241	39.5087	41.2
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	438310	40.6435	42.4
30 2-Butanone	43	8.694	8.694	(0.871)	468905	318.281	332
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	401454	42.1881	44.0
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	662307	41.8084	43.6
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	345204	42.6445	44.5
36 Chloroform	83	9.059	9.059	(0.908)	427767	41.0843	42.9
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	632171	41.9295	43.7
35 Bromochloromethane	128	9.023	9.023	(0.904)	136731	43.0873	45.0
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	367547	43.5311	45.4
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	350654	42.1547	44.0
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	339496	44.3329	46.2
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	303112	38.6310	40.3
49 Benzene	78	9.724	9.724	(0.974)	1029758	40.1032	41.8
53 Trichloroethylene	95	10.364	10.364	(1.038)	279516	43.4266	45.3
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	263286	41.9002	43.7
59 Bromodichloromethane	83	10.864	10.864	(1.089)	318306	45.2305	47.2
58 Dibromomethane	93	10.754	10.754	(1.078)	149893	42.2075	44.0
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	466172	226.861	237
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	413336	44.9092	46.8
65 Toluene	92	11.699	11.699	(0.889)	659913	39.1952	40.9
67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	366612	44.9535	46.9
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	189257	43.3465	45.2
69 2-Hexanone	43	12.260	12.260	(0.932)	744038	262.655	274
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	388909	41.9482	43.8
71 Tetrachloroethylene	164	12.290	12.291	(0.934)	252255	42.8850	44.7
72 Dibromochloromethane	129	12.540	12.540	(0.953)	246741	46.0836	48.1
73 1,2-Dibromoethane	107	12.711	12.711	(0.966)	225313	44.0496	46.0
76 Chlorobenzene	112	13.193	13.193	(1.003)	760827	41.9120	43.7
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	271813	45.8972	47.9
78 Ethylbenzene	91	13.254	13.254	(1.007)	1232204	40.5307	42.3
79 m,p-Xylenes	106	13.363	13.363	(1.016)	1009100	82.6602	86.2
80 o-Xylene	106	13.796	13.796	(1.049)	501074	41.9567	43.8
81 Styrene	104	13.802	13.802	(1.049)	810502	43.6272	45.5
82 Bromoform	173	14.064	14.065	(0.903)	179851	40.0487	41.8
87 1,1,2,2-Tetrachloroethane	83	14.442	14.443	(0.927)	284753	41.0857	42.9
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	89259	46.6963	48.7
90 Bromobenzene	156	14.564	14.564	(0.935)	344016	41.8334	43.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1466068	39.4678	41.2
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1015142	40.2572	42.0
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1098816	34.2729	35.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1081162	40.1639	41.9
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	910657	40.5049	42.3
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1050781	41.4837	43.3
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1097668	40.3499	42.1
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	1465488	40.8001	42.6
99 4-Isopropyltoluene	119	15.454	15.455	(0.992)	1242017	42.0524	43.9
104 n-Butylbenzene	92	15.887	15.887	(1.020)	607251	40.5072	42.3
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	65695	55.2780	57.7

Data File: /chem/VOA6.i/070609v6/6s126.d
Date : 06-JUL-2009 22:18
Client ID: CAMO-09-10463MSD
Sample Info: |120187491318827431|VOAF1|

Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

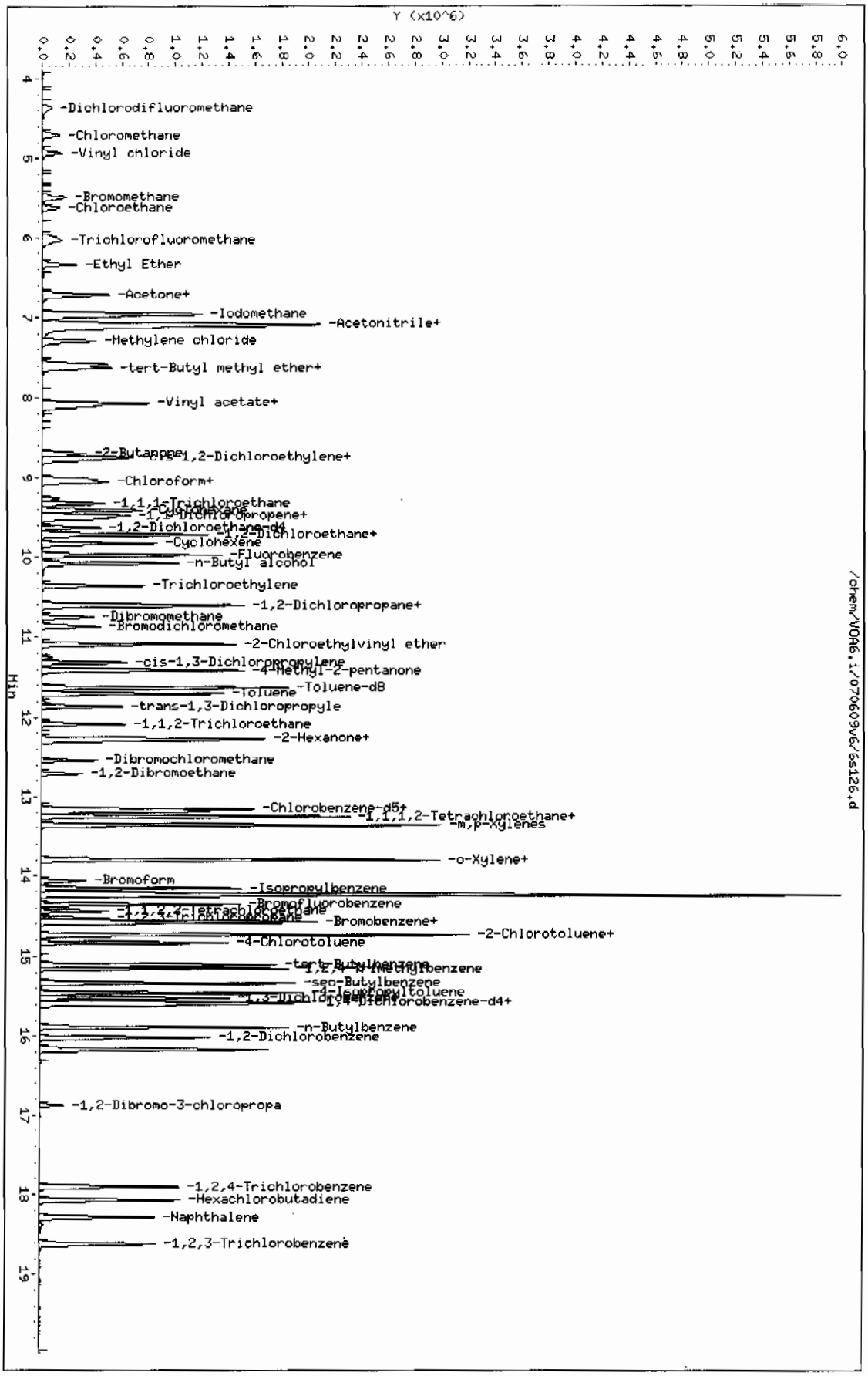

Page 1

Miscellaneous Data

Prep LogBook

Analyst: AXO1 Verified by:_____

Batch: 882741

Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201874911		SW846 5030	06-JUL-2009 10:30	N/A	5 g	5 mL	1	SOIL
MB	1201877123		SW846 5030	07-JUL-2009 10:00	N/A	5 g	5 mL	1	SOIL
LCS	1201874914		SW846 5030	06-JUL-2009 10:30	N/A	5 g	5 mL	1	SOIL
LCS	1201874915		SW846 5030	06-JUL-2009 10:30	N/A	5 g	5 mL	1	SOIL
LCS	1201877124		SW846 5030	07-JUL-2009 10:00	N/A	5 g	5 mL	1	SOIL
LCS	1201877125		SW846 5030	07-JUL-2009 10:00	N/A	5 g	5 mL	1	SOIL
SAMPLE	232424001		SW846 5030	06-JUL-2009 13:16	N/A	5 g	5 mL	1	SOIL
PS	1201874912	232424001	SW846 5030	06-JUL-2009 13:31	N/A	5 g	5 mL	1	SOIL
PSD	1201874913	232424001	SW846 5030	06-JUL-2009 13:32	N/A	5 g	5 mL	1	SOIL
SAMPLE	232426001		SW846 5030	06-JUL-2009 13:17	N/A	5 g	5 mL	1	SOIL
SAMPLE	232426002		SW846 5030	07-JUL-2009 10:45	N/A	5 g	5 mL	1	SOIL
SAMPLE	232426003		SW846 5030	06-JUL-2009 13:19	N/A	5 g	5 mL	1	SOIL
SAMPLE	232426004		SW846 5030	06-JUL-2009 13:20	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428001		SW846 5030	06-JUL-2009 13:21	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428004		SW846 5030	06-JUL-2009 13:22	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428006		SW846 5030	06-JUL-2009 13:23	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428007		SW846 5030	06-JUL-2009 13:24	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428008		SW846 5030	06-JUL-2009 13:25	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428011		SW846 5030	06-JUL-2009 13:26	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428013		SW846 5030	06-JUL-2009 13:27	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428016		SW846 5030	06-JUL-2009 13:28	N/A	5 g	5 mL	1	SOIL
SAMPLE	232428017		SW846 5030	06-JUL-2009 13:29	N/A	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 6/15/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1306

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 061509V6

Daily Standard — Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	ICV	MS/ LCS	BFB
L-ICV	W6VM090615-17		5+5		
IS	UVM090518-01	1	1		
SS	UVM090305-02	1	1		
S-ICV	W6VM090615-25		5+5		
BFB	UVM090305-02				1

Purge Amount

5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6/15/2009	9:58	6P101.D	RINSE	GEL	BLANK	5mL	1	N/A	1	w	RXD1	N/A	X	RINSE
6/15/2009	10:26	6P102.D	RINSE	GEL	BLANK	5mL	1	N/A	2	w	RXD1	N/A	X	RINSE
6/15/2009	11:16	6P103.D	W6VM090615-01	GEL	CCV	5uL	1	N/A	3	w	RXD1	N/A	X	UVM090603-07A+UVM090520-07D
6/15/2009	11:44	6P104.D	W6VM090615-02	GEL	CCV/LCS	5uL	1	N/A	4	w	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	12:36	6P105.D	W6VM090615-03	GEL	CCV	5uL	1	N/A	5	w	RXD1	N/A	X	UVM090603-07A+UVM090520-07D
6/15/2009	13:04	6P106.D	W6VM090615-04	GEL	CCV/LCS	5uL	1	N/A	6	w	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	13:32	6P107.D	W6VM090615-05	GEL	LCS	5g	1	N/A	7	s	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	14:23	6P108.D	W6VM090615-06	GEL	CCV/LCS	5uL	1	N/A	8	w	RXD1	N/A	X	UVM090519-01E+IVM090611-01
6/15/2009	15:14	6P109.D	RINSE	GEL	BLANK	5mL	1	N/A	9	w	RXD1	N/A	X	RINSE
6/15/2009	15:42	6P110.D	W6VM090615-07	GEL	L-1	5uL	1	N/A	10	w	RXD1	N/A	X	TEST
6/15/2009	16:10	6P111.D	UVM090305-02	GEL	BFB	5mL	1	N/A	11	w	RXD1	N/A	O	
6/15/2009	16:38	6P112.D	W6VM090615-08	GEL	L-1	5uL	1	N/A	12	w	RXD1	N/A	O	UVM090603-02A+UVM090520-02D
6/15/2009	17:06	6P113.D	W6VM090615-09	GEL	L-2	5uL	1	N/A	13	w	RXD1	N/A	O	UVM090603-03A+UVM090520-03D
6/15/2009	17:34	6P114.D	W6VM090615-10	GEL	L-5	5uL	1	N/A	14	w	RXD1	N/A	O	UVM090603-04A+UVM090520-04D
6/15/2009	18:02	6P115.D	W6VM090615-11	GEL	L-10	5uL	1	N/A	15	w	RXD1	N/A	O	UVM090603-05A+UVM090520-05D
6/15/2009	18:30	6P116.D	W6VM090615-12	GEL	L-20	5uL	1	N/A	16	w	RXD1	N/A	X	Methyline Chloride would not pass
6/15/2009	18:58	6P117.D	W6VM090615-13	GEL	L-50	5uL	1	N/A	17	w	RXD1	N/A	O	UVM090603-07A+UVM090520-07D
6/15/2009	19:25	6P118.D	W6VM090615-14	GEL	L-100	5uL	1	N/A	18	w	RXD1	N/A	O	UVM090603-08A+UVM090520-08D
6/15/2009	19:53	6P119.D	RINSE	GEL	BLANK	5mL	1	N/A	19	w	RXD1	N/A	x	RINSE
6/15/2009	20:21	6P120.D	W6VM090615-15	GEL	L-0.5	5uL	1	N/A	20	w	RXD1	N/A	O	UVM090603-01A+UVM090520-01D
6/15/2009	20:49	6P121.D	W6VM090615-16	GEL	L-ICV	5uL	1	N/A	21	w	RXD1	N/A	x	UVM090605-01A+IVM090611-01
6/15/2009	21:17	6P122.D	W6VM090615-17	GEL	L-ICV	5uL	1	N/A	22	w	RXD1	N/A	O	UVM090527-01C+IVM090611-01
6/15/2009	21:45	6P123.D	W6VM090615-18	GEL	S-5	5uL	1	N/A	23	w	RXD1	N/A	O	UVM090601-01+UVM090522-01C
6/15/2009	22:12	6P124.D	W6VM090615-19	GEL	S-10	5uL	1	N/A	24	w	RXD1	N/A	O	UVM090601-02+UVM090522-02C
6/15/2009	22:40	6P125.D	W6VM090615-20	GEL	S-25	5uL	1	N/A	25	w	RXD1	N/A	O	UVM090601-03+UVM090522-03C
6/15/2009	23:07	6P126.D	W6VM090615-21	GEL	S-50	5uL	1	N/A	26	w	RXD1	N/A	O	UVM090601-04+UVM090522-04C
6/15/2009	23:35	6P127.D	W6VM090615-22	GEL	S-100	5uL	1	N/A	27	w	RXD1	N/A	O	UVM090601-05+UVM090522-05C
6/16/2009	0:03	6P128.D	W6VM090615-23	GEL	S-250	5uL	1	N/A	28	w	RXD1	N/A	O	UVM090601-06+UVM090522-06C

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 6/15/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1306

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 061509V6

Daily Standard — Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	ICV	MS/ LCS	BFB
L-ICV	W6VM090615-17		5+5		
IS	UVM090518-01	1	1		
SS	UVM090305-02	1	1		
S-ICV	W6VM090615-25		5+5		
BFB	UVM090305-02				1

Purge Amount

5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6/16/2009	0:31	6P129.D	W6VM090615-24	GEL	S-500	5uL	1	N/A	29	w	RXD1	N/A	O	UVM090601-07+UVM090522-07C
6/16/2009	0:59	6P130.D	RINSE	GEL	BLANK	5mL	1	N/A	30	w	RXD1	N/A	x	RINSE
6/16/2009	1:27	6P131.D	W6VM090615-25	GEL	S-ICV	5uL	1	N/A	31	w	RXD1	N/A	O	UVM090601-08A+UVM090528-01C
6/16/2009	1:55	6P132.D	RINSE	GEL	BLANK	5mL	1	N/A	32	w	RXD1	N/A	x	RINSE

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 7/6/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1341

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. 123 for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 070609V6

Daily Standard — Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W6VM090706-02		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W6VM090706-02/03			5+5	
BFB	W6VM090706-02				1
SHORT	UVM090601-08B		5	5	
DHEC	N/A				

Purge Amount

5	Water Purge Vol:ML
5	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6 Jul 2009 09:53	6S101.D	RINSE	GEL	RINSE	5mL	1	N/A	1	w	AXO1	N/A	X	RINSE
6 Jul 2009 10:21	6S102.D	W6VM090706-01	GEL	CCV	5uL	1	N/A	2	w	AXO1	N/A	X	UVM090603-07B+UVM090617-07C Multiple CCC failures
6 Jul 2009 10:49	6S103.D	W6VM090706-02	GEL	BFB/CCV/LCS	5uL	1	N/A	3	w	AXO1	N/A	O	UVM090605-01D+IVM090630-01
6 Jul 2009 11:17	6S104.D	W6VM090706-03	GEL	LCS	5g	1	N/A	4	s	AXO1	N/A	O	UVM090605-01D+IVM090630-01
6 Jul 2009 11:44	6S105.D	UVM090601-08B	GEL	SHORT/LCS	5uL	1	N/A	5	w	AXO1	N/A	O	
6 Jul 2009 12:12	6S106.D	UVM090601-08B	GEL	SLCS	5g	1	N/A	6	s	AXO1	N/A	O	
6 Jul 2009 12:39	6S107.D	12018--	GEL	MB	5ml	1	N/A	7	w	AXO1	N/A	X	
6 Jul 2009 13:07	6S108.D	12018--	GEL	MB	5g	1	N/A	8	s	AXO1	N/A	O	
6 Jul 2009 13:35	6S109.D	232363003	LANL	882208	5g	1	N/A	9	s	AXO1	N/A	O	
6 Jul 2009 14:03	6S110.D	232363004	LANL	882208	5g	1	N/A	10	s	AXO1	N/A	O	
6 Jul 2009 15:22	6S111.D	232424001	LANL	882743	5g	1	N/A	11	s	AXO1	N/A	O	
6 Jul 2009 15:50	6S112.D	232426001	LANL	882743	5g	1	N/A	12	s	AXO1	N/A	O	
6 Jul 2009 16:18	6S113.D	232426002	LANL	882743	5g	1	N/A	13	s	AXO1	N/A	X	RR IS Failure see file 6s209
6 Jul 2009 16:46	6S114.D	232426003	LANL	882743	5g	1	N/A	14	s	AXO1	N/A	O	
6 Jul 2009 17:14	6S115.D	232426004	LANL	882743	5g	1	N/A	15	s	AXO1	N/A	O	
6 Jul 2009 17:41	6S116.D	232428001	LANL	882743	5g	1	N/A	16	s	AXO1	N/A	O	
6 Jul 2009 18:09	6S117.D	232428004	LANL	882743	5g	1	N/A	17	s	AXO1	N/A	O	
6 Jul 2009 18:37	6S118.D	232428006	LANL	882743	5g	1	N/A	18	s	AXO1	N/A	O	
6 Jul 2009 19:05	6S119.D	232428007	LANL	882743	5g	1	N/A	19	s	AXO1	N/A	O	
6 Jul 2009 19:32	6S120.D	232428008	LANL	882743	5g	1	N/A	20	s	AXO1	N/A	O	
6 Jul 2009 20:00	6S121.D	232428011	LANL	882743	5g	1	N/A	21	s	AXO1	N/A	O	
6 Jul 2009 20:28	6S122.D	232428013	LANL	882743	5g	1	N/A	22	s	AXO1	N/A	O	
6 Jul 2009 20:55	6S123.D	232428016	LANL	882743	5g	1	N/A	23	s	AXO1	N/A	O	
6 Jul 2009 21:23	6S124.D	232428017	LANL	882743	5g	1	N/A	24	s	AXO1	N/A	O	
6 Jul 2009 21:51	6S125.D	1201874912	LANL	882743	5g	1	N/A	25	s	AXO1	N/A	O	232424001MS

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 7/6/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1341

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. 123 for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 070609V6

Daily Standard	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W6VM090706-02		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W6VM090706-02/03			5+5	
BFB	W6VM090706-02				1
SHORT	UVM090601-08B		5	5	
DHEC	N/A				

Purge Amount	
5	Water Purge Vol:ML
5	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6 Jul 2009	22:18	6S126.D	1201874913	LANL	882743	5g	1	N/A	26	s	AXO1	N/A	O	232424001MSD

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GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2473

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	881319
Prep Batch Number:	881317

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232424001	CAMO-09-10463
1201871647	Method Blank (MB)
1201871648	Laboratory Control Sample (LCS)
1201871649	232428001(CAMO-09-6007) Matrix Spike (MS)
1201871650	232428001(CAMO-09-6007) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C,

Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
The non-SDG sample 232428001 (CAMO-09-6007) was selected for analysis as the matrix spike and matrix spike duplicate. Please see the associated raw data files located in the Miscellaneous Section of the data report.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days

expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for confirmations and/or dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Additional Comments
Additional comments were not required for this SDG.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration

The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD2.I	Agilent 5975 Mass Spectrometer	HP7890A/HP5975C	DB-5MS	25m x 0.2mm, 0.33um (5% Phenylmethylpolysiloxane)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: [illegible] **Date:** 7-17-09

Roadmap for LANL 09-2473 SVOA

This roadmap was analyzed by ANN00964 on 07-01-2009, 17:18.
This roadmap was reviewed by dan01134 on 07-07-2009, 16:28.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD2.i/s063009.b/s2f3007.d	232424001	30-JUN-2009	17:53	09-2473.sub	CAMO-09 10463	1	881319	REPORT

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	Y	/chem/MSD2.i/s063009.b/s2f3005.d	1201871647	mb	30-JUN-2009	17:13	09-2473.sub	SBLK01	1.00000	881319	
☐	Y	/chem/MSD2.i/s063009.b/s2f3006.d	1201871648	lcs	30-JUN-2009	17:33	09-2473.sub	SBLK01LCS	1.00000	881319	

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	Date Collected:	06/23/2009 12:00	Matrix:	R
Lab Sample ID:	232424001	Date Received:	06/26/2009 08:40	%Moisture:	4.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10463	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.1	Dilution:	1
Run Date:	06/30/2009 17:53	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30.24 g	Final Volume:	1 mL
Data File:	s2f3007.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	345	ug/kg	69.0	345
108-95-2	Phenol	U	345	ug/kg	69.0	345
95-57-8	2-Chlorophenol	U	345	ug/kg	69.0	345
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	69.0	345
621-64-7	N-Nitrosodipropylamine	U	345	ug/kg	69.0	345
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	34.5	345
83-32-9	Acenaphthene	U	34.5	ug/kg	11.5	34.5
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345
100-02-7	4-Nitrophenol	U	345	ug/kg	69.0	345
87-86-5	Pentachlorophenol	U	345	ug/kg	69.0	345
129-00-0	Pyrene	U	34.5	ug/kg	10.8	34.5
110-86-1	Pyridine	U	345	ug/kg	69.0	345
62-53-3	Aniline	U	345	ug/kg	121	345
111-44-4	bis(2-Chloroethyl) ether	U	345	ug/kg	69.0	345
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	69.0	345
100-51-6	Benzyl alcohol	U	345	ug/kg	104	345
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	69.0	345
108-60-1	bis(2-Chloroisopropyl)ether	U	345	ug/kg	69.0	345
95-48-7	o-Cresol	U	345	ug/kg	69.0	345
65794-96-9	m,p-Cresols	U	345	ug/kg	138	345
67-72-1	Hexachloroethane	U	345	ug/kg	69.0	345
98-95-3	Nitrobenzene	U	345	ug/kg	69.0	345
78-59-1	Isophorone	U	345	ug/kg	69.0	345
88-75-5	2-Nitrophenol	U	345	ug/kg	34.5	345
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	69.0	345
111-91-1	bis(2-Chloroethoxy)methane	U	345	ug/kg	69.0	345
120-83-2	2,4-Dichlorophenol	U	345	ug/kg	69.0	345
65-85-0	Benzoic acid	U	690	ug/kg	173	690
91-20-3	Naphthalene	U	34.5	ug/kg	10.4	34.5
106-47-8	4-Chloroaniline	U	345	ug/kg	69.0	345
87-68-3	Hexachlorobutadiene	U	345	ug/kg	69.0	345
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.90	34.5
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	69.0	345
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	69.0	345
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	69.0	345
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	12.1	34.5
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	345	ug/kg	69.0	345
99-09-2	3-Nitroaniline	U	345	ug/kg	69.0	345

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232424001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10463	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 17:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.24 g	**Final Volume:**	1 mL
Data File:	s2f3007.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	345	ug/kg	69.0	345
606-20-2	2,6-Dinitrotoluene	U	345	ug/kg	34.5	345
208-96-8	Acenaphthylene	U	34.5	ug/kg	10.4	34.5
51-28-5	2,4-Dinitrophenol	U	690	ug/kg	131	690
132-64-9	Dibenzofuran	U	345	ug/kg	69.0	345
84-66-2	Diethylphthalate	U	345	ug/kg	69.0	345
86-73-7	Fluorene	U	34.5	ug/kg	10.4	34.5
7005-72-3	4-Chlorophenylphenylether	U	345	ug/kg	34.5	345
534-52-1	2-Methyl-4,6-dinitrophenol	U	345	ug/kg	69.0	345
100-01-6	4-Nitroaniline	U	345	ug/kg	69.0	345
	p-Nitroaniline					
122-39-4	Diphenylamine	U	345	ug/kg	69.0	345
122-66-7	Azobenzene	U	345	ug/kg	69.0	345
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	345	ug/kg	34.5	345
118-74-1	Hexachlorobenzene	U	345	ug/kg	69.0	345
85-01-8	Phenanthrene	U	34.5	ug/kg	10.4	34.5
120-12-7	Anthracene	U	34.5	ug/kg	6.90	34.5
84-74-2	Di-n-butylphthalate	U	345	ug/kg	34.5	345
206-44-0	Fluoranthene	U	34.5	ug/kg	10.4	34.5
85-68-7	Butylbenzylphthalate	U	345	ug/kg	69.0	345
56-55-3	Benzo(a)anthracene	U	34.5	ug/kg	10.4	34.5
91-94-1	3,3'-Dichlorobenzidine	U	345	ug/kg	104	345
218-01-9	Chrysene	U	34.5	ug/kg	10.4	34.5
117-81-7	bis(2-Ethylhexyl)phthalate	U	345	ug/kg	69.0	345
117-84-0	Di-n-octylphthalate	U	345	ug/kg	69.0	345
205-99-2	Benzo(b)fluoranthene	U	34.5	ug/kg	10.4	34.5
207-08-9	Benzo(k)fluoranthene	U	34.5	ug/kg	10.4	34.5
50-32-8	Benzo(a)pyrene	U	34.5	ug/kg	10.4	34.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.4	34.5
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.4	34.5
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.4	34.5
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	69.0	345

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	259	ug/kg		JA

QC Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 09-2473

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201871647	MB for batch 881317	69	69	69	74	73	96
1201871648	LCS for batch 881317	74	69	76	77	85	91
232424001	CAMO-09-10463	56	53	56	57	57	68

Surrogate		Acceptance Limits
2FP	= 2-Fluorophenol	(35%-96%)
PHL	= Phenol-d5	(36%-96%)
NBZ	= Nitrobenzene-d5	(34%-104%)
FBP	= 2-Fluorobiphenyl	(36%-100%)
TBP	= 2,4,6-Tribromophenol	(37%-106%)
TPH	= p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: LCS for batch 881317
Lab Sample ID: 1201871648
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 17:33
Dilution: 1
Prep Batch ID: 881317
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1200	72	31-95
108-95-2	LCS	Phenol	1670	0.0	1230	74	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1290	78	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	1190	71	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1250	75	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1410	84	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1210	73	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1430	86	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1540	92	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	1500	90	38-116
129-00-0	LCS	Pyrene	1670	0.0	1350	81	43-108
110-86-1	LCS	Pyridine	1670	0.0	1150	69	13-129
62-53-3	LCS	Aniline	1670	0.0	1380	83	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1180	71	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	1180	71	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	1010	60	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	1260	75	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1200	72	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1320	79	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1460	88	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	1170	70	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1310	78	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: LCS for batch 881317
Lab Sample ID: 1201871648
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 17:33
Dilution: 1
Prep Batch ID 881317
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1310	79	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1340	80	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1420	85	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1290	77	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1350	81	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	1570	94	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1180	71	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1410	85	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1370	82	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1330	80	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1760	106	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1300	78	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1350	81	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1320	79	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1400	84	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1560	93	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1310	78	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1300	78	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1320	79	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	1410	85	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1370	82	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1360	82	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: LCS for batch 881317
Lab Sample ID: 1201871648
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 17:33
Dilution: 1
Prep Batch ID: 881317
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1240	75	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1370	82	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	1480	89	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	1790	108	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1430	86	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1370	82	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1390	84	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1450	87	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1320	79	45-107
120-12-7	LCS	Anthracene	1670	0.0	1440	87	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1470	88	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1560	94	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1510	91	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1440	87	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1590	96	45-98
218-01-9	LCS	Chrysene	1670	0.0	1500	90	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1470	88	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1360	82	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1610	96	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1510	91	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1580	95	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1570	94	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: LCS for batch 881317
Lab Sample ID: 1201871648
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 17:33
Dilution: 1
Prep Batch ID: 881317
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1640	99	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1560	94	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1300	78	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-6007MS
Lab Sample ID: 1201871649
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 4.3
Analysis Date: 06/30/2009 19:13
Prep Batch ID: 881317
Batch ID: 881319
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	1740	0.00	U	862	50	32-90
108-95-2	MS	Phenol	1740	0.00	U	915	53	32-105
95-57-8	MS	2-Chlorophenol	1740	0.00	U	951	55	33-106
106-46-7	MS	1,4-Dichlorobenzene	1740	0.00	U	835	48	33-95
621-64-7	MS	N-Nitrosodipropylamine	1740	0.00	U	928	53	31-109
59-50-7	MS	4-Chloro-3-methylphenol	1740	0.00	U	1150	66	38-119
83-32-9	MS	Acenaphthene	1740	0.00	U	933	54	39-100
121-14-2	MS	2,4-Dinitrotoluene	1740	0.00	U	1090	63	42-107
100-02-7	MS	4-Nitrophenol	1740	0.00	U	1250	72	24-120
87-86-5	MS	Pentachlorophenol	1740	0.00	U	1240	71	26-121
129-00-0	MS	Pyrene	1740	0.00	U	1080	62	34-120
110-86-1	MS	Pyridine	1740	0.00	U	727	42	30-95
62-53-3	MS	Aniline	1740	0.00	U	972	56	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	1740	0.00	U	855	49	34-101
541-73-1	MS	1,3-Dichlorobenzene	1740	0.00	U	840	48	31-97
100-51-6	MS	Benzyl alcohol	1740	0.00	U	514	30	17-120
95-50-1	MS	1,2-Dichlorobenzene	1740	0.00	U	898	52	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	1740	0.00	U	868	50	32-113
95-48-7	MS	o-Cresol	1740	0.00	U	1020	59	31-119
65794-96-9	MS	m,p-Cresols	1740	0.00	U	1130	65	35-125
67-72-1	MS	Hexachloroethane	1740	0.00	U	804	46	30-100
98-95-3	MS	Nitrobenzene	1740	0.00	U	986	57	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-6007MS
Lab Sample ID: 1201871649
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 4.3
Analysis Date: 06/30/2009 19:13
Prep Batch ID: 881317
Batch ID: 881319
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	1740	0.00	U	977	56	34-110
88-75-5	MS	2-Nitrophenol	1740	0.00	U	1010	58	32-108
105-67-9	MS	2,4-Dimethylphenol	1740	0.00	U	1030	59	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	1740	0.00	U	973	56	35-108
120-83-2	MS	2,4-Dichlorophenol	1740	0.00	U	1020	59	38-110
65-85-0	MS	Benzoic acid	1740	0.00	U	1100	63	18-134
91-20-3	MS	Naphthalene	1740	0.00	U	882	51	31-105
106-47-8	MS	4-Chloroaniline	1740	0.00	U	1050	61	29-123
87-68-3	MS	Hexachlorobutadiene	1740	0.00	U	988	57	31-109
91-57-6	MS	2-Methylnaphthalene	1740	0.00	U	1010	58	32-110
77-47-4	MS	Hexachlorocyclopentadiene	1740	0.00	U	1160	67	21-122
88-06-2	MS	2,4,6-Trichlorophenol	1740	0.00	U	1010	58	37-108
95-95-4	MS	2,4,5-Trichlorophenol	1740	0.00	U	1130	65	37-116
91-58-7	MS	2-Chloronaphthalene	1740	0.00	U	1000	58	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	1740	0.00	U	1090	63	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	1740	0.00	U	1210	69	39-117
131-11-3	MS	Dimethylphthalate	1740	0.00	U	1050	60	41-105
606-20-2	MS	2,6-Dinitrotoluene	1740	0.00	U	1040	60	41-103
208-96-8	MS	Acenaphthylene	1740	0.00	U	1040	60	41-103
51-28-5	MS	2,4-Dinitrophenol	1740	0.00	U	765	44	25-104
132-64-9	MS	Dibenzofuran	1740	0.00	U	1090	63	40-114
84-66-2	MS	Diethylphthalate	1740	0.00	U	1080	62	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-6007MS
Lab Sample ID: 1201871649
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 4.3
Analysis Date: 06/30/2009 19:13
Prep Batch ID: 881317
Batch ID: 881319
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	1740	0.00	U	1010	58	48-99
7005-72-3	MS	4-Chlorophenylphenylether	1740	0.00	U	1090	63	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	1740	0.00	U	877	51	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	1740	0.00	U	1340	77	35-139
122-39-4	MS	Diphenylamine	1740	0.00	U	1120	64	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	1740	0.00	U	1100	63	37-118
101-55-3	MS	4-Bromophenylphenylether	1740	0.00	U	1110	64	39-112
118-74-1	MS	Hexachlorobenzene	1740	0.00	U	1170	67	38-113
85-01-8	MS	Phenanthrene	1740	0.00	U	1050	61	38-110
120-12-7	MS	Anthracene	1740	0.00	U	1140	66	38-112
84-74-2	MS	Di-n-butylphthalate	1740	0.00	U	1140	66	42-119
206-44-0	MS	Fluoranthene	1740	0.00	U	1180	68	38-119
85-68-7	MS	Butylbenzylphthalate	1740	0.00	U	1210	70	39-126
56-55-3	MS	Benzo(a)anthracene	1740	0.00	U	1120	65	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	1740	0.00	U	770	44	35-106
218-01-9	MS	Chrysene	1740	0.00	U	1090	63	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	1740	0.00	U	1200	69	40-125
117-84-0	MS	Di-n-octylphthalate	1740	0.00	U	1160	67	30-147
205-99-2	MS	Benzo(b)fluoranthene	1740	0.00	U	1200	69	38-117
207-08-9	MS	Benzo(k)fluoranthene	1740	0.00	U	1180	68	39-120
50-32-8	MS	Benzo(a)pyrene	1740	0.00	U	1160	67	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	1740	0.00	U	983	57	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	**09-2473**	**Sample Type:**	**Matrix Spike**
Client ID:	**CAMO-09-6007MS**	**Matrix:**	**R**
Lab Sample ID:	**1201871649**	**%Moisture:**	**4.3**
Instrument:	**MSD2.I**	**Analysis Date:**	**06/30/2009 19:13**
Analyst:	**AGS1**	**Prep Batch ID:**	**881317**
Inj. Vol:	**.5 uL**	**Batch ID:**	**881319**

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	1740	0.00	U	1010	58	32-124
191-24-2	MS	Benzo(ghi)perylene	1740	0.00	U	902	52	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	1740	0.00	U	956	55	31-105

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-6007MSD
Lab Sample ID: 1201871650
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 4.3
Analysis Date: 06/30/2009 19:32
Prep Batch ID: 881317
Batch ID: 881319
Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD N-Methyl-N-nitrosomethylam	1740	0.00	U	793	46	32-90	8	0-30
108-95-2	MSD Phenol	1740	0.00	U	815	47	32-105	12	0-30
95-57-8	MSD 2-Chlorophenol	1740	0.00	U	839	48	33-106	13	0-30
106-46-7	MSD 1,4-Dichlorobenzene	1740	0.00	U	761	44	33-95	9	0-30
621-64-7	MSD N-Nitrosodipropylamine	1740	0.00	U	821	47	31-109	12	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	1740	0.00	U	1170	67	38-119	1	0-30
83-32-9	MSD Acenaphthene	1740	0.00	U	903	52	39-100	3	0-30
121-14-2	MSD 2,4-Dinitrotoluene	1740	0.00	U	1160	67	42-107	6	0-30
100-02-7	MSD 4-Nitrophenol	1740	0.00	U	1390	80	24-120	10	0-30
87-86-5	MSD Pentachlorophenol	1740	0.00	U	1360	78	26-121	10	0-30
129-00-0	MSD Pyrene	1740	0.00	U	1180	68	34-120	8	0-30
110-86-1	MSD Pyridine	1740	0.00	U	713	41	30-95	2	0-30
62-53-3	MSD Aniline	1740	0.00	U	888	51	34-111	9	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	1740	0.00	U	760	44	34-101	12	0-30
541-73-1	MSD 1,3-Dichlorobenzene	1740	0.00	U	755	43	31-97	11	0-30
100-51-6	MSD Benzyl alcohol	1740	0.00	U	421	24	17-120	20	0-30
95-50-1	MSD 1,2-Dichlorobenzene	1740	0.00	U	818	47	32-102	9	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	1740	0.00	U	781	45	32-113	11	0-30
95-48-7	MSD o-Cresol	1740	0.00	U	901	52	31-119	13	0-30
65794-96-9	MSD m,p-Cresols	1740	0.00	U	1020	59	35-125	9	0-30
67-72-1	MSD Hexachloroethane	1740	0.00	U	725	42	30-100	10	0-30
98-95-3	MSD Nitrobenzene	1740	0.00	U	879	51	33-108	12	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-6007MSD
Lab Sample ID: 1201871650
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 4.3
Analysis Date: 06/30/2009 19:32
Dilution: 1
Prep Batch ID: 881317
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD	Isophorone	1740	0.00	U	888	51	34-110	9	0-30
88-75-5	MSD	2-Nitrophenol	1740	0.00	U	891	51	32-108	13	0-30
105-67-9	MSD	2,4-Dimethylphenol	1740	0.00	U	1020	58	32-115	1	0-30
111-91-1	MSD	bis(2-Chloroethoxy)methane	1740	0.00	U	854	49	35-108	13	0-30
120-83-2	MSD	2,4-Dichlorophenol	1740	0.00	U	952	55	38-110	7	0-30
65-85-0	MSD	Benzoic acid	1740	0.00	U	1220	70	18-134	11	0-30
91-20-3	MSD	Naphthalene	1740	0.00	U	795	46	31-105	10	0-30
106-47-8	MSD	4-Chloroaniline	1740	0.00	U	1020	59	29-123	3	0-30
87-68-3	MSD	Hexachlorobutadiene	1740	0.00	U	887	51	31-109	11	0-30
91-57-6	MSD	2-Methylnaphthalene	1740	0.00	U	911	52	32-110	10	0-30
77-47-4	MSD	Hexachlorocyclopentadiene	1740	0.00	U	982	56	21-122	17	0-30
88-06-2	MSD	2,4,6-Trichlorophenol	1740	0.00	U	1010	58	37-108	0	0-30
95-95-4	MSD	2,4,5-Trichlorophenol	1740	0.00	U	1170	67	37-116	3	0-30
91-58-7	MSD	2-Chloronaphthalene	1740	0.00	U	927	53	37-103	8	0-30
88-74-4	MSD	2-Nitroaniline *o-Nitroaniline*	1740	0.00	U	1120	64	36-115	3	0-30
99-09-2	MSD	3-Nitroaniline *m-Nitroaniline*	1740	0.00	U	1310	75	39-117	8	0-30
131-11-3	MSD	Dimethylphthalate	1740	0.00	U	1070	61	41-105	2	0-30
606-20-2	MSD	2,6-Dinitrotoluene	1740	0.00	U	1060	61	41-103	2	0-30
208-96-8	MSD	Acenaphthylene	1740	0.00	U	996	57	41-103	4	0-30
51-28-5	MSD	2,4-Dinitrophenol	1740	0.00	U	737	42	25-104	4	0-30
132-64-9	MSD	Dibenzofuran	1740	0.00	U	1080	62	40-114	1	0-30
84-66-2	MSD	Diethylphthalate	1740	0.00	U	1160	67	43-110	7	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2473
Client ID: CAMO-09-6007MSD
Lab Sample ID: 1201871650
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 4.3
Analysis Date: 06/30/2009 19:32
Dilution: 1
Prep Batch ID: 881317
Batch ID: 881319

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	1740	0.00	U	1030	59	48-99	2	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	1740	0.00	U	1120	64	42-111	2	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	1740	0.00	U	910	52	19-118	4	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	1740	0.00	U	1460	84	35-139	9	0-30
122-39-4	MSD	Diphenylamine	1740	0.00	U	1180	68	41-112	5	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	1740	0.00	U	1140	65	37-118	4	0-30
101-55-3	MSD	4-Bromophenylphenylether	1740	0.00	U	1190	68	39-112	7	0-30
118-74-1	MSD	Hexachlorobenzene	1740	0.00	U	1230	71	38-113	5	0-30
85-01-8	MSD	Phenanthrene	1740	0.00	U	1130	65	38-110	7	0-30
120-12-7	MSD	Anthracene	1740	0.00	U	1210	70	38-112	6	0-30
84-74-2	MSD	Di-n-butylphthalate	1740	0.00	U	1240	71	42-119	8	0-30
206-44-0	MSD	Fluoranthene	1740	0.00	U	1290	74	38-119	9	0-30
85-68-7	MSD	Butylbenzylphthalate	1740	0.00	U	1320	76	39-126	9	0-30
56-55-3	MSD	Benzo(a)anthracene	1740	0.00	U	1190	68	39-110	6	0-30
91-94-1	MSD	3,3'-Dichlorobenzidine	1740	0.00	U	1010	58	35-106	27	0-30
218-01-9	MSD	Chrysene	1740	0.00	U	1230	71	39-109	12	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	1740	0.00	U	1280	73	40-125	6	0-30
117-84-0	MSD	Di-n-octylphthalate	1740	0.00	U	1250	72	30-147	7	0-30
205-99-2	MSD	Benzo(b)fluoranthene	1740	0.00	U	1370	79	38-117	13	0-30
207-08-9	MSD	Benzo(k)fluoranthene	1740	0.00	U	1240	71	39-120	5	0-30
50-32-8	MSD	Benzo(a)pyrene	1740	0.00	U	1310	75	40-115	12	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	1740	0.00	U	1140	65	32-120	15	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	**09-2473**	**Sample Type:**	**Matrix Spike Duplicate**	
Client ID:	**CAMO-09-6007MSD**	**Matrix:**	**R**	
Lab Sample ID:	**1201871650**	**%Moisture:**	**4.3**	
Instrument:	**MSD2.I**	**Analysis Date:**	**06/30/2009 19:32**	**Dilution: 1**
Analyst:	**AGS1**	**Prep Batch ID:**	**881317**	
Inj. Vol:	**.5 uL**	**Batch ID:**	**881319**	

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD Dibenzo(a,h)anthracene	1740	0.00	U	1190	69	32-124	17	0-30
191-24-2	MSD Benzo(ghi)perylene	1740	0.00	U	1070	61	28-119	17	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	1740	0.00	U	853	49	31-105	11	0-30

Method Blank Summary

SDG Number:	09-2473	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881317	Instrument ID:	MSD2.I	Data File:	s2f3005-1.d
Lab Sample ID:	1201871647	Prep Date:	06/30/2009 14:54	Analyzed:	06/30/09 17:13
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 881317	1201871648	s2f3006-1.d	06/30/09	1733
02	CAMO-09-10463	232424001	s2f3007.d	06/30/09	1753

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2473

Instrument ID: MSD2.I **Injection Date/Time:** 27-JUN-09 01:45

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD2.i/s062609.b/s2f2614.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	45.4
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	42.4
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	52.6
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	21.8
365	Greater than 1% of mass 198	2.9
441	Present, but less than mass 443	77.4
442	Greater than 40% of mass 198	73.5
443	17 - 23% of mass 442	20.4

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGA001	WBN090626-08	/chem/MSD2.i/s062609.b/s2f2616	27-JUN-09 02:16
MEGA010	WBN090626-07	/chem/MSD2.i/s062609.b/s2f2617	27-JUN-09 02:40
MEGA020	WBN090626-06	/chem/MSD2.i/s062609.b/s2f2618	27-JUN-09 03:04
MEGA040	WBN090626-05.1	/chem/MSD2.i/s062609.b/s2f2619	27-JUN-09 03:29
MEGA050	WBN090626-04	/chem/MSD2.i/s062609.b/s2f2620	27-JUN-09 03:53
MEGA080	WBN090626-03	/chem/MSD2.i/s062609.b/s2f2621	27-JUN-09 04:17
MEGA100	WBN090626-02	/chem/MSD2.i/s062609.b/s2f2622	27-JUN-09 04:41
MEGA120	WBN090626-01	/chem/MSD2.i/s062609.b/s2f2623	27-JUN-09 05:05
MEGAICV	WBN090626-09.1	/chem/MSD2.i/s062609.b/s2f2625	27-JUN-09 05:54

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2473

Instrument ID: MSD2.I **Injection Date/Time:** 28-JUN-09 18:00

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD2.i/s062809.b/s2f2801.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	42.6
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	40.2
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	51.7
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	7
275	10 - 30% of mass 198	22.4
365	Greater than 1% of mass 198	2.9
441	Present, but less than mass 443	79.1
442	Greater than 40% of mass 198	77
443	17 - 23% of mass 442	20

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
APICAL	WBN090528-07	/chem/MSD2.i/s062809.b/s2f2803	28-JUN-09 18:31
APICAL	WBN090528-06	/chem/MSD2.i/s062809.b/s2f2804	28-JUN-09 18:51
APICAL	WBN090528-05.1	/chem/MSD2.i/s062809.b/s2f2805	28-JUN-09 19:10
APICAL	WBN090528-04	/chem/MSD2.i/s062809.b/s2f2806	28-JUN-09 19:30
APICAL	WBN090528-03	/chem/MSD2.i/s062809.b/s2f2807	28-JUN-09 19:49
APICAL	WBN090528-02	/chem/MSD2.i/s062809.b/s2f2808	28-JUN-09 20:08
APICAL	WBN090528-01	/chem/MSD2.i/s062809.b/s2f2809	28-JUN-09 20:28
APICV	WBN090528-8.1	/chem/MSD2.i/s062809.b/s2f2823	29-JUN-09 00:59

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2473

Instrument ID: MSD2.I **Injection Date/Time:** 30-JUN-09 15:51

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD2.i/s063009.b/s2f3001.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	42.6
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	40.5
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	51.2
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	22.5
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	79.4
442	Greater than 40% of mass 198	79.8
443	17 - 23% of mass 442	19.9

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090626-05.3	/chem/MSD2.i/s063009.b/s2f3002	30-JUN-09 16:03
APCVS	WBN090619-01.2	/chem/MSD2.i/s063009.b/s2f3003	30-JUN-09 16:27
SBLK01	1201871647	/s063009.b/s2f3005-1.d	30-JUN-09 17:13
SBLK01LCS	1201871648	/s063009.b/s2f3006-1.d	30-JUN-09 17:33
CAMO-09-10463	232424001	/s063009.b/s2f3007.d	30-JUN-09 17:53

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: MSD2.I

GC Column: J&W DB-5MS

Client SDG: 09-2473

STD Analysis Time: 30-JUN-09 16:03

Data File: s2f3002.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	199810		4.05	811715		4.92	413629		6.17	708218		7.15	583275		8.89	517572		10.5
Upper Limit	399620		4.55	1623430		5.42	827258		6.67	1416436		7.65	1166550		9.39	1035144		11.0
Lower Limit	99905		3.55	405858		4.42	206815		5.67	354109		6.65	291638		8.39	258786		10.0
Sample ID																		
BLK01	196202		4.05	735867		4.92	403005		6.17	671443		7.15	565609		8.88	464558		10.5
BLK01LCS	151287		4.05	611419		4.92	323125		6.17	560782		7.15	498899		8.89	442975		10.5
CAMO-09-10463	164669		4.05	606356		4.92	336310		6.17	572408		7.15	503498		8.88	416792		10.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232424001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10463	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 17:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.24 g	**Final Volume:**	1 mL
Data File:	s2f3007.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	345	ug/kg	69.0	345
108-95-2	Phenol	U	345	ug/kg	69.0	345
95-57-8	2-Chlorophenol	U	345	ug/kg	69.0	345
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	69.0	345
621-64-7	N-Nitrosodipropylamine	U	345	ug/kg	69.0	345
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	34.5	345
83-32-9	Acenaphthene	U	34.5	ug/kg	11.5	34.5
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345
100-02-7	4-Nitrophenol	U	345	ug/kg	69.0	345
87-86-5	Pentachlorophenol	U	345	ug/kg	69.0	345
129-00-0	Pyrene	U	34.5	ug/kg	10.8	34.5
110-86-1	Pyridine	U	345	ug/kg	69.0	345
62-53-3	Aniline	U	345	ug/kg	121	345
111-44-4	bis(2-Chloroethyl) ether	U	345	ug/kg	69.0	345
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	69.0	345
100-51-6	Benzyl alcohol	U	345	ug/kg	104	345
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	69.0	345
108-60-1	bis(2-Chloroisopropyl)ether	U	345	ug/kg	69.0	345
95-48-7	o-Cresol	U	345	ug/kg	69.0	345
65794-96-9	m,p-Cresols	U	345	ug/kg	138	345
67-72-1	Hexachloroethane	U	345	ug/kg	69.0	345
98-95-3	Nitrobenzene	U	345	ug/kg	69.0	345
78-59-1	Isophorone	U	345	ug/kg	69.0	345
88-75-5	2-Nitrophenol	U	345	ug/kg	34.5	345
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	69.0	345
111-91-1	bis(2-Chloroethoxy)methane	U	345	ug/kg	69.0	345
120-83-2	2,4-Dichlorophenol	U	345	ug/kg	69.0	345
65-85-0	Benzoic acid	U	690	ug/kg	173	690
91-20-3	Naphthalene	U	34.5	ug/kg	10.4	34.5
106-47-8	4-Chloroaniline	U	345	ug/kg	69.0	345
87-68-3	Hexachlorobutadiene	U	345	ug/kg	69.0	345
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.90	34.5
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	69.0	345
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	69.0	345
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	69.0	345
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	12.1	34.5
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	345	ug/kg	69.0	345
99-09-2	3-Nitroaniline	U	345	ug/kg	69.0	345

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473	**Date Collected:**	06/23/2009 12:00	**Matrix:**	R
Lab Sample ID:	232424001	**Date Received:**	06/26/2009 08:40	**%Moisture:**	4.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10463	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 17:53	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30.24 g	**Final Volume:**	1 mL
Data File:	s2f3007.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	345	ug/kg	69.0	345
606-20-2	2,6-Dinitrotoluene	U	345	ug/kg	34.5	345
208-96-8	Acenaphthylene	U	34.5	ug/kg	10.4	34.5
51-28-5	2,4-Dinitrophenol	U	690	ug/kg	131	690
132-64-9	Dibenzofuran	U	345	ug/kg	69.0	345
84-66-2	Diethylphthalate	U	345	ug/kg	69.0	345
86-73-7	Fluorene	U	34.5	ug/kg	10.4	34.5
7005-72-3	4-Chlorophenylphenylether	U	345	ug/kg	34.5	345
534-52-1	2-Methyl-4,6-dinitrophenol	U	345	ug/kg	69.0	345
100-01-6	4-Nitroaniline	U	345	ug/kg	69.0	345
	p-Nitroaniline					
122-39-4	Diphenylamine	U	345	ug/kg	69.0	345
122-66-7	Azobenzene	U	345	ug/kg	69.0	345
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	345	ug/kg	34.5	345
118-74-1	Hexachlorobenzene	U	345	ug/kg	69.0	345
85-01-8	Phenanthrene	U	34.5	ug/kg	10.4	34.5
120-12-7	Anthracene	U	34.5	ug/kg	6.90	34.5
84-74-2	Di-n-butylphthalate	U	345	ug/kg	34.5	345
206-44-0	Fluoranthene	U	34.5	ug/kg	10.4	34.5
85-68-7	Butylbenzylphthalate	U	345	ug/kg	69.0	345
56-55-3	Benzo(a)anthracene	U	34.5	ug/kg	10.4	34.5
91-94-1	3,3'-Dichlorobenzidine	U	345	ug/kg	104	345
218-01-9	Chrysene	U	34.5	ug/kg	10.4	34.5
117-81-7	bis(2-Ethylhexyl)phthalate	U	345	ug/kg	69.0	345
117-84-0	Di-n-octylphthalate	U	345	ug/kg	69.0	345
205-99-2	Benzo(b)fluoranthene	U	34.5	ug/kg	10.4	34.5
207-08-9	Benzo(k)fluoranthene	U	34.5	ug/kg	10.4	34.5
50-32-8	Benzo(a)pyrene	U	34.5	ug/kg	10.4	34.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.4	34.5
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.4	34.5
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.4	34.5
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	69.0	345

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.06	259	ug/kg		JA

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s063009.b/s2f3007.d
Lab Smp Id: 232424001 Client Smp ID: CAMO-09-10463
Inj Date : 30-JUN-2009 17:53
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232424001|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.24000	weight of sample
M	4.16030	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.052	4.051	(1.000)	164669	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	606356	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	336310	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	572408	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	503498	40.0000	
* 98 Perylene-d12	264	10.491	10.507	(1.000)	416792	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	253362	55.6034	1920
$ 5 Phenol-d5	99	3.752	3.757	(0.926)	300146	53.3419	1840
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.896)	128912	28.1784	972
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	269089	28.3302	978
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	66221	57.4898	1980
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	291791	34.0239	1170

ION RATIO REPORT

SV REPORT

Data file: s2f3007.d
Report Date: 06/30/2009 18:10
Lab. ID: 232424001 SampleType: SAMPLE
Injection Date: 30-JUN-2009 17:53
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232424001|881319|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01|
Comment:
Method used: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2473
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	13366	3.75	3.83	80-120	100	(T)
93	429	3.84	3.84	440-500	3	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	16898	4.41	4.29	80-120	100	(T)
42	10159	4.41	4.29	40-100	60	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	71990	6.17	5.94	80-120	100	(T)
164	336310	6.17	5.94	0- 40	467	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	43347	6.17	5.99	80-120	100	(T)
63	537	6.17	5.99	46-106	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	43347	6.17	6.27	80-120	100	(T)
89	557	6.17	6.27	38- 98	1	(QT)
63	537	6.17	6.27	16- 76	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	4086	6.69	6.54	80-120	100	(T)
165	4158	6.69	6.54	61-121	102	(T)
167	1230	6.69	6.54	0- 44	30	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	3605	6.69	6.84	80-120	100	(T)
141	26378	6.69	6.84	51-111	732	(QT)
250	7877	6.69	6.84	66-126	218	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

GEL Laboratories, LLC

Data file : /chem/MSD2.i/s063009.b/s2f3007.d
Lab Smp Id: 232424001 Client Smp ID: CAMO-09-10463
Inj Date : 30-JUN-2009 17:53
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232424001|881319|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.24000	weight of sample
M	4.16030	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.052	981453	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.062	184205	7.50/45431	259	0		0	10

Data File: /chem/MSD2.i/s063009.b/s2f3007.d
Date : 30-JUN-2009 17:53
Client ID: CAMO-09-10463
Sample Info: 1232424001|881319|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: AGS1
Column diameter: 0.20

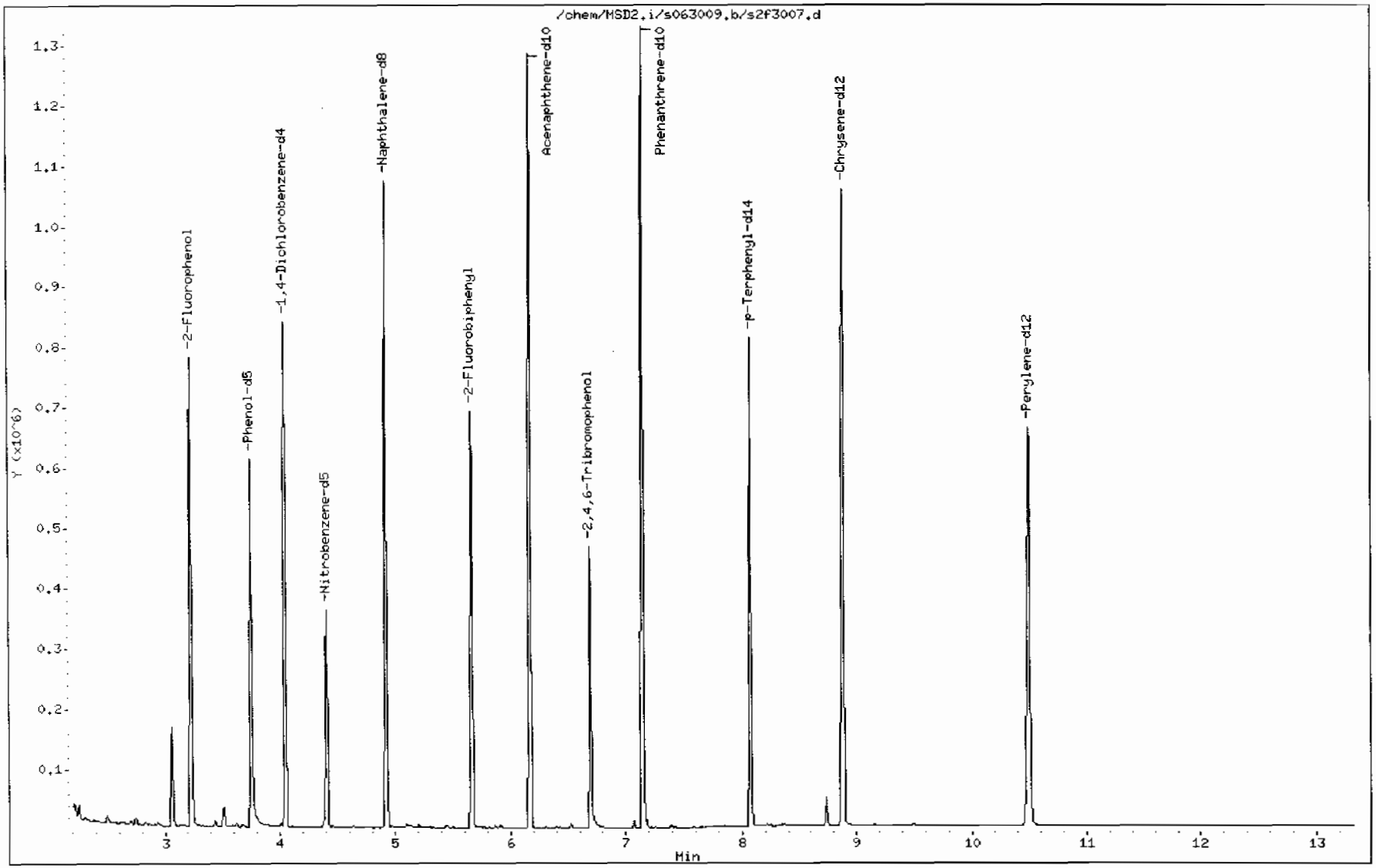

Data File: /chem/MSD2.i/s063009.b/s2f3007.d

Date : 30-JUN-2009 17:53

Client ID: CAMO-09-10463

Instrument: MSD2.i

Sample Info: 1232424001188131911ISVMF11ILANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	27	C4H7NO2	101

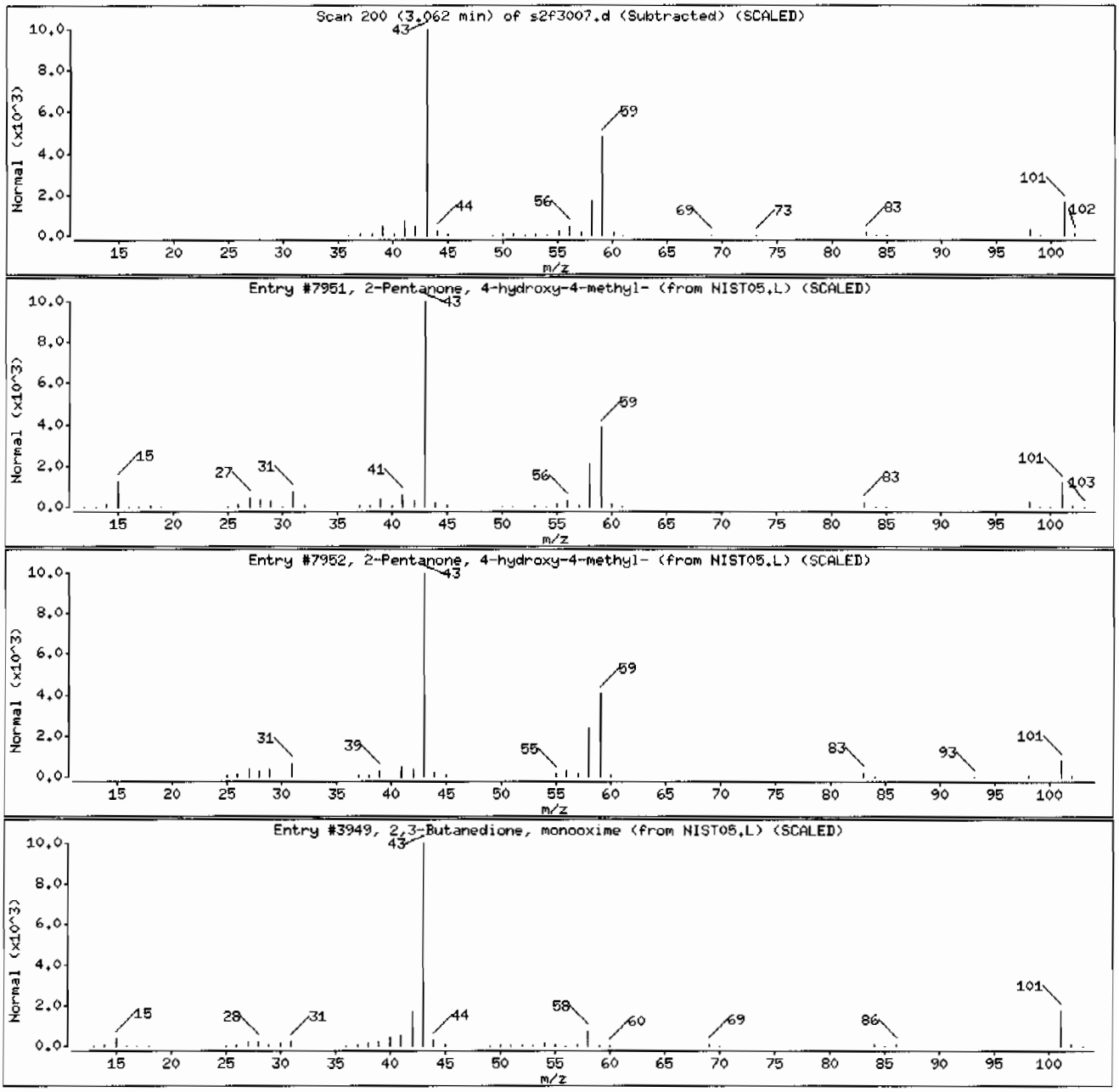

Standard Data

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 30-Jun-2009 18:45

Calibration History

Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Start Cal Date: 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
27-JUN-2009 02:16	MEGAII	/chem/MSD2.i/s062609.b/s2f2616.d
Cal Level: 2 , Cal Amount: 10.00000		
29-JUN-2009 02:32	NEV	/chem/MSD2.i/s062809.b/s2f2828.d
28-JUN-2009 23:03	HEX	/chem/MSD2.i/s062809.b/s2f2817.d
28-JUN-2009 20:47	PEST	/chem/MSD2.i/s062809.b/s2f2810.d
28-JUN-2009 18:31	AP12	/chem/MSD2.i/s062809.b/s2f2803.d
27-JUN-2009 02:40	MEGAII	/chem/MSD2.i/s062609.b/s2f2617.d
Cal Level: 3 , Cal Amount: 20.00000		
29-JUN-2009 02:51	NEV	/chem/MSD2.i/s062809.b/s2f2829.d
28-JUN-2009 23:23	HEX	/chem/MSD2.i/s062809.b/s2f2818.d
28-JUN-2009 21:07	PEST	/chem/MSD2.i/s062809.b/s2f2811.d
28-JUN-2009 18:51	AP12	/chem/MSD2.i/s062809.b/s2f2804.d
27-JUN-2009 03:04	MEGAII	/chem/MSD2.i/s062609.b/s2f2618.d
Cal Level: 4 , Cal Amount: 40.00000		
29-JUN-2009 03:11	NEV	/chem/MSD2.i/s062809.b/s2f2830.d
28-JUN-2009 23:42	HEX	/chem/MSD2.i/s062809.b/s2f2819.d
28-JUN-2009 21:26	PEST	/chem/MSD2.i/s062809.b/s2f2812.d
28-JUN-2009 19:10	AP12	/chem/MSD2.i/s062809.b/s2f2805.d
27-JUN-2009 03:29	MEGAII	/chem/MSD2.i/s062609.b/s2f2619.d
Cal Level: 5 , Cal Amount: 50.00000		
29-JUN-2009 03:30	NEV	/chem/MSD2.i/s062809.b/s2f2831.d
29-JUN-2009 00:01	HEX	/chem/MSD2.i/s062809.b/s2f2820.d
28-JUN-2009 21:45	PEST	/chem/MSD2.i/s062809.b/s2f2813.d
28-JUN-2009 19:30	AP12	/chem/MSD2.i/s062809.b/s2f2806.d
27-JUN-2009 03:53	MEGAII	/chem/MSD2.i/s062609.b/s2f2620.d
Cal Level: 6 , Cal Amount: 80.00000		
29-JUN-2009 03:49	NEV	/chem/MSD2.i/s062809.b/s2f2832.d
29-JUN-2009 00:21	HEX	/chem/MSD2.i/s062809.b/s2f2821.d
28-JUN-2009 22:05	PEST	/chem/MSD2.i/s062809.b/s2f2814.d
28-JUN-2009 19:49	AP12	/chem/MSD2.i/s062809.b/s2f2807.d
27-JUN-2009 04:17	MEGAII	/chem/MSD2.i/s062609.b/s2f2621.d
Cal Level: 7 , Cal Amount: 100.00000		

29-JUN-2009 04:09	NEV	/chem/MSD2.i/s062809.b/s2f2833.d
29-JUN-2009 00:40	HEX	/chem/MSD2.i/s062809.b/s2f2822.d
28-JUN-2009 22:24	PEST	/chem/MSD2.i/s062809.b/s2f2815.d
28-JUN-2009 20:08	AP12	/chem/MSD2.i/s062809.b/s2f2808.d
27-JUN-2009 04:41	MEGAII	/chem/MSD2.i/s062609.b/s2f2622.d

Cal Level: 8 , Cal Amount: 120.00000		
29-JUN-2009 04:28	NEV	/chem/MSD2.i/s062809.b/s2f2834.d
28-JUN-2009 22:44	PEST	/chem/MSD2.i/s062809.b/s2f2816.d
28-JUN-2009 20:28	AP12	/chem/MSD2.i/s062809.b/s2f2809.d
27-JUN-2009 05:05	MEGAII	/chem/MSD2.i/s062609.b/s2f2623.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
30-JUN-2009 16:03	MEGAII	/chem/MSD2.i/s063009.b/s2f3002.d
Ccal Level: 4 , Ccal Amount: 40.0		
30-JUN-2009 16:53	PEST	/chem/MSD2.i/s063009.b/s2f3004.d
Ccal Level: 4 , Ccal Amount: 40.0		
30-JUN-2009 16:27	AP12	/chem/MSD2.i/s063009.b/s2f3003.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Calibration File Names:
Level 1: /chem/MSD2.i/s062609.b/s2f2616.d
Level 2: /chem/MSD2.i/s062809.b/s2f2828.d
Level 3: /chem/MSD2.i/s062809.b/s2f2829.d
Level 4: /chem/MSD2.i/s062809.b/s2f2830.d
Level 5: /chem/MSD2.i/s062809.b/s2f2831.d
Level 6: /chem/MSD2.i/s062809.b/s2f2832.d
Level 7: /chem/MSD2.i/s062809.b/s2f2833.d
Level 8: /chem/MSD2.i/s062809.b/s2f2834.d

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
1 N-Methyl-N-nitrosomethylamine	+++++	0.69039	0.72951	0.70150	0.66093	0.67965					
	0.66886	0.66718					AVRG		0.68543		3.50704
2 Pyridine	++--+	0.86520	0.92170	0.93760	0.89132	0.90626					
	0.97413	0.93351					AVRG		0.91853		3.82967
4 Aniline	++--+	0.54735	0.57712	0.56139	0.53009	0.55143					
	0.54745	0.54019					AVRG		0.55072		2.74368
209 Benzaldehyde	+++++	0.87905	0.93930	0.87221	0.86925	0.84625					
	0.82101	0.75879					AVRG		0.85512		6.52380
6 Phenol	+++++	1.46571	1.51634	1.43616	1.34991	1.34475					
	1.33903	1.29504					AVRG		1.39242		5.79415

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Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	1.05547	1.07090	1.10049	1.04112	0.98051	0.98108					
	0.97714	0.94276					AVRG		1.01868		5.45749
8 2-Chlorophenol	++++-	1.22115	1.29024	1.22223	1.14751	1.14427					
	1.14285	1.11008					AVRG		1.18262		5.36811
203 n-Decane	+-++-	1.79885	1.79755	1.64128	1.53904	1.36489					
	1.40609	1.23127					AVRG		1.53985		14.21564
9 1,3-Dichlorobenzene	+-+++	1.44788	1.45807	1.37028	1.28760	1.24616					
	1.24913	1.17375					AVRG		1.31898		8.23866
11 1,4-Dichlorobenzene	+-+++	1.46286	1.46802	1.36944	1.28961	1.23077					
	1.24012	1.16149					AVRG		1.31747		9.03997
12 Benzyl alcohol	+++++	0.77831	0.82396	0.80753	0.75509	0.77236					
	0.75853	0.75992					AVRG		0.77939		3.40855
13 1,2-Dichlorobenzene	+++++	1.36658	1.36378	1.23263	1.15598	1.04264					
	1.07125	0.95328					AVRG		1.16945		13.66615
14 bis(2-Chloroisopropyl)ether	+++-+	2.50121	2.52978	2.38393	2.23799	2.15967					
	2.17847	2.00949					AVRG		2.28579		8.40797
15 o-Cresol	+++-+	0.95590	0.98573	0.91181	0.85653	0.80175					
	0.81510	0.74571					AVRG		0.86750		10.06907

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Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
16 Acetophenone	-+-++	1.22384	1.29748	1.21187	1.20257	1.19254					
	1.17596	1.08741					AVRG		1.19881		5.22238
17 N-Nitrosodipropylamine	0.73956	0.87005	0.91720	0.87383	0.82323	0.83620					
	0.82564	0.80637					AVRG		0.83651		6.33048
18 m,p-Cresols	+++++	1.22788	1.28634	1.23739	1.16848	1.19210					
	1.17119	1.17505					AVRG		1.20835		3.64675
19 Hexachloroethane	+++-+	0.51229	0.53508	0.50797	0.47973	0.47238					
	0.47342	0.45215					AVRG		0.49043		5.87067
21 Nitrobenzene	+++++	0.32753	0.33058	0.30836	0.28626	0.27168					
	0.25189	0.24815					AVRG		0.28921		11.76073
22 Isophorone	+++++	0.61385	0.62546	0.57462	0.53543	0.51915					
	0.48565	0.48570					AVRG		0.54855		10.47275
23 2-Nitrophenol	+++++	0.16270	0.15720	0.14780	0.13984	0.13238					
	0.12726	0.12055					AVRG		0.14110		11.06292
24 2,4-Dimethylphenol	+++++	0.34805	0.38714	0.38568	0.36156	0.35852					
	0.33752	0.34099					AVRG		0.35992		5.56929
25 bis(2-Chloroethoxy)methane	+++-+	0.38255	0.38068	0.34149	0.31672	0.29025					
	0.27765	0.26754					AVRG		0.32241		14.68930

GEL Laboratories LLC

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Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
26 2,4-Dichlorophenol	+++++	0.24032	0.25043	0.23132	0.21657	0.20464					
	0.18978	0.18966					AVRG		0.21753		11.11236
27 Benzoic acid	+++++	+++++	0.12323	0.14092	0.13590	0.15073					
	0.14033	0.15639					AVRG		0.14125		8.21762
28 1,2,4-Trichlorobenzene	+++++	0.29566	0.29122	0.26037	0.24344	0.22377					
	0.21259	+++++					AVRG		0.25451		13.49716
30 Naphthalene	1.06207	1.01462	0.98540	0.85424	0.79343	+-+++					
	+++++	+++++					AVRG		0.94195		12.02841
204 alpha-Terpineol	+++++	0.30102	0.30144	0.27351	0.25618	0.23365					
	0.22385	0.20916					AVRG		0.25697		14.31412
31 4-Chloroaniline	+++++	0.38934	0.42365	0.39825	0.37594	0.34649					
	0.32934	0.31761					AVRG		0.36866		10.51922
189 Caprolactam	+++++	0.07438	0.08756	0.08798	0.08978	0.09316					
	0.09272	0.07649					AVRG		0.08601		8.78430
32 Hexachlorobutadiene	+-+++	0.15222	0.15253	0.13591	0.12725	0.11677					
	0.11329	0.10593					AVRG		0.12913		14.39176
33 4-Chloro-3-methylphenol	+-+++	0.24254	0.25133	0.23305	0.21576	0.20869					
	0.19634	0.19460					AVRG		0.22033		10.16630

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Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.61627	0.61413	0.59557	0.52918	0.49047	0.43750					
	+++++	+++++					AVRG		0.54719		13.47068
35 1-Methylnaphthalene	0.65836	0.64408	0.62164	0.55038	0.51269	0.45385					
	+++++	+++++					AVRG		0.57350		14.17642
36 Hexachlorocyclopentadiene	+++++	0.15683	0.18566	0.18509	0.17867	0.17719					
	0.16396	0.16091					AVRG		0.17262		6.87379
208 1,1'-Biphenyl	+++++	1.31230	1.35004	1.20122	1.20269	1.12846					
	1.07439	+++++					AVRG		1.21152		8.67510
205 2,3-Dichloroaniline	+++++	0.58190	0.61084	0.56762	0.53224	0.49923					
	0.50106	0.44766					AVRG		0.53436		10.55301
37 2,4,6-Trichlorophenol	+++++	0.30229	0.32112	0.32700	0.31364	0.27643					
	0.28448	0.24464					AVRG		0.29566		9.85703
38 2,4,5-Trichlorophenol	+++++	0.34231	0.38184	0.34308	0.32995	0.33854					
	0.33063	0.32601					AVRG		0.34176		5.51289
40 2-Chloronaphthalene	1.09290	1.08113	1.08949	1.01572	0.95230	0.89075					
	0.89856	0.82202					AVRG		0.98036		10.66760
42 o-Nitroaniline	++++-	0.27903	0.30714	0.31024	0.29525	0.30377					
	0.29871	0.29495					AVRG		0.29844		3.46682

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INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
41 m-Nitroaniline	++++++	0.19547	0.22895	0.25638	0.24356	0.25315					
	0.24606	0.24731					AVRG		0.23870		8.78227
43 Dimethylphthalate	+++++-	1.22393	1.25917	1.17520	1.11662	1.08535					
	1.07942	1.02338					AVRG		1.13758		7.46313
44 2,6-Dinitrotoluene	+++++	0.27918	0.30041	0.28943	0.27384	0.26719					
	0.26625	0.25103					AVRG		0.27533		5.90117
45 Acenaphthylene	1.63476	1.78414	1.81104	1.66333	1.56180	1.46336					
	1.45283	1.33623					AVRG		1.58844		10.47930
47 Acenaphthene	1.24714	1.12257	1.11696	1.01038	0.93440	0.83192					
	+-++++	-++++					AVRG		1.04389		14.26541
48 2,4-Dinitrophenol	+-++++	+++++	14830	38648	42093	86876					
	73327	114749					LINR	0.19589	0.11047		0.99746
49 Dibenzofuran	+-++++	1.54218	1.54361	1.42238	1.33354	1.23825					
	1.23959	1.14217					AVRG		1.35168		11.61081
50 2,4-Dinitrotoluene	+++++	0.32241	0.35522	0.36066	0.34084	0.34591					
	0.34092	0.33105					AVRG		0.34243		3.85045
51 Diethylphthalate	+++++	1.23228	1.24147	1.15655	1.09394	1.04036					
	1.04596	0.96131					AVRG		1.11027		9.42648

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Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
52 4-Nitrophenol	-+++-	0.14566	0.16856	0.18182	0.17258	0.17034					
	0.16713	0.16802					AVRG		0.16773		6.51871
53 Fluorene	1.27314	1.30157	1.27309	1.13280	1.06756	0.94025					
	0.94446	+++++					AVRG		1.13327		13.70159
54 4-Chlorophenylphenylether	+++++	0.58604	0.58562	0.54938	0.51757	0.47803					
	0.48248	0.43360					AVRG		0.51896		11.16990
55 2-Methyl-4,6-dinitrophenol	+++++	9100	30013	65052	69783	134205					
	116111	178378					LINR	0.10059	0.09828		0.99935
56 p-Nitroaniline	+++++	0.16374	0.17999	0.22053	0.21515	0.22182					
	0.20157	0.20958					AVRG		0.20177		10.92280
133 Diphenylamine	+++++	0.61082	0.60843	0.55622	0.52177	0.49063					
	0.49083	0.46088					AVRG		0.53423		11.12025
58 1,2-Diphenylhydrazine	+++++	0.75120	0.79654	0.72292	0.68243	0.64978					
	0.64441	0.61112					AVRG		0.69406		9.49164
59 Tributylphosphate	+++++	1.08075	1.14516	1.15861	1.09688	1.06726					
	1.03024	0.99069					AVRG		1.08137		5.51158
61 4-Bromophenylphenylether	+++++	0.18307	0.19354	0.17513	0.16553	0.15356					
	0.15325	0.14245					AVRG		0.16665		10.96239

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Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
63 Hexachlorobenzene	++++	0.20045	0.21246	0.19273	0.18176	0.17202						
	0.16827	0.15968					AVRG		0.18391		10.27984	
207 Atrazine	+++++	0.04721	0.04969	0.04483	0.04470	0.04375						
	0.04029	0.03794					AVRG		0.04406		8.99731	
65 Pentachlorophenol	+++++	0.07738	0.09995	0.10308	0.09843	0.10166						
	0.09959	0.09530					AVRG		0.09648		9.09625	
206 n-Octadecane	+++++	0.61277	0.64232	0.55712	0.52071	0.42108						
	+++++	+++++					AVRG		0.55080		15.72005	<-
68 Phenanthrene	1.12620	1.04733	1.03801	0.96924	0.86678	0.79753						
	0.82243	+++++					AVRG		0.95250		13.21323	
69 Anthracene	0.99489	1.04469	1.05390	0.94444	0.92789	0.82252						
	0.80159	0.75921					AVRG		0.91864		12.28174	
72 Di-n-butylphthalate	+++++	1.13957	1.24371	1.12414	1.05987	0.97905						
	0.98201	0.89443					AVRG		1.06040		11.17434	
76 Fluoranthene	0.86288	1.00215	1.00056	0.93825	0.87050	0.79440						
	0.80778	0.73329					AVRG		0.87623		11.18058	
77 Benzidine	+++++	22872	62918	166793	224649	446051						
	564014	848216					LINR	0.23685	0.44179		0.99510	

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
79 Pyrene	1.34330	1.27250	1.37499	1.21096	1.13484	1.07700					
	1.09795	1.01424					AVRG		1.19072		11.00224
85 Butylbenzylphthalate	+-+++	0.52085	0.59986	0.51594	0.49136	0.45596					
	0.47145	0.42685					AVRG		0.49747		11.25114
89 Benzo(a)anthracene	1.04673	0.97487	1.05606	0.99557	0.93319	0.92987					
	0.93218	0.91723					AVRG		0.97321		5.63703
90 3,3'-Dichlorobenzidine	+-+++	0.18780	0.23328	0.25613	0.27282	0.29355					
	0.29207	0.27475					AVRG		0.25863		14.52335
92 Chrysene	0.97507	1.02354	0.98860	0.94517	0.89334	0.88895					
	0.91213	0.88692					AVRG		0.93921		5.54276
93 bis(2-Ethylhexyl)phthalate	0.54232	0.72896	0.86988	0.79184	0.75313	0.73043					
	0.76239	0.69130					AVRG		0.73378		12.78238
94 Di-n-octylphthalate	+++++	1.14313	1.45599	1.36696	1.26834	1.28529					
	1.35701	1.22886					AVRG		1.30080		7.87435
95 Benzo(b)fluoranthene	0.87387	1.01569	0.99473	0.99671	0.92029	0.94238					
	0.95465	0.98368					AVRG		0.96025		4.90832
96 Benzo(k)fluoranthene	0.93389	1.01628	1.12965	1.06131	1.03858	0.99069					
	1.02832	0.90660					AVRG		1.01317		6.97095

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Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
97 Benzo(a)pyrene	0.67985	0.83878	0.87957	0.89970	0.84749	0.85752					
	0.87472	0.83416					AVRG		0.83897		8.10580
99 Indeno(1,2,3-cd)pyrene	0.64000	0.82233	0.81361	0.88071	0.77965	0.82885					
	0.85683	0.82546					AVRG		0.80593		9.09898
100 Dibenzo(a,h)anthracene	0.50405	0.64680	0.63724	0.70642	0.63479	0.67471					
	0.69689	0.67274					AVRG		0.64671		9.80209
101 Benzo(ghi)perylene	0.59868	0.71182	0.70702	0.75708	0.66677	0.71134					
	0.74457	0.70082					AVRG		0.69976		7.02871
102 1,4-Dioxane	+++++	0.39772	0.40311	0.37296	0.36975	0.37134					
	0.36894	0.33784					AVRG		0.37452		5.73436
103 Methyl methacrylate	+++++	0.20996	0.22614	0.21209	0.21072	0.21330					
	0.21114	0.18984					AVRG		0.21046		5.06778
104 Ethyl methacrylate	+++++	0.79857	0.84722	0.80112	0.80411	0.80737					
	0.81266	0.74558					AVRG		0.80237		3.73419
105 2-Picoline	+++++	1.25271	1.33893	1.25469	1.25060	1.24109					
	1.23220	1.11687					AVRG		1.24101		5.25228
106 N-Nitrosomethylethylamine	+++++	0.49901	0.54314	0.52387	0.52344	0.53620					
	0.54908	0.53084					AVRG		0.52937		3.09819

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Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.47052	0.50126	0.47524	0.46945	0.47491					
	0.47042	0.45601					AVRG		0.47397		2.87551
108 N-Nitrosodiethylamine	+++++	0.51998	0.56646	0.54327	0.53716	0.54527					
	0.55248	0.52328					AVRG		0.54113		2.99287
109 Ethyl Methanesulfonate	+++++	0.63006	0.67809	0.63459	0.63852	0.64934					
	0.65680	0.63462					AVRG		0.64600		2.62667
110 Pentachloroethane	+++++	0.30499	0.32835	0.31041	0.31171	0.31672					
	0.31609	0.29592					AVRG		0.31203		3.24854
111 N-Nitrosopyrrolidine	+++++	0.49461	0.55822	0.55049	0.55217	0.56133					
	0.56208	0.52723					AVRG		0.54373		4.54126
113 N-Nitrosomorpholine	+++++	0.70881	0.75811	0.72140	0.72252	0.73332					
	0.73620	0.67535					AVRG		0.72224		3.56797
114 o-Toluidine	+++++	1.81344	1.94243	1.83859	1.82660	1.77553					
	1.76318	1.60663					AVRG		1.79520		5.65548
115 N-Nitrosopiperidine	+++++	0.14337	0.15582	0.14726	0.14726	0.15193					
	0.14972	0.14382					AVRG		0.14845		2.98731
116 a,a-Dimethylphenethylamine	+++++	0.57425	0.72322	0.76162	0.78421	0.85786					
	0.86301	0.82195					AVRG		0.76945		12.97979

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Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
117 Triethylphosphorothioate	+-+++	0.14418	0.14938	0.14232	0.13965	0.13684					
	0.12762	0.11819					AVRG		0.13688		7.78882
118 2,6-Dichlorophenol	+++-+	0.19961	0.22277	0.21643	0.21941	0.22653					
	0.22167	0.20864					AVRG		0.21644		4.31018
119 Hexachloropropene	-++++	0.07288	0.09224	0.09316	0.09615	0.10218					
	0.10311	0.09990					AVRG		0.09423		10.95111
120 p-Phenylenediamine	+++++	0.15582	0.20451	0.23862	0.24890	0.24828					
	0.23839	0.22055					AVRG		0.22216		14.98248
121 N-Nitrosodi-n-butylamine	+-+++	0.22439	0.25129	0.23557	0.19879	0.19823					
	0.19383	0.18437					AVRG		0.21235		11.70943
122 Safrole	+++++	0.19695	0.21207	0.19719	0.19841	0.19789					
	0.19197	0.17613					AVRG		0.19580		5.44019
123 1,2,4,5-Tetrachlorobenzene	++++-	0.44571	0.45113	0.41057	0.40974	0.39204					
	0.37322	0.34950					AVRG		0.40456		9.07998
124 Isosafrole	-+-++	0.33722	0.36762	0.35274	0.35141	0.35716					
	0.35384	0.33963					AVRG		0.35137		2.94726
125 1,4-Naphthoquinone	+++++	0.30635	0.38081	0.36257	0.35511	0.32509					
	0.30744	0.28441					AVRG		0.33168		10.60498

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
126 m-Dinitrobenzene	+-++++	0.17541	0.20057	0.20342	0.19466	0.19942					
	0.19513	0.19233					AVRG		0.19442		4.74365
127 Pentachlorobenzene	-+++++	0.38078	0.39337	0.36052	0.36180	0.35374					
	0.33562	0.30840					AVRG		0.35632		7.89644
128 1-Naphthylamine	+++++	0.89219	0.96731	0.94680	0.96309	0.93980					
	0.90534	0.83429					AVRG		0.92126		5.15448
129 2-Naphthylamine	+++++	0.95674	1.03123	1.02844	1.05408	1.03895					
	0.99761	0.92539					AVRG		1.00463		4.72498
130 2,3,4,6-Tetrachlorophenol	+++++	0.28377	0.31045	0.28533	0.26800	0.27346					
	0.26536	0.23698					AVRG		0.27476		8.17853
131 5-Nitro-o-toluidine	+++++	16520	48018	110753	131396	238779					
	306628	428864					LINR	0.10413	0.31599		0.99907
132 Thionazin	+++++	0.16905	0.17849	0.18173	0.17207	0.17103					
	0.16242	0.15725					AVRG		0.17029		5.00232
134 Sulfotepp	+++++	0.10023	0.10187	0.10250	0.09686	0.09057					
	0.08805	0.08077					AVRG		0.09441		8.67017
135 Phorate	+++++	0.38689	0.39399	0.39568	0.37643	0.36365					
	0.35192	0.32231					AVRG		0.37013		7.15082

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
136 1,3,5-Trinitrobenzene	--+++	7249	24622	65831	82495	150694					
	193765	278057					LINR	0.17364	0.12282		0.99955
137 Phenacetin	-++++	0.18974	0.23994	0.24142	0.24633	0.26389					
	0.26582	0.26374					AVRG		0.24441		10.86750
138 Diallate	-++++	0.29105	0.29277	0.25721	0.25477	0.25095					
	0.24113	0.22815					AVRG		0.25943		9.34012
139 Dimethoate	-++++	0.20718	0.22900	0.24121	0.23799	0.24471					
	0.24405	0.23962					AVRG		0.23482		5.64543
140 4-Aminobiphenyl	+++++	0.44908	0.51202	0.47968	0.49819	0.53554					
	0.50604	0.45671					AVRG		0.49104		6.31269
141 Pentachloronitrobenzene	+-+++	0.06058	0.06747	0.06295	0.06212	0.06304					
	0.06031	0.05529					AVRG		0.06168		5.96047
142 Pronamide	+-+++	0.27080	0.29112	0.25926	0.25598	0.22611					
	0.21066	++++-					AVRG		0.25232		11.66466
143 Dinoseb	+-+++	12725	46848	105565	110643	211821					
	185297	272725					LINR	0.08825	0.15291		0.99806
144 Disulfoton	+-+++	0.34980	0.35064	0.34865	0.33531	0.31908					
	0.30426	0.27842					AVRG		0.32659		8.43667

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
145 Methyl parathion	+++++	0.13639	0.16231	0.18078	0.17561	0.18580					
	0.18424	0.18201					AVRG		0.17245		10.29419
146 4-Nitroquinoline-1-oxide	+++++	1986	8303	17052	21060	34048					
	+++++	++++					LINR	0.05856	0.02694		0.99309
147 Methapyrilene	+++++	0.43796	0.52317	0.47267	0.47915	0.45098					
	0.40172	0.34816					AVRG		0.44483		12.77554
148 Isodrin	++++	0.10982	0.11290	0.10130	0.10133	0.09963					
	0.09488	0.08905					AVRG		0.10127		8.07610
149 Aramite	++++	0.03964	0.04717	0.04605	0.04734	0.04932					
	0.04730	0.04602					AVRG		0.04612		6.63351
150 Kepone	+++++	0.06380	0.07655	0.07250	0.07309	0.07540					
	0.07338	0.07194					AVRG		0.07238		5.69557
151 p-(Dimethylamino)azobenzene	+++++	0.30974	0.34670	0.32805	0.31690	0.31425					
	0.31275	0.28115					AVRG		0.31565		6.27537
152 Chlorobenzilate	+++++	0.28985	0.29768	0.27730	0.26468	0.26092					
	0.25904	0.22989					AVRG		0.26848		8.37983
153 3,3'-Dimethylbenzidine	++++	0.40033	0.46884	0.47816	0.49648	0.52910					
	0.53546	0.52449					AVRG		0.49041		9.65612

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
154 Famphur	+++++	0.33413	0.33836	0.37345	0.36796	0.36875					
	0.38338	0.35503					AVRG		0.36015		5.10679
155 2-Acetylaminofluorene	+++++	13639	53322	139323	180338	352859					
	426563	617426					LINR	0.18098	0.32395		0.99879
157 7,12Dimethylbenz(a)anthracene	+++++	0.45506	0.48633	0.47694	0.47156	0.48232					
	0.48628	0.45160					AVRG		0.47287		3.03811
158 3-Methylcholanthrene	+++++	0.32290	0.39428	0.39389	0.41296	0.44058					
	0.43581	0.42267					AVRG		0.40330		9.89218
26 Phthalic anhydride	+++++	9279	28432	88382	98010	174350					
	155303	233968					LINR	0.08557	0.10270		0.99452
173 Carbazole	0.76996	0.78964	0.67562	0.73091	0.70289	0.71013					
	0.69698	0.66805					AVRG		0.71802		6.00716
174 Hexachlorophene	+++++	0.04729	0.05480	0.06131	0.06240	0.05994					
	0.06360	+++++					AVRG		0.05822		10.58982
179 Dibenzo(a,e)pyrene	+++++	0.40291	0.35847	0.45818	0.33173	0.41418					
	0.46603	0.40080					AVRG		0.40461		12.01988
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e-00		0.000e+00 <-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
184 p-Benzoquinone	+-+++	3150	11516	23358	26594	48466					
	46443	68308					LINR	0.16246	0.14101		0.99754
191 Parathion	+-+++-	0.05529	0.06328	0.07150	0.06943	0.07088					
	0.07101	0.06676					AVRG		0.06688		8.80608
192 Methoxychlor	+-+++-	0.46435	0.58624	0.57649	0.51368	0.54017					
	0.54881	0.50354					AVRG		0.53333		8.02107
210 m-Toluidine	+++++	1.49620	1.38339	1.68036	1.63844	1.62579					
	1.55123	1.72011					AVRG		1.58507		7.35471
211 p-Toluidine	+++++	1.01959	1.23757	1.10717	1.03885	1.13933					
	1.16181	0.98132					AVRG		1.09795		8.19734
212 Cis Diallate	++-++	0.28988	0.29966	0.28366	0.28200	0.28772					
	0.28729	0.28618					AVRG		0.28806		1.99541
213 Trans Diallate	++-++	0.34241	0.34326	0.30222	0.29953	0.29524					
	0.28357	0.26826					AVRG		0.30493		9.28034
214 1,4-Dinitrobenzene	++-++	0.17749	0.21032	0.22035	0.21167	0.22213					
	0.21406	0.21900					AVRG		0.21072		7.27016
215 2-Ethoxyethanol	-++++	0.77687	0.83191	0.80656	0.77164	0.78617					
	0.79097	0.78383					AVRG		0.79256		2.60025

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
216 Methylenebis(2-chloroaniline)	+++++-	12805	28290	73347	76015	163504					
	143350	227450					LINR	0.22688	0.16489		0.99276
226 2,2'-Dichlorobenzil	+++++	0.66353	0.63564	0.69938	0.71605	+++++					
	0.61894	0.61670					AVRG		0.65837		6.38794
227 4-Chlorothioanisole	+++++	0.24506	0.23206	0.25611	0.24444	+++++					
	0.22647	0.22185					AVRG		0.23767		5.47811
228 4-Chlorothiophenol	+++++	16402	35170	110583	127434	+++++-					
	369945	362685					LINR	0.16556	0.19296		0.99881
229 bis(p-Chlorophenyl)sulfone	+++++	0.43190	0.39213	0.41296	0.42357	+++++-					
	0.35674	0.35512					AVRG		0.39540		8.43542
230 bis(p-Chlorophenyl)disulfide	+++++	0.13289	0.12954	0.13348	0.13989	+++++					
	0.13874	0.13358					AVRG		0.13469		2.89412
231 Diphenyl disulfide	+++++	0.21076	0.20544	0.20636	0.21043	+++++					
	0.20788	0.19706					AVRG		0.20632		2.42897
232 Diphenyl sulfide	+++++	0.77433	0.71574	0.74089	0.72654	+++++					
	0.63212	0.61110					AVRG		0.70012		9.18145
233 Phenyl sulfone	+++++	0.45053	0.43893	0.43334	0.43289	+++++					
	0.40522	0.38870					AVRG		0.42493		5.45500

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
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Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
234 Hydroxymethyl phthalimide	++++-	0.10467	0.13108	0.13853	0.12812	+++++						
	0.09771	0.10338					AVRG		0.11725		14.74617	
235 Phthalic acid	++++	6901	14671	49475	59125	+++++						
	224418	229358					LINR	0.33489	0.12663		0.99106	
236 Thiophenol	+-+++	32180	64610	165609	195072	+-+++						
	558912	549454					LINR	0.11114	1.06569		0.99908	
237 bis(Chloromethyl)ether	+-+++	0.84495	0.79365	0.86291	0.82523	+++-+						
	0.79051	0.76601					AVRG		0.81388		4.51297	
238 Octachlorostyrene	+++++	0.07576	0.07428	0.07540	0.07664	+++++						
	0.06778	0.06554					AVRG		0.07257		6.46624	
M 222 Trichlorophenols	+++++	0.32230	0.35148	0.33504	0.32180	0.30748						
	0.30756	0.28533					AVRG		0.31871		6.69034	
M 223 Tetrachlorophenols	+++++	0.28377	0.31045	0.28533	0.26800	0.27346						
	0.26536	0.23698					AVRG		0.27476		8.17853	
M 224 Benzo(b,k)fluoranthene	0.90388	1.01599	1.06219	1.02901	0.97944	0.96653						
	0.99148	0.94514					AVRG		0.98671		5.05498	
M 225 TTO Sum Semivolatiles	-++++	+-+++-	+++++	+++++	+++++	+++++						
	-++++	+-+++-					AVRG		0.000e+00		0.000e+00	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
$ 3 2-Fluorophenol	+++++	1.11390	1.17947	1.13740	1.07315	1.08214						
	1.09504	1.06683					AVRG		1.10685		3.64091	
$ 5 Phenol-d5	+++++	1.40468	1.49093	1.41246	1.33021	1.32629						
	1.31886	1.28434					AVRG		1.36682		5.25941	
$ 187 2-Chlorophenol-d4	-++++	+++++	+++++	+-+-+	-++++	+++++						
	-++++	+++++					AVRG		0.000e+00		0.000e-00	<-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	-++++	+++++	+++-+	++++-						
	++++-	+-+++					AVRG		0.000e-00		0.000e+00	<-
$ 20 Nitrobenzene-d5	+++++	0.33115	0.34312	0.31862	0.29770	0.28653						
	0.26834	0.26708					AVRG		0.30179		9.96470	
$ 39 2-Fluorobiphenyl	+-+++	1.30270	1.30016	1.18745	1.11084	1.02835						
	1.04071	0.93774					AVRG		1.12971		12.39866	
$ 60 2,4,6-Tribromophenol	+-+++	0.12926	0.14519	0.14483	0.13812	0.13844						
	0.13560	0.12756					AVRG		0.13700		5.00904	
$ 81 p-Terphenyl-d14	+++-+	0.73551	0.79284	0.69691	0.65932	0.63740						
	0.64073	0.60652					AVRG		0.68132		9.52562	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Cal Date : 30-Jun-2009 18:04 ann00964

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response

Data File: /chem/MSD2.i/s062609.b/s2f2625.d
Report Date: 29-Jun-2009 12:08

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 27-JUN-2009 05:54
Lab File ID: s2f2625.d Init. Cal. Date(s): 27-JUN-2009 27-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 05:05
Lab Sample ID: WBN090626-09.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 3 2-Fluorophenol	1.10685	1.17178	1.17178	0.000	5.86682	60.00000	Averaged	
$ 5 Phenol-d5	1.36682	1.39574	1.39574	0.000	2.11573	60.00000	Averaged	
$ 20 Nitrobenzene-d5	0.30179	0.33074	0.33074	0.000	9.59180	60.00000	Averaged	
$ 39 2-Fluorobiphenyl	1.12971	1.24615	1.24615	0.000	10.30702	60.00000	Averaged	
$ 60 2,4,6-Tribromophenol	0.13700	0.15078	0.15078	0.000	10.06079	60.00000	Averaged	
$ 81 p-Terphenyl-d14	0.68132	0.78070	0.78070	0.000	14.58697	60.00000	Averaged	
1 N-Methyl-N-nitrosomethylami	0.68543	0.76584	0.76584	0.000	11.73072	60.00000	Averaged	
2 Pyridine	0.91853	0.86229	0.86229	0.000	-6.12306	60.00000	Averaged	
4 Aniline	0.55072	0.57317	0.57317	0.000	4.07658	60.00000	Averaged	
6 Phenol	1.39242	1.43236	1.43236	0.001	2.86843	20.00000	Averaged	ccc
7 bis(2-Chloroethyl) ether	1.01868	1.03922	1.03922	0.000	2.01606	60.00000	Averaged	
8 2-Chlorophenol	1.18262	1.23519	1.23519	0.000	4.44553	60.00000	Averaged	
203 n-Decane	1.53985	1.60413	1.60413	0.000	4.17402	60.00000	Averaged	
9 1,3-Dichlorobenzene	1.31898	1.40893	1.40893	0.000	6.81954	60.00000	Averaged	
11 1,4-Dichlorobenzene	1.31747	1.36837	1.36837	0.001	3.86361	20.00000	Averaged	ccc
13 1,2-Dichlorobenzene	1.16945	1.21643	1.21643	0.000	4.01722	60.00000	Averaged	
14 bis(2-Chloroisopropyl)ether	2.28579	2.41210	2.41210	0.000	5.52573	60.00000	Averaged	
12 Benzyl alcohol	0.77939	0.82303	0.82303	0.000	5.59989	60.00000	Averaged	
15 o-Cresol	0.86750	0.87142	0.87142	0.000	0.45124	60.00000	Averaged	
18 m,p-Cresols	1.20835	1.28000	1.28000	0.000	5.92963	60.00000	Averaged	
17 N-Nitrosodipropylamine	0.83651	0.88727	0.88727	0.050	6.06876	60.00000	Averaged	spcc
19 Hexachloroethane	0.49043	0.50579	0.50579	0.000	3.13108	60.00000	Averaged	
21 Nitrobenzene	0.28921	0.31629	0.31629	0.000	9.36578	60.00000	Averaged	
22 Isophorone	0.54855	0.57925	0.57925	0.000	5.59589	60.00000	Averaged	
23 2-Nitrophenol	0.14110	0.15568	0.15568	0.001	10.33046	20.00000	Averaged	ccc
24 2,4-Dimethylphenol	0.35992	0.42881	0.42881	0.000	19.13912	60.00000	Averaged	
25 bis(2-Chloroethoxy)methane	0.32241	0.35122	0.35122	0.000	8.93649	60.00000	Averaged	
26 2,4-Dichlorophenol	0.21753	0.23746	0.23746	0.001	9.16146	20.00000	Averaged	ccc
27 Benzoic acid	0.14125	0.17436	0.17436	0.000	23.44089	60.00000	Averaged	
28 1,2,4-Trichlorobenzene	0.25451	0.25793	0.25793	0.000	1.34477	60.00000	Averaged	
30 Naphthalene	0.94195	0.88268	0.88268	0.000	-6.29195	60.00000	Averaged	
204 alpha-Terpineol	0.25697	0.26727	0.26727	0.000	4.00622	60.00000	Averaged	
31 4-Chloroaniline	0.36866	0.41756	0.41756	0.000	13.26317	60.00000	Averaged	
32 Hexachlorobutadiene	0.12913	0.13787	0.13787	0.001	6.76658	20.00000	Averaged	ccc
33 4-Chloro-3-methylphenol	0.22033	0.24191	0.24191	0.001	9.79481	20.00000	Averaged	ccc
34 2-Methylnaphthalene	0.54719	0.59562	0.59562	0.000	8.85038	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 27-JUN-2009 05:54
Lab File ID: s2f2625.d Init. Cal. Date(s): 27-JUN-2009 27-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 05:05
Lab Sample ID: WBN090626-09.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35 1-Methylnaphthalene	0.57350	0.55994	0.55994	0.000	-2.36393	60.00000	Averaged	
36 Hexachlorocyclopentadiene	0.17262	0.16622	0.16622	0.050	-3.70260	60.00000	Averaged	spcc
205 2,3-Dichloroaniline	0.53436	0.58180	0.58180	0.000	8.87692	60.00000	Averaged	
37 2,4,6-Trichlorophenol	0.29566	0.34293	0.34293	0.001	15.98835	20.00000	Averaged	ccc
38 2,4,5-Trichlorophenol	0.34176	0.36993	0.36993	0.000	8.24257	60.00000	Averaged	
40 2-Chloronaphthalene	0.98036	1.04394	1.04394	0.000	6.48523	60.00000	Averaged	
42 o-Nitroaniline	0.29844	0.32423	0.32423	0.000	8.64225	60.00000	Averaged	
41 m-Nitroaniline	0.23870	0.27422	0.27422	0.000	14.88399	60.00000	Averaged	
43 Dimethylphthalate	1.13758	1.28061	1.28061	0.000	12.57297	60.00000	Averaged	
44 2,6-Dinitrotoluene	0.27533	0.29805	0.29805	0.000	8.25341	60.00000	Averaged	
50 2,4-Dinitrotoluene	0.34243	0.36829	0.36829	0.000	7.55082	60.00000	Averaged	
45 Acenaphthylene	1.58844	1.78524	1.78524	0.000	12.38970	60.00000	Averaged	
47 Acenaphthene	1.04389	1.03692	1.03692	0.001	-0.66848	20.00000	Averaged	ccc
48 2,4-Dinitrophenol	41.54860	40.00000	0.09311	0.050	3.87150	60.00000	Linear	spcc
49 Dibenzofuran	1.35168	1.47216	1.47216	0.000	8.91346	60.00000	Averaged	
51 Diethylphthalate	1.11027	1.25912	1.25912	0.000	13.40739	60.00000	Averaged	
52 4-Nitrophenol	0.16773	0.18740	0.18740	0.050	11.72935	60.00000	Averaged	spcc
53 Fluorene	1.13327	1.18450	1.18450	0.000	4.52096	60.00000	Averaged	
54 4-Chlorophenylphenylether	0.51896	0.58121	0.58121	0.000	11.99434	60.00000	Averaged	
55 2-Methyl-4,6-dinitrophenol	51.45183	40.00000	0.11653	0.000	28.62959	60.00000	Linear	
56 p-Nitroaniline	0.20177	0.23693	0.23693	0.000	17.42550	60.00000	Averaged	
133 Diphenylamine	0.53423	0.57681	0.57681	0.001	7.97087	20.00000	Averaged	ccc
58 1,2-Diphenylhydrazine	0.69406	0.75023	0.75023	0.000	8.09262	60.00000	Averaged	
61 4-Bromophenylphenylether	0.16665	0.18185	0.18185	0.000	9.12215	60.00000	Averaged	
63 Hexachlorobenzene	0.18391	0.19930	0.19930	0.000	8.36942	60.00000	Averaged	
65 Pentachlorophenol	0.09648	0.11255	0.11255	0.001	16.64996	20.00000	Averaged	ccc
206 n-Octadecane	0.55080	0.55599	0.55599	0.000	0.94275	60.00000	Averaged	
68 Phenanthrene	0.95250	0.95419	0.95419	0.000	0.17665	60.00000	Averaged	
69 Anthracene	0.91864	1.02669	1.02669	0.000	11.76167	60.00000	Averaged	
72 Di-n-butylphthalate	1.06040	1.21201	1.21201	0.000	14.29748	60.00000	Averaged	
76 Fluoranthene	0.87623	0.98279	0.98279	0.001	12.16116	20.00000	Averaged	ccc
79 Pyrene	1.19072	1.24730	1.24730	0.000	4.75140	60.00000	Averaged	
85 Butylbenzylphthalate	0.49747	0.61856	0.61856	0.000	24.34130	60.00000	Averaged	
89 Benzo(a)anthracene	0.97321	1.02966	1.02966	0.000	5.80050	60.00000	Averaged	
92 Chrysene	0.93921	0.99173	0.99173	0.000	5.59137	60.00000	Averaged	
93 bis(2-Ethylhexyl)phthalate	0.73378	0.85303	0.85303	0.000	16.25197	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 27-JUN-2009 05:54
Lab File ID: s2f2625.d Init. Cal. Date(s): 27-JUN-2009 27-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 05:05
Lab Sample ID: WBN090626-09.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
94	Di n-octylphthalate	1.30080	1.42438	1.42438	0.001	9.50026	20.00000	Averaged	ccc
95	Benzo(b)fluoranthene	0.96025	1.01654	1.01654	0.000	5.86244	60.00000	Averaged	
96	Benzo(k)fluoranthene	1.01317	1.14707	1.14707	0.000	13.21595	60.00000	Averaged	
97	Benzo(a)pyrene	0.83897	0.93000	0.93000	0.001	10.84982	20.00000	Averaged	ccc
99	Indeno(1,2,3-cd)pyrene	0.80593	0.81608	0.81608	0.000	1.25966	60.00000	Averaged	
100	Dibenzo(a,h)anthracene	0.64671	0.68007	0.68007	0.000	5.15846	60.00000	Averaged	
101	Benzo(ghi)perylene	0.69976	0.70004	0.70004	0.000	0.03956	60.00000	Averaged	
126	m-Dinitrobenzene	0.19442	0.21031	0.21031	0.000	8.17273	60.00000	Averaged	
130	2,3,4,6-Tetrachlorophenol	0.27476	0.27345	0.27345	0.000	-0.47639	60.00000	Averaged	
143	Dinoseb	40.99235	40.00000	0.14321	0.000	2.48087	60.00000	Linear	
173	Carbazole	0.71802	0.83406	0.83406	0.000	16.16014	60.00000	Averaged	
184	p-Benzoquinone	36.34465	40.00000	0.10522	0.000	-9.13838	60.00000	Linear	
192	Methoxychlor	0.53333	0.55997	0.55997	0.000	4.99631	60.00000	Averaged	
211	p-Toluidine	1.09795	1.09966	1.09966	0.000	0.15562	60.00000	Averaged	
210	m-Toluidine	1.58507	1.77063	1.77063	0.000	11.70669	60.00000	Averaged	
214	1,4-Dinitrobenzene	0.21072	0.23347	0.23347	0.000	10.79737	60.00000	Averaged	
215	2-Ethoxyethanol	0.79256	0.84757	0.84757	0.000	6.94050	60.00000	Averaged	
216	Methylenebis(2-chloroanilin	43.43535	40.00000	0.14164	0.000	8.58838	60.00000	Linear	
179	Dibenzo(a,e)pyrene	0.40461	0.25194	0.25194	0.000	-37.73433	60.00000	Averaged	
26	Phthalic anhydride	54.66208	40.00000	0.13156	0.000	36.65520	60.00000	Linear	
M 222	Trichlorophenols	0.31871	0.35643	0.35643	0.000	11.83533	60.00000	Averaged	
M 223	Tetrachlorophenols	0.27476	0.27345	0.27345	0.000	-0.47639	60.00000	Averaged	
M 224	Benzo(b,k)fluoranthene	0.98671	1.08180	1.08180	0.000	9.63779	60.00000	Averaged	

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Data file : /chem/MSD2.i/s062609.b/s2f2625.d
Lab Smp Id: WBN090626-09.1 Client Smp ID: MEGAICV
Inj Date : 27-JUN-2009 05:54
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090626-09.1|40 PPM|1|SVMF|1|MEGAICV
Misc Info : |MSD8270|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m
Meth Date : 29-Jun-2009 12:08 jos00786 Quant Type: ISTD
Cal Date : 27-JUN-2009 03:29 Cal File: s2f2619.d
Als bottle: 12 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAII.sub
Target Version: 3.50
Processing Host: kilroy

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.057	4.057	(1.000)	205606	40.0000	
* 29 Naphthalene-d8	136	4.929	4.929	(1.000)	846162	40.0000	
* 46 Acenaphthene-d10	164	6.175	6.175	(1.000)	422231	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.148	(1.000)	715323	40.0000	
* 91 Chrysene-d12	240	8.881	8.881	(1.000)	589663	40.0000	
* 98 Perylene-d12	264	10.491	10.491	(1.000)	544803	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.228	(0.796)	240926	40.0000	42.3
$ 5 Phenol-d5	99	3.757	3.757	(0.926)	286973	40.0000	40.8
$ 20 Nitrobenzene-d5	82	4.421	4.421	(0.897)	279860	40.0000	43.8
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	526162	40.0000	44.1
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.085)	63666	40.0000	44.0
$ 81 p-Terphenyl-d14	244	8.074	8.074	(0.909)	460351	40.0000	45.8
1 N-Methyl-N-nitrosomethylamine	74	2.522	2.522	(0.622)	157461	40.0000	44.7
2 Pyridine	79	2.554	2.554	(0.630)	177292	40.0000	37.6
4 Aniline	66	3.838	3.838	(0.946)	117847	40.0000	41.6
6 Phenol	94	3.768	3.768	(0.929)	294502	40.0000	41.1
7 bis(2-Chloroethyl) ether	63	3.848	3.848	(0.949)	213670	40.0000	40.8
8 2-Chlorophenol	128	3.918	3.918	(0.966)	253963	40.0000	41.8
203 n-Decane	43	3.902	3.902	(0.962)	329818	40.0000	41.7
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.991)	289685	40.0000	42.7
11 1,4-Dichlorobenzene	146	4.068	4.068	(1.003)	281346	40.0000	41.5
13 1,2-Dichlorobenzene	146	4.175	4.175	(1.029)	250105	40.0000	41.6
14 bis(2-Chloroisopropyl)ether	45	4.196	4.196	(1.034)	495942	40.0000	42.2
12 Benzyl alcohol	108	4.116	4.116	(1.014)	169220	40.0000	42.2
15 o-Cresol	107	4.164	4.164	(1.026)	179169	40.0000	40.2
18 m,p-Cresols	107	4.265	4.265	(1.051)	263175	40.0000	42.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.292	4.292	(1.058)	182429	40.0000	42.4
19 Hexachloroethane	117	4.405	4.405	(1.086)	103993	40.0000	41.2
21 Nitrobenzene	77	4.431	4.431	(0.899)	267636	40.0000	43.7
22 Isophorone	82	4.586	4.586	(0.931)	490137	40.0000	42.2
23 2-Nitrophenol	139	4.645	4.645	(0.942)	131732	40.0000	44.1
24 2,4-Dimethylphenol	122	4.635	4.635	(0.940)	362843	40.0000	47.6
25 bis(2-Chloroethoxy)methane	93	4.704	4.704	(0.954)	297191	40.0000	43.6
26 2,4-Dichlorophenol	162	4.806	4.806	(0.975)	200929	40.0000	43.7
27 Benzoic acid	105	4.688	4.688	(0.951)	147536	40.0000	49.4
28 1,2,4-Trichlorobenzene	180	4.875	4.875	(0.989)	218251	40.0000	40.5
30 Naphthalene	128	4.945	4.945	(1.003)	746894	40.0000	37.5
204 alpha-Terpineol	59	4.913	4.913	(0.997)	226152	40.0000	41.6
31 4-Chloroaniline	127	4.950	4.950	(1.004)	353320	40.0000	45.3
32 Hexachlorobutadiene	225	5.004	5.004	(1.015)	116658	40.0000	42.7
33 4-Chloro-3-methylphenol	107	5.260	5.260	(1.067)	204697	40.0000	43.9
34 2-Methylnaphthalene	142	5.421	5.421	(1.100)	503988	40.0000	43.5
35 1-Methylnaphthalene	142	5.496	5.496	(1.115)	473804	40.0000	39.0
36 Hexachlorocyclopentadiene	237	5.528	5.528	(0.895)	70185	40.0000	38.5
205 2,3-Dichloroaniline	161	5.619	5.619	(0.910)	245654	40.0000	43.6
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.908)	144796	40.0000	46.4
38 2,4,5-Trichlorophenol	196	5.635	5.635	(0.912)	156198	40.0000	43.3
40 2-Chloronaphthalene	162	5.779	5.779	(0.936)	440783	40.0000	42.6
42 o-Nitroaniline	65	5.827	5.827	(0.944)	136901	40.0000	43.4
41 m-Nitroaniline	138	6.121	6.121	(0.991)	115786	40.0000	46.0
43 Dimethylphthalate	163	5.940	5.940	(0.962)	540713	40.0000	45.0
44 2,6-Dinitrotoluene	165	5.993	5.993	(0.971)	125848	40.0000	43.3
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	155502	40.0000	43.0
45 Acenaphthylene	152	6.079	6.079	(0.984)	753783	40.0000	45.0
47 Acenaphthene	154	6.196	6.196	(1.003)	437818	40.0000	39.7
48 2,4-Dinitrophenol	184	6.186	6.186	(1.002)	39313	40.0000	41.5
49 Dibenzofuran	168	6.314	6.314	(1.023)	621590	40.0000	43.6
51 Diethylphthalate	149	6.416	6.416	(1.039)	531641	40.0000	45.4
52 4-Nitrophenol	139	6.196	6.196	(1.003)	79128	40.0000	44.7
53 Fluorene	166	6.544	6.544	(1.060)	500134	40.0000	41.8
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.055)	245403	40.0000	44.8
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	83355	40.0000	51.4
56 p-Nitroaniline	138	6.539	6.539	(1.059)	100038	40.0000	47.0
133 Diphenylamine	169	6.592	6.592	(0.922)	412604	40.0000	43.2
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.927)	536654	40.0000	43.2
61 4-Bromophenylphenylether	248	6.844	6.844	(0.957)	130081	40.0000	43.6
63 Hexachlorobenzene	284	6.902	6.902	(0.966)	142565	40.0000	43.3
65 Pentachlorophenol	266	7.015	7.015	(0.981)	80509	40.0000	46.6
206 n-Octadecane	57	6.993	6.993	(0.978)	397713	40.0000	40.4
68 Phenanthrene	178	7.164	7.164	(1.002)	682552	40.0000	40.1
69 Anthracene	178	7.197	7.197	(1.007)	734414	40.0000	44.7
72 Di-n-butylphthalate	149	7.432	7.432	(1.040)	866976	40.0000	45.7
76 Fluoranthene	202	7.881	7.881	(1.103)	703009	40.0000	44.9

Compounds	QUANT SIC MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
79 Pyrene	202	8.026	8.026	(0.904)	735485	40.0000	41.9
85 Butylbenzylphthalate	149	8.347	8.347	(0.940)	364740	40.0000	49.7
89 Benzo(a)anthracene	228	8.871	8.871	(0.999)	607155	40.0000	42.3
92 Chrysene	228	8.903	8.903	(1.002)	584785	40.0000	42.2
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.737	(0.984)	503003	40.0000	46.5
94 Di-n-octylphthalate	149	9.320	9.320	(0.888)	776004	40.0000	43.8
95 Benzo(b)fluoranthene	252	9.972	9.972	(0.951)	553816	40.0000	42.3
96 Benzo(k)fluoranthene	252	10.010	10.010	(0.954)	624925	40.0000	45.3
97 Benzo(a)pyrene	252	10.416	10.416	(0.993)	506668	40.0000	44.3
99 Indeno(1,2,3-cd)pyrene	276	12.326	12.326	(1.175)	444604	40.0000	40.5
100 Dibenzo(a,h)anthracene	278	12.331	12.331	(1.175)	370502	40.0000	42.1
101 Benzo(ghi)perylene	276	12.887	12.887	(1.228)	381383	40.0000	40.0
126 m-Dinitrobenzene	168	5.977	5.977	(0.968)	88799	40.0000	43.3
130 2,3,4,6-Tetrachlorophenol	232	6.378	6.378	(1.033)	115461	40.0000	39.8
143 Dinoseb	211	7.100	7.100	(0.993)	102438	40.0000	41.0
173 Carbazole	167	7.277	7.277	(1.018)	596619	40.0000	46.5
184 p-Benzoquinone	54	3.533	3.533	(0.871)	21633	40.0000	36.3
192 Methoxychlor	227	8.721	8.721	(0.982)	330195	40.0000	42.0
211 p-Toluidine	106	4.330	4.330	(1.067)	226096	40.0000	40.1
210 m-Toluidine	106	4.351	4.351	(1.073)	364053	40.0000	44.7
214 1,4-Dinitrobenzene	75	5.918	5.918	(0.958)	98577	40.0000	44.3
215 2-Ethoxyethanol	59	2.356	2.356	(0.581)	174266	40.0000	42.8
216 Methylenebis(2-chloroaniline)	231	8.790	8.790	(0.990)	83518	40.0000	43.4
179 Dibenzo(a,e)pyrene	302	17.257	17.257	(1.645)	137255	40.0000	24.9
26 Phthalic anhydride	104	5.458	5.458	(1.107)	111320	40.0000	54.7
M 222 Trichlorophenols	196				300994	80.0000	89.5
M 223 Tetrachlorophenols	232				115461	40.0000	39.8
M 224 Benzo(b,k)fluoranthene	252				1178741	80.0000	87.7

Data File: /chem/MSD2.i/s062609.b/s2f2625.d
Date : 27-JUN-2009 05:54
Client ID: MEGAICV
Sample Info: WBN090626-09,1|40 PPM|1|SVMF|1|MEGAICV
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

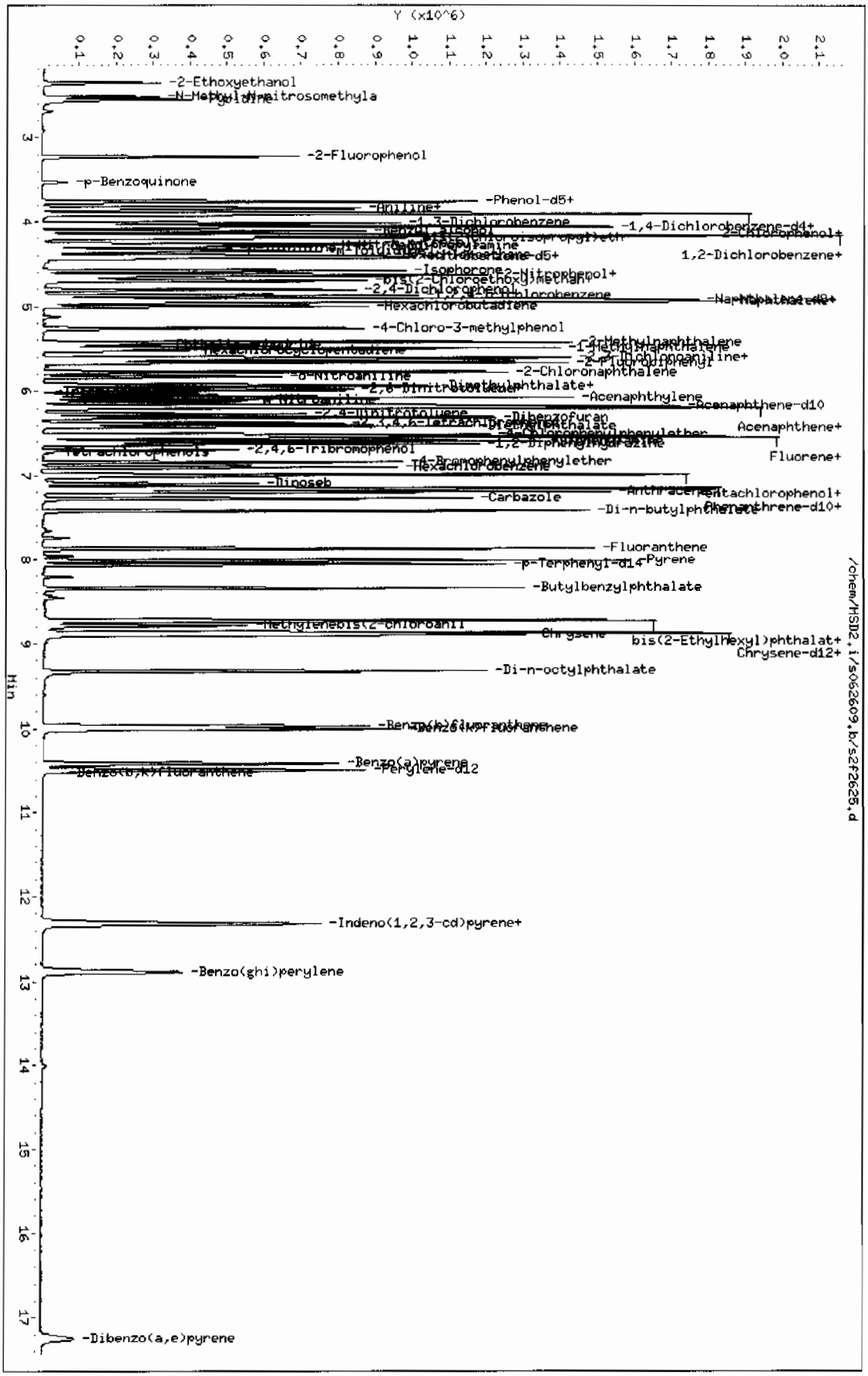

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 29-JUN-2009 00:59
Lab File ID: s2f2823.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090528-8.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062809.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.85512	0.73215	0.73215	0.000	-14.38070	60.00000	Averaged
16 Acetophenone	1.19881	1.22790	1.22790	0.000	2.42616	60.00000	Averaged
189 Caprolactam	0.08601	0.09673	0.09673	0.000	12.46213	60.00000	Averaged
208 1,1'-Biphenyl	1.21152	1.22593	1.22593	0.000	1.18934	60.00000	Averaged
207 Atrazine	0.04406	0.04635	0.04635	0.000	5.20660	60.00000	Averaged
77 Benzidine	32.96272	40.00000	0.25943	0.000	-17.59321	60.00000	Linear
90 3,3'-Dichlorobenzidine	0.25863	0.27950	0.27950	0.000	8.07052	60.00000	Averaged
102 1,4-Dioxane	0.37452	0.45026	0.45026	0.000	20.22257	60.00000	Averaged
103 Methyl methacrylate	0.21046	0.26097	0.26097	0.000	24.00158	60.00000	Averaged
104 Ethyl methacrylate	0.80237	0.96882	0.96882	0.000	20.74475	60.00000	Averaged
105 2-Picoline	1.24101	1.23730	1.23730	0.000	-0.29905	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.52937	0.53916	0.53916	0.000	1.85004	60.00000	Averaged
107 Methyl methanesulfonate	0.47397	0.50724	0.50724	0.000	7.01905	60.00000	Averaged
108 N-Nitrosodiethylamine	0.54113	0.54765	0.54765	0.000	1.20582	60.00000	Averaged
109 Ethyl Methanesulfonate	0.64600	0.79249	0.79249	0.000	22.67636	60.00000	Averaged
110 Pentachloroethane	0.31203	0.42180	0.42180	0.000	35.18260	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.54373	0.54895	0.54895	0.000	0.95984	60.00000	Averaged
113 N-Nitrosomorpholine	0.72224	0.75660	0.75660	0.000	4.75732	60.00000	Averaged
114 o-Toluidine	1.79520	1.86436	1.86436	0.000	3.85230	60.00000	Averaged
115 N-Nitrosopiperidine	0.14845	0.14948	0.14948	0.000	0.69168	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.76945	0.78098	0.78098	0.000	1.49868	60.00000	Averaged
118 2,6-Dichlorophenol	0.21644	0.22654	0.22654	0.000	4.66964	60.00000	Averaged
119 Hexachloropropene	0.09423	0.14226	0.14226	0.000	50.96975	60.00000	Averaged
120 p-Phenylenediamine	0.22216	0.23975	0.23975	0.000	7.92199	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.21235	0.25105	0.25105	0.000	18.22302	60.00000	Averaged
122 Safrole	0.19580	0.23292	0.23292	0.000	18.95759	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.40456	0.43809	0.43809	0.000	8.28861	60.00000	Averaged
124 Isosafrole	0.35137	0.46660	0.46660	0.000	32.79214	60.00000	Averaged
125 1,4-Naphthoquinone	0.33168	0.35285	0.35285	0.000	6.38276	60.00000	Averaged
127 Pentachlorobenzene	0.35632	0.38055	0.38055	0.000	6.79978	60.00000	Averaged
128 1-Naphthylamine	0.92126	0.99462	0.99462	0.000	7.96341	60.00000	Averaged
129 2-Naphthylamine	1.00463	1.03173	1.03173	0.000	2.69747	60.00000	Averaged
131 5-Nitro-o-toluidine	40.98178	40.00000	0.29084	0.000	2.45445	60.00000	Linear
136 1,3,5-Trinitrobenzene	52.14849	40.00000	0.13880	0.000	30.37122	60.00000	Linear
137 Phenacetin	0.24441	0.25948	0.25948	0.000	6.16755	60.00000	Averaged
138 Diallate	0.25943	0.26304	0.26304	0.000	1.39040	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 29-JUN-2009 00:59
Lab File ID: s2f2823.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090528-8.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062809.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.28806	0.30517	0.30517	0.000	5.94019	60.00000	Averaged
213 Trans Diallate	0.30493	0.30905	0.30905	0.000	1.35293	60.00000	Averaged
140 4-Aminobiphenyl	0.49104	0.54713	0.54713	0.000	11.42323	60.00000	Averaged
141 Pentachloronitrobenzene	0.06168	0.06578	0.06578	0.000	6.64718	60.00000	Averaged
142 Pronamide	0.25232	0.26349	0.26349	0.000	4.42401	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	40.26838	40.00000	0.02554	0.000	0.67094	60.00000	Linear
147 Methapyrilene	0.44483	0.45204	0.45204	0.000	1.61954	60.00000	Averaged
148 Isodrin	0.10127	0.09742	0.09742	0.000	-3.80395	60.00000	Averaged
149 Aramite	0.04612	0.04281	0.04281	0.000	-7.17325	60.00000	Averaged
150 Kepone	0.07238	0.07563	0.07563	0.000	4.49567	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.31565	0.32885	0.32885	0.000	4.18054	60.00000	Averaged
152 Chlorobenzilate	0.26848	0.29038	0.29038	0.000	8.15609	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.49041	0.49218	0.49218	0.000	0.36220	60.00000	Averaged
155 2-Acetylaminofluorene	41.17782	40.00000	0.27486	0.000	2.94454	60.00000	Linear
157 7,12Dimethylbenz(a)anthrace	0.47287	0.44162	0.44162	0.000	-6.60888	60.00000	Averaged
158 3-Methylcholanthrene	0.40330	0.39491	0.39491	0.000	-2.07992	60.00000	Averaged

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Data file : /chem/MSD2.i/s062809.b/s2f2823.d
Lab Smp Id: WBN090528-8.1 Client Smp ID: APICV
Inj Date : 29-JUN-2009 00:59
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090528-8.1|40 PPM|1|SVMF|1|APICV
Misc Info : |MSD8270|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s062809.b/MSD2-M8270CAQA-062809.m
Meth Date : 29-Jun-2009 12:07 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.052	4.052	(1.000)	164062	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	623167	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.170	(1.000)	350836	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.148	(1.000)	600630	40.0000	
* 91 Chrysene-d12	240	8.876	8.876	(1.000)	507539	40.0000	
* 98 Perylene-d12	264	10.486	10.513	(1.000)	420039	40.0000	
209 Benzaldehyde	77	3.773	3.773	(0.931)	120118	40.0000	34.2
16 Acetophenone	105	4.303	4.303	(1.062)	201451	40.0000	41.0
189 Caprolactam	113	5.191	5.191	(1.054)	60278	40.0000	45.0
208 1,1'-Biphenyl	154	5.747	5.747	(0.932)	430099	40.0000	40.5
207 Atrazine	173	6.908	6.908	(0.966)	27840	40.0000	42.1
77 Benzidine	184	7.924	7.924	(0.893)	131669	40.0000	33.0
90 3,3'-Dichlorobenzidine	252	8.796	8.796	(0.991)	141857	40.0000	43.2
102 1,4-Dioxane	88	2.356	2.356	(0.582)	73871	40.0000	48.1
103 Methyl methacrylate	100	2.351	2.351	(0.580)	42815	40.0000	49.6
104 Ethyl methacrylate	69	2.736	2.736	(0.675)	158947	40.0000	48.3
105 2-Picoline	93	2.934	2.934	(0.724)	202994	40.0000	39.9
106 N-Nitrosomethylethylamine	88	2.976	2.976	(0.735)	88456	40.0000	40.7
107 Methyl methanesulfonate	80	3.137	3.137	(0.774)	83219	40.0000	42.8
108 N-Nitrosodiethylamine	102	3.372	3.372	(0.832)	89849	40.0000	40.5
109 Ethyl Methanesulfonate	79	3.527	3.527	(0.871)	130018	40.0000	49.1
110 Pentachloroethane	167	3.880	3.880	(0.958)	69202	40.0000	54.1
111 N-Nitrosopyrrolidine	100	4.287	4.287	(1.058)	90062	40.0000	40.4
113 N-Nitrosomorpholine	56	4.308	4.308	(1.063)	124130	40.0000	41.9
114 o-Toluidine	106	4.330	4.330	(1.069)	305870	40.0000	41.5
115 N-Nitrosopiperidine	114	4.533	4.533	(0.921)	93151	40.0000	40.3
116 a,a-Dimethylphenethylamine	58	4.784	4.784	(0.972)	486679	40.0000	40.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
118 2,6-Dichlorophenol	162	4.966	4.966	(1.009)	141174	40.0000	41.9
119 Hexachloropropene	213	4.998	4.998	(1.015)	88654	40.0000	60.4
120 p-Phenylenediamine	108	5.196	5.196	(1.055)	149407	40.0000	43.2
121 N-Nitrosodi-n-butylamine	84	5.164	5.164	(1.049)	156447	40.0000	47.3
122 Safrole	162	5.335	5.335	(1.084)	145148	40.0000	47.6
123 1,2,4,5-Tetrachlorobenzene	216	5.538	5.538	(0.898)	153698	40.0000	43.3
124 Isosafrole	162	5.704	5.704	(0.925)	163699	40.0000	53.1
125 1,4-Naphthoquinone	158	5.891	5.891	(0.955)	123794	40.0000	42.6
127 Pentachlorobenzene	250	6.282	6.282	(1.018)	133510	40.0000	42.7
128 1-Naphthylamine	143	6.357	6.357	(1.030)	348950	40.0000	43.2
129 2-Naphthylamine	143	6.410	6.410	(1.039)	361969	40.0000	41.1
131 5-Nitro-o-toluidine	152	6.528	6.528	(1.058)	102037	40.0000	41.0
136 1,3,5-Trinitrobenzene	75	6.731	6.731	(0.942)	83365	40.0000	52.1
137 Phenacetin	108	6.769	6.769	(0.947)	155854	40.0000	42.5
138 Diallate	86	6.763	6.763	(0.946)	157989	40.0000	40.6
212 Cis Diallate	86	6.827	6.827	(0.955)	27494	6.00000	6.4
213 Trans Diallate	86	6.763	6.763	(0.946)	157782	34.0000	34.4
140 4-Aminobiphenyl	169	7.004	7.004	(0.980)	328623	40.0000	44.6
141 Pentachloronitrobenzene	237	7.025	7.025	(0.983)	39510	40.0000	42.6
142 Pronamide	173	7.009	7.009	(0.981)	158257	40.0000	41.8
146 4-Nitroquinoline-1-oxide	101	7.614	7.614	(1.065)	15343	40.0000	40.3
147 Methapyrilene	58	7.624	7.624	(1.067)	271506	40.0000	40.6
148 Isodrin	193	7.790	7.790	(1.090)	58514	40.0000	38.5
149 Aramite	185	8.015	8.015	(1.121)	25715	40.0000	37.1
150 Kepone	272	8.475	8.475	(1.186)	45428	40.0000	41.8
151 p-(Dimethylamino)azobenzene	120	8.149	8.149	(0.918)	166902	40.0000	41.7
152 Chlorobenzilate	251	8.165	8.165	(0.920)	147378	40.0000	43.3
153 3,3'-Dimethylbenzidine	212	8.373	8.373	(0.943)	249802	40.0000	40.1
155 2-Acetylaminofluorene	181	8.566	8.566	(0.965)	139501	40.0000	41.2
157 7,12Dimethylbenz(a)anthracene	256	9.935	9.935	(0.947)	185497	40.0000	37.4
158 3-Methylcholanthrene	268	10.892	10.892	(1.039)	165878	40.0000	39.2

Data File: /chem/MSD2.i/s062809.b/s2f2823.d
Date : 29-JUN-2009 00:59
Client ID: APICV
Sample Info: IWBN090528-8.1|40 PPM|1|SVMF|1|APICV

Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: AGS1
Column diameter: 0.20

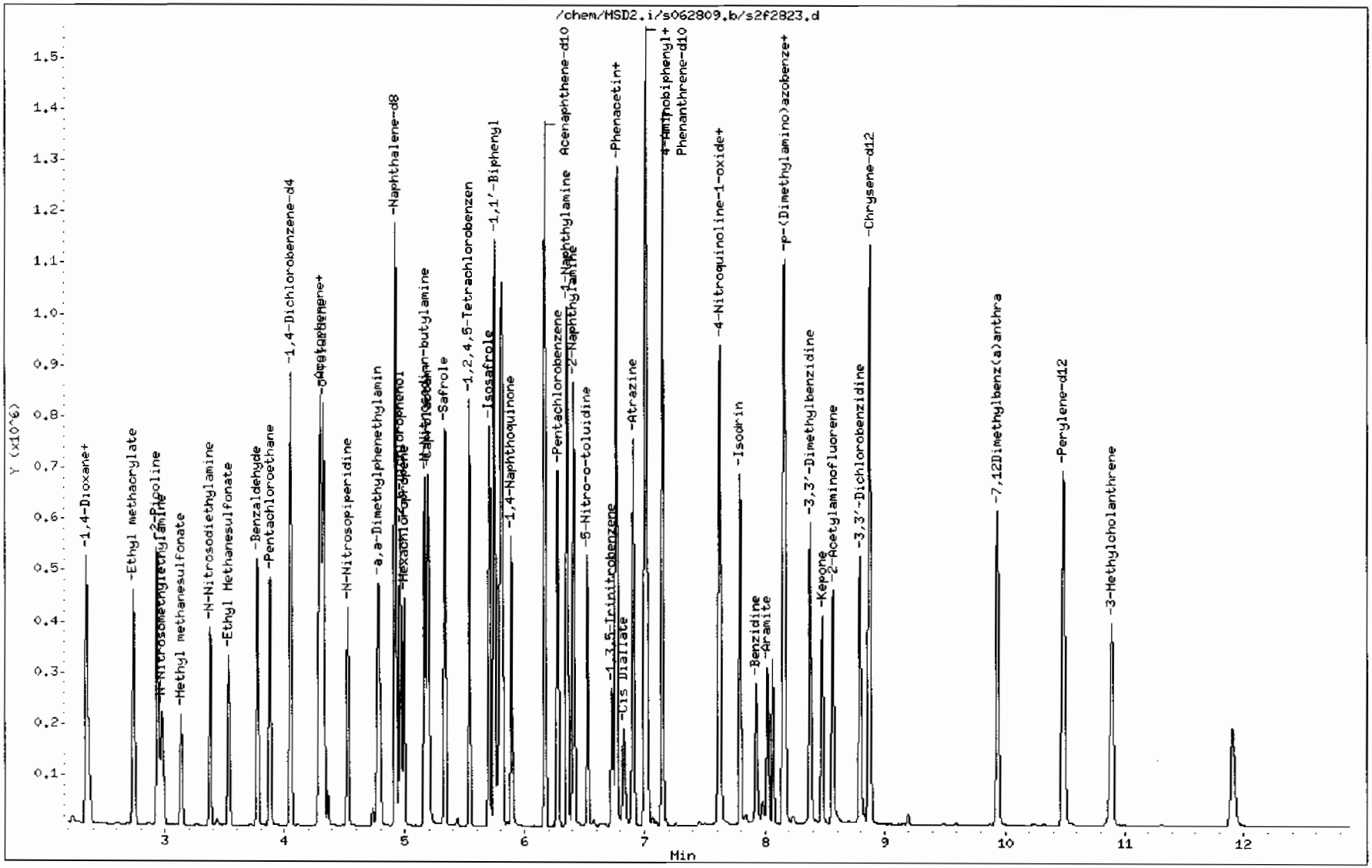

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 30-JUN-2009 16:03
Lab File ID: s2f3002.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 3 2-Fluorophenol	1.10685	1.13956	1.13956	0.000	2.95565	60.00000	Averaged
$ 5 Phenol-d5	1.36682	1.39968	1.39968	0.000	2.40380	60.00000	Averaged
$ 20 Nitrobenzene-d5	0.30179	0.33203	0.33203	0.000	10.01757	60.00000	Averaged
$ 39 2-Fluorobiphenyl	1.12971	1.21463	1.21463	0.000	7.51691	60.00000	Averaged
$ 60 2,4,6-Tribromophenol	0.13700	0.15465	0.15465	0.000	12.87906	60.00000	Averaged
$ 81 p-Terphenyl-d14	0.68132	0.70755	0.70755	0.000	3.85010	60.00000	Averaged
1 N-Methyl-N-nitrosomethylami	0.68543	0.70044	0.70044	0.000	2.18884	60.00000	Averaged
2 Pyridine	0.91853	0.90943	0.90943	0.000	-0.99053	60.00000	Averaged
4 Aniline	0.55072	0.57574	0.57574	0.000	4.54377	60.00000	Averaged
6 Phenol	1.39242	1.42075	1.42075	0.001	2.03454	20.00000	Averaged ccc
7 bis(2-Chloroethyl) ether	1.01868	1.05130	1.05130	0.000	3.20221	60.00000	Averaged
8 2-Chlorophenol	1.18262	1.23259	1.23259	0.000	4.22512	60.00000	Averaged
203 n-Decane	1.53985	1.58407	1.58407	0.000	2.87185	60.00000	Averaged
9 1,3-Dichlorobenzene	1.31898	1.37757	1.37757	0.000	4.44165	60.00000	Averaged
11 1,4-Dichlorobenzene	1.31747	1.38446	1.38446	0.001	5.08418	20.00000	Averaged ccc
13 1,2-Dichlorobenzene	1.16945	1.25039	1.25039	0.000	6.92153	60.00000	Averaged
14 bis(2-Chloroisopropyl)ether	2.28579	2.31654	2.31654	0.000	1.34520	60.00000	Averaged
12 Benzyl alcohol	0.77939	0.77033	0.77033	0.000	-1.16167	60.00000	Averaged
15 o-Cresol	0.86750	0.94552	0.94552	0.000	8.99288	60.00000	Averaged
18 m,p-Cresols	1.20835	1.21935	1.21935	0.000	0.91051	60.00000	Averaged
17 N-Nitrosodipropylamine	0.83651	0.87898	0.87898	0.050	5.07718	60.00000	Averaged spcc
19 Hexachloroethane	0.49043	0.51693	0.51693	0.000	5.40322	60.00000	Averaged
21 Nitrobenzene	0.28921	0.31565	0.31565	0.000	9.14444	60.00000	Averaged
22 Isophorone	0.54855	0.58650	0.58650	0.000	6.91854	60.00000	Averaged
23 2-Nitrophenol	0.14110	0.15907	0.15907	0.001	12.73472	20.00000	Averaged ccc
24 2,4-Dimethylphenol	0.35992	0.41162	0.41162	0.000	14.36195	60.00000	Averaged
25 bis(2-Chloroethoxy)methane	0.32241	0.35286	0.35286	0.000	9.44376	60.00000	Averaged
26 2,4-Dichlorophenol	0.21753	0.24317	0.24317	0.001	11.78574	20.00000	Averaged ccc
27 Benzoic acid	0.14125	0.16442	0.16442	0.000	16.40593	60.00000	Averaged
28 1,2,4-Trichlorobenzene	0.25451	0.27404	0.27404	0.000	7.67570	60.00000	Averaged
30 Naphthalene	0.94195	0.87694	0.87694	0.000	-6.90145	60.00000	Averaged
204 alpha-Terpineol	0.25697	0.27539	0.27539	0.000	7.16870	60.00000	Averaged
31 4-Chloroaniline	0.36866	0.41067	0.41067	0.000	11.39600	60.00000	Averaged
32 Hexachlorobutadiene	0.12913	0.14434	0.14434	0.001	11.77544	20.00000	Averaged ccc
33 4-Chloro-3-methylphenol	0.22033	0.22999	0.22999	0.001	4.38355	20.00000	Averaged ccc
34 2-Methylnaphthalene	0.54719	0.54725	0.54725	0.000	0.01219	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 30-JUN-2009 16:03
Lab File ID: s2f3002.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35 1-Methylnaphthalene	0.57350	0.56769	0.56769	0.000	-1.01374	60.00000	Averaged	
36 Hexachlorocyclopentadiene	0.17262	0.23518	0.23518	0.050	36.24609	60.00000	Averaged	spcc
205 2,3-Dichloroaniline	0.53436	0.58148	0.58148	0.000	8.81749	60.00000	Averaged	
37 2,4,6-Trichlorophenol	0.29566	0.31130	0.31130	0.001	5.28941	20.00000	Averaged	ccc
38 2,4,5-Trichlorophenol	0.34176	0.38777	0.38777	0.000	13.46044	60.00000	Averaged	
40 2-Chloronaphthalene	0.98036	1.03280	1.03280	0.000	5.34886	60.00000	Averaged	
42 o-Nitroaniline	0.29844	0.32658	0.32658	0.000	9.43050	60.00000	Averaged	
41 m-Nitroaniline	0.23870	0.26738	0.26738	0.000	12.01549	60.00000	Averaged	
43 Dimethylphthalate	1.13758	1.19507	1.19507	0.000	5.05365	60.00000	Averaged	
44 2,6-Dinitrotoluene	0.27533	0.29396	0.29396	0.000	6.76670	60.00000	Averaged	
50 2,4-Dinitrotoluene	0.34243	0.36824	0.36824	0.000	7.53600	60.00000	Averaged	
45 Acenaphthylene	1.58844	1.68238	1.68238	0.000	5.91438	60.00000	Averaged	
47 Acenaphthene	1.04389	1.01910	1.01910	0.001	-2.37522	20.00000	Averaged	ccc
48 2,4-Dinitrophenol	50.63501	40.00000	0.11820	0.050	26.58753	60.00000	Linear	spcc
49 Dibenzofuran	1.35168	1.44760	1.44760	0.000	7.09650	60.00000	Averaged	
51 Diethylphthalate	1.11027	1.16995	1.16995	0.000	5.37539	60.00000	Averaged	
52 4-Nitrophenol	0.16773	0.18345	0.18345	0.050	9.37422	60.00000	Averaged	spcc
53 Fluorene	1.13327	1.15397	1.15397	0.000	1.82660	60.00000	Averaged	
54 4-Chlorophenylphenylether	0.51896	0.56434	0.56434	0.000	8.74381	60.00000	Averaged	
55 2-Methyl-4,6-dinitrophenol	46.37719	40.00000	0.10406	0.000	15.94298	60.00000	Linear	
56 p-Nitroaniline	0.20177	0.25457	0.25457	0.000	26.16777	60.00000	Averaged	
133 Diphenylamine	0.53423	0.57363	0.57363	0.001	7.37624	20.00000	Averaged	ccc
58 1,2-Diphenylhydrazine	0.69406	0.72422	0.72422	0.000	4.34553	60.00000	Averaged	
61 4-Bromophenylphenylether	0.16665	0.18003	0.18003	0.000	8.03257	60.00000	Averaged	
63 Hexachlorobenzene	0.18391	0.20155	0.20155	0.000	9.59173	60.00000	Averaged	
65 Pentachlorophenol	0.09648	0.10794	0.10794	0.001	11.87426	20.00000	Averaged	ccc
206 n-Octadecane	0.55080	0.54404	0.54404	0.000	-1.22619	60.00000	Averaged	
68 Phenanthrene	0.95250	0.97516	0.97516	0.000	2.37824	60.00000	Averaged	
69 Anthracene	0.91864	0.94794	0.94794	0.000	3.18966	60.00000	Averaged	
72 Di-n-butylphthalate	1.06040	1.10762	1.10762	0.000	4.45308	60.00000	Averaged	
76 Fluoranthene	0.87623	0.93731	0.93731	0.001	6.97079	20.00000	Averaged	ccc
79 Pyrene	1.19072	1.20920	1.20920	0.000	1.55188	60.00000	Averaged	
85 Butylbenzylphthalate	0.49747	0.52326	0.52326	0.000	5.18440	60.00000	Averaged	
89 Benzo(a)anthracene	0.97321	0.99162	0.99162	0.000	1.89167	60.00000	Averaged	
92 Chrysene	0.93921	0.96765	0.96765	0.000	3.02760	60.00000	Averaged	
93 bis(2-Ethylhexyl)phthalate	0.73378	0.77276	0.77276	0.000	5.31149	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 30-JUN-2009 16:03
Lab File ID: s2f3002.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
94 Di-n-octylphthalate	1.30080	1.31754	1.31754	0.001	1.28691	20.00000	Averaged	ccc
95 Benzo(b)fluoranthene	0.96025	1.02221	1.02221	0.000	6.45249	60.00000	Averaged	
96 Benzo(k)fluoranthene	1.01317	1.05440	1.05440	0.000	4.06941	60.00000	Averaged	
97 Benzo(a)pyrene	0.83897	0.89849	0.89849	0.001	7.09349	20.00000	Averaged	ccc
99 Indeno(1,2,3-cd)pyrene	0.80593	0.83823	0.83823	0.000	4.00768	60.00000	Averaged	
100 Dibenzo(a,h)anthracene	0.64671	0.68393	0.68393	0.000	5.75654	60.00000	Averaged	
101 Benzo(ghi)perylene	0.69976	0.71831	0.71831	0.000	2.65010	60.00000	Averaged	
126 m-Dinitrobenzene	0.19442	0.21399	0.21399	0.000	10.06545	60.00000	Averaged	
130 2,3,4,6-Tetrachlorophenol	0.27476	0.29108	0.29108	0.000	5.94002	60.00000	Averaged	
143 Dinoseb	44.88167	40.00000	0.15807	0.000	12.20417	60.00000	Linear	
173 Carbazole	0.71802	0.80801	0.80801	0.000	12.53311	60.00000	Averaged	
184 p-Benzoquinone	31.69637	40.00000	0.08883	0.000	-20.75908	60.00000	Linear	
192 Methoxychlor	0.53333	0.58352	0.58352	0.000	9.41231	60.00000	Averaged	
211 p-Toluidine	1.09795	1.28071	1.28071	0.000	16.64547	60.00000	Averaged	
210 m-Toluidine	1.58507	1.54813	1.54813	0.000	-2.33104	60.00000	Averaged	
214 1,4-Dinitrobenzene	0.21072	0.23597	0.23597	0.000	11.98520	60.00000	Averaged	
215 2-Ethoxyethanol	0.79256	0.80169	0.80169	0.000	1.15095	60.00000	Averaged	
216 Methylenebis(2-chloroanilin	42.73194	40.00000	0.13874	0.000	6.82986	60.00000	Linear	
179 Dibenzo(a,e)pyrene	0.40461	0.39593	0.39593	0.000	-2.14523	60.00000	Averaged	
26 Phthalic anhydride	43.24702	40.00000	0.10225	0.000	8.11754	60.00000	Linear	
M 222 Trichlorophenols	0.31871	0.34953	0.34953	0.000	9.67043	60.00000	Averaged	
M 223 Tetrachlorophenols	0.27476	0.29108	0.29108	0.000	5.94002	60.00000	Averaged	
M 224 Benzo(b,k)fluoranthene	0.98671	1.03830	1.03830	0.000	5.22900	60.00000	Averaged	

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Data file : /chem/MSD2.i/s063009.b/s2f3002.d
Lab Smp Id: WBN090626-05.3 Client Smp ID: MEGACVS
Inj Date : 30-JUN-2009 16:03
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090626-05.3|40 PPM|1|SVMF|1|MEGACVS
Misc Info : |MSD8270|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:04 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAII.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	199810	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	811715	40.0000	
* 46 Acenaphthene-d10	164	6.175	6.175	(1.000)	413629	40.0000	
* 67 Phenanthrene-d10	188	7.154	7.154	(1.000)	708218	40.0000	
* 91 Chrysene-d12	240	8.892	8.892	(1.000)	583275	40.0000	
* 98 Perylene-d12	264	10.507	10.507	(1.000)	517572	40.0000	
$ 3 2-Fluorophenol	112	3.222	3.222	(0.795)	227696	40.0000	41.2
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	279670	40.0000	41.0
$ 20 Nitrobenzene-d5	82	4.415	4.415	(0.897)	269510	40.0000	44.0
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	502405	40.0000	43.0
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.085)	63966	40.0000	45.2
$ 81 p-Terphenyl-d14	244	8.079	8.079	(0.909)	412696	40.0000	41.5
1 N-Methyl-N-nitrosomethylamine	74	2.522	2.522	(0.622)	139954	40.0000	40.9
2 Pyridine	79	2.554	2.554	(0.630)	181714	40.0000	39.6
4 Aniline	66	3.832	3.832	(0.946)	115039	40.0000	41.8
6 Phenol	94	3.763	3.763	(0.929)	283880	40.0000	40.8
7 bis(2-Chloroethyl) ether	63	3.848	3.848	(0.950)	210061	40.0000	41.3
8 2-Chlorophenol	128	3.912	3.912	(0.966)	246283	40.0000	41.7
203 n-Decane	43	3.896	3.896	(0.962)	316514	40.0000	41.1
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.992)	275252	40.0000	41.8
11 1,4-Dichlorobenzene	146	4.062	4.062	(1.003)	276628	40.0000	42.0
13 1,2-Dichlorobenzene	146	4.169	4.169	(1.029)	249841	40.0000	42.8
14 bis(2-Chloroisopropyl)ether	45	4.191	4.191	(1.034)	462868	40.0000	40.5
12 Benzyl alcohol	108	4.116	4.116	(1.016)	153920	40.0000	39.5
15 o-Cresol	107	4.164	4.164	(1.028)	188924	40.0000	43.6
18 m,p-Cresols	107	4.265	4.265	(1.053)	243638	40.0000	40.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.287	4.287	(1.058)	175629	40.0000	42.0
19 Hexachloroethane	117	4.399	4.399	(1.086)	103288	40.0000	42.2
21 Nitrobenzene	77	4.431	4.431	(0.900)	256221	40.0000	43.6
22 Isophorone	82	4.581	4.581	(0.930)	476073	40.0000	42.8
23 2-Nitrophenol	139	4.645	4.645	(0.944)	129123	40.0000	45.1
24 2,4-Dimethylphenol	122	4.635	4.635	(0.941)	334115	40.0000	45.7
25 bis(2-Chloroethoxy)methane	93	4.699	4.699	(0.954)	286420	40.0000	43.8
26 2,4-Dichlorophenol	162	4.811	4.811	(0.977)	197383	40.0000	44.7
27 Benzoic acid	105	4.683	4.683	(0.951)	133464	40.0000	46.6
28 1,2,4-Trichlorobenzene	180	4.875	4.875	(0.990)	222445	40.0000	43.1
30 Naphthalene	128	4.939	4.939	(1.003)	711828	40.0000	37.2
204 alpha-Terpineol	59	4.913	4.913	(0.998)	223542	40.0000	42.9
31 4-Chloroaniline	127	4.950	4.950	(1.005)	333349	40.0000	44.6
32 Hexachlorobutadiene	225	5.004	5.004	(1.016)	117159	40.0000	44.7
33 4-Chloro-3-methylphenol	107	5.260	5.260	(1.068)	186686	40.0000	41.8
34 2-Methylnaphthalene	142	5.421	5.421	(1.101)	444215	40.0000	40.0
35 1-Methylnaphthalene	142	5.496	5.496	(1.116)	460801	40.0000	39.6
36 Hexachlorocyclopentadiene	237	5.522	5.522	(0.894)	97278	40.0000	54.5
205 2,3-Dichloroaniline	161	5.619	5.619	(0.910)	240518	40.0000	43.5
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.908)	128762	40.0000	42.1
38 2,4,5-Trichlorophenol	196	5.635	5.635	(0.912)	160392	40.0000	45.4
40 2-Chloronaphthalene	162	5.779	5.779	(0.936)	427195	40.0000	42.1
42 o-Nitroaniline	65	5.827	5.827	(0.944)	135085	40.0000	43.8
41 m-Nitroaniline	138	6.116	6.116	(0.990)	110595	40.0000	44.8
43 Dimethylphthalate	163	5.940	5.940	(0.962)	494316	40.0000	42.0
44 2,6-Dinitrotoluene	165	5.993	5.993	(0.971)	121591	40.0000	42.7
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	152313	40.0000	43.0
45 Acenaphthylene	152	6.079	6.079	(0.984)	695882	40.0000	42.4
47 Acenaphthene	154	6.196	6.196	(1.003)	421529	40.0000	39.0
48 2,4-Dinitrophenol	184	6.186	6.186	(1.002)	48892	40.0000	50.6
49 Dibenzofuran	168	6.309	6.309	(1.022)	598768	40.0000	42.8
51 Diethylphthalate	149	6.416	6.416	(1.039)	483924	40.0000	42.2
52 4-Nitrophenol	139	6.196	6.196	(1.003)	75882	40.0000	43.7
53 Fluorene	166	6.544	6.544	(1.060)	477315	40.0000	40.7
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.055)	233426	40.0000	43.5
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	73697	40.0000	46.4
56 p-Nitroaniline	138	6.539	6.539	(1.059)	105296	40.0000	50.5
133 Diphenylamine	169	6.592	6.592	(0.921)	406256	40.0000	43.0
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.926)	512905	40.0000	41.7
61 4-Bromophenylphenylether	248	6.843	6.843	(0.957)	127503	40.0000	43.2
63 Hexachlorobenzene	284	6.902	6.902	(0.965)	142741	40.0000	43.8
65 Pentachlorophenol	266	7.015	7.015	(0.981)	76446	40.0000	44.7
206 n-Octadecane	57	6.993	6.993	(0.978)	385302	40.0000	39.5
68 Phenanthrene	178	7.170	7.170	(1.002)	690624	40.0000	41.0
69 Anthracene	178	7.202	7.202	(1.007)	671350	40.0000	41.3
72 Di-n-butylphthalate	149	7.432	7.432	(1.039)	784434	40.0000	41.8
76 Fluoranthene	202	7.886	7.886	(1.102)	663817	40.0000	42.8

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	8.031	8.031	(0.903)	705296	40.0000	40.6
85 Butylbenzylphthalate	149	8.357	8.357	(0.940)	305203	40.0000	42.1
89 Benzo(a)anthracene	228	8.881	8.881	(0.999)	578389	40.0000	40.8
92 Chrysene	228	8.919	8.919	(1.003)	564405	40.0000	41.2
93 bis(2-Ethylhexyl)phthalate	149	8.748	8.748	(0.984)	450729	40.0000	42.1
94 Di-n-octylphthalate	149	9.331	9.331	(0.888)	681920	40.0000	40.5
95 Benzo(b)fluoranthene	252	9.988	9.988	(0.951)	529067	40.0000	42.6
96 Benzo(k)fluoranthene	252	10.021	10.021	(0.954)	545726	40.0000	41.6
97 Benzo(a)pyrene	252	10.432	10.432	(0.993)	465032	40.0000	42.8
99 Indeno(1,2,3-cd)pyrene	276	12.337	12.337	(1.174)	433844	40.0000	41.6
100 Dibenzo(a,h)anthracene	278	12.342	12.342	(1.175)	353985	40.0000	42.3
101 Benzo(ghi)perylene	276	12.903	12.903	(1.228)	371775	40.0000	41.1
126 m-Dinitrobenzene	168	5.977	5.977	(0.968)	88512	40.0000	44.0
130 2,3,4,6-Tetrachlorophenol	232	6.378	6.378	(1.033)	120401	40.0000	42.4
143 Dinoseb	211	7.106	7.106	(0.993)	111950	40.0000	44.9
173 Carbazole	167	7.282	7.282	(1.018)	572249	40.0000	45.0
184 p-Benzoquinone	54	3.533	3.533	(0.872)	17749	40.0000	31.7
192 Methoxychlor	227	8.732	8.732	(0.982)	340355	40.0000	43.8
211 p-Toluidine	106	4.330	4.330	(1.069)	255898	40.0000	46.6
210 m-Toluidine	106	4.351	4.351	(1.074)	309331	40.0000	39.1
214 1,4-Dinitrobenzene	75	5.918	5.918	(0.958)	97604	40.0000	44.8
215 2-Ethoxyethanol	59	2.361	2.361	(0.583)	160185	40.0000	40.5
216 Methylenebis(2-chloroaniline)	231	8.801	8.801	(0.990)	80922	40.0000	42.7
179 Dibenzo(a,e)pyrene	302	17.289	17.289	(1.645)	204924	40.0000	39.1
26 Phthalic anhydride	104	5.453	5.453	(1.108)	82998	40.0000	43.2
M 222 Trichlorophenols	196				289154	80.0000	87.7
M 223 Tetrachlorophenols	232				120401	40.0000	42.4
M 224 Benzo(b,k)fluoranthene	252				1074793	80.0000	84.2

Data File: /chem/MSD2.i/s063009.b/s2f3002.d
Date : 30-JUN-2009 16:03
Client ID: MEGACVS
Sample Info: IWBN090626-05,3140 PPM:11SVMF11MEGACVS
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

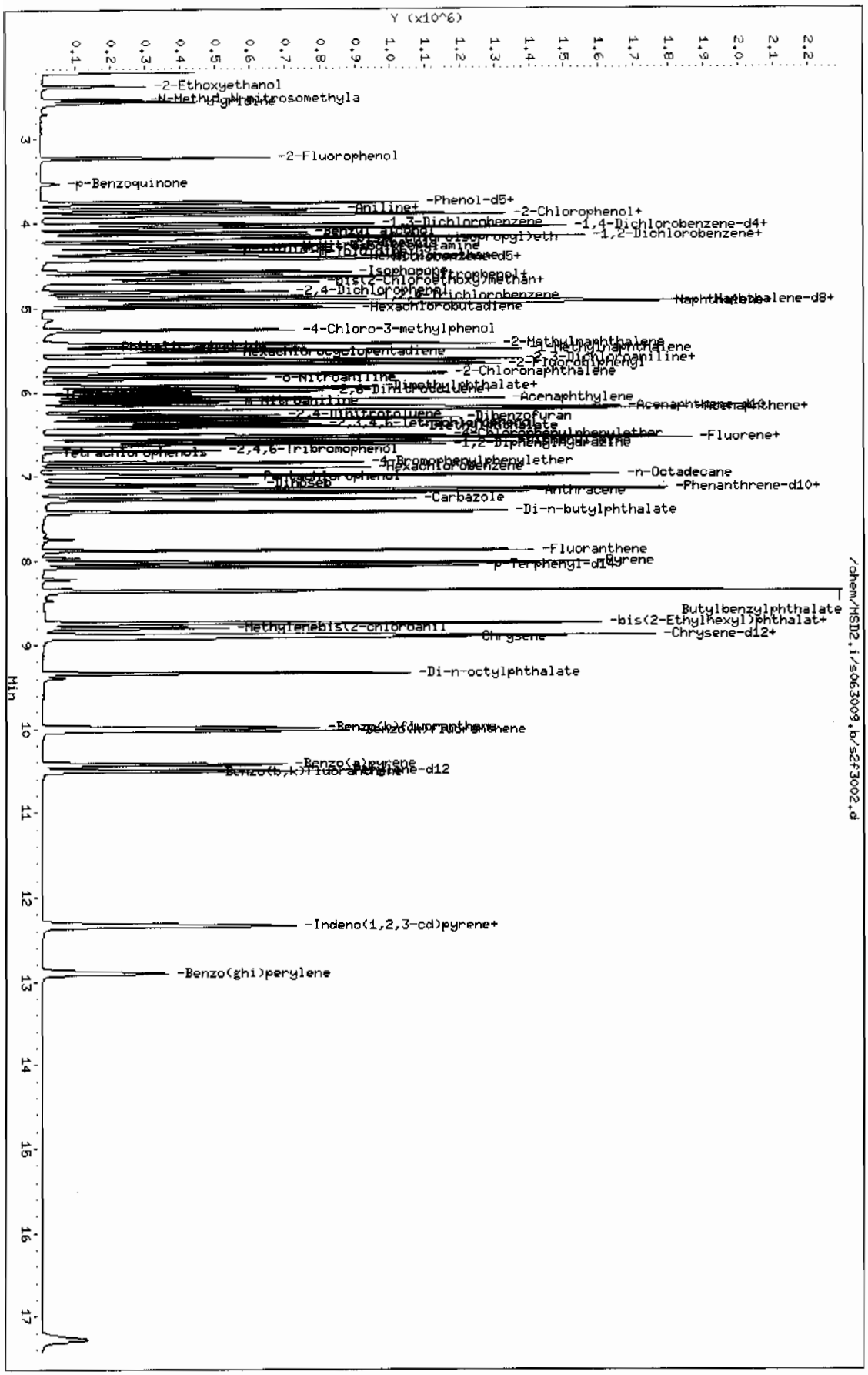

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 30-JUN-2009 16:27
Lab File ID: s2f3003.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090619-01.2 Quant Type: ISTD
Method: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.85512	0.91103	0.91103	0.000	6.53807	60.00000	Averaged
16 Acetophenone	1.19881	1.23895	1.23895	0.000	3.34818	60.00000	Averaged
189 Caprolactam	0.08601	0.09105	0.09105	0.000	5.86552	60.00000	Averaged
208 1,1'-Biphenyl	1.21152	1.27803	1.27803	0.000	5.48971	60.00000	Averaged
207 Atrazine	0.04406	0.04561	0.04561	0.000	3.53410	60.00000	Averaged
77 Benzidine	38.29454	40.00000	0.31832	0.000	-4.26366	60.00000	Linear
90 3,3'-Dichlorobenzidine	0.25863	0.27307	0.27307	0.000	5.58538	60.00000	Averaged
102 1,4-Dioxane	0.37452	0.38188	0.38188	0.000	1.96374	60.00000	Averaged
103 Methyl methacrylate	0.21046	0.22041	0.22041	0.000	4.72955	60.00000	Averaged
104 Ethyl methacrylate	0.80237	0.83089	0.83089	0.000	3.55459	60.00000	Averaged
105 2-Picoline	1.24101	1.26178	1.26178	0.000	1.67374	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.52937	0.51873	0.51873	0.000	-2.01043	60.00000	Averaged
107 Methyl methanesulfonate	0.47397	0.49416	0.49416	0.000	4.25884	60.00000	Averaged
108 N-Nitrosodiethylamine	0.54113	0.53349	0.53349	0.000	-1.41172	60.00000	Averaged
109 Ethyl Methanesulfonate	0.64600	0.65149	0.65149	0.000	0.84969	60.00000	Averaged
110 Pentachloroethane	0.31203	0.32561	0.32561	0.000	4.35417	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.54373	0.53934	0.53934	0.000	-0.80833	60.00000	Averaged
113 N-Nitrosomorpholine	0.72224	0.72667	0.72667	0.000	0.61299	60.00000	Averaged
114 o-Toluidine	1.79520	1.84526	1.84526	0.000	2.78871	60.00000	Averaged
115 N-Nitrosopiperidine	0.14845	0.15016	0.15016	0.000	1.15258	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.76945	0.73382	0.73382	0.000	-4.63017	60.00000	Averaged
118 2,6-Dichlorophenol	0.21644	0.22235	0.22235	0.000	2.73059	60.00000	Averaged
119 Hexachloropropene	0.09423	0.10236	0.10236	0.000	8.62419	60.00000	Averaged
120 p-Phenylenediamine	0.22216	0.23343	0.23343	0.000	5.07733	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.21235	0.24527	0.24527	0.000	15.50185	60.00000	Averaged
122 Safrole	0.19580	0.20942	0.20942	0.000	6.95462	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.40456	0.43668	0.43668	0.000	7.93976	60.00000	Averaged
124 Isosafrole	0.35137	0.36519	0.36519	0.000	3.93245	60.00000	Averaged
125 1,4-Naphthoquinone	0.33168	0.37174	0.37174	0.000	12.07601	60.00000	Averaged
127 Pentachlorobenzene	0.35632	0.38852	0.38852	0.000	9.03687	60.00000	Averaged
128 1-Naphthylamine	0.92126	0.97961	0.97961	0.000	6.33387	60.00000	Averaged
129 2-Naphthylamine	1.00463	1.06836	1.06836	0.000	6.34372	60.00000	Averaged
131 5-Nitro-o-toluidine	41.54142	40.00000	0.29526	0.000	3.85354	60.00000	Linear
136 1,3,5-Trinitrobenzene	42.03896	40.00000	0.10775	0.000	5.09740	60.00000	Linear
137 Phenacetin	0.24441	0.25400	0.25400	0.000	3.92176	60.00000	Averaged
138 Diallate	0.25943	0.25874	0.25874	0.000	-0.26783	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 30-JUN-2009 16:27
Lab File ID: s2f3003.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090619-01.2 Quant Type: ISTD
Method: /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.28806	0.27515	0.27515	0.000	-4.48214	60.00000	Averaged
213 Trans Diallate	0.30493	0.30440	0.30440	0.000	-0.17389	60.00000	Averaged
140 4-Aminobiphenyl	0.49104	0.52349	0.52349	0.000	6.60820	60.00000	Averaged
141 Pentachloronitrobenzene	0.06168	0.06383	0.06383	0.000	3.48010	60.00000	Averaged
142 Pronamide	0.25232	0.26703	0.26703	0.000	5.82910	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	40.89612	40.00000	0.02597	0.000	2.24029	60.00000	Linear
147 Methapyrilene	0.44483	0.48156	0.48156	0.000	8.25733	60.00000	Averaged
148 Isodrin	0.10127	0.10252	0.10252	0.000	1.22789	60.00000	Averaged
149 Aramite	0.04612	0.04862	0.04862	0.000	5.42488	60.00000	Averaged
150 Kepone	0.07238	0.07841	0.07841	0.000	8.32870	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.31565	0.31704	0.31704	0.000	0.43940	60.00000	Averaged
152 Chlorobenzilate	0.26848	0.27753	0.27753	0.000	3.36924	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.49041	0.50404	0.50404	0.000	2.77969	60.00000	Averaged
155 2-Acetylaminofluorene	40.54919	40.00000	0.26977	0.000	1.37298	60.00000	Linear
157 7,12Dimethylbenz(a)anthrace	0.47287	0.48736	0.48736	0.000	3.06438	60.00000	Averaged
158 3-Methylcholanthrene	0.40330	0.40454	0.40454	0.000	0.30768	60.00000	Averaged

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Data file : /chem/MSD2.i/s063009.b/s2f3003.d
Lab Smp Id: WBN090619-01.2 Client Smp ID: APCVS
Inj Date : 30-JUN-2009 16:27
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090619-01.2|40 PPM|1|SVMF|1|APCVS
Misc Info : |MSD8270|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 17:57 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	144826	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	540455	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.170	(1.000)	304443	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.148	(1.000)	536321	40.0000	
* 91 Chrysene-d12	240	8.881	8.881	(1.000)	466151	40.0000	
* 98 Perylene-d12	264	10.491	10.491	(1.000)	377347	40.0000	
209 Benzaldehyde	77	3.773	3.773	(0.931)	131941	40.0000	42.6
16 Acetophenone	105	4.303	4.303	(1.062)	179432	40.0000	41.3
189 Caprolactam	113	5.185	5.185	(1.053)	49211	40.0000	42.3
208 1,1'-Biphenyl	154	5.742	5.742	(0.931)	389086	40.0000	42.2
207 Atrazine	173	6.908	6.908	(0.966)	24464	40.0000	41.4
77 Benzidine	184	7.929	7.929	(0.893)	148383	40.0000	38.3
90 3,3'-Dichlorobenzidine	252	8.801	8.801	(0.991)	127293	40.0000	42.2
102 1,4-Dioxane	88	2.356	2.356	(0.582)	55306	40.0000	40.8
103 Methyl methacrylate	100	2.345	2.345	(0.579)	31921	40.0000	41.9
104 Ethyl methacrylate	69	2.736	2.736	(0.675)	120335	40.0000	41.4
105 2-Picoline	93	2.934	2.934	(0.724)	182739	40.0000	40.7
106 N-Nitrosomethylethylamine	88	2.976	2.976	(0.735)	75125	40.0000	39.2
107 Methyl methanesulfonate	80	3.131	3.131	(0.773)	71567	40.0000	41.7
108 N-Nitrosodiethylamine	102	3.372	3.372	(0.832)	77263	40.0000	39.4
109 Ethyl Methanesulfonate	79	3.527	3.527	(0.871)	94353	40.0000	40.3
110 Pentachloroethane	167	3.875	3.875	(0.956)	47157	40.0000	41.7
111 N-Nitrosopyrrolidine	100	4.287	4.287	(1.058)	78110	40.0000	39.7
113 N-Nitrosomorpholine	56	4.308	4.308	(1.063)	105241	40.0000	40.2
114 o-Toluidine	106	4.330	4.330	(1.069)	267242	40.0000	41.1
115 N-Nitrosopiperidine	114	4.527	4.527	(0.920)	81157	40.0000	40.5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.779	4.779	(0.971)	396596	40.0000	38.1
118 2,6-Dichlorophenol	162	4.961	4.961	(1.008)	120168	40.0000	41.1
119 Hexachloropropene	213	4.993	4.993	(1.014)	55321	40.0000	43.4
120 p-Phenylenediamine	108	5.196	5.196	(1.055)	126161	40.0000	42.0
121 N-Nitrosodi-n-butylamine	84	5.164	5.164	(1.049)	132559	40.0000	46.2
122 Safrole	162	5.330	5.330	(1.083)	113181	40.0000	42.8
123 1,2,4,5-Tetrachlorobenzene	216	5.538	5.538	(0.898)	132944	40.0000	43.2
124 Isosafrole	162	5.704	5.704	(0.925)	111180	40.0000	41.6
125 1,4-Naphthoquinone	158	5.891	5.891	(0.955)	113173	40.0000	44.8
127 Pentachlorobenzene	250	6.282	6.282	(1.018)	118282	40.0000	43.6
128 1-Naphthylamine	143	6.357	6.357	(1.030)	298236	40.0000	42.5
129 2-Naphthylamine	143	6.410	6.410	(1.039)	325256	40.0000	42.5
131 5-Nitro-o-toluidine	152	6.528	6.528	(1.058)	89890	40.0000	41.5
136 1,3,5-Trinitrobenzene	75	6.731	6.731	(0.942)	57791	40.0000	42.0
137 Phenacetin	108	6.769	6.769	(0.947)	136223	40.0000	41.6
138 Diallate	86	6.763	6.763	(0.946)	138766	40.0000	39.9
212 Cis Diallate	86	6.827	6.827	(0.955)	22135	6.00000	5.7
213 Trans Diallate	86	6.763	6.763	(0.946)	138766	34.0000	33.9
140 4-Aminobiphenyl	169	7.004	7.004	(0.980)	280757	40.0000	42.6
141 Pentachloronitrobenzene	237	7.025	7.025	(0.983)	34232	40.0000	41.4
142 Pronamide	173	7.009	7.009	(0.981)	143214	40.0000	42.3
146 4-Nitroquinoline-1-oxide	101	7.614	7.614	(1.065)	13927	40.0000	40.9
147 Methapyrilene	58	7.624	7.624	(1.067)	258272	40.0000	43.3
148 Isodrin	193	7.796	7.796	(1.091)	54982	40.0000	40.5
149 Aramite	185	8.020	8.020	(1.122)	26078	40.0000	42.2
150 Kepone	272	8.480	8.480	(1.186)	42052	40.0000	43.3
151 p-(Dimethylamino)azobenzene	120	8.154	8.154	(0.918)	147787	40.0000	40.2
152 Chlorobenzilate	251	8.170	8.170	(0.920)	129369	40.0000	41.3
153 3,3'-Dimethylbenzidine	212	8.379	8.379	(0.943)	234958	40.0000	41.1
155 2-Acetylaminofluorene	181	8.571	8.571	(0.965)	125752	40.0000	40.5
157 7,12Dimethylbenz(a)anthracene	256	9.946	9.946	(0.948)	183904	40.0000	41.2
158 3-Methylcholanthrene	268	10.892	10.892	(1.038)	152652	40.0000	40.1

Data File: /chem/MSD2.i/s063009.b/s2f3003.d
Date : 30-JUN-2009 16:27
Client ID: APCVS
Sample Info: IWBN090619-01,2|40 PPM|1|SWMF|1|APCVS
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

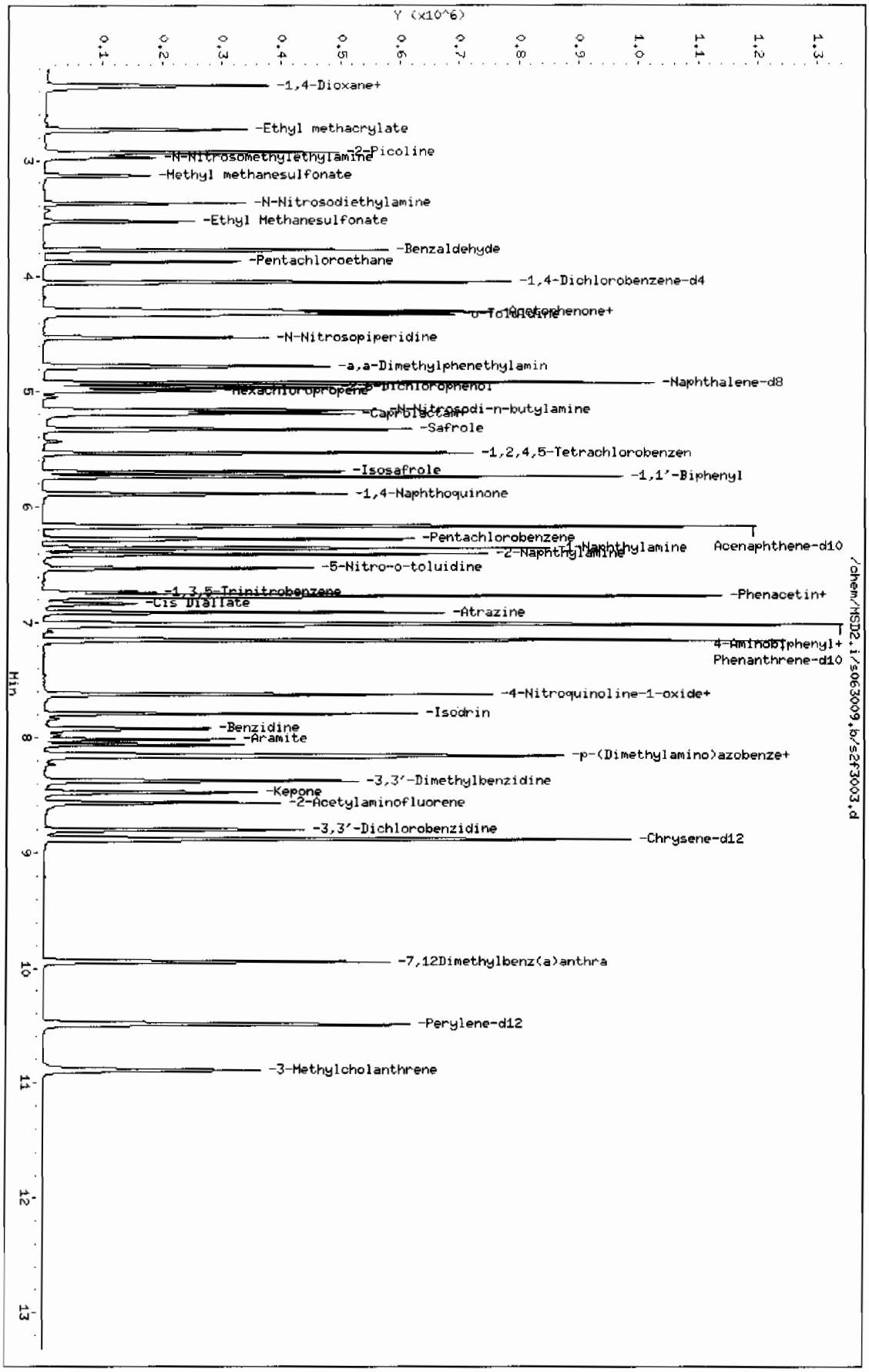

Page 1

QC Data

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Page 1

Date : 27-JUN-2009 01:48

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

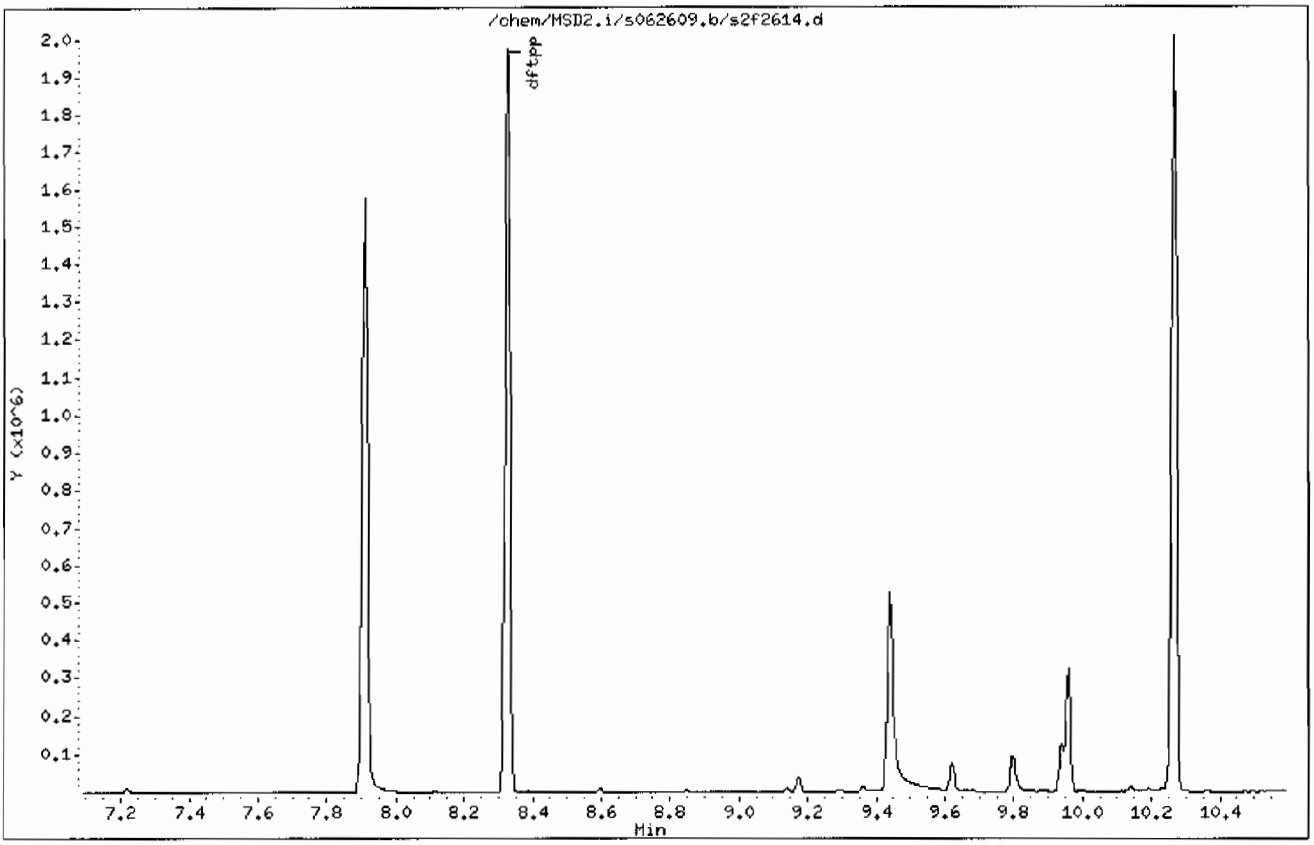

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

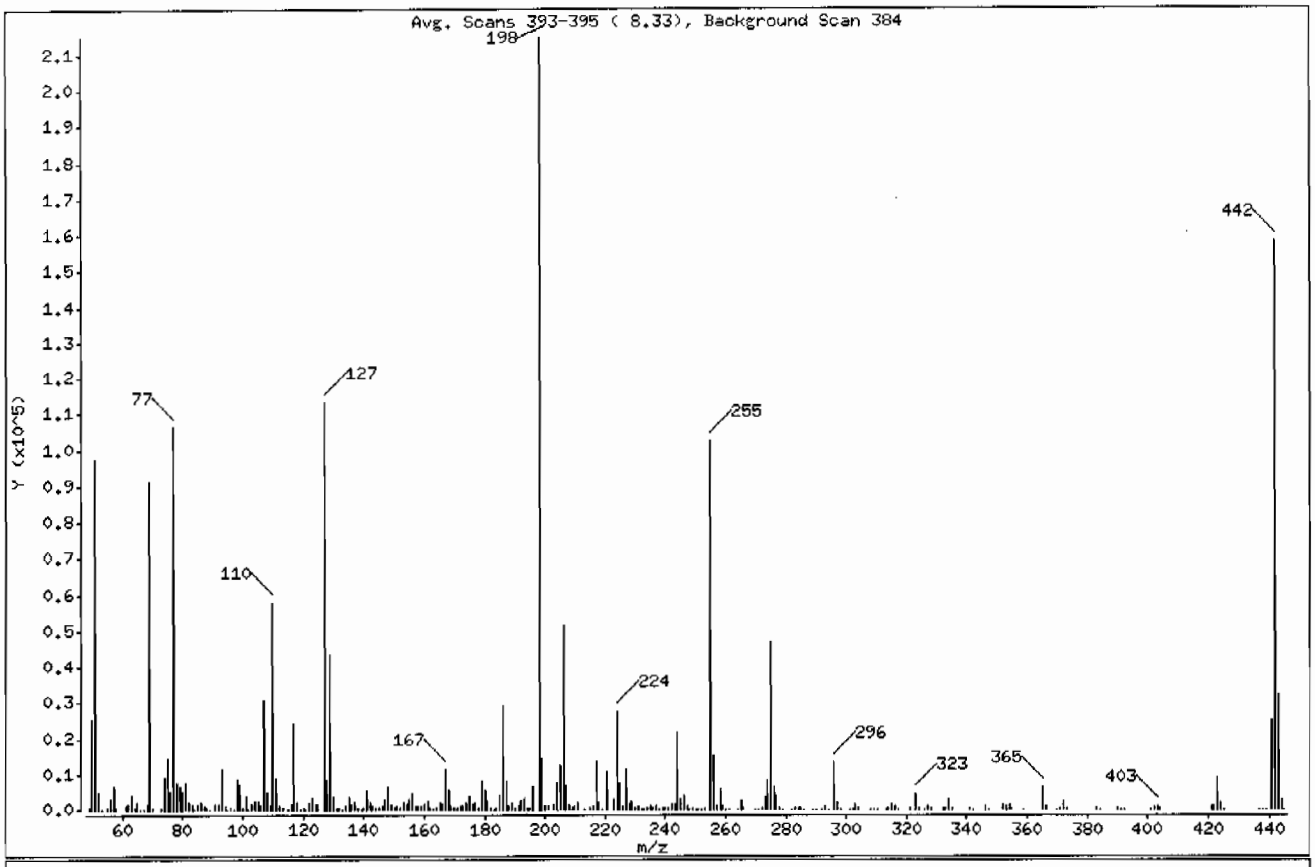

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	45.36
68	Less than 2.00% of mass 69	0.72 (1.70)
69	Mass 69 relative abundance	42.44
70	Less than 2.00% of mass 69	0.22 (0.52)
127	40.00 - 60.00% of mass 198	52.55
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.78
275	10.00 - 30.00% of mass 198	21.80
365	Greater than 1.00% of mass 198	2.92
441	Present, but less than mass 443	11.61
442	Greater than 40.00% of mass 198	73.53
443	17.00 - 23.00% of mass 442	14.99 (20.39)

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2614.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	614	128.00	8592	200.00	1143	284.00	310
50.00	25008	129.00	43336	201.00	1044	285.00	735
51.00	97448	130.00	3663	203.00	1400	286.00	119
52.00	4985	131.00	694	204.00	7284	289.00	146
53.00	190	132.00	351	205.00	12447	290.00	144
55.00	491	133.00	170	206.00	51520	292.00	190
56.00	2897	134.00	1204	207.00	6748	293.00	838
57.00	6609	135.00	3455	208.00	1648	294.00	213
58.00	305	136.00	1375	209.00	489	296.00	13138
61.00	1214	137.00	1780	210.00	807	297.00	1941
62.00	1343	138.00	387	211.00	2033	298.00	82
63.00	3769	139.00	227	213.00	120	301.00	181
64.00	526	140.00	566	215.00	553	302.00	230
65.00	1861	141.00	5437	216.00	1167	303.00	1569
66.00	121	142.00	1865	217.00	13546	304.00	428
67.00	111	143.00	1171	218.00	1809	308.00	186
68.00	1548	144.00	337	219.00	160	309.00	108
69.00	91176	145.00	287	221.00	10832	310.00	176
70.00	471	146.00	986	223.00	3042	313.00	114
73.00	721	147.00	2892	224.00	27504	314.00	658
74.00	9123	148.00	6325	225.00	7208	315.00	1379
75.00	14484	149.00	1310	226.00	756	316.00	774
76.00	5107	150.00	348	227.00	11424	317.00	136
77.00	106208	151.00	770	228.00	1587	321.00	432
78.00	7249	152.00	425	229.00	2297	323.00	4314
79.00	6623	153.00	1734	230.00	333	324.00	737
80.00	5066	154.00	1275	231.00	1016	326.00	35
81.00	7387	155.00	2954	232.00	174	327.00	788
82.00	1734	156.00	4464	233.00	183	328.00	405
83.00	1706	157.00	897	234.00	705	332.00	335
84.00	210	158.00	967	235.00	799	333.00	402
85.00	1366	159.00	745	236.00	546	334.00	2732
86.00	2092	160.00	1677	237.00	890	335.00	676
87.00	956	161.00	2489	238.00	74	341.00	464
88.00	379	162.00	685	239.00	420	342.00	139

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2614.d

Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384

Location of Maximum: 198.00

Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	150	163.00	176	240.00	353	346.00	993
91.00	1589	164.00	315	241.00	654	347.00	138
92.00	1702	165.00	2043	242.00	1474	352.00	1407
93.00	11186	166.00	1560	243.00	1653	353.00	951
94.00	794	167.00	11200	244.00	21544	354.00	1340
95.00	181	168.00	5550	245.00	2866	355.00	255
96.00	559	169.00	967	246.00	4187	359.00	69
97.00	65	170.00	346	247.00	812	365.00	6266
98.00	8574	171.00	422	248.00	176	366.00	896
99.00	6953	172.00	970	249.00	716	370.00	83
100.00	621	173.00	1180	250.00	136	371.00	324
101.00	4062	174.00	2181	251.00	166	372.00	2367
102.00	222	175.00	4122	252.00	220	373.00	619
103.00	1381	176.00	1274	253.00	501	383.00	616
104.00	2630	177.00	1912	255.00	102400	384.00	139
105.00	2491	178.00	647	256.00	15378	390.00	299
106.00	776	179.00	7737	257.00	1232	391.00	220
107.00	30744	180.00	5302	258.00	6162	392.00	129
108.00	4922	181.00	2538	259.00	883	401.00	81
109.00	883	182.00	404	260.00	156	402.00	933
110.00	58008	183.00	203	261.00	175	403.00	1205
111.00	8805	184.00	589	264.00	183	404.00	414
112.00	1066	185.00	3711	265.00	2391	421.00	1187
113.00	324	186.00	28960	266.00	388	422.00	1178
115.00	121	187.00	7958	270.00	119	423.00	8795
116.00	1682	188.00	885	271.00	213	424.00	1900
117.00	24112	189.00	1751	272.00	315	425.00	166
118.00	1865	190.00	309	273.00	3233	437.00	78
119.00	222	191.00	879	274.00	8403	438.00	81
120.00	400	192.00	2552	275.00	46840	439.00	68
121.00	148	193.00	2752	276.00	6339	441.00	24944
122.00	2153	194.00	564	277.00	4030	442.00	157952
123.00	3238	195.00	328	278.00	616	443.00	32208
124.00	1466	196.00	6406	279.00	123	444.00	2899
125.00	1359	198.00	214848	282.00	33	445.00	156

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2614.d

Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384

Location of Maximum: 198.00

Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
127.00	112912	199.00	14557	283.00	443		

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Page 1

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

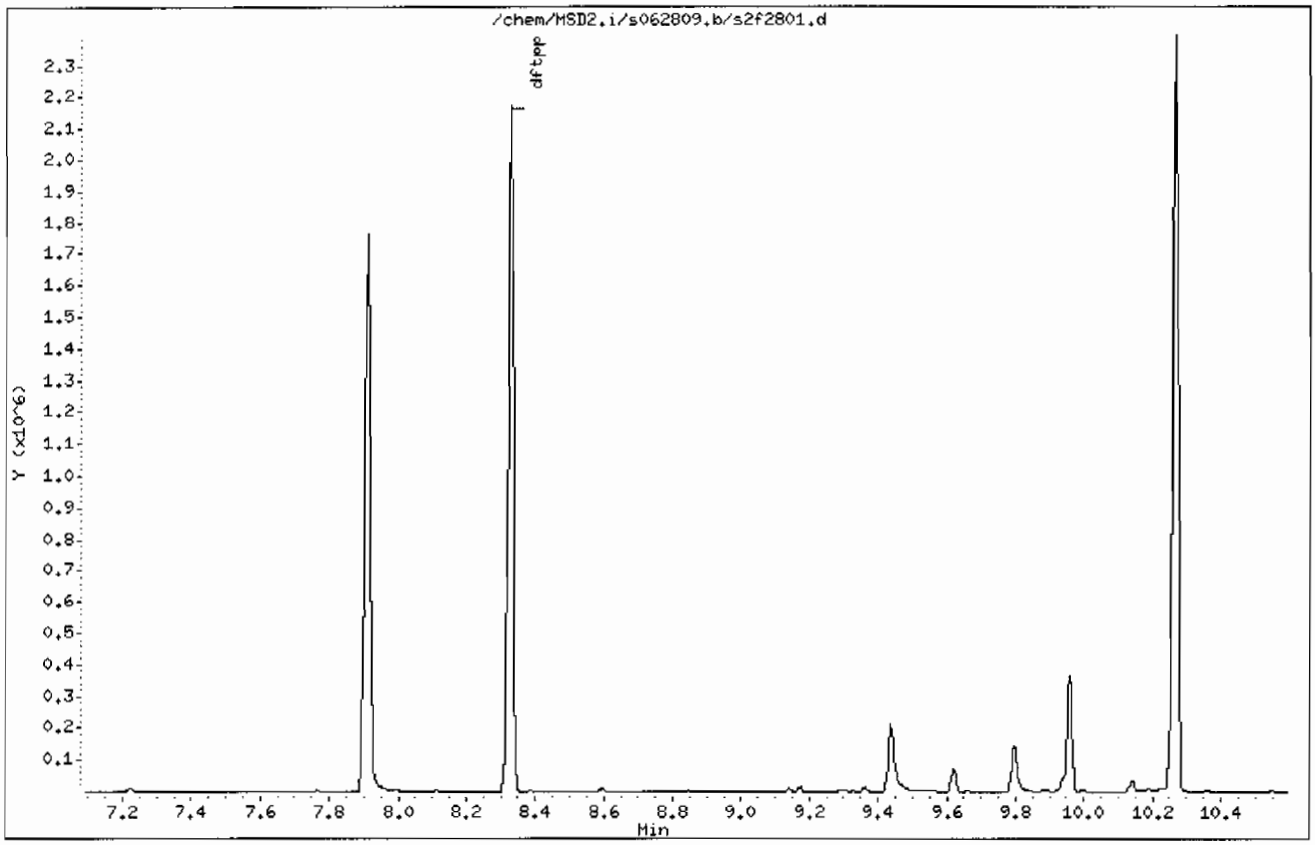

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

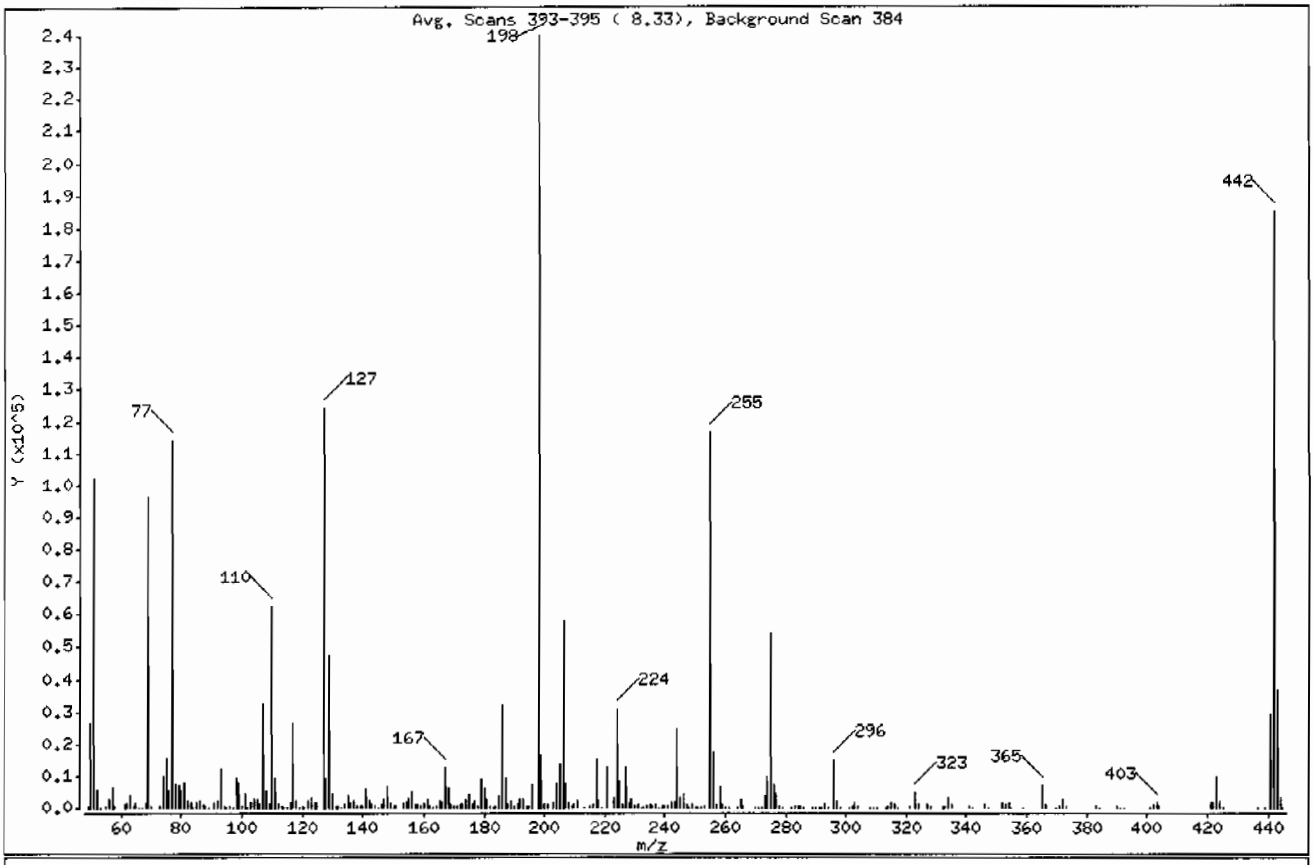

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.62
68	Less than 2.00% of mass 69	0.71 (1.76)
69	Mass 69 relative abundance	40.19
70	Less than 2.00% of mass 69	0.20 (0.50)
127	40.00 - 60.00% of mass 198	51.69
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.97
275	10.00 - 30.00% of mass 198	22.45
365	Greater than 1.00% of mass 198	2.94
441	Present, but less than mass 443	12.18
442	Greater than 40.00% of mass 198	76.96
443	17.00 - 23.00% of mass 442	15.40 (20.01)

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2801.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	636	127.00	124088	200.00	1261	284.00	322
50.00	26320	128.00	9638	201.00	1053	285.00	811
51.00	102312	129.00	47320	203.00	1556	286.00	90
52.00	5308	130.00	4152	204.00	7994	289.00	194
53.00	201	131.00	757	205.00	13846	290.00	175
55.00	496	132.00	411	206.00	58152	291.00	82
56.00	3006	133.00	143	207.00	7575	292.00	215
57.00	6853	134.00	1285	208.00	1929	293.00	1013
58.00	292	135.00	3912	209.00	629	294.00	260
61.00	1294	136.00	1523	210.00	975	296.00	14731
62.00	1456	137.00	2032	211.00	2273	297.00	2049
63.00	3980	138.00	415	213.00	151	298.00	125
64.00	549	139.00	328	215.00	600	301.00	159
65.00	1891	140.00	648	216.00	1223	302.00	299
66.00	112	141.00	5858	217.00	15209	303.00	1713
67.00	119	142.00	2040	218.00	2055	304.00	438
68.00	1696	143.00	1266	219.00	196	308.00	215
69.00	96480	144.00	318	221.00	12612	309.00	145
70.00	487	145.00	250	223.00	3385	310.00	190
73.00	740	146.00	1066	224.00	31128	313.00	135
74.00	10024	147.00	3032	225.00	8054	314.00	698
75.00	15526	148.00	6877	226.00	946	315.00	1696
76.00	5742	149.00	1461	227.00	12526	316.00	875
77.00	114344	150.00	387	228.00	1852	317.00	155
78.00	7971	151.00	769	229.00	2722	321.00	518
79.00	7075	153.00	1842	230.00	344	323.00	4765
80.00	5517	154.00	1462	231.00	1104	324.00	871
81.00	7750	155.00	3356	232.00	186	327.00	864
82.00	1963	156.00	4882	233.00	210	328.00	448
83.00	1916	157.00	912	234.00	789	332.00	367
84.00	251	158.00	1141	235.00	955	333.00	458
85.00	1386	159.00	819	236.00	608	334.00	3132
86.00	2224	160.00	1889	237.00	1001	335.00	862
87.00	1020	161.00	2810	238.00	171	341.00	554
88.00	415	162.00	741	239.00	499	342.00	90

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2801.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	170	163.00	188	240.00	363	346.00	1128
91.00	1736	164.00	300	241.00	698	347.00	204
92.00	1946	165.00	2270	242.00	1661	352.00	1582
93.00	12042	166.00	1896	243.00	1817	353.00	1093
94.00	785	167.00	12669	244.00	24936	354.00	1642
95.00	207	168.00	6276	245.00	3284	355.00	253
96.00	603	169.00	1053	246.00	4498	359.00	76
97.00	220	170.00	378	247.00	920	365.00	7046
98.00	9460	171.00	462	248.00	218	366.00	1044
99.00	7763	172.00	1099	249.00	837	370.00	133
100.00	654	173.00	1317	250.00	170	371.00	368
101.00	4442	174.00	2561	251.00	212	372.00	2645
102.00	233	175.00	4478	252.00	226	373.00	620
103.00	1506	176.00	1341	253.00	521	383.00	686
104.00	2693	177.00	2154	255.00	116384	384.00	174
105.00	2602	178.00	721	256.00	17392	390.00	312
106.00	899	179.00	8799	257.00	1370	391.00	251
107.00	32792	180.00	5795	258.00	6789	392.00	168
108.00	5314	181.00	2762	259.00	1104	401.00	162
109.00	1039	182.00	449	260.00	205	402.00	1111
110.00	62136	183.00	265	261.00	197	403.00	1532
111.00	9534	184.00	682	264.00	230	404.00	490
112.00	1232	185.00	4068	265.00	2707	421.00	1391
113.00	373	186.00	32232	266.00	452	422.00	1464
114.00	34	187.00	9194	270.00	135	423.00	10125
115.00	129	188.00	910	271.00	249	424.00	2189
116.00	1883	189.00	2044	272.00	101	425.00	234
117.00	26408	190.00	340	273.00	3643	437.00	84
118.00	2016	191.00	874	274.00	9719	439.00	181
119.00	245	192.00	2771	275.00	53880	441.00	29232
120.00	438	193.00	2950	276.00	7249	442.00	184704
121.00	150	194.00	640	277.00	4412	443.00	36960
122.00	2323	195.00	307	278.00	719	444.00	3426
123.00	3438	196.00	7325	279.00	134	445.00	185
124.00	1590	198.00	240064	282.00	73		

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2801.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	1554	199.00	16728	283.00	473		

Data File: /chem/MSD2.i/s063009.b/s2f3001.d

Page 1

Date : 30-JUN-2009 15:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

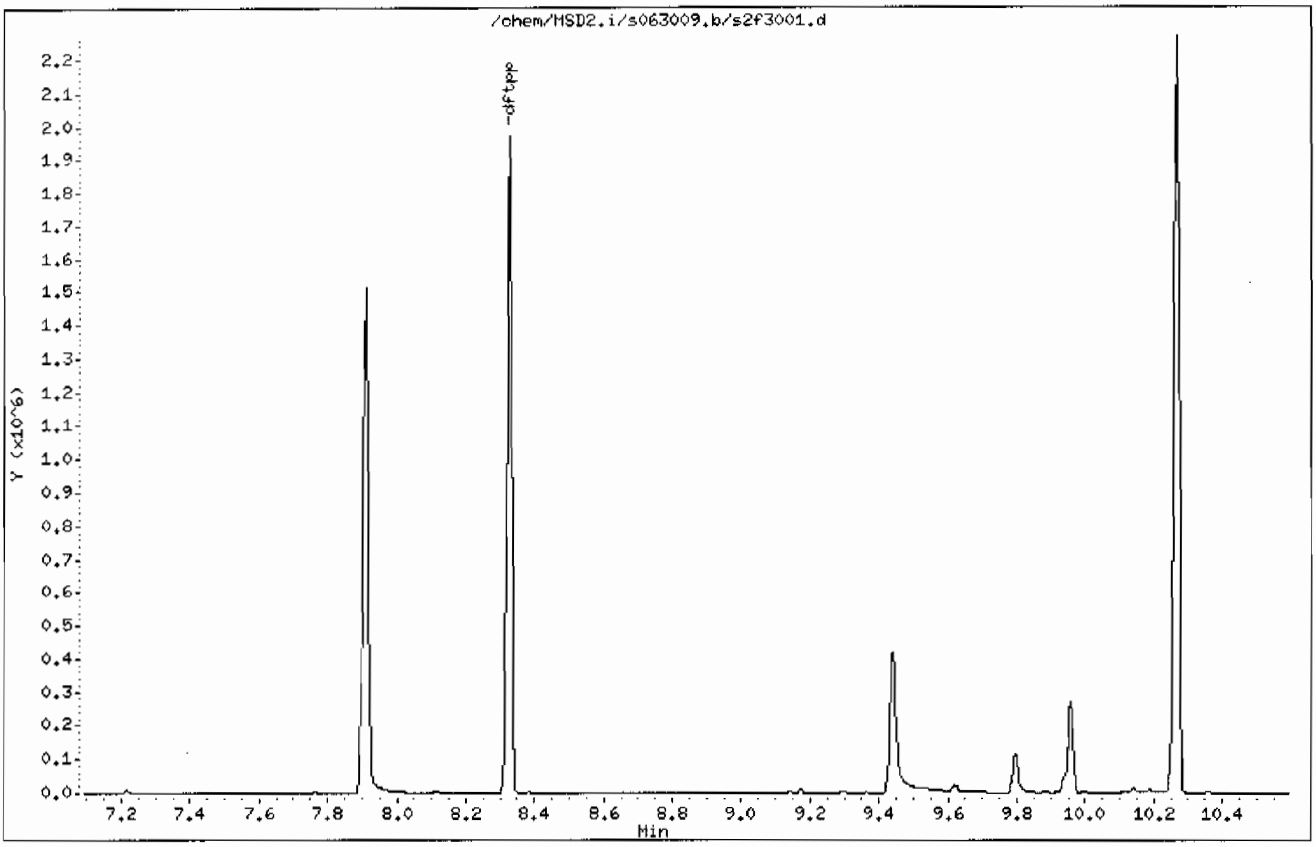

Data File: /chem/MSD2.i/s063009.b/s2f3001.d

Date : 30-JUN-2009 15:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

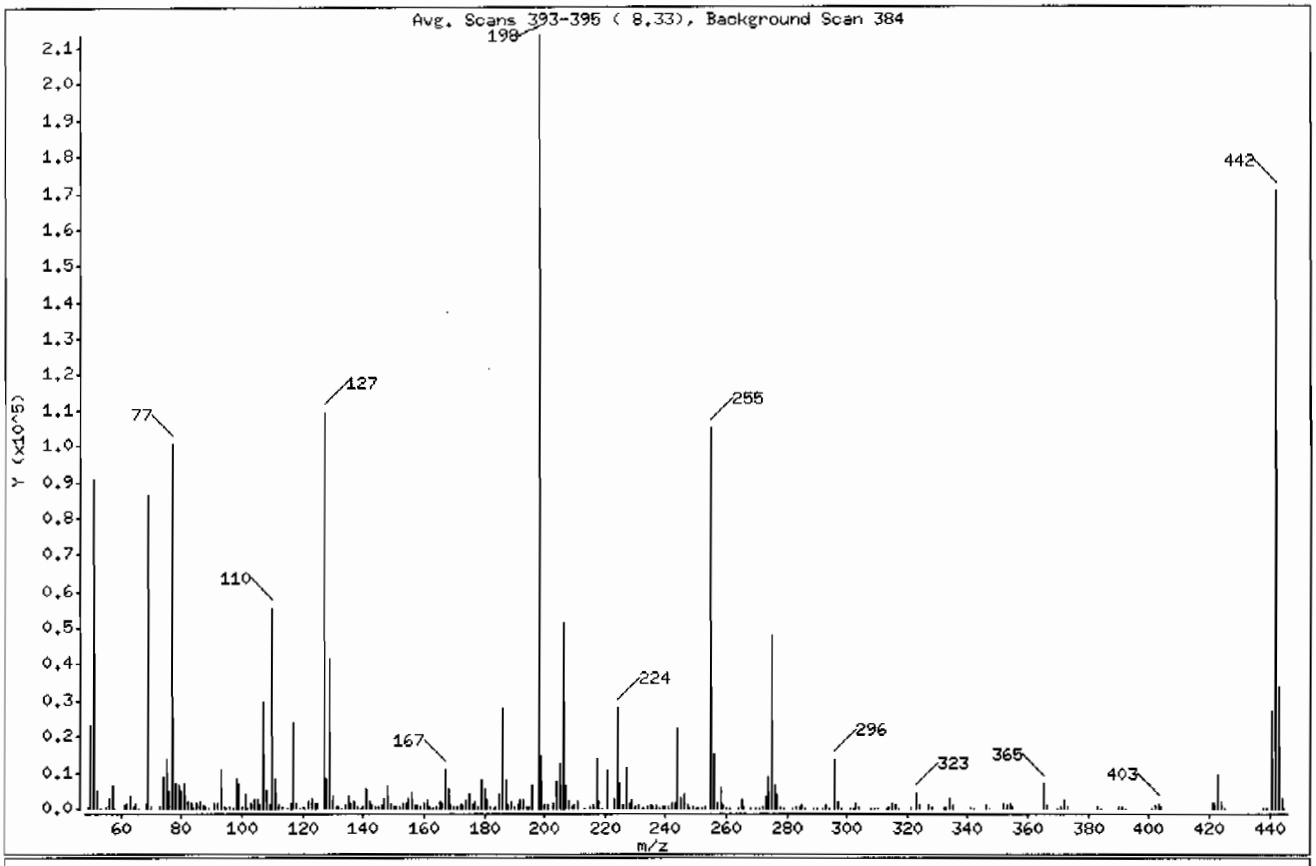

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.62
68	Less than 2.00% of mass 69	0.68 (1.68)
69	Mass 69 relative abundance	40.49
70	Less than 2.00% of mass 69	0.20 (0.50)
127	40.00 - 60.00% of mass 198	51.20
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.82
275	10.00 - 30.00% of mass 198	22.47
365	Greater than 1.00% of mass 198	3.18
441	Present, but less than mass 443	12.60
442	Greater than 40.00% of mass 198	79.82
443	17.00 - 23.00% of mass 442	15.87 (19.88)

Data File: /chem/MSD2.i/s063009.b/s2f3001.d

Date : 30-JUN-2009 15:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f3001.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 280

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	572	129.00	41928	201.00	1007	284.00	315
50.00	23168	130.00	3661	203.00	1393	285.00	738
51.00	90976	131.00	694	204.00	7326	286.00	124
52.00	4680	132.00	367	205.00	12142	289.00	159
53.00	171	133.00	132	206.00	51696	290.00	129
55.00	418	134.00	1200	207.00	6590	292.00	182
56.00	2762	135.00	3373	208.00	1740	293.00	920
57.00	6207	136.00	1371	209.00	486	294.00	204
58.00	241	137.00	1721	210.00	819	296.00	13677
61.00	1072	138.00	365	211.00	2039	297.00	1951
62.00	1264	139.00	217	213.00	145	298.00	128
63.00	3525	140.00	503	215.00	559	301.00	154
64.00	455	141.00	5349	216.00	1142	302.00	244
65.00	1715	142.00	1796	217.00	13829	303.00	1593
66.00	74	143.00	1132	218.00	1809	304.00	395
68.00	1455	144.00	291	219.00	183	308.00	192
69.00	86440	145.00	278	221.00	10880	309.00	116
70.00	434	146.00	1003	223.00	3000	310.00	176
73.00	677	147.00	2723	224.00	27856	313.00	125
74.00	9048	148.00	6202	225.00	7040	314.00	662
75.00	13727	149.00	1239	226.00	765	315.00	1568
76.00	4943	150.00	351	227.00	11295	316.00	827
77.00	100832	151.00	690	228.00	1672	317.00	85
78.00	6936	152.00	403	229.00	2408	321.00	442
79.00	6396	153.00	1646	230.00	317	323.00	4464
80.00	4783	154.00	1246	231.00	1029	324.00	801
81.00	6897	155.00	3034	232.00	167	327.00	860
82.00	1729	156.00	4438	233.00	178	328.00	422
83.00	1607	157.00	893	234.00	736	332.00	323
84.00	186	158.00	960	235.00	770	333.00	462
85.00	1516	159.00	694	236.00	506	334.00	2850
86.00	2039	160.00	1570	237.00	902	335.00	742
87.00	934	161.00	2410	238.00	82	341.00	490
88.00	336	162.00	670	239.00	433	342.00	118
89.00	158	163.00	163	240.00	351	346.00	1021

Data File: /chem/MSD2.i/s063009.b/s2f3001.d

Date : 30-JUN-2009 15:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f3001.d

Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384

Location of Maximum: 198.00

Number of points: 280

m/z	Y	m/z	Y	m/z	Y	m/z	Y
91.00	1598	164.00	253	241.00	671	347.00	164
92.00	1702	165.00	1899	242.00	1467	352.00	1351
93.00	10640	166.00	1601	243.00	1616	353.00	1018
94.00	675	167.00	10849	244.00	22256	354.00	1513
95.00	176	168.00	5324	245.00	2853	355.00	271
96.00	513	169.00	949	246.00	4084	365.00	6791
97.00	188	170.00	324	247.00	855	366.00	920
98.00	8336	171.00	457	248.00	193	370.00	130
99.00	6762	172.00	894	249.00	725	371.00	335
100.00	537	173.00	1214	250.00	152	372.00	2501
101.00	4024	174.00	2266	251.00	180	373.00	633
102.00	210	175.00	4077	252.00	201	383.00	662
103.00	1302	176.00	1199	253.00	507	384.00	169
104.00	2411	177.00	1815	255.00	105048	390.00	296
105.00	2425	178.00	623	256.00	15348	391.00	262
106.00	755	179.00	7682	257.00	1276	392.00	157
107.00	29424	180.00	5338	258.00	6106	401.00	142
108.00	4768	181.00	2465	259.00	982	402.00	991
109.00	888	182.00	348	260.00	152	403.00	1381
110.00	55288	183.00	203	261.00	179	404.00	472
111.00	8352	184.00	578	264.00	238	421.00	1259
112.00	999	185.00	3704	265.00	2567	422.00	1297
113.00	362	186.00	28208	266.00	406	423.00	9318
115.00	117	187.00	7977	268.00	71	424.00	1871
116.00	1682	188.00	825	270.00	120	425.00	182
117.00	24288	189.00	1737	271.00	215	438.00	101
118.00	1711	190.00	274	272.00	341	439.00	78
119.00	203	191.00	767	273.00	3245	441.00	26888
120.00	393	192.00	2479	274.00	8587	442.00	170368
121.00	134	193.00	2684	275.00	47968	443.00	33880
122.00	2097	194.00	585	276.00	6479	444.00	3189
123.00	3143	195.00	349	277.00	3984	445.00	167
124.00	1398	196.00	6212	278.00	615		
125.00	1287	198.00	213440	279.00	138		
127.00	109280	199.00	14553	282.00	70		

Data File: /chem/MSD2.i/s063009.b/s2f3001.d

Date : 30-JUN-2009 15:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f3001.d

Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384

Location of Maximum: 198.00

Number of points: 280

m/z	Y	m/z	Y	m/z	Y	m/z	Y
128.00	8462	200.00	1145	283.00	450		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			Matrix:	SOIL
Lab Sample ID:	1201871647				
Client Sample:	QC for batch 881317	Client:	LANL010	Project:	QC
Client ID:	MB for batch 881317	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 17:13	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s2f3005-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	33.3	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	66.7	333
87-86-5	Pentachlorophenol	U	333	ug/kg	66.7	333
129-00-0	Pyrene	U	33.3	ug/kg	10.5	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	133	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	333	ug/kg	66.7	333
99-09-2	3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			**Matrix:**	SOIL
Lab Sample ID:	1201871647				
Client Sample:	QC for batch 881317	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881317	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 17:13	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s2f3005-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	33.3	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	33.3	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.14	424	ug/kg		J
	Unknown	2.27	168	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			Matrix:	SOIL
Lab Sample ID:	1201871647				
Client Sample:	QC for batch 881317	Client:	LANL010	Project:	QC
Client ID:	MB for batch 881317	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 17:13	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s2f3005-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.07	381	ug/kg		JA

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s063009.b/s2f3005.d
Lab Smp Id: 1201871647 Client Smp ID: SBLK01
Inj Date : 30-JUN-2009 17:13
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201871647|881319|1|SVMF|1|MB
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.046	4.051	(1.000)	196202	40.0000	
* 29 Naphthalene-d8	136	4.918	4.923	(1.000)	735867	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	403005	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	671443	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	565609	40.0000	
* 98 Perylene-d12	264	10.496	10.507	(1.000)	464558	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.798)	376962	69.4330	2310
$ 5 Phenol-d5	99	3.752	3.757	(0.927)	462474	68.9813	2300
$ 20 Nitrobenzene-d5	82	4.410	4.415	(0.897)	192778	34.7223	1160
$ 39 2-Fluorobiphenyl	172	5.661	5.667	(0.918)	421247	37.0101	1230
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	101334	73.4142	2450
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	460182	47.7665	1590

GEL Laboratories LLC

GEL Laboratories, LLC

Data file : /chem/MSD2.i/s063009.b/s2f3005.d
Lab Smp Id: 1201871647 Client Smp ID: SBLK01
Inj Date : 30-JUN-2009 17:13
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201871647|881319|1|SVMF|1|MB
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.046	1184183	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.142	376817	12.7283431	424	0		0	10
Unknown				CAS #:			
2.270	149465	5.04872470	168	0		0	10

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	========	======
Unknown Aldol Condensate					CAS #:		
3.067	338509	11.4343443	38J	0		0	10

Data File: /chem/MSD2.i/s063009.b/s2f3005.d
Date : 30-JUN-2009 17:13
Client ID: SBLK01
Sample Info: |120187164|881319|1|SVMF|1|MB
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: AGS1
Column diameter: 0.20

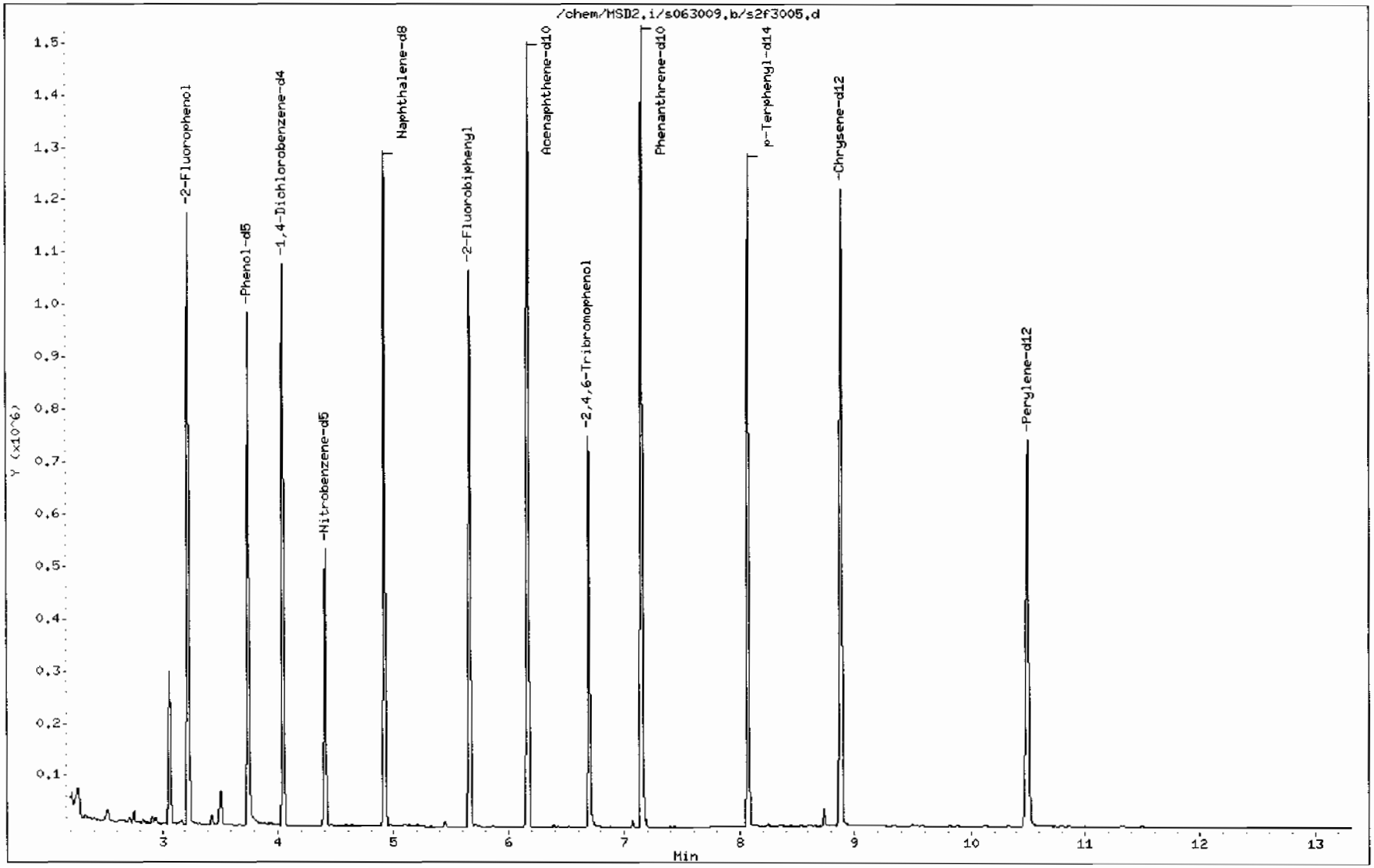

Data File: /chem/MSD2.i/s063009.b/s2f3005.d

Date : 30-JUN-2009 17:13

Client ID: SBLK01

Instrument: MSD2.i

Sample Info: |120187164718813191|1|SVHF|1|MB

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	42	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	40	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4658	36	C5H12O2	104

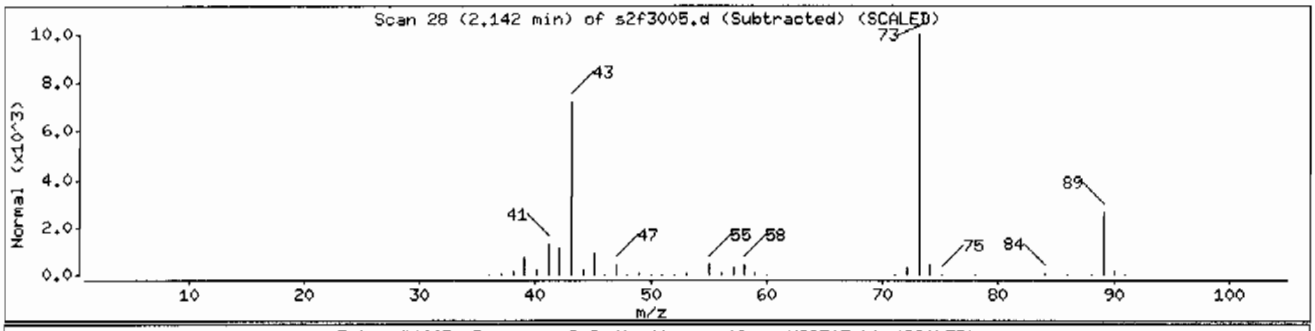

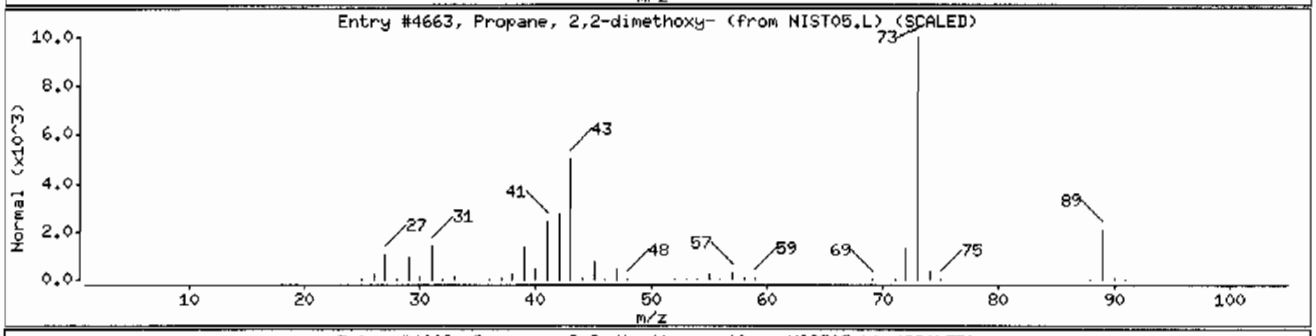

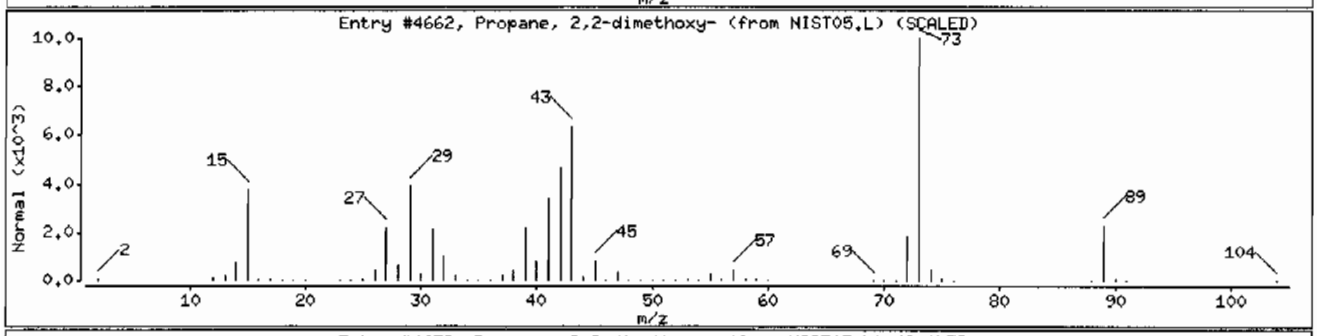

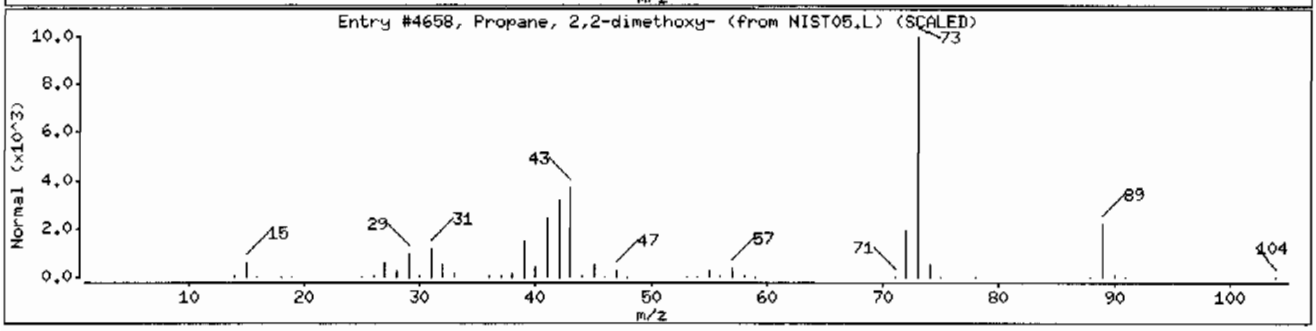

Data File: /chem/MSD2.i/s063009.b/s2f3005.d

Date : 30-JUN-2009 17:13

Client ID: SBLK01

Instrument: MSD2.i

Sample Info: |120187164718813191|SVMF|1|MB

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2355	49	C3H5ClO	92
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2356	47	C3H5ClO	92
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2354	43	C3H5ClO	92

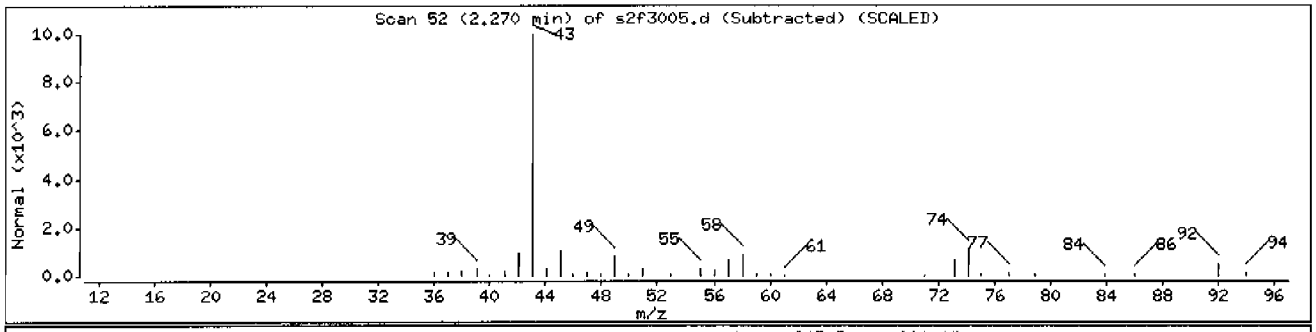

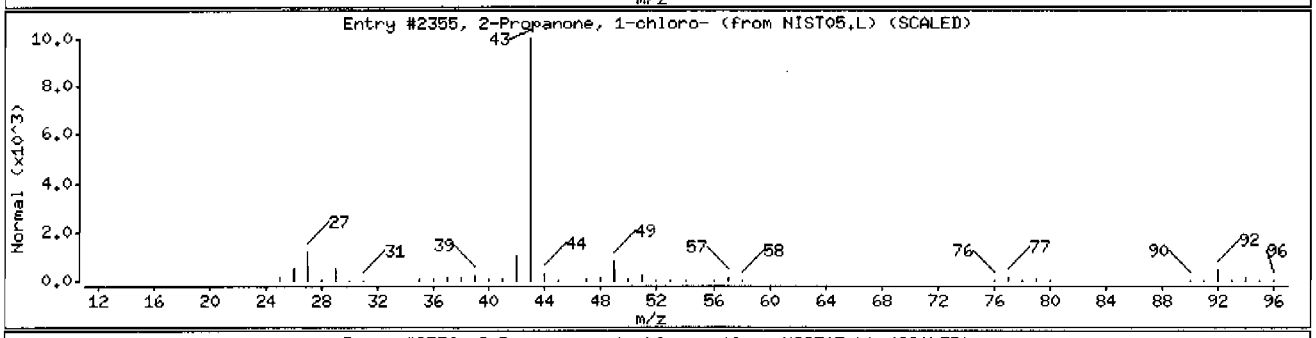

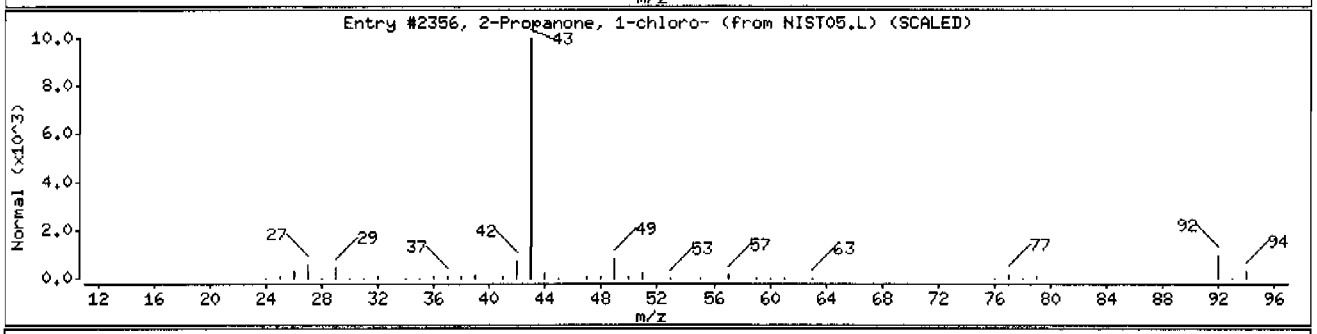

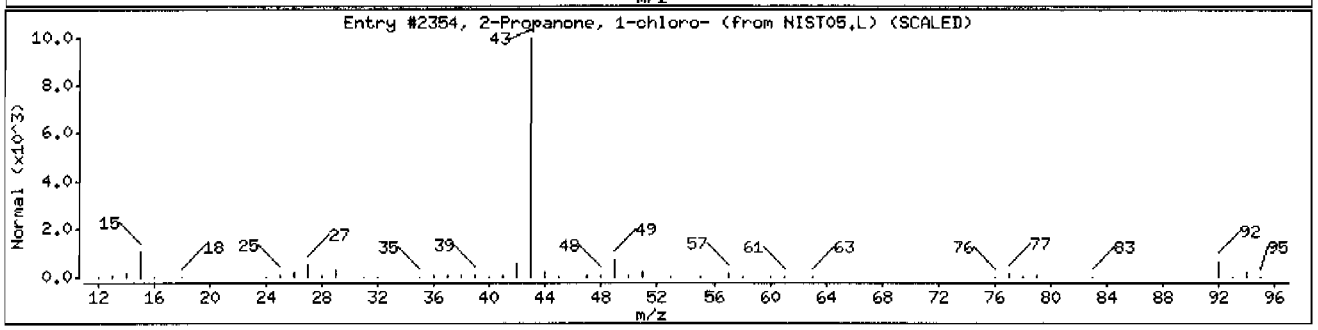

Data File: /chem/MSD2.i/s063009.b/s2f3005.d

Date : 30-JUN-2009 17:13

Client ID: SBLK01

Instrument: MSD2.i

Sample Info: |120187164718813191|1|SVMF|1|MB

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	45	C6H12O2	116

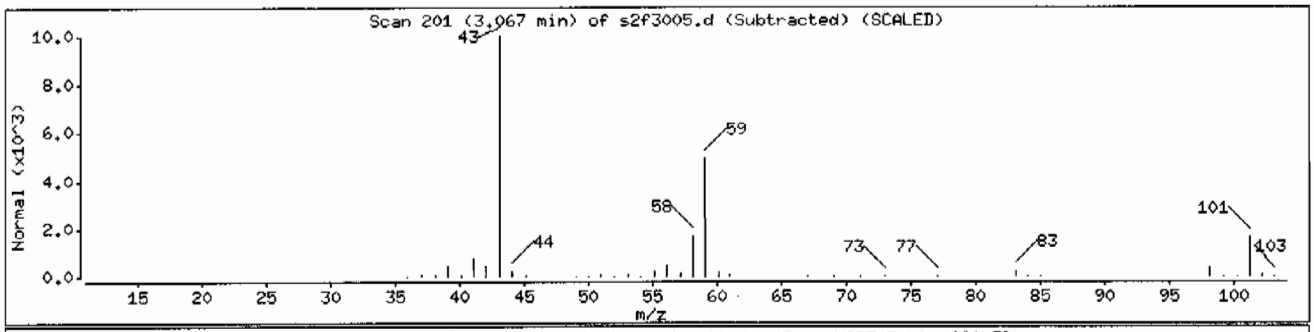

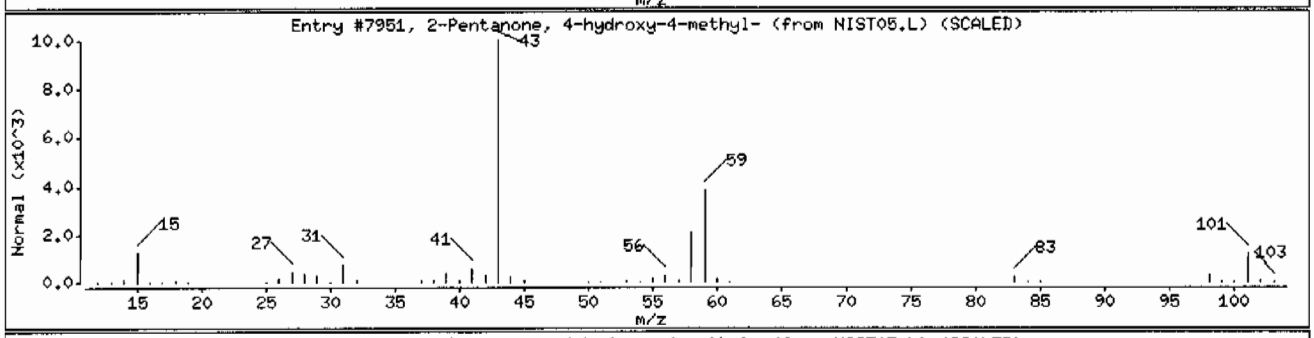

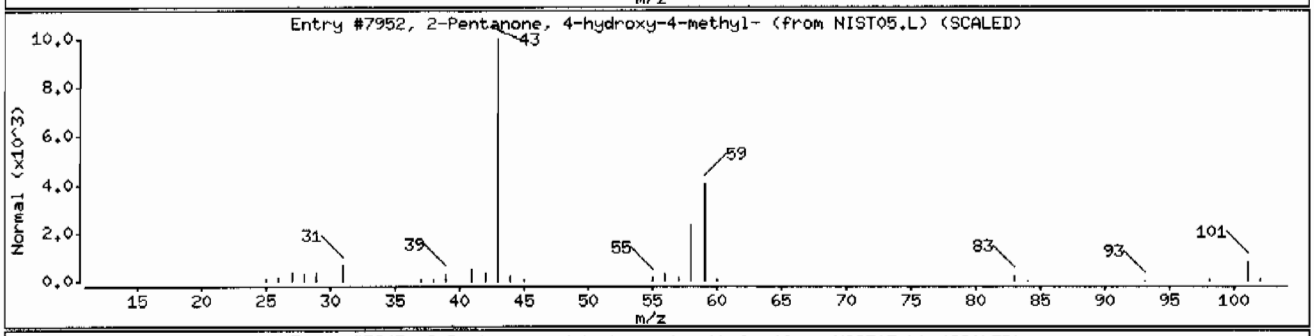

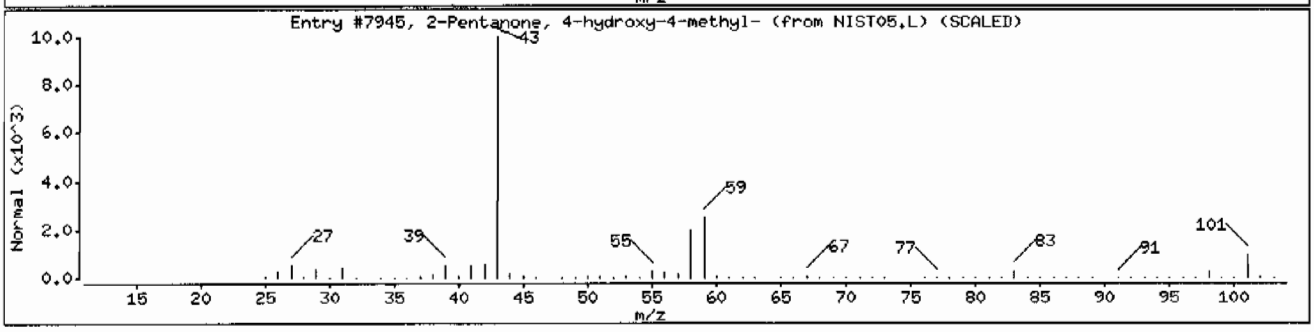

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			Matrix:	SOIL
Lab Sample ID:	1201871648				
Client Sample:	QC for batch 881317	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 881317	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881319	Inst:	MSD2.I	Dilution:	1
Run Date:	06/30/2009 17:33	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 14:54	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s2f3006-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1200	ug/kg	66.7	333
108-95-2	Phenol		1230	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1290	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1190	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1250	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1410	ug/kg	33.3	333
83-32-9	Acenaphthene		1210	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene		1430	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1540	ug/kg	66.7	333
87-86-5	Pentachlorophenol		1500	ug/kg	66.7	333
129-00-0	Pyrene		1350	ug/kg	10.5	33.3
110-86-1	Pyridine		1150	ug/kg	66.7	333
62-53-3	Aniline		1380	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether		1180	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1180	ug/kg	66.7	333
100-51-6	Benzyl alcohol		1010	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1260	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1200	ug/kg	66.7	333
95-48-7	o-Cresol		1320	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1460	ug/kg	133	333
67-72-1	Hexachloroethane		1170	ug/kg	66.7	333
98-95-3	Nitrobenzene		1310	ug/kg	66.7	333
78-59-1	Isophorone		1310	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1340	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol		1420	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane		1290	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1350	ug/kg	66.7	333
65-85-0	Benzoic acid		1570	ug/kg	167	667
91-20-3	Naphthalene		1180	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1410	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1370	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1330	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1760	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1300	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1350	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1320	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*		1400	ug/kg	66.7	333
99-09-2	3-Nitroaniline		1560	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2473			**Matrix:**	SOIL
Lab Sample ID:	1201871648				
Client Sample:	QC for batch 881317	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881317	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881319	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	06/30/2009 17:33	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 14:54	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s2f3006-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1310	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1300	ug/kg	33.3	333
208-96-8	Acenaphthylene		1320	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		1410	ug/kg	127	667
132-64-9	Dibenzofuran		1370	ug/kg	66.7	333
84-66-2	Diethylphthalate		1360	ug/kg	66.7	333
86-73-7	Fluorene		1240	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1370	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol		1480	ug/kg	66.7	333
100-01-6	4-Nitroaniline		1790	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1430	ug/kg	66.7	333
122-66-7	Azobenzene		1370	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1390	ug/kg	33.3	333
118-74-1	Hexachlorobenzene		1450	ug/kg	66.7	333
85-01-8	Phenanthrene		1320	ug/kg	10.0	33.3
120-12-7	Anthracene		1440	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1470	ug/kg	33.3	333
206-44-0	Fluoranthene		1560	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1510	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1440	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1590	ug/kg	100	333
218-01-9	Chrysene		1500	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1470	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1360	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1610	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1510	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1580	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1570	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1640	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1560	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1300	ug/kg	66.7	333

GEL Laboratories LLC

GEL Laboratories, LLC

Data file : /chem/MSD2.i/s063009.b/s2f3006.d
Lab Smp Id: 1201871648 Client Smp ID: SBLK01LCS
Inj Date : 30-JUN-2009 17:33
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201871648|881319|1|SVMF|1|LCS
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:04 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2473.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	151287	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	611419	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	323125	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	560782	40.0000	
* 91 Chrysene-d12	240	8.886	8.892	(1.000)	498899	40.0000	
* 98 Perylene-d12	264	10.502	10.507	(1.000)	442975	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	308657	73.7304	2460
$ 5 Phenol-d6	99	3.757	3.757	(0.927)	358375	69.3240	2310
$ 20 Nitrobenzene-d5	82	4.415	4.415	(0.897)	175531	38.0510	1270
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	349134	38.2574	1280
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	94292	85.2000	2840
$ 81 p-Terphenyl-d14	244	8.073	8.079	(0.908)	388648	45.7355	1520

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.768	3.763	(0.930)	193618	36.7649	1220
8 2-Chlorophenol	128	3.912	3.912	(0.966)	173408	38.7688	1290
11 1,4-Dichlorobenzene	146	4.062	4.062	(1.003)	177984	35.7189	1190
17 N-Nitrosodipropylamine	70	4.281	4.287	(1.057)	118332	37.4016	1250(Q)
28 1,2,4-Trichlorobenzene	180	4.870	4.875	(0.989)	151750	39.0075	1300
33 4-Chloro-3-methylpheno.	107	5.265	5.260	(1.070)	142171	42.2139	1410
47 Acenaphthene	154	6.196	6.196	(1.004)	306924	36.3969	1210
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	118836	42.9601	1430
52 4-Nitrophenol	139	6.201	6.196	(1.005)	62493	46.1220	1540
65 Pentachlorophenol	266	7.020	7.015	(0.982)	60776	44.9304	1500
79 Pyrene	202	8.031	8.031	(0.904)	600707	40.4483	1350
2 Pyridine	79	2.564	2.554	(0.633)	119438	34.3800	1150
4 Aniline	66	3.827	3.832	(0.945)	86388	41.4746	1380(Q)
7 bis(2-Chloroethyl) ether	63	3.843	3.848	(0.948)	136251	35.3638	1180
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.992)	177006	35.4819	1180
12 Benzyl alcohol	108	4.115	4.116	(1.016)	89133	30.2374	1010
13 1,2-Dichlorobenzene	146	4.169	4.169	(1.029)	166869	37.7270	1260
14 bis(2-Chloroisopropyl)ether	45	4.190	4.191	(1.034)	312517	36.1489	1200
15 o-Cresol	107	4.164	4.164	(1.028)	129474	39.4611	1320
18 m,p-Cresols	107	4.260	4.265	(1.051)	200203	43.8064	1460
19 Hexachloroethane	117	4.399	4.399	(1.086)	64939	35.0094	1170
21 Nitrobenzene	77	4.426	4.431	(0.899)	173147	39.1676	1300
22 Isophorone	82	4.581	4.581	(0.930)	329343	39.2783	1310
23 2-Nitrophenol	139	4.645	4.645	(0.944)	86464	40.0880	1340
24 2,4-Dimethylphenol	122	4.634	4.635	(0.941)	234794	42.6773	1420
25 bis(2-Chloroethoxy)methane	93	4.699	4.699	(0.954)	190479	38.6509	1290
26 2,4-Dichlorophenol	162	4.805	4.811	(0.976)	134859	40.5584	1350
27 Benzoic acid	105	4.672	4.683	(0.949)	101692	47.1002	1570(Q)
30 Naphthalene	128	4.939	4.939	(1.003)	508800	35.3378	1180
31 4-Chloroaniline	127	4.950	4.950	(1.005)	238755	42.3689	1410
32 Hexachlorobutadiene	225	5.003	5.004	(1.016)	81123	41.0998	1370
34 2-Methylnaphthalene	142	5.421	5.421	(1.101)	334342	39.9738	1330
36 Hexachlorocyclopentadiene	237	5.522	5.522	(0.895)	73759	52.8962	1760
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.909)	93215	39.0286	1300
38 2,4,5-Trichlorophenol	196	5.640	5.635	(0.914)	112206	40.6423	1350
40 2-Chloronaphthalene	162	5.774	5.779	(0.936)	314274	39.6837	1320
42 o-Nitroaniline	65	5.827	5.827	(0.944)	101291	42.0148	1400
41 m-Nitroaniline	138	6.116	6.116	(0.991)	90018	46.6845	1560
43 Dimethylphthalate	163	5.929	5.940	(0.961)	360209	39.1978	1310
44 2,6-Dinitrotoluene	165	5.988	5.993	(0.971)	86794	39.0233	1300
45 Acenaphthylene	152	6.078	6.079	(0.985)	508445	39.6245	1320
48 2,4-Dinitrophenol	184	6.185	6.186	(1.003)	30859	42.4154	1410(Q)
49 Dibenzofuran	168	6.308	6.309	(1.023)	447584	40.9913	1370
51 Diethylphthalate	149	6.410	6.416	(1.039)	367238	40.9459	1360
53 Fluorene	166	6.544	6.544	(1.061)	341306	37.2821	1240
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.056)	172491	41.1455	1370
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	55641	44.4075	1480

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.533	6.539	(1.059)	87639	53.7693	1790
133 Diphenylamine	169	6.592	6.592	(0.922)	320480	42.7900	1430
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.927)	398804	40.9854	1370
61 4-Bromophenylphenylether	248	6.843	6.843	(0.957)	97577	41.7652	1390
63 Hexachlorobenzene	284	6.902	6.902	(0.966)	112115	43.4836	1450
68 Phenanthrene	178	7.164	7.170	(1.002)	528804	39.5999	1320
69 Anthracene	178	7.196	7.202	(1.007)	557404	43.2803	1440
72 Di-n-butylphthalate	149	7.432	7.432	(1.040)	656889	44.1865	1470
76 Fluoranthene	202	7.881	7.886	(1.103)	576167	46.9027	1560
85 Butylbenzylphthalate	149	8.352	8.357	(0.940)	281035	45.2943	1510
89 Benzo(a)anthracene	228	8.876	8.881	(0.999)	525353	43.2803	1440
90 3,3'-Dichlorobenzidine	252	8.806	8.801	(0.991)	154189	47.7999	1590
92 Chrysene	228	8.908	8.919	(1.002)	527314	45.0145	1500
93 bis(2-Ethylhexyl)phthalate	149	8.742	8.748	(0.984)	402340	43.9617	1460
94 Di-n-octylphthalate	149	9.325	9.331	(0.888)	588861	40.8775	1360
95 Benzo(b)fluoranthene	252	9.983	9.988	(0.951)	512189	48.1645	1600
96 Benzo(k)fluoranthene	252	10.015	10.021	(0.954)	509609	45.4189	1510
97 Benzo(a)pyrene	252	10.427	10.432	(0.993)	439905	47.3468	1580
99 Indeno(1,2,3-cd)pyrene	276	12.331	12.337	(1.174)	420362	47.0985	1570
100 Dibenzo(a,h)anthracene	278	12.336	12.342	(1.175)	352827	49.2647	1640
101 Benzo(ghi)perylene	276	12.898	12.903	(1.228)	363305	46.8816	1560
1 N-Methyl-N-nitrosomethylamine	74	2.522	2.522	(0.622)	93148	35.9308	1200(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD2.i/s063009.b/s2f3006.d
Date : 30-JUN-2009 17:33
Client ID: SBLK01LCS
Sample Info: 1120187164818813191|1|SVMF11|LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACSI
Column diameter: 0.20

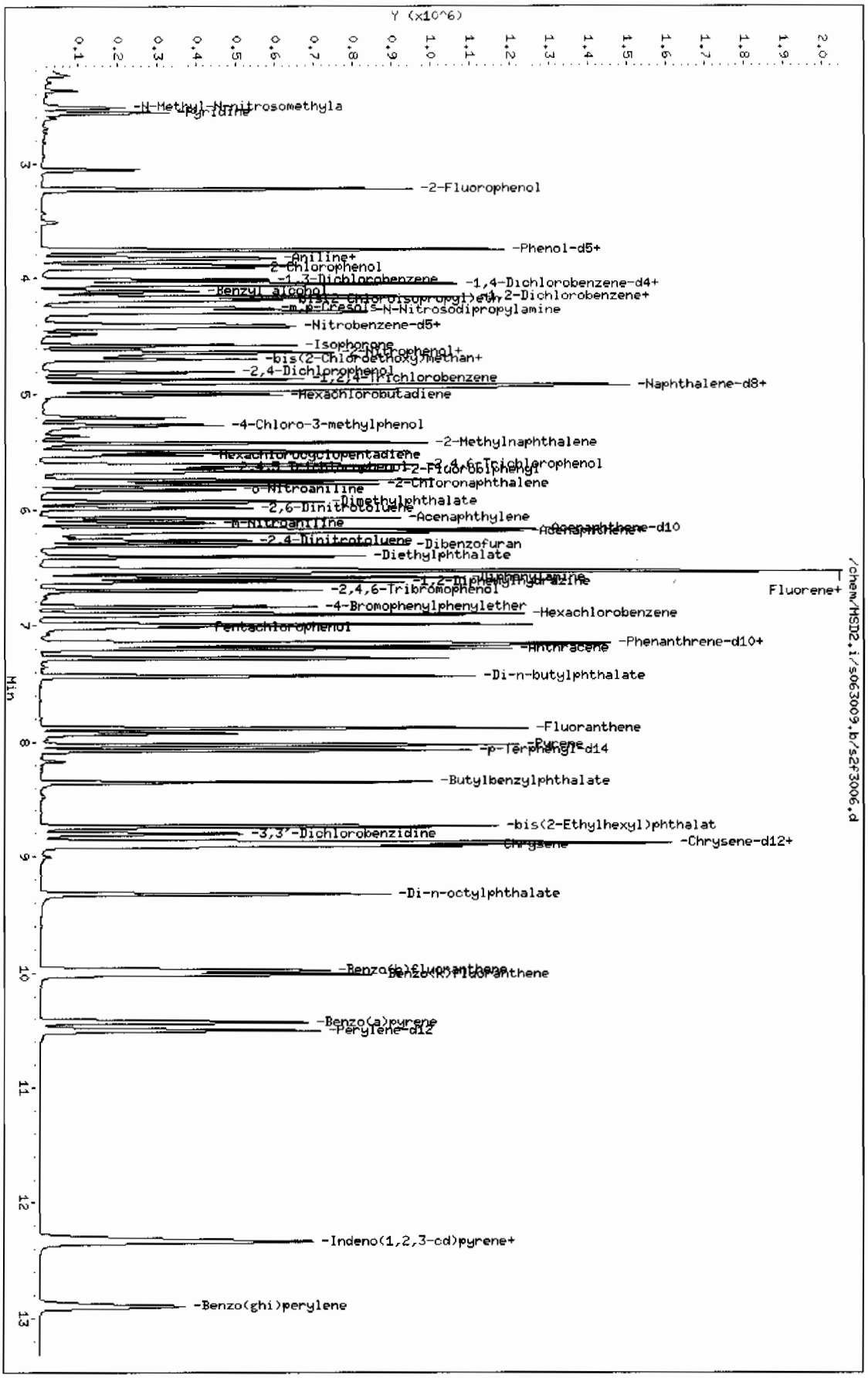

Page 1

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 881317 **Verified by:** _____

Analyst: Robin Hunt

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201871647 MB	30-JUN-2009 14:54:29	30	1	0.03333
1201871648 LCS	30-JUN-2009 14:54:29	30	1	0.03333
232424001	30-JUN-2009 14:54:29	30.24	1	0.03307
232426001	30-JUN-2009 14:54:29	30.03	1	0.0333
232426002	30-JUN-2009 14:54:29	30.06	1	0.03327
232428001	30-JUN-2009 14:54:29	30.06	1	0.03327
1201871649 MS (232428001)	30-JUN-2009 14:54:29	30.09	1	0.03323
1201871650 MSD (232428001)	30-JUN-2009 14:54:29	30.03	1	0.0333
232428002	30-JUN-2009 14:54:29	30.08	1	0.03324
232428003	30-JUN-2009 14:54:29	30.15	1	0.03317
232428004	30-JUN-2009 14:54:29	30.17	1	0.03315
232428005	30-JUN-2009 14:54:29	30.12	1	0.0332
232428006	30-JUN-2009 14:54:29	30.17	1	0.03315
232428007	30-JUN-2009 14:54:29	30.19	1	0.03312
232428008	30-JUN-2009 14:54:29	30.15	1	0.03317
232428009	30-JUN-2009 14:54:29	30.01	1	0.03332
232428010	30-JUN-2009 14:54:29	30.25	1	0.03306
232428011	30-JUN-2009 14:54:29	30.02	1	0.03331
232428012	30-JUN-2009 14:54:29	30.16	1	0.03316
232428013	30-JUN-2009 14:54:29	30.16	1	0.03316
232428014	30-JUN-2009 14:54:29	30.19	1	0.03312
232428015	30-JUN-2009 14:54:29	30.12	1	0.0332

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201871648	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
LCS	1201871648	BENZIDINE LCS	UE090622-18	1	mL
MS	1201871649	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
MS	1201871649	BENZIDINE LCS	UE090622-18	1	mL
MSD	1201871650	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
MSD	1201871650	BENZIDINE LCS	UE090622-18	1	mL
SURR	All	BNA for all Surrogate	UE090506-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1143854-D	150	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: jda

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD2

DATE: 06/26/2009 METHOD:See raw data OPERATOR:ANN REVIEWED BY:_____ DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 3 on pg. 3 SOLVENT LOT 1116462-D
Multiplier Voltage: 941 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
SOP: GL-OA-E-009 Rev. 22

Sequence Number: /chem/MSD2.i/s062609.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s2f2601.d	WBN090624-01	AGS1	26-JUN-2009 20:54	50PPM	s062609	1.0	DFTPP	DUSE
s2f2602.d	WBN090624-01	AGS1	26-JUN-2009 21:09	50PPM	s062609	1.0	DFTPP	DUSE
s2f2603.d	INSTBLK	AGS1	26-JUN-2009 21:21	------	s062609	1.0	INSTBLK	DUSE
s2f2604.d	WBN090626-08	AGS1	26-JUN-2009 21:40	1 PPM	s062609	1.0	MEGA001	DUSE
s2f2605.d	WBN090626-07	AGS1	26-JUN-2009 22:04	10 PPM	s062609	1.0	MEGA010	DUSE
s2f2606.d	WBN090626-06	AGS1	26-JUN-2009 22:28	20 PPM	s062609	1.0	MEGA020	DUSE
s2f2607.d	WBN090626-05.1	AGS1	26-JUN-2009 22:53	40 PPM	s062609	1.0	MEGA040	DUSE
s2f2608.d	WBN090626-04	AGS1	26-JUN-2009 23:17	50 PPM	s062609	1.0	MEGA050	DUSE
s2f2609.d	WBN090626-03	AGS1	26-JUN-2009 23:41	80 PPM	s062609	1.0	MEGA080	DUSE
s2f2610.d	WBN090626-02	AGS1	27-JUN-2009 00:05	100 PPM	s062609	1.0	MEGA100	DUSE
s2f2611.d	WBN090626-01	AGS1	27-JUN-2009 00:29	120 PPM	s062609	1.0	MEGA120	DUSE
s2f2612.d	INSTBLK	AGS1	27-JUN-2009 00:54	------	s062609	1.0	INSTBLK	DUSE
s2f2613.d	WBN090626-09.1	AGS1	27-JUN-2009 01:18	40 PPM	s062609	1.0	MEGAICV	DUSE
s2f2614-D.d	WBN090624-01	AGS1	27-JUN-2009 01:45	50PPM	s062609	1.0	DFTPP	TUNE: 8270D - MEGA
s2f2614.d	WBN090624-01	AGS1	27-JUN-2009 01:45	50PPM	s062609	1.0	DFTPP	TUNE: 8270C - MEGA
s2f2615.d	INSTBLK	AGS1	27-JUN-2009 01:57	------	s062609	1.0	INSTBLK	
s2f2616.d	WBN090626-08	AGS1	27-JUN-2009 02:16	1 PPM	s062609	1.0	MEGA001	lev 1
s2f2617.d	WBN090626-07	AGS1	27-JUN-2009 02:40	10 PPM	s062609	1.0	MEGA010	lev 2
s2f2618.d	WBN090626-06	AGS1	27-JUN-2009 03:04	20 PPM	s062609	1.0	MEGA020	lev 3

s2f2619.d	WBN090626-05.1	AGS1	27-JUN-2009 03:29	40 PPM	s062609		1.0	MEGA040	lev 4
s2f2620.d	WBN090626-04	AGS1	27-JUN-2009 03:53	50 PPM	s062609		1.0	MEGA050	lev 5
s2f2621.d	WBN090626-03	AGS1	27-JUN-2009 04:17	80 PPM	s062609		1.0	MEGA080	lev 6
s2f2622.d	WBN090626-02	AGS1	27-JUN-2009 04:41	100 PPM	s062609		1.0	MEGA100	lev 7
s2f2623.d	WBN090626-01	AGS1	27-JUN-2009 05:05	120 PPM	s062609		1.0	MEGA120	lev 8
s2f2624.d	INSTBLK	AGS1	27-JUN-2009 05:30	------	s062609		1.0	INSTBLK	
s2f2625-625.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609		1.0	MEGAICV	625 some analytes failed- C55/C27/C179/C26-phthalic >20% drift
s2f2625-BOE.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609		1.0	MEGAICV	pass BOE
s2f2625-D.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609		1.0	MEGAICV	pass 8270D
s2f2625.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609		1.0	MEGAICV	ICV pass 205606

Instrument Batch: /chem/MSD2.i/s062609.b

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD2

DATE: 06/28/2009 METHOD:8270C MSD2-DFTPP8270D.m OPERATOR:AGS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 3 on pg. 3 SOLVENT LOT 1116462-D
Multiplier Voltage: 941 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
SOP: GL-OA-E-009 Rev. 22

Sequence Number: /chem/MSD2.i/s062809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s2f2801-D.d	WBN090624-01	AGS1	28-JUN-2009 18:00	50PPM	s062809	1.0	DFTPP	TUNE: 8270D - AP/PEST/HEX
s2f2801.d	WBN090624-01	AGS1	28-JUN-2009 18:00	50PPM	s062809	1.0	DFTPP	TUNE: 8270C - AP/PEST/HEX
s2f2802.d	INSTBLK	AGS1	28-JUN-2009 18:12	------	s062809	1.0	INSTBLK	
s2f2803-D.d	WBN090528-07	AGS1	28-JUN-2009 18:31	10 PPM	s062809	1.0	APICAL	8270D req. as sample for linear analytes; benzidine <70%
s2f2803.d	WBN090528-07	AGS1	28-JUN-2009 18:31	10 PPM	s062809	1.0	APICAL	lev 2
s2f2804.d	WBN090528-06	AGS1	28-JUN-2009 18:51	20 PPM	s062809	1.0	APICAL	lev 3
s2f2805.d	WBN090528-05.1	AGS1	28-JUN-2009 19:10	40 PPM	s062809	1.0	APICAL	lev 4
s2f2806.d	WBN090528-04	AGS1	28-JUN-2009 19:30	50 PPM	s062809	1.0	APICAL	lev 5
s2f2807.d	WBN090528-03	AGS1	28-JUN-2009 19:49	80 PPM	s062809	1.0	APICAL	lev 6
s2f2808.d	WBN090528-02	AGS1	28-JUN-2009 20:08	100 PPM	s062809	1.0	APICAL	lev 7
s2f2809.d	WBN090528-01	AGS1	28-JUN-2009 20:28	120 PPM	s062809	1.0	APICAL	lev 8
s2f2810.d	WBN090609-24	AGS1	28-JUN-2009 20:47	10 PPM	s062809	1.0	PESTICAL	lev 2
s2f2811.d	WBN090609-23	AGS1	28-JUN-2009 21:07	20 PPM	s062809	1.0	PESTICAL	lev 3
s2f2812.d	WBN090609-22.1	AGS1	28-JUN-2009 21:26	40 PPM	s062809	1.0	PESTICAL	lev 4
s2f2813.d	WBN090609-21	AGS1	28-JUN-2009 21:45	50 PPM	s062809	1.0	PESTICAL	lev 5
s2f2814.d	WBN090609-20	AGS1	28-JUN-2009 22:05	80 PPM	s062809	1.0	PESTICAL	lev 6
s2f2815.d	WBN090609-19	AGS1	28-JUN-2009 22:24	100 PPM	s062809	1.0	PESTICAL	lev 7
s2f2816.d	WBN090609-18	AGS1	28-JUN-2009 22:44	120 PPM	s062809	1.0	PESTICAL	lev 8
s2f2817.d	WBN090624-16	AGS1	28-JUN-2009 23:03	500 PPM	s062809	1.0	HEXICAL	lev 2

s2f2818.d	WBN090624-15	AGS1	28-JUN-2009 23:23	1000 PPM	s062809	1.0	HEXICAL	lev 3
s2f2819.d	WBN090624-14	AGS1	28-JUN-2009 23:42	1250 PPM	s062809	1.0	HEXICAL	lev 4
s2f2820.d	WBN090624-13	AGS1	29-JUN-2009 00:01	1500 PPM	s062809	1.0	HEXICAL	lev 5
s2f2821.d	WBN090624-12	AGS1	29-JUN-2009 00:21	1750 PPM	s062809	1.0	HEXICAL	lev 6
s2f2822.d	UBN090317-02.6	AGS1	29-JUN-2009 00:40	2000 PPM	s062809	1.0	HEXICAL	lev 7
s2f2823-D.d	WBN090528-8.1	AGS1	29-JUN-2009 00:59	40 PPM	s062809	1.0	APICV	8270D AP ICV: PASSES
s2f2823.d	WBN090528-8.1	AGS1	29-JUN-2009 00:59	40 PPM	s062809	1.0	APICV	8270C AP ICV: PASSES
s2f2824-D.d	WBN090609-25.1	AGS1	29-JUN-2009 01:19	40 PPM	s062809	1.0	PESTICV	8270D PEST ICV: PASSES
s2f2824.d	WBN090609-25.1	AGS1	29-JUN-2009 01:19	40 PPM	s062809	1.0	PESTICV	8270C PEST ICV: PASSES
s2f2825-D.d	WBN090624-10.1	AGS1	29-JUN-2009 01:38	1250 PPM	s062809	1.0	HEXICV	8270D HEX ICV: PASSES
s2f2825.d	WBN090624-10.1	AGS1	29-JUN-2009 01:38	1250 PPM	s062809	1.0	HEXICV	8270C HEX ICV: PASSES
s2f2826-D.d	WBN090624-01	AGS1	29-JUN-2009 02:01	50PPM	s062809	1.0	DFTPP	TUNE: 8270D - NEV
s2f2826.d	WBN090624-01	AGS1	29-JUN-2009 02:01	50PPM	s062809	1.0	DFTPP	TUNE: 8270C - NEV
s2f2827.d	INSTBLK	AGS1	29-JUN-2009 02:12	------	s062809	1.0	INSTBLK	
s2f2828-D.d	UBN090428-01	AGS1	29-JUN-2009 02:32	10 PPM	s062809	1.0	NEVICAL	8270D
s2f2828.d	UBN090428-01	AGS1	29-JUN-2009 02:32	10 PPM	s062809	1.0	NEVICAL	lev 2
s2f2829.d	UBN090428-02	AGS1	29-JUN-2009 02:51	20 PPM	s062809	1.0	NEVICAL	lev 3
s2f2830.d	UBN090428-03	AGS1	29-JUN-2009 03:11	40 PPM	s062809	1.0	NEVICAL	lev 4
s2f2831.d	UBN090428-04	AGS1	29-JUN-2009 03:30	50 PPM	s062809	1.0	NEVICAL	lev 5
s2f2832.d	UBN090428-05	AGS1	29-JUN-2009 03:49	80 PPM	s062809	1.0	NEVICAL	DUSE: disable level for all NEV analytes
s2f2833.d	UBN090428-06	AGS1	29-JUN-2009 04:09	100 PPM	s062809	1.0	NEVICAL	lev 7
s2f2834.d	UBN090428-07	AGS1	29-JUN-2009 04:28	120 PPM	s062809	1.0	NEVICAL	lev 8

Instrument Batch: /chem/MSD2.i/s062809.b

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD2

DATE: 06/30/2009 METHOD:8270C MSD2-DFTPP.m OPERATOR:AGS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 3 on pg. 3 SOLVENT LOT 1116462-D
Multiplier Voltage: 941 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
SOP: GL-OA-E-009 Rev. 22

Sequence Number: /chem/MSD2.i/s063009.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s2f3001.d	WBN090624-01	AGS1	30-JUN-2009 15:51	50PPM	s063009	1.0	DFTPP	TUNE: PASSES
s2f3002.d	WBN090626-05.3	AGS1	30-JUN-2009 16:03	40 PPM	s063009	1.0	MEGACVS	MEGA CVS: PASSES (ISL: 199819)
s2f3003.d	WBN090619-01.2	AGS1	30-JUN-2009 16:27	40 PPM	s063009	1.0	APCVS	AP CVS: PASSES
s2f3004.d	WBN090609-22.5	AGS1	30-JUN-2009 16:53	40 PPM	s063009	1.0	PESTCVS	PEST CVS: PASSES
s2f3005-1.d	1201871647	AGS1	30-JUN-2009 17:13	881319	09-2475	1.0	MB	REPORT
s2f3005-2.d	1201871647	AGS1	30-JUN-2009 17:13	881319	09-2477	1.0	MB	REPORT
s2f3005.d	1201871647	AGS1	30-JUN-2009 17:13	881319	09-2473	1.0	MB	REPORT
s2f3006-1.d	1201871648	AGS1	30-JUN-2009 17:33	881319	09-2475	1.0	LCS	REPORT
s2f3006-2.d	1201871648	AGS1	30-JUN-2009 17:33	881319	09-2477	1.0	LCS	REPORT
s2f3006.d	1201871648	AGS1	30-JUN-2009 17:33	881319	09-2473	1.0	LCS	REPORT
s2f3007.d	232424001	AGS1	30-JUN-2009 17:53	881319	09-2473	1.0	LANL	REPORT
s2f3008.d	232426001	AGS1	30-JUN-2009 18:12	881319	09-2475	1.0	LANL	REPORT
s2f3009.d	232426002	AGS1	30-JUN-2009 18:32	881319	09-2475	1.0	LANL	REPORT
s2f3010.d	232428001	AGS1	30-JUN-2009 18:53	881319	09-2477	1.0	LANL	REPORT
s2f3011.d	1201871649	AGS1	30-JUN-2009 19:13	881319	09-2477	1.0	MS	REPORT
s2f3012.d	1201871650	AGS1	30-JUN-2009 19:32	881319	09-2477	1.0	MSD	REPORT
s2f3013.d	232428002	AGS1	30-JUN-2009 19:53	881319	09-2477	1.0	LANL	REPORT
s2f3014.d	232428003	AGS1	30-JUN-2009 20:13	881319	09-2477	1.0	LANL	DUSE: fails surr - see rerun s2f3027
s2f3015.d	232428004	AGS1	30-JUN-2009 20:33	881319	09-2477	1.0	LANL	REPORT

s2f3016.d	232428005	AGS1	30-JUN-2009 20:53	881319	09-2477	1.0	LANL	REPORT
s2f3017.d	232428006	AGS1	30-JUN-2009 21:13	881319	09-2477	1.0	LANL	REPORT
s2f3018.d	232428007	AGS1	30-JUN-2009 21:33	881319	09-2477	1.0	LANL	REPORT
s2f3019.d	232428008	AGS1	30-JUN-2009 21:53	881319	09-2477	1.0	LANL	REPORT
s2f3020.d	232428009	AGS1	30-JUN-2009 22:12	881319	09-2477	1.0	LANL	REPORT
s2f3021.d	232428010	AGS1	30-JUN-2009 22:32	881319	09-2477	1.0	LANL	REPORT
s2f3022.d	232428011	AGS1	30-JUN-2009 22:52	881319	09-2477	1.0	LANL	REPORT
s2f3023.d	232428012	AGS1	30-JUN-2009 23:12	881319	09-2477	1.0	LANL	REPORT
s2f3024.d	232428013	AGS1	30-JUN-2009 23:32	881319	09-2477	1.0	LANL	REPORT
s2f3025.d	232428014	AGS1	30-JUN-2009 23:52	881319	09-2477	1.0	LANL	REPORT
s2f3026.d	232428015	AGS1	01-JUL-2009 00:12	881319	09-2477	1.0	LANL	REPORT
s2f3027.d	232428003	AGS1	01-JUL-2009 00:32	881319	09-2477	1.0	LANL	REPORT

Instrument Batch: /chem/MSD2.i/s063009.b

GEL Laboratories LLC

GEL Laboratories, LLC

Data file : /chem/MSD2.i/s063009.b/s2f3011.d
Lab Smp Id: 1201871649 Client Smp ID: CAMO-09-6007MS
Inj Date : 30-JUN-2009 19:13
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201871649|881319|1|SVMF|1|MS
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 11 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.09000	weight of sample
M	4.26710	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	198371	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	784347	40.0000	
* 46 Acenaphthene-d10	164	6.169	6.175	(1.000)	418050	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	718176	40.0000	
* 91 Chrysene-d12	240	8.887	8.892	(1.000)	605522	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	483563	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	294422	53.6369	1860
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	346804	51.1627	1780
$ 20 Nitrobenzene-d5	82	4.415	4.415	(0.897)	168382	28.4537	988
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	338231	28.6470	994
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	98941	69.1008	2400
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.908)	365578	35.4454	1230

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.768	3.763	(0.930)	182077	26.3674	915
8 2-Chlorophenol	128	3.912	3.912	(0.966)	160706	27.4012	951
11 1,4-Dichlorobenzene	146	4.062	4.062	(1.003)	157207	24.0609	835
17 N-Nitrosodipropylamine	70	4.281	4.287	(1.057)	110905	26.7339	928(Q)
28 1,2,4-Trichlorobenzene	180	4.870	4.875	(0.989)	137441	27.5402	956
33 4-Chloro-3-methylphenol	107	5.266	5.260	(1.070)	142871	33.0689	1150
47 Acenaphthene	154	6.196	6.196	(1.004)	293321	26.8855	933
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	112263	31.3687	1090
52 4-Nitrophenol	139	6.202	6.196	(1.005)	63345	36.1353	1250
65 Pentachlorophenol	266	7.020	7.015	(0.982)	61790	35.6689	1240
79 Pyrene	202	8.025	8.031	(0.903)	560513	31.0961	1080
2 Pyridine	79	2.575	2.554	(0.636)	95436	20.9508	727
4 Aniline	66	3.832	3.832	(0.946)	76453	27.9928	972
7 bis(2-Chloroethyl) ether	63	3.843	3.848	(0.948)	124430	24.6302	855
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.992)	158220	24.1882	840
12 Benzyl alcohol	108	4.116	4.116	(1.016)	57187	14.7954	514
13 1,2-Dichlorobenzene	146	4.169	4.169	(1.029)	150026	25.8682	898
14 bis(2-Chloroisopropyl)ether	45	4.190	4.191	(1.034)	283590	25.0170	868
15 o-Cresol	107	4.164	4.164	(1.028)	126956	29.5096	1020
18 m,p-Cresols	107	4.260	4.265	(1.051)	194467	32.4516	1130
19 Hexachloroethane	117	4.399	4.399	(1.086)	56315	23.1541	804
21 Nitrobenzene	77	4.426	4.431	(0.899)	161141	28.4150	986
22 Isophorone	82	4.581	4.581	(0.930)	302711	28.1425	977
23 2-Nitrophenol	139	4.645	4.645	(0.944)	80539	29.1082	1010
24 2,4-Dimethylphenol	122	4.634	4.635	(0.941)	208784	29.5827	1030
25 bis(2-Chloroethoxy)methane	93	4.699	4.699	(0.954)	177111	28.0149	972
26 2,4-Dichlorophenol	162	4.806	4.811	(0.976)	125570	29.4386	1020
27 Benzoic acid	105	4.667	4.683	(0.948)	87677	31.6557	1100(Q)
30 Naphthalene	128	4.939	4.939	(1.003)	469311	25.4088	882
31 4-Chloroaniline	127	4.950	4.950	(1.005)	219137	30.3139	1050
32 Hexachlorobutadiene	225	5.003	5.004	(1.016)	72071	28.4634	988
34 2-Methylnaphthalene	142	5.421	5.421	(1.101)	312086	29.0864	1010
36 Hexachlorocyclopentadiene	237	5.522	5.522	(0.895)	60459	33.5130	1160
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.909)	89577	28.9892	1010
38 2,4,5-Trichlorophenol	196	5.640	5.635	(0.914)	116609	32.6465	1130
40 2-Chloronaphthalene	162	5.774	5.779	(0.936)	295257	28.8169	1000
42 o-Nitroaniline	65	5.827	5.827	(0.944)	97775	31.3474	1090
41 m-Nitroaniline	138	6.116	6.116	(0.991)	86641	34.7303	1200
43 Dimethylphthalate	163	5.929	5.940	(0.961)	359159	30.2090	1050
44 2,6-Dinitrotoluene	165	5.988	5.993	(0.971)	86016	29.8921	1040
45 Acenaphthylene	152	6.079	6.079	(0.985)	495463	29.8451	1040
48 2,4-Dinitrophenol	184	6.186	6.186	(1.003)	16391	22.0324	765(Q)
49 Dibenzofuran	168	6.309	6.309	(1.023)	442238	31.3051	1090
51 Diethylphthalate	149	6.410	6.416	(1.039)	361280	31.1350	1080
53 Fluorene	166	6.539	6.544	(1.060)	344286	29.0682	1010
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.056)	170978	31.5238	1090
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	37458	25.2521	877

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.533	6.539	(1.059)	81138	38.4772	1340
133 Diphenylamine	169	6.592	6.592	(0.922)	309045	32.2200	1120
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.927)	393068	31.5428	1100
61 4-Bromophenylphenylether	248	6.843	6.843	(0.957)	95464	31.9058	1110
63 Hexachlorobenzene	284	6.902	6.902	(0.966)	111151	33.6619	1170
68 Phenanthrene	178	7.164	7.170	(1.002)	517903	30.2838	1050
69 Anthracene	178	7.196	7.202	(1.007)	540286	32.7572	1140
72 Di-n-butylphthalate	149	7.432	7.432	(1.040)	626352	32.8987	1140
76 Fluoranthene	202	7.881	7.886	(1.103)	535562	34.0426	1180
85 Butylbenzylphthalate	149	8.352	8.357	(0.940)	261804	34.7650	1210
89 Benzo(a)anthracene	228	8.871	8.881	(0.998)	475528	32.2774	1120
90 3,3'-Dichlorobenzidine	252	8.801	8.801	(0.990)	86839	22.1805	770
92 Chrysene	228	8.908	8.919	(1.002)	445918	31.3633	1090
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.983)	385082	34.6671	1200
94 Di-n-octylphthalate	149	9.320	9.331	(0.888)	525851	33.4395	1160
95 Benzo(b)fluoranthene	252	9.978	9.988	(0.951)	402287	34.6544	1200
96 Benzo(k)fluoranthene	252	10.010	10.021	(0.954)	416271	33.9862	1180
97 Benzo(a)pyrene	252	10.422	10.432	(0.993)	337991	33.3245	1160
99 Indeno(1,2,3-cd)pyrene	276	12.320	12.337	(1.174)	275944	28.3224	983
100 Dibenzo(a,h)anthracene	278	12.326	12.342	(1.174)	226659	28.9917	1010
101 Benzo(ghi)perylene	276	12.882	12.903	(1.227)	219698	25.9707	902
1 N-Methyl-N-nitrosomethylamine	74	2.527	2.522	(0.624)	84444	24.8420	862

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD2.i/s063009.b/s2f3011.d
Date : 30-JUN-2009 19:13
Client ID: CAMO-09-6007MS
Sample Info: 1120187164918813191|1|SVMF|1|MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

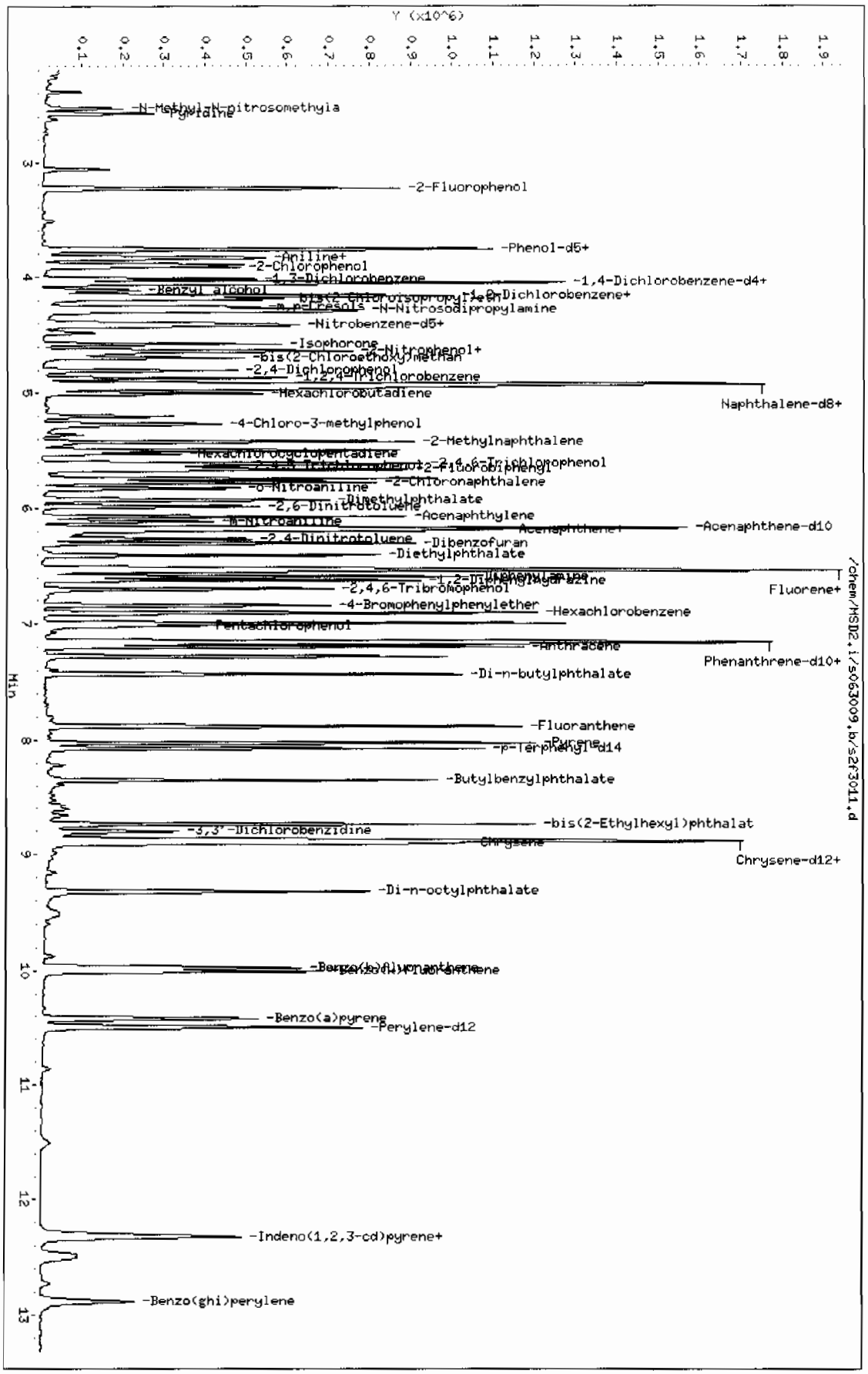

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Data file : /chem/MSD2.i/s063009.b/s2f3012.d
Lab Smp Id: 1201871650 Client Smp ID: CAMO-09-6007MSD
Inj Date : 30-JUN-2009 19:32
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201871650|881319|1|SVMF|1|MSD
Misc Info : |MSD8270_SF|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s063009.b/MSD2-M8270CAQA-062809.m
Meth Date : 30-Jun-2009 18:58 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 12 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2477.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	4.26710	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.051	4.051	(1.000)	180510	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	711148	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.175	(1.000)	382541	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.154	(1.000)	660262	40.0000	
* 91 Chrysene-d12	240	8.881	8.892	(1.000)	560383	40.0000	
* 98 Perylene-d12	264	10.497	10.507	(1.000)	456500	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.222	(0.797)	231505	46.3480	1610
$ 5 Phenol-d5	99	3.757	3.757	(0.927)	271728	44.0535	1530
$ 20 Nitrobenzene-d5	82	4.415	4.415	(0.897)	131678	24.5417	854
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	273557	25.3200	881
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.086)	96021	73.2864	2550
$ 81 p-Terphenyl-d14	244	8.074	8.079	(0.909)	358558	37.5651	1310

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.763	3.763	(0.929)	147262	23.4358	815
8 2-Chlorophenol	128	3.912	3.912	(0.966)	128731	24.1211	839
11 1,4-Dichlorobenzene	146	4.062	4.062	(1.003)	130035	21.8714	761
17 N-Nitrosodipropylamine	70	4.281	4.287	(1.057)	89138	23.6130	821(Q)
28 1,2,4-Trichlorobenzene	180	4.870	4.875	(0.989)	110956	24.5216	853
33 4-Chloro-3-methylphenol	107	5.266	5.260	(1.070)	131221	33.4986	1160
47 Acenaphthene	154	6.196	6.196	(1.004)	259286	25.9720	903
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	108993	33.2819	1160
52 4-Nitrophenol	139	6.207	6.196	(1.006)	64193	40.0181	1390
65 Pentachlorophenol	266	7.020	7.015	(0.982)	62389	39.1737	1360
79 Pyrene	202	8.025	8.031	(0.904)	563582	33.7849	1180
2 Pyridine	79	2.570	2.554	(0.634)	84934	20.4902	713
4 Aniline	66	3.827	3.832	(0.945)	63435	25.5245	888
7 bis(2-Chloroethyl) ether	63	3.843	3.848	(0.948)	100424	21.8452	760
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.992)	129136	21.6953	755
12 Benzyl alcohol	108	4.116	4.116	(1.016)	42580	12.1063	421
13 1,2-Dichlorobenzene	146	4.169	4.169	(1.029)	124130	23.5209	818
14 bis(2-Chloroisopropyl)ether	45	4.191	4.191	(1.034)	231487	22.4413	781
15 o-Cresol	107	4.164	4.164	(1.028)	101418	25.9061	901
18 m,p-Cresols	107	4.260	4.265	(1.051)	160622	29.4559	1020
19 Hexachloroethane	117	4.399	4.399	(1.086)	46125	20.8409	725
21 Nitrobenzene	77	4.426	4.431	(0.899)	129893	25.2625	879
22 Isophorone	82	4.576	4.581	(0.929)	249094	25.5415	888
23 2-Nitrophenol	139	4.645	4.645	(0.944)	64247	25.6101	891
24 2,4-Dimethylphenol	122	4.634	4.635	(0.941)	187040	29.2297	1020
25 bis(2-Chloroethoxy)methane	93	4.699	4.699	(0.954)	140805	24.5646	854
26 2,4-Dichlorophenol	162	4.806	4.811	(0.976)	105871	27.3752	952
27 Benzoic acid	105	4.667	4.683	(0.948)	88202	35.1231	1220(Q)
30 Naphthalene	128	4.939	4.939	(1.003)	382683	22.8513	795
31 4-Chloroaniline	127	4.950	4.950	(1.005)	192709	29.4019	1020
32 Hexachlorobutadiene	225	5.003	5.004	(1.016)	58563	25.5092	887
34 2-Methylnaphthalene	142	5.421	5.421	(1.101)	254846	26.1964	911
36 Hexachlorocyclopentadiene	237	5.522	5.522	(0.895)	46587	28.2207	982
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.909)	81895	28.9633	1010
38 2,4,5-Trichlorophenol	196	5.640	5.635	(0.914)	109836	33.6047	1170
40 2-Chloronaphthalene	162	5.774	5.779	(0.936)	249821	26.6456	927
42 o-Nitroaniline	65	5.827	5.827	(0.945)	92004	32.2352	1120
41 m-Nitroaniline	138	6.116	6.116	(0.991)	85847	37.6063	1310
43 Dimethylphthalate	163	5.929	5.940	(0.961)	334452	30.7421	1070
44 2,6-Dinitrotoluene	165	5.988	5.993	(0.971)	80004	30.3836	1060
45 Acenaphthylene	152	6.079	6.079	(0.985)	434790	28.6215	996
48 2,4-Dinitrophenol	184	6.186	6.186	(1.003)	14095	21.1770	737(Q)
49 Dibenzofuran	168	6.309	6.309	(1.023)	400188	30.9581	1080
51 Diethylphthalate	149	6.410	6.416	(1.039)	353577	33.2996	1160
53 Fluorene	166	6.539	6.544	(1.060)	320388	29.5614	1030
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.056)	160044	32.2469	1120
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	35903	26.1556	910

Compounds	QUANT STD MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.533	6.539	(1.059)	80983	41.9685	1460
133 Diphenylamine	169	6.592	6.592	(0.922)	299330	33.9445	1180
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.927)	374621	32.6994	1140
61 4-Bromophenylphenylether	248	6.843	6.843	(0.957)	94156	34.2289	1190
63 Hexachlorobenzene	284	6.902	6.902	(0.966)	107355	35.3640	1230
68 Phenanthrene	178	7.164	7.170	(1.002)	508631	32.3504	1120
69 Anthracene	178	7.196	7.202	(1.007)	528724	34.8680	1210
72 Di-n-butylphthalate	149	7.432	7.432	(1.040)	625214	35.7194	1240
76 Fluoranthene	202	7.881	7.886	(1.103)	537711	37.1772	1290
85 Butylbenzylphthalate	149	8.352	8.357	(0.940)	264003	37.8809	1320
89 Benzo(a)anthracene	228	8.871	8.881	(0.999)	466305	34.2009	1190
90 3,3'-Dichlorobenzidine	252	8.801	8.801	(0.991)	105550	29.1313	1010
92 Chrysene	228	8.908	8.919	(1.003)	466074	35.4214	1230
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.748	(0.984)	377590	36.7307	1280
94 Di-n-octylphthalate	149	9.320	9.331	(0.888)	533246	35.9201	1250
95 Benzo(b)fluoranthene	252	9.972	9.988	(0.950)	432285	39.4462	1370
96 Benzo(k)fluoranthene	252	10.010	10.021	(0.954)	412209	35.6497	1240
97 Benzo(a)pyrene	252	10.416	10.432	(0.992)	360262	37.6261	1310
99 Indeno(1,2,3-cd)pyrene	276	12.315	12.337	(1.173)	301001	32.7258	1140
100 Dibenzo(a,h)anthracene	278	12.320	12.342	(1.174)	252812	34.2539	1190
101 Benzo(ghi)perylene	276	12.882	12.903	(1.227)	244928	30.6696	1070
1 N-Methyl-N-nitrosomethylamine	74	2.527	2.522	(0.624)	70557	22.8105	793

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD2.i/s063009.b/s2f3012.d
Date : 30-JUN-2009 19:32
Client ID: CAMO-09-6007MSD
Sample Info: |1201871650|881319|1|SVMF|1|MSD
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

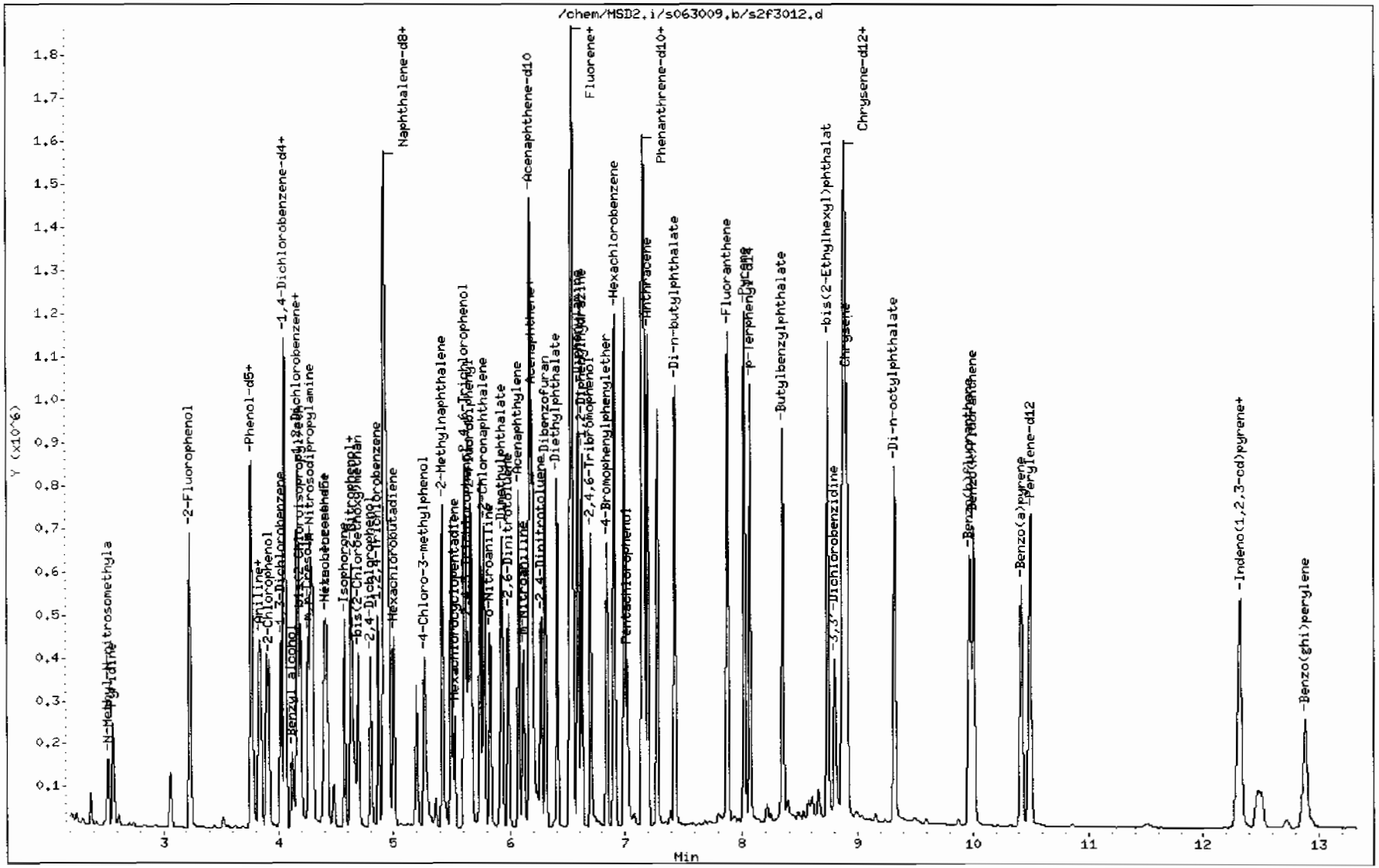

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2473

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881213
Prep Batch Number:	881212

Sample Analysis

Sample ID	Client ID
232424001	CAMO-09-10463
1201871408	Interference Check Sample (ICS)
1201871404	Method Blank (MB)
1201871405	Laboratory Control Sample (LCS)
1201871406	232429001(CAMO-09-6007) Matrix Spike (MS)
1201871407	232429001(CAMO-09-6007) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

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CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232429001 (CAMO-09-6007) from SDG 09-2478 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

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Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The sample in this SDG was not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards Prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

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Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Heather M Mauer **Date:** 07/09/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10463

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2473

GEL Sample ID: 232424001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 95.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	0.522	ug/kg	U	1	07-JUL-09 12:38	per0707015a
	Perchlorate-O(18)			5.38	ug/kg		1	07-JUL-09 12:38	per0707015a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2473

Extract Batch Code: 881212

Date Filtered: 30–JUN–09

Matrix: SOIL

Sample ID: 1201871405

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.05	ug/kg	102		70 – 130
Perchlorate–O(18)		4.85	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2473

Extract Batch Code: 881212

Date Filtered: 30–JUN–09

Matrix: SOIL

Sample ID: 1201871408

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.39	ug/kg	120		70 – 130
Perchlorate–O(18)		5.28	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707014a
Date: 07-Jul-2009
Time: 11:52:19
ID: 1201871408
Vial: 1:3,C

| LANL | 881213 | 5020 | TIS | 11

CWW 07-08-09

Perchlorate

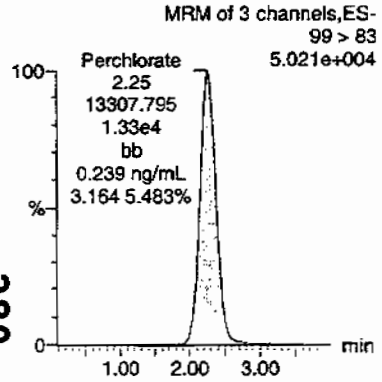

Perchlorate

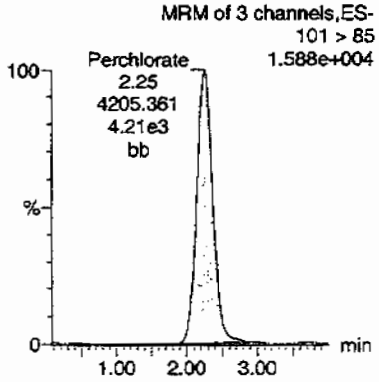

Perchlorate-101

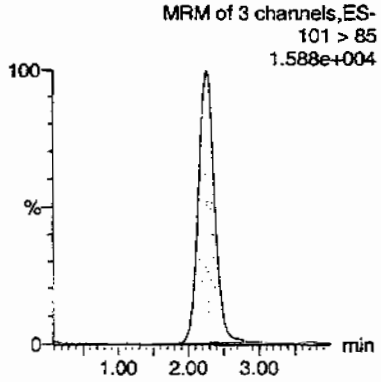

Perchlorate-O(18)

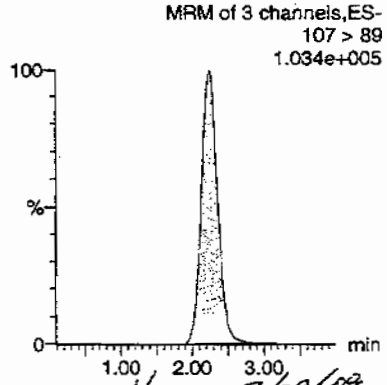

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871408	Perchlorate	99 > 83	2.25	13307.795	13307.795	bb			0.2391	119.56	19.56	2590.8...	3.16
1201871408	Perchlorate-101	101 > 85	2.25	4205.361	4205.361	bb			0.2227	111.35	11.35	2106.0...	
1201871408	Perchlorate-O(18)	107 > 89	2.24	27200.326	27200.326	bb			0.5277	105.54	5.54	6209.6...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2473

Extract Batch Code: 881212

Date Extracted: 30–JUN–09

GEL MS/PS ID: 1201871406

Client ID: CAMO–09–6007

GEL MSD/PSD ID: 1201871407

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.09	0.350	ug/kg	2.48	102	2.51	103	1.22	30	75 – 125
Perchlorate–O(18)	0	5.10	ug/kg	5.16		5.12		.956		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2473

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	07–JUL–09	per0707001a	IPB001
Perchlorate–101	0.00	0	NA	07–JUL–09	per0707001a	IPB001
Perchlorate	0.00	0	NA	07–JUL–09	per0707002a	IPB001
Perchlorate–101	0.00	0	NA	07–JUL–09	per0707002a	IPB001

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070709a.mdb 07 Jul 2009 10:05:35
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070709a.cdb 08 Jul 2009 11:12:39

Name: per0707001a
Date: 07-Jul-2009
Time: 10:11:48
ID: IPB001
Vial: 1:1,A

WO
07-08-09

Perchlorate

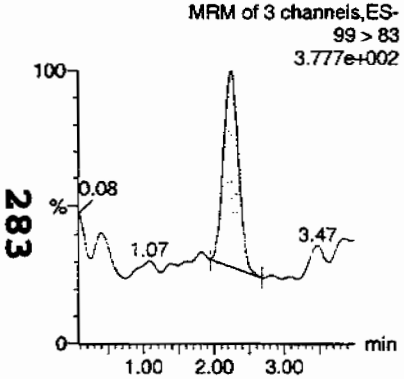

Perchlorate

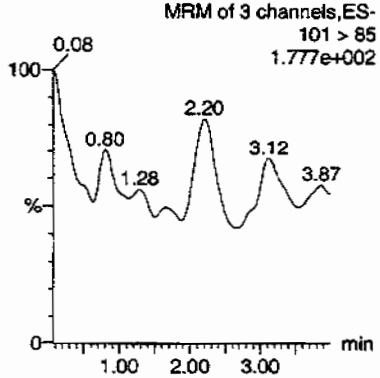

Perchlorate-101

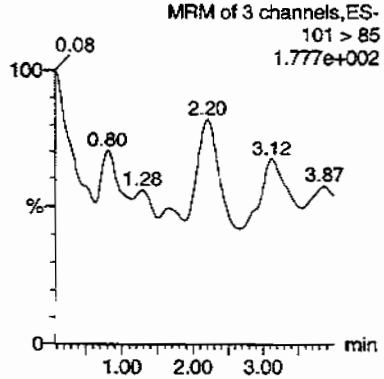

Perchlorate-O(18)

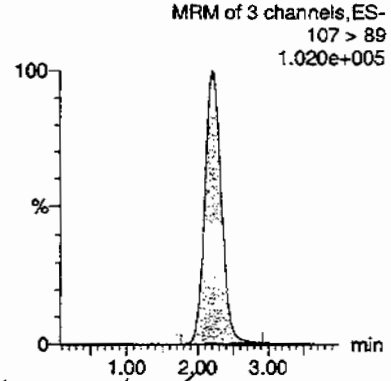

Hnm 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.24	67.591	67.591	bb			0.0012			12.969	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.22	27597.391	27597.391	bb			0.5354	107.08	7.08	9895.4...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707002a
Date: 07-Jul-2009
Time: 10:19:33
ID: IPB001
Vial: 1:1,A

cwo 07-08-09

Perchlorate

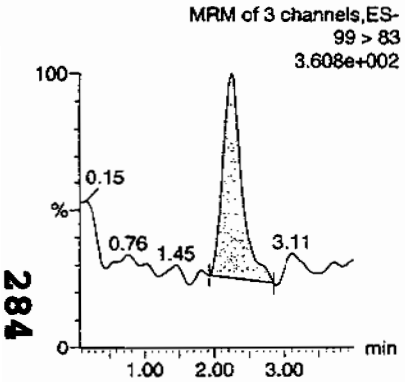

Perchlorate

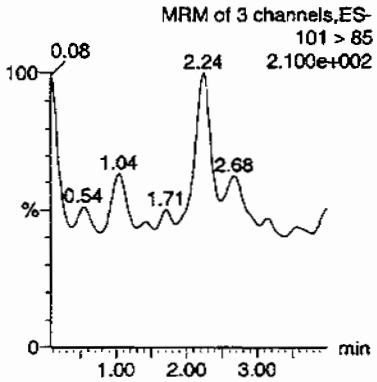

Perchlorate-101

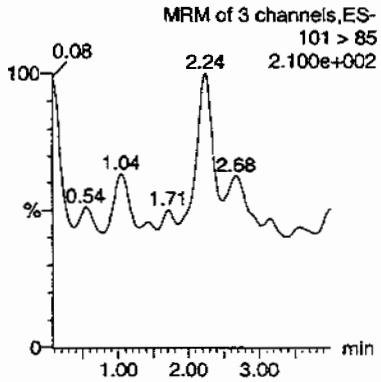

Perchlorate-O(18)

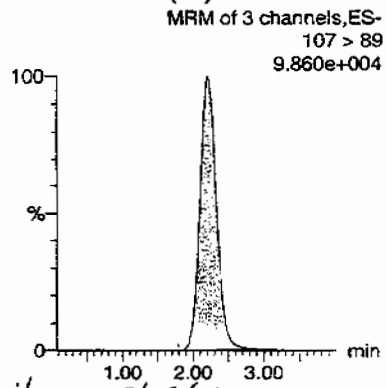

Hmw 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.24	85.770	85.770	bb			0.0015			16.003	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.22	26461.072	26461.072	bb			0.5134	102.67	2.67	5056.4...	

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2473

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	07–JUL–09	per0707008a	IPB002
Perchlorate–101	0.00	0	NA	07–JUL–09	per0707008a	IPB002
Perchlorate	0.00	0	NA	07–JUL–09	per0707010a	IPB003
Perchlorate–101	0.00	0	NA	07–JUL–09	per0707010a	IPB003
Perchlorate	0.00	0	NA	07–JUL–09	per0707023a	IPB004
Perchlorate–101	0.00	0	NA	07–JUL–09	per0707023a	IPB004

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707008a
Date: 07-Jul-2009
Time: 11:05:51
ID: IPB002
Vial: 1:1,A

CWW 07-08-09

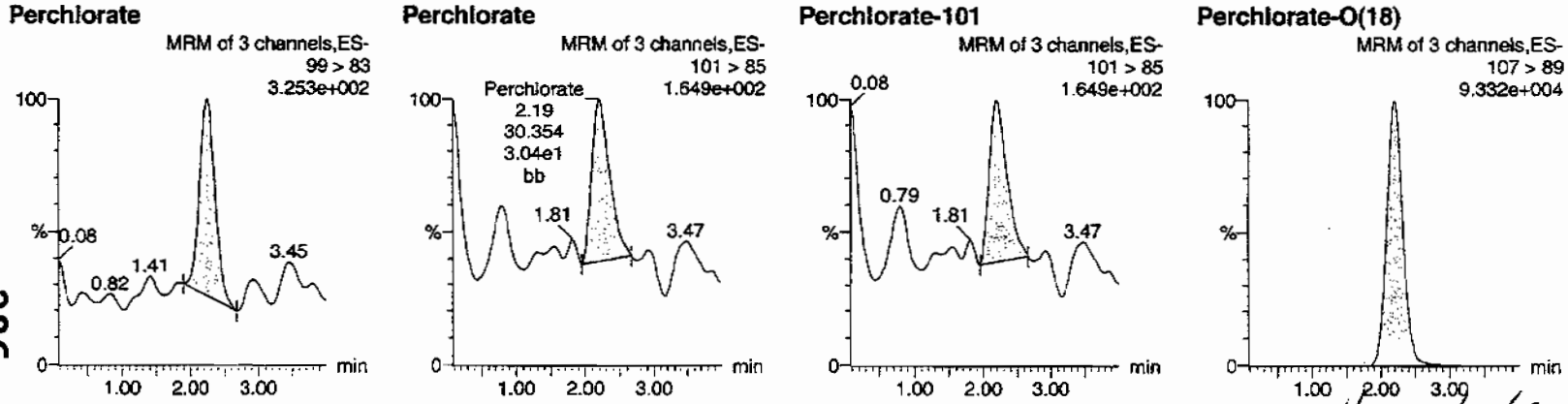

Hmw 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.24	64.888	64.888	bb			0.0012			13.648	2.14
IPB002	Perchlorate-101	101 > 85	2.19	30.354	30.354	bb			0.0016			12.329	
IPB002	Perchlorate-O(18)	107 > 89	2.20	25095.828	25095.828	bb			0.4869	97.38	-2.62	3190.0...	

OK94 LQ 0.0500

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GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707010a
Date: 07-Jul-2009
Time: 11:21:19
ID: IPB003
Vial: 1:1,A

CWW 07-08-09

Perchlorate

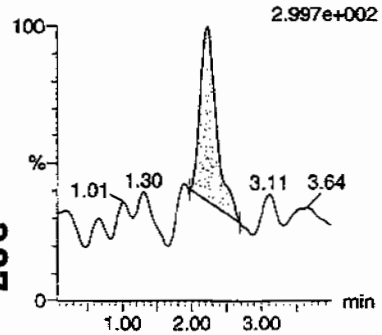

Perchlorate

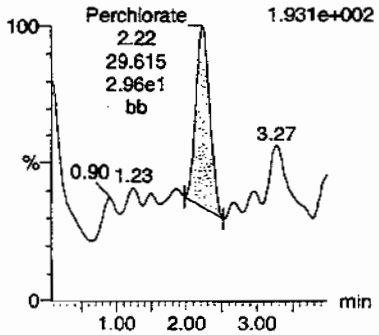

Perchlorate-101

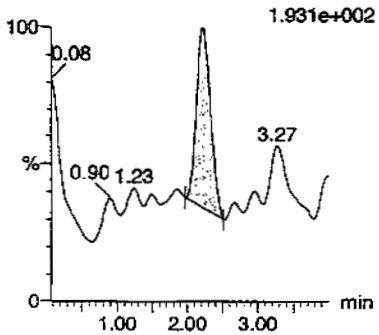

Perchlorate-O(18)

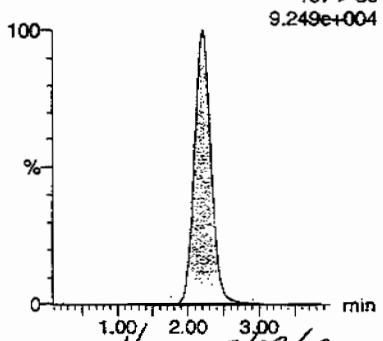

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.22	52.556	52.556	bb			0.0009			24.634	1.77
IPB003	Perchlorate-101	101 > 85	2.22	29.615	29.615	bb			0.0016			13.335	
IPB003	Perchlorate-O(18)	107 > 89	2.20	24986.230	24986.230	bb			0.4848	96.95	-3.05	9199.0...	

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Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707023a
Date: 07-Jul-2009
Time: 13:41:23
ID: IPB004
Vial: 1:1,A

CWW 07-08-09

Perchlorate

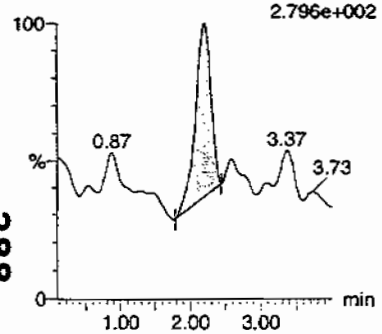

Perchlorate

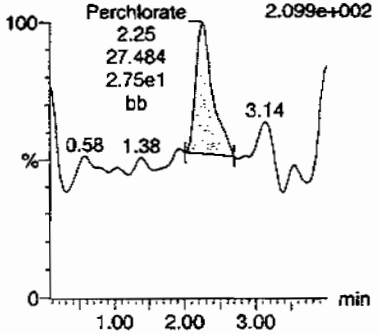

Perchlorate-101

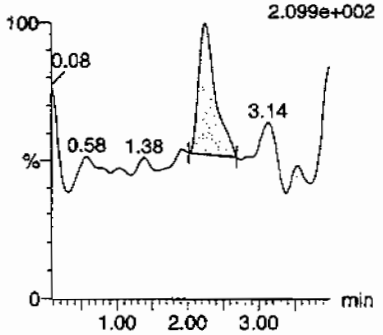

Perchlorate-O(18)

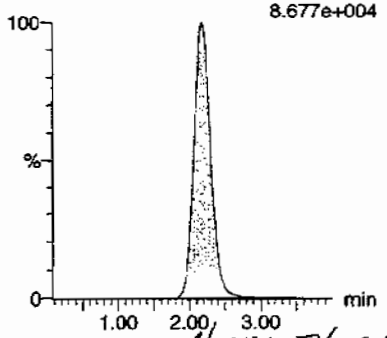

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.20	46.044	46.044	bb			0.0008			21.132	1.68
IPB004	Perchlorate-101	101 > 85	2.25	27.484	27.484	bb			0.0015			16.919	
IPB004	Perchlorate-O(18)	107 > 89	2.18	23486.318	23486.318	bb			0.4557	91.13	-8.87	3147.8...	

0.0944
<0.0500

288

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWW 01-07-08

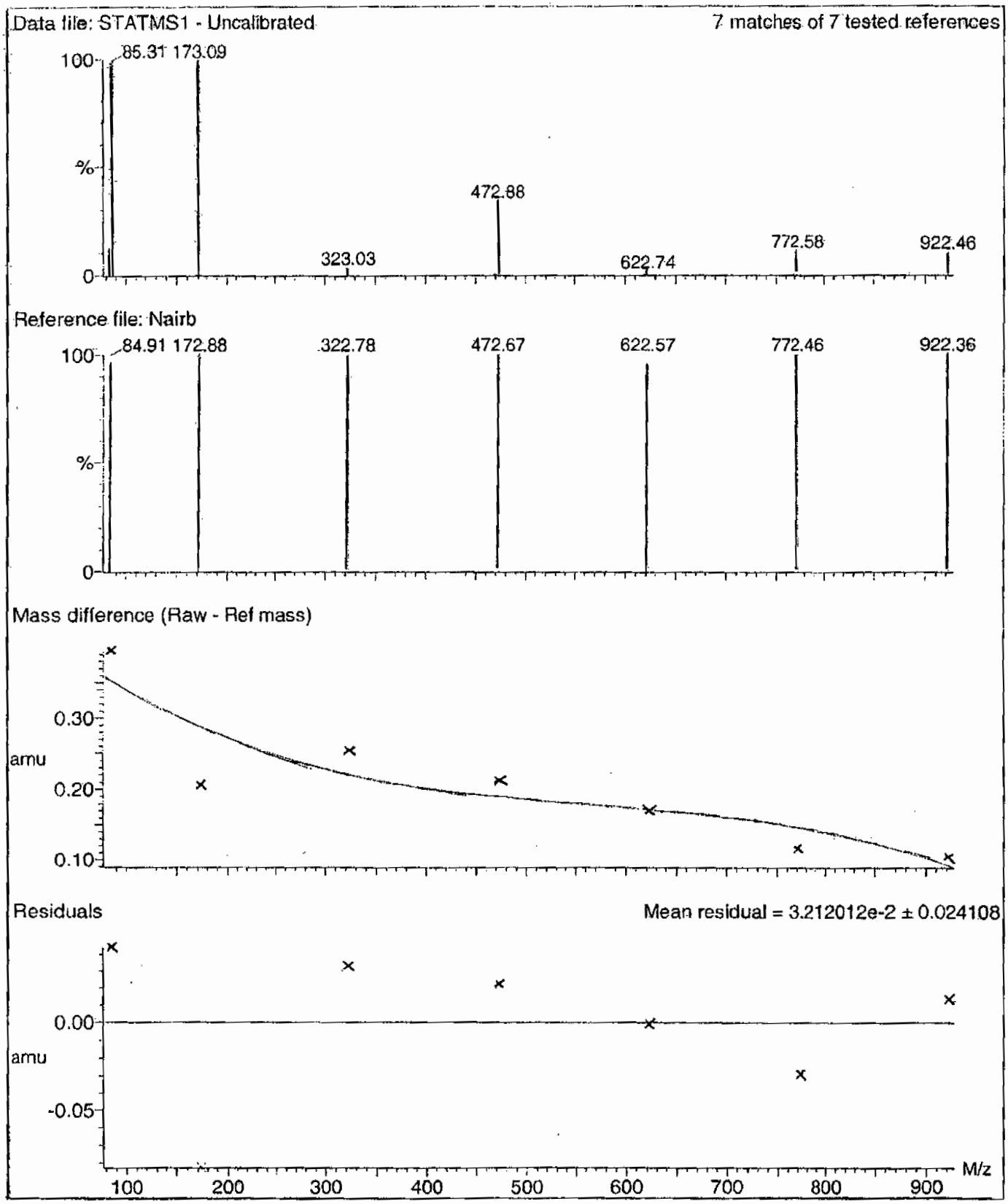

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

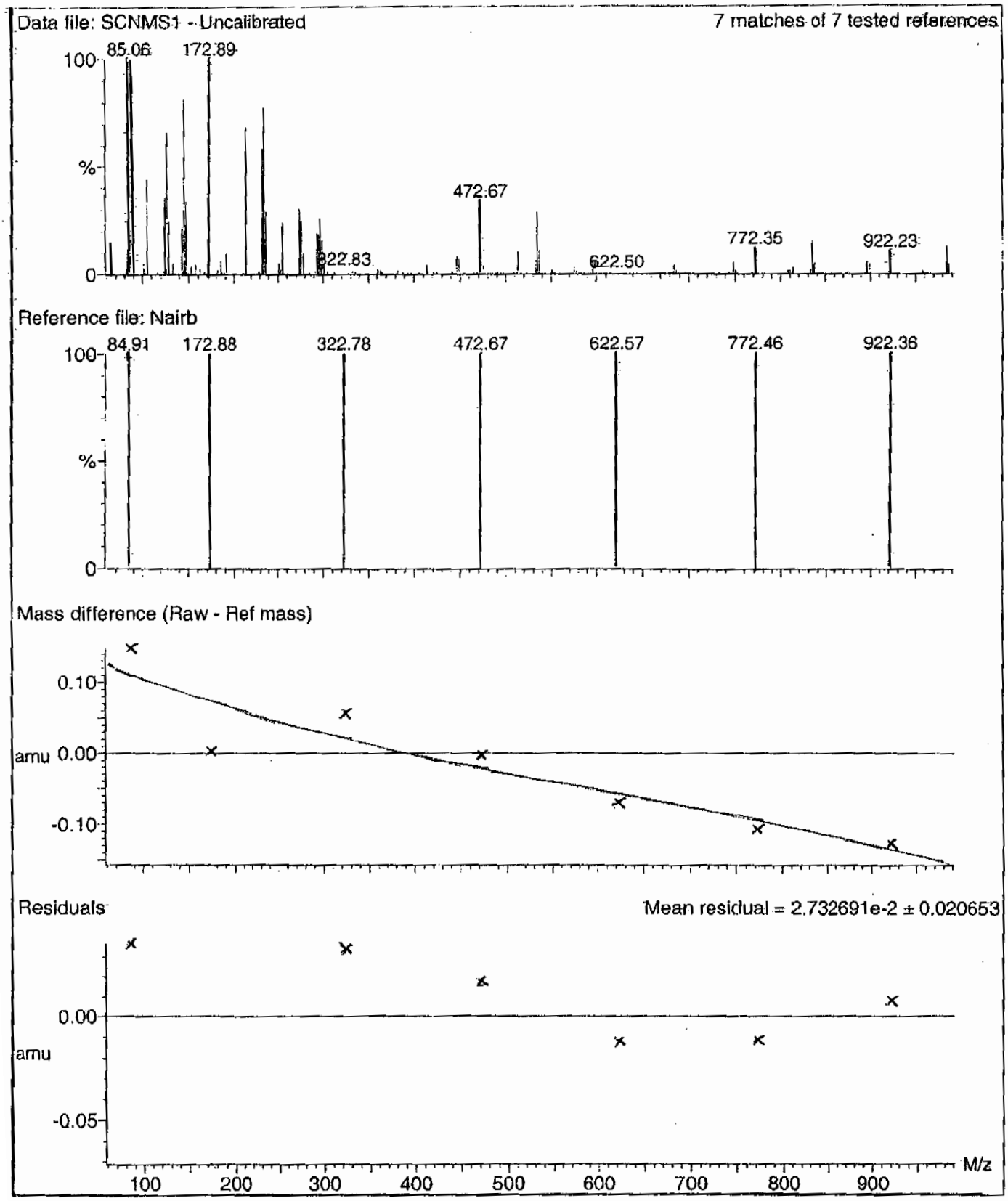

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

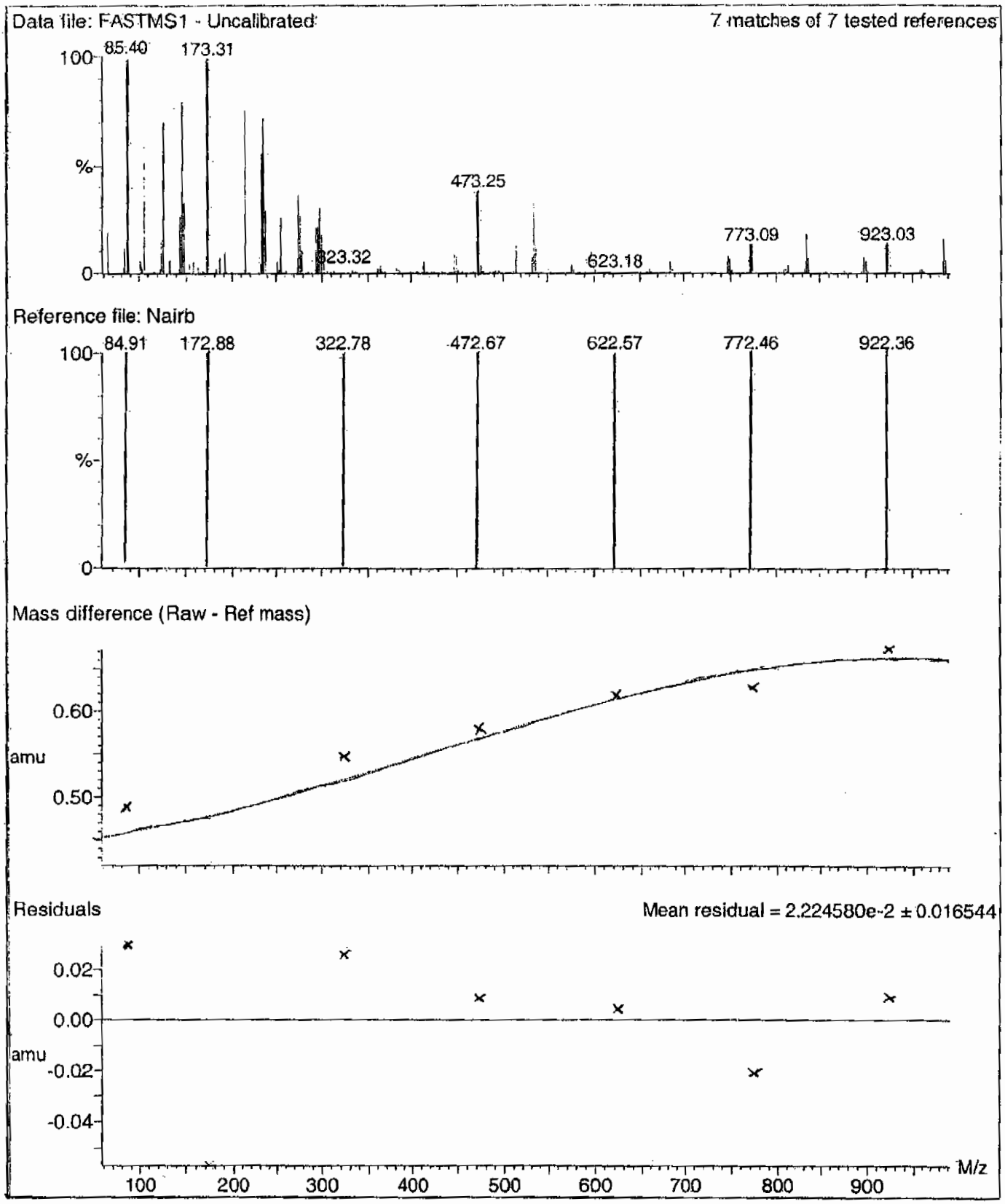

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

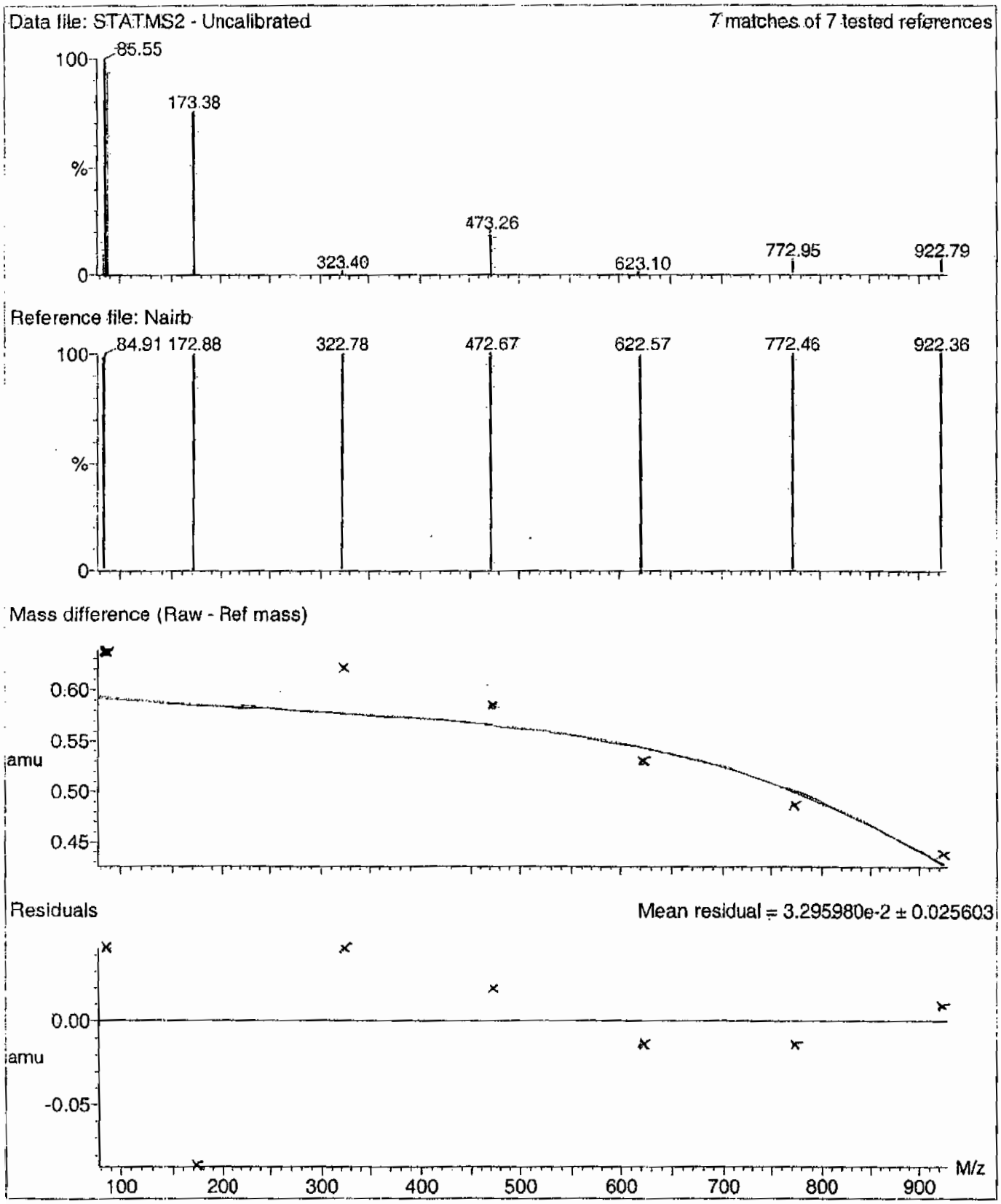

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

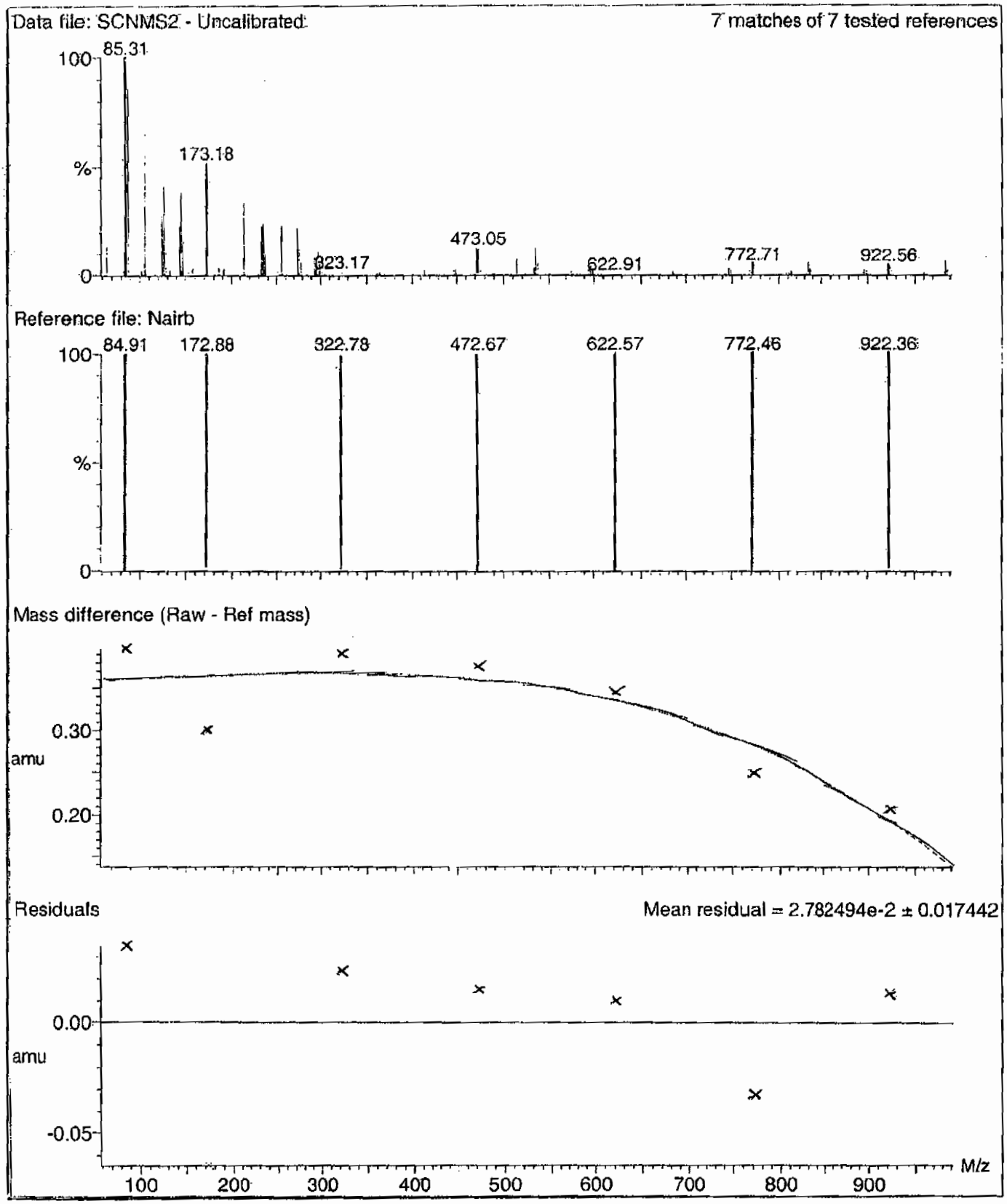

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Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

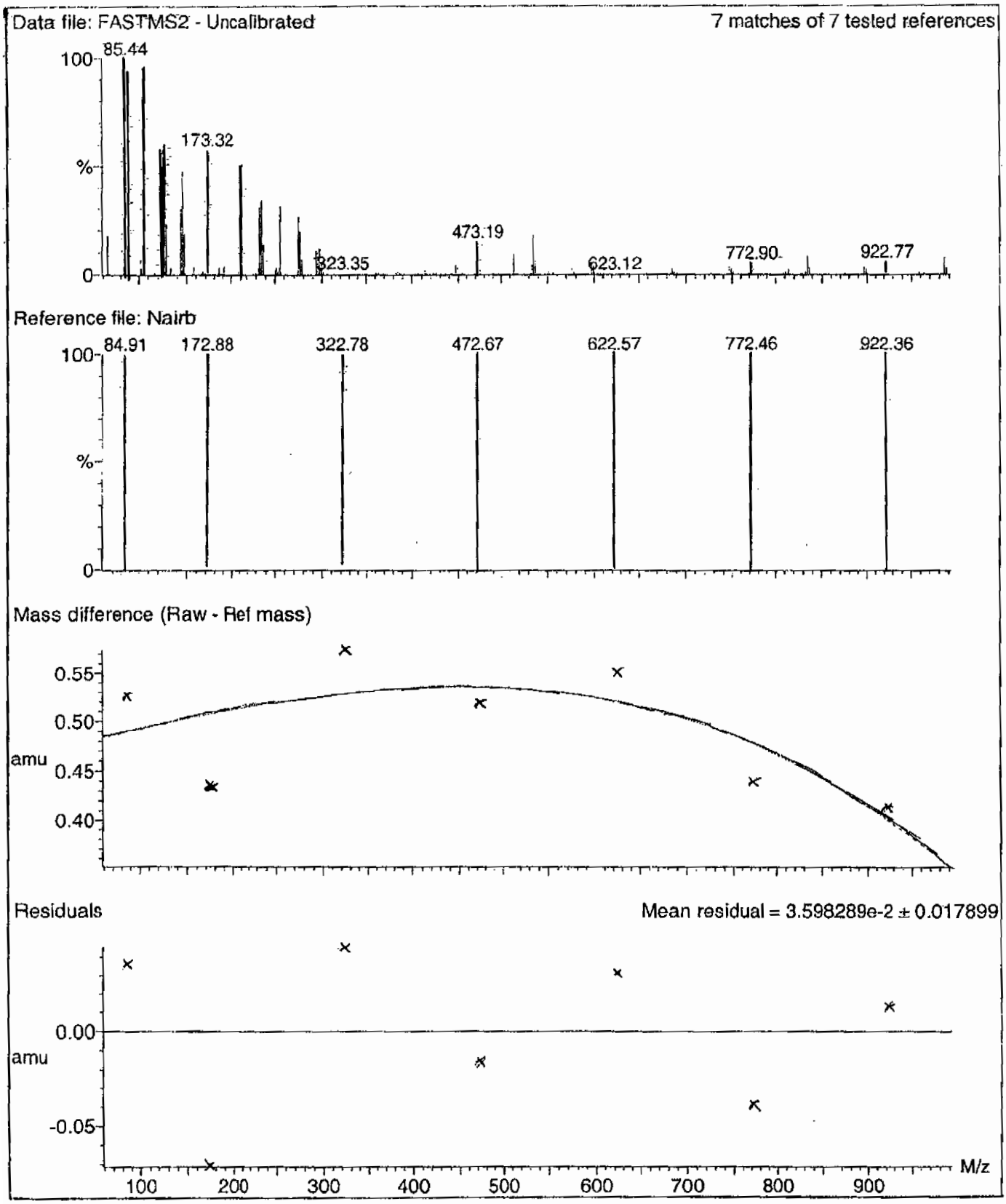

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Tuesday, July 07, 2009 09:02:03 Eastern Daylight Time

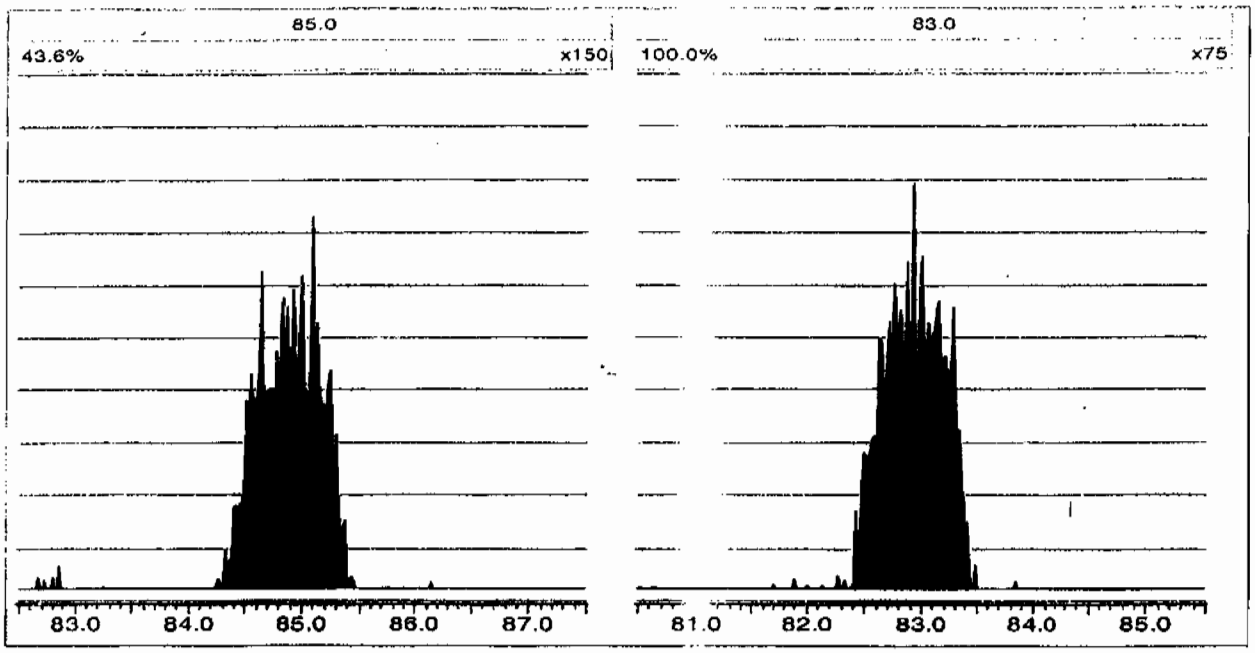

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2473

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0707006a**	**07–JUL–09**	**25911.2**				
Lower Area Limit			**12955.6**				
Upper Area Limit			**51822.4**				
1201871404	per0707012a	07–JUL–09 11:36	24962.2	2.2	2.21573	1.007	
1201871405	per0707013a	07–JUL–09 11:44	24984.7	2.19	2.21577	1.012	
1201871408	per0707014a	07–JUL–09 11:52	27200.3	2.24	2.25302	1.006	
232424001	per0707015a	07–JUL–09 12:38	26573.1	2.18	2.19093	1.005	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10463

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2473

GEL Sample ID: 232424001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 95.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.522	2.09	0.522	ug/kg	U	1	07-JUL-09 12:38	per0707015a
	Perchlorate-O(18)			5.38	ug/kg		1	07-JUL-09 12:38	per0707015a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707015a
Date: 07-Jul-2009
Time: 12:38:54
ID: 232424001
Vial: 1:3,D

|LANL|881213|50120|11|

CWW 07-08-09

Perchlorate

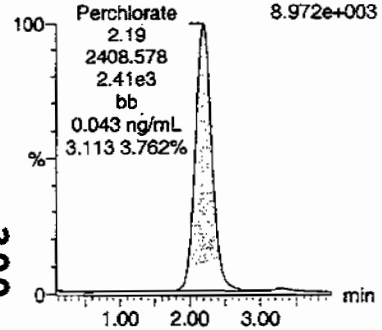

Perchlorate

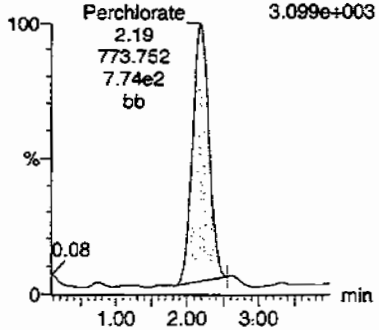

Perchlorate-101

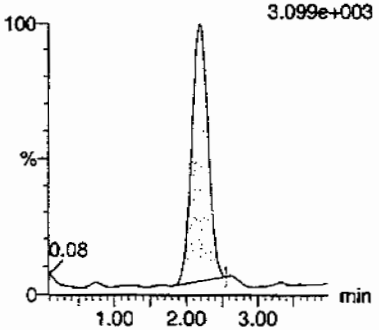

Perchlorate-O(18)

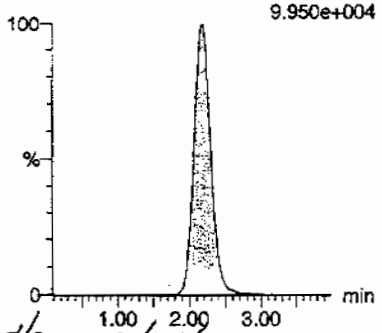

HMM 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232424001	Perchlorate	99 > 83	2.19	2408.578	2408.578	bb			0.0433			655.476	3.11
232424001	Perchlorate-101	101 > 85	2.19	773.752	773.752	bb			0.0410			131.802	
232424001	Perchlorate-O(18)	107 > 89	2.18	26573.104	26573.104	bb			0.5155	103.11	3.11	8985.9...	

300

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2473

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 07–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 55651.96

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2473

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 07–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 18883.14

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070709a.mdb 07 Jul 2009 10:05:35
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070709a.cdb 08 Jul 2009 11:12:39

Compound name: Perchlorate
Response Factor: 55651.9
RRF SD: 1424.57, % Relative SD: 2.55979
Response type: External Std, Area
Curve type: RF

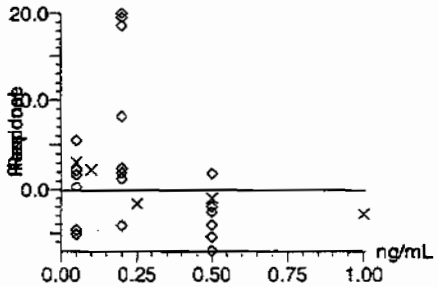

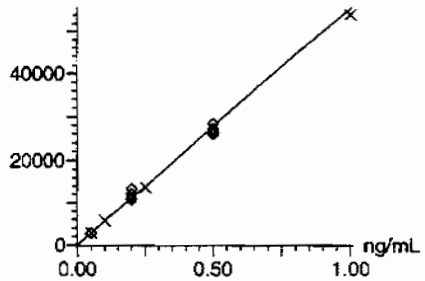

CWW
07-08-09

Compound name: Perchlorate-101
Response Factor: 18883.1
RRF SD: 893.468, % Relative SD: 4.73156
Response type: External Std, Area
Curve type: RF

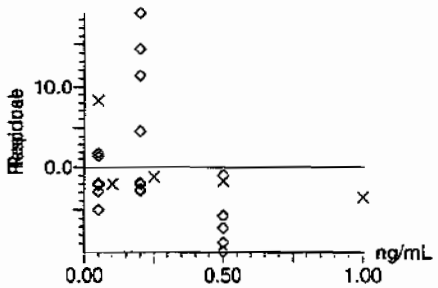

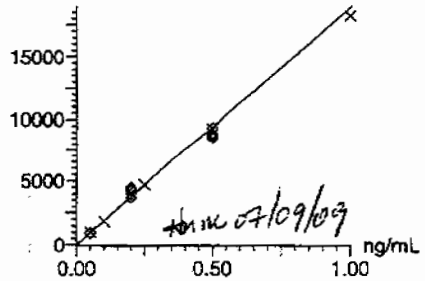

tbm 07/09/09

304

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 51544
RRF SD: 656.316, % Relative SD: 1.27331
Response type: External Std, Area
Curve type: RF

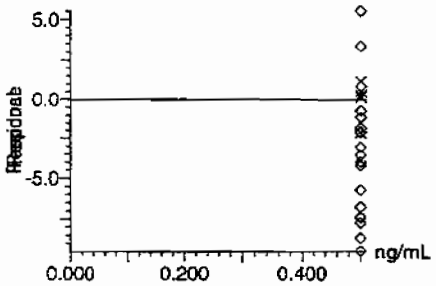

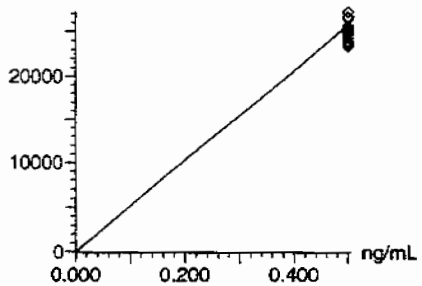

305

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2473

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.51	101.86	07–JUL–09 11:13	per0707009a
Perchlorate Isotope Ratio		3.03		07–JUL–09 11:13	per0707009a
Perchlorate–101	.5	.5	99.02	07–JUL–09 11:13	per0707009a

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Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707009a
Date: 07-Jul-2009
Time: 11:13:35
ID: WCL090706-06ICV
Vial: 1:2,A

Pass
ama
07-08-09

Perchlorate

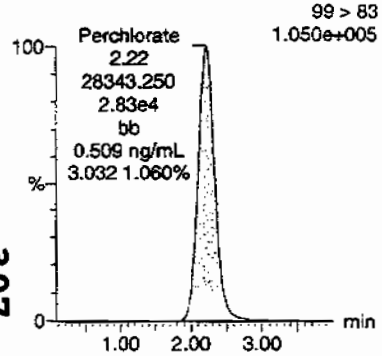

Perchlorate

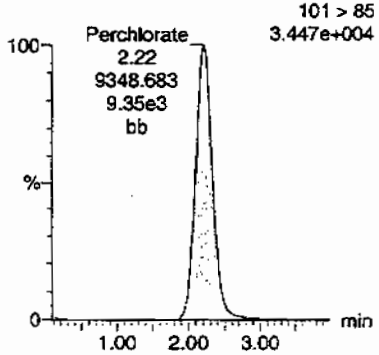

Perchlorate-101

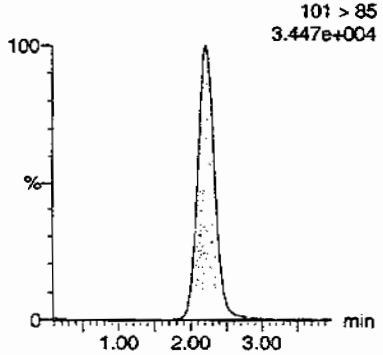

Perchlorate-O(18)

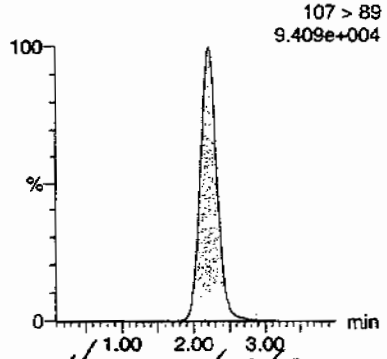

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06ICV	Perchlorate	99 > 83	2.22	28343.250	28343.250	bb			0.5093	101.86	1.86	4333.4...	3.03
WCL090706-06ICV	Perchlorate-101	101 > 85	2.22	9348.683	9348.683	bb			0.4951	99.02	-0.98	1661.2...	
WCL090706-06ICV	Perchlorate-O(18)	107 > 89	2.20	25226.955	25226.955	bb			0.4894	97.89	-2.11	4845.1...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2473

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	98.01	07–JUL–09 13:33	per0707022a
Perchlorate Isotope Ratio		2.92		07–JUL–09 13:33	per0707022a
Perchlorate–101	.5	.5	99.05	07–JUL–09 13:33	per0707022a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707022a
Date: 07-Jul-2009
Time: 13:33:31
ID: WCL090706-06CCV
Vial: 1:2,A

Pass and 07-08-09

Perchlorate

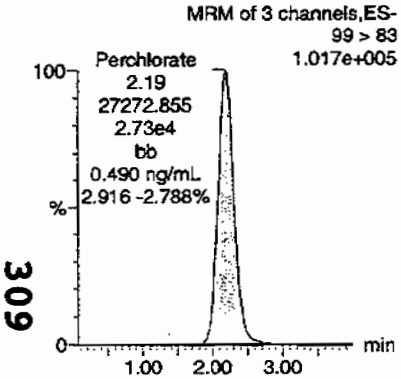

Perchlorate

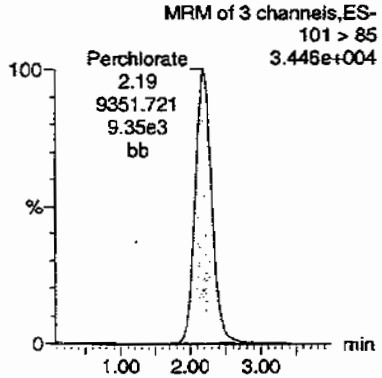

Perchlorate-101

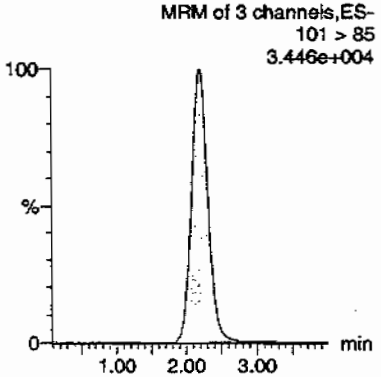

Perchlorate-O(18)

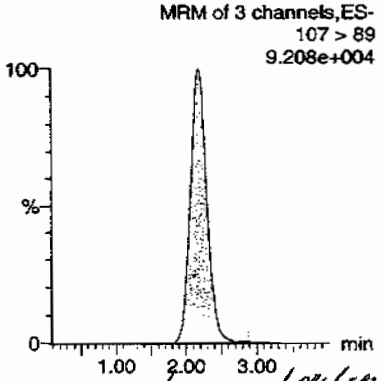

ghw 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.19	27272.855	27272.855	bb			0.4901	98.01	-1.99	2760.0...	2.92
WCL090706-06CCV	Perchlorate-101	101 > 85	2.19	9351.721	9351.721	bb			0.4952	99.05	-0.95	2954.9...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.18	24749.586	24749.586	bb			0.4802	96.03	-3.97	6216.4...	

309

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2473

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	105.52	07–JUL–09 11:29	per0707011a
Perchlorate Isotope Ratio		3.05		07–JUL–09 11:29	per0707011a
Perchlorate–101	.05	.05	101.85	07–JUL–09 11:29	per0707011a
Perchlorate	.05	.05	102.24	07–JUL–09 13:49	per0707024a
Perchlorate Isotope Ratio		2.97		07–JUL–09 13:49	per0707024a
Perchlorate–101	.05	.05	101.41	07–JUL–09 13:49	per0707024a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707011a
Date: 07-Jul-2009
Time: 11:29:03
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
AMC
07-08-09

Perchlorate

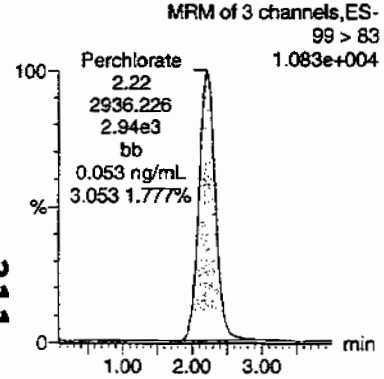

Perchlorate

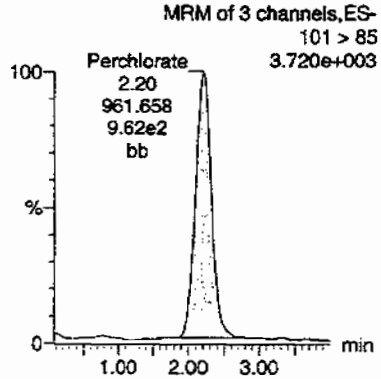

Perchlorate-101

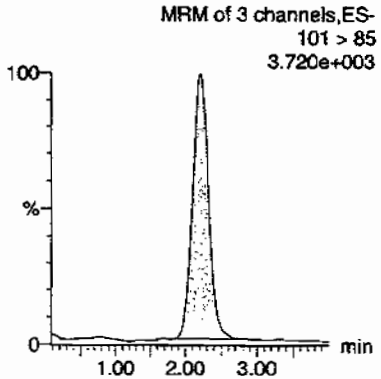

Perchlorate-O(18)

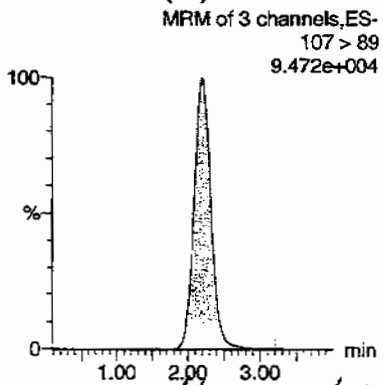

HMW 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.22	2936.226	2936.226	bb			0.0528	105.52	5.52	1422.1...	3.05
WCL090706-07CRI	Perchlorate-101	101 > 85	2.20	961.658	961.658	bb			0.0509	101.85	1.85	1140.0...	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.20	25591.541	25591.541	bb			0.4965	99.30	-0.70	2623.9...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707024a
Date: 07-Jul-2009
Time: 13:49:15
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
amo
07-08-09

Perchlorate

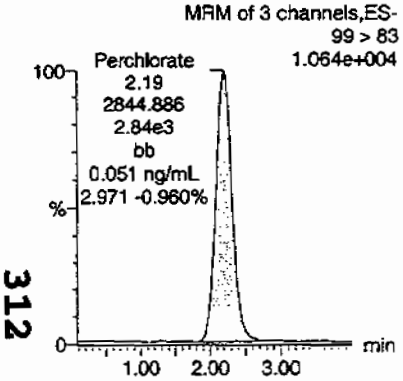

Perchlorate

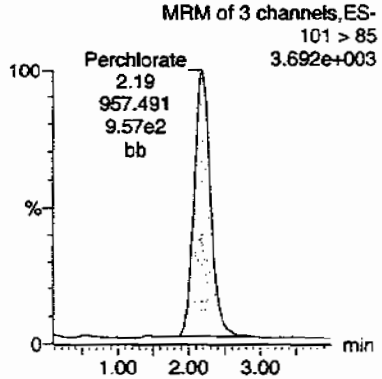

Perchlorate-101

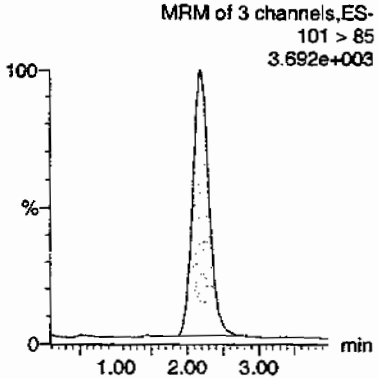

Perchlorate-O(18)

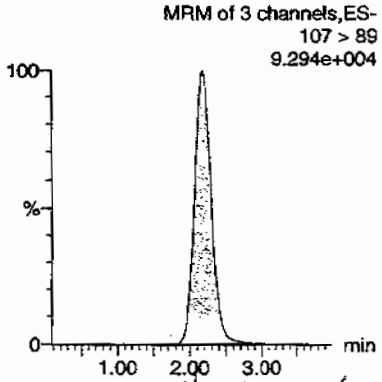

HMK 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.19	2844.886	2844.886	bb			0.0511	102.24	2.24	768.114	2.97
WCL090706-07CRI	Perchlorate-101	101 > 85	2.19	957.491	957.491	bb			0.0507	101.41	1.41	352.026	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.18	24864.365	24864.365	bb			0.4824	96.48	-3.52	4391.6...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2473

GEL Sample ID: 1201871404

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	07-JUL-09 11:36	per0707012a
	Perchlorate-O(18)			4.84	ug/kg		1	07-JUL-09 11:36	per0707012a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707012a
Date: 07-Jul-2009
Time: 11:36:50
ID: 1201871404
Vial: 1:3,A

1LAWL | 881213 | 5020 | MB | 11

GWD 07-08-09

Perchlorate

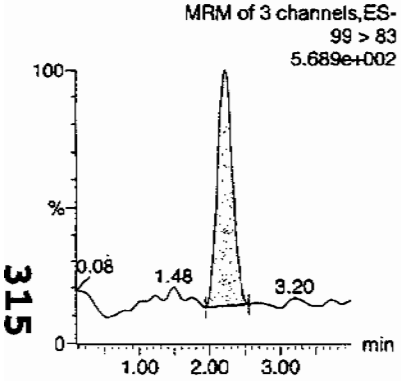

Perchlorate

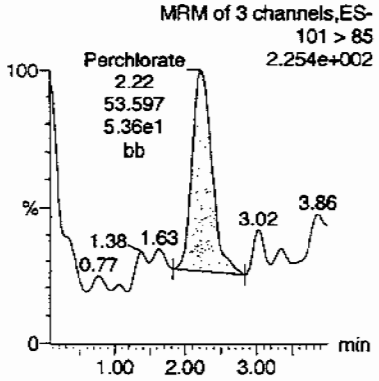

Perchlorate-101

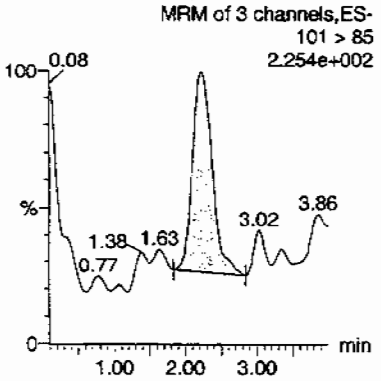

Perchlorate-O(18)

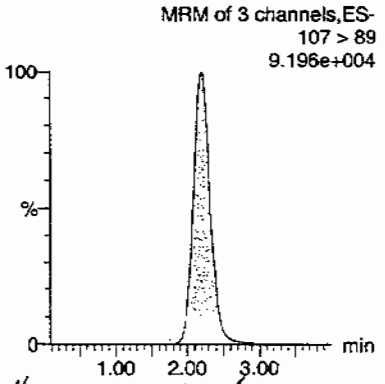

tm 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871404	Perchlorate	99 > 83	2.22	123.661	123.661	bb			0.0022			83.289	2.31
1201871404	Perchlorate-101	101 > 85	2.22	53.597	53.597	bb			0.0028			10.873	
1201871404	Perchlorate-O(18)	107 > 89	2.20	24962.213	24962.213	bb			0.4843	96.86	-3.14	23394....	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881212

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 30–JUN–09

GEL Job No (SDG): 09–2473

GEL Sample ID: 1201871405

Date Filtered: 30–JUN–09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.5	2	2.05	ug/kg		1	07–JUL–09 11:44	per0707013a
	Perchlorate–O(18)			4.85	ug/kg		1	07–JUL–09 11:44	per0707013a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707013a
Date: 07-Jul-2009
Time: 11:44:35
ID: 1201871405
Vial: 1:3,B

| LANL | 881213 | 50220 | 443 | 11

Cmo
07-08-09

Perchlorate

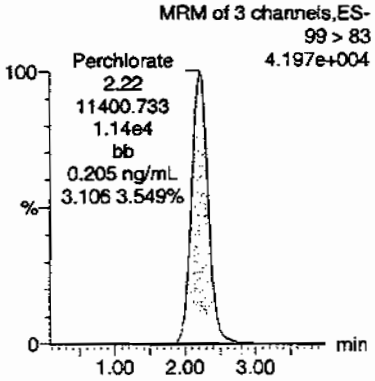

Perchlorate

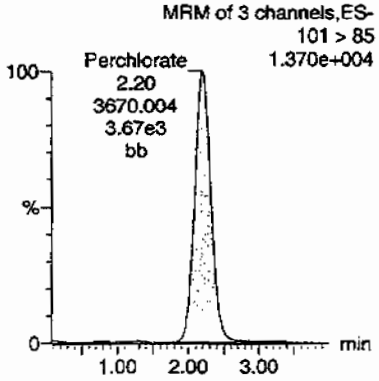

Perchlorate-101

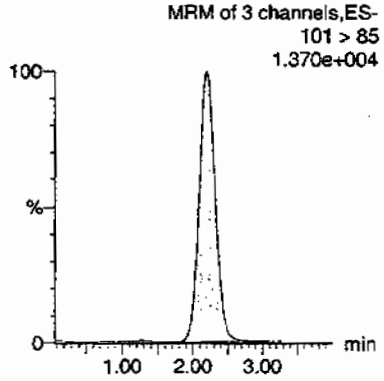

Perchlorate-O(18)

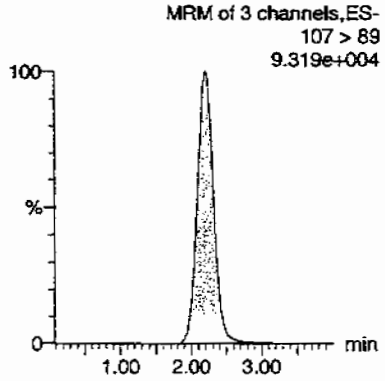

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871405	Perchlorate	99 > 83	2.22	11400.733	11400.733	bb			0.2049	102.43	2.43	1013.6...	3.11
1201871405	Perchlorate-101	101 > 85	2.20	3670.004	3670.004	bb			0.1944	97.18	-2.82	820.491	
1201871405	Perchlorate-O(18)	107 > 89	2.19	24984.744	24984.744	bb			0.4847	96.95	-3.05	2876.9...	

$\frac{11400.733}{55651.9} = 0.2049$

Hmm 07/09/09

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 881212 Verified by:
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201871404 MB	30-JUN-2009 09:20:40	2	20	10
1201871405 LCS	30-JUN-2009 09:20:40	2	20	10
232424001	30-JUN-2009 09:20:40	2	20	10
232426001	30-JUN-2009 09:20:40	2	20	10
232426002	30-JUN-2009 09:20:40	2	20	10
232429001	30-JUN-2009 09:20:40	2	20	10
1201871406 MS (232429001)	30-JUN-2009 09:20:40	2	20	10
1201871407 MSD (232429001)	30-JUN-2009 09:20:40	2	20	10
232429002	30-JUN-2009 09:20:40	2	20	10
232429003	30-JUN-2009 09:20:40	2	20	10
232429004	30-JUN-2009 09:20:40	2	20	10
232429005	30-JUN-2009 09:20:40	2	20	10
232429006	30-JUN-2009 09:20:40	2	20	10
232429007	30-JUN-2009 09:20:40	2	20	10
232429008	30-JUN-2009 09:20:40	2	20	10
232429009	30-JUN-2009 09:20:40	2	20	10
232429010	30-JUN-2009 09:20:40	2	20	10
232429011	30-JUN-2009 09:20:40	2	20	10
232429012	30-JUN-2009 09:20:40	2	20	10
232429013	30-JUN-2009 09:20:40	2	20	10
232429014	30-JUN-2009 09:20:40	2	20	10
232429015	30-JUN-2009 09:20:40	2	20	10
1201871408 ICS	30-JUN-2009 09:20:40	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201871408	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
LCS	1201871405	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MS	1201871406	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MSD	1201871407	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL

Comments:

Desalting cartridges used: 090603-1-H & 090401-Ba

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 07/01/09
Extr. Injection Volume: 20uL
Sequence Number: per070109a
Initial Calibration Date: 07/01/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: [illegible]
Date: 07/09/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag	
per0707001a	IPB001	CWW	7/7/2009 10:11			1		USE	B	
per0707002a	IPB001	CWW	7/7/2009 10:19			1		USE	B	
per0707003a	WCLICAL-01	CWW	7/7/2009 10:27			1		USE	I	
per0707004a	WCLICAL-02	CWW	7/7/2009 10:35			1		USE	I	
per0707005a	WCLICAL-03	CWW	7/7/2009 10:42			1		USE	I	
per0707006a	WCLICAL-04	CWW	7/7/2009 10:50			1		USE	I	
per0707007a	WCLICAL-05	CWW	7/7/2009 10:58			1		USE	I	
per0707008a	IPB002	CWW	7/7/2009 11:05			1		USE	B	
per0707009a	WCLICV	CWW	7/7/2009 11:13			1		USE	C	
per0707010a	IPB003	CWW	7/7/2009 11:21			1		USE	B	
per0707011a	WCLCRI	CWW	7/7/2009 11:29			1		USE	C	
per0707012a	1201871404	CWW	7/7/2009 11:36	881213	VARIOUS	1	LANL	USE	S	
per0707013a	1201871405	CWW	7/7/2009 11:44	881213	VARIOUS	1	LANL	USE	S	
per0707014a	1201871408	CWW	7/7/2009 11:52	881213	VARIOUS	1	LANL	USE	S	Injec. Error
per0707015a	232424001	CWW	7/7/2009 12:38	881213	09-2473	1	LANL	USE	S	Restarted
per0707016a	232426001	CWW	7/7/2009 12:46	881213	09-2475	1	LANL	USE	S	
per0707017a	232426002	CWW	7/7/2009 12:54	881213	09-2475	1	LANL	USE	S	
per0707018a	232429001	CWW	7/7/2009 13:02	881213	09-2478	1	LANL	USE	S	
per0707019a	1201871406	CWW	7/7/2009 13:10	881213	09-2478	1	LANL	USE	S	
per0707020a	1201871407	CWW	7/7/2009 13:17	881213	09-2478	1	LANL	USE	S	
per0707021a	232429002	CWW	7/7/2009 13:25	881213	09-2478	1	LANL	USE	S	
per0707022a	WCLCCV	CWW	7/7/2009 13:33			1		USE	C	
per0707023a	IPB004	CWW	7/7/2009 13:41			1		USE	B	
per0707024a	WCLCRI	CWW	7/7/2009 13:49			1		USE	C	
per0707025a	232429003	CWW	7/7/2009 13:56	881213	09-2478	1	LANL	USE	S	
per0707026a	232429004	CWW	7/7/2009 14:04	881213	09-2478	1	LANL	USE	S	
per0707027a	232429005	CWW	7/7/2009 14:12	881213	09-2478	1	LANL	USE	S	
per0707028a	232429006	CWW	7/7/2009 14:20	881213	09-2478	1	LANL	USE	S	
per0707029a	232429007	CWW	7/7/2009 14:28	881213	09-2478	1	LANL	USE	S	

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per0707030a	232429008	CWW	7/7/2009 14:35	881213	09-2478	1	LANL	USE	S
per0707031a	232429009	CWW	7/7/2009 14:43	881213	09-2478	1	LANL	USE	S
per0707032a	232429010	CWW	7/7/2009 14:51	881213	09-2478	1	LANL	USE	S
per0707033a	232429011	CWW	7/7/2009 14:59	881213	09-2478	1	LANL	USE	S
per0707034a	232429012	CWW	7/7/2009 15:06	881213	09-2478	1	LANL	USE	S
per0707035a	WCLCCV	CWW	7/7/2009 15:14			1		USE	C
per0707036a	IPB005	CWW	7/7/2009 15:22			1		USE	B
per0707037a	WCLCRI	CWW	7/7/2009 15:30			1		USE	C
per0707038a	232429013	CWW	7/7/2009 15:37	881213	09-2478	1	LANL	USE	S
per0707039a	232429014	CWW	7/7/2009 15:45	881213	09-2478	1	LANL	USE	S
per0707040a	232429015	CWW	7/7/2009 15:53	881213	09-2478	1	LANL	USE	S
per0707041a	IPB006	CWW	7/7/2009 16:01			1		USE	B
per0707042a	1201868648	CWW	7/7/2009 16:09	880097	VARIOUS	1	LANL	USE	S
per0707043a	1201868649	CWW	7/7/2009 16:17	880097	VARIOUS	1	LANL	USE	S
per0707044a	1201868652	CWW	7/7/2009 16:24	880097	VARIOUS	1	LANL	USE	S
per0707045a	232209001	CWW	7/7/2009 16:32	880097	09-2424	1	LANL	USE	S
per0707046a	1201868650	CWW	7/7/2009 16:40	880097	09-2424	1	LANL	USE	S
per0707047a	1201868651	CWW	7/7/2009 16:48	880097	09-2424	1	LANL	USE	S
per0707048a	WCLCCV	CWW	7/7/2009 16:55			1		USE	C
per0707049a	IPB007	CWW	7/7/2009 17:03			1		USE	B
per0707050a	WCLCRI	CWW	7/7/2009 17:11			1		USE	C
per0707051a	232209002	CWW	7/7/2009 17:19	880097	09-2424	1	LANL	USE	S
per0707052a	232209003	CWW	7/7/2009 17:27	880097	09-2424	1	LANL	USE	S
per0707053a	232209004	CWW	7/7/2009 17:34	880097	09-2424	1	LANL	USE	S
per0707054a	232209005	CWW	7/7/2009 17:42	880097	09-2424	1	LANL	USE	S
per0707055a	232209006	CWW	7/7/2009 17:50	880097	09-2424	1	LANL	USE	S
per0707056a	232209007	CWW	7/7/2009 17:58	880097	09-2424	1	LANL	USE	S
per0707057a	232209008	CWW	7/7/2009 18:05	880097	09-2424	1	LANL	USE	S
per0707058a	232212001	CWW	7/7/2009 18:13	880097	09-2427	1	LANL	USE	S
per0707059a	232212002	CWW	7/7/2009 18:21	880097	09-2427	1	LANL	USE	S
per0707060a	232212003	CWW	7/7/2009 18:28	880097	09-2427	1	LANL	USE	S
per0707061a	WCLCCV	CWW	7/7/2009 18:36			1		USE	C
per0707062a	IPB008	CWW	7/7/2009 18:44			1		USE	B
per0707063a	WCLCRI	CWW	7/7/2009 18:52			1		USE	C
per0707064a	232265001	CWW	7/7/2009 19:00	880097	09-2435	1	LANL	USE	S
per0707065a	232265002	CWW	7/7/2009 19:08	880097	09-2435	1	LANL	USE	S
per0707066a	232265003	CWW	7/7/2009 19:15	880097	09-2435	1	LANL	USE	S

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per0707067a	232265004	CWW	7/7/2009 19:23	880097	09-2435	1	LANL	USE	S
per0707068a	232265005	CWW	7/7/2009 19:31	880097	09-2435	1	LANL	USE	S
per0707069a	232265006	CWW	7/7/2009 19:39	880097	09-2435	1	LANL	USE	S
per0707070a	232265007	CWW	7/7/2009 19:46	880097	09-2435	1	LANL	USE	S
per0707071a	232265008	CWW	7/7/2009 19:54	880097	09-2435	1	LANL	USE	S
per0707072a	232265009	CWW	7/7/2009 20:02	880097	09-2435	1	LANL	USE	S
per0707073a	WCLCCV	CWW	7/7/2009 20:10			1		USE	C
per0707074a	IPB009	CWW	7/7/2009 20:17			1		USE	B
per0707075a	WCLCRI	CWW	7/7/2009 20:25			1		USE	C

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707019a
Date: 07-Jul-2009
Time: 13:10:09
ID: 1201871406
Vial: 1:4,B

1LAW1881213 | 50120 | MS | 1 |

CWW 07-08-09

Perchlorate

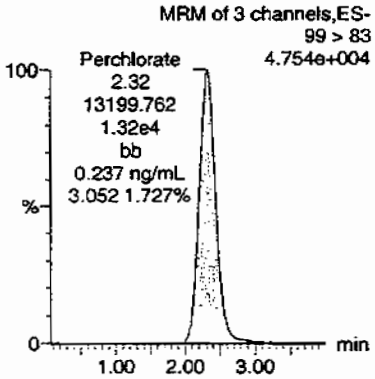

Perchlorate

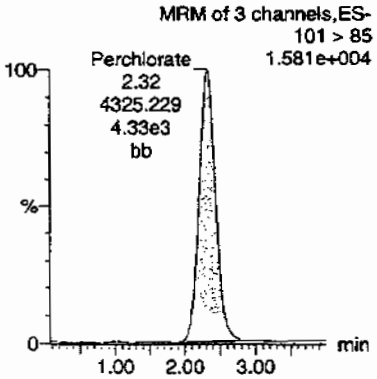

Perchlorate-101

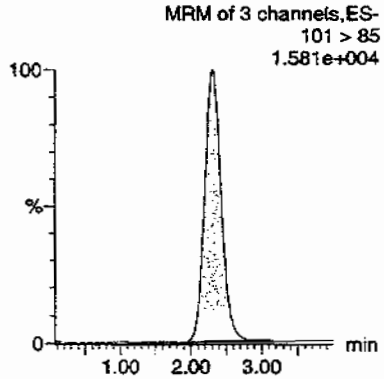

Perchlorate-O(18)

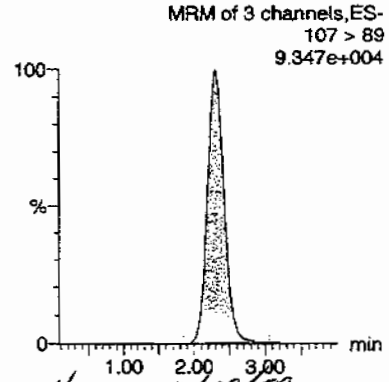

Hmc 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871406	Perchlorate	99 > 83	2.32	13199.762	13199.762	bb			0.2372	118.59	18.59	3175.7...	3.05
1201871406	Perchlorate-101	101 > 85	2.32	4325.229	4325.229	bb			0.2291	114.53	14.53	1782.8...	
1201871406	Perchlorate-O(18)	107 > 89	2.32	25484.055	25484.055	bb			0.4944	98.88	-1.12	4334.1...	

323

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Quantity Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070709a.qld

Last Altered: Wednesday, July 08, 2009 11:12:40 AM Eastern Daylight Time
Printed: Wednesday, July 08, 2009 11:21:09 AM Eastern Daylight Time

Name: per0707020a
Date: 07-Jul-2009
Time: 13:17:54
ID: 1201871407
Vial: 1:4,C

| LANL | 881213 | 5020 | MS0 | 1 |

07-08-09

Perchlorate

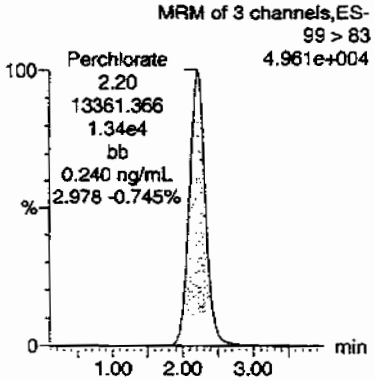

Perchlorate

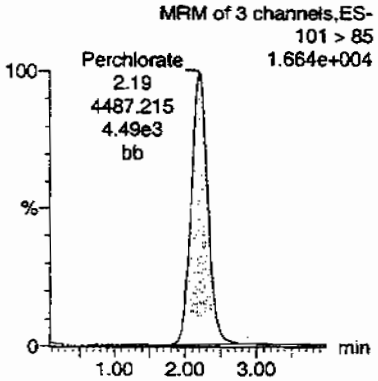

Perchlorate-101

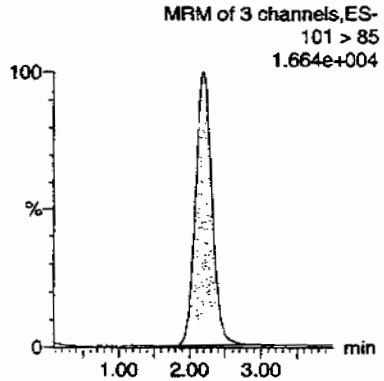

Perchlorate-O(18)

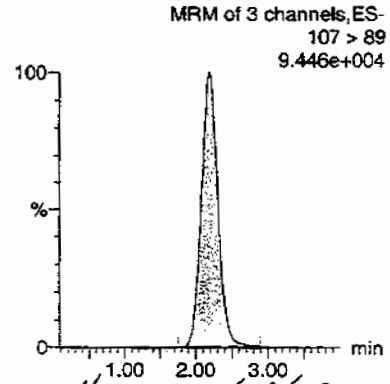

Hrm 07/09/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871407	Perchlorate	99 > 83	2.20	13361.366	13361.366	bb			0.2401	120.04	20.04	5671.7...	2.98
1201871407	Perchlorate-101	101 > 85	2.19	4487.215	4487.215	bb			0.2376	118.82	18.82	2181.0...	
1201871407	Perchlorate-O(18)	107 > 89	2.19	25241.471	25241.471	bb			0.4897	97.94	-2.06	11871....	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2473-1

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881216
Prep Batch Number:	881215

Sample Analysis

Sample ID	Client ID
232425001	CAMO-09-10468
1201871417	Interference Check Sample (ICS)
1201871409	Method Blank (MB)
1201871410	Laboratory Control Sample (LCS)
1201871414	232370001(CAMO-09-6053) Matrix Spike (MS)
1201871416	232370001(CAMO-09-6053) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

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CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232370001 (CAMO-09-6053) from SDG 09-2452-1 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

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Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The sample in this SDG was not originally analyzed using EPA Method 314.0.

Additional Comments
The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

Perchlorate Isotope Ratio
The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert M Maus **Date:** 07/06/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10468

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2473-1

GEL Sample ID: 232425001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:28	per0630061a
	Perchlorate Isotope Ratio						1	30-JUN-09 18:28	per0630061a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:28	per0630061a
	Perchlorate-O(18)			0.438	ug/L		1	30-JUN-09 18:28	per0630061a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2473–1

Extract Batch Code: 881215

Date Filtered: 30–JUN–09

Matrix: GROUND WATER

Sample ID: 1201871410

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.186	ug/L	93.1		85 – 115
Perchlorate Isotope Ratio		2.71				–
Perchlorate–101	0.200	.189	ug/L	94.6		85 – 115
Perchlorate–O(18)		.435	ug/L			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2473–1

Extract Batch Code: 881215

Date Filtered: 30–JUN–09

Matrix: WATER

Sample ID: 1201871417

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.2	ug/L	100		70 – 130
Perchlorate Isotope Ratio		2.62				
Perchlorate–101	0.200	.211	ug/L	105		70 – 130
Perchlorate–O(18)		.467	ug/L			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630047a
Date: 30-Jun-2009
Time: 16:33:09
ID: 1201871417
Vial: 2:1,C

|LANL|881216|LZQ|ZLS|1|

LMS 07-01-5

Perchlorate

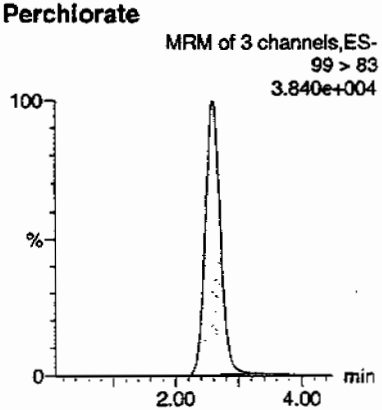

Perchlorate

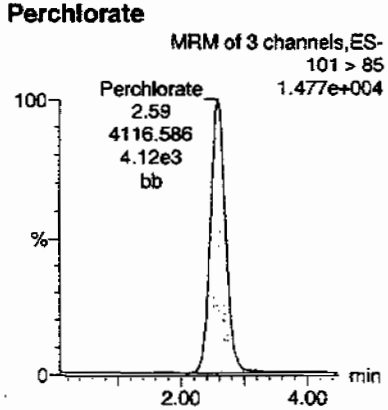

Perchlorate-101

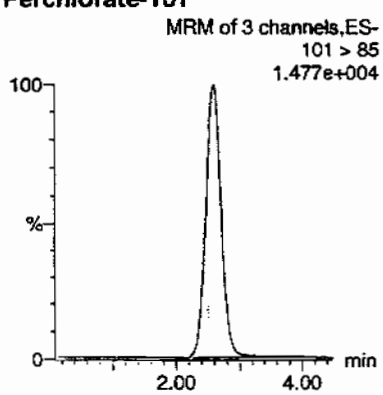

Perchlorate-O(18)

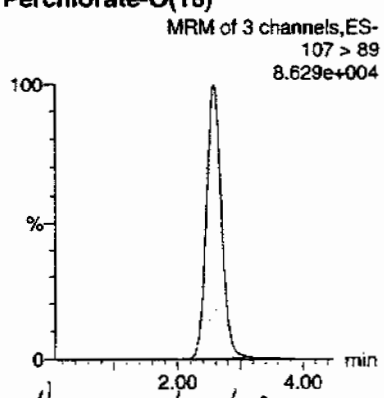

Hnm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871417	Perchlorate	99 > 83	2.59	10770.017	10770.017	bb			0.2002	100.10	0.10	617.777	2.62
1201871417	Perchlorate-101	101 > 85	2.59	4116.586	4116.586	bb			0.2106	105.31	5.31	471.114	
1201871417	Perchlorate-O(18)	107 > 89	2.58	23954.342	23954.342	bb			0.4666	93.32	-6.68	1264.8...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2473–1

Extract Batch Code: 881215

Date Extracted: 30–JUN–09

GEL MS/PS ID: 1201871414

Client ID: CAMO–09–6053

GEL MSD/PSD ID: 1201871416

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	0.200	0.00507	ug/L	0.192	93.3	.184	89.6	3.92	30	75 – 125
Perchlorate Isotope Ratio	0	0.00		2.68		2.65		0		–
Perchlorate–101	0.200	0.00467	ug/L	0.197	96	.191	93.3	2.8	30	75 – 125
Perchlorate–O(18)	0	0.442	ug/L	0.444		.445		.283		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2473–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	30–JUN–09	per0630001a	IPB001
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630001a	IPB001
Perchlorate	0.00	0	NA	30–JUN–09	per0630002a	IPB001
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630002a	IPB001

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per063009a.mdb 30 Jun 2009 11:03:27
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per063009a.cdb 01 Jul 2009 08:12:45

Name: per0630001a
Date: 30-Jun-2009
Time: 10:13:26
ID: IPB001
Vial: 1:1,A

cwd
07-01-09

Perchlorate

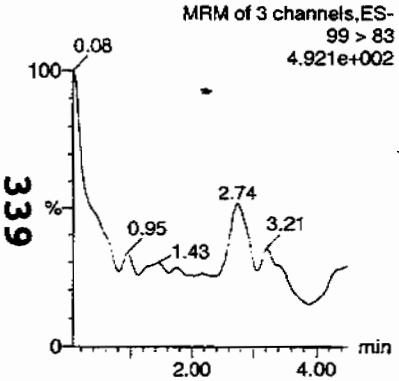

Perchlorate

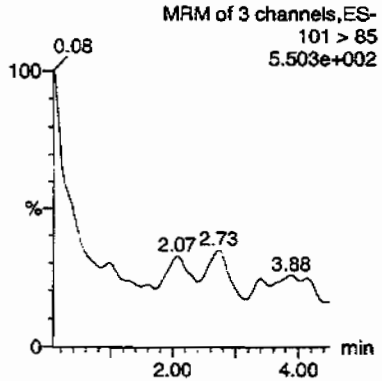

Perchlorate-101

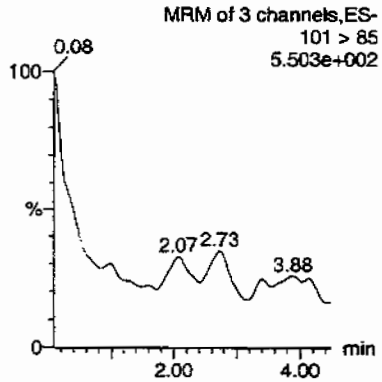

Perchlorate-O(18)

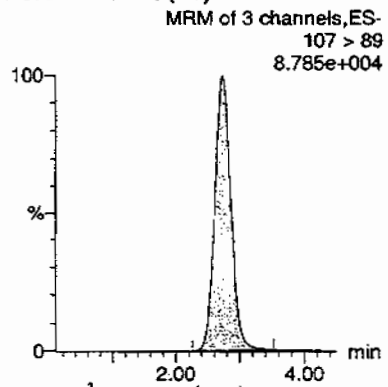

Anne 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.74	25499.680	25499.680	bb			0.4967	99.34	-0.66	1986.5...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630002a
Date: 30-Jun-2009
Time: 10:21:51
ID: IPB001
Vial: 1:1,A

CWW 07-01-09

Perchlorate

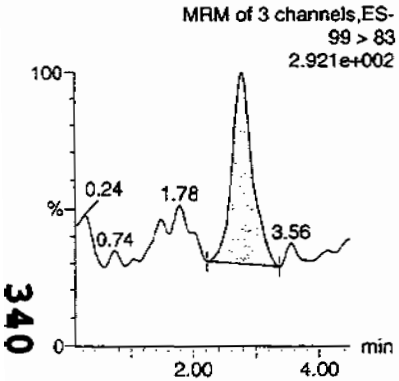

Perchlorate

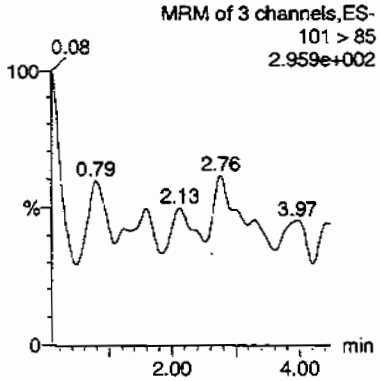

Perchlorate-101

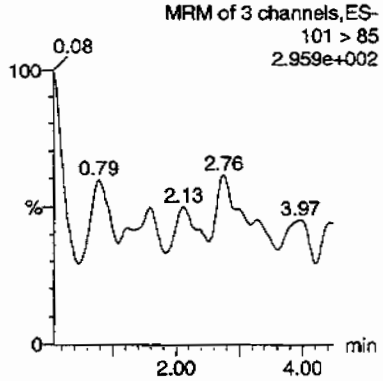

Perchlorate-O(18)

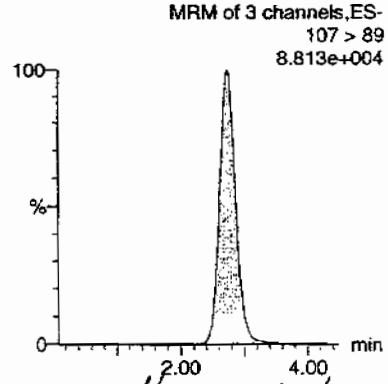

HNM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.77	78.075	78.075	bb			0.0015			13.957	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.74	25611.930	25611.930	bb			0.4989	99.78	-0.22	5316.7...	

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2473–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	30–JUN–09	per0630008a	IPB002
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630008a	IPB002
Perchlorate	0.00	0	NA	30–JUN–09	per0630010a	IPB003
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630010a	IPB003
Perchlorate	0.00	0	NA	30–JUN–09	per0630021a	IPB004
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630021a	IPB004
Perchlorate	0.00	0	NA	30–JUN–09	per0630032a	IPB005
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630032a	IPB005
Perchlorate	0.00	0	NA	30–JUN–09	per0630043a	IPB006
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630043a	IPB006
Perchlorate	0.00	0	NA	30–JUN–09	per0630054a	IPB007
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630054a	IPB007
Perchlorate	0.00	0	NA	30–JUN–09	per0630065a	IPB008

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Continning Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2473–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630065a	IPB008

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630008a
Date: 30-Jun-2009
Time: 11:11:24
ID: IPB002
Vial: 1:1,A

CWW 07-01-09

Perchlorate

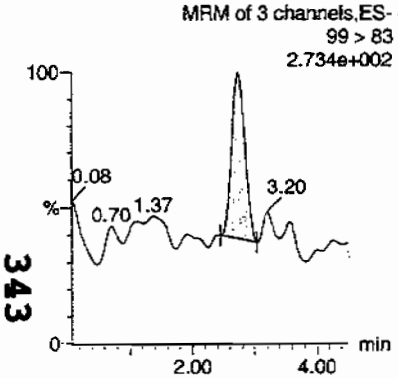

Perchlorate

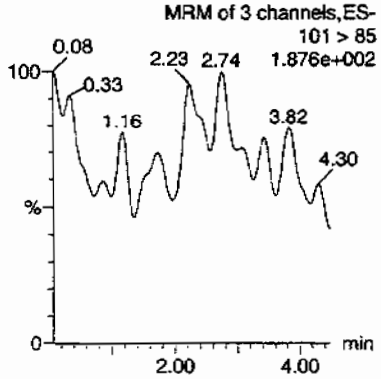

Perchlorate-101

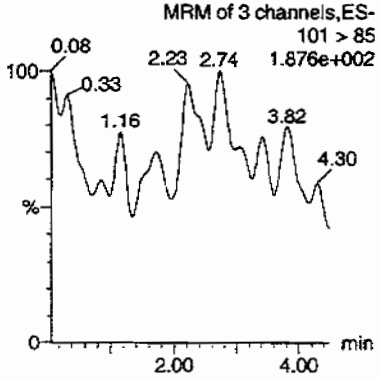

Perchlorate-O(18)

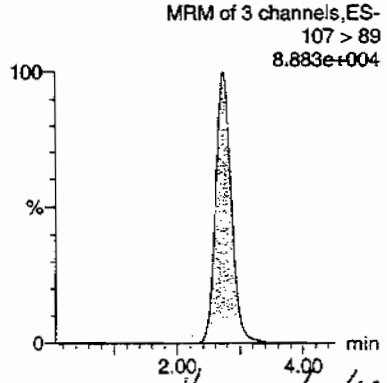

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.73	41.477	41.477	bb			0.0008			22.735	0.00
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	2.74	25865.879	25865.879	bb			0.5039	100.77	0.77	13696....	

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Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630010a
Date: 30-Jun-2009
Time: 11:27:53
ID: IPB003
Vial: 1:1,A

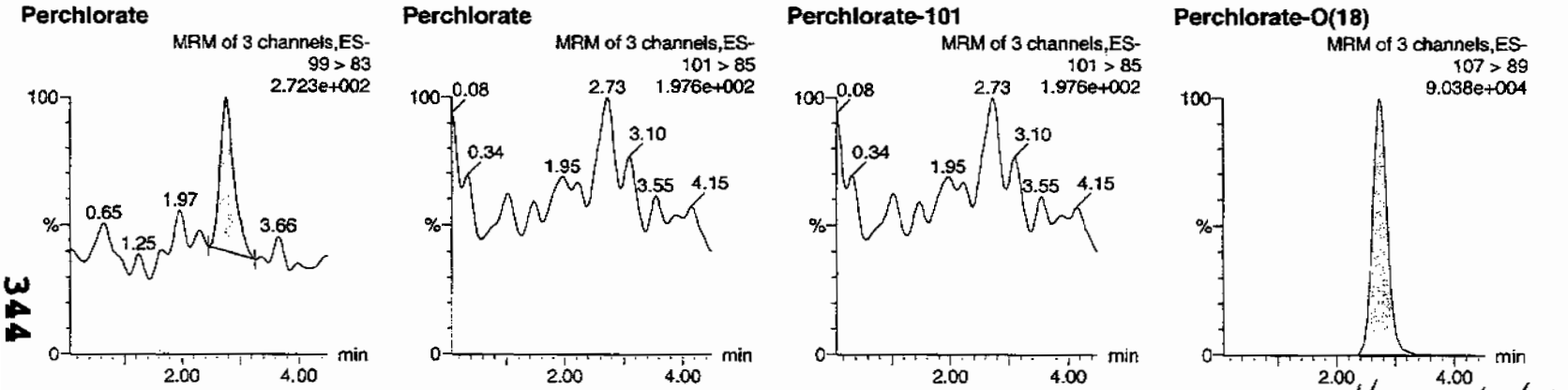

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.76	46.613	46.613	bb			0.0009			12.878	0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	2.74	26347.156	26347.156	bb			0.5132	102.65	2.65	1443.4...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630021a
Date: 30-Jun-2009
Time: 12:58:33
ID: IPB004
Vial: 1:1,A

CWW
07-01-09

Perchlorate

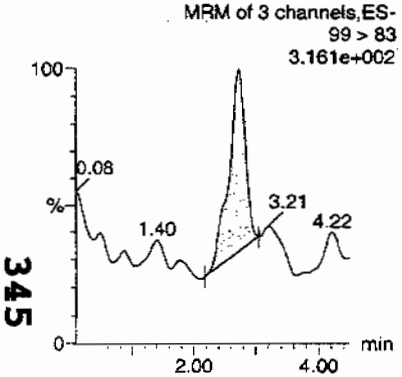

Perchlorate

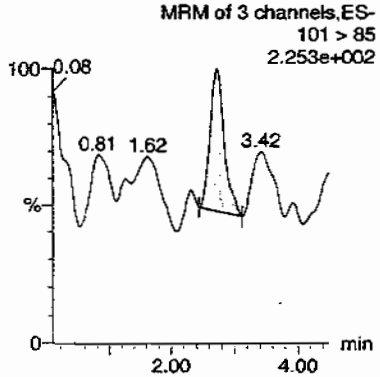

Perchlorate-101

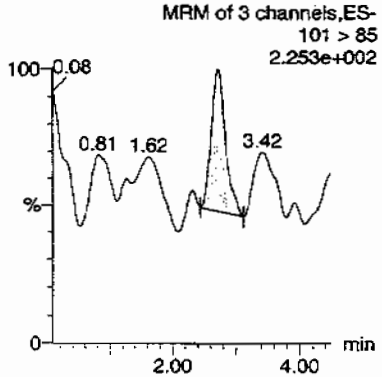

Perchlorate-O(18)

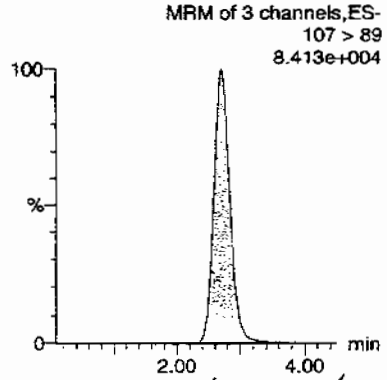

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.73	66.205	66.205	bb			0.0012			10.897	2.12
IPB004	Perchlorate-101	101 > 85	2.73	31.188	31.188	bb			0.0016			11.767	
IPB004	Perchlorate-O(18)	107 > 89	2.71	24336.664	24336.664	bb			0.4741	94.81	-5.19	9731.8...	

OKAY
LA 0500

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Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630032a
Date: 30-Jun-2009
Time: 14:29:15
ID: IPB005
Vial: 1:1,A

CWW 07-01-09

Perchlorate

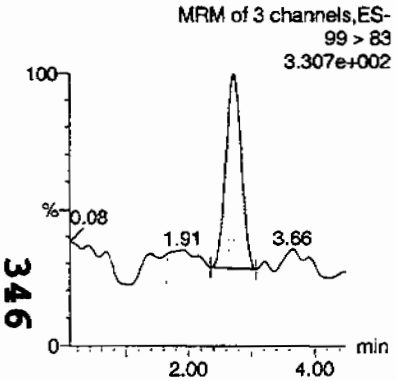

Perchlorate

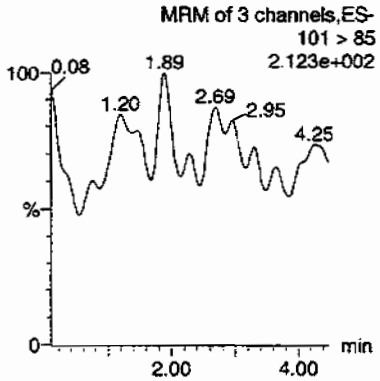

Perchlorate-101

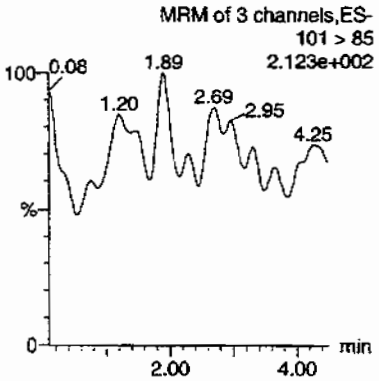

Perchlorate-O(18)

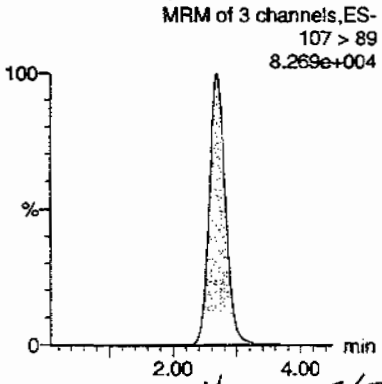

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83	2.73	68.128	68.128	bb			0.0013			10.633	0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.69	24007.066	24007.066	bb			0.4676	93.53	-6.47	4573.8...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qid

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630043a
Date: 30-Jun-2009
Time: 15:59:59
ID: IPB006
Vial: 1:1,A

07-01-09

Perchlorate

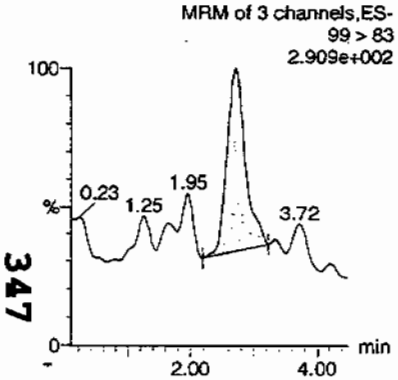

Perchlorate

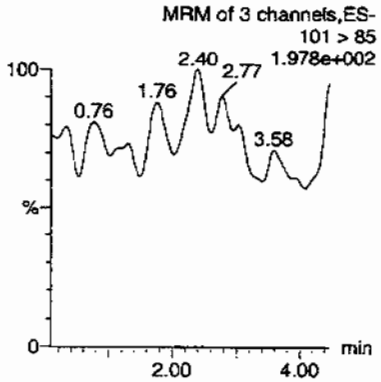

Perchlorate-101

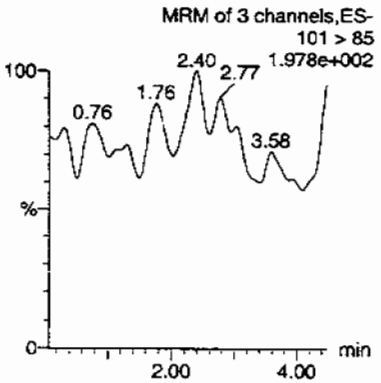

Perchlorate-O(18)

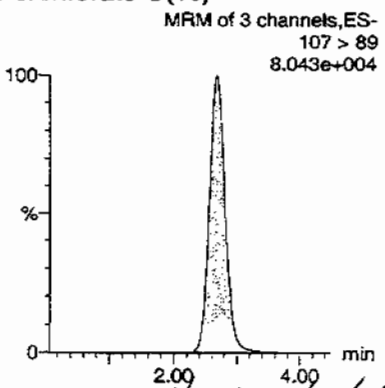

Anomaly 07-01-09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	2.71	66.098	66.098	bb			0.0012			24.923	0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	2.68	22968.156	22968.156	bb			0.4474	89.48	-10.52	10845....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630054a
Date: 30-Jun-2009
Time: 17:30:59
ID: IPB007
Vial: 1:1,A

GMW 07-01-09

Perchlorate

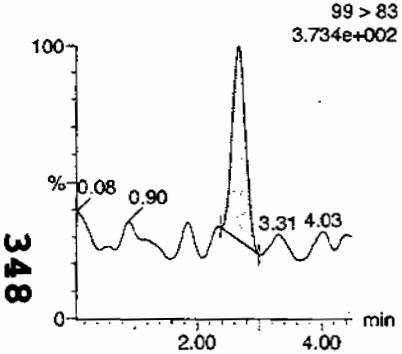

Perchlorate

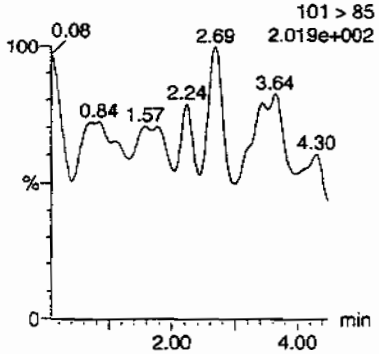

Perchlorate-101

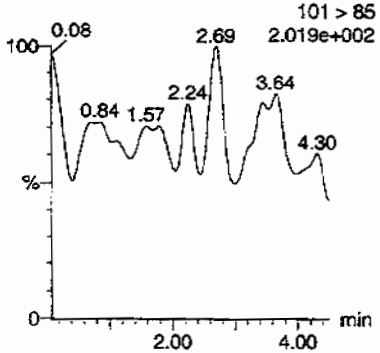

Perchlorate-O(18)

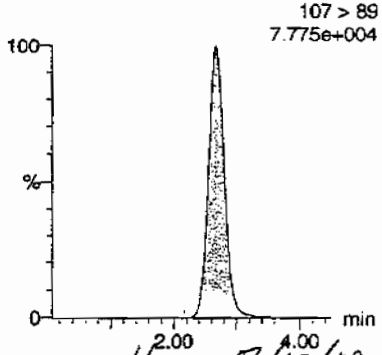

Hmc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83	2.68	66.521	66.521	bb			0.0012			16.943	0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	2.68	22485.289	22485.289	bb			0.4380	87.60	-12.40	12877....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630065a
Date: 30-Jun-2009
Time: 19:01:59
ID: IPB008
Vial: 1:1,A

CWW 07-01-09

Perchlorate

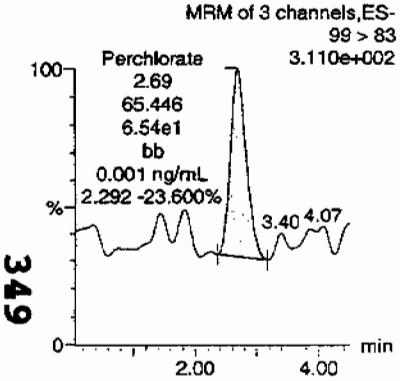

Perchlorate

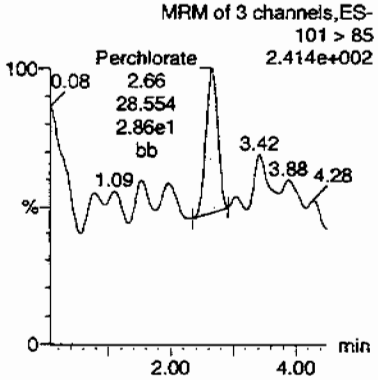

Perchlorate-101

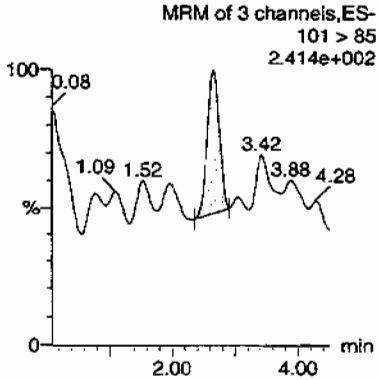

Perchlorate-O(18)

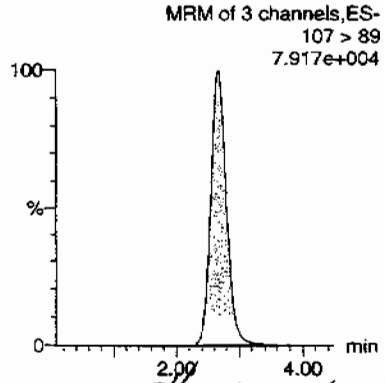

HMK 07/01/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83	2.69	65.446	65.446	bb			0.0012			24.164	2.29
IPB008	Perchlorate-101	101 > 85	2.66	28.554	28.554	bb			0.0015			5.670	
IPB008	Perchlorate-O(18)	107 > 89	2.66	22664.361	22664.361	bb			0.4415	88.30	-11.70	11124....	

OKAY LA 0500

349

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report -- MS1 Static

Printed: Tue Jan 08 12:19:12 2008

POINTS HIGHLIGHTED BY CUSS 01-09-08

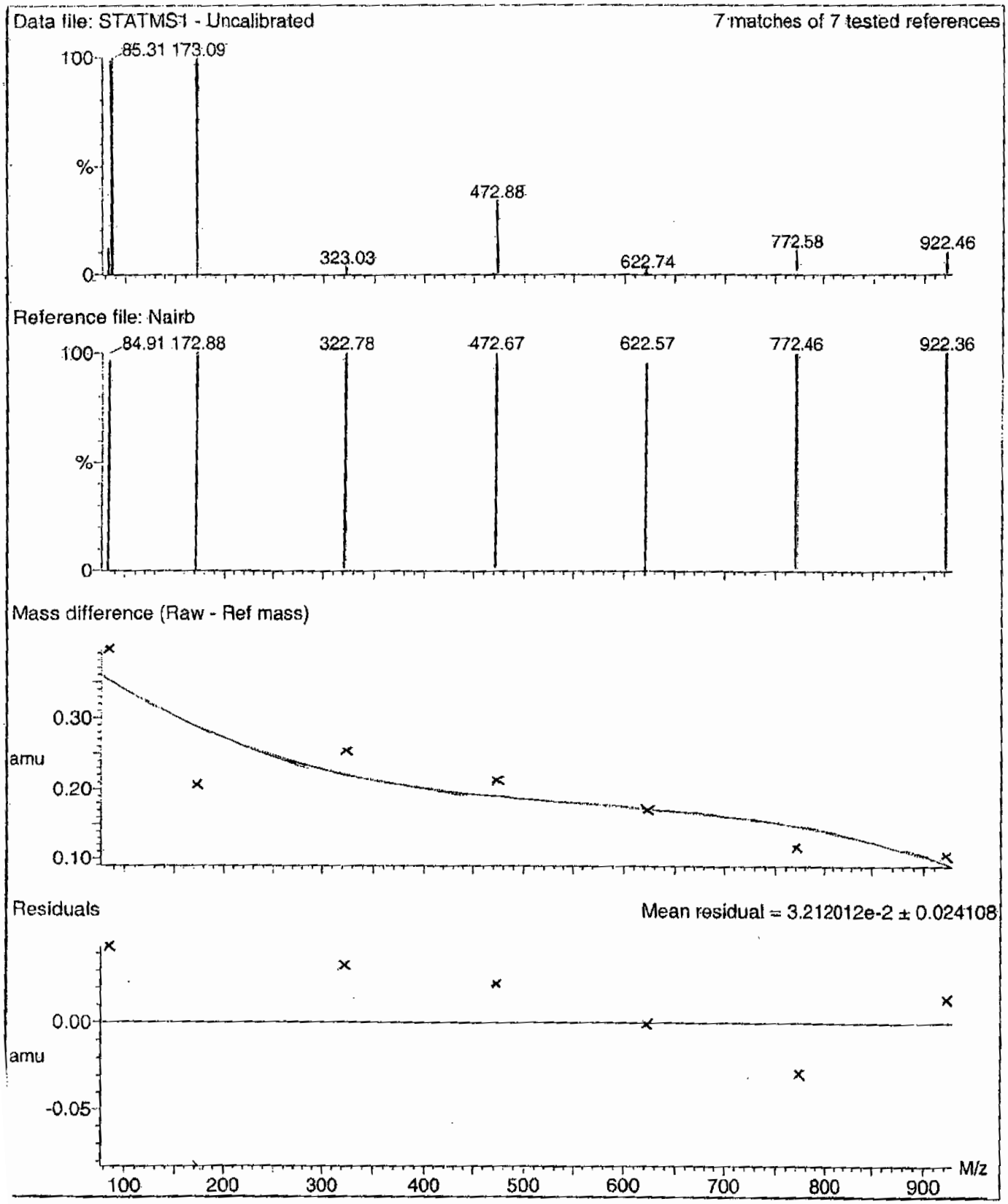

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

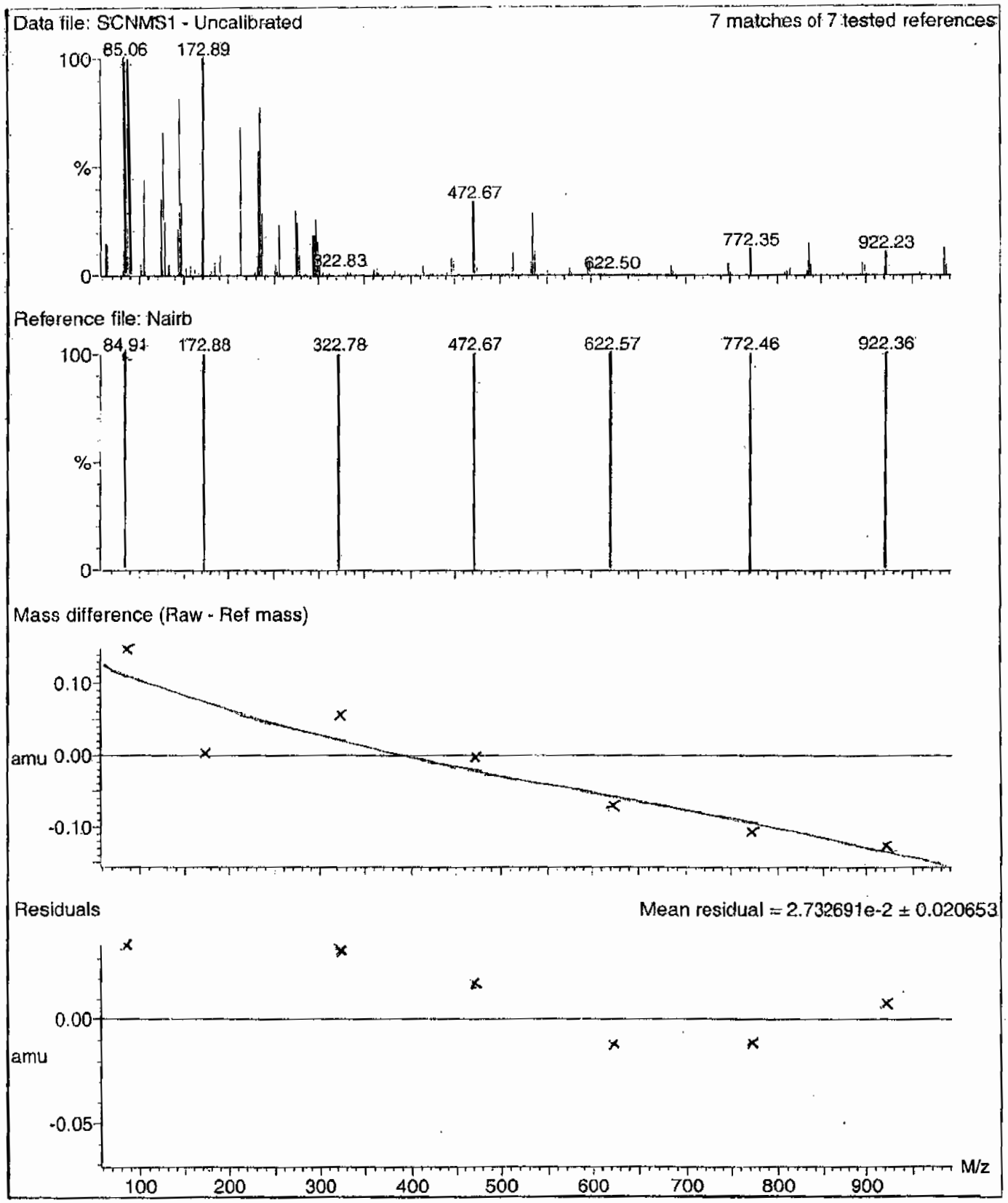

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Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

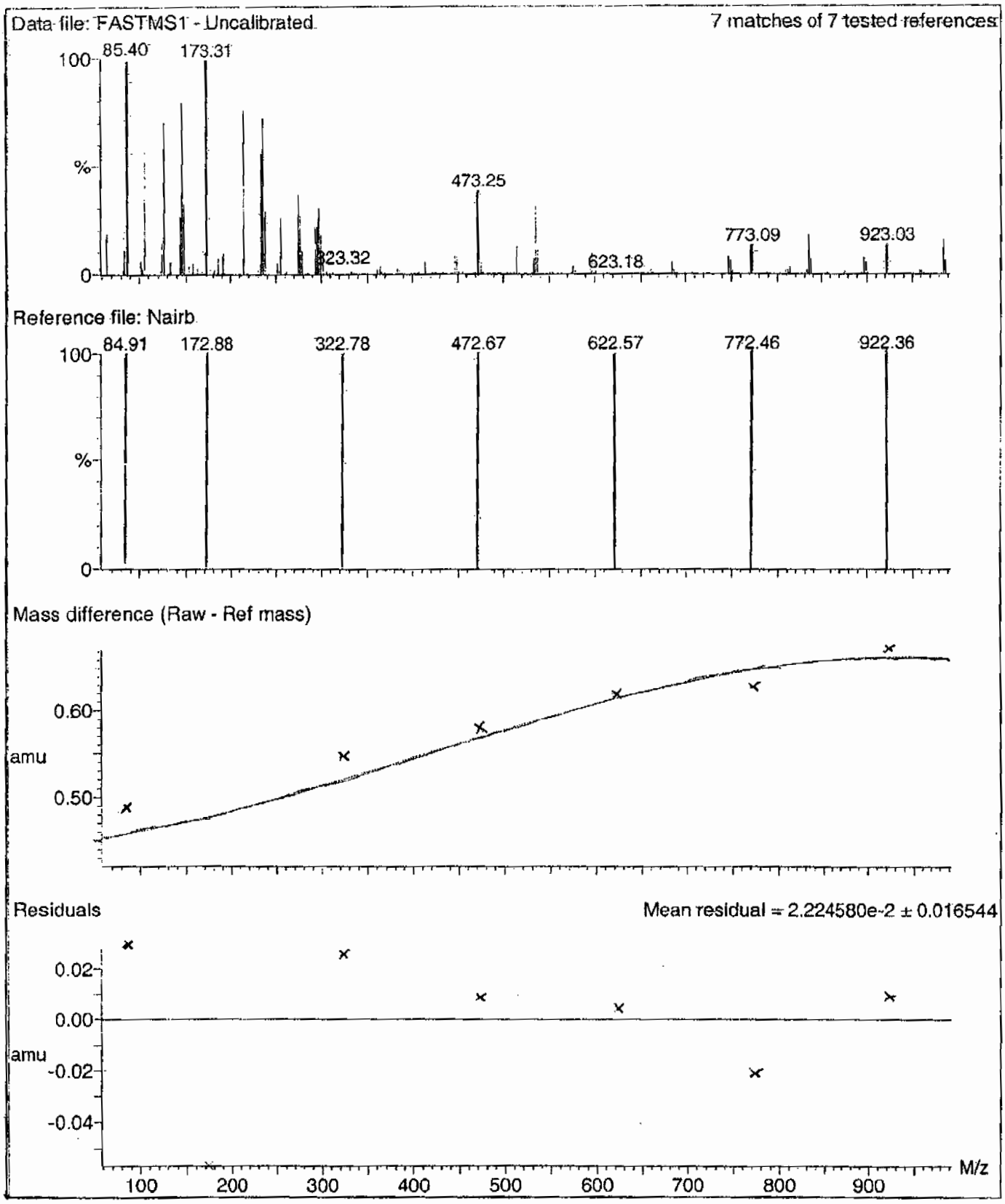

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

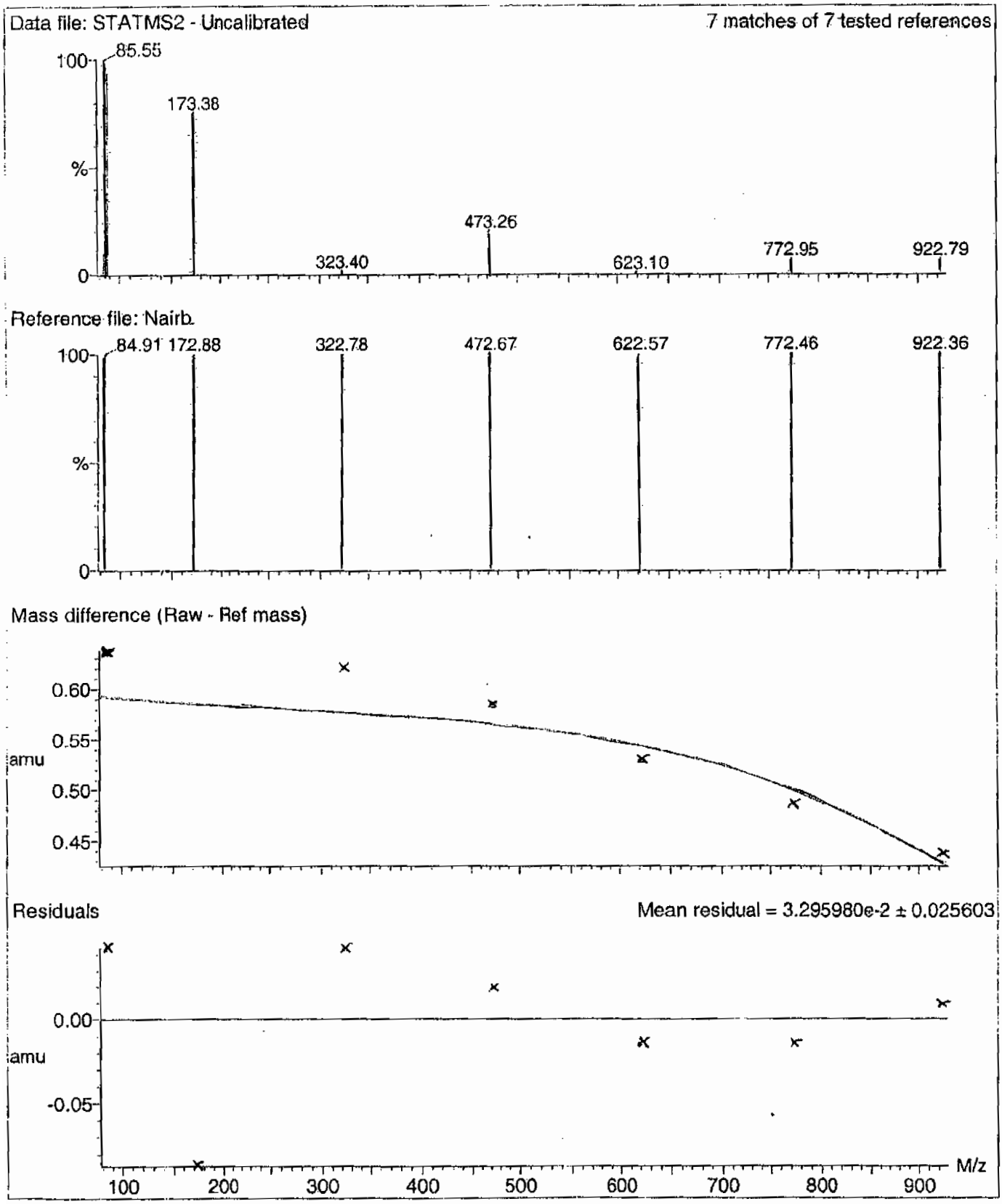

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Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

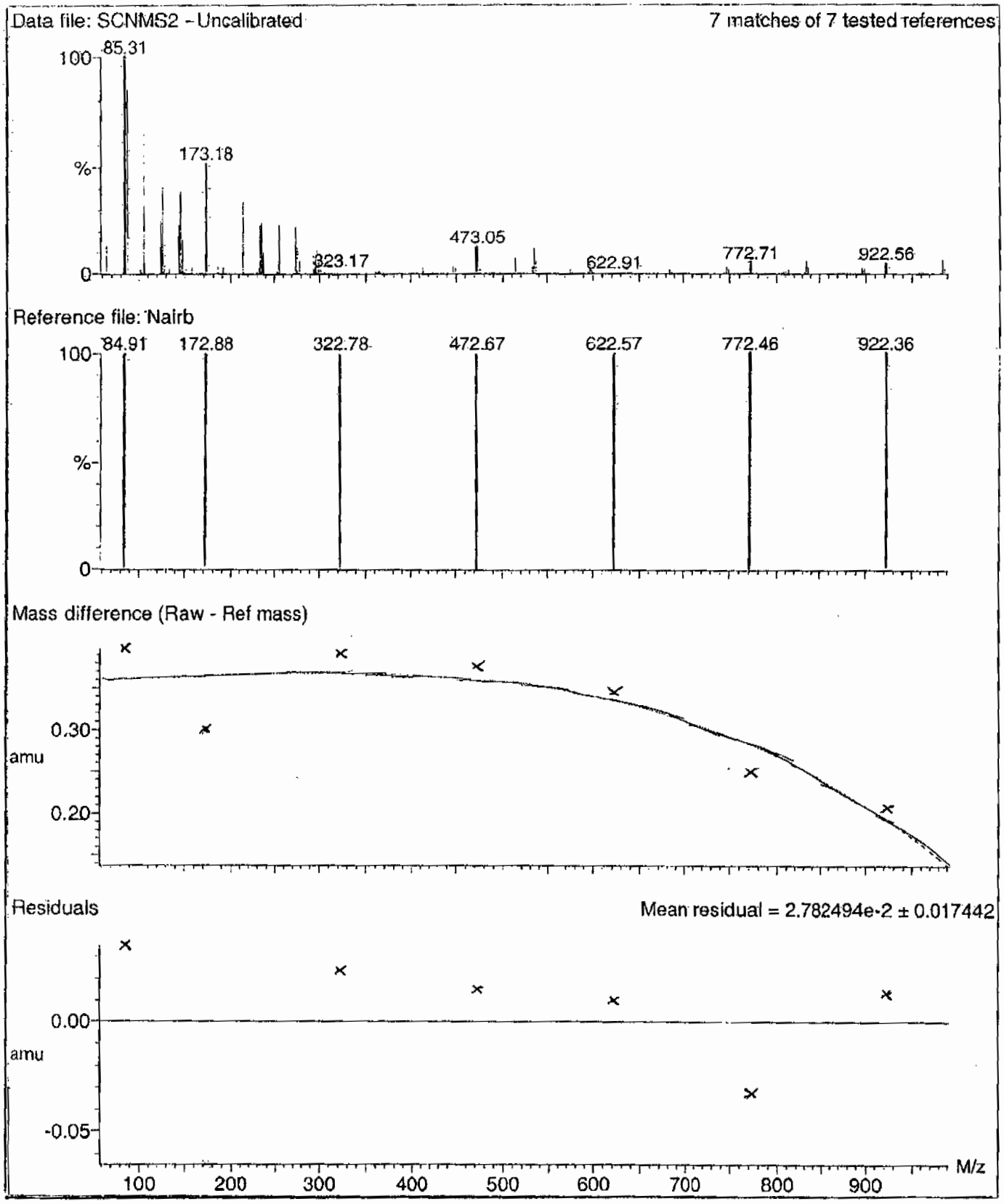

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Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

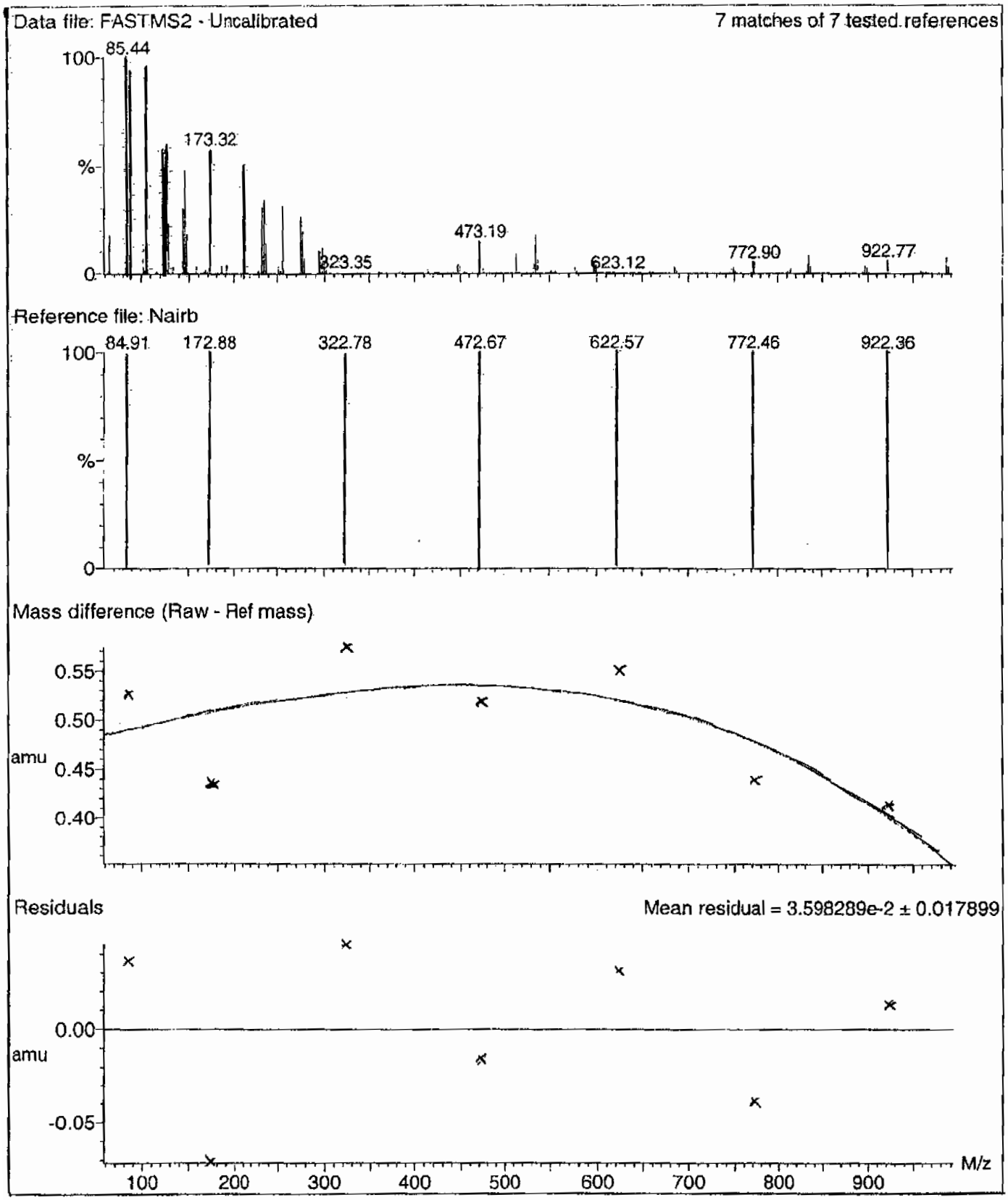

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File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Tuesday, June 30, 2009 10:00:39 Eastern Daylight Time

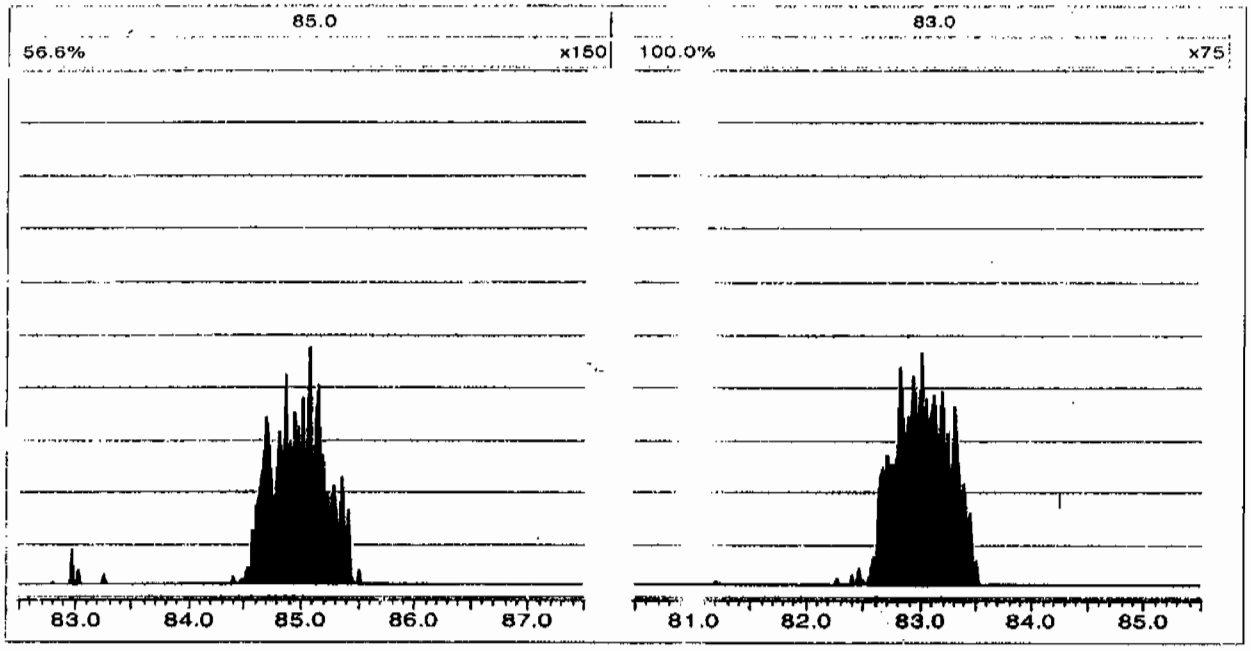

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2473-1

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	**per0630006a**	**30-JUN-09**	**25387.5**				
Lower Area Limit			**12693.75**				
Upper Area Limit			**50775**				
1201871409	per0630045a	30-JUN-09 16:16	21871.3	2.68	2.68793	1.003	
1201871410	per0630046a	30-JUN-09 16:24	22316.8	2.69	2.7002	1.004	
1201871417	per0630047a	30-JUN-09 16:33	23954.3	2.58	2.58837	1.003	
232425001	per0630061a	30-JUN-09 18:28	22466.6	2.66	2.68785	1.01	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10468

Date Received: 26-JUN-09

GEL Job No (SDG): 09-2473-1

GEL Sample ID: 232425001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:28	per0630061a
	Perchlorate Isotope Ratio						1	30-JUN-09 18:28	per0630061a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	30-JUN-09 18:28	per0630061a
	Perchlorate-O(18)			0.438	ug/L		1	30-JUN-09 18:28	per0630061a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630061a
Date: 30-Jun-2009
Time: 18:28:47
ID: 232425001
Vial: 2:3,B

1LANL|881216|LZQ|11

AWD 07-01-9

Perchlorate

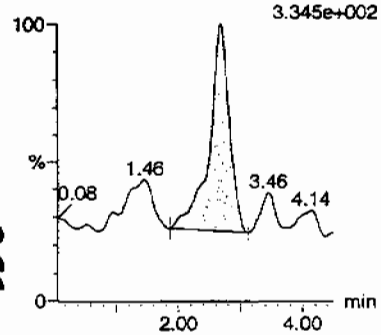

Perchlorate

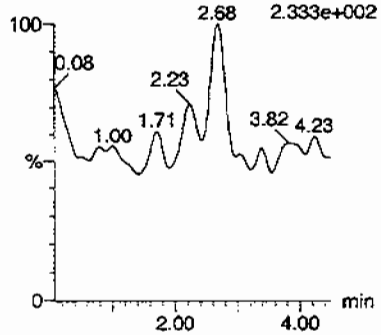

Perchlorate-101

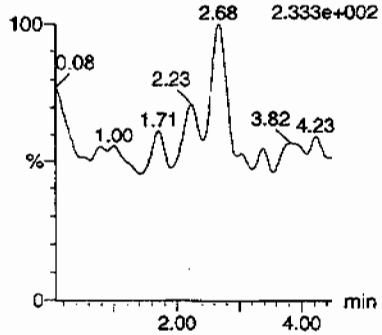

Perchlorate-O(18)

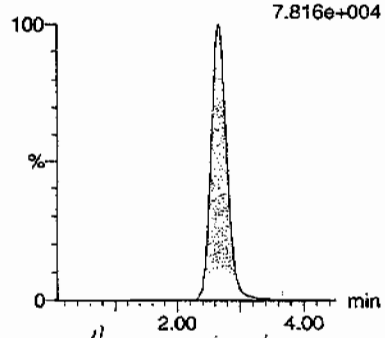

HMW 07/01/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232425001	Perchlorate	99 > 83	2.69	95.606	95.606	bb			0.0018			30.356	0.00
232425001	Perchlorate-101	101 > 85											
232425001	Perchlorate-O(18)	107 > 89	2.66	22466.578	22466.578	bb			0.4376	87.53	-12.47	2711.9...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2473–1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 30–JUN–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 53797.02

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2473–1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 30–JUN–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 19544.92

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 9:01:25 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per063009a.mdb 30 Jun 2009 11:03:27
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per063009a.cdb 01 Jul 2009 08:12:45

Compound name: Perchlorate
Response Factor: 53797
RRF SD: 950.099, % Relative SD: 1.76608
Response type: External Std, Area
Curve type: RF

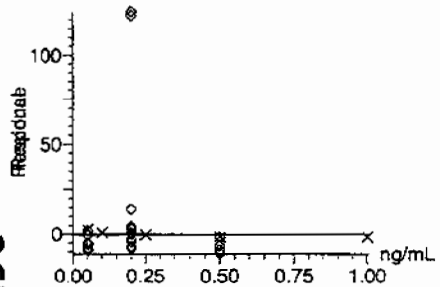

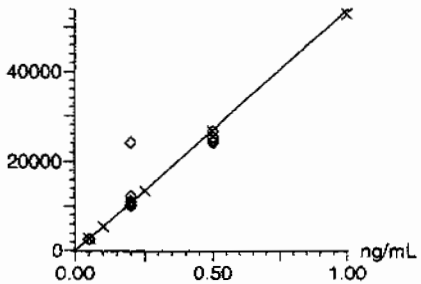

AW 07-01-09

Compound name: Perchlorate-101
Response Factor: 19544.9
RRF SD: 835.421, % Relative SD: 4.27437
Response type: External Std, Area
Curve type: RF

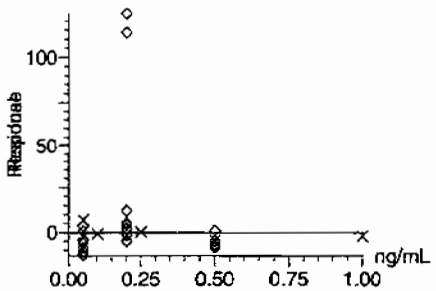

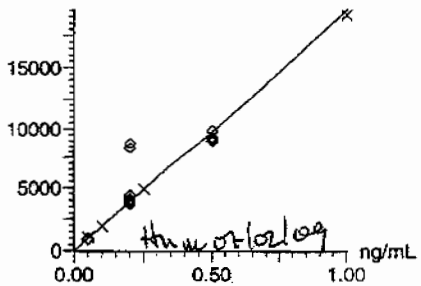

thw 07/02/09

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 9:01:25 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 51336.3
RRF SD: 459.349, % Relative SD: 0.894783
Response type: External Std, Area
Curve type: RF

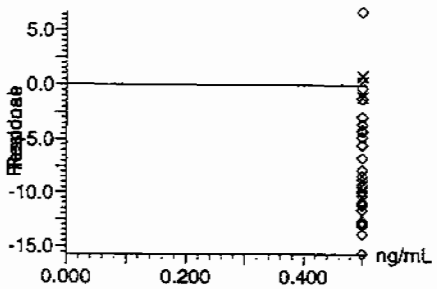

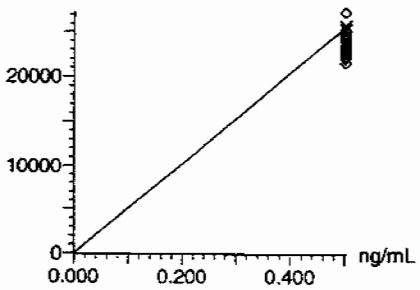

366

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2473–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	98.41	30–JUN–09 11:19	per0630009a
Perchlorate Isotope Ratio		2.68		30–JUN–09 11:19	per0630009a
Perchlorate–101	.5	.51	101.17	30–JUN–09 11:19	per0630009a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630009a
Date: 30-Jun-2009
Time: 11:19:39
ID: WCL090610-06ICV
Vial: 1:2,A

aw
07-01-09

Perchlorate

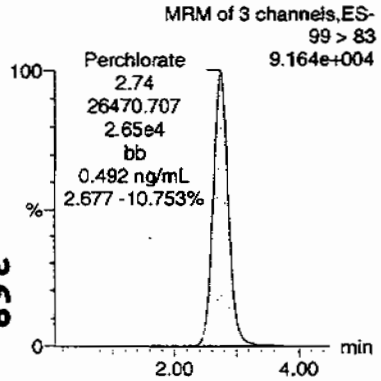

Perchlorate

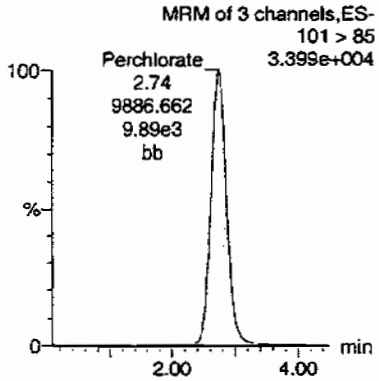

Perchlorate-101

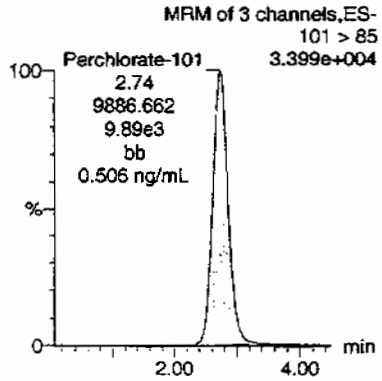

Perchlorate-O(18)

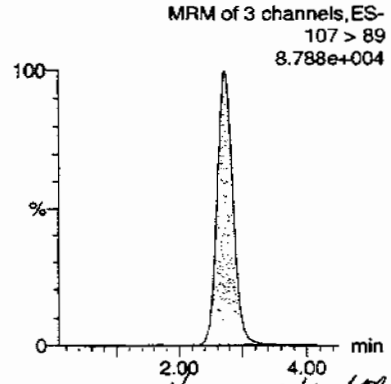

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06ICV	Perchlorate	99 > 83	2.74	26470.707	26470.707	bb			0.4920	98.41	-1.59	15047....	2.68
WCL090610-06ICV	Perchlorate-101	101 > 85	2.74	9886.662	9886.662	bb			0.5058	101.17	1.17	1131.1...	
WCL090610-06ICV	Perchlorate-O(18)	107 > 89	2.73	25360.139	25360.139	bb			0.4940	98.80	-1.20	4237.8...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2473-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	93.51	30-JUN-09 12:50	per0630020a
Perchlorate Isotope Ratio		2.71		30-JUN-09 12:50	per0630020a
Perchlorate-101	.5	.47	94.92	30-JUN-09 12:50	per0630020a
Perchlorate	.5	.47	93.43	30-JUN-09 14:21	per0630031a
Perchlorate Isotope Ratio		2.75		30-JUN-09 14:21	per0630031a
Perchlorate-101	.5	.47	93.52	30-JUN-09 14:21	per0630031a
Perchlorate	.5	.47	93.5	30-JUN-09 15:51	per0630042a
Perchlorate Isotope Ratio		2.7		30-JUN-09 15:51	per0630042a
Perchlorate-101	.5	.48	95.26	30-JUN-09 15:51	per0630042a
Perchlorate	.5	.47	93.35	30-JUN-09 17:22	per0630053a
Perchlorate Isotope Ratio		2.8		30-JUN-09 17:22	per0630053a
Perchlorate-101	.5	.46	91.73	30-JUN-09 17:22	per0630053a
Perchlorate	.5	.45	89.18	30-JUN-09 18:53	per0630064a

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2473-1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		2.66		30-JUN-09 18:53	per0630064a
Perchlorate-101	.5	.46	92.31	30-JUN-09 18:53	per0630064a

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Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630020a
Date: 30-Jun-2009
Time: 12:50:19
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
CWW
07/01/09

Perchlorate

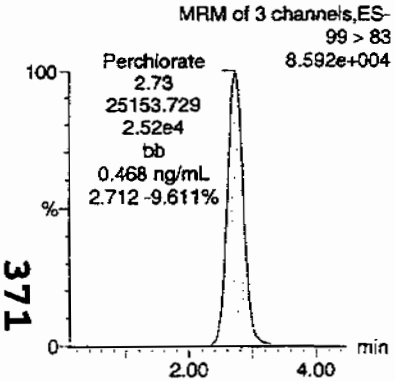

Perchlorate

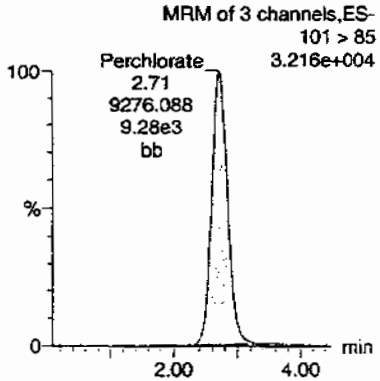

Perchlorate-101

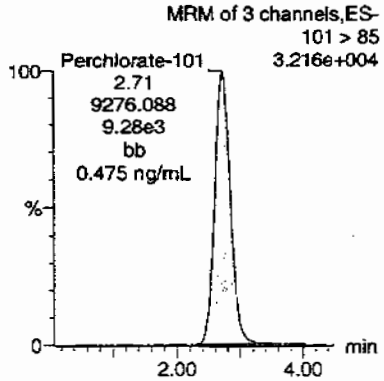

Perchlorate-O(18)

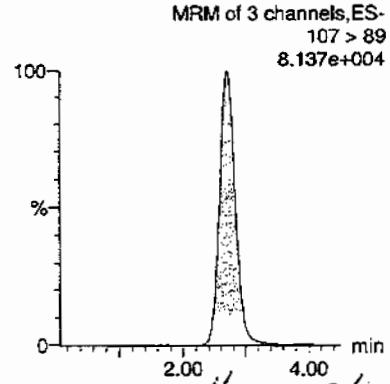

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.73	25153.729	25153.729	bb			0.4676	93.51	-6.49	13956....	2.71
WCL090610-06CCV	Perchlorate-101	101 > 85	2.71	9276.088	9276.088	bb			0.4746	94.92	-5.08	1180.7...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.70	23519.236	23519.236	bb			0.4581	91.63	-8.37	4023.7...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630031a
Date: 30-Jun-2009
Time: 14:21:01
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
07-01-09

Perchlorate

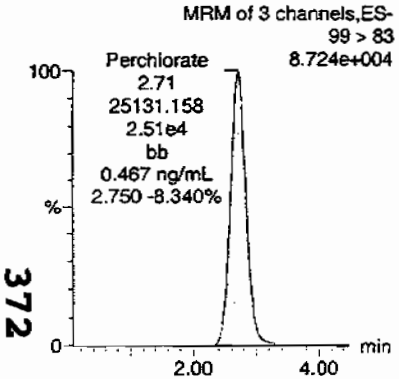

Perchlorate

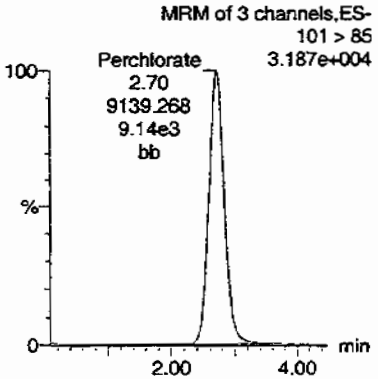

Perchlorate-101

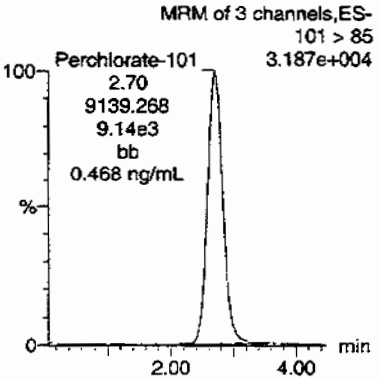

Perchlorate-O(18)

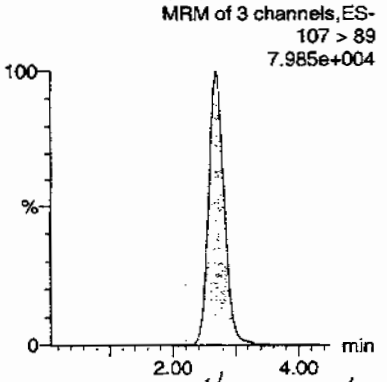

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.71	25131.158	25131.158	bb			0.4671	93.43	-6.57	583.159	2.75
WCL090610-06CCV	Perchlorate-101	101 > 85	2.70	9139.268	9139.268	bb			0.4676	93.52	-6.48	1409.9...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.69	23116.545	23116.545	bb			0.4503	90.06	-9.94	7340.3...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630042a
Date: 30-Jun-2009
Time: 15:51:45
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
ano
07-01-09

Perchlorate

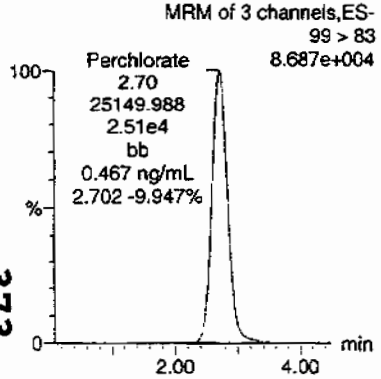

Perchlorate

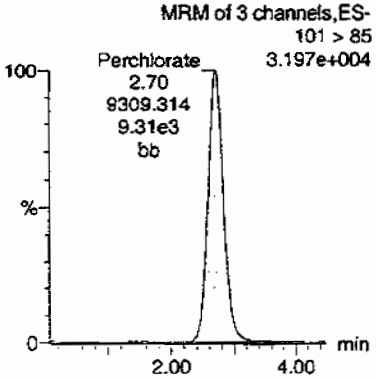

Perchlorate-101

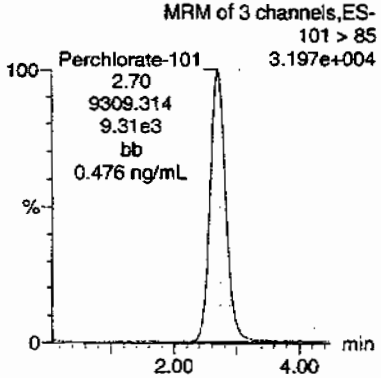

Perchlorate-O(18)

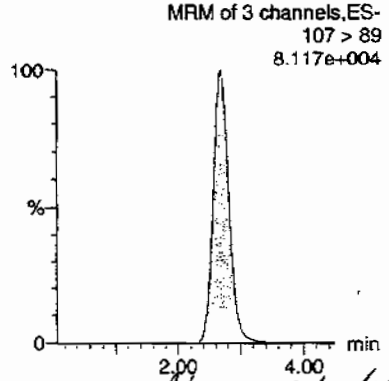

Amm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.70	25149.988	25149.988	bb			0.4675	93.50	-6.50	12682....	2.70
WCL090610-06CCV	Perchlorate-101	101 > 85	2.70	9309.314	9309.314	bb			0.4763	95.26	-4.74	2339.4...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.69	23399.309	23399.309	bb			0.4558	91.16	-8.84	10568....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630053a
Date: 30-Jun-2009
Time: 17:22:30
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
07-01-09

Perchlorate

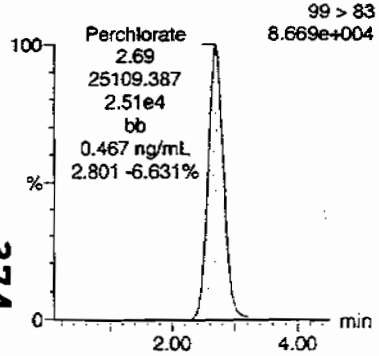

Perchlorate

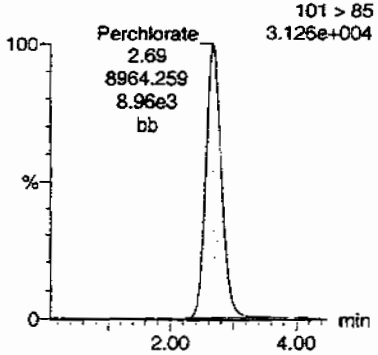

Perchlorate-101

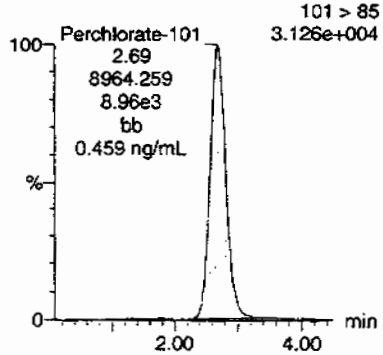

Perchlorate-O(18)

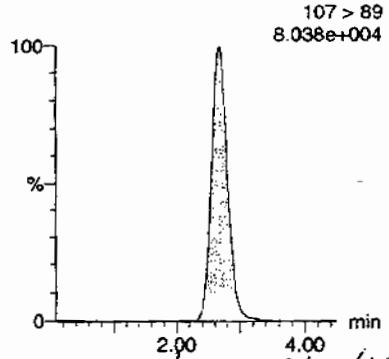

Hum 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.69	25109.387	25109.387	bb			0.4667	93.35	-6.65	5465.5...	2.80
WCL090610-06CCV	Perchlorate-101	101 > 85	2.69	8964.259	8964.259	bb			0.4586	91.73	-8.27	2400.4...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.68	23249.029	23249.029	bb			0.4529	90.58	-9.42	2653.1...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630064a
Date: 30-Jun-2009
Time: 18:53:30
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
CWW
07/01/09

Perchlorate

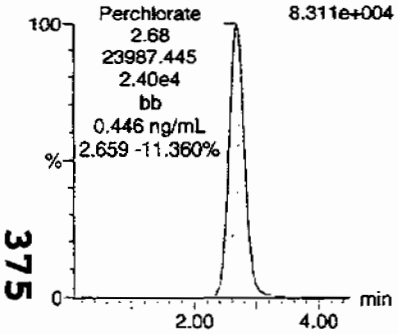

Perchlorate

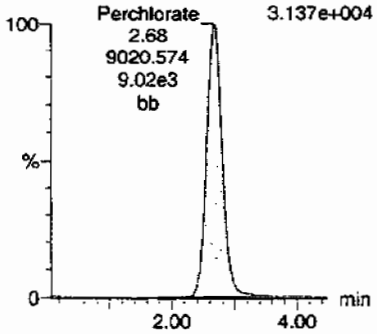

Perchlorate-101

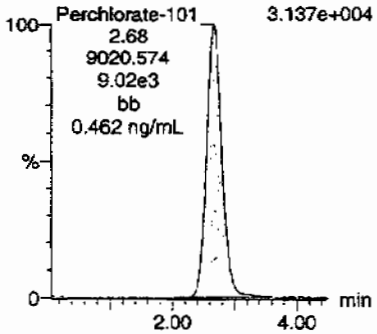

Perchlorate-O(18)

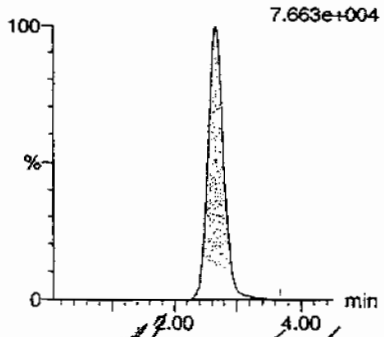

HMC 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.68	23987.445	23987.445	bb			0.4459	89.18	-10.82	4248.5...	2.66
WCL090610-06CCV	Perchlorate-101	101 > 85	2.68	9020.574	9020.574	bb			0.4615	92.31	-7.69	1904.7...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.66	22107.057	22107.057	bb			0.4306	86.13	-13.87	6813.9...	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2473–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	99.87	30–JUN–09 11:36	per0630011a
Perchlorate Isotope Ratio		2.73		30–JUN–09 11:36	per0630011a
Perchlorate–101	.05	.05	100.55	30–JUN–09 11:36	per0630011a
Perchlorate	.05	.05	95.32	30–JUN–09 13:06	per0630022a
Perchlorate Isotope Ratio		2.93		30–JUN–09 13:06	per0630022a
Perchlorate–101	.05	.04	89.51	30–JUN–09 13:06	per0630022a
Perchlorate	.05	.05	102.07	30–JUN–09 14:37	per0630033a
Perchlorate Isotope Ratio		2.93		30–JUN–09 14:37	per0630033a
Perchlorate–101	.05	.05	95.89	30–JUN–09 14:37	per0630033a
Perchlorate	.05	.05	94.41	30–JUN–09 16:08	per0630044a
Perchlorate Isotope Ratio		2.51		30–JUN–09 16:08	per0630044a

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2473-1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate-101	.05	.05	103.53	30-JUN-09 16:08	per0630044a
Perchlorate	.05	.05	93.98	30-JUN-09 17:39	per0630055a
Perchlorate Isotope Ratio		2.75		30-JUN-09 17:39	per0630055a
Perchlorate-101	.05	.05	94.06	30-JUN-09 17:39	per0630055a
Perchlorate	.05	.05	90.83	30-JUN-09 19:10	per0630066a
Perchlorate Isotope Ratio		2.86		30-JUN-09 19:10	per0630066a
Perchlorate-101	.05	.04	87.49	30-JUN-09 19:10	per0630066a

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630011a
Date: 30-Jun-2009
Time: 11:36:07
ID: WCL090610-07CRI
Vial: 1:2,B

CWW 07-01-09

Perchlorate

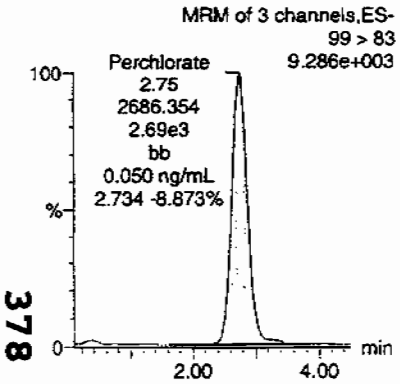

Perchlorate

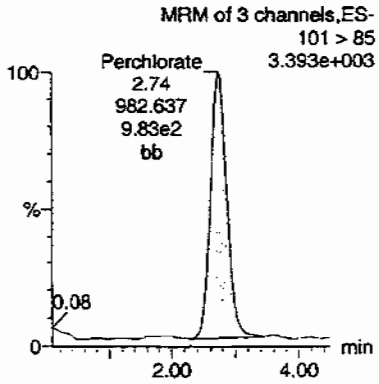

Perchlorate-101

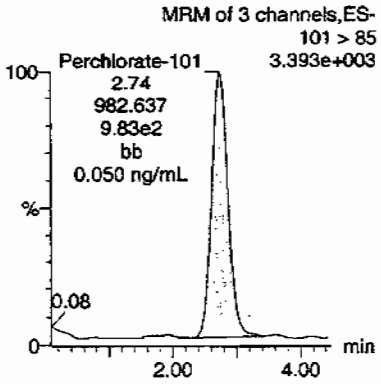

Perchlorate-O(18)

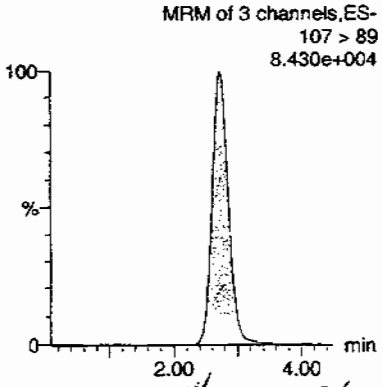

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.75	2686.354	2686.354	bb			0.0499	99.87	-0.13	924.865	2.73
WCL090610-07CRI	Perchlorate-101	101 > 85	2.74	982.637	982.637	bb			0.0503	100.55	0.55	313.910	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.73	24612.648	24612.648	bb			0.4794	95.89	-4.11	2349.9...	

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630022a
Date: 30-Jun-2009
Time: 13:06:48
ID: WCL090610-07CRI
Vial: 1:2,B

Pgao
ano
07-01-09

Perchlorate

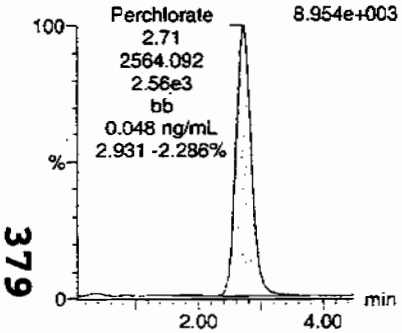

Perchlorate

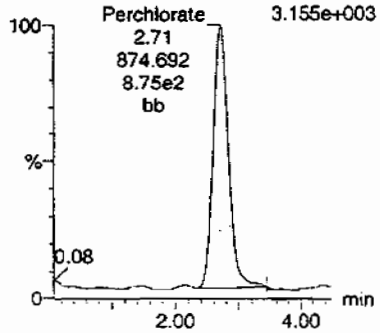

Perchlorate-101

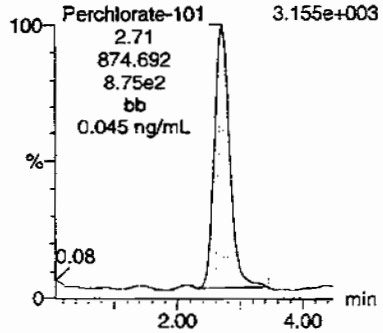

Perchlorate-O(18)

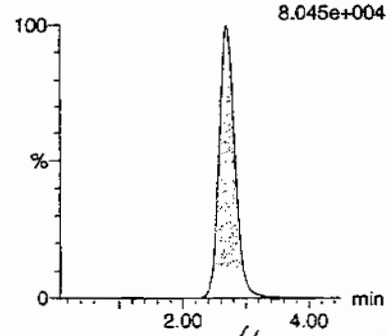

Anne 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.71	2564.092	2564.092	bb			0.0477	95.32	-4.68	377.492	2.93
WCL090610-07CRI	Perchlorate-101	101 > 85	2.71	874.692	874.692	bb			0.0448	89.51	-10.49	144.469	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.70	23144.973	23144.973	bb			0.4508	90.17	-9.83	8866.8...	

379

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630033a
Date: 30-Jun-2009
Time: 14:37:30
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
CWW
07/01/09

Perchlorate

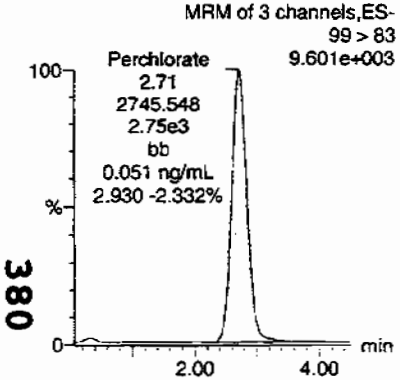

Perchlorate

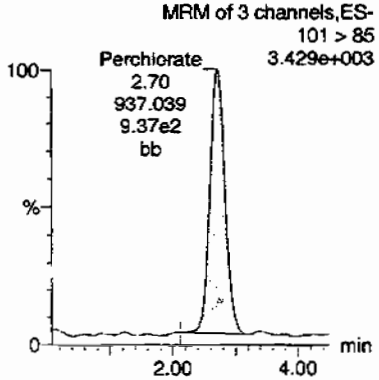

Perchlorate-101

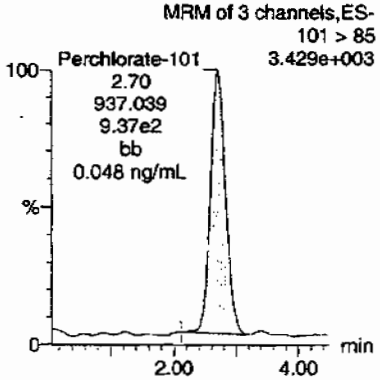

Perchlorate-O(18)

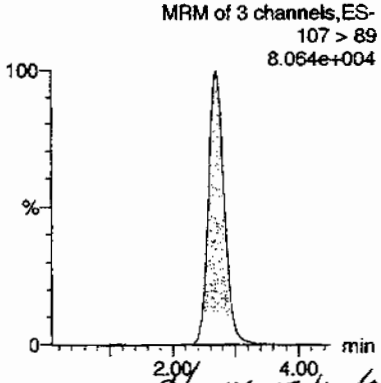

AMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.71	2745.548	2745.548	bb			0.0510	102.07	2.07	1568.9...	2.93
WCL090610-07CRI	Perchlorate-101	101 > 85	2.70	937.039	937.039	bb			0.0479	95.89	-4.11	119.555	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.70	23314.953	23314.953	bb			0.4542	90.83	-9.17	6251.4...	

380

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630044a
Date: 30-Jun-2009
Time: 16:08:13
ID: WCL090610-07CRI
Vial: 1:2,B

Rss
aw
07/01/09

Perchlorate

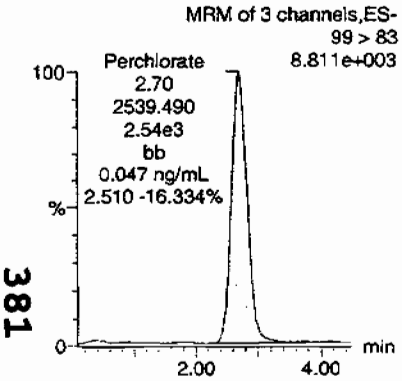

Perchlorate

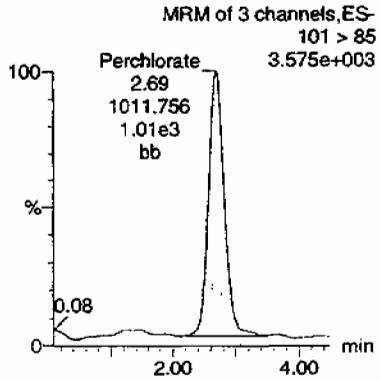

Perchlorate-101

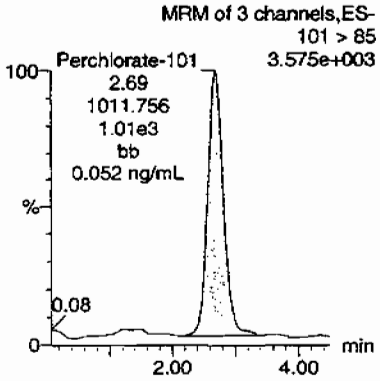

Perchlorate-O(18)

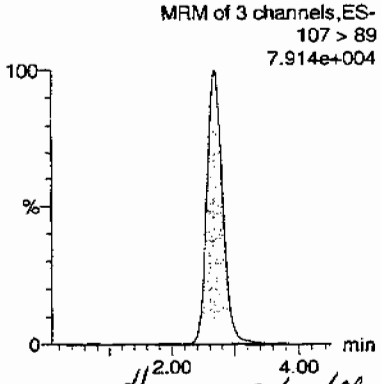

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.70	2539.490	2539.490	bb			0.0472	94.41	-5.59	337.441	2.51
WCL090610-07CRI	Perchlorate-101	101 > 85	2.69	1011.756	1011.756	bb			0.0518	103.53	3.53	78.842	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.69	22688.219	22688.219	bb			0.4420	88.39	-11.61	5355.6...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630055a
Date: 30-Jun-2009
Time: 17:39:13
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
and
07-01-09

Perchlorate

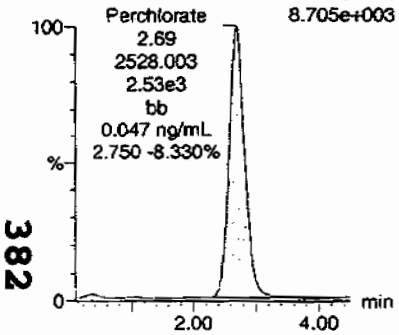

Perchlorate

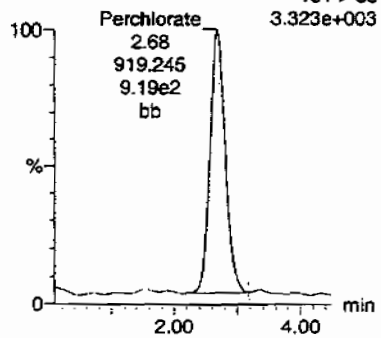

Perchlorate-101

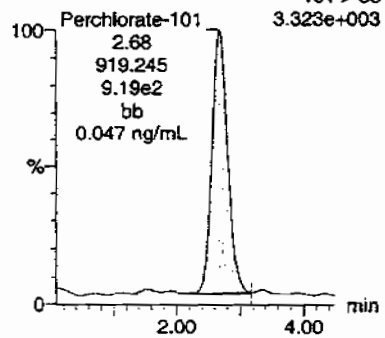

Perchlorate-O(18)

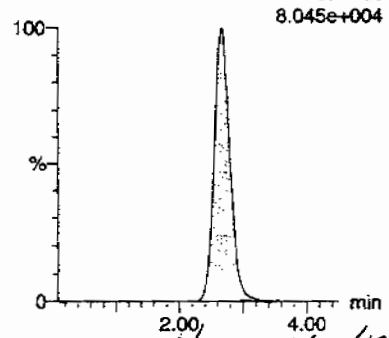

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.69	2528.003	2528.003	bb			0.0470	93.98	-6.02	555.542	2.75
WCL090610-07CRI	Perchlorate-101	101 > 85	2.68	919.245	919.245	bb			0.0470	94.06	-5.94	154.618	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.68	23038.914	23038.914	bb			0.4488	89.76	-10.24	5496.9...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qid

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630066a
Date: 30-Jun-2009
Time: 19:10:13
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
and
07.01.09

Perchlorate

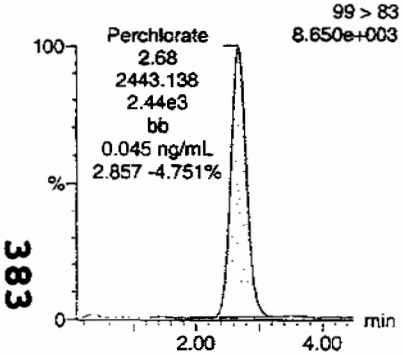

Perchlorate

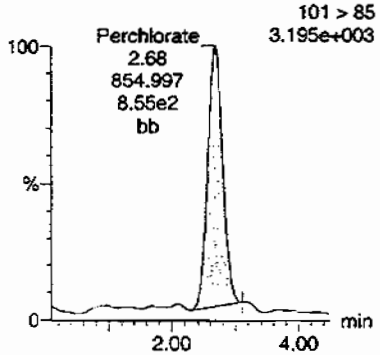

Perchlorate-101

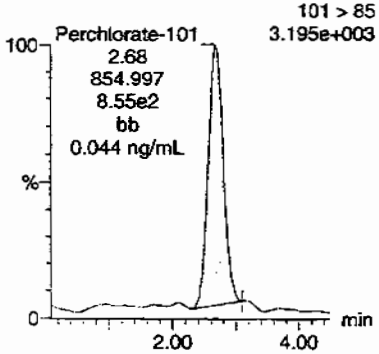

Perchlorate-O(18)

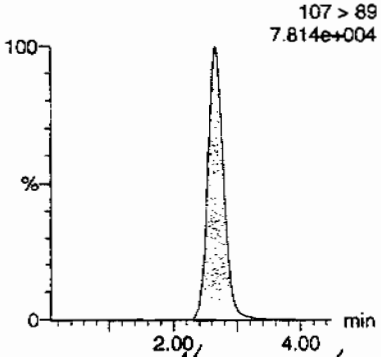

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.68	2443.138	2443.138	bb			0.0454	90.83	-9.17	545.751	2.86
WCL090610-07CRI	Perchlorate-101	101 > 85	2.68	854.997	854.997	bb			0.0437	87.49	-12.51	419.408	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.66	22362.273	22362.273	bb			0.4356	87.12	-12.88	9605.5...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: GROUND WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

MB

Date Received: 30–JUN–09

GEL Job No (SDG): 09–2473–1

GEL Sample ID: 1201871409

Date Filtered: 30–JUN–09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.050	ug/L	U	1	30–JUN–09 16:16	per0630045a
	Perchlorate Isotope Ratio						1	30–JUN–09 16:16	per0630045a
14797–73–0	Perchlorate–101	.05	.2	0.050	ug/L	U	1	30–JUN–09 16:16	per0630045a
	Perchlorate–O(18)			0.426	ug/L		1	30–JUN–09 16:16	per0630045a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630045a
Date: 30-Jun-2009
Time: 16:16:29
ID: 1201871409
Vial: 2:1,A

|LANL|881216|L2Q|MB|1|

Cmm 07-01-09

Perchlorate

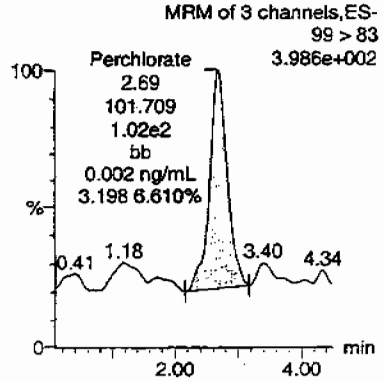

Perchlorate

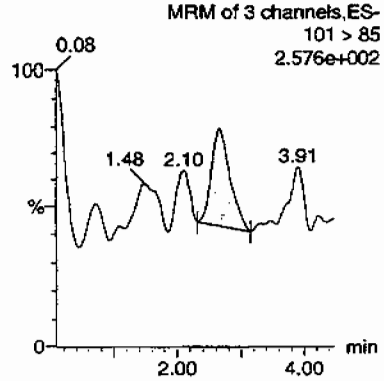

Perchlorate-101

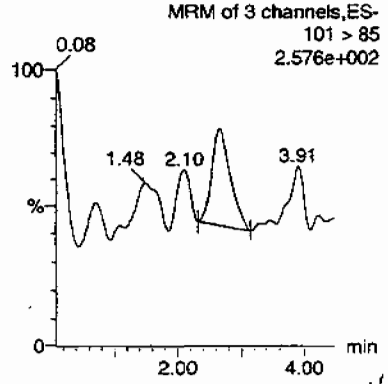

Perchlorate-O(18)

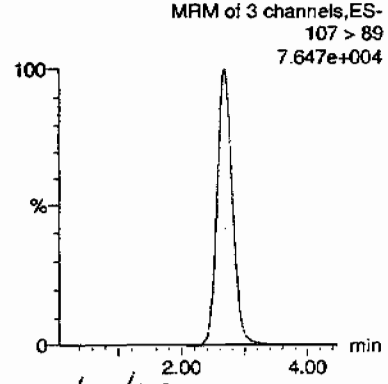

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871409	Perchlorate	99 > 83	2.69	101.709	101.709	bb			0.0019			47.727	3.20
1201871409	Perchlorate-101	101 > 85	2.65	31.801	31.801	bb			0.0016			8.847	
1201871409	Perchlorate-O(18)	107 > 89	2.68	21871.309	21871.309	bb			0.4260	85.21	-14.79	18447....	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: GROUND WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
LCS

Date Received: 30–JUN–09

GEL Job No (SDG): 09–2473–1

GEL Sample ID: 1201871410

Date Filtered: 30–JUN–09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.186	ug/L	J	1	30–JUN–09 16:24	per0630046a
	Perchlorate Isotope Ratio			2.71			1	30–JUN–09 16:24	per0630046a
14797–73–0	Perchlorate–101	.05	.2	0.189	ug/L	J	1	30–JUN–09 16:24	per0630046a
	Perchlorate–O(18)			0.435	ug/L		1	30–JUN–09 16:24	per0630046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630046a
Date: 30-Jun-2009
Time: 16:24:55
ID: 1201871410
Vial: 2:1,B

|LANL| 881216 |LZQ|LLS|1|

LWW 07-01-09

Perchlorate

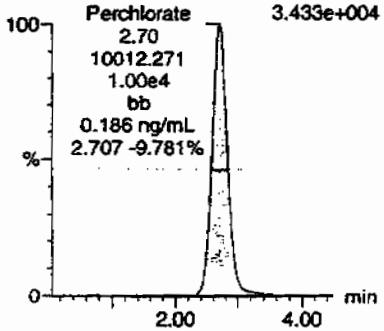

Perchlorate

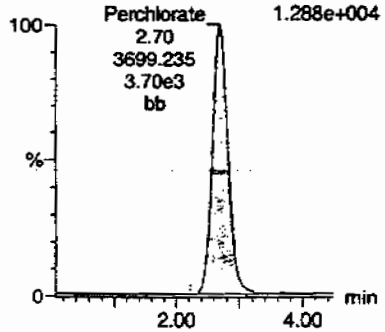

Perchlorate-101

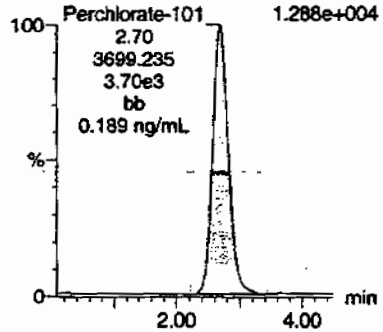

Perchlorate-O(18)

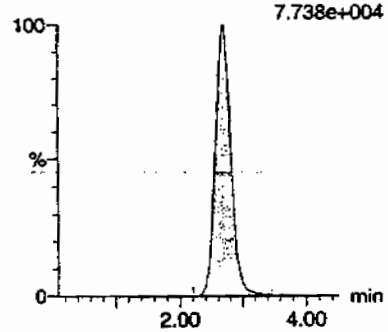

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871410	Perchlorate	99 > 83	2.70	10012.271	10012.271	bb			0.1861	93.06	-6.94	5613.9...	2.71
1201871410	Perchlorate-101	101 > 85	2.70	3699.235	3699.235	bb			0.1893	94.63	-5.37	1128.3...	
1201871410	Perchlorate-O(18)	107 > 89	2.69	22316.830	22316.830	bb			0.4347	86.94	-13.06	7263.1...	

$$\frac{10012.271}{53797} = 0.1861$$

HMW 07/02/09

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 881215 Verified by:
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1201871409 MB	30-JUN-2009 11:11:16	10	10	1
1201871410 LCS	30-JUN-2009 11:11:16	10	10	1
232341002	30-JUN-2009 11:11:16	10	10	1
232345001	30-JUN-2009 11:11:16	10	10	1
1201871411 MS (232345001)	30-JUN-2009 11:11:16	10	10	1
1201871412 MSD (232345001)	30-JUN-2009 11:11:16	10	10	1
232345003	30-JUN-2009 11:11:16	10	10	1
232345008	30-JUN-2009 11:11:16	10	10	1
232345009	30-JUN-2009 11:11:16	10	10	1
232370001	30-JUN-2009 11:11:16	10	10	1
1201871414 MS (232370001)	30-JUN-2009 11:11:16	10	10	1
1201871416 MSD (232370001)	30-JUN-2009 11:11:16	10	10	1
232425001	30-JUN-2009 11:11:16	10	10	1
232432001	30-JUN-2009 11:11:16	10	10	1
232435002	30-JUN-2009 11:11:16	10	10	1
232437001	30-JUN-2009 11:11:16	10	10	1
1201871413 MS (232437001)	30-JUN-2009 11:11:16	10	10	1
1201871415 MSD (232437001)	30-JUN-2009 11:11:16	10	10	1
232502001	30-JUN-2009 11:11:16	10	10	1
232502002	30-JUN-2009 11:11:16	10	10	1
232502003	30-JUN-2009 11:11:16	10	10	1
232502004	30-JUN-2009 11:11:16	10	10	1
232510001	30-JUN-2009 11:11:16	10	10	1
1201871417 ICS	30-JUN-2009 11:11:16	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201871417	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
LCS	1201871410	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MS	1201871411	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MS	1201871413	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MS	1201871414	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MSD	1201871412	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MSD	1201871415	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MSD	1201871416	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
RGNT	All	500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1133543	10	mL
RGNT	All	O2SI HPLC Grade Water	1141273	10	mL

Comments:

Desalting cartridges used: 090603-1-H & 090401-Ba

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 06/30/09
Extr. Injection Volume: 20uL
Sequence Number: per063009a
Initial Calibration Date: 06/30/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: [illegible]
Date: 07/02/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090618-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0630001a	IPB001	CWW	6/30/2009 10:13			1		USE	B
per0630002a	IPB001	CWW	6/30/2009 10:21			1		USE	B
per0630003a	WCLICAL-01	CWW	6/30/2009 10:30			1		USE	I
per0630004a	WCLICAL-02	CWW	6/30/2009 10:38			1		USE	I
per0630005a	WCLICAL-03	CWW	6/30/2009 10:46			1		USE	I
per0630006a	WCLICAL-04	CWW	6/30/2009 10:54			1		USE	I
per0630007a	WCLICAL-05	CWW	6/30/2009 11:02			1		USE	I
per0630008a	IPB002	CWW	6/30/2009 11:11			1		USE	B
per0630009a	WCLICV	CWW	6/30/2009 11:19			1		USE	C
per0630010a	IPB003	CWW	6/30/2009 11:27			1		USE	B
per0630011a	WCLCRI	CWW	6/30/2009 11:36			1		USE	C
per0630012a	1201864376	CWW	6/30/2009 11:44	878266	09-2331-1	1	LANL	USE	S
per0630013a	1201864377	CWW	6/30/2009 11:52	878266	09-2331-1	1	LANL	USE	S
per0630014a	1201864380	CWW	6/30/2009 12:00	878266	09-2331-1	1	LANL	USE	S
per0630015a	231844001	CWW	6/30/2009 12:09	878266	09-2331-1	1	LANL	USE	S
per0630016a	1201864378	CWW	6/30/2009 12:17	878266	09-2331-1	1	LANL	USE	S
per0630017a	1201864379	CWW	6/30/2009 12:25	878266	09-2331-1	1	LANL	USE	S
per0630018a	231844002	CWW	6/30/2009 12:33	878266	09-2331-1	1	LANL	USE	S
per0630019a	231844003	CWW	6/30/2009 12:42	878266	09-2331-1	1	LANL	USE	S
per0630020a	WCLCCV	CWW	6/30/2009 12:50			1		USE	C
per0630021a	IPB004	CWW	6/30/2009 12:58			1		USE	B
per0630022a	WCLCRI	CWW	6/30/2009 13:06			1		USE	C
per0630023a	231844004	CWW	6/30/2009 13:15	878266	09-2331-1	1	LANL	USE	S
per0630024a	231844005	CWW	6/30/2009 13:23	878266	09-2331-1	1	LANL	USE	S
per0630025a	231844006	CWW	6/30/2009 13:31	878266	09-2331-1	1	LANL	USE	S
per0630026a	231844007	CWW	6/30/2009 13:39	878266	09-2331-1	1	LANL	USE	S
per0630027a	231844008	CWW	6/30/2009 13:48	878266	09-2331-1	1	LANL	USE	S
per0630028a	231844009	CWW	6/30/2009 13:56	878266	09-2331-1	1	LANL	USE	S
per0630029a	231844010	CWW	6/30/2009 14:04	878266	09-2331-1	1	LANL	USE	S

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per0630030a	231844011	CWW	6/30/2009 14:12	878266	09-2331-1	1	LANL	USE	S
per0630031a	WCLCCV	CWW	6/30/2009 14:21			1		USE	C
per0630032a	IPB005	CWW	6/30/2009 14:29			1		USE	B
per0630033a	WCLCRI	CWW	6/30/2009 14:37			1		USE	C
per0630034a	231844012	CWW	6/30/2009 14:45	878266	09-2331-1	1	LANL	USE	S
per0630035a	231844013	CWW	6/30/2009 14:54	878266	09-2331-1	1	LANL	USE	S
per0630036a	231844014	CWW	6/30/2009 15:02	878266	09-2331-1	1	LANL	USE	S
per0630037a	231844015	CWW	6/30/2009 15:10	878266	09-2331-1	1	LANL	USE	S
per0630038a	231844016	CWW	6/30/2009 15:18	878266	09-2331-1	1	LANL	USE	S
per0630039a	231844017	CWW	6/30/2009 15:27	878266	09-2331-1	1	LANL	USE	S
per0630040a	231844018	CWW	6/30/2009 15:35	878266	09-2331-1	1	LANL	USE	S
per0630041a	231844019	CWW	6/30/2009 15:43	878266	09-2331-1	1	LANL	USE	S
per0630042a	WCLCCV	CWW	6/30/2009 15:51			1		USE	C
per0630043a	IPB006	CWW	6/30/2009 15:59			1		USE	B
per0630044a	WCLCRI	CWW	6/30/2009 16:08			1		USE	C
per0630045a	1201871409	CWW	6/30/2009 16:16	881216	VARIOUS	1	LANL	USE	S
per0630046a	1201871410	CWW	6/30/2009 16:24	881216	VARIOUS	1	LANL	USE	S
per0630047a	1201871417	CWW	6/30/2009 16:33	881216	VARIOUS	1	LANL	USE	S
per0630048a	232341002	CWW	6/30/2009 16:41	881216	09-2469	1	LANL	USE	S
per0630049a	232345001	CWW	6/30/2009 16:49	881216	09-2464	1	LANL	USE	S
per0630050a	1201871411	CWW	6/30/2009 16:57	881216	09-2464	1	LANL	USE	S
per0630051a	1201871412	CWW	6/30/2009 17:06	881216	09-2464	1	LANL	USE	S
per0630052a	232345003	CWW	6/30/2009 17:14	881216	09-2464	1	LANL	USE	S
per0630053a	WCLCCV	CWW	6/30/2009 17:22			1		USE	C
per0630054a	IPB007	CWW	6/30/2009 17:30			1		USE	B
per0630055a	WCLCRI	CWW	6/30/2009 17:39			1		USE	C
per0630056a	232345008	CWW	6/30/2009 17:47	881216	09-2464	1	LANL	USE	S
per0630057a	232345009	CWW	6/30/2009 17:55	881216	09-2464	1	LANL	USE	S
per0630058a	232370001	CWW	6/30/2009 18:04	881216	09-2452-1	1	LANL	USE	S
per0630059a	1201871414	CWW	6/30/2009 18:12	881216	09-2452-1	1	LANL	USE	S
per0630060a	1201871416	CWW	6/30/2009 18:20	881216	09-2452-1	1	LANL	USE	S
per0630061a	232425001	CWW	6/30/2009 18:28	881216	09-2473-1	1	LANL	USE	S
per0630062a	232432001	CWW	6/30/2009 18:37	881216	09-2478-1	1	LANL	USE	S
per0630063a	232435002	CWW	6/30/2009 18:45	881216	09-2484	1	LANL	USE	S
per0630064a	WCLCCV	CWW	6/30/2009 18:53			1		USE	C
per0630065a	IPB008	CWW	6/30/2009 19:01			1		USE	B
per0630066a	WCLCRI	CWW	6/30/2009 19:10			1		USE	C

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per0630067a	232437001	CWW	6/30/2009 19:18	881216	09-2493	1	LANL	USE	S
per0630068a	1201871413	CWW	6/30/2009 19:26	881216	09-2493	1	LANL	USE	S
per0630069a	1201871415	CWW	6/30/2009 19:35	881216	09-2493	1	LANL	USE	S
per0630070a	232502001	CWW	6/30/2009 19:43	881216	09-2496	1	LANL	USE	S
per0630071a	232502002	CWW	6/30/2009 19:51	881216	09-2496	1	LANL	USE	S
per0630072a	232502003	CWW	6/30/2009 19:59	881216	09-2496	1	LANL	USE	S
per0630073a	232502004	CWW	6/30/2009 20:08	881216	09-2496	1	LANL	USE	S
per0630074a	232510001	CWW	6/30/2009 20:16	881216	09-2500-1	1	LANL	USE	S
per0630075a	WCLCCV	CWW	6/30/2009 20:24			1		USE	C
per0630076a	IPB009	CWW	6/30/2009 20:33			1		USE	B
per0630077a	WCLCRI	CWW	6/30/2009 20:41			1		USE	C

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630059a
Date: 30-Jun-2009
Time: 18:12:19
ID: 1201871414
Vial: 2:2,F

|LANL|881216|IZQ|MS|1|

CWW 07-01-09

Perchlorate

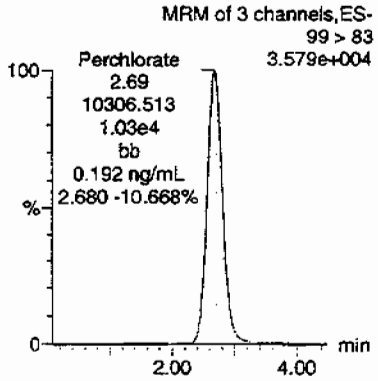

Perchlorate

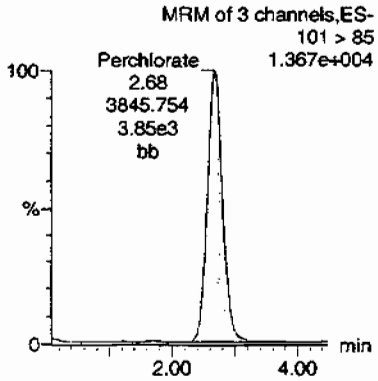

Perchlorate-101

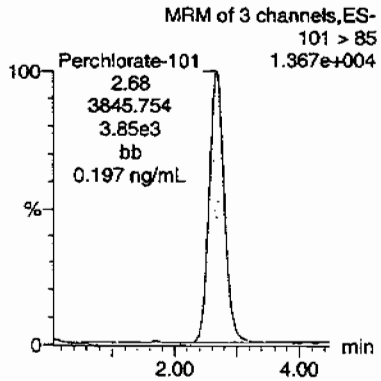

Perchlorate-O(18)

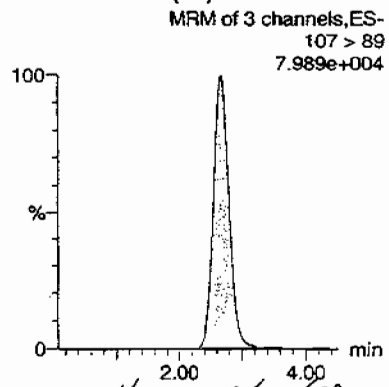

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871414	Perchlorate	99 > 83	2.69	10306.513	10306.513	bb			0.1916	95.79	-4.21	1474.6...	2.68
1201871414	Perchlorate-101	101 > 85	2.68	3845.754	3845.754	bb			0.1968	98.38	-1.62	515.957	
1201871414	Perchlorate-O(18)	107 > 89	2.66	22800.783	22800.783	bb			0.4441	88.83	-11.17	10123....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630060a
Date: 30-Jun-2009
Time: 18:20:32
ID: 1201871416
Vial: 2:3,A

|LAWL|881216|LIQ|MSD|1|

CWW 07-01-09

Perchlorate

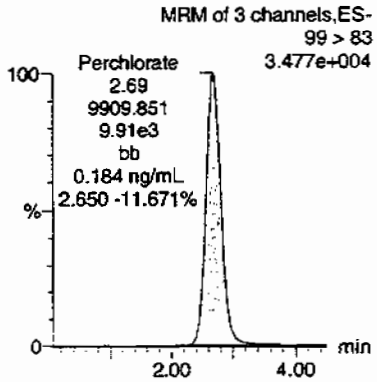

Perchlorate

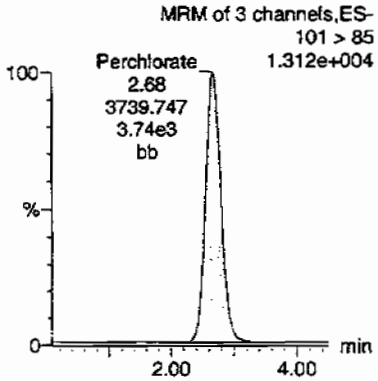

Perchlorate-101

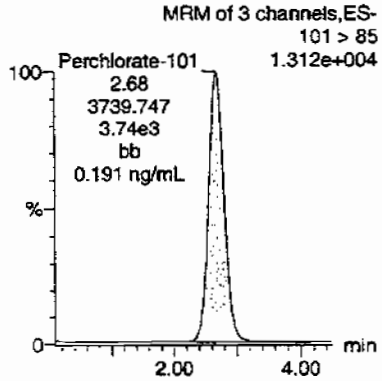

Perchlorate-O(18)

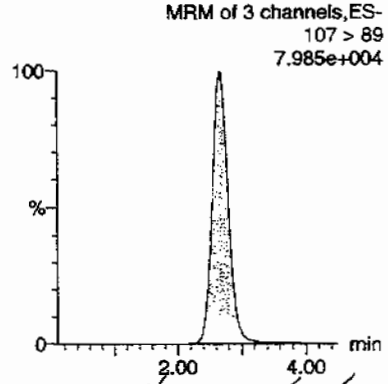

HMM 07/01/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871416	Perchlorate	99 > 83	2.69	9909.851	9909.851	bb			0.1842	92.10	-7.90	3219.4...	2.65
1201871416	Perchlorate-101	101 > 85	2.68	3739.747	3739.747	bb			0.1913	95.67	-4.33	1064.5...	
1201871416	Perchlorate-O(18)	107 > 89	2.66	22865.434	22865.434	bb			0.4454	89.08	-10.92	5575.2...	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

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LC/MS/MS EXPLOSIVES ANALYSIS

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LC/MS/MS Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2473

Method/Analysis Information

Procedure:	**Definitive Low Level Analysis of Nitroaromatic Explosives Utilizing Liquid Chromatography / Mass Spectrometry / Mass Spectrometry (LC/MS/MS) by SW-846 Method 8321 Modified (8321M)**
Analytical Method:	SW846 8321A Modified
Prep Method:	SW846 8330 PREP
Analytical Batch Number:	880975
Prep Batch Number:	880974

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8321A Modified:

Sample ID	Client ID
232424001	CAMO-09-10463
1201870673	Method Blank (MB)
1201870674	Laboratory Control Sample (LCS)
1201870675	232424001(CAMO-09-10463) Matrix Spike (MS)
1201870676	232424001(CAMO-09-10463) Matrix Spike Duplicate (MSD)

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-056 REV# 11.

Primary Analyte Analysis

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG.

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Calibration Verification Standard Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Calibration Blank Requirements
All initial or continuing calibration blanks (ICB or CCB) bracketing the analyses associated with this batch were within acceptance criteria. Due to software limitations, the CCBs and/or the ICBs may have a concentration for target analytes in the Found column. These values should be zero.

CRI Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards and may be based off the grand mean average percent recovery of all target analytes.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria in this SDG in this analytical batch for this analysis.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation
Sample 232424001 (CAMO-09-10463) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS spike recoveries were within the established acceptance limits:

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD spike recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

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Sample Dilutions
According to the GEL SOP for Method 8321A, all sample and QC extracts are diluted 1:1 v/v with acidified HPLC grade water. The samples in this SDG in this analytical batch for this analysis did not require any additional dilutions.

Sample Re-extraction/Re-analysis
Sample 232424001 (CAMO-09-10463) failed ISTD acceptance criteria. It was re-analyzed and passed acceptance criteria. The re-analysis is reported.

Secondary Analyte Analysis

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG.

Calibration Verification Standard Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Calibration Blank Requirements
All initial or continuing calibration blanks (ICB or CCB) bracketing the analyses associated with this batch were within acceptance criteria. Due to software limitations, the CCBs and/or the ICBs may have a concentration for target analytes in the Found column. These values should be zero.

CRI Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards and may be based off the grand mean average percent recovery of all target analytes.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria in this SDG in this analytical batch for this analysis.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation
Sample 232424001 (CAMO-09-10463) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS spike recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD spike recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

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Internal Standard (ISTD) Acceptance
The internal standards were not added to the secondary analyte extracts.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
According to the GEL SOP for Method 8321A, all sample and QC extracts are diluted 1:1 v/v with acidified HPLC grade water. The samples in this SDG in this analytical batch for this analysis did not require any additional dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG in this analytical batch for this analysis except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples required manual integrations due to software limitations.

Flagging Convention
The sample was not originally analyzed using SW-846 Method 8330.

Additional Comments
Due to software limitations, all initial calibration blanks must be designated as XIB001 in order for the forms to be correct.

Due to software limitations in the secondary analyte analysis, false positives and analytes detected below the MDL cannot be deleted from the raw data.

Due to software limitations, file extensions such as DL, RE, etc. may not appear on the generated forms and/or raw data.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for primary analyte analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for the primary analyte analysis. The laboratory also utilizes an Agilent 1100 liquid chromatography instrument for either primary or secondary analyte analysis. It is coupled with a Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as either LCMSMS #3 or LCMSMS #4. It is fitted with a APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for both the primary and secondary analyte analysis.

Chromatographic Columns

The detection of the primary analyte nitroaromatic and nitramines is accomplished through analysis on the following reversed phase column:

Phenomenex: Ultracarb 5u ODS (20), 250 x 4.60 mm ID.

The detection of the secondary analytes is accomplished through analysis on the following reversed phase column:

YMC: J'sphere ODS-H80, 150 x 4.6mm I.D.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Deborah M Mauer **Date:** 07/14/09

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SAMPLE DATA SUMMARY

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10463

Lab Code: GEI

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 232424001

Sample Amount 2

Moisture: 4.2

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713014a

Date Analyzed: 13-JUL-09 21:19

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10463

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 232424001

Sample Amount 2

Moisture: 4.2

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0701018.wiff

Date Analyzed: 01-JUL-09 15:15

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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QUALITY CONTROL SUMMARY

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

2

High Explosives Surrogate Recovery Summary

Lab Name: GEL Laboratories LLC **GEL Job No (SDG):** 09-2473

Lab Code: GEL **HPLC Column:** Phenomenex Ultracarb 5u ODS(20)

Lab Sample ID	Client Sample ID	DNT	QC Limits	Flg
232424001	CAMO-09-10463	97.4	73.7 - 133.3	
232424001	CAMO-09-10463	104	73.7 - 133.3	
1201870673	MB for batch 880974	104	73.7 - 133.3	
1201870673	MB for batch 880974	110	73.7 - 133.3	
1201870674	LCS for batch 880974	108	73.7 - 133.3	
1201870674	LCS for batch 880974	99.6	73.7 - 133.3	
1201870675	CAMO-09-10463(232424001MS)	108	73.7 - 133.3	
1201870675	CAMO-09-10463(232424001MS)	99.2	73.7 - 133.3	
1201870676	CAMO-09-10463(232424001MSD)	103	73.7 - 133.3	
1201870676	CAMO-09-10463(232424001MSD)	98.8	73.7 - 133.3	

DNT = 3,4-Dinitrotoluene

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3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 09-2473

Extract Batch Code: 880974

Date Extracted: 30-JUN-09

GEL LCS ID: 1201870674

GEL LCSDUP ID:

Analysis Date/Time: 01-JUL-09 14:42

DUP Analysis Date/Time:

Reporting Units: ug/kg

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
1,3,5-Trinitrobenzene	5000	4510	90.2					62.1 – 124
2,4,6-Trinitrotoluene	5000	5570	111					78.3 – 132
2,4-Dinitrotoluene	5000	5410	108					82.7 – 132
2,6-Dinitrotoluene	5000	4880	97.7					86.9 – 122
2-Amino-4,6-dinitrotoluene	5000	5800	116					84.2 – 149
4-Amino-2,6-dinitrotoluene	5000	5200	104					85.6 – 133
HMX	5000	5050	101					66.5 – 142
Nitrobenzene	5000	4290	85.7					71.8 – 126
PETN	5000	4260	85.2					64.6 – 147
RDX	5000	5070	101					78.7 – 144
Tetryl	5000	4280	85.5					31.2 – 119
m-Dinitrobenzene	5000	4900	98					80.9 – 127
m-Nitrotoluene	5000	4150	82.9					71.9 – 126
o-Nitrotoluene	5000	4020	80.5					75 – 123
p-Nitrotoluene	5000	3800	76.1					73.7 – 124

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

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3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 09-2473

Extract Batch Code: 880974

Date Extracted: 30-JUN-09

GEL LCS ID: 1201870674

GEL LCSDUP ID:

Analysis Date/Time: 01-JUL-09 14:58

DUP Analysis Date/Time:

Reporting Units: ug/kg

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
2,4-Diamino-6-nitrotoluene	5000	3890	77.8					64.8 – 128
2,6-Diamino-4-nitrotoluene	5000	4610	92.2					69.6 – 133
3,5-Dinitroaniline	5000	4850	97					77.3 – 123
TATB	5000	3690	73.8					46.8 – 166
tris(o-cresyl) phosphate	5000	5270	105					84.3 – 120

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

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High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: CAMO-09-10463

Lab Code: GEL

GEL Job No (SDG) 09-2473

Extract Batch Code: 880974

Date Extracted: 30-JUN-09

GEL Spike ID: 1201870675

GEL SpikeDup ID: 1201870676

Analysis Date/Time: 01-JUL-09 15:41

MSD Analysis Date/Time:

Reporting Units: ug/kg

QC Type: MS/MSD

Compound	Spike Added	Sample Conc	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Rec Limits
2,4,6-Trinitrotoluene	5000	0	5360	107	5540	111	3.14	30	83.4 - 138
2,4-Dinitrotoluene	5000	0	4890	97.7	5220	104	6.53	30	79.1 - 137
1,3,5-Trinitrobenzene	5000	0	4570	91.4	4740	94.9	3.72	30	70.7 - 130
2,6-Dinitrotoluene	5000	0	5020	100	5020	100	.127	30	85.4 - 125
2-Amino-4,6-dinitrotoluene	5000	0	5860	117	5820	116	.633	30	77.4 - 154
4-Amino-2,6-dinitrotoluene	5000	0	5000	100	5120	102	2.31	30	77.3 - 140
HMX	5000	0	5270	105	5370	107	1.95	30	66.7 - 144
Nitrobenzene	5000	0	4320	86.3	4440	88.8	2.77	30	70.4 - 129
PETN	5000	0	3740	74.7	3960	79.2	5.86	30	61.9 - 153
RDX	5000	0	5520	110	5630	113	1.91	30	73 - 140
Tetryl	5000	0	4180	83.6	4630	92.5	10.2	30	46.8 - 138
m-Dinitrobenzene	5000	0	5010	100	4830	96.6	3.59	30	83.5 - 126
m-Nitrotoluene	5000	0	4150	82.9	4150	82.9	.027	30	68.6 - 135
o-Nitrotoluene	5000	0	3860	77.2	3880	77.5	.411	30	71.2 - 131
p-Nitrotoluene	5000	0	3850	77.1	3960	79.2	2.76	30	69.3 - 133

#Column to be used to flag recovery and RPD values with an asterisk

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High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: CAMO-09-10463

Lab Code: GEL

GEL Job No (SDG) 09-2473

Extract Batch Code: 880974

Date Extracted: 30-JUN-09

GEL Spike ID: 1201870675

GEL SpikeDup ID: 1201870676

Analysis Date/Time: 01-JUL-09 15:31

MSD Analysis Date/Time:

Reporting Units: ug/kg

QC Type: MS/MSD

Compound	Spike Added	Sample Conc	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Rec Limits
2,4-Diamino-6-nitrotoluene	5000	0	4690	93.8	4950	99	5.39	30	51.6 - 127
2,6-Diamino-4-nitrotoluene	5000	0	5000	100	4820	96.4	3.67	30	58.9 - 135
3,5-Dinitroaniline	5000	0	4680	93.6	4760	95.2	1.7	30	72.8 - 125
tris(o-cresyl) phosphate	5000	0	5250	105	5150	103	1.92	30	79.1 - 124
TATB	5000	0	4390	87.8	5770	115	27.2	30	43.9 - 166

#Column to be used to flag recovery and RPD values with an asterisk

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 30-JUN-09 14:38

GEL Data File: EXP0630001a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	523.179
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	525.671
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

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Calibration: Untitled, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630001a
Date: 30-Jun-2009
Time: 14:38:24
ID: XIBLK01
Vial: 1:1,A

MMT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.893e+003

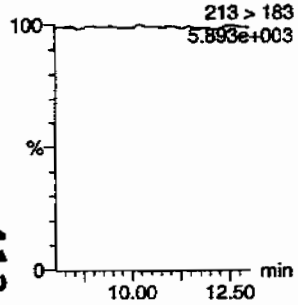

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.784e+003

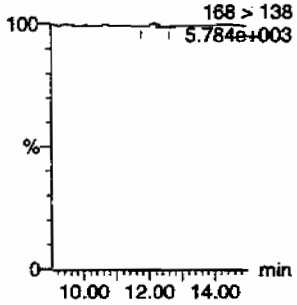

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.794e+004

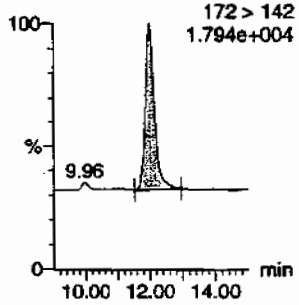

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.863e+003

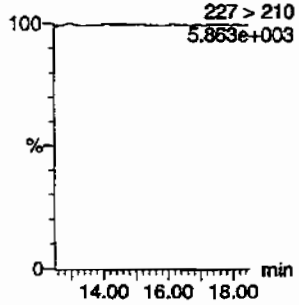

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.799e+003

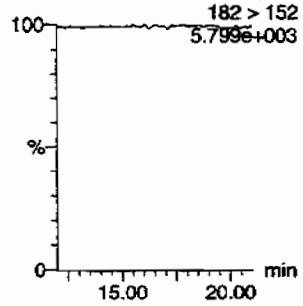

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.799e+003

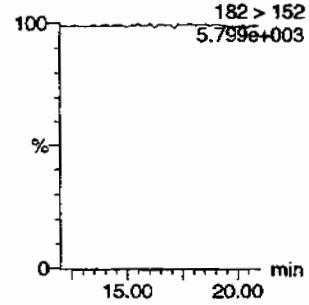

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.271e+004

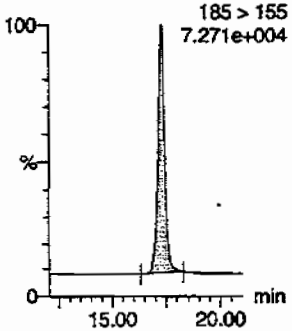

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.952e+003

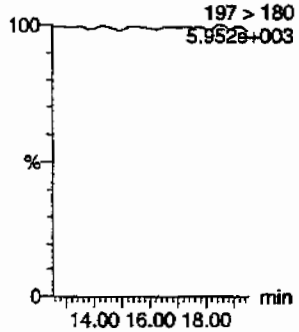

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.784e+003

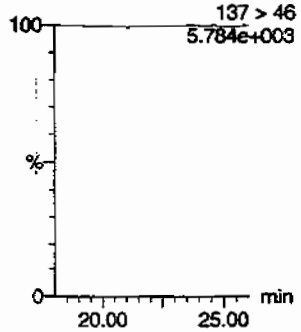

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.799e+003

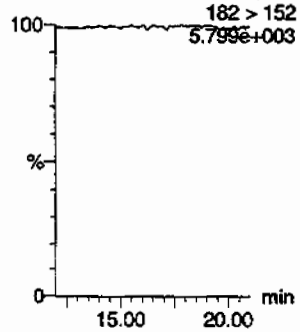

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.784e+003

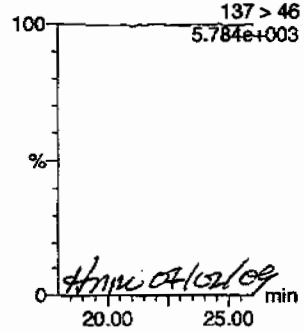

MMC 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.909e+003

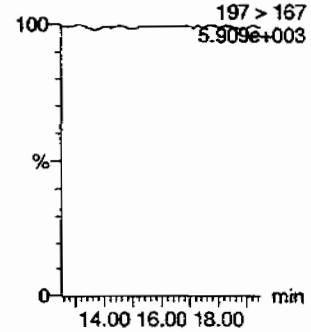

413

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

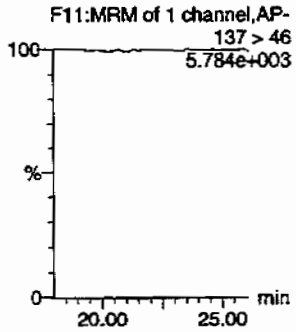

HMX

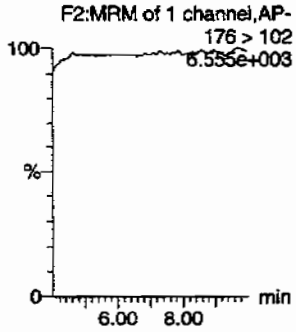

Nitrobenzene

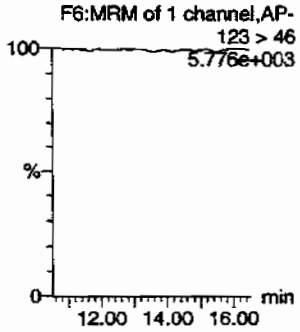

PETN

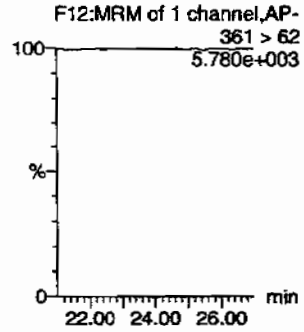

RDX

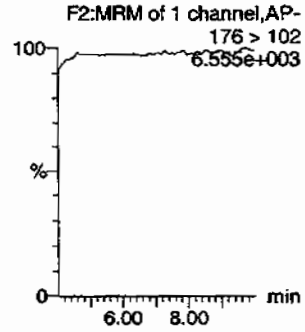

Tetryl

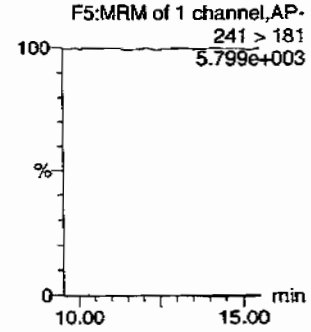

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XIBLK01	HMX	176 > 102			4009.323									
XIBLK01	RDX	176 > 102			4009.323									
XIBLK01	135-Trinitrobenzene	213 > 183			4009.323									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	12.00	4009.323		4009.323	4009.323	bb			523.1791	104.6	4.6	168.3
XIBLK01	13-Dinitrobenzene	168 > 138			4009.323			MM-	01-Jul-09	09:21:09				
XIBLK01	Tetryl	241 > 181			4009.323									
XIBLK01	Nitrobenzene	123 > 46			4009.323									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			25197.955									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			25197.955									
XIBLK01	246-Trinitrotoluene	227 > 210			25197.955									
XIBLK01	34-dinitrotoluene	182 > 152			25197.955									
XIBLK01	26-dinitrotoluene	182 > 152			25197.955									
XIBLK01	24-dinitrotoluene	182 > 152			25197.955									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.27	25197.955		25197.955	25197.955	bb			525.6707	105.1	5.1	1647.7
XIBLK01	2-Nitrotoluene	137 > 46			25197.955									
XIBLK01	4-Nitrotoluene	137 > 46			25197.955									
XIBLK01	3-Nitrotoluene	137 > 46			25197.955									
XIBLK01	PETN	361 > 62			25197.955									

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 30-JUN-09 15:07

GEL Data File: EXP0630002a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	501.95
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	510.817
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

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Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630002a
Date: 30-Jun-2009
Time: 15:07:52
ID: XIBLK01
Vial: 1:1,A

MMP 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.838e+003

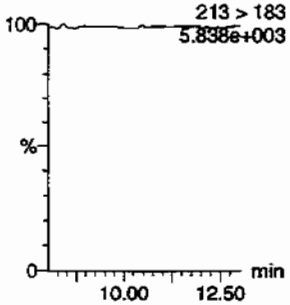

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.775e+003

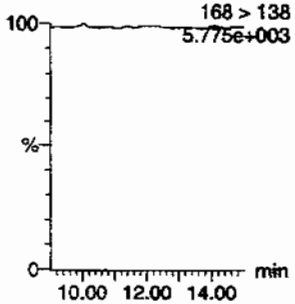

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.740e+004

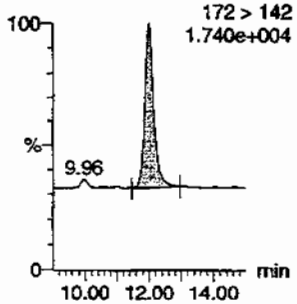

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.849e+003

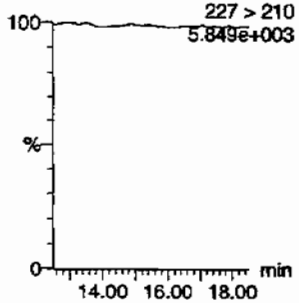

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.792e+003

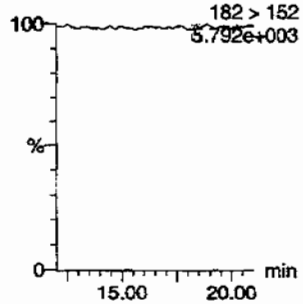

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.792e+003

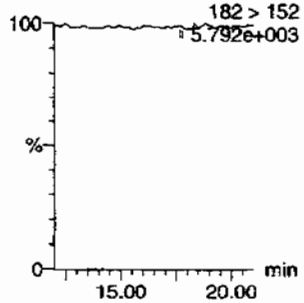

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.849e+004

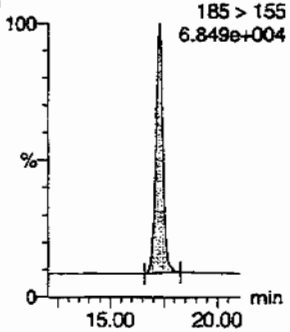

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.868e+003

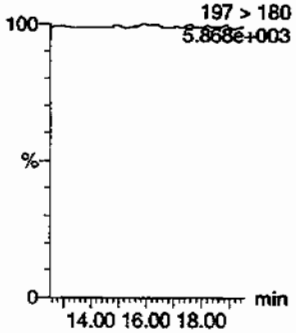

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.770e+003

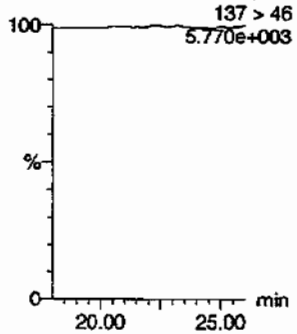

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.792e+003

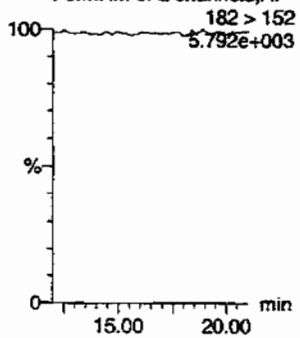

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.770e+003

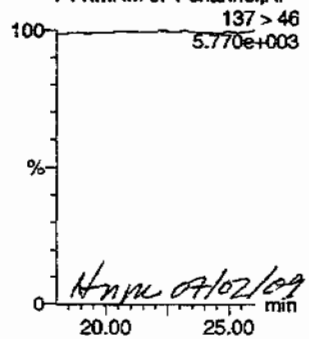

Hnpc 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.842e+003

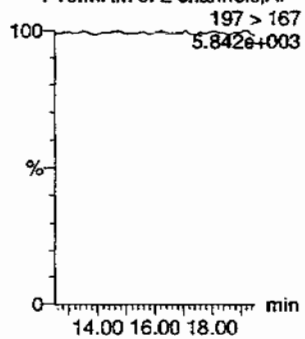

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

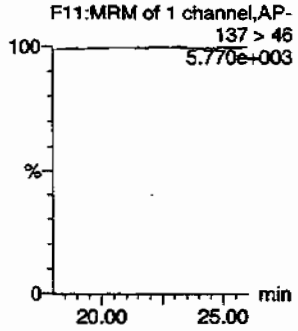

HMX

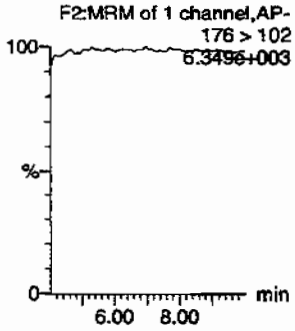

Nitrobenzene

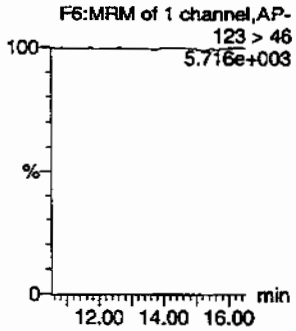

PETN

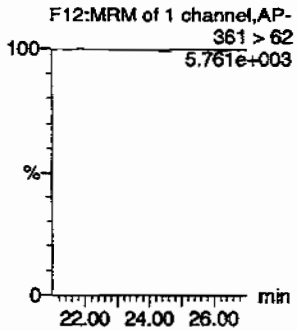

RDX

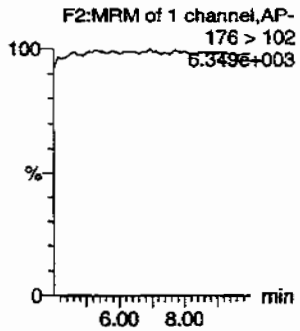

Tetryl

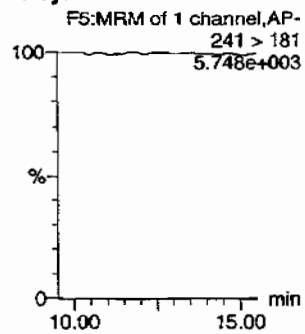

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modification	Modified	Amount	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			3846.638									
XIBLK01	RDX	176 > 102			3846.638									
XIBLK01	135-Trinitrobenzene	213 > 183			3846.638									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	11.97	3846.638		3846.638	3846.638	bb			501.9502	100.4	0.4	373.7
XIBLK01	13-Dinitrobenzene	168 > 138			3846.638									
XIBLK01	Tetryl	241 > 181			3846.638									
XIBLK01	Nitrobenzene	123 > 46			3846.638									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			24485.924									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			24485.924									
XIBLK01	246-Trinitrotoluene	227 > 210			24485.924									
XIBLK01	34-dinitrotoluene	182 > 152			24485.924									
XIBLK01	26-dinitrotoluene	182 > 152			24485.924			MM-	01-Jul-09	09:29:02				
XIBLK01	24-dinitrotoluene	182 > 152			24485.924			MM-	01-Jul-09	09:32:28				
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.27	24485.924		24485.924	24485.924	bb			510.8165	102.2	2.2	1461.6
XIBLK01	2-Nitrotoluene	137 > 46			24485.924									
XIBLK01	4-Nitrotoluene	137 > 46			24485.924									
XIBLK01	3-Nitrotoluene	137 > 46			24485.924									
XIBLK01	PETN	361 > 62			24485.924									

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 13-JUL-09 14:54

GEL Data File: EXP0713001a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	381.015
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	386.045
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\071309expa.mdb, Time: Tue Jul 14 10:07:51 2009
Calibration: Untitled, Time: Tue Jul 14 10:21:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713001a
Date: 13-Jul-2009
Time: 14:54:51
ID: XIBLK01
Vial: 1:1,A

HMM 7/14/09

135-Trinitrobenzene

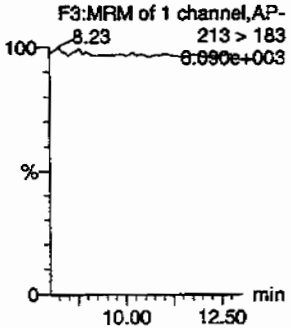

13-Dinitrobenzene

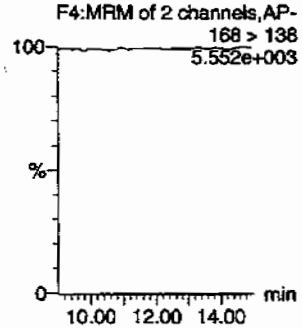

13-Dinitrobenzene-d4

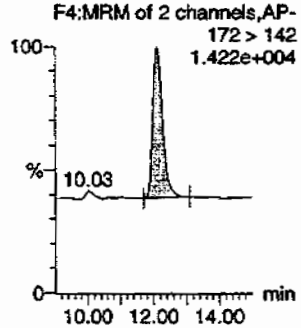

246-Trinitrotoluene

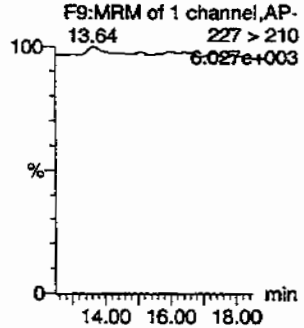

24-dinitrotoluene

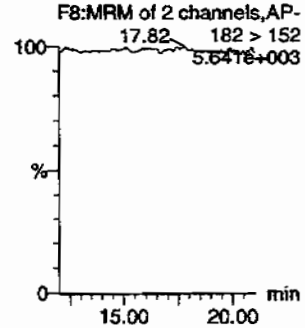

26-dinitrotoluene

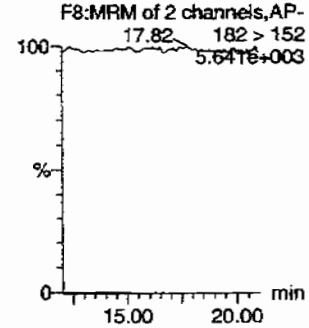

26-dinitrotoluene-d3

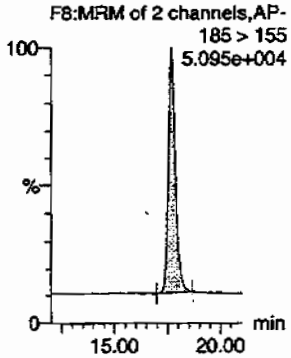

2-Amino-46-dinitrotoluene

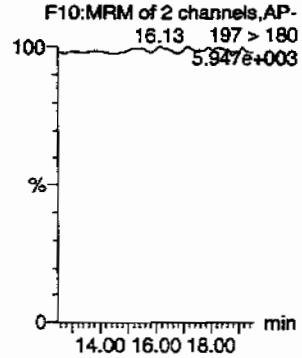

2-Nitrotoluene

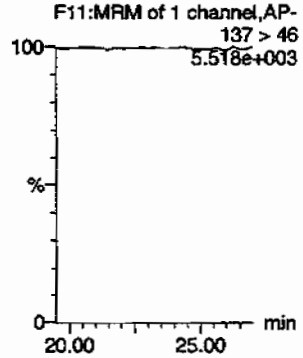

34-dinitrotoluene

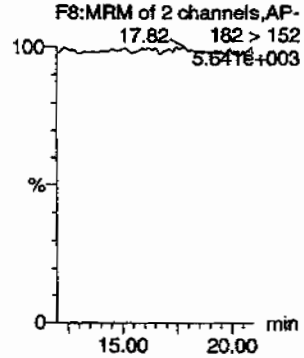

3-Nitrotoluene

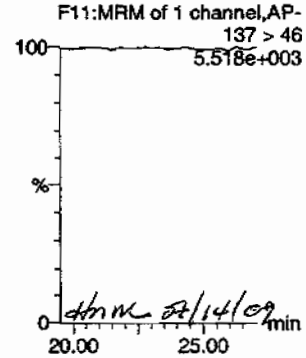

dhm 7/14/09

4-Amino-26-dinitrotoluene

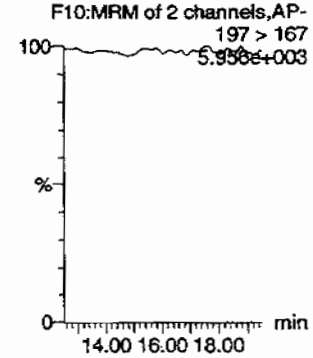

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

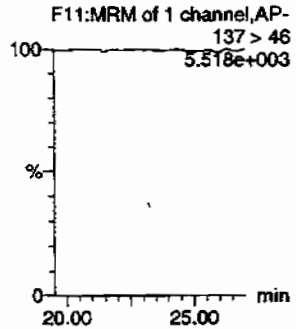

HMX

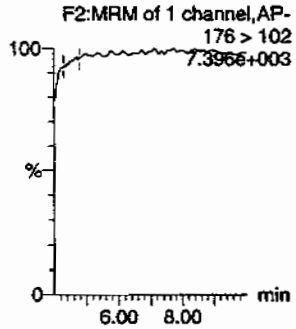

Nitrobenzene

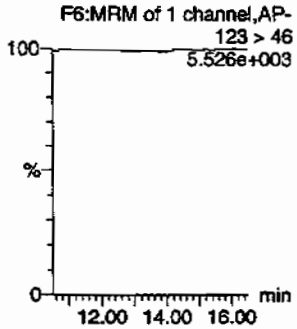

PETN

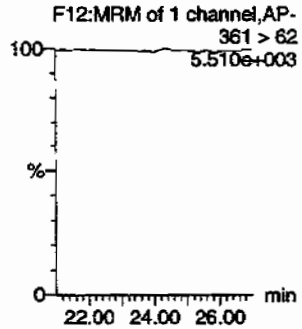

RDX

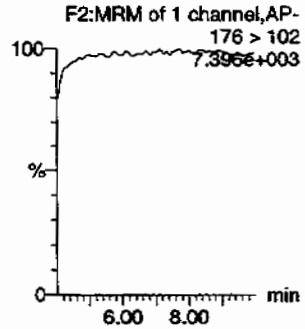

Tetryl

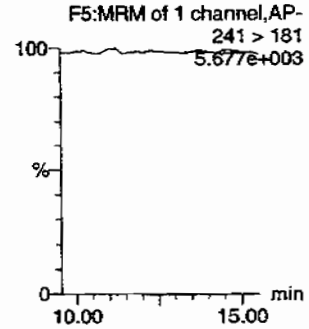

ID	Name	Trace	RT	Area	S/Area	Abs Resp	Response	Flags	Modified	Modifier	Target	Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			3003.309			MM-	14-Jul-09	10:22:19				
XIBLK01	RDX	176 > 102			3003.309									
XIBLK01	135-Trinitrobenzene	213 > 183			3003.309									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	12.14	3003.309		3003.309	3003.309	bb			381.0148	76.2	-23.8	216.9
XIBLK01	13-Dinitrobenzene	168 > 138			3003.309									
XIBLK01	Tetryl	241 > 181			3003.309									
XIBLK01	Nitrobenzene	123 > 46			3003.309									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			18462.215									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			18462.215									
XIBLK01	246-Trinitrotoluene	227 > 210			18462.215									
XIBLK01	34-dinitrotoluene	182 > 152			18462.215									
XIBLK01	26-dinitrotoluene	182 > 152			18462.215									
XIBLK01	24-dinitrotoluene	182 > 152			18462.215									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.71	18462.215		18462.215	18462.215	bb			386.0448	77.2	-22.8	1327.3
XIBLK01	2-Nitrotoluene	137 > 46			18462.215									
XIBLK01	4-Nitrotoluene	137 > 46			18462.215									
XIBLK01	3-Nitrotoluene	137 > 46			18462.215									
XIBLK01	PETN	361 > 62			18462.215									

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 13-JUL-09 15:25

GEL Data File: EXP0713002a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	425.613
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	430.859
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713002a
Date: 13-Jul-2009
Time: 15:25:20
ID: XIBLK01
Vial: 1:1,A

MMT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.876e+003

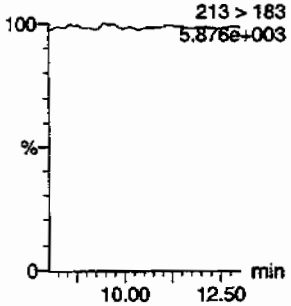

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.591e+003

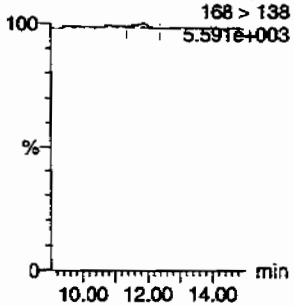

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.524e+004

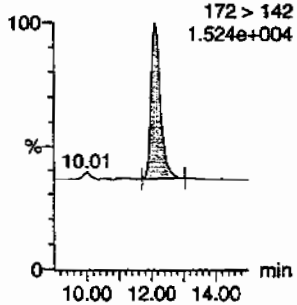

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.809e+003

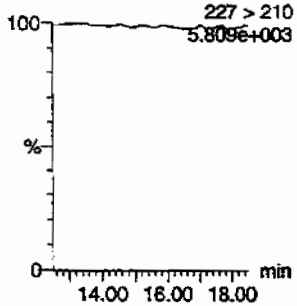

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.627e+003

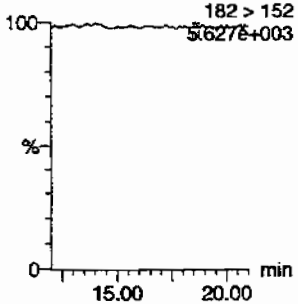

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.627e+003

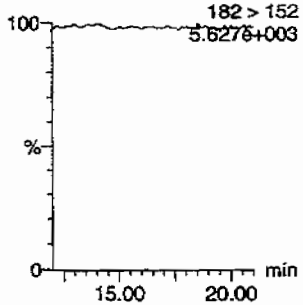

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
5.679e+004

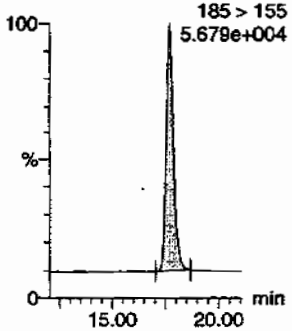

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.952e+003

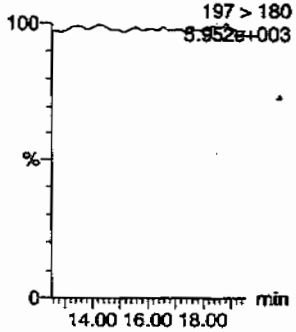

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.518e+003

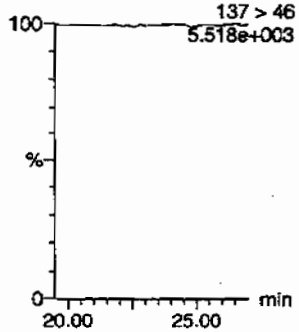

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.627e+003

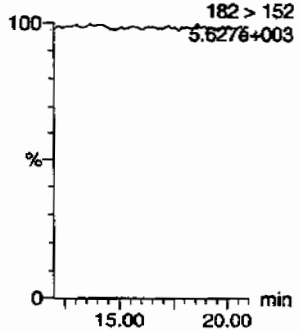

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.518e+003

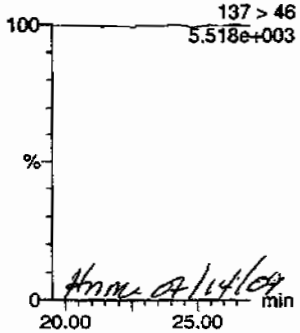

Hmm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.892e+003

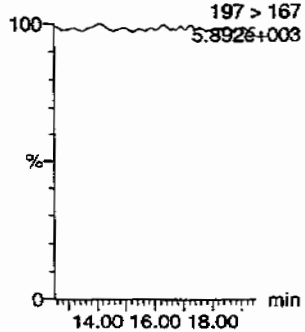

422

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

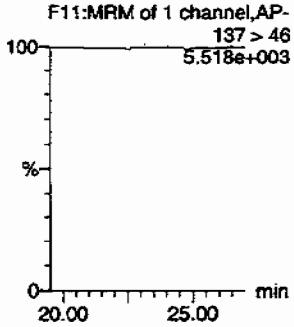

HMX

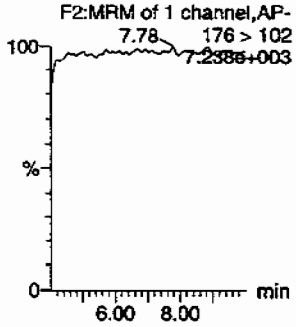

Nitrobenzene

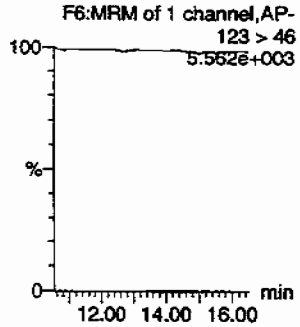

PETN

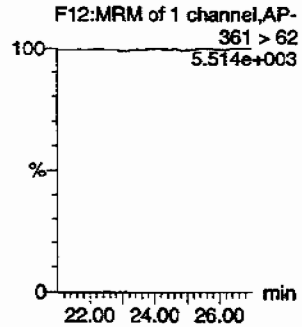

RDX

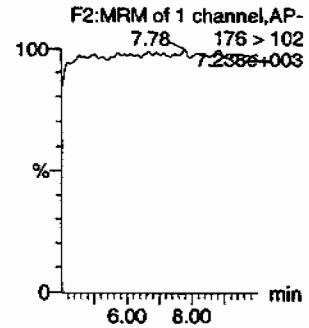

Tetryl

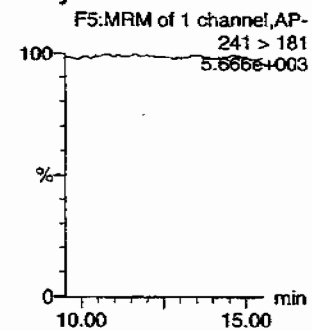

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Rel Response	Flags	Modified	Modified	Amount	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			3354.853									
XIBLK01	RDX	176 > 102			3354.853									
XIBLK01	135-Trinitrobenzene	213 > 183			3354.853									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	12.14	3354.853		3354.853	3354.853	bb			425.6134	85.1	-14.9	186.6
XIBLK01	13-Dinitrobenzene	168 > 138			3354.853			MM-	14-Jul-09	10:21:25				
XIBLK01	Tetryl	241 > 181			3354.853									
XIBLK01	Nitrobenzene	123 > 46			3354.853									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			20605.398									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			20605.398									
XIBLK01	246-Trinitrotoluene	227 > 210			20605.398									
XIBLK01	34-dinitrotoluene	182 > 152			20605.398									
XIBLK01	26-dinitrotoluene	182 > 152			20605.398									
XIBLK01	24-dinitrotoluene	182 > 152			20605.398			MM-	14-Jul-09	10:10:31				
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.68	20605.398		20605.398	20605.398	bb			430.8588	86.2	-13.8	1070.1
XIBLK01	2-Nitrotoluene	137 > 46			20605.398									
XIBLK01	4-Nitrotoluene	137 > 46			20605.398									
XIBLK01	3-Nitrotoluene	137 > 46			20605.398									
XIBLK01	PETN	361 > 62			20605.398									

423

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 01-JUL-09 10:39

GEL Data File: EXS0701001.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	3.89
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0701001.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No

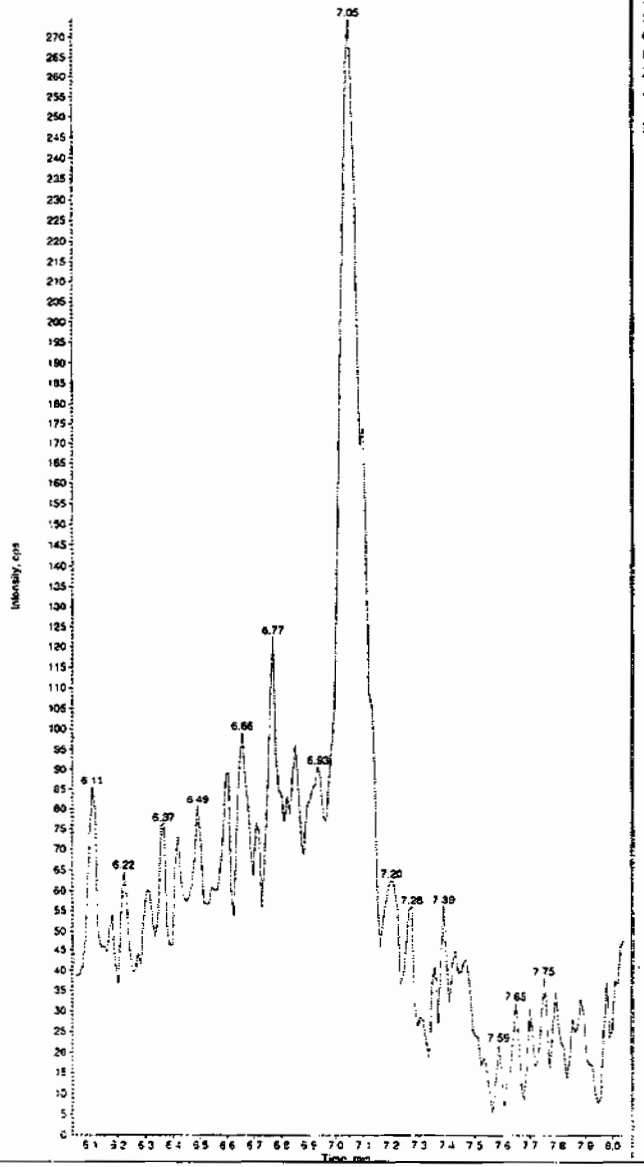

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0701001.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No

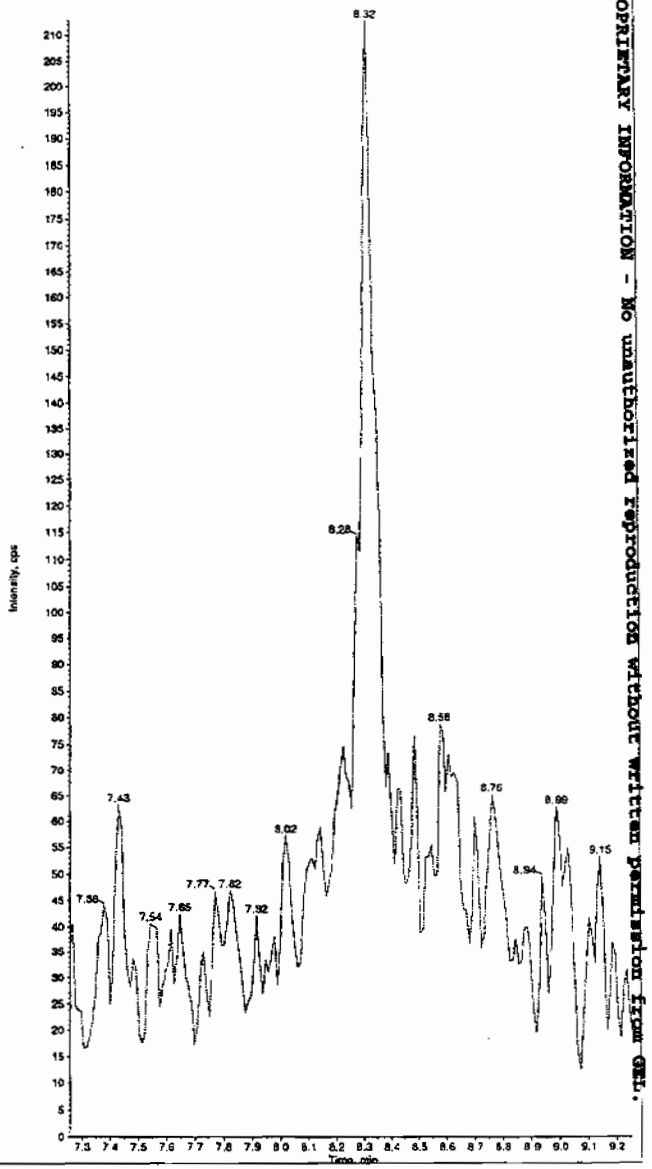

425

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701001.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_8" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No

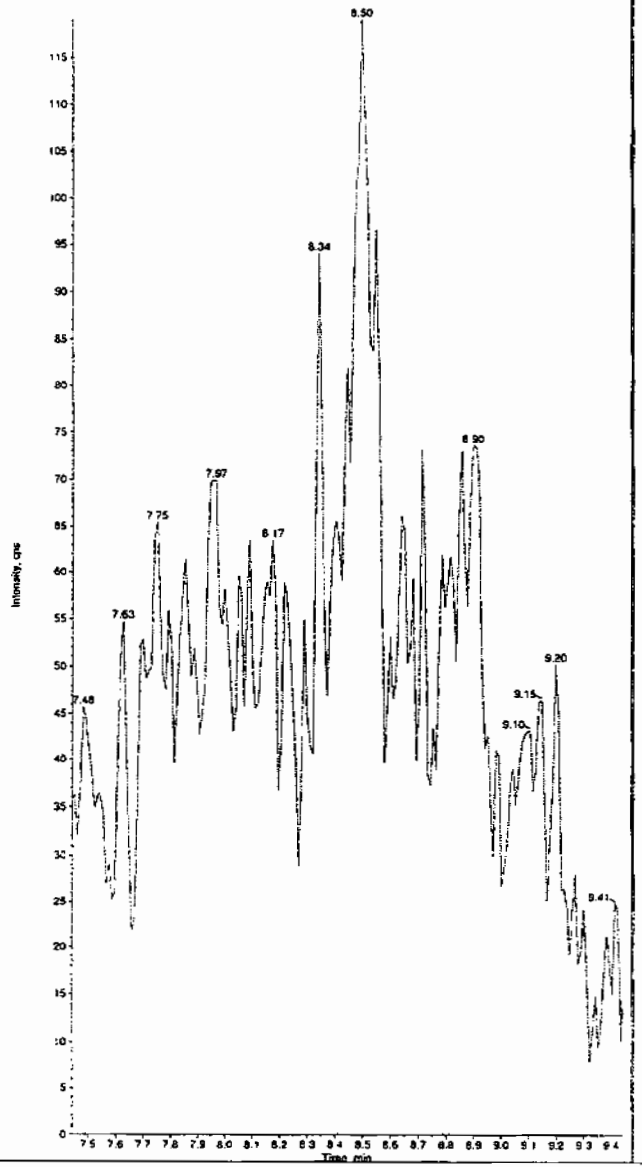

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701001.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_8" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No

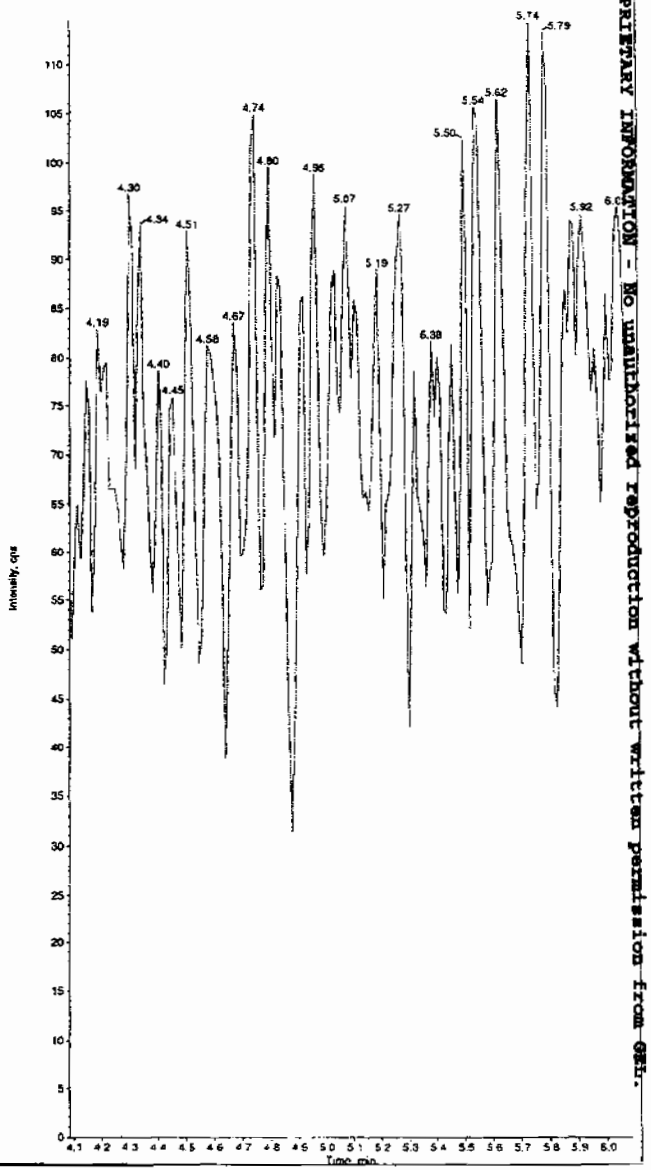

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701001.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No

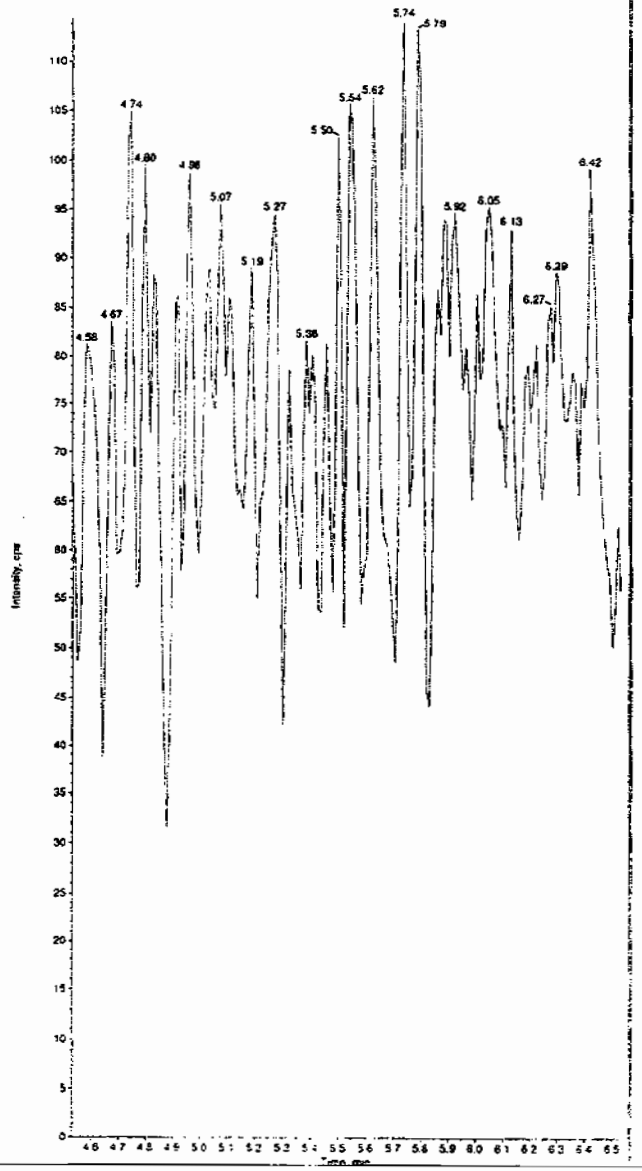

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701001.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 3.89 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.59e+004 counts
Height: 14369.535 cps
Start Time: 10.8 min
End Time: 11.1 min

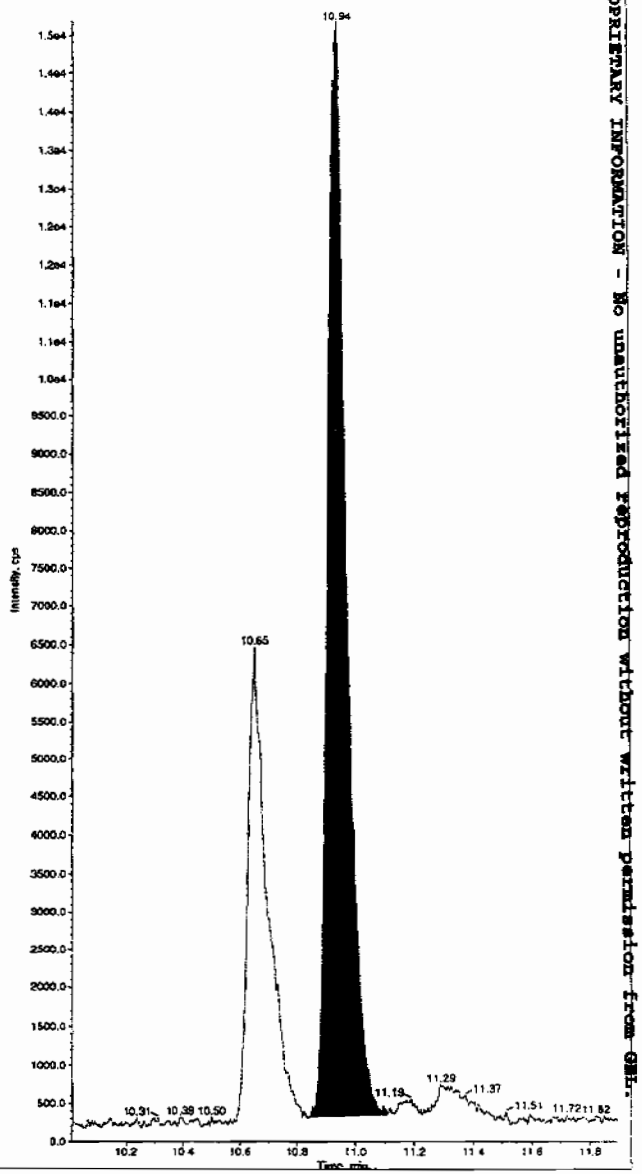

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09--2473

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 01-JUL-09 10:55

GEL Data File: EXS0701002.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	2.9
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0701002.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:55:37 AM

Modified: No

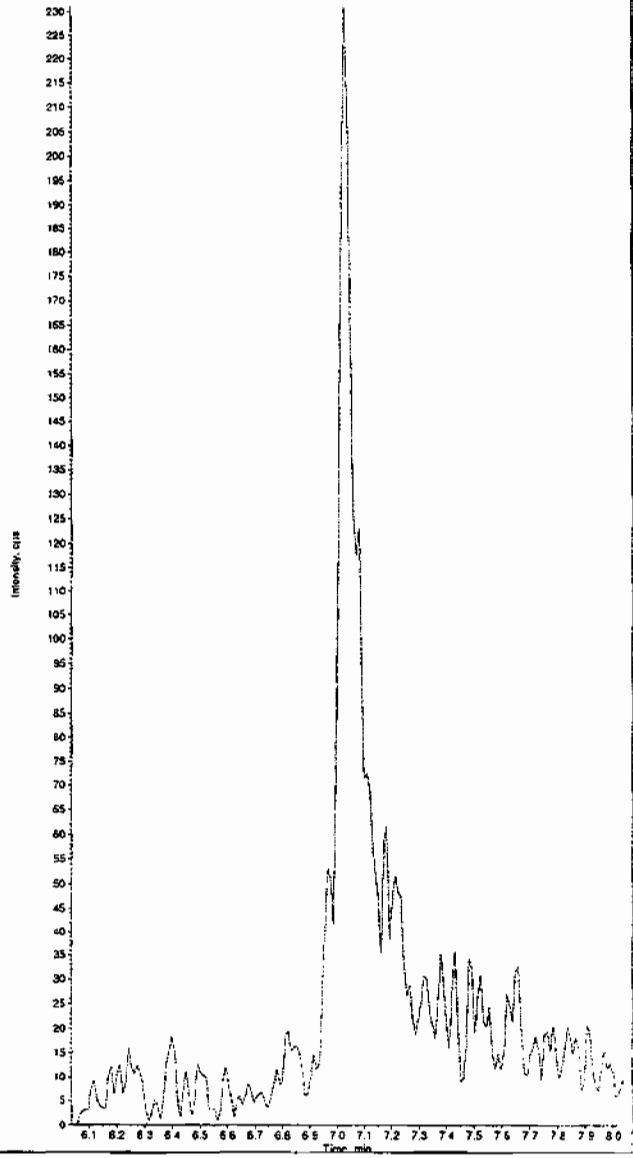

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0701002.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:55:37 AM

Modified: No

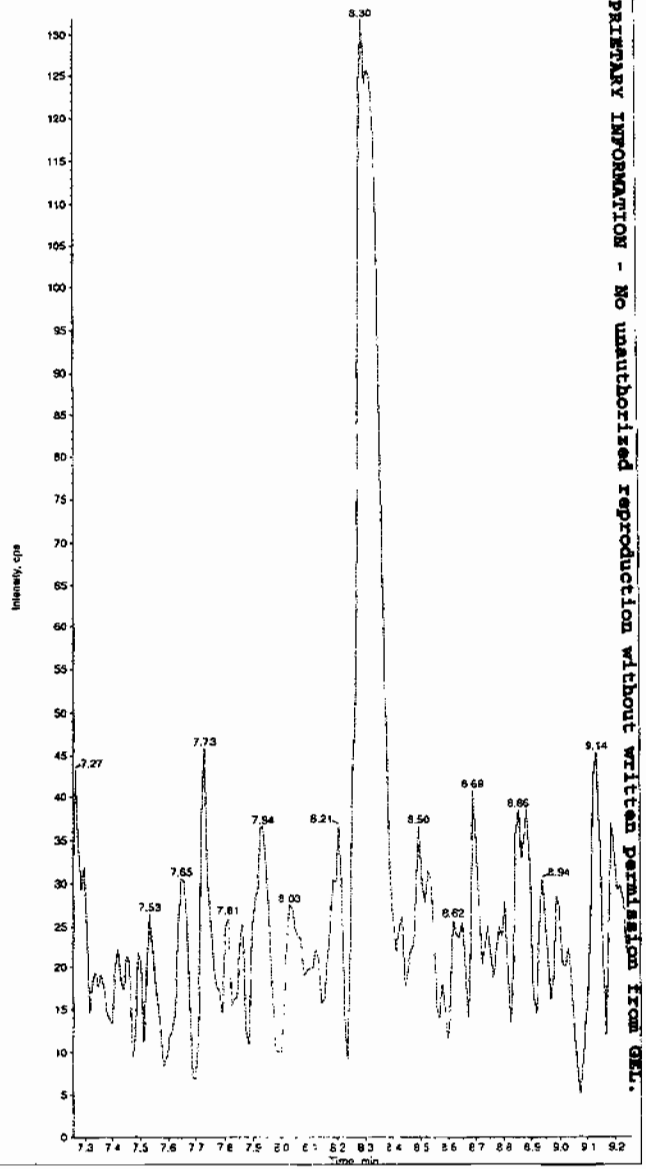

Anne 07/06/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701002.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:55:37 AM

Modified: No

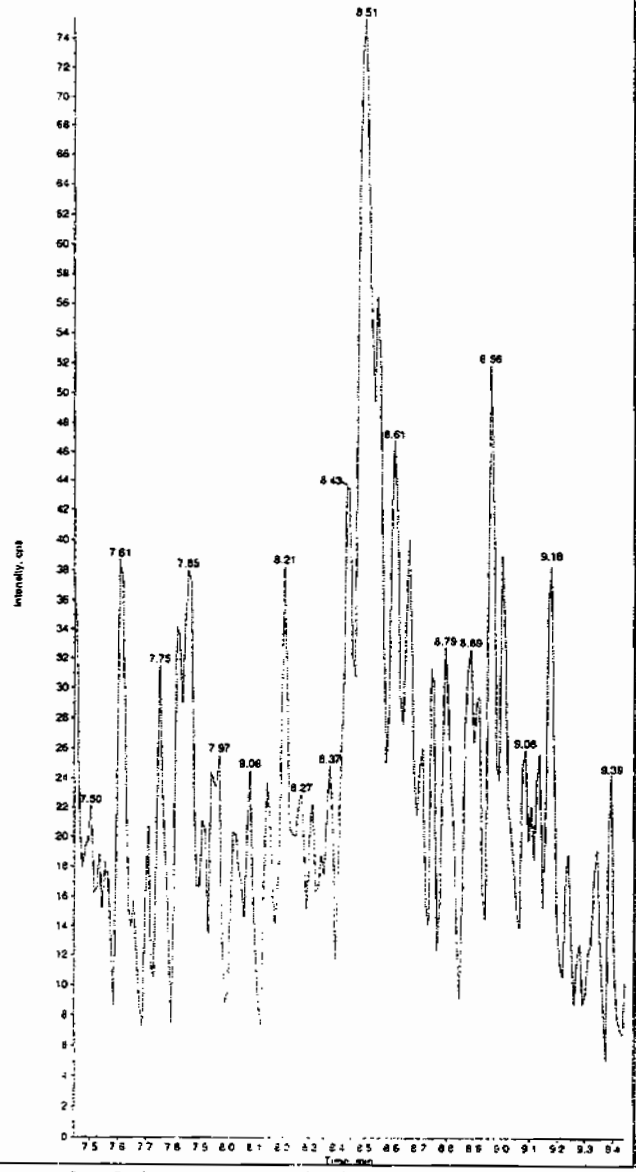

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701002.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:55:37 AM

Modified: No

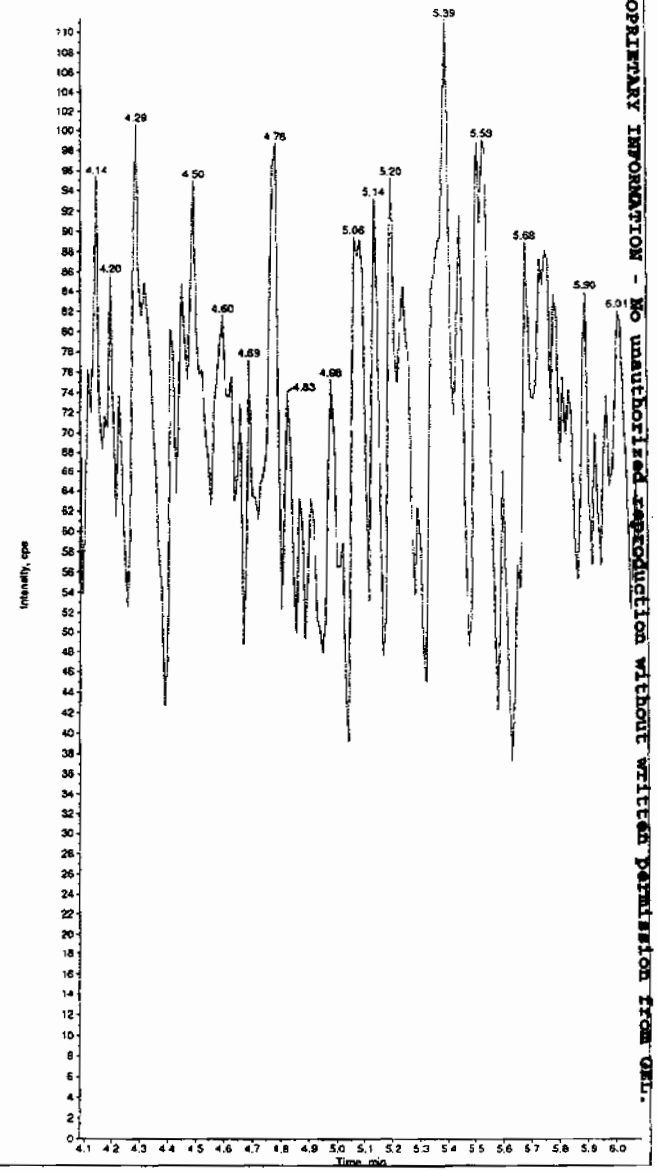

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701002.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

```
Sample Index:        1
Sample Type:     Unknown
Concentration:     N/A
Calculated Conc:   0.00     ng/mL
Acq. Date:       7/1/2009
Acq. Time:       10:55:37 AM

Modified:          No
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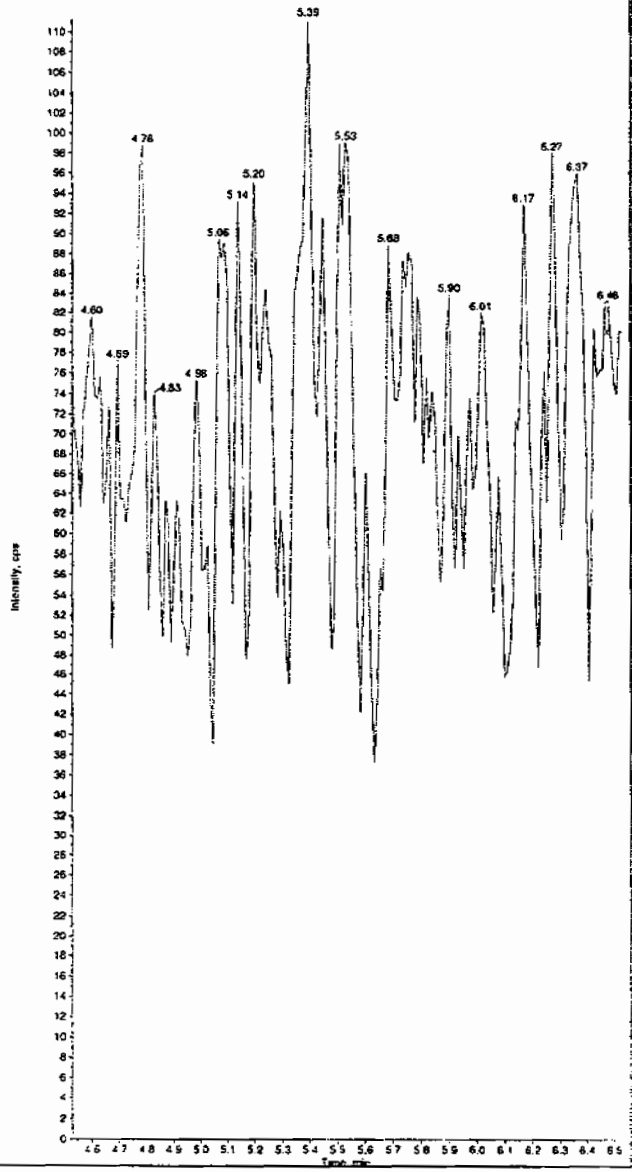

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701002.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

```
Sample Index:        1
Sample Type:     Unknown
Concentration:     N/A
Calculated Conc:   2.90     ng/mL
Acq. Date:       7/1/2009
Acq. Time:       10:55:37 AM

Modified:          No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4    cps
Min. Peak Width:    0.00    sec
Smoothing Width:  3         points
RT Window:         30.0     sec
Expected RT:       10.9     min
Use Relative RT:   No

Int. Type:       Valley
Retention Time:    10.9     min
Area:        5.27e+004      counts
Height:        12139.582    cps
Start Time:        10.9     min
End Time:          11.1     min
```

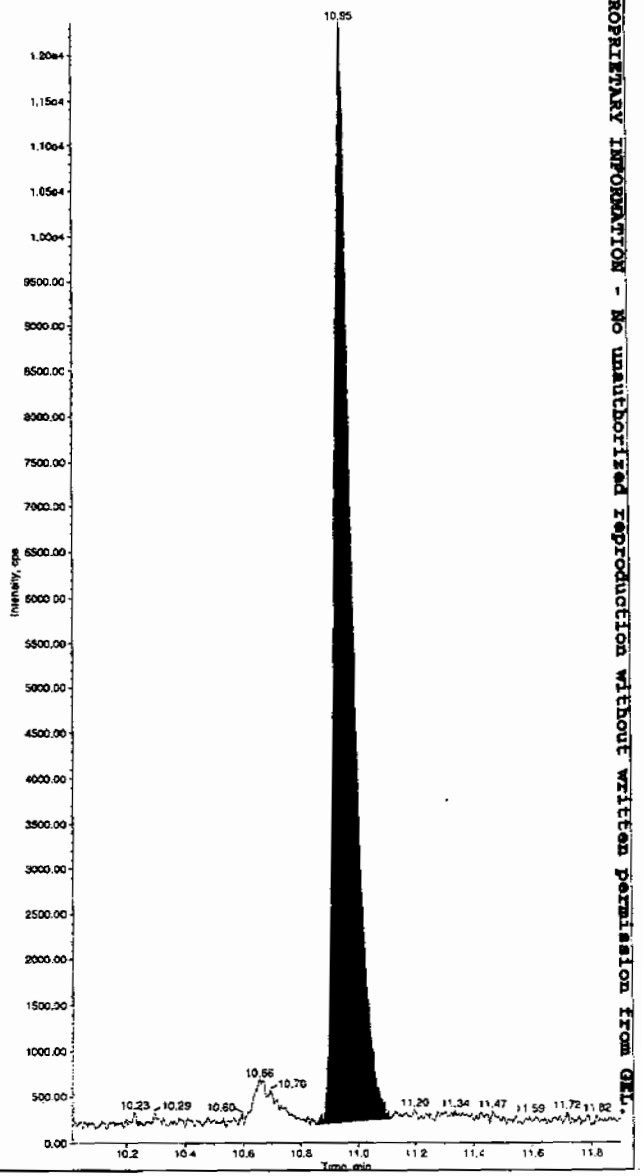

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 30-JUN-09 18:34

GEL Data File: EXP0630009a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	494.808
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	524.395
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630009a
Date: 30-Jun-2009
Time: 18:34:07
ID: XIBLK02
Vial: 1:1,A

MMT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.833e+003

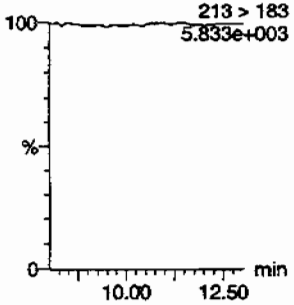

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.756e+003

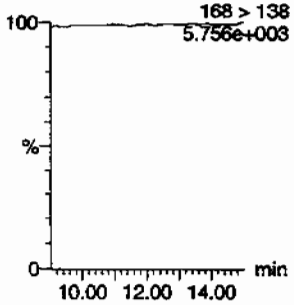

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.696e+004

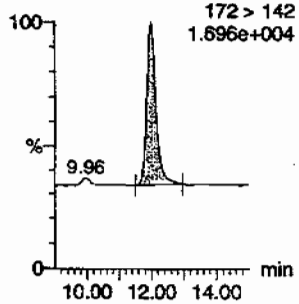

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.891e+003

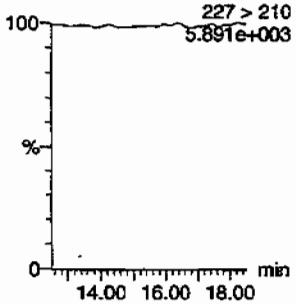

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.847e+003

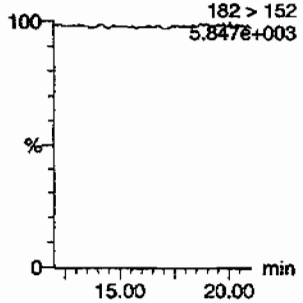

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.847e+003

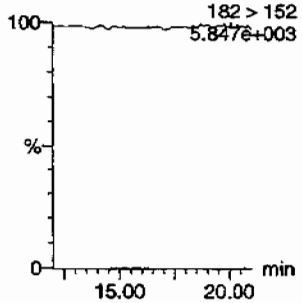

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.260e+004

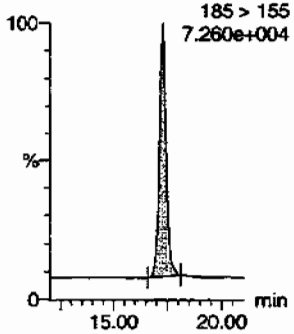

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
6.009e+003

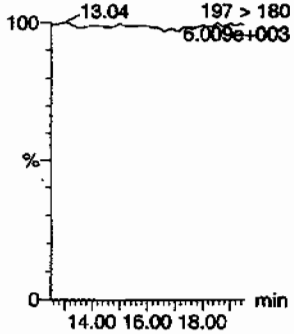

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.778e+003

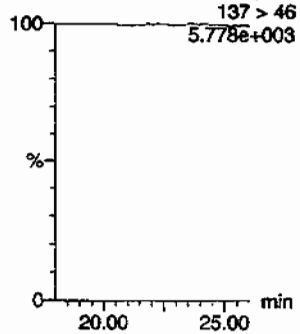

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.847e+003

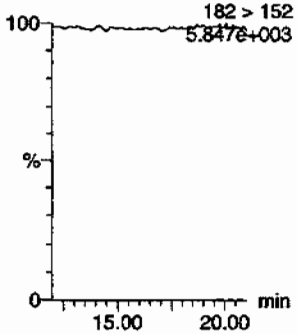

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.778e+003

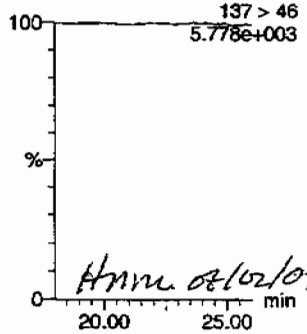

Hmm 08/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.980e+003

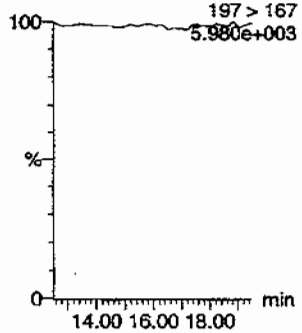

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

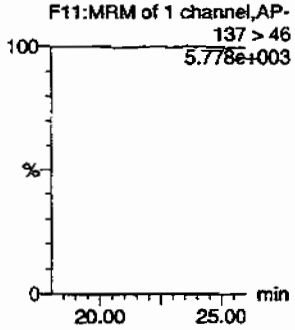

HMX

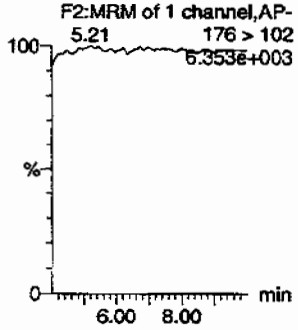

Nitrobenzene

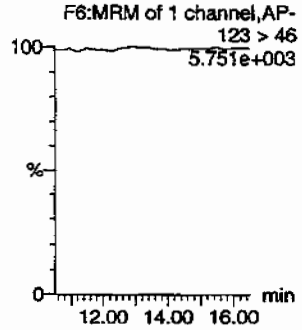

PETN

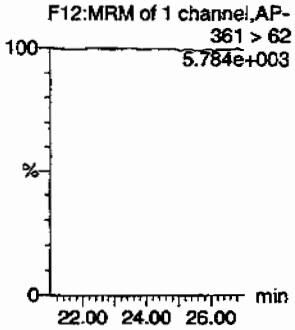

RDX

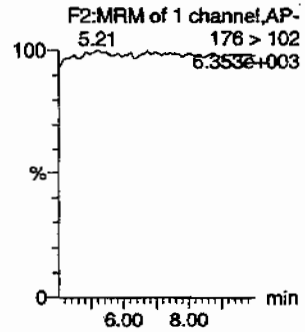

Tetryl

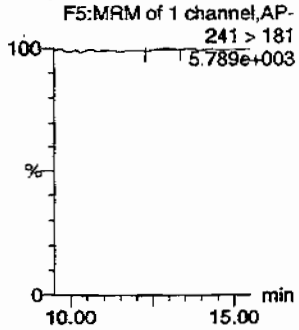

ID	Name	Trace	RT	Area	IS Area	Abs Resp	% Response	Flags	Mod/DEM	Mod Time	Conc	%Rec	%Dev	S/N
XIBLK02	HMX	176 > 102			3791.902									
XIBLK02	RDX	176 > 102			3791.902									
XIBLK02	135-Trinitrobenzene	213 > 183			3791.902									
XIBLK02	13-Dinitrobenzene-d4	172 > 142	11.97	3791.902		3791.902	3791.902	bb			494.8077	99.0	-1.0	321.7
XIBLK02	13-Dinitrobenzene	168 > 138			3791.902									
XIBLK02	Tetryl	241 > 181	12.96	32.835	3791.902	32.835	4.330	bb			2.1508			1.4
XIBLK02	Nitrobenzene	123 > 46			3791.902									
XIBLK02	4-Amino-26-dinitrotoluene	197 > 167			25136.822									
XIBLK02	2-Amino-46-dinitrotoluene	197 > 180			25136.822									
XIBLK02	246-Trinitrotoluene	227 > 210			25136.822									
XIBLK02	34-dinitrotoluene	182 > 152			25136.822									
XIBLK02	26-dinitrotoluene	182 > 152			25136.822									
XIBLK02	24-dinitrotoluene	182 > 152			25136.822									
XIBLK02	26-dinitrotoluene-d3	185 > 155	17.27	25136.822		25136.822	25136.822	bb			524.3953	104.9	4.9	1331.8
XIBLK02	2-Nitrotoluene	137 > 46			25136.822									
XIBLK02	4-Nitrotoluene	137 > 46			25136.822									
XIBLK02	3-Nitrotoluene	137 > 46			25136.822									
XIBLK02	PETN	361 > 62			25136.822									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 30-JUN-09 19:33

GEL Data File: EXP0630011a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	520.965
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	533.653
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630011a
Date: 30-Jun-2009
Time: 19:33:02
ID: XIBLK03
Vial: 1:1,A

MAH 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.558e+003

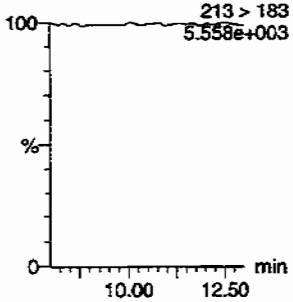

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.518e+003

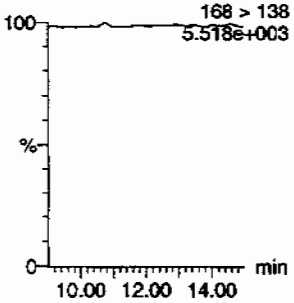

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.776e+004

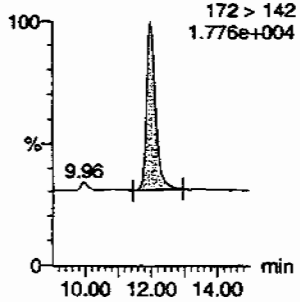

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.569e+003

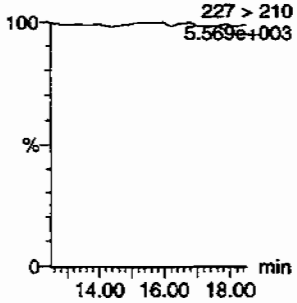

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.492e+003

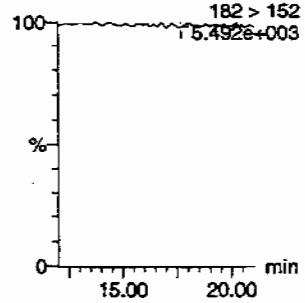

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.492e+003

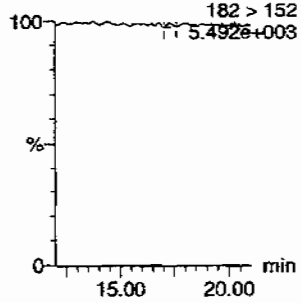

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.376e+004

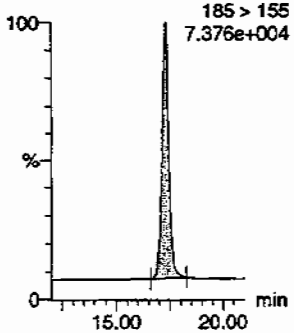

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.557e+003

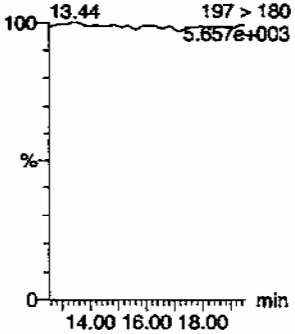

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.458e+003

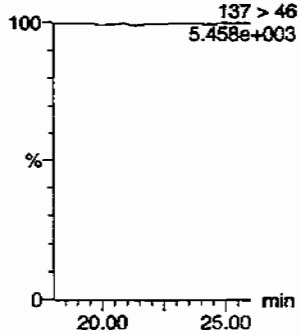

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.492e+003

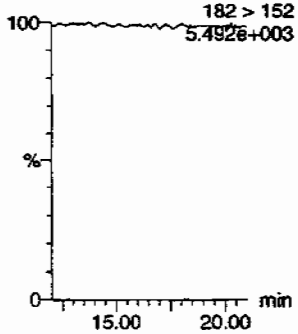

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.458e+003

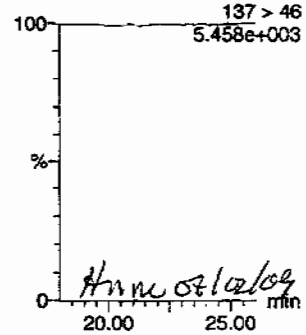

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.640e+003

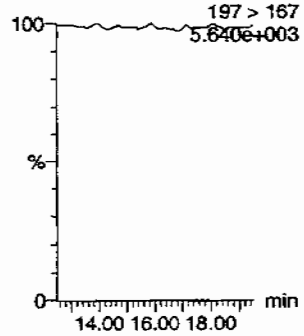

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

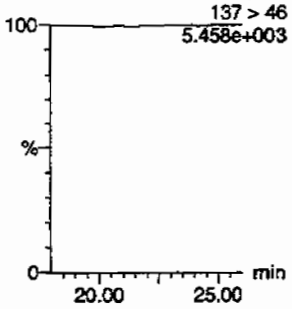

HMX

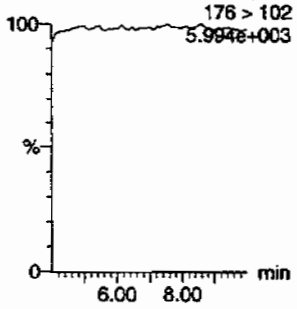

Nitrobenzene

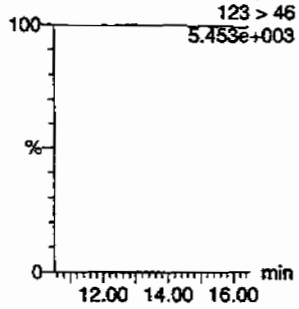

PETN

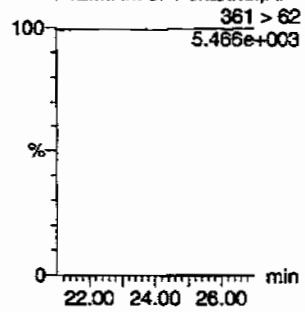

RDX

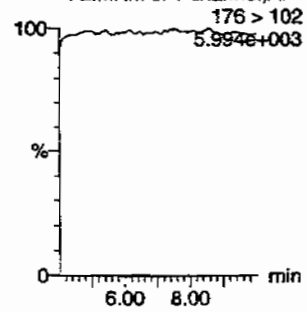

Tetryl

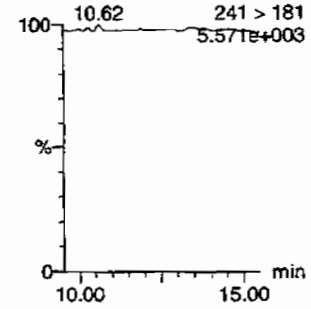

ID	Name	Trace	RT	Area	IS Area	%Abs Resp	%Response	Flags	Modifier	Modtime	Signal	%RS	%DA	S/N
XIBLK03	HMX	176 > 102			3992.352									
XIBLK03	RDX	176 > 102			3992.352									
XIBLK03	135-Trinitrobenzene	213 > 183			3992.352									
XIBLK03	13-Dinitrobenzene-d4	172 > 142	11.97	3992.352		3992.352	3992.352	bb			520.9646	104.2	4.2	339.7
XIBLK03	13-Dinitrobenzene	168 > 138			3992.352									
XIBLK03	Tetryl	241 > 181			3992.352									
XIBLK03	Nitrobenzene	123 > 46			3992.352									
XIBLK03	4-Amino-26-dinitrotoluene	197 > 167			25580.592									
XIBLK03	2-Amino-46-dinitrotoluene	197 > 180			25580.592									
XIBLK03	246-Trinitrotoluene	227 > 210			25580.592									
XIBLK03	34-dinitrotoluene	182 > 152			25580.592									
XIBLK03	26-dinitrotoluene	182 > 152			25580.592			MM-	01-Jul-09	09:29:57				
XIBLK03	24-dinitrotoluene	182 > 152			25580.592			MM-	01-Jul-09	09:33:43				
XIBLK03	26-dinitrotoluene-d3	185 > 155	17.27	25580.592		25580.592	25580.592	bb			533.6531	106.7	6.7	1367.4
XIBLK03	2-Nitrotoluene	137 > 46			25580.592									
XIBLK03	4-Nitrotoluene	137 > 46			25580.592									
XIBLK03	3-Nitrotoluene	137 > 46			25580.592									
XIBLK03	PETN	361 > 62			25580.592									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 30-JUN-09 23:58

GEL Data File: EXP0630020a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	519.307
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	519.338
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630020a
Date: 30-Jun-2009
Time: 23:58:17
ID: XIBLK04
Vial: 1:1,A

MAT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.773e+003

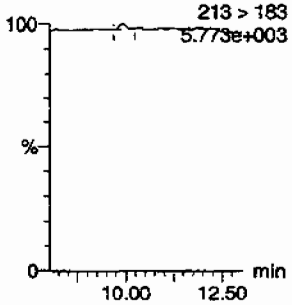

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.628e+003

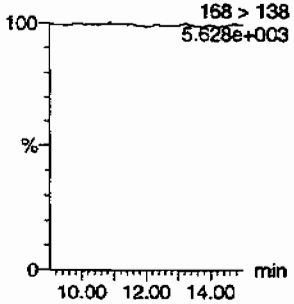

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.800e+004

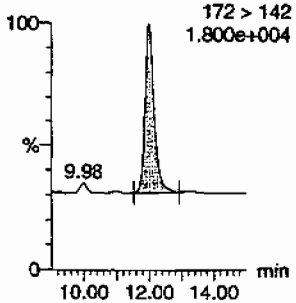

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.713e+003

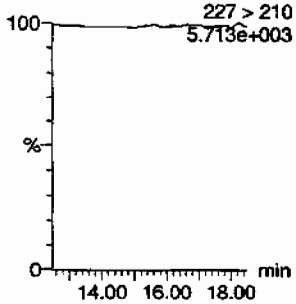

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.671e+003

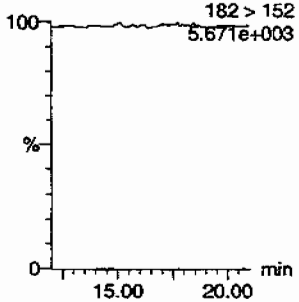

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.671e+003

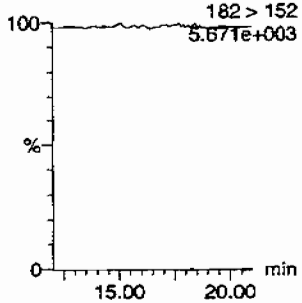

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.198e+004

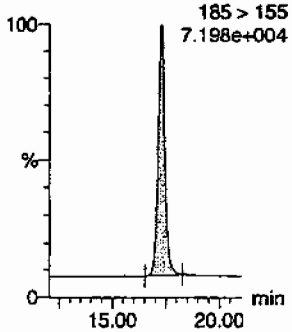

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.767e+003

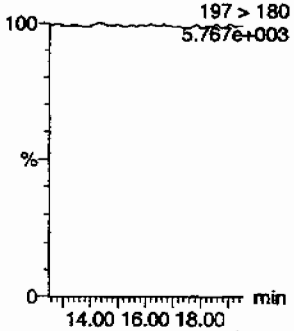

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.648e+003

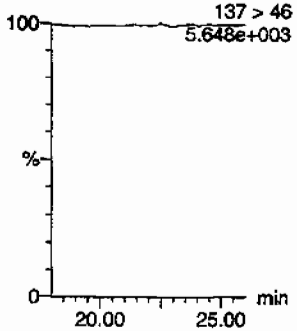

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.671e+003

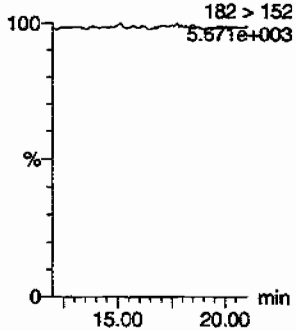

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.648e+003

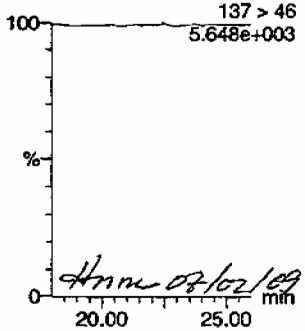

Hmm 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.756e+003

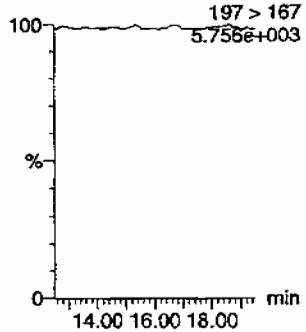

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

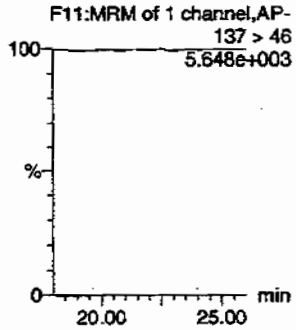

HMX

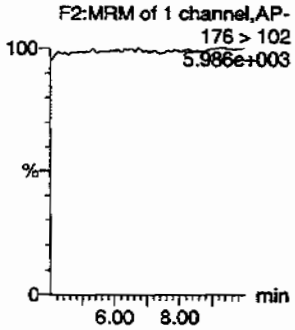

Nitrobenzene

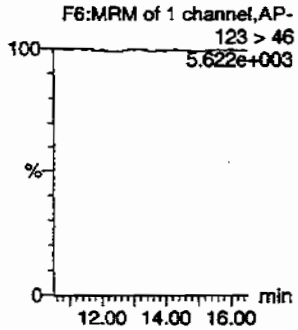

PETN

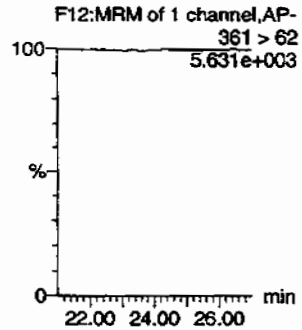

RDX

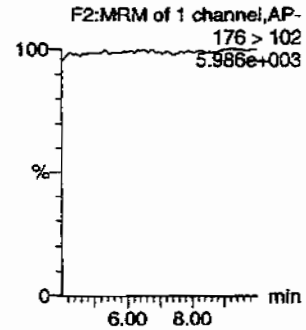

Tetryl

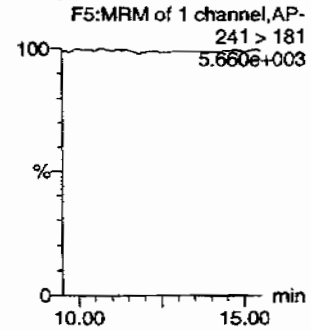

ID	Name	Trace	RT	Area	IS Area	Abs Resp	IS Response	Flags	Mod Date	Mod Time	Amount	% Rec	%Dev	S/N
XIBLK04	HMX	176 > 102			3979.651									
XIBLK04	RDX	176 > 102			3979.651									
XIBLK04	135-Trinitrobenzene	213 > 183			3979.651			MM-	01-Jul-09	09:20:52				
XIBLK04	13-Dinitrobenzene-d4	172 > 142	12.00	3979.651		3979.651	3979.651	bb		*	519.3072	103.9	3.9	116.6
XIBLK04	13-Dinitrobenzene	168 > 138			3979.651									
XIBLK04	Tetryl	241 > 181			3979.651									
XIBLK04	Nitrobenzene	123 > 46			3979.651									
XIBLK04	4-Amino-26-dinitrotoluene	197 > 167			24894.395									
XIBLK04	2-Amino-46-dinitrotoluene	197 > 180			24894.395									
XIBLK04	246-Trinitrotoluene	227 > 210			24894.395									
XIBLK04	34-dinitrotoluene	182 > 152			24894.395									
XIBLK04	26-dinitrotoluene	182 > 152			24894.395									
XIBLK04	24-dinitrotoluene	182 > 152			24894.395									
XIBLK04	26-dinitrotoluene-d3	185 > 155	17.29	24894.395		24894.395	24894.395	bb			519.3379	103.9	3.9	1019.2
XIBLK04	2-Nitrotoluene	137 > 46			24894.395									
XIBLK04	4-Nitrotoluene	137 > 46			24894.395									
XIBLK04	3-Nitrotoluene	137 > 46			24894.395									
XIBLK04	PETN	361 > 62			24894.395									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 01-JUL-09 03:54

GEL Data File: EXP0630028a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	505.116
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	535.624
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630028a
Date: 01-Jul-2009
Time: 03:54:08
ID: XIBLK05
Vial: 1:1,A

MAT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.723e+003

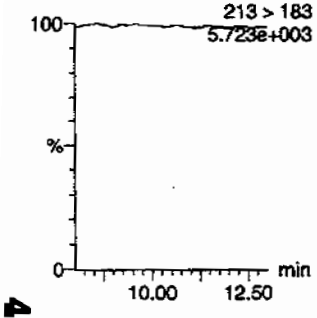

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.651e+003

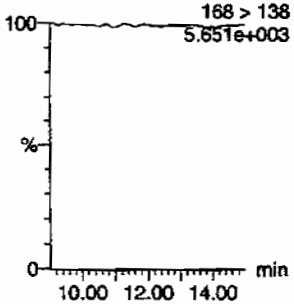

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.764e+004

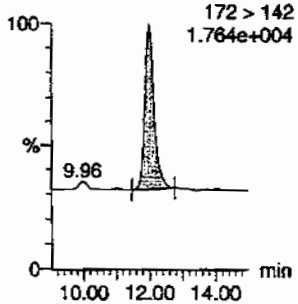

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.733e+003

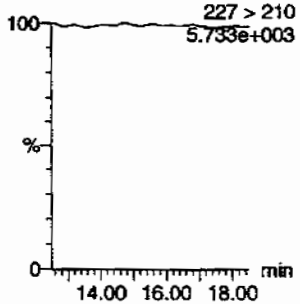

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.688e+003

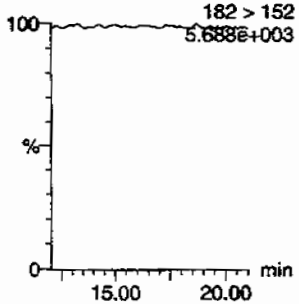

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.688e+003

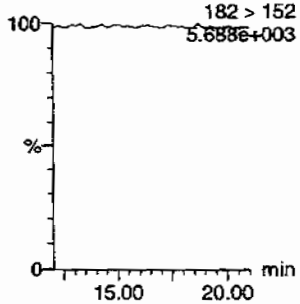

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.363e+004

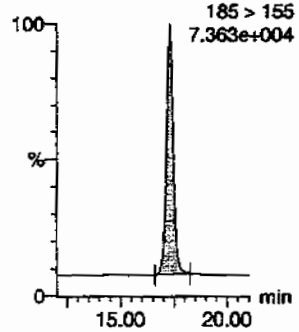

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.830e+003

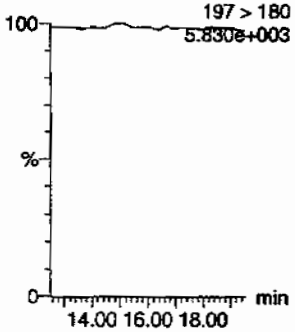

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.641e+003

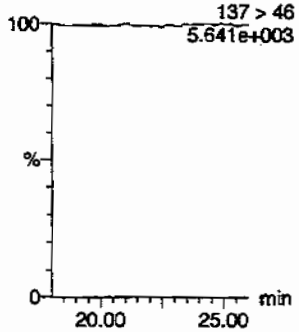

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.688e+003

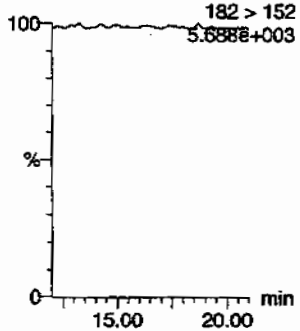

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.641e+003

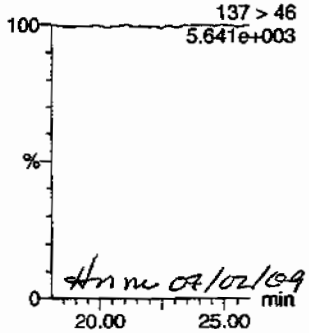

HM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.783e+003

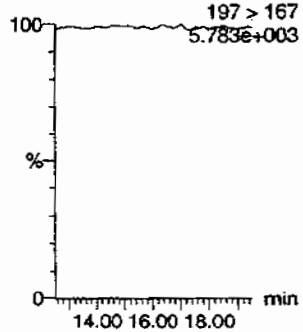

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qid, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

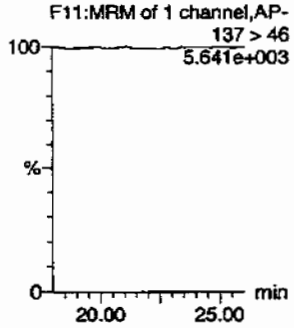

HMX

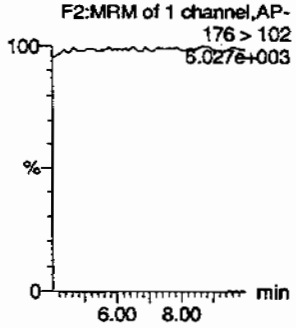

Nitrobenzene

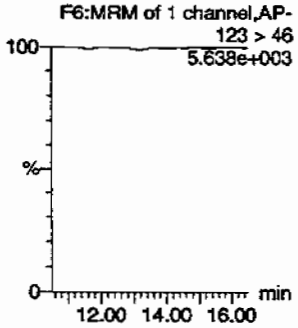

PETN

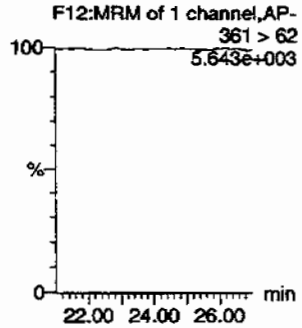

RDX

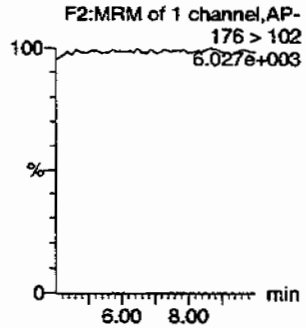

Tetryl

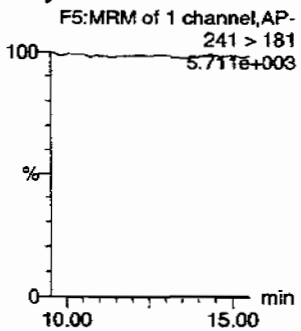

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Modifiers	Amount	%Rec	%Dev	S/N
XIBLK05	HMX	176 > 102			3870.898									
XIBLK05	RDX	176 > 102			3870.898									
XIBLK05	135-Trinitrobenzene	213 > 183			3870.898									
XIBLK05	13-Dinitrobenzene-d4	172 > 142	12.00	3870.898		3870.898	3870.898	bb			505.1160	101.0	1.0	258.6
XIBLK05	13-Dinitrobenzene	168 > 138			3870.898									
XIBLK05	Tetryl	241 > 181			3870.898									
XIBLK05	Nitrobenzene	123 > 46			3870.898									
XIBLK05	4-Amino-26-dinitrotoluene	197 > 167			25675.066									
XIBLK05	2-Amino-46-dinitrotoluene	197 > 180			25675.066									
XIBLK05	246-Trinitrotoluene	227 > 210			25675.066									
XIBLK05	34-dinitrotoluene	182 > 152			25675.066									
XIBLK05	26-dinitrotoluene	182 > 152			25675.066									
XIBLK05	24-dinitrotoluene	182 > 152			25675.066									
XIBLK05	26-dinitrotoluene-d3	185 > 155	17.27	25675.066		25675.066	25675.066	bb			535.6240	107.1	7.1	1575.7
XIBLK05	2-Nitrotoluene	137 > 46			25675.066									
XIBLK05	4-Nitrotoluene	137 > 46			25675.066									
XIBLK05	3-Nitrotoluene	137 > 46			25675.066									
XIBLK05	PETN	361 > 62			25675.066									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK06

Analysis Date: 01-JUL-09 07:49

GEL Data File: EXP0630036a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	508.032
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	524.477
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630036a
Date: 01-Jul-2009
Time: 07:49:59
ID: XIBLK06
Vial: 1:1,A

MMT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.857e+003

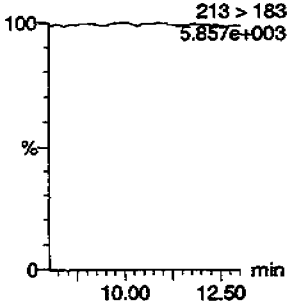

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.796e+003

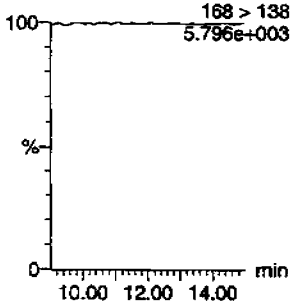

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.799e+004

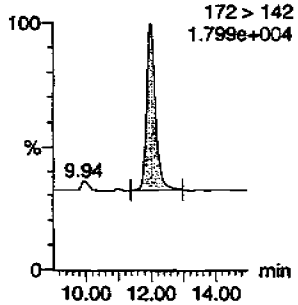

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.879e+003

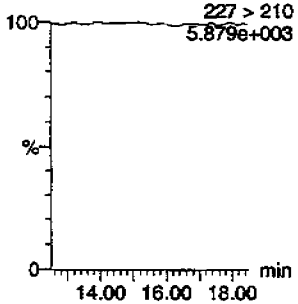

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.852e+003

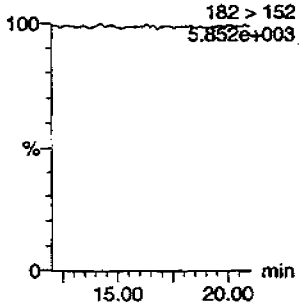

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.852e+003

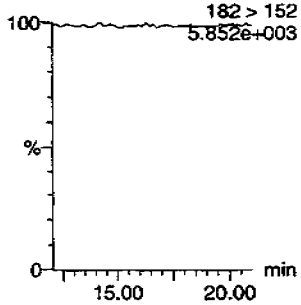

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.351e+004

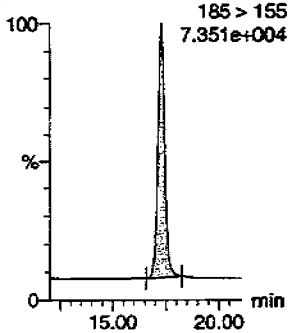

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.952e+003

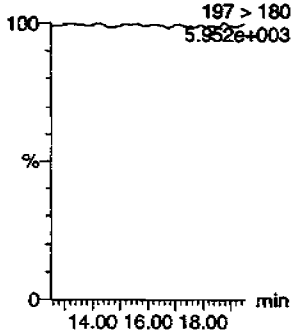

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.818e+003

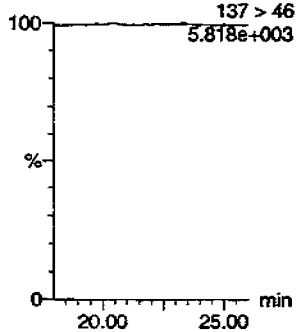

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.852e+003

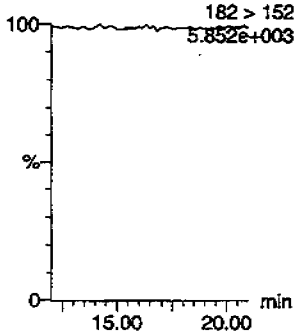

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.818e+003

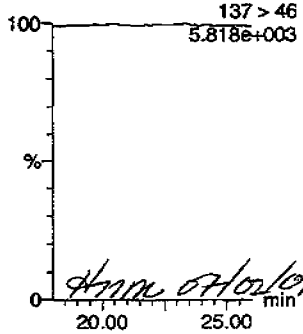

Hmm 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.976e+003

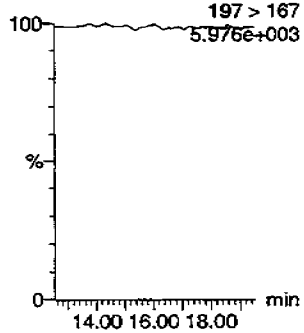

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

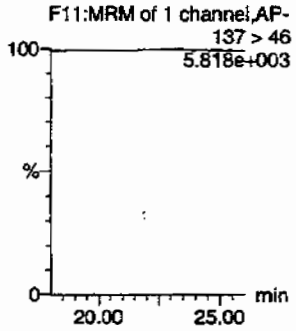

HMX

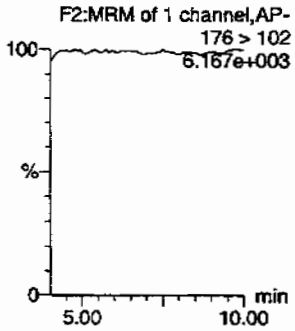

Nitrobenzene

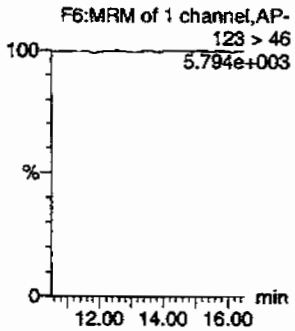

PETN

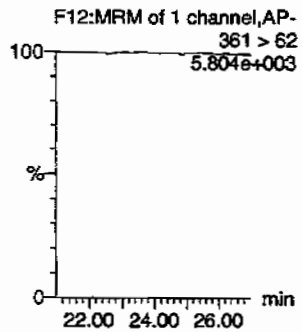

RDX

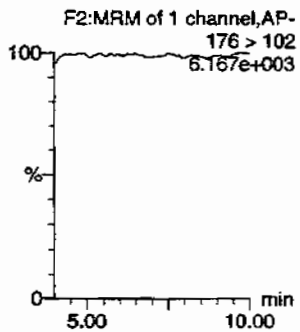

Tetryl

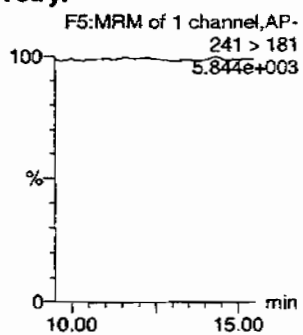

ID	Name	Trace	RT	IS Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
XIBLK06	HMX	176 > 102			3893.246									
XIBLK06	RDX	176 > 102			3893.246									
XIBLK06	135-Trinitrobenzene	213 > 183			3893.246									
XIBLK06	13-Dinitrobenzene-d4	172 > 142	11.97	3893.246		3893.246	3893.246	bb			508.0322	101.6	1.6	83.7
XIBLK06	13-Dinitrobenzene	168 > 138			3893.246									
XIBLK06	Tetryl	241 > 181			3893.246									
XIBLK06	Nitrobenzene	123 > 46			3893.246									
XIBLK06	4-Amino-26-dinitrotoluene	197 > 167			25140.730									
XIBLK06	2-Amino-46-dinitrotoluene	197 > 180			25140.730									
XIBLK06	246-Trinitrotoluene	227 > 210			25140.730									
XIBLK06	34-dinitrotoluene	182 > 152			25140.730									
XIBLK06	26-dinitrotoluene	182 > 152			25140.730									
XIBLK06	24-dinitrotoluene	182 > 152			25140.730									
XIBLK06	26-dinitrotoluene-d3	185 > 155	17.28	25140.730		25140.730	25140.730	bb			524.4769	104.9	4.9	1499.3
XIBLK06	2-Nitrotoluene	137 > 46			25140.730									
XIBLK06	4-Nitrotoluene	137 > 46			25140.730									
XIBLK06	3-Nitrotoluene	137 > 46			25140.730									
XIBLK06	PETN	361 > 62			25140.730									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09--2473

Lab Code: GEL

Lab Sample ID: XIBLK07

Analysis Date: 01-JUL-09 13:14

GEL Data File: EXP0630047a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	544.68
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	530.455
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630047a
Date: 01-Jul-2009
Time: 13:14:25
ID: XIBLK07
Vial: 1:1,A

MAH 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.575e+003

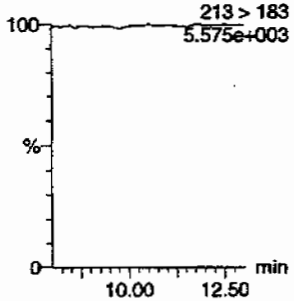

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.524e+003

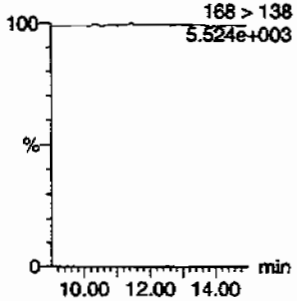

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.854e+004

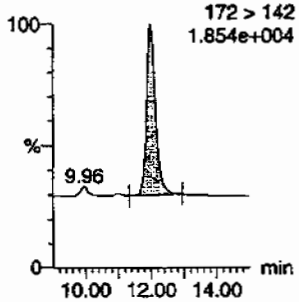

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.579e+003

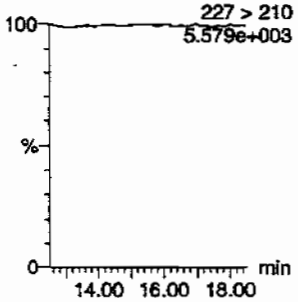

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.619e+003

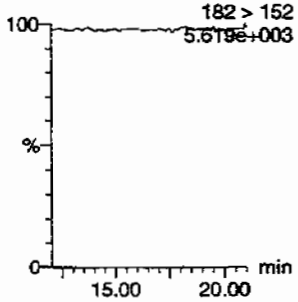

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.619e+003

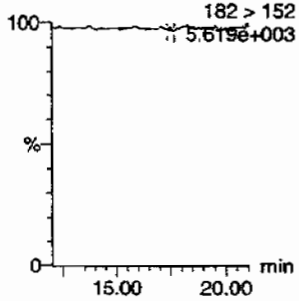

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.342e+004

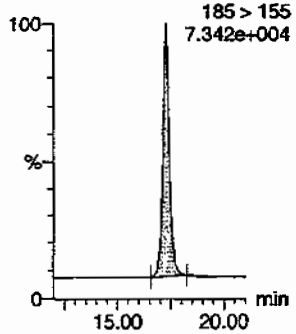

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.654e+003

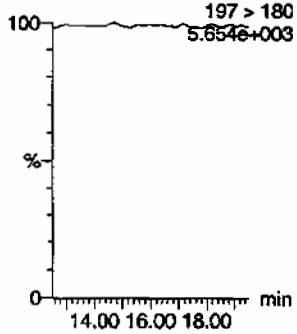

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.531e+003

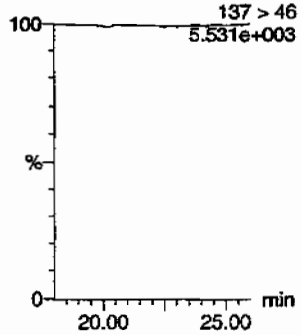

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.619e+003

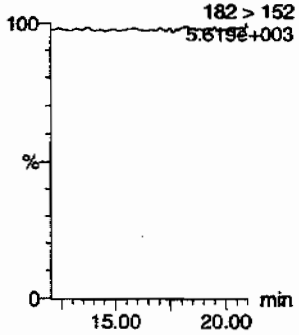

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.531e+003

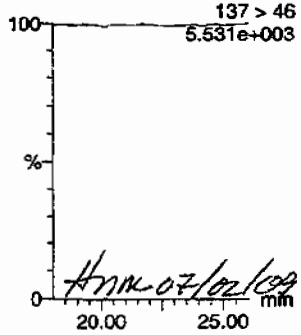

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.677e+003

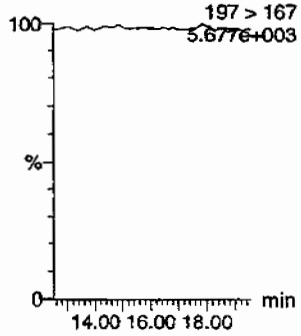

4400

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

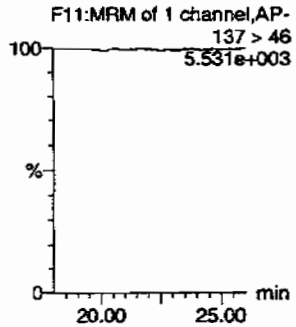

HMX

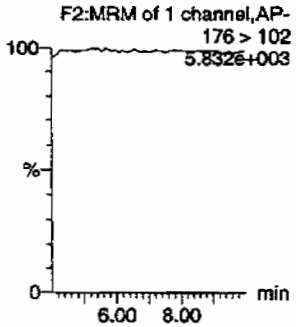

Nitrobenzene

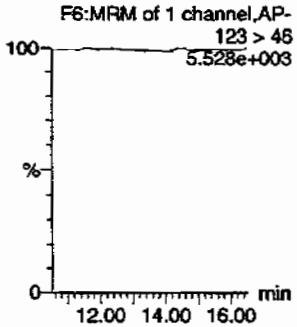

PETN

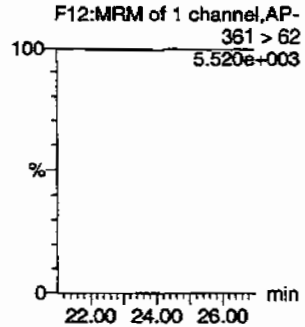

RDX

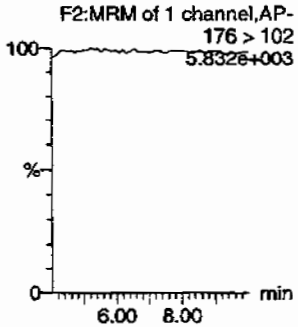

Tetryl

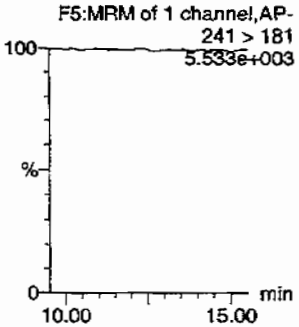

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Rel Response	Flags	Modified	Modified Time	mg/mL	%Rec	%Dev	S/N
XIBLK07	HMX	176 > 102			4174.093									
XIBLK07	RDX	176 > 102			4174.093									
XIBLK07	135-Trinitrobenzene	213 > 183			4174.093									
XIBLK07	13-Dinitrobenzene-d4	172 > 142	11.97	4174.093		4174.093	4174.093	bb			544.6801	108.9	8.9	608.0
XIBLK07	13-Dinitrobenzene	168 > 138			4174.093									
XIBLK07	Tetryl	241 > 181			4174.093									
XIBLK07	Nitrobenzene	123 > 46			4174.093									
XIBLK07	4-Amino-26-dinitrotoluene	197 > 167			25427.313									
XIBLK07	2-Amino-46-dinitrotoluene	197 > 180			25427.313									
XIBLK07	246-Trinitrotoluene	227 > 210			25427.313									
XIBLK07	34-dinitrotoluene	182 > 152			25427.313									
XIBLK07	26-dinitrotoluene	182 > 152			25427.313			MM-	02-Jul-09	07:57:39				
XIBLK07	24-dinitrotoluene	182 > 152			25427.313									
XIBLK07	26-dinitrotoluene-d3	185 > 155	17.27	25427.313		25427.313	25427.313	bb			530.4555	106.1	6.1	2059.9
XIBLK07	2-Nitrotoluene	137 > 46			25427.313									
XIBLK07	4-Nitrotoluene	137 > 46			25427.313									
XIBLK07	3-Nitrotoluene	137 > 46			25427.313									
XIBLK07	PETN	361 > 62			25427.313									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK08

Analysis Date: 01-JUL-09 17:10

GEL Data File: EXP0630055a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	537.543
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	544.234
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630055a
Date: 01-Jul-2009
Time: 17:10:11
ID: XIBLK08
Vial: 1:1,A

MAT 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.509e+003

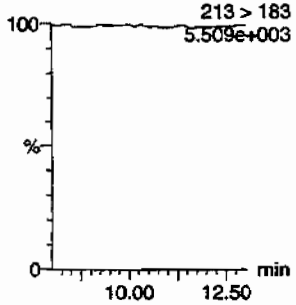

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.454e+003

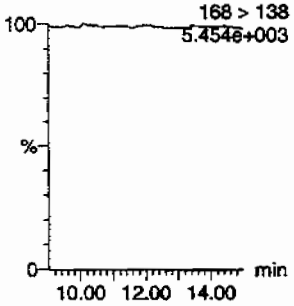

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.807e+004

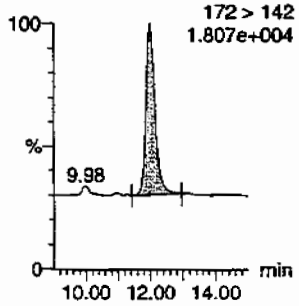

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.489e+003

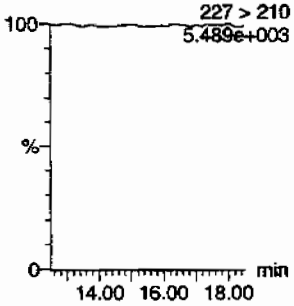

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.476e+003

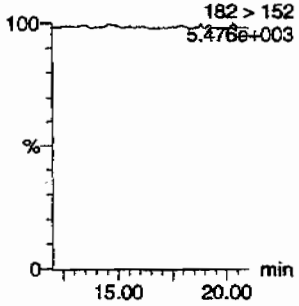

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.476e+003

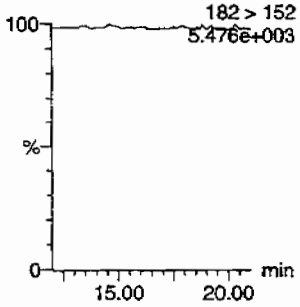

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.496e+004

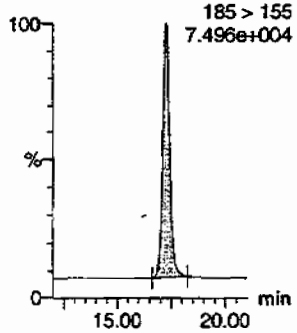

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.597e+003

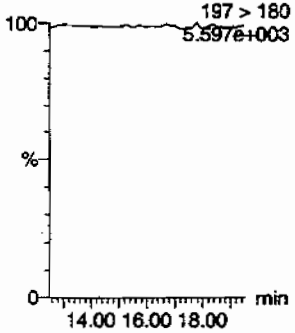

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.418e+003

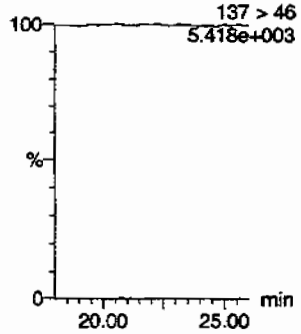

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.476e+003

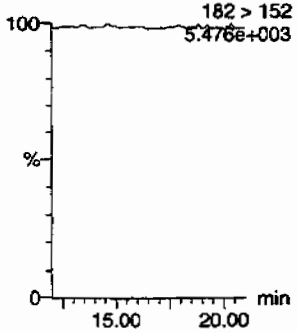

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.418e+003

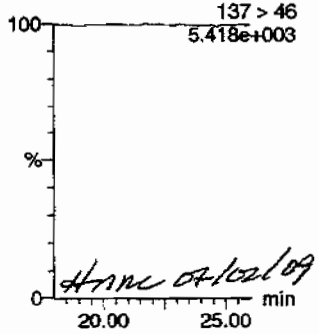

HMC 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.583e+003

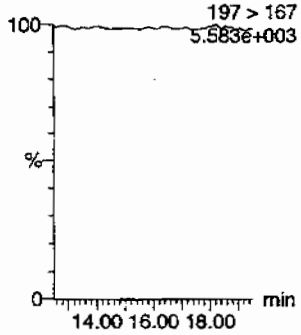

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

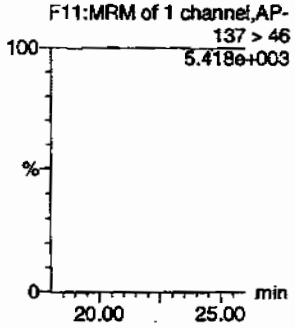

HMX

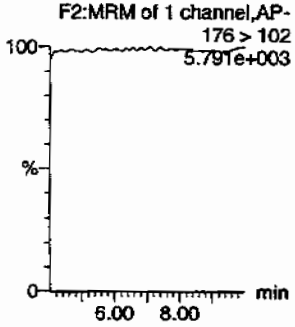

Nitrobenzene

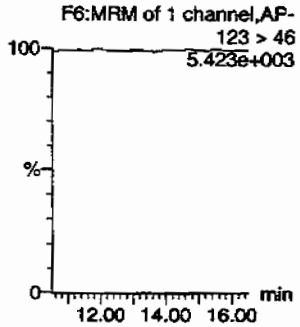

PETN

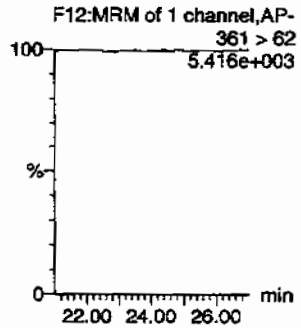

RDX

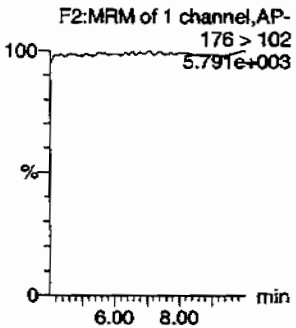

Tetryl

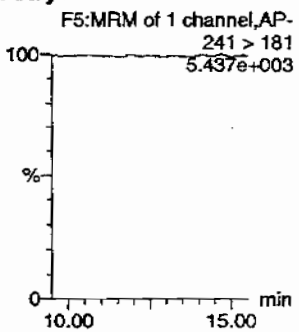

ID	Name	Trace	RT	Area	S/Area	Abs Resp	Response	Flags	Modifier	Modifiers	Amount	%Rec	%Dev	S/N
XIBLK08	HMX	176 > 102			4119.398									
XIBLK08	RDX	176 > 102			4119.398									
XIBLK08	135-Trinitrobenzene	213 > 183			4119.398									
XIBLK08	13-Dinitrobenzene-d4	172 > 142	12.00	4119.398		4119.398	4119.398	bb			537.5429	107.5	7.5	159.4
XIBLK08	13-Dinitrobenzene	168 > 138			4119.398									
XIBLK08	Tetryl	241 > 181			4119.398									
XIBLK08	Nitrobenzene	123 > 46			4119.398									
XIBLK08	4-Amino-26-dinitrotoluene	197 > 167			26087.762									
XIBLK08	2-Amino-46-dinitrotoluene	197 > 180			26087.762									
XIBLK08	246-Trinitrotoluene	227 > 210			26087.762									
XIBLK08	34-dinitrotoluene	182 > 152			26087.762									
XIBLK08	26-dinitrotoluene	182 > 152			26087.762									
XIBLK08	24-dinitrotoluene	182 > 152			26087.762									
XIBLK08	26-dinitrotoluene-d3	185 > 155	17.29	26087.762		26087.762	26087.762	bb			544.2335	108.8	8.8	2479.5
XIBLK08	2-Nitrotoluene	137 > 46			26087.762									
XIBLK08	4-Nitrotoluene	137 > 46			26087.762									
XIBLK08	3-Nitrotoluene	137 > 46			26087.762									
XIBLK08	PETN	361 > 62			26087.762									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 13-JUL-09 18:52

GEL Data File: EXP0713009a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	521.619
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	534.002
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713009a
Date: 13-Jul-2009
Time: 18:52:18
ID: XIBLK02
Vial: 1:1,A

MAP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.710e+003

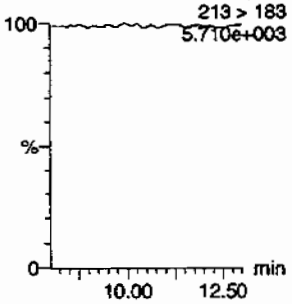

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.575e+003

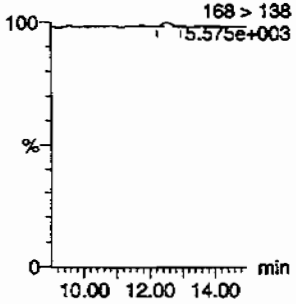

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.699e+004

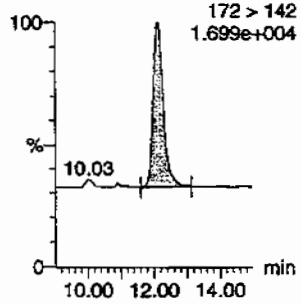

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.733e+003

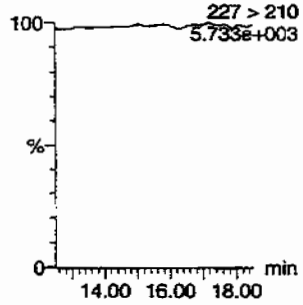

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.611e+003

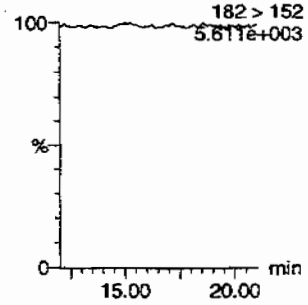

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.611e+003

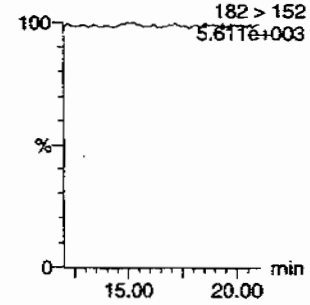

126-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.981e+004

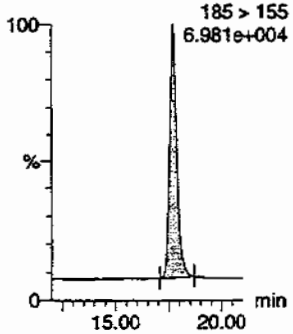

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.843e+003

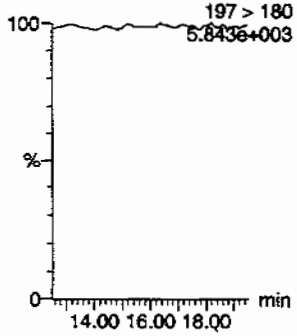

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.554e+003

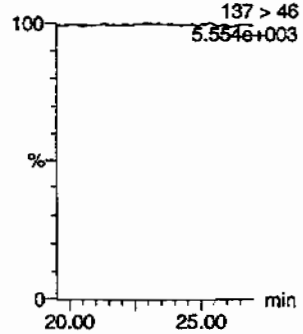

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.611e+003

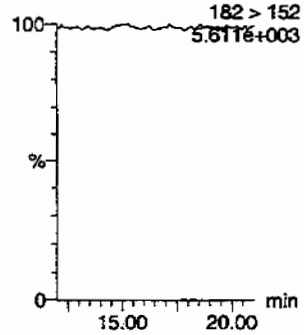

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.554e+003

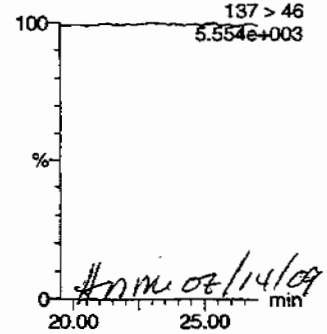

Anm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.835e+003

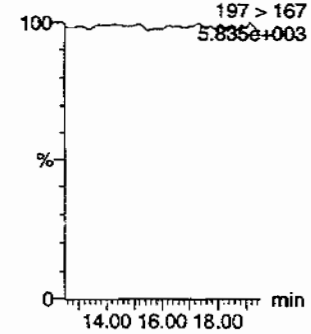

4514

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

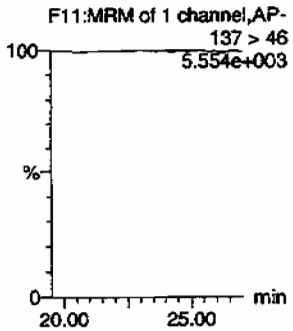

HMX

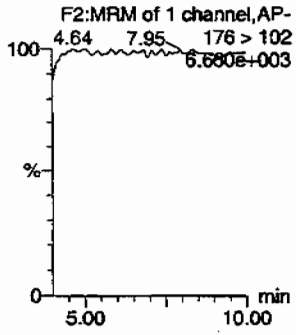

Nitrobenzene

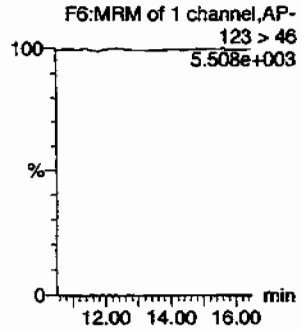

PETN

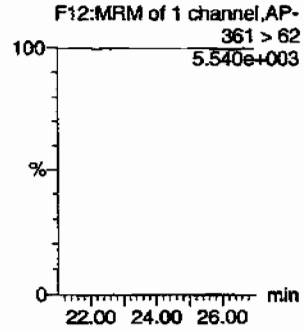

RDX

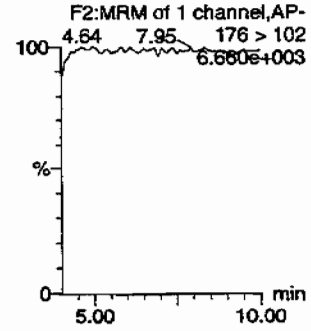

Tetryl

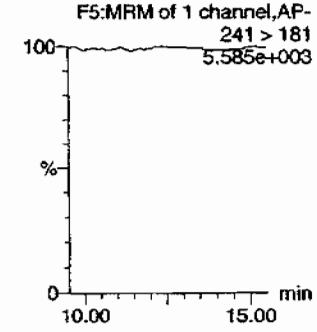

ID	Name	Trace	RT	Area	S/Area	Abs.Resp	Response	Flags	Modifiers	Mod.Time	Found	%Rec	%Dev	S/N
XIBLK02	HMX	176 > 102			4111.610									
XIBLK02	RDX	176 > 102			4111.610									
XIBLK02	135-Trinitrobenzene	213 > 183			4111.610									
XIBLK02	13-Dinitrobenzene-d4	172 > 142	12.14	4111.610		4111.610	4111.610	bb			521.6194	104.3	4.3	408.3
XIBLK02	13-Dinitrobenzene	168 > 138			4111.610			MM-	14-Jul-09	10:21:28				
XIBLK02	Tetryl	241 > 181			4111.610									
XIBLK02	Nitrobenzene	123 > 46			4111.610									
XIBLK02	4-Amino-26-dinitrotoluene	197 > 167			25538.109									
XIBLK02	2-Amino-46-dinitrotoluene	197 > 180			25538.109									
XIBLK02	246-Trinitrotoluene	227 > 210			25538.109									
XIBLK02	34-dinitrotoluene	182 > 152			25538.109									
XIBLK02	26-dinitrotoluene	182 > 152			25538.109									
XIBLK02	24-dinitrotoluene	182 > 152			25538.109									
XIBLK02	26-dinitrotoluene-d3	185 > 155	17.68	25538.109		25538.109	25538.109	bb			534.0018	106.8	6.8	1104.7
XIBLK02	2-Nitrotoluene	137 > 46			25538.109									
XIBLK02	4-Nitrotoluene	137 > 46			25538.109									
XIBLK02	3-Nitrotoluene	137 > 46			25538.109									
XIBLK02	PETN	361 > 62			25538.109									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 13-JUL-09 19:51

GEL Data File: EXP0713011a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	572.542
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	574.682
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713011a
Date: 13-Jul-2009
Time: 19:51:17
ID: XIBLK03
Vial: 1:1,A

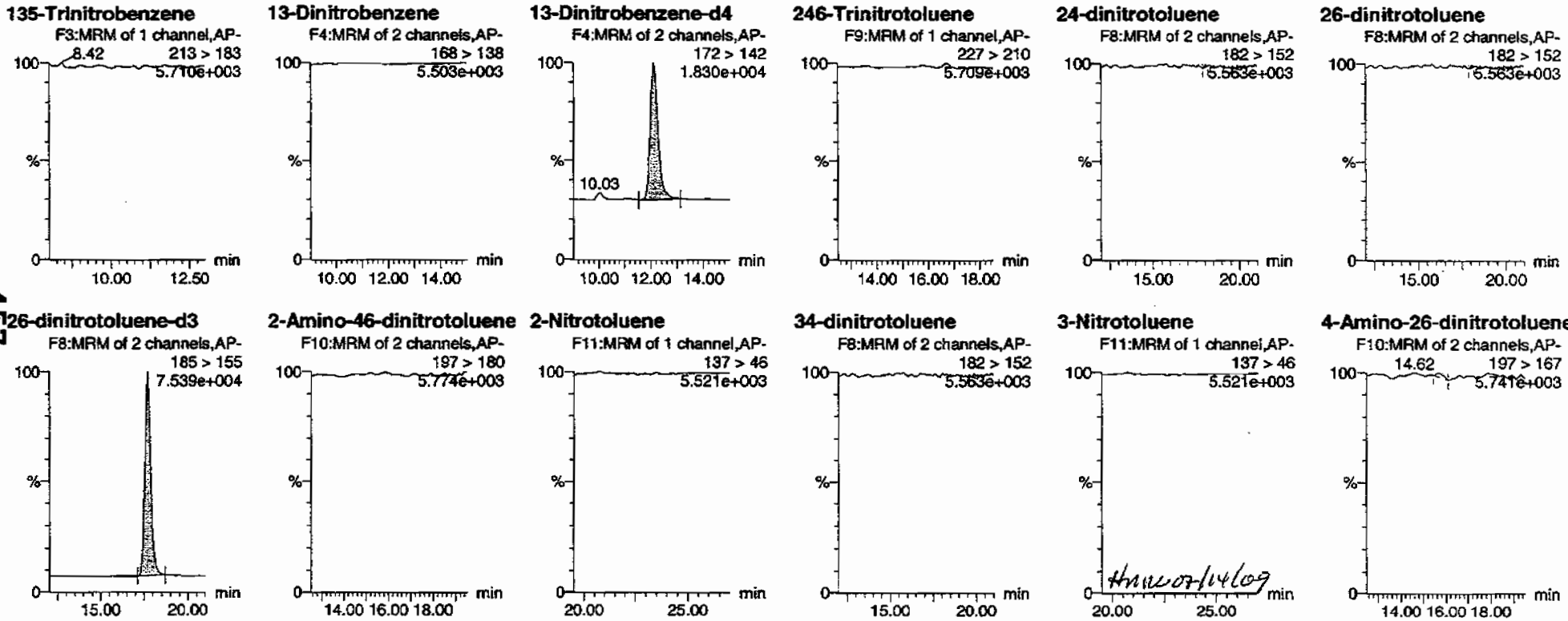

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

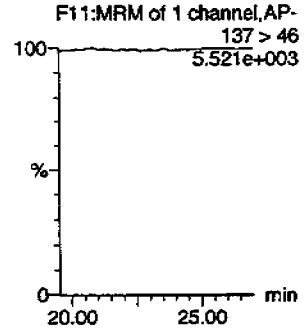

HMX

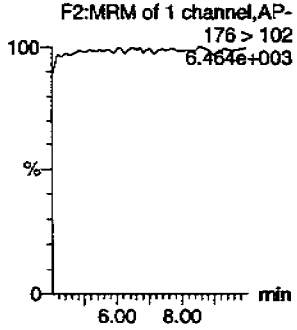

Nitrobenzene

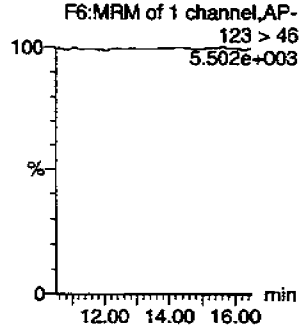

PETN

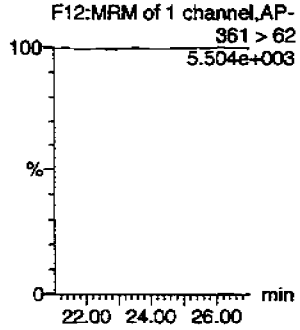

RDX

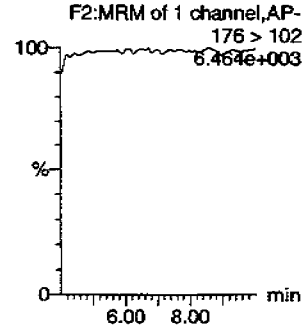

Tetryl

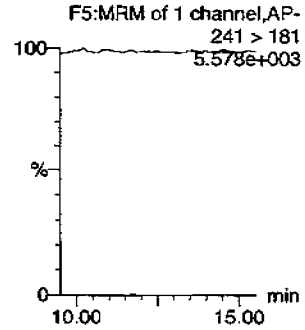

ID	Name	Trace	RT	Area	S/Area	Abs Resp	%Response	Flags	Moddate	Modtime	Spiqnt	%Rec	%Dev	S/N
XIBLK03	HMX	176 > 102			4513.001									
XIBLK03	RDX	176 > 102			4513.001									
XIBLK03	135-Trinitrobenzene	213 > 183			4513.001									
XIBLK03	13-Dinitrobenzene-d4	172 > 142	12.14	4513.001		4513.001	4513.001	bb			572.5419	114.5	14.5	297.7
XIBLK03	13-Dinitrobenzene	168 > 138			4513.001									
XIBLK03	Tetryl	241 > 181			4513.001									
XIBLK03	Nitrobenzene	123 > 46			4513.001									
XIBLK03	4-Amino-26-dinitrotoluene	197 > 167			27483.588			MM-	14-Jul-09	10:18:35				
XIBLK03	2-Amino-46-dinitrotoluene	197 > 180			27483.588									
XIBLK03	246-Trinitrotoluene	227 > 210			27483.588									
XIBLK03	34-dinitrotoluene	182 > 152			27483.588									
XIBLK03	26-dinitrotoluene	182 > 152			27483.588			MM-	14-Jul-09	10:15:08				
XIBLK03	24-dinitrotoluene	182 > 152			27483.588			MM-	14-Jul-09	10:11:39				
XIBLK03	26-dinitrotoluene-d3	185 > 155	17.68	27483.588		27483.588	27483.588	bb			574.6817	114.9	14.9	603.4
XIBLK03	2-Nitrotoluene	137 > 46			27483.588									
XIBLK03	4-Nitrotoluene	137 > 46			27483.588									
XIBLK03	3-Nitrotoluene	137 > 46			27483.588									
XIBLK03	PETN	361 > 62			27483.588									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 13-JUL-09 21:49

GEL Data File: EXP0713015a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	630.06
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	594.608
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713015a
Date: 13-Jul-2009
Time: 21:49:18
ID: XIBLK04
Vial: 1:1,A

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.776e+003

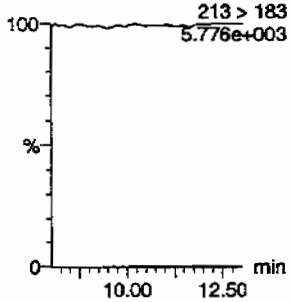

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.705e+003

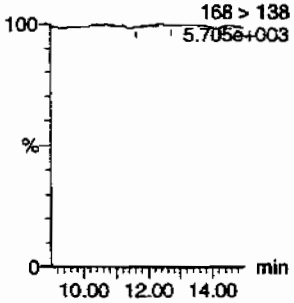

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
2.037e+004

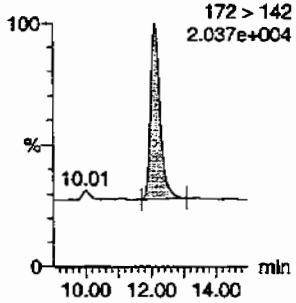

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.795e+003

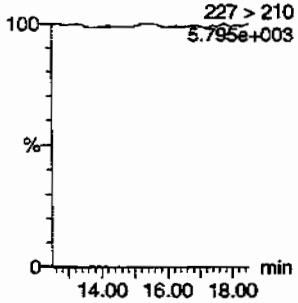

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.757e+003

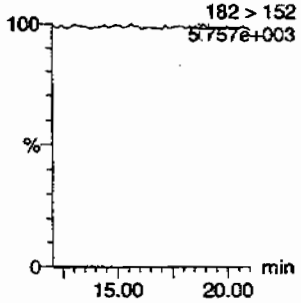

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.757e+003

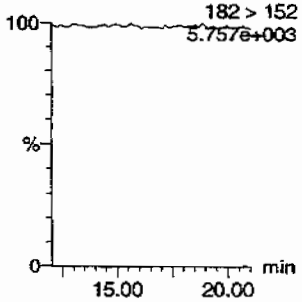

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.949e+004

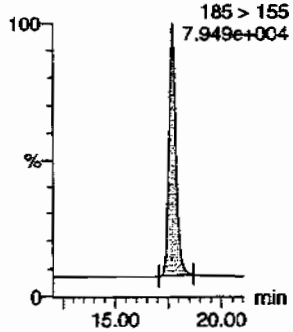

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.825e+003

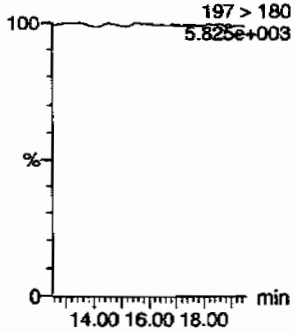

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.694e+003

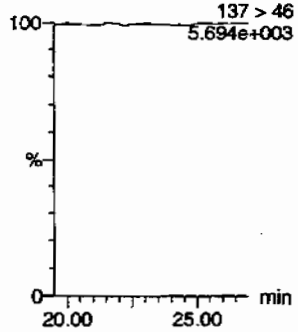

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.757e+003

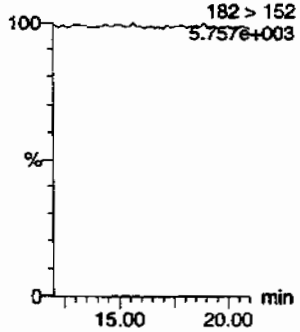

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.694e+003

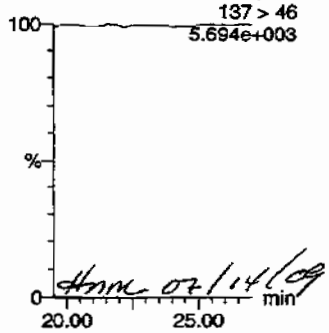

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.819e+003

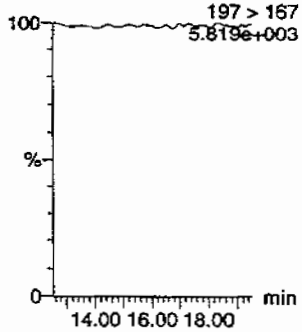

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

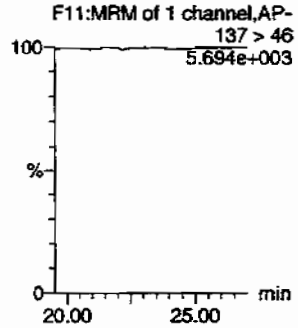

HMX

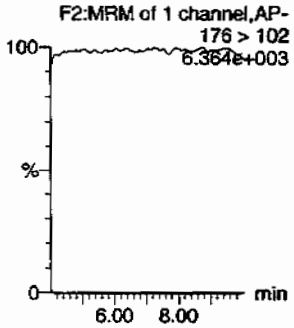

Nitrobenzene

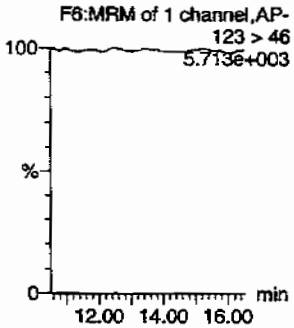

PETN

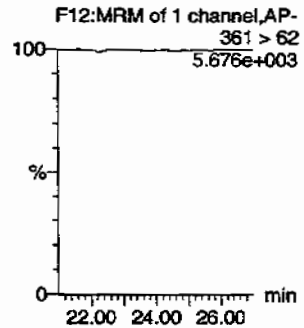

RDX

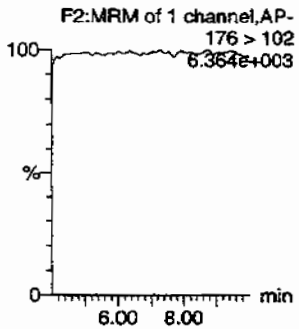

Tetryl

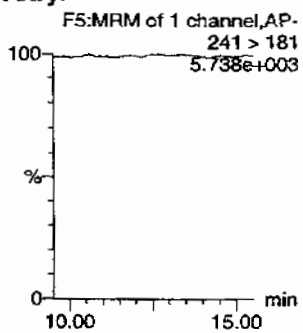

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
XIBLK04	HMX	176 > 102			4966.385									
XIBLK04	RDX	176 > 102			4966.385									
XIBLK04	135-Trinitrobenzene	213 > 183			4966.385									
XIBLK04	13-Dinitrobenzene-d4	172 > 142	12.14	4966.385		4966.385	4966.385	bb			630.0605	126.0	26.0	439.2
XIBLK04	13-Dinitrobenzene	168 > 138			4966.385			MM-	14-Jul-09	10:21:36				
XIBLK04	Tetryl	241 > 181			4966.385									
XIBLK04	Nitrobenzene	123 > 46			4966.385									
XIBLK04	4-Amino-26-dinitrotoluene	197 > 167			28436.547									
XIBLK04	2-Amino-46-dinitrotoluene	197 > 180			28436.547									
XIBLK04	246-Trinitrotoluene	227 > 210			28436.547									
XIBLK04	34-dinitrotoluene	182 > 152			28436.547									
XIBLK04	26-dinitrotoluene	182 > 152			28436.547									
XIBLK04	24-dinitrotoluene	182 > 152			28436.547			MM-	14-Jul-09	10:11:55				
XIBLK04	26-dinitrotoluene-d3	185 > 155	17.68	28436.547		28436.547	28436.547	bb			594.6081	118.9	18.9	1170.6
XIBLK04	2-Nitrotoluene	137 > 46			28436.547									
XIBLK04	4-Nitrotoluene	137 > 46			28436.547									
XIBLK04	3-Nitrotoluene	137 > 46			28436.547									
XIBLK04	PETN	361 > 62			28436.547									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 14-JUL-09 01:45

GEL Data File: EXP0713023a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	525.527
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	534.353
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713023a
Date: 14-Jul-2009
Time: 01:45:16
ID: XIBLK05
Vial: 1:1,A

MMT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.937e+003

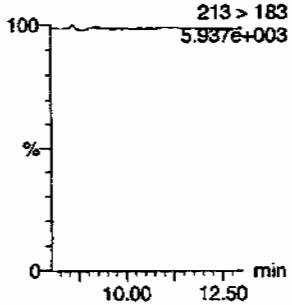

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.813e+003

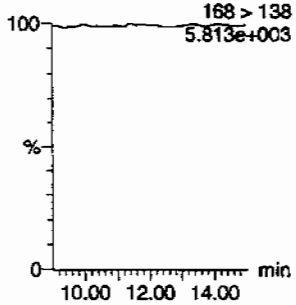

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.792e+004

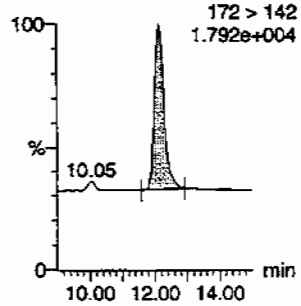

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.900e+003

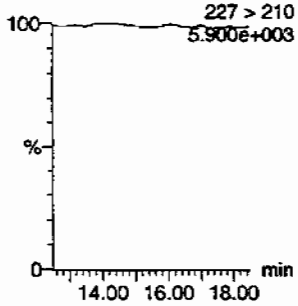

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.873e+003

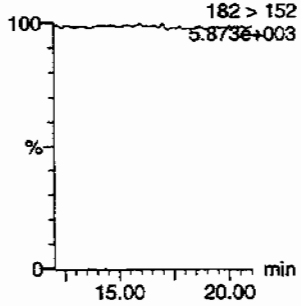

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.873e+003

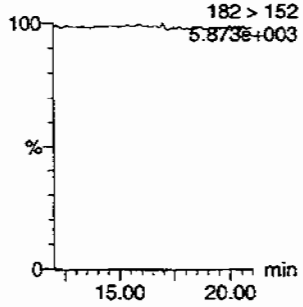

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.974e+004

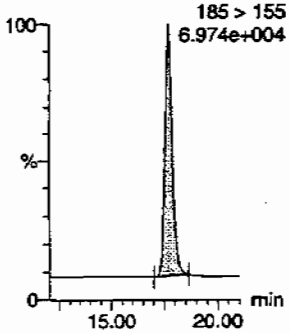

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.934e+003

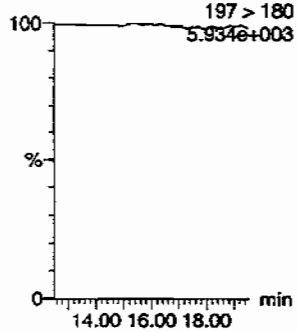

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.787e+003

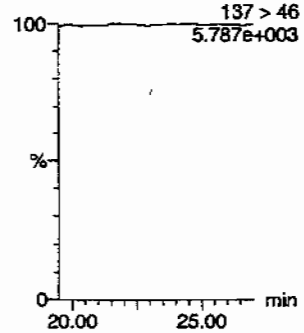

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.873e+003

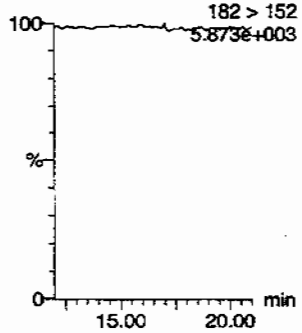

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.787e+003

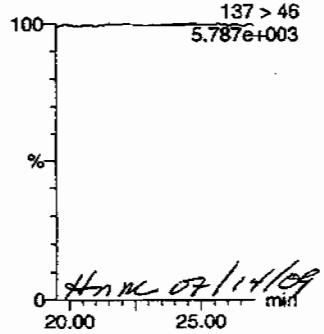

HMC 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.951e+003

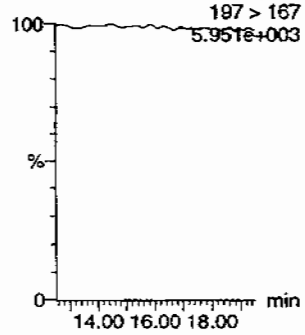

463

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

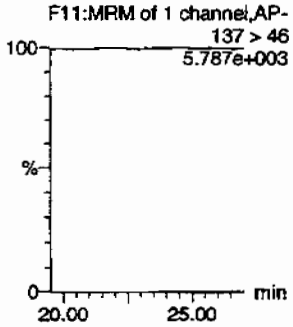

HMX

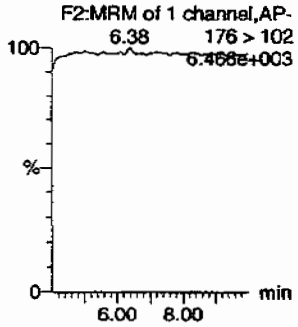

Nitrobenzene

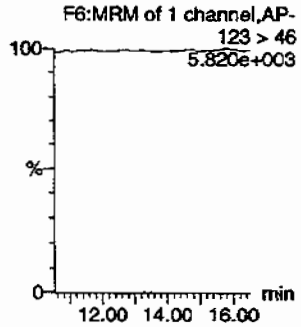

PETN

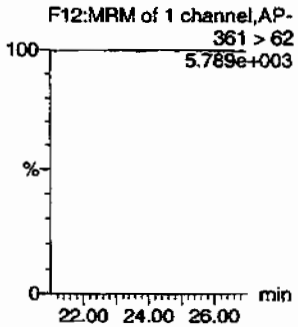

RDX

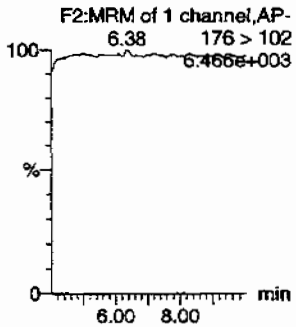

Tetryl

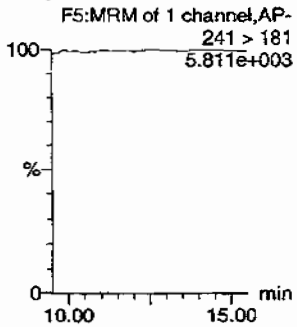

ID	Name	Trace	RT	Area	IS Area	Abs Resp	% Response	Flags	Mod Date	Mod Time	Amount	%Rec	%Dev	S/N
XIBLK05	HMX	176 > 102			4142.414									
XIBLK05	RDX	176 > 102			4142.414									
XIBLK05	135-Trinitrobenzene	213 > 183			4142.414									
XIBLK05	13-Dinitrobenzene-d4	172 > 142	12.14	4142.414		4142.414	4142.414	bb			525.5274	105.1	5.1	466.8
XIBLK05	13-Dinitrobenzene	168 > 138			4142.414									
XIBLK05	Tetryl	241 > 181			4142.414									
XIBLK05	Nitrobenzene	123 > 46			4142.414									
XIBLK05	4-Amino-26-dinitrotoluene	197 > 167			25554.914									
XIBLK05	2-Amino-46-dinitrotoluene	197 > 180			25554.914									
XIBLK05	246-Trinitrotoluene	227 > 210			25554.914									
XIBLK05	34-dinitrotoluene	182 > 152			25554.914									
XIBLK05	26-dinitrotoluene	182 > 152			25554.914									
XIBLK05	24-dinitrotoluene	182 > 152			25554.914									
XIBLK05	26-dinitrotoluene-d3	185 > 155	17.68	25554.914		25554.914	25554.914	bb			534.3531	106.9	6.9	1416.5
XIBLK05	2-Nitrotoluene	137 > 46			25554.914									
XIBLK05	4-Nitrotoluene	137 > 46			25554.914									
XIBLK05	3-Nitrotoluene	137 > 46			25554.914									
XIBLK05	PETN	361 > 62			25554.914									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 01-JUL-09 13:05

GEL Data File: EXS0701010.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	12
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Lar 7/6/09

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0701010.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No

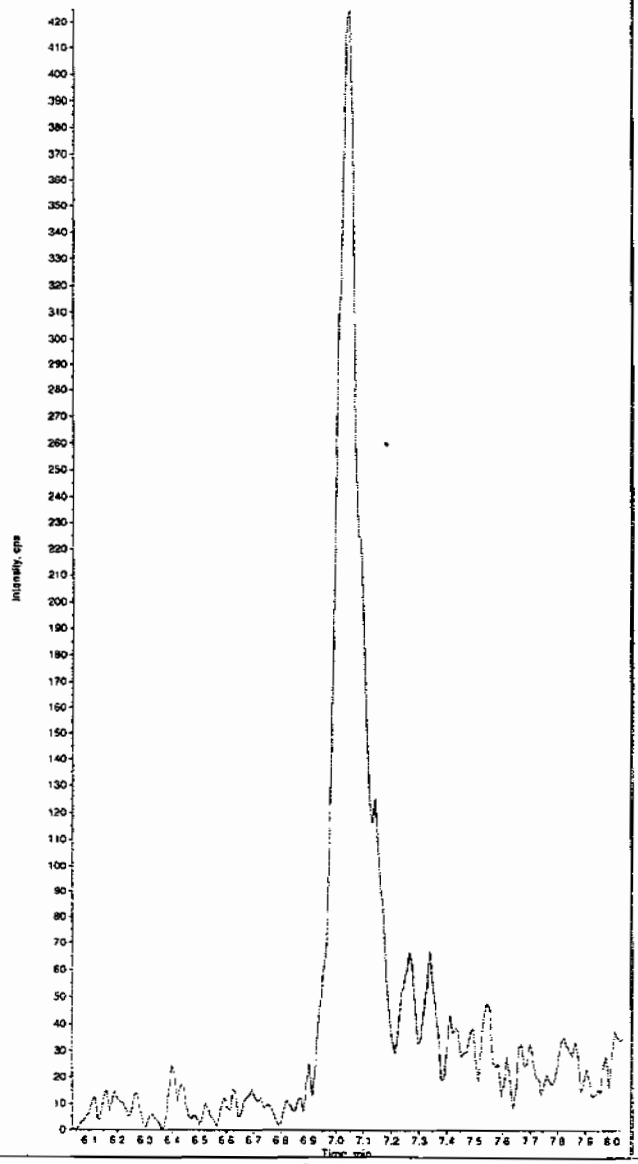

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0701010.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No

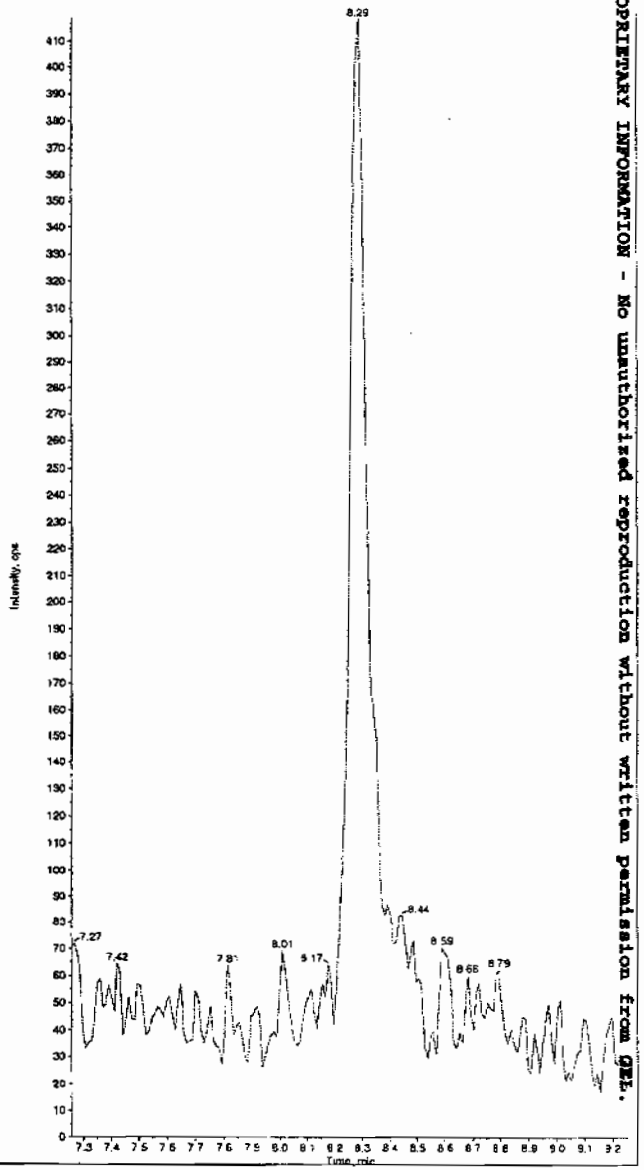

Hme 07/06/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS0701010.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No

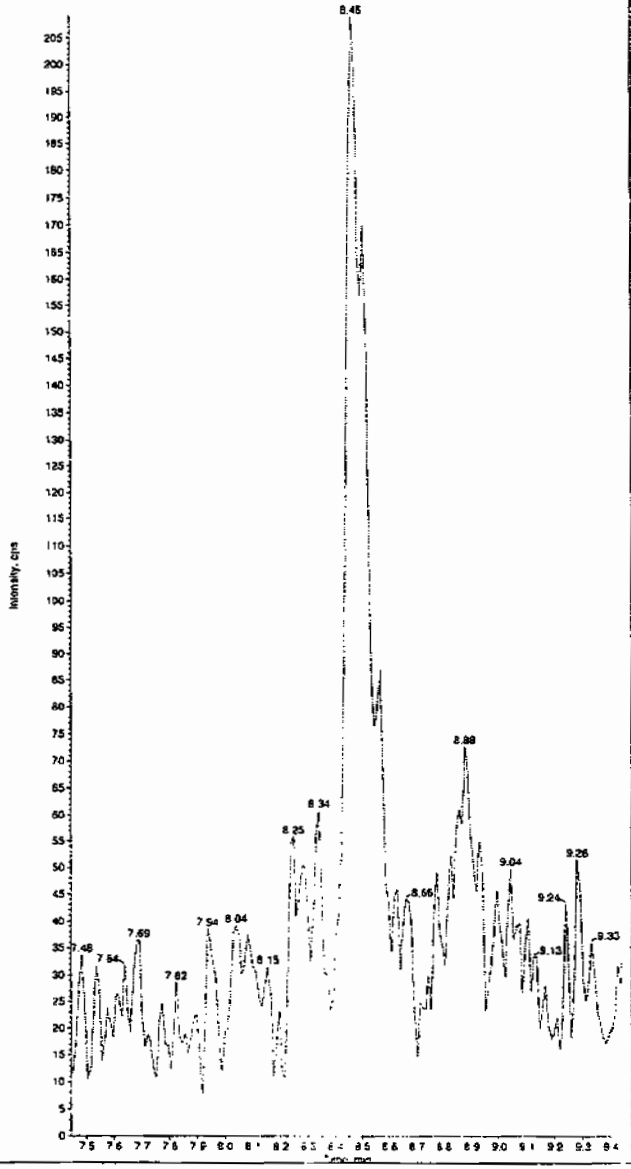

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS0701010.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No

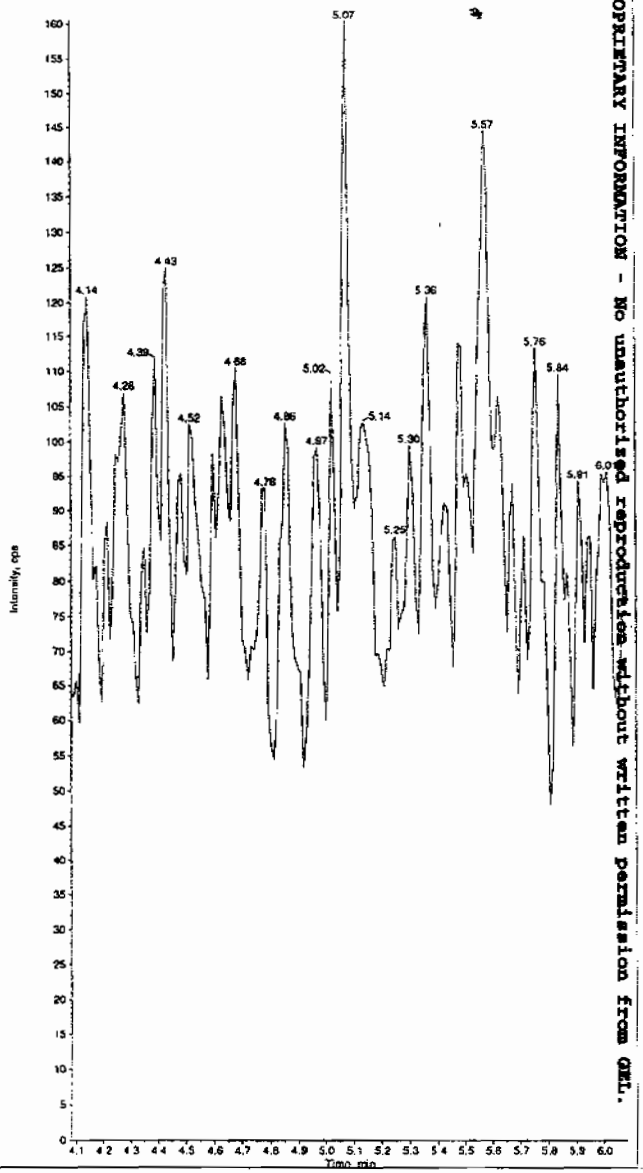

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0701010.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No

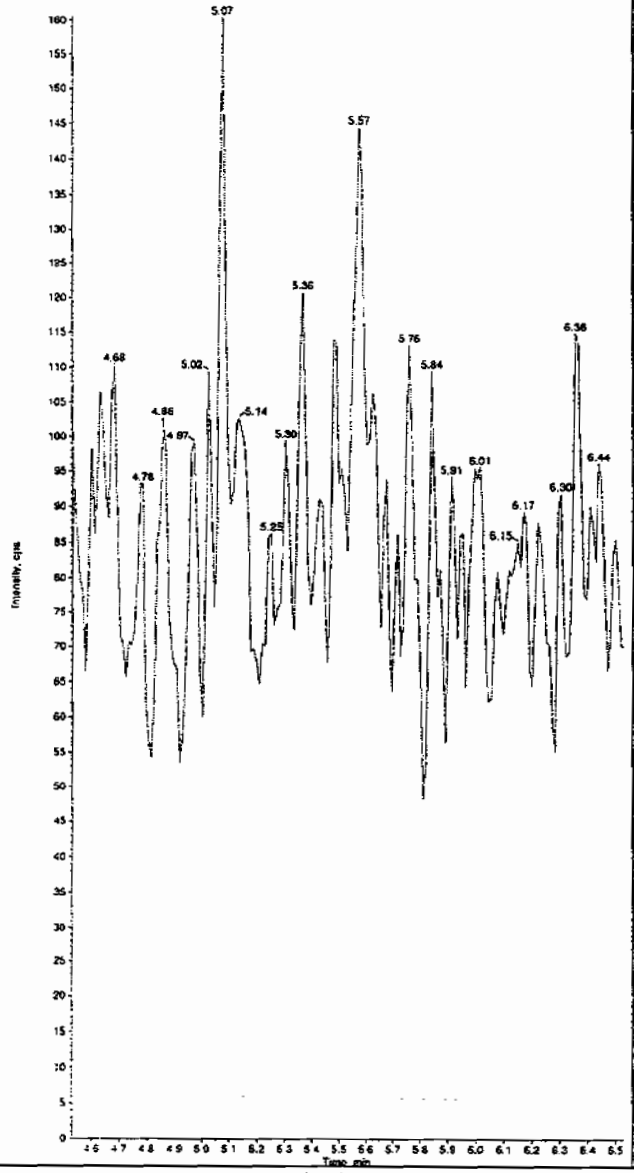

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0701010.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 12.0 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.74e+005 counts
Height: 36705.116 cps
Start Time: 10.8 min
End Time: 11.2 min

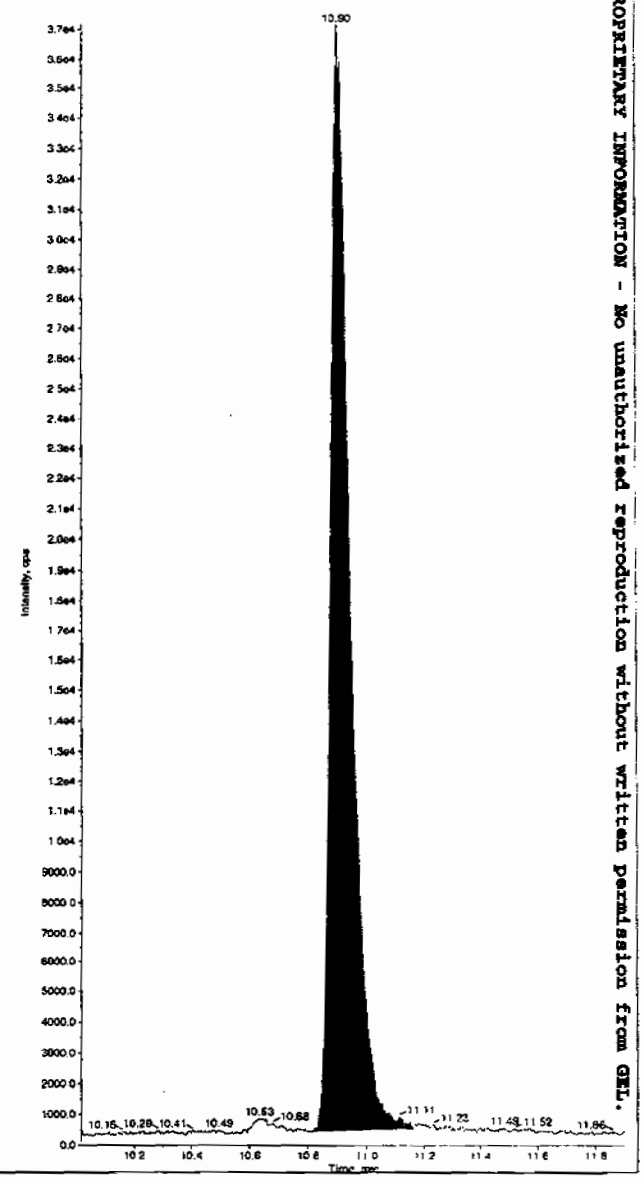

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 01-JUL-09 13:37

GEL Data File: EXS0701012.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	7.3
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0701012.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:37:43 PM

Modified: No

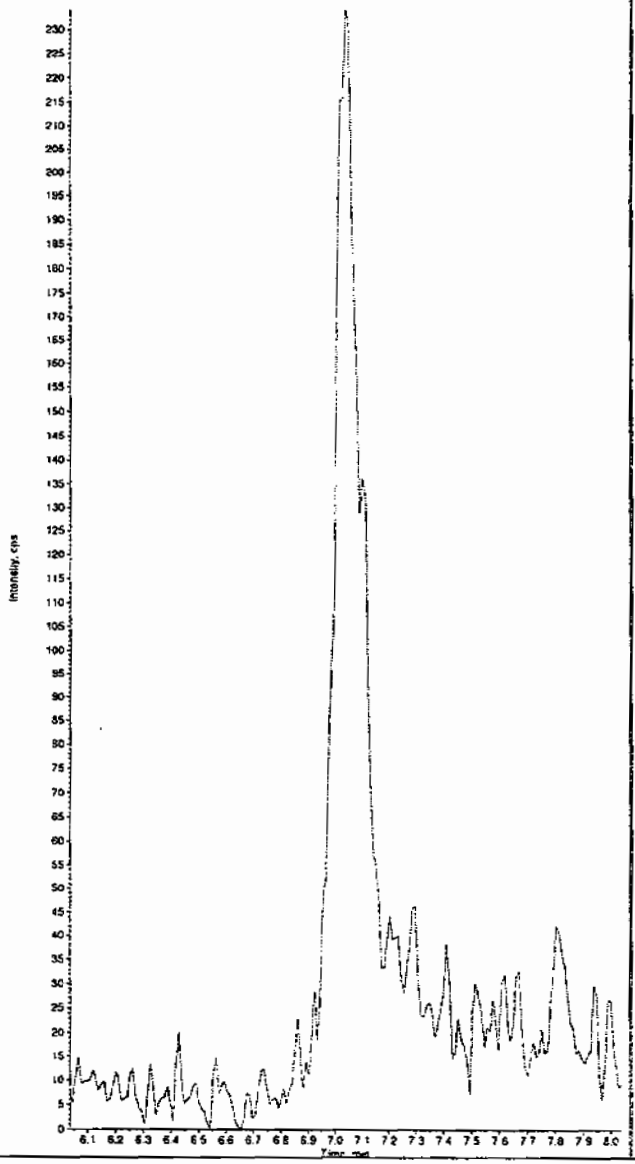

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0701012.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:37:43 PM

Modified: No

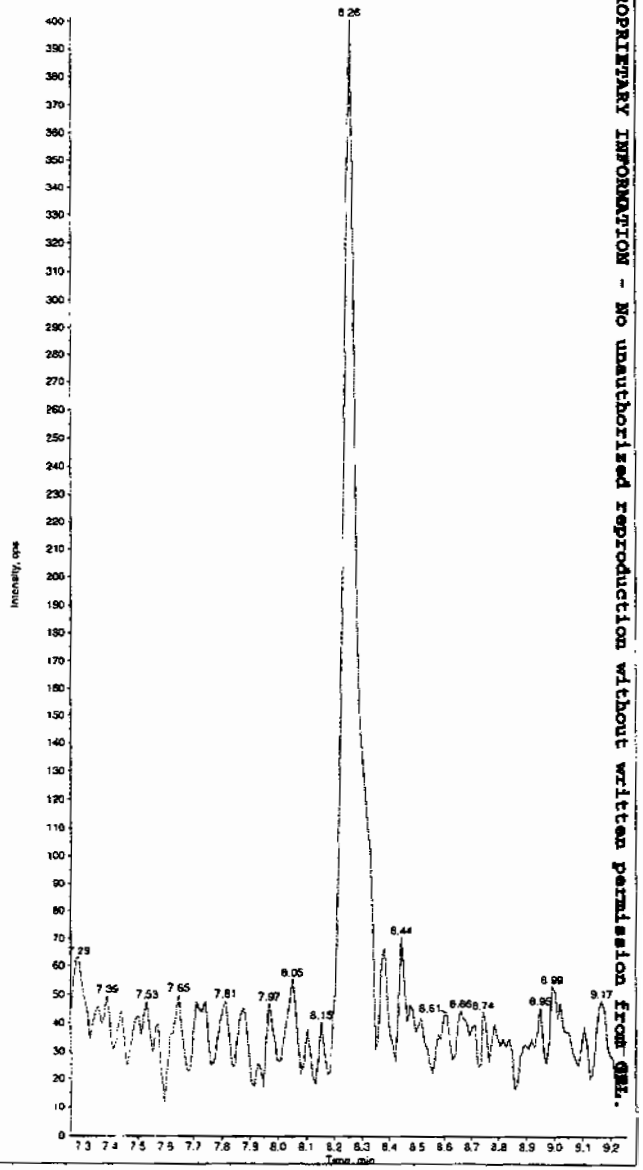

Han 7/6/09

Hnm 07/06/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0701012.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:37:43 PM

Modified: No

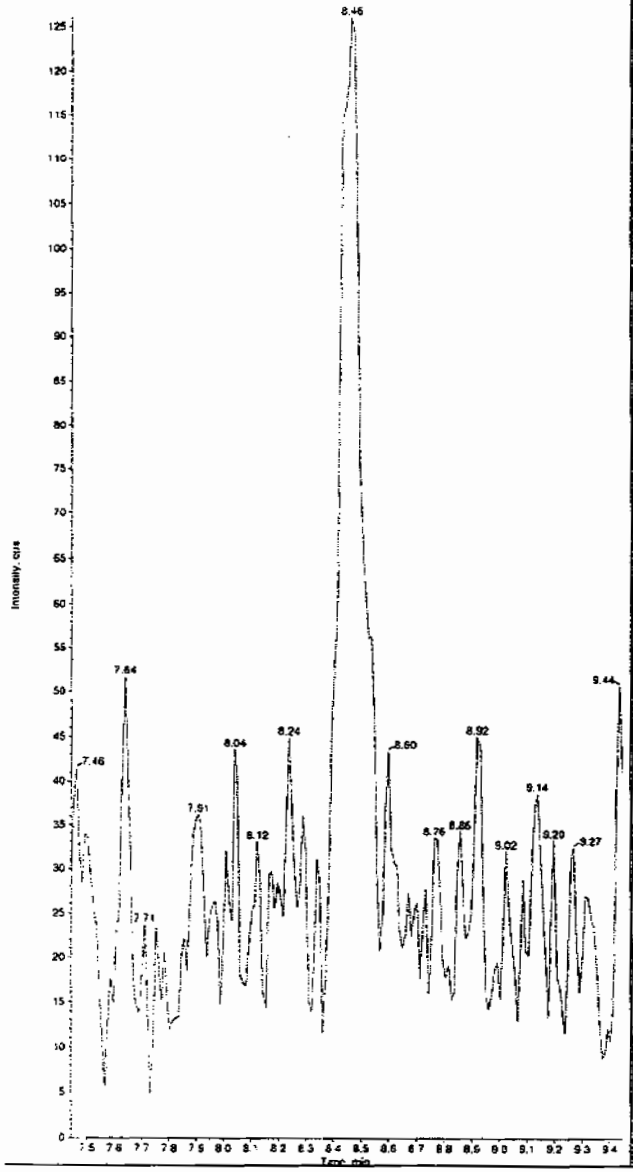

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0701012.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:37:43 PM

Modified: No

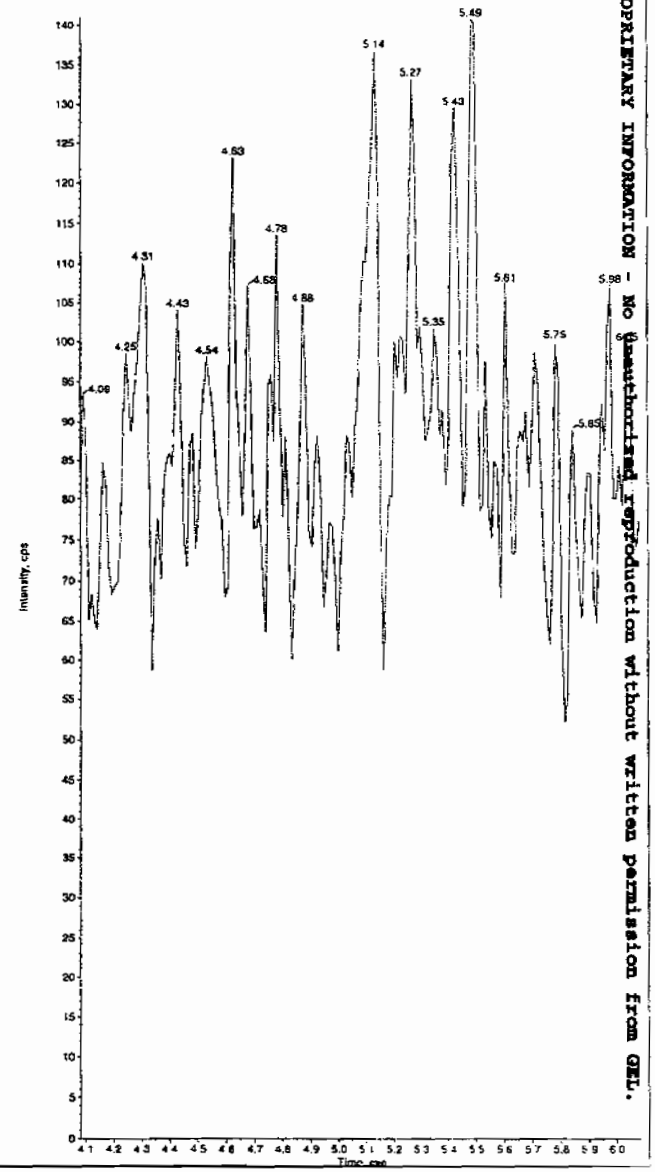

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK03" Sample ID: "j1[LER" File: "EXS0701012.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

```
Sample Index:        1
Sample Type:     Unknown
Concentration:     N/A
Calculated Conc:   0.00     ng/mL
Acq. Date:     7/1/2009
Acq. Time:     1:37:43 PM

Modified:          No
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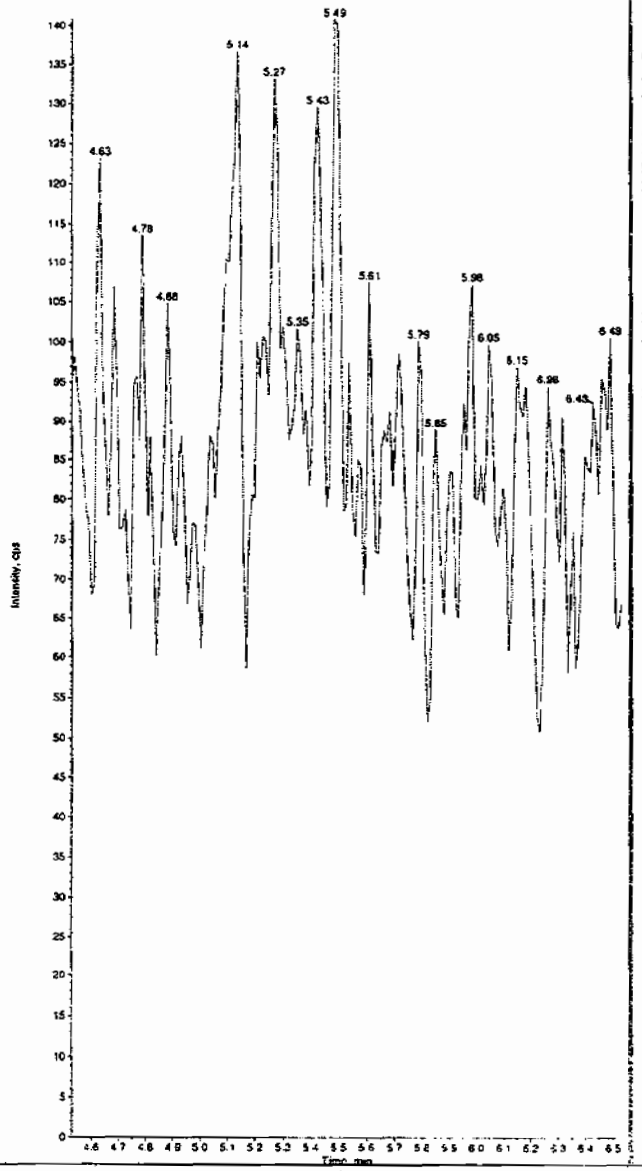

Sample Name: "XIBLK03" Sample ID: "j1[LER" File: "EXS0701012.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

```
Sample Index:        1
Sample Type:     Unknown
Concentration:     N/A
Calculated Conc:   7.30     ng/mL
Acq. Date:     7/1/2009
Acq. Time:     1:37:43 PM

Modified:          No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4    cps
Min. Peak Width:   0.00     sec
Smoothing Width:   3       points
RT Window:        30.0      sec
Expected RT:      10.9      min
Use Relative RT:   No

Int. Type:       Valley
Retention Time:    10.9     min
Area:        1.12e+005    counts
Height:      23997.810    cps
Start Time:        10.8     min
End Time:          11.1     min
```

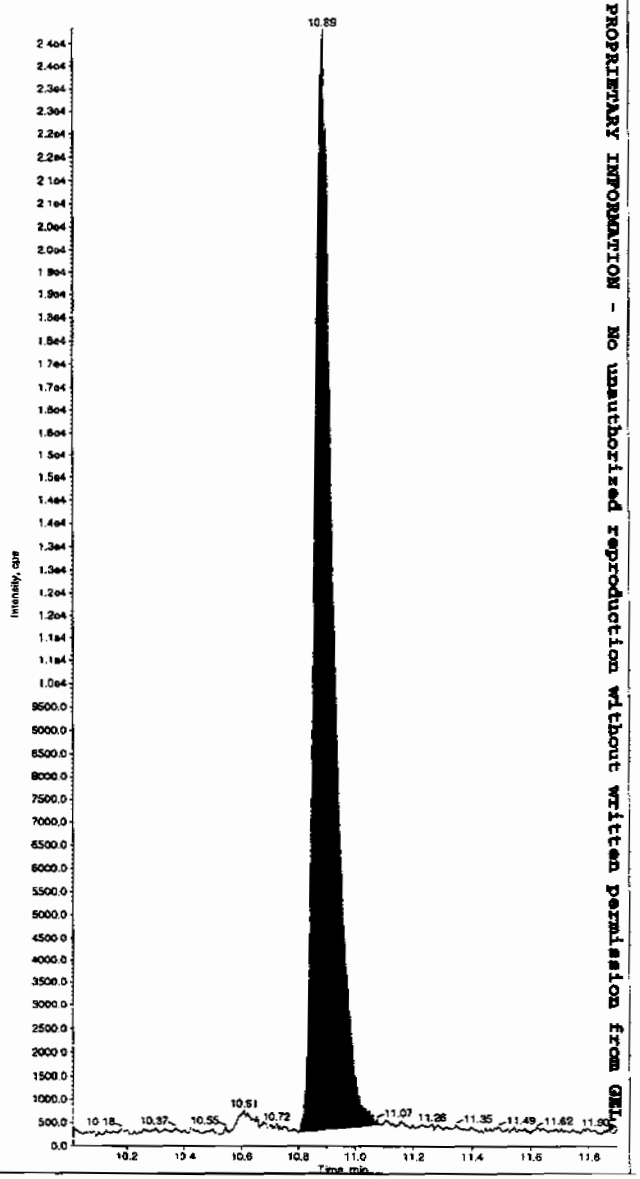

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 01-JUL-09 14:26

GEL Data File: EXS0701015.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	4.12
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS0701015.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No

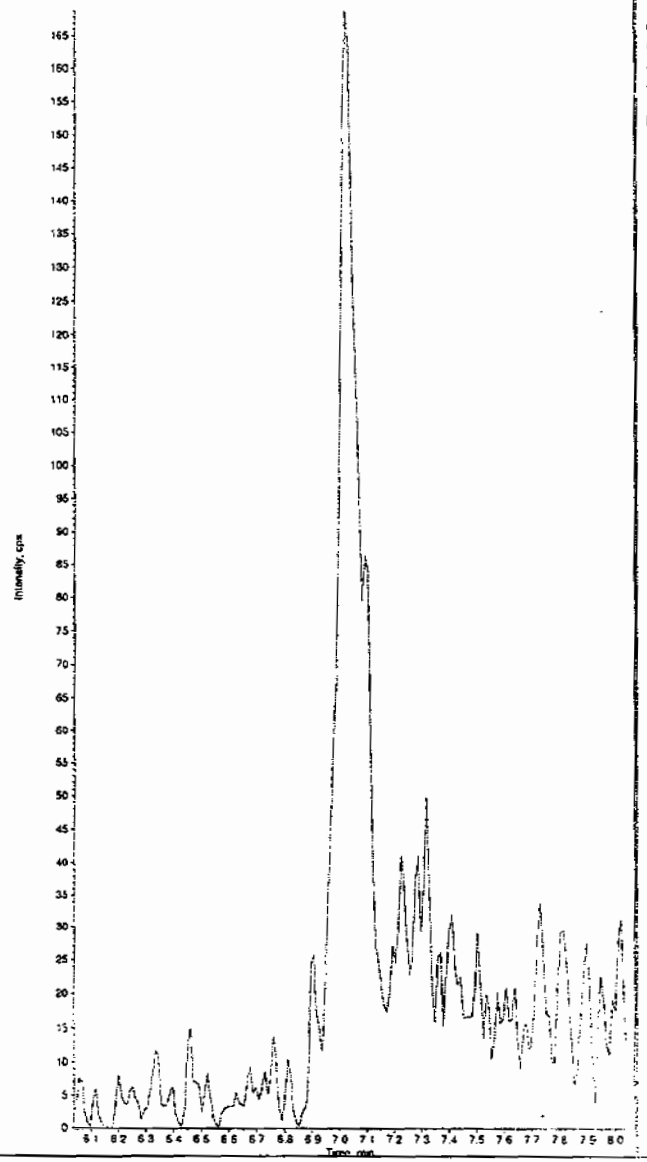

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS0701015.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No

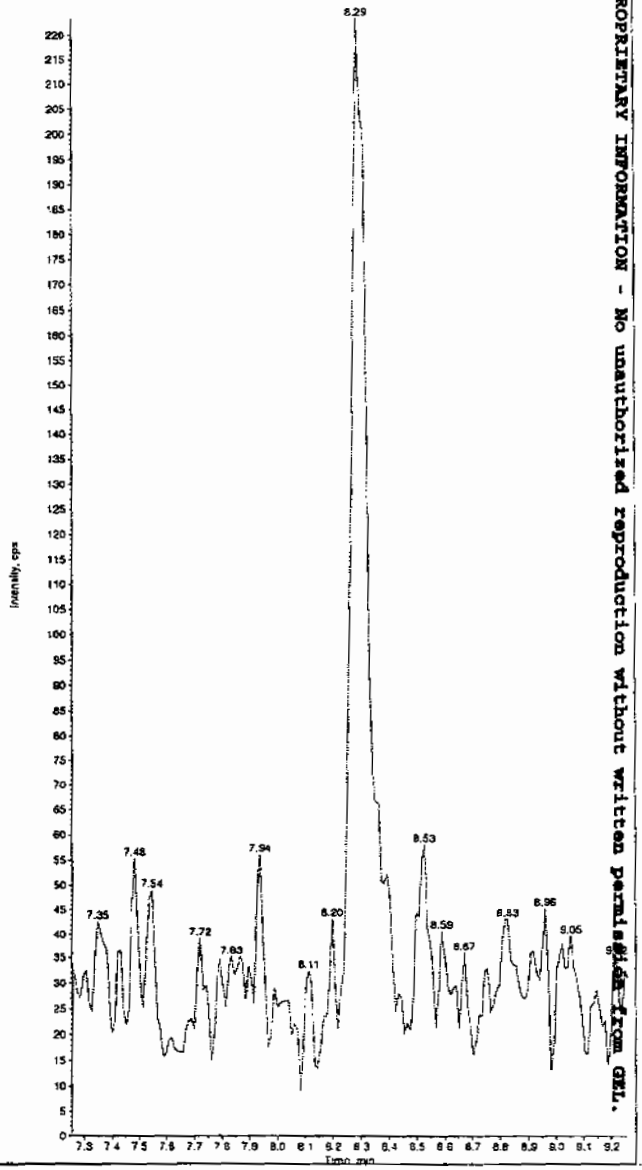

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS0701015.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No

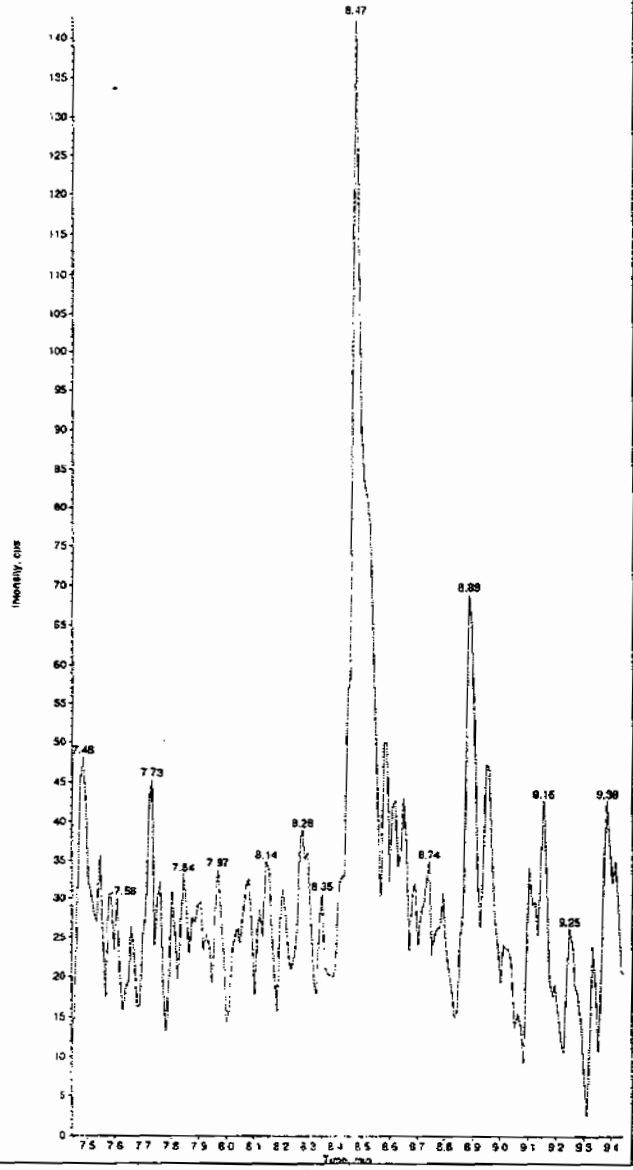

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS0701015.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No

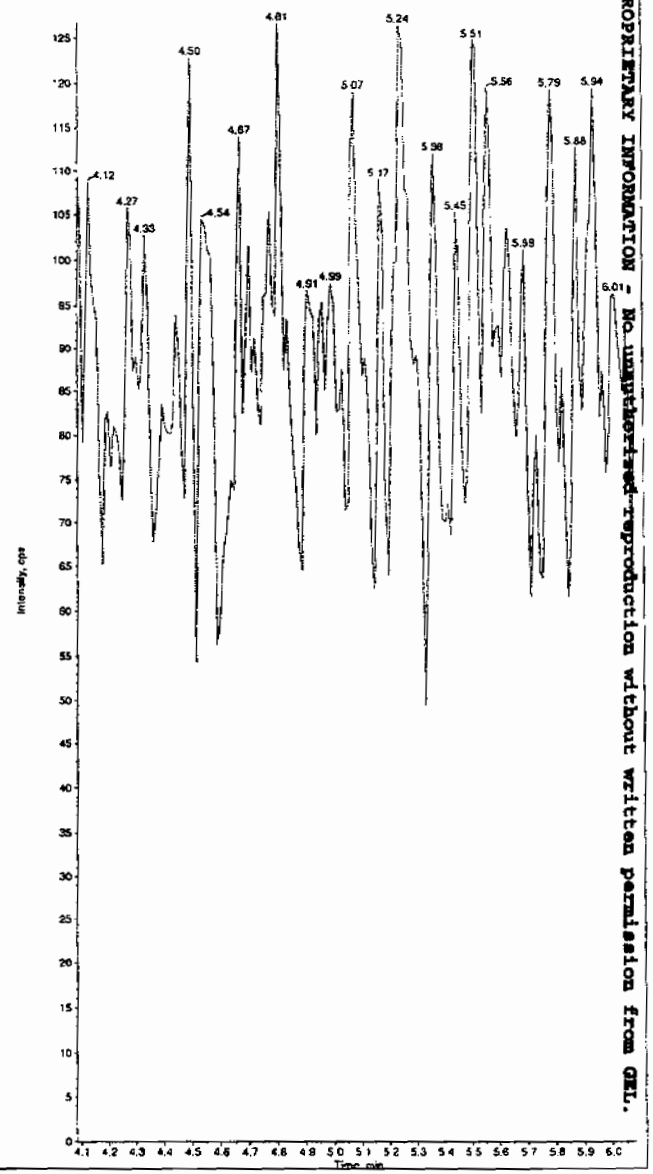

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK04" Sample ID: "1|LER" File: "EXS0701015.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No

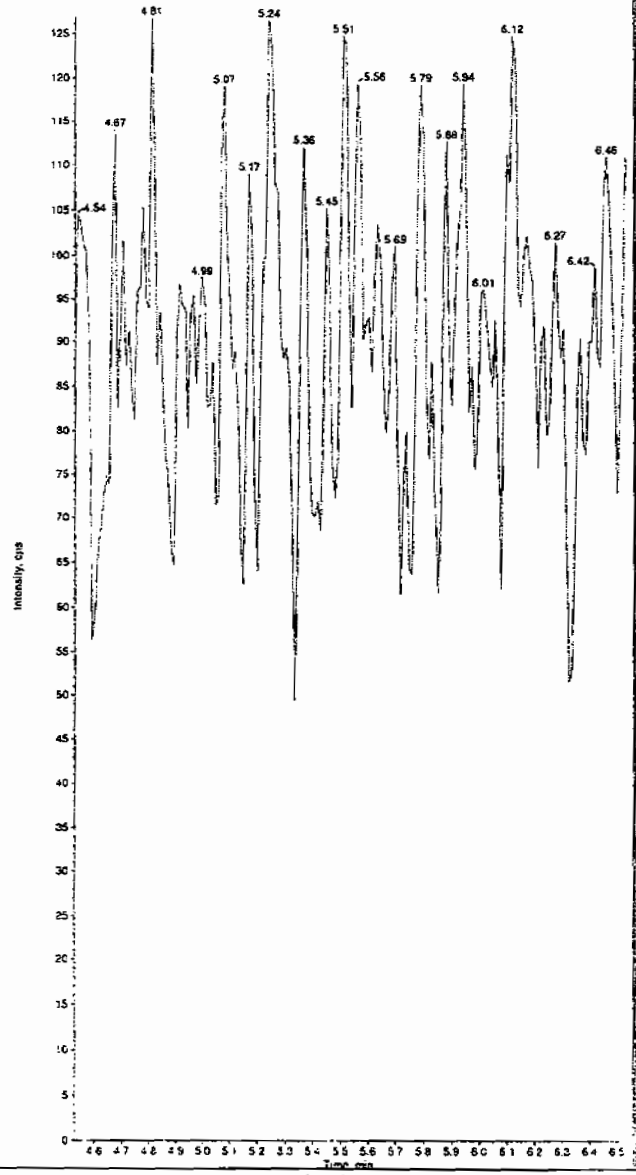

Sample Name: "XIBLK04" Sample ID: "1|LER" File: "EXS0701015.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 4.12 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.90e+004 counts
Height: 16368.376 cps
Start Time: 10.8 min
End Time: 11.1 min

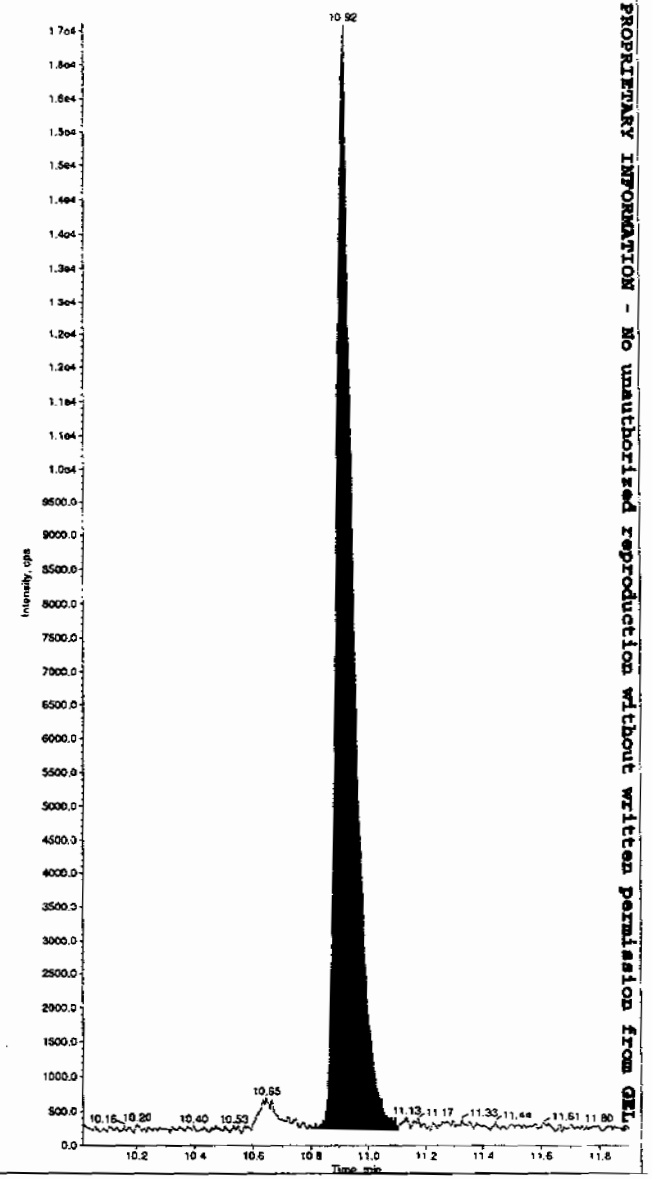

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2473

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 01-JUL-09 16:19

GEL Data File: EXS0701022.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	6.24
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS0701022.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No

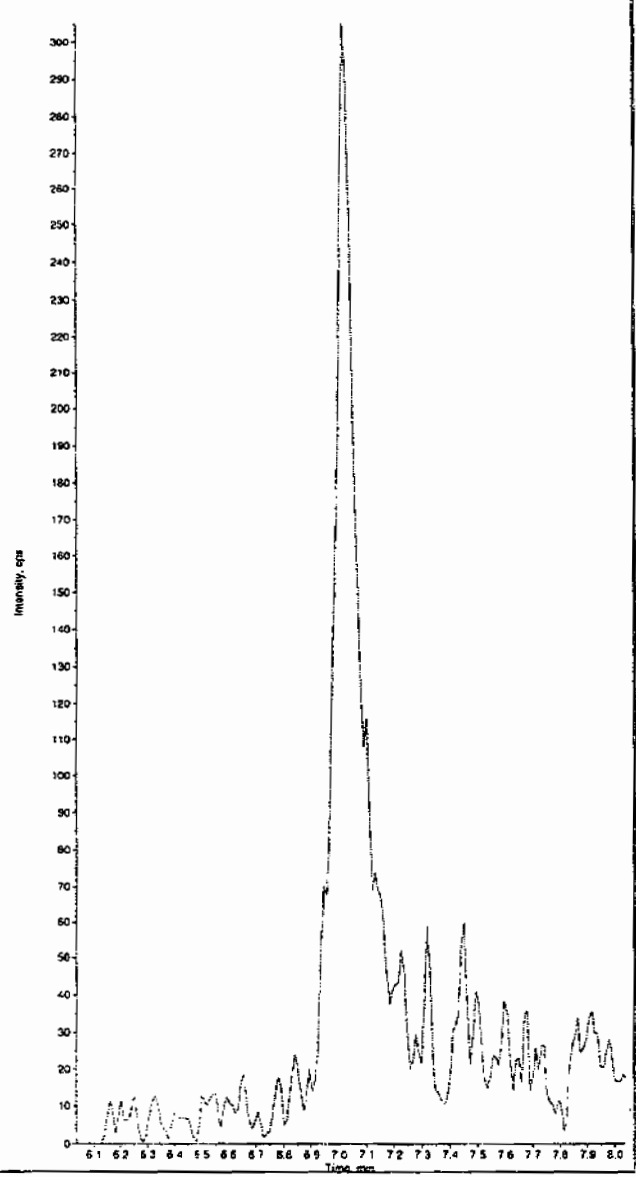

Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS0701022.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No

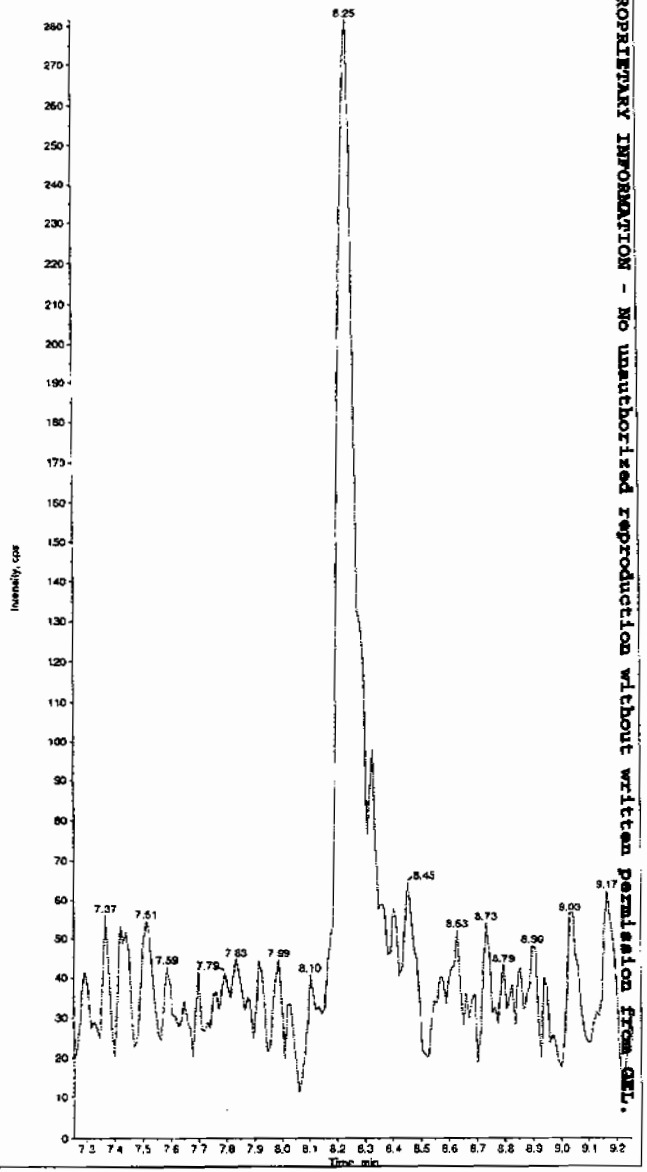

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS0701022.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No

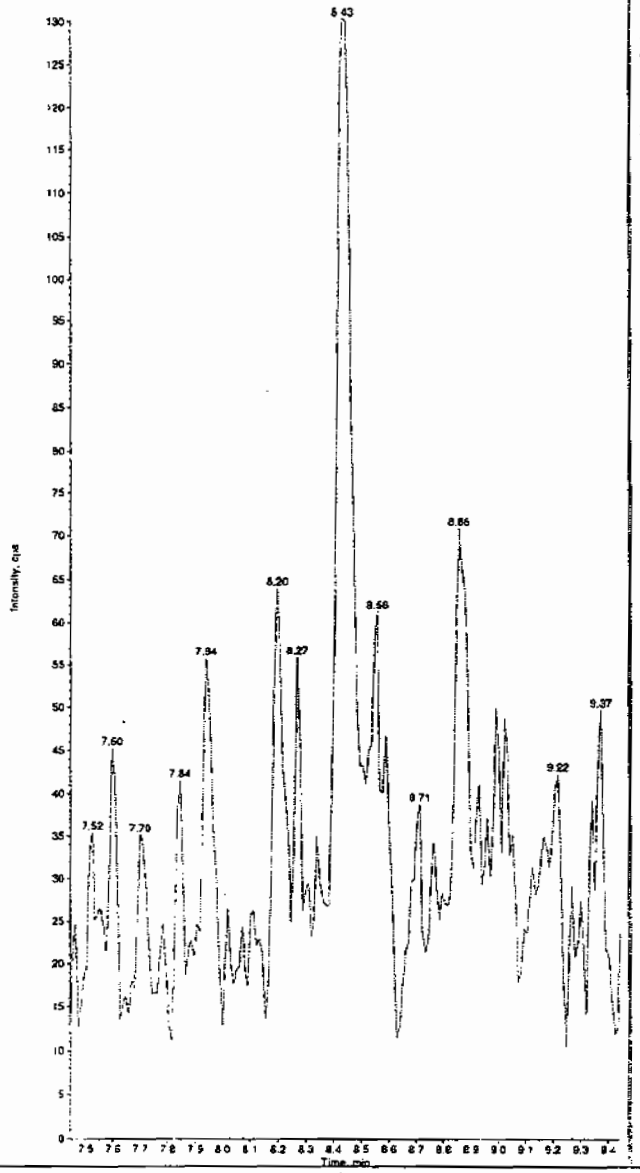

Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS0701022.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No

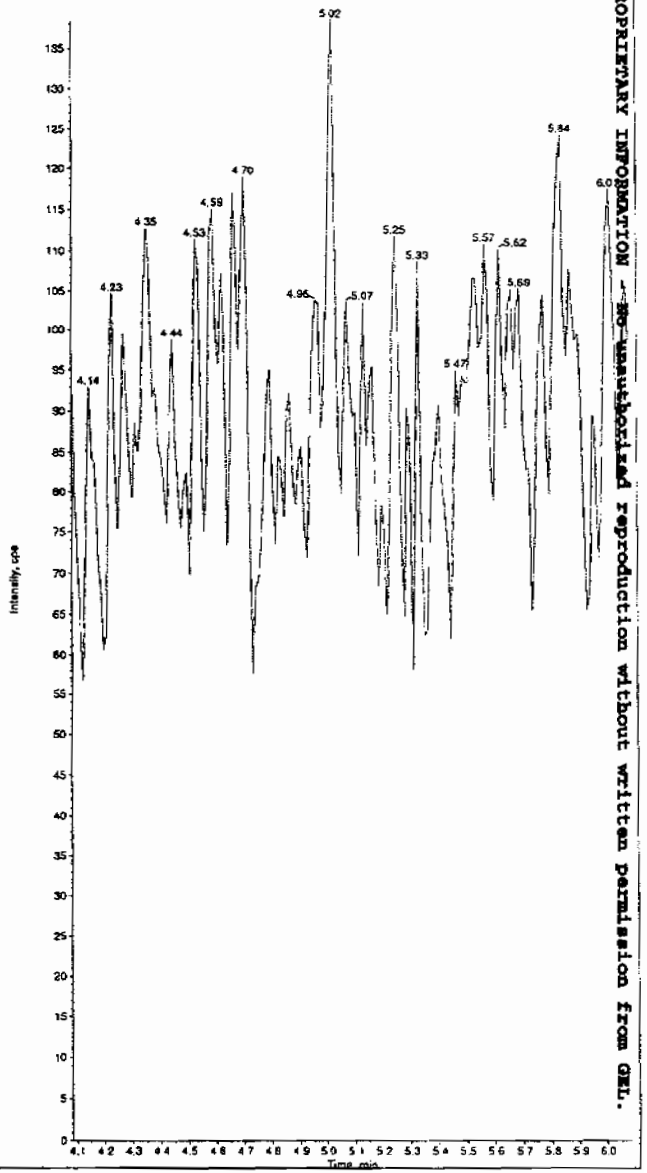

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK05" Sample ID: "]1]LER" File: "EXS0701022.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No

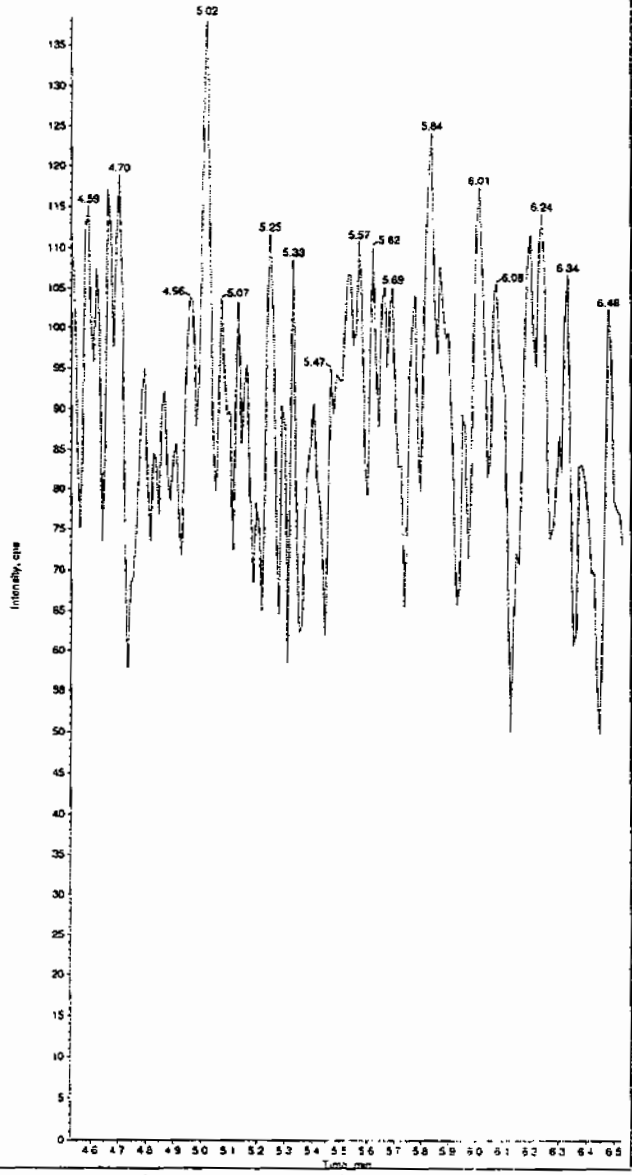

Sample Name: "XIBLK05" Sample ID: "]1]LER" File: "EXS0701022.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 6.24 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 9.74e+004 counts
Height: 21765.491 cps
Start Time: 10.8 min
End Time: 11.1 min

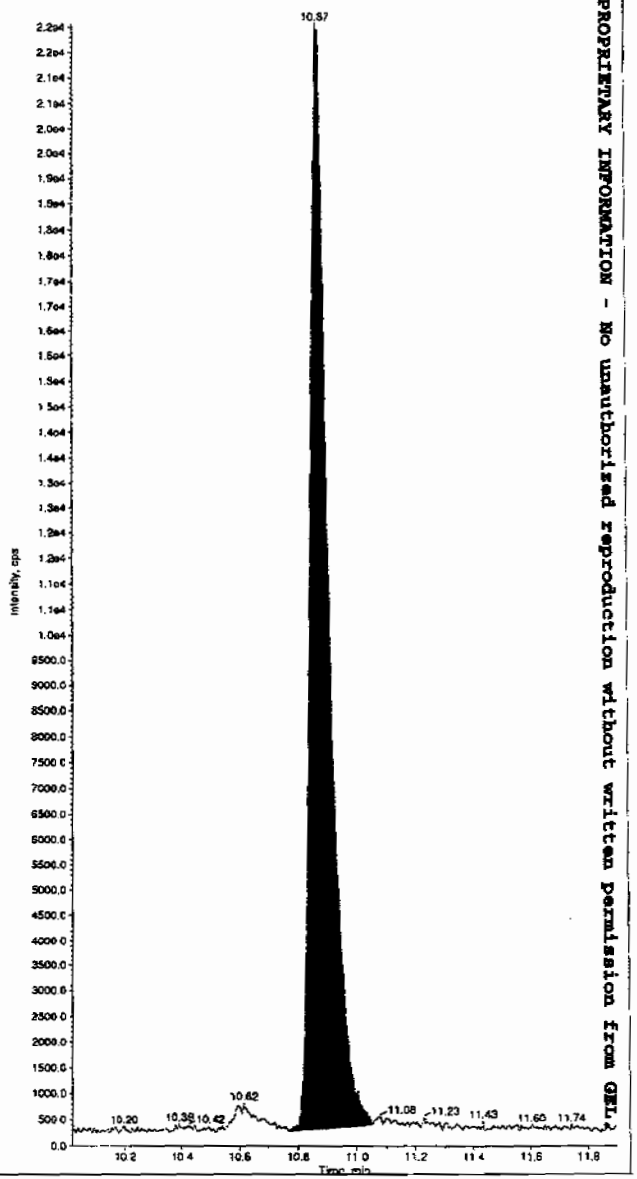

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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Calibration Report - MS1 Static

Printed: Fri Aug 25 10:50:01 2006

Data file: STATMS1 - Calibrated

15 matches of 15 tested references

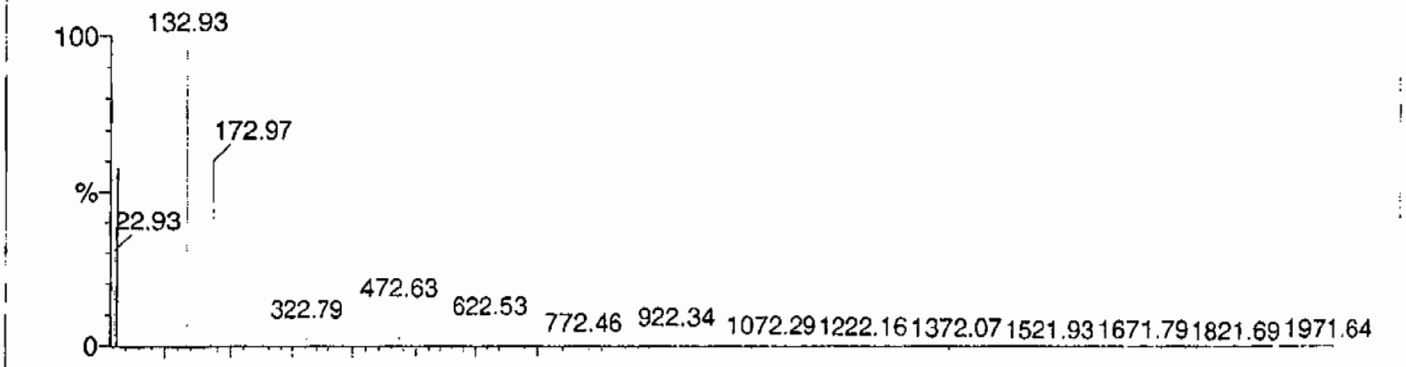

Reference file: Naics2

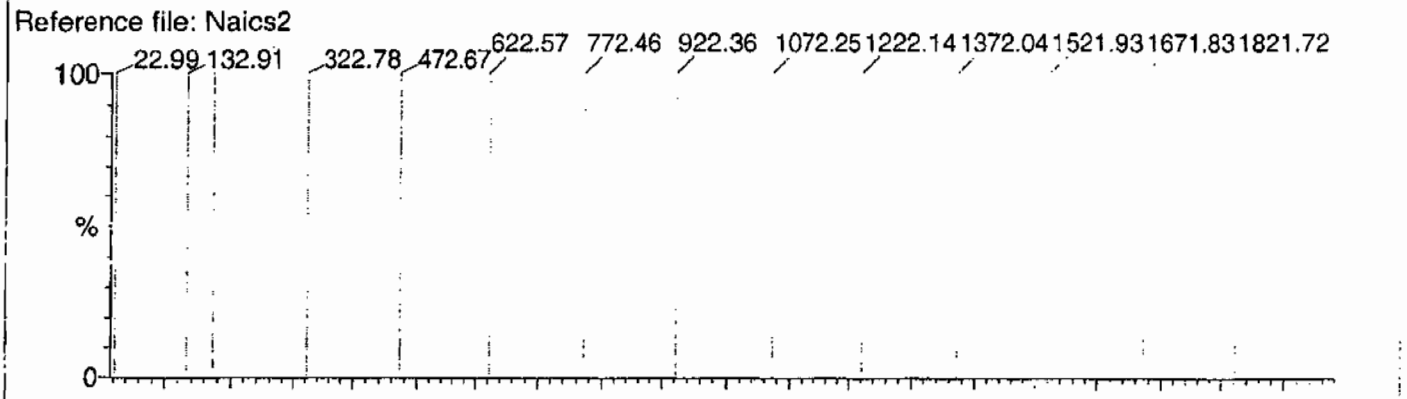

Mass difference (Raw - Ref mass)

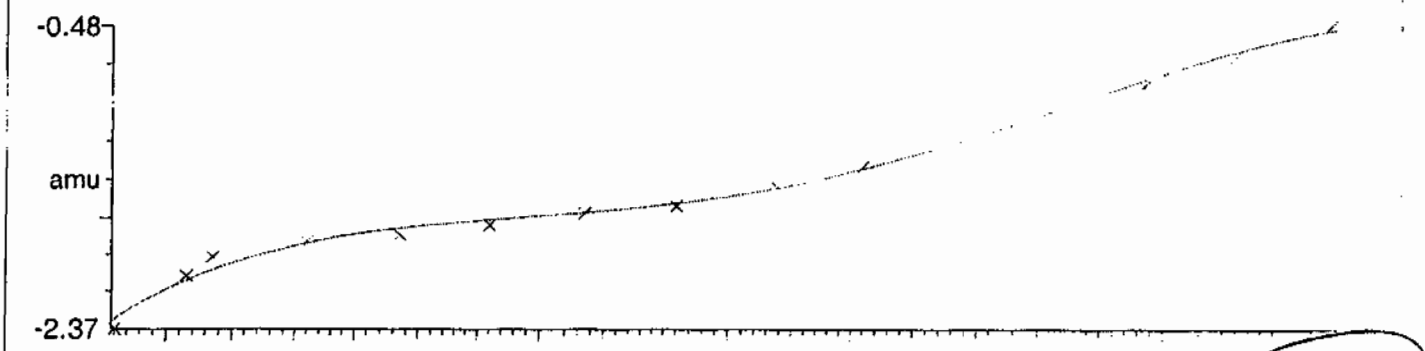

Residuals

Mean residual = -1.673470e-9 ± 0.036953

ok
hm

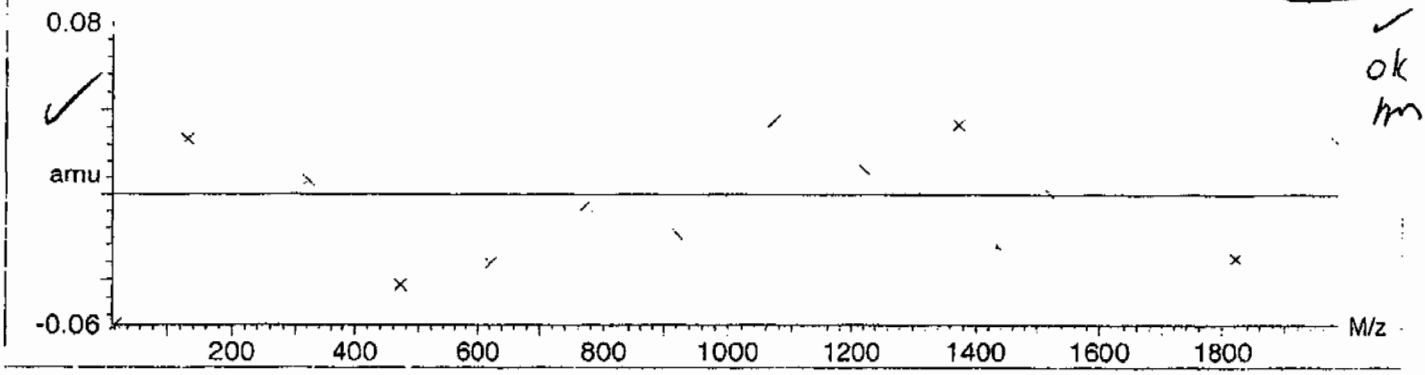

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Calibration Report - MS1 Scanning

Printed: Fri Aug 25 10:51:06 2006

Data file: SCNMS1 - Calibrated

15 matches of 15 tested references

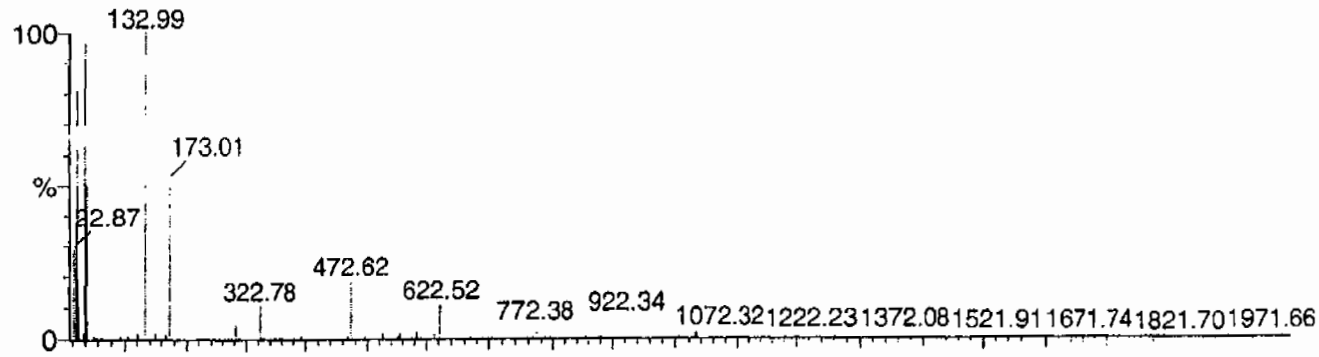

Reference file: Naics2

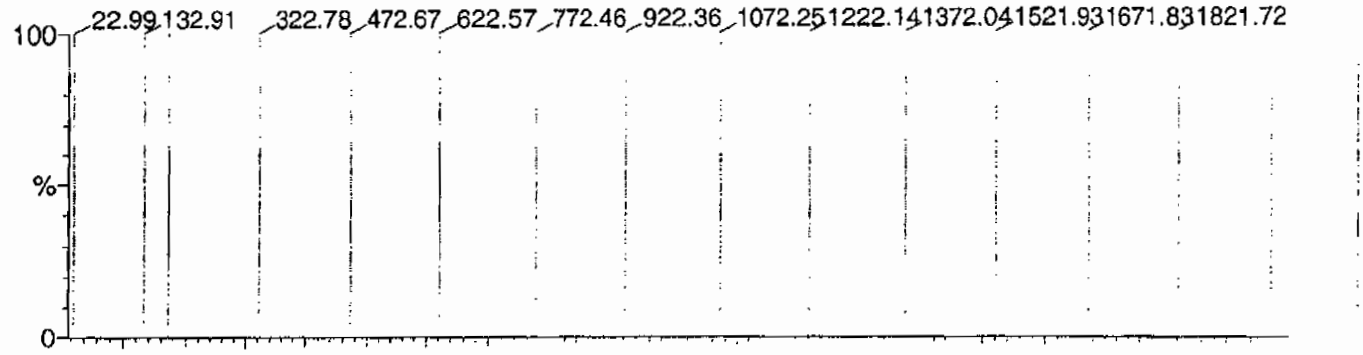

Mass difference (Raw - Ref mass)

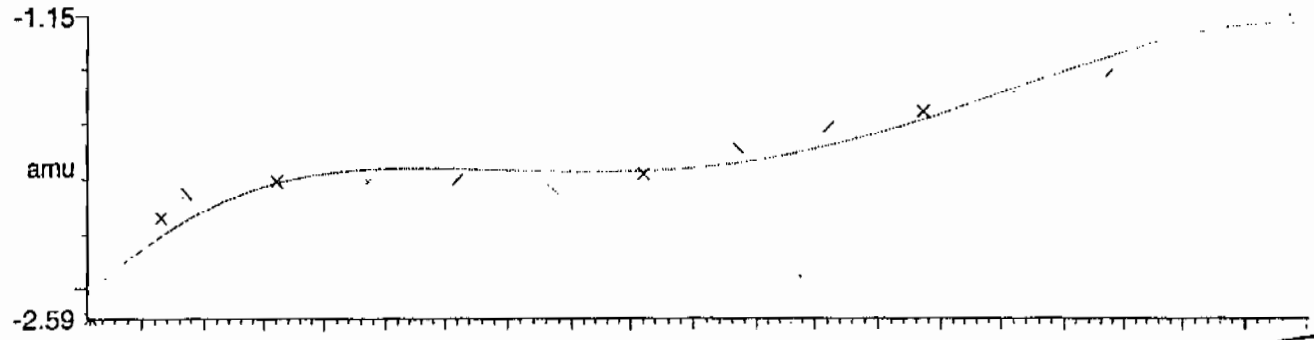

Residuals

Mean residual = -5.432715e-9 ± 0.069858

ok
m

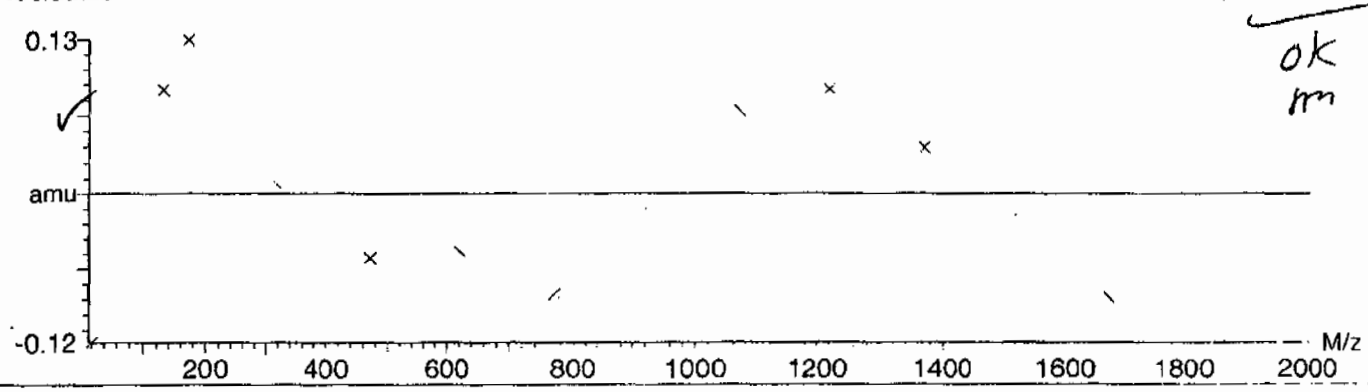

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Calibration Report - MS1 Scan Speed Compensation

Printed: Fri Aug 25 10:52:01 2006

Data file: FASTMS1 - Calibrated

15 matches of 15 tested references

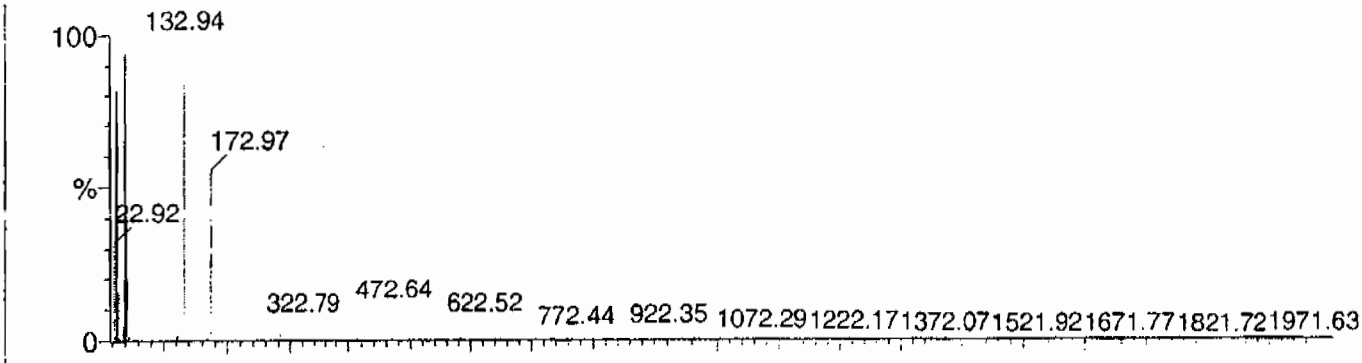

Reference file: Naics2

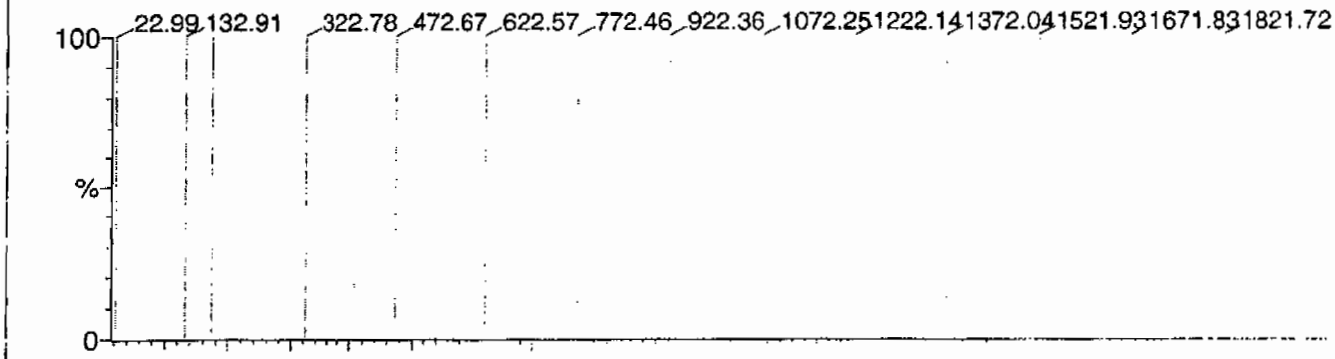

Mass difference (Raw - Ref mass)

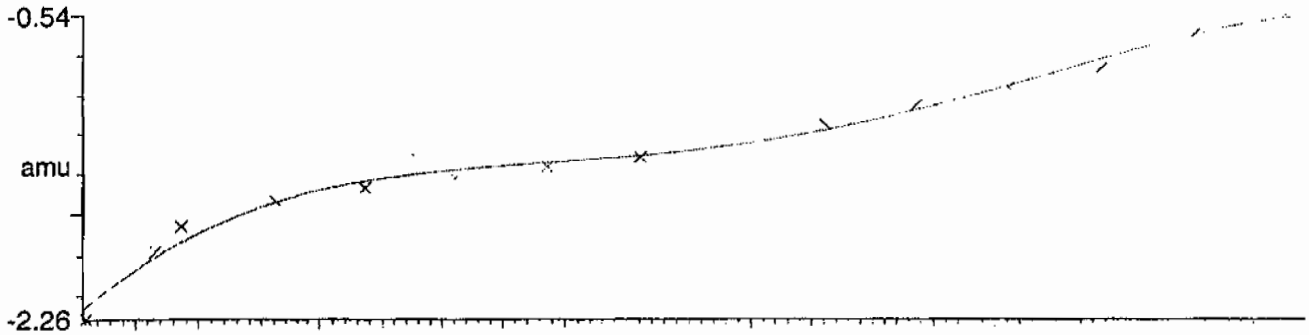

Residuals

Mean residual = 3.486639e-9 ± 0.040487

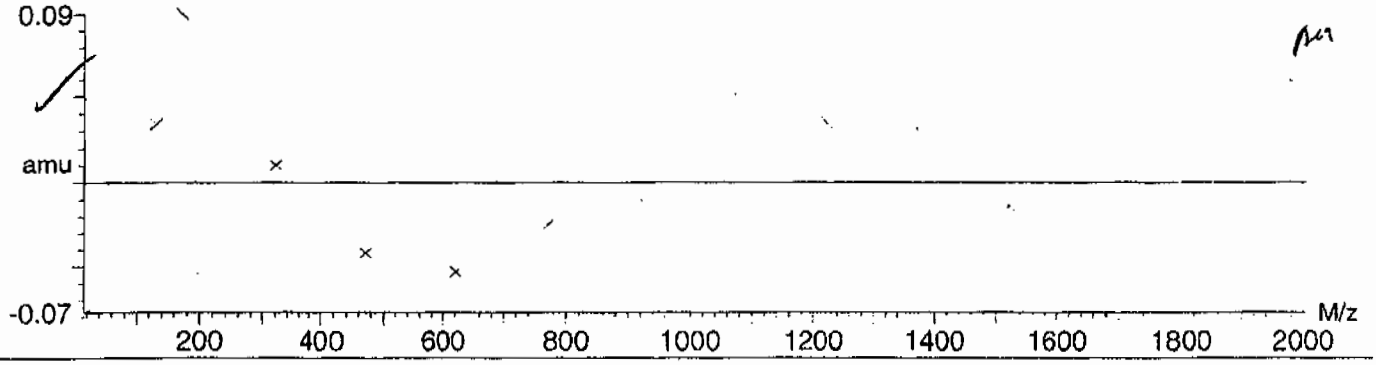

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Calibration Report - MS2 Static

Printed: Fri Aug 25 10:52:54 2006

Data file: STATMS2 - Calibrated

15 matches of 15 tested references

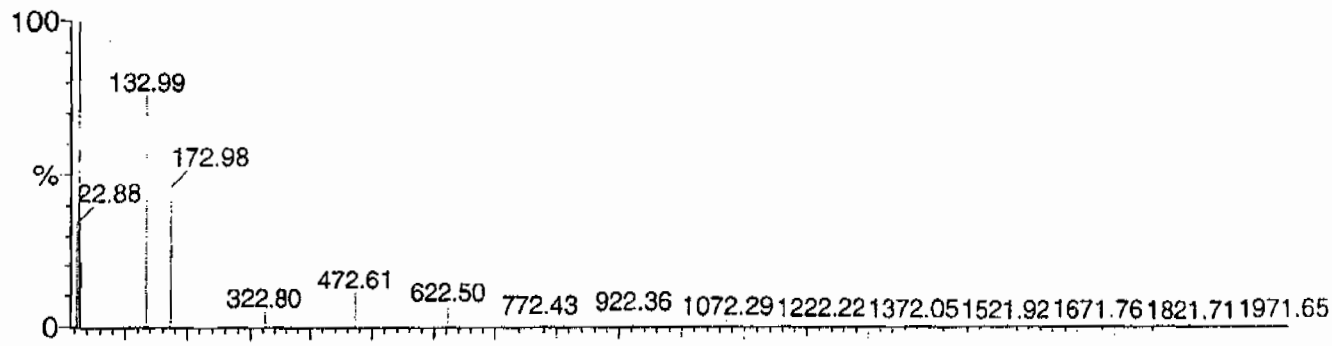

Reference file: Naics2

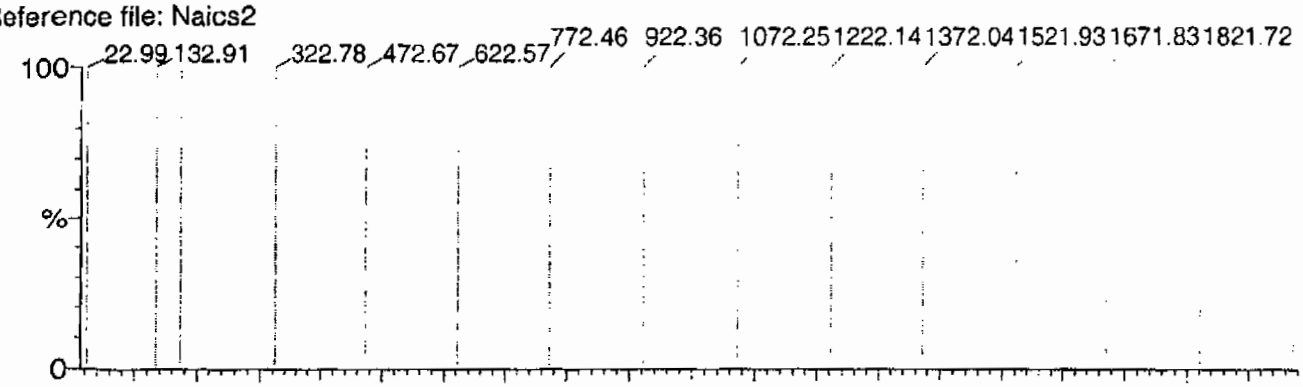

Mass difference (Raw - Ref mass)

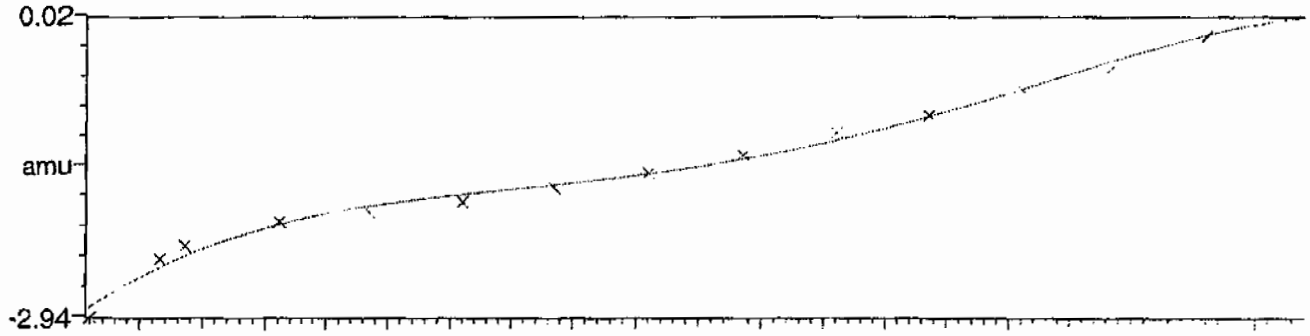

Residuals

Mean residual = 2.048910e-9 ± 0.057803

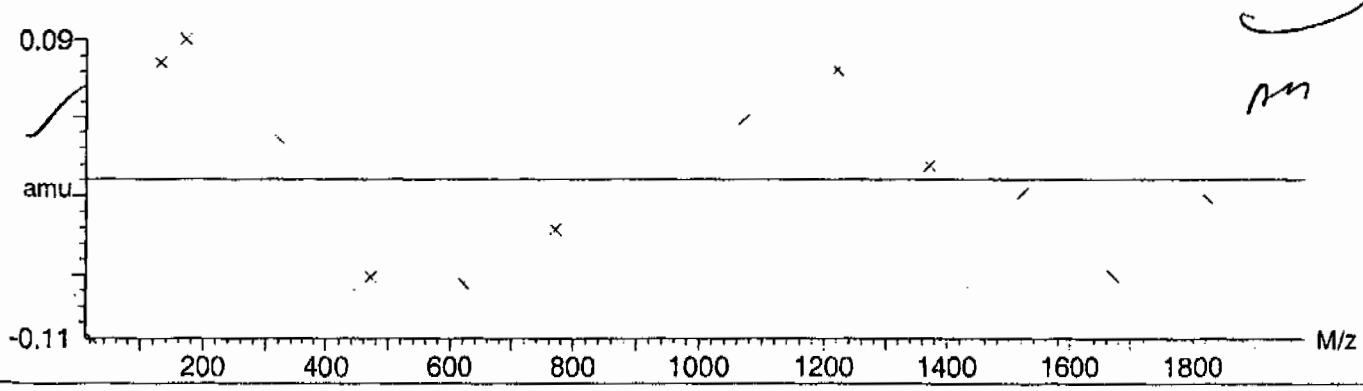

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Calibration Report - MS2 Scanning

Printed: Fri Aug 25 10:54:00 2006

Data file: SCNMS2 - Calibrated

14 matches of 15 tested references

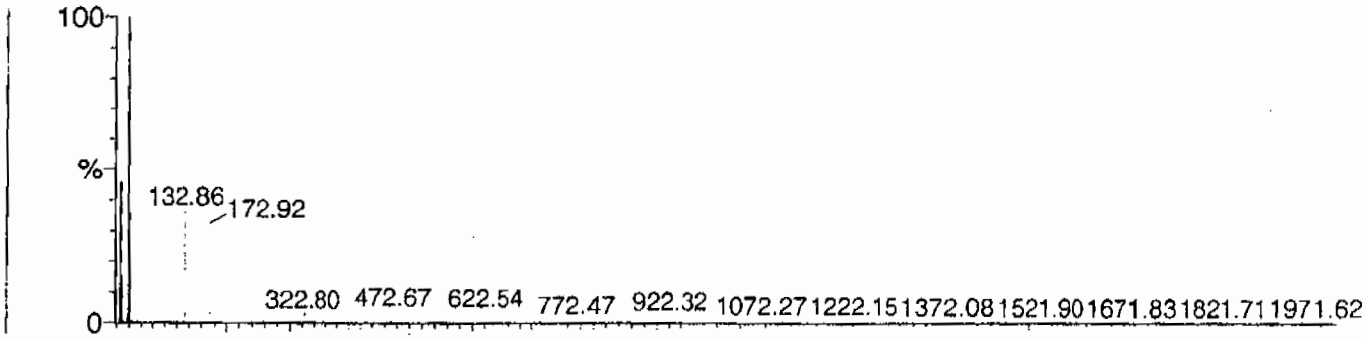

Reference file: Naics2

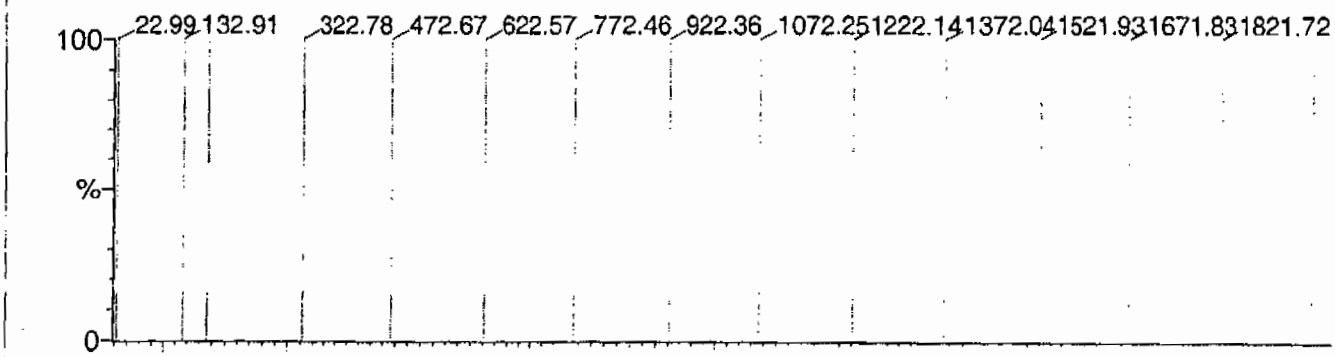

Mass difference (Raw - Ref mass)

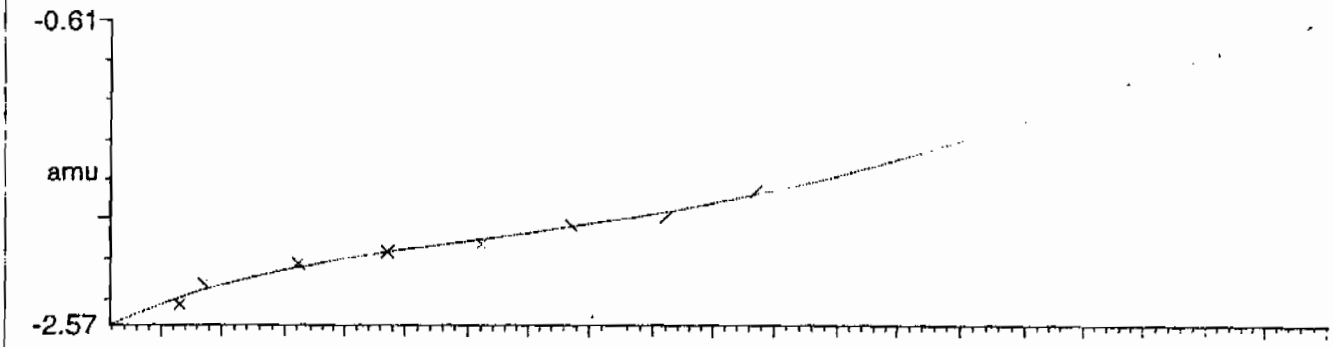

Residuals

Mean residual = -2.623502e-9 ± 0.025622

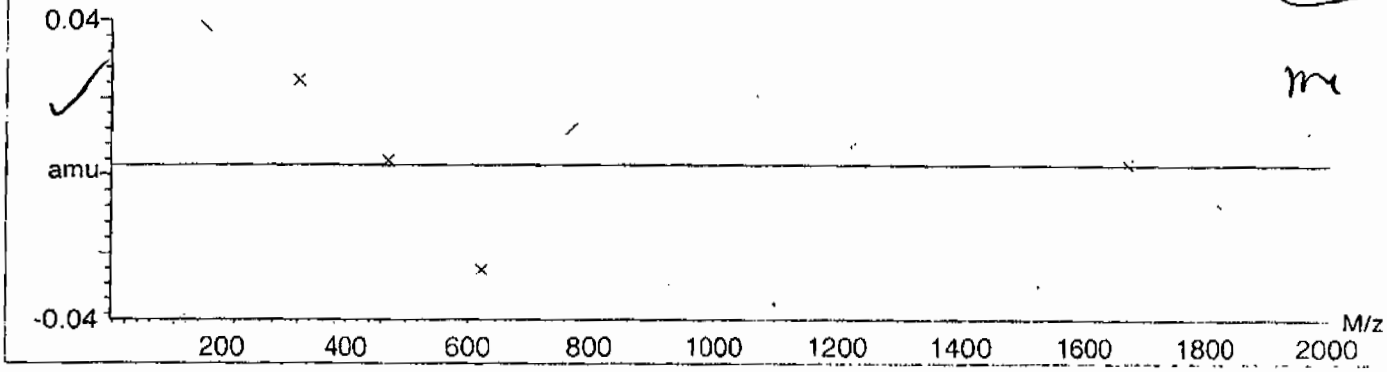

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Calibration Report - MS2 Scan Speed Compensation

Printed: Fri Aug 25 10:54:54 2006

Data file: FASTMS2 - Calibrated

14 matches of 15 tested references

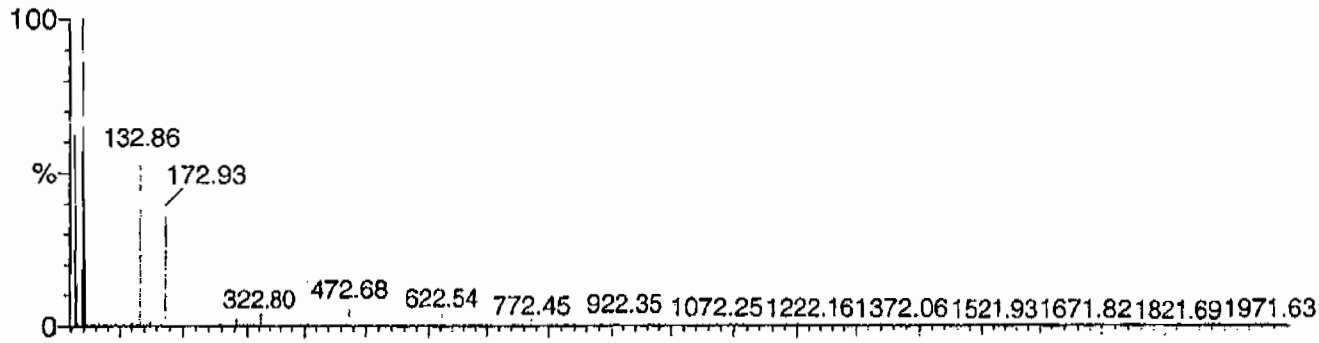

Reference file: Naics2

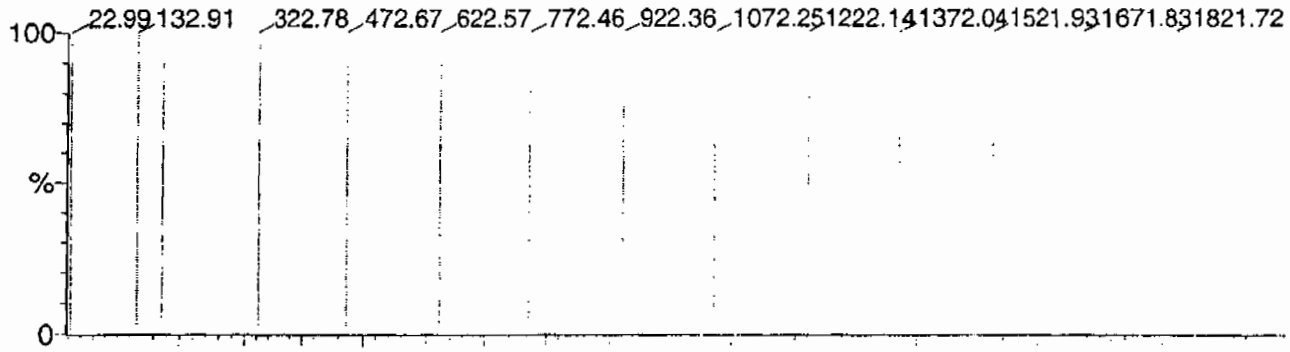

Mass difference (Raw - Ref mass)

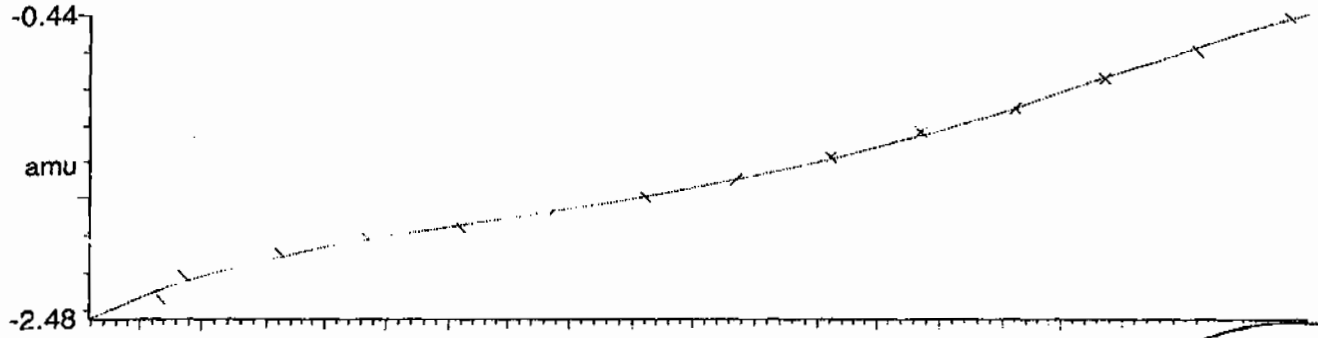

Residuals

Mean residual = -6.785350e-9 ± 0.023134

m

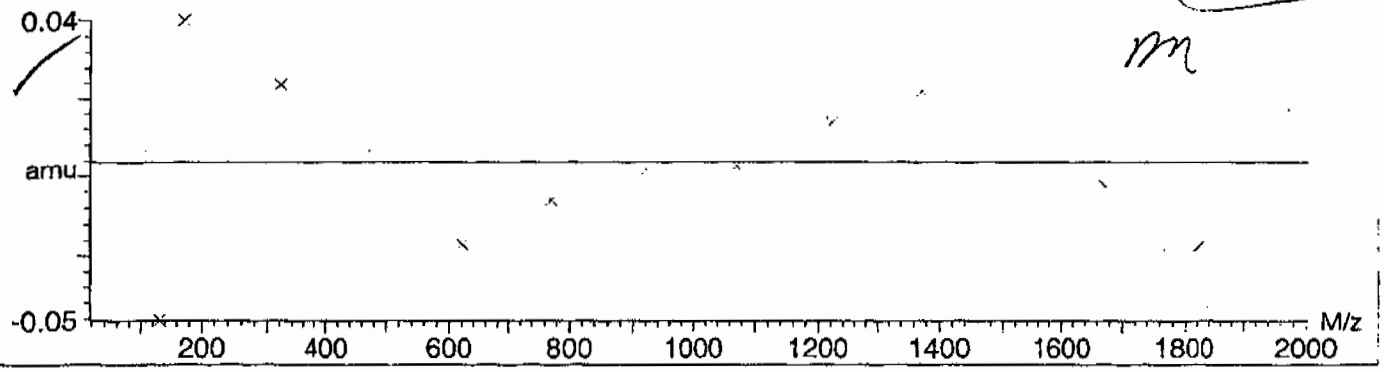

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Quattro Micro Tune Parameters

Parameter File: C:\MASSLYNX\NEW_EXP.PRO\ACQUDB\explosives04.ipr

Printed : Tue Jun 30 08:42:49 2009

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Quattro Micro Tune Parameters

Parameter File: C:\MASSLYNX\NEW_EXP.PRO\ACQUDB\explosives04.ipr

Printed : Mon Jul 13 10:31:58 2009

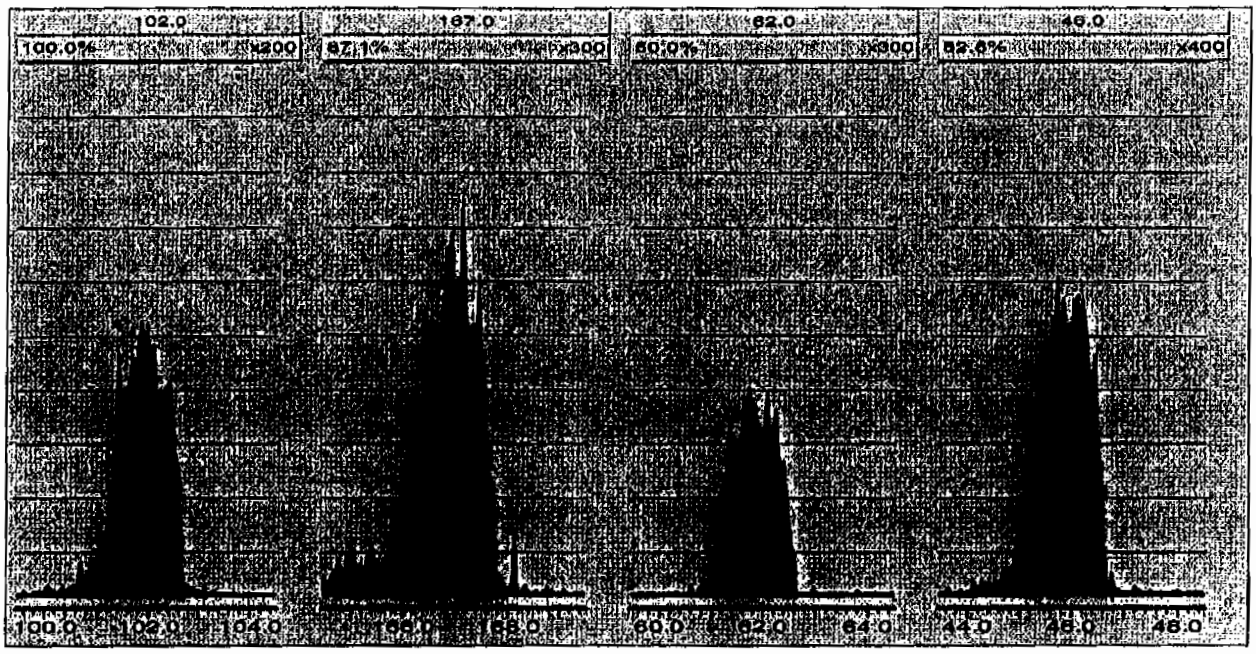

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8

High Explosives Internal Standard Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

HPLC Column: Phenomenex Ultracarb 5u ODS(20)

Instrument ID: LCMSMS

	Analysis Date/Time	GEL Data File	IS1 (DNB) (Area) #	RT (min) #	IS2 (DNT) (Area) #	RT2 (min) #
			3831.693	11.977	23967.433	17.272
Upper Limit			4981.2009	12.477	31157.6629	17.772
Lower Limit			2682.1851	11.477	16777.2031	16.772
MB for batch 880974	01-jul-09 14:13	EXP0630049a	4465.96	11.998	27830.1	17.269
LCS for batch 880974	01-jul-09 14:42	EXP0630050a	4686.67	11.998	28585.3	17.269
CAMO-09-10463(232424001MS	01-jul-09 15:41	EXP0630052a	4651.77	11.998	29070.5	17.291
CAMO-09-10463(232424001MS	01-jul-09 16:11	EXP0630053a	4633.14	11.972	29361.3	17.291

	Analysis Date/Time	GEL Data File	IS1 (DNB) (Area) #	RT (min) #	IS2 (DNT) (Area) #	RT2 (min) #
			3941.197	12.13	23911.983	17.684
Upper Limit			5123.5561	12.63	31085.5779	18.184
Lower Limit			2758.8379	11.63	16738.3881	17.184
CAMO-09-10463	13-jul-09 21:19	EXP0713014a	4425.06	12.136	27088.3	17.684

IS1 (DNB) = 1,3-Dinitrobenzene-d4
IS2 (DNT) = 2,6-Dinitrotoluene-d3

Area Upper Limit = + 30% of average IS area from multipoint calibration
Area Lower Limit = – 30% of average IS area from multipoint calibratio

RT Upper Limit = +0.5 of average multipoint RT
RT Lower Limit = –0.5 of average multipoint RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits

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SAMPLE DATA

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10463

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 232424001

Sample Amount 2

Moisture: 4.2

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713014a

Date Analyzed: 13-JUL-09 21:19

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713014a
Date: 13-Jul-2009
Time: 21:19:48
ID: 232424001 | LANU | 880975 | Soil | 21
Vial: 1:4,B

MAP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.743e+003

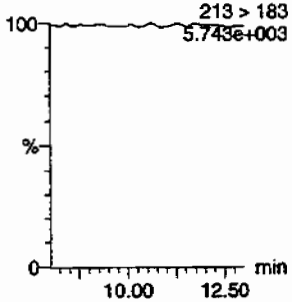

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.784e+003

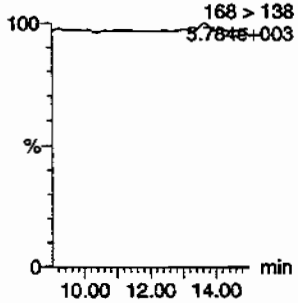

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.806e+004

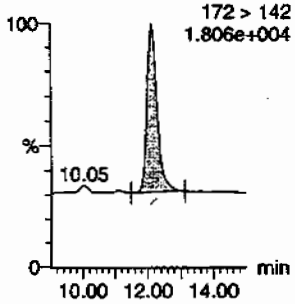

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.749e+003

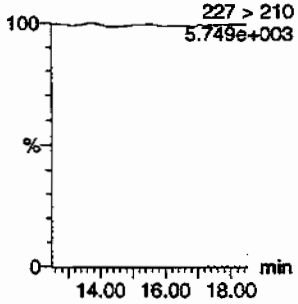

24-dinitrotoluene
F8:MRM of 2 channels,AP-
14.51
182 > 152
3.303e+004

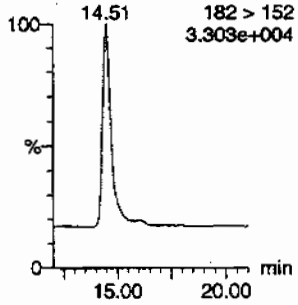

26-dinitrotoluene
F8:MRM of 2 channels,AP-
14.51
182 > 152
3.303e+004

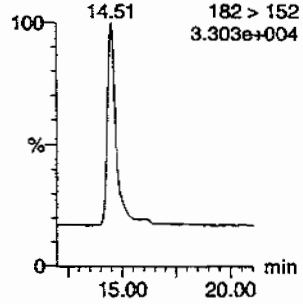

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.272e+004

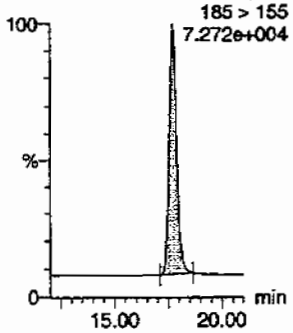

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.836e+003

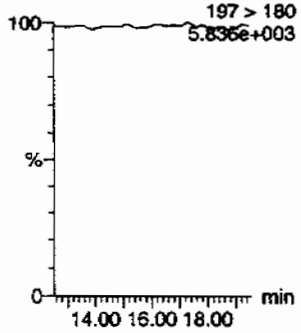

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.638e+003

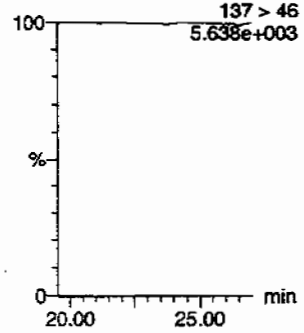

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
3.303e+004

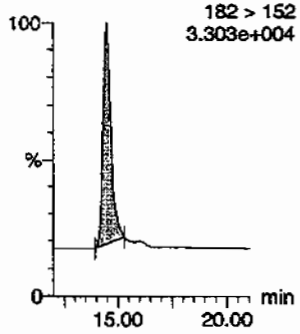

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.638e+003

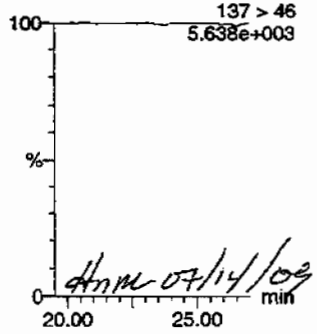

HMM 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.799e+003

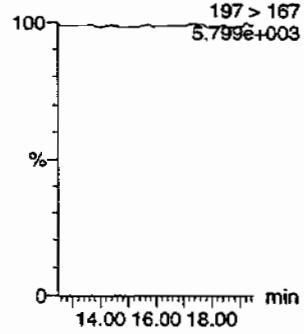

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

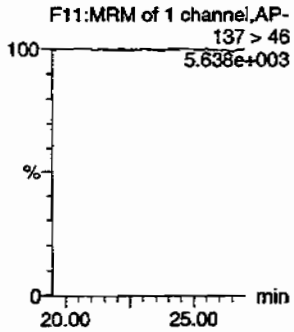

HMX

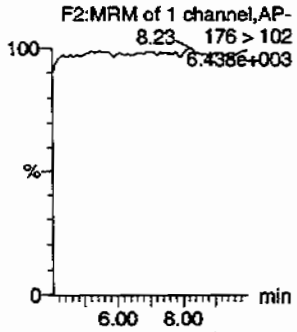

Nitrobenzene

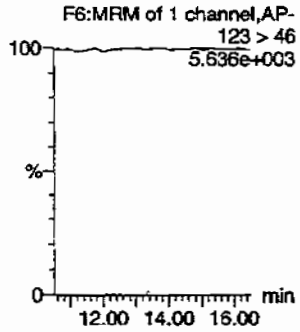

PETN

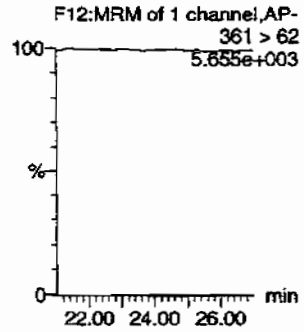

RDX

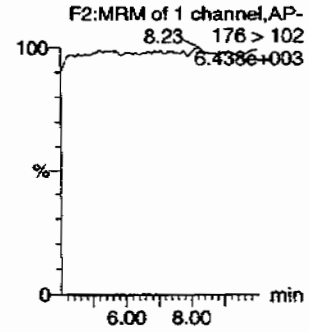

Tetryl

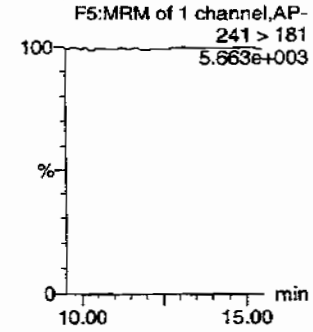

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modifiers	Mod. Time	Conc ng/mL	%Rec	%Dev	S/N
232424001	HMX	176 > 102			4425.061									
232424001	RDX	176 > 102			4425.061									
232424001	135-Trinitrobenzene	213 > 183			4425.061									
232424001	13-Dinitrobenzene-d4	172 > 142	12.14	4425.061		4425.061	4425.061	bb			561.3854	112.3	12.3	168.9
232424001	13-Dinitrobenzene	168 > 138			4425.061									
232424001	Tetryl	241 > 181			4425.061									
232424001	Nitrobenzene	123 > 46			4425.061									
232424001	4-Amino-26-dinitrotoluene	197 > 167			27088.293									
232424001	2-Amino-46-dinitrotoluene	197 > 180			27088.293									
232424001	246-Trinitrotoluene	227 > 210			27088.293									
232424001	34-dinitrotoluene	182 > 152	14.51	11487.453	27088.293	11487.453	212.037	bb			243.4275	97.4	-2.6	444.1
232424001	26-dinitrotoluene	182 > 152			27088.293									
232424001	24-dinitrotoluene	182 > 152			27088.293									
232424001	26-dinitrotoluene-d3	185 > 155	17.68	27088.293		27088.293	27088.293	bb			566.4161	113.3	13.3	1266.0
232424001	2-Nitrotoluene	137 > 46			27088.293									
232424001	4-Nitrotoluene	137 > 46			27088.293									
232424001	3-Nitrotoluene	137 > 46			27088.293									
232424001	PETN	361 > 62			27088.293									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO--09-10463

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 232424001

Sample Amount 2

Moisture: 4.2

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0701018.wiff

Date Analyzed: 01-JUL-09 15:15

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5--Dinitroaniline	1000	U
6629-29-4	2,4--Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sample Name: "232424001" Sample ID: "880975|2|LER" File: "EXS0701018.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:15:02 PM

Modified: No

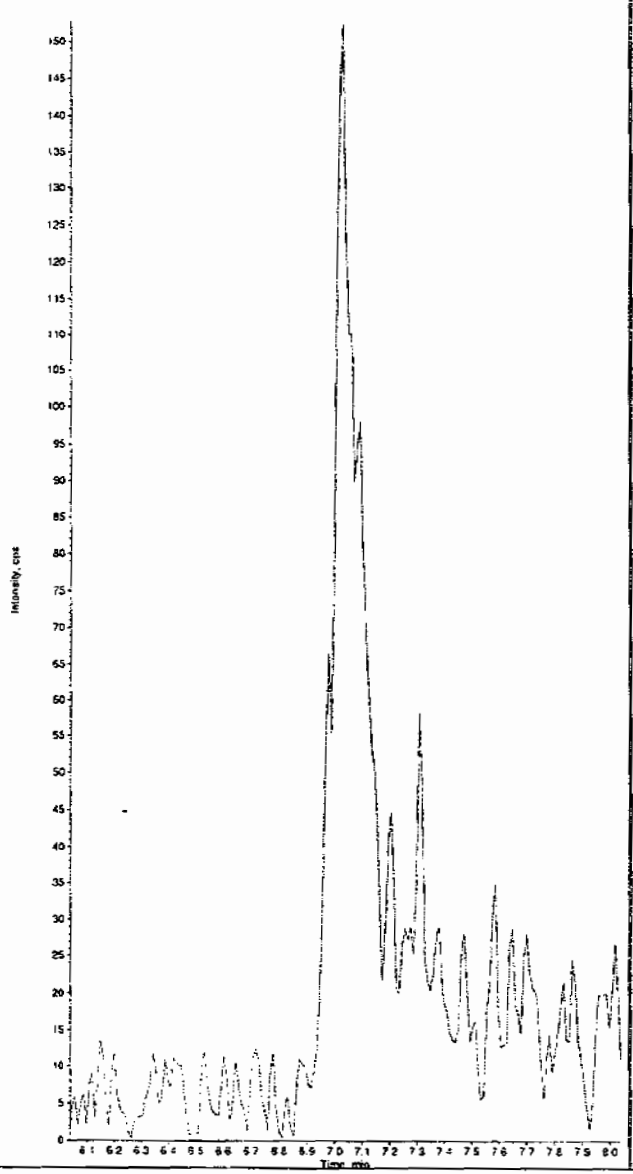

Sample Name: "232424001" Sample ID: "880975|2|LER" File: "EXS0701018.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:15:02 PM

Modified: No

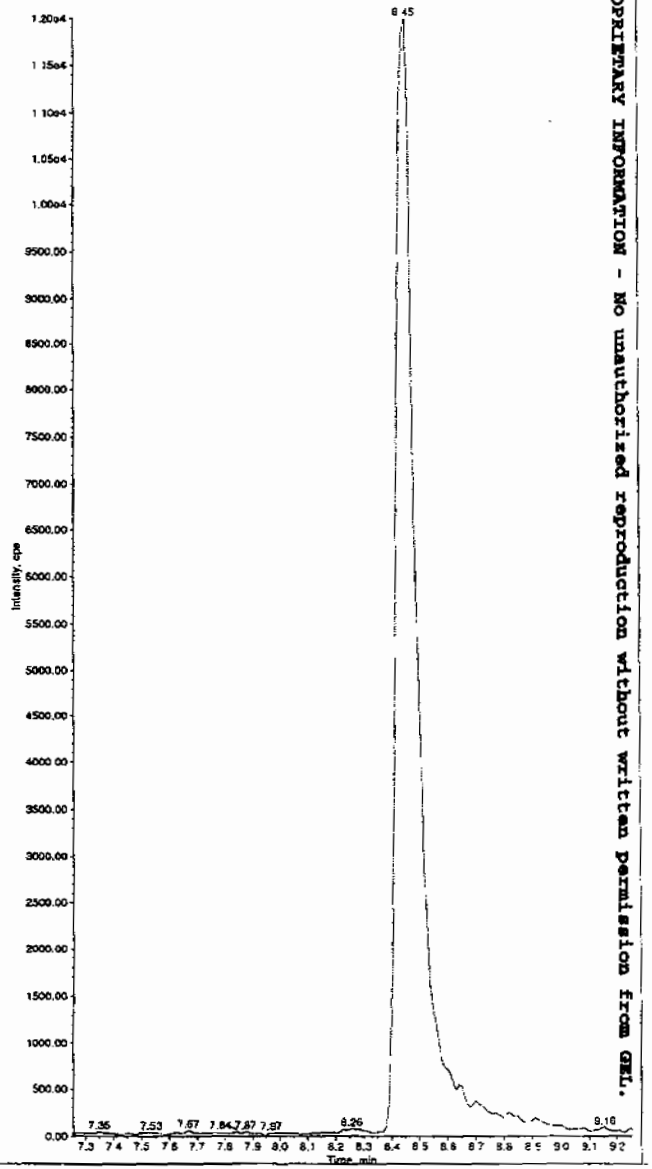

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232424001" Sample ID: "880975|2|LER" File: "EXS0701018.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 261. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:15:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.44 min
Area: 5.74e+005 counts
Height: 106654.808 cps
Start Time: 8.35 min
End Time: 9.58 min

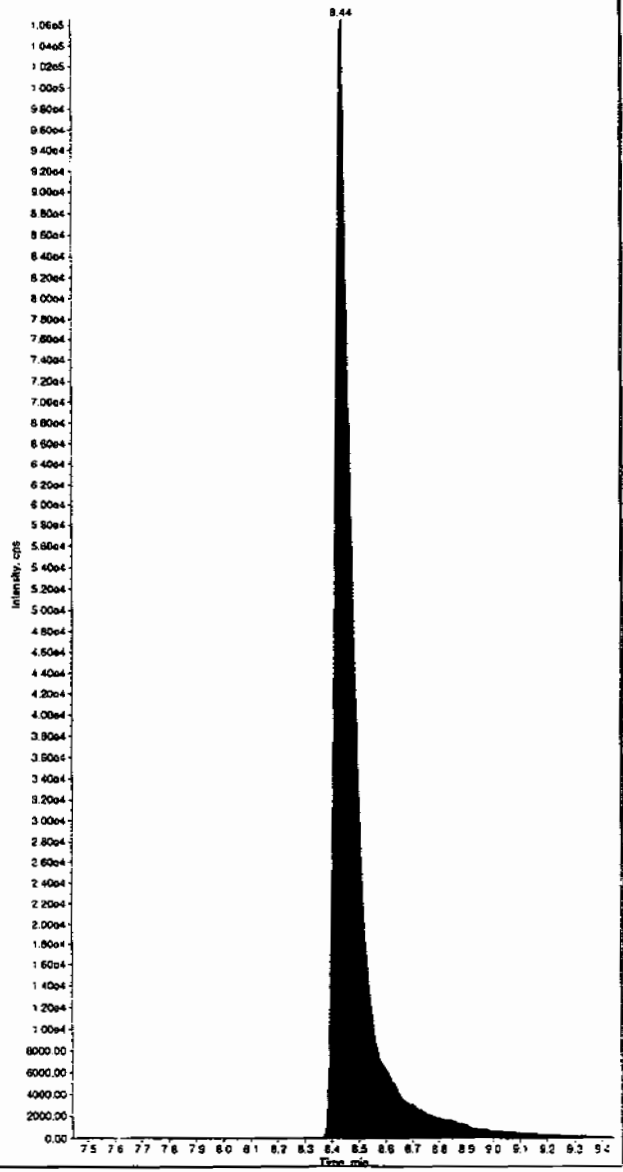

Sample Name: "232424001" Sample ID: "880975|2|LER" File: "EXS0701018.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:15:02 PM

Modified: No

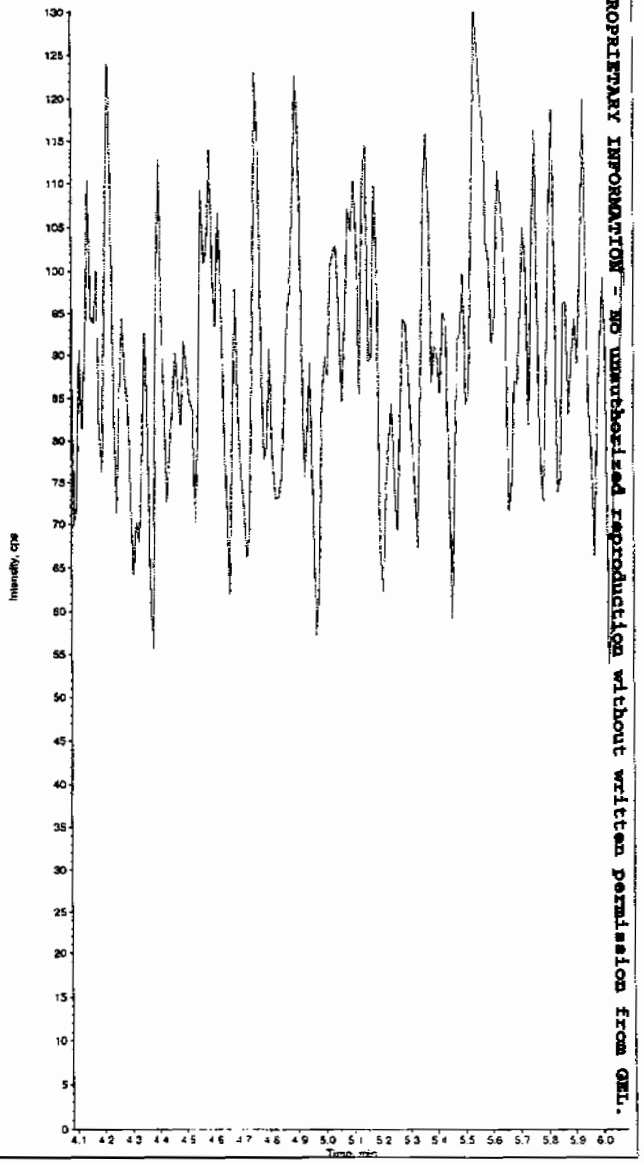

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232424001" Sample ID: "880975|2|LER" File: "EXS0701018.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:15:02 PM

Modified: No

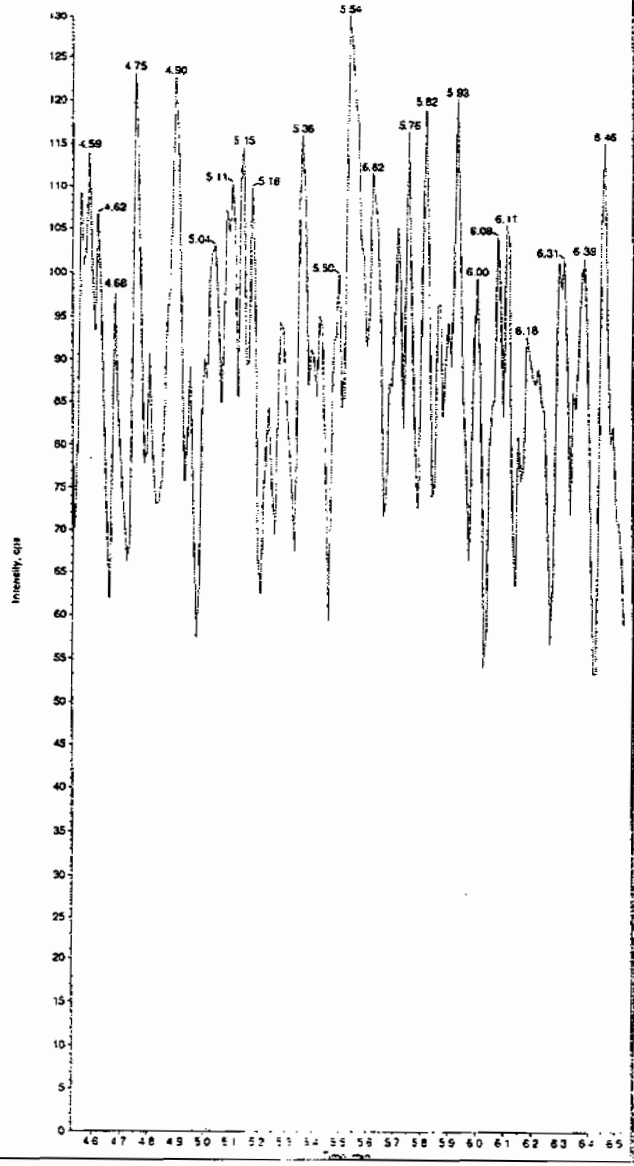

Sample Name: "232424001" Sample ID: "880975|2|LER" File: "EXS0701018.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:15:02 PM

Modified: No

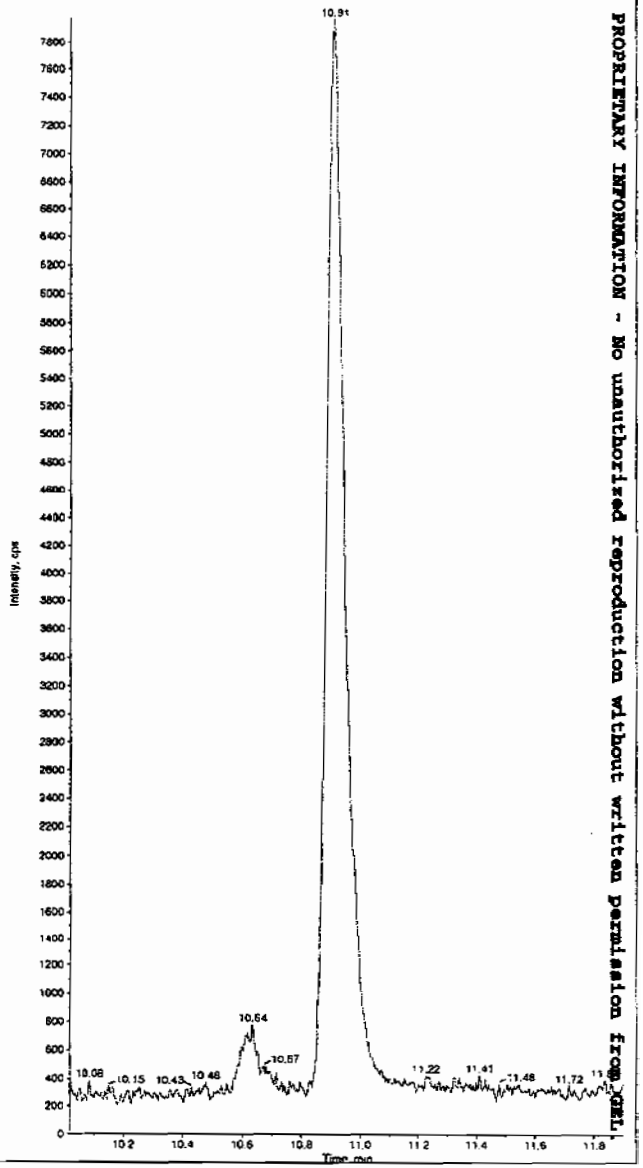

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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STANDARDS DATA

SW846 8321A Modified-Explosives
Calibration Standard Concentration Levels

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	CCV
3,4-Dinitrotoluene (Surrogate)	12.5	25	100	200	400	500	[illegible]	300
Primary Analytes								
HMX	25	50	200	400	800	1000	na	600
RDX	25	50	200	400	800	1000	na	600
1,3,5-Trinitrobenzene	25	50	200	400	800	1000	na	600
1,3-Dinitrobenzene	25	50	200	400	800	1000	na	600
Nitrobenzene	25	50	200	400	800	1000	na	600
Tetryl	25	50	200	400	800	1000	na	600
Nitroglycerin	50	100	200	400	800	1000	na	600
2,4,6-Trinitrotoluene	25	50	200	400	800	1000	na	600
2-Amino-4,6-dinitrotoluene	25	50	200	400	800	1000	na	600
4-Amino-2,6-dinitrotoluene	25	50	200	400	800	1000	na	600
2,4-Dinitrotoluene	25	50	200	400	800	1000	na	600
2,6-Dinitrotoluene	25	50	200	400	800	1000	na	600
2-Nitrotoluene	25	50	200	400	800	1000	na	600
4-Nitrotoluene	25	50	200	400	800	1000	an	600
3-Nitrotoluene	25	50	200	400	800	1000	na	600
PETN	25	50	200	400	800	1000	na	600
Picric Acid	200	400	1600	3200	6400	8000	na	4800
3,4-Dinitrotoluene (Surrogate)	25	50	125	250	375	500	[illegible]	250
Secondary Analytes								
2,4-Diamino-6-nitrotoluene	50	100	250	500	750	1000	2000	500
2,6-Diamino-4-nitrotoluene	50	100	250	500	750	1000	2000	500
3,5-Dinitroaniline	50	100	250	500	750	1000	2000	500
TATB	50	100	250	500	750	1000	2000	500
tris(o-Cresyl)phosphate	50	100	250	500	750	1000	2000	500

All values are ug/L without the prep factor

Calibration Levels 8321A-Modified-EXPL.xls (01/09)

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Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2473

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	Ave RF	RSD	Q
Data File:	EXP0630003a	EXP0630004a	EXP0630005a	EXP0630006a	EXP0630007a	EXP0630008a			
Parmname									
1,3,5-Trinitrobenzene	8.002	7.343	6.402	6.101	6.395	6.125	6.728	11.464	
1,3-Dinitrobenzene-d4	8.063	7.821	7.562	7.666	7.295	7.573	7.663	3.396	
2,4,6-Trinitrotoluene	1.642	1.578	1.615	1.662	1.733	1.689	1.653	3.301	
2,4-Dinitrotoluene	.264	.255	.257	.267	.266	.263	0.262	1.886	
2,6-Dinitrotoluene	1.153	1.199	1.172	1.153	1.169	1.187	1.172	1.559	
2,6-Dinitrotoluene-d3	51.035	48.616	48.415	46.46	45.806	47.276	47.935	3.897	
2-Amino-4,6-dinitrotoluene	.345	.4	.406	.4	.418	.405	0.396	6.466	
3,4-Dinitrotoluene	1.076	.927	.929	.961	1.002	.947	0.974	5.871	
4-Amino-2,6-dinitrotoluene	.38	.323	.329	.315	.349	.333	0.338	6.865	
HMX	3.347	3.12	3.365	3.257	3.337	3.241	3.278	2.813	
Nitrobenzene	.622	.631	.658	.576	.631	.615	0.622	4.33	
RDX	2.594	2.691	2.822	2.708	2.723	2.549	2.681	3.628	
Tetryl	2.307	2.114	2.008	1.896	1.92	1.834	2.013	8.619	
m-Dinitrobenzene	1.429	1.349	1.329	1.302	1.372	1.299	1.347	3.634	
m-Nitrotoluene	.072	.054	.055	.058	.057	.055	0.059	11.874	
o-Nitrotoluene	.102	.097	.089	.087	.088	.087	0.092	6.819	
p-Nitrotoluene	.066	.048	.045	.044	.043	.044	0.048	18.173	

Q column used to flag RSD values outside of Limit (>20%)
* Values outside of QC Limit

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Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2473

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: 2nd Order

Calibration Level:	1	2	3	4	5	6	X	X^2	Intercept	COD	Q
Data File:	EXP0630003a	EXP0630004a	EXP0630005a	EXP0630006a	EXP0630007a	EXP0630008a					
Parmname:											
PETN	1926.77	3578.37	12683.7	21791.2	37615.7	43944.1	1.343	-.0004157	6.024	.9998	

Quadradic Fit: y = Ax^2 + Bx + C
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\063009expa.mdb, Time: Wed Jul 01 09:15:14 2009
Calibration: Untitled, Time: Wed Jul 01 09:37:04 2009

Compound name: HMX
Response Factor: 3.27809
RRF SD: 0.092212, % Relative SD: 2.81298
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

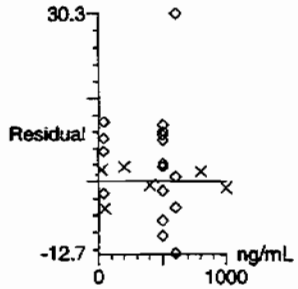

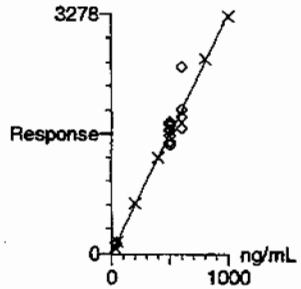

MMT 7/1/09

Compound name: RDX
Response Factor: 2.68098
RRF SD: 0.0972628, % Relative SD: 3.62788
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

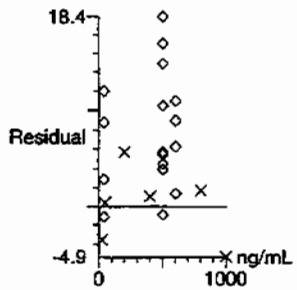

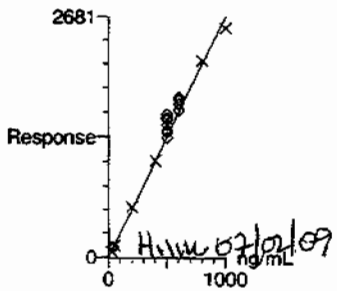

HMW 07/02/09

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 135-Trinitrobenzene
Response Factor: 6.72772
RRF SD: 0.771292, % Relative SD: 11.4644
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

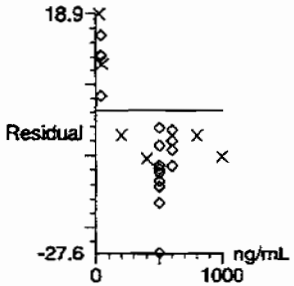

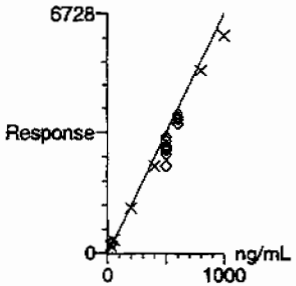

Compound name: 13-Dinitrobenzene-d4
Response Factor: 7.66338
RRF SD: 0.260276, % Relative SD: 3.39636
Response type: External Std, Area
Curve type: RF

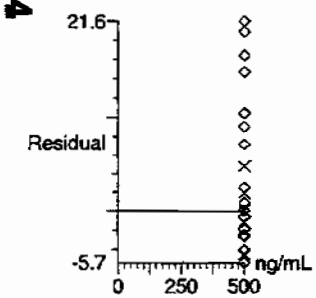

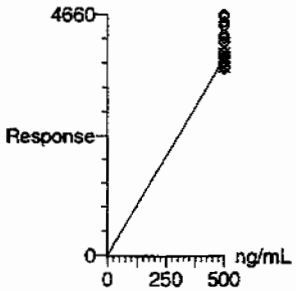

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 13-Dinitrobenzene
Response Factor: 1.34644
RRF SD: 0.048925, % Relative SD: 3.63366
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

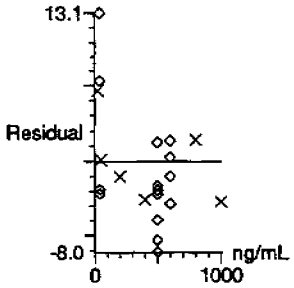

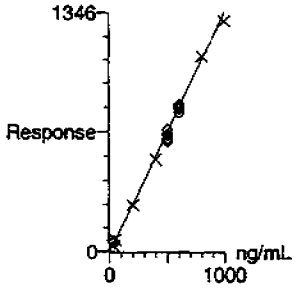

Compound name: Tetryl
Response Factor: 2.01305
RRF SD: 0.173501, % Relative SD: 8.61882
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

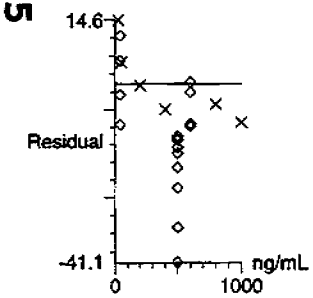

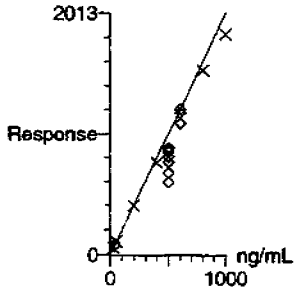

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: Nitrobenzene
Response Factor: 0.622131
RRF SD: 0.0269399, % Relative SD: 4.33025
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

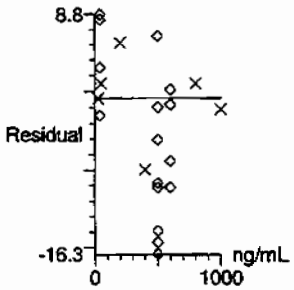

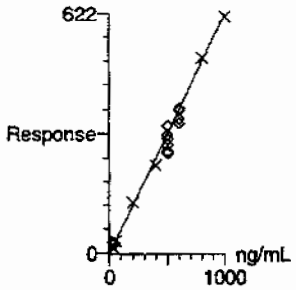

Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.338217
RRF SD: 0.0232178, % Relative SD: 6.86477
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

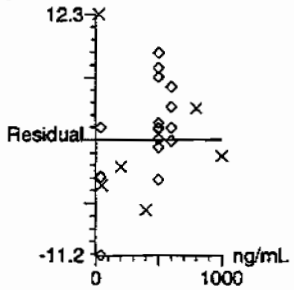

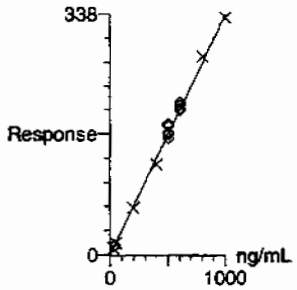

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 2-Amino-46-dinitrotoluene
Response Factor: 0.395782
RRF SD: 0.0255904, % Relative SD: 6.46579
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

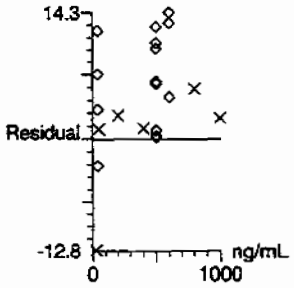

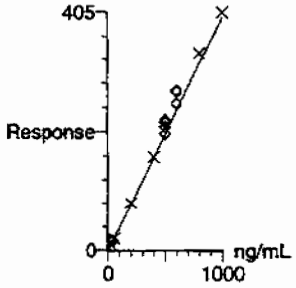

Compound name: 246-Trinitrotoluene
Response Factor: 1.6531
RRF SD: 0.0545759, % Relative SD: 3.30143
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

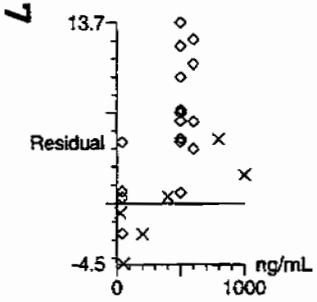

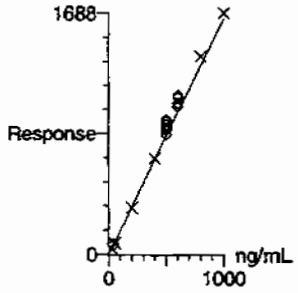

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 34-dinitrotoluene
Response Factor: 0.973789
RRF SD: 0.057167, % Relative SD: 5.87058
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

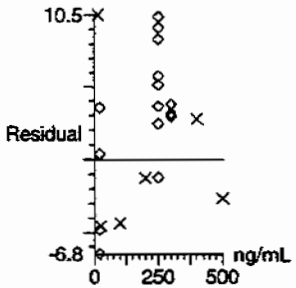

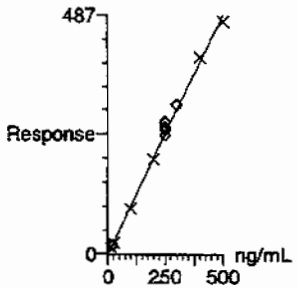

Compound name: 26-dinitrotoluene
Response Factor: 1.17216
RRF SD: 0.0182749, % Relative SD: 1.55908
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

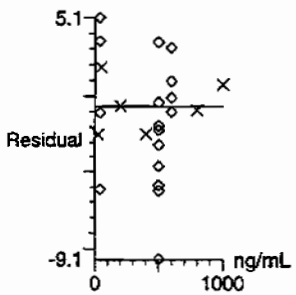

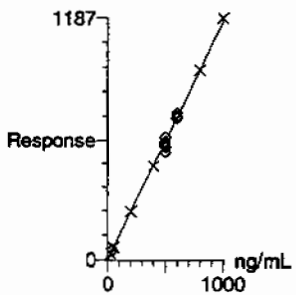

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 24-dinitrotoluene
Response Factor: 0.262117
RRF SD: 0.00494389, % Relative SD: 1.88614
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

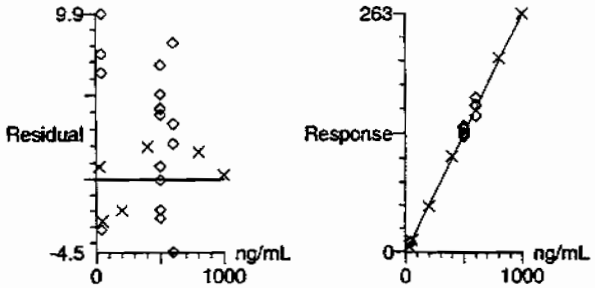

Compound name: 26-dinitrotoluene-d3
Response Factor: 47.9349
RRF SD: 1.86803, % Relative SD: 3.89702
Response type: External Std, Area
Curve type: RF

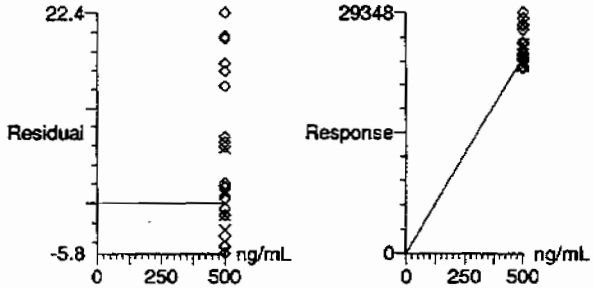

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 2-Nitrotoluene
Response Factor: 0.0917175
RRF SD: 0.00625455, % Relative SD: 6.81937
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

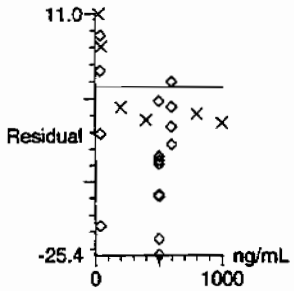

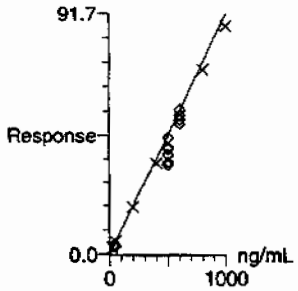

Compound name: 4-Nitrotoluene
Response Factor: 0.0483095
RRF SD: 0.00877921, % Relative SD: 18.1728
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

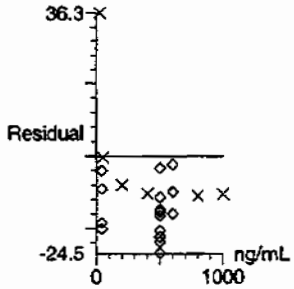

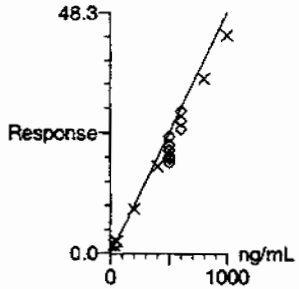

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 3-Nitrotoluene
Response Factor: 0.0584638
RRF SD: 0.00694204, % Relative SD: 11.8741
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

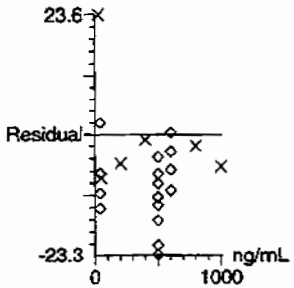

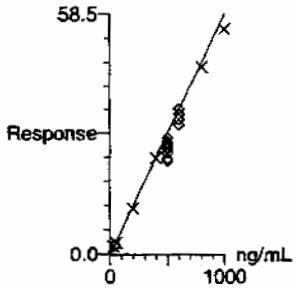

Compound name: PETN
Coefficient of Determination: 0.999803
Calibration curve: -0.000415666 * x^2 + 1.34265 * x + 6.02372
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: Null, Axis trans: None

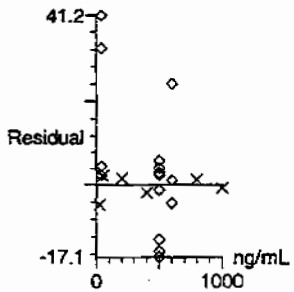

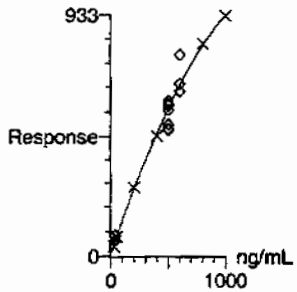

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7

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXP0630010a

Analysis Date: 30-JUN-09 19:03

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	564.231	94	
1,3-Dinitrobenzene-d4	500	489.765	98	
2,4,6-Trinitrotoluene	600	624.784	104	
2,4-Dinitrotoluene	600	619.633	103	
2,6-Dinitrotoluene	600	608.657	101	
2,6-Dinitrotoluene-d3	500	475.349	95	
2-Amino-4,6-dinitrotoluene	600	627.782	105	
3,4-Dinitrotoluene	300	309.83	103	
4-Amino-2,6-dinitrotoluene	600	607.008	101	
HMX	600	523.889	87	
Nitrobenzene	600	605.054	101	
PETN	600	748.77	125	*
RDX	600	607.542	101	
Tetryl	600	541.301	90	
m-Dinitrobenzene	600	592.419	99	
m-Nitrotoluene	600	580.01	97	
o-Nitrotoluene	600	582.842	97	
p-Nitrotoluene	600	547.152	91	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630010a
Date: 30-Jun-2009
Time: 19:03:35
ID: WXX090630-07ICV
Vial: 1:1,B

MM 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.453e+004

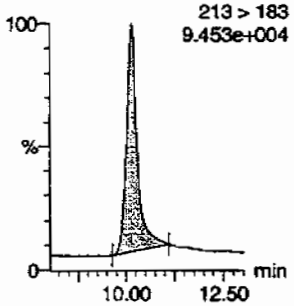

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.104e+004

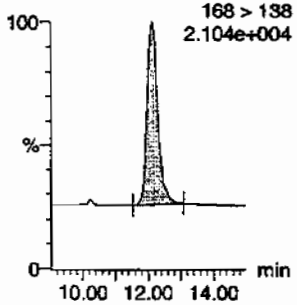

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.739e+004

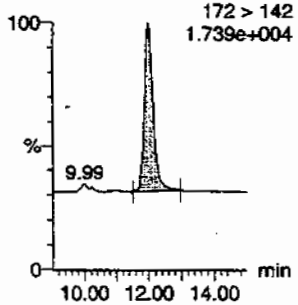

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.055e+005

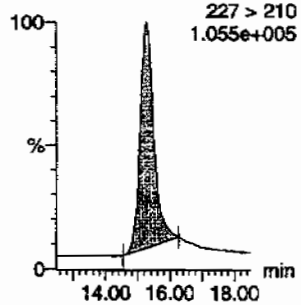

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.251e+004

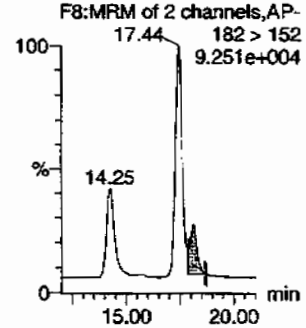

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.251e+004

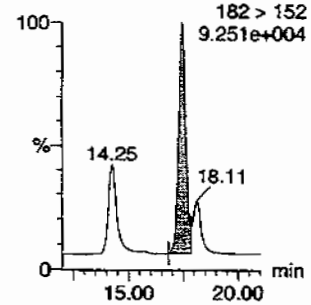

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.582e+004

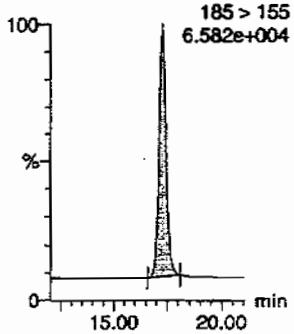

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.254e+004

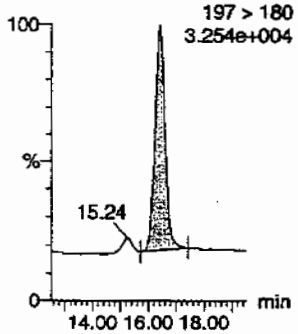

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.047e+004

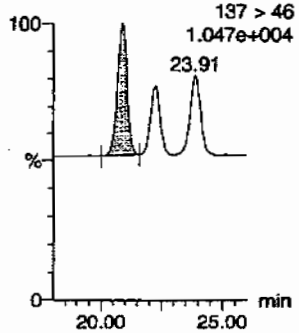

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.251e+004

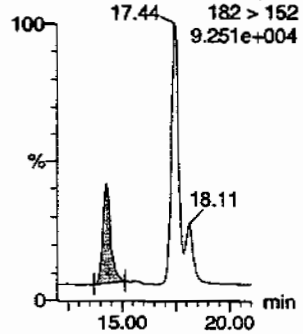

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.047e+004

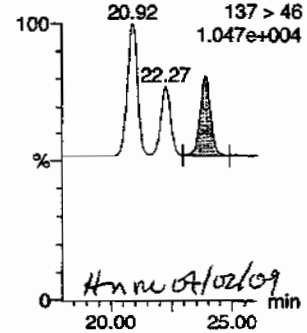

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.612e+004

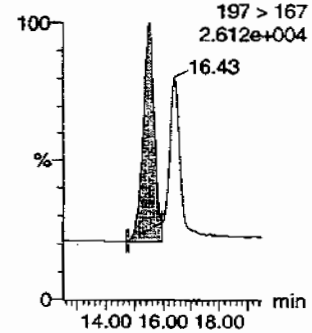

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GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

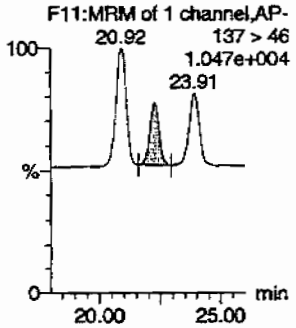

HMX

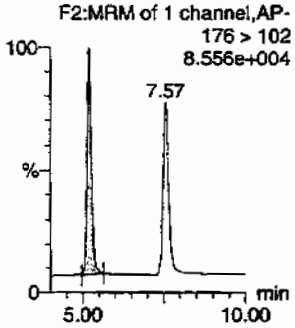

Nitrobenzene

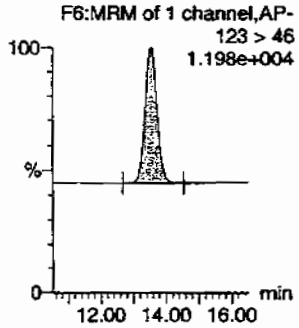

PETN

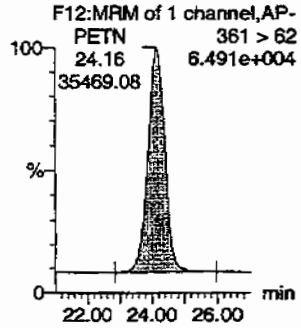

RDX

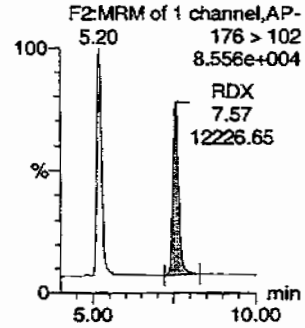

Tetryl

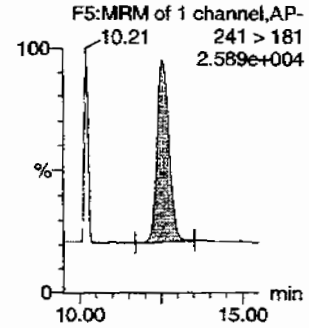

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Amount	%Rec	%Dev	S/N
WXX090630-07ICV	HMX	176 > 102	5.20	12891.344	3753.256	12891.344	1717.355	bb			523.8889	87.3	-12.7	2370.8
WXX090630-07ICV	RDX	176 > 102	7.57	12226.653	3753.256	12226.653	1628.806	bb			607.5416	101.3	1.3	1794.3
WXX090630-07ICV	135-Trinitrobenzene	213 > 183	10.14	28494.656	3753.256	28494.656	3795.992	bb			564.2312	94.0	-6.0	2556.4
WXX090630-07ICV	13-Dinitrobenzene-d4	172 > 142	11.97	3753.256		3753.256	3753.256	bb			489.7648	98.0	-2.0	163.3
WXX090630-07ICV	13-Dinitrobenzene	168 > 138	12.10	5987.602	3753.256	5987.602	797.654	bb			592.4187	98.7	-1.3	583.1
WXX090630-07ICV	Tetryl	241 > 181	12.53	8179.593	3753.256	8179.593	1089.666	bb			541.3009	90.2	-9.8	27.9
WXX090630-07ICV	Nitrobenzene	123 > 46	13.53	2825.623	3753.256	2825.623	376.423	bb			605.0537	100.8	0.8	367.7
WXX090630-07ICV	4-Amino-26-dinitrotoluene	197 > 167	15.55	9355.866	22785.805	9355.866	205.300	MM	01-Jul-09	09:23:10	607.0083	101.2	1.2	391.2
WXX090630-07ICV	2-Amino-46-dinitrotoluene	197 > 180	16.43	11322.955	22785.805	11322.955	248.465	bb			627.7822	104.6	4.6	364.2
WXX090630-07ICV	246-Trinitrotoluene	227 > 210	15.27	47067.680	22785.805	47067.680	1032.829	bb			624.7840	104.1	4.1	1071.1
WXX090630-07ICV	34-dinitrotoluene	182 > 152	14.25	13749.344	22785.805	13749.344	301.709	bb			309.8296	103.3	3.3	320.7
WXX090630-07ICV	26-dinitrotoluene	182 > 152	17.44	32512.719	22785.805	32512.719	713.442	MM	01-Jul-09	09:29:53	608.6567	101.4	1.4	847.2
WXX090630-07ICV	24-dinitrotoluene	182 > 152	18.11	7401.558	22785.805	7401.558	162.416	MM	01-Jul-09	09:33:38	619.6328	103.3	3.3	180.8
WXX090630-07ICV	26-dinitrotoluene-d3	185 > 155	17.28	22785.805		22785.805	22785.805	bb			475.3493	95.1	-4.9	1352.4
WXX090630-07ICV	2-Nitrotoluene	137 > 46	20.92	2436.114	22785.805	2436.114	53.457	bb			582.8424	97.1	-2.9	405.5
WXX090630-07ICV	4-Nitrotoluene	137 > 46	22.27	1204.578	22785.805	1204.578	26.433	bb			547.1516	91.2	-8.8	214.0
WXX090630-07ICV	3-Nitrotoluene	137 > 46	23.91	1545.316	22785.805	1545.316	33.910	bb			580.0102	96.7	-3.3	247.7
WXX090630-07ICV	PETN	361 > 62	24.16	35469.082	22785.805	35469.082	778.315	bb			748.7696	124.8	24.8	4636.4

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 06/30/09
Time of Injection 1903
Standard Number WXX090630-07ICV
Data File EXP0630010a

HMX		87.3
RDX		101.3
135-TNB		94.0
13-DNB		98.7
Tetryl		90.2
Nitrobenzene		100.8
4A-26-DNT		101.2
2A-46-DNT		104.6
246-TNT		104.1
34-DNT(surr)		103.3
26-DNT		101.4
24-DNT		103.3
2-NT		97.1
4-NT		91.2
3-NT		96.7
PETN		124.8
Total		1600.0
Average		100.0

MTT 7/1/09

Hmc 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

Form 6

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2473

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	Ave RF	RSD	Q
Data File:	EXP0713003a	EXP0713004a	EXP0713005a	EXP0713006a	EXP0713007a	EXP0713008a			
Parmname									
1,3,5-Trinitrobenzene	5.388	5.525	5.545	5.361	5.653	5.743	5.536	2.668	
1,3-Dinitrobenzene-d4	7.755	8.052	8.123	8.26	7.821	7.282	7.882	4.43	
2,4,6-Trinitrotoluene	.954	1.117	1.091	1.133	1.166	1.243	1.117	8.563	
2,4-Dinitrotoluene	.238	.25	.242	.256	.268	.255	0.252	4.234	
2,6-Dinitrotoluene	1.114	1.153	1.126	1.154	1.132	1.157	1.139	1.562	
2,6-Dinitrotoluene-d3	47.356	49.612	49.742	48.578	47.932	43.724	47.824	4.627	
2-Amino-4,6-dinitrotoluene	.329	.344	.364	.384	.384	.4	0.368	7.293	
3,4-Dinitrotoluene	.884	.887	.809	.852	.893	.901	0.871	3.978	
4-Amino-2,6-dinitrotoluene	.304	.258	.3	.302	.317	.329	0.302	8.007	
HMX	2.801	2.852	2.975	3.109	3.155	3.311	3.034	6.39	
Nitrobenzene	1.095	1.017	.931	.945	.972	.913	0.979	6.892	
PETN	.734	.766	.697	.656	.547	.537	0.656	14.599	
RDX	1.821	2.06	2.093	2.11	2.232	2.25	2.094	7.38	
m-Dinitrobenzene	1.266	1.344	1.304	1.285	1.368	1.358	1.321	3.158	
m-Nitrotoluene	.083	.095	.087	.089	.086	.089	0.088	4.339	
o-Nitrotoluene	.141	.141	.144	.142	.137	.139	0.141	1.633	
p-Nitrotoluene	.069	.067	.071	.072	.066	.067	0.069	3.787	

Q column used to flag RSD values outside of Limit (>20%)
* Values outside of QC Limit

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Form 6

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2473

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: 2nd Order

Calibration Level:	1	2	3	4	5	6	X	X^2	Intercept	COD	Q
Data File:	EXP0713003a	EXP0713004a	EXP0713005a	EXP0713006a	EXP0713007a	EXP0713008a					
Parmname:											
Tetryl	544.229	1174.83	3758.71	6459.02	11333.2	13210.4	1.92	-.0001692	47.345	.9988	

Quadradic Fit: y = Ax^2 + Bx + C
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\071309expa.mdb, Time: Tue Jul 14 10:07:51 2009
Calibration: Untitled, Time: Tue Jul 14 10:21:04 2009

Compound name: HMX
Response Factor: 3.03385
RRF SD: 0.193849, % Relative SD: 6.38953
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

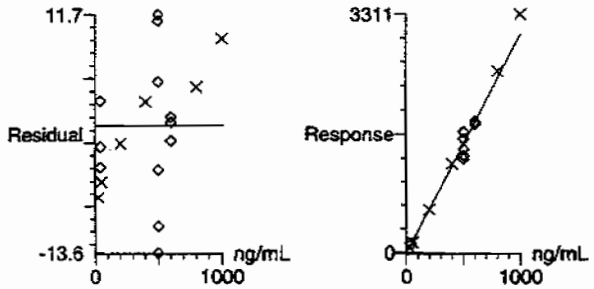

MAP 7/14/09

Compound name: RDX
Response Factor: 2.09431
RRF SD: 0.154559, % Relative SD: 7.37996
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

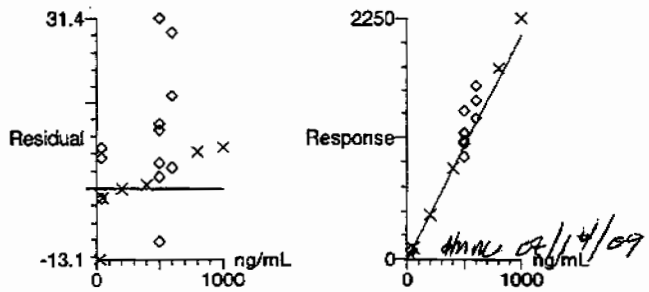

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 135-Trinitrobenzene
Response Factor: 5.53571
RRF SD: 0.147719, % Relative SD: 2.66848
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

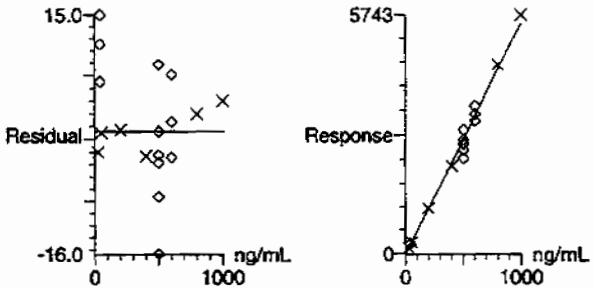

Compound name: 13-Dinitrobenzene-d4
Response Factor: 7.88239
RRF SD: 0.349213, % Relative SD: 4.43029
Response type: External Std, Area
Curve type: RF

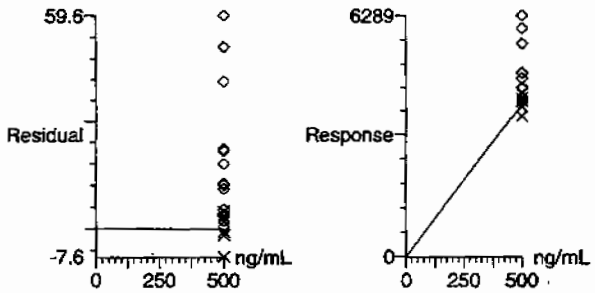

519

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 13-Dinitrobenzene
Response Factor: 1.32093
RRF SD: 0.0417136, % Relative SD: 3.15789
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

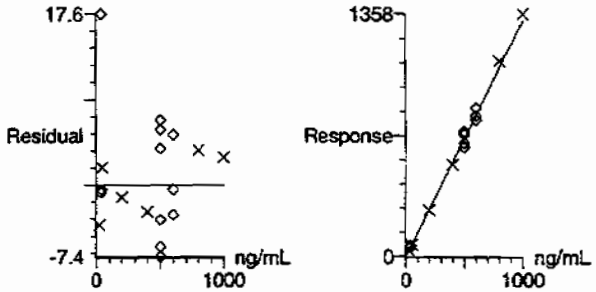

Compound name: Tetryl
Coefficient of Determination: 0.998789
Calibration curve: -0.000169195 * x^2 + 1.91984 * x + 47.345
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: Null, Axis trans: None

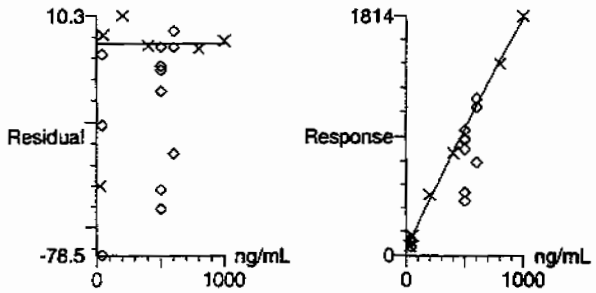

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: Nitrobenzene
Response Factor: 0.97865
RRF SD: 0.0674452, % Relative SD: 6.89166
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

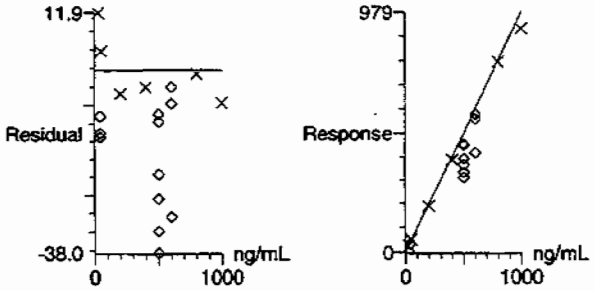

Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.301728
RRF SD: 0.0241594, % Relative SD: 8.00703
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

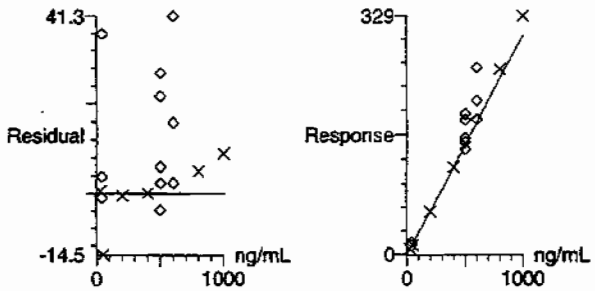

521

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 2-Amino-46-dinitrotoluene
Response Factor: 0.367608
RRF SD: 0.0268111, % Relative SD: 7.29338
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

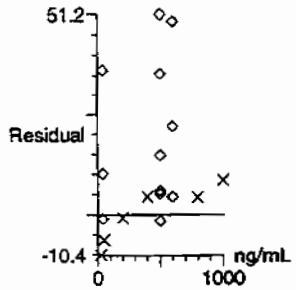

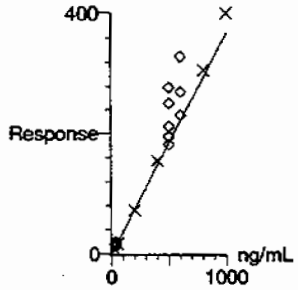

Compound name: 246-Trinitrotoluene
Response Factor: 1.11757
RRF SD: 0.0956942, % Relative SD: 8.5627
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

522

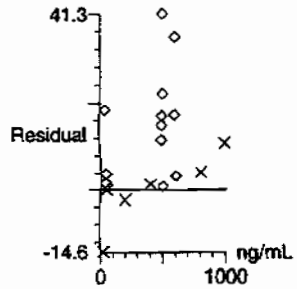

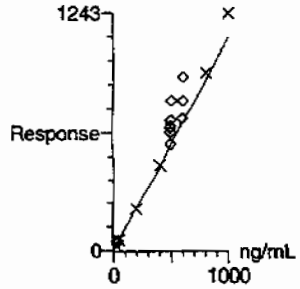

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 34-dinitrotoluene
Response Factor: 0.871049
RRF SD: 0.0346537, % Relative SD: 3.97839
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

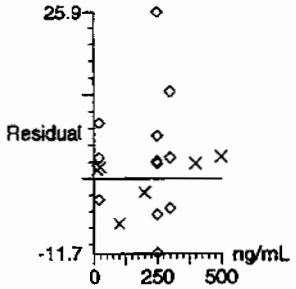

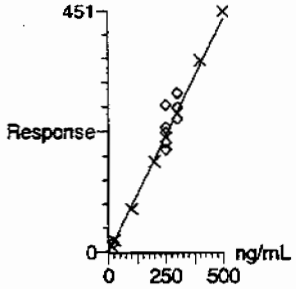

Compound name: 26-dinitrotoluene
Response Factor: 1.13947
RRF SD: 0.0178005, % Relative SD: 1.56218
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

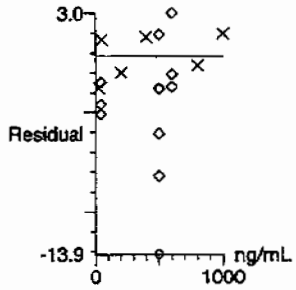

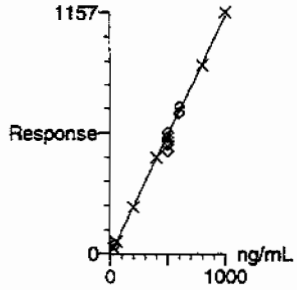

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 24-dinitrotoluene
Response Factor: 0.251398
RRF SD: 0.0106446, % Relative SD: 4.23418
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

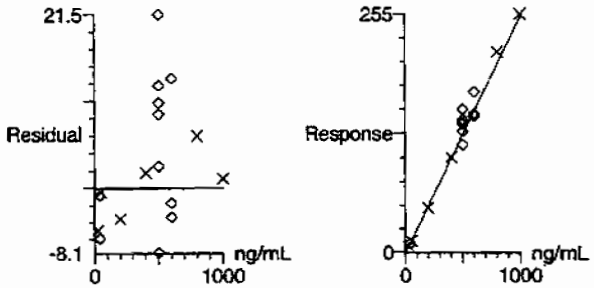

Compound name: 26-dinitrotoluene-d3
Response Factor: 47.824
RRF SD: 2.21281, % Relative SD: 4.62699
Response type: External Std, Area
Curve type: RF

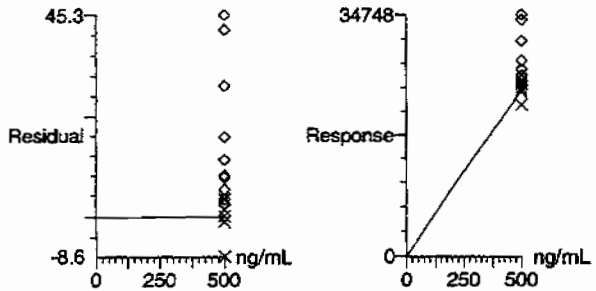

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 2-Nitrotoluene
Response Factor: 0.140666
RRF SD: 0.00229699, % Relative SD: 1.63293
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

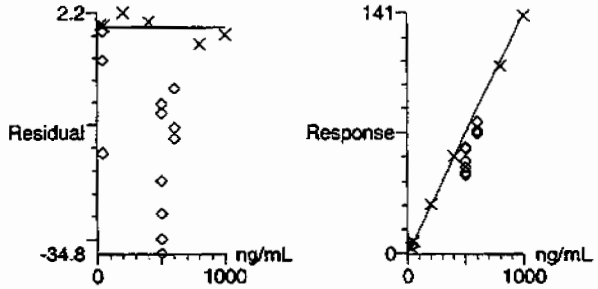

Compound name: 4-Nitrotoluene
Response Factor: 0.0684833
RRF SD: 0.00259338, % Relative SD: 3.78688
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

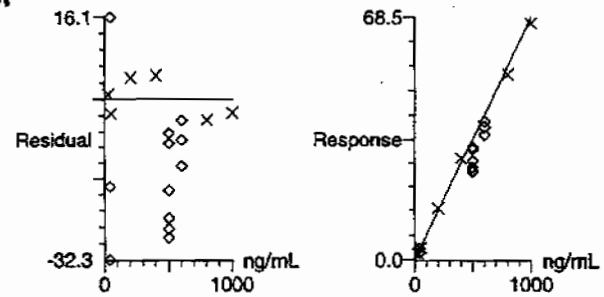

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 3-Nitrotoluene
Response Factor: 0.0882614
RRF SD: 0.00382945, % Relative SD: 4.33876
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

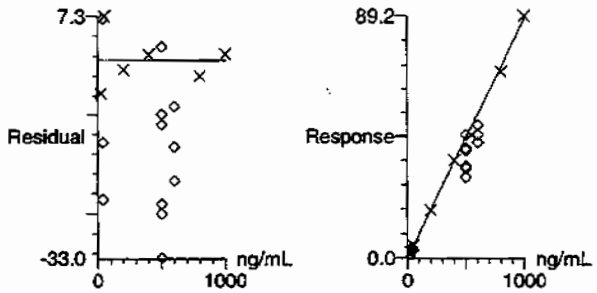

Compound name: PETN
Response Factor: 0.65614
RRF SD: 0.0957864, % Relative SD: 14.5985
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

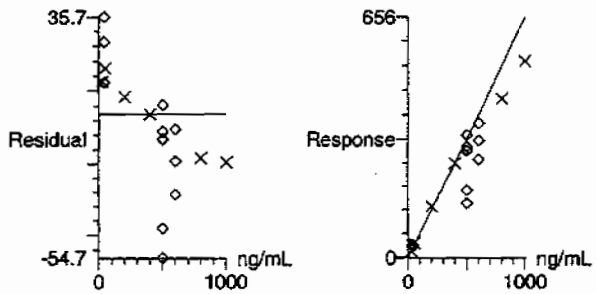

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7

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXP0713010a

Analysis Date: 13-JUL-09 19:21

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	580.032	97	
1,3-Dinitrobenzene-d4	500	511.821	102	
2,4,6-Trinitrotoluene	600	621.358	104	
2,4-Dinitrotoluene	600	589.208	98	
2,6-Dinitrotoluene	600	587.044	98	
2,6-Dinitrotoluene-d3	500	542.957	109	
2-Amino-4,6-dinitrotoluene	600	627.163	105	
3,4-Dinitrotoluene	300	286.144	95	
4-Amino-2,6-dinitrotoluene	600	614.782	102	
HMX	600	605.231	101	
Nitrobenzene	600	579.57	97	
PETN	600	493.649	82	
RDX	600	622.42	104	
Tetryl	600	591.608	99	
m-Dinitrobenzene	600	597.156	100	
m-Nitrotoluene	600	553.922	92	
o-Nitrotoluene	600	542.932	90	
p-Nitrotoluene	600	575.156	96	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713010a
Date: 13-Jul-2009
Time: 19:21:47
ID: WXX090713-07ICV
Vial: 1:1,B

MMP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
8.937e+004

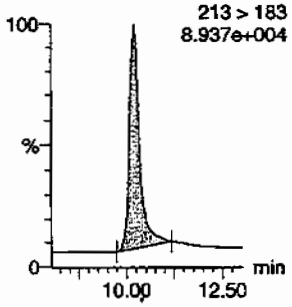

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.112e+004

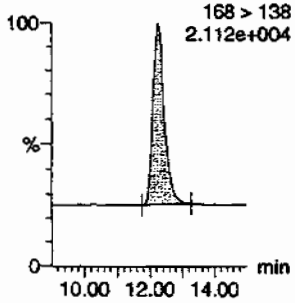

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.670e+004

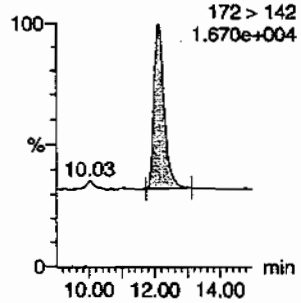

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
8.426e+004

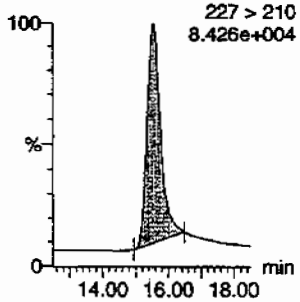

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.367e+004

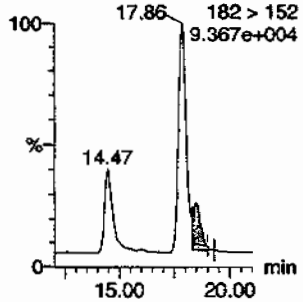

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.367e+004

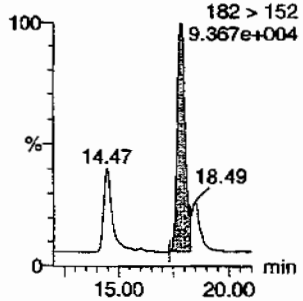

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.086e+004

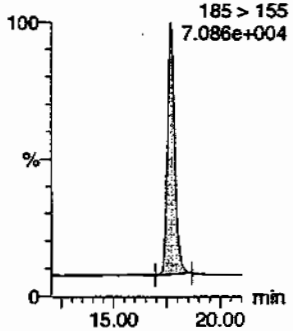

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.450e+004

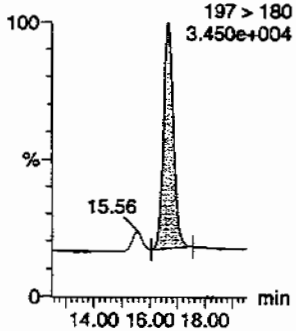

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.399e+004

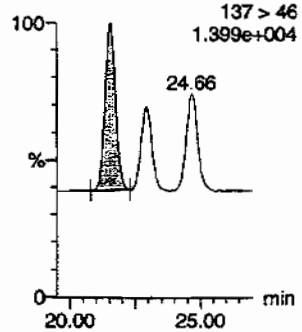

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.367e+004

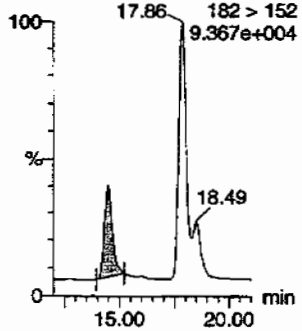

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.399e+004

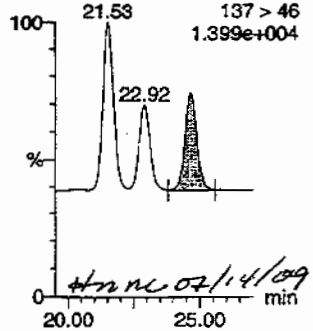

HMC 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.724e+004

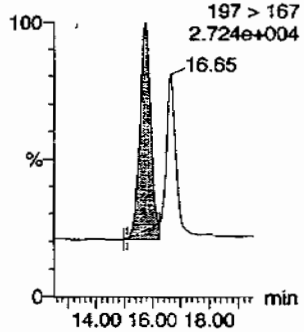

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

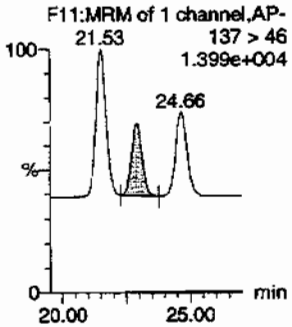

HMX

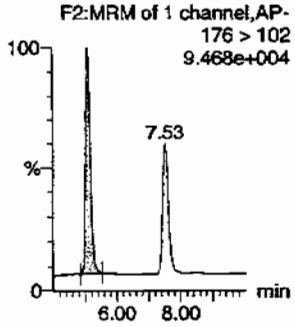

Nitrobenzene

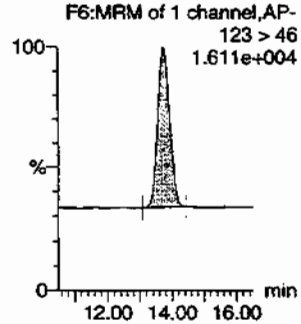

PETN

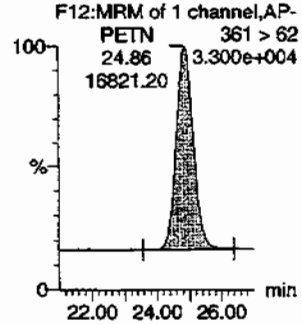

RDX

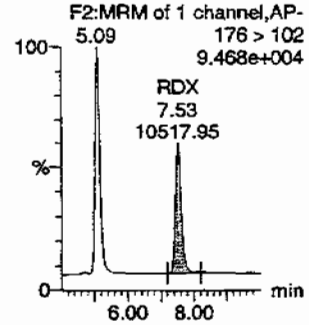

Tetryl

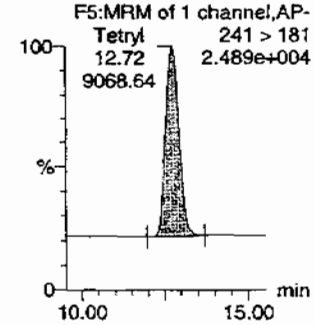

ID	Name	Trace	RT	Area	IS Area	Abs Resp	% Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX090713-07ICV	HMX	176 > 102	5.09	14815.656	4034.376	14815.656	1836.177	bb			605.2308	100.9	0.9	1474.7
WXX090713-07ICV	RDX	176 > 102	7.53	10517.949	4034.376	10517.949	1303.541	bb			622.4196	103.7	3.7	843.1
WXX090713-07ICV	135-Trinitrobenzene	213 > 183	10.20	25907.861	4034.376	25907.861	3210.888	bb			580.0323	96.7	-3.3	1645.7
WXX090713-07ICV	13-Dinitrobenzene-d4	172 > 142	12.14	4034.376		4034.376	4034.376	bb			511.8211	102.4	2.4	243.4
WXX090713-07ICV	13-Dinitrobenzene	168 > 138	12.27	6364.646	4034.376	6364.646	788.802	bb			597.1561	99.5	-0.5	513.3
WXX090713-07ICV	Tetryl	241 > 181	12.72	9068.635	4034.376	9068.635	1123.920	bb			591.6085	98.6	-1.4	655.9
WXX090713-07ICV	Nitrobenzene	123 > 46	13.76	4576.560	4034.376	4576.560	567.196	bb			579.5696	96.6	-3.4	764.5
WXX090713-07ICV	4-Amino-26-dinitrotoluene	197 > 167	15.77	9633.361	25966.389	9633.361	185.497	MM	14-Jul-09	10:18:30	614.7818	102.5	2.5	272.4
WXX090713-07ICV	2-Amino-46-dinitrotoluene	197 > 180	16.65	11973.124	25966.389	11973.124	230.550	bb			627.1631	104.5	4.5	403.6
WXX090713-07ICV	246-Trinitrotoluene	227 > 210	15.55	36062.738	25966.389	36062.738	694.412	bb			621.3583	103.6	3.6	1352.1
WXX090713-07ICV	34-dinitrotoluene	182 > 152	14.47	12944.023	25966.389	12944.023	249.246	bb			286.1444	95.4	-4.6	266.8
WXX090713-07ICV	26-dinitrotoluene	182 > 152	17.86	34738.852	25966.389	34738.852	668.920	MM	14-Jul-09	10:15:04	587.0440	97.8	-2.2	747.1
WXX090713-07ICV	24-dinitrotoluene	182 > 152	18.49	7692.565	25966.389	7692.565	148.125	MM	14-Jul-09	10:11:35	589.2076	98.2	-1.8	159.2
WXX090713-07ICV	26-dinitrotoluene-d3	185 > 155	17.68	25966.389		25966.389	25966.389	bb			542.9571	108.6	8.6	1092.5
WXX090713-07ICV	2-Nitrotoluene	137 > 46	21.53	3966.221	25966.389	3966.221	76.372	bb			542.9317	90.5	-9.5	520.0
WXX090713-07ICV	4-Nitrotoluene	137 > 46	22.92	2045.559	25966.389	2045.559	39.389	bb			575.1561	95.9	-4.1	258.2
WXX090713-07ICV	3-Nitrotoluene	137 > 46	24.66	2538.991	25966.389	2538.991	48.890	bb			553.9223	92.3	-7.7	299.6
WXX090713-07ICV	PETN	361 > 62	24.86	16821.195	25966.389	16821.195	323.903	bb			493.6494	82.3	-17.7	4055.4

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/13/09
Time of Injection 1921
Standard Number WXX090713-07ICV
Data File EXP0713010a

HMX		100.9
RDX		103.7
135-TNB		96.7
13-DNB		99.5
Tetryl		98.6
Nitrobenzene		96.6
4A-26-DNT		102.5
2A-46-DNT		104.5
246-TNT		103.6
34-DNT(surr)		95.4
26-DNT		97.8
24-DNT		98.2
2-NT		90.5
4-NT		95.9
3-NT		92.3
PETN		82.3
Total		1559.0
Average		97.4

MTP 7/14/09

07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2473

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS4

Method: 8321A Modified

HPLC Column: YMC J-Sphere ODS-H80

Calibration Type: 2nd Order

Calibration Level:	19	20	21	22	23	24	25	X	X^2	Intercept	COD	Q
Data File:	EXS0701003.wiff	EXS0701004.wiff	EXS0701005.wiff	EXS0701006.wiff	EXS0701007.wiff	EXS0701008.wiff	EXS0701009.wiff					
Parmname:												
2,4-Diamino-6-nitrotoluene	15000	29200	71400	146000	222000	292000	563000	-1790	304	-.011	1	
2,6-Diamino-4-nitrotoluene	10100	21100	51400	102000	151000	210000	405000	-688	209	-.003	.9998	
3,4-Dinitrotoluene	49800	104000	265000	510000	767000	1080000	2130000	-11800	2280	-.14	.9993	
3,5-Dinitroaniline	75200	157000	380000	732000	1040000	1340000	2750000	28800	1340	.01	.9997	
TATB	32500	69200	176000	339000	497000	674000	1280000	-482	696	-.029	.9999	
tris(o-cresyl) phosphate	678000	1370000	3320000	6260000	9220000	12200000	21300000	13800	13400	-1.37	.9999	

Quadradic Fit: y = Ax^2 + Bx + C
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-482			
a1	696			
a2	-0.0288			

Correlation coefficient 0.9999
Use Area

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	2.88e+004			
a1	1.34e+003			
a2	0.00963			

Correlation coefficient 0.9997
Use Area

Peak Name: 34-Dinitrotoluene
No Internal Standard
Q1/Q3 Masses: 182.08/151.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-1.18e+004			
a1	2.28e+003			
a2	-0.14			

Correlation coefficient 0.9993
Use Area

Peak Name: 26-Diamino-4-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-688			
a1	209			
a2	-0.00284			

Correlation coefficient 0.9998
Use Area

Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

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Fit	Quadratic	Weighting	None	Iterate No
a0	-1.79e+003			
a1	304			
a2	-0.0109			

Correlation coefficient 1.0000
Use Area

Peak Name: tris(o-cresyl) phosphate
No Internal Standard
Q1/Q3 Masses: 369.15/91.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	1.38e+004			
a1	1.34e+004			
a2	-1.37			

Correlation coefficient 0.9999
Use Area

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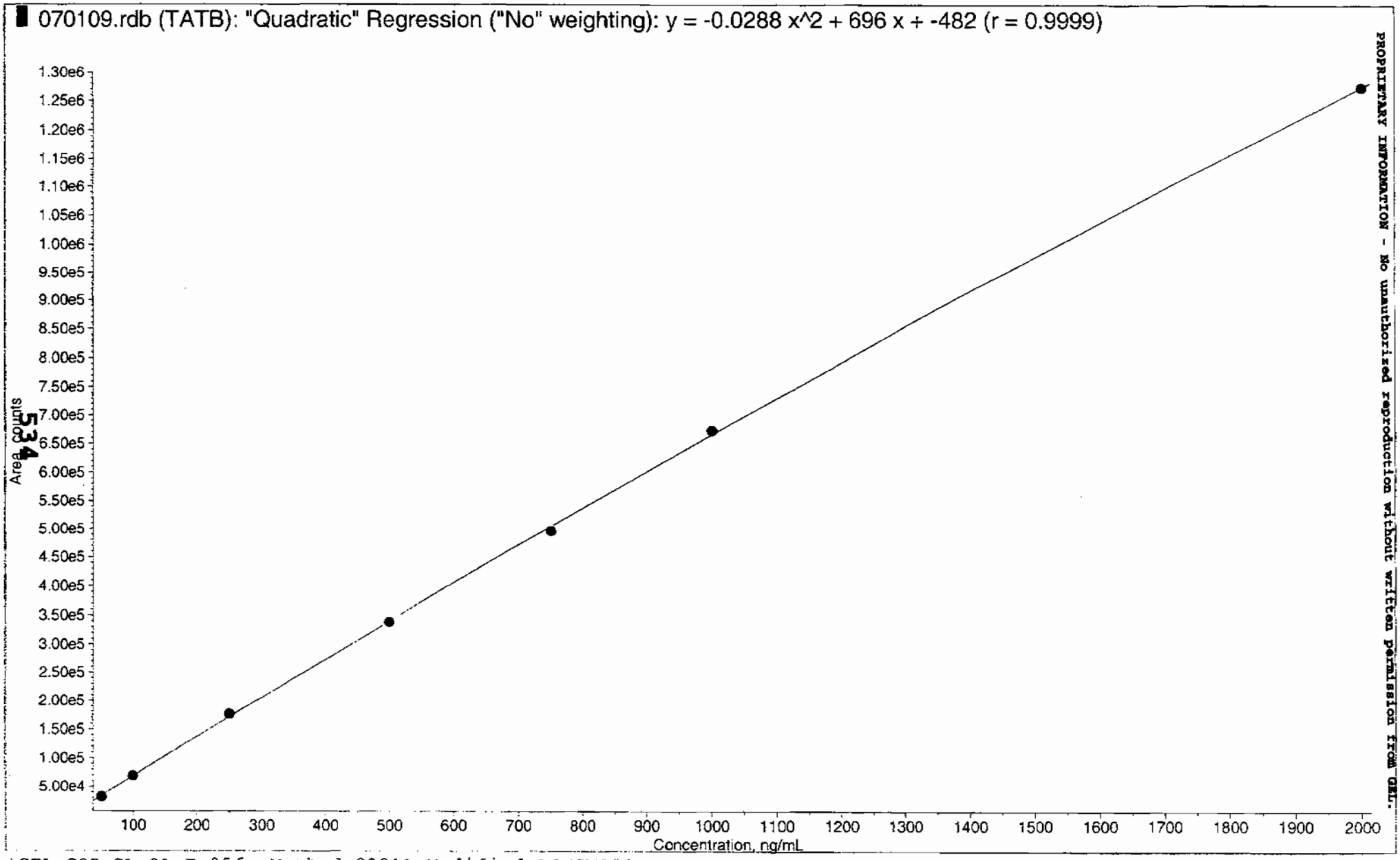

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

070109.rdb (35-Dinitroaniline): "Quadratic" Regression ("No" weighting): y = 0.00963 x^2 + 1.34e+003 x + 2.88e+004 (r = 0.9997...

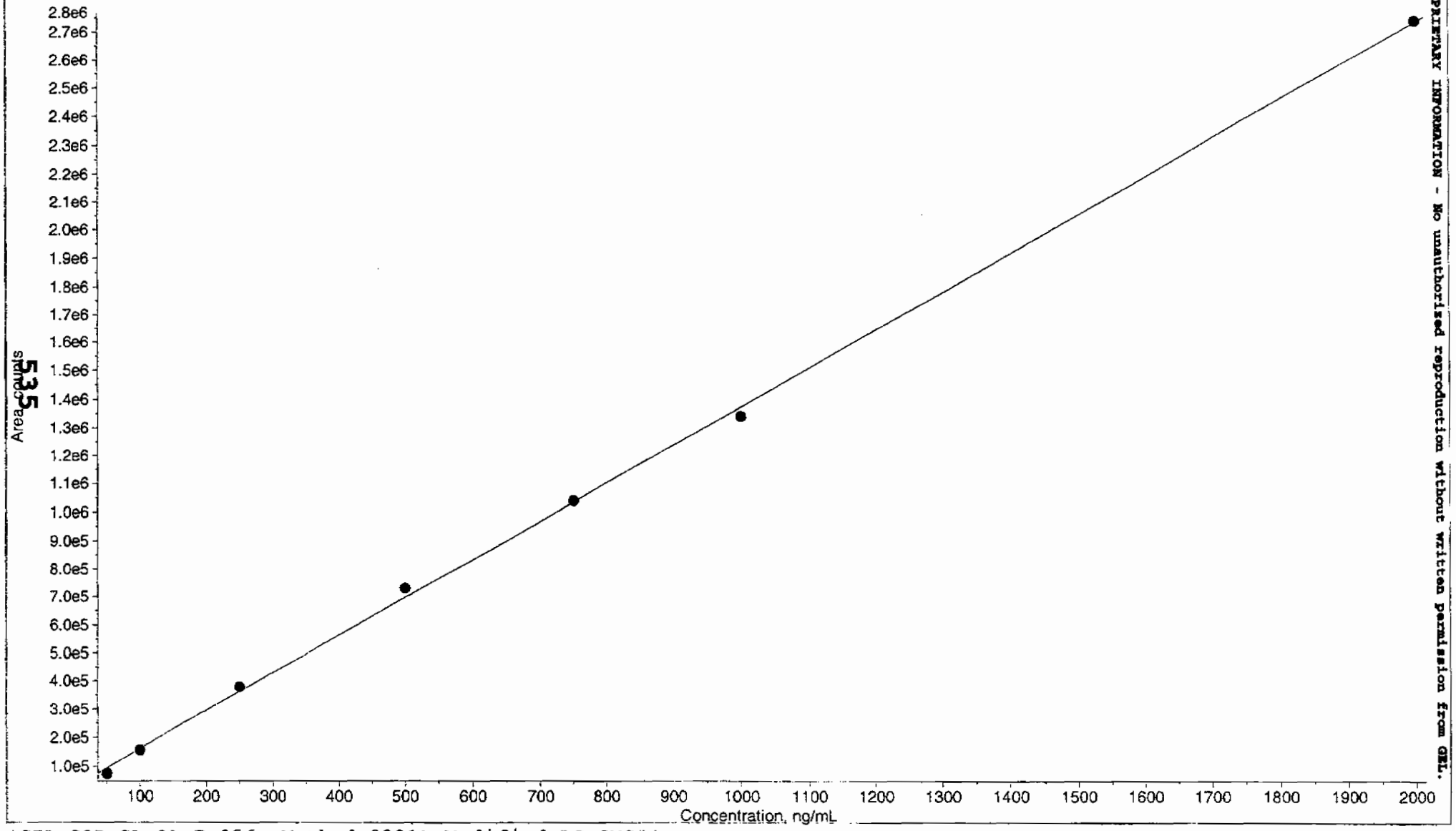

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

070109.rdb (34-Dinitrotoluene): "Quadratic" Regression ("No" weighting): y = -0.14 x^2 + 2.28e+003 x + -1.18e+004 (r = 0.9993)

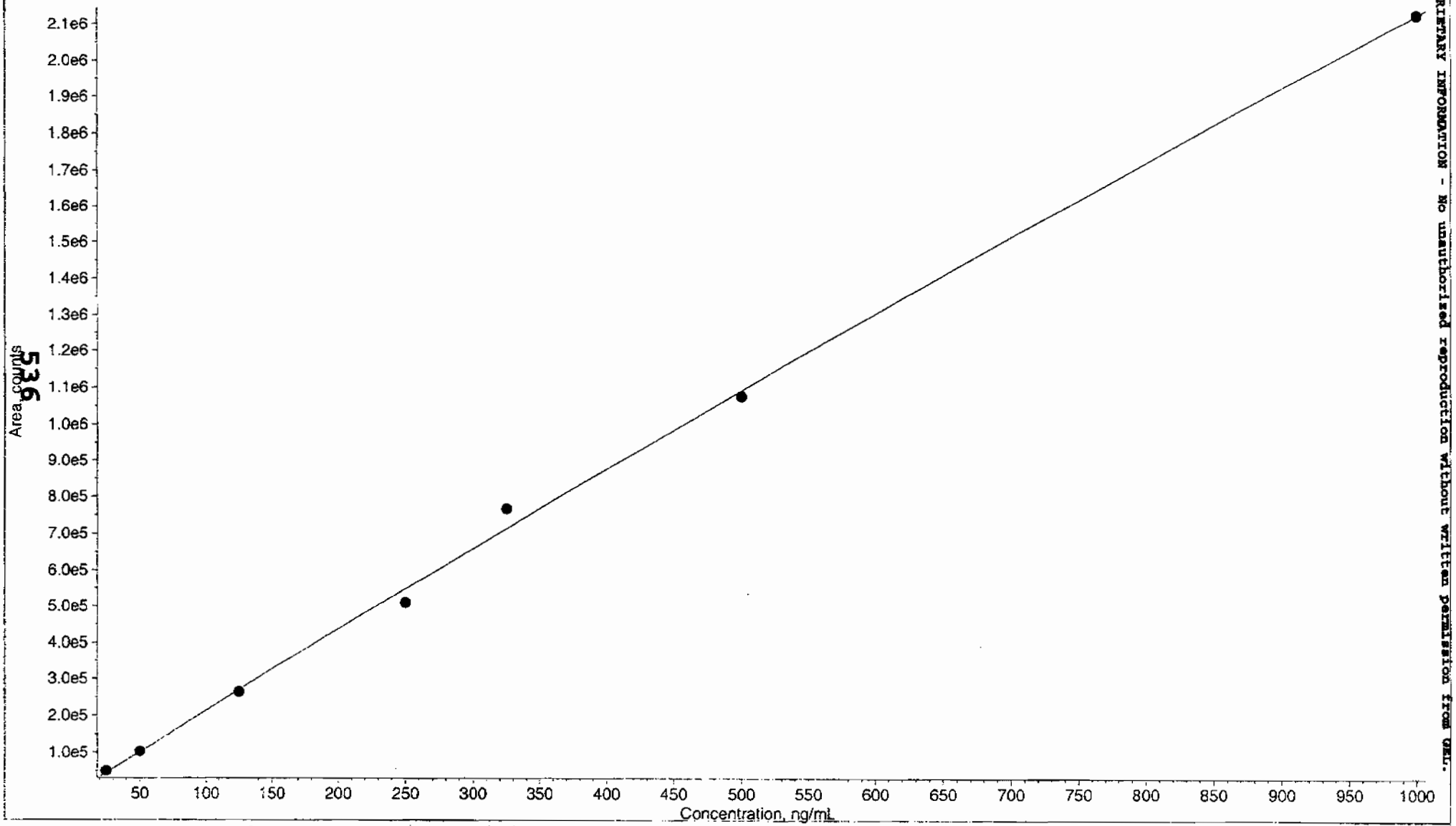

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

070109.rdb (26-Diamino-4-nitrotoluene): "Quadratic" Regression ("No" weighting): y = -0.00284 x^2 + 209 x + -688 (r = 0.9998)

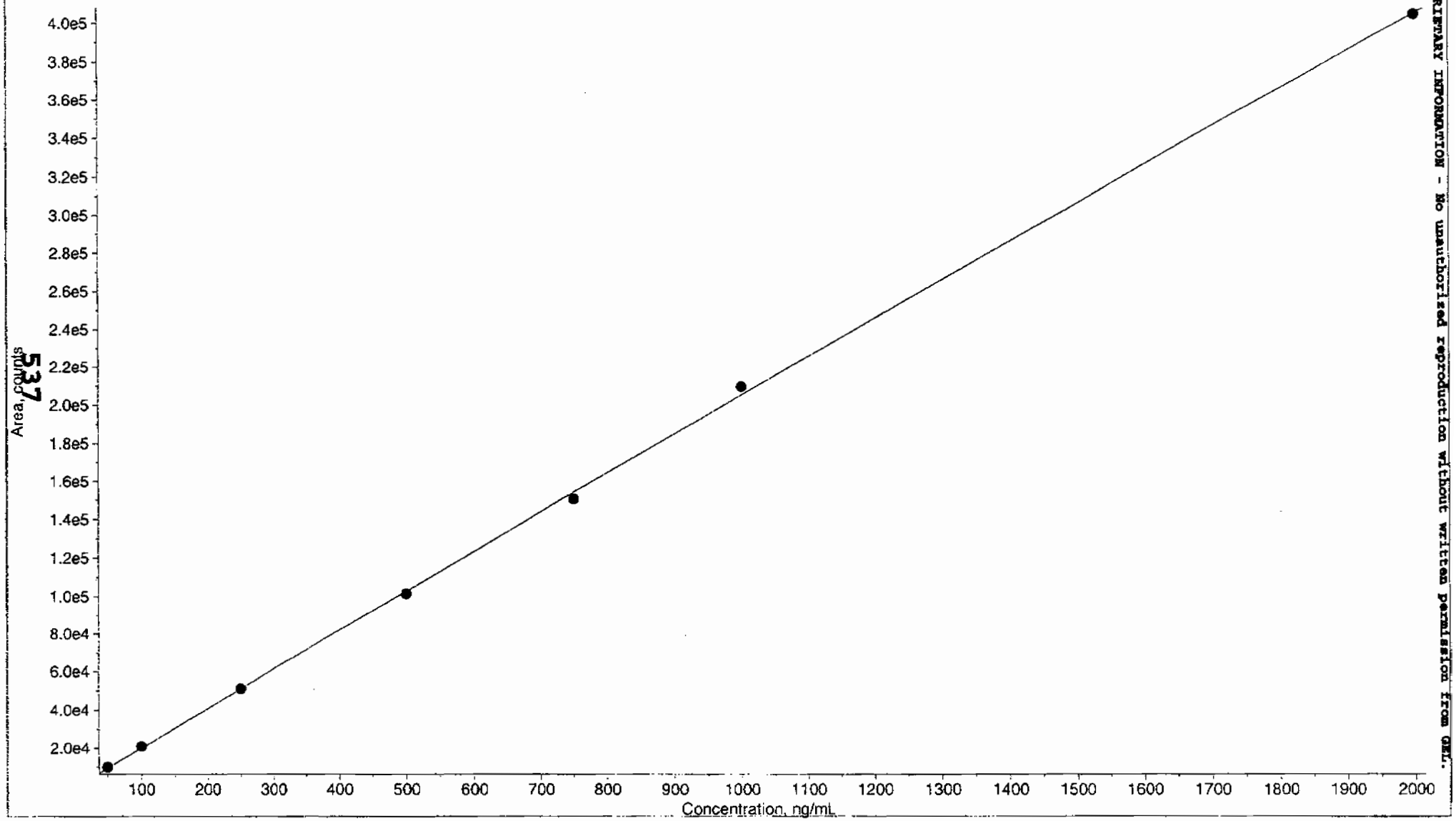

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

070109.rdb (24-Diamino-6-nitrotoluene): "Quadratic" Regression ("No" weighting): y = -0.0109 x^2 + 304 x + -1.79e+003 (r = 1.0...

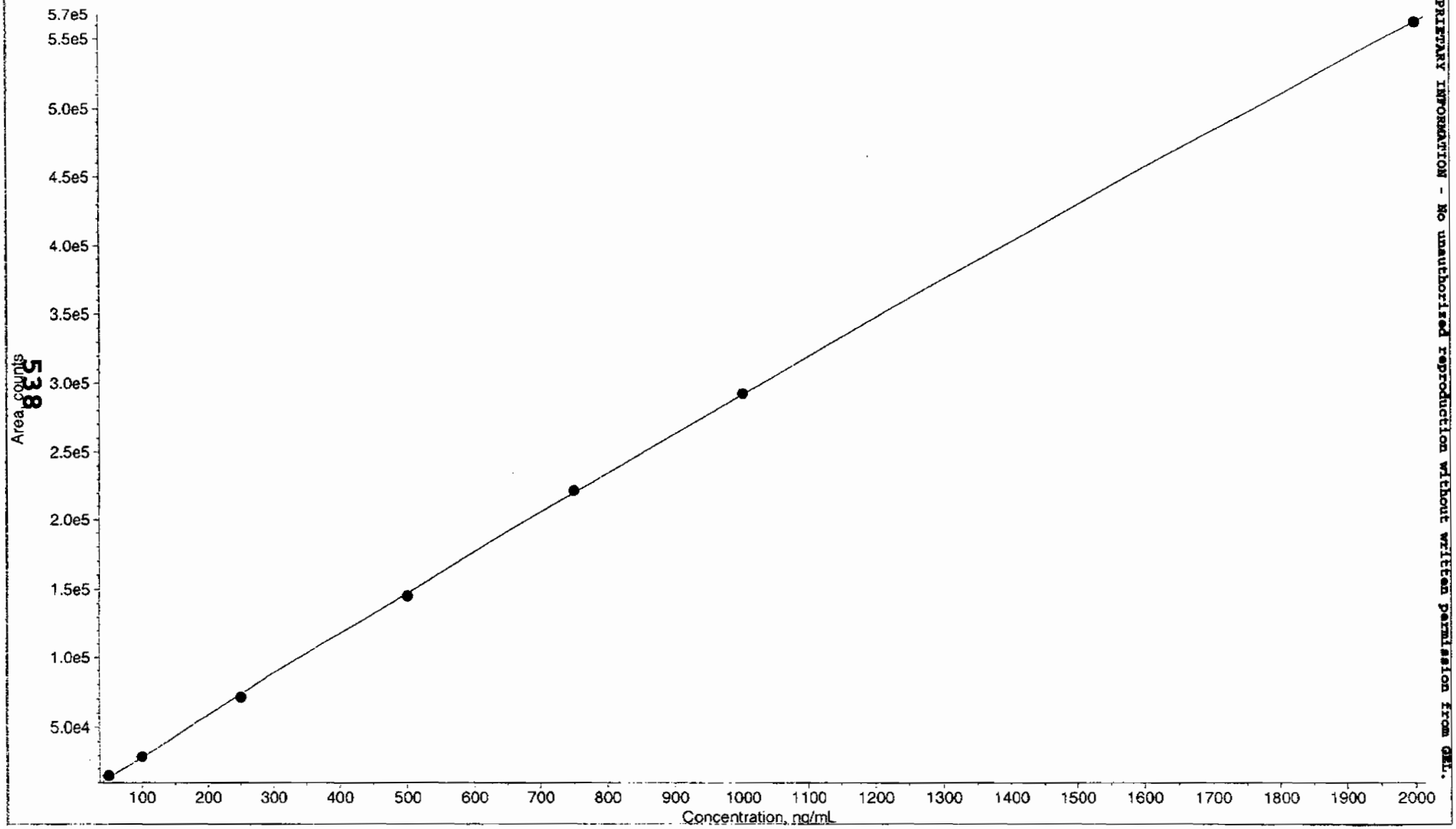

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

070109.rdb (tris(o-cresyl) phosphate): "Quadratic" Regression ("No" weighting): y = -1.37 x^2 + 1.34e+004 x + 1.38e+004 (r = 0....

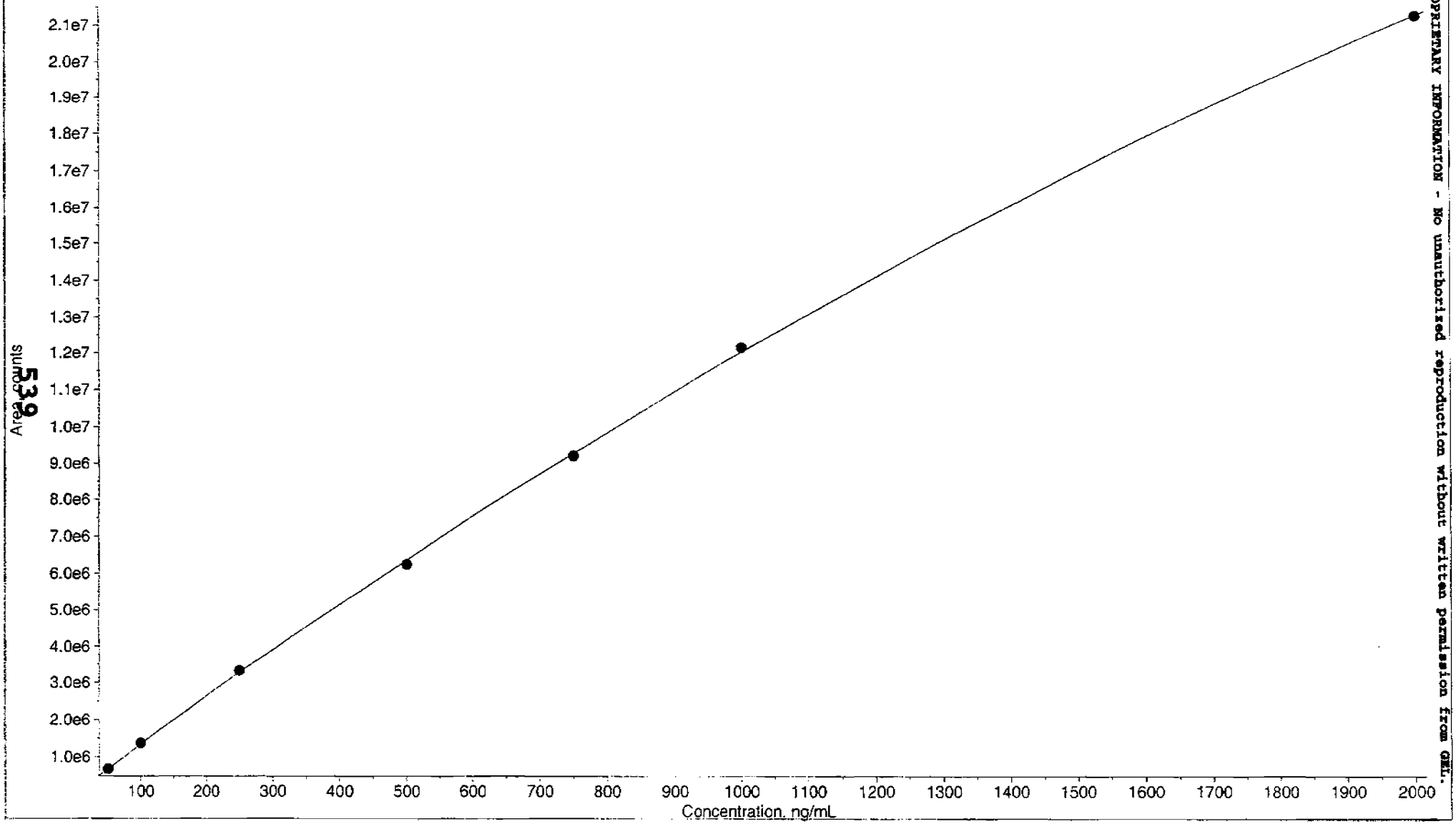

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXS0701011.wiff

Analysis Date: 01-JUL-09 13:21

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	473	95	
2,6-Diamino-4-nitrotoluene	500	495	99	
3,4-Dinitrotoluene	250	239	96	
3,5-Dinitroaniline	500	456	91	
TATB	500	478	96	
tris(o-cresyl) phosphate	500	497	99	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090701-26ICV" Sample ID: "[1]LER" File: "EXS0701011.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 478. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:21:31 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.04 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.04 min
Area: 3.26e+005 counts
Height: 62333.988 cps
Start Time: 6.91 min
End Time: 7.51 min

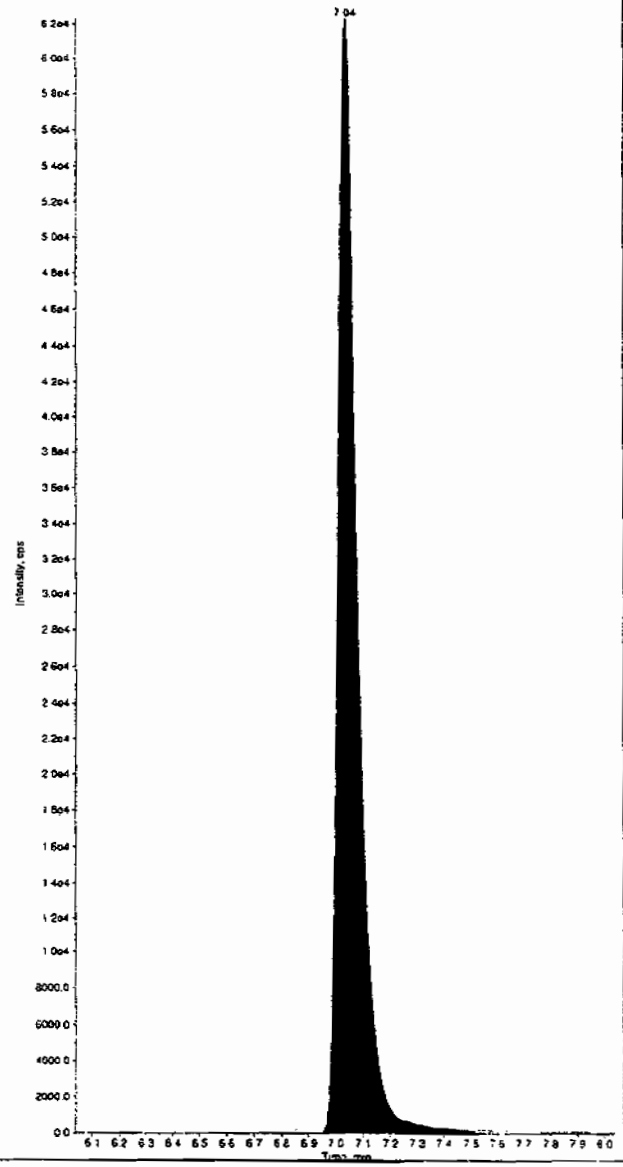

Sample Name: "WXX090701-26ICV" Sample ID: "[1]LER" File: "EXS0701011.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 456. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:21:31 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.25 min
Area: 6.40e+005 counts
Height: 143974.014 cps
Start Time: 8.16 min
End Time: 8.40 min

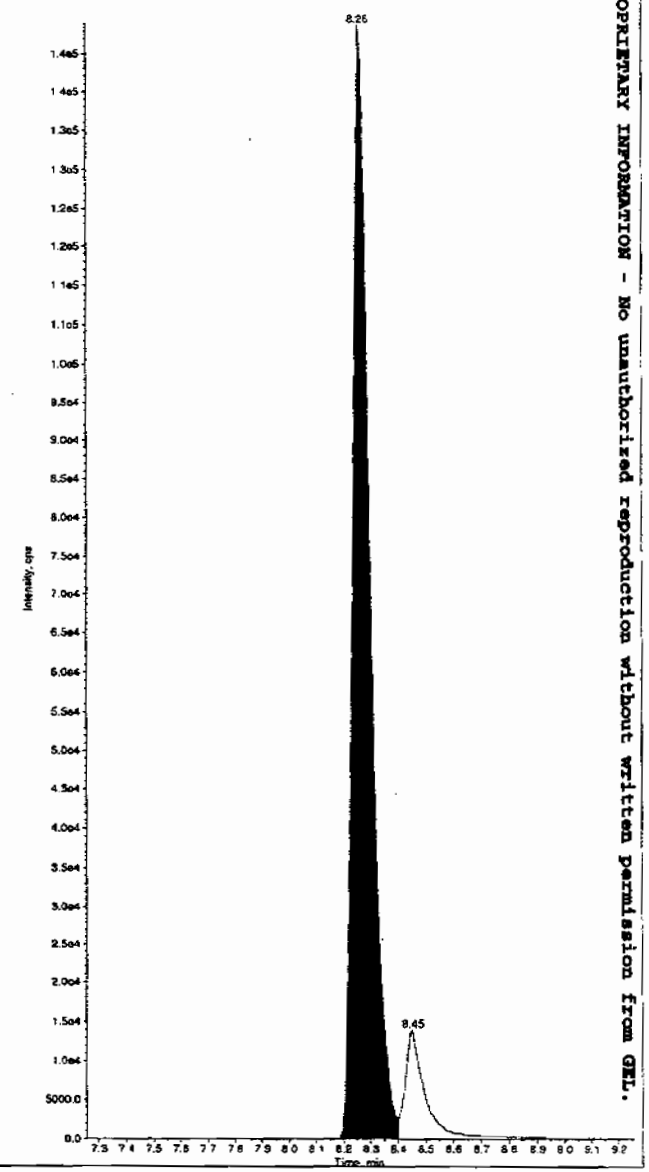

Hnm 07/06/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-26ICV" Sample ID: "j1|LER" File: "EXS0701011.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index:	1	
Sample Type:	QC	
Concentration:	250.	ng/mL
Calculated Conc:	239.	ng/mL
Acq. Date:	7/1/2009	
Acq. Time:	1:21:31 PM	
Modified:	No	
Proc. Algorithm:	IntelliQuan - IQA	
Min. Peak Height:	1460.00	cps
Min. Peak Width:	0.00	sec
Smoothing Width:	3	points
RT Window:	30.0	sec
Expected RT:	8.44	min
Use Relative RT:	No	
Int. Type:	Valley	
Retention Time:	8.44	min
Area:	5.25e+005	counts
Height:	99715.485	cps
Start Time:	8.37	min
End Time:	9.51	min

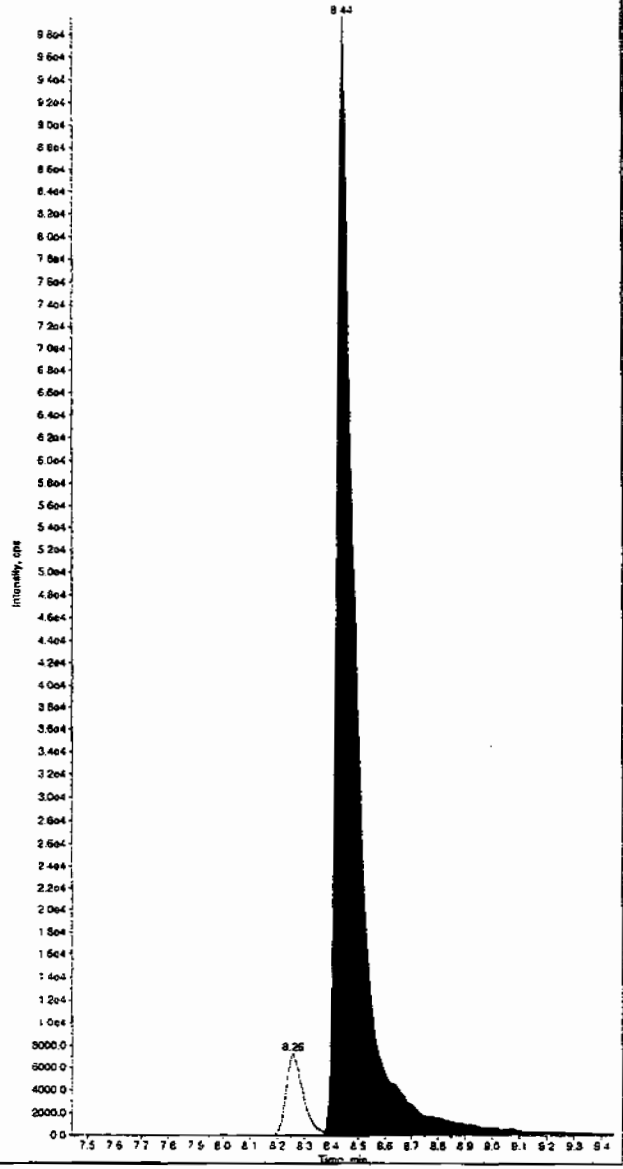

Sample Name: "WXX090701-26ICV" Sample ID: "j1|LER" File: "EXS0701011.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index:	1	
Sample Type:	QC	
Concentration:	500.	ng/mL
Calculated Conc:	495.	ng/mL
Acq. Date:	7/1/2009	
Acq. Time:	1:21:31 PM	
Modified:	No	
Proc. Algorithm:	IntelliQuan - IQA	
Min. Peak Height:	450.00	cps
Min. Peak Width:	0.00	sec
Smoothing Width:	3	points
RT Window:	30.0	sec
Expected RT:	5.08	min
Use Relative RT:	No	
Int. Type:	Valley	
Retention Time:	5.08	min
Area:	1.02e+005	counts
Height:	21050.850	cps
Start Time:	5.00	min
End Time:	5.36	min

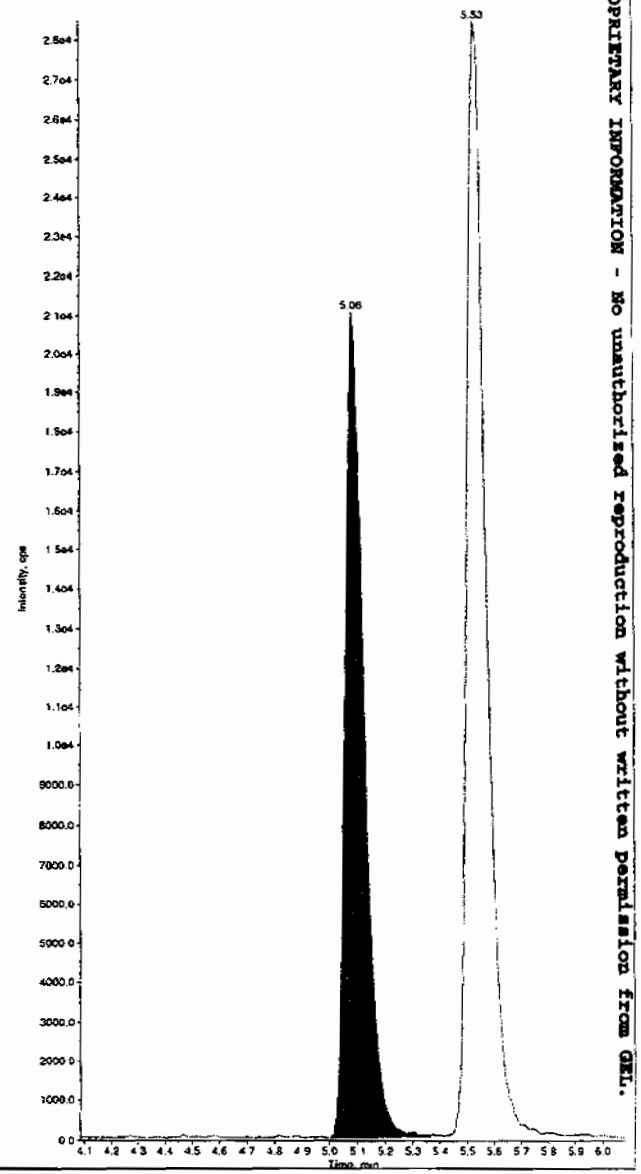

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-26ICV" Sample ID: "[1]LER" File: "EXS0701011.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 473. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:21:31 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 1.40e+005 counts
Height: 28374.369 cps
Start Time: 5.45 min
End Time: 5.84 min

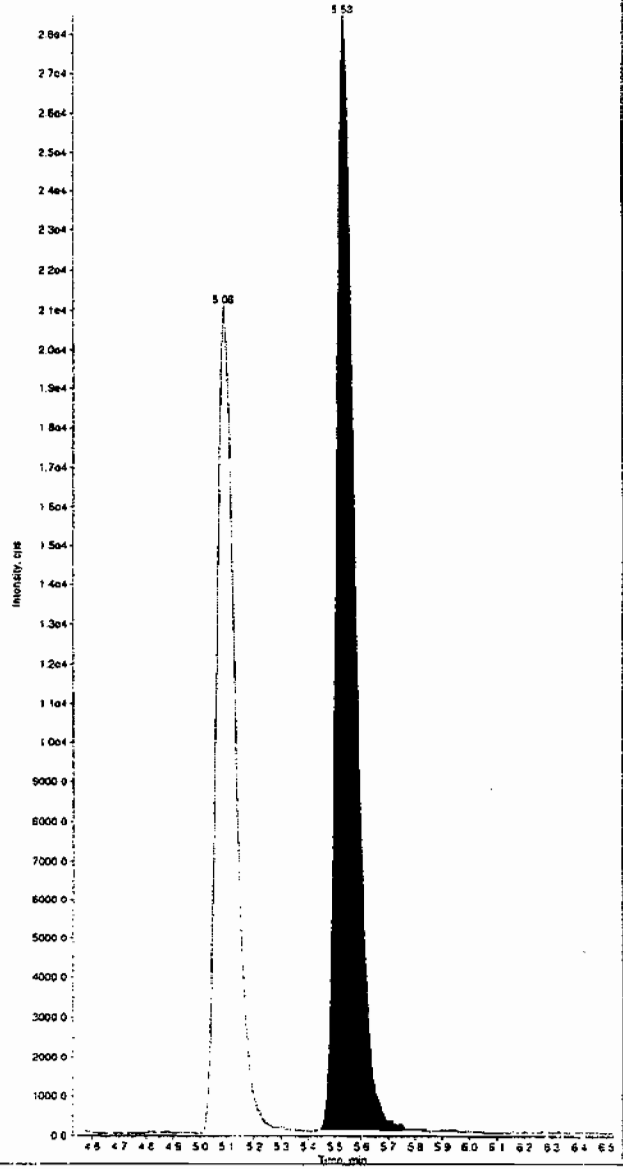

Sample Name: "WXX090701-26ICV" Sample ID: "[1]LER" File: "EXS0701011.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 497. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:21:31 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.33e+006 counts
Height: 1395938.477 cps
Start Time: 10.8 min
End Time: 11.2 min

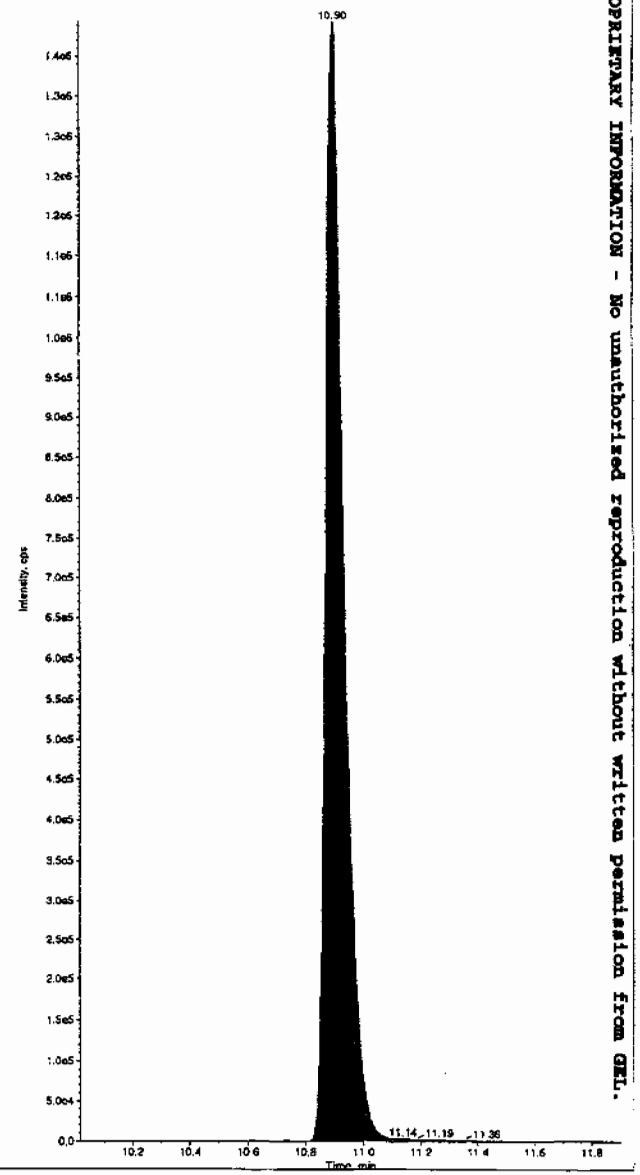

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630012a

Analysis Date: 30-JUN-09 20:02

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	45.95	115	
1,3-Dinitrobenzene-d4	500	485.668	97	
2,4,6-Trinitrotoluene	40	40.177	100	
2,4-Dinitrotoluene	40	38.742	97	
2,6-Dinitrotoluene	40	39.857	100	
2,6-Dinitrotoluene-d3	500	497.017	99	
2-Amino-4,6-dinitrotoluene	40	41.294	103	
3,4-Dinitrotoluene	20	20.083	100	
4-Amino-2,6-dinitrotoluene	40	38.576	96	
HMX	40	39.157	98	
Nitrobenzene	40	43.302	108	
PETN	40	56.487	141	*
RDX	40	39.591	99	
Tetryl	40	39.027	98	
m-Dinitrobenzene	40	39.032	98	
m-Nitrotoluene	40	35.432	89	
o-Nitrotoluene	40	37.23	93	
p-Nitrotoluene	40	38.586	96	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630012a
Date: 30-Jun-2009
Time: 20:02:31
ID: WXX090630-08CRI
Vial: 1:1,C

MATT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.303e+004

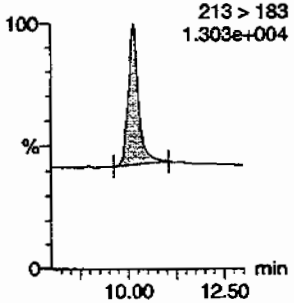

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.441e+003

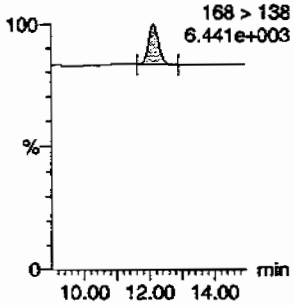

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.690e+004

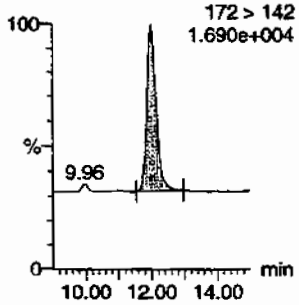

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.217e+004

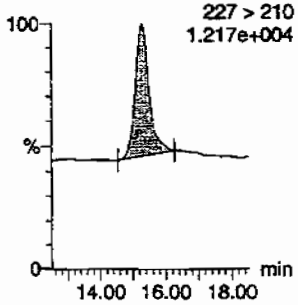

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.127e+004

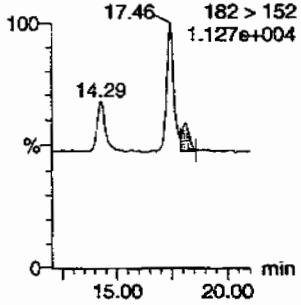

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.127e+004

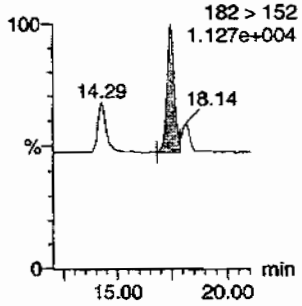

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.941e+004

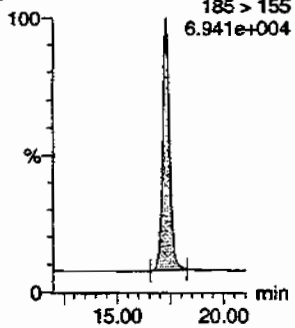

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.170e+003

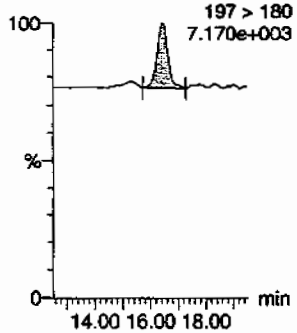

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.752e+003

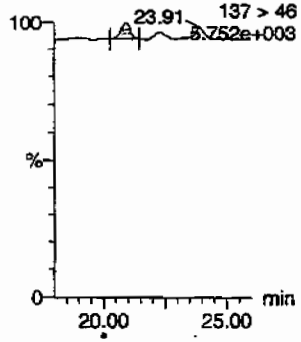

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.127e+004

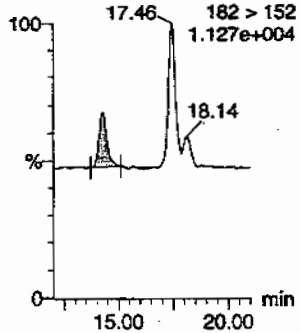

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.752e+003

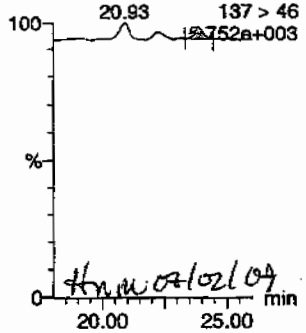

HMW 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
6.791e+003

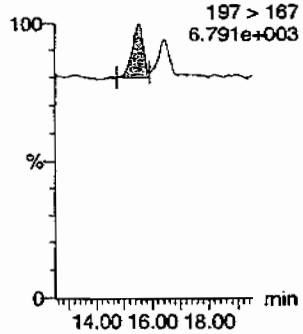

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GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

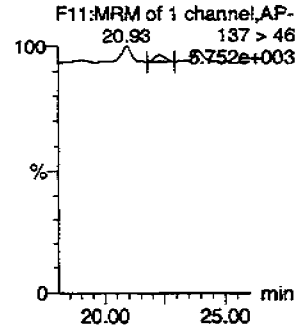

HMX

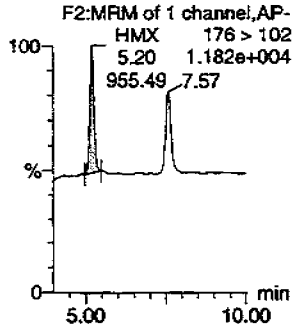

Nitrobenzene

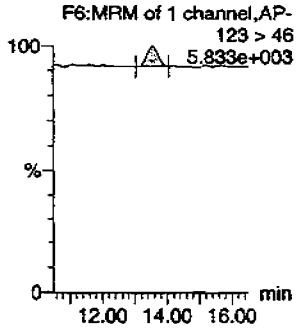

PETN

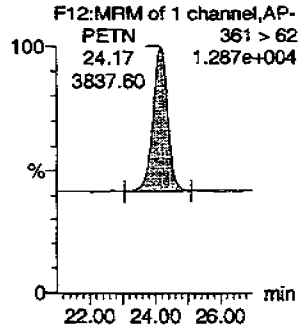

RDX

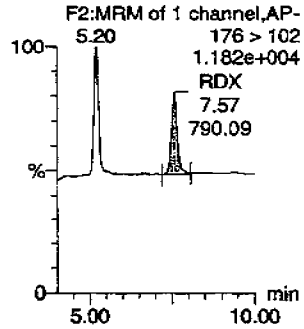

Tetryl

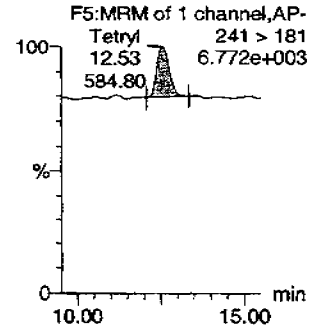

ID	Name	Trace	RT	Sig Area	IS Area	Abs Resp	Rel Response	Flags	Mod Date	Mod Time	Amount	%Rec	%Dev	RSA
WXX090630-08CRI	HMX	176 > 102	5.20	955.486	3721.859	955.486	128.361	bb			39.1574	97.9	-2.1	175.6
WXX090630-08CRI	RDX	176 > 102	7.57	790.090	3721.859	790.090	106.142	bb			39.5907	99.0	-1.0	111.8
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2301.161	3721.859	2301.161	309.141	bb			45.9504	114.9	14.9	332.7
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3721.859		3721.859	3721.859	bb			485.6678	97.1	-2.9	146.0
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	391.202	3721.859	391.202	52.555	bb			39.0324	97.6	-2.4	46.8
WXX090630-08CRI	Tetryl	241 > 181	12.53	584.797	3721.859	584.797	78.562	bb			39.0266	97.6	-2.4	51.8
WXX090630-08CRI	Nitrobenzene	123 > 46	13.58	200.531	3721.859	200.531	26.940	bb			43.3022	108.3	8.3	39.3
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.55	621.683	23824.459	621.683	13.047	MM	01-Jul-09	09:23:17	38.5763	96.4	-3.6	54.9
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.43	778.742	23824.459	778.742	16.343	bb			41.2937	103.2	3.2	36.8
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.27	3164.651	23824.459	3164.651	66.416	bb			40.1767	100.4	0.4	155.1
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.29	931.868	23824.459	931.868	19.557	bb			20.0834	100.4	0.4	36.8
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.46	2226.119	23824.459	2226.119	46.719	MM	01-Jul-09	09:30:04	39.8574	99.6	-0.4	97.9
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.14	483.876	23824.459	483.876	10.155	MM	01-Jul-09	09:33:51	38.7424	96.9	-3.1	20.6
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.28	23824.459		23824.459	23824.459	bb			497.0173	99.4	-0.6	1550.2
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.93	162.702	23824.459	162.702	3.415	bb			37.2295	93.1	-6.9	37.2
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.28	88.821	23824.459	88.821	1.864	bb			38.5860	96.5	-3.5	17.4
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.91	98.704	23824.459	98.704	2.071	bb			35.4319	88.6	-11.4	25.4
WXX090630-08CRI	PETN	361 > 62	24.17	3837.604	23824.459	3837.604	80.539	bb			56.4865	141.2	41.2	1045.2

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 06/30/09
Time of Injection 2002
Standard Number WXX090630-08CRI
Data File EXP0630012a

HMX	97.9
RDX	99.0
135-TNB	114.9
13-DNB	97.6
Tetryl	97.6
Nitrobenzene	108.3
4A-26-DNT	96.4
2A-46-DNT	103.2
246-TNT	100.4
34-DNT(surr)	100.4
26-DNT	99.6
24-DNT	96.9
2-NT	93.1
4-NT	96.5
3-NT	88.6
PETN	141.2
Total	1631.6
Average	102.0

MATT 7/1/09

Hm 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0630019a

Analysis Date: 30-JUN-09 23:28

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	535.523	89	
1,3-Dinitrobenzene-d4	500	471.441	94	
2,4,6-Trinitrotoluene	600	637.323	106	
2,4-Dinitrotoluene	600	612.726	102	
2,6-Dinitrotoluene	600	598.012	100	
2,6-Dinitrotoluene-d3	500	470.842	94	
2-Amino-4,6-dinitrotoluene	600	628.093	105	
3,4-Dinitrotoluene	300	309.784	103	
4-Amino-2,6-dinitrotoluene	600	599.37	100	
HMX	600	572.104	95	
Nitrobenzene	600	560.784	93	
PETN	600	574.387	96	
RDX	600	634.358	106	
Tetryl	600	544.656	91	
m-Dinitrobenzene	600	577.787	96	
m-Nitrotoluene	600	559.139	93	
o-Nitrotoluene	600	565.054	94	
p-Nitrotoluene	600	545.606	91	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630019a
Date: 30-Jun-2009
Time: 23:28:50
ID: WXX090630-07CCV
Vial: 1:1,B

MAP 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.017e+004

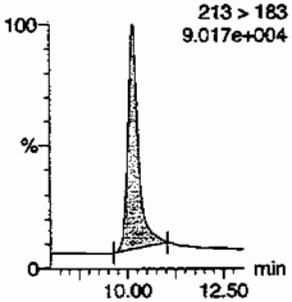

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.017e+004

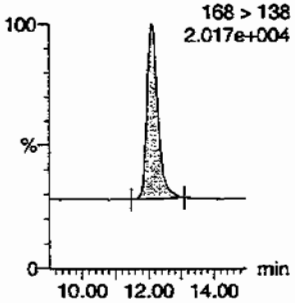

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.679e+004

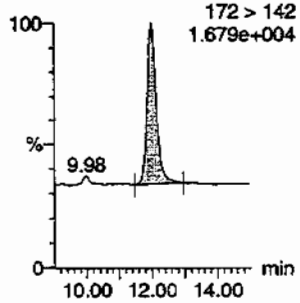

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.052e+005

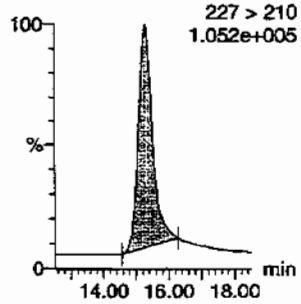

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.034e+004

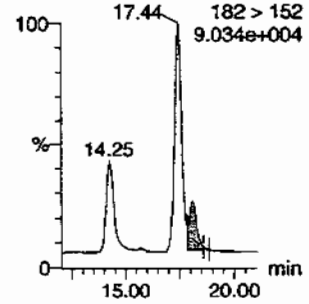

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.034e+004

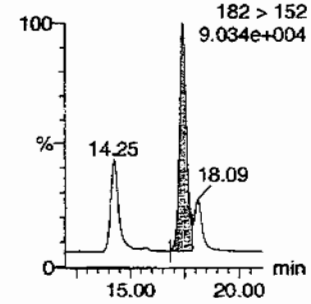

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.546e+004

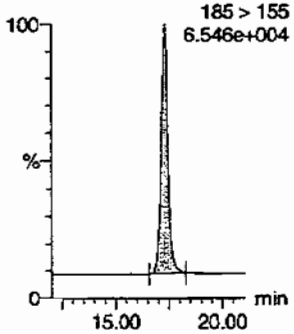

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.292e+004

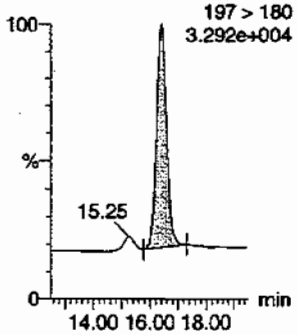

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.060e+004

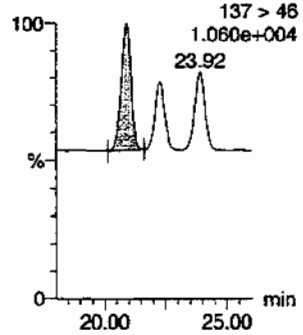

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.034e+004

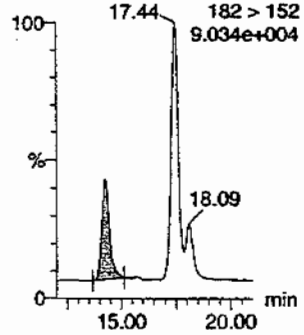

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.060e+004

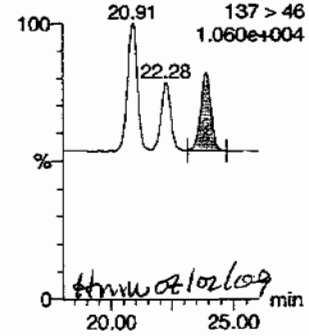

HMW 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.587e+004

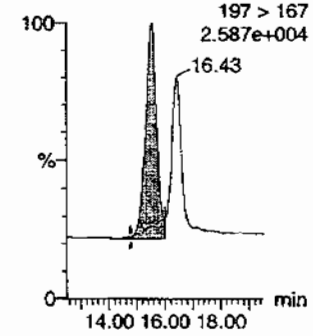

549

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

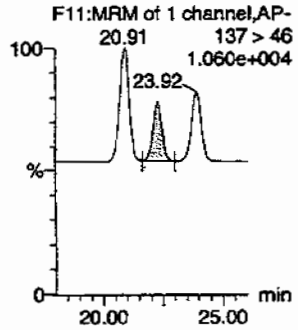

HMX

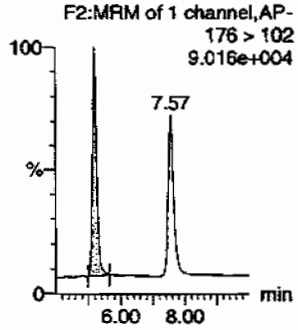

Nitrobenzene

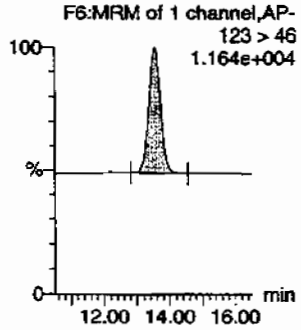

PETN

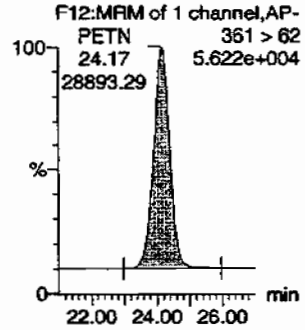

RDX

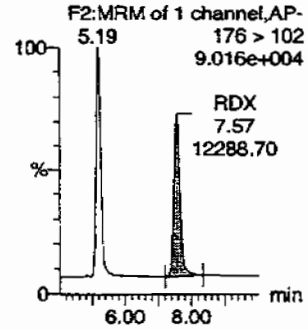

Tetryl

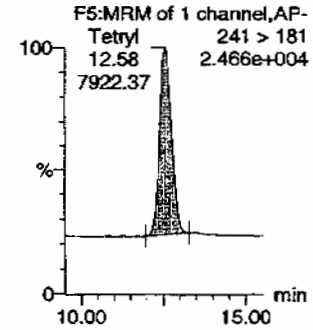

ID	Name	Trace	RT	Area	(S)Area	Abs Resp	Response	Flags	Modifiers	Modified	ng/mL	%Rec	%Dev	RT S/N
WXX090630-07CCV	HMX	176 > 102	5.19	13551.079	3612.833	13551.079	1875.409	bb			572.1043	95.4	-4.6	2247.5
WXX090630-07CCV	RDX	176 > 102	7.57	12288.702	3612.833	12288.702	1700.702	bb			634.3585	105.7	5.7	1593.9
WXX090630-07CCV	135-Trinitrobenzene	213 > 183	10.14	26032.984	3612.833	26032.984	3602.849	bb			535.5228	89.3	-10.7	1248.5
WXX090630-07CCV	13-Dinitrobenzene-d4	172 > 142	12.00	3612.833		3612.833	3612.833	bb			471.4409	94.3	-5.7	273.6
WXX090630-07CCV	13-Dinitrobenzene	168 > 138	12.14	5621.237	3612.833	5621.237	777.954	bb			577.7874	96.3	-3.7	443.5
WXX090630-07CCV	Tetryl	241 > 181	12.58	7922.374	3612.833	7922.374	1096.421	bb			544.6565	90.8	-9.2	797.5
WXX090630-07CCV	Nitrobenzene	123 > 46	13.54	2520.901	3612.833	2520.901	348.881	bb			560.7842	93.5	-6.5	201.8
WXX090630-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.56	9150.542	22569.742	9150.542	202.717	MM	01-Jul-09	09:24:02	599.3704	99.9	-0.1	372.6
WXX090630-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.43	11221.137	22569.742	11221.137	248.588	bb			628.0929	104.7	4.7	404.3
WXX090630-07CCV	246-Trinitrotoluene	227 > 210	15.28	47557.051	22569.742	47557.051	1053.558	bb			637.3233	106.2	6.2	1156.7
WXX090630-07CCV	34-dinitrotoluene	182 > 152	14.25	13616.949	22569.742	13616.949	301.664	bb			309.7836	103.3	3.3	621.2
WXX090630-07CCV	26-dinitrotoluene	182 > 152	17.44	31641.225	22569.742	31641.225	700.966	MM	01-Jul-09	09:30:43	598.0124	99.7	-0.3	1589.2
WXX090630-07CCV	24-dinitrotoluene	182 > 152	18.09	7249.658	22569.742	7249.658	160.606	MM	01-Jul-09	09:34:38	612.7263	102.1	2.1	339.5
WXX090630-07CCV	26-dinitrotoluene-d3	185 > 155	17.27	22569.742		22569.742	22569.742	bb			470.8418	94.2	-5.8	1231.8
WXX090630-07CCV	2-Nitrotoluene	137 > 46	20.91	2339.370	22569.742	2339.370	51.825	bb			565.0543	94.2	-5.8	172.8
WXX090630-07CCV	4-Nitrotoluene	137 > 46	22.28	1189.785	22569.742	1189.785	26.358	bb			545.6058	90.9	-9.1	92.5
WXX090630-07CCV	3-Nitrotoluene	137 > 46	23.92	1475.583	22569.742	1475.583	32.689	bb			559.1389	93.2	-6.8	107.0
WXX090630-07CCV	PETN	361 > 62	24.17	28893.295	22569.742	28893.295	640.089	bb			574.3872	95.7	-4.3	5373.2

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 06/30/09
Time of Injection 2328
Standard Number WXX090630-07CCV
Data File EXP0630019a

HMX		95.4
RDX		105.7
135-TNB		89.3
13-DNB		96.3
Tetryl		90.8
Nitrobenzene		93.5
4A-26-DNT		99.9
2A-46-DNT		104.7
246-TNT		106.2
34-DNT(surr)		103.3
26-DNT		99.7
24-DNT		102.1
2-NT		94.2
4-NT		90.9
3-NT		93.2
PETN		95.7
Total		1560.9
Average		97.6

HMM 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630021a

Analysis Date: 01-JUL-09 00:27

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	44.305	111	
1,3-Dinitrobenzene-d4	500	478.13	96	
2,4,6-Trinitrotoluene	40	41.853	105	
2,4-Dinitrotoluene	40	43.963	110	
2,6-Dinitrotoluene	40	42.052	105	
2,6-Dinitrotoluene-d3	500	493.141	99	
2-Amino-4,6-dinitrotoluene	40	38.801	97	
3,4-Dinitrotoluene	20	18.989	95	
4-Amino-2,6-dinitrotoluene	40	40.488	101	
HMX	40	42.219	106	
Nitrobenzene	40	43.523	109	
PETN	40	53.296	133	*
RDX	40	44.401	111	
Tetryl	40	36.234	91	
m-Dinitrobenzene	40	45.237	113	
m-Nitrotoluene	40	40.958	102	
o-Nitrotoluene	40	40.977	102	
p-Nitrotoluene	40	32.697	82	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630021a
Date: 01-Jul-2009
Time: 00:27:45
ID: WXX090630-08CRf
Vial: 1:1,C

MMP 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.277e+004

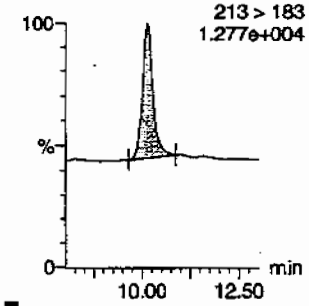

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.649e+003

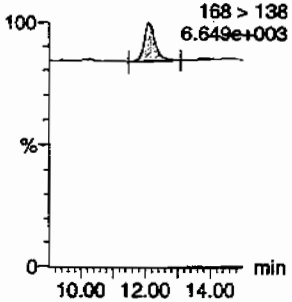

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.691e+004

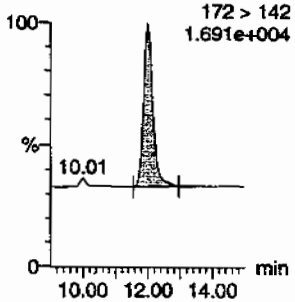

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.264e+004

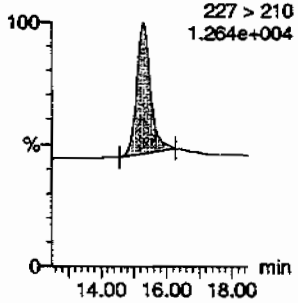

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.193e+004

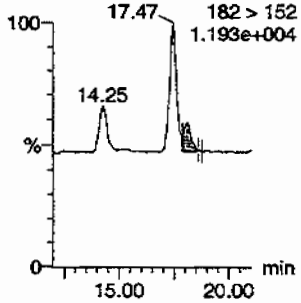

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.193e+004

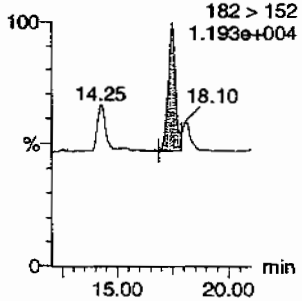

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.840e+004

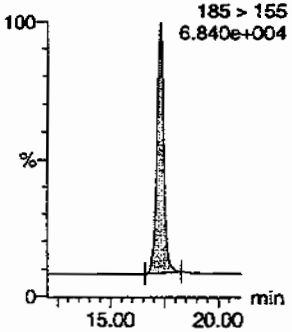

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.489e+003

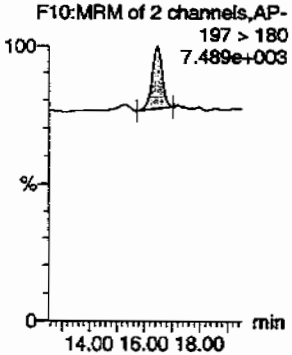

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
8.997e+003

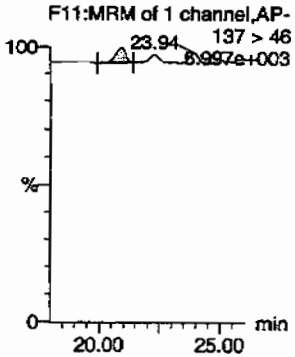

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.193e+004

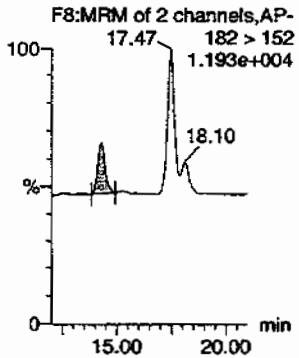

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
8.997e+003

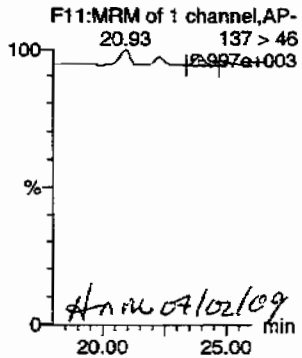

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.107e+003

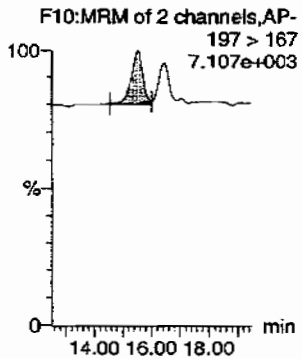

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qid, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

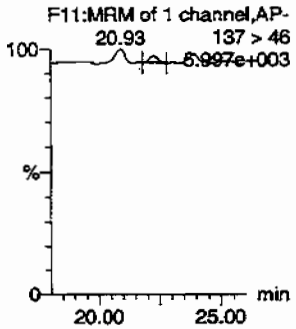

HMX

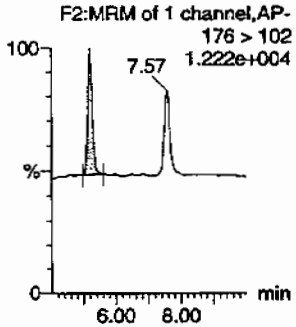

Nitrobenzene

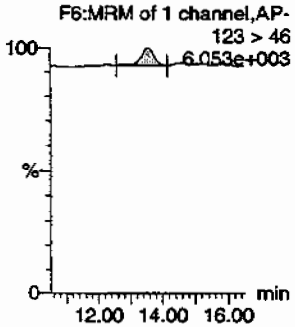

PETN

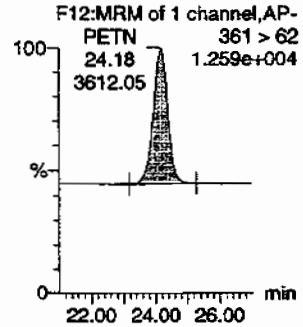

RDX

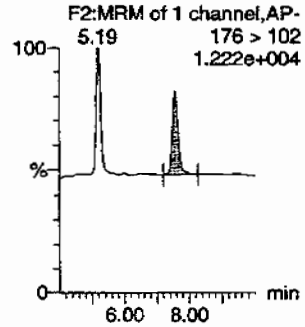

Tetryl

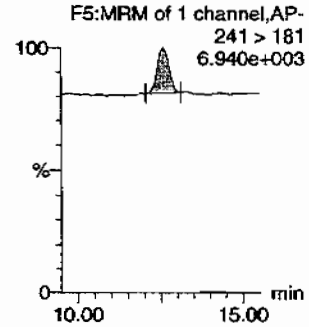

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	mg/ml	%Rec	%Dev	S/N
WXX090630-08CRI	HMX	176 > 102	5.19	1014.208	3664.093	1014.208	138.398	bb			42.2192	105.5	5.5	198.7
WXX090630-08CRI	RDX	176 > 102	7.57	872.324	3664.093	872.324	119.037	bb			44.4005	111.0	11.0	132.1
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2184.347	3664.093	2184.347	298.075	bb			44.3054	110.8	10.8	235.0
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3664.093		3664.093	3664.093	bb			478.1298	95.6	-4.4	164.9
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	446.349	3664.093	446.349	60.909	bb			45.2368	113.1	13.1	37.7
WXX090630-08CRI	Tetryl	241 > 181	12.58	534.524	3664.093	534.524	72.941	bb			36.2340	90.6	-9.4	44.7
WXX090630-08CRI	Nitrobenzene	123 > 46	13.58	198.424	3664.093	198.424	27.077	bb			43.5227	108.8	8.8	31.3
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.56	647.408	23638.666	647.408	13.694	MM	01-Jul-09	09:24:09	40.4884	101.2	1.2	59.6
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.47	726.021	23638.666	726.021	15.357	bb			38.8007	97.0	-3.0	64.6
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.28	3271.013	23638.666	3271.013	69.188	bb			41.8534	104.6	4.6	135.3
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.25	874.227	23638.666	874.227	18.491	bb			18.9892	94.9	-5.1	50.5
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.47	2330.370	23638.666	2330.370	49.291	MM	01-Jul-09	09:30:49	42.0519	105.1	5.1	146.8
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.10	544.791	23638.666	544.791	11.523	MM	01-Jul-09	09:34:46	43.9625	109.9	9.9	32.1
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.29	23638.666		23638.666	23638.666	bb			493.1414	98.6	-1.4	2004.0
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.93	177.684	23638.666	177.684	3.758	bb			40.9773	102.4	2.4	53.1
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.27	74.679	23638.666	74.679	1.580	bb			32.6974	81.7	-18.3	26.0
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.94	113.207	23638.666	113.207	2.395	bb			40.9575	102.4	2.4	34.6
WXX090630-08CRI	PETN	361 > 62	24.18	3612.045	23638.666	3612.045	76.401	bb			53.2961	133.2	33.2	429.2

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/01/09
Time of Injection 0027
Standard Number WXX090630-08CRI
Data File EXP0630021a

HMX		105.5
RDX		111.0
135-TNB		110.8
13-DNB		113.1
Tetryl		90.6
Nitrobenzene		108.8
4A-26-DNT	*	101.2
2A-46-DNT		97.0
246-TNT		104.6
34-DNT(surr)		94.9
26-DNT		105.1
24-DNT		109.9
2-NT		102.4
4-NT		81.7
3-NT		102.4
PETN		133.2
Total		1672.2
Average		104.5

MJP 7/1/09

Hmm 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%

No single analyte > +/- 60%

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0630027a

Analysis Date: 01-JUL-09 03:24

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	576.56	96	
1,3-Dinitrobenzene-d4	500	485.599	97	
2,4,6-Trinitrotoluene	600	663.72	111	
2,4-Dinitrotoluene	600	572.863	95	
2,6-Dinitrotoluene	600	620.213	103	
2,6-Dinitrotoluene-d3	500	474.634	95	
2-Amino-4,6-dinitrotoluene	600	678.892	113	
3,4-Dinitrotoluene	300	309.187	103	
4-Amino-2,6-dinitrotoluene	600	631.31	105	
HMX	600	604.491	101	
Nitrobenzene	600	595.999	99	
PETN	600	607.151	101	
RDX	600	660.509	110	
Tetryl	600	602.394	100	
m-Dinitrobenzene	600	602.268	100	
m-Nitrotoluene	600	602.318	100	
o-Nitrotoluene	600	604.942	101	
p-Nitrotoluene	600	587.351	98	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630027a
Date: 01-Jul-2009
Time: 03:24:41
ID: WXX090630-07CCV
Vial: 1:1,B

MAT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.786e+004

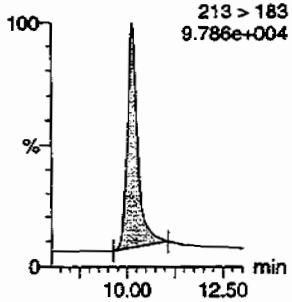

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.217e+004

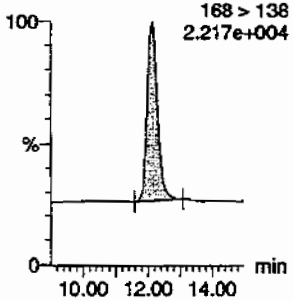

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.745e+004

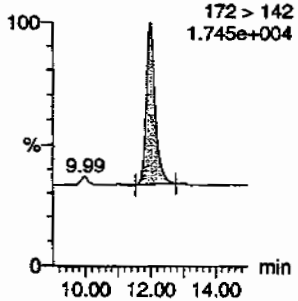

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.111e+005

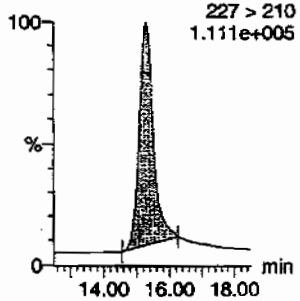

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.442e+004

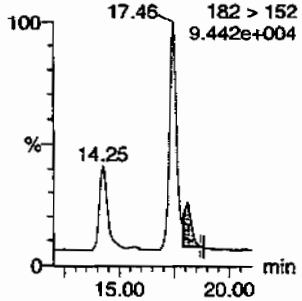

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.442e+004

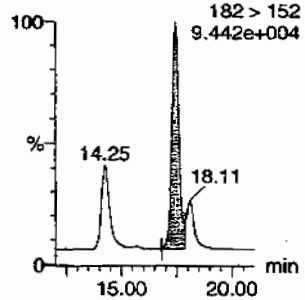

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.704e+004

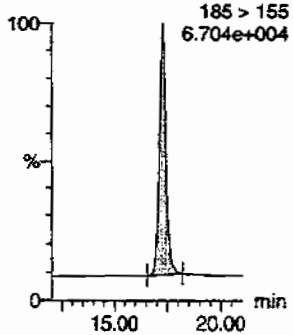

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.485e+004

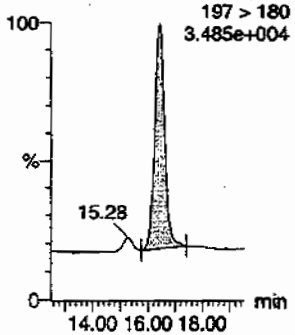

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.117e+004

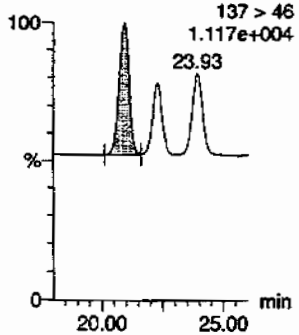

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.442e+004

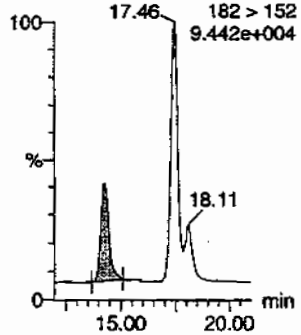

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.117e+004

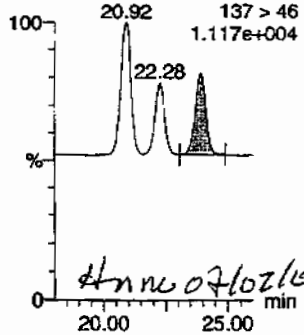

Hnnc 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.775e+004

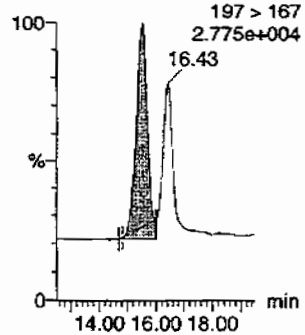

557

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

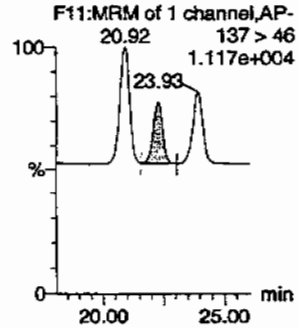

HMX

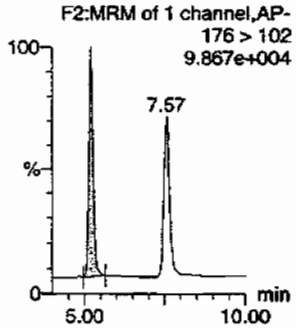

Nitrobenzene

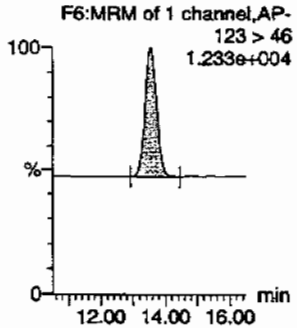

PETN

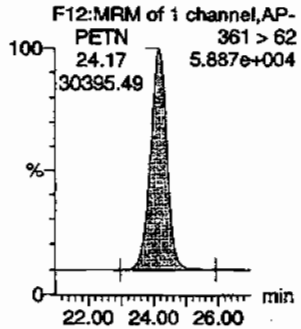

RDX

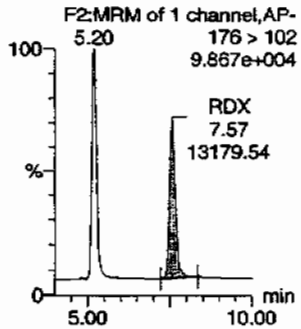

Tetryl

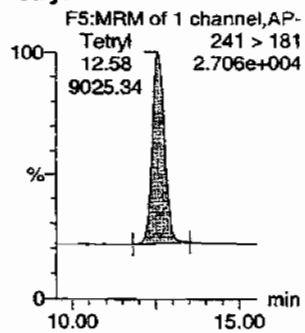

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc	%Rec	%Dev	S/N
WXX090630-07CCV	HMX	176 > 102	5.20	14748.188	3721.330	14748.188	1981.575	bb			604.4908	100.7	0.7	4048.0
WXX090630-07CCV	RDX	176 > 102	7.57	13179.540	3721.330	13179.540	1770.810	bb			660.5089	110.1	10.1	2832.1
WXX090630-07CCV	135-Trinitrobenzene	213 > 183	10.14	28869.617	3721.330	28869.617	3878.938	bb			576.5603	96.1	-3.9	1196.4
WXX090630-07CCV	13-Dinitrobenzene-d4	172 > 142	12.00	3721.330		3721.330	3721.330	bb			485.5987	97.1	-2.9	254.8
WXX090630-07CCV	13-Dinitrobenzene	168 > 138	12.14	6035.366	3721.330	6035.366	810.915	bb			602.2676	100.4	0.4	595.4
WXX090630-07CCV	Tetryl	241 > 181	12.58	9025.336	3721.330	9025.336	1212.649	bb			602.3937	100.4	0.4	921.4
WXX090630-07CCV	Nitrobenzene	123 > 46	13.53	2759.660	3721.330	2759.660	370.789	bb			595.9987	99.3	-0.7	257.0
WXX090630-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.55	9715.774	22751.500	9715.774	213.519	MM	01-Jul-09	09:24:56	631.3096	105.2	5.2	487.7
WXX090630-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.43	12226.354	22751.500	12226.354	268.693	bb			678.8918	113.1	13.1	612.0
WXX090630-07CCV	246-Trinitrotoluene	227 > 210	15.27	49925.645	22751.500	49925.645	1097.195	bb			663.7204	110.6	10.6	2053.6
WXX090630-07CCV	34-dinitrotoluene	182 > 152	14.25	13700.187	22751.500	13700.187	301.083	bb			309.1874	103.1	3.1	500.4
WXX090630-07CCV	26-dinitrotoluene	182 > 152	17.46	33080.164	22751.500	33080.164	726.989	MM	01-Jul-09	09:31:28	620.2133	103.4	3.4	1347.3
WXX090630-07CCV	24-dinitrotoluene	182 > 152	18.11	6832.589	22751.500	6832.589	150.157	MM	01-Jul-09	09:35:32	572.8632	95.5	-4.5	273.3
WXX090630-07CCV	26-dinitrotoluene-d3	185 > 155	17.28	22751.500		22751.500	22751.500	bb			474.6336	94.9	-5.1	1137.4
WXX090630-07CCV	2-Nitrotoluene	137 > 46	20.92	2524.676	22751.500	2524.676	55.484	bb			604.9417	100.8	0.8	152.4
WXX090630-07CCV	4-Nitrotoluene	137 > 46	22.28	1291.132	22751.500	1291.132	28.375	bb			587.3510	97.9	-2.1	82.0
WXX090630-07CCV	3-Nitrotoluene	137 > 46	23.93	1602.335	22751.500	1602.335	35.214	bb			602.3182	100.4	0.4	93.8
WXX090630-07CCV	PETN	361 > 62	24.17	30395.494	22751.500	30395.494	667.989	bb			607.1514	101.2	1.2	3801.3

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/01/09
Time of Injection 0324
Standard Number WXX090630-07CCV
Data File EXP0630027a

HMX		100.7
RDX		110.1
135-TNB		96.1
13-DNB		100.4
Tetryl		100.4
Nitrobenzene		99.3
4A-26-DNT		105.2
2A-46-DNT		113.1
246-TNT		110.6
34-DNT(surr)		103.1
26-DNT		103.4
24-DNT		95.5
2-NT		100.8
4-NT		97.9
3-NT		100.4
PETN		101.2
Total		1638.2
Average		102.4

MHT 7/1/09

HAM 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630029a

Analysis Date: 01-JUL-09 04:23

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	44.414	111	
1,3-Dinitrobenzene-d4	500	500.306	100	
2,4,6-Trinitrotoluene	40	40.366	101	
2,4-Dinitrotoluene	40	42.969	107	
2,6-Dinitrotoluene	40	41.502	104	
2,6-Dinitrotoluene-d3	500	502.875	101	
2-Amino-4,6-dinitrotoluene	40	42.885	107	
3,4-Dinitrotoluene	20	20.746	104	
4-Amino-2,6-dinitrotoluene	40	38.543	96	
HMX	40	44.41	111	
Nitrobenzene	40	41.246	103	
PETN	40	40.983	102	
RDX	40	41.062	103	
Tetryl	40	44.403	111	
m-Dinitrobenzene	40	42.788	107	
m-Nitrotoluene	40	34.27	86	
o-Nitrotoluene	40	43.077	108	
p-Nitrotoluene	40	33.3	83	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630029a
Date: 01-Jul-2009
Time: 04:23:36
ID: WXX090630-08CRI
Vial: 1:1,C

MM 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.320e+004

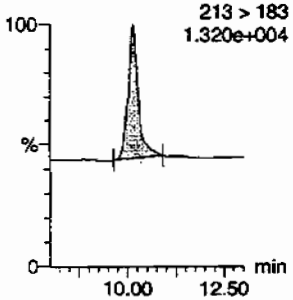

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.863e+003

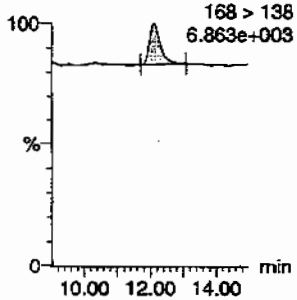

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.747e+004

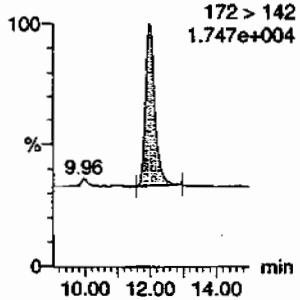

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.245e+004

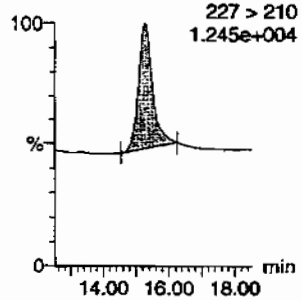

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.227e+004

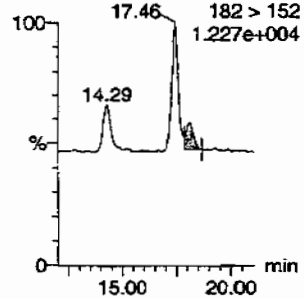

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.227e+004

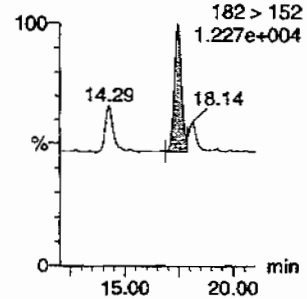

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.036e+004

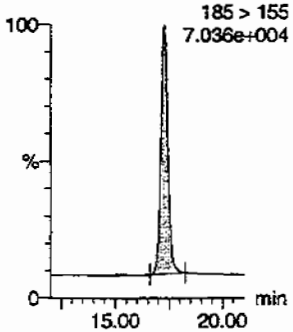

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.802e+003

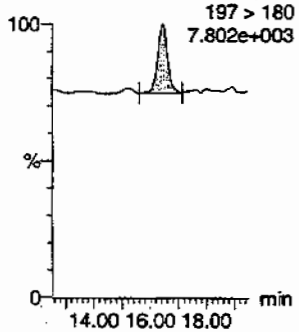

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.084e+003

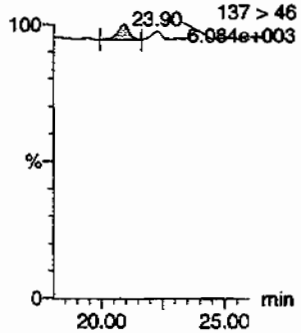

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.227e+004

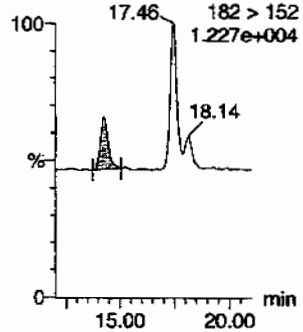

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.084e+003

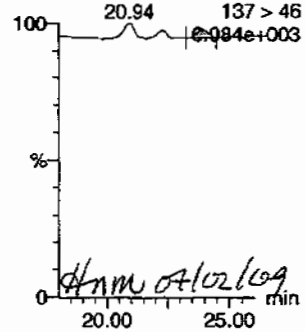

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.119e+003

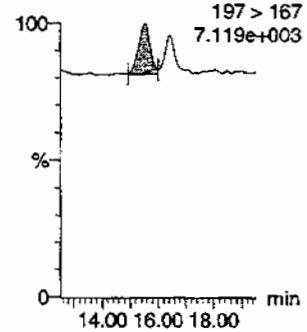

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

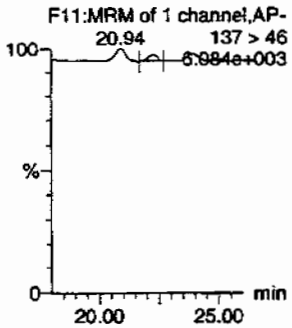

HMX

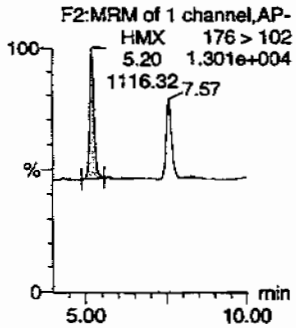

Nitrobenzene

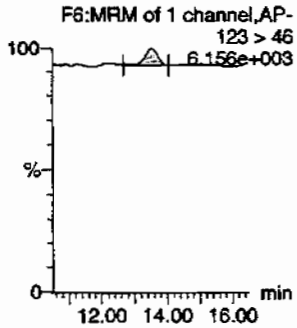

PETN

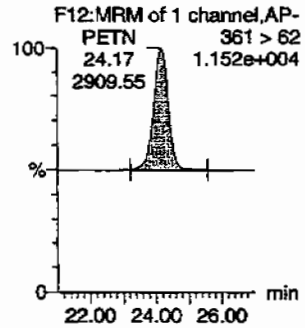

RDX

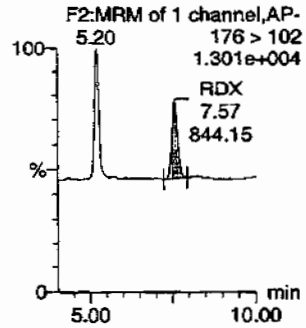

Tetryl

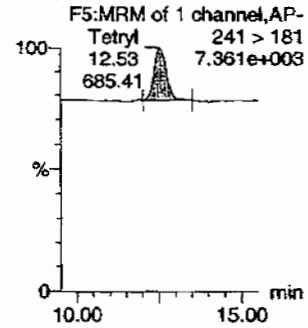

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modified	Mod Time	Conc	%Rec	%Dev	S/N
WXX090630-08CRI	HMX	176 > 102	5.20	1116.320	3834.034	1116.320	145.580	bb			44.4101	111.0	11.0	334.8
WXX090630-08CRI	RDX	176 > 102	7.57	844.151	3834.034	844.151	110.087	bb			41.0621	102.7	2.7	199.1
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2291.268	3834.034	2291.268	298.806	bb			44.4142	111.0	11.0	123.8
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3834.034		3834.034	3834.034	bb			500.3055	100.1	0.1	124.9
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	441.767	3834.034	441.767	57.611	bb			42.7879	107.0	7.0	41.6
WXX090630-08CRI	Tetryl	241 > 181	12.53	685.409	3834.034	685.409	89.385	bb			44.4027	111.0	11.0	90.3
WXX090630-08CRI	Nitrobenzene	123 > 46	13.53	196.767	3834.034	196.767	25.661	bb			41.2462	103.1	3.1	14.5
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.55	628.458	24105.223	628.458	13.036	MM	01-Jul-09	09:25:03	38.5425	96.4	-3.6	24.4
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.43	818.285	24105.223	818.285	16.973	bb			42.8852	107.2	7.2	43.5
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.27	3217.027	24105.223	3217.027	66.729	bb			40.3659	100.9	0.9	166.8
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.29	973.953	24105.223	973.953	20.202	bb			20.7459	103.7	3.7	41.2
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.46	2345.290	24105.223	2345.290	48.647	MM	01-Jul-09	09:31:39	41.5020	103.8	3.8	114.9
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.14	542.990	24105.223	542.990	11.263	MM	01-Jul-09	09:35:54	42.9691	107.4	7.4	24.6
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.28	24105.223		24105.223	24105.223	bb			502.8745	100.6	0.6	1923.1
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.94	190.473	24105.223	190.473	3.951	bb			43.0765	107.7	7.7	49.4
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.31	77.557	24105.223	77.557	1.609	bb			33.3002	83.3	-16.7	24.9
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.90	96.593	24105.223	96.593	2.004	bb			34.2702	85.7	-14.3	26.6
WXX090630-08CRI	PETN	361 > 62	24.17	2909.549	24105.223	2909.549	60.351	bb			40.9826	102.5	2.5	251.3

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/01/09
Time of Injection 0423
Standard Number WXX090630-08CRI
Data File EXP0630029a

HMX		111.0
RDX		102.7
135-TNB		111.0
13-DNB		107.0
Tetryl		111.0
Nitrobenzene		103.1
4A-26-DNT		96.4
2A-46-DNT		107.2
246-TNT		100.9
34-DNT(surr)		103.7
26-DNT		103.8
24-DNT		107.4
2-NT		107.7
4-NT		83.3
3-NT		85.7
PETN		102.5
Total		1644.4
Average		102.8

MPP 7/1/09

HMK 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0630035a

Analysis Date: 01-JUL-09 07:20

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	553.998	92	
1,3-Dinitrobenzene-d4	500	504.73	101	
2,4,6-Trinitrotoluene	600	674.765	112	
2,4-Dinitrotoluene	600	648.658	108	
2,6-Dinitrotoluene	600	602.879	100	
2,6-Dinitrotoluene-d3	500	509.386	102	
2-Amino-4,6-dinitrotoluene	600	685.89	114	
3,4-Dinitrotoluene	300	311.969	104	
4-Amino-2,6-dinitrotoluene	600	619.491	103	
HMX	600	781.623	130	*
Nitrobenzene	600	543.962	91	
PETN	600	572.8	95	
RDX	600	649.241	108	
Tetryl	600	588.802	98	
m-Dinitrobenzene	600	610.702	102	
m-Nitrotoluene	600	534.881	89	
o-Nitrotoluene	600	548.434	91	
p-Nitrotoluene	600	513.331	86	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630035a
Date: 01-Jul-2009
Time: 07:20:31
ID: WXX090630-07CCV
Vial: 1:1,B

MMT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.888e+004

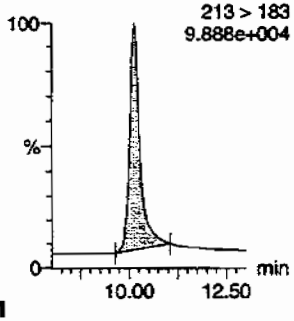

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.230e+004

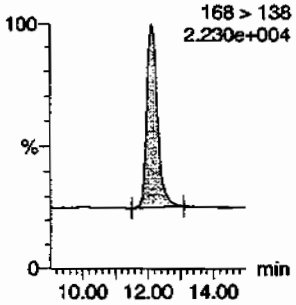

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.732e+004

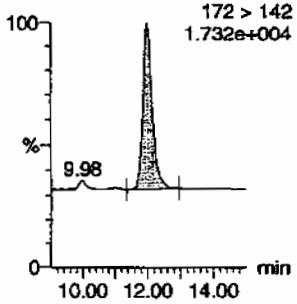

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.202e+005

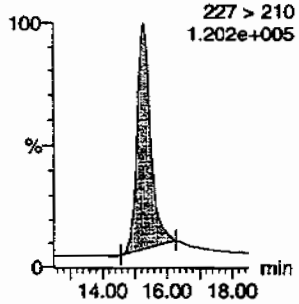

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.859e+004

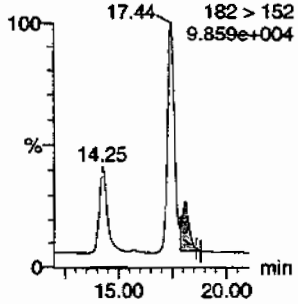

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.859e+004

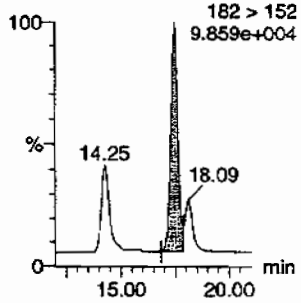

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.085e+004

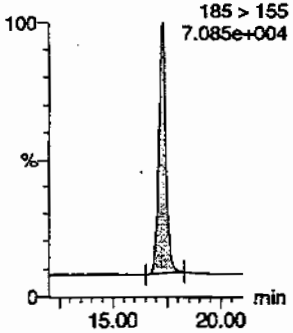

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.758e+004

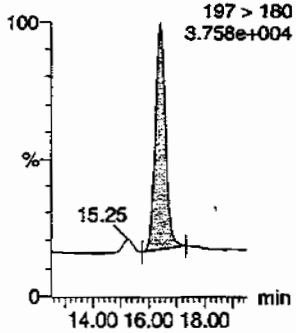

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.086e+004

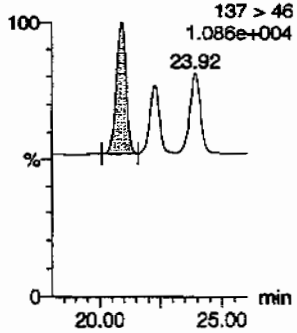

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.859e+004

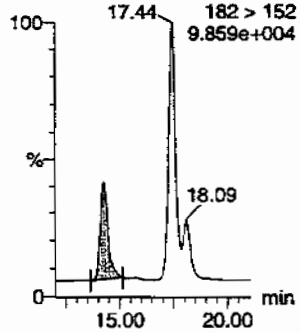

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.086e+004

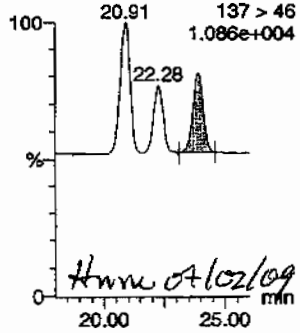

Hmm 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.899e+004

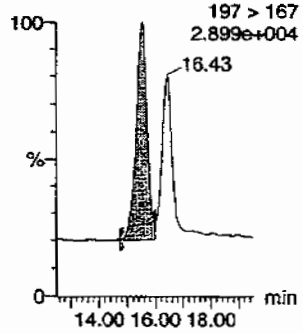

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

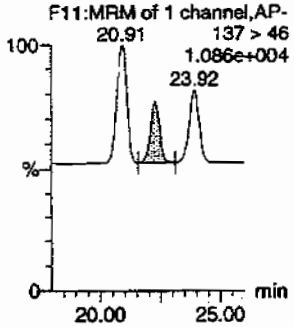

HMX

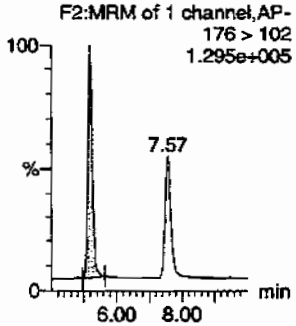

Nitrobenzene

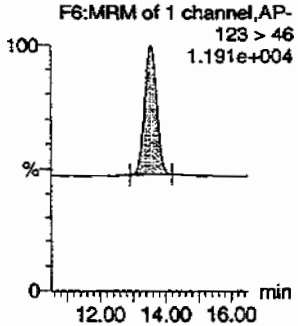

PETN

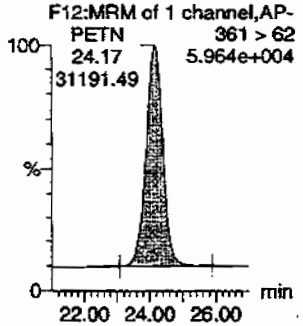

RDX

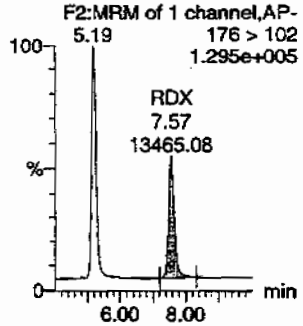

Tetryl

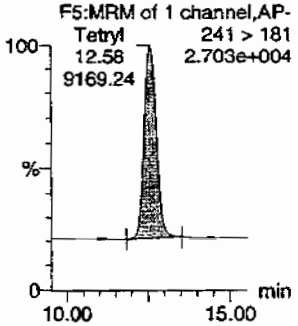

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Amount	%Rec	%Dev	S/N
WXX090630-07CCV	HMX	176 > 102	5.19	19821.096	3867.938	19821.096	2562.230	bb			781.6231	130.3	30.3	2530.8
WXX090630-07CCV	RDX	176 > 102	7.57	13465.083	3867.938	13465.083	1740.602	bb			649.2413	108.2	8.2	1338.5
WXX090630-07CCV	135-Trinitrobenzene	213 > 183	10.14	28832.730	3867.938	28832.730	3727.145	bb			553.9979	92.3	-7.7	3949.6
WXX090630-07CCV	13-Dinitrobenzene-d4	172 > 142	12.00	3867.938		3867.938	3867.938	bb			504.7297	100.9	0.9	393.0
WXX090630-07CCV	13-Dinitrobenzene	168 > 138	12.14	6360.988	3867.938	6360.988	822.271	bb			610.7017	101.8	1.8	718.1
WXX090630-07CCV	Tetryl	241 > 181	12.58	9169.244	3867.938	9169.244	1185.288	bb			588.8019	98.1	-1.9	596.0
WXX090630-07CCV	Nitrobenzene	123 > 46	13.54	2617.941	3867.938	2617.941	338.416	bb			543.9616	90.7	-9.3	504.3
WXX090630-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.56	10231.951	24417.363	10231.951	209.522	MM	01-Jul-09	09:25:48	619.4906	103.2	3.2	479.7
WXX090630-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.43	13256.829	24417.363	13256.829	271.463	bb			685.8901	114.3	14.3	975.6
WXX090630-07CCV	246-Trinitrotoluene	227 > 210	15.28	54472.840	24417.363	54472.840	1115.453	bb			674.7653	112.5	12.5	1395.7
WXX090630-07CCV	34-dinitrotoluene	182 > 152	14.25	14835.599	24417.363	14835.599	303.792	bb			311.9691	104.0	4.0	498.0
WXX090630-07CCV	26-dinitrotoluene	182 > 152	17.44	34510.031	24417.363	34510.031	706.670	MM	01-Jul-09	09:32:11	602.8789	100.5	0.5	1312.4
WXX090630-07CCV	24-dinitrotoluene	182 > 152	18.09	8303.074	24417.363	8303.074	170.024	MM	01-Jul-09	09:36:38	648.6580	108.1	8.1	296.3
WXX090630-07CCV	26-dinitrotoluene-d3	185 > 155	17.29	24417.363		24417.363	24417.363	bb			509.3863	101.9	1.9	2202.6
WXX090630-07CCV	2-Nitrotoluene	137 > 46	20.91	2456.433	24417.363	2456.433	50.301	bb			548.4336	91.4	-8.6	635.3
WXX090630-07CCV	4-Nitrotoluene	137 > 46	22.28	1211.042	24417.363	1211.042	24.799	bb			513.3310	85.6	-14.4	324.5
WXX090630-07CCV	3-Nitrotoluene	137 > 46	23.92	1527.119	24417.363	1527.119	31.271	bb			534.8806	89.1	-10.9	384.3
WXX090630-07CCV	PETN	361 > 62	24.17	31191.492	24417.363	31191.492	638.715	bb			572.8005	95.5	-4.5	6365.6

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/01/09
Time of Injection 0720
Standard Number WXX090630-07CCV
Data File EXP0630035a

HMX		130.3
RDX		108.2
135-TNB		92.3
13-DNB		101.8
Tetryl		98.1
Nitrobenzene		90.7
4A-26-DNT		103.2
2A-46-DNT		114.3
246-TNT		112.5
34-DNT(surr)		104.0
26-DNT		100.5
24-DNT		108.1
2-NT		91.4
4-NT		85.6
3-NT		89.1
PETN		95.5
Total		1625.6
Average		101.6

HMM 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630037a

Analysis Date: 01-JUL-09 08:19

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	41.164	103	
1,3-Dinitrobenzene-d4	500	513.519	103	
2,4,6-Trinitrotoluene	40	39.108	98	
2,4-Dinitrotoluene	40	42.525	106	
2,6-Dinitrotoluene	40	38.006	95	
2,6-Dinitrotoluene-d3	500	532.927	107	
2-Amino-4,6-dinitrotoluene	40	44.908	112	
3,4-Dinitrotoluene	20	18.635	93	
4-Amino-2,6-dinitrotoluene	40	35.533	89	
HMX	40	43.159	108	
Nitrobenzene	40	39.293	98	
PETN	40	41.9	105	
RDX	40	43.212	108	
Tetryl	40	42.139	105	
m-Dinitrobenzene	40	38.873	97	
m-Nitrotoluene	40	36.972	92	
o-Nitrotoluene	40	31.541	79	
p-Nitrotoluene	40	36.713	92	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630037a
Date: 01-Jul-2009
Time: 08:19:27
ID: WXX090630-08CRI
Vial: 1:1,C

MMT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.324e+004

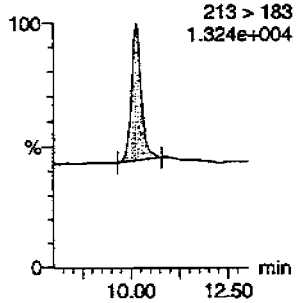

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.742e+003

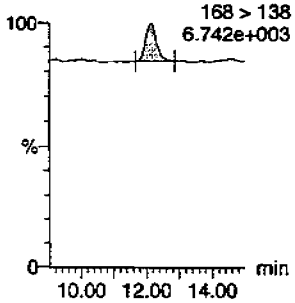

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.792e+004

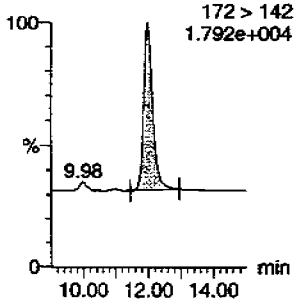

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.282e+004

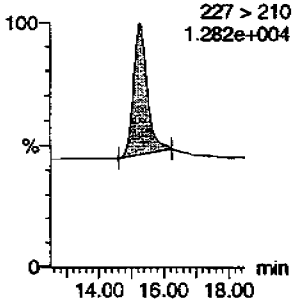

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.176e+004

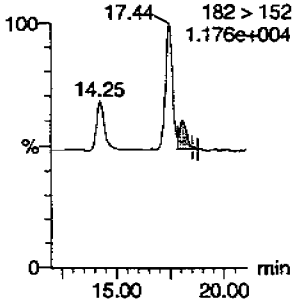

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.176e+004

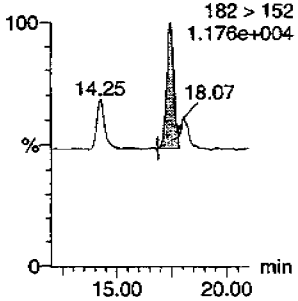

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.444e+004

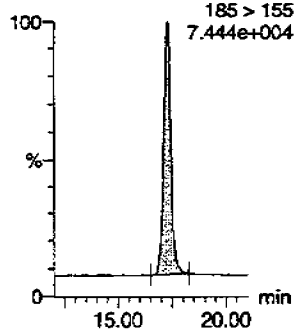

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.925e+003

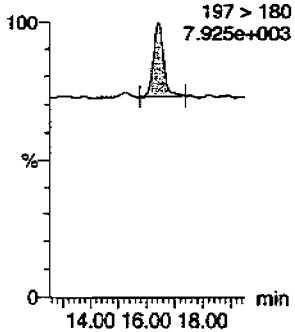

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.038e+003

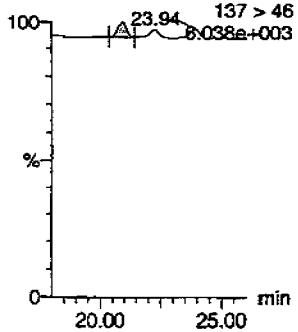

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.176e+004

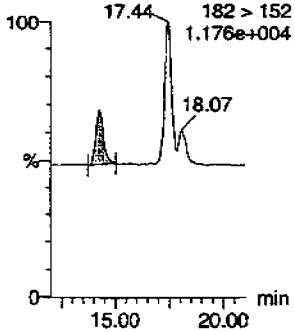

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.038e+003

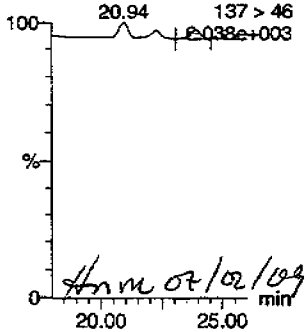

Hmm 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.137e+003

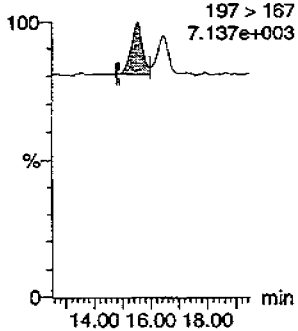

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

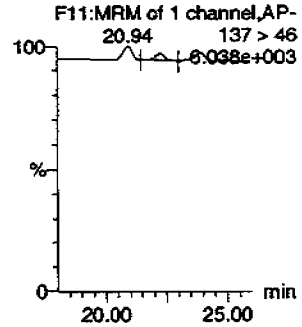

HMX

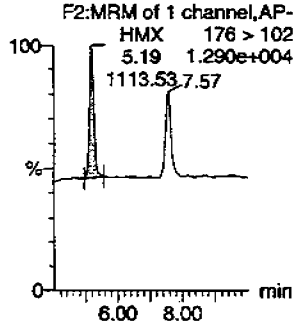

Nitrobenzene

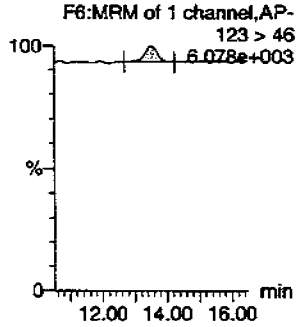

PETN

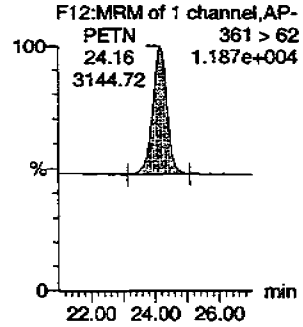

RDX

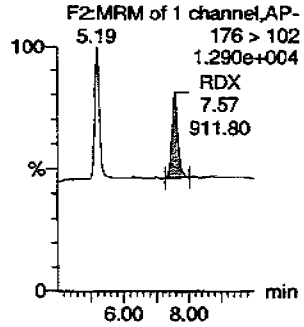

Tetryl

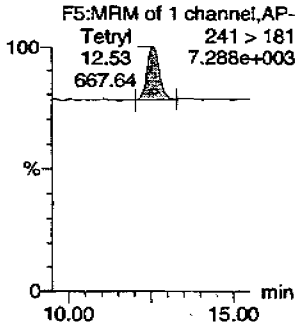

ID	Name	Trace	RT	Area	IS Area	Adj. Resp	Response	Flags	Mod Date	Mod Time	Uncorr	%Rec	%Dev	S/N
WXX090630-08CRI	HMX	176 > 102	5.19	1113.526	3935.291	1113.526	141.479	bb			43.1591	107.9	7.9	180.1
WXX090630-08CRI	RDX	176 > 102	7.57	911.802	3935.291	911.802	115.849	bb			43.2116	108.0	8.0	114.4
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2179.697	3935.291	2179.697	276.942	bb			41.1643	102.9	2.9	391.7
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3935.291		3935.291	3935.291	bb			513.5186	102.7	2.7	271.4
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	411.941	3935.291	411.941	52.339	bb			38.8725	97.2	-2.8	36.2
WXX090630-08CRI	Tetryl	241 > 181	12.53	667.638	3935.291	667.638	84.827	bb			42.1385	105.3	5.3	57.7
WXX090630-08CRI	Nitrobenzene	123 > 46	13.54	192.401	3935.291	192.401	24.446	bb			39.2933	98.2	-1.8	25.8
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.53	614.003	25545.764	614.003	12.018	MM	01-Jul-09	09:25:59	35.5326	88.8	-11.2	45.7
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.43	908.092	25545.764	908.092	17.774	bb			44.9081	112.3	12.3	66.6
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.28	3303.006	25545.764	3303.006	64.649	bb			39.1077	97.8	-2.2	248.3
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.25	927.131	25545.764	927.131	18.146	bb			18.6349	93.2	-6.8	82.3
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.44	2276.048	25545.764	2276.048	44.548	MM	01-Jul-09	09:32:19	38.0055	95.0	-5.0	216.4
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.07	569.485	25545.764	569.485	11.146	MM	01-Jul-09	09:36:53	42.5245	106.3	6.3	50.6
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.27	25545.764		25545.764	25545.764	bb			532.9265	106.6	6.6	1212.8
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.94	147.799	25545.764	147.799	2.893	bb			31.5406	78.9	-21.1	42.7
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.27	90.615	25545.764	90.615	1.774	bb			36.7129	91.8	-8.2	23.8
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.94	110.436	25545.764	110.436	2.162	bb			36.9721	92.4	-7.6	26.5
WXX090630-08CRI	PETN	361 > 62	24.16	3144.715	25545.764	3144.715	61.551	bb			41.8996	104.7	4.7	829.5

570

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/01/09
Time of Injection 0819
Standard Number WXX090630-08CRI
Data File EXP0630037a

HMX		107.9
RDX		108.0
135-TNB		102.9
13-DNB		97.2
Tetryl		105.3
Nitrobenzene		98.2
4A-26-DNT		88.8
2A-46-DNT		112.3
246-TNT		97.8
34-DNT(surr)		93.2
26-DNT		95.0
24-DNT		106.3
2-NT		78.9
4-NT		91.8
3-NT		92.4
PETN		104.7
Total		1580.7
Average		98.8

MATT 7/1/09

Hmm 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0630046a

Analysis Date: 01-JUL-09 12:44

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	524.305	87	
1,3-Dinitrobenzene-d4	500	530.162	106	
2,4,6-Trinitrotoluene	600	688.172	115	
2,4-Dinitrotoluene	600	617.412	103	
2,6-Dinitrotoluene	600	608.515	101	
2,6-Dinitrotoluene-d3	500	499.686	100	
2-Amino-4,6-dinitrotoluene	600	727.316	121	*
3,4-Dinitrotoluene	300	314.876	105	
4-Amino-2,6-dinitrotoluene	600	633.371	106	
HMX	600	588.557	98	
Nitrobenzene	600	514.103	86	
PETN	600	538.281	90	
RDX	600	608.839	101	
Tetryl	600	560.406	93	
m-Dinitrobenzene	600	562.907	94	
m-Nitrotoluene	600	508.81	85	
o-Nitrotoluene	600	482.05	80	
p-Nitrotoluene	600	481.796	80	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630046a
Date: 01-Jul-2009
Time: 12:44:56
ID: WXX090630-07CCV
Vial: 1:1,B

MAP 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.907e+004

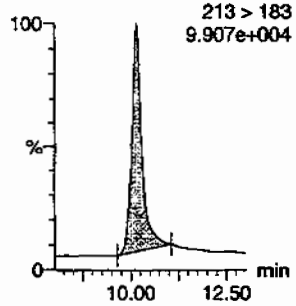

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.176e+004

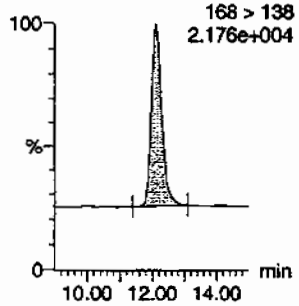

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.781e+004

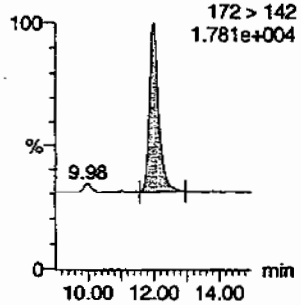

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.201e+005

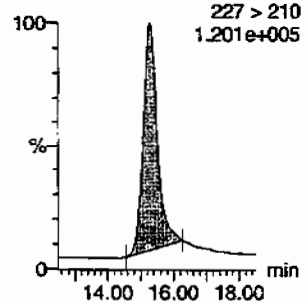

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.794e+004

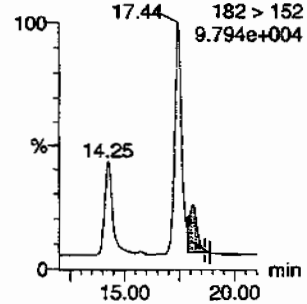

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.794e+004

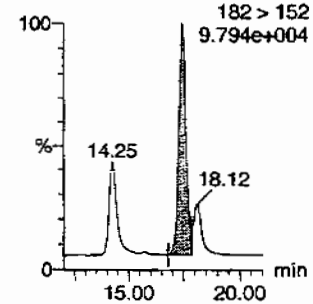

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.996e+004

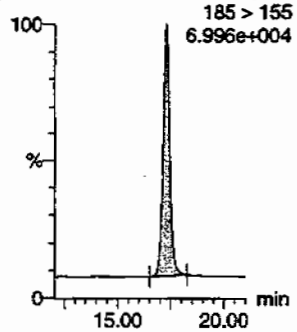

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.890e+004

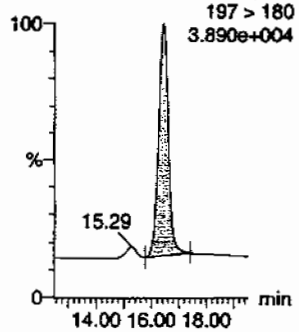

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
9.930e+003

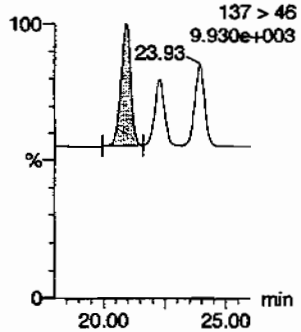

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.794e+004

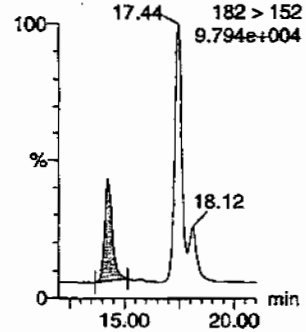

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
9.930e+003

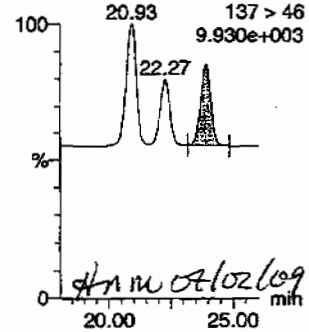

HM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.864e+004

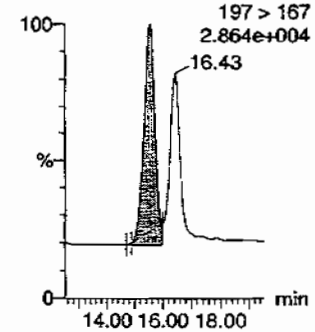

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

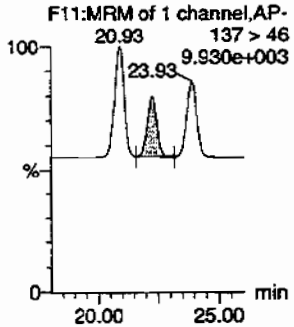

HMX

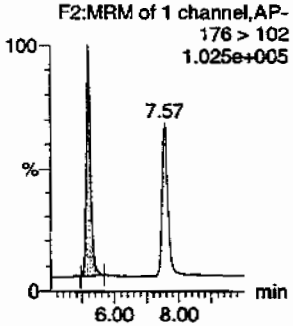

Nitrobenzene

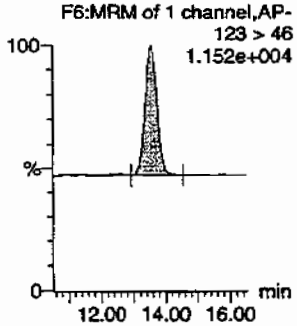

PETN

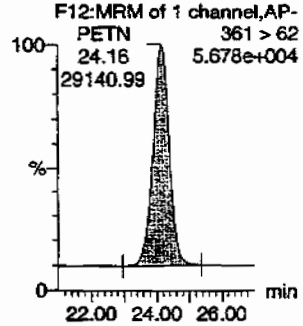

RDX

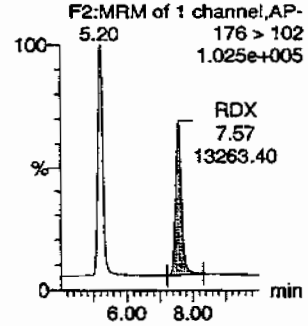

Tetryl

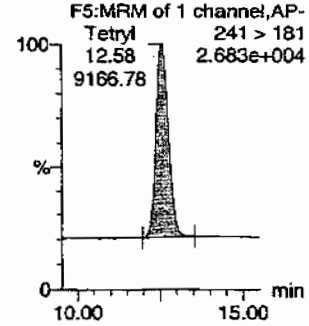

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc	%Rec	%Dev	S/N
WXX090630-07CCV	HMX	176 > 102	5.20	15677.212	4062.835	15677.212	1929.344	bb			588.5574	98.1	-1.9	3973.4
WXX090630-07CCV	RDX	176 > 102	7.57	13263.402	4062.835	13263.402	1632.284	bb			608.8389	101.5	1.5	2661.5
WXX090630-07CCV	135-Trinitrobenzene	213 > 183	10.14	28662.311	4062.835	28662.311	3527.378	bb			524.3049	87.4	-12.6	2071.8
WXX090630-07CCV	13-Dinitrobenzene-d4	172 > 142	12.00	4062.835		4062.835	4062.835	bb			530.1619	106.0	6.0	353.0
WXX090630-07CCV	13-Dinitrobenzene	168 > 138	12.14	6158.592	4062.835	6158.592	757.918	bb			562.9065	93.8	-6.2	353.0
WXX090630-07CCV	Tetryl	241 > 181	12.58	9166.784	4062.835	9166.784	1128.127	bb			560.4063	93.4	-6.6	1142.3
WXX090630-07CCV	Nitrobenzene	123 > 46	13.54	2598.911	4062.835	2598.911	319.840	bb			514.1030	85.7	-14.3	252.5
WXX090630-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.56	10262.002	23952.402	10262.002	214.217	MM	02-Jul-09	07:54:33	633.3708	105.6	5.6	232.2
WXX090630-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.43	13789.820	23952.402	13789.820	287.859	bb			727.3160	121.2	21.2	558.9
WXX090630-07CCV	246-Trinitrotoluene	227 > 210	15.28	54497.262	23952.402	54497.262	1137.616	bb			688.1722	114.7	14.7	3208.9
WXX090630-07CCV	34-dinitrotoluene	182 > 152	14.25	14688.677	23952.402	14688.677	306.622	bb			314.8755	105.0	5.0	751.7
WXX090630-07CCV	26-dinitrotoluene	182 > 152	17.44	34169.359	23952.402	34169.359	713.276	MM	02-Jul-09	07:57:35	608.5149	101.4	1.4	1897.7
WXX090630-07CCV	24-dinitrotoluene	182 > 152	18.12	7752.625	23952.402	7752.625	161.834	MM	02-Jul-09	08:00:47	617.4124	102.9	2.9	388.6
WXX090630-07CCV	26-dinitrotoluene-d3	185 > 155	17.29	23952.402		23952.402	23952.402	bb			499.6864	99.9	-0.1	916.5
WXX090630-07CCV	2-Nitrotoluene	137 > 46	20.93	2117.987	23952.402	2117.987	44.212	bb			482.0500	80.3	-19.7	114.8
WXX090630-07CCV	4-Nitrotoluene	137 > 46	22.27	1115.000	23952.402	1115.000	23.275	bb			481.7957	80.3	-19.7	63.0
WXX090630-07CCV	3-Nitrotoluene	137 > 46	23.93	1425.023	23952.402	1425.023	29.747	bb			508.8098	84.8	-15.2	77.9
WXX090630-07CCV	PETN	361 > 62	24.16	29140.992	23952.402	29140.992	608.310	bb			538.2813	89.7	-10.3	287.4

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/01/09
Time of Injection 1244
Standard Number WXX090630-07CCV
Data File EXP0630046a

HMX	98.1
RDX	101.5
135-TNB	87.4
13-DNB	93.8
Tetryl	93.4
Nitrobenzene	85.7
4A-26-DNT	105.6
2A-46-DNT	121.2
246-TNT	114.7
34-DNT(surr)	105.0
26-DNT	101.4
24-DNT	102.9
2-NT	80.3
4-NT	80.3
3-NT	84.8
PETN	89.7
Total	1545.8
Average	96.6

MTT 7/2/09

Hmm 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630048a

Analysis Date: 01-JUL-09 13:43

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	43.499	109	
1,3-Dinitrobenzene-d4	500	629.686	126	
2,4,6-Trinitrotoluene	40	37.821	95	
2,4-Dinitrotoluene	40	43.71	109	
2,6-Dinitrotoluene	40	40.92	102	
2,6-Dinitrotoluene-d3	500	642.602	129	
2-Amino-4,6-dinitrotoluene	40	42.27	106	
3,4-Dinitrotoluene	20	20.889	104	
4-Amino-2,6-dinitrotoluene	40	33.616	84	
HMX	40	49.289	123	
Nitrobenzene	40	42.61	107	
PETN	40	32.919	82	
RDX	40	46.84	117	
Tetryl	40	40.65	102	
m-Dinitrobenzene	40	43.707	109	
m-Nitrotoluene	40	39.066	98	
o-Nitrotoluene	40	33.14	83	
p-Nitrotoluene	40	32.107	80	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630048a
Date: 01-Jul-2009
Time: 13:43:53
ID: WXX090630-08CRI
Vial: 1:1,C

MAP 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.508e+004

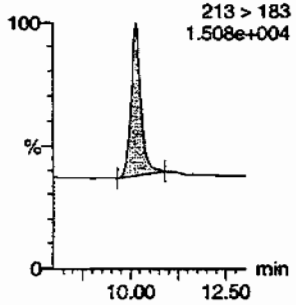

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.945e+003

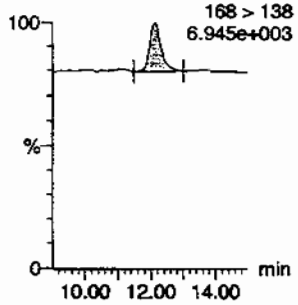

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
2.057e+004

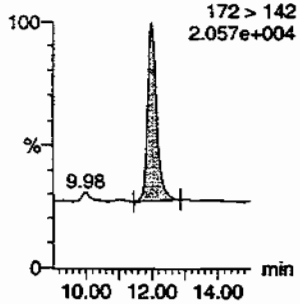

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.365e+004

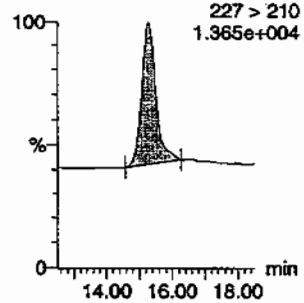

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.331e+004

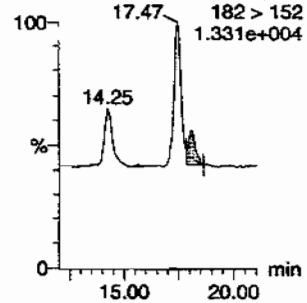

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.331e+004

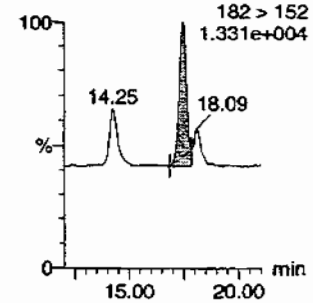

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
8.826e+004

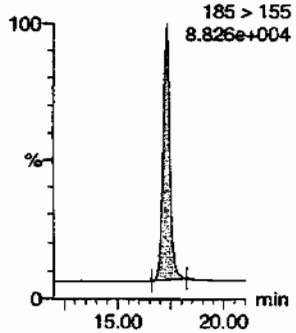

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
8.156e+003

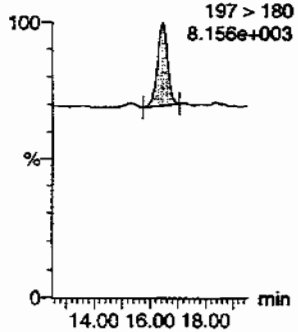

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.918e+003

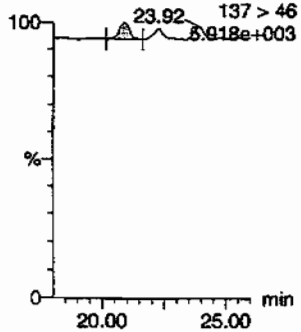

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.331e+004

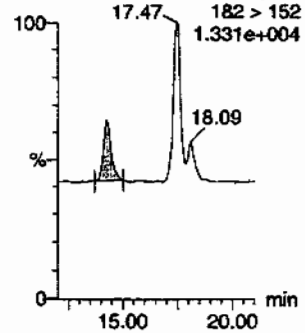

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
2.918e+003

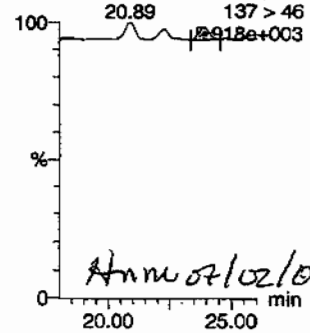

Amm 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.108e+003

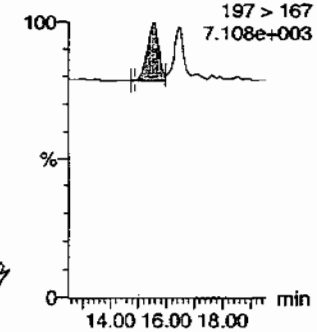

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

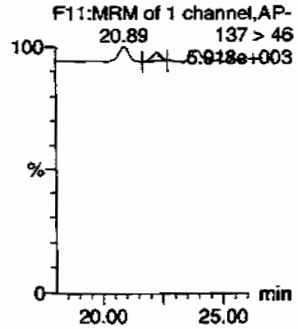

HMX

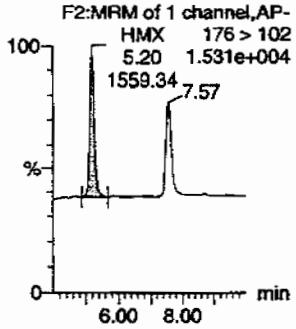

Nitrobenzene

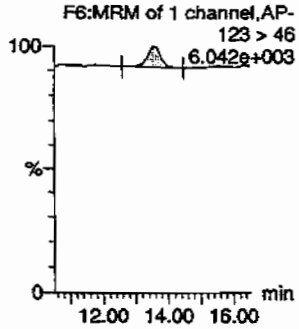

PETN

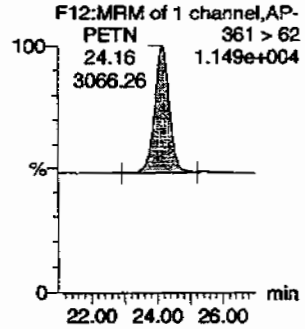

RDX

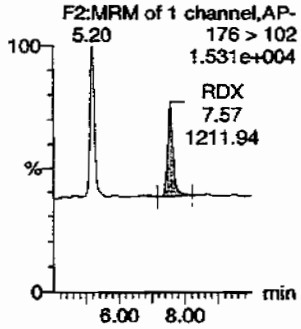

Tetryl

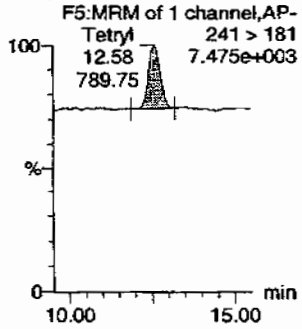

ID	Name	Trace	RT	Area	IS Area	Abs Resp	% Response	Errors	Modified	Modified Time	% Recov	Acc	SN
WXX090630-08CRI	HMX	176 > 102	5.20	1559.343	4825.526	1559.343	161.572	bb			49.2886	123.2	23.2	220.8
WXX090630-08CRI	RDX	176 > 102	7.57	1211.945	4825.526	1211.945	125.576	bb			46.8398	117.1	17.1	137.4
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2824.352	4825.526	2824.352	292.647	bb			43.4987	108.7	8.7	197.4
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	4825.526		4825.526	4825.526	bb			629.6860	125.9	25.9	317.9
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	567.957	4825.526	567.957	58.849	bb			43.7074	109.3	9.3	61.4
WXX090630-08CRI	Tetryl	241 > 181	12.58	789.750	4825.526	789.750	81.830	bb			40.6500	101.6	1.6	66.3
WXX090630-08CRI	Nitrobenzene	123 > 46	13.58	255.841	4825.526	255.841	26.509	bb			42.6102	106.5	6.5	21.5
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.56	700.433	30803.021	700.433	11.370	MM	02-Jul-09	07:54:50	33.6162	84.0	-16.0	52.5
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.43	1030.660	30803.021	1030.660	16.730	bb			42.2703	105.7	5.7	54.2
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.28	3851.718	30803.021	3851.718	62.522	bb			37.8210	94.6	-5.4	347.8
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.25	1253.143	30803.021	1253.143	20.341	bb			20.8888	104.4	4.4	38.5
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.47	2954.912	30803.021	2954.912	47.965	MM	02-Jul-09	07:57:50	40.9199	102.3	2.3	99.8
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.09	705.829	30803.021	705.829	11.457	MM	02-Jul-09	08:01:11	43.7101	109.3	9.3	24.2
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.29	30803.021		30803.021	30803.021	bb			642.6016	128.5	28.5	1636.0
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.89	187.250	30803.021	187.250	3.039	bb			33.1395	82.8	-17.2	25.6
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.27	95.554	30803.021	95.554	1.551	bb			32.1065	80.3	-19.7	15.1
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.92	140.705	30803.021	140.705	2.284	bb			39.0660	97.7	-2.3	19.3
WXX090630-08CRI	PETN	361 > 62	24.16	3066.264	30803.021	3066.264	49.772	bb			32.9191	82.3	-17.7	532.5

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/01/09
Time of Injection 1343
Standard Number WXX090630-08CRI
Data File EXP0630048a

HMX		123.2
RDX		117.1
135-TNB		108.7
13-DNB		109.3
Tetryl		101.6
Nitrobenzene		106.5
4A-26-DNT		84.0
2A-46-DNT		105.7
246-TNT		94.6
34-DNT(surr)		104.4
26-DNT		102.3
24-DNT		109.3
2-NT		82.8
4-NT		80.3
3-NT		97.7
PETN		82.3
Total		1609.8
Average		100.6

MAP 7/2/09

HMM 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%

No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0630054a

Analysis Date: 01-JUL-09 16:40

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	559.043	93	
1,3-Dinitrobenzene-d4	500	539.28	108	
2,4,6-Trinitrotoluene	600	688.977	115	
2,4-Dinitrotoluene	600	643.896	107	
2,6-Dinitrotoluene	600	602.993	100	
2,6-Dinitrotoluene-d3	500	502.986	101	
2-Amino-4,6-dinitrotoluene	600	733.362	122	*
3,4-Dinitrotoluene	300	331.8	111	
4-Amino-2,6-dinitrotoluene	600	658.663	110	
HMX	600	633.808	106	
Nitrobenzene	600	511.148	85	
PETN	600	556.272	93	
RDX	600	656.921	109	
Tetryl	600	575.227	96	
m-Dinitrobenzene	600	577.288	96	
m-Nitrotoluene	600	503.807	84	
o-Nitrotoluene	600	502.378	84	
p-Nitrotoluene	600	474.152	79	*

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630054a
Date: 01-Jul-2009
Time: 16:40:42
ID: WXX090630-07CCV
Vial: 1:1,B

MAT 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.057e+005

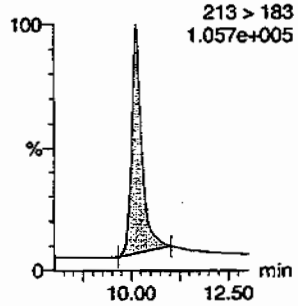

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.211e+004

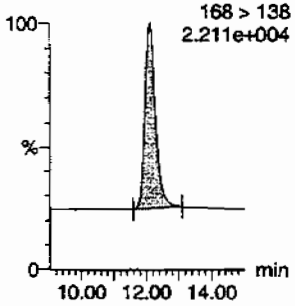

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.818e+004

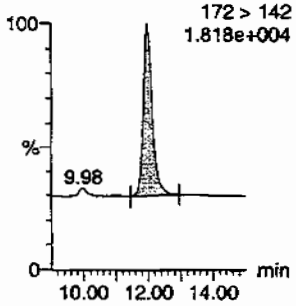

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.222e+005

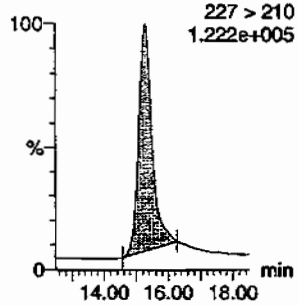

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.815e+004

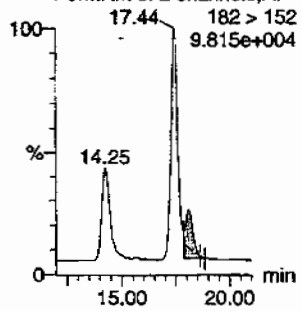

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.815e+004

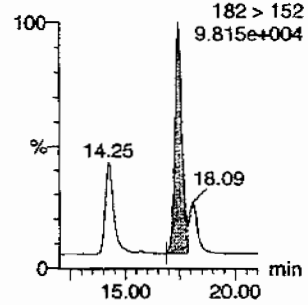

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.966e+004

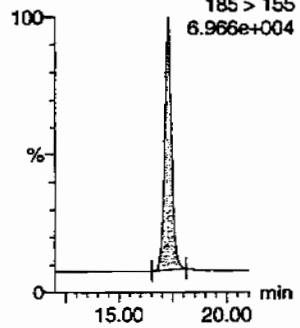

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.953e+004

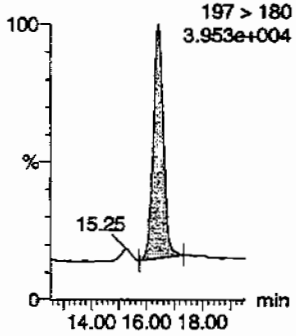

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.015e+004

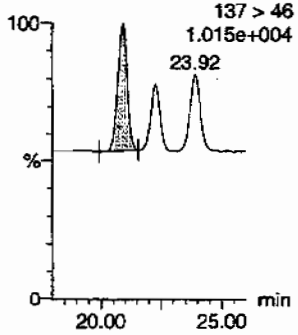

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.815e+004

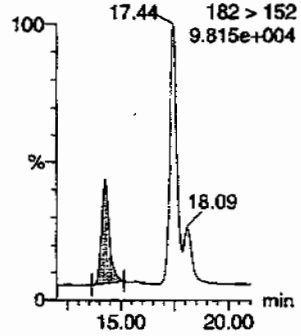

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.015e+004

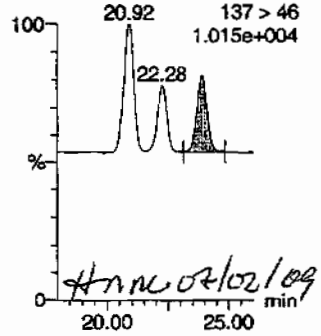

HMC 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.943e+004

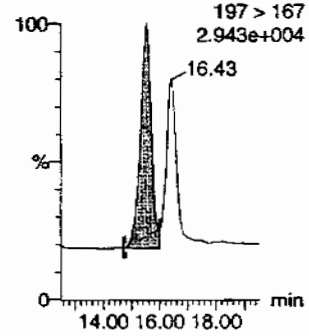

581

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

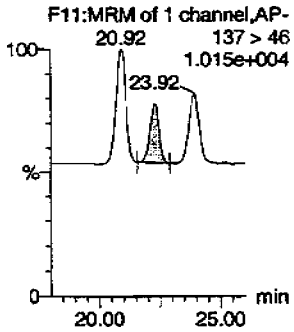

HMX

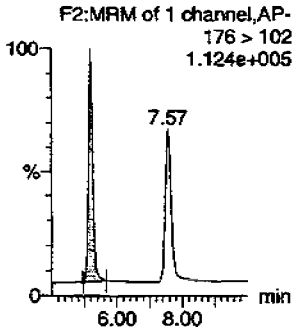

Nitrobenzene

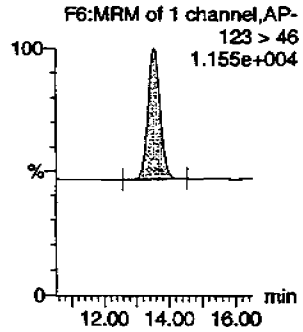

PETN

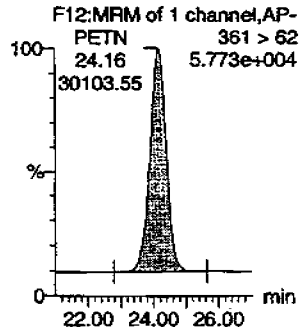

RDX

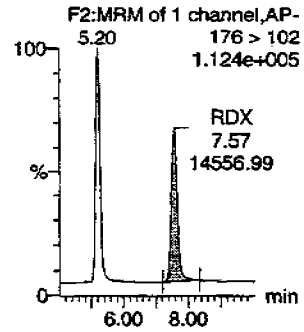

Tetryl

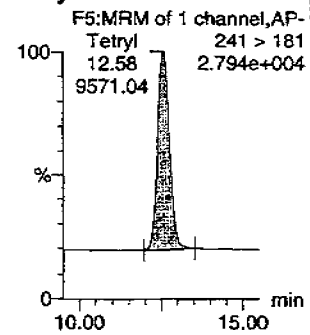

ID	Name	Trace	RT	Area	IS Area	% Abs Resp	% Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX090630-07CCV	HMX	176 > 102	5.20	17172.895	4132.713	17172.895	2077.678	bb			633.8076	105.6	5.6	1956.1
WXX090630-07CCV	RDX	176 > 102	7.57	14556.992	4132.713	14556.992	1761.191	bb			656.9208	109.5	9.5	1284.1
WXX090630-07CCV	135-Trinitrobenzene	213 > 183	10.14	31086.992	4132.713	31086.992	3761.088	bb			559.0432	93.2	-6.8	981.8
WXX090630-07CCV	13-Dinitrobenzene-d4	172 > 142	11.97	4132.713		4132.713	4132.713	bb			539.2804	107.9	7.9	309.9
WXX090630-07CCV	13-Dinitrobenzene	168 > 138	12.14	6424.564	4132.713	6424.564	777.282	bb			577.2879	96.2	-3.8	799.9
WXX090630-07CCV	Tetryl	241 > 181	12.58	9571.040	4132.713	9571.040	1157.961	bb			575.2268	95.9	-4.1	917.7
WXX090630-07CCV	Nitrobenzene	123 > 46	13.54	2628.416	4132.713	2628.416	318.001	bb			511.1481	85.2	-14.8	305.5
WXX090630-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.56	10742.271	24110.580	10742.271	222.771	MM	02-Jul-09	07:55:54	658.6633	109.8	9.8	480.3
WXX090630-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.43	13996.283	24110.580	13996.283	290.252	bb			733.3625	122.2	22.2	1149.5
WXX090630-07CCV	246-Trinitrotoluene	227 > 210	15.28	54921.309	24110.580	54921.309	1138.946	bb			688.9770	114.8	14.8	2989.0
WXX090630-07CCV	34-dinitrotoluene	182 > 152	14.25	15580.422	24110.580	15580.422	323.103	bb			331.8003	110.6	10.6	496.8
WXX090630-07CCV	26-dinitrotoluene	182 > 152	17.44	34082.898	24110.580	34082.898	706.804	MM	02-Jul-09	07:58:35	602.9931	100.5	0.5	1242.2
WXX090630-07CCV	24-dinitrotoluene	182 > 152	18.09	8138.564	24110.580	8138.564	168.776	MM	02-Jul-09	08:02:09	643.8960	107.3	7.3	263.3
WXX090630-07CCV	26-dinitrotoluene-d3	185 > 155	17.27	24110.580		24110.580	24110.580	bb			502.9863	100.6	0.6	1842.6
WXX090630-07CCV	2-Nitrotoluene	137 > 46	20.92	2221.879	24110.580	2221.879	46.077	bb			502.3780	83.7	-16.3	291.5
WXX090630-07CCV	4-Nitrotoluene	137 > 46	22.28	1104.557	24110.580	1104.557	22.906	bb			474.1520	79.0	-21.0	152.8
WXX090630-07CCV	3-Nitrotoluene	137 > 46	23.92	1420.330	24110.580	1420.330	29.454	bb			503.8071	84.0	-16.0	177.8
WXX090630-07CCV	PETN	361 > 62	24.16	30103.549	24110.580	30103.549	624.281	bb			556.2725	92.7	-7.3	5862.5

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GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/01/09
Time of Injection 1640
Standard Number WXX090630-07CCV
Data File EXP0630054a

HMX		105.6
RDX		109.5
135-TNB		93.2
13-DNB		96.2
Tetryl		95.9
Nitrobenzene		85.2
4A-26-DNT		109.8
2A-46-DNT		122.2
246-TNT		114.8
34-DNT(surr)		110.6
26-DNT		100.5
24-DNT		107.3
2-NT		83.7
4-NT		79.0
3-NT		84.0
PETN		92.7
Total		1590.2
Average		99.4

MAT 7/2/09

Hmm 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630056a

Analysis Date: 01-JUL-09 17:39

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	45.115	113	
1,3-Dinitrobenzene-d4	500	538.671	108	
2,4,6-Trinitrotoluene	40	41.849	105	
2,4-Dinitrotoluene	40	42.726	107	
2,6-Dinitrotoluene	40	39.279	98	
2,6-Dinitrotoluene-d3	500	544.944	109	
2-Amino-4,6-dinitrotoluene	40	45.452	114	
3,4-Dinitrotoluene	20	21.044	105	
4-Amino-2,6-dinitrotoluene	40	39.811	100	
HMX	40	46.998	117	
Nitrobenzene	40	37.443	94	
PETN	40	38.277	96	
RDX	40	44.829	112	
Tetryl	40	40.416	101	
m-Dinitrobenzene	40	42.594	106	
m-Nitrotoluene	40	38.341	96	
o-Nitrotoluene	40	32.137	80	
p-Nitrotoluene	40	38.427	96	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630056a
Date: 01-Jul-2009
Time: 17:39:38
ID: WXX090630-08CRI
Vial: 1:1,C

MAT 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.328e+004

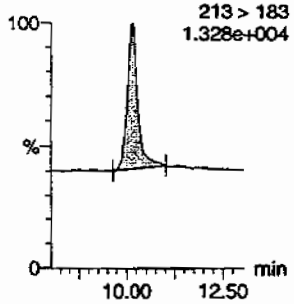

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.522e+003

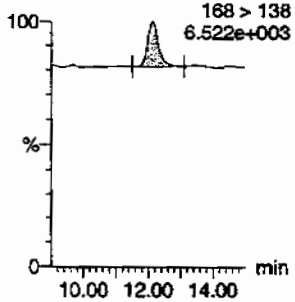

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.810e+004

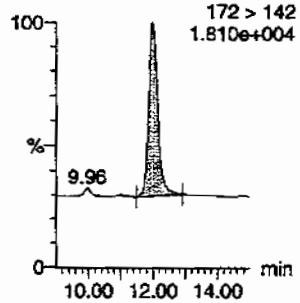

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.308e+004

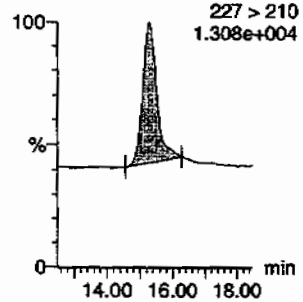

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.209e+004

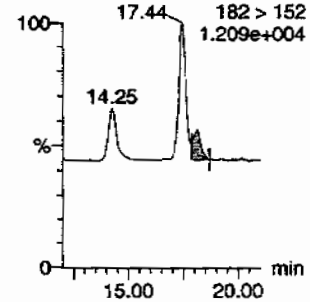

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.209e+004

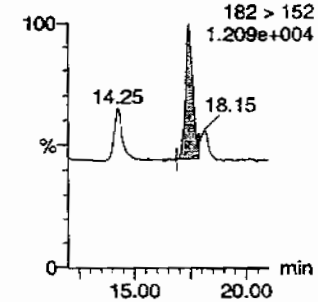

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.462e+004

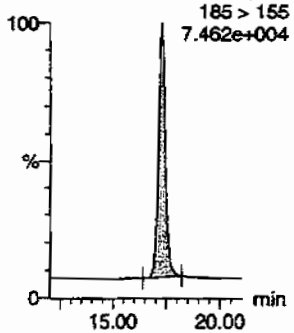

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.697e+003

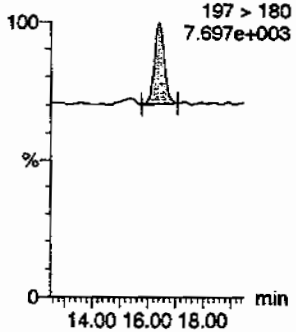

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
8.660e+003

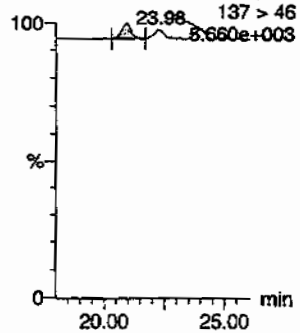

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.209e+004

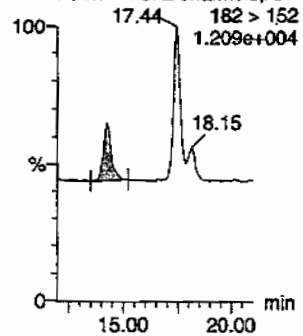

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
8.660e+003

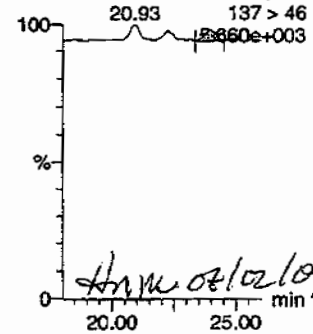

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
6.899e+003

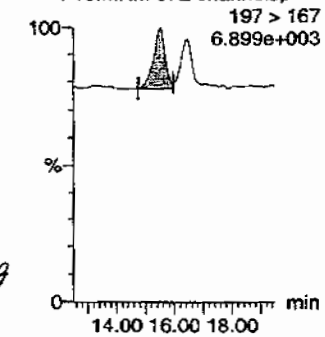

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

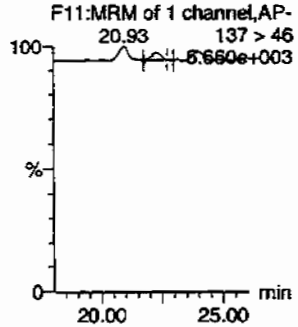

HMX

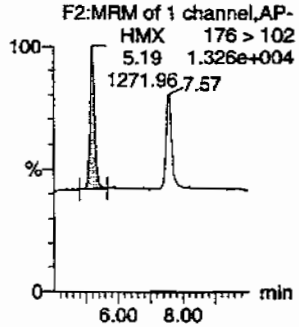

Nitrobenzene

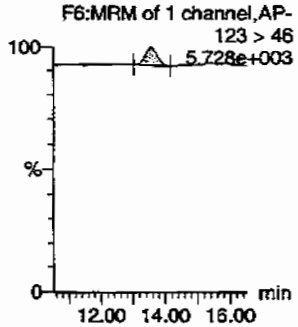

PETN

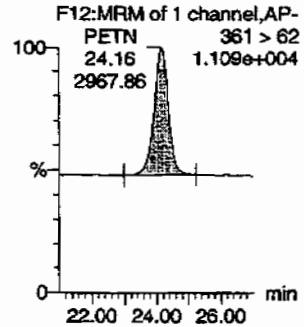

RDX

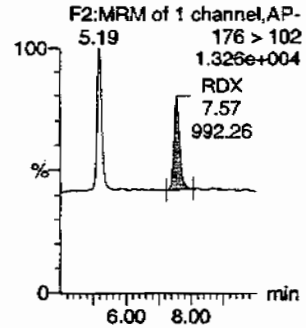

Tetryl

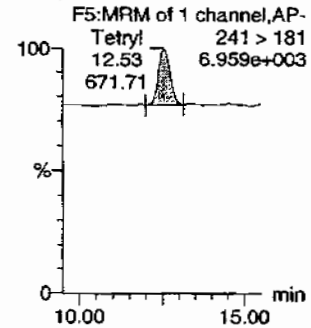

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Rel Response	Flags	Modified	Mod Time	Uncorr	%Rec	%Dev	S/N
WXX090630-08CRI	HMX	176 > 102	5.19	1271.963	4128.040	1271.963	154.064	bb			46.9980	117.5	17.5	235.2
WXX090630-08CRI	RDX	176 > 102	7.57	992.257	4128.040	992.257	120.185	bb			44.8288	112.1	12.1	152.0
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2505.873	4128.040	2505.873	303.518	bb			45.1146	112.8	12.8	186.3
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	4128.040		4128.040	4128.040	bb			538.6706	107.7	7.7	279.4
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	473.483	4128.040	473.483	57.350	bb			42.5936	106.5	6.5	45.9
WXX090630-08CRI	Tetryl	241 > 181	12.53	671.706	4128.040	671.706	81.359	bb			40.4157	101.0	1.0	93.5
WXX090630-08CRI	Nitrobenzene	123 > 46	13.54	192.320	4128.040	192.320	23.294	bb			37.4428	93.6	-6.4	22.2
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.53	703.448	26121.838	703.448	13.465	MM	02-Jul-09	07:56:11	39.8110	99.5	-0.5	68.3
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.40	939.824	26121.838	939.824	17.989	bb			45.4524	113.6	13.6	50.6
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.28	3614.219	26121.838	3614.219	69.180	bb			41.8487	104.6	4.6	122.8
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.25	1070.586	26121.838	1070.586	20.492	bb			21.0437	105.2	5.2	40.4
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.44	2405.379	26121.838	2405.379	46.042	MM	02-Jul-09	07:58:42	39.2793	98.2	-1.8	106.7
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.15	585.090	26121.838	585.090	11.199	MM	02-Jul-09	08:02:21	42.7262	106.8	6.8	22.9
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.27	26121.838		26121.838	26121.838	bb			544.9444	109.0	9.0	1686.6
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.93	153.987	26121.838	153.987	2.947	bb			32.1365	80.3	-19.7	42.6
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.25	96.984	26121.838	96.984	1.856	MM	02-Jul-09	08:02:39	38.4267	96.1	-3.9	24.8
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.98	117.108	26121.838	117.108	2.242	bb			38.3412	95.9	-4.1	28.5
WXX090630-08CRI	PETN	361 > 62	24.16	2967.859	26121.838	2967.859	56.808	bb			38.2774	95.7	-4.3	846.7

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/01/09
Time of Injection 1739
Standard Number WXX090630-08CRI
Data File EXP0630056a

HMX		117.5
RDX		112.1
135-TNB		112.8
13-DNB		106.5
Tetryl		101.0
Nitrobenzene		93.6
4A-26-DNT		99.5
2A-46-DNT		113.6
246-TNT		104.6
34-DNT(surr)		105.2
26-DNT		98.2
24-DNT		106.8
2-NT		80.3
4-NT		96.1
3-NT		95.9
PETN		95.7
Total		1639.4
Average		102.5

MTT 7/2/09

HMM 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0713012a

Analysis Date: 13-JUL-09 20:20

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	42.474	106	
1,3-Dinitrobenzene-d4	500	520.066	104	
2,4,6-Trinitrotoluene	40	40.709	102	
2,4-Dinitrotoluene	40	37.457	94	
2,6-Dinitrotoluene	40	39.261	98	
2,6-Dinitrotoluene-d3	500	519.262	104	
2-Amino-4,6-dinitrotoluene	40	39.55	99	
3,4-Dinitrotoluene	20	21.709	109	
4-Amino-2,6-dinitrotoluene	40	41.587	104	
HMX	40	38.223	96	
Nitrobenzene	40	36.232	91	
PETN	40	44.624	112	
RDX	40	42.183	105	
Tetryl	40	38.347	96	
m-Dinitrobenzene	40	47.028	118	
m-Nitrotoluene	40	34.455	86	
o-Nitrotoluene	40	39.765	99	
p-Nitrotoluene	40	46.423	116	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713012a
Date: 13-Jul-2009
Time: 20:20:46
ID: WXX090713-08CRI
Vial: 1:1,C

MAP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.222e+004

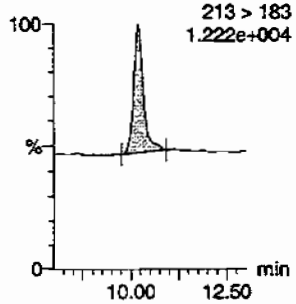

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.765e+003

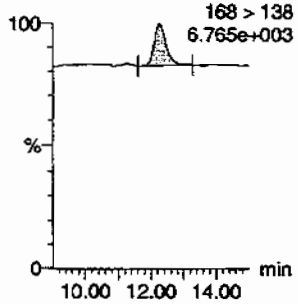

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.743e+004

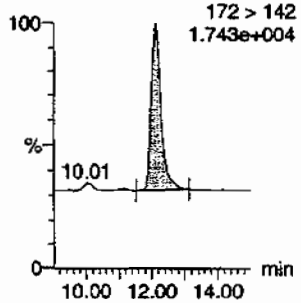

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.058e+004

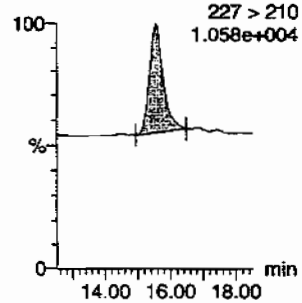

24-dinitrotoluene
F8:MRM of 2 channels,AP-
17.86
182 > 152
1.096e+004

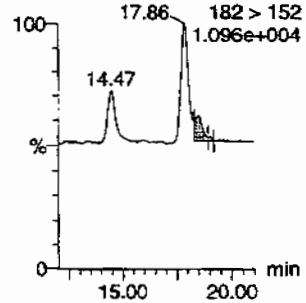

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.096e+004

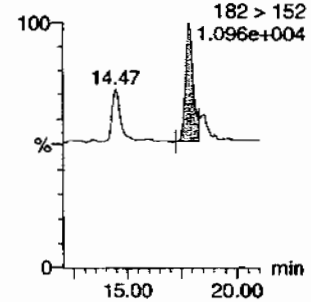

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.892e+004

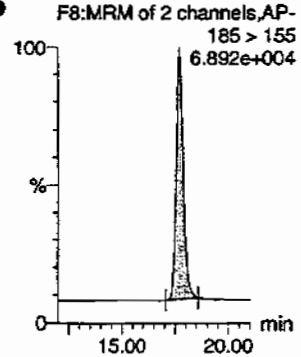

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.411e+003

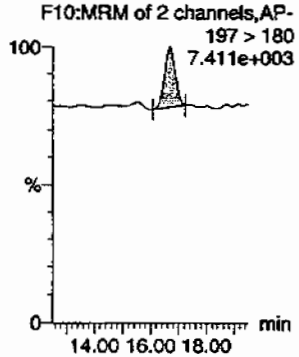

2-Nitrotoluene
F11:MRM of 1 channel,AP-
24.66
137 > 46
6.206e+003

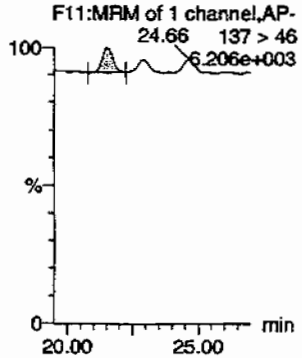

34-dinitrotoluene
F8:MRM of 2 channels,AP-
17.86
182 > 152
1.096e+004

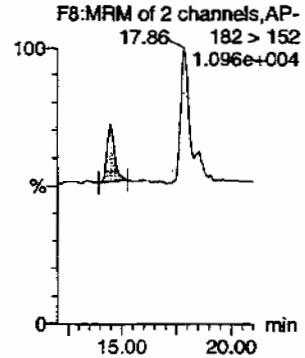

3-Nitrotoluene
F11:MRM of 1 channel,AP-
21.53
137 > 46
6.206e+003

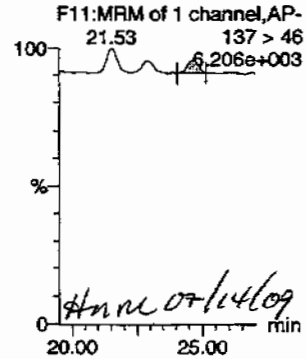

Hnm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.015e+003

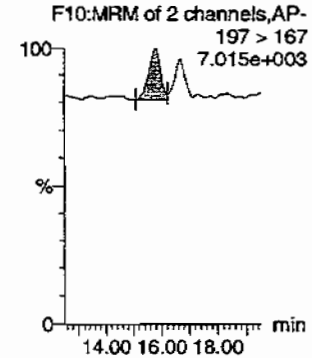

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

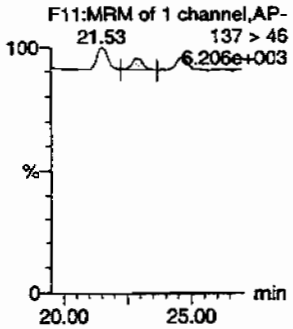

HMX

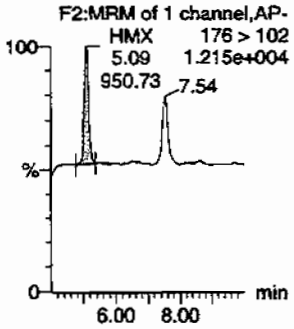

Nitrobenzene

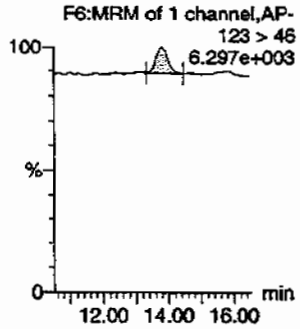

PETN

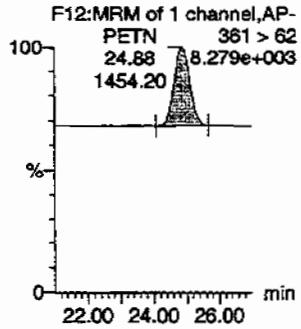

RDX

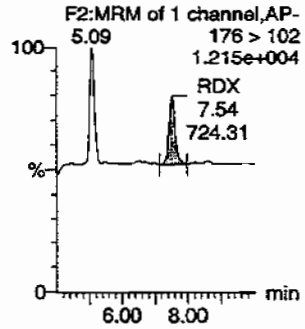

Tetryl

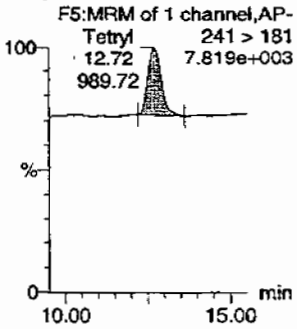

ID	Name	Trace	RT	Area	IS Area	Abs Resp	S/N Response	Flags	Mod Date	Mod Time	Amount	%Rec	%Dev	S/N
WXX090713-08CRI	HMX	176 > 102	5.09	950.734	4099.368	950.734	115.961	bb			38.2225	95.6	-4.4	111.6
WXX090713-08CRI	RDX	176 > 102	7.54	724.314	4099.368	724.314	88.345	bb			42.1831	105.5	5.5	63.5
WXX090713-08CRI	135-Trinitrobenzene	213 > 183	10.20	1927.722	4099.368	1927.722	235.124	bb			42.4741	106.2	6.2	272.2
WXX090713-08CRI	13-Dinitrobenzene-d4	172 > 142	12.14	4099.368		4099.368	4099.368	bb			520.0663	104.0	4.0	408.9
WXX090713-08CRI	13-Dinitrobenzene	168 > 138	12.27	509.316	4099.368	509.316	62.121	bb			47.0284	117.6	17.6	38.3
WXX090713-08CRI	Tetryl	241 > 181	12.72	989.718	4099.368	989.718	120.716	bb			38.3468	95.9	-4.1	64.5
WXX090713-08CRI	Nitrobenzene	123 > 46	13.80	290.713	4099.368	290.713	35.458	bb			36.2318	90.6	-9.4	24.4
WXX090713-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.80	623.213	24833.205	623.213	12.548	MM	14-Jul-09	10:18:40	41.5871	104.0	4.0	26.3
WXX090713-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.68	722.091	24833.205	722.091	14.539	bb			39.5497	98.9	-1.1	50.5
WXX090713-08CRI	246-Trinitrotoluene	227 > 210	15.55	2259.581	24833.205	2259.581	45.495	bb			40.7090	101.8	1.8	83.0
WXX090713-08CRI	34-dinitrotoluene	182 > 152	14.47	939.169	24833.205	939.169	18.910	bb			21.7089	108.5	8.5	57.6
WXX090713-08CRI	26-dinitrotoluene	182 > 152	17.86	2221.925	24833.205	2221.925	44.737	MM	14-Jul-09	10:15:16	39.2612	98.2	-1.8	135.7
WXX090713-08CRI	24-dinitrotoluene	182 > 152	18.53	467.683	24833.205	467.683	9.416	MM	14-Jul-09	10:11:47	37.4565	93.6	-6.4	28.0
WXX090713-08CRI	26-dinitrotoluene-d3	185 > 155	17.68	24833.205		24833.205	24833.205	bb			519.2622	103.9	3.9	1092.6
WXX090713-08CRI	2-Nitrotoluene	137 > 46	21.53	277.811	24833.205	277.811	5.594	bb			39.7646	99.4	-0.6	32.2
WXX090713-08CRI	4-Nitrotoluene	137 > 46	22.91	157.901	24833.205	157.901	3.179	bb			46.4234	116.1	16.1	16.6
WXX090713-08CRI	3-Nitrotoluene	137 > 46	24.66	151.039	24833.205	151.039	3.041	bb			34.4553	86.1	-13.9	17.2
WXX090713-08CRI	PETN	361 > 62	24.88	1454.199	24833.205	1454.199	29.279	bb			44.6236	111.6	11.6	296.6

590

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/13/09
Time of Injection 2020
Standard Number WXX090713-08CRI
Data File EXP0713012a

HMX		95.6
RDX		105.5
135-TNB		106.2
13-DNB		117.6
Tetryl		95.9
Nitrobenzene		90.6
4A-26-DNT		104.0
2A-46-DNT		98.9
246-TNT		101.8
34-DNT(surr)		108.5
26-DNT		98.2
24-DNT		93.6
2-NT		99.4
4-NT		116.1
3-NT		86.1
PETN		111.6
Total		1629.6
Average		101.9

MJT 7/14/09

Hmm 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0713022a

Analysis Date: 14-JUL-09 01:15

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	642.794	107	
1,3-Dinitrobenzene-d4	500	526.454	105	
2,4,6-Trinitrotoluene	600	706.609	118	
2,4-Dinitrotoluene	600	578.41	96	
2,6-Dinitrotoluene	600	592.39	99	
2,6-Dinitrotoluene-d3	500	515.313	103	
2-Amino-4,6-dinitrotoluene	600	735.592	123	*
3,4-Dinitrotoluene	300	310.133	103	
4-Amino-2,6-dinitrotoluene	600	697.626	116	
HMX	600	602.051	100	
Nitrobenzene	600	559.141	93	
PETN	600	565.352	94	
RDX	600	702.253	117	
Tetryl	600	627.983	105	
m-Dinitrobenzene	600	631.063	105	
m-Nitrotoluene	600	478.601	80	*
o-Nitrotoluene	600	506.419	84	
p-Nitrotoluene	600	551.079	92	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713022a
Date: 14-Jul-2009
Time: 01:15:47
ID: WXX090713-07CCV
Vial: 1:1,B

MMT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.010e+005

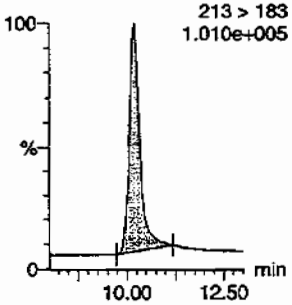

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.329e+004

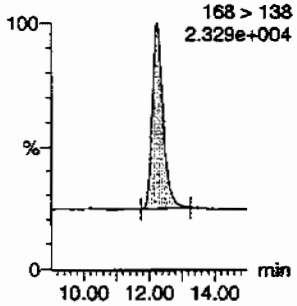

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.803e+004

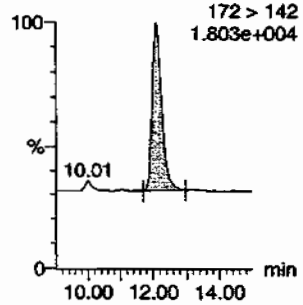

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
9.053e+004

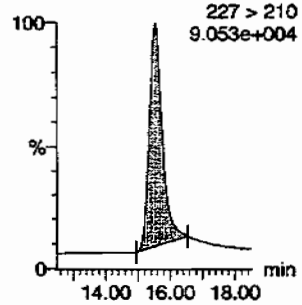

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.071e+004

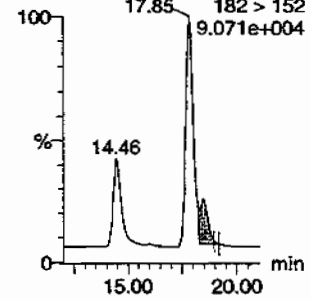

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.071e+004

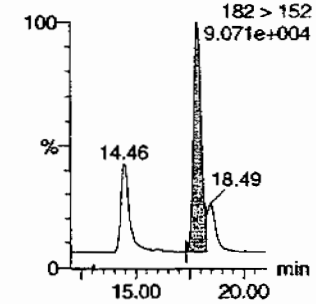

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.748e+004

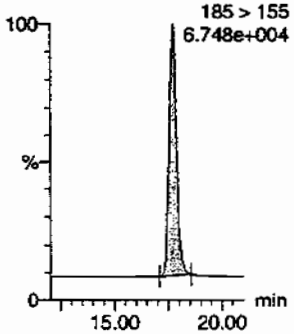

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.780e+004

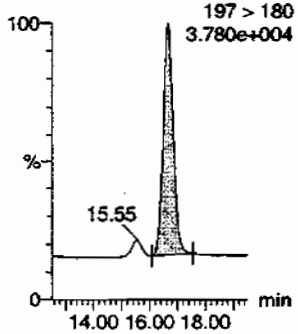

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.333e+004

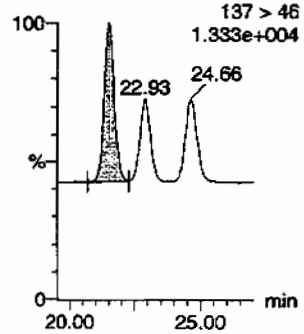

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.071e+004

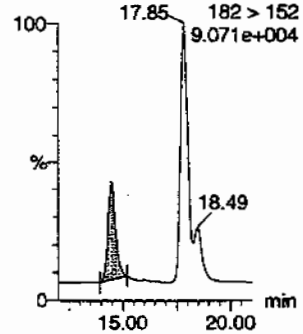

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.333e+004

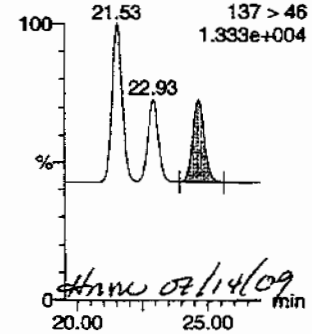

Hmw 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.954e+004

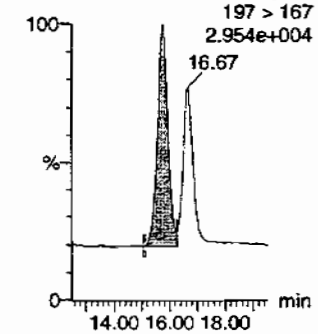

593

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GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

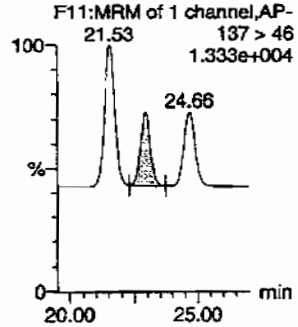

HMX

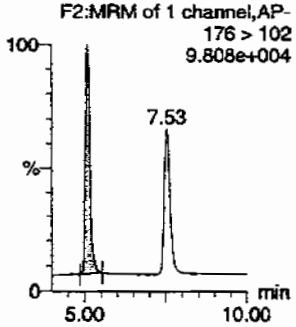

Nitrobenzene

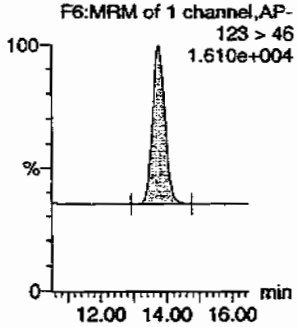

PETN

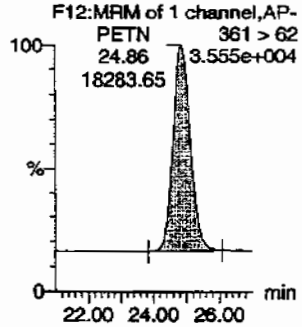

RDX

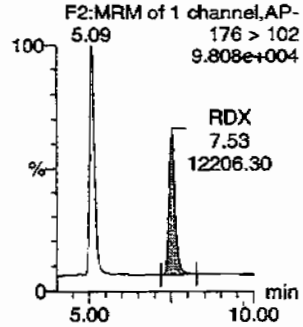

Tetryl

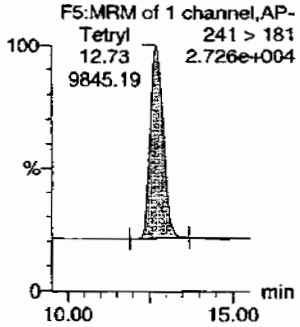

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Height	%Rec	%Dev	S/N
WXX090713-07CCV	HMX	176 > 102	5.09	15159.184	4149.721	15159.184	1826.531	bb			602.0512	100.3	0.3	1792.1
WXX090713-07CCV	RDX	176 > 102	7.53	12206.297	4149.721	12206.297	1470.737	bb			702.2530	117.0	17.0	1144.0
WXX090713-07CCV	135-Trinitrobenzene	213 > 183	10.18	29532.057	4149.721	29532.057	3558.318	bb			642.7939	107.1	7.1	4631.2
WXX090713-07CCV	13-Dinitrobenzene-d4	172 > 142	12.10	4149.721		4149.721	4149.721	bb			526.4544	105.3	5.3	466.1
WXX090713-07CCV	13-Dinitrobenzene	168 > 138	12.24	6918.331	4149.721	6918.331	833.590	bb			631.0626	105.2	5.2	590.5
WXX090713-07CCV	Tetryl	241 > 181	12.73	9845.190	4149.721	9845.190	1186.247	bb			627.9826	104.7	4.7	853.9
WXX090713-07CCV	Nitrobenzene	123 > 46	13.75	4541.480	4149.721	4541.480	547.203	bb			559.1410	93.2	-6.8	322.9
WXX090713-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.76	10374.928	24644.340	10374.928	210.493	MM	14-Jul-09	10:19:30	697.6259	116.3	16.3	277.9
WXX090713-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.67	13328.149	24644.340	13328.149	270.410	bb			735.5924	122.6	22.6	519.4
WXX090713-07CCV	246-Trinitrotoluene	227 > 210	15.57	38922.586	24644.340	38922.586	789.686	bb			706.6094	117.8	17.8	1815.3
WXX090713-07CCV	34-dinitrotoluene	182 > 152	14.46	13314.886	24644.340	13314.886	270.141	bb			310.1329	103.4	3.4	271.9
WXX090713-07CCV	26-dinitrotoluene	182 > 152	17.85	33270.398	24644.340	33270.398	675.011	MM	14-Jul-09	10:15:56	592.3897	98.7	-1.3	712.7
WXX090713-07CCV	24-dinitrotoluene	182 > 152	18.49	7167.119	24644.340	7167.119	145.411	MM	14-Jul-09	10:12:37	578.4104	96.4	-3.6	142.3
WXX090713-07CCV	26-dinitrotoluene-d3	185 > 155	17.68	24644.340		24644.340	24644.340	bb			515.3130	103.1	3.1	1142.5
WXX090713-07CCV	2-Nitrotoluene	137 > 46	21.53	3511.135	24644.340	3511.135	71.236	bb			506.4193	84.4	-15.6	161.7
WXX090713-07CCV	4-Nitrotoluene	137 > 46	22.93	1860.142	24644.340	1860.142	37.740	bb			551.0794	91.8	-8.2	84.9
WXX090713-07CCV	3-Nitrotoluene	137 > 46	24.66	2082.052	24644.340	2082.052	42.242	bb			478.6010	79.8	-20.2	84.9
WXX090713-07CCV	PETN	361 > 62	24.86	18283.646	24644.340	18283.646	370.950	bb			565.3520	94.2	-5.8	3442.6

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/14/09
Time of Injection 0115
Standard Number WXX090713-07CCV
Data File EXP0713022a

HMX		100.3
RDX		117.0
135-TNB		107.1
13-DNB		105.2
Tetryl		104.7
Nitrobenzene		93.2
4A-26-DNT		116.3
2A-46-DNT		122.6
246-TNT		117.8
34-DNT(surr)		103.4
26-DNT		98.7
24-DNT		96.4
2-NT		84.4
4-NT		91.8
3-NT		79.8
PETN		94.2
Total		1632.9
Average		102.1

HTP 7/14/09

Hmm 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0713024a

Analysis Date: 14-JUL-09 02:14

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	45.982	115	
1,3-Dinitrobenzene-d4	500	555.109	111	
2,4,6-Trinitrotoluene	40	41.657	104	
2,4-Dinitrotoluene	40	39.648	99	
2,6-Dinitrotoluene	40	38.348	96	
2,6-Dinitrotoluene-d3	500	529.624	106	
2-Amino-4,6-dinitrotoluene	40	44.149	110	
3,4-Dinitrotoluene	20	19.341	97	
4-Amino-2,6-dinitrotoluene	40	39.608	99	
HMX	40	39.085	98	
Nitrobenzene	40	34.813	87	
PETN	40	50.517	126	
RDX	40	39.257	98	
Tetryl	40	27.953	70	*
m-Dinitrobenzene	40	39.703	99	
m-Nitrotoluene	40	42.769	107	
o-Nitrotoluene	40	37.963	95	
p-Nitrotoluene	40	32.873	82	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713024a
Date: 14-Jul-2009
Time: 02:14:45
ID: WXX090713-08CRI
Vial: 1:1,C

MM 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.331e+004

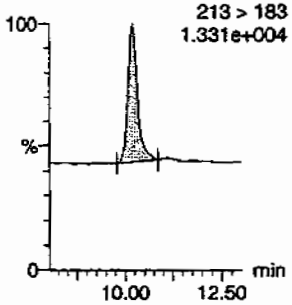

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.663e+003

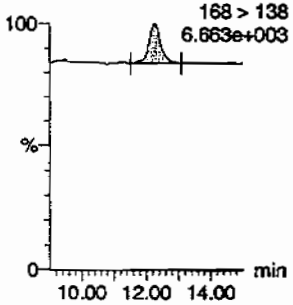

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.821e+004

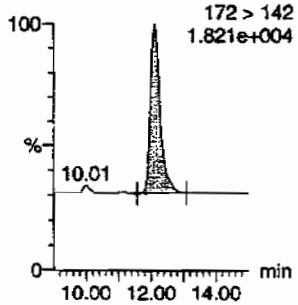

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.081e+004

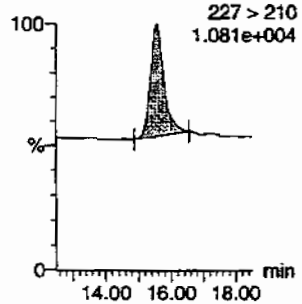

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.104e+004

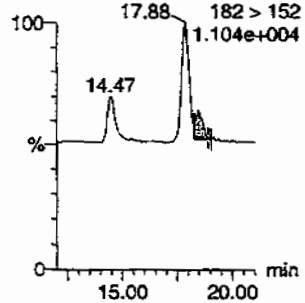

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.104e+004

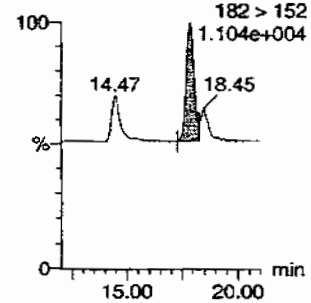

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.917e+004

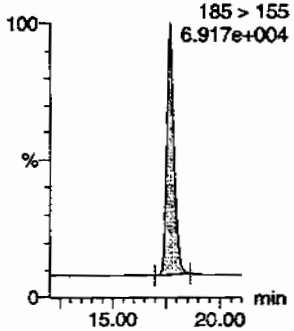

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.493e+003

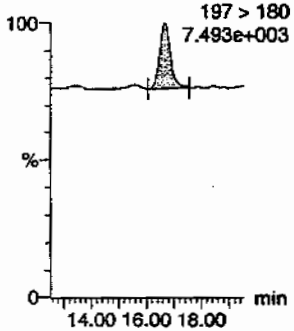

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.219e+003

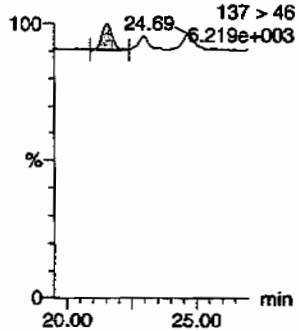

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.104e+004

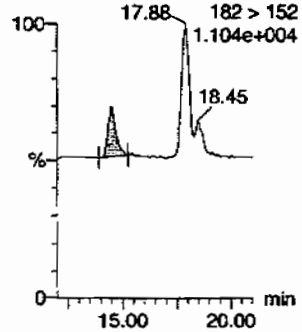

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.219e+003

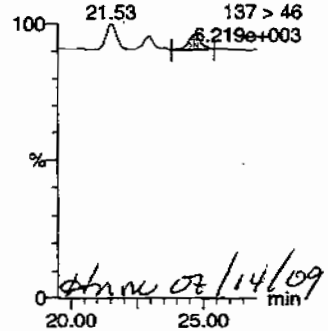

Hnm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.088e+003

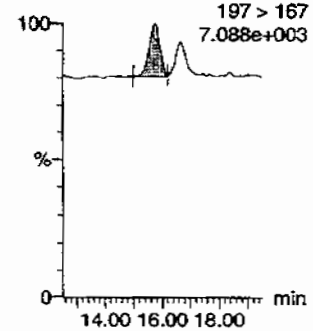

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GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

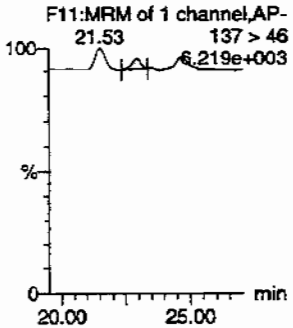

HMX

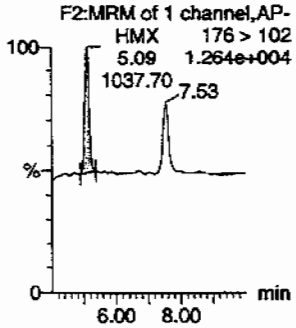

Nitrobenzene

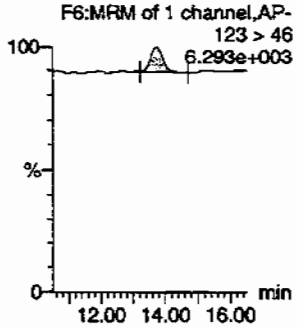

PETN

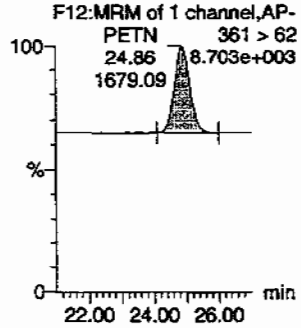

RDX

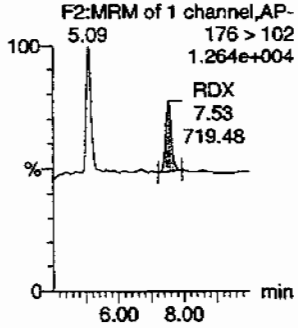

Tetryl

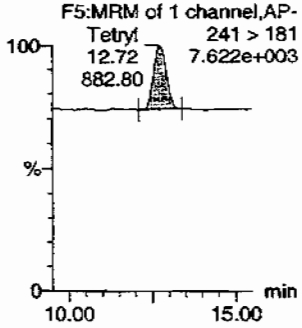

ID	Name	Trace	RT	Area	ISArea	AbsResp	Response	Flags	ModDate	Mod Time	Conc	%Rec	%Dev	S/N
WXX090713-08CRI	HMX	176 > 102	5.09	1037.703	4375.591	1037.703	118.579	bb			39.0852	97.7	-2.3	96.5
WXX090713-08CRI	RDX	176 > 102	7.53	719.484	4375.591	719.484	82.216	bb			39.2566	98.1	-1.9	53.1
WXX090713-08CRI	135-Trinitrobenzene	213 > 183	10.20	2227.525	4375.591	2227.525	254.540	bb			45.9815	115.0	15.0	235.9
WXX090713-08CRI	13-Dinitrobenzene-d4	172 > 142	12.14	4375.591		4375.591	4375.591	bb			555.1094	111.0	11.0	454.2
WXX090713-08CRI	13-Dinitrobenzene	168 > 138	12.27	458.950	4375.591	458.950	52.444	bb			39.7026	99.3	-0.7	50.5
WXX090713-08CRI	Tetryl	241 > 181	12.72	882.804	4375.591	882.804	100.878	bb			27.9531	69.9	-30.1	63.3
WXX090713-08CRI	Nitrobenzene	123 > 46	13.76	298.146	4375.591	298.146	34.069	bb			34.8125	87.0	-13.0	18.8
WXX090713-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.77	605.406	25328.754	605.406	11.951	MM	14-Jul-09	10:19:37	39.6084	99.0	-1.0	45.8
WXX090713-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.65	822.149	25328.754	822.149	16.230	bb			44.1490	110.4	10.4	29.5
WXX090713-08CRI	246-Trinitrotoluene	227 > 210	15.55	2358.355	25328.754	2358.355	46.555	bb			41.6572	104.1	4.1	103.7
WXX090713-08CRI	34-dinitrotoluene	182 > 152	14.47	853.434	25328.754	853.434	16.847	bb			19.3412	96.7	-3.3	63.5
WXX090713-08CRI	26-dinitrotoluene	182 > 152	17.88	2213.560	25328.754	2213.560	43.697	MM	14-Jul-09	10:16:04	38.3481	95.9	-4.1	166.2
WXX090713-08CRI	24-dinitrotoluene	182 > 152	18.45	504.918	25328.754	504.918	9.967	MM	14-Jul-09	10:12:52	39.6475	99.1	-0.9	41.5
WXX090713-08CRI	26-dinitrotoluene-d3	185 > 155	17.68	25328.754		25328.754	25328.754	bb			529.6241	105.9	5.9	1137.3
WXX090713-08CRI	2-Nitrotoluene	137 > 46	21.53	270.514	25328.754	270.514	5.340	bb			37.9626	94.9	-5.1	33.7
WXX090713-08CRI	4-Nitrotoluene	137 > 46	22.95	114.041	25328.754	114.041	2.251	bb			32.8725	82.2	-17.8	16.3
WXX090713-08CRI	3-Nitrotoluene	137 > 46	24.69	191.225	25328.754	191.225	3.775	bb			42.7691	106.9	6.9	20.0
WXX090713-08CRI	PETN	361 > 62	24.86	1679.089	25328.754	1679.089	33.146	bb			50.5165	126.3	26.3	618.5

598

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/14/09
Time of Injection 0214
Standard Number WXX090713-08CRI
Data File EXP0713024a

HMX		97.7
RDX		98.1
135-TNB		115.0
13-DNB		99.3
Tetryl		69.9
Nitrobenzene		87.0
4A-26-DNT		99.0
2A-46-DNT		110.4
246-TNT		104.1
34-DNT(surr)		96.7
26-DNT		95.9
24-DNT		99.1
2-NT		94.9
4-NT		82.2
3-NT		106.9
PETN		126.3
Total		1582.5
Average		98.9

MT 7/14/09

Hmm 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS0701013.wiff

Analysis Date: 01-JUL-09 13:53

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	98.7	99	
2,6-Diamino-4-nitrotoluene	100	101	101	
3,4-Dinitrotoluene	50	52.2	104	
3,5-Dinitroaniline	100	78.9	79	
TATB	100	92.5	93	
tris(o-cresyl) phosphate	100	103	103	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701013.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 92.5 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:53:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.04 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.03 min
Area: 6.36e+004 counts
Height: 13476.406 cps
Start Time: 6.93 min
End Time: 7.27 min

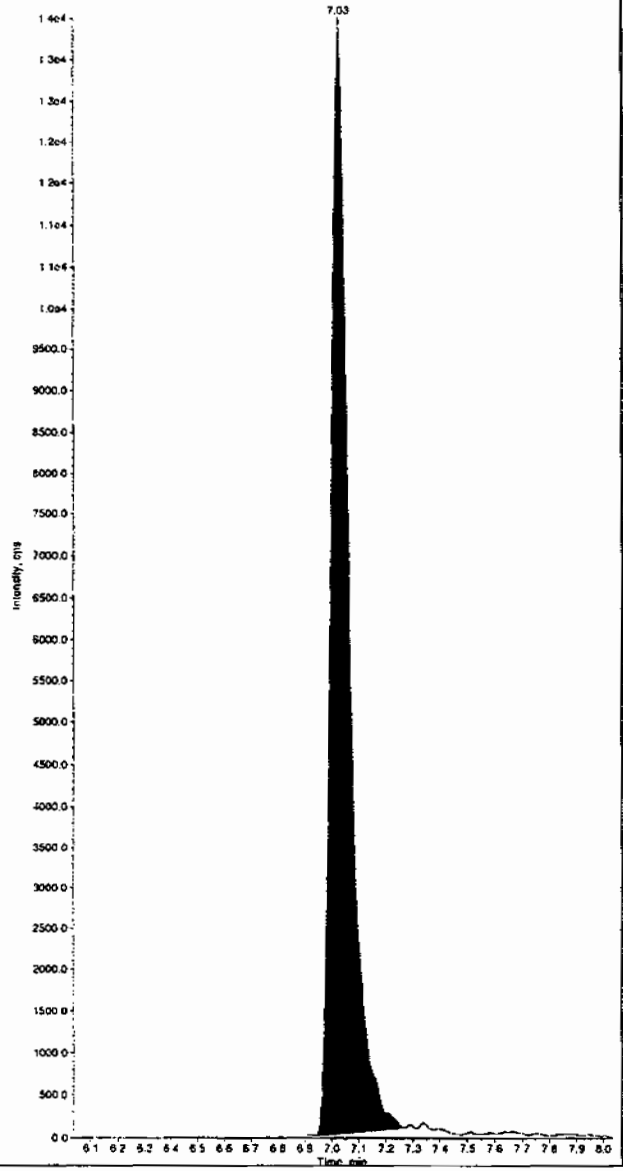

601

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701013.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 78.9 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:53:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.28 min
Area: 1.34e+005 counts
Height: 29213.385 cps
Start Time: 8.16 min
End Time: 8.41 min

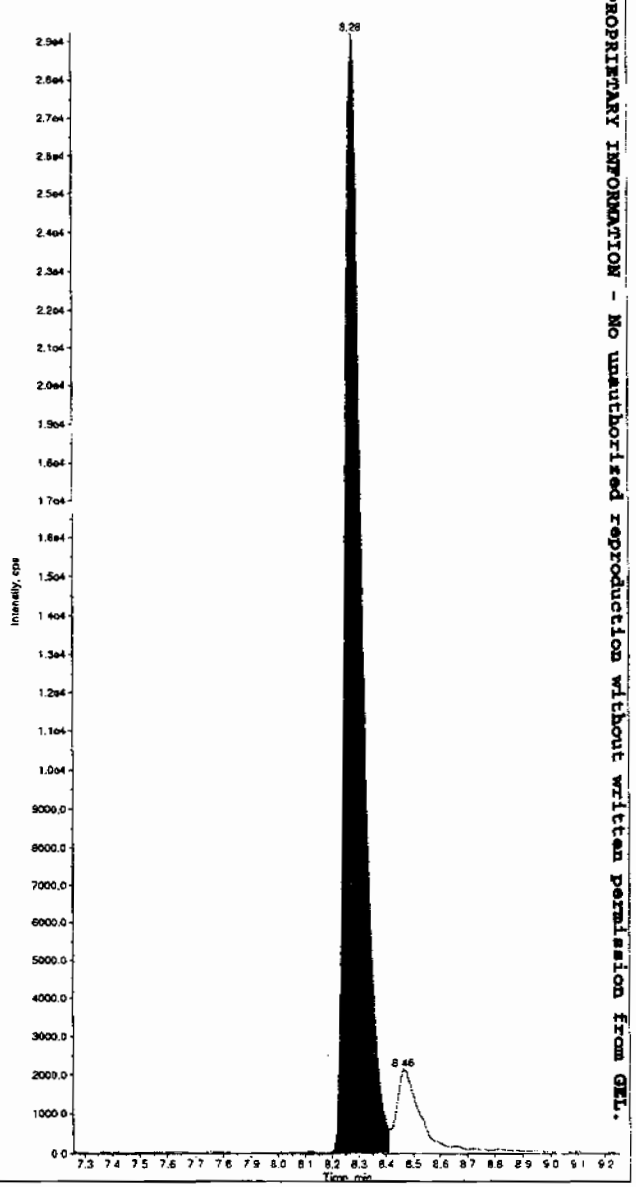

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-27CRI" Sample ID: "[1]LER" File: "EXS0701013.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

```
Sample Index:        1
Sample Type:          QC
Concentration:      50.0     ng/mL
Calculated Conc:    52.2     ng/mL
Acq. Date:       7/1/2009
Acq. Time:       1:53:55 PM

Modified:           No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height:1460.00    cps
Min. Peak Width:    0.00    sec
Smoothing Width:  3        points
RT Window:         30.0     sec
Expected RT:        8.44    min
Use Relative RT:    No

Int. Type:        Valley
Retention Time:     8.46    min
Area:         1.07e+005    counts
Height:        20992.949   cps
Start Time:         8.39    min
End Time:           9.00    min
```

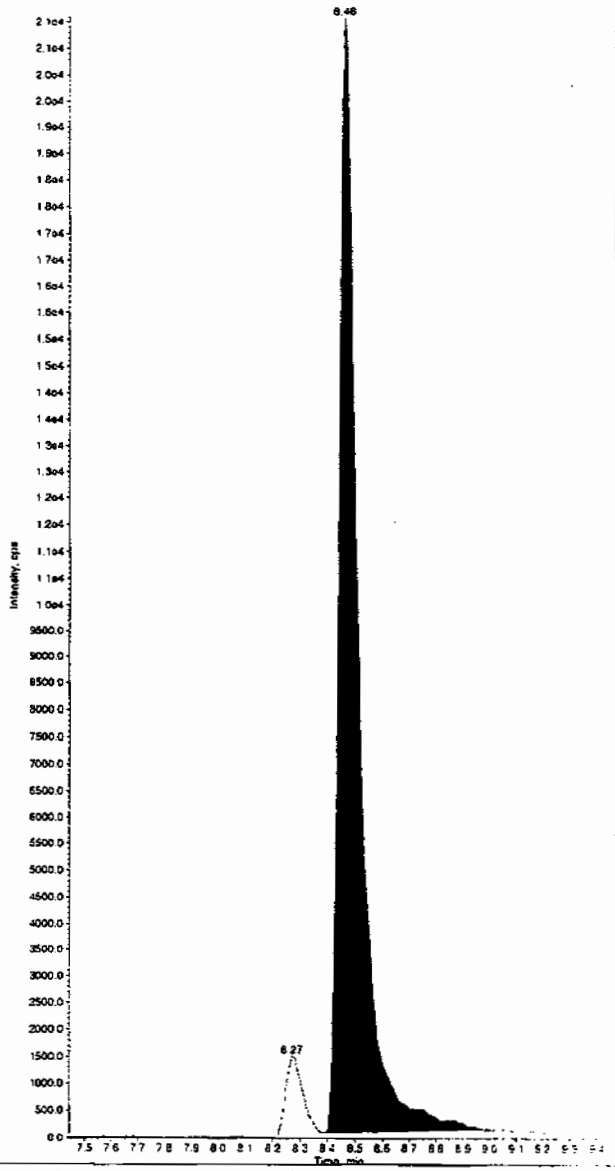

Sample Name: "WXX090701-27CRI" Sample ID: "[1]LER" File: "EXS0701013.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

```
Sample Index:        1
Sample Type:          QC
Concentration:     100.      ng/mL
Calculated Conc:   101.      ng/mL
Acq. Date:       7/1/2009
Acq. Time:       1:53:55 PM

Modified:           No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00    cps
Min. Peak Width:    0.00    sec
Smoothing Width:  3        points
RT Window:         30.0     sec
Expected RT:        5.08    min
Use Relative RT:    No

Int. Type:        Valley
Retention Time:     5.10    min
Area:         3.04e+004    counts
Height:        4198.899    cps
Start Time:         4.99    min
End Time:           5.29    min
```

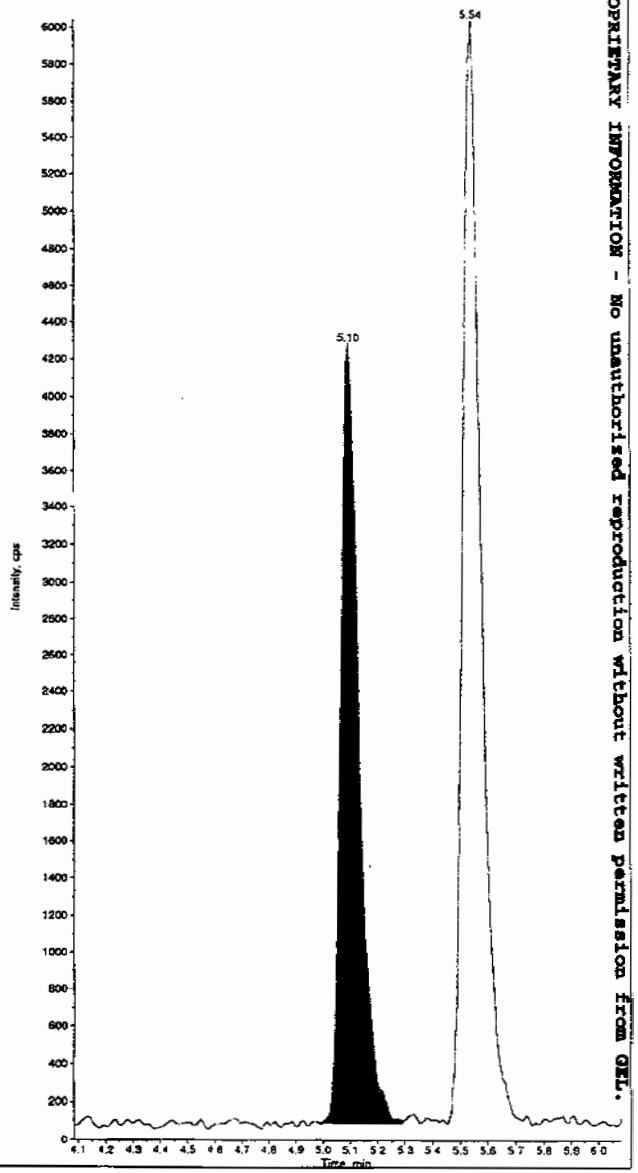

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-27CRI" Sample ID: "[1]LER" File: "EXS0701013.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index:	1	
Sample Type:	QC	
Concentration:	100.	ng/mL
Calculated Conc:	98.7	ng/mL
Acq. Date:	7/1/2009	
Acq. Time:	1:53:55 PM	
Modified:	No	
Proc. Algorithm:	IntelliQuan - IQA	
Min. Peak Height:	350.00	cps
Min. Peak Width:	0.00	sec
Smoothing Width:	3	points
RT Window:	30.0	sec
Expected RT:	5.53	min
Use Relative RT:	No	
Int. Type:	Valley	
Retention Time:	5.54	min
Area:	2.82e+004	counts
Height:	5962.781	cps
Start Time:	5.46	min
End Time:	5.76	min

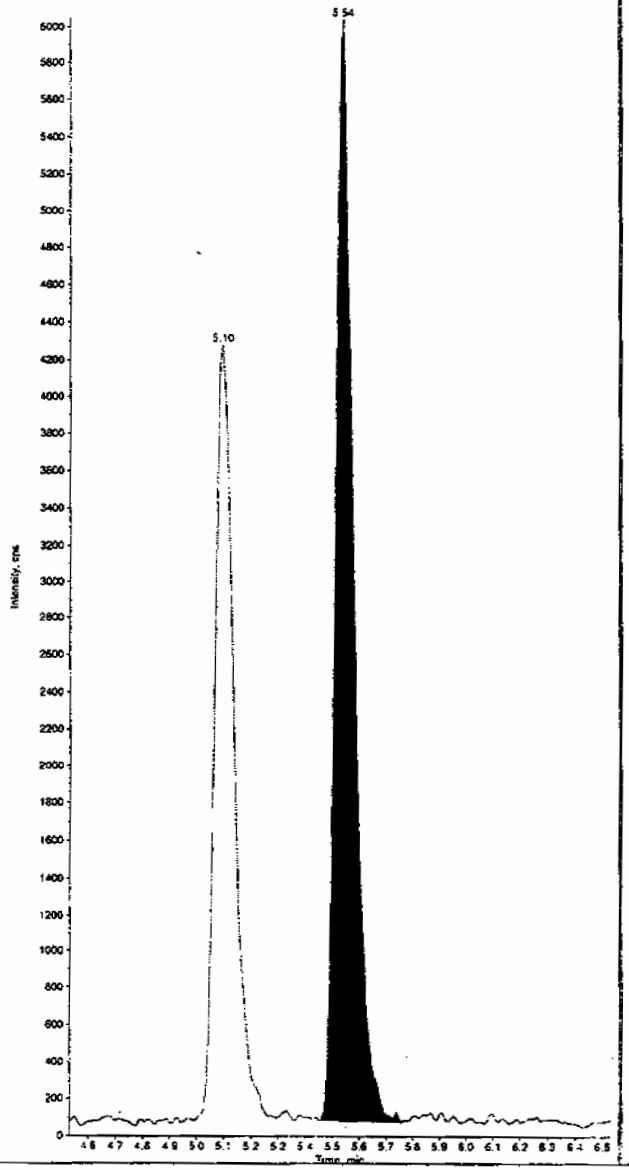

Sample Name: "WXX090701-27CRI" Sample ID: "[1]LER" File: "EXS0701013.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index:	1	
Sample Type:	QC	
Concentration:	100.	ng/mL
Calculated Conc:	103.	ng/mL
Acq. Date:	7/1/2009	
Acq. Time:	1:53:55 PM	
Modified:	No	
Proc. Algorithm:	IntelliQuan - IQA	
Min. Peak Height:	1.00e4	cps
Min. Peak Width:	0.00	sec
Smoothing Width:	3	points
RT Window:	30.0	sec
Expected RT:	10.9	min
Use Relative RT:	No	
Int. Type:	Valley	
Retention Time:	10.9	min
Area:	1.37e+006	counts
Height:	304357.666	cps
Start Time:	10.8	min
End Time:	11.2	min

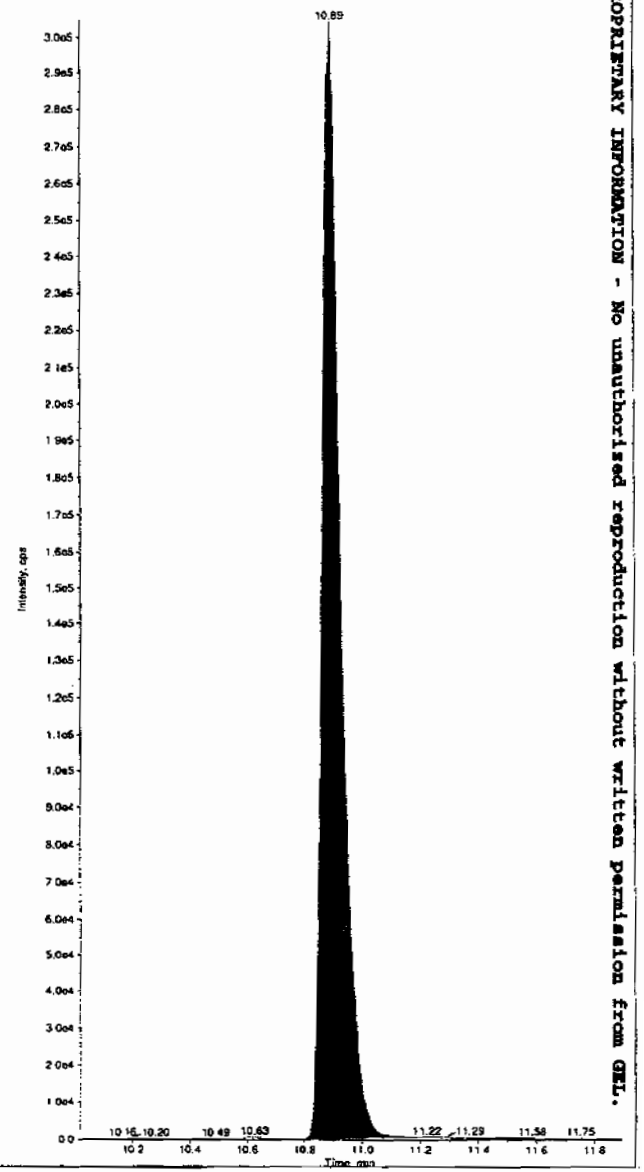

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS0701021.wiff

Analysis Date: 01-JUL-09 16:03

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	451	90	
2,6-Diamino-4-nitrotoluene	500	498	100	
3,4-Dinitrotoluene	250	230	92	
3,5-Dinitroaniline	500	503	101	
TATB	500	469	94	
tris(o-cresyl) phosphate	500	508	102	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090701-26CCV" Sample ID: "|1|LER" File: "EXS0701021.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 469. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:03:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.04 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 3.19e+005 counts
Height: 56745.010 cps
Start Time: 6.89 min
End Time: 7.56 min

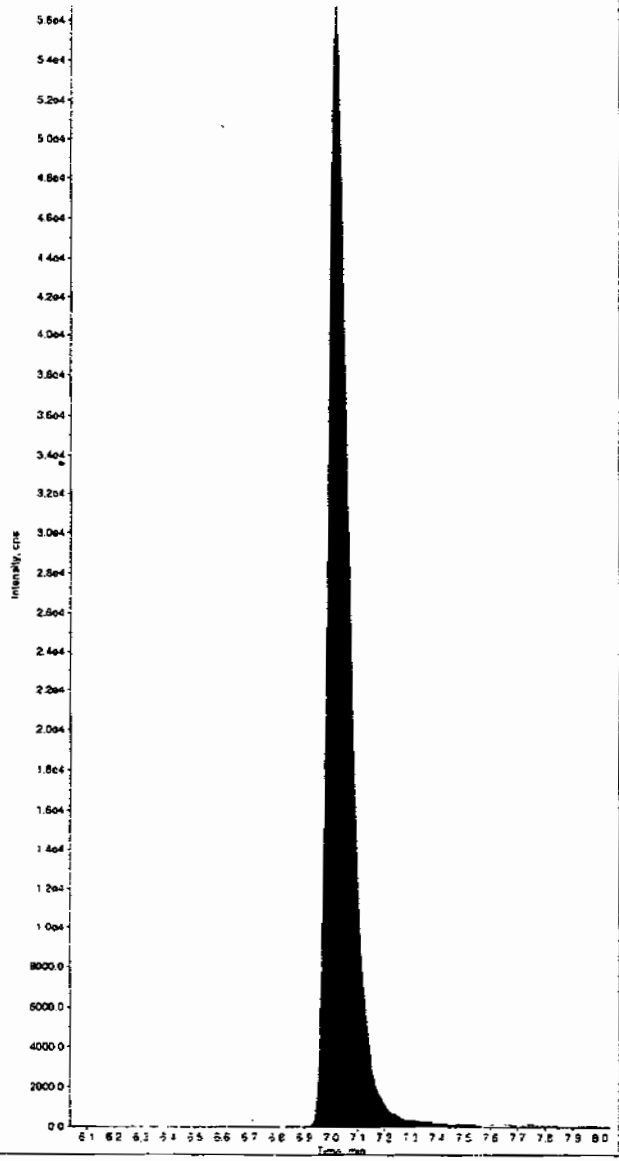

605

Sample Name: "WXX090701-26CCV" Sample ID: "|1|LER" File: "EXS0701021.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 503. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:03:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.25 min
Area: 7.03e+005 counts
Height: 137139.389 cps
Start Time: 8.09 min
End Time: 8.38 min

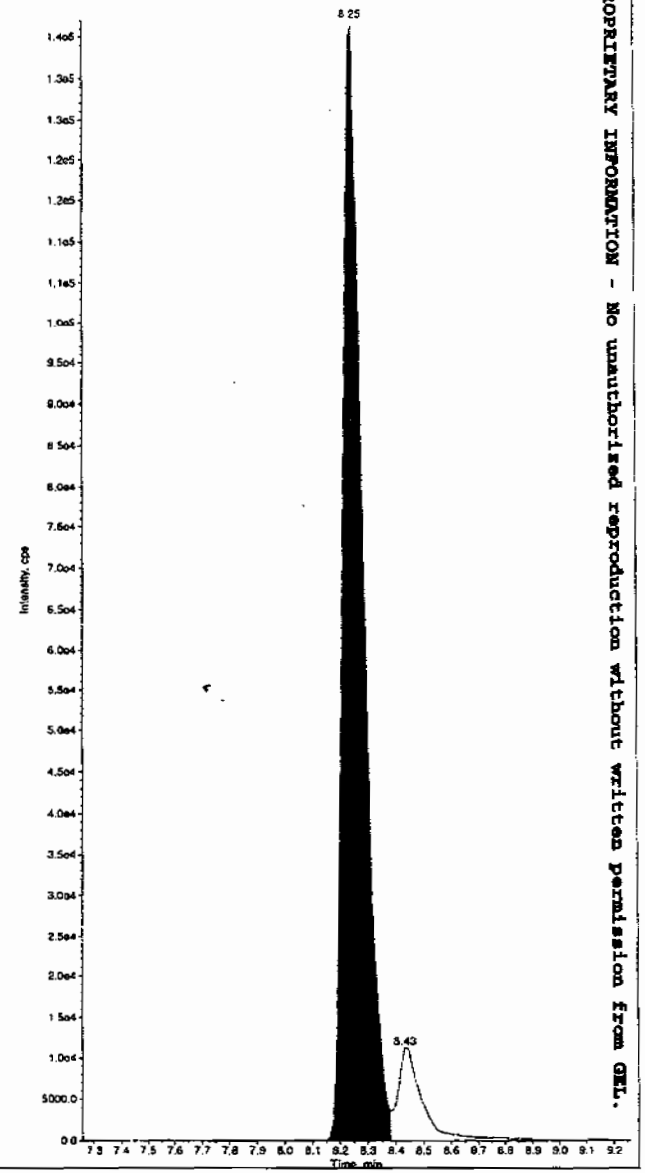

Hmm 07/06/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-26CCV" Sample ID: "[1]LER" File: "EXS0701021.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

```
Sample Index:        1
Sample Type:         QC
Concentration:       250.     ng/mL
Calculated Conc:     230.     ng/mL
Acq. Date:        7/1/2009
Acq. Time:        4:03:37 PM

Modified:            No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height:1460.00    cps
Min. Peak Width:     0.00   sec
Smoothing Width:  3         points
RT Window:          30.0    sec
Expected RT:         8.44   min
Use Relative RT:     No

Int. Type:         Valley
Retention Time:      8.43   min
Area:          5.05e+005   counts
Height:        84792.290   cps
Start Time:          8.35   min
End Time:            9.25   min
```

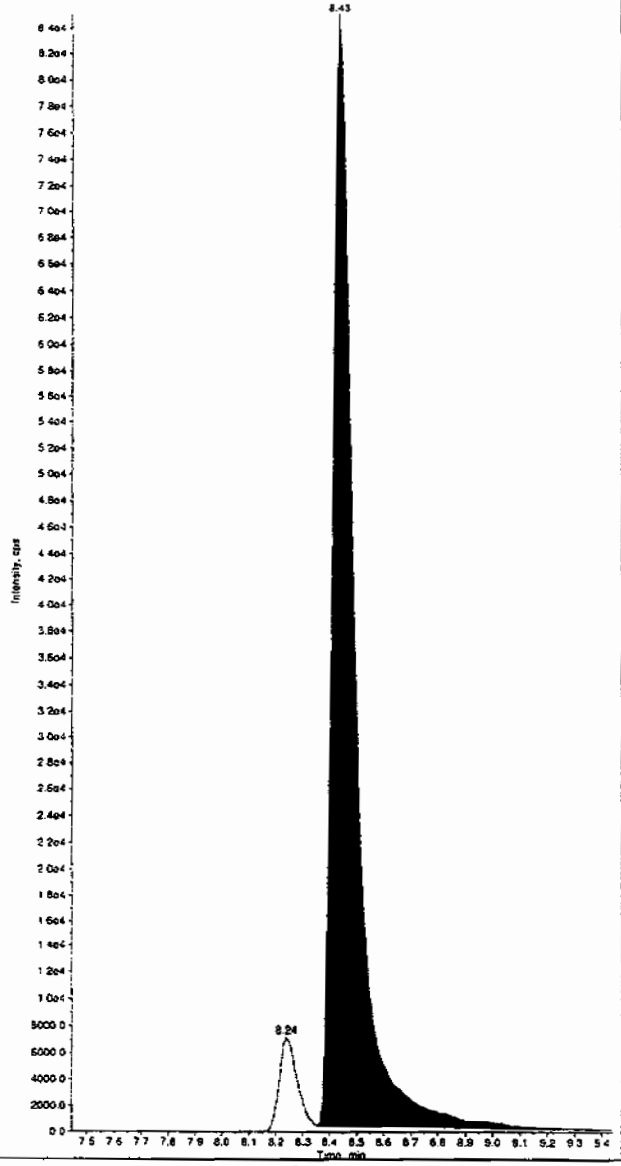

Sample Name: "WXX090701-26CCV" Sample ID: "[1]LER" File: "EXS0701021.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

```
Sample Index:        1
Sample Type:         QC
Concentration:       500.     ng/mL
Calculated Conc:     498.     ng/mL
Acq. Date:        7/1/2009
Acq. Time:        4:03:37 PM

Modified:            No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00    cps
Min. Peak Width:     0.00   sec
Smoothing Width:  3         points
RT Window:          30.0    sec
Expected RT:         5.08   min
Use Relative RT:     No

Int. Type:         Valley
Retention Time:      5.09   min
Area:          1.03e+005   counts
Height:        21561.049   cps
Start Time:          4.93   min
End Time:            5.35   min
```

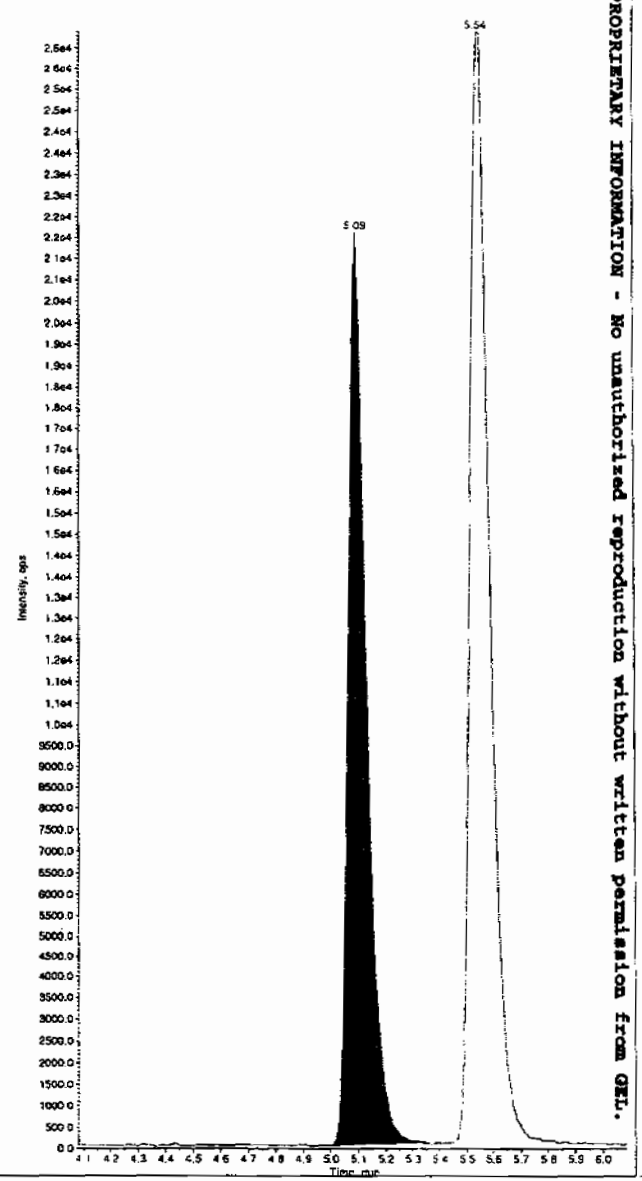

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-26CCV" Sample ID: "[1]LER" File: "EXS0701021.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

```
Sample Index:        1
Sample Type:        QC
Concentration:      500.     ng/mL
Calculated Conc:    451.     ng/mL
Acq. Date:       7/1/2009
Acq. Time:       4:03:37 PM

Modified:           No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00   cps
Min. Peak Width:    0.00   sec
Smoothing Width:  3       points
RT Window:         30.0    sec
Expected RT:        5.53   min
Use Relative RT:    No

Int. Type:        Valley
Retention Time:     5.54   min
Area:        1.33e+005   counts
Height:        26262.451  cps
Start Time:         5.46   min
End Time:           5.78   min
```

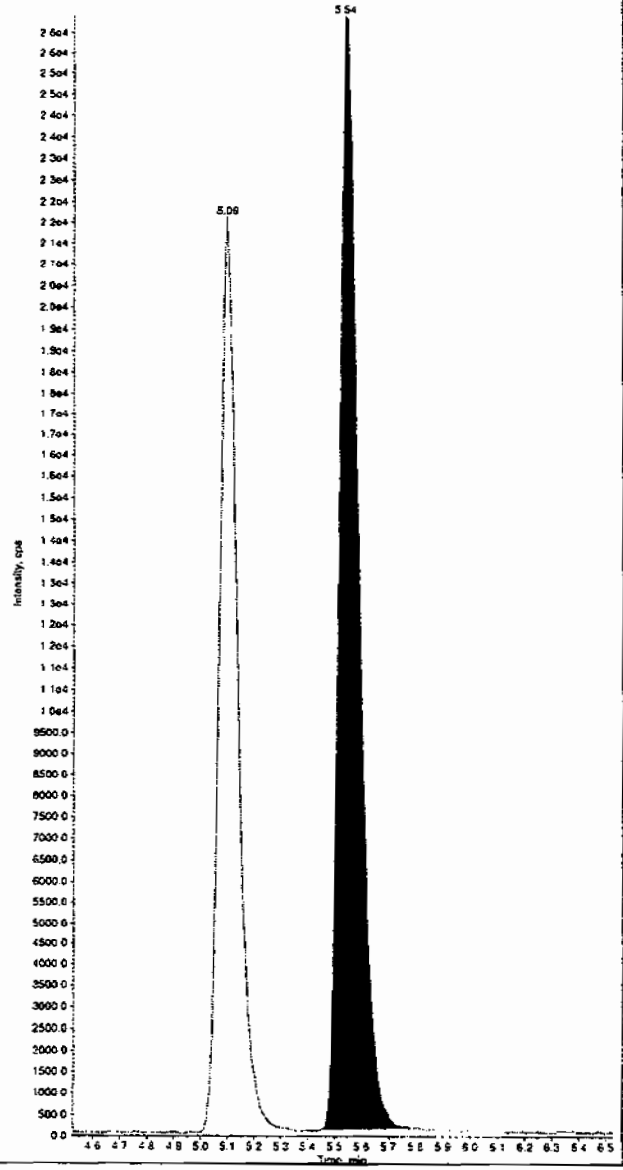

Sample Name: "WXX090701-26CCV" Sample ID: "[1]LER" File: "EXS0701021.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

```
Sample Index:        1
Sample Type:        QC
Concentration:      500.     ng/mL
Calculated Conc:    508.     ng/mL
Acq. Date:       7/1/2009
Acq. Time:       4:03:37 PM

Modified:           No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4   cps
Min. Peak Width:    0.00   sec
Smoothing Width:  3       points
RT Window:         30.0    sec
Expected RT:        10.9   min
Use Relative RT:    No

Int. Type:        Valley
Retention Time:     10.9   min
Area:        6.47e+006   counts
Height:      1431122.681  cps
Start Time:         10.8   min
End Time:           11.2   min
```

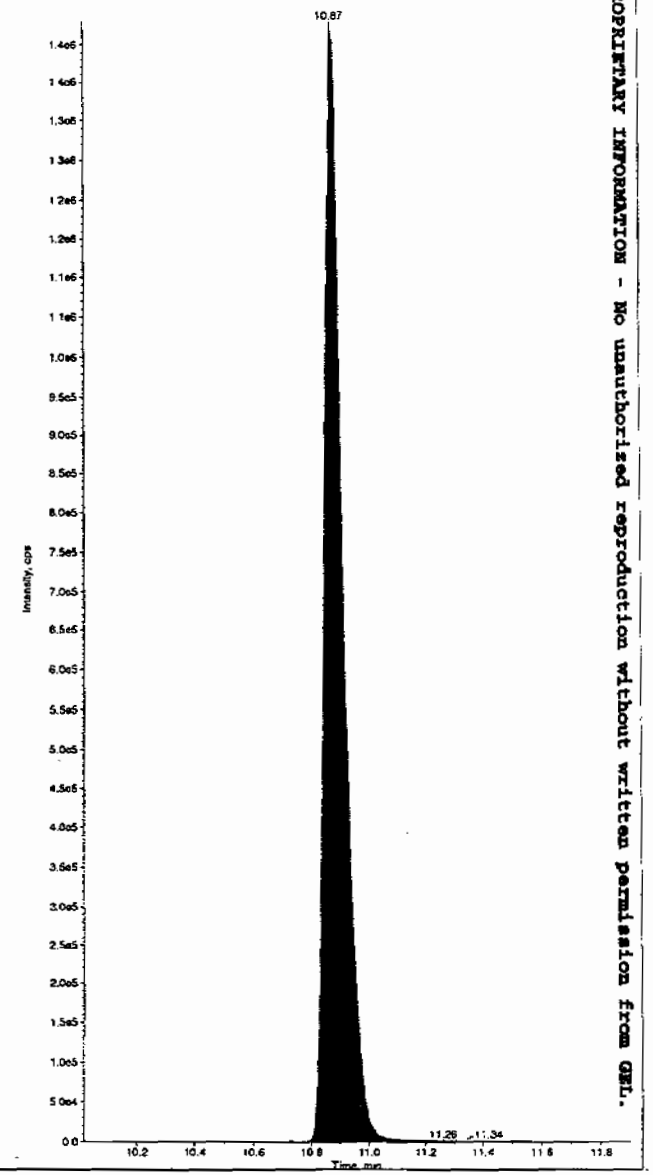

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2473

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS0701023.wiff

Analysis Date: 01-JUL-09 16:36

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	99.1	99	
2,6-Diamino-4-nitrotoluene	100	104	104	
3,4-Dinitrotoluene	50	47.5	95	
3,5-Dinitroaniline	100	81.2	81	
TATB	100	93.5	94	
tris(o-cresyl) phosphate	100	102	102	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090701-27CRI" Sample ID: "[1]LER" File: "EXS0701023.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

```
Sample Index:          1
Sample Type:           QC
Concentration:       100.     ng/mL
Calculated Conc:      93.5     ng/mL
Acq. Date:        7/1/2009
Acq. Time:        4:36:02 PM

Modified:             No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height:2500.00    cps
Min. Peak Width:     0.00    sec
Smoothing Width:  3        points
RT Window:          30.0     sec
Expected RT:         7.04    min
Use Relative RT:     No

Int. Type:         Valley
Retention Time:      7.02    min
Area:          6.43e+004    counts
Height:          12525.168  cps
Start Time:          6.87    min
End Time:            7.46    min
```

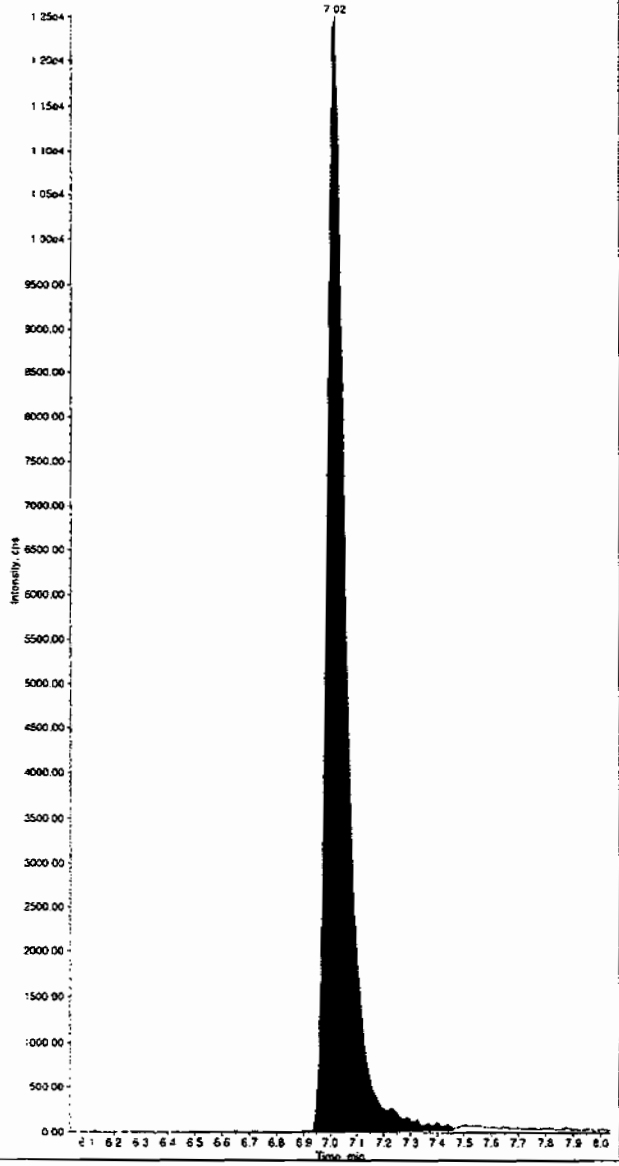

609

Sample Name: "WXX090701-27CRI" Sample ID: "[1]LER" File: "EXS0701023.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

```
Sample Index:          1
Sample Type:           QC
Concentration:       100.     ng/mL
Calculated Conc:      81.2     ng/mL
Acq. Date:        7/1/2009
Acq. Time:        4:36:02 PM

Modified:             No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height:2000.00    cps
Min. Peak Width:     0.00    sec
Smoothing Width:  3        points
RT Window:          15.0     sec
Expected RT:         8.26    min
Use Relative RT:     No

Int. Type:         Valley
Retention Time:      8.25    min
Area:          1.37e+005    counts
Height:        29695.374    cps
Start Time:          8.06    min
End Time:            8.39    min
```

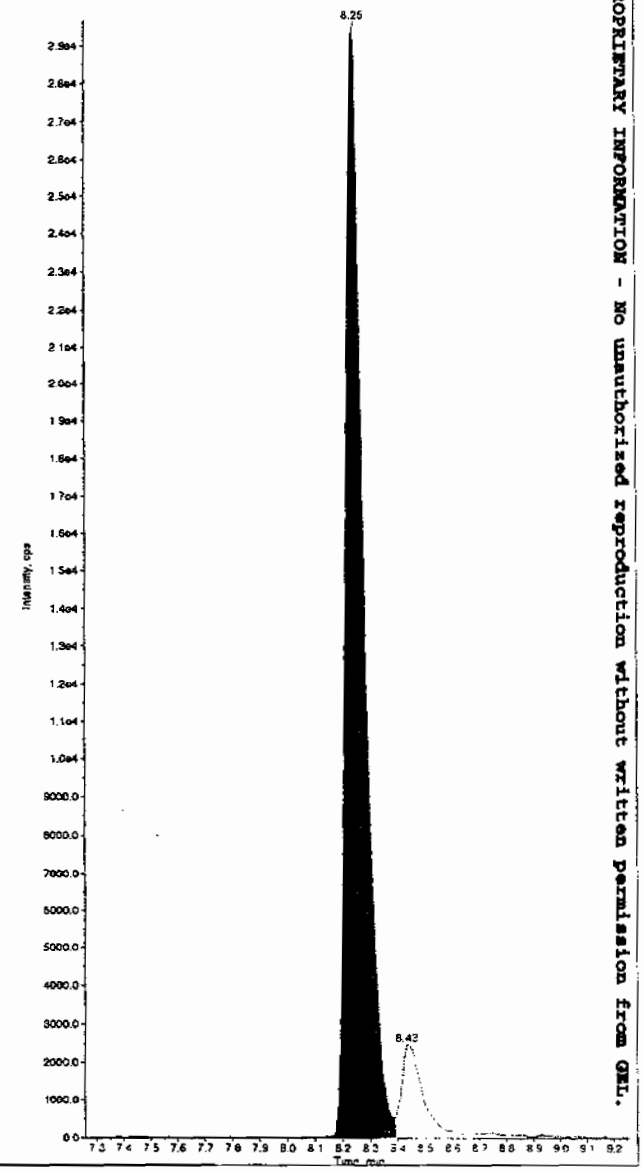

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701023.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 47.5 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:36:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.44 min
Area: 9.61e+004 counts
Height: 17450.579 cps
Start Time: 8.35 min
End Time: 8.94 min

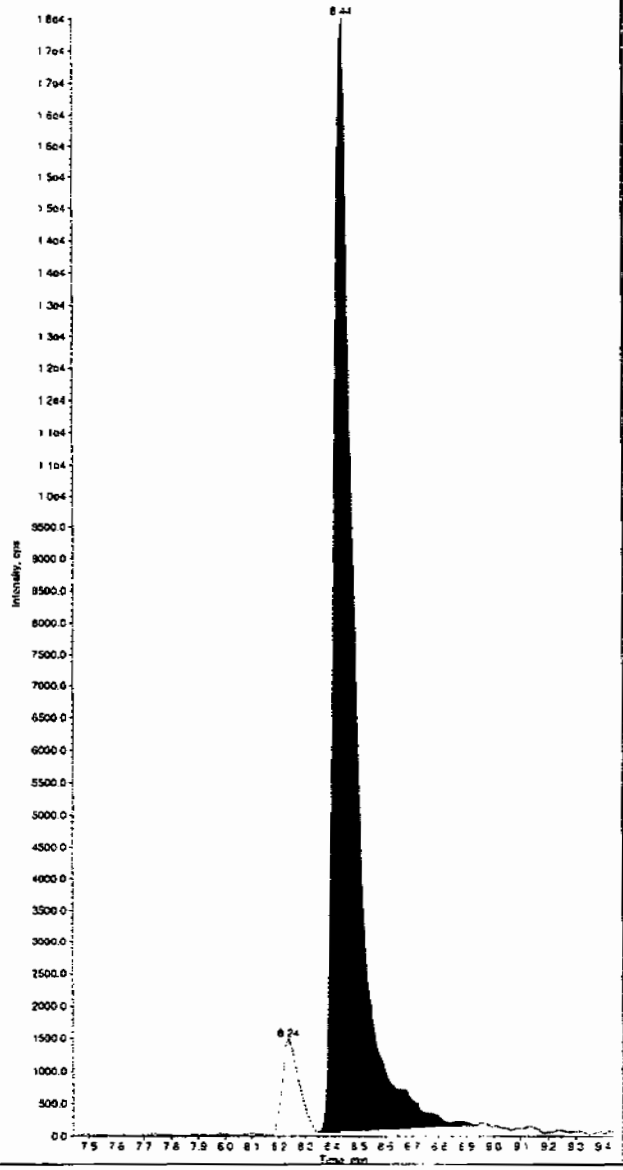

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701023.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 104. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:36:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.09 min
Area: 2.11e+004 counts
Height: 4497.255 cps
Start Time: 4.97 min
End Time: 5.32 min

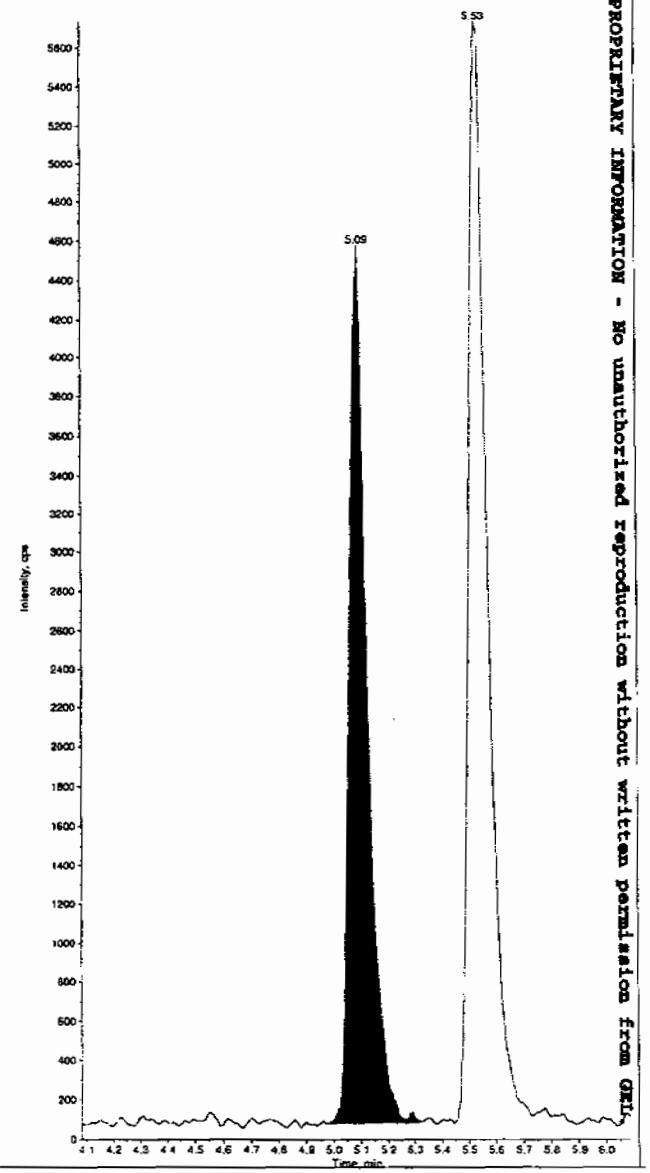

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701023.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 99.1 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:36:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 2.83e+004 counts
Height: 5664.690 cps
Start Time: 5.45 min
End Time: 5.89 min

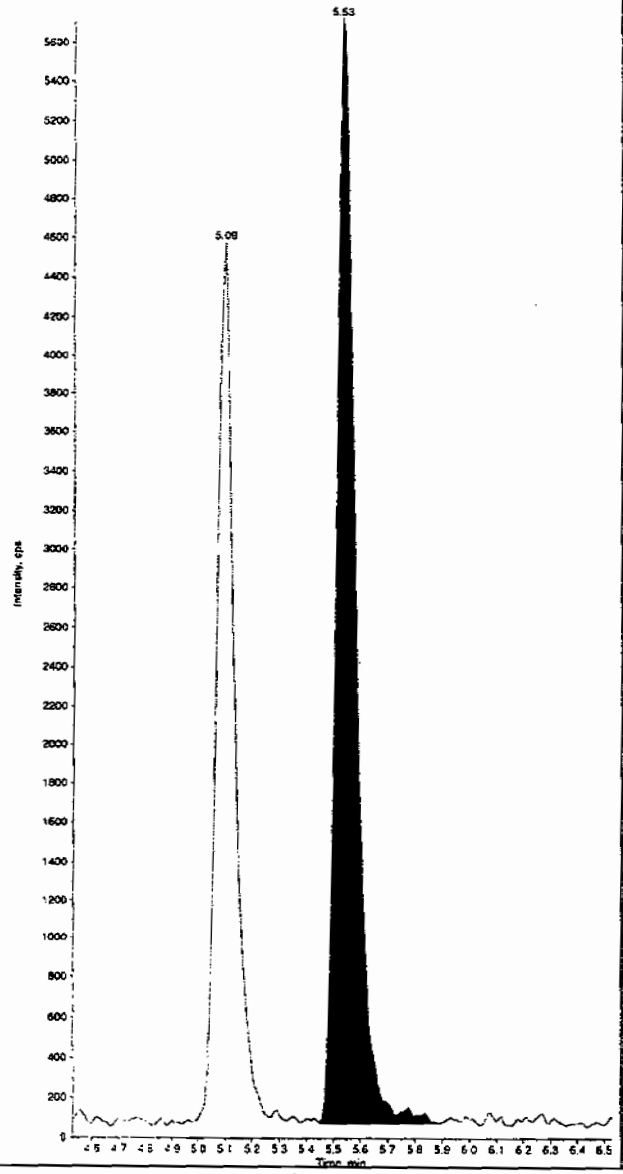

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701023.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 102. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:36:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.37e+006 counts
Height: 299398.926 cps
Start Time: 10.8 min
End Time: 11.2 min

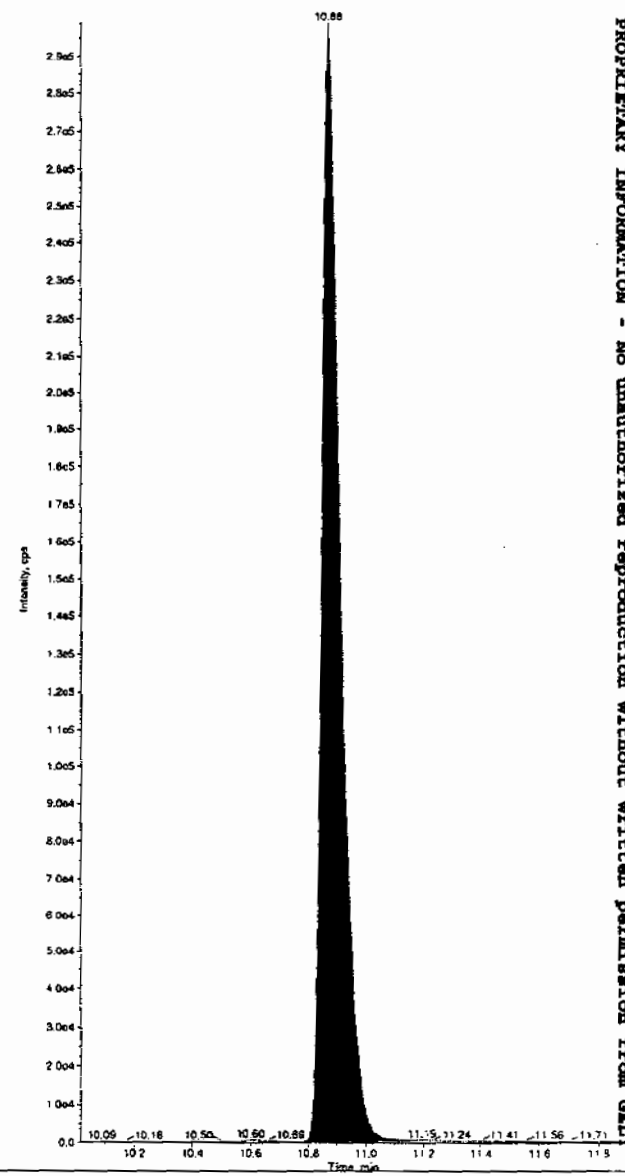

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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QUALITY CONTROL DATA

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 880974

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 1201870673

Sample Amount 2

Moisture:

Amount Units g

Date Received: 29-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630049a

Date Analyzed: 01-JUL-09 14:13

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630049a
Date: 01-Jul-2009
Time: 14:13:22
ID: 1201870673 | LANW | 880975 | Solid | MB | 21
Vial: 1:3,A

MAP 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.600e+003

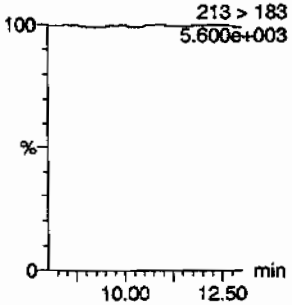

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.575e+003

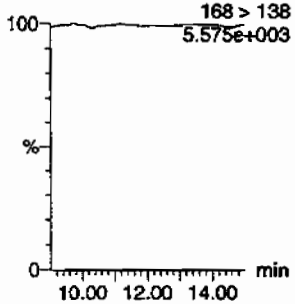

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.944e+004

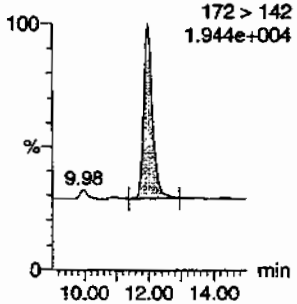

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.572e+003

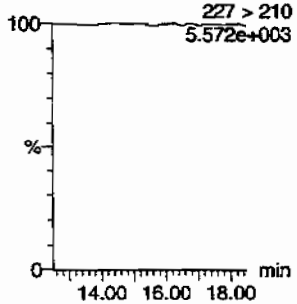

24-dinitrotoluene
F8:MRM of 2 channels,AP-
14.25
182 > 152
3.955e+004

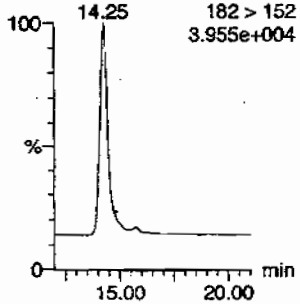

26-dinitrotoluene
F8:MRM of 2 channels,AP-
14.25
182 > 152
3.955e+004

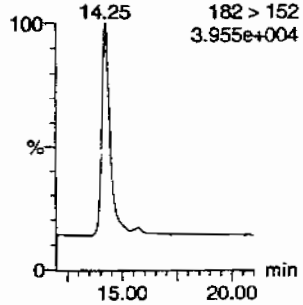

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.912e+004

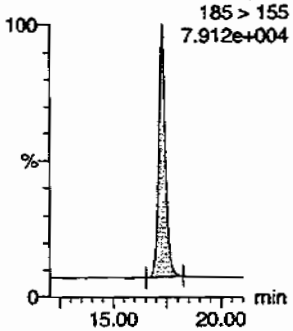

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.634e+003

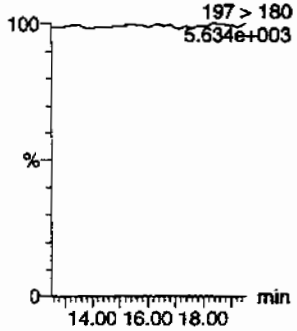

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.555e+003

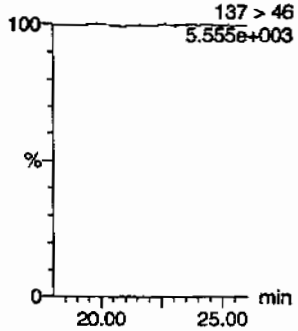

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
3.955e+004

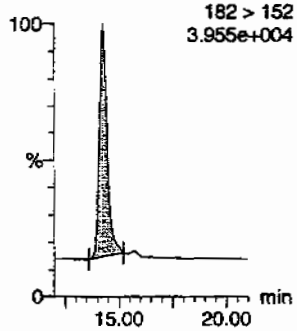

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.555e+003

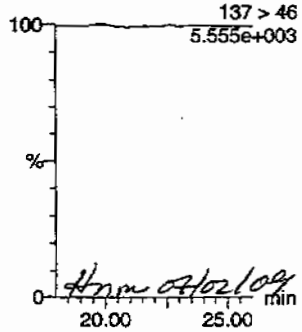

Hnm 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.595e+003

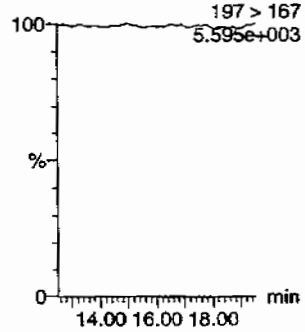

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

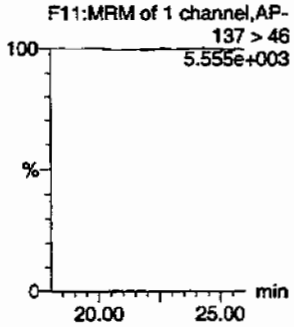

HMX

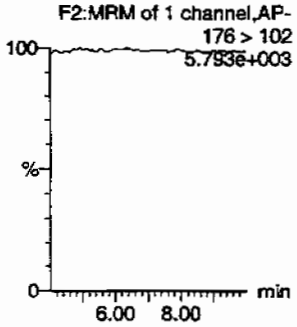

Nitrobenzene

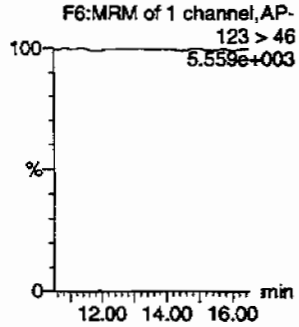

PETN

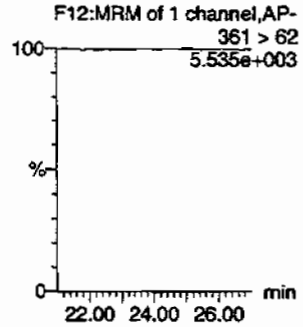

RDX

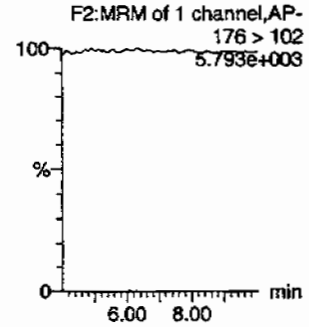

Tetryl

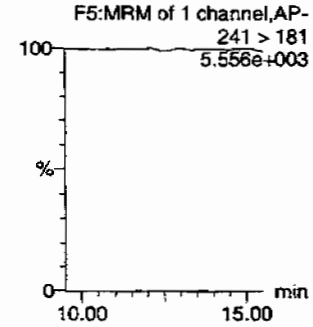

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modifiers	Modified	Amount	%Rec	%Dev	S/N
1201870673	HMX	176 > 102			4465.961									
1201870673	RDX	176 > 102			4465.961									
1201870673	135-Trinitrobenzene	213 > 183			4465.961									
1201870673	13-Dinitrobenzene-d4	172 > 142	12.00	4465.961		4465.961	4465.961	bb			582.7661	116.6	16.6	473.7
1201870673	13-Dinitrobenzene	168 > 138			4465.961									
1201870673	Tetryl	241 > 181			4465.961									
1201870673	Nitrobenzene	123 > 46			4465.961									
1201870673	4-Amino-26-dinitrotoluene	197 > 167			27830.145									
1201870673	2-Amino-46-dinitrotoluene	197 > 180			27830.145									
1201870673	246-Trinitrotoluene	227 > 210			27830.145									
1201870673	34-dinitrotoluene	182 > 152	14.25	14046.523	27830.145	14046.523	252.362	bb			259.1544	103.7	3.7	782.6
1201870673	26-dinitrotoluene	182 > 152			27830.145									
1201870673	24-dinitrotoluene	182 > 152			27830.145									
1201870673	26-dinitrotoluene-d3	185 > 155	17.27	27830.145		27830.145	27830.145	bb			580.5825	116.1	16.1	1293.5
1201870673	2-Nitrotoluene	137 > 46			27830.145									
1201870673	4-Nitrotoluene	137 > 46			27830.145									
1201870673	3-Nitrotoluene	137 > 46			27830.145									
1201870673	PETN	361 > 62			27830.145									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 880974

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 1201870673

Sample Amount 2

Moisture:

Amount Units g

Date Received: 29-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0701016.wiff

Date Analyzed: 01-JUL-09 14:42

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Lab file 109

Sample Name: "1201870673" Sample ID: "880975|2|LER" File: "EXS0701016.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:42:37 PM

Modified: No

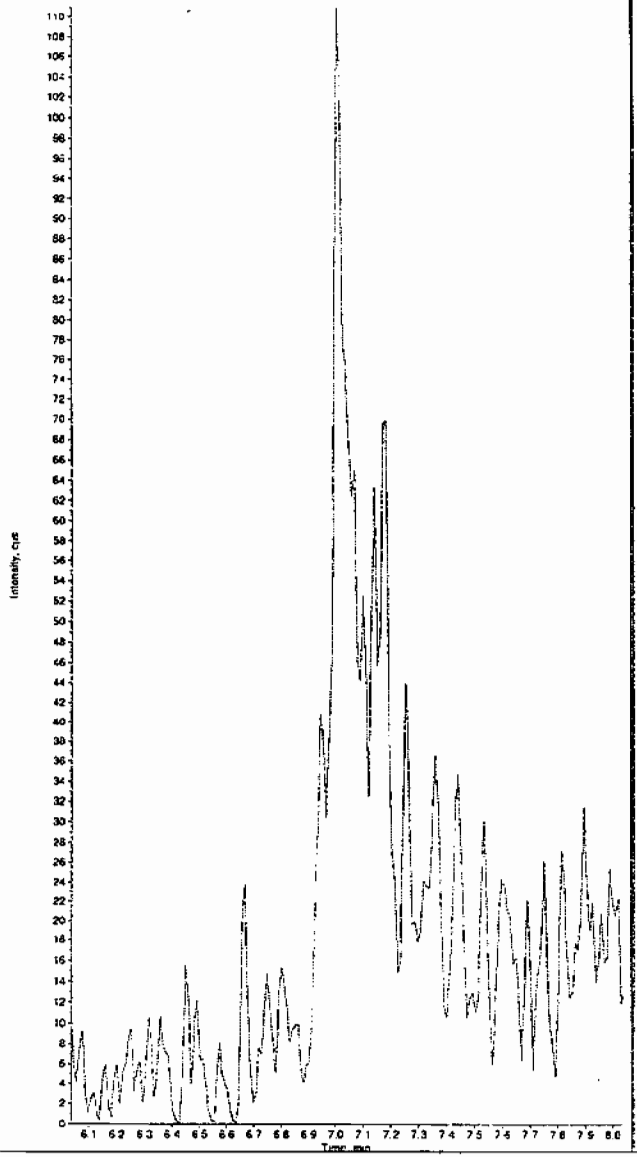

Sample Name: "1201870673" Sample ID: "880975|2|LER" File: "EXS0701016.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:42:37 PM

Modified: No

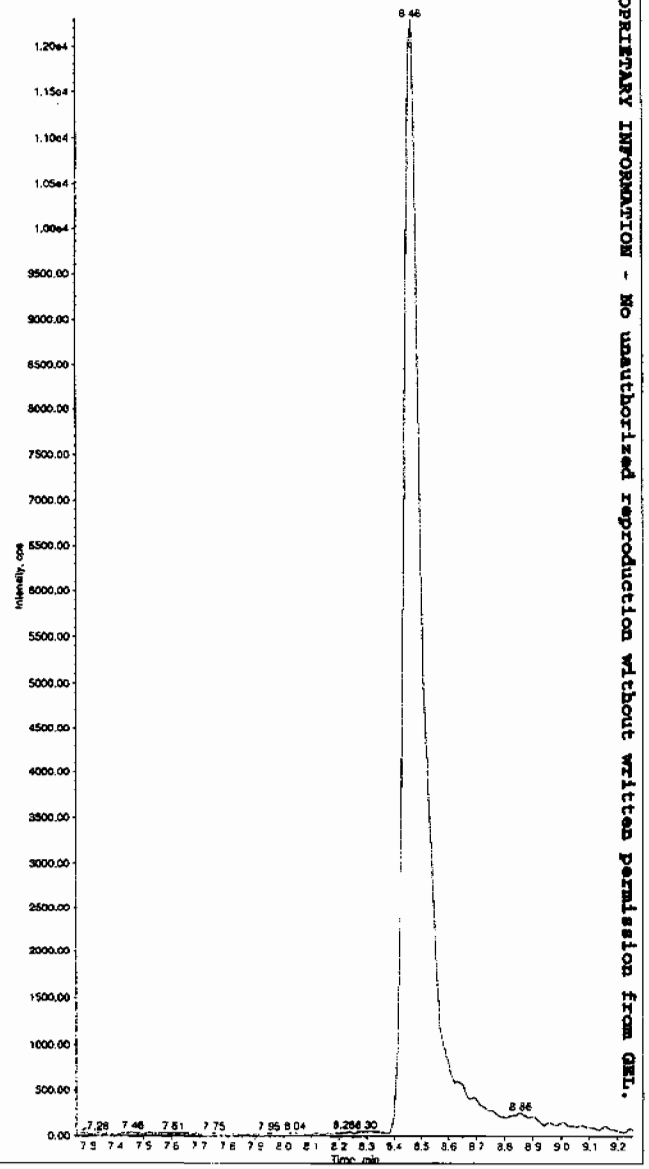

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HMK 07/14/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201870673" Sample ID: "880975|2|LER" File: "EXS0701016.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 274. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:42:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.45 min
Area: 6.01e+005 counts
Height: 112556.419 cps
Start Time: 8.36 min
End Time: 9.36 min

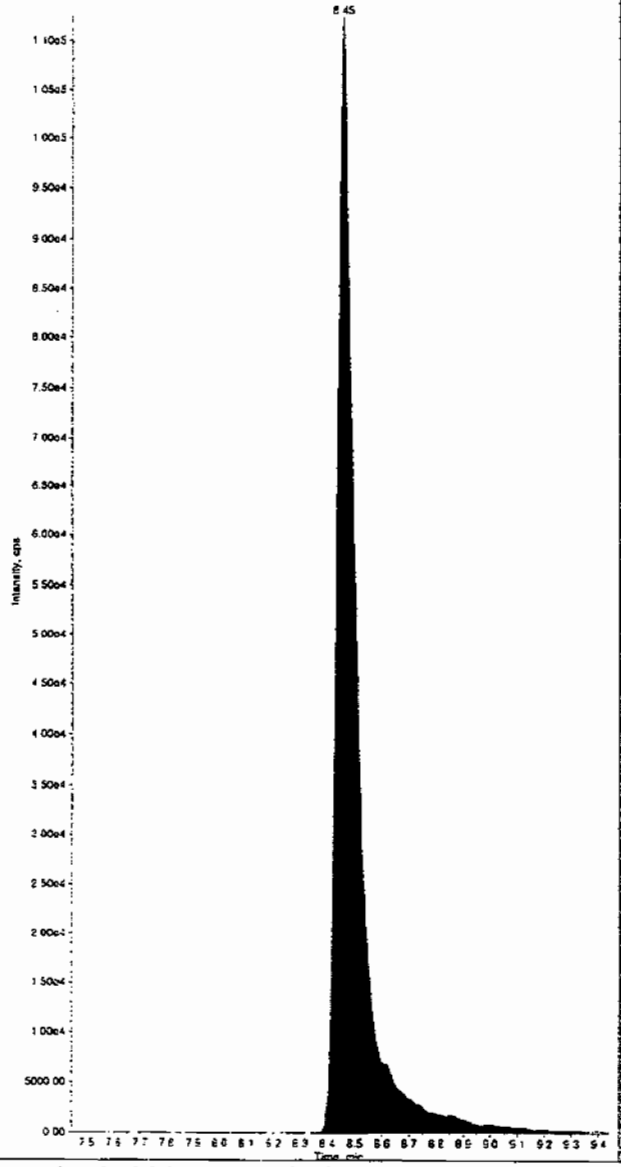

Sample Name: "1201870673" Sample ID: "880975|2|LER" File: "EXS0701016.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:42:37 PM

Modified: No

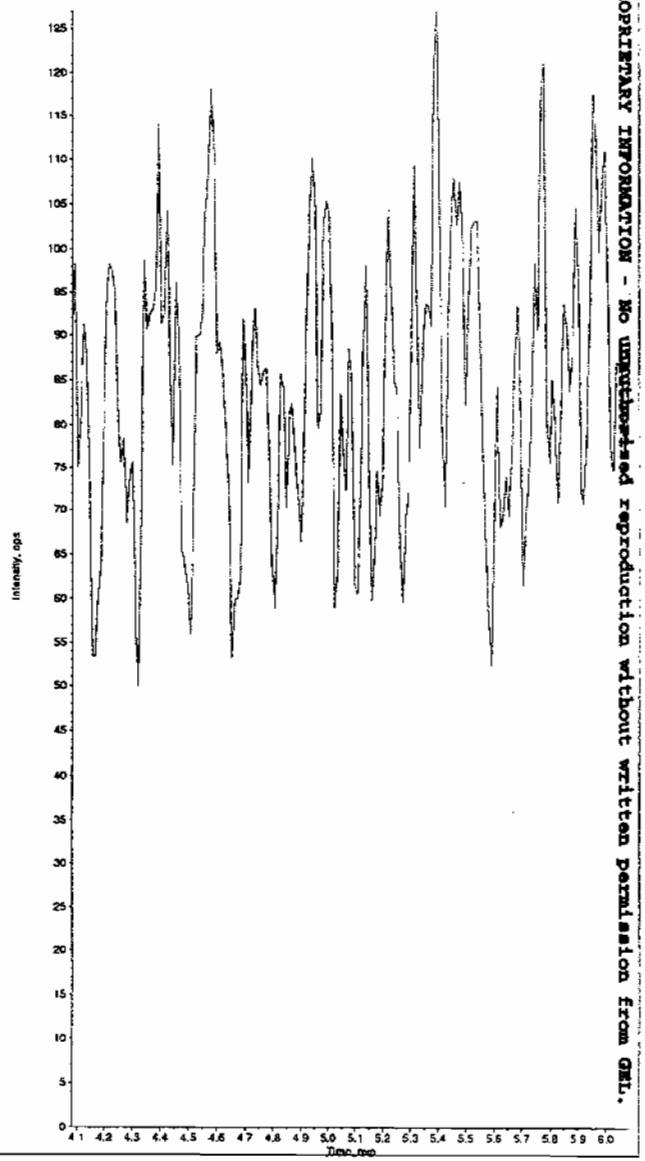

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201870673" Sample ID: "880975|2|LER" File: "EXS0701016.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:42:37 PM

Modified: No

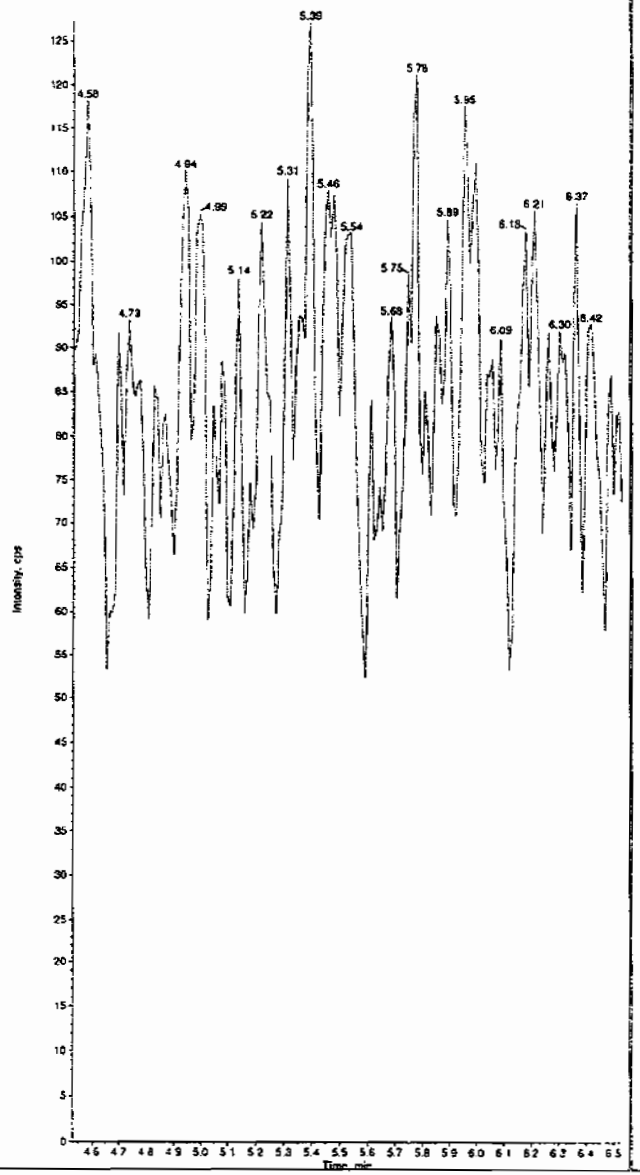

Sample Name: "1201870673" Sample ID: "880975|2|LER" File: "EXS0701016.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:42:37 PM

Modified: No

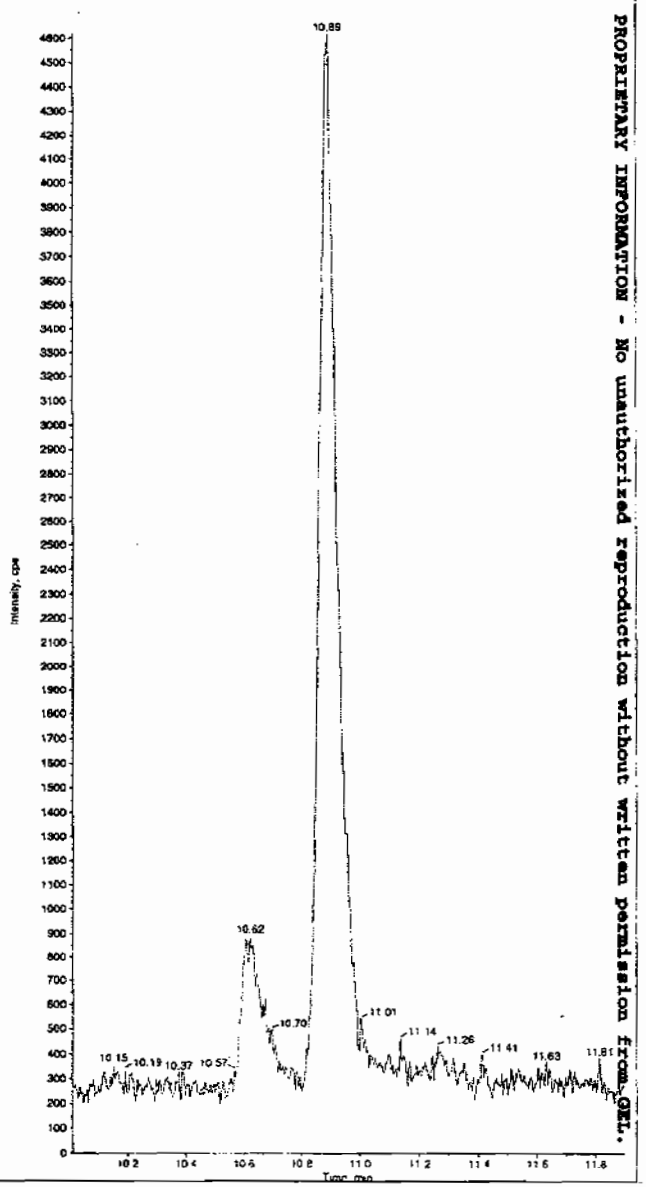

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 880974

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 1201870674

Sample Amount 2

Moisture:

Amount Units g

Date Received: 29-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630050a

Date Analyzed: 01-JUL-09 14:42

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5570	
121-14-2	2,4-Dinitrotoluene	5410	
121-82-4	RDX	5070	
19406-51-0	4-Amino-2,6-dinitrotoluene	5200	
2691-41-0	HMX	5050	
35572-78-2	2-Amino-4,6-dinitrotoluene	5800	
479-45-8	Tetryl	4280	
606-20-2	2,6-Dinitrotoluene	4880	
78-11-5	PETN	4260	
88-72-2	o-Nitrotoluene	4020	
98-95-3	Nitrobenzene	4290	
99-08-1	m-Nitrotoluene	4150	
99-35-4	1,3,5-Trinitrobenzene	4510	
99-65-0	m-Dinitrobenzene	4900	
99-99-0	p-Nitrotoluene	3800	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630050a
Date: 01-Jul-2009
Time: 14:42:51
ID: 1201870674 | LANL | 380975 | Soil | LC8 | 21
Vial: 1:3,B

7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.806e+004

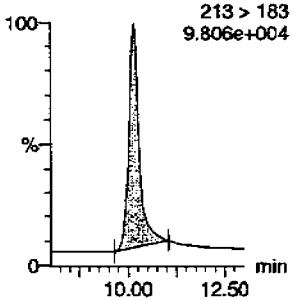

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.164e+004

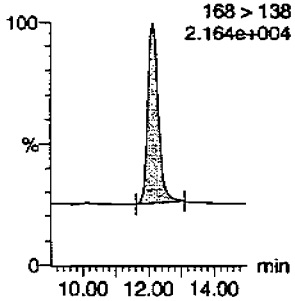

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.983e+004

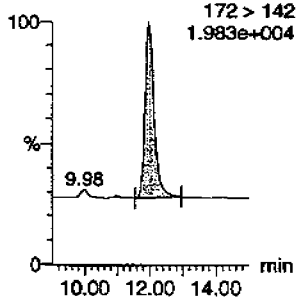

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.166e+005

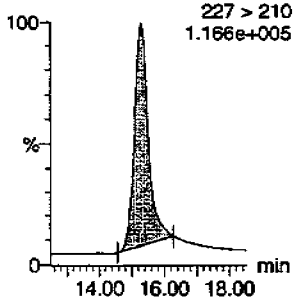

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.341e+004

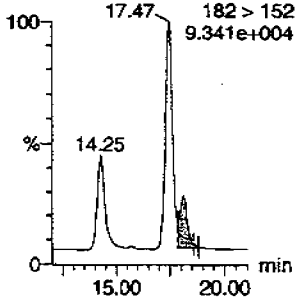

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.341e+004

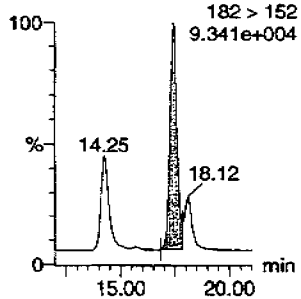

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
8.163e+004

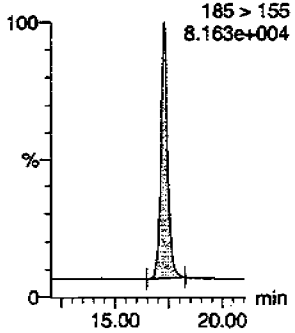

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.715e+004

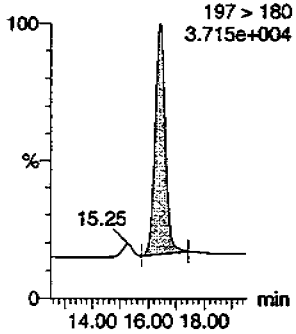

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
9.864e+003

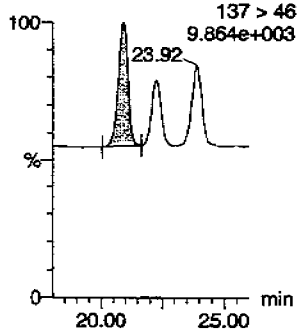

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.341e+004

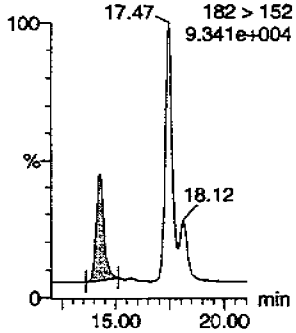

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
9.864e+003

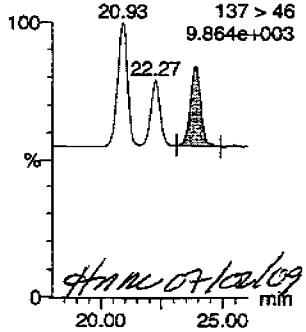

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.849e+004

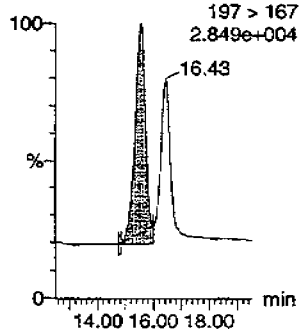

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

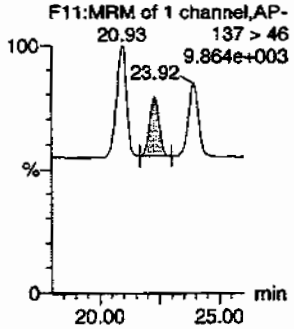

HMX

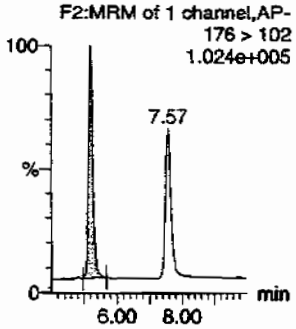

Nitrobenzene

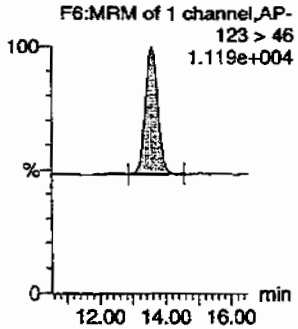

PETN

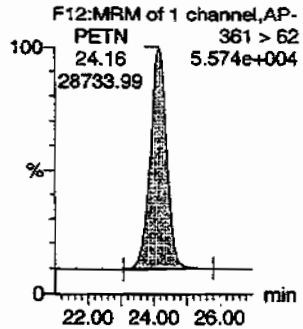

RDX

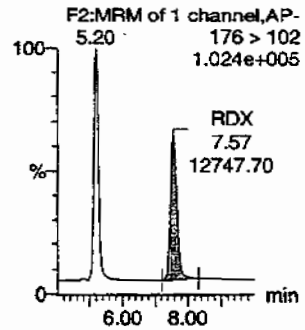

Tetryl

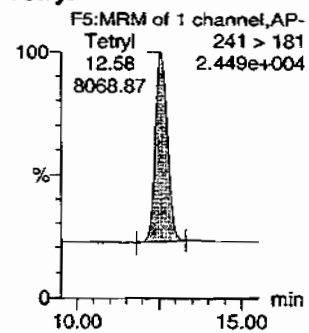

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Dage	Mod Date	Mod Time	Conc	%Rec	%Dev	S/N
1201870674	HMX	176 > 102	5.20	15516.947	4686.673	15516.947	1655.433	bb			504.9994	101.0	1.0	2240.1
1201870674	RDX	176 > 102	7.57	12747.704	4686.673	12747.704	1359.995	bb			507.2756	101.5	1.5	1443.7
1201870674	135-Trinitrobenzene	213 > 183	10.14	28450.520	4686.673	28450.520	3035.258	bb			451.1567	90.2	-9.8	2640.9
1201870674	13-Dinitrobenzene-d4	172 > 142	12.00	4686.673		4686.673	4686.673	bb			611.5670	122.3	22.3	671.3
1201870674	13-Dinitrobenzene	168 > 138	12.14	6185.884	4686.673	6185.884	659.944	bb			490.1411	98.0	-2.0	278.8
1201870674	Tetryl	241 > 181	12.58	8068.867	4686.673	8068.867	860.831	bb			427.6250	85.5	-14.5	481.6
1201870674	Nitrobenzene	123 > 46	13.54	2499.846	4686.673	2499.846	266.697	bb			428.6832	85.7	-14.3	263.1
1201870674	4-Amino-26-dinitrotoluene	197 > 167	15.56	10058.168	28585.291	10058.168	175.933	MM	02-Jul-09	07:54:59	520.1772	104.0	4.0	325.6
1201870674	2-Amino-46-dinitrotoluene	197 > 180	16.43	13131.943	28585.291	13131.943	229.698	bb			580.3634	116.1	16.1	500.1
1201870674	246-Trinitrotoluene	227 > 210	15.28	52666.172	28585.291	52666.172	921.211	bb			557.2635	111.5	11.5	1186.4
1201870674	34-dinitrotoluene	182 > 152	14.25	15021.075	28585.291	15021.075	262.741	bb			269.8135	107.9	7.9	520.7
1201870674	26-dinitrotoluene	182 > 152	17.47	32719.438	28585.291	32719.438	572.312	MM	02-Jul-09	07:58:02	488.2550	97.7	-2.3	1256.1
1201870674	24-dinitrotoluene	182 > 152	18.12	8111.241	28585.291	8111.241	141.878	MM	02-Jul-09	08:01:22	541.2779	108.3	8.3	286.0
1201870674	26-dinitrotoluene-d3	185 > 155	17.27	28585.291		28585.291	28585.291	bb			596.3361	119.3	19.3	1374.4
1201870674	2-Nitrotoluene	137 > 46	20.93	2110.354	28585.291	2110.354	36.913	bb			402.4673	80.5	-19.5	675.3
1201870674	4-Nitrotoluene	137 > 46	22.27	1050.434	28585.291	1050.434	18.374	bb			380.3323	76.1	-23.9	356.3
1201870674	3-Nitrotoluene	137 > 46	23.92	1386.091	28585.291	1386.091	24.245	bb			414.6979	82.9	-17.1	436.7
1201870674	PETN	361 > 62	24.16	28733.992	28585.291	28733.992	502.601	bb			426.0413	85.2	-14.8	5173.7

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 880974

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 1201870674

Sample Amount 2

Moisture:

Amount Units g

Date Received: 29-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0701017.wiff

Date Analyzed: 01-JUL-09 14:58

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	3690	
59229-75-3	2,6-Diamino-4-nitrotoluene	4610	
618-87-1	3,5-Dinitroaniline	4850	
6629-29-4	2,4-Diamino-6-nitrotoluene	3890	
78-30-8	tris(o-cresyl) phosphate	5270	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sample Name: "1201870674" Sample ID: "880975|2|LER" File: "EXS0701017.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 369. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:58:50 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.04 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 2.52e+005 counts
Height: 48131.599 cps
Start Time: 6.90 min
End Time: 7.50 min

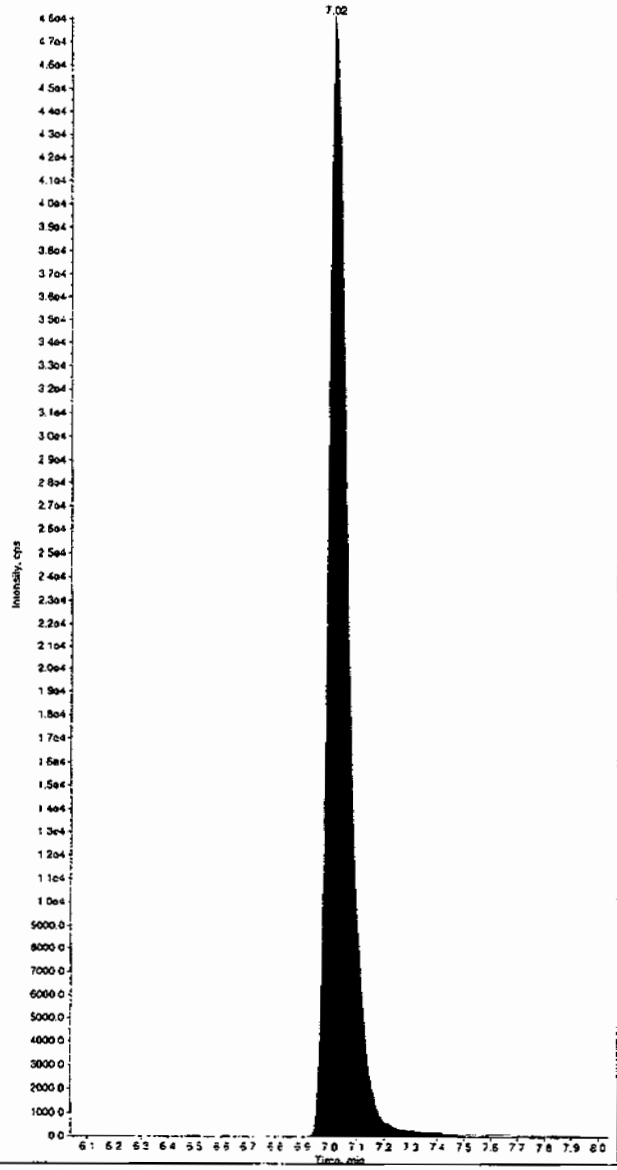

624

Sample Name: "1201870674" Sample ID: "880975|2|LER" File: "EXS0701017.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 485. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:58:50 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.26 min
Area: 6.79e+005 counts
Height: 148941.925 cps
Start Time: 8.17 min
End Time: 8.38 min

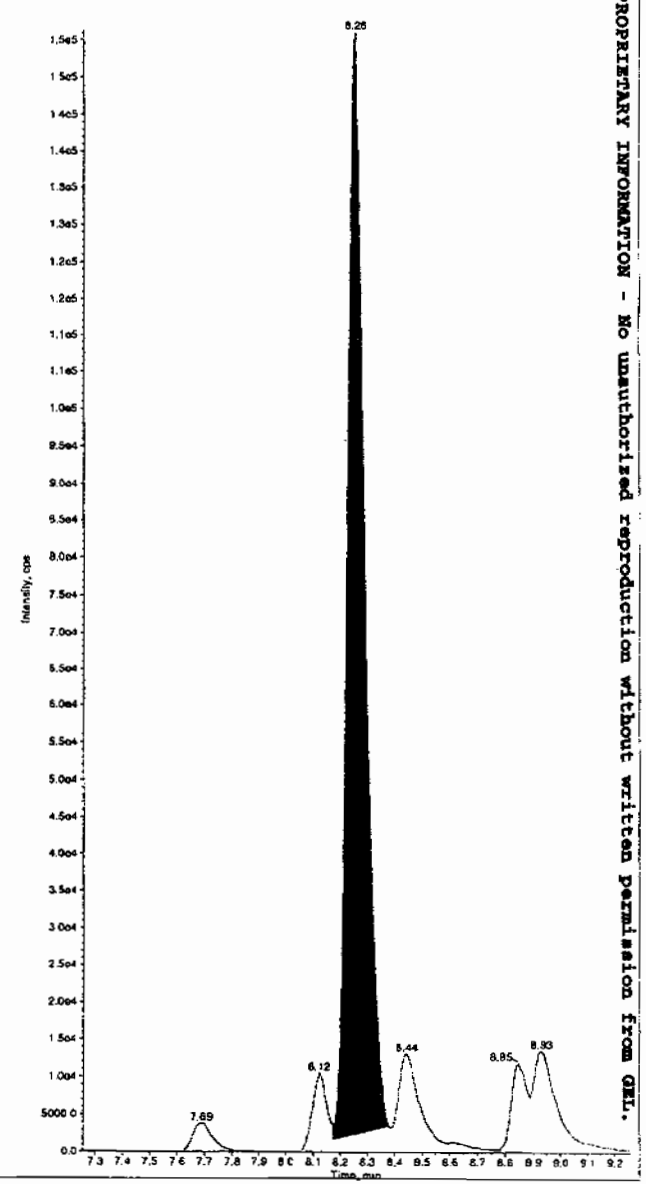

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201870674" Sample ID: "880975|2|LER" File: "EXS0701017.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 249. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:58:50 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.43 min
Area: 5.47e+005 counts
Height: 101507.805 cps
Start Time: 8.36 min
End Time: 8.73 min

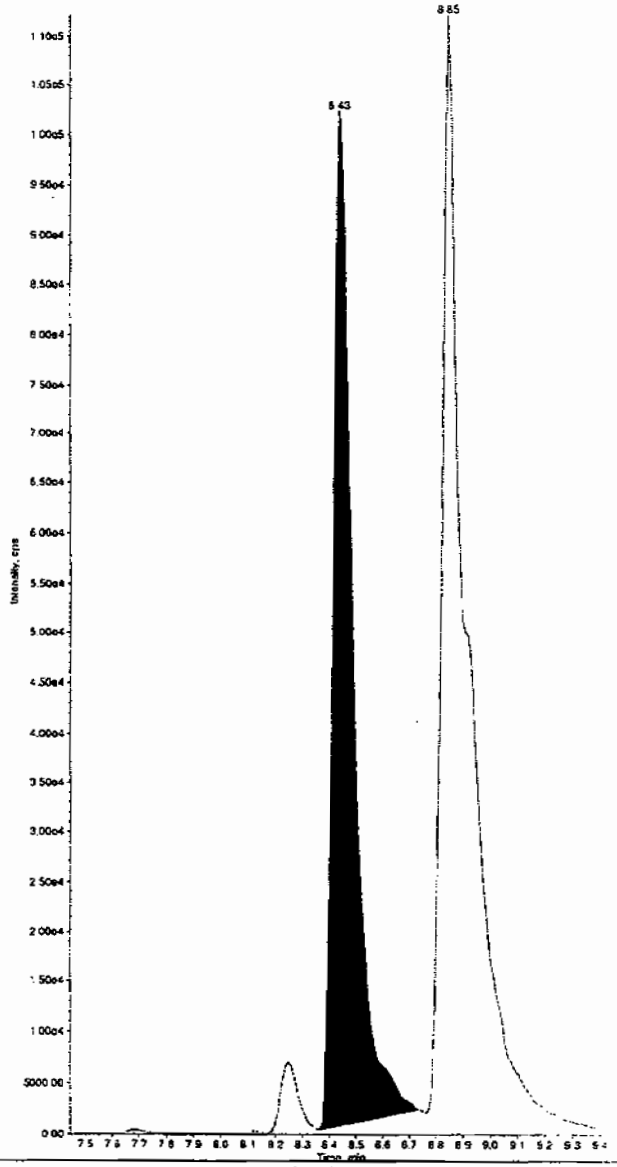

Sample Name: "1201870674" Sample ID: "880975|2|LER" File: "EXS0701017.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 461. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:58:50 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.08 min
Area: 9.49e+004 counts
Height: 19480.782 cps
Start Time: 4.94 min
End Time: 5.37 min

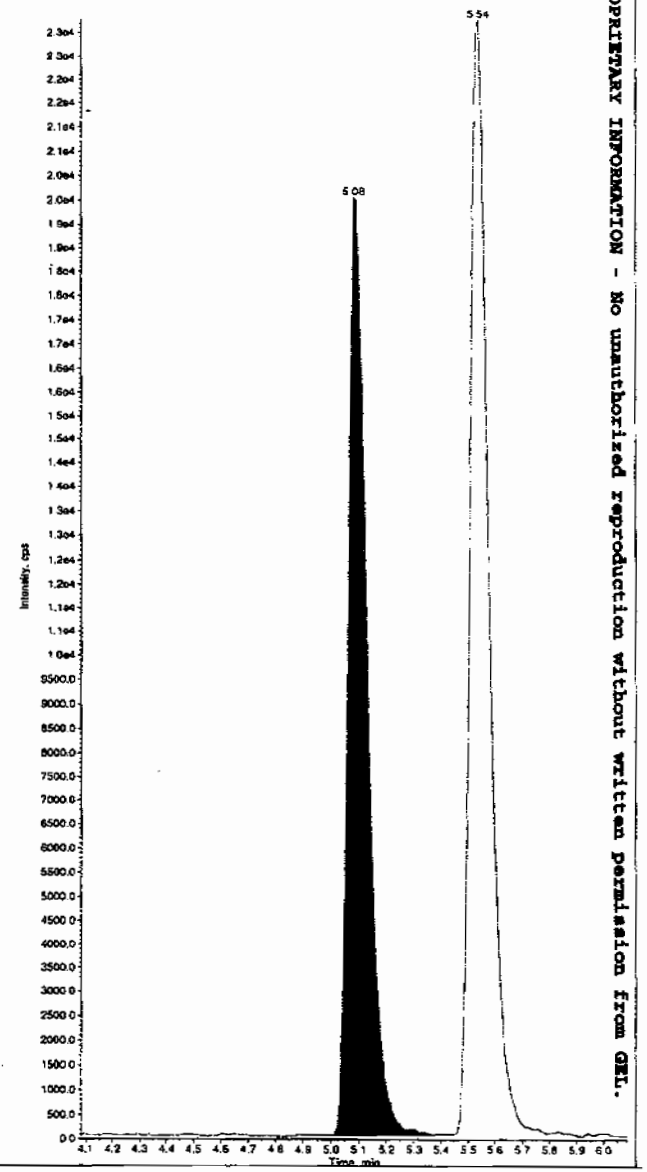

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201870674" Sample ID: "880975|2|LER" File: "EXS0701017.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 389. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:58:50 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.54 min
Area: 1.15e+005 counts
Height: 23214.809 cps
Start Time: 5.45 min
End Time: 5.91 min

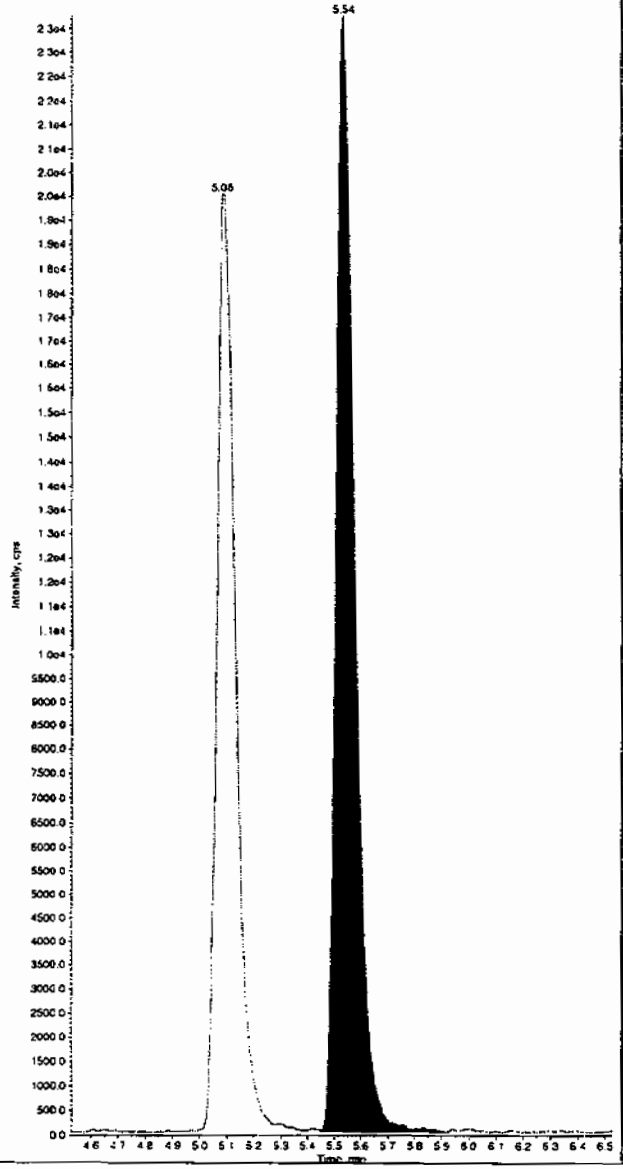

Sample Name: "1201870674" Sample ID: "880975|2|LER" File: "EXS0701017.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 527. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:58:50 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.69e+006 counts
Height: 1493773.193 cps
Start Time: 10.8 min
End Time: 11.2 min

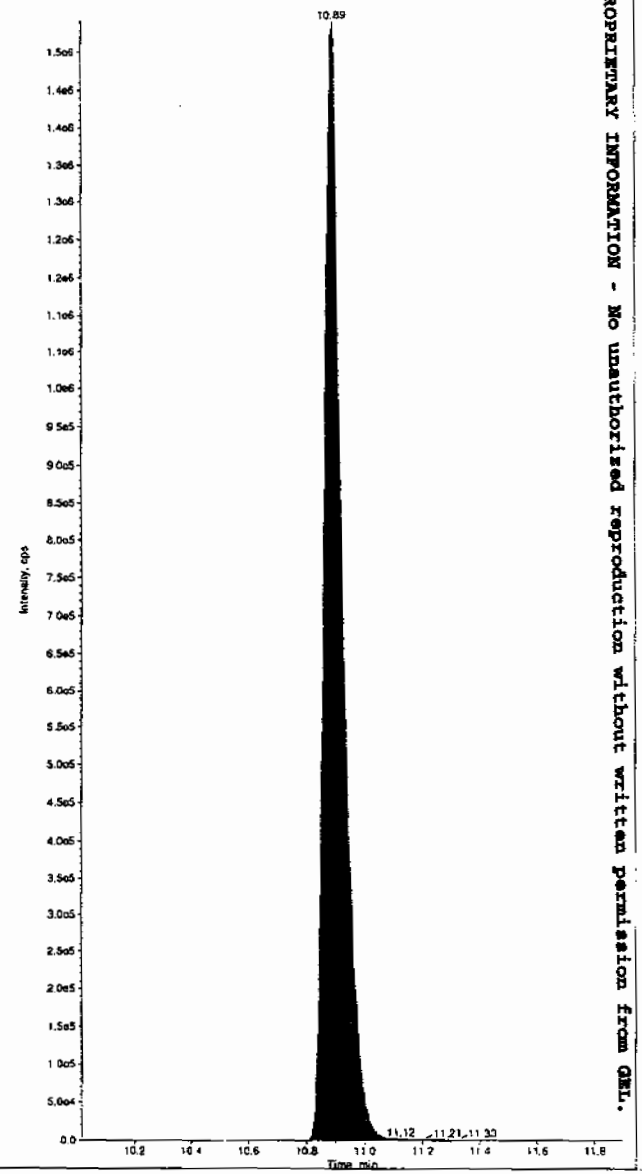

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10463(232424001MS)

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 1201870675

Sample Amount 2

Moisture: 4.2

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630052a

Date Analyzed: 01-JUL-09 15:41

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5360	
121-14-2	2,4-Dinitrotoluene	4890	
121-82-4	RDX	5520	
19406-51-0	4-Amino-2,6-dinitrotoluene	5000	
2691-41-0	HMX	5270	
35572-78-2	2-Amino-4,6-dinitrotoluene	5860	
479-45-8	Tetryl	4180	
606-20-2	2,6-Dinitrotoluene	5020	
78-11-5	PETN	3740	
88-72-2	o-Nitrotoluene	3860	
98-95-3	Nitrobenzene	4320	
99-08-1	m-Nitrotoluene	4150	
99-35-4	1,3,5-Trinitrobenzene	4570	
99-65-0	m-Dinitrobenzene	5010	
99-99-0	p-Nitrotoluene	3850	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630052a
Date: 01-Jul-2009
Time: 15:41:47
ID: 1201870675 | LANU | 880975 | Soil | 23242400IMS | 21
Vial: 1:3,D

MAT 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.853e+004

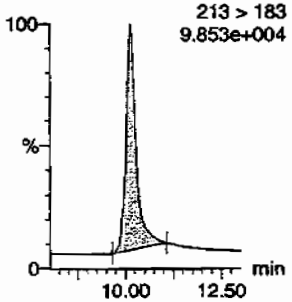

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.237e+004

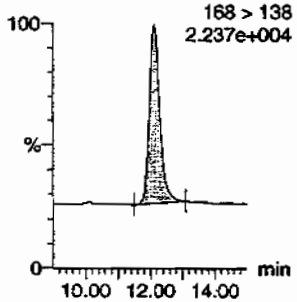

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
2.019e+004

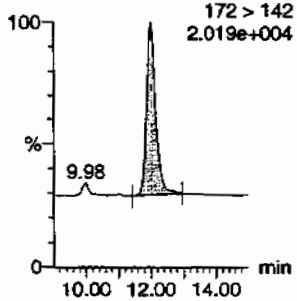

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.154e+005

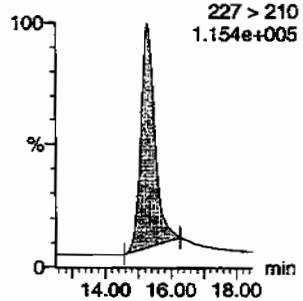

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.815e+004

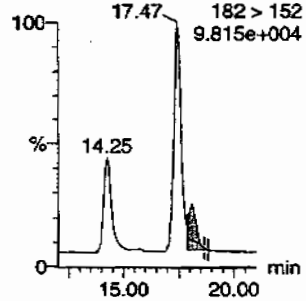

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.815e+004

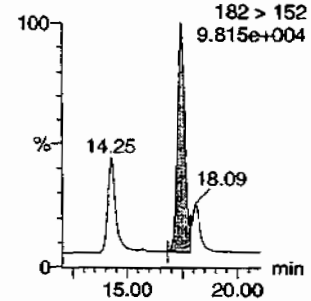

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
8.085e+004

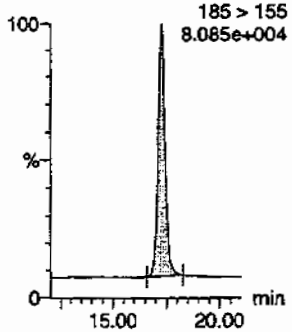

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.870e+004

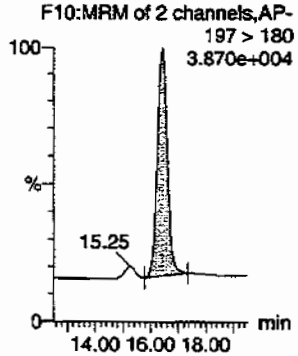

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.024e+004

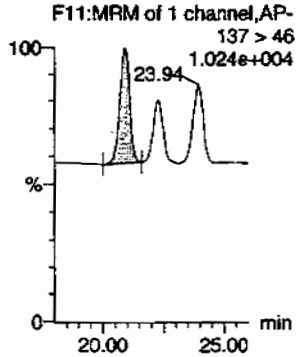

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.815e+004

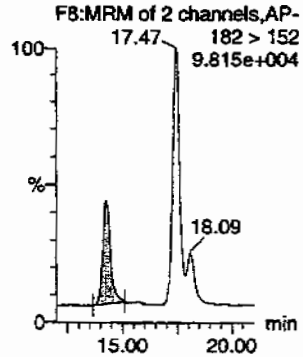

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.024e+004

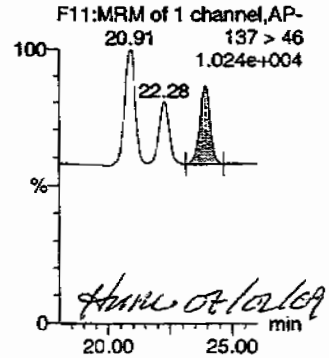

Hmu 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.857e+004

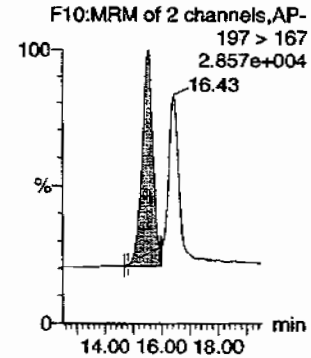

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

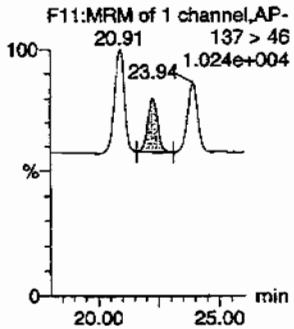

HMX

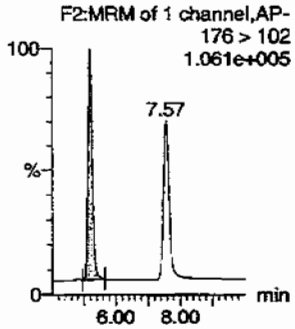

Nitrobenzene

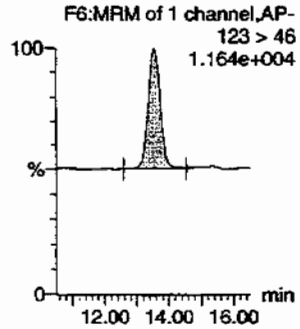

PETN

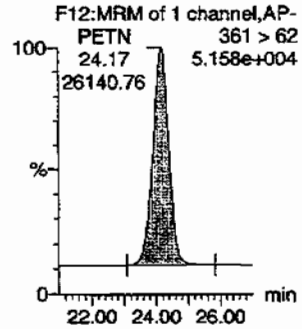

RDX

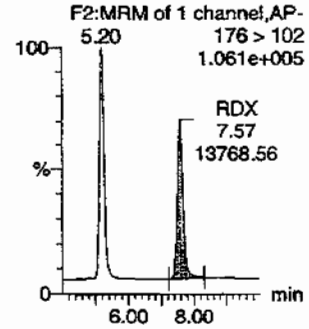

Tetryl

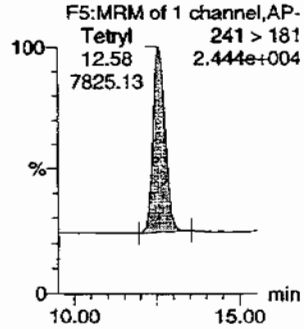

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Amount	%Rec	%Dev	S/N
1201870675	HMX	176 > 102	5.20	16066.750	4651.768	16066.750	1726.951	bb			526.8163	105.4	5.4	2779.1
1201870675	RDX	176 > 102	7.57	13768.563	4651.768	13768.563	1479.928	bb			552.0103	110.4	10.4	1901.8
1201870675	135-Trinitrobenzene	213 > 183	10.14	28599.328	4651.768	28599.328	3074.028	bb			456.9195	91.4	-8.6	3174.0
1201870675	13-Dinitrobenzene-d4	172 > 142	12.00	4651.768		4651.768	4651.768	bb			607.0122	121.4	21.4	493.5
1201870675	13-Dinitrobenzene	168 > 138	12.14	6273.440	4651.768	6273.440	674.307	bb			500.8086	100.2	0.2	1034.3
1201870675	Tetryl	241 > 181	12.58	7825.130	4651.768	7825.130	841.092	bb			417.8195	83.6	-16.4	840.8
1201870675	Nitrobenzene	123 > 46	13.54	2498.468	4651.768	2498.468	268.550	bb			431.6618	86.3	-13.7	127.8
1201870675	4-Amino-26-dinitrotoluene	197 > 167	15.56	9839.475	29070.525	9839.475	169.235	MM	02-Jul-09	07:55:23	500.3732	100.1	0.1	482.0
1201870675	2-Amino-46-dinitrotoluene	197 > 180	16.43	13474.475	29070.525	13474.475	231.755	bb			585.5616	117.1	17.1	724.2
1201870675	246-Trinitrotoluene	227 > 210	15.28	51558.809	29070.525	51558.809	886.788	bb			536.4404	107.3	7.3	1371.8
1201870675	34-dinitrotoluene	182 > 152	14.25	15277.154	29070.525	15277.154	262.760	bb			269.8329	107.9	7.9	326.2
1201870675	26-dinitrotoluene	182 > 152	17.47	34224.418	29070.525	34224.418	588.645	MM	02-Jul-09	07:58:12	502.1884	100.4	0.4	806.4
1201870675	24-dinitrotoluene	182 > 152	18.09	7446.953	29070.525	7446.953	128.084	MM	02-Jul-09	08:01:31	488.6539	97.7	-2.3	161.8
1201870675	26-dinitrotoluene-d3	185 > 155	17.29	29070.525		29070.525	29070.525	bb			606.4588	121.3	21.3	1824.2
1201870675	2-Nitrotoluene	137 > 46	20.91	2058.262	29070.525	2058.262	35.401	bb			385.9808	77.2	-22.8	495.2
1201870675	4-Nitrotoluene	137 > 46	22.28	1082.259	29070.525	1082.259	18.614	bb			385.3146	77.1	-22.9	262.4
1201870675	3-Nitrotoluene	137 > 46	23.94	1409.384	29070.525	1409.384	24.241	bb			414.6285	82.9	-17.1	333.3
1201870675	PETN	361 > 62	24.17	26140.760	29070.525	26140.760	449.609	bb			373.5885	74.7	-25.3	16338.9

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10463(232424001MS)

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 1201870675

Sample Amount 2

Moisture: 4.2

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0701019.wiff

Date Analyzed: 01-JUL-09 15:31

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	4390	
59229-75-3	2,6-Diamino-4-nitrotoluene	5000	
618-87-1	3,5-Dinitroaniline	4680	
6629-29-4	2,4-Diamino-6-nitrotoluene	4690	
78-30-8	tris(o-cresyl) phosphate	5250	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sample Name: "1201870675" Sample ID: "880975|2|LER" File: "EXS0701019.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 439. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:31:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.04 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 2.99e+005 counts
Height: 60478.321 cps
Start Time: 6.88 min
End Time: 7.58 min

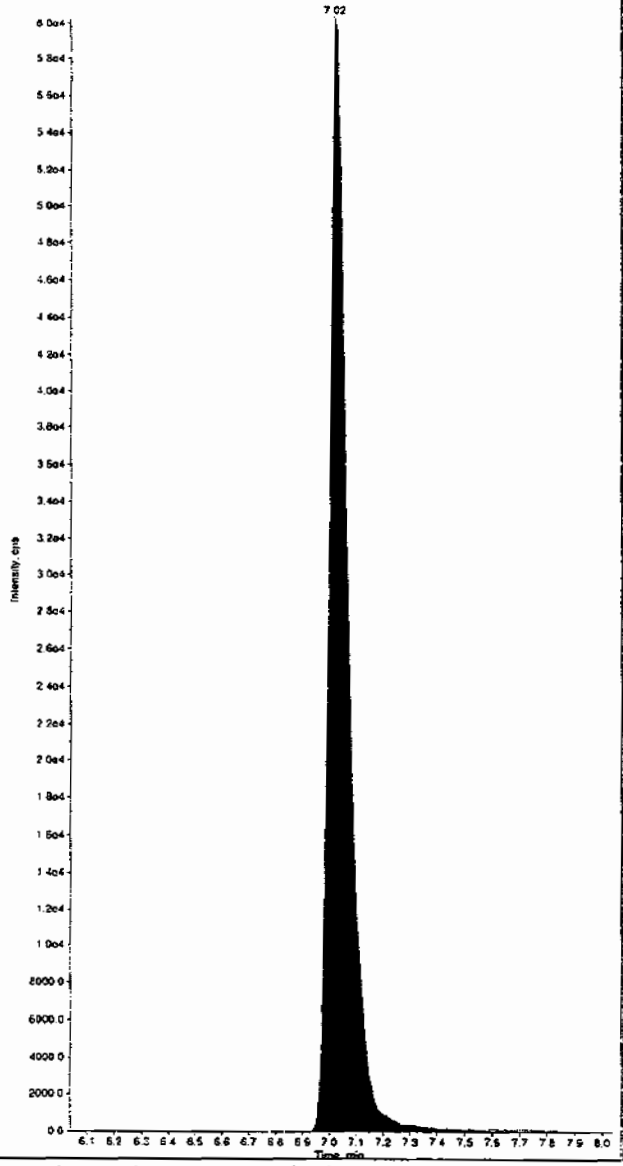

631

Sample Name: "1201870675" Sample ID: "880975|2|LER" File: "EXS0701019.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 468. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:31:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.25 min
Area: 6.56e+005 counts
Height: 150670.837 cps
Start Time: 8.17 min
End Time: 8.38 min

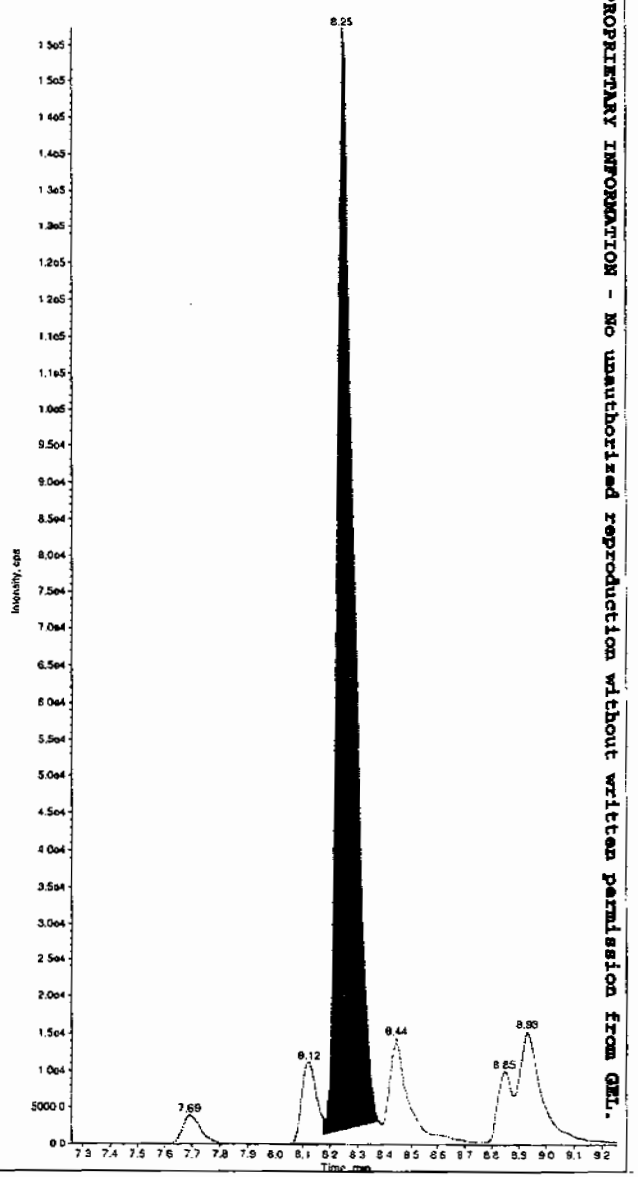

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201870675" Sample ID: "880975|2|LER" File: "EXS0701019.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 248. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:31:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.44 min
Area: 5.45e+005 counts
Height: 102119.125 cps
Start Time: 8.36 min
End Time: 8.75 min

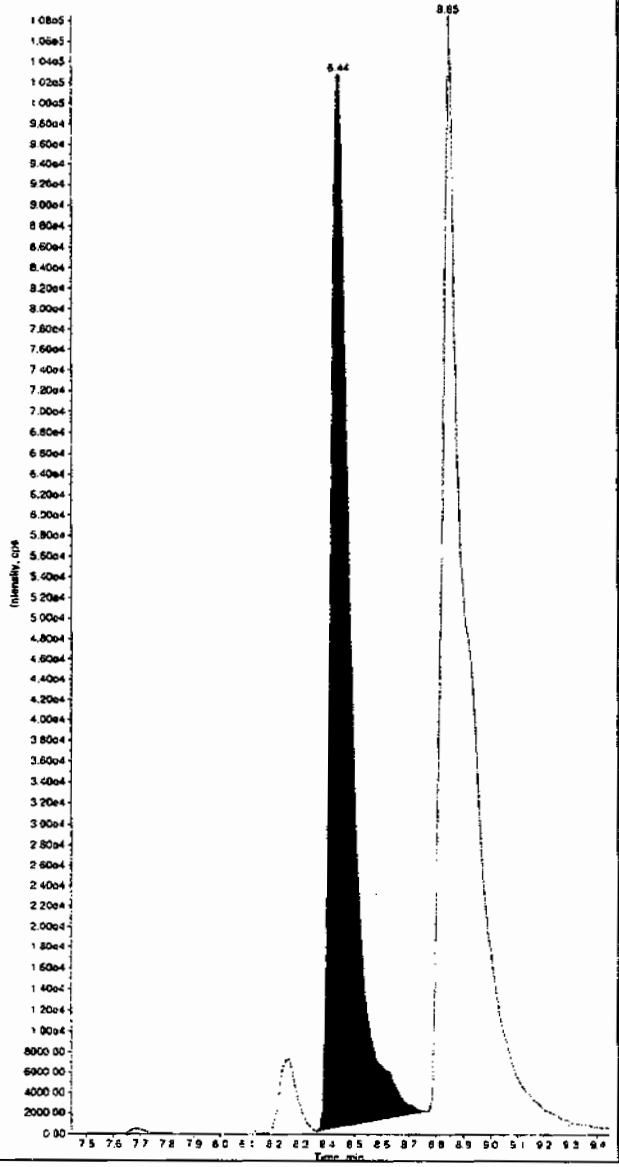

Sample Name: "1201870675" Sample ID: "880975|2|LER" File: "EXS0701019.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 500. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:31:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.09 min
Area: 1.03e+005 counts
Height: 21906.754 cps
Start Time: 5.00 min
End Time: 5.32 min

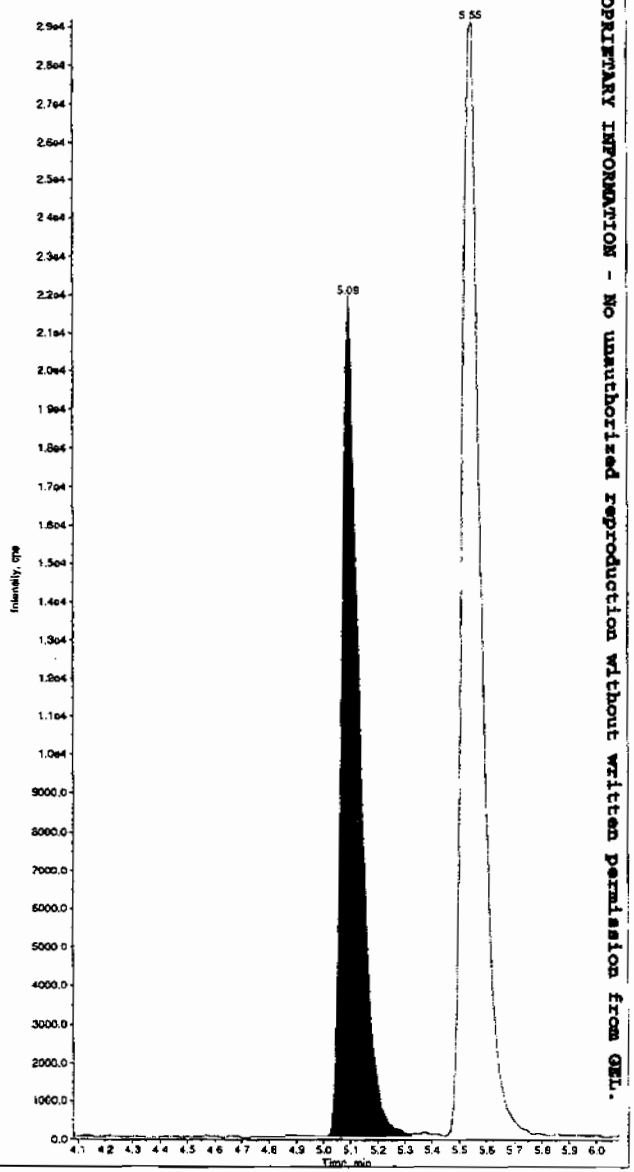

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201870675" Sample ID: "880975|2|LER" File: "EXS0701019.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 469. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:31:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.55 min
Area: 1.39e+005 counts
Height: 29068.899 cps
Start Time: 5.46 min
End Time: 5.77 min

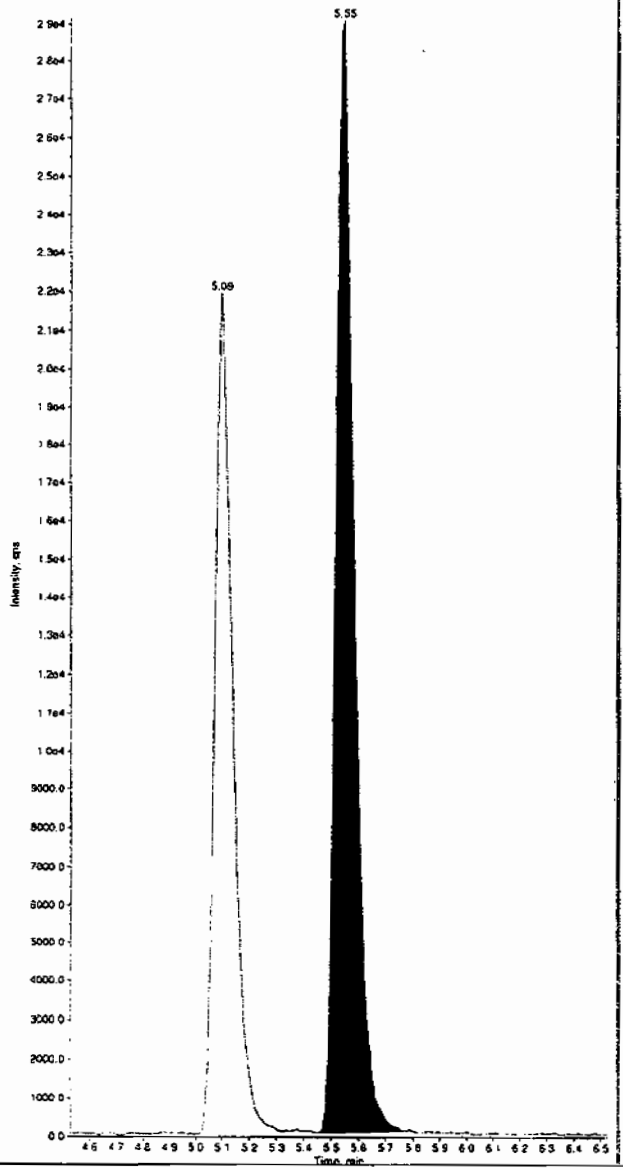

Sample Name: "1201870675" Sample ID: "880975|2|LER" File: "EXS0701019.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 525. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:31:15 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.67e+006 counts
Height: 1504982.544 cps
Start Time: 10.8 min
End Time: 11.2 min

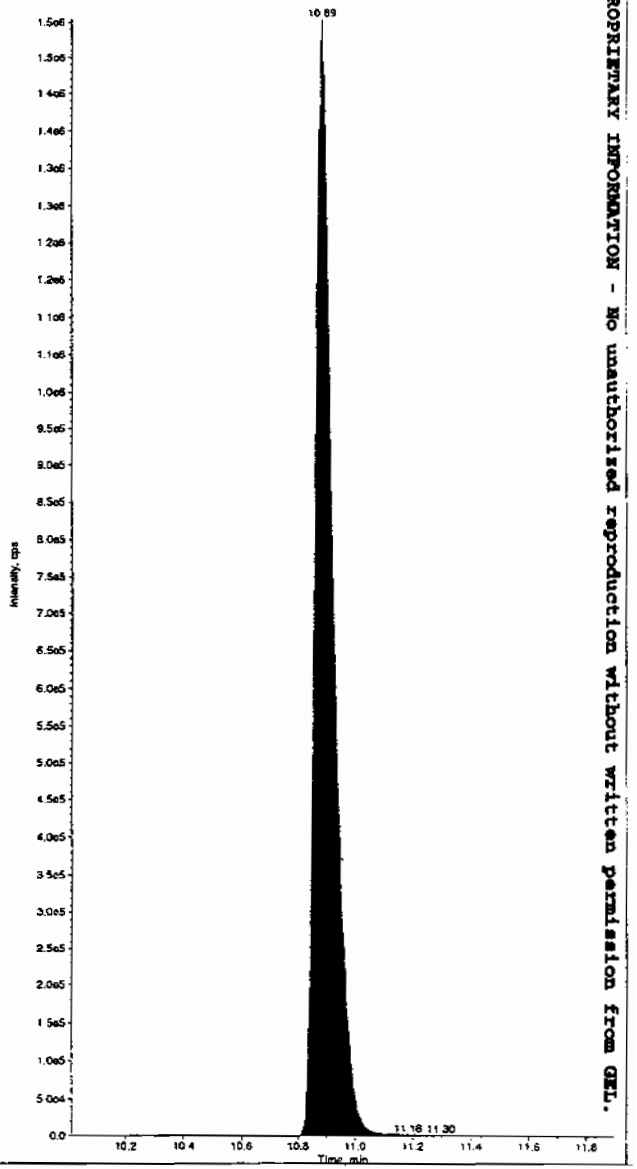

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10463(232424001MSD)

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 1201870676

Sample Amount 2

Moisture: 4.2

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630053a

Date Analyzed: 01-JUL-09 16:11

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5540	
121-14-2	2,4-Dinitrotoluene	5220	
121-82-4	RDX	5630	
19406-51-0	4-Amino-2,6-dinitrotoluene	5120	
2691-41-0	HMX	5370	
35572-78-2	2-Amino-4,6-dinitrotoluene	5820	
479-45-8	Tetryl	4630	
606-20-2	2,6-Dinitrotoluene	5020	
78-11-5	PETN	3960	
88-72-2	o-Nitrotoluene	3880	
98-95-3	Nitrobenzene	4440	
99-08-1	m-Nitrotoluene	4150	
99-35-4	1,3,5-Trinitrobenzene	4740	
99-65-0	m-Dinitrobenzene	4830	
99-99-0	p-Nitrotoluene	3960	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630053a
Date: 01-Jul-2009
Time: 16:11:15
ID: 1201870676 | LANU | 880975 | Soil | 23242400 | MSD | 21
Vial: 1:3,E

MAP 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.026e+005

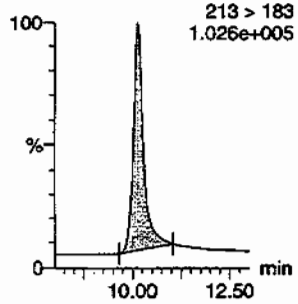

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.132e+004

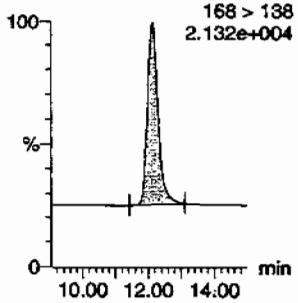

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.948e+004

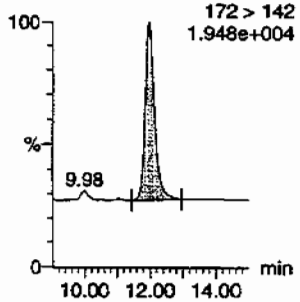

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.179e+005

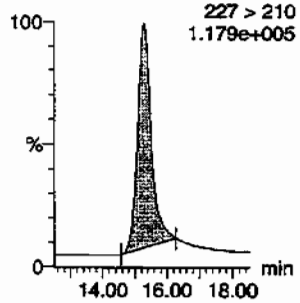

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.899e+004

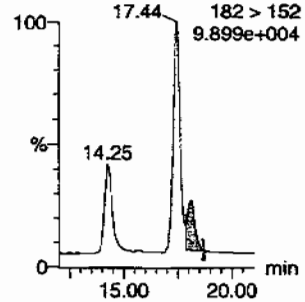

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.899e+004

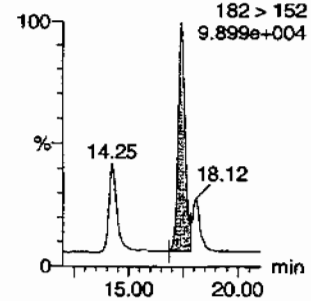

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
8.371e+004

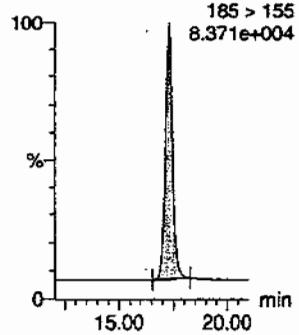

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.824e+004

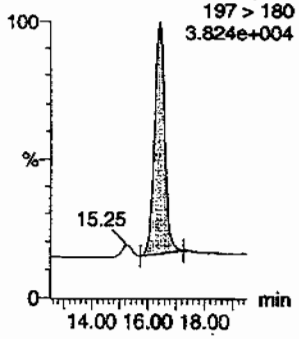

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
9.823e+003

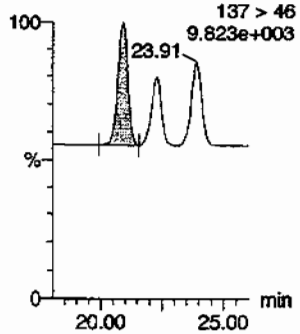

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.899e+004

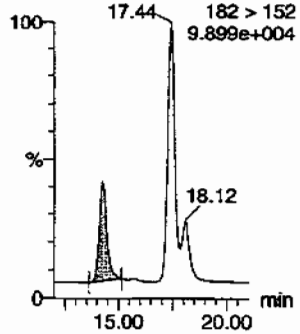

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
9.823e+003

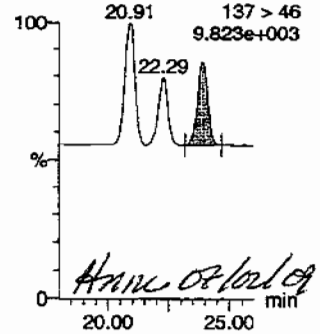

Hanu 08/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.848e+004

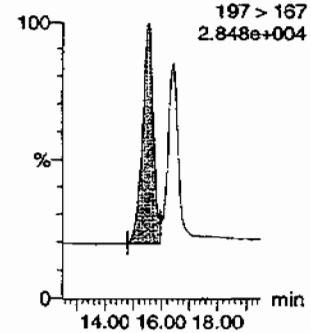

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

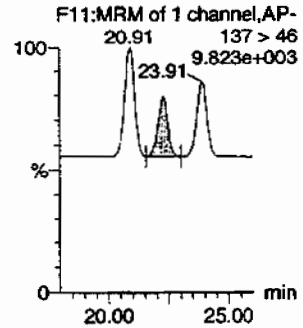

HMX

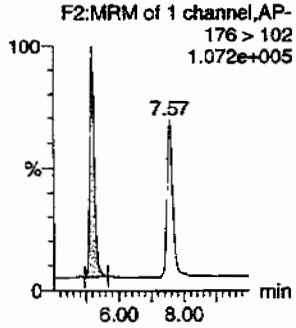

Nitrobenzene

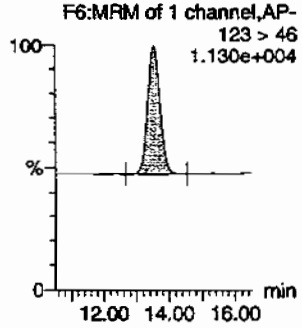

PETN

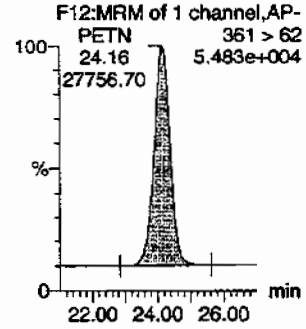

RDX

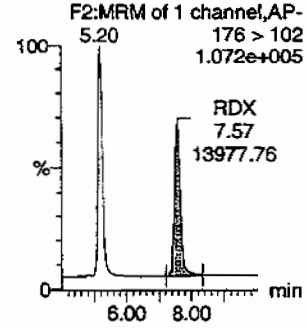

Tetryl

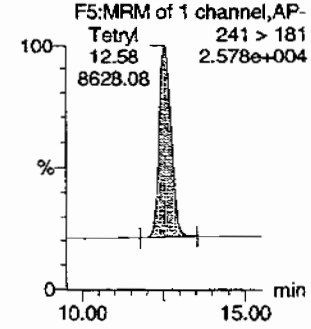

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc/mL	%Rec	%Dev	S/N
1201870676	HMX	176 > 102	5.20	16317.589	4633.143	16317.589	1760.963	bb			537.1919	107.4	7.4	2506.2
1201870676	RDX	176 > 102	7.57	13977.759	4633.143	13977.759	1508.453	bb			562.6502	112.5	12.5	1697.5
1201870676	135-Trinitrobenzene	213 > 183	10.14	29565.240	4633.143	29565.240	3190.625	bb			474.2503	94.9	-5.1	1729.1
1201870676	13-Dinitrobenzene-d4	172 > 142	11.97	4633.143		4633.143	4633.143	bb			604.5818	120.9	20.9	214.8
1201870676	13-Dinitrobenzene	168 > 138	12.14	6027.938	4633.143	6027.938	650.524	bb			483.1446	96.6	-3.4	641.7
1201870676	Tetryl	241 > 181	12.58	8628.078	4633.143	8628.078	931.126	bb			462.5445	92.5	-7.5	510.4
1201870676	Nitrobenzene	123 > 46	13.54	2558.461	4633.143	2558.461	276.104	bb			443.8038	88.8	-11.2	196.6
1201870676	4-Amino-26-dinitrotoluene	197 > 167	15.56	10169.754	29361.322	10169.754	173.183	MM	02-Jul-09	07:55:45	512.0471	102.4	2.4	282.5
1201870676	2-Amino-46-dinitrotoluene	197 > 180	16.43	13523.390	29361.322	13523.390	230.293	bb			581.8668	116.4	16.4	498.1
1201870676	246-Trinitrotoluene	227 > 210	15.28	53734.969	29361.322	53734.969	915.064	bb			553.5449	110.7	10.7	1780.6
1201870676	34-dinitrotoluene	182 > 152	14.25	14762.476	29361.322	14762.476	251.393	bb			258.1600	103.3	3.3	610.1
1201870676	26-dinitrotoluene	182 > 152	17.44	34522.766	29361.322	34522.766	587.895	MM	02-Jul-09	07:58:20	501.5491	100.3	0.3	1591.3
1201870676	24-dinitrotoluene	182 > 152	18.12	8028.938	29361.322	8028.938	136.726	MM	02-Jul-09	08:02:00	521.6247	104.3	4.3	351.1
1201870676	26-dinitrotoluene-d3	185 > 155	17.29	29361.322		29361.322	29361.322	bb			612.5253	122.5	22.5	1339.2
1201870676	2-Nitrotoluene	137 > 46	20.91	2087.407	29361.322	2087.407	35.547	bb			387.5693	77.5	-22.5	339.9
1201870676	4-Nitrotoluene	137 > 46	22.29	1123.650	29361.322	1123.650	19.135	bb			396.0888	79.2	-20.8	184.7
1201870676	3-Nitrotoluene	137 > 46	23.91	1423.863	29361.322	1423.863	24.247	bb			414.7394	82.9	-17.1	228.7
1201870676	PETN	361 > 62	24.16	27756.697	29361.322	27756.697	472.675	bb			396.1417	79.2	-20.8	10354.8

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10463(232424001MSD)

Lab Code: GEL

GEL Job No (SDG) 09-2473

Matrix: SOIL

GEL Sample ID: 1201870676

Sample Amount 2

Moisture: 4.2

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880974

Concentrated Extract Volume (mL) 10

Date Extracted: 30-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0701020.wiff

Date Analyzed: 01-JUL-09 15:47

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	5770	
59229-75-3	2,6-Diamino-4-nitrotoluene	4820	
618-87-1	3,5-Dinitroaniline	4760	
6629-29-4	2,4-Diamino-6-nitrotoluene	4950	
78-30-8	tris(o-cresyl) phosphate	5150	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sample Name: "1201870676" Sample ID: "880975|2|LER" File: "EXS0701020.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 577. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:47:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.04 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 3.92e+005 counts
Height: 77058.174 cps
Start Time: 6.86 min
End Time: 7.55 min

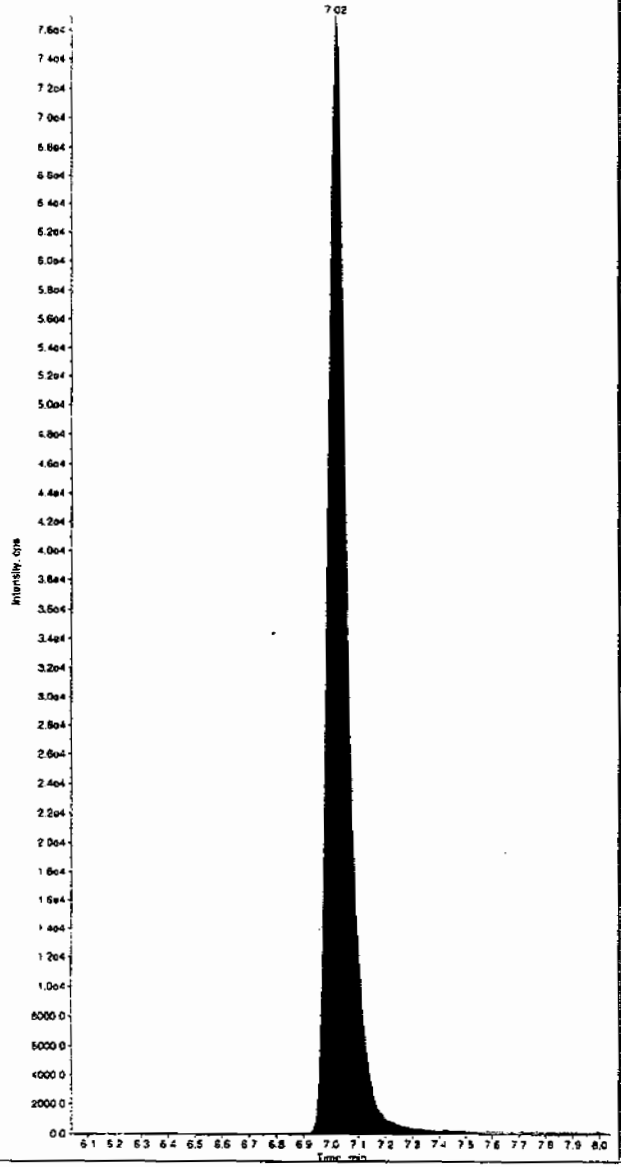

638

Sample Name: "1201870676" Sample ID: "880975|2|LER" File: "EXS0701020.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 476. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:47:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.24 min
Area: 6.67e+005 counts
Height: 143164.063 cps
Start Time: 8.16 min
End Time: 8.38 min

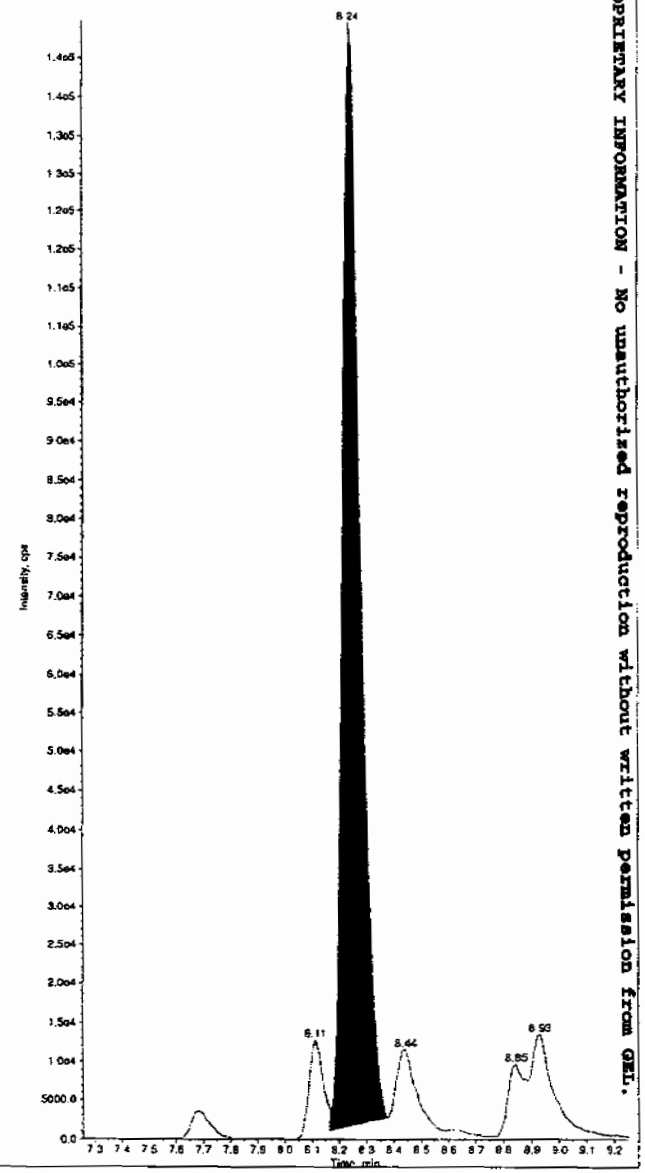

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201870676" Sample ID: "880975|2|LER" File: "EXS0701020.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 247. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:47:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.43 min
Area: 5.43e+005 counts
Height: 110061.798 cps
Start Time: 8.36 min
End Time: 8.72 min

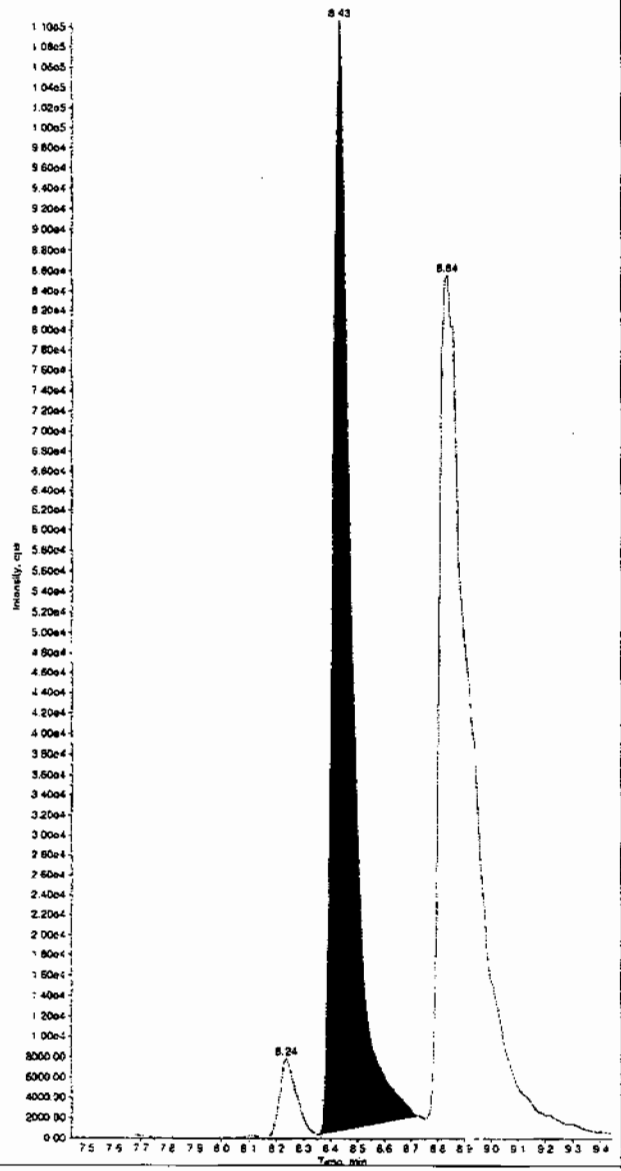

Sample Name: "1201870676" Sample ID: "880975|2|LER" File: "EXS0701020.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 482. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:47:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.09 min
Area: 9.94e+004 counts
Height: 20006.622 cps
Start Time: 4.98 min
End Time: 5.37 min

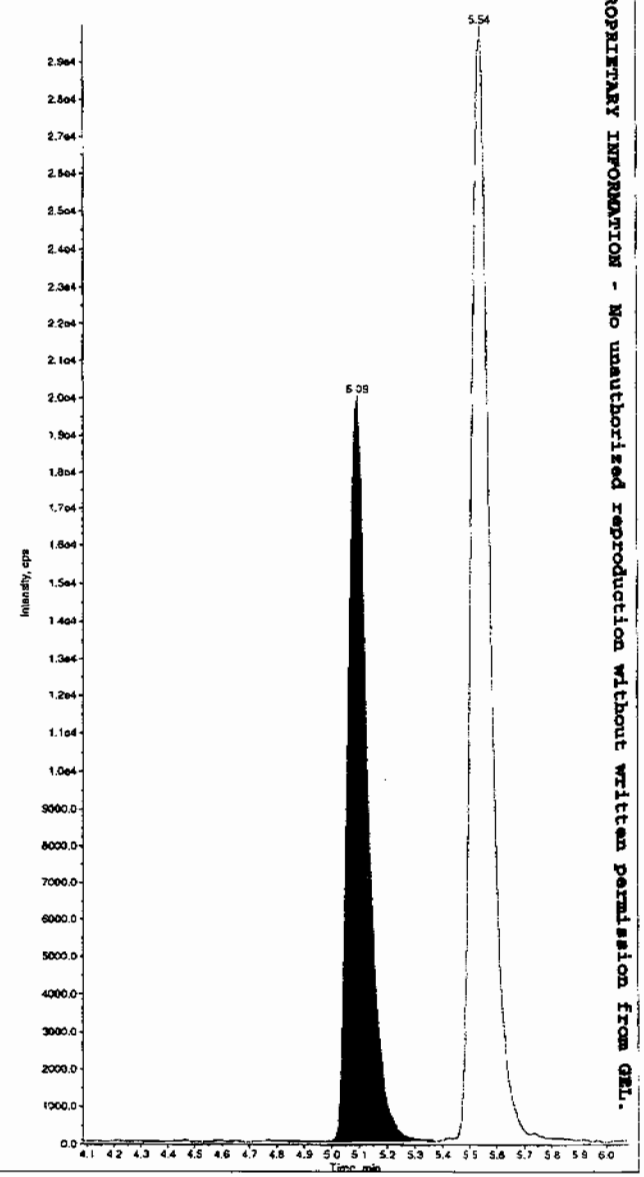

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201870676" Sample ID: "880975|2|LER" File: "EXS0701020.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 495. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:47:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.54 min
Area: 1.46e+005 counts
Height: 29908.291 cps
Start Time: 5.41 min
End Time: 5.99 min

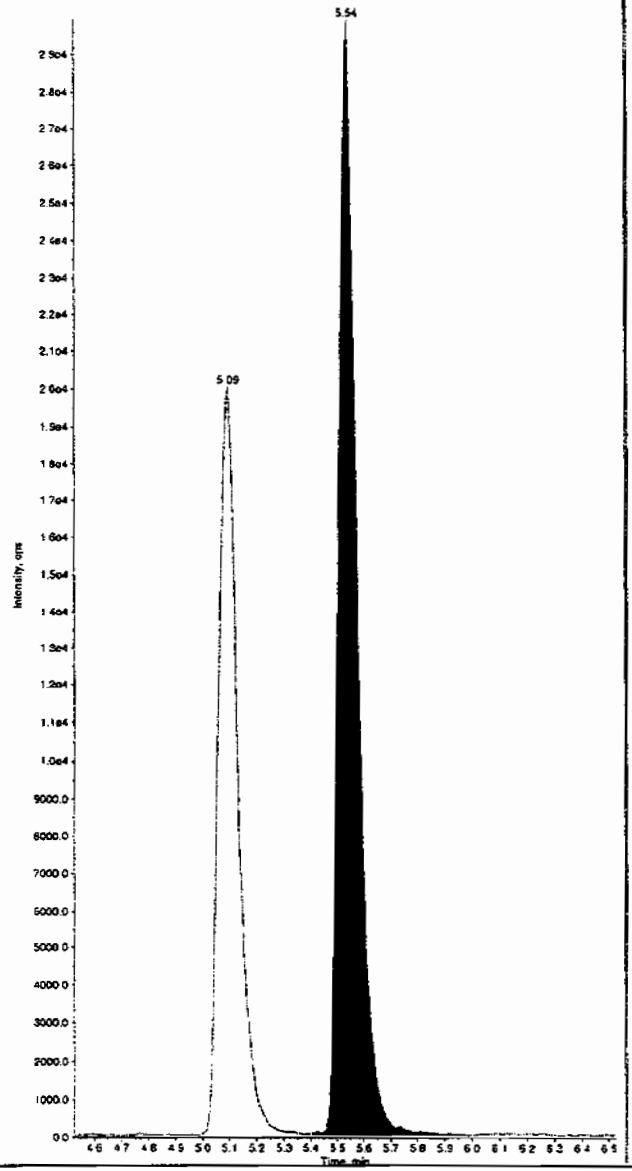

Sample Name: "1201870676" Sample ID: "880975|2|LER" File: "EXS0701020.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 515. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 3:47:26 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.54e+006 counts
Height: 1488069.092 cps
Start Time: 10.8 min
End Time: 11.2 min

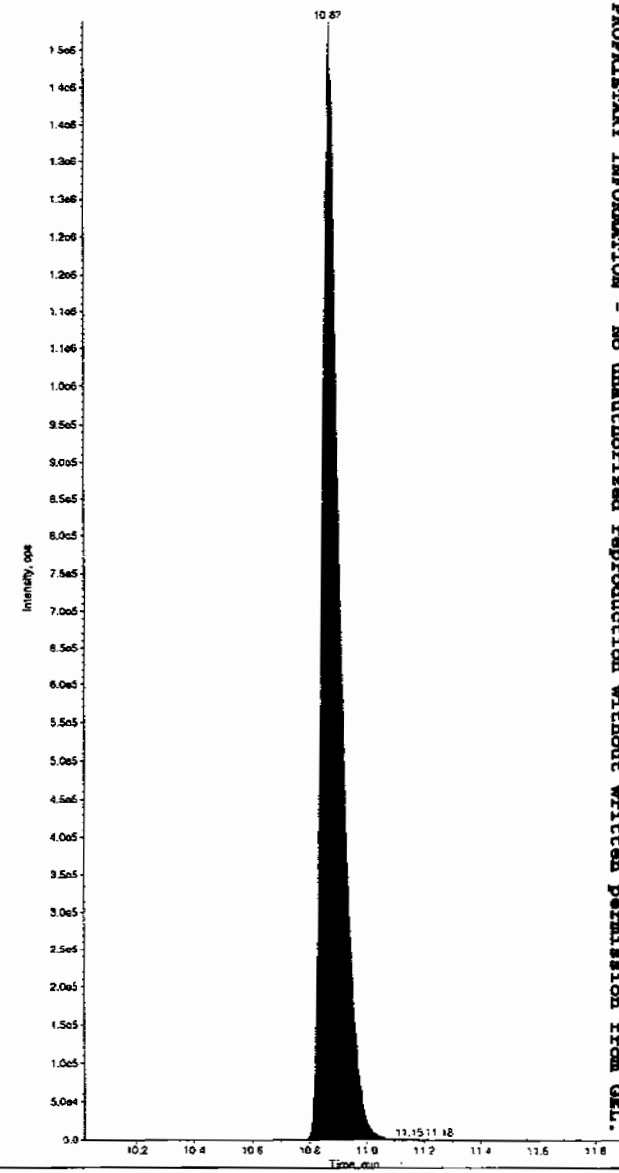

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MISCELLANEOUS DATA

Prep Logbook

Nitroaromatics and Nitramines by High Performance Liquid Chromatography (HPLC)

Batch ID: 880974 **Verified by:** _____

Analyst: James Allnutt

Method: SW846 8330 PREP

Lab SOP: GL-OA-E-033 REV# 17

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201870673 MB	30-JUN-2009 07:50:29	2	10	5
1201870674 LCS	30-JUN-2009 07:50:29	2	10	5
232424001	30-JUN-2009 07:50:29	2	10	5
1201870675 MS (232424001)	30-JUN-2009 07:50:29	2	10	5
1201870676 MSD (232424001)	30-JUN-2009 07:50:29	2	10	5

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201870674	8321 Explosives LCS	IXX090514-01	.1	mL
LCS	1201870674	8321 LANL Explosives Mix 10mg/L	UXX090616-02.2	1	mL
MS	1201870675	8321 Explosives LCS	IXX090514-01	.1	mL
MS	1201870675	8321 LANL Explosives Mix 10mg/L	UXX090616-02.2	1	mL
MSD	1201870676	8321 Explosives LCS	IXX090514-01	.1	mL
MSD	1201870676	8321 LANL Explosives Mix 10mg/L	UXX090616-02.2	1	mL
SURR	All	3,4-Dinitrotoluene (8330 Surr.) 100ppm	IXP090622-02	.05	mL

Comments:

642

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS #1

Date: 06/30/09
Extr. Injection Volume: 50uL
Sequence Number: 063009expA
Initial Calibration Date: 06/30/09

Method: SW846 8321A-Modified
Int. Std.: UXX090506-01.4
Mobile Phase Lot#: 1139935, 1134419
Standard-Samp Reagent Lot#: 1135125, 1128740

Reviewed BY: Hmc
Date: 07/02/09
SOP: GL-OA-E-056Rev.11
Alt Check Std. ID: WXX090630-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP0630001a	XIBLK01	MAP	6/30/09 14:38			1		USE	B
EXP0630002a	XIBLK01	MAP	6/30/09 15:07			1		USE	B
EXP0630003a	WXXICAL-01	MAP	6/30/09 15:37			1		USE	I
EXP0630004a	WXXICAL-02	MAP	6/30/09 16:06			1		USE	I
EXP0630005a	WXXICAL-03	MAP	6/30/09 16:36			1		USE	I
EXP0630006a	WXXICAL-04	MAP	6/30/09 17:05			1		USE	I
EXP0630007a	WXXICAL-05	MAP	6/30/09 17:35			1		USE	I
EXP0630008a	WXXICAL-06	MAP	6/30/09 18:04			1		USE	I
EXP0630009a	XIBLK02	MAP	6/30/09 18:34			1		USE	B
EXP0630010a	WXXICV	MAP	6/30/09 19:03			1		USE	C
EXP0630011a	XIBLK03	MAP	6/30/09 19:33			1		USE	B
EXP0630012a	WXXCRI	MAP	6/30/09 20:02			1		USE	C
EXP0630013a	1201868644	MAP	6/30/09 20:31	880096	09-2437	2	LANL	USE	S
EXP0630014a	1201868645	MAP	6/30/09 21:01	880096	09-2437	2	LANL	USE	S
EXP0630015a	232278001	MAP	6/30/09 21:30	880096	09-2437	2	LANL	USE	S
EXP0630016a	1201868646	MAP	6/30/09 22:00	880096	09-2437	2	LANL	USE	S
EXP0630017a	1201868647	MAP	6/30/09 22:29	880096	09-2437	2	LANL	USE	S
EXP0630018a	232278002	MAP	6/30/09 22:59	880096	09-2437	2	LANL	USE	S
EXP0630019a	WXXCCV	MAP	6/30/09 23:28			1		USE	C
EXP0630020a	XIBLK04	MAP	6/30/09 23:58			1		USE	B
EXP0630021a	WXXCRI	MAP	7/1/09 0:27			1		USE	C
EXP0630022a	1201869904	MAP	7/1/09 0:57	880637	09-2468	2	LANL	USE	S
EXP0630023a	1201869905	MAP	7/1/09 1:26	880637	09-2468	2	LANL	USE	S
EXP0630024a	232342007	MAP	7/1/09 1:56	880637	09-2468	2	LANL	USE	S
EXP0630025a	1201869906	MAP	7/1/09 2:25	880637	09-2468	2	LANL	USE	S
EXP0630026a	1201869907	MAP	7/1/09 2:55	880637	09-2468	2	LANL	USE	S
EXP0630027a	WXXCCV	MAP	7/1/09 3:24			1		USE	C
EXP0630028a	XIBLK05	MAP	7/1/09 3:54			1		USE	B
EXP0630029a	WXXCRI	MAP	7/1/09 4:23			1		USE	C

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EXP0630030a	1201870677	MAP	7/1/09 4:53	880977	09-2483	2	LANL	USE	S
EXP0630031a	1201870678	MAP	7/1/09 5:22	880977	09-2483	2	LANL	USE	S
EXP0630032a	232434004	MAP	7/1/09 5:52	880977	09-2483	2	LANL	USE	S
EXP0630033a	1201870679	MAP	7/1/09 6:21	880977	09-2483	2	LANL	USE	S
EXP0630034a	1201870680	MAP	7/1/09 6:51	880977	09-2483	2	LANL	USE	S
EXP0630035a	WXXCCV	MAP	7/1/09 7:20			1		USE	C
EXP0630036a	XIBLK06	MAP	7/1/09 7:49			1		USE	B
EXP0630037a	WXXCRI	MAP	7/1/09 8:19			1		USE	C
EXP0630038a	1201869916	MAP	7/1/09 8:48	880642	09-2457	2	LANL	USE	S
EXP0630039a	1201869917	MAP	7/1/09 9:18	880642	09-2457	2	LANL	USE	S
EXP0630040a	232348001	MAP	7/1/09 9:47	880642	09-2457	2	LANL	DUSE-RA	S
EXP0630041a	1201869918	MAP	7/1/09 10:17	880642	09-2457	2	LANL	USE	S
EXP0630042a	1201869919	MAP	7/1/09 10:46	880642	09-2457	2	LANL	USE	S
EXP0630043a	232348002	MAP	7/1/09 11:16	880642	09-2457	2	LANL	USE	S
EXP0630044a	232348003	MAP	7/1/09 11:45	880642	09-2457	2	LANL	USE	S
EXP0630045a	232348004	MAP	7/1/09 12:15	880642	09-2457	2	LANL	USE	S
EXP0630046a	WXXCCV	MAP	7/1/09 12:44			1		USE	C
EXP0630047a	XIBLK07	MAP	7/1/09 13:14			1		USE	B
EXP0630048a	WXXCRI	MAP	7/1/09 13:43			1		USE	C
EXP0630049a	1201870673	MAP	7/1/09 14:13	880975	09-2473	2	LANL	USE	S
EXP0630050a	1201870674	MAP	7/1/09 14:42	880975	09-2473	2	LANL	USE	S
EXP0630051a	232424001	MAP	7/1/09 15:12	880975	09-2473	2	LANL	DUSE-RA	S
EXP0630052a	1201870675	MAP	7/1/09 15:41	880975	09-2473	2	LANL	USE	S
EXP0630053a	1201870676	MAP	7/1/09 16:11	880975	09-2473	2	LANL	USE	S
EXP0630054a	WXXCCV	MAP	7/1/09 16:40			1		USE	C
EXP0630055a	XIBLK08	MAP	7/1/09 17:10			1		USE	B
EXP0630056a	WXXCRI	MAP	7/1/09 17:39			1		USE	C

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS #1

Date: 07/13/09
Extr. Injection Volume: 50uL
Sequence Number: 071309expA
Initial Calibration Date: 07/13/09

Method: SW846 8321A-Modified
Int. Std.: UXX090506-01.4
Mobile Phase Lot#: 1151871, 1134419
Standard-Samp Reagent Lot#: 115179, 1141273

Reviewed BY: [illegible]
Date: 07/14/09
SOP: GL-OA-E-056Rev.11
Alt Check Std. ID: WXX090713-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP0713001a	XIBLK01	MAP	7/13/09 14:54			1		USE	B
EXP0713002a	XIBLK01	MAP	7/13/09 15:25			1		USE	B
EXP0713003a	WXXICAL-01	MAP	7/13/09 15:55			1		USE	I
EXP0713004a	WXXICAL-02	MAP	7/13/09 16:24			1		USE	I
EXP0713005a	WXXICAL-03	MAP	7/13/09 16:54			1		USE	I
EXP0713006a	WXXICAL-04	MAP	7/13/09 17:23			1		USE	I
EXP0713007a	WXXICAL-05	MAP	7/13/09 17:53			1		USE	I
EXP0713008a	WXXICAL-06	MAP	7/13/09 18:22			1		USE	I
EXP0713009a	XIBLK02	MAP	7/13/09 18:52			1		USE	B
EXP0713010a	WXXICV	MAP	7/13/09 19:21			1		USE	C
EXP0713011a	XIBLK03	MAP	7/13/09 19:51			1		USE	B
EXP0713012a	WXXCRI	MAP	7/13/09 20:20			1		USE	C
EXP0713013a	232348001	MAP	7/13/09 20:50	880642	09-2457	2	LANL	USE	S
EXP0713014a	232424001	MAP	7/13/09 21:19	880975	09-2473	2	LANL	USE	S
EXP0713015a	XIBLK04	MAP	7/13/09 21:49			1		USE	B
EXP0713016a	1201872315	MAP	7/13/09 22:18	881635	09-2508	2	LANL	USE	S
EXP0713017a	1201872316	MAP	7/13/09 22:48	881635	09-2508	2	LANL	USE	S
EXP0713018a	232582001	MAP	7/13/09 23:17	881635	09-2508	2	LANL	USE	S
EXP0713019a	1201872317	MAP	7/13/09 23:47	881635	09-2508	2	LANL	USE	S
EXP0713020a	1201872318	MAP	7/14/09 0:16	881635	09-2508	2	LANL	USE	S
EXP0713021a	232582002	MAP	7/14/09 0:46	881635	09-2508	2	LANL	USE	S
EXP0713022a	WXXCCV	MAP	7/14/09 1:15			1		USE	C
EXP0713023a	XIBLK05	MAP	7/14/09 1:45			1		USE	B
EXP0713024a	WXXCRI	MAP	7/14/09 2:14			1		USE	C
EXP0713025a	1201874292	MAP	7/14/09 2:44	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713026a	1201874293	MAP	7/14/09 3:13	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713027a	232752005	MAP	7/14/09 3:43	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713028a	1201874294	MAP	7/14/09 4:12	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713029a	1201874295	MAP	7/14/09 4:42	882489	09-2530	2	LANL	DUSE-RA	S

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EXP0713030a	WXXCCV	MAP	7/14/09 5:11	1	USE	C
EXP0713031a	XIBLK06	MAP	7/14/09 5:41	1	USE	B
EXP0713032a	WXXCRI	MAP	7/14/09 6:10	1	USE	C

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS4

Date: 07/01/09
Extr. Injection Volume: 10uL
Sequence Number: 070109exs
Initial Calibration Date: 070109

Method: 8321A-Modified
Int. Std.: N/A
Mobile Phase Lot#:1118668, 1130432
Standard-Samp Reagent Lot# :1135125, 1128740

Reviewed By: dmnc
Date: 07/14/09
SOP: GL-OA-E-056Rev.11
Alt Check Std. ID: WXX090701-26

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS0701001.wiff	XIBLK01	LER	7/1/2009 10:39			1		USE	B
EXS0701002.wiff	XIBLK01	LER	7/1/2009 10:55			1		USE	B
EXS0701003.wiff	WXXICAL-19	LER	7/1/2009 11:11			1		USE	I
EXS0701004.wiff	WXXICAL-20	LER	7/1/2009 11:28			1		USE	I
EXS0701005.wiff	WXXICAL-21	LER	7/1/2009 11:44			1		USE	I
EXS0701006.wiff	WXXICAL-22	LER	7/1/2009 12:00			1		USE	I
EXS0701007.wiff	WXXICAL-23	LER	7/1/2009 12:16			1		USE	I
EXS0701008.wiff	WXXICAL-24	LER	7/1/2009 12:32			1		USE	I
EXS0701009.wiff	WXXICAL-25	LER	7/1/2009 12:49			1		USE	I
EXS0701010.wiff	XIBLK02	LER	7/1/2009 13:05			1		USE	B
EXS0701011.wiff	WXXICV	LER	7/1/2009 13:21			1		USE	C
EXS0701012.wiff	XIBLK03	LER	7/1/2009 13:37			1		USE	B
EXS0701013.wiff	WXXCRI	LER	7/1/2009 13:53			1		USE	C
EXS0701014.wiff	232348003	LER	7/1/2009 14:10	880642	09-2457	2	LANL	USE	S
EXS0701015.wiff	XIBLK04	LER	7/1/2009 14:26			1		USE	B
EXS0701016.wiff	1201870673	LER	7/1/2009 14:42	880975	09-2473	2	LANL	USE	S
EXS0701017.wiff	1201870674	LER	7/1/2009 14:58	880975	09-2473	2	LANL	USE	S
EXS0701018.wiff	232424001	LER	7/1/2009 15:15	880975	09-2473	2	LANL	USE	S
EXS0701019.wiff	1201870675	LER	7/1/2009 15:31	880975	09-2473	2	LANL	USE	S
EXS0701020.wiff	1201870676	LER	7/1/2009 15:47	880975	09-2473	2	LANL	USE	S
EXS0701021.wiff	WXXCCV	LER	7/1/2009 16:03			1		USE	C
EXS0701022.wiff	XIBLK05	LER	7/1/2009 16:19			1		USE	B
EXS0701023.wiff	WXXCRI	LER	7/1/2009 16:36			1		USE	C

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Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2473

Sample Analysis

Sample ID	Client ID
232424001	CAMO-09-10463
1201870539	Method Blank (MB) **ICP**
1201870544	Laboratory Control Sample (LCS)
1201870541	232424001(CAMO-09-10463L) Serial Dilution (SD)
1201870540	232424001(CAMO-09-10463D) Sample Duplicate (DUP)
1201870542	232424001(CAMO-09-10463S) Matrix Spike (MS)
1201870543	232424001(CAMO-09-10463SD) Matrix Spike Duplicate (MSD)
1201870575	Method Blank (MB) **ICP-MS**
1201870580	Laboratory Control Sample (LCS)
1201870577	232424001(CAMO-09-10463L) Serial Dilution (SD)
1201870576	232424001(CAMO-09-10463D) Sample Duplicate (DUP)
1201870578	232424001(CAMO-09-10463S) Matrix Spike (MS)
1201870579	232424001(CAMO-09-10463SD) Matrix Spike Duplicate (MSD)
1201870737	Method Blank (MB) **CVAA**
1201870738	Laboratory Control Sample (LCS)
1201870745	232429001(CAMO-09-6007L) Serial Dilution (SD)
1201870739	232429001(CAMO-09-6007D) Sample Duplicate (DUP)
1201870740	232429001(CAMO-09-6007S) Matrix Spike (MS)
1201870746	232429001(CAMO-09-6007SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	880930, 880943 and 880997
Prep Batch :	880929, 880942 and 880994
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 4300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232424001 (CAMO-09-10463)-ICP and ICP-MS and 232429001 (CAMO-09-6007)-CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of manganese, as indicated by the "N" qualifier.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of aluminum, as indicated by the "N" qualifier.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 706853. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Parson **Date:** 7/17/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2473 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232424001 **BASIS:** Dry Weight **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-10463 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1560000	ug/Kg	N	7020	20700	20700	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-36-0	Antimony	905	ug/Kg	J	320	1030	1030	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-38-2	Arsenic	612	ug/kg	J	298	994	994	2	MS	BAJ	06/30/09 21:39	090630-2	880943
7440-39-3	Barium	12700	ug/Kg		103	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-41-7	Beryllium	338	ug/kg		19.9	99.4	99.4	2	MS	BAJ	07/01/09 08:42	090630-4	880943
7440-43-9	Cadmium	517	ug/Kg	U	103	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-70-2	Calcium	693000	ug/Kg		3100	10300	10300	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-47-3	Chromium	4070	ug/Kg		103	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-48-4	Cobalt	829	ug/Kg		207	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-50-8	Copper	3140	ug/Kg		310	1030	1030	1	P	JWJ	06/30/09 06:11	063009-1	880930
7439-89-6	Iron	9560000	ug/Kg		2580	10300	10300	1	P	JWJ	06/30/09 06:11	063009-1	880930
7439-92-1	Lead	15400	ug/Kg		258	1030	1030	1	P	JWJ	06/30/09 06:11	063009-1	880930
7439-95-4	Magnesium	850000	ug/Kg		8780	31000	31000	1	P	JWJ	06/30/09 06:11	063009-1	880930
7439-96-5	Manganese	190000	ug/Kg	N	207	1030	1030	1	P	JWJ	06/30/09 06:11	063009-1	880930
7439-97-6	Mercury	12	ug/kg	U	4.07	12	12	1	AV	JXL1	07/13/09 10:02	071309S2-5	880997
7440-02-0	Nickel	1930	ug/kg		99.4	397	397	2	MS	BAJ	06/30/09 21:39	090630-2	880943
7440-09-7	Potassium	472000	ug/Kg		5170	15500	15500	1	P	JWJ	06/30/09 06:11	063009-1	880930
7782-49-2	Selenium	994	ug/kg	U	497	994	994	2	MS	BAJ	06/30/09 21:39	090630-2	880943
7440-22-4	Silver	225	ug/Kg	J	103	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-23-5	Sodium	225000	ug/Kg		4650	15500	15500	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-28-0	Thallium	193	ug/kg	J	39.7	199	199	2	MS	BAJ	06/30/09 21:39	090630-2	880943
7440-62-2	Vanadium	5850	ug/Kg		103	517	517	1	P	JWJ	06/30/09 06:11	063009-1	880930
7440-66-6	Zinc	44400	ug/Kg		207	1030	1030	1	P	JWJ	06/30/09 06:11	063009-1	880930

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880930	880929	SW846 3050B	0.505	g	50	mL	06/29/09	BXA1
880943	880942	SW846 3050B	0.525	g	50	mL	06/29/09	BXA1
880997	880994	SW846 7471A Prep	0.523	g	30	mL	07/10/09	AXG2

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5190	ug/L	5000	ug/L	103.8	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Antimony	517	ug/L	500	ug/L	103.3	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Barium	525	ug/L	500	ug/L	104.9	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Chromium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Cobalt	471	ug/L	500	ug/L	94.3	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Copper	518	ug/L	500	ug/L	103.5	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Iron	5220	ug/L	5000	ug/L	104.5	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Lead	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Magnesium	5300	ug/L	5000	ug/L	106	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Manganese	515	ug/L	500	ug/L	103	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Potassium	2480	ug/L	2500	ug/L	99.4	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Silver	254	ug/L	250	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Sodium	2610	ug/L	2500	ug/L	104.6	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Vanadium	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Zinc	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	30-JUN-09 02:58	063009-1
	Arsenic	48.9	ug/L	50	ug/L	97.7	90.0 - 110.0	MS	30-JUN-09 20:25	090630-2
	Nickel	51.1	ug/L	50	ug/L	102.3	90.0 - 110.0	MS	30-JUN-09 20:25	090630-2
	Selenium	48.1	ug/L	50	ug/L	96.2	90.0 - 110.0	MS	30-JUN-09 20:25	090630-2
	Thallium	50.2	ug/L	50	ug/L	100.3	90.0 - 110.0	MS	30-JUN-09 20:25	090630-2
	Beryllium	49.2	ug/L	50	ug/L	98.4	90.0 - 110.0	MS	01-JUL-09 07:34	090630-4
	Mercury	5.22	ug/L	5	ug/L	104.4	90.0 - 110.0	AV	13-JUL-09 09:48	071309S2-5
CCV01										
	Aluminum	5140	ug/L	5000	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 03:28	063009-1
	Antimony	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	30-JUN-09 03:28	063009-1
	Barium	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 03:28	063009-1
	Cadmium	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 03:28	063009-1
	Calcium	5200	ug/L	5000	ug/L	104	90.0 - 110.0	P	30-JUN-09 03:28	063009-1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	30-JUN-09 03:28	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Copper	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Iron	5190	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Lead	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Magnesium	5240	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Manganese	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Potassium	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Silver	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Vanadium	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Zinc	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Arsenic	50.5	ug/L	50	ug/L	100.9	90.0 – 110.0	MS	30-JUN-09 20:56	090630-2
	Nickel	54.7	ug/L	50	ug/L	109.4	90.0 – 110.0	MS	30-JUN-09 20:56	090630-2
	Selenium	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	30-JUN-09 20:56	090630-2
	Thallium	53.2	ug/L	50	ug/L	106.3	90.0 – 110.0	MS	30-JUN-09 20:56	090630-2
	Beryllium	48.1	ug/L	50	ug/L	96.3	90.0 – 110.0	MS	01-JUL-09 07:47	090630-4
	Mercury	5.16	ug/L	5	ug/L	103.2	80.0 – 120.0	AV	13-JUL-09 09:54	071309S2-5
CCV02										
	Aluminum	5120	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Antimony	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Barium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Cadmium	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Calcium	5170	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Chromium	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Cobalt	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Copper	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Iron	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Lead	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Magnesium	5210	ug/L	5000	ug/L	104.3	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Manganese	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-JUN-09 04:03	063009-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2473

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5100	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	30–JUN–09 04:03	063009–1
	Silver	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 04:03	063009–1
	Sodium	10200	ug/L	10000	ug/L	101.9	90.0 – 110.0	P	30–JUN–09 04:03	063009–1
	Vanadium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30–JUN–09 04:03	063009–1
	Zinc	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	30–JUN–09 04:03	063009–1
	Arsenic	49	ug/L	50	ug/L	98	90.0 – 110.0	MS	30–JUN–09 21:14	090630–2
	Nickel	50.3	ug/L	50	ug/L	100.6	90.0 – 110.0	MS	30–JUN–09 21:14	090630–2
	Selenium	48.3	ug/L	50	ug/L	96.7	90.0 – 110.0	MS	30–JUN–09 21:14	090630–2
	Thallium	51.2	ug/L	50	ug/L	102.4	90.0 – 110.0	MS	30–JUN–09 21:14	090630–2
	Beryllium	52.4	ug/L	50	ug/L	104.8	90.0 – 110.0	MS	01–JUL–09 08:07	090630–4
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 – 120.0	AV	13–JUL–09 10:18	071309S2–5
CCV03										
	Aluminum	5130	ug/L	5000	ug/L	102.6	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Antimony	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Barium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Cadmium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Calcium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Chromium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Cobalt	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Copper	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Iron	5160	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Lead	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Magnesium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Manganese	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Potassium	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Silver	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Sodium	10200	ug/L	10000	ug/L	102.5	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Vanadium	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Zinc	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Arsenic	50	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	30–JUN–09 22:09	090630–2

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Nickel	53.4	ug/L	50	ug/L	106.8	90.0 – 110.0	MS	30-JUN-09 22:09	090630-2
	Selenium	50.7	ug/L	50	ug/L	101.3	90.0 – 110.0	MS	30-JUN-09 22:09	090630-2
	Thallium	53.4	ug/L	50	ug/L	106.8	90.0 – 110.0	MS	30-JUN-09 22:09	090630-2
	Beryllium	52.5	ug/L	50	ug/L	105	90.0 – 110.0	MS	01-JUL-09 08:32	090630-4
CCV04										
	Aluminum	5190	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Antimony	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Barium	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Cadmium	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Calcium	5240	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Chromium	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Cobalt	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Copper	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Iron	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Lead	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Magnesium	5270	ug/L	5000	ug/L	105.4	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Manganese	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Potassium	5160	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Silver	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Sodium	10300	ug/L	10000	ug/L	102.5	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Vanadium	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Zinc	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Beryllium	51.5	ug/L	50	ug/L	103.1	90.0 – 110.0	MS	01-JUL-09 09:00	090630-4
CCV05										
	Aluminum	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Antimony	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Barium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Cadmium	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Calcium	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Chromium	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30-JUN-09 05:14	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Copper	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Iron	5180	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Magnesium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Manganese	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Potassium	5120	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Silver	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Sodium	10300	ug/L	10000	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Vanadium	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Zinc	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
CCV06										
	Aluminum	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Antimony	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Barium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Cadmium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Calcium	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Chromium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Cobalt	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Copper	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Iron	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Lead	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Magnesium	5220	ug/L	5000	ug/L	104.4	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Manganese	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Potassium	5140	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Sodium	10300	ug/L	10000	ug/L	103.2	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Vanadium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Zinc	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	30-JUN-09 05:36	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV07										
	Aluminum	5210	ug/L	5000	ug/L	104.2	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Antimony	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Barium	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Cadmium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Calcium	5200	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Cobalt	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Copper	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Iron	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Lead	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Magnesium	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Manganese	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Potassium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Silver	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Vanadium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Zinc	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
CCV08										
	Aluminum	5180	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Antimony	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Barium	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Cadmium	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Calcium	5140	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Chromium	503	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Cobalt	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Copper	503	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Iron	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Lead	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Magnesium	5210	ug/L	5000	ug/L	104.2	90.0 – 110.0	P	30-JUN-09 06:32	063009-1
	Manganese	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 06:32	063009-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2473

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5130	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	30–JUN–09 06:32	063009–1
	Silver	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30–JUN–09 06:32	063009–1
	Sodium	10300	ug/L	10000	ug/L	102.7	90.0 – 110.0	P	30–JUN–09 06:32	063009–1
	Vanadium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 06:32	063009–1
	Zinc	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	30–JUN–09 06:32	063009–1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2473

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Arsenic	5.12	ug/L	5	ug/L	102.5	70.0 – 130.0	MS	30-JUN-09 20:38	090630-2
	Nickel	2.08	ug/L	2	ug/L	104.2	70.0 – 130.0	MS	30-JUN-09 20:38	090630-2
	Selenium	4.89	ug/L	5	ug/L	97.7	70.0 – 130.0	MS	30-JUN-09 20:38	090630-2
	Thallium	1.12	ug/L	1	ug/L	111.8	70.0 – 130.0	MS	30-JUN-09 20:38	090630-2
	Beryllium	.518	ug/L	.5	ug/L	103.6	70.0 – 130.0	MS	01-JUL-09 07:39	090630-4
	Mercury	.146	ug/L	.2	ug/L	72.8	70.0 – 130.0	AV	13-JUL-09 09:52	071309S2-5
PQL01										
	Zinc	10	ug/L	10	ug/L	100.4	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Aluminum	204	ug/L	200	ug/L	102.2	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Antimony	9.03	ug/L	10	ug/L	90.3	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Barium	5	ug/L	5	ug/L	100	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Cadmium	5.28	ug/L	5	ug/L	105.6	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Calcium	97.8	ug/L	100	ug/L	97.8	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Chromium	4.95	ug/L	5	ug/L	99	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Cobalt	4.76	ug/L	5	ug/L	95.3	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Copper	9.82	ug/L	10	ug/L	98.2	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Iron	109	ug/L	100	ug/L	108.9	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Lead	8.4	ug/L	10	ug/L	84	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Magnesium	306	ug/L	300	ug/L	102	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Manganese	10.5	ug/L	10	ug/L	104.5	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Potassium	128	ug/L	150	ug/L	85.1	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Silver	5.6	ug/L	5	ug/L	112	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Sodium	157	ug/L	150	ug/L	104.4	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Vanadium	5.4	ug/L	5	ug/L	108	70.0 – 130.0	P	30-JUN-09 03:04	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2473

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 03:01	063009-1
	Antimony	5.7	+/-10	J	3.1	10.0	SOL	P	30-JUN-09 03:01	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 03:01	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 03:01	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 03:01	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 03:01	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 03:01	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 03:01	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 03:01	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 03:01	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 03:01	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 03:01	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 03:01	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 03:01	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 03:01	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 03:01	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 03:01	063009-1
	Arsenic	1.5	+/-5	U	1.5	5.0	SOL	MS	30-JUN-09 20:31	090630-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	30-JUN-09 20:31	090630-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	30-JUN-09 20:31	090630-2
	Thallium	0.259	+/-1	J	0.2	1.0	SOL	MS	30-JUN-09 20:31	090630-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	01-JUL-09 07:37	090630-4
	Mercury	-0.121	+/-.2	J	0.068	0.2	SOL	AV	13-JUL-09 09:50	071309S2-5
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 03:31	063009-1
	Antimony	4.88	+/-10	J	3.1	10.0	SOL	P	30-JUN-09 03:31	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 03:31	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 03:31	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 03:31	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 03:31	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 03:31	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2473

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 03:31	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 03:31	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 03:31	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 03:31	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 03:31	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 03:31	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 03:31	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 03:31	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 03:31	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 03:31	063009-1
	Arsenic	1.5	+/-5	U	1.5	5.0	SOL	MS	30-JUN-09 21:02	090630-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	30-JUN-09 21:02	090630-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	30-JUN-09 21:02	090630-2
	Thallium	0.252	+/-1	J	0.2	1.0	SOL	MS	30-JUN-09 21:02	090630-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	01-JUL-09 07:49	090630-4
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 09:56	071309S2-5
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 04:06	063009-1
	Antimony	3.1	+/-10	U	3.1	10.0	SOL	P	30-JUN-09 04:06	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:06	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:06	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 04:06	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:06	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 04:06	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 04:06	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 04:06	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 04:06	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 04:06	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 04:06	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 04:06	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:06	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2473

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 04:06	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:06	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 04:06	063009-1
	Arsenic	1.5	+/-5	U	1.5	5.0	SOL	MS	30-JUN-09 21:20	090630-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	30-JUN-09 21:20	090630-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	30-JUN-09 21:20	090630-2
	Thallium	0.384	+/-1	J	0.2	1.0	SOL	MS	30-JUN-09 21:20	090630-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	01-JUL-09 08:09	090630-4
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:20	071309S2-5
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 04:19	063009-1
	Antimony	4.18	+/-10	J	3.1	10.0	SOL	P	30-JUN-09 04:19	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 04:19	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 04:19	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 04:19	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 04:19	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 04:19	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 04:19	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 04:19	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 04:19	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 04:19	063009-1
	Arsenic	1.5	+/-5	U	1.5	5.0	SOL	MS	30-JUN-09 22:15	090630-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	30-JUN-09 22:15	090630-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	30-JUN-09 22:15	090630-2
	Thallium	0.2	+/-1	U	0.2	1.0	SOL	MS	30-JUN-09 22:15	090630-2

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2473

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	01-JUL-09 08:35	090630-4
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 04:46	063009-1
	Antimony	4.68	+/-10	J	3.1	10.0	SOL	P	30-JUN-09 04:46	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:46	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:46	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 04:46	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:46	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 04:46	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 04:46	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 04:46	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 04:46	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 04:46	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 04:46	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 04:46	063009-1
	Silver	1.16	+/-5	J	1.0	5.0	SOL	P	30-JUN-09 04:46	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 04:46	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:46	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 04:46	063009-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	01-JUL-09 09:03	090630-4
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 05:17	063009-1
	Antimony	3.1	+/-10	U	3.1	10.0	SOL	P	30-JUN-09 05:17	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 05:17	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 05:17	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 05:17	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 05:17	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 05:17	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 05:17	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 05:17	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 05:17	063009-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2473

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	30–JUN–09 05:17	063009–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 05:17	063009–1
	Potassium	50.0	+/–150	U	50.0	150	SOL	P	30–JUN–09 05:17	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 05:17	063009–1
	Sodium	45.0	+/–150	U	45.0	150	SOL	P	30–JUN–09 05:17	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 05:17	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 05:17	063009–1
CCB06										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	30–JUN–09 05:39	063009–1
	Antimony	3.67	+/–10	J	3.1	10.0	SOL	P	30–JUN–09 05:39	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 05:39	063009–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 05:39	063009–1
	Calcium	30.0	+/–100	U	30.0	100	SOL	P	30–JUN–09 05:39	063009–1
	Chromium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 05:39	063009–1
	Cobalt	2.0	+/–5	U	2.0	5.0	SOL	P	30–JUN–09 05:39	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	30–JUN–09 05:39	063009–1
	Iron	25.76	+/–100	J	25.0	100	SOL	P	30–JUN–09 05:39	063009–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	30–JUN–09 05:39	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	30–JUN–09 05:39	063009–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 05:39	063009–1
	Potassium	50.0	+/–150	U	50.0	150	SOL	P	30–JUN–09 05:39	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 05:39	063009–1
	Sodium	45.0	+/–150	U	45.0	150	SOL	P	30–JUN–09 05:39	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 05:39	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 05:39	063009–1
CCB07										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	30–JUN–09 06:01	063009–1
	Antimony	3.63	+/–10	J	3.1	10.0	SOL	P	30–JUN–09 06:01	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 06:01	063009–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 06:01	063009–1
	Calcium	30.0	+/–100	U	30.0	100	SOL	P	30–JUN–09 06:01	063009–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2473

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:01	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 06:01	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 06:01	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 06:01	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 06:01	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 06:01	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 06:01	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 06:01	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:01	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 06:01	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:01	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 06:01	063009-1
CCB08										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 06:35	063009-1
	Antimony	5.04	+/-10	J	3.1	10.0	SOL	P	30-JUN-09 06:35	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:35	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:35	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 06:35	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:35	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 06:35	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 06:35	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 06:35	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 06:35	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 06:35	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 06:35	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 06:35	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:35	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 06:35	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:35	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 06:35	063009-1

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 09-2473

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201870539								
	Aluminum	6680	ug/Kg	+/-19646.365	U	P	6680	19600
	Antimony	408	ug/Kg	+/-982.318	J	P	305	982
	Barium	98.2	ug/Kg	+/-491.159	U	P	98.2	491
	Chromium	98.2	ug/Kg	+/-491.159	U	P	98.2	491
	Cobalt	196	ug/Kg	+/-491.159	U	P	196	491
	Calcium	5150	ug/Kg	+/-9823.183	J	P	2950	9820
	Cadmium	98.2	ug/Kg	+/-491.159	U	P	98.2	491
	Copper	295	ug/Kg	+/-982.318	U	P	295	982
	Lead	246	ug/Kg	+/-982.318	U	P	246	982
	Zinc	341	ug/Kg	+/-982.318	J	P	196	982
	Vanadium	98.2	ug/Kg	+/-491.159	U	P	98.2	491
	Sodium	4420	ug/Kg	+/-14734.774	U	P	4420	14700
	Silver	98.2	ug/Kg	+/-491.159	U	P	98.2	491
	Potassium	4910	ug/Kg	+/-14734.774	U	P	4910	14700
	Manganese	196	ug/Kg	+/-982.318	U	P	196	982
	Magnesium	8350	ug/Kg	+/-29469.548	U	P	8350	29500
	Iron	5580	ug/Kg	+/-9823.183	J	P	2460	9820
1201870575								
	Arsenic	299	ug/kg	+/-996.016	U	MS	299	996
	Beryllium	19.9	ug/kg	+/-99.602	U	MS	19.9	99.6
	Nickel	99.6	ug/kg	+/-398.406	U	MS	99.6	398
	Thallium	40	ug/kg	+/-199.203	J	MS	39.8	199
	Selenium	498	ug/kg	+/-996.016	U	MS	498	996
1201870737								
	Mercury	-8.77	ug/kg	+/-11.719	J	AV	3.98	11.7

METALS
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Interference Check Sample

SDG No: 09-2473

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 - 120.0	30-JUN-09 03:08	063009-1
	Antimony	-11.9	ug/L					30-JUN-09 03:08	063009-1
	Barium	5.01	ug/L					30-JUN-09 03:08	063009-1
	Cadmium	0.713	ug/L					30-JUN-09 03:08	063009-1
	Calcium	488000	ug/L	500000	ug/L	97.5	80.0 - 120.0	30-JUN-09 03:08	063009-1
	Chromium	-3.65	ug/L					30-JUN-09 03:08	063009-1
	Cobalt	-1.47	ug/L					30-JUN-09 03:08	063009-1
	Copper	-11.0	ug/L					30-JUN-09 03:08	063009-1
	Iron	187000	ug/L	200000	ug/L	93.7	80.0 - 120.0	30-JUN-09 03:08	063009-1
	Lead	6.5	ug/L					30-JUN-09 03:08	063009-1
	Magnesium	485000	ug/L	500000	ug/L	97	80.0 - 120.0	30-JUN-09 03:08	063009-1
	Manganese	-4.1	ug/L					30-JUN-09 03:08	063009-1
	Potassium	-44.3	ug/L					30-JUN-09 03:08	063009-1
	Silver	1.63	ug/L					30-JUN-09 03:08	063009-1
	Sodium	18.0	ug/L					30-JUN-09 03:08	063009-1
	Vanadium	-0.455	ug/L					30-JUN-09 03:08	063009-1
	Zinc	8.31	ug/L					30-JUN-09 03:08	063009-1
ICSAB01									
	Aluminum	506000	ug/L	500000	ug/L	101	80.0 - 120.0	30-JUN-09 03:11	063009-1
	Antimony	513	ug/L	500	ug/L	103	80.0 - 120.0	30-JUN-09 03:11	063009-1
	Barium	504	ug/L	500	ug/L	101	80.0 - 120.0	30-JUN-09 03:11	063009-1
	Cadmium	464	ug/L	500	ug/L	92.8	80.0 - 120.0	30-JUN-09 03:11	063009-1
	Calcium	483000	ug/L	500000	ug/L	96.5	80.0 - 120.0	30-JUN-09 03:11	063009-1
	Chromium	479	ug/L	500	ug/L	95.8	80.0 - 120.0	30-JUN-09 03:11	063009-1
	Cobalt	460	ug/L	500	ug/L	91.9	80.0 - 120.0	30-JUN-09 03:11	063009-1
	Copper	545	ug/L	500	ug/L	109	80.0 - 120.0	30-JUN-09 03:11	063009-1
	Iron	186000	ug/L	200000	ug/L	93.2	80.0 - 120.0	30-JUN-09 03:11	063009-1
	Lead	496	ug/L	500	ug/L	99.2	80.0 - 120.0	30-JUN-09 03:11	063009-1
	Magnesium	482000	ug/L	500000	ug/L	96.5	80.0 - 120.0	30-JUN-09 03:11	063009-1

METALS
–4–
Interference Check Sample

SDG No: 09–2473

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	478	ug/L	500	ug/L	95.6	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Potassium	5170	ug/L	5000	ug/L	103	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Silver	271	ug/L	250	ug/L	109	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Sodium	5230	ug/L	5000	ug/L	105	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Vanadium	522	ug/L	500	ug/L	104	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Zinc	485	ug/L	500	ug/L	97.1	80.0 – 120.0	30–JUN–09 03:11	063009–1

METALS
-4-
Interference Check Sample

SDG No: 09-2473

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	0.122	ug/L					30-JUN-09 20:44	090630-2
	Nickel	2.98	ug/L					30-JUN-09 20:44	090630-2
	Selenium	-1.26	ug/L					30-JUN-09 20:44	090630-2
	Thallium	0.031	ug/L					30-JUN-09 20:44	090630-2
ICSAB01									
	Arsenic	20.5	ug/L	20	ug/L	102	80.0 - 120.0	30-JUN-09 20:50	090630-2
	Nickel	22.0	ug/L	22.7	ug/L	97	80.0 - 120.0	30-JUN-09 20:50	090630-2
	Selenium	19.5	ug/L	20	ug/L	97.4	80.0 - 120.0	30-JUN-09 20:50	090630-2
	Thallium	20.3	ug/L	20	ug/L	102	80.0 - 120.0	30-JUN-09 20:50	090630-2

METALS
-4-
Interference Check Sample

SDG No: 09-2473

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.045	ug/L					01-JUL-09 07:42	090630-4
ICSAB01									
	Beryllium	17.3	ug/L	20	ug/L	86.5	80.0 - 120.0	01-JUL-09 07:44	090630-4

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2473 **Client ID** CAMO-09-10463S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.8

Sample ID: 232424001 **Spike ID:** 1201870542

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg	75-125	2090000		1560000		509000	103		P
Antimony	ug/Kg	75-125	49900		905	J	50900	96.2		P
Barium	ug/Kg	75-125	61900		12700		50900	96.5		P
Cadmium	ug/Kg	75-125	50600		103	U	50900	99.3		P
Calcium	ug/Kg	75-125	1220000		693000		509000	104		P
Chromium	ug/Kg	75-125	53700		4070		50900	97.4		P
Cobalt	ug/Kg	75-125	49900		829		50900	96.3		P
Copper	ug/Kg	75-125	54900		3140		50900	102		P
Iron	ug/Kg		9550000		9560000		509000	-2.78	N/A	P
Lead	ug/Kg	75-125	63600		15400		50900	94.6		P
Magnesium	ug/Kg	75-125	1330000		850000		509000	95		P
Manganese	ug/Kg	75-125	227000		190000		50900	71.9	N	P
Potassium	ug/Kg	75-125	979000		472000		509000	99.5		P
Silver	ug/Kg	75-125	50200		225	J	50900	98.2		P
Sodium	ug/Kg	75-125	731000		225000		509000	99.2		P
Vanadium	ug/Kg	75-125	55500		5850		50900	97.5		P
Zinc	ug/Kg	75-125	90600		44400		50900	90.7		P

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2473 **Client ID** CAMO-09-10463SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.8

Sample ID: 232424001 **Spike ID:** 1201870543

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg	75-125	2350000		1560000		505000	155	N	P
Antimony	ug/Kg	75-125	48900		905	J	50500	95.1		P
Barium	ug/Kg	75-125	64100		12700		50500	102		P
Cadmium	ug/Kg	75-125	50300		103	U	50500	99.7		P
Calcium	ug/Kg	75-125	1190000		693000		505000	98.6		P
Chromium	ug/Kg	75-125	52700		4070		50500	96.3		P
Cobalt	ug/Kg	75-125	48600		829		50500	94.6		P
Copper	ug/Kg	75-125	55000		3140		50500	103		P
Iron	ug/Kg		9670000		9560000		505000	20.6	N/A	P
Lead	ug/Kg	75-125	67800		15400		50500	104		P
Magnesium	ug/Kg	75-125	1430000		850000		505000	115		P
Manganese	ug/Kg	75-125	250000		190000		50500	119		P
Potassium	ug/Kg	75-125	1020000		472000		505000	108		P
Silver	ug/Kg	75-125	50100		225	J	50500	98.9		P
Sodium	ug/Kg	75-125	727000		225000		505000	99.5		P
Vanadium	ug/Kg	75-125	55500		5850		50500	98.4		P
Zinc	ug/Kg	75-125	91500		44400		50500	93.4		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2473 **Client ID** CAMO-09-10463S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.8

Sample ID: 232424001 **Spike ID:** 1201870578

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	8770		612	J	8260	98.8		MS
Beryllium	ug/kg	75-125	5080		338		5170	91.7		MS
Nickel	ug/kg	75-125	7150		1930		5170	101		MS
Selenium	ug/kg	75-125	1920		497	U	2070	82.7		MS
Thallium	ug/kg	75-125	10500		193	J	10300	99.8		MS

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2473 **Client ID** CAMO-09-10463SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.8

Sample ID: 232424001 **Spike ID:** 1201870579

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	8160		612	J	8280	91.2		MS
Beryllium	ug/kg	75-125	4850		338		5180	87.3		MS
Nickel	ug/kg	75-125	6530		1930		5180	88.9		MS
Selenium	ug/kg	75-125	1930		497	U	2070	83.2		MS
Thallium	ug/kg	75-125	9870		193	J	10400	93.5		MS

METALS
–5a–
Matrix Spike Summary

SDG NO. 09–2473 **Client ID** CAMO–09–6007S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.7

Sample ID: 232429001 **Spike ID:** 1201870740

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75–125	137		18.4		116	102		AV

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2473 **Client ID** CAMO-09-6007SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 95.7

Sample ID: 232429001 **Spike ID:** 1201870746

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	137		18.4		109	109		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2473

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10463D

Sample ID: 232424001 **Duplicate ID:** 1201870540 **Percent Solids for Dup:** 95.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	1560000		1420000		9.42		P
Antimony	ug/Kg	+/–1010	905	J	1270		33.5		P
Barium	ug/Kg	+/–20%	12700		13500		5.81		P
Cadmium	ug/Kg		103	U	101	U			P
Calcium	ug/Kg	+/–20%	693000		596000		15.1		P
Chromium	ug/Kg	+/–20%	4070		3830		5.94		P
Cobalt	ug/Kg	+/–507	829		776		6.66		P
Copper	ug/Kg	+/–1010	3140		2970		5.85		P
Iron	ug/Kg	+/–20%	9560000		9140000		4.51		P
Lead	ug/Kg	+/–20%	15400		14100		8.73		P
Magnesium	ug/Kg	+/–20%	850000		801000		5.88		P
Manganese	ug/Kg	+/–20%	190000		186000		2.14		P
Potassium	ug/Kg	+/–20%	472000		443000		6.3		P
Silver	ug/Kg	+/–507	225	J	152	J	38.5		P
Sodium	ug/Kg	+/–20%	225000		211000		6.73		P
Vanadium	ug/Kg	+/–20%	5850		5520		5.77		P
Zinc	ug/Kg	+/–20%	44400		42000		5.42		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2473

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-10463SD

Sample ID: 1201870542 **Duplicate ID:** 1201870543 **Percent Solids for Dup:** 95.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	2090000		2350000		11.8		P
Antimony	ug/Kg	+/-20	49900		48900		2.1		P
Barium	ug/Kg	+/-20	61900		64100		3.62		P
Cadmium	ug/Kg	+/-20	50600		50300		.548		P
Calcium	ug/Kg	+/-20	1220000		1190000		2.52		P
Chromium	ug/Kg	+/-20	53700		52700		1.9		P
Cobalt	ug/Kg	+/-20	49900		48600		2.68		P
Copper	ug/Kg	+/-20	54900		55000		.0764		P
Iron	ug/Kg	+/-20	9550000		9670000		1.23		P
Lead	ug/Kg	+/-20	63600		67800		6.34		P
Magnesium	ug/Kg	+/-20	1330000		1430000		6.89		P
Manganese	ug/Kg	+/-20	227000		250000		9.85		P
Potassium	ug/Kg	+/-20	979000		1020000		3.69		P
Silver	ug/Kg	+/-20	50200		50100		.22		P
Sodium	ug/Kg	+/-20	731000		727000		.457		P
Vanadium	ug/Kg	+/-20	55500		55500		.0329		P
Zinc	ug/Kg	+/-20	90600		91500		1.03		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2473

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-10463D

Sample ID: 232424001 **Duplicate ID:** 1201870576 **Percent Solids for Dup:** 95.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-1010	612	J	640	J	4.53		MS
Beryllium	ug/kg	+/-101	338		367		8.35		MS
Nickel	ug/kg	+/-402	1930		2090		7.84		MS
Selenium	ug/kg		497	U	503	U			MS
Thallium	ug/kg	+/-201	193	J	177	J	8.8		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2473

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-10463SD

Sample ID: 1201870578 **Duplicate ID:** 1201870579 **Percent Solids for Dup:** 95.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-20	8770		8160		7.23		MS
Beryllium	ug/kg	+/-20	5080		4850		4.45		MS
Nickel	ug/kg	+/-20	7150		6530		9.16		MS
Selenium	ug/kg	+/-20	1920		1930		.704		MS
Thallium	ug/kg	+/-20	10500		9870		6.25		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2473

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-6007D

Sample ID: 232429001 **Duplicate ID:** 1201870739 **Percent Solids for Dup:** 95.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-10.8	18.4		19.4		5.78		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2473

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–6007SD

Sample ID: 1201870740 **Duplicate ID:** 1201870746 **Percent Solids for Dup:** 95.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/–20	137		137		.285		AV

METALS
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Laboratory Control Sample Summary

SDG NO. 09-2473

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201870544								
	Aluminum	ug/Kg	7290000	7540000		103	63.5-118	P
	Antimony	ug/Kg	121000	119000		98.4	39.1-132.1	P
	Barium	ug/Kg	475000	480000		101	82-110.6	P
	Cadmium	ug/Kg	116000	118000		101	77.9-115.2	P
	Calcium	ug/Kg	3720000	3700000		99.4	77.4-111.7	P
	Chromium	ug/Kg	84000	78600		93.6	66.6-116.5	P
	Cobalt	ug/Kg	83000	83300		100	79-113.9	P
	Copper	ug/Kg	105000	101000		96.5	77.6-112	P
	Iron	ug/Kg	20000000	20400000		102	51.5-145.5	P
	Lead	ug/Kg	161000	168000		104	83.1-114.7	P
	Magnesium	ug/Kg	2980000	3120000		105	81-114.3	P
	Manganese	ug/Kg	398000	378000		95.1	76.6-106.6	P
	Potassium	ug/Kg	2390000	2420000		101	72.2-111.1	P
	Silver	ug/Kg	133000	134000		101	81.7-115.7	P
	Sodium	ug/Kg	614000	587000		95.6	71.5-109.3	P
	Vanadium	ug/Kg	166000	154000		92.9	65-118.6	P
	Zinc	ug/Kg	195000	199000		102	82.8-111.9	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2473

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201870580								
	Arsenic	ug/kg	255000	257000		101	83-120	MS
	Beryllium	ug/kg	86400	90300		104	81.2-126.8	MS
	Nickel	ug/kg	101000	104000		103	83.3-121.4	MS
	Selenium	ug/kg	171000	185000		108	80.2-125.9	MS
	Thallium	ug/kg	203000	210000		104	78-123.2	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2473

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201870738								
	Mercury	ug/kg	5150	5620		109	71.6-128.3	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2473 **Client ID** CAMO-09-10463L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232424001 **Serial Dilution ID:** 1201870541

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	15100		15200		.662		10	P
Antimony	8.76	J	20.3	J	131			P
Barium	123		129		4.88		10	P
Cadmium	1	U	5	U				P
Calcium	6700		6700		0		10	P
Chromium	39.4		42.1		6.85			P
Cobalt	8.02		10	U	100			P
Copper	30.4		32.1	J	5.43			P
Iron	92600		93000		.432		10	P
Lead	149		150		.671		10	P
Magnesium	8230		8150		.972		10	P
Manganese	1840		1840		.272		10	P
Potassium	4570		4330		5.36		10	P
Silver	2.18	J	5	U	100			P
Sodium	2180		2160		.917			P
Vanadium	56.6		58		2.47		10	P
Zinc	430		454		5.47		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2473 **Client ID** CAMO-09-10463L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232424001 **Serial Dilution ID:** 1201870577

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	3.08	J	7.5	U	100			MS
Beryllium	1.7		1.44	J	15.6			MS
Nickel	9.7		11.3		16			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.971	J	1	U	100			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2473 **Client ID** CAMO-09-6007L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232429001 **Serial Dilution ID:** 1201870745

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.324		.34	U	100			AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2473 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880929						
1201870539	MB for batch 880929	MB	S	29-JUN-09	.509g	50mL	
1201870544	LCS for batch 880929	LCS	S	29-JUN-09	.518g	50mL	
1201870542	CAMO-09-10463S	MS	S	29-JUN-09	.512g	50mL	
1201870543	CAMO-09-10463SD	MSD	S	29-JUN-09	.517g	50mL	
1201870540	CAMO-09-10463D	DUP	S	29-JUN-09	.514g	50mL	
232424001	CAMO-09-10463	SAMPLE	S	29-JUN-09	.505g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2473 **Method Type**: MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880942						
1201870575	MB for batch 880942	MB	S	29-JUN-09	.502g	50mL	
1201870580	LCS for batch 880942	LCS	S	29-JUN-09	.51g	50mL	
1201870578	CAMO-09-10463S	MS	S	29-JUN-09	.505g	50mL	
1201870579	CAMO-09-10463SD	MSD	S	29-JUN-09	.504g	50mL	
1201870576	CAMO-09-10463D	DUP	S	29-JUN-09	.519g	50mL	
232424001	CAMO-09-10463	SAMPLE	S	29-JUN-09	.525g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2473 **Method Type** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880994						
1201870737	MB for batch 880994	MB	S	10-JUL-09	.512g	30mL	
1201870738	LCS for batch 880994	LCS	S	10-JUL-09	.203g	30mL	
1201870740	CAMO-09-6007S	MS	S	10-JUL-09	.541g	30mL	
1201870746	CAMO-09-6007SD	MSD	S	10-JUL-09	.573g	30mL	
1201870739	CAMO-09-6007D	DUP	S	10-JUL-09	.581g	30mL	
232424001	CAMO-09-10463	SAMPLE	S	10-JUL-09	.523g	30mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 30–JUN–09 **End Date:** 01–JUL–09

Client Sdg: 09–2473
Method MS
Data File: 090630–2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	20:07			X													X		X			X		
S10	1	20:13			X													X		X			X		
S100	1	20:19			X													X		X			X		
ICV01	1	20:25			X													X		X			X		
ICB01	1	20:31			X													X		X			X		
CRDL01	1	20:38			X													X		X			X		
ICSA01	1	20:44			X													X		X			X		
ICSAB01	1	20:50			X													X		X			X		
CCV01	1	20:56			X													X		X			X		
CCB01	1	21:02			X													X		X			X		
LR01	1	21:08			X													X		X			X		
CCV02	1	21:14			X													X		X			X		
CCB02	1	21:20			X													X		X			X		
1201870575	2	21:26			X													X		X			X		
1201870580	40	21:33			X													X		X			X		
232424001	2	21:39			X													X		X			X		
1201870576	2	21:45			X													X		X			X		
1201870578	2	21:51			X													X		X			X		
1201870579	2	21:57			X													X		X			X		
1201870577	10	22:03			X													X		X			X		
CCV03	1	22:09			X													X		X			X		
CCB03	1	22:15			X													X		X			X		

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 30–JUN–09 **End Date:** 01–JUL–09

Client Sdg: 09–2473
Method MS
Data File: 090630–4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	07:27					X																		
S10	1	07:29					X																		
S100	1	07:32					X																		
ICV01	1	07:34					X																		
ICB01	1	07:37					X																		
CRDL01	1	07:39					X																		
ICSA01	1	07:42					X																		
ICSAB01	1	07:44					X																		
CCV01	1	07:47					X																		
CCB01	1	07:49					X																		
ZZZZZZ	1	07:52																							
ZZZZZZ	1	07:54																							
ZZZZZZ	20	07:57																							
ZZZZZZ	20	07:59																							
ZZZZZZ	20	08:02																							
ZZZZZZ	100	08:04																							
CCV02	1	08:07					X																		
CCB02	1	08:09					X																		
ZZZZZZ	20	08:17																							
ZZZZZZ	20	08:20																							
ZZZZZZ	20	08:22																							
ZZZZZZ	100	08:27																							
ZZZZZZ	20	08:30																							
CCV03	1	08:32					X																		
CCB03	1	08:35					X																		
1201870575	2	08:37					X																		
1201870580	40	08:40					X																		
232424001	2	08:42					X																		
1201870576	2	08:45					X																		
1201870578	2	08:47					X																		
1201870579	2	08:50					X																		
1201870577	10	08:52					X																		
ZZZZZZ	2	08:55																							
ZZZZZZ	2	08:58																							
CCV04	1	09:00					X																		
CCB04	1	09:03					X																		

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 13-JUL-09 **End Date:** 13-JUL-09

Client Sdg: 09-2473
Method AV
Data File: 071309S2-5

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:36															X								
S0.2	1	09:38															X								
S0.5	1	09:40															X								
S2.0	1	09:42															X								
S5.0	1	09:44															X								
S10	1	09:46															X								
ICV01	1	09:48															X								
ICB01	1	09:50															X								
CRDL01	1	09:52															X								
CCV01	1	09:54															X								
CCB01	1	09:56															X								
1201870737	1	09:58															X								
1201870738	10	10:00															X								
232424001	1	10:02															X								
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
ZZZZZZ	1	10:08																							
1201870739	1	10:10															X								
1201870740	1	10:12															X								
1201870746	1	10:14															X								
1201870745	5	10:16															X								
CCV02	1	10:18															X								
CCB02	1	10:20															X								

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA1
Start Date: 30–JUN–09 **End Date:** 30–JUN–09

Client Sdg: 09–2473
Method P
Data File: 063009–1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	02:45	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	02:48		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	02:51	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	02:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	02:57	X						X				X		X							X			
ICV01	1	02:58	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	03:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	03:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	03:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	03:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	03:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	03:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	03:20																							
ZZZZZZ	1	03:23																							
CCV01	1	03:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	03:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	03:38																							
ZZZZZZ	1	03:42																							
ZZZZZZ	1	03:45																							
ZZZZZZ	1	03:49																							
ZZZZZZ	1	03:52																							
ZZZZZZ	1	03:56																							
ZZZZZZ	1	03:59																							
CCV02	1	04:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	04:06	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV03	1	04:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	04:19	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	04:23																							
ZZZZZZ	1	04:26																							
ZZZZZZ	1	04:30																							
ZZZZZZ	1	04:34																							
ZZZZZZ	1	04:36																							
ZZZZZZ	5	04:39																							
CCV04	1	04:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	04:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	04:49																							
ZZZZZZ	2	04:53																							
ZZZZZZ	1	04:56																							
ZZZZZZ	1	04:59																							
ZZZZZZ	1	05:02																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	05:05																							
ZZZZZZ	5	05:08																							
ZZZZZZ	1	05:11																							
CCV05	1	05:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	05:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	05:21																							
ZZZZZZ	2	05:24																							
ZZZZZZ	1	05:27																							
ZZZZZZ	1	05:30																							
ZZZZZZ	1	05:33																							
CCV06	1	05:36	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	05:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	05:42																							
ZZZZZZ	5	05:45																							
ZZZZZZ	1	05:49																							
ZZZZZZ	1	05:52																							
ZZZZZZ	1	05:55																							
CCV07	1	05:58	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	06:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870539	1	06:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870544	2	06:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232424001	1	06:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870540	1	06:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870542	1	06:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870543	1	06:19	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201870541	5	06:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	06:26																							
ZZZZZZ	1	06:30																							
CCV08	1	06:32	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB08	1	06:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Standards

METALS
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Instrument Detection Limits

SDG NO. 09-2473

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 23-JUL-07

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		5.0	15
	Antimony		0.5	2
	Arsenic		1.5	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		30.0	100
	Chromium		1.0	3
	Cobalt		0.1	1
	Copper		0.2	1
	Iron		10.0	25
	Lead		0.5	2
	Magnesium		5.0	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.2	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2473

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2473

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 23-JUL-07

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.1	10
	Arsenic	188.979	5.0	15
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	30.0	100
	Chromium	267.716	1.0	5
	Cobalt	228.616	2.0	5
	Copper	324.752	3.0	10
	Iron	238.204	25.0	100
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.0	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	15
	Silver	328.068	1.0	5
	Sodium	589.592	45.0	150
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	2.0	10

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2473
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.08714	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.36980	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.01008	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2473
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	4.75140	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-33.0980	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	2.44121
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	1.49970	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	176.49
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	4.07230	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	3.65700

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2473
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	38.0301
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	1.47380
Arsenic	188.979	-0.49261	0.00000	0.00000	0.00000	1.83900
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.31446	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.19492	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	-2.33110
Copper	324.752	-0.05080	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.01248	0.00000	0.00000	0.00000	-2.95230
Magnesium	279.077	1.68320	0.00000	0.00000	0.00000	-24.9658
Manganese	257.61	-0.17632	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	-0.03930	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	1.17810	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.07891	0.00000	0.34018	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.0660
Silver	328.068	-0.07890	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	3.84480	0.00000
Tin	189.927	-0.05585	0.00000	-0.13696	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	-0.08158	0.00000	0.00000	0.00000	-6.97050
Zinc	213.857	0.11260	0.00000	0.04420	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2473
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Selenium	Silicon	Silver
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-1.09390	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	5.19130	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2473
Effective Dates: 01-MAY-09

Parmname	Wavelength	Thallium	Tin	Titanium	Uranium	Vanadium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	-3.74360	-0.55870	0.00000
Arsenic	188.979	0.00000	0.00000	-2.71110	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	-2.10080
Beryllium	313.107	0.00000	0.00000	-2.91300	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	-0.71290	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	-1.47980
Cobalt	228.616	0.00000	0.00000	2.08900	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.84100	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	-21.8313	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	38.5869	36.0710	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	-6.85200
Thallium	190.801	0.00000	0.00000	-7.24690	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	-1.61770	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2473
Effective Dates: 01-MAY-09

Parmname	Wavelength	Zinc
Aluminum	396.153	0.00000
Antimony	206.836	0.00000
Arsenic	188.979	0.00000
Barium	233.527	0.00000
Beryllium	313.107	0.00000
Boron	249.677	0.00000
Cadmium	226.502	0.00000
Chromium	267.716	0.00000
Cobalt	228.616	0.00000
Copper	324.752	0.00000
Iron	238.204	0.00000
Lead	220.353	0.00000
Magnesium	279.077	0.00000
Manganese	257.61	0.00000
Molybdenum	202.031	0.00000
Nickel	231.604	0.00000
Phosphorous	214.914	0.00000
Selenium	196.026	0.00000
Silicon	251.611	0.00000
Silver	328.068	0.00000
Thallium	190.801	0.00000
Tin	189.927	0.00000
Titanium	334.94	0.00000
Uranium	409.014	0.00000
Vanadium	292.402	0.00000
Zinc	213.857	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2473

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS5

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2473

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA1

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

Raw Data

Spectra

Method: Hg_ReAlign
Result: 071409

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

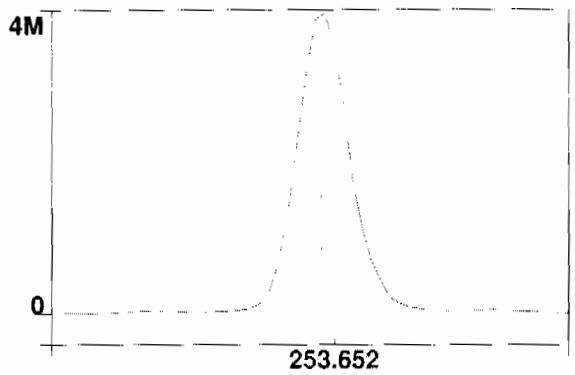

Intensity: 4189915.0 cps
Conc:

1

6/30/2009 02:35:43 Hg ReAlign... Actual peak offset (nm): 0.005
Drift (nm): 0.000 Slit adjustment: 0

Analysis Begun

Start Time: 6/30/2009 02:45:03 **Plasma On Time: 6/29/2009 11:03:38**
Logged In Analyst: optima **Technique: ICP Continuous**
Spectrometer Model: Optima 4300 DV, S/N 077N1030502Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\062909.sif
Batch ID:
Results Data Set: 063009
Results Library: c:\pe\optima1\Results\Results.mdb

Method Loaded
Method Name: Gen Eng fast_new Si **Method Last Saved: 6/30/2009 02:36:56**
IEC File: 042009.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 6/30/2009 02:45:05**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time

1	Sc RADIAL	165140.8	165140.8	99.3	%	02:45:39
1	Al 396.153Radial†	-141.6	-142.7	[0.00]	µg/L	02:45:39
1	Ca 317.933Radial†	869.6	876.1	[0.00]	µg/L	02:45:59
1	Fe 238.204 Radial†	-29.8	-30.0	[0.00]	µg/L	02:45:59
1	K 766.490 Radial†	895.3	902.0	[0.00]	µg/L	02:45:39
1	Mg 279.077 IEC†	49.9	50.2	[0.00]	µg/L	02:45:59
1	Na 589.592 Radial†	114.4	115.2	[0.00]	µg/L	02:45:39
1	Sr 421.552†	-36.9	-37.2	[0.00]	µg/L	02:45:39
1	Sc 361.383	2076982.1	2076982.1	100.03	%	02:47:01
1	Y 371.029	1356555.9	1356555.9	99.982	%	02:47:01
1	Ag 328.068†	-983.3	-983.0	[0.00]	µg/L	02:47:06
1	As 188.979†	-3.8	-3.8	[0.00]	µg/L	02:47:27
1	B 249.677†	217.1	217.0	[0.00]	µg/L	02:47:06
1	Ba 233.527†	-91.7	-91.7	[0.00]	µg/L	02:47:27
1	Be 313.107†	3372.7	3371.7	[0.00]	µg/L	02:47:06
1	Cd 226.502†	-139.6	-139.6	[0.00]	µg/L	02:47:27
1	Co 228.616†	-94.1	-94.1	[0.00]	µg/L	02:47:27
1	Cr 267.716†	-198.4	-198.4	[0.00]	µg/L	02:47:06
1	Cu 324.752†	4838.6	4837.2	[0.00]	µg/L	02:47:06
1	Mn 257.610†	73.7	73.7	[0.00]	µg/L	02:47:06
1	Mo 202.031†	5.3	5.3	[0.00]	µg/L	02:47:27
1	Ni 231.604†	436.5	436.4	[0.00]	µg/L	02:47:27
1	P 214.914†	251.8	251.7	[0.00]	µg/L	02:47:27
1	Pb 220.353†	65.7	65.7	[0.00]	µg/L	02:47:27
1	S 181.975 Axial†	44.2	44.2	[0.00]	µg/L	02:47:27
1	Sb 206.836†	25.6	25.6	[0.00]	µg/L	02:47:27
1	Se 196.026†	21.7	21.7	[0.00]	µg/L	02:47:27
1	SiO2†	3175.9	3174.9	[0.00]	µg/L	02:47:06
1	Si 251.611†	345.4	345.3	[0.00]	µg/L	02:47:27
1	Sn 189.927†	7.5	7.5	[0.00]	µg/L	02:47:27
1	Ti 334.940†	1345.1	1344.7	[0.00]	µg/L	02:47:06
1	Tl 190.801†	-27.3	-27.2	[0.00]	µg/L	02:47:27
1	U 409.014†	-17.2	-17.2	[0.00]	µg/L	02:47:06
1	V 292.402†	-205.6	-205.5	[0.00]	µg/L	02:47:06
1	Zn 213.857†	732.5	732.3	[0.00]	µg/L	02:47:27
2	Sc RADIAL	165837.4	165837.4	99.7	%	02:46:04
2	Al 396.153Radial†	-158.7	-159.2	[0.00]	µg/L	02:46:04
2	Ca 317.933Radial†	892.7	895.6	[0.00]	µg/L	02:46:25
2	Fe 238.204 Radial†	-26.1	-26.1	[0.00]	µg/L	02:46:25
2	K 766.490 Radial†	865.5	868.3	[0.00]	µg/L	02:46:04
2	Mg 279.077 IEC†	55.2	55.3	[0.00]	µg/L	02:46:25
2	Na 589.592 Radial†	120.1	120.5	[0.00]	µg/L	02:46:04
2	Sr 421.552†	-11.2	-11.3	[0.00]	µg/L	02:46:04
2	Sc 361.383	2086301.4	2086301.4	100.48	%	02:47:33
2	Y 371.029	1362967.0	1362967.0	100.45	%	02:47:33
2	Ag 328.068†	-939.7	-935.2	[0.00]	µg/L	02:47:38
2	As 188.979†	2.8	2.8	[0.00]	µg/L	02:47:59
2	B 249.677†	203.9	203.0	[0.00]	µg/L	02:47:38
2	Ba 233.527†	-86.0	-85.6	[0.00]	µg/L	02:47:59
2	Be 313.107†	3353.4	3337.4	[0.00]	µg/L	02:47:38
2	Cd 226.502†	-141.4	-140.7	[0.00]	µg/L	02:47:59
2	Co 228.616†	-90.5	-90.1	[0.00]	µg/L	02:47:59
2	Cr 267.716†	-169.1	-168.3	[0.00]	µg/L	02:47:38
2	Cu 324.752†	4979.4	4955.7	[0.00]	µg/L	02:47:38
2	Mn 257.610†	76.9	76.5	[0.00]	µg/L	02:47:38
2	Mo 202.031†	2.4	2.3	[0.00]	µg/L	02:47:59
2	Ni 231.604†	432.1	430.1	[0.00]	µg/L	02:47:59
2	P 214.914†	250.3	249.1	[0.00]	µg/L	02:47:59
2	Pb 220.353†	65.7	65.4	[0.00]	µg/L	02:47:59
2	S 181.975 Axial†	45.3	45.1	[0.00]	µg/L	02:47:59
2	Sb 206.836†	24.6	24.5	[0.00]	µg/L	02:47:59
2	Se 196.026†	19.3	19.2	[0.00]	µg/L	02:47:59
2	SiO2†	3252.4	3236.9	[0.00]	µg/L	02:47:38
2	Si 251.611†	348.7	347.0	[0.00]	µg/L	02:47:59
2	Sn 189.927†	11.0	10.9	[0.00]	µg/L	02:47:59
2	Ti 334.940†	1094.3	1089.1	[0.00]	µg/L	02:47:38
2	Tl 190.801†	-26.6	-26.5	[0.00]	µg/L	02:47:59
2	U 409.014†	-63.7	-63.4	[0.00]	µg/L	02:47:38
2	V 292.402†	-238.5	-237.3	[0.00]	µg/L	02:47:38
2	Zn 213.857†	729.7	726.2	[0.00]	µg/L	02:47:59
3	Sc RADIAL	168138.3	168138.3	101	%	02:46:30

3	Al 396.153Radial†	-150.0	-148.5	[0.00]	µg/L	02:46:30
3	Ca 317.933Radial†	884.3	875.0	[0.00]	µg/L	02:46:51
3	Fe 238.204 Radial†	-26.1	-25.9	[0.00]	µg/L	02:46:51
3	K 766.490 Radial†	828.8	820.1	[0.00]	µg/L	02:46:30
3	Mg 279.077 IEC†	46.1	45.6	[0.00]	µg/L	02:46:51
3	Na 589.592 Radial†	119.4	118.1	[0.00]	µg/L	02:46:30
3	Sr 421.552†	22.8	22.5	[0.00]	µg/L	02:46:30
3	Sc 361.383	2065830.5	2065830.5	99.492	%	02:48:05
3	Y 371.029	1350875.6	1350875.6	99.563	%	02:48:05
3	Ag 328.068†	-978.8	-983.8	[0.00]	µg/L	02:48:10
3	As 188.979†	1.6	1.6	[0.00]	µg/L	02:48:31
3	B 249.677†	211.0	212.0	[0.00]	µg/L	02:48:10
3	Ba 233.527†	-91.4	-91.8	[0.00]	µg/L	02:48:31
3	Be 313.107†	3363.7	3380.8	[0.00]	µg/L	02:48:10
3	Cd 226.502†	-145.5	-146.2	[0.00]	µg/L	02:48:31
3	Co 228.616†	-98.3	-98.8	[0.00]	µg/L	02:48:31
3	Cr 267.716†	-188.5	-189.5	[0.00]	µg/L	02:48:10
3	Cu 324.752†	4928.6	4953.7	[0.00]	µg/L	02:48:10
3	Mn 257.610†	116.7	117.3	[0.00]	µg/L	02:48:10
3	Mo 202.031†	0.8	0.9	[0.00]	µg/L	02:48:31
3	Ni 231.604†	431.2	433.4	[0.00]	µg/L	02:48:31
3	P 214.914†	259.0	260.4	[0.00]	µg/L	02:48:31
3	Pb 220.353†	69.9	70.3	[0.00]	µg/L	02:48:31
3	S 181.975 Axial†	43.7	43.9	[0.00]	µg/L	02:48:31
3	Sb 206.836†	19.5	19.6	[0.00]	µg/L	02:48:31
3	Se 196.026†	20.3	20.4	[0.00]	µg/L	02:48:31
3	SiO2†	3201.9	3218.2	[0.00]	µg/L	02:48:10
3	Si 251.611†	344.2	345.9	[0.00]	µg/L	02:48:31
3	Sn 189.927†	6.3	6.3	[0.00]	µg/L	02:48:31
3	Ti 334.940†	1057.6	1063.0	[0.00]	µg/L	02:48:10
3	Tl 190.801†	-29.7	-29.8	[0.00]	µg/L	02:48:31
3	U 409.014†	-4.1	-4.1	[0.00]	µg/L	02:48:10
3	V 292.402†	-174.3	-175.2	[0.00]	µg/L	02:48:10
3	Zn 213.857†	736.2	739.9	[0.00]	µg/L	02:48:31

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2076371.3	10249.11	0.49%	100.00	%
Sc RADIAL	166372.2	1568.69	0.94%	100	%
Y 371.029	1356799.5	6049.35	0.45%	100.00	%
Ag 328.068†	-967.3	27.83	2.88%	[0.00]	µg/L
Al 396.153Radial†	-150.1	8.42	5.61%	[0.00]	µg/L
As 188.979†	0.2	3.48	>999.9%	[0.00]	µg/L
B 249.677†	210.7	7.12	3.38%	[0.00]	µg/L
Ba 233.527†	-89.7	3.53	3.94%	[0.00]	µg/L
Be 313.107†	3363.3	22.90	0.68%	[0.00]	µg/L
Ca 317.933Radial†	882.2	11.57	1.31%	[0.00]	µg/L
Cd 226.502†	-142.2	3.54	2.49%	[0.00]	µg/L
Co 228.616†	-94.3	4.37	4.63%	[0.00]	µg/L
Cr 267.716†	-185.4	15.47	8.35%	[0.00]	µg/L
Cu 324.752†	4915.5	67.85	1.38%	[0.00]	µg/L
Fe 238.204 Radial†	-27.3	2.31	8.45%	[0.00]	µg/L
K 766.490 Radial†	863.5	41.14	4.76%	[0.00]	µg/L
Mg 279.077 IEC†	50.4	4.87	9.67%	[0.00]	µg/L
Mn 257.610†	89.2	24.43	27.40%	[0.00]	µg/L
Mo 202.031†	2.8	2.26	79.92%	[0.00]	µg/L
Na 589.592 Radial†	117.9	2.65	2.25%	[0.00]	µg/L
Ni 231.604†	433.3	3.17	0.73%	[0.00]	µg/L
P 214.914†	253.7	5.91	2.33%	[0.00]	µg/L
Pb 220.353†	67.1	2.73	4.06%	[0.00]	µg/L
S 181.975 Axial†	44.4	0.62	1.41%	[0.00]	µg/L
Sb 206.836†	23.2	3.23	13.91%	[0.00]	µg/L
Se 196.026†	20.4	1.23	6.01%	[0.00]	µg/L
SiO2†	3210.0	31.78	0.99%	[0.00]	µg/L
Si 251.611†	346.1	0.87	0.25%	[0.00]	µg/L
Sn 189.927†	8.2	2.40	29.09%	[0.00]	µg/L
Sr 421.552†	-8.6	29.95	346.54%	[0.00]	µg/L
Ti 334.940†	1165.6	155.68	13.36%	[0.00]	µg/L
Tl 190.801†	-27.8	1.75	6.28%	[0.00]	µg/L

U 409.014†	-28.3	31.17	110.31%	[0.00]	µg/L
V 292.402†	-206.0	31.06	15.08%	[0.00]	µg/L
Zn 213.857†	732.8	6.89	0.94%	[0.00]	µg/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 6/30/2009 02:48:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	169009.3	169009.3	102	%	02:49:15
1	K 766.490 Radial†	2765.7	1859.0	[1000]	µg/L	02:49:15
1	Sr 421.552†	23905.2	23540.9	[100]	µg/L	02:49:15
1	Sc 361.383	2055071.9	2055071.9	98.974	%	02:49:36
1	Y 371.029	1341967.0	1341967.0	98.907	%	02:49:36
1	Ag 328.068†	10952.0	12032.8	[100]	µg/L	02:49:42
1	As 188.979†	71.4	71.9	[100]	µg/L	02:50:03
1	B 249.677†	2703.6	2521.0	[100]	µg/L	02:49:42
1	Ba 233.527†	4026.1	4157.5	[100]	µg/L	02:49:42
1	Be 313.107†	176441.7	174907.1	[100]	µg/L	02:49:36
1	Cd 226.502†	4291.7	4478.3	[100]	µg/L	02:49:42
1	Co 228.616†	2119.6	2235.9	[100]	µg/L	02:50:03
1	Cr 267.716†	5103.5	5341.8	[100]	µg/L	02:49:42
1	Cu 324.752†	19194.9	14478.3	[100]	µg/L	02:49:42
1	Mn 257.610†	35317.3	35594.2	[100]	µg/L	02:49:42
1	Mo 202.031†	948.2	955.2	[100]	µg/L	02:50:03
1	Ni 231.604†	2512.1	2104.9	[100]	µg/L	02:49:42
1	P 214.914†	569.7	321.9	[500]	µg/L	02:50:03
1	Pb 220.353†	508.6	446.7	[100]	µg/L	02:50:03
1	S 181.975 Axial†	86.3	42.8	[200]	µg/L	02:50:03
1	Sb 206.836†	134.2	112.3	[100]	µg/L	02:50:03
1	Se 196.026†	118.7	99.5	[100]	µg/L	02:50:03
1	SiO2†	9464.7	6352.8	[1069.5]	µg/L	02:49:42
1	Si 251.611†	7596.5	7329.1	[500]	µg/L	02:49:42
1	Sn 189.927†	241.5	235.8	[100]	µg/L	02:50:03
1	Ti 334.940†	44369.3	43663.5	[100]	µg/L	02:49:42
1	Tl 190.801†	36.4	64.7	[100]	µg/L	02:50:03
1	U 409.014†	1087.7	1127.2	[100]	µg/L	02:49:42
1	V 292.402†	9304.4	9606.9	[100]	µg/L	02:49:42
1	Zn 213.857†	5093.8	4413.8	[100]	µg/L	02:49:42
2	Sc RADIAL	170112.2	170112.2	102	%	02:49:20
2	K 766.490 Radial†	2735.0	1811.4	[1000]	µg/L	02:49:20
2	Sr 421.552†	24086.9	23566.0	[100]	µg/L	02:49:20
2	Sc 361.383	2059305.9	2059305.9	99.178	%	02:50:09
2	Y 371.029	1345372.3	1345372.3	99.158	%	02:50:09
2	Ag 328.068†	10884.2	11941.7	[100]	µg/L	02:50:15
2	As 188.979†	79.1	79.5	[100]	µg/L	02:50:35
2	B 249.677†	2686.3	2497.9	[100]	µg/L	02:50:15
2	Ba 233.527†	3999.8	4122.7	[100]	µg/L	02:50:15
2	Be 313.107†	178649.3	176766.4	[100]	µg/L	02:50:09
2	Cd 226.502†	4289.2	4467.0	[100]	µg/L	02:50:15
2	Co 228.616†	2118.2	2230.1	[100]	µg/L	02:50:35
2	Cr 267.716†	5106.3	5334.0	[100]	µg/L	02:50:15
2	Cu 324.752†	19186.4	14429.9	[100]	µg/L	02:50:15
2	Mn 257.610†	35220.4	35423.1	[100]	µg/L	02:50:15
2	Mo 202.031†	940.2	945.2	[100]	µg/L	02:50:35
2	Ni 231.604†	2479.1	2066.4	[100]	µg/L	02:50:15
2	P 214.914†	557.2	308.1	[500]	µg/L	02:50:35
2	Pb 220.353†	484.7	421.6	[100]	µg/L	02:50:35
2	S 181.975 Axial†	89.0	45.4	[200]	µg/L	02:50:35
2	Sb 206.836†	133.7	111.5	[100]	µg/L	02:50:35
2	Se 196.026†	101.5	81.9	[100]	µg/L	02:50:35
2	SiO2†	9482.3	6350.8	[1069.5]	µg/L	02:50:15
2	Si 251.611†	7612.9	7329.9	[500]	µg/L	02:50:15
2	Sn 189.927†	237.0	230.7	[100]	µg/L	02:50:35
2	Ti 334.940†	44245.8	43446.9	[100]	µg/L	02:50:15
2	Tl 190.801†	36.8	64.9	[100]	µg/L	02:50:35
2	U 409.014†	1042.4	1079.3	[100]	µg/L	02:50:15
2	V 292.402†	9269.3	9552.1	[100]	µg/L	02:50:15

2	Zn 213.857†	5071.0	4380.2	[100]	µg/L	02:50:15
3	Sc RADIAL	169213.2	169213.2	102	%	02:49:26
3	K 766.490 Radial†	2794.6	1884.2	[1000]	µg/L	02:49:26
3	Sr 421.552†	24223.6	23825.5	[100]	µg/L	02:49:26
3	Sc 361.383	2064765.7	2064765.7	99.441	%	02:50:41
3	Y 371.029	1347758.1	1347758.1	99.334	%	02:50:41
3	Ag 328.068†	11039.1	12068.5	[100]	µg/L	02:50:47
3	As 188.979†	67.1	67.3	[100]	µg/L	02:51:07
3	B 249.677†	2722.2	2526.8	[100]	µg/L	02:50:47
3	Ba 233.527†	4080.8	4193.4	[100]	µg/L	02:50:47
3	Be 313.107†	179019.9	176662.8	[100]	µg/L	02:50:41
3	Cd 226.502†	4384.4	4551.2	[100]	µg/L	02:50:47
3	Co 228.616†	2106.7	2212.8	[100]	µg/L	02:51:07
3	Cr 267.716†	5167.2	5381.7	[100]	µg/L	02:50:47
3	Cu 324.752†	19280.2	14473.0	[100]	µg/L	02:50:47
3	Mn 257.610†	35687.0	35798.5	[100]	µg/L	02:50:47
3	Mo 202.031†	944.4	946.9	[100]	µg/L	02:51:07
3	Ni 231.604†	2504.4	2085.2	[100]	µg/L	02:50:47
3	P 214.914†	553.1	302.5	[500]	µg/L	02:51:07
3	Pb 220.353†	501.3	437.0	[100]	µg/L	02:51:07
3	S 181.975 Axial†	88.4	44.5	[200]	µg/L	02:51:07
3	Sb 206.836†	142.2	119.8	[100]	µg/L	02:51:07
3	Se 196.026†	112.5	92.7	[100]	µg/L	02:51:07
3	SiO2†	9484.1	6327.4	[1069.5]	µg/L	02:50:47
3	Si 251.611†	7655.4	7352.3	[500]	µg/L	02:50:47
3	Sn 189.927†	240.1	233.2	[100]	µg/L	02:51:07
3	Ti 334.940†	44712.3	43798.1	[100]	µg/L	02:50:47
3	Tl 190.801†	38.5	66.6	[100]	µg/L	02:51:07
3	U 409.014†	1074.8	1109.1	[100]	µg/L	02:50:47
3	V 292.402†	9403.4	9662.3	[100]	µg/L	02:50:47
3	Zn 213.857†	5163.8	4460.0	[100]	µg/L	02:50:47

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2059714.5	4859.77	0.24%	99.198	%
Sc RADIAL	169444.9	586.82	0.35%	102	%
Y 371.029	1345032.5	2910.49	0.22%	99.133	%
Ag 328.068†	12014.3	65.41	0.54%	[100]	µg/L
As 188.979†	72.9	6.18	8.47%	[100]	µg/L
B 249.677†	2515.2	15.30	0.61%	[100]	µg/L
Ba 233.527†	4157.9	35.38	0.85%	[100]	µg/L
Be 313.107†	176112.1	1044.84	0.59%	[100]	µg/L
Cd 226.502†	4498.8	45.69	1.02%	[100]	µg/L
Co 228.616†	2226.3	11.99	0.54%	[100]	µg/L
Cr 267.716†	5352.5	25.58	0.48%	[100]	µg/L
Cu 324.752†	14460.4	26.56	0.18%	[100]	µg/L
K 766.490 Radial†	1851.5	36.98	2.00%	[1000]	µg/L
Mn 257.610†	35605.3	187.92	0.53%	[100]	µg/L
Mo 202.031†	949.1	5.33	0.56%	[100]	µg/L
Ni 231.604†	2085.5	19.24	0.92%	[100]	µg/L
P 214.914†	310.8	9.98	3.21%	[500]	µg/L
Pb 220.353†	435.1	12.66	2.91%	[100]	µg/L
S 181.975 Axial†	44.2	1.33	3.02%	[200]	µg/L
Sb 206.836†	114.5	4.53	3.96%	[100]	µg/L
Se 196.026†	91.4	8.87	9.71%	[100]	µg/L
SiO2†	6343.7	14.11	0.22%	[1069.5]	µg/L
Si 251.611†	7337.1	13.17	0.18%	[500]	µg/L
Sn 189.927†	233.2	2.56	1.10%	[100]	µg/L
Sr 421.552†	23644.1	157.59	0.67%	[100]	µg/L
Ti 334.940†	43636.2	177.18	0.41%	[100]	µg/L
Tl 190.801†	65.4	1.05	1.61%	[100]	µg/L
U 409.014†	1105.2	24.20	2.19%	[100]	µg/L
V 292.402†	9607.1	55.10	0.57%	[100]	µg/L
Zn 213.857†	4418.0	40.07	0.91%	[100]	µg/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 6/30/2009 02:51:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	169028.2	169028.2	102	%	02:51:49
1	Al 396.153Radial†	12274.7	12232.0	[5000]	µg/L	02:51:55
1	Ca 317.933Radial†	28799.0	27464.2	[5000]	µg/L	02:51:55
1	K 766.490 Radial†	10333.8	9307.9	[5000]	µg/L	02:51:55
1	Mg 279.077 IEC†	2688.6	2596.0	[5000]	µg/L	02:51:55
1	Sr 421.552†	119596.4	117725.7	[500]	µg/L	02:51:49
1	Sc 361.383	2053526.9	2053526.9	98.900	%	02:52:28
1	Y 371.029	1337237.0	1337237.0	98.558	%	02:52:28
1	Ag 328.068†	57618.8	59227.1	[500]	µg/L	02:52:34
1	As 188.979†	330.4	333.9	[500]	µg/L	02:52:54
1	B 249.677†	12790.9	12722.6	[500]	µg/L	02:52:34
1	Ba 233.527†	20347.2	20663.2	[500]	µg/L	02:52:34
1	Be 313.107†	876095.9	882478.6	[500]	µg/L	02:52:28
1	Cd 226.502†	21673.1	22056.3	[500]	µg/L	02:52:34
1	Co 228.616†	10947.1	11163.2	[500]	µg/L	02:52:34
1	Cr 267.716†	25885.9	26359.2	[500]	µg/L	02:52:34
1	Cu 324.752†	74709.0	70624.6	[500]	µg/L	02:52:34
1	Mn 257.610†	174109.8	175957.5	[500]	µg/L	02:52:28
1	Mo 202.031†	4650.1	4699.0	[500]	µg/L	02:52:54
1	Ni 231.604†	10581.2	10265.6	[500]	µg/L	02:52:34
1	P 214.914†	1764.4	1530.3	[2500]	µg/L	02:52:54
1	Pb 220.353†	2206.6	2164.1	[500]	µg/L	02:52:54
1	S 181.975 Axial†	279.7	238.5	[1000]	µg/L	02:52:54
1	Sb 206.836†	591.1	574.4	[500]	µg/L	02:52:54
1	Se 196.026†	487.6	472.6	[500]	µg/L	02:52:54
1	SiO2†	34374.0	31546.4	[5347.5]	µg/L	02:52:34
1	Si 251.611†	36761.0	36823.8	[2500]	µg/L	02:52:34
1	Sn 189.927†	1155.4	1160.0	[500]	µg/L	02:52:54
1	Ti 334.940†	219150.4	220422.8	[500]	µg/L	02:52:28
1	Tl 190.801†	323.7	355.2	[500]	µg/L	02:52:54
1	U 409.014†	5292.2	5379.3	[500]	µg/L	02:52:34
1	V 292.402†	46917.1	47645.1	[500]	µg/L	02:52:34
1	Zn 213.857†	22178.4	21692.3	[500]	µg/L	02:52:34
2	Sc RADIAL	169499.6	169499.6	102	%	02:52:00
2	Al 396.153Radial†	12232.5	12156.9	[5000]	µg/L	02:52:06
2	Ca 317.933Radial†	28666.6	27255.4	[5000]	µg/L	02:52:06
2	K 766.490 Radial†	10339.5	9285.3	[5000]	µg/L	02:52:06
2	Mg 279.077 IEC†	2645.6	2546.4	[5000]	µg/L	02:52:06
2	Sr 421.552†	120700.6	118482.2	[500]	µg/L	02:52:00
2	Sc 361.383	2058954.0	2058954.0	99.161	%	02:53:01
2	Y 371.029	1335587.0	1335587.0	98.437	%	02:53:01
2	Ag 328.068†	57399.2	58852.0	[500]	µg/L	02:53:07
2	As 188.979†	334.5	337.1	[500]	µg/L	02:53:27
2	B 249.677†	12768.6	12666.0	[500]	µg/L	02:53:07
2	Ba 233.527†	20256.0	20517.1	[500]	µg/L	02:53:07
2	Be 313.107†	873723.0	877750.8	[500]	µg/L	02:53:01
2	Cd 226.502†	21511.7	21835.9	[500]	µg/L	02:53:07
2	Co 228.616†	10914.6	11101.3	[500]	µg/L	02:53:07
2	Cr 267.716†	25850.2	26254.3	[500]	µg/L	02:53:07
2	Cu 324.752†	74597.8	70313.3	[500]	µg/L	02:53:07
2	Mn 257.610†	173850.6	175232.1	[500]	µg/L	02:53:01
2	Mo 202.031†	4665.6	4702.2	[500]	µg/L	02:53:27
2	Ni 231.604†	10553.4	10209.4	[500]	µg/L	02:53:07
2	P 214.914†	1777.9	1539.3	[2500]	µg/L	02:53:27
2	Pb 220.353†	2218.1	2169.8	[500]	µg/L	02:53:27
2	S 181.975 Axial†	278.1	236.1	[1000]	µg/L	02:53:27
2	Sb 206.836†	588.2	569.9	[500]	µg/L	02:53:27
2	Se 196.026†	480.0	463.7	[500]	µg/L	02:53:27
2	SiO2†	34365.4	31446.1	[5347.5]	µg/L	02:53:07

2	Si 251.611†	36770.4	36735.4	[2500]	µg/L	02:53:07
2	Sn 189.927†	1155.0	1156.5	[500]	µg/L	02:53:27
2	Ti 334.940†	218726.2	219410.8	[500]	µg/L	02:53:01
2	Tl 190.801†	316.7	347.3	[500]	µg/L	02:53:27
2	U 409.014†	5291.6	5364.6	[500]	µg/L	02:53:07
2	V 292.402†	46777.4	47379.1	[500]	µg/L	02:53:07
2	Zn 213.857†	22141.9	21596.4	[500]	µg/L	02:53:07
3	Sc RADIAL	170447.4	170447.4	102	%	02:52:11
3	Al 396.153Radial†	12379.7	12233.8	[5000]	µg/L	02:52:16
3	Ca 317.933Radial†	29013.2	27437.3	[5000]	µg/L	02:52:16
3	K 766.490 Radial†	10487.7	9373.5	[5000]	µg/L	02:52:16
3	Mg 279.077 IEC†	2684.6	2570.0	[5000]	µg/L	02:52:16
3	Sr 421.552†	119382.5	116536.8	[500]	µg/L	02:52:11
3	Sc 361.383	2074511.1	2074511.1	99.910	%	02:53:34
3	Y 371.029	1346381.2	1346381.2	99.232	%	02:53:34
3	Ag 328.068†	57514.7	58533.6	[500]	µg/L	02:53:40
3	As 188.979†	331.7	331.8	[500]	µg/L	02:54:01
3	B 249.677†	12752.5	12553.3	[500]	µg/L	02:53:40
3	Ba 233.527†	20257.9	20365.8	[500]	µg/L	02:53:40
3	Be 313.107†	875159.3	872580.8	[500]	µg/L	02:53:34
3	Cd 226.502†	21547.6	21709.1	[500]	µg/L	02:53:40
3	Co 228.616†	10903.6	11007.7	[500]	µg/L	02:53:40
3	Cr 267.716†	25826.9	26035.4	[500]	µg/L	02:53:40
3	Cu 324.752†	74646.8	69798.2	[500]	µg/L	02:53:40
3	Mn 257.610†	173996.0	174062.8	[500]	µg/L	02:53:34
3	Mo 202.031†	4641.6	4643.0	[500]	µg/L	02:54:01
3	Ni 231.604†	10491.9	10068.1	[500]	µg/L	02:53:40
3	P 214.914†	1764.2	1512.1	[2500]	µg/L	02:54:01
3	Pb 220.353†	2210.5	2145.3	[500]	µg/L	02:54:01
3	S 181.975 Axial†	279.9	235.8	[1000]	µg/L	02:54:01
3	Sb 206.836†	598.8	576.1	[500]	µg/L	02:54:01
3	Se 196.026†	480.0	460.0	[500]	µg/L	02:54:01
3	SiO2†	34388.4	31209.2	[5347.5]	µg/L	02:53:40
3	Si 251.611†	36742.2	36429.1	[2500]	µg/L	02:53:40
3	Sn 189.927†	1138.8	1131.6	[500]	µg/L	02:54:01
3	Ti 334.940†	218968.9	217999.6	[500]	µg/L	02:53:34
3	Tl 190.801†	311.2	339.3	[500]	µg/L	02:54:01
3	U 409.014†	5306.0	5339.0	[500]	µg/L	02:53:40
3	V 292.402†	46832.9	47081.0	[500]	µg/L	02:53:40
3	Zn 213.857†	22130.6	21417.7	[500]	µg/L	02:53:40

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2062330.7	10892.00	0.53%	99.324	%
Sc RADIAL	169658.4	722.82	0.43%	102	%
Y 371.029	1339735.1	5814.56	0.43%	98.742	%
Ag 328.068†	58870.9	347.16	0.59%	[500]	µg/L
Al 396.153Radial†	12207.6	43.88	0.36%	[5000]	µg/L
As 188.979†	334.3	2.65	0.79%	[500]	µg/L
B 249.677†	12647.3	86.18	0.68%	[500]	µg/L
Ba 233.527†	20515.4	148.73	0.72%	[500]	µg/L
Be 313.107†	877603.4	4950.57	0.56%	[500]	µg/L
Ca 317.933Radial†	27385.7	113.56	0.41%	[5000]	µg/L
Cd 226.502†	21867.1	175.74	0.80%	[500]	µg/L
Co 228.616†	11090.7	78.28	0.71%	[500]	µg/L
Cr 267.716†	26216.3	165.20	0.63%	[500]	µg/L
Cu 324.752†	70245.4	417.38	0.59%	[500]	µg/L
K 766.490 Radial†	9322.2	45.82	0.49%	[5000]	µg/L
Mg 279.077 IEC†	2570.8	24.81	0.96%	[5000]	µg/L
Mn 257.610†	175084.1	955.95	0.55%	[500]	µg/L
Mo 202.031†	4681.4	33.34	0.71%	[500]	µg/L
Ni 231.604†	10181.0	101.80	1.00%	[500]	µg/L
P 214.914†	1527.2	13.85	0.91%	[2500]	µg/L
Pb 220.353†	2159.7	12.78	0.59%	[500]	µg/L
S 181.975 Axial†	236.8	1.46	0.62%	[1000]	µg/L
Sb 206.836†	573.5	3.18	0.56%	[500]	µg/L
Se 196.026†	465.4	6.47	1.39%	[500]	µg/L
SiO2†	31400.6	173.10	0.55%	[5347.5]	µg/L
Si 251.611†	36662.8	207.13	0.56%	[2500]	µg/L

Sn 189.927†	1149.4	15.50	1.35%	[500]	µg/L
Sr 421.552†	117581.6	980.68	0.83%	[500]	µg/L
Ti 334.940†	219277.7	1217.03	0.56%	[500]	µg/L
Tl 190.801†	347.3	7.90	2.28%	[500]	µg/L
U 409.014†	5361.0	20.37	0.38%	[500]	µg/L
V 292.402†	47368.4	282.22	0.60%	[500]	µg/L
Zn 213.857†	21568.8	139.36	0.65%	[500]	µg/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 6/30/2009 02:54:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	171128.5	171128.5	103	%	02:54:42
1	Al 396.153Radial†	24743.2	24205.6	[10000]	µg/L	02:54:48
1	Ca 317.933Radial†	56229.5	53784.4	[10000]	µg/L	02:54:48
1	Fe 238.204 Radial†	14888.0	14501.5	[10000]	µg/L	02:54:48
1	K 766.490 Radial†	19851.5	18436.3	[10000]	µg/L	02:54:48
1	Mg 279.077 IEC†	5307.0	5109.1	[10000]	µg/L	02:54:48
1	Na 589.592 Radial†	43206.1	41887.3	[10000]	µg/L	02:54:42
1	Sr 421.552†	238604.3	231981.2	[1000]	µg/L	02:54:42
1	Sc 361.383	2071464.5	2071464.5	99.764	%	02:55:22
1	Y 371.029	1342373.7	1342373.7	98.937	%	02:55:22
1	Ag 328.068†	115765.2	117006.8	[1000]	µg/L	02:55:28
1	As 188.979†	660.8	662.1	[1000]	µg/L	02:55:48
1	B 249.677†	25259.0	25108.2	[1000]	µg/L	02:55:28
1	Ba 233.527†	40240.3	40425.4	[1000]	µg/L	02:55:28
1	Be 313.107†	1730993.7	1731730.6	[1000]	µg/L	02:55:22
1	Cd 226.502†	42665.5	42908.7	[1000]	µg/L	02:55:28
1	Co 228.616†	21571.3	21716.7	[1000]	µg/L	02:55:28
1	Cr 267.716†	51370.2	51677.3	[1000]	µg/L	02:55:28
1	Cu 324.752†	143728.4	139153.3	[1000]	µg/L	02:55:28
1	Mn 257.610†	339821.6	340537.4	[1000]	µg/L	02:55:28
1	Mo 202.031†	9365.0	9384.4	[1000]	µg/L	02:55:48
1	Ni 231.604†	20250.2	19864.9	[1000]	µg/L	02:55:28
1	P 214.914†	3303.0	3057.1	[5000]	µg/L	02:55:48
1	Pb 220.353†	4396.4	4339.7	[1000]	µg/L	02:55:48
1	S 181.975 Axial†	518.7	475.5	[2000]	µg/L	02:55:48
1	Sb 206.836†	1192.1	1171.7	[1000]	µg/L	02:55:48
1	Se 196.026†	949.3	931.1	[1000]	µg/L	02:55:48
1	SiO2†	64358.1	61300.6	[10695]	µg/L	02:55:28
1	Si 251.611†	71535.5	71358.8	[5000]	µg/L	02:55:28
1	Sn 189.927†	2320.5	2317.8	[1000]	µg/L	02:55:48
1	Ti 334.940†	437066.3	436936.1	[1000]	µg/L	02:55:22
1	Tl 190.801†	662.9	692.4	[1000]	µg/L	02:55:48
1	U 409.014†	10225.1	10277.6	[1000]	µg/L	02:55:28
1	V 292.402†	93356.4	93783.5	[1000]	µg/L	02:55:28
1	Zn 213.857†	42837.6	42206.3	[1000]	µg/L	02:55:28
2	Sc RADIAL	170198.4	170198.4	102	%	02:54:54
2	Al 396.153Radial†	24732.0	24326.1	[10000]	µg/L	02:54:59
2	Ca 317.933Radial†	56258.8	54111.8	[10000]	µg/L	02:54:59
2	Fe 238.204 Radial†	14889.5	14582.1	[10000]	µg/L	02:54:59
2	K 766.490 Radial†	19906.3	18595.3	[10000]	µg/L	02:54:59
2	Mg 279.077 IEC†	5296.0	5126.6	[10000]	µg/L	02:54:59
2	Na 589.592 Radial†	43009.9	41925.0	[10000]	µg/L	02:54:54
2	Sr 421.552†	237719.8	232384.2	[1000]	µg/L	02:54:54
2	Sc 361.383	2059243.0	2059243.0	99.175	%	02:55:55
2	Y 371.029	1335994.6	1335994.6	98.467	%	02:55:55
2	Ag 328.068†	117235.0	119177.4	[1000]	µg/L	02:56:01
2	As 188.979†	665.6	670.9	[1000]	µg/L	02:56:22
2	B 249.677†	25611.6	25613.9	[1000]	µg/L	02:56:01
2	Ba 233.527†	40731.1	41159.6	[1000]	µg/L	02:56:01
2	Be 313.107†	1717928.2	1728854.2	[1000]	µg/L	02:55:55
2	Cd 226.502†	43015.9	43515.9	[1000]	µg/L	02:56:01
2	Co 228.616†	21815.8	22091.6	[1000]	µg/L	02:56:01
2	Cr 267.716†	52040.6	52658.8	[1000]	µg/L	02:56:01
2	Cu 324.752†	145728.0	142024.6	[1000]	µg/L	02:56:01
2	Mn 257.610†	343816.7	346587.3	[1000]	µg/L	02:56:01
2	Mo 202.031†	9375.3	9450.4	[1000]	µg/L	02:56:22
2	Ni 231.604†	20507.7	20244.9	[1000]	µg/L	02:56:01
2	P 214.914†	3293.2	3066.9	[5000]	µg/L	02:56:22
2	Pb 220.353†	4391.6	4361.0	[1000]	µg/L	02:56:22

2	S 181.975 Axial†	519.4	479.3	[2000]	µg/L	02:56:22
2	Sb 206.836†	1181.1	1167.7	[1000]	µg/L	02:56:22
2	Se 196.026†	946.9	934.4	[1000]	µg/L	02:56:22
2	SiO2†	65084.4	62415.8	[10695]	µg/L	02:56:01
2	Si 251.611†	72546.0	72803.3	[5000]	µg/L	02:56:01
2	Sn 189.927†	2306.1	2317.1	[1000]	µg/L	02:56:22
2	Ti 334.940†	434030.5	436475.1	[1000]	µg/L	02:55:55
2	Tl 190.801†	656.1	689.4	[1000]	µg/L	02:56:22
2	U 409.014†	10267.3	10380.9	[1000]	µg/L	02:56:01
2	V 292.402†	94546.9	95539.4	[1000]	µg/L	02:56:01
2	Zn 213.857†	43278.0	42905.2	[1000]	µg/L	02:56:01
3	Sc RADIAL	171449.5	171449.5	103	%	02:55:05
3	Al 396.153Radial†	24889.9	24302.9	[10000]	µg/L	02:55:10
3	Ca 317.933Radial†	56566.7	54009.3	[10000]	µg/L	02:55:10
3	Fe 238.204 Radial†	14984.0	14567.6	[10000]	µg/L	02:55:10
3	K 766.490 Radial†	19987.1	18531.7	[10000]	µg/L	02:55:10
3	Mg 279.077 IEC†	5313.9	5106.1	[10000]	µg/L	02:55:10
3	Na 589.592 Radial†	43354.2	41952.3	[10000]	µg/L	02:55:05
3	Sr 421.552†	239587.9	232501.4	[1000]	µg/L	02:55:05
3	Sc 361.383	2072464.5	2072464.5	99.812	%	02:56:28
3	Y 371.029	1349901.6	1349901.6	99.492	%	02:56:28
3	Ag 328.068†	116725.4	117912.8	[1000]	µg/L	02:56:34
3	As 188.979†	666.2	667.2	[1000]	µg/L	02:56:55
3	B 249.677†	25475.9	25313.3	[1000]	µg/L	02:56:34
3	Ba 233.527†	40584.2	40750.4	[1000]	µg/L	02:56:34
3	Be 313.107†	1749691.7	1749626.7	[1000]	µg/L	02:56:28
3	Cd 226.502†	43003.2	43226.4	[1000]	µg/L	02:56:34
3	Co 228.616†	21757.8	21893.1	[1000]	µg/L	02:56:34
3	Cr 267.716†	51790.1	52073.1	[1000]	µg/L	02:56:34
3	Cu 324.752†	144840.2	140197.7	[1000]	µg/L	02:56:34
3	Mn 257.610†	342569.2	343125.9	[1000]	µg/L	02:56:34
3	Mo 202.031†	9371.9	9386.7	[1000]	µg/L	02:56:55
3	Ni 231.604†	20401.5	20006.7	[1000]	µg/L	02:56:34
3	P 214.914†	3297.3	3049.8	[5000]	µg/L	02:56:55
3	Pb 220.353†	4406.3	4347.5	[1000]	µg/L	02:56:55
3	S 181.975 Axial†	517.6	474.2	[2000]	µg/L	02:56:55
3	Sb 206.836†	1196.5	1175.5	[1000]	µg/L	02:56:55
3	Se 196.026†	953.0	934.3	[1000]	µg/L	02:56:55
3	SiO2†	64803.6	61715.7	[10695]	µg/L	02:56:34
3	Si 251.611†	72148.1	71938.0	[5000]	µg/L	02:56:34
3	Sn 189.927†	2317.6	2313.7	[1000]	µg/L	02:56:55
3	Ti 334.940†	441766.6	441433.7	[1000]	µg/L	02:56:28
3	Tl 190.801†	668.2	697.3	[1000]	µg/L	02:56:55
3	U 409.014†	10214.9	10262.4	[1000]	µg/L	02:56:34
3	V 292.402†	94227.5	94611.2	[1000]	µg/L	02:56:34
3	Zn 213.857†	43139.3	42487.8	[1000]	µg/L	02:56:34

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2067724.0	7361.76	0.36%	99.584	%
Sc RADIAL	170925.5	649.78	0.38%	103	%
Y 371.029	1342756.6	6961.42	0.52%	98.965	%
Ag 328.068†	118032.3	1090.26	0.92%	[1000]	µg/L
Al 396.153Radial†	24278.2	63.96	0.26%	[10000]	µg/L
As 188.979†	666.8	4.43	0.66%	[1000]	µg/L
B 249.677†	25345.1	254.36	1.00%	[1000]	µg/L
Ba 233.527†	40778.4	367.93	0.90%	[1000]	µg/L
Be 313.107†	1736737.2	11254.93	0.65%	[1000]	µg/L
Ca 317.933Radial†	53968.5	167.46	0.31%	[10000]	µg/L
Cd 226.502†	43217.0	303.68	0.70%	[1000]	µg/L
Co 228.616†	21900.5	187.56	0.86%	[1000]	µg/L
Cr 267.716†	52136.4	493.84	0.95%	[1000]	µg/L
Cu 324.752†	140458.6	1453.32	1.03%	[1000]	µg/L
Fe 238.204 Radial†	14550.4	42.93	0.30%	[10000]	µg/L
K 766.490 Radial†	18521.1	80.03	0.43%	[10000]	µg/L
Mg 279.077 IEC†	5113.9	11.02	0.22%	[10000]	µg/L
Mn 257.610†	343416.9	3035.44	0.88%	[1000]	µg/L
Mo 202.031†	9407.2	37.48	0.40%	[1000]	µg/L
Na 589.592 Radial†	41921.6	32.65	0.08%	[10000]	µg/L

Ni 231.604†	20038.9	192.04	0.96%	[1000]	µg/L
P 214.914†	3057.9	8.57	0.28%	[5000]	µg/L
Pb 220.353†	4349.4	10.78	0.25%	[1000]	µg/L
S 181.975 Axial†	476.4	2.64	0.55%	[2000]	µg/L
Sb 206.836†	1171.6	3.93	0.34%	[1000]	µg/L
Se 196.026†	933.3	1.89	0.20%	[1000]	µg/L
SiO2†	61810.7	563.64	0.91%	[10695]	µg/L
Si 251.611†	72033.4	726.95	1.01%	[5000]	µg/L
Sn 189.927†	2316.2	2.19	0.09%	[1000]	µg/L
Sr 421.552†	232289.0	272.89	0.12%	[1000]	µg/L
Ti 334.940†	438281.6	2739.51	0.63%	[1000]	µg/L
Tl 190.801†	693.0	3.98	0.57%	[1000]	µg/L
U 409.014†	10307.0	64.48	0.63%	[1000]	µg/L
V 292.402†	94644.7	878.40	0.93%	[1000]	µg/L
Zn 213.857†	42533.1	351.65	0.83%	[1000]	µg/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 6/30/2009 02:57:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	167527.5	167527.5	101	%	02:57:36
1	Al 396.153Radial†	121203.7	120517.9	[50000]	µg/L	02:57:36
1	Ca 317.933Radial†	271009.2	268258.0	[50000]	µg/L	02:57:36
1	Fe 238.204 Radial†	29159.1	28985.3	[20000]	µg/L	02:57:36
1	Mg 279.077 IEC†	25176.5	24952.5	[50000]	µg/L	02:57:36
1	Na 589.592 Radial†	84197.4	83498.8	[20000]	µg/L	02:57:36
1	Sc 361.383	2100176.4	2100176.4	101.15	%	02:57:59
1	Y 371.029	1353259.1	1353259.1	99.739	%	02:57:59
2	Sc RADIAL	169087.0	169087.0	102	%	02:57:42
2	Al 396.153Radial†	121952.2	120144.2	[50000]	µg/L	02:57:42
2	Ca 317.933Radial†	273106.6	267839.4	[50000]	µg/L	02:57:42
2	Fe 238.204 Radial†	29344.1	28900.3	[20000]	µg/L	02:57:42
2	Mg 279.077 IEC†	25334.4	24877.2	[50000]	µg/L	02:57:42
2	Na 589.592 Radial†	84685.1	83207.4	[20000]	µg/L	02:57:42
2	Sc 361.383	2077154.0	2077154.0	100.04	%	02:58:07
2	Y 371.029	1339456.1	1339456.1	98.722	%	02:58:07
3	Sc RADIAL	171625.7	171625.7	103	%	02:57:47
3	Al 396.153Radial†	122442.5	118844.5	[50000]	µg/L	02:57:47
3	Ca 317.933Radial†	275343.1	266032.5	[50000]	µg/L	02:57:47
3	Fe 238.204 Radial†	29507.2	28631.3	[20000]	µg/L	02:57:47
3	Mg 279.077 IEC†	25503.8	24672.7	[50000]	µg/L	02:57:47
3	Na 589.592 Radial†	84834.7	82119.9	[20000]	µg/L	02:57:47
3	Sc 361.383	2083201.4	2083201.4	100.33	%	02:58:15
3	Y 371.029	1343882.5	1343882.5	99.048	%	02:58:15

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2086843.9	11935.59	0.57%	100.50	%
Sc RADIAL	169413.4	2068.53	1.22%	102	%
Y 371.029	1345532.6	7047.87	0.52%	99.170	%
Al 396.153Radial†	119835.6	878.36	0.73%	[50000]	µg/L
Ca 317.933Radial†	267376.6	1182.73	0.44%	[50000]	µg/L
Fe 238.204 Radial†	28839.0	184.78	0.64%	[20000]	µg/L
Mg 279.077 IEC†	24834.1	144.78	0.58%	[50000]	µg/L
Na 589.592 Radial†	82942.0	726.75	0.88%	[20000]	µg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	118.0	0.00000	0.999998	
Al 396.153Radial	3	Lin Thru 0	0.0	2.398	0.00000	0.999995	
As 188.979	3	Lin Thru 0	0.0	0.6676	0.00000	0.999965	
B 249.677	3	Lin Thru 0	0.0	25.33	0.00000	0.999999	
Ba 233.527	3	Lin Thru 0	0.0	40.83	0.00000	0.999996	
Be 313.107	3	Lin Thru 0	0.0	1741	0.00000	0.999991	
Ca 317.933Radial	3	Lin Thru 0	0.0	5.351	0.00000	0.999996	
Cd 226.502	3	Lin Thru 0	0.0	43.33	0.00000	0.999983	
Co 228.616	3	Lin Thru 0	0.0	21.96	0.00000	0.999986	
Cr 267.716	3	Lin Thru 0	0.0	52.21	0.00000	0.999995	
Cu 324.752	3	Lin Thru 0	0.0	140.5	0.00000	0.999997	
Fe 238.204 Radia	2	Lin Thru 0	0.0	1.445	0.00000	0.999993	
K 766.490 Radial	3	Lin Thru 0	0.0	1.855	0.00000	0.999996	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.4974	0.00000	0.999979	
Mn 257.610	3	Lin Thru 0	0.0	344.9	0.00000	0.999965	
Mo 202.031	3	Lin Thru 0	0.0	9.399	0.00000	0.999998	
Na 589.592 Radia	2	Lin Thru 0	0.0	4.156	0.00000	0.999991	

Ni 231.604	3	Lin Thru 0	0.0	20.11	0.00000	0.999974
P 214.914	3	Lin Thru 0	0.0	0.6115	0.00000	0.999999
Pb 220.353	3	Lin Thru 0	0.0	4.343	0.00000	0.999996
S 181.975 Axial	3	Lin Thru 0	0.0	0.2378	0.00000	0.999978
Sb 206.836	3	Lin Thru 0	0.0	1.167	0.00000	0.999963
Se 196.026	3	Lin Thru 0	0.0	0.9326	0.00000	0.999998
SiO2	3	Lin Thru 0	0.0	5.799	0.00000	0.999978
Si 251.611	3	Lin Thru 0	0.0	14.46	0.00000	0.999974
Sn 189.927	3	Lin Thru 0	0.0	2.313	0.00000	0.999995
Sr 421.552	3	Lin Thru 0	0.0	232.9	0.00000	0.999987
Ti 334.940	3	Lin Thru 0	0.0	438.3	0.00000	1.000000
Tl 190.801	3	Lin Thru 0	0.0	0.6930	0.00000	0.999987
U 409.014	3	Lin Thru 0	0.0	10.40	0.00000	0.999858
V 292.402	3	Lin Thru 0	0.0	94.67	0.00000	0.999999
Zn 213.857	3	Lin Thru 0	0.0	42.67	0.00000	0.999979

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 6/30/2009 02:58:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	169484.0	169484.0	102	%			02:58:57
1	Al 396.153Radial†	12667.0	12584.6	5227.7	µg/L	5227.7	ppb	02:59:02
1	Ca 317.933Radial†	28316.5	26914.4	5030.1	µg/L	5030.1	ppb	02:59:02
1	Fe 238.204 Radial†	7657.2	7544.0	5237.9	µg/L	5237.9	ppb	02:59:02
1	K 766.490 Radial†	5575.6	4609.8	2485.6	µg/L	2485.6	ppb	02:59:02
1	Mg 279.077 IEC†	2750.8	2649.9	5331.4	µg/L	5331.4	ppb	02:59:02
1	Na 589.592 Radial†	11261.3	10936.6	2631.5	µg/L	2631.5	ppb	02:59:02
1	Sr 421.552†	118164.9	116004.0	498.10	µg/L	498.10	ppb	02:58:57
1	Sc 361.383	2090725.5	2090725.5	100.69	%			02:59:35
1	Y 371.029	1360582.7	1360582.7	100.28	%			02:59:35
1	Ag 328.068†	28876.7	29645.8	255.08	µg/L	255.08	ppb	02:59:41
1	As 188.979†	312.5	310.1	466.94	µg/L	466.94	ppb	03:00:01
1	B 249.677†	12910.7	12611.4	496.17	µg/L	496.17	ppb	02:59:41
1	Ba 233.527†	21519.9	21461.9	526.63	µg/L	526.63	ppb	02:59:41
1	Be 313.107†	457447.2	450943.2	260.52	µg/L	260.52	ppb	02:59:35
1	Cd 226.502†	21625.4	21619.1	499.41	µg/L	499.41	ppb	02:59:41
1	Co 228.616†	10303.4	10327.0	470.44	µg/L	470.44	ppb	03:00:01
1	Cr 267.716†	26054.5	26061.0	499.93	µg/L	499.93	ppb	02:59:41
1	Cu 324.752†	78258.0	72805.2	518.90	µg/L	518.90	ppb	02:59:41
1	Mn 257.610†	179348.7	178028.2	516.27	µg/L	516.27	ppb	02:59:41
1	Mo 202.031†	4852.5	4816.3	512.64	µg/L	512.64	ppb	03:00:01
1	Ni 231.604†	10997.7	10489.0	520.89	µg/L	520.89	ppb	03:00:01
1	P 214.914†	1794.5	1528.4	2415.1	µg/L	2415.1	ppb	03:00:01
1	Pb 220.353†	2237.9	2155.4	496.47	µg/L	496.47	ppb	03:00:01
1	S 181.975 Axial†	661.0	612.0	2572.6	µg/L	2572.6	ppb	03:00:01
1	Sb 206.836†	633.4	605.8	517.99	µg/L	517.99	ppb	03:00:01
1	Se 196.026†	2360.3	2323.6	2492.8	µg/L	2492.8	ppb	03:00:01
1	SiO2†	65272.5	61614.4	10625	µg/L	10625	ppb	02:59:41
1	Si 251.611†	72490.4	71646.6	4907.0	µg/L	4907.0	ppb	02:59:41
1	Sn 189.927†	1227.1	1210.4	526.16	µg/L	526.16	ppb	03:00:01
1	Ti 334.940†	220413.1	217734.2	496.57	µg/L	496.57	ppb	02:59:41
1	Tl 190.801†	320.0	345.7	497.99	µg/L	497.99	ppb	03:00:01
1	U 409.014†	5123.9	5117.0	490.75	µg/L	490.75	ppb	02:59:41
1	V 292.402†	47330.0	47211.1	503.46	µg/L	503.46	ppb	02:59:41
1	Zn 213.857†	22602.2	21714.2	503.82	µg/L	503.82	ppb	02:59:41
2	Sc RADIAL	171786.5	171786.5	103	%			02:59:08
2	Al 396.153Radial†	12556.9	12311.3	5113.8	µg/L	5113.8	ppb	02:59:13
2	Ca 317.933Radial†	28216.7	26445.2	4942.4	µg/L	4942.4	ppb	02:59:13
2	Fe 238.204 Radial†	7611.5	7398.9	5137.4	µg/L	5137.4	ppb	02:59:13
2	K 766.490 Radial†	5594.3	4554.5	2455.8	µg/L	2455.8	ppb	02:59:13
2	Mg 279.077 IEC†	2734.2	2597.7	5226.5	µg/L	5226.5	ppb	02:59:13
2	Na 589.592 Radial†	11210.1	10738.9	2583.9	µg/L	2583.9	ppb	02:59:13
2	Sr 421.552†	119497.2	115739.5	496.97	µg/L	496.97	ppb	02:59:08
2	Sc 361.383	2099063.9	2099063.9	101.09	%			03:00:08
2	Y 371.029	1363725.0	1363725.0	100.51	%			03:00:08
2	Ag 328.068†	28675.2	29332.5	252.38	µg/L	252.38	ppb	03:00:14
2	As 188.979†	315.1	311.5	468.92	µg/L	468.92	ppb	03:00:34
2	B 249.677†	12828.9	12479.6	491.00	µg/L	491.00	ppb	03:00:14
2	Ba 233.527†	21375.7	21234.3	521.04	µg/L	521.04	ppb	03:00:14
2	Be 313.107†	457833.1	449520.2	259.69	µg/L	259.69	ppb	03:00:08
2	Cd 226.502†	21494.0	21403.8	494.46	µg/L	494.46	ppb	03:00:14
2	Co 228.616†	10302.4	10285.3	468.55	µg/L	468.55	ppb	03:00:34
2	Cr 267.716†	25858.3	25764.2	494.24	µg/L	494.24	ppb	03:00:14
2	Cu 324.752†	77939.0	72180.9	514.44	µg/L	514.44	ppb	03:00:14
2	Mn 257.610†	178355.7	176338.4	511.37	µg/L	511.37	ppb	03:00:14
2	Mo 202.031†	4860.5	4805.2	511.44	µg/L	511.44	ppb	03:00:34
2	Ni 231.604†	11013.3	10460.9	519.50	µg/L	519.50	ppb	03:00:34
2	P 214.914†	1790.8	1517.7	2398.5	µg/L	2398.5	ppb	03:00:34
2	Pb 220.353†	2247.6	2156.1	496.63	µg/L	496.63	ppb	03:00:34

2	S 181.975 Axial†	660.7	609.2	2560.6 µg/L	2560.6 ppb		03:00:34
2	Sb 206.836†	625.4	595.4	509.08 µg/L	509.08 ppb		03:00:34
2	Se 196.026†	2354.2	2308.3	2476.4 µg/L	2476.4 ppb		03:00:34
2	SiO2†	64858.2	60947.0	10510 µg/L	10510 ppb		03:00:14
2	Si 251.611†	72029.6	70904.8	4855.9 µg/L	4855.9 ppb		03:00:14
2	Sn 189.927†	1232.7	1211.1	526.40 µg/L	526.40 ppb		03:00:34
2	Ti 334.940†	219044.7	215511.1	491.50 µg/L	491.50 ppb		03:00:14
2	Tl 190.801†	311.5	336.0	484.04 µg/L	484.04 ppb		03:00:34
2	U 409.014†	5184.4	5156.6	494.59 µg/L	494.59 ppb		03:00:14
2	V 292.402†	46927.6	46626.3	497.28 µg/L	497.28 ppb		03:00:14
2	Zn 213.857†	22452.1	21476.6	498.29 µg/L	498.29 ppb		03:00:14
3	Sc RADIAL	169300.8	169300.8	102 %			02:59:19
3	Al 396.153Radial†	12663.3	12594.4	5231.6 µg/L	5231.6 ppb		02:59:24
3	Ca 317.933Radial†	28461.6	27087.1	5062.4 µg/L	5062.4 ppb		02:59:24
3	Fe 238.204 Radial†	7728.2	7621.9	5291.9 µg/L	5291.9 ppb		02:59:24
3	K 766.490 Radial†	5616.4	4655.8	2510.5 µg/L	2510.5 ppb		02:59:24
3	Mg 279.077 IEC†	2751.8	2653.8	5339.3 µg/L	5339.3 ppb		02:59:24
3	Na 589.592 Radial†	11237.4	10925.1	2628.7 µg/L	2628.7 ppb		02:59:24
3	Sr 421.552†	119292.7	117237.8	503.40 µg/L	503.40 ppb		02:59:19
3	Sc 361.383	2084965.1	2084965.1	100.41 %			03:00:41
3	Y 371.029	1354416.7	1354416.7	99.824 %			03:00:41
3	Ag 328.068†	28785.2	29633.9	254.98 µg/L	254.98 ppb		03:00:46
3	As 188.979†	323.8	322.3	485.15 µg/L	485.15 ppb		03:01:07
3	B 249.677†	12926.0	12662.1	498.15 µg/L	498.15 ppb		03:00:46
3	Ba 233.527†	21454.0	21455.3	526.46 µg/L	526.46 ppb		03:00:46
3	Be 313.107†	456300.5	451056.4	260.59 µg/L	260.59 ppb		03:00:41
3	Cd 226.502†	21617.2	21670.3	500.59 µg/L	500.59 ppb		03:00:46
3	Co 228.616†	10377.8	10429.4	475.11 µg/L	475.11 ppb		03:01:07
3	Cr 267.716†	25973.6	26051.9	499.76 µg/L	499.76 ppb		03:00:46
3	Cu 324.752†	78135.4	72897.8	519.56 µg/L	519.56 ppb		03:00:46
3	Mn 257.610†	178988.1	178161.2	516.66 µg/L	516.66 ppb		03:00:46
3	Mo 202.031†	4890.8	4867.8	518.11 µg/L	518.11 ppb		03:01:07
3	Ni 231.604†	11072.3	10593.4	526.07 µg/L	526.07 ppb		03:01:07
3	P 214.914†	1806.5	1545.3	2442.7 µg/L	2442.7 ppb		03:01:07
3	Pb 220.353†	2255.4	2179.0	501.92 µg/L	501.92 ppb		03:01:07
3	S 181.975 Axial†	666.4	619.3	2603.1 µg/L	2603.1 ppb		03:01:07
3	Sb 206.836†	637.0	611.1	522.54 µg/L	522.54 ppb		03:01:07
3	Se 196.026†	2372.6	2342.4	2512.9 µg/L	2512.9 ppb		03:01:07
3	SiO2†	65044.8	61566.7	10617 µg/L	10617 ppb		03:00:46
3	Si 251.611†	72295.4	71651.3	4907.1 µg/L	4907.1 ppb		03:00:46
3	Sn 189.927†	1234.5	1221.1	530.82 µg/L	530.82 ppb		03:01:07
3	Ti 334.940†	219643.1	217572.2	496.20 µg/L	496.20 ppb		03:00:46
3	Tl 190.801†	310.0	336.5	484.79 µg/L	484.79 ppb		03:01:07
3	U 409.014†	5055.0	5062.4	485.49 µg/L	485.49 ppb		03:00:46
3	V 292.402†	47171.1	47182.7	503.20 µg/L	503.20 ppb		03:00:46
3	Zn 213.857†	22544.5	21718.8	503.90 µg/L	503.90 ppb		03:00:46

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2091584.8	100.73	%	0.341				0.34%
Sc RADIAL	170190.4	102	%	0.8				0.81%
Y 371.029	1359574.8	100.20	%	0.349				0.35%
Ag 328.068†	29537.4	254.15	µg/L	1.534	254.15	ppb	1.534	0.60%
QC value within limits for Ag 328.068 Recovery = 101.66%								
Al 396.153Radial†	12496.7	5191.1	µg/L	66.91	5191.1	ppb	66.91	1.29%
QC value within limits for Al 396.153Radial Recovery = 103.82%								
As 188.979†	314.6	473.67	µg/L	9.994	473.67	ppb	9.994	2.11%
QC value within limits for As 188.979 Recovery = 94.73%								
B 249.677†	12584.4	495.11	µg/L	3.694	495.11	ppb	3.694	0.75%
QC value within limits for B 249.677 Recovery = 99.02%								
Ba 233.527†	21383.9	524.71	µg/L	3.180	524.71	ppb	3.180	0.61%
QC value within limits for Ba 233.527 Recovery = 104.94%								
Be 313.107†	450506.6	260.27	µg/L	0.500	260.27	ppb	0.500	0.19%
QC value within limits for Be 313.107 Recovery = 104.11%								
Ca 317.933Radial†	26815.5	5011.6	µg/L	62.08	5011.6	ppb	62.08	1.24%
QC value within limits for Ca 317.933Radial Recovery = 100.23%								
Cd 226.502†	21564.4	498.16	µg/L	3.257	498.16	ppb	3.257	0.65%
QC value within limits for Cd 226.502 Recovery = 99.63%								
Co 228.616†	10347.2	471.37	µg/L	3.380	471.37	ppb	3.380	0.72%

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   QC value within limits for Co 228.616  Recovery = 94.27%
Cr 267.716†            25959.0      497.97 µg/L        3.239      497.97 ppb        3.239   0.65%
   QC value within limits for Cr 267.716  Recovery = 99.59%
Cu 324.752†            72627.9      517.63 µg/L        2.786      517.63 ppb        2.786   0.54%
   QC value within limits for Cu 324.752  Recovery = 103.53%
Fe 238.204 Radial†      7521.6      5222.4 µg/L       78.43      5222.4 ppb       78.43   1.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.45%
K 766.490 Radial†       4606.7      2484.0 µg/L       27.36      2484.0 ppb       27.36   1.10%
   QC value within limits for K 766.490 Radial  Recovery = 99.36%
Mg 279.077 IEC†         2633.8      5299.1 µg/L       62.96      5299.1 ppb       62.96   1.19%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.98%
Mn 257.610†           177509.3      514.77 µg/L        2.947      514.77 ppb        2.947   0.57%
   QC value within limits for Mn 257.610  Recovery = 102.95%
Mo 202.031†             4829.8      514.06 µg/L        3.556      514.06 ppb        3.556   0.69%
   QC value within limits for Mo 202.031  Recovery = 102.81%
Na 589.592 Radial†     10866.8      2614.7 µg/L       26.71      2614.7 ppb       26.71   1.02%
   QC value within limits for Na 589.592 Radial  Recovery = 104.59%
Ni 231.604†            10514.4      522.15 µg/L        3.467      522.15 ppb        3.467   0.66%
   QC value within limits for Ni 231.604  Recovery = 104.43%
P 214.914†              1530.5      2418.8 µg/L       22.34      2418.8 ppb       22.34   0.92%
   QC value within limits for P 214.914  Recovery = 96.75%
Pb 220.353†             2163.5      498.34 µg/L        3.103      498.34 ppb        3.103   0.62%
   QC value within limits for Pb 220.353  Recovery = 99.67%
S 181.975 Axial†         613.5      2578.8 µg/L       21.89      2578.8 ppb       21.89   0.85%
   QC value within limits for S 181.975 Axial  Recovery = 103.15%
Sb 206.836†              604.1      516.54 µg/L        6.847      516.54 ppb        6.847   1.33%
   QC value within limits for Sb 206.836  Recovery = 103.31%
Se 196.026†             2324.8      2494.0 µg/L       18.32      2494.0 ppb       18.32   0.73%
   QC value within limits for Se 196.026  Recovery = 99.76%
SiO2†                  61376.0       10584 µg/L        64.2       10584 ppb        64.2   0.61%
   QC value within limits for SiO2  Recovery = 98.96%
Si 251.611†            71400.9      4890.0 µg/L       29.52      4890.0 ppb       29.52   0.60%
   QC value within limits for Si 251.611  Recovery = 97.80%
Sn 189.927†             1214.2      527.79 µg/L        2.623      527.79 ppb        2.623   0.50%
   QC value within limits for Sn 189.927  Recovery = 105.56%
Sr 421.552†           116327.1      499.49 µg/L        3.434      499.49 ppb        3.434   0.69%
   QC value within limits for Sr 421.552  Recovery = 99.90%
Ti 334.940†           216939.2      494.76 µg/L        2.826      494.76 ppb        2.826   0.57%
   QC value within limits for Ti 334.940  Recovery = 98.95%
Tl 190.801†              339.4      488.94 µg/L        7.844      488.94 ppb        7.844   1.60%
   QC value within limits for Tl 190.801  Recovery = 97.79%
U 409.014†              5112.0      490.28 µg/L        4.571      490.28 ppb        4.571   0.93%
   QC value within limits for U 409.014  Recovery = 98.06%
V 292.402†             47006.7      501.31 µg/L        3.498      501.31 ppb        3.498   0.70%
   QC value within limits for V 292.402  Recovery = 100.26%
Zn 213.857†            21636.5      502.00 µg/L        3.218      502.00 ppb        3.218   0.64%
   QC value within limits for Zn 213.857  Recovery = 100.40%
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 6/30/2009 03:01:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	169416.4	169416.4	102	%			03:01:49
1	Al 396.153Radial†	-116.4	35.8	14.958	µg/L	14.958	ppb	03:01:49
1	Ca 317.933Radial†	885.6	-12.6	-2.3483	µg/L	-2.3483	ppb	03:02:10
1	Fe 238.204 Radial†	-16.4	11.2	7.7541	µg/L	7.7541	ppb	03:02:10
1	K 766.490 Radial†	908.2	28.4	15.299	µg/L	15.299	ppb	03:01:49
1	Mg 279.077 IEC†	51.3	0.0	0.0315	µg/L	0.0315	ppb	03:02:10
1	Na 589.592 Radial†	156.9	36.2	8.7047	µg/L	8.7047	ppb	03:01:49
1	Sr 421.552†	40.6	48.5	0.2081	µg/L	0.2081	ppb	03:01:49
1	Sc 361.383	2086063.5	2086063.5	100.47	%			03:03:12
1	Y 371.029	1362370.0	1362370.0	100.41	%			03:03:12
1	Ag 328.068†	-915.2	56.4	0.4817	µg/L	0.4817	ppb	03:03:18
1	As 188.979†	5.0	4.8	7.1278	µg/L	7.1278	ppb	03:03:38
1	B 249.677†	243.1	31.3	1.2328	µg/L	1.2328	ppb	03:03:18
1	Ba 233.527†	-91.0	-0.8	-0.0191	µg/L	-0.0191	ppb	03:03:38
1	Be 313.107†	3497.7	118.2	0.0674	µg/L	0.0674	ppb	03:03:18
1	Cd 226.502†	-134.3	8.5	0.2019	µg/L	0.2019	ppb	03:03:38
1	Co 228.616†	-111.4	-16.6	-0.7553	µg/L	-0.7553	ppb	03:03:38
1	Cr 267.716†	-179.6	6.7	0.1283	µg/L	0.1283	ppb	03:03:18
1	Cu 324.752†	4987.7	49.0	0.3495	µg/L	0.3495	ppb	03:03:18
1	Mn 257.610†	128.1	38.4	0.1113	µg/L	0.1113	ppb	03:03:18
1	Mo 202.031†	-1.2	-4.0	-0.4278	µg/L	-0.4278	ppb	03:03:38
1	Ni 231.604†	441.7	6.4	0.3178	µg/L	0.3178	ppb	03:03:38
1	P 214.914†	248.9	-5.9	-9.7153	µg/L	-9.7153	ppb	03:03:38
1	Pb 220.353†	69.7	2.3	0.5165	µg/L	0.5165	ppb	03:03:38
1	S 181.975 Axial†	36.9	-7.7	-32.336	µg/L	-32.336	ppb	03:03:38
1	Sb 206.836†	24.6	1.2	1.0682	µg/L	1.0682	ppb	03:03:38
1	Se 196.026†	21.8	1.3	1.3574	µg/L	1.3574	ppb	03:03:38
1	SiO2†	3185.3	-39.5	-6.8119	µg/L	-6.8119	ppb	03:03:18
1	Si 251.611†	396.4	48.5	3.2518	µg/L	3.2518	ppb	03:03:38
1	Sn 189.927†	14.8	6.4	2.7899	µg/L	2.7899	ppb	03:03:38
1	Ti 334.940†	1102.5	-68.2	-0.1554	µg/L	-0.1554	ppb	03:03:18
1	Tl 190.801†	-28.1	-0.1	-0.1823	µg/L	-0.1823	ppb	03:03:38
1	U 409.014†	63.5	91.5	8.7975	µg/L	8.7975	ppb	03:03:18
1	V 292.402†	-162.6	44.2	0.4788	µg/L	0.4788	ppb	03:03:18
1	Zn 213.857†	719.9	-16.2	-0.3841	µg/L	-0.3841	ppb	03:03:38
2	Sc RADIAL	166890.5	166890.5	100	%			03:02:15
2	Al 396.153Radial†	-188.6	-37.8	-15.765	µg/L	-15.765	ppb	03:02:15
2	Ca 317.933Radial†	874.2	-10.8	-2.0137	µg/L	-2.0137	ppb	03:02:36
2	Fe 238.204 Radial†	-15.3	12.1	8.3434	µg/L	8.3434	ppb	03:02:36
2	K 766.490 Radial†	913.9	47.6	25.676	µg/L	25.676	ppb	03:02:15
2	Mg 279.077 IEC†	41.5	-9.0	-18.146	µg/L	-18.146	ppb	03:02:36
2	Na 589.592 Radial†	218.8	100.2	24.110	µg/L	24.110	ppb	03:02:15
2	Sr 421.552†	16.8	25.4	0.1089	µg/L	0.1089	ppb	03:02:15
2	Sc 361.383	2093702.2	2093702.2	100.83	%			03:03:44
2	Y 371.029	1367165.8	1367165.8	100.76	%			03:03:44
2	Ag 328.068†	-874.1	100.4	0.8537	µg/L	0.8537	ppb	03:03:50
2	As 188.979†	-0.0	-0.2	-0.3265	µg/L	-0.3265	ppb	03:04:10
2	B 249.677†	261.1	48.3	1.9035	µg/L	1.9035	ppb	03:03:50
2	Ba 233.527†	-86.2	4.2	0.1028	µg/L	0.1028	ppb	03:04:10
2	Be 313.107†	3412.2	20.6	0.0123	µg/L	0.0123	ppb	03:03:50
2	Cd 226.502†	-134.5	8.8	0.2041	µg/L	0.2041	ppb	03:04:10
2	Co 228.616†	-102.8	-7.7	-0.3503	µg/L	-0.3503	ppb	03:04:10
2	Cr 267.716†	-170.2	16.6	0.3185	µg/L	0.3185	ppb	03:03:50
2	Cu 324.752†	4947.4	-9.1	-0.0638	µg/L	-0.0638	ppb	03:03:50
2	Mn 257.610†	104.9	14.9	0.0432	µg/L	0.0432	ppb	03:03:50
2	Mo 202.031†	-1.2	-4.0	-0.4250	µg/L	-0.4250	ppb	03:04:10
2	Ni 231.604†	426.8	-10.0	-0.4957	µg/L	-0.4957	ppb	03:04:10
2	P 214.914†	253.2	-2.6	-4.2758	µg/L	-4.2758	ppb	03:04:10
2	Pb 220.353†	58.5	-9.1	-2.1064	µg/L	-2.1064	ppb	03:04:10

2	S 181.975 Axial†	40.8	-3.9	-16.313	µg/L	-16.313 ppb	03:04:10
2	Sb 206.836†	35.0	11.5	9.8740	µg/L	9.8740 ppb	03:04:10
2	Se 196.026†	23.5	2.9	3.1334	µg/L	3.1334 ppb	03:04:10
2	SiO2†	3202.1	-34.4	-5.9318	µg/L	-5.9318 ppb	03:03:50
2	Si 251.611†	387.1	37.8	2.5262	µg/L	2.5262 ppb	03:04:10
2	Sn 189.927†	13.1	4.8	2.0719	µg/L	2.0719 ppb	03:04:10
2	Ti 334.940†	1243.4	67.5	0.1542	µg/L	0.1542 ppb	03:03:50
2	Tl 190.801†	-27.2	0.8	1.2128	µg/L	1.2128 ppb	03:04:10
2	U 409.014†	10.8	39.0	3.7475	µg/L	3.7475 ppb	03:03:50
2	V 292.402†	-181.7	25.8	0.2768	µg/L	0.2768 ppb	03:03:50
2	Zn 213.857†	728.3	-10.6	-0.2448	µg/L	-0.2448 ppb	03:04:10
3	Sc RADIAL	166448.1	166448.1	100	%		03:02:41
3	Al 396.153Radial†	-128.9	21.3	8.8723	µg/L	8.8723 ppb	03:02:41
3	Ca 317.933Radial†	866.1	-16.5	-3.0828	µg/L	-3.0828 ppb	03:03:02
3	Fe 238.204 Radial†	-18.5	8.8	6.1058	µg/L	6.1058 ppb	03:03:02
3	K 766.490 Radial†	955.4	91.5	49.323	µg/L	49.323 ppb	03:02:41
3	Mg 279.077 IEC†	50.6	0.2	0.2980	µg/L	0.2980 ppb	03:03:02
3	Na 589.592 Radial†	126.4	8.4	2.0289	µg/L	2.0289 ppb	03:02:41
3	Sr 421.552†	19.7	28.3	0.1215	µg/L	0.1215 ppb	03:02:41
3	Sc 361.383	2081475.3	2081475.3	100.25	%		03:04:16
3	Y 371.029	1358815.2	1358815.2	100.15	%		03:04:16
3	Ag 328.068†	-893.4	76.1	0.6474	µg/L	0.6474 ppb	03:04:22
3	As 188.979†	0.6	0.4	0.5801	µg/L	0.5801 ppb	03:04:43
3	B 249.677†	246.3	35.0	1.3789	µg/L	1.3789 ppb	03:04:22
3	Ba 233.527†	-77.8	12.1	0.2978	µg/L	0.2978 ppb	03:04:43
3	Be 313.107†	3547.6	175.6	0.1008	µg/L	0.1008 ppb	03:04:22
3	Cd 226.502†	-130.8	11.7	0.2756	µg/L	0.2756 ppb	03:04:43
3	Co 228.616†	-83.9	10.6	0.4831	µg/L	0.4831 ppb	03:04:43
3	Cr 267.716†	-170.0	15.8	0.3032	µg/L	0.3032 ppb	03:04:22
3	Cu 324.752†	4943.9	16.3	0.1166	µg/L	0.1166 ppb	03:04:22
3	Mn 257.610†	120.7	31.3	0.0907	µg/L	0.0907 ppb	03:04:22
3	Mo 202.031†	3.9	1.1	0.1186	µg/L	0.1186 ppb	03:04:43
3	Ni 231.604†	435.1	0.8	0.0389	µg/L	0.0389 ppb	03:04:43
3	P 214.914†	244.5	-9.8	-16.072	µg/L	-16.072 ppb	03:04:43
3	Pb 220.353†	54.2	-13.0	-3.0057	µg/L	-3.0057 ppb	03:04:43
3	S 181.975 Axial†	37.5	-6.9	-29.189	µg/L	-29.189 ppb	03:04:43
3	Sb 206.836†	30.5	7.2	6.1452	µg/L	6.1452 ppb	03:04:43
3	Se 196.026†	16.6	-3.9	-4.1962	µg/L	-4.1962 ppb	03:04:43
3	SiO2†	3237.9	19.9	3.4344	µg/L	3.4344 ppb	03:04:22
3	Si 251.611†	379.8	32.8	2.1807	µg/L	2.1807 ppb	03:04:43
3	Sn 189.927†	12.2	3.9	1.7042	µg/L	1.7042 ppb	03:04:43
3	Ti 334.940†	1159.8	-8.7	-0.0197	µg/L	-0.0197 ppb	03:04:22
3	Tl 190.801†	-30.4	-2.5	-3.5885	µg/L	-3.5885 ppb	03:04:43
3	U 409.014†	63.1	91.2	8.7687	µg/L	8.7687 ppb	03:04:22
3	V 292.402†	-184.8	21.7	0.2445	µg/L	0.2445 ppb	03:04:22
3	Zn 213.857†	727.2	-7.4	-0.1738	µg/L	-0.1738 ppb	03:04:43

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2087080.3	100.52	%	0.297				0.30%
Sc RADIAL	167585.0	101	%	1.0				0.96%
Y 371.029	1362783.7	100.44	%	0.309				0.31%
Ag 328.068†	77.7	0.6609	µg/L	0.18637	0.6609	ppb	0.18637	28.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	6.4	2.6884	µg/L	16.26848	2.6884	ppb	16.26848	605.14%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.6	2.4605	µg/L	4.06741	2.4605	ppb	4.06741	165.31%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	38.2	1.5051	µg/L	0.35268	1.5051	ppb	0.35268	23.43%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.2	0.1272	µg/L	0.15985	0.1272	ppb	0.15985	125.70%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	104.8	0.0602	µg/L	0.04471	0.0602	ppb	0.04471	74.30%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-13.3	-2.4816	µg/L	0.54684	-2.4816	ppb	0.54684	22.04%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	9.7	0.2272	µg/L	0.04195	0.2272	ppb	0.04195	18.46%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-4.5	-0.2075	µg/L	0.63141	-0.2075	ppb	0.63141	304.31%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              13.0      0.2500 µg/L       0.10566      0.2500 ppb        0.10566  42.27%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              18.7      0.1341 µg/L       0.20722      0.1341 ppb        0.20722 154.54%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       10.7      7.4011 µg/L       1.15980      7.4011 ppb        1.15980  15.67%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        55.8      30.099 µg/L       17.4380      30.099 ppb        17.4380  57.94%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -2.9     -5.9389 µg/L      10.57267     -5.9389 ppb       10.57267 178.02%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              28.2      0.0817 µg/L       0.03495      0.0817 ppb        0.03495  42.77%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -2.3     -0.2447 µg/L       0.31466     -0.2447 ppb        0.31466 128.57%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       48.3      11.615 µg/L       11.3246      11.615 ppb        11.3246  97.50%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              -0.9     -0.0463 µg/L       0.41344     -0.0463 ppb        0.41344 892.53%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -6.1     -10.021 µg/L        5.9041     -10.021 ppb         5.9041  58.92%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -6.6     -1.5319 µg/L       1.83003     -1.5319 ppb        1.83003 119.46%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -6.2     -25.946 µg/L        8.4895     -25.946 ppb         8.4895  32.72%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               6.6      5.6958 µg/L       4.42006      5.6958 ppb        4.42006  77.60%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               0.1      0.0982 µg/L       3.82364      0.0982 ppb        3.82364 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                   -18.0     -3.1031 µg/L       5.67875     -3.1031 ppb        5.67875 183.00%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              39.7      2.6529 µg/L       0.54670      2.6529 ppb        0.54670  20.61%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               5.1      2.1886 µg/L       0.55222      2.1886 ppb        0.55222  25.23%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              34.0      0.1462 µg/L       0.05402      0.1462 ppb        0.05402  36.95%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -3.1     -0.0070 µg/L       0.15519     -0.0070 ppb        0.15519 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -0.6     -0.8527 µg/L       2.46987     -0.8527 ppb        2.46987 289.66%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               73.9      7.1046 µg/L       2.90737      7.1046 ppb        2.90737  40.92%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               30.6      0.3334 µg/L       0.12702      0.3334 ppb        0.12702  38.10%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -11.4     -0.2676 µg/L       0.10701     -0.2676 ppb        0.10701  39.99%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 101
Date Collected: 6/30/2009 03:04:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168025.1	168025.1	101	%			03:05:24
1	Al 396.153Radial†	366.3	512.8	213.44	µg/L	213.44	ppb	03:05:24
1	Ca 317.933Radial†	1433.8	537.5	100.45	µg/L	100.45	ppb	03:05:44
1	Fe 238.204 Radial†	134.1	160.1	111.00	µg/L	111.00	ppb	03:05:44
1	K 766.490 Radial†	1068.0	194.0	104.63	µg/L	104.63	ppb	03:05:24
1	Mg 279.077 IEC†	208.4	156.0	313.61	µg/L	313.61	ppb	03:05:44
1	Na 589.592 Radial†	802.7	676.8	162.85	µg/L	162.85	ppb	03:05:24
1	Sr 421.552†	1328.5	1324.1	5.6853	µg/L	5.6853	ppb	03:05:24
1	Sc 361.383	2067590.7	2067590.7	99.577	%			03:06:47
1	Y 371.029	1351532.0	1351532.0	99.612	%			03:06:47
1	Ag 328.068†	-341.0	624.9	5.3383	µg/L	5.3383	ppb	03:06:52
1	As 188.979†	15.2	15.1	22.621	µg/L	22.621	ppb	03:07:13
1	B 249.677†	1469.2	1264.7	49.889	µg/L	49.889	ppb	03:06:52
1	Ba 233.527†	120.6	210.9	5.1740	µg/L	5.1740	ppb	03:07:13
1	Be 313.107†	12240.3	8928.9	5.1439	µg/L	5.1439	ppb	03:06:52
1	Cd 226.502†	83.7	226.2	5.2626	µg/L	5.2626	ppb	03:07:13
1	Co 228.616†	9.8	104.2	4.7561	µg/L	4.7561	ppb	03:07:13
1	Cr 267.716†	89.6	275.4	5.2821	µg/L	5.2821	ppb	03:06:52
1	Cu 324.752†	6301.6	1412.8	10.070	µg/L	10.070	ppb	03:06:52
1	Mn 257.610†	3673.3	3599.7	10.439	µg/L	10.439	ppb	03:06:52
1	Mo 202.031†	92.8	90.4	9.6228	µg/L	9.6228	ppb	03:07:13
1	Ni 231.604†	554.6	123.6	6.1414	µg/L	6.1414	ppb	03:07:13
1	P 214.914†	341.0	88.7	143.45	µg/L	143.45	ppb	03:07:13
1	Pb 220.353†	101.9	35.2	8.0769	µg/L	8.0769	ppb	03:07:13
1	S 181.975 Axial†	65.0	20.9	87.747	µg/L	87.747	ppb	03:07:13
1	Sb 206.836†	30.1	7.0	6.0255	µg/L	6.0255	ppb	03:07:13
1	Se 196.026†	34.9	14.6	15.633	µg/L	15.633	ppb	03:07:13
1	SiO2†	4460.2	1269.2	218.86	µg/L	218.86	ppb	03:06:52
1	Si 251.611†	1801.4	1462.9	100.39	µg/L	100.39	ppb	03:06:52
1	Sn 189.927†	32.0	23.9	10.428	µg/L	10.428	ppb	03:07:13
1	Ti 334.940†	3265.2	2113.4	4.8182	µg/L	4.8182	ppb	03:06:52
1	Tl 190.801†	-17.9	9.9	14.208	µg/L	14.208	ppb	03:07:13
1	U 409.014†	617.0	647.8	62.290	µg/L	62.290	ppb	03:06:52
1	V 292.402†	252.3	459.4	5.0295	µg/L	5.0295	ppb	03:06:52
1	Zn 213.857†	1167.5	439.6	10.219	µg/L	10.219	ppb	03:07:13
2	Sc RADIAL	169684.4	169684.4	102	%			03:05:50
2	Al 396.153Radial†	349.4	492.7	205.04	µg/L	205.04	ppb	03:05:50
2	Ca 317.933Radial†	1433.3	523.1	97.761	µg/L	97.761	ppb	03:06:11
2	Fe 238.204 Radial†	130.4	155.2	107.58	µg/L	107.58	ppb	03:06:11
2	K 766.490 Radial†	1158.1	272.0	146.68	µg/L	146.68	ppb	03:05:50
2	Mg 279.077 IEC†	201.3	147.0	295.51	µg/L	295.51	ppb	03:06:11
2	Na 589.592 Radial†	782.7	649.4	156.26	µg/L	156.26	ppb	03:05:50
2	Sr 421.552†	1329.6	1312.3	5.6346	µg/L	5.6346	ppb	03:05:50
2	Sc 361.383	2091236.2	2091236.2	100.72	%			03:07:19
2	Y 371.029	1367748.0	1367748.0	100.81	%			03:07:19
2	Ag 328.068†	-310.3	659.2	5.6309	µg/L	5.6309	ppb	03:07:24
2	As 188.979†	12.0	11.7	17.622	µg/L	17.622	ppb	03:07:45
2	B 249.677†	1498.2	1276.9	50.368	µg/L	50.368	ppb	03:07:24
2	Ba 233.527†	119.1	208.0	5.1039	µg/L	5.1039	ppb	03:07:45
2	Be 313.107†	12177.5	8727.7	5.0287	µg/L	5.0287	ppb	03:07:24
2	Cd 226.502†	87.3	228.8	5.3109	µg/L	5.3109	ppb	03:07:45
2	Co 228.616†	12.0	106.3	4.8533	µg/L	4.8533	ppb	03:07:45
2	Cr 267.716†	35.0	220.2	4.2250	µg/L	4.2250	ppb	03:07:24
2	Cu 324.752†	6316.3	1355.9	9.6650	µg/L	9.6650	ppb	03:07:24
2	Mn 257.610†	3724.8	3609.2	10.466	µg/L	10.466	ppb	03:07:24
2	Mo 202.031†	98.4	94.9	10.103	µg/L	10.103	ppb	03:07:45
2	Ni 231.604†	558.7	121.4	6.0321	µg/L	6.0321	ppb	03:07:45
2	P 214.914†	341.7	85.5	138.35	µg/L	138.35	ppb	03:07:45
2	Pb 220.353†	106.1	38.2	8.7783	µg/L	8.7783	ppb	03:07:45

2	S 181.975 Axial†	69.6	24.7	103.77 µg/L	103.77 ppb	03:07:45
2	Sb 206.836†	37.9	14.4	12.353 µg/L	12.353 ppb	03:07:45
2	Se 196.026†	41.0	20.3	21.763 µg/L	21.763 ppb	03:07:45
2	SiO2†	4446.8	1205.2	207.83 µg/L	207.83 ppb	03:07:24
2	Si 251.611†	1807.3	1448.3	99.332 µg/L	99.332 ppb	03:07:24
2	Sn 189.927†	33.7	25.2	10.997 µg/L	10.997 ppb	03:07:45
2	Ti 334.940†	3376.0	2186.4	4.9848 µg/L	4.9848 ppb	03:07:24
2	Tl 190.801†	-10.8	17.2	24.721 µg/L	24.721 ppb	03:07:45
2	U 409.014†	435.5	460.6	44.281 µg/L	44.281 ppb	03:07:24
2	V 292.402†	286.0	490.0	5.3264 µg/L	5.3264 ppb	03:07:24
2	Zn 213.857†	1167.4	426.3	9.9092 µg/L	9.9092 ppb	03:07:45
3	Sc RADIAL	171278.0	171278.0	103 %		03:06:16
3	Al 396.153Radial†	327.0	467.8	194.70 µg/L	194.70 ppb	03:06:16
3	Ca 317.933Radial†	1433.1	509.8	95.287 µg/L	95.287 ppb	03:06:36
3	Fe 238.204 Radial†	132.3	155.9	108.06 µg/L	108.06 ppb	03:06:36
3	K 766.490 Radial†	1140.1	244.0	131.57 µg/L	131.57 ppb	03:06:16
3	Mg 279.077 IEC†	210.1	153.7	309.03 µg/L	309.03 ppb	03:06:36
3	Na 589.592 Radial†	765.6	625.7	150.55 µg/L	150.55 ppb	03:06:16
3	Sr 421.552†	1294.9	1266.4	5.4379 µg/L	5.4379 ppb	03:06:16
3	Sc 361.383	2087929.5	2087929.5	100.56 %		03:07:51
3	Y 371.029	1363921.8	1363921.8	100.52 %		03:07:51
3	Ag 328.068†	-287.1	681.9	5.8264 µg/L	5.8264 ppb	03:07:57
3	As 188.979†	17.4	17.1	25.605 µg/L	25.605 ppb	03:08:17
3	B 249.677†	1463.7	1245.0	49.109 µg/L	49.109 ppb	03:07:57
3	Ba 233.527†	103.1	192.2	4.7188 µg/L	4.7188 ppb	03:08:17
3	Be 313.107†	12165.9	8735.3	5.0329 µg/L	5.0329 ppb	03:07:57
3	Cd 226.502†	85.1	226.8	5.2608 µg/L	5.2608 ppb	03:08:17
3	Co 228.616†	8.3	102.5	4.6805 µg/L	4.6805 ppb	03:08:17
3	Cr 267.716†	93.8	278.6	5.3453 µg/L	5.3453 ppb	03:07:57
3	Cu 324.752†	6312.7	1362.2	9.7101 µg/L	9.7101 ppb	03:07:57
3	Mn 257.610†	3714.5	3604.8	10.454 µg/L	10.454 ppb	03:07:57
3	Mo 202.031†	89.8	86.5	9.2054 µg/L	9.2054 ppb	03:08:17
3	Ni 231.604†	549.0	112.7	5.5977 µg/L	5.5977 ppb	03:08:17
3	P 214.914†	340.7	85.1	137.59 µg/L	137.59 ppb	03:08:17
3	Pb 220.353†	104.0	36.3	8.3372 µg/L	8.3372 ppb	03:08:17
3	S 181.975 Axial†	71.4	26.7	112.07 µg/L	112.07 ppb	03:08:17
3	Sb 206.836†	33.6	10.2	8.7203 µg/L	8.7203 ppb	03:08:17
3	Se 196.026†	31.3	10.7	11.465 µg/L	11.465 ppb	03:08:17
3	SiO2†	4465.3	1230.6	212.20 µg/L	212.20 ppb	03:07:57
3	Si 251.611†	1818.3	1462.1	100.37 µg/L	100.37 ppb	03:07:57
3	Sn 189.927†	29.8	21.4	9.3471 µg/L	9.3471 ppb	03:08:17
3	Ti 334.940†	3345.4	2161.3	4.9276 µg/L	4.9276 ppb	03:07:57
3	Tl 190.801†	-17.5	10.4	15.016 µg/L	15.016 ppb	03:08:17
3	U 409.014†	408.6	434.6	41.776 µg/L	41.776 ppb	03:07:57
3	V 292.402†	335.3	539.5	5.8392 µg/L	5.8392 ppb	03:07:57
3	Zn 213.857†	1168.9	429.7	9.9900 µg/L	9.9900 ppb	03:08:17

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2082252.2	100.28	%	0.617				0.61%
Sc RADIAL	169662.5	102	%	1.0				0.96%
Y 371.029	1361067.2	100.31	%	0.625				0.62%
Ag 328.068†	655.3	5.5986	µg/L	0.24565	5.5986	ppb	0.24565	4.39%
QC value within limits for Ag 328.068 Recovery = 111.97%								
Al 396.153Radial†	491.1	204.40	µg/L	9.385	204.40	ppb	9.385	4.59%
QC value within limits for Al 396.153Radial Recovery = 102.20%								
As 188.979†	14.6	21.949	µg/L	4.0338	21.949	ppb	4.0338	18.38%
QC value greater than the upper limit for As 188.979 Recovery = 146.33%								
B 249.677†	1262.2	49.789	µg/L	0.6356	49.789	ppb	0.6356	1.28%
QC value within limits for B 249.677 Recovery = 99.58%								
Ba 233.527†	203.7	4.9989	µg/L	0.24506	4.9989	ppb	0.24506	4.90%
QC value within limits for Ba 233.527 Recovery = 99.98%								
Be 313.107†	8797.3	5.0685	µg/L	0.06530	5.0685	ppb	0.06530	1.29%
QC value within limits for Be 313.107 Recovery = 101.37%								
Ca 317.933Radial†	523.5	97.832	µg/L	2.5809	97.832	ppb	2.5809	2.64%
QC value within limits for Ca 317.933Radial Recovery = 97.83%								
Cd 226.502†	227.3	5.2781	µg/L	0.02840	5.2781	ppb	0.02840	0.54%
QC value within limits for Cd 226.502 Recovery = 105.56%								
Co 228.616†	104.3	4.7633	µg/L	0.08661	4.7633	ppb	0.08661	1.82%

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   QC value within limits for Co 228.616  Recovery - 95.27%
Cr 267.716†            258.1      4.9508 µg/L      0.62935      4.9508 ppb       0.62935  12.71%
   QC value within limits for Cr 267.716  Recovery = 99.02%
Cu 324.752†           1377.0      9.8152 µg/L      0.22223      9.8152 ppb       0.22223   2.26%
   QC value within limits for Cu 324.752  Recovery = 98.15%
Fe 238.204 Radial†     157.1      108.88 µg/L        1.853      108.88 ppb         1.853   1.70%
   QC value within limits for Fe 238.204 Radial  Recovery = 108.88%
K 766.490 Radial†      236.7      127.62 µg/L       21.301      127.62 ppb        21.301  16.69%
   QC value within limits for K 766.490 Radial  Recovery = 85.08%
Mg 279.077 IEC†        152.2      306.05 µg/L        9.414      306.05 ppb         9.414   3.08%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.02%
Mn 257.610†           3604.6      10.453 µg/L       0.0137      10.453 ppb        0.0137   0.13%
   QC value within limits for Mn 257.610  Recovery = 104.53%
Mo 202.031†             90.6      9.6436 µg/L      0.44905      9.6436 ppb       0.44905   4.66%
   QC value within limits for Mo 202.031  Recovery = 96.44%
Na 589.592 Radial†     650.7      156.55 µg/L        6.153      156.55 ppb         6.153   3.93%
   QC value within limits for Na 589.592 Radial  Recovery = 104.37%
Ni 231.604†            119.3      5.9237 µg/L      0.28758      5.9237 ppb       0.28758   4.85%
   QC value within limits for Ni 231.604  Recovery = 118.47%
P 214.914†              86.4      139.80 µg/L        3.188      139.80 ppb         3.188   2.28%
   QC value within limits for P 214.914  Recovery = 93.20%
Pb 220.353†             36.6      8.3975 µg/L      0.35457      8.3975 ppb       0.35457   4.22%
   QC value within limits for Pb 220.353  Recovery = 83.97%
S 181.975 Axial†        24.1      101.20 µg/L       12.367      101.20 ppb        12.367  12.22%
   QC value within limits for S 181.975 Axial  Recovery = 101.20%
Sb 206.836†             10.5      9.0330 µg/L      3.17536      9.0330 ppb       3.17536  35.15%
   QC value within limits for Sb 206.836  Recovery = 90.33%
Se 196.026†             15.2      16.287 µg/L       5.1803      16.287 ppb        5.1803  31.81%
   QC value within limits for Se 196.026  Recovery = 108.58%
SiO2†                  1235.0      212.96 µg/L        5.556      212.96 ppb         5.556   2.61%
   QC value within limits for SiO2  Recovery = 99.98%
Si 251.611†           1457.8      100.03 µg/L        0.607      100.03 ppb         0.607   0.61%
   QC value within limits for Si 251.611  Recovery = 100.03%
Sn 189.927†             23.5      10.258 µg/L       0.8381      10.258 ppb        0.8381   8.17%
   QC value within limits for Sn 189.927  Recovery = 102.58%
Sr 421.552†           1300.9      5.5859 µg/L      0.13069      5.5859 ppb       0.13069   2.34%
   QC value within limits for Sr 421.552  Recovery = 111.72%
Ti 334.940†           2153.7      4.9102 µg/L      0.08464      4.9102 ppb       0.08464   1.72%
   QC value within limits for Ti 334.940  Recovery = 98.20%
Tl 190.801†             12.5      17.982 µg/L       5.8505      17.982 ppb        5.8505  32.54%
   QC value within limits for Tl 190.801  Recovery = 89.91%
U 409.014†             514.3      49.449 µg/L      11.1908      49.449 ppb       11.1908  22.63%
   QC value within limits for U 409.014  Recovery = 98.90%
V 292.402†             496.3      5.3984 µg/L      0.40963      5.3984 ppb       0.40963   7.59%
   QC value within limits for V 292.402  Recovery = 107.97%
Zn 213.857†            431.9      10.039 µg/L       0.1609      10.039 ppb        0.1609   1.60%
   QC value within limits for Zn 213.857  Recovery = 100.39%
QC Failed.  Continue with analysis.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 103
Date Collected: 6/30/2009 03:08:27
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	164154.3	164154.3	98.7	%			03:09:07
1	Al 396.153Radial†	1198904.7	1215253.2	506710	µg/L	506710	ppb	03:09:02
1	Ca 317.933Radial†	2564736.3	2598506.1	485640	µg/L	485640	ppb	03:09:02
1	Fe 238.204 Radial†	267634.8	271278.1	187790	µg/L	187790	ppb	03:09:07
1	K 766.490 Radial†	784.8	-68.0	-36.681	µg/L	-36.681	ppb	03:09:07
1	Mg 279.077 IEC†	238645.5	241819.4	485840	µg/L	485840	ppb	03:09:07
1	Na 589.592 Radial†	164.5	48.8	11.745	µg/L	11.745	ppb	03:09:07
1	Sr 421.552†	1018.9	1041.3	4.4711	µg/L	4.4711	ppb	03:09:07
1	Sc 361.383	1956543.7	1956543.7	94.229	%			03:09:41
1	Y 371.029	1258603.1	1258603.1	92.763	%			03:09:41
1	Ag 328.068†	-2386.6	-1565.5	1.4431	µg/L	1.4431	ppb	03:09:46
1	As 188.979†	46.0	48.6	5.6664	µg/L	5.6664	ppb	03:10:07
1	B 249.677†	2114.6	2033.5	21.215	µg/L	21.215	ppb	03:09:46
1	Ba 233.527†	121.7	218.8	5.3260	µg/L	5.3260	ppb	03:10:07
1	Be 313.107†	2150.8	-1080.8	-0.5651	µg/L	-0.5651	ppb	03:09:46
1	Cd 226.502†	482.7	654.5	0.5734	µg/L	0.5734	ppb	03:10:07
1	Co 228.616†	-119.8	-32.9	-1.5681	µg/L	-1.5681	ppb	03:10:07
1	Cr 267.716†	-357.5	-194.0	-3.7385	µg/L	-3.7385	ppb	03:10:07
1	Cu 324.752†	-164.9	-5090.5	-10.991	µg/L	-10.991	ppb	03:09:46
1	Mn 257.610†	-1602.8	-1790.1	-3.9679	µg/L	-3.9679	ppb	03:09:46
1	Mo 202.031†	-118.4	-128.5	-6.2942	µg/L	-6.2942	ppb	03:10:07
1	Ni 231.604†	402.5	-6.1	-0.3016	µg/L	-0.3016	ppb	03:10:07
1	P 214.914†	247.6	9.1	-16.430	µg/L	-16.430	ppb	03:10:07
1	Pb 220.353†	-81.1	-153.2	6.5582	µg/L	6.5582	ppb	03:10:07
1	S 181.975 Axial†	78.0	38.4	64.135	µg/L	64.135	ppb	03:10:07
1	Sb 206.836†	50.4	30.3	-7.3532	µg/L	-7.3532	ppb	03:10:07
1	Se 196.026†	36.0	17.7	0.8897	µg/L	0.8897	ppb	03:10:07
1	SiO2†	2925.1	-105.7	-18.234	µg/L	-18.234	ppb	03:10:07
1	Si 251.611†	444.5	125.6	15.049	µg/L	15.049	ppb	03:10:07
1	Sn 189.927†	-376.8	-408.1	12.005	µg/L	12.005	ppb	03:10:07
1	Ti 334.940†	9021.4	8408.3	2.4040	µg/L	2.4040	ppb	03:09:46
1	Tl 190.801†	5.5	33.7	-1.7382	µg/L	-1.7382	ppb	03:10:07
1	U 409.014†	290.6	336.6	-52.851	µg/L	-52.851	ppb	03:09:46
1	V 292.402†	-1571.9	-1462.2	-0.1669	µg/L	-0.1669	ppb	03:09:46
1	Zn 213.857†	2080.3	1474.9	8.4129	µg/L	8.4129	ppb	03:10:07
2	Sc RADIAL	163979.6	163979.6	98.6	%			03:09:19
2	Al 396.153Radial†	1206287.9	1224038.4	510370	µg/L	510370	ppb	03:09:13
2	Ca 317.933Radial†	2577890.8	2614621.4	488660	µg/L	488660	ppb	03:09:13
2	Fe 238.204 Radial†	263247.3	267115.5	184910	µg/L	184910	ppb	03:09:19
2	K 766.490 Radial†	761.5	-90.8	-48.975	µg/L	-48.975	ppb	03:09:19
2	Mg 279.077 IEC†	234907.6	238284.6	478740	µg/L	478740	ppb	03:09:19
2	Na 589.592 Radial†	199.4	84.4	20.297	µg/L	20.297	ppb	03:09:19
2	Sr 421.552†	1009.3	1032.6	4.4340	µg/L	4.4340	ppb	03:09:19
2	Sc 361.383	1963975.2	1963975.2	94.587	%			03:10:13
2	Y 371.029	1262660.2	1262660.2	93.062	%			03:10:13
2	Ag 328.068†	-2341.8	-1508.5	1.7012	µg/L	1.7012	ppb	03:10:19
2	As 188.979†	41.5	43.7	-5.4669	µg/L	-5.4669	ppb	03:10:39
2	B 249.677†	2104.5	2014.3	21.365	µg/L	21.365	ppb	03:10:19
2	Ba 233.527†	110.8	206.8	5.0334	µg/L	5.0334	ppb	03:10:39
2	Be 313.107†	2249.0	-985.6	-0.5071	µg/L	-0.5071	ppb	03:10:19
2	Cd 226.502†	499.8	670.5	1.1651	µg/L	1.1651	ppb	03:10:39
2	Co 228.616†	-109.5	-21.5	-1.0538	µg/L	-1.0538	ppb	03:10:39
2	Cr 267.716†	-353.5	-188.3	-3.6300	µg/L	-3.6300	ppb	03:10:39
2	Cu 324.752†	-176.2	-5101.8	-11.459	µg/L	-11.459	ppb	03:10:19
2	Mn 257.610†	-1683.9	-1869.5	-4.2169	µg/L	-4.2169	ppb	03:10:19
2	Mo 202.031†	-126.1	-136.2	-7.2212	µg/L	-7.2212	ppb	03:10:39
2	Ni 231.604†	382.4	-29.0	-1.4428	µg/L	-1.4428	ppb	03:10:39
2	P 214.914†	261.7	23.0	11.028	µg/L	11.028	ppb	03:10:39
2	Pb 220.353†	-86.7	-158.8	5.6192	µg/L	5.6192	ppb	03:10:39

2	S 181.975 Axial†	74.5	34.4	49.086	µg/L	49.086 ppb	03:10:39
2	Sb 206.836†	48.0	27.5	-9.9595	µg/L	-9.9595 ppb	03:10:39
2	Se 196.026†	17.0	-2.5	-20.150	µg/L	-20.150 ppb	03:10:39
2	SiO2†	2919.9	-123.0	-21.213	µg/L	-21.213 ppb	03:10:39
2	Si 251.611†	434.6	113.4	14.256	µg/L	14.256 ppb	03:10:39
2	Sn 189.927†	-382.3	-412.4	9.0378	µg/L	9.0378 ppb	03:10:39
2	Ti 334.940†	9516.8	8895.8	3.4122	µg/L	3.4122 ppb	03:10:19
2	Tl 190.801†	8.6	37.0	2.6620	µg/L	2.6620 ppb	03:10:39
2	U 409.014†	272.4	316.3	-54.579	µg/L	-54.579 ppb	03:10:19
2	V 292.402†	-1546.2	-1428.6	-0.0568	µg/L	-0.0568 ppb	03:10:19
2	Zn 213.857†	2079.4	1465.6	8.5941	µg/L	8.5941 ppb	03:10:39
3	Sc RADIAL	163664.6	163664.6	98.4	%		03:09:31
3	Al 396.153Radial†	1205346.7	1225437.6	510960	µg/L	510960 ppb	03:09:25
3	Ca 317.933Radial†	2573549.9	2615243.6	488770	µg/L	488770 ppb	03:09:25
3	Fe 238.204 Radial†	269177.3	273657.8	189440	µg/L	189440 ppb	03:09:31
3	K 766.490 Radial†	763.1	-87.7	-47.293	µg/L	-47.293 ppb	03:09:31
3	Mg 279.077 IEC†	240065.4	243986.5	490190	µg/L	490190 ppb	03:09:31
3	Na 589.592 Radial†	205.4	90.9	21.866	µg/L	21.866 ppb	03:09:31
3	Sr 421.552†	1022.7	1048.3	4.5012	µg/L	4.5012 ppb	03:09:31
3	Sc 361.383	1957929.6	1957929.6	94.296	%		03:10:45
3	Y 371.029	1260376.4	1260376.4	92.893	%		03:10:45
3	Ag 328.068†	-2368.5	-1544.5	1.7434	µg/L	1.7434 ppb	03:10:51
3	As 188.979†	41.9	44.2	-1.0173	µg/L	-1.0173 ppb	03:11:11
3	B 249.677†	2107.9	2024.7	20.350	µg/L	20.350 ppb	03:10:51
3	Ba 233.527†	96.8	192.3	4.6748	µg/L	4.6748 ppb	03:11:11
3	Be 313.107†	2260.9	-965.7	-0.4976	µg/L	-0.4976 ppb	03:10:51
3	Cd 226.502†	481.2	652.5	0.3993	µg/L	0.3993 ppb	03:11:11
3	Co 228.616†	-124.4	-37.6	-1.7860	µg/L	-1.7860 ppb	03:11:11
3	Cr 267.716†	-349.8	-185.5	-3.5783	µg/L	-3.5783 ppb	03:11:11
3	Cu 324.752†	-121.3	-5044.2	-10.439	µg/L	-10.439 ppb	03:10:51
3	Mn 257.610†	-1658.4	-1847.9	-4.1248	µg/L	-4.1248 ppb	03:10:51
3	Mo 202.031†	-121.0	-131.1	-6.5061	µg/L	-6.5061 ppb	03:11:11
3	Ni 231.604†	393.0	-16.5	-0.8169	µg/L	-0.8169 ppb	03:11:11
3	P 214.914†	262.9	25.1	9.3246	µg/L	9.3246 ppb	03:11:11
3	Pb 220.353†	-79.4	-151.4	7.3329	µg/L	7.3329 ppb	03:11:11
3	S 181.975 Axial†	87.5	48.4	105.73	µg/L	105.73 ppb	03:11:11
3	Sb 206.836†	38.5	17.6	-18.445	µg/L	-18.445 ppb	03:11:11
3	Se 196.026†	20.7	1.5	-16.745	µg/L	-16.745 ppb	03:11:11
3	SiO2†	2946.2	-85.6	-14.757	µg/L	-14.757 ppb	03:11:11
3	Si 251.611†	436.8	117.2	14.507	µg/L	14.507 ppb	03:11:11
3	Sn 189.927†	-379.8	-411.0	12.235	µg/L	12.235 ppb	03:11:11
3	Ti 334.940†	9210.8	8602.4	2.7388	µg/L	2.7388 ppb	03:10:51
3	Tl 190.801†	14.7	43.4	11.977	µg/L	11.977 ppb	03:11:11
3	U 409.014†	289.4	335.2	-53.617	µg/L	-53.617 ppb	03:10:51
3	V 292.402†	-1671.8	-1566.9	-1.1412	µg/L	-1.1412 ppb	03:10:51
3	Zn 213.857†	2071.4	1463.9	7.9219	µg/L	7.9219 ppb	03:11:11

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1959482.8	94.371	%	0.1903				0.20%
Sc RADIAL	163932.8	98.5	%	0.15				0.15%
Y 371.029	1260546.6	92.906	%	0.1499				0.16%
Ag 328.068†	-1539.5	1.6292	µg/L	0.16254	1.6292	ppb	0.16254	9.98%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	1221576.4	509350	µg/L	2301.9	509350	ppb	2301.9	0.45%
QC value within limits for Al 396.153Radial Recovery = 101.87%								
As 188.979†	45.5	-0.2726	µg/L	5.60392	-0.2726	ppb	5.60392	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	2024.2	20.977	µg/L	0.5476	20.977	ppb	0.5476	2.61%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	206.0	5.0114	µg/L	0.32618	5.0114	ppb	0.32618	6.51%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1010.7	-0.5233	µg/L	0.03650	-0.5233	ppb	0.03650	6.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2609457.0	487690	µg/L	1773.4	487690	ppb	1773.4	0.36%
QC value within limits for Ca 317.933Radial Recovery = 97.54%								
Cd 226.502†	659.2	0.7126	µg/L	0.40143	0.7126	ppb	0.40143	56.33%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-30.6	-1.4693	µg/L	0.37595	-1.4693	ppb	0.37595	25.59%

```
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -189.3     -3.6489 µg/L       0.08178     -3.6489 ppb        0.08178   2.24%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -5078.8    -10.963 µg/L        0.5102     -10.963 ppb         0.5102   4.65%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    270683.8     187380 µg/L       2292.3      187380 ppb         2292.3   1.22%
   QC value within limits for Fe 238.204 Radial  Recovery = 93.69%
K 766.490 Radial†        -82.2    -44.316 µg/L       6.6659     -44.316 ppb         6.6659  15.04%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       241363.5     484930 µg/L       5782.5      484930 ppb         5782.5   1.19%
   QC value within limits for Mg 279.077 IEC  Recovery = 96.99%
Mn 257.610†           -1835.8    -4.1032 µg/L       0.12586     -4.1032 ppb        0.12586   3.07%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -131.9    -6.6738 µg/L       0.48570     -6.6738 ppb        0.48570   7.28%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       74.7     17.969 µg/L        5.4473      17.969 ppb         5.4473  30.31%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†            -17.2    -0.8538 µg/L       0.57151     -0.8538 ppb        0.57151  66.94%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               19.1     1.3076 µg/L      15.38456      1.3076 ppb       15.38456 >999.9%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -154.5     6.5034 µg/L       0.85817      6.5034 ppb        0.85817  13.20%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         40.4     72.982 µg/L       29.3380      72.982 ppb        29.3380  40.20%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              25.1    -11.919 µg/L        5.7998     -11.919 ppb         5.7998  48.66%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               5.6    -12.002 µg/L       11.2932     -12.002 ppb        11.2932  94.10%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                  -104.8    -18.068 µg/L        3.2317     -18.068 ppb         3.2317  17.89%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†             118.7     14.604 µg/L        0.4053      14.604 ppb         0.4053   2.78%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -410.5     11.092 µg/L        1.7831      11.092 ppb         1.7831  16.07%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†            1040.7     4.4688 µg/L       0.03365      4.4688 ppb        0.03365   0.75%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†            8635.5     2.8517 µg/L       0.51348      2.8517 ppb        0.51348  18.01%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              38.0     4.3004 µg/L       7.00297      4.3004 ppb        7.00297 162.85%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              329.4    -53.682 µg/L        0.8658     -53.682 ppb         0.8658   1.61%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†            -1485.9    -0.4550 µg/L       0.59685     -0.4550 ppb        0.59685 131.19%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            1468.1     8.3096 µg/L       0.34779      8.3096 ppb        0.34779   4.19%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 104
Date Collected: 6/30/2009 03:11:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	164855.7	164855.7	99.1	%			03:12:00
1	Al 396.153Radial†	1197251.9	1208415.3	503840	µg/L	503840	ppb	03:11:54
1	Ca 317.933Radial†	2546094.5	2568633.4	480060	µg/L	480060	ppb	03:11:54
1	Fe 238.204 Radial†	265710.2	268181.7	185660	µg/L	185660	ppb	03:12:00
1	K 766.490 Radial†	10314.8	9546.2	5147.4	µg/L	5147.4	ppb	03:12:00
1	Mg 279.077 IEC†	237135.6	239266.6	480720	µg/L	480720	ppb	03:12:00
1	Na 589.592 Radial†	21607.5	21688.3	5218.4	µg/L	5218.4	ppb	03:12:00
1	Sr 421.552†	117369.6	118457.9	508.64	µg/L	508.64	ppb	03:12:00
1	Sc 361.383	1955005.6	1955005.6	94.155	%			03:12:37
1	Y 371.029	1259277.8	1259277.8	92.812	%			03:12:37
1	Ag 328.068†	27074.8	29722.9	269.98	µg/L	269.98	ppb	03:12:37
1	As 188.979†	361.2	383.4	508.46	µg/L	508.46	ppb	03:12:58
1	B 249.677†	14369.4	15050.7	535.72	µg/L	535.72	ppb	03:12:37
1	Ba 233.527†	19083.5	20357.9	499.59	µg/L	499.59	ppb	03:12:58
1	Be 313.107†	399458.6	420893.5	243.38	µg/L	243.38	ppb	03:12:37
1	Cd 226.502†	19170.8	20503.1	459.69	µg/L	459.69	ppb	03:12:58
1	Co 228.616†	9339.4	10013.5	456.03	µg/L	456.03	ppb	03:12:58
1	Cr 267.716†	23099.0	24718.4	474.22	µg/L	474.22	ppb	03:12:58
1	Cu 324.752†	73038.5	72657.2	542.09	µg/L	542.09	ppb	03:12:37
1	Mn 257.610†	153950.6	163418.7	475.08	µg/L	475.08	ppb	03:12:37
1	Mo 202.031†	4350.9	4618.1	498.64	µg/L	498.64	ppb	03:12:58
1	Ni 231.604†	8849.8	8965.9	445.17	µg/L	445.17	ppb	03:12:58
1	P 214.914†	1724.4	1577.7	2463.5	µg/L	2463.5	ppb	03:12:58
1	Pb 220.353†	1891.8	1942.1	488.40	µg/L	488.40	ppb	03:12:58
1	S 181.975 Axial†	672.8	670.1	2722.4	µg/L	2722.4	ppb	03:12:58
1	Sb 206.836†	612.2	627.0	503.78	µg/L	503.78	ppb	03:12:58
1	Se 196.026†	2114.1	2224.9	2367.6	µg/L	2367.6	ppb	03:12:58
1	SiO2†	64885.2	65703.3	11330	µg/L	11330	ppb	03:12:37
1	Si 251.611†	72539.7	76696.8	5261.6	µg/L	5261.6	ppb	03:12:37
1	Sn 189.927†	726.5	763.4	516.40	µg/L	516.40	ppb	03:12:58
1	Ti 334.940†	223329.3	236027.9	521.90	µg/L	521.90	ppb	03:12:37
1	Tl 190.801†	326.1	374.2	490.19	µg/L	490.19	ppb	03:12:58
1	U 409.014†	6033.3	6436.1	534.89	µg/L	534.89	ppb	03:12:37
1	V 292.402†	44339.9	47298.5	519.16	µg/L	519.16	ppb	03:12:37
1	Zn 213.857†	21207.5	21791.3	480.53	µg/L	480.53	ppb	03:12:58
2	Sc RADIAL	163379.5	163379.5	98.2	%			03:12:12
2	Al 396.153Radial†	1206801.4	1229056.7	512450	µg/L	512450	ppb	03:12:06
2	Ca 317.933Radial†	2564087.6	2610172.2	487820	µg/L	487820	ppb	03:12:06
2	Fe 238.204 Radial†	265244.9	270130.7	187010	µg/L	187010	ppb	03:12:12
2	K 766.490 Radial†	10352.4	9678.5	5218.8	µg/L	5218.8	ppb	03:12:12
2	Mg 279.077 IEC†	236911.4	241200.5	484610	µg/L	484610	ppb	03:12:12
2	Na 589.592 Radial†	21586.6	21864.1	5260.7	µg/L	5260.7	ppb	03:12:12
2	Sr 421.552†	117377.0	119535.7	513.27	µg/L	513.27	ppb	03:12:12
2	Sc 361.383	1938075.7	1938075.7	93.340	%			03:13:07
2	Y 371.029	1248928.3	1248928.3	92.050	%			03:13:07
2	Ag 328.068†	27048.0	29945.4	272.00	µg/L	272.00	ppb	03:13:07
2	As 188.979†	359.0	384.4	507.52	µg/L	507.52	ppb	03:13:28
2	B 249.677†	14405.0	15222.3	542.07	µg/L	542.07	ppb	03:13:07
2	Ba 233.527†	19150.4	20606.6	505.69	µg/L	505.69	ppb	03:13:28
2	Be 313.107†	399596.1	424746.8	245.61	µg/L	245.61	ppb	03:13:07
2	Cd 226.502†	19239.0	20754.0	465.38	µg/L	465.38	ppb	03:13:28
2	Co 228.616†	9350.8	10112.4	460.54	µg/L	460.54	ppb	03:13:28
2	Cr 267.716†	23206.8	25048.2	480.54	µg/L	480.54	ppb	03:13:28
2	Cu 324.752†	73028.7	73324.3	547.02	µg/L	547.02	ppb	03:13:07
2	Mn 257.610†	153820.2	164707.2	478.83	µg/L	478.83	ppb	03:13:07
2	Mo 202.031†	4381.0	4690.8	506.42	µg/L	506.42	ppb	03:13:28
2	Ni 231.604†	8885.7	9086.5	451.16	µg/L	451.16	ppb	03:13:28
2	P 214.914†	1724.8	1594.2	2491.2	µg/L	2491.2	ppb	03:13:28
2	Pb 220.353†	1923.1	1993.2	500.90	µg/L	500.90	ppb	03:13:28

2	S 181.975 Axial†	688.5	693.2	2818.8 µg/L	2818.8 ppb	03:13:28
2	Sb 206.836†	618.2	639.1	513.64 µg/L	513.64 ppb	03:13:28
2	Se 196.026†	2138.8	2271.0	2417.0 µg/L	2417.0 ppb	03:13:28
2	SiO2†	64874.8	66294.0	11432 µg/L	11432 ppb	03:13:07
2	Si 251.611†	72529.2	77358.6	5307.0 µg/L	5307.0 ppb	03:13:07
2	Sn 189.927†	722.7	766.0	519.67 µg/L	519.67 ppb	03:13:28
2	Ti 334.940†	223305.5	238074.3	526.30 µg/L	526.30 ppb	03:13:07
2	Tl 190.801†	338.3	390.3	512.60 µg/L	512.60 ppb	03:13:28
2	U 409.014†	5956.4	6409.7	531.29 µg/L	531.29 ppb	03:13:07
2	V 292.402†	44323.3	47692.1	523.48 µg/L	523.48 ppb	03:13:07
2	Zn 213.857†	21298.3	22085.3	487.17 µg/L	487.17 ppb	03:13:28
3	Sc RADIAL	166465.3	166465.3	100 %		03:12:24
3	Al 396.153Radial†	1206259.1	1205734.1	502720 µg/L	502720 ppb	03:12:18
3	Ca 317.933Radial†	2569616.2	2567295.9	479810 µg/L	479810 ppb	03:12:18
3	Fe 238.204 Radial†	269285.9	269162.5	186340 µg/L	186340 ppb	03:12:24
3	K 766.490 Radial†	10426.8	9557.5	5153.6 µg/L	5153.6 ppb	03:12:24
3	Mg 279.077 IEC†	239994.0	239809.3	481820 µg/L	481820 ppb	03:12:24
3	Na 589.592 Radial†	21839.0	21708.8	5223.3 µg/L	5223.3 ppb	03:12:24
3	Sr 421.552†	118878.4	118820.5	510.20 µg/L	510.20 ppb	03:12:24
3	Sc 361.383	1937161.5	1937161.5	93.296 %		03:13:37
3	Y 371.029	1248738.5	1248738.5	92.036 %		03:13:37
3	Ag 328.068†	27078.9	29992.1	272.34 µg/L	272.34 ppb	03:13:37
3	As 188.979†	357.3	382.8	508.11 µg/L	508.11 ppb	03:13:58
3	B 249.677†	14393.1	15216.7	542.06 µg/L	542.06 ppb	03:13:37
3	Ba 233.527†	19167.0	20634.1	506.36 µg/L	506.36 ppb	03:13:58
3	Be 313.107†	399624.3	424979.1	245.74 µg/L	245.74 ppb	03:13:37
3	Cd 226.502†	19303.5	20832.8	467.25 µg/L	467.25 ppb	03:13:58
3	Co 228.616†	9380.1	10148.5	462.18 µg/L	462.18 ppb	03:13:58
3	Cr 267.716†	23247.7	25103.7	481.60 µg/L	481.60 ppb	03:13:58
3	Cu 324.752†	72890.9	73213.6	546.15 µg/L	546.15 ppb	03:13:37
3	Mn 257.610†	153955.0	164929.5	479.47 µg/L	479.47 ppb	03:13:37
3	Mo 202.031†	4379.3	4691.1	506.43 µg/L	506.43 ppb	03:13:58
3	Ni 231.604†	8923.0	9131.0	453.37 µg/L	453.37 ppb	03:13:58
3	P 214.914†	1733.6	1604.5	2505.5 µg/L	2505.5 ppb	03:13:58
3	Pb 220.353†	1915.9	1986.4	498.51 µg/L	498.51 ppb	03:13:58
3	S 181.975 Axial†	692.0	697.4	2836.8 µg/L	2836.8 ppb	03:13:58
3	Sb 206.836†	626.2	648.0	521.76 µg/L	521.76 ppb	03:13:58
3	Se 196.026†	2123.0	2255.1	2400.0 µg/L	2400.0 ppb	03:13:58
3	SiO2†	64949.7	66407.1	11452 µg/L	11452 ppb	03:13:37
3	Si 251.611†	72481.5	77344.1	5305.8 µg/L	5305.8 ppb	03:13:37
3	Sn 189.927†	734.5	779.1	523.46 µg/L	523.46 ppb	03:13:58
3	Ti 334.940†	223244.4	238121.7	526.68 µg/L	526.68 ppb	03:13:37
3	Tl 190.801†	343.8	396.4	522.27 µg/L	522.27 ppb	03:13:58
3	U 409.014†	5930.9	6385.3	529.90 µg/L	529.90 ppb	03:13:37
3	V 292.402†	44267.4	47654.6	523.03 µg/L	523.03 ppb	03:13:37
3	Zn 213.857†	21341.5	22142.3	488.63 µg/L	488.63 ppb	03:13:58

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1943414.3	93.597	%	0.4840				0.52%
Sc RADIAL	164900.2	99.1	%	0.93				0.94%
Y 371.029	1252314.9	92.299	%	0.4445				0.48%
Ag 328.068†	29886.8	271.44	µg/L	1.276	271.44	ppb	1.276	0.47%
QC value within limits for Ag 328.068 Recovery = 108.58%								
Al 396.153Radial†	1214402.1	506340	µg/L	5321.1	506340	ppb	5321.1	1.05%
QC value within limits for Al 396.153Radial Recovery = 101.27%								
As 188.979†	383.5	508.03	µg/L	0.474	508.03	ppb	0.474	0.09%
QC value within limits for As 188.979 Recovery = 101.61%								
B 249.677†	15163.2	539.95	µg/L	3.662	539.95	ppb	3.662	0.68%
QC value within limits for B 249.677 Recovery = 107.99%								
Ba 233.527†	20532.9	503.88	µg/L	3.731	503.88	ppb	3.731	0.74%
QC value within limits for Ba 233.527 Recovery = 100.78%								
Be 313.107†	423539.8	244.91	µg/L	1.326	244.91	ppb	1.326	0.54%
QC value within limits for Be 313.107 Recovery = 97.96%								
Ca 317.933Radial†	2582033.8	482560	µg/L	4556.0	482560	ppb	4556.0	0.94%
QC value within limits for Ca 317.933Radial Recovery = 96.51%								
Cd 226.502†	20696.6	464.10	µg/L	3.938	464.10	ppb	3.938	0.85%
QC value within limits for Cd 226.502 Recovery = 92.82%								
Co 228.616†	10091.5	459.58	µg/L	3.188	459.58	ppb	3.188	0.69%

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   QC value within limits for Co 228.616  Recovery = 91.92%
Cr 267.716†            24956.8      478.79 µg/L        3.993      478.79 ppb          3.993   0.83%
   QC value within limits for Cr 267.716  Recovery = 95.76%
Cu 324.752†            73065.0      545.09 µg/L        2.629      545.09 ppb          2.629   0.48%
   QC value within limits for Cu 324.752  Recovery = 109.02%
Fe 238.204 Radial†    269158.3      186340 µg/L        674.7      186340 ppb          674.7   0.36%
   QC value within limits for Fe 238.204 Radial  Recovery = 93.17%
K 766.490 Radial†       9594.1      5173.3 µg/L        39.55      5173.3 ppb          39.55   0.76%
   QC value within limits for K 766.490 Radial  Recovery = 103.47%
Mg 279.077 IEC†       240092.2      482380 µg/L       2004.4      482380 ppb         2004.4   0.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 96.48%
Mn 257.610†           164351.8      477.79 µg/L        2.369      477.79 ppb          2.369   0.50%
   QC value within limits for Mn 257.610  Recovery = 95.56%
Mo 202.031†             4666.7      503.83 µg/L        4.496      503.83 ppb          4.496   0.89%
   QC value within limits for Mo 202.031  Recovery = 100.77%
Na 589.592 Radial†     21753.7      5234.2 µg/L        23.13      5234.2 ppb          23.13   0.44%
   QC value within limits for Na 589.592 Radial  Recovery = 104.68%
Ni 231.604†             9061.1      449.90 µg/L        4.241      449.90 ppb          4.241   0.94%
   QC value within limits for Ni 231.604  Recovery = 89.98%
P 214.914†              1592.1      2486.7 µg/L        21.32      2486.7 ppb          21.32   0.86%
   QC value within limits for P 214.914  Recovery = 99.47%
Pb 220.353†             1973.9      495.93 µg/L        6.636      495.93 ppb          6.636   1.34%
   QC value within limits for Pb 220.353  Recovery = 99.19%
S 181.975 Axial†         686.9      2792.6 µg/L        61.51      2792.6 ppb          61.51   2.20%
   QC value within limits for S 181.975 Axial  Recovery = 111.71%
Sb 206.836†              638.0      513.06 µg/L        9.007      513.06 ppb          9.007   1.76%
   QC value within limits for Sb 206.836  Recovery = 102.61%
Se 196.026†             2250.4      2394.9 µg/L        25.09      2394.9 ppb          25.09   1.05%
   QC value within limits for Se 196.026  Recovery = 95.80%
SiO2†                  66134.8       11405 µg/L         65.2       11405 ppb           65.2   0.57%
   QC value within limits for SiO2  Recovery = 106.63%
Si 251.611†            77133.2      5291.4 µg/L        25.87      5291.4 ppb          25.87   0.49%
   QC value within limits for Si 251.611  Recovery = 105.83%
Sn 189.927†              769.5      519.84 µg/L        3.533      519.84 ppb          3.533   0.68%
   QC value within limits for Sn 189.927  Recovery = 103.97%
Sr 421.552†           118938.1      510.70 µg/L        2.355      510.70 ppb          2.355   0.46%
   QC value within limits for Sr 421.552  Recovery = 102.14%
Ti 334.940†           237408.0      524.96 µg/L        2.659      524.96 ppb          2.659   0.51%
   QC value within limits for Ti 334.940  Recovery = 104.99%
Tl 190.801†              387.0      508.35 µg/L       16.457      508.35 ppb         16.457   3.24%
   QC value within limits for Tl 190.801  Recovery = 101.67%
U 409.014†              6410.4      532.03 µg/L        2.574      532.03 ppb          2.574   0.48%
   QC value within limits for U 409.014  Recovery = 106.41%
V 292.402†             47548.4      521.89 µg/L        2.372      521.89 ppb          2.372   0.45%
   QC value within limits for V 292.402  Recovery = 104.38%
Zn 213.857†            22006.3      485.44 µg/L        4.315      485.44 ppb          4.315   0.89%
   QC value within limits for Zn 213.857  Recovery = 97.09%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 105
Date Collected: 6/30/2009 03:14:07
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	162989.4	162989.4	98.0	%			03:14:48
1	Al 396.153Radial†	1185155.6	1209903.4	504480	µg/L	504480	ppb	03:14:43
1	Ca 317.933Radial†	2561266.8	2613543.0	488450	µg/L	488450	ppb	03:14:43
1	Fe 238.204 Radial†	654094.4	667697.3	462210	µg/L	462210	ppb	03:14:43
1	K 766.490 Radial†	871.0	25.6	13.804	µg/L	13.804	ppb	03:14:48
1	Mg 279.077 IEC†	235696.7	240538.2	482800	µg/L	482800	ppb	03:14:48
1	Na 589.592 Radial†	1973729.8	2014576.1	484730	µg/L	484730	ppb	03:14:43
1	Sr 421.552†	1319.3	1355.3	5.8195	µg/L	5.8195	ppb	03:14:48
1	Sc 361.383	1927037.9	1927037.9	92.808	%			03:15:25
1	Y 371.029	1227619.6	1227619.6	90.479	%			03:15:25
1	Ag 328.068†	-4915.5	-4329.1	-0.6077	µg/L	-0.6077	ppb	03:15:31
1	As 188.979†	35.0	37.6	213.06	µg/L	213.06	ppb	03:15:51
1	B 249.677†	4782.7	4942.6	49.754	µg/L	49.754	ppb	03:15:31
1	Ba 233.527†	268.3	378.8	9.1576	µg/L	9.1576	ppb	03:15:51
1	Be 313.107†	-2252.6	-5790.5	-3.2317	µg/L	-3.2317	ppb	03:15:31
1	Cd 226.502†	1335.3	1580.9	11.079	µg/L	11.079	ppb	03:15:31
1	Co 228.616†	16.0	111.5	4.9523	µg/L	4.9523	ppb	03:15:51
1	Cr 267.716†	-373.5	-217.1	-4.2420	µg/L	-4.2420	ppb	03:15:31
1	Cu 324.752†	-7897.3	-13424.8	-33.426	µg/L	-33.426	ppb	03:15:31
1	Mn 257.610†	-13102.1	-14206.6	-38.186	µg/L	-38.186	ppb	03:15:31
1	Mo 202.031†	-219.4	-239.2	-7.2828	µg/L	-7.2828	ppb	03:15:51
1	Ni 231.604†	345.7	-60.8	-3.0286	µg/L	-3.0286	ppb	03:15:51
1	P 214.914†	434.6	214.6	5.3518	µg/L	5.3518	ppb	03:15:51
1	Pb 220.353†	8.0	-58.5	12.584	µg/L	12.584	ppb	03:15:51
1	S 181.975 Axial†	78.8	40.5	32.741	µg/L	32.741	ppb	03:15:51
1	Sb 206.836†	36.5	16.1	-11.460	µg/L	-11.460	ppb	03:15:51
1	Se 196.026†	-123.6	-153.6	-53.481	µg/L	-53.481	ppb	03:15:51
1	SiO2†	2683.5	-318.6	-54.935	µg/L	-54.935	ppb	03:15:51
1	Si 251.611†	-424.1	-803.1	-48.422	µg/L	-48.422	ppb	03:15:51
1	Sn 189.927†	-429.9	-471.4	54.032	µg/L	54.032	ppb	03:15:51
1	Ti 334.940†	14351.9	14298.5	15.745	µg/L	15.745	ppb	03:15:31
1	Tl 190.801†	-10.2	16.8	-26.154	µg/L	-26.154	ppb	03:15:51
1	U 409.014†	140944.2	151894.8	14475	µg/L	14475	ppb	03:15:31
1	V 292.402†	-5149.8	-5342.9	4.7335	µg/L	4.7335	ppb	03:15:31
1	Zn 213.857†	3415.3	2947.2	24.176	µg/L	24.176	ppb	03:15:51
2	Sc RADIAL	163571.8	163571.8	98.3	%			03:15:02
2	Al 396.153Radial†	1182874.3	1203275.4	501720	µg/L	501720	ppb	03:14:56
2	Ca 317.933Radial†	2553586.3	2596422.0	485250	µg/L	485250	ppb	03:14:56
2	Fe 238.204 Radial†	652066.2	663257.0	459140	µg/L	459140	ppb	03:14:56
2	K 766.490 Radial†	837.6	-11.5	-6.2163	µg/L	-6.2163	ppb	03:15:02
2	Mg 279.077 IEC†	237001.3	241008.4	483750	µg/L	483750	ppb	03:15:02
2	Na 589.592 Radial†	1968849.0	2002438.2	481810	µg/L	481810	ppb	03:14:56
2	Sr 421.552†	1236.4	1266.2	5.4369	µg/L	5.4369	ppb	03:15:02
2	Sc 361.383	1925201.9	1925201.9	92.720	%			03:15:57
2	Y 371.029	1226738.9	1226738.9	90.414	%			03:15:57
2	Ag 328.068†	-4950.6	-4372.0	-1.2196	µg/L	-1.2196	ppb	03:16:03
2	As 188.979†	37.1	39.8	215.41	µg/L	215.41	ppb	03:16:24
2	B 249.677†	4799.8	4966.0	51.644	µg/L	51.644	ppb	03:16:03
2	Ba 233.527†	237.9	346.3	8.3610	µg/L	8.3610	ppb	03:16:24
2	Be 313.107†	-2669.7	-6242.6	-3.4934	µg/L	-3.4934	ppb	03:16:03
2	Cd 226.502†	1340.8	1588.2	11.518	µg/L	11.518	ppb	03:16:03
2	Co 228.616†	22.4	118.5	5.2713	µg/L	5.2713	ppb	03:16:24
2	Cr 267.716†	-415.1	-262.3	-5.1087	µg/L	-5.1087	ppb	03:16:03
2	Cu 324.752†	-8068.7	-13617.8	-35.213	µg/L	-35.213	ppb	03:16:03
2	Mn 257.610†	-13218.7	-14345.9	-38.610	µg/L	-38.610	ppb	03:16:03
2	Mo 202.031†	-211.4	-230.9	-6.5179	µg/L	-6.5179	ppb	03:16:24
2	Ni 231.604†	351.5	-54.2	-2.7036	µg/L	-2.7036	ppb	03:16:24
2	P 214.914†	435.0	215.4	9.5900	µg/L	9.5900	ppb	03:16:24
2	Pb 220.353†	0.4	-66.7	10.463	µg/L	10.463	ppb	03:16:24

2	S 181.975 Axial†	71.5	32.8	0.5701	µg/L	0.5701 ppb	03:16:24
2	Sb 206.836†	22.5	1.1	-24.155	µg/L	-24.155 ppb	03:16:24
2	Se 196.026†	-129.0	-159.5	-61.605	µg/L	-61.605 ppb	03:16:24
2	SiO2†	2645.8	-356.4	-61.462	µg/L	-61.462 ppb	03:16:24
2	Si 251.611†	-455.2	-837.0	-50.751	µg/L	-50.751 ppb	03:16:24
2	Sn 189.927†	-429.5	-471.4	52.836	µg/L	52.836 ppb	03:16:24
2	Ti 334.940†	14063.2	14001.8	15.179	µg/L	15.179 ppb	03:16:03
2	Tl 190.801†	-3.5	24.0	-15.426	µg/L	-15.426 ppb	03:16:24
2	U 409.014†	141233.1	152351.2	14520	µg/L	14520 ppb	03:16:03
2	V 292.402†	-5213.9	-5417.3	3.7741	µg/L	3.7741 ppb	03:16:03
2	Zn 213.857†	3409.1	2943.9	24.291	µg/L	24.291 ppb	03:16:24
3	Sc RADIAL	164721.1	164721.1	99.0	%		03:15:15
3	Al 396.153Radial†	1192434.5	1204536.6	502240	µg/L	502240 ppb	03:15:09
3	Ca 317.933Radial†	2577831.2	2602787.2	486440	µg/L	486440 ppb	03:15:09
3	Fe 238.204 Radial†	658237.2	664862.2	460250	µg/L	460250 ppb	03:15:09
3	K 766.490 Radial†	782.2	-73.4	-39.582	µg/L	-39.582 ppb	03:15:15
3	Mg 279.077 IEC†	236012.9	238328.2	478360	µg/L	478360 ppb	03:15:15
3	Na 589.592 Radial†	1986228.8	2006019.3	482670	µg/L	482670 ppb	03:15:09
3	Sr 421.552†	1307.0	1328.7	5.7054	µg/L	5.7054 ppb	03:15:15
3	Sc 361.383	1915113.9	1915113.9	92.234	%		03:16:30
3	Y 371.029	1220902.1	1220902.1	89.984	%		03:16:30
3	Ag 328.068†	-4931.6	-4379.6	-1.1977	µg/L	-1.1977 ppb	03:16:36
3	As 188.979†	35.7	38.6	213.87	µg/L	213.87 ppb	03:16:56
3	B 249.677†	4792.9	4985.8	52.075	µg/L	52.075 ppb	03:16:36
3	Ba 233.527†	259.2	370.8	8.9591	µg/L	8.9591 ppb	03:16:56
3	Be 313.107†	-2775.6	-6372.7	-3.5658	µg/L	-3.5658 ppb	03:16:36
3	Cd 226.502†	1345.3	1600.7	11.873	µg/L	11.873 ppb	03:16:36
3	Co 228.616†	13.9	109.4	4.8489	µg/L	4.8489 ppb	03:16:56
3	Cr 267.716†	-385.5	-232.5	-4.5390	µg/L	-4.5390 ppb	03:16:36
3	Cu 324.752†	-8002.3	-13591.6	-34.877	µg/L	-34.877 ppb	03:16:36
3	Mn 257.610†	-13330.2	-14541.8	-39.171	µg/L	-39.171 ppb	03:16:36
3	Mo 202.031†	-240.1	-263.1	-9.9085	µg/L	-9.9085 ppb	03:16:56
3	Ni 231.604†	356.6	-46.6	-2.3272	µg/L	-2.3272 ppb	03:16:56
3	P 214.914†	436.8	219.8	15.578	µg/L	15.578 ppb	03:16:56
3	Pb 220.353†	6.5	-60.0	11.847	µg/L	11.847 ppb	03:16:56
3	S 181.975 Axial†	81.0	43.4	46.011	µg/L	46.011 ppb	03:16:56
3	Sb 206.836†	17.2	-4.6	-28.982	µg/L	-28.982 ppb	03:16:56
3	Se 196.026†	-136.8	-168.7	-69.505	µg/L	-69.505 ppb	03:16:56
3	SiO2†	2603.2	-387.6	-66.840	µg/L	-66.840 ppb	03:16:56
3	Si 251.611†	-425.7	-807.6	-48.597	µg/L	-48.597 ppb	03:16:56
3	Sn 189.927†	-431.5	-476.1	50.627	µg/L	50.627 ppb	03:16:56
3	Ti 334.940†	14312.4	14352.0	15.937	µg/L	15.937 ppb	03:16:36
3	Tl 190.801†	-6.2	21.1	-19.777	µg/L	-19.777 ppb	03:16:56
3	U 409.014†	142547.3	154578.4	14734	µg/L	14734 ppb	03:16:36
3	V 292.402†	-5207.3	-5439.8	3.9497	µg/L	3.9497 ppb	03:16:36
3	Zn 213.857†	3390.7	2943.4	24.344	µg/L	24.344 ppb	03:16:56

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1922451.2	92.587	%	0.3092				0.33%
Sc RADIAL	163760.8	98.4	%	0.53				0.54%
Y 371.029	1225086.8	90.292	%	0.2691				0.30%
Ag 328.068†	-4360.2	-1.0083	µg/L	0.34714	-1.0083	ppb	0.34714	34.43%
Al 396.153Radial†	1205905.1	502810	µg/L	1467.5	502810	ppb	1467.5	0.29%
QC value within limits for Al 396.153Radial Recovery = 100.56%								
As 188.979†	38.6	214.12	µg/L	1.196	214.12	ppb	1.196	0.56%
B 249.677†	4964.8	51.158	µg/L	1.2344	51.158	ppb	1.2344	2.41%
Ba 233.527†	365.3	8.8259	µg/L	0.41467	8.8259	ppb	0.41467	4.70%
Be 313.107†	-6135.3	-3.4303	µg/L	0.17576	-3.4303	ppb	0.17576	5.12%
Ca 317.933Radial†	2604250.7	486720	µg/L	1617.3	486720	ppb	1617.3	0.33%
QC value within limits for Ca 317.933Radial Recovery = 97.34%								
Cd 226.502†	1590.0	11.490	µg/L	0.3981	11.490	ppb	0.3981	3.47%
Co 228.616†	113.1	5.0242	µg/L	0.22017	5.0242	ppb	0.22017	4.38%
Cr 267.716†	-237.3	-4.6299	µg/L	0.44043	-4.6299	ppb	0.44043	9.51%
Cu 324.752†	-13544.7	-34.505	µg/L	0.9496	-34.505	ppb	0.9496	2.75%
Fe 238.204 Radial†	665272.2	460530	µg/L	1556.4	460530	ppb	1556.4	0.34%
QC value within limits for Fe 238.204 Radial Recovery = 92.11%								
K 766.490 Radial†	-19.8	-10.665	µg/L	26.9697	-10.665	ppb	26.9697	252.89%
Mg 279.077 IEC†	239958.2	481640	µg/L	2877.2	481640	ppb	2877.2	0.60%

QC value within limits for Mg 279.077 IEC Recovery = 96.33%

Mn 257.610†	-14364.8	-38.655 µg/L	0.4940	-38.655 ppb	0.4940	1.28%
Mo 202.031†	-244.4	-7.9031 µg/L	1.77835	-7.9031 ppb	1.77835	22.50%
Na 589.592 Radial†	2007677.9	483070 µg/L	1500.6	483070 ppb	1500.6	0.31%

QC value within limits for Na 589.592 Radial Recovery = 96.61%

Ni 231.604†	-53.9	-2.6864 µg/L	0.35102	-2.6864 ppb	0.35102	13.07%
P 214.914†	216.6	10.173 µg/L	5.1382	10.173 ppb	5.1382	50.51%
Pb 220.353†	-61.8	11.631 µg/L	1.0770	11.631 ppb	1.0770	9.26%
S 181.975 Axial†	38.9	26.441 µg/L	23.3665	26.441 ppb	23.3665	88.37%
Sb 206.836†	4.2	-21.532 µg/L	9.0502	-21.532 ppb	9.0502	42.03%
Se 196.026†	-160.6	-61.530 µg/L	8.0125	-61.530 ppb	8.0125	13.02%
SiO2†	-354.2	-61.079 µg/L	5.9616	-61.079 ppb	5.9616	9.76%
Si 251.611†	-815.9	-49.256 µg/L	1.2969	-49.256 ppb	1.2969	2.63%
Sn 189.927†	-473.0	52.498 µg/L	1.7278	52.498 ppb	1.7278	3.29%
Sr 421.552†	1316.8	5.6539 µg/L	0.19641	5.6539 ppb	0.19641	3.47%
Ti 334.940†	14217.4	15.620 µg/L	0.3940	15.620 ppb	0.3940	2.52%
Tl 190.801†	20.6	-20.452 µg/L	5.3959	-20.452 ppb	5.3959	26.38%
U 409.014†	152941.4	14576 µg/L	138.3	14576 ppb	138.3	0.95%

QC value within limits for U 409.014 Recovery = 97.18%

V 292.402†	-5400.0	4.1524 µg/L	0.51080	4.1524 ppb	0.51080	12.30%
Zn 213.857†	2944.8	24.270 µg/L	0.0860	24.270 ppb	0.0860	0.35%

All analyte(s) passed QC.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 108
Date Collected: 6/30/2009 03:17:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	169350.7	169350.7	102	%			03:17:47
1	Al 396.153Radial†	1107.3	1238.0	142.04	µg/L	142.04	ppb	03:18:08
1	Ca 317.933Radial†	2191.6	1270.9	237.52	µg/L	237.52	ppb	03:18:08
1	Fe 238.204 Radial†	153.9	178.6	450.56	µg/L	450.56	ppb	03:18:08
1	K 766.490 Radial†	555788.4	545149.7	293950	µg/L	293950	ppb	03:17:42
1	Mg 279.077 IEC†	-49.7	-99.2	45.992	µg/L	45.992	ppb	03:18:08
1	Na 589.592 Radial†	1579.2	1433.5	344.91	µg/L	344.91	ppb	03:17:47
1	Sr 421.552†	2322043.1	2281211.6	9795.1	µg/L	9795.1	ppb	03:17:42
1	Sc 361.383	2052435.4	2052435.4	98.847	%			03:19:41
1	Y 371.029	1321860.0	1321860.0	97.425	%			03:19:41
1	Ag 328.068†	-6294.1	-5400.1	23.039	µg/L	23.039	ppb	03:19:41
1	As 188.979†	6489.9	6565.4	9843.0	µg/L	9843.0	ppb	03:19:47
1	B 249.677†	125958.1	127216.4	5021.6	µg/L	5021.6	ppb	03:19:41
1	Ba 233.527†	604911.5	612055.8	15010	µg/L	15010	ppb	03:19:41
1	Be 313.107†	5076275.3	5132112.3	2977.5	µg/L	2977.5	ppb	03:19:31
1	Cd 226.502†	436762.0	441997.8	10211	µg/L	10211	ppb	03:19:41
1	Co 228.616†	214323.5	216917.3	9880.4	µg/L	9880.4	ppb	03:19:41
1	Cr 267.716†	1270892.7	1285899.5	24646	µg/L	24646	ppb	03:19:41
1	Cu 324.752†	2890009.2	2918797.4	20775	µg/L	20775	ppb	03:19:41
1	Mn 257.610†	3330316.2	3369065.8	9769.5	µg/L	9769.5	ppb	03:19:41
1	Mo 202.031†	91401.9	92465.0	9837.7	µg/L	9837.7	ppb	03:19:41
1	Ni 231.604†	199181.8	201071.4	9984.0	µg/L	9984.0	ppb	03:19:41
1	P 214.914†	10676.4	10547.2	13809	µg/L	13809	ppb	03:19:47
1	Pb 220.353†	108655.4	109855.4	25270	µg/L	25270	ppb	03:19:41
1	S 181.975 Axial†	12024.5	12120.4	50976	µg/L	50976	ppb	03:19:47
1	Sb 206.836†	11990.2	12106.8	10284	µg/L	10284	ppb	03:19:47
1	Se 196.026†	9047.6	9132.7	9792.6	µg/L	9792.6	ppb	03:19:47
1	SiO2†	581580.8	585153.3	100910	µg/L	100910	ppb	03:19:41
1	Si 251.611†	672539.3	680036.4	45988	µg/L	45988	ppb	03:19:41
1	Sn 189.927†	23927.2	24198.0	10462	µg/L	10462	ppb	03:19:47
1	Ti 334.940†	4312441.7	4361568.5	9950.6	µg/L	9950.6	ppb	03:19:31
1	Tl 190.801†	6788.9	6895.9	9945.3	µg/L	9945.3	ppb	03:19:47
1	U 409.014†	1053.8	1094.4	105.23	µg/L	105.23	ppb	03:19:41
1	V 292.402†	939402.1	950563.6	10109	µg/L	10109	ppb	03:19:41
1	Zn 213.857†	638002.1	644709.8	14983	µg/L	14983	ppb	03:19:41
2	Sc RADIAL	172163.9	172163.9	103	%			03:18:20
2	Al 396.153Radial†	909.5	1029.0	58.823	µg/L	58.823	ppb	03:18:40
2	Ca 317.933Radial†	1717.0	777.1	145.23	µg/L	145.23	ppb	03:18:40
2	Fe 238.204 Radial†	36.1	62.3	366.45	µg/L	366.45	ppb	03:18:40
2	K 766.490 Radial†	566867.8	546934.4	294910	µg/L	294910	ppb	03:18:15
2	Mg 279.077 IEC†	-94.2	-141.4	-41.354	µg/L	-41.354	ppb	03:18:40
2	Na 589.592 Radial†	970.2	819.6	197.20	µg/L	197.20	ppb	03:18:20
2	Sr 421.552†	2374144.8	2294285.1	9851.3	µg/L	9851.3	ppb	03:18:15
2	Sc 361.383	2063587.5	2063587.5	99.384	%			03:20:07
2	Y 371.029	1325506.5	1325506.5	97.694	%			03:20:07
2	Ag 328.068†	-6208.8	-5279.9	23.316	µg/L	23.316	ppb	03:20:07
2	As 188.979†	6545.9	6586.2	9874.2	µg/L	9874.2	ppb	03:20:12
2	B 249.677†	125125.8	125690.3	4961.4	µg/L	4961.4	ppb	03:20:07
2	Ba 233.527†	601638.1	605454.9	14848	µg/L	14848	ppb	03:20:07
2	Be 313.107†	5064565.8	5092577.0	2954.5	µg/L	2954.5	ppb	03:19:56
2	Cd 226.502†	434053.6	436884.7	10093	µg/L	10093	ppb	03:20:07
2	Co 228.616†	213116.6	214531.1	9771.6	µg/L	9771.6	ppb	03:20:07
2	Cr 267.716†	1263235.2	1271246.2	24365	µg/L	24365	ppb	03:20:07
2	Cu 324.752†	2877145.2	2890053.3	20570	µg/L	20570	ppb	03:20:07
2	Mn 257.610†	3312235.1	3332665.0	9663.9	µg/L	9663.9	ppb	03:20:07
2	Mo 202.031†	90944.9	91505.5	9735.6	µg/L	9735.6	ppb	03:20:07
2	Ni 231.604†	197954.0	198747.0	9868.6	µg/L	9868.6	ppb	03:20:07
2	P 214.914†	10790.3	10603.5	13938	µg/L	13938	ppb	03:20:12
2	Pb 220.353†	108122.4	108725.0	25010	µg/L	25010	ppb	03:20:07

2	S 181.975 Axial†	12154.8	12185.7	51251	µg/L	51251 ppb	03:20:12
2	Sb 206.836†	12077.8	12129.4	10305	µg/L	10305 ppb	03:20:12
2	Se 196.026†	9128.6	9164.7	9826.9	µg/L	9826.9 ppb	03:20:12
2	SiO2†	578792.7	579168.3	99874	µg/L	99874 ppb	03:20:07
2	Si 251.611†	669355.0	673155.5	45515	µg/L	45515 ppb	03:20:07
2	Sn 189.927†	24147.6	24289.0	10502	µg/L	10502 ppb	03:20:12
2	Ti 334.940†	4300847.6	4326325.5	9870.2	µg/L	9870.2 ppb	03:19:56
2	Tl 190.801†	6851.0	6921.3	9982.2	µg/L	9982.2 ppb	03:20:12
2	U 409.014†	1069.7	1104.6	106.24	µg/L	106.24 ppb	03:20:07
2	V 292.402†	934406.9	940401.5	10001	µg/L	10001 ppb	03:20:07
2	Zn 213.857†	634696.0	637895.1	14824	µg/L	14824 ppb	03:20:07
3	Sc RADIAL	171181.1	171181.1	103	%		03:18:53
3	Al 396.153Radial†	815.3	942.5	21.115	µg/L	21.115 ppb	03:19:13
3	Ca 317.933Radial†	1497.5	573.2	107.13	µg/L	107.13 ppb	03:19:13
3	Fe 238.204 Radial†	-38.4	-10.0	318.36	µg/L	318.36 ppb	03:19:13
3	K 766.490 Radial†	563046.9	546365.8	294610	µg/L	294610 ppb	03:18:47
3	Mg 279.077 IEC†	-116.6	-163.7	-85.023	µg/L	-85.023 ppb	03:19:13
3	Na 589.592 Radial†	765.9	626.5	150.74	µg/L	150.74 ppb	03:18:53
3	Sr 421.552†	2357120.9	2290911.3	9836.8	µg/L	9836.8 ppb	03:18:47
3	Sc 361.383	2075851.1	2075851.1	99.975	%		03:20:32
3	Y 371.029	1333126.9	1333126.9	98.255	%		03:20:32
3	Ag 328.068†	-6329.8	-5364.1	22.907	µg/L	22.907 ppb	03:20:32
3	As 188.979†	6464.5	6465.9	9693.7	µg/L	9693.7 ppb	03:20:37
3	B 249.677†	126546.6	126367.7	4988.2	µg/L	4988.2 ppb	03:20:32
3	Ba 233.527†	608462.7	608704.9	14927	µg/L	14927 ppb	03:20:32
3	Be 313.107†	5051702.9	5049605.5	2929.6	µg/L	2929.6 ppb	03:20:21
3	Cd 226.502†	439331.4	439583.7	10155	µg/L	10155 ppb	03:20:32
3	Co 228.616†	215661.8	215810.2	9830.1	µg/L	9830.1 ppb	03:20:32
3	Cr 267.716†	1277986.3	1278491.9	24504	µg/L	24504 ppb	03:20:32
3	Cu 324.752†	2905310.5	2901123.0	20649	µg/L	20649 ppb	03:20:32
3	Mn 257.610†	3348724.6	3349474.6	9712.7	µg/L	9712.7 ppb	03:20:32
3	Mo 202.031†	91889.7	91909.9	9778.7	µg/L	9778.7 ppb	03:20:32
3	Ni 231.604†	200302.2	199919.1	9926.8	µg/L	9926.8 ppb	03:20:32
3	P 214.914†	10626.5	10375.4	13547	µg/L	13547 ppb	03:20:37
3	Pb 220.353†	109472.1	109432.4	25173	µg/L	25173 ppb	03:20:32
3	S 181.975 Axial†	11973.7	11932.3	50185	µg/L	50185 ppb	03:20:37
3	Sb 206.836†	11905.7	11885.4	10095	µg/L	10095 ppb	03:20:37
3	Se 196.026†	8978.2	8960.0	9607.4	µg/L	9607.4 ppb	03:20:37
3	SiO2†	585418.2	582354.9	100420	µg/L	100420 ppb	03:20:32
3	Si 251.611†	677526.9	677350.6	45815	µg/L	45815 ppb	03:20:32
3	Sn 189.927†	23795.1	23792.8	10287	µg/L	10287 ppb	03:20:37
3	Ti 334.940†	4294395.6	4294306.2	9797.2	µg/L	9797.2 ppb	03:20:21
3	Tl 190.801†	6767.5	6797.1	9802.0	µg/L	9802.0 ppb	03:20:37
3	U 409.014†	1098.3	1126.8	108.39	µg/L	108.39 ppb	03:20:32
3	V 292.402†	944208.0	944650.6	10046	µg/L	10046 ppb	03:20:32
3	Zn 213.857†	641459.9	640887.8	14894	µg/L	14894 ppb	03:20:32

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2063958.0	99.402	%	0.5641				0.57%
Sc RADIAL	170898.6	103	%	0.9				0.84%
Y 371.029	1326831.1	97.791	%	0.4237				0.43%
Ag 328.068†	-5348.0	23.087	µg/L	0.2088	23.087	ppb	0.2088	0.90%
Al 396.153Radial†	1069.8	73.994	µg/L	61.8756	73.994	ppb	61.8756	83.62%
As 188.979†	6539.1	9803.6	µg/L	96.50	9803.6	ppb	96.50	0.98%
QC value within limits for As 188.979 Recovery = 98.04%								
B 249.677†	126424.8	4990.4	µg/L	30.17	4990.4	ppb	30.17	0.60%
QC value within limits for B 249.677 Recovery = 99.81%								
Ba 233.527†	608738.5	14928	µg/L	80.9	14928	ppb	80.9	0.54%
QC value within limits for Ba 233.527 Recovery = 99.52%								
Be 313.107†	5091431.6	2953.9	µg/L	23.93	2953.9	ppb	23.93	0.81%
QC value within limits for Be 313.107 Recovery = 98.46%								
Ca 317.933Radial†	873.7	163.29	µg/L	67.047	163.29	ppb	67.047	41.06%
Cd 226.502†	439488.7	10153	µg/L	59.1	10153	ppb	59.1	0.58%
QC value within limits for Cd 226.502 Recovery = 101.53%								
Co 228.616†	215752.9	9827.4	µg/L	54.42	9827.4	ppb	54.42	0.55%
QC value within limits for Co 228.616 Recovery = 98.27%								
Cr 267.716†	1278545.9	24505	µg/L	140.4	24505	ppb	140.4	0.57%
QC value within limits for Cr 267.716 Recovery = 98.02%								

Cu 324.752†	2903324.6	20665 µg/L	103.2	20665 ppb	103.2	0.50%
QC value within limits for Cu 324.752 Recovery = 103.32%						
Fe 238.204 Radial†	76.9	378.46 µg/L	66.909	378.46 ppb	66.909	17.68%
K 766.490 Radial†	546150.0	294490 µg/L	491.6	294490 ppb	491.6	0.17%
QC value within limits for K 766.490 Radial Recovery = 98.16%						
Mg 279.077 IEC†	-134.8	-26.795 µg/L	66.7101	-26.795 ppb	66.7101	248.97%
Mn 257.610†	3350401.8	9715.3 µg/L	52.83	9715.3 ppb	52.83	0.54%
QC value within limits for Mn 257.610 Recovery = 97.15%						
Mo 202.031†	91960.1	9784.0 µg/L	51.26	9784.0 ppb	51.26	0.52%
QC value within limits for Mo 202.031 Recovery = 97.84%						
Na 589.592 Radial†	959.8	230.95 µg/L	101.391	230.95 ppb	101.391	43.90%
Ni 231.604†	199912.5	9926.5 µg/L	57.71	9926.5 ppb	57.71	0.58%
QC value within limits for Ni 231.604 Recovery = 99.26%						
P 214.914†	10508.7	13765 µg/L	199.5	13765 ppb	199.5	1.45%
QC value within limits for P 214.914 Recovery = 91.77%						
Pb 220.353†	109337.6	25151 µg/L	131.4	25151 ppb	131.4	0.52%
QC value within limits for Pb 220.353 Recovery = 100.61%						
S 181.975 Axial†	12079.5	50804 µg/L	553.3	50804 ppb	553.3	1.09%
QC value within limits for S 181.975 Axial Recovery = 101.61%						
Sb 206.836†	12040.6	10228 µg/L	115.9	10228 ppb	115.9	1.13%
QC value within limits for Sb 206.836 Recovery = 102.28%						
Se 196.026†	9085.8	9742.3 µg/L	118.07	9742.3 ppb	118.07	1.21%
QC value within limits for Se 196.026 Recovery = 97.42%						
SiO2†	582225.5	100400 µg/L	516.4	100400 ppb	516.4	0.51%
QC value within limits for SiO2 Recovery = 93.83%						
Si 251.611†	676847.5	45773 µg/L	239.4	45773 ppb	239.4	0.52%
QC value within limits for Si 251.611 Recovery = 91.55%						
Sn 189.927†	24093.3	10417 µg/L	114.2	10417 ppb	114.2	1.10%
QC value within limits for Sn 189.927 Recovery = 104.17%						
Sr 421.552†	2288802.7	9827.7 µg/L	29.14	9827.7 ppb	29.14	0.30%
QC value within limits for Sr 421.552 Recovery = 98.28%						
Ti 334.940†	4327400.0	9872.7 µg/L	76.75	9872.7 ppb	76.75	0.78%
QC value within limits for Ti 334.940 Recovery = 98.73%						
Tl 190.801†	6871.4	9909.8 µg/L	95.21	9909.8 ppb	95.21	0.96%
QC value within limits for Tl 190.801 Recovery = 99.10%						
U 409.014†	1108.6	106.62 µg/L	1.613	106.62 ppb	1.613	1.51%
V 292.402†	945205.3	10052 µg/L	54.3	10052 ppb	54.3	0.54%
QC value within limits for V 292.402 Recovery = 100.52%						
Zn 213.857†	641164.2	14900 µg/L	79.4	14900 ppb	79.4	0.53%
QC value within limits for Zn 213.857 Recovery = 99.34%						

All analyte(s) passed QC.

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Analysis Begun

Start Time: 6/30/2009 03:28:04
Plasma On Time: 6/29/2009 11:03:38
Logged In Analyst: optima
Technique: ICP Continuous
Spectrometer Model: Optima 4300 DV, S/N 077N1030502**Autosampler Model:** AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\062909.sif
Batch ID:
Results Data Set: 063009
Results Library: c:\pe\optima1\Results\Results.mdb

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Method Loaded
Method Name: Gen Eng fast_new Si
Method Last Saved: 6/30/2009 02:36:56
IEC File: 042009.iec
MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

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Sequence No.: 1
Autosampler Location: 7
Sample ID: CCV
Date Collected: 6/30/2009 03:28:06
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168011.8	168011.8	101	%			03:28:40
1	Al 396.153Radial†	12431.8	12460.6	5176.5	µg/L	5176.5	ppb	03:28:45
1	Ca 317.933Radial†	29199.9	28032.7	5239.1	µg/L	5239.1	ppb	03:28:45
1	Fe 238.204 Radial†	7573.9	7527.3	5227.8	µg/L	5227.8	ppb	03:28:45

1	K 766.490 Radial†	10485.8	9520.0	5133.3 µg/L	5133.3 ppb	03:28:45
1	Mg 279.077 IEC†	2697.9	2621.2	5273.4 µg/L	5273.4 ppb	03:28:45
1	Na 589.592 Radial†	43459.3	42917.2	10326 µg/L	10326 ppb	03:28:40
1	Sr 421.552†	120358.6	119192.7	511.79 µg/L	511.79 ppb	03:28:40
1	Sc 361.383	2052663.8	2052663.8	98.858 %		03:29:19
1	Y 371.029	1334152.5	1334152.5	98.331 %		03:29:19
1	Ag 328.068†	58049.6	59687.4	509.76 µg/L	509.76 ppb	03:29:24
1	As 188.979†	332.9	336.5	506.43 µg/L	506.43 ppb	03:29:45
1	B 249.677†	12969.0	12908.1	507.89 µg/L	507.89 ppb	03:29:24
1	Ba 233.527†	20551.1	20878.1	512.35 µg/L	512.35 ppb	03:29:24
1	Be 313.107†	877285.8	884054.8	509.37 µg/L	509.37 ppb	03:29:19
1	Cd 226.502†	21891.3	22286.3	514.83 µg/L	514.83 ppb	03:29:24
1	Co 228.616†	11073.6	11295.8	514.52 µg/L	514.52 ppb	03:29:24
1	Cr 267.716†	26194.3	26682.2	511.85 µg/L	511.85 ppb	03:29:24
1	Cu 324.752†	75574.2	71531.5	509.83 µg/L	509.83 ppb	03:29:24
1	Mn 257.610†	174501.1	176427.4	511.63 µg/L	511.63 ppb	03:29:19
1	Mo 202.031†	4660.4	4711.4	501.47 µg/L	501.47 ppb	03:29:45
1	Ni 231.604†	10705.5	10395.9	516.19 µg/L	516.19 ppb	03:29:24
1	P 214.914†	1766.6	1533.3	2424.1 µg/L	2424.1 ppb	03:29:45
1	Pb 220.353†	2227.2	2185.8	503.43 µg/L	503.43 ppb	03:29:45
1	S 181.975 Axial†	274.9	233.7	981.46 µg/L	981.46 ppb	03:29:45
1	Sb 206.836†	599.8	583.5	498.90 µg/L	498.90 ppb	03:29:45
1	Se 196.026†	485.9	471.1	506.44 µg/L	506.44 ppb	03:29:45
1	SiO2†	34770.1	31961.7	5511.6 µg/L	5511.6 ppb	03:29:24
1	Si 251.611†	37118.3	37200.9	2524.7 µg/L	2524.7 ppb	03:29:24
1	Sn 189.927†	1149.7	1154.7	502.09 µg/L	502.09 ppb	03:29:45
1	Ti 334.940†	219950.0	221324.8	504.76 µg/L	504.76 ppb	03:29:19
1	Tl 190.801†	326.9	358.5	516.41 µg/L	516.41 ppb	03:29:45
1	U 409.014†	5365.5	5455.7	523.31 µg/L	523.31 ppb	03:29:24
1	V 292.402†	47470.9	48225.2	514.15 µg/L	514.15 ppb	03:29:24
1	Zn 213.857†	22403.8	21929.8	508.94 µg/L	508.94 ppb	03:29:24
2	Sc RADIAL	170346.6	170346.6	102 %		03:28:51
2	Al 396.153Radial†	12523.7	12381.6	5143.4 µg/L	5143.4 ppb	03:28:56
2	Ca 317.933Radial†	29433.2	27864.2	5207.6 µg/L	5207.6 ppb	03:28:56
2	Fe 238.204 Radial†	7635.4	7484.6	5198.1 µg/L	5198.1 ppb	03:28:56
2	K 766.490 Radial†	10581.3	9470.9	5106.8 µg/L	5106.8 ppb	03:28:56
2	Mg 279.077 IEC†	2721.8	2607.9	5246.8 µg/L	5246.8 ppb	03:28:56
2	Na 589.592 Radial†	43458.4	42326.5	10184 µg/L	10184 ppb	03:28:51
2	Sr 421.552†	120564.8	117760.4	505.64 µg/L	505.64 ppb	03:28:51
2	Sc 361.383	2048444.0	2048444.0	98.655 %		03:29:52
2	Y 371.029	1333803.0	1333803.0	98.305 %		03:29:52
2	Ag 328.068†	57116.1	58862.1	502.76 µg/L	502.76 ppb	03:29:58
2	As 188.979†	333.3	337.6	508.00 µg/L	508.00 ppb	03:30:18
2	B 249.677†	12855.3	12819.9	504.41 µg/L	504.41 ppb	03:29:58
2	Ba 233.527†	20691.6	21063.4	516.89 µg/L	516.89 ppb	03:29:58
2	Be 313.107†	878124.3	886732.8	510.92 µg/L	510.92 ppb	03:29:52
2	Cd 226.502†	21843.9	22283.9	514.78 µg/L	514.78 ppb	03:29:58
2	Co 228.616†	11001.4	11245.7	512.24 µg/L	512.24 ppb	03:29:58
2	Cr 267.716†	26812.5	27363.4	524.89 µg/L	524.89 ppb	03:29:58
2	Cu 324.752†	76684.6	72814.5	518.96 µg/L	518.96 ppb	03:29:58
2	Mn 257.610†	174724.9	177017.9	513.34 µg/L	513.34 ppb	03:29:52
2	Mo 202.031†	4685.1	4746.1	505.16 µg/L	505.16 ppb	03:30:18
2	Ni 231.604†	10633.8	10345.5	513.69 µg/L	513.69 ppb	03:29:58
2	P 214.914†	1768.0	1538.4	2431.1 µg/L	2431.1 ppb	03:30:18
2	Pb 220.353†	2250.4	2214.0	509.90 µg/L	509.90 ppb	03:30:18
2	S 181.975 Axial†	283.7	243.2	1021.4 µg/L	1021.4 ppb	03:30:18
2	Sb 206.836†	608.1	593.1	507.07 µg/L	507.07 ppb	03:30:18
2	Se 196.026†	476.0	462.0	496.67 µg/L	496.67 ppb	03:30:18
2	SiO2†	34664.3	31926.9	5505.6 µg/L	5505.6 ppb	03:29:58
2	Si 251.611†	37163.5	37324.1	2532.9 µg/L	2532.9 ppb	03:29:58
2	Sn 189.927†	1158.9	1166.5	507.18 µg/L	507.18 ppb	03:30:18
2	Ti 334.940†	220080.8	221915.7	506.11 µg/L	506.11 ppb	03:29:52
2	Tl 190.801†	320.5	352.7	507.98 µg/L	507.98 ppb	03:30:18
2	U 409.014†	5431.7	5534.0	530.86 µg/L	530.86 ppb	03:29:58
2	V 292.402†	47327.1	48178.4	513.69 µg/L	513.69 ppb	03:29:58
2	Zn 213.857†	22556.1	22130.8	513.63 µg/L	513.63 ppb	03:29:58
3	Sc RADIAL	170495.2	170495.2	102 %		03:29:01
3	Al 396.153Radial†	12419.0	12268.8	5096.7 µg/L	5096.7 ppb	03:29:07
3	Ca 317.933Radial†	29164.7	27577.2	5154.0 µg/L	5154.0 ppb	03:29:07
3	Fe 238.204 Radial†	7543.9	7388.8	5131.6 µg/L	5131.6 ppb	03:29:07
3	K 766.490 Radial†	10506.7	9389.1	5062.7 µg/L	5062.7 ppb	03:29:07

3	Mg 279.077 IEC†	2706.8	2590.9	5212.6 µg/L	5212.6 ppb	03:29:07
3	Na 589.592 Radial†	43361.4	42194.9	10152 µg/L	10152 ppb	03:29:01
3	Sr 421.552†	120085.0	117189.6	503.19 µg/L	503.19 ppb	03:29:01
3	Sc 361.383	2080507.7	2080507.7	100.20 %		03:30:25
3	Y 371.029	1351096.6	1351096.6	99.580 %		03:30:25
3	Ag 328.068†	57889.0	58741.2	501.67 µg/L	501.67 ppb	03:30:31
3	As 188.979†	332.1	331.2	498.44 µg/L	498.44 ppb	03:30:51
3	B 249.677†	12975.9	12739.4	501.26 µg/L	501.26 ppb	03:30:31
3	Ba 233.527†	20456.1	20505.2	503.20 µg/L	503.20 ppb	03:30:31
3	Be 313.107†	881588.1	876472.0	505.00 µg/L	505.00 ppb	03:30:25
3	Cd 226.502†	21791.8	21890.6	505.69 µg/L	505.69 ppb	03:30:31
3	Co 228.616†	11024.1	11096.5	505.44 µg/L	505.44 ppb	03:30:31
3	Cr 267.716†	26083.4	26217.0	502.92 µg/L	502.92 ppb	03:30:31
3	Cu 324.752†	75315.0	70249.7	500.69 µg/L	500.69 ppb	03:30:31
3	Mn 257.610†	175393.2	174955.3	507.36 µg/L	507.36 ppb	03:30:25
3	Mo 202.031†	4676.2	4664.1	496.43 µg/L	496.43 ppb	03:30:51
3	Ni 231.604†	10610.3	10155.9	504.27 µg/L	504.27 ppb	03:30:31
3	P 214.914†	1763.5	1506.2	2381.5 µg/L	2381.5 ppb	03:30:51
3	Pb 220.353†	2229.1	2157.5	496.92 µg/L	496.92 ppb	03:30:51
3	S 181.975 Axial†	276.6	231.6	972.74 µg/L	972.74 ppb	03:30:51
3	Sb 206.836†	604.4	579.9	495.84 µg/L	495.84 ppb	03:30:51
3	Se 196.026†	486.9	465.5	500.35 µg/L	500.35 ppb	03:30:51
3	SiO2†	34666.5	31387.5	5412.6 µg/L	5412.6 ppb	03:30:31
3	Si 251.611†	37024.6	36604.9	2483.9 µg/L	2483.9 ppb	03:30:31
3	Sn 189.927†	1156.8	1146.3	498.41 µg/L	498.41 ppb	03:30:51
3	Ti 334.940†	220879.0	219274.3	500.08 µg/L	500.08 ppb	03:30:25
3	Tl 190.801†	316.4	343.6	494.96 µg/L	494.96 ppb	03:30:51
3	U 409.014†	5378.0	5395.5	517.55 µg/L	517.55 ppb	03:30:31
3	V 292.402†	47212.0	47324.2	504.58 µg/L	504.58 ppb	03:30:31
3	Zn 213.857†	22315.4	21538.2	499.86 µg/L	499.86 ppb	03:30:31

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2060538.5	99.237	%	0.8391				0.85%
Sc RADIAL	169617.9	102	%	0.8				0.82%
Y 371.029	1339684.0	98.739	%	0.7286				0.74%
Ag 328.068†	59096.9	504.73	µg/L	4.391	504.73	ppb	4.391	0.87%
QC value within limits for Ag 328.068 Recovery = 100.95%								
Al 396.153Radial†	12370.3	5138.9	µg/L	40.07	5138.9	ppb	40.07	0.78%
QC value within limits for Al 396.153Radial Recovery = 102.78%								
As 188.979†	335.1	504.29	µg/L	5.126	504.29	ppb	5.126	1.02%
QC value within limits for As 188.979 Recovery = 100.86%								
B 249.677†	12822.5	504.52	µg/L	3.317	504.52	ppb	3.317	0.66%
QC value within limits for B 249.677 Recovery = 100.90%								
Ba 233.527†	20815.6	510.81	µg/L	6.974	510.81	ppb	6.974	1.37%
QC value within limits for Ba 233.527 Recovery = 102.16%								
Be 313.107†	882419.9	508.43	µg/L	3.067	508.43	ppb	3.067	0.60%
QC value within limits for Be 313.107 Recovery = 101.69%								
Ca 317.933Radial†	27824.7	5200.3	µg/L	43.04	5200.3	ppb	43.04	0.83%
QC value within limits for Ca 317.933Radial Recovery = 104.01%								
Cd 226.502†	22153.6	511.77	µg/L	5.263	511.77	ppb	5.263	1.03%
QC value within limits for Cd 226.502 Recovery = 102.35%								
Co 228.616†	11212.7	510.73	µg/L	4.724	510.73	ppb	4.724	0.92%
QC value within limits for Co 228.616 Recovery = 102.15%								
Cr 267.716†	26754.2	513.22	µg/L	11.051	513.22	ppb	11.051	2.15%
QC value within limits for Cr 267.716 Recovery = 102.64%								
Cu 324.752†	71531.9	509.83	µg/L	9.132	509.83	ppb	9.132	1.79%
QC value within limits for Cu 324.752 Recovery = 101.97%								
Fe 238.204 Radial†	7466.9	5185.9	µg/L	49.24	5185.9	ppb	49.24	0.95%
QC value within limits for Fe 238.204 Radial Recovery = 103.72%								
K 766.490 Radial†	9460.0	5101.0	µg/L	35.65	5101.0	ppb	35.65	0.70%
QC value within limits for K 766.490 Radial Recovery = 102.02%								
Mg 279.077 IEC†	2606.7	5244.3	µg/L	30.47	5244.3	ppb	30.47	0.58%
QC value within limits for Mg 279.077 IEC Recovery = 104.89%								
Mn 257.610†	176133.5	510.78	µg/L	3.081	510.78	ppb	3.081	0.60%
QC value within limits for Mn 257.610 Recovery = 102.16%								
Mo 202.031†	4707.2	501.02	µg/L	4.382	501.02	ppb	4.382	0.87%
QC value within limits for Mo 202.031 Recovery = 100.20%								
Na 589.592 Radial†	42479.5	10221	µg/L	92.6	10221	ppb	92.6	0.91%

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   QC value within limits for Na 589.592 Radial  Recovery = 102.21%
Ni 231.604†            10299.1      511.39 µg/L        6.286      511.39 ppb        6.286   1.23%
   QC value within limits for Ni 231.604  Recovery = 102.28%
P 214.914†              1526.0      2412.2 µg/L       26.83      2412.2 ppb       26.83   1.11%
   QC value within limits for P 214.914  Recovery = 96.49%
Pb 220.353†             2185.8      503.42 µg/L        6.486      503.42 ppb        6.486   1.29%
   QC value within limits for Pb 220.353  Recovery = 100.68%
S 181.975 Axial†         236.2      991.86 µg/L       25.935      991.86 ppb       25.935   2.61%
   QC value within limits for S 181.975 Axial  Recovery = 99.19%
Sb 206.836†              585.5      500.60 µg/L        5.807      500.60 ppb        5.807   1.16%
   QC value within limits for Sb 206.836  Recovery = 100.12%
Se 196.026†              466.2      501.15 µg/L        4.935      501.15 ppb        4.935   0.98%
   QC value within limits for Se 196.026  Recovery = 100.23%
SiO2†                  31758.7      5476.6 µg/L       55.51      5476.6 ppb       55.51   1.01%
   QC value within limits for SiO2  Recovery = 102.41%
Si 251.611†            37043.3      2513.9 µg/L       26.25      2513.9 ppb       26.25   1.04%
   QC value within limits for Si 251.611  Recovery = 100.55%
Sn 189.927†             1155.8      502.56 µg/L        4.401      502.56 ppb        4.401   0.88%
   QC value within limits for Sn 189.927  Recovery = 100.51%
Sr 421.552†           118047.6      506.88 µg/L        4.431      506.88 ppb        4.431   0.87%
   QC value within limits for Sr 421.552  Recovery = 101.38%
Ti 334.940†           220838.3      503.65 µg/L        3.161      503.65 ppb        3.161   0.63%
   QC value within limits for Ti 334.940  Recovery = 100.73%
Tl 190.801†              351.6      506.45 µg/L       10.808      506.45 ppb       10.808   2.13%
   QC value within limits for Tl 190.801  Recovery = 101.29%
U 409.014†              5461.8      523.91 µg/L        6.672      523.91 ppb        6.672   1.27%
   QC value within limits for U 409.014  Recovery = 104.78%
V 292.402†             47909.3      510.81 µg/L        5.397      510.81 ppb        5.397   1.06%
   QC value within limits for V 292.402  Recovery = 102.16%
Zn 213.857†            21866.2      507.47 µg/L        6.999      507.47 ppb        6.999   1.38%
   QC value within limits for Zn 213.857  Recovery = 101.49%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 03:31:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168118.3	168118.3	101	%			03:31:33
1	Al 396.153Radial†	-176.5	-24.5	-10.247	µg/L	-10.247	ppb	03:31:33
1	Ca 317.933Radial†	914.1	22.4	4.1812	µg/L	4.1812	ppb	03:31:53
1	Fe 238.204 Radial†	-7.3	20.1	13.922	µg/L	13.922	ppb	03:31:53
1	K 766.490 Radial†	813.8	-58.2	-31.359	µg/L	-31.359	ppb	03:31:33
1	Mg 279.077 IEC†	42.8	-8.0	-16.140	µg/L	-16.140	ppb	03:31:53
1	Na 589.592 Radial†	173.7	53.9	12.977	µg/L	12.977	ppb	03:31:33
1	Sr 421.552†	200.5	207.1	0.8892	µg/L	0.8892	ppb	03:31:33
1	Sc 361.383	2042809.0	2042809.0	98.384	%			03:32:55
1	Y 371.029	1334985.3	1334985.3	98.392	%			03:32:55
1	Ag 328.068†	-891.5	61.2	0.5241	µg/L	0.5241	ppb	03:33:01
1	As 188.979†	3.9	3.7	5.6148	µg/L	5.6148	ppb	03:33:21
1	B 249.677†	232.9	26.1	1.0242	µg/L	1.0242	ppb	03:33:01
1	Ba 233.527†	-83.0	5.3	0.1317	µg/L	0.1317	ppb	03:33:21
1	Be 313.107†	3546.9	241.9	0.1396	µg/L	0.1396	ppb	03:33:01
1	Cd 226.502†	-132.4	7.6	0.1736	µg/L	0.1736	ppb	03:33:21
1	Co 228.616†	-91.2	1.6	0.0735	µg/L	0.0735	ppb	03:33:21
1	Cr 267.716†	-177.3	5.1	0.0992	µg/L	0.0992	ppb	03:33:01
1	Cu 324.752†	4829.4	-6.8	-0.0462	µg/L	-0.0462	ppb	03:33:01
1	Mn 257.610†	171.6	85.2	0.2472	µg/L	0.2472	ppb	03:33:01
1	Mo 202.031†	9.1	6.5	0.6883	µg/L	0.6883	ppb	03:33:21
1	Ni 231.604†	436.3	10.2	0.5057	µg/L	0.5057	ppb	03:33:21
1	P 214.914†	248.5	-1.1	-1.8800	µg/L	-1.8800	ppb	03:33:21
1	Pb 220.353†	73.8	7.9	1.8250	µg/L	1.8250	ppb	03:33:21
1	S 181.975 Axial†	40.5	-3.2	-13.625	µg/L	-13.625	ppb	03:33:21
1	Sb 206.836†	28.9	6.1	5.2571	µg/L	5.2571	ppb	03:33:21
1	Se 196.026†	19.8	-0.3	-0.3509	µg/L	-0.3509	ppb	03:33:21
1	SiO2†	3187.0	29.3	5.0603	µg/L	5.0603	ppb	03:33:01
1	Si 251.611†	376.8	36.9	2.5280	µg/L	2.5280	ppb	03:33:21
1	Sn 189.927†	9.0	0.9	0.4035	µg/L	0.4035	ppb	03:33:21
1	Ti 334.940†	1238.6	93.4	0.2128	µg/L	0.2128	ppb	03:33:01
1	Tl 190.801†	-28.9	-1.5	-2.1905	µg/L	-2.1905	ppb	03:33:21
1	U 409.014†	-38.3	-10.7	-1.0330	µg/L	-1.0330	ppb	03:33:01
1	V 292.402†	-143.4	60.3	0.6413	µg/L	0.6413	ppb	03:33:01
1	Zn 213.857†	731.1	10.3	0.2390	µg/L	0.2390	ppb	03:33:21
2	Sc RADIAL	168345.8	168345.8	101	%			03:31:59
2	Al 396.153Radial†	-171.2	-19.1	-7.9580	µg/L	-7.9580	ppb	03:31:59
2	Ca 317.933Radial†	900.9	8.1	1.5195	µg/L	1.5195	ppb	03:32:19
2	Fe 238.204 Radial†	-15.6	11.9	8.2410	µg/L	8.2410	ppb	03:32:19
2	K 766.490 Radial†	740.7	-131.5	-70.898	µg/L	-70.898	ppb	03:31:59
2	Mg 279.077 IEC†	42.8	-8.0	-16.196	µg/L	-16.196	ppb	03:32:19
2	Na 589.592 Radial†	156.4	36.6	8.8043	µg/L	8.8043	ppb	03:31:59
2	Sr 421.552†	137.1	144.2	0.6191	µg/L	0.6191	ppb	03:31:59
2	Sc 361.383	2059913.1	2059913.1	99.207	%			03:33:28
2	Y 371.029	1345943.4	1345943.4	99.200	%			03:33:28
2	Ag 328.068†	-886.6	73.7	0.6281	µg/L	0.6281	ppb	03:33:33
2	As 188.979†	-1.9	-2.1	-3.1182	µg/L	-3.1182	ppb	03:33:54
2	B 249.677†	272.9	64.4	2.5409	µg/L	2.5409	ppb	03:33:33
2	Ba 233.527†	-75.6	13.5	0.3324	µg/L	0.3324	ppb	03:33:54
2	Be 313.107†	3566.3	231.4	0.1339	µg/L	0.1339	ppb	03:33:33
2	Cd 226.502†	-129.6	11.5	0.2636	µg/L	0.2636	ppb	03:33:54
2	Co 228.616†	-94.4	-0.8	-0.0400	µg/L	-0.0400	ppb	03:33:54
2	Cr 267.716†	-147.9	36.3	0.6962	µg/L	0.6962	ppb	03:33:33
2	Cu 324.752†	4799.4	-77.7	-0.5523	µg/L	-0.5523	ppb	03:33:33
2	Mn 257.610†	150.1	62.1	0.1802	µg/L	0.1802	ppb	03:33:33
2	Mo 202.031†	0.0	-2.8	-0.2958	µg/L	-0.2958	ppb	03:33:54
2	Ni 231.604†	441.9	12.2	0.6066	µg/L	0.6066	ppb	03:33:54
2	P 214.914†	246.9	-4.9	-7.8119	µg/L	-7.8119	ppb	03:33:54
2	Pb 220.353†	64.0	-2.7	-0.6099	µg/L	-0.6099	ppb	03:33:54

2	S 181.975 Axial†	40.6	-3.5	-14.670 µg/L	-14.670 ppb	03:33:54
2	Sb 206.836†	23.2	0.2	0.1567 µg/L	0.1567 ppb	03:33:54
2	Se 196.026†	19.4	-0.9	-0.9517 µg/L	-0.9517 ppb	03:33:54
2	SiO2†	3143.7	-41.2	-7.0989 µg/L	-7.0989 ppb	03:33:33
2	Si 251.611†	357.7	14.5	0.9437 µg/L	0.9437 ppb	03:33:54
2	Sn 189.927†	12.8	4.6	1.9993 µg/L	1.9993 ppb	03:33:54
2	Ti 334.940†	1294.1	138.8	0.3166 µg/L	0.3166 ppb	03:33:33
2	Tl 190.801†	-30.8	-3.2	-4.6801 µg/L	-4.6801 ppb	03:33:54
2	U 409.014†	-58.9	-31.1	-2.9942 µg/L	-2.9942 ppb	03:33:33
2	V 292.402†	-161.4	43.4	0.4519 µg/L	0.4519 ppb	03:33:33
2	Zn 213.857†	734.4	7.5	0.1735 µg/L	0.1735 ppb	03:33:54
3	Sc RADIAL	166298.6	166298.6	100.0 %		03:32:25
3	Al 396.153Radial†	-143.7	6.4	2.6198 µg/L	2.6198 ppb	03:32:25
3	Ca 317.933Radial†	896.0	14.2	2.6476 µg/L	2.6476 ppb	03:32:45
3	Fe 238.204 Radial†	-9.9	17.4	12.057 µg/L	12.057 ppb	03:32:45
3	K 766.490 Radial†	801.6	-61.5	-33.176 µg/L	-33.176 ppb	03:32:25
3	Mg 279.077 IEC†	47.4	-3.0	-5.9362 µg/L	-5.9362 ppb	03:32:45
3	Na 589.592 Radial†	176.1	58.3	14.018 µg/L	14.018 ppb	03:32:25
3	Sr 421.552†	140.9	149.6	0.6425 µg/L	0.6425 ppb	03:32:25
3	Sc 361.383	2056606.9	2056606.9	99.048 %		03:34:00
3	Y 371.029	1343415.6	1343415.6	99.014 %		03:34:00
3	Ag 328.068†	-938.6	19.6	0.1712 µg/L	0.1712 ppb	03:34:05
3	As 188.979†	-0.6	-0.8	-1.2644 µg/L	-1.2644 ppb	03:34:26
3	B 249.677†	248.3	40.0	1.5763 µg/L	1.5763 ppb	03:34:05
3	Ba 233.527†	-80.1	8.8	0.2173 µg/L	0.2173 ppb	03:34:26
3	Be 313.107†	3501.6	171.9	0.0988 µg/L	0.0988 ppb	03:34:05
3	Cd 226.502†	-135.7	5.2	0.1226 µg/L	0.1226 ppb	03:34:26
3	Co 228.616†	-94.2	-0.8	-0.0342 µg/L	-0.0342 ppb	03:34:26
3	Cr 267.716†	-181.9	1.7	0.0340 µg/L	0.0340 ppb	03:34:05
3	Cu 324.752†	4857.0	-11.8	-0.0827 µg/L	-0.0827 ppb	03:34:05
3	Mn 257.610†	150.4	62.6	0.1817 µg/L	0.1817 ppb	03:34:05
3	Mo 202.031†	14.8	12.1	1.2882 µg/L	1.2882 ppb	03:34:26
3	Ni 231.604†	466.7	37.9	1.8844 µg/L	1.8844 ppb	03:34:26
3	P 214.914†	255.0	3.8	6.1493 µg/L	6.1493 ppb	03:34:26
3	Pb 220.353†	73.9	7.4	1.7158 µg/L	1.7158 ppb	03:34:26
3	S 181.975 Axial†	40.9	-3.1	-13.109 µg/L	-13.109 ppb	03:34:26
3	Sb 206.836†	33.7	10.8	9.2386 µg/L	9.2386 ppb	03:34:26
3	Se 196.026†	22.2	2.0	2.1430 µg/L	2.1430 ppb	03:34:26
3	SiO2†	3166.8	-12.7	-2.1980 µg/L	-2.1980 ppb	03:34:05
3	Si 251.611†	382.2	39.8	2.7406 µg/L	2.7406 ppb	03:34:26
3	Sn 189.927†	8.2	-0.0	0.0026 µg/L	0.0026 ppb	03:34:26
3	Ti 334.940†	1161.9	7.5	0.0169 µg/L	0.0169 ppb	03:34:05
3	Tl 190.801†	-28.5	-0.9	-1.3698 µg/L	-1.3698 ppb	03:34:26
3	U 409.014†	1.0	29.2	2.8100 µg/L	2.8100 ppb	03:34:05
3	V 292.402†	-153.5	51.0	0.5533 µg/L	0.5533 ppb	03:34:05
3	Zn 213.857†	728.8	3.0	0.0604 µg/L	0.0604 ppb	03:34:26

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2053109.7	98.880	%	0.4369				0.44%
Sc RADIAL	167587.6	101	%	0.7				0.67%
Y 371.029	1341448.1	98.869	%	0.4229				0.43%
Ag 328.068†	51.5	0.4411	µg/L	0.23949	0.4411	ppb	0.23949	54.29%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-12.4	-5.1950	µg/L	6.86387	-5.1950	ppb	6.86387	132.13%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.3	0.4107	µg/L	4.60115	0.4107	ppb	4.60115	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	43.5	1.7138	µg/L	0.76767	1.7138	ppb	0.76767	44.79%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	9.2	0.2271	µg/L	0.10072	0.2271	ppb	0.10072	44.34%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	215.1	0.1241	µg/L	0.02207	0.1241	ppb	0.02207	17.78%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	14.9	2.7828	µg/L	1.33600	2.7828	ppb	1.33600	48.01%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	8.1	0.1866	µg/L	0.07142	0.1866	ppb	0.07142	38.27%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-0.0	-0.0002	µg/L	0.06391	-0.0002	ppb	0.06391	>999.9%

```
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              14.4      0.2764 µg/L       0.36496      0.2764 ppb        0.36496 132.02%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -32.1     -0.2270 µg/L       0.28223     -0.2270 ppb        0.28223 124.30%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       16.5      11.407 µg/L        2.8960      11.407 ppb         2.8960  25.39%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -83.7     -45.144 µg/L       22.3215     -45.144 ppb        22.3215  49.44%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -6.3     -12.757 µg/L        5.9073     -12.757 ppb         5.9073  46.31%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              70.0      0.2031 µg/L       0.03825      0.2031 ppb        0.03825  18.84%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.3      0.5602 µg/L       0.79976      0.5602 ppb        0.79976 142.76%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       49.6      11.933 µg/L        2.7592      11.933 ppb         2.7592  23.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              20.1      0.9989 µg/L       0.76852      0.9989 ppb        0.76852  76.93%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -0.7     -1.1809 µg/L       7.00680     -1.1809 ppb        7.00680 593.36%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               4.2      0.9770 µg/L       1.37532      0.9770 ppb        1.37532 140.77%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -3.3     -13.801 µg/L        0.7957     -13.801 ppb         0.7957   5.77%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               5.7      4.8841 µg/L       4.55239      4.8841 ppb        4.55239  93.21%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               0.3      0.2801 µg/L       1.64102      0.2801 ppb        1.64102 585.84%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    -8.2     -1.4122 µg/L       6.11757     -1.4122 ppb        6.11757 433.19%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              30.4      2.0708 µg/L       0.98187      2.0708 ppb        0.98187  47.42%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.9      0.8018 µg/L       1.05625      0.8018 ppb        1.05625 131.73%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             167.0      0.7169 µg/L       0.14967      0.7169 ppb        0.14967  20.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              79.9      0.1821 µg/L       0.15221      0.1821 ppb        0.15221  83.57%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -1.9     -2.7468 µg/L       1.72385     -2.7468 ppb        1.72385  62.76%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -4.2     -0.4057 µg/L       2.95251     -0.4057 ppb        2.95251 727.75%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               51.6      0.5488 µg/L       0.09480      0.5488 ppb        0.09480  17.27%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               6.9      0.1576 µg/L       0.09035      0.1576 ppb        0.09035  57.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 04:03:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168237.2	168237.2	101	%			04:04:05
1	Al 396.153Radial†	12277.9	12291.9	5106.2	µg/L	5106.2	ppb	04:04:10
1	Ca 317.933Radial†	28848.7	27646.7	5167.0	µg/L	5167.0	ppb	04:04:10
1	Fe 238.204 Radial†	7490.9	7435.2	5163.7	µg/L	5163.7	ppb	04:04:10
1	K 766.490 Radial†	10484.7	9505.0	5125.2	µg/L	5125.2	ppb	04:04:10
1	Mg 279.077 IEC†	2685.9	2605.7	5242.3	µg/L	5242.3	ppb	04:04:10
1	Na 589.592 Radial†	42644.3	42053.6	10119	µg/L	10119	ppb	04:04:05
1	Sr 421.552†	118087.3	116786.9	501.46	µg/L	501.46	ppb	04:04:05
1	Sc 361.383	2051773.8	2051773.8	98.815	%			04:04:44
1	Y 371.029	1331797.3	1331797.3	98.157	%			04:04:44
1	Ag 328.068†	57207.6	58860.8	502.69	µg/L	502.69	ppb	04:04:49
1	As 188.979†	337.6	341.4	513.68	µg/L	513.68	ppb	04:05:10
1	B 249.677†	12719.4	12661.3	498.16	µg/L	498.16	ppb	04:04:49
1	Ba 233.527†	20186.9	20518.6	503.53	µg/L	503.53	ppb	04:04:49
1	Be 313.107†	869944.4	877010.3	505.32	µg/L	505.32	ppb	04:04:44
1	Cd 226.502†	21370.5	21768.9	502.88	µg/L	502.88	ppb	04:04:49
1	Co 228.616†	10877.7	11102.5	505.72	µg/L	505.72	ppb	04:04:49
1	Cr 267.716†	25666.4	26159.5	501.82	µg/L	501.82	ppb	04:04:49
1	Cu 324.752†	74298.7	70273.9	500.87	µg/L	500.87	ppb	04:04:49
1	Mn 257.610†	173083.8	175069.6	507.69	µg/L	507.69	ppb	04:04:44
1	Mo 202.031†	4643.8	4696.7	499.90	µg/L	499.90	ppb	04:05:10
1	Ni 231.604†	10496.4	10188.9	505.91	µg/L	505.91	ppb	04:04:49
1	P 214.914†	1764.9	1532.4	2424.3	µg/L	2424.3	ppb	04:05:10
1	Pb 220.353†	2213.9	2173.3	500.56	µg/L	500.56	ppb	04:05:10
1	S 181.975 Axial†	277.8	236.8	994.31	µg/L	994.31	ppb	04:05:10
1	Sb 206.836†	595.1	579.1	495.09	µg/L	495.09	ppb	04:05:10
1	Se 196.026†	476.5	461.8	496.40	µg/L	496.40	ppb	04:05:10
1	SiO2†	34093.2	31291.9	5396.1	µg/L	5396.1	ppb	04:04:49
1	Si 251.611†	36462.7	36553.7	2480.1	µg/L	2480.1	ppb	04:04:49
1	Sn 189.927†	1152.0	1157.6	503.31	µg/L	503.31	ppb	04:05:10
1	Ti 334.940†	218109.4	219558.6	500.73	µg/L	500.73	ppb	04:04:44
1	Tl 190.801†	311.5	343.0	494.10	µg/L	494.10	ppb	04:05:10
1	U 409.014†	5321.9	5413.9	519.31	µg/L	519.31	ppb	04:04:49
1	V 292.402†	46569.6	47334.0	504.71	µg/L	504.71	ppb	04:04:49
1	Zn 213.857†	22040.8	21572.2	500.65	µg/L	500.65	ppb	04:04:49
2	Sc RADIAL	168844.8	168844.8	101	%			04:04:15
2	Al 396.153Radial†	12446.1	12414.0	5157.2	µg/L	5157.2	ppb	04:04:21
2	Ca 317.933Radial†	28985.6	27678.9	5173.0	µg/L	5173.0	ppb	04:04:21
2	Fe 238.204 Radial†	7528.8	7445.9	5171.3	µg/L	5171.3	ppb	04:04:21
2	K 766.490 Radial†	10455.6	9439.0	5089.7	µg/L	5089.7	ppb	04:04:21
2	Mg 279.077 IEC†	2684.9	2595.2	5221.2	µg/L	5221.2	ppb	04:04:21
2	Na 589.592 Radial†	43288.0	42536.1	10235	µg/L	10235	ppb	04:04:15
2	Sr 421.552†	119716.3	117971.8	506.55	µg/L	506.55	ppb	04:04:15
2	Sc 361.383	2051713.9	2051713.9	98.812	%			04:05:17
2	Y 371.029	1335147.5	1335147.5	98.404	%			04:05:17
2	Ag 328.068†	57779.6	59441.3	507.65	µg/L	507.65	ppb	04:05:22
2	As 188.979†	332.4	336.2	505.90	µg/L	505.90	ppb	04:05:43
2	B 249.677†	12832.7	12776.2	502.70	µg/L	502.70	ppb	04:05:22
2	Ba 233.527†	20351.0	20685.3	507.62	µg/L	507.62	ppb	04:05:22
2	Be 313.107†	876620.0	883791.9	509.22	µg/L	509.22	ppb	04:05:17
2	Cd 226.502†	21659.5	22061.9	509.64	µg/L	509.64	ppb	04:05:22
2	Co 228.616†	10993.9	11220.3	511.07	µg/L	511.07	ppb	04:05:22
2	Cr 267.716†	25986.2	26483.9	508.04	µg/L	508.04	ppb	04:05:22
2	Cu 324.752†	75150.6	71138.2	507.02	µg/L	507.02	ppb	04:05:22
2	Mn 257.610†	174423.4	176430.5	511.64	µg/L	511.64	ppb	04:05:17
2	Mo 202.031†	4631.4	4684.2	498.58	µg/L	498.58	ppb	04:05:43
2	Ni 231.604†	10593.8	10287.8	510.82	µg/L	510.82	ppb	04:05:22
2	P 214.914†	1754.6	1521.9	2406.1	µg/L	2406.1	ppb	04:05:43
2	Pb 220.353†	2198.8	2158.1	497.06	µg/L	497.06	ppb	04:05:43

2	S 181.975 Axial†	277.5	236.4	992.88 µg/L	992.88 ppb	04:05:43
2	Sb 206.836†	594.8	578.7	494.76 µg/L	494.76 ppb	04:05:43
2	Se 196.026†	481.1	466.5	501.47 µg/L	501.47 ppb	04:05:43
2	SiO2†	34453.6	31657.7	5459.2 µg/L	5459.2 ppb	04:05:22
2	Si 251.611†	36914.9	37012.4	2511.7 µg/L	2511.7 ppb	04:05:22
2	Sn 189.927†	1151.8	1157.4	503.24 µg/L	503.24 ppb	04:05:43
2	Ti 334.940†	219885.6	221362.6	504.85 µg/L	504.85 ppb	04:05:17
2	Tl 190.801†	312.5	344.1	495.67 µg/L	495.67 ppb	04:05:43
2	U 409.014†	5257.7	5349.1	513.08 µg/L	513.08 ppb	04:05:22
2	V 292.402†	47059.6	47831.2	509.95 µg/L	509.95 ppb	04:05:22
2	Zn 213.857†	22221.1	21755.4	504.89 µg/L	504.89 ppb	04:05:22
3	Sc RADIAL	169119.3	169119.3	102 %		04:04:26
3	Al 396.153Radial†	12351.7	12301.2	5110.1 µg/L	5110.1 ppb	04:04:32
3	Ca 317.933Radial†	28939.1	27586.8	5155.8 µg/L	5155.8 ppb	04:04:32
3	Fe 238.204 Radial†	7534.6	7439.6	5166.8 µg/L	5166.8 ppb	04:04:32
3	K 766.490 Radial†	10490.3	9456.5	5099.0 µg/L	5099.0 ppb	04:04:32
3	Mg 279.077 IEC†	2668.7	2574.9	5180.5 µg/L	5180.5 ppb	04:04:32
3	Na 589.592 Radial†	43221.6	42401.6	10202 µg/L	10202 ppb	04:04:26
3	Sr 421.552†	119704.0	117768.2	505.68 µg/L	505.68 ppb	04:04:26
3	Sc 361.383	2061643.5	2061643.5	99.291 %		04:05:50
3	Y 371.029	1338139.0	1338139.0	98.625 %		04:05:50
3	Ag 328.068†	57402.0	58779.3	502.01 µg/L	502.01 ppb	04:05:56
3	As 188.979†	335.9	338.1	508.76 µg/L	508.76 ppb	04:06:16
3	B 249.677†	12808.8	12689.6	499.28 µg/L	499.28 ppb	04:05:56
3	Ba 233.527†	20337.7	20572.7	504.85 µg/L	504.85 ppb	04:05:56
3	Be 313.107†	875946.8	878841.0	506.37 µg/L	506.37 ppb	04:05:50
3	Cd 226.502†	21666.0	21962.9	507.36 µg/L	507.36 ppb	04:05:56
3	Co 228.616†	10964.8	11137.5	507.31 µg/L	507.31 ppb	04:05:56
3	Cr 267.716†	25863.0	26233.1	503.23 µg/L	503.23 ppb	04:05:56
3	Cu 324.752†	74785.8	70404.5	501.80 µg/L	501.80 ppb	04:05:56
3	Mn 257.610†	174199.5	175354.8	508.52 µg/L	508.52 ppb	04:05:50
3	Mo 202.031†	4656.1	4686.5	498.82 µg/L	498.82 ppb	04:06:16
3	Ni 231.604†	10567.4	10209.6	506.94 µg/L	506.94 ppb	04:05:56
3	P 214.914†	1762.1	1521.0	2405.5 µg/L	2405.5 ppb	04:06:16
3	Pb 220.353†	2219.3	2168.1	499.35 µg/L	499.35 ppb	04:06:16
3	S 181.975 Axial†	275.8	233.4	980.00 µg/L	980.00 ppb	04:06:16
3	Sb 206.836†	595.0	576.1	492.52 µg/L	492.52 ppb	04:06:16
3	Se 196.026†	486.7	469.8	505.00 µg/L	505.00 ppb	04:06:16
3	SiO2†	34360.9	31396.3	5414.1 µg/L	5414.1 ppb	04:05:56
3	Si 251.611†	36721.2	36637.4	2485.9 µg/L	2485.9 ppb	04:05:56
3	Sn 189.927†	1153.9	1153.9	501.71 µg/L	501.71 ppb	04:06:16
3	Ti 334.940†	219697.5	220101.3	501.97 µg/L	501.97 ppb	04:05:50
3	Tl 190.801†	316.9	347.1	499.90 µg/L	499.90 ppb	04:06:16
3	U 409.014†	5291.2	5357.3	513.87 µg/L	513.87 ppb	04:05:56
3	V 292.402†	46919.5	47460.7	506.04 µg/L	506.04 ppb	04:05:56
3	Zn 213.857†	22157.5	21583.0	500.89 µg/L	500.89 ppb	04:05:56

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2055043.7	98.973	%	0.2753				0.28%
Sc RADIAL	168733.8	101	%	0.3				0.27%
Y 371.029	1335028.0	98.395	%	0.2338				0.24%
Ag 328.068†	59027.1	504.11	µg/L	3.077	504.11	ppb	3.077	0.61%
QC value within limits for Ag 328.068 Recovery = 100.82%								
Al 396.153Radial†	12335.7	5124.5	µg/L	28.36	5124.5	ppb	28.36	0.55%
QC value within limits for Al 396.153Radial Recovery = 102.49%								
As 188.979†	338.6	509.44	µg/L	3.936	509.44	ppb	3.936	0.77%
QC value within limits for As 188.979 Recovery = 101.89%								
B 249.677†	12709.0	500.05	µg/L	2.363	500.05	ppb	2.363	0.47%
QC value within limits for B 249.677 Recovery = 100.01%								
Ba 233.527†	20592.2	505.34	µg/L	2.088	505.34	ppb	2.088	0.41%
QC value within limits for Ba 233.527 Recovery = 101.07%								
Be 313.107†	879881.1	506.97	µg/L	2.022	506.97	ppb	2.022	0.40%
QC value within limits for Be 313.107 Recovery = 101.39%								
Ca 317.933Radial†	27637.5	5165.3	µg/L	8.73	5165.3	ppb	8.73	0.17%
QC value within limits for Ca 317.933Radial Recovery = 103.31%								
Cd 226.502†	21931.2	506.63	µg/L	3.439	506.63	ppb	3.439	0.68%
QC value within limits for Cd 226.502 Recovery = 101.33%								
Co 228.616†	11153.4	508.03	µg/L	2.751	508.03	ppb	2.751	0.54%

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   QC value within limits for Co 228.616  Recovery = 101.61%
Cr 267.716†          26292.2      504.36 µg/L        3.262      504.36 ppb        3.262   0.65%
   QC value within limits for Cr 267.716  Recovery = 100.87%
Cu 324.752†          70605.5      503.23 µg/L        3.317      503.23 ppb        3.317   0.66%
   QC value within limits for Cu 324.752  Recovery = 100.65%
Fe 238.204 Radial†    7440.2      5167.3 µg/L         3.81      5167.3 ppb         3.81   0.07%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.35%
K 766.490 Radial†     9466.8      5104.6 µg/L        18.42      5104.6 ppb        18.42   0.36%
   QC value within limits for K 766.490 Radial  Recovery = 102.09%
Mg 279.077 IEC†       2592.0      5214.7 µg/L        31.44      5214.7 ppb        31.44   0.60%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.29%
Mn 257.610†         175618.3      509.28 µg/L        2.081      509.28 ppb        2.081   0.41%
   QC value within limits for Mn 257.610  Recovery = 101.86%
Mo 202.031†           4689.1      499.10 µg/L        0.704      499.10 ppb        0.704   0.14%
   QC value within limits for Mo 202.031  Recovery = 99.82%
Na 589.592 Radial†   42330.4       10185 µg/L         59.9       10185 ppb         59.9   0.59%
   QC value within limits for Na 589.592 Radial  Recovery = 101.85%
Ni 231.604†          10228.8      507.89 µg/L        2.590      507.89 ppb        2.590   0.51%
   QC value within limits for Ni 231.604  Recovery = 101.58%
P 214.914†            1525.1      2412.0 µg/L        10.67      2412.0 ppb        10.67   0.44%
   QC value within limits for P 214.914  Recovery = 96.48%
Pb 220.353†           2166.5      498.99 µg/L        1.776      498.99 ppb        1.776   0.36%
   QC value within limits for Pb 220.353  Recovery = 99.80%
S 181.975 Axial†       235.5      989.06 µg/L        7.882      989.06 ppb        7.882   0.80%
   QC value within limits for S 181.975 Axial  Recovery = 98.91%
Sb 206.836†            577.9      494.12 µg/L        1.399      494.12 ppb        1.399   0.28%
   QC value within limits for Sb 206.836  Recovery = 98.82%
Se 196.026†            466.0      500.95 µg/L        4.323      500.95 ppb        4.323   0.86%
   QC value within limits for Se 196.026  Recovery = 100.19%
SiO2†                31448.6      5423.1 µg/L        32.49      5423.1 ppb        32.49   0.60%
   QC value within limits for SiO2  Recovery = 101.41%
Si 251.611†          36734.5      2492.6 µg/L        16.82      2492.6 ppb        16.82   0.67%
   QC value within limits for Si 251.611  Recovery = 99.70%
Sn 189.927†           1156.3      502.75 µg/L        0.904      502.75 ppb        0.904   0.18%
   QC value within limits for Sn 189.927  Recovery = 100.55%
Sr 421.552†         117509.0      504.56 µg/L        2.720      504.56 ppb        2.720   0.54%
   QC value within limits for Sr 421.552  Recovery = 100.91%
Ti 334.940†         220340.8      502.51 µg/L        2.111      502.51 ppb        2.111   0.42%
   QC value within limits for Ti 334.940  Recovery = 100.50%
Tl 190.801†            344.7      496.56 µg/L        2.998      496.56 ppb        2.998   0.60%
   QC value within limits for Tl 190.801  Recovery = 99.31%
U 409.014†            5373.4      515.42 µg/L        3.396      515.42 ppb        3.396   0.66%
   QC value within limits for U 409.014  Recovery = 103.08%
V 292.402†           47542.0      506.90 µg/L        2.721      506.90 ppb        2.721   0.54%
   QC value within limits for V 292.402  Recovery = 101.38%
Zn 213.857†          21636.9      502.14 µg/L        2.383      502.14 ppb        2.383   0.47%
   QC value within limits for Zn 213.857  Recovery = 100.43%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 04:06:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	164372.4	164372.4	98.8	%			04:06:58
1	Al 396.153Radial†	-145.5	2.9	1.1859	µg/L	1.1859	ppb	04:06:58
1	Ca 317.933Radial†	870.9	-0.7	-0.1299	µg/L	-0.1299	ppb	04:07:19
1	Fe 238.204 Radial†	-21.6	5.5	3.8011	µg/L	3.8011	ppb	04:07:19
1	K 766.490 Radial†	858.0	5.0	2.6827	µg/L	2.6827	ppb	04:06:58
1	Mg 279.077 IEC†	51.4	1.7	3.3385	µg/L	3.3385	ppb	04:07:19
1	Na 589.592 Radial†	117.7	1.2	0.2771	µg/L	0.2771	ppb	04:06:58
1	Sr 421.552†	37.8	46.9	0.2015	µg/L	0.2015	ppb	04:06:58
1	Sc 361.383	2033017.9	2033017.9	97.912	%			04:08:20
1	Y 371.029	1327781.3	1327781.3	97.861	%			04:08:20
1	Ag 328.068†	-812.9	137.1	1.1652	µg/L	1.1652	ppb	04:08:26
1	As 188.979†	2.8	2.6	3.9388	µg/L	3.9388	ppb	04:08:47
1	B 249.677†	226.4	20.5	0.8096	µg/L	0.8096	ppb	04:08:26
1	Ba 233.527†	-75.3	12.8	0.3138	µg/L	0.3138	ppb	04:08:47
1	Be 313.107†	3527.6	239.5	0.1378	µg/L	0.1378	ppb	04:08:26
1	Cd 226.502†	-141.0	-1.8	-0.0398	µg/L	-0.0398	ppb	04:08:47
1	Co 228.616†	-103.1	-11.0	-0.4984	µg/L	-0.4984	ppb	04:08:47
1	Cr 267.716†	-182.4	-0.9	-0.0170	µg/L	-0.0170	ppb	04:08:26
1	Cu 324.752†	4839.9	27.6	0.1967	µg/L	0.1967	ppb	04:08:26
1	Mn 257.610†	99.0	12.0	0.0347	µg/L	0.0347	ppb	04:08:26
1	Mo 202.031†	5.1	2.4	0.2522	µg/L	0.2522	ppb	04:08:47
1	Ni 231.604†	452.3	28.6	1.4246	µg/L	1.4246	ppb	04:08:47
1	P 214.914†	243.5	-5.0	-8.3272	µg/L	-8.3272	ppb	04:08:47
1	Pb 220.353†	46.0	-20.1	-4.6390	µg/L	-4.6390	ppb	04:08:47
1	S 181.975 Axial†	37.1	-6.5	-27.296	µg/L	-27.296	ppb	04:08:47
1	Sb 206.836†	27.1	4.4	3.7828	µg/L	3.7828	ppb	04:08:47
1	Se 196.026†	13.4	-6.7	-7.1912	µg/L	-7.1912	ppb	04:08:47
1	SiO2†	3100.1	-43.8	-7.5463	µg/L	-7.5463	ppb	04:08:26
1	Si 251.611†	369.6	31.4	2.2475	µg/L	2.2475	ppb	04:08:47
1	Sn 189.927†	3.0	-5.2	-2.2357	µg/L	-2.2357	ppb	04:08:47
1	Ti 334.940†	1175.5	35.0	0.0799	µg/L	0.0799	ppb	04:08:26
1	Tl 190.801†	-24.9	2.4	3.4347	µg/L	3.4347	ppb	04:08:47
1	U 409.014†	-13.4	14.6	1.4011	µg/L	1.4011	ppb	04:08:26
1	V 292.402†	-157.9	44.7	0.4767	µg/L	0.4767	ppb	04:08:26
1	Zn 213.857†	728.3	11.0	0.2503	µg/L	0.2503	ppb	04:08:47
2	Sc RADIAL	165467.2	165467.2	99.5	%			04:07:24
2	Al 396.153Radial†	-130.5	18.9	7.8707	µg/L	7.8707	ppb	04:07:24
2	Ca 317.933Radial†	882.1	4.7	0.8831	µg/L	0.8831	ppb	04:07:44
2	Fe 238.204 Radial†	-22.3	4.9	3.4162	µg/L	3.4162	ppb	04:07:44
2	K 766.490 Radial†	832.1	-26.8	-14.440	µg/L	-14.440	ppb	04:07:24
2	Mg 279.077 IEC†	36.0	-14.2	-28.534	µg/L	-28.534	ppb	04:07:44
2	Na 589.592 Radial†	107.2	-10.2	-2.4549	µg/L	-2.4549	ppb	04:07:24
2	Sr 421.552†	-12.7	-4.1	-0.0175	µg/L	-0.0175	ppb	04:07:24
2	Sc 361.383	2046283.3	2046283.3	98.551	%			04:08:53
2	Y 371.029	1337997.1	1337997.1	98.614	%			04:08:53
2	Ag 328.068†	-872.7	81.8	0.6952	µg/L	0.6952	ppb	04:08:58
2	As 188.979†	5.6	5.4	8.1538	µg/L	8.1538	ppb	04:09:19
2	B 249.677†	247.5	40.4	1.5945	µg/L	1.5945	ppb	04:08:58
2	Ba 233.527†	-76.8	11.7	0.2880	µg/L	0.2880	ppb	04:09:19
2	Be 313.107†	3471.2	158.9	0.0909	µg/L	0.0909	ppb	04:08:58
2	Cd 226.502†	-143.8	-3.7	-0.0815	µg/L	-0.0815	ppb	04:09:19
2	Co 228.616†	-94.3	-1.4	-0.0619	µg/L	-0.0619	ppb	04:09:19
2	Cr 267.716†	-161.7	21.3	0.4077	µg/L	0.4077	ppb	04:08:58
2	Cu 324.752†	4781.5	-63.8	-0.4533	µg/L	-0.4533	ppb	04:08:58
2	Mn 257.610†	133.5	46.3	0.1344	µg/L	0.1344	ppb	04:08:58
2	Mo 202.031†	5.1	2.3	0.2495	µg/L	0.2495	ppb	04:09:19
2	Ni 231.604†	446.9	20.2	1.0027	µg/L	1.0027	ppb	04:09:19
2	P 214.914†	250.1	0.1	0.2507	µg/L	0.2507	ppb	04:09:19
2	Pb 220.353†	68.6	2.4	0.5587	µg/L	0.5587	ppb	04:09:19

2	S 181.975 Axial†	39.6	4.2	-17.712 µg/L	-17.712 ppb	04:09:19
2	Sb 206.836†	20.2	-2.7	-2.3175 µg/L	-2.3175 ppb	04:09:19
2	Se 196.026†	16.8	3.4	-3.6012 µg/L	-3.6012 ppb	04:09:19
2	SiO2†	3165.9	2.5	0.4249 µg/L	0.4249 ppb	04:08:58
2	Si 251.611†	356.1	15.3	1.0177 µg/L	1.0177 ppb	04:09:19
2	Sn 189.927†	10.7	2.6	1.1300 µg/L	1.1300 ppb	04:09:19
2	Ti 334.940†	1098.4	-51.0	-0.1164 µg/L	-0.1164 ppb	04:08:58
2	Tl 190.801†	-22.8	4.7	6.8241 µg/L	6.8241 ppb	04:09:19
2	U 409.014†	24.4	53.0	5.1007 µg/L	5.1007 ppb	04:08:58
2	V 292.402†	-180.9	22.5	0.2477 µg/L	0.2477 ppb	04:08:58
2	Zn 213.857†	725.5	3.4	0.0756 µg/L	0.0756 ppb	04:09:19
3	Sc RADIAL	163968.3	163968.3	98.6 %		04:07:50
3	Al 396.153Radial†	-140.0	8.1	3.3731 µg/L	3.3731 ppb	04:07:50
3	Ca 317.933Radial†	879.1	9.8	1.8257 µg/L	1.8257 ppb	04:08:10
3	Fe 238.204 Radial†	-20.0	7.1	4.8994 µg/L	4.8994 ppb	04:08:10
3	K 766.490 Radial†	862.0	11.1	5.9962 µg/L	5.9962 ppb	04:07:50
3	Mg 279.077 IEC†	46.6	-3.1	-6.2065 µg/L	-6.2065 ppb	04:08:10
3	Na 589.592 Radial†	163.4	47.9	11.521 µg/L	11.521 ppb	04:07:50
3	Sr 421.552†	134.0	144.6	0.6210 µg/L	0.6210 ppb	04:07:50
3	Sc 361.383	2070993.7	2070993.7	99.741 %		04:09:25
3	Y 371.029	1352696.0	1352696.0	99.698 %		04:09:25
3	Ag 328.068†	-971.7	-6.9	-0.0584 µg/L	-0.0584 ppb	04:09:31
3	As 188.979†	1.0	0.8	1.1550 µg/L	1.1550 ppb	04:09:51
3	B 249.677†	235.6	25.5	1.0051 µg/L	1.0051 ppb	04:09:31
3	Ba 233.527†	-77.3	12.2	0.2993 µg/L	0.2993 ppb	04:09:51
3	Be 313.107†	3412.4	57.9	0.0332 µg/L	0.0332 ppb	04:09:31
3	Cd 226.502†	-129.2	12.6	0.2919 µg/L	0.2919 ppb	04:09:51
3	Co 228.616†	-83.1	11.0	0.4990 µg/L	0.4990 ppb	04:09:51
3	Cr 267.716†	-147.1	37.9	0.7266 µg/L	0.7266 ppb	04:09:31
3	Cu 324.752†	4734.0	-169.3	-1.2040 µg/L	-1.2040 ppb	04:09:31
3	Mn 257.610†	114.8	25.9	0.0752 µg/L	0.0752 ppb	04:09:31
3	Mo 202.031†	-0.0	-2.9	-0.3036 µg/L	-0.3036 ppb	04:09:51
3	Ni 231.604†	437.3	5.1	0.2532 µg/L	0.2532 ppb	04:09:51
3	P 214.914†	248.6	-4.4	-6.9635 µg/L	-6.9635 ppb	04:09:51
3	Pb 220.353†	52.3	-14.7	-3.3907 µg/L	-3.3907 ppb	04:09:51
3	S 181.975 Axial†	35.8	-8.5	-35.707 µg/L	-35.707 ppb	04:09:51
3	Sb 206.836†	30.6	7.4	6.3460 µg/L	6.3460 ppb	04:09:51
3	Se 196.026†	19.8	-0.5	-0.5726 µg/L	-0.5726 ppb	04:09:51
3	SiO2†	3106.6	-95.4	-16.448 µg/L	-16.448 ppb	04:09:31
3	Si 251.611†	371.2	26.1	1.7155 µg/L	1.7155 ppb	04:09:51
3	Sn 189.927†	13.8	5.6	2.4098 µg/L	2.4098 ppb	04:09:51
3	Ti 334.940†	1152.4	-10.2	-0.0233 µg/L	-0.0233 ppb	04:09:31
3	Tl 190.801†	-22.5	5.3	7.6833 µg/L	7.6833 ppb	04:09:51
3	U 409.014†	-9.4	18.8	1.8115 µg/L	1.8115 ppb	04:09:31
3	V 292.402†	-213.7	-8.2	-0.0854 µg/L	-0.0854 ppb	04:09:31
3	Zn 213.857†	731.5	0.6	0.0174 µg/L	0.0174 ppb	04:09:51

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2050098.3	98.735	%	0.9282				0.94%
Sc RADIAL	164602.6	98.9	%	0.47				0.47%
Y 371.029	1339491.5	98.724	%	0.9231				0.94%
Ag 328.068†	70.7	0.6007	µg/L	0.61726	0.6007	ppb	0.61726	102.76%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.9	4.1432	µg/L	3.40833	4.1432	ppb	3.40833	82.26%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.9	4.4159	µg/L	3.52370	4.4159	ppb	3.52370	79.80%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	28.8	1.1364	µg/L	0.40862	1.1364	ppb	0.40862	35.96%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	12.2	0.3003	µg/L	0.01292	0.3003	ppb	0.01292	4.30%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	152.1	0.0873	µg/L	0.05239	0.0873	ppb	0.05239	60.00%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.6	0.8597	µg/L	0.97800	0.8597	ppb	0.97800	113.77%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	2.3	0.0569	µg/L	0.20459	0.0569	ppb	0.20459	359.86%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-0.5	-0.0204	µg/L	0.50003	-0.0204	ppb	0.50003	>999.9%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                19.4      0.3724 µg/L       0.37305      0.3724 ppb        0.37305 100.17%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -68.5     -0.4869 µg/L       0.70094     -0.4869 ppb        0.70094 143.96%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          5.8      4.0389 µg/L       0.76968      4.0389 ppb        0.76968  19.06%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          -3.6     -1.9205 µg/L      10.96839     -1.9205 ppb       10.96839 571.13%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -5.2     -10.467 µg/L       16.3581     -10.467 ppb        16.3581 156.28%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                28.1      0.0814 µg/L       0.05012      0.0814 ppb        0.05012  61.55%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 0.6      0.0661 µg/L       0.32015      0.0661 ppb        0.32015 484.67%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         12.9      3.1143 µg/L       7.40714      3.1143 ppb        7.40714 237.85%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                18.0      0.8935 µg/L       0.59331      0.8935 ppb        0.59331  66.40%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -3.1     -5.0134 µg/L       4.60952     -5.0134 ppb        4.60952  91.94%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -10.8     -2.4903 µg/L       2.71326     -2.4903 ppb        2.71326 108.95%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -6.4     -26.905 µg/L        9.0038     -26.905 ppb         9.0038  33.47%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 3.0      2.6038 µg/L       4.45048      2.6038 ppb        4.45048 170.92%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -3.5     -3.7883 µg/L       3.31328     -3.7883 ppb        3.31328  87.46%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     -45.6     -7.8564 µg/L       8.44065     -7.8564 ppb        8.44065 107.44%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                24.2      1.6602 µg/L       0.61679      1.6602 ppb        0.61679  37.15%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.0      0.4347 µg/L       2.39953      0.4347 ppb        2.39953 552.01%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                62.5      0.2683 µg/L       0.32447      0.2683 ppb        0.32447 120.93%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                -8.7     -0.0199 µg/L       0.09819     -0.0199 ppb        0.09819 492.23%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 4.1      5.9807 µg/L       2.24640      5.9807 ppb        2.24640  37.56%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 28.8      2.7711 µg/L       2.02790      2.7711 ppb        2.02790  73.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 19.7      0.2130 µg/L       0.28267      0.2130 ppb        0.28267 132.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 5.0      0.1144 µg/L       0.12122      0.1144 ppb        0.12122 105.93%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 6/30/2009 04:16:43
Logged In Analyst: optima
Spectrometer Model: Optima 4300 DV, S/N 077N1030502

Plasma On Time: 6/29/2009 11:03:38
Technique: ICP Continuous
Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\063009.SIF
Batch ID:
Results Data Set: 063009
Results Library: c:\pe\optima1\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 04:16:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168134.0	168134.0	101	%			04:17:19
1	Al 396.153Radial†	12321.1	12342.1	5127.1	µg/L	5127.1	ppb	04:17:24
1	Ca 317.933Radial†	28800.0	27616.0	5161.2	µg/L	5161.2	ppb	04:17:24
1	Fe 238.204 Radial†	7500.7	7449.4	5173.6	µg/L	5173.6	ppb	04:17:24
1	K 766.490 Radial†	10445.4	9472.5	5107.7	µg/L	5107.7	ppb	04:17:24
1	Mg 279.077 IEC†	2678.4	2599.9	5230.7	µg/L	5230.7	ppb	04:17:24
1	Na 589.592 Radial†	43077.1	42507.7	10228	µg/L	10228	ppb	04:17:19
1	Sr 421.552†	119003.9	117765.6	505.67	µg/L	505.67	ppb	04:17:19
1	Sc 361.383	2054700.2	2054700.2	98.956	%			04:17:58
1	Y 371.029	1333358.8	1333358.8	98.272	%			04:17:58
1	Ag 328.068†	57384.5	58957.0	503.51	µg/L	503.51	ppb	04:18:04
1	As 188.979†	336.5	339.9	511.39	µg/L	511.39	ppb	04:18:24
1	B 249.677†	12755.3	12679.1	498.87	µg/L	498.87	ppb	04:18:04
1	Ba 233.527†	20232.2	20535.3	503.94	µg/L	503.94	ppb	04:18:04
1	Be 313.107†	869208.1	875012.4	504.17	µg/L	504.17	ppb	04:17:58
1	Cd 226.502†	21522.3	21891.4	505.71	µg/L	505.71	ppb	04:18:04
1	Co 228.616†	10918.5	11128.0	506.88	µg/L	506.88	ppb	04:18:04
1	Cr 267.716†	25797.4	26254.8	503.65	µg/L	503.65	ppb	04:18:04
1	Cu 324.752†	74501.1	70371.3	501.56	µg/L	501.56	ppb	04:18:04
1	Mn 257.610†	173020.4	174756.1	506.78	µg/L	506.78	ppb	04:17:58
1	Mo 202.031†	4647.0	4693.1	499.52	µg/L	499.52	ppb	04:18:24
1	Ni 231.604†	10538.5	10216.4	507.28	µg/L	507.28	ppb	04:18:04
1	P 214.914†	1756.1	1520.9	2405.3	µg/L	2405.3	ppb	04:18:24
1	Pb 220.353†	2221.4	2177.7	501.57	µg/L	501.57	ppb	04:18:24
1	S 181.975 Axial†	285.4	244.1	1024.9	µg/L	1024.9	ppb	04:18:24
1	Sb 206.836†	602.5	585.6	500.73	µg/L	500.73	ppb	04:18:24
1	Se 196.026†	477.6	462.2	496.82	µg/L	496.82	ppb	04:18:24
1	SiO2†	34141.4	31291.5	5396.0	µg/L	5396.0	ppb	04:18:04
1	Si 251.611†	36617.1	36657.2	2487.5	µg/L	2487.5	ppb	04:18:04
1	Sn 189.927†	1141.2	1145.0	497.87	µg/L	497.87	ppb	04:18:24
1	Ti 334.940†	218296.0	219432.8	500.44	µg/L	500.44	ppb	04:17:58
1	Tl 190.801†	322.9	354.2	510.20	µg/L	510.20	ppb	04:18:24
1	U 409.014†	5320.5	5404.9	518.45	µg/L	518.45	ppb	04:18:04
1	V 292.402†	46761.1	47460.3	506.04	µg/L	506.04	ppb	04:18:04
1	Zn 213.857†	22080.5	21580.6	500.83	µg/L	500.83	ppb	04:18:04
2	Sc RADIAL	167739.1	167739.1	101	%			04:17:30
2	Al 396.153Radial†	12334.8	12384.4	5144.7	µg/L	5144.7	ppb	04:17:35
2	Ca 317.933Radial†	28855.8	27738.4	5184.1	µg/L	5184.1	ppb	04:17:35
2	Fe 238.204 Radial†	7479.2	7445.6	5171.0	µg/L	5171.0	ppb	04:17:35
2	K 766.490 Radial†	10391.1	9442.9	5091.7	µg/L	5091.7	ppb	04:17:35
2	Mg 279.077 IEC†	2681.2	2609.0	5249.0	µg/L	5249.0	ppb	04:17:35
2	Na 589.592 Radial†	43184.9	42715.1	10278	µg/L	10278	ppb	04:17:30
2	Sr 421.552†	119463.7	118498.8	508.81	µg/L	508.81	ppb	04:17:30
2	Sc 361.383	2061848.1	2061848.1	99.301	%			04:18:31
2	Y 371.029	1339263.7	1339263.7	98.708	%			04:18:31
2	Ag 328.068†	57739.6	59113.6	504.84	µg/L	504.84	ppb	04:18:37
2	As 188.979†	332.1	334.2	502.90	µg/L	502.90	ppb	04:18:57

2	B 249.677†	12809.1	12688.6	499.24 µg/L	499.24 ppb	04:18:37
2	Ba 233.527†	20320.2	20553.0	504.37 µg/L	504.37 ppb	04:18:37
2	Be 313.107†	879097.0	881925.9	508.15 µg/L	508.15 ppb	04:18:31
2	Cd 226.502†	21621.9	21916.4	506.29 µg/L	506.29 ppb	04:18:37
2	Co 228.616†	10981.5	11153.1	508.02 µg/L	508.02 ppb	04:18:37
2	Cr 267.716†	25917.8	26285.8	504.24 µg/L	504.24 ppb	04:18:37
2	Cu 324.752†	74986.5	70599.2	503.19 µg/L	503.19 ppb	04:18:37
2	Mn 257.610†	175014.0	176157.6	510.85 µg/L	510.85 ppb	04:18:31
2	Mo 202.031†	4672.9	4703.0	500.58 µg/L	500.58 ppb	04:18:57
2	Ni 231.604†	10576.4	10217.6	507.34 µg/L	507.34 ppb	04:18:37
2	P 214.914†	1766.3	1525.0	2411.8 µg/L	2411.8 ppb	04:18:57
2	Pb 220.353†	2212.3	2160.7	497.66 µg/L	497.66 ppb	04:18:57
2	S 181.975 Axial†	277.9	235.5	989.07 µg/L	989.07 ppb	04:18:57
2	Sb 206.836†	599.7	580.7	496.48 µg/L	496.48 ppb	04:18:57
2	Se 196.026†	480.1	463.0	497.73 µg/L	497.73 ppb	04:18:57
2	SiO2†	34385.7	31417.9	5417.8 µg/L	5417.8 ppb	04:18:37
2	Si 251.611†	36834.0	36747.3	2493.5 µg/L	2493.5 ppb	04:18:37
2	Sn 189.927†	1148.2	1148.1	499.21 µg/L	499.21 ppb	04:18:57
2	Ti 334.940†	220585.6	220973.7	503.96 µg/L	503.96 ppb	04:18:31
2	Tl 190.801†	313.1	343.1	494.23 µg/L	494.23 ppb	04:18:57
2	U 409.014†	5347.6	5413.5	519.27 µg/L	519.27 ppb	04:18:37
2	V 292.402†	46977.9	47514.8	506.63 µg/L	506.63 ppb	04:18:37
2	Zn 213.857†	22188.8	21612.3	501.57 µg/L	501.57 ppb	04:18:37
3	Sc RADIAL	169018.7	169018.7	102 %		04:17:41
3	Al 396.153Radial†	12355.5	12312.1	5114.7 µg/L	5114.7 ppb	04:17:46
3	Ca 317.933Radial†	28836.4	27502.7	5140.1 µg/L	5140.1 ppb	04:17:46
3	Fe 238.204 Radial†	7495.7	7405.6	5143.4 µg/L	5143.4 ppb	04:17:46
3	K 766.490 Radial†	10479.5	9452.0	5096.6 µg/L	5096.6 ppb	04:17:46
3	Mg 279.077 IEC†	2686.4	2594.0	5218.7 µg/L	5218.7 ppb	04:17:46
3	Na 589.592 Radial†	43313.0	42516.9	10230 µg/L	10230 ppb	04:17:41
3	Sr 421.552†	119883.7	118015.1	506.74 µg/L	506.74 ppb	04:17:41
3	Sc 361.383	2062008.7	2062008.7	99.308 %		04:19:05
3	Y 371.029	1339237.8	1339237.8	98.706 %		04:19:05
3	Ag 328.068†	57899.5	59270.1	506.19 µg/L	506.19 ppb	04:19:10
3	As 188.979†	334.6	336.7	506.63 µg/L	506.63 ppb	04:19:31
3	B 249.677†	12889.3	12768.4	502.40 µg/L	502.40 ppb	04:19:10
3	Ba 233.527†	20437.2	20669.2	507.23 µg/L	507.23 ppb	04:19:10
3	Be 313.107†	873440.6	876161.1	504.83 µg/L	504.83 ppb	04:19:05
3	Cd 226.502†	21754.4	22048.1	509.33 µg/L	509.33 ppb	04:19:10
3	Co 228.616†	11010.3	11181.3	509.30 µg/L	509.30 ppb	04:19:10
3	Cr 267.716†	26062.0	26428.9	506.99 µg/L	506.99 ppb	04:19:10
3	Cu 324.752†	75357.5	70966.8	505.80 µg/L	505.80 ppb	04:19:10
3	Mn 257.610†	173856.2	174978.0	507.43 µg/L	507.43 ppb	04:19:05
3	Mo 202.031†	4649.6	4679.2	498.04 µg/L	498.04 ppb	04:19:31
3	Ni 231.604†	10627.3	10268.0	509.84 µg/L	509.84 ppb	04:19:10
3	P 214.914†	1760.2	1518.8	2401.2 µg/L	2401.2 ppb	04:19:31
3	Pb 220.353†	2216.8	2165.1	498.66 µg/L	498.66 ppb	04:19:31
3	S 181.975 Axial†	280.1	237.6	997.99 µg/L	997.99 ppb	04:19:31
3	Sb 206.836†	590.7	571.6	488.68 µg/L	488.68 ppb	04:19:31
3	Se 196.026†	481.5	464.4	499.19 µg/L	499.19 ppb	04:19:31
3	SiO2†	34587.7	31618.6	5452.4 µg/L	5452.4 ppb	04:19:10
3	Si 251.611†	37006.6	36918.2	2505.4 µg/L	2505.4 ppb	04:19:10
3	Sn 189.927†	1154.7	1154.5	501.98 µg/L	501.98 ppb	04:19:31
3	Ti 334.940†	218955.1	219314.6	500.17 µg/L	500.17 ppb	04:19:05
3	Tl 190.801†	317.7	347.8	500.91 µg/L	500.91 ppb	04:19:31
3	U 409.014†	5401.9	5467.8	524.50 µg/L	524.50 ppb	04:19:10
3	V 292.402†	47234.3	47769.3	509.30 µg/L	509.30 ppb	04:19:10
3	Zn 213.857†	22317.2	21739.8	504.54 µg/L	504.54 ppb	04:19:10

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2059519.0	99.188	%	0.2010				0.20%
Sc RADIAL	168297.3	101	%	0.4				0.39%
Y 371.029	1337286.8	98.562	%	0.2507				0.25%
Ag 328.068†	59113.6	504.85	µg/L	1.337	504.85	ppb	1.337	0.26%
QC value within limits for Ag 328.068 Recovery = 100.97%								
Al 396.153Radial†	12346.2	5128.9	µg/L	15.09	5128.9	ppb	15.09	0.29%
QC value within limits for Al 396.153Radial Recovery = 102.58%								
As 188.979†	336.9	506.97	µg/L	4.258	506.97	ppb	4.258	0.84%

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   QC value within limits for As 188.979  Recovery = 101.39%
B 249.677†            12712.1      500.17 µg/L        1.941      500.17 ppb          1.941   0.39%
   QC value within limits for B 249.677  Recovery = 100.03%
Ba 233.527†           20585.8      505.18 µg/L        1.786      505.18 ppb          1.786   0.35%
   QC value within limits for Ba 233.527  Recovery = 101.04%
Be 313.107†          877699.8      505.71 µg/L        2.134      505.71 ppb          2.134   0.42%
   QC value within limits for Be 313.107  Recovery = 101.14%
Ca 317.933Radial†     27619.0      5161.8 µg/L       22.04      5161.8 ppb         22.04   0.43%
   QC value within limits for Ca 317.933Radial  Recovery = 103.24%
Cd 226.502†           21952.0      507.11 µg/L        1.948      507.11 ppb          1.948   0.38%
   QC value within limits for Cd 226.502  Recovery = 101.42%
Co 228.616†           11154.2      508.07 µg/L        1.213      508.07 ppb          1.213   0.24%
   QC value within limits for Co 228.616  Recovery = 101.61%
Cr 267.716†           26323.2      504.96 µg/L        1.781      504.96 ppb          1.781   0.35%
   QC value within limits for Cr 267.716  Recovery = 100.99%
Cu 324.752†           70645.8      503.52 µg/L        2.136      503.52 ppb          2.136   0.42%
   QC value within limits for Cu 324.752  Recovery = 100.70%
Fe 238.204 Radial†     7433.5      5162.7 µg/L       16.75      5162.7 ppb         16.75   0.32%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.25%
K 766.490 Radial†      9455.8      5098.7 µg/L        8.17      5098.7 ppb          8.17   0.16%
   QC value within limits for K 766.490 Radial  Recovery = 101.97%
Mg 279.077 IEC†        2601.0      5232.8 µg/L       15.25      5232.8 ppb         15.25   0.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.66%
Mn 257.610†          175297.2      508.35 µg/L        2.184      508.35 ppb          2.184   0.43%
   QC value within limits for Mn 257.610  Recovery = 101.67%
Mo 202.031†            4691.8      499.38 µg/L        1.277      499.38 ppb          1.277   0.26%
   QC value within limits for Mo 202.031  Recovery = 99.88%
Na 589.592 Radial†    42579.9       10245 µg/L         28.2       10245 ppb           28.2   0.28%
   QC value within limits for Na 589.592 Radial  Recovery = 102.45%
Ni 231.604†           10234.0      508.15 µg/L        1.464      508.15 ppb          1.464   0.29%
   QC value within limits for Ni 231.604  Recovery = 101.63%
P 214.914†             1521.6      2406.1 µg/L        5.37      2406.1 ppb           5.37   0.22%
   QC value within limits for P 214.914  Recovery = 96.24%
Pb 220.353†            2167.8      499.30 µg/L        2.032      499.30 ppb          2.032   0.41%
   QC value within limits for Pb 220.353  Recovery = 99.86%
S 181.975 Axial†        239.1      1004.0 µg/L       18.66      1004.0 ppb         18.66   1.86%
   QC value within limits for S 181.975 Axial  Recovery = 100.40%
Sb 206.836†             579.3      495.30 µg/L        6.110      495.30 ppb          6.110   1.23%
   QC value within limits for Sb 206.836  Recovery = 99.06%
Se 196.026†             463.2      497.91 µg/L        1.195      497.91 ppb          1.195   0.24%
   QC value within limits for Se 196.026  Recovery = 99.58%
SiO2†                  31442.7      5422.1 µg/L       28.44      5422.1 ppb         28.44   0.52%
   QC value within limits for SiO2  Recovery = 101.40%
Si 251.611†            36774.3      2495.5 µg/L        9.12      2495.5 ppb          9.12   0.37%
   QC value within limits for Si 251.611  Recovery = 99.82%
Sn 189.927†            1149.2      499.69 µg/L        2.096      499.69 ppb          2.096   0.42%
   QC value within limits for Sn 189.927  Recovery = 99.94%
Sr 421.552†           118093.2      507.07 µg/L        1.601      507.07 ppb          1.601   0.32%
   QC value within limits for Sr 421.552  Recovery = 101.41%
Ti 334.940†           219907.0      501.53 µg/L        2.111      501.53 ppb          2.111   0.42%
   QC value within limits for Ti 334.940  Recovery = 100.31%
Tl 190.801†             348.4      501.78 µg/L        8.020      501.78 ppb          8.020   1.60%
   QC value within limits for Tl 190.801  Recovery = 100.36%
U 409.014†             5428.7      520.74 µg/L        3.284      520.74 ppb          3.284   0.63%
   QC value within limits for U 409.014  Recovery = 104.15%
V 292.402†            47581.5      507.32 µg/L        1.739      507.32 ppb          1.739   0.34%
   QC value within limits for V 292.402  Recovery = 101.46%
Zn 213.857†           21644.2      502.31 µg/L        1.962      502.31 ppb          1.962   0.39%
   QC value within limits for Zn 213.857  Recovery = 100.46%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 04:19:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	165488.4	165488.4	99.5	%			04:20:12
1	Al 396.153Radial†	-150.9	-1.6	-0.6744	µg/L	-0.6744	ppb	04:20:12
1	Ca 317.933Radial†	890.2	12.7	2.3772	µg/L	2.3772	ppb	04:20:33
1	Fe 238.204 Radial†	-19.9	7.4	5.0751	µg/L	5.0751	ppb	04:20:33
1	K 766.490 Radial†	816.4	-42.7	-23.032	µg/L	-23.032	ppb	04:20:12
1	Mg 279.077 IEC†	40.8	-9.4	-18.804	µg/L	-18.804	ppb	04:20:33
1	Na 589.592 Radial†	146.6	29.5	7.0864	µg/L	7.0864	ppb	04:20:12
1	Sr 421.552†	32.3	41.1	0.1763	µg/L	0.1763	ppb	04:20:12
1	Sc 361.383	2048979.5	2048979.5	98.681	%			04:21:34
1	Y 371.029	1337733.4	1337733.4	98.595	%			04:21:34
1	Ag 328.068†	-919.1	35.9	0.3096	µg/L	0.3096	ppb	04:21:40
1	As 188.979†	-0.9	-1.1	-1.6241	µg/L	-1.6241	ppb	04:22:01
1	B 249.677†	248.7	41.4	1.6310	µg/L	1.6310	ppb	04:21:40
1	Ba 233.527†	-86.3	2.3	0.0578	µg/L	0.0578	ppb	04:22:01
1	Be 313.107†	3570.3	254.7	0.1461	µg/L	0.1461	ppb	04:21:40
1	Cd 226.502†	-144.3	-4.0	-0.0889	µg/L	-0.0889	ppb	04:22:01
1	Co 228.616†	-102.7	-9.8	-0.4433	µg/L	-0.4433	ppb	04:22:01
1	Cr 267.716†	-155.7	27.6	0.5305	µg/L	0.5305	ppb	04:21:40
1	Cu 324.752†	4849.4	-1.4	-0.0089	µg/L	-0.0089	ppb	04:21:40
1	Mn 257.610†	121.2	33.6	0.0976	µg/L	0.0976	ppb	04:21:40
1	Mo 202.031†	7.2	4.4	0.4725	µg/L	0.4725	ppb	04:22:01
1	Ni 231.604†	439.7	12.3	0.6132	µg/L	0.6132	ppb	04:22:01
1	P 214.914†	253.5	3.2	5.2448	µg/L	5.2448	ppb	04:22:01
1	Pb 220.353†	63.4	-2.8	-0.6585	µg/L	-0.6585	ppb	04:22:01
1	S 181.975 Axial†	34.0	-9.9	-41.659	µg/L	-41.659	ppb	04:22:01
1	Sb 206.836†	22.6	-0.3	-0.2739	µg/L	-0.2739	ppb	04:22:01
1	Se 196.026†	16.7	-3.5	-3.7983	µg/L	-3.7983	ppb	04:22:01
1	SiO2†	3157.2	-10.6	-1.8294	µg/L	-1.8294	ppb	04:21:40
1	Si 251.611†	347.2	5.7	0.3454	µg/L	0.3454	ppb	04:22:01
1	Sn 189.927†	11.3	3.2	1.3851	µg/L	1.3851	ppb	04:22:01
1	Ti 334.940†	1121.3	-29.3	-0.0668	µg/L	-0.0668	ppb	04:21:40
1	Tl 190.801†	-25.9	1.6	2.3461	µg/L	2.3461	ppb	04:22:01
1	U 409.014†	31.3	60.0	5.7726	µg/L	5.7726	ppb	04:21:40
1	V 292.402†	-135.5	68.7	0.7388	µg/L	0.7388	ppb	04:21:40
1	Zn 213.857†	729.0	6.0	0.1372	µg/L	0.1372	ppb	04:22:01
2	Sc RADIAL	167942.0	167942.0	101	%			04:20:38
2	Al 396.153Radial†	-209.6	-57.5	-23.975	µg/L	-23.975	ppb	04:20:38
2	Ca 317.933Radial†	871.6	-18.7	-3.5026	µg/L	-3.5026	ppb	04:20:58
2	Fe 238.204 Radial†	-22.5	5.0	3.4491	µg/L	3.4491	ppb	04:20:58
2	K 766.490 Radial†	883.6	11.9	6.4095	µg/L	6.4095	ppb	04:20:38
2	Mg 279.077 IEC†	52.5	1.6	3.2140	µg/L	3.2140	ppb	04:20:58
2	Na 589.592 Radial†	149.8	30.4	7.3217	µg/L	7.3217	ppb	04:20:38
2	Sr 421.552†	67.1	75.1	0.3226	µg/L	0.3226	ppb	04:20:38
2	Sc 361.383	2035897.6	2035897.6	98.051	%			04:22:06
2	Y 371.029	1330554.0	1330554.0	98.066	%			04:22:06
2	Ag 328.068†	-911.9	37.3	0.3205	µg/L	0.3205	ppb	04:22:12
2	As 188.979†	3.2	3.0	4.5226	µg/L	4.5226	ppb	04:22:33
2	B 249.677†	236.7	30.7	1.2118	µg/L	1.2118	ppb	04:22:12
2	Ba 233.527†	-78.4	9.8	0.2405	µg/L	0.2405	ppb	04:22:33
2	Be 313.107†	3535.1	242.0	0.1392	µg/L	0.1392	ppb	04:22:12
2	Cd 226.502†	-136.3	3.2	0.0715	µg/L	0.0715	ppb	04:22:33
2	Co 228.616†	-103.9	-11.6	-0.5282	µg/L	-0.5282	ppb	04:22:33
2	Cr 267.716†	-213.6	-32.5	-0.6210	µg/L	-0.6210	ppb	04:22:12
2	Cu 324.752†	4802.9	-17.1	-0.1213	µg/L	-0.1213	ppb	04:22:12
2	Mn 257.610†	104.4	17.3	0.0503	µg/L	0.0503	ppb	04:22:12
2	Mo 202.031†	5.1	2.3	0.2482	µg/L	0.2482	ppb	04:22:33
2	Ni 231.604†	448.1	23.8	1.1824	µg/L	1.1824	ppb	04:22:33
2	P 214.914†	253.7	5.1	8.2953	µg/L	8.2953	ppb	04:22:33
2	Pb 220.353†	66.1	0.2	0.0566	µg/L	0.0566	ppb	04:22:33

2	S 181.975 Axial†	37.7	-5.9	-25.010 µg/L	-25.010 ppb	04:22:33
2	Sb 206.836†	28.1	5.4	4.6475 µg/L	4.6475 ppb	04:22:33
2	Se 196.026†	11.6	-8.6	-9.2105 µg/L	-9.2105 ppb	04:22:33
2	SiO2†	3132.9	-14.8	-2.5558 µg/L	-2.5558 ppb	04:22:12
2	Si 251.611†	358.6	19.6	1.3847 µg/L	1.3847 ppb	04:22:33
2	Sn 189.927†	5.8	-2.3	-1.0003 µg/L	-1.0003 ppb	04:22:33
2	Ti 334.940†	1159.8	17.3	0.0395 µg/L	0.0395 ppb	04:22:12
2	Tl 190.801†	-31.9	-4.7	-6.8323 µg/L	-6.8323 ppb	04:22:33
2	U 409.014†	-75.2	-48.5	-4.6615 µg/L	-4.6615 ppb	04:22:12
2	V 292.402†	-149.1	53.9	0.5641 µg/L	0.5641 ppb	04:22:12
2	Zn 213.857†	732.9	14.6	0.3368 µg/L	0.3368 ppb	04:22:33
3	Sc RADIAL	166376.6	166376.6	100 %		04:21:04
3	Al 396.153Radial†	-181.2	-31.0	-12.949 µg/L	-12.949 ppb	04:21:04
3	Ca 317.933Radial†	871.1	-11.2	-2.0851 µg/L	-2.0851 ppb	04:21:24
3	Fe 238.204 Radial†	-25.2	2.2	1.4941 µg/L	1.4941 ppb	04:21:24
3	K 766.490 Radial†	918.3	54.8	29.526 µg/L	29.526 ppb	04:21:04
3	Mg 279.077 IEC†	50.9	0.6	1.1199 µg/L	1.1199 ppb	04:21:24
3	Na 589.592 Radial†	119.0	1.0	0.2434 µg/L	0.2434 ppb	04:21:04
3	Sr 421.552†	24.4	33.1	0.1419 µg/L	0.1419 ppb	04:21:04
3	Sc 361.383	2060039.0	2060039.0	99.213 %		04:22:39
3	Y 371.029	1345935.2	1345935.2	99.199 %		04:22:39
3	Ag 328.068†	-840.4	120.3	1.0224 µg/L	1.0224 ppb	04:22:44
3	As 188.979†	-1.2	-1.4	-2.0769 µg/L	-2.0769 ppb	04:23:05
3	B 249.677†	221.0	12.1	0.4761 µg/L	0.4761 ppb	04:22:44
3	Ba 233.527†	-77.7	11.4	0.2807 µg/L	0.2807 ppb	04:23:05
3	Be 313.107†	3617.6	282.9	0.1626 µg/L	0.1626 ppb	04:22:44
3	Cd 226.502†	-140.3	0.7	0.0182 µg/L	0.0182 ppb	04:23:05
3	Co 228.616†	-99.5	-6.0	-0.2724 µg/L	-0.2724 ppb	04:23:05
3	Cr 267.716†	-184.6	-0.7	-0.0119 µg/L	-0.0119 ppb	04:22:44
3	Cu 324.752†	4797.4	-80.1	-0.5698 µg/L	-0.5698 ppb	04:22:44
3	Mn 257.610†	127.1	39.0	0.1131 µg/L	0.1131 ppb	04:22:44
3	Mo 202.031†	4.7	1.9	0.2041 µg/L	0.2041 ppb	04:23:05
3	Ni 231.604†	440.5	10.7	0.5345 µg/L	0.5345 ppb	04:23:05
3	P 214.914†	241.4	-10.4	-16.993 µg/L	-16.993 ppb	04:23:05
3	Pb 220.353†	63.9	-2.8	-0.6372 µg/L	-0.6372 ppb	04:23:05
3	S 181.975 Axial†	42.1	-2.0	-8.3068 µg/L	-8.3068 ppb	04:23:05
3	Sb 206.836†	32.5	9.5	8.1557 µg/L	8.1557 ppb	04:23:05
3	Se 196.026†	19.9	-0.4	-0.4422 µg/L	-0.4422 ppb	04:23:05
3	SiO2†	3151.8	-33.3	-5.7386 µg/L	-5.7386 ppb	04:22:44
3	Si 251.611†	358.0	14.7	1.0201 µg/L	1.0201 ppb	04:23:05
3	Sn 189.927†	7.1	-1.1	-0.4727 µg/L	-0.4727 ppb	04:23:05
3	Ti 334.940†	1156.8	0.4	0.0009 µg/L	0.0009 ppb	04:22:44
3	Tl 190.801†	-29.6	-2.0	-2.9277 µg/L	-2.9277 ppb	04:23:05
3	U 409.014†	-14.2	13.9	1.3413 µg/L	1.3413 ppb	04:22:44
3	V 292.402†	-165.3	39.4	0.4196 µg/L	0.4196 ppb	04:22:44
3	Zn 213.857†	726.6	-0.4	-0.0112 µg/L	-0.0112 ppb	04:23:05

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2048305.4	98.648	%	0.5820				0.59%
Sc RADIAL	166602.4	100	%	0.7				0.75%
Y 371.029	1338074.2	98.620	%	0.5672				0.58%
Ag 328.068†	64.5	0.5508	µg/L	0.40844	0.5508	ppb	0.40844	74.15%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-30.0	-12.533	µg/L	11.6558	-12.533	ppb	11.6558	93.00%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.2	0.2739	µg/L	3.68643	0.2739	ppb	3.68643	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	28.1	1.1063	µg/L	0.58464	1.1063	ppb	0.58464	52.85%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.8	0.1930	µg/L	0.11879	0.1930	ppb	0.11879	61.54%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	259.9	0.1493	µg/L	0.01201	0.1493	ppb	0.01201	8.05%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-5.7	-1.0702	µg/L	3.06848	-1.0702	ppb	3.06848	286.72%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	-0.0	0.0003	µg/L	0.08168	0.0003	ppb	0.08168	>999.9%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-9.1	-0.4146	µg/L	0.13028	-0.4146	ppb	0.13028	31.42%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -1.8     -0.0341 µg/L      0.57606     -0.0341 ppb       0.57606 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -32.8     -0.2333 µg/L      0.29672     -0.2333 ppb       0.29672 127.16%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        4.8      3.3394 µg/L      1.79302      3.3394 ppb       1.79302  53.69%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         8.0      4.3013 µg/L     26.34248      4.3013 ppb      26.34248 612.44%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -2.4     -4.8235 µg/L     12.15294     -4.8235 ppb      12.15294 251.95%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              30.0      0.0870 µg/L      0.03273      0.0870 ppb       0.03273  37.63%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               2.9      0.3082 µg/L      0.14394      0.3082 ppb       0.14394  46.70%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       20.3      4.8838 µg/L      4.02044      4.8838 ppb       4.02044  82.32%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              15.6      0.7767 µg/L      0.35353      0.7767 ppb       0.35353  45.51%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -0.7     -1.1511 µg/L     13.80439     -1.1511 ppb      13.80439 >999.9%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -1.8     -0.4130 µg/L      0.40689     -0.4130 ppb       0.40689  98.51%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -5.9     -24.992 µg/L     16.6762     -24.992 ppb       16.6762  66.73%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               4.9      4.1764 µg/L      4.23448      4.1764 ppb       4.23448 101.39%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -4.2     -4.4836 µg/L      4.42413     -4.4836 ppb       4.42413  98.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                   -19.6     -3.3746 µg/L      2.07924     -3.3746 ppb       2.07924  61.61%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              13.3      0.9167 µg/L      0.52730      0.9167 ppb       0.52730  57.52%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -0.1     -0.0293 µg/L      1.25299     -0.0293 ppb       1.25299 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              49.8      0.2136 µg/L      0.09594      0.2136 ppb       0.09594  44.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -3.9     -0.0088 µg/L      0.05382     -0.0088 ppb       0.05382 610.24%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -1.7     -2.4713 µg/L      4.60618     -2.4713 ppb       4.60618 186.39%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                8.5      0.8174 µg/L      5.23676      0.8174 ppb       5.23676 640.63%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               54.0      0.5741 µg/L      0.15983      0.5741 ppb       0.15983  27.84%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               6.7      0.1543 µg/L      0.17460      0.1543 ppb       0.17460 113.17%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 04:43:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	169247.6	169247.6	102	%			04:43:58
1	Al 396.153Radial†	12563.2	12499.9	5192.8	µg/L	5192.8	ppb	04:44:04
1	Ca 317.933Radial†	29448.5	28065.9	5245.3	µg/L	5245.3	ppb	04:44:04
1	Fe 238.204 Radial†	7606.0	7504.1	5211.6	µg/L	5211.6	ppb	04:44:04
1	K 766.490 Radial†	10637.3	9593.1	5172.7	µg/L	5172.7	ppb	04:44:04
1	Mg 279.077 IEC†	2722.3	2625.7	5282.5	µg/L	5282.5	ppb	04:44:04
1	Na 589.592 Radial†	43276.0	42422.8	10207	µg/L	10207	ppb	04:43:58
1	Sr 421.552†	119847.7	117820.2	505.90	µg/L	505.90	ppb	04:43:58
1	Sc 361.383	2063596.7	2063596.7	99.385	%			04:44:37
1	Y 371.029	1340760.7	1340760.7	98.818	%			04:44:37
1	Ag 328.068†	58064.7	59391.4	507.23	µg/L	507.23	ppb	04:44:43
1	As 188.979†	333.4	335.2	504.46	µg/L	504.46	ppb	04:45:04
1	B 249.677†	12923.8	12793.2	503.36	µg/L	503.36	ppb	04:44:43
1	Ba 233.527†	20544.3	20761.2	509.48	µg/L	509.48	ppb	04:44:43
1	Be 313.107†	880184.0	882269.4	508.34	µg/L	508.34	ppb	04:44:37
1	Cd 226.502†	21905.0	22182.8	512.43	µg/L	512.43	ppb	04:44:43
1	Co 228.616†	11076.2	11239.1	511.94	µg/L	511.94	ppb	04:44:43
1	Cr 267.716†	26215.5	26563.2	509.56	µg/L	509.56	ppb	04:44:43
1	Cu 324.752†	75414.8	70966.1	505.80	µg/L	505.80	ppb	04:44:43
1	Mn 257.610†	175046.6	176041.1	510.51	µg/L	510.51	ppb	04:44:37
1	Mo 202.031†	4697.4	4723.6	502.77	µg/L	502.77	ppb	04:45:04
1	Ni 231.604†	10687.1	10320.0	512.42	µg/L	512.42	ppb	04:44:43
1	P 214.914†	1780.2	1537.6	2431.8	µg/L	2431.8	ppb	04:45:04
1	Pb 220.353†	2229.6	2176.2	501.25	µg/L	501.25	ppb	04:45:04
1	S 181.975 Axial†	280.2	237.6	997.58	µg/L	997.58	ppb	04:45:04
1	Sb 206.836†	606.1	586.6	501.55	µg/L	501.55	ppb	04:45:04
1	Se 196.026†	482.6	465.2	500.09	µg/L	500.09	ppb	04:45:04
1	SiO2†	34588.7	31592.8	5448.0	µg/L	5448.0	ppb	04:44:43
1	Si 251.611†	37126.7	37010.5	2511.6	µg/L	2511.6	ppb	04:44:43
1	Sn 189.927†	1155.5	1154.4	501.98	µg/L	501.98	ppb	04:45:04
1	Ti 334.940†	220514.9	220714.4	503.36	µg/L	503.36	ppb	04:44:37
1	Tl 190.801†	320.1	350.0	504.07	µg/L	504.07	ppb	04:45:04
1	U 409.014†	5311.9	5373.1	515.37	µg/L	515.37	ppb	04:44:43
1	V 292.402†	47377.0	47876.3	510.46	µg/L	510.46	ppb	04:44:43
1	Zn 213.857†	22411.2	21817.1	506.33	µg/L	506.33	ppb	04:44:43
2	Sc RADIAL	167506.1	167506.1	101	%			04:44:09
2	Al 396.153Radial†	12431.7	12497.7	5191.9	µg/L	5191.9	ppb	04:44:15
2	Ca 317.933Radial†	29091.4	28012.2	5235.3	µg/L	5235.3	ppb	04:44:15
2	Fe 238.204 Radial†	7556.5	7532.7	5231.4	µg/L	5231.4	ppb	04:44:15
2	K 766.490 Radial†	10483.5	9549.1	5149.0	µg/L	5149.0	ppb	04:44:15
2	Mg 279.077 IEC†	2683.3	2614.7	5260.5	µg/L	5260.5	ppb	04:44:15
2	Na 589.592 Radial†	43129.0	42719.1	10279	µg/L	10279	ppb	04:44:09
2	Sr 421.552†	119444.6	118644.6	509.44	µg/L	509.44	ppb	04:44:09
2	Sc 361.383	2055507.7	2055507.7	98.995	%			04:45:11
2	Y 371.029	1338374.6	1338374.6	98.642	%			04:45:11
2	Ag 328.068†	57858.1	59412.7	507.40	µg/L	507.40	ppb	04:45:16
2	As 188.979†	328.5	331.6	499.01	µg/L	499.01	ppb	04:45:37
2	B 249.677†	12931.7	12852.3	505.68	µg/L	505.68	ppb	04:45:16
2	Ba 233.527†	20435.9	20733.0	508.79	µg/L	508.79	ppb	04:45:16
2	Be 313.107†	886921.4	892560.4	514.27	µg/L	514.27	ppb	04:45:11
2	Cd 226.502†	21751.3	22114.2	510.85	µg/L	510.85	ppb	04:45:16
2	Co 228.616†	11008.8	11214.9	510.83	µg/L	510.83	ppb	04:45:16
2	Cr 267.716†	25994.2	26443.5	507.27	µg/L	507.27	ppb	04:45:16
2	Cu 324.752†	75172.8	71020.3	506.19	µg/L	506.19	ppb	04:45:16
2	Mn 257.610†	176407.9	178109.3	516.51	µg/L	516.51	ppb	04:45:11
2	Mo 202.031†	4692.1	4736.8	504.18	µg/L	504.18	ppb	04:45:37
2	Ni 231.604†	10640.2	10314.9	512.17	µg/L	512.17	ppb	04:45:16
2	P 214.914†	1772.8	1537.1	2431.1	µg/L	2431.1	ppb	04:45:37
2	Pb 220.353†	2238.2	2193.8	505.29	µg/L	505.29	ppb	04:45:37

2	S 181.975 Axial†	283.4	241.9	1015.9 µg/L	1015.9 ppb	04:45:37
2	Sb 206.836†	597.3	580.1	495.99 µg/L	495.99 ppb	04:45:37
2	Se 196.026†	483.3	467.8	502.92 µg/L	502.92 ppb	04:45:37
2	SiO2†	34489.9	31630.0	5454.4 µg/L	5454.4 ppb	04:45:16
2	Si 251.611†	36922.2	36950.9	2507.0 µg/L	2507.0 ppb	04:45:16
2	Sn 189.927†	1161.1	1164.7	506.41 µg/L	506.41 ppb	04:45:37
2	Ti 334.940†	222213.6	223303.5	509.27 µg/L	509.27 ppb	04:45:11
2	Tl 190.801†	316.0	347.0	499.88 µg/L	499.88 ppb	04:45:37
2	U 409.014†	5256.5	5338.1	512.00 µg/L	512.00 ppb	04:45:16
2	V 292.402†	47104.1	47788.2	509.53 µg/L	509.53 ppb	04:45:16
2	Zn 213.857†	22305.5	21799.1	505.91 µg/L	505.91 ppb	04:45:16
3	Sc RADIAL	167880.6	167880.6	101 %		04:44:20
3	Al 396.153Radial†	12420.7	12459.2	5175.8 µg/L	5175.8 ppb	04:44:26
3	Ca 317.933Radial†	29125.2	27981.3	5229.5 µg/L	5229.5 ppb	04:44:26
3	Fe 238.204 Radial†	7576.8	7536.1	5233.7 µg/L	5233.7 ppb	04:44:26
3	K 766.490 Radial†	10548.2	9590.0	5171.0 µg/L	5171.0 ppb	04:44:26
3	Mg 279.077 IEC†	2690.5	2615.9	5262.8 µg/L	5262.8 ppb	04:44:26
3	Na 589.592 Radial†	43169.7	42663.9	10265 µg/L	10265 ppb	04:44:20
3	Sr 421.552†	119534.7	118469.3	508.69 µg/L	508.69 ppb	04:44:20
3	Sc 361.383	2056072.6	2056072.6	99.022 %		04:45:44
3	Y 371.029	1336425.7	1336425.7	98.498 %		04:45:44
3	Ag 328.068†	57799.0	59336.9	506.76 µg/L	506.76 ppb	04:45:50
3	As 188.979†	323.0	325.9	490.57 µg/L	490.57 ppb	04:46:10
3	B 249.677†	12867.1	12783.4	502.96 µg/L	502.96 ppb	04:45:50
3	Ba 233.527†	20413.2	20704.4	508.09 µg/L	508.09 ppb	04:45:50
3	Be 313.107†	882408.7	887757.0	511.51 µg/L	511.51 ppb	04:45:44
3	Cd 226.502†	21707.7	22064.2	509.70 µg/L	509.70 ppb	04:45:50
3	Co 228.616†	10957.3	11159.8	508.32 µg/L	508.32 ppb	04:45:50
3	Cr 267.716†	26007.4	26449.5	507.38 µg/L	507.38 ppb	04:45:50
3	Cu 324.752†	75053.9	70879.4	505.19 µg/L	505.19 ppb	04:45:50
3	Mn 257.610†	175632.0	177276.8	514.09 µg/L	514.09 ppb	04:45:44
3	Mo 202.031†	4688.9	4732.4	503.70 µg/L	503.70 ppb	04:46:10
3	Ni 231.604†	10627.3	10298.9	511.38 µg/L	511.38 ppb	04:45:50
3	P 214.914†	1763.8	1527.5	2415.7 µg/L	2415.7 ppb	04:46:10
3	Pb 220.353†	2229.4	2184.2	503.08 µg/L	503.08 ppb	04:46:10
3	S 181.975 Axial†	279.5	237.9	998.98 µg/L	998.98 ppb	04:46:10
3	Sb 206.836†	594.9	577.5	493.78 µg/L	493.78 ppb	04:46:10
3	Se 196.026†	477.1	461.4	495.99 µg/L	495.99 ppb	04:46:10
3	SiO2†	34435.6	31565.5	5443.3 µg/L	5443.3 ppb	04:45:50
3	Si 251.611†	36840.9	36858.5	2500.6 µg/L	2500.6 ppb	04:45:50
3	Sn 189.927†	1168.6	1171.9	509.52 µg/L	509.52 ppb	04:46:10
3	Ti 334.940†	221127.8	222145.3	506.63 µg/L	506.63 ppb	04:45:44
3	Tl 190.801†	320.0	351.0	505.62 µg/L	505.62 ppb	04:46:10
3	U 409.014†	5351.3	5432.4	521.07 µg/L	521.07 ppb	04:45:50
3	V 292.402†	47030.0	47700.3	508.62 µg/L	508.62 ppb	04:45:50
3	Zn 213.857†	22211.0	21697.4	503.53 µg/L	503.53 ppb	04:45:50

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2058392.3	99.134	%	0.2175				0.22%
Sc RADIAL	168211.4	101	%	0.6				0.54%
Y 371.029	1338520.3	98.653	%	0.1600				0.16%
Ag 328.068†	59380.4	507.13	µg/L	0.335	507.13	ppb	0.335	0.07%
QC value within limits for Ag 328.068 Recovery = 101.43%								
Al 396.153Radial†	12485.6	5186.8	µg/L	9.55	5186.8	ppb	9.55	0.18%
QC value within limits for Al 396.153Radial Recovery = 103.74%								
As 188.979†	330.9	498.01	µg/L	6.999	498.01	ppb	6.999	1.41%
QC value within limits for As 188.979 Recovery = 99.60%								
B 249.677†	12809.6	504.00	µg/L	1.469	504.00	ppb	1.469	0.29%
QC value within limits for B 249.677 Recovery = 100.80%								
Ba 233.527†	20732.9	508.79	µg/L	0.698	508.79	ppb	0.698	0.14%
QC value within limits for Ba 233.527 Recovery = 101.76%								
Be 313.107†	887528.9	511.38	µg/L	2.967	511.38	ppb	2.967	0.58%
QC value within limits for Be 313.107 Recovery = 102.28%								
Ca 317.933Radial†	28019.8	5236.7	µg/L	8.00	5236.7	ppb	8.00	0.15%
QC value within limits for Ca 317.933Radial Recovery = 104.73%								
Cd 226.502†	22120.4	510.99	µg/L	1.374	510.99	ppb	1.374	0.27%
QC value within limits for Cd 226.502 Recovery = 102.20%								
Co 228.616†	11204.6	510.36	µg/L	1.852	510.36	ppb	1.852	0.36%

QC value within limits for Co 228.616 Recovery = 102.07%

Cr 267.716†	26485.4	508.07 µg/L	1.293	508.07 ppb	1.293	0.25%

QC value within limits for Cr 267.716 Recovery = 101.61%

Cu 324.752†	70955.2	505.73 µg/L	0.506	505.73 ppb	0.506	0.10%

QC value within limits for Cu 324.752 Recovery = 101.15%

Fe 238.204 Radial†	7524.3	5225.6 µg/L	12.12	5225.6 ppb	12.12	0.23%

QC value within limits for Fe 238.204 Radial Recovery = 104.51%

K 766.490 Radial†	9577.4	5164.3 µg/L	13.25	5164.3 ppb	13.25	0.26%

QC value within limits for K 766.490 Radial Recovery = 103.29%

Mg 279.077 IEC†	2618.8	5268.6 µg/L	12.08	5268.6 ppb	12.08	0.23%

QC value within limits for Mg 279.077 IEC Recovery = 105.37%

Mn 257.610†	177142.4	513.70 µg/L	3.018	513.70 ppb	3.018	0.59%

QC value within limits for Mn 257.610 Recovery = 102.74%

Mo 202.031†	4731.0	503.55 µg/L	0.716	503.55 ppb	0.716	0.14%

QC value within limits for Mo 202.031 Recovery = 100.71%

Na 589.592 Radial†	42601.9	10250 µg/L	37.9	10250 ppb	37.9	0.37%

QC value within limits for Na 589.592 Radial Recovery = 102.50%

Ni 231.604†	10311.3	511.99 µg/L	0.544	511.99 ppb	0.544	0.11%

QC value within limits for Ni 231.604 Recovery = 102.40%

P 214.914†	1534.1	2426.2 µg/L	9.11	2426.2 ppb	9.11	0.38%

QC value within limits for P 214.914 Recovery = 97.05%

Pb 220.353†	2184.8	503.21 µg/L	2.026	503.21 ppb	2.026	0.40%

QC value within limits for Pb 220.353 Recovery = 100.64%

S 181.975 Axial†	239.1	1004.1 µg/L	10.17	1004.1 ppb	10.17	1.01%

QC value within limits for S 181.975 Axial Recovery = 100.41%

Sb 206.836†	581.4	497.11 µg/L	4.001	497.11 ppb	4.001	0.80%

QC value within limits for Sb 206.836 Recovery = 99.42%

Se 196.026†	464.8	499.66 µg/L	3.480	499.66 ppb	3.480	0.70%

QC value within limits for Se 196.026 Recovery = 99.93%

SiO2†	31596.1	5448.6 µg/L	5.58	5448.6 ppb	5.58	0.10%

QC value within limits for SiO2 Recovery = 101.89%

Si 251.611†	36940.0	2506.4 µg/L	5.49	2506.4 ppb	5.49	0.22%

QC value within limits for Si 251.611 Recovery = 100.26%

Sn 189.927†	1163.7	505.97 µg/L	3.788	505.97 ppb	3.788	0.75%

QC value within limits for Sn 189.927 Recovery = 101.19%

Sr 421.552†	118311.4	508.01 µg/L	1.865	508.01 ppb	1.865	0.37%

QC value within limits for Sr 421.552 Recovery = 101.60%

Ti 334.940†	222054.4	506.42 µg/L	2.959	506.42 ppb	2.959	0.58%

QC value within limits for Ti 334.940 Recovery = 101.28%

Tl 190.801†	349.3	503.19 µg/L	2.967	503.19 ppb	2.967	0.59%

QC value within limits for Tl 190.801 Recovery = 100.64%

U 409.014†	5381.2	516.15 µg/L	4.584	516.15 ppb	4.584	0.89%

QC value within limits for U 409.014 Recovery = 103.23%

V 292.402†	47788.3	509.54 µg/L	0.921	509.54 ppb	0.921	0.18%

QC value within limits for V 292.402 Recovery = 101.91%

Zn 213.857†	21771.2	505.26 µg/L	1.509	505.26 ppb	1.509	0.30%

QC value within limits for Zn 213.857 Recovery = 101.05%

All analyte(s) passed QC.

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 04:46:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	166968.0	166968.0	100	%			04:46:52
1	Al 396.153Radial†	-145.4	5.2	2.1824	µg/L	2.1824	ppb	04:46:52
1	Ca 317.933Radial†	892.8	7.4	1.3823	µg/L	1.3823	ppb	04:47:13
1	Fe 238.204 Radial†	-10.8	16.6	11.490	µg/L	11.490	ppb	04:47:13
1	K 766.490 Radial†	849.9	-16.6	-8.9430	µg/L	-8.9430	ppb	04:46:52
1	Mg 279.077 IEC†	38.6	-11.9	-23.949	µg/L	-23.949	ppb	04:47:13
1	Na 589.592 Radial†	152.0	33.5	8.0640	µg/L	8.0640	ppb	04:46:52
1	Sr 421.552†	-0.5	8.2	0.0350	µg/L	0.0350	ppb	04:46:52
1	Sc 361.383	2046295.9	2046295.9	98.552	%			04:48:15
1	Y 371.029	1336328.3	1336328.3	98.491	%			04:48:15
1	Ag 328.068†	-848.4	106.5	0.9054	µg/L	0.9054	ppb	04:48:21
1	As 188.979†	0.8	0.6	0.8966	µg/L	0.8966	ppb	04:48:41
1	B 249.677†	234.1	26.9	1.0568	µg/L	1.0568	ppb	04:48:21
1	Ba 233.527†	-82.6	5.9	0.1446	µg/L	0.1446	ppb	04:48:41
1	Be 313.107†	3605.1	294.8	0.1692	µg/L	0.1692	ppb	04:48:21
1	Cd 226.502†	-130.2	10.0	0.2301	µg/L	0.2301	ppb	04:48:41
1	Co 228.616†	-96.4	-3.4	-0.1578	µg/L	-0.1578	ppb	04:48:41
1	Cr 267.716†	-176.0	6.8	0.1313	µg/L	0.1313	ppb	04:48:21
1	Cu 324.752†	4930.2	87.1	0.6214	µg/L	0.6214	ppb	04:48:21
1	Mn 257.610†	154.8	68.0	0.1972	µg/L	0.1972	ppb	04:48:21
1	Mo 202.031†	-0.5	-3.4	-0.3583	µg/L	-0.3583	ppb	04:48:41
1	Ni 231.604†	437.1	10.2	0.5079	µg/L	0.5079	ppb	04:48:41
1	P 214.914†	241.2	-9.0	-14.751	µg/L	-14.751	ppb	04:48:41
1	Pb 220.353†	58.5	-7.8	-1.7972	µg/L	-1.7972	ppb	04:48:41
1	S 181.975 Axial†	34.6	-9.3	-39.033	µg/L	-39.033	ppb	04:48:41
1	Sb 206.836†	30.2	7.4	6.3621	µg/L	6.3621	ppb	04:48:41
1	Se 196.026†	14.2	-6.0	-6.4572	µg/L	-6.4572	ppb	04:48:41
1	SiO2†	3210.6	47.8	8.2366	µg/L	8.2366	ppb	04:48:21
1	Si 251.611†	385.0	44.5	3.0544	µg/L	3.0544	ppb	04:48:41
1	Sn 189.927†	10.3	2.2	0.9585	µg/L	0.9585	ppb	04:48:41
1	Ti 334.940†	1129.1	-19.8	-0.0453	µg/L	-0.0453	ppb	04:48:21
1	Tl 190.801†	-19.8	7.8	11.220	µg/L	11.220	ppb	04:48:41
1	U 409.014†	-43.0	-15.4	-1.4836	µg/L	-1.4836	ppb	04:48:21
1	V 292.402†	-175.7	27.7	0.2888	µg/L	0.2888	ppb	04:48:21
1	Zn 213.857†	729.9	7.8	0.1785	µg/L	0.1785	ppb	04:48:41
2	Sc RADIAL	166415.3	166415.3	100	%			04:47:18
2	Al 396.153Radial†	-160.1	-9.9	-4.1138	µg/L	-4.1138	ppb	04:47:18
2	Ca 317.933Radial†	882.0	-0.4	-0.0817	µg/L	-0.0817	ppb	04:47:39
2	Fe 238.204 Radial†	-21.1	6.3	4.3267	µg/L	4.3267	ppb	04:47:39
2	K 766.490 Radial†	1000.5	136.7	73.722	µg/L	73.722	ppb	04:47:18
2	Mg 279.077 IEC†	42.8	-7.6	-15.230	µg/L	-15.230	ppb	04:47:39
2	Na 589.592 Radial†	131.6	13.6	3.2769	µg/L	3.2769	ppb	04:47:18
2	Sr 421.552†	43.4	52.0	0.2234	µg/L	0.2234	ppb	04:47:18
2	Sc 361.383	2044409.0	2044409.0	98.461	%			04:48:47
2	Y 371.029	1334923.3	1334923.3	98.388	%			04:48:47
2	Ag 328.068†	-818.3	136.2	1.1599	µg/L	1.1599	ppb	04:48:53
2	As 188.979†	1.2	1.0	1.4862	µg/L	1.4862	ppb	04:49:13
2	B 249.677†	249.4	42.6	1.6819	µg/L	1.6819	ppb	04:48:53
2	Ba 233.527†	-91.6	-3.3	-0.0791	µg/L	-0.0791	ppb	04:49:13
2	Be 313.107†	4318.9	1023.1	0.5891	µg/L	0.5891	ppb	04:48:53
2	Cd 226.502†	-127.2	12.9	0.3013	µg/L	0.3013	ppb	04:49:13
2	Co 228.616†	-99.2	-6.5	-0.2968	µg/L	-0.2968	ppb	04:49:13
2	Cr 267.716†	-151.3	31.7	0.6081	µg/L	0.6081	ppb	04:48:53
2	Cu 324.752†	5011.6	174.4	1.2419	µg/L	1.2419	ppb	04:48:53
2	Mn 257.610†	293.3	208.7	0.6053	µg/L	0.6053	ppb	04:48:53
2	Mo 202.031†	-4.6	-7.5	-0.7939	µg/L	-0.7939	ppb	04:49:13
2	Ni 231.604†	455.6	29.4	1.4626	µg/L	1.4626	ppb	04:49:13
2	P 214.914†	255.5	5.8	9.2418	µg/L	9.2418	ppb	04:49:13
2	Pb 220.353†	53.9	-12.4	-2.8647	µg/L	-2.8647	ppb	04:49:13

2	S 181.975 Axial†	39.8	-4.0	-16.766 µg/L	-16.766 ppb	04:49:13
2	Sb 206.836†	26.9	4.0	3.4671 µg/L	3.4671 ppb	04:49:13
2	Se 196.026†	13.2	-7.0	-7.5222 µg/L	-7.5222 ppb	04:49:13
2	SiO2†	3237.0	77.6	13.378 µg/L	13.378 ppb	04:48:53
2	Si 251.611†	372.4	32.1	2.1191 µg/L	2.1191 ppb	04:49:13
2	Sn 189.927†	12.2	4.1	1.7836 µg/L	1.7836 ppb	04:49:13
2	Ti 334.940†	1344.3	199.7	0.4556 µg/L	0.4556 ppb	04:48:53
2	Tl 190.801†	-25.6	1.8	2.6105 µg/L	2.6105 ppb	04:49:13
2	U 409.014†	-2.0	26.3	2.5268 µg/L	2.5268 ppb	04:48:53
2	V 292.402†	-136.1	67.8	0.7154 µg/L	0.7154 ppb	04:48:53
2	Zn 213.857†	731.8	10.4	0.2327 µg/L	0.2327 ppb	04:49:13
3	Sc RADIAL	165864.5	165864.5	99.7 %		04:47:44
3	Al 396.153Radial†	-138.4	11.3	4.7335 µg/L	4.7335 ppb	04:47:44
3	Ca 317.933Radial†	897.6	18.1	3.3793 µg/L	3.3793 ppb	04:48:05
3	Fe 238.204 Radial†	-17.1	10.2	7.0547 µg/L	7.0547 ppb	04:48:05
3	K 766.490 Radial†	855.4	-5.5	-2.9564 µg/L	-2.9564 ppb	04:47:44
3	Mg 279.077 IEC†	45.5	-4.7	-9.4769 µg/L	-9.4769 ppb	04:48:05
3	Na 589.592 Radial†	167.6	50.1	12.060 µg/L	12.060 ppb	04:47:44
3	Sr 421.552†	-5.2	3.4	0.0146 µg/L	0.0146 ppb	04:47:44
3	Sc 361.383	2058381.0	2058381.0	99.134 %		04:49:19
3	Y 371.029	1344164.6	1344164.6	99.069 %		04:49:19
3	Ag 328.068†	-794.1	166.2	1.4142 µg/L	1.4142 ppb	04:49:25
3	As 188.979†	7.3	7.1	10.713 µg/L	10.713 ppb	04:49:45
3	B 249.677†	240.0	31.4	1.2371 µg/L	1.2371 ppb	04:49:25
3	Ba 233.527†	-73.5	15.5	0.3817 µg/L	0.3817 ppb	04:49:45
3	Be 313.107†	3532.1	199.7	0.1150 µg/L	0.1150 ppb	04:49:25
3	Cd 226.502†	-136.8	4.1	0.1003 µg/L	0.1003 ppb	04:49:45
3	Co 228.616†	-97.7	-4.2	-0.1938 µg/L	-0.1938 ppb	04:49:45
3	Cr 267.716†	-182.9	0.9	0.0178 µg/L	0.0178 ppb	04:49:25
3	Cu 324.752†	4854.7	-18.4	-0.1301 µg/L	-0.1301 ppb	04:49:25
3	Mn 257.610†	106.1	17.9	0.0518 µg/L	0.0518 ppb	04:49:25
3	Mo 202.031†	0.4	-2.5	-0.2605 µg/L	-0.2605 ppb	04:49:45
3	Ni 231.604†	451.6	22.2	1.1060 µg/L	1.1060 ppb	04:49:45
3	P 214.914†	245.7	-5.8	-9.4717 µg/L	-9.4717 ppb	04:49:45
3	Pb 220.353†	60.9	-5.7	-1.3272 µg/L	-1.3272 ppb	04:49:45
3	S 181.975 Axial†	38.8	-5.3	-22.128 µg/L	-22.128 ppb	04:49:45
3	Sb 206.836†	27.9	4.9	4.2049 µg/L	4.2049 ppb	04:49:45
3	Se 196.026†	18.7	-1.6	-1.6768 µg/L	-1.6768 ppb	04:49:45
3	SiO2†	3174.1	-8.2	-1.4147 µg/L	-1.4147 ppb	04:49:25
3	Si 251.611†	393.1	50.4	3.4236 µg/L	3.4236 ppb	04:49:45
3	Sn 189.927†	12.2	4.0	1.7444 µg/L	1.7444 ppb	04:49:45
3	Ti 334.940†	1195.4	40.3	0.0918 µg/L	0.0918 ppb	04:49:25
3	Tl 190.801†	-22.3	5.4	7.7429 µg/L	7.7429 ppb	04:49:45
3	U 409.014†	29.1	57.6	5.5359 µg/L	5.5359 ppb	04:49:25
3	V 292.402†	-140.1	64.7	0.6908 µg/L	0.6908 ppb	04:49:25
3	Zn 213.857†	726.2	-0.3	-0.0122 µg/L	-0.0122 ppb	04:49:45

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2049695.3	98.715	%	0.3651				0.37%
Sc RADIAL	166415.9	100	%	0.3				0.33%
Y 371.029	1338472.1	98.649	%	0.3670				0.37%
Ag 328.068†	136.3	1.1598	µg/L	0.25442	1.1598	ppb	0.25442	21.94%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	2.2	0.9340	µg/L	4.55387	0.9340	ppb	4.55387	487.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.9	4.3653	µg/L	5.50526	4.3653	ppb	5.50526	126.12%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	33.6	1.3252	µg/L	0.32173	1.3252	ppb	0.32173	24.28%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	6.0	0.1491	µg/L	0.23041	0.1491	ppb	0.23041	154.55%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	505.9	0.2911	µg/L	0.25950	0.2911	ppb	0.25950	89.14%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	8.3	1.5600	µg/L	1.73730	1.5600	ppb	1.73730	111.37%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	9.0	0.2105	µg/L	0.10189	0.2105	ppb	0.10189	48.39%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-4.7	-0.2161	µg/L	0.07212	-0.2161	ppb	0.07212	33.37%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                13.1      0.2524 µg/L       0.31320      0.2524 ppb        0.31320 124.09%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                81.0      0.5778 µg/L       0.68706      0.5778 ppb        0.68706 118.92%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         11.0      7.6239 µg/L       3.61550      7.6239 ppb        3.61550  47.42%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          38.2     20.608 µg/L       46.0957     20.608 ppb        46.0957 223.68%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -8.1    -16.219 µg/L        7.2868    -16.219 ppb         7.2868  44.93%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                98.2      0.2848 µg/L       0.28694      0.2848 ppb        0.28694 100.76%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -4.4     -0.4709 µg/L       0.28395     -0.4709 ppb        0.28395  60.30%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         32.4      7.8004 µg/L       4.39771      7.8004 ppb        4.39771  56.38%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                20.6      1.0255 µg/L       0.48238      1.0255 ppb        0.48238  47.04%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -3.0     -4.9937 µg/L      12.60771     -4.9937 ppb       12.60771 252.47%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -8.7     -1.9964 µg/L       0.78785     -1.9964 ppb        0.78785  39.46%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -6.2    -25.976 µg/L       11.6214    -25.976 ppb        11.6214  44.74%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 5.5      4.6780 µg/L       1.50438      4.6780 ppb        1.50438  32.16%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -4.9     -5.2187 µg/L       3.11329     -5.2187 ppb        3.11329  59.66%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                      39.0      6.7335 µg/L       7.51028      6.7335 ppb        7.51028 111.54%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                42.4      2.8657 µg/L       0.67243      2.8657 ppb        0.67243  23.46%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 3.5      1.4955 µg/L       0.46542      1.4955 ppb        0.46542  31.12%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                21.2      0.0910 µg/L       0.11511      0.0910 ppb        0.11511 126.50%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                73.4      0.1673 µg/L       0.25885      0.1673 ppb        0.25885 154.69%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.0      7.1911 µg/L       4.33114      7.1911 ppb        4.33114  60.23%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 22.8      2.1930 µg/L       3.52164      2.1930 ppb        3.52164 160.58%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 53.4      0.5650 µg/L       0.23953      0.5650 ppb        0.23953  42.40%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 6.0      0.1330 µg/L       0.12861      0.1330 ppb        0.12861  96.71%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 05:14:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	172227.2	172227.2	104	%			05:15:10
1	Al 396.153Radial†	12633.3	12353.9	5132.1	µg/L	5132.1	ppb	05:15:15
1	Ca 317.933Radial†	29400.2	27518.5	5143.0	µg/L	5143.0	ppb	05:15:15
1	Fe 238.204 Radial†	7675.3	7441.7	5168.2	µg/L	5168.2	ppb	05:15:15
1	K 766.490 Radial†	10648.4	9422.9	5080.9	µg/L	5080.9	ppb	05:15:15
1	Mg 279.077 IEC†	2739.3	2595.8	5222.3	µg/L	5222.3	ppb	05:15:15
1	Na 589.592 Radial†	43834.1	42226.0	10160	µg/L	10160	ppb	05:15:10
1	Sr 421.552†	121134.7	117025.3	502.49	µg/L	502.49	ppb	05:15:10
1	Sc 361.383	2084836.1	2084836.1	100.41	%			05:15:49
1	Y 371.029	1355707.9	1355707.9	99.920	%			05:15:49
1	Ag 328.068†	58493.9	59223.7	505.78	µg/L	505.78	ppb	05:15:55
1	As 188.979†	340.0	338.4	509.27	µg/L	509.27	ppb	05:16:15
1	B 249.677†	12917.0	12653.9	497.87	µg/L	497.87	ppb	05:15:55
1	Ba 233.527†	20511.8	20518.2	503.52	µg/L	503.52	ppb	05:15:55
1	Be 313.107†	883142.0	876193.0	504.87	µg/L	504.87	ppb	05:15:49
1	Cd 226.502†	21774.5	21828.2	504.25	µg/L	504.25	ppb	05:15:55
1	Co 228.616†	11035.8	11085.3	504.91	µg/L	504.91	ppb	05:15:55
1	Cr 267.716†	26151.0	26230.2	503.18	µg/L	503.18	ppb	05:15:55
1	Cu 324.752†	75908.3	70684.6	503.79	µg/L	503.79	ppb	05:15:55
1	Mn 257.610†	177245.2	176436.4	511.66	µg/L	511.66	ppb	05:15:49
1	Mo 202.031†	4700.7	4678.8	497.99	µg/L	497.99	ppb	05:16:15
1	Ni 231.604†	10617.9	10141.5	503.56	µg/L	503.56	ppb	05:15:55
1	P 214.914†	1781.0	1520.1	2403.6	µg/L	2403.6	ppb	05:16:15
1	Pb 220.353†	2250.4	2174.1	500.74	µg/L	500.74	ppb	05:16:15
1	S 181.975 Axial†	276.8	231.3	971.49	µg/L	971.49	ppb	05:16:15
1	Sb 206.836†	603.5	577.8	494.02	µg/L	494.02	ppb	05:16:15
1	Se 196.026†	484.1	461.7	496.29	µg/L	496.29	ppb	05:16:15
1	SiO2†	34822.6	31471.2	5427.0	µg/L	5427.0	ppb	05:15:55
1	Si 251.611†	37277.0	36779.6	2495.6	µg/L	2495.6	ppb	05:15:55
1	Sn 189.927†	1159.2	1146.3	498.42	µg/L	498.42	ppb	05:16:15
1	Ti 334.940†	225269.5	223189.3	509.01	µg/L	509.01	ppb	05:15:49
1	Tl 190.801†	327.0	353.5	509.30	µg/L	509.30	ppb	05:16:15
1	U 409.014†	5376.2	5382.6	516.31	µg/L	516.31	ppb	05:15:55
1	V 292.402†	47555.3	47568.2	507.17	µg/L	507.17	ppb	05:15:55
1	Zn 213.857†	22415.3	21591.5	501.10	µg/L	501.10	ppb	05:15:55
2	Sc RADIAL	167457.3	167457.3	101	%			05:15:21
2	Al 396.153Radial†	12541.6	12610.5	5239.1	µg/L	5239.1	ppb	05:15:26
2	Ca 317.933Radial†	29011.4	27941.2	5222.0	µg/L	5222.0	ppb	05:15:26
2	Fe 238.204 Radial†	7557.8	7536.2	5233.8	µg/L	5233.8	ppb	05:15:26
2	K 766.490 Radial†	10583.7	9651.7	5204.3	µg/L	5204.3	ppb	05:15:26
2	Mg 279.077 IEC†	2710.0	2642.0	5315.2	µg/L	5315.2	ppb	05:15:26
2	Na 589.592 Radial†	43832.4	43430.4	10450	µg/L	10450	ppb	05:15:21
2	Sr 421.552†	121062.2	120286.4	516.49	µg/L	516.49	ppb	05:15:21
2	Sc 361.383	2076921.7	2076921.7	100.03	%			05:16:22
2	Y 371.029	1350159.9	1350159.9	99.511	%			05:16:22
2	Ag 328.068†	58864.5	59816.3	510.85	µg/L	510.85	ppb	05:16:28
2	As 188.979†	333.7	333.4	501.81	µg/L	501.81	ppb	05:16:48
2	B 249.677†	13088.8	12874.6	506.56	µg/L	506.56	ppb	05:16:28
2	Ba 233.527†	20704.4	20788.6	510.16	µg/L	510.16	ppb	05:16:28
2	Be 313.107†	880000.8	876404.3	504.97	µg/L	504.97	ppb	05:16:22
2	Cd 226.502†	21973.6	22109.9	510.75	µg/L	510.75	ppb	05:16:28
2	Co 228.616†	11137.8	11229.2	511.48	µg/L	511.48	ppb	05:16:28
2	Cr 267.716†	26340.3	26518.7	508.71	µg/L	508.71	ppb	05:16:28
2	Cu 324.752†	76399.2	71463.4	509.35	µg/L	509.35	ppb	05:16:28
2	Mn 257.610†	175270.2	175134.6	507.88	µg/L	507.88	ppb	05:16:22
2	Mo 202.031†	4674.9	4670.8	497.15	µg/L	497.15	ppb	05:16:48
2	Ni 231.604†	10754.8	10318.6	512.36	µg/L	512.36	ppb	05:16:28
2	P 214.914†	1773.8	1519.7	2401.9	µg/L	2401.9	ppb	05:16:48
2	Pb 220.353†	2245.4	2177.6	501.54	µg/L	501.54	ppb	05:16:48

2	S 181.975 Axial†	279.4	235.0	986.68 µg/L	986.68 ppb	05:16:48
2	Sb 206.836†	594.4	571.0	488.14 µg/L	488.14 ppb	05:16:48
2	Se 196.026†	488.5	467.9	502.99 µg/L	502.99 ppb	05:16:48
2	SiO2†	34992.7	31773.4	5479.1 µg/L	5479.1 ppb	05:16:28
2	Si 251.611†	37551.6	37195.5	2524.5 µg/L	2524.5 ppb	05:16:28
2	Sn 189.927†	1163.0	1154.4	501.99 µg/L	501.99 ppb	05:16:48
2	Ti 334.940†	221445.5	220221.3	502.24 µg/L	502.24 ppb	05:16:22
2	Tl 190.801†	317.7	345.4	497.52 µg/L	497.52 ppb	05:16:48
2	U 409.014†	5392.1	5418.9	519.78 µg/L	519.78 ppb	05:16:28
2	V 292.402†	47943.9	48137.2	513.18 µg/L	513.18 ppb	05:16:28
2	Zn 213.857†	22617.6	21878.8	507.76 µg/L	507.76 ppb	05:16:28
3	Sc RADIAL	171569.2	171569.2	103 %		05:15:32
3	Al 396.153Radial†	12489.9	12261.7	5093.6 µg/L	5093.6 ppb	05:15:37
3	Ca 317.933Radial†	29008.7	27247.8	5092.4 µg/L	5092.4 ppb	05:15:37
3	Fe 238.204 Radial†	7578.5	7376.3	5122.9 µg/L	5122.9 ppb	05:15:37
3	K 766.490 Radial†	10611.7	9426.8	5083.0 µg/L	5083.0 ppb	05:15:37
3	Mg 279.077 IEC†	2697.7	2565.6	5161.9 µg/L	5161.9 ppb	05:15:37
3	Na 589.592 Radial†	43952.7	42503.3	10227 µg/L	10227 ppb	05:15:32
3	Sr 421.552†	121612.8	117937.6	506.40 µg/L	506.40 ppb	05:15:32
3	Sc 361.383	2059512.6	2059512.6	99.188 %		05:16:55
3	Y 371.029	1338819.3	1338819.3	98.675 %		05:16:55
3	Ag 328.068†	57729.6	59169.5	505.31 µg/L	505.31 ppb	05:17:01
3	As 188.979†	339.0	341.6	513.93 µg/L	513.93 ppb	05:17:21
3	B 249.677†	12826.5	12720.9	500.53 µg/L	500.53 ppb	05:17:01
3	Ba 233.527†	20249.0	20504.5	503.19 µg/L	503.19 ppb	05:17:01
3	Be 313.107†	877081.2	880897.4	507.56 µg/L	507.56 ppb	05:16:55
3	Cd 226.502†	21494.7	21812.8	503.90 µg/L	503.90 ppb	05:17:01
3	Co 228.616†	10901.3	11084.9	504.91 µg/L	504.91 ppb	05:17:01
3	Cr 267.716†	25768.1	26164.4	501.92 µg/L	501.92 ppb	05:17:01
3	Cu 324.752†	74890.8	70588.3	503.10 µg/L	503.10 ppb	05:17:01
3	Mn 257.610†	174518.1	175857.5	509.98 µg/L	509.98 ppb	05:16:55
3	Mo 202.031†	4673.0	4708.4	501.14 µg/L	501.14 ppb	05:17:21
3	Ni 231.604†	10484.1	10136.7	503.32 µg/L	503.32 ppb	05:17:01
3	P 214.914†	1768.1	1528.8	2418.1 µg/L	2418.1 ppb	05:17:21
3	Pb 220.353†	2227.7	2178.8	501.82 µg/L	501.82 ppb	05:17:21
3	S 181.975 Axial†	278.2	236.1	991.61 µg/L	991.61 ppb	05:17:21
3	Sb 206.836†	601.5	583.2	498.64 µg/L	498.64 ppb	05:17:21
3	Se 196.026†	477.3	460.7	495.30 µg/L	495.30 ppb	05:17:21
3	SiO2†	34350.4	31421.6	5418.5 µg/L	5418.5 ppb	05:17:01
3	Si 251.611†	36776.4	36731.4	2492.2 µg/L	2492.2 ppb	05:17:01
3	Sn 189.927†	1155.2	1156.4	502.75 µg/L	502.75 ppb	05:17:21
3	Ti 334.940†	220724.3	221365.5	504.85 µg/L	504.85 ppb	05:16:55
3	Tl 190.801†	318.7	349.1	502.92 µg/L	502.92 ppb	05:17:21
3	U 409.014†	5400.9	5473.3	525.04 µg/L	525.04 ppb	05:17:01
3	V 292.402†	46896.0	47485.9	506.33 µg/L	506.33 ppb	05:17:01
3	Zn 213.857†	22082.8	21530.7	499.68 µg/L	499.68 ppb	05:17:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	2073756.8	99.874	%	0.6239				0.62%
Sc RADIAL	170417.9	102	%	1.6				1.52%
Y 371.029	1348229.0	99.368	%	0.6345				0.64%
Ag 328.068†	59403.1	507.31	µg/L	3.071	507.31	ppb	3.071	0.61%
QC value within limits for Ag 328.068 Recovery = 101.46%								
Al 396.153Radial†	12408.7	5154.9	µg/L	75.42	5154.9	ppb	75.42	1.46%
QC value within limits for Al 396.153Radial Recovery = 103.10%								
As 188.979†	337.8	508.33	µg/L	6.112	508.33	ppb	6.112	1.20%
QC value within limits for As 188.979 Recovery = 101.67%								
B 249.677†	12749.8	501.65	µg/L	4.455	501.65	ppb	4.455	0.89%
QC value within limits for B 249.677 Recovery = 100.33%								
Ba 233.527†	20603.8	505.62	µg/L	3.932	505.62	ppb	3.932	0.78%
QC value within limits for Ba 233.527 Recovery = 101.12%								
Be 313.107†	877831.6	505.80	µg/L	1.525	505.80	ppb	1.525	0.30%
QC value within limits for Be 313.107 Recovery = 101.16%								
Ca 317.933Radial†	27569.2	5152.5	µg/L	65.31	5152.5	ppb	65.31	1.27%
QC value within limits for Ca 317.933Radial Recovery = 103.05%								
Cd 226.502†	21917.0	506.30	µg/L	3.861	506.30	ppb	3.861	0.76%
QC value within limits for Cd 226.502 Recovery = 101.26%								
Co 228.616†	11133.1	507.10	µg/L	3.790	507.10	ppb	3.790	0.75%

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   QC value within limits for Co 228.616  Recovery = 101.42%
Cr 267.716†            26304.4      504.60 µg/L         3.616      504.60 ppb          3.616   0.72%
   QC value within limits for Cr 267.716  Recovery = 100.92%
Cu 324.752†            70912.1      505.41 µg/L         3.423      505.41 ppb          3.423   0.68%
   QC value within limits for Cu 324.752  Recovery = 101.08%
Fe 238.204 Radial†      7451.4      5175.0 µg/L        55.76      5175.0 ppb         55.76   1.08%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.50%
K 766.490 Radial†       9500.4      5122.8 µg/L        70.63      5122.8 ppb         70.63   1.38%
   QC value within limits for K 766.490 Radial  Recovery = 102.46%
Mg 279.077 IEC†         2601.1      5233.1 µg/L        77.23      5233.1 ppb         77.23   1.48%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.66%
Mn 257.610†           175809.5      509.84 µg/L         1.891      509.84 ppb         1.891   0.37%
   QC value within limits for Mn 257.610  Recovery = 101.97%
Mo 202.031†             4686.0      498.76 µg/L         2.105      498.76 ppb         2.105   0.42%
   QC value within limits for Mo 202.031  Recovery = 99.75%
Na 589.592 Radial†     42719.9       10279 µg/L       151.8        10279 ppb        151.8   1.48%
   QC value within limits for Na 589.592 Radial  Recovery = 102.79%
Ni 231.604†            10199.0      506.41 µg/L         5.150      506.41 ppb         5.150   1.02%
   QC value within limits for Ni 231.604  Recovery = 101.28%
P 214.914†              1522.9      2407.9 µg/L         8.91      2407.9 ppb          8.91   0.37%
   QC value within limits for P 214.914  Recovery = 96.32%
Pb 220.353†             2176.8      501.37 µg/L         0.562      501.37 ppb         0.562   0.11%
   QC value within limits for Pb 220.353  Recovery = 100.27%
S 181.975 Axial†         234.1      983.26 µg/L        10.489      983.26 ppb        10.489   1.07%
   QC value within limits for S 181.975 Axial  Recovery = 98.33%
Sb 206.836†              577.3      493.60 µg/L         5.263      493.60 ppb         5.263   1.07%
   QC value within limits for Sb 206.836  Recovery = 98.72%
Se 196.026†              463.4      498.19 µg/L         4.184      498.19 ppb         4.184   0.84%
   QC value within limits for Se 196.026  Recovery = 99.64%
SiO2†                  31555.4      5441.5 µg/L        32.84      5441.5 ppb        32.84   0.60%
   QC value within limits for SiO2  Recovery = 101.76%
Si 251.611†            36902.2      2504.1 µg/L        17.72      2504.1 ppb        17.72   0.71%
   QC value within limits for Si 251.611  Recovery = 100.16%
Sn 189.927†             1152.4      501.05 µg/L         2.312      501.05 ppb         2.312   0.46%
   QC value within limits for Sn 189.927  Recovery = 100.21%
Sr 421.552†           118416.4      508.46 µg/L         7.224      508.46 ppb         7.224   1.42%
   QC value within limits for Sr 421.552  Recovery = 101.69%
Ti 334.940†           221592.0      505.37 µg/L         3.416      505.37 ppb         3.416   0.68%
   QC value within limits for Ti 334.940  Recovery = 101.07%
Tl 190.801†              349.4      503.25 µg/L         5.895      503.25 ppb         5.895   1.17%
   QC value within limits for Tl 190.801  Recovery = 100.65%
U 409.014†              5425.0      520.38 µg/L         4.400      520.38 ppb         4.400   0.85%
   QC value within limits for U 409.014  Recovery = 104.08%
V 292.402†             47730.4      508.89 µg/L         3.738      508.89 ppb         3.738   0.73%
   QC value within limits for V 292.402  Recovery = 101.78%
Zn 213.857†            21667.0      502.85 µg/L         4.313      502.85 ppb         4.313   0.86%
   QC value within limits for Zn 213.857  Recovery = 100.57%
All analyte(s) passed QC.
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Sequence No.: 20
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 05:17:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	165718.7	165718.7	99.6	%			05:18:03
1	Al 396.153Radial†	-141.3	8.3	3.4527	µg/L	3.4527	ppb	05:18:03
1	Ca 317.933Radial†	899.3	20.6	3.8510	µg/L	3.8510	ppb	05:18:23
1	Fe 238.204 Radial†	-7.3	20.1	13.871	µg/L	13.871	ppb	05:18:23
1	K 766.490 Radial†	843.0	-17.2	-9.2481	µg/L	-9.2481	ppb	05:18:03
1	Mg 279.077 IEC†	50.9	0.7	1.4491	µg/L	1.4491	ppb	05:18:23
1	Na 589.592 Radial†	143.6	26.3	6.3191	µg/L	6.3191	ppb	05:18:03
1	Sr 421.552†	63.7	72.6	0.3119	µg/L	0.3119	ppb	05:18:03
1	Sc 361.383	2066032.6	2066032.6	99.502	%			05:19:25
1	Y 371.029	1348705.3	1348705.3	99.403	%			05:19:25
1	Ag 328.068†	-873.4	89.6	0.7604	µg/L	0.7604	ppb	05:19:31
1	As 188.979†	5.1	4.9	7.3538	µg/L	7.3538	ppb	05:19:51
1	B 249.677†	236.7	27.2	1.0712	µg/L	1.0712	ppb	05:19:31
1	Ba 233.527†	-78.8	10.5	0.2575	µg/L	0.2575	ppb	05:19:51
1	Be 313.107†	3547.7	202.1	0.1176	µg/L	0.1176	ppb	05:19:31
1	Cd 226.502†	-121.1	20.5	0.4759	µg/L	0.4759	ppb	05:19:51
1	Co 228.616†	-99.9	-6.1	-0.2795	µg/L	-0.2795	ppb	05:19:51
1	Cr 267.716†	-183.4	1.1	0.0202	µg/L	0.0202	ppb	05:19:31
1	Cu 324.752†	4795.9	-95.7	-0.6791	µg/L	-0.6791	ppb	05:19:31
1	Mn 257.610†	230.4	142.4	0.4130	µg/L	0.4130	ppb	05:19:31
1	Mo 202.031†	3.2	0.4	0.0411	µg/L	0.0411	ppb	05:19:51
1	Ni 231.604†	436.5	5.4	0.2705	µg/L	0.2705	ppb	05:19:51
1	P 214.914†	249.2	-3.2	-5.1420	µg/L	-5.1420	ppb	05:19:51
1	Pb 220.353†	63.1	-3.7	-0.8596	µg/L	-0.8596	ppb	05:19:51
1	S 181.975 Axial†	39.3	-4.9	-20.609	µg/L	-20.609	ppb	05:19:51
1	Sb 206.836†	23.3	0.2	0.2016	µg/L	0.2016	ppb	05:19:51
1	Se 196.026†	22.6	2.2	2.4138	µg/L	2.4138	ppb	05:19:51
1	SiO2†	3148.0	-46.2	-7.9741	µg/L	-7.9741	ppb	05:19:31
1	Si 251.611†	383.9	39.7	2.7141	µg/L	2.7141	ppb	05:19:51
1	Sn 189.927†	9.4	1.2	0.5163	µg/L	0.5163	ppb	05:19:51
1	Ti 334.940†	1372.5	213.8	0.4877	µg/L	0.4877	ppb	05:19:31
1	Tl 190.801†	-24.5	3.2	4.6454	µg/L	4.6454	ppb	05:19:51
1	U 409.014†	35.2	63.6	6.1173	µg/L	6.1173	ppb	05:19:31
1	V 292.402†	-202.0	3.0	0.0431	µg/L	0.0431	ppb	05:19:31
1	Zn 213.857†	710.6	-18.6	-0.4370	µg/L	-0.4370	ppb	05:19:51
2	Sc RADIAL	166541.2	166541.2	100	%			05:18:29
2	Al 396.153Radial†	-156.8	-6.5	-2.6998	µg/L	-2.6998	ppb	05:18:29
2	Ca 317.933Radial†	871.5	-11.6	-2.1711	µg/L	-2.1711	ppb	05:18:49
2	Fe 238.204 Radial†	-11.5	15.9	10.980	µg/L	10.980	ppb	05:18:49
2	K 766.490 Radial†	807.0	-57.3	-30.909	µg/L	-30.909	ppb	05:18:29
2	Mg 279.077 IEC†	41.5	-9.0	-18.073	µg/L	-18.073	ppb	05:18:49
2	Na 589.592 Radial†	165.7	47.6	11.457	µg/L	11.457	ppb	05:18:29
2	Sr 421.552†	7.6	16.2	0.0697	µg/L	0.0697	ppb	05:18:29
2	Sc 361.383	2062257.0	2062257.0	99.320	%			05:19:57
2	Y 371.029	1348118.6	1348118.6	99.360	%			05:19:57
2	Ag 328.068†	-904.7	56.4	0.4841	µg/L	0.4841	ppb	05:20:03
2	As 188.979†	-1.0	-1.2	-1.7592	µg/L	-1.7592	ppb	05:20:23
2	B 249.677†	218.7	9.6	0.3746	µg/L	0.3746	ppb	05:20:03
2	Ba 233.527†	-79.2	10.0	0.2457	µg/L	0.2457	ppb	05:20:23
2	Be 313.107†	3435.7	95.9	0.0561	µg/L	0.0561	ppb	05:20:03
2	Cd 226.502†	-127.1	14.1	0.3230	µg/L	0.3230	ppb	05:20:23
2	Co 228.616†	-100.8	-7.1	-0.3272	µg/L	-0.3272	ppb	05:20:23
2	Cr 267.716†	-158.4	25.9	0.4966	µg/L	0.4966	ppb	05:20:03
2	Cu 324.752†	4825.9	-56.6	-0.4012	µg/L	-0.4012	ppb	05:20:03
2	Mn 257.610†	159.8	71.8	0.2082	µg/L	0.2082	ppb	05:20:03
2	Mo 202.031†	-3.8	-6.6	-0.7022	µg/L	-0.7022	ppb	05:20:23
2	Ni 231.604†	452.1	21.9	1.0920	µg/L	1.0920	ppb	05:20:23
2	P 214.914†	248.9	-3.1	-5.0009	µg/L	-5.0009	ppb	05:20:23
2	Pb 220.353†	60.7	-6.0	-1.3826	µg/L	-1.3826	ppb	05:20:23

2	S 181.975 Axial†	39.7	-4.4	-18.583 µg/L	-18.583 ppb	05:20:23
2	Sb 206.836†	23.2	0.1	0.0722 µg/L	0.0722 ppb	05:20:23
2	Se 196.026†	16.7	-3.6	-3.8275 µg/L	-3.8275 ppb	05:20:23
2	SiO2†	3235.7	47.8	8.2443 µg/L	8.2443 ppb	05:20:03
2	Si 251.611†	409.3	66.0	4.4300 µg/L	4.4300 ppb	05:20:23
2	Sn 189.927†	16.7	8.6	3.7176 µg/L	3.7176 ppb	05:20:23
2	Ti 334.940†	1310.6	154.0	0.3513 µg/L	0.3513 ppb	05:20:03
2	Tl 190.801†	-24.7	3.0	4.2932 µg/L	4.2932 ppb	05:20:23
2	U 409.014†	-82.9	-55.2	-5.3150 µg/L	-5.3150 ppb	05:20:03
2	V 292.402†	-130.5	74.6	0.7754 µg/L	0.7754 ppb	05:20:03
2	Zn 213.857†	735.2	7.4	0.1700 µg/L	0.1700 ppb	05:20:23
3	Sc RADIAL	163672.9	163672.9	98.4 %		05:18:55
3	Al 396.153Radial†	-134.5	13.4	5.6184 µg/L	5.6184 ppb	05:18:55
3	Ca 317.933Radial†	892.3	24.8	4.6311 µg/L	4.6311 ppb	05:19:15
3	Fe 238.204 Radial†	-14.6	12.5	8.6595 µg/L	8.6595 ppb	05:19:15
3	K 766.490 Radial†	833.4	-16.3	-8.7967 µg/L	-8.7967 ppb	05:18:55
3	Mg 279.077 IEC†	36.5	-13.2	-26.648 µg/L	-26.648 ppb	05:19:15
3	Na 589.592 Radial†	133.9	18.2	4.3681 µg/L	4.3681 ppb	05:18:55
3	Sr 421.552†	-16.3	-7.9	-0.0339 µg/L	-0.0339 ppb	05:18:55
3	Sc 361.383	2048624.7	2048624.7	98.664 %		05:20:29
3	Y 371.029	1337702.1	1337702.1	98.592 %		05:20:29
3	Ag 328.068†	-935.3	19.3	0.1658 µg/L	0.1658 ppb	05:20:35
3	As 188.979†	6.5	6.4	9.6318 µg/L	9.6318 ppb	05:20:55
3	B 249.677†	254.6	47.4	1.8680 µg/L	1.8680 ppb	05:20:35
3	Ba 233.527†	-92.0	-3.5	-0.0857 µg/L	-0.0857 ppb	05:20:55
3	Be 313.107†	3503.8	187.9	0.1085 µg/L	0.1085 ppb	05:20:35
3	Cd 226.502†	-137.0	3.3	0.0733 µg/L	0.0733 ppb	05:20:55
3	Co 228.616†	-94.6	-1.5	-0.0712 µg/L	-0.0712 ppb	05:20:55
3	Cr 267.716†	-174.0	9.0	0.1735 µg/L	0.1735 ppb	05:20:35
3	Cu 324.752†	4839.3	-10.7	-0.0747 µg/L	-0.0747 ppb	05:20:35
3	Mn 257.610†	183.2	96.5	0.2798 µg/L	0.2798 ppb	05:20:35
3	Mo 202.031†	-3.0	-5.9	-0.6226 µg/L	-0.6226 ppb	05:20:55
3	Ni 231.604†	451.0	23.8	1.1844 µg/L	1.1844 ppb	05:20:55
3	P 214.914†	248.2	-2.2	-3.4885 µg/L	-3.4885 ppb	05:20:55
3	Pb 220.353†	60.9	-5.4	-1.2429 µg/L	-1.2429 ppb	05:20:55
3	S 181.975 Axial†	36.5	-7.4	-30.986 µg/L	-30.986 ppb	05:20:55
3	Sb 206.836†	29.1	6.3	5.4094 µg/L	5.4094 ppb	05:20:55
3	Se 196.026†	13.6	-6.7	-7.1334 µg/L	-7.1334 ppb	05:20:55
3	SiO2†	3148.4	-19.0	-3.2795 µg/L	-3.2795 ppb	05:20:35
3	Si 251.611†	364.6	23.4	1.5553 µg/L	1.5553 ppb	05:20:55
3	Sn 189.927†	12.5	4.4	1.8906 µg/L	1.8906 ppb	05:20:55
3	Ti 334.940†	1234.6	85.7	0.1955 µg/L	0.1955 ppb	05:20:35
3	Tl 190.801†	-27.8	-0.3	-0.4999 µg/L	-0.4999 ppb	05:20:55
3	U 409.014†	-62.4	-35.0	-3.3695 µg/L	-3.3695 ppb	05:20:35
3	V 292.402†	-187.8	15.7	0.1564 µg/L	0.1564 ppb	05:20:35
3	Zn 213.857†	730.3	7.4	0.1665 µg/L	0.1665 ppb	05:20:55

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2058971.4	99.162	%	0.4410				0.44%
Sc RADIAL	165310.9	99.4	%	0.89				0.89%
Y 371.029	1344842.0	99.119	%	0.4562				0.46%
Ag 328.068†	55.1	0.4701	µg/L	0.29754	0.4701	ppb	0.29754	63.29%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.1	2.1238	µg/L	4.31543	2.1238	ppb	4.31543	203.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.4	5.0755	µg/L	6.02758	5.0755	ppb	6.02758	118.76%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	28.1	1.1046	µg/L	0.74728	1.1046	ppb	0.74728	67.65%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.7	0.1392	µg/L	0.19486	0.1392	ppb	0.19486	140.02%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	162.0	0.0941	µg/L	0.03318	0.0941	ppb	0.03318	35.28%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.3	2.1036	µg/L	3.72258	2.1036	ppb	3.72258	176.96%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	12.6	0.2907	µg/L	0.20323	0.2907	ppb	0.20323	69.90%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-4.9	-0.2260	µg/L	0.13612	-0.2260	ppb	0.13612	60.24%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              12.0      0.2301 µg/L      0.24321      0.2301 ppb        0.24321 105.71%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -54.3     -0.3850 µg/L      0.30251     -0.3850 ppb        0.30251  78.58%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       16.1      11.170 µg/L       2.6112      11.170 ppb         2.6112  23.38%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -30.3     -16.318 µg/L      12.6384     -16.318 ppb        12.6384  77.45%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -7.2     -14.424 µg/L      14.3995     -14.424 ppb        14.3995  99.83%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             103.6      0.3003 µg/L      0.10393      0.3003 ppb        0.10393  34.60%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -4.0     -0.4279 µg/L      0.40815     -0.4279 ppb        0.40815  95.39%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       30.7      7.3813 µg/L      3.66182      7.3813 ppb        3.66182  49.61%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              17.1      0.8490 µg/L      0.50308      0.8490 ppb        0.50308  59.26%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -2.8     -4.5438 µg/L      0.91664     -4.5438 ppb        0.91664  20.17%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -5.0     -1.1617 µg/L      0.27080     -1.1617 ppb        0.27080  23.31%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -5.6     -23.393 µg/L       6.6537     -23.393 ppb         6.6537  28.44%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               2.2      1.8944 µg/L      3.04480      1.8944 ppb        3.04480 160.73%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -2.7     -2.8491 µg/L      4.84822     -2.8491 ppb        4.84822 170.17%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    -5.8     -1.0031 µg/L      8.34542     -1.0031 ppb        8.34542 831.98%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              43.1      2.8998 µg/L      1.44628      2.8998 ppb        1.44628  49.88%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               4.7      2.0415 µg/L      1.60595      2.0415 ppb        1.60595  78.67%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              27.0      0.1159 µg/L      0.17744      0.1159 ppb        0.17744 153.10%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             151.2      0.3448 µg/L      0.14623      0.3448 ppb        0.14623  42.41%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               1.9      2.8129 µg/L      2.87438      2.8129 ppb        2.87438 102.19%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -8.9     -0.8557 µg/L      6.11669     -0.8557 ppb        6.11669 714.79%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               31.1      0.3250 µg/L      0.39419      0.3250 ppb        0.39419 121.30%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              -1.3     -0.0335 µg/L      0.34947     -0.0335 ppb        0.34947 >999.9%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 26
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 05:36:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168512.9	168512.9	101	%			05:36:56
1	Al 396.153Radial†	12578.5	12568.8	5221.6	µg/L	5221.6	ppb	05:37:01
1	Ca 317.933Radial†	29047.7	27796.5	5195.0	µg/L	5195.0	ppb	05:37:01
1	Fe 238.204 Radial†	7621.1	7551.6	5244.5	µg/L	5244.5	ppb	05:37:01
1	K 766.490 Radial†	10688.8	9689.5	5224.7	µg/L	5224.7	ppb	05:37:01
1	Mg 279.077 IEC†	2686.6	2602.1	5235.0	µg/L	5235.0	ppb	05:37:01
1	Na 589.592 Radial†	43758.3	43084.4	10367	µg/L	10367	ppb	05:36:56
1	Sr 421.552†	120419.3	118898.2	510.53	µg/L	510.53	ppb	05:36:56
1	Sc 361.383	2087588.6	2087588.6	100.54	%			05:37:35
1	Y 371.029	1357655.6	1357655.6	100.06	%			05:37:35
1	Ag 328.068†	58739.9	59391.6	507.22	µg/L	507.22	ppb	05:37:40
1	As 188.979†	336.7	334.7	503.64	µg/L	503.64	ppb	05:38:01
1	B 249.677†	13054.7	12773.9	502.58	µg/L	502.58	ppb	05:37:40
1	Ba 233.527†	20689.3	20667.9	507.19	µg/L	507.19	ppb	05:37:40
1	Be 313.107†	885298.1	877177.8	505.42	µg/L	505.42	ppb	05:37:35
1	Cd 226.502†	21986.2	22010.2	508.45	µg/L	508.45	ppb	05:37:40
1	Co 228.616†	11166.1	11200.4	510.17	µg/L	510.17	ppb	05:37:40
1	Cr 267.716†	26403.8	26447.4	507.34	µg/L	507.34	ppb	05:37:40
1	Cu 324.752†	76188.9	70864.0	505.08	µg/L	505.08	ppb	05:37:40
1	Mn 257.610†	176389.5	175352.5	508.51	µg/L	508.51	ppb	05:37:35
1	Mo 202.031†	4731.2	4702.9	500.57	µg/L	500.57	ppb	05:38:01
1	Ni 231.604†	10749.7	10258.6	509.38	µg/L	509.38	ppb	05:37:40
1	P 214.914†	1776.9	1513.6	2392.8	µg/L	2392.8	ppb	05:38:01
1	Pb 220.353†	2251.2	2172.0	500.27	µg/L	500.27	ppb	05:38:01
1	S 181.975 Axial†	282.7	236.9	994.65	µg/L	994.65	ppb	05:38:01
1	Sb 206.836†	599.7	573.3	490.10	µg/L	490.10	ppb	05:38:01
1	Se 196.026†	484.3	461.3	495.89	µg/L	495.89	ppb	05:38:01
1	SiO2†	34914.2	31516.5	5434.8	µg/L	5434.8	ppb	05:37:40
1	Si 251.611†	37490.7	36943.2	2507.0	µg/L	2507.0	ppb	05:37:40
1	Sn 189.927†	1166.7	1152.2	501.00	µg/L	501.00	ppb	05:38:01
1	Ti 334.940†	223094.9	220730.5	503.40	µg/L	503.40	ppb	05:37:35
1	Tl 190.801†	318.6	344.7	496.51	µg/L	496.51	ppb	05:38:01
1	U 409.014†	5395.6	5394.8	517.46	µg/L	517.46	ppb	05:37:40
1	V 292.402†	47755.7	47705.1	508.64	µg/L	508.64	ppb	05:37:40
1	Zn 213.857†	22495.4	21641.7	502.24	µg/L	502.24	ppb	05:37:40
2	Sc RADIAL	171136.1	171136.1	103	%			05:37:06
2	Al 396.153Radial†	12536.9	12338.0	5125.5	µg/L	5125.5	ppb	05:37:12
2	Ca 317.933Radial†	28960.3	27271.9	5096.9	µg/L	5096.9	ppb	05:37:12
2	Fe 238.204 Radial†	7623.2	7438.4	5165.9	µg/L	5165.9	ppb	05:37:12
2	K 766.490 Radial†	10589.4	9431.2	5085.4	µg/L	5085.4	ppb	05:37:12
2	Mg 279.077 IEC†	2724.2	2597.9	5226.7	µg/L	5226.7	ppb	05:37:12
2	Na 589.592 Radial†	43608.7	42276.9	10172	µg/L	10172	ppb	05:37:06
2	Sr 421.552†	120504.8	117159.0	503.06	µg/L	503.06	ppb	05:37:06
2	Sc 361.383	2091074.2	2091074.2	100.71	%			05:38:08
2	Y 371.029	1360303.4	1360303.4	100.26	%			05:38:08
2	Ag 328.068†	58298.4	58855.8	502.64	µg/L	502.64	ppb	05:38:14
2	As 188.979†	327.5	325.0	489.20	µg/L	489.20	ppb	05:38:34
2	B 249.677†	12995.2	12693.2	499.42	µg/L	499.42	ppb	05:38:14
2	Ba 233.527†	20516.0	20461.5	502.13	µg/L	502.13	ppb	05:38:14
2	Be 313.107†	887726.5	878121.3	505.96	µg/L	505.96	ppb	05:38:08
2	Cd 226.502†	21802.2	21791.0	503.38	µg/L	503.38	ppb	05:38:14
2	Co 228.616†	11032.4	11049.2	503.28	µg/L	503.28	ppb	05:38:14
2	Cr 267.716†	26052.1	26054.3	499.80	µg/L	499.80	ppb	05:38:14
2	Cu 324.752†	75610.3	70163.1	500.08	µg/L	500.08	ppb	05:38:14
2	Mn 257.610†	176813.1	175480.7	508.88	µg/L	508.88	ppb	05:38:08
2	Mo 202.031†	4725.7	4689.6	499.15	µg/L	499.15	ppb	05:38:34
2	Ni 231.604†	10647.1	10139.0	503.43	µg/L	503.43	ppb	05:38:14
2	P 214.914†	1788.1	1521.8	2407.1	µg/L	2407.1	ppb	05:38:34
2	Pb 220.353†	2248.5	2165.5	498.78	µg/L	498.78	ppb	05:38:34

2	S 181.975 Axial†	279.0	232.7	977.05 µg/L	977.05 ppb	05:38:34
2	Sb 206.836†	598.4	571.0	488.16 µg/L	488.16 ppb	05:38:34
2	Se 196.026†	480.7	456.9	491.19 µg/L	491.19 ppb	05:38:34
2	SiO2†	34613.9	31160.5	5373.5 µg/L	5373.5 ppb	05:38:14
2	Si 251.611†	37099.1	36492.2	2475.7 µg/L	2475.7 ppb	05:38:14
2	Sn 189.927†	1178.9	1162.4	505.37 µg/L	505.37 ppb	05:38:34
2	Ti 334.940†	223204.7	220469.7	502.81 µg/L	502.81 ppb	05:38:08
2	Tl 190.801†	323.9	349.4	503.34 µg/L	503.34 ppb	05:38:34
2	U 409.014†	5326.7	5317.5	510.04 µg/L	510.04 ppb	05:38:14
2	V 292.402†	47364.9	47237.9	503.68 µg/L	503.68 ppb	05:38:14
2	Zn 213.857†	22343.0	21453.1	497.87 µg/L	497.87 ppb	05:38:14
3	Sc RADIAL	169923.9	169923.9	102 %		05:37:18
3	Al 396.153Radial†	12549.1	12436.9	5166.8 µg/L	5166.8 ppb	05:37:23
3	Ca 317.933Radial†	28929.1	27442.2	5128.8 µg/L	5128.8 ppb	05:37:23
3	Fe 238.204 Radial†	7554.9	7424.3	5156.2 µg/L	5156.2 ppb	05:37:23
3	K 766.490 Radial†	10574.2	9489.7	5117.0 µg/L	5117.0 ppb	05:37:23
3	Mg 279.077 IEC†	2686.6	2580.1	5190.8 µg/L	5190.8 ppb	05:37:23
3	Na 589.592 Radial†	44332.0	43287.5	10415 µg/L	10415 ppb	05:37:18
3	Sr 421.552†	122357.2	119808.4	514.44 µg/L	514.44 ppb	05:37:18
3	Sc 361.383	2091261.6	2091261.6	100.72 %		05:38:41
3	Y 371.029	1361230.8	1361230.8	100.33 %		05:38:41
3	Ag 328.068†	58194.1	58747.1	501.72 µg/L	501.72 ppb	05:38:47
3	As 188.979†	337.6	335.0	504.10 µg/L	504.10 ppb	05:39:07
3	B 249.677†	12948.5	12645.6	497.55 µg/L	497.55 ppb	05:38:47
3	Ba 233.527†	20507.0	20450.7	501.86 µg/L	501.86 ppb	05:38:47
3	Be 313.107†	887477.3	877795.0	505.77 µg/L	505.77 ppb	05:38:41
3	Cd 226.502†	21878.2	21864.5	505.08 µg/L	505.08 ppb	05:38:47
3	Co 228.616†	11093.0	11108.4	505.97 µg/L	505.97 ppb	05:38:47
3	Cr 267.716†	26179.7	26178.7	502.19 µg/L	502.19 ppb	05:38:47
3	Cu 324.752†	75573.6	70120.0	499.77 µg/L	499.77 ppb	05:38:47
3	Mn 257.610†	176702.2	175354.8	508.52 µg/L	508.52 ppb	05:38:41
3	Mo 202.031†	4706.9	4670.6	497.13 µg/L	497.13 ppb	05:39:07
3	Ni 231.604†	10671.9	10162.6	504.60 µg/L	504.60 ppb	05:38:47
3	P 214.914†	1770.2	1503.9	2377.8 µg/L	2377.8 ppb	05:39:07
3	Pb 220.353†	2239.2	2156.1	496.60 µg/L	496.60 ppb	05:39:07
3	S 181.975 Axial†	282.7	236.3	992.34 µg/L	992.34 ppb	05:39:07
3	Sb 206.836†	605.4	577.8	494.06 µg/L	494.06 ppb	05:39:07
3	Se 196.026†	492.1	468.2	503.28 µg/L	503.28 ppb	05:39:07
3	SiO2†	34674.8	31217.9	5383.3 µg/L	5383.3 ppb	05:38:47
3	Si 251.611†	37194.2	36583.2	2482.2 µg/L	2482.2 ppb	05:38:47
3	Sn 189.927†	1167.0	1150.4	500.19 µg/L	500.19 ppb	05:39:07
3	Ti 334.940†	223014.0	220260.5	502.33 µg/L	502.33 ppb	05:38:41
3	Tl 190.801†	322.9	348.5	501.93 µg/L	501.93 ppb	05:39:07
3	U 409.014†	5323.8	5314.1	509.72 µg/L	509.72 ppb	05:38:47
3	V 292.402†	47437.1	47305.4	504.37 µg/L	504.37 ppb	05:38:47
3	Zn 213.857†	22369.9	21477.9	498.45 µg/L	498.45 ppb	05:38:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2089974.8	100.66	%	0.100				0.10%
Sc RADIAL	169857.6	102	%	0.8				0.77%
Y 371.029	1359729.9	100.22	%	0.137				0.14%
Ag 328.068†	58998.2	503.86	µg/L	2.946	503.86	ppb	2.946	0.58%
QC value within limits for Ag 328.068 Recovery = 100.77%								
Al 396.153Radial†	12447.9	5171.3	µg/L	48.24	5171.3	ppb	48.24	0.93%
QC value within limits for Al 396.153Radial Recovery = 103.43%								
As 188.979†	331.6	498.98	µg/L	8.477	498.98	ppb	8.477	1.70%
QC value within limits for As 188.979 Recovery = 99.80%								
B 249.677†	12704.2	499.85	µg/L	2.546	499.85	ppb	2.546	0.51%
QC value within limits for B 249.677 Recovery = 99.97%								
Ba 233.527†	20526.7	503.73	µg/L	3.003	503.73	ppb	3.003	0.60%
QC value within limits for Ba 233.527 Recovery = 100.75%								
Be 313.107†	877698.0	505.72	µg/L	0.274	505.72	ppb	0.274	0.05%
QC value within limits for Be 313.107 Recovery = 101.14%								
Ca 317.933Radial†	27503.5	5140.2	µg/L	50.01	5140.2	ppb	50.01	0.97%
QC value within limits for Ca 317.933Radial Recovery = 102.80%								
Cd 226.502†	21888.6	505.64	µg/L	2.577	505.64	ppb	2.577	0.51%
QC value within limits for Cd 226.502 Recovery = 101.13%								
Co 228.616†	11119.3	506.48	µg/L	3.471	506.48	ppb	3.471	0.69%

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   QC value within limits for Co 228.616  Recovery = 101.30%
Cr 267.716†            26226.8      503.11 µg/L        3.852      503.11 ppb          3.852   0.77%
   QC value within limits for Cr 267.716  Recovery = 100.62%
Cu 324.752†            70382.4      501.64 µg/L        2.979      501.64 ppb          2.979   0.59%
   QC value within limits for Cu 324.752  Recovery = 100.33%
Fe 238.204 Radial†      7471.4      5188.9 µg/L       48.43      5188.9 ppb          48.43   0.93%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.78%
K 766.490 Radial†       9536.8      5142.4 µg/L       73.04      5142.4 ppb          73.04   1.42%
   QC value within limits for K 766.490 Radial  Recovery = 102.85%
Mg 279.077 IEC†         2593.4      5217.5 µg/L       23.49      5217.5 ppb          23.49   0.45%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.35%
Mn 257.610†           175396.0      508.64 µg/L        0.213      508.64 ppb          0.213   0.04%
   QC value within limits for Mn 257.610  Recovery = 101.73%
Mo 202.031†             4687.7      498.95 µg/L        1.729      498.95 ppb          1.729   0.35%
   QC value within limits for Mo 202.031  Recovery = 99.79%
Na 589.592 Radial†     42882.9       10318 µg/L      128.6       10318 ppb          128.6   1.25%
   QC value within limits for Na 589.592 Radial  Recovery = 103.18%
Ni 231.604†            10186.7      505.80 µg/L        3.147      505.80 ppb          3.147   0.62%
   QC value within limits for Ni 231.604  Recovery = 101.16%
P 214.914†              1513.1      2392.6 µg/L       14.65      2392.6 ppb          14.65   0.61%
   QC value within limits for P 214.914  Recovery = 95.70%
Pb 220.353†             2164.5      498.55 µg/L        1.843      498.55 ppb          1.843   0.37%
   QC value within limits for Pb 220.353  Recovery = 99.71%
S 181.975 Axial†         235.3      988.01 µg/L        9.565      988.01 ppb          9.565   0.97%
   QC value within limits for S 181.975 Axial  Recovery = 98.80%
Sb 206.836†              574.0      490.77 µg/L        3.004      490.77 ppb          3.004   0.61%
   QC value within limits for Sb 206.836  Recovery = 98.15%
Se 196.026†              462.1      496.79 µg/L        6.095      496.79 ppb          6.095   1.23%
   QC value within limits for Se 196.026  Recovery = 99.36%
SiO2†                  31298.3      5397.2 µg/L       32.96      5397.2 ppb          32.96   0.61%
   QC value within limits for SiO2  Recovery = 100.93%
Si 251.611†            36672.9      2488.3 µg/L       16.49      2488.3 ppb          16.49   0.66%
   QC value within limits for Si 251.611  Recovery = 99.53%
Sn 189.927†             1155.0      502.19 µg/L        2.783      502.19 ppb          2.783   0.55%
   QC value within limits for Sn 189.927  Recovery = 100.44%
Sr 421.552†           118621.9      509.34 µg/L        5.780      509.34 ppb          5.780   1.13%
   QC value within limits for Sr 421.552  Recovery = 101.87%
Ti 334.940†           220486.9      502.85 µg/L        0.536      502.85 ppb          0.536   0.11%
   QC value within limits for Ti 334.940  Recovery = 100.57%
Tl 190.801†              347.5      500.59 µg/L        3.608      500.59 ppb          3.608   0.72%
   QC value within limits for Tl 190.801  Recovery = 100.12%
U 409.014†              5342.1      512.41 µg/L        4.379      512.41 ppb          4.379   0.85%
   QC value within limits for U 409.014  Recovery = 102.48%
V 292.402†             47416.1      505.56 µg/L        2.687      505.56 ppb          2.687   0.53%
   QC value within limits for V 292.402  Recovery = 101.11%
Zn 213.857†            21524.2      499.52 µg/L        2.372      499.52 ppb          2.372   0.47%
   QC value within limits for Zn 213.857  Recovery = 99.90%
All analyte(s) passed QC.
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Sequence No.: 27
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 05:39:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	167065.3	167065.3	100	%			05:39:49
1	Al 396.153Radial†	-117.8	32.8	13.669	µg/L	13.669	ppb	05:39:49
1	Ca 317.933Radial†	911.4	25.4	4.7536	µg/L	4.7536	ppb	05:40:09
1	Fe 238.204 Radial†	20.9	48.1	33.282	µg/L	33.282	ppb	05:40:09
1	K 766.490 Radial†	939.1	71.7	38.674	µg/L	38.674	ppb	05:39:49
1	Mg 279.077 IEC†	51.1	0.5	0.9918	µg/L	0.9918	ppb	05:40:09
1	Na 589.592 Radial†	146.9	28.4	6.8229	µg/L	6.8229	ppb	05:39:49
1	Sr 421.552†	141.3	149.4	0.6414	µg/L	0.6414	ppb	05:39:49
1	Sc 361.383	2058288.0	2058288.0	99.129	%			05:41:11
1	Y 371.029	1344890.3	1344890.3	99.122	%			05:41:11
1	Ag 328.068†	-949.8	9.2	0.0845	µg/L	0.0845	ppb	05:41:17
1	As 188.979†	6.3	6.2	9.2464	µg/L	9.2464	ppb	05:41:37
1	B 249.677†	238.0	29.4	1.1492	µg/L	1.1492	ppb	05:41:17
1	Ba 233.527†	-82.4	6.6	0.1632	µg/L	0.1632	ppb	05:41:37
1	Be 313.107†	3663.0	331.8	0.1925	µg/L	0.1925	ppb	05:41:17
1	Cd 226.502†	-141.5	-0.6	-0.0103	µg/L	-0.0103	ppb	05:41:37
1	Co 228.616†	-103.3	-9.9	-0.4517	µg/L	-0.4517	ppb	05:41:37
1	Cr 267.716†	-143.7	40.4	0.7742	µg/L	0.7742	ppb	05:41:17
1	Cu 324.752†	4851.4	-21.5	-0.1487	µg/L	-0.1487	ppb	05:41:17
1	Mn 257.610†	188.9	101.4	0.2943	µg/L	0.2943	ppb	05:41:17
1	Mo 202.031†	5.9	3.1	0.3320	µg/L	0.3320	ppb	05:41:37
1	Ni 231.604†	449.7	20.4	1.0141	µg/L	1.0141	ppb	05:41:37
1	P 214.914†	251.2	-0.3	-0.4937	µg/L	-0.4937	ppb	05:41:37
1	Pb 220.353†	65.0	-1.6	-0.3618	µg/L	-0.3618	ppb	05:41:37
1	S 181.975 Axial†	36.6	-7.4	-31.209	µg/L	-31.209	ppb	05:41:37
1	Sb 206.836†	28.2	5.2	4.4685	µg/L	4.4685	ppb	05:41:37
1	Se 196.026†	16.8	-3.5	-3.7313	µg/L	-3.7313	ppb	05:41:37
1	SiO2†	3173.4	-8.7	-1.5000	µg/L	-1.5000	ppb	05:41:17
1	Si 251.611†	387.2	44.5	3.0009	µg/L	3.0009	ppb	05:41:37
1	Sn 189.927†	10.2	2.1	0.9017	µg/L	0.9017	ppb	05:41:37
1	Ti 334.940†	1431.3	278.3	0.6348	µg/L	0.6348	ppb	05:41:17
1	Tl 190.801†	-19.6	8.1	11.639	µg/L	11.639	ppb	05:41:37
1	U 409.014†	53.0	81.7	7.8520	µg/L	7.8520	ppb	05:41:17
1	V 292.402†	-154.1	50.5	0.5516	µg/L	0.5516	ppb	05:41:17
1	Zn 213.857†	737.7	11.3	0.2587	µg/L	0.2587	ppb	05:41:37
2	Sc RADIAL	166899.8	166899.8	100	%			05:40:15
2	Al 396.153Radial†	-169.1	-18.4	-7.6967	µg/L	-7.6967	ppb	05:40:15
2	Ca 317.933Radial†	898.3	13.2	2.4680	µg/L	2.4680	ppb	05:40:35
2	Fe 238.204 Radial†	5.1	32.4	22.409	µg/L	22.409	ppb	05:40:35
2	K 766.490 Radial†	954.8	88.3	47.624	µg/L	47.624	ppb	05:40:15
2	Mg 279.077 IEC†	47.1	-3.5	-6.9709	µg/L	-6.9709	ppb	05:40:35
2	Na 589.592 Radial†	168.5	50.0	12.030	µg/L	12.030	ppb	05:40:15
2	Sr 421.552†	85.2	93.6	0.4017	µg/L	0.4017	ppb	05:40:15
2	Sc 361.383	2097407.8	2097407.8	101.01	%			05:41:43
2	Y 371.029	1372154.3	1372154.3	101.13	%			05:41:43
2	Ag 328.068†	-864.6	111.4	0.9489	µg/L	0.9489	ppb	05:41:49
2	As 188.979†	6.9	6.6	9.9068	µg/L	9.9068	ppb	05:42:09
2	B 249.677†	211.8	-1.0	-0.0472	µg/L	-0.0472	ppb	05:41:49
2	Ba 233.527†	-67.5	22.9	0.5613	µg/L	0.5613	ppb	05:42:09
2	Be 313.107†	3690.6	290.2	0.1676	µg/L	0.1676	ppb	05:41:49
2	Cd 226.502†	-134.9	8.6	0.2017	µg/L	0.2017	ppb	05:42:09
2	Co 228.616†	-95.1	0.2	0.0091	µg/L	0.0091	ppb	05:42:09
2	Cr 267.716†	-177.5	9.7	0.1857	µg/L	0.1857	ppb	05:41:49
2	Cu 324.752†	4824.8	-139.1	-0.9874	µg/L	-0.9874	ppb	05:41:49
2	Mn 257.610†	173.7	82.8	0.2403	µg/L	0.2403	ppb	05:41:49
2	Mo 202.031†	4.3	1.4	0.1539	µg/L	0.1539	ppb	05:42:09
2	Ni 231.604†	443.6	5.8	0.2907	µg/L	0.2907	ppb	05:42:09
2	P 214.914†	247.7	-8.5	-13.712	µg/L	-13.712	ppb	05:42:09
2	Pb 220.353†	59.3	-8.4	-1.9336	µg/L	-1.9336	ppb	05:42:09

2	S 181.975 Axial†	40.8	-4.0	-16.692	µg/L	-16.692 ppb	05:42:09
2	Sb 206.836†	30.3	6.8	5.7937	µg/L	5.7937 ppb	05:42:09
2	Se 196.026†	23.6	2.9	3.1458	µg/L	3.1458 ppb	05:42:09
2	SiO2†	3177.3	-64.6	-11.143	µg/L	-11.143 ppb	05:41:49
2	Si 251.611†	370.1	20.3	1.3907	µg/L	1.3907 ppb	05:42:09
2	Sn 189.927†	7.3	-1.0	-0.4290	µg/L	-0.4290 ppb	05:42:09
2	Ti 334.940†	1305.2	126.5	0.2885	µg/L	0.2885 ppb	05:41:49
2	Tl 190.801†	33.0	-4.8	-6.8978	µg/L	-6.8978 ppb	05:42:09
2	U 409.014†	22.6	50.7	4.8688	µg/L	4.8688 ppb	05:41:49
2	V 292.402†	-163.9	43.8	0.4731	µg/L	0.4731 ppb	05:41:49
2	Zn 213.857†	729.0	-11.1	-0.2590	µg/L	-0.2590 ppb	05:42:09
3	Sc RAD1AL	166910.7	166910.7	100	%		05:40:40
3	Al 396.153Radial†	-125.9	24.6	10.267	µg/L	10.267 ppb	05:40:40
3	Ca 317.933Radial†	893.2	8.1	1.5180	µg/L	1.5180 ppb	05:41:01
3	Fe 238.204 Radial†	3.9	31.2	21.599	µg/L	21.599 ppb	05:41:01
3	K 766.490 Radial†	879.0	12.7	6.8299	µg/L	6.8299 ppb	05:40:40
3	Mg 279.077 IEC†	43.6	-6.9	-13.900	µg/L	-13.900 ppb	05:41:01
3	Na 589.592 Radial†	102.3	-16.0	-3.8472	µg/L	-3.8472 ppb	05:40:40
3	Sr 421.552†	38.4	46.9	0.2013	µg/L	0.2013 ppb	05:40:40
3	Sc 361.383	2084466.2	2084466.2	100.39	%		05:42:15
3	Y 371.029	1360563.3	1360563.3	100.28	%		05:42:15
3	Ag 328.068†	-908.4	62.4	0.5312	µg/L	0.5312 ppb	05:42:21
3	As 188.979†	6.2	6.0	8.9442	µg/L	8.9442 ppb	05:42:41
3	B 249.677†	224.1	12.6	0.4898	µg/L	0.4898 ppb	05:42:21
3	Ba 233.527†	-75.5	14.5	0.3546	µg/L	0.3546 ppb	05:42:41
3	Be 313.107†	3602.6	225.3	0.1297	µg/L	0.1297 ppb	05:42:21
3	Cd 226.502†	-141.4	1.4	0.0328	µg/L	0.0328 ppb	05:42:41
3	Co 228.616†	-106.4	-11.6	-0.5289	µg/L	-0.5289 ppb	05:42:41
3	Cr 267.716†	-158.0	28.0	0.5357	µg/L	0.5357 ppb	05:42:21
3	Cu 324.752†	4879.9	-54.6	-0.3854	µg/L	-0.3854 ppb	05:42:21
3	Mn 257.610†	194.2	104.3	0.3026	µg/L	0.3026 ppb	05:42:21
3	Mo 202.031†	5.0	2.2	0.2348	µg/L	0.2348 ppb	05:42:41
3	Ni 231.604†	453.1	18.1	0.9004	µg/L	0.9004 ppb	05:42:41
3	P 214.914†	251.8	-2.9	-4.6696	µg/L	-4.6696 ppb	05:42:41
3	Pb 220.353†	71.2	3.8	0.8673	µg/L	0.8673 ppb	05:42:41
3	S 181.975 Axial†	38.3	-6.2	-26.287	µg/L	-26.287 ppb	05:42:41
3	Sb 206.836†	24.2	0.9	0.7528	µg/L	0.7528 ppb	05:42:41
3	Se 196.026†	22.1	1.6	1.7653	µg/L	1.7653 ppb	05:42:41
3	SiO2†	3168.6	-53.7	-9.2676	µg/L	-9.2676 ppb	05:42:21
3	Si 251.611†	373.0	25.4	1.6718	µg/L	1.6718 ppb	05:42:41
3	Sn 189.927†	12.8	4.5	1.9664	µg/L	1.9664 ppb	05:42:41
3	Ti 334.940†	1218.1	47.8	0.1090	µg/L	0.1090 ppb	05:42:21
3	Tl 190.801†	-23.9	4.0	5.8386	µg/L	5.8386 ppb	05:42:41
3	U 409.014†	4.7	32.9	3.1615	µg/L	3.1615 ppb	05:42:21
3	V 292.402†	-201.8	5.0	0.0610	µg/L	0.0610 ppb	05:42:21
3	Zn 213.857†	736.1	0.4	0.0054	µg/L	0.0054 ppb	05:42:41

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2080054.0	100.18	%	0.960				0.96%
Sc RADIAL	166958.6	100	%	0.1				0.06%
Y 371.029	1359202.6	100.18	%	1.008				1.01%
Ag 328.068†	61.0	0.5215	µg/L	0.43229	0.5215	ppb	0.43229	82.89%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	13.0	5.4129	µg/L	11.47994	5.4129	ppb	11.47994	212.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	6.2	9.3658	µg/L	0.49230	9.3658	ppb	0.49230	5.26%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	13.6	0.5306	µg/L	0.59921	0.5306	ppb	0.59921	112.93%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	14.7	0.3597	µg/L	0.19909	0.3597	ppb	0.19909	55.35%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	282.4	0.1633	µg/L	0.03161	0.1633	ppb	0.03161	19.36%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	15.6	2.9132	µg/L	1.66315	2.9132	ppb	1.66315	57.09%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	3.1	0.0747	µg/L	0.11202	0.0747	ppb	0.11202	149.93%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-7.1	-0.3238	µg/L	0.29087	-0.3238	ppb	0.29087	89.83%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              26.0      0.4985 µg/L       0.29598      0.4985 ppb        0.29598  59.37%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -71.7     -0.5072 µg/L       0.43236     -0.5072 ppb        0.43236  85.25%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       37.2      25.763 µg/L        6.5239      25.763 ppb         6.5239  25.32%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        57.6      31.042 µg/L       21.4408      31.042 ppb        21.4408  69.07%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -3.3     -6.6264 µg/L       7.45191     -6.6264 ppb        7.45191 112.46%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              96.2      0.2790 µg/L       0.03380      0.2790 ppb        0.03380  12.11%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               2.2      0.2402 µg/L       0.08918      0.2402 ppb        0.08918  37.12%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       20.8      5.0021 µg/L       8.09389      5.0021 ppb        8.09389 161.81%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              14.8      0.7350 µg/L       0.38901      0.7350 ppb        0.38901  52.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -3.9     -6.2916 µg/L       6.75658     -6.2916 ppb        6.75658 107.39%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -2.1     -0.4760 µg/L       1.40394     -0.4760 ppb        1.40394 294.92%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -5.9     -24.729 µg/L        7.3831     -24.729 ppb         7.3831  29.86%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               4.3      3.6717 µg/L       2.61320      3.6717 ppb        2.61320  71.17%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               0.4      0.3933 µg/L       3.63804      0.3933 ppb        3.63804 925.07%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                   -42.4     -7.3034 µg/L       5.11267     -7.3034 ppb        5.11267  70.00%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              30.1      2.0211 µg/L       0.86005      2.0211 ppb        0.86005  42.55%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.9      0.8130 µg/L       1.20015      0.8130 ppb        1.20015 147.62%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              96.6      0.4148 µg/L       0.22032      0.4148 ppb        0.22032  53.11%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             150.9      0.3441 µg/L       0.26724      0.3441 ppb        0.26724  77.66%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               2.4      3.5265 µg/L       9.48200      3.5265 ppb        9.48200 268.88%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               55.1      5.2941 µg/L       2.37402      5.2941 ppb        2.37402  44.84%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               33.1      0.3619 µg/L       0.26355      0.3619 ppb        0.26355  72.82%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               0.2      0.0017 µg/L       0.25887      0.0017 ppb        0.25887 >999.9%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 33
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 05:58:06
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	170361.1	170361.1	102	%			05:58:40
1	Al 396.153Radial†	12753.9	12605.4	5236.9	µg/L	5236.9	ppb	05:58:46
1	Ca 317.933Radial†	29399.3	27828.7	5201.0	µg/L	5201.0	ppb	05:58:46
1	Fe 238.204 Radial†	7757.5	7603.2	5280.0	µg/L	5280.0	ppb	05:58:46
1	K 766.490 Radial†	10800.7	9684.3	5221.9	µg/L	5221.9	ppb	05:58:46
1	Mg 279.077 IEC†	2714.3	2600.3	5231.4	µg/L	5231.4	ppb	05:58:46
1	Na 589.592 Radial†	43645.4	42505.5	10227	µg/L	10227	ppb	05:58:40
1	Sr 421.552†	120551.7	117737.6	505.55	µg/L	505.55	ppb	05:58:40
1	Sc 361.383	2090877.7	2090877.7	100.70	%			05:59:19
1	Y 371.029	1364802.5	1364802.5	100.59	%			05:59:19
1	Ag 328.068†	58613.7	59174.3	505.37	µg/L	505.37	ppb	05:59:25
1	As 188.979†	335.3	332.7	500.81	µg/L	500.81	ppb	05:59:46
1	B 249.677†	12965.3	12664.7	498.26	µg/L	498.26	ppb	05:59:25
1	Ba 233.527†	20619.9	20566.5	504.71	µg/L	504.71	ppb	05:59:25
1	Be 313.107†	886038.6	876528.0	505.05	µg/L	505.05	ppb	05:59:19
1	Cd 226.502†	21843.1	21833.7	504.37	µg/L	504.37	ppb	05:59:25
1	Co 228.616†	11083.5	11100.9	505.64	µg/L	505.64	ppb	05:59:25
1	Cr 267.716†	26251.3	26254.6	503.64	µg/L	503.64	ppb	05:59:25
1	Cu 324.752†	76158.8	70714.9	504.02	µg/L	504.02	ppb	05:59:25
1	Mn 257.610†	176638.3	175323.6	508.43	µg/L	508.43	ppb	05:59:19
1	Mo 202.031†	4742.8	4707.1	501.01	µg/L	501.01	ppb	05:59:46
1	Ni 231.604†	10746.9	10239.0	508.41	µg/L	508.41	ppb	05:59:25
1	P 214.914†	1789.4	1523.3	2408.7	µg/L	2408.7	ppb	05:59:46
1	Pb 220.353†	2246.7	2164.0	498.42	µg/L	498.42	ppb	05:59:46
1	S 181.975 Axial†	283.5	237.2	996.09	µg/L	996.09	ppb	05:59:46
1	Sb 206.836†	615.6	588.1	502.86	µg/L	502.86	ppb	05:59:46
1	Se 196.026†	485.5	461.7	496.42	µg/L	496.42	ppb	05:59:46
1	SiO2†	34806.7	31355.2	5407.0	µg/L	5407.0	ppb	05:59:25
1	Si 251.611†	37304.9	36700.0	2490.1	µg/L	2490.1	ppb	05:59:25
1	Sn 189.927†	1169.4	1153.0	501.38	µg/L	501.38	ppb	05:59:46
1	Ti 334.940†	223556.0	220839.4	503.65	µg/L	503.65	ppb	05:59:19
1	Tl 190.801†	323.2	348.8	502.50	µg/L	502.50	ppb	05:59:46
1	U 409.014†	5426.5	5417.1	519.59	µg/L	519.59	ppb	05:59:25
1	V 292.402†	47618.9	47494.5	506.43	µg/L	506.43	ppb	05:59:25
1	Zn 213.857†	22455.3	21566.7	500.48	µg/L	500.48	ppb	05:59:25
2	Sc RADIAL	172342.5	172342.5	104	%			05:58:51
2	Al 396.153Radial†	12644.5	12356.6	5133.3	µg/L	5133.3	ppb	05:58:57
2	Ca 317.933Radial†	29468.0	27564.9	5151.7	µg/L	5151.7	ppb	05:58:57
2	Fe 238.204 Radial†	7719.2	7479.1	5194.2	µg/L	5194.2	ppb	05:58:57
2	K 766.490 Radial†	10636.7	9404.7	5071.1	µg/L	5071.1	ppb	05:58:57
2	Mg 279.077 IEC†	2734.9	2589.7	5210.1	µg/L	5210.1	ppb	05:58:57
2	Na 589.592 Radial†	44089.0	42443.7	10212	µg/L	10212	ppb	05:58:51
2	Sr 421.552†	121588.0	117384.6	504.03	µg/L	504.03	ppb	05:58:51
2	Sc 361.383	2097650.4	2097650.4	101.02	%			05:59:53
2	Y 371.029	1363450.9	1363450.9	100.49	%			05:59:53
2	Ag 328.068†	58787.8	59158.8	505.23	µg/L	505.23	ppb	05:59:58
2	As 188.979†	337.2	333.6	502.05	µg/L	502.05	ppb	06:00:19
2	B 249.677†	13029.9	12687.1	499.17	µg/L	499.17	ppb	05:59:58
2	Ba 233.527†	20688.1	20567.9	504.74	µg/L	504.74	ppb	05:59:58
2	Be 313.107†	891260.0	878855.5	506.38	µg/L	506.38	ppb	05:59:53
2	Cd 226.502†	21959.4	21878.8	505.41	µg/L	505.41	ppb	05:59:58
2	Co 228.616†	11139.2	11120.6	506.53	µg/L	506.53	ppb	05:59:58
2	Cr 267.716†	26361.8	26279.7	504.13	µg/L	504.13	ppb	05:59:58
2	Cu 324.752†	76278.8	70589.5	503.12	µg/L	503.12	ppb	05:59:58
2	Mn 257.610†	177643.5	175752.3	509.67	µg/L	509.67	ppb	05:59:53
2	Mo 202.031†	4728.2	4677.4	497.85	µg/L	497.85	ppb	06:00:19
2	Ni 231.604†	10707.5	10165.6	504.75	µg/L	504.75	ppb	05:59:58
2	P 214.914†	1777.6	1505.8	2380.3	µg/L	2380.3	ppb	06:00:19
2	Pb 220.353†	2245.0	2155.1	496.36	µg/L	496.36	ppb	06:00:19

2	S 181.975 Axial†	277.9	230.7	968.79 µg/L	968.79 ppb		06:00:19
2	Sb 206.836†	608.7	579.3	495.32 µg/L	495.32 ppb		06:00:19
2	Se 196.026†	482.9	457.6	491.89 µg/L	491.89 ppb		06:00:19
2	SiO2†	34907.5	31343.4	5405.0 µg/L	5405.0 ppb		05:59:58
2	Si 251.611†	37437.6	36711.7	2491.1 µg/L	2491.1 ppb		05:59:58
2	Sn 189.927†	1165.8	1145.7	498.17 µg/L	498.17 ppb		06:00:19
2	Ti 334.940†	224355.8	220914.3	503.82 µg/L	503.82 ppb		05:59:53
2	Tl 190.801†	318.1	342.8	493.70 µg/L	493.70 ppb		06:00:19
2	U 409.014†	5412.2	5385.5	516.58 µg/L	516.58 ppb		05:59:58
2	V 292.402†	47832.1	47552.9	507.01 µg/L	507.01 ppb		05:59:58
2	Zn 213.857†	22520.4	21559.2	500.34 µg/L	500.34 ppb		05:59:58
3	Sc RADIAL	170206.3	170206.3	102 %			05:59:02
3	Al 396.153Radial†	12782.3	12644.5	5253.3 µg/L	5253.3 ppb		05:59:08
3	Ca 317.933Radial†	29548.2	28000.4	5233.1 µg/L	5233.1 ppb		05:59:08
3	Fe 238.204 Radial†	7747.7	7600.5	5278.2 µg/L	5278.2 ppb		05:59:08
3	K 766.490 Radial†	10721.9	9616.9	5185.5 µg/L	5185.5 ppb		05:59:08
3	Mg 279.077 IEC†	2754.1	2641.7	5314.4 µg/L	5314.4 ppb		05:59:08
3	Na 589.592 Radial†	43849.9	42744.2	10285 µg/L	10285 ppb		05:59:02
3	Sr 421.552†	121078.0	118359.2	508.21 µg/L	508.21 ppb		05:59:02
3	Sc 361.383	2085178.3	2085178.3	100.42 %			06:00:26
3	Y 371.029	1356595.0	1356595.0	99.985 %			06:00:26
3	Ag 328.068†	58563.0	59283.0	506.29 µg/L	506.29 ppb		06:00:32
3	As 188.979†	333.6	332.0	499.69 µg/L	499.69 ppb		06:00:52
3	B 249.677†	12986.4	12720.9	500.48 µg/L	500.48 ppb		06:00:32
3	Ba 233.527†	20505.0	20508.1	503.28 µg/L	503.28 ppb		06:00:32
3	Be 313.107†	887362.2	880251.0	507.19 µg/L	507.19 ppb		06:00:26
3	Cd 226.502†	21827.1	21877.1	505.37 µg/L	505.37 ppb		06:00:32
3	Co 228.616†	11062.2	11109.8	506.03 µg/L	506.03 ppb		06:00:32
3	Cr 267.716†	26212.9	26287.5	504.28 µg/L	504.28 ppb		06:00:32
3	Cu 324.752†	76121.0	70883.9	505.23 µg/L	505.23 ppb		06:00:32
3	Mn 257.610†	176873.2	176037.0	510.50 µg/L	510.50 ppb		06:00:26
3	Mo 202.031†	4686.2	4663.6	496.39 µg/L	496.39 ppb		06:00:52
3	Ni 231.604†	10649.2	10171.0	505.02 µg/L	505.02 ppb		06:00:32
3	P 214.914†	1764.2	1503.0	2375.3 µg/L	2375.3 ppb		06:00:52
3	Pb 220.353†	2222.6	2146.1	494.29 µg/L	494.29 ppb		06:00:52
3	S 181.975 Axial†	272.0	226.4	950.86 µg/L	950.86 ppb		06:00:52
3	Sb 206.836†	602.5	576.8	493.13 µg/L	493.13 ppb		06:00:52
3	Se 196.026†	479.9	457.5	491.83 µg/L	491.83 ppb		06:00:52
3	SiO2†	34696.9	31340.3	5404.5 µg/L	5404.5 ppb		06:00:32
3	Si 251.611†	37274.8	36771.3	2495.3 µg/L	2495.3 ppb		06:00:32
3	Sn 189.927†	1153.3	1140.2	495.85 µg/L	495.85 ppb		06:00:52
3	Ti 334.940†	223466.3	221356.9	504.83 µg/L	504.83 ppb		06:00:26
3	Tl 190.801†	315.5	342.0	492.67 µg/L	492.67 ppb		06:00:52
3	U 409.014†	5403.0	5408.5	518.76 µg/L	518.76 ppb		06:00:32
3	V 292.402†	47576.3	47581.4	507.31 µg/L	507.31 ppb		06:00:32
3	Zn 213.857†	22429.4	21601.9	501.32 µg/L	501.32 ppb		06:00:32

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2091235.4	100.72	%	0.301				0.30%
Sc RADIAL	170970.0	103	%	0.7				0.70%
Y 371.029	1361616.1	100.36	%	0.324				0.32%
Ag 328.068†	59205.4	505.63	µg/L	0.578	505.63	ppb	0.578	0.11%
QC value within limits for Ag 328.068 Recovery = 101.13%								
Al 396.153Radial†	12535.5	5207.8	µg/L	65.10	5207.8	ppb	65.10	1.25%
QC value within limits for Al 396.153Radial Recovery = 104.16%								
As 188.979†	332.8	500.85	µg/L	1.179	500.85	ppb	1.179	0.24%
QC value within limits for As 188.979 Recovery = 100.17%								
B 249.677†	12690.9	499.31	µg/L	1.116	499.31	ppb	1.116	0.22%
QC value within limits for B 249.677 Recovery = 99.86%								
Ba 233.527†	20547.5	504.24	µg/L	0.835	504.24	ppb	0.835	0.17%
QC value within limits for Ba 233.527 Recovery = 100.85%								
Be 313.107†	878544.9	506.21	µg/L	1.082	506.21	ppb	1.082	0.21%
QC value within limits for Be 313.107 Recovery = 101.24%								
Ca 317.933Radial†	27798.0	5195.3	µg/L	41.00	5195.3	ppb	41.00	0.79%
QC value within limits for Ca 317.933Radial Recovery = 103.91%								
Cd 226.502†	21863.2	505.05	µg/L	0.589	505.05	ppb	0.589	0.12%
QC value within limits for Cd 226.502 Recovery = 101.01%								
Co 228.616†	11110.4	506.07	µg/L	0.444	506.07	ppb	0.444	0.09%

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   QC value within limits for Co 228.616  Recovery = 101.21%
Cr 267.716†            26273.9      504.02 µg/L        0.331      504.02 ppb          0.331   0.07%
   QC value within limits for Cr 267.716  Recovery = 100.80%
Cu 324.752†            70729.4      504.12 µg/L        1.057      504.12 ppb          1.057   0.21%
   QC value within limits for Cu 324.752  Recovery = 100.82%
Fe 238.204 Radial†      7560.9      5250.8 µg/L       49.05      5250.8 ppb         49.05   0.93%
   QC value within limits for Fe 238.204 Radial  Recovery = 105.02%
K 766.490 Radial†       9568.6      5159.5 µg/L       78.67      5159.5 ppb         78.67   1.52%
   QC value within limits for K 766.490 Radial  Recovery = 103.19%
Mg 279.077 IEC†         2610.6      5252.0 µg/L       55.07      5252.0 ppb         55.07   1.05%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.04%
Mn 257.610†           175704.3      509.53 µg/L        1.041      509.53 ppb          1.041   0.20%
   QC value within limits for Mn 257.610  Recovery = 101.91%
Mo 202.031†             4682.7      498.42 µg/L        2.364      498.42 ppb          2.364   0.47%
   QC value within limits for Mo 202.031  Recovery = 99.68%
Na 589.592 Radial†     42564.5       10241 µg/L       38.2        10241 ppb         38.2   0.37%
   QC value within limits for Na 589.592 Radial  Recovery = 102.41%
Ni 231.604†            10191.9      506.06 µg/L        2.036      506.06 ppb          2.036   0.40%
   QC value within limits for Ni 231.604  Recovery = 101.21%
P 214.914†              1510.7      2388.1 µg/L       18.02      2388.1 ppb         18.02   0.75%
   QC value within limits for P 214.914  Recovery = 95.53%
Pb 220.353†             2155.1      496.36 µg/L        2.068      496.36 ppb          2.068   0.42%
   QC value within limits for Pb 220.353  Recovery = 99.27%
S 181.975 Axial†         231.5      971.91 µg/L       22.778      971.91 ppb         22.778   2.34%
   QC value within limits for S 181.975 Axial  Recovery = 97.19%
Sb 206.836†              581.4      497.10 µg/L        5.106      497.10 ppb          5.106   1.03%
   QC value within limits for Sb 206.836  Recovery = 99.42%
Se 196.026†              458.9      493.38 µg/L        2.631      493.38 ppb          2.631   0.53%
   QC value within limits for Se 196.026  Recovery = 98.68%
SiO2†                  31346.3      5405.5 µg/L        1.36      5405.5 ppb          1.36   0.03%
   QC value within limits for SiO2  Recovery = 101.08%
Si 251.611†            36727.7      2492.2 µg/L        2.75      2492.2 ppb          2.75   0.11%
   QC value within limits for Si 251.611  Recovery = 99.69%
Sn 189.927†             1146.3      498.46 µg/L        2.779      498.46 ppb          2.779   0.56%
   QC value within limits for Sn 189.927  Recovery = 99.69%
Sr 421.552†           117827.1      505.93 µg/L        2.119      505.93 ppb          2.119   0.42%
   QC value within limits for Sr 421.552  Recovery = 101.19%
Ti 334.940†           221036.8      504.10 µg/L        0.637      504.10 ppb          0.637   0.13%
   QC value within limits for Ti 334.940  Recovery = 100.82%
Tl 190.801†              344.5      496.29 µg/L        5.402      496.29 ppb          5.402   1.09%
   QC value within limits for Tl 190.801  Recovery = 99.26%
U 409.014†              5403.7      518.31 µg/L        1.556      518.31 ppb          1.556   0.30%
   QC value within limits for U 409.014  Recovery = 103.66%
V 292.402†             47542.9      506.91 µg/L        0.449      506.91 ppb          0.449   0.09%
   QC value within limits for V 292.402  Recovery = 101.38%
Zn 213.857†            21575.9      500.71 µg/L        0.530      500.71 ppb          0.530   0.11%
   QC value within limits for Zn 213.857  Recovery = 100.14%
All analyte(s) passed QC.
```

Sequence No.: 34
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 06:01:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168967.9	168967.9	102	%			06:01:34
1	Al 396.153Radial†	-171.0	-18.3	-7.6151	µg/L	-7.6151	ppb	06:01:34
1	Ca 317.933Radial†	881.8	-14.0	-2.6175	µg/L	-2.6175	ppb	06:01:54
1	Fe 238.204 Radial†	-0.0	27.3	18.894	µg/L	18.894	ppb	06:01:54
1	K 766.490 Radial†	772.9	-102.5	-55.245	µg/L	-55.245	ppb	06:01:34
1	Mg 279.077 IEC†	46.0	-5.1	-10.199	µg/L	-10.199	ppb	06:01:54
1	Na 589.592 Radial†	155.9	35.5	8.5499	µg/L	8.5499	ppb	06:01:34
1	Sr 421.552†	184.9	190.7	0.8188	µg/L	0.8188	ppb	06:01:34
1	Sc 361.383	2062181.5	2062181.5	99.317	%			06:02:56
1	Y 371.029	1346929.8	1346929.8	99.273	%			06:02:56
1	Ag 328.068†	-926.9	34.0	0.2922	µg/L	0.2922	ppb	06:03:02
1	As 188.979†	3.7	3.5	5.2107	µg/L	5.2107	ppb	06:03:22
1	B 249.677†	199.5	-9.8	-0.3934	µg/L	-0.3934	ppb	06:03:02
1	Ba 233.527†	-73.4	15.8	0.3870	µg/L	0.3870	ppb	06:03:22
1	Be 313.107†	3538.3	199.3	0.1155	µg/L	0.1155	ppb	06:03:02
1	Cd 226.502†	-128.5	12.8	0.2969	µg/L	0.2969	ppb	06:03:22
1	Co 228.616†	-104.6	-11.0	-0.5016	µg/L	-0.5016	ppb	06:03:22
1	Cr 267.716†	-184.8	-0.7	-0.0130	µg/L	-0.0130	ppb	06:03:02
1	Cu 324.752†	4781.7	-101.0	-0.7161	µg/L	-0.7161	ppb	06:03:02
1	Mn 257.610†	161.5	73.4	0.2131	µg/L	0.2131	ppb	06:03:02
1	Mo 202.031†	2.6	-0.2	-0.0239	µg/L	-0.0239	ppb	06:03:22
1	Ni 231.604†	442.8	12.6	0.6268	µg/L	0.6268	ppb	06:03:22
1	P 214.914†	248.1	-3.9	-6.1665	µg/L	-6.1665	ppb	06:03:22
1	Pb 220.353†	58.8	-7.9	-1.8153	µg/L	-1.8153	ppb	06:03:22
1	S 181.975 Axial†	41.4	-2.7	-11.190	µg/L	-11.190	ppb	06:03:22
1	Sb 206.836†	31.6	8.6	7.4104	µg/L	7.4104	ppb	06:03:22
1	Se 196.026†	20.9	0.7	0.7236	µg/L	0.7236	ppb	06:03:22
1	SiO2†	3151.3	-37.0	-6.3851	µg/L	-6.3851	ppb	06:03:02
1	Si 251.611†	381.2	37.8	2.5232	µg/L	2.5232	ppb	06:03:22
1	Sn 189.927†	14.0	5.8	2.5196	µg/L	2.5196	ppb	06:03:22
1	Ti 334.940†	1296.1	139.4	0.3182	µg/L	0.3182	ppb	06:03:02
1	Tl 190.801†	-27.6	0.1	0.1531	µg/L	0.1531	ppb	06:03:22
1	U 409.014†	7.4	35.7	3.4300	µg/L	3.4300	ppb	06:03:02
1	V 292.402†	-173.2	31.6	0.3411	µg/L	0.3411	ppb	06:03:02
1	Zn 213.857†	735.0	7.2	0.1672	µg/L	0.1672	ppb	06:03:22
2	Sc RADIAL	168380.0	168380.0	101	%			06:02:00
2	Al 396.153Radial†	-129.2	22.5	9.3977	µg/L	9.3977	ppb	06:02:00
2	Ca 317.933Radial†	883.7	-9.1	-1.6915	µg/L	-1.6915	ppb	06:02:20
2	Fe 238.204 Radial†	-12.8	14.7	10.158	µg/L	10.158	ppb	06:02:20
2	K 766.490 Radial†	789.3	-83.6	-45.080	µg/L	-45.080	ppb	06:02:00
2	Mg 279.077 IEC†	46.0	-4.9	-9.8520	µg/L	-9.8520	ppb	06:02:20
2	Na 589.592 Radial†	175.7	55.6	13.382	µg/L	13.382	ppb	06:02:00
2	Sr 421.552†	200.8	207.1	0.8891	µg/L	0.8891	ppb	06:02:00
2	Sc 361.383	2080824.4	2080824.4	100.21	%			06:03:28
2	Y 371.029	1359296.3	1359296.3	100.18	%			06:03:28
2	Ag 328.068†	-902.4	66.9	0.5682	µg/L	0.5682	ppb	06:03:34
2	As 188.979†	-4.6	-4.8	-7.1973	µg/L	-7.1973	ppb	06:03:55
2	B 249.677†	234.2	23.0	0.9042	µg/L	0.9042	ppb	06:03:34
2	Ba 233.527†	-88.8	1.1	0.0266	µg/L	0.0266	ppb	06:03:55
2	Be 313.107†	3476.4	105.7	0.0611	µg/L	0.0611	ppb	06:03:34
2	Cd 226.502†	-135.2	7.3	0.1643	µg/L	0.1643	ppb	06:03:55
2	Co 228.616†	-98.0	-3.5	-0.1595	µg/L	-0.1595	ppb	06:03:55
2	Cr 267.716†	-202.2	-16.4	-0.3134	µg/L	-0.3134	ppb	06:03:34
2	Cu 324.752†	4808.2	-117.6	-0.8357	µg/L	-0.8357	ppb	06:03:34
2	Mn 257.610†	176.0	86.5	0.2508	µg/L	0.2508	ppb	06:03:34
2	Mo 202.031†	-0.7	-3.5	-0.3698	µg/L	-0.3698	ppb	06:03:55
2	Ni 231.604†	446.6	12.4	0.6165	µg/L	0.6165	ppb	06:03:55
2	P 214.914†	249.4	-4.9	-7.8600	µg/L	-7.8600	ppb	06:03:55
2	Pb 220.353†	62.9	-4.4	-0.9972	µg/L	-0.9972	ppb	06:03:55

2	S 181.975 Axial†	39.5	-4.9	-20.665 µg/L	-20.665 ppb	06:03:55
2	Sb 206.836†	24.1	0.8	0.6677 µg/L	0.6677 ppb	06:03:55
2	Se 196.026†	23.3	2.8	3.0486 µg/L	3.0486 ppb	06:03:55
2	SiO2†	3098.3	-118.3	-20.400 µg/L	-20.400 ppb	06:03:34
2	Si 251.611†	370.5	23.6	1.6721 µg/L	1.6721 ppb	06:03:55
2	Sn 189.927†	7.1	-1.1	-0.4876 µg/L	-0.4876 ppb	06:03:55
2	Ti 334.940†	1230.4	62.2	0.1420 µg/L	0.1420 ppb	06:03:34
2	Tl 190.801†	-29.6	-1.7	-2.5033 µg/L	-2.5033 ppb	06:03:55
2	U 409.014†	-82.5	-54.1	-5.2041 µg/L	-5.2041 ppb	06:03:34
2	V 292.402†	-195.8	10.7	0.1026 µg/L	0.1026 ppb	06:03:34
2	Zn 213.857†	720.6	-13.7	-0.3225 µg/L	-0.3225 ppb	06:03:55
3	Sc RADIAL	169845.1	169845.1	102 %		06:02:26
3	Al 396.153Radial†	-139.7	13.3	5.5579 µg/L	5.5579 ppb	06:02:26
3	Ca 317.933Radial†	863.4	-36.5	-6.8157 µg/L	-6.8157 ppb	06:02:46
3	Fe 238.204 Radial†	-11.3	16.3	11.230 µg/L	11.230 ppb	06:02:46
3	K 766.490 Radial†	812.3	-67.8	-36.562 µg/L	-36.562 ppb	06:02:26
3	Mg 279.077 IEC†	43.1	-8.2	-16.532 µg/L	-16.532 ppb	06:02:46
3	Na 589.592 Radial†	121.1	0.6	0.1518 µg/L	0.1518 ppb	06:02:26
3	Sr 421.552†	110.1	116.4	0.5000 µg/L	0.5000 ppb	06:02:26
3	Sc 361.383	2051225.1	2051225.1	98.789 %		06:04:00
3	Y 371.029	1341690.6	1341690.6	98.886 %		06:04:00
3	Ag 328.068†	-863.3	93.4	0.7953 µg/L	0.7953 ppb	06:04:06
3	As 188.979†	3.7	3.6	5.3638 µg/L	5.3638 ppb	06:04:27
3	B 249.677†	227.9	20.1	0.7884 µg/L	0.7884 ppb	06:04:06
3	Ba 233.527†	-74.5	14.3	0.3499 µg/L	0.3499 ppb	06:04:27
3	Be 313.107†	3440.6	119.4	0.0693 µg/L	0.0693 ppb	06:04:06
3	Cd 226.502†	-123.9	16.7	0.3936 µg/L	0.3936 ppb	06:04:27
3	Co 228.616†	-107.3	-14.3	-0.6531 µg/L	-0.6531 ppb	06:04:27
3	Cr 267.716†	-146.0	37.5	0.7198 µg/L	0.7198 ppb	06:04:06
3	Cu 324.752†	4742.3	-115.1	-0.8176 µg/L	-0.8176 ppb	06:04:06
3	Mn 257.610†	163.6	76.5	0.2218 µg/L	0.2218 ppb	06:04:06
3	Mo 202.031†	-0.1	-2.9	-0.3111 µg/L	-0.3111 ppb	06:04:27
3	Ni 231.604†	444.6	16.8	0.8351 µg/L	0.8351 ppb	06:04:27
3	P 214.914†	246.9	-3.8	-6.1328 µg/L	-6.1328 ppb	06:04:27
3	Pb 220.353†	63.1	-3.2	-0.7547 µg/L	-0.7547 ppb	06:04:27
3	S 181.975 Axial†	33.1	-10.9	-45.857 µg/L	-45.857 ppb	06:04:27
3	Sb 206.836†	26.2	3.3	2.8235 µg/L	2.8235 ppb	06:04:27
3	Se 196.026†	19.0	-1.2	-1.3207 µg/L	-1.3207 ppb	06:04:27
3	SiO2†	3083.8	-88.5	-15.254 µg/L	-15.254 ppb	06:04:06
3	Si 251.611†	374.0	32.5	2.2760 µg/L	2.2760 ppb	06:04:27
3	Sn 189.927†	7.0	-1.2	-0.4988 µg/L	-0.4988 ppb	06:04:27
3	Ti 334.940†	1260.2	110.1	0.2514 µg/L	0.2514 ppb	06:04:06
3	Tl 190.801†	-21.8	5.7	8.2838 µg/L	8.2838 ppb	06:04:27
3	U 409.014†	91.3	120.6	11.604 µg/L	11.604 ppb	06:04:06
3	V 292.402†	-163.8	40.2	0.4421 µg/L	0.4421 ppb	06:04:06
3	Zn 213.857†	719.4	-4.6	-0.1084 µg/L	-0.1084 ppb	06:04:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2064743.6	99.440	%	0.7207				0.72%
Sc RADIAL	169064.3	102	%	0.4				0.44%
Y 371.029	1349305.6	99.448	%	0.6663				0.67%
Ag 328.068†	64.8	0.5519	µg/L	0.25198	0.5519	ppb	0.25198	45.66%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.8	2.4468	µg/L	8.92287	2.4468	ppb	8.92287	364.67%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.7	1.1257	µg/L	7.20839	1.1257	ppb	7.20839	640.33%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	11.1	0.4330	µg/L	0.71808	0.4330	ppb	0.71808	165.83%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.4	0.2545	µg/L	0.19823	0.2545	ppb	0.19823	77.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	141.5	0.0820	µg/L	0.02929	0.0820	ppb	0.02929	35.73%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-19.8	-3.7082	µg/L	2.73069	-3.7082	ppb	2.73069	73.64%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	12.3	0.2849	µg/L	0.11507	0.2849	ppb	0.11507	40.39%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-9.6	-0.4381	µg/L	0.25287	-0.4381	ppb	0.25287	57.72%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                6.8      0.1311 µg/L       0.53146      0.1311 ppb        0.53146 405.26%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -111.2     -0.7898 µg/L       0.06445     -0.7898 ppb        0.06445   8.16%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        19.4      13.427 µg/L        4.7643      13.427 ppb         4.7643  35.48%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -84.6     -45.629 µg/L        9.3534     -45.629 ppb         9.3534  20.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -6.1     -12.194 µg/L        3.7608     -12.194 ppb         3.7608  30.84%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               78.8      0.2286 µg/L       0.01972      0.2286 ppb        0.01972   8.63%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -2.2     -0.2349 µg/L       0.18515     -0.2349 ppb        0.18515  78.81%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        30.6      7.3613 µg/L       6.69484      7.3613 ppb        6.69484  90.95%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               13.9      0.6928 µg/L       0.12336      0.6928 ppb        0.12336  17.81%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -4.2     -6.7198 µg/L       0.98763     -6.7198 ppb        0.98763  14.70%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -5.2     -1.1891 µg/L       0.55572     -1.1891 ppb        0.55572  46.73%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -6.2     -25.904 µg/L       17.9174     -25.904 ppb        17.9174  69.17%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.2      3.6339 µg/L       3.44361      3.6339 ppb        3.44361  94.76%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                0.8      0.8171 µg/L       2.18616      0.8171 ppb        2.18616 267.54%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    -81.3     -14.013 µg/L        7.0892     -14.013 ppb         7.0892  50.59%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               31.3      2.1571 µg/L       0.43784      2.1571 ppb        0.43784  20.30%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.2      0.5111 µg/L       1.73947      0.5111 ppb        1.73947 340.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              171.4      0.7360 µg/L       0.20736      0.7360 ppb        0.20736  28.17%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              103.9      0.2372 µg/L       0.08896      0.2372 ppb        0.08896  37.50%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.4      1.9779 µg/L       5.62028      1.9779 ppb        5.62028 284.16%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                34.1      3.2766 µg/L       8.40505      3.2766 ppb        8.40505 256.52%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                27.5      0.2952 µg/L       0.17430      0.2952 ppb        0.17430  59.04%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -3.7     -0.0879 µg/L       0.24550     -0.0879 ppb        0.24550 279.20%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 35
Sample ID: 1201870539|880930|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 325
Date Collected: 6/30/2009 06:04:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870539|880930|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	163311.1	163311.1	98.2	%			06:05:10
1	Al 396.153Radial†	-50.3	98.9	41.235	µg/L	41.235	ppb	06:05:10
1	Ca 317.933Radial†	1131.9	270.9	50.628	µg/L	50.628	ppb	06:05:30
1	Fe 238.204 Radial†	56.6	85.0	58.857	µg/L	58.857	ppb	06:05:30
1	K 766.490 Radial†	901.3	54.7	29.480	µg/L	29.480	ppb	06:05:10
1	Mg 279.077 IEC†	37.9	-11.7	-23.699	µg/L	-23.699	ppb	06:05:30
1	Na 589.592 Radial†	136.1	20.8	4.9929	µg/L	4.9929	ppb	06:05:10
1	Sr 421.552†	57.0	66.8	0.2866	µg/L	0.2866	ppb	06:05:10
1	Sc 361.383	2014098.4	2014098.4	97.001	%			06:06:32
1	Y 371.029	1313456.9	1313456.9	96.806	%			06:06:32
1	Ag 328.068†	-951.8	-13.9	-0.1084	µg/L	-0.1084	ppb	06:06:38
1	As 188.979†	5.3	5.3	7.9142	µg/L	7.9142	ppb	06:06:58
1	B 249.677†	283.0	81.1	3.1838	µg/L	3.1838	ppb	06:06:38
1	Ba 233.527†	-87.4	-0.4	-0.0093	µg/L	-0.0093	ppb	06:06:58
1	Be 313.107†	3395.0	136.7	0.0804	µg/L	0.0804	ppb	06:06:38
1	Cd 226.502†	-144.4	-6.7	-0.1530	µg/L	-0.1530	ppb	06:06:58
1	Co 228.616†	-89.9	1.6	0.0713	µg/L	0.0713	ppb	06:06:58
1	Cr 267.716†	-161.7	18.7	0.3585	µg/L	0.3585	ppb	06:06:38
1	Cu 324.752†	4752.8	-15.8	-0.1048	µg/L	-0.1048	ppb	06:06:38
1	Mn 257.610†	254.7	173.4	0.5032	µg/L	0.5032	ppb	06:06:38
1	Mo 202.031†	1.1	-1.6	-0.1725	µg/L	-0.1725	ppb	06:06:58
1	Ni 231.604†	466.0	47.1	2.3424	µg/L	2.3424	ppb	06:06:58
1	P 214.914†	255.2	9.4	15.322	µg/L	15.322	ppb	06:06:58
1	Pb 220.353†	56.9	-8.5	-1.9538	µg/L	-1.9538	ppb	06:06:58
1	S 181.975 Axial†	40.8	-2.3	-9.5958	µg/L	-9.5958	ppb	06:06:58
1	Sb 206.836†	27.2	4.8	4.1531	µg/L	4.1531	ppb	06:06:58
1	Se 196.026†	18.0	-1.8	-1.9292	µg/L	-1.9292	ppb	06:06:58
1	SiO2†	3296.3	188.2	32.460	µg/L	32.460	ppb	06:06:38
1	Si 251.611†	545.4	216.1	14.804	µg/L	14.804	ppb	06:06:58
1	Sn 189.927†	14.6	6.8	2.9508	µg/L	2.9508	ppb	06:06:58
1	Ti 334.940†	1398.4	276.1	0.6281	µg/L	0.6281	ppb	06:06:38
1	Tl 190.801†	-28.8	-1.8	-2.6395	µg/L	-2.6395	ppb	06:06:58
1	U 409.014†	38.4	67.8	6.5074	µg/L	6.5074	ppb	06:06:38
1	V 292.402†	-131.5	70.4	0.7579	µg/L	0.7579	ppb	06:06:38
1	Zn 213.857†	849.7	143.1	3.3392	µg/L	3.3392	ppb	06:06:58
2	Sc RADIAL	163902.2	163902.2	98.5	%			06:05:36
2	Al 396.153Radial†	-76.4	72.6	30.278	µg/L	30.278	ppb	06:05:36
2	Ca 317.933Radial†	1146.3	281.4	52.590	µg/L	52.590	ppb	06:05:56
2	Fe 238.204 Radial†	52.7	80.8	55.923	µg/L	55.923	ppb	06:05:56
2	K 766.490 Radial†	896.3	46.3	24.969	µg/L	24.969	ppb	06:05:36
2	Mg 279.077 IEC†	52.4	2.8	5.5479	µg/L	5.5479	ppb	06:05:56
2	Na 589.592 Radial†	154.6	38.9	9.3697	µg/L	9.3697	ppb	06:05:36
2	Sr 421.552†	153.5	164.4	0.7060	µg/L	0.7060	ppb	06:05:36
2	Sc 361.383	2026074.7	2026074.7	97.578	%			06:07:04
2	Y 371.029	1321997.7	1321997.7	97.435	%			06:07:04
2	Ag 328.068†	-924.4	20.0	0.1763	µg/L	0.1763	ppb	06:07:10
2	As 188.979†	-1.0	-1.3	-1.8560	µg/L	-1.8560	ppb	06:07:31
2	B 249.677†	280.5	76.8	3.0130	µg/L	3.0130	ppb	06:07:10
2	Ba 233.527†	-79.6	8.2	0.2007	µg/L	0.2007	ppb	06:07:31
2	Be 313.107†	3401.3	122.4	0.0721	µg/L	0.0721	ppb	06:07:10
2	Cd 226.502†	-138.9	-0.1	0.0000	µg/L	0.0000	ppb	06:07:31
2	Co 228.616†	-94.3	-2.4	-0.1100	µg/L	-0.1100	ppb	06:07:31
2	Cr 267.716†	-163.4	18.0	0.3447	µg/L	0.3447	ppb	06:07:10
2	Cu 324.752†	4719.1	-79.3	-0.5568	µg/L	-0.5568	ppb	06:07:10
2	Mn 257.610†	273.6	191.2	0.5548	µg/L	0.5548	ppb	06:07:10
2	Mo 202.031†	-0.9	-3.8	-0.3993	µg/L	-0.3993	ppb	06:07:31
2	Ni 231.604†	448.9	26.8	1.3334	µg/L	1.3334	ppb	06:07:31
2	P 214.914†	254.7	7.3	12.087	µg/L	12.087	ppb	06:07:31
2	Pb 220.353†	57.0	-8.7	-2.0132	µg/L	-2.0132	ppb	06:07:31

2	S 181.975 Axial†	37.6	-5.8	-24.578	µg/L	-24.578 ppb	06:07:31
2	Sb 206.836†	27.0	4.5	3.8497	µg/L	3.8497 ppb	06:07:31
2	Se 196.026†	19.2	-0.7	-0.7645	µg/L	-0.7645 ppb	06:07:31
2	SiO2†	3269.1	140.2	24.184	µg/L	24.184 ppb	06:07:10
2	Si 251.611†	552.0	219.6	15.099	µg/L	15.099 ppb	06:07:31
2	Sn 189.927†	11.8	3.8	1.6736	µg/L	1.6736 ppb	06:07:31
2	Ti 334.940†	1407.4	276.8	0.6296	µg/L	0.6296 ppb	06:07:10
2	Tl 190.801†	-23.6	3.7	5.3232	µg/L	5.3232 ppb	06:07:31
2	U 409.014†	61.7	91.5	8.7870	µg/L	8.7870 ppb	06:07:10
2	V 292.402†	-166.7	35.1	0.3872	µg/L	0.3872 ppb	06:07:10
2	Zn 213.857†	858.4	146.9	3.4352	µg/L	3.4352 ppb	06:07:31
3	Sc RADIAL	163996.6	163996.6	98.6	%		06:06:02
3	Al 396.153Radial†	-34.8	114.8	47.880	µg/L	47.880 ppb	06:06:02
3	Ca 317.933Radial†	1154.9	289.4	54.093	µg/L	54.093 ppb	06:06:22
3	Fe 238.204 Radial†	52.5	80.5	55.751	µg/L	55.751 ppb	06:06:22
3	K 766.490 Radial†	872.1	21.3	11.474	µg/L	11.474 ppb	06:06:02
3	Mg 279.077 IEC†	57.4	7.9	15.752	µg/L	15.752 ppb	06:06:22
3	Na 589.592 Radial†	126.8	10.7	2.5632	µg/L	2.5632 ppb	06:06:02
3	Sr 421.552†	105.6	115.8	0.4971	µg/L	0.4971 ppb	06:06:02
3	Sc 361.383	2027464.4	2027464.4	97.645	%		06:07:37
3	Y 371.029	1322878.0	1322878.0	97.500	%		06:07:37
3	Ag 328.068†	-849.3	97.5	0.8322	µg/L	0.8322 ppb	06:07:42
3	As 188.979†	1.0	0.8	1.2342	µg/L	1.2342 ppb	06:08:03
3	B 249.677†	256.8	52.3	2.0460	µg/L	2.0460 ppb	06:07:42
3	Ba 233.527†	-87.4	0.2	0.0052	µg/L	0.0052 ppb	06:08:03
3	Be 313.107†	3334.6	51.7	0.0316	µg/L	0.0316 ppb	06:07:42
3	Cd 226.502†	-128.0	11.1	0.2522	µg/L	0.2522 ppb	06:08:03
3	Co 228.616†	-97.5	-5.5	-0.2543	µg/L	-0.2543 ppb	06:08:03
3	Cr 267.716†	-137.9	44.1	0.8458	µg/L	0.8458 ppb	06:07:42
3	Cu 324.752†	4698.8	-103.4	-0.7284	µg/L	-0.7284 ppb	06:07:42
3	Mn 257.610†	289.1	206.9	0.6004	µg/L	0.6004 ppb	06:07:42
3	Mo 202.031†	-0.5	-3.3	-0.3483	µg/L	-0.3483 ppb	06:08:03
3	Ni 231.604†	465.0	42.9	2.1332	µg/L	2.1332 ppb	06:08:03
3	P 214.914†	252.6	5.0	8.2448	µg/L	8.2448 ppb	06:08:03
3	Pb 220.353†	66.6	1.1	0.2638	µg/L	0.2638 ppb	06:08:03
3	S 181.975 Axial†	46.1	2.8	11.798	µg/L	11.798 ppb	06:08:03
3	Sb 206.836†	27.8	5.2	4.4541	µg/L	4.4541 ppb	06:08:03
3	Se 196.026†	9.9	-10.3	-11.020	µg/L	-11.020 ppb	06:08:03
3	SiO2†	3280.3	149.4	25.771	µg/L	25.771 ppb	06:07:42
3	Si 251.611†	573.2	240.9	16.530	µg/L	16.530 ppb	06:08:03
3	Sn 189.927†	14.4	6.5	2.8409	µg/L	2.8409 ppb	06:08:03
3	Ti 334.940†	1416.4	285.0	0.6483	µg/L	0.6483 ppb	06:07:42
3	Tl 190.801†	-27.6	-0.4	-0.6165	µg/L	-0.6165 ppb	06:08:03
3	U 409.014†	-56.2	-29.3	-2.8337	µg/L	-2.8337 ppb	06:07:42
3	V 292.402†	-184.6	16.9	0.1766	µg/L	0.1766 ppb	06:07:42
3	Zn 213.857†	868.0	156.1	3.6461	µg/L	3.6461 ppb	06:08:03

Mean Data: 1201870539|880930|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2022545.8	97.408	%	0.3539				0.36%
Sc RADIAL	163736.6	98.4	%	0.22				0.23%
Y 371.029	1319444.2	97.247	%	0.3835				0.39%
Ag 328.068†	34.5	0.3000	µg/L	0.48237	0.3000	ppb	0.48237	160.78%
Al 396.153Radial†	95.4	39.798	µg/L	8.8888	39.798	ppb	8.8888	22.33%
As 188.979†	1.6	2.4308	µg/L	4.99381	2.4308	ppb	4.99381	205.44%
B 249.677†	70.1	2.7476	µg/L	0.61357	2.7476	ppb	0.61357	22.33%
Ba 233.527†	2.6	0.0655	µg/L	0.11730	0.0655	ppb	0.11730	178.99%
Be 313.107†	103.6	0.0614	µg/L	0.02609	0.0614	ppb	0.02609	42.51%
Ca 317.933Radial†	280.6	52.437	µg/L	1.7379	52.437	ppb	1.7379	3.31%
Cd 226.502†	1.4	0.0331	µg/L	0.20459	0.0331	ppb	0.20459	618.75%
Co 228.616†	-2.1	-0.0977	µg/L	0.16317	-0.0977	ppb	0.16317	167.01%
Cr 267.716†	26.9	0.5163	µg/L	0.28544	0.5163	ppb	0.28544	55.28%
Cu 324.752†	-66.2	-0.4634	µg/L	0.32216	-0.4634	ppb	0.32216	69.53%
Fe 238.204 Radial†	82.1	56.844	µg/L	1.7458	56.844	ppb	1.7458	3.07%
K 766.490 Radial†	40.8	21.975	µg/L	9.3691	21.975	ppb	9.3691	42.64%
Mg 279.077 IEC†	-0.3	-0.7997	µg/L	20.47682	-0.7997	ppb	20.47682	>999.9%
Mn 257.610†	190.5	0.5528	µg/L	0.04868	0.5528	ppb	0.04868	8.81%
Mo 202.031†	-2.9	-0.3067	µg/L	0.11900	-0.3067	ppb	0.11900	38.80%
Na 589.592 Radial†	23.4	5.6419	µg/L	3.44940	5.6419	ppb	3.44940	61.14%

Ni 231.604†	38.9	1.9363	µg/L	0.53254	1.9363	ppb	0.53254 27.50%
P 214.914†	7.2	11.885	µg/L	3.5431	11.885	ppb	3.5431 29.81%
Pb 220.353†	-5.4	-1.2344	µg/L	1.29780	-1.2344	ppb	1.29780 105.14%
S 181.975 Axial†	-1.8	-7.4585	µg/L	18.28209	-7.4585	ppb	18.28209 245.12%
Sb 206.836†	4.8	4.1523	µg/L	0.30218	4.1523	ppb	0.30218 7.28%
Se 196.026†	-4.3	-4.5711	µg/L	5.61483	-4.5711	ppb	5.61483 122.83%
SiO2†	159.3	27.472	µg/L	4.3923	27.472	ppb	4.3923 15.99%
Si 251.611†	225.6	15.477	µg/L	0.9229	15.477	ppb	0.9229 5.96%
Sn 189.927†	5.7	2.4884	µg/L	0.70784	2.4884	ppb	0.70784 28.45%
Sr 421.552†	115.7	0.4966	µg/L	0.20969	0.4966	ppb	0.20969 42.23%
Ti 334.940†	279.3	0.6353	µg/L	0.01125	0.6353	ppb	0.01125 1.77%
Tl 190.801†	0.5	0.6891	µg/L	4.13877	0.6891	ppb	4.13877 600.63%
U 409.014†	43.3	4.1535	µg/L	6.15755	4.1535	ppb	6.15755 148.25%
V 292.402†	40.8	0.4406	µg/L	0.29434	0.4406	ppb	0.29434 66.81%
Zn 213.857†	148.7	3.4735	µg/L	0.15702	3.4735	ppb	0.15702 4.52%

Sequence No.: 36
Sample ID: 1201870544|880930|2
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 326
Date Collected: 6/30/2009 06:08:12
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870544|880930|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	166234.9	166234.9	99.9	%			06:08:49
1	Al 396.153Radial†	93457.1	93684.4	39046	µg/L	39046	ppb	06:08:44
1	Ca 317.933Radial†	103421.4	102624.6	19180	µg/L	19180	ppb	06:08:49
1	Fe 238.204 Radial†	152498.7	152652.0	105690	µg/L	105690	ppb	06:08:49
1	K 766.490 Radial†	24118.8	23275.3	12550	µg/L	12550	ppb	06:08:49
1	Mg 279.077 IEC†	8151.7	8108.1	16134	µg/L	16134	ppb	06:08:49
1	Na 589.592 Radial†	12753.9	12646.5	3042.9	µg/L	3042.9	ppb	06:08:49
1	Sr 421.552†	200140.3	200314.3	860.12	µg/L	860.12	ppb	06:08:44
1	Sc 361.383	2076027.3	2076027.3	99.983	%			06:09:24
1	Y 371.029	1365950.1	1365950.1	100.67	%			06:09:24
1	Ag 328.068†	79234.7	80215.1	693.56	µg/L	693.56	ppb	06:09:30
1	As 188.979†	870.5	870.4	1386.3	µg/L	1386.3	ppb	06:09:50
1	B 249.677†	19214.5	19007.1	717.04	µg/L	717.04	ppb	06:09:30
1	Ba 233.527†	101376.0	101482.5	2486.8	µg/L	2486.8	ppb	06:09:30
1	Be 313.107†	811626.3	808397.5	470.17	µg/L	470.17	ppb	06:09:24
1	Cd 226.502†	26600.5	26747.0	609.60	µg/L	609.60	ppb	06:09:30
1	Co 228.616†	9425.8	9521.6	430.51	µg/L	430.51	ppb	06:09:30
1	Cr 267.716†	20954.4	21143.2	406.16	µg/L	406.16	ppb	06:09:30
1	Cu 324.752†	76554.6	71651.8	524.19	µg/L	524.19	ppb	06:09:30
1	Mn 257.610†	671187.2	671209.3	1947.0	µg/L	1947.0	ppb	06:09:24
1	Mo 202.031†	4111.8	4109.7	441.40	µg/L	441.40	ppb	06:09:50
1	Ni 231.604†	11163.1	10731.6	533.01	µg/L	533.01	ppb	06:09:30
1	P 214.914†	2628.2	2374.9	3695.3	µg/L	3695.3	ppb	06:09:50
1	Pb 220.353†	3827.5	3761.0	868.08	µg/L	868.08	ppb	06:09:50
1	S 181.975 Axial†	297.3	252.9	1045.8	µg/L	1045.8	ppb	06:09:50
1	Sb 206.836†	737.9	714.8	616.22	µg/L	616.22	ppb	06:09:50
1	Se 196.026†	821.1	800.9	904.79	µg/L	904.79	ppb	06:09:50
1	SiO2†	49480.6	46278.8	7980.5	µg/L	7980.5	ppb	06:09:30
1	Si 251.611†	54251.9	53914.8	3624.4	µg/L	3624.4	ppb	06:09:30
1	Sn 189.927†	1261.8	1253.8	573.97	µg/L	573.97	ppb	06:09:50
1	Ti 334.940†	863985.7	862963.2	1968.1	µg/L	1968.1	ppb	06:09:24
1	Tl 190.801†	527.3	555.3	804.08	µg/L	804.08	ppb	06:09:50
1	U 409.014†	-484.3	-456.1	-65.591	µg/L	-65.591	ppb	06:09:30
1	V 292.402†	74206.9	74425.2	797.72	µg/L	797.72	ppb	06:09:30
1	Zn 213.857†	45202.8	44477.5	1030.0	µg/L	1030.0	ppb	06:09:30
2	Sc RADIAL	168182.5	168182.5	101	%			06:09:00
2	Al 396.153Radial†	93963.7	93102.4	38803	µg/L	38803	ppb	06:08:55
2	Ca 317.933Radial†	103547.4	101550.6	18979	µg/L	18979	ppb	06:09:00
2	Fe 238.204 Radial†	152679.5	151063.4	104590	µg/L	104590	ppb	06:09:00
2	K 766.490 Radial†	24095.5	22972.7	12387	µg/L	12387	ppb	06:09:00
2	Mg 279.077 IEC†	8191.9	8053.3	16025	µg/L	16025	ppb	06:09:00
2	Na 589.592 Radial†	12771.7	12516.3	3011.5	µg/L	3011.5	ppb	06:09:00
2	Sr 421.552†	201175.4	199018.6	854.55	µg/L	854.55	ppb	06:08:55
2	Sc 361.383	2065884.2	2065884.2	99.495	%			06:09:57
2	Y 371.029	1360366.7	1360366.7	100.26	%			06:09:57
2	Ag 328.068†	79129.9	80498.9	695.90	µg/L	695.90	ppb	06:10:03
2	As 188.979†	871.1	875.3	1392.8	µg/L	1392.8	ppb	06:10:23
2	B 249.677†	19204.4	19091.2	720.71	µg/L	720.71	ppb	06:10:03
2	Ba 233.527†	101172.3	101775.6	2494.0	µg/L	2494.0	ppb	06:10:03
2	Be 313.107†	816483.2	817264.6	475.33	µg/L	475.33	ppb	06:09:57
2	Cd 226.502†	26552.4	26829.3	611.59	µg/L	611.59	ppb	06:10:03
2	Co 228.616†	9451.5	9593.8	433.76	µg/L	433.76	ppb	06:10:03
2	Cr 267.716†	20946.6	21238.4	407.98	µg/L	407.98	ppb	06:10:03
2	Cu 324.752†	76531.6	72004.5	526.55	µg/L	526.55	ppb	06:10:03
2	Mn 257.610†	675360.3	678699.4	1968.7	µg/L	1968.7	ppb	06:09:57
2	Mo 202.031†	4095.3	4113.3	441.74	µg/L	441.74	ppb	06:10:23
2	Ni 231.604†	11169.4	10792.8	536.05	µg/L	536.05	ppb	06:10:03
2	P 214.914†	2614.7	2374.3	3695.2	µg/L	3695.2	ppb	06:10:23
2	Pb 220.353†	3809.3	3761.6	868.18	µg/L	868.18	ppb	06:10:23

2	S 181.975 Axial†	297.6	254.7	1053.6 µg/L	1053.6 ppb	06:10:23
2	Sb 206.836†	737.4	717.9	618.96 µg/L	618.96 ppb	06:10:23
2	Se 196.026†	818.0	801.7	905.22 µg/L	905.22 ppb	06:10:23
2	SiO2†	49388.3	46429.0	8006.4 µg/L	8006.4 ppb	06:10:03
2	Si 251.611†	54299.3	54228.9	3645.3 µg/L	3645.3 ppb	06:10:03
2	Sn 189.927†	1265.7	1263.8	578.00 µg/L	578.00 ppb	06:10:23
2	Ti 334.940†	868942.5	872187.9	1989.2 µg/L	1989.2 ppb	06:09:57
2	Tl 190.801†	527.6	558.1	808.25 µg/L	808.25 ppb	06:10:23
2	U 409.014†	-476.8	-450.9	-64.863 µg/L	-64.863 ppb	06:10:03
2	V 292.402†	74125.7	74708.0	800.62 µg/L	800.62 ppb	06:10:03
2	Zn 213.857†	45182.0	44678.5	1034.8 µg/L	1034.8 ppb	06:10:03
3	Sc RADIAL	166768.5	166768.5	100 %		06:09:11
3	Al 396.153Radial†	94244.5	94170.7	39249 µg/L	39249 ppb	06:09:06
3	Ca 317.933Radial†	104407.9	103277.6	19302 µg/L	19302 ppb	06:09:11
3	Fe 238.204 Radial†	154035.6	153696.9	106410 µg/L	106410 ppb	06:09:11
3	K 766.490 Radial†	24310.9	23389.6	12612 µg/L	12612 ppb	06:09:11
3	Mg 279.077 IEC†	8290.8	8220.7	16359 µg/L	16359 ppb	06:09:11
3	Na 589.592 Radial†	12897.7	12749.1	3067.5 µg/L	3067.5 ppb	06:09:11
3	Sr 421.552†	201690.4	201219.7	864.00 µg/L	864.00 ppb	06:09:06
3	Sc 361.383	2085252.5	2085252.5	100.43 %		06:10:30
3	Y 371.029	1373898.1	1373898.1	101.26 %		06:10:30
3	Ag 328.068†	79434.1	80063.1	692.33 µg/L	692.33 ppb	06:10:36
3	As 188.979†	880.3	876.4	1395.8 µg/L	1395.8 ppb	06:10:57
3	B 249.677†	19313.9	19021.0	717.36 µg/L	717.36 ppb	06:10:36
3	Ba 233.527†	101686.3	101342.9	2483.4 µg/L	2483.4 ppb	06:10:36
3	Be 313.107†	822744.2	815876.8	474.52 µg/L	474.52 ppb	06:10:30
3	Cd 226.502†	26640.4	26669.1	607.75 µg/L	607.75 ppb	06:10:36
3	Co 228.616†	9471.4	9525.4	430.65 µg/L	430.65 ppb	06:10:36
3	Cr 267.716†	21121.5	21216.9	407.57 µg/L	407.57 ppb	06:10:36
3	Cu 324.752†	76759.6	71517.2	523.33 µg/L	523.33 ppb	06:10:36
3	Mn 257.610†	680305.6	677319.0	1964.8 µg/L	1964.8 ppb	06:10:30
3	Mo 202.031†	4141.9	4121.4	442.68 µg/L	442.68 ppb	06:10:57
3	Ni 231.604†	11217.2	10736.1	533.23 µg/L	533.23 ppb	06:10:36
3	P 214.914†	2649.8	2384.8	3710.9 µg/L	3710.9 ppb	06:10:57
3	Pb 220.353†	3859.8	3776.2	871.58 µg/L	871.58 ppb	06:10:57
3	S 181.975 Axial†	305.6	259.9	1075.1 µg/L	1075.1 ppb	06:10:57
3	Sb 206.836†	739.0	712.6	614.42 µg/L	614.42 ppb	06:10:57
3	Se 196.026†	823.4	799.5	903.61 µg/L	903.61 ppb	06:10:57
3	SiO2†	49669.1	46247.5	7975.1 µg/L	7975.1 ppb	06:10:36
3	Si 251.611†	54460.4	53882.3	3621.4 µg/L	3621.4 ppb	06:10:36
3	Sn 189.927†	1275.9	1262.2	577.85 µg/L	577.85 ppb	06:10:57
3	Ti 334.940†	875018.5	870126.2	1984.5 µg/L	1984.5 ppb	06:10:30
3	Tl 190.801†	525.2	550.8	797.74 µg/L	797.74 ppb	06:10:57
3	U 409.014†	-412.7	-382.7	-58.672 µg/L	-58.672 ppb	06:10:36
3	V 292.402†	74461.5	74350.4	797.01 µg/L	797.01 ppb	06:10:36
3	Zn 213.857†	45356.2	44430.2	1028.9 µg/L	1028.9 ppb	06:10:36

Mean Data: 1201870544|880930|2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2075721.3	99.969	%	0.4666				0.47%
Sc RADIAL	167061.9	100	%	0.6				0.60%
Y 371.029	1366738.3	100.73	%	0.501				0.50%
Ag 328.068†	80259.0	693.93	µg/L	1.816	693.93	ppb	1.816	0.26%
Al 396.153Radial†	93652.5	39032	µg/L	223.0	39032	ppb	223.0	0.57%
As 188.979†	874.0	1391.6	µg/L	4.86	1391.6	ppb	4.86	0.35%
B 249.677†	19039.8	718.37	µg/L	2.032	718.37	ppb	2.032	0.28%
Ba 233.527†	101533.7	2488.1	µg/L	5.41	2488.1	ppb	5.41	0.22%
Be 313.107†	813846.3	473.34	µg/L	2.772	473.34	ppb	2.772	0.59%
Ca 317.933Radial†	102484.3	19154	µg/L	163.0	19154	ppb	163.0	0.85%
Cd 226.502†	26748.5	609.64	µg/L	1.920	609.64	ppb	1.920	0.31%
Co 228.616†	9546.9	431.64	µg/L	1.832	431.64	ppb	1.832	0.42%
Cr 267.716†	21199.5	407.24	µg/L	0.958	407.24	ppb	0.958	0.24%
Cu 324.752†	71724.5	524.69	µg/L	1.669	524.69	ppb	1.669	0.32%
Fe 238.204 Radial†	152470.8	105560	µg/L	917.9	105560	ppb	917.9	0.87%
K 766.490 Radial†	23212.5	12517	µg/L	116.2	12517	ppb	116.2	0.93%
Mg 279.077 IEC†	8127.4	16173	µg/L	170.2	16173	ppb	170.2	1.05%
Mn 257.610†	675742.6	1960.2	µg/L	11.56	1960.2	ppb	11.56	0.59%
Mo 202.031†	4114.8	441.94	µg/L	0.664	441.94	ppb	0.664	0.15%
Na 589.592 Radial†	12637.3	3040.7	µg/L	28.07	3040.7	ppb	28.07	0.92%

Ni 231.604†	10753.5	534.10	µg/L	1.692	534.10	ppb	1.692	0.32%
P 214.914†	2378.0	3700.5	µg/L	9.04	3700.5	ppb	9.04	0.24%
Pb 220.353†	3766.3	869.28	µg/L	1.992	869.28	ppb	1.992	0.23%
S 181.975 Axial†	255.9	1058.2	µg/L	15.20	1058.2	ppb	15.20	1.44%
Sb 206.836†	715.1	616.53	µg/L	2.286	616.53	ppb	2.286	0.37%
Se 196.026†	800.7	904.54	µg/L	0.833	904.54	ppb	0.833	0.09%
SiO2†	46318.4	7987.3	µg/L	16.73	7987.3	ppb	16.73	0.21%
Si 251.611†	54008.7	3630.4	µg/L	13.00	3630.4	ppb	13.00	0.36%
Sn 189.927†	1259.9	576.61	µg/L	2.284	576.61	ppb	2.284	0.40%
Sr 421.552†	200184.2	859.56	µg/L	4.750	859.56	ppb	4.750	0.55%
Ti 334.940†	868425.8	1980.6	µg/L	11.05	1980.6	ppb	11.05	0.56%
Tl 190.801†	554.7	803.36	µg/L	5.293	803.36	ppb	5.293	0.66%
U 409.014†	-429.9	-63.042	µg/L	3.8021	-63.042	ppb	3.8021	6.03%
V 292.402†	74494.5	798.45	µg/L	1.913	798.45	ppb	1.913	0.24%
Zn 213.857†	44528.7	1031.2	µg/L	3.14	1031.2	ppb	3.14	0.30%

Sequence No.: 37
Sample ID: 232424001|880930|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 327
Date Collected: 6/30/2009 06:11:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232424001|880930|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	167763.4	167763.4	101	%			06:11:38
1	Al 396.153Radial†	36310.8	36159.8	15077	µg/L	15077	ppb	06:11:43
1	Ca 317.933Radial†	36968.5	35779.7	6687.0	µg/L	6687.0	ppb	06:11:43
1	Fe 238.204 Radial†	134325.4	133238.8	92235	µg/L	92235	ppb	06:11:38
1	K 766.490 Radial†	9375.4	8434.2	4547.8	µg/L	4547.8	ppb	06:11:43
1	Mg 279.077 IEC†	4258.4	4172.7	8233.7	µg/L	8233.7	ppb	06:11:43
1	Na 589.592 Radial†	9225.4	9031.0	2172.9	µg/L	2172.9	ppb	06:11:43
1	Sr 421.552†	10237.6	10161.4	43.631	µg/L	43.631	ppb	06:11:43
1	Sc 361.383	2070022.0	2070022.0	99.694	%			06:12:17
1	Y 371.029	1400269.2	1400269.2	103.20	%			06:12:17
1	Ag 328.068†	-1614.6	-652.2	2.0811	µg/L	2.0811	ppb	06:12:23
1	As 188.979†	5.0	4.8	91.340	µg/L	91.340	ppb	06:12:43
1	B 249.677†	1492.3	1286.2	21.768	µg/L	21.768	ppb	06:12:23
1	Ba 233.527†	4893.7	4998.4	122.51	µg/L	122.51	ppb	06:12:43
1	Be 313.107†	14267.1	10947.5	18.650	µg/L	18.650	ppb	06:12:23
1	Cd 226.502†	166.1	308.7	-0.0645	µg/L	-0.0645	ppb	06:12:43
1	Co 228.616†	280.6	375.8	8.2610	µg/L	8.2610	ppb	06:12:43
1	Cr 267.716†	1861.1	2052.1	39.380	µg/L	39.380	ppb	06:12:43
1	Cu 324.752†	7486.9	2594.4	30.863	µg/L	30.863	ppb	06:12:23
1	Mn 257.610†	633601.3	635455.6	1843.3	µg/L	1843.3	ppb	06:12:17
1	Mo 202.031†	52.0	49.3	8.8738	µg/L	8.8738	ppb	06:12:43
1	Ni 231.604†	1001.9	571.7	28.405	µg/L	28.405	ppb	06:12:43
1	P 214.914†	1112.9	862.6	1304.1	µg/L	1304.1	ppb	06:12:43
1	Pb 220.353†	720.6	655.7	151.18	µg/L	151.18	ppb	06:12:43
1	S 181.975 Axial†	46.8	2.5	-4.2696	µg/L	-4.2696	ppb	06:12:43
1	Sb 206.836†	14.5	-8.7	7.6914	µg/L	7.6914	ppb	06:12:43
1	Se 196.026†	-28.1	-48.6	-10.823	µg/L	-10.823	ppb	06:12:43
1	SiO2†	84443.6	81492.6	14053	µg/L	14053	ppb	06:12:23
1	Si 251.611†	94862.4	94807.3	6401.9	µg/L	6401.9	ppb	06:12:23
1	Sn 189.927†	-7.7	-16.0	18.532	µg/L	18.532	ppb	06:12:43
1	Ti 334.940†	1855350.2	1859875.4	4243.0	µg/L	4243.0	ppb	06:12:17
1	Tl 190.801†	-53.2	-25.5	-14.013	µg/L	-14.013	ppb	06:12:43
1	U 409.014†	-1092.6	-1067.7	-120.62	µg/L	-120.62	ppb	06:12:17
1	V 292.402†	4360.7	4580.1	55.772	µg/L	55.772	ppb	06:12:23
1	Zn 213.857†	19348.3	18674.9	430.85	µg/L	430.85	ppb	06:12:23
2	Sc RADIAL	166528.0	166528.0	100	%			06:11:49
2	Al 396.153Radial†	36541.6	36657.6	15284	µg/L	15284	ppb	06:11:54
2	Ca 317.933Radial†	37178.2	36261.2	6777.0	µg/L	6777.0	ppb	06:11:54
2	Fe 238.204 Radial†	135021.0	134922.0	93400	µg/L	93400	ppb	06:11:49
2	K 766.490 Radial†	9431.6	8559.3	4615.3	µg/L	4615.3	ppb	06:11:54
2	Mg 279.077 IEC†	4247.4	4193.0	8272.6	µg/L	8272.6	ppb	06:11:54
2	Na 589.592 Radial†	9249.4	9122.8	2195.0	µg/L	2195.0	ppb	06:11:54
2	Sr 421.552†	10246.8	10245.9	43.994	µg/L	43.994	ppb	06:11:54
2	Sc 361.383	2069005.1	2069005.1	99.645	%			06:12:51
2	Y 371.029	1400423.1	1400423.1	103.22	%			06:12:51
2	Ag 328.068†	-1571.1	-609.4	2.5461	µg/L	2.5461	ppb	06:12:56
2	As 188.979†	1.5	1.3	87.018	µg/L	87.018	ppb	06:13:17
2	B 249.677†	1406.7	1201.0	18.038	µg/L	18.038	ppb	06:12:56
2	Ba 233.527†	4924.3	5031.5	123.32	µg/L	123.32	ppb	06:13:17
2	Be 313.107†	14268.6	10956.1	18.643	µg/L	18.643	ppb	06:12:56
2	Cd 226.502†	183.3	326.1	0.2451	µg/L	0.2451	ppb	06:13:17
2	Co 228.616†	271.3	366.6	7.8502	µg/L	7.8502	ppb	06:13:17
2	Cr 267.716†	1853.0	2045.0	39.246	µg/L	39.246	ppb	06:13:17
2	Cu 324.752†	7392.9	2503.7	30.374	µg/L	30.374	ppb	06:12:56
2	Mn 257.610†	632359.5	634521.7	1840.6	µg/L	1840.6	ppb	06:12:51
2	Mo 202.031†	47.2	44.5	8.4101	µg/L	8.4101	ppb	06:13:17
2	Ni 231.604†	981.9	552.1	27.431	µg/L	27.431	ppb	06:13:17
2	P 214.914†	1133.9	884.3	1338.3	µg/L	1338.3	ppb	06:13:17
2	Pb 220.353†	706.9	642.3	148.10	µg/L	148.10	ppb	06:13:17

2	S 181.975 Axial†	42.6	-1.7	-22.050	µg/L	-22.050 ppb	06:13:17
2	Sb 206.836†	15.3	-7.8	8.4320	µg/L	8.4320 ppb	06:13:17
2	Se 196.026†	-22.7	-43.2	-4.4855	µg/L	-4.4855 ppb	06:13:17
2	SiO2†	84341.8	81432.1	14042	µg/L	14042 ppb	06:12:56
2	Si 251.611†	94736.0	94727.2	6396.5	µg/L	6396.5 ppb	06:12:56
2	Sn 189.927†	-7.5	-15.7	18.943	µg/L	18.943 ppb	06:13:17
2	Ti 334.940†	1852632.3	1858062.6	4238.8	µg/L	4238.8 ppb	06:12:51
2	Tl 190.801†	-56.9	-29.3	-19.433	µg/L	-19.433 ppb	06:13:17
2	U 409.014†	-1088.9	-1064.5	-120.54	µg/L	-120.54 ppb	06:12:51
2	V 292.402†	4500.5	4722.5	57.369	µg/L	57.369 ppb	06:12:56
2	Zn 213.857†	19281.3	18617.1	429.42	µg/L	429.42 ppb	06:12:56
3	Sc RADIAL	169131.0	169131.0	102	%		06:12:00
3	Al 396.153Radial†	36562.9	36116.6	15059	µg/L	15059 ppb	06:12:05
3	Ca 317.933Radial†	37061.9	35575.2	6648.8	µg/L	6648.8 ppb	06:12:05
3	Fe 238.204 Radial†	135105.1	132928.7	92020	µg/L	92020 ppb	06:12:00
3	K 766.490 Radial†	9440.0	8422.5	4541.5	µg/L	4541.5 ppb	06:12:05
3	Mg 279.077 IEC†	4261.5	4141.6	8171.7	µg/L	8171.7 ppb	06:12:05
3	Na 589.592 Radial†	9320.7	9050.7	2177.7	µg/L	2177.7 ppb	06:12:05
3	Sr 421.552†	10286.1	10126.9	43.483	µg/L	43.483 ppb	06:12:05
3	Sc 361.383	2066234.7	2066234.7	99.512	%		06:13:24
3	Y 371.029	1398578.2	1398578.2	103.08	%		06:13:24
3	Ag 328.068†	-1630.7	-671.3	1.9093	µg/L	1.9093 ppb	06:13:30
3	As 188.979†	7.8	7.7	95.417	µg/L	95.417 ppb	06:13:50
3	B 249.677†	1412.8	1209.1	18.790	µg/L	18.790 ppb	06:13:30
3	Ba 233.527†	4912.2	5026.0	123.18	µg/L	123.18 ppb	06:13:50
3	Be 313.107†	14256.1	10962.8	18.638	µg/L	18.638 ppb	06:13:30
3	Cd 226.502†	182.4	325.4	0.3361	µg/L	0.3361 ppb	06:13:50
3	Co 228.616†	273.3	368.9	7.9635	µg/L	7.9635 ppb	06:13:50
3	Cr 267.716†	1865.0	2059.6	39.524	µg/L	39.524 ppb	06:13:50
3	Cu 324.752†	7366.9	2487.5	30.073	µg/L	30.073 ppb	06:13:30
3	Mn 257.610†	631034.5	634041.1	1839.2	µg/L	1839.2 ppb	06:13:24
3	Mo 202.031†	51.6	49.1	8.8374	µg/L	8.8374 ppb	06:13:50
3	Ni 231.604†	996.7	568.3	28.235	µg/L	28.235 ppb	06:13:50
3	P 214.914†	1124.6	876.4	1327.1	µg/L	1327.1 ppb	06:13:50
3	Pb 220.353†	709.3	645.6	148.86	µg/L	148.86 ppb	06:13:50
3	S 181.975 Axial†	42.7	-1.4	-20.867	µg/L	-20.867 ppb	06:13:50
3	Sb 206.836†	17.3	-5.8	10.151	µg/L	10.151 ppb	06:13:50
3	Se 196.026†	-25.9	-46.4	-8.5438	µg/L	-8.5438 ppb	06:13:50
3	SiO2†	84404.7	81608.8	14073	µg/L	14073 ppb	06:13:30
3	Si 251.611†	94782.6	94901.5	6408.7	µg/L	6408.7 ppb	06:13:30
3	Sn 189.927†	-11.3	-19.6	16.888	µg/L	16.888 ppb	06:13:50
3	Ti 334.940†	1848830.6	1856735.1	4235.8	µg/L	4235.8 ppb	06:13:24
3	Tl 190.801†	-59.6	-32.0	-23.428	µg/L	-23.428 ppb	06:13:50
3	U 409.014†	-1107.6	-1084.8	-122.22	µg/L	-122.22 ppb	06:13:24
3	V 292.402†	4451.6	4679.4	56.801	µg/L	56.801 ppb	06:13:30
3	Zn 213.857†	19223.0	18584.5	428.75	µg/L	428.75 ppb	06:13:30

Mean Data: 232424001|880930|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2068420.6	99.617	%	0.0944				0.09%
Sc RADIAL	167807.4	101	%	0.8				0.78%
Y 371.029	1399756.8	103.17	%	0.075				0.07%
Ag 328.068†	-644.3	2.1788	µg/L	0.32948	2.1788	ppb	0.32948	15.12%
Al 396.153Radial†	36311.3	15140	µg/L	125.4	15140	ppb	125.4	0.83%
As 188.979†	4.6	91.258	µg/L	4.2000	91.258	ppb	4.2000	4.60%
B 249.677†	1232.1	19.532	µg/L	1.9730	19.532	ppb	1.9730	10.10%
Ba 233.527†	5018.6	123.00	µg/L	0.436	123.00	ppb	0.436	0.35%
Be 313.107†	10955.5	18.644	µg/L	0.0061	18.644	ppb	0.0061	0.03%
Ca 317.933Radial†	35872.0	6704.2	µg/L	65.82	6704.2	ppb	65.82	0.98%
Cd 226.502†	320.1	0.1722	µg/L	0.21002	0.1722	ppb	0.21002	121.96%
Co 228.616†	370.4	8.0249	µg/L	0.21218	8.0249	ppb	0.21218	2.64%
Cr 267.716†	2052.3	39.383	µg/L	0.1391	39.383	ppb	0.1391	0.35%
Cu 324.752†	2528.5	30.437	µg/L	0.3984	30.437	ppb	0.3984	1.31%
Fe 238.204 Radial†	133696.5	92552	µg/L	742.5	92552	ppb	742.5	0.80%
K 766.490 Radial†	8472.0	4568.2	µg/L	40.87	4568.2	ppb	40.87	0.89%
Mg 279.077 IEC†	4169.1	8226.0	µg/L	50.91	8226.0	ppb	50.91	0.62%
Mn 257.610†	634672.8	1841.0	µg/L	2.09	1841.0	ppb	2.09	0.11%
Mo 202.031†	47.7	8.7071	µg/L	0.25785	8.7071	ppb	0.25785	2.96%
Na 589.592 Radial†	9068.2	2181.9	µg/L	11.63	2181.9	ppb	11.63	0.53%

Ni 231.604†	564.1	28.024	µg/L	0.5204	28.024	ppb	0.5204	1.86%
P 214.914†	874.5	1323.2	µg/L	17.42	1323.2	ppb	17.42	1.32%
Pb 220.353†	647.9	149.38	µg/L	1.606	149.38	ppb	1.606	1.08%
S 181.975 Axial†	-0.2	-15.729	µg/L	9.9414	-15.729	ppb	9.9414	63.21%
Sb 206.836†	-7.5	8.7582	µg/L	1.26184	8.7582	ppb	1.26184	14.41%
Se 196.026†	-46.1	-7.9507	µg/L	3.20997	-7.9507	ppb	3.20997	40.37%
SiO2†	81511.1	14056	µg/L	15.5	14056	ppb	15.5	0.11%
Si 251.611†	94812.0	6402.4	µg/L	6.14	6402.4	ppb	6.14	0.10%
Sn 189.927†	-17.1	18.121	µg/L	1.0876	18.121	ppb	1.0876	6.00%
Sr 421.552†	10178.1	43.703	µg/L	0.2627	43.703	ppb	0.2627	0.60%
Ti 334.940†	1858224.4	4239.2	µg/L	3.60	4239.2	ppb	3.60	0.08%
Tl 190.801†	-28.9	-18.958	µg/L	4.7258	-18.958	ppb	4.7258	24.93%
U 409.014†	-1072.3	-121.13	µg/L	0.950	-121.13	ppb	0.950	0.78%
V 292.402†	4660.7	56.647	µg/L	0.8095	56.647	ppb	0.8095	1.43%
Zn 213.857†	18625.5	429.68	µg/L	1.072	429.68	ppb	1.072	0.25%

Sequence No.: 38
Sample ID: 1201870540|880930|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 328
Date Collected: 6/30/2009 06:14:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870540|880930|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	166515.1	166515.1	100	%			06:14:32
1	Al 396.153Radial†	33755.9	33877.0	14125	µg/L	14125	ppb	06:14:37
1	Ca 317.933Radial†	32521.5	31611.4	5908.0	µg/L	5908.0	ppb	06:14:37
1	Fe 238.204 Radial†	130915.8	130830.7	90568	µg/L	90568	ppb	06:14:32
1	K 766.490 Radial†	9082.4	8211.1	4427.5	µg/L	4427.5	ppb	06:14:37
1	Mg 279.077 IEC†	4094.8	4040.9	7971.6	µg/L	7971.6	ppb	06:14:37
1	Na 589.592 Radial†	8813.8	8688.3	2090.5	µg/L	2090.5	ppb	06:14:37
1	Sr 421.552†	9333.1	9333.7	40.078	µg/L	40.078	ppb	06:14:37
1	Sc 361.383	2060436.3	2060436.3	99.233	%			06:15:11
1	Y 371.029	1394944.9	1394944.9	102.81	%			06:15:11
1	Ag 328.068†	-1707.8	-753.7	1.0829	µg/L	1.0829	ppb	06:15:17
1	As 188.979†	11.2	11.1	99.709	µg/L	99.709	ppb	06:15:37
1	B 249.677†	1343.3	1143.0	16.640	µg/L	16.640	ppb	06:15:17
1	Ba 233.527†	5333.0	5463.9	133.91	µg/L	133.91	ppb	06:15:17
1	Be 313.107†	13949.9	10694.5	18.534	µg/L	18.534	ppb	06:15:17
1	Cd 226.502†	179.6	323.2	0.3924	µg/L	0.3924	ppb	06:15:37
1	Co 228.616†	263.8	360.1	7.5235	µg/L	7.5235	ppb	06:15:37
1	Cr 267.716†	1778.6	1977.7	37.953	µg/L	37.953	ppb	06:15:37
1	Cu 324.752†	7299.5	2440.4	29.543	µg/L	29.543	ppb	06:15:17
1	Mn 257.610†	625769.4	630519.8	1828.9	µg/L	1828.9	ppb	06:15:11
1	Mo 202.031†	38.9	36.4	7.4277	µg/L	7.4277	ppb	06:15:37
1	Ni 231.604†	986.5	560.9	27.867	µg/L	27.867	ppb	06:15:37
1	P 214.914†	1072.3	826.9	1247.5	µg/L	1247.5	ppb	06:15:37
1	Pb 220.353†	667.8	605.8	139.64	µg/L	139.64	ppb	06:15:37
1	S 181.975 Axial†	48.7	4.7	5.3490	µg/L	5.3490	ppb	06:15:37
1	Sb 206.836†	19.6	-3.4	12.330	µg/L	12.330	ppb	06:15:37
1	Se 196.026†	-26.4	-47.0	-9.8233	µg/L	-9.8233	ppb	06:15:37
1	SiO2†	84871.7	82318.1	14195	µg/L	14195	ppb	06:15:17
1	Si 251.611†	95213.9	95604.2	6456.7	µg/L	6456.7	ppb	06:15:17
1	Sn 189.927†	-8.8	-17.1	17.449	µg/L	17.449	ppb	06:15:37
1	Ti 334.940†	1851176.3	1864327.3	4253.1	µg/L	4253.1	ppb	06:15:11
1	Tl 190.801†	-60.2	-32.8	-24.311	µg/L	-24.311	ppb	06:15:37
1	U 409.014†	-1147.3	-1127.9	-126.02	µg/L	-126.02	ppb	06:15:11
1	V 292.402†	4253.8	4492.7	54.695	µg/L	54.695	ppb	06:15:17
1	Zn 213.857†	18710.6	18122.5	418.04	µg/L	418.04	ppb	06:15:17
2	Sc RADIAL	170228.4	170228.4	102	%			06:14:43
2	Al 396.153Radial†	33808.3	33192.6	13840	µg/L	13840	ppb	06:14:48
2	Ca 317.933Radial†	32579.5	30959.3	5786.1	µg/L	5786.1	ppb	06:14:48
2	Fe 238.204 Radial†	132017.7	129054.5	89338	µg/L	89338	ppb	06:14:43
2	K 766.490 Radial†	9006.2	7938.8	4280.7	µg/L	4280.7	ppb	06:14:48
2	Mg 279.077 IEC†	4099.4	3956.1	7803.2	µg/L	7803.2	ppb	06:14:48
2	Na 589.592 Radial†	8789.7	8472.7	2038.6	µg/L	2038.6	ppb	06:14:48
2	Sr 421.552†	9360.7	9157.3	39.320	µg/L	39.320	ppb	06:14:48
2	Sc 361.383	2069438.7	2069438.7	99.666	%			06:15:45
2	Y 371.029	1401231.1	1401231.1	103.27	%			06:15:45
2	Ag 328.068†	-1644.6	-682.8	1.5849	µg/L	1.5849	ppb	06:15:50
2	As 188.979†	15.4	15.3	105.10	µg/L	105.10	ppb	06:16:11
2	B 249.677†	1305.4	1099.1	15.291	µg/L	15.291	ppb	06:15:50
2	Ba 233.527†	5255.3	5362.6	131.42	µg/L	131.42	ppb	06:15:50
2	Be 313.107†	13722.2	10404.9	18.402	µg/L	18.402	ppb	06:15:50
2	Cd 226.502†	172.3	315.0	0.3023	µg/L	0.3023	ppb	06:16:11
2	Co 228.616†	268.0	363.3	7.6418	µg/L	7.6418	ppb	06:16:11
2	Cr 267.716†	1772.4	1963.7	37.685	µg/L	37.685	ppb	06:16:11
2	Cu 324.752†	7272.3	2381.2	28.956	µg/L	28.956	ppb	06:15:50
2	Mn 257.610†	630418.8	632441.5	1834.5	µg/L	1834.5	ppb	06:15:45
2	Mo 202.031†	39.2	36.5	7.3940	µg/L	7.3940	ppb	06:16:11
2	Ni 231.604†	990.7	560.7	27.860	µg/L	27.860	ppb	06:16:11
2	P 214.914†	1071.1	821.0	1239.2	µg/L	1239.2	ppb	06:16:11
2	Pb 220.353†	673.0	608.2	140.17	µg/L	140.17	ppb	06:16:11

2	S 181.975 Axial†	49.0	4.8	5.5989 µg/L	5.5989 ppb	06:16:11
2	Sb 206.836†	17.1	-6.1	10.115 µg/L	10.115 ppb	06:16:11
2	Se 196.026†	-33.8	-54.3	-18.184 µg/L	-18.184 ppb	06:16:11
2	SiO2†	83695.7	80766.1	13928 µg/L	13928 ppb	06:15:50
2	Si 251.611†	94015.0	93983.8	6344.3 µg/L	6344.3 ppb	06:15:50
2	Sn 189.927†	-6.1	-14.3	18.297 µg/L	18.297 ppb	06:16:11
2	Ti 334.940†	1864332.9	1869412.8	4264.7 µg/L	4264.7 ppb	06:15:45
2	Tl 190.801†	-66.0	-38.4	-32.313 µg/L	-32.313 ppb	06:16:11
2	U 409.014†	-1122.4	-1097.9	-122.89 µg/L	-122.89 ppb	06:15:45
2	V 292.402†	4241.8	4462.0	54.275 µg/L	54.275 ppb	06:15:50
2	Zn 213.857†	18420.2	17749.1	409.38 µg/L	409.38 ppb	06:15:50
3	Sc RADIAL	167333.5	167333.5	101 %		06:14:54
3	Al 396.153Radial†	33872.6	33828.1	14105 µg/L	14105 ppb	06:14:59
3	Ca 317.933Radial†	32695.1	31625.0	5910.5 µg/L	5910.5 ppb	06:14:59
3	Fe 238.204 Radial†	131059.1	130333.5	90224 µg/L	90224 ppb	06:14:54
3	K 766.490 Radial†	9055.0	8139.5	4388.9 µg/L	4388.9 ppb	06:14:59
3	Mg 279.077 IEC†	4082.6	4008.8	7907.6 µg/L	7907.6 ppb	06:14:59
3	Na 589.592 Radial†	8893.5	8724.4	2099.2 µg/L	2099.2 ppb	06:14:59
3	Sr 421.552†	9420.3	9374.8	40.254 µg/L	40.254 ppb	06:14:59
3	Sc 361.383	2057665.5	2057665.5	99.099 %		06:16:18
3	Y 371.029	1392555.4	1392555.4	102.64 %		06:16:18
3	Ag 328.068†	-1613.8	-661.1	1.8379 µg/L	1.8379 ppb	06:16:24
3	As 188.979†	11.3	11.2	99.723 µg/L	99.723 ppb	06:16:44
3	B 249.677†	1236.4	1037.0	12.563 µg/L	12.563 ppb	06:16:24
3	Ba 233.527†	5277.5	5415.2	132.71 µg/L	132.71 ppb	06:16:24
3	Be 313.107†	13730.2	10491.6	18.492 µg/L	18.492 ppb	06:16:24
3	Cd 226.502†	175.9	319.7	0.3457 µg/L	0.3457 ppb	06:16:44
3	Co 228.616†	269.7	366.4	7.7594 µg/L	7.7594 ppb	06:16:44
3	Cr 267.716†	1762.0	1963.4	37.678 µg/L	37.678 ppb	06:16:44
3	Cu 324.752†	7242.3	2392.6	29.156 µg/L	29.156 ppb	06:16:24
3	Mn 257.610†	628438.4	634062.2	1839.2 µg/L	1839.2 ppb	06:16:18
3	Mo 202.031†	43.9	41.5	7.9623 µg/L	7.9623 ppb	06:16:44
3	Ni 231.604†	993.2	569.0	28.269 µg/L	28.269 ppb	06:16:44
3	P 214.914†	1065.8	821.8	1239.6 µg/L	1239.6 ppb	06:16:44
3	Pb 220.353†	660.6	599.5	138.18 µg/L	138.18 ppb	06:16:44
3	S 181.975 Axial†	48.0	4.0	2.4243 µg/L	2.4243 ppb	06:16:44
3	Sb 206.836†	22.7	-0.4	15.069 µg/L	15.069 ppb	06:16:44
3	Se 196.026†	-23.5	-44.1	-6.8976 µg/L	-6.8976 ppb	06:16:44
3	SiO2†	84270.4	81826.4	14110 µg/L	14110 ppb	06:16:24
3	Si 251.611†	94614.8	95128.9	6423.0 µg/L	6423.0 ppb	06:16:24
3	Sn 189.927†	-11.2	-19.5	16.309 µg/L	16.309 ppb	06:16:44
3	Ti 334.940†	1859745.9	1875486.9	4278.6 µg/L	4278.6 ppb	06:16:18
3	Tl 190.801†	-53.7	-26.4	-14.885 µg/L	-14.885 ppb	06:16:44
3	U 409.014†	-1053.4	-1034.7	-116.99 µg/L	-116.99 ppb	06:16:18
3	V 292.402†	4211.9	4456.2	54.299 µg/L	54.299 ppb	06:16:24
3	Zn 213.857†	18573.9	18010.0	415.42 µg/L	415.42 ppb	06:16:24

Mean Data: 1201870540|880930|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2062513.5	99.333	%	0.2964				0.30%
Sc RADIAL	168025.7	101	%	1.2				1.16%
Y 371.029	1396243.8	102.91	%	0.330				0.32%
Ag 328.068†	-699.2	1.5019	µg/L	0.38431	1.5019	ppb	0.38431	25.59%
Al 396.153Radial†	33632.5	14023	µg/L	159.2	14023	ppb	159.2	1.14%
As 188.979†	12.5	101.51	µg/L	3.106	101.51	ppb	3.106	3.06%
B 249.677†	1093.0	14.831	µg/L	2.0771	14.831	ppb	2.0771	14.00%
Ba 233.527†	5413.9	132.68	µg/L	1.241	132.68	ppb	1.241	0.94%
Be 313.107†	10530.3	18.476	µg/L	0.0677	18.476	ppb	0.0677	0.37%
Ca 317.933Radial†	31398.6	5868.2	µg/L	71.11	5868.2	ppb	71.11	1.21%
Cd 226.502†	319.3	0.3468	µg/L	0.04508	0.3468	ppb	0.04508	13.00%
Co 228.616†	363.3	7.6416	µg/L	0.11795	7.6416	ppb	0.11795	1.54%
Cr 267.716†	1968.3	37.772	µg/L	0.1570	37.772	ppb	0.1570	0.42%
Cu 324.752†	2404.7	29.218	µg/L	0.2984	29.218	ppb	0.2984	1.02%
Fe 238.204 Radial†	130072.9	90043	µg/L	634.4	90043	ppb	634.4	0.70%
K 766.490 Radial†	8096.5	4365.7	µg/L	76.13	4365.7	ppb	76.13	1.74%
Mg 279.077 IEC†	4001.9	7894.1	µg/L	84.98	7894.1	ppb	84.98	1.08%
Mn 257.610†	632341.2	1834.2	µg/L	5.14	1834.2	ppb	5.14	0.28%
Mo 202.031†	38.1	7.5947	µg/L	0.31880	7.5947	ppb	0.31880	4.20%
Na 589.592 Radial†	8628.5	2076.1	µg/L	32.75	2076.1	ppb	32.75	1.58%

Ni 231.604†	563.5	27.999	µg/L	0.2345	27.999	ppb	0.2345	0.84%
P 214.914†	823.2	1242.1	µg/L	4.67	1242.1	ppb	4.67	0.38%
Pb 220.353†	604.5	139.33	µg/L	1.026	139.33	ppb	1.026	0.74%
S 181.975 Axial†	4.5	4.4574	µg/L	1.76517	4.4574	ppb	1.76517	39.60%
Sb 206.836†	-3.3	12.505	µg/L	2.4813	12.505	ppb	2.4813	19.84%
Se 196.026†	-48.5	-11.635	µg/L	5.8571	-11.635	ppb	5.8571	50.34%
SiO2†	81636.8	14078	µg/L	136.8	14078	ppb	136.8	0.97%
Si 251.611†	94905.6	6408.0	µg/L	57.71	6408.0	ppb	57.71	0.90%
Sn 189.927†	-17.0	17.352	µg/L	0.9971	17.352	ppb	0.9971	5.75%
Sr 421.552†	9288.6	39.884	µg/L	0.4963	39.884	ppb	0.4963	1.24%
Ti 334.940†	1869742.3	4265.5	µg/L	12.75	4265.5	ppb	12.75	0.30%
Tl 190.801†	-32.5	-23.837	µg/L	8.7237	-23.837	ppb	8.7237	36.60%
U 409.014†	-1086.8	-121.97	µg/L	4.587	-121.97	ppb	4.587	3.76%
V 292.402†	4470.3	54.423	µg/L	0.2359	54.423	ppb	0.2359	0.43%
Zn 213.857†	17960.5	414.28	µg/L	4.443	414.28	ppb	4.443	1.07%

Sequence No.: 39
Sample ID: 1201870542|880930|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 329
Date Collected: 6/30/2009 06:16:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870542|880930|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	170298.3	170298.3	102	%			06:17:26
1	Al 396.153Radial†	49700.8	48705.1	20290	µg/L	20290	ppb	06:17:31
1	Ca 317.933Radial†	65951.4	63548.7	11877	µg/L	11877	ppb	06:17:31
1	Fe 238.204 Radial†	137309.6	134171.3	92896	µg/L	92896	ppb	06:17:31
1	K 766.490 Radial†	18937.2	17637.1	9510.2	µg/L	9510.2	ppb	06:17:31
1	Mg 279.077 IEC†	6718.8	6513.5	12951	µg/L	12951	ppb	06:17:31
1	Na 589.592 Radial†	30377.9	29559.6	7112.3	µg/L	7112.3	ppb	06:17:31
1	Sr 421.552†	125430.9	122547.8	526.20	µg/L	526.20	ppb	06:17:26
1	Sc 361.383	2076114.5	2076114.5	99.988	%			06:18:07
1	Y 371.029	1409129.6	1409129.6	103.86	%			06:18:07
1	Ag 328.068†	55382.8	56357.0	488.58	µg/L	488.58	ppb	06:18:12
1	As 188.979†	328.6	328.4	574.91	µg/L	574.91	ppb	06:18:33
1	B 249.677†	13629.6	13420.7	500.55	µg/L	500.55	ppb	06:18:12
1	Ba 233.527†	24427.3	24520.0	601.58	µg/L	601.58	ppb	06:18:12
1	Be 313.107†	870885.7	867630.2	512.55	µg/L	512.55	ppb	06:18:07
1	Cd 226.502†	21377.3	21522.1	490.30	µg/L	490.30	ppb	06:18:12
1	Co 228.616†	10721.1	10816.8	483.60	µg/L	483.60	ppb	06:18:12
1	Cr 267.716†	27016.9	27205.6	521.90	µg/L	521.90	ppb	06:18:12
1	Cu 324.752†	78085.1	73179.2	533.34	µg/L	533.34	ppb	06:18:12
1	Mn 257.610†	765561.0	765566.5	2220.6	µg/L	2220.6	ppb	06:18:07
1	Mo 202.031†	4510.6	4508.3	483.31	µg/L	483.31	ppb	06:18:33
1	Ni 231.604†	10778.3	10346.3	513.76	µg/L	513.76	ppb	06:18:12
1	P 214.914†	1687.6	1434.1	2161.7	µg/L	2161.7	ppb	06:18:33
1	Pb 220.353†	2773.6	2706.8	623.61	µg/L	623.61	ppb	06:18:33
1	S 181.975 Axial†	1207.4	1163.2	4876.4	µg/L	4876.4	ppb	06:18:33
1	Sb 206.836†	578.3	555.1	490.19	µg/L	490.19	ppb	06:18:33
1	Se 196.026†	417.7	397.4	466.68	µg/L	466.68	ppb	06:18:33
1	SiO2†	114921.6	111725.8	19266	µg/L	19266	ppb	06:18:12
1	Si 251.611†	130168.7	129838.7	8774.5	µg/L	8774.5	ppb	06:18:12
1	Sn 189.927†	1116.6	1108.5	506.33	µg/L	506.33	ppb	06:18:33
1	Ti 334.940†	2120475.7	2119572.4	4835.3	µg/L	4835.3	ppb	06:18:07
1	Tl 190.801†	176.4	204.3	317.93	µg/L	317.93	ppb	06:18:33
1	U 409.014†	4044.9	4073.6	373.31	µg/L	373.31	ppb	06:18:07
1	V 292.402†	49711.8	49924.0	538.88	µg/L	538.88	ppb	06:18:12
1	Zn 213.857†	38730.2	38002.2	879.31	µg/L	879.31	ppb	06:18:12
2	Sc RADIAL	168834.3	168834.3	101	%			06:17:37
2	Al 396.153Radial†	50099.4	49518.9	20629	µg/L	20629	ppb	06:17:42
2	Ca 317.933Radial†	66496.8	64644.8	12082	µg/L	12082	ppb	06:17:42
2	Fe 238.204 Radial†	138452.3	136460.6	94481	µg/L	94481	ppb	06:17:42
2	K 766.490 Radial†	19082.2	17940.5	9673.8	µg/L	9673.8	ppb	06:17:42
2	Mg 279.077 IEC†	6794.3	6644.8	13212	µg/L	13212	ppb	06:17:42
2	Na 589.592 Radial†	30574.9	30011.1	7221.0	µg/L	7221.0	ppb	06:17:42
2	Sr 421.552†	126722.1	124882.8	536.23	µg/L	536.23	ppb	06:17:37
2	Sc 361.383	2079287.6	2079287.6	100.14	%			06:18:40
2	Y 371.029	1411652.5	1411652.5	104.04	%			06:18:40
2	Ag 328.068†	56112.3	57001.0	494.21	µg/L	494.21	ppb	06:18:46
2	As 188.979†	327.3	326.6	573.55	µg/L	573.55	ppb	06:19:06
2	B 249.677†	13808.3	13578.3	506.27	µg/L	506.27	ppb	06:18:46
2	Ba 233.527†	24689.3	24744.4	607.09	µg/L	607.09	ppb	06:18:46
2	Be 313.107†	877249.7	872656.0	515.51	µg/L	515.51	ppb	06:18:40
2	Cd 226.502†	21714.8	21826.5	497.21	µg/L	497.21	ppb	06:18:46
2	Co 228.616†	10876.3	10955.3	489.87	µg/L	489.87	ppb	06:18:46
2	Cr 267.716†	27344.1	27491.1	527.38	µg/L	527.38	ppb	06:18:46
2	Cu 324.752†	79161.4	74134.8	540.36	µg/L	540.36	ppb	06:18:46
2	Mn 257.610†	770890.1	769719.8	2232.6	µg/L	2232.6	ppb	06:18:40
2	Mo 202.031†	4557.7	4548.5	487.64	µg/L	487.64	ppb	06:19:06
2	Ni 231.604†	10907.1	10458.5	519.33	µg/L	519.33	ppb	06:18:46
2	P 214.914†	1692.6	1436.5	2162.7	µg/L	2162.7	ppb	06:19:06
2	Pb 220.353†	2790.6	2719.5	626.55	µg/L	626.55	ppb	06:19:06

2	S 181.975 Axial†	1223.5	1177.4	4936.1 µg/L	4936.1 ppb	06:19:06
2	Sb 206.836†	586.1	562.1	496.19 µg/L	496.19 ppb	06:19:06
2	Se 196.026†	412.6	391.6	461.18 µg/L	461.18 ppb	06:19:06
2	SiO2†	116270.1	112897.0	19468 µg/L	19468 ppb	06:18:46
2	Si 251.611†	131928.5	131397.4	8881.1 µg/L	8881.1 ppb	06:18:46
2	Sn 189.927†	1124.0	1114.2	509.24 µg/L	509.24 ppb	06:19:06
2	Ti 334.940†	2134320.1	2130161.0	4859.4 µg/L	4859.4 ppb	06:18:40
2	Tl 190.801†	181.8	209.4	325.48 µg/L	325.48 ppb	06:19:06
2	U 409.014†	4028.2	4050.8	370.80 µg/L	370.80 ppb	06:18:40
2	V 292.402†	50424.8	50560.1	545.75 µg/L	545.75 ppb	06:18:46
2	Zn 213.857†	39193.3	38405.5	888.59 µg/L	888.59 ppb	06:18:46
3	Sc RADIAL	170685.6	170685.6	103 %		06:17:48
3	Al 396.153Radial†	50409.0	49285.2	20531 µg/L	20531 ppb	06:17:53
3	Ca 317.933Radial†	66660.2	64093.4	11979 µg/L	11979 ppb	06:17:53
3	Fe 238.204 Radial†	138827.1	135346.1	93710 µg/L	93710 ppb	06:17:53
3	K 766.490 Radial†	19205.3	17856.5	9628.4 µg/L	9628.4 ppb	06:17:53
3	Mg 279.077 IEC†	6812.1	6589.5	13102 µg/L	13102 ppb	06:17:53
3	Na 589.592 Radial†	30734.1	29839.4	7179.6 µg/L	7179.6 ppb	06:17:53
3	Sr 421.552†	126772.1	123577.1	530.62 µg/L	530.62 ppb	06:17:48
3	Sc 361.383	2068594.1	2068594.1	99.625 %		06:19:14
3	Y 371.029	1404247.4	1404247.4	103.50 %		06:19:14
3	Ag 328.068†	56087.4	57265.6	496.42 µg/L	496.42 ppb	06:19:20
3	As 188.979†	321.4	322.4	566.65 µg/L	566.65 ppb	06:19:40
3	B 249.677†	13840.2	13681.6	510.59 µg/L	510.59 ppb	06:19:20
3	Ba 233.527†	24795.2	24978.1	612.82 µg/L	612.82 ppb	06:19:20
3	Be 313.107†	870095.6	870003.6	513.94 µg/L	513.94 ppb	06:19:14
3	Cd 226.502†	21830.6	22054.9	502.55 µg/L	502.55 ppb	06:19:20
3	Co 228.616†	10948.2	11083.7	495.75 µg/L	495.75 ppb	06:19:20
3	Cr 267.716†	27382.8	27671.1	530.83 µg/L	530.83 ppb	06:19:20
3	Cu 324.752†	79188.2	74570.3	543.35 µg/L	543.35 ppb	06:19:20
3	Mn 257.610†	764197.2	766981.1	2224.7 µg/L	2224.7 ppb	06:19:14
3	Mo 202.031†	4550.2	4564.5	489.32 µg/L	489.32 ppb	06:19:40
3	Ni 231.604†	10956.2	10564.1	524.57 µg/L	524.57 ppb	06:19:20
3	P 214.914†	1687.4	1440.0	2168.9 µg/L	2168.9 ppb	06:19:40
3	Pb 220.353†	2761.2	2704.5	623.08 µg/L	623.08 ppb	06:19:40
3	S 181.975 Axial†	1211.1	1171.3	4910.5 µg/L	4910.5 ppb	06:19:40
3	Sb 206.836†	567.9	546.8	483.06 µg/L	483.06 ppb	06:19:40
3	Se 196.026†	411.6	392.8	462.10 µg/L	462.10 ppb	06:19:40
3	SiO2†	116770.5	113999.5	19659 µg/L	19659 ppb	06:19:20
3	Si 251.611†	132246.0	132397.1	8950.7 µg/L	8950.7 ppb	06:19:20
3	Sn 189.927†	1122.6	1118.6	510.92 µg/L	510.92 ppb	06:19:40
3	Ti 334.940†	2116720.1	2123512.7	4844.2 µg/L	4844.2 ppb	06:19:14
3	Tl 190.801†	173.0	201.5	313.97 µg/L	313.97 ppb	06:19:40
3	U 409.014†	4099.6	4143.3	379.84 µg/L	379.84 ppb	06:19:14
3	V 292.402†	50561.1	50957.2	549.91 µg/L	549.91 ppb	06:19:20
3	Zn 213.857†	39435.5	38851.0	899.05 µg/L	899.05 ppb	06:19:20

Mean Data: 1201870542|880930|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2074665.4	99.918	%	0.2645				0.26%
Sc RADIAL	169939.4	102	%	0.6				0.57%
Y 371.029	1408343.2	103.80	%	0.277				0.27%
Ag 328.068†	56874.5	493.07	µg/L	4.042	493.07	ppb	4.042	0.82%
Al 396.153Radial†	49169.8	20483	µg/L	174.6	20483	ppb	174.6	0.85%
As 188.979†	325.8	571.71	µg/L	4.429	571.71	ppb	4.429	0.77%
B 249.677†	13560.2	505.81	µg/L	5.038	505.81	ppb	5.038	1.00%
Ba 233.527†	24747.5	607.16	µg/L	5.622	607.16	ppb	5.622	0.93%
Be 313.107†	870096.6	514.00	µg/L	1.480	514.00	ppb	1.480	0.29%
Ca 317.933Radial†	64095.6	11979	µg/L	102.4	11979	ppb	102.4	0.86%
Cd 226.502†	21801.2	496.69	µg/L	6.141	496.69	ppb	6.141	1.24%
Co 228.616†	10951.9	489.74	µg/L	6.077	489.74	ppb	6.077	1.24%
Cr 267.716†	27455.9	526.70	µg/L	4.505	526.70	ppb	4.505	0.86%
Cu 324.752†	73961.5	539.02	µg/L	5.138	539.02	ppb	5.138	0.95%
Fe 238.204 Radial†	135326.0	93696	µg/L	792.6	93696	ppb	792.6	0.85%
K 766.490 Radial†	17811.4	9604.1	µg/L	84.45	9604.1	ppb	84.45	0.88%
Mg 279.077 IEC†	6582.6	13088	µg/L	131.3	13088	ppb	131.3	1.00%
Mn 257.610†	767422.5	2225.9	µg/L	6.13	2225.9	ppb	6.13	0.28%
Mo 202.031†	4540.4	486.76	µg/L	3.101	486.76	ppb	3.101	0.64%
Na 589.592 Radial†	29803.4	7171.0	µg/L	54.84	7171.0	ppb	54.84	0.76%

Ni 231.604†	10456.3	519.22 µg/L	5.407	519.22 ppb	5.407	1.04%
P 214.914†	1436.9	2164.5 µg/L	3.89	2164.5 ppb	3.89	0.18%
Pb 220.353†	2710.3	624.41 µg/L	1.871	624.41 ppb	1.871	0.30%
S 181.975 Axial†	1170.6	4907.7 µg/L	29.96	4907.7 ppb	29.96	0.61%
Sb 206.836†	554.7	489.81 µg/L	6.571	489.81 ppb	6.571	1.34%
Se 196.026†	393.9	463.32 µg/L	2.944	463.32 ppb	2.944	0.64%
SiO2†	112874.1	19464 µg/L	196.1	19464 ppb	196.1	1.01%
Si 251.611†	131211.1	8868.8 µg/L	88.79	8868.8 ppb	88.79	1.00%
Sn 189.927†	1113.8	508.83 µg/L	2.323	508.83 ppb	2.323	0.46%
Sr 421.552†	123669.2	531.01 µg/L	5.025	531.01 ppb	5.025	0.95%
Ti 334.940†	2124415.4	4846.3 µg/L	12.21	4846.3 ppb	12.21	0.25%
Tl 190.801†	205.1	319.13 µg/L	5.849	319.13 ppb	5.849	1.83%
U 409.014†	4089.2	374.65 µg/L	4.671	374.65 ppb	4.671	1.25%
V 292.402†	50480.4	544.85 µg/L	5.571	544.85 ppb	5.571	1.02%
Zn 213.857†	38419.6	888.98 µg/L	9.876	888.98 ppb	9.876	1.11%

Sequence No.: 40
Sample ID: 1201870543|880930|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 330
Date Collected: 6/30/2009 06:19:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870543|880930|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	171264.7	171264.7	103	%			06:20:22
1	Al 396.153Radial†	57801.3	56300.2	23457	µg/L	23457	ppb	06:20:27
1	Ca 317.933Radial†	66574.6	63790.6	11922	µg/L	11922	ppb	06:20:27
1	Fe 238.204 Radial†	143956.9	139871.8	96842	µg/L	96842	ppb	06:20:27
1	K 766.490 Radial†	20167.0	18727.4	10098	µg/L	10098	ppb	06:20:27
1	Mg 279.077 IEC†	7445.4	7182.4	14289	µg/L	14289	ppb	06:20:27
1	Na 589.592 Radial†	31182.7	30173.9	7260.1	µg/L	7260.1	ppb	06:20:27
1	Sr 421.552†	127754.0	124113.1	532.92	µg/L	532.92	ppb	06:20:22
1	Sc 361.383	2092884.2	2092884.2	100.80	%			06:21:02
1	Y 371.029	1420380.8	1420380.8	104.69	%			06:21:02
1	Ag 328.068†	56703.6	57223.5	496.31	µg/L	496.31	ppb	06:21:08
1	As 188.979†	332.7	329.9	580.54	µg/L	580.54	ppb	06:21:28
1	B 249.677†	13904.7	13584.4	505.77	µg/L	505.77	ppb	06:21:08
1	Ba 233.527†	26028.0	25912.3	635.69	µg/L	635.69	ppb	06:21:08
1	Be 313.107†	876714.6	866434.0	512.02	µg/L	512.02	ppb	06:21:02
1	Cd 226.502†	21943.8	21912.8	498.96	µg/L	498.96	ppb	06:21:08
1	Co 228.616†	10767.7	10777.1	481.69	µg/L	481.69	ppb	06:21:28
1	Cr 267.716†	27210.9	27181.6	521.45	µg/L	521.45	ppb	06:21:08
1	Cu 324.752†	80246.6	74698.0	544.68	µg/L	544.68	ppb	06:21:08
1	Mn 257.610†	859857.6	852984.1	2474.1	µg/L	2474.1	ppb	06:21:02
1	Mo 202.031†	4568.9	4530.0	485.77	µg/L	485.77	ppb	06:21:28
1	Ni 231.604†	10794.2	10275.8	510.26	µg/L	510.26	ppb	06:21:28
1	P 214.914†	1519.9	1254.2	1862.2	µg/L	1862.2	ppb	06:21:28
1	Pb 220.353†	3028.4	2937.4	676.97	µg/L	676.97	ppb	06:21:28
1	S 181.975 Axial†	1218.5	1164.5	4881.2	µg/L	4881.2	ppb	06:21:28
1	Sb 206.836†	571.4	543.6	480.49	µg/L	480.49	ppb	06:21:28
1	Se 196.026†	422.8	399.0	469.93	µg/L	469.93	ppb	06:21:28
1	SiO2†	111675.2	107584.1	18552	µg/L	18552	ppb	06:21:08
1	Si 251.611†	126335.1	124992.3	8437.2	µg/L	8437.2	ppb	06:21:08
1	Sn 189.927†	1123.1	1106.0	506.42	µg/L	506.42	ppb	06:21:28
1	Ti 334.940†	2160266.4	2142056.3	4886.5	µg/L	4886.5	ppb	06:21:02
1	Tl 190.801†	179.5	205.9	319.66	µg/L	319.66	ppb	06:21:28
1	U 409.014†	3338.3	3340.2	302.01	µg/L	302.01	ppb	06:21:08
1	V 292.402†	51151.2	50953.6	549.98	µg/L	549.98	ppb	06:21:08
1	Zn 213.857†	40222.7	39172.5	906.41	µg/L	906.41	ppb	06:21:08
2	Sc RADIAL	170695.8	170695.8	103	%			06:20:33
2	Al 396.153Radial†	57230.6	55931.2	23303	µg/L	23303	ppb	06:20:38
2	Ca 317.933Radial†	65550.0	63007.5	11776	µg/L	11776	ppb	06:20:38
2	Fe 238.204 Radial†	141819.3	138254.5	95723	µg/L	95723	ppb	06:20:38
2	K 766.490 Radial†	20124.9	18751.7	10111	µg/L	10111	ppb	06:20:38
2	Mg 279.077 IEC†	7343.5	7107.1	14139	µg/L	14139	ppb	06:20:38
2	Na 589.592 Radial†	30960.4	30058.3	7232.3	µg/L	7232.3	ppb	06:20:38
2	Sr 421.552†	127109.6	123898.7	532.00	µg/L	532.00	ppb	06:20:33
2	Sc 361.383	2106099.8	2106099.8	101.43	%			06:21:36
2	Y 371.029	1429800.3	1429800.3	105.38	%			06:21:36
2	Ag 328.068†	56597.0	56765.4	492.30	µg/L	492.30	ppb	06:21:41
2	As 188.979†	324.1	319.3	563.88	µg/L	563.88	ppb	06:22:02
2	B 249.677†	13899.3	13492.4	502.50	µg/L	502.50	ppb	06:21:41
2	Ba 233.527†	25957.6	25680.9	630.02	µg/L	630.02	ppb	06:21:41
2	Be 313.107†	883110.1	867281.3	512.51	µg/L	512.51	ppb	06:21:36
2	Cd 226.502†	21849.0	21682.7	493.73	µg/L	493.73	ppb	06:21:41
2	Co 228.616†	10771.7	10714.0	478.81	µg/L	478.81	ppb	06:22:02
2	Cr 267.716†	27141.2	26943.5	516.89	µg/L	516.89	ppb	06:21:41
2	Cu 324.752†	80037.3	73992.0	539.51	µg/L	539.51	ppb	06:21:41
2	Mn 257.610†	866272.1	853955.1	2476.9	µg/L	2476.9	ppb	06:21:36
2	Mo 202.031†	4559.7	4492.5	481.74	µg/L	481.74	ppb	06:22:02
2	Ni 231.604†	10792.8	10207.2	506.85	µg/L	506.85	ppb	06:22:02
2	P 214.914†	1536.5	1261.1	1875.6	µg/L	1875.6	ppb	06:22:02
2	Pb 220.353†	3005.6	2896.1	667.46	µg/L	667.46	ppb	06:22:02

Ni 231.604†	10270.1	509.98 µg/L	2.996	509.98 ppb	2.996	0.59%
P 214.914†	1262.1	1876.2 µg/L	14.41	1876.2 ppb	14.41	0.77%
Pb 220.353†	2915.1	671.82 µg/L	4.805	671.82 ppb	4.805	0.72%
S 181.975 Axial†	1165.3	4884.7 µg/L	28.93	4884.7 ppb	28.93	0.59%
Sb 206.836†	548.0	484.32 µg/L	4.828	484.32 ppb	4.828	1.00%
Se 196.026†	397.4	467.79 µg/L	2.447	467.79 ppb	2.447	0.52%
SiO2†	107565.0	18549 µg/L	179.3	18549 ppb	179.3	0.97%
Si 251.611†	125082.9	8443.1 µg/L	77.82	8443.1 ppb	77.82	0.92%
Sn 189.927†	1108.6	507.24 µg/L	1.747	507.24 ppb	1.747	0.34%
Sr 421.552†	124228.0	533.41 µg/L	1.715	533.41 ppb	1.715	0.32%
Ti 334.940†	2146892.7	4897.6 µg/L	18.35	4897.6 ppb	18.35	0.37%
Tl 190.801†	202.6	315.02 µg/L	4.211	315.02 ppb	4.211	1.34%
U 409.014†	3328.1	301.06 µg/L	3.096	301.06 ppb	3.096	1.03%
V 292.402†	50963.2	549.99 µg/L	4.762	549.99 ppb	4.762	0.87%
Zn 213.857†	39190.7	906.91 µg/L	8.106	906.91 ppb	8.106	0.89%

Sequence No.: 41
Sample ID: 1201870541|880930|5
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 331
Date Collected: 6/30/2009 06:22:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201870541|880930|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	172241.9	172241.9	104	%			06:23:17
1	Al 396.153Radial†	7386.3	7284.7	3037.4	µg/L	3037.4	ppb	06:23:37
1	Ca 317.933Radial†	8353.3	7186.4	1343.1	µg/L	1343.1	ppb	06:23:37
1	Fe 238.204 Radial†	27846.5	26924.9	18639	µg/L	18639	ppb	06:23:37
1	K 766.490 Radial†	2596.2	1644.2	886.60	µg/L	886.60	ppb	06:23:17
1	Mg 279.077 IEC†	908.5	827.1	1631.6	µg/L	1631.6	ppb	06:23:37
1	Na 589.592 Radial†	1983.9	1798.3	432.70	µg/L	432.70	ppb	06:23:37
1	Sr 421.552†	2153.4	2088.7	8.9685	µg/L	8.9685	ppb	06:23:37
1	Sc 361.383	2107070.8	2107070.8	101.48	%			06:24:40
1	Y 371.029	1384264.5	1384264.5	102.02	%			06:24:40
1	Ag 328.068†	-1155.8	-171.6	0.0839	µg/L	0.0839	ppb	06:24:46
1	As 188.979†	7.8	7.5	28.197	µg/L	28.197	ppb	06:25:06
1	B 249.677†	465.2	247.7	3.9180	µg/L	3.9180	ppb	06:24:46
1	Ba 233.527†	976.2	1051.7	25.775	µg/L	25.775	ppb	06:25:06
1	Be 313.107†	5639.4	2193.9	3.7371	µg/L	3.7371	ppb	06:24:46
1	Cd 226.502†	-60.2	82.8	0.4541	µg/L	0.4541	ppb	06:25:06
1	Co 228.616†	-19.2	75.4	1.6591	µg/L	1.6591	ppb	06:25:06
1	Cr 267.716†	268.4	449.8	8.6312	µg/L	8.6312	ppb	06:24:46
1	Cu 324.752†	5537.7	541.5	6.3593	µg/L	6.3593	ppb	06:24:46
1	Mn 257.610†	129213.7	127241.9	369.09	µg/L	369.09	ppb	06:24:46
1	Mo 202.031†	15.8	12.7	2.0884	µg/L	2.0884	ppb	06:25:06
1	Ni 231.604†	577.7	136.0	6.7560	µg/L	6.7560	ppb	06:25:06
1	P 214.914†	429.2	169.3	255.25	µg/L	255.25	ppb	06:25:06
1	Pb 220.353†	202.1	132.1	30.454	µg/L	30.454	ppb	06:25:06
1	S 181.975 Axial†	45.9	0.9	0.7483	µg/L	0.7483	ppb	06:25:06
1	Sb 206.836†	24.9	1.3	4.1465	µg/L	4.1465	ppb	06:25:06
1	Se 196.026†	9.4	-11.1	-3.5841	µg/L	-3.5841	ppb	06:25:06
1	SiO2†	20195.2	16690.9	2878.3	µg/L	2878.3	ppb	06:24:46
1	Si 251.611†	20042.0	19403.9	1311.0	µg/L	1311.0	ppb	06:24:46
1	Sn 189.927†	3.1	-5.2	2.9027	µg/L	2.9027	ppb	06:25:06
1	Ti 334.940†	379353.9	372661.3	850.16	µg/L	850.16	ppb	06:24:40
1	Tl 190.801†	-37.2	-8.9	-8.2032	µg/L	-8.2032	ppb	06:25:06
1	U 409.014†	-317.7	-284.8	-31.018	µg/L	-31.018	ppb	06:24:46
1	V 292.402†	742.8	938.0	11.393	µg/L	11.393	ppb	06:24:46
1	Zn 213.857†	4749.7	3947.7	91.137	µg/L	91.137	ppb	06:24:46
2	Sc RADIAL	171534.9	171534.9	103	%			06:23:43
2	Al 396.153Radial†	7379.8	7307.8	3047.0	µg/L	3047.0	ppb	06:24:03
2	Ca 317.933Radial†	8332.0	7199.0	1345.4	µg/L	1345.4	ppb	06:24:03
2	Fe 238.204 Radial†	27809.6	26999.9	18691	µg/L	18691	ppb	06:24:03
2	K 766.490 Radial†	2547.7	1607.5	866.80	µg/L	866.80	ppb	06:23:43
2	Mg 279.077 IEC†	906.3	828.6	1634.4	µg/L	1634.4	ppb	06:24:03
2	Na 589.592 Radial†	1968.3	1791.1	430.96	µg/L	430.96	ppb	06:24:03
2	Sr 421.552†	2148.9	2092.9	8.9864	µg/L	8.9864	ppb	06:24:03
2	Sc 361.383	2103381.9	2103381.9	101.30	%			06:25:13
2	Y 371.029	1382940.2	1382940.2	101.93	%			06:25:13
2	Ag 328.068†	-1072.0	-91.0	0.7738	µg/L	0.7738	ppb	06:25:18
2	As 188.979†	8.7	8.4	29.679	µg/L	29.679	ppb	06:25:39
2	B 249.677†	477.9	261.1	4.4283	µg/L	4.4283	ppb	06:25:18
2	Ba 233.527†	982.4	1059.4	25.966	µg/L	25.966	ppb	06:25:39
2	Be 313.107†	5637.3	2201.6	3.7732	µg/L	3.7732	ppb	06:25:18
2	Cd 226.502†	-79.1	64.1	0.0186	µg/L	0.0186	ppb	06:25:39
2	Co 228.616†	-7.2	87.2	2.1754	µg/L	2.1754	ppb	06:25:39
2	Cr 267.716†	220.5	403.1	7.7365	µg/L	7.7365	ppb	06:25:18
2	Cu 324.752†	5587.6	600.3	6.7850	µg/L	6.7850	ppb	06:25:18
2	Mn 257.610†	127756.7	126026.9	365.57	µg/L	365.57	ppb	06:25:18
2	Mo 202.031†	7.3	4.4	1.2051	µg/L	1.2051	ppb	06:25:39
2	Ni 231.604†	574.5	133.8	6.6483	µg/L	6.6483	ppb	06:25:39
2	P 214.914†	419.1	160.0	240.01	µg/L	240.01	ppb	06:25:39
2	Pb 220.353†	208.5	138.7	31.986	µg/L	31.986	ppb	06:25:39

2	S 181.975 Axial†	43.7	-1.3	-8.3602	µg/L	-8.3602 ppb	06:25:39
2	Sb 206.836†	21.2	-2.3	1.1363	µg/L	1.1363 ppb	06:25:39
2	Se 196.026†	-0.6	-21.0	-14.177	µg/L	-14.177 ppb	06:25:39
2	SiO2†	19881.8	16416.5	2830.9	µg/L	2830.9 ppb	06:25:18
2	Si 251.611†	19851.7	19250.6	1299.9	µg/L	1299.9 ppb	06:25:18
2	Sn 189.927†	5.8	-2.6	4.0408	µg/L	4.0408 ppb	06:25:39
2	Ti 334.940†	383515.4	377424.9	861.02	µg/L	861.02 ppb	06:25:13
2	Tl 190.801†	-33.1	-4.8	-2.3348	µg/L	-2.3348 ppb	06:25:39
2	U 409.014†	-321.3	-289.0	-31.425	µg/L	-31.425 ppb	06:25:18
2	V 292.402†	770.9	967.0	11.697	µg/L	11.697 ppb	06:25:18
2	Zn 213.857†	4711.2	3917.9	90.434	µg/L	90.434 ppb	06:25:18
3	Sc RADIAL	172180.6	172180.6	103	%		06:24:09
3	Al 396.153Radial†	7358.8	7260.7	3027.4	µg/L	3027.4 ppb	06:24:29
3	Ca 317.933Radial†	8311.1	7148.5	1336.0	µg/L	1336.0 ppb	06:24:29
3	Fe 238.204 Radial†	27715.0	26807.4	18557	µg/L	18557 ppb	06:24:29
3	K 766.490 Radial†	2508.4	1560.3	841.33	µg/L	841.33 ppb	06:24:09
3	Mg 279.077 IEC†	910.6	829.5	1636.5	µg/L	1636.5 ppb	06:24:29
3	Na 589.592 Radial†	1975.5	1790.9	430.90	µg/L	430.90 ppb	06:24:29
3	Sr 421.552†	2160.1	2095.8	8.9992	µg/L	8.9992 ppb	06:24:29
3	Sc 361.383	2108480.2	2108480.2	101.55	%		06:25:45
3	Y 371.029	1384663.5	1384663.5	102.05	%		06:25:45
3	Ag 328.068†	-1092.3	-108.4	0.6152	µg/L	0.6152 ppb	06:25:51
3	As 188.979†	4.1	3.9	22.700	µg/L	22.700 ppb	06:26:12
3	B 249.677†	472.4	254.5	4.2108	µg/L	4.2108 ppb	06:25:51
3	Ba 233.527†	972.5	1047.4	25.671	µg/L	25.671 ppb	06:26:12
3	Be 313.107†	5747.1	2296.3	3.7977	µg/L	3.7977 ppb	06:25:51
3	Cd 226.502†	-65.4	77.7	0.3433	µg/L	0.3433 ppb	06:26:12
3	Co 228.616†	-16.6	78.0	1.7746	µg/L	1.7746 ppb	06:26:12
3	Cr 267.716†	282.3	463.4	8.8917	µg/L	8.8917 ppb	06:25:51
3	Cu 324.752†	5504.2	504.8	6.0876	µg/L	6.0876 ppb	06:25:51
3	Mn 257.610†	128830.4	126779.4	367.75	µg/L	367.75 ppb	06:25:51
3	Mo 202.031†	3.7	0.8	0.8192	µg/L	0.8192 ppb	06:26:12
3	Ni 231.604†	566.5	124.6	6.1909	µg/L	6.1909 ppb	06:26:12
3	P 214.914†	429.4	169.2	255.23	µg/L	255.23 ppb	06:26:12
3	Pb 220.353†	189.5	119.5	27.547	µg/L	27.547 ppb	06:26:12
3	S 181.975 Axial†	40.2	-4.7	-22.943	µg/L	-22.943 ppb	06:26:12
3	Sb 206.836†	28.1	4.5	6.8790	µg/L	6.8790 ppb	06:26:12
3	Se 196.026†	14.4	-6.3	1.5755	µg/L	1.5755 ppb	06:26:12
3	SiO2†	20093.8	16577.8	2858.7	µg/L	2858.7 ppb	06:25:51
3	Si 251.611†	19966.8	19316.6	1304.9	µg/L	1304.9 ppb	06:25:51
3	Sn 189.927†	8.3	-0.1	5.0770	µg/L	5.0770 ppb	06:26:12
3	Ti 334.940†	379879.3	372928.7	850.77	µg/L	850.77 ppb	06:25:45
3	Tl 190.801†	-37.1	-8.7	-7.9448	µg/L	-7.9448 ppb	06:26:12
3	U 409.014†	-310.3	-277.4	-30.284	µg/L	-30.284 ppb	06:25:51
3	V 292.402†	764.4	958.8	11.598	µg/L	11.598 ppb	06:25:51
3	Zn 213.857†	4720.6	3915.9	90.402	µg/L	90.402 ppb	06:25:51

Mean Data: 1201870541|880930|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2106311.0	101.44	%	0.127				0.12%
Sc RADIAL	171985.8	103	%	0.2				0.23%
Y 371.029	1383956.0	102.00	%	0.066				0.07%
Ag 328.068†	-123.6	0.4910	µg/L	0.36134	0.4910	ppb	0.36134	73.60%
Al 396.153Radial†	7284.4	3037.3	µg/L	9.80	3037.3	ppb	9.80	0.32%
As 188.979†	6.6	26.858	µg/L	3.6770	26.858	ppb	3.6770	13.69%
B 249.677†	254.4	4.1857	µg/L	0.25608	4.1857	ppb	0.25608	6.12%
Ba 233.527†	1052.8	25.804	µg/L	0.1496	25.804	ppb	0.1496	0.58%
Be 313.107†	2230.6	3.7693	µg/L	0.03047	3.7693	ppb	0.03047	0.81%
Ca 317.933Radial†	7178.0	1341.5	µg/L	4.91	1341.5	ppb	4.91	0.37%
Cd 226.502†	74.9	0.2720	µg/L	0.22631	0.2720	ppb	0.22631	83.20%
Co 228.616†	80.2	1.8697	µg/L	0.27100	1.8697	ppb	0.27100	14.49%
Cr 267.716†	438.8	8.4198	µg/L	0.60594	8.4198	ppb	0.60594	7.20%
Cu 324.752†	548.9	6.4106	µg/L	0.35154	6.4106	ppb	0.35154	5.48%
Fe 238.204 Radial†	26910.7	18629	µg/L	67.2	18629	ppb	67.2	0.36%
K 766.490 Radial†	1604.0	864.91	µg/L	22.691	864.91	ppb	22.691	2.62%
Mg 279.077 IEC†	828.4	1634.2	µg/L	2.47	1634.2	ppb	2.47	0.15%
Mn 257.610†	126682.7	367.47	µg/L	1.778	367.47	ppb	1.778	0.48%
Mo 202.031†	6.0	1.3709	µg/L	0.65067	1.3709	ppb	0.65067	47.46%
Na 589.592 Radial†	1793.4	431.52	µg/L	1.022	431.52	ppb	1.022	0.24%

Ni 231.604†	131.5	6.5317	µg/L	0.30005	6.5317	ppb	0.30005	4.59%
P 214.914†	166.2	250.16	µg/L	8.791	250.16	ppb	8.791	3.51%
Pb 220.353†	130.1	29.996	µg/L	2.2543	29.996	ppb	2.2543	7.52%
S 181.975 Axial†	-1.7	-10.185	µg/L	11.9508	-10.185	ppb	11.9508	117.34%
Sb 206.836†	1.2	4.0539	µg/L	2.87249	4.0539	ppb	2.87249	70.86%
Se 196.026†	-12.8	-5.3953	µg/L	8.03103	-5.3953	ppb	8.03103	148.85%
SiO2†	16561.8	2856.0	µg/L	23.78	2856.0	ppb	23.78	0.83%
Si 251.611†	19323.7	1305.3	µg/L	5.52	1305.3	ppb	5.52	0.42%
Sn 189.927†	-2.6	4.0068	µg/L	1.08757	4.0068	ppb	1.08757	27.14%
Sr 421.552†	2092.5	8.9847	µg/L	0.01542	8.9847	ppb	0.01542	0.17%
Ti 334.940†	374338.3	853.98	µg/L	6.106	853.98	ppb	6.106	0.72%
Tl 190.801†	-7.5	-6.1609	µg/L	3.31606	-6.1609	ppb	3.31606	53.82%
U 409.014†	-283.7	-30.909	µg/L	0.5784	-30.909	ppb	0.5784	1.87%
V 292.402†	954.6	11.563	µg/L	0.1550	11.563	ppb	0.1550	1.34%
Zn 213.857†	3927.2	90.657	µg/L	0.4152	90.657	ppb	0.4152	0.46%

Sequence No.: 44
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 06:32:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	169419.2	169419.2	102	%			06:33:30
1	Al 396.153Radial†	12675.2	12597.3	5233.5	µg/L	5233.5	ppb	06:33:35
1	Ca 317.933Radial†	29203.6	27796.2	5194.9	µg/L	5194.9	ppb	06:33:35
1	Fe 238.204 Radial†	7658.9	7548.5	5242.0	µg/L	5242.0	ppb	06:33:35
1	K 766.490 Radial†	10690.5	9634.7	5195.2	µg/L	5195.2	ppb	06:33:35
1	Mg 279.077 IEC†	2695.2	2596.3	5223.4	µg/L	5223.4	ppb	06:33:35
1	Na 589.592 Radial†	44016.1	43106.5	10372	µg/L	10372	ppb	06:33:30
1	Sr 421.552†	121248.0	119076.0	511.29	µg/L	511.29	ppb	06:33:30
1	Sc 361.383	2091925.8	2091925.8	100.75	%			06:34:09
1	Y 371.029	1361901.1	1361901.1	100.38	%			06:34:09
1	Ag 328.068†	58301.9	58835.7	502.47	µg/L	502.47	ppb	06:34:15
1	As 188.979†	341.8	339.0	510.19	µg/L	510.19	ppb	06:34:35
1	B 249.677†	12944.4	12637.5	497.20	µg/L	497.20	ppb	06:34:15
1	Ba 233.527†	20420.7	20358.6	499.61	µg/L	499.61	ppb	06:34:15
1	Be 313.107†	888334.1	878365.6	506.10	µg/L	506.10	ppb	06:34:09
1	Cd 226.502†	21716.9	21697.6	501.22	µg/L	501.22	ppb	06:34:15
1	Co 228.616†	11004.9	11017.4	501.84	µg/L	501.84	ppb	06:34:15
1	Cr 267.716†	26097.1	26088.4	500.46	µg/L	500.46	ppb	06:34:15
1	Cu 324.752†	75736.4	70257.7	500.76	µg/L	500.76	ppb	06:34:15
1	Mn 257.610†	177129.4	175723.2	509.59	µg/L	509.59	ppb	06:34:09
1	Mo 202.031†	4739.5	4701.5	500.41	µg/L	500.41	ppb	06:34:35
1	Ni 231.604†	10643.5	10131.1	503.05	µg/L	503.05	ppb	06:34:15
1	P 214.914†	1786.4	1519.4	2403.0	µg/L	2403.0	ppb	06:34:35
1	Pb 220.353†	2246.9	2163.1	498.23	µg/L	498.23	ppb	06:34:35
1	S 181.975 Axial†	284.1	237.6	997.96	µg/L	997.96	ppb	06:34:35
1	Sb 206.836†	607.5	579.7	495.69	µg/L	495.69	ppb	06:34:35
1	Se 196.026†	482.1	458.1	492.47	µg/L	492.47	ppb	06:34:35
1	SiO2†	34621.1	31153.6	5372.3	µg/L	5372.3	ppb	06:34:15
1	Si 251.611†	37098.9	36476.9	2474.7	µg/L	2474.7	ppb	06:34:15
1	Sn 189.927†	1171.6	1154.7	502.07	µg/L	502.07	ppb	06:34:35
1	Ti 334.940†	223597.7	220769.5	503.49	µg/L	503.49	ppb	06:34:09
1	Tl 190.801†	320.0	345.4	497.60	µg/L	497.60	ppb	06:34:35
1	U 409.014†	5336.2	5324.8	510.72	µg/L	510.72	ppb	06:34:15
1	V 292.402†	47331.0	47185.1	503.14	µg/L	503.14	ppb	06:34:15
1	Zn 213.857†	22269.8	21371.4	495.95	µg/L	495.95	ppb	06:34:15
2	Sc RADIAL	171630.0	171630.0	103	%			06:33:41
2	Al 396.153Radial†	12670.0	12432.0	5164.4	µg/L	5164.4	ppb	06:33:46
2	Ca 317.933Radial†	29274.7	27495.7	5138.8	µg/L	5138.8	ppb	06:33:46
2	Fe 238.204 Radial†	7652.0	7444.9	5170.6	µg/L	5170.6	ppb	06:33:46
2	K 766.490 Radial†	10667.5	9477.2	5110.3	µg/L	5110.3	ppb	06:33:46
2	Mg 279.077 IEC†	2727.0	2593.1	5217.0	µg/L	5217.0	ppb	06:33:46
2	Na 589.592 Radial†	43953.2	42488.8	10223	µg/L	10223	ppb	06:33:41
2	Sr 421.552†	121376.2	117666.5	505.24	µg/L	505.24	ppb	06:33:41
2	Sc 361.383	2088291.4	2088291.4	100.57	%			06:34:42
2	Y 371.029	1362848.0	1362848.0	100.45	%			06:34:42
2	Ag 328.068†	58978.1	59608.8	509.07	µg/L	509.07	ppb	06:34:48
2	As 188.979†	342.2	340.1	511.72	µg/L	511.72	ppb	06:35:08
2	B 249.677†	13069.7	12784.5	503.02	µg/L	503.02	ppb	06:34:48
2	Ba 233.527†	20758.0	20729.2	508.70	µg/L	508.70	ppb	06:34:48
2	Be 313.107†	885222.3	876806.0	505.20	µg/L	505.20	ppb	06:34:42
2	Cd 226.502†	22067.9	22084.1	510.16	µg/L	510.16	ppb	06:34:48
2	Co 228.616†	11138.8	11169.5	508.77	µg/L	508.77	ppb	06:34:48
2	Cr 267.716†	26414.8	26449.4	507.38	µg/L	507.38	ppb	06:34:48
2	Cu 324.752†	76595.1	71242.3	507.76	µg/L	507.76	ppb	06:34:48
2	Mn 257.610†	176325.2	175229.6	508.16	µg/L	508.16	ppb	06:34:42
2	Mo 202.031†	4764.8	4734.8	503.96	µg/L	503.96	ppb	06:35:08
2	Ni 231.604†	10786.4	10291.5	511.01	µg/L	511.01	ppb	06:34:48
2	P 214.914†	1798.9	1534.9	2427.3	µg/L	2427.3	ppb	06:35:08
2	Pb 220.353†	2262.2	2182.1	502.60	µg/L	502.60	ppb	06:35:08

2	S 181.975 Axial†	276.1	230.1	966.45 µg/L	966.45 ppb	06:35:08
2	Sb 206.836†	612.0	585.3	500.43 µg/L	500.43 ppb	06:35:08
2	Se 196.026†	489.6	466.4	501.31 µg/L	501.31 ppb	06:35:08
2	SiO2†	35079.6	31669.3	5461.2 µg/L	5461.2 ppb	06:34:48
2	Si 251.611†	37562.2	37001.7	2510.9 µg/L	2510.9 ppb	06:34:48
2	Sn 189.927†	1174.8	1159.9	504.30 µg/L	504.30 ppb	06:35:08
2	Ti 334.940†	222730.0	220293.0	502.41 µg/L	502.41 ppb	06:34:42
2	Tl 190.801†	327.9	353.9	509.71 µg/L	509.71 ppb	06:35:08
2	U 409.014†	5368.0	5365.7	514.67 µg/L	514.67 ppb	06:34:48
2	V 292.402†	47922.2	47854.7	510.23 µg/L	510.23 ppb	06:34:48
2	Zn 213.857†	22612.3	21750.4	504.77 µg/L	504.77 ppb	06:34:48
3	Sc RADIAL	172532.4	172532.4	104 %		06:33:52
3	Al 396.153Radial†	12651.1	12349.5	5130.4 µg/L	5130.4 ppb	06:33:57
3	Ca 317.933Radial†	29200.2	27275.4	5097.6 µg/L	5097.6 ppb	06:33:57
3	Fe 238.204 Radial†	7623.9	7379.0	5124.8 µg/L	5124.8 ppb	06:33:57
3	K 766.490 Radial†	10653.5	9409.6	5073.8 µg/L	5073.8 ppb	06:33:57
3	Mg 279.077 IEC†	2727.8	2580.1	5190.7 µg/L	5190.7 ppb	06:33:57
3	Na 589.592 Radial†	44110.8	42417.9	10206 µg/L	10206 ppb	06:33:52
3	Sr 421.552†	121826.1	117485.0	504.46 µg/L	504.46 ppb	06:33:52
3	Sc 361.383	2112776.2	2112776.2	101.75 %		06:35:15
3	Y 371.029	1373117.8	1373117.8	101.20 %		06:35:15
3	Ag 328.068†	58832.1	58785.7	502.04 µg/L	502.04 ppb	06:35:21
3	As 188.979†	336.2	330.2	496.90 µg/L	496.90 ppb	06:35:41
3	B 249.677†	13052.8	12617.2	496.44 µg/L	496.44 ppb	06:35:21
3	Ba 233.527†	20711.6	20444.4	501.71 µg/L	501.71 ppb	06:35:21
3	Be 313.107†	886298.3	867663.3	499.93 µg/L	499.93 ppb	06:35:15
3	Cd 226.502†	21966.5	21730.1	501.98 µg/L	501.98 ppb	06:35:21
3	Co 228.616†	11151.6	11053.8	503.50 µg/L	503.50 ppb	06:35:21
3	Cr 267.716†	26336.6	26068.2	500.07 µg/L	500.07 ppb	06:35:21
3	Cu 324.752†	76305.9	70075.5	499.45 µg/L	499.45 ppb	06:35:21
3	Mn 257.610†	176647.0	173514.1	503.18 µg/L	503.18 ppb	06:35:15
3	Mo 202.031†	4740.3	4655.8	495.55 µg/L	495.55 ppb	06:35:41
3	Ni 231.604†	10749.5	10131.0	503.04 µg/L	503.04 ppb	06:35:21
3	P 214.914†	1784.7	1500.3	2372.0 µg/L	2372.0 ppb	06:35:41
3	Pb 220.353†	2256.3	2150.3	495.25 µg/L	495.25 ppb	06:35:41
3	S 181.975 Axial†	279.4	230.2	966.73 µg/L	966.73 ppb	06:35:41
3	Sb 206.836†	611.3	577.6	493.82 µg/L	493.82 ppb	06:35:41
3	Se 196.026†	482.8	454.1	488.12 µg/L	488.12 ppb	06:35:41
3	SiO2†	34985.9	31173.1	5375.6 µg/L	5375.6 ppb	06:35:21
3	Si 251.611†	37515.5	36523.0	2478.3 µg/L	2478.3 ppb	06:35:21
3	Sn 189.927†	1176.6	1148.0	499.16 µg/L	499.16 ppb	06:35:41
3	Ti 334.940†	222875.3	217869.4	496.88 µg/L	496.88 ppb	06:35:15
3	Tl 190.801†	322.9	345.2	497.16 µg/L	497.16 ppb	06:35:41
3	U 409.014†	5436.2	5370.8	515.18 µg/L	515.18 ppb	06:35:21
3	V 292.402†	47824.7	47206.7	503.33 µg/L	503.33 ppb	06:35:21
3	Zn 213.857†	22470.6	21350.6	495.48 µg/L	495.48 ppb	06:35:21

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	2097664.5	101.03	%	0.636				0.63%
Sc RADIAL	171193.9	103	%	1.0				0.94%
Y 371.029	1365955.6	100.67	%	0.458				0.46%
Ag 328.068†	59076.7	504.53	µg/L	3.938	504.53	ppb	3.938	0.78%
QC value within limits for Ag 328.068 Recovery = 100.91%								
Al 396.153Radial†	12459.6	5176.1	µg/L	52.55	5176.1	ppb	52.55	1.02%
QC value within limits for Al 396.153Radial Recovery = 103.52%								
As 188.979†	336.4	506.27	µg/L	8.148	506.27	ppb	8.148	1.61%
QC value within limits for As 188.979 Recovery = 101.25%								
B 249.677†	12679.7	498.89	µg/L	3.603	498.89	ppb	3.603	0.72%
QC value within limits for B 249.677 Recovery = 99.78%								
Ba 233.527†	20510.7	503.34	µg/L	4.760	503.34	ppb	4.760	0.95%
QC value within limits for Ba 233.527 Recovery = 100.67%								
Be 313.107†	874278.3	503.75	µg/L	3.332	503.75	ppb	3.332	0.66%
QC value within limits for Be 313.107 Recovery = 100.75%								
Ca 317.933Radial†	27522.4	5143.8	µg/L	48.86	5143.8	ppb	48.86	0.95%
QC value within limits for Ca 317.933Radial Recovery = 102.88%								
Cd 226.502†	21837.3	504.45	µg/L	4.953	504.45	ppb	4.953	0.98%
QC value within limits for Cd 226.502 Recovery = 100.89%								
Co 228.616†	11080.2	504.70	µg/L	3.623	504.70	ppb	3.623	0.72%

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   QC value within limits for Co 228.616  Recovery = 100.94%
Cr 267.716†            26202.0      502.64 µg/L        4.114      502.64 ppb        4.114   0.82%
   QC value within limits for Cr 267.716  Recovery = 100.53%
Cu 324.752†            70525.2      502.66 µg/L        4.468      502.66 ppb        4.468   0.89%
   QC value within limits for Cu 324.752  Recovery = 100.53%
Fe 238.204 Radial†      7457.5      5179.1 µg/L       59.10      5179.1 ppb       59.10   1.14%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.58%
K 766.490 Radial†       9507.2      5126.4 µg/L       62.28      5126.4 ppb       62.28   1.21%
   QC value within limits for K 766.490 Radial  Recovery = 102.53%
Mg 279.077 IEC†         2589.8      5210.4 µg/L       17.30      5210.4 ppb       17.30   0.33%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.21%
Mn 257.610†           174822.3      506.98 µg/L        3.363      506.98 ppb        3.363   0.66%
   QC value within limits for Mn 257.610  Recovery = 101.40%
Mo 202.031†             4697.4      499.97 µg/L        4.221      499.97 ppb        4.221   0.84%
   QC value within limits for Mo 202.031  Recovery = 99.99%
Na 589.592 Radial†     42671.0       10267 µg/L         91.1       10267 ppb         91.1   0.89%
   QC value within limits for Na 589.592 Radial  Recovery = 102.67%
Ni 231.604†            10184.6      505.70 µg/L        4.602      505.70 ppb        4.602   0.91%
   QC value within limits for Ni 231.604  Recovery = 101.14%
P 214.914†              1518.2      2400.8 µg/L       27.73      2400.8 ppb       27.73   1.16%
   QC value within limits for P 214.914  Recovery = 96.03%
Pb 220.353†             2165.2      498.69 µg/L        3.695      498.69 ppb        3.695   0.74%
   QC value within limits for Pb 220.353  Recovery = 99.74%
S 181.975 Axial†         232.7      977.05 µg/L       18.114      977.05 ppb       18.114   1.85%
   QC value within limits for S 181.975 Axial  Recovery = 97.70%
Sb 206.836†              580.9      496.65 µg/L        3.406      496.65 ppb        3.406   0.69%
   QC value within limits for Sb 206.836  Recovery = 99.33%
Se 196.026†              459.5      493.97 µg/L        6.726      493.97 ppb        6.726   1.36%
   QC value within limits for Se 196.026  Recovery = 98.79%
SiO2†                  31332.0      5403.0 µg/L       50.40      5403.0 ppb       50.40   0.93%
   QC value within limits for SiO2  Recovery = 101.04%
Si 251.611†            36667.2      2488.0 µg/L       19.93      2488.0 ppb       19.93   0.80%
   QC value within limits for Si 251.611  Recovery = 99.52%
Sn 189.927†             1154.2      501.84 µg/L        2.576      501.84 ppb        2.576   0.51%
   QC value within limits for Sn 189.927  Recovery = 100.37%
Sr 421.552†           118075.8      507.00 µg/L        3.740      507.00 ppb        3.740   0.74%
   QC value within limits for Sr 421.552  Recovery = 101.40%
Ti 334.940†           219644.0      500.93 µg/L        3.547      500.93 ppb        3.547   0.71%
   QC value within limits for Ti 334.940  Recovery = 100.19%
Tl 190.801†              348.2      501.49 µg/L        7.123      501.49 ppb        7.123   1.42%
   QC value within limits for Tl 190.801  Recovery = 100.30%
U 409.014†              5353.7      513.52 µg/L        2.441      513.52 ppb        2.441   0.48%
   QC value within limits for U 409.014  Recovery = 102.70%
V 292.402†             47415.5      505.57 µg/L        4.043      505.57 ppb        4.043   0.80%
   QC value within limits for V 292.402  Recovery = 101.11%
Zn 213.857†            21490.8      498.73 µg/L        5.235      498.73 ppb        5.235   1.05%
   QC value within limits for Zn 213.857  Recovery = 99.75%
All analyte(s) passed QC.
```

Sequence No.: 45
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 06:35:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168951.6	168951.6	102	%			06:36:23
1	Al 396.153Radial†	-154.1	-1.6	-0.7142	µg/L	-0.7142	ppb	06:36:23
1	Ca 317.933Radial†	912.3	16.2	3.0224	µg/L	3.0224	ppb	06:36:43
1	Fe 238.204 Radial†	-4.1	23.3	16.149	µg/L	16.149	ppb	06:36:43
1	K 766.490 Radial†	855.5	-21.0	-11.346	µg/L	-11.346	ppb	06:36:23
1	Mg 279.077 IEC†	40.7	-10.3	-20.773	µg/L	-20.773	ppb	06:36:43
1	Na 589.592 Radial†	117.4	-2.3	-0.5579	µg/L	-0.5579	ppb	06:36:23
1	Sr 421.552†	69.8	77.4	0.3322	µg/L	0.3322	ppb	06:36:23
1	Sc 361.383	2088183.6	2088183.6	100.57	%			06:37:45
1	Y 371.029	1364139.6	1364139.6	100.54	%			06:37:45
1	Ag 328.068†	-894.6	77.8	0.6626	µg/L	0.6626	ppb	06:37:51
1	As 188.979†	6.2	6.0	8.9649	µg/L	8.9649	ppb	06:38:11
1	B 249.677†	247.9	35.9	1.4104	µg/L	1.4104	ppb	06:37:51
1	Ba 233.527†	-69.0	21.1	0.5170	µg/L	0.5170	ppb	06:38:11
1	Be 313.107†	3791.9	407.1	0.2387	µg/L	0.2387	ppb	06:37:51
1	Cd 226.502†	-142.4	0.5	0.0130	µg/L	0.0130	ppb	06:38:11
1	Co 228.616†	-85.1	9.7	0.4403	µg/L	0.4403	ppb	06:38:11
1	Cr 267.716†	-174.1	12.3	0.2364	µg/L	0.2364	ppb	06:37:51
1	Cu 324.752†	4862.2	-80.8	-0.5731	µg/L	-0.5731	ppb	06:37:51
1	Mn 257.610†	610.9	518.3	1.5030	µg/L	1.5030	ppb	06:37:51
1	Mo 202.031†	9.9	7.0	0.7491	µg/L	0.7491	ppb	06:38:11
1	Ni 231.604†	439.1	3.4	0.1673	µg/L	0.1673	ppb	06:38:11
1	P 214.914†	246.4	-8.7	-14.143	µg/L	-14.143	ppb	06:38:11
1	Pb 220.353†	62.7	-4.8	-1.0987	µg/L	-1.0987	ppb	06:38:11
1	S 181.975 Axial†	39.6	-5.0	-21.136	µg/L	-21.136	ppb	06:38:11
1	Sb 206.836†	28.1	4.8	4.0843	µg/L	4.0843	ppb	06:38:11
1	Se 196.026†	25.4	4.8	5.1501	µg/L	5.1501	ppb	06:38:11
1	SiO2†	3224.9	-3.3	-0.5732	µg/L	-0.5732	ppb	06:37:51
1	Si 251.611†	409.0	60.6	4.1214	µg/L	4.1214	ppb	06:38:11
1	Sn 189.927†	8.4	0.1	0.0491	µg/L	0.0491	ppb	06:38:11
1	Ti 334.940†	1902.5	726.1	1.6565	µg/L	1.6565	ppb	06:37:51
1	Tl 190.801†	-28.4	-0.4	-0.5037	µg/L	-0.5037	ppb	06:38:11
1	U 409.014†	-4.3	24.0	2.3037	µg/L	2.3037	ppb	06:37:51
1	V 292.402†	-176.0	31.0	0.3379	µg/L	0.3379	ppb	06:37:51
1	Zn 213.857†	731.1	-5.9	-0.1371	µg/L	-0.1371	ppb	06:38:11
2	Sc RADIAL	169123.2	169123.2	102	%			06:36:49
2	Al 396.153Radial†	-140.1	12.3	5.1152	µg/L	5.1152	ppb	06:36:49
2	Ca 317.933Radial†	900.1	3.2	0.6067	µg/L	0.6067	ppb	06:37:09
2	Fe 238.204 Radial†	-7.7	19.7	13.663	µg/L	13.663	ppb	06:37:09
2	K 766.490 Radial†	863.1	-14.4	-7.7737	µg/L	-7.7737	ppb	06:36:49
2	Mg 279.077 IEC†	45.0	-6.1	-12.360	µg/L	-12.360	ppb	06:37:09
2	Na 589.592 Radial†	88.0	-31.4	-7.5554	µg/L	-7.5554	ppb	06:36:49
2	Sr 421.552†	-19.6	-10.7	-0.0459	µg/L	-0.0459	ppb	06:36:49
2	Sc 361.383	2085307.1	2085307.1	100.43	%			06:38:17
2	Y 371.029	1362060.4	1362060.4	100.39	%			06:38:17
2	Ag 328.068†	-861.4	109.6	0.9300	µg/L	0.9300	ppb	06:38:23
2	As 188.979†	4.9	4.7	7.0663	µg/L	7.0663	ppb	06:38:44
2	B 249.677†	240.4	28.7	1.1306	µg/L	1.1306	ppb	06:38:23
2	Ba 233.527†	-87.0	3.1	0.0748	µg/L	0.0748	ppb	06:38:44
2	Be 313.107†	3551.3	172.7	0.0996	µg/L	0.0996	ppb	06:38:23
2	Cd 226.502†	-128.3	14.4	0.3355	µg/L	0.3355	ppb	06:38:44
2	Co 228.616†	-99.4	-4.6	-0.2092	µg/L	-0.2092	ppb	06:38:44
2	Cr 267.716†	-169.7	16.4	0.3141	µg/L	0.3141	ppb	06:38:23
2	Cu 324.752†	4841.3	-95.0	-0.6743	µg/L	-0.6743	ppb	06:38:23
2	Mn 257.610†	273.5	183.1	0.5311	µg/L	0.5311	ppb	06:38:23
2	Mo 202.031†	6.1	3.3	0.3489	µg/L	0.3489	ppb	06:38:44
2	Ni 231.604†	448.5	13.3	0.6594	µg/L	0.6594	ppb	06:38:44
2	P 214.914†	246.1	-8.7	-14.149	µg/L	-14.149	ppb	06:38:44
2	Pb 220.353†	61.1	-6.2	-1.4386	µg/L	-1.4386	ppb	06:38:44

2	S 181.975 Axial†	33.8	-10.8	-45.227 µg/L	-45.227 ppb	06:38:44
2	Sb 206.836†	31.6	8.2	7.0513 µg/L	7.0513 ppb	06:38:44
2	Se 196.026†	19.5	-1.0	-1.0800 µg/L	-1.0800 ppb	06:38:44
2	SiO2†	3134.5	-88.9	-15.330 µg/L	-15.330 ppb	06:38:23
2	Si 251.611†	374.6	26.9	1.8734 µg/L	1.8734 ppb	06:38:44
2	Sn 189.927†	7.1	-1.2	-0.5244 µg/L	-0.5244 ppb	06:38:44
2	Ti 334.940†	1233.2	62.3	0.1421 µg/L	0.1421 ppb	06:38:23
2	Tl 190.801†	-24.2	3.7	5.3474 µg/L	5.3474 ppb	06:38:44
2	U 409.014†	12.7	40.9	3.9342 µg/L	3.9342 ppb	06:38:23
2	V 292.402†	-207.5	-0.6	0.0037 µg/L	0.0037 ppb	06:38:23
2	Zn 213.857†	722.0	-13.9	-0.3275 µg/L	-0.3275 ppb	06:38:44
3	Sc RADIAL	165910.0	165910.0	99.7 %		06:37:15
3	Al 396.153Radial†	-149.5	0.2	0.0834 µg/L	0.0834 ppb	06:37:15
3	Ca 317.933Radial†	899.9	20.2	3.7684 µg/L	3.7684 ppb	06:37:35
3	Fe 238.204 Radial†	-12.6	14.7	10.163 µg/L	10.163 ppb	06:37:35
3	K 766.490 Radial†	850.4	-10.7	-5.7779 µg/L	-5.7779 ppb	06:37:15
3	Mg 279.077 IEC†	46.4	-3.9	-7.8724 µg/L	-7.8724 ppb	06:37:35
3	Na 589.592 Radial†	81.2	-36.5	-8.7790 µg/L	-8.7790 ppb	06:37:15
3	Sr 421.552†	22.5	31.2	0.1342 µg/L	0.1342 ppb	06:37:15
3	Sc 361.383	2081086.3	2081086.3	100.23 %		06:38:50
3	Y 371.029	1363708.9	1363708.9	100.51 %		06:38:50
3	Ag 328.068†	-854.6	114.7	0.9783 µg/L	0.9783 ppb	06:38:55
3	As 188.979†	-3.4	-3.6	-5.3785 µg/L	-5.3785 ppb	06:39:16
3	B 249.677†	239.2	28.0	1.1034 µg/L	1.1034 ppb	06:38:55
3	Ba 233.527†	-70.8	19.1	0.4697 µg/L	0.4697 ppb	06:39:16
3	Be 313.107†	3507.7	136.4	0.0793 µg/L	0.0793 ppb	06:38:55
3	Cd 226.502†	-133.1	9.3	0.2155 µg/L	0.2155 ppb	06:39:16
3	Co 228.616†	-101.1	-6.5	-0.2974 µg/L	-0.2974 ppb	06:39:16
3	Cr 267.716†	-187.7	-1.9	-0.0358 µg/L	-0.0358 ppb	06:38:55
3	Cu 324.752†	4859.3	-67.3	-0.4775 µg/L	-0.4775 ppb	06:38:55
3	Mn 257.610†	180.8	91.3	0.2647 µg/L	0.2647 ppb	06:38:55
3	Mo 202.031†	2.0	-0.8	-0.0869 µg/L	-0.0869 ppb	06:39:16
3	Ni 231.604†	445.2	11.0	0.5454 µg/L	0.5454 ppb	06:39:16
3	P 214.914†	249.5	-4.8	-7.7893 µg/L	-7.7893 ppb	06:39:16
3	Pb 220.353†	61.9	-5.3	-1.2283 µg/L	-1.2283 ppb	06:39:16
3	S 181.975 Axial†	37.8	-6.7	-28.063 µg/L	-28.063 ppb	06:39:16
3	Sb 206.836†	27.9	4.6	3.9738 µg/L	3.9738 ppb	06:39:16
3	Se 196.026†	23.4	2.9	3.1239 µg/L	3.1239 ppb	06:39:16
3	SiO2†	3185.1	-32.2	-5.5481 µg/L	-5.5481 ppb	06:38:55
3	Si 251.611†	378.2	31.2	2.1970 µg/L	2.1970 ppb	06:39:16
3	Sn 189.927†	5.6	-2.7	-1.1679 µg/L	-1.1679 ppb	06:39:16
3	Ti 334.940†	1306.7	138.2	0.3151 µg/L	0.3151 ppb	06:38:55
3	Tl 190.801†	-28.1	-0.2	-0.2482 µg/L	-0.2482 ppb	06:39:16
3	U 409.014†	-28.8	-0.5	-0.0491 µg/L	-0.0491 ppb	06:38:55
3	V 292.402†	-126.8	79.5	0.8395 µg/L	0.8395 ppb	06:38:55
3	Zn 213.857†	736.2	1.7	0.0384 µg/L	0.0384 ppb	06:39:16

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2084859.0	100.41	%	0.172				0.17%
Sc RADIAL	167994.9	101	%	1.1				1.08%
Y 371.029	1363303.0	100.48	%	0.081				0.08%
Ag 328.068†	100.7	0.8570	µg/L	0.17006	0.8570	ppb	0.17006	19.84%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	3.6	1.4948	µg/L	3.16062	1.4948	ppb	3.16062	211.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.4	3.5509	µg/L	7.79117	3.5509	ppb	7.79117	219.41%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	30.9	1.2148	µg/L	0.16993	1.2148	ppb	0.16993	13.99%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	14.4	0.3538	µg/L	0.24282	0.3538	ppb	0.24282	68.62%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	238.8	0.1392	µg/L	0.08677	0.1392	ppb	0.08677	62.32%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.2	2.4658	µg/L	1.65272	2.4658	ppb	1.65272	67.03%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	8.1	0.1880	µg/L	0.16303	0.1880	ppb	0.16303	86.72%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-0.5	-0.0221	µg/L	0.40287	-0.0221	ppb	0.40287	>999.9%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 8.9      0.1716 µg/L       0.18373      0.1716 ppb        0.18373 107.09%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -81.0     -0.5750 µg/L       0.09842     -0.5750 ppb        0.09842  17.12%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         19.2      13.325 µg/L        3.0072      13.325 ppb         3.0072  22.57%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -15.4     -8.2991 µg/L       2.82077     -8.2991 ppb        2.82077  33.99%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -6.8     -13.668 µg/L        6.5491     -13.668 ppb         6.5491  47.91%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              264.2      0.7663 µg/L       0.65179      0.7663 ppb        0.65179  85.06%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                3.2      0.3370 µg/L       0.41810      0.3370 ppb        0.41810 124.05%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -23.4     -5.6308 µg/L       4.43563     -5.6308 ppb        4.43563  78.78%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                9.2      0.4574 µg/L       0.25761      0.4574 ppb        0.25761  56.32%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -7.4     -12.027 µg/L        3.6701     -12.027 ppb         3.6701  30.52%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -5.5     -1.2552 µg/L       0.17158     -1.2552 ppb        0.17158  13.67%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -7.5     -31.476 µg/L       12.4026     -31.476 ppb        12.4026  39.40%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                5.9      5.0364 µg/L       1.74577      5.0364 ppb        1.74577  34.66%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                2.2      2.3980 µg/L       3.17786      2.3980 ppb        3.17786 132.52%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    -41.5     -7.1504 µg/L       7.50768     -7.1504 ppb        7.50768 105.00%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               39.6      2.7306 µg/L       1.21530      2.7306 ppb        1.21530  44.51%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -1.3     -0.5478 µg/L       0.60881     -0.5478 ppb        0.60881 111.15%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               32.6      0.1402 µg/L       0.18912      0.1402 ppb        0.18912 134.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              308.9      0.7046 µg/L       0.82892      0.7046 ppb        0.82892 117.65%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.1      1.5318 µg/L       3.30687      1.5318 ppb        3.30687 215.87%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                21.5      2.0629 µg/L       2.00255      2.0629 ppb        2.00255  97.07%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                36.6      0.3937 µg/L       0.42069      0.3937 ppb        0.42069 106.86%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -6.0     -0.1421 µg/L       0.18299     -0.1421 ppb        0.18299 128.80%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, June 30, 2009 11:14:37
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default2\Sample.513
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	4586.1	4586.136	103.360	2.3
	Mg	24.0	47035.1	47035.106	296.605	0.6
	Co	58.9	84523.9	84523.920	511.827	0.6
	Rh	102.9	158254.6	158254.558	1021.491	0.6
	In	114.9	193591.7	193591.744	1352.521	0.7
	Pb	208.0	192199.7	192199.737	1352.951	0.7
⌈>	Ba	137.9	189715.9	189715.916	1161.084	0.6
⌊	Ba++	69.0	4640.2	0.024	0.000	1.0
⌈>	Ce	139.9	242560.0	242559.973	1617.063	0.7
⌊	CeO	155.9	4742.7	0.020	0.000	1.0
	Bkgd	220.0	12.8	12.800	1.525	11.9

Current Optimization File Data

Current Value	Description
0.88	Nebulizer Gas Flow
8.00	Lens Voltage
1450.00	ICP RF Power
-1950.00	Analog Stage Voltage
1350.00	Pulse Stage Voltage
250.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	15	7.8	6280.4
Co	59	15	8.3	83148.6
In	115	15	10.3	188431.6

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	591	2045	0.649
Be	9.0	9.0	2050	2060	0.659
Mg	24.0	24.0	5687	2060	0.619
Mg	25.0	24.9	5929	2050	0.621
Mg	26.0	26.0	6183	2080	0.646
Co	58.9	58.9	14185	2090	0.643
Rh	102.9	102.9	24874	2140	0.669
In	114.9	114.9	27788	2165	0.649
Ce	139.9	139.9	33872	2190	0.641
Pb	206.0	206.0	49948	2275	0.648
Pb	207.0	207.0	50159	2240	0.640
Pb	208.0	208.0	50451	2260	0.689
U	238.1	238.0	57723	2265	0.733

Report Date/Time: Tuesday, June 30, 2009 11:14:12
Page 1

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, June 30, 2009 20:07:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\Blank.124

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		155	
	Be	9		ug/L		20	
	B	11		ug/L		1316	
	Na	23		ug/L		80902	
	Mg	24		ug/L		13673	
	Al	27		ug/L		27026	
	P	31		ug/L		8453	
	K	39		ug/L		574669	
	Ca	43		ug/L		355	
>	Sc	45		ug/L		424147	
	Ti	47		ug/L		360	
	V	51		ug/L		13451	
	Cr	52		ug/L		669	
	Cr	53		ug/L		82614	
	Mn	55		ug/L		2015	
	Fe	57		ug/L		5414	
	Co	59		ug/L		214	
	Ni	60		ug/L		145	
	Cu	63		ug/L		864	
	Cu	65		ug/L		490	
	Zn	66		ug/L		883	
	Zn	67		ug/L		14069	
	Zn	68		ug/L		1694	
>	Ge	74		ug/L		424446	
	As	75		ug/L		116	
	Se	77		ug/L		5194	
	Se	82		ug/L		11	
	Kr	83		ug/L		95	
	Sr	88		ug/L		384	
	Y	89		ug/L		109	
	Mo	98		ug/L		172	
	Ag	107		ug/L		106	
	Cd	111		ug/L		31	
	Cd	114		ug/L		77	
>	In	115		ug/L		243783	
	Sn	120		ug/L		313	
	Sb	121		ug/L		275	
	Sb	123		ug/L		227	
	Ba	135		ug/L		55	
	Ba	137		ug/L		96	
	Ho	165		ug/L		67	
>	Lu	175		ug/L		423428	
	Tl	205		ug/L		1383	
	Pb	208		ug/L		2177	
	Bi	209		ug/L		149	
	Th	232		ug/L		1462	
	U	238		ug/L		970	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	
Be	9	Linear Thru Zero	
B	11	Linear Thru Zero	
Na	23	Linear Thru Zero	
Mg	24	Linear Thru Zero	
Al	27	Linear Thru Zero	
P	31	Linear Thru Zero	
K	39	Linear Thru Zero	
Ca	43	Linear Thru Zero	
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	
V	51	Linear Thru Zero	
Cr	52	Linear Thru Zero	
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	
Fe	57	Linear Thru Zero	
Co	59	Linear Thru Zero	
Ni	60	Linear Thru Zero	
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	
Zn	66	Linear Thru Zero	
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	
Ag	107	Linear Thru Zero	
Cd	111	Linear Thru Zero	
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	
Sb	121	Linear Thru Zero	
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	
Pb	208	Linear Thru Zero	
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	
U	238	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, June 30, 2009 20:13:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\Standard 1.125

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	3.283	18010	0.043
	Be	9	**10.000**	**ug/L**	0.538	4890	0.012
	B	11	**20.000**	**ug/L**	2.824	10631	0.022
	Na	23	**1000.000**	**ug/L**	7.372	4699765	11.073
	Mg	24	**1000.000**	**ug/L**	6.614	3469879	8.282
	Al	27	**1000.000**	**ug/L**	3.529	4558055	10.863
	P	31	**1000.000**	**ug/L**	0.381	252857	0.586
	K	39	**1000.000**	**ug/L**	2.040	5350847	11.472
	Ca	43	**1000.000**	**ug/L**	0.636	12158	0.028
>	Sc	45		**ug/L**		417195	417194.906
	Ti	47	**10.000**	**ug/L**	2.665	6172	0.014
	V	51	**10.000**	**ug/L**	1.960	82244	0.165
	Cr	52	**10.000**	**ug/L**	0.362	53927	0.128
	Cr	53		**ug/L**		88490	0.017
	Mn	55	**10.000**	**ug/L**	0.848	83354	0.195
	Fe	57	**1000.000**	**ug/L**	0.290	168257	0.391
	Co	59	**10.000**	**ug/L**	0.315	65326	0.156
	Ni	60	**10.000**	**ug/L**	0.622	14302	0.034
	Cu	63		**ug/L**		35207	0.082
	Cu	65	**10.000**	**ug/L**	0.693	17377	0.040
	Zn	66	**10.000**	**ug/L**	0.341	11096	0.024
	Zn	67		**ug/L**		15490	0.004
	Zn	68		**ug/L**		9362	0.018
>	Ge	74		**ug/L**		421510	421510.366
	As	75	**10.000**	**ug/L**	3.530	11577	0.027
	Se	77		**ug/L**		5869	0.002
	Se	82	**10.000**	**ug/L**	4.338	1057	0.002
	Kr	83		**ug/L**		88	-0.000
	Sr	88	**10.000**	**ug/L**	2.793	124253	0.516
	Y	89		**ug/L**		79	-0.000
	Mo	98	**10.000**	**ug/L**	3.606	31304	0.130
	Ag	107	**10.000**	**ug/L**	1.125	55193	0.229
	Cd	111	**10.000**	**ug/L**	1.814	12680	0.053
	Cd	114		**ug/L**		30000	0.125
>	In	115		**ug/L**		240241	240240.923
	Sn	120	**10.000**	**ug/L**	2.186	52735	0.218
	Sb	121	**10.000**	**ug/L**	4.009	43267	0.179
	Sb	123		**ug/L**		33474	0.138
	Ba	135		**ug/L**		13080	0.031
	Ba	137	**10.000**	**ug/L**	2.803	23223	0.056
	Ho	165		**ug/L**		57	-0.000
>	Lu	175		**ug/L**		413665	413665.460
	Tl	205	**10.000**	**ug/L**	0.945	153665	0.368
	Pb	208	**10.000**	**ug/L**	0.501	243956	0.585
	Bi	209		**ug/L**		207	0.000
	Th	232	**10.000**	**ug/L**	1.678	299670	0.721
	U	238	**10.000**	**ug/L**	0.743	318725	0.768

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, June 30, 2009 20:19:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\Standard 2.126

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.005**	ug/L	1.156	180895	0.430
	Be	9	**99.989**	ug/L	1.585	48497	0.115
	B	11	**200.067**	ug/L	0.827	98570	0.232
	Na	23	**10001.499**	ug/L	7.026	47312664	112.429
	Mg	24	**9997.713**	ug/L	7.109	34014279	80.951
	Al	27	**9998.645**	ug/L	3.137	45024833	107.162
	P	31	**9996.678**	ug/L	0.885	2390016	5.671
	K	39	**10003.152**	ug/L	3.028	50337598	118.489
	Ca	43	**9996.976**	ug/L	0.706	115689	0.275
>	Sc	45		ug/L		419959	419958.778
	Ti	47	**99.987**	ug/L	1.318	58171	0.138
	V	51	**99.954**	ug/L	1.838	677197	1.581
	Cr	52	**99.949**	ug/L	1.734	510373	1.214
	Cr	53		ug/L		140849	0.141
	Mn	55	**99.950**	ug/L	1.793	782031	1.858
	Fe	57	**9988.160**	ug/L	1.829	1469984	3.488
	Co	59	**99.939**	ug/L	1.828	617821	1.471
	Ni	60	**99.960**	ug/L	1.992	137186	0.326
	Cu	63		ug/L		326872	0.776
	Cu	65	**99.952**	ug/L	1.803	162665	0.386
	Zn	66	**99.981**	ug/L	1.508	101565	0.238
	Zn	67		ug/L		30642	0.039
	Zn	68		ug/L		78371	0.181
>	Ge	74		ug/L		423358	423357.514
	As	75	**99.967**	ug/L	1.236	111489	0.263
	Se	77		ug/L		12968	0.018
	Se	82	**99.963**	ug/L	2.799	10141	0.024
	Kr	83		ug/L		104	0.000
	Sr	88	**99.936**	ug/L	0.637	1152881	4.845
	Y	89		ug/L		151	0.000
	Mo	98	**100.004**	ug/L	0.424	309820	1.302
	Ag	107	**99.958**	ug/L	0.813	523543	2.200
	Cd	111	**99.991**	ug/L	1.033	124221	0.522
	Cd	114		ug/L		288449	1.212
>	In	115		ug/L		237873	237872.918
	Sn	120	**99.973**	ug/L	0.507	505849	2.125
	Sb	121	**99.982**	ug/L	1.186	418770	1.759
	Sb	123		ug/L		326814	1.373
	Ba	135		ug/L		128427	0.307
	Ba	137	**99.965**	ug/L	0.969	226149	0.540
	Ho	165		ug/L		60	-0.000
>	Lu	175		ug/L		418547	418546.943
	Tl	205	**99.891**	ug/L	0.914	1388998	3.315
	Pb	208	**99.939**	ug/L	1.587	2307190	5.508
	Bi	209		ug/L		621	0.001
	Th	232	**99.787**	ug/L	1.157	2482856	5.929
	U	238	**99.796**	ug/L	0.795	2666025	6.368

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, June 30, 2009 20:25:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 1.127

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.137**	ug/L	3.776	90330	0.211
	Be	9	**49.941**	ug/L	2.682	24610	0.058
	B	11	**105.371**	ug/L	0.653	53361	0.122
	Na	23	**4524.391**	ug/L	2.704	21786587	50.860
	Mg	24	**4712.407**	ug/L	1.698	16294799	38.156
	Al	27	**5208.723**	ug/L	2.094	23836676	55.825
	P	31	**4799.055**	ug/L	1.244	1169820	2.723
	K	39	**4982.786**	ug/L	3.707	25763337	59.022
	Ca	43	**4909.314**	ug/L	1.549	57884	0.135
>	Sc	45		ug/L		426625	426624.640
	Ti	47	**47.954**	ug/L	2.088	28523	0.066
	V	51	**49.422**	ug/L	1.937	346968	0.782
	Cr	52	**50.271**	ug/L	1.215	261082	0.610
	Cr	53		ug/L		109886	0.063
	Mn	55	**47.326**	ug/L	2.781	377138	0.880
	Fe	57	**5111.805**	ug/L	1.373	766896	1.785
	Co	59	**50.086**	ug/L	1.516	314620	0.737
	Ni	60	**51.127**	ug/L	0.920	71350	0.167
	Cu	63		ug/L		158778	0.370
	Cu	65	**47.583**	ug/L	3.312	78893	0.184
	Zn	66	**50.463**	ug/L	0.736	51730	0.120
	Zn	67		ug/L		21804	0.018
	Zn	68		ug/L		40242	0.091
>	Ge	74		ug/L		423604	423604.391
	As	75	**48.852**	ug/L	0.479	54577	0.129
	Se	77		ug/L		8881	0.009
	Se	82	**48.083**	ug/L	3.101	4888	0.012
	Kr	83		ug/L		110	0.000
	Sr	88	**51.031**	ug/L	1.199	590541	2.474
	Y	89		ug/L		91	-0.000
	Mo	98	**48.017**	ug/L	1.756	149262	0.625
	Ag	107	**50.022**	ug/L	1.505	262781	1.101
	Cd	111	**51.894**	ug/L	0.495	64670	0.271
	Cd	114		ug/L		151718	0.636
>	In	115		ug/L		238567	238566.581
	Sn	120	**49.281**	ug/L	1.836	250198	1.048
	Sb	121	**50.359**	ug/L	1.207	211663	0.886
	Sb	123		ug/L		164403	0.688
	Ba	135		ug/L		62497	0.149
	Ba	137	**48.951**	ug/L	1.468	111295	0.264
	Ho	165		ug/L		91	0.000
>	Lu	175		ug/L		420510	420510.069
	Tl	205	**50.154**	ug/L	1.620	701242	1.665
	Pb	208	**50.875**	ug/L	1.039	1181041	2.804
	Bi	209		ug/L		399	0.001
	Th	232	**54.181**	ug/L	1.802	1354856	3.219
	U	238	**54.220**	ug/L	1.875	1455484	3.460

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	98.274				
	Be	9	99.882				
	B	11	105.371				
	Na	23	90.488				
	Mg	24	94.248				
	Al	27	103.143				
	P	31	95.981				
	K	39	99.656				
	Ca	43	98.186				
>	Sc	45		100.6			
	Ti	47	95.908				
	V	51	98.844				
	Cr	52	100.541				
	Cr	53					
	Mn	55	94.653				
	Fe	57	102.236				
	Co	59	100.173				
	Ni	60	102.254				
	Cu	63					
	Cu	65	95.167				
	Zn	66	100.927				
	Zn	67					
	Zn	68					
>	Ge	74		99.8			
	As	75	97.703				
	Se	77					
	Se	82	96.165				
	Kr	83					
	Sr	88	102.062				
	Y	89					
	Mo	98	96.034				
	Ag	107	100.044				
	Cd	111	103.787				
	Cd	114					
>	In	115		97.9			
	Sn	120	98.562				
	Sb	121	100.717				
	Sb	123					
	Ba	135					
	Ba	137	97.901				
	Ho	165					
>	Lu	175		99.3			
	Tl	205	100.309				
	Pb	208	101.750				
	Bi	209					
	Th	232	108.362				
	U	238	108.440				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, June 30, 2009 20:31:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 2.128

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	-0.013	ug/L	53.327	134	-0.000
	Be	9	0.006	ug/L	203.996	23	0.000
	B	11	4.358	ug/L	22.459	3507	0.005
	Na	23	-0.670	ug/L	177.610	78884	-0.008
	Mg	24	-0.256	ug/L	209.935	13006	-0.002
	Al	27	-1.537	ug/L	78.552	20349	-0.016
	P	31	-5.033	ug/L	21.753	7354	-0.003
	K	39	-6.067	ug/L	81.820	552849	-0.072
	Ca	43	3.241	ug/L	182.592	399	0.000
>	Sc	45		ug/L		430776	430776.177
	Ti	47	-0.141	ug/L	17.243	282	-0.000
	V	51	0.444	ug/L	66.996	16682	0.007
	Cr	52	0.172	ug/L	19.195	1579	0.002
	Cr	53		ug/L		90198	0.015
	Mn	55	-0.085	ug/L	9.096	1364	-0.002
	Fe	57	-1.678	ug/L	11.018	5246	-0.001
	Co	59	0.002	ug/L	168.328	229	0.000
	Ni	60	-0.002	ug/L	548.068	145	-0.000
	Cu	63		ug/L		922	0.000
	Cu	65	-0.010	ug/L	64.253	481	-0.000
	Zn	66	-0.018	ug/L	170.455	877	-0.000
	Zn	67		ug/L		14972	0.002
	Zn	68		ug/L		1716	-0.000
>	Ge	74		ug/L		430399	430399.377
	As	75	0.010	ug/L	223.353	130	0.000
	Se	77		ug/L		5705	0.001
	Se	82	0.041	ug/L	455.844	15	0.000
	Kr	83		ug/L		97	0.000
	Sr	88	-0.002	ug/L	53.201	363	-0.000
	Y	89		ug/L		51	-0.000
	Mo	98	0.019	ug/L	26.955	234	0.000
	Ag	107	-0.001	ug/L	343.655	102	-0.000
	Cd	111	0.012	ug/L	113.728	47	0.000
	Cd	114		ug/L		90	0.000
>	In	115		ug/L		243828	243827.837
	Sn	120	0.001	ug/L	161.353	316	0.000
	Sb	121	0.159	ug/L	24.784	959	0.003
	Sb	123		ug/L		788	0.002
	Ba	135		ug/L		52	-0.000
	Ba	137	0.000	ug/L	8298.464	96	0.000
	Ho	165		ug/L		58	-0.000
>	Lu	175		ug/L		426195	426195.344
	Tl	205	0.259	ug/L	26.000	5060	0.009
	Pb	208	-0.021	ug/L	5.859	1700	-0.001
	Bi	209		ug/L		141	-0.000
	Th	232	0.049	ug/L	47.156	2722	0.003
	U	238	-0.001	ug/L	86.352	958	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.6			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.7			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, June 30, 2009 20:38:01
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 3.129

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.349**	ug/L	2.444	19518	0.045
	Be	9	**0.528**	ug/L	6.245	285	0.001
	B	11	**16.102**	ug/L	1.067	9452	0.019
	Na	23	**253.784**	ug/L	7.698	1322688	2.853
	Mg	24	**12.242**	ug/L	11.679	57115	0.099
	Al	27	**12.208**	ug/L	12.846	84584	0.131
	P	31	**48.587**	ug/L	2.499	20645	0.028
	K	39	**291.393**	ug/L	6.805	2089495	3.452
	Ca	43	**101.641**	ug/L	5.124	1578	0.003
>	Sc	45		ug/L		434671	434670.826
	Ti	47	**8.366**	ug/L	1.269	5376	0.012
	V	51	**9.761**	ug/L	6.282	80905	0.154
	Cr	52	**3.325**	ug/L	0.713	18236	0.040
	Cr	53		ug/L		88054	0.008
	Mn	55	**5.183**	ug/L	1.321	43937	0.096
	Fe	57	**26.452**	ug/L	3.609	9563	0.009
	Co	59	**1.078**	ug/L	1.798	7114	0.016
	Ni	60	**2.084**	ug/L	0.464	3107	0.007
	Cu	63		ug/L		4585	0.009
	Cu	65	**1.051**	ug/L	4.609	2267	0.004
	Zn	66	**10.446**	ug/L	1.180	11587	0.025
	Zn	67		ug/L		15752	0.003
	Zn	68		ug/L		9618	0.018
>	Ge	74		ug/L		430287	430286.832
	As	75	**5.124**	ug/L	8.728	5918	0.013
	Se	77		ug/L		5729	0.001
	Se	82	**4.887**	ug/L	6.171	515	0.001
	Kr	83		ug/L		95	-0.000
	Sr	88	**10.961**	ug/L	1.526	131061	0.531
	Y	89		ug/L		52	-0.000
	Mo	98	**0.478**	ug/L	1.635	1705	0.006
	Ag	107	**1.054**	ug/L	2.145	5815	0.023
	Cd	111	**1.069**	ug/L	1.906	1404	0.006
	Cd	114		ug/L		3121	0.012
>	In	115		ug/L		245936	245936.455
	Sn	120	**5.132**	ug/L	0.412	27145	0.109
	Sb	121	**2.006**	ug/L	3.494	8957	0.035
	Sb	123		ug/L		6874	0.027
	Ba	135		ug/L		2666	0.006
	Ba	137	**2.032**	ug/L	2.221	4786	0.011
	Ho	165		ug/L		63	-0.000
>	Lu	175		ug/L		427098	427098.038
	Tl	205	**1.118**	ug/L	1.387	17248	0.037
	Pb	208	**2.106**	ug/L	1.168	51762	0.116
	Bi	209		ug/L		133	-0.000
	Th	232	**1.220**	ug/L	0.788	32429	0.072
	U	238	**0.280**	ug/L	2.135	8611	0.018

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	103.492				
	Be	9	105.683				
	B	11	107.350				
	Na	23	101.514				
	Mg	24	81.611				
	Al	27	81.389				
	P	31	97.175				
	K	39	97.131				
	Ca	43	101.641				
>	Sc	45		102.5			
	Ti	47	83.664				
	V	51	97.614				
	Cr	52	110.829				
	Cr	53					
	Mn	55	103.666				
	Fe	57	105.806				
	Co	59	107.785				
	Ni	60	104.208				
	Cu	63					
	Cu	65	105.058				
	Zn	66	104.463				
	Zn	67					
	Zn	68					
>	Ge	74		101.4			
	As	75	102.483				
	Se	77					
	Se	82	97.737				
	Kr	83					
	Sr	88	109.605				
	Y	89					
	Mo	98	95.679				
	Ag	107	105.419				
	Cd	111	106.909				
	Cd	114					
>	In	115		100.9			
	Sn	120	102.638				
	Sb	121	100.297				
	Sb	123					
	Ba	135					
	Ba	137	101.604				
	Ho	165					
>	Lu	175		100.9			
	Tl	205	111.838				
	Pb	208	105.290				
	Bi	209					
	Th	232	121.979				
	U	238	140.033				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 3	U	238CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, June 30, 2009 20:44:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 4.130

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.112**	ug/L	17.511	323	0.000
	Be	9	**0.087**	ug/L	17.003	56	0.000
	B	11	**0.644**	ug/L	31.007	1466	0.001
	Na	23	**95372.953**	ug/L	3.285	408579806	1072.110
	Mg	24	**99902.170**	ug/L	9.119	308265538	808.906
	Al	27	**95440.783**	ug/L	2.372	389710740	1022.901
	P	31	**93396.865**	ug/L	1.052	20193487	52.984
	K	39	**96491.796**	ug/L	2.413	435994941	1142.960
	Ca	43	**93857.768**	ug/L	0.969	982654	2.578
>	Sc	45		ug/L		380991	380990.808
	Ti	47	**1703.552**	ug/L	0.863	893966	2.346
	V	51	**0.085**	ug/L	203.245	12590	0.001
	Cr	52	**3.414**	ug/L	1.038	16397	0.041
	Cr	53		ug/L		64845	-0.025
	Mn	55	**5.843**	ug/L	0.730	43179	0.109
	Fe	57	**94901.462**	ug/L	0.564	12630780	33.140
	Co	59	**0.336**	ug/L	1.144	2075	0.005
	Ni	60	**2.975**	ug/L	2.750	3831	0.010
	Cu	63		ug/L		7225	0.017
	Cu	65	**2.764**	ug/L	2.487	4509	0.011
	Zn	66	**3.405**	ug/L	4.122	4011	0.008
	Zn	67		ug/L		12646	-0.001
	Zn	68		ug/L		1928	0.001
>	Ge	74		ug/L		394085	394085.484
	As	75	**0.122**	ug/L	379.935	232	0.000
	Se	77		ug/L		6039	0.003
	Se	82	**-1.258**	ug/L	37.293	-109	-0.000
	Kr	83		ug/L		290	0.001
	Sr	88	**1.302**	ug/L	2.037	13994	0.063
	Y	89		ug/L		442	0.002
	Mo	98	**1973.361**	ug/L	0.778	5555796	25.687
	Ag	107	**0.075**	ug/L	9.158	452	0.002
	Cd	111	**0.319**	ug/L	27.561	387	0.002
	Cd	114		ug/L		6822	0.031
>	In	115		ug/L		216274	216273.667
	Sn	120	**0.175**	ug/L	2.259	1083	0.004
	Sb	121	**0.068**	ug/L	23.695	504	0.001
	Sb	123		ug/L		407	0.001
	Ba	135		ug/L		869	0.002
	Ba	137	**0.645**	ug/L	1.751	1505	0.003
	Ho	165		ug/L		1004	0.002
>	Lu	175		ug/L		405838	405837.855
	Tl	205	**0.031**	ug/L	23.795	1737	0.001
	Pb	208	**0.160**	ug/L	3.038	5672	0.009
	Bi	209		ug/L		873	0.002
	Th	232	**0.008**	ug/L	146.797	1605	0.000
	U	238	**-0.013**	ug/L	4.988	598	-0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	95.373				
	Mg	24	99.902				
	Al	27	95.441				
	P	31	93.397				
	K	39	96.492				
	Ca	43	93.858				
>	Sc	45			89.8		
	Ti	47	85.178				
	V	51					
	Cr	52	92.271				
	Cr	53					
	Mn	55	100.735				
	Fe	57	94.901				
	Co	59	134.314				
	Ni	60	110.181				
	Cu	63					
	Cu	65	95.325				
	Zn	66	94.587				
	Zn	67					
	Zn	68					
>	Ge	74			92.8		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	108.515				
	Y	89					
	Mo	98	98.668				
	Ag	107					
	Cd	111	79.677				
	Cd	114					
>	In	115			88.7		
	Sn	120					
	Sb	121	68.381				
	Sb	123					
	Ba	135					
	Ba	137	96.225				
	Ho	165					
>	Lu	175			95.8		
	Tl	205					
	Pb	208	80.161				
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, June 30, 2009 20:50:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 5.131

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**22.757**	**ug/L**	1.237	36505	0.098
	Be	9	**20.522**	**ug/L**	3.683	8813	0.024
	B	11	**18.869**	**ug/L**	3.508	9261	0.022
	Na	23	**93119.940**	**ug/L**	6.880	388581670	1046.784
	Mg	24	**98824.601**	**ug/L**	4.475	297046168	800.181
	Al	27	**96555.326**	**ug/L**	4.202	384413701	1034.846
	P	31	**94511.750**	**ug/L**	2.054	19918470	53.617
	K	39	**98492.116**	**ug/L**	4.075	434013146	1166.654
	Ca	43	**95440.411**	**ug/L**	0.761	973981	2.622
>	Sc	45		**ug/L**		371385	371385.371
	Ti	47	**1737.257**	**ug/L**	1.079	888575	2.392
	V	51	**20.180**	**ug/L**	2.942	130276	0.319
	Cr	52	**23.477**	**ug/L**	1.882	106447	0.285
	Cr	53		**ug/L**		74168	0.005
	Mn	55	**26.716**	**ug/L**	1.390	186126	0.497
	Fe	57	**98021.151**	**ug/L**	1.613	12714469	34.229
	Co	59	**21.137**	**ug/L**	2.194	115682	0.311
	Ni	60	**22.024**	**ug/L**	2.227	26825	0.072
	Cu	63		**ug/L**		63698	0.169
	Cu	65	**22.008**	**ug/L**	1.186	32008	0.085
	Zn	66	**22.184**	**ug/L**	1.525	21270	0.053
	Zn	67		**ug/L**		15055	0.006
	Zn	68		**ug/L**		14965	0.035
>	Ge	74		**ug/L**		387812	387811.690
	As	75	**20.492**	**ug/L**	1.309	21021	0.054
	Se	77		**ug/L**		7419	0.007
	Se	82	**19.471**	**ug/L**	2.761	1818	0.005
	Kr	83		**ug/L**		268	0.000
	Sr	88	**23.429**	**ug/L**	0.698	246645	1.136
	Y	89		**ug/L**		434	0.002
	Mo	98	**1975.753**	**ug/L**	1.636	5576914	25.718
	Ag	107	**19.464**	**ug/L**	1.453	93007	0.428
	Cd	111	**19.603**	**ug/L**	1.454	22223	0.102
	Cd	114		**ug/L**		57944	0.267
>	In	115		**ug/L**		216844	216843.702
	Sn	120	**20.724**	**ug/L**	0.516	95810	0.441
	Sb	121	**21.741**	**ug/L**	1.165	83203	0.383
	Sb	123		**ug/L**		64990	0.299
	Ba	135		**ug/L**		24521	0.061
	Ba	137	**20.275**	**ug/L**	1.859	44097	0.110
	Ho	165		**ug/L**		1006	0.002
>	Lu	175		**ug/L**		401767	401766.657
	Tl	205	**20.309**	**ug/L**	1.338	272164	0.674
	Pb	208	**20.258**	**ug/L**	0.520	450601	1.116
	Bi	209		**ug/L**		985	0.002
	Th	232	**23.154**	**ug/L**	0.166	554095	1.376
	U	238	**23.426**	**ug/L**	1.046	601415	1.495

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	113.786				
	Be	9	102.612				
	B	11	94.344				
	Na	23	93.120				
	Mg	24	98.825				
	Al	27	96.555				
	P	31	94.512				
	K	39	98.492				
	Ca	43	95.440				
>	Sc	45		87.6			
	Ti	47	86.863				
	V	51	100.902				
	Cr	52	99.058				
	Cr	53					
	Mn	55	103.549				
	Fe	57	98.021				
	Co	59	104.378				
	Ni	60	97.023				
	Cu	63					
	Cu	65	96.104				
	Zn	66	94.001				
	Zn	67					
	Zn	68					
>	Ge	74		91.4			
	As	75	102.458				
	Se	77					
	Se	82	97.357				
	Kr	83					
	Sr	88	110.514				
	Y	89					
	Mo	98	98.788				
	Ag	107	97.321				
	Cd	111	96.092				
	Cd	114					
>	In	115		88.9			
	Sn	120	103.621				
	Sb	121	108.165				
	Sb	123					
	Ba	135					
	Ba	137	98.088				
	Ho	165					
>	Lu	175		94.9			
	Tl	205	101.547				
	Pb	208	100.288				
	Bi	209					
	Th	232	115.769				
	U	238	117.130				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, June 30, 2009 20:56:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 6.132

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**61.649**	ug/L	2.934	99670	0.265
	Be	9	**57.491**	ug/L	0.739	24920	0.066
	B	11	**107.616**	ug/L	2.456	47908	0.125
	Na	23	**4840.013**	ug/L	8.065	20485896	54.408
	Mg	24	**4968.508**	ug/L	6.872	15109419	40.230
	Al	27	**5098.440**	ug/L	6.756	20528983	54.643
	P	31	**4910.627**	ug/L	0.398	1052642	2.786
	K	39	**5242.253**	ug/L	12.464	23806315	62.095
	Ca	43	**5144.434**	ug/L	1.776	53339	0.141
>	Sc	45		ug/L		375174	375174.088
	Ti	47	**50.365**	ug/L	0.404	26336	0.069
	V	51	**52.299**	ug/L	1.184	322250	0.827
	Cr	52	**52.802**	ug/L	1.318	241181	0.641
	Cr	53		ug/L		102469	0.078
	Mn	55	**50.440**	ug/L	0.886	353463	0.937
	Fe	57	**5547.425**	ug/L	0.640	731577	1.937
	Co	59	**54.367**	ug/L	0.770	300378	0.800
	Ni	60	**54.689**	ug/L	1.575	67112	0.179
	Cu	63		ug/L		151894	0.403
	Cu	65	**51.377**	ug/L	0.461	74910	0.199
	Zn	66	**53.323**	ug/L	1.275	48626	0.127
	Zn	67		ug/L		20288	0.021
	Zn	68		ug/L		36422	0.093
>	Ge	74		ug/L		377225	377224.724
	As	75	**50.471**	ug/L	3.042	50193	0.133
	Se	77		ug/L		8101	0.009
	Se	82	**50.890**	ug/L	4.870	4603	0.012
	Kr	83		ug/L		93	0.000
	Sr	88	**52.140**	ug/L	0.917	554350	2.528
	Y	89		ug/L		79	-0.000
	Mo	98	**49.555**	ug/L	1.209	141525	0.645
	Ag	107	**52.321**	ug/L	1.313	252518	1.152
	Cd	111	**54.820**	ug/L	1.493	62759	0.286
	Cd	114		ug/L		146279	0.667
>	In	115		ug/L		219168	219168.405
	Sn	120	**50.865**	ug/L	0.889	237259	1.081
	Sb	121	**51.448**	ug/L	0.899	198663	0.905
	Sb	123		ug/L		153453	0.699
	Ba	135		ug/L		57694	0.166
	Ba	137	**54.565**	ug/L	1.970	102280	0.295
	Ho	165		ug/L		77	0.000
>	Lu	175		ug/L		346648	346647.862
	Tl	205	**53.149**	ug/L	2.287	612650	1.764
	Pb	208	**53.926**	ug/L	0.370	1031973	2.972
	Bi	209		ug/L		328	0.001
	Th	232	**60.255**	ug/L	1.681	1242270	3.580
	U	238	**60.818**	ug/L	1.664	1346035	3.881

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	123.298				
	Be	9	114.982				
	B	11	107.616				
	Na	23	96.800				
	Mg	24	99.370				
	Al	27	100.959				
	P	31	98.213				
	K	39	104.845				
	Ca	43	102.889				
>	Sc	45		88.5			
	Ti	47	100.730				
	V	51	104.598				
	Cr	52	105.604				
	Cr	53					
	Mn	55	100.879				
	Fe	57	110.948				
	Co	59	108.735				
	Ni	60	109.377				
	Cu	63					
	Cu	65	102.755				
	Zn	66	106.646				
	Zn	67					
	Zn	68					
>	Ge	74		88.9			
	As	75	100.943				
	Se	77					
	Se	82	101.780				
	Kr	83					
	Sr	88	104.281				
	Y	89					
	Mo	98	99.110				
	Ag	107	104.643				
	Cd	111	109.640				
	Cd	114					
>	In	115		89.9			
	Sn	120	101.730				
	Sb	121	102.897				
	Sb	123					
	Ba	135					
	Ba	137	109.131				
	Ho	165					
>	Lu	175		81.9			
	Tl	205	106.298				
	Pb	208	107.851				
	Bi	209					
	Th	232	120.510				
	U	238	121.636				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
QC Std 6	Be	9	CCV is out of limits (+/- 10%)
QC Std 6	Fe	57	CCV is out of limits (+/- 10%)
QC Std 6	Th	232	CCV is out of limits (+/- 10%)
QC Std 6	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, June 30, 2009 21:02:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 7.133

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.010**	ug/L	63.519	122	-0.000
	Be	9	**0.009**	ug/L	125.483	21	0.000
	B	11	**2.281**	ug/L	20.753	2159	0.003
	Na	23	**0.979**	ug/L	325.320	75872	0.011
	Mg	24	**-0.582**	ug/L	166.877	10337	-0.005
	Al	27	**-1.973**	ug/L	33.275	16009	-0.021
	P	31	**-2.437**	ug/L	8.144	6975	-0.001
	K	39	**8.786**	ug/L	91.755	548702	0.104
	Ca	43	**5.379**	ug/L	13.875	371	0.000
>	Sc	45		ug/L		376091	376091.273
	Ti	47	**-0.008**	ug/L	632.066	315	-0.000
	V	51	**-0.224**	ug/L	181.435	10578	-0.004
	Cr	52	**0.033**	ug/L	249.080	743	0.000
	Cr	53		ug/L		82653	0.025
	Mn	55	**-0.075**	ug/L	3.805	1264	-0.001
	Fe	57	**1.091**	ug/L	7.425	4944	0.000
	Co	59	**0.001**	ug/L	192.345	197	0.000
	Ni	60	**0.004**	ug/L	324.644	134	0.000
	Cu	63		ug/L		813	0.000
	Cu	65	**-0.011**	ug/L	112.431	418	-0.000
	Zn	66	**0.001**	ug/L	2111.357	792	0.000
	Zn	67		ug/L		13791	0.003
	Zn	68		ug/L		1538	0.000
>	Ge	74		ug/L		380185	380184.637
	As	75	**-0.107**	ug/L	98.064	-3	-0.000
	Se	77		ug/L		5129	0.001
	Se	82	**-0.057**	ug/L	146.216	5	-0.000
	Kr	83		ug/L		94	0.000
	Sr	88	**-0.000**	ug/L	383.751	346	-0.000
	Y	89		ug/L		55	-0.000
	Mo	98	**0.045**	ug/L	29.413	289	0.001
	Ag	107	**0.004**	ug/L	12.706	115	0.000
	Cd	111	**0.012**	ug/L	173.328	42	0.000
	Cd	114		ug/L		82	0.000
>	In	115		ug/L		222764	222764.162
	Sn	120	**-0.002**	ug/L	76.264	277	-0.000
	Sb	121	**0.064**	ug/L	25.671	501	0.001
	Sb	123		ug/L		389	0.001
	Ba	135		ug/L		53	0.000
	Ba	137	**0.000**	ug/L	1720.883	77	0.000
	Ho	165		ug/L		54	-0.000
>	Lu	175		ug/L		341360	341360.340
	Tl	205	**0.252**	ug/L	30.821	3967	0.008
	Pb	208	**-0.016**	ug/L	18.925	1456	-0.001
	Bi	209		ug/L		108	-0.000
	Th	232	**0.077**	ug/L	35.975	2732	0.005
	U	238	**0.004**	ug/L	66.454	877	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		88.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		89.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		80.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Tuesday, June 30, 2009 21:08:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 10.134

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**1114.918**	ug/L	3.279	1685327	4.798
	Be	9	**1098.196**	ug/L	2.995	445340	1.268
	B	11	**0.873**	ug/L	27.052	1444	0.001
	Na	23	**54576.255**	ug/L	1.639	215589663	613.505
	Mg	24	**51123.026**	ug/L	3.293	145495635	413.942
	Al	27	**49945.371**	ug/L	2.435	188044891	535.297
	P	31	**24658.345**	ug/L	1.169	4923438	13.989
	K	39	**51152.577**	ug/L	1.697	213439342	605.910
	Ca	43	**50507.913**	ug/L	0.881	487941	1.388
>	Sc	45		ug/L		351392	351392.413
	Ti	47	**37.696**	ug/L	3.398	18528	0.052
	V	51	**906.787**	ug/L	1.431	5051991	14.343
	Cr	52	**932.870**	ug/L	1.627	3982061	11.329
	Cr	53		ug/L		568572	1.424
	Mn	55	**911.176**	ug/L	1.455	5950836	16.934
	Fe	57	**50192.033**	ug/L	0.858	6162756	17.527
	Co	59	**893.345**	ug/L	1.378	4619241	13.147
	Ni	60	**930.378**	ug/L	0.654	1067393	3.038
	Cu	63		ug/L		2528845	7.194
	Cu	65	**907.912**	ug/L	1.433	1232794	3.508
	Zn	66	**2162.603**	ug/L	0.793	1839035	5.144
	Zn	67		ug/L		353153	0.955
	Zn	68		ug/L		1431630	4.002
>	Ge	74		ug/L		357373	357372.985
	As	75	**946.510**	ug/L	1.514	890125	2.491
	Se	77		ug/L		38324	0.095
	Se	82	**503.477**	ug/L	0.252	43083	0.121
	Kr	83		ug/L		164	0.000
	Sr	88	**952.030**	ug/L	1.258	9677230	46.155
	Y	89		ug/L		515	0.002
	Mo	98	**990.926**	ug/L	1.314	2704835	12.899
	Ag	107	**233.774**	ug/L	1.215	1079049	5.146
	Cd	111	**948.733**	ug/L	0.379	1038739	4.954
	Cd	114		ug/L		2491057	11.880
>	In	115		ug/L		209682	209681.826
	Sn	120	**960.923**	ug/L	0.668	4283402	20.428
	Sb	121	**244.967**	ug/L	1.871	904097	4.311
	Sb	123		ug/L		719405	3.430
	Ba	135		ug/L		2709508	6.957
	Ba	137	**2276.334**	ug/L	0.200	4790979	12.299
	Ho	165		ug/L		402	0.001
>	Lu	175		ug/L		389527	389526.735
	Tl	205	**502.649**	ug/L	2.286	6497444	16.683
	Pb	208	**5051.467**	ug/L	0.301	108439101	278.392
	Bi	209		ug/L		20261	0.052
	Th	232	**2776.560**	ug/L	1.546	64246572	164.971
	U	238	**5788.852**	ug/L	0.860	143864568	369.370

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	111.492				
	Be	9	109.820				
	B	11					
	Na	23	109.153				
	Mg	24	102.246				
	Al	27	99.891				
	P	31	98.633				
	K	39	102.305				
	Ca	43	101.016				
>	Sc	45		82.8			
	Ti	47					
	V	51	90.679				
	Cr	52	93.287				
	Cr	53					
	Mn	55	91.118				
	Fe	57	100.384				
	Co	59	89.334				
	Ni	60	93.038				
	Cu	63					
	Cu	65	90.791				
	Zn	66	86.504				
	Zn	67					
	Zn	68					
>	Ge	74		84.2			
	As	75	94.651				
	Se	77					
	Se	82	100.695				
	Kr	83					
	Sr	88	95.203				
	Y	89					
	Mo	98	99.093				
	Ag	107	93.509				
	Cd	111	94.873				
	Cd	114					
>	In	115		86.0			
	Sn	120	96.092				
	Sb	121	97.987				
	Sb	123					
	Ba	135					
	Ba	137	91.053				
	Ho	165					
>	Lu	175		92.0			
	Tl	205	100.530				
	Pb	208	101.029				
	Bi	209					
	Th	232	111.062				
	U	238	115.777				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Li	7	LRS is out of limits (+/- 10%)
QC Std 10	Co	59	LRS is out of limits (+/- 10%)
QC Std 10	Zn	66	LRS is out of limits (+/- 10%)
QC Std 10	Th	232	LRS is out of limits (+/- 10%)
QC Std 10	U	238	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Tuesday, June 30, 2009 21:14:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 11.135

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.051**	ug/L	2.151	93601	0.233
	Be	9	**52.277**	ug/L	1.554	24268	0.060
	B	11	**100.801**	ug/L	5.482	48108	0.117
	Na	23	**4668.177**	ug/L	10.494	21136241	52.476
	Mg	24	**4891.736**	ug/L	4.832	15919150	39.608
	Al	27	**4346.621**	ug/L	5.684	18746553	46.586
	P	31	**4725.519**	ug/L	2.913	1084857	2.681
	K	39	**4936.534**	ug/L	3.172	24032363	58.474
	Ca	43	**4839.232**	ug/L	3.689	53734	0.133
>	Sc	45		ug/L		401848	401848.352
	Ti	47	**47.047**	ug/L	1.561	26367	0.065
	V	51	**48.643**	ug/L	3.001	321814	0.769
	Cr	52	**49.426**	ug/L	2.618	241757	0.600
	Cr	53		ug/L		101830	0.059
	Mn	55	**47.021**	ug/L	2.887	352939	0.874
	Fe	57	**5161.541**	ug/L	2.602	729174	1.802
	Co	59	**50.062**	ug/L	2.803	296159	0.737
	Ni	60	**50.304**	ug/L	3.658	66107	0.164
	Cu	63		ug/L		149560	0.370
	Cu	65	**46.900**	ug/L	2.522	73260	0.181
	Zn	66	**51.329**	ug/L	0.510	48880	0.122
	Zn	67		ug/L		21150	0.021
	Zn	68		ug/L		37140	0.090
>	Ge	74		ug/L		393617	393616.905
	As	75	**49.002**	ug/L	0.819	50869	0.129
	Se	77		ug/L		7611	0.007
	Se	82	**48.325**	ug/L	1.652	4564	0.012
	Kr	83		ug/L		104	0.000
	Sr	88	**49.190**	ug/L	0.387	546872	2.385
	Y	89		ug/L		79	-0.000
	Mo	98	**46.991**	ug/L	1.150	140337	0.612
	Ag	107	**49.604**	ug/L	0.790	250341	1.092
	Cd	111	**52.138**	ug/L	2.121	62413	0.272
	Cd	114		ug/L		144752	0.631
>	In	115		ug/L		229166	229166.492
	Sn	120	**48.859**	ug/L	1.985	238322	1.039
	Sb	121	**50.504**	ug/L	0.560	203925	0.889
	Sb	123		ug/L		158975	0.693
	Ba	135		ug/L		58722	0.154
	Ba	137	**50.378**	ug/L	2.632	103918	0.272
	Ho	165		ug/L		85	0.000
>	Lu	175		ug/L		381529	381528.845
	Tl	205	**51.178**	ug/L	1.108	649264	1.699
	Pb	208	**51.361**	ug/L	1.055	1081777	2.831
	Bi	209		ug/L		348	0.001
	Th	232	**56.436**	ug/L	2.337	1280282	3.353
	U	238	**57.375**	ug/L	1.648	1397351	3.661

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	108.102				
	Be	9	104.553				
	B	11	100.801				
	Na	23	93.364				
	Mg	24	97.835				
	Al	27	86.072				
	P	31	94.510				
	K	39	98.731				
	Ca	43	96.785				
>	Sc	45		94.7			
	Ti	47	94.093				
	V	51	97.285				
	Cr	52	98.852				
	Cr	53					
	Mn	55	94.042				
	Fe	57	103.231				
	Co	59	100.124				
	Ni	60	100.609				
	Cu	63					
	Cu	65	93.801				
	Zn	66	102.659				
	Zn	67					
	Zn	68					
>	Ge	74		92.7			
	As	75	98.004				
	Se	77					
	Se	82	96.650				
	Kr	83					
	Sr	88	98.380				
	Y	89					
	Mo	98	93.982				
	Ag	107	99.209				
	Cd	111	104.276				
	Cd	114					
>	In	115		94.0			
	Sn	120	97.718				
	Sb	121	101.009				
	Sb	123					
	Ba	135					
	Ba	137	100.756				
	Ho	165					
>	Lu	175		90.1			
	Tl	205	102.357				
	Pb	208	102.722				
	Bi	209					
	Th	232	112.871				
	U	238	114.751				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Al	27	CCV is out of limits (+/- 10%)
QC Std 11	Th	232	CCV is out of limits (+/- 10%)
QC Std 11	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Tuesday, June 30, 2009 21:20:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 12.136

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.063**	ug/L	6.013	247	0.000
	Be	9	**0.009**	ug/L	161.698	22	0.000
	B	11	**2.304**	ug/L	34.044	2231	0.003
	Na	23	**1.271**	ug/L	138.763	79556	0.014
	Mg	24	**0.176**	ug/L	423.989	13006	0.001
	Al	27	**-1.137**	ug/L	135.728	20015	-0.012
	P	31	**-0.882**	ug/L	208.426	7523	-0.001
	K	39	**8.216**	ug/L	6.640	562881	0.097
	Ca	43	**3.017**	ug/L	87.952	357	0.000
>	Sc	45		ug/L		387578	387577.547
	Ti	47	**-0.098**	ug/L	15.377	277	-0.000
	V	51	**-0.150**	ug/L	17.366	11375	-0.002
	Cr	52	**0.120**	ug/L	25.261	1177	0.001
	Cr	53		ug/L		82461	0.018
	Mn	55	**-0.081**	ug/L	3.508	1255	-0.002
	Fe	57	**-0.355**	ug/L	160.289	4898	-0.000
	Co	59	**0.010**	ug/L	4.763	253	0.000
	Ni	60	**0.016**	ug/L	69.998	153	0.000
	Cu	63		ug/L		900	0.000
	Cu	65	**0.005**	ug/L	158.773	455	0.000
	Zn	66	**0.035**	ug/L	43.665	832	0.000
	Zn	67		ug/L		14601	0.005
	Zn	68		ug/L		1684	0.000
>	Ge	74		ug/L		384683	384683.424
	As	75	**0.035**	ug/L	612.152	141	0.000
	Se	77		ug/L		4911	0.001
	Se	82	**-0.018**	ug/L	554.333	9	-0.000
	Kr	83		ug/L		93	0.000
	Sr	88	**0.001**	ug/L	85.811	371	0.000
	Y	89		ug/L		48	-0.000
	Mo	98	**0.073**	ug/L	17.851	373	0.001
	Ag	107	**0.003**	ug/L	43.517	115	0.000
	Cd	111	**0.013**	ug/L	99.062	43	0.000
	Cd	114		ug/L		76	0.000
>	In	115		ug/L		225342	225342.412
	Sn	120	**0.049**	ug/L	13.335	523	0.001
	Sb	121	**0.506**	ug/L	10.855	2258	0.009
	Sb	123		ug/L		1793	0.007
	Ba	135		ug/L		71	0.000
	Ba	137	**0.010**	ug/L	33.610	103	0.000
	Ho	165		ug/L		45	-0.000
>	Lu	175		ug/L		366995	366994.782
	Tl	205	**0.384**	ug/L	19.054	5871	0.013
	Pb	208	**-0.005**	ug/L	31.547	1786	-0.000
	Bi	209		ug/L		99	-0.000
	Th	232	**0.124**	ug/L	22.173	3975	0.007
	U	238	**0.028**	ug/L	24.711	1491	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		91.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		90.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		86.7			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870575
Sample Date/Time: Tuesday, June 30, 2009 21:26:53
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 880943|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870575.137

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.012**	ug/L	23.507	121	-0.000
	Be	9	**0.005**	ug/L	31.772	20	0.000
	B	11	**0.148**	ug/L	154.827	1266	0.000
	Na	23	**3.655**	ug/L	74.876	89617	0.041
	Mg	24	**-1.853**	ug/L	59.972	6669	-0.015
	Al	27	**1.295**	ug/L	80.442	30032	0.014
	P	31	**19.415**	ug/L	13.838	11961	0.011
	K	39	**-11.814**	ug/L	53.535	469608	-0.140
	Ca	43	**9.295**	ug/L	16.347	423	0.000
>	Sc	45		ug/L		386657	386657.482
	Ti	47	**0.088**	ug/L	39.955	375	0.000
	V	51	**-0.197**	ug/L	57.889	11056	-0.003
	Cr	52	**0.555**	ug/L	14.198	3213	0.007
	Cr	53		ug/L		56823	-0.048
	Mn	55	**0.168**	ug/L	40.729	3042	0.003
	Fe	57	**13.371**	ug/L	13.704	6740	0.005
	Co	59	**0.005**	ug/L	131.039	221	0.000
	Ni	60	**0.074**	ug/L	20.565	226	0.000
	Cu	63		ug/L		1146	0.001
	Cu	65	**0.111**	ug/L	22.719	613	0.000
	Zn	66	**181.850**	ug/L	2.399	163017	0.433
	Zn	67		ug/L		34444	0.059
	Zn	68		ug/L		120267	0.317
>	Ge	74		ug/L		375090	375090.064
	As	75	**0.132**	ug/L	216.022	235	0.000
	Se	77		ug/L		2950	-0.004
	Se	82	**0.220**	ug/L	48.296	30	0.000
	Kr	83		ug/L		86	0.000
	Sr	88	**0.007**	ug/L	18.808	433	0.000
	Y	89		ug/L		61	-0.000
	Mo	98	**0.022**	ug/L	6.741	223	0.000
	Ag	107	**-0.007**	ug/L	20.131	64	-0.000
	Cd	111	**0.035**	ug/L	9.437	69	0.000
	Cd	114		ug/L		154	0.000
>	In	115		ug/L		223898	223898.120
	Sn	120	**0.057**	ug/L	5.418	559	0.001
	Sb	121	**0.068**	ug/L	64.273	520	0.001
	Sb	123		ug/L		411	0.001
	Ba	135		ug/L		87	0.000
	Ba	137	**0.025**	ug/L	52.264	132	0.000
	Ho	165		ug/L		52	-0.000
>	Lu	175		ug/L		364331	364330.920
	Tl	205	**0.201**	ug/L	13.070	3618	0.007
	Pb	208	**0.779**	ug/L	6.694	17507	0.043
	Bi	209		ug/L		95	-0.000
	Th	232	**0.068**	ug/L	30.265	2732	0.004
	U	238	**-0.011**	ug/L	39.824	587	-0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		91.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		88.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		86.0			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870580
Sample Date/Time: Tuesday, June 30, 2009 21:33:02
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 880943|40|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870580.138

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.370**	ug/L	2.079	4183	0.010
	Be	9	**24.920**	ug/L	1.108	11411	0.029
	B	11	**36.014**	ug/L	2.215	17739	0.042
	Na	23	**161.028**	ug/L	6.834	792078	1.810
	Mg	24	**829.180**	ug/L	1.320	2671278	6.714
	Al	27	**2559.301**	ug/L	2.013	10886716	27.430
	P	31	**189.873**	ug/L	1.506	50537	0.108
	K	39	**657.511**	ug/L	5.230	3619873	7.788
	Ca	43	**968.050**	ug/L	1.847	10860	0.027
>	Sc	45		ug/L		395938	395937.794
	Ti	47	**72.260**	ug/L	0.505	39730	0.099
	V	51	**32.145**	ug/L	1.161	213852	0.508
	Cr	52	**17.975**	ug/L	1.215	87047	0.218
	Cr	53		ug/L		73049	-0.010
	Mn	55	**92.862**	ug/L	1.081	685144	1.726
	Fe	57	**3111.038**	ug/L	0.728	435171	1.086
	Co	59	**21.863**	ug/L	2.195	127587	0.322
	Ni	60	**26.429**	ug/L	1.296	34297	0.086
	Cu	63		ug/L		80332	0.201
	Cu	65	**25.744**	ug/L	0.867	39842	0.099
	Zn	66	**55.457**	ug/L	1.244	52302	0.132
	Zn	67		ug/L		19137	0.016
	Zn	68		ug/L		41248	0.102
>	Ge	74		ug/L		390335	390335.489
	As	75	**65.476**	ug/L	1.072	67363	0.172
	Se	77		ug/L		7113	0.006
	Se	82	**47.056**	ug/L	1.654	4407	0.011
	Kr	83		ug/L		106	0.000
	Sr	88	**42.309**	ug/L	1.797	461055	2.051
	Y	89		ug/L		44673	0.198
	Mo	98	**20.647**	ug/L	1.236	60527	0.269
	Ag	107	**4.997**	ug/L	1.393	24810	0.110
	Cd	111	**30.920**	ug/L	1.596	36291	0.161
	Cd	114		ug/L		85248	0.379
>	In	115		ug/L		224634	224633.521
	Sn	120	**13.645**	ug/L	2.311	65436	0.290
	Sb	121	**8.385**	ug/L	1.430	33397	0.148
	Sb	123		ug/L		26272	0.116
	Ba	135		ug/L		142821	0.388
	Ba	137	**126.727**	ug/L	1.466	251806	0.685
	Ho	165		ug/L		3159	0.008
>	Lu	175		ug/L		367673	367672.990
	Tl	205	**53.596**	ug/L	2.438	655150	1.779
	Pb	208	**45.225**	ug/L	0.887	918219	2.492
	Bi	209		ug/L		1713	0.004
	Th	232	**5.446**	ug/L	2.913	120220	0.324
	U	238	**0.670**	ug/L	2.373	16552	0.043

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		93.3			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		86.8			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232424001
Sample Date/Time: Tuesday, June 30, 2009 21:39:09
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880943|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\232424001.139

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**86.719**	ug/L	2.017	170106	0.373
	Be	9	**1.651**	ug/L	4.730	889	0.002
	B	11	**1.915**	ug/L	9.577	2422	0.002
	Na	23	**1377.322**	ug/L	1.253	7138562	15.483
	Mg	24	**3784.595**	ug/L	2.135	13968560	30.644
	Al	27	**8371.451**	ug/L	10.548	40862874	89.722
	P	31	**645.674**	ug/L	1.422	175872	0.366
	K	39	**2569.047**	ug/L	1.937	14476395	30.431
	Ca	43	**2986.721**	ug/L	0.852	37753	0.082
>	Sc	45		ug/L		455425	455425.476
	Ti	47	**1082.485**	ug/L	1.021	679160	1.490
	V	51	**15.656**	ug/L	2.470	127204	0.248
	Cr	52	**11.680**	ug/L	1.817	65313	0.142
	Cr	53		ug/L		55908	-0.072
	Mn	55	**532.968**	ug/L	1.488	4512612	9.905
	Fe	57	**27901.893**	ug/L	1.823	4442621	9.743
	Co	59	**3.102**	ug/L	3.250	21021	0.046
	Ni	60	**9.701**	ug/L	0.844	14581	0.032
	Cu	63		ug/L		54761	0.118
	Cu	65	**15.684**	ug/L	0.704	28123	0.061
	Zn	66	**141.622**	ug/L	1.517	132880	0.337
	Zn	67		ug/L		28960	0.041
	Zn	68		ug/L		98822	0.248
>	Ge	74		ug/L		392093	392093.477
	As	75	**3.079**	ug/L	6.378	3285	0.008
	Se	77		ug/L		2630	-0.006
	Se	82	**1.041**	ug/L	12.644	108	0.000
	Kr	83		ug/L		207	0.000
	Sr	88	**20.370**	ug/L	2.157	233435	0.988
	Y	89		ug/L		940399	3.984
	Mo	98	**3.079**	ug/L	0.637	9628	0.040
	Ag	107	**0.189**	ug/L	4.698	1084	0.004
	Cd	111	**0.948**	ug/L	2.713	1198	0.005
	Cd	114		ug/L		316	0.001
>	In	115		ug/L		236030	236029.700
	Sn	120	**9.131**	ug/L	1.084	46121	0.194
	Sb	121	**0.386**	ug/L	0.200	1871	0.007
	Sb	123		ug/L		1466	0.005
	Ba	135		ug/L		77197	0.185
	Ba	137	**61.018**	ug/L	1.590	137420	0.330
	Ho	165		ug/L		73978	0.177
>	Lu	175		ug/L		416639	416639.219
	Tl	205	**0.971**	ug/L	5.222	14780	0.032
	Pb	208	**60.913**	ug/L	0.929	1400711	3.357
	Bi	209		ug/L		5693	0.013
	Th	232	**20.663**	ug/L	2.585	512741	1.228
	U	238	**1.585**	ug/L	3.358	43074	0.101

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		107.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870576
Sample Date/Time: Tuesday, June 30, 2009 21:45:15
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 880943|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870576.140

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**89.734**	**ug/L**	0.507	187320	0.386
	Be	9	**1.752**	**ug/L**	1.469	1003	0.002
	B	11	**1.285**	**ug/L**	0.984	2225	0.001
	Na	23	**1455.254**	**ug/L**	2.903	8017545	16.359
	Mg	24	**3730.541**	**ug/L**	0.528	14653076	30.206
	Al	27	**9394.323**	**ug/L**	2.739	48808433	100.685
	P	31	**551.545**	**ug/L**	1.169	161274	0.313
	K	39	**2846.982**	**ug/L**	1.102	17000087	33.723
	Ca	43	**2868.558**	**ug/L**	0.887	38598	0.079
>	Sc	45		**ug/L**		484597	484597.215
	Ti	47	**1141.152**	**ug/L**	1.156	761797	1.571
	V	51	**17.362**	**ug/L**	2.963	148415	0.275
	Cr	52	**12.663**	**ug/L**	0.837	75283	0.154
	Cr	53		**ug/L**		55973	-0.079
	Mn	55	**540.478**	**ug/L**	1.329	4869441	10.045
	Fe	57	**29305.649**	**ug/L**	1.352	4965263	10.234
	Co	59	**3.202**	**ug/L**	0.862	23079	0.047
	Ni	60	**10.373**	**ug/L**	1.282	16577	0.034
	Cu	63		**ug/L**		60752	0.123
	Cu	65	**16.513**	**ug/L**	1.734	31473	0.064
	Zn	66	**153.003**	**ug/L**	0.155	149995	0.364
	Zn	67		**ug/L**		31858	0.045
	Zn	68		**ug/L**		113823	0.274
>	Ge	74		**ug/L**		409771	409771.000
	As	75	**3.185**	**ug/L**	11.038	3547	0.008
	Se	77		**ug/L**		2694	-0.006
	Se	82	**0.656**	**ug/L**	64.508	75	0.000
	Kr	83		**ug/L**		219	0.000
	Sr	88	**24.137**	**ug/L**	0.579	290873	1.170
	Y	89		**ug/L**		1058855	4.265
	Mo	98	**3.156**	**ug/L**	2.363	10373	0.041
	Ag	107	**0.207**	**ug/L**	4.624	1240	0.005
	Cd	111	**1.044**	**ug/L**	15.422	1384	0.005
	Cd	114		**ug/L**		269	0.001
>	In	115		**ug/L**		248227	248226.977
	Sn	120	**9.647**	**ug/L**	0.484	51226	0.205
	Sb	121	**0.401**	**ug/L**	1.683	2031	0.007
	Sb	123		**ug/L**		1580	0.005
	Ba	135		**ug/L**		123548	0.284
	Ba	137	**93.157**	**ug/L**	1.216	219292	0.503
	Ho	165		**ug/L**		84568	0.194
>	Lu	175		**ug/L**		435514	435513.768
	Tl	205	**0.879**	**ug/L**	1.624	14123	0.029
	Pb	208	**67.072**	**ug/L**	1.832	1611953	3.696
	Bi	209		**ug/L**		6759	0.015
	Th	232	**22.516**	**ug/L**	2.042	584080	1.338
	U	238	**1.802**	**ug/L**	2.445	51083	0.115

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		114.3			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		101.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		102.9			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870578
Sample Date/Time: Tuesday, June 30, 2009 21:51:22
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 880943|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870578.141

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**125.215**	ug/L	1.957	266246	0.539
	Be	9	**23.938**	ug/L	0.973	13671	0.028
	B	11	**44.741**	ug/L	3.030	27113	0.052
	Na	23	**2482.393**	ug/L	1.305	13875739	27.905
	Mg	24	**5740.288**	ug/L	3.518	22972995	46.479
	Al	27	**17150.833**	ug/L	1.514	90806386	183.817
	P	31	**1418.572**	ug/L	1.534	407269	0.805
	K	39	**4427.412**	ug/L	5.712	26580828	52.443
	Ca	43	**4763.138**	ug/L	1.564	65040	0.131
>	Sc	45		ug/L		493807	493806.675
	Ti	47	**1266.145**	ug/L	0.558	861326	1.743
	V	51	**49.703**	ug/L	2.542	403921	0.786
	Cr	52	**36.567**	ug/L	1.534	220084	0.444
	Cr	53		ug/L		71016	-0.051
	Mn	55	**750.803**	ug/L	0.599	6892874	13.953
	Fe	57	**35125.313**	ug/L	1.428	6063865	12.266
	Co	59	**27.292**	ug/L	1.599	198588	0.402
	Ni	60	**34.628**	ug/L	1.768	56007	0.113
	Cu	63		ug/L		157937	0.318
	Cu	65	**41.322**	ug/L	0.514	79412	0.160
	Zn	66	**206.412**	ug/L	1.156	202958	0.491
	Zn	67		ug/L		40777	0.066
	Zn	68		ug/L		152540	0.367
>	Ge	74		ug/L		411559	411558.512
	As	75	**42.467**	ug/L	0.957	46109	0.112
	Se	77		ug/L		3294	-0.004
	Se	82	**9.270**	ug/L	6.220	925	0.002
	Kr	83		ug/L		248	0.000
	Sr	88	**65.870**	ug/L	0.541	797786	3.193
	Y	89		ug/L		1071745	4.291
	Mo	98	**27.210**	ug/L	0.984	88627	0.354
	Ag	107	**24.683**	ug/L	1.083	135795	0.543
	Cd	111	**6.131**	ug/L	2.408	8026	0.032
	Cd	114		ug/L		15089	0.060
>	In	115		ug/L		249705	249705.252
	Sn	120	**32.411**	ug/L	1.605	172381	0.689
	Sb	121	**67.729**	ug/L	0.928	297908	1.192
	Sb	123		ug/L		233175	0.933
	Ba	135		ug/L		158161	0.356
	Ba	137	**116.819**	ug/L	3.615	280581	0.631
	Ho	165		ug/L		85868	0.193
>	Lu	175		ug/L		444634	444633.827
	Tl	205	**50.857**	ug/L	2.841	751531	1.688
	Pb	208	**166.770**	ug/L	2.822	4087079	9.191
	Bi	209		ug/L		9427	0.021
	Th	232	**49.333**	ug/L	2.874	1304105	2.931
	U	238	**30.450**	ug/L	2.736	864583	1.943

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		116.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		105.0			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870579
Sample Date/Time: Tuesday, June 30, 2009 21:57:29
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 880943|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870579.142

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**110.053**	ug/L	1.127	230673	0.474
	Be	9	**22.932**	ug/L	2.469	12905	0.026
	B	11	**43.459**	ug/L	2.139	25992	0.050
	Na	23	**2388.695**	ug/L	3.677	13161883	26.852
	Mg	24	**4428.707**	ug/L	9.647	17474613	35.859
	Al	27	**11814.399**	ug/L	6.628	61672671	126.623
	P	31	**1328.308**	ug/L	1.096	376390	0.754
	K	39	**3664.263**	ug/L	4.712	21781168	43.404
	Ca	43	**4275.307**	ug/L	0.983	57566	0.117
>	Sc	45		ug/L		486633	486633.102
	Ti	47	**1144.495**	ug/L	0.596	767311	1.576
	V	51	**38.650**	ug/L	0.651	312914	0.611
	Cr	52	**33.053**	ug/L	1.523	196087	0.401
	Cr	53		ug/L		70037	-0.051
	Mn	55	**544.695**	ug/L	1.217	4928274	10.123
	Fe	57	**30098.983**	ug/L	2.018	5120463	10.511
	Co	59	**24.555**	ug/L	1.758	176087	0.361
	Ni	60	**31.532**	ug/L	1.014	50264	0.103
	Cu	63		ug/L		146018	0.298
	Cu	65	**38.517**	ug/L	1.722	72978	0.149
	Zn	66	**192.083**	ug/L	1.605	191357	0.457
	Zn	67		ug/L		38179	0.058
	Zn	68		ug/L		142285	0.337
>	Ge	74		ug/L		416962	416962.140
	As	75	**39.426**	ug/L	2.170	43369	0.104
	Se	77		ug/L		3413	-0.004
	Se	82	**9.317**	ug/L	7.396	941	0.002
	Kr	83		ug/L		202	0.000
	Sr	88	**49.553**	ug/L	1.141	600170	2.402
	Y	89		ug/L		1047033	4.193
	Mo	98	**26.407**	ug/L	1.884	85992	0.344
	Ag	107	**23.487**	ug/L	1.312	129192	0.517
	Cd	111	**5.748**	ug/L	0.834	7525	0.030
	Cd	114		ug/L		14195	0.057
>	In	115		ug/L		249670	249670.482
	Sn	120	**31.947**	ug/L	1.381	169870	0.679
	Sb	121	**70.176**	ug/L	1.401	308577	1.235
	Sb	123		ug/L		240155	0.961
	Ba	135		ug/L		142334	0.323
	Ba	137	**104.843**	ug/L	1.731	249774	0.566
	Ho	165		ug/L		82077	0.186
>	Lu	175		ug/L		440829	440828.786
	Tl	205	**47.681**	ug/L	1.127	699031	1.583
	Pb	208	**142.195**	ug/L	1.695	3456287	7.837
	Bi	209		ug/L		8103	0.018
	Th	232	**47.117**	ug/L	2.027	1235366	2.799
	U	238	**29.497**	ug/L	2.227	830512	1.882

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		114.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		104.1			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870577
Sample Date/Time: Tuesday, June 30, 2009 22:03:37
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 880943|10|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870577.143

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**19.106**	ug/L	3.090	34263	0.082
	Be	9	**0.363**	ug/L	3.824	193	0.000
	B	11	**1.005**	ug/L	42.456	1768	0.001
	Na	23	**300.778**	ug/L	5.671	1481843	3.381
	Mg	24	**795.530**	ug/L	9.953	2687974	6.441
	Al	27	**1856.295**	ug/L	12.539	8273668	19.895
	P	31	**142.999**	ug/L	1.250	41931	0.081
	K	39	**588.871**	ug/L	5.222	3455755	6.975
	Ca	43	**683.576**	ug/L	2.067	8140	0.019
>	Sc	45		ug/L		414938	414938.163
	Ti	47	**246.836**	ug/L	0.937	141368	0.340
	V	51	**2.894**	ug/L	5.749	32145	0.046
	Cr	52	**2.617**	ug/L	2.847	13846	0.032
	Cr	53		ug/L		58092	-0.055
	Mn	55	**129.195**	ug/L	1.421	998143	2.401
	Fe	57	**6691.226**	ug/L	1.049	974809	2.337
	Co	59	**0.680**	ug/L	0.408	4362	0.010
	Ni	60	**2.245**	ug/L	0.790	3183	0.007
	Cu	63		ug/L		12233	0.027
	Cu	65	**3.616**	ug/L	1.291	6278	0.014
	Zn	66	**30.290**	ug/L	1.273	29697	0.072
	Zn	67		ug/L		13663	0.001
	Zn	68		ug/L		22622	0.052
>	Ge	74		ug/L		400589	400589.400
	As	75	**0.620**	ug/L	63.839	765	0.002
	Se	77		ug/L		3232	-0.004
	Se	82	**0.018**	ug/L	444.261	12	0.000
	Kr	83		ug/L		121	0.000
	Sr	88	**4.037**	ug/L	0.954	46737	0.196
	Y	89		ug/L		195699	0.826
	Mo	98	**0.601**	ug/L	1.779	2020	0.008
	Ag	107	**0.030**	ug/L	21.920	260	0.001
	Cd	111	**0.170**	ug/L	18.721	240	0.001
	Cd	114		ug/L		95	0.000
>	In	115		ug/L		236895	236894.982
	Sn	120	**1.790**	ug/L	1.957	9315	0.038
	Sb	121	**0.077**	ug/L	8.852	589	0.001
	Sb	123		ug/L		449	0.001
	Ba	135		ug/L		15575	0.040
	Ba	137	**13.396**	ug/L	1.577	27931	0.072
	Ho	165		ug/L		14068	0.036
>	Lu	175		ug/L		384681	384680.646
	Tl	205	**0.196**	ug/L	5.317	3755	0.006
	Pb	208	**13.027**	ug/L	0.862	278153	0.718
	Bi	209		ug/L		1223	0.003
	Th	232	**4.304**	ug/L	1.318	99700	0.256
	U	238	**0.308**	ug/L	1.019	8443	0.020

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		97.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		90.8			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Tuesday, June 30, 2009 22:09:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 8.144

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**58.702**	**ug/L**	4.277	98035	0.253
	Be	9	**55.347**	**ug/L**	1.836	24789	0.064
	B	11	**104.106**	**ug/L**	3.497	47945	0.121
	Na	23	**4885.103**	**ug/L**	13.425	21319151	54.915
	Mg	24	**5084.170**	**ug/L**	2.373	15980367	41.166
	Al	27	**4960.670**	**ug/L**	7.365	20617661	53.167
	P	31	**4870.551**	**ug/L**	1.135	1079227	2.763
	K	39	**5411.686**	**ug/L**	3.433	25366978	64.102
	Ca	43	**5120.570**	**ug/L**	2.014	54885	0.141
>	Sc	45		**ug/L**		387737	387737.358
	Ti	47	**49.576**	**ug/L**	1.708	26802	0.068
	V	51	**50.555**	**ug/L**	1.749	322426	0.800
	Cr	52	**52.035**	**ug/L**	0.247	245623	0.632
	Cr	53		**ug/L**		102501	0.070
	Mn	55	**50.144**	**ug/L**	1.558	363138	0.932
	Fe	57	**5468.871**	**ug/L**	2.622	745175	1.910
	Co	59	**53.465**	**ug/L**	1.764	305235	0.787
	Ni	60	**53.398**	**ug/L**	0.376	67732	0.174
	Cu	63		**ug/L**		154341	0.396
	Cu	65	**50.521**	**ug/L**	1.659	76115	0.195
	Zn	66	**52.865**	**ug/L**	1.667	49268	0.126
	Zn	67		**ug/L**		20114	0.019
	Zn	68		**ug/L**		37604	0.094
>	Ge	74		**ug/L**		385346	385345.761
	As	75	**49.969**	**ug/L**	1.126	50781	0.132
	Se	77		**ug/L**		8175	0.009
	Se	82	**50.652**	**ug/L**	1.021	4683	0.012
	Kr	83		**ug/L**		99	0.000
	Sr	88	**51.408**	**ug/L**	1.747	567091	2.492
	Y	89		**ug/L**		84	-0.000
	Mo	98	**48.246**	**ug/L**	2.446	142968	0.628
	Ag	107	**51.561**	**ug/L**	1.486	258202	1.135
	Cd	111	**53.388**	**ug/L**	2.950	63415	0.279
	Cd	114		**ug/L**		148228	0.652
>	In	115		**ug/L**		227379	227379.280
	Sn	120	**50.024**	**ug/L**	0.030	242092	1.063
	Sb	121	**48.965**	**ug/L**	2.324	196187	0.862
	Sb	123		**ug/L**		152865	0.671
	Ba	135		**ug/L**		59588	0.162
	Ba	137	**53.394**	**ug/L**	1.420	105803	0.288
	Ho	165		**ug/L**		89	0.000
>	Lu	175		**ug/L**		366423	366423.392
	Tl	205	**53.398**	**ug/L**	0.344	650631	1.772
	Pb	208	**53.677**	**ug/L**	1.152	1085847	2.958
	Bi	209		**ug/L**		349	0.001
	Th	232	**59.260**	**ug/L**	0.647	1291361	3.521
	U	238	**60.010**	**ug/L**	2.500	1403799	3.829

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	117.404				
	Be	9	110.693				
	B	11	104.106				
	Na	23	97.702				
	Mg	24	101.683				
	Al	27	98.231				
	P	31	97.411				
	K	39	108.234				
	Ca	43	102.411				
>	Sc	45		91.4			
	Ti	47	99.153				
	V	51	101.109				
	Cr	52	104.070				
	Cr	53					
	Mn	55	100.289				
	Fe	57	109.377				
	Co	59	106.929				
	Ni	60	106.795				
	Cu	63					
	Cu	65	101.042				
	Zn	66	105.731				
	Zn	67					
	Zn	68					
>	Ge	74		90.8			
	As	75	99.938				
	Se	77					
	Se	82	101.303				
	Kr	83					
	Sr	88	102.816				
	Y	89					
	Mo	98	96.492				
	Ag	107	103.122				
	Cd	111	106.777				
	Cd	114					
>	In	115		93.3			
	Sn	120	100.048				
	Sb	121	97.930				
	Sb	123					
	Ba	135					
	Ba	137	106.788				
	Ho	165					
>	Lu	175		86.5			
	Tl	205	106.796				
	Pb	208	107.355				
	Bi	209					
	Th	232	118.519				
	U	238	120.020				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Li	7	CCV is out of limits (+/- 10%)
QC Std 8	Be	9	CCV is out of limits (+/- 10%)
QC Std 8	Th	232	CCV is out of limits (+/- 10%)
QC Std 8	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Tuesday, June 30, 2009 22:15:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 9.145

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.022**	ug/L	76.765	181	0.000
	Be	9	**0.019**	ug/L	30.653	27	0.000
	B	11	**2.144**	ug/L	22.312	2198	0.002
	Na	23	**0.188**	ug/L	520.709	75868	0.002
	Mg	24	**-0.111**	ug/L	1418.024	12339	-0.001
	Al	27	**-0.882**	ug/L	31.770	21349	-0.009
	P	31	**-2.105**	ug/L	102.254	7371	-0.001
	K	39	**-2.666**	ug/L	323.735	520691	-0.032
	Ca	43	**2.811**	ug/L	42.004	360	0.000
>	Sc	45		ug/L		393420	393420.296
	Ti	47	**-0.097**	ug/L	30.081	281	-0.000
	V	51	**-0.312**	ug/L	97.291	10533	-0.005
	Cr	52	**0.046**	ug/L	97.102	840	0.001
	Cr	53		ug/L		85111	0.022
	Mn	55	**-0.061**	ug/L	9.585	1421	-0.001
	Fe	57	**1.408**	ug/L	16.355	5216	0.000
	Co	59	**0.004**	ug/L	74.065	224	0.000
	Ni	60	**0.021**	ug/L	51.986	162	0.000
	Cu	63		ug/L		836	0.000
	Cu	65	**0.005**	ug/L	167.545	462	0.000
	Zn	66	**0.029**	ug/L	220.342	845	0.000
	Zn	67		ug/L		14162	0.003
	Zn	68		ug/L		1659	0.000
>	Ge	74		ug/L		392943	392943.068
	As	75	**-0.191**	ug/L	190.106	-89	-0.001
	Se	77		ug/L		5337	0.001
	Se	82	**-0.007**	ug/L	3357.996	10	-0.000
	Kr	83		ug/L		95	0.000
	Sr	88	**0.003**	ug/L	57.629	396	0.000
	Y	89		ug/L		44	-0.000
	Mo	98	**0.027**	ug/L	36.350	242	0.000
	Ag	107	**0.004**	ug/L	30.282	120	0.000
	Cd	111	**0.015**	ug/L	69.236	47	0.000
	Cd	114		ug/L		94	0.000
>	In	115		ug/L		229724	229723.635
	Sn	120	**0.005**	ug/L	24.111	321	0.000
	Sb	121	**0.174**	ug/L	20.584	964	0.003
	Sb	123		ug/L		746	0.002
	Ba	135		ug/L		62	0.000
	Ba	137	**0.014**	ug/L	23.035	110	0.000
	Ho	165		ug/L		47	-0.000
>	Lu	175		ug/L		365177	365176.911
	Tl	205	**0.134**	ug/L	28.771	2812	0.004
	Pb	208	**-0.000**	ug/L	730.310	1869	-0.000
	Bi	209		ug/L		129	-0.000
	Th	232	**0.048**	ug/L	48.305	2308	0.003
	U	238	**0.017**	ug/L	23.098	1243	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		92.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		86.2			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, July 01, 2009 07:27:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\Blank.234

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		**ug/L**		27	
>	Sc	45		**ug/L**		311753	
	Ni	60		**ug/L**		122	
	Zn	66		**ug/L**		700	
	Zn	67		**ug/L**		11022	
	Zn	68		**ug/L**		1587	
>	Ge	74		**ug/L**		306615	
>	Lu	175		**ug/L**		252519	
	Tl	205		**ug/L**		1042	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	
Zn	66	Linear Thru Zero	
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, July 01, 2009 07:29:35
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\Standard 1.235

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**10.000**	**ug/L**	2.187	4409	0.014
>	Sc	45		**ug/L**		307670	307669.788
	Ni	60	**10.000**	**ug/L**	1.268	10744	0.035
	Zn	66	**10.000**	**ug/L**	1.315	8299	0.025
	Zn	67		**ug/L**		12101	0.004
	Zn	68		**ug/L**		7101	0.018
>	Ge	74		**ug/L**		303682	303682.088
>	Lu	175		**ug/L**		249735	249735.264
	Tl	205	**10.000**	**ug/L**	2.081	107542	0.427

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, July 01, 2009 07:32:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\Standard 2.236

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**99.967**	**ug/L**	2.117	43279	0.138
>	Sc	45		**ug/L**		313947	313947.395
	Ni	60	**99.971**	**ug/L**	2.870	105402	0.336
	Zn	66	**99.999**	**ug/L**	3.231	78780	0.250
	Zn	67		**ug/L**		23411	0.039
	Zn	68		**ug/L**		57285	0.178
>	Ge	74		**ug/L**		312058	312058.430
>	Lu	175		**ug/L**		269817	269817.255
	Tl	205	**99.882**	**ug/L**	0.779	1029526	3.811

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, July 01, 2009 07:34:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 1.237

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**49.217**	**ug/L**	2.361	22336	0.068
>	Sc	45		**ug/L**		328787	328786.665
	Ni	60	**51.496**	**ug/L**	1.838	56961	0.173
	Zn	66	**49.657**	**ug/L**	2.024	40923	0.124
	Zn	67		**ug/L**		17486	0.018
	Zn	68		**ug/L**		31049	0.091
>	Ge	74		**ug/L**		323423	323423.127
>	Lu	175		**ug/L**		276172	276172.223
	Tl	205	**49.145**	**ug/L**	2.844	518880	1.875

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	98.433				
>	Sc	45		105.5			
	Ni	60	102.992				
	Zn	66	99.314				
	Zn	67					
	Zn	68					
>	Ge	74		105.5			
>	Lu	175		109.4			
	Tl	205	98.289				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, July 01, 2009 07:37:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 2.238

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.002**	**ug/L**	380.246	27	-0.000
>	Sc	45		**ug/L**		325462	325461.653
	Ni	60	**0.009**	**ug/L**	184.916	137	0.000
	Zn	66	**-0.017**	**ug/L**	125.553	711	-0.000
	Zn	67		**ug/L**		11742	0.001
	Zn	68		**ug/L**		1591	-0.000
>	Ge	74		**ug/L**		317138	317138.230
>	Lu	175		**ug/L**		265431	265430.835
	Tl	205	**0.345**	**ug/L**	6.572	4591	0.013

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		104.4			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.4			
>	Lu	175		105.1			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, July 01, 2009 07:39:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 3.239

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.518**	**ug/L**	16.507	242	0.001
>	Sc	45		**ug/L**		304401	304400.841
	Ni	60	**2.267**	**ug/L**	3.099	2432	0.008
	Zn	66	**11.609**	**ug/L**	10.133	9310	0.029
	Zn	67		**ug/L**		12445	0.006
	Zn	68		**ug/L**		7599	0.020
>	Ge	74		**ug/L**		298382	298381.609
>	Lu	175		**ug/L**		245590	245590.157
	Tl	205	**1.332**	**ug/L**	7.904	13450	0.051

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	103.500				
>	Sc	45		97.6			
	Ni	60	113.337				
	Zn	66	116.087				
	Zn	67					
	Zn	68					
>	Ge	74		97.3			
>	Lu	175		97.3			
	Tl	205	133.205				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Tl	205	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, July 01, 2009 07:42:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 4.240

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.045**	**ug/L**	36.261	48	0.000
>	Sc	45		**ug/L**		324392	324392.436
	Ni	60	**2.943**	**ug/L**	3.959	3332	0.010
	Zn	66	**3.510**	**ug/L**	3.965	3505	0.009
	Zn	67		**ug/L**		11236	-0.000
	Zn	68		**ug/L**		1856	0.001
>	Ge	74		**ug/L**		316666	316665.730
>	Lu	175		**ug/L**		320588	320588.341
	Tl	205	**0.030**	**ug/L**	6.017	1690	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		104.1			
	Ni	60	109.008				
	Zn	66	97.511				
	Zn	67					
	Zn	68					
>	Ge	74		103.3			
>	Lu	175		127.0			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for QC	Lu	175	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, July 01, 2009 07:44:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 5.241

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**17.308**	**ug/L**	1.453	8091	0.024
>	Sc	45		**ug/L**		337817	337816.536
	Ni	60	**19.804**	**ug/L**	0.966	22589	0.066
	Zn	66	**20.725**	**ug/L**	2.623	17926	0.052
	Zn	67		**ug/L**		12893	0.003
	Zn	68		**ug/L**		12504	0.033
>	Ge	74		**ug/L**		331083	331082.574
>	Lu	175		**ug/L**		326742	326742.471
	Tl	205	**16.880**	**ug/L**	1.621	211846	0.644

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	86.542				
>	Sc	45		108.4			
	Ni	60	87.244				
	Zn	66	87.816				
	Zn	67					
	Zn	68					
>	Ge	74		108.0			
>	Lu	175		129.4			
	Tl	205	84.398				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Lu 175 Int Std for QC	Lu	175	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 01, 2009 07:47:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 6.242

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**48.134**	**ug/L**	1.339	22548	0.066
>	Sc	45		**ug/L**		339348	339347.617
	Ni	60	**50.397**	**ug/L**	2.911	57520	0.169
	Zn	66	**49.738**	**ug/L**	4.372	42170	0.124
	Zn	67		**ug/L**		17446	0.016
	Zn	68		**ug/L**		30946	0.088
>	Ge	74		**ug/L**		332883	332883.135
>	Lu	175		**ug/L**		278825	278825.366
	Tl	205	**47.877**	**ug/L**	1.731	510568	1.827

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	96.268				
>	Sc	45		108.9			
	Ni	60	100.794				
	Zn	66	99.475				
	Zn	67					
	Zn	68					
>	Ge	74		108.6			
>	Lu	175		110.4			
	Tl	205	95.754				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 01, 2009 07:49:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 7.243

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.008**	**ug/L**	120.440	33	0.000
>	Sc	45		**ug/L**		340488	340487.972
	Ni	60	**0.022**	**ug/L**	49.641	158	0.000
	Zn	66	**-0.043**	**ug/L**	80.943	731	-0.000
	Zn	67		**ug/L**		11614	-0.001
	Zn	68		**ug/L**		1438	-0.001
>	Ge	74		**ug/L**		336220	336219.669
>	Lu	175		**ug/L**		275121	275120.730
	Tl	205	**0.315**	**ug/L**	6.724	4435	0.012

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		109.2			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		109.7			
>	Lu	175		109.0			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, July 01, 2009 08:07:17
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 8.250

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.386**	**ug/L**	1.094	22790	0.072
>	Sc	45		**ug/L**		315168	315167.807
	Ni	60	**55.387**	**ug/L**	2.541	58696	0.186
	Zn	66	**51.755**	**ug/L**	2.823	41998	0.130
	Zn	67		**ug/L**		17282	0.018
	Zn	68		**ug/L**		31198	0.093
>	Ge	74		**ug/L**		318701	318700.778
>	Lu	175		**ug/L**		260562	260561.640
	Tl	205	**51.219**	**ug/L**	0.988	510364	1.954

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	104.773				
>	Sc	45		101.1			
	Ni	60	110.773				
	Zn	66	103.510				
	Zn	67					
	Zn	68					
>	Ge	74		103.9			
>	Lu	175		103.2			
	Tl	205	102.438				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Ni	60	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, July 01, 2009 08:09:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 9.251

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.003**	**ug/L**	120.642	26	-0.000
>	Sc	45		**ug/L**		319503	319503.360
	Ni	60	**0.010**	**ug/L**	103.800	136	0.000
	Zn	66	**0.042**	**ug/L**	54.195	755	0.000
	Zn	67		**ug/L**		11537	0.001
	Zn	68		**ug/L**		1507	-0.000
>	Ge	74		**ug/L**		316405	316405.355
>	Lu	175		**ug/L**		252711	252711.375
	Tl	205	**0.288**	**ug/L**	5.016	3817	0.011

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		102.5			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.2			
>	Lu	175		100.1			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 01, 2009 08:32:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 6.258

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.500**	**ug/L**	2.161	22917	0.072
>	Sc	45		**ug/L**		316216	316216.044
	Ni	60	**53.219**	**ug/L**	1.733	56607	0.179
	Zn	66	**50.838**	**ug/L**	4.197	41147	0.127
	Zn	67		**ug/L**		16968	0.017
	Zn	68		**ug/L**		30745	0.092
>	Ge	74		**ug/L**		317825	317825.344
>	Lu	175		**ug/L**		254361	254360.979
	Tl	205	**49.001**	**ug/L**	2.820	476720	1.870

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	104.999				
>	Sc	45		101.4			
	Ni	60	106.438				
	Zn	66	101.676				
	Zn	67					
	Zn	68					
>	Ge	74		103.7			
>	Lu	175		100.7			
	Tl	205	98.003				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 01, 2009 08:35:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 7.259

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.006**	ug/L	112.751	30	0.000
>	Sc	45		ug/L		318779	318779.118
	Ni	60	**0.020**	ug/L	48.318	146	0.000
	Zn	66	**-0.010**	ug/L	624.205	711	-0.000
	Zn	67		ug/L		11181	-0.000
	Zn	68		ug/L		1462	-0.001
>	Ge	74		ug/L		315266	315265.711
>	Lu	175		ug/L		247776	247776.082
	Tl	205	**0.304**	ug/L	11.413	3897	0.012

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		102.3			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.8			
>	Lu	175		98.1			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870575
Sample Date/Time: Wednesday, July 01, 2009 08:37:45
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 880943|2|baj
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\1201870575.260

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.021**	**ug/L**	11.891	17	-0.000
>	Sc	45		**ug/L**		306317	306317.437
	Ni	60	**0.073**	**ug/L**	37.333	194	0.000
	Zn	66	**177.602**	**ug/L**	3.683	136034	0.444
	Zn	67		**ug/L**		28840	0.059
	Zn	68		**ug/L**		98562	0.318
>	Ge	74		**ug/L**		304659	304658.859
>	Lu	175		**ug/L**		248188	248188.362
	Tl	205	**0.090**	**ug/L**	7.845	1877	0.003

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		98.3			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.4			
>	Lu	175		98.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870580
Sample Date/Time: Wednesday, July 01, 2009 08:40:18
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 880943|40|baj
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\1201870580.261

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**23.023**	**ug/L**	0.326	10454	0.032
| >	Sc	45		**ug/L**		328404	328404.423
⌊	Ni	60	**26.218**	**ug/L**	1.382	29028	0.088
⌈	Zn	66	**51.145**	**ug/L**	4.341	43018	0.128
|	Zn	67		**ug/L**		15613	0.011
|	Zn	68		**ug/L**		33401	0.096
⌊>	Ge	74		**ug/L**		330391	330390.698
⌈>	Lu	175		**ug/L**		261105	261104.996
⌊	Tl	205	**49.706**	**ug/L**	3.069	496406	1.897

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		105.3			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		107.8			
>	Lu	175		103.4			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232424001
Sample Date/Time: Wednesday, July 01, 2009 08:42:50
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880943|2|baj
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\232424001.262

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**1.700**	**ug/L**	2.415	843	0.002
>	Sc	45		**ug/L**		346919	346919.492
	Ni	60	**11.084**	**ug/L**	1.249	13041	0.037
	Zn	66	**149.635**	**ug/L**	4.170	113215	0.374
	Zn	67		**ug/L**		24629	0.046
	Zn	68		**ug/L**		82355	0.269
>	Ge	74		**ug/L**		300704	300704.003
>	Lu	175		**ug/L**		272905	272904.571
	Tl	205	**0.991**	**ug/L**	4.852	11443	0.038

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		111.3			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.1			
>	Lu	175		108.1			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870576
Sample Date/Time: Wednesday, July 01, 2009 08:45:21
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 880943|2|baj
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\1201870576.263

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**1.827**	**ug/L**	1.391	907	0.003
>	Sc	45		**ug/L**		348386	348386.347
	Ni	60	**11.774**	**ug/L**	2.287	13906	0.040
	Zn	66	**164.347**	**ug/L**	2.043	124670	0.411
	Zn	67		**ug/L**		26300	0.051
	Zn	68		**ug/L**		91360	0.298
>	Ge	74		**ug/L**		301477	301477.015
>	Lu	175		**ug/L**		270860	270859.688
	Tl	205	**0.876**	**ug/L**	2.957	10167	0.033

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		111.8			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.3			
>	Lu	175		107.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870578
Sample Date/Time: Wednesday, July 01, 2009 08:47:52
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 880943|2|baj
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\1201870578.264

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**24.563**	**ug/L**	2.090	12601	0.034
|>	Sc	45		**ug/L**		371198	371197.550
⌊	Ni	60	**37.356**	**ug/L**	0.792	46688	0.125
⌈	Zn	66	**217.030**	**ug/L**	3.817	167165	0.543
|	Zn	67		**ug/L**		32893	0.071
|	Zn	68		**ug/L**		121379	0.391
⌊>	Ge	74		**ug/L**		306706	306706.238
⌈>	Lu	175		**ug/L**		282033	282033.214
⌊	Tl	205	**52.556**	**ug/L**	4.134	566520	2.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		119.1			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.0			
>	Lu	175		111.7			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870579
Sample Date/Time: Wednesday, July 01, 2009 08:50:24
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 880943|2|baj
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\1201870579.265

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**23.448**	**ug/L**	0.918	11661	0.032
>	Sc	45		**ug/L**		359692	359692.399
	Ni	60	**34.434**	**ug/L**	3.726	41708	0.116
	Zn	66	**208.918**	**ug/L**	4.735	157648	0.523
	Zn	67		**ug/L**		31005	0.067
	Zn	68		**ug/L**		112621	0.370
>	Ge	74		**ug/L**		300410	300410.266
>	Lu	175		**ug/L**		273907	273906.888
	Tl	205	**50.932**	**ug/L**	2.170	533513	1.944

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		115.4			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.0			
>	Lu	175		108.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870577
Sample Date/Time: Wednesday, July 01, 2009 08:52:56
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 880943|10|baj
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\1201870577.266

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.287**	**ug/L**	17.786	156	0.000
>	Sc	45		**ug/L**		324367	324367.199
	Ni	60	**2.304**	**ug/L**	2.488	2635	0.008
	Zn	66	**29.728**	**ug/L**	1.456	24269	0.074
	Zn	67		**ug/L**		10947	-0.001
	Zn	68		**ug/L**		17865	0.051
>	Ge	74		**ug/L**		316509	316508.947
>	Lu	175		**ug/L**		257151	257151.448
	Tl	205	**0.265**	**ug/L**	4.376	3665	0.010

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		104.0			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.2			
>	Lu	175		101.8			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 01, 2009 09:00:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 6.269

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**51.524**	ug/L	2.528	22159	0.071
>	Sc	45		ug/L		311670	311669.571
	Ni	60	**53.334**	ug/L	2.053	55895	0.179
	Zn	66	**49.838**	ug/L	3.016	39925	0.125
	Zn	67		ug/L		15599	0.014
	Zn	68		ug/L		29778	0.090
>	Ge	74		ug/L		314491	314490.849
>	Lu	175		ug/L		248758	248757.782
	Tl	205	**50.549**	ug/L	3.367	480686	1.929

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	103.049				
>	Sc	45		100.0			
	Ni	60	106.667				
	Zn	66	99.676				
	Zn	67					
	Zn	68					
>	Ge	74		102.6			
>	Lu	175		98.5			
	Tl	205	101.097				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 01, 2009 09:03:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni zn and tl.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 7.270

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.013**	**ug/L**	173.247	33	0.000
>	Sc	45		**ug/L**		315476	315476.133
	Ni	60	**0.012**	**ug/L**	43.442	136	0.000
	Zn	66	**0.008**	**ug/L**	122.950	722	0.000
	Zn	67		**ug/L**		10812	-0.001
	Zn	68		**ug/L**		1432	-0.001
>	Ge	74		**ug/L**		313547	313547.489
>	Lu	175		**ug/L**		250398	250397.529
	Tl	205	**0.314**	**ug/L**	13.259	4031	0.012

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		101.2			
	Ni	60					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.3			
>	Lu	175		99.2			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL
Method Description: 7471A, ILM04 ANALYST JXL1
Element: Hg

Date: 07/13/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 071309S1.SIF Results Data Set Name: 071309S2

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/13/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0026	0.0026	09:36:04	No
2			0.0025	0.0025	09:36:39	No
Mean:			0.0025			
SD :			0.0001			
%RSD:			2.0116			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/13/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0047	0.0072	09:38:01	No
2			0.0046	0.0071	09:38:35	No
Mean:			0.0046			
SD :			0.0001			
%RSD:			1.1672			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.02310
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/13/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0089	0.0114	09:39:58	No
2			0.0089	0.0115	09:40:33	No
Mean:			0.0089			
SD :			0.0001			
%RSD:			0.5682			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99055 Slope: 0.01750
Intercept : 0.00042

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/13/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0294	0.0320	09:41:58	No
2			0.0290	0.0315	09:42:33	No
Mean:			0.0292			
SD :			0.0003			
%RSD:			1.1424			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99775 Slope: 0.01416
Intercept : 0.00112

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/13/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0650	0.0676	09:43:58	No
2			0.0670	0.0695	09:44:32	No
Mean:			0.0660			
SD :			0.0014			
%RSD:			2.0933			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99895 Slope: 0.01299
Intercept : 0.00174

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/13/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1277	0.1302	09:45:59	No
2			0.1281	0.1306	09:46:33	No
Mean:			0.1279			
SD :			0.0003			
%RSD:			0.1987			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99964 Slope: 0.01265
Intercept : 0.00213

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0025	---	----	----	----
S0.2	0.0046	0.200	0.197	0.0001	1.2
S0.5	0.0089	0.500	0.535	0.0001	0.6
S2.0	0.0292	2.000	2.141	0.0003	1.1
S5.0	0.0660	5.000	5.051	0.0014	2.1
S10	0.1279	10.000	9.945	0.0003	0.2
Calib Blank	0.0025	---	----	----	----

Correlation Coefficient: 0.99964 Slope: 0.01265 Intercept: 0.0021

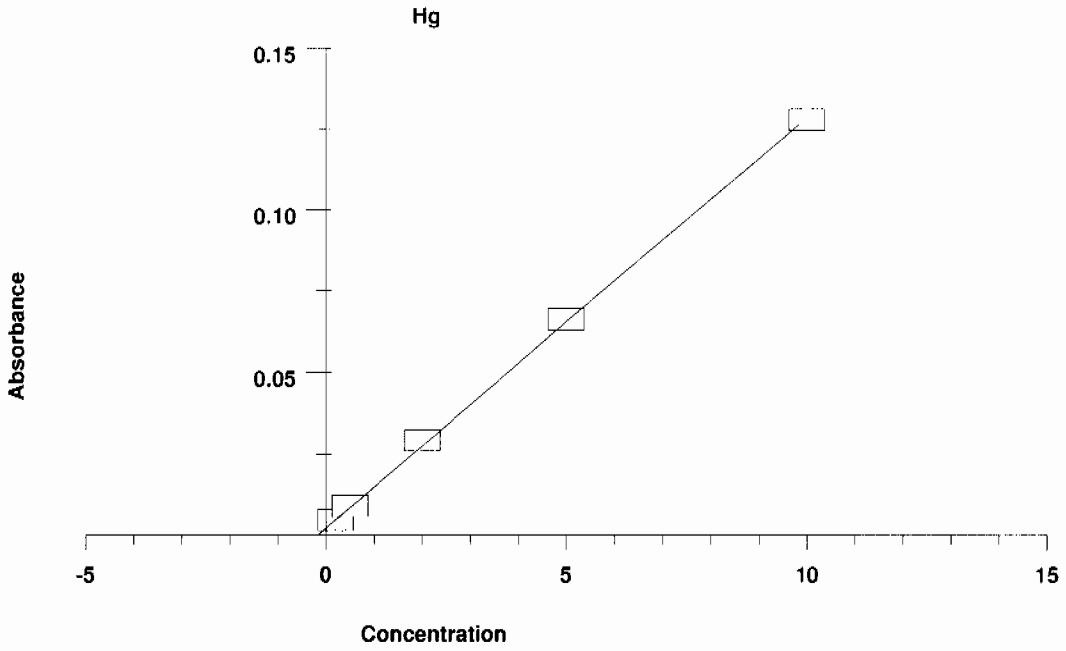

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Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/13/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.179	5.179	0.0676	0.0702	09:48:02	No
2	5.264	5.264	0.0687	0.0712	09:48:37	No
Mean:	5.221	5.221	0.0682			
SD :	0.0602	0.0602	0.0008			
%RSD:	1.2	1.2	1.1171			

QC value within specified limits.

==========

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/13/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.117	-0.117	0.0007	0.0032	09:49:59	No
2	-0.126	-0.126	0.0005	0.0031	09:50:34	No
Mean:	-0.121	-0.121	0.0006			
SD :	0.0064	0.0064	0.0001			
%RSD:	5.3	5.3	13.7540			

QC value within specified limits.

==========

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/13/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.156	0.156	0.0041	0.0066	09:51:56	No
2	0.135	0.135	0.0038	0.0064	09:52:31	No
Mean:	0.146	0.146	0.0040			
SD :	0.0146	0.0146	0.0002			
%RSD:	10.0	10.0	4.6526			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	09:53:56	No
2	5.219	5.219	0.0681	0.0707	09:54:31	No
Mean:	5.160	5.160	0.0674			
SD :	0.0831	0.0831	0.0011			
%RSD:	1.6	1.6	1.5602			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.014	0.014	0.0023	0.0048	09:55:59	No
2	0.023	0.023	0.0024	0.0050	09:56:34	No
Mean:	0.019	0.019	0.0024			
SD :	0.0063	0.0063	0.0001			
%RSD:	33.8	33.8	3.3712			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/13/2009
Sample ID: 1201870737|i||880997|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.145	-0.145	0.0003	0.0028	09:58:00	No
2	-0.154	-0.154	0.0002	0.0027	09:58:35	No
Mean:	-0.150	-0.150	0.0002			
SD :	0.0066	0.0066	0.0001			
%RSD:	4.4	4.4	35.8425			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/13/2009
Sample ID: 1201870738|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.783	3.783	0.0500	0.0525	10:00:01	No
2	3.816	3.816	0.0504	0.0529	10:00:35	No
Mean:	3.800	3.800	0.0502			
SD :	0.0230	0.0230	0.0003			
%RSD:	0.6	0.6	0.5806			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/13/2009
Sample ID: 232424001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.002	-0.002	0.0021	0.0046	10:02:01	No
2	-0.007	-0.007	0.0020	0.0046	10:02:35	No
Mean:	-0.005	-0.005	0.0021			
SD :	0.0040	0.0040	0.0001			
%RSD:	86.6	86.6	2.4535			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/13/2009
Sample ID: 232426001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.165	0.165	0.0042	0.0067	10:04:02	No
2	0.152	0.152	0.0040	0.0066	10:04:37	No
Mean:	0.158	0.158	0.0041			
SD :	0.0091	0.0091	0.0001			
%RSD:	5.8	5.8	2.8011			

Element: Hg Seq. No.: 16 AS Loc.: 16 Date: 07/13/2009
Sample ID: 232426002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.172	0.172	0.0043	0.0068	10:06:05	No
2	0.187	0.187	0.0045	0.0070	10:06:40	No
Mean:	0.179	0.179	0.0044			
SD :	0.0105	0.0105	0.0001			
%RSD:	5.9	5.9	3.0327			

Element: Hg Seq. No.: 17 AS Loc.: 17 Date: 07/13/2009
Sample ID: 232429001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.333	0.333	0.0063	0.0089	10:08:04	No
2	0.315	0.315	0.0061	0.0086	10:08:39	No
Mean:	0.324	0.324	0.0062			
SD :	0.0126	0.0126	0.0002			
%RSD:	3.9	3.9	2.5584			

Element: Hg Seq. No.: 18 AS Loc.: 18 Date: 07/13/2009
Sample ID: 1201870739|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.364	0.364	0.0067	0.0093	10:09:59	No
2	0.357	0.357	0.0066	0.0092	10:10:34	No
Mean:	0.361	0.361	0.0067			
SD :	0.0054	0.0054	0.0001			
%RSD:	1.5	1.5	1.0164			

Element: Hg Seq. No.: 19 AS Loc.: 19 Date: 07/13/2009
Sample ID: 1201870740|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.406	2.406	0.0326	0.0351	10:11:56	No
2	2.313	2.313	0.0314	0.0339	10:12:31	No
Mean:	2.359	2.359	0.0320			
SD :	0.0656	0.0656	0.0008			
%RSD:	2.8	2.8	2.5958			

Element: Hg Seq. No.: 20 AS Loc.: 20 Date: 07/13/2009
Sample ID: 1201870746|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.476	2.476	0.0334	0.0360	10:13:53	No
2	2.536	2.536	0.0342	0.0367	10:14:28	No
Mean:	2.506	2.506	0.0338			
SD :	0.0428	0.0428	0.0005			

%RSD: 1.7 1.7 1.5996

==========

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/13/2009
Sample ID: 1201870745|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.025	0.025	0.0024	0.0050	10:15:50	No
2	-0.002	-0.002	0.0021	0.0046	10:16:25	No
Mean:	0.012	0.012	0.0023			
SD :	0.0185	0.0185	0.0002			
%RSD:	159.8	159.8	10.3056			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	10:17:50	No
2	4.942	4.942	0.0646	0.0672	10:18:24	No
Mean:	5.022	5.022	0.0656			
SD :	0.1122	0.1122	0.0014			
%RSD:	2.2	2.2	2.1625			

QC value within specified limits.

==========

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.043	-0.043	0.0016	0.0041	10:19:52	No
2	-0.052	-0.052	0.0015	0.0040	10:20:27	No
Mean:	-0.048	-0.048	0.0015			
SD :	0.0057	0.0057	0.0001			
%RSD:	11.9	11.9	4.7042			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/13/2009
Sample ID: 232429002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.240	0.240	0.0052	0.0077	10:21:52	No
2	0.235	0.235	0.0051	0.0076	10:22:27	No
Mean:	0.238	0.238	0.0051			
SD :	0.0035	0.0035	0.0000			
%RSD:	1.5	1.5	0.8527			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/13/2009
Sample ID: 232429003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.189	0.189	0.0045	0.0070	10:23:51	No
2	0.176	0.176	0.0044	0.0069	10:24:26	No
Mean:	0.183	0.183	0.0044			
SD :	0.0087	0.0087	0.0001			
%RSD:	4.8	4.8	2.4733			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/13/2009
Sample ID: 232429004|i|||

Miscellaneous

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 880942

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870580	UI647733-01	.51	g
MS	1201870578	UI042709-A	.5	mL
MS	1201870578	UI042709-B	.5	mL
MSD	1201870579	UI042709-A	.5	mL
MSD	1201870579	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870575		SW846 3050B	29-JUN-2009 15:44	0.502 g	50 mL	99.60159	SOIL
LCS	1201870580		SW846 3050B	29-JUN-2009 15:44	0.51 g	50 mL	98.03922	SOIL
SAMPLE	232424001		SW846 3050B	29-JUN-2009 15:44	0.525 g	50 mL	95.2381	SOIL
DUP	1201870576	232424001	SW846 3050B	29-JUN-2009 15:44	0.519 g	50 mL	96.33911	SOIL
SDILT	1201870577	232424001	SW846 3050B	29-JUN-2009 15:44	0.525 g	50 mL	95.2381	SOIL
MS	1201870578	232424001	SW846 3050B	29-JUN-2009 15:44	0.505 g	50 mL	99.0099	SOIL
MSD	1201870579	232424001	SW846 3050B	29-JUN-2009 15:44	0.504 g	50 mL	99.20635	SOIL
SAMPLE	232426001		SW846 3050B	29-JUN-2009 15:44	0.503 g	50 mL	99.40358	SOIL
SAMPLE	232426002		SW846 3050B	29-JUN-2009 15:44	0.503 g	50 mL	99.40358	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments sample#232424001 is a brown medium soil.

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 880929

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870544	UI652380	.518	g
MS	1201870542	UI090622-01	.25	mL
MS	1201870542	UI090622-06	.25	mL
MSD	1201870543	UI090622-01	.25	mL
MSD	1201870543	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870539		SW846 3050B	29-JUN-2009 16:01	0.509 g	50 mL	98.23183	SOIL
LCS	1201870544		SW846 3050B	29-JUN-2009 16:01	0.518 g	50 mL	96.5251	SOIL
SAMPLE	232424001		SW846 3050B	29-JUN-2009 16:01	0.505 g	50 mL	99.0099	SOIL
DUP	1201870540	232424001	SW846 3050B	29-JUN-2009 16:01	0.514 g	50 mL	97.27626	SOIL
SDILT	1201870541	232424001	SW846 3050B	29-JUN-2009 16:01	0.505 g	50 mL	99.0099	SOIL
MS	1201870542	232424001	SW846 3050B	29-JUN-2009 16:01	0.512 g	50 mL	97.65625	SOIL
MSD	1201870543	232424001	SW846 3050B	29-JUN-2009 16:01	0.517 g	50 mL	96.7118	SOIL
SAMPLE	232426001		SW846 3050B	29-JUN-2009 16:01	0.505 g	50 mL	99.0099	SOIL
SAMPLE	232426002		SW846 3050B	29-JUN-2009 16:01	0.513 g	50 mL	97.46589	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments sample#232424001 is a brown, medium soil.

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 880994

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870738	UI031809A	.203	g
MS	1201870740	WHG090710-14	.3	mL
MSD	1201870746	WHG090710-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870737		SW846 7471A Prep	10-JUL-2009 14:20	0.512 g	30 mL	58.59375	SOIL
LCS	1201870738		SW846 7471A Prep	10-JUL-2009 14:20	0.203 g	30 mL	147.78325	SOIL
SAMPLE	232424001		SW846 7471A Prep	10-JUL-2009 14:20	0.523 g	30 mL	57.36138	SOIL
SAMPLE	232426001		SW846 7471A Prep	10-JUL-2009 14:20	0.6 g	30 mL	50	SOIL
SAMPLE	232426002		SW846 7471A Prep	10-JUL-2009 14:20	0.516 g	30 mL	58.13953	SOIL
SAMPLE	232429001		SW846 7471A Prep	10-JUL-2009 14:20	0.553 g	30 mL	54.24955	SOIL
DUP	1201870739	232429001	SW846 7471A Prep	10-JUL-2009 14:20	0.581 g	30 mL	51.63511	SOIL
MS	1201870740	232429001	SW846 7471A Prep	10-JUL-2009 14:20	0.541 g	30 mL	55.45287	SOIL
MSD	1201870746	232429001	SW846 7471A Prep	10-JUL-2009 14:20	0.573 g	30 mL	52.35602	SOIL
SDILT	1201870745	232429001	SW846 7471A Prep	10-JUL-2009 14:20	0.553 g	30 mL	54.24955	SOIL
SAMPLE	232429002		SW846 7471A Prep	10-JUL-2009 14:20	0.537 g	30 mL	55.86592	SOIL
SAMPLE	232429003		SW846 7471A Prep	10-JUL-2009 14:20	0.505 g	30 mL	59.40594	SOIL
SAMPLE	232429004		SW846 7471A Prep	10-JUL-2009 14:20	0.574 g	30 mL	52.26481	SOIL
SAMPLE	232429005		SW846 7471A Prep	10-JUL-2009 14:20	0.53 g	30 mL	56.60377	SOIL
SAMPLE	232429006		SW846 7471A Prep	10-JUL-2009 14:20	0.576 g	30 mL	52.08333	SOIL
SAMPLE	232429007		SW846 7471A Prep	10-JUL-2009 14:20	0.579 g	30 mL	51.81347	SOIL
SAMPLE	232429008		SW846 7471A Prep	10-JUL-2009 14:20	0.559 g	30 mL	53.66726	SOIL
SAMPLE	232429009		SW846 7471A Prep	10-JUL-2009 14:20	0.5 g	30 mL	60	SOIL
SAMPLE	232429010		SW846 7471A Prep	10-JUL-2009 14:20	0.542 g	30 mL	55.35055	SOIL
SAMPLE	232429011		SW846 7471A Prep	10-JUL-2009 14:20	0.563 g	30 mL	53.28597	SOIL
SAMPLE	232429012		SW846 7471A Prep	10-JUL-2009 14:20	0.569 g	30 mL	52.72408	SOIL
SAMPLE	232429013		SW846 7471A Prep	10-JUL-2009 14:20	0.558 g	30 mL	53.76344	SOIL
SAMPLE	232429014		SW846 7471A Prep	10-JUL-2009 14:20	0.567 g	30 mL	52.91005	SOIL
SAMPLE	232429015		SW846 7471A Prep	10-JUL-2009 14:20	0.535 g	30 mL	56.07477	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution
1144356-C	2 mL	Hg reducing agent
WHG090710-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090710-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5

Comments Sample 232429001 consist of light brown, fine soil.
Digestion Start Date: 10-JUL-09 14:20
Digestion End Date: 10-JUL-09 14:50

Prep LogBook

WHG090710-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090710-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090710-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090710-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 706853
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
30-JUN-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
880930	See Below		

Potentially affected work order(s)(SDG): 232424(09-2473),232426(09-2475)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201870542MS 2. Failed Recovery for MSD/PSD: QC 1201870543MSD	1. The matrix spike recovery failed outside of the control limits for manganese due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The matrix spike duplicate recovery failed outside of the control limits for aluminum due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:
Helen Camello 02-JUL-09

Data Validator/Group Leader:
Eric Lawson 02-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI080818-09 **Opened:** 18-AUG-08 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 18-AUG-08 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 18-AUG-09 **Lot Number :** 1010290
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI080818-10 **Opened:** 18-AUG-08 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 18-AUG-08 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 18-AUG-09 **Lot Number :** 1010289
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express

Standard Logbook

Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L

Analyte	Concentration	Analyte	Concentration
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Standard Logbook

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-11 **Opened:** 10-JUN-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 10-JUN-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 10-JUN-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Standard Logbook

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL

Analyte	Concentration	Analyte	Concentration
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI647733-01 **Opened:** 02-APR-07 **Amount :** 80 g
Name: ICPMSSOILSRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis
Supplier: ERA
Description: ICPMS Soil LCS (Reference)
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	8270 mg/kg	Antimony	55.8 mg/kg
Arsenic	255 mg/kg	Barium	469 mg/kg
Beryllium	86.4 mg/kg	Boron	138 mg/kg
Cadmium	119 mg/kg	Calcium	3760 mg/kg
Chromium	71.2 mg/kg	Cobalt	79.6 mg/kg
Copper	96.2 mg/kg	Iron	13200 mg/kg
Lead	169 mg/kg	Lithium	8.01 mg/kg
Magnesium	2990 mg/kg	Manganese	364 mg/kg
Mercury	4.18 mg/kg	Molybdenum	79.6 mg/kg
Nickel	101 mg/kg	Phosphorous	752 mg/kg
Potassium	2420 mg/kg	Selenium	171 mg/kg
Silver	116 mg/kg	Sodium	575 mg/kg
Strontium	144 mg/kg	Thallium	203 mg/kg
Thorium	17.2 mg/kg	Titanium	255 mg/kg
Uranium	2.12 mg/kg	Uranium-235	.0153 mg/kg
Uranium-238	2.105 mg/kg	Vanadium	134 mg/kg
Zinc	202 mg/kg	Zirconium	6.83 mg/kg

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg

Analyte	Concentration	Analyte	Concentration
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Standard Logbook

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090710-01 **Opened:** 10-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 10-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090710-02 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 10-JUL-09
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090710-07 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Standard Logbook

Serial ID: WHG090710-08 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090710-09 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090710-10 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-11 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Standard Logbook

Serial ID: WHG090710-12 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-14 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090630-43 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WMS090630-04 **Opened:** 30-JUN-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl-1143705
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090630-04A **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090630-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090630-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090630-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090630-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090630-05 **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090630-06 **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI080818-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI080818-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI080818-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI080818-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI080818-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI080818-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI080818-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI080818-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI080818-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI080818-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI080818-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI080818-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI080818-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI080818-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI080818-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090630-07 **Opened:** 30-JUN-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090630-08 **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090630-70 **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS LINEAR RANGE ST **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Standard Logbook

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1143705 **Opened:** 29-JUN-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 06-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Standard Logbook

Serial ID: 1143746 **Opened:** 29-JUN-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JUN-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 05-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2473-1

Sample Analysis

Sample ID	Client ID
232425001	CAMO-09-10468
1201871706	Method Blank (MB) **ICP**
1201871707	Laboratory Control Sample (LCS)
1201871710	232510001(CAMO-09-6533L) Serial Dilution (SD)
1201871708	232510001(CAMO-09-6533D) Sample Duplicate (DUP)
1201871709	232510001(CAMO-09-6533S) Matrix Spike (MS)
1201871711	Method Blank (MB) **ICP-MS**
1201871712	Laboratory Control Sample (LCS)
1201871715	232370001(CAMO-09-6053L) Serial Dilution (SD)
1201871713	232370001(CAMO-09-6053D) Sample Duplicate (DUP)
1201871714	232370001(CAMO-09-6053S) Matrix Spike (MS)
1201871792	Method Blank (MB) **CVAA**
1201871793	Laboratory Control Sample (LCS)
1201871796	232425001(CAMO-09-10468L) Serial Dilution (SD)
1201871794	232425001(CAMO-09-10468D) Sample Duplicate (DUP)
1201871795	232425001(CAMO-09-10468S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Method/Analysis Information

Analytical Batch: 881354, 881357 and 881393

Prep Batch :	881353, 881356 and 881392
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3005/6010B, SW846 3005/6020 and SW846 7470A
Prep Method :	SW846 3005A and SW846 7470A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232510001 (CAMO-09-6533)-ICP, 232370001 (CAMO-09-6053)-ICP-MS and 232425001 (CAMO-09-10468)-CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of thallium, as indicated by the "N" qualifier.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are

calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 708200. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Parson **Date:** 7/17/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2473-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232425001 **BASIS:** As Received **DATE COLLECTED** 23-JUN-09

CLIENT ID: CAMO-09-10468 **LEVEL:** Low **DATE RECEIVED** 26-JUN-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/04/09 02:32	090703-2	881357
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/04/09 02:32	090703-2	881357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/04/09 02:32	090703-2	881357
7440-70-2	Calcium	100	ug/L	U	30	100	100	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-47-3	Chromium	5	ug/L	U	2	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	06/30/09 18:53	063009-1	881354
7439-89-6	Iron	100	ug/L	U	25	100	100	1	P	HSC	06/30/09 18:53	063009-1	881354
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/04/09 02:32	090703-2	881357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	06/30/09 18:53	063009-1	881354
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/04/09 02:32	090703-2	881357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	ETL	07/02/09 10:42	070209W1-4	881393
7440-02-0	Nickel	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-09-7	Potassium	126	ug/L	J	50	150	150	1	P	HSC	06/30/09 18:53	063009-1	881354
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-23-5	Sodium	138	ug/L	J	45	150	150	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	PRB	07/04/09 15:11	090703-3	881357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 18:53	063009-1	881354
7440-66-6	Zinc	10	ug/L	U	2	10	10	1	P	HSC	06/30/09 18:53	063009-1	881354

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881354	881353	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881357	881356	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881393	881392	SW846 7470A Prep	20	mL	20	mL	07/01/09	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5320	ug/L	5000	ug/L	106.4	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Arsenic	486	ug/L	500	ug/L	97.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Barium	536	ug/L	500	ug/L	107.3	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Calcium	5140	ug/L	5000	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Cobalt	480	ug/L	500	ug/L	96.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Copper	522	ug/L	500	ug/L	104.3	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Iron	5220	ug/L	5000	ug/L	104.4	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Magnesium	5500	ug/L	5000	ug/L	110	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Nickel	530	ug/L	500	ug/L	105.9	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Potassium	2480	ug/L	2500	ug/L	99.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Selenium	2630	ug/L	2500	ug/L	105.2	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Silver	256	ug/L	250	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Sodium	2650	ug/L	2500	ug/L	106.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Zinc	508	ug/L	500	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Mercury	5.23	ug/L	5	ug/L	104.6	90.0 - 110.0	AV	02-JUL-09 08:19	070209W1-4
	Antimony	48.1	ug/L	50	ug/L	96.2	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Beryllium	51.6	ug/L	50	ug/L	103.2	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Cadmium	52.5	ug/L	50	ug/L	105	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Lead	51.3	ug/L	50	ug/L	102.6	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Manganese	48.7	ug/L	50	ug/L	97.4	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Thallium	49.7	ug/L	50	ug/L	99.4	90.0 - 110.0	MS	04-JUL-09 14:15	090703-3
CCV01										
	Aluminum	5240	ug/L	5000	ug/L	104.7	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Arsenic	515	ug/L	500	ug/L	103.1	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Barium	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Chromium	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Cobalt	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 09:33	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Copper	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Iron	5040	ug/L	5000	ug/L	100.8	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Magnesium	5250	ug/L	5000	ug/L	105.1	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Nickel	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Potassium	4860	ug/L	5000	ug/L	97.3	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Selenium	535	ug/L	500	ug/L	107	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Silver	508	ug/L	500	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Zinc	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Mercury	4.85	ug/L	5	ug/L	97	80.0 - 120.0	AV	02-JUL-09 08:25	070209W1-4
	Antimony	51.5	ug/L	50	ug/L	102.9	90.0 - 110.0	MS	04-JUL-09 01:31	090703-2
	Beryllium	53.8	ug/L	50	ug/L	107.6	90.0 - 110.0	MS	04-JUL-09 01:31	090703-2
	Cadmium	51.8	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	04-JUL-09 01:31	090703-2
	Lead	52.2	ug/L	50	ug/L	104.4	90.0 - 110.0	MS	04-JUL-09 01:31	090703-2
	Manganese	52.1	ug/L	50	ug/L	104.2	90.0 - 110.0	MS	04-JUL-09 01:31	090703-2
	Thallium	48.9	ug/L	50	ug/L	97.7	90.0 - 110.0	MS	04-JUL-09 14:33	090703-3
CCV02										
	Aluminum	5250	ug/L	5000	ug/L	104.9	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Arsenic	510	ug/L	500	ug/L	102.1	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Barium	507	ug/L	500	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Calcium	5260	ug/L	5000	ug/L	105.3	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Chromium	506	ug/L	500	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Cobalt	500	ug/L	500	ug/L	100	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Copper	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Magnesium	5280	ug/L	5000	ug/L	105.6	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Nickel	499	ug/L	500	ug/L	99.9	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Potassium	4890	ug/L	5000	ug/L	97.7	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Selenium	527	ug/L	500	ug/L	105.5	90.0 - 110.0	P	30-JUN-09 09:54	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09--2473-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Sodium	10300	ug/L	10000	ug/L	103.3	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Zinc	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Mercury	4.78	ug/L	5	ug/L	95.5	80.0 - 120.0	AV	02-JUL-09 08:49	070209W1-4
	Antimony	53.3	ug/L	50	ug/L	106.7	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Beryllium	52	ug/L	50	ug/L	104	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Cadmium	49.6	ug/L	50	ug/L	99.3	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Lead	53.2	ug/L	50	ug/L	106.3	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Manganese	50.1	ug/L	50	ug/L	100.2	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Thallium	48.5	ug/L	50	ug/L	96.9	90.0 - 110.0	MS	04-JUL-09 15:03	090703-3
CCV03										
	Aluminum	5200	ug/L	5000	ug/L	104	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Arsenic	516	ug/L	500	ug/L	103.1	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Barium	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Calcium	5150	ug/L	5000	ug/L	102.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Chromium	513	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Cobalt	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Copper	507	ug/L	500	ug/L	101.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Iron	4940	ug/L	5000	ug/L	98.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Magnesium	5190	ug/L	5000	ug/L	103.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Nickel	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Potassium	4790	ug/L	5000	ug/L	95.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Selenium	532	ug/L	500	ug/L	106.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Silver	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Zinc	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Mercury	4.76	ug/L	5	ug/L	95.3	80.0 - 120.0	AV	02-JUL-09 09:13	070209W1-4
	Antimony	50.6	ug/L	50	ug/L	101.1	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	54.4	ug/L	50	ug/L	108.9	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2
	Cadmium	49.2	ug/L	50	ug/L	98.4	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2
	Manganese	52.9	ug/L	50	ug/L	105.8	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2
	Thallium	47	ug/L	50	ug/L	94	90.0 - 110.0	MS	04-JUL-09 15:30	090703-3
CCV04										
	Aluminum	5210	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Arsenic	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Barium	511	ug/L	500	ug/L	102.3	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Chromium	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Cobalt	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Copper	505	ug/L	500	ug/L	100.9	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Iron	4990	ug/L	5000	ug/L	99.8	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Nickel	500	ug/L	500	ug/L	100	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Potassium	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Selenium	526	ug/L	500	ug/L	105.3	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Silver	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Zinc	506	ug/L	500	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Mercury	4.77	ug/L	5	ug/L	95.4	80.0 - 120.0	AV	02-JUL-09 09:36	070209W1-4
	Antimony	49.4	ug/L	50	ug/L	98.8	90.0 - 110.0	MS	04-JUL-09 02:56	090703-2
	Beryllium	55.1	ug/L	50	ug/L	110.3	90.0 - 110.0	MS	04-JUL-09 02:56	090703-2
	Cadmium	48.3	ug/L	50	ug/L	96.7	90.0 - 110.0	MS	04-JUL-09 02:56	090703-2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 - 110.0	MS	04-JUL-09 02:56	090703-2
	Manganese	51.8	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	04-JUL-09 02:56	090703-2
CCV05										
	Aluminum	5340	ug/L	5000	ug/L	106.7	90.0 - 110.0	P	30-JUN-09 13:02	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Arsenic	520	ug/L	500	ug/L	103.9	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Barium	515	ug/L	500	ug/L	103	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Calcium	5320	ug/L	5000	ug/L	106.3	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Chromium	515	ug/L	500	ug/L	102.9	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Cobalt	518	ug/L	500	ug/L	103.7	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Copper	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Iron	5100	ug/L	5000	ug/L	102.1	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Magnesium	5370	ug/L	5000	ug/L	107.4	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Nickel	516	ug/L	500	ug/L	103.2	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Potassium	4990	ug/L	5000	ug/L	99.7	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Selenium	533	ug/L	500	ug/L	106.6	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Silver	515	ug/L	500	ug/L	103	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Sodium	10500	ug/L	10000	ug/L	104.8	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Vanadium	518	ug/L	500	ug/L	103.6	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Zinc	510	ug/L	500	ug/L	102	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Mercury	4.82	ug/L	5	ug/L	96.3	80.0 - 120.0	AV	02-JUL-09 10:00	070209W1-4
CCV06										
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Arsenic	525	ug/L	500	ug/L	104.9	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Barium	515	ug/L	500	ug/L	102.9	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Calcium	5280	ug/L	5000	ug/L	105.6	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Chromium	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Cobalt	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Copper	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Iron	5080	ug/L	5000	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Magnesium	5300	ug/L	5000	ug/L	106	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Nickel	511	ug/L	500	ug/L	102.3	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Potassium	5040	ug/L	5000	ug/L	100.8	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Selenium	539	ug/L	500	ug/L	107.7	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Silver	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 14:20	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	10600	ug/L	10000	ug/L	106	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Vanadium	516	ug/L	500	ug/L	103.2	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Zinc	509	ug/L	500	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Mercury	4.8	ug/L	5	ug/L	96	80.0 - 120.0	AV	02-JUL-09 10:24	070209W1-4
CCV07										
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Arsenic	505	ug/L	500	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Barium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Calcium	5340	ug/L	5000	ug/L	106.8	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Chromium	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Cobalt	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Copper	495	ug/L	500	ug/L	98.9	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Iron	5140	ug/L	5000	ug/L	102.9	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Magnesium	5350	ug/L	5000	ug/L	107.1	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Nickel	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Potassium	5010	ug/L	5000	ug/L	100.1	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Selenium	524	ug/L	500	ug/L	104.9	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Silver	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Sodium	10500	ug/L	10000	ug/L	105.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Vanadium	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Mercury	4.82	ug/L	5	ug/L	96.5	80.0 - 120.0	AV	02-JUL-09 10:48	070209W1-4
CCV08										
	Aluminum	5290	ug/L	5000	ug/L	105.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Arsenic	520	ug/L	500	ug/L	104	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Barium	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Cobalt	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Copper	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Iron	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Nickel	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Potassium	4840	ug/L	5000	ug/L	96.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Selenium	534	ug/L	500	ug/L	106.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Silver	512	ug/L	500	ug/L	102.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Zinc	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Mercury	4.82	ug/L	5	ug/L	96.4	80.0 - 120.0	AV	02-JUL-09 11:11	070209W1-4
CCV09										
	Aluminum	5250	ug/L	5000	ug/L	105	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Arsenic	516	ug/L	500	ug/L	103.1	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Barium	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Calcium	5260	ug/L	5000	ug/L	105.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Chromium	510	ug/L	500	ug/L	102.1	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Cobalt	507	ug/L	500	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Copper	506	ug/L	500	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Iron	5050	ug/L	5000	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Magnesium	5230	ug/L	5000	ug/L	104.6	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Nickel	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Potassium	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Selenium	531	ug/L	500	ug/L	106.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Silver	510	ug/L	500	ug/L	102	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Sodium	10400	ug/L	10000	ug/L	104.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Vanadium	514	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Zinc	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
CCV10										
	Aluminum	5270	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Arsenic	513	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 18:18	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Barium	518	ug/L	500	ug/L	103.5	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Calcium	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Chromium	519	ug/L	500	ug/L	103.9	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Cobalt	521	ug/L	500	ug/L	104.3	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Copper	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Iron	5060	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Magnesium	5240	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Nickel	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Potassium	4970	ug/L	5000	ug/L	99.3	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Selenium	530	ug/L	500	ug/L	106	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Silver	520	ug/L	500	ug/L	104.1	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Sodium	10500	ug/L	10000	ug/L	104.9	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Vanadium	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
	Zinc	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 18:18	063009-1
CCV11										
	Aluminum	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Arsenic	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Barium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Calcium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Chromium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Cobalt	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Copper	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Iron	4920	ug/L	5000	ug/L	98.4	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Magnesium	5090	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Nickel	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Potassium	4890	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Selenium	529	ug/L	500	ug/L	105.8	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Silver	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Sodium	10400	ug/L	10000	ug/L	104	90.0 – 110.0	P	30-JUN-09 19:13	063009-1
	Vanadium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-JUN-09 19:13	063009-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2473–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Zinc	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
CCV12										
	Aluminum	5290	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Arsenic	519	ug/L	500	ug/L	103.7	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Barium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Cobalt	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Copper	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Iron	4910	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Magnesium	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Nickel	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Potassium	4890	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Selenium	534	ug/L	500	ug/L	106.9	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Silver	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Sodium	10300	ug/L	10000	ug/L	103.4	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Vanadium	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Zinc	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30–JUN–09 20:01	063009–1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.228	ug/L	.2	ug/L	114	70.0 - 130.0	AV	02-JUL-09 08:23	070209W1-4
	Antimony	3.11	ug/L	3	ug/L	103.5	70.0 - 130.0	MS	04-JUL-09 01:16	090703-2
	Beryllium	.571	ug/L	.5	ug/L	114.2	70.0 - 130.0	MS	04-JUL-09 01:16	090703-2
	Cadmium	1.01	ug/L	1	ug/L	100.5	70.0 - 130.0	MS	04-JUL-09 01:16	090703-2
	Manganese	5.61	ug/L	5	ug/L	112.2	70.0 - 130.0	MS	04-JUL-09 01:16	090703-2
	Lead	2.17	ug/L	2	ug/L	108.7	70.0 - 130.0	MS	04-JUL-09 01:16	090703-2
	Thallium	.981	ug/L	1	ug/L	98.1	70.0 - 130.0	MS	04-JUL-09 14:22	090703-3
PQL01										
	Aluminum	208	ug/L	200	ug/L	104.1	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Arsenic	18.2	ug/L	15	ug/L	121	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Barium	5.29	ug/L	5	ug/L	105.7	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Calcium	103	ug/L	100	ug/L	103.4	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Chromium	5.14	ug/L	5	ug/L	102.9	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Cobalt	5.22	ug/L	5	ug/L	104.4	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Copper	9.75	ug/L	10	ug/L	97.5	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Iron	114	ug/L	100	ug/L	114.1	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Magnesium	331	ug/L	300	ug/L	110.5	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Nickel	5.6	ug/L	5	ug/L	111.9	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Potassium	153	ug/L	150	ug/L	102.1	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Selenium	16.6	ug/L	15	ug/L	110.5	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Silver	5.26	ug/L	5	ug/L	105.1	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Sodium	156	ug/L	150	ug/L	104.3	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Vanadium	5.17	ug/L	5	ug/L	103.5	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Zinc	10.5	ug/L	10	ug/L	104.6	70.0 - 130.0	P	30-JUN-09 08:45	063009-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2473–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 08:39	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 08:39	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 08:39	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 08:39	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 08:39	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 08:39	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 08:39	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 08:39	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 08:39	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 08:39	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 08:21	070209W1–4
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	04–JUL–09 01:12	090703–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	04–JUL–09 01:12	090703–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	04–JUL–09 01:12	090703–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	04–JUL–09 01:12	090703–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	04–JUL–09 01:12	090703–2
	Thallium	0.3	+/–1	U	0.3	1.0	LIQ	MS	04–JUL–09 14:19	090703–3
CCB01										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 09:40	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 09:40	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 09:40	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 09:40	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 09:40	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 09:40	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 09:40	063009–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2473-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 09:40	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 09:40	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 09:40	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 09:40	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 09:40	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 09:40	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 08:27	070209W1-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 01:35	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	04-JUL-09 14:37	090703-3
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 10:01	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 10:01	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 10:01	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 10:01	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 10:01	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 10:01	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 10:01	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 10:01	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 10:01	063009-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2473–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 10:01	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 10:01	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 08:51	070209W1–4
	Antimony	1.36	+/–3	J	1.0	3.0	LIQ	MS	04–JUL–09 01:50	090703–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	04–JUL–09 01:50	090703–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	04–JUL–09 01:50	090703–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	04–JUL–09 01:50	090703–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	04–JUL–09 01:50	090703–2
	Thallium	0.37	+/–1	J	0.3	1.0	LIQ	MS	04–JUL–09 15:07	090703–3
CCB03										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 11:04	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 11:04	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 11:04	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 11:04	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 11:04	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 11:04	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 11:04	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 11:04	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 11:04	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 11:04	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 09:15	070209W1–4
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	04–JUL–09 02:28	090703–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	04–JUL–09 02:28	090703–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	04–JUL–09 02:28	090703–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	04–JUL–09 02:28	090703–2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2473–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	04–JUL–09 02:28	090703–2
	Thallium	0.3	+/–1	U	0.3	1.0	LIQ	MS	04–JUL–09 15:34	090703–3
CCB04										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 11:59	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 11:59	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:59	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 11:59	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 11:59	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:59	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 11:59	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 11:59	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 11:59	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:59	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 11:59	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 11:59	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:59	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 11:59	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:59	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 11:59	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 09:38	070209W1–4
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	04–JUL–09 03:01	090703–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	04–JUL–09 03:01	090703–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	04–JUL–09 03:01	090703–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	04–JUL–09 03:01	090703–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	04–JUL–09 03:01	090703–2
CCB05										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 13:09	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 13:09	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 13:09	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 13:09	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 13:09	063009–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2473-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 13:09	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 13:09	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 13:09	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 13:09	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 13:09	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 13:09	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 13:09	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 10:02	070209W1-4
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 14:26	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 14:26	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 14:26	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 14:26	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 14:26	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 14:26	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 14:26	063009-1
	Selenium	-5.83	+/-15	J	5.0	15.0	LIQ	P	30-JUN-09 14:26	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 14:26	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 14:26	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 10:26	070209W1-4

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2473–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB07										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 14:50	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 14:50	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 14:50	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 14:50	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 14:50	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 14:50	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 14:50	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 14:50	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 14:50	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 14:50	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 10:50	070209W1–4
CCB08										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 15:59	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 15:59	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 15:59	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 15:59	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 15:59	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 15:59	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 15:59	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 15:59	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2473–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 15:59	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 15:59	063009–1
	Mercury	–0.074	+/–.2	J	0.066	0.2	LIQ	AV	02–JUL–09 11:13	070209W1–4
CCB09										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 17:15	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 17:15	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 17:15	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 17:15	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 17:15	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 17:15	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 17:15	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 17:15	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 17:15	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 17:15	063009–1
CCB10										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 18:25	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 18:25	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 18:25	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 18:25	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 18:25	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 18:25	063009–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2473–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 18:25	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 18:25	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 18:25	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 18:25	063009–1
CCB11										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 19:20	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 19:20	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 19:20	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 19:20	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 19:20	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 19:20	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 19:20	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 19:20	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 19:20	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 19:20	063009–1
CCB12										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 20:08	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 20:08	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 20:08	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 20:08	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 20:08	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 20:08	063009–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2473-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 20:08	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 20:08	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 20:08	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 20:08	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 20:08	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 20:08	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 20:08	063009-1

METALS
–3b–
PREPARATION BLANK SUMMARY

SDG NO. 09–2473–1

Contract: LANL01004

Matrix: WATER

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201871706								
	Aluminum	68	ug/L	+/–200	U	P	68	200
	Arsenic	5	ug/L	+/–15.0	U	P	5	15
	Barium	1	ug/L	+/–5.0	U	P	1	5
	Calcium	30	ug/L	+/–100	U	P	30	100
	Chromium	2	ug/L	+/–5.0	U	P	2	5
	Cobalt	1	ug/L	+/–5.0	U	P	1	5
	Copper	3	ug/L	+/–10.0	U	P	3	10
	Iron	25	ug/L	+/–100	U	P	25	100
	Magnesium	85	ug/L	+/–300	U	P	85	300
	Nickel	1	ug/L	+/–5.0	U	P	1	5
	Potassium	50	ug/L	+/–150	U	P	50	150
	Selenium	5	ug/L	+/–15.0	U	P	5	15
	Silver	1	ug/L	+/–5.0	U	P	1	5
	Sodium	45	ug/L	+/–150	U	P	45	150
	Vanadium	1	ug/L	+/–5.0	U	P	1	5
	Zinc	2	ug/L	+/–10.0	U	P	2	10
1201871711								
	Antimony	1.08	ug/L	+/–3.0	J	MS	1	3
	Beryllium	0.1	ug/L	+/–0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/–1.0	U	MS	0.11	1
	Lead	0.5	ug/L	+/–2.0	U	MS	0.5	2
	Manganese	1	ug/L	+/–5.0	U	MS	1	5
	Thallium	0.3	ug/L	+/–1.0	U	MS	0.3	1
1201871792								
	Mercury	0.066	ug/L	+/–0.2	U	AV	0.066	0.2

METALS
-4-
Interference Check Sample

SDG No: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	521000	ug/L	500000	ug/L	104	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Arsenic	12.1	ug/L					30-JUN-09 08:52	063009-1
	Barium	-4.95	ug/L					30-JUN-09 08:52	063009-1
	Calcium	479000	ug/L	500000	ug/L	95.8	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Chromium	2.29	ug/L					30-JUN-09 08:52	063009-1
	Cobalt	-1.33	ug/L					30-JUN-09 08:52	063009-1
	Copper	1.81	ug/L					30-JUN-09 08:52	063009-1
	Iron	181000	ug/L	200000	ug/L	90.7	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Magnesium	476000	ug/L	500000	ug/L	95.2	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Nickel	5.0	ug/L					30-JUN-09 08:52	063009-1
	Potassium	-32.1	ug/L					30-JUN-09 08:52	063009-1
	Selenium	0.557	ug/L					30-JUN-09 08:52	063009-1
	Silver	-0.79	ug/L					30-JUN-09 08:52	063009-1
	Sodium	31.8	ug/L					30-JUN-09 08:52	063009-1
	Vanadium	-2.42	ug/L					30-JUN-09 08:52	063009-1
	Zinc	-6.97	ug/L					30-JUN-09 08:52	063009-1
ICSAB01									
	Aluminum	519000	ug/L	500000	ug/L	104	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Arsenic	532	ug/L	500	ug/L	106	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Barium	498	ug/L	500	ug/L	99.6	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Calcium	473000	ug/L	500000	ug/L	94.6	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Chromium	496	ug/L	500	ug/L	99.3	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Cobalt	467	ug/L	500	ug/L	93.4	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Copper	562	ug/L	500	ug/L	112	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Iron	179000	ug/L	200000	ug/L	89.6	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Magnesium	470000	ug/L	500000	ug/L	94.1	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Nickel	473	ug/L	500	ug/L	94.5	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Potassium	5110	ug/L	5000	ug/L	102	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Selenium	2610	ug/L	2500	ug/L	104	80.0 - 120.0	30-JUN-09 08:58	063009-1

METALS
–4–
Interference Check Sample

SDG No: 09–2473–1

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silver	282	ug/L	250	ug/L	113	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Sodium	5390	ug/L	5000	ug/L	108	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Vanadium	519	ug/L	500	ug/L	104	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Zinc	495	ug/L	500	ug/L	99	80.0 – 120.0	30–JUN–09 08:58	063009–1

METALS
-4-
Interference Check Sample

SDG No: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.278	ug/L					04-JUL-09 01:21	090703-2
	Beryllium	0.051	ug/L					04-JUL-09 01:21	090703-2
	Cadmium	0.292	ug/L					04-JUL-09 01:21	090703-2
	Lead	0.17	ug/L					04-JUL-09 01:21	090703-2
	Manganese	5.89	ug/L					04-JUL-09 01:21	090703-2
ICSAB01									
	Antimony	22.0	ug/L	20.1	ug/L	109	80.0 - 120.0	04-JUL-09 01:26	090703-2
	Beryllium	22.7	ug/L	20	ug/L	113	80.0 - 120.0	04-JUL-09 01:26	090703-2
	Cadmium	20.8	ug/L	20.4	ug/L	102	80.0 - 120.0	04-JUL-09 01:26	090703-2
	Lead	20.4	ug/L	20.5	ug/L	99.4	80.0 - 120.0	04-JUL-09 01:26	090703-2
	Manganese	26.2	ug/L	25.8	ug/L	102	80.0 - 120.0	04-JUL-09 01:26	090703-2

METALS
–4–
Interference Check Sample

SDG No: 09–2473–1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Thallium	0.034	ug/L					04–JUL–09 14:26	090703–3
ICSAB01									
	Thallium	18.3	ug/L	20	ug/L	91.7	80.0 – 120.0	04–JUL–09 14:30	090703–3

METALS
–5a–
Matrix Spike Summary

SDG NO. 09–2473–1 **Client ID** CAMO–09–6533S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232510001 **Spike ID:** 1201871709

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cobalt	ug/L	75–125	485		1	U	500	97		P
Copper	ug/L	75–125	500		3	U	500	100		P
Iron	ug/L	75–125	4770		25	U	5000	95.4		P
Magnesium	ug/L	75–125	4990		85	U	5000	99.5		P
Nickel	ug/L	75–125	494		1	U	500	98.7		P
Potassium	ug/L	75–125	5020		126	J	5000	97.8		P
Selenium	ug/L	75–125	501		5	U	500	100		P
Silver	ug/L	75–125	496		1	U	500	99.2		P
Sodium	ug/L	75–125	5280		85.2	J	5000	104		P
Vanadium	ug/L	75–125	505		1	U	500	101		P
Zinc	ug/L	75–125	483		2	U	500	96.4		P
Aluminum	ug/L	75–125	5120		68	U	5000	102		P
Arsenic	ug/L	75–125	499		5	U	500	99.6		P
Barium	ug/L	75–125	506		1	U	500	101		P
Calcium	ug/L	75–125	5050		30	U	5000	101		P
Chromium	ug/L	75–125	496		2	U	500	99.1		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2473-1 **Client ID** CAMO-09-6053S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232370001 **Spike ID:** 1201871714

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	75-125	106		1	U	100	105		MS
Beryllium	ug/L	75-125	55.2		0.1	U	50	110		MS
Cadmium	ug/L	75-125	5.33		0.11	U	5	107		MS
Lead	ug/L	75-125	21.2		0.5	U	20	106		MS
Manganese	ug/L	75-125	53.3		1	U	50	106		MS
Thallium	ug/L	75-125	29.3		0.3	U	50	58.3	N	MS

METALS
-5a-

Matrix Spike Summary

SDG NO. 09-2473-1 **Client ID** CAMO-09-10468S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232425001 **Spike ID:** 1201871795

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75-125	2		0.066	U	2	100		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-6533D

Sample ID: 232510001 **Duplicate ID:** 1201871708 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68	U	68	U			P
Arsenic	ug/L		5	U	5	U			P
Barium	ug/L		1	U	1	U			P
Calcium	ug/L		30	U	30	U			P
Chromium	ug/L		2	U	2	U			P
Cobalt	ug/L		1	U	1	U			P
Copper	ug/L		3	U	3	U			P
Iron	ug/L		25	U	25	U			P
Magnesium	ug/L		85	U	85	U			P
Nickel	ug/L		1	U	1	U			P
Potassium	ug/L	+/-150	126	J	117	J	6.62		P
Selenium	ug/L		5	U	5	U			P
Silver	ug/L		1	U	1	U			P
Sodium	ug/L	+/-150	85.2	J	82.9	J	2.77		P
Vanadium	ug/L		1	U	1	U			P
Zinc	ug/L		2	U	2	U			P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-6053D

Sample ID: 232370001 **Duplicate ID:** 1201871713 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		1	U	1	U			MS
Beryllium	ug/L		0.1	U	0.1	U			MS
Cadmium	ug/L		0.11	U	0.11	U			MS
Lead	ug/L		0.5	U	0.5	U			MS
Manganese	ug/L		1	U	1	U			MS
Thallium	ug/L		0.3	U	0.3	U			MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2473-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-10468D

Sample ID: 232425001 **Duplicate ID:** 1201871794 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066	U	0.066	U			AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2473-1

Contract: LANL01004

Aqueous LCS Source: OS2I **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871707								
	Aluminum	ug/L	5000	5150		103	80-120	P
	Arsenic	ug/L	500	500		100	80-120	P
	Barium	ug/L	500	508		102	80-120	P
	Calcium	ug/L	5000	5050		101	80-120	P
	Chromium	ug/L	500	499		99.9	80-120	P
	Cobalt	ug/L	500	487		97.5	80-120	P
	Copper	ug/L	500	502		100	80-120	P
	Iron	ug/L	5000	4950		98.9	80-120	P
	Magnesium	ug/L	5000	5150		103	80-120	P
	Nickel	ug/L	500	498		99.5	80-120	P
	Potassium	ug/L	5000	4920		98.4	80-120	P
	Selenium	ug/L	500	507		101	80-120	P
	Silver	ug/L	500	498		99.6	80-120	P
	Sodium	ug/L	5000	5220		104	80-120	P
	Vanadium	ug/L	500	508		102	80-120	P
	Zinc	ug/L	500	488		97.6	80-120	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2473-1

Contract: LANL01004

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871712								
	Antimony	ug/L	50	54.2		108	80-120	MS
	Beryllium	ug/L	50	53.6		107	80-120	MS
	Cadmium	ug/L	50	51.5		103	80-120	MS
	Lead	ug/L	50	51.6		103	80-120	MS
	Manganese	ug/L	50	52.4		105	80-120	MS
	Thallium	ug/L	50	43		86	80-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2473-1

Contract: LANL01004

Aqueous LCS Source: GEL **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871793								
	Mercury	ug/L	2	1.98		99.1	80-120	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2473-1 **Client ID** CAMO-09-6533L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232510001 **Serial Dilution ID:** 1201871710

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Arsenic	5	U	25	U				P
Barium	1	U	5	U				P
Calcium	30	U	150	U				P
Chromium	2	U	10	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	25	U	125	U				P
Magnesium	85	U	425	U				P
Nickel	1	U	5	U				P
Potassium	126	J	250	U	100			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	85.2	J	225	U	100			P
Vanadium	1	U	5	U				P
Zinc	2	U	10	U				P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2473-1 **Client ID** CAMO-09-6053L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232370001 **Serial Dilution ID:** 1201871715

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	1	U	5	U				MS
Beryllium	.1	U	.5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	.5	U	2.5	U				MS
Manganese	1	U	5	U				MS
Thallium	.3	U	4.09	J				MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2473-1 **Client ID** CAMO-09-10468L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232425001 **Serial Dilution ID:** 1201871796

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2473-1 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881353						
1201871706	MB for batch 881353	MB	W	30-JUN-09	50mL	50mL	
1201871707	LCS for batch 881353	LCS	W	30-JUN-09	50mL	50mL	
1201871709	CAMO-09-6533S	MS	W	30-JUN-09	50mL	50mL	
1201871708	CAMO-09-6533D	DUP	W	30-JUN-09	50mL	50mL	
232425001	CAMO-09-10468	SAMPLE	W	30-JUN-09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2473-1 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881356						
1201871711	MB for batch 881356	MB	W	30-JUN-09	50mL	50mL	
1201871712	LCS for batch 881356	LCS	W	30-JUN-09	50mL	50mL	
1201871714	CAMO-09-6053S	MS	W	30-JUN-09	50mL	50mL	
1201871713	CAMO-09-6053D	DUP	W	30-JUN-09	50mL	50mL	
232425001	CAMO-09-10468	SAMPLE	W	30-JUN-09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2473-1 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881392						
1201871792	MB for batch 881392	MB	W	01-JUL-09	20mL	20mL	
1201871793	LCS for batch 881392	LCS	W	01-JUL-09	20mL	20mL	
1201871795	CAMO-09-10468S	MS	W	01-JUL-09	20mL	20mL	
1201871794	CAMO-09-10468D	DUP	W	01-JUL-09	20mL	20mL	
232425001	CAMO-09-10468	SAMPLE	W	01-JUL-09	20mL	20mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 30–JUN–09 **End Date:** 30–JUN–09

Client Sdg: 09–2473–1
Method P
Data File: 063009–1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	08:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S0.1	1	08:06			X	X				X	X	X						X	X	X	X			X	X
S0.5	1	08:12	X		X	X			X	X	X	X			X			X	X	X	X			X	X
SCAL	1	08:19	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S10	1	08:26	X						X				X		X							X			
ICV01	1	08:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICB01	1	08:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
PQL01	1	08:45	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSA01	1	08:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSAB01	1	08:58	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR01	1	09:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR02	1	09:10	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	09:17																							
ZZZZZZ	1	09:24																							
CCV01	1	09:33	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB01	1	09:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR03	1	09:47	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV02	1	09:54	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB02	1	10:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	10:15																							
ZZZZZZ	1	10:22																							
ZZZZZZ	1	10:29																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:43																							
ZZZZZZ	5	10:50																							
CCV03	1	10:57	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB03	1	11:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	11:11																							
ZZZZZZ	5	11:18																							
ZZZZZZ	5	11:25																							
ZZZZZZ	5	11:32																							
ZZZZZZ	25	11:38																							
ZZZZZZ	5	11:45																							
CCV04	1	11:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB04	1	11:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	12:06																							
ZZZZZZ	2	12:13																							
ZZZZZZ	1	12:20																							
ZZZZZZ	1	12:27																							
ZZZZZZ	1	12:34																							

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	12:41																							
ZZZZZZ	1	12:48																							
ZZZZZZ	1	12:55																							
CCV05	1	13:02	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB05	1	13:09	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	13:16																							
ZZZZZZ	1	13:23																							
ZZZZZZ	1	13:30																							
ZZZZZZ	1	13:38																							
ZZZZZZ	1	13:45																							
ZZZZZZ	1	13:52																							
ZZZZZZ	5	13:59																							
ZZZZZZ	1	14:05																							
ZZZZZZ	1	14:13																							
CCV06	1	14:20	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB06	1	14:26	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV07	1	14:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB07	1	14:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	14:56																							
ZZZZZZ	2	15:03																							
ZZZZZZ	1	15:10																							
ZZZZZZ	1	15:17																							
ZZZZZZ	1	15:24																							
ZZZZZZ	1	15:31																							
ZZZZZZ	5	15:38																							
ZZZZZZ	1	15:45																							
CCV08	1	15:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB08	1	15:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	16:06																							
ZZZZZZ	2	16:12																							
ZZZZZZ	1	16:19																							
ZZZZZZ	1	16:26																							
ZZZZZZ	1	16:34																							
ZZZZZZ	1	16:40																							
ZZZZZZ	5	16:47																							
ZZZZZZ	1	16:54																							
ZZZZZZ	1	17:01																							
CCV09	1	17:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB09	1	17:15	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	17:22																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	17:29																							
ZZZZZZ	1	17:36																							
ZZZZZZ	1	17:43																							
ZZZZZZ	1	17:50																							
ZZZZZZ	1	17:57																							
ZZZZZZ	1	18:04																							
ZZZZZZ	1	18:11																							
CCV10	1	18:18	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB10	1	18:25	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871706	1	18:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871707	1	18:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	18:46																							
232425001	1	18:53	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	18:59																							
ZZZZZZ	1	19:06																							
CCV11	1	19:13	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB11	1	19:20	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	19:27																							
ZZZZZZ	1	19:34																							
1201871708	1	19:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871709	1	19:47	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871710	5	19:54	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV12	1	20:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB12	1	20:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 02-JUL-09 **End Date:** 02-JUL-09

Client Sdg: 09-2473-1
Method AV
Data File: 070209W1-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	08:07															X								
S0.2	1	08:09															X								
S0.5	1	08:11															X								
S2.0	1	08:13															X								
S5.0	1	08:15															X								
S10	1	08:17															X								
ICV01	1	08:19															X								
ICB01	1	08:21															X								
CRDL01	1	08:23															X								
CCV01	1	08:25															X								
CCB01	1	08:27															X								
ZZZZZZ	1	08:29																							
ZZZZZZ	1	08:31																							
ZZZZZZ	1	08:33																							
ZZZZZZ	1	08:35																							
ZZZZZZ	1	08:37																							
ZZZZZZ	5	08:39																							
ZZZZZZ	1	08:41																							
ZZZZZZ	1	08:43																							
ZZZZZZ	1	08:45																							
ZZZZZZ	1	08:47																							
CCV02	1	08:49															X								
CCB02	1	08:51															X								
ZZZZZZ	1	08:53																							
ZZZZZZ	1	08:55																							
ZZZZZZ	1	08:57																							
ZZZZZZ	5	08:59																							
ZZZZZZ	1	09:01																							
ZZZZZZ	1	09:03																							
ZZZZZZ	1	09:05																							
ZZZZZZ	1	09:07																							
ZZZZZZ	1	09:09																							
ZZZZZZ	1	09:11																							
CCV03	1	09:13															X								
CCB03	1	09:15															X								
ZZZZZZ	1	09:17																							
ZZZZZZ	1	09:19																							
ZZZZZZ	1	09:21																							
ZZZZZZ	1	09:23																							
ZZZZZZ	1	09:25																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	1	09:26																						
ZZZZZZ	1	09:28																						
ZZZZZZ	1	09:30																						
ZZZZZZ	1	09:32																						
ZZZZZZ	1	09:34																						
CCV04	1	09:36													X									
CCB04	1	09:38													X									
ZZZZZZ	1	09:40																						
ZZZZZZ	1	09:42																						
ZZZZZZ	1	09:44																						
ZZZZZZ	1	09:47																						
ZZZZZZ	1	09:49																						
ZZZZZZ	1	09:51																						
ZZZZZZ	1	09:53																						
ZZZZZZ	5	09:54																						
ZZZZZZ	1	09:56																						
ZZZZZZ	1	09:58																						
CCV05	1	10:00													X									
CCB05	1	10:02													X									
ZZZZZZ	1	10:04																						
ZZZZZZ	1	10:06																						
ZZZZZZ	1	10:08																						
ZZZZZZ	1	10:10																						
ZZZZZZ	1	10:12																						
ZZZZZZ	1	10:14																						
ZZZZZZ	5	10:16																						
ZZZZZZ	1	10:18																						
ZZZZZZ	1	10:20																						
ZZZZZZ	1	10:22																						
CCV06	1	10:24													X									
CCB06	1	10:26													X									
ZZZZZZ	1	10:28																						
ZZZZZZ	1	10:30																						
ZZZZZZ	1	10:32																						
ZZZZZZ	1	10:34																						
1201871792	1	10:36													X									
1201871793	1	10:38													X									
ZZZZZZ	1	10:40																						
232425001	1	10:42													X									
1201871794	1	10:44													X									

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
1201871795	1	10:46															X								
CCV07	1	10:48															X								
CCB07	1	10:50															X								
1201871796	5	10:52															X								
ZZZZZZ	1	10:54																							
ZZZZZZ	1	10:56																							
ZZZZZZ	1	10:58																							
ZZZZZZ	1	11:00																							
ZZZZZZ	1	11:02																							
ZZZZZZ	1	11:04																							
ZZZZZZ	1	11:06																							
ZZZZZZ	1	11:08																							
ZZZZZZ	5	11:09																							
CCV08	1	11:11															X								
CCB08	1	11:13															X								

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 04-JUL-09 **End Date:** 04-JUL-09

Client Sdg: 09-2473-1
Method MS
Data File: 090703-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	00:53		X			X	X						X		X									
S10	1	00:58		X			X	X						X		X									
S100	1	01:02		X			X	X						X		X									
ICV01	1	01:07		X			X	X						X		X									
ICB01	1	01:12		X			X	X						X		X									
CRDL01	1	01:16		X			X	X						X		X									
ICSA01	1	01:21		X			X	X						X		X									
ICSAB01	1	01:26		X			X	X						X		X									
CCV01	1	01:31		X			X	X						X		X									
CCB01	1	01:35		X			X	X						X		X									
LR01	1	01:40		X			X	X						X		X									
CCV02	1	01:45		X			X	X						X		X									
CCB02	1	01:50		X			X	X						X		X									
1201871711	1	01:54		X			X	X						X		X									
1201871712	1	01:59		X			X	X						X		X									
ZZZZZZ	1	02:04																							
1201871713	1	02:08		X			X	X						X		X									
1201871714	1	02:13		X			X	X						X		X									
1201871715	5	02:18		X			X	X						X		X									
CCV03	1	02:23		X			X	X						X		X									
CCB03	1	02:28		X			X	X						X		X									
232425001	1	02:32		X			X	X						X		X									
ZZZZZZ	1	02:37																							
ZZZZZZ	1	02:42																							
ZZZZZZ	1	02:46																							
ZZZZZZ	1	02:51																							
CCV04	1	02:56		X			X	X						X		X									
CCB04	1	03:01		X			X	X						X		X									

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 04-JUL-09 **End Date:** 04-JUL-09

Client Sdg: 09-2473-1
Method MS
Data File: 090703-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	14:04																					X		
S10	1	14:08																					X		
S100	1	14:11																					X		
ICV01	1	14:15																					X		
ICB01	1	14:19																					X		
CRDL01	1	14:22																					X		
ICSA01	1	14:26																					X		
ICSAB01	1	14:30																					X		
CCV01	1	14:33																					X		
CCB01	1	14:37																					X		
1201871711	1	14:41																					X		
1201871712	1	14:45																					X		
ZZZZZZ	1	14:48																							
1201871713	1	14:52																					X		
1201871714	1	14:56																					X		
1201871715	5	15:00																					X		
CCV02	1	15:03																					X		
CCB02	1	15:07																					X		
232425001	1	15:11																					X		
ZZZZZZ	1	15:15																							
ZZZZZZ	1	15:19																							
ZZZZZZ	1	15:22																							
ZZZZZZ	1	15:26																							
CCV03	1	15:30																					X		
CCB03	1	15:34																					X		

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2473-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		3.0	10
	Zinc		3.0	10

METALS
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Instrument Detection Limits

SDG NO. 09-2473-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
MERCURY				
LIQUID	Mercury		0.066	.2

METALS
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Instrument Detection Limits

SDG NO. 09-2473-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 23-JUL-07

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	15
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	30.0	100
	Chromium	267.716	2.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	25.0	100
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.0	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	15
	Silver	328.068	1.0	5
	Sodium	589.592	45.0	150
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	2.0	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2473-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2473-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09–2473–1
Effective Dates: 01–MAY–09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	–0.01812	0.00000	0.00000	0.00000	–20.8769
Arsenic	188.979	–0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	–0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	–2.64232
Copper	324.752	–0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	–2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	–20.2401
Manganese	257.61	–0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	–0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	–0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	–3.41808	0.00000	0.00000	0.00000	–1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	–0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	–4.64362	0.00000
Tin	189.927	–0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	–0.01660	0.00000	–12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2473-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 09-2473-1
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-MAY-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2473-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
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Linear Ranges

SDG NO. 09-2473-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2473-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

Raw Data

Spectra

Method: Hg_ReAlign
Result: 070909

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

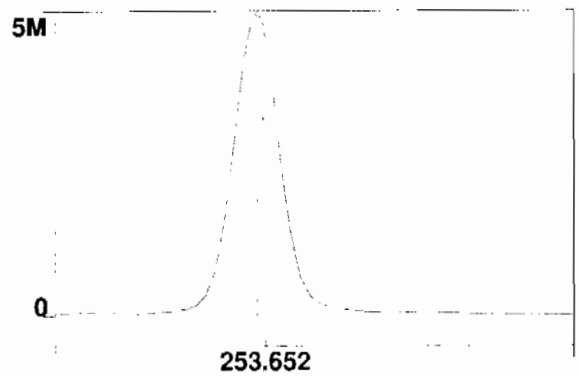

253.652
Intensity: 5431129.6 cps
Conc:

1

Start Time: 6/30/2009 08:00:09
Plasma On Time: 6/29/2009 15:26:31
Logged In Analyst: Optima3
Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 8
Sample ID: S0
Date Collected: 6/30/2009 08:00:09
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7332.9	7332.9	98.1	%	08:02:02
1	Y RADIAL	6768.4	6768.4	97.75	%	08:02:02
1	Al 396.153Radial†	-69.2	-70.5	[0.00]	ug/L	08:02:02
1	Ca 317.933Radial†	30.7	31.3	[0.00]	ug/L	08:02:22
1	Fe 238.204 Radial†	34.0	34.7	[0.00]	ug/L	08:02:22
1	K 766.490 Radial†	2350.8	2396.2	[0.00]	ug/L	08:02:02
1	Mg 279.077 IEC†	1.8	1.8	[0.00]	ug/L	08:02:22
1	Na 589.592 Radial†	-137.1	-139.7	[0.00]	ug/L	08:02:02
1	Sr 421.552†	-74.2	-75.6	[0.00]	ug/L	08:02:02
1	Sc 361.383	723693.7	723693.7	100.70	%	08:03:19
1	Y 371.029	565792.8	565792.8	100.67	%	08:03:19
1	Ag 328.068†	572.4	568.4	[0.00]	ug/L	08:03:19
1	As 188.979†	-46.3	-46.0	[0.00]	ug/L	08:03:39
1	B 249.677†	-1020.4	-1013.3	[0.00]	ug/L	08:03:19
1	Ba 233.527†	-1.7	-1.7	[0.00]	ug/L	08:03:39
1	Be 313.107†	-4879.3	-4845.6	[0.00]	ug/L	08:03:19
1	Cd 226.502†	-281.3	-279.4	[0.00]	ug/L	08:03:39
1	Co 228.616†	-99.0	-98.3	[0.00]	ug/L	08:03:39
1	Cr 267.716†	-47.5	-47.2	[0.00]	ug/L	08:03:19
1	Cu 324.752†	5579.8	5541.2	[0.00]	ug/L	08:03:19
1	Mn 257.610†	659.8	655.2	[0.00]	ug/L	08:03:19
1	Mo 202.031†	7.3	7.3	[0.00]	ug/L	08:03:39
1	Ni 231.604†	119.2	118.4	[0.00]	ug/L	08:03:39
1	P 214.914†	315.8	313.6	[0.00]	ug/L	08:03:39
1	Pb 220.353†	-12.1	-12.0	[0.00]	ug/L	08:03:39
1	S 181.975 Axial†	77.2	76.7	[0.00]	ug/L	08:03:39
1	Sb 206.836†	60.4	60.0	[0.00]	ug/L	08:03:39
1	Se 196.026†	-31.0	-30.8	[0.00]	ug/L	08:03:39
1	Si 251.611†	415.3	412.5	[0.00]	ug/L	08:03:39
1	Sn 189.927†	11.9	11.8	[0.00]	ug/L	08:03:39
1	Ti 334.940†	-1389.6	-1380.0	[0.00]	ug/L	08:03:19
1	Tl 190.801†	-57.8	-57.4	[0.00]	ug/L	08:03:39
1	U 409.014†	-4755.0	-4722.1	[0.00]	ug/L	08:03:19
1	V 292.402†	-1589.6	-1578.6	[0.00]	ug/L	08:03:19
1	Zn 213.857†	901.8	895.6	[0.00]	ug/L	08:03:39
1	SiO2†	429.1	426.2	[0.00]	ug/L	08:04:35
2	Sc Radial	7660.2	7660.2	102	%	08:02:27
2	Y RADIAL	7100.7	7100.7	102.5	%	08:02:27
2	Al 396.153Radial†	-86.3	-84.2	[0.00]	ug/L	08:02:27
2	Ca 317.933Radial†	21.4	20.9	[0.00]	ug/L	08:02:47
2	Fe 238.204 Radial†	36.8	35.9	[0.00]	ug/L	08:02:47
2	K 766.490 Radial†	2362.0	2304.8	[0.00]	ug/L	08:02:27
2	Mg 279.077 IEC†	5.1	5.0	[0.00]	ug/L	08:02:47
2	Na 589.592 Radial†	-283.4	-276.5	[0.00]	ug/L	08:02:27
2	Sr 421.552†	-46.7	-45.6	[0.00]	ug/L	08:02:27
2	Sc 361.383	713270.6	713270.6	99.246	%	08:03:44
2	Y 371.029	557882.4	557882.4	99.267	%	08:03:44
2	Ag 328.068†	711.7	717.1	[0.00]	ug/L	08:03:44
2	As 188.979†	-32.3	-32.5	[0.00]	ug/L	08:04:04
2	B 249.677†	-913.5	-920.4	[0.00]	ug/L	08:03:44

2	Ba 233.527†	-1.8	-1.8	[0.00]	ug/L	08:04:04
2	Be 313.107†	-4896.3	-4933.5	[0.00]	ug/L	08:03:44
2	Cd 226.502†	-295.8	-298.0	[0.00]	ug/L	08:04:04
2	Co 228.616†	-106.2	-107.0	[0.00]	ug/L	08:04:04
2	Cr 267.716†	-79.3	-79.9	[0.00]	ug/L	08:03:44
2	Cu 324.752†	5643.3	5686.2	[0.00]	ug/L	08:03:44
2	Mn 257.610†	692.3	697.5	[0.00]	ug/L	08:03:44
2	Mo 202.031†	19.0	19.2	[0.00]	ug/L	08:04:04
2	Ni 231.604†	121.8	122.7	[0.00]	ug/L	08:04:04
2	P 214.914†	309.8	312.1	[0.00]	ug/L	08:04:04
2	Pb 220.353†	-3.0	-3.0	[0.00]	ug/L	08:04:04
2	S 181.975 Axial†	69.7	70.3	[0.00]	ug/L	08:04:04
2	Sb 206.836†	54.7	55.1	[0.00]	ug/L	08:04:04
2	Se 196.026†	-23.1	-23.3	[0.00]	ug/L	08:04:04
2	Si 251.611†	423.6	426.8	[0.00]	ug/L	08:04:04
2	Sn 189.927†	7.3	7.3	[0.00]	ug/L	08:04:04
2	Ti 334.940†	-1312.1	-1322.1	[0.00]	ug/L	08:03:44
2	Tl 190.801†	-61.2	-61.7	[0.00]	ug/L	08:04:04
2	U 409.014†	-4836.8	-4873.6	[0.00]	ug/L	08:03:44
2	V 292.402†	-1570.5	-1582.4	[0.00]	ug/L	08:03:44
2	Zn 213.857†	928.6	935.7	[0.00]	ug/L	08:04:04
2	SiO2†	424.7	427.9	[0.00]	ug/L	08:04:40
3	Sc Radial	7430.7	7430.7	99.4	%	08:02:52
3	Y RADIAL	6903.8	6903.8	99.70	%	08:02:52
3	Al 396.153Radial†	-62.8	-63.2	[0.00]	ug/L	08:02:52
3	Ca 317.933Radial†	34.9	35.1	[0.00]	ug/L	08:03:12
3	Fe 238.204 Radial†	33.6	33.8	[0.00]	ug/L	08:03:12
3	K 766.490 Radial†	2505.8	2520.6	[0.00]	ug/L	08:02:52
3	Mg 279.077 IEC†	2.3	2.3	[0.00]	ug/L	08:03:12
3	Na 589.592 Radial†	9.5	9.6	[0.00]	ug/L	08:02:52
3	Sr 421.552†	-46.2	-46.4	[0.00]	ug/L	08:02:52
3	Sc 361.383	719103.6	719103.6	100.06	%	08:04:10
3	Y 371.029	562324.5	562324.5	100.06	%	08:04:10
3	Ag 328.068†	612.8	612.4	[0.00]	ug/L	08:04:10
3	As 188.979†	-27.8	-27.8	[0.00]	ug/L	08:04:30
3	B 249.677†	-886.6	-886.0	[0.00]	ug/L	08:04:10
3	Ba 233.527†	5.0	5.0	[0.00]	ug/L	08:04:30
3	Be 313.107†	-4868.9	-4866.1	[0.00]	ug/L	08:04:10
3	Cd 226.502†	-266.1	-265.9	[0.00]	ug/L	08:04:30
3	Co 228.616†	-93.0	-93.0	[0.00]	ug/L	08:04:30
3	Cr 267.716†	-105.1	-105.1	[0.00]	ug/L	08:04:10
3	Cu 324.752†	5691.2	5687.9	[0.00]	ug/L	08:04:10
3	Mn 257.610†	686.5	686.1	[0.00]	ug/L	08:04:10
3	Mo 202.031†	25.0	25.0	[0.00]	ug/L	08:04:30
3	Ni 231.604†	118.4	118.3	[0.00]	ug/L	08:04:30
3	P 214.914†	318.8	318.6	[0.00]	ug/L	08:04:30
3	Pb 220.353†	-24.8	-24.7	[0.00]	ug/L	08:04:30
3	S 181.975 Axial†	79.4	79.3	[0.00]	ug/L	08:04:30
3	Sb 206.836†	56.7	56.7	[0.00]	ug/L	08:04:30
3	Se 196.026†	-32.3	-32.3	[0.00]	ug/L	08:04:30
3	Si 251.611†	396.3	396.0	[0.00]	ug/L	08:04:30
3	Sn 189.927†	18.3	18.3	[0.00]	ug/L	08:04:30
3	Ti 334.940†	-1343.5	-1342.7	[0.00]	ug/L	08:04:10
3	Tl 190.801†	-63.3	-63.2	[0.00]	ug/L	08:04:30
3	U 409.014†	-4953.4	-4950.5	[0.00]	ug/L	08:04:10
3	V 292.402†	-1535.5	-1534.6	[0.00]	ug/L	08:04:10
3	Zn 213.857†	944.6	944.1	[0.00]	ug/L	08:04:30
3	SiO2†	456.8	456.5	[0.00]	ug/L	08:04:45

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	718689.3	5223.89	0.73%	100.00	%
Sc Radial	7474.6	167.97	2.25%	100	%
Y 371.029	561999.9	3965.18	0.71%	100.00	%
Y RADIAL	6924.3	167.10	2.41%	100.0	%
Ag 328.068†	632.6	76.36	12.07%	[0.00]	ug/L
Al 396.153Radial†	-72.6	10.68	14.70%	[0.00]	ug/L
As 188.979†	-35.4	9.45	26.67%	[0.00]	ug/L
B 249.677†	-939.9	65.84	7.01%	[0.00]	ug/L

Ba 233.527†	0.5	3.89	769.35%	[0.00]	ug/L
Be 313.107†	-4881.7	46.00	0.94%	[0.00]	ug/L
Ca 317.933Radial†	29.1	7.36	25.29%	[0.00]	ug/L
Cd 226.502†	-281.1	16.12	5.73%	[0.00]	ug/L
Co 228.616†	-99.4	7.08	7.12%	[0.00]	ug/L
Cr 267.716†	-77.4	29.04	37.52%	[0.00]	ug/L
Cu 324.752†	5638.4	84.19	1.49%	[0.00]	ug/L
Fe 238.204 Radial†	34.8	1.08	3.11%	[0.00]	ug/L
K 766.490 Radial†	2407.2	108.32	4.50%	[0.00]	ug/L
Mg 279.077 IEC†	3.0	1.67	54.91%	[0.00]	ug/L
Mn 257.610†	679.6	21.90	3.22%	[0.00]	ug/L
Mo 202.031†	17.1	9.03	52.69%	[0.00]	ug/L
Na 589.592 Radial†	-135.6	143.12	105.58%	[0.00]	ug/L
Ni 231.604†	119.8	2.51	2.09%	[0.00]	ug/L
P 214.914†	314.8	3.38	1.07%	[0.00]	ug/L
Pb 220.353†	-13.3	10.92	82.37%	[0.00]	ug/L
S 181.975 Axial†	75.4	4.65	6.16%	[0.00]	ug/L
Sb 206.836†	57.3	2.49	4.36%	[0.00]	ug/L
Se 196.026†	-28.8	4.81	16.71%	[0.00]	ug/L
Si 251.611†	411.8	15.40	3.74%	[0.00]	ug/L
Sn 189.927†	12.5	5.52	44.16%	[0.00]	ug/L
Sr 421.552†	-55.9	17.09	30.60%	[0.00]	ug/L
Ti 334.940†	-1348.3	29.36	2.18%	[0.00]	ug/L
Tl 190.801†	-60.8	3.03	4.98%	[0.00]	ug/L
U 409.014†	-4848.7	116.20	2.40%	[0.00]	ug/L
V 292.402†	-1565.2	26.55	1.70%	[0.00]	ug/L
Zn 213.857†	925.1	25.93	2.80%	[0.00]	ug/L
SiO2†	436.9	17.05	3.90%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 6/30/2009 08:06:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7536.7	7536.7	101	%	08:08:52
1	Y RADIAL	6939.1	6939.1	100.2	%	08:08:52
1	K 766.490 Radial†	7002.8	4537.9	[1000]	ug/L	08:08:47
1	Sr 421.552†	34034.9	33810.4	[100]	ug/L	08:08:47
1	Sc 361.383	734393.9	734393.9	102.19	%	08:09:19
1	Y 371.029	573053.1	573053.1	101.97	%	08:09:19
1	Ag 328.068†	18107.9	17088.1	[100]	ug/L	08:09:19
1	As 188.979†	245.2	275.4	[100]	ug/L	08:09:39
1	B 249.677†	3110.2	3983.6	[100]	ug/L	08:09:19
1	Ba 233.527†	14955.4	14635.1	[100]	ug/L	08:09:19
1	Be 313.107†	222292.2	222420.4	[100]	ug/L	08:09:19
1	Cd 226.502†	7806.4	7920.5	[100]	ug/L	08:09:39
1	Co 228.616†	5943.2	5915.6	[100]	ug/L	08:09:39
1	Cr 267.716†	7405.7	7324.8	[100]	ug/L	08:09:19
1	Cu 324.752†	34513.6	28137.2	[100]	ug/L	08:09:19
1	Mn 257.610†	97154.7	94397.5	[100]	ug/L	08:09:19
1	Mo 202.031†	1505.5	1456.1	[100]	ug/L	08:09:39
1	Ni 231.604†	3998.2	3792.9	[100]	ug/L	08:09:39
1	P 214.914†	1350.2	1006.6	[500]	ug/L	08:09:39
1	Pb 220.353†	890.6	884.8	[100]	ug/L	08:09:39
1	S 181.975 Axial†	232.7	152.3	[200]	ug/L	08:09:39
1	Sb 206.836†	401.3	335.5	[100]	ug/L	08:09:39
1	Se 196.026†	174.4	199.5	[100]	ug/L	08:09:39
1	Si 251.611†	17145.7	16367.3	[500]	ug/L	08:09:19
1	Sn 189.927†	597.0	571.7	[100]	ug/L	08:09:39
1	Ti 334.940†	55327.0	55492.2	[100]	ug/L	08:09:19
1	Tl 190.801†	353.4	406.6	[100]	ug/L	08:09:39
1	U 409.014†	-1643.9	3240.0	[100]	ug/L	08:09:19
1	V 292.402†	9828.0	11183.0	[100]	ug/L	08:09:19
1	Zn 213.857†	12345.3	11156.2	[100]	ug/L	08:09:19
1	SiO2†	16831.6	16034.7	[1069.5]	ug/L	08:10:36
2	Sc Radial	7396.9	7396.9	99.0	%	08:09:02
2	Y RADIAL	6800.1	6800.1	98.21	%	08:09:02
2	K 766.490 Radial†	6887.5	4552.7	[1000]	ug/L	08:08:57
2	Sr 421.552†	34356.2	34773.1	[100]	ug/L	08:08:57
2	Sc 361.383	729336.4	729336.4	101.48	%	08:09:45
2	Y 371.029	568343.4	568343.4	101.13	%	08:09:45
2	Ag 328.068†	18043.8	17147.7	[100]	ug/L	08:09:45
2	As 188.979†	267.9	299.4	[100]	ug/L	08:10:05
2	B 249.677†	2982.8	3879.2	[100]	ug/L	08:09:45
2	Ba 233.527†	14864.7	14647.2	[100]	ug/L	08:09:45
2	Be 313.107†	220607.8	222269.0	[100]	ug/L	08:09:45
2	Cd 226.502†	7778.0	7945.6	[100]	ug/L	08:10:05
2	Co 228.616†	5930.9	5943.8	[100]	ug/L	08:10:05
2	Cr 267.716†	7358.5	7328.4	[100]	ug/L	08:09:45
2	Cu 324.752†	34059.7	27924.1	[100]	ug/L	08:09:45
2	Mn 257.610†	96466.5	94378.6	[100]	ug/L	08:09:45
2	Mo 202.031†	1502.6	1463.6	[100]	ug/L	08:10:05
2	Ni 231.604†	3991.0	3813.0	[100]	ug/L	08:10:05
2	P 214.914†	1333.3	999.1	[500]	ug/L	08:10:05
2	Pb 220.353†	883.7	884.1	[100]	ug/L	08:10:05
2	S 181.975 Axial†	238.4	159.5	[200]	ug/L	08:10:05
2	Sb 206.836†	392.3	329.4	[100]	ug/L	08:10:05
2	Se 196.026†	178.3	204.5	[100]	ug/L	08:10:05
2	Si 251.611†	17027.5	16367.1	[500]	ug/L	08:09:45
2	Sn 189.927†	595.1	573.9	[100]	ug/L	08:10:05
2	Ti 334.940†	54903.8	55450.6	[100]	ug/L	08:09:45
2	Tl 190.801†	340.2	396.0	[100]	ug/L	08:10:05
2	U 409.014†	-1533.7	3337.4	[100]	ug/L	08:09:45

2	V 292.402†	9767.9	11190.5	[100]	ug/L	08:09:45
2	Zn 213.857†	12219.7	11116.2	[100]	ug/L	08:09:45
2	SiO2†	16580.2	15901.3	[1069.5]	ug/L	08:10:41
3	Sc Radial	7592.7	7592.7	102	%	08:09:12
3	Y RADIAL	7005.7	7005.7	101.2	%	08:09:12
3	K 766.490 Radial†	7071.4	4554.3	[1000]	ug/L	08:09:07
3	Sr 421.552†	34873.0	34386.5	[100]	ug/L	08:09:07
3	Sc 361.383	738752.0	738752.0	102.79	%	08:10:10
3	Y 371.029	576233.1	576233.1	102.53	%	08:10:10
3	Ag 328.068†	18197.8	17071.0	[100]	ug/L	08:10:10
3	As 188.979†	254.2	282.7	[100]	ug/L	08:10:30
3	B 249.677†	3118.6	3973.8	[100]	ug/L	08:10:10
3	Ba 233.527†	15063.6	14654.0	[100]	ug/L	08:10:10
3	Be 313.107†	223875.9	222677.8	[100]	ug/L	08:10:10
3	Cd 226.502†	7755.4	7825.9	[100]	ug/L	08:10:30
3	Co 228.616†	5940.8	5878.9	[100]	ug/L	08:10:30
3	Cr 267.716†	7475.5	7349.9	[100]	ug/L	08:10:10
3	Cu 324.752†	34750.0	28167.8	[100]	ug/L	08:10:10
3	Mn 257.610†	97657.0	94325.2	[100]	ug/L	08:10:10
3	Mo 202.031†	1495.8	1438.1	[100]	ug/L	08:10:30
3	Ni 231.604†	4016.8	3787.9	[100]	ug/L	08:10:30
3	P 214.914†	1333.5	982.5	[500]	ug/L	08:10:30
3	Pb 220.353†	877.8	867.2	[100]	ug/L	08:10:30
3	S 181.975 Axial†	222.6	141.1	[200]	ug/L	08:10:30
3	Sb 206.836†	398.6	330.5	[100]	ug/L	08:10:30
3	Se 196.026†	170.3	194.5	[100]	ug/L	08:10:30
3	Si 251.611†	17254.1	16373.7	[500]	ug/L	08:10:10
3	Sn 189.927†	587.6	559.2	[100]	ug/L	08:10:30
3	Ti 334.940†	55848.1	55679.6	[100]	ug/L	08:10:10
3	Tl 190.801†	343.9	395.3	[100]	ug/L	08:10:30
3	U 409.014†	-1621.5	3271.3	[100]	ug/L	08:10:10
3	V 292.402†	9943.5	11238.7	[100]	ug/L	08:10:10
3	Zn 213.857†	12396.5	11134.7	[100]	ug/L	08:10:10
3	SiO2†	16720.9	15829.9	[1069.5]	ug/L	08:10:46

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	734160.8	4712.12	0.64%	102.15	%
Sc Radial	7508.7	100.86	1.34%	100	%
Y 371.029	572543.2	3969.45	0.69%	101.88	%
Y RADIAL	6915.0	104.91	1.52%	99.86	%
Ag 328.068†	17102.3	40.29	0.24%	[100]	ug/L
As 188.979†	285.9	12.31	4.31%	[100]	ug/L
B 249.677†	3945.5	57.65	1.46%	[100]	ug/L
Ba 233.527†	14645.4	9.59	0.07%	[100]	ug/L
Be 313.107†	222455.7	206.65	0.09%	[100]	ug/L
Cd 226.502†	7897.3	63.13	0.80%	[100]	ug/L
Co 228.616†	5912.7	32.55	0.55%	[100]	ug/L
Cr 267.716†	7334.4	13.58	0.19%	[100]	ug/L
Cu 324.752†	28076.4	132.76	0.47%	[100]	ug/L
K 766.490 Radial†	4548.3	9.03	0.20%	[1000]	ug/L
Mn 257.610†	94367.1	37.47	0.04%	[100]	ug/L
Mo 202.031†	1452.6	13.10	0.90%	[100]	ug/L
Ni 231.604†	3797.9	13.28	0.35%	[100]	ug/L
P 214.914†	996.1	12.30	1.24%	[500]	ug/L
Pb 220.353†	878.7	9.94	1.13%	[100]	ug/L
S 181.975 Axial†	151.0	9.23	6.12%	[200]	ug/L
Sb 206.836†	331.8	3.25	0.98%	[100]	ug/L
Se 196.026†	199.5	5.01	2.51%	[100]	ug/L
Si 251.611†	16369.4	3.77	0.02%	[500]	ug/L
Sn 189.927†	568.3	7.94	1.40%	[100]	ug/L
Sr 421.552†	34323.3	484.48	1.41%	[100]	ug/L
Ti 334.940†	55540.8	122.03	0.22%	[100]	ug/L
Tl 190.801†	399.3	6.30	1.58%	[100]	ug/L
U 409.014†	3282.9	49.72	1.51%	[100]	ug/L
V 292.402†	11204.1	30.19	0.27%	[100]	ug/L
Zn 213.857†	11135.7	20.05	0.18%	[100]	ug/L
SiO2†	15922.0	103.97	0.65%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 6/30/2009 08:12:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7331.6	7331.6	98.1	%	08:14:48
1	Y RADIAL	6711.6	6711.6	96.93	%	08:14:48
1	Al 396.153Radial†	6146.5	6339.0	[5000]	ug/L	08:14:48
1	Ca 317.933Radial†	3679.6	3722.2	[5000]	ug/L	08:14:48
1	K 766.490 Radial†	24598.6	22671.0	[5000]	ug/L	08:14:48
1	Mg 279.077 IEC†	216.5	217.7	[5000]	ug/L	08:15:08
1	Sr 421.552†	169572.9	172935.1	[500]	ug/L	08:14:48
1	Sc 361.383	769868.5	769868.5	107.12	%	08:16:07
1	Y 371.029	593513.7	593513.7	105.61	%	08:16:07
1	Ag 328.068†	87541.8	81089.5	[500]	ug/L	08:16:07
1	As 188.979†	1409.8	1351.5	[500]	ug/L	08:16:27
1	B 249.677†	19467.3	19113.1	[500]	ug/L	08:16:07
1	Ba 233.527†	73932.8	69017.4	[500]	ug/L	08:16:07
1	Be 313.107†	1136680.0	1065997.8	[500]	ug/L	08:16:07
1	Cd 226.502†	39456.0	37114.2	[500]	ug/L	08:16:27
1	Co 228.616†	29402.6	27547.4	[500]	ug/L	08:16:27
1	Cr 267.716†	37090.5	34702.2	[500]	ug/L	08:16:07
1	Cu 324.752†	149279.1	133716.9	[500]	ug/L	08:16:07
1	Mn 257.610†	473775.8	441600.6	[500]	ug/L	08:16:07
1	Mo 202.031†	7403.7	6894.4	[500]	ug/L	08:16:27
1	Ni 231.604†	19288.8	17886.7	[500]	ug/L	08:16:27
1	P 214.914†	5408.5	4734.1	[2500]	ug/L	08:16:27
1	Pb 220.353†	4336.2	4061.2	[500]	ug/L	08:16:27
1	S 181.975 Axial†	819.7	689.8	[1000]	ug/L	08:16:27
1	Sb 206.836†	1784.5	1608.6	[500]	ug/L	08:16:27
1	Se 196.026†	996.6	959.1	[500]	ug/L	08:16:27
1	Si 251.611†	85511.7	79415.3	[2500]	ug/L	08:16:07
1	Sn 189.927†	2931.4	2724.0	[500]	ug/L	08:16:27
1	Ti 334.940†	282238.5	264824.2	[500]	ug/L	08:16:07
1	Tl 190.801†	1928.3	1860.8	[500]	ug/L	08:16:27
1	U 409.014†	10443.6	14598.1	[500]	ug/L	08:16:07
1	V 292.402†	55566.5	53437.8	[500]	ug/L	08:16:07
1	Zn 213.857†	57403.7	52662.5	[500]	ug/L	08:16:07
1	SiO2†	86466.0	80281.1	[5347.5]	ug/L	08:17:27
2	Sc Radial	7012.2	7012.2	93.8	%	08:15:13
2	Y RADIAL	6406.9	6406.9	92.53	%	08:15:13
2	Al 396.153Radial†	6199.2	6680.6	[5000]	ug/L	08:15:13
2	Ca 317.933Radial†	3669.6	3882.5	[5000]	ug/L	08:15:13
2	K 766.490 Radial†	24515.2	23724.5	[5000]	ug/L	08:15:13
2	Mg 279.077 IEC†	213.8	224.8	[5000]	ug/L	08:15:33
2	Sr 421.552†	170064.4	181333.7	[500]	ug/L	08:15:13
2	Sc 361.383	741530.7	741530.7	103.18	%	08:16:34
2	Y 371.029	572044.7	572044.7	101.79	%	08:16:34
2	Ag 328.068†	87246.2	83926.1	[500]	ug/L	08:16:34
2	As 188.979†	1416.7	1408.5	[500]	ug/L	08:16:54
2	B 249.677†	19479.9	19819.7	[500]	ug/L	08:16:34
2	Ba 233.527†	73805.8	71531.8	[500]	ug/L	08:16:34
2	Be 313.107†	1135032.3	1104951.6	[500]	ug/L	08:16:34
2	Cd 226.502†	39893.2	38945.5	[500]	ug/L	08:16:54
2	Co 228.616†	29720.4	28904.3	[500]	ug/L	08:16:54
2	Cr 267.716†	37001.7	35939.3	[500]	ug/L	08:16:34
2	Cu 324.752†	148954.2	138727.6	[500]	ug/L	08:16:34
2	Mn 257.610†	472845.3	457600.6	[500]	ug/L	08:16:34
2	Mo 202.031†	7472.5	7225.2	[500]	ug/L	08:16:54
2	Ni 231.604†	19486.5	18766.4	[500]	ug/L	08:16:54
2	P 214.914†	5446.9	4964.3	[2500]	ug/L	08:16:54
2	Pb 220.353†	4388.1	4266.1	[500]	ug/L	08:16:54
2	S 181.975 Axial†	832.2	731.2	[1000]	ug/L	08:16:54
2	Sb 206.836†	1819.4	1706.1	[500]	ug/L	08:16:54

2	Se 196.026†	994.2	992.4	[500]	ug/L	08:16:54
2	Si 251.611†	85264.0	82225.8	[2500]	ug/L	08:16:34
2	Sn 189.927†	2961.9	2858.2	[500]	ug/L	08:16:54
2	Ti 334.940†	282021.6	274682.7	[500]	ug/L	08:16:34
2	Tl 190.801†	1952.3	1953.0	[500]	ug/L	08:16:54
2	U 409.014†	10246.1	14779.2	[500]	ug/L	08:16:34
2	V 292.402†	55595.3	55448.0	[500]	ug/L	08:16:34
2	Zn 213.857†	57330.7	54639.6	[500]	ug/L	08:16:34
2	SiO2†	85458.1	82388.9	[5347.5]	ug/L	08:17:32
3	Sc Radial	7281.7	7281.7	97.4	%	08:15:38
3	Y RADIAL	6673.6	6673.6	96.38	%	08:15:38
3	Al 396.153Radial†	6002.9	6234.6	[5000]	ug/L	08:15:38
3	Ca 317.933Radial†	3580.6	3646.4	[5000]	ug/L	08:15:38
3	K 766.490 Radial†	24009.6	22238.6	[5000]	ug/L	08:15:38
3	Mg 279.077 IEC†	207.3	209.8	[5000]	ug/L	08:15:58
3	Sr 421.552†	165542.3	169984.4	[500]	ug/L	08:15:38
3	Sc 361.383	732297.7	732297.7	101.89	%	08:17:02
3	Y 371.029	565284.2	565284.2	100.58	%	08:17:02
3	Ag 328.068†	86631.1	84388.6	[500]	ug/L	08:17:02
3	As 188.979†	1413.7	1422.9	[500]	ug/L	08:17:22
3	B 249.677†	19357.3	19937.5	[500]	ug/L	08:17:02
3	Ba 233.527†	73252.9	71891.1	[500]	ug/L	08:17:02
3	Be 313.107†	1126344.5	1110295.2	[500]	ug/L	08:17:02
3	Cd 226.502†	39932.3	39471.3	[500]	ug/L	08:17:22
3	Co 228.616†	29714.9	29262.1	[500]	ug/L	08:17:22
3	Cr 267.716†	36694.0	36089.5	[500]	ug/L	08:17:02
3	Cu 324.752†	147084.2	138712.4	[500]	ug/L	08:17:02
3	Mn 257.610†	469176.5	459778.1	[500]	ug/L	08:17:02
3	Mo 202.031†	7457.0	7301.3	[500]	ug/L	08:17:22
3	Ni 231.604†	19533.9	19051.1	[500]	ug/L	08:17:22
3	P 214.914†	5449.9	5033.8	[2500]	ug/L	08:17:22
3	Pb 220.353†	4412.4	4343.7	[500]	ug/L	08:17:22
3	S 181.975 Axial†	840.6	749.6	[1000]	ug/L	08:17:22
3	Sb 206.836†	1816.0	1725.0	[500]	ug/L	08:17:22
3	Se 196.026†	1002.2	1012.3	[500]	ug/L	08:17:22
3	Si 251.611†	84453.6	82472.4	[2500]	ug/L	08:17:02
3	Sn 189.927†	2978.8	2910.9	[500]	ug/L	08:17:22
3	Ti 334.940†	278860.4	275026.5	[500]	ug/L	08:17:02
3	Tl 190.801†	1948.7	1973.3	[500]	ug/L	08:17:22
3	U 409.014†	9966.0	14629.5	[500]	ug/L	08:17:02
3	V 292.402†	54895.9	55441.0	[500]	ug/L	08:17:02
3	Zn 213.857†	56933.7	54950.6	[500]	ug/L	08:17:02
3	SiO2†	86700.3	84652.2	[5347.5]	ug/L	08:17:37

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	747899.0	19578.21	2.62%	104.06	%
Sc Radial	7208.5	171.81	2.38%	96.4	%
Y 371.029	576947.5	14739.54	2.55%	102.66	%
Y RADIAL	6597.4	166.02	2.52%	95.28	%
Ag 328.068†	83134.7	1786.23	2.15%	[500]	ug/L
Al 396.153Radial†	6418.0	233.28	3.63%	[5000]	ug/L
As 188.979†	1394.3	37.77	2.71%	[500]	ug/L
B 249.677†	19623.4	445.89	2.27%	[500]	ug/L
Ba 233.527†	70813.4	1565.76	2.21%	[500]	ug/L
Be 313.107†	1093748.2	24180.62	2.21%	[500]	ug/L
Ca 317.933Radial†	3750.4	120.53	3.21%	[5000]	ug/L
Cd 226.502†	38510.3	1237.37	3.21%	[500]	ug/L
Co 228.616†	28571.3	904.57	3.17%	[500]	ug/L
Cr 267.716†	35577.0	761.31	2.14%	[500]	ug/L
Cu 324.752†	137052.3	2888.55	2.11%	[500]	ug/L
K 766.490 Radial†	22878.0	764.29	3.34%	[5000]	ug/L
Mg 279.077 IEC†	217.4	7.53	3.46%	[5000]	ug/L
Mn 257.610†	452993.1	9926.07	2.19%	[500]	ug/L
Mo 202.031†	7140.3	216.36	3.03%	[500]	ug/L
Ni 231.604†	18568.1	607.02	3.27%	[500]	ug/L
P 214.914†	4910.7	156.86	3.19%	[2500]	ug/L
Pb 220.353†	4223.7	145.95	3.46%	[500]	ug/L
S 181.975 Axial†	723.5	30.63	4.23%	[1000]	ug/L

Sb 206.836†	1679.9	62.46	3.72%	[500]	ug/L
Se 196.026†	987.9	26.86	2.72%	[500]	ug/L
Si 251.611†	81371.2	1698.29	2.09%	[2500]	ug/L
Sn 189.927†	2831.0	96.35	3.40%	[500]	ug/L
Sr 421.552†	174751.0	5888.55	3.37%	[500]	ug/L
Ti 334.940†	271511.1	5793.62	2.13%	[500]	ug/L
Tl 190.801†	1929.0	59.92	3.11%	[500]	ug/L
U 409.014†	14668.9	96.79	0.66%	[500]	ug/L
V 292.402†	54775.6	1158.59	2.12%	[500]	ug/L
Zn 213.857†	54084.3	1241.03	2.29%	[500]	ug/L
SiO2†	82440.7	2186.02	2.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 6/30/2009 08:19:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7204.7	7204.7	96.4	%	08:22:02
1	Y RADIAL	7061.7	7061.7	102.0	%	08:21:42
1	Al 396.153Radial†	12196.2	12725.7	[10000]	ug/L	08:21:42
1	Ca 317.933Radial†	7147.7	7386.4	[10000]	ug/L	08:22:02
1	Fe 238.204 Radial†	2424.5	2480.5	[10000]	ug/L	08:22:02
1	K 766.490 Radial†	45808.2	45117.1	[10000]	ug/L	08:21:42
1	Mg 279.077 IEC†	418.3	431.0	[10000]	ug/L	08:22:02
1	Na 589.592 Radial†	161229.1	167404.7	[10000]	ug/L	08:21:42
1	Sr 421.552†	336493.3	349155.2	[1000]	ug/L	08:21:42
1	Sc 361.383	731644.6	731644.6	101.80	%	08:23:01
1	Y 371.029	562448.6	562448.6	100.08	%	08:23:01
1	Ag 328.068†	173528.7	169823.4	[1000]	ug/L	08:23:01
1	As 188.979†	2839.1	2824.3	[1000]	ug/L	08:23:21
1	B 249.677†	40015.0	40246.4	[1000]	ug/L	08:23:01
1	Ba 233.527†	146287.3	143696.5	[1000]	ug/L	08:23:01
1	Be 313.107†	2249343.7	2214396.2	[1000]	ug/L	08:23:01
1	Cd 226.502†	81183.1	80026.7	[1000]	ug/L	08:23:01
1	Co 228.616†	59665.4	58708.3	[1000]	ug/L	08:23:01
1	Cr 267.716†	73671.7	72444.6	[1000]	ug/L	08:23:01
1	Cu 324.752†	290566.6	279783.1	[1000]	ug/L	08:23:01
1	Mn 257.610†	937074.5	919802.1	[1000]	ug/L	08:23:01
1	Mo 202.031†	14767.8	14489.2	[1000]	ug/L	08:23:21
1	Ni 231.604†	38890.7	38082.2	[1000]	ug/L	08:23:01
1	P 214.914†	10479.1	9978.8	[5000]	ug/L	08:23:21
1	Pb 220.353†	8695.5	8554.8	[1000]	ug/L	08:23:21
1	S 181.975 Axial†	1600.3	1496.5	[2000]	ug/L	08:23:21
1	Sb 206.836†	3574.8	3454.3	[1000]	ug/L	08:23:21
1	Se 196.026†	2002.9	1996.2	[1000]	ug/L	08:23:21
1	Si 251.611†	167224.9	163852.0	[5000]	ug/L	08:23:01
1	Sn 189.927†	5879.4	5762.8	[1000]	ug/L	08:23:21
1	Ti 334.940†	562505.4	553893.3	[1000]	ug/L	08:23:01
1	Tl 190.801†	3903.4	3895.0	[1000]	ug/L	08:23:21
1	U 409.014†	25254.0	29655.6	[1000]	ug/L	08:23:01
1	V 292.402†	112154.0	111733.3	[1000]	ug/L	08:23:01
1	Zn 213.857†	113078.1	110150.7	[1000]	ug/L	08:23:01
1	SiO2†	166605.1	163218.1	[10695]	ug/L	08:24:22
2	Sc Radial	7030.2	7030.2	94.1	%	08:22:27
2	Y RADIAL	5925.9	5925.9	85.58	%	08:22:07
2	Al 396.153Radial†	12831.1	13714.8	[10000]	ug/L	08:22:07
2	Ca 317.933Radial†	7296.2	7728.2	[10000]	ug/L	08:22:27
2	Fe 238.204 Radial†	2474.3	2595.9	[10000]	ug/L	08:22:27
2	K 766.490 Radial†	47735.1	48345.1	[10000]	ug/L	08:22:07
2	Mg 279.077 IEC†	418.7	442.2	[10000]	ug/L	08:22:27
2	Na 589.592 Radial†	168332.5	179107.6	[10000]	ug/L	08:22:07
2	Sr 421.552†	352945.4	375309.4	[1000]	ug/L	08:22:07
2	Sc 361.383	736250.1	736250.1	102.44	%	08:23:29
2	Y 371.029	566550.5	566550.5	100.81	%	08:23:29
2	Ag 328.068†	173180.3	168417.0	[1000]	ug/L	08:23:29
2	As 188.979†	2763.2	2732.7	[1000]	ug/L	08:23:49
2	B 249.677†	39944.8	39932.0	[1000]	ug/L	08:23:29
2	Ba 233.527†	145645.5	142171.1	[1000]	ug/L	08:23:29
2	Be 313.107†	2241322.6	2192745.1	[1000]	ug/L	08:23:29
2	Cd 226.502†	80530.2	78890.5	[1000]	ug/L	08:23:29
2	Co 228.616†	59248.5	57934.7	[1000]	ug/L	08:23:29
2	Cr 267.716†	73330.1	71658.4	[1000]	ug/L	08:23:29
2	Cu 324.752†	290171.2	277611.7	[1000]	ug/L	08:23:29
2	Mn 257.610†	932429.5	909509.9	[1000]	ug/L	08:23:29
2	Mo 202.031†	14414.1	14053.2	[1000]	ug/L	08:23:49
2	Ni 231.604†	38630.1	37588.9	[1000]	ug/L	08:23:29

2	P 214.914†	10255.7	9696.3	[5000]	ug/L	08:23:49
2	Pb 220.353†	8495.4	8306.1	[1000]	ug/L	08:23:49
2	S 181.975 Axial†	1560.2	1447.6	[2000]	ug/L	08:23:49
2	Sb 206.836†	3479.3	3339.0	[1000]	ug/L	08:23:49
2	Se 196.026†	1946.5	1928.8	[1000]	ug/L	08:23:49
2	Si 251.611†	166585.8	162200.7	[5000]	ug/L	08:23:29
2	Sn 189.927†	5744.7	5595.1	[1000]	ug/L	08:23:49
2	Ti 334.940†	561361.9	549320.8	[1000]	ug/L	08:23:29
2	Tl 190.801†	3783.4	3753.9	[1000]	ug/L	08:23:49
2	U 409.014†	25427.8	29670.0	[1000]	ug/L	08:23:29
2	V 292.402†	111767.7	110667.1	[1000]	ug/L	08:23:29
2	Zn 213.857†	112281.5	108678.3	[1000]	ug/L	08:23:29
2	SiO2†	169107.1	164636.8	[10695]	ug/L	08:24:27
3	Sc Radial	7179.0	7179.0	96.0	%	08:22:52
3	Y RADIAL	6782.9	6782.9	97.96	%	08:22:32
3	Al 396.153Radial†	12455.1	13040.5	[10000]	ug/L	08:22:32
3	Ca 317.933Radial†	7211.3	7479.1	[10000]	ug/L	08:22:52
3	Fe 238.204 Radial†	2448.1	2514.1	[10000]	ug/L	08:22:52
3	K 766.490 Radial†	46541.4	46050.6	[10000]	ug/L	08:22:32
3	Mg 279.077 IEC†	421.5	435.8	[10000]	ug/L	08:22:52
3	Na 589.592 Radial†	163743.5	170621.2	[10000]	ug/L	08:22:32
3	Sr 421.552†	342328.1	356479.3	[1000]	ug/L	08:22:32
3	Sc 361.383	754192.3	754192.3	104.94	%	08:23:56
3	Y 371.029	580172.7	580172.7	103.23	%	08:23:56
3	Ag 328.068†	173481.6	164682.5	[1000]	ug/L	08:23:56
3	As 188.979†	2839.1	2740.9	[1000]	ug/L	08:24:16
3	B 249.677†	40141.4	39191.7	[1000]	ug/L	08:23:56
3	Ba 233.527†	146129.4	139249.9	[1000]	ug/L	08:23:56
3	Be 313.107†	2245004.3	2144204.4	[1000]	ug/L	08:23:56
3	Cd 226.502†	80829.2	77305.3	[1000]	ug/L	08:23:56
3	Co 228.616†	59391.2	56694.9	[1000]	ug/L	08:23:56
3	Cr 267.716†	73470.2	70089.1	[1000]	ug/L	08:23:56
3	Cu 324.752†	291067.4	271727.3	[1000]	ug/L	08:23:56
3	Mn 257.610†	935327.1	890617.8	[1000]	ug/L	08:23:56
3	Mo 202.031†	14715.4	14005.6	[1000]	ug/L	08:24:16
3	Ni 231.604†	38693.3	36752.0	[1000]	ug/L	08:23:56
3	P 214.914†	10487.0	9678.6	[5000]	ug/L	08:24:16
3	Pb 220.353†	8683.7	8288.1	[1000]	ug/L	08:24:16
3	S 181.975 Axial†	1594.1	1443.7	[2000]	ug/L	08:24:16
3	Sb 206.836†	3539.1	3315.3	[1000]	ug/L	08:24:16
3	Se 196.026†	2006.3	1940.6	[1000]	ug/L	08:24:16
3	Si 251.611†	167230.5	158946.5	[5000]	ug/L	08:23:56
3	Sn 189.927†	5871.1	5582.2	[1000]	ug/L	08:24:16
3	Ti 334.940†	562636.9	537499.6	[1000]	ug/L	08:23:56
3	Tl 190.801†	3902.1	3779.2	[1000]	ug/L	08:24:16
3	U 409.014†	25678.7	29318.6	[1000]	ug/L	08:23:56
3	V 292.402†	111958.9	108253.7	[1000]	ug/L	08:23:56
3	Zn 213.857†	112557.5	106333.8	[1000]	ug/L	08:23:56
3	SiO2†	166725.6	158440.2	[10695]	ug/L	08:24:32

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	740695.7	11913.08	1.61%	103.06	%
Sc Radial	7138.0	94.18	1.32%	95.5	%
Y 371.029	569723.9	9278.37	1.63%	101.37	%
Y RADIAL	6590.2	591.92	8.98%	95.17	%
Ag 328.068†	167641.0	2656.88	1.58%	[1000]	ug/L
Al 396.153Radial†	13160.3	505.29	3.84%	[10000]	ug/L
As 188.979†	2766.0	50.67	1.83%	[1000]	ug/L
B 249.677†	39790.0	541.48	1.36%	[1000]	ug/L
Ba 233.527†	141705.8	2259.47	1.59%	[1000]	ug/L
Be 313.107†	2183781.9	35944.05	1.65%	[1000]	ug/L
Ca 317.933Radial†	7531.2	176.79	2.35%	[10000]	ug/L
Cd 226.502†	78740.8	1366.83	1.74%	[1000]	ug/L
Co 228.616†	57779.3	1015.70	1.76%	[1000]	ug/L
Cr 267.716†	71397.4	1199.28	1.68%	[1000]	ug/L
Cu 324.752†	276374.0	4168.09	1.51%	[1000]	ug/L
Fe 238.204 Radial†	2530.2	59.32	2.34%	[10000]	ug/L
K 766.490 Radial†	46504.2	1661.12	3.57%	[10000]	ug/L

Mg 279.077 IEC†	436.3	5.61	1.29%	[10000]	ug/L
Mn 257.610†	906643.3	14801.82	1.63%	[1000]	ug/L
Mo 202.031†	14182.7	266.55	1.88%	[1000]	ug/L
Na 589.592 Radial†	172377.9	6045.95	3.51%	[10000]	ug/L
Ni 231.604†	37474.4	672.45	1.79%	[1000]	ug/L
P 214.914†	9784.6	168.42	1.72%	[5000]	ug/L
Pb 220.353†	8383.0	149.05	1.78%	[1000]	ug/L
S 181.975 Axial†	1462.6	29.43	2.01%	[2000]	ug/L
Sb 206.836†	3369.5	74.35	2.21%	[1000]	ug/L
Se 196.026†	1955.2	35.97	1.84%	[1000]	ug/L
Si 251.611†	161666.4	2496.06	1.54%	[5000]	ug/L
Sn 189.927†	5646.7	100.73	1.78%	[1000]	ug/L
Sr 421.552†	360314.6	13492.36	3.74%	[1000]	ug/L
Ti 334.940†	546904.5	8459.75	1.55%	[1000]	ug/L
Tl 190.801†	3809.4	75.25	1.98%	[1000]	ug/L
U 409.014†	29548.0	198.85	0.67%	[1000]	ug/L
V 292.402†	110218.0	1782.72	1.62%	[1000]	ug/L
Zn 213.857†	108387.6	1924.98	1.78%	[1000]	ug/L
SiO2†	162098.4	3246.49	2.00%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 6/30/2009 08:26:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7395.9	7395.9	98.9	%	08:28:57
1	Y RADIAL	6757.0	6757.0	97.58	%	08:28:57
1	Al 396.153Radial†	58979.0	59679.3	[50000]	ug/L	08:28:37
1	Ca 317.933Radial†	34828.4	35170.0	[50000]	ug/L	08:28:57
1	Fe 238.204 Radial†	4716.7	4732.1	[20000]	ug/L	08:28:57
1	Mg 279.077 IEC†	1974.9	1992.8	[50000]	ug/L	08:28:57
1	Na 589.592 Radial†	312800.4	316264.9	[20000]	ug/L	08:28:37
1	Sc 361.383	728229.0	728229.0	101.33	%	08:29:54
1	Y 371.029	558499.0	558499.0	99.377	%	08:29:54
2	Sc Radial	7352.7	7352.7	98.4	%	08:29:22
2	Y RADIAL	6711.0	6711.0	96.92	%	08:29:22
2	Al 396.153Radial†	59889.8	60955.7	[50000]	ug/L	08:29:02
2	Ca 317.933Radial†	34701.3	35247.7	[50000]	ug/L	08:29:22
2	Fe 238.204 Radial†	4700.8	4744.0	[20000]	ug/L	08:29:22
2	Mg 279.077 IEC†	1971.2	2000.9	[50000]	ug/L	08:29:22
2	Na 589.592 Radial†	318315.5	323730.2	[20000]	ug/L	08:29:02
2	Sc 361.383	719163.9	719163.9	100.07	%	08:30:00
2	Y 371.029	551632.9	551632.9	98.155	%	08:30:00
3	Sc Radial	7422.8	7422.8	99.3	%	08:29:47
3	Y RADIAL	6775.3	6775.3	97.85	%	08:29:47
3	Al 396.153Radial†	60312.5	60805.9	[50000]	ug/L	08:29:27
3	Ca 317.933Radial†	34904.4	35118.8	[50000]	ug/L	08:29:47
3	Fe 238.204 Radial†	4722.7	4720.8	[20000]	ug/L	08:29:47
3	Mg 279.077 IEC†	1986.0	1996.8	[50000]	ug/L	08:29:47
3	Na 589.592 Radial†	321104.6	323480.3	[20000]	ug/L	08:29:27
3	Sc 361.383	728485.1	728485.1	101.36	%	08:30:05
3	Y 371.029	558549.8	558549.8	99.386	%	08:30:05

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	725292.7	5309.24	0.73%	100.92	%
Sc Radial	7390.4	35.39	0.48%	98.9	%
Y 371.029	556227.2	3978.89	0.72%	98.973	%
Y RADIAL	6747.8	33.13	0.49%	97.45	%
Al 396.153Radial†	60480.3	697.72	1.15%	[50000]	ug/L
Ca 317.933Radial†	35178.8	64.92	0.18%	[50000]	ug/L
Fe 238.204 Radial†	4732.3	11.57	0.24%	[20000]	ug/L
Mg 279.077 IEC†	1996.9	4.02	0.20%	[50000]	ug/L
Na 589.592 Radial†	321158.5	4239.77	1.32%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	167.4	0.00000	0.999993	
Al 396.153Radial	3	Lin Thru 0	0.0	1.214	0.00000	0.999844	
As 188.979	3	Lin Thru 0	0.0	2.771	0.00000	0.999991	
B 249.677	3	Lin Thru 0	0.0	39.68	0.00000	0.999985	
Ba 233.527	3	Lin Thru 0	0.0	141.7	0.00000	0.999996	
Be 313.107	3	Lin Thru 0	0.0	2185	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.7059	0.00000	0.999891	
Cd 226.502	3	Lin Thru 0	0.0	78.40	0.00000	0.999962	
Co 228.616	3	Lin Thru 0	0.0	57.66	0.00000	0.999988	
Cr 267.716	3	Lin Thru 0	0.0	71.36	0.00000	0.999996	
Cu 324.752	3	Lin Thru 0	0.0	276.0	0.00000	0.999993	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.2399	0.00000	0.999626	
K 766.490 Radial	3	Lin Thru 0	0.0	4.635	0.00000	0.999978	

Mg 279.077 1EC	3	Lin Thru 0	0.0	0.0401	0.00000	0.999811
Mn 257.610	3	Lin Thru 0	0.0	906.8	0.00000	0.999993
Mo 202.031	3	Lin Thru 0	0.0	14.20	0.00000	0.999994
Na 589.592 Radia	2	Lin Thru 0	0.0	16.29	0.00000	0.999581
Ni 231.604	3	Lin Thru 0	0.0	37.41	0.00000	0.999993
P 214.914	3	Lin Thru 0	0.0	1.959	0.00000	0.999998
Pb 220.353	3	Lin Thru 0	0.0	8.399	0.00000	0.999987
S 181.975 Axial	3	Lin Thru 0	0.0	0.7299	0.00000	0.999986
Sb 206.836	3	Lin Thru 0	0.0	3.367	0.00000	0.999998
Se 196.026	3	Lin Thru 0	0.0	1.960	0.00000	0.999990
Si 251.611	3	Lin Thru 0	0.0	32.38	0.00000	0.999996
Sn 189.927	3	Lin Thru 0	0.0	5.650	0.00000	0.999999
Sr 421.552	3	Lin Thru 0	0.0	358.0	0.00000	0.999921
Ti 334.940	3	Lin Thru 0	0.0	546.2	0.00000	0.999995
Tl 190.801	3	Lin Thru 0	0.0	3.820	0.00000	0.999979
U 409.014	3	Lin Thru 0	0.0	29.53	0.00000	0.999946
V 292.402	3	Lin Thru 0	0.0	110.1	0.00000	0.999996
Zn 213.857	3	Lin Thru 0	0.0	108.4	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	15.21	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 6/30/2009 08:32:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7311.1	7311.1	97.8	%			08:34:29
1	Y RADIAL	6721.5	6721.5	97.07	%			08:34:29
1	Al 396.153Radial†	6272.0	6484.9	5317.7	ug/L	5317.7	ppb	08:34:09
1	Ca 317.933Radial†	3582.0	3633.1	5146.7	ug/L	5146.7	ppb	08:34:29
1	Fe 238.204 Radial†	1260.1	1253.5	5240.1	ug/L	5240.1	ppb	08:34:29
1	K 766.490 Radial†	13670.6	11569.2	2483.4	ug/L	2483.4	ppb	08:34:09
1	Mg 279.077 IEC†	218.5	220.3	5498.7	ug/L	5498.7	ppb	08:34:29
1	Na 589.592 Radial†	42038.9	43114.8	2646.1	ug/L	2646.1	ppb	08:34:09
1	Sr 421.552†	169418.8	173264.0	483.88	ug/L	483.88	ppb	08:34:09
1	Sc 361.383	742145.3	742145.3	103.26	%			08:35:26
1	Y 371.029	574749.9	574749.9	102.27	%			08:35:26
1	Ag 328.068†	44211.4	42181.4	255.12	ug/L	255.12	ppb	08:35:26
1	As 188.979†	1339.9	1333.0	483.93	ug/L	483.93	ppb	08:35:46
1	B 249.677†	19594.8	19915.4	499.11	ug/L	499.11	ppb	08:35:26
1	Ba 233.527†	78271.1	75796.8	535.91	ug/L	535.91	ppb	08:35:26
1	Be 313.107†	582097.1	568581.3	261.42	ug/L	261.42	ppb	08:35:26
1	Cd 226.502†	39466.2	38500.0	490.79	ug/L	490.79	ppb	08:35:46
1	Co 228.616†	28280.5	27486.1	476.94	ug/L	476.94	ppb	08:35:46
1	Cr 267.716†	36963.9	35873.1	503.38	ug/L	503.38	ppb	08:35:26
1	Cu 324.752†	154059.0	143551.4	520.49	ug/L	520.49	ppb	08:35:26
1	Mn 257.610†	490018.2	473851.2	523.10	ug/L	523.10	ppb	08:35:26
1	Mo 202.031†	7718.1	7457.0	525.30	ug/L	525.30	ppb	08:35:46
1	Ni 231.604†	20442.3	19676.4	525.64	ug/L	525.64	ppb	08:35:46
1	P 214.914†	5439.5	4952.8	2430.0	ug/L	2430.0	ppb	08:35:46
1	Pb 220.353†	4408.1	4282.1	511.42	ug/L	511.42	ppb	08:35:46
1	S 181.975 Axial†	2049.7	1909.5	2614.9	ug/L	2614.9	ppb	08:35:46
1	Sb 206.836†	1869.3	1753.0	528.00	ug/L	528.00	ppb	08:35:46
1	Se 196.026†	5231.7	5095.1	2618.6	ug/L	2618.6	ppb	08:35:46
1	Si 251.611†	167612.2	161902.9	4983.0	ug/L	4983.0	ppb	08:35:26
1	Sn 189.927†	3142.3	3030.5	537.29	ug/L	537.29	ppb	08:35:46
1	Ti 334.940†	286278.1	278578.4	509.91	ug/L	509.91	ppb	08:35:26
1	Tl 190.801†	1924.1	1924.0	507.00	ug/L	507.00	ppb	08:35:46
1	U 409.014†	11414.2	15902.2	536.85	ug/L	536.85	ppb	08:35:26
1	V 292.402†	55390.3	55204.8	507.68	ug/L	507.68	ppb	08:35:26
1	Zn 213.857†	58307.0	55539.1	507.72	ug/L	507.72	ppb	08:35:26
1	SiO2†	167219.3	161497.4	10582	ug/L	10582	ppb	08:36:44
2	Sc Radial	7274.5	7274.5	97.3	%			08:34:54
2	Y RADIAL	6697.6	6697.6	96.73	%			08:34:54
2	Al 396.153Radial†	6255.2	6499.9	5329.7	ug/L	5329.7	ppb	08:34:34
2	Ca 317.933Radial†	3558.1	3626.9	5137.9	ug/L	5137.9	ppb	08:34:54
2	Fe 238.204 Radial†	1245.9	1245.3	5206.4	ug/L	5206.4	ppb	08:34:54
2	K 766.490 Radial†	13611.2	11578.5	2485.3	ug/L	2485.3	ppb	08:34:34
2	Mg 279.077 IEC†	219.7	222.7	5558.2	ug/L	5558.2	ppb	08:34:54
2	Na 589.592 Radial†	42036.0	43328.0	2659.2	ug/L	2659.2	ppb	08:34:34
2	Sr 421.552†	168803.2	173502.8	484.55	ug/L	484.55	ppb	08:34:34
2	Sc 361.383	733513.4	733513.4	102.06	%			08:35:52
2	Y 371.029	568212.8	568212.8	101.11	%			08:35:52
2	Ag 328.068†	43958.9	42437.9	256.64	ug/L	256.64	ppb	08:35:52
2	As 188.979†	1336.4	1344.8	488.20	ug/L	488.20	ppb	08:36:12
2	B 249.677†	19510.6	20056.2	502.63	ug/L	502.63	ppb	08:35:52
2	Ba 233.527†	77397.0	75832.3	536.16	ug/L	536.16	ppb	08:35:52
2	Be 313.107†	576054.7	569294.5	261.75	ug/L	261.75	ppb	08:35:52
2	Cd 226.502†	39397.2	38882.0	495.67	ug/L	495.67	ppb	08:36:12
2	Co 228.616†	28277.3	27805.3	482.49	ug/L	482.49	ppb	08:36:12
2	Cr 267.716†	36653.8	35990.4	505.02	ug/L	505.02	ppb	08:35:52
2	Cu 324.752†	152551.9	143830.4	521.50	ug/L	521.50	ppb	08:35:52
2	Mn 257.610†	485576.9	475083.9	524.45	ug/L	524.45	ppb	08:35:52
2	Mo 202.031†	7722.0	7548.8	531.76	ug/L	531.76	ppb	08:36:12
2	Ni 231.604†	20462.9	19929.6	532.41	ug/L	532.41	ppb	08:36:12

2	P 214.914†	5426.8	5002.3	2455.2 ug/L	2455.2 ppb	08:36:12
2	Pb 220.353†	4388.7	4313.2	515.16 ug/L	515.16 ppb	08:36:12
2	S 181.975 Axial†	2036.4	1919.9	2629.1 ug/L	2629.1 ppb	08:36:12
2	Sb 206.836†	1877.4	1782.2	536.82 ug/L	536.82 ppb	08:36:12
2	Se 196.026†	5200.7	5124.4	2633.4 ug/L	2633.4 ppb	08:36:12
2	Si 251.611†	165998.4	162231.9	4993.0 ug/L	4993.0 ppb	08:35:52
2	Sn 189.927†	3121.5	3045.9	540.00 ug/L	540.00 ppb	08:36:12
2	Ti 334.940†	283330.6	278952.8	510.60 ug/L	510.60 ppb	08:35:52
2	Tl 190.801†	1916.6	1938.6	510.80 ug/L	510.80 ppb	08:36:12
2	U 409.014†	11015.3	15641.4	528.02 ug/L	528.02 ppb	08:35:52
2	V 292.402†	54718.8	55178.2	507.51 ug/L	507.51 ppb	08:35:52
2	Zn 213.857†	57714.9	55623.4	508.45 ug/L	508.45 ppb	08:35:52
2	SiO2†	167334.4	163515.8	10715 ug/L	10715 ppb	08:36:49
3	Sc Radial	7288.8	7288.8	97.5 %		08:35:19
3	Y RADIAL	6706.2	6706.2	96.85 %		08:35:19
3	Al 396.153Radial†	6253.6	6485.7	5318.1 ug/L	5318.1 ppb	08:34:59
3	Ca 317.933Radial†	3567.3	3629.1	5141.1 ug/L	5141.1 ppb	08:35:19
3	Fe 238.204 Radial†	1249.8	1246.8	5212.6 ug/L	5212.6 ppb	08:35:19
3	K 766.490 Radial†	13537.7	11475.5	2463.1 ug/L	2463.1 ppb	08:34:59
3	Mg 279.077 IEC†	215.7	218.2	5446.1 ug/L	5446.1 ppb	08:35:19
3	Na 589.592 Radial†	41958.3	43163.3	2649.0 ug/L	2649.0 ppb	08:34:59
3	Sr 421.552†	169081.7	173447.1	484.39 ug/L	484.39 ppb	08:34:59
3	Sc 361.383	733570.0	733570.0	102.07 %		08:36:18
3	Y 371.029	568459.5	568459.5	101.15 %		08:36:18
3	Ag 328.068†	43827.3	42305.6	255.84 ug/L	255.84 ppb	08:36:18
3	As 188.979†	1326.6	1335.2	484.71 ug/L	484.71 ppb	08:36:38
3	B 249.677†	19479.8	20024.6	501.84 ug/L	501.84 ppb	08:36:18
3	Ba 233.527†	77507.0	75934.2	536.88 ug/L	536.88 ppb	08:36:18
3	Be 313.107†	575610.8	568816.2	261.53 ug/L	261.53 ppb	08:36:18
3	Cd 226.502†	39293.8	38777.8	494.34 ug/L	494.34 ppb	08:36:38
3	Co 228.616†	28220.0	27747.0	481.47 ug/L	481.47 ppb	08:36:38
3	Cr 267.716†	36597.3	35932.3	504.20 ug/L	504.20 ppb	08:36:18
3	Cu 324.752†	153006.8	144264.6	523.08 ug/L	523.08 ppb	08:36:18
3	Mn 257.610†	485201.7	474679.6	524.01 ug/L	524.01 ppb	08:36:18
3	Mo 202.031†	7703.1	7529.7	530.42 ug/L	530.42 ppb	08:36:38
3	Ni 231.604†	20403.2	19869.5	530.80 ug/L	530.80 ppb	08:36:38
3	P 214.914†	5408.5	4984.0	2445.5 ug/L	2445.5 ppb	08:36:38
3	Pb 220.353†	4351.6	4276.6	510.79 ug/L	510.79 ppb	08:36:38
3	S 181.975 Axial†	2025.2	1908.7	2613.8 ug/L	2613.8 ppb	08:36:38
3	Sb 206.836†	1863.8	1768.7	532.77 ug/L	532.77 ppb	08:36:38
3	Se 196.026†	5202.5	5125.8	2634.2 ug/L	2634.2 ppb	08:36:38
3	Si 251.611†	166092.4	162311.4	4995.5 ug/L	4995.5 ppb	08:36:18
3	Sn 189.927†	3112.8	3037.1	538.46 ug/L	538.46 ppb	08:36:38
3	Ti 334.940†	283620.0	279215.0	511.08 ug/L	511.08 ppb	08:36:18
3	Tl 190.801†	1917.3	1939.2	510.95 ug/L	510.95 ppb	08:36:38
3	U 409.014†	11453.0	16069.4	542.52 ug/L	542.52 ppb	08:36:18
3	V 292.402†	54718.6	55173.8	507.48 ug/L	507.48 ppb	08:36:18
3	Zn 213.857†	57781.1	55683.9	509.02 ug/L	509.02 ppb	08:36:18
3	SiO2†	166907.8	163085.1	10687 ug/L	10687 ppb	08:36:54

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	736409.6	102.47	%	0.691				0.67%
Sc Radial	7291.5	97.5	%	0.25				0.25%
Y 371.029	570474.1	101.51	%	0.659				0.65%
Y RADIAL	6708.4	96.88	%	0.174				0.18%
Ag 328.068†	42308.3	255.87	ug/L	0.764	255.87	ppb	0.764	0.30%
QC value within limits for Ag 328.068 Recovery = 102.35%								
Al 396.153Radial†	6490.2	5321.8	ug/L	6.84	5321.8	ppb	6.84	0.13%
QC value within limits for Al 396.153Radial Recovery = 106.44%								
As 188.979†	1337.7	485.61	ug/L	2.269	485.61	ppb	2.269	0.47%
QC value within limits for As 188.979 Recovery = 97.12%								
B 249.677†	19998.8	501.19	ug/L	1.848	501.19	ppb	1.848	0.37%
QC value within limits for B 249.677 Recovery = 100.24%								
Ba 233.527†	75854.4	536.31	ug/L	0.503	536.31	ppb	0.503	0.09%
QC value within limits for Ba 233.527 Recovery = 107.26%								
Be 313.107†	568897.3	261.57	ug/L	0.167	261.57	ppb	0.167	0.06%
QC value within limits for Be 313.107 Recovery = 104.63%								
Ca 317.933Radial†	3629.7	5141.9	ug/L	4.41	5141.9	ppb	4.41	0.09%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.84%
Cd 226.502†            38720.0      493.60 ug/L         2.523      493.60 ppb          2.523   0.51%
   QC value within limits for Cd 226.502  Recovery = 98.72%
Co 228.616†            27679.5      480.30 ug/L         2.955      480.30 ppb          2.955   0.62%
   QC value within limits for Co 228.616  Recovery = 96.06%
Cr 267.716†            35931.9      504.20 ug/L         0.823      504.20 ppb          0.823   0.16%
   QC value within limits for Cr 267.716  Recovery = 100.84%
Cu 324.752†           143882.1      521.69 ug/L         1.302      521.69 ppb          1.302   0.25%
   QC value within limits for Cu 324.752  Recovery = 104.34%
Fe 238.204 Radial†      1248.5      5219.7 ug/L         17.92      5219.7 ppb          17.92   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.39%
K 766.490 Radial†      11541.1      2477.3 ug/L         12.30      2477.3 ppb          12.30   0.50%
   QC value within limits for K 766.490 Radial  Recovery = 99.09%
Mg 279.077 IEC†         220.4      5501.0 ug/L         56.09      5501.0 ppb          56.09   1.02%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 110.02%
Mn 257.610†           474538.3      523.86 ug/L         0.690      523.86 ppb          0.690   0.13%
   QC value within limits for Mn 257.610  Recovery = 104.77%
Mo 202.031†             7511.8      529.16 ug/L         3.409      529.16 ppb          3.409   0.64%
   QC value within limits for Mo 202.031  Recovery = 105.83%
Na 589.592 Radial†     43202.0      2651.4 ug/L          6.86      2651.4 ppb           6.86   0.26%
   QC value within limits for Na 589.592 Radial  Recovery = 106.06%
Ni 231.604†            19825.2      529.62 ug/L         3.534      529.62 ppb          3.534   0.67%
   QC value within limits for Ni 231.604  Recovery = 105.92%
P 214.914†              4979.7      2443.5 ug/L         12.68      2443.5 ppb          12.68   0.52%
   QC value within limits for P 214.914  Recovery = 97.74%
Pb 220.353†             4290.6      512.46 ug/L         2.360      512.46 ppb          2.360   0.46%
   QC value within limits for Pb 220.353  Recovery = 102.49%
S 181.975 Axial†        1912.7      2619.3 ug/L          8.53      2619.3 ppb           8.53   0.33%
   QC value within limits for S 181.975 Axial  Recovery = 104.77%
Sb 206.836†             1768.0      532.53 ug/L         4.414      532.53 ppb          4.414   0.83%
   QC value within limits for Sb 206.836  Recovery = 106.51%
Se 196.026†             5115.1      2628.7 ug/L          8.78      2628.7 ppb           8.78   0.33%
   QC value within limits for Se 196.026  Recovery = 105.15%
Si 251.611†           162148.7      4990.5 ug/L          6.62      4990.5 ppb           6.62   0.13%
   QC value within limits for Si 251.611  Recovery = 99.81%
Sn 189.927†             3037.8      538.58 ug/L         1.361      538.58 ppb          1.361   0.25%
   QC value within limits for Sn 189.927  Recovery = 107.72%
Sr 421.552†           173404.7      484.27 ug/L         0.349      484.27 ppb          0.349   0.07%
   QC value within limits for Sr 421.552  Recovery = 96.85%
Ti 334.940†           278915.4      510.53 ug/L         0.584      510.53 ppb          0.584   0.11%
   QC value within limits for Ti 334.940  Recovery = 102.11%
Tl 190.801†             1933.9      509.58 ug/L         2.243      509.58 ppb          2.243   0.44%
   QC value within limits for Tl 190.801  Recovery = 101.92%
U 409.014†             15871.0      535.80 ug/L         7.305      535.80 ppb          7.305   1.36%
   QC value within limits for U 409.014  Recovery = 107.16%
V 292.402†             55185.6      507.56 ug/L         0.110      507.56 ppb          0.110   0.02%
   QC value within limits for V 292.402  Recovery = 101.51%
Zn 213.857†            55615.4      508.40 ug/L         0.654      508.40 ppb          0.654   0.13%
   QC value within limits for Zn 213.857  Recovery = 101.68%
SiO2†                 162699.4       10661 ug/L          69.7       10661 ppb           69.7   0.65%
   QC value within limits for SiO2  Recovery = 99.69%
QC Failed.  Continue with analysis.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 6/30/2009 08:39:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Units	Sample Conc.	Units	Analysis Time
1	Sc Radial	7601.5	7601.5	102	%			08:40:58
1	Y RADIAL	7021.8	7021.8	101.4	%			08:40:58
1	Al 396.153Radial†	-76.5	-2.6	-2.1567	ug/L	-2.1567	ppb	08:40:58
1	Ca 317.933Radial†	33.4	3.8	5.3776	ug/L	5.3776	ppb	08:41:18
1	Fe 238.204 Radial†	37.6	2.2	9.2474	ug/L	9.2474	ppb	08:41:18
1	K 766.490 Radial†	2581.0	130.8	28.208	ug/L	28.208	ppb	08:40:58
1	Mg 279.077 IEC†	0.5	-2.6	-64.453	ug/L	-64.453	ppb	08:41:18
1	Na 589.592 Radial†	-143.1	-5.2	-0.3171	ug/L	-0.3171	ppb	08:40:58
1	Sr 421.552†	-51.1	5.6	0.0157	ug/L	0.0157	ppb	08:40:58
1	Sc 361.383	721142.6	721142.6	100.34	%			08:42:15
1	Y 371.029	564655.5	564655.5	100.47	%			08:42:15
1	Ag 328.068†	614.3	-20.5	-0.1160	ug/L	-0.1160	ppb	08:42:15
1	As 188.979†	-23.4	12.1	4.3570	ug/L	4.3570	ppb	08:42:35
1	B 249.677†	-582.3	359.6	9.0628	ug/L	9.0628	ppb	08:42:15
1	Ba 233.527†	20.3	19.7	0.1392	ug/L	0.1392	ppb	08:42:35
1	Be 313.107†	-4751.1	146.8	0.0669	ug/L	0.0669	ppb	08:42:15
1	Cd 226.502†	-282.9	-0.8	-0.0112	ug/L	-0.0112	ppb	08:42:35
1	Co 228.616†	-100.1	-0.3	-0.0047	ug/L	-0.0047	ppb	08:42:35
1	Cr 267.716†	-50.9	26.7	0.3755	ug/L	0.3755	ppb	08:42:15
1	Cu 324.752†	5612.3	-45.2	-0.1632	ug/L	-0.1632	ppb	08:42:15
1	Mn 257.610†	701.4	19.4	0.0238	ug/L	0.0238	ppb	08:42:35
1	Mo 202.031†	22.6	5.3	0.3767	ug/L	0.3767	ppb	08:42:35
1	Ni 231.604†	146.7	26.4	0.7070	ug/L	0.7070	ppb	08:42:35
1	P 214.914†	307.0	-8.8	-4.4889	ug/L	-4.4889	ppb	08:42:35
1	Pb 220.353†	-28.4	-15.0	-1.7872	ug/L	-1.7872	ppb	08:42:35
1	S 181.975 Axial†	75.0	-0.7	-0.9099	ug/L	-0.9099	ppb	08:42:35
1	Sb 206.836†	58.3	0.8	0.2323	ug/L	0.2323	ppb	08:42:35
1	Se 196.026†	-30.1	-1.2	-0.5968	ug/L	-0.5968	ppb	08:42:35
1	Si 251.611†	433.8	20.5	0.6297	ug/L	0.6297	ppb	08:42:35
1	Sn 189.927†	7.7	-4.9	-0.8615	ug/L	-0.8615	ppb	08:42:35
1	Ti 334.940†	-1422.8	-69.7	-0.1260	ug/L	-0.1260	ppb	08:42:15
1	Tl 190.801†	-44.6	16.3	4.2752	ug/L	4.2752	ppb	08:42:35
1	U 409.014†	-4967.7	-102.1	-3.4593	ug/L	-3.4593	ppb	08:42:15
1	V 292.402†	-1558.5	12.0	0.1047	ug/L	0.1047	ppb	08:42:15
1	Zn 213.857†	954.8	26.4	0.2410	ug/L	0.2410	ppb	08:42:35
1	SiO2†	430.2	-8.2	-0.5457	ug/L	-0.5457	ppb	08:43:31
2	Sc Radial	7362.4	7362.4	98.5	%			08:41:23
2	Y RADIAL	6811.5	6811.5	98.37	%			08:41:23
2	Al 396.153Radial†	-79.9	-8.5	-7.0111	ug/L	-7.0111	ppb	08:41:23
2	Ca 317.933Radial†	28.2	-0.4	-0.6266	ug/L	-0.6266	ppb	08:41:43
2	Fe 238.204 Radial†	33.9	-0.4	-1.6120	ug/L	-1.6120	ppb	08:41:43
2	K 766.490 Radial†	2372.6	1.6	0.3348	ug/L	0.3348	ppb	08:41:23
2	Mg 279.077 IEC†	2.7	-0.3	-6.6483	ug/L	-6.6483	ppb	08:41:43
2	Na 589.592 Radial†	-194.1	-61.5	-3.7725	ug/L	-3.7725	ppb	08:41:23
2	Sr 421.552†	-59.5	-4.6	-0.0127	ug/L	-0.0127	ppb	08:41:23
2	Sc 361.383	709208.7	709208.7	98.681	%			08:42:40
2	Y 371.029	555090.4	555090.4	98.771	%			08:42:40
2	Ag 328.068†	564.1	-61.0	-0.3641	ug/L	-0.3641	ppb	08:42:40
2	As 188.979†	-35.6	-0.6	-0.2289	ug/L	-0.2289	ppb	08:43:00
2	B 249.677†	-626.2	305.3	7.6930	ug/L	7.6930	ppb	08:42:40
2	Ba 233.527†	3.8	3.3	0.0236	ug/L	0.0236	ppb	08:43:00
2	Be 313.107†	-4739.3	79.1	0.0362	ug/L	0.0362	ppb	08:42:40
2	Cd 226.502†	-277.4	0.0	0.0008	ug/L	0.0008	ppb	08:43:00
2	Co 228.616†	-78.7	19.7	0.3421	ug/L	0.3421	ppb	08:43:00
2	Cr 267.716†	5.5	82.9	1.1624	ug/L	1.1624	ppb	08:42:40
2	Cu 324.752†	5692.5	130.2	0.4717	ug/L	0.4717	ppb	08:42:40
2	Mn 257.610†	663.0	-7.7	-0.0086	ug/L	-0.0086	ppb	08:43:00
2	Mo 202.031†	20.5	3.7	0.2595	ug/L	0.2595	ppb	08:43:00
2	Ni 231.604†	145.0	27.2	0.7260	ug/L	0.7260	ppb	08:43:00

2	P 214.914†	321.5	11.0	5.4982	ug/L	5.4982 ppb	08:43:00
2	Pb 220.353†	5.3	18.6	2.2131	ug/L	2.2131 ppb	08:43:00
2	S 181.975 Axial†	80.8	6.5	8.8568	ug/L	8.8568 ppb	08:43:00
2	Sb 206.836†	62.7	6.3	1.8523	ug/L	1.8523 ppb	08:43:00
2	Se 196.026†	-21.3	7.2	3.6577	ug/L	3.6577 ppb	08:43:00
2	Si 251.611†	440.4	34.5	1.0656	ug/L	1.0656 ppb	08:43:00
2	Sn 189.927†	10.4	-2.0	-0.3500	ug/L	-0.3500 ppb	08:43:00
2	Ti 334.940†	-1330.5	-0.0	0.0000	ug/L	0.0000 ppb	08:42:40
2	Tl 190.801†	-57.5	2.5	0.6582	ug/L	0.6582 ppb	08:43:00
2	U 409.014†	-4821.6	-37.3	-1.2666	ug/L	-1.2666 ppb	08:42:40
2	V 292.402†	-1545.3	-0.8	-0.0067	ug/L	-0.0067 ppb	08:42:40
2	Zn 213.857†	934.9	22.3	0.2010	ug/L	0.2010 ppb	08:43:00
2	SiO2†	467.2	36.6	2.4059	ug/L	2.4059 ppb	08:43:36
3	Sc Radial	7531.9	7531.9	101	%		08:41:48
3	Y RADIAL	6932.5	6932.5	100.1	%		08:41:48
3	Al 396.153Radial†	-64.4	8.8	7.2185	ug/L	7.2185 ppb	08:41:48
3	Ca 317.933Radial†	28.1	-1.2	-1.7339	ug/L	-1.7339 ppb	08:42:08
3	Fe 238.204 Radial†	34.0	-1.0	-4.2524	ug/L	-4.2524 ppb	08:42:08
3	K 766.490 Radial†	2517.4	91.0	19.640	ug/L	19.640 ppb	08:41:48
3	Mg 279.077 IEC†	4.8	1.7	42.633	ug/L	42.633 ppb	08:42:08
3	Na 589.592 Radial†	-181.8	-44.8	-2.7524	ug/L	-2.7524 ppb	08:41:48
3	Sr 421.552†	-7.9	48.0	0.1342	ug/L	0.1342 ppb	08:41:48
3	Sc 361.383	717543.5	717543.5	99.841	%		08:43:06
3	Y 371.029	562243.3	562243.3	100.04	%		08:43:06
3	Ag 328.068†	733.3	101.9	0.6059	ug/L	0.6059 ppb	08:43:06
3	As 188.979†	-22.7	12.7	4.5745	ug/L	4.5745 ppb	08:43:26
3	B 249.677†	-621.9	317.0	7.9909	ug/L	7.9909 ppb	08:43:06
3	Ba 233.527†	9.8	9.3	0.0660	ug/L	0.0660 ppb	08:43:26
3	Be 313.107†	-4668.4	205.9	0.0939	ug/L	0.0939 ppb	08:43:06
3	Cd 226.502†	-260.8	19.9	0.2548	ug/L	0.2548 ppb	08:43:26
3	Co 228.616†	-104.9	-5.6	-0.0962	ug/L	-0.0962 ppb	08:43:26
3	Cr 267.716†	-107.3	-30.0	-0.4214	ug/L	-0.4214 ppb	08:43:06
3	Cu 324.752†	5580.9	-48.6	-0.1764	ug/L	-0.1764 ppb	08:43:06
3	Mn 257.610†	660.2	-18.4	-0.0216	ug/L	-0.0216 ppb	08:43:26
3	Mo 202.031†	18.5	1.4	0.0960	ug/L	0.0960 ppb	08:43:26
3	Ni 231.604†	145.2	25.7	0.6864	ug/L	0.6864 ppb	08:43:26
3	P 214.914†	316.1	1.8	0.9886	ug/L	0.9886 ppb	08:43:26
3	Pb 220.353†	-18.2	-5.0	-0.5942	ug/L	-0.5942 ppb	08:43:26
3	S 181.975 Axial†	74.8	-0.5	-0.6830	ug/L	-0.6830 ppb	08:43:26
3	Sb 206.836†	45.9	-11.3	-3.3175	ug/L	-3.3175 ppb	08:43:26
3	Se 196.026†	-20.8	7.9	4.0410	ug/L	4.0410 ppb	08:43:26
3	Si 251.611†	442.8	31.7	0.9554	ug/L	0.9554 ppb	08:43:26
3	Sn 189.927†	18.7	6.3	1.1088	ug/L	1.1088 ppb	08:43:26
3	Ti 334.940†	-1425.7	-79.7	-0.1466	ug/L	-0.1466 ppb	08:43:06
3	Tl 190.801†	-50.9	9.8	2.5513	ug/L	2.5513 ppb	08:43:26
3	U 409.014†	-4789.5	51.6	1.7472	ug/L	1.7472 ppb	08:43:06
3	V 292.402†	-1556.1	6.6	0.0661	ug/L	0.0661 ppb	08:43:06
3	Zn 213.857†	957.3	33.7	0.3060	ug/L	0.3060 ppb	08:43:26
3	SiO2†	457.2	21.1	1.3325	ug/L	1.3325 ppb	08:43:41

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	715964.9	99.621	%	0.8518				0.86%
Sc Radial	7498.6	100	%	1.6				1.64%
Y 371.029	560663.1	99.762	%	0.8851				0.89%
Y RADIAL	6922.0	99.97	%	1.524				1.52%
Ag 328.068†	6.8	0.0419	ug/L	0.50392	0.0419	ppb	0.50392	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-0.8	-0.6498	ug/L	7.23350	-0.6498	ppb	7.23350	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	8.1	2.9008	ug/L	2.71265	2.9008	ppb	2.71265	93.51%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	327.3	8.2489	ug/L	0.72044	8.2489	ppb	0.72044	8.73%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.8	0.0763	ug/L	0.05850	0.0763	ppb	0.05850	76.71%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	143.9	0.0657	ug/L	0.02888	0.0657	ppb	0.02888	43.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.7	1.0057	ug/L	3.82643	1.0057	ppb	3.82643	380.47%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                6.4      0.0815 ug/L       0.15021      0.0815 ppb        0.15021 184.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.6      0.0804 ug/L       0.23125      0.0804 ppb        0.23125 287.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               26.5      0.3722 ug/L       0.79191      0.3722 ppb        0.79191 212.78%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               12.1      0.0440 ug/L       0.37040      0.0440 ppb        0.37040 841.44%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.3      1.1277 ug/L       7.15474      1.1277 ppb        7.15474 634.48%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         74.4     16.061 ug/L       14.2773     16.061 ppb        14.2773  88.89%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4     -9.4894 ug/L      53.59919     -9.4894 ppb       53.59919 564.83%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -2.2     -0.0022 ug/L       0.02340     -0.0022 ppb        0.02340 >999.9%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                3.5      0.2441 ug/L       0.14099      0.2441 ppb        0.14099  57.77%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -37.2     -2.2807 ug/L       1.77531     -2.2807 ppb        1.77531  77.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               26.4      0.7064 ug/L       0.01981      0.7064 ppb        0.01981   2.80%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 1.3      0.6660 ug/L       5.00137      0.6660 ppb        5.00137 750.97%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -0.5     -0.0561 ug/L       2.05369     -0.0561 ppb        2.05369 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           1.8      2.4213 ug/L       5.57447      2.4213 ppb        5.57447 230.23%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               -1.4     -0.4109 ug/L       2.64424     -0.4109 ppb        2.64424 643.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.6      2.3673 ug/L       2.57415      2.3673 ppb        2.57415 108.74%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               28.9      0.8836 ug/L       0.22666      0.8836 ppb        0.22666  25.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -0.2     -0.0342 ug/L       1.02240     -0.0342 ppb        1.02240 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               16.4      0.0457 ug/L       0.07791      0.0457 ppb        0.07791 170.38%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -49.8     -0.0909 ug/L       0.07939     -0.0909 ppb        0.07939  87.37%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                9.5      2.4949 ug/L       1.80916      2.4949 ppb        1.80916  72.52%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -29.3     -0.9929 ug/L       2.61405     -0.9929 ppb        2.61405 263.27%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 5.9      0.0547 ug/L       0.05658      0.0547 ppb        0.05658 103.45%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               27.5      0.2493 ug/L       0.05300      0.2493 ppb        0.05300  21.26%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     16.5      1.0642 ug/L       1.49397      1.0642 ppb        1.49397 140.38%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 6/30/2009 08:45:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7469.8	7469.8	99.9	%			08:47:44
1	Y RADIAL	6890.6	6890.6	99.51	%			08:47:44
1	Al 396.153Radial†	175.4	248.2	203.90	ug/L	203.90	ppb	08:47:44
1	Ca 317.933Radial†	103.5	74.5	105.52	ug/L	105.52	ppb	08:48:04
1	Fe 238.204 Radial†	63.0	28.3	117.94	ug/L	117.94	ppb	08:48:04
1	K 766.490 Radial†	3099.8	694.7	149.59	ug/L	149.59	ppb	08:47:44
1	Mg 279.077 IEC†	18.2	15.1	377.15	ug/L	377.15	ppb	08:48:04
1	Na 589.592 Radial†	2396.5	2533.6	155.49	ug/L	155.49	ppb	08:47:44
1	Sr 421.552†	1663.1	1720.0	4.8031	ug/L	4.8031	ppb	08:47:44
1	Sc 361.383	725321.6	725321.6	100.92	%			08:49:01
1	Y 371.029	567853.4	567853.4	101.04	%			08:49:01
1	Ag 328.068†	1530.3	883.7	5.2825	ug/L	5.2825	ppb	08:49:01
1	As 188.979†	12.1	47.4	17.111	ug/L	17.111	ppb	08:49:21
1	B 249.677†	1246.2	2174.8	54.774	ug/L	54.774	ppb	08:49:01
1	Ba 233.527†	767.7	760.2	5.3731	ug/L	5.3731	ppb	08:49:21
1	Be 313.107†	6713.9	11534.3	5.2910	ug/L	5.2910	ppb	08:49:01
1	Cd 226.502†	144.1	423.9	5.3963	ug/L	5.3963	ppb	08:49:21
1	Co 228.616†	193.0	290.7	5.0579	ug/L	5.0579	ppb	08:49:21
1	Cr 267.716†	317.5	392.0	5.4832	ug/L	5.4832	ppb	08:49:01
1	Cu 324.752†	8440.7	2725.1	9.8818	ug/L	9.8818	ppb	08:49:01
1	Mn 257.610†	10489.3	9713.8	10.720	ug/L	10.720	ppb	08:49:01
1	Mo 202.031†	172.5	153.8	10.834	ug/L	10.834	ppb	08:49:21
1	Ni 231.604†	340.9	218.0	5.8229	ug/L	5.8229	ppb	08:49:21
1	P 214.914†	620.8	300.4	151.53	ug/L	151.53	ppb	08:49:21
1	Pb 220.353†	78.8	91.3	10.926	ug/L	10.926	ppb	08:49:21
1	S 181.975 Axial†	179.1	102.0	139.75	ug/L	139.75	ppb	08:49:21
1	Sb 206.836†	84.0	25.9	7.9773	ug/L	7.9773	ppb	08:49:21
1	Se 196.026†	0.8	29.5	15.487	ug/L	15.487	ppb	08:49:21
1	Si 251.611†	3837.4	3390.5	104.32	ug/L	104.32	ppb	08:49:01
1	Sn 189.927†	78.5	65.3	11.575	ug/L	11.575	ppb	08:49:21
1	Ti 334.940†	1430.2	2765.4	5.0414	ug/L	5.0414	ppb	08:49:01
1	Tl 190.801†	24.6	85.1	22.333	ug/L	22.333	ppb	08:49:21
1	U 409.014†	-3151.4	1726.2	58.424	ug/L	58.424	ppb	08:49:01
1	V 292.402†	-1092.4	482.8	4.6171	ug/L	4.6171	ppb	08:49:01
1	Zn 213.857†	2104.5	1160.2	10.630	ug/L	10.630	ppb	08:49:21
1	SiO2†	3737.0	3266.0	213.91	ug/L	213.91	ppb	08:50:18
2	Sc Radial	7389.0	7389.0	98.9	%			08:48:09
2	Y RADIAL	6822.2	6822.2	98.53	%			08:48:09
2	Al 396.153Radial†	187.2	262.0	215.31	ug/L	215.31	ppb	08:48:09
2	Ca 317.933Radial†	104.7	76.8	108.86	ug/L	108.86	ppb	08:48:29
2	Fe 238.204 Radial†	62.6	28.5	119.06	ug/L	119.06	ppb	08:48:29
2	K 766.490 Radial†	3147.0	776.2	167.20	ug/L	167.20	ppb	08:48:09
2	Mg 279.077 IEC†	15.7	12.9	321.01	ug/L	321.01	ppb	08:48:29
2	Na 589.592 Radial†	2342.4	2505.1	153.74	ug/L	153.74	ppb	08:48:09
2	Sr 421.552†	1719.8	1795.5	5.0140	ug/L	5.0140	ppb	08:48:09
2	Sc 361.383	733226.2	733226.2	102.02	%			08:49:27
2	Y 371.029	573027.7	573027.7	101.96	%			08:49:27
2	Ag 328.068†	1568.7	904.9	5.4068	ug/L	5.4068	ppb	08:49:27
2	As 188.979†	19.6	54.7	19.748	ug/L	19.748	ppb	08:49:47
2	B 249.677†	1211.3	2127.2	53.574	ug/L	53.574	ppb	08:49:27
2	Ba 233.527†	742.7	727.5	5.1428	ug/L	5.1428	ppb	08:49:47
2	Be 313.107†	6763.7	11511.4	5.2808	ug/L	5.2808	ppb	08:49:27
2	Cd 226.502†	135.2	413.6	5.2649	ug/L	5.2649	ppb	08:49:47
2	Co 228.616†	208.3	303.6	5.2795	ug/L	5.2795	ppb	08:49:47
2	Cr 267.716†	250.3	322.7	4.5115	ug/L	4.5115	ppb	08:49:27
2	Cu 324.752†	8539.6	2731.8	9.9063	ug/L	9.9063	ppb	08:49:27
2	Mn 257.610†	10566.6	9677.5	10.681	ug/L	10.681	ppb	08:49:27
2	Mo 202.031†	166.3	145.9	10.280	ug/L	10.280	ppb	08:49:47
2	Ni 231.604†	323.5	197.3	5.2697	ug/L	5.2697	ppb	08:49:47

2	P 214.914†	614.1	287.1	144.74	ug/L	144.74 ppb	08:49:47
2	Pb 220.353†	84.8	96.4	11.526	ug/L	11.526 ppb	08:49:47
2	S 181.975 Axial†	160.4	81.8	112.05	ug/L	112.05 ppb	08:49:47
2	Sb 206.836†	89.6	30.6	9.3585	ug/L	9.3585 ppb	08:49:47
2	Se 196.026†	8.6	37.2	19.421	ug/L	19.421 ppb	08:49:47
2	Si 251.611†	3808.8	3321.5	102.20	ug/L	102.20 ppb	08:49:27
2	Sn 189.927†	77.2	63.1	11.195	ug/L	11.195 ppb	08:49:47
2	Ti 334.940†	1503.2	2821.7	5.1427	ug/L	5.1427 ppb	08:49:27
2	Tl 190.801†	30.6	90.8	23.822	ug/L	23.822 ppb	08:49:47
2	U 409.014†	-3028.0	1880.8	63.661	ug/L	63.661 ppb	08:49:27
2	V 292.402†	-1064.8	521.6	4.9718	ug/L	4.9718 ppb	08:49:27
2	Zn 213.857†	2100.2	1133.4	10.389	ug/L	10.389 ppb	08:49:47
2	SiO2†	3824.9	3312.2	216.97	ug/L	216.97 ppb	08:50:23
3	Sc Radial	7545.0	7545.0	101	%		08:48:34
3	Y RADIAL	6987.4	6987.4	100.9	%		08:48:34
3	Al 396.153Radial†	179.1	250.1	205.50	ug/L	205.50 ppb	08:48:34
3	Ca 317.933Radial†	97.6	67.6	95.785	ug/L	95.785 ppb	08:48:54
3	Fe 238.204 Radial†	60.5	25.2	105.16	ug/L	105.16 ppb	08:48:54
3	K 766.490 Radial†	3097.9	661.8	142.50	ug/L	142.50 ppb	08:48:34
3	Mg 279.077 IEC†	15.1	11.9	296.23	ug/L	296.23 ppb	08:48:54
3	Na 589.592 Radial†	2493.3	2605.6	159.91	ug/L	159.91 ppb	08:48:34
3	Sr 421.552†	1679.3	1719.5	4.8017	ug/L	4.8017 ppb	08:48:34
3	Sc 361.383	735021.6	735021.6	102.27	%		08:49:52
3	Y 371.029	575191.2	575191.2	102.35	%		08:49:52
3	Ag 328.068†	1514.9	848.6	5.0767	ug/L	5.0767 ppb	08:49:52
3	As 188.979†	13.6	48.8	17.600	ug/L	17.600 ppb	08:50:12
3	B 249.677†	1366.1	2275.7	57.317	ug/L	57.317 ppb	08:49:52
3	Ba 233.527†	773.0	755.3	5.3414	ug/L	5.3414 ppb	08:50:12
3	Be 313.107†	6813.5	11543.9	5.2957	ug/L	5.2957 ppb	08:49:52
3	Cd 226.502†	136.9	415.0	5.2844	ug/L	5.2844 ppb	08:50:12
3	Co 228.616†	211.0	305.8	5.3190	ug/L	5.3190 ppb	08:50:12
3	Cr 267.716†	318.4	388.7	5.4401	ug/L	5.4401 ppb	08:49:52
3	Cu 324.752†	8436.2	2610.3	9.4650	ug/L	9.4650 ppb	08:49:52
3	Mn 257.610†	10583.1	9668.4	10.669	ug/L	10.669 ppb	08:49:52
3	Mo 202.031†	172.2	151.2	10.654	ug/L	10.654 ppb	08:50:12
3	Ni 231.604†	340.6	213.2	5.6963	ug/L	5.6963 ppb	08:50:12
3	P 214.914†	625.1	296.4	149.59	ug/L	149.59 ppb	08:50:12
3	Pb 220.353†	81.2	92.7	11.086	ug/L	11.086 ppb	08:50:12
3	S 181.975 Axial†	161.5	82.5	113.02	ug/L	113.02 ppb	08:50:12
3	Sb 206.836†	96.1	36.7	11.181	ug/L	11.181 ppb	08:50:12
3	Se 196.026†	-0.5	28.3	14.812	ug/L	14.812 ppb	08:50:12
3	Si 251.611†	3835.0	3338.0	102.70	ug/L	102.70 ppb	08:49:52
3	Sn 189.927†	80.7	66.4	11.763	ug/L	11.763 ppb	08:50:12
3	Ti 334.940†	1516.6	2831.1	5.1624	ug/L	5.1624 ppb	08:49:52
3	Tl 190.801†	19.2	79.6	20.887	ug/L	20.887 ppb	08:50:12
3	U 409.014†	-3277.7	1643.9	55.640	ug/L	55.640 ppb	08:49:52
3	V 292.402†	-957.8	628.7	5.9348	ug/L	5.9348 ppb	08:49:52
3	Zn 213.857†	2101.3	1129.5	10.352	ug/L	10.352 ppb	08:50:12
3	SiO2†	3842.2	3319.9	217.46	ug/L	217.46 ppb	08:50:28

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	731189.8	101.74	%	0.718				0.71%
Sc Radial	7467.9	99.9	%	1.04				1.04%
Y 371.029	572024.1	101.78	%	0.671				0.66%
Y RADIAL	6900.1	99.65	%	1.199				1.20%
Ag 328.068†	879.1	5.2553	ug/L	0.16669	5.2553	ppb	0.16669	3.17%
QC value within limits for Ag 328.068 Recovery = 105.11%								
Al 396.153Radial†	253.4	208.24	ug/L	6.175	208.24	ppb	6.175	2.97%
QC value within limits for Al 396.153Radial Recovery = 104.12%								
As 188.979†	50.3	18.153	ug/L	1.4027	18.153	ppb	1.4027	7.73%
QC value within limits for As 188.979 Recovery = 121.02%								
B 249.677†	2192.5	55.222	ug/L	1.9115	55.222	ppb	1.9115	3.46%
QC value within limits for B 249.677 Recovery = 110.44%								
Ba 233.527†	747.6	5.2858	ug/L	0.12480	5.2858	ppb	0.12480	2.36%
QC value within limits for Ba 233.527 Recovery = 105.72%								
Be 313.107†	11529.8	5.2891	ug/L	0.00762	5.2891	ppb	0.00762	0.14%
QC value within limits for Be 313.107 Recovery = 105.78%								
Ca 317.933Radial†	73.0	103.39	ug/L	6.794	103.39	ppb	6.794	6.57%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.39%
Cd 226.502†              417.5      5.3152 ug/L       0.07090      5.3152 ppb        0.07090   1.33%
   QC value within limits for Cd 226.502  Recovery = 106.30%
Co 228.616†              300.0      5.2188 ug/L       0.14074      5.2188 ppb        0.14074   2.70%
   QC value within limits for Co 228.616  Recovery = 104.38%
Cr 267.716|              367.8      5.1449 ug/L       0.54900      5.1449 ppb        0.54900  10.67%
   QC value within limits for Cr 267.716  Recovery = 102.90%
Cu 324.752†             2689.1      9.7511 ug/L       0.24804      9.7511 ppb        0.24804   2.54%
   QC value within limits for Cu 324.752  Recovery = 97.51%
Fe 238.204 Radial†        27.3      114.05 ug/L         7.726      114.05 ppb          7.726   6.77%
   QC value within limits for Fe 238.204 Radial  Recovery = 114.05%
K 766.490 Radial†        710.9      153.10 ug/L        12.717      153.10 ppb         12.717   8.31%
   QC value within limits for K 766.490 Radial  Recovery = 102.07%
Mg 279.077 IEC†           13.3      331.46 ug/L        41.459      331.46 ppb         41.459  12.51%
   QC value within limits for Mg 279.077 IEC  Recovery = 110.49%
Mn 257.610†             9686.5      10.690 ug/L        0.0263      10.690 ppb         0.0263   0.25%
   QC value within limits for Mn 257.610  Recovery = 106.90%
Mo 202.031†              150.3      10.589 ug/L        0.2827      10.589 ppb         0.2827   2.67%
   QC value within limits for Mo 202.031  Recovery = 105.89%
Na 589.592 Radial†      2548.1      156.38 ug/L         3.178      156.38 ppb          3.178   2.03%
   QC value within limits for Na 589.592 Radial  Recovery = 104.25%
Ni 231.604†              209.5      5.5963 ug/L       0.28988      5.5963 ppb        0.28988   5.18%
   QC value within limits for Ni 231.604  Recovery = 111.93%
P 214.914†               294.6      148.62 ug/L         3.496      148.62 ppb          3.496   2.35%
   QC value within limits for P 214.914  Recovery = 99.08%
Pb 220.353†               93.5      11.179 ug/L        0.3107      11.179 ppb         0.3107   2.78%
   QC value within limits for Pb 220.353  Recovery = 111.79%
S 181.975 Axial†          88.8      121.61 ug/L        15.720      121.61 ppb         15.720  12.93%
   QC value within limits for S 181.975 Axial  Recovery = 121.61%
Sb 206.836†               31.1      9.5055 ug/L       1.60681      9.5055 ppb        1.60681  16.90%
   QC value within limits for Sb 206.836  Recovery = 95.06%
Se 196.026†               31.7      16.573 ug/L        2.4893      16.573 ppb         2.4893  15.02%
   QC value within limits for Se 196.026  Recovery = 110.49%
Si 251.611†             3350.0      103.07 ug/L         1.109      103.07 ppb          1.109   1.08%
   QC value within limits for Si 251.611  Recovery = 103.07%
Sn 189.927†               64.9      11.511 ug/L        0.2890      11.511 ppb         0.2890   2.51%
   QC value within limits for Sn 189.927  Recovery = 115.11%
Sr 421.552†             1745.0      4.8729 ug/L       0.12215      4.8729 ppb        0.12215   2.51%
   QC value within limits for Sr 421.552  Recovery = 97.46%
Ti 334.940†             2806.1      5.1155 ug/L       0.06491      5.1155 ppb        0.06491   1.27%
   QC value within limits for Ti 334.940  Recovery = 102.31%
Tl 190.801†               85.1      22.347 ug/L        1.4678      22.347 ppb         1.4678   6.57%
   QC value within limits for Tl 190.801  Recovery = 111.74%
U 409.014†              1750.3      59.242 ug/L        4.0728      59.242 ppb         4.0728   6.87%
   QC value within limits for U 409.014  Recovery = 118.48%
V 292.402†               544.3      5.1746 ug/L       0.68186      5.1746 ppb        0.68186  13.18%
   QC value within limits for V 292.402  Recovery = 103.49%
Zn 213.857†             1141.0      10.457 ug/L        0.1509      10.457 ppb         0.1509   1.44%
   QC value within limits for Zn 213.857  Recovery = 104.57%
SiO2†                   3299.4      216.11 ug/L         1.925      216.11 ppb          1.925   0.89%
   QC value within limits for SiO2  Recovery = 101.46%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 6/30/2009 08:52:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6850.8	6850.8	91.7	%			08:54:37
1	Y RADIAL	6235.8	6235.8	90.06	%			08:54:37
1	Al 396.153Radial†	583718.5	636936.7	524500	ug/L	524500	ppb	08:54:32
1	Ca 317.933Radial†	312430.1	340846.7	482850	ug/L	482850	ppb	08:54:32
1	Fe 238.204 Radial†	40162.7	43784.6	182510	ug/L	182510	ppb	08:54:37
1	K 766.490 Radial†	2341.7	147.7	-18.935	ug/L	-18.935	ppb	08:54:37
1	Mg 279.077 IEC†	17585.8	19183.9	478110	ug/L	478110	ppb	08:54:37
1	Na 589.592 Radial†	330.1	495.8	30.426	ug/L	30.426	ppb	08:54:37
1	Sr 421.552†	1325.2	1501.7	-0.5494	ug/L	-0.5494	ppb	08:54:37
1	Sc 361.383	638864.5	638864.5	88.893	%			08:55:04
1	Y 371.029	490311.2	490311.2	87.244	%			08:55:04
1	Ag 328.068†	-7196.6	-8728.4	-0.7953	ug/L	-0.7953	ppb	08:55:04
1	As 188.979†	-92.4	-68.5	11.625	ug/L	11.625	ppb	08:55:24
1	B 249.677†	-106.4	820.2	8.2059	ug/L	8.2059	ppb	08:55:04
1	Ba 233.527†	-509.4	-573.6	-4.8606	ug/L	-4.8606	ppb	08:55:24
1	Be 313.107†	-4943.1	-679.0	-0.3804	ug/L	-0.3804	ppb	08:55:04
1	Cd 226.502†	1055.1	1468.1	-2.5471	ug/L	-2.5471	ppb	08:55:24
1	Co 228.616†	-33.7	61.5	-1.5195	ug/L	-1.5195	ppb	08:55:24
1	Cr 267.716†	-157.6	-99.9	2.3562	ug/L	2.3562	ppb	08:55:24
1	Cu 324.752†	2925.6	-2347.3	2.0463	ug/L	2.0463	ppb	08:55:04
1	Mn 257.610†	56.7	-615.8	13.039	ug/L	13.039	ppb	08:55:04
1	Mo 202.031†	-211.7	-255.3	-6.0630	ug/L	-6.0630	ppb	08:55:24
1	Ni 231.604†	274.2	188.7	5.0434	ug/L	5.0434	ppb	08:55:24
1	P 214.914†	243.2	-41.2	10.354	ug/L	10.354	ppb	08:55:24
1	Pb 220.353†	-657.8	-726.7	-1.6856	ug/L	-1.6856	ppb	08:55:24
1	S 181.975 Axial†	106.7	44.7	-41.972	ug/L	-41.972	ppb	08:55:24
1	Sb 206.836†	107.0	63.1	8.2049	ug/L	8.2049	ppb	08:55:24
1	Se 196.026†	-1143.6	-1257.7	0.0601	ug/L	0.0601	ppb	08:55:24
1	Si 251.611†	-128.9	-556.8	-16.030	ug/L	-16.030	ppb	08:55:24
1	Sn 189.927†	-312.0	-363.4	-1.2012	ug/L	-1.2012	ppb	08:55:24
1	Ti 334.940†	-15732.9	-16350.4	-1.7855	ug/L	-1.7855	ppb	08:55:04
1	Tl 190.801†	-98.6	-50.2	-0.5835	ug/L	-0.5835	ppb	08:55:24
1	U 409.014†	-3610.2	787.5	4.2387	ug/L	4.2387	ppb	08:55:04
1	V 292.402†	68.5	1642.2	-2.7310	ug/L	-2.7310	ppb	08:55:24
1	Zn 213.857†	3606.0	3131.4	-6.7355	ug/L	-6.7355	ppb	08:55:24
1	SiO2†	-207.4	-670.2	-41.439	ug/L	-41.439	ppb	08:56:21
2	Sc Radial	6902.1	6902.1	92.3	%			08:54:48
2	Y RADIAL	6270.0	6270.0	90.55	%			08:54:48
2	Al 396.153Radial†	588201.4	637059.3	524600	ug/L	524600	ppb	08:54:43
2	Ca 317.933Radial†	313676.9	339664.1	481170	ug/L	481170	ppb	08:54:43
2	Fe 238.204 Radial†	40118.0	43410.6	180960	ug/L	180960	ppb	08:54:48
2	K 766.490 Radial†	2274.2	55.7	-39.051	ug/L	-39.051	ppb	08:54:48
2	Mg 279.077 IEC†	17568.0	19022.0	474070	ug/L	474070	ppb	08:54:48
2	Na 589.592 Radial†	396.1	564.6	34.648	ug/L	34.648	ppb	08:54:48
2	Sr 421.552†	1347.8	1515.4	-0.4946	ug/L	-0.4946	ppb	08:54:48
2	Sc 361.383	652326.9	652326.9	90.766	%			08:55:30
2	Y 371.029	500307.2	500307.2	89.023	%			08:55:30
2	Ag 328.068†	-7238.1	-8607.1	-0.5407	ug/L	-0.5407	ppb	08:55:30
2	As 188.979†	-93.3	-67.4	11.741	ug/L	11.741	ppb	08:55:50
2	B 249.677†	-18.8	919.2	10.806	ug/L	10.806	ppb	08:55:30
2	Ba 233.527†	-527.7	-581.9	-4.9115	ug/L	-4.9115	ppb	08:55:50
2	Be 313.107†	-4881.7	-496.6	-0.2943	ug/L	-0.2943	ppb	08:55:30
2	Cd 226.502†	1039.2	1426.0	-2.9018	ug/L	-2.9018	ppb	08:55:50
2	Co 228.616†	-27.1	69.6	-1.3609	ug/L	-1.3609	ppb	08:55:50
2	Cr 267.716†	-169.0	-108.8	2.2016	ug/L	2.2016	ppb	08:55:50
2	Cu 324.752†	2941.1	-2398.1	1.7719	ug/L	1.7719	ppb	08:55:30
2	Mn 257.610†	102.2	-567.0	12.975	ug/L	12.975	ppb	08:55:30
2	Mo 202.031†	-222.9	-262.7	-6.6896	ug/L	-6.6896	ppb	08:55:50
2	Ni 231.604†	294.4	204.6	5.4673	ug/L	5.4673	ppb	08:55:50

2	P 214.914†	245.8	-44.0	10.245	ug/L	10.245	ppb	08:55:50
2	Pb 220.353†	-685.3	-741.8	-3.3156	ug/L	-3.3156	ppb	08:55:50
2	S 181.975 Axial†	135.4	73.8	-2.1013	ug/L	-2.1013	ppb	08:55:50
2	Sb 206.836†	100.3	53.2	5.2286	ug/L	5.2286	ppb	08:55:50
2	Se 196.026†	-1149.2	-1237.4	5.2343	ug/L	5.2343	ppb	08:55:50
2	Si 251.611†	-174.6	-604.1	-17.479	ug/L	-17.479	ppb	08:55:50
2	Sn 189.927†	-317.5	-362.3	-1.2801	ug/L	-1.2801	ppb	08:55:50
2	Ti 334.940†	-15508.9	-15738.4	-0.7613	ug/L	-0.7613	ppb	08:55:30
2	Tl 190.801†	-102.2	-51.8	-0.9939	ug/L	-0.9939	ppb	08:55:50
2	U 409.014†	-3768.6	696.7	1.3570	ug/L	1.3570	ppb	08:55:30
2	V 292.402†	97.5	1672.6	-2.3186	ug/L	-2.3186	ppb	08:55:50
2	Zn 213.857†	3582.3	3021.6	-7.4489	ug/L	-7.4489	ppb	08:55:50
2	SiO2†	-193.6	-650.2	-40.093	ug/L	-40.093	ppb	08:56:26
3	Sc Radial	7020.0	7020.0	93.9	%			08:54:58
3	Y RADIAL	6403.5	6403.5	92.48	%			08:54:58
3	Al 396.153Radial†	587631.3	625753.0	515290	ug/L	515290	ppb	08:54:53
3	Ca 317.933Radial†	313618.8	333896.4	473000	ug/L	473000	ppb	08:54:53
3	Fe 238.204 Radial†	40809.0	43416.6	180980	ug/L	180980	ppb	08:54:58
3	K 766.490 Radial†	2309.7	52.0	-38.307	ug/L	-38.307	ppb	08:54:58
3	Mg 279.077 IEC†	17948.0	19107.1	476190	ug/L	476190	ppb	08:54:58
3	Na 589.592 Radial†	337.3	494.7	30.360	ug/L	30.360	ppb	08:54:58
3	Sr 421.552†	1390.4	1536.3	-0.3561	ug/L	-0.3561	ppb	08:54:58
3	Sc 361.383	643963.2	643963.2	89.602	%			08:55:55
3	Y 371.029	493367.8	493367.8	87.788	%			08:55:55
3	Ag 328.068†	-7239.8	-8712.5	-1.0341	ug/L	-1.0341	ppb	08:55:55
3	As 188.979†	-89.2	-64.1	12.933	ug/L	12.933	ppb	08:56:15
3	B 249.677†	-136.4	787.7	7.4900	ug/L	7.4900	ppb	08:55:55
3	Ba 233.527†	-542.4	-605.8	-5.0801	ug/L	-5.0801	ppb	08:56:15
3	Be 313.107†	-4938.6	-630.0	-0.3576	ug/L	-0.3576	ppb	08:55:55
3	Cd 226.502†	1053.5	1456.9	-2.5114	ug/L	-2.5114	ppb	08:56:15
3	Co 228.616†	-14.3	83.5	-1.1097	ug/L	-1.1097	ppb	08:56:15
3	Cr 267.716†	-159.7	-100.9	2.3163	ug/L	2.3163	ppb	08:56:15
3	Cu 324.752†	2865.6	-2440.4	1.6203	ug/L	1.6203	ppb	08:55:55
3	Mn 257.610†	344.3	-295.4	13.236	ug/L	13.236	ppb	08:55:55
3	Mo 202.031†	-176.1	-213.7	-3.2346	ug/L	-3.2346	ppb	08:56:15
3	Ni 231.604†	257.8	167.9	4.4876	ug/L	4.4876	ppb	08:56:15
3	P 214.914†	234.9	-52.6	2.7037	ug/L	2.7037	ppb	08:56:15
3	Pb 220.353†	-706.7	-775.4	-9.1286	ug/L	-9.1286	ppb	08:56:15
3	S 181.975 Axial†	131.0	70.8	-4.3212	ug/L	-4.3212	ppb	08:56:15
3	Sb 206.836†	92.7	46.2	3.4672	ug/L	3.4672	ppb	08:56:15
3	Se 196.026†	-1149.1	-1253.7	-3.6228	ug/L	-3.6228	ppb	08:56:15
3	Si 251.611†	-167.3	-598.5	-17.391	ug/L	-17.391	ppb	08:56:15
3	Sn 189.927†	-303.9	-351.6	-0.2390	ug/L	-0.2390	ppb	08:56:15
3	Ti 334.940†	-15801.5	-16286.9	-2.2375	ug/L	-2.2375	ppb	08:55:55
3	Tl 190.801†	-103.1	-54.4	-1.9044	ug/L	-1.9044	ppb	08:56:15
3	U 409.014†	-3992.1	393.4	-8.9157	ug/L	-8.9157	ppb	08:55:55
3	V 292.402†	102.0	1679.0	-2.2042	ug/L	-2.2042	ppb	08:56:15
3	Zn 213.857†	3614.0	3108.3	-6.7189	ug/L	-6.7189	ppb	08:56:15
3	SiO2†	-215.1	-677.0	-42.041	ug/L	-42.041	ppb	08:56:31

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	645051.5	89.754	%	0.9457				1.05%
Sc Radial	6924.3	92.6	%	1.16				1.25%
Y 371.029	494662.1	88.018	%	0.9114				1.04%
Y RADIAL	6303.1	91.03	%	1.280				1.41%
Ag 328.068†	-8682.7	-0.7900	ug/L	0.24674	-0.7900	ppb	0.24674	31.23%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	633249.7	521470	ug/L	5346.6	521470	ppb	5346.6	1.03%
QC value within limits for Al 396.153Radial Recovery = 104.29%								
As 188.979†	-66.7	12.100	ug/L	0.7241	12.100	ppb	0.7241	5.98%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	842.4	8.8340	ug/L	1.74505	8.8340	ppb	1.74505	19.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-587.1	-4.9508	ug/L	0.11490	-4.9508	ppb	0.11490	2.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-601.9	-0.3441	ug/L	0.04461	-0.3441	ppb	0.04461	12.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	338135.7	479010	ug/L	5267.9	479010	ppb	5267.9	1.10%

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   QC value within limits for Ca 317.933Radial  Recovery = 95.80%
Cd 226.502†            1450.3     -2.6535 ug/L       0.21582     -2.6535 ppb        0.21582   8.13%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              71.5     -1.3300 ug/L       0.20665     -1.3300 ppb        0.20665  15.54%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -103.2      2.2914 ug/L       0.08023      2.2914 ppb        0.08023   3.50%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -2395.2      1.8128 ug/L       0.21594      1.8128 ppb        0.21594  11.91%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    43537.2      181480 ug/L         893.0      181480 ppb          893.0   0.49%
   QC value within limits for Fe 238.204 Radial  Recovery = 90.74%
K 766.490 Radial†         85.1     -32.097 ug/L       11.4050     -32.097 ppb        11.4050  35.53%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       19104.3      476120 ug/L        2018.8      476120 ppb         2018.8   0.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 95.22%
Mn 257.610†            -492.7      13.083 ug/L        0.1364      13.083 ppb         0.1364   1.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -243.9     -5.3291 ug/L       1.84072     -5.3291 ppb        1.84072  34.54%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       518.3      31.811 ug/L        2.4568      31.811 ppb         2.4568   7.72%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              187.1      4.9994 ug/L       0.49137      4.9994 ppb        0.49137   9.83%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -45.9      7.7676 ug/L       4.38582      7.7676 ppb        4.38582  56.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -748.0     -4.7099 ug/L       3.91250     -4.7099 ppb        3.91250  83.07%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          63.1     -16.132 ug/L       22.4062     -16.132 ppb        22.4062 138.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               54.2      5.6336 ug/L       2.39467      5.6336 ppb        2.39467  42.51%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†           -1249.6      0.5572 ug/L       4.44942      0.5572 ppb        4.44942 798.53%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -586.5     -16.967 ug/L        0.8126     -16.967 ppb         0.8126   4.79%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -359.1     -0.9068 ug/L       0.57964     -0.9068 ppb        0.57964  63.92%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†            1517.8     -0.4667 ug/L       0.09963     -0.4667 ppb        0.09963  21.35%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†          -16125.2     -1.5947 ug/L       0.75634     -1.5947 ppb        0.75634  47.43%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -52.1     -1.1606 ug/L       0.67608     -1.1606 ppb        0.67608  58.25%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               625.9     -1.1067 ug/L       6.91461     -1.1067 ppb        6.91461 624.82%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†             1664.6     -2.4180 ug/L       0.27710     -2.4180 ppb        0.27710  11.46%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            3087.1     -6.9678 ug/L       0.41678     -6.9678 ppb        0.41678   5.98%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                  -665.8     -41.191 ug/L        0.9975     -41.191 ppb         0.9975   2.42%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 6/30/2009 08:58:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6855.2	6855.2	91.7	%			09:00:40
1	Y RADIAL	6208.8	6208.8	89.67	%			09:00:40
1	Al 396.153Radial†	587975.9	641176.3	527970	ug/L	527970	ppb	09:00:35
1	Ca 317.933Radial†	311516.7	339635.4	481130	ug/L	481130	ppb	09:00:35
1	Fe 238.204 Radial†	39507.6	43042.6	179440	ug/L	179440	ppb	09:00:40
1	K 766.490 Radial†	24540.8	24351.0	5189.4	ug/L	5189.4	ppb	09:00:35
1	Mg 279.077 IEC†	17320.4	18882.3	470600	ug/L	470600	ppb	09:00:40
1	Na 589.592 Radial†	81859.5	89391.6	5486.2	ug/L	5486.2	ppb	09:00:35
1	Sr 421.552†	160589.6	175155.9	484.49	ug/L	484.49	ppb	09:00:35
1	Sc 361.383	652496.2	652496.2	90.790	%			09:01:08
1	Y 371.029	498677.7	498677.7	88.733	%			09:01:08
1	Ag 328.068†	35600.4	38579.2	282.44	ug/L	282.44	ppb	09:01:08
1	As 188.979†	1196.4	1353.2	526.01	ug/L	526.01	ppb	09:01:13
1	B 249.677†	18992.0	21858.6	536.23	ug/L	536.23	ppb	09:01:08
1	Ba 233.527†	64009.1	70502.1	497.80	ug/L	497.80	ppb	09:01:08
1	Be 313.107†	497779.3	553158.8	254.33	ug/L	254.33	ppb	09:01:08
1	Cd 226.502†	35153.6	39000.9	476.84	ug/L	476.84	ppb	09:01:13
1	Co 228.616†	24397.7	26972.2	465.48	ug/L	465.48	ppb	09:01:13
1	Cr 267.716†	31670.4	34960.6	494.20	ug/L	494.20	ppb	09:01:13
1	Cu 324.752†	143721.4	152662.9	563.58	ug/L	563.58	ppb	09:01:08
1	Mn 257.610†	400655.3	440620.6	499.38	ug/L	499.38	ppb	09:01:08
1	Mo 202.031†	6383.3	7013.7	505.46	ug/L	505.46	ppb	09:01:13
1	Ni 231.604†	16114.7	17629.7	470.94	ug/L	470.94	ppb	09:01:13
1	P 214.914†	4855.3	5033.1	2499.9	ug/L	2499.9	ppb	09:01:13
1	Pb 220.353†	2927.1	3237.3	472.24	ug/L	472.24	ppb	09:01:13
1	S 181.975 Axial†	1913.5	2032.2	2680.3	ug/L	2680.3	ppb	09:01:13
1	Sb 206.836†	1774.0	1896.7	559.70	ug/L	559.70	ppb	09:01:13
1	Se 196.026†	3495.6	3879.0	2612.1	ug/L	2612.1	ppb	09:01:13
1	Si 251.611†	159246.7	174989.8	5388.0	ug/L	5388.0	ppb	09:01:08
1	Sn 189.927†	2332.9	2557.1	515.29	ug/L	515.29	ppb	09:01:13
1	Ti 334.940†	244564.5	270722.8	523.29	ug/L	523.29	ppb	09:01:08
1	Tl 190.801†	1581.3	1802.5	487.68	ug/L	487.68	ppb	09:01:13
1	U 409.014†	10317.9	16213.3	526.01	ug/L	526.01	ppb	09:01:08
1	V 292.402†	51266.1	58032.1	516.45	ug/L	516.45	ppb	09:01:13
1	Zn 213.857†	53333.6	57819.0	494.77	ug/L	494.77	ppb	09:01:13
1	SiO2†	156907.4	172388.1	11300	ug/L	11300	ppb	09:01:40
2	Sc Radial	6964.5	6964.5	93.2	%			09:00:51
2	Y RADIAL	6360.1	6360.1	91.85	%			09:00:51
2	Al 396.153Radial†	584733.7	627632.3	516820	ug/L	516820	ppb	09:00:45
2	Ca 317.933Radial†	310333.5	333033.2	471780	ug/L	471780	ppb	09:00:45
2	Fe 238.204 Radial†	40096.1	42997.9	179250	ug/L	179250	ppb	09:00:51
2	K 766.490 Radial†	24603.7	23998.5	5115.2	ug/L	5115.2	ppb	09:00:45
2	Mg 279.077 IEC†	17606.9	18893.4	470880	ug/L	470880	ppb	09:00:51
2	Na 589.592 Radial†	81588.7	87699.8	5382.4	ug/L	5382.4	ppb	09:00:45
2	Sr 421.552†	159721.7	171475.5	474.30	ug/L	474.30	ppb	09:00:45
2	Sc 361.383	640008.8	640008.8	89.052	%			09:01:19
2	Y 371.029	489123.1	489123.1	87.033	%			09:01:19
2	Ag 328.068†	34867.9	38521.8	282.23	ug/L	282.23	ppb	09:01:19
2	As 188.979†	1221.0	1406.6	545.22	ug/L	545.22	ppb	09:01:24
2	B 249.677†	18525.2	21742.5	533.29	ug/L	533.29	ppb	09:01:19
2	Ba 233.527†	62881.8	70611.7	498.59	ug/L	498.59	ppb	09:01:19
2	Be 313.107†	488771.8	553741.5	254.60	ug/L	254.60	ppb	09:01:19
2	Cd 226.502†	35071.1	39663.7	485.32	ug/L	485.32	ppb	09:01:24
2	Co 228.616†	24242.5	27322.3	471.56	ug/L	471.56	ppb	09:01:24
2	Cr 267.716†	31487.6	35436.0	500.88	ug/L	500.88	ppb	09:01:24
2	Cu 324.752†	140491.7	152124.9	561.62	ug/L	561.62	ppb	09:01:19
2	Mn 257.610†	393408.5	441093.3	499.87	ug/L	499.87	ppb	09:01:19
2	Mo 202.031†	6298.7	7055.9	508.42	ug/L	508.42	ppb	09:01:24
2	Ni 231.604†	16045.8	17898.6	478.12	ug/L	478.12	ppb	09:01:24

2	P 214.914†	4819.0	5096.7	2529.1 ug/L	2529.1 ppb	09:01:24
2	Pb 220.353†	2892.3	3261.1	472.94 ug/L	472.94 ppb	09:01:24
2	S 181.975 Axial†	1952.4	2117.1	2798.6 ug/L	2798.6 ppb	09:01:24
2	Sb 206.836†	1748.6	1906.3	562.68 ug/L	562.68 ppb	09:01:24
2	Se 196.026†	3502.5	3961.8	2652.9 ug/L	2652.9 ppb	09:01:24
2	Si 251.611†	155984.1	174748.5	5380.5 ug/L	5380.5 ppb	09:01:19
2	Sn 189.927†	2266.7	2532.8	510.03 ug/L	510.03 ppb	09:01:24
2	Ti 334.940†	239914.7	270757.3	522.82 ug/L	522.82 ppb	09:01:19
2	Tl 190.801†	1494.2	1738.7	470.66 ug/L	470.66 ppb	09:01:24
2	U 409.014†	9585.9	15613.1	505.69 ug/L	505.69 ppb	09:01:19
2	V 292.402†	51169.7	59025.5	525.50 ug/L	525.50 ppb	09:01:24
2	Zn 213.857†	52846.7	58418.3	500.27 ug/L	500.27 ppb	09:01:24
2	SiO2†	158025.2	177015.4	11605 ug/L	11605 ppb	09:01:45
3	Sc Radial	6904.4	6904.4	92.4 %		09:01:01
3	Y RADIAL	6308.2	6308.2	91.10 %		09:01:01
3	Al 396.153Radial†	574321.0	621827.5	512040 ug/L	512040 ppb	09:00:56
3	Ca 317.933Radial†	304252.1	329351.6	466560 ug/L	466560 ppb	09:00:56
3	Fe 238.204 Radial†	39631.2	42869.6	178720 ug/L	178720 ppb	09:01:01
3	K 766.490 Radial†	24062.9	23643.1	5039.3 ug/L	5039.3 ppb	09:00:56
3	Mg 279.077 IEC†	17393.5	18827.0	469220 ug/L	469220 ppb	09:01:01
3	Na 589.592 Radial†	79837.6	86567.1	5312.9 ug/L	5312.9 ppb	09:00:56
3	Sr 421.552†	156550.0	169535.4	468.93 ug/L	468.93 ppb	09:00:56
3	Sc 361.383	645704.5	645704.5	89.845 %		09:01:30
3	Y 371.029	493775.8	493775.8	87.860 %		09:01:30
3	Ag 328.068†	35088.0	38421.5	281.49 ug/L	281.49 ppb	09:01:30
3	As 188.979†	1180.9	1349.8	524.64 ug/L	524.64 ppb	09:01:35
3	B 249.677†	18741.7	21800.0	534.82 ug/L	534.82 ppb	09:01:30
3	Ba 233.527†	63400.4	70566.1	498.25 ug/L	498.25 ppb	09:01:30
3	Be 313.107†	493451.6	554108.9	254.77 ug/L	254.77 ppb	09:01:30
3	Cd 226.502†	34757.3	38967.1	476.49 ug/L	476.49 ppb	09:01:35
3	Co 228.616†	24041.0	26857.8	463.49 ug/L	463.49 ppb	09:01:35
3	Cr 267.716†	31321.8	34939.5	493.89 ug/L	493.89 ppb	09:01:35
3	Cu 324.752†	141805.9	152196.0	561.85 ug/L	561.85 ppb	09:01:30
3	Mn 257.610†	397141.2	441351.0	500.12 ug/L	500.12 ppb	09:01:30
3	Mo 202.031†	6256.8	6946.9	500.71 ug/L	500.71 ppb	09:01:35
3	Ni 231.604†	15872.8	17547.1	468.74 ug/L	468.74 ppb	09:01:35
3	P 214.914†	4818.5	5048.3	2503.0 ug/L	2503.0 ppb	09:01:35
3	Pb 220.353†	2896.5	3237.1	469.18 ug/L	469.18 ppb	09:01:35
3	S 181.975 Axial†	1916.4	2057.6	2718.1 ug/L	2718.1 ppb	09:01:35
3	Sb 206.836†	1759.5	1901.1	561.12 ug/L	561.12 ppb	09:01:35
3	Se 196.026†	3380.6	3791.5	2564.0 ug/L	2564.0 ppb	09:01:35
3	Si 251.611†	157500.7	174891.4	5385.2 ug/L	5385.2 ppb	09:01:30
3	Sn 189.927†	2251.2	2493.2	502.44 ug/L	502.44 ppb	09:01:35
3	Ti 334.940†	242241.8	270971.0	522.90 ug/L	522.90 ppb	09:01:30
3	Tl 190.801†	1495.1	1724.9	467.00 ug/L	467.00 ppb	09:01:35
3	U 409.014†	9825.0	15784.2	511.57 ug/L	511.57 ppb	09:01:30
3	V 292.402†	50585.3	57868.2	514.95 ug/L	514.95 ppb	09:01:35
3	Zn 213.857†	52327.3	57316.8	490.27 ug/L	490.27 ppb	09:01:35
3	SiO2†	157730.3	175121.9	11481 ug/L	11481 ppb	09:01:51

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	646069.8	89.896	%	0.8699				0.97%
Sc Radial	6908.0	92.4	%	0.73				0.79%
Y 371.029	493858.9	87.875	%	0.8501				0.97%
Y RADIAL	6292.4	90.87	%	1.110				1.22%
Ag 328.068†	38507.5	282.05	ug/L	0.500	282.05	ppb	0.500	0.18%
QC value within limits for Ag 328.068 Recovery = 112.82%								
Al 396.153Radial†	630212.0	518940	ug/L	8176.2	518940	ppb	8176.2	1.58%
QC value within limits for Al 396.153Radial Recovery = 103.79%								
As 188.979†	1369.9	531.96	ug/L	11.511	531.96	ppb	11.511	2.16%
QC value within limits for As 188.979 Recovery = 106.39%								
B 249.677†	21800.4	534.78	ug/L	1.473	534.78	ppb	1.473	0.28%
QC value within limits for B 249.677 Recovery = 106.96%								
Ba 233.527†	70560.0	498.22	ug/L	0.399	498.22	ppb	0.399	0.08%
QC value within limits for Ba 233.527 Recovery = 99.64%								
Be 313.107†	553669.7	254.57	ug/L	0.220	254.57	ppb	0.220	0.09%
QC value within limits for Be 313.107 Recovery = 101.83%								
Ca 317.933Radial†	334006.7	473160	ug/L	7381.4	473160	ppb	7381.4	1.56%

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   QC value within limits for Ca 317.933Radial  Recovery = 94.63%
Cd 226.502†            39210.6      479.55 ug/L         5.000      479.55 ppb          5.000   1.04%
   QC value within limits for Cd 226.502  Recovery = 95.91%
Co 228.616†            27050.7      466.84 ug/L         4.202      466.84 ppb          4.202   0.90%
   QC value within limits for Co 228.616  Recovery = 93.37%
Cr 267.716†            35112.0      496.32 ug/L         3.947      496.32 ppb          3.947   0.80%
   QC value within limits for Cr 267.716  Recovery = 99.26%
Cu 324.752†           152327.9      562.35 ug/L         1.072      562.35 ppb          1.072   0.19%
   QC value within limits for Cu 324.752  Recovery = 112.47%
Fe 238.204 Radial†     42970.0      179130 ug/L         374.5      179130 ppb          374.5   0.21%
   QC value within limits for Fe 238.204 Radial  Recovery = 89.57%
K 766.490 Radial†      23997.5      5114.6 ug/L         75.05      5114.6 ppb          75.05   1.47%
   QC value within limits for K 766.490 Radial  Recovery = 102.29%
Mg 279.077 IEC†        18867.5      470230 ug/L         887.1      470230 ppb          887.1   0.19%
   QC value within limits for Mg 279.077 IEC  Recovery = 94.05%
Mn 257.610†           441021.6      499.79 ug/L         0.377      499.79 ppb          0.377   0.08%
   QC value within limits for Mn 257.610  Recovery = 99.96%
Mo 202.031†             7005.5      504.86 ug/L         3.890      504.86 ppb          3.890   0.77%
   QC value within limits for Mo 202.031  Recovery = 100.97%
Na 589.592 Radial†     87886.2      5393.8 ug/L         87.24      5393.8 ppb          87.24   1.62%
   QC value within limits for Na 589.592 Radial  Recovery = 107.88%
Ni 231.604†            17691.8      472.60 ug/L         4.909      472.60 ppb          4.909   1.04%
   QC value within limits for Ni 231.604  Recovery = 94.52%
P 214.914†              5059.4      2510.7 ug/L         16.01      2510.7 ppb          16.01   0.64%
   QC value within limits for P 214.914  Recovery = 100.43%
Pb 220.353†             3245.2      471.45 ug/L         1.999      471.45 ppb          1.999   0.42%
   QC value within limits for Pb 220.353  Recovery = 94.29%
S 181.975 Axial†        2069.0      2732.3 ug/L         60.46      2732.3 ppb          60.46   2.21%
   QC value within limits for S 181.975 Axial  Recovery = 109.29%
Sb 206.836†             1901.4      561.17 ug/L         1.489      561.17 ppb          1.489   0.27%
   QC value within limits for Sb 206.836  Recovery = 112.23%
Se 196.026†             3877.5      2609.7 ug/L         44.55      2609.7 ppb          44.55   1.71%
   QC value within limits for Se 196.026  Recovery = 104.39%
Si 251.611†           174876.6      5384.6 ug/L          3.75      5384.6 ppb           3.75   0.07%
   QC value within limits for Si 251.611  Recovery = 107.69%
Sn 189.927†             2527.7      509.25 ug/L         6.461      509.25 ppb          6.461   1.27%
   QC value within limits for Sn 189.927  Recovery = 101.85%
Sr 421.552†           172055.6      475.91 ug/L         7.901      475.91 ppb          7.901   1.66%
   QC value within limits for Sr 421.552  Recovery = 95.18%
Ti 334.940†           270817.0      523.00 ug/L         0.253      523.00 ppb          0.253   0.05%
   QC value within limits for Ti 334.940  Recovery = 104.60%
Tl 190.801†             1755.3      475.11 ug/L        11.036      475.11 ppb         11.036   2.32%
   QC value within limits for Tl 190.801  Recovery = 95.02%
U 409.014†             15870.2      514.42 ug/L        10.453      514.42 ppb         10.453   2.03%
   QC value within limits for U 409.014  Recovery = 102.88%
V 292.402†             58308.6      518.97 ug/L         5.707      518.97 ppb          5.707   1.10%
   QC value within limits for V 292.402  Recovery = 103.79%
Zn 213.857†            57851.4      495.10 ug/L         5.004      495.10 ppb          5.004   1.01%
   QC value within limits for Zn 213.857  Recovery = 99.02%
SiO2†                 174841.8       11462 ug/L         153.1       11462 ppb          153.1   1.34%
   QC value within limits for SiO2  Recovery = 107.17%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 6/30/2009 09:04:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6672.9	6672.9	89.3	%			09:06:04
1	Y RADIAL	6066.4	6066.4	87.61	%			09:06:04
1	Al 396.153Radial†	588193.9	658933.3	542620	ug/L	542620	ppb	09:05:59
1	Ca 317.933Radial†	308456.8	345486.3	489420	ug/L	489420	ppb	09:05:59
1	Fe 238.204 Radial†	95333.1	106751.7	444990	ug/L	444990	ppb	09:05:59
1	K 766.490 Radial†	3042.4	1000.7	149.11	ug/L	149.11	ppb	09:06:04
1	Mg 279.077 IEC†	16910.7	18939.3	471780	ug/L	471780	ppb	09:06:04
1	Na 589.592 Radial†	7414295.7	8305199.0	509710	ug/L	509710	ppb	09:05:53
1	Sr 421.552†	1706.7	1967.6	0.6871	ug/L	0.6871	ppb	09:06:04
1	Sc 361.383	634303.9	634303.9	88.258	%			09:06:43
1	Y 371.029	486307.1	486307.1	86.532	%			09:06:43
1	Ag 328.068†	-17514.1	-20476.8	0.1770	ug/L	0.1770	ppb	09:06:43
1	As 188.979†	-218.8	-212.4	12.230	ug/L	12.230	ppb	09:07:03
1	B 249.677†	714.0	1748.9	13.664	ug/L	13.664	ppb	09:06:43
1	Ba 233.527†	-1455.2	-1649.3	-13.645	ug/L	-13.645	ppb	09:07:03
1	Be 313.107†	-9676.3	-6081.9	-2.8306	ug/L	-2.8306	ppb	09:06:43
1	Cd 226.502†	2949.9	3623.5	-5.6487	ug/L	-5.6487	ppb	09:07:03
1	Co 228.616†	229.2	359.1	-0.1629	ug/L	-0.1629	ppb	09:07:03
1	Cr 267.716†	-60.5	8.8	4.4697	ug/L	4.4697	ppb	09:07:03
1	Cu 324.752†	771.2	-4764.6	8.4617	ug/L	8.4617	ppb	09:06:43
1	Mn 257.610†	-24677.9	-28640.6	15.252	ug/L	15.252	ppb	09:06:43
1	Mo 202.031†	-390.1	-459.2	-3.2898	ug/L	-3.2898	ppb	09:06:43
1	Ni 231.604†	451.5	391.7	10.467	ug/L	10.467	ppb	09:07:03
1	P 214.914†	700.2	478.6	71.900	ug/L	71.900	ppb	09:07:03
1	Pb 220.353†	-433.0	-477.4	6.7025	ug/L	6.7025	ppb	09:07:03
1	S 181.975 Axial†	141.3	84.7	9.2496	ug/L	9.2496	ppb	09:07:03
1	Sb 206.836†	116.3	74.5	15.554	ug/L	15.554	ppb	09:07:03
1	Se 196.026†	-2719.4	-3052.4	-40.929	ug/L	-40.929	ppb	09:07:03
1	Si 251.611†	-1841.5	-2498.2	-75.766	ug/L	-75.766	ppb	09:07:03
1	Sn 189.927†	-322.1	-377.4	16.539	ug/L	16.539	ppb	09:07:03
1	Ti 334.940†	-10915.4	-11019.2	1.7610	ug/L	1.7610	ppb	09:06:43
1	Tl 190.801†	-137.4	-94.9	-11.963	ug/L	-11.963	ppb	09:07:03
1	U 409.014†	385912.9	442102.1	14915	ug/L	14915	ppb	09:06:43
1	V 292.402†	1135.5	2851.8	0.3848	ug/L	0.3848	ppb	09:07:03
1	Zn 213.857†	6547.8	6493.8	-2.8943	ug/L	-2.8943	ppb	09:07:03
1	SiO2†	-1901.7	-2591.6	-167.31	ug/L	-167.31	ppb	09:08:00
2	Sc Radial	6734.9	6734.9	90.1	%			09:06:20
2	Y RADIAL	6141.0	6141.0	88.69	%			09:06:20
2	Al 396.153Radial†	563254.8	625190.0	514830	ug/L	514830	ppb	09:06:15
2	Ca 317.933Radial†	294889.7	327248.4	463590	ug/L	463590	ppb	09:06:15
2	Fe 238.204 Radial†	91146.1	101121.9	421520	ug/L	421520	ppb	09:06:15
2	K 766.490 Radial†	2910.4	822.9	110.63	ug/L	110.63	ppb	09:06:20
2	Mg 279.077 IEC†	16879.2	18730.0	466580	ug/L	466580	ppb	09:06:20
2	Na 589.592 Radial†	7462964.3	8282760.6	508340	ug/L	508340	ppb	09:06:10
2	Sr 421.552†	1762.9	2012.4	1.0662	ug/L	1.0662	ppb	09:06:20
2	Sc 361.383	627079.1	627079.1	87.253	%			09:07:09
2	Y 371.029	480401.5	480401.5	85.481	%			09:07:09
2	Ag 328.068†	-17263.2	-20417.8	-6.6947	ug/L	-6.6947	ppb	09:07:09
2	As 188.979†	-216.4	-212.6	7.4911	ug/L	7.4911	ppb	09:07:29
2	B 249.677†	703.7	1746.5	15.208	ug/L	15.208	ppb	09:07:09
2	Ba 233.527†	-1544.3	-1770.4	-14.389	ug/L	-14.389	ppb	09:07:29
2	Be 313.107†	-9692.9	-6227.2	-2.8955	ug/L	-2.8955	ppb	09:07:09
2	Cd 226.502†	2948.1	3659.9	-2.4489	ug/L	-2.4489	ppb	09:07:29
2	Co 228.616†	210.3	340.4	-0.1617	ug/L	-0.1617	ppb	09:07:29
2	Cr 267.716†	24.0	104.9	5.2985	ug/L	5.2985	ppb	09:07:29
2	Cu 324.752†	682.2	-4856.6	6.7716	ug/L	6.7716	ppb	09:07:09
2	Mn 257.610†	-24380.0	-28621.3	12.424	ug/L	12.424	ppb	09:07:09
2	Mo 202.031†	-417.9	-496.1	-7.4217	ug/L	-7.4217	ppb	09:07:09
2	Ni 231.604†	402.0	340.9	9.1088	ug/L	9.1088	ppb	09:07:29

2	P 214.914†	696.9	484.0	84.249	ug/L	84.249 ppb	09:07:29
2	Pb 220.353†	-474.2	-530.2	-2.7882	ug/L	-2.7882 ppb	09:07:29
2	S 181.975 Axial†	145.2	91.0	23.403	ug/L	23.403 ppb	09:07:29
2	Sb 206.836†	101.7	59.3	11.195	ug/L	11.195 ppb	09:07:29
2	Se 196.026†	-2705.3	-3071.7	-130.71	ug/L	-130.71 ppb	09:07:29
2	Si 251.611†	-1871.8	-2557.0	-77.540	ug/L	-77.540 ppb	09:07:29
2	Sn 189.927†	-312.9	-371.1	13.268	ug/L	13.268 ppb	09:07:29
2	Ti 334.940†	-10467.4	-10648.3	0.8830	ug/L	0.8830 ppb	09:07:09
2	Tl 190.801†	-132.6	-91.2	-11.657	ug/L	-11.657 ppb	09:07:29
2	U 409.014†	384426.7	445436.5	15031	ug/L	15031 ppb	09:07:09
2	V 292.402†	1147.9	2880.8	4.0182	ug/L	4.0182 ppb	09:07:29
2	Zn 213.857†	6559.6	6592.8	0.6570	ug/L	0.6570 ppb	09:07:29
2	SiO2†	-2024.5	-2757.1	-178.11	ug/L	-178.11 ppb	09:08:05
3	Sc Radial	6767.1	6767.1	90.5	%		09:06:36
3	Y RADIAL	6211.2	6211.2	89.70	%		09:06:36
3	Al 396.153Radial†	575709.6	635976.0	523710	ug/L	523710 ppb	09:06:31
3	Ca 317.933Radial†	302452.6	334046.7	473220	ug/L	473220 ppb	09:06:31
3	Fe 238.204 Radial†	93273.8	102991.4	429320	ug/L	429320 ppb	09:06:31
3	K 766.490 Radial†	3023.0	931.8	134.94	ug/L	134.94 ppb	09:06:36
3	Mg 279.077 IEC†	16986.4	18759.4	467310	ug/L	467310 ppb	09:06:36
3	Na 589.592 Radial†	7426290.6	8202888.0	503430	ug/L	503430 ppb	09:06:26
3	Sr 421.552†	1779.2	2021.1	0.9958	ug/L	0.9958 ppb	09:06:36
3	Sc 361.383	633280.0	633280.0	88.116	%		09:07:34
3	Y 371.029	485991.6	485991.6	86.475	%		09:07:34
3	Ag 328.068†	-17711.5	-20732.8	-6.2775	ug/L	-6.2775 ppb	09:07:34
3	As 188.979†	-214.8	-208.3	10.577	ug/L	10.577 ppb	09:07:55
3	B 249.677†	734.1	1773.0	15.342	ug/L	15.342 ppb	09:07:34
3	Ba 233.527†	-1477.0	-1676.8	-13.768	ug/L	-13.768 ppb	09:07:55
3	Be 313.107†	-9808.8	-6249.9	-2.9076	ug/L	-2.9076 ppb	09:07:34
3	Cd 226.502†	2908.0	3581.3	-4.3598	ug/L	-4.3598 ppb	09:07:55
3	Co 228.616†	236.6	367.9	0.2042	ug/L	0.2042 ppb	09:07:55
3	Cr 267.716†	-40.2	31.8	4.4141	ug/L	4.4141 ppb	09:07:55
3	Cu 324.752†	877.3	-4642.8	7.9967	ug/L	7.9967 ppb	09:07:34
3	Mn 257.610†	-24695.8	-28706.0	13.296	ug/L	13.296 ppb	09:07:34
3	Mo 202.031†	-432.4	-507.9	-7.7409	ug/L	-7.7409 ppb	09:07:34
3	Ni 231.604†	439.3	378.8	10.121	ug/L	10.121 ppb	09:07:55
3	P 214.914†	689.5	467.7	72.429	ug/L	72.429 ppb	09:07:55
3	Pb 220.353†	-434.1	-479.4	4.2570	ug/L	4.2570 ppb	09:07:55
3	S 181.975 Axial†	133.6	76.2	1.3507	ug/L	1.3507 ppb	09:07:55
3	Sb 206.836†	101.8	58.3	10.743	ug/L	10.743 ppb	09:07:55
3	Se 196.026†	-2700.4	-3035.8	-85.863	ug/L	-85.863 ppb	09:07:55
3	Si 251.611†	-1854.9	-2516.9	-76.210	ug/L	-76.210 ppb	09:07:55
3	Sn 189.927†	-346.5	-405.7	8.7052	ug/L	8.7052 ppb	09:07:55
3	Ti 334.940†	-10916.1	-11040.1	0.7034	ug/L	0.7034 ppb	09:07:34
3	Tl 190.801†	-124.8	-80.9	-8.7461	ug/L	-8.7461 ppb	09:07:55
3	U 409.014†	389663.6	447065.6	15085	ug/L	15085 ppb	09:07:34
3	V 292.402†	1019.7	2722.5	1.6041	ug/L	1.6041 ppb	09:07:55
3	Zn 213.857†	6557.7	6517.1	-0.8875	ug/L	-0.8875 ppb	09:07:55
3	SiO2†	-1993.7	-2699.5	-174.12	ug/L	-174.12 ppb	09:08:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	631554.3	87.876	%	0.5440				0.62%
Sc Radial	6725.0	90.0	%	0.64				0.71%
Y 371.029	484233.4	86.163	%	0.5912				0.69%
Y RADIAL	6139.5	88.67	%	1.045				1.18%
Ag 328.068†	-20542.5	-4.2651	ug/L	3.85262	-4.2651	ppb	3.85262	90.33%
Al 396.153Radial†	640033.1	527050	ug/L	14191.4	527050	ppb	14191.4	2.69%
QC value within limits for Al 396.153Radial Recovery = 105.41%								
As 188.979†	-211.1	10.099	ug/L	2.4052	10.099	ppb	2.4052	23.82%
B 249.677†	1756.1	14.738	ug/L	0.9322	14.738	ppb	0.9322	6.33%
Ba 233.527†	-1698.8	-13.934	ug/L	0.3991	-13.934	ppb	0.3991	2.86%
Be 313.107†	-6186.4	-2.8779	ug/L	0.04141	-2.8779	ppb	0.04141	1.44%
Ca 317.933Radial†	335593.8	475410	ug/L	13056.7	475410	ppb	13056.7	2.75%
QC value within limits for Ca 317.933Radial Recovery = 95.08%								
Cd 226.502†	3621.5	-4.1525	ug/L	1.60991	-4.1525	ppb	1.60991	38.77%
Co 228.616†	355.8	-0.0401	ug/L	0.21157	-0.0401	ppb	0.21157	527.33%
Cr 267.716†	48.5	4.7274	ug/L	0.49533	4.7274	ppb	0.49533	10.48%
Cu 324.752†	-4754.7	7.7433	ug/L	0.87304	7.7433	ppb	0.87304	11.27%

Fe 238.204 Radial†	103621.7	431940	ug/L	11952.5	431940	ppb	11952.5	2.77%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 86.39%								
K 766.490 Radial†	918.5	131.56	ug/L	19.462	131.56	ppb	19.462	14.79%
Mg 279.077 IEC†	18809.6	468560	ug/L	2815.7	468560	ppb	2815.7	0.60%
QC value within limits for Mg 279.077 IEC Recovery = 93.71%								
Mn 257.610†	-28656.0	13.657	ug/L	1.4485	13.657	ppb	1.4485	10.61%
Mo 202.031†	-487.7	-6.1508	ug/L	2.48284	-6.1508	ppb	2.48284	40.37%
Na 589.592 Radial†	8263615.9	507160	ug/L	3300.3	507160	ppb	3300.3	0.65%
QC value within limits for Na 589.592 Radial Recovery = 101.43%								
Ni 231.604†	370.5	9.8988	ug/L	0.70582	9.8988	ppb	0.70582	7.13%
P 214.914†	476.7	76.193	ug/L	6.9820	76.193	ppb	6.9820	9.16%
Pb 220.353†	-495.7	2.7238	ug/L	4.92765	2.7238	ppb	4.92765	180.91%
S 181.975 Axial†	84.0	11.334	ug/L	11.1731	11.334	ppb	11.1731	98.58%
Sb 206.836†	64.1	12.497	ug/L	2.6567	12.497	ppb	2.6567	21.26%
Se 196.026†	-3053.3	-85.835	ug/L	44.8929	-85.835	ppb	44.8929	52.30%
Si 251.611†	-2524.0	-76.505	ug/L	0.9228	-76.505	ppb	0.9228	1.21%
Sn 189.927†	-384.7	12.837	ug/L	3.9344	12.837	ppb	3.9344	30.65%
Sr 421.552†	2000.3	0.9164	ug/L	0.20161	0.9164	ppb	0.20161	22.00%
Ti 334.940†	-10902.5	1.1158	ug/L	0.56593	1.1158	ppb	0.56593	50.72%
Tl 190.801†	-89.0	-10.789	ug/L	1.7755	-10.789	ppb	1.7755	16.46%
U 409.014†	444868.0	15011	ug/L	86.8	15011	ppb	86.8	0.58%
QC value within limits for U 409.014 Recovery = 100.07%								
V 292.402†	2818.3	2.0024	ug/L	1.84916	2.0024	ppb	1.84916	92.35%
Zn 213.857†	6534.5	-1.0416	ug/L	1.78067	-1.0416	ppb	1.78067	170.95%
SiO2†	-2682.7	-173.18	ug/L	5.457	-173.18	ppb	5.457	3.15%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 6/30/2009 09:10:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7422.4	7422.4	99.3	%			09:12:17
1	Y RADIAL	6803.8	6803.8	98.26	%			09:12:17
1	Al 396.153Radial†	486.3	562.3	36.776	ug/L	36.776	ppb	09:12:17
1	Ca 317.933Radial†	56.2	27.5	38.995	ug/L	38.995	ppb	09:12:37
1	Fe 238.204 Radial†	-27.3	-62.3	51.387	ug/L	51.387	ppb	09:12:37
1	K 766.490 Radial†	1284333.0	1290956.1	278300	ug/L	278300	ppb	09:12:12
1	Mg 279.077 IEC†	-12.1	-15.2	-176.89	ug/L	-176.89	ppb	09:12:37
1	Na 589.592 Radial†	3381.0	3540.3	217.28	ug/L	217.28	ppb	09:12:17
1	Sr 421.552†	3247986.4	3270879.2	9135.7	ug/L	9135.7	ppb	09:12:12
1	Sc 361.383	718051.7	718051.7	99.911	%			09:13:56
1	Y 371.029	548825.4	548825.4	97.656	%			09:13:56
1	Ag 328.068†	-5154.5	-5791.7	5.5336	ug/L	5.5336	ppb	09:14:01
1	As 188.979†	28412.9	28473.6	10329	ug/L	10329	ppb	09:14:01
1	B 249.677†	200225.0	201342.7	5023.7	ug/L	5023.7	ppb	09:13:56
1	Ba 233.527†	2013651.4	2015439.0	14243	ug/L	14243	ppb	09:13:56
1	Be 313.107†	6475018.7	6485650.3	2991.6	ug/L	2991.6	ppb	09:13:49
1	Cd 226.502†	801401.5	802394.2	10241	ug/L	10241	ppb	09:13:56
1	Co 228.616†	568003.8	568607.7	9862.7	ug/L	9862.7	ppb	09:13:56
1	Cr 267.716†	1753379.4	1755013.8	24608	ug/L	24608	ppb	09:13:56
1	Cu 324.752†	5633997.2	5633361.7	20414	ug/L	20414	ppb	09:13:49
1	Mn 257.610†	8719648.2	8726711.6	9623.5	ug/L	9623.5	ppb	09:13:49
1	Mo 202.031†	141325.9	141434.3	9956.8	ug/L	9956.8	ppb	09:14:01
1	Ni 231.604†	375246.3	375459.7	10030	ug/L	10030	ppb	09:13:56
1	P 214.914†	36848.1	36566.0	14746	ug/L	14746	ppb	09:14:01
1	Pb 220.353†	208794.7	208993.4	24898	ug/L	24898	ppb	09:14:01
1	S 181.975 Axial†	38281.0	38239.6	52387	ug/L	52387	ppb	09:14:01
1	Sb 206.836†	36376.8	36351.9	10574	ug/L	10574	ppb	09:14:01
1	Se 196.026†	20377.2	20424.1	10437	ug/L	10437	ppb	09:14:01
1	Si 251.611†	1574586.6	1575573.0	48252	ug/L	48252	ppb	09:13:56
1	Sn 189.927†	59738.9	59779.5	10580	ug/L	10580	ppb	09:14:01
1	Ti 334.940†	5433406.0	5439579.1	9950.3	ug/L	9950.3	ppb	09:13:49
1	Tl 190.801†	37513.8	37607.8	9901.1	ug/L	9901.1	ppb	09:14:01
1	U 409.014†	-3927.2	918.0	-16.385	ug/L	-16.385	ppb	09:14:01
1	V 292.402†	1111733.1	1114285.5	10226	ug/L	10226	ppb	09:13:56
1	Zn 213.857†	1578752.8	1579229.6	14482	ug/L	14482	ppb	09:13:56
1	SiO2†	1612167.7	1613162.5	105180	ug/L	105180	ppb	09:14:48
2	Sc Radial	7206.1	7206.1	96.4	%			09:12:48
2	Y RADIAL	6605.6	6605.6	95.40	%			09:12:48
2	Al 396.153Radial†	485.6	576.3	60.533	ug/L	60.533	ppb	09:12:48
2	Ca 317.933Radial†	45.1	17.7	25.032	ug/L	25.032	ppb	09:13:08
2	Fe 238.204 Radial†	-30.3	-66.2	35.518	ug/L	35.518	ppb	09:13:08
2	K 766.490 Radial†	1251869.1	1296097.9	279420	ug/L	279420	ppb	09:12:43
2	Mg 279.077 IEC†	-5.2	-8.5	-15.141	ug/L	-15.141	ppb	09:13:08
2	Na 589.592 Radial†	3117.0	3368.6	206.74	ug/L	206.74	ppb	09:12:48
2	Sr 421.552†	3168878.4	3286984.7	9180.7	ug/L	9180.7	ppb	09:12:43
2	Sc 361.383	735519.8	735519.8	102.34	%			09:14:16
2	Y 371.029	561414.9	561414.9	99.896	%			09:14:16
2	Ag 328.068†	-5183.2	-5697.2	6.1117	ug/L	6.1117	ppb	09:14:21
2	As 188.979†	28211.9	27601.8	10014	ug/L	10014	ppb	09:14:21
2	B 249.677†	206438.4	202654.5	5056.7	ug/L	5056.7	ppb	09:14:16
2	Ba 233.527†	2058610.8	2011504.3	14215	ug/L	14215	ppb	09:14:16
2	Be 313.107†	6582936.2	6437184.4	2969.3	ug/L	2969.3	ppb	09:14:09
2	Cd 226.502†	822941.6	804391.7	10266	ug/L	10266	ppb	09:14:16
2	Co 228.616†	582933.8	569694.3	9881.0	ug/L	9881.0	ppb	09:14:16
2	Cr 267.716†	1796035.7	1755015.5	24608	ug/L	24608	ppb	09:14:16
2	Cu 324.752†	5728920.0	5592190.0	20265	ug/L	20265	ppb	09:14:09
2	Mn 257.610†	8853284.4	8650020.1	9539.0	ug/L	9539.0	ppb	09:14:09
2	Mo 202.031†	140614.3	137379.6	9671.3	ug/L	9671.3	ppb	09:14:21
2	Ni 231.604†	385203.4	376269.2	10051	ug/L	10051	ppb	09:14:16

2	P 214.914†	36681.5	35527.3	14242	ug/L	14242	ppb	09:14:21
2	Pb 220.353†	208078.1	203330.0	24223	ug/L	24223	ppb	09:14:21
2	S 181.975 Axial†	38120.9	37173.1	50926	ug/L	50926	ppb	09:14:21
2	Sb 206.836†	36309.4	35421.3	10287	ug/L	10287	ppb	09:14:21
2	Se 196.026†	20351.7	19914.8	10177	ug/L	10177	ppb	09:14:21
2	Si 251.611†	1618495.9	1581049.0	48430	ug/L	48430	ppb	09:14:16
2	Sn 189.927†	59380.7	58009.4	10267	ug/L	10267	ppb	09:14:21
2	Ti 334.940†	5520991.7	5396006.2	9870.5	ug/L	9870.5	ppb	09:14:09
2	Tl 190.801†	37408.7	36613.5	9639.6	ug/L	9639.6	ppb	09:14:21
2	U 409.014†	-3870.5	1066.8	-11.345	ug/L	-11.345	ppb	09:14:21
2	V 292.402†	1139430.5	1114922.7	10228	ug/L	10228	ppb	09:14:16
2	Zn 213.857†	1616276.8	1578367.4	14474	ug/L	14474	ppb	09:14:16
2	SiO2†	1605287.1	1568117.4	102240	ug/L	102240	ppb	09:14:56
3	Sc Radial	7389.2	7389.2	98.9	%			09:13:19
3	Y RADIAL	6809.8	6809.8	98.35	%			09:13:19
3	Al 396.153Radial†	492.6	570.9	52.098	ug/L	52.098	ppb	09:13:19
3	Ca 317.933Radial†	52.2	23.7	33.632	ug/L	33.632	ppb	09:13:39
3	Fe 238.204 Radial†	-32.6	-67.8	28.576	ug/L	28.576	ppb	09:13:39
3	K 766.490 Radial†	1295433.0	1307991.1	281980	ug/L	281980	ppb	09:13:14
3	Mg 279.077 IEC†	-9.0	-12.1	-104.20	ug/L	-104.20	ppb	09:13:39
3	Na 589.592 Radial†	3056.6	3227.4	198.08	ug/L	198.08	ppb	09:13:19
3	Sr 421.552†	3283861.0	3321853.3	9278.0	ug/L	9278.0	ppb	09:13:14
3	Sc 361.383	730486.3	730486.3	101.64	%			09:14:36
3	Y 371.029	557699.4	557699.4	99.235	%			09:14:36
3	Ag 328.068†	-5279.5	-5826.9	5.3135	ug/L	5.3135	ppb	09:14:41
3	As 188.979†	28275.2	27854.1	10105	ug/L	10105	ppb	09:14:41
3	B 249.677†	204596.7	202232.5	5046.2	ug/L	5046.2	ppb	09:14:36
3	Ba 233.527†	2042687.3	2009698.5	14203	ug/L	14203	ppb	09:14:36
3	Be 313.107†	6531840.2	6431236.2	2966.5	ug/L	2966.5	ppb	09:14:29
3	Cd 226.502†	815548.9	802659.3	10244	ug/L	10244	ppb	09:14:36
3	Co 228.616†	577808.6	568576.8	9861.8	ug/L	9861.8	ppb	09:14:36
3	Cr 267.716†	1781881.5	1753182.4	24582	ug/L	24582	ppb	09:14:36
3	Cu 324.752†	5675359.2	5578066.8	20213	ug/L	20213	ppb	09:14:29
3	Mn 257.610†	8795863.8	8653135.7	9542.4	ug/L	9542.4	ppb	09:14:29
3	Mo 202.031†	140994.6	138700.4	9764.3	ug/L	9764.3	ppb	09:14:41
3	Ni 231.604†	381768.8	375483.6	10030	ug/L	10030	ppb	09:14:36
3	P 214.914†	36776.7	35868.0	14427	ug/L	14427	ppb	09:14:41
3	Pb 220.353†	208448.9	205095.8	24434	ug/L	24434	ppb	09:14:41
3	S 181.975 Axial†	38215.1	37522.6	51405	ug/L	51405	ppb	09:14:41
3	Sb 206.836†	36365.1	35720.6	10380	ug/L	10380	ppb	09:14:41
3	Se 196.026†	20296.9	19997.9	10219	ug/L	10219	ppb	09:14:41
3	Si 251.611†	1604788.1	1578459.9	48346	ug/L	48346	ppb	09:14:36
3	Sn 189.927†	59493.6	58520.3	10358	ug/L	10358	ppb	09:14:41
3	Ti 334.940†	5479942.6	5392792.7	9864.6	ug/L	9864.6	ppb	09:14:29
3	Tl 190.801†	37353.2	36810.7	9691.3	ug/L	9691.3	ppb	09:14:41
3	U 409.014†	-3711.6	1197.1	-6.8830	ug/L	-6.8830	ppb	09:14:41
3	V 292.402†	1131143.9	1114441.7	10225	ug/L	10225	ppb	09:14:36
3	Zn 213.857†	1603469.7	1576649.5	14458	ug/L	14458	ppb	09:14:36
3	SiO2†	1587412.8	1561340.0	101780	ug/L	101780	ppb	09:15:03

Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	728019.3	101.30	%	1.251				1.24%
Sc Radial	7339.3	98.2	%	1.56				1.59%
Y 371.029	555979.9	98.929	%	1.1510				1.16%
Y RADIAL	6739.7	97.33	%	1.679				1.72%
Ag 328.068†	-5771.9	5.6529	ug/L	0.41226	5.6529	ppb	0.41226	7.29%
Al 396.153Radial†	569.9	49.803	ug/L	12.0435	49.803	ppb	12.0435	24.18%
As 188.979†	27976.5	10149	ug/L	161.9	10149	ppb	161.9	1.60%
QC value within limits for As 188.979 Recovery = 101.49%								
B 249.677†	202076.6	5042.2	ug/L	16.84	5042.2	ppb	16.84	0.33%
QC value within limits for B 249.677 Recovery = 100.84%								
Ba 233.527†	2012213.9	14220	ug/L	20.7	14220	ppb	20.7	0.15%
QC value within limits for Ba 233.527 Recovery = 94.80%								
Be 313.107†	6451357.0	2975.8	ug/L	13.77	2975.8	ppb	13.77	0.46%
QC value within limits for Be 313.107 Recovery = 99.19%								
Ca 317.933Radial†	23.0	32.553	ug/L	7.0439	32.553	ppb	7.0439	21.64%
Cd 226.502†	803148.4	10251	ug/L	13.8	10251	ppb	13.8	0.14%
QC value within limits for Cd 226.502 Recovery = 102.51%								

Co 228.616†	568959.6	9868.5 ug/L	10.79	9868.5 ppb	10.79	0.11%
QC value within limits for Co 228.616 Recovery = 98.69%						
Cr 267.716†	1754403.9	24599 ug/L	14.8	24599 ppb	14.8	0.06%
QC value within limits for Cr 267.716 Recovery = 98.40%						
Cu 324.752†	5601206.2	20297 ug/L	104.1	20297 ppb	104.1	0.51%
QC value within limits for Cu 324.752 Recovery = 101.49%						
Fe 238.204 Radial†	-65.4	38.494 ug/L	11.6927	38.494 ppb	11.6927	30.38%
K 766.490 Radial†	1298348.4	279900 ug/L	1886.5	279900 ppb	1886.5	0.67%
QC value within limits for K 766.490 Radial Recovery = 93.30%						
Mg 279.077 IEC†	-11.9	-98.743 ug/L	81.0101	-98.743 ppb	81.0101	82.04%
Mn 257.610†	8676622.5	9568.3 ug/L	47.87	9568.3 ppb	47.87	0.50%
QC value within limits for Mn 257.610 Recovery = 95.68%						
Mo 202.031†	139171.4	9797.5 ug/L	145.58	9797.5 ppb	145.58	1.49%
QC value within limits for Mo 202.031 Recovery = 97.97%						
Na 589.592 Radial†	3378.8	207.37 ug/L	9.617	207.37 ppb	9.617	4.64%
Ni 231.604†	375737.5	10037 ug/L	12.3	10037 ppb	12.3	0.12%
QC value within limits for Ni 231.604 Recovery = 100.37%						
P 214.914†	35987.1	14472 ug/L	255.4	14472 ppb	255.4	1.76%
QC value within limits for P 214.914 Recovery = 96.48%						
Pb 220.353†	205806.4	24519 ug/L	345.3	24519 ppb	345.3	1.41%
QC value within limits for Pb 220.353 Recovery = 98.07%						
S 181.975 Axial†	37645.1	51572 ug/L	744.8	51572 ppb	744.8	1.44%
QC value within limits for S 181.975 Axial Recovery = 103.14%						
Sb 206.836†	35831.3	10413 ug/L	146.6	10413 ppb	146.6	1.41%
QC value within limits for Sb 206.836 Recovery = 104.13%						
Se 196.026†	20112.3	10278 ug/L	139.7	10278 ppb	139.7	1.36%
QC value within limits for Se 196.026 Recovery = 102.78%						
Si 251.611†	1578360.6	48343 ug/L	89.0	48343 ppb	89.0	0.18%
QC value within limits for Si 251.611 Recovery = 96.69%						
Sn 189.927†	58769.7	10402 ug/L	161.2	10402 ppb	161.2	1.55%
QC value within limits for Sn 189.927 Recovery = 104.02%						
Sr 421.552†	3293239.0	9198.1 ug/L	72.78	9198.1 ppb	72.78	0.79%
QC value within limits for Sr 421.552 Recovery = 91.98%						
Ti 334.940†	5409459.3	9895.1 ug/L	47.85	9895.1 ppb	47.85	0.48%
QC value within limits for Ti 334.940 Recovery = 98.95%						
Tl 190.801†	37010.7	9744.0 ug/L	138.47	9744.0 ppb	138.47	1.42%
QC value within limits for Tl 190.801 Recovery = 97.44%						
U 409.014†	1060.7	-11.538 ug/L	4.7539	-11.538 ppb	4.7539	41.20%
V 292.402†	1114550.0	10226 ug/L	1.6	10226 ppb	1.6	0.02%
QC value within limits for V 292.402 Recovery = 102.26%						
Zn 213.857†	1578082.1	14471 ug/L	12.0	14471 ppb	12.0	0.08%
QC value within limits for Zn 213.857 Recovery = 96.47%						
SiO2†	1580873.3	103070 ug/L	1844.0	103070 ppb	1844.0	1.79%
QC value within limits for SiO2 Recovery = 96.32%						

All analyte(s) passed QC.

Analysis Begun

Start Time: 6/30/2009 09:33:27
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601
Plasma On Time: 6/29/2009 15:26:31
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX
IEC File: 040209.iec
Method Description:
Method Last Saved: 6/30/2009 07:55:59
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 7
Date Collected: 6/30/2009 09:33:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7423.1	7423.1	99.3	%			09:35:25
1	Y RADIAL	6826.3	6826.3	98.58	%			09:35:25
1	Al 396.153Radial†	6345.6	6462.3	5299.9	ug/L	5299.9	ppb	09:35:25

1	Ca 317.933Radial†	3697.4	3693.9	5232.9 ug/L	5232.9 ppb	09:35:25
1	Fe 238.204 Radial†	1240.3	1214.1	5076.9 ug/L	5076.9 ppb	09:35:45
1	K 766.490 Radial†	24857.4	22622.8	4867.7 ug/L	4867.7 ppb	09:35:20
1	Mg 279.077 IEC†	213.4	211.8	5286.2 ug/L	5286.2 ppb	09:35:45
1	Na 589.592 Radial†	164426.0	165702.9	10170 ug/L	10170 ppb	09:35:20
1	Sr 421.552†	170615.6	171855.8	479.95 ug/L	479.95 ppb	09:35:20
1	Sc 361.383	749922.0	749922.0	104.35 %		09:36:53
1	Y 371.029	578377.8	578377.8	102.91 %		09:36:53
1	Ag 328.068†	88179.2	83874.1	504.14 ug/L	504.14 ppb	09:36:58
1	As 188.979†	1443.2	1418.5	514.68 ug/L	514.68 ppb	09:37:18
1	B 249.677†	20193.0	20291.9	508.46 ug/L	508.46 ppb	09:36:58
1	Ba 233.527†	74246.7	71154.0	503.15 ug/L	503.15 ppb	09:36:58
1	Be 313.107†	1148696.4	1105737.4	507.23 ug/L	507.23 ppb	09:36:53
1	Cd 226.502†	41055.7	39626.9	505.17 ug/L	505.17 ppb	09:36:58
1	Co 228.616†	30353.3	29188.6	506.44 ug/L	506.44 ppb	09:36:58
1	Cr 267.716†	37337.8	35860.2	503.20 ug/L	503.20 ppb	09:36:58
1	Cu 324.752†	149034.2	137188.8	497.43 ug/L	497.43 ppb	09:36:58
1	Mn 257.610†	478322.5	457721.8	505.30 ug/L	505.30 ppb	09:36:53
1	Mo 202.031†	7514.2	7184.1	506.08 ug/L	506.08 ppb	09:37:18
1	Ni 231.604†	19794.6	18850.4	503.55 ug/L	503.55 ppb	09:36:58
1	P 214.914†	5522.9	4978.1	2447.3 ug/L	2447.3 ppb	09:37:18
1	Pb 220.353†	4426.8	4255.7	508.26 ug/L	508.26 ppb	09:37:18
1	S 181.975 Axial†	852.5	741.5	1014.8 ug/L	1014.8 ppb	09:37:18
1	Sb 206.836†	1850.3	1716.0	516.26 ug/L	516.26 ppb	09:37:18
1	Se 196.026†	1028.0	1014.0	535.42 ug/L	535.42 ppb	09:37:18
1	Si 251.611†	86183.9	82182.8	2520.8 ug/L	2520.8 ppb	09:36:58
1	Sn 189.927†	3027.0	2888.4	512.14 ug/L	512.14 ppb	09:37:18
1	Ti 334.940†	276976.0	266788.8	488.34 ug/L	488.34 ppb	09:36:58
1	Tl 190.801†	1970.3	1949.0	513.11 ug/L	513.11 ppb	09:37:18
1	U 409.014†	10959.4	15351.7	518.23 ug/L	518.23 ppb	09:36:58
1	V 292.402†	55911.1	55147.7	506.93 ug/L	506.93 ppb	09:36:58
1	Zn 213.857†	57939.9	54601.7	499.26 ug/L	499.26 ppb	09:36:58
1	SiO2†	87174.2	83106.7	5426.9 ug/L	5426.9 ppb	09:38:25
2	Sc Radial	7525.2	7525.2	101 %		09:35:55
2	Y RADIAL	6923.0	6923.0	99.98 %		09:35:55
2	Al 396.153Radial†	6313.2	6343.4	5202.2 ug/L	5202.2 ppb	09:35:55
2	Ca 317.933Radial†	3695.1	3641.2	5158.2 ug/L	5158.2 ppb	09:35:55
2	Fe 238.204 Radial†	1235.4	1192.3	4986.0 ug/L	4986.0 ppb	09:36:15
2	K 766.490 Radial†	24952.7	22377.7	4814.9 ug/L	4814.9 ppb	09:35:50
2	Mg 279.077 IEC†	213.2	208.7	5209.3 ug/L	5209.3 ppb	09:36:15
2	Na 589.592 Radial†	166648.8	165663.7	10167 ug/L	10167 ppb	09:35:50
2	Sr 421.552†	172873.2	171766.5	479.70 ug/L	479.70 ppb	09:35:50
2	Sc 361.383	749726.7	749726.7	104.32 %		09:37:24
2	Y 371.029	577553.5	577553.5	102.77 %		09:37:24
2	Ag 328.068†	88437.2	84143.4	505.74 ug/L	505.74 ppb	09:37:29
2	As 188.979†	1424.9	1401.3	508.49 ug/L	508.49 ppb	09:37:49
2	B 249.677†	20283.9	20384.1	510.77 ug/L	510.77 ppb	09:37:29
2	Ba 233.527†	74577.0	71489.2	505.52 ug/L	505.52 ppb	09:37:29
2	Be 313.107†	1154468.4	1111557.2	509.90 ug/L	509.90 ppb	09:37:24
2	Cd 226.502†	41318.3	39888.9	508.52 ug/L	508.52 ppb	09:37:29
2	Co 228.616†	30503.1	29339.8	509.04 ug/L	509.04 ppb	09:37:29
2	Cr 267.716†	37503.7	36028.5	505.56 ug/L	505.56 ppb	09:37:29
2	Cu 324.752†	149487.6	137660.6	499.13 ug/L	499.13 ppb	09:37:29
2	Mn 257.610†	481180.8	460581.1	508.44 ug/L	508.44 ppb	09:37:24
2	Mo 202.031†	7416.3	7092.1	499.60 ug/L	499.60 ppb	09:37:49
2	Ni 231.604†	19877.2	18934.5	505.79 ug/L	505.79 ppb	09:37:29
2	P 214.914†	5449.0	4908.6	2411.4 ug/L	2411.4 ppb	09:37:49
2	Pb 220.353†	4369.2	4201.6	501.79 ug/L	501.79 ppb	09:37:49
2	S 181.975 Axial†	848.0	737.4	1009.2 ug/L	1009.2 ppb	09:37:49
2	Sb 206.836†	1820.4	1687.8	507.57 ug/L	507.57 ppb	09:37:49
2	Se 196.026†	1016.3	1003.0	529.49 ug/L	529.49 ppb	09:37:49
2	Si 251.611†	86487.8	82495.6	2530.7 ug/L	2530.7 ppb	09:37:29
2	Sn 189.927†	2979.1	2843.3	504.13 ug/L	504.13 ppb	09:37:49
2	Ti 334.940†	278487.2	268306.6	491.12 ug/L	491.12 ppb	09:37:29
2	Tl 190.801†	1949.7	1929.7	508.08 ug/L	508.08 ppb	09:37:49
2	U 409.014†	10728.8	15133.4	510.85 ug/L	510.85 ppb	09:37:29
2	V 292.402†	56273.5	55509.1	510.12 ug/L	510.12 ppb	09:37:29
2	Zn 213.857†	58249.1	54912.5	502.13 ug/L	502.13 ppb	09:37:29
2	SiO2†	86644.3	82620.5	5395.5 ug/L	5395.5 ppb	09:38:30
3	Sc Radial	7497.0	7497.0	100 %		09:36:26
3	Y RADIAL	6929.0	6929.0	100.1 %		09:36:26

3	Al 396.153Radial†	6295.9	6349.8	5207.0	ug/L	5207.0 ppb	09:36:26
3	Ca 317.933Radial†	3671.2	3631.1	5143.9	ug/L	5143.9 ppb	09:36:26
3	Fe 238.204 Radial†	1247.9	1209.4	5057.6	ug/L	5057.6 ppb	09:36:46
3	K 766.490 Radial†	25275.1	22792.3	4904.2	ug/L	4904.2 ppb	09:36:21
3	Mg 279.077 IEC†	214.6	210.9	5263.3	ug/L	5263.3 ppb	09:36:46
3	Na 589.592 Radial†	168542.7	168174.3	10321	ug/L	10321 ppb	09:36:21
3	Sr 421.552†	175020.0	174552.5	487.48	ug/L	487.48 ppb	09:36:21
3	Sc 361.383	742795.5	742795.5	103.35	%		09:37:55
3	Y 371.029	572707.4	572707.4	101.91	%		09:37:55
3	Ag 328.068†	89178.1	85651.4	514.80	ug/L	514.80 ppb	09:38:00
3	As 188.979†	1453.3	1441.6	523.06	ug/L	523.06 ppb	09:38:20
3	B 249.677†	20460.7	20736.6	519.61	ug/L	519.61 ppb	09:38:00
3	Ba 233.527†	75243.2	72800.8	514.80	ug/L	514.80 ppb	09:38:00
3	Be 313.107†	1144942.8	1112667.4	510.43	ug/L	510.43 ppb	09:37:55
3	Cd 226.502†	41580.1	40511.8	516.47	ug/L	516.47 ppb	09:38:00
3	Co 228.616†	30748.5	29850.0	517.90	ug/L	517.90 ppb	09:38:00
3	Cr 267.716†	37784.8	36635.9	514.08	ug/L	514.08 ppb	09:38:00
3	Cu 324.752†	150573.6	140048.6	507.79	ug/L	507.79 ppb	09:38:00
3	Mn 257.610†	477446.4	461272.1	509.21	ug/L	509.21 ppb	09:37:55
3	Mo 202.031†	7501.5	7240.9	510.08	ug/L	510.08 ppb	09:38:20
3	Ni 231.604†	20016.5	19247.1	514.14	ug/L	514.14 ppb	09:38:00
3	P 214.914†	5517.1	5023.3	2468.3	ug/L	2468.3 ppb	09:38:20
3	Pb 220.353†	4428.4	4297.9	513.28	ug/L	513.28 ppb	09:38:20
3	S 181.975 Axial†	853.9	750.8	1027.5	ug/L	1027.5 ppb	09:38:20
3	Sb 206.836†	1857.2	1739.7	523.18	ug/L	523.18 ppb	09:38:20
3	Se 196.026†	1026.5	1021.9	539.41	ug/L	539.41 ppb	09:38:20
3	Si 251.611†	87171.3	83930.5	2574.7	ug/L	2574.7 ppb	09:38:00
3	Sn 189.927†	3017.8	2907.3	515.47	ug/L	515.47 ppb	09:38:20
3	Ti 334.940†	280908.0	273139.9	499.96	ug/L	499.96 ppb	09:38:00
3	Tl 190.801†	1984.5	1980.8	521.47	ug/L	521.47 ppb	09:38:20
3	U 409.014†	11073.0	15562.3	525.35	ug/L	525.35 ppb	09:38:00
3	V 292.402†	56726.1	56450.4	518.81	ug/L	518.81 ppb	09:38:00
3	Zn 213.857†	58702.4	55872.2	510.91	ug/L	510.91 ppb	09:38:00
3	SiO2†	87234.6	83966.6	5483.2	ug/L	5483.2 ppb	09:38:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	747481.4	104.01	%	0.565				0.54%
Sc Radial	7481.8	100	%	0.7				0.71%
Y 371.029	576212.9	102.53	%	0.545				0.53%
Y RADIAL	6892.8	99.54	%	0.833				0.84%
Ag 328.068†	84556.3	508.23	ug/L	5.745	508.23	ppb	5.745	1.13%
QC value within limits for Ag 328.068 Recovery = 101.65%								
Al 396.153Radial†	6385.1	5236.4	ug/L	55.04	5236.4	ppb	55.04	1.05%
QC value within limits for Al 396.153Radial Recovery = 104.73%								
As 188.979†	1420.5	515.41	ug/L	7.313	515.41	ppb	7.313	1.42%
QC value within limits for As 188.979 Recovery = 103.08%								
B 249.677†	20470.9	512.95	ug/L	5.884	512.95	ppb	5.884	1.15%
QC value within limits for B 249.677 Recovery = 102.59%								
Ba 233.527†	71814.7	507.82	ug/L	6.155	507.82	ppb	6.155	1.21%
QC value within limits for Ba 233.527 Recovery = 101.56%								
Be 313.107†	1109987.3	509.19	ug/L	1.715	509.19	ppb	1.715	0.34%
QC value within limits for Be 313.107 Recovery = 101.84%								
Ca 317.933Radial†	3655.4	5178.3	ug/L	47.79	5178.3	ppb	47.79	0.92%
QC value within limits for Ca 317.933Radial Recovery = 103.57%								
Cd 226.502†	40009.2	510.05	ug/L	5.801	510.05	ppb	5.801	1.14%
QC value within limits for Cd 226.502 Recovery = 102.01%								
Co 228.616†	29459.5	511.13	ug/L	6.007	511.13	ppb	6.007	1.18%
QC value within limits for Co 228.616 Recovery = 102.23%								
Cr 267.716†	36174.9	507.61	ug/L	5.726	507.61	ppb	5.726	1.13%
QC value within limits for Cr 267.716 Recovery = 101.52%								
Cu 324.752†	138299.3	501.45	ug/L	5.556	501.45	ppb	5.556	1.11%
QC value within limits for Cu 324.752 Recovery = 100.29%								
Fe 238.204 Radial†	1205.3	5040.2	ug/L	47.87	5040.2	ppb	47.87	0.95%
QC value within limits for Fe 238.204 Radial Recovery = 100.80%								
K 766.490 Radial†	22597.6	4862.3	ug/L	44.91	4862.3	ppb	44.91	0.92%
QC value within limits for K 766.490 Radial Recovery = 97.25%								
Mg 279.077 IEC†	210.5	5252.9	ug/L	39.45	5252.9	ppb	39.45	0.75%
QC value within limits for Mg 279.077 IEC Recovery = 105.06%								

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Mn 257.610†          459858.3      507.65 ug/L        2.073      507.65 ppb        2.073   0.41%
   QC value within limits for Mn 257.610  Recovery = 101.53%
Mo 202.031†            7172.4      505.25 ug/L        5.288      505.25 ppb        5.288   1.05%
   QC value within limits for Mo 202.031  Recovery = 101.05%
Na 589.592 Radial†   166513.6       10219 ug/L         88.3       10219 ppb         88.3   0.86%
   QC value within limits for Na 589.592 Radial  Recovery = 102.19%
Ni 231.604†           19010.7      507.83 ug/L        5.584      507.83 ppb        5.584   1.10%
   QC value within limits for Ni 231.604  Recovery = 101.57%
P 214.914†             4970.0      2442.3 ug/L        28.79      2442.3 ppb        28.79   1.18%
   QC value within limits for P 214.914  Recovery = 97.69%
Pb 220.353†            4251.7      507.77 ug/L        5.758      507.77 ppb        5.758   1.13%
   QC value within limits for Pb 220.353  Recovery = 101.55%
S 181.975 Axial†        743.3      1017.2 ug/L         9.36      1017.2 ppb         9.36   0.92%
   QC value within limits for S 181.975 Axial  Recovery = 101.72%
Sb 206.836†            1714.5      515.67 ug/L        7.821      515.67 ppb        7.821   1.52%
   QC value within limits for Sb 206.836  Recovery = 103.13%
Se 196.026†            1013.0      534.77 ug/L        4.996      534.77 ppb        4.996   0.93%
   QC value within limits for Se 196.026  Recovery = 106.95%
Si 251.611†           82869.6      2542.1 ug/L        28.66      2542.1 ppb        28.66   1.13%
   QC value within limits for Si 251.611  Recovery = 101.68%
Sn 189.927†            2879.7      510.58 ug/L        5.831      510.58 ppb        5.831   1.14%
   QC value within limits for Sn 189.927  Recovery = 102.12%
Sr 421.552†          172725.0      482.38 ug/L        4.423      482.38 ppb        4.423   0.92%
   QC value within limits for Sr 421.552  Recovery = 96.48%
Ti 334.940†          269411.7      493.14 ug/L        6.066      493.14 ppb        6.066   1.23%
   QC value within limits for Ti 334.940  Recovery = 98.63%
Tl 190.801†            1953.2      514.22 ug/L        6.763      514.22 ppb        6.763   1.32%
   QC value within limits for Tl 190.801  Recovery = 102.84%
U 409.014†            15349.1      518.14 ug/L        7.251      518.14 ppb        7.251   1.40%
   QC value within limits for U 409.014  Recovery = 103.63%
V 292.402†            55702.4      511.96 ug/L        6.148      511.96 ppb        6.148   1.20%
   QC value within limits for V 292.402  Recovery = 102.39%
Zn 213.857†           55128.8      504.10 ug/L        6.068      504.10 ppb        6.068   1.20%
   QC value within limits for Zn 213.857  Recovery = 100.82%
SiO2†                 83231.3      5435.2 ug/L        44.44      5435.2 ppb        44.44   0.82%
   QC value within limits for SiO2  Recovery = 101.64%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 09:40:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6894.2	6894.2	92.2	%			09:42:38
1	Y RADIAL	6384.5	6384.5	92.20	%			09:42:38
1	Al 396.153Radial†	-102.5	-38.5	-31.712	ug/L	-31.712	ppb	09:42:38
1	Ca 317.933Radial†	29.5	2.9	4.0374	ug/L	4.0374	ppb	09:42:58
1	Fe 238.204 Radial†	36.5	4.8	20.033	ug/L	20.033	ppb	09:42:58
1	K 766.490 Radial†	2481.1	282.8	61.013	ug/L	61.013	ppb	09:42:38
1	Mg 279.077 IEC†	0.9	-2.0	-50.288	ug/L	-50.288	ppb	09:42:58
1	Na 589.592 Radial†	184.5	335.6	20.597	ug/L	20.597	ppb	09:42:38
1	Sr 421.552†	-9.0	46.1	0.1288	ug/L	0.1288	ppb	09:42:38
1	Sc 361.383	719880.5	719880.5	100.17	%			09:43:55
1	Y 371.029	563118.3	563118.3	100.20	%			09:43:55
1	Ag 328.068†	709.6	75.7	0.4618	ug/L	0.4618	ppb	09:43:55
1	As 188.979†	-34.9	0.6	0.2269	ug/L	0.2269	ppb	09:44:15
1	B 249.677†	-391.1	549.5	13.844	ug/L	13.844	ppb	09:43:55
1	Ba 233.527†	18.8	18.3	0.1286	ug/L	0.1286	ppb	09:44:15
1	Be 313.107†	-4691.2	198.3	0.0903	ug/L	0.0903	ppb	09:43:55
1	Cd 226.502†	-263.5	18.0	0.2283	ug/L	0.2283	ppb	09:44:15
1	Co 228.616†	-72.7	26.9	0.4673	ug/L	0.4673	ppb	09:44:15
1	Cr 267.716†	-53.4	24.1	0.3395	ug/L	0.3395	ppb	09:43:55
1	Cu 324.752†	5742.2	94.2	0.3426	ug/L	0.3426	ppb	09:43:55
1	Mn 257.610†	688.0	7.2	0.0115	ug/L	0.0115	ppb	09:43:55
1	Mo 202.031†	25.4	8.2	0.5818	ug/L	0.5818	ppb	09:44:15
1	Ni 231.604†	157.3	37.2	0.9947	ug/L	0.9947	ppb	09:44:15
1	P 214.914†	308.9	-6.4	-3.3577	ug/L	-3.3577	ppb	09:44:15
1	Pb 220.353†	9.0	22.2	2.6412	ug/L	2.6412	ppb	09:44:15
1	S 181.975 Axial†	78.3	2.7	3.7221	ug/L	3.7221	ppb	09:44:15
1	Sb 206.836†	56.2	-1.1	-0.3198	ug/L	-0.3198	ppb	09:44:15
1	Se 196.026†	-22.0	6.8	3.5212	ug/L	3.5212	ppb	09:44:15
1	Si 251.611†	507.8	95.2	2.9043	ug/L	2.9043	ppb	09:44:15
1	Sn 189.927†	14.6	2.0	0.3634	ug/L	0.3634	ppb	09:44:15
1	Ti 334.940†	-1464.0	-113.3	-0.2055	ug/L	-0.2055	ppb	09:43:55
1	Tl 190.801†	-49.5	11.3	2.9527	ug/L	2.9527	ppb	09:44:15
1	U 409.014†	-4984.1	-127.1	-4.3081	ug/L	-4.3081	ppb	09:43:55
1	V 292.402†	-1586.5	-18.7	-0.1745	ug/L	-0.1745	ppb	09:43:55
1	Zn 213.857†	1000.9	74.1	0.6768	ug/L	0.6768	ppb	09:44:15
1	SiO2†	526.1	88.4	5.7331	ug/L	5.7331	ppb	09:45:11
2	Sc Radial	7433.1	7433.1	99.4	%			09:43:03
2	Y RADIAL	6894.2	6894.2	99.57	%			09:43:03
2	Al 396.153Radial†	-54.3	18.0	14.812	ug/L	14.812	ppb	09:43:03
2	Ca 317.933Radial†	23.2	-5.7	-8.1219	ug/L	-8.1219	ppb	09:43:23
2	Fe 238.204 Radial†	40.9	6.3	26.394	ug/L	26.394	ppb	09:43:23
2	K 766.490 Radial†	2620.1	227.6	49.101	ug/L	49.101	ppb	09:43:03
2	Mg 279.077 IEC†	1.7	-1.3	-32.309	ug/L	-32.309	ppb	09:43:23
2	Na 589.592 Radial†	226.0	362.8	22.267	ug/L	22.267	ppb	09:43:03
2	Sr 421.552†	-22.1	33.7	0.0941	ug/L	0.0941	ppb	09:43:03
2	Sc 361.383	714110.1	714110.1	99.363	%			09:44:21
2	Y 371.029	559063.9	559063.9	99.478	%			09:44:21
2	Ag 328.068†	565.2	-63.8	-0.3693	ug/L	-0.3693	ppb	09:44:21
2	As 188.979†	-19.0	16.4	5.9022	ug/L	5.9022	ppb	09:44:41
2	B 249.677†	-386.0	551.5	13.897	ug/L	13.897	ppb	09:44:21
2	Ba 233.527†	21.6	21.2	0.1505	ug/L	0.1505	ppb	09:44:41
2	Be 313.107†	-4693.3	158.3	0.0722	ug/L	0.0722	ppb	09:44:21
2	Cd 226.502†	-258.1	21.4	0.2697	ug/L	0.2697	ppb	09:44:41
2	Co 228.616†	-103.6	-4.8	-0.0823	ug/L	-0.0823	ppb	09:44:41
2	Cr 267.716†	-79.8	-2.9	-0.0388	ug/L	-0.0388	ppb	09:44:21
2	Cu 324.752†	5568.8	-33.9	-0.1215	ug/L	-0.1215	ppb	09:44:21
2	Mn 257.610†	712.7	37.7	0.0455	ug/L	0.0455	ppb	09:44:21
2	Mo 202.031†	24.6	7.7	0.5407	ug/L	0.5407	ppb	09:44:41
2	Ni 231.604†	139.0	20.1	0.5377	ug/L	0.5377	ppb	09:44:41

2	P 214.914†	311.1	-1.7	-0.8331	ug/L	-0.8331 ppb	09:44:41
2	Pb 220.353†	5.5	18.8	2.2417	ug/L	2.2417 ppb	09:44:41
2	S 181.975 Axial†	76.0	1.1	1.4516	ug/L	1.4516 ppb	09:44:41
2	Sb 206.836†	61.5	4.7	1.4121	ug/L	1.4121 ppb	09:44:41
2	Se 196.026†	-35.8	-7.2	-3.6099	ug/L	-3.6099 ppb	09:44:41
2	Si 251.611†	492.7	84.1	2.5666	ug/L	2.5666 ppb	09:44:41
2	Sn 189.927†	14.8	2.4	0.4327	ug/L	0.4327 ppb	09:44:41
2	Ti 334.940†	-1394.0	-54.7	-0.0997	ug/L	-0.0997 ppb	09:44:21
2	Tl 190.801†	-53.5	6.9	1.8178	ug/L	1.8178 ppb	09:44:41
2	U 409.014†	-4881.1	-63.7	-2.1597	ug/L	-2.1597 ppb	09:44:21
2	V 292.402†	-1517.5	38.0	0.3435	ug/L	0.3435 ppb	09:44:21
2	Zn 213.857†	988.3	69.5	0.6366	ug/L	0.6366 ppb	09:44:41
2	SiO2†	496.6	62.9	4.0655	ug/L	4.0655 ppb	09:45:17
3	Sc Radial	7360.3	7360.3	98.5	%		09:43:28
3	Y RADIAL	6797.8	6797.8	98.17	%		09:43:28
3	Al 396.153Radial†	-90.0	-18.7	-15.460	ug/L	-15.460 ppb	09:43:28
3	Ca 317.933Radial†	32.4	3.8	5.4300	ug/L	5.4300 ppb	09:43:49
3	Fe 238.204 Radial†	35.1	0.9	3.5646	ug/L	3.5646 ppb	09:43:49
3	K 766.490 Radial†	2468.3	99.4	21.436	ug/L	21.436 ppb	09:43:28
3	Mg 279.077 IEC†	2.7	-0.3	-7.6229	ug/L	-7.6229 ppb	09:43:49
3	Na 589.592 Radial†	277.0	416.8	25.582	ug/L	25.582 ppb	09:43:28
3	Sr 421.552†	-56.3	-1.3	-0.0036	ug/L	-0.0036 ppb	09:43:28
3	Sc 361.383	722967.1	722967.1	100.60	%		09:44:46
3	Y 371.029	565613.4	565613.4	100.64	%		09:44:46
3	Ag 328.068†	639.5	3.1	0.0184	ug/L	0.0184 ppb	09:44:46
3	As 188.979†	-31.7	3.9	1.3987	ug/L	1.3987 ppb	09:45:06
3	B 249.677†	-390.2	552.0	13.909	ug/L	13.909 ppb	09:44:46
3	Ba 233.527†	39.7	39.0	0.2765	ug/L	0.2765 ppb	09:45:06
3	Be 313.107†	-4786.6	123.5	0.0567	ug/L	0.0567 ppb	09:44:46
3	Cd 226.502†	-275.3	7.4	0.0941	ug/L	0.0941 ppb	09:45:06
3	Co 228.616†	-79.1	20.8	0.3617	ug/L	0.3617 ppb	09:45:06
3	Cr 267.716†	-45.9	31.7	0.4442	ug/L	0.4442 ppb	09:44:46
3	Cu 324.752†	5639.4	-32.4	-0.1170	ug/L	-0.1170 ppb	09:44:46
3	Mn 257.610†	719.5	35.7	0.0399	ug/L	0.0399 ppb	09:44:46
3	Mo 202.031†	24.7	7.4	0.5208	ug/L	0.5208 ppb	09:45:06
3	Ni 231.604†	144.8	24.2	0.6462	ug/L	0.6462 ppb	09:45:06
3	P 214.914†	309.6	-7.0	-3.5366	ug/L	-3.5366 ppb	09:45:06
3	Pb 220.353†	-7.1	6.2	0.7392	ug/L	0.7392 ppb	09:45:06
3	S 181.975 Axial†	80.1	4.2	5.7096	ug/L	5.7096 ppb	09:45:06
3	Sb 206.836†	52.2	-5.4	-1.5761	ug/L	-1.5761 ppb	09:45:06
3	Se 196.026†	-16.0	12.9	6.5953	ug/L	6.5953 ppb	09:45:06
3	Si 251.611†	510.2	95.4	2.9083	ug/L	2.9083 ppb	09:45:06
3	Sn 189.927†	22.2	9.6	1.6974	ug/L	1.6974 ppb	09:45:06
3	Ti 334.940†	-1304.9	51.0	0.0916	ug/L	0.0916 ppb	09:44:46
3	Tl 190.801†	-58.8	2.3	0.6090	ug/L	0.6090 ppb	09:45:06
3	U 409.014†	-4742.7	134.1	4.5395	ug/L	4.5395 ppb	09:44:46
3	V 292.402†	-1494.0	80.0	0.7414	ug/L	0.7414 ppb	09:44:46
3	Zn 213.857†	990.5	59.5	0.5453	ug/L	0.5453 ppb	09:45:06
3	SiO2†	542.4	102.3	6.6406	ug/L	6.6406 ppb	09:45:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	718985.9	100.04	%	0.626				0.63%
Sc Radial	7229.2	96.7	%	3.91				4.04%
Y 371.029	562598.5	100.11	%	0.588				0.59%
Y RADIAL	6692.2	96.65	%	3.911				4.05%
Ag 328.068†	5.0	0.0370	ug/L	0.41585	0.0370	ppb	0.41585	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.1	-10.787	ug/L	23.6114	-10.787	ppb	23.6114	218.89%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.0	2.5093	ug/L	2.99621	2.5093	ppb	2.99621	119.40%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	551.0	13.883	ug/L	0.0344	13.883	ppb	0.0344	0.25%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.2	0.1852	ug/L	0.07981	0.1852	ppb	0.07981	43.10%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	160.1	0.0731	ug/L	0.01679	0.0731	ppb	0.01679	22.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.3	0.4485	ug/L	7.45476	0.4485	ppb	7.45476	>999.9%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                15.6      0.1974 ug/L       0.09179      0.1974 ppb        0.09179  46.51%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                14.3      0.2489 ug/L       0.29165      0.2489 ppb        0.29165 117.19%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.6      0.2483 ug/L       0.25408      0.2483 ppb        0.25408 102.32%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                 9.3      0.0347 ug/L       0.26665      0.0347 ppb        0.26665 768.84%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.0      16.664 ug/L       11.7815      16.664 ppb        11.7815  70.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         203.3      43.850 ug/L       20.3045      43.850 ppb        20.3045  46.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.2     -30.073 ug/L       21.4204     -30.073 ppb        21.4204  71.23%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                26.9      0.0323 ug/L       0.01826      0.0323 ppb        0.01826  56.53%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 7.8      0.5478 ug/L       0.03113      0.5478 ppb        0.03113   5.68%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        371.7      22.815 ug/L        2.5369      22.815 ppb         2.5369  11.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                27.2      0.7262 ug/L       0.23879      0.7262 ppb        0.23879  32.88%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -5.0     -2.5758 ug/L       1.51188     -2.5758 ppb        1.51188  58.70%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                15.8      1.8740 ug/L       1.00290      1.8740 ppb        1.00290  53.52%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            2.6      3.6278 ug/L       2.13055      3.6278 ppb        2.13055  58.73%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.6     -0.1613 ug/L       1.50040     -0.1613 ppb        1.50040 930.30%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 4.1      2.1689 ug/L       5.23531      2.1689 ppb        5.23531 241.38%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                91.6      2.7931 ug/L       0.19618      2.7931 ppb        0.19618   7.02%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 4.7      0.8312 ug/L       0.75095      0.8312 ppb        0.75095  90.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                26.2      0.0731 ug/L       0.06869      0.0731 ppb        0.06869  93.96%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -39.0     -0.0712 ug/L       0.15057     -0.0712 ppb        0.15057 211.53%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.7932 ug/L       1.17204      1.7932 ppb        1.17204  65.36%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -18.9     -0.6428 ug/L       4.61470     -0.6428 ppb        4.61470 717.96%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 33.1      0.3035 ug/L       0.45926      0.3035 ppb        0.45926 151.34%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                67.7      0.6196 ug/L       0.06739      0.6196 ppb        0.06739  10.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      84.5      5.4798 ug/L       1.30612      5.4798 ppb        1.30612  23.84%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: LR1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 6/30/2009 09:47:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7516.4	7516.4	101	%			09:49:26
1	Y RADIAL	6915.7	6915.7	99.88	%			09:49:26
1	Al 396.153Radial†	-98.8	-25.7	-20.086	ug/L	-20.086	ppb	09:49:26
1	Ca 317.933Radial†	37.1	7.8	11.041	ug/L	11.041	ppb	09:49:46
1	Fe 238.204 Radial†	87066.9	86547.6	360770	ug/L	360770	ppb	09:49:26
1	K 766.490 Radial†	2428.8	8.1	81.500	ug/L	81.500	ppb	09:49:26
1	Mg 279.077 IEC†	12.0	8.9	-88.405	ug/L	-88.405	ppb	09:49:46
1	Na 589.592 Radial†	397.1	530.5	32.556	ug/L	32.556	ppb	09:49:26
1	Sr 421.552†	117.9	173.1	0.4834	ug/L	0.4834	ppb	09:49:26
1	Sc 361.383	725108.3	725108.3	100.89	%			09:50:43
1	Y 371.029	563385.4	563385.4	100.25	%			09:50:43
1	Ag 328.068†	-18790.9	-19257.2	0.5238	ug/L	0.5238	ppb	09:50:43
1	As 188.979†	-260.5	-222.8	-8.2675	ug/L	-8.2675	ppb	09:51:03
1	B 249.677†	1152.5	2082.2	27.824	ug/L	27.824	ppb	09:50:43
1	Ba 233.527†	-1624.5	-1610.6	-12.915	ug/L	-12.915	ppb	09:51:03
1	Be 313.107†	-4636.8	286.0	0.1315	ug/L	0.1315	ppb	09:50:43
1	Cd 226.502†	2753.8	3010.5	-3.6531	ug/L	-3.6531	ppb	09:51:03
1	Co 228.616†	166.0	264.0	-0.6316	ug/L	-0.6316	ppb	09:51:03
1	Cr 267.716†	-640.8	-557.7	-0.3574	ug/L	-0.3574	ppb	09:51:03
1	Cu 324.752†	-525.4	-6159.2	-1.4610	ug/L	-1.4610	ppb	09:50:43
1	Mn 257.610†	-38240.2	-38581.3	2.8086	ug/L	2.8086	ppb	09:50:43
1	Mo 202.031†	-332.9	-347.1	-0.8931	ug/L	-0.8931	ppb	09:51:03
1	Ni 231.604†	309.3	186.8	4.9901	ug/L	4.9901	ppb	09:51:03
1	P 214.914†	895.5	572.8	5.9449	ug/L	5.9449	ppb	09:51:03
1	Pb 220.353†	275.4	286.2	-0.0517	ug/L	-0.0517	ppb	09:51:03
1	S 181.975 Axial†	104.1	27.7	37.997	ug/L	37.997	ppb	09:51:03
1	Sb 206.836†	39.7	-17.9	0.9970	ug/L	0.9970	ppb	09:51:03
1	Se 196.026†	-2351.1	-2301.5	26.401	ug/L	26.401	ppb	09:51:03
1	Si 251.611†	-1963.8	-2358.2	-72.361	ug/L	-72.361	ppb	09:51:03
1	Sn 189.927†	-6.1	-18.5	23.583	ug/L	23.583	ppb	09:51:03
1	Ti 334.940†	-1212.7	146.3	0.2396	ug/L	0.2396	ppb	09:51:03
1	Tl 190.801†	-59.6	1.7	0.1017	ug/L	0.1017	ppb	09:51:03
1	U 409.014†	-2758.9	2114.2	27.271	ug/L	27.271	ppb	09:50:43
1	V 292.402†	4514.8	6040.0	4.3981	ug/L	4.3981	ppb	09:51:03
1	Zn 213.857†	5026.5	4056.9	-0.1994	ug/L	-0.1994	ppb	09:51:03
1	SiO2†	-2098.2	-2516.5	-164.47	ug/L	-164.47	ppb	09:51:59
2	Sc Radial	7401.7	7401.7	99.0	%			09:49:51
2	Y RADIAL	6860.1	6860.1	99.07	%			09:49:51
2	Al 396.153Radial†	-68.9	3.0	3.4831	ug/L	3.4831	ppb	09:49:51
2	Ca 317.933Radial†	32.6	3.8	5.4514	ug/L	5.4514	ppb	09:50:11
2	Fe 238.204 Radial†	86091.0	86904.1	362260	ug/L	362260	ppb	09:49:51
2	K 766.490 Radial†	2280.1	-104.6	57.480	ug/L	57.480	ppb	09:49:51
2	Mg 279.077 IEC†	14.0	11.1	-34.289	ug/L	-34.289	ppb	09:50:11
2	Na 589.592 Radial†	370.6	509.8	31.289	ug/L	31.289	ppb	09:49:51
2	Sr 421.552†	114.6	171.6	0.4793	ug/L	0.4793	ppb	09:49:51
2	Sc 361.383	731404.0	731404.0	101.77	%			09:51:08
2	Y 371.029	568361.3	568361.3	101.13	%			09:51:08
2	Ag 328.068†	-18900.9	-19204.9	1.3021	ug/L	1.3021	ppb	09:51:08
2	As 188.979†	-252.9	-213.1	-4.4741	ug/L	-4.4741	ppb	09:51:28
2	B 249.677†	1176.0	2095.5	28.056	ug/L	28.056	ppb	09:51:08
2	Ba 233.527†	-1621.3	-1593.6	-12.806	ug/L	-12.806	ppb	09:51:28
2	Be 313.107†	-4754.1	210.3	0.0968	ug/L	0.0968	ppb	09:51:08
2	Cd 226.502†	2731.8	2965.4	-4.4011	ug/L	-4.4011	ppb	09:51:28
2	Co 228.616†	168.6	265.1	-0.6302	ug/L	-0.6302	ppb	09:51:28
2	Cr 267.716†	-644.5	-555.9	-0.3045	ug/L	-0.3045	ppb	09:51:28
2	Cu 324.752†	-590.7	-6218.9	-1.5916	ug/L	-1.5916	ppb	09:51:08
2	Mn 257.610†	-38621.6	-38629.8	2.9409	ug/L	2.9409	ppb	09:51:08
2	Mo 202.031†	-320.2	-331.8	0.2783	ug/L	0.2783	ppb	09:51:28
2	Ni 231.604†	288.4	163.5	4.3684	ug/L	4.3684	ppb	09:51:28

2	P 214.914†	902.1	571.6	4.1616	ug/L	4.1616	ppb	09:51:28
2	Pb 220.353†	269.2	277.8	-1.1874	ug/L	-1.1874	ppb	09:51:28
2	S 181.975 Axial†	109.6	32.2	44.179	ug/L	44.179	ppb	09:51:28
2	Sb 206.836†	47.8	-10.3	3.2563	ug/L	3.2563	ppb	09:51:28
2	Se 196.026†	-2354.5	-2284.8	39.892	ug/L	39.892	ppb	09:51:28
2	Si 251.611†	-2007.9	-2384.8	-73.149	ug/L	-73.149	ppb	09:51:28
2	Sn 189.927†	-24.3	-36.4	20.525	ug/L	20.525	ppb	09:51:28
2	Ti 334.940†	-1232.5	137.2	0.2210	ug/L	0.2210	ppb	09:51:28
2	Tl 190.801†	-76.8	-14.8	-4.1977	ug/L	-4.1977	ppb	09:51:28
2	U 409.014†	-2677.4	2217.9	30.599	ug/L	30.599	ppb	09:51:08
2	V 292.402†	4373.9	5863.1	2.6053	ug/L	2.6053	ppb	09:51:28
2	Zn 213.857†	5020.1	4007.7	-0.8055	ug/L	-0.8055	ppb	09:51:28
2	SiO2†	-2031.8	-2433.4	-158.93	ug/L	-158.93	ppb	09:52:05
3	Sc Radial	7410.2	7410.2	99.1	%			09:50:16
3	Y RADIAL	6847.3	6847.3	98.89	%			09:50:16
3	Al 396.153Radial†	-111.8	-40.1	-31.936	ug/L	-31.936	ppb	09:50:16
3	Ca 317.933Radial†	33.1	4.3	6.1250	ug/L	6.1250	ppb	09:50:36
3	Fe 238.204 Radial†	86398.0	87114.4	363130	ug/L	363130	ppb	09:50:16
3	K 766.490 Radial†	2431.6	45.5	90.097	ug/L	90.097	ppb	09:50:16
3	Mg 279.077 IEC†	13.0	10.1	-60.202	ug/L	-60.202	ppb	09:50:36
3	Na 589.592 Radial†	433.2	572.5	35.136	ug/L	35.136	ppb	09:50:16
3	Sr 421.552†	140.6	197.7	0.5521	ug/L	0.5521	ppb	09:50:16
3	Sc 361.383	728972.2	728972.2	101.43	%			09:51:34
3	Y 371.029	566673.6	566673.6	100.83	%			09:51:34
3	Ag 328.068†	-18859.5	-19226.1	1.4611	ug/L	1.4611	ppb	09:51:34
3	As 188.979†	-247.1	-208.1	-2.5135	ug/L	-2.5135	ppb	09:51:54
3	B 249.677†	1234.9	2157.4	29.557	ug/L	29.557	ppb	09:51:34
3	Ba 233.527†	-1639.4	-1616.8	-12.972	ug/L	-12.972	ppb	09:51:54
3	Be 313.107†	-4699.9	248.2	0.1140	ug/L	0.1140	ppb	09:51:34
3	Cd 226.502†	2783.8	3025.7	-3.7352	ug/L	-3.7352	ppb	09:51:54
3	Co 228.616†	174.3	271.3	-0.5400	ug/L	-0.5400	ppb	09:51:54
3	Cr 267.716†	-591.8	-506.0	0.4145	ug/L	0.4145	ppb	09:51:54
3	Cu 324.752†	-729.8	-6357.9	-2.0447	ug/L	-2.0447	ppb	09:51:34
3	Mn 257.610†	-38791.6	-38924.0	2.7271	ug/L	2.7271	ppb	09:51:34
3	Mo 202.031†	-344.1	-356.4	-1.3967	ug/L	-1.3967	ppb	09:51:54
3	Ni 231.604†	295.1	171.1	4.5706	ug/L	4.5706	ppb	09:51:54
3	P 214.914†	869.6	542.5	-11.288	ug/L	-11.288	ppb	09:51:54
3	Pb 220.353†	261.6	271.1	-2.0706	ug/L	-2.0706	ppb	09:51:54
3	S 181.975 Axial†	102.7	25.9	35.435	ug/L	35.435	ppb	09:51:54
3	Sb 206.836†	50.3	-7.7	4.0433	ug/L	4.0433	ppb	09:51:54
3	Se 196.026†	-2361.0	-2299.0	35.562	ug/L	35.562	ppb	09:51:54
3	Si 251.611†	-1975.7	-2359.6	-72.383	ug/L	-72.383	ppb	09:51:54
3	Sn 189.927†	-11.8	-24.1	22.763	ug/L	22.763	ppb	09:51:54
3	Ti 334.940†	-1278.1	88.2	0.1322	ug/L	0.1322	ppb	09:51:54
3	Tl 190.801†	-76.3	-14.5	-4.1245	ug/L	-4.1245	ppb	09:51:54
3	U 409.014†	-2741.1	2146.3	28.066	ug/L	28.066	ppb	09:51:34
3	V 292.402†	4447.8	5950.2	3.2477	ug/L	3.2477	ppb	09:51:54
3	Zn 213.857†	5010.6	4014.8	-0.8309	ug/L	-0.8309	ppb	09:51:54
3	SiO2†	-2036.2	-2444.4	-159.68	ug/L	-159.68	ppb	09:52:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	728494.8	101.36	%	0.442				0.44%
Sc Radial	7442.8	99.6	%	0.86				0.86%
Y 371.029	566140.1	100.74	%	0.450				0.45%
Y RADIAL	6874.4	99.28	%	0.525				0.53%
Ag 328.068†	-19229.4	1.0957	ug/L	0.50161	1.0957	ppb	0.50161	45.78%
Al 396.153Radial†	-20.9	-16.179	ug/L	18.0298	-16.179	ppb	18.0298	111.44%
As 188.979†	-214.7	-5.0850	ug/L	2.92523	-5.0850	ppb	2.92523	57.53%
B 249.677†	2111.7	28.479	ug/L	0.9406	28.479	ppb	0.9406	3.30%
Ba 233.527†	-1607.0	-12.898	ug/L	0.0845	-12.898	ppb	0.0845	0.66%
Be 313.107†	248.1	0.1141	ug/L	0.01735	0.1141	ppb	0.01735	15.21%
Ca 317.933Radial†	5.3	7.5390	ug/L	3.05107	7.5390	ppb	3.05107	40.47%
Cd 226.502†	3000.5	-3.9298	ug/L	0.41023	-3.9298	ppb	0.41023	10.44%
Co 228.616†	266.8	-0.6006	ug/L	0.05250	-0.6006	ppb	0.05250	8.74%
Cr 267.716†	-539.9	-0.0825	ug/L	0.43120	-0.0825	ppb	0.43120	522.91%
Cu 324.752†	-6245.3	-1.6991	ug/L	0.30636	-1.6991	ppb	0.30636	18.03%
Fe 238.204 Radial†	86855.3	362050	ug/L	1194.5	362050	ppb	1194.5	0.33%
K 766.490 Radial†	-17.0	76.359	ug/L	16.9055	76.359	ppb	16.9055	22.14%

Mg 279.077 IEC†	10.0	-60.965	ug/L	27.0664	-60.965	ppb	27.0664	44.40%
Mn 257.610†	-38711.7	2.8255	ug/L	0.10788	2.8255	ppb	0.10788	3.82%
Mo 202.031†	-345.1	-0.6705	ug/L	0.85941	-0.6705	ppb	0.85941	128.18%
Na 589.592 Radial†	537.6	32.994	ug/L	1.9608	32.994	ppb	1.9608	5.94%
Ni 231.604†	173.8	4.6430	ug/L	0.31712	4.6430	ppb	0.31712	6.83%
P 214.914†	562.3	-0.3937	ug/L	9.47646	-0.3937	ppb	9.47646	>999.9%
Pb 220.353†	278.4	-1.1032	ug/L	1.01205	-1.1032	ppb	1.01205	91.73%
S 181.975 Axial†	28.6	39.204	ug/L	4.4950	39.204	ppb	4.4950	11.47%
Sb 206.836†	-12.0	2.7655	ug/L	1.58134	2.7655	ppb	1.58134	57.18%
Se 196.026†	-2295.1	33.951	ug/L	6.8883	33.951	ppb	6.8883	20.29%
Si 251.611†	-2367.5	-72.631	ug/L	0.4490	-72.631	ppb	0.4490	0.62%
Sn 189.927†	-26.4	22.290	ug/L	1.5828	22.290	ppb	1.5828	7.10%
Sr 421.552†	180.8	0.5049	ug/L	0.04089	0.5049	ppb	0.04089	8.10%
Ti 334.940†	123.9	0.1976	ug/L	0.05741	0.1976	ppb	0.05741	29.06%
Tl 190.801†	-9.2	-2.7402	ug/L	2.46144	-2.7402	ppb	2.46144	89.83%
U 409.014†	2159.5	28.645	ug/L	1.7380	28.645	ppb	1.7380	6.07%
V 292.402†	5951.1	3.4170	ug/L	0.90831	3.4170	ppb	0.90831	26.58%
Zn 213.857†	4026.5	-0.6119	ug/L	0.35751	-0.6119	ppb	0.35751	58.42%
SiO2†	-2464.7	-161.03	ug/L	3.008	-161.03	ppb	3.008	1.87%

Sequence No.: 4
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 09:54:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7478.5	7478.5	100	%			09:56:33
1	Y RADIAL	6940.5	6940.5	100.2	%			09:56:13
1	Al 396.153Radial†	6252.6	6321.9	5184.7	ug/L	5184.7	ppb	09:56:13
1	Ca 317.933Radial†	3732.0	3701.0	5242.8	ug/L	5242.8	ppb	09:56:33
1	Fe 238.204 Radial†	1242.8	1207.3	5048.3	ug/L	5048.3	ppb	09:56:33
1	K 766.490 Radial†	24779.2	22359.0	4811.0	ug/L	4811.0	ppb	09:56:13
1	Mg 279.077 IEC†	213.1	209.9	5239.8	ug/L	5239.8	ppb	09:56:33
1	Na 589.592 Radial†	165729.6	165778.2	10174	ug/L	10174	ppb	09:56:13
1	Sr 421.552†	172347.0	172312.4	481.22	ug/L	481.22	ppb	09:56:13
1	Sc 361.383	755963.2	755963.2	105.19	%			09:57:32
1	Y 371.029	582662.1	582662.1	103.68	%			09:57:32
1	Ag 328.068†	87925.9	82958.0	498.66	ug/L	498.66	ppb	09:57:32
1	As 188.979†	1406.2	1372.3	498.06	ug/L	498.06	ppb	09:57:52
1	B 249.677†	19796.4	19760.2	495.13	ug/L	495.13	ppb	09:57:32
1	Ba 233.527†	74510.0	70835.7	500.89	ug/L	500.89	ppb	09:57:32
1	Be 313.107†	1145024.8	1093449.4	501.63	ug/L	501.63	ppb	09:57:32
1	Cd 226.502†	39856.8	38172.7	486.62	ug/L	486.62	ppb	09:57:52
1	Co 228.616†	29708.8	28343.4	491.74	ug/L	491.74	ppb	09:57:52
1	Cr 267.716†	37343.6	35579.8	499.27	ug/L	499.27	ppb	09:57:32
1	Cu 324.752†	150019.0	136983.6	496.68	ug/L	496.68	ppb	09:57:32
1	Mn 257.610†	477832.6	453592.8	500.74	ug/L	500.74	ppb	09:57:32
1	Mo 202.031†	7443.1	7058.9	497.27	ug/L	497.27	ppb	09:57:52
1	Ni 231.604†	19445.4	18366.8	490.63	ug/L	490.63	ppb	09:57:52
1	P 214.914†	5462.1	4878.0	2396.1	ug/L	2396.1	ppb	09:57:52
1	Pb 220.353†	4416.7	4212.2	503.04	ug/L	503.04	ppb	09:57:52
1	S 181.975 Axial†	837.4	720.7	986.32	ug/L	986.32	ppb	09:57:52
1	Sb 206.836†	1799.7	1653.7	497.42	ug/L	497.42	ppb	09:57:52
1	Se 196.026†	1002.5	981.8	518.88	ug/L	518.88	ppb	09:57:52
1	Si 251.611†	86227.0	81563.6	2502.1	ug/L	2502.1	ppb	09:57:32
1	Sn 189.927†	2970.3	2811.3	498.49	ug/L	498.49	ppb	09:57:52
1	Ti 334.940†	284289.1	271620.1	497.20	ug/L	497.20	ppb	09:57:32
1	Tl 190.801†	1943.0	1907.9	502.50	ug/L	502.50	ppb	09:57:52
1	U 409.014†	10464.7	14797.5	499.48	ug/L	499.48	ppb	09:57:32
1	V 292.402†	55893.3	54702.6	502.73	ug/L	502.73	ppb	09:57:32
1	Zn 213.857†	58022.0	54236.0	495.98	ug/L	495.98	ppb	09:57:32
1	SiO2†	85674.8	81013.6	5290.1	ug/L	5290.1	ppb	09:58:53
2	Sc Radial	7375.3	7375.3	98.7	%			09:56:59
2	Y RADIAL	6971.4	6971.4	100.7	%			09:56:39
2	Al 396.153Radial†	6237.3	6393.9	5243.3	ug/L	5243.3	ppb	09:56:39
2	Ca 317.933Radial†	3700.7	3721.4	5271.8	ug/L	5271.8	ppb	09:56:59
2	Fe 238.204 Radial†	1238.5	1220.4	5103.2	ug/L	5103.2	ppb	09:56:59
2	K 766.490 Radial†	24868.6	22796.1	4905.0	ug/L	4905.0	ppb	09:56:39
2	Mg 279.077 IEC†	212.1	211.9	5288.6	ug/L	5288.6	ppb	09:56:59
2	Na 589.592 Radial†	166224.2	168596.9	10347	ug/L	10347	ppb	09:56:39
2	Sr 421.552†	172525.7	174903.5	488.46	ug/L	488.46	ppb	09:56:39
2	Sc 361.383	741650.4	741650.4	103.19	%			09:58:00
2	Y 371.029	572297.5	572297.5	101.83	%			09:58:00
2	Ag 328.068†	87542.3	84199.4	506.12	ug/L	506.12	ppb	09:58:00
2	As 188.979†	1428.4	1419.6	515.15	ug/L	515.15	ppb	09:58:20
2	B 249.677†	19712.4	20042.0	502.16	ug/L	502.16	ppb	09:58:00
2	Ba 233.527†	74207.4	71909.5	508.48	ug/L	508.48	ppb	09:58:00
2	Be 313.107†	1140040.3	1109627.1	509.05	ug/L	509.05	ppb	09:58:00
2	Cd 226.502†	40268.6	39303.1	501.04	ug/L	501.04	ppb	09:58:20
2	Co 228.616†	29947.4	29119.7	505.23	ug/L	505.23	ppb	09:58:20
2	Cr 267.716†	37278.3	36201.6	507.99	ug/L	507.99	ppb	09:58:00
2	Cu 324.752†	148944.0	138694.3	502.89	ug/L	502.89	ppb	09:58:00
2	Mn 257.610†	475432.5	460033.8	507.85	ug/L	507.85	ppb	09:58:00
2	Mo 202.031†	7521.0	7271.0	512.20	ug/L	512.20	ppb	09:58:20
2	Ni 231.604†	19618.0	18890.8	504.63	ug/L	504.63	ppb	09:58:20

2	P 214.914†	5502.9	5017.8	2466.4 ug/L	2466.4 ppb	09:58:20
2	Pb 220.353†	4442.9	4318.6	515.75 ug/L	515.75 ppb	09:58:20
2	S 181.975 Axial†	845.3	743.7	1017.9 ug/L	1017.9 ppb	09:58:20
2	Sb 206.836†	1809.1	1695.8	510.22 ug/L	510.22 ppb	09:58:20
2	Se 196.026†	1003.1	1000.8	528.79 ug/L	528.79 ppb	09:58:20
2	Si 251.611†	85675.8	82611.5	2534.0 ug/L	2534.0 ppb	09:58:00
2	Sn 189.927†	2986.0	2881.1	510.85 ug/L	510.85 ppb	09:58:20
2	Ti 334.940†	282438.0	275042.2	503.46 ug/L	503.46 ppb	09:58:00
2	Tl 190.801†	1958.2	1958.3	515.69 ug/L	515.69 ppb	09:58:20
2	U 409.014†	10221.9	14754.2	497.99 ug/L	497.99 ppb	09:58:00
2	V 292.402†	55452.0	55300.4	508.33 ug/L	508.33 ppb	09:58:00
2	Zn 213.857†	57730.0	55017.6	503.09 ug/L	503.09 ppb	09:58:00
2	SiO2†	87267.4	84128.8	5493.9 ug/L	5493.9 ppb	09:58:58
3	Sc Radial	7411.0	7411.0	99.1 %		09:57:24
3	Y RADIAL	7040.6	7040.6	101.7 %		09:57:04
3	Al 396.153Radial†	6347.5	6474.6	5309.9 ug/L	5309.9 ppb	09:57:04
3	Ca 317.933Radial†	3721.8	3724.7	5276.5 ug/L	5276.5 ppb	09:57:24
3	Fe 238.204 Radial†	1240.8	1216.7	5087.6 ug/L	5087.6 ppb	09:57:24
3	K 766.490 Radial†	25163.8	22972.6	4943.1 ug/L	4943.1 ppb	09:57:04
3	Mg 279.077 IEC†	213.8	212.6	5307.0 ug/L	5307.0 ppb	09:57:24
3	Na 589.592 Radial†	168879.2	170464.6	10462 ug/L	10462 ppb	09:57:04
3	Sr 421.552†	175504.4	177067.0	494.50 ug/L	494.50 ppb	09:57:04
3	Sc 361.383	748842.8	748842.8	104.20 %		09:58:27
3	Y 371.029	577212.1	577212.1	102.71 %		09:58:27
3	Ag 328.068†	88600.2	84400.0	507.32 ug/L	507.32 ppb	09:58:27
3	As 188.979†	1449.4	1426.5	517.65 ug/L	517.65 ppb	09:58:47
3	B 249.677†	20105.2	20235.5	507.05 ug/L	507.05 ppb	09:58:27
3	Ba 233.527†	75265.7	72234.5	510.78 ug/L	510.78 ppb	09:58:27
3	Be 313.107†	1157683.3	1115948.9	511.94 ug/L	511.94 ppb	09:58:27
3	Cd 226.502†	40484.4	39135.4	498.90 ug/L	498.90 ppb	09:58:47
3	Co 228.616†	30123.4	29009.9	503.32 ug/L	503.32 ppb	09:58:47
3	Cr 267.716†	37752.9	36310.1	509.52 ug/L	509.52 ppb	09:58:27
3	Cu 324.752†	151098.8	139376.1	505.35 ug/L	505.35 ppb	09:58:27
3	Mn 257.610†	482278.8	462179.4	510.21 ug/L	510.21 ppb	09:58:27
3	Mo 202.031†	7551.9	7230.7	509.36 ug/L	509.36 ppb	09:58:47
3	Ni 231.604†	19742.2	18827.4	502.93 ug/L	502.93 ppb	09:58:47
3	P 214.914†	5533.5	4995.9	2454.7 ug/L	2454.7 ppb	09:58:47
3	Pb 220.353†	4475.9	4308.9	514.60 ug/L	514.60 ppb	09:58:47
3	S 181.975 Axial†	854.0	744.2	1018.4 ug/L	1018.4 ppb	09:58:47
3	Sb 206.836†	1825.2	1694.4	509.69 ug/L	509.69 ppb	09:58:47
3	Se 196.026†	1023.7	1011.2	534.06 ug/L	534.06 ppb	09:58:47
3	Si 251.611†	87051.0	83134.0	2550.2 ug/L	2550.2 ppb	09:58:27
3	Sn 189.927†	3008.4	2874.7	509.72 ug/L	509.72 ppb	09:58:47
3	Ti 334.940†	286275.1	276096.0	505.39 ug/L	505.39 ppb	09:58:27
3	Tl 190.801†	1979.1	1960.2	516.21 ug/L	516.21 ppb	09:58:47
3	U 409.014†	10307.6	14741.2	497.55 ug/L	497.55 ppb	09:58:27
3	V 292.402†	56401.2	55695.3	511.88 ug/L	511.88 ppb	09:58:27
3	Zn 213.857†	58544.6	55262.1	505.35 ug/L	505.35 ppb	09:58:27
3	SiO2†	87811.5	83838.7	5475.0 ug/L	5475.0 ppb	09:59:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	748818.8	104.19	%	0.996				0.96%
Sc Radial	7421.6	99.3	%	0.70				0.71%
Y 371.029	577390.6	102.74	%	0.923				0.90%
Y RADIAL	6984.2	100.9	%	0.74				0.73%
Ag 328.068†	83852.5	504.03	ug/L	4.692	504.03	ppb	4.692	0.93%
QC value within limits for Ag 328.068 Recovery = 100.81%								
Al 396.153Radial†	6396.8	5246.0	ug/L	62.65	5246.0	ppb	62.65	1.19%
QC value within limits for Al 396.153Radial Recovery = 104.92%								
As 188.979†	1406.1	510.29	ug/L	10.662	510.29	ppb	10.662	2.09%
QC value within limits for As 188.979 Recovery = 102.06%								
B 249.677†	20012.6	501.45	ug/L	5.991	501.45	ppb	5.991	1.19%
QC value within limits for B 249.677 Recovery = 100.29%								
Ba 233.527†	71659.9	506.72	ug/L	5.175	506.72	ppb	5.175	1.02%
QC value within limits for Ba 233.527 Recovery = 101.34%								
Be 313.107†	1106341.8	507.54	ug/L	5.321	507.54	ppb	5.321	1.05%
QC value within limits for Be 313.107 Recovery = 101.51%								
Ca 317.933Radial†	3715.7	5263.7	ug/L	18.21	5263.7	ppb	18.21	0.35%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.27%
Cd 226.502†            38870.4      495.52 ug/L          7.782      495.52 ppb          7.782   1.57%
   QC value within limits for Cd 226.502  Recovery = 99.10%
Co 228.616†            28824.3      500.10 ug/L          7.297      500.10 ppb          7.297   1.46%
   QC value within limits for Co 228.616  Recovery = 100.02%
Cr 267.716†            36030.5      505.59 ug/L          5.530      505.59 ppb          5.530   1.09%
   QC value within limits for Cr 267.716  Recovery = 101.12%
Cu 324.752†           138351.3      501.64 ug/L          4.468      501.64 ppb          4.468   0.89%
   QC value within limits for Cu 324.752  Recovery = 100.33%
Fe 238.204 Radial†      1214.8      5079.7 ug/L         28.29      5079.7 ppb         28.29   0.56%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.59%
K 766.490 Radial†      22709.2      4886.3 ug/L         68.00      4886.3 ppb         68.00   1.39%
   QC value within limits for K 766.490 Radial  Recovery = 97.73%
Mg 279.077 IEC†          211.5      5278.5 ug/L         34.76      5278.5 ppb         34.76   0.66%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.57%
Mn 257.610†           458602.0      506.27 ug/L          4.930      506.27 ppb          4.930   0.97%
   QC value within limits for Mn 257.610  Recovery = 101.25%
Mo 202.031†             7186.9      506.28 ug/L          7.930      506.28 ppb          7.930   1.57%
   QC value within limits for Mo 202.031  Recovery = 101.26%
Na 589.592 Radial†    168279.9       10328 ug/L        144.8       10328 ppb        144.8   1.40%
   QC value within limits for Na 589.592 Radial  Recovery = 103.28%
Ni 231.604†            18695.0      499.40 ug/L          7.640      499.40 ppb          7.640   1.53%
   QC value within limits for Ni 231.604  Recovery = 99.88%
P 214.914†              4963.9      2439.1 ug/L         37.67      2439.1 ppb         37.67   1.54%
   QC value within limits for P 214.914  Recovery = 97.56%
Pb 220.353†             4279.9      511.13 ug/L          7.030      511.13 ppb          7.030   1.38%
   QC value within limits for Pb 220.353  Recovery = 102.23%
S 181.975 Axial†         736.2      1007.5 ug/L         18.37      1007.5 ppb         18.37   1.82%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             1681.3      505.78 ug/L          7.243      505.78 ppb          7.243   1.43%
   QC value within limits for Sb 206.836  Recovery = 101.16%
Se 196.026†              998.0      527.24 ug/L          7.706      527.24 ppb          7.706   1.46%
   QC value within limits for Se 196.026  Recovery = 105.45%
Si 251.611†            82436.4      2528.7 ug/L         24.47      2528.7 ppb         24.47   0.97%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†             2855.7      506.35 ug/L          6.833      506.35 ppb          6.833   1.35%
   QC value within limits for Sn 189.927  Recovery = 101.27%
Sr 421.552†           174760.9      488.06 ug/L          6.649      488.06 ppb          6.649   1.36%
   QC value within limits for Sr 421.552  Recovery = 97.61%
Ti 334.940†           274252.7      502.02 ug/L          4.284      502.02 ppb          4.284   0.85%
   QC value within limits for Ti 334.940  Recovery = 100.40%
Tl 190.801†             1942.1      511.46 ug/L          7.769      511.46 ppb          7.769   1.52%
   QC value within limits for Tl 190.801  Recovery = 102.29%
U 409.014†             14764.3      498.34 ug/L          1.011      498.34 ppb          1.011   0.20%
   QC value within limits for U 409.014  Recovery = 99.67%
V 292.402†             55232.8      507.65 ug/L          4.612      507.65 ppb          4.612   0.91%
   QC value within limits for V 292.402  Recovery = 101.53%
Zn 213.857†            54838.6      501.47 ug/L          4.890      501.47 ppb          4.890   0.98%
   QC value within limits for Zn 213.857  Recovery = 100.29%
SiO2†                  82993.7      5419.7 ug/L        112.62      5419.7 ppb        112.62   2.08%
   QC value within limits for SiO2  Recovery = 101.35%
All analyte(s) passed QC.
```

Sequence No.: 5
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 10:01:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7523.2	7523.2	101	%			10:03:05
1	Y RADIAL	7002.2	7002.2	101.1	%			10:03:05
1	Al 396.153Radial†	-76.6	-3.4	-2.8352	ug/L	-2.8352	ppb	10:03:05
1	Ca 317.933Radial†	29.1	-0.2	-0.2986	ug/L	-0.2986	ppb	10:03:25
1	Fe 238.204 Radial†	35.7	0.7	2.9537	ug/L	2.9537	ppb	10:03:25
1	K 766.490 Radial†	2487.9	64.7	13.944	ug/L	13.944	ppb	10:03:05
1	Mg 279.077 IEC†	6.1	3.0	75.404	ug/L	75.404	ppb	10:03:25
1	Na 589.592 Radial†	81.7	216.7	13.301	ug/L	13.301	ppb	10:03:05
1	Sr 421.552†	-19.2	36.8	0.1029	ug/L	0.1029	ppb	10:03:05
1	Sc 361.383	722848.6	722848.6	100.58	%			10:04:22
1	Y 371.029	565709.7	565709.7	100.66	%			10:04:22
1	Ag 328.068†	713.2	76.4	0.4596	ug/L	0.4596	ppb	10:04:22
1	As 188.979†	-27.7	7.9	2.8303	ug/L	2.8303	ppb	10:04:42
1	B 249.677†	-657.8	285.9	7.2027	ug/L	7.2027	ppb	10:04:22
1	Ba 233.527†	32.1	31.4	0.2212	ug/L	0.2212	ppb	10:04:42
1	Be 313.107†	-4822.3	87.2	0.0396	ug/L	0.0396	ppb	10:04:22
1	Cd 226.502†	-263.1	19.5	0.2480	ug/L	0.2480	ppb	10:04:42
1	Co 228.616†	-67.3	32.6	0.5665	ug/L	0.5665	ppb	10:04:42
1	Cr 267.716†	-53.9	23.8	0.3341	ug/L	0.3341	ppb	10:04:22
1	Cu 324.752†	5612.3	-58.4	-0.2116	ug/L	-0.2116	ppb	10:04:22
1	Mn 257.610†	625.0	-58.2	-0.0652	ug/L	-0.0652	ppb	10:04:42
1	Mo 202.031†	24.0	6.7	0.4712	ug/L	0.4712	ppb	10:04:42
1	Ni 231.604†	124.8	4.3	0.1134	ug/L	0.1134	ppb	10:04:42
1	P 214.914†	314.4	-2.2	-1.0806	ug/L	-1.0806	ppb	10:04:42
1	Pb 220.353†	-6.9	6.4	0.7635	ug/L	0.7635	ppb	10:04:42
1	S 181.975 Axial†	79.8	3.9	5.3226	ug/L	5.3226	ppb	10:04:42
1	Sb 206.836†	60.4	2.8	0.8532	ug/L	0.8532	ppb	10:04:42
1	Se 196.026†	-27.6	1.4	0.7143	ug/L	0.7143	ppb	10:04:42
1	Si 251.611†	482.7	68.1	2.0772	ug/L	2.0772	ppb	10:04:42
1	Sn 189.927†	18.8	6.2	1.0938	ug/L	1.0938	ppb	10:04:42
1	Ti 334.940†	-1435.9	-79.4	-0.1442	ug/L	-0.1442	ppb	10:04:22
1	Tl 190.801†	-53.0	8.1	2.1110	ug/L	2.1110	ppb	10:04:42
1	U 409.014†	-4963.2	-85.9	-2.9104	ug/L	-2.9104	ppb	10:04:22
1	V 292.402†	-1585.9	-11.6	-0.1040	ug/L	-0.1040	ppb	10:04:22
1	Zn 213.857†	973.9	43.2	0.3953	ug/L	0.3953	ppb	10:04:42
1	SiO2†	517.3	77.4	5.0284	ug/L	5.0284	ppb	10:05:38
2	Sc Radial	7549.3	7549.3	101	%			10:03:30
2	Y RADIAL	6999.8	6999.8	101.1	%			10:03:30
2	Al 396.153Radial†	-68.7	4.6	3.7370	ug/L	3.7370	ppb	10:03:30
2	Ca 317.933Radial†	28.8	-0.6	-0.8039	ug/L	-0.8039	ppb	10:03:50
2	Fe 238.204 Radial†	38.7	3.5	14.687	ug/L	14.687	ppb	10:03:50
2	K 766.490 Radial†	2642.9	209.5	45.202	ug/L	45.202	ppb	10:03:30
2	Mg 279.077 IEC†	-0.6	-3.6	-90.505	ug/L	-90.505	ppb	10:03:50
2	Na 589.592 Radial†	76.5	211.3	12.970	ug/L	12.970	ppb	10:03:30
2	Sr 421.552†	29.1	84.7	0.2365	ug/L	0.2365	ppb	10:03:30
2	Sc 361.383	732900.9	732900.9	101.98	%			10:04:47
2	Y 371.029	573361.1	573361.1	102.02	%			10:04:47
2	Ag 328.068†	679.3	33.4	0.2003	ug/L	0.2003	ppb	10:04:47
2	As 188.979†	-34.5	1.6	0.5908	ug/L	0.5908	ppb	10:05:07
2	B 249.677†	-583.0	368.2	9.2784	ug/L	9.2784	ppb	10:04:47
2	Ba 233.527†	20.6	19.7	0.1389	ug/L	0.1389	ppb	10:05:07
2	Be 313.107†	-4829.5	145.9	0.0669	ug/L	0.0669	ppb	10:04:47
2	Cd 226.502†	-270.4	16.0	0.2023	ug/L	0.2023	ppb	10:05:07
2	Co 228.616†	-90.6	10.6	0.1862	ug/L	0.1862	ppb	10:05:07
2	Cr 267.716†	-58.4	20.1	0.2805	ug/L	0.2805	ppb	10:04:47
2	Cu 324.752†	5752.2	2.2	0.0090	ug/L	0.0090	ppb	10:04:47
2	Mn 257.610†	657.3	-35.1	-0.0351	ug/L	-0.0351	ppb	10:05:07
2	Mo 202.031†	28.8	11.1	0.7824	ug/L	0.7824	ppb	10:05:07
2	Ni 231.604†	141.7	19.2	0.5124	ug/L	0.5124	ppb	10:05:07

2	P 214.914†	297.2	-23.3	-11.906	ug/L	-11.906	ppb	10:05:07
2	Pb 220.353†	9.9	3.5	0.4219	ug/L	0.4219	ppb	10:05:07
2	S 181.975 Axial†	80.3	3.3	4.5650	ug/L	4.5650	ppb	10:05:07
2	Sb 206.836†	74.9	16.2	4.8151	ug/L	4.8151	ppb	10:05:07
2	Se 196.026†	-31.1	-1.8	-0.8478	ug/L	-0.8478	ppb	10:05:07
2	Si 251.611†	459.2	38.5	1.1551	ug/L	1.1551	ppb	10:05:07
2	Sn 189.927†	15.2	2.4	0.4310	ug/L	0.4310	ppb	10:05:07
2	Ti 334.940†	-1349.9	24.5	0.0426	ug/L	0.0426	ppb	10:04:47
2	Tl 190.801†	-51.1	10.6	2.7838	ug/L	2.7838	ppb	10:05:07
2	U 409.014†	-4797.1	144.7	4.8967	ug/L	4.8967	ppb	10:04:47
2	V 292.402†	-1595.8	0.3	0.0187	ug/L	0.0187	ppb	10:04:47
2	Zn 213.857†	962.1	18.3	0.1675	ug/L	0.1675	ppb	10:05:07
2	SiO2†	487.2	40.8	2.6085	ug/L	2.6085	ppb	10:05:43
3	Sc Radial	7617.8	7617.8	102	%			10:03:55
3	Y RADIAL	7019.0	7019.0	101.4	%			10:03:55
3	Al 396.153Radial†	-52.2	21.5	17.674	ug/L	17.674	ppb	10:03:55
3	Ca 317.933Radial†	32.5	2.8	3.9509	ug/L	3.9509	ppb	10:04:15
3	Fe 238.204 Radial†	35.8	0.3	1.4002	ug/L	1.4002	ppb	10:04:15
3	K 766.490 Radial†	2517.2	62.7	13.516	ug/L	13.516	ppb	10:03:55
3	Mg 279.077 IEC†	4.6	1.4	35.985	ug/L	35.985	ppb	10:04:15
3	Na 589.592 Radial†	142.1	275.0	16.876	ug/L	16.876	ppb	10:03:55
3	Sr 421.552†	-5.0	50.9	0.1422	ug/L	0.1422	ppb	10:03:55
3	Sc 361.383	725063.9	725063.9	100.89	%			10:05:13
3	Y 371.029	567550.1	567550.1	100.99	%			10:05:13
3	Ag 328.068†	597.1	-40.8	-0.2368	ug/L	-0.2368	ppb	10:05:13
3	As 188.979†	-33.2	2.5	0.9038	ug/L	0.9038	ppb	10:05:33
3	B 249.677†	-630.7	314.8	7.9341	ug/L	7.9341	ppb	10:05:13
3	Ba 233.527†	24.9	24.2	0.1724	ug/L	0.1724	ppb	10:05:33
3	Be 313.107†	-4848.3	76.1	0.0351	ug/L	0.0351	ppb	10:05:13
3	Cd 226.502†	-279.6	4.0	0.0508	ug/L	0.0508	ppb	10:05:33
3	Co 228.616†	-108.0	-7.6	-0.1325	ug/L	-0.1325	ppb	10:05:33
3	Cr 267.716†	-50.7	27.1	0.3823	ug/L	0.3823	ppb	10:05:13
3	Cu 324.752†	5699.5	11.0	0.0399	ug/L	0.0399	ppb	10:05:13
3	Mn 257.610†	651.6	-33.8	-0.0378	ug/L	-0.0378	ppb	10:05:33
3	Mo 202.031†	15.3	-1.9	-0.1364	ug/L	-0.1364	ppb	10:05:33
3	Ni 231.604†	135.6	14.6	0.3914	ug/L	0.3914	ppb	10:05:33
3	P 214.914†	311.4	-6.1	-3.1113	ug/L	-3.1113	ppb	10:05:33
3	Pb 220.353†	-13.2	0.2	0.0218	ug/L	0.0218	ppb	10:05:33
3	S 181.975 Axial†	84.3	8.2	11.170	ug/L	11.170	ppb	10:05:33
3	Sb 206.836†	60.6	2.8	0.8387	ug/L	0.8387	ppb	10:05:33
3	Se 196.026†	-32.6	-3.6	-1.8077	ug/L	-1.8077	ppb	10:05:33
3	Si 251.611†	470.8	54.9	1.6774	ug/L	1.6774	ppb	10:05:33
3	Sn 189.927†	19.6	6.9	1.2305	ug/L	1.2305	ppb	10:05:33
3	Ti 334.940†	-1300.4	59.2	0.1106	ug/L	0.1106	ppb	10:05:13
3	Tl 190.801†	-51.4	9.8	2.5707	ug/L	2.5707	ppb	10:05:33
3	U 409.014†	-5032.0	-139.1	-4.7100	ug/L	-4.7100	ppb	10:05:13
3	V 292.402†	-1505.5	72.9	0.6516	ug/L	0.6516	ppb	10:05:13
3	Zn 213.857†	974.6	41.0	0.3740	ug/L	0.3740	ppb	10:05:33
3	SiO2†	505.5	64.2	4.1801	ug/L	4.1801	ppb	10:05:48

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	726937.8	101.15	%	0.735				0.73%
Sc Radial	7563.4	101	%	0.7				0.65%
Y 371.029	568873.6	101.22	%	0.711				0.70%
Y RADIAL	7007.0	101.2	%	0.15				0.15%
Ag 328.068†	23.0	0.1410	ug/L	0.35197	0.1410	ppb	0.35197	249.56%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	7.5	6.1919	ug/L	10.47268	6.1919	ppb	10.47268	169.13%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.0	1.4416	ug/L	1.21278	1.4416	ppb	1.21278	84.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	323.0	8.1384	ug/L	1.05284	8.1384	ppb	1.05284	12.94%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.1	0.1775	ug/L	0.04137	0.1775	ppb	0.04137	23.31%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	103.1	0.0472	ug/L	0.01721	0.0472	ppb	0.01721	36.48%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.7	0.9495	ug/L	2.61157	0.9495	ppb	2.61157	275.05%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.1      0.1670 ug/L       0.10326      0.1670 ppb        0.10326  61.82%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                11.9      0.2067 ug/L       0.34993      0.2067 ppb        0.34993 169.27%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                23.7      0.3323 ug/L       0.05096      0.3323 ppb        0.05096  15.33%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -15.1     -0.0542 ug/L       0.13715     -0.0542 ppb        0.13715 252.94%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.5      6.3469 ug/L       7.26416      6.3469 ppb        7.26416 114.45%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         112.3     24.221 ug/L       18.1718     24.221 ppb        18.1718  75.03%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.3      6.9612 ug/L      86.67921      6.9612 ppb       86.67921 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -42.3     -0.0460 ug/L       0.01669     -0.0460 ppb        0.01669  36.26%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 5.3      0.3724 ug/L       0.46732      0.3724 ppb        0.46732 125.49%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        234.3     14.382 ug/L        2.1662     14.382 ppb         2.1662  15.06%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                12.7      0.3391 ug/L       0.20457      0.3391 ppb        0.20457  60.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -10.6     -5.3660 ug/L       5.75414     -5.3660 ppb        5.75414 107.23%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 3.4      0.4024 ug/L       0.37122      0.4024 ppb        0.37122  92.26%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.1      7.0191 ug/L       3.61445      7.0191 ppb        3.61445  51.49%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 7.3      2.1690 ug/L       2.29159      2.1690 ppb        2.29159 105.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -1.3     -0.6470 ug/L       1.27291     -0.6470 ppb        1.27291 196.73%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                53.9      1.6366 ug/L       0.46242      1.6366 ppb        0.46242  28.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.2      0.9184 ug/L       0.42765      0.9184 ppb        0.42765  46.56%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                57.5      0.1605 ug/L       0.06866      0.1605 ppb        0.06866  42.77%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 1.5      0.0030 ug/L       0.13197      0.0030 ppb        0.13197 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 9.5      2.4885 ug/L       0.34386      2.4885 ppb        0.34386  13.82%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -26.8     -0.9079 ug/L       5.10685     -0.9079 ppb        5.10685 562.48%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 20.6      0.1888 ug/L       0.40548      0.1888 ppb        0.40548 214.78%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                34.2      0.3123 ug/L       0.12585      0.3123 ppb        0.12585  40.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      60.8      3.9390 ug/L       1.22783      3.9390 ppb        1.22783  31.17%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 10:57:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7562.8	7562.8	101	%			10:59:20
1	Y RADIAL	6962.9	6962.9	100.6	%			10:59:20
1	Al 396.153Radial†	6246.8	6246.6	5122.4	ug/L	5122.4	ppb	10:59:20
1	Ca 317.933Radial†	3649.3	3577.7	5068.2	ug/L	5068.2	ppb	10:59:20
1	Fe 238.204 Radial†	1210.3	1161.4	4857.7	ug/L	4857.7	ppb	10:59:40
1	K 766.490 Radial†	24506.8	21813.9	4693.3	ug/L	4693.3	ppb	10:59:15
1	Mg 279.077 IEC†	213.1	207.6	5181.7	ug/L	5181.7	ppb	10:59:40
1	Na 589.592 Radial†	163646.8	161874.2	9934.7	ug/L	9934.7	ppb	10:59:15
1	Sr 421.552†	170737.3	168802.3	471.42	ug/L	471.42	ppb	10:59:15
1	Sc 361.383	744688.2	744688.2	103.62	%			11:00:47
1	Y 371.029	574366.7	574366.7	102.20	%			11:00:47
1	Ag 328.068†	89936.9	86164.3	517.80	ug/L	517.80	ppb	11:00:53
1	As 188.979†	1426.8	1412.4	512.51	ug/L	512.51	ppb	11:01:13
1	B 249.677†	20280.2	20512.1	513.95	ug/L	513.95	ppb	11:00:53
1	Ba 233.527†	75895.8	73245.6	517.94	ug/L	517.94	ppb	11:00:53
1	Be 313.107†	1130809.6	1096212.0	502.90	ug/L	502.90	ppb	11:00:47
1	Cd 226.502†	41959.0	40775.2	519.85	ug/L	519.85	ppb	11:00:53
1	Co 228.616†	30995.3	30012.6	520.70	ug/L	520.70	ppb	11:00:53
1	Cr 267.716†	38126.3	36872.6	517.40	ug/L	517.40	ppb	11:00:53
1	Cu 324.752†	152100.8	141152.2	511.78	ug/L	511.78	ppb	11:00:53
1	Mn 257.610†	471556.1	454413.3	501.62	ug/L	501.62	ppb	11:00:47
1	Mo 202.031†	7425.7	7149.3	503.62	ug/L	503.62	ppb	11:01:13
1	Ni 231.604†	20201.5	19376.4	517.60	ug/L	517.60	ppb	11:00:53
1	P 214.914†	5455.1	4949.9	2430.1	ug/L	2430.1	ppb	11:01:13
1	Pb 220.353†	4376.8	4237.3	506.04	ug/L	506.04	ppb	11:01:13
1	S 181.975 Axial†	849.2	744.1	1018.4	ug/L	1018.4	ppb	11:01:13
1	Sb 206.836†	1844.4	1722.8	517.79	ug/L	517.79	ppb	11:01:13
1	Se 196.026†	1011.7	1005.1	530.14	ug/L	530.14	ppb	11:01:13
1	Si 251.611†	88149.6	84660.3	2597.5	ug/L	2597.5	ppb	11:00:53
1	Sn 189.927†	2975.9	2859.5	506.99	ug/L	506.99	ppb	11:01:13
1	Ti 334.940†	282974.0	274443.0	502.34	ug/L	502.34	ppb	11:00:53
1	Tl 190.801†	1970.9	1962.9	516.73	ug/L	516.73	ppb	11:01:13
1	U 409.014†	11173.4	15632.0	527.73	ug/L	527.73	ppb	11:00:53
1	V 292.402†	57110.2	56681.5	520.86	ug/L	520.86	ppb	11:00:53
1	Zn 213.857†	59267.2	56272.9	514.60	ug/L	514.60	ppb	11:00:53
1	SiO2†	86293.0	82843.4	5410.0	ug/L	5410.0	ppb	11:02:20
2	Sc Radial	7484.4	7484.4	100	%			10:59:50
2	Y RADIAL	6908.6	6908.6	99.77	%			10:59:50
2	Al 396.153Radial†	6320.9	6385.2	5236.3	ug/L	5236.3	ppb	10:59:50
2	Ca 317.933Radial†	3688.8	3654.8	5177.5	ug/L	5177.5	ppb	10:59:50
2	Fe 238.204 Radial†	1236.0	1199.6	5016.6	ug/L	5016.6	ppb	11:00:10
2	K 766.490 Radial†	24856.7	22416.9	4823.2	ug/L	4823.2	ppb	10:59:45
2	Mg 279.077 IEC†	209.9	206.6	5155.6	ug/L	5155.6	ppb	11:00:10
2	Na 589.592 Radial†	166232.1	166149.1	10197	ug/L	10197	ppb	10:59:45
2	Sr 421.552†	172573.7	172402.7	481.48	ug/L	481.48	ppb	10:59:45
2	Sc 361.383	736289.9	736289.9	102.45	%			11:01:18
2	Y 371.029	568354.7	568354.7	101.13	%			11:01:18
2	Ag 328.068†	87992.3	85256.3	512.41	ug/L	512.41	ppb	11:01:24
2	As 188.979†	1423.0	1424.4	516.86	ug/L	516.86	ppb	11:01:44
2	B 249.677†	19665.8	20135.6	504.48	ug/L	504.48	ppb	11:01:24
2	Ba 233.527†	74096.3	72324.5	511.43	ug/L	511.43	ppb	11:01:24
2	Be 313.107†	1132360.3	1110173.7	509.28	ug/L	509.28	ppb	11:01:18
2	Cd 226.502†	40924.6	40227.4	512.84	ug/L	512.84	ppb	11:01:24
2	Co 228.616†	30278.6	29654.3	514.51	ug/L	514.51	ppb	11:01:24
2	Cr 267.716†	37224.4	36412.0	510.94	ug/L	510.94	ppb	11:01:24
2	Cu 324.752†	148247.3	139065.1	504.22	ug/L	504.22	ppb	11:01:24
2	Mn 257.610†	472204.2	460236.9	508.07	ug/L	508.07	ppb	11:01:18
2	Mo 202.031†	7412.9	7218.6	508.50	ug/L	508.50	ppb	11:01:44
2	Ni 231.604†	19663.4	19073.6	509.51	ug/L	509.51	ppb	11:01:24

2	P 214.914†	5417.4	4973.1	2443.4 ug/L	2443.4 ppb	11:01:44
2	Pb 220.353†	4337.3	4246.9	507.21 ug/L	507.21 ppb	11:01:44
2	S 181.975 Axial†	840.2	744.7	1019.2 ug/L	1019.2 ppb	11:01:44
2	Sb 206.836†	1839.9	1738.7	522.83 ug/L	522.83 ppb	11:01:44
2	Se 196.026†	1010.9	1015.5	535.99 ug/L	535.99 ppb	11:01:44
2	Si 251.611†	85710.2	83249.6	2553.8 ug/L	2553.8 ppb	11:01:24
2	Sn 189.927†	2960.6	2877.3	510.16 ug/L	510.16 ppb	11:01:44
2	Ti 334.940†	276718.0	271451.5	496.87 ug/L	496.87 ppb	11:01:24
2	Tl 190.801†	1946.4	1960.6	516.18 ug/L	516.18 ppb	11:01:44
2	U 409.014†	10777.4	15368.5	518.79 ug/L	518.79 ppb	11:01:24
2	V 292.402†	55755.1	55987.6	514.58 ug/L	514.58 ppb	11:01:24
2	Zn 213.857†	57695.5	55391.2	506.51 ug/L	506.51 ppb	11:01:24
2	SiO2†	85916.0	83425.4	5447.9 ug/L	5447.9 ppb	11:02:25
3	Sc Radial	7491.8	7491.8	100 %		11:00:20
3	Y RADIAL	6880.3	6880.3	99.36 %		11:00:20
3	Al 396.153Radial†	6340.0	6398.1	5246.9 ug/L	5246.9 ppb	11:00:20
3	Ca 317.933Radial†	3701.1	3663.5	5189.8 ug/L	5189.8 ppb	11:00:20
3	Fe 238.204 Radial†	1222.5	1184.9	4955.6 ug/L	4955.6 ppb	11:00:40
3	K 766.490 Radial†	25054.1	22589.4	4860.4 ug/L	4860.4 ppb	11:00:15
3	Mg 279.077 IEC†	213.6	210.0	5242.5 ug/L	5242.5 ppb	11:00:40
3	Na 589.592 Radial†	167473.7	167224.7	10263 ug/L	10263 ppb	11:00:15
3	Sr 421.552†	174168.1	173824.1	485.45 ug/L	485.45 ppb	11:00:15
3	Sc 361.383	742591.9	742591.9	103.33 %		11:01:49
3	Y 371.029	573318.2	573318.2	102.01 %		11:01:49
3	Ag 328.068†	88554.5	85071.4	511.29 ug/L	511.29 ppb	11:01:55
3	As 188.979†	1436.9	1426.1	517.43 ug/L	517.43 ppb	11:02:15
3	B 249.677†	19971.5	20268.6	507.83 ug/L	507.83 ppb	11:01:55
3	Ba 233.527†	74813.9	72405.2	512.00 ug/L	512.00 ppb	11:01:55
3	Be 313.107†	1143597.4	1111669.0	509.96 ug/L	509.96 ppb	11:01:49
3	Cd 226.502†	41324.4	40275.3	513.46 ug/L	513.46 ppb	11:01:55
3	Co 228.616†	30570.8	29686.2	515.06 ug/L	515.06 ppb	11:01:55
3	Cr 267.716†	37594.3	36461.7	511.64 ug/L	511.64 ppb	11:01:55
3	Cu 324.752†	149668.9	139212.9	504.76 ug/L	504.76 ppb	11:01:55
3	Mn 257.610†	476911.1	460880.6	508.77 ug/L	508.77 ppb	11:01:49
3	Mo 202.031†	7473.8	7216.1	508.32 ug/L	508.32 ppb	11:02:15
3	Ni 231.604†	19910.2	19149.5	511.54 ug/L	511.54 ppb	11:01:55
3	P 214.914†	5449.8	4959.6	2436.4 ug/L	2436.4 ppb	11:02:15
3	Pb 220.353†	4381.3	4253.5	508.01 ug/L	508.01 ppb	11:02:15
3	S 181.975 Axial†	857.8	754.8	1033.0 ug/L	1033.0 ppb	11:02:15
3	Sb 206.836†	1854.8	1737.8	522.52 ug/L	522.52 ppb	11:02:15
3	Se 196.026†	1006.2	1002.5	529.17 ug/L	529.17 ppb	11:02:15
3	Si 251.611†	86609.1	83409.5	2558.7 ug/L	2558.7 ppb	11:01:55
3	Sn 189.927†	2974.4	2866.2	508.19 ug/L	508.19 ppb	11:02:15
3	Ti 334.940†	278364.8	270753.1	495.59 ug/L	495.59 ppb	11:01:55
3	Tl 190.801†	1953.6	1951.5	513.77 ug/L	513.77 ppb	11:02:15
3	U 409.014†	10927.4	15424.4	520.69 ug/L	520.69 ppb	11:01:55
3	V 292.402†	56335.4	56087.3	515.50 ug/L	515.50 ppb	11:01:55
3	Zn 213.857†	58236.1	55436.5	506.92 ug/L	506.92 ppb	11:01:55
3	SiO2†	88598.9	85310.2	5571.9 ug/L	5571.9 ppb	11:02:30

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	741190.0	103.13	%	0.608				0.59%
Sc Radial	7513.0	101	%	0.6				0.58%
Y 371.029	572013.2	101.78	%	0.571				0.56%
Y RADIAL	6917.3	99.90	%	0.606				0.61%
Ag 328.068†	85497.3	513.83	ug/L	3.483	513.83	ppb	3.483	0.68%
QC value within limits for Ag 328.068 Recovery = 102.77%								
Al 396.153Radial†	6343.3	5201.9	ug/L	69.03	5201.9	ppb	69.03	1.33%
QC value within limits for Al 396.153Radial Recovery = 104.04%								
As 188.979†	1421.0	515.60	ug/L	2.693	515.60	ppb	2.693	0.52%
QC value within limits for As 188.979 Recovery = 103.12%								
B 249.677†	20305.4	508.75	ug/L	4.800	508.75	ppb	4.800	0.94%
QC value within limits for B 249.677 Recovery = 101.75%								
Ba 233.527†	72658.4	513.79	ug/L	3.607	513.79	ppb	3.607	0.70%
QC value within limits for Ba 233.527 Recovery = 102.76%								
Be 313.107†	1106018.2	507.38	ug/L	3.894	507.38	ppb	3.894	0.77%
QC value within limits for Be 313.107 Recovery = 101.48%								
Ca 317.933Radial†	3632.0	5145.2	ug/L	66.93	5145.2	ppb	66.93	1.30%

```
   QC value within limits for Ca 317.933Radial  Recovery = 102.90%
Cd 226.502†            40426.0      515.38 ug/L        3.881      515.38 ppb        3.881   0.75%
   QC value within limits for Cd 226.502  Recovery = 103.08%
Co 228.616†            29784.3      516.76 ug/L        3.426      516.76 ppb        3.426   0.66%
   QC value within limits for Co 228.616  Recovery = 103.35%
Cr 267.716†            36582.1      513.32 ug/L        3.545      513.32 ppb        3.545   0.69%
   QC value within limits for Cr 267.716  Recovery = 102.66%
Cu 324.752†           139810.0      506.92 ug/L        4.216      506.92 ppb        4.216   0.83%
   QC value within limits for Cu 324.752  Recovery = 101.38%
Fe 238.204 Radial†      1182.0      4943.3 ug/L       80.13      4943.3 ppb       80.13   1.62%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.87%
K 766.490 Radial†      22273.4      4792.3 ug/L       87.75      4792.3 ppb       87.75   1.83%
   QC value within limits for K 766.490 Radial  Recovery = 95.85%
Mg 279.077 IEC†          208.1      5193.3 ug/L       44.55      5193.3 ppb       44.55   0.86%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.87%
Mn 257.610†           458510.3      506.15 ug/L        3.937      506.15 ppb        3.937   0.78%
   QC value within limits for Mn 257.610  Recovery = 101.23%
Mo 202.031†             7194.7      506.82 ug/L        2.770      506.82 ppb        2.770   0.55%
   QC value within limits for Mo 202.031  Recovery = 101.36%
Na 589.592 Radial†    165082.7       10132 ug/L      173.7        10132 ppb      173.7   1.71%
   QC value within limits for Na 589.592 Radial  Recovery = 101.32%
Ni 231.604†            19199.8      512.88 ug/L        4.209      512.88 ppb        4.209   0.82%
   QC value within limits for Ni 231.604  Recovery = 102.58%
P 214.914†              4960.9      2436.6 ug/L        6.66      2436.6 ppb         6.66   0.27%
   QC value within limits for P 214.914  Recovery = 97.47%
Pb 220.353†             4245.9      507.08 ug/L        0.988      507.08 ppb        0.988   0.19%
   QC value within limits for Pb 220.353  Recovery = 101.42%
S 181.975 Axial†         747.9      1023.5 ug/L        8.21      1023.5 ppb         8.21   0.80%
   QC value within limits for S 181.975 Axial  Recovery = 102.35%
Sb 206.836†             1733.1      521.05 ug/L        2.822      521.05 ppb        2.822   0.54%
   QC value within limits for Sb 206.836  Recovery = 104.21%
Se 196.026†             1007.7      531.77 ug/L        3.684      531.77 ppb        3.684   0.69%
   QC value within limits for Se 196.026  Recovery = 106.35%
Si 251.611†            83773.2      2570.0 ug/L       23.95      2570.0 ppb       23.95   0.93%
   QC value within limits for Si 251.611  Recovery = 102.80%
Sn 189.927†             2867.7      508.45 ug/L        1.600      508.45 ppb        1.600   0.31%
   QC value within limits for Sn 189.927  Recovery = 101.69%
Sr 421.552†           171676.4      479.45 ug/L        7.229      479.45 ppb        7.229   1.51%
   QC value within limits for Sr 421.552  Recovery = 95.89%
Ti 334.940†           272215.9      498.27 ug/L        3.582      498.27 ppb        3.582   0.72%
   QC value within limits for Ti 334.940  Recovery = 99.65%
Tl 190.801†             1958.3      515.56 ug/L        1.574      515.56 ppb        1.574   0.31%
   QC value within limits for Tl 190.801  Recovery = 103.11%
U 409.014†             15475.0      522.40 ug/L        4.706      522.40 ppb        4.706   0.90%
   QC value within limits for U 409.014  Recovery = 104.48%
V 292.402†             56252.1      516.98 ug/L        3.388      516.98 ppb        3.388   0.66%
   QC value within limits for V 292.402  Recovery = 103.40%
Zn 213.857†            55700.2      509.35 ug/L        4.558      509.35 ppb        4.558   0.89%
   QC value within limits for Zn 213.857  Recovery = 101.87%
SiO2†                  83859.6      5476.6 ug/L       84.67      5476.6 ppb       84.67   1.55%
   QC value within limits for SiO2  Recovery = 102.41%
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 11:04:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7365.6	7365.6	98.5	%			11:06:33
1	Y RADIAL	6805.4	6805.4	98.28	%			11:06:33
1	Al 396.153Radial†	-89.3	-18.0	-14.782	ug/L	-14.782	ppb	11:06:33
1	Ca 317.933Radial†	32.9	4.3	6.0431	ug/L	6.0431	ppb	11:06:53
1	Fe 238.204 Radial†	33.1	-1.3	-5.2293	ug/L	-5.2293	ppb	11:06:53
1	K 766.490 Radial†	2548.1	178.7	38.547	ug/L	38.547	ppb	11:06:33
1	Mg 279.077 IEC†	2.9	-0.1	-2.5683	ug/L	-2.5683	ppb	11:06:53
1	Na 589.592 Radial†	-30.3	104.8	6.4324	ug/L	6.4324	ppb	11:06:33
1	Sr 421.552†	18.9	75.1	0.2096	ug/L	0.2096	ppb	11:06:33
1	Sc 361.383	728492.4	728492.4	101.36	%			11:07:50
1	Y 371.029	571035.3	571035.3	101.61	%			11:07:50
1	Ag 328.068†	631.7	-9.5	-0.0600	ug/L	-0.0600	ppb	11:07:50
1	As 188.979†	-28.4	7.4	2.6780	ug/L	2.6780	ppb	11:08:10
1	B 249.677†	-589.2	358.7	9.0389	ug/L	9.0389	ppb	11:07:50
1	Ba 233.527†	25.1	24.2	0.1721	ug/L	0.1721	ppb	11:08:10
1	Be 313.107†	-4679.9	264.8	0.1213	ug/L	0.1213	ppb	11:07:50
1	Cd 226.502†	-254.6	30.0	0.3830	ug/L	0.3830	ppb	11:08:10
1	Co 228.616†	-95.8	5.0	0.0862	ug/L	0.0862	ppb	11:08:10
1	Cr 267.716†	-52.7	25.4	0.3547	ug/L	0.3547	ppb	11:07:50
1	Cu 324.752†	5672.3	-42.5	-0.1541	ug/L	-0.1541	ppb	11:07:50
1	Mn 257.610†	704.2	15.1	0.0161	ug/L	0.0161	ppb	11:08:10
1	Mo 202.031†	17.3	-0.1	-0.0066	ug/L	-0.0066	ppb	11:08:10
1	Ni 231.604†	132.1	10.5	0.2808	ug/L	0.2808	ppb	11:08:10
1	P 214.914†	302.8	-16.1	-8.1629	ug/L	-8.1629	ppb	11:08:10
1	Pb 220.353†	-1.8	11.5	1.3675	ug/L	1.3675	ppb	11:08:10
1	S 181.975 Axial†	82.9	6.3	8.6662	ug/L	8.6662	ppb	11:08:10
1	Sb 206.836†	50.0	-7.9	-2.3383	ug/L	-2.3383	ppb	11:08:10
1	Se 196.026†	-25.7	3.4	1.7142	ug/L	1.7142	ppb	11:08:10
1	Si 251.611†	527.4	108.5	3.3159	ug/L	3.3159	ppb	11:08:10
1	Sn 189.927†	22.2	9.4	1.6619	ug/L	1.6619	ppb	11:08:10
1	Ti 334.940†	-1354.1	12.4	0.0209	ug/L	0.0209	ppb	11:07:50
1	Tl 190.801†	-56.7	4.8	1.2660	ug/L	1.2660	ppb	11:08:10
1	U 409.014†	-4780.0	133.1	4.5069	ug/L	4.5069	ppb	11:07:50
1	V 292.402†	-1529.6	56.2	0.5195	ug/L	0.5195	ppb	11:07:50
1	Zn 213.857†	994.4	55.9	0.5148	ug/L	0.5148	ppb	11:08:10
1	SiO2†	560.3	115.9	7.5403	ug/L	7.5403	ppb	11:09:06
2	Sc Radial	7520.6	7520.6	101	%			11:06:58
2	Y RADIAL	6922.2	6922.2	99.97	%			11:06:58
2	Al 396.153Radial†	-54.9	18.1	14.887	ug/L	14.887	ppb	11:06:58
2	Ca 317.933Radial†	32.4	3.1	4.4074	ug/L	4.4074	ppb	11:07:18
2	Fe 238.204 Radial†	40.1	5.0	20.992	ug/L	20.992	ppb	11:07:18
2	K 766.490 Radial†	2407.0	-14.9	-3.2266	ug/L	-3.2266	ppb	11:06:58
2	Mg 279.077 IEC†	1.5	-1.5	-38.623	ug/L	-38.623	ppb	11:07:18
2	Na 589.592 Radial†	-80.6	55.5	3.4061	ug/L	3.4061	ppb	11:06:58
2	Sr 421.552†	-47.4	8.7	0.0244	ug/L	0.0244	ppb	11:06:58
2	Sc 361.383	728647.1	728647.1	101.39	%			11:08:16
2	Y 371.029	570984.1	570984.1	101.60	%			11:08:16
2	Ag 328.068†	543.1	-96.9	-0.5685	ug/L	-0.5685	ppb	11:08:16
2	As 188.979†	-28.6	7.2	2.6118	ug/L	2.6118	ppb	11:08:36
2	B 249.677†	-764.1	186.3	4.6931	ug/L	4.6931	ppb	11:08:16
2	Ba 233.527†	3.2	2.6	0.0209	ug/L	0.0209	ppb	11:08:36
2	Be 313.107†	-4636.0	309.1	0.1414	ug/L	0.1414	ppb	11:08:16
2	Cd 226.502†	-290.4	-5.3	-0.0703	ug/L	-0.0703	ppb	11:08:36
2	Co 228.616†	-107.0	-6.1	-0.1039	ug/L	-0.1039	ppb	11:08:36
2	Cr 267.716†	-64.0	14.3	0.2021	ug/L	0.2021	ppb	11:08:16
2	Cu 324.752†	5705.6	-10.8	-0.0379	ug/L	-0.0379	ppb	11:08:16
2	Mn 257.610†	685.6	-3.4	-0.0004	ug/L	-0.0004	ppb	11:08:36
2	Mo 202.031†	25.6	8.1	0.5737	ug/L	0.5737	ppb	11:08:36
2	Ni 231.604†	130.2	8.6	0.2296	ug/L	0.2296	ppb	11:08:36

2	P 214.914†	323.9	4.7	2.3879	ug/L	2.3879 ppb	11:08:36
2	Pb 220.353†	-10.2	3.1	0.3766	ug/L	0.3766 ppb	11:08:36
2	S 181.975 Axial†	83.1	6.5	8.9582	ug/L	8.9582 ppb	11:08:36
2	Sb 206.836†	61.2	3.1	0.9360	ug/L	0.9360 ppb	11:08:36
2	Se 196.026†	-29.5	-0.3	-0.0928	ug/L	-0.0928 ppb	11:08:36
2	Si 251.611†	502.3	83.7	2.5823	ug/L	2.5823 ppb	11:08:36
2	Sn 189.927†	9.4	-3.2	-0.5694	ug/L	-0.5694 ppb	11:08:36
2	Ti 334.940†	-1385.2	-18.0	-0.0330	ug/L	-0.0330 ppb	11:08:16
2	Tl 190.801†	-57.5	4.0	1.0469	ug/L	1.0469 ppb	11:08:36
2	U 409.014†	-4900.3	15.4	0.5177	ug/L	0.5177 ppb	11:08:16
2	V 292.402†	-1462.9	122.3	1.1153	ug/L	1.1153 ppb	11:08:16
2	Zn 213.857†	990.6	52.0	0.4772	ug/L	0.4772 ppb	11:08:36
2	SiO2†	527.4	83.3	5.4746	ug/L	5.4746 ppb	11:09:11
3	Sc Radial	7467.1	7467.1	99.9	%		11:07:24
3	Y RADIAL	6890.2	6890.2	99.51	%		11:07:24
3	Al 396.153Radial†	-117.4	-44.9	-36.953	ug/L	-36.953 ppb	11:07:24
3	Ca 317.933Radial†	34.2	5.2	7.3018	ug/L	7.3018 ppb	11:07:44
3	Fe 238.204 Radial†	34.3	-0.4	-1.7725	ug/L	-1.7725 ppb	11:07:44
3	K 766.490 Radial†	2550.1	145.5	31.394	ug/L	31.394 ppb	11:07:24
3	Mg 279.077 IEC†	-0.5	-3.6	-88.784	ug/L	-88.784 ppb	11:07:44
3	Na 589.592 Radial†	-14.1	121.5	7.4542	ug/L	7.4542 ppb	11:07:24
3	Sr 421.552†	-10.5	45.3	0.1265	ug/L	0.1265 ppb	11:07:24
3	Sc 361.383	732992.4	732992.4	101.99	%		11:08:41
3	Y 371.029	573758.4	573758.4	102.09	%		11:08:41
3	Ag 328.068†	703.3	56.9	0.3346	ug/L	0.3346 ppb	11:08:41
3	As 188.979†	-29.2	6.8	2.4619	ug/L	2.4619 ppb	11:09:01
3	B 249.677†	-699.1	254.5	6.4135	ug/L	6.4135 ppb	11:08:41
3	Ba 233.527†	33.7	32.5	0.2297	ug/L	0.2297 ppb	11:09:01
3	Be 313.107†	-4724.9	249.0	0.1140	ug/L	0.1140 ppb	11:08:41
3	Cd 226.502†	-265.1	21.1	0.2695	ug/L	0.2695 ppb	11:09:01
3	Co 228.616†	-98.7	2.7	0.0445	ug/L	0.0445 ppb	11:09:01
3	Cr 267.716†	-56.2	22.3	0.3109	ug/L	0.3109 ppb	11:08:41
3	Cu 324.752†	5668.8	-80.3	-0.2910	ug/L	-0.2910 ppb	11:08:41
3	Mn 257.610†	700.1	6.8	0.0090	ug/L	0.0090 ppb	11:09:01
3	Mo 202.031†	8.1	-9.2	-0.6488	ug/L	-0.6488 ppb	11:09:01
3	Ni 231.604†	115.0	-7.0	-0.1876	ug/L	-0.1876 ppb	11:09:01
3	P 214.914†	312.0	-8.9	-4.4559	ug/L	-4.4559 ppb	11:09:01
3	Pb 220.353†	3.3	16.5	1.9544	ug/L	1.9544 ppb	11:09:01
3	S 181.975 Axial†	87.1	10.0	13.702	ug/L	13.702 ppb	11:09:01
3	Sb 206.836†	48.7	-9.5	-2.8044	ug/L	-2.8044 ppb	11:09:01
3	Se 196.026†	-31.7	-2.3	-1.1651	ug/L	-1.1651 ppb	11:09:01
3	Si 251.611†	504.6	83.0	2.5402	ug/L	2.5402 ppb	11:09:01
3	Sn 189.927†	22.8	9.8	1.7428	ug/L	1.7428 ppb	11:09:01
3	Ti 334.940†	-1368.8	6.2	0.0091	ug/L	0.0091 ppb	11:08:41
3	Tl 190.801†	-50.7	11.1	2.8932	ug/L	2.8932 ppb	11:09:01
3	U 409.014†	-4769.8	172.0	5.8227	ug/L	5.8227 ppb	11:08:41
3	V 292.402†	-1585.3	10.8	0.1001	ug/L	0.1001 ppb	11:08:41
3	Zn 213.857†	996.4	51.8	0.4830	ug/L	0.4830 ppb	11:09:01
3	SiO2†	547.1	99.5	6.4910	ug/L	6.4910 ppb	11:09:16

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	730044.0	101.58	%	0.355				0.35%
Sc Radial	7451.1	99.7	%	1.05				1.06%
Y 371.029	571925.9	101.77	%	0.282				0.28%
Y RADIAL	6872.6	99.25	%	0.871				0.88%
Ag 328.068†	-16.5	-0.0980	ug/L	0.45276	-0.0980	ppb	0.45276	462.07%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-14.9	-12.283	ug/L	26.0102	-12.283	ppb	26.0102	211.76%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.2	2.5839	ug/L	0.11071	2.5839	ppb	0.11071	4.28%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	266.5	6.7152	ug/L	2.18855	6.7152	ppb	2.18855	32.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	19.8	0.1409	ug/L	0.10782	0.1409	ppb	0.10782	76.53%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	274.3	0.1256	ug/L	0.01420	0.1256	ppb	0.01420	11.31%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.2	5.9174	ug/L	1.45127	5.9174	ppb	1.45127	24.53%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                15.3      0.1941 ug/L       0.23587      0.1941 ppb        0.23587 121.52%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 0.5      0.0089 ug/L       0.09992      0.0089 ppb        0.09992 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                20.7      0.2892 ug/L       0.07855      0.2892 ppb        0.07855  27.16%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -44.5     -0.1610 ug/L       0.12666     -0.1610 ppb        0.12666  78.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.1      4.6633 ug/L      14.24596      4.6633 ppb       14.24596 305.49%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         103.1     22.238 ug/L       22.3410      22.238 ppb        22.3410 100.46%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.7    -43.325 ug/L       43.2999     -43.325 ppb        43.2999  99.94%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                 6.2      0.0082 ug/L       0.00824      0.0082 ppb        0.00824 100.09%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.4     -0.0272 ug/L       0.61151     -0.0272 ppb        0.61151 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         93.9      5.7642 ug/L       2.10510      5.7642 ppb        2.10510  36.52%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 4.0      0.1076 ug/L       0.25693      0.1076 ppb        0.25693 238.78%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.8     -3.4103 ug/L       5.35253     -3.4103 ppb        5.35253 156.95%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                10.4      1.2328 ug/L       0.79748      1.2328 ppb        0.79748  64.69%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.6     10.442 ug/L        2.8268      10.442 ppb         2.8268  27.07%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -4.8     -1.4022 ug/L       2.03830     -1.4022 ppb        2.03830 145.36%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.3      0.1521 ug/L       1.45521      0.1521 ppb        1.45521 956.84%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                91.7      2.8128 ug/L       0.43618      2.8128 ppb        0.43618  15.51%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.3      0.9451 ug/L       1.31223      0.9451 ppb        1.31223 138.85%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                43.0      0.1202 ug/L       0.09280      0.1202 ppb        0.09280  77.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 0.2     -0.0010 ug/L       0.02834     -0.0010 ppb        0.02834 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.6      1.7354 ug/L       1.00868      1.7354 ppb        1.00868  58.12%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                106.8      3.6158 ug/L       2.76251      3.6158 ppb        2.76251  76.40%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 63.1      0.5783 ug/L       0.51014      0.5783 ppb        0.51014  88.22%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                53.2      0.4917 ug/L       0.02026      0.4917 ppb        0.02026   4.12%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      99.5      6.5020 ug/L       1.03286      6.5020 ppb        1.03286  15.89%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 11:52:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7651.7	7651.7	102	%			11:54:44
1	Y RADIAL	7137.7	7137.7	103.1	%			11:54:44
1	Al 396.153Radial†	6083.8	6015.6	4932.2	ug/L	4932.2	ppb	11:54:24
1	Ca 317.933Radial†	3595.9	3483.6	4934.9	ug/L	4934.9	ppb	11:54:44
1	Fe 238.204 Radial†	1199.3	1136.8	4754.3	ug/L	4754.3	ppb	11:54:44
1	K 766.490 Radial†	24321.8	21351.6	4593.5	ug/L	4593.5	ppb	11:54:24
1	Mg 279.077 IEC†	207.3	199.5	4979.2	ug/L	4979.2	ppb	11:54:44
1	Na 589.592 Radial†	161684.3	158077.3	9701.6	ug/L	9701.6	ppb	11:54:24
1	Sr 421.552†	167822.7	163993.9	457.99	ug/L	457.99	ppb	11:54:24
1	Sc 361.383	744388.0	744388.0	103.58	%			11:55:43
1	Y 371.029	574786.2	574786.2	102.28	%			11:55:43
1	Ag 328.068†	88348.0	84665.3	508.81	ug/L	508.81	ppb	11:55:43
1	As 188.979†	1410.9	1397.6	507.17	ug/L	507.17	ppb	11:56:03
1	B 249.677†	19853.2	20107.7	503.88	ug/L	503.88	ppb	11:55:43
1	Ba 233.527†	74986.6	72397.3	511.94	ug/L	511.94	ppb	11:55:43
1	Be 313.107†	1153787.7	1118837.0	513.27	ug/L	513.27	ppb	11:55:43
1	Cd 226.502†	39844.3	38749.9	494.02	ug/L	494.02	ppb	11:56:03
1	Co 228.616†	29656.2	28731.8	498.49	ug/L	498.49	ppb	11:56:03
1	Cr 267.716†	37552.8	36333.7	509.84	ug/L	509.84	ppb	11:55:43
1	Cu 324.752†	150414.6	139583.4	506.09	ug/L	506.09	ppb	11:55:43
1	Mn 257.610†	479727.5	462486.1	510.52	ug/L	510.52	ppb	11:55:43
1	Mo 202.031†	7428.6	7155.0	504.01	ug/L	504.01	ppb	11:56:03
1	Ni 231.604†	19436.9	18646.1	498.09	ug/L	498.09	ppb	11:56:03
1	P 214.914†	5441.6	4939.0	2425.6	ug/L	2425.6	ppb	11:56:03
1	Pb 220.353†	4406.2	4267.4	509.60	ug/L	509.60	ppb	11:56:03
1	S 181.975 Axial†	846.9	742.2	1015.8	ug/L	1015.8	ppb	11:56:03
1	Sb 206.836†	1803.7	1684.2	506.44	ug/L	506.44	ppb	11:56:03
1	Se 196.026†	997.3	991.6	522.92	ug/L	522.92	ppb	11:56:03
1	Si 251.611†	86686.8	83282.4	2555.0	ug/L	2555.0	ppb	11:55:43
1	Sn 189.927†	2954.3	2839.8	503.47	ug/L	503.47	ppb	11:56:03
1	Ti 334.940†	284554.5	276079.0	505.34	ug/L	505.34	ppb	11:55:43
1	Tl 190.801†	1952.6	1946.0	512.51	ug/L	512.51	ppb	11:56:03
1	U 409.014†	10428.5	14917.2	503.55	ug/L	503.55	ppb	11:55:43
1	V 292.402†	56156.7	55783.2	512.67	ug/L	512.67	ppb	11:55:43
1	Zn 213.857†	58255.7	55319.4	505.95	ug/L	505.95	ppb	11:55:43
1	SiO2†	85799.0	82400.1	5381.0	ug/L	5381.0	ppb	11:57:03
2	Sc Radial	7165.7	7165.7	95.9	%			11:55:10
2	Y RADIAL	6575.4	6575.4	94.96	%			11:55:10
2	Al 396.153Radial†	6218.8	6559.5	5380.0	ug/L	5380.0	ppb	11:54:50
2	Ca 317.933Radial†	3617.3	3744.1	5304.0	ug/L	5304.0	ppb	11:55:10
2	Fe 238.204 Radial†	1209.3	1226.6	5128.7	ug/L	5128.7	ppb	11:55:10
2	K 766.490 Radial†	24712.0	23370.0	5028.8	ug/L	5028.8	ppb	11:54:50
2	Mg 279.077 IEC†	203.6	209.3	5224.9	ug/L	5224.9	ppb	11:55:10
2	Na 589.592 Radial†	164743.4	171980.1	10555	ug/L	10555	ppb	11:54:50
2	Sr 421.552†	170948.2	178372.7	498.15	ug/L	498.15	ppb	11:54:50
2	Sc 361.383	749020.2	749020.2	104.22	%			11:56:11
2	Y 371.029	577772.1	577772.1	102.81	%			11:56:11
2	Ag 328.068†	88621.7	84400.4	507.33	ug/L	507.33	ppb	11:56:11
2	As 188.979†	1428.3	1405.9	510.25	ug/L	510.25	ppb	11:56:31
2	B 249.677†	19956.4	20088.2	503.36	ug/L	503.36	ppb	11:56:11
2	Ba 233.527†	75280.5	72231.6	510.76	ug/L	510.76	ppb	11:56:11
2	Be 313.107†	1159234.9	1117174.5	512.50	ug/L	512.50	ppb	11:56:11
2	Cd 226.502†	40076.5	38734.8	493.78	ug/L	493.78	ppb	11:56:31
2	Co 228.616†	29834.6	28725.9	498.38	ug/L	498.38	ppb	11:56:31
2	Cr 267.716†	37755.8	36304.3	509.43	ug/L	509.43	ppb	11:56:11
2	Cu 324.752†	150915.7	139166.1	504.60	ug/L	504.60	ppb	11:56:11
2	Mn 257.610†	482150.4	461946.5	509.96	ug/L	509.96	ppb	11:56:11
2	Mo 202.031†	7480.9	7160.8	504.45	ug/L	504.45	ppb	11:56:31
2	Ni 231.604†	19539.0	18628.0	497.61	ug/L	497.61	ppb	11:56:31

2	P 214.914†	5495.4	4958.1	2435.5	ug/L	2435.5	ppb	11:56:31
2	Pb 220.353†	4445.8	4279.0	511.04	ug/L	511.04	ppb	11:56:31
2	S 181.975 Axial†	848.2	738.4	1010.5	ug/L	1010.5	ppb	11:56:31
2	Sb 206.836†	1825.6	1694.4	509.48	ug/L	509.48	ppb	11:56:31
2	Se 196.026†	1003.1	991.2	523.98	ug/L	523.98	ppb	11:56:31
2	Si 251.611†	87228.1	83284.1	2554.9	ug/L	2554.9	ppb	11:56:11
2	Sn 189.927†	2974.6	2841.7	503.87	ug/L	503.87	ppb	11:56:31
2	Ti 334.940†	286071.2	275835.3	504.91	ug/L	504.91	ppb	11:56:11
2	Tl 190.801†	1932.4	1915.0	504.40	ug/L	504.40	ppb	11:56:31
2	U 409.014†	10523.2	14945.8	504.47	ug/L	504.47	ppb	11:56:11
2	V 292.402†	56362.2	55645.0	511.37	ug/L	511.37	ppb	11:56:11
2	Zn 213.857†	58590.5	55292.8	505.67	ug/L	505.67	ppb	11:56:11
2	SiO2†	86417.9	82481.6	5386.0	ug/L	5386.0	ppb	11:57:09
3	Sc Radial	7319.7	7319.7	97.9	%			11:55:35
3	Y RADIAL	6733.7	6733.7	97.25	%			11:55:35
3	Al 396.153Radial†	6287.9	6493.6	5325.5	ug/L	5325.5	ppb	11:55:15
3	Ca 317.933Radial†	3688.6	3737.5	5294.6	ug/L	5294.6	ppb	11:55:35
3	Fe 238.204 Radial†	1223.8	1214.9	5080.0	ug/L	5080.0	ppb	11:55:35
3	K 766.490 Radial†	24945.3	23066.0	4963.2	ug/L	4963.2	ppb	11:55:15
3	Mg 279.077 IEC†	211.0	212.4	5301.6	ug/L	5301.6	ppb	11:55:35
3	Na 589.592 Radial†	166850.6	170517.3	10465	ug/L	10465	ppb	11:55:15
3	Sr 421.552†	173511.1	177239.0	494.98	ug/L	494.98	ppb	11:55:15
3	Sc 361.383	740419.2	740419.2	103.02	%			11:56:38
3	Y 371.029	571986.6	571986.6	101.78	%			11:56:38
3	Ag 328.068†	87696.7	84490.4	507.86	ug/L	507.86	ppb	11:56:38
3	As 188.979†	1426.3	1419.9	515.26	ug/L	515.26	ppb	11:56:58
3	B 249.677†	19642.0	20005.5	501.25	ug/L	501.25	ppb	11:56:38
3	Ba 233.527†	74465.2	72279.3	511.10	ug/L	511.10	ppb	11:56:38
3	Be 313.107†	1144420.5	1115715.8	511.84	ug/L	511.84	ppb	11:56:38
3	Cd 226.502†	40084.3	39189.0	499.59	ug/L	499.59	ppb	11:56:58
3	Co 228.616†	29827.3	29051.3	504.04	ug/L	504.04	ppb	11:56:58
3	Cr 267.716†	37244.3	36228.7	508.38	ug/L	508.38	ppb	11:56:38
3	Cu 324.752†	148855.8	138848.8	503.44	ug/L	503.44	ppb	11:56:38
3	Mn 257.610†	476478.4	461815.1	509.81	ug/L	509.81	ppb	11:56:38
3	Mo 202.031†	7477.4	7240.9	510.08	ug/L	510.08	ppb	11:56:58
3	Ni 231.604†	19572.6	18878.4	504.30	ug/L	504.30	ppb	11:56:58
3	P 214.914†	5519.2	5042.4	2478.9	ug/L	2478.9	ppb	11:56:58
3	Pb 220.353†	4424.2	4307.6	514.45	ug/L	514.45	ppb	11:56:58
3	S 181.975 Axial†	849.9	749.5	1025.8	ug/L	1025.8	ppb	11:56:58
3	Sb 206.836†	1830.8	1719.8	517.30	ug/L	517.30	ppb	11:56:58
3	Se 196.026†	1007.9	1007.1	531.92	ug/L	531.92	ppb	11:56:58
3	Si 251.611†	85938.1	83004.2	2546.1	ug/L	2546.1	ppb	11:56:38
3	Sn 189.927†	2983.0	2882.9	511.17	ug/L	511.17	ppb	11:56:58
3	Ti 334.940†	282816.0	275864.2	504.97	ug/L	504.97	ppb	11:56:38
3	Tl 190.801†	1960.9	1964.1	517.24	ug/L	517.24	ppb	11:56:58
3	U 409.014†	10268.3	14815.7	500.07	ug/L	500.07	ppb	11:56:38
3	V 292.402†	55820.6	55747.6	512.37	ug/L	512.37	ppb	11:56:38
3	Zn 213.857†	57893.1	55268.9	505.41	ug/L	505.41	ppb	11:56:38
3	SiO2†	85553.5	82605.8	5393.8	ug/L	5393.8	ppb	11:57:14

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	744609.1	103.61	%	0.599				0.58%
Sc Radial	7379.0	98.7	%	3.32				3.37%
Y 371.029	574848.3	102.29	%	0.515				0.50%
Y RADIAL	6815.6	98.43	%	4.187				4.25%
Ag 328.068†	84518.7	508.00	ug/L	0.747	508.00	ppb	0.747	0.15%
QC value within limits for Ag 328.068 Recovery = 101.60%								
Al 396.153Radial†	6356.3	5212.6	ug/L	244.36	5212.6	ppb	244.36	4.69%
QC value within limits for Al 396.153Radial Recovery = 104.25%								
As 188.979†	1407.8	510.89	ug/L	4.082	510.89	ppb	4.082	0.80%
QC value within limits for As 188.979 Recovery = 102.18%								
B 249.677†	20067.1	502.83	ug/L	1.392	502.83	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.57%								
Ba 233.527†	72302.7	511.27	ug/L	0.604	511.27	ppb	0.604	0.12%
QC value within limits for Ba 233.527 Recovery = 102.25%								
Be 313.107†	1117242.4	512.53	ug/L	0.715	512.53	ppb	0.715	0.14%
QC value within limits for Be 313.107 Recovery = 102.51%								
Ca 317.933Radial†	3655.1	5177.8	ug/L	210.45	5177.8	ppb	210.45	4.06%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.56%
Cd 226.502†            38891.2      495.79 ug/L         3.285      495.79 ppb          3.285   0.66%
   QC value within limits for Cd 226.502  Recovery = 99.16%
Co 228.616†            28836.3      500.30 ug/L         3.237      500.30 ppb          3.237   0.65%
   QC value within limits for Co 228.616  Recovery = 100.06%
Cr 267.716†            36288.9      509.22 ug/L         0.756      509.22 ppb          0.756   0.15%
   QC value within limits for Cr 267.716  Recovery = 101.84%
Cu 324.752†           139199.4      504.71 ug/L         1.325      504.71 ppb          1.325   0.26%
   QC value within limits for Cu 324.752  Recovery = 100.94%
Fe 238.204 Radial†      1192.7      4987.7 ug/L        203.57      4987.7 ppb         203.57   4.08%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.75%
K 766.490 Radial†      22595.9      4861.8 ug/L        234.72      4861.8 ppb         234.72   4.83%
   QC value within limits for K 766.490 Radial  Recovery = 97.24%
Mg 279.077 IEC†          207.1      5168.6 ug/L        168.46      5168.6 ppb         168.46   3.26%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.37%
Mn 257.610†           462082.6      510.10 ug/L         0.371      510.10 ppb          0.371   0.07%
   QC value within limits for Mn 257.610  Recovery = 102.02%
Mo 202.031†             7185.6      506.18 ug/L         3.383      506.18 ppb          3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.24%
Na 589.592 Radial†    166858.3       10241 ug/L         468.9       10241 ppb          468.9   4.58%
   QC value within limits for Na 589.592 Radial  Recovery = 102.41%
Ni 231.604†            18717.5      500.00 ug/L         3.730      500.00 ppb          3.730   0.75%
   QC value within limits for Ni 231.604  Recovery = 100.00%
P 214.914†              4979.8      2446.7 ug/L        28.35      2446.7 ppb         28.35   1.16%
   QC value within limits for P 214.914  Recovery = 97.87%
Pb 220.353†             4284.6      511.70 ug/L         2.490      511.70 ppb          2.490   0.49%
   QC value within limits for Pb 220.353  Recovery = 102.34%
S 181.975 Axial†         743.4      1017.4 ug/L         7.74      1017.4 ppb          7.74   0.76%
   QC value within limits for S 181.975 Axial  Recovery = 101.74%
Sb 206.836†             1699.5      511.08 ug/L         5.604      511.08 ppb          5.604   1.10%
   QC value within limits for Sb 206.836  Recovery = 102.22%
Se 196.026†              996.7      526.27 ug/L         4.918      526.27 ppb          4.918   0.93%
   QC value within limits for Se 196.026  Recovery = 105.25%
Si 251.611†            83190.2      2552.0 ug/L          5.12      2552.0 ppb          5.12   0.20%
   QC value within limits for Si 251.611  Recovery = 102.08%
Sn 189.927†             2854.8      506.17 ug/L         4.333      506.17 ppb          4.333   0.86%
   QC value within limits for Sn 189.927  Recovery = 101.23%
Sr 421.552†           173201.9      483.71 ug/L        22.327      483.71 ppb         22.327   4.62%
   QC value within limits for Sr 421.552  Recovery = 96.74%
Ti 334.940†           275926.2      505.07 ug/L         0.231      505.07 ppb          0.231   0.05%
   QC value within limits for Ti 334.940  Recovery = 101.01%
Tl 190.801†             1941.7      511.38 ug/L         6.494      511.38 ppb          6.494   1.27%
   QC value within limits for Tl 190.801  Recovery = 102.28%
U 409.014†             14892.9      502.70 ug/L         2.319      502.70 ppb          2.319   0.46%
   QC value within limits for U 409.014  Recovery = 100.54%
V 292.402†             55725.3      512.14 ug/L         0.679      512.14 ppb          0.679   0.13%
   QC value within limits for V 292.402  Recovery = 102.43%
Zn 213.857†            55293.7      505.68 ug/L         0.274      505.68 ppb          0.274   0.05%
   QC value within limits for Zn 213.857  Recovery = 101.14%
SiO2†                  82495.8      5386.9 ug/L          6.44      5386.9 ppb          6.44   0.12%
   QC value within limits for SiO2  Recovery = 100.74%
All analyte(s) passed QC.
```

Sequence No.: 16
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 11:59:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6676.6	6676.6	89.3	%			12:01:16
1	Y RADIAL	6221.6	6221.6	89.85	%			12:01:16
1	Al 396.153Radial†	-74.0	-10.2	-8.3558	ug/L	-8.3558	ppb	12:01:16
1	Ca 317.933Radial†	31.1	5.8	8.1594	ug/L	8.1594	ppb	12:01:36
1	Fe 238.204 Radial†	36.5	6.1	25.452	ug/L	25.452	ppb	12:01:36
1	K 766.490 Radial†	2487.6	377.7	81.514	ug/L	81.514	ppb	12:01:16
1	Mg 279.077 IEC†	6.6	4.3	107.37	ug/L	107.37	ppb	12:01:36
1	Na 589.592 Radial†	-155.2	-38.2	-2.3449	ug/L	-2.3449	ppb	12:01:16
1	Sr 421.552†	-43.6	7.0	0.0196	ug/L	0.0196	ppb	12:01:16
1	Sc 361.383	722196.1	722196.1	100.49	%			12:02:33
1	Y 371.029	566873.9	566873.9	100.87	%			12:02:33
1	Ag 328.068†	661.5	25.6	0.1612	ug/L	0.1612	ppb	12:02:33
1	As 188.979†	-35.7	-0.0	-0.0121	ug/L	-0.0121	ppb	12:02:53
1	B 249.677†	-645.8	297.3	7.4909	ug/L	7.4909	ppb	12:02:33
1	Ba 233.527†	10.4	9.8	0.0698	ug/L	0.0698	ppb	12:02:53
1	Be 313.107†	-4667.2	237.2	0.1083	ug/L	0.1083	ppb	12:02:33
1	Cd 226.502†	-262.4	20.0	0.2521	ug/L	0.2521	ppb	12:02:53
1	Co 228.616†	-99.7	0.3	0.0031	ug/L	0.0031	ppb	12:02:53
1	Cr 267.716†	-90.0	-12.1	-0.1697	ug/L	-0.1697	ppb	12:02:33
1	Cu 324.752†	5702.3	36.2	0.1327	ug/L	0.1327	ppb	12:02:33
1	Mn 257.610†	713.1	30.1	0.0343	ug/L	0.0343	ppb	12:02:33
1	Mo 202.031†	9.5	-7.7	-0.5372	ug/L	-0.5372	ppb	12:02:53
1	Ni 231.604†	138.5	18.0	0.4814	ug/L	0.4814	ppb	12:02:53
1	P 214.914†	305.5	-10.8	-5.5324	ug/L	-5.5324	ppb	12:02:53
1	Pb 220.353†	12.8	26.0	3.0925	ug/L	3.0925	ppb	12:02:53
1	S 181.975 Axial†	84.6	8.8	12.017	ug/L	12.017	ppb	12:02:53
1	Sb 206.836†	59.4	1.9	0.5718	ug/L	0.5718	ppb	12:02:53
1	Se 196.026†	-32.6	-3.7	-1.8088	ug/L	-1.8088	ppb	12:02:53
1	Si 251.611†	471.3	57.2	1.7336	ug/L	1.7336	ppb	12:02:53
1	Sn 189.927†	18.9	6.3	1.1223	ug/L	1.1223	ppb	12:02:53
1	Ti 334.940†	-1417.4	-62.3	-0.1140	ug/L	-0.1140	ppb	12:02:33
1	Tl 190.801†	-48.4	12.6	3.2842	ug/L	3.2842	ppb	12:02:53
1	U 409.014†	-4843.9	28.3	0.9560	ug/L	0.9560	ppb	12:02:33
1	V 292.402†	-1549.3	23.4	0.2065	ug/L	0.2065	ppb	12:02:33
1	Zn 213.857†	997.4	67.5	0.6132	ug/L	0.6132	ppb	12:02:53
1	SiO2†	511.0	71.6	4.6352	ug/L	4.6352	ppb	12:03:49
2	Sc Radial	7850.3	7850.3	105	%			12:01:41
2	Y RADIAL	7299.1	7299.1	105.4	%			12:01:41
2	Al 396.153Radial†	-80.8	-4.3	-3.5266	ug/L	-3.5266	ppb	12:01:41
2	Ca 317.933Radial†	37.6	6.7	9.5130	ug/L	9.5130	ppb	12:02:01
2	Fe 238.204 Radial†	37.1	0.5	2.1865	ug/L	2.1865	ppb	12:02:01
2	K 766.490 Radial†	2543.6	14.7	3.1649	ug/L	3.1649	ppb	12:01:41
2	Mg 279.077 IEC†	5.2	1.9	46.597	ug/L	46.597	ppb	12:02:01
2	Na 589.592 Radial†	-97.8	42.4	2.6046	ug/L	2.6046	ppb	12:01:41
2	Sr 421.552†	-10.6	45.8	0.1278	ug/L	0.1278	ppb	12:01:41
2	Sc 361.383	738106.8	738106.8	102.70	%			12:02:58
2	Y 371.029	578058.3	578058.3	102.86	%			12:02:58
2	Ag 328.068†	702.7	51.6	0.3084	ug/L	0.3084	ppb	12:02:58
2	As 188.979†	-28.3	7.9	2.8321	ug/L	2.8321	ppb	12:03:18
2	B 249.677†	-737.6	221.8	5.5873	ug/L	5.5873	ppb	12:02:58
2	Ba 233.527†	34.1	32.7	0.2315	ug/L	0.2315	ppb	12:03:18
2	Be 313.107†	-4673.0	331.6	0.1518	ug/L	0.1518	ppb	12:02:58
2	Cd 226.502†	-270.9	17.3	0.2209	ug/L	0.2209	ppb	12:03:18
2	Co 228.616†	-85.3	16.4	0.2843	ug/L	0.2843	ppb	12:03:18
2	Cr 267.716†	-38.2	40.2	0.5638	ug/L	0.5638	ppb	12:02:58
2	Cu 324.752†	5712.8	-75.9	-0.2750	ug/L	-0.2750	ppb	12:02:58
2	Mn 257.610†	706.1	8.0	0.0082	ug/L	0.0082	ppb	12:02:58
2	Mo 202.031†	20.8	3.1	0.2205	ug/L	0.2205	ppb	12:03:18
2	Ni 231.604†	123.8	0.7	0.0186	ug/L	0.0186	ppb	12:03:18

2	P 214.914†	315.2	-7.9	-3.9885 ug/L	-3.9885 ppb	12:03:18
2	Pb 220.353†	-5.4	8.0	0.9477 ug/L	0.9477 ppb	12:03:18
2	S 181.975 Axial†	83.9	6.3	8.5731 ug/L	8.5731 ppb	12:03:18
2	Sb 206.836†	59.1	0.3	0.0711 ug/L	0.0711 ppb	12:03:18
2	Se 196.026†	-25.3	4.1	2.1232 ug/L	2.1232 ppb	12:03:18
2	Si 251.611†	478.4	54.0	1.6718 ug/L	1.6718 ppb	12:03:18
2	Sn 189.927†	9.6	-3.2	-0.5582 ug/L	-0.5582 ppb	12:03:18
2	Ti 334.940†	-1390.3	-5.5	-0.0105 ug/L	-0.0105 ppb	12:02:58
2	Tl 190.801†	-56.0	6.2	1.6193 ug/L	1.6193 ppb	12:03:18
2	U 409.014†	-4919.4	58.8	1.9895 ug/L	1.9895 ppb	12:02:58
2	V 292.402†	-1566.7	39.7	0.3675 ug/L	0.3675 ppb	12:02:58
2	Zn 213.857†	991.9	40.7	0.3737 ug/L	0.3737 ppb	12:03:18
2	SiO2†	510.4	60.1	3.9610 ug/L	3.9610 ppb	12:03:54
3	Sc Radial	7481.5	7481.5	100 %		12:02:06
3	Y RADIAL	6948.3	6948.3	100.3 %		12:02:06
3	Al 396.153Radial†	-66.5	6.2	5.1212 ug/L	5.1212 ppb	12:02:06
3	Ca 317.933Radial†	29.3	0.2	0.2331 ug/L	0.2331 ppb	12:02:26
3	Fe 238.204 Radial†	38.4	3.6	15.060 ug/L	15.060 ppb	12:02:26
3	K 766.490 Radial†	2403.8	-5.6	-1.2057 ug/L	-1.2057 ppb	12:02:06
3	Mg 279.077 IEC†	2.5	-0.6	-13.800 ug/L	-13.800 ppb	12:02:26
3	Na 589.592 Radial†	-192.8	-57.0	-3.4996 ug/L	-3.4996 ppb	12:02:06
3	Sr 421.552†	-56.4	-0.4	-0.0012 ug/L	-0.0012 ppb	12:02:06
3	Sc 361.383	737609.7	737609.7	102.63 %		12:03:24
3	Y 371.029	577833.9	577833.9	102.82 %		12:03:24
3	Ag 328.068†	559.5	-87.4	-0.5206 ug/L	-0.5206 ppb	12:03:24
3	As 188.979†	-28.1	8.1	2.9158 ug/L	2.9158 ppb	12:03:44
3	B 249.677†	-718.9	239.4	6.0314 ug/L	6.0314 ppb	12:03:24
3	Ba 233.527†	43.0	41.4	0.2924 ug/L	0.2924 ppb	12:03:44
3	Be 313.107†	-4699.2	303.1	0.1387 ug/L	0.1387 ppb	12:03:24
3	Cd 226.502†	-276.5	11.7	0.1475 ug/L	0.1475 ppb	12:03:44
3	Co 228.616†	-81.7	19.8	0.3442 ug/L	0.3442 ppb	12:03:44
3	Cr 267.716†	-60.4	18.5	0.2587 ug/L	0.2587 ppb	12:03:24
3	Cu 324.752†	5668.2	-115.6	-0.4180 ug/L	-0.4180 ppb	12:03:24
3	Mn 257.610†	759.7	60.6	0.0690 ug/L	0.0690 ppb	12:03:24
3	Mo 202.031†	21.7	4.0	0.2812 ug/L	0.2812 ppb	12:03:44
3	Ni 231.604†	123.3	0.3	0.0086 ug/L	0.0086 ppb	12:03:44
3	P 214.914†	328.6	5.3	2.8084 ug/L	2.8084 ppb	12:03:44
3	Pb 220.353†	-14.4	-0.8	-0.0937 ug/L	-0.0937 ppb	12:03:44
3	S 181.975 Axial†	79.6	2.2	2.9820 ug/L	2.9820 ppb	12:03:44
3	Sb 206.836†	63.1	4.2	1.2666 ug/L	1.2666 ppb	12:03:44
3	Se 196.026†	-26.7	2.7	1.4534 ug/L	1.4534 ppb	12:03:44
3	Si 251.611†	490.5	66.2	2.0309 ug/L	2.0309 ppb	12:03:44
3	Sn 189.927†	16.4	3.4	0.6087 ug/L	0.6087 ppb	12:03:44
3	Ti 334.940†	-1399.2	-15.1	-0.0297 ug/L	-0.0297 ppb	12:03:24
3	Tl 190.801†	-58.2	4.1	1.0626 ug/L	1.0626 ppb	12:03:44
3	U 409.014†	-4842.3	130.6	4.4214 ug/L	4.4214 ppb	12:03:24
3	V 292.402†	-1583.7	22.2	0.2111 ug/L	0.2111 ppb	12:03:24
3	Zn 213.857†	1000.5	49.7	0.4579 ug/L	0.4579 ppb	12:03:44
3	SiO2†	479.5	30.3	1.9621 ug/L	1.9621 ppb	12:03:59

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	732637.5	101.94	%	1.259				1.23%
Sc Radial	7336.1	98.1	%	8.03				8.18%
Y 371.029	574255.4	102.18	%	1.138				1.11%
Y RADIAL	6823.0	98.54	%	7.936				8.05%
Ag 328.068†	-3.4	-0.0170	ug/L	0.44227	-0.0170	ppb	0.44227	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-2.7	-2.2537	ug/L	6.82809	-2.2537	ppb	6.82809	302.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.3	1.9119	ug/L	1.66680	1.9119	ppb	1.66680	87.18%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	252.8	6.3699	ug/L	0.99589	6.3699	ppb	0.99589	15.63%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	28.0	0.1979	ug/L	0.11506	0.1979	ppb	0.11506	58.14%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	290.6	0.1329	ug/L	0.02230	0.1329	ppb	0.02230	16.78%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.2	5.9685	ug/L	5.01291	5.9685	ppb	5.01291	83.99%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              16.3      0.2069 ug/L       0.05370      0.2069 ppb        0.05370  25.96%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              12.1      0.2105 ug/L       0.18212      0.2105 ppb        0.18212  86.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              15.5      0.2176 ug/L       0.36845      0.2176 ppb        0.36845 169.30%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -51.8     -0.1868 ug/L       0.28574     -0.1868 ppb        0.28574 152.98%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        3.4      14.233 ug/L       11.6546      14.233 ppb        11.6546  81.89%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       128.9      27.824 ug/L       46.5479      27.824 ppb        46.5479 167.29%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           1.9      46.722 ug/L       60.5843      46.722 ppb        60.5843 129.67%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              32.9      0.0372 ug/L       0.03054      0.0372 ppb        0.03054  82.18%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -0.2     -0.0118 ug/L       0.45599     -0.0118 ppb        0.45599 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       17.6     -1.0800 ug/L       3.24277     -1.0800 ppb        3.24277 300.27%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               6.3      0.1695 ug/L       0.27013      0.1695 ppb        0.27013 159.35%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -4.4     -2.2375 ug/L       4.43752     -2.2375 ppb        4.43752 198.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              11.1      1.3155 ug/L       1.62466      1.3155 ppb        1.62466 123.50%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          5.7      7.8573 ug/L       4.55971      7.8573 ppb        4.55971  58.03%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               2.1      0.6365 ug/L       0.60041      0.6365 ppb        0.60041  94.33%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               1.1      0.5893 ug/L       2.10363      0.5893 ppb        2.10363 356.99%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              59.1      1.8121 ug/L       0.19200      1.8121 ppb        0.19200  10.60%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               2.2      0.3909 ug/L       0.86112      0.3909 ppb        0.86112 220.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              17.5      0.0487 ug/L       0.06926      0.0487 ppb        0.06926 142.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -27.6     -0.0514 ug/L       0.05503     -0.0514 ppb        0.05503 107.08%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               7.6      1.9887 ug/L       1.15598      1.9887 ppb        1.15598  58.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               72.6      2.4556 ug/L       1.77912      2.4556 ppb        1.77912  72.45%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               28.4      0.2617 ug/L       0.09166      0.2617 ppb        0.09166  35.03%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              52.6      0.4816 ug/L       0.12146      0.4816 ppb        0.12146  25.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    54.0      3.5195 ug/L       1.39017      3.5195 ppb        1.39017  39.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 13:02:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7281.5	7281.5	97.4	%			13:05:06
1	Y RADIAL	6680.3	6680.3	96.48	%			13:05:06
1	Al 396.153Radial†	6299.3	6539.0	5362.9	ug/L	5362.9	ppb	13:04:46
1	Ca 317.933Radial†	3703.5	3772.6	5344.4	ug/L	5344.4	ppb	13:05:06
1	Fe 238.204 Radial†	1228.0	1225.8	5126.1	ug/L	5126.1	ppb	13:05:06
1	K 766.490 Radial†	24961.3	23216.1	4995.5	ug/L	4995.5	ppb	13:04:46
1	Mg 279.077 IEC†	211.7	214.2	5347.0	ug/L	5347.0	ppb	13:05:06
1	Na 589.592 Radial†	166781.0	171339.3	10516	ug/L	10516	ppb	13:04:46
1	Sr 421.552†	173274.8	177925.7	496.90	ug/L	496.90	ppb	13:04:46
1	Sc 361.383	741755.7	741755.7	103.21	%			13:06:04
1	Y 371.029	572432.8	572432.8	101.86	%			13:06:04
1	Ag 328.068†	89777.9	86353.5	519.02	ug/L	519.02	ppb	13:06:09
1	As 188.979†	1445.8	1436.2	521.17	ug/L	521.17	ppb	13:06:29
1	B 249.677†	20111.0	20425.5	511.73	ug/L	511.73	ppb	13:06:09
1	Ba 233.527†	75676.2	73322.4	518.48	ug/L	518.48	ppb	13:06:09
1	Be 313.107†	1161288.0	1130057.2	518.40	ug/L	518.40	ppb	13:06:04
1	Cd 226.502†	41966.5	40942.5	521.96	ug/L	521.96	ppb	13:06:09
1	Co 228.616†	31029.2	30163.8	523.33	ug/L	523.33	ppb	13:06:09
1	Cr 267.716†	38024.5	36919.4	518.06	ug/L	518.06	ppb	13:06:09
1	Cu 324.752†	151507.1	141157.3	511.81	ug/L	511.81	ppb	13:06:09
1	Mn 257.610†	483722.8	468000.8	516.64	ug/L	516.64	ppb	13:06:04
1	Mo 202.031†	7486.1	7236.2	509.75	ug/L	509.75	ppb	13:06:29
1	Ni 231.604†	20203.6	19455.5	519.71	ug/L	519.71	ppb	13:06:09
1	P 214.914†	5506.0	5020.0	2465.8	ug/L	2465.8	ppb	13:06:29
1	Pb 220.353†	4373.3	4250.6	507.66	ug/L	507.66	ppb	13:06:29
1	S 181.975 Axial†	861.0	758.8	1038.5	ug/L	1038.5	ppb	13:06:29
1	Sb 206.836†	1842.1	1727.5	519.43	ug/L	519.43	ppb	13:06:29
1	Se 196.026†	1015.3	1012.5	534.84	ug/L	534.84	ppb	13:06:29
1	Si 251.611†	87862.7	84718.7	2599.0	ug/L	2599.0	ppb	13:06:09
1	Sn 189.927†	3005.5	2899.5	514.11	ug/L	514.11	ppb	13:06:29
1	Ti 334.940†	282291.1	274861.0	503.12	ug/L	503.12	ppb	13:06:09
1	Tl 190.801†	1971.1	1970.5	518.80	ug/L	518.80	ppb	13:06:29
1	U 409.014†	11031.4	15537.1	524.48	ug/L	524.48	ppb	13:06:09
1	V 292.402†	57055.2	56846.2	522.39	ug/L	522.39	ppb	13:06:09
1	Zn 213.857†	58967.8	56209.0	513.97	ug/L	513.97	ppb	13:06:09
1	SiO2†	87498.0	84340.2	5507.8	ug/L	5507.8	ppb	13:07:37
2	Sc Radial	7294.7	7294.7	97.6	%			13:05:32
2	Y RADIAL	6695.2	6695.2	96.69	%			13:05:32
2	Al 396.153Radial†	6307.0	6535.2	5359.7	ug/L	5359.7	ppb	13:05:12
2	Ca 317.933Radial†	3668.9	3730.3	5284.4	ug/L	5284.4	ppb	13:05:32
2	Fe 238.204 Radial†	1215.4	1210.6	5062.6	ug/L	5062.6	ppb	13:05:32
2	K 766.490 Radial†	25174.2	23388.0	5032.6	ug/L	5032.6	ppb	13:05:12
2	Mg 279.077 IEC†	212.5	214.7	5359.2	ug/L	5359.2	ppb	13:05:32
2	Na 589.592 Radial†	167635.3	171905.9	10550	ug/L	10550	ppb	13:05:12
2	Sr 421.552†	173780.8	178123.3	497.45	ug/L	497.45	ppb	13:05:12
2	Sc 361.383	744205.0	744205.0	103.55	%			13:06:35
2	Y 371.029	574002.9	574002.9	102.14	%			13:06:35
2	Ag 328.068†	89345.2	85649.2	514.78	ug/L	514.78	ppb	13:06:40
2	As 188.979†	1454.7	1440.3	522.60	ug/L	522.60	ppb	13:07:00
2	B 249.677†	20044.2	20296.9	508.53	ug/L	508.53	ppb	13:06:40
2	Ba 233.527†	75470.1	72882.1	515.37	ug/L	515.37	ppb	13:06:40
2	Be 313.107†	1157004.1	1122217.0	514.80	ug/L	514.80	ppb	13:06:35
2	Cd 226.502†	41734.2	40584.4	517.39	ug/L	517.39	ppb	13:06:40
2	Co 228.616†	30787.2	29831.1	517.58	ug/L	517.58	ppb	13:06:40
2	Cr 267.716†	37890.1	36668.4	514.54	ug/L	514.54	ppb	13:06:40
2	Cu 324.752†	150966.9	140152.4	508.17	ug/L	508.17	ppb	13:06:40
2	Mn 257.610†	483147.7	465903.0	514.32	ug/L	514.32	ppb	13:06:35
2	Mo 202.031†	7534.1	7258.7	511.33	ug/L	511.33	ppb	13:07:00
2	Ni 231.604†	20097.6	19288.7	515.26	ug/L	515.26	ppb	13:06:40

2	P 214.914†	5532.6	5028.1	2470.8 ug/L	2470.8 ppb	13:07:00
2	Pb 220.353†	4435.0	4296.2	513.10 ug/L	513.10 ppb	13:07:00
2	S 181.975 Axial†	855.6	750.9	1027.6 ug/L	1027.6 ppb	13:07:00
2	Sb 206.836†	1849.1	1728.4	519.83 ug/L	519.83 ppb	13:07:00
2	Se 196.026†	1031.5	1024.9	540.96 ug/L	540.96 ppb	13:07:00
2	Si 251.611†	87511.3	84099.1	2579.8 ug/L	2579.8 ppb	13:06:40
2	Sn 189.927†	3021.0	2904.9	515.06 ug/L	515.06 ppb	13:07:00
2	Ti 334.940†	281132.5	272841.9	499.42 ug/L	499.42 ppb	13:06:40
2	Tl 190.801†	1993.9	1986.3	522.92 ug/L	522.92 ppb	13:07:00
2	U 409.014†	11073.6	15542.7	524.68 ug/L	524.68 ppb	13:06:40
2	V 292.402†	56696.5	56317.8	517.62 ug/L	517.62 ppb	13:06:40
2	Zn 213.857†	58743.5	55804.3	510.27 ug/L	510.27 ppb	13:06:40
2	SiO2†	86542.0	83137.9	5428.6 ug/L	5428.6 ppb	13:07:42
3	Sc Radial	7304.1	7304.1	97.7 %		13:05:57
3	Y RADIAL	6729.5	6729.5	97.19 %		13:05:57
3	Al 396.153Radial†	6230.7	6448.7	5288.8 ug/L	5288.8 ppb	13:05:37
3	Ca 317.933Radial†	3697.0	3754.2	5318.3 ug/L	5318.3 ppb	13:05:57
3	Fe 238.204 Radial†	1230.4	1224.3	5119.7 ug/L	5119.7 ppb	13:05:57
3	K 766.490 Radial†	24732.5	22902.6	4928.0 ug/L	4928.0 ppb	13:05:37
3	Mg 279.077 IEC†	214.6	216.5	5404.1 ug/L	5404.1 ppb	13:05:57
3	Na 589.592 Radial†	164955.2	168941.0	10368 ug/L	10368 ppb	13:05:37
3	Sr 421.552†	171454.6	175512.4	490.16 ug/L	490.16 ppb	13:05:37
3	Sc 361.383	749321.2	749321.2	104.26 %		13:07:06
3	Y 371.029	578032.5	578032.5	102.85 %		13:07:06
3	Ag 328.068†	89258.3	84976.8	510.78 ug/L	510.78 ppb	13:07:11
3	As 188.979†	1443.6	1420.0	515.27 ug/L	515.27 ppb	13:07:31
3	B 249.677†	19999.5	20121.8	504.13 ug/L	504.13 ppb	13:07:11
3	Ba 233.527†	75388.4	72306.1	511.30 ug/L	511.30 ppb	13:07:11
3	Be 313.107†	1168029.6	1125162.9	516.14 ug/L	516.14 ppb	13:07:06
3	Cd 226.502†	41658.4	40236.6	512.95 ug/L	512.95 ppb	13:07:11
3	Co 228.616†	30816.1	29655.8	514.53 ug/L	514.53 ppb	13:07:11
3	Cr 267.716†	37880.8	36409.6	510.91 ug/L	510.91 ppb	13:07:11
3	Cu 324.752†	150551.5	138758.6	503.12 ug/L	503.12 ppb	13:07:11
3	Mn 257.610†	486365.0	465803.0	514.21 ug/L	514.21 ppb	13:07:06
3	Mo 202.031†	7486.1	7162.9	504.59 ug/L	504.59 ppb	13:07:31
3	Ni 231.604†	20123.8	19181.4	512.39 ug/L	512.39 ppb	13:07:11
3	P 214.914†	5487.2	4948.1	2430.7 ug/L	2430.7 ppb	13:07:31
3	Pb 220.353†	4377.3	4211.6	503.00 ug/L	503.00 ppb	13:07:31
3	S 181.975 Axial†	855.2	744.9	1019.4 ug/L	1019.4 ppb	13:07:31
3	Sb 206.836†	1834.1	1701.9	511.79 ug/L	511.79 ppb	13:07:31
3	Se 196.026†	1001.4	989.2	522.93 ug/L	522.93 ppb	13:07:31
3	Si 251.611†	87420.1	83434.6	2559.6 ug/L	2559.6 ppb	13:07:11
3	Sn 189.927†	2997.8	2862.7	507.60 ug/L	507.60 ppb	13:07:31
3	Ti 334.940†	280603.6	270480.9	495.11 ug/L	495.11 ppb	13:07:11
3	Tl 190.801†	1970.7	1950.9	513.65 ug/L	513.65 ppb	13:07:31
3	U 409.014†	10813.4	15220.1	513.76 ug/L	513.76 ppb	13:07:11
3	V 292.402†	56734.7	55980.6	514.45 ug/L	514.45 ppb	13:07:11
3	Zn 213.857†	58697.7	55373.1	506.31 ug/L	506.31 ppb	13:07:11
3	SiO2†	86581.0	82604.7	5394.1 ug/L	5394.1 ppb	13:07:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	745094.0	103.67	%	0.537				0.52%
Sc Radial	7293.4	97.6	%	0.15				0.16%
Y 371.029	574822.7	102.28	%	0.514				0.50%
Y RADIAL	6701.6	96.78	%	0.364				0.38%
Ag 328.068†	85659.8	514.86	ug/L	4.124	514.86	ppb	4.124	0.80%
QC value within limits for Ag 328.068 Recovery = 102.97%								
Al 396.153Radial†	6507.6	5337.1	ug/L	41.89	5337.1	ppb	41.89	0.78%
QC value within limits for Al 396.153Radial Recovery = 106.74%								
As 188.979†	1432.2	519.68	ug/L	3.887	519.68	ppb	3.887	0.75%
QC value within limits for As 188.979 Recovery = 103.94%								
B 249.677†	20281.4	508.13	ug/L	3.820	508.13	ppb	3.820	0.75%
QC value within limits for B 249.677 Recovery = 101.63%								
Ba 233.527†	72836.9	515.05	ug/L	3.605	515.05	ppb	3.605	0.70%
QC value within limits for Ba 233.527 Recovery = 103.01%								
Be 313.107†	1125812.4	516.44	ug/L	1.818	516.44	ppb	1.818	0.35%
QC value within limits for Be 313.107 Recovery = 103.29%								
Ca 317.933Radial†	3752.4	5315.7	ug/L	30.06	5315.7	ppb	30.06	0.57%

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   QC value within limits for Ca 317.933Radial  Recovery = 106.31%
Cd 226.502†            40587.8      517.43 ug/L         4.504      517.43 ppb          4.504   0.87%
   QC value within limits for Cd 226.502  Recovery = 103.49%
Co 228.616†            29883.6      518.48 ug/L         4.472      518.48 ppb          4.472   0.86%
   QC value within limits for Co 228.616  Recovery = 103.70%
Cr 267.716†            36665.8      514.50 ug/L         3.576      514.50 ppb          3.576   0.70%
   QC value within limits for Cr 267.716  Recovery = 102.90%
Cu 324.752†           140022.8      507.70 ug/L         4.365      507.70 ppb          4.365   0.86%
   QC value within limits for Cu 324.752  Recovery = 101.54%
Fe 238.204 Radial†      1220.2      5102.8 ug/L         34.97      5102.8 ppb          34.97   0.69%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.06%
K 766.490 Radial†      23168.9      4985.3 ug/L         53.03      4985.3 ppb          53.03   1.06%
   QC value within limits for K 766.490 Radial  Recovery = 99.71%
Mg 279.077 IEC†          215.2      5370.1 ug/L         30.07      5370.1 ppb          30.07   0.56%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.40%
Mn 257.610†           466569.0      515.05 ug/L         1.371      515.05 ppb          1.371   0.27%
   QC value within limits for Mn 257.610  Recovery = 103.01%
Mo 202.031†             7219.3      508.56 ug/L         3.523      508.56 ppb          3.523   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.71%
Na 589.592 Radial†    170728.7       10478 ug/L          96.6       10478 ppb           96.6   0.92%
   QC value within limits for Na 589.592 Radial  Recovery = 104.78%
Ni 231.604†            19308.6      515.78 ug/L         3.690      515.78 ppb          3.690   0.72%
   QC value within limits for Ni 231.604  Recovery = 103.16%
P 214.914†              4998.7      2455.8 ug/L         21.82      2455.8 ppb          21.82   0.89%
   QC value within limits for P 214.914  Recovery = 98.23%
Pb 220.353†             4252.8      507.92 ug/L         5.056      507.92 ppb          5.056   1.00%
   QC value within limits for Pb 220.353  Recovery = 101.58%
S 181.975 Axial†         751.5      1028.5 ug/L          9.59      1028.5 ppb           9.59   0.93%
   QC value within limits for S 181.975 Axial  Recovery = 102.85%
Sb 206.836†             1719.3      517.02 ug/L         4.533      517.02 ppb          4.533   0.88%
   QC value within limits for Sb 206.836  Recovery = 103.40%
Se 196.026†             1008.9      532.91 ug/L         9.172      532.91 ppb          9.172   1.72%
   QC value within limits for Se 196.026  Recovery = 106.58%
Si 251.611†            84084.2      2579.5 ug/L         19.73      2579.5 ppb          19.73   0.76%
   QC value within limits for Si 251.611  Recovery = 103.18%
Sn 189.927†             2889.0      512.26 ug/L         4.062      512.26 ppb          4.062   0.79%
   QC value within limits for Sn 189.927  Recovery = 102.45%
Sr 421.552†           177187.1      494.84 ug/L         4.060      494.84 ppb          4.060   0.82%
   QC value within limits for Sr 421.552  Recovery = 98.97%
Ti 334.940†           272727.9      499.22 ug/L         4.011      499.22 ppb          4.011   0.80%
   QC value within limits for Ti 334.940  Recovery = 99.84%
Tl 190.801†             1969.2      518.46 ug/L         4.648      518.46 ppb          4.648   0.90%
   QC value within limits for Tl 190.801  Recovery = 103.69%
U 409.014†             15433.3      520.97 ug/L         6.249      520.97 ppb          6.249   1.20%
   QC value within limits for U 409.014  Recovery = 104.19%
V 292.402†             56381.5      518.15 ug/L         3.994      518.15 ppb          3.994   0.77%
   QC value within limits for V 292.402  Recovery = 103.63%
Zn 213.857†            55795.5      510.18 ug/L         3.829      510.18 ppb          3.829   0.75%
   QC value within limits for Zn 213.857  Recovery = 102.04%
SiO2†                  83360.9      5443.5 ug/L         58.29      5443.5 ppb          58.29   1.07%
   QC value within limits for SiO2  Recovery = 101.79%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 13:09:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7339.6	7339.6	98.2	%			13:11:49
1	Y RADIAL	6824.4	6824.4	98.56	%			13:11:49
1	Al 396.153Radial†	-77.7	-6.5	-5.3397	ug/L	-5.3397	ppb	13:11:49
1	Ca 317.933Radial†	31.1	2.6	3.6605	ug/L	3.6605	ppb	13:12:09
1	Fe 238.204 Radial†	35.4	1.3	5.4250	ug/L	5.4250	ppb	13:12:09
1	K 766.490 Radial†	2410.9	48.1	10.371	ug/L	10.371	ppb	13:11:49
1	Mg 279.077 IEC†	2.6	-0.4	-9.7786	ug/L	-9.7786	ppb	13:12:09
1	Na 589.592 Radial†	-194.8	-62.8	-3.8556	ug/L	-3.8556	ppb	13:11:49
1	Sr 421.552†	-28.9	26.4	0.0738	ug/L	0.0738	ppb	13:11:49
1	Sc 361.383	735705.4	735705.4	102.37	%			13:13:06
1	Y 371.029	575918.7	575918.7	102.48	%			13:13:06
1	Ag 328.068†	609.8	-36.9	-0.2214	ug/L	-0.2214	ppb	13:13:06
1	As 188.979†	-29.2	6.9	2.4993	ug/L	2.4993	ppb	13:13:26
1	B 249.677†	-756.7	200.7	5.0583	ug/L	5.0583	ppb	13:13:06
1	Ba 233.527†	3.1	2.6	0.0191	ug/L	0.0191	ppb	13:13:26
1	Be 313.107†	-4761.6	230.3	0.1056	ug/L	0.1056	ppb	13:13:06
1	Cd 226.502†	-263.7	23.5	0.2992	ug/L	0.2992	ppb	13:13:26
1	Co 228.616†	-97.4	4.3	0.0754	ug/L	0.0754	ppb	13:13:26
1	Cr 267.716†	-49.2	29.3	0.4105	ug/L	0.4105	ppb	13:13:06
1	Cu 324.752†	5670.5	-99.0	-0.3586	ug/L	-0.3586	ppb	13:13:06
1	Mn 257.610†	756.0	58.9	0.0658	ug/L	0.0658	ppb	13:13:06
1	Mo 202.031†	20.7	3.1	0.2182	ug/L	0.2182	ppb	13:13:26
1	Ni 231.604†	145.5	22.3	0.5970	ug/L	0.5970	ppb	13:13:26
1	P 214.914†	298.1	-23.6	-11.955	ug/L	-11.955	ppb	13:13:26
1	Pb 220.353†	-12.3	1.3	0.1482	ug/L	0.1482	ppb	13:13:26
1	S 181.975 Axial†	87.8	10.4	14.208	ug/L	14.208	ppb	13:13:26
1	Sb 206.836†	53.6	-4.9	-1.4416	ug/L	-1.4416	ppb	13:13:26
1	Se 196.026†	-20.9	8.4	4.2944	ug/L	4.2944	ppb	13:13:26
1	Si 251.611†	501.3	77.9	2.3948	ug/L	2.3948	ppb	13:13:26
1	Sn 189.927†	14.5	1.7	0.2979	ug/L	0.2979	ppb	13:13:26
1	Ti 334.940†	-1320.2	58.6	0.1051	ug/L	0.1051	ppb	13:13:06
1	Tl 190.801†	-63.1	-0.9	-0.2409	ug/L	-0.2409	ppb	13:13:26
1	U 409.014†	-4805.0	154.9	5.2424	ug/L	5.2424	ppb	13:13:06
1	V 292.402†	-1545.0	56.0	0.5201	ug/L	0.5201	ppb	13:13:06
1	Zn 213.857†	1008.0	59.6	0.5466	ug/L	0.5466	ppb	13:13:26
1	SiO2†	537.4	88.1	5.7670	ug/L	5.7670	ppb	13:14:22
2	Sc Radial	7299.4	7299.4	97.7	%			13:12:14
2	Y RADIAL	6806.6	6806.6	98.30	%			13:12:14
2	Al 396.153Radial†	-64.9	6.2	5.1385	ug/L	5.1385	ppb	13:12:14
2	Ca 317.933Radial†	31.8	3.5	4.9128	ug/L	4.9128	ppb	13:12:34
2	Fe 238.204 Radial†	39.9	6.1	25.460	ug/L	25.460	ppb	13:12:34
2	K 766.490 Radial†	2496.6	149.3	32.227	ug/L	32.227	ppb	13:12:14
2	Mg 279.077 IEC†	1.3	-1.7	-42.568	ug/L	-42.568	ppb	13:12:34
2	Na 589.592 Radial†	-273.7	-144.7	-8.8794	ug/L	-8.8794	ppb	13:12:14
2	Sr 421.552†	4.5	60.4	0.1688	ug/L	0.1688	ppb	13:12:14
2	Sc 361.383	768724.4	768724.4	106.96	%			13:13:31
2	Y 371.029	602364.5	602364.5	107.18	%			13:13:31
2	Ag 328.068†	798.0	113.4	0.6792	ug/L	0.6792	ppb	13:13:31
2	As 188.979†	-36.8	1.1	0.3905	ug/L	0.3905	ppb	13:13:51
2	B 249.677†	-757.7	231.5	5.8327	ug/L	5.8327	ppb	13:13:31
2	Ba 233.527†	24.3	22.2	0.1574	ug/L	0.1574	ppb	13:13:51
2	Be 313.107†	-4731.8	458.0	0.2099	ug/L	0.2099	ppb	13:13:31
2	Cd 226.502†	-281.1	18.3	0.2310	ug/L	0.2310	ppb	13:13:51
2	Co 228.616†	-98.3	7.6	0.1297	ug/L	0.1297	ppb	13:13:51
2	Cr 267.716†	-37.2	42.6	0.5951	ug/L	0.5951	ppb	13:13:31
2	Cu 324.752†	5667.3	-340.0	-1.2308	ug/L	-1.2308	ppb	13:13:31
2	Mn 257.610†	765.8	36.3	0.0441	ug/L	0.0441	ppb	13:13:31
2	Mo 202.031†	12.7	-5.3	-0.3691	ug/L	-0.3691	ppb	13:13:51
2	Ni 231.604†	129.7	1.5	0.0392	ug/L	0.0392	ppb	13:13:51

2	P 214.914†	307.7	-27.1	-13.596	ug/L	-13.596	ppb	13:13:51
2	Pb 220.353†	-14.8	-0.6	-0.0732	ug/L	-0.0732	ppb	13:13:51
2	S 181.975 Axial†	78.9	-1.7	-2.3105	ug/L	-2.3105	ppb	13:13:51
2	Sb 206.836†	59.0	-2.1	-0.6442	ug/L	-0.6442	ppb	13:13:51
2	Se 196.026†	-24.1	6.3	3.2860	ug/L	3.2860	ppb	13:13:51
2	Si 251.611†	664.4	209.4	6.4638	ug/L	6.4638	ppb	13:13:51
2	Sn 189.927†	12.6	-0.7	-0.1213	ug/L	-0.1213	ppb	13:13:51
2	Ti 334.940†	-1365.3	71.8	0.1274	ug/L	0.1274	ppb	13:13:31
2	Tl 190.801†	-46.9	16.9	4.4161	ug/L	4.4161	ppb	13:13:51
2	U 409.014†	-4885.6	281.1	9.5138	ug/L	9.5138	ppb	13:13:31
2	V 292.402†	-1624.1	46.8	0.4340	ug/L	0.4340	ppb	13:13:31
2	Zn 213.857†	994.2	4.4	0.0406	ug/L	0.0406	ppb	13:13:51
2	SiO2†	527.4	56.1	3.6863	ug/L	3.6863	ppb	13:14:27
3	Sc Radial	7409.2	7409.2	99.1	%			13:12:39
3	Y RADIAL	6911.5	6911.5	99.82	%			13:12:39
3	Al 396.153Radial†	-54.6	17.5	14.385	ug/L	14.385	ppb	13:12:39
3	Ca 317.933Radial†	32.6	3.8	5.3612	ug/L	5.3612	ppb	13:12:59
3	Fe 238.204 Radial†	32.0	-2.5	-10.621	ug/L	-10.621	ppb	13:12:59
3	K 766.490 Radial†	2415.8	29.9	6.4454	ug/L	6.4454	ppb	13:12:39
3	Mg 279.077 IEC†	4.7	1.7	43.296	ug/L	43.296	ppb	13:12:59
3	Na 589.592 Radial†	-201.9	-68.2	-4.1837	ug/L	-4.1837	ppb	13:12:39
3	Sr 421.552†	-23.6	32.1	0.0896	ug/L	0.0896	ppb	13:12:39
3	Sc 361.383	732304.3	732304.3	101.89	%			13:13:57
3	Y 371.029	573568.0	573568.0	102.06	%			13:13:57
3	Ag 328.068†	701.6	55.9	0.3317	ug/L	0.3317	ppb	13:13:57
3	As 188.979†	-28.6	7.3	2.6374	ug/L	2.6374	ppb	13:14:17
3	B 249.677†	-724.4	229.0	5.7731	ug/L	5.7731	ppb	13:13:57
3	Ba 233.527†	26.2	25.3	0.1787	ug/L	0.1787	ppb	13:14:17
3	Be 313.107†	-4592.5	374.6	0.1718	ug/L	0.1718	ppb	13:13:57
3	Cd 226.502†	-278.3	8.0	0.1038	ug/L	0.1038	ppb	13:14:17
3	Co 228.616†	-103.0	-1.7	-0.0274	ug/L	-0.0274	ppb	13:14:17
3	Cr 267.716†	-65.7	12.9	0.1810	ug/L	0.1810	ppb	13:13:57
3	Cu 324.752†	5614.1	-128.7	-0.4670	ug/L	-0.4670	ppb	13:13:57
3	Mn 257.610†	731.2	38.0	0.0397	ug/L	0.0397	ppb	13:13:57
3	Mo 202.031†	27.9	10.2	0.7177	ug/L	0.7177	ppb	13:14:17
3	Ni 231.604†	139.4	17.0	0.4539	ug/L	0.4539	ppb	13:14:17
3	P 214.914†	328.4	7.5	3.9420	ug/L	3.9420	ppb	13:14:17
3	Pb 220.353†	0.7	14.0	1.6695	ug/L	1.6695	ppb	13:14:17
3	S 181.975 Axial†	89.7	12.7	17.328	ug/L	17.328	ppb	13:14:17
3	Sb 206.836†	58.2	-0.1	-0.0504	ug/L	-0.0504	ppb	13:14:17
3	Se 196.026†	-29.1	0.2	0.0784	ug/L	0.0784	ppb	13:14:17
3	Si 251.611†	486.7	65.9	2.0347	ug/L	2.0347	ppb	13:14:17
3	Sn 189.927†	6.7	-5.9	-1.0522	ug/L	-1.0522	ppb	13:14:17
3	Ti 334.940†	-1290.1	82.2	0.1510	ug/L	0.1510	ppb	13:13:57
3	Tl 190.801†	-68.9	-6.9	-1.7955	ug/L	-1.7955	ppb	13:14:17
3	U 409.014†	-4958.8	-17.9	-0.6055	ug/L	-0.6055	ppb	13:13:57
3	V 292.402†	-1571.6	22.8	0.2167	ug/L	0.2167	ppb	13:13:57
3	Zn 213.857†	1009.2	65.4	0.6006	ug/L	0.6006	ppb	13:14:17
3	SiO2†	470.1	24.5	1.6090	ug/L	1.6090	ppb	13:14:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	745578.0	103.74	%	2.799				2.70%
Sc Radial	7349.4	98.3	%	0.74				0.76%
Y 371.029	583950.4	103.91	%	2.845				2.74%
Y RADIAL	6847.5	98.89	%	0.811				0.82%
Ag 328.068†	44.1	0.2631	ug/L	0.45419	0.2631	ppb	0.45419	172.60%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.8	4.7278	ug/L	9.86858	4.7278	ppb	9.86858	208.74%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.1	1.8424	ug/L	1.25927	1.8424	ppb	1.25927	68.35%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	220.4	5.5547	ug/L	0.43092	5.5547	ppb	0.43092	7.76%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	16.7	0.1184	ug/L	0.08664	0.1184	ppb	0.08664	73.15%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	354.3	0.1625	ug/L	0.05276	0.1625	ppb	0.05276	32.47%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	3.3	4.6449	ug/L	0.88144	4.6449	ppb	0.88144	18.98%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                16.6      0.2113 ug/L       0.09916      0.2113 ppb        0.09916  46.92%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 3.4      0.0592 ug/L       0.07982      0.0592 ppb        0.07982 134.79%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                28.3      0.3955 ug/L       0.20743      0.3955 ppb        0.20743  52.45%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -189.3     -0.6855 ug/L       0.47536     -0.6855 ppb        0.47536  69.35%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.6      6.7546 ug/L      18.07716      6.7546 ppb       18.07716 267.63%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          75.8     16.348 ug/L       13.8911      16.348 ppb        13.8911  84.97%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.1     -3.0170 ug/L      43.32954     -3.0170 ppb       43.32954 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                44.4      0.0499 ug/L       0.01397      0.0499 ppb        0.01397  28.02%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.7      0.1889 ug/L       0.54399      0.1889 ppb        0.54399 287.92%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -91.9     -5.6396 ug/L       2.81058     -5.6396 ppb        2.81058  49.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                13.6      0.3634 ug/L       0.28971      0.3634 ppb        0.28971  79.73%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -14.4     -7.2029 ug/L       9.68661     -7.2029 ppb        9.68661 134.48%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 4.9      0.5815 ug/L       0.94872      0.5815 ppb        0.94872 163.15%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.1      9.7418 ug/L      10.55350      9.7418 ppb       10.55350 108.33%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.4     -0.7121 ug/L       0.69810     -0.7121 ppb        0.69810  98.04%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      2.5530 ug/L       2.20151      2.5530 ppb        2.20151  86.23%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               117.7      3.6311 ug/L       2.45976      3.6311 ppb        2.45976  67.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.7     -0.2919 ug/L       0.69099     -0.2919 ppb        0.69099 236.73%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                39.7      0.1107 ug/L       0.05087      0.1107 ppb        0.05087  45.94%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                70.9      0.1278 ug/L       0.02295      0.1278 ppb        0.02295  17.96%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.0      0.7933 ug/L       3.23236      0.7933 ppb        3.23236 407.48%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                139.3      4.7169 ug/L       5.08007      4.7169 ppb        5.08007 107.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 41.8      0.3903 ug/L       0.15636      0.3903 ppb        0.15636  40.06%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                43.1      0.3959 ug/L       0.30892      0.3959 ppb        0.30892  78.02%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      56.2      3.6874 ug/L       2.07903      3.6874 ppb        2.07903  56.38%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 20
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 14:20:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7268.9	7268.9	97.2	%			14:22:17
1	Y RADIAL	6682.9	6682.9	96.51	%			14:22:17
1	Al 396.153Radial†	6364.0	6616.7	5426.5	ug/L	5426.5	ppb	14:21:57
1	Ca 317.933Radial†	3675.0	3749.9	5312.2	ug/L	5312.2	ppb	14:22:17
1	Fe 238.204 Radial†	1220.9	1220.6	5104.3	ug/L	5104.3	ppb	14:22:17
1	K 766.490 Radial†	25405.0	23716.6	5103.4	ug/L	5103.4	ppb	14:21:57
1	Mg 279.077 IEC†	209.6	212.5	5304.3	ug/L	5304.3	ppb	14:22:17
1	Na 589.592 Radial†	169392.5	174320.7	10699	ug/L	10699	ppb	14:21:57
1	Sr 421.552†	175803.8	180833.6	505.02	ug/L	505.02	ppb	14:21:57
1	Sc 361.383	736145.7	736145.7	102.43	%			14:23:16
1	Y 371.029	568107.5	568107.5	101.09	%			14:23:16
1	Ag 328.068†	88288.3	85562.1	514.28	ug/L	514.28	ppb	14:23:16
1	As 188.979†	1443.8	1445.0	524.36	ug/L	524.36	ppb	14:23:36
1	B 249.677†	19754.4	20225.9	506.76	ug/L	506.76	ppb	14:23:16
1	Ba 233.527†	74705.4	72933.4	515.73	ug/L	515.73	ppb	14:23:16
1	Be 313.107†	1147152.8	1124832.0	516.02	ug/L	516.02	ppb	14:23:16
1	Cd 226.502†	40642.0	39959.4	509.41	ug/L	509.41	ppb	14:23:36
1	Co 228.616†	30160.4	29544.7	512.60	ug/L	512.60	ppb	14:23:36
1	Cr 267.716†	37385.8	36576.7	513.26	ug/L	513.26	ppb	14:23:16
1	Cu 324.752†	149905.1	140712.0	510.20	ug/L	510.20	ppb	14:23:16
1	Mn 257.610†	478523.4	466496.5	514.98	ug/L	514.98	ppb	14:23:16
1	Mo 202.031†	7561.8	7365.3	518.84	ug/L	518.84	ppb	14:23:36
1	Ni 231.604†	19787.9	19198.8	512.86	ug/L	512.86	ppb	14:23:36
1	P 214.914†	5569.3	5122.4	2518.5	ug/L	2518.5	ppb	14:23:36
1	Pb 220.353†	4461.9	4369.3	521.84	ug/L	521.84	ppb	14:23:36
1	S 181.975 Axial†	857.2	761.5	1042.1	ug/L	1042.1	ppb	14:23:36
1	Sb 206.836†	1836.0	1735.3	522.07	ug/L	522.07	ppb	14:23:36
1	Se 196.026†	1023.6	1028.1	542.76	ug/L	542.76	ppb	14:23:36
1	Si 251.611†	86539.5	84075.6	2578.9	ug/L	2578.9	ppb	14:23:16
1	Sn 189.927†	3007.9	2924.1	518.45	ug/L	518.45	ppb	14:23:36
1	Ti 334.940†	284645.0	279243.5	511.15	ug/L	511.15	ppb	14:23:16
1	Tl 190.801†	1978.3	1992.2	524.59	ug/L	524.59	ppb	14:23:36
1	U 409.014†	10517.9	15117.2	510.27	ug/L	510.27	ppb	14:23:16
1	V 292.402†	56077.6	56313.0	517.63	ug/L	517.63	ppb	14:23:16
1	Zn 213.857†	58084.8	55782.3	510.08	ug/L	510.08	ppb	14:23:16
1	SiO2†	87073.4	84571.7	5522.4	ug/L	5522.4	ppb	14:24:36
2	Sc Radial	7373.5	7373.5	98.6	%			14:22:42
2	Y RADIAL	6779.1	6779.1	97.90	%			14:22:42
2	Al 396.153Radial†	6208.6	6366.3	5220.5	ug/L	5220.5	ppb	14:22:22
2	Ca 317.933Radial†	3650.1	3671.1	5200.5	ug/L	5200.5	ppb	14:22:42
2	Fe 238.204 Radial†	1214.0	1195.9	5000.9	ug/L	5000.9	ppb	14:22:42
2	K 766.490 Radial†	24977.7	22912.9	4930.1	ug/L	4930.1	ppb	14:22:22
2	Mg 279.077 IEC†	212.9	212.8	5310.5	ug/L	5310.5	ppb	14:22:42
2	Na 589.592 Radial†	165853.5	168262.0	10327	ug/L	10327	ppb	14:22:22
2	Sr 421.552†	171817.1	174227.6	486.57	ug/L	486.57	ppb	14:22:22
2	Sc 361.383	745644.9	745644.9	103.75	%			14:23:43
2	Y 371.029	574518.9	574518.9	102.23	%			14:23:43
2	Ag 328.068†	88786.8	84944.5	510.56	ug/L	510.56	ppb	14:23:43
2	As 188.979†	1459.8	1442.5	523.43	ug/L	523.43	ppb	14:24:04
2	B 249.677†	19865.1	20086.9	503.28	ug/L	503.28	ppb	14:23:43
2	Ba 233.527†	75307.6	72584.7	513.26	ug/L	513.26	ppb	14:23:43
2	Be 313.107†	1157447.5	1120486.7	514.03	ug/L	514.03	ppb	14:23:43
2	Cd 226.502†	40807.8	39613.7	505.01	ug/L	505.01	ppb	14:24:04
2	Co 228.616†	30335.0	29337.9	509.01	ug/L	509.01	ppb	14:24:04
2	Cr 267.716†	37765.4	36477.5	511.86	ug/L	511.86	ppb	14:23:43
2	Cu 324.752†	151498.8	140383.5	509.00	ug/L	509.00	ppb	14:23:43
2	Mn 257.610†	483051.4	464909.1	513.21	ug/L	513.21	ppb	14:23:43
2	Mo 202.031†	7588.0	7296.6	513.99	ug/L	513.99	ppb	14:24:04
2	Ni 231.604†	19856.2	19018.6	508.04	ug/L	508.04	ppb	14:24:04

2	P 214.914†	5598.5	5081.3	2497.7 ug/L	2497.7 ppb	14:24:04
2	Pb 220.353†	4505.8	4356.1	520.22 ug/L	520.22 ppb	14:24:04
2	S 181.975 Axial†	872.9	765.9	1048.3 ug/L	1048.3 ppb	14:24:04
2	Sb 206.836†	1849.5	1725.4	518.94 ug/L	518.94 ppb	14:24:04
2	Se 196.026†	1016.7	1008.7	532.50 ug/L	532.50 ppb	14:24:04
2	Si 251.611†	87327.2	83758.4	2569.4 ug/L	2569.4 ppb	14:23:43
2	Sn 189.927†	2997.1	2876.2	509.97 ug/L	509.97 ppb	14:24:04
2	Ti 334.940†	287277.4	278240.4	509.31 ug/L	509.31 ppb	14:23:43
2	Tl 190.801†	1977.4	1966.6	517.91 ug/L	517.91 ppb	14:24:04
2	U 409.014†	10533.6	15001.5	506.37 ug/L	506.37 ppb	14:23:43
2	V 292.402†	56503.2	56025.7	514.97 ug/L	514.97 ppb	14:23:43
2	Zn 213.857†	58507.6	55467.4	507.22 ug/L	507.22 ppb	14:23:43
2	SiO2†	87741.9	84133.1	5494.2 ug/L	5494.2 ppb	14:24:41
3	Sc Radial	7240.3	7240.3	96.9 %		14:23:08
3	Y RADIAL	6661.5	6661.5	96.20 %		14:23:08
3	Al 396.153Radial†	6383.5	6662.7	5464.4 ug/L	5464.4 ppb	14:22:48
3	Ca 317.933Radial†	3673.9	3763.7	5331.7 ug/L	5331.7 ppb	14:23:08
3	Fe 238.204 Radial†	1226.4	1231.3	5148.8 ug/L	5148.8 ppb	14:23:08
3	K 766.490 Radial†	25214.2	23623.1	5083.2 ug/L	5083.2 ppb	14:22:48
3	Mg 279.077 IEC†	207.9	211.6	5281.7 ug/L	5281.7 ppb	14:23:08
3	Na 589.592 Radial†	169684.7	175312.2	10759 ug/L	10759 ppb	14:22:48
3	Sr 421.552†	175629.8	181370.1	506.52 ug/L	506.52 ppb	14:22:48
3	Sc 361.383	740782.9	740782.9	103.07 %		14:24:11
3	Y 371.029	571291.1	571291.1	101.65 %		14:24:11
3	Ag 328.068†	88278.7	85013.2	511.01 ug/L	511.01 ppb	14:24:11
3	As 188.979†	1458.3	1450.2	526.22 ug/L	526.22 ppb	14:24:31
3	B 249.677†	19775.7	20125.9	504.23 ug/L	504.23 ppb	14:24:11
3	Ba 233.527†	75004.4	72766.9	514.55 ug/L	514.55 ppb	14:24:11
3	Be 313.107†	1148487.1	1119115.7	513.40 ug/L	513.40 ppb	14:24:11
3	Cd 226.502†	40987.9	40046.6	510.52 ug/L	510.52 ppb	14:24:31
3	Co 228.616†	30462.5	29653.4	514.50 ug/L	514.50 ppb	14:24:31
3	Cr 267.716†	37490.7	36449.9	511.48 ug/L	511.48 ppb	14:24:11
3	Cu 324.752†	150206.8	140088.5	507.94 ug/L	507.94 ppb	14:24:11
3	Mn 257.610†	480485.2	465475.3	513.86 ug/L	513.86 ppb	14:24:11
3	Mo 202.031†	7621.7	7377.2	519.68 ug/L	519.68 ppb	14:24:31
3	Ni 231.604†	19909.6	19196.0	512.78 ug/L	512.78 ppb	14:24:31
3	P 214.914†	5597.5	5115.8	2515.6 ug/L	2515.6 ppb	14:24:31
3	Pb 220.353†	4520.4	4398.8	525.36 ug/L	525.36 ppb	14:24:31
3	S 181.975 Axial†	866.8	765.5	1047.6 ug/L	1047.6 ppb	14:24:31
3	Sb 206.836†	1868.9	1755.9	528.27 ug/L	528.27 ppb	14:24:31
3	Se 196.026†	1025.7	1023.9	540.74 ug/L	540.74 ppb	14:24:31
3	Si 251.611†	86940.6	83935.9	2574.6 ug/L	2574.6 ppb	14:24:11
3	Sn 189.927†	3032.5	2929.6	519.44 ug/L	519.44 ppb	14:24:31
3	Ti 334.940†	284896.7	277748.0	508.42 ug/L	508.42 ppb	14:24:11
3	Tl 190.801†	1987.7	1989.2	523.79 ug/L	523.79 ppb	14:24:31
3	U 409.014†	10425.0	14962.8	505.04 ug/L	505.04 ppb	14:24:11
3	V 292.402†	56204.3	56093.2	515.63 ug/L	515.63 ppb	14:24:11
3	Zn 213.857†	58249.3	55586.9	508.28 ug/L	508.28 ppb	14:24:11
3	SiO2†	87617.3	84567.3	5522.1 ug/L	5522.1 ppb	14:24:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	740857.8	103.08	%	0.661				0.64%
Sc Radial	7294.2	97.6	%	0.94				0.96%
Y 371.029	571305.8	101.66	%	0.570				0.56%
Y RADIAL	6707.8	96.87	%	0.904				0.93%
Ag 328.068†	85173.3	511.95	ug/L	2.033	511.95	ppb	2.033	0.40%
QC value within limits for Ag 328.068 Recovery = 102.39%								
Al 396.153Radial†	6548.6	5370.4	ug/L	131.23	5370.4	ppb	131.23	2.44%
QC value within limits for Al 396.153Radial Recovery = 107.41%								
As 188.979†	1445.9	524.67	ug/L	1.421	524.67	ppb	1.421	0.27%
QC value within limits for As 188.979 Recovery = 104.93%								
B 249.677†	20146.2	504.76	ug/L	1.799	504.76	ppb	1.799	0.36%
QC value within limits for B 249.677 Recovery = 100.95%								
Ba 233.527†	72761.7	514.51	ug/L	1.233	514.51	ppb	1.233	0.24%
QC value within limits for Ba 233.527 Recovery = 102.90%								
Be 313.107†	1121478.1	514.48	ug/L	1.369	514.48	ppb	1.369	0.27%
QC value within limits for Be 313.107 Recovery = 102.90%								
Ca 317.933Radial†	3728.2	5281.5	ug/L	70.82	5281.5	ppb	70.82	1.34%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.63%
Cd 226.502†            39873.2      508.32 ug/L         2.913      508.32 ppb          2.913   0.57%
   QC value within limits for Cd 226.502  Recovery = 101.66%
Co 228.616†            29512.0      512.04 ug/L         2.788      512.04 ppb          2.788   0.54%
   QC value within limits for Co 228.616  Recovery = 102.41%
Cr 267.716†            36501.4      512.20 ug/L         0.935      512.20 ppb          0.935   0.18%
   QC value within limits for Cr 267.716  Recovery = 102.44%
Cu 324.752†           140394.7      509.05 ug/L         1.129      509.05 ppb          1.129   0.22%
   QC value within limits for Cu 324.752  Recovery = 101.81%
Fe 238.204 Radial†      1215.9      5084.7 ug/L        75.87      5084.7 ppb         75.87   1.49%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.69%
K 766.490 Radial†      23417.5      5038.9 ug/L        94.75      5038.9 ppb         94.75   1.88%
   QC value within limits for K 766.490 Radial  Recovery = 100.78%
Mg 279.077 IEC†          212.3      5298.8 ug/L        15.20      5298.8 ppb         15.20   0.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.98%
Mn 257.610†           465627.0      514.01 ug/L         0.892      514.01 ppb          0.892   0.17%
   QC value within limits for Mn 257.610  Recovery = 102.80%
Mo 202.031†             7346.4      517.51 ug/L         3.070      517.51 ppb          3.070   0.59%
   QC value within limits for Mo 202.031  Recovery = 103.50%
Na 589.592 Radial†    172631.6       10595 ug/L       234.2        10595 ppb        234.2   2.21%
   QC value within limits for Na 589.592 Radial  Recovery = 105.95%
Ni 231.604†            19137.8      511.23 ug/L         2.759      511.23 ppb          2.759   0.54%
   QC value within limits for Ni 231.604  Recovery = 102.25%
P 214.914†              5106.5      2510.6 ug/L        11.29      2510.6 ppb         11.29   0.45%
   QC value within limits for P 214.914  Recovery = 100.42%
Pb 220.353†             4374.8      522.47 ug/L         2.623      522.47 ppb          2.623   0.50%
   QC value within limits for Pb 220.353  Recovery = 104.49%
S 181.975 Axial†         764.3      1046.0 ug/L         3.36      1046.0 ppb          3.36   0.32%
   QC value within limits for S 181.975 Axial  Recovery = 104.60%
Sb 206.836†             1738.8      523.09 ug/L         4.752      523.09 ppb          4.752   0.91%
   QC value within limits for Sb 206.836  Recovery = 104.62%
Se 196.026†             1020.3      538.67 ug/L         5.438      538.67 ppb          5.438   1.01%
   QC value within limits for Se 196.026  Recovery = 107.73%
Si 251.611†            83923.3      2574.3 ug/L         4.78      2574.3 ppb          4.78   0.19%
   QC value within limits for Si 251.611  Recovery = 102.97%
Sn 189.927†             2910.0      515.95 ug/L         5.205      515.95 ppb          5.205   1.01%
   QC value within limits for Sn 189.927  Recovery = 103.19%
Sr 421.552†           178810.5      499.37 ug/L        11.110      499.37 ppb         11.110   2.22%
   QC value within limits for Sr 421.552  Recovery = 99.87%
Ti 334.940†           278410.6      509.63 ug/L         1.394      509.63 ppb          1.394   0.27%
   QC value within limits for Ti 334.940  Recovery = 101.93%
Tl 190.801†             1982.7      522.10 ug/L         3.647      522.10 ppb          3.647   0.70%
   QC value within limits for Tl 190.801  Recovery = 104.42%
U 409.014†             15027.2      507.23 ug/L         2.718      507.23 ppb          2.718   0.54%
   QC value within limits for U 409.014  Recovery = 101.45%
V 292.402†             56144.0      516.07 ug/L         1.385      516.07 ppb          1.385   0.27%
   QC value within limits for V 292.402  Recovery = 103.21%
Zn 213.857†            55612.2      508.52 ug/L         1.448      508.52 ppb          1.448   0.28%
   QC value within limits for Zn 213.857  Recovery = 101.70%
SiO2†                  84424.0      5512.9 ug/L        16.23      5512.9 ppb         16.23   0.29%
   QC value within limits for SiO2  Recovery = 103.09%
All analyte(s) passed QC.
```

Sequence No.: 21
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 14:26:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7357.7	7357.7	98.4	%			14:28:49
1	Y RADIAL	6806.0	6806.0	98.29	%			14:28:49
1	Al 396.153Radial†	-57.0	14.7	12.054	ug/L	12.054	ppb	14:28:49
1	Ca 317.933Radial†	30.0	1.3	1.8928	ug/L	1.8928	ppb	14:29:09
1	Fe 238.204 Radial†	35.7	1.5	6.3098	ug/L	6.3098	ppb	14:29:09
1	K 766.490 Radial†	2420.4	51.7	11.141	ug/L	11.141	ppb	14:28:49
1	Mg 279.077 IEC†	4.1	1.1	28.546	ug/L	28.546	ppb	14:29:09
1	Na 589.592 Radial†	-146.4	-13.1	-0.8054	ug/L	-0.8054	ppb	14:28:49
1	Sr 421.552†	-20.7	34.9	0.0973	ug/L	0.0973	ppb	14:28:49
1	Sc 361.383	720454.6	720454.6	100.25	%			14:30:06
1	Y 371.029	563412.7	563412.7	100.25	%			14:30:06
1	Ag 328.068†	662.0	27.8	0.1718	ug/L	0.1718	ppb	14:30:06
1	As 188.979†	-25.3	10.2	3.6748	ug/L	3.6748	ppb	14:30:26
1	B 249.677†	-672.7	268.9	6.7766	ug/L	6.7766	ppb	14:30:06
1	Ba 233.527†	42.7	42.1	0.2992	ug/L	0.2992	ppb	14:30:26
1	Be 313.107†	-4827.3	66.3	0.0302	ug/L	0.0302	ppb	14:30:06
1	Cd 226.502†	-275.4	6.3	0.0804	ug/L	0.0804	ppb	14:30:26
1	Co 228.616†	-102.0	-2.3	-0.0375	ug/L	-0.0375	ppb	14:30:26
1	Cr 267.716†	-61.4	16.2	0.2281	ug/L	0.2281	ppb	14:30:06
1	Cu 324.752†	5602.1	-50.0	-0.1809	ug/L	-0.1809	ppb	14:30:06
1	Mn 257.610†	762.0	80.5	0.0890	ug/L	0.0890	ppb	14:30:26
1	Mo 202.031†	29.0	11.8	0.8323	ug/L	0.8323	ppb	14:30:26
1	Ni 231.604†	149.4	29.2	0.7802	ug/L	0.7802	ppb	14:30:26
1	P 214.914†	320.3	4.7	2.4546	ug/L	2.4546	ppb	14:30:26
1	Pb 220.353†	-18.0	-4.7	-0.5563	ug/L	-0.5563	ppb	14:30:26
1	S 181.975 Axial†	71.6	-4.0	-5.4613	ug/L	-5.4613	ppb	14:30:26
1	Sb 206.836†	66.9	9.5	2.8349	ug/L	2.8349	ppb	14:30:26
1	Se 196.026†	-44.1	-15.2	-7.7493	ug/L	-7.7493	ppb	14:30:26
1	Si 251.611†	526.1	113.1	3.4662	ug/L	3.4662	ppb	14:30:26
1	Sn 189.927†	15.7	3.2	0.5611	ug/L	0.5611	ppb	14:30:26
1	Ti 334.940†	-1383.1	-31.5	-0.0578	ug/L	-0.0578	ppb	14:30:06
1	Tl 190.801†	-57.8	3.1	0.8061	ug/L	0.8061	ppb	14:30:26
1	U 409.014†	-4853.3	7.3	0.2454	ug/L	0.2454	ppb	14:30:06
1	V 292.402†	-1455.3	113.4	1.0408	ug/L	1.0408	ppb	14:30:06
1	Zn 213.857†	994.5	67.0	0.6118	ug/L	0.6118	ppb	14:30:26
1	SiO2†	566.6	128.3	8.3824	ug/L	8.3824	ppb	14:31:22
2	Sc Radial	7144.9	7144.9	95.6	%			14:29:14
2	Y RADIAL	6613.7	6613.7	95.51	%			14:29:14
2	Al 396.153Radial†	-62.5	7.2	5.9468	ug/L	5.9468	ppb	14:29:14
2	Ca 317.933Radial†	38.1	10.8	15.270	ug/L	15.270	ppb	14:29:34
2	Fe 238.204 Radial†	37.7	4.7	19.470	ug/L	19.470	ppb	14:29:34
2	K 766.490 Radial†	2432.2	137.3	29.614	ug/L	29.614	ppb	14:29:14
2	Mg 279.077 IEC†	2.0	-1.0	-24.813	ug/L	-24.813	ppb	14:29:34
2	Na 589.592 Radial†	-275.4	-152.5	-9.3607	ug/L	-9.3607	ppb	14:29:14
2	Sr 421.552†	-48.3	5.4	0.0148	ug/L	0.0148	ppb	14:29:14
2	Sc 361.383	710699.1	710699.1	98.888	%			14:30:31
2	Y 371.029	556084.3	556084.3	98.947	%			14:30:31
2	Ag 328.068†	587.2	-38.9	-0.2273	ug/L	-0.2273	ppb	14:30:31
2	As 188.979†	-30.4	4.7	1.6844	ug/L	1.6844	ppb	14:30:51
2	B 249.677†	-781.9	149.3	3.7592	ug/L	3.7592	ppb	14:30:31
2	Ba 233.527†	28.1	27.9	0.1965	ug/L	0.1965	ppb	14:30:51
2	Be 313.107†	-4635.1	194.5	0.0886	ug/L	0.0886	ppb	14:30:31
2	Cd 226.502†	-278.4	-0.5	-0.0082	ug/L	-0.0082	ppb	14:30:51
2	Co 228.616†	-86.4	12.1	0.2105	ug/L	0.2105	ppb	14:30:51
2	Cr 267.716†	-79.0	-2.5	-0.0353	ug/L	-0.0353	ppb	14:30:31
2	Cu 324.752†	5698.4	124.0	0.4504	ug/L	0.4504	ppb	14:30:31
2	Mn 257.610†	727.6	56.2	0.0649	ug/L	0.0649	ppb	14:30:51
2	Mo 202.031†	20.1	3.2	0.2260	ug/L	0.2260	ppb	14:30:51
2	Ni 231.604†	111.5	-7.0	-0.1876	ug/L	-0.1876	ppb	14:30:51

2	P 214.914†	312.0	0.7	0.2668	ug/L	0.2668 ppb	14:30:51
2	Pb 220.353†	1.4	14.6	1.7419	ug/L	1.7419 ppb	14:30:51
2	S 181.975 Axial†	89.1	14.7	20.125	ug/L	20.125 ppb	14:30:51
2	Sb 206.836†	61.8	5.2	1.5531	ug/L	1.5531 ppb	14:30:51
2	Se 196.026†	-34.4	-6.0	-2.9820	ug/L	-2.9820 ppb	14:30:51
2	Si 251.611†	523.9	118.1	3.6358	ug/L	3.6358 ppb	14:30:51
2	Sn 189.927†	11.0	-1.4	-0.2406	ug/L	-0.2406 ppb	14:30:51
2	Ti 334.940†	-1427.4	-95.1	-0.1739	ug/L	-0.1739 ppb	14:30:31
2	Tl 190.801†	-57.0	3.1	0.8020	ug/L	0.8020 ppb	14:30:51
2	U 409.014†	-4754.9	40.4	1.3643	ug/L	1.3643 ppb	14:30:31
2	V 292.402†	-1548.4	-0.6	-0.0029	ug/L	-0.0029 ppb	14:30:31
2	Zn 213.857†	1006.1	92.3	0.8516	ug/L	0.8516 ppb	14:30:51
2	SiO2†	567.5	137.0	8.9890	ug/L	8.9890 ppb	14:31:27
3	Sc Radial	7320.7	7320.7	97.9	%		14:29:39
3	Y RADIAL	6770.7	6770.7	97.78	%		14:29:39
3	Al 396.153Radial†	-80.2	-9.3	-7.6114	ug/L	-7.6114 ppb	14:29:39
3	Ca 317.933Radial†	32.7	4.3	6.0964	ug/L	6.0964 ppb	14:29:59
3	Fe 238.204 Radial†	38.0	4.0	16.490	ug/L	16.490 ppb	14:29:59
3	K 766.490 Radial†	2520.8	166.6	35.953	ug/L	35.953 ppb	14:29:39
3	Mg 279.077 IEC†	6.8	3.9	96.707	ug/L	96.707 ppb	14:29:59
3	Na 589.592 Radial†	-174.0	-42.1	-2.5864	ug/L	-2.5864 ppb	14:29:39
3	Sr 421.552†	-67.5	-13.0	-0.0364	ug/L	-0.0364 ppb	14:29:39
3	Sc 361.383	722799.3	722799.3	100.57	%		14:30:56
3	Y 371.029	564630.8	564630.8	100.47	%		14:30:56
3	Ag 328.068†	662.4	26.0	0.1590	ug/L	0.1590 ppb	14:30:56
3	As 188.979†	-38.2	-2.6	-0.9212	ug/L	-0.9212 ppb	14:31:16
3	B 249.677†	-733.3	210.8	5.3117	ug/L	5.3117 ppb	14:30:56
3	Ba 233.527†	34.8	34.1	0.2388	ug/L	0.2388 ppb	14:31:16
3	Be 313.107†	-4763.4	145.5	0.0666	ug/L	0.0666 ppb	14:30:56
3	Cd 226.502†	-294.8	-12.0	-0.1548	ug/L	-0.1548 ppb	14:31:16
3	Co 228.616†	-103.7	-3.7	-0.0657	ug/L	-0.0657 ppb	14:31:16
3	Cr 267.716†	-48.4	29.3	0.4098	ug/L	0.4098 ppb	14:30:56
3	Cu 324.752†	5673.0	2.3	0.0092	ug/L	0.0092 ppb	14:30:56
3	Mn 257.610†	724.2	40.5	0.0449	ug/L	0.0449 ppb	14:31:16
3	Mo 202.031†	10.6	-6.6	-0.4657	ug/L	-0.4657 ppb	14:31:16
3	Ni 231.604†	134.7	14.1	0.3771	ug/L	0.3771 ppb	14:31:16
3	P 214.914†	329.0	12.4	6.2915	ug/L	6.2915 ppb	14:31:16
3	Pb 220.353†	-18.4	-5.1	-0.6070	ug/L	-0.6070 ppb	14:31:16
3	S 181.975 Axial†	87.4	11.5	15.691	ug/L	15.691 ppb	14:31:16
3	Sb 206.836†	50.4	-7.1	-2.1543	ug/L	-2.1543 ppb	14:31:16
3	Se 196.026†	-42.4	-13.4	-6.7728	ug/L	-6.7728 ppb	14:31:16
3	Si 251.611†	525.2	110.5	3.4199	ug/L	3.4199 ppb	14:31:16
3	Sn 189.927†	7.4	-5.1	-0.9024	ug/L	-0.9024 ppb	14:31:16
3	Ti 334.940†	-1347.4	8.5	0.0163	ug/L	0.0163 ppb	14:30:56
3	Tl 190.801†	-65.9	-4.7	-1.2408	ug/L	-1.2408 ppb	14:31:16
3	U 409.014†	-4904.5	-27.9	-0.9480	ug/L	-0.9480 ppb	14:30:56
3	V 292.402†	-1643.2	-68.7	-0.6323	ug/L	-0.6323 ppb	14:30:56
3	Zn 213.857†	998.2	67.4	0.6142	ug/L	0.6142 ppb	14:31:16
3	SiO2†	536.0	96.1	6.3369	ug/L	6.3369 ppb	14:31:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	717984.4	99.902	%	0.8929				0.89%
Sc Radial	7274.4	97.3	%	1.52				1.56%
Y 371.029	561375.9	99.889	%	0.8226				0.82%
Y RADIAL	6730.1	97.20	%	1.479				1.52%
Ag 328.068†	5.0	0.0345	ug/L	0.22680	0.0345	ppb	0.22680	657.52%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	4.2	3.4631	ug/L	10.06512	3.4631	ppb	10.06512	290.64%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.1	1.4793	ug/L	2.30486	1.4793	ppb	2.30486	155.80%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	209.7	5.2825	ug/L	1.50894	5.2825	ppb	1.50894	28.56%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	34.7	0.2449	ug/L	0.05159	0.2449	ppb	0.05159	21.07%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	135.4	0.0618	ug/L	0.02952	0.0618	ppb	0.02952	47.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.5	7.7531	ug/L	6.84079	7.7531	ppb	6.84079	88.23%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -2.0     -0.0275 ug/L       0.11883     -0.0275 ppb        0.11883 431.73%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 2.0      0.0358 ug/L       0.15200      0.0358 ppb        0.15200 424.78%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.3      0.2009 ug/L       0.22380      0.2009 ppb        0.22380 111.41%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                25.4      0.0929 ug/L       0.32389      0.0929 ppb        0.32389 348.61%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4      14.090 ug/L        6.9006      14.090 ppb         6.9006  48.98%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         118.5      25.569 ug/L       12.8914      25.569 ppb        12.8914  50.42%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.3      33.480 ug/L       60.9101      33.480 ppb        60.9101 181.93%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                59.1       0.0663 ug/L       0.02210       0.0663 ppb        0.02210  33.35%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.8       0.1975 ug/L       0.64950       0.1975 ppb        0.64950 328.83%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -69.3      -4.2508 ug/L       4.51400      -4.2508 ppb        4.51400 106.19%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                12.1       0.3233 ug/L       0.48613       0.3233 ppb        0.48613 150.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  5.9       3.0043 ug/L       3.04972       3.0043 ppb        3.04972 101.51%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 1.6       0.1929 ug/L       1.34174       0.1929 ppb        1.34174 695.60%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.4      10.118 ug/L       13.6732      10.118 ppb        13.6732 135.13%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 2.5       0.7446 ug/L       2.59100       0.7446 ppb        2.59100 347.98%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -11.5      -5.8347 ug/L       2.51832      -5.8347 ppb        2.51832  43.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               113.9       3.5073 ug/L       0.11368       3.5073 ppb        0.11368   3.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.1      -0.1939 ug/L       0.73286      -0.1939 ppb        0.73286 377.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 9.1       0.0252 ug/L       0.06748       0.0252 ppb        0.06748 267.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -39.4      -0.0718 ug/L       0.09585      -0.0718 ppb        0.09585 133.50%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 0.5       0.1224 ug/L       1.18057       0.1224 ppb        1.18057 964.40%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                  6.6       0.2206 ug/L       1.15636       0.2206 ppb        1.15636 524.25%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 14.7       0.1352 ug/L       0.84504       0.1352 ppb        0.84504 625.07%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                75.6       0.6925 ug/L       0.13778       0.6925 ppb        0.13778  19.90%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     120.5       7.9028 ug/L       1.38958       7.9028 ppb        1.38958  17.58%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 6/30/2009 14:43:19
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601

Plasma On Time: 6/29/2009 15:26:31
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 14:43:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7137.2	7137.2	95.5	%			14:45:32
1	Y RADIAL	6564.5	6564.5	94.80	%			14:45:32
1	Al 396.153Radial†	6313.0	6684.1	5482.8	ug/L	5482.8	ppb	14:45:12
1	Ca 317.933Radial†	3719.0	3865.8	5476.3	ug/L	5476.3	ppb	14:45:32
1	Fe 238.204 Radial†	1240.3	1264.1	5285.0	ug/L	5285.0	ppb	14:45:32
1	K 766.490 Radial†	24931.6	23703.1	5101.0	ug/L	5101.0	ppb	14:45:12
1	Mg 279.077 IEC†	211.3	218.3	5447.3	ug/L	5447.3	ppb	14:45:32
1	Na 589.592 Radial†	167622.3	175682.6	10782	ug/L	10782	ppb	14:45:12
1	Sr 421.552†	174150.3	182439.6	509.51	ug/L	509.51	ppb	14:45:12
1	Sc 361.383	766538.4	766538.4	106.66	%			14:46:31
1	Y 371.029	591502.5	591502.5	105.25	%			14:46:31
1	Ag 328.068†	88049.0	81920.1	492.51	ug/L	492.51	ppb	14:46:31
1	As 188.979†	1426.3	1372.7	498.22	ug/L	498.22	ppb	14:46:51
1	B 249.677†	19721.2	19430.0	486.80	ug/L	486.80	ppb	14:46:31
1	Ba 233.527†	74223.1	69589.4	492.08	ug/L	492.08	ppb	14:46:31
1	Be 313.107†	1142807.9	1076352.9	493.78	ug/L	493.78	ppb	14:46:31
1	Cd 226.502†	40577.3	38325.4	488.54	ug/L	488.54	ppb	14:46:51
1	Co 228.616†	30101.9	28322.3	491.40	ug/L	491.40	ppb	14:46:51
1	Cr 267.716†	37316.8	35064.8	492.05	ug/L	492.05	ppb	14:46:31
1	Cu 324.752†	149803.2	134813.7	488.83	ug/L	488.83	ppb	14:46:31
1	Mn 257.610†	475710.6	445336.1	491.66	ug/L	491.66	ppb	14:46:31
1	Mo 202.031†	7571.2	7081.5	498.87	ug/L	498.87	ppb	14:46:51
1	Ni 231.604†	19779.8	18425.3	492.19	ug/L	492.19	ppb	14:46:51
1	P 214.914†	5537.1	4876.6	2396.9	ug/L	2396.9	ppb	14:46:51
1	Pb 220.353†	4488.4	4221.4	504.19	ug/L	504.19	ppb	14:46:51
1	S 181.975 Axial†	851.2	722.7	988.94	ug/L	988.94	ppb	14:46:51
1	Sb 206.836†	1827.8	1656.5	498.41	ug/L	498.41	ppb	14:46:51
1	Se 196.026†	1012.1	977.7	517.57	ug/L	517.57	ppb	14:46:51
1	Si 251.611†	86130.7	80342.5	2464.3	ug/L	2464.3	ppb	14:46:31
1	Sn 189.927†	2996.3	2796.8	495.96	ug/L	495.96	ppb	14:46:51
1	Ti 334.940†	283264.6	266930.9	488.63	ug/L	488.63	ppb	14:46:31
1	Tl 190.801†	1968.1	1906.0	501.90	ug/L	501.90	ppb	14:46:51
1	U 409.014†	10490.6	14684.5	495.64	ug/L	495.64	ppb	14:46:31
1	V 292.402†	55760.9	53845.4	494.94	ug/L	494.94	ppb	14:46:31
1	Zn 213.857†	57833.3	53298.1	487.29	ug/L	487.29	ppb	14:46:31
1	SiO2†	86560.6	80720.4	5270.6	ug/L	5270.6	ppb	14:47:51
2	Sc Radial	7255.2	7255.2	97.1	%			14:45:57
2	Y RADIAL	6649.7	6649.7	96.03	%			14:45:57
2	Al 396.153Radial†	6286.0	6548.7	5371.3	ug/L	5371.3	ppb	14:45:37
2	Ca 317.933Radial†	3699.9	3782.7	5358.6	ug/L	5358.6	ppb	14:45:57
2	Fe 238.204 Radial†	1225.9	1228.1	5135.0	ug/L	5135.0	ppb	14:45:57
2	K 766.490 Radial†	24915.7	23261.9	5005.8	ug/L	5005.8	ppb	14:45:37
2	Mg 279.077 IEC†	212.6	216.0	5391.2	ug/L	5391.2	ppb	14:45:57
2	Na 589.592 Radial†	165986.4	171140.5	10503	ug/L	10503	ppb	14:45:37
2	Sr 421.552†	172511.4	177783.0	496.50	ug/L	496.50	ppb	14:45:37
2	Sc 361.383	765905.4	765905.4	106.57	%			14:46:58
2	Y 371.029	590898.1	590898.1	105.14	%			14:46:58

2	Ag 328.068†	87867.8	81818.4	491.86 ug/L	491.86 ppb	14:46:58
2	As 188.979†	1444.7	1391.1	504.81 ug/L	504.81 ppb	14:47:18
2	B 249.677†	19805.4	19524.4	489.17 ug/L	489.17 ppb	14:46:58
2	Ba 233.527†	74361.4	69776.7	493.41 ug/L	493.41 ppb	14:46:58
2	Be 313.107†	1144475.3	1078803.1	494.90 ug/L	494.90 ppb	14:46:58
2	Cd 226.502†	40726.0	38496.4	490.74 ug/L	490.74 ppb	14:47:18
2	Co 228.616†	30228.7	28464.6	493.87 ug/L	493.87 ppb	14:47:18
2	Cr 267.716†	37299.4	35077.4	492.22 ug/L	492.22 ppb	14:46:58
2	Cu 324.752†	149550.1	134692.3	488.38 ug/L	488.38 ppb	14:46:58
2	Mn 257.610†	476621.3	446559.2	492.99 ug/L	492.99 ppb	14:46:58
2	Mo 202.031†	7579.4	7095.0	499.81 ug/L	499.81 ppb	14:47:18
2	Ni 231.604†	19793.6	18453.6	492.95 ug/L	492.95 ppb	14:47:18
2	P 214.914†	5556.7	4899.3	2408.7 ug/L	2408.7 ppb	14:47:18
2	Pb 220.353†	4502.6	4238.3	506.18 ug/L	506.18 ppb	14:47:18
2	S 181.975 Axial†	856.2	728.0	996.26 ug/L	996.26 ppb	14:47:18
2	Sb 206.836†	1827.7	1657.8	498.87 ug/L	498.87 ppb	14:47:18
2	Se 196.026†	1022.1	987.8	522.25 ug/L	522.25 ppb	14:47:18
2	Si 251.611†	86108.9	80388.7	2465.7 ug/L	2465.7 ppb	14:46:58
2	Sn 189.927†	3017.4	2818.9	499.84 ug/L	499.84 ppb	14:47:18
2	Ti 334.940†	283539.8	267408.6	489.50 ug/L	489.50 ppb	14:46:58
2	Tl 190.801†	1974.7	1913.7	503.91 ug/L	503.91 ppb	14:47:18
2	U 409.014†	10341.8	14553.0	491.20 ug/L	491.20 ppb	14:46:58
2	V 292.402†	55922.9	54040.6	496.74 ug/L	496.74 ppb	14:46:58
2	Zn 213.857†	57768.0	53281.6	487.15 ug/L	487.15 ppb	14:46:58
2	SiO2†	87933.2	82075.5	5359.6 ug/L	5359.6 ppb	14:47:56
3	Sc Radial	7426.8	7426.8	99.4 %		14:46:22
3	Y RADIAL	6805.9	6805.9	98.29 %		14:46:22
3	Al 396.153Radial†	6296.0	6409.2	5255.8 ug/L	5255.8 ppb	14:46:02
3	Ca 317.933Radial†	3666.3	3660.8	5185.9 ug/L	5185.9 ppb	14:46:22
3	Fe 238.204 Radial†	1224.8	1197.9	5009.4 ug/L	5009.4 ppb	14:46:22
3	K 766.490 Radial†	25058.1	22812.2	4908.4 ug/L	4908.4 ppb	14:46:02
3	Mg 279.077 IEC†	211.0	209.3	5224.6 ug/L	5224.6 ppb	14:46:22
3	Na 589.592 Radial†	167205.4	168417.2	10336 ug/L	10336 ppb	14:46:02
3	Sr 421.552†	173181.4	174351.9	486.92 ug/L	486.92 ppb	14:46:02
3	Sc 361.383	749065.5	749065.5	104.23 %		14:47:25
3	Y 371.029	577293.0	577293.0	102.72 %		14:47:25
3	Ag 328.068†	89173.2	84924.4	510.44 ug/L	510.44 ppb	14:47:25
3	As 188.979†	1436.8	1414.0	513.12 ug/L	513.12 ppb	14:47:45
3	B 249.677†	20007.2	20135.8	504.53 ug/L	504.53 ppb	14:47:25
3	Ba 233.527†	75493.4	72431.5	512.18 ug/L	512.18 ppb	14:47:25
3	Be 313.107†	1162013.9	1119773.6	513.70 ug/L	513.70 ppb	14:47:25
3	Cd 226.502†	40671.0	39302.8	501.05 ug/L	501.05 ppb	14:47:45
3	Co 228.616†	30234.1	29107.5	505.02 ug/L	505.02 ppb	14:47:45
3	Cr 267.716†	37870.8	36412.4	510.95 ug/L	510.95 ppb	14:47:25
3	Cu 324.752†	151474.5	139693.5	506.50 ug/L	506.50 ppb	14:47:25
3	Mn 257.610†	483656.1	463363.2	511.51 ug/L	511.51 ppb	14:47:25
3	Mo 202.031†	7607.2	7281.6	512.94 ug/L	512.94 ppb	14:47:45
3	Ni 231.604†	19846.1	18921.5	505.45 ug/L	505.45 ppb	14:47:45
3	P 214.914†	5543.9	5004.3	2458.8 ug/L	2458.8 ppb	14:47:45
3	Pb 220.353†	4505.4	4335.9	517.82 ug/L	517.82 ppb	14:47:45
3	S 181.975 Axial†	855.5	745.4	1020.1 ug/L	1020.1 ppb	14:47:45
3	Sb 206.836†	1838.2	1706.4	513.28 ug/L	513.28 ppb	14:47:45
3	Se 196.026†	1023.4	1010.6	533.50 ug/L	533.50 ppb	14:47:45
3	Si 251.611†	87271.9	83321.1	2555.9 ug/L	2555.9 ppb	14:47:25
3	Sn 189.927†	3001.6	2867.4	508.40 ug/L	508.40 ppb	14:47:45
3	Ti 334.940†	287210.2	276911.5	506.88 ug/L	506.88 ppb	14:47:25
3	Tl 190.801†	1981.5	1961.9	516.66 ug/L	516.66 ppb	14:47:45
3	U 409.014†	10450.5	14875.5	502.10 ug/L	502.10 ppb	14:47:25
3	V 292.402†	56735.2	55999.7	514.71 ug/L	514.71 ppb	14:47:25
3	Zn 213.857†	58731.8	55425.0	506.85 ug/L	506.85 ppb	14:47:25
3	SiO2†	87396.9	83415.8	5447.1 ug/L	5447.1 ppb	14:48:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	760503.1	105.82	%	1.379				1.30%
Sc Radial	7273.1	97.3	%	1.95				2.00%
Y 371.029	586564.5	104.37	%	1.430				1.37%
Y RADIAL	6673.4	96.38	%	1.768				1.83%
Ag 328.068†	82887.6	498.27	ug/L	10.545	498.27	ppb	10.545	2.12%

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   QC value within limits for Ag 328.068  Recovery = 99.65%
Al 396.153Radial†        6547.3      5370.0 ug/L        113.49      5370.0 ppb        113.49   2.11%
   QC value within limits for Al 396.153Radial  Recovery = 107.40%
As 188.979†              1392.6      505.38 ug/L         7.465      505.38 ppb         7.465   1.48%
   QC value within limits for As 188.979  Recovery = 101.08%
B 249.677†              19696.7      493.50 ug/L         9.627      493.50 ppb         9.627   1.95%
   QC value within limits for B 249.677  Recovery = 98.70%
Ba 233.527†             70599.2      499.22 ug/L        11.240      499.22 ppb        11.240   2.25%
   QC value within limits for Ba 233.527  Recovery = 99.84%
Be 313.107†           1091643.2      500.79 ug/L        11.188      500.79 ppb        11.188   2.23%
   QC value within limits for Be 313.107  Recovery = 100.16%
Ca 317.933Radial†        3769.7      5340.3 ug/L       146.08      5340.3 ppb       146.08   2.74%
   QC value within limits for Ca 317.933Radial  Recovery = 106.81%
Cd 226.502†             38708.2      493.44 ug/L         6.677      493.44 ppb         6.677   1.35%
   QC value within limits for Cd 226.502  Recovery = 98.69%
Co 228.616†             28631.5      496.76 ug/L         7.257      496.76 ppb         7.257   1.46%
   QC value within limits for Co 228.616  Recovery = 99.35%
Cr 267.716†             35518.2      498.41 ug/L        10.865      498.41 ppb        10.865   2.18%
   QC value within limits for Cr 267.716  Recovery = 99.68%
Cu 324.752†            136399.8      494.57 ug/L        10.332      494.57 ppb        10.332   2.09%
   QC value within limits for Cu 324.752  Recovery = 98.91%
Fe 238.204 Radial†       1230.1      5143.1 ug/L       137.94      5143.1 ppb       137.94   2.68%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.86%
K 766.490 Radial†       23259.1      5005.1 ug/L        96.30      5005.1 ppb        96.30   1.92%
   QC value within limits for K 766.490 Radial  Recovery = 100.10%
Mg 279.077 IEC†           214.5      5354.4 ug/L       115.81      5354.4 ppb       115.81   2.16%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.09%
Mn 257.610†            451752.8      498.72 ug/L        11.096      498.72 ppb        11.096   2.22%
   QC value within limits for Mn 257.610  Recovery = 99.74%
Mo 202.031†              7152.7      503.87 ug/L         7.865      503.87 ppb         7.865   1.56%
   QC value within limits for Mo 202.031  Recovery = 100.77%
Na 589.592 Radial†     171746.7       10541 ug/L         225.3       10541 ppb         225.3   2.14%
   QC value within limits for Na 589.592 Radial  Recovery = 105.41%
Ni 231.604†             18600.1      496.86 ug/L         7.444      496.86 ppb         7.444   1.50%
   QC value within limits for Ni 231.604  Recovery = 99.37%
P 214.914†               4926.7      2421.5 ug/L        32.89      2421.5 ppb        32.89   1.36%
   QC value within limits for P 214.914  Recovery = 96.86%
Pb 220.353†              4265.2      509.40 ug/L         7.366      509.40 ppb         7.366   1.45%
   QC value within limits for Pb 220.353  Recovery = 101.88%
S 181.975 Axial†          732.0      1001.8 ug/L        16.31      1001.8 ppb        16.31   1.63%
   QC value within limits for S 181.975 Axial  Recovery = 100.18%
Sb 206.836†              1673.6      503.52 ug/L         8.451      503.52 ppb         8.451   1.68%
   QC value within limits for Sb 206.836  Recovery = 100.70%
Se 196.026†               992.0      524.44 ug/L         8.185      524.44 ppb         8.185   1.56%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†             81350.8      2495.3 ug/L        52.51      2495.3 ppb        52.51   2.10%
   QC value within limits for Si 251.611  Recovery = 99.81%
Sn 189.927†              2827.7      501.40 ug/L         6.367      501.40 ppb         6.367   1.27%
   QC value within limits for Sn 189.927  Recovery = 100.28%
Sr 421.552†            178191.5      497.64 ug/L        11.336      497.64 ppb        11.336   2.28%
   QC value within limits for Sr 421.552  Recovery = 99.53%
Ti 334.940†            270417.0      495.00 ug/L        10.293      495.00 ppb        10.293   2.08%
   QC value within limits for Ti 334.940  Recovery = 99.00%
Tl 190.801†              1927.2      507.49 ug/L         8.006      507.49 ppb         8.006   1.58%
   QC value within limits for Tl 190.801  Recovery = 101.50%
U 409.014†              14704.3      496.31 ug/L         5.481      496.31 ppb         5.481   1.10%
   QC value within limits for U 409.014  Recovery = 99.26%
V 292.402†              54628.6      502.13 ug/L        10.929      502.13 ppb        10.929   2.18%
   QC value within limits for V 292.402  Recovery = 100.43%
Zn 213.857†             54001.6      493.76 ug/L        11.331      493.76 ppb        11.331   2.29%
   QC value within limits for Zn 213.857  Recovery = 98.75%
SiO2†                   82070.6      5359.1 ug/L        88.25      5359.1 ppb        88.25   1.65%
   QC value within limits for SiO2  Recovery = 100.22%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 14:50:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7498.2	7498.2	100	%			14:52:03
1	Y RADIAL	6974.0	6974.0	100.7	%			14:52:03
1	Al 396.153Radial†	-76.4	-3.5	-2.8247	ug/L	-2.8247	ppb	14:52:03
1	Ca 317.933Radial†	27.2	-2.0	-2.8304	ug/L	-2.8304	ppb	14:52:23
1	Fe 238.204 Radial†	39.0	4.1	17.204	ug/L	17.204	ppb	14:52:23
1	K 766.490 Radial†	2478.1	63.1	13.619	ug/L	13.619	ppb	14:52:03
1	Mg 279.077 IEC†	4.6	1.5	37.389	ug/L	37.389	ppb	14:52:23
1	Na 589.592 Radial†	-154.1	-18.0	-1.1077	ug/L	-1.1077	ppb	14:52:03
1	Sr 421.552†	-23.5	32.4	0.0905	ug/L	0.0905	ppb	14:52:03
1	Sc 361.383	720920.1	720920.1	100.31	%			14:53:20
1	Y 371.029	564413.2	564413.2	100.43	%			14:53:20
1	Ag 328.068†	628.9	-5.6	-0.0297	ug/L	-0.0297	ppb	14:53:20
1	As 188.979†	-28.6	7.0	2.5106	ug/L	2.5106	ppb	14:53:40
1	B 249.677†	-707.3	234.8	5.9156	ug/L	5.9156	ppb	14:53:20
1	Ba 233.527†	42.1	41.5	0.2935	ug/L	0.2935	ppb	14:53:40
1	Be 313.107†	-4744.7	151.7	0.0693	ug/L	0.0693	ppb	14:53:20
1	Cd 226.502†	-268.2	13.7	0.1731	ug/L	0.1731	ppb	14:53:40
1	Co 228.616†	-96.0	3.7	0.0625	ug/L	0.0625	ppb	14:53:40
1	Cr 267.716†	-46.5	31.1	0.4351	ug/L	0.4351	ppb	14:53:20
1	Cu 324.752†	5622.5	-33.3	-0.1197	ug/L	-0.1197	ppb	14:53:20
1	Mn 257.610†	734.5	52.6	0.0594	ug/L	0.0594	ppb	14:53:20
1	Mo 202.031†	5.4	-11.8	-0.8283	ug/L	-0.8283	ppb	14:53:40
1	Ni 231.604†	134.8	14.5	0.3885	ug/L	0.3885	ppb	14:53:40
1	P 214.914†	299.8	-16.0	-8.1209	ug/L	-8.1209	ppb	14:53:40
1	Pb 220.353†	-10.0	3.3	0.3868	ug/L	0.3868	ppb	14:53:40
1	S 181.975 Axial†	85.0	9.4	12.814	ug/L	12.814	ppb	14:53:40
1	Sb 206.836†	64.7	7.2	2.1388	ug/L	2.1388	ppb	14:53:40
1	Se 196.026†	-28.6	0.3	0.1849	ug/L	0.1849	ppb	14:53:40
1	Si 251.611†	538.2	124.8	3.8488	ug/L	3.8488	ppb	14:53:40
1	Sn 189.927†	19.0	6.5	1.1461	ug/L	1.1461	ppb	14:53:40
1	Ti 334.940†	-1389.9	-37.3	-0.0703	ug/L	-0.0703	ppb	14:53:20
1	Tl 190.801†	-54.1	6.9	1.7974	ug/L	1.7974	ppb	14:53:40
1	U 409.014†	-4751.7	111.7	3.7797	ug/L	3.7797	ppb	14:53:20
1	V 292.402†	-1521.6	48.3	0.4341	ug/L	0.4341	ppb	14:53:20
1	Zn 213.857†	999.2	71.0	0.6499	ug/L	0.6499	ppb	14:53:40
1	SiO2†	483.8	45.4	2.9735	ug/L	2.9735	ppb	14:54:36
2	Sc Radial	7550.7	7550.7	101	%			14:52:28
2	Y RADIAL	6988.0	6988.0	100.9	%			14:52:28
2	Al 396.153Radial†	-84.3	-10.8	-8.8757	ug/L	-8.8757	ppb	14:52:28
2	Ca 317.933Radial†	32.6	3.2	4.5234	ug/L	4.5234	ppb	14:52:48
2	Fe 238.204 Radial†	37.3	2.1	8.6923	ug/L	8.6923	ppb	14:52:48
2	K 766.490 Radial†	2505.7	73.3	15.813	ug/L	15.813	ppb	14:52:28
2	Mg 279.077 IEC†	8.2	5.1	125.98	ug/L	125.98	ppb	14:52:48
2	Na 589.592 Radial†	-224.4	-86.6	-5.3161	ug/L	-5.3161	ppb	14:52:28
2	Sr 421.552†	35.9	91.4	0.2551	ug/L	0.2551	ppb	14:52:28
2	Sc 361.383	727136.0	727136.0	101.18	%			14:53:45
2	Y 371.029	568952.0	568952.0	101.24	%			14:53:45
2	Ag 328.068†	578.3	-61.1	-0.3614	ug/L	-0.3614	ppb	14:53:45
2	As 188.979†	-32.2	3.6	1.2893	ug/L	1.2893	ppb	14:54:05
2	B 249.677†	-725.3	223.1	5.6208	ug/L	5.6208	ppb	14:53:45
2	Ba 233.527†	38.1	37.2	0.2626	ug/L	0.2626	ppb	14:54:05
2	Be 313.107†	-4754.7	182.3	0.0838	ug/L	0.0838	ppb	14:53:45
2	Cd 226.502†	-270.9	13.3	0.1698	ug/L	0.1698	ppb	14:54:05
2	Co 228.616†	-89.7	10.8	0.1870	ug/L	0.1870	ppb	14:54:05
2	Cr 267.716†	-109.1	-30.5	-0.4262	ug/L	-0.4262	ppb	14:53:45
2	Cu 324.752†	5761.6	56.2	0.2042	ug/L	0.2042	ppb	14:53:45
2	Mn 257.610†	794.7	105.9	0.1154	ug/L	0.1154	ppb	14:53:45
2	Mo 202.031†	13.5	-3.8	-0.2662	ug/L	-0.2662	ppb	14:54:05
2	Ni 231.604†	156.2	34.6	0.9254	ug/L	0.9254	ppb	14:54:05

2	P 214.914†	326.2	7.6	3.8332	ug/L	3.8332 ppb	14:54:05
2	Pb 220.353†	-8.0	5.4	0.6349	ug/L	0.6349 ppb	14:54:05
2	S 181.975 Axial†	87.2	10.8	14.815	ug/L	14.815 ppb	14:54:05
2	Sb 206.836†	57.9	0.0	0.0225	ug/L	0.0225 ppb	14:54:05
2	Se 196.026†	-16.7	12.2	6.2667	ug/L	6.2667 ppb	14:54:05
2	Si 251.611†	507.4	89.7	2.7566	ug/L	2.7566 ppb	14:54:05
2	Sn 189.927†	18.2	5.5	0.9763	ug/L	0.9763 ppb	14:54:05
2	Ti 334.940†	-1283.3	79.9	0.1467	ug/L	0.1467 ppb	14:53:45
2	Tl 190.801†	-55.5	5.9	1.5495	ug/L	1.5495 ppb	14:54:05
2	U 409.014†	-4907.8	-2.0	-0.0694	ug/L	-0.0694 ppb	14:53:45
2	V 292.402†	1560.6	22.7	0.2040	ug/L	0.2040 ppb	14:53:45
2	Zn 213.857†	995.5	58.8	0.5313	ug/L	0.5313 ppb	14:54:05
2	SiO2†	534.8	91.7	6.0009	ug/L	6.0009 ppb	14:54:41
3	Sc Radial	7378.8	7378.8	98.7	%		14:52:53
3	Y RADIAL	6834.8	6834.8	98.71	%		14:52:53
3	Al 396.153Radial†	-60.7	11.1	9.1352	ug/L	9.1352 ppb	14:52:53
3	Ca 317.933Radial†	23.7	-5.1	-7.1543	ug/L	-7.1543 ppb	14:53:13
3	Fe 238.204 Radial†	41.7	7.4	30.851	ug/L	30.851 ppb	14:53:13
3	K 766.490 Radial†	2380.1	3.8	0.8155	ug/L	0.8155 ppb	14:52:53
3	Mg 279.077 IEC†	6.1	3.1	76.957	ug/L	76.957 ppb	14:53:13
3	Na 589.592 Radial†	-60.8	73.9	4.5371	ug/L	4.5371 ppb	14:52:53
3	Sr 421.552†	-18.8	36.8	0.1030	ug/L	0.1030 ppb	14:52:53
3	Sc 361.383	722489.3	722489.3	100.53	%		14:54:11
3	Y 371.029	565343.4	565343.4	100.59	%		14:54:11
3	Ag 328.068†	586.2	-49.5	-0.2853	ug/L	-0.2853 ppb	14:54:11
3	As 188.979†	-28.8	6.8	2.4664	ug/L	2.4664 ppb	14:54:31
3	B 249.677†	-718.1	225.6	5.6844	ug/L	5.6844 ppb	14:54:11
3	Ba 233.527†	19.6	19.0	0.1349	ug/L	0.1349 ppb	14:54:31
3	Be 313.107†	-4696.3	210.1	0.0956	ug/L	0.0956 ppb	14:54:11
3	Cd 226.502†	-268.1	14.5	0.1810	ug/L	0.1810 ppb	14:54:31
3	Co 228.616†	-99.3	0.7	0.0120	ug/L	0.0120 ppb	14:54:31
3	Cr 267.716†	-101.0	-23.1	-0.3230	ug/L	-0.3230 ppb	14:54:11
3	Cu 324.752†	5636.0	-32.1	-0.1144	ug/L	-0.1144 ppb	14:54:11
3	Mn 257.610†	782.6	98.9	0.1114	ug/L	0.1114 ppb	14:54:11
3	Mo 202.031†	19.4	2.2	0.1564	ug/L	0.1564 ppb	14:54:31
3	Ni 231.604†	136.9	16.3	0.4366	ug/L	0.4366 ppb	14:54:31
3	P 214.914†	326.7	10.2	5.2465	ug/L	5.2465 ppb	14:54:31
3	Pb 220.353†	15.4	28.6	3.4017	ug/L	3.4017 ppb	14:54:31
3	S 181.975 Axial†	82.5	6.6	9.0567	ug/L	9.0567 ppb	14:54:31
3	Sb 206.836†	50.7	-6.8	-1.9961	ug/L	-1.9961 ppb	14:54:31
3	Se 196.026†	-29.7	-0.8	-0.2859	ug/L	-0.2859 ppb	14:54:31
3	Si 251.611†	496.8	82.4	2.5275	ug/L	2.5275 ppb	14:54:31
3	Sn 189.927†	18.9	6.3	1.1210	ug/L	1.1210 ppb	14:54:31
3	Ti 334.940†	-1487.1	-131.0	-0.2407	ug/L	-0.2407 ppb	14:54:11
3	Tl 190.801†	-50.3	10.7	2.8039	ug/L	2.8039 ppb	14:54:31
3	U 409.014†	-4837.8	36.3	1.2271	ug/L	1.2271 ppb	14:54:11
3	V 292.402†	-1527.7	45.5	0.4151	ug/L	0.4151 ppb	14:54:11
3	Zn 213.857†	1007.6	77.2	0.7040	ug/L	0.7040 ppb	14:54:31
3	SiO2†	483.3	43.9	2.8469	ug/L	2.8469 ppb	14:54:46

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	723515.1	100.67	%	0.450				0.45%
Sc Radial	7475.9	100	%	1.2				1.18%
Y 371.029	566236.2	100.75	%	0.427				0.42%
Y RADIAL	6932.3	100.1	%	1.22				1.22%
Ag 328.068†	-38.8	-0.2254	ug/L	0.17376	-0.2254	ppb	0.17376	77.08%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.1	-0.8551	ug/L	9.16556	-0.8551	ppb	9.16556	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.8	2.0888	ug/L	0.69274	2.0888	ppb	0.69274	33.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	227.8	5.7403	ug/L	0.15517	5.7403	ppb	0.15517	2.70%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.5	0.2303	ug/L	0.08411	0.2303	ppb	0.08411	36.51%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	181.4	0.0829	ug/L	0.01319	0.0829	ppb	0.01319	15.91%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.3	-1.8204	ug/L	5.90399	-1.8204	ppb	5.90399	324.32%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.8      0.1747 ug/L       0.00575      0.1747 ppb        0.00575   3.29%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 5.1      0.0872 ug/L       0.09006      0.0872 ppb        0.09006 103.29%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -7.5     -0.1047 ug/L       0.47033     -0.1047 ppb        0.47033 449.21%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -3.1     -0.0100 ug/L       0.18548     -0.0100 ppb        0.18548 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.5      18.916 ug/L       11.1783      18.916 ppb        11.1783  59.09%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          46.7      10.082 ug/L        8.1000      10.082 ppb         8.1000  80.34%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             3.2      80.108 ug/L       44.3783      80.108 ppb        44.3783  55.40%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                85.8      0.0954 ug/L       0.03124      0.0954 ppb        0.03124  32.74%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -4.5     -0.3127 ug/L       0.49396     -0.3127 ppb        0.49396 157.97%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -10.2     -0.6289 ug/L       4.94403     -0.6289 ppb        4.94403 786.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.8      0.5835 ug/L       0.29710      0.5835 ppb        0.29710  50.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  0.6      0.3196 ug/L       7.34373      0.3196 ppb        7.34373 >999.9%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                12.4      1.4745 ug/L       1.67362      1.4745 ppb        1.67362 113.51%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            8.9      12.229 ug/L        2.9233      12.229 ppb         2.9233  23.91%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 0.1      0.0551 ug/L       2.06766      0.0551 ppb        2.06766 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.9      2.0552 ug/L       3.65483      2.0552 ppb        3.65483 177.83%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                99.0      3.0443 ug/L       0.70605      3.0443 ppb        0.70605  23.19%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 6.1      1.0811 ug/L       0.09168      1.0811 ppb        0.09168   8.48%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                53.5      0.1495 ug/L       0.09166      0.1495 ppb        0.09166  61.29%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -29.5     -0.0548 ug/L       0.19418     -0.0548 ppb        0.19418 354.51%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 7.8      2.0503 ug/L       0.66435      2.0503 ppb        0.66435  32.40%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 48.7      1.6458 ug/L       1.95840      1.6458 ppb        1.95840 119.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 38.9      0.3510 ug/L       0.12772      0.3510 ppb        0.12772  36.38%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                69.0      0.6284 ug/L       0.08833      0.6284 ppb        0.08833  14.06%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      60.4      3.9404 ug/L       1.78552      3.9404 ppb        1.78552  45.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 15:52:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7392.6	7392.6	98.9	%			15:54:14
1	Y RADIAL	6831.1	6831.1	98.65	%			15:54:14
1	Al 396.153Radial†	6384.8	6528.2	5353.8	ug/L	5353.8	ppb	15:54:14
1	Ca 317.933Radial†	3686.9	3698.7	5239.7	ug/L	5239.7	ppb	15:54:14
1	Fe 238.204 Radial†	1233.5	1212.4	5070.0	ug/L	5070.0	ppb	15:54:34
1	K 766.490 Radial†	24999.4	22869.4	4920.7	ug/L	4920.7	ppb	15:54:09
1	Mg 279.077 IEC†	209.4	208.7	5208.0	ug/L	5208.0	ppb	15:54:34
1	Na 589.592 Radial†	167953.4	169950.9	10430	ug/L	10430	ppb	15:54:09
1	Sr 421.552†	173977.9	175962.5	491.42	ug/L	491.42	ppb	15:54:09
1	Sc 361.383	743690.7	743690.7	103.48	%			15:55:43
1	Y 371.029	574212.4	574212.4	102.17	%			15:55:43
1	Ag 328.068†	88739.6	85123.7	511.65	ug/L	511.65	ppb	15:55:43
1	As 188.979†	1447.8	1434.5	520.56	ug/L	520.56	ppb	15:56:03
1	B 249.677†	19920.6	20190.8	505.90	ug/L	505.90	ppb	15:55:43
1	Ba 233.527†	75114.0	72588.3	513.29	ug/L	513.29	ppb	15:55:43
1	Be 313.107†	1157668.5	1123631.7	515.47	ug/L	515.47	ppb	15:55:43
1	Cd 226.502†	40637.1	39552.0	504.22	ug/L	504.22	ppb	15:56:03
1	Co 228.616†	30224.8	29308.2	508.49	ug/L	508.49	ppb	15:56:03
1	Cr 267.716†	37736.9	36545.7	512.82	ug/L	512.82	ppb	15:55:43
1	Cu 324.752†	151200.3	140478.8	509.35	ug/L	509.35	ppb	15:55:43
1	Mn 257.610†	481419.3	464555.3	512.83	ug/L	512.83	ppb	15:55:43
1	Mo 202.031†	7567.4	7295.9	513.95	ug/L	513.95	ppb	15:56:03
1	Ni 231.604†	19802.2	19016.7	507.99	ug/L	507.99	ppb	15:56:03
1	P 214.914†	5532.0	5031.2	2472.1	ug/L	2472.1	ppb	15:56:03
1	Pb 220.353†	4494.8	4356.9	520.34	ug/L	520.34	ppb	15:56:03
1	S 181.975 Axial†	857.8	753.6	1031.3	ug/L	1031.3	ppb	15:56:03
1	Sb 206.836†	1837.2	1718.1	516.80	ug/L	516.80	ppb	15:56:03
1	Se 196.026†	1010.8	1005.5	531.10	ug/L	531.10	ppb	15:56:03
1	Si 251.611†	87008.6	83671.7	2566.7	ug/L	2566.7	ppb	15:55:43
1	Sn 189.927†	3003.5	2890.0	512.42	ug/L	512.42	ppb	15:56:03
1	Ti 334.940†	286554.6	278269.5	509.36	ug/L	509.36	ppb	15:55:43
1	Tl 190.801†	1965.3	1960.0	516.18	ug/L	516.18	ppb	15:56:03
1	U 409.014†	10786.1	15272.3	515.53	ug/L	515.53	ppb	15:55:43
1	V 292.402†	56589.2	56252.0	517.03	ug/L	517.03	ppb	15:55:43
1	Zn 213.857†	58438.7	55549.0	507.96	ug/L	507.96	ppb	15:55:43
1	SiO2†	85865.0	82541.5	5389.4	ug/L	5389.4	ppb	15:57:03
2	Sc Radial	7563.8	7563.8	101	%			15:54:44
2	Y RADIAL	6952.9	6952.9	100.4	%			15:54:44
2	Al 396.153Radial†	6473.5	6469.8	5305.5	ug/L	5305.5	ppb	15:54:44
2	Ca 317.933Radial†	3725.1	3652.1	5173.6	ug/L	5173.6	ppb	15:54:44
2	Fe 238.204 Radial†	1246.4	1196.9	5005.6	ug/L	5005.6	ppb	15:55:04
2	K 766.490 Radial†	25155.6	22451.7	4830.5	ug/L	4830.5	ppb	15:54:39
2	Mg 279.077 IEC†	215.7	210.1	5245.3	ug/L	5245.3	ppb	15:55:04
2	Na 589.592 Radial†	167405.4	165566.2	10161	ug/L	10161	ppb	15:54:39
2	Sr 421.552†	173610.7	171618.6	479.29	ug/L	479.29	ppb	15:54:39
2	Sc 361.383	736578.7	736578.7	102.49	%			15:56:10
2	Y 371.029	568582.4	568582.4	101.17	%			15:56:10
2	Ag 328.068†	87970.1	85200.9	512.10	ug/L	512.10	ppb	15:56:10
2	As 188.979†	1438.6	1439.1	522.18	ug/L	522.18	ppb	15:56:30
2	B 249.677†	19816.6	20275.2	508.01	ug/L	508.01	ppb	15:56:10
2	Ba 233.527†	74484.7	72675.2	513.91	ug/L	513.91	ppb	15:56:10
2	Be 313.107†	1146088.8	1123135.4	515.24	ug/L	515.24	ppb	15:56:10
2	Cd 226.502†	40673.3	39966.5	509.52	ug/L	509.52	ppb	15:56:30
2	Co 228.616†	30183.5	29549.9	512.70	ug/L	512.70	ppb	15:56:30
2	Cr 267.716†	37369.9	36539.7	512.74	ug/L	512.74	ppb	15:56:10
2	Cu 324.752†	149465.5	140197.0	508.32	ug/L	508.32	ppb	15:56:10
2	Mn 257.610†	477259.4	464988.6	513.30	ug/L	513.30	ppb	15:56:10
2	Mo 202.031†	7576.9	7375.8	519.57	ug/L	519.57	ppb	15:56:30
2	Ni 231.604†	19805.0	19204.2	513.00	ug/L	513.00	ppb	15:56:30

2	P 214.914†	5548.0	5098.5	2506.7 ug/L	2506.7 ppb	15:56:30
2	Pb 220.353†	4482.5	4386.9	523.92 ug/L	523.92 ppb	15:56:30
2	S 181.975 Axial†	856.1	759.9	1040.0 ug/L	1040.0 ppb	15:56:30
2	Sb 206.836†	1835.4	1733.5	521.56 ug/L	521.56 ppb	15:56:30
2	Se 196.026†	1007.5	1011.8	534.09 ug/L	534.09 ppb	15:56:30
2	Si 251.611†	86181.3	83676.4	2566.7 ug/L	2566.7 ppb	15:56:10
2	Sn 189.927†	3000.1	2914.7	516.77 ug/L	516.77 ppb	15:56:30
2	Ti 334.940†	283810.8	278266.1	509.35 ug/L	509.35 ppb	15:56:10
2	Tl 190.801†	1980.1	1992.7	524.72 ug/L	524.72 ppb	15:56:30
2	U 409.014†	10428.8	15024.2	507.14 ug/L	507.14 ppb	15:56:10
2	V 292.402†	56028.9	56233.3	516.92 ug/L	516.92 ppb	15:56:10
2	Zn 213.857†	57986.8	55653.4	508.90 ug/L	508.90 ppb	15:56:10
2	SiO2†	86048.5	83521.8	5453.6 ug/L	5453.6 ppb	15:57:08
3	Sc Radial	7629.1	7629.1	102 %		15:55:14
3	Y RADIAL	7031.2	7031.2	101.5 %		15:55:14
3	Al 396.153Radial†	6423.1	6365.7	5220.0 ug/L	5220.0 ppb	15:55:14
3	Ca 317.933Radial†	3714.0	3609.7	5113.6 ug/L	5113.6 ppb	15:55:14
3	Fe 238.204 Radial†	1236.5	1176.7	4920.8 ug/L	4920.8 ppb	15:55:35
3	K 766.490 Radial†	25116.6	22200.8	4776.4 ug/L	4776.4 ppb	15:55:09
3	Mg 279.077 IEC†	207.6	200.4	5001.5 ug/L	5001.5 ppb	15:55:35
3	Na 589.592 Radial†	168735.2	165453.6	10154 ug/L	10154 ppb	15:55:09
3	Sr 421.552†	174182.3	170710.7	476.75 ug/L	476.75 ppb	15:55:09
3	Sc 361.383	747076.8	747076.8	103.95 %		15:56:38
3	Y 371.029	576159.0	576159.0	102.52 %		15:56:38
3	Ag 328.068†	89375.6	85346.9	512.94 ug/L	512.94 ppb	15:56:38
3	As 188.979†	1443.8	1424.4	516.88 ug/L	516.88 ppb	15:56:58
3	B 249.677†	20109.7	20285.5	508.30 ug/L	508.30 ppb	15:56:38
3	Ba 233.527†	75729.9	72851.8	515.15 ug/L	515.15 ppb	15:56:38
3	Be 313.107†	1165222.4	1125828.0	516.48 ug/L	516.48 ppb	15:56:38
3	Cd 226.502†	40756.6	39489.0	503.43 ug/L	503.43 ppb	15:56:58
3	Co 228.616†	30278.2	29227.2	507.09 ug/L	507.09 ppb	15:56:58
3	Cr 267.716†	37926.9	36563.2	513.06 ug/L	513.06 ppb	15:56:38
3	Cu 324.752†	152097.2	140679.4	510.07 ug/L	510.07 ppb	15:56:38
3	Mn 257.610†	485326.4	466205.4	514.64 ug/L	514.64 ppb	15:56:38
3	Mo 202.031†	7598.8	7292.9	513.73 ug/L	513.73 ppb	15:56:58
3	Ni 231.604†	19847.3	18973.3	506.83 ug/L	506.83 ppb	15:56:58
3	P 214.914†	5569.7	5043.2	2478.1 ug/L	2478.1 ppb	15:56:58
3	Pb 220.353†	4504.7	4346.8	519.11 ug/L	519.11 ppb	15:56:58
3	S 181.975 Axial†	863.9	755.6	1034.2 ug/L	1034.2 ppb	15:56:58
3	Sb 206.836†	1832.0	1705.1	512.89 ug/L	512.89 ppb	15:56:58
3	Se 196.026†	1030.2	1019.9	537.90 ug/L	537.90 ppb	15:56:58
3	Si 251.611†	87713.4	83968.6	2575.9 ug/L	2575.9 ppb	15:56:38
3	Sn 189.927†	3007.4	2880.7	510.74 ug/L	510.74 ppb	15:56:58
3	Ti 334.940†	288512.1	278897.4	510.51 ug/L	510.51 ppb	15:56:38
3	Tl 190.801†	1973.1	1958.9	515.92 ug/L	515.92 ppb	15:56:58
3	U 409.014†	10473.8	14924.6	503.77 ug/L	503.77 ppb	15:56:38
3	V 292.402†	56778.9	56186.6	516.42 ug/L	516.42 ppb	15:56:38
3	Zn 213.857†	58897.4	55734.3	509.70 ug/L	509.70 ppb	15:56:38
3	SiO2†	86419.9	82699.2	5400.0 ug/L	5400.0 ppb	15:57:13

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	742448.7	103.31	%	0.746				0.72%
Sc Radial	7528.5	101	%	1.6				1.62%
Y 371.029	572984.6	101.95	%	0.700				0.69%
Y RADIAL	6938.4	100.2	%	1.46				1.45%
Ag 328.068†	85223.8	512.23	ug/L	0.658	512.23	ppb	0.658	0.13%
QC value within limits for Ag 328.068 Recovery = 102.45%								
Al 396.153Radial†	6454.6	5293.1	ug/L	67.75	5293.1	ppb	67.75	1.28%
QC value within limits for Al 396.153Radial Recovery = 105.86%								
As 188.979†	1432.7	519.87	ug/L	2.717	519.87	ppb	2.717	0.52%
QC value within limits for As 188.979 Recovery = 103.97%								
B 249.677†	20250.5	507.40	ug/L	1.311	507.40	ppb	1.311	0.26%
QC value within limits for B 249.677 Recovery = 101.48%								
Ba 233.527†	72705.1	514.12	ug/L	0.947	514.12	ppb	0.947	0.18%
QC value within limits for Ba 233.527 Recovery = 102.82%								
Be 313.107†	1124198.3	515.73	ug/L	0.657	515.73	ppb	0.657	0.13%
QC value within limits for Be 313.107 Recovery = 103.15%								
Ca 317.933Radial†	3653.5	5175.6	ug/L	63.05	5175.6	ppb	63.05	1.22%

```
   QC value within limits for Ca 317.933Radial  Recovery = 103.51%
Cd 226.502†            39669.2      505.72 ug/L         3.309      505.72 ppb          3.309   0.65%
   QC value within limits for Cd 226.502  Recovery = 101.14%
Co 228.616†            29361.7      509.43 ug/L         2.921      509.43 ppb          2.921   0.57%
   QC value within limits for Co 228.616  Recovery = 101.89%
Cr 267.716†            36549.5      512.87 ug/L         0.171      512.87 ppb          0.171   0.03%
   QC value within limits for Cr 267.716  Recovery = 102.57%
Cu 324.752†           140451.7      509.25 ug/L         0.876      509.25 ppb          0.876   0.17%
   QC value within limits for Cu 324.752  Recovery = 101.85%
Fe 238.204 Radial†      1195.3      4998.8 ug/L         74.81      4998.8 ppb          74.81   1.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.98%
K 766.490 Radial†      22507.3      4842.6 ug/L         72.87      4842.6 ppb          72.87   1.50%
   QC value within limits for K 766.490 Radial  Recovery = 96.85%
Mg 279.077 IEC†          206.4      5151.6 ug/L        131.28      5151.6 ppb         131.28   2.55%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.03%
Mn 257.610†           465249.7      513.59 ug/L         0.936      513.59 ppb          0.936   0.18%
   QC value within limits for Mn 257.610  Recovery = 102.72%
Mo 202.031†             7321.5      515.75 ug/L         3.310      515.75 ppb          3.310   0.64%
   QC value within limits for Mo 202.031  Recovery = 103.15%
Na 589.592 Radial†    166990.2       10249 ug/L         157.4       10249 ppb          157.4   1.54%
   QC value within limits for Na 589.592 Radial  Recovery = 102.49%
Ni 231.604†            19064.7      509.27 ug/L         3.278      509.27 ppb          3.278   0.64%
   QC value within limits for Ni 231.604  Recovery = 101.85%
P 214.914†              5057.7      2485.6 ug/L         18.51      2485.6 ppb          18.51   0.74%
   QC value within limits for P 214.914  Recovery = 99.43%
Pb 220.353†             4363.5      521.12 ug/L         2.496      521.12 ppb          2.496   0.48%
   QC value within limits for Pb 220.353  Recovery = 104.22%
S 181.975 Axial†         756.4      1035.1 ug/L          4.42      1035.1 ppb           4.42   0.43%
   QC value within limits for S 181.975 Axial  Recovery = 103.51%
Sb 206.836†             1718.9      517.08 ug/L         4.344      517.08 ppb          4.344   0.84%
   QC value within limits for Sb 206.836  Recovery = 103.42%
Se 196.026†             1012.4      534.36 ug/L         3.408      534.36 ppb          3.408   0.64%
   QC value within limits for Se 196.026  Recovery = 106.87%
Si 251.611†            83772.3      2569.7 ug/L          5.33      2569.7 ppb           5.33   0.21%
   QC value within limits for Si 251.611  Recovery = 102.79%
Sn 189.927†             2895.1      513.31 ug/L         3.114      513.31 ppb          3.114   0.61%
   QC value within limits for Sn 189.927  Recovery = 102.66%
Sr 421.552†           172763.9      482.48 ug/L         7.839      482.48 ppb          7.839   1.62%
   QC value within limits for Sr 421.552  Recovery = 96.50%
Ti 334.940†           278477.7      509.74 ug/L         0.664      509.74 ppb          0.664   0.13%
   QC value within limits for Ti 334.940  Recovery = 101.95%
Tl 190.801†             1970.6      518.94 ug/L         5.011      518.94 ppb          5.011   0.97%
   QC value within limits for Tl 190.801  Recovery = 103.79%
U 409.014†             15073.7      508.81 ug/L         6.054      508.81 ppb          6.054   1.19%
   QC value within limits for U 409.014  Recovery = 101.76%
V 292.402†             56224.0      516.79 ug/L         0.322      516.79 ppb          0.322   0.06%
   QC value within limits for V 292.402  Recovery = 103.36%
Zn 213.857†            55645.6      508.86 ug/L         0.871      508.86 ppb          0.871   0.17%
   QC value within limits for Zn 213.857  Recovery = 101.77%
SiO2†                  82920.8      5414.3 ug/L         34.42      5414.3 ppb          34.42   0.64%
   QC value within limits for SiO2  Recovery = 101.25%
All analyte(s) passed QC.
```

Sequence No.: 12
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 15:59:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7369.9	7369.9	98.6	%			16:01:16
1	Y RADIAL	6844.4	6844.4	98.85	%			16:01:16
1	Al 396.153Radial†	-59.2	12.6	10.377	ug/L	10.377	ppb	16:01:16
1	Ca 317.933Radial†	33.2	4.6	6.5450	ug/L	6.5450	ppb	16:01:36
1	Fe 238.204 Radial†	37.0	2.7	11.352	ug/L	11.352	ppb	16:01:36
1	K 766.490 Radial†	2418.3	45.5	9.8141	ug/L	9.8141	ppb	16:01:16
1	Mg 279.077 IEC†	2.3	-0.8	-19.006	ug/L	-19.006	ppb	16:01:36
1	Na 589.592 Radial†	-198.6	-65.9	-4.0422	ug/L	-4.0422	ppb	16:01:16
1	Sr 421.552†	-79.9	-25.1	-0.0703	ug/L	-0.0703	ppb	16:01:16
1	Sc 361.383	726891.3	726891.3	101.14	%			16:02:33
1	Y 371.029	569168.5	569168.5	101.28	%			16:02:33
1	Ag 328.068†	697.4	56.9	0.3397	ug/L	0.3397	ppb	16:02:33
1	As 188.979†	-38.2	-2.3	-0.8482	ug/L	-0.8482	ppb	16:02:53
1	B 249.677†	-671.7	275.8	6.9498	ug/L	6.9498	ppb	16:02:33
1	Ba 233.527†	33.8	33.0	0.2312	ug/L	0.2312	ppb	16:02:53
1	Be 313.107†	-4696.0	238.7	0.1095	ug/L	0.1095	ppb	16:02:33
1	Cd 226.502†	-284.9	-0.6	-0.0089	ug/L	-0.0089	ppb	16:02:53
1	Co 228.616†	-86.0	14.4	0.2516	ug/L	0.2516	ppb	16:02:53
1	Cr 267.716†	-69.6	8.6	0.1188	ug/L	0.1188	ppb	16:02:33
1	Cu 324.752†	5760.4	57.0	0.2072	ug/L	0.2072	ppb	16:02:33
1	Mn 257.610†	807.8	119.1	0.1332	ug/L	0.1332	ppb	16:02:33
1	Mo 202.031†	25.5	8.1	0.5713	ug/L	0.5713	ppb	16:02:53
1	Ni 231.604†	141.8	20.4	0.5460	ug/L	0.5460	ppb	16:02:53
1	P 214.914†	314.2	-4.2	-2.1738	ug/L	-2.1738	ppb	16:02:53
1	Pb 220.353†	-13.6	-0.2	-0.0209	ug/L	-0.0209	ppb	16:02:53
1	S 181.975 Axial†	92.0	15.6	21.315	ug/L	21.315	ppb	16:02:53
1	Sb 206.836†	53.2	-4.6	-1.3693	ug/L	-1.3693	ppb	16:02:53
1	Se 196.026†	-33.1	-4.0	-1.9932	ug/L	-1.9932	ppb	16:02:53
1	Si 251.611†	527.7	110.0	3.3813	ug/L	3.3813	ppb	16:02:53
1	Sn 189.927†	13.3	0.6	0.1119	ug/L	0.1119	ppb	16:02:53
1	Ti 334.940†	-1299.6	63.3	0.1154	ug/L	0.1154	ppb	16:02:33
1	Tl 190.801†	-48.1	13.2	3.4495	ug/L	3.4495	ppb	16:02:53
1	U 409.014†	-4846.5	56.9	1.9255	ug/L	1.9255	ppb	16:02:33
1	V 292.402†	-1646.4	-62.6	-0.5598	ug/L	-0.5598	ppb	16:02:33
1	Zn 213.857†	1000.6	64.2	0.5878	ug/L	0.5878	ppb	16:02:53
1	SiO2†	506.6	64.0	4.1738	ug/L	4.1738	ppb	16:03:49
2	Sc Radial	7474.7	7474.7	100	%			16:01:41
2	Y RADIAL	6888.8	6888.8	99.49	%			16:01:41
2	Al 396.153Radial†	-87.5	-14.9	-12.233	ug/L	-12.233	ppb	16:01:41
2	Ca 317.933Radial†	26.4	-2.7	-3.8030	ug/L	-3.8030	ppb	16:02:01
2	Fe 238.204 Radial†	39.6	4.8	19.820	ug/L	19.820	ppb	16:02:01
2	K 766.490 Radial†	2372.9	-34.3	-7.3891	ug/L	-7.3891	ppb	16:01:41
2	Mg 279.077 IEC†	3.2	0.2	4.5260	ug/L	4.5260	ppb	16:02:01
2	Na 589.592 Radial†	-109.1	26.5	1.6262	ug/L	1.6262	ppb	16:01:41
2	Sr 421.552†	-82.0	-26.1	-0.0729	ug/L	-0.0729	ppb	16:01:41
2	Sc 361.383	727502.2	727502.2	101.23	%			16:02:58
2	Y 371.029	568746.1	568746.1	101.20	%			16:02:58
2	Ag 328.068†	721.7	80.3	0.4829	ug/L	0.4829	ppb	16:02:58
2	As 188.979†	-34.1	1.7	0.6198	ug/L	0.6198	ppb	16:03:19
2	B 249.677†	-686.8	261.4	6.5865	ug/L	6.5865	ppb	16:02:58
2	Ba 233.527†	47.1	46.0	0.3244	ug/L	0.3244	ppb	16:03:19
2	Be 313.107†	-4841.6	98.8	0.0452	ug/L	0.0452	ppb	16:02:58
2	Cd 226.502†	-268.2	16.1	0.2033	ug/L	0.2033	ppb	16:03:19
2	Co 228.616†	-87.4	13.1	0.2251	ug/L	0.2251	ppb	16:03:19
2	Cr 267.716†	-59.9	18.2	0.2544	ug/L	0.2544	ppb	16:02:58
2	Cu 324.752†	5579.9	-126.1	-0.4559	ug/L	-0.4559	ppb	16:02:58
2	Mn 257.610†	753.5	64.7	0.0738	ug/L	0.0738	ppb	16:02:58
2	Mo 202.031†	7.9	-9.3	-0.6544	ug/L	-0.6544	ppb	16:03:19
2	Ni 231.604†	136.5	15.0	0.4017	ug/L	0.4017	ppb	16:03:19

2	P 214.914†	304.8	-13.7	-6.9260	ug/L	-6.9260 ppb	16:03:19
2	Pb 220.353†	-6.8	6.5	0.7689	ug/L	0.7689 ppb	16:03:19
2	S 181.975 Axial†	94.8	18.2	24.961	ug/L	24.961 ppb	16:03:19
2	Sb 206.836†	53.9	-4.0	-1.2212	ug/L	-1.2212 ppb	16:03:19
2	Se 196.026†	-25.0	4.0	2.1270	ug/L	2.1270 ppb	16:03:19
2	Si 251.611†	485.0	67.3	2.0965	ug/L	2.0965 ppb	16:03:19
2	Sn 189.927†	11.3	-1.4	-0.2431	ug/L	-0.2431 ppb	16:03:19
2	Ti 334.940†	-1357.2	7.5	0.0117	ug/L	0.0117 ppb	16:02:58
2	Tl 190.801†	-54.0	7.4	1.9319	ug/L	1.9319 ppb	16:03:19
2	U 409.014†	-4788.7	118.1	3.9945	ug/L	3.9945 ppb	16:02:58
2	V 292.402†	-1579.9	4.4	0.0367	ug/L	0.0367 ppb	16:02:58
2	Zn 213.857†	1037.5	99.8	0.9166	ug/L	0.9166 ppb	16:03:19
2	SiO2†	486.4	43.6	2.9058	ug/L	2.9058 ppb	16:03:54
3	Sc Radial	7403.0	7403.0	99.0	%		16:02:06
3	Y RADIAL	6847.2	6847.2	98.89	%		16:02:06
3	Al 396.153Radial†	-54.0	18.1	14.884	ug/L	14.884 ppb	16:02:06
3	Ca 317.933Radial†	31.7	2.9	4.1275	ug/L	4.1275 ppb	16:02:26
3	Fe 238.204 Radial†	37.0	2.6	10.803	ug/L	10.803 ppb	16:02:26
3	K 766.490 Radial†	2437.2	53.6	11.551	ug/L	11.551 ppb	16:02:06
3	Mg 279.077 IEC†	2.8	-0.2	-4.3818	ug/L	-4.3818 ppb	16:02:26
3	Na 589.592 Radial†	-102.2	32.4	1.9864	ug/L	1.9864 ppb	16:02:06
3	Sr 421.552†	12.5	68.5	0.1913	ug/L	0.1913 ppb	16:02:06
3	Sc 361.383	724912.0	724912.0	100.87	%		16:03:24
3	Y 371.029	566560.2	566560.2	100.81	%		16:03:24
3	Ag 328.068†	611.5	-26.3	-0.1562	ug/L	-0.1562 ppb	16:03:24
3	As 188.979†	-25.8	9.9	3.5743	ug/L	3.5743 ppb	16:03:44
3	B 249.677†	-797.7	149.0	3.7569	ug/L	3.7569 ppb	16:03:24
3	Ba 233.527†	-2.1	-2.6	-0.0191	ug/L	-0.0191 ppb	16:03:44
3	Be 313.107†	-4783.9	138.9	0.0636	ug/L	0.0636 ppb	16:03:24
3	Cd 226.502†	-262.4	20.9	0.2656	ug/L	0.2656 ppb	16:03:44
3	Co 228.616†	-117.9	-17.5	-0.3023	ug/L	-0.3023 ppb	16:03:44
3	Cr 267.716†	-91.4	-13.2	-0.1862	ug/L	-0.1862 ppb	16:03:24
3	Cu 324.752†	5727.1	39.5	0.1438	ug/L	0.1438 ppb	16:03:24
3	Mn 257.610†	762.8	76.6	0.0860	ug/L	0.0860 ppb	16:03:24
3	Mo 202.031†	23.2	5.8	0.4125	ug/L	0.4125 ppb	16:03:44
3	Ni 231.604†	129.2	8.3	0.2223	ug/L	0.2223 ppb	16:03:44
3	P 214.914†	315.7	-1.8	-0.9448	ug/L	-0.9448 ppb	16:03:44
3	Pb 220.353†	-9.3	4.1	0.4857	ug/L	0.4857 ppb	16:03:44
3	S 181.975 Axial†	83.4	7.2	9.8891	ug/L	9.8891 ppb	16:03:44
3	Sb 206.836†	58.2	0.4	0.1393	ug/L	0.1393 ppb	16:03:44
3	Se 196.026†	-28.4	0.6	0.3462	ug/L	0.3462 ppb	16:03:44
3	Si 251.611†	508.5	92.3	2.8372	ug/L	2.8372 ppb	16:03:44
3	Sn 189.927†	13.9	1.3	0.2327	ug/L	0.2327 ppb	16:03:44
3	Ti 334.940†	-1350.6	9.3	0.0167	ug/L	0.0167 ppb	16:03:24
3	Tl 190.801†	-65.3	-3.9	-1.0304	ug/L	-1.0304 ppb	16:03:44
3	U 409.014†	-4846.3	44.0	1.4896	ug/L	1.4896 ppb	16:03:24
3	V 292.402†	-1605.2	-26.2	-0.2317	ug/L	-0.2317 ppb	16:03:24
3	Zn 213.857†	1020.7	86.8	0.7986	ug/L	0.7986 ppb	16:03:44
3	SiO2†	500.0	58.8	3.8345	ug/L	3.8345 ppb	16:03:59

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	726435.2	101.08	%	0.188				0.19%
Sc Radial	7415.8	99.2	%	0.72				0.72%
Y 371.029	568158.2	101.10	%	0.249				0.25%
Y RADIAL	6860.1	99.07	%	0.359				0.36%
Ag 328.068†	37.0	0.2221	ug/L	0.33539	0.2221	ppb	0.33539	150.99%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.3	4.3424	ug/L	14.53076	4.3424	ppb	14.53076	334.62%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.1	1.1153	ug/L	2.25251	1.1153	ppb	2.25251	201.97%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	228.8	5.7644	ug/L	1.74802	5.7644	ppb	1.74802	30.32%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.4	0.1788	ug/L	0.17762	0.1788	ppb	0.17762	99.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	158.8	0.0728	ug/L	0.03311	0.0728	ppb	0.03311	45.49%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.6	2.2898	ug/L	5.41322	2.2898	ppb	5.41322	236.40%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                12.1      0.1533 ug/L       0.14389      0.1533 ppb        0.14389  93.85%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 3.3      0.0581 ug/L       0.31243      0.0581 ppb        0.31243 537.72%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 4.5      0.0623 ug/L       0.22565      0.0623 ppb        0.22565 361.94%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -9.9     -0.0350 ug/L       0.36590     -0.0350 ppb        0.36590 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4      13.992 ug/L        5.0547      13.992 ppb         5.0547  36.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          21.6      4.6586 ug/L      10.46975      4.6586 ppb       10.46975 224.74%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -6.2873 ug/L      11.88120     -6.2873 ppb       11.88120 188.97%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                86.8      0.0976 ug/L       0.03136      0.0976 ppb        0.03136  32.12%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 1.5      0.1098 ug/L       0.66654      0.1098 ppb        0.66654 607.14%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -2.3     -0.1432 ug/L       3.38145     -0.1432 ppb        3.38145 >999.9%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.6      0.3900 ug/L       0.16215      0.3900 ppb        0.16215  41.58%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.6     -3.3482 ug/L       3.15883     -3.3482 ppb        3.15883  94.34%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 3.5      0.4112 ug/L       0.40015      0.4112 ppb        0.40015  97.30%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           13.7      18.722 ug/L        7.8634      18.722 ppb         7.8634  42.00%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.8     -0.8171 ug/L       0.83153     -0.8171 ppb        0.83153 101.77%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.2      0.1600 ug/L       2.06638      0.1600 ppb        2.06638 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                89.9      2.7717 ug/L       0.64491      2.7717 ppb        0.64491  23.27%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.2      0.0338 ug/L       0.24736      0.0338 ppb        0.24736 730.83%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 5.8      0.0161 ug/L       0.15179      0.0161 ppb        0.15179 944.43%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                26.7      0.0479 ug/L       0.05850      0.0479 ppb        0.05850 122.09%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.5      1.4503 ug/L       2.27843      1.4503 ppb        2.27843 157.10%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 73.0      2.4699 ug/L       1.33823      2.4699 ppb        1.33823  54.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -28.1     -0.2516 ug/L       0.29875     -0.2516 ppb        0.29875 118.75%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                83.6      0.7677 ug/L       0.16655      0.7677 ppb        0.16655  21.70%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      55.5      3.6380 ug/L       0.65642      3.6380 ppb        0.65642  18.04%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 22
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 17:08:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7355.2	7355.2	98.4	%			17:10:59
1	Y RADIAL	6761.2	6761.2	97.64	%			17:10:59
1	Al 396.153Radial†	6223.9	6397.5	5246.3	ug/L	5246.3	ppb	17:10:39
1	Ca 317.933Radial†	3673.7	3704.2	5247.5	ug/L	5247.5	ppb	17:10:59
1	Fe 238.204 Radial†	1224.8	1209.9	5059.2	ug/L	5059.2	ppb	17:10:59
1	K 766.490 Radial†	25156.0	23156.9	4982.8	ug/L	4982.8	ppb	17:10:39
1	Mg 279.077 IEC†	209.2	209.6	5230.9	ug/L	5230.9	ppb	17:10:59
1	Na 589.592 Radial†	167127.7	169975.0	10432	ug/L	10432	ppb	17:10:39
1	Sr 421.552†	173183.6	176049.5	491.66	ug/L	491.66	ppb	17:10:39
1	Sc 361.383	741120.8	741120.8	103.12	%			17:11:58
1	Y 371.029	572028.0	572028.0	101.78	%			17:11:58
1	Ag 328.068†	88301.1	84995.8	510.88	ug/L	510.88	ppb	17:11:58
1	As 188.979†	1419.5	1412.0	512.41	ug/L	512.41	ppb	17:12:18
1	B 249.677†	19772.0	20113.5	503.96	ug/L	503.96	ppb	17:11:58
1	Ba 233.527†	74712.4	72450.6	512.31	ug/L	512.31	ppb	17:11:58
1	Be 313.107†	1148778.6	1118890.4	513.29	ug/L	513.29	ppb	17:11:58
1	Cd 226.502†	40390.2	39448.9	502.90	ug/L	502.90	ppb	17:12:18
1	Co 228.616†	30009.5	29200.6	506.63	ug/L	506.63	ppb	17:12:18
1	Cr 267.716†	37484.1	36427.0	511.16	ug/L	511.16	ppb	17:11:58
1	Cu 324.752†	149844.6	139670.9	506.42	ug/L	506.42	ppb	17:11:58
1	Mn 257.610†	478419.7	463259.8	511.40	ug/L	511.40	ppb	17:11:58
1	Mo 202.031†	7522.9	7278.1	512.70	ug/L	512.70	ppb	17:12:18
1	Ni 231.604†	19647.4	18932.9	505.75	ug/L	505.75	ppb	17:12:18
1	P 214.914†	5504.7	5023.3	2468.5	ug/L	2468.5	ppb	17:12:18
1	Pb 220.353†	4456.9	4335.3	517.74	ug/L	517.74	ppb	17:12:18
1	S 181.975 Axial†	852.7	751.5	1028.4	ug/L	1028.4	ppb	17:12:18
1	Sb 206.836†	1816.2	1704.0	512.55	ug/L	512.55	ppb	17:12:18
1	Se 196.026†	997.4	995.9	526.15	ug/L	526.15	ppb	17:12:18
1	Si 251.611†	87163.1	84113.2	2580.3	ug/L	2580.3	ppb	17:11:58
1	Sn 189.927†	2974.4	2871.9	509.21	ug/L	509.21	ppb	17:12:18
1	Ti 334.940†	284487.2	277224.9	507.45	ug/L	507.45	ppb	17:11:58
1	Tl 190.801†	1946.4	1948.2	513.09	ug/L	513.09	ppb	17:12:18
1	U 409.014†	10382.3	14916.8	503.49	ug/L	503.49	ppb	17:11:58
1	V 292.402†	56045.4	55914.2	513.92	ug/L	513.92	ppb	17:11:58
1	Zn 213.857†	58130.4	55445.8	507.03	ug/L	507.03	ppb	17:11:58
1	SiO2†	87839.5	84744.0	5534.4	ug/L	5534.4	ppb	17:13:18
2	Sc Radial	7325.9	7325.9	98.0	%			17:11:24
2	Y RADIAL	6752.9	6752.9	97.52	%			17:11:24
2	Al 396.153Radial†	6231.0	6430.1	5273.1	ug/L	5273.1	ppb	17:11:04
2	Ca 317.933Radial†	3670.6	3716.0	5264.1	ug/L	5264.1	ppb	17:11:24
2	Fe 238.204 Radial†	1218.3	1208.3	5052.5	ug/L	5052.5	ppb	17:11:24
2	K 766.490 Radial†	25340.6	23447.7	5045.5	ug/L	5045.5	ppb	17:11:04
2	Mg 279.077 IEC†	208.2	209.4	5225.8	ug/L	5225.8	ppb	17:11:24
2	Na 589.592 Radial†	167131.7	170659.6	10474	ug/L	10474	ppb	17:11:04
2	Sr 421.552†	173419.2	176995.0	494.30	ug/L	494.30	ppb	17:11:04
2	Sc 361.383	739217.0	739217.0	102.86	%			17:12:25
2	Y 371.029	570105.1	570105.1	101.44	%			17:12:25
2	Ag 328.068†	87884.9	84811.8	509.78	ug/L	509.78	ppb	17:12:25
2	As 188.979†	1422.5	1418.5	514.76	ug/L	514.76	ppb	17:12:45
2	B 249.677†	19750.7	20142.2	504.69	ug/L	504.69	ppb	17:12:25
2	Ba 233.527†	74335.0	72270.3	511.04	ug/L	511.04	ppb	17:12:25
2	Be 313.107†	1143521.5	1116648.2	512.27	ug/L	512.27	ppb	17:12:25
2	Cd 226.502†	40177.9	39343.3	501.56	ug/L	501.56	ppb	17:12:45
2	Co 228.616†	29852.3	29122.8	505.28	ug/L	505.28	ppb	17:12:45
2	Cr 267.716†	37289.3	36331.2	509.81	ug/L	509.81	ppb	17:12:25
2	Cu 324.752†	149532.5	139741.6	506.68	ug/L	506.68	ppb	17:12:25
2	Mn 257.610†	476899.3	462976.5	511.09	ug/L	511.09	ppb	17:12:25
2	Mo 202.031†	7496.3	7271.0	512.20	ug/L	512.20	ppb	17:12:45
2	Ni 231.604†	19580.3	18916.7	505.32	ug/L	505.32	ppb	17:12:45

2	P 214.914†	5485.3	5018.2	2465.9	ug/L	2465.9 ppb	17:12:45
2	Pb 220.353†	4415.6	4306.2	514.28	ug/L	514.28 ppb	17:12:45
2	S 181.975 Axial†	848.0	749.0	1025.0	ug/L	1025.0 ppb	17:12:45
2	Sb 206.836†	1816.8	1709.1	514.09	ug/L	514.09 ppb	17:12:45
2	Se 196.026†	1003.6	1004.5	530.52	ug/L	530.52 ppb	17:12:45
2	Si 251.611†	86801.9	83979.7	2576.2	ug/L	2576.2 ppb	17:12:25
2	Sn 189.927†	2961.8	2867.1	508.36	ug/L	508.36 ppb	17:12:45
2	Ti 334.940†	283706.8	277176.6	507.37	ug/L	507.37 ppb	17:12:25
2	Tl 190.801†	1947.0	1953.6	514.51	ug/L	514.51 ppb	17:12:45
2	U 409.014†	10377.7	14938.2	504.22	ug/L	504.22 ppb	17:12:25
2	V 292.402†	55940.5	55952.3	514.27	ug/L	514.27 ppb	17:12:25
2	Zn 213.857†	57861.6	55329.7	505.96	ug/L	505.96 ppb	17:12:25
2	SiO2†	87366.6	84503.6	5518.6	ug/L	5518.6 ppb	17:13:23
3	Sc Radial	7318.8	7318.8	97.9	%		17:11:49
3	Y RADIAL	6734.8	6734.8	97.26	%		17:11:49
3	Al 396.153Radial†	6166.3	6370.2	5223.7	ug/L	5223.7 ppb	17:11:29
3	Ca 317.933Radial†	3664.6	3713.5	5260.6	ug/L	5260.6 ppb	17:11:49
3	Fe 238.204 Radial†	1215.9	1207.0	5047.4	ug/L	5047.4 ppb	17:11:49
3	K 766.490 Radial†	25093.8	23220.7	4996.6	ug/L	4996.6 ppb	17:11:29
3	Mg 279.077 IEC†	208.1	209.4	5227.5	ug/L	5227.5 ppb	17:11:49
3	Na 589.592 Radial†	165706.5	169369.3	10395	ug/L	10395 ppb	17:11:29
3	Sr 421.552†	171906.5	175621.7	490.47	ug/L	490.47 ppb	17:11:29
3	Sc 361.383	734212.8	734212.8	102.16	%		17:12:52
3	Y 371.029	566556.0	566556.0	100.81	%		17:12:52
3	Ag 328.068†	87293.3	84815.0	509.79	ug/L	509.79 ppb	17:12:52
3	As 188.979†	1427.4	1432.6	519.86	ug/L	519.86 ppb	17:13:12
3	B 249.677†	19543.9	20070.6	502.87	ug/L	502.87 ppb	17:12:52
3	Ba 233.527†	73660.1	72102.2	509.85	ug/L	509.85 ppb	17:12:52
3	Be 313.107†	1132526.8	1113463.4	510.81	ug/L	510.81 ppb	17:12:52
3	Cd 226.502†	40095.0	39528.3	503.92	ug/L	503.92 ppb	17:13:12
3	Co 228.616†	29800.1	29269.5	507.83	ug/L	507.83 ppb	17:13:12
3	Cr 267.716†	37069.1	36362.7	510.25	ug/L	510.25 ppb	17:12:52
3	Cu 324.752†	148278.3	139504.8	505.82	ug/L	505.82 ppb	17:12:52
3	Mn 257.610†	472366.2	461699.3	509.68	ug/L	509.68 ppb	17:12:52
3	Mo 202.031†	7470.0	7295.0	513.88	ug/L	513.88 ppb	17:13:12
3	Ni 231.604†	19500.0	18967.9	506.69	ug/L	506.69 ppb	17:13:12
3	P 214.914†	5484.0	5053.2	2483.9	ug/L	2483.9 ppb	17:13:12
3	Pb 220.353†	4417.4	4337.3	517.98	ug/L	517.98 ppb	17:13:12
3	S 181.975 Axial†	835.5	742.4	1016.1	ug/L	1016.1 ppb	17:13:12
3	Sb 206.836†	1812.6	1717.1	516.49	ug/L	516.49 ppb	17:13:12
3	Se 196.026†	1010.2	1017.6	537.19	ug/L	537.19 ppb	17:13:12
3	Si 251.611†	86011.1	83780.7	2570.0	ug/L	2570.0 ppb	17:12:52
3	Sn 189.927†	2947.7	2872.9	509.39	ug/L	509.39 ppb	17:13:12
3	Ti 334.940†	281343.0	276742.8	506.57	ug/L	506.57 ppb	17:12:52
3	Tl 190.801†	1949.3	1968.9	518.46	ug/L	518.46 ppb	17:13:12
3	U 409.014†	10333.0	14963.3	505.07	ug/L	505.07 ppb	17:12:52
3	V 292.402†	55374.7	55769.1	512.63	ug/L	512.63 ppb	17:12:52
3	Zn 213.857†	57333.5	55196.2	504.72	ug/L	504.72 ppb	17:12:52
3	SiO2†	86755.9	84484.7	5517.2	ug/L	5517.2 ppb	17:13:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	738183.5	102.71	%	0.496				0.48%
Sc Radial	7333.3	98.1	%	0.26				0.26%
Y 371.029	569563.0	101.35	%	0.494				0.49%
Y RADIAL	6749.7	97.48	%	0.195				0.20%
Ag 328.068†	84874.2	510.15	ug/L	0.633	510.15	ppb	0.633	0.12%
QC value within limits for Ag 328.068 Recovery = 102.03%								
Al 396.153Radial†	6399.3	5247.7	ug/L	24.76	5247.7	ppb	24.76	0.47%
QC value within limits for Al 396.153Radial Recovery = 104.95%								
As 188.979†	1421.0	515.68	ug/L	3.810	515.68	ppb	3.810	0.74%
QC value within limits for As 188.979 Recovery = 103.14%								
B 249.677†	20108.8	503.84	ug/L	0.914	503.84	ppb	0.914	0.18%
QC value within limits for B 249.677 Recovery = 100.77%								
Ba 233.527†	72274.4	511.07	ug/L	1.231	511.07	ppb	1.231	0.24%
QC value within limits for Ba 233.527 Recovery = 102.21%								
Be 313.107†	1116334.0	512.12	ug/L	1.249	512.12	ppb	1.249	0.24%
QC value within limits for Be 313.107 Recovery = 102.42%								
Ca 317.933Radial†	3711.3	5257.4	ug/L	8.77	5257.4	ppb	8.77	0.17%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.15%
Cd 226.502†            39440.2      502.79 ug/L         1.185      502.79 ppb          1.185   0.24%
   QC value within limits for Cd 226.502  Recovery = 100.56%
Co 228.616†            29197.6      506.58 ug/L         1.275      506.58 ppb          1.275   0.25%
   QC value within limits for Co 228.616  Recovery = 101.32%
Cr 267.716†            36373.6      510.41 ug/L         0.684      510.41 ppb          0.684   0.13%
   QC value within limits for Cr 267.716  Recovery = 102.08%
Cu 324.752†           139639.1      506.31 ug/L         0.441      506.31 ppb          0.441   0.09%
   QC value within limits for Cu 324.752  Recovery = 101.26%
Fe 238.204 Radial†      1208.4      5053.0 ug/L          5.94      5053.0 ppb           5.94   0.12%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.06%
K 766.490 Radial†      23275.1      5008.3 ug/L         32.97      5008.3 ppb          32.97   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 100.17%
Mg 279.077 IEC†          209.5      5228.1 ug/L          2.59      5228.1 ppb           2.59   0.05%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.56%
Mn 257.610†           462645.2      510.72 ug/L         0.917      510.72 ppb          0.917   0.18%
   QC value within limits for Mn 257.610  Recovery = 102.14%
Mo 202.031†             7281.4      512.93 ug/L         0.866      512.93 ppb          0.866   0.17%
   QC value within limits for Mo 202.031  Recovery = 102.59%
Na 589.592 Radial†    170001.3       10433 ug/L          39.6       10433 ppb           39.6   0.38%
   QC value within limits for Na 589.592 Radial  Recovery = 104.33%
Ni 231.604†            18939.2      505.92 ug/L         0.698      505.92 ppb          0.698   0.14%
   QC value within limits for Ni 231.604  Recovery = 101.18%
P 214.914†              5031.6      2472.8 ug/L          9.75      2472.8 ppb           9.75   0.39%
   QC value within limits for P 214.914  Recovery = 98.91%
Pb 220.353†             4326.3      516.67 ug/L         2.067      516.67 ppb          2.067   0.40%
   QC value within limits for Pb 220.353  Recovery = 103.33%
S 181.975 Axial†         747.6      1023.2 ug/L          6.38      1023.2 ppb           6.38   0.62%
   QC value within limits for S 181.975 Axial  Recovery = 102.32%
Sb 206.836†             1710.0      514.38 ug/L         1.985      514.38 ppb          1.985   0.39%
   QC value within limits for Sb 206.836  Recovery = 102.88%
Se 196.026†             1006.0      531.29 ug/L         5.557      531.29 ppb          5.557   1.05%
   QC value within limits for Se 196.026  Recovery = 106.26%
Si 251.611†            83957.9      2575.5 ug/L          5.18      2575.5 ppb           5.18   0.20%
   QC value within limits for Si 251.611  Recovery = 103.02%
Sn 189.927†             2870.6      508.98 ug/L         0.547      508.98 ppb          0.547   0.11%
   QC value within limits for Sn 189.927  Recovery = 101.80%
Sr 421.552†           176222.1      492.14 ug/L         1.963      492.14 ppb          1.963   0.40%
   QC value within limits for Sr 421.552  Recovery = 98.43%
Ti 334.940†           277048.1      507.13 ug/L         0.486      507.13 ppb          0.486   0.10%
   QC value within limits for Ti 334.940  Recovery = 101.43%
Tl 190.801†             1956.9      515.35 ug/L         2.787      515.35 ppb          2.787   0.54%
   QC value within limits for Tl 190.801  Recovery = 103.07%
U 409.014†             14939.4      504.26 ug/L         0.789      504.26 ppb          0.789   0.16%
   QC value within limits for U 409.014  Recovery = 100.85%
V 292.402†             55878.5      513.61 ug/L         0.865      513.61 ppb          0.865   0.17%
   QC value within limits for V 292.402  Recovery = 102.72%
Zn 213.857†            55323.9      505.91 ug/L         1.155      505.91 ppb          1.155   0.23%
   QC value within limits for Zn 213.857  Recovery = 101.18%
SiO2†                  84577.4      5523.4 ug/L          9.53      5523.4 ppb           9.53   0.17%
   QC value within limits for SiO2  Recovery = 103.29%
All analyte(s) passed QC.
```

Sequence No.: 23
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 17:15:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7383.1	7383.1	98.8	%			17:17:29
1	Y RADIAL	6829.3	6829.3	98.63	%			17:17:29
1	Al 396.153Radial†	-55.3	16.7	13.755	ug/L	13.755	ppb	17:17:29
1	Ca 317.933Radial†	22.6	-6.2	-8.8370	ug/L	-8.8370	ppb	17:17:49
1	Fe 238.204 Radial†	35.1	0.8	3.2274	ug/L	3.2274	ppb	17:17:49
1	K 766.490 Radial†	2425.1	48.0	10.354	ug/L	10.354	ppb	17:17:29
1	Mg 279.077 IEC†	6.3	3.3	82.931	ug/L	82.931	ppb	17:17:49
1	Na 589.592 Radial†	-137.4	-3.6	-0.2206	ug/L	-0.2206	ppb	17:17:29
1	Sr 421.552†	-31.9	23.5	0.0658	ug/L	0.0658	ppb	17:17:29
1	Sc 361.383	729651.1	729651.1	101.53	%			17:18:46
1	Y 371.029	571078.0	571078.0	101.62	%			17:18:46
1	Ag 328.068†	704.8	61.6	0.3645	ug/L	0.3645	ppb	17:18:46
1	As 188.979†	-33.9	2.1	0.7411	ug/L	0.7411	ppb	17:19:06
1	B 249.677†	-666.7	283.2	7.1376	ug/L	7.1376	ppb	17:18:46
1	Ba 233.527†	12.7	12.0	0.0865	ug/L	0.0865	ppb	17:19:06
1	Be 313.107†	-4888.7	66.5	0.0307	ug/L	0.0307	ppb	17:18:46
1	Cd 226.502†	-288.5	-3.0	-0.0388	ug/L	-0.0388	ppb	17:19:06
1	Co 228.616†	-98.7	2.2	0.0387	ug/L	0.0387	ppb	17:19:06
1	Cr 267.716†	-105.2	-26.2	-0.3687	ug/L	-0.3687	ppb	17:18:46
1	Cu 324.752†	5591.3	-131.1	-0.4750	ug/L	-0.4750	ppb	17:18:46
1	Mn 257.610†	767.2	76.0	0.0826	ug/L	0.0826	ppb	17:18:46
1	Mo 202.031†	17.0	-0.4	-0.0272	ug/L	-0.0272	ppb	17:19:06
1	Ni 231.604†	141.1	19.2	0.5126	ug/L	0.5126	ppb	17:19:06
1	P 214.914†	323.3	3.7	1.9606	ug/L	1.9606	ppb	17:19:06
1	Pb 220.353†	2.6	15.8	1.8861	ug/L	1.8861	ppb	17:19:06
1	S 181.975 Axial†	84.2	7.5	10.335	ug/L	10.335	ppb	17:19:06
1	Sb 206.836†	56.2	-1.9	-0.5435	ug/L	-0.5435	ppb	17:19:06
1	Se 196.026†	-23.3	5.8	2.9742	ug/L	2.9742	ppb	17:19:06
1	Si 251.611†	778.3	354.8	10.956	ug/L	10.956	ppb	17:19:06
1	Sn 189.927†	12.2	-0.5	-0.0805	ug/L	-0.0805	ppb	17:19:06
1	Ti 334.940†	-1301.1	66.7	0.1175	ug/L	0.1175	ppb	17:18:46
1	Tl 190.801†	-47.8	13.7	3.5830	ug/L	3.5830	ppb	17:19:06
1	U 409.014†	-4642.7	275.8	9.3385	ug/L	9.3385	ppb	17:18:46
1	V 292.402†	-1500.3	87.4	0.8126	ug/L	0.8126	ppb	17:18:46
1	Zn 213.857†	967.2	27.5	0.2483	ug/L	0.2483	ppb	17:19:06
1	SiO2†	761.7	313.4	20.603	ug/L	20.603	ppb	17:20:02
2	Sc Radial	7555.7	7555.7	101	%			17:17:54
2	Y RADIAL	7004.6	7004.6	101.2	%			17:17:54
2	Al 396.153Radial†	-70.3	3.1	2.5786	ug/L	2.5786	ppb	17:17:54
2	Ca 317.933Radial†	14.0	-15.3	-21.619	ug/L	-21.619	ppb	17:18:14
2	Fe 238.204 Radial†	38.2	3.0	12.580	ug/L	12.580	ppb	17:18:14
2	K 766.490 Radial†	2533.5	99.1	21.403	ug/L	21.403	ppb	17:17:54
2	Mg 279.077 IEC†	4.3	1.2	30.148	ug/L	30.148	ppb	17:18:14
2	Na 589.592 Radial†	-268.9	-130.5	-8.0088	ug/L	-8.0088	ppb	17:17:54
2	Sr 421.552†	-30.4	25.7	0.0721	ug/L	0.0721	ppb	17:17:54
2	Sc 361.383	716378.7	716378.7	99.678	%			17:19:11
2	Y 371.029	560732.4	560732.4	99.774	%			17:19:11
2	Ag 328.068†	618.9	-11.7	-0.0617	ug/L	-0.0617	ppb	17:19:11
2	As 188.979†	-24.0	11.3	4.0898	ug/L	4.0898	ppb	17:19:31
2	B 249.677†	-741.4	196.1	4.9415	ug/L	4.9415	ppb	17:19:11
2	Ba 233.527†	6.3	5.8	0.0414	ug/L	0.0414	ppb	17:19:31
2	Be 313.107†	-4782.5	83.8	0.0386	ug/L	0.0386	ppb	17:19:11
2	Cd 226.502†	-267.5	12.8	0.1616	ug/L	0.1616	ppb	17:19:31
2	Co 228.616†	-97.4	1.8	0.0286	ug/L	0.0286	ppb	17:19:31
2	Cr 267.716†	-27.4	49.9	0.7010	ug/L	0.7010	ppb	17:19:11
2	Cu 324.752†	5628.5	8.2	0.0304	ug/L	0.0304	ppb	17:19:11
2	Mn 257.610†	744.8	67.6	0.0755	ug/L	0.0755	ppb	17:19:11
2	Mo 202.031†	8.5	-8.6	-0.6049	ug/L	-0.6049	ppb	17:19:31
2	Ni 231.604†	136.4	17.1	0.4563	ug/L	0.4563	ppb	17:19:31

2	P 214.914†	342.5	28.8	14.695	ug/L	14.695 ppb	17:19:31
2	Pb 220.353†	2.1	15.4	1.8303	ug/L	1.8303 ppb	17:19:31
2	S 181.975 Axial†	79.4	4.3	5.8761	ug/L	5.8761 ppb	17:19:31
2	Sb 206.836†	54.6	-2.5	-0.7895	ug/L	-0.7895 ppb	17:19:31
2	Se 196.026†	-26.7	2.0	1.0415	ug/L	1.0415 ppb	17:19:31
2	Si 251.611†	745.8	336.4	10.409	ug/L	10.409 ppb	17:19:31
2	Sn 189.927†	6.2	-6.3	-1.1127	ug/L	-1.1127 ppb	17:19:31
2	Ti 334.940†	-1294.5	49.5	0.0909	ug/L	0.0909 ppb	17:19:11
2	Tl 190.801†	-53.8	6.8	1.7745	ug/L	1.7745 ppb	17:19:31
2	U 409.014†	-4950.8	-118.1	-4.0008	ug/L	-4.0008 ppb	17:19:11
2	V 292.402†	-1542.2	18.0	0.1466	ug/L	0.1466 ppb	17:19:11
2	Zn 213.857†	963.2	41.1	0.3744	ug/L	0.3744 ppb	17:19:31
2	SiO2†	776.6	342.3	22.549	ug/L	22.549 ppb	17:20:07
3	Sc Radial	7361.7	7361.7	98.5	%		17:18:19
3	Y RADIAL	6861.2	6861.2	99.09	%		17:18:19
3	Al 396.153Radial†	-72.8	-1.3	-1.0607	ug/L	-1.0607 ppb	17:18:19
3	Ca 317.933Radial†	31.6	3.0	4.2344	ug/L	4.2344 ppb	17:18:39
3	Fe 238.204 Radial†	36.7	2.5	10.477	ug/L	10.477 ppb	17:18:39
3	K 766.490 Radial†	2542.7	174.5	37.654	ug/L	37.654 ppb	17:18:19
3	Mg 279.077 IEC†	1.9	-1.1	-27.017	ug/L	-27.017 ppb	17:18:39
3	Na 589.592 Radial†	-207.9	-75.5	-4.6364	ug/L	-4.6364 ppb	17:18:19
3	Sr 421.552†	-71.0	-16.2	-0.0452	ug/L	-0.0452 ppb	17:18:19
3	Sc 361.383	722458.7	722458.7	100.52	%		17:19:37
3	Y 371.029	565036.5	565036.5	100.54	%		17:19:37
3	Ag 328.068†	564.6	-71.0	-0.4225	ug/L	-0.4225 ppb	17:19:37
3	As 188.979†	-40.8	-5.1	-1.8485	ug/L	-1.8485 ppb	17:19:57
3	B 249.677†	-804.1	140.0	3.5258	ug/L	3.5258 ppb	17:19:37
3	Ba 233.527†	3.1	2.6	0.0174	ug/L	0.0174 ppb	17:19:57
3	Be 313.107†	-4788.1	118.6	0.0543	ug/L	0.0543 ppb	17:19:37
3	Cd 226.502†	-270.0	12.5	0.1593	ug/L	0.1593 ppb	17:19:57
3	Co 228.616†	-82.6	17.3	0.3002	ug/L	0.3002 ppb	17:19:57
3	Cr 267.716†	-53.3	24.4	0.3415	ug/L	0.3415 ppb	17:19:37
3	Cu 324.752†	5622.5	-45.3	-0.1635	ug/L	-0.1635 ppb	17:19:37
3	Mn 257.610†	717.0	33.6	0.0389	ug/L	0.0389 ppb	17:19:37
3	Mo 202.031†	24.0	6.8	0.4785	ug/L	0.4785 ppb	17:19:57
3	Ni 231.604†	148.7	28.1	0.7516	ug/L	0.7516 ppb	17:19:57
3	P 214.914†	311.3	-5.1	-2.5655	ug/L	-2.5655 ppb	17:19:57
3	Pb 220.353†	-9.4	3.9	0.4590	ug/L	0.4590 ppb	17:19:57
3	S 181.975 Axial†	78.1	2.3	3.1219	ug/L	3.1219 ppb	17:19:57
3	Sb 206.836†	44.1	-13.4	-3.9514	ug/L	-3.9514 ppb	17:19:57
3	Se 196.026†	-21.7	7.1	3.6792	ug/L	3.6792 ppb	17:19:57
3	Si 251.611†	737.4	321.8	9.8971	ug/L	9.8971 ppb	17:19:57
3	Sn 189.927†	21.2	8.6	1.5176	ug/L	1.5176 ppb	17:19:57
3	Ti 334.940†	-1359.0	-3.7	-0.0066	ug/L	-0.0066 ppb	17:19:37
3	Tl 190.801†	-53.6	7.4	1.9366	ug/L	1.9366 ppb	17:19:57
3	U 409.014†	-4870.7	3.4	0.1132	ug/L	0.1132 ppb	17:19:37
3	V 292.402†	-1621.8	-48.1	-0.4327	ug/L	-0.4327 ppb	17:19:37
3	Zn 213.857†	957.3	27.2	0.2461	ug/L	0.2461 ppb	17:19:57
3	SiO2†	748.2	307.4	20.123	ug/L	20.123 ppb	17:20:12

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	722829.5	100.58	%	0.924				0.92%
Sc Radial	7433.5	99.5	%	1.42				1.43%
Y 371.029	565615.6	100.64	%	0.925				0.92%
Y RADIAL	6898.4	99.63	%	1.349				1.35%
Ag 328.068†	-7.0	-0.0399	ug/L	0.39393	-0.0399	ppb	0.39393	987.29%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	6.2	5.0908	ug/L	7.72056	5.0908	ppb	7.72056	151.66%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.8	0.9941	ug/L	2.97723	0.9941	ppb	2.97723	299.48%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	206.4	5.2017	ug/L	1.81989	5.2017	ppb	1.81989	34.99%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	6.8	0.0484	ug/L	0.03505	0.0484	ppb	0.03505	72.38%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	89.6	0.0412	ug/L	0.01198	0.0412	ppb	0.01198	29.10%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-6.2	-8.7407	ug/L	12.92716	-8.7407	ppb	12.92716	147.90%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 7.4      0.0941 ug/L       0.11506      0.0941 ppb        0.11506 122.32%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 7.1      0.1225 ug/L       0.15398      0.1225 ppb        0.15398 125.73%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                16.0      0.2246 ug/L       0.54437      0.2246 ppb        0.54437 242.37%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -56.1     -0.2027 ug/L       0.25498     -0.2027 ppb        0.25498 125.79%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          2.1      8.7613 ug/L       4.90648      8.7613 ppb        4.90648  56.00%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         107.2     23.137 ug/L       13.7321     23.137 ppb        13.7321  59.35%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.2     28.687 ug/L       54.9883     28.687 ppb        54.9883 191.68%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                59.1      0.0657 ug/L       0.02347      0.0657 ppb        0.02347  35.73%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.7     -0.0512 ug/L       0.54211     -0.0512 ppb        0.54211 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -69.9     -4.2886 ug/L       3.90572     -4.2886 ppb        3.90572  91.07%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.5      0.5735 ug/L       0.15675      0.5735 ppb        0.15675  27.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  9.1      4.6966 ug/L       8.94941      4.6966 ppb        8.94941 190.55%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                11.7      1.3918 ug/L       0.80833      1.3918 ppb        0.80833  58.08%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            4.7      6.4442 ug/L       3.63975      6.4442 ppb        3.63975  56.48%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -5.9     -1.7615 ug/L       1.90051     -1.7615 ppb        1.90051 107.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      2.5649 ug/L       1.36562      2.5649 ppb        1.36562  53.24%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               337.7     10.421 ug/L        0.5298     10.421 ppb         0.5298   5.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.6      0.1081 ug/L       1.32522      0.1081 ppb        1.32522 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                11.0      0.0309 ug/L       0.06601      0.0309 ppb        0.06601 213.73%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                37.5      0.0673 ug/L       0.06537      0.0673 ppb        0.06537  97.16%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 9.3      2.4314 ug/L       1.00061      2.4314 ppb        1.00061  41.15%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 53.7      1.8170 ug/L       6.83090      1.8170 ppb        6.83090 375.95%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 19.1      0.1755 ug/L       0.62311      0.1755 ppb        0.62311 355.08%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                32.0      0.2896 ug/L       0.07345      0.2896 ppb        0.07345  25.36%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     321.0     21.092 ug/L        1.2851     21.092 ppb         1.2851   6.09%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 32
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 18:18:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7366.9	7366.9	98.6	%			18:21:03
1	Y RADIAL	6789.6	6789.6	98.05	%			18:21:03
1	Al 396.153Radial†	6381.2	6547.1	5369.6	ug/L	5369.6	ppb	18:20:43
1	Ca 317.933Radial†	3683.4	3708.2	5253.1	ug/L	5253.1	ppb	18:21:03
1	Fe 238.204 Radial†	1228.3	1211.4	5066.0	ug/L	5066.0	ppb	18:21:03
1	K 766.490 Radial†	25571.7	23538.4	5065.1	ug/L	5065.1	ppb	18:20:43
1	Mg 279.077 IEC†	208.6	208.6	5205.9	ug/L	5205.9	ppb	18:21:03
1	Na 589.592 Radial†	171913.5	174562.7	10713	ug/L	10713	ppb	18:20:43
1	Sr 421.552†	178023.7	180682.5	504.60	ug/L	504.60	ppb	18:20:43
1	Sc 361.383	741979.7	741979.7	103.24	%			18:22:00
1	Y 371.029	481732.9	481732.9	85.718	%			18:22:05
1	Ag 328.068†	89407.2	85968.1	516.69	ug/L	516.69	ppb	18:22:05
1	As 188.979†	1424.3	1415.1	513.50	ug/L	513.50	ppb	18:22:25
1	B 249.677†	20010.2	20322.0	509.17	ug/L	509.17	ppb	18:22:05
1	Ba 233.527†	74975.3	72621.4	513.53	ug/L	513.53	ppb	18:22:05
1	Be 313.107†	1148144.2	1116986.4	512.41	ug/L	512.41	ppb	18:22:00
1	Cd 226.502†	41517.3	40495.1	516.25	ug/L	516.25	ppb	18:22:05
1	Co 228.616†	30576.8	29716.4	515.58	ug/L	515.58	ppb	18:22:05
1	Cr 267.716†	37878.9	36767.3	515.92	ug/L	515.92	ppb	18:22:05
1	Cu 324.752†	150859.2	140485.4	509.37	ug/L	509.37	ppb	18:22:05
1	Mn 257.610†	477837.9	462159.2	510.19	ug/L	510.19	ppb	18:22:00
1	Mo 202.031†	7481.2	7229.2	509.26	ug/L	509.26	ppb	18:22:25
1	Ni 231.604†	20046.2	19297.1	515.48	ug/L	515.48	ppb	18:22:05
1	P 214.914†	5493.4	5006.2	2459.3	ug/L	2459.3	ppb	18:22:25
1	Pb 220.353†	4396.0	4271.3	510.13	ug/L	510.13	ppb	18:22:25
1	S 181.975 Axial†	849.6	747.5	1023.0	ug/L	1023.0	ppb	18:22:25
1	Sb 206.836†	1829.4	1714.7	515.60	ug/L	515.60	ppb	18:22:25
1	Se 196.026†	1005.0	1002.3	529.41	ug/L	529.41	ppb	18:22:25
1	Si 251.611†	87322.6	84169.8	2582.1	ug/L	2582.1	ppb	18:22:05
1	Sn 189.927†	2980.6	2874.6	509.68	ug/L	509.68	ppb	18:22:25
1	Ti 334.940†	281193.2	273715.0	501.01	ug/L	501.01	ppb	18:22:05
1	Tl 190.801†	1949.3	1948.9	513.14	ug/L	513.14	ppb	18:22:25
1	U 409.014†	11260.3	15755.5	531.88	ug/L	531.88	ppb	18:22:05
1	V 292.402†	56741.6	56525.7	519.49	ug/L	519.49	ppb	18:22:05
1	Zn 213.857†	58482.3	55721.5	509.51	ug/L	509.51	ppb	18:22:05
1	SiO2†	86787.3	83626.2	5460.9	ug/L	5460.9	ppb	18:23:32
2	Sc Radial	7380.2	7380.2	98.7	%			18:21:28
2	Y RADIAL	6784.0	6784.0	97.97	%			18:21:28
2	Al 396.153Radial†	6225.4	6377.7	5230.5	ug/L	5230.5	ppb	18:21:08
2	Ca 317.933Radial†	3695.3	3713.4	5260.5	ug/L	5260.5	ppb	18:21:28
2	Fe 238.204 Radial†	1233.9	1214.9	5080.5	ug/L	5080.5	ppb	18:21:28
2	K 766.490 Radial†	24792.4	22702.4	4884.9	ug/L	4884.9	ppb	18:21:08
2	Mg 279.077 IEC†	211.8	211.4	5277.1	ug/L	5277.1	ppb	18:21:28
2	Na 589.592 Radial†	166312.9	168576.6	10346	ug/L	10346	ppb	18:21:08
2	Sr 421.552†	171966.4	174222.8	486.56	ug/L	486.56	ppb	18:21:08
2	Sc 361.383	756402.4	756402.4	105.25	%			18:22:31
2	Y 371.029	482492.8	482492.8	85.853	%			18:22:36
2	Ag 328.068†	91031.8	85860.5	516.05	ug/L	516.05	ppb	18:22:36
2	As 188.979†	1430.0	1394.1	505.95	ug/L	505.95	ppb	18:22:56
2	B 249.677†	20503.7	20421.3	511.66	ug/L	511.66	ppb	18:22:36
2	Ba 233.527†	76369.9	72561.7	513.11	ug/L	513.11	ppb	18:22:36
2	Be 313.107†	1172757.8	1119167.6	513.41	ug/L	513.41	ppb	18:22:31
2	Cd 226.502†	42375.2	40543.5	516.87	ug/L	516.87	ppb	18:22:36
2	Co 228.616†	31301.9	29840.7	517.71	ug/L	517.71	ppb	18:22:36
2	Cr 267.716†	38449.3	36609.7	513.72	ug/L	513.72	ppb	18:22:36
2	Cu 324.752†	153966.2	140651.2	509.98	ug/L	509.98	ppb	18:22:36
2	Mn 257.610†	487165.4	462196.5	510.23	ug/L	510.23	ppb	18:22:31
2	Mo 202.031†	7470.1	7080.6	498.79	ug/L	498.79	ppb	18:22:56
2	Ni 231.604†	20398.8	19261.9	514.54	ug/L	514.54	ppb	18:22:36

2	P 214.914†	5494.2	4905.5	2407.5 ug/L	2407.5 ppb	18:22:56
2	Pb 220.353†	4375.4	4170.5	498.08 ug/L	498.08 ppb	18:22:56
2	S 181.975 Axial†	845.8	728.2	996.63 ug/L	996.63 ppb	18:22:56
2	Sb 206.836†	1841.0	1692.0	508.54 ug/L	508.54 ppb	18:22:56
2	Se 196.026†	1005.5	984.1	520.17 ug/L	520.17 ppb	18:22:56
2	Si 251.611†	89109.8	84255.1	2585.1 ug/L	2585.1 ppb	18:22:36
2	Sn 189.927†	2986.1	2824.8	500.87 ug/L	500.87 ppb	18:22:56
2	Ti 334.940†	286481.9	273546.6	500.71 ug/L	500.71 ppb	18:22:36
2	Tl 190.801†	1954.4	1917.7	504.96 ug/L	504.96 ppb	18:22:56
2	U 409.014†	11416.3	15695.8	529.86 ug/L	529.86 ppb	18:22:36
2	V 292.402†	57831.1	56512.9	519.24 ug/L	519.24 ppb	18:22:36
2	Zn 213.857†	59611.9	55714.6	509.45 ug/L	509.45 ppb	18:22:36
2	SiO2†	88060.2	83232.8	5435.8 ug/L	5435.8 ppb	18:23:38
3	Sc Radial	7353.6	7353.6	98.4 %		18:21:53
3	Y RADIAL	6759.1	6759.1	97.61 %		18:21:53
3	Al 396.153Radial†	6191.3	6365.8	5219.8 ug/L	5219.8 ppb	18:21:33
3	Ca 317.933Radial†	3658.2	3689.3	5226.3 ug/L	5226.3 ppb	18:21:53
3	Fe 238.204 Radial†	1220.9	1206.2	5044.6 ug/L	5044.6 ppb	18:21:53
3	K 766.490 Radial†	24981.2	22985.2	4945.7 ug/L	4945.7 ppb	18:21:33
3	Mg 279.077 IEC†	209.0	209.4	5227.8 ug/L	5227.8 ppb	18:21:53
3	Na 589.592 Radial†	166943.5	169826.9	10423 ug/L	10423 ppb	18:21:33
3	Sr 421.552†	172581.9	175478.5	490.07 ug/L	490.07 ppb	18:21:33
3	Sc 361.383	727526.5	727526.5	101.23 %		18:23:02
3	Y 371.029	481127.2	481127.2	85.610 %		18:23:07
3	Ag 328.068†	89683.8	87961.8	528.63 ug/L	528.63 ppb	18:23:07
3	As 188.979†	1416.1	1434.3	520.49 ug/L	520.49 ppb	18:23:27
3	B 249.677†	20221.5	20915.8	524.06 ug/L	524.06 ppb	18:23:07
3	Ba 233.527†	75324.7	74409.3	526.17 ug/L	526.17 ppb	18:23:07
3	Be 313.107†	1125090.4	1116305.8	512.12 ug/L	512.12 ppb	18:23:02
3	Cd 226.502†	41808.2	41581.4	530.12 ug/L	530.12 ppb	18:23:07
3	Co 228.616†	30846.9	30571.7	530.41 ug/L	530.41 ppb	18:23:07
3	Cr 267.716†	38029.6	37645.0	528.24 ug/L	528.24 ppb	18:23:07
3	Cu 324.752†	151258.9	143783.1	521.32 ug/L	521.32 ppb	18:23:07
3	Mn 257.610†	468798.8	462424.7	510.48 ug/L	510.48 ppb	18:23:02
3	Mo 202.031†	7491.9	7383.7	520.13 ug/L	520.13 ppb	18:23:27
3	Ni 231.604†	20078.8	19715.1	526.64 ug/L	526.64 ppb	18:23:07
3	P 214.914†	5486.3	5104.9	2507.4 ug/L	2507.4 ppb	18:23:27
3	Pb 220.353†	4369.1	4329.3	517.04 ug/L	517.04 ppb	18:23:27
3	S 181.975 Axial†	852.1	766.4	1048.9 ug/L	1048.9 ppb	18:23:27
3	Sb 206.836†	1848.7	1769.0	531.80 ug/L	531.80 ppb	18:23:27
3	Se 196.026†	1008.5	1025.0	540.96 ug/L	540.96 ppb	18:23:27
3	Si 251.611†	87674.8	86198.1	2644.5 ug/L	2644.5 ppb	18:23:07
3	Sn 189.927†	2977.2	2928.5	519.23 ug/L	519.23 ppb	18:23:27
3	Ti 334.940†	282004.8	279927.6	512.38 ug/L	512.38 ppb	18:23:07
3	Tl 190.801†	1957.8	1994.7	525.13 ug/L	525.13 ppb	18:23:27
3	U 409.014†	11254.7	15966.7	539.01 ug/L	539.01 ppb	18:23:07
3	V 292.402†	57044.9	57917.2	532.27 ug/L	532.27 ppb	18:23:07
3	Zn 213.857†	58861.3	57221.2	523.26 ug/L	523.26 ppb	18:23:07
3	SiO2†	85896.9	84416.7	5512.3 ug/L	5512.3 ppb	18:23:43

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	741969.5	103.24	%	2.009				1.95%
Sc Radial	7366.9	98.6	%	0.18				0.18%
Y 371.029	481784.3	85.727	%	0.1217				0.14%
Y RADIAL	6777.6	97.88	%	0.234				0.24%
Ag 328.068†	86596.8	520.46	ug/L	7.089	520.46	ppb	7.089	1.36%
QC value within limits for Ag 328.068 Recovery = 104.09%								
Al 396.153Radial†	6430.2	5273.3	ug/L	83.55	5273.3	ppb	83.55	1.58%
QC value within limits for Al 396.153Radial Recovery = 105.47%								
As 188.979†	1414.5	513.31	ug/L	7.270	513.31	ppb	7.270	1.42%
QC value within limits for As 188.979 Recovery = 102.66%								
B 249.677†	20553.0	514.96	ug/L	7.976	514.96	ppb	7.976	1.55%
QC value within limits for B 249.677 Recovery = 102.99%								
Ba 233.527†	73197.5	517.61	ug/L	7.424	517.61	ppb	7.424	1.43%
QC value within limits for Ba 233.527 Recovery = 103.52%								
Be 313.107†	1117486.6	512.65	ug/L	0.674	512.65	ppb	0.674	0.13%
QC value within limits for Be 313.107 Recovery = 102.53%								
Ca 317.933Radial†	3703.7	5246.7	ug/L	17.98	5246.7	ppb	17.98	0.34%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.93%
Cd 226.502†            40873.4      521.08 ug/L         7.834      521.08 ppb          7.834   1.50%
   QC value within limits for Cd 226.502  Recovery = 104.22%
Co 228.616†            30042.9      521.23 ug/L         8.023      521.23 ppb          8.023   1.54%
   QC value within limits for Co 228.616  Recovery = 104.25%
Cr 267.716†            37007.3      519.29 ug/L         7.826      519.29 ppb          7.826   1.51%
   QC value within limits for Cr 267.716  Recovery = 103.86%
Cu 324.752†           141639.9      513.56 ug/L         6.732      513.56 ppb          6.732   1.31%
   QC value within limits for Cu 324.752  Recovery = 102.71%
Fe 238.204 Radial†      1210.8      5063.7 ug/L         18.05      5063.7 ppb          18.05   0.36%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.27%
K 766.490 Radial†      23075.4      4965.2 ug/L         91.67      4965.2 ppb          91.67   1.85%
   QC value within limits for K 766.490 Radial  Recovery = 99.30%
Mg 279.077 IEC†          209.8      5236.9 ug/L         36.47      5236.9 ppb          36.47   0.70%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.74%
Mn 257.610†           462260.1      510.30 ug/L         0.157      510.30 ppb          0.157   0.03%
   QC value within limits for Mn 257.610  Recovery = 102.06%
Mo 202.031†             7231.2      509.39 ug/L        10.671      509.39 ppb         10.671   2.09%
   QC value within limits for Mo 202.031  Recovery = 101.88%
Na 589.592 Radial†    170988.8       10494 ug/L         193.8       10494 ppb          193.8   1.85%
   QC value within limits for Na 589.592 Radial  Recovery = 104.94%
Ni 231.604†            19424.7      518.89 ug/L         6.733      518.89 ppb          6.733   1.30%
   QC value within limits for Ni 231.604  Recovery = 103.78%
P 214.914†              5005.5      2458.0 ug/L         49.92      2458.0 ppb          49.92   2.03%
   QC value within limits for P 214.914  Recovery = 98.32%
Pb 220.353†             4257.0      508.42 ug/L         9.594      508.42 ppb          9.594   1.89%
   QC value within limits for Pb 220.353  Recovery = 101.68%
S 181.975 Axial†         747.4      1022.8 ug/L         26.13      1022.8 ppb          26.13   2.55%
   QC value within limits for S 181.975 Axial  Recovery = 102.28%
Sb 206.836†             1725.2      518.65 ug/L        11.923      518.65 ppb         11.923   2.30%
   QC value within limits for Sb 206.836  Recovery = 103.73%
Se 196.026†             1003.8      530.18 ug/L        10.417      530.18 ppb         10.417   1.96%
   QC value within limits for Se 196.026  Recovery = 106.04%
Si 251.611†            84874.3      2603.9 ug/L         35.17      2603.9 ppb          35.17   1.35%
   QC value within limits for Si 251.611  Recovery = 104.16%
Sn 189.927†             2876.0      509.93 ug/L         9.184      509.93 ppb          9.184   1.80%
   QC value within limits for Sn 189.927  Recovery = 101.99%
Sr 421.552†           176794.6      493.74 ug/L         9.566      493.74 ppb          9.566   1.94%
   QC value within limits for Sr 421.552  Recovery = 98.75%
Ti 334.940†           275729.7      504.70 ug/L         6.652      504.70 ppb          6.652   1.32%
   QC value within limits for Ti 334.940  Recovery = 100.94%
Tl 190.801†             1953.8      514.41 ug/L        10.148      514.41 ppb         10.148   1.97%
   QC value within limits for Tl 190.801  Recovery = 102.88%
U 409.014†             15806.0      533.59 ug/L         4.806      533.59 ppb          4.806   0.90%
   QC value within limits for U 409.014  Recovery = 106.72%
V 292.402†             56985.3      523.67 ug/L         7.450      523.67 ppb          7.450   1.42%
   QC value within limits for V 292.402  Recovery = 104.73%
Zn 213.857†            56219.1      514.07 ug/L         7.959      514.07 ppb          7.959   1.55%
   QC value within limits for Zn 213.857  Recovery = 102.81%
SiO2†                  83758.5      5469.7 ug/L         38.97      5469.7 ppb          38.97   0.71%
   QC value within limits for SiO2  Recovery = 102.28%
All analyte(s) passed QC.
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Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 18:25:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7284.7	7284.7	97.5	%			18:27:44
1	Y RADIAL	6752.1	6752.1	97.51	%			18:27:44
1	Al 396.153Radial†	-76.5	-5.9	-4.8707	ug/L	-4.8707	ppb	18:27:44
1	Ca 317.933Radial†	26.4	-2.0	-2.8920	ug/L	-2.8920	ppb	18:28:04
1	Fe 238.204 Radial†	36.0	2.1	8.7733	ug/L	8.7733	ppb	18:28:04
1	K 766.490 Radial†	2474.9	132.2	28.523	ug/L	28.523	ppb	18:27:44
1	Mg 279.077 IEC†	4.3	1.3	33.065	ug/L	33.065	ppb	18:28:04
1	Na 589.592 Radial†	-403.9	-278.9	-17.116	ug/L	-17.116	ppb	18:27:44
1	Sr 421.552†	-70.1	-16.1	-0.0448	ug/L	-0.0448	ppb	18:27:44
1	Sc 361.383	721634.9	721634.9	100.41	%			18:29:01
1	Y 371.029	565103.1	565103.1	100.55	%			18:29:01
1	Ag 328.068†	599.7	-35.4	-0.2134	ug/L	-0.2134	ppb	18:29:01
1	As 188.979†	-38.1	-2.5	-0.8990	ug/L	-0.8990	ppb	18:29:21
1	B 249.677†	-765.3	177.8	4.4803	ug/L	4.4803	ppb	18:29:01
1	Ba 233.527†	10.2	9.7	0.0674	ug/L	0.0674	ppb	18:29:21
1	Be 313.107†	-4778.8	122.5	0.0562	ug/L	0.0562	ppb	18:29:01
1	Cd 226.502†	-255.0	27.1	0.3447	ug/L	0.3447	ppb	18:29:21
1	Co 228.616†	-102.0	-2.1	-0.0361	ug/L	-0.0361	ppb	18:29:21
1	Cr 267.716†	-87.4	-9.6	-0.1366	ug/L	-0.1366	ppb	18:29:01
1	Cu 324.752†	5674.0	12.4	0.0456	ug/L	0.0456	ppb	18:29:01
1	Mn 257.610†	685.1	2.7	0.0035	ug/L	0.0035	ppb	18:29:21
1	Mo 202.031†	21.7	4.4	0.3133	ug/L	0.3133	ppb	18:29:21
1	Ni 231.604†	118.5	-1.8	-0.0474	ug/L	-0.0474	ppb	18:29:21
1	P 214.914†	298.8	-17.2	-8.8168	ug/L	-8.8168	ppb	18:29:21
1	Pb 220.353†	-13.5	-0.2	-0.0295	ug/L	-0.0295	ppb	18:29:21
1	S 181.975 Axial†	79.3	3.6	4.8842	ug/L	4.8842	ppb	18:29:21
1	Sb 206.836†	53.8	-3.7	-1.0934	ug/L	-1.0934	ppb	18:29:21
1	Se 196.026†	-38.4	-9.5	-4.8185	ug/L	-4.8185	ppb	18:29:21
1	Si 251.611†	557.5	143.4	4.4165	ug/L	4.4165	ppb	18:29:21
1	Sn 189.927†	11.7	-0.9	-0.1592	ug/L	-0.1592	ppb	18:29:21
1	Ti 334.940†	-1310.4	43.2	0.0772	ug/L	0.0772	ppb	18:29:01
1	Tl 190.801†	-48.7	12.2	3.2027	ug/L	3.2027	ppb	18:29:21
1	U 409.014†	-4756.3	111.8	3.7862	ug/L	3.7862	ppb	18:29:01
1	V 292.402†	-1611.3	-39.6	-0.3487	ug/L	-0.3487	ppb	18:29:01
1	Zn 213.857†	959.6	30.5	0.2799	ug/L	0.2799	ppb	18:29:21
1	SiO2†	620.6	181.2	11.888	ug/L	11.888	ppb	18:30:17
2	Sc Radial	7350.6	7350.6	98.3	%			18:28:09
2	Y RADIAL	6817.8	6817.8	98.46	%			18:28:09
2	Al 396.153Radial†	-89.6	-18.4	-15.159	ug/L	-15.159	ppb	18:28:09
2	Ca 317.933Radial†	33.2	4.6	6.5582	ug/L	6.5582	ppb	18:28:29
2	Fe 238.204 Radial†	38.1	4.0	16.509	ug/L	16.509	ppb	18:28:29
2	K 766.490 Radial†	2441.1	75.1	16.221	ug/L	16.221	ppb	18:28:09
2	Mg 279.077 IEC†	1.8	-1.2	-31.067	ug/L	-31.067	ppb	18:28:29
2	Na 589.592 Radial†	-285.1	-154.3	-9.4724	ug/L	-9.4724	ppb	18:28:09
2	Sr 421.552†	-40.7	14.4	0.0402	ug/L	0.0402	ppb	18:28:09
2	Sc 361.383	728244.2	728244.2	101.33	%			18:29:26
2	Y 371.029	570115.9	570115.9	101.44	%			18:29:26
2	Ag 328.068†	662.5	21.2	0.1259	ug/L	0.1259	ppb	18:29:26
2	As 188.979†	-32.5	3.4	1.2323	ug/L	1.2323	ppb	18:29:46
2	B 249.677†	-782.3	167.9	4.2312	ug/L	4.2312	ppb	18:29:26
2	Ba 233.527†	8.3	7.7	0.0545	ug/L	0.0545	ppb	18:29:46
2	Be 313.107†	-4851.6	93.8	0.0427	ug/L	0.0427	ppb	18:29:26
2	Cd 226.502†	-276.3	8.4	0.1052	ug/L	0.1052	ppb	18:29:46
2	Co 228.616†	-112.3	-11.4	-0.1991	ug/L	-0.1991	ppb	18:29:46
2	Cr 267.716†	-90.2	-11.6	-0.1645	ug/L	-0.1645	ppb	18:29:26
2	Cu 324.752†	5687.4	-25.6	-0.0919	ug/L	-0.0919	ppb	18:29:26
2	Mn 257.610†	669.5	-18.9	-0.0182	ug/L	-0.0182	ppb	18:29:46
2	Mo 202.031†	10.8	-6.5	-0.4550	ug/L	-0.4550	ppb	18:29:46
2	Ni 231.604†	135.3	13.7	0.3660	ug/L	0.3660	ppb	18:29:46

2	P 214.914†	316.8	-2.1	1.0649 ug/L	1.0649 ppb	18:29:46
2	Pb 220.353†	4.7	17.9	2.1207 ug/L	2.1207 ppb	18:29:46
2	S 181.975 Axial†	80.5	4.1	5.5884 ug/L	5.5884 ppb	18:29:46
2	Sb 206.836†	69.3	11.1	3.3194 ug/L	3.3194 ppb	18:29:46
2	Se 196.026†	-28.5	0.7	0.4013 ug/L	0.4013 ppb	18:29:46
2	Si 251.611†	536.1	117.3	3.6134 ug/L	3.6134 ppb	18:29:46
2	Sn 189.927†	17.6	4.9	0.8646 ug/L	0.8646 ppb	18:29:46
2	Ti 334.940†	-1410.3	-43.6	-0.0828 ug/L	-0.0828 ppb	18:29:26
2	Tl 190.801†	-55.9	5.6	1.4742 ug/L	1.4742 ppb	18:29:46
2	U 409.014†	-4679.1	231.0	7.8208 ug/L	7.8208 ppb	18:29:26
2	V 292.402†	-1557.6	28.1	0.2619 ug/L	0.2619 ppb	18:29:26
2	Zn 213.857†	958.3	20.6	0.1874 ug/L	0.1874 ppb	18:29:46
2	SiO2†	576.1	131.7	8.6371 ug/L	8.6371 ppb	18:30:22
3	Sc Radial	7382.0	7382.0	98.8 %		18:28:34
3	Y RADIAL	6824.7	6824.7	98.56 %		18:28:34
3	Al 396.153Radial†	-80.8	-9.2	-7.5951 ug/L	-7.5951 ppb	18:28:34
3	Ca 317.933Radial†	25.7	-3.0	-4.2807 ug/L	-4.2807 ppb	18:28:54
3	Fe 238.204 Radial†	34.9	0.5	2.1414 ug/L	2.1414 ppb	18:28:54
3	K 766.490 Radial†	2405.9	28.9	6.2193 ug/L	6.2193 ppb	18:28:34
3	Mg 279.077 IEC†	3.1	0.1	3.0843 ug/L	3.0843 ppb	18:28:54
3	Na 589.592 Radial†	-246.5	-114.0	-6.9971 ug/L	-6.9971 ppb	18:28:34
3	Sr 421.552†	-15.0	40.7	0.1137 ug/L	0.1137 ppb	18:28:34
3	Sc 361.383	724186.7	724186.7	100.76 %		18:29:51
3	Y 371.029	566691.6	566691.6	100.83 %		18:29:51
3	Ag 328.068†	571.7	-65.2	-0.3875 ug/L	-0.3875 ppb	18:29:51
3	As 188.979†	-20.8	14.8	5.3251 ug/L	5.3251 ppb	18:30:12
3	B 249.677†	-781.5	164.3	4.1420 ug/L	4.1420 ppb	18:29:51
3	Ba 233.527†	4.7	4.2	0.0305 ug/L	0.0305 ppb	18:30:12
3	Be 313.107†	-4880.0	38.8	0.0178 ug/L	0.0178 ppb	18:29:51
3	Cd 226.502†	-269.9	13.2	0.1685 ug/L	0.1685 ppb	18:30:12
3	Co 228.616†	-108.8	-8.5	-0.1459 ug/L	-0.1459 ppb	18:30:12
3	Cr 267.716†	-75.6	2.3	0.0333 ug/L	0.0333 ppb	18:29:51
3	Cu 324.752†	5626.2	-55.0	-0.1990 ug/L	-0.1990 ppb	18:29:51
3	Mn 257.610†	685.5	0.7	0.0010 ug/L	0.0010 ppb	18:30:12
3	Mo 202.031†	30.1	12.7	0.8936 ug/L	0.8936 ppb	18:30:12
3	Ni 231.604†	136.2	15.3	0.4102 ug/L	0.4102 ppb	18:30:12
3	P 214.914†	321.4	4.2	2.1530 ug/L	2.1530 ppb	18:30:12
3	Pb 220.353†	-34.7	-21.2	-2.5272 ug/L	-2.5272 ppb	18:30:12
3	S 181.975 Axial†	72.1	-3.9	-5.3248 ug/L	-5.3248 ppb	18:30:12
3	Sb 206.836†	49.5	-8.1	-2.3935 ug/L	-2.3935 ppb	18:30:12
3	Se 196.026†	-31.5	-2.5	-1.2567 ug/L	-1.2567 ppb	18:30:12
3	Si 251.611†	564.1	148.1	4.5578 ug/L	4.5578 ppb	18:30:12
3	Sn 189.927†	11.7	-0.9	-0.1668 ug/L	-0.1668 ppb	18:30:12
3	Ti 334.940†	-1337.9	20.5	0.0370 ug/L	0.0370 ppb	18:29:51
3	Tl 190.801†	-63.5	-2.2	-0.5887 ug/L	-0.5887 ppb	18:30:12
3	U 409.014†	-4871.3	14.4	0.4881 ug/L	0.4881 ppb	18:29:51
3	V 292.402†	-1523.9	52.9	0.4925 ug/L	0.4925 ppb	18:29:51
3	Zn 213.857†	967.0	34.6	0.3164 ug/L	0.3164 ppb	18:30:12
3	SiO2†	588.3	147.0	9.6312 ug/L	9.6312 ppb	18:30:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	724688.6	100.83	%	0.464				0.46%
Sc Radial	7339.1	98.2	%	0.66				0.68%
Y 371.029	567303.5	100.94	%	0.456				0.45%
Y RADIAL	6798.2	98.18	%	0.579				0.59%
Ag 328.068†	-26.5	-0.1583	ug/L	0.26109	-0.1583	ppb	0.26109	164.90%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-11.2	-9.2082	ug/L	5.33032	-9.2082	ppb	5.33032	57.89%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.2	1.8861	ug/L	3.16317	1.8861	ppb	3.16317	167.71%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	170.0	4.2845	ug/L	0.17536	4.2845	ppb	0.17536	4.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.2	0.0508	ug/L	0.01873	0.0508	ppb	0.01873	36.86%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	85.0	0.0389	ug/L	0.01948	0.0389	ppb	0.01948	50.02%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-0.1	-0.2048	ug/L	5.89796	-0.2048	ppb	5.89796	>999.9%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              16.2      0.2062 ug/L       0.12410      0.2062 ppb        0.12410  60.19%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -7.4     -0.1270 ug/L       0.08310     -0.1270 ppb        0.08310  65.41%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -6.3     -0.0893 ug/L       0.10707     -0.0893 ppb        0.10707 119.95%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -22.7     -0.0818 ug/L       0.12263     -0.0818 ppb        0.12263 149.92%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        2.2      9.1411 ug/L       7.19072      9.1411 ppb        7.19072  78.66%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        78.7      16.988 ug/L       11.1718      16.988 ppb        11.1718  65.76%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.1      1.6943 ug/L      32.08835      1.6943 ppb       32.08835 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -5.1     -0.0046 ug/L       0.01185     -0.0046 ppb        0.01185 260.18%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               3.6      0.2506 ug/L       0.67648      0.2506 ppb        0.67648 269.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -182.4     -11.195 ug/L        5.2747     -11.195 ppb         5.2747  47.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               9.1      0.2429 ug/L       0.25241      0.2429 ppb        0.25241 103.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -5.1     -2.5762 ug/L       5.63890     -2.5762 ppb        5.63890 218.88%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -1.2     -0.1453 ug/L       2.32613     -0.1453 ppb        2.32613 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          1.3      1.7159 ug/L       6.10762      1.7159 ppb        6.10762 355.93%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              -0.2     -0.0558 ug/L       2.99448     -0.0558 ppb        2.99448 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -3.8     -1.8913 ug/L       2.66714     -1.8913 ppb        2.66714 141.02%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             136.3      4.1959 ug/L       0.50942      4.1959 ppb        0.50942  12.14%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.0      0.1796 ug/L       0.59332      0.1796 ppb        0.59332 330.44%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              13.0      0.0364 ug/L       0.07932      0.0364 ppb        0.07932 218.16%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               6.7      0.0105 ug/L       0.08325      0.0105 ppb        0.08325 794.40%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               5.2      1.3627 ug/L       1.89815      1.3627 ppb        1.89815 139.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              119.1      4.0317 ug/L       3.67251      4.0317 ppb        3.67251  91.09%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               13.8      0.1352 ug/L       0.43464      0.1352 ppb        0.43464 321.39%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              28.6      0.2612 ug/L       0.06651      0.2612 ppb        0.06651  25.46%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   153.3      10.052 ug/L        1.6656      10.052 ppb         1.6656  16.57%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 34
Sample ID: 1201871706|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 6/30/2009 18:32:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871706|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7511.8	7511.8	100	%			18:34:29
1	Y RADIAL	6950.7	6950.7	100.4	%			18:34:29
1	Al 396.153Radial†	-77.8	-4.8	-3.9731	ug/L	-3.9731	ppb	18:34:29
1	Ca 317.933Radial†	24.6	-4.7	-6.5948	ug/L	-6.5948	ppb	18:34:49
1	Fe 238.204 Radial†	38.5	3.5	14.778	ug/L	14.778	ppb	18:34:49
1	K 766.490 Radial†	2421.9	2.8	0.5996	ug/L	0.5996	ppb	18:34:29
1	Mg 279.077 IEC†	5.2	2.2	53.757	ug/L	53.757	ppb	18:34:49
1	Na 589.592 Radial†	-238.0	-101.3	-6.2164	ug/L	-6.2164	ppb	18:34:29
1	Sr 421.552†	-59.0	-2.8	-0.0079	ug/L	-0.0079	ppb	18:34:29
1	Sc 361.383	720917.4	720917.4	100.31	%			18:35:46
1	Y 371.029	564150.6	564150.6	100.38	%			18:35:46
1	Ag 328.068†	661.5	26.8	0.1666	ug/L	0.1666	ppb	18:35:46
1	As 188.979†	-32.6	2.9	1.0579	ug/L	1.0579	ppb	18:36:06
1	B 249.677†	-780.4	161.9	4.0801	ug/L	4.0801	ppb	18:35:46
1	Ba 233.527†	9.8	9.3	0.0651	ug/L	0.0651	ppb	18:36:06
1	Be 313.107†	-4769.6	126.9	0.0582	ug/L	0.0582	ppb	18:35:46
1	Cd 226.502†	-294.4	-12.4	-0.1587	ug/L	-0.1587	ppb	18:36:06
1	Co 228.616†	-113.8	-14.0	-0.2415	ug/L	-0.2415	ppb	18:36:06
1	Cr 267.716†	-81.7	-4.1	-0.0560	ug/L	-0.0560	ppb	18:35:46
1	Cu 324.752†	5503.3	-152.1	-0.5504	ug/L	-0.5504	ppb	18:35:46
1	Mn 257.610†	638.9	-42.7	-0.0462	ug/L	-0.0462	ppb	18:36:06
1	Mo 202.031†	22.4	5.2	0.3666	ug/L	0.3666	ppb	18:36:06
1	Ni 231.604†	158.6	38.3	1.0239	ug/L	1.0239	ppb	18:36:06
1	P 214.914†	333.3	17.4	9.0135	ug/L	9.0135	ppb	18:36:06
1	Pb 220.353†	-23.5	-10.2	-1.2162	ug/L	-1.2162	ppb	18:36:06
1	S 181.975 Axial†	78.6	3.0	4.0433	ug/L	4.0433	ppb	18:36:06
1	Sb 206.836†	56.2	-1.2	-0.3388	ug/L	-0.3388	ppb	18:36:06
1	Se 196.026†	-35.6	-6.8	-3.4019	ug/L	-3.4019	ppb	18:36:06
1	Si 251.611†	837.7	423.3	13.057	ug/L	13.057	ppb	18:36:06
1	Sn 189.927†	16.8	4.3	0.7595	ug/L	0.7595	ppb	18:36:06
1	Ti 334.940†	-1324.1	28.2	0.0524	ug/L	0.0524	ppb	18:35:46
1	Tl 190.801†	-59.4	1.5	0.4069	ug/L	0.4069	ppb	18:36:06
1	U 409.014†	-4938.2	-74.2	-2.5147	ug/L	-2.5147	ppb	18:35:46
1	V 292.402†	-1587.7	-17.6	-0.1612	ug/L	-0.1612	ppb	18:35:46
1	Zn 213.857†	997.9	69.8	0.6345	ug/L	0.6345	ppb	18:36:06
1	SiO2†	892.2	452.5	29.723	ug/L	29.723	ppb	18:37:02
2	Sc Radial	7634.5	7634.5	102	%			18:34:54
2	Y RADIAL	7043.7	7043.7	101.7	%			18:34:54
2	Al 396.153Radial†	-68.9	5.2	4.2486	ug/L	4.2486	ppb	18:34:54
2	Ca 317.933Radial†	29.6	-0.1	-0.1315	ug/L	-0.1315	ppb	18:35:14
2	Fe 238.204 Radial†	36.6	1.1	4.3988	ug/L	4.3988	ppb	18:35:14
2	K 766.490 Radial†	2376.2	-80.8	-17.424	ug/L	-17.424	ppb	18:34:54
2	Mg 279.077 IEC†	0.1	-3.0	-74.443	ug/L	-74.443	ppb	18:35:14
2	Na 589.592 Radial†	-116.0	21.9	1.3466	ug/L	1.3466	ppb	18:34:54
2	Sr 421.552†	-16.2	40.0	0.1116	ug/L	0.1116	ppb	18:34:54
2	Sc 361.383	736026.2	736026.2	102.41	%			18:36:11
2	Y 371.029	575819.9	575819.9	102.46	%			18:36:11
2	Ag 328.068†	600.6	-46.2	-0.2824	ug/L	-0.2824	ppb	18:36:11
2	As 188.979†	-31.8	4.3	1.5668	ug/L	1.5668	ppb	18:36:31
2	B 249.677†	-763.7	194.3	4.8956	ug/L	4.8956	ppb	18:36:11
2	Ba 233.527†	22.6	21.6	0.1546	ug/L	0.1546	ppb	18:36:31
2	Be 313.107†	-4965.0	33.7	0.0158	ug/L	0.0158	ppb	18:36:11
2	Cd 226.502†	-273.9	13.6	0.1736	ug/L	0.1736	ppb	18:36:31
2	Co 228.616†	-106.2	-4.3	-0.0747	ug/L	-0.0747	ppb	18:36:31
2	Cr 267.716†	-84.5	-5.1	-0.0744	ug/L	-0.0744	ppb	18:36:11
2	Cu 324.752†	5655.5	-116.1	-0.4205	ug/L	-0.4205	ppb	18:36:11
2	Mn 257.610†	684.6	-11.1	-0.0102	ug/L	-0.0102	ppb	18:36:31
2	Mo 202.031†	15.5	-2.0	-0.1373	ug/L	-0.1373	ppb	18:36:31
2	Ni 231.604†	148.2	24.9	0.6669	ug/L	0.6669	ppb	18:36:31

2	P 214.914†	342.9	20.1	10.328	ug/L	10.328	ppb	18:36:31
2	Pb 220.353†	-34.0	-20.0	-2.3801	ug/L	-2.3801	ppb	18:36:31
2	S 181.975 Axial†	79.3	2.0	2.7036	ug/L	2.7036	ppb	18:36:31
2	Sb 206.836†	60.1	1.5	0.4284	ug/L	0.4284	ppb	18:36:31
2	Se 196.026†	-16.0	13.1	6.7222	ug/L	6.7222	ppb	18:36:31
2	Si 251.611†	810.5	379.6	11.737	ug/L	11.737	ppb	18:36:31
2	Sn 189.927†	11.2	-1.6	-0.2770	ug/L	-0.2770	ppb	18:36:31
2	Ti 334.940†	-1294.4	84.4	0.1484	ug/L	0.1484	ppb	18:36:11
2	Tl 190.801†	-62.4	-0.2	-0.0463	ug/L	-0.0463	ppb	18:36:31
2	U 409.014†	-4547.3	408.6	13.834	ug/L	13.834	ppb	18:36:11
2	V 292.402†	-1488.4	111.9	1.0393	ug/L	1.0393	ppb	18:36:11
2	Zn 213.857†	1013.7	64.8	0.5960	ug/L	0.5960	ppb	18:36:31
2	SiO2†	851.5	394.5	25.973	ug/L	25.973	ppb	18:37:07
3	Sc Radial	7574.9	7574.9	101	%			18:35:19
3	Y RADIAL	7048.8	7048.8	101.8	%			18:35:19
3	Al 396.153Radial†	-43.4	29.9	24.564	ug/L	24.564	ppb	18:35:19
3	Ca 317.933Radial†	23.2	-6.2	-8.7615	ug/L	-8.7615	ppb	18:35:39
3	Fe 238.204 Radial†	34.2	-1.1	-4.5073	ug/L	-4.5073	ppb	18:35:39
3	K 766.490 Radial†	2426.9	-12.4	-2.6884	ug/L	-2.6884	ppb	18:35:19
3	Mg 279.077 IEC†	3.5	0.4	9.6412	ug/L	9.6412	ppb	18:35:39
3	Na 589.592 Radial†	-134.2	3.2	0.1954	ug/L	0.1954	ppb	18:35:19
3	Sr 421.552†	-23.5	32.6	0.0912	ug/L	0.0912	ppb	18:35:19
3	Sc 361.383	737077.2	737077.2	102.56	%			18:36:37
3	Y 371.029	576099.6	576099.6	102.51	%			18:36:37
3	Ag 328.068†	511.5	-133.9	-0.8106	ug/L	-0.8106	ppb	18:36:37
3	As 188.979†	-40.3	-3.8	-1.3914	ug/L	-1.3914	ppb	18:36:57
3	B 249.677†	-739.9	218.5	5.5053	ug/L	5.5053	ppb	18:36:37
3	Ba 233.527†	15.8	14.9	0.1061	ug/L	0.1061	ppb	18:36:57
3	Be 313.107†	-4980.5	25.5	0.0125	ug/L	0.0125	ppb	18:36:37
3	Cd 226.502†	-277.5	10.5	0.1348	ug/L	0.1348	ppb	18:36:57
3	Co 228.616†	-89.9	11.8	0.2054	ug/L	0.2054	ppb	18:36:57
3	Cr 267.716†	-61.6	17.3	0.2388	ug/L	0.2388	ppb	18:36:37
3	Cu 324.752†	5577.5	-200.1	-0.7252	ug/L	-0.7252	ppb	18:36:37
3	Mn 257.610†	676.1	-20.3	-0.0232	ug/L	-0.0232	ppb	18:36:57
3	Mo 202.031†	24.6	6.8	0.4811	ug/L	0.4811	ppb	18:36:57
3	Ni 231.604†	130.6	7.6	0.2023	ug/L	0.2023	ppb	18:36:57
3	P 214.914†	317.6	-5.1	-2.4776	ug/L	-2.4776	ppb	18:36:57
3	Pb 220.353†	-16.4	-2.7	-0.3144	ug/L	-0.3144	ppb	18:36:57
3	S 181.975 Axial†	82.1	4.7	6.4013	ug/L	6.4013	ppb	18:36:57
3	Sb 206.836†	67.9	9.0	2.6668	ug/L	2.6668	ppb	18:36:57
3	Se 196.026†	-29.5	-0.0	-0.0282	ug/L	-0.0282	ppb	18:36:57
3	Si 251.611†	803.8	371.9	11.487	ug/L	11.487	ppb	18:36:57
3	Sn 189.927†	9.7	-3.0	-0.5396	ug/L	-0.5396	ppb	18:36:57
3	Ti 334.940†	-1184.5	193.3	0.3479	ug/L	0.3479	ppb	18:36:37
3	Tl 190.801†	-49.9	12.1	3.1693	ug/L	3.1693	ppb	18:36:57
3	U 409.014†	-4599.0	364.4	12.340	ug/L	12.340	ppb	18:36:37
3	V 292.402†	-1570.4	34.0	0.3389	ug/L	0.3389	ppb	18:36:37
3	Zn 213.857†	1006.5	56.3	0.5196	ug/L	0.5196	ppb	18:36:57
3	SiO2†	855.6	397.4	26.135	ug/L	26.135	ppb	18:37:12

Mean Data: 1201871706|881354|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	731340.3	101.76	%	1.258				1.24%
Sc Radial	7573.7	101	%	0.8				0.81%
Y 371.029	572023.3	101.78	%	1.213				1.19%
Y RADIAL	7014.4	101.3	%	0.80				0.79%
Ag 328.068†	-51.1	-0.3088	ug/L	0.48913	-0.3088	ppb	0.48913	158.41%
Al 396.153Radial†	10.1	8.2797	ug/L	14.68934	8.2797	ppb	14.68934	177.41%
As 188.979†	1.1	0.4111	ug/L	1.58158	0.4111	ppb	1.58158	384.74%
B 249.677†	191.5	4.8270	ug/L	0.71509	4.8270	ppb	0.71509	14.81%
Ba 233.527†	15.3	0.1086	ug/L	0.04476	0.1086	ppb	0.04476	41.21%
Be 313.107†	62.0	0.0288	ug/L	0.02549	0.0288	ppb	0.02549	88.45%
Ca 317.933Radial†	-3.6	-5.1626	ug/L	4.48970	-5.1626	ppb	4.48970	86.97%
Cd 226.502†	3.9	0.0499	ug/L	0.18171	0.0499	ppb	0.18171	364.31%
Co 228.616†	-2.1	-0.0369	ug/L	0.22580	-0.0369	ppb	0.22580	611.55%
Cr 267.716†	2.7	0.0361	ug/L	0.17580	0.0361	ppb	0.17580	486.71%
Cu 324.752†	-156.1	-0.5654	ug/L	0.15291	-0.5654	ppb	0.15291	27.05%
Fe 238.204 Radial†	1.2	4.8899	ug/L	9.65206	4.8899	ppb	9.65206	197.39%
K 766.490 Radial†	-30.1	-6.5043	ug/L	9.59863	-6.5043	ppb	9.59863	147.57%

Mg 279.077 IEC†	-0.1	-3.6816	ug/L	65.12984	-3.6816	ppb	65.12984	>999.9%
Mn 257.610†	-24.7	-0.0266	ug/L	0.01823	-0.0266	ppb	0.01823	68.65%
Mo 202.031†	3.4	0.2368	ug/L	0.32901	0.2368	ppb	0.32901	138.94%
Na 589.592 Radial†	-25.4	-1.5582	ug/L	4.07500	-1.5582	ppb	4.07500	261.53%
Ni 231.604†	23.6	0.6310	ug/L	0.41197	0.6310	ppb	0.41197	65.29%
P 214.914†	10.8	5.6212	ug/L	7.04450	5.6212	ppb	7.04450	125.32%
Pb 220.353†	-11.0	-1.3036	ug/L	1.03564	-1.3036	ppb	1.03564	79.44%
S 181.975 Axial†	3.2	4.3827	ug/L	1.87207	4.3827	ppb	1.87207	42.71%
Sb 206.836†	3.1	0.9188	ug/L	1.56169	0.9188	ppb	1.56169	169.97%
Se 196.026†	2.1	1.0974	ug/L	5.15507	1.0974	ppb	5.15507	469.77%
Si 251.611†	391.6	12.093	ug/L	0.8437	12.093	ppb	0.8437	6.98%
Sn 189.927†	-0.1	-0.0190	ug/L	0.68690	-0.0190	ppb	0.68690	>999.9%
Sr 421.552†	23.2	0.0650	ug/L	0.06393	0.0650	ppb	0.06393	98.37%
Ti 334.940†	102.0	0.1829	ug/L	0.15072	0.1829	ppb	0.15072	82.41%
Tl 190.801†	4.5	1.1766	ug/L	1.74051	1.1766	ppb	1.74051	147.92%
U 409.014†	232.9	7.8865	ug/L	9.03860	7.8865	ppb	9.03860	114.61%
V 292.402†	42.8	0.4057	ug/L	0.60300	0.4057	ppb	0.60300	148.64%
Zn 213.857†	63.6	0.5834	ug/L	0.05846	0.5834	ppb	0.05846	10.02%
SiO2†	414.8	27.277	ug/L	2.1199	27.277	ppb	2.1199	7.77%

Sequence No.: 35
Sample ID: 1201871707|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 6/30/2009 18:39:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871707|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7570.2	7570.2	101	%			18:41:15
1	Y RADIAL	6946.8	6946.8	100.3	%			18:41:15
1	Al 396.153Radial†	6284.1	6277.3	5148.0	ug/L	5148.0	ppb	18:41:15
1	Ca 317.933Radial†	3613.8	3539.0	5013.4	ug/L	5013.4	ppb	18:41:35
1	Fe 238.204 Radial†	1228.8	1178.5	4928.1	ug/L	4928.1	ppb	18:41:35
1	K 766.490 Radial†	25587.0	22856.6	4919.0	ug/L	4919.0	ppb	18:41:15
1	Mg 279.077 IEC†	214.6	208.8	5211.3	ug/L	5211.3	ppb	18:41:35
1	Na 589.592 Radial†	86001.0	85050.3	5219.8	ug/L	5219.8	ppb	18:41:15
1	Sr 421.552†	175566.4	173404.7	484.28	ug/L	484.28	ppb	18:41:15
1	Sc 361.383	750645.2	750645.2	104.45	%			18:42:34
1	Y 371.029	579516.0	579516.0	103.12	%			18:42:34
1	Ag 328.068†	87134.6	82792.5	497.65	ug/L	497.65	ppb	18:42:34
1	As 188.979†	1415.1	1390.3	504.54	ug/L	504.54	ppb	18:42:54
1	B 249.677†	19358.9	19474.7	487.95	ug/L	487.95	ppb	18:42:34
1	Ba 233.527†	74836.8	71650.4	506.65	ug/L	506.65	ppb	18:42:34
1	Be 313.107†	1128674.5	1085507.2	498.00	ug/L	498.00	ppb	18:42:34
1	Cd 226.502†	40625.4	39177.0	499.45	ug/L	499.45	ppb	18:42:54
1	Co 228.616†	29452.2	28297.8	490.95	ug/L	490.95	ppb	18:42:54
1	Cr 267.716†	37070.9	35570.2	499.13	ug/L	499.13	ppb	18:42:34
1	Cu 324.752†	149925.0	137904.1	500.01	ug/L	500.01	ppb	18:42:34
1	Mn 257.610†	475642.8	454714.5	501.96	ug/L	501.96	ppb	18:42:34
1	Mo 202.031†	7373.9	7042.9	496.13	ug/L	496.13	ppb	18:42:54
1	Ni 231.604†	19708.6	18749.8	500.87	ug/L	500.87	ppb	18:42:54
1	P 214.914†	1512.0	1132.9	483.68	ug/L	483.68	ppb	18:42:54
1	Pb 220.353†	4447.0	4270.9	510.04	ug/L	510.04	ppb	18:42:54
1	S 181.975 Axial†	3922.3	3679.9	5040.3	ug/L	5040.3	ppb	18:42:54
1	Sb 206.836†	1845.4	1709.5	514.24	ug/L	514.24	ppb	18:42:54
1	Se 196.026†	974.8	962.1	508.42	ug/L	508.42	ppb	18:42:54
1	Si 251.611†	168646.9	161055.6	4956.9	ug/L	4956.9	ppb	18:42:34
1	Sn 189.927†	3041.1	2899.1	514.00	ug/L	514.00	ppb	18:42:54
1	Ti 334.940†	284109.0	273362.4	500.37	ug/L	500.37	ppb	18:42:34
1	Tl 190.801†	1934.8	1913.2	503.90	ug/L	503.90	ppb	18:42:54
1	U 409.014†	10796.5	15185.6	512.63	ug/L	512.63	ppb	18:42:34
1	V 292.402†	56083.3	55260.9	507.83	ug/L	507.83	ppb	18:42:34
1	Zn 213.857†	56679.0	53341.0	487.66	ug/L	487.66	ppb	18:42:34
1	SiO2†	168042.4	160451.8	10514	ug/L	10514	ppb	18:43:54
2	Sc Radial	7439.4	7439.4	99.5	%			18:41:40
2	Y RADIAL	6862.0	6862.0	99.10	%			18:41:40
2	Al 396.153Radial†	6208.3	6310.3	5175.4	ug/L	5175.4	ppb	18:41:40
2	Ca 317.933Radial†	3629.0	3617.1	5124.0	ug/L	5124.0	ppb	18:42:00
2	Fe 238.204 Radial†	1232.3	1203.3	5031.3	ug/L	5031.3	ppb	18:42:00
2	K 766.490 Radial†	25220.2	22932.3	4935.4	ug/L	4935.4	ppb	18:41:40
2	Mg 279.077 IEC†	211.4	209.3	5223.9	ug/L	5223.9	ppb	18:42:00
2	Na 589.592 Radial†	84626.5	85162.2	5226.6	ug/L	5226.6	ppb	18:41:40
2	Sr 421.552†	172041.3	172910.7	482.90	ug/L	482.90	ppb	18:41:40
2	Sc 361.383	757569.2	757569.2	105.41	%			18:43:01
2	Y 371.029	584063.8	584063.8	103.93	%			18:43:01
2	Ag 328.068†	88167.7	83010.2	498.97	ug/L	498.97	ppb	18:43:01
2	As 188.979†	1394.6	1358.5	493.11	ug/L	493.11	ppb	18:43:22
2	B 249.677†	19769.5	19694.8	493.53	ug/L	493.53	ppb	18:43:01
2	Ba 233.527†	75782.7	71892.9	508.36	ug/L	508.36	ppb	18:43:01
2	Be 313.107†	1140521.3	1086869.3	498.62	ug/L	498.62	ppb	18:43:01
2	Cd 226.502†	40451.5	38656.6	492.79	ug/L	492.79	ppb	18:43:22
2	Co 228.616†	29269.7	27866.9	483.46	ug/L	483.46	ppb	18:43:22
2	Cr 267.716†	37465.9	35620.5	499.84	ug/L	499.84	ppb	18:43:01
2	Cu 324.752†	152238.6	138787.0	503.22	ug/L	503.22	ppb	18:43:01
2	Mn 257.610†	480776.3	455422.4	502.76	ug/L	502.76	ppb	18:43:01
2	Mo 202.031†	7363.9	6968.8	490.92	ug/L	490.92	ppb	18:43:22
2	Ni 231.604†	19586.6	18461.6	493.17	ug/L	493.17	ppb	18:43:22

2	P 214.914†	1516.9	1124.3	478.51	ug/L	478.51 ppb	18:43:22
2	Pb 220.353†	4400.0	4187.4	500.07	ug/L	500.07 ppb	18:43:22
2	S 181.975 Axial†	3880.0	3605.5	4938.3	ug/L	4938.3 ppb	18:43:22
2	Sb 206.836†	1856.9	1704.3	512.48	ug/L	512.48 ppb	18:43:22
2	Se 196.026†	987.4	965.5	510.49	ug/L	510.49 ppb	18:43:22
2	Si 251.611†	170889.5	161707.4	4977.1	ug/L	4977.1 ppb	18:43:01
2	Sn 189.927†	3041.6	2873.0	509.40	ug/L	509.40 ppb	18:43:22
2	Ti 334.940†	287306.3	273909.4	501.38	ug/L	501.38 ppb	18:43:01
2	Tl 190.801†	1924.2	1886.2	496.90	ug/L	496.90 ppb	18:43:22
2	U 409.014†	11022.1	15305.1	516.67	ug/L	516.67 ppb	18:43:01
2	V 292.402†	56497.5	55163.1	506.87	ug/L	506.87 ppb	18:43:01
2	Zn 213.857†	57288.4	53423.1	488.45	ug/L	488.45 ppb	18:43:01
2	SiO2†	169845.2	160691.5	10530	ug/L	10530 ppb	18:44:00
3	Sc Radial	7536.8	7536.8	101	%		18:42:05
3	Y RADIAL	6953.1	6953.1	100.4	%		18:42:05
3	Al 396.153Radial†	6236.6	6257.7	5131.9	ug/L	5131.9 ppb	18:42:05
3	Ca 317.933Radial†	3588.2	3529.5	5000.0	ug/L	5000.0 ppb	18:42:26
3	Fe 238.204 Radial†	1212.1	1167.3	4881.1	ug/L	4881.1 ppb	18:42:26
3	K 766.490 Radial†	25431.4	22814.3	4909.9	ug/L	4909.9 ppb	18:42:05
3	Mg 279.077 IEC†	205.5	200.8	5011.9	ug/L	5011.9 ppb	18:42:26
3	Na 589.592 Radial†	85530.3	84959.7	5214.2	ug/L	5214.2 ppb	18:42:05
3	Sr 421.552†	174039.5	172658.6	482.19	ug/L	482.19 ppb	18:42:05
3	Sc 361.383	751772.5	751772.5	104.60	%		18:43:29
3	Y 371.029	579877.2	579877.2	103.18	%		18:43:29
3	Ag 328.068†	87290.5	82816.5	497.78	ug/L	497.78 ppb	18:43:29
3	As 188.979†	1410.1	1383.5	502.07	ug/L	502.07 ppb	18:43:49
3	B 249.677†	19537.5	19617.6	491.57	ug/L	491.57 ppb	18:43:29
3	Ba 233.527†	75167.6	71859.2	508.13	ug/L	508.13 ppb	18:43:29
3	Be 313.107†	1131025.9	1086134.6	498.29	ug/L	498.29 ppb	18:43:29
3	Cd 226.502†	40501.5	39000.3	497.20	ug/L	497.20 ppb	18:43:49
3	Co 228.616†	29306.9	28116.7	487.81	ug/L	487.81 ppb	18:43:49
3	Cr 267.716†	37100.7	35545.4	498.79	ug/L	498.79 ppb	18:43:29
3	Cu 324.752†	150548.4	138284.8	501.39	ug/L	501.39 ppb	18:43:29
3	Mn 257.610†	476366.5	454723.5	501.97	ug/L	501.97 ppb	18:43:29
3	Mo 202.031†	7374.8	7033.2	495.44	ug/L	495.44 ppb	18:43:49
3	Ni 231.604†	19657.8	18672.9	498.81	ug/L	498.81 ppb	18:43:49
3	P 214.914†	1510.9	1129.7	481.79	ug/L	481.79 ppb	18:43:49
3	Pb 220.353†	4412.3	4231.4	505.33	ug/L	505.33 ppb	18:43:49
3	S 181.975 Axial†	3892.9	3646.1	4994.1	ug/L	4994.1 ppb	18:43:49
3	Sb 206.836†	1834.5	1696.5	510.35	ug/L	510.35 ppb	18:43:49
3	Se 196.026†	965.2	951.5	502.85	ug/L	502.85 ppb	18:43:49
3	Si 251.611†	169144.0	161288.7	4964.1	ug/L	4964.1 ppb	18:43:29
3	Sn 189.927†	3041.6	2895.3	513.31	ug/L	513.31 ppb	18:43:49
3	Ti 334.940†	284685.2	273505.3	500.63	ug/L	500.63 ppb	18:43:29
3	Tl 190.801†	1932.6	1908.3	502.63	ug/L	502.63 ppb	18:43:49
3	U 409.014†	10812.0	15184.9	512.62	ug/L	512.62 ppb	18:43:29
3	V 292.402†	56201.7	55293.7	508.12	ug/L	508.12 ppb	18:43:29
3	Zn 213.857†	56807.7	53382.7	488.07	ug/L	488.07 ppb	18:43:29
3	SiO2†	170081.6	162159.9	10626	ug/L	10626 ppb	18:44:05

Mean Data: 1201871707|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	753329.0	104.82	%	0.517				0.49%
Sc Radial	7515.5	101	%	0.9				0.90%
Y 371.029	581152.3	103.41	%	0.450				0.43%
Y RADIAL	6920.7	99.95	%	0.734				0.73%
Ag 328.068†	82873.0	498.13	ug/L	0.730	498.13	ppb	0.730	0.15%
Al 396.153Radial†	6281.8	5151.7	ug/L	21.99	5151.7	ppb	21.99	0.43%
As 188.979†	1377.4	499.91	ug/L	6.017	499.91	ppb	6.017	1.20%
B 249.677†	19595.7	491.02	ug/L	2.831	491.02	ppb	2.831	0.58%
Ba 233.527†	71800.8	507.72	ug/L	0.926	507.72	ppb	0.926	0.18%
Be 313.107†	1086170.4	498.30	ug/L	0.313	498.30	ppb	0.313	0.06%
Ca 317.933Radial†	3561.9	5045.8	ug/L	68.04	5045.8	ppb	68.04	1.35%
Cd 226.502†	38944.6	496.48	ug/L	3.385	496.48	ppb	3.385	0.68%
Co 228.616†	28093.8	487.40	ug/L	3.760	487.40	ppb	3.760	0.77%
Cr 267.716†	35578.7	499.25	ug/L	0.536	499.25	ppb	0.536	0.11%
Cu 324.752†	138325.3	501.54	ug/L	1.608	501.54	ppb	1.608	0.32%
Fe 238.204 Radial†	1183.0	4946.8	ug/L	76.82	4946.8	ppb	76.82	1.55%
K 766.490 Radial†	22867.7	4921.4	ug/L	12.93	4921.4	ppb	12.93	0.26%

Mg 279.077 IEC†	206.3	5149.0 ug/L	118.91	5149.0 ppb	118.91	2.31%
Mn 257.610†	454953.4	502.23 ug/L	0.456	502.23 ppb	0.456	0.09%
Mo 202.031†	7015.0	494.17 ug/L	2.828	494.17 ppb	2.828	0.57%
Na 589.592 Radial†	85057.4	5220.2 ug/L	6.22	5220.2 ppb	6.22	0.12%
Ni 231.604†	18628.1	497.62 ug/L	3.987	497.62 ppb	3.987	0.80%
P 214.914†	1128.9	481.32 ug/L	2.615	481.32 ppb	2.615	0.54%
Pb 220.353†	4229.9	505.14 ug/L	4.986	505.14 ppb	4.986	0.99%
S 181.975 Axial†	3643.8	4990.9 ug/L	51.04	4990.9 ppb	51.04	1.02%
Sb 206.836†	1703.5	512.36 ug/L	1.947	512.36 ppb	1.947	0.38%
Se 196.026†	959.7	507.25 ug/L	3.954	507.25 ppb	3.954	0.78%
Si 251.611†	161350.5	4966.0 ug/L	10.28	4966.0 ppb	10.28	0.21%
Sn 189.927†	2889.1	512.23 ug/L	2.483	512.23 ppb	2.483	0.48%
Sr 421.552†	172991.3	483.12 ug/L	1.060	483.12 ppb	1.060	0.22%
Ti 334.940†	273592.4	500.79 ug/L	0.522	500.79 ppb	0.522	0.10%
Tl 190.801†	1902.6	501.14 ug/L	3.728	501.14 ppb	3.728	0.74%
U 409.014†	15225.2	513.97 ug/L	2.334	513.97 ppb	2.334	0.45%
V 292.402†	55239.2	507.61 ug/L	0.656	507.61 ppb	0.656	0.13%
Zn 213.857†	53382.2	488.06 ug/L	0.396	488.06 ppb	0.396	0.08%
SiO2†	161101.1	10557 ug/L	60.8	10557 ppb	60.8	0.58%

Sequence No.: 37
Sample ID: 232425001|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 66
Date Collected: 6/30/2009 18:53:02
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232425001|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7679.2	7679.2	103	%			18:54:55
1	Y RADIAL	7141.8	7141.8	103.1	%			18:54:55
1	Al 396.153Radial†	-43.1	30.7	25.313	ug/L	25.313	ppb	18:54:55
1	Ca 317.933Radial†	41.0	10.9	15.383	ug/L	15.383	ppb	18:55:15
1	Fe 238.204 Radial†	36.5	0.7	3.0647	ug/L	3.0647	ppb	18:55:15
1	K 766.490 Radial†	3150.5	659.3	142.24	ug/L	142.24	ppb	18:54:55
1	Mg 279.077 IEC†	2.5	-0.7	-16.430	ug/L	-16.430	ppb	18:55:15
1	Na 589.592 Radial†	2139.2	2217.8	136.11	ug/L	136.11	ppb	18:54:55
1	Sr 421.552†	3.8	59.5	0.1661	ug/L	0.1661	ppb	18:54:55
1	Sc 361.383	749081.8	749081.8	104.23	%			18:56:12
1	Y 371.029	585777.8	585777.8	104.23	%			18:56:12
1	Ag 328.068†	603.8	-53.4	-0.3268	ug/L	-0.3268	ppb	18:56:12
1	As 188.979†	-34.6	2.2	0.7995	ug/L	0.7995	ppb	18:56:32
1	B 249.677†	111.0	1046.4	26.372	ug/L	26.372	ppb	18:56:12
1	Ba 233.527†	38.5	36.5	0.2594	ug/L	0.2594	ppb	18:56:32
1	Be 313.107†	-4852.1	226.5	0.1048	ug/L	0.1048	ppb	18:56:12
1	Cd 226.502†	-272.4	19.7	0.2517	ug/L	0.2517	ppb	18:56:32
1	Co 228.616†	-102.5	1.1	0.0165	ug/L	0.0165	ppb	18:56:32
1	Cr 267.716†	-44.2	35.0	0.4876	ug/L	0.4876	ppb	18:56:12
1	Cu 324.752†	5748.4	-123.3	-0.4467	ug/L	-0.4467	ppb	18:56:12
1	Mn 257.610†	1193.3	465.3	0.5138	ug/L	0.5138	ppb	18:56:12
1	Mo 202.031†	10.7	-6.8	-0.4800	ug/L	-0.4800	ppb	18:56:32
1	Ni 231.604†	141.1	15.6	0.4158	ug/L	0.4158	ppb	18:56:32
1	P 214.914†	331.0	2.7	1.4835	ug/L	1.4835	ppb	18:56:32
1	Pb 220.353†	-23.4	-9.2	-1.0886	ug/L	-1.0886	ppb	18:56:32
1	S 181.975 Axial†	111.3	31.4	43.036	ug/L	43.036	ppb	18:56:32
1	Sb 206.836†	55.0	-4.5	-1.3684	ug/L	-1.3684	ppb	18:56:32
1	Se 196.026†	-24.9	4.9	2.5112	ug/L	2.5112	ppb	18:56:32
1	Si 251.611†	55231.9	52579.2	1623.8	ug/L	1623.8	ppb	18:56:12
1	Sn 189.927†	7.2	-5.6	-0.9908	ug/L	-0.9908	ppb	18:56:32
1	Ti 334.940†	-1136.9	257.5	0.4658	ug/L	0.4658	ppb	18:56:12
1	Tl 190.801†	-61.6	1.6	0.4304	ug/L	0.4304	ppb	18:56:32
1	U 409.014†	-4612.6	423.3	14.331	ug/L	14.331	ppb	18:56:12
1	V 292.402†	-1530.4	96.9	0.9006	ug/L	0.9006	ppb	18:56:12
1	Zn 213.857†	1088.2	118.9	1.0957	ug/L	1.0957	ppb	18:56:32
1	SiO2†	55619.9	52926.3	3480.6	ug/L	3480.6	ppb	18:57:28
2	Sc Radial	7626.5	7626.5	102	%			18:55:20
2	Y RADIAL	7069.1	7069.1	102.1	%			18:55:20
2	Al 396.153Radial†	-76.0	-1.9	-1.5186	ug/L	-1.5186	ppb	18:55:20
2	Ca 317.933Radial†	40.1	10.2	14.492	ug/L	14.492	ppb	18:55:40
2	Fe 238.204 Radial†	36.3	0.8	3.4061	ug/L	3.4061	ppb	18:55:40
2	K 766.490 Radial†	3063.9	595.7	128.51	ug/L	128.51	ppb	18:55:20
2	Mg 279.077 IEC†	5.1	2.0	49.454	ug/L	49.454	ppb	18:55:40
2	Na 589.592 Radial†	2259.2	2349.7	144.21	ug/L	144.21	ppb	18:55:20
2	Sr 421.552†	-3.0	52.9	0.1476	ug/L	0.1476	ppb	18:55:20
2	Sc 361.383	751805.2	751805.2	104.61	%			18:56:38
2	Y 371.029	587338.6	587338.6	104.51	%			18:56:38
2	Ag 328.068†	639.4	-21.4	-0.1361	ug/L	-0.1361	ppb	18:56:38
2	As 188.979†	-32.8	4.1	1.4652	ug/L	1.4652	ppb	18:56:58
2	B 249.677†	264.4	1192.7	30.058	ug/L	30.058	ppb	18:56:38
2	Ba 233.527†	37.8	35.6	0.2532	ug/L	0.2532	ppb	18:56:58
2	Be 313.107†	-4998.9	103.0	0.0478	ug/L	0.0478	ppb	18:56:38
2	Cd 226.502†	-264.4	28.3	0.3617	ug/L	0.3617	ppb	18:56:58
2	Co 228.616†	-103.0	1.0	0.0162	ug/L	0.0162	ppb	18:56:58
2	Cr 267.716†	-64.8	15.4	0.2127	ug/L	0.2127	ppb	18:56:38
2	Cu 324.752†	5895.0	-3.1	-0.0109	ug/L	-0.0109	ppb	18:56:38
2	Mn 257.610†	1219.0	485.7	0.5351	ug/L	0.5351	ppb	18:56:38
2	Mo 202.031†	13.2	-4.5	-0.3190	ug/L	-0.3190	ppb	18:56:58
2	Ni 231.604†	155.0	28.4	0.7578	ug/L	0.7578	ppb	18:56:58

2	P 214.914†	313.0	-15.6	-7.9535 ug/L	-7.9535 ppb	18:56:58
2	Pb 220.353†	-19.4	-5.3	-0.6352 ug/L	-0.6352 ppb	18:56:58
2	S 181.975 Axial†	107.3	27.2	37.263 ug/L	37.263 ppb	18:56:58
2	Sb 206.836†	59.1	-0.7	-0.2103 ug/L	-0.2103 ppb	18:56:58
2	Se 196.026†	-28.5	1.5	0.8003 ug/L	0.8003 ppb	18:56:58
2	Si 251.611†	55654.8	52791.5	1630.4 ug/L	1630.4 ppb	18:56:38
2	Sn 189.927†	18.1	4.8	0.8542 ug/L	0.8542 ppb	18:56:58
2	Ti 334.940†	-1237.5	165.3	0.2967 ug/L	0.2967 ppb	18:56:38
2	Tl 190.801†	-58.8	4.5	1.1932 ug/L	1.1932 ppb	18:56:58
2	U 409.014†	-4608.3	443.4	15.014 ug/L	15.014 ppb	18:56:38
2	V 292.402†	-1529.0	103.5	0.9653 ug/L	0.9653 ppb	18:56:38
2	Zn 213.857†	1082.9	110.1	1.0088 ug/L	1.0088 ppb	18:56:58
2	SiO2†	55618.8	52732.0	3467.7 ug/L	3467.7 ppb	18:57:33
3	Sc Radial	7721.4	7721.4	103 %		18:55:45
3	Y RADIAL	7155.3	7155.3	103.3 %		18:55:45
3	Al 396.153Radial†	-64.8	10.0	8.1941 ug/L	8.1941 ppb	18:55:45
3	Ca 317.933Radial†	41.2	10.8	15.240 ug/L	15.240 ppb	18:56:05
3	Fe 238.204 Radial†	32.7	-3.2	-13.243 ug/L	-13.243 ppb	18:56:05
3	K 766.490 Radial†	3002.0	498.8	107.60 ug/L	107.60 ppb	18:55:45
3	Mg 279.077 IEC†	4.2	1.0	24.481 ug/L	24.481 ppb	18:56:05
3	Na 589.592 Radial†	2100.8	2169.2	133.13 ug/L	133.13 ppb	18:55:45
3	Sr 421.552†	-17.8	38.7	0.1078 ug/L	0.1078 ppb	18:55:45
3	Sc 361.383	759509.3	759509.3	105.68 %		18:57:03
3	Y 371.029	593083.9	593083.9	105.53 %		18:57:03
3	Ag 328.068†	641.9	-25.3	-0.1677 ug/L	-0.1677 ppb	18:57:03
3	As 188.979†	-40.2	-2.6	-0.9500 ug/L	-0.9500 ppb	18:57:23
3	B 249.677†	246.8	1173.5	29.574 ug/L	29.574 ppb	18:57:03
3	Ba 233.527†	44.5	41.6	0.2940 ug/L	0.2940 ppb	18:57:23
3	Be 313.107†	-4903.9	241.4	0.1115 ug/L	0.1115 ppb	18:57:03
3	Cd 226.502†	-271.8	23.9	0.3065 ug/L	0.3065 ppb	18:57:23
3	Co 228.616†	-100.4	4.4	0.0764 ug/L	0.0764 ppb	18:57:23
3	Cr 267.716†	-78.4	3.2	0.0401 ug/L	0.0401 ppb	18:57:03
3	Cu 324.752†	5832.8	-119.2	-0.4325 ug/L	-0.4325 ppb	18:57:03
3	Mn 257.610†	1188.8	445.3	0.4890 ug/L	0.4890 ppb	18:57:03
3	Mo 202.031†	19.0	0.8	0.0573 ug/L	0.0573 ppb	18:57:23
3	Ni 231.604†	134.1	7.1	0.1902 ug/L	0.1902 ppb	18:57:23
3	P 214.914†	317.5	-14.4	-7.2318 ug/L	-7.2318 ppb	18:57:23
3	Pb 220.353†	-13.1	0.9	0.1106 ug/L	0.1106 ppb	18:57:23
3	S 181.975 Axial†	107.3	26.1	35.733 ug/L	35.733 ppb	18:57:23
3	Sb 206.836†	53.6	-6.5	-1.9360 ug/L	-1.9360 ppb	18:57:23
3	Se 196.026†	-27.4	2.8	1.3945 ug/L	1.3945 ppb	18:57:23
3	Si 251.611†	56238.4	52804.1	1630.8 ug/L	1630.8 ppb	18:57:03
3	Sn 189.927†	13.1	-0.1	-0.0231 ug/L	-0.0231 ppb	18:57:23
3	Ti 334.940†	-1178.5	233.1	0.4210 ug/L	0.4210 ppb	18:57:03
3	Tl 190.801†	-57.9	6.0	1.5802 ug/L	1.5802 ppb	18:57:23
3	U 409.014†	-4652.7	446.1	15.108 ug/L	15.108 ppb	18:57:03
3	V 292.402†	-1634.6	18.4	0.1993 ug/L	0.1993 ppb	18:57:03
3	Zn 213.857†	1079.7	96.5	0.8907 ug/L	0.8907 ppb	18:57:23
3	SiO2†	55921.6	52479.2	3451.1 ug/L	3451.1 ppb	18:57:39

Mean Data: 232425001|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	753465.5	104.84	%	0.753				0.72%
Sc Radial	7675.7	103	%	0.6				0.62%
Y 371.029	588733.4	104.76	%	0.685				0.65%
Y RADIAL	7122.1	102.9	%	0.67				0.65%
Ag 328.068†	-33.4	-0.2102	ug/L	0.10223	-0.2102	ppb	0.10223	48.63%
Al 396.153Radial†	12.9	10.663	ug/L	13.5850	10.663	ppb	13.5850	127.41%
As 188.979†	1.3	0.4382	ug/L	1.24744	0.4382	ppb	1.24744	284.65%
B 249.677†	1137.5	28.668	ug/L	2.0033	28.668	ppb	2.0033	6.99%
Ba 233.527†	37.9	0.2689	ug/L	0.02196	0.2689	ppb	0.02196	8.17%
Be 313.107†	190.3	0.0880	ug/L	0.03496	0.0880	ppb	0.03496	39.71%
Ca 317.933Radial†	10.6	15.039	ug/L	0.4783	15.039	ppb	0.4783	3.18%
Cd 226.502†	24.0	0.3066	ug/L	0.05498	0.3066	ppb	0.05498	17.93%
Co 228.616†	2.2	0.0364	ug/L	0.03466	0.0364	ppb	0.03466	95.33%
Cr 267.716†	17.9	0.2468	ug/L	0.22569	0.2468	ppb	0.22569	91.46%
Cu 324.752†	-81.8	-0.2967	ug/L	0.24760	-0.2967	ppb	0.24760	83.45%
Fe 238.204 Radial†	-0.5	-2.2573	ug/L	9.51512	-2.2573	ppb	9.51512	421.53%
K 766.490 Radial†	584.6	126.12	ug/L	17.442	126.12	ppb	17.442	13.83%

Mg 279.077 IEC†	0.8	19.168	ug/L	33.2621	19.168	ppb	33.2621 173.53%
Mn 257.610†	465.4	0.5126	ug/L	0.02310	0.5126	ppb	0.02310 4.51%
Mo 202.031†	-3.5	-0.2472	ug/L	0.27577	-0.2472	ppb	0.27577 111.55%
Na 589.592 Radial†	2245.6	137.82	ug/L	5.735	137.82	ppb	5.735 4.16%
Ni 231.604†	17.0	0.4546	ug/L	0.28580	0.4546	ppb	0.28580 62.87%
P 214.914†	-9.1	-4.5673	ug/L	5.25254	-4.5673	ppb	5.25254 115.00%
Pb 220.353†	-4.5	-0.5378	ug/L	0.60553	-0.5378	ppb	0.60553 112.60%
S 181.975 Axial†	28.2	38.677	ug/L	3.8514	38.677	ppb	3.8514 9.96%
Sb 206.836†	-3.9	-1.1716	ug/L	0.87957	-1.1716	ppb	0.87957 75.08%
Se 196.026†	3.1	1.5687	ug/L	0.86864	1.5687	ppb	0.86864 55.37%
Si 251.611†	52724.9	1628.3	ug/L	3.89	1628.3	ppb	3.89 0.24%
Sn 189.927†	-0.3	-0.0533	ug/L	0.92290	-0.0533	ppb	0.92290 >999.9%
Sr 421.552†	50.4	0.1405	ug/L	0.02979	0.1405	ppb	0.02979 21.20%
Ti 334.940†	218.6	0.3945	ug/L	0.08760	0.3945	ppb	0.08760 22.20%
Tl 190.801†	4.1	1.0679	ug/L	0.58507	1.0679	ppb	0.58507 54.79%
U 409.014†	437.6	14.818	ug/L	0.4242	14.818	ppb	0.4242 2.86%
V 292.402†	73.0	0.6884	ug/L	0.42477	0.6884	ppb	0.42477 61.70%
Zn 213.857†	108.5	0.9984	ug/L	0.10290	0.9984	ppb	0.10290 10.31%
SiO2†	52712.5	3466.5	ug/L	14.76	3466.5	ppb	14.76 0.43%

Sequence No.: 40
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 19:13:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7624.8	7624.8	102	%			19:15:19
1	Y RADIAL	7017.8	7017.8	101.4	%			19:15:19
1	Al 396.153Radial†	6388.3	6335.1	5195.6	ug/L	5195.6	ppb	19:15:19
1	Ca 317.933Radial†	3676.3	3574.7	5064.0	ug/L	5064.0	ppb	19:15:19
1	Fe 238.204 Radial†	1223.7	1164.8	4870.8	ug/L	4870.8	ppb	19:15:39
1	K 766.490 Radial†	25168.9	22265.7	4790.9	ug/L	4790.9	ppb	19:15:14
1	Mg 279.077 IEC†	212.4	205.2	5121.7	ug/L	5121.7	ppb	19:15:39
1	Na 589.592 Radial†	169779.8	166569.6	10223	ug/L	10223	ppb	19:15:14
1	Sr 421.552†	175689.9	172283.6	481.14	ug/L	481.14	ppb	19:15:14
1	Sc 361.383	768663.6	768663.6	106.95	%			19:16:48
1	Y 371.029	592644.8	592644.8	105.45	%			19:16:48
1	Ag 328.068†	88040.7	81684.2	490.97	ug/L	490.97	ppb	19:16:48
1	As 188.979†	1437.1	1379.1	500.45	ug/L	500.45	ppb	19:17:08
1	B 249.677†	19667.4	19328.6	484.28	ug/L	484.28	ppb	19:16:48
1	Ba 233.527†	74178.4	69355.2	490.43	ug/L	490.43	ppb	19:16:48
1	Be 313.107†	1145311.2	1075731.2	493.50	ug/L	493.50	ppb	19:16:48
1	Cd 226.502†	40488.8	38137.6	486.19	ug/L	486.19	ppb	19:17:08
1	Co 228.616†	30065.4	28210.2	489.45	ug/L	489.45	ppb	19:17:08
1	Cr 267.716†	37378.5	35025.8	491.49	ug/L	491.49	ppb	19:16:48
1	Cu 324.752†	149927.6	134541.7	487.82	ug/L	487.82	ppb	19:16:48
1	Mn 257.610†	476428.3	444773.9	491.00	ug/L	491.00	ppb	19:16:48
1	Mo 202.031†	7534.1	7027.2	495.02	ug/L	495.02	ppb	19:17:08
1	Ni 231.604†	19734.5	18331.7	489.69	ug/L	489.69	ppb	19:17:08
1	P 214.914†	5522.7	4848.8	2383.1	ug/L	2383.1	ppb	19:17:08
1	Pb 220.353†	4470.7	4193.3	500.81	ug/L	500.81	ppb	19:17:08
1	S 181.975 Axial†	841.5	711.4	973.60	ug/L	973.60	ppb	19:17:08
1	Sb 206.836†	1830.8	1654.5	497.69	ug/L	497.69	ppb	19:17:08
1	Se 196.026†	1012.3	975.3	514.95	ug/L	514.95	ppb	19:17:08
1	Si 251.611†	86043.3	80037.5	2455.1	ug/L	2455.1	ppb	19:16:48
1	Sn 189.927†	2979.0	2772.8	491.64	ug/L	491.64	ppb	19:17:08
1	Ti 334.940†	283813.9	266710.1	488.20	ug/L	488.20	ppb	19:16:48
1	Tl 190.801†	1926.6	1862.1	490.42	ug/L	490.42	ppb	19:17:08
1	U 409.014†	10499.7	14665.8	495.06	ug/L	495.06	ppb	19:16:48
1	V 292.402†	55901.1	53832.0	494.83	ug/L	494.83	ppb	19:16:48
1	Zn 213.857†	57858.7	53171.9	486.20	ug/L	486.20	ppb	19:16:48
1	SiO2†	85478.5	79484.3	5189.8	ug/L	5189.8	ppb	19:18:08
2	Sc Radial	7544.5	7544.5	101	%			19:15:49
2	Y RADIAL	6937.8	6937.8	100.2	%			19:15:49
2	Al 396.153Radial†	6375.5	6389.0	5239.3	ug/L	5239.3	ppb	19:15:49
2	Ca 317.933Radial†	3709.0	3645.6	5164.4	ug/L	5164.4	ppb	19:15:49
2	Fe 238.204 Radial†	1234.6	1188.3	4969.4	ug/L	4969.4	ppb	19:16:09
2	K 766.490 Radial†	25456.1	22812.9	4908.5	ug/L	4908.5	ppb	19:15:44
2	Mg 279.077 IEC†	208.8	203.9	5088.6	ug/L	5088.6	ppb	19:16:09
2	Na 589.592 Radial†	171290.6	169838.5	10423	ug/L	10423	ppb	19:15:44
2	Sr 421.552†	176920.7	175336.7	489.67	ug/L	489.67	ppb	19:15:44
2	Sc 361.383	739420.8	739420.8	102.88	%			19:17:15
2	Y 371.029	570351.5	570351.5	101.49	%			19:17:15
2	Ag 328.068†	89145.4	86013.3	516.95	ug/L	516.95	ppb	19:17:15
2	As 188.979†	1425.2	1420.7	515.58	ug/L	515.58	ppb	19:17:35
2	B 249.677†	20099.8	20476.2	513.11	ug/L	513.11	ppb	19:17:15
2	Ba 233.527†	75262.9	73152.2	517.28	ug/L	517.28	ppb	19:17:15
2	Be 313.107†	1163202.3	1135470.9	520.90	ug/L	520.90	ppb	19:17:15
2	Cd 226.502†	40416.2	39564.1	504.38	ug/L	504.38	ppb	19:17:35
2	Co 228.616†	29966.2	29225.4	507.04	ug/L	507.04	ppb	19:17:35
2	Cr 267.716†	37953.8	36967.1	518.73	ug/L	518.73	ppb	19:17:15
2	Cu 324.752†	151617.6	141728.2	513.87	ug/L	513.87	ppb	19:17:15
2	Mn 257.610†	483691.3	469450.3	518.22	ug/L	518.22	ppb	19:17:15
2	Mo 202.031†	7504.4	7276.8	512.60	ug/L	512.60	ppb	19:17:35
2	Ni 231.604†	19673.8	19002.4	507.61	ug/L	507.61	ppb	19:17:35

2	P 214.914†	5508.5	5039.3	2475.3 ug/L	2475.3 ppb	19:17:35
2	Pb 220.353†	4456.7	4345.0	518.90 ug/L	518.90 ppb	19:17:35
2	S 181.975 Axial†	846.6	747.5	1023.0 ug/L	1023.0 ppb	19:17:35
2	Sb 206.836†	1823.0	1714.6	515.60 ug/L	515.60 ppb	19:17:35
2	Se 196.026†	1008.5	1009.0	532.54 ug/L	532.54 ppb	19:17:35
2	Si 251.611†	87369.2	84507.9	2592.5 ug/L	2592.5 ppb	19:17:15
2	Sn 189.927†	2991.0	2894.6	513.22 ug/L	513.22 ppb	19:17:35
2	Ti 334.940†	287913.1	281189.0	514.70 ug/L	514.70 ppb	19:17:15
2	Tl 190.801†	1928.6	1935.3	509.77 ug/L	509.77 ppb	19:17:35
2	U 409.014†	10549.8	15102.7	509.79 ug/L	509.79 ppb	19:17:15
2	V 292.402†	56794.2	56767.0	521.68 ug/L	521.68 ppb	19:17:15
2	Zn 213.857†	58603.9	56035.7	512.47 ug/L	512.47 ppb	19:17:15
2	SiO2†	86477.1	83615.7	5460.1 ug/L	5460.1 ppb	19:18:13
3	Sc Radial	7531.2	7531.2	101 %		19:16:19
3	Y RADIAL	6899.9	6899.9	99.65 %		19:16:19
3	Al 396.153Radial†	6366.9	6391.6	5241.3 ug/L	5241.3 ppb	19:16:19
3	Ca 317.933Radial†	3664.6	3608.0	5111.1 ug/L	5111.1 ppb	19:16:19
3	Fe 238.204 Radial†	1221.5	1177.5	4924.4 ug/L	4924.4 ppb	19:16:39
3	K 766.490 Radial†	25737.9	23137.1	4978.4 ug/L	4978.4 ppb	19:16:14
3	Mg 279.077 IEC†	206.8	202.2	5047.9 ug/L	5047.9 ppb	19:16:39
3	Na 589.592 Radial†	173049.7	171883.5	10549 ug/L	10549 ppb	19:16:14
3	Sr 421.552†	178978.7	177688.1	496.24 ug/L	496.24 ppb	19:16:14
3	Sc 361.383	740672.0	740672.0	103.06 %		19:17:43
3	Y 371.029	571519.5	571519.5	101.69 %		19:17:43
3	Ag 328.068†	87920.0	84678.0	508.94 ug/L	508.94 ppb	19:17:43
3	As 188.979†	1448.4	1440.9	522.80 ug/L	522.80 ppb	19:18:03
3	B 249.677†	19705.1	20060.2	502.61 ug/L	502.61 ppb	19:17:43
3	Ba 233.527†	74275.9	72070.9	509.63 ug/L	509.63 ppb	19:17:43
3	Be 313.107†	1148041.0	1118849.7	513.27 ug/L	513.27 ppb	19:17:43
3	Cd 226.502†	40802.6	39872.7	508.33 ug/L	508.33 ppb	19:18:03
3	Co 228.616†	30206.7	29409.7	510.27 ug/L	510.27 ppb	19:18:03
3	Cr 267.716†	37413.1	36380.1	510.50 ug/L	510.50 ppb	19:17:43
3	Cu 324.752†	149436.4	139362.8	505.30 ug/L	505.30 ppb	19:17:43
3	Mn 257.610†	476929.6	462095.1	510.10 ug/L	510.10 ppb	19:17:43
3	Mo 202.031†	7565.6	7324.0	515.92 ug/L	515.92 ppb	19:18:03
3	Ni 231.604†	19891.1	19180.9	512.38 ug/L	512.38 ppb	19:18:03
3	P 214.914†	5557.6	5077.8	2496.8 ug/L	2496.8 ppb	19:18:03
3	Pb 220.353†	4503.6	4383.2	523.47 ug/L	523.47 ppb	19:18:03
3	S 181.975 Axial†	846.1	745.6	1020.4 ug/L	1020.4 ppb	19:18:03
3	Sb 206.836†	1857.8	1745.5	525.08 ug/L	525.08 ppb	19:18:03
3	Se 196.026†	1024.3	1022.6	539.33 ug/L	539.33 ppb	19:18:03
3	Si 251.611†	86072.0	83105.7	2549.1 ug/L	2549.1 ppb	19:17:43
3	Sn 189.927†	3015.7	2913.7	516.58 ug/L	516.58 ppb	19:18:03
3	Ti 334.940†	283942.2	276863.3	506.78 ug/L	506.78 ppb	19:17:43
3	Tl 190.801†	1956.9	1959.5	516.02 ug/L	516.02 ppb	19:18:03
3	U 409.014†	10363.0	14904.2	503.08 ug/L	503.08 ppb	19:17:43
3	V 292.402†	55972.0	55876.0	513.63 ug/L	513.63 ppb	19:17:43
3	Zn 213.857†	57980.4	55334.5	505.98 ug/L	505.98 ppb	19:17:43
3	SiO2†	87652.8	84614.4	5525.5 ug/L	5525.5 ppb	19:18:18

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	749585.4	104.30	%	2.301				2.21%
Sc Radial	7566.9	101	%	0.7				0.67%
Y 371.029	578171.9	102.88	%	2.233				2.17%
Y RADIAL	6951.8	100.4	%	0.87				0.87%
Ag 328.068†	84125.2	505.62	ug/L	13.306	505.62	ppb	13.306	2.63%
QC value within limits for Ag 328.068 Recovery = 101.12%								
Al 396.153Radial†	6371.9	5225.4	ug/L	25.81	5225.4	ppb	25.81	0.49%
QC value within limits for Al 396.153Radial Recovery = 104.51%								
As 188.979†	1413.6	512.94	ug/L	11.405	512.94	ppb	11.405	2.22%
QC value within limits for As 188.979 Recovery = 102.59%								
B 249.677†	19955.0	500.00	ug/L	14.588	500.00	ppb	14.588	2.92%
QC value within limits for B 249.677 Recovery = 100.00%								
Ba 233.527†	71526.1	505.78	ug/L	13.833	505.78	ppb	13.833	2.74%
QC value within limits for Ba 233.527 Recovery = 101.16%								
Be 313.107†	1110017.3	509.22	ug/L	14.144	509.22	ppb	14.144	2.78%
QC value within limits for Be 313.107 Recovery = 101.84%								
Ca 317.933Radial†	3609.4	5113.2	ug/L	50.20	5113.2	ppb	50.20	0.98%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.26%
Cd 226.502†            39191.5      499.63 ug/L        11.810      499.63 ppb         11.810   2.36%
   QC value within limits for Cd 226.502  Recovery = 99.93%
Co 228.616†            28948.4      502.25 ug/L        11.206      502.25 ppb         11.206   2.23%
   QC value within limits for Co 228.616  Recovery = 100.45%
Cr 267.716†            36124.3      506.91 ug/L        13.971      506.91 ppb         13.971   2.76%
   QC value within limits for Cr 267.716  Recovery = 101.38%
Cu 324.752†           138544.2      502.33 ug/L        13.275      502.33 ppb         13.275   2.64%
   QC value within limits for Cu 324.752  Recovery = 100.47%
Fe 238.204 Radial†      1176.9      4921.6 ug/L         49.35      4921.6 ppb          49.35   1.00%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.43%
K 766.490 Radial†      22738.6      4892.6 ug/L         94.74      4892.6 ppb          94.74   1.94%
   QC value within limits for K 766.490 Radial  Recovery = 97.85%
Mg 279.077 IEC†          203.8      5086.1 ug/L         36.96      5086.1 ppb          36.96   0.73%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.72%
Mn 257.610†           458773.1      506.44 ug/L        13.978      506.44 ppb         13.978   2.76%
   QC value within limits for Mn 257.610  Recovery = 101.29%
Mo 202.031†             7209.3      507.85 ug/L        11.231      507.85 ppb         11.231   2.21%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†    169430.5       10398 ug/L         164.5       10398 ppb          164.5   1.58%
   QC value within limits for Na 589.592 Radial  Recovery = 103.98%
Ni 231.604†            18838.3      503.23 ug/L        11.962      503.23 ppb         11.962   2.38%
   QC value within limits for Ni 231.604  Recovery = 100.65%
P 214.914†              4988.6      2451.7 ug/L         60.44      2451.7 ppb          60.44   2.47%
   QC value within limits for P 214.914  Recovery = 98.07%
Pb 220.353†             4307.2      514.39 ug/L        11.984      514.39 ppb         11.984   2.33%
   QC value within limits for Pb 220.353  Recovery = 102.88%
S 181.975 Axial†         734.8      1005.7 ug/L         27.80      1005.7 ppb          27.80   2.76%
   QC value within limits for S 181.975 Axial  Recovery = 100.57%
Sb 206.836†             1704.9      512.79 ug/L        13.907      512.79 ppb         13.907   2.71%
   QC value within limits for Sb 206.836  Recovery = 102.56%
Se 196.026†             1002.3      528.94 ug/L        12.583      528.94 ppb         12.583   2.38%
   QC value within limits for Se 196.026  Recovery = 105.79%
Si 251.611†            82550.3      2532.2 ug/L         70.25      2532.2 ppb          70.25   2.77%
   QC value within limits for Si 251.611  Recovery = 101.29%
Sn 189.927†             2860.4      507.15 ug/L        13.537      507.15 ppb         13.537   2.67%
   QC value within limits for Sn 189.927  Recovery = 101.43%
Sr 421.552†           175102.8      489.02 ug/L         7.568      489.02 ppb          7.568   1.55%
   QC value within limits for Sr 421.552  Recovery = 97.80%
Ti 334.940†           274920.8      503.23 ug/L        13.602      503.23 ppb         13.602   2.70%
   QC value within limits for Ti 334.940  Recovery = 100.65%
Tl 190.801†             1919.0      505.40 ug/L        13.346      505.40 ppb         13.346   2.64%
   QC value within limits for Tl 190.801  Recovery = 101.08%
U 409.014†             14890.9      502.64 ug/L         7.375      502.64 ppb          7.375   1.47%
   QC value within limits for U 409.014  Recovery = 100.53%
V 292.402†             55491.7      510.05 ug/L        13.782      510.05 ppb         13.782   2.70%
   QC value within limits for V 292.402  Recovery = 102.01%
Zn 213.857†            54847.4      501.55 ug/L        13.684      501.55 ppb         13.684   2.73%
   QC value within limits for Zn 213.857  Recovery = 100.31%
SiO2†                  82571.4      5391.8 ug/L        177.96      5391.8 ppb         177.96   3.30%
   QC value within limits for SiO2  Recovery = 100.83%
All analyte(s) passed QC.
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Sequence No.: 41
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 19:20:29
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7503.2	7503.2	100	%			19:22:21
1	Y RADIAL	6942.1	6942.1	100.3	%			19:22:21
1	Al 396.153Radial†	-77.2	-4.3	-3.5081	ug/L	-3.5081	ppb	19:22:21
1	Ca 317.933Radial†	29.2	-0.1	-0.0742	ug/L	-0.0742	ppb	19:22:41
1	Fe 238.204 Radial†	33.7	-1.2	-5.1310	ug/L	-5.1310	ppb	19:22:41
1	K 766.490 Radial†	2474.2	57.6	12.430	ug/L	12.430	ppb	19:22:21
1	Mg 279.077 IEC†	3.7	0.6	15.906	ug/L	15.906	ppb	19:22:41
1	Na 589.592 Radial†	-232.6	-96.2	-5.9039	ug/L	-5.9039	ppb	19:22:21
1	Sr 421.552†	-55.5	0.6	0.0017	ug/L	0.0017	ppb	19:22:21
1	Sc 361.383	733564.8	733564.8	102.07	%			19:23:37
1	Y 371.029	574142.8	574142.8	102.16	%			19:23:37
1	Ag 328.068†	711.6	64.6	0.3807	ug/L	0.3807	ppb	19:23:37
1	As 188.979†	-31.3	4.7	1.7032	ug/L	1.7032	ppb	19:23:58
1	B 249.677†	-734.7	220.1	5.5477	ug/L	5.5477	ppb	19:23:37
1	Ba 233.527†	6.1	5.5	0.0396	ug/L	0.0396	ppb	19:23:58
1	Be 313.107†	-4820.2	159.3	0.0731	ug/L	0.0731	ppb	19:23:37
1	Cd 226.502†	-267.6	18.9	0.2422	ug/L	0.2422	ppb	19:23:58
1	Co 228.616†	-110.0	-8.3	-0.1445	ug/L	-0.1445	ppb	19:23:58
1	Cr 267.716†	-121.0	-41.2	-0.5781	ug/L	-0.5781	ppb	19:23:37
1	Cu 324.752†	5705.7	-48.4	-0.1757	ug/L	-0.1757	ppb	19:23:37
1	Mn 257.610†	747.5	52.7	0.0572	ug/L	0.0572	ppb	19:23:37
1	Mo 202.031†	14.6	-2.9	-0.2021	ug/L	-0.2021	ppb	19:23:58
1	Ni 231.604†	125.3	3.0	0.0803	ug/L	0.0803	ppb	19:23:58
1	P 214.914†	326.2	4.8	2.5214	ug/L	2.5214	ppb	19:23:58
1	Pb 220.353†	-26.5	-12.7	-1.5125	ug/L	-1.5125	ppb	19:23:58
1	S 181.975 Axial†	84.8	7.7	10.517	ug/L	10.517	ppb	19:23:58
1	Sb 206.836†	50.9	-7.4	-2.1646	ug/L	-2.1646	ppb	19:23:58
1	Se 196.026†	-19.3	9.9	5.0124	ug/L	5.0124	ppb	19:23:58
1	Si 251.611†	457.4	36.4	1.0998	ug/L	1.0998	ppb	19:23:58
1	Sn 189.927†	22.7	9.8	1.7290	ug/L	1.7290	ppb	19:23:58
1	Ti 334.940†	-1316.0	59.0	0.1058	ug/L	0.1058	ppb	19:23:37
1	Tl 190.801†	-44.8	16.8	4.4094	ug/L	4.4094	ppb	19:23:58
1	U 409.014†	-4789.3	156.6	5.3032	ug/L	5.3032	ppb	19:23:37
1	V 292.402†	-1564.9	32.0	0.2994	ug/L	0.2994	ppb	19:23:37
1	Zn 213.857†	956.9	12.4	0.1142	ug/L	0.1142	ppb	19:23:58
1	SiO2†	452.6	6.6	0.3761	ug/L	0.3761	ppb	19:24:54
2	Sc Radial	7446.1	7446.1	99.6	%			19:22:46
2	Y RADIAL	6863.2	6863.2	99.12	%			19:22:46
2	Al 396.153Radial†	-61.9	10.5	8.6366	ug/L	8.6366	ppb	19:22:46
2	Ca 317.933Radial†	27.9	-1.1	-1.4958	ug/L	-1.4958	ppb	19:23:06
2	Fe 238.204 Radial†	39.4	4.8	19.992	ug/L	19.992	ppb	19:23:06
2	K 766.490 Radial†	2526.6	129.0	27.851	ug/L	27.851	ppb	19:22:46
2	Mg 279.077 IEC†	1.8	-1.3	-31.935	ug/L	-31.935	ppb	19:23:06
2	Na 589.592 Radial†	-298.2	-163.8	-10.055	ug/L	-10.055	ppb	19:22:46
2	Sr 421.552†	-32.2	23.5	0.0657	ug/L	0.0657	ppb	19:22:46
2	Sc 361.383	724908.4	724908.4	100.87	%			19:24:03
2	Y 371.029	568012.1	568012.1	101.07	%			19:24:03
2	Ag 328.068†	650.9	12.7	0.0769	ug/L	0.0769	ppb	19:24:03
2	As 188.979†	-24.9	10.8	3.8911	ug/L	3.8911	ppb	19:24:23
2	B 249.677†	-714.3	231.8	5.8408	ug/L	5.8408	ppb	19:24:03
2	Ba 233.527†	13.0	12.3	0.0878	ug/L	0.0878	ppb	19:24:23
2	Be 313.107†	-4795.9	127.0	0.0581	ug/L	0.0581	ppb	19:24:03
2	Cd 226.502†	-265.1	18.2	0.2306	ug/L	0.2306	ppb	19:24:23
2	Co 228.616†	-114.9	-14.5	-0.2526	ug/L	-0.2526	ppb	19:24:23
2	Cr 267.716†	-46.1	31.7	0.4424	ug/L	0.4424	ppb	19:24:03
2	Cu 324.752†	5637.2	-49.6	-0.1787	ug/L	-0.1787	ppb	19:24:03
2	Mn 257.610†	726.0	40.2	0.0474	ug/L	0.0474	ppb	19:24:03
2	Mo 202.031†	11.8	-5.4	-0.3778	ug/L	-0.3778	ppb	19:24:23
2	Ni 231.604†	148.9	27.8	0.7438	ug/L	0.7438	ppb	19:24:23

2	P 214.914†	308.1	-9.3	-4.7005	ug/L	-4.7005 ppb	19:24:23
2	Pb 220.353†	-9.8	3.5	0.4190	ug/L	0.4190 ppb	19:24:23
2	S 181.975 Axial†	77.8	1.7	2.2949	ug/L	2.2949 ppb	19:24:23
2	Sb 206.836†	67.8	10.0	2.9668	ug/L	2.9668 ppb	19:24:23
2	Se 196.026†	-29.4	-0.4	-0.1143	ug/L	-0.1143 ppb	19:24:23
2	Si 251.611†	460.8	45.1	1.3740	ug/L	1.3740 ppb	19:24:23
2	Sn 189.927†	19.7	7.0	1.2412	ug/L	1.2412 ppb	19:24:23
2	Ti 334.940†	-1372.9	-12.8	-0.0272	ug/L	-0.0272 ppb	19:24:03
2	Tl 190.801†	-52.2	9.0	2.3613	ug/L	2.3613 ppb	19:24:23
2	U 409.014†	-4660.0	228.7	7.7397	ug/L	7.7397 ppb	19:24:03
2	V 292.402†	-1538.2	40.2	0.3722	ug/L	0.3722 ppb	19:24:03
2	Zn 213.857†	948.2	14.9	0.1323	ug/L	0.1323 ppb	19:24:23
2	SiO2†	435.2	-5.4	-0.4009	ug/L	-0.4009 ppb	19:24:59
3	Sc Radial	7395.5	7395.5	98.9	%		19:23:11
3	Y RADIAL	6866.3	6866.3	99.16	%		19:23:11
3	Al 396.153Radial†	-81.3	-9.5	-7.8152	ug/L	-7.8152 ppb	19:23:11
3	Ca 317.933Radial†	21.3	-7.6	-10.721	ug/L	-10.721 ppb	19:23:31
3	Fe 238.204 Radial†	33.0	-1.4	-6.0319	ug/L	-6.0319 ppb	19:23:31
3	K 766.490 Radial†	2473.3	92.6	19.979	ug/L	19.979 ppb	19:23:11
3	Mg 279.077 IEC†	1.7	-1.3	-31.980	ug/L	-31.980 ppb	19:23:31
3	Na 589.592 Radial†	-332.7	-200.7	-12.316	ug/L	-12.316 ppb	19:23:11
3	Sr 421.552†	-59.9	-4.7	-0.0129	ug/L	-0.0129 ppb	19:23:11
3	Sc 361.383	732958.1	732958.1	101.99	%		19:24:28
3	Y 371.029	573677.3	573677.3	102.08	%		19:24:28
3	Ag 328.068†	581.8	-62.2	-0.3768	ug/L	-0.3768 ppb	19:24:28
3	As 188.979†	-31.1	4.9	1.7798	ug/L	1.7798 ppb	19:24:48
3	B 249.677†	-687.3	266.0	6.7049	ug/L	6.7049 ppb	19:24:28
3	Ba 233.527†	18.1	17.2	0.1217	ug/L	0.1217 ppb	19:24:48
3	Be 313.107†	-4756.9	217.4	0.0996	ug/L	0.0996 ppb	19:24:28
3	Cd 226.502†	-284.8	1.9	0.0249	ug/L	0.0249 ppb	19:24:48
3	Co 228.616†	-110.9	-9.2	-0.1601	ug/L	-0.1601 ppb	19:24:48
3	Cr 267.716†	-69.2	9.5	0.1322	ug/L	0.1322 ppb	19:24:28
3	Cu 324.752†	5718.5	-31.3	-0.1137	ug/L	-0.1137 ppb	19:24:28
3	Mn 257.610†	735.5	41.6	0.0458	ug/L	0.0458 ppb	19:24:28
3	Mo 202.031†	18.6	1.1	0.0789	ug/L	0.0789 ppb	19:24:48
3	Ni 231.604†	138.1	15.6	0.4172	ug/L	0.4172 ppb	19:24:48
3	P 214.914†	319.1	-1.9	-0.9416	ug/L	-0.9416 ppb	19:24:48
3	Pb 220.353†	-8.3	5.2	0.6134	ug/L	0.6134 ppb	19:24:48
3	S 181.975 Axial†	83.2	6.2	8.4605	ug/L	8.4605 ppb	19:24:48
3	Sb 206.836†	60.5	2.0	0.6113	ug/L	0.6113 ppb	19:24:48
3	Se 196.026†	-23.7	5.6	2.8158	ug/L	2.8158 ppb	19:24:48
3	Si 251.611†	447.6	27.1	0.8193	ug/L	0.8193 ppb	19:24:48
3	Sn 189.927†	16.4	3.6	0.6306	ug/L	0.6306 ppb	19:24:48
3	Ti 334.940†	-1363.0	11.8	0.0188	ug/L	0.0188 ppb	19:24:28
3	Tl 190.801†	-47.6	14.1	3.6939	ug/L	3.6939 ppb	19:24:48
3	U 409.014†	-4805.4	136.9	4.6345	ug/L	4.6345 ppb	19:24:28
3	V 292.402†	-1580.9	15.1	0.1473	ug/L	0.1473 ppb	19:24:28
3	Zn 213.857†	959.8	16.0	0.1466	ug/L	0.1466 ppb	19:24:48
3	SiO2†	416.5	-28.5	-1.9131	ug/L	-1.9131 ppb	19:25:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	730477.1	101.64	%	0.672				0.66%
Sc Radial	7448.3	99.6	%	0.72				0.72%
Y 371.029	571944.0	101.77	%	0.607				0.60%
Y RADIAL	6890.5	99.51	%	0.646				0.65%
Ag 328.068†	5.0	0.0269	ug/L	0.38118	0.0269	ppb	0.38118	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.1	-0.8956	ug/L	8.53136	-0.8956	ppb	8.53136	952.59%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	6.8	2.4580	ug/L	1.24170	2.4580	ppb	1.24170	50.52%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	239.3	6.0311	ug/L	0.60163	6.0311	ppb	0.60163	9.98%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	11.7	0.0830	ug/L	0.04122	0.0830	ppb	0.04122	49.66%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	167.9	0.0769	ug/L	0.02100	0.0769	ppb	0.02100	27.30%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.9	-4.0971	ug/L	5.78053	-4.0971	ppb	5.78053	141.09%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.0      0.1659 ug/L       0.12227      0.1659 ppb        0.12227  73.70%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -10.7     -0.1857 ug/L       0.05844     -0.1857 ppb        0.05844  31.46%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 0.0     -0.0012 ug/L       0.52317     -0.0012 ppb        0.52317 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -43.1     -0.1560 ug/L       0.03671     -0.1560 ppb        0.03671  23.53%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.7      2.9430 ug/L      14.77161      2.9430 ppb       14.77161 501.92%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          93.1      20.087 ug/L        7.7111      20.087 ppb         7.7111  38.39%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.6     -16.003 ug/L       27.6339     -16.003 ppb        27.6339 172.68%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                44.8      0.0501 ug/L       0.00619      0.0501 ppb        0.00619  12.34%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -2.4     -0.1670 ug/L       0.23034     -0.1670 ppb        0.23034 137.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -153.6     -9.4250 ug/L       3.25231     -9.4250 ppb        3.25231  34.51%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                15.5      0.4138 ug/L       0.33178      0.4138 ppb        0.33178  80.18%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -2.1     -1.0402 ug/L       3.61197     -1.0402 ppb        3.61197 347.23%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -1.3     -0.1600 ug/L       1.17530     -0.1600 ppb        1.17530 734.38%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.2      7.0906 ug/L       4.27861      7.0906 ppb        4.27861  60.34%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 1.5      0.4712 ug/L       2.56853      0.4712 ppb        2.56853 545.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      2.5713 ug/L       2.57210      2.5713 ppb        2.57210 100.03%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                36.2      1.0977 ug/L       0.27738      1.0977 ppb        0.27738  25.27%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 6.8      1.2003 ug/L       0.55031      1.2003 ppb        0.55031  45.85%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 6.5      0.0182 ug/L       0.04183      0.0182 ppb        0.04183 230.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                19.3      0.0325 ug/L       0.06753      0.0325 ppb        0.06753 207.90%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                13.3      3.4882 ug/L       1.03945      3.4882 ppb        1.03945  29.80%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                174.0      5.8925 ug/L       1.63431      5.8925 ppb        1.63431  27.74%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 29.1      0.2730 ug/L       0.11478      0.2730 ppb        0.11478  42.05%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                14.4      0.1310 ug/L       0.01626      0.1310 ppb        0.01626  12.41%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      -9.1     -0.6460 ug/L       1.16412     -0.6460 ppb        1.16412 180.21%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 44
Sample ID: 1201871708|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 71
Date Collected: 6/30/2009 19:40:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871708|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7744.1	7744.1	104	%			19:42:40
1	Y RADIAL	7164.9	7164.9	103.5	%			19:42:40
1	Al 396.153Radial†	-60.7	14.1	11.570	ug/L	11.570	ppb	19:42:40
1	Ca 317.933Radial†	39.3	8.9	12.557	ug/L	12.557	ppb	19:43:00
1	Fe 238.204 Radial†	36.0	-0.0	-0.1785	ug/L	-0.1785	ppb	19:43:00
1	K 766.490 Radial†	2968.6	458.1	98.814	ug/L	98.814	ppb	19:42:40
1	Mg 279.077 IEC†	2.3	-0.8	-19.459	ug/L	-19.459	ppb	19:43:00
1	Na 589.592 Radial†	1188.2	1282.4	78.702	ug/L	78.702	ppb	19:42:40
1	Sr 421.552†	35.0	89.7	0.2503	ug/L	0.2503	ppb	19:42:40
1	Sc 361.383	746456.7	746456.7	103.86	%			19:43:57
1	Y 371.029	583514.3	583514.3	103.83	%			19:43:57
1	Ag 328.068†	715.3	56.1	0.3269	ug/L	0.3269	ppb	19:43:57
1	As 188.979†	-33.9	2.8	0.9956	ug/L	0.9956	ppb	19:44:17
1	B 249.677†	129.9	1065.0	26.841	ug/L	26.841	ppb	19:43:57
1	Ba 233.527†	40.9	38.9	0.2750	ug/L	0.2750	ppb	19:44:17
1	Be 313.107†	-4807.4	253.2	0.1160	ug/L	0.1160	ppb	19:43:57
1	Cd 226.502†	-262.6	28.2	0.3601	ug/L	0.3601	ppb	19:44:17
1	Co 228.616†	-112.2	-8.6	-0.1475	ug/L	-0.1475	ppb	19:44:17
1	Cr 267.716†	-65.3	14.5	0.2004	ug/L	0.2004	ppb	19:43:57
1	Cu 324.752†	5805.8	-48.6	-0.1763	ug/L	-0.1763	ppb	19:43:57
1	Mn 257.610†	1062.6	343.4	0.3791	ug/L	0.3791	ppb	19:44:17
1	Mo 202.031†	24.8	6.8	0.4777	ug/L	0.4777	ppb	19:44:17
1	Ni 231.604†	125.9	1.5	0.0390	ug/L	0.0390	ppb	19:44:17
1	P 214.914†	329.0	2.0	1.0244	ug/L	1.0244	ppb	19:44:17
1	Pb 220.353†	-2.6	10.7	1.2778	ug/L	1.2778	ppb	19:44:17
1	S 181.975 Axial†	102.7	23.4	32.116	ug/L	32.116	ppb	19:44:17
1	Sb 206.836†	66.6	6.8	2.0049	ug/L	2.0049	ppb	19:44:17
1	Se 196.026†	-24.8	4.9	2.4866	ug/L	2.4866	ppb	19:44:17
1	Si 251.611†	53887.6	51471.2	1589.6	ug/L	1589.6	ppb	19:43:57
1	Sn 189.927†	2.6	-10.0	-1.7773	ug/L	-1.7773	ppb	19:44:17
1	Ti 334.940†	-1373.2	26.2	0.0437	ug/L	0.0437	ppb	19:43:57
1	Tl 190.801†	-64.1	-0.9	-0.2362	ug/L	-0.2362	ppb	19:44:17
1	U 409.014†	-4699.1	324.4	10.985	ug/L	10.985	ppb	19:43:57
1	V 292.402†	-1580.5	43.5	0.4218	ug/L	0.4218	ppb	19:43:57
1	Zn 213.857†	1112.4	145.9	1.3474	ug/L	1.3474	ppb	19:44:17
1	SiO2†	53460.1	51034.5	3356.2	ug/L	3356.2	ppb	19:45:13
2	Sc Radial	7668.0	7668.0	103	%			19:43:05
2	Y RADIAL	7098.7	7098.7	102.5	%			19:43:05
2	Al 396.153Radial†	-79.7	-5.0	-4.1476	ug/L	-4.1476	ppb	19:43:05
2	Ca 317.933Radial†	39.3	9.2	13.011	ug/L	13.011	ppb	19:43:25
2	Fe 238.204 Radial†	36.9	1.2	5.0496	ug/L	5.0496	ppb	19:43:25
2	K 766.490 Radial†	3084.5	599.5	129.33	ug/L	129.33	ppb	19:43:05
2	Mg 279.077 IEC†	2.1	-1.0	-23.705	ug/L	-23.705	ppb	19:43:25
2	Na 589.592 Radial†	1279.2	1382.5	84.846	ug/L	84.846	ppb	19:43:05
2	Sr 421.552†	-15.1	41.2	0.1149	ug/L	0.1149	ppb	19:43:05
2	Sc 361.383	753828.8	753828.8	104.89	%			19:44:22
2	Y 371.029	589108.4	589108.4	104.82	%			19:44:22
2	Ag 328.068†	642.7	-19.9	-0.1290	ug/L	-0.1290	ppb	19:44:22
2	As 188.979†	-29.4	7.4	2.6523	ug/L	2.6523	ppb	19:44:42
2	B 249.677†	96.9	1032.3	26.015	ug/L	26.015	ppb	19:44:22
2	Ba 233.527†	46.6	44.0	0.3101	ug/L	0.3101	ppb	19:44:42
2	Be 313.107†	-4845.6	262.0	0.1203	ug/L	0.1203	ppb	19:44:22
2	Cd 226.502†	-292.8	2.0	0.0248	ug/L	0.0248	ppb	19:44:42
2	Co 228.616†	-96.7	7.3	0.1272	ug/L	0.1272	ppb	19:44:42
2	Cr 267.716†	4.1	81.3	1.1353	ug/L	1.1353	ppb	19:44:22
2	Cu 324.752†	5827.3	-82.8	-0.2997	ug/L	-0.2997	ppb	19:44:22
2	Mn 257.610†	1075.4	345.6	0.3823	ug/L	0.3823	ppb	19:44:42
2	Mo 202.031†	26.6	8.3	0.5823	ug/L	0.5823	ppb	19:44:42
2	Ni 231.604†	142.3	15.8	0.4231	ug/L	0.4231	ppb	19:44:42

2	P 214.914†	331.4	1.1	0.6272	ug/L	0.6272 ppb	19:44:42
2	Pb 220.353†	-4.6	8.9	1.0608	ug/L	1.0608 ppb	19:44:42
2	S 181.975 Axial†	102.4	22.2	30.457	ug/L	30.457 ppb	19:44:42
2	Sb 206.836†	58.4	-1.6	-0.4877	ug/L	-0.4877 ppb	19:44:42
2	Se 196.026†	-31.5	-1.3	-0.6380	ug/L	-0.6380 ppb	19:44:42
2	Si 251.611†	54608.0	51650.7	1595.1	ug/L	1595.1 ppb	19:44:22
2	Sn 189.927†	13.7	0.5	0.0970	ug/L	0.0970 ppb	19:44:42
2	Ti 334.940†	-1322.0	87.9	0.1555	ug/L	0.1555 ppb	19:44:22
2	Tl 190.801†	-66.4	-2.6	-0.6678	ug/L	-0.6678 ppb	19:44:42
2	U 409.014†	-4676.7	390.0	13.203	ug/L	13.203 ppb	19:44:22
2	V 292.402†	-1647.0	-5.0	-0.0145	ug/L	-0.0145 ppb	19:44:22
2	Zn 213.857†	1121.3	143.9	1.3258	ug/L	1.3258 ppb	19:44:42
2	SiO2†	53563.9	50630.2	3329.5	ug/L	3329.5 ppb	19:45:18
3	Sc Radial	7610.9	7610.9	102	%		19:43:30
3	Y RADIAL	7017.4	7017.4	101.3	%		19:43:30
3	Al 396.153Radial†	-49.4	24.1	19.929	ug/L	19.929 ppb	19:43:30
3	Ca 317.933Radial†	41.7	11.9	16.839	ug/L	16.839 ppb	19:43:50
3	Fe 238.204 Radial†	36.0	0.5	2.2499	ug/L	2.2499 ppb	19:43:50
3	K 766.490 Radial†	3037.8	576.2	124.31	ug/L	124.31 ppb	19:43:30
3	Mg 279.077 IEC†	1.0	-2.0	-50.857	ug/L	-50.857 ppb	19:43:50
3	Na 589.592 Radial†	1272.2	1385.0	85.002	ug/L	85.002 ppb	19:43:30
3	Sr 421.552†	9.1	64.8	0.1808	ug/L	0.1808 ppb	19:43:30
3	Sc 361.383	742155.8	742155.8	103.27	%		19:44:48
3	Y 371.029	580272.8	580272.8	103.25	%		19:44:48
3	Ag 328.068†	589.3	-61.9	-0.3821	ug/L	-0.3821 ppb	19:44:48
3	As 188.979†	-33.3	3.2	1.1501	ug/L	1.1501 ppb	19:45:08
3	B 249.677†	152.5	1087.6	27.411	ug/L	27.411 ppb	19:44:48
3	Ba 233.527†	33.9	32.3	0.2278	ug/L	0.2278 ppb	19:45:08
3	Be 313.107†	-4852.4	182.7	0.0845	ug/L	0.0845 ppb	19:44:48
3	Cd 226.502†	-271.4	18.3	0.2331	ug/L	0.2331 ppb	19:45:08
3	Co 228.616†	-111.9	-8.9	-0.1591	ug/L	-0.1591 ppb	19:45:08
3	Cr 267.716†	-19.1	58.9	0.8211	ug/L	0.8211 ppb	19:44:48
3	Cu 324.752†	5750.5	-69.7	-0.2526	ug/L	-0.2526 ppb	19:44:48
3	Mn 257.610†	1058.2	345.1	0.3819	ug/L	0.3819 ppb	19:45:08
3	Mo 202.031†	-1.2	-18.3	-1.2904	ug/L	-1.2904 ppb	19:45:08
3	Ni 231.604†	148.1	23.6	0.6309	ug/L	0.6309 ppb	19:45:08
3	P 214.914†	325.3	0.2	0.1660	ug/L	0.1660 ppb	19:45:08
3	Pb 220.353†	-18.4	-4.5	-0.5408	ug/L	-0.5408 ppb	19:45:08
3	S 181.975 Axial†	95.3	16.9	23.090	ug/L	23.090 ppb	19:45:08
3	Sb 206.836†	64.1	4.8	1.3771	ug/L	1.3771 ppb	19:45:08
3	Se 196.026†	-21.3	8.2	4.1830	ug/L	4.1830 ppb	19:45:08
3	Si 251.611†	53511.4	51407.6	1587.7	ug/L	1587.7 ppb	19:44:48
3	Sn 189.927†	13.4	0.5	0.0881	ug/L	0.0881 ppb	19:45:08
3	Ti 334.940†	-1191.4	194.5	0.3502	ug/L	0.3502 ppb	19:44:48
3	Tl 190.801†	-58.5	4.1	1.0780	ug/L	1.0780 ppb	19:45:08
3	U 409.014†	-4553.8	439.0	14.862	ug/L	14.862 ppb	19:44:48
3	V 292.402†	-1614.3	2.0	0.0285	ug/L	0.0285 ppb	19:44:48
3	Zn 213.857†	1138.9	177.8	1.6381	ug/L	1.6381 ppb	19:45:08
3	SiO2†	53594.0	51462.5	3384.3	ug/L	3384.3 ppb	19:45:23

Mean Data: 1201871708|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	747480.4	104.01	%	0.821				0.79%
Sc Radial	7674.3	103	%	0.9				0.87%
Y 371.029	584298.5	103.97	%	0.795				0.76%
Y RADIAL	7093.7	102.4	%	1.07				1.04%
Ag 328.068†	-8.6	-0.0614	ug/L	0.35929	-0.0614	ppb	0.35929	584.99%
Al 396.153Radial†	11.1	9.1172	ug/L	12.22422	9.1172	ppb	12.22422	134.08%
As 188.979†	4.5	1.5993	ug/L	0.91517	1.5993	ppb	0.91517	57.22%
B 249.677†	1061.6	26.755	ug/L	0.7018	26.755	ppb	0.7018	2.62%
Ba 233.527†	38.4	0.2710	ug/L	0.04125	0.2710	ppb	0.04125	15.22%
Be 313.107†	232.6	0.1069	ug/L	0.01957	0.1069	ppb	0.01957	18.30%
Ca 317.933Radial†	10.0	14.135	ug/L	2.3522	14.135	ppb	2.3522	16.64%
Cd 226.502†	16.2	0.2060	ug/L	0.16930	0.2060	ppb	0.16930	82.19%
Co 228.616†	-3.4	-0.0598	ug/L	0.16204	-0.0598	ppb	0.16204	271.01%
Cr 267.716†	51.6	0.7189	ug/L	0.47571	0.7189	ppb	0.47571	66.17%
Cu 324.752†	-67.1	-0.2428	ug/L	0.06227	-0.2428	ppb	0.06227	25.64%
Fe 238.204 Radial†	0.6	2.3737	ug/L	2.61624	2.3737	ppb	2.61624	110.22%
K 766.490 Radial†	544.6	117.49	ug/L	16.363	117.49	ppb	16.363	13.93%

Mg 279.077 1EC†	-1.3	-31.340	ug/L	17.0351	-31.340	ppb	17.0351 54.36%
Mn 257.610†	344.7	0.3811	ug/L	0.00172	0.3811	ppb	0.00172 0.45%
Mo 202.031†	-1.1	-0.0768	ug/L	1.05234	-0.0768	ppb	1.05234 >999.9%
Na 589.592 Radial†	1350.0	82.850	ug/L	3.5928	82.850	ppb	3.5928 4.34%
Ni 231.604†	13.6	0.3643	ug/L	0.30032	0.3643	ppb	0.30032 82.43%
P 214.914†	1.1	0.6059	ug/L	0.42960	0.6059	ppb	0.42960 70.90%
Pb 220.353†	5.0	0.5993	ug/L	0.99325	0.5993	ppb	0.99325 165.74%
S 181.975 Axial†	20.8	28.554	ug/L	4.8043	28.554	ppb	4.8043 16.83%
Sb 206.836†	3.3	0.9648	ug/L	1.29642	0.9648	ppb	1.29642 134.38%
Se 196.026†	3.9	2.0105	ug/L	2.44554	2.0105	ppb	2.44554 121.64%
Si 251.611†	51509.9	1590.8	ug/L	3.87	1590.8	ppb	3.87 0.24%
Sn 189.927†	-3.0	-0.5307	ug/L	1.07958	-0.5307	ppb	1.07958 203.41%
Sr 421.552†	65.2	0.1820	ug/L	0.06772	0.1820	ppb	0.06772 37.21%
Ti 334.940†	102.9	0.1831	ug/L	0.15511	0.1831	ppb	0.15511 84.70%
Tl 190.801†	0.2	0.0580	ug/L	0.90935	0.0580	ppb	0.90935 >999.9%
U 409.014†	384.5	13.017	ug/L	1.9450	13.017	ppb	1.9450 14.94%
V 292.402†	13.5	0.1453	ug/L	0.24043	0.1453	ppb	0.24043 165.51%
Zn 213.857†	155.9	1.4371	ug/L	0.17438	1.4371	ppb	0.17438 12.13%
SiO2†	51042.4	3356.7	ug/L	27.41	3356.7	ppb	27.41 0.82%

Sequence No.: 45
Sample ID: 1201871709|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 72
Date Collected: 6/30/2009 19:47:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871709|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7707.3	7707.3	103	%			19:49:28
1	Y RADIAL	7078.2	7078.2	102.2	%			19:49:28
1	Al 396.153Radial†	6342.7	6223.9	5104.0	ug/L	5104.0	ppb	19:49:28
1	Ca 317.933Radial†	3701.1	3560.3	5043.5	ug/L	5043.5	ppb	19:49:28
1	Fe 238.204 Radial†	1221.2	1149.5	4807.0	ug/L	4807.0	ppb	19:49:48
1	K 766.490 Radial†	26476.1	23269.5	5008.1	ug/L	5008.1	ppb	19:49:28
1	Mg 279.077 IEC†	207.8	198.5	4954.2	ug/L	4954.2	ppb	19:49:48
1	Na 589.592 Radial†	88419.6	85885.6	5271.0	ug/L	5271.0	ppb	19:49:28
1	Sr 421.552†	176922.3	171636.4	479.34	ug/L	479.34	ppb	19:49:28
1	Sc 361.383	748522.5	748522.5	104.15	%			19:50:46
1	Y 371.029	577845.3	577845.3	102.82	%			19:50:46
1	Ag 328.068†	86617.7	82532.9	496.04	ug/L	496.04	ppb	19:50:46
1	As 188.979†	1398.8	1378.4	500.22	ug/L	500.22	ppb	19:51:07
1	B 249.677†	20224.1	20357.9	510.24	ug/L	510.24	ppb	19:50:46
1	Ba 233.527†	74460.8	71492.6	505.53	ug/L	505.53	ppb	19:50:46
1	Be 313.107†	1125260.2	1085293.5	497.89	ug/L	497.89	ppb	19:50:46
1	Cd 226.502†	40175.3	38855.2	495.35	ug/L	495.35	ppb	19:51:07
1	Co 228.616†	29156.8	28094.2	487.42	ug/L	487.42	ppb	19:51:07
1	Cr 267.716†	36758.8	35371.2	496.34	ug/L	496.34	ppb	19:50:46
1	Cu 324.752†	149200.9	137615.9	498.96	ug/L	498.96	ppb	19:50:46
1	Mn 257.610†	471737.8	452256.6	499.24	ug/L	499.24	ppb	19:50:46
1	Mo 202.031†	7330.7	7021.4	494.61	ug/L	494.61	ppb	19:51:07
1	Ni 231.604†	19441.6	18547.0	495.45	ug/L	495.45	ppb	19:51:07
1	P 214.914†	1454.3	1081.5	457.71	ug/L	457.71	ppb	19:51:07
1	Pb 220.353†	4364.3	4203.6	502.02	ug/L	502.02	ppb	19:51:07
1	S 181.975 Axial†	3880.4	3650.4	4999.9	ug/L	4999.9	ppb	19:51:07
1	Sb 206.836†	1841.3	1710.6	514.56	ug/L	514.56	ppb	19:51:07
1	Se 196.026†	965.9	956.2	504.98	ug/L	504.98	ppb	19:51:07
1	Si 251.611†	220649.1	211443.1	6513.1	ug/L	6513.1	ppb	19:50:46
1	Sn 189.927†	3018.5	2885.7	511.61	ug/L	511.61	ppb	19:51:07
1	Ti 334.940†	281471.7	271601.6	497.15	ug/L	497.15	ppb	19:50:46
1	Tl 190.801†	1811.3	1799.8	474.22	ug/L	474.22	ppb	19:51:07
1	U 409.014†	10725.7	15147.0	511.35	ug/L	511.35	ppb	19:50:46
1	V 292.402†	55559.5	54910.3	504.64	ug/L	504.64	ppb	19:50:46
1	Zn 213.857†	55945.4	52790.5	482.64	ug/L	482.64	ppb	19:50:46
1	SiO2†	220542.1	211315.3	13859	ug/L	13859	ppb	19:52:07
2	Sc Radial	7731.2	7731.2	103	%			19:49:53
2	Y RADIAL	7162.5	7162.5	103.4	%			19:49:53
2	Al 396.153Radial†	6390.7	6251.2	5126.7	ug/L	5126.7	ppb	19:49:53
2	Ca 317.933Radial†	3730.5	3577.6	5068.1	ug/L	5068.1	ppb	19:49:53
2	Fe 238.204 Radial†	1210.3	1135.4	4748.0	ug/L	4748.0	ppb	19:50:13
2	K 766.490 Radial†	26570.0	23280.7	5010.6	ug/L	5010.6	ppb	19:49:53
2	Mg 279.077 IEC†	212.2	202.2	5045.6	ug/L	5045.6	ppb	19:50:13
2	Na 589.592 Radial†	88783.8	85972.0	5276.3	ug/L	5276.3	ppb	19:49:53
2	Sr 421.552†	178392.2	172525.9	481.82	ug/L	481.82	ppb	19:49:53
2	Sc 361.383	749577.0	749577.0	104.30	%			19:51:14
2	Y 371.029	578691.4	578691.4	102.97	%			19:51:14
2	Ag 328.068†	86774.5	82566.1	496.22	ug/L	496.22	ppb	19:51:14
2	As 188.979†	1404.3	1381.9	501.44	ug/L	501.44	ppb	19:51:34
2	B 249.677†	20263.0	20367.9	510.50	ug/L	510.50	ppb	19:51:14
2	Ba 233.527†	74574.7	71501.2	505.59	ug/L	505.59	ppb	19:51:14
2	Be 313.107†	1126888.8	1085335.2	497.91	ug/L	497.91	ppb	19:51:14
2	Cd 226.502†	40106.0	38734.5	493.82	ug/L	493.82	ppb	19:51:34
2	Co 228.616†	29102.9	28003.1	485.84	ug/L	485.84	ppb	19:51:34
2	Cr 267.716†	36809.7	35370.3	496.32	ug/L	496.32	ppb	19:51:14
2	Cu 324.752†	149739.4	137930.7	500.10	ug/L	500.10	ppb	19:51:14
2	Mn 257.610†	472755.7	452595.4	499.61	ug/L	499.61	ppb	19:51:14
2	Mo 202.031†	7298.3	6980.5	491.72	ug/L	491.72	ppb	19:51:34
2	Ni 231.604†	19423.1	18502.9	494.27	ug/L	494.27	ppb	19:51:34

2	P 214.914†		1477.4	1101.7	467.8	ug/L	467.8	ppb	19:51: 4
2	Pb 220. 5 †		4 62.5	4196.0	501.11	ug/L	501.11	ppb	19:51: 4
2	181.975	1†	871.4	6 6.5	4980.8	ug/L	4980.8	ppb	19:51: 4
2	b 206.8 6†		1826.0	169 .5	509. 7	ug/L	509. 7	ppb	19:51: 4
2	e 196.026†		96 .9	95 .0	50 .14	ug/L	50 .14	ppb	19:51: 4
2	251.611†		221172.6	211647.0	6519.4	ug/L	6519.4	ppb	19:51:14
2	189.927†		012.2	2875.5	509.81	ug/L	509.81	ppb	19:51: 4
2	T 4.940†		281724.5	27146 .8	496.90	ug/L	496.90	ppb	19:51:14
2	Tl 190.801†		1809.2	1795.4	47 .06	ug/L	47 .06	ppb	19:51: 4
2	409.014†		1081 .8	15217.0	51 .7	ug/L	51 .7	ppb	19:51:14
2	V 292.402†		55567.9	5484 .4	504.01	ug/L	504.01	ppb	19:51:14
2	Z 21 .857†		56125.1	52887.2	48 .54	ug/L	48 .54	ppb	19:51:14
2	O2†		221694.8	212122.6	1 912	ug/L	1 912	ppb	19:5 :1
	1		7664.2	7664.2	10				19:5 :1
	I L		71 .2	71 .2	10 .0				19:5 :1
	l 96.15	1†	6 45.1	6260.8	51 4.7	ug/L	51 4.7	ppb	19:5 :1
	17.9	1†	684.4	564.1	5049.0	ug/L	5049.0	ppb	19:5 :1
	e 2 8.204	1†	120 .7	11 9.1	476 .4	ug/L	476 .4	ppb	19:5 :
	766.490	1†	264 7.	2 76.1	50 1.2	ug/L	50 1.2	ppb	19:5 :1
	g 279.077 I	†	206.8	198.7	4958.9	ug/L	4958.9	ppb	19:5 :
	589.592	1†	88 2.5	86282.6	5295.4	ug/L	5295.4	ppb	19:5 :1
	421.552†		176751.	1724 4.0	481.56	ug/L	481.56	ppb	19:5 :1
	61. 8		75 27.1	75 27.1	104.82				19:51:41
	71.029		5815 8.1	5815 8.1	10 .48				19:51:41
	g 28.068†		87118.8	82480.5	495.71	ug/L	495.71	ppb	19:51:41
	188.979†		1 90.5	1 62.0	494.29	ug/L	494.29	ppb	19:5 : 1
	249.677†		20481.2	20479.4	51 .	ug/L	51 .	ppb	19:51:41
	2 .527†		7504 .0	71592.0	506.24	ug/L	506.24	ppb	19:51:41
	e 1 .107†		11 2474.5	1085285.4	497.89	ug/L	497.89	ppb	19:51:41
	226.502†		40014.2	8455.4	490.26	ug/L	490.26	ppb	19:5 : 1
	o 228.616†		290 .	27797.8	482.26	ug/L	482.26	ppb	19:5 : 1
	267.716†		6967.8	5 45.5	495.98	ug/L	495.98	ppb	19:51:41
	u 24.752†		1506 7.0	1 8072.	500.61	ug/L	500.61	ppb	19:51:41
	257.610†		474716.9	452209.9	499.19	ug/L	499.19	ppb	19:51:41
	o 202.0 1†		7272.1	6920.6	487.51	ug/L	487.51	ppb	19:5 : 1
	2 1.604†		19 99.2	18 87.4	491.19	ug/L	491.19	ppb	19:5 : 1
	P 214.914†		1484.1	1101.0	467. 2	ug/L	467. 2	ppb	19:5 : 1
	Pb 220. 5 †		4 55.1	4168.1	497.78	ug/L	497.78	ppb	19:5 : 1
	181.975	1†	85 .8	601.2	49 2.5	ug/L	49 2.5	ppb	19:5 : 1
	b 206.8 6†		1820.4	1679.4	505.04	ug/L	505.04	ppb	19:5 : 1
	e 196.026†		952.	9 7.	495.22	ug/L	495.22	ppb	19:5 : 1
	251.611†		222 14.6	211680.9	6520.6	ug/L	6520.6	ppb	19:51:41
	189.927†		000.8	2850.	505. 5	ug/L	505. 5	ppb	19:5 : 1
	T 4.940†		28 402.6	271720.1	497. 6	ug/L	497. 6	ppb	19:51:41
	Tl 190.801†		1828.	1805.0	475.59	ug/L	475.59	ppb	19:5 : 1
	409.014†		10970.9	15 15.2	517.05	ug/L	517.05	ppb	19:51:41
	V 292.402†		55969.5	54961.2	505.0	ug/L	505.0	ppb	19:51:41
	Z 21 .857†		56265.1	52752.9	482. 2	ug/L	482. 2	ppb	19:51:41
	O2†		218646.9	208156.7	1 651	ug/L	1 651	ppb	19:5 :17

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e : 7 7 | |

	e		e	o .	. e .	o .		. e .	
	61. 8		750475.5	104.42	0. 51				0. 4
	1		7700.9	10	0.5				0.44
	71.029		579 58.	10 .09	0. 44				0.
	I L		7124.6	102.9	0.62				0.60
g	28.068†		82526.5	495.99 ug/L	0.256	495.99	ppb	0.256	0.05
l	96.15	1†	6245.	5121.8 ug/L	15.92	5121.8	ppb	15.92	0. 1
	188.979†		1 74.1	498.65 ug/L	.829	498.65	ppb	.829	0.77
	249.677†		20401.7	511. 5 ug/L	1.71	511. 5	ppb	1.71	0. 4
	2 .527†		71528.6	505.79 ug/L	0. 90	505.79	ppb	0. 90	0.08
e	1 .107†		1085 04.7	497.90 ug/L	0.012	497.90	ppb	0.012	0.00
	17.9	1†	567.	505 .5 ug/L	12.90	505 .5	ppb	12.90	0.26
	226.502†		8681.7	49 .14 ug/L	2.615	49 .14	ppb	2.615	0.5
o	228.616†		27965.0	485.17 ug/L	2.642	485.17	ppb	2.642	0.54
	267.716†		5 62.	496.21 ug/L	0.205	496.21	ppb	0.205	0.04
u	24.752†		1 787 .0	499.89 ug/L	0.845	499.89	ppb	0.845	0.17
e	2 8.204	1†	1141.	4772.8 ug/L	0.58	4772.8	ppb	0.58	0.64
	766.490	1†	2 08.8	5016.6 ug/L	12.67	5016.6	ppb	12.67	0.25

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Saturday, July 04, 2009 00:53:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Blank.944

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		14	
	Be	9		ug/L		15	
	B	11		ug/L		202	
	Na	23		ug/L		30366	
	Mg	24		ug/L		1667	
	Al	27		ug/L		6001	
	P	31		ug/L		3443	
	K	39		ug/L		431761	
	Ca	43		ug/L		685	
>	Sc	45		ug/L		259742	
	Ti	47		ug/L		218	
	V	51		ug/L		35273	
	Cr	52		ug/L		-2554	
	Cr	53		ug/L		211336	
	Mn	55		ug/L		1205	
	Fe	57		ug/L		5661	
	Co	59		ug/L		135	
	Ni	60		ug/L		77	
	Cu	63		ug/L		179	
	Cu	65		ug/L		69	
	Zn	66		ug/L		105	
	Zn	67		ug/L		9125	
	Zn	68		ug/L		695	
>	Ge	74		ug/L		194460	
	As	75		ug/L		335	
	Se	77		ug/L		8508	
	Se	82		ug/L		-10	
	Kr	83		ug/L		94	
	Sr	88		ug/L		172	
	Y	89		ug/L		29	
	Zr	90		ug/L		222	
	Mo	98		ug/L		76	
	Ag	107		ug/L		49	
	Cd	111		ug/L		24	
	Cd	114		ug/L		49	
>	In	115		ug/L		146234	
	Sn	120		ug/L		155	
	Sb	121		ug/L		424	
	Sb	123		ug/L		346	
	Ba	135		ug/L		38	
	Ba	137		ug/L		60	
	Ho	165		ug/L		34	
>	Lu	175		ug/L		198590	
	Tl	205		ug/L		915	
	Pb	208		ug/L		271	
	Th	232		ug/L		233	
	U	238		ug/L		191	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	0.9991
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 04, 2009 00:58:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Standard 1.945

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	10.000	ug/L	7.519	1457	0.005
	Be	9	10.000	ug/L	7.847	1321	0.005
	B	11	20.000	ug/L	6.026	2406	0.008
	Na	23	1000.000	ug/L	8.178	1069333	3.940
	Mg	24	1000.000	ug/L	4.819	804723	3.045
	Al	27	1000.000	ug/L	2.145	1312372	4.948
	P	31	1000.000	ug/L	2.624	95863	0.350
	K	39	1000.000	ug/L	7.537	2572982	8.078
	Ca	43	1000.000	ug/L	4.934	4873	0.016
>	Sc	45		ug/L		263905	263904.866
	Ti	47	10.000	ug/L	1.597	2490	0.009
	V	51	10.000	ug/L	13.856	52484	0.063
	Cr	52	10.000	ug/L	4.641	19790	0.085
	Cr	53		ug/L		202820	-0.045
	Mn	55	10.000	ug/L	1.726	36585	0.134
	Fe	57	1000.000	ug/L	1.565	75725	0.265
	Co	59	10.000	ug/L	1.901	27054	0.102
	Ni	60	10.000	ug/L	1.795	5757	0.022
	Cu	63		ug/L		13240	0.049
	Cu	65	10.000	ug/L	2.689	6161	0.023
	Zn	66	10.000	ug/L	3.735	4544	0.022
	Zn	67		ug/L		8999	-0.002
	Zn	68		ug/L		3754	0.015
>	Ge	74		ug/L		199081	199080.554
	As	75	10.000	ug/L	6.665	6514	0.031
	Se	77		ug/L		8302	-0.002
	Se	82	10.000	ug/L	10.344	409	0.002
	Kr	83		ug/L		98	0.000
	Sr	88	10.000	ug/L	2.495	60108	0.408
	Y	89		ug/L		28	-0.000
	Zr	90	10.000	ug/L	1.871	33966	0.229
	Mo	98	10.000	ug/L	2.578	15412	0.104
	Ag	107	10.000	ug/L	3.222	26596	0.181
	Cd	111	10.000	ug/L	2.659	6298	0.043
	Cd	114		ug/L		15241	0.103
>	In	115		ug/L		147096	147095.867
	Sn	120	10.000	ug/L	2.933	27452	0.186
	Sb	121	10.000	ug/L	2.322	26450	0.177
	Sb	123		ug/L		20447	0.137
	Ba	135		ug/L		7021	0.035
	Ba	137	10.000	ug/L	2.781	12320	0.061
	Ho	165		ug/L		30	-0.000
>	Lu	175		ug/L		200628	200628.478
	Tl	205	10.000	ug/L	1.278	67367	0.331
	Pb	208	10.000	ug/L	1.278	75019	0.373
	Th	232	10.000	ug/L	0.896	77142	0.383
	U	238	10.000	ug/L	1.220	75456	0.375

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 04, 2009 01:02:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Standard 2.946

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.010**	ug/L	4.027	14431	0.055
	Be	9	**100.005**	ug/L	3.253	13006	0.050
	B	11	**200.013**	ug/L	4.645	22099	0.084
	Na	23	**10002.784**	ug/L	4.871	10598164	40.535
	Mg	24	**10004.469**	ug/L	5.138	8315220	31.889
	Al	27	**9993.795**	ug/L	0.385	12150908	46.562
	P	31	**9997.252**	ug/L	2.736	891897	3.407
	K	39	**9986.078**	ug/L	10.888	18898396	70.813
	Ca	43	**9996.557**	ug/L	2.198	40580	0.153
>	Sc	45		ug/L		260837	260836.667
	Ti	47	**99.954**	ug/L	2.558	21644	0.082
	V	51	**100.225**	ug/L	3.929	248290	0.816
	Cr	52	**99.976**	ug/L	2.835	213555	0.829
	Cr	53		ug/L		208495	-0.015
	Mn	55	**99.975**	ug/L	1.181	342300	1.308
	Fe	57	**9996.513**	ug/L	1.191	673831	2.562
	Co	59	**99.961**	ug/L	2.465	256193	0.982
	Ni	60	**99.969**	ug/L	1.989	54527	0.209
	Cu	63		ug/L		126894	0.486
	Cu	65	**99.974**	ug/L	0.769	58770	0.225
	Zn	66	**99.968**	ug/L	2.005	41789	0.216
	Zn	67		ug/L		14058	0.026
	Zn	68		ug/L		30116	0.152
>	Ge	74		ug/L		193112	193111.608
	As	75	**99.878**	ug/L	2.794	53594	0.276
	Se	77		ug/L		9929	0.008
	Se	82	**100.012**	ug/L	2.475	4111	0.021
	Kr	83		ug/L		88	-0.000
	Sr	88	**99.970**	ug/L	0.693	568807	3.956
	Y	89		ug/L		75	0.000
	Zr	90	**99.990**	ug/L	1.012	326689	2.271
	Mo	98	**99.989**	ug/L	2.186	148371	1.032
	Ag	107	**99.975**	ug/L	2.365	253206	1.761
	Cd	111	**99.983**	ug/L	1.555	60300	0.419
	Cd	114		ug/L		146428	1.018
>	In	115		ug/L		143762	143762.480
	Sn	120	**99.990**	ug/L	0.665	264471	1.839
	Sb	121	**100.015**	ug/L	0.598	258829	1.798
	Sb	123		ug/L		200890	1.395
	Ba	135		ug/L		68281	0.342
	Ba	137	**99.974**	ug/L	1.923	118869	0.595
	Ho	165		ug/L		38	0.000
>	Lu	175		ug/L		199624	199623.846
	Tl	205	**99.961**	ug/L	2.459	636443	3.185
	Pb	208	**99.943**	ug/L	1.720	703220	3.523
	Th	232	**99.943**	ug/L	2.474	723504	3.625
	U	238	**99.925**	ug/L	3.026	695829	3.487

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
Lu	175					
Tl	205					
Pb	208					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 04, 2009 01:07:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 1.947

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.612**	**ug/L**	4.170	7452	0.029
	Be	9	**51.573**	**ug/L**	2.572	6712	0.026
	B	11	**104.599**	**ug/L**	4.736	11646	0.044
	Na	23	**4688.287**	**ug/L**	7.639	4979923	18.999
	Mg	24	**5204.936**	**ug/L**	9.478	4320123	16.591
	Al	27	**5254.327**	**ug/L**	5.411	6383388	24.480
	P	31	**5088.406**	**ug/L**	1.725	455495	1.734
	K	39	**5458.499**	**ug/L**	4.317	10532706	38.707
	Ca	43	**5129.546**	**ug/L**	0.779	21153	0.078
>	Sc	45		**ug/L**		260780	260780.029
	Ti	47	**49.899**	**ug/L**	0.559	10914	0.041
	V	51	**47.078**	**ug/L**	4.509	135374	0.383
	Cr	52	**51.333**	**ug/L**	2.248	108363	0.426
	Cr	53		**ug/L**		195537	-0.064
	Mn	55	**48.722**	**ug/L**	2.494	167343	0.637
	Fe	57	**5108.123**	**ug/L**	2.617	346893	1.309
	Co	59	**51.726**	**ug/L**	1.404	132591	0.508
	Ni	60	**52.199**	**ug/L**	2.660	28493	0.109
	Cu	63		**ug/L**		62811	0.240
	Cu	65	**50.130**	**ug/L**	3.272	29482	0.113
	Zn	66	**51.519**	**ug/L**	2.178	21736	0.111
	Zn	67		**ug/L**		10914	0.009
	Zn	68		**ug/L**		15831	0.078
>	Ge	74		**ug/L**		194444	194443.902
	As	75	**49.625**	**ug/L**	1.306	26989	0.137
	Se	77		**ug/L**		8731	0.001
	Se	82	**49.673**	**ug/L**	1.204	2050	0.011
	Kr	83		**ug/L**		90	-0.000
	Sr	88	**49.868**	**ug/L**	1.612	288993	1.973
	Y	89		**ug/L**		43	0.000
	Zr	90	**48.886**	**ug/L**	2.025	162740	1.110
	Mo	98	**48.820**	**ug/L**	1.950	73805	0.504
	Ag	107	**49.539**	**ug/L**	1.412	127807	0.873
	Cd	111	**52.489**	**ug/L**	2.178	32243	0.220
	Cd	114		**ug/L**		77209	0.527
>	In	115		**ug/L**		146390	146389.750
	Sn	120	**49.197**	**ug/L**	4.531	132532	0.905
	Sb	121	**48.109**	**ug/L**	3.664	126960	0.865
	Sb	123		**ug/L**		99421	0.677
	Ba	135		**ug/L**		33867	0.170
	Ba	137	**51.032**	**ug/L**	2.182	60618	0.304
	Ho	165		**ug/L**		50	0.000
>	Lu	175		**ug/L**		199286	199285.778
	Tl	205	**49.173**	**ug/L**	1.513	313157	1.567
	Pb	208	**51.274**	**ug/L**	1.773	360394	1.807
	Th	232	**51.015**	**ug/L**	1.722	368948	1.850
	U	238	**53.227**	**ug/L**	1.762	370284	1.857

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	103.223				
	Be	9	103.146				
	B	11	104.599				
	Na	23	93.766				
	Mg	24	104.099				
	Al	27	104.046				
	P	31	101.768				
	K	39	109.170				
	Ca	43	102.591				
>	Sc	45		100.4			
	Ti	47	99.798				
	V	51	94.156				
	Cr	52	102.667				
	Cr	53					
	Mn	55	97.444				
	Fe	57	102.162				
	Co	59	103.451				
	Ni	60	104.398				
	Cu	63					
	Cu	65	100.260				
	Zn	66	103.038				
	Zn	67					
	Zn	68					
>	Ge	74		100.0			
	As	75	99.250				
	Se	77					
	Se	82	99.346				
	Kr	83					
	Sr	88	99.735				
	Y	89					
	Zr	90	97.772				
	Mo	98	97.641				
	Ag	107	99.079				
	Cd	111	104.978				
	Cd	114					
>	In	115		100.1			
	Sn	120	98.395				
	Sb	121	96.218				
	Sb	123					
	Ba	135					
	Ba	137	102.064				
	Ho	165					
>	Lu	175		100.4			
	Tl	205	98.346				
	Pb	208	102.547				
	Th	232	102.029				
	U	238	106.453				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 04, 2009 01:12:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 2.948

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.091**	ug/L	33.031	27	0.000
	Be	9	**-0.007**	ug/L	318.475	14	-0.000
	B	11	**3.273**	ug/L	20.537	557	0.001
	Na	23	**1.373**	ug/L	337.989	31702	0.006
	Mg	24	**2.027**	ug/L	33.571	3334	0.006
	Al	27	**-0.817**	ug/L	303.666	5001	-0.004
	P	31	**-3.319**	ug/L	22.959	3137	-0.001
	K	39	**26.232**	ug/L	21.357	478209	0.186
	Ca	43	**-18.864**	ug/L	66.672	608	-0.000
>	Sc	45		ug/L		258709	258709.162
	Ti	47	**0.015**	ug/L	793.491	221	0.000
	V	51	**-2.335**	ug/L	60.770	30222	-0.019
	Cr	52	**0.446**	ug/L	27.498	-1588	0.004
	Cr	53		ug/L		192257	-0.071
	Mn	55	**-0.023**	ug/L	27.497	1121	-0.000
	Fe	57	**3.996**	ug/L	41.483	5904	0.001
	Co	59	**0.001**	ug/L	304.267	137	0.000
	Ni	60	**-0.015**	ug/L	201.405	68	-0.000
	Cu	63		ug/L		179	0.000
	Cu	65	**0.019**	ug/L	131.617	80	0.000
	Zn	66	**0.024**	ug/L	110.767	117	0.000
	Zn	67		ug/L		8089	-0.006
	Zn	68		ug/L		646	-0.000
>	Ge	74		ug/L		197285	197284.774
	As	75	**1.112**	ug/L	36.901	945	0.003
	Se	77		ug/L		8027	-0.003
	Se	82	**-0.105**	ug/L	471.784	-15	-0.000
	Kr	83		ug/L		101	0.000
	Sr	88	**0.005**	ug/L	15.375	199	0.000
	Y	89		ug/L		28	-0.000
	Zr	90	**0.123**	ug/L	22.963	621	0.003
	Mo	98	**0.080**	ug/L	19.618	193	0.001
	Ag	107	**0.008**	ug/L	47.454	68	0.000
	Cd	111	**-0.009**	ug/L	270.240	18	-0.000
	Cd	114		ug/L		57	0.000
>	In	115		ug/L		143922	143921.586
	Sn	120	**0.024**	ug/L	11.411	217	0.000
	Sb	121	**0.868**	ug/L	23.776	2662	0.016
	Sb	123		ug/L		2089	0.012
	Ba	135		ug/L		36	-0.000
	Ba	137	**0.008**	ug/L	132.971	68	0.000
	Ho	165		ug/L		29	-0.000
>	Lu	175		ug/L		192783	192782.652
	Tl	205	**0.511**	ug/L	24.227	4029	0.016
	Pb	208	**0.011**	ug/L	5.340	335	0.000
	Th	232	**0.109**	ug/L	39.306	985	0.004
	U	238	**0.021**	ug/L	13.006	326	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		99.6			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.1			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 04, 2009 01:16:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 3.949

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**11.263**	ug/L	3.123	1591	0.006
	Be	9	**0.571**	ug/L	4.231	86	0.000
	B	11	**17.097**	ug/L	2.984	2018	0.007
	Na	23	**236.090**	ug/L	7.652	272595	0.957
	Mg	24	**15.887**	ug/L	37.425	14341	0.051
	Al	27	**35.958**	ug/L	25.877	48419	0.168
	P	31	**46.399**	ug/L	7.997	7360	0.016
	K	39	**390.279**	ug/L	10.340	1121012	2.768
	Ca	43	**202.038**	ug/L	8.017	1451	0.003
>	Sc	45		ug/L		253462	253462.025
	Ti	47	**8.973**	ug/L	3.382	2081	0.007
	V	51	**6.413**	ug/L	24.897	47680	0.052
	Cr	52	**10.718**	ug/L	0.476	20026	0.089
	Cr	53		ug/L		194012	-0.047
	Mn	55	**5.608**	ug/L	3.809	19754	0.073
	Fe	57	**115.524**	ug/L	5.057	13019	0.030
	Co	59	**1.077**	ug/L	4.071	2811	0.011
	Ni	60	**2.199**	ug/L	6.973	1237	0.005
	Cu	63		ug/L		1627	0.006
	Cu	65	**1.216**	ug/L	3.217	762	0.003
	Zn	66	**10.554**	ug/L	2.251	4529	0.023
	Zn	67		ug/L		8625	-0.002
	Zn	68		ug/L		3615	0.015
>	Ge	74		ug/L		194083	194082.815
	As	75	**6.167**	ug/L	9.828	3641	0.017
	Se	77		ug/L		8036	-0.002
	Se	82	**5.196**	ug/L	11.268	205	0.001
	Kr	83		ug/L		102	0.000
	Sr	88	**10.583**	ug/L	1.572	60625	0.419
	Y	89		ug/L		24	-0.000
	Zr	90	**1.997**	ug/L	0.620	6769	0.045
	Mo	98	**0.542**	ug/L	1.799	882	0.006
	Ag	107	**1.061**	ug/L	2.993	2747	0.019
	Cd	111	**1.005**	ug/L	3.091	632	0.004
	Cd	114		ug/L		1536	0.010
>	In	115		ug/L		144379	144379.265
	Sn	120	**5.098**	ug/L	2.215	13688	0.094
	Sb	121	**3.106**	ug/L	1.790	8480	0.056
	Sb	123		ug/L		6572	0.043
	Ba	135		ug/L		1414	0.007
	Ba	137	**2.088**	ug/L	3.703	2452	0.012
	Ho	165		ug/L		35	0.000
>	Lu	175		ug/L		192559	192559.169
	Tl	205	**1.160**	ug/L	0.855	8006	0.037
	Pb	208	**2.174**	ug/L	3.041	15012	0.077
	Th	232	**1.080**	ug/L	2.738	7767	0.039
	U	238	**0.217**	ug/L	1.557	1641	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.630				
	Be	9	114.132				
	B	11	113.981				
	Na	23	94.436				
	Mg	24	105.916				
	Al	27	119.860				
	P	31	92.798				
	K	39	130.093				
	Ca	43	101.019				
>	Sc	45		97.6			
	Ti	47	89.725				
	V	51	64.132				
	Cr	52	107.181				
	Cr	53					
	Mn	55	112.160				
	Fe	57	115.524				
	Co	59	107.730				
	Ni	60	109.936				
	Cu	63					
	Cu	65	121.591				
	Zn	66	105.537				
	Zn	67					
	Zn	68					
>	Ge	74		99.8			
	As	75	123.336				
	Se	77					
	Se	82	103.929				
	Kr	83					
	Sr	88	105.828				
	Y	89					
	Zr	90	99.865				
	Mo	98	108.338				
	Ag	107	106.099				
	Cd	111	100.503				
	Cd	114					
>	In	115		98.7			
	Sn	120	101.969				
	Sb	121	103.548				
	Sb	123					
	Ba	135					
	Ba	137	104.392				
	Ho	165					
>	Lu	175		97.0			
	Tl	205	116.023				
	Pb	208	108.694				
	Th	232	108.005				
	U	238	108.362				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	K	39	CRDL is out of limits
QC Std 3	V	51	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 04, 2009 01:21:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 4.950

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.147**	ug/L	27.599	33	0.000
	Be	9	**0.051**	ug/L	74.719	20	0.000
	B	11	**1.727**	ug/L	3.074	367	0.001
	Na	23	**105347.607**	ug/L	8.165	104363880	426.907
	Mg	24	**103491.822**	ug/L	7.556	80606174	329.878
	Al	27	**104460.384**	ug/L	0.629	118956833	486.692
	P	31	**99695.908**	ug/L	3.004	8305761	33.974
	K	39	**110305.143**	ug/L	6.532	191548543	782.190
	Ca	43	**100643.864**	ug/L	2.058	376994	1.540
>	Sc	45		ug/L		244404	244403.715
	Ti	47	**1832.225**	ug/L	1.505	368284	1.506
	V	51	**-4.862**	ug/L	11.323	23513	-0.040
	Cr	52	**3.246**	ug/L	6.051	4173	0.027
	Cr	53		ug/L		161729	-0.152
	Mn	55	**5.892**	ug/L	2.127	19969	0.077
	Fe	57	**99394.419**	ug/L	1.789	6230519	25.472
	Co	59	**0.216**	ug/L	3.988	645	0.002
	Ni	60	**2.537**	ug/L	3.495	1367	0.005
	Cu	63		ug/L		2556	0.010
	Cu	65	**2.444**	ug/L	7.986	1410	0.006
	Zn	66	**3.060**	ug/L	5.928	1322	0.007
	Zn	67		ug/L		7410	-0.007
	Zn	68		ug/L		892	0.001
>	Ge	74		ug/L		184938	184937.634
	As	75	**0.217**	ug/L	327.200	426	0.001
	Se	77		ug/L		6838	-0.007
	Se	82	**-0.862**	ug/L	38.289	-44	-0.000
	Kr	83		ug/L		149	0.000
	Sr	88	**1.115**	ug/L	1.863	6188	0.044
	Y	89		ug/L		172	0.001
	Zr	90	**0.541**	ug/L	38.934	1893	0.012
	Mo	98	**1965.314**	ug/L	2.237	2769408	20.279
	Ag	107	**0.047**	ug/L	8.821	160	0.001
	Cd	111	**0.292**	ug/L	21.591	189	0.001
	Cd	114		ug/L		3054	0.022
>	In	115		ug/L		136595	136595.465
	Sn	120	**0.171**	ug/L	10.093	574	0.003
	Sb	121	**0.278**	ug/L	18.762	1080	0.005
	Sb	123		ug/L		856	0.004
	Ba	135		ug/L		472	0.002
	Ba	137	**0.657**	ug/L	3.679	794	0.004
	Ho	165		ug/L		433	0.002
>	Lu	175		ug/L		188523	188523.020
	Tl	205	**0.054**	ug/L	17.839	1193	0.002
	Pb	208	**0.170**	ug/L	5.551	1387	0.006
	Th	232	**0.023**	ug/L	58.371	378	0.001
	U	238	**-0.015**	ug/L	6.023	83	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23	105.348				
	Mg	24	103.492				
	Al	27	104.460				
	P	31	99.696				
	K	39	110.305				
	Ca	43	100.644				
>	Sc	45		94.1			
	Ti	47	91.611				
	V	51					
	Cr	52	87.739				
	Cr	53					
	Mn	55	101.581				
	Fe	57	99.394				
	Co	59	86.377				
	Ni	60	93.963				
	Cu	63					
	Cu	65	84.271				
	Zn	66	84.991				
	Zn	67					
	Zn	68					
>	Ge	74		95.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	92.916				
	Y	89					
	Zr	90					
	Mo	98	98.266				
	Ag	107					
	Cd	111	73.051				
	Cd	114					
>	In	115		93.4			
	Sn	120					
	Sb	121	278.099				
	Sb	123					
	Ba	135					
	Ba	137	98.004				
	Ho	165					
>	Lu	175		94.9			
	Tl	205					
	Pb	208	85.081				
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 04, 2009 01:26:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 5.951

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**22.447**	ug/L	3.271	3071	0.012
	Be	9	**22.647**	ug/L	2.881	2793	0.011
	B	11	**22.317**	ug/L	5.531	2499	0.009
	Na	23	**97790.103**	ug/L	12.955	97417314	396.281
	Mg	24	**94023.155**	ug/L	1.742	73845656	299.697
	Al	27	**100200.703**	ug/L	1.664	115050788	466.846
	P	31	**99104.746**	ug/L	4.819	8317378	33.772
	K	39	**107503.666**	ug/L	3.504	188144032	762.325
	Ca	43	**101032.454**	ug/L	3.639	381309	1.546
>	Sc	45		ug/L		246444	246443.634
	Ti	47	**1816.977**	ug/L	2.476	368076	1.494
	V	51	**15.809**	ug/L	5.333	65189	0.129
	Cr	52	**23.148**	ug/L	4.012	44834	0.192
	Cr	53		ug/L		167329	-0.134
	Mn	55	**26.240**	ug/L	3.290	85676	0.343
	Fe	57	**99334.417**	ug/L	5.043	6273094	25.457
	Co	59	**20.577**	ug/L	4.415	49889	0.202
	Ni	60	**21.647**	ug/L	3.190	11207	0.045
	Cu	63		ug/L		26228	0.106
	Cu	65	**22.018**	ug/L	3.120	12273	0.050
	Zn	66	**22.501**	ug/L	1.787	9078	0.049
	Zn	67		ug/L		8340	-0.002
	Zn	68		ug/L		6338	0.031
>	Ge	74		ug/L		184781	184780.836
	As	75	**21.202**	ug/L	3.823	11137	0.059
	Se	77		ug/L		7594	-0.003
	Se	82	**20.519**	ug/L	5.601	798	0.004
	Kr	83		ug/L		141	0.000
	Sr	88	**21.915**	ug/L	1.246	116339	0.867
	Y	89		ug/L		196	0.001
	Zr	90	**21.287**	ug/L	0.765	64981	0.484
	Mo	98	**2062.342**	ug/L	0.845	2851028	21.280
	Ag	107	**20.448**	ug/L	2.176	48308	0.360
	Cd	111	**20.830**	ug/L	3.805	11724	0.087
	Cd	114		ug/L		30708	0.229
>	In	115		ug/L		133985	133985.483
	Sn	120	**20.800**	ug/L	1.418	51387	0.382
	Sb	121	**21.977**	ug/L	1.448	53305	0.395
	Sb	123		ug/L		41005	0.304
	Ba	135		ug/L		13238	0.070
	Ba	137	**21.011**	ug/L	2.102	23759	0.125
	Ho	165		ug/L		422	0.002
>	Lu	175		ug/L		189448	189448.368
	Tl	205	**18.980**	ug/L	0.849	115453	0.605
	Pb	208	**20.378**	ug/L	2.579	136285	0.718
	Th	232	**21.405**	ug/L	2.097	147266	0.776
	U	238	**21.954**	ug/L	0.738	145290	0.766

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.235				
	Be	9	113.233				
	B	11	111.585				
	Na	23	97.790				
	Mg	24	94.023				
	Al	27	100.201				
	P	31	99.105				
	K	39	107.504				
	Ca	43	101.032				
>	Sc	45			94.9		
	Ti	47	90.849				
	V	51	79.043				
	Cr	52	97.672				
	Cr	53					
	Mn	55	101.706				
	Fe	57	99.334				
	Co	59	101.614				
	Ni	60	95.360				
	Cu	63					
	Cu	65	96.147				
	Zn	66	95.343				
	Zn	67					
	Zn	68					
>	Ge	74			95.0		
	As	75	106.010				
	Se	77					
	Se	82	102.594				
	Kr	83					
	Sr	88	103.372				
	Y	89					
	Zr	90	106.433				
	Mo	98	103.117				
	Ag	107	102.238				
	Cd	111	102.110				
	Cd	114					
>	In	115			91.6		
	Sn	120	104.001				
	Sb	121	109.336				
	Sb	123					
	Ba	135					
	Ba	137	101.652				
	Ho	165					
>	Lu	175			95.4		
	Tl	205	94.900				
	Pb	208	100.881				
	Th	232	107.023				
	U	238	109.768				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 5	V	51ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 01:31:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.952

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.337**	ug/L	1.464	8073	0.030
	Be	9	**53.789**	ug/L	1.558	7203	0.027
	B	11	**105.199**	ug/L	2.113	12058	0.044
	Na	23	**4911.740**	ug/L	0.663	5370150	19.904
	Mg	24	**4932.779**	ug/L	3.513	4219907	15.723
	Al	27	**5374.446**	ug/L	7.180	6721838	25.040
	P	31	**5097.195**	ug/L	1.531	469431	1.737
	K	39	**5427.945**	ug/L	4.543	10770686	38.490
	Ca	43	**5149.006**	ug/L	3.385	21837	0.079
>	Sc	45		ug/L		268231	268230.838
	Ti	47	**51.234**	ug/L	0.201	11522	0.042
	V	51	**49.737**	ug/L	1.432	145104	0.405
	Cr	52	**51.215**	ug/L	1.722	111255	0.425
	Cr	53		ug/L		197093	-0.079
	Mn	55	**52.111**	ug/L	1.062	184087	0.682
	Fe	57	**5206.112**	ug/L	1.021	363700	1.334
	Co	59	**51.248**	ug/L	0.492	135155	0.503
	Ni	60	**51.248**	ug/L	1.311	28789	0.107
	Cu	63		ug/L		66874	0.249
	Cu	65	**51.848**	ug/L	0.957	31378	0.117
	Zn	66	**49.459**	ug/L	2.983	21940	0.107
	Zn	67		ug/L		10475	0.004
	Zn	68		ug/L		16420	0.077
>	Ge	74		ug/L		204522	204521.508
	As	75	**49.992**	ug/L	5.332	28546	0.138
	Se	77		ug/L		9312	0.002
	Se	82	**49.645**	ug/L	4.556	2152	0.011
	Kr	83		ug/L		92	-0.000
	Sr	88	**51.410**	ug/L	8.081	298222	2.034
	Y	89		ug/L		54	0.000
	Zr	90	**51.568**	ug/L	9.281	171738	1.171
	Mo	98	**52.756**	ug/L	10.131	79753	0.544
	Ag	107	**51.688**	ug/L	7.396	133540	0.911
	Cd	111	**51.746**	ug/L	9.002	31809	0.217
	Cd	114		ug/L		75266	0.513
>	In	115		ug/L		147088	147088.124
	Sn	120	**50.476**	ug/L	7.753	136172	0.928
	Sb	121	**51.458**	ug/L	8.458	135911	0.925
	Sb	123		ug/L		105824	0.720
	Ba	135		ug/L		34952	0.174
	Ba	137	**52.096**	ug/L	2.603	62134	0.310
	Ho	165		ug/L		33	-0.000
>	Lu	175		ug/L		200152	200152.217
	Tl	205	**50.761**	ug/L	3.284	324482	1.617
	Pb	208	**52.196**	ug/L	2.434	368344	1.840
	Th	232	**52.198**	ug/L	2.279	379033	1.893
	U	238	**52.946**	ug/L	1.999	369837	1.847

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	108.674				
	Be	9	107.577				
	B	11	105.199				
	Na	23	98.235				
	Mg	24	98.656				
	Al	27	106.425				
	P	31	101.944				
	K	39	108.559				
	Ca	43	102.980				
>	Sc	45		103.3			
	Ti	47	102.468				
	V	51	99.475				
	Cr	52	102.430				
	Cr	53					
	Mn	55	104.223				
	Fe	57	104.122				
	Co	59	102.495				
	Ni	60	102.496				
	Cu	63					
	Cu	65	103.696				
	Zn	66	98.917				
	Zn	67					
	Zn	68					
>	Ge	74		105.2			
	As	75	99.983				
	Se	77					
	Se	82	99.290				
	Kr	83					
	Sr	88	102.820				
	Y	89					
	Zr	90	103.136				
	Mo	98	105.512				
	Ag	107	103.376				
	Cd	111	103.492				
	Cd	114					
>	In	115		100.6			
	Sn	120	100.952				
	Sb	121	102.916				
	Sb	123					
	Ba	135					
	Ba	137	104.191				
	Ho	165					
>	Lu	175		100.8			
	Tl	205	101.521				
	Pb	208	104.391				
	Th	232	104.397				
	U	238	105.891				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 01:35:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.953

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.037**	**ug/L**	39.891	21	0.000
	Be	9	**0.017**	**ug/L**	94.918	18	0.000
	B	11	**2.422**	**ug/L**	37.849	489	0.001
	Na	23	**12.214**	**ug/L**	23.570	45406	0.049
	Mg	24	**1.425**	**ug/L**	77.306	3000	0.005
	Al	27	**1.070**	**ug/L**	113.547	7669	0.005
	P	31	**-4.038**	**ug/L**	50.835	3242	-0.001
	K	39	**11.979**	**ug/L**	62.909	477181	0.085
	Ca	43	**-22.224**	**ug/L**	32.146	627	-0.000
>	Sc	45		**ug/L**		273055	273055.341
	Ti	47	**0.071**	**ug/L**	136.716	245	0.000
	V	51	**-3.177**	**ug/L**	53.229	29981	-0.026
	Cr	52	**0.486**	**ug/L**	27.409	-1582	0.004
	Cr	53		**ug/L**		195659	-0.097
	Mn	55	**-0.024**	**ug/L**	77.299	1180	-0.000
	Fe	57	**8.438**	**ug/L**	57.317	6538	0.002
	Co	59	**-0.005**	**ug/L**	63.633	130	-0.000
	Ni	60	**-0.006**	**ug/L**	86.049	77	-0.000
	Cu	63		**ug/L**		161	-0.000
	Cu	65	**0.000**	**ug/L**	4059.776	73	0.000
	Zn	66	**0.014**	**ug/L**	140.150	118	0.000
	Zn	67		**ug/L**		7650	-0.010
	Zn	68		**ug/L**		558	-0.001
>	Ge	74		**ug/L**		206836	206836.307
	As	75	**0.560**	**ug/L**	24.869	675	0.002
	Se	77		**ug/L**		8687	-0.002
	Se	82	**0.159**	**ug/L**	149.844	-4	0.000
	Kr	83		**ug/L**		92	-0.000
	Sr	88	**0.002**	**ug/L**	160.611	186	0.000
	Y	89		**ug/L**		28	-0.000
	Zr	90	**0.021**	**ug/L**	37.313	299	0.000
	Mo	98	**0.170**	**ug/L**	24.053	340	0.002
	Ag	107	**0.007**	**ug/L**	15.247	69	0.000
	Cd	111	**-0.013**	**ug/L**	90.304	16	-0.000
	Cd	114		**ug/L**		49	-0.000
>	In	115		**ug/L**		149357	149356.811
	Sn	120	**0.006**	**ug/L**	24.610	175	0.000
	Sb	121	**0.236**	**ug/L**	22.137	1068	0.004
	Sb	123		**ug/L**		860	0.003
	Ba	135		**ug/L**		37	-0.000
	Ba	137	**-0.005**	**ug/L**	66.381	55	-0.000
	Ho	165		**ug/L**		39	0.000
>	Lu	175		**ug/L**		201112	201111.744
	Tl	205	**0.703**	**ug/L**	29.459	5427	0.022
	Pb	208	**0.009**	**ug/L**	62.197	341	0.000
	Th	232	**0.067**	**ug/L**	43.818	721	0.002
	U	238	**0.014**	**ug/L**	21.836	295	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		105.1			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		106.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		101.3			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Saturday, July 04, 2009 01:40:35
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 10.954

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**1099.862**	ug/L	1.353	152815	0.608
	Be	9	**1081.591**	ug/L	1.897	135415	0.539
	B	11	**1.100**	ug/L	19.996	312	0.000
	Na	23	**51774.825**	ug/L	2.364	52760820	209.811
	Mg	24	**53429.185**	ug/L	5.709	42816613	170.304
	Al	27	**52455.497**	ug/L	1.369	61431439	244.396
	P	31	**26054.920**	ug/L	1.116	2234600	8.879
	K	39	**55477.396**	ug/L	4.559	99268375	393.399
	Ca	43	**51573.570**	ug/L	0.294	198976	0.789
>	Sc	45		ug/L		251311	251310.569
	Ti	47	**29.799**	ug/L	3.169	6365	0.024
	V	51	**1017.116**	ug/L	3.308	2115936	8.285
	Cr	52	**968.886**	ug/L	4.740	2016487	8.032
	Cr	53		ug/L		418911	0.853
	Mn	55	**1027.813**	ug/L	1.873	3379654	13.445
	Fe	57	**51929.528**	ug/L	2.671	3349360	13.308
	Co	59	**988.104**	ug/L	1.800	2439108	9.705
	Ni	60	**973.808**	ug/L	2.344	511296	2.034
	Cu	63		ug/L		1173705	4.670
	Cu	65	**1000.270**	ug/L	1.674	566029	2.252
	Zn	66	**2308.684**	ug/L	2.159	975222	4.986
	Zn	67		ug/L		161208	0.777
	Zn	68		ug/L		696747	3.558
>	Ge	74		ug/L		195626	195626.080
	As	75	**919.724**	ug/L	0.712	497243	2.540
	Se	77		ug/L		20634	0.062
	Se	82	**473.085**	ug/L	2.457	19725	0.101
	Kr	83		ug/L		125	0.000
	Sr	88	**1011.810**	ug/L	1.310	5404052	40.035
	Y	89		ug/L		445	0.003
	Zr	90	**503.453**	ug/L	0.745	1543843	11.435
	Mo	98	**1005.809**	ug/L	1.132	1401015	10.378
	Ag	107	**248.353**	ug/L	1.307	590711	4.376
	Cd	111	**999.875**	ug/L	1.626	566111	4.194
	Cd	114		ug/L		1318894	9.770
>	In	115		ug/L		134984	134984.422
	Sn	120	**995.426**	ug/L	0.676	2470915	18.305
	Sb	121	**251.716**	ug/L	0.249	611090	4.524
	Sb	123		ug/L		477027	3.532
	Ba	135		ug/L		1487696	7.820
	Ba	137	**2403.132**	ug/L	0.849	2722519	14.311
	Ho	165		ug/L		197	0.001
>	Lu	175		ug/L		190246	190245.768
	Tl	205	**458.139**	ug/L	2.653	2777391	14.598
	Pb	208	**4789.372**	ug/L	1.721	32109501	168.804
	Th	232	**2371.066**	ug/L	4.111	16355640	85.997
	U	238	**5034.849**	ug/L	2.398	33414971	175.678

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	109.986				
	Be	9	108.159				
	B	11					
	Na	23	103.550				
	Mg	24	106.858				
	Al	27	104.911				
	P	31	104.220				
	K	39	110.955				
	Ca	43	103.147				
>	Sc	45			96.8		
	Ti	47					
	V	51	101.712				
	Cr	52	96.889				
	Cr	53					
	Mn	55	102.781				
	Fe	57	103.859				
	Co	59	98.810				
	Ni	60	97.381				
	Cu	63					
	Cu	65	100.027				
	Zn	66	92.347				
	Zn	67					
	Zn	68					
>	Ge	74			100.6		
	As	75	91.972				
	Se	77					
	Se	82	94.617				
	Kr	83					
	Sr	88	101.181				
	Y	89					
	Zr	90	100.691				
	Mo	98	100.581				
	Ag	107	99.341				
	Cd	111	99.988				
	Cd	114					
>	In	115			92.3		
	Sn	120	99.543				
	Sb	121	100.686				
	Sb	123					
	Ba	135					
	Ba	137	96.125				
	Ho	165					
>	Lu	175			95.8		
	Tl	205	91.628				
	Pb	208	95.787				
	Th	232	94.843				
	U	238	100.697				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 10	K	39LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Saturday, July 04, 2009 01:45:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 11.955

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.296**	ug/L	1.785	8225	0.031
	Be	9	**52.007**	ug/L	0.954	6972	0.026
	B	11	**102.366**	ug/L	1.049	11752	0.043
	Na	23	**5311.112**	ug/L	7.115	5809479	21.523
	Mg	24	**5118.306**	ug/L	6.832	4379710	16.315
	Al	27	**5333.428**	ug/L	4.038	6674677	24.849
	P	31	**4914.763**	ug/L	1.514	453178	1.675
	K	39	**5801.844**	ug/L	5.997	11487425	41.142
	Ca	43	**4981.100**	ug/L	1.543	21169	0.076
>	Sc	45		ug/L		268509	268509.315
	Ti	47	**48.487**	ug/L	4.413	10922	0.040
	V	51	**46.743**	ug/L	4.282	138653	0.381
	Cr	52	**50.104**	ug/L	2.809	108850	0.415
	Cr	53		ug/L		190467	-0.104
	Mn	55	**50.078**	ug/L	2.912	177090	0.655
	Fe	57	**5002.624**	ug/L	3.319	349946	1.282
	Co	59	**50.507**	ug/L	2.798	133297	0.496
	Ni	60	**49.131**	ug/L	1.808	27626	0.103
	Cu	63		ug/L		65812	0.244
	Cu	65	**50.723**	ug/L	2.433	30727	0.114
	Zn	66	**49.991**	ug/L	1.773	21818	0.108
	Zn	67		ug/L		10648	0.006
	Zn	68		ug/L		15940	0.076
>	Ge	74		ug/L		201082	201082.139
	As	75	**49.497**	ug/L	1.925	27838	0.137
	Se	77		ug/L		8481	-0.002
	Se	82	**48.554**	ug/L	1.638	2072	0.010
	Kr	83		ug/L		90	-0.000
	Sr	88	**49.968**	ug/L	1.094	286901	1.977
	Y	89		ug/L		59	0.000
	Zr	90	**51.146**	ug/L	4.056	168622	1.162
	Mo	98	**52.148**	ug/L	3.481	78085	0.538
	Ag	107	**50.064**	ug/L	2.808	127950	0.882
	Cd	111	**49.627**	ug/L	3.425	30199	0.208
	Cd	114		ug/L		73058	0.503
>	In	115		ug/L		145048	145047.817
	Sn	120	**50.231**	ug/L	4.750	134040	0.924
	Sb	121	**53.343**	ug/L	2.496	139433	0.959
	Sb	123		ug/L		107365	0.738
	Ba	135		ug/L		34471	0.177
	Ba	137	**52.488**	ug/L	2.467	60747	0.313
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194160	194160.148
	Tl	205	**51.283**	ug/L	0.432	318155	1.634
	Pb	208	**53.167**	ug/L	0.688	364096	1.874
	Th	232	**52.702**	ug/L	0.606	371362	1.911
	U	238	**53.496**	ug/L	1.568	362621	1.867

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	110.592				
	Be	9	104.013				
	B	11	102.366				
	Na	23	106.222				
	Mg	24	102.366				
	Al	27	105.612				
	P	31	98.295				
	K	39	116.037				
	Ca	43	99.622				
>	Sc	45		103.4			
	Ti	47	96.974				
	V	51	93.487				
	Cr	52	100.209				
	Cr	53					
	Mn	55	100.155				
	Fe	57	100.052				
	Co	59	101.014				
	Ni	60	98.263				
	Cu	63					
	Cu	65	101.446				
	Zn	66	99.982				
	Zn	67					
	Zn	68					
>	Ge	74		103.4			
	As	75	98.995				
	Se	77					
	Se	82	97.108				
	Kr	83					
	Sr	88	99.935				
	Y	89					
	Zr	90	102.291				
	Mo	98	104.297				
	Ag	107	100.128				
	Cd	111	99.254				
	Cd	114					
>	In	115		99.2			
	Sn	120	100.463				
	Sb	121	106.685				
	Sb	123					
	Ba	135					
	Ba	137	104.977				
	Ho	165					
>	Lu	175		97.8			
	Tl	205	102.566				
	Pb	208	106.335				
	Th	232	105.403				
	U	238	106.991				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Li	7	CCV is out of limits (+/- 10%)
QC Std 11	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Saturday, July 04, 2009 01:50:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 12.956

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.293**	ug/L	4.290	58	0.000
	Be	9	**0.017**	ug/L	293.712	17	0.000
	B	11	**2.235**	ug/L	19.071	458	0.001
	Na	23	**0.169**	ug/L	2773.444	31368	0.001
	Mg	24	**2.290**	ug/L	128.589	3667	0.007
	Al	27	**1.743**	ug/L	51.966	8336	0.008
	P	31	**-2.130**	ug/L	100.677	3344	-0.001
	K	39	**17.381**	ug/L	30.404	476485	0.123
	Ca	43	**-21.581**	ug/L	39.372	616	-0.000
>	Sc	45		ug/L		266861	266861.125
	Ti	47	**-0.061**	ug/L	47.344	211	-0.000
	V	51	**-3.375**	ug/L	33.299	28896	-0.027
	Cr	52	**0.623**	ug/L	14.099	-1247	0.005
	Cr	53		ug/L		188907	-0.106
	Mn	55	**0.050**	ug/L	157.186	1413	0.001
	Fe	57	**9.374**	ug/L	29.720	6457	0.002
	Co	59	**0.018**	ug/L	33.386	186	0.000
	Ni	60	**-0.004**	ug/L	755.901	76	-0.000
	Cu	63		ug/L		221	0.000
	Cu	65	**0.036**	ug/L	13.517	93	0.000
	Zn	66	**0.054**	ug/L	29.904	132	0.000
	Zn	67		ug/L		7579	-0.009
	Zn	68		ug/L		640	-0.000
>	Ge	74		ug/L		200384	200383.637
	As	75	**0.966**	ug/L	47.045	879	0.003
	Se	77		ug/L		7997	-0.004
	Se	82	**0.162**	ug/L	145.557	-3	0.000
	Kr	83		ug/L		92	-0.000
	Sr	88	**0.021**	ug/L	23.610	291	0.001
	Y	89		ug/L		28	-0.000
	Zr	90	**0.052**	ug/L	4.788	388	0.001
	Mo	98	**0.239**	ug/L	6.463	430	0.002
	Ag	107	**0.017**	ug/L	20.675	92	0.000
	Cd	111	**0.020**	ug/L	134.806	35	0.000
	Cd	114		ug/L		66	0.000
>	In	115		ug/L		144149	144149.228
	Sn	120	**0.063**	ug/L	13.426	321	0.001
	Sb	121	**1.358**	ug/L	15.857	3942	0.024
	Sb	123		ug/L		3066	0.019
	Ba	135		ug/L		61	0.000
	Ba	137	**0.045**	ug/L	35.699	111	0.000
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194396	194396.402
	Tl	205	**1.027**	ug/L	24.516	7247	0.033
	Pb	208	**0.087**	ug/L	30.499	860	0.003
	Th	232	**0.185**	ug/L	28.582	1531	0.007
	U	238	**0.207**	ug/L	20.207	1589	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			102.7		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			103.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.9		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 12	Tl	205CCB is out of limits (+/- PQL)
QC Std 12	U	238CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201871711
Sample Date/Time: Saturday, July 04, 2009 01:54:49
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871711.957

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.349**	ug/L	12.054	66	0.000
	Be	9	**-0.040**	ug/L	117.355	10	-0.000
	B	11	**0.983**	ug/L	34.872	316	0.000
	Na	23	**-18.342**	ug/L	5.113	11338	-0.074
	Mg	24	**-1.228**	ug/L	55.413	667	-0.004
	Al	27	**-2.282**	ug/L	106.587	3334	-0.011
	P	31	**-15.559**	ug/L	12.337	2115	-0.005
	K	39	**29.666**	ug/L	29.954	498212	0.210
	Ca	43	**35.746**	ug/L	21.250	847	0.001
>	Sc	45		ug/L		266073	266072.772
	Ti	47	**0.217**	ug/L	37.506	271	0.000
	V	51	**3.904**	ug/L	38.759	44613	0.032
	Cr	52	**0.747**	ug/L	26.771	-969	0.006
	Cr	53		ug/L		397084	0.679
	Mn	55	**0.177**	ug/L	5.710	1849	0.002
	Fe	57	**15.265**	ug/L	12.684	6839	0.004
	Co	59	**-0.013**	ug/L	24.159	104	-0.000
	Ni	60	**0.025**	ug/L	68.235	92	0.000
	Cu	63		ug/L		288	0.000
	Cu	65	**0.113**	ug/L	18.146	138	0.000
	Zn	66	**0.570**	ug/L	10.223	370	0.001
	Zn	67		ug/L		18527	0.042
	Zn	68		ug/L		1223	0.002
>	Ge	74		ug/L		208569	208569.397
	As	75	**3.847**	ug/L	17.694	2578	0.011
	Se	77		ug/L		23088	0.067
	Se	82	**-0.171**	ug/L	215.730	-18	-0.000
	Kr	83		ug/L		94	-0.000
	Sr	88	**0.012**	ug/L	22.862	248	0.000
	Y	89		ug/L		27	-0.000
	Zr	90	**0.021**	ug/L	12.113	299	0.000
	Mo	98	**0.049**	ug/L	8.592	155	0.001
	Ag	107	**-0.007**	ug/L	11.236	32	-0.000
	Cd	111	**-0.023**	ug/L	39.023	10	-0.000
	Cd	114		ug/L		32	-0.000
>	In	115		ug/L		150788	150788.156
	Sn	120	**0.136**	ug/L	2.729	537	0.002
	Sb	121	**1.083**	ug/L	12.628	3370	0.019
	Sb	123		ug/L		2593	0.015
	Ba	135		ug/L		66	0.000
	Ba	137	**0.032**	ug/L	25.655	98	0.000
	Ho	165		ug/L		31	-0.000
>	Lu	175		ug/L		198113	198112.901
	Tl	205	**0.236**	ug/L	6.775	2405	0.008
	Pb	208	**0.002**	ug/L	63.559	281	0.000
	Th	232	**0.024**	ug/L	14.991	404	0.001
	U	238	**0.024**	ug/L	12.845	358	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		102.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		107.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.8			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871712
Sample Date/Time: Saturday, July 04, 2009 01:59:32
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871712.958

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.273**	ug/L	1.638	7945	0.030
	Be	9	**53.569**	ug/L	1.838	7068	0.027
	B	11	**104.686**	ug/L	1.812	11823	0.044
	Na	23	**1908.098**	ug/L	6.519	2073707	7.732
	Mg	24	**1775.868**	ug/L	5.271	1498135	5.661
	Al	27	**2049.622**	ug/L	2.020	2530052	9.549
	P	31	**2023.215**	ug/L	2.607	185698	0.689
	K	39	**2152.249**	ug/L	4.537	4474020	15.262
	Ca	43	**2143.018**	ug/L	2.637	9363	0.033
>	Sc	45		ug/L		264298	264297.549
	Ti	47	**47.830**	ug/L	1.362	10612	0.039
	V	51	**53.478**	ug/L	6.380	150978	0.436
	Cr	52	**51.335**	ug/L	2.283	109861	0.426
	Cr	53		ug/L		436284	0.837
	Mn	55	**52.404**	ug/L	1.748	182396	0.686
	Fe	57	**2133.237**	ug/L	2.373	150231	0.547
	Co	59	**52.683**	ug/L	0.874	136893	0.517
	Ni	60	**52.727**	ug/L	1.577	29182	0.110
	Cu	63		ug/L		68572	0.259
	Cu	65	**54.072**	ug/L	1.342	32245	0.122
	Zn	66	**50.392**	ug/L	1.161	22825	0.109
	Zn	67		ug/L		23623	0.066
	Zn	68		ug/L		17081	0.078
>	Ge	74		ug/L		208692	208691.606
	As	75	**52.284**	ug/L	4.782	30480	0.144
	Se	77		ug/L		24814	0.075
	Se	82	**51.845**	ug/L	3.068	2297	0.011
	Kr	83		ug/L		95	-0.000
	Sr	88	**51.575**	ug/L	1.246	304501	2.041
	Y	89		ug/L		48	0.000
	Zr	90	**50.268**	ug/L	2.893	170459	1.142
	Mo	98	**51.012**	ug/L	0.933	78567	0.526
	Ag	107	**52.524**	ug/L	1.136	138058	0.925
	Cd	111	**51.482**	ug/L	0.545	32226	0.216
	Cd	114		ug/L		78134	0.524
>	In	115		ug/L		149131	149130.823
	Sn	120	**50.111**	ug/L	1.239	137564	0.921
	Sb	121	**54.163**	ug/L	1.919	145589	0.973
	Sb	123		ug/L		112226	0.750
	Ba	135		ug/L		35268	0.179
	Ba	137	**53.133**	ug/L	2.381	62194	0.316
	Ho	165		ug/L		42	0.000
>	Lu	175		ug/L		196395	196394.796
	Tl	205	**46.106**	ug/L	2.968	289413	1.469
	Pb	208	**51.633**	ug/L	1.089	357658	1.820
	Th	232	**51.230**	ug/L	0.600	365138	1.858
	U	238	**53.549**	ug/L	0.509	367155	1.868

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		107.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871713
Sample Date/Time: Saturday, July 04, 2009 02:08:59
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871713.960

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.413**	**ug/L**	18.005	74	0.000
	Be	9	**-0.014**	**ug/L**	87.231	13	-0.000
	B	11	**11.410**	**ug/L**	2.847	1456	0.005
	Na	23	**196.484**	**ug/L**	14.589	238664	0.796
	Mg	24	**6.768**	**ug/L**	35.565	7335	0.022
	Al	27	**-1.688**	**ug/L**	174.841	4001	-0.008
	P	31	**-13.511**	**ug/L**	16.344	2261	-0.005
	K	39	**478.992**	**ug/L**	12.415	1321593	3.397
	Ca	43	**103.560**	**ug/L**	12.526	1105	0.002
>	Sc	45		**ug/L**		261460	261460.293
	Ti	47	**0.374**	**ug/L**	21.523	300	0.000
	V	51	**0.875**	**ug/L**	499.196	37277	0.007
	Cr	52	**1.845**	**ug/L**	15.198	1428	0.015
	Cr	53		**ug/L**		452497	0.917
	Mn	55	**0.502**	**ug/L**	3.117	2928	0.007
	Fe	57	**17.241**	**ug/L**	9.341	6854	0.004
	Co	59	**-0.009**	**ug/L**	19.189	113	-0.000
	Ni	60	**0.085**	**ug/L**	16.854	124	0.000
	Cu	63		**ug/L**		1107	0.004
	Cu	65	**0.738**	**ug/L**	6.837	504	0.002
	Zn	66	**1.210**	**ug/L**	5.250	652	0.003
	Zn	67		**ug/L**		20874	0.054
	Zn	68		**ug/L**		1535	0.004
>	Ge	74		**ug/L**		206924	206924.438
	As	75	**1.463**	**ug/L**	82.957	1183	0.004
	Se	77		**ug/L**		26733	0.086
	Se	82	**-0.099**	**ug/L**	615.179	-15	-0.000
	Kr	83		**ug/L**		100	0.000
	Sr	88	**0.168**	**ug/L**	2.737	1191	0.007
	Y	89		**ug/L**		56	0.000
	Zr	90	**0.050**	**ug/L**	10.647	402	0.001
	Mo	98	**0.011**	**ug/L**	67.301	97	0.000
	Ag	107	**-0.009**	**ug/L**	19.044	27	-0.000
	Cd	111	**-0.016**	**ug/L**	80.178	14	-0.000
	Cd	114		**ug/L**		46	-0.000
>	In	115		**ug/L**		151802	151801.561
	Sn	120	**0.086**	**ug/L**	0.597	400	0.002
	Sb	121	**0.521**	**ug/L**	6.374	1860	0.009
	Sb	123		**ug/L**		1436	0.007
	Ba	135		**ug/L**		113	0.000
	Ba	137	**0.124**	**ug/L**	7.229	207	0.001
	Ho	165		**ug/L**		37	0.000
>	Lu	175		**ug/L**		198551	198551.077
	Tl	205	**0.204**	**ug/L**	11.977	2208	0.007
	Pb	208	**0.015**	**ug/L**	17.175	376	0.001
	Th	232	**0.001**	**ug/L**	154.516	237	0.000
	U	238	**-0.008**	**ug/L**	15.984	134	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			100.7		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			106.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			103.8		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			100.0		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871714
Sample Date/Time: Saturday, July 04, 2009 02:13:44
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871714.961

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.448**	ug/L	2.658	8179	0.031
	Be	9	**55.232**	ug/L	2.821	7213	0.028
	B	11	**117.193**	ug/L	1.771	13078	0.049
	Na	23	**2167.664**	ug/L	4.374	2328443	8.784
	Mg	24	**1952.516**	ug/L	5.882	1630192	6.224
	Al	27	**1972.369**	ug/L	8.743	2410762	9.189
	P	31	**2028.566**	ug/L	0.716	184335	0.691
	K	39	**2797.093**	ug/L	8.799	5621923	19.835
	Ca	43	**2253.076**	ug/L	1.605	9711	0.034
>	Sc	45		ug/L		261645	261644.667
	Ti	47	**47.681**	ug/L	1.944	10474	0.039
	V	51	**51.842**	ug/L	10.098	145979	0.422
	Cr	52	**54.622**	ug/L	1.563	115899	0.453
	Cr	53		ug/L		440248	0.869
	Mn	55	**53.277**	ug/L	1.534	183552	0.697
	Fe	57	**2218.633**	ug/L	0.848	154461	0.569
	Co	59	**53.851**	ug/L	1.484	138526	0.529
	Ni	60	**53.652**	ug/L	2.489	29393	0.112
	Cu	63		ug/L		69616	0.265
	Cu	65	**55.183**	ug/L	1.096	32573	0.124
	Zn	66	**50.032**	ug/L	2.769	22900	0.108
	Zn	67		ug/L		23549	0.065
	Zn	68		ug/L		17293	0.078
>	Ge	74		ug/L		210905	210905.483
	As	75	**41.306**	ug/L	2.621	24422	0.114
	Se	77		ug/L		24392	0.072
	Se	82	**9.933**	ug/L	4.122	436	0.002
	Kr	83		ug/L		96	-0.000
	Sr	88	**51.858**	ug/L	0.663	307646	2.052
	Y	89		ug/L		68	0.000
	Zr	90	**51.172**	ug/L	1.513	174385	1.162
	Mo	98	**51.989**	ug/L	2.091	80446	0.536
	Ag	107	**52.346**	ug/L	1.186	138236	0.922
	Cd	111	**5.327**	ug/L	0.768	3372	0.022
	Cd	114		ug/L		8006	0.053
>	In	115		ug/L		149857	149857.013
	Sn	120	**50.509**	ug/L	1.754	139323	0.929
	Sb	121	**105.709**	ug/L	2.256	285075	1.900
	Sb	123		ug/L		222758	1.484
	Ba	135		ug/L		36818	0.186
	Ba	137	**54.837**	ug/L	2.246	64492	0.327
	Ho	165		ug/L		39	0.000
>	Lu	175		ug/L		197325	197325.489
	Tl	205	**26.502**	ug/L	6.424	167594	0.844
	Pb	208	**21.162**	ug/L	1.991	147432	0.746
	Th	232	**52.364**	ug/L	1.471	374985	1.899
	U	238	**54.189**	ug/L	1.925	373266	1.891

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			100.7		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			108.5		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			102.5		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.4		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871715
Sample Date/Time: Saturday, July 04, 2009 02:18:29
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881357|5|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871715.962

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.088**	ug/L	39.985	27	0.000
	Be	9	**0.023**	ug/L	127.973	18	0.000
	B	11	**4.528**	ug/L	10.542	696	0.002
	Na	23	**29.250**	ug/L	31.866	61133	0.119
	Mg	24	**1.212**	ug/L	59.518	2667	0.004
	Al	27	**-4.134**	ug/L	20.051	1000	-0.019
	P	31	**-12.615**	ug/L	6.674	2327	-0.004
	K	39	**78.759**	ug/L	16.307	576756	0.558
	Ca	43	**-0.976**	ug/L	1256.023	681	-0.000
>	Sc	45		ug/L		259742	259742.059
	Ti	47	**0.039**	ug/L	189.291	227	0.000
	V	51	**-1.401**	ug/L	130.042	32318	-0.011
	Cr	52	**0.982**	ug/L	22.200	-439	0.008
	Cr	53		ug/L		270763	0.229
	Mn	55	**0.079**	ug/L	21.046	1475	0.001
	Fe	57	**6.706**	ug/L	20.748	6108	0.002
	Co	59	**-0.013**	ug/L	57.943	102	-0.000
	Ni	60	**-0.001**	ug/L	4268.980	76	-0.000
	Cu	63		ug/L		339	0.001
	Cu	65	**0.146**	ug/L	16.136	155	0.000
	Zn	66	**0.333**	ug/L	13.487	254	0.001
	Zn	67		ug/L		10662	0.006
	Zn	68		ug/L		833	0.001
>	Ge	74		ug/L		201666	201666.144
	As	75	**1.377**	ug/L	30.651	1114	0.004
	Se	77		ug/L		13538	0.023
	Se	82	**0.274**	ug/L	53.351	1	0.000
	Kr	83		ug/L		85	-0.000
	Sr	88	**0.030**	ug/L	20.911	341	0.001
	Y	89		ug/L		28	-0.000
	Zr	90	**0.020**	ug/L	38.278	282	0.000
	Mo	98	**0.023**	ug/L	83.947	109	0.000
	Ag	107	**-0.000**	ug/L	1506.644	48	-0.000
	Cd	111	**-0.033**	ug/L	41.200	3	-0.000
	Cd	114		ug/L		31	-0.000
>	In	115		ug/L		144129	144129.045
	Sn	120	**0.014**	ug/L	19.877	190	0.000
	Sb	121	**0.274**	ug/L	10.329	1127	0.005
	Sb	123		ug/L		849	0.004
	Ba	135		ug/L		50	0.000
	Ba	137	**0.016**	ug/L	73.744	77	0.000
	Ho	165		ug/L		27	-0.000
>	Lu	175		ug/L		194491	194490.676
	Tl	205	**3.217**	ug/L	14.536	20848	0.102
	Pb	208	**-0.005**	ug/L	29.663	230	-0.000
	Th	232	**0.005**	ug/L	85.235	263	0.000
	U	238	**-0.007**	ug/L	22.726	142	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			100.0		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			103.7		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.9		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 02:23:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.963

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.081**	ug/L	1.442	7987	0.031
	Be	9	**54.436**	ug/L	0.560	6988	0.027
	B	11	**104.324**	ug/L	4.827	11451	0.044
	Na	23	**4926.997**	ug/L	2.768	5168576	19.966
	Mg	24	**5362.075**	ug/L	10.902	4385128	17.092
	Al	27	**5265.782**	ug/L	8.220	6302937	24.534
	P	31	**5025.347**	ug/L	3.237	443384	1.712
	K	39	**5388.561**	ug/L	1.542	10249930	38.211
	Ca	43	**5129.567**	ug/L	4.017	20844	0.078
>	Sc	45		ug/L		257159	257158.933
	Ti	47	**50.609**	ug/L	3.501	10905	0.042
	V	51	**49.608**	ug/L	5.804	138668	0.404
	Cr	52	**52.029**	ug/L	4.754	108237	0.431
	Cr	53		ug/L		202983	-0.023
	Mn	55	**52.908**	ug/L	4.659	178945	0.692
	Fe	57	**5322.415**	ug/L	5.120	355868	1.364
	Co	59	**53.194**	ug/L	5.432	134290	0.522
	Ni	60	**51.952**	ug/L	6.034	27935	0.109
	Cu	63		ug/L		64478	0.250
	Cu	65	**52.358**	ug/L	6.783	30322	0.118
	Zn	66	**49.901**	ug/L	2.860	21833	0.108
	Zn	67		ug/L		10838	0.007
	Zn	68		ug/L		15807	0.075
>	Ge	74		ug/L		201592	201592.470
	As	75	**49.186**	ug/L	1.832	27730	0.136
	Se	77		ug/L		9431	0.003
	Se	82	**48.809**	ug/L	1.748	2088	0.010
	Kr	83		ug/L		92	-0.000
	Sr	88	**49.646**	ug/L	2.006	285828	1.964
	Y	89		ug/L		57	0.000
	Zr	90	**49.336**	ug/L	0.747	163182	1.121
	Mo	98	**50.951**	ug/L	1.505	76522	0.526
	Ag	107	**49.791**	ug/L	0.576	127617	0.877
	Cd	111	**49.207**	ug/L	0.196	30034	0.206
	Cd	114		ug/L		72763	0.500
>	In	115		ug/L		145418	145418.478
	Sn	120	**49.271**	ug/L	0.151	131909	0.906
	Sb	121	**50.566**	ug/L	1.641	132580	0.909
	Sb	123		ug/L		103113	0.707
	Ba	135		ug/L		33700	0.171
	Ba	137	**50.903**	ug/L	1.829	59662	0.303
	Ho	165		ug/L		38	0.000
>	Lu	175		ug/L		196644	196643.927
	Tl	205	**42.489**	ug/L	4.160	267054	1.354
	Pb	208	**50.874**	ug/L	0.600	352853	1.793
	Th	232	**51.647**	ug/L	1.236	368573	1.873
	U	238	**52.693**	ug/L	3.568	361645	1.839

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.162				
	Be	9	108.873				
	B	11	104.324				
	Na	23	98.540				
	Mg	24	107.241				
	Al	27	104.273				
	P	31	100.507				
	K	39	107.771				
	Ca	43	102.591				
>	Sc	45		99.0			
	Ti	47	101.217				
	V	51	99.215				
	Cr	52	104.057				
	Cr	53					
	Mn	55	105.817				
	Fe	57	106.448				
	Co	59	106.389				
	Ni	60	103.904				
	Cu	63					
	Cu	65	104.716				
	Zn	66	99.802				
	Zn	67					
	Zn	68					
>	Ge	74		103.7			
	As	75	98.371				
	Se	77					
	Se	82	97.617				
	Kr	83					
	Sr	88	99.292				
	Y	89					
	Zr	90	98.671				
	Mo	98	101.903				
	Ag	107	99.582				
	Cd	111	98.413				
	Cd	114					
>	In	115		99.4			
	Sn	120	98.543				
	Sb	121	101.131				
	Sb	123					
	Ba	135					
	Ba	137	101.807				
	Ho	165					
>	Lu	175		99.0			
	Tl	205	84.978				
	Pb	208	101.749				
	Th	232	103.295				
	U	238	105.387				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits (+/- 10%)
QC Std 6	Tl	205CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 02:28:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.964

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.098**	ug/L	6.922	29	0.000
	Be	9	**0.032**	ug/L	106.556	19	0.000
	B	11	**2.828**	ug/L	19.314	514	0.001
	Na	23	**-3.016**	ug/L	195.199	27360	-0.012
	Mg	24	**0.777**	ug/L	82.791	2334	0.002
	Al	27	**-1.666**	ug/L	101.736	4001	-0.008
	P	31	**-4.392**	ug/L	6.083	3079	-0.001
	K	39	**2.178**	ug/L	438.900	438978	0.015
	Ca	43	**-34.431**	ug/L	10.354	553	-0.001
>	Sc	45		ug/L		261788	261788.050
	Ti	47	**0.052**	ug/L	344.563	231	0.000
	V	51	**-4.128**	ug/L	39.572	26703	-0.034
	Cr	52	**0.812**	ug/L	19.034	-810	0.007
	Cr	53		ug/L		189825	-0.088
	Mn	55	**-0.017**	ug/L	134.421	1154	-0.000
	Fe	57	**10.098**	ug/L	28.516	6381	0.003
	Co	59	**0.010**	ug/L	19.874	162	0.000
	Ni	60	**-0.030**	ug/L	43.534	61	-0.000
	Cu	63		ug/L		147	-0.000
	Cu	65	**0.023**	ug/L	79.367	83	0.000
	Zn	66	**0.004**	ug/L	363.200	112	0.000
	Zn	67		ug/L		7581	-0.010
	Zn	68		ug/L		573	-0.001
>	Ge	74		ug/L		203154	203153.747
	As	75	**1.191**	ug/L	93.365	1014	0.003
	Se	77		ug/L		8420	-0.002
	Se	82	**0.034**	ug/L	630.681	-9	0.000
	Kr	83		ug/L		86	-0.000
	Sr	88	**0.005**	ug/L	69.163	194	0.000
	Y	89		ug/L		27	-0.000
	Zr	90	**0.036**	ug/L	23.860	334	0.001
	Mo	98	**0.079**	ug/L	28.896	192	0.001
	Ag	107	**0.007**	ug/L	22.881	66	0.000
	Cd	111	**0.002**	ug/L	616.736	24	0.000
	Cd	114		ug/L		53	0.000
>	In	115		ug/L		143137	143137.440
	Sn	120	**0.015**	ug/L	61.493	191	0.000
	Sb	121	**0.328**	ug/L	16.068	1260	0.006
	Sb	123		ug/L		966	0.004
	Ba	135		ug/L		43	0.000
	Ba	137	**0.008**	ug/L	94.313	68	0.000
	Ho	165		ug/L		32	-0.000
>	Lu	175		ug/L		195393	195392.902
	Tl	205	**4.291**	ug/L	16.990	27625	0.137
	Pb	208	**0.022**	ug/L	18.893	419	0.001
	Th	232	**0.090**	ug/L	36.089	867	0.003
	U	238	**0.024**	ug/L	26.786	353	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		104.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.4			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232425001
Sample Date/Time: Saturday, July 04, 2009 02:32:46
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\232425001.965

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.161**	**ug/L**	23.037	38	0.000
	Be	9	**0.002**	**ug/L**	1611.613	15	0.000
	B	11	**26.154**	**ug/L**	4.888	3069	0.011
	Na	23	**101.307**	**ug/L**	3.739	137661	0.411
	Mg	24	**2.384**	**ug/L**	153.218	3667	0.008
	Al	27	**-0.013**	**ug/L**	23983.616	6002	-0.000
	P	31	**-14.542**	**ug/L**	9.611	2166	-0.005
	K	39	**152.312**	**ug/L**	16.680	715522	1.080
	Ca	43	**46.105**	**ug/L**	3.022	873	0.001
>	Sc	45		**ug/L**		260976	260975.508
	Ti	47	**0.371**	**ug/L**	25.162	299	0.000
	V	51	**-1.813**	**ug/L**	289.760	31604	-0.015
	Cr	52	**2.198**	**ug/L**	6.733	2190	0.018
	Cr	53		**ug/L**		391656	0.687
	Mn	55	**0.644**	**ug/L**	2.642	3409	0.008
	Fe	57	**21.078**	**ug/L**	5.571	7098	0.005
	Co	59	**-0.012**	**ug/L**	10.273	106	-0.000
	Ni	60	**0.005**	**ug/L**	183.034	80	0.000
	Cu	63		**ug/L**		852	0.003
	Cu	65	**0.570**	**ug/L**	2.910	404	0.001
	Zn	66	**1.035**	**ug/L**	4.284	594	0.002
	Zn	67		**ug/L**		17501	0.035
	Zn	68		**ug/L**		1277	0.002
>	Ge	74		**ug/L**		213982	213981.742
	As	75	**3.663**	**ug/L**	6.028	2532	0.010
	Se	77		**ug/L**		24202	0.069
	Se	82	**0.181**	**ug/L**	310.961	-3	0.000
	Kr	83		**ug/L**		87	-0.000
	Sr	88	**0.066**	**ug/L**	0.990	572	0.003
	Y	89		**ug/L**		67	0.000
	Zr	90	**0.013**	**ug/L**	65.306	275	0.000
	Mo	98	**0.017**	**ug/L**	34.930	105	0.000
	Ag	107	**-0.010**	**ug/L**	17.103	24	-0.000
	Cd	111	**-0.029**	**ug/L**	35.253	6	-0.000
	Cd	114		**ug/L**		17	-0.000
>	In	115		**ug/L**		151589	151589.281
	Sn	120	**0.070**	**ug/L**	7.077	355	0.001
	Sb	121	**0.292**	**ug/L**	12.276	1235	0.005
	Sb	123		**ug/L**		1011	0.004
	Ba	135		**ug/L**		192	0.001
	Ba	137	**0.234**	**ug/L**	8.428	342	0.001
	Ho	165		**ug/L**		34	-0.000
>	Lu	175		**ug/L**		201588	201588.261
	Tl	205	**0.754**	**ug/L**	6.369	5770	0.024
	Pb	208	**0.006**	**ug/L**	30.468	318	0.000
	Th	232	**-0.005**	**ug/L**	31.915	201	-0.000
	U	238	**-0.018**	**ug/L**	5.213	70	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			100.5		
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74			110.0		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			103.7		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			101.5		
Tl	205					
Pb	208					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 02:56:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.970

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.801**	ug/L	5.445	8026	0.031
	Be	9	**55.134**	ug/L	3.125	7024	0.027
	B	11	**100.809**	ug/L	4.621	10999	0.042
	Na	23	**4771.226**	ug/L	10.775	4961833	19.335
	Mg	24	**4998.899**	ug/L	13.415	4065520	15.934
	Al	27	**5143.022**	ug/L	4.516	6119841	23.962
	P	31	**4748.563**	ug/L	2.077	416344	1.618
	K	39	**5216.401**	ug/L	2.018	9866363	36.990
	Ca	43	**4877.992**	ug/L	1.752	19722	0.075
>	Sc	45		ug/L		255243	255243.095
	Ti	47	**48.518**	ug/L	3.148	10392	0.040
	V	51	**47.433**	ug/L	3.919	133254	0.386
	Cr	52	**50.493**	ug/L	2.827	104310	0.419
	Cr	53		ug/L		218872	0.043
	Mn	55	**51.771**	ug/L	1.369	174026	0.677
	Fe	57	**5202.310**	ug/L	3.022	345792	1.333
	Co	59	**51.581**	ug/L	1.501	129440	0.507
	Ni	60	**51.253**	ug/L	0.670	27398	0.107
	Cu	63		ug/L		63800	0.249
	Cu	65	**51.488**	ug/L	1.217	29652	0.116
	Zn	66	**47.822**	ug/L	2.336	21139	0.103
	Zn	67		ug/L		11340	0.009
	Zn	68		ug/L		15422	0.072
>	Ge	74		ug/L		203620	203620.289
	As	75	**48.612**	ug/L	0.907	27689	0.134
	Se	77		ug/L		10143	0.006
	Se	82	**46.113**	ug/L	3.318	1992	0.010
	Kr	83		ug/L		79	-0.000
	Sr	88	**48.234**	ug/L	0.975	276276	1.909
	Y	89		ug/L		58	0.000
	Zr	90	**48.614**	ug/L	3.745	159937	1.104
	Mo	98	**50.109**	ug/L	1.089	74876	0.517
	Ag	107	**49.420**	ug/L	2.232	126001	0.871
	Cd	111	**48.338**	ug/L	1.110	29352	0.203
	Cd	114		ug/L		72102	0.498
>	In	115		ug/L		144688	144687.716
	Sn	120	**48.209**	ug/L	2.308	128383	0.887
	Sb	121	**49.415**	ug/L	1.210	128904	0.888
	Sb	123		ug/L		100068	0.689
	Ba	135		ug/L		33172	0.168
	Ba	137	**49.914**	ug/L	1.558	58763	0.297
	Ho	165		ug/L		42	0.000
>	Lu	175		ug/L		197513	197512.814
	Tl	205	**36.785**	ug/L	2.884	232363	1.172
	Pb	208	**50.881**	ug/L	0.794	354446	1.793
	Th	232	**51.850**	ug/L	2.051	371611	1.881
	U	238	**52.234**	ug/L	1.385	360129	1.823

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	113.601				
	Be	9	110.268				
	B	11	100.809				
	Na	23	95.425				
	Mg	24	99.978				
	Al	27	101.842				
	P	31	94.971				
	K	39	104.328				
	Ca	43	97.560				
>	Sc	45		98.3			
	Ti	47	97.036				
	V	51	94.865				
	Cr	52	100.987				
	Cr	53					
	Mn	55	103.541				
	Fe	57	104.046				
	Co	59	103.162				
	Ni	60	102.506				
	Cu	63					
	Cu	65	102.976				
	Zn	66	95.644				
	Zn	67					
	Zn	68					
>	Ge	74		104.7			
	As	75	97.223				
	Se	77					
	Se	82	92.226				
	Kr	83					
	Sr	88	96.468				
	Y	89					
	Zr	90	97.229				
	Mo	98	100.219				
	Ag	107	98.841				
	Cd	111	96.676				
	Cd	114					
>	In	115		98.9			
	Sn	120	96.419				
	Sb	121	98.829				
	Sb	123					
	Ba	135					
	Ba	137	99.827				
	Ho	165					
>	Lu	175		99.5			
	Tl	205	73.569				
	Pb	208	101.761				
	Th	232	103.701				
	U	238	104.469				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
QC Std 6	Be	9	CCV is out of limits (+/- 10%)
QC Std 6	Tl	205	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 03:01:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.971

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.051**	ug/L	25.397	21	0.000
	Be	9	**0.024**	ug/L	22.382	17	0.000
	B	11	**2.351**	ug/L	22.913	446	0.001
	Na	23	**-0.486**	ug/L	331.587	29030	-0.002
	Mg	24	**0.473**	ug/L	265.593	2000	0.002
	Al	27	**-2.975**	ug/L	43.946	2334	-0.014
	P	31	**-4.816**	ug/L	38.669	2934	-0.002
	K	39	**1.849**	ug/L	567.689	423187	0.013
	Ca	43	**-35.631**	ug/L	12.561	529	-0.001
>	Sc	45		ug/L		252553	252553.265
	Ti	47	**-0.021**	ug/L	843.142	208	-0.000
	V	51	**-2.920**	ug/L	60.984	28308	-0.024
	Cr	52	**0.724**	ug/L	16.144	-968	0.006
	Cr	53		ug/L		188018	-0.069
	Mn	55	**-0.013**	ug/L	36.906	1128	-0.000
	Fe	57	**9.704**	ug/L	46.525	6132	0.002
	Co	59	**0.005**	ug/L	139.610	144	0.000
	Ni	60	**-0.012**	ug/L	207.010	68	-0.000
	Cu	63		ug/L		137	-0.000
	Cu	65	**0.002**	ug/L	1045.413	69	0.000
	Zn	66	**0.019**	ug/L	205.630	117	0.000
	Zn	67		ug/L		7445	-0.010
	Zn	68		ug/L		571	-0.001
>	Ge	74		ug/L		199852	199851.899
	As	75	**1.252**	ug/L	41.240	1036	0.003
	Se	77		ug/L		8405	-0.002
	Se	82	**0.284**	ug/L	39.148	2	0.000
	Kr	83		ug/L		77	-0.000
	Sr	88	**0.005**	ug/L	49.749	195	0.000
	Y	89		ug/L		24	-0.000
	Zr	90	**0.033**	ug/L	25.328	320	0.001
	Mo	98	**0.070**	ug/L	37.724	177	0.001
	Ag	107	**0.009**	ug/L	55.596	71	0.000
	Cd	111	**0.005**	ug/L	160.410	26	0.000
	Cd	114		ug/L		60	0.000
>	In	115		ug/L		141761	141761.344
	Sn	120	**0.017**	ug/L	26.674	194	0.000
	Sb	121	**0.265**	ug/L	25.204	1088	0.005
	Sb	123		ug/L		856	0.004
	Ba	135		ug/L		40	0.000
	Ba	137	**0.006**	ug/L	47.761	67	0.000
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194922	194922.260
	Tl	205	**3.450**	ug/L	14.724	22357	0.110
	Pb	208	**0.018**	ug/L	26.405	386	0.001
	Th	232	**0.085**	ug/L	38.072	832	0.003
	U	238	**0.023**	ug/L	14.589	346	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		97.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.2			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Saturday, July 04, 2009 11:02:58
Sample Description:
Method File: C:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.1057
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1681.5	1681.499	43.815	2.6
	Mg	24.0	16793.5	16793.469	385.861	2.3
	Co	58.9	32721.8	32721.842	598.507	1.8
	Rh	102.9	71511.8	71511.777	1135.666	1.6
	In	114.9	91608.9	91608.866	1676.072	1.8
	Pb	208.0	41004.2	41004.167	382.874	0.9
⌈>	Ba	137.9	85130.0	85129.980	1041.796	1.2
⌊	Ba++	69.0	1858.6	0.022	0.000	1.9
⌈>	Ce	139.9	109273.8	109273.813	1682.715	1.5
⌊	CeO	155.9	1508.8	0.014	0.000	2.3
	Bkgd	220.0	10.1	10.100	1.673	16.6

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-2000.00	Analog Stage Voltage
1950.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	7.3	1853.1
Co	59	17	8.3	33908.2
In	115	17	9.3	120912.5

ICPMS#3 Instrument Tuning Report

File Name: 090704.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	582	2070	0.655
Be	9.0	9.0	2046	2070	0.628
Mg	24.0	24.0	5708	2120	0.577
Mg	25.0	25.0	5927	2050	0.652
Mg	26.0	26.0	6188	2130	0.633
Co	58.9	58.9	14199	2110	0.679
Rh	102.9	103.0	24906	2170	0.655
In	114.9	114.9	27822	2180	0.658
Ce	139.9	139.9	33907	2200	0.688
Pb	206.0	205.9	49980	2270	0.703
Pb	207.0	207.0	50269	2300	0.673
Pb	208.0	208.0	50486	2320	0.628
U	238.1	238.0	57832	2340	0.668

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Saturday, July 04, 2009 14:04:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Blank.1058

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		221755	
	Tl	205		ug/L		93	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Simple Linear	
Tl	205	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 04, 2009 14:08:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Standard 1.1059

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		216188	216188.484
	Tl	205	**10.000**	**ug/L**	0.595	78913	0.365

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 04, 2009 14:11:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Standard 2.1060

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		208064	208064.435
	Tl	205	**99.979**	**ug/L**	1.276	742955	3.571

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 04, 2009 14:15:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 1.1061

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		205540	205540.181
	Tl	205	**49.707**	**ug/L**	0.765	364996	1.775

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			92.7		
	Tl	205	99.414				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 04, 2009 14:19:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 2.1062

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		**ug/L**		212674	212673.926
⌊	Tl	205	**0.047**	**ug/L**	9.653	446	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		95.9			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 04, 2009 14:22:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 3.1063

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		211516	211516.206
	Tl	205	**0.981**	**ug/L**	0.855	7500	0.035

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			95.4		
	Tl	205	98.110				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 04, 2009 14:26:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 4.1064

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		203137	203136.803
	Tl	205	**0.034**	**ug/L**	1.253	332	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		91.6			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 04, 2009 14:30:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 5.1065

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		200750	200749.728
	Tl	205	**18.343**	**ug/L**	1.086	131602	0.655

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175			90.5		
⌊	Tl	205	91.714				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 14:33:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1066

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		206829	206829.015
	Tl	205	**48.863**	**ug/L**	1.236	361023	1.745

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			93.3		
	Tl	205	97.726				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 14:37:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1067

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		211763	211762.861
	Tl	205	**0.054**	**ug/L**	3.235	494	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		95.5			
[	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871711
Sample Date/Time: Saturday, July 04, 2009 14:41:23
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871711.1068

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		211249	211249.053
	Tl	205	0.016	ug/L	7.494	208	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175			95.3		
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871712
Sample Date/Time: Saturday, July 04, 2009 14:45:10
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871712.1069

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		212039	212039.147
	Tl	205	**42.993**	**ug/L**	0.441	325701	1.536

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175			95.6		
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871713
Sample Date/Time: Saturday, July 04, 2009 14:52:44
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871713.1071

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		213947	213947.221
	Tl	205	**0.039**	**ug/L**	9.530	385	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		96.5			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871714
Sample Date/Time: Saturday, July 04, 2009 14:56:30
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871714.1072

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		209571	209570.521
	Tl	205	**29.263**	**ug/L**	0.556	219126	1.045

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175			94.5		
[	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871715
Sample Date/Time: Saturday, July 04, 2009 15:00:15
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881357|5|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871715.1073

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		208353	208352.504
⌊	Tl	205	0.818	ug/L	1.503	6174	0.029

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		94.0			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 15:03:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1074

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		202248	202248.130
	Tl	205	**48.451**	**ug/L**	1.527	350035	1.731

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			91.2		
	Tl	205	96.903				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 15:07:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1075

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		209532	209532.009
	Tl	205	**0.370**	**ug/L**	2.492	2860	0.013

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		94.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232425001
Sample Date/Time: Saturday, July 04, 2009 15:11:27
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\232425001.1076

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		207892	207892.267
	Tl	205	0.094	ug/L	4.691	787	0.003

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		93.7			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 15:30:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1081

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		**ug/L**		204551	204550.807
[	Tl	205	**46.976**	**ug/L**	1.330	343271	1.678

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		92.2			
	Tl	205	93.953				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 15:34:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1082

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		206366	206365.675
	Tl	205	**0.205**	**ug/L**	3.291	1600	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		93.1			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: WATER
Method Description: 7470A, 245.2, ILM04 ANALYST JXL1
Element: Hg

Date: 07/02/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 070209W1.SIF Results Data Set Name: 070209W1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/02/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0035	0.0035	08:06:52	No
2			0.0035	0.0035	08:07:27	No
Mean:			0.0035			
SD :			0.0000			
%RSD:						

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/02/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0024	0.0059	08:08:50	No
2			0.0024	0.0059	08:09:25	No
Mean:			0.0024			
SD :			0.0000			
%RSD:						

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.01208
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/02/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0065	0.0099	08:10:48	No
2			0.0062	0.0097	08:11:23	No
Mean:			0.0064			
SD :			0.0002			
%RSD:			2.3730			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99975 Slope: 0.01274
Intercept : -0.00005

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/02/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0263	0.0297	08:12:48	No
2			0.0260	0.0294	08:13:22	No
Mean:			0.0261			
SD :			0.0002			
%RSD:			0.8210			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99997 Slope: 0.01312
Intercept : -0.00013

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/02/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0654	0.0689	08:14:47	No
2			0.0647	0.0682	08:15:22	No
Mean:			0.0651			
SD :			0.0005			
%RSD:			0.7186			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99999 Slope: 0.01304
Intercept : -0.00009

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/02/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1313	0.1348	08:16:48	No
2			0.1307	0.1341	08:17:23	No
Mean:			0.1310			
SD :			0.0005			
%RSD:			0.3773			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 1.00000 Slope: 0.01310
Intercept : -0.00016

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0035	---	----	----	----
S0.2	0.0024	0.200	0.196	0.0000	----
S0.5	0.0064	0.500	0.497	0.0002	2.4
S2.0	0.0261	2.000	2.006	0.0002	0.8
S5.0	0.0651	5.000	4.979	0.0005	0.7
S10	0.1310	10.000	10.01	0.0005	0.4

Correlation Coefficient: 1.00000 Slope: 0.01310 Intercept: -0.0002

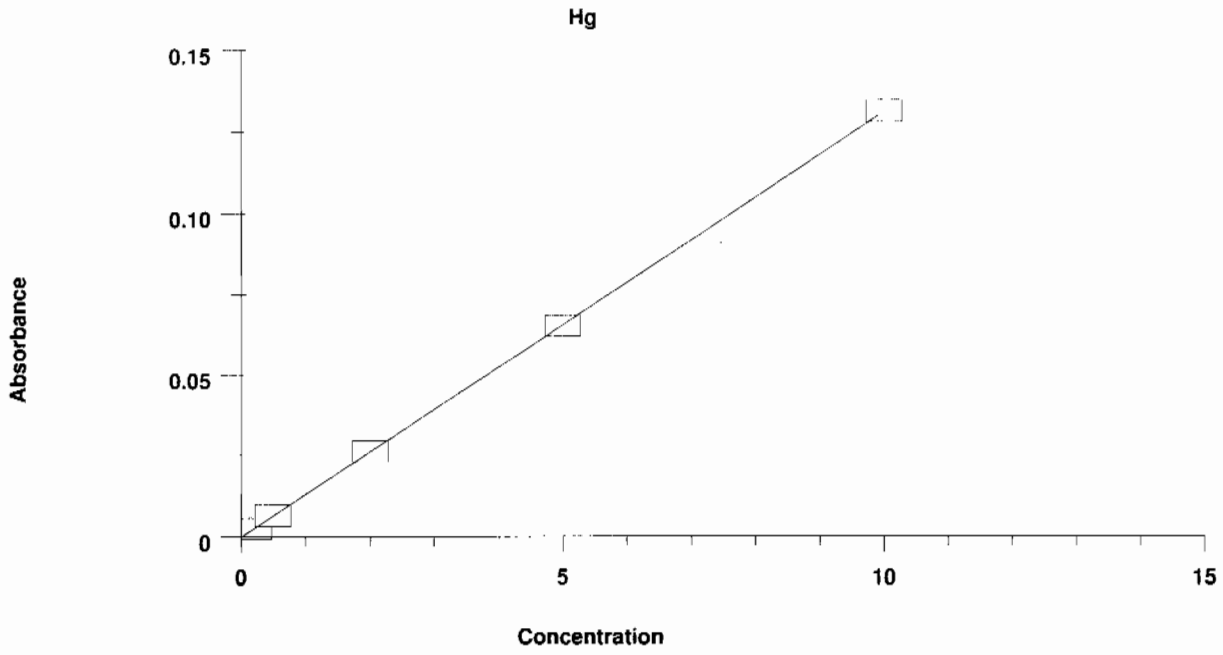

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Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/02/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.225	5.225	0.0683	0.0718	08:18:51	No
2	5.236	5.236	0.0685	0.0719	08:19:27	No
Mean:	5.231	5.231	0.0684			
SD :	0.0077	0.0077	0.0001			
%RSD:	0.1	0.1	0.1470			

QC value within specified limits.

==========

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/02/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0004	0.0031	08:20:49	No
2	-0.021	-0.021	-0.0004	0.0030	08:21:24	No
Mean:	-0.019	-0.019	-0.0004			
SD :	0.0022	0.0022	0.0000			
%RSD:	11.5	11.5	7.0604			

QC value within specified limits.

==========

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/02/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.232	0.232	0.0029	0.0063	08:22:47	No
2	0.224	0.224	0.0028	0.0062	08:23:22	No
Mean:	0.228	0.228	0.0028			
SD :	0.0056	0.0056	0.0001			
%RSD:	2.4	2.4	2.5791			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.883	4.883	0.0638	0.0673	08:24:47	No
2	4.821	4.821	0.0630	0.0665	08:25:21	No
Mean:	4.852	4.852	0.0634			
SD :	0.0441	0.0441	0.0006			
%RSD:	0.9	0.9	0.9102			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.008	-0.008	-0.0003	0.0032	08:26:49	No
2	-0.012	-0.012	-0.0003	0.0031	08:27:24	No
Mean:	-0.010	-0.010	-0.0003			
SD :	0.0032	0.0032	0.0000			
%RSD:	31.8	31.8	14.4763			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/02/2009
Sample ID: 1201870347|i||880856|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.032	-0.032	-0.0006	0.0029	08:28:49	No
2	-0.048	-0.048	-0.0008	0.0027	08:29:25	No
Mean:	-0.040	-0.040	-0.0007			
SD :	0.0112	0.0112	0.0001			
%RSD:	28.3	28.3	21.6993			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/02/2009
Sample ID: 1201870348|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.008	2.008	0.0261	0.0296	08:30:49	No
2	1.976	1.976	0.0257	0.0292	08:31:24	No
Mean:	1.992	1.992	0.0259			
SD :	0.0223	0.0223	0.0003			
%RSD:	1.1	1.1	1.1248			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/02/2009
Sample ID: 232341001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.041	-0.041	-0.0007	0.0028	08:32:50	No
2	-0.057	-0.057	-0.0009	0.0026	08:33:24	No
Mean:	-0.049	-0.049	-0.0008			
SD :	0.0112	0.0112	0.0001			
%RSD:	23.1	23.1	18.5514			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/02/2009
Sample ID: 1201870349|i|||DUP

%RSD: 14.9 14.9 11.8685

==========

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/02/2009
Sample ID: 1201872353|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.963	1.963	0.0256	0.0290	08:46:39	No
2	1.968	1.968	0.0256	0.0291	08:47:13	No
Mean:	1.966	1.966	0.0256			
SD :	0.0033	0.0033	0.0000			
%RSD:	0.2	0.2	0.1702			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.785	4.785	0.0625	0.0660	08:48:37	No
2	4.766	4.766	0.0623	0.0657	08:49:11	No
Mean:	4.775	4.775	0.0624			
SD :	0.0139	0.0139	0.0002			
%RSD:	0.3	0.3	0.2925			

QC value within specified limits.

==========

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.031	-0.031	-0.0006	0.0029	08:50:39	No
2	-0.034	-0.034	-0.0006	0.0029	08:51:14	No
Mean:	-0.033	-0.033	-0.0006			
SD :	0.0018	0.0018	0.0000			
%RSD:	5.5	5.5	4.0500			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/02/2009
Sample ID: 231723001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	-0.0010	0.0024	08:52:40	No
2	-0.080	-0.080	-0.0012	0.0023	08:53:15	No
Mean:	-0.073	-0.073	-0.0011			
SD :	0.0091	0.0091	0.0001			
%RSD:	12.4	12.4	10.6120			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/02/2009
Sample ID: 1201871389|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.542	1.542	0.0201	0.0235	08:54:38	No
2	1.548	1.548	0.0201	0.0236	08:55:13	No
Mean:	1.545	1.545	0.0201			
SD :	0.0038	0.0038	0.0001			
%RSD:	0.2	0.2	0.2492			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/02/2009
Sample ID: 1201872354|i|||DUP

%RSD: 7.6 7.6 6.1821

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/02/2009
Sample ID: 231723006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.063	-0.063	-0.0010	0.0025	09:08:39	No
2	-0.061	-0.061	-0.0010	0.0025	09:09:14	No
Mean:	-0.062	-0.062	-0.0010			
SD :	0.0011	0.0011	0.0000			
%RSD:	1.8	1.8	1.4924			

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/02/2009
Sample ID: 231727001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.072	-0.072	-0.0011	0.0024	09:10:41	No
2	-0.070	-0.070	-0.0011	0.0024	09:11:16	No
Mean:	-0.071	-0.071	-0.0011			
SD :	0.0013	0.0013	0.0000			
%RSD:	1.8	1.8	1.5214			

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.773	4.773	0.0624	0.0658	09:12:43	No
2	4.755	4.755	0.0622	0.0656	09:13:18	No
Mean:	4.764	4.764	0.0623			
SD :	0.0125	0.0125	0.0002			
%RSD:	0.3	0.3	0.2638			

QC value within specified limits.

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.024	-0.024	-0.0005	0.0030	09:14:46	No
2	-0.036	-0.036	-0.0006	0.0028	09:15:21	No
Mean:	-0.030	-0.030	-0.0005			
SD :	0.0082	0.0082	0.0001			
%RSD:	27.4	27.4	19.5797			

QC value within specified limits.

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/02/2009
Sample ID: 231727002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.016	-0.016	-0.0004	0.0031	09:16:46	No
2	-0.024	-0.024	-0.0005	0.0030	09:17:21	No
Mean:	-0.020	-0.020	-0.0004			
SD :	0.0057	0.0057	0.0001			
%RSD:	28.3	28.3	17.7366			

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/02/2009
Sample ID: 231727003|i|||

```
%RSD:       44.5        44.5   14.3043

==========================================================================================
Element: Hg    Seq. No.: 43       AS Loc.: 39   Date: 07/02/2009
Sample ID: 231732003|i|||
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1       -0.006    -0.006   -0.0002     0.0032   09:30:20  No
 2       -0.018    -0.018   -0.0004     0.0031   09:30:55  No
Mean:    -0.012    -0.012   -0.0003
SD  :    0.0085    0.0085    0.0001
%RSD:      69.5       69.5   35.1341

==========================================================================================
Element: Hg    Seq. No.: 44       AS Loc.: 40   Date: 07/02/2009
Sample ID: 231732004|i|||
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.009     0.009    0.0000     0.0034   09:32:19  No
 2       -0.003    -0.003   -0.0002     0.0033   09:32:54  No
Mean:     0.003     0.003   -0.0001
SD  :    0.0084    0.0084    0.0001
%RSD:     264.7      264.7   94.3912

==========================================================================================
Element: Hg    Seq. No.: 45       AS Loc.: 41   Date: 07/02/2009
Sample ID: 231732005|i|||
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1       -0.020    -0.020   -0.0004     0.0030   09:34:18  No
 2       -0.034    -0.034   -0.0006     0.0029   09:34:53  No
Mean:    -0.027    -0.027   -0.0005
SD  :    0.0103    0.0103    0.0001
%RSD:      38.0       38.0   26.3442

==========================================================================================
Element: Hg    Seq. No.: 46       AS Loc.: 7    Date: 07/02/2009
Sample ID: CCV
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        4.761     4.761    0.0622     0.0657   09:36:18  No
 2        4.778     4.778    0.0625     0.0659   09:36:53  No
Mean:     4.769     4.769    0.0623
SD  :    0.0124    0.0124    0.0002
%RSD:       0.3       0.3    0.2608
QC value within specified limits.

==========================================================================================
Element: Hg    Seq. No.: 47       AS Loc.: 8    Date: 07/02/2009
Sample ID: CCB
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1       -0.023    -0.023   -0.0005     0.0030   09:38:22  No
 2       -0.032    -0.032   -0.0006     0.0029   09:38:57  No
Mean:    -0.027    -0.027   -0.0005
SD  :    0.0068    0.0068    0.0001
%RSD:      25.0       25.0   17.3712
QC value within specified limits.

==========================================================================================
Element: Hg    Seq. No.: 48       AS Loc.: 42   Date: 07/02/2009
Sample ID: 231732006|i|||
```

%RSD: 32.2 32.2 18.1163

==========

Element: Hg Seq. No.: 54 AS Loc.: 48 Date: 07/02/2009
Sample ID: 1201872366|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.024	2.024	0.0264	0.0298	09:52:27	No
2	2.014	2.014	0.0262	0.0297	09:53:02	No
Mean:	2.019	2.019	0.0263			
SD :	0.0072	0.0072	0.0001			
%RSD:	0.4	0.4	0.3580			

==========

Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 07/02/2009
Sample ID: 1201872367|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0012	0.0023	09:54:21	No
2	-0.082	-0.082	-0.0012	0.0022	09:54:56	No
Mean:	-0.079	-0.079	-0.0012			
SD :	0.0042	0.0042	0.0001			
%RSD:	5.3	5.3	4.6033			

==========

Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 07/02/2009
Sample ID: 232604003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.026	-0.026	-0.0005	0.0030	09:56:16	No
2	-0.025	-0.025	-0.0005	0.0030	09:56:51	No
Mean:	-0.025	-0.025	-0.0005			
SD :	0.0005	0.0005	0.0000			
%RSD:	2.0	2.0	1.3807			

==========

Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 07/02/2009
Sample ID: 232604004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.029	-0.029	-0.0005	0.0029	09:58:11	No
2	-0.034	-0.034	-0.0006	0.0029	09:58:46	No
Mean:	-0.032	-0.032	-0.0006			
SD :	0.0038	0.0038	0.0001			
%RSD:	12.1	12.1	8.7533			

==========

Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.824	4.824	0.0631	0.0665	10:00:10	No
2	4.809	4.809	0.0629	0.0663	10:00:45	No
Mean:	4.816	4.816	0.0630			
SD :	0.0111	0.0111	0.0001			
%RSD:	0.2	0.2	0.2305			

QC value within specified limits.

==========

Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.028	-0.028	-0.0005	0.0029	10:02:14	No
2	-0.033	-0.033	-0.0006	0.0029	10:02:49	No
Mean:	-0.030	-0.030	-0.0006			
SD :	0.0038	0.0038	0.0000			
%RSD:	12.4	12.4	8.9172			

QC value within specified limits.

==========

Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 07/02/2009
Sample ID: 232604005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.039	-0.039	-0.0007	0.0028	10:04:14	No
2	-0.045	-0.045	-0.0007	0.0027	10:04:49	No
Mean:	-0.042	-0.042	-0.0007			
SD :	0.0040	0.0040	0.0001			
%RSD:	9.5	9.5	7.4059			

==========

Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 07/02/2009
Sample ID: 1201872375|i||881662|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	-0.0004	0.0030	10:06:11	No
2	-0.029	-0.029	-0.0005	0.0029	10:06:46	No
Mean:	-0.025	-0.025	-0.0005			
SD :	0.0065	0.0065	0.0001			
%RSD:	26.6	26.6	17.8750			

==========

Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 07/02/2009
Sample ID: 1201872376|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.992	1.992	0.0259	0.0294	10:08:08	No
2	1.968	1.968	0.0256	0.0291	10:08:43	No
Mean:	1.980	1.980	0.0258			
SD :	0.0171	0.0171	0.0002			
%RSD:	0.9	0.9	0.8681			

==========

Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 07/02/2009
Sample ID: 231763001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.019	-0.019	-0.0004	0.0030	10:10:06	No
2	-0.045	-0.045	-0.0007	0.0027	10:10:41	No
Mean:	-0.032	-0.032	-0.0006			
SD :	0.0179	0.0179	0.0002			
%RSD:	55.8	55.8	40.5951			

==========

Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 07/02/2009
Sample ID: 1201872377|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.027	-0.027	-0.0005	0.0029	10:12:04	No
2	-0.034	-0.034	-0.0006	0.0029	10:12:38	No
Mean:	-0.030	-0.030	-0.0006			
SD :	0.0046	0.0046	0.0001			

%RSD: 15.1 15.1 10.8186

Element: Hg Seq. No.: 65 AS Loc.: 57 Date: 07/02/2009
Sample ID: 1201872378|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.136	2.136	0.0278	0.0313	10:14:03	No
2	2.111	2.111	0.0275	0.0310	10:14:37	No
Mean:	2.124	2.124	0.0277			
SD :	0.0179	0.0179	0.0002			
%RSD:	0.8	0.8	0.8466			

Element: Hg Seq. No.: 66 AS Loc.: 58 Date: 07/02/2009
Sample ID: 1201872379|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.093	-0.093	-0.0014	0.0021	10:16:01	No
2	-0.097	-0.097	-0.0014	0.0020	10:16:36	No
Mean:	-0.095	-0.095	-0.0014			
SD :	0.0030	0.0030	0.0000			
%RSD:	3.1	3.1	2.7945			

Element: Hg Seq. No.: 67 AS Loc.: 59 Date: 07/02/2009
Sample ID: 231763002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.003	0.003	-0.0001	0.0033	10:18:00	No
2	-0.010	-0.010	-0.0003	0.0032	10:18:35	No
Mean:	-0.004	-0.004	-0.0002			
SD :	0.0098	0.0098	0.0001			
%RSD:	277.5	277.5	63.0283			

Element: Hg Seq. No.: 68 AS Loc.: 60 Date: 07/02/2009
Sample ID: 231763003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0004	0.0031	10:20:00	No
2	-0.021	-0.021	-0.0004	0.0030	10:20:35	No
Mean:	-0.019	-0.019	-0.0004			
SD :	0.0021	0.0021	0.0000			
%RSD:	10.6	10.6	6.5449			

Element: Hg Seq. No.: 69 AS Loc.: 61 Date: 07/02/2009
Sample ID: 231763004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0000	0.0034	10:22:00	No
2	-0.038	-0.038	-0.0007	0.0028	10:22:35	No
Mean:	-0.015	-0.015	-0.0003			
SD :	0.0333	0.0333	0.0004			
%RSD:	229.6	229.6	125.6828			

Element: Hg Seq. No.: 70 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	4.826	4.826	0.0631	0.0665	10:24:01	No
2	4.773	4.773	0.0624	0.0658	10:24:37	No
Mean:	4.800	4.800	0.0627			
SD :	0.0374	0.0374	0.0005			
%RSD:	0.8	0.8	0.7802			

QC value within specified limits.

==========

Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	-0.0009	0.0026	10:26:05	No
2	-0.049	-0.049	-0.0008	0.0027	10:26:40	No
Mean:	-0.051	-0.051	-0.0008			
SD :	0.0031	0.0031	0.0000			
%RSD:	6.1	6.1	4.9132			

QC value within specified limits.

==========

Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 07/02/2009
Sample ID: 231763005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	-0.0010	0.0024	10:28:07	No
2	-0.068	-0.068	-0.0011	0.0024	10:28:42	No
Mean:	-0.068	-0.068	-0.0010			
SD :	0.0008	0.0008	0.0000			
%RSD:	1.1	1.1	0.9406			

==========

Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 07/02/2009
Sample ID: 231763006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.061	-0.061	-0.0010	0.0025	10:30:05	No
2	-0.059	-0.059	-0.0009	0.0025	10:30:40	No
Mean:	-0.060	-0.060	-0.0009			
SD :	0.0015	0.0015	0.0000			
%RSD:	2.4	2.4	2.0349			

==========

Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 07/02/2009
Sample ID: 231763007|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0012	0.0023	10:32:00	No
2	-0.077	-0.077	-0.0012	0.0023	10:32:35	No
Mean:	-0.076	-0.076	-0.0012			
SD :	0.0001	0.0001	0.0000			
%RSD:	0.1	0.1	0.1295			

==========

Element: Hg Seq. No.: 75 AS Loc.: 65 Date: 07/02/2009
Sample ID: 231763008|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.064	-0.064	-0.0010	0.0025	10:33:55	No
2	-0.073	-0.073	-0.0011	0.0023	10:34:30	No
Mean:	-0.069	-0.069	-0.0011			
SD :	0.0062	0.0062	0.0001			

%RSD: 9.0 9.0 7.6954

Element: Hg Seq. No.: 76 AS Loc.: 66 Date: 07/02/2009
Sample ID: 1201871792|i||881393|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.061	-0.061	-0.0010	0.0025	10:35:50	No
2	-0.065	-0.065	-0.0010	0.0025	10:36:25	No
Mean:	-0.063	-0.063	-0.0010			
SD :	0.0030	0.0030	0.0000			
%RSD:	4.7	4.7	3.9605			

Element: Hg Seq. No.: 77 AS Loc.: 67 Date: 07/02/2009
Sample ID: 1201871793|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.985	1.985	0.0258	0.0293	10:37:47	No
2	1.980	1.980	0.0258	0.0292	10:38:22	No
Mean:	1.982	1.982	0.0258			
SD :	0.0034	0.0034	0.0000			
%RSD:	0.2	0.2	0.1705			

Element: Hg Seq. No.: 78 AS Loc.: 68 Date: 07/02/2009
Sample ID: 232370001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.028	-0.028	-0.0005	0.0029	10:39:44	No
2	-0.035	-0.035	-0.0006	0.0028	10:40:18	No
Mean:	-0.032	-0.032	-0.0006			
SD :	0.0049	0.0049	0.0001			
%RSD:	15.4	15.4	11.1986			

Element: Hg Seq. No.: 79 AS Loc.: 69 Date: 07/02/2009
Sample ID: 232425001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.048	-0.048	-0.0008	0.0027	10:41:40	No
2	-0.048	-0.048	-0.0008	0.0027	10:42:14	No
Mean:	-0.048	-0.048	-0.0008			
SD :	0.0002	0.0002	0.0000			
%RSD:	0.4	0.4	0.3446			

Element: Hg Seq. No.: 80 AS Loc.: 70 Date: 07/02/2009
Sample ID: 1201871794|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.039	-0.039	-0.0007	0.0028	10:43:36	No
2	-0.047	-0.047	-0.0008	0.0027	10:44:10	No
Mean:	-0.043	-0.043	-0.0007			
SD :	0.0059	0.0059	0.0001			
%RSD:	13.8	13.8	10.7597			

Element: Hg Seq. No.: 81 AS Loc.: 71 Date: 07/02/2009
Sample ID: 1201871795|i|||MS

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	2.016	2.016	0.0263	0.0297	10:45:33	No
2	1.985	1.985	0.0259	0.0293	10:46:08	No
Mean:	2.001	2.001	0.0261			
SD :	0.0217	0.0217	0.0003			
%RSD:	1.1	1.1	1.0889			

==========

Element: Hg Seq. No.: 82 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.826	4.826	0.0631	0.0665	10:47:34	No
2	4.823	4.823	0.0630	0.0665	10:48:09	No
Mean:	4.824	4.824	0.0631			
SD :	0.0018	0.0018	0.0000			
%RSD:						

QC value within specified limits.

==========

Element: Hg Seq. No.: 83 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	-0.0009	0.0026	10:49:37	No
2	-0.060	-0.060	-0.0009	0.0025	10:50:12	No
Mean:	-0.057	-0.057	-0.0009			
SD :	0.0048	0.0048	0.0001			
%RSD:	8.4	8.4	6.9349			

QC value within specified limits.

==========

Element: Hg Seq. No.: 84 AS Loc.: 72 Date: 07/02/2009
Sample ID: 1201871796|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.110	-0.110	-0.0016	0.0019	10:51:37	No
2	-0.117	-0.117	-0.0017	0.0018	10:52:12	No
Mean:	-0.113	-0.113	-0.0016			
SD :	0.0051	0.0051	0.0001			
%RSD:	4.5	4.5	4.0716			

==========

Element: Hg Seq. No.: 85 AS Loc.: 73 Date: 07/02/2009
Sample ID: 1201871797|i||881396|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.077	-0.077	-0.0012	0.0023	10:53:36	No
2	-0.090	-0.090	-0.0013	0.0021	10:54:11	No
Mean:	-0.084	-0.084	-0.0013			
SD :	0.0091	0.0091	0.0001			
%RSD:	10.8	10.8	9.4415			

==========

Element: Hg Seq. No.: 86 AS Loc.: 74 Date: 07/02/2009
Sample ID: 1201871798|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.001	2.001	0.0261	0.0295	10:55:36	No
2	1.982	1.982	0.0258	0.0293	10:56:11	No
Mean:	1.991	1.991	0.0259			
SD :	0.0132	0.0132	0.0002			

#	µg/L	µg/L	Signal	Height		Stored
1	2.050	2.050	0.0267	0.0302	11:07:26	No
2	2.029	2.029	0.0264	0.0299	11:08:01	No
Mean:	2.040	2.040	0.0266			
SD :	0.0148	0.0148	0.0002			
%RSD:	0.7	0.7	0.7307			

==========

Element: Hg Seq. No.: 93 AS Loc.: 81 Date: 07/02/2009
Sample ID: 1201871801|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.126	-0.126	-0.0018	0.0017	11:09:21	No
2	-0.126	-0.126	-0.0018	0.0017	11:09:55	No
Mean:	-0.126	-0.126	-0.0018			
SD :	0.0004	0.0004	0.0000			
%RSD:	0.3	0.3	0.2773			

==========

Element: Hg Seq. No.: 94 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.813	4.813	0.0629	0.0664	11:11:19	No
2	4.826	4.826	0.0631	0.0665	11:11:55	No
Mean:	4.820	4.820	0.0630			
SD :	0.0094	0.0094	0.0001			
%RSD:	0.2	0.2	0.1953			

QC value within specified limits.

==========

Element: Hg Seq. No.: 95 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.070	-0.070	-0.0011	0.0024	11:13:23	No
2	-0.077	-0.077	-0.0012	0.0023	11:13:57	No
Mean:	-0.074	-0.074	-0.0011			
SD :	0.0049	0.0049	0.0001			
%RSD:	6.7	6.7	5.7719			

QC value within specified limits.

==========

Element: Hg Seq. No.: 96 AS Loc.: 82 Date: 07/02/2009
Sample ID: 1201871638|i||881660|TB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	-0.0009	0.0026	11:15:21	No
2	-0.070	-0.070	-0.0011	0.0024	11:15:56	No
Mean:	-0.064	-0.064	-0.0010			
SD :	0.0090	0.0090	0.0001			
%RSD:	14.2	14.2	11.9285			

==========

Element: Hg Seq. No.: 97 AS Loc.: 83 Date: 07/02/2009
Sample ID: 1201872368|i|||MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.079	-0.079	-0.0012	0.0023	11:17:17	No
2	-0.086	-0.086	-0.0013	0.0022	11:17:51	No
Mean:	-0.083	-0.083	-0.0012			
SD :	0.0048	0.0048	0.0001			

Miscellaneous

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881353

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871707	UI090622-01	.25	mL
LCS	1201871707	UI090622-06	.25	mL
MS	1201871709	UI090622-01	.25	mL
MS	1201871709	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871706		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
LCS	1201871707		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232370001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232425001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232432001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506002		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232510001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
DUP	1201871708	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
MS	1201871709	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SDILT	1201871710	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881356

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871712	UI090622-A	.5	mL
LCS	1201871712	UI090622-B	.5	mL
MS	1201871714	UI090612-A	.5	mL
MS	1201871714	UI090612-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871711		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
LCS	1201871712		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232370001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
DUP	1201871713	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
MS	1201871714	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SDILT	1201871715	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232425001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232432001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506002		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232510001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 881392

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871793	WHG090701-13	.2	mL
MS	1201871795	WHG090701-13	.2	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871792		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
LCS	1201871793		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232370001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232425001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
DUP	1201871794	232425001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
MS	1201871795	232425001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SDILT	1201871796	232425001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143839	1 mL	Sulfuric Acid, Concentrated
1136798-1	.5 mL	NITRIC ACID
1125381-C	1.5 mL	5% Potassium Persulfate
1144332-C	3 mL	5% KMnO4 solution
1144356-C	1 mL	Hg reducing agent
WHG090701-06	500 uL	Mercury Working 2nd Source 5.0/ICV
WHG090701-01	20 uL	Mercury Working 1st Source CAL 0.2/CRA
WHG090701-02	50 uL	Mercury Working 1st Source CAL 0.5
WHG090701-05	1 mL	Mercury Working 1st Source CAL 10.0
WHG090701-03	200 uL	Mercury Working 1st Source CAL 2.0
WHG090701-04	500 uL	Mercury Working 1st Source CAL 5.0/CCV

Comments Digestion Start Date: 01-JUL-09 11:35
Digestion End Date: 01-JUL-09 13:35

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
05-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3005/6020	Liquid	LANL
Batch ID:	**Sample Numbers:**		
881357	See Below		

Potentially affected work order(s)(SDG): 232370(09-2452-1),232425(09-2473-1),232432(09-2478-1),232506(09-2498-1),232510(09-2500-1)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201871714MS	The matrix spike recovery failed outside of the control limits for Tl due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Paul Boyd 05-JUL-09

Data Validator/Group Leader:

Kristen Parson 17-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090121-40 **Opened:** 22-JAN-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 20-JAN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 22-JAN-10 **Lot Number :** 1014592
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	7.5 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	50 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	7.5 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	75 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Standard Logbook

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-11 **Opened:** 10-JUN-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 10-JUN-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 10-JUN-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.12 **Opened:** 30-JUN-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 01-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090612-A **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE liquid Spike Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	4 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	.5 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L

Analyte	Concentration	Analyte	Concentration
Iron	200 mg/L	Lead	2 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	1 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	5 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090612-B **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE Liquid Spike Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090622-A **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090622-B **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Standard Logbook

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090701-01 **Opened:** 01-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 01-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 02-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L

Standard Logbook

Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090701-02 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 01-JUL-09
Type: Intermediate **Expires:** 02-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090701-01 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.2CRA **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

Serial ID: WHG090701-02 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.5 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG090701-03 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL2.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Serial ID: WHG090701-04 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL5.0CCV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090701-05 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL10.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG090701-06 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORK5.0ICV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090701-07 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090701-08 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090701-09 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090701-10 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090701-11 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090701-12 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090701-13 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGLIQLCSMSSPIKE **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury working intermediate standard for LCS/MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090630-42 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090630-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090630-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090630-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090630-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090630-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090630-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090630-43 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090630-44 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1 %HNO3 -1143746

Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09

Type: Working **Expires:** 01-JUL-09

Employee: Helen Camello

Supplier: o2si

Description: Trace ICP Calibration Standard 1.0ppm

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090630-45 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 -1143746
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090630-46 **Opened:** 30-JUN-09 **Solvent :** 3%HCL AND 1%HNO3 -1143746
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
LII081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090630-47 **Opened:** 30-JUN-09 **Solvent :** 3%HCL &1%HNO3-1143746
Name: PQL Working Standard **Received:** 22-JAN-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Carnello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090121-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090121-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Arsenic	7.5 mg/L	2 mL	1000 mL	15 ug/L
UI090121-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090121-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Calcium	50 mg/L	2 mL	1000 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090121-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090121-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Selenium	7.5 mg/L	2 mL	1000 mL	15 ug/L
UI090121-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Sodium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090121-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090121-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090703-04 **Opened:** 03-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl-1143705
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090703-04A **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705

Name: ICPMS Cal Standard 10 **Received:** 03-JUL-09

Type: Working **Expires:** 04-JUL-09

Employee: Paul Boyd

Supplier: GEL

Description: ICPMS Calibration Standard (10 ppb)

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090703-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090703-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090703-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090703-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090703-05 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090703-06 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090703-07 **Opened:** 03-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090703-08 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090703-70 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS LINEAR RANGE ST **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Standard Logbook

Serial ID: 1116812 **Opened:** 29-APR-09 **Lot Number :** E45475
Name: B-K2S2O8S-MER **Received:** 29-APR-09
Type: Reagent/Solvent **Expires:** 29-APR-10
Employee: Tara Griffin
Supplier: J.T BAKER
Description: Potassium Persulfate Concentrate.
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1125381-C **Opened:** 21-MAY-09
Name: B-K2S2O8-MER **Received:** 21-MAY-09
Type: Reagent/Solvent **Expires:** 21-NOV-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% Potassium Persulfate
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1116812	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1143705 **Opened:** 29-JUN-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 06-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1143746 **Opened:** 29-JUN-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JUN-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 05-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1143839 **Opened:** 29-JUN-09 **Lot Number :** G45010
Name: B-H2SO4-MER **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 29-JUN-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Sulfuric Acid, Concentrated
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL

Standard Logbook

Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2473

Method/Analysis Information

Product: pH

Analytical Batch: 881124 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232424001	CAMO-09-10463
1201871137	232424001(CAMO-09-10463) Sample Duplicate (DUP)
1201871138	232426001(CAMO-09-7143) Sample Duplicate (DUP)
1201871139	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHecT LogR pH/ISE.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232424001 (CAMO-09-10463) and 232426001 (CAMO-09-7143).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following sample from this sample group was received by the lab outside of the method specified holding time: 232424001 (CAMO-09-10463).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881032	**Method:**	SW846 9012A
Prep Batch :	881030	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232424001	CAMO-09-10463
1201870869	Method Blank (MB)
1201870870	232357001(CAMO-09-10480) Sample Duplicate (DUP)
1201870871	232357002(CAMO-09-10479) Sample Duplicate (DUP)
1201870872	232357001(CAMO-09-10480) Matrix Spike (MS)
1201870873	232357002(CAMO-09-10479) Matrix Spike (MS)
1201870874	232357001(CAMO-09-10480) Matrix Spike Duplicate (MSD)
1201870875	232357002(CAMO-09-10479) Matrix Spike Duplicate (MSD)
1201870876	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch

were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232357001 (CAMO-09-10480) and 232357002 (CAMO-09-10479).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201870870 (CAMO-09-10480) and 1201870871 (CAMO-09-10479).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Negative Bias
No Chlorinated Cyanide results exceed the Total Cyanide results by more than three times the PQL

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1201870876 (LCS).

Sample Re-analysis

The following samples were re-analyzed due to CCB failure: 1201870871 (CAMO-09-10479), 1201870873 (CAMO-09-10479) and 1201870875 (CAMO-09-10479).

Miscellaneous Information

Nonconformance (NCR) Documentation

An NCR was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	880973	**Method:**	EPA 300.0
Prep Batch :	880972	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232424001	CAMO-09-10463
1201870668	Method Blank (MB)
1201870669	232426001(CAMO-09-7143) Sample Duplicate (DUP)
1201870670	232426001(CAMO-09-7143) Matrix Spike (MS)
1201870671	232426001(CAMO-09-7143) Matrix Spike Duplicate (MSD)
1201870672	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232426001 (CAMO-09-7143).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201870670 (CAMO-09-7143).

Matrix Spike Duplicate (MSD) Recovery Statement
The spike duplicate recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201870671 (CAMO-09-7143).

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following sample from this sample group was received by the lab outside of the method specified holding time: 232424001 (CAMO-09-10463).

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 710466 1201870670 (CAMO-09-7143) and 1201870671 (CAMO-09-7143).

Manual Integrations
Manual integrations were not required for the samples in this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 17July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2473 GEL Work Order: 232424

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 16, 2009

Client SDG: 09-2473

Client Sample ID: CAMO-09-10463
Sample ID: 232424001
Matrix: R
Collect Date: 23-JUN-09 12:00
Receive Date: 26-JUN-09
Collector: Client
Moisture: 4.16%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.1C	H	9.17	0.010	0.100	SU	1	RXG2 06/29/09	1215	881124	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.0	261	ug/kg	1	AXC2 07/06/09	1305	881032	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.313	1.04	mg/kg	1	MAR1 07/10/09	0431	880973	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0855	880972
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 16, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232424

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis										
Batch 881124										
QC1201871137 232424001 DUP										
pH	H	9.17	H	8.89	SU	3.10		(0%-10%)	RXG2	06/29/09 12:20
QC1201871138 232426001 DUP										
pH	H	7.79	H	7.98	SU	2.41		(0%-10%)		06/29/09 12:23
QC1201871139 LCS										
pH	7.00			7.03	SU		100	(95%-105%)		06/29/09 12:15
Flow Injection Analysis										
Batch 881032										
QC1201870870 232357001 DUP										
Cyanide, Total	U	ND	U	ND	ug/kg	N/A		(+/-247)	AXC2	07/06/09 11:18
QC1201870871 232357002 DUP										
Cyanide, Total	U	ND	U	ND	ug/kg	N/A		(+/-266)		07/06/09 12:49
QC1201870876 LCS										
Cyanide, Total	174000			154000	ug/kg		88.5	(46%-145%)		07/06/09 11:13
QC1201870869 MB										
Cyanide, Total			U	250	ug/kg					07/06/09 11:12
QC1201870872 232357001 MS										
Cyanide, Total	5520	U ND		5740	ug/kg		104	(50%-130%)		07/06/09 11:19
QC1201870873 232357002 MS										
Cyanide, Total	4760	U ND		4690	ug/kg		98.6	(50%-130%)		07/06/09 12:50
QC1201870874 232357001 MSD										
Cyanide, Total	4940	U ND		4940	ug/kg	15.0	100	(0%-30%)		07/06/09 11:20
QC1201870875 232357002 MSD										
Cyanide, Total	5210	U ND		5260	ug/kg	11.4	101	(0%-30%)		07/06/09 12:51
Ion Chromatography										
Batch 880973										
QC1201870669 232426001 DUP										
Nitrate-N	Hh	2.12	Hh	2.12	mg/kg	0.204 ^		(+/-1.08)	MAR1	07/10/09 05:29
QC1201870672 LCS										
Nitrate-N	50.0			47.1	mg/kg		94.2	(90%-110%)		07/10/09 04:03
QC1201870668 MB										
Nitrate-N			U	1.00	mg/kg					07/10/09 03:34
QC1201870670 232426001 MS										
Nitrate-N	54.0 Hh	2.12	Hh	50.4	mg/kg		89.5*	(90%-110%)		07/10/09 05:58
QC1201870671 232426001 MSD										
Nitrate-N	54.0 Hh	2.12	Hh	50.4	mg/kg	0.0621	89.4*	(0%-20%)		07/10/09 06:27

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

** Analyte is a surrogate compound

< Result is less than value reported

QC Summary

Workorder: 232424

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 16-JUL-2009 17:35

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2473

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**06-JUL-2009 11:06:57**	**OM_7-6-2009_10-57-13**	**148**	**150**	**99**	**(90%-110%)**	**Yes**
CCV	06-JUL-2009 11:21:16	OM_7-6-2009_10-57-13	105	100	105	(90%-110%)	Yes
ICV	**06-JUL-2009 12:43:38**	**OM_7-6-2009_12-35-43**	**153**	**150**	**102**	**(90%-110%)**	**Yes**
CCV	06-JUL-2009 12:57:55	OM_7-6-2009_12-35-43	102	100	102	(90%-110%)	Yes
CCV	06-JUL-2009 13:08:36	OM_7-6-2009_12-35-43	103	100	103	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**06-JUL-2009 11:08:48**	**OM_7-6-2009_10-57-13**	**-2.21**	**5**	**Yes**
CCB	06-JUL-2009 11:23:06	OM_7-6-2009_10-57-13	-3.02	5	Yes
ICB	**06-JUL-2009 12:45:28**	**OM_7-6-2009_12-35-43**	**-1.68**	**5**	**Yes**
CCB	06-JUL-2009 12:59:46	OM_7-6-2009_12-35-43	-1.6	5	Yes
CCB	06-JUL-2009 13:10:27	OM_7-6-2009_12-35-43	-2.53	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 16-JUL-2009 17:35

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2473**

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**09-JUL-2009 10:13:00**	**090709**	**4.7057**	**5**	**94**	**(90%-110%)**	**Yes**
CCV	10-JUL-2009 02:36:00	090709	4.7293	5	95	(90%-110%)	Yes
CCV	10-JUL-2009 07:25:00	090709	7.3244	7.5	98	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**09-JUL-2009 10:42:00**	**090709**	**0**	**0.1**	**Yes**
CCB	10-JUL-2009 03:05:00	090709	0	0.1	Yes
CCB	10-JUL-2009 07:54:00	090709	0	0.1	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881030

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870876	URF071009-01	.25	g
MS	1201870872	URF1091135-02	.025	mL
MS	1201870873	URF1091135-02	.025	mL
MSD	1201870874	URF1091135-02	.025	mL
MSD	1201870875	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870869		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
LCS	1201870876		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.25 g	25 mL	100	SOIL
SAMPLE	232347001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232347002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232347003		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232347004		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232357001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
DUP	1201870870	232357001	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
MS	1201870872	232357001	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.51 g	25 mL	49.01961	SOIL
MSD	1201870874	232357001	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232357002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
DUP	1201870871	232357002	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
MS	1201870873	232357002	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.58 g	25 mL	43.10345	SOIL
MSD	1201870875	232357002	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232367001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232367002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232367003		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232367004		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232367005		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232367006		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232367007		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232367008		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232367009		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232367010		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232367011		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232424001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232426001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232426002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090702-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/6/2009 10:59:47	OM_7-6-2009_10-57-13
150 ppb		1	axc2	7/6/2009 11:00:39	OM_7-6-2009_10-57-13
100 ppb		1	axc2	7/6/2009 11:01:32	OM_7-6-2009_10-57-13
50 ppb		1	axc2	7/6/2009 11:02:25	OM_7-6-2009_10-57-13
10 ppb		1	axc2	7/6/2009 11:03:18	OM_7-6-2009_10-57-13
CRDL 5.0 ppb		1	axc2	7/6/2009 11:04:12	OM_7-6-2009_10-57-13
ICAL-00		1	axc2	7/6/2009 11:05:06	OM_7-6-2009_10-57-13
ICV		1	axc2	7/6/2009 11:06:57	OM_7-6-2009_10-57-13
ICB		1	axc2	7/6/2009 11:08:48	OM_7-6-2009_10-57-13
CRDL		1	axc2	7/6/2009 11:10:37	OM_7-6-2009_10-57-13
1201870869	881032	1	axc2	7/6/2009 11:12:27	OM_7-6-2009_10-57-13
1201870876	881032	50	axc2	7/6/2009 11:13:21	OM_7-6-2009_10-57-13
232347001	881032	1	axc2	7/6/2009 11:14:14	OM_7-6-2009_10-57-13
232347002	881032	1	axc2	7/6/2009 11:15:07	OM_7-6-2009_10-57-13
232347003	881032	1	axc2	7/6/2009 11:16:00	OM_7-6-2009_10-57-13
232347004	881032	1	axc2	7/6/2009 11:16:53	OM_7-6-2009_10-57-13
232357001	881032	1	axc2	7/6/2009 11:17:46	OM_7-6-2009_10-57-13
1201870870	881032	1	axc2	7/6/2009 11:18:39	OM_7-6-2009_10-57-13
1201870872	881032	1	axc2	7/6/2009 11:19:31	OM_7-6-2009_10-57-13
1201870874	881032	1	axc2	7/6/2009 11:20:23	OM_7-6-2009_10-57-13
CCV		1	axc2	7/6/2009 11:21:16	OM_7-6-2009_10-57-13
CCB		1	axc2	7/6/2009 11:23:06	OM_7-6-2009_10-57-13
232357002*	881032	1	axc2	7/6/2009 11:24:55	OM_7-6-2009_10-57-13
1201870871*	881032	1	axc2	7/6/2009 11:25:46	OM_7-6-2009_10-57-13
1201870873*	881032	1	axc2	7/6/2009 11:26:38	OM_7-6-2009_10-57-13
1201870875*	881032	1	axc2	7/6/2009 11:27:30	OM_7-6-2009_10-57-13
232367001*	881032	1	axc2	7/6/2009 11:28:21	OM_7-6-2009_10-57-13
232367002*	881032	1	axc2	7/6/2009 11:29:15	OM_7-6-2009_10-57-13
232367003*	881032	1	axc2	7/6/2009 11:30:08	OM_7-6-2009_10-57-13
232367004*	881032	1	axc2	7/6/2009 11:31:02	OM_7-6-2009_10-57-13
232367005*	881032	1	axc2	7/6/2009 11:31:55	OM_7-6-2009_10-57-13
232367006*	881032	1	axc2	7/6/2009 11:32:48	OM_7-6-2009_10-57-13
CCV		1	axc2	7/6/2009 11:33:41	OM_7-6-2009_10-57-13

Author: axc2 Date : 7/6/2009

Original Run Filename: OM_7-6-2009_10-57-13.OMN created 7/6/2009 10:57:13
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-6-2009_10-57-13.OMN last modified 7/6/2009 11:34:45
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090706-01	1	S1	200	8.64	7/6/2009@10:59:47			200 ppb
WCN090706-02	1	S2	150	6.60	7/6/2009@11:00:39			150 ppb
WCN090706-03	1	S3	100	4.45	7/6/2009@11:01:32			100 ppb
WCN090706-04	1	S4	50.0	2.29	7/6/2009@11:02:25			50 ppb
WCN090706-05	1	S5	10.0	0.493	7/6/2009@11:03:18			10 ppb
WCN090706-06	1	S6	5.00	0.340	7/6/2009@11:04:12			CRDL 5.0 ppb
WCN090706-08	1	S7	0.00	-0.0232	7/6/2009@11:05:06			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99981 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090706-07	1	S8	148	6.46	7/6/2009@11:06:57			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-1.4 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-1.4 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090706-08	1	S7	-2.21	-0.0172	7/6/2009@11:08:48			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.21 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.21 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090706-06	1	S6	6.12	0.343	7/6/2009@11:10:37			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.12 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.12 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870869|881032|MB	1	1	0.257	0.0894	7/6/2009@11:12:27			
1201870876||LCS	1	2	30.8	1.41	7/6/2009@11:13:21		50.00	
232347001	1	3	0.215	0.0875	7/6/2009@11:14:14			
232347002	1	4	-0.0230	0.0773	7/6/2009@11:15:07			
232347003	1	5	-0.321	0.0644	7/6/2009@11:16:00			
232347004	1	6	3.52	0.230	7/6/2009@11:16:53			
232357001	1	7	-0.298	0.0654	7/6/2009@11:17:46			
1201870870||DUP	1	8	-0.473	0.0578	7/6/2009@11:18:39			
1201870872||MS	1	9	104	4.59	7/6/2009@11:19:31			
1201870874||MSD	1	10	100	4.41	7/6/2009@11:20:23			
WCN090706-03	1	S3	105	4.61	7/6/2009@11:21:16			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	4.9 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	4.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090706-08	1	S7	-3.02	-0.0520	7/6/2009@11:23:06			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-3.02 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-3.02 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232357002	1	11	-0.198	0.0697	7/6/2009@11:24:55			
1201870871||DUP	1	12	0.0866	0.0820	7/6/2009@11:25:46			
1201870873||MS	1	13	102	4.46	7/6/2009@11:26:38			
1201870875||MSD	1	14	103	4.51	7/6/2009@11:27:30			
232367001	1	15	0.563	0.103	7/6/2009@11:28:21			
232367002	1	16	0.416	0.0963	7/6/2009@11:29:15			
232367003	1	17	-0.706	0.0478	7/6/2009@11:30:08			
232367004	1	18	0.168	0.0855	7/6/2009@11:31:02			
232367005	1	19	0.462	0.0982	7/6/2009@11:31:55			
232367006	1	20	2.28	0.177	7/6/2009@11:32:48			
WCN090706-03	1	S3	110	4.84	7/6/2009@11:33:41			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	10.2 > 10.0					
		Message	CCV Failed					
		Action	Stop Run					
DQM Test: < - Percent Relative Difference								
		Result:	10.2 > 10.0					
		Message	CCV Passed					
		Action	Continue					

Analyte Properties Table for OM_7-6-2009_10-57-13.OMN

Property	Channel 1 TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/6/2009

Channel 1: Current View

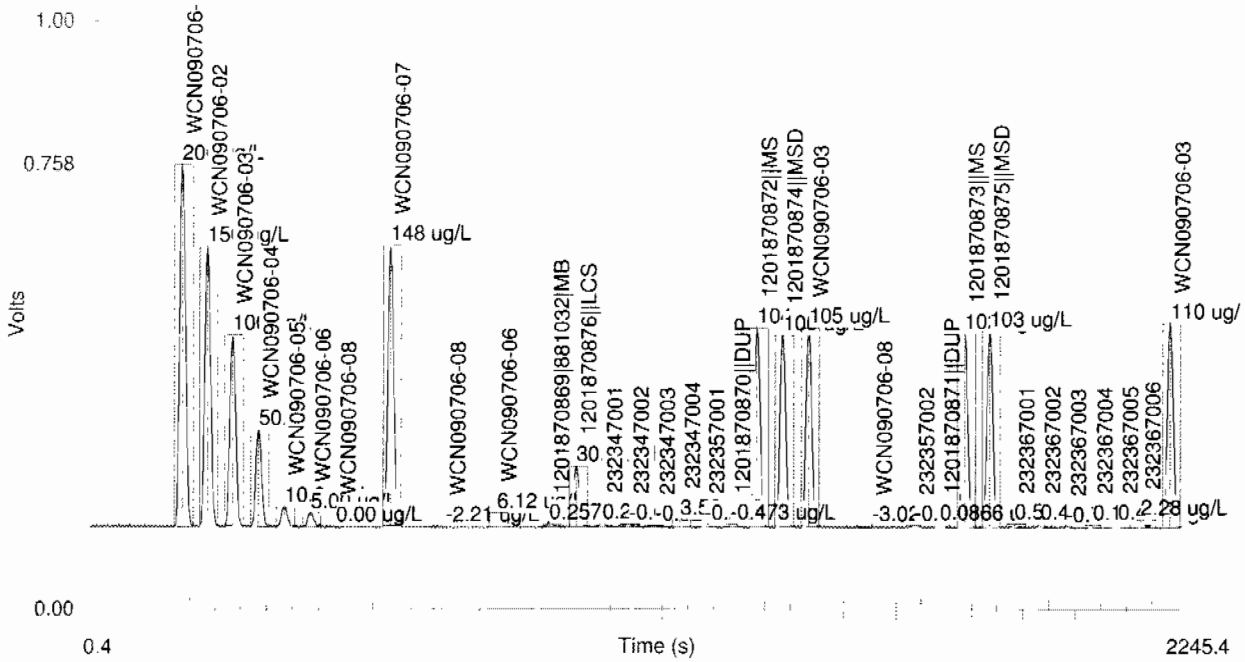

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.64	0.614	0.9	7/6/2009	11:00:51
2	150	1	6.60	0.472	-0.7	7/6/2009	11:01:43
3	100	1	4.45	0.322	-1.3	7/6/2009	11:02:35
4	50.0	1	2.29	0.163	-2.2	7/6/2009	11:03:28
5	10.0	1	0.493	0.0339	3.6	7/6/2009	11:04:21
6	5.00	1	0.340	0.0230	-15.3	7/6/2009	11:05:15
7	0.00	1	-0.0232	-0.00204		7/6/2009	11:06:09

Figure 1: TCYANIDE

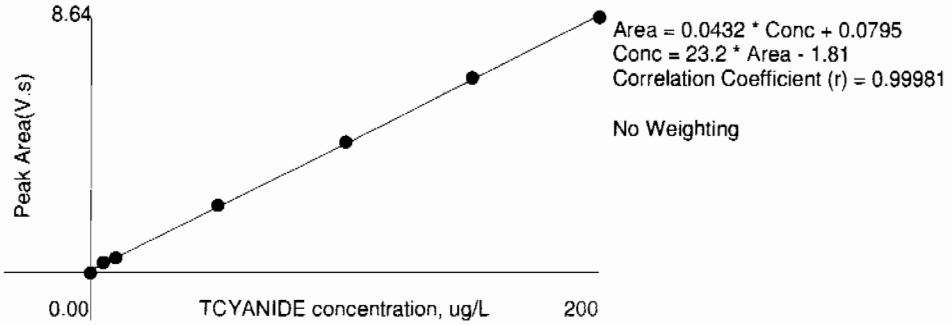

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/6/2009 12:36:28	OM_7-6-2009_12-35-43
150 ppb		1	axc2	7/6/2009 12:37:20	OM_7-6-2009_12-35-43
100 ppb		1	axc2	7/6/2009 12:38:13	OM_7-6-2009_12-35-43
50 ppb		1	axc2	7/6/2009 12:39:06	OM_7-6-2009_12-35-43
10 ppb		1	axc2	7/6/2009 12:39:59	OM_7-6-2009_12-35-43
CRDL 5.0 ppb		1	axc2	7/6/2009 12:40:53	OM_7-6-2009_12-35-43
ICAL-00		1	axc2	7/6/2009 12:41:47	OM_7-6-2009_12-35-43
ICV		1	axc2	7/6/2009 12:43:38	OM_7-6-2009_12-35-43
ICB		1	axc2	7/6/2009 12:45:28	OM_7-6-2009_12-35-43
CRDL		1	axc2	7/6/2009 12:47:19	OM_7-6-2009_12-35-43
232357002	881032	1	axc2	7/6/2009 12:49:08	OM_7-6-2009_12-35-43
1201870871	881032	1	axc2	7/6/2009 12:49:59	OM_7-6-2009_12-35-43
1201870873	881032	1	axc2	7/6/2009 12:50:51	OM_7-6-2009_12-35-43
1201870875	881032	1	axc2	7/6/2009 12:51:43	OM_7-6-2009_12-35-43
232367001	881032	1	axc2	7/6/2009 12:52:35	OM_7-6-2009_12-35-43
232367002	881032	1	axc2	7/6/2009 12:53:29	OM_7-6-2009_12-35-43
232367003	881032	1	axc2	7/6/2009 12:54:23	OM_7-6-2009_12-35-43
232367004	881032	1	axc2	7/6/2009 12:55:16	OM_7-6-2009_12-35-43
232367005	881032	1	axc2	7/6/2009 12:56:10	OM_7-6-2009_12-35-43
232367006	881032	1	axc2	7/6/2009 12:57:03	OM_7-6-2009_12-35-43
CCV		1	axc2	7/6/2009 12:57:55	OM_7-6-2009_12-35-43
CCB		1	axc2	7/6/2009 12:59:46	OM_7-6-2009_12-35-43
232367007	881032	1	axc2	7/6/2009 13:01:35	OM_7-6-2009_12-35-43
232367008	881032	1	axc2	7/6/2009 13:02:27	OM_7-6-2009_12-35-43
232367009	881032	1	axc2	7/6/2009 13:03:20	OM_7-6-2009_12-35-43
232367010	881032	1	axc2	7/6/2009 13:04:13	OM_7-6-2009_12-35-43
232367011	881032	1	axc2	7/6/2009 13:05:06	OM_7-6-2009_12-35-43
232424001	881032	1	axc2	7/6/2009 13:05:59	OM_7-6-2009_12-35-43
232426001	881032	1	axc2	7/6/2009 13:06:51	OM_7-6-2009_12-35-43
232426002	881032	1	axc2	7/6/2009 13:07:43	OM_7-6-2009_12-35-43
CCV		1	axc2	7/6/2009 13:08:36	OM_7-6-2009_12-35-43
CCB		1	axc2	7/6/2009 13:10:27	OM_7-6-2009_12-35-43

Author: axc2 Date : 7/6/2009

Original Run Filename: OM_7-6-2009_12-35-43.OMN created 7/6/2009 12:35:43
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-6-2009_12-35-43.OMN last modified 7/6/2009 13:11:31
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090706-01	1	S1	200	11.2	7/6/2009@12:36:28			200 ppb
WCN090706-02	1	S2	150	8.46	7/6/2009@12:37:20			150 ppb
WCN090706-03	1	S3	100	5.50	7/6/2009@12:38:13			100 ppb
WCN090706-04	1	S4	50.0	2.96	7/6/2009@12:39:06			50 ppb
WCN090706-05	1	S5	10.0	0.632	7/6/2009@12:39:59			10 ppb
WCN090706-06	1	S6	5.00	0.451	7/6/2009@12:40:53			CRDL 5.0 ppb
WCN090706-08	1	S7	0.00	1.43e-4	7/6/2009@12:41:47			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99980 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090706-07	1	S8	153	8.57	7/6/2009@12:43:38			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	2.0 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.0 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090706-08	1	S7	-1.68	-0.00459	7/6/2009@12:45:28			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.68 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.68 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090706-06	1	S6	6.79	0.465	7/6/2009@12:47:19			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.79 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.79 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
232357002|881032|	1	11	-0.166	0.0795	7/6/2009@12:49:08			
1201870871||DUP	1	12	0.0193	0.0898	7/6/2009@12:49:59			
1201870873||MS	1	13	98.6	5.55	7/6/2009@12:50:51			
1201870875||MSD	1	14	101	5.68	7/6/2009@12:51:43			
232367001	1	15	0.648	0.125	7/6/2009@12:52:35			
232367002	1	16	0.126	0.0958	7/6/2009@12:53:29			
232367003	1	17	-1.51	0.00486	7/6/2009@12:54:23			
232367004	1	18	0.173	0.0983	7/6/2009@12:55:16			
232367005	1	19	0.178	0.0986	7/6/2009@12:56:10			
232367006	1	20	-0.739	0.0478	7/6/2009@12:57:03			
WCN090706-03	1	S3	102	5.73	7/6/2009@12:57:55			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	1.8 < 10.0					

		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	1.8 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090706-08	1	S7	-1.60	0.00	7/6/2009@12:59:46			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.60 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.60 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232367007	1	21	3.20	0.266	7/6/2009@13:01:35			
232367008	1	22	2.56	0.231	7/6/2009@13:02:27			
232367009	1	23	1.63	0.179	7/6/2009@13:03:20			
232367010	1	24	0.232	0.102	7/6/2009@13:04:13			
232367011	1	25	-0.464	0.0630	7/6/2009@13:05:06			
232424001	1	26	0.797	0.133	7/6/2009@13:05:59			
232426001	1	27	0.0603	0.0921	7/6/2009@13:06:51			
232426002	1	28	0.752	0.130	7/6/2009@13:07:43			
WCN090706-03	1	S3	103	5.81	7/6/2009@13:08:36			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	3.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	3.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090706-08	1	S7	-2.53	-0.0517	7/6/2009@13:10:27			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-2.53 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-2.53 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_7-6-2009_12-35-43.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/6/2009

Channel 1: Current View

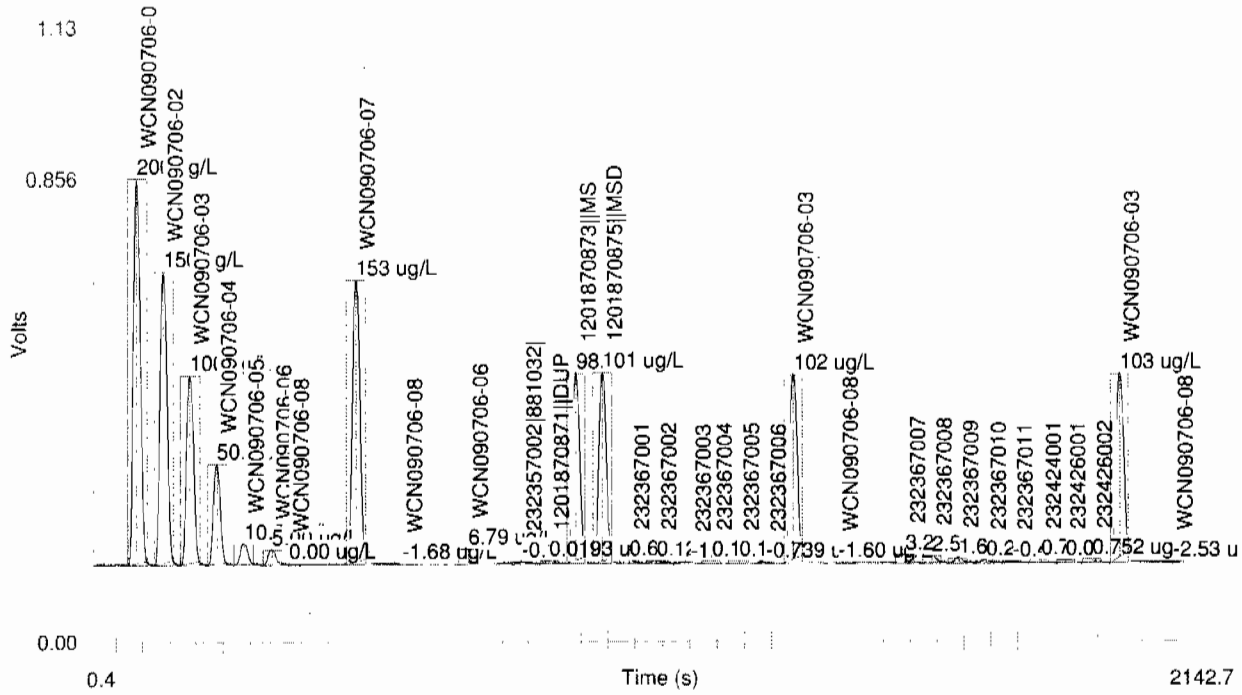

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	11.2	0.709	0.0	7/6/2009	12:37:32
2	150	1	8.46	0.536	-0.7	7/6/2009	12:38:24
3	100	1	5.50	0.344	2.3	7/6/2009	12:39:17
4	50.0	1	2.96	0.183	-3.4	7/6/2009	12:40:09
5	10.0	1	0.632	0.0371	2.0	7/6/2009	12:41:03
6	5.00	1	0.451	0.0264	-22.7	7/6/2009	12:41:56
7	0.00	1	1.43e-4	0.00246		7/6/2009	12:42:51

Figure 1: TCYANIDE

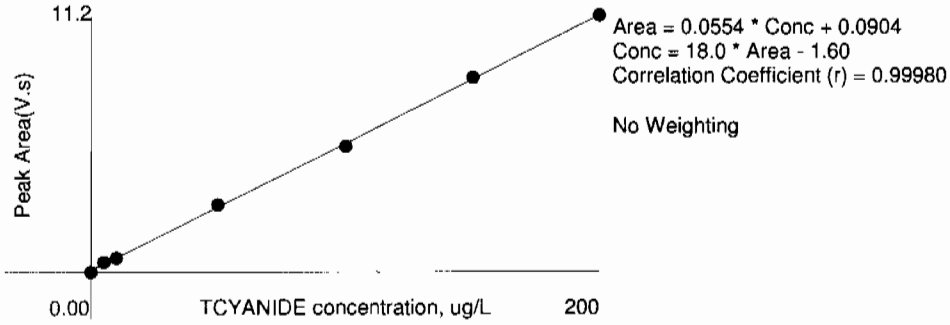

Ion Chromatography

Prep LogBook

Analyst: MAR1 Verified by:_____

Batch: 880972

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870672	UIC090627SPK	.8	mL
MS	1201870670	UIC090627SPK	.8	mL
MSD	1201870671	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870668		EPA 300.0 PREP	09-JUL-2009 08:55	4 g	40 mL	10	SOIL
LCS	1201870672		EPA 300.0 PREP	09-JUL-2009 08:55	4 g	40 mL	10	SOIL
SAMPLE	232424001		EPA 300.0 PREP	09-JUL-2009 08:55	4 g	40 mL	10	SOIL
SAMPLE	232426001		EPA 300.0 PREP	09-JUL-2009 08:55	4 g	40 mL	10	SOIL
DUP	1201870669	232426001	EPA 300.0 PREP	09-JUL-2009 08:55	4 g	40 mL	10	SOIL
MS	1201870670	232426001	EPA 300.0 PREP	09-JUL-2009 08:55	4 g	40 mL	10	SOIL
MSD	1201870671	232426001	EPA 300.0 PREP	09-JUL-2009 08:55	4 g	40 mL	10	SOIL
SAMPLE	232426002		EPA 300.0 PREP	09-JUL-2009 08:55	4 g	40 mL	10	SOIL

Comments

This is runlog for Sequence 090707.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	07/03/09 22:08		1	090707	MAR1
ICAL-06	07/03/09 22:41		1	090707	MAR1
ICAL-05	07/03/09 23:14		1	090707	MAR1
ICAL-04	07/03/09 23:47		1	090707	MAR1

22 AUTOCAL7

Sample Name:	**AUTOCAL7**	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

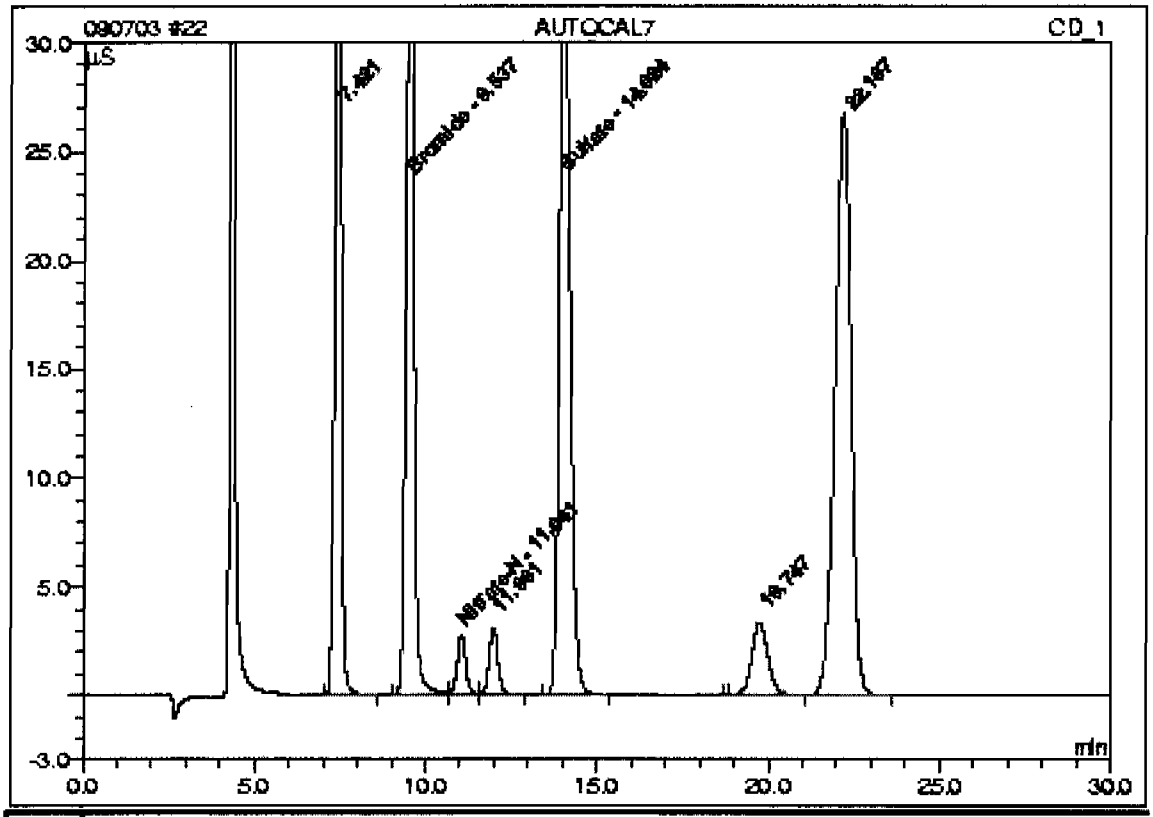

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	20.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	5.0000	n.a.	n.a.	n.a.	n.a.
2	9.54	Bromide	5.0000	5.0000		10.49618	20.17
n.a.	n.a.	Chlorate	5.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	10.0000	10.0000		0.81946	1.58
5	14.02	Sulfate	40.0000	40.0000		12.51803	24.06
Total:				55.0000	0.000	23.834	45.81

22 AUTOCAL7

Sample Name:	**AUTOCAL7**	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9068

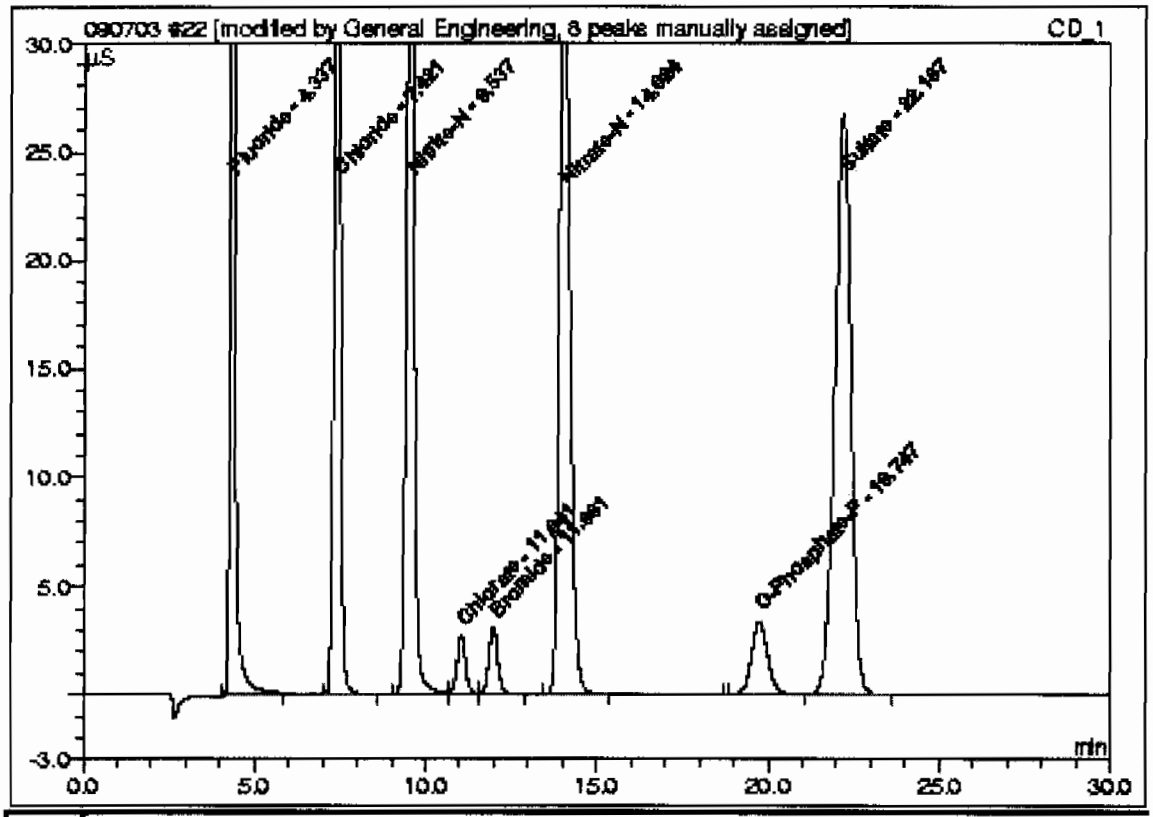

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	10.0000	10.0444	*	6.95356	11.79
2	7.42	Chloride	20.0000	20.3404		10.85875	18.41
3	9.54	Nitrite-N	10.0000	10.0541		10.49618	17.80
4	11.04	Chlorate	5.0000	4.9982		0.81946	1.39
5	11.98	Bromide	5.0000	5.0134		0.92846	1.57
6	14.02	Nitrate-N	10.0000	10.1573		12.51803	21.22
7	19.75	O-Phosphate-P	5.0000	5.0143		1.85201	3.14
8	22.19	Sulfate	40.0000	40.5382		14.55536	24.68
Total:				106.1605	0.000	58.982	100.00

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantit. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE0855;300;9055

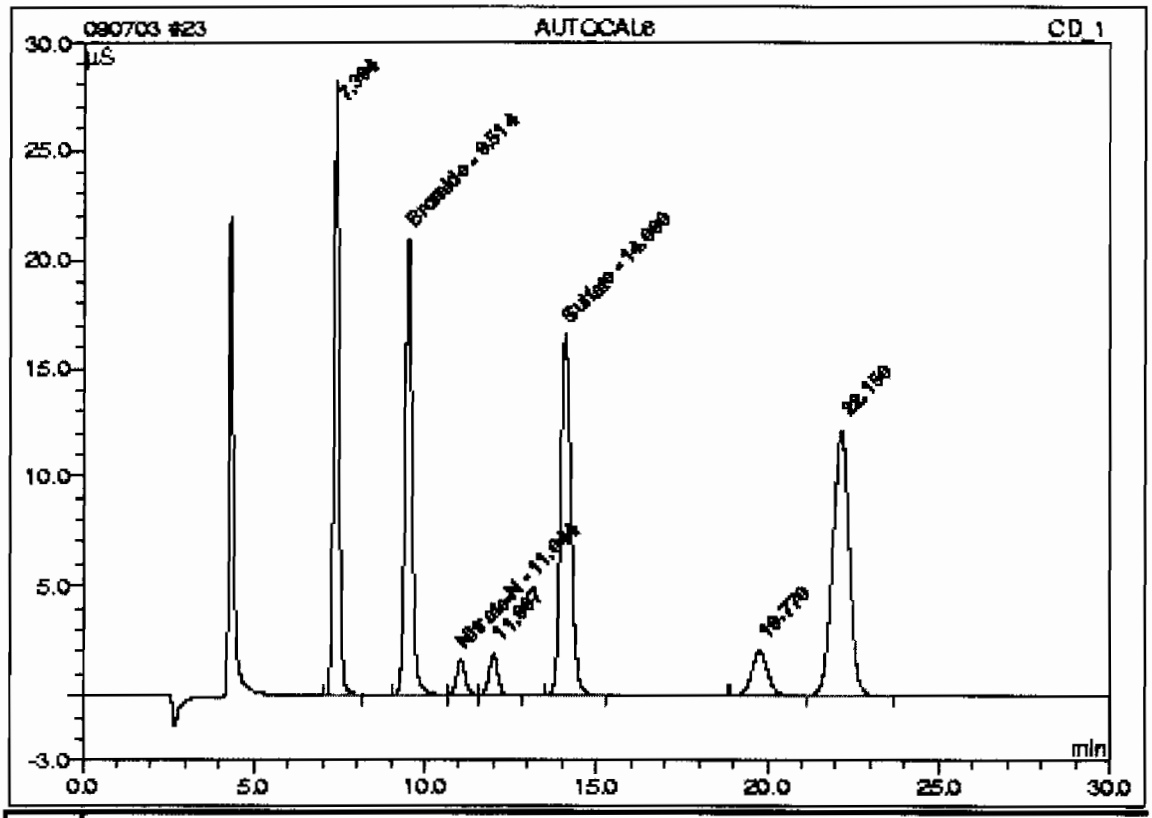

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	3.0000	n.a.	n.a.	n.a.	n.a.
2	9.51	Bromide	3.0000	2.6148		5.09735	20.64
n.a.	n.a.	Chlorate	3.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	5.0000	5.6894		0.49447	2.01
5	14.08	Sulfate	20.0000	18.8591		5.72345	23.22
Total:				27.1634	0.000	11.305	45.87

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE086;300;9056

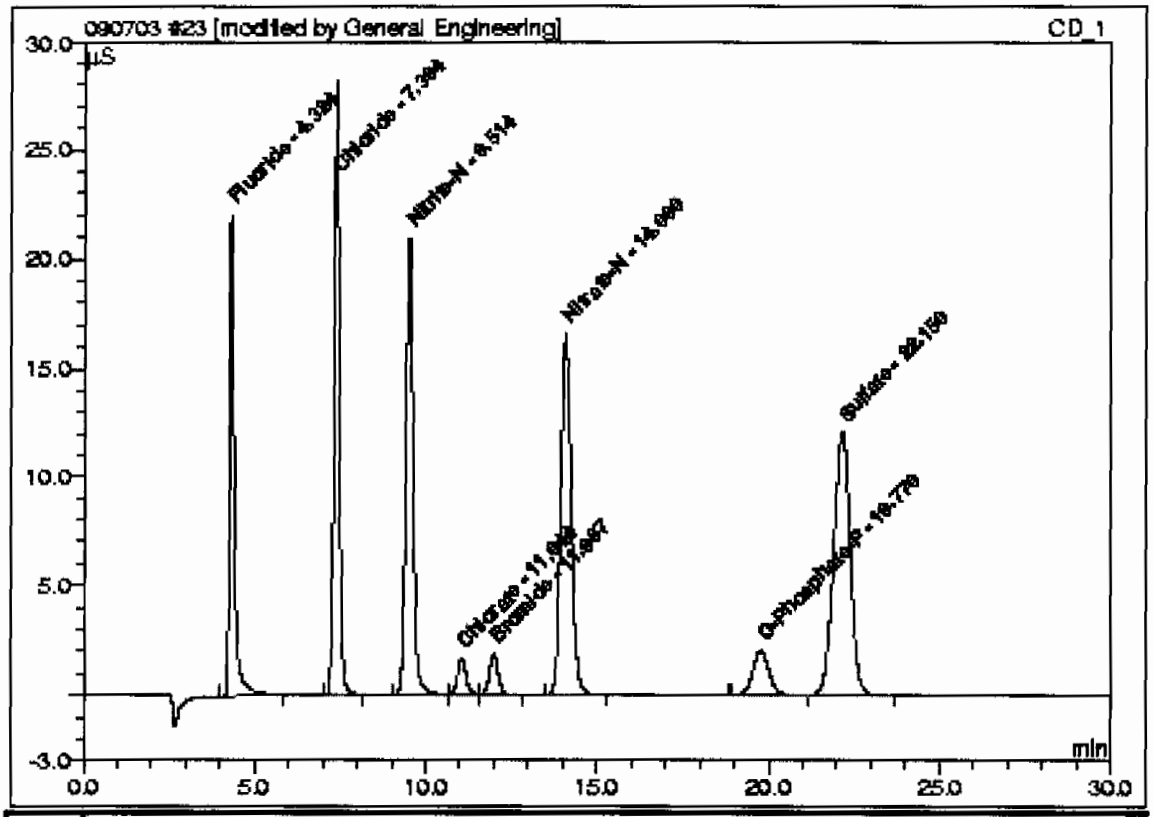

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	5.0000	4.9254	*	3.38643	12.09
2	7.39	Chloride	10.0000	9.3510		4.93051	17.59
3	9.51	Nitrite-N	5.0000	4.9036		5.08735	18.15
4	11.04	Chlorate	3.0000	3.0238		0.49447	1.76
5	11.99	Bromide	3.0000	3.0288		0.55878	1.99
6	14.09	Nitrate-N	5.0000	4.6989		5.72345	20.42
7	19.77	O-Phosphate-P	3.0000	3.0156		1.10727	3.95
8	22.15	Sulfate	20.0000	18.9608		6.74477	24.06
Total:				51.9078	0.000	28.033	100.00

24 AUTOCAL5

Sample Name:	**AUTOCAL5**	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	**AS23_HC**	*Sample Weight:*	1.0000
Quantif. Method:	**090703an**	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	**AS9HC-014108;GLGCE088;300;9058**

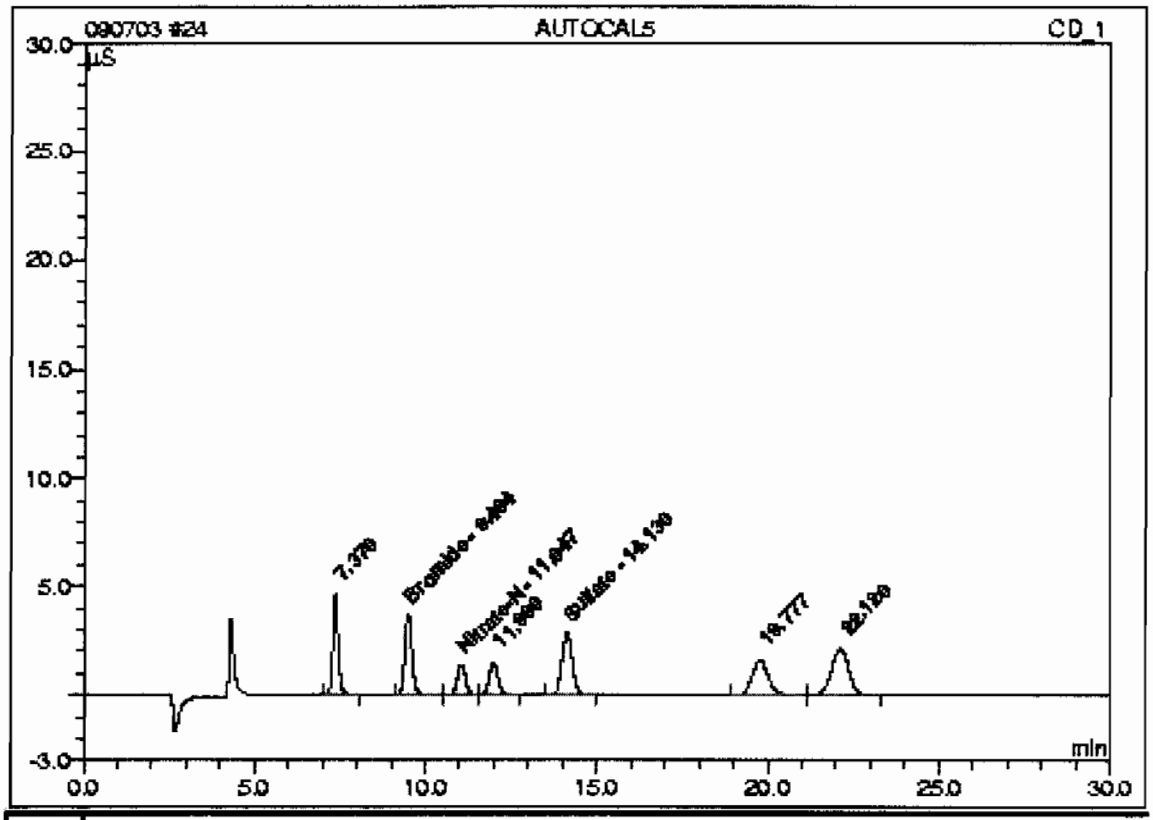

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	2.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	2.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	2.5000	1.1051		0.92663	15.98
n.a.	n.a.	Chlorate	2.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	1.0000	3.6480		0.40624	7.01
5	14.13	Sulfate	4.0000	3.8794		1.01074	17.44
Total:				8.6325	0.000	2.344	40.43

24 AUTOCAL5

Sample Name:	**AUTOCAL5**	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

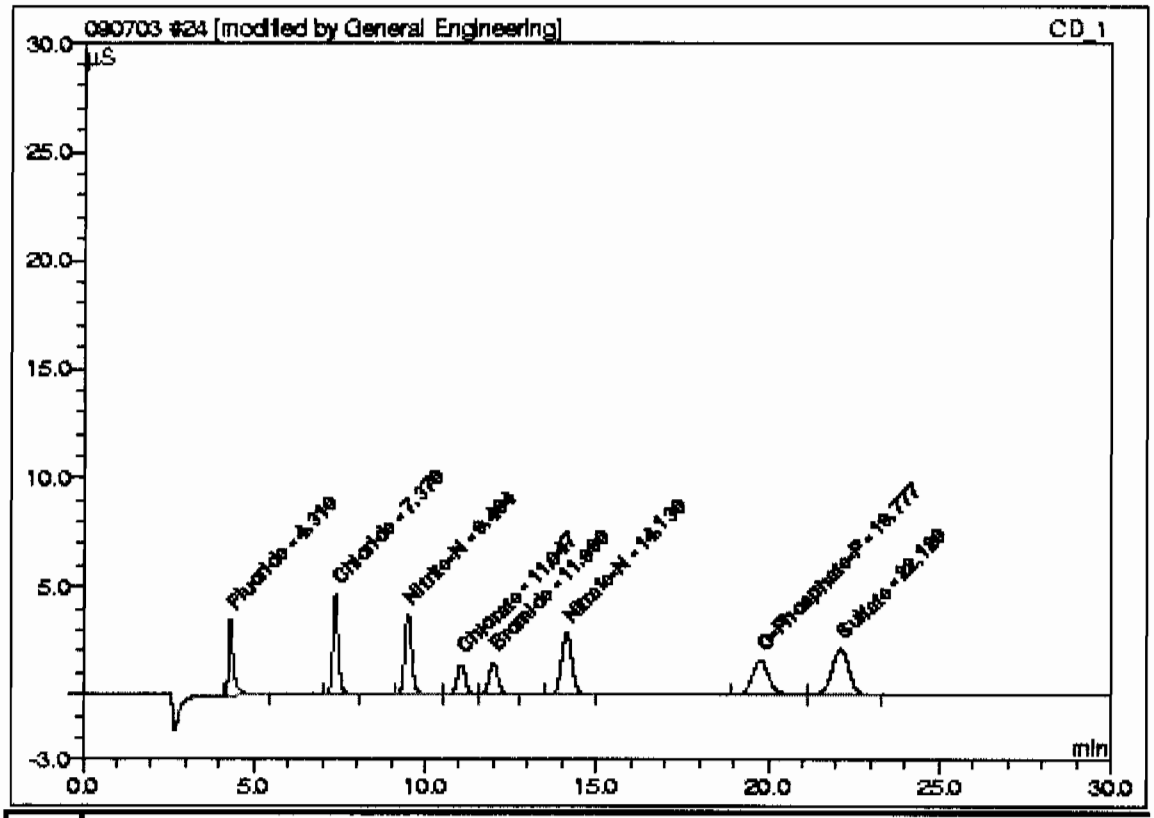

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	1.0000	0.9326 *		0.60409	9.44
2	7.37	Chloride	2.0000	1.7967		0.85540	13.36
3	9.49	Nitrite-N	1.0000	0.9416		0.92663	14.48
4	11.05	Chlorate	2.5000	2.4978		0.40624	6.35
5	11.99	Bromide	2.5000	2.4502		0.45103	7.05
6	14.13	Nitrate-N	1.0000	0.9129		1.01074	15.79
7	19.78	O-Phosphate-P	2.5000	2.4771		0.90660	14.16
8	22.12	Sulfate	4.0000	3.7545		1.24042	19.38
Total:				15.7534	0.000	6.401	100.00

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

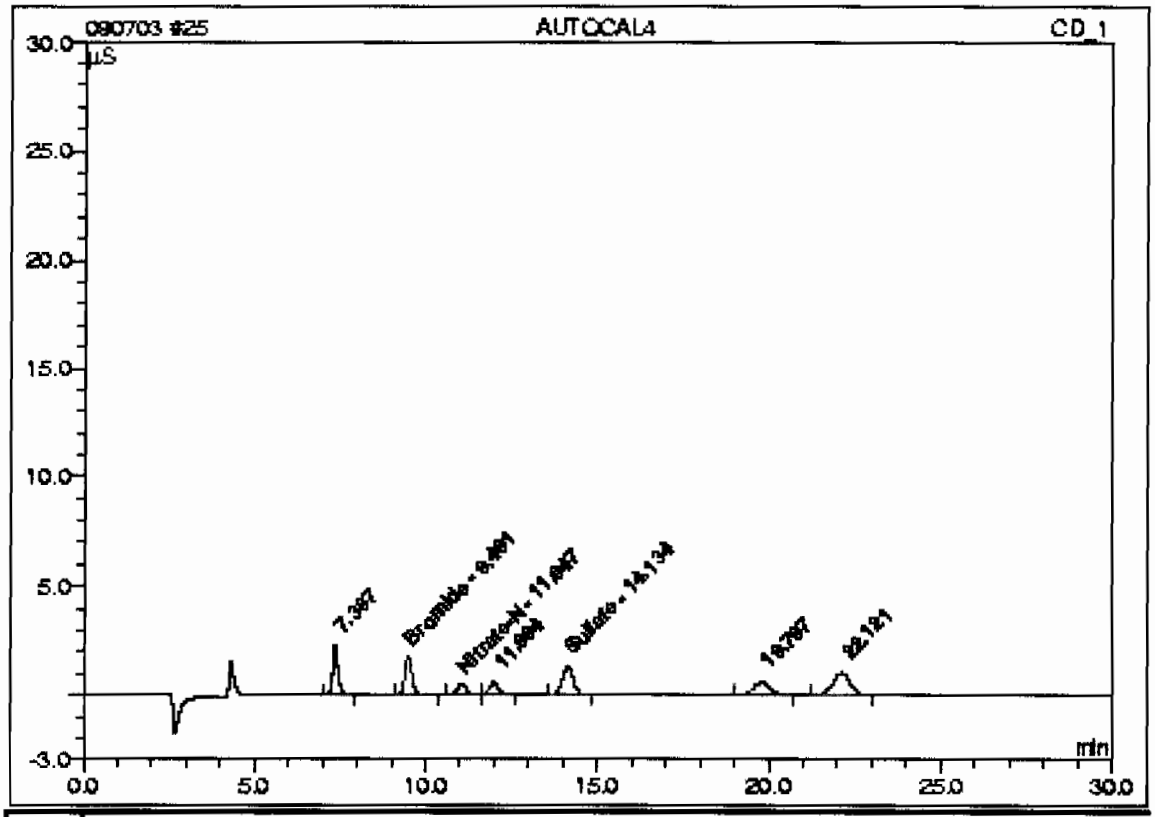

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	1.0000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	1.0000	0.9160		0.44459	16.96
n.a.	n.a.	Chlorate	1.0000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.5000	0.1298		0.15634	5.97
5	14.13	Sulfate	2.0000	2.1573		0.49242	18.79
Total:				3.2029	0.000	1.093	41.72

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9058

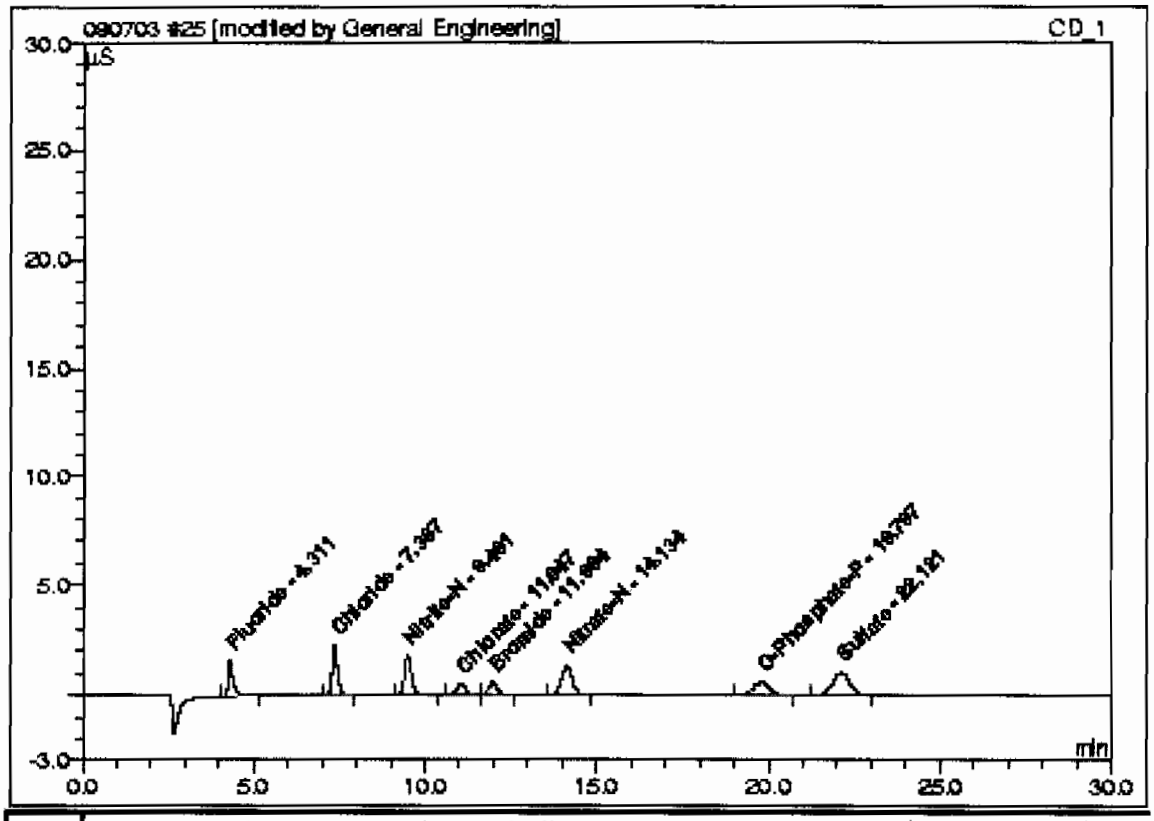

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.5000	0.4772	*	0.28671	9.86
2	7.37	Chloride	1.0000	0.9876		0.41893	14.41
3	9.49	Nitrite-N	0.5000	0.4826		0.44459	15.29
4	11.05	Chlorate	1.0000	0.9695		0.15634	5.38
5	11.99	Bromide	1.0000	0.9693		0.17517	6.02
6	14.13	Nitrate-N	0.5000	0.4966		0.49242	16.94
7	19.80	O-Phosphate-P	1.0000	0.9414		0.33440	11.50
8	22.12	Sulfate	2.0000	1.9824		0.59899	20.60
Total:				7.3065	0.000	2.908	100.00

This is runlog for Sequence 090703.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-03	07/04/09 00:20		1	090703	MAR1
ICAL-02	07/04/09 00:53		1	090703	MAR1
ICAL-01	07/04/09 01:26		1	090703	MAR1
ICV	07/04/09 01:59		1	090703	MAR1
ICB	07/04/09 02:32		1	090703	MAR1

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

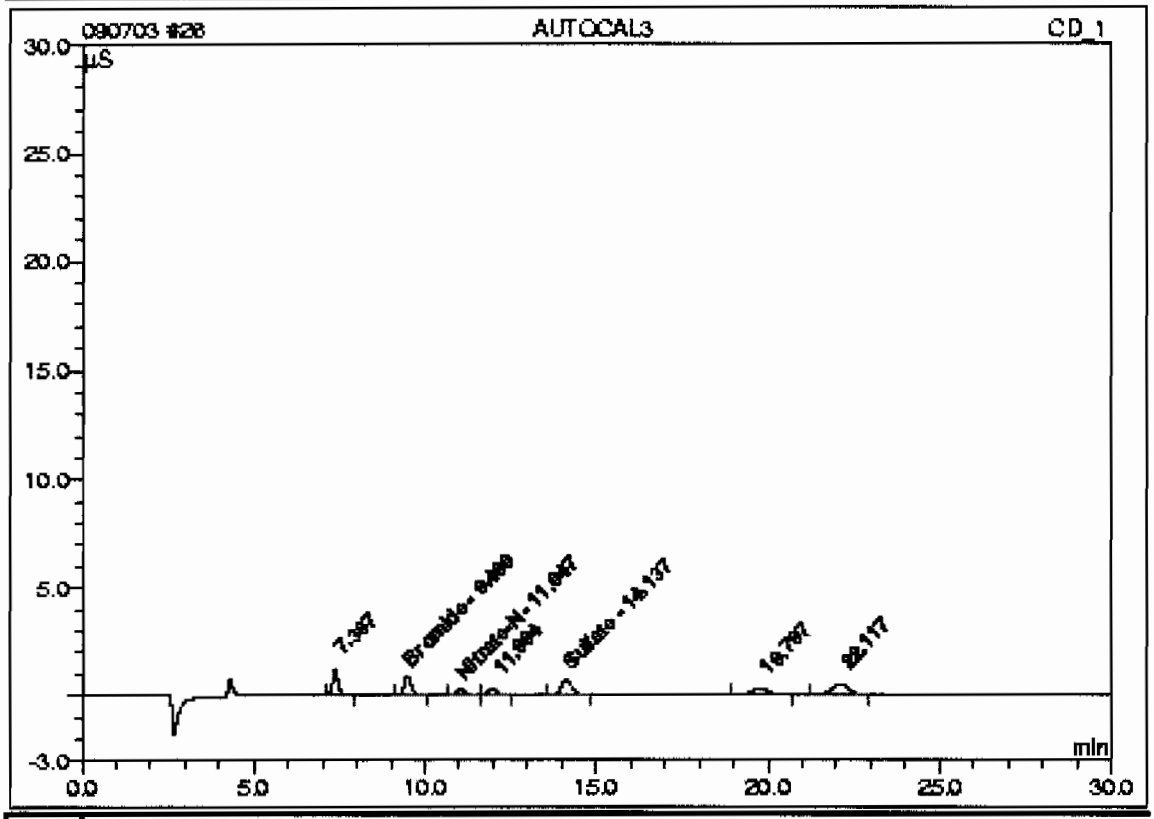

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.5000	0.7242		0.21812	16.45
n.a.	n.a.	Chlorate	0.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.2500	-0.6565		0.07808	5.89
5	14.14	Sulfate	1.0000	1.2880		0.24968	18.83
Total:				1.3557	0.000	0.546	41.17

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9058

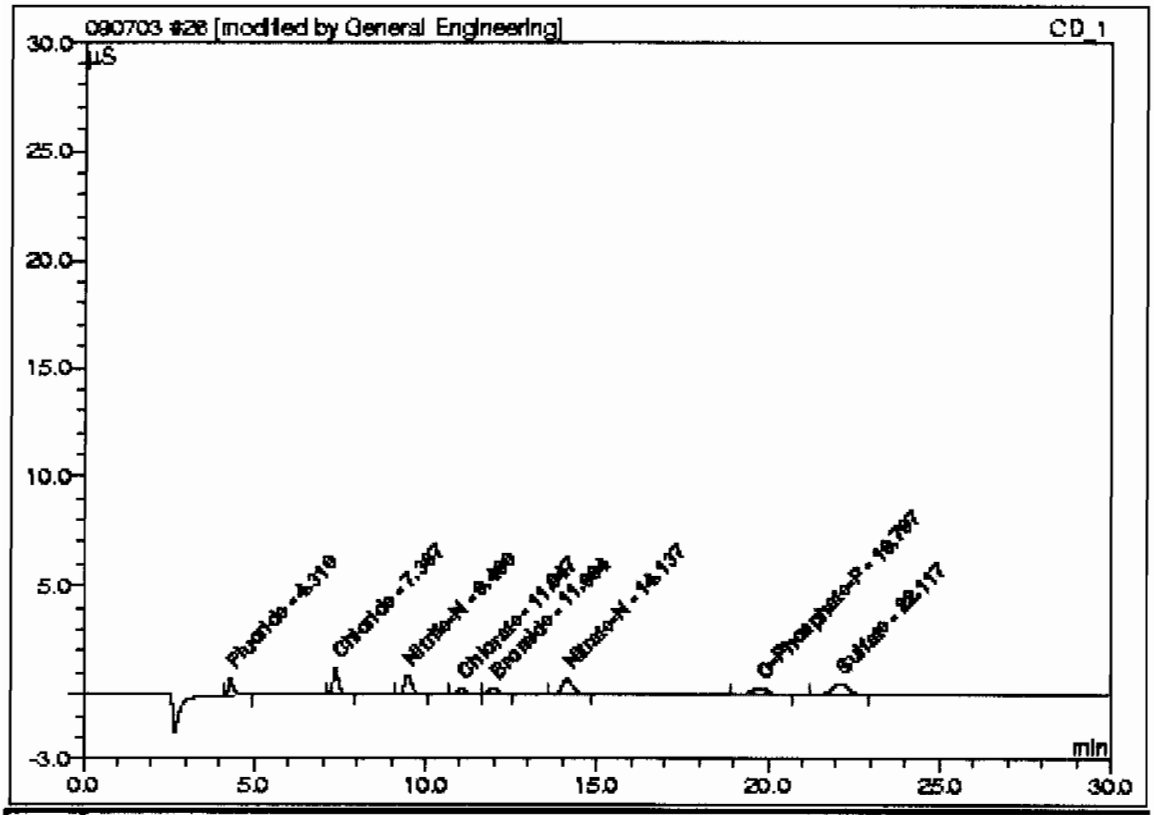

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.2500	0.2638	*	0.13800	9.43
2	7.37	Chloride	0.5000	0.6284		0.22515	15.38
3	9.49	Nitrite-N	0.2500	0.2669		0.21812	14.90
4	11.05	Chlorate	0.5000	0.4940		0.07808	5.33
5	11.99	Bromide	0.5000	0.4991		0.09759	5.99
6	14.14	Nitrate-N	0.2500	0.3016		0.24968	17.05
7	19.80	O-Phosphate-P	0.5000	0.4865		0.16491	11.26
8	22.12	Sulfate	1.0000	1.1634		0.30252	20.66
Total:				4.1037	0.000	1.464	100.00

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

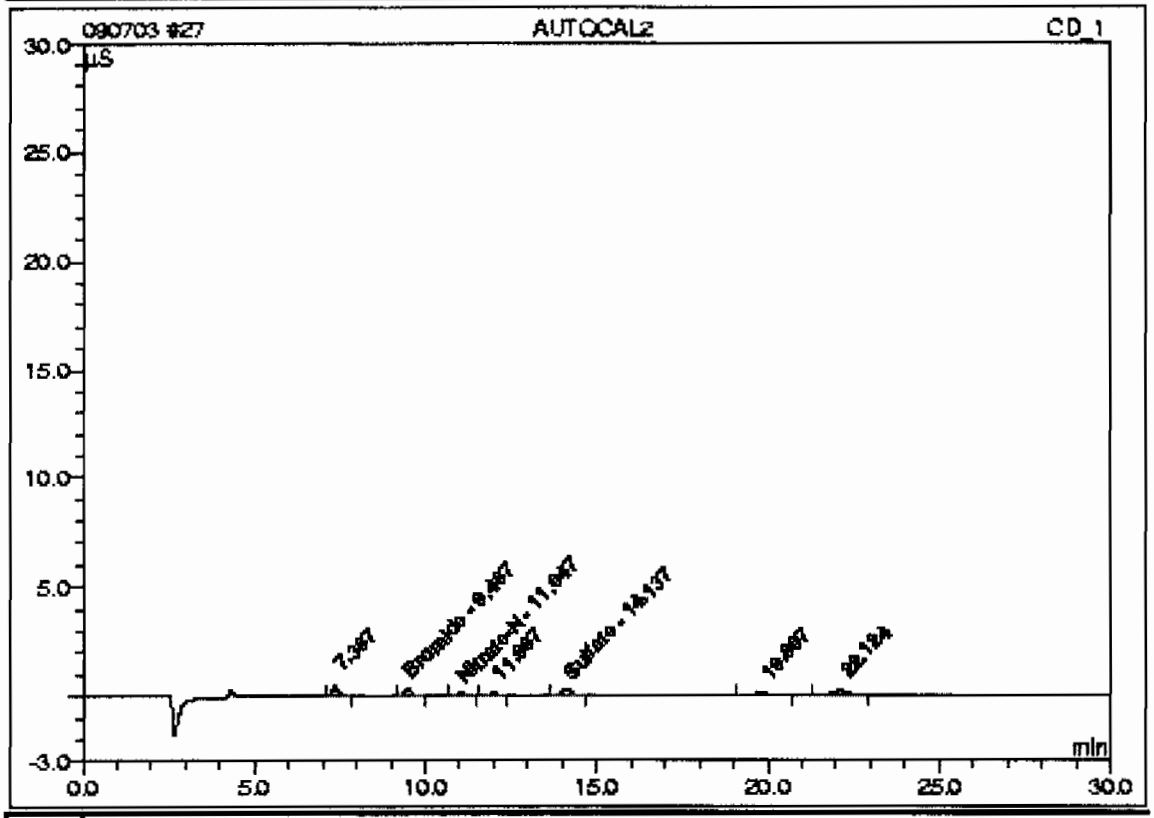

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.2000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.2000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.2000	0.5534		0.08703	16.21
n.a.	n.a.	Chlorate	0.2000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.1000	-0.9832		0.03083	5.74
5	14.14	Sulfate	0.4000	0.7269		0.10053	18.72
Total:				0.2971	0.000	0.218	40.67

27 AUTOCAL2

Sample Name:	**AUTOCAL2**	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	**AS23_HC**	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	**AS23-001528;GLGCE088;300;9058**

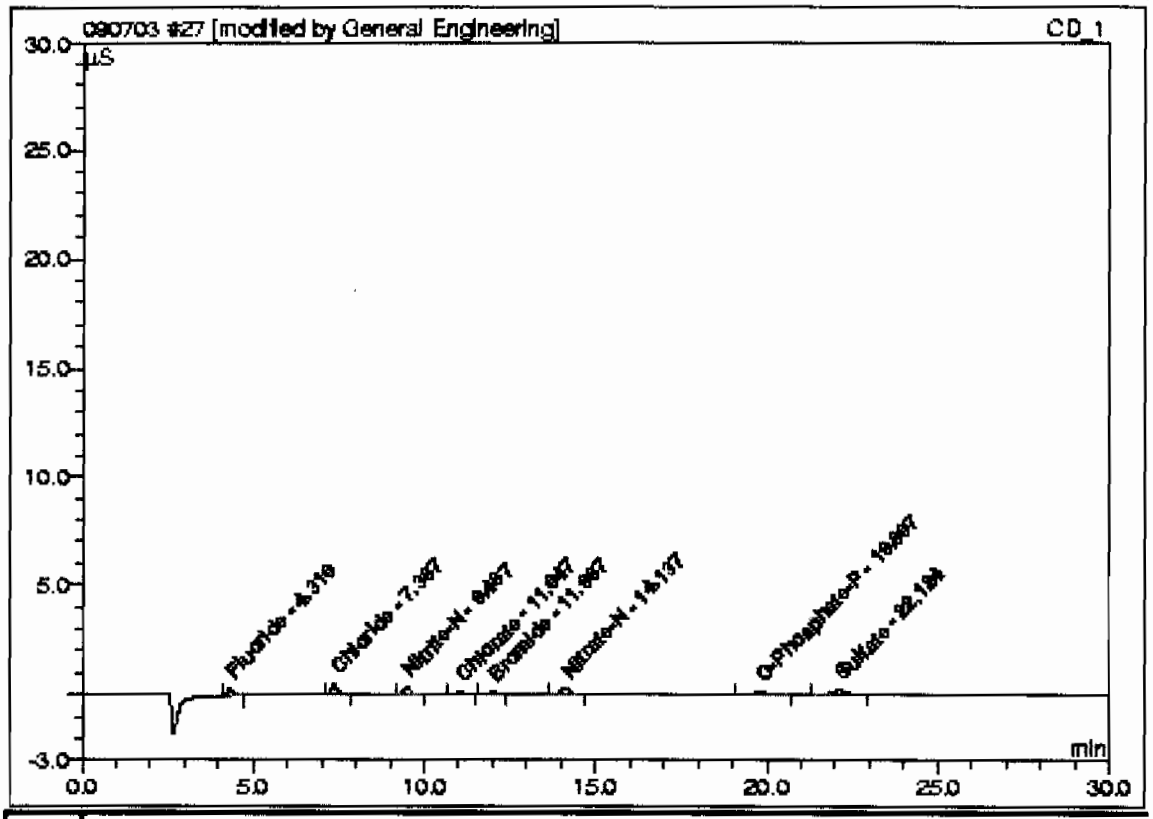

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.1000	0.1409	*	0.05234	8.88
2	7.37	Chloride	0.2000	0.3848		0.09372	15.91
3	9.49	Nitrite-N	0.1000	0.1421		0.08703	14.77
4	11.05	Chlorate	0.2000	0.2070		0.03083	5.23
5	11.99	Bromide	0.2000	0.2104		0.03382	5.74
6	14.14	Nitrate-N	0.1000	0.1817		0.10053	17.06
7	19.81	O-Phosphate-P	0.2000	0.2212		0.06603	11.21
8	22.12	Sulfate	0.4000	0.6729		0.12497	21.21
Total:				2.1609	0.000	0.589	100.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:25	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE0815;300;9058

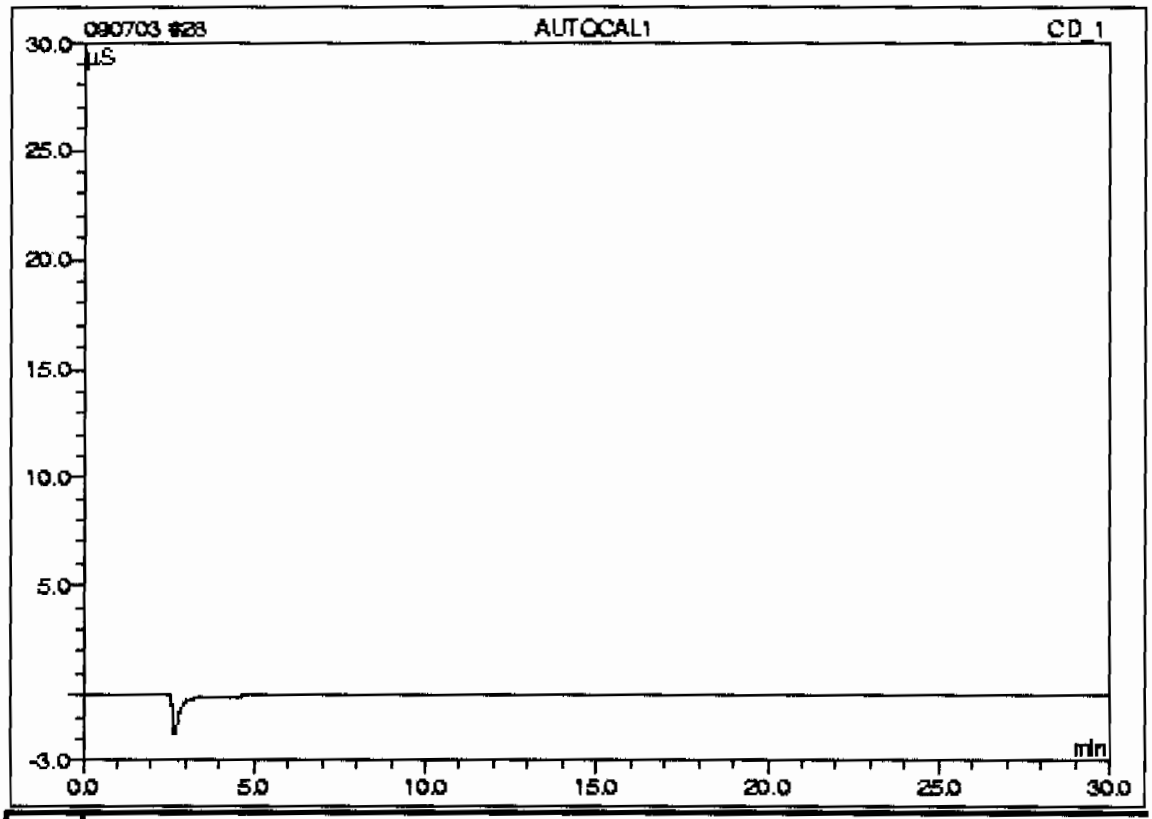

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-015880;GLGCE088;300;9058

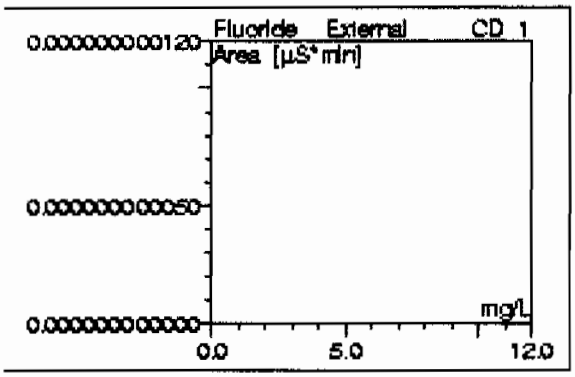

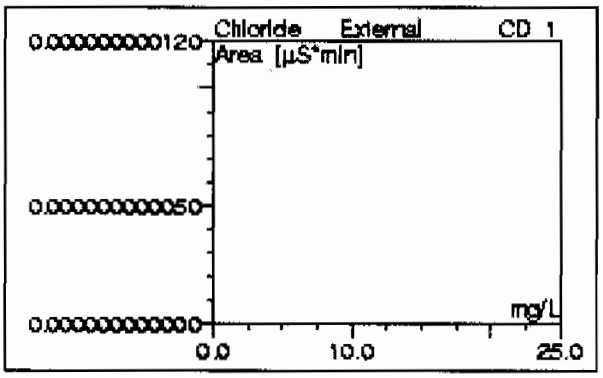

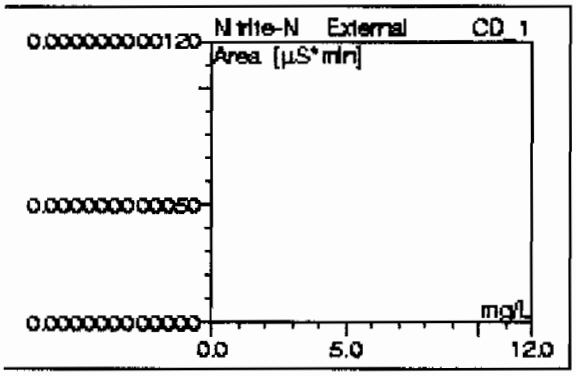

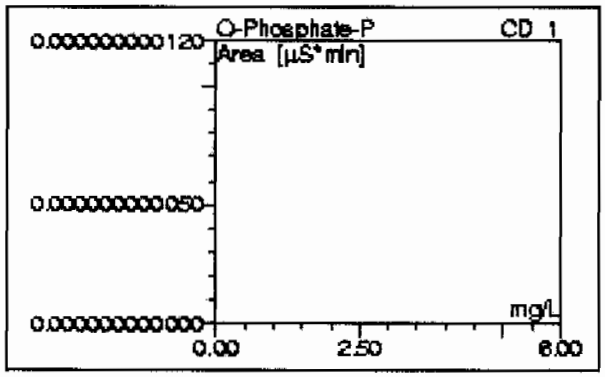

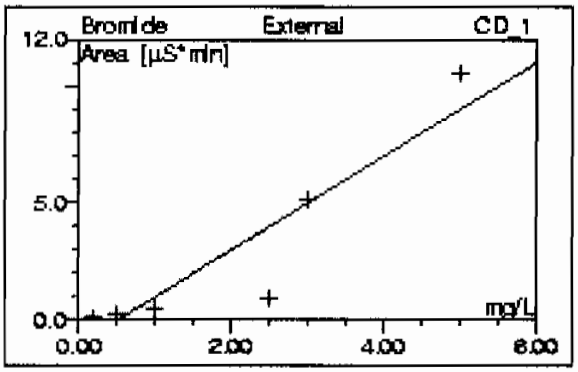

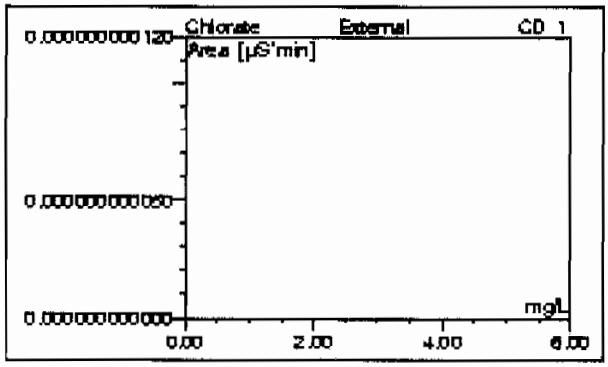

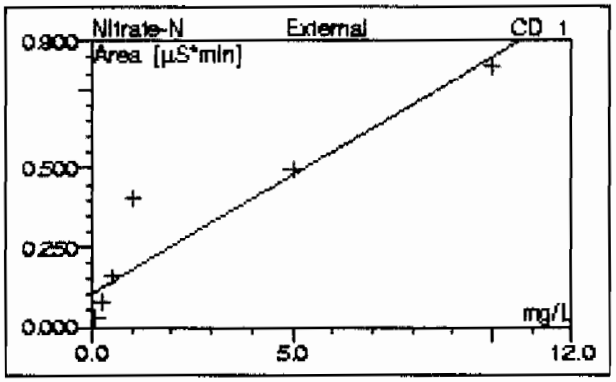

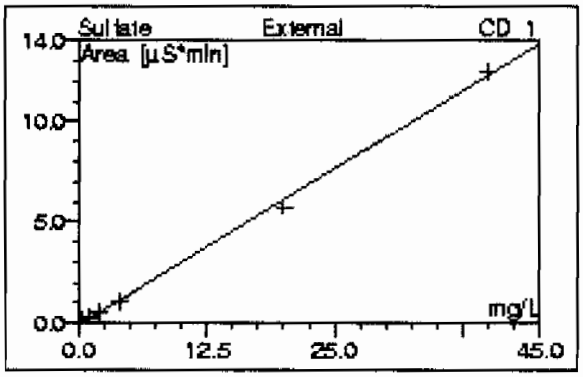

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Chloride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrite-N	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Bromide	0LOff	85.7419	-1.0196	1.9997	0.0000
n.a.	n.a.	Chlorate	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrate-N	0LOff	86.4468	0.1041	0.0746	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8340	-0.1257	0.3112	0.0000
Average:				90.6742	-0.1301	0.2982	0.0000

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

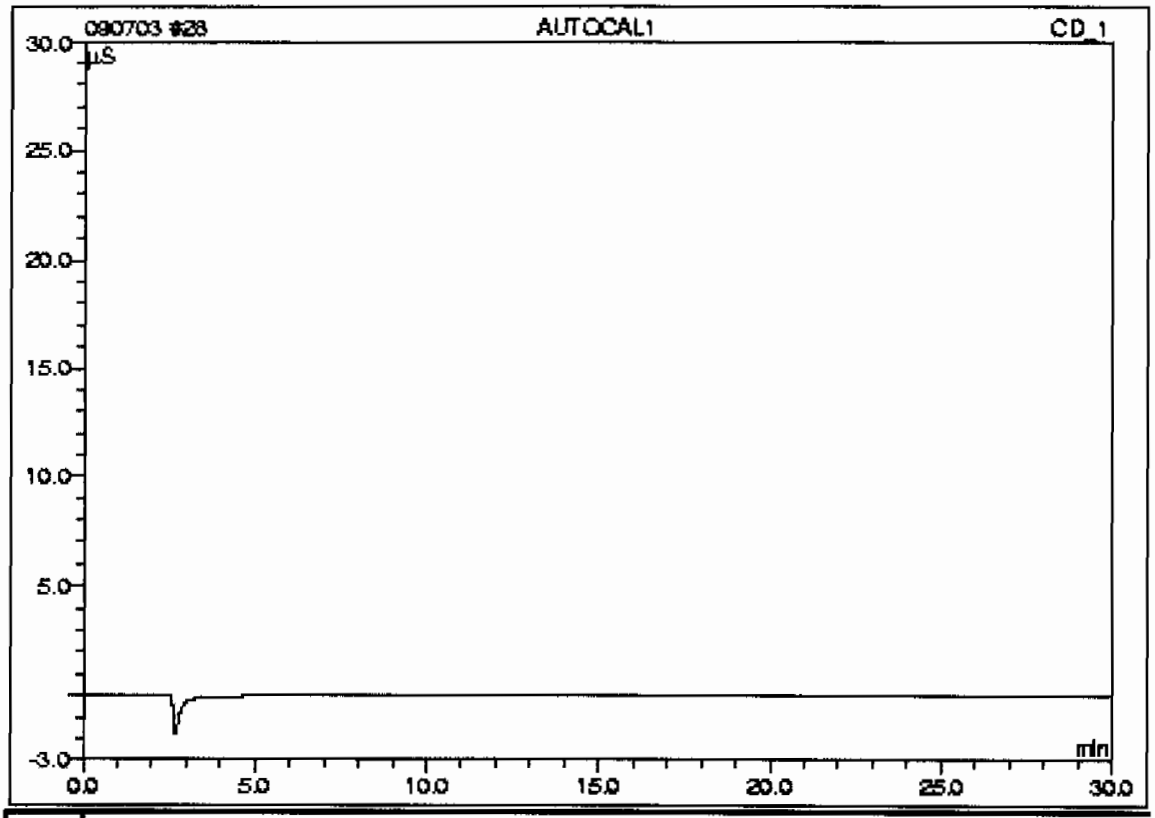

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE086;300;9058

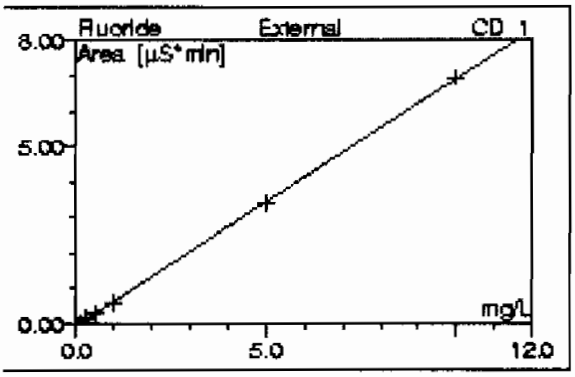

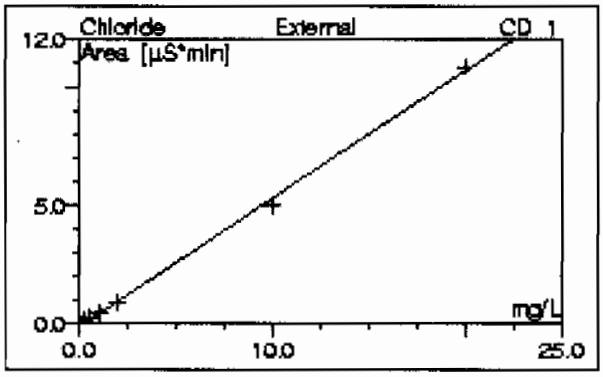

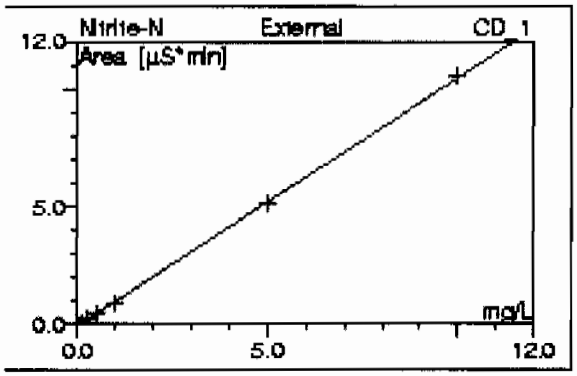

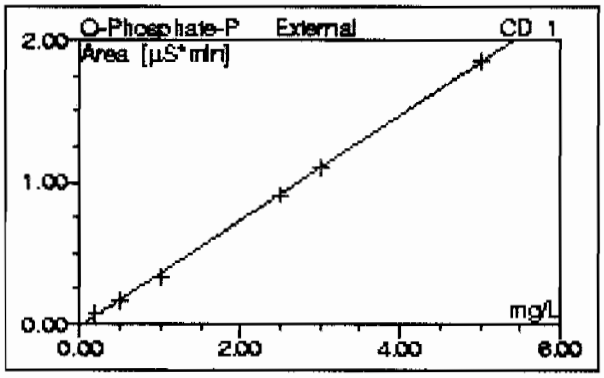

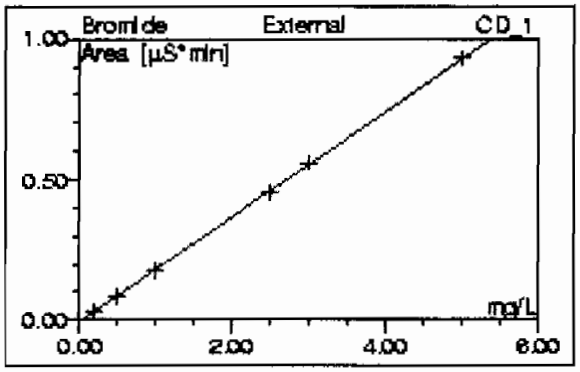

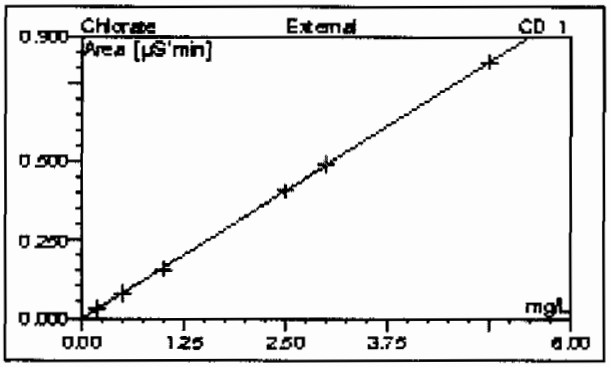

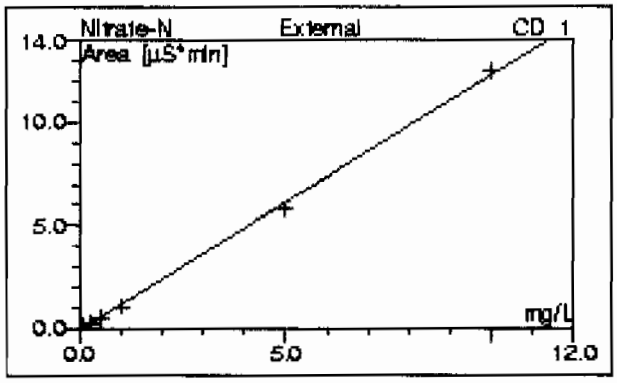

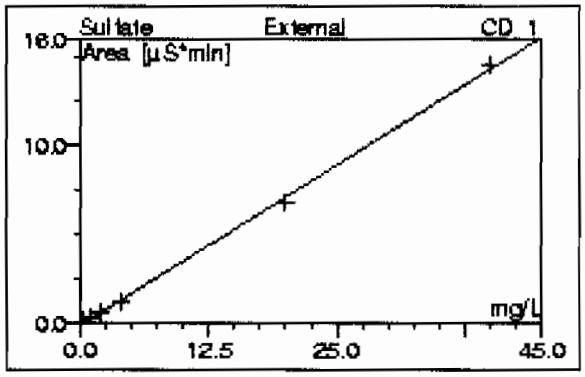

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9818	-0.0458	0.6969	0.0000
n.a.	n.a.	Chloride	0LOff	99.8028	-0.1138	0.5394	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9773	-0.0622	1.0502	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	99.9702	-0.0164	0.3726	0.0000
n.a.	n.a.	Bromide	0LOff	99.9731	-0.0054	0.1863	0.0000
n.a.	n.a.	Chlorate	0LOff	99.9897	-0.0032	0.1646	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.8340	-0.1257	1.2449	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8797	-0.1186	0.3620	0.0000
Average:				99.9261	-0.0614	0.5771	0.0000

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

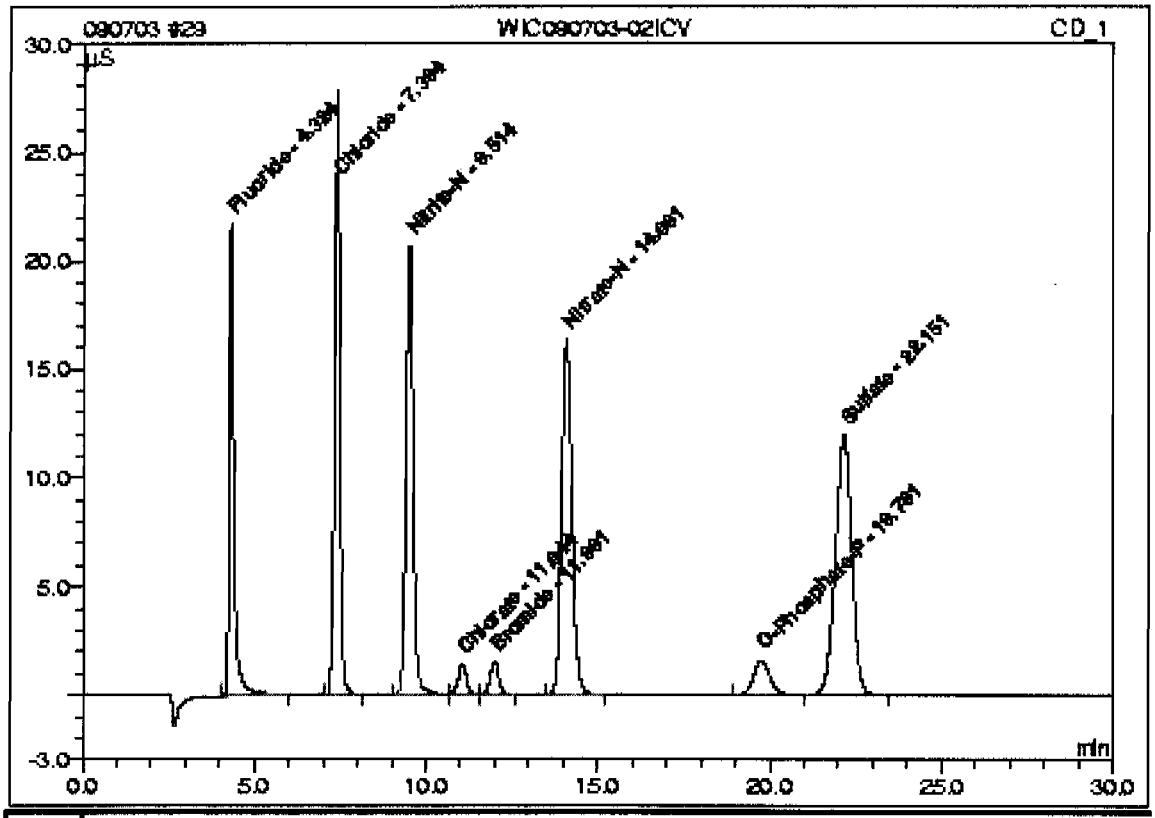

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.08	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65398	24.40
Total:				49.6694	0.000	27.271	100.00

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

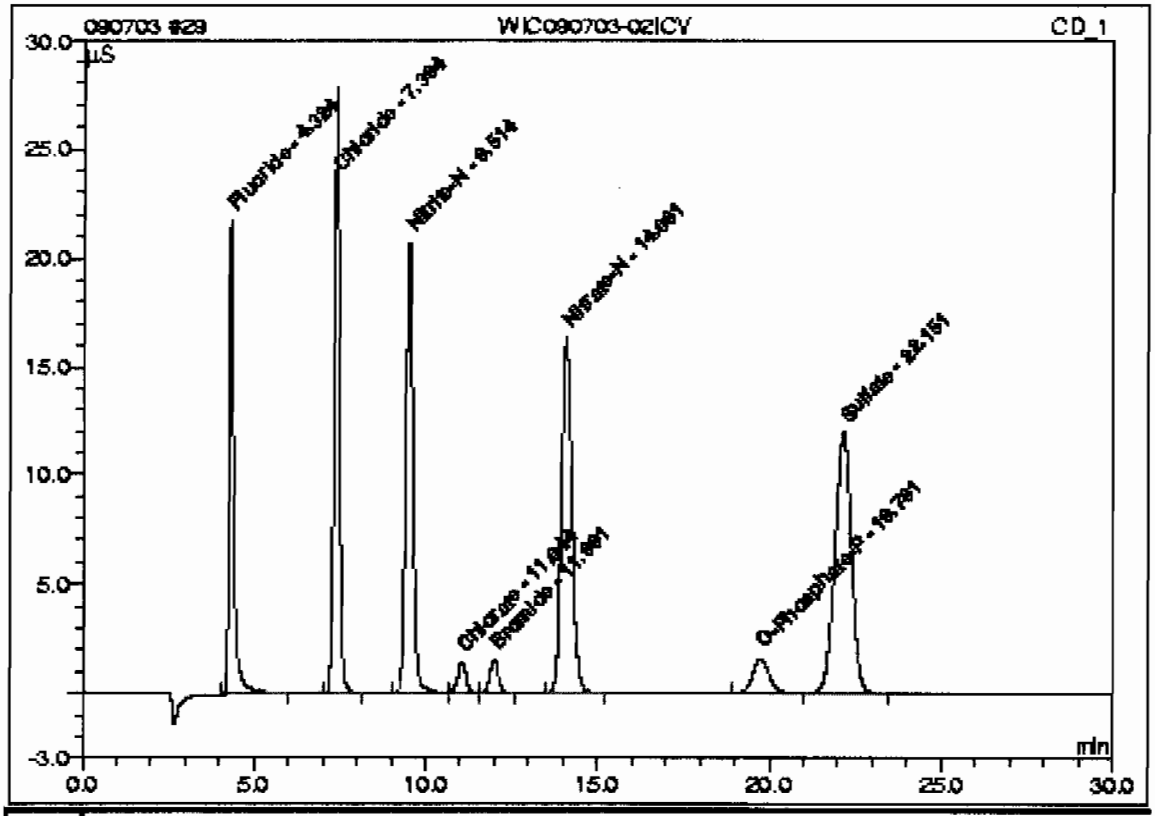

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.09	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65338	24.40
Total:				49.6694	0.000	27.271	100.00

30 ICB

Sample Name:	**ICB**	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	**AS23_HC**	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	**AS9HC-014108;GLGCE088;300;9058**

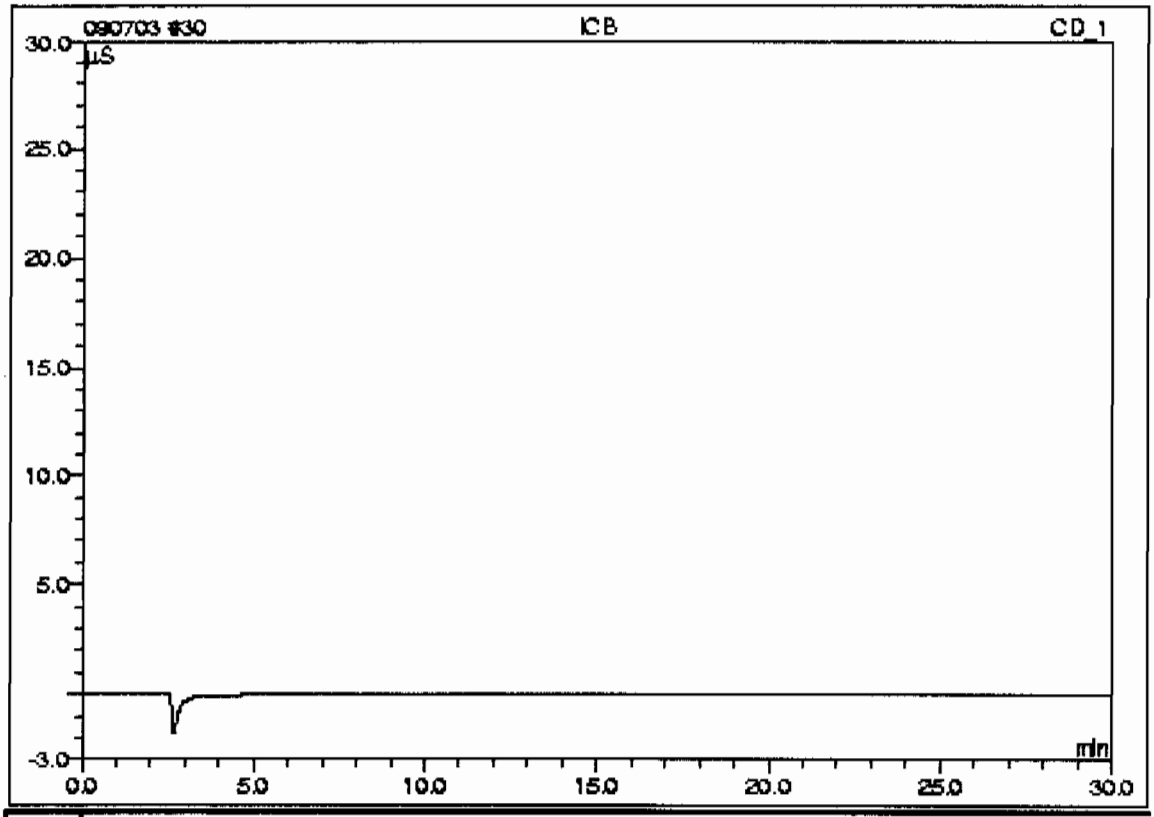

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

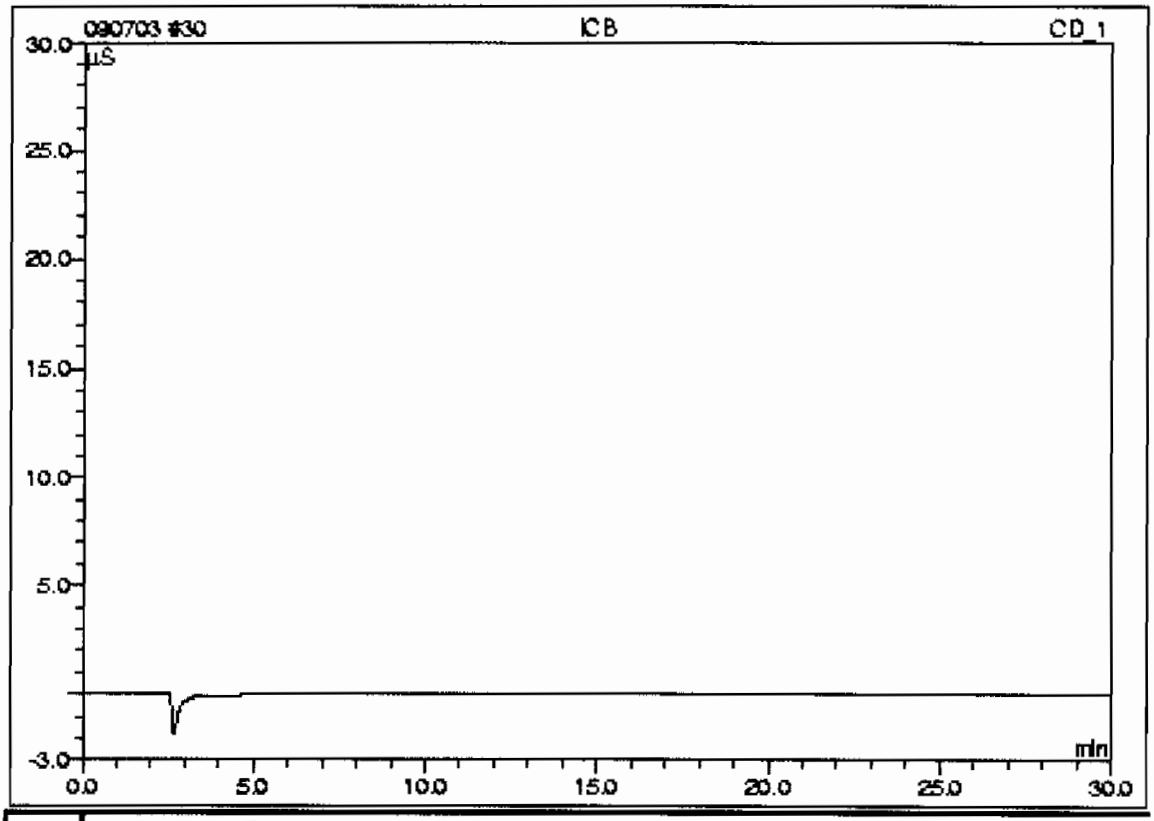

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 090709.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/09/09 09:44		1	090709	MAR1
ICV	07/09/09 10:13		1	090709	MAR1
ICB	07/09/09 10:42		1	090709	MAR1
1201868385	07/09/09 11:11	879955	1	090709	MAR1
1201868389	07/09/09 11:40	879955	1	090709	MAR1
232076001	07/09/09 12:09	879955	1	090709	MAR1
1201868386	07/09/09 12:37	879955	1	090709	MAR1
1201868387	07/09/09 13:06	879955	1	090709	MAR1
1201868388	07/09/09 13:35	879955	1	090709	MAR1
232076002	07/09/09 14:04	879955	1	090709	MAR1
232076003	07/09/09 14:33	879955	1	090709	MAR1
CVH	07/09/09 15:02		1	090709	MAR1
CCB	07/09/09 15:31		1	090709	MAR1
232079001	07/09/09 16:00	879955	1	090709	MAR1
232079002	07/09/09 16:29	879955	1	090709	MAR1
232079003	07/09/09 16:58	879955	1	090709	MAR1
232079004	07/09/09 17:27	879955	1	090709	MAR1
232079005	07/09/09 17:55	879955	1	090709	MAR1
232357001	07/09/09 18:24	879955	1	090709	MAR1
232357002	07/09/09 18:53	879955	1	090709	MAR1
CCV	07/09/09 19:22		1	090709	MAR1
CCB	07/09/09 19:51		1	090709	MAR1
1201871608	07/09/09 20:20	881302	1	090709	MAR1
1201871612	07/09/09 20:49	881302	1	090709	MAR1
232509001	07/09/09 21:18	881302	1	090709	MAR1
1201871609	07/09/09 21:47	881302	1	090709	MAR1
1201871610	07/09/09 22:16	881302	1	090709	MAR1
1201871611	07/09/09 22:45	881302	1	090709	MAR1

232509002	07/09/09 23:13	881302	1	090709	MAR1
232509003	07/09/09 23:42	881302	1	090709	MAR1

9 WIC090709-02ICV

Sample Name:	WIC090709-02ICV	*Injection Volume:*	1.0
Vial Number:	2	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 10:13	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

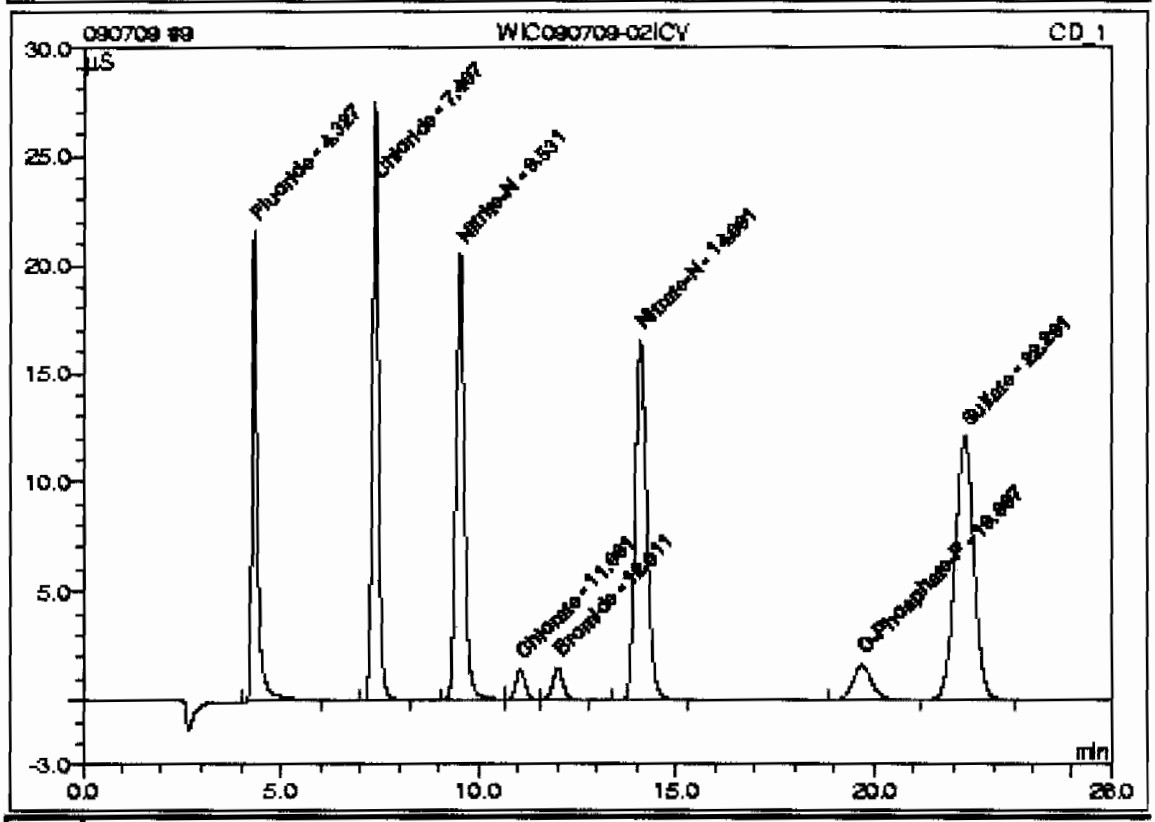

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.8959		3.36585	12.23
2	7.41	Chloride	n.a.	9.2383		4.86975	17.69
3	9.53	Nitrite-N	n.a.	4.8673		5.04924	18.35
4	11.06	Chlorate	n.a.	2.5658		0.41908	1.52
5	12.01	Bromide	n.a.	2.4471		0.45043	1.64
6	14.09	Nitrate-N	n.a.	4.7057		5.73197	20.83
7	19.70	O-Phosphate-P	n.a.	2.4685		0.90341	3.28
8	22.29	Sulfate	n.a.	18.9257		6.73209	24.46
Total:				50.1143	0.000	27.522	100.00

10 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	3	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 10:42	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

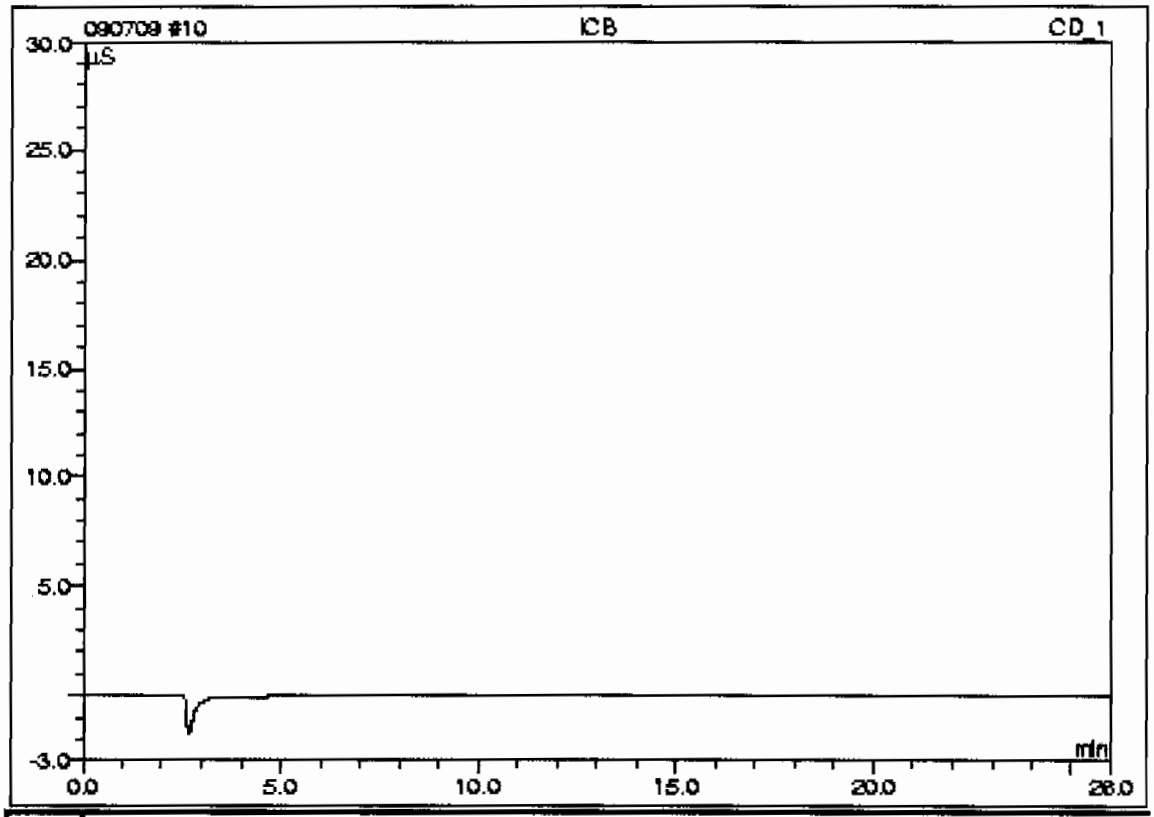

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 090709.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
232509004	07/10/09 00:11	881302	1	090709	MAR1
CVH	07/10/09 00:40		1	090709	MAR1
CCB	07/10/09 01:09		1	090709	MAR1
232509005	07/10/09 01:38	881302	1	090709	MAR1
232509006	07/10/09 02:07	881302	1	090709	MAR1
CCV	07/10/09 02:36		1	090709	MAR1
CCB	07/10/09 03:05		1	090709	MAR1
1201870668	07/10/09 03:34	880973	1	090709	MAR1
1201870672	07/10/09 04:03	880973	1	090709	MAR1
232424001	07/10/09 04:31	880973	1	090709	MAR1
232426001	07/10/09 05:00	880973	1	090709	MAR1
1201870669	07/10/09 05:29	880973	1	090709	MAR1
1201870670	07/10/09 05:58	880973	1	090709	MAR1
1201870671	07/10/09 06:27	880973	1	090709	MAR1
232426002	07/10/09 06:56	880973	1	090709	MAR1
CVH	07/10/09 07:25		1	090709	MAR1
CCB	07/10/09 07:54		1	090709	MAR1

43 WIC090709-02CCV

Sample Name:	WIC090709-02CCV	*Injection Volume:*	1.0
Vial Number:	35	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 2:35	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE035;300;9055

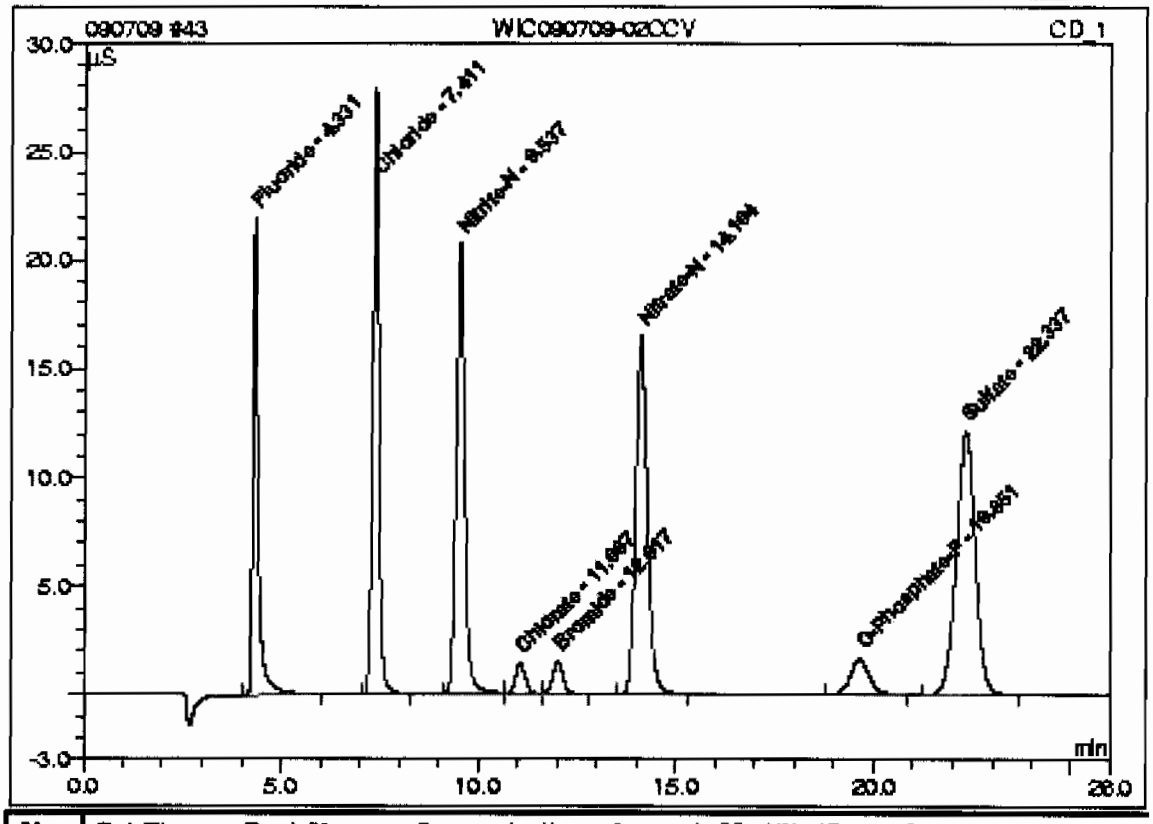

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9746		3.42070	12.30
2	7.41	Chloride	n.a.	9.4183		4.96685	17.86
3	9.54	Nitrite-N	n.a.	4.9139		5.09814	18.33
4	11.07	Chlorate	n.a.	2.5542		0.41717	1.50
5	12.02	Bromide	n.a.	2.4713		0.45494	1.64
6	14.10	Nitrate-N	n.a.	4.7293		5.76133	20.72
7	19.65	O-Phosphate-P	n.a.	2.4605		0.90045	3.24
8	22.34	Sulfate	n.a.	19.0784		6.78737	24.41
Total:				50.6005	0.000	27.807	100.00

44 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	37	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 3:05	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

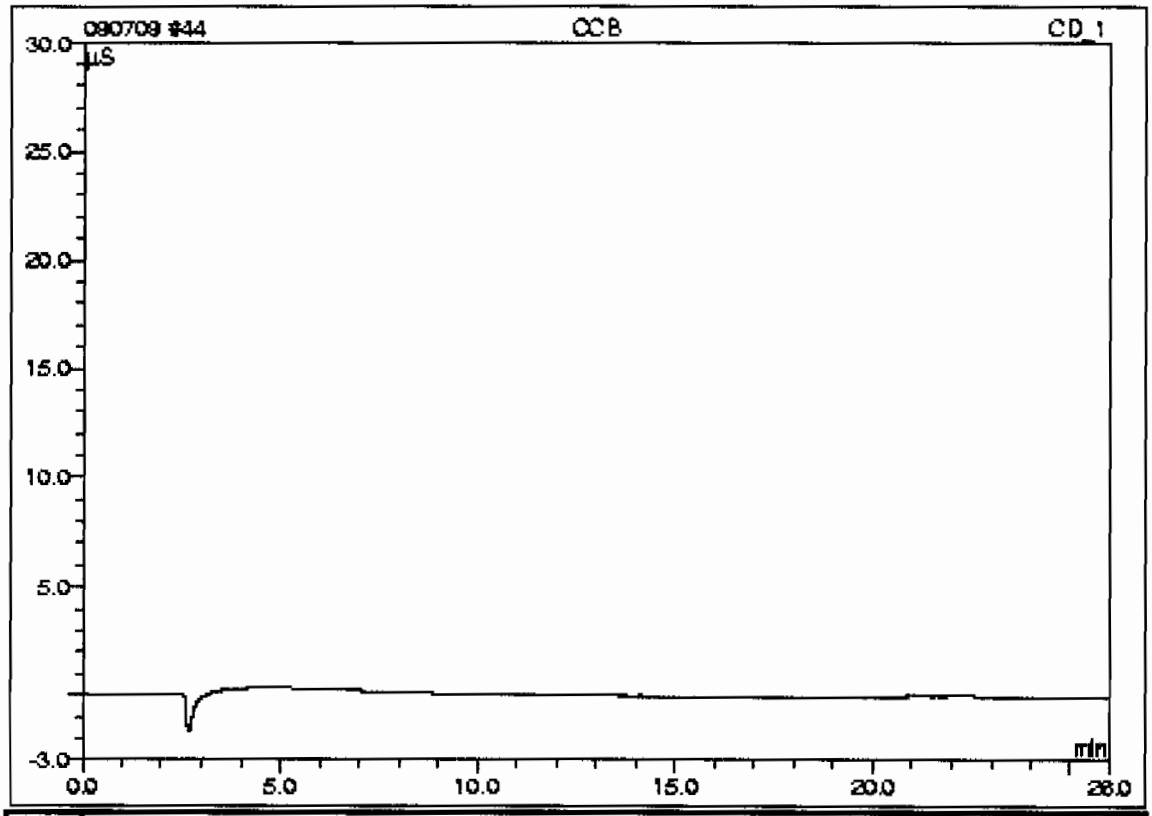

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

45 1201870668/880973/1/1/MB

Sample Name:	1201870668/880973/1/1/MB	*Injection Volume:*	1.0
Vial Number:	38	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 3:34	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

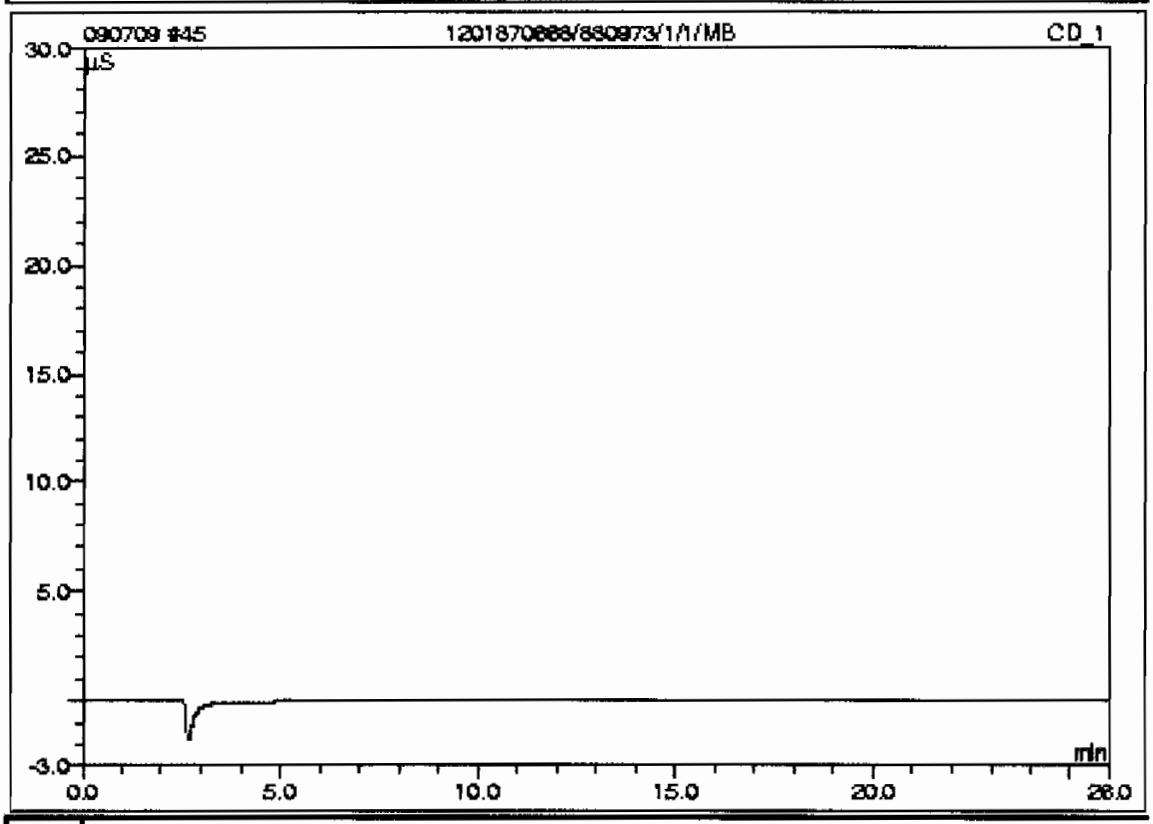

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

46 1201870672/880973/1/1/LCS

Sample Name:	1201870672/880973/1/1/LCS	*Injection Volume:*	1.0
Vial Number:	39	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 4:03	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

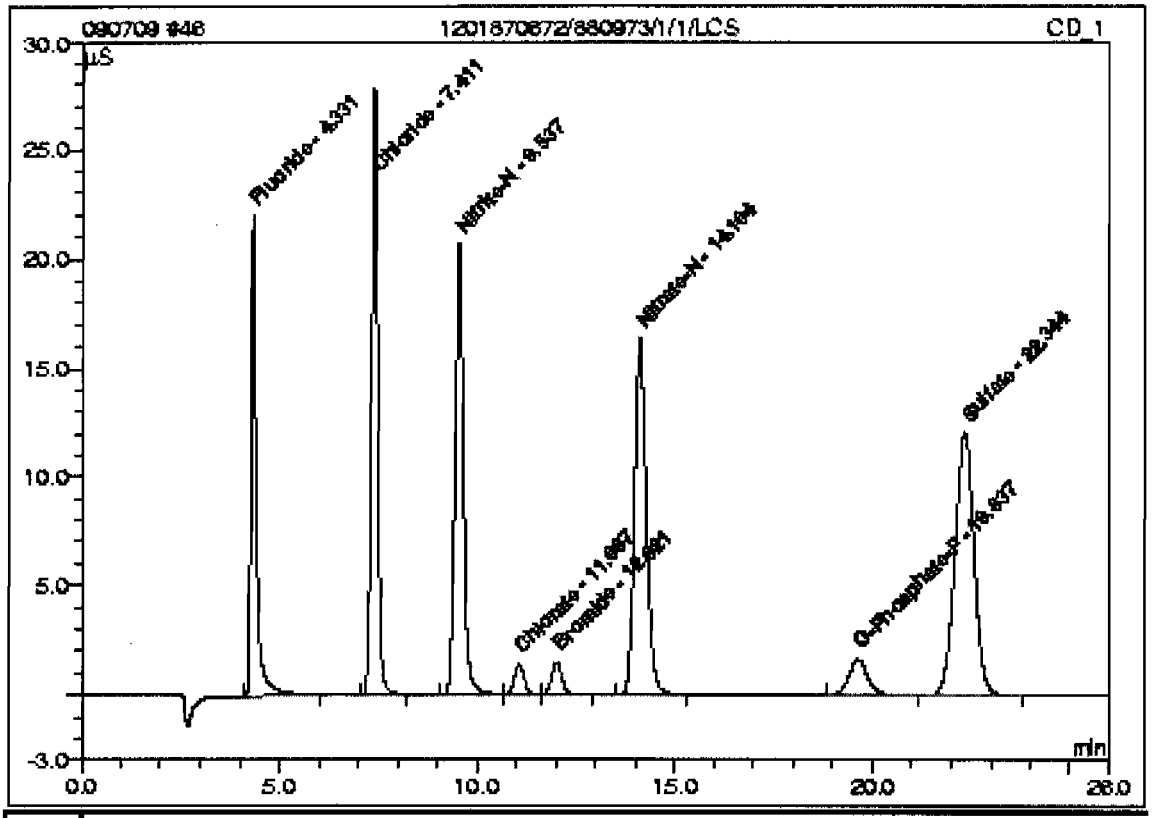

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9638		3.41318	12.30
2	7.41	Chloride	n.a.	9.3819		4.94721	17.83
3	9.54	Nitrite-N	n.a.	4.9034		5.08721	18.33
4	11.07	Chlorate	n.a.	2.5665		0.41920	1.51
5	12.02	Bromide	n.a.	2.4728		0.45523	1.64
6	14.10	Nitrate-N	n.a.	4.7115		5.73911	20.68
7	19.64	O-Phosphate-P	n.a.	2.4697		0.90388	3.26
8	22.34	Sulfate	n.a.	19.0894		6.78411	24.45
Total:				50.5392	0.000	27.749	100.00

47 232424001/880973/1/1/

Sample Name:	232424001/880973/1/1/	*Injection Volume:*	1.0
Vial Number:	40	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 4:31	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

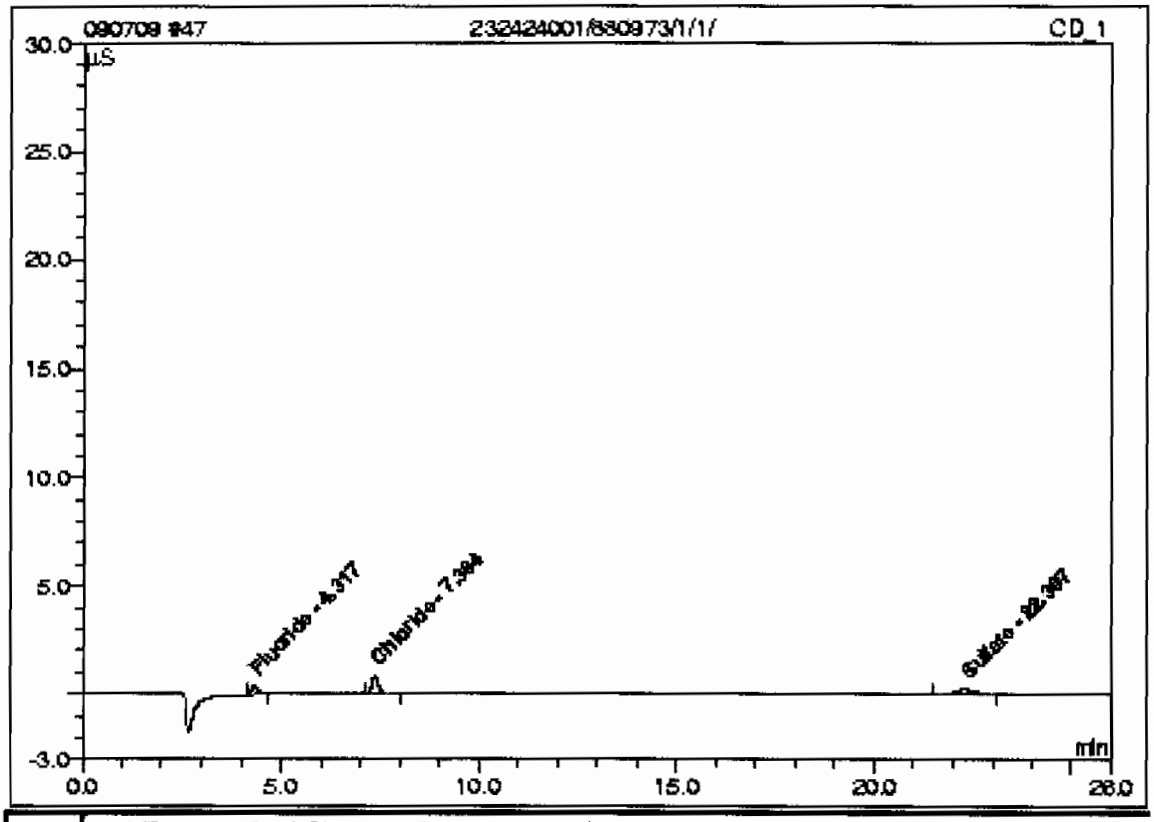

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.1665		0.07019	18.55
2	7.38	Chloride	n.a.	0.5325		0.17340	45.82
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.31	Sulfate	n.a.	0.7002		0.13483	35.63
Total:				1.3991	0.000	0.378	100.00

48 232426001/880973/1/1/

Sample Name:	232426001/880973/1/1/	*Injection Volume:*	1.0
Vial Number:	41	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 5:00	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

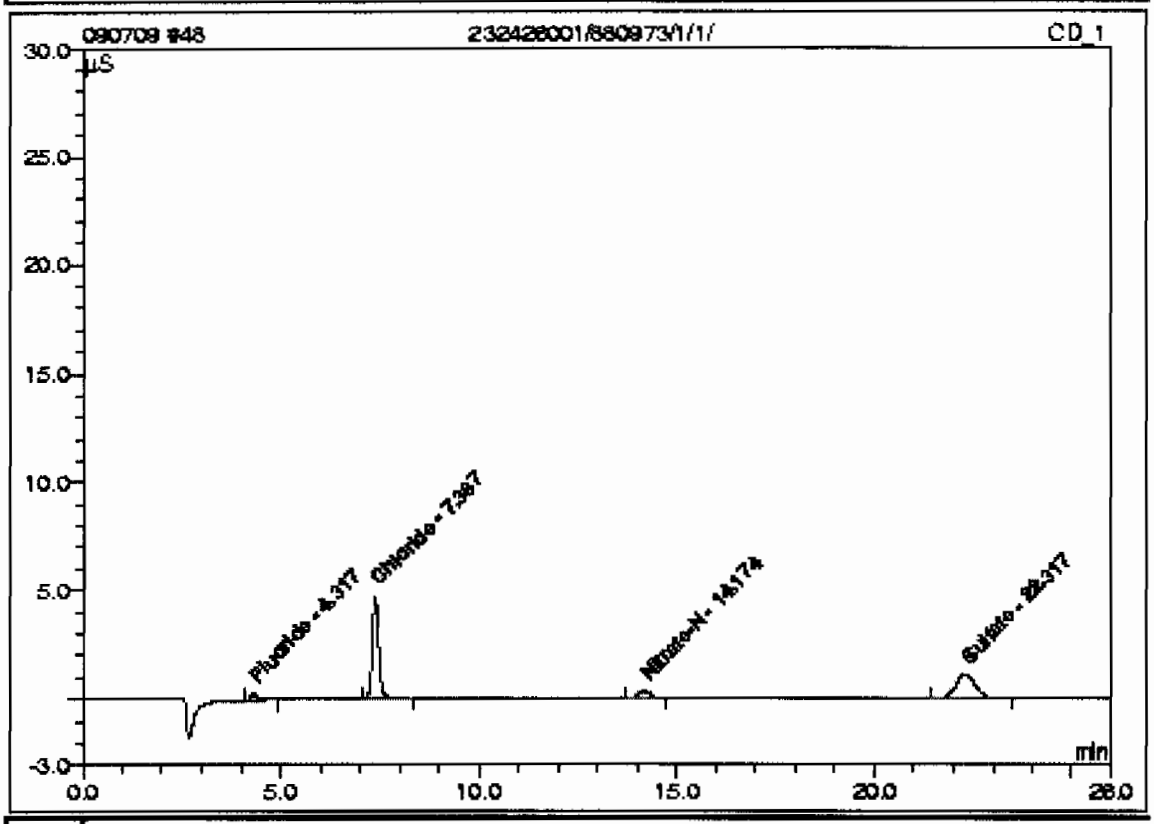

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.1552		0.06233	3.60
2	7.39	Chloride	n.a.	1.8499		0.88403	51.09
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.17	Nitrate-N	n.a.	0.1964		0.11877	6.86
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	22.32	Sulfate	n.a.	2.1651		0.66512	38.44
Total:				4.3665	0.000	1.730	100.00

49 1201870669/880973/1/1/DUP

Sample Name:	1201870669/880973/1/1/**DUP**	*Injection Volume:*	1.0
Vial Number:	42	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	**AS23**	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 5:29	Analyst:	**MAR1**
Run Time (min):	28.00 Column:	**AS9HC-014108;GLGCE088;300;9058**	

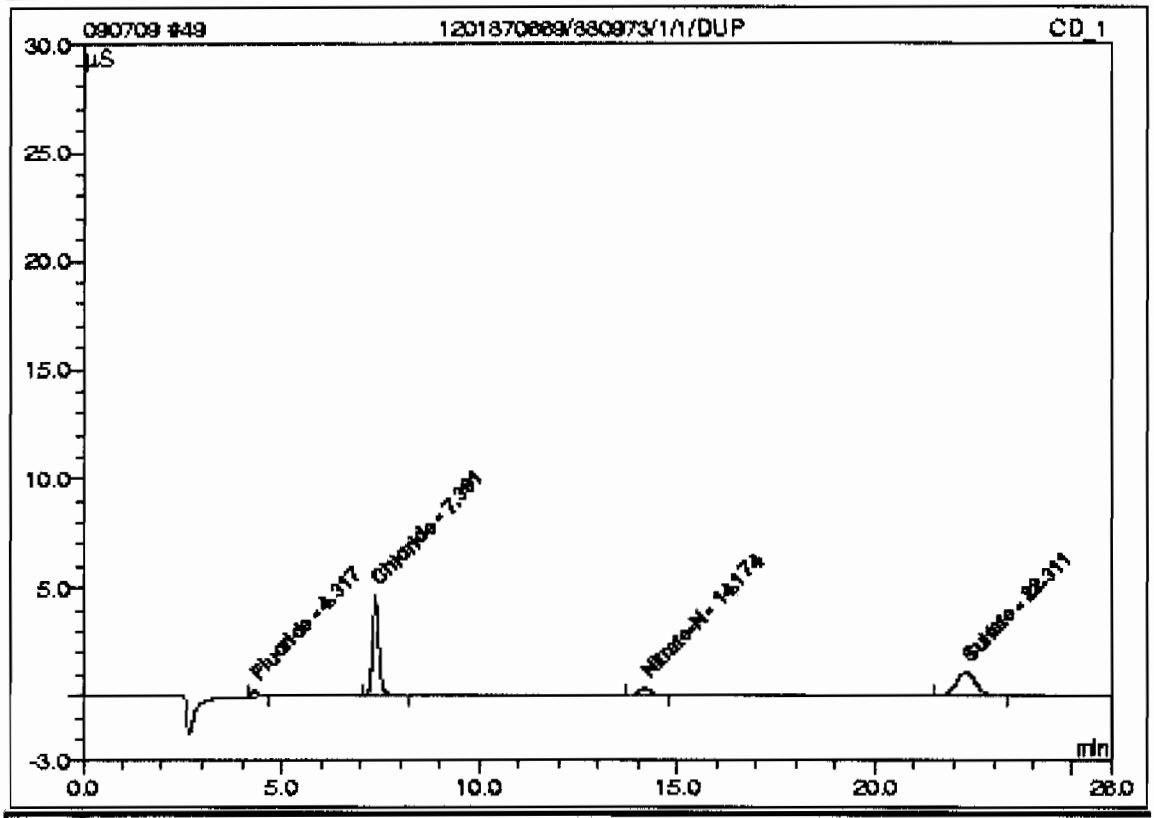

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.1417		0.05292	3.13
2	7.39	Chloride	n.a.	1.8104		0.86278	51.03
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.17	Nitrate-N	n.a.	0.1960		0.11823	6.99
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	22.31	Sulfate	n.a.	2.1424		0.65687	38.85
Total:				4.2904	0.000	1.691	100.00

50 1201870670/880973/1/1/MS

Sample Name:	1201870670/880973/1/1/MS	*Injection Volume:*	1.0
Vial Number:	43	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 5:58	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

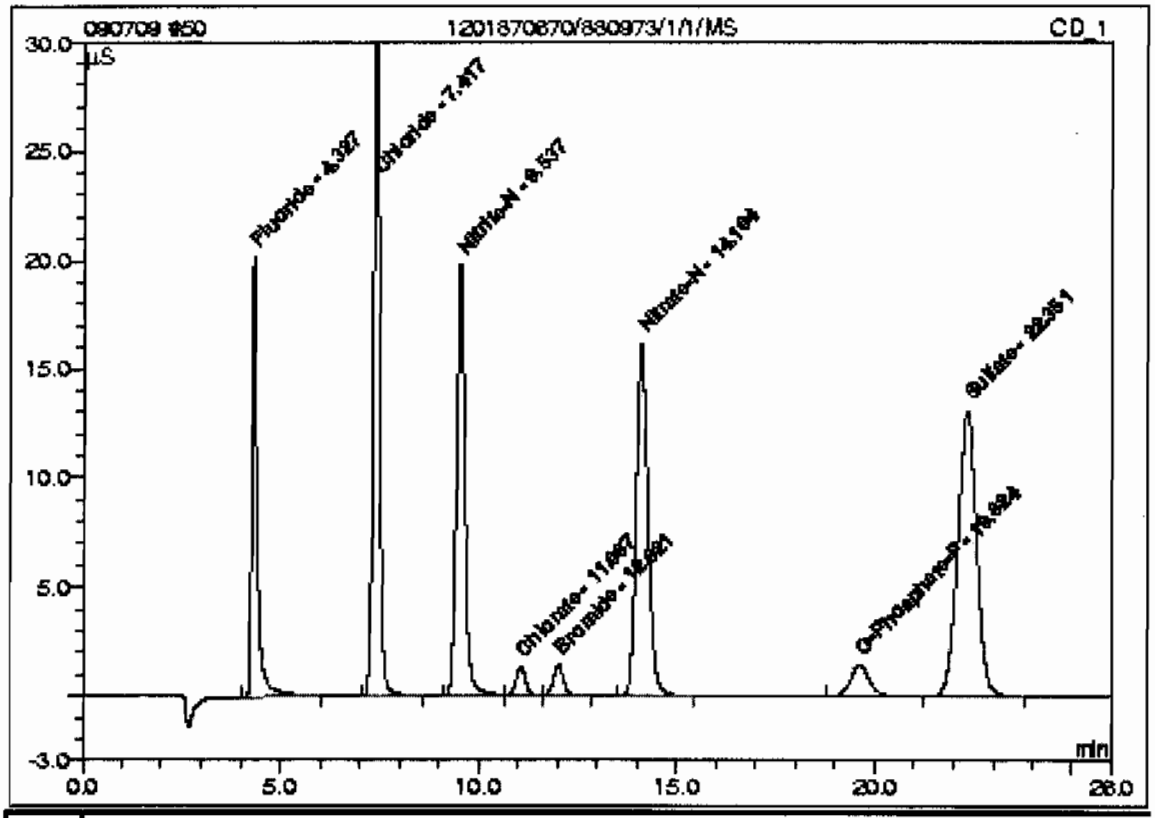

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.5984		3.15855	10.99
2	7.42	Chloride	n.a.	11.2713		5.96645	20.77
3	9.54	Nitrite-N	n.a.	4.7178		4.89227	17.03
4	11.07	Chlorate	n.a.	2.4924		0.40701	1.42
5	12.02	Bromide	n.a.	2.4084		0.44323	1.54
6	14.10	Nitrate-N	n.a.	4.6709		5.68854	19.80
7	19.62	O-Phosphate-P	n.a.	2.2634		0.82697	2.88
8	22.35	Sulfate	n.a.	20.6175		7.34446	25.57
Total:				53.0400	0.000	28.727	100.00

51 1201870671/880973/1/1/MSD

Sample Name:	1201870671/880973/1/1/**MSD**	*Injection Volume:*	1.0
Vial Number:	44	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	**AS23**	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 5:27	Analyst:	**MAR1**
Run Time (min):	28.00	Column:	**AS9HC-014108;GLGCE088;300;9058**

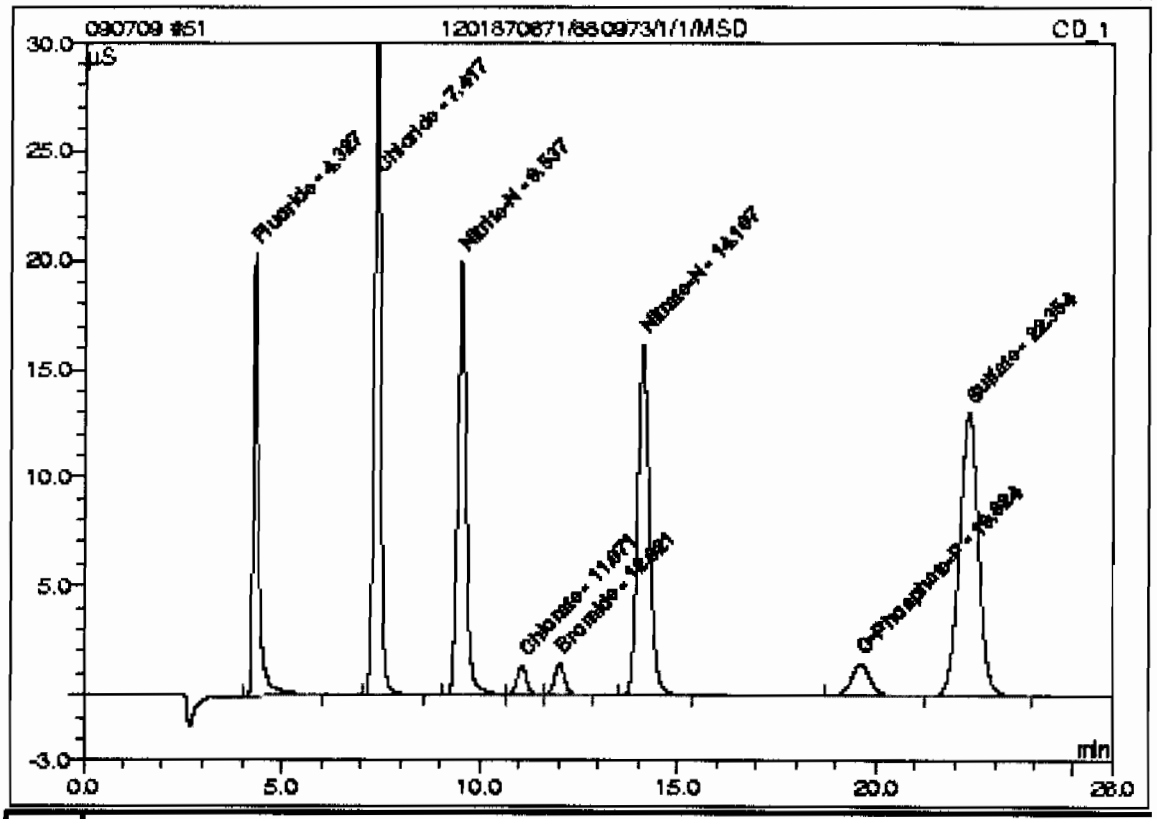

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.6019		3.16098	11.00
2	7.42	Chloride	n.a.	11.2641		5.96255	20.75
3	9.54	Nitrite-N	n.a.	4.7189		4.89327	17.03
4	11.07	Chlorate	n.a.	2.4786		0.40474	1.41
5	12.02	Bromide	n.a.	2.4055		0.44269	1.54
6	14.11	Nitrate-N	n.a.	4.6680		5.68498	19.79
7	19.62	O-Phosphate-P	n.a.	2.2612		0.82615	2.88
8	22.35	Sulfate	n.a.	20.6516		7.35681	25.60
Total:				53.0496	0.000	28.732	100.00

53 WIC090709-02CVH

Sample Name:	**WIC090709-02CVH**	*Injection Volume:*	1.0
Vial Number:	48	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	**AS23**	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10.09 7:25	Analyst:	**MAR1**
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

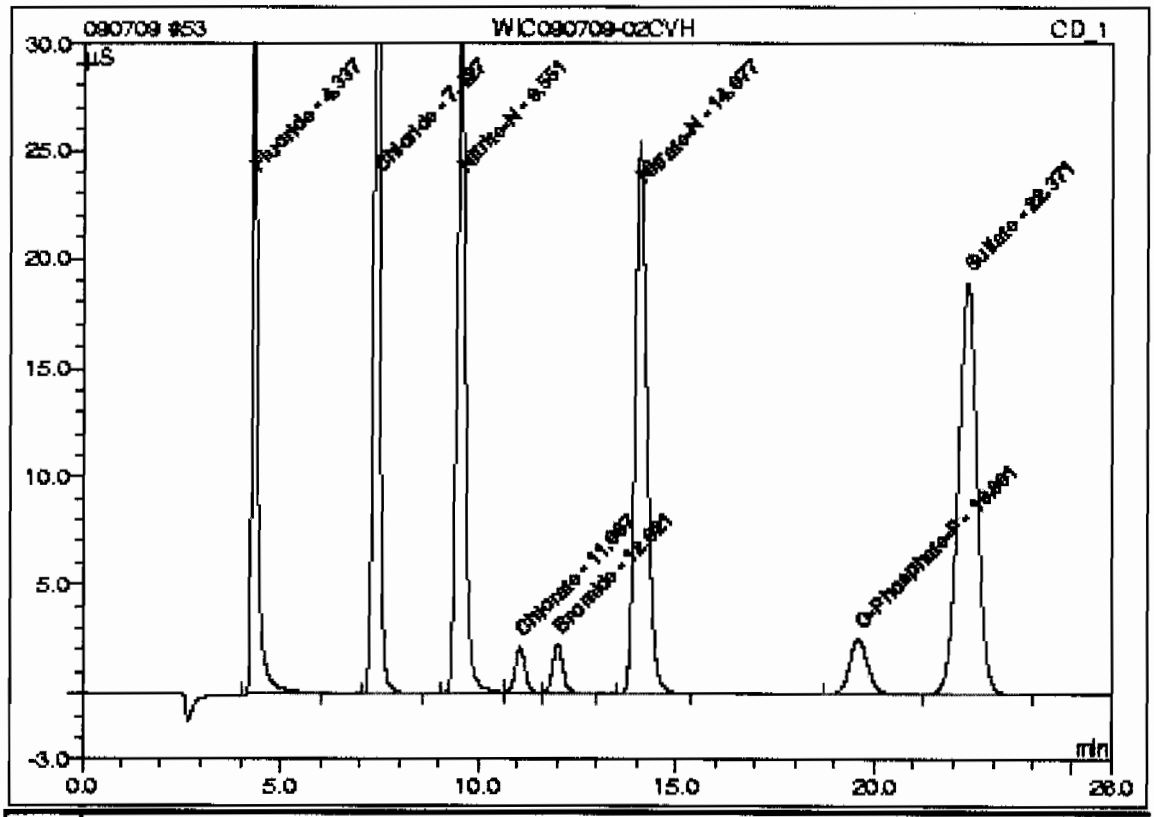

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	n.a.	7.5369		5.20617	12.10
2	7.43	Chloride	n.a.	14.7045		7.81849	18.17
3	9.55	Nitrite-N	n.a.	7.4596		7.77156	18.06
4	11.07	Chlorate	n.a.	3.8962		0.63807	1.48
5	12.02	Bromide	n.a.	3.7394		0.69114	1.61
6	14.08	Nitrate-N	n.a.	7.3244		8.99165	20.89
7	19.60	O-Phosphate-P	n.a.	3.7621		1.38540	3.22
8	22.37	Sulfate	n.a.	29.4349		10.53620	24.48
Total:				77.8579	0.000	43.039	100.00

54 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 7:54	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

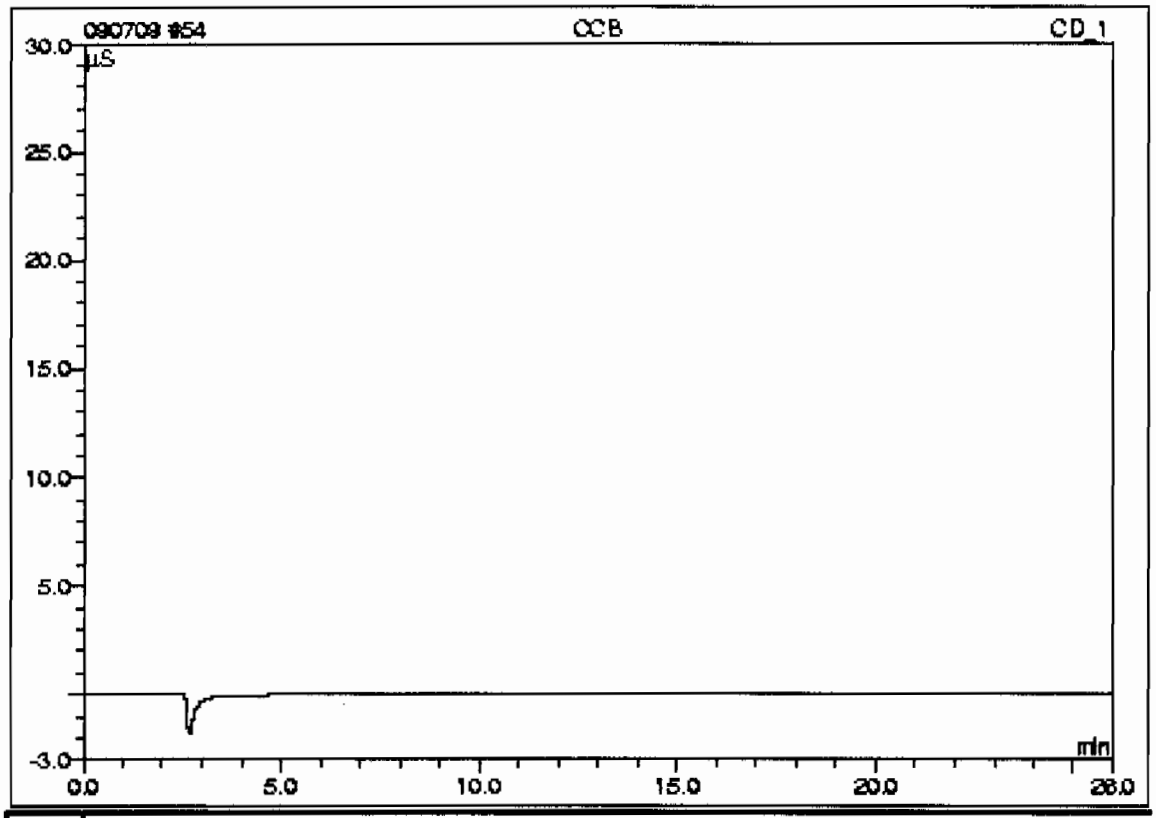

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

pH

pH / Corrosivity LogBook

Analyst: RXG2
Batch: 881124
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201871139	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201871139 LCS		Soil	11:00	11:05	29-JUN-09 12:15	pH	20	20	7.03	21.4'C	7	100.429	
1201871139 LCS		Soil	11:00	11:05	29-JUN-09 12:15	pH 2	20	20	7.03	21.4'C	7	100.429	
232424001		Soil	11:00	11:05	29-JUN-09 12:15	pH	20	20	9.17	22.1'C			
232424001		Soil	11:00	11:05	29-JUN-09 12:15	pH 2	20	20	9.18	22.1'C			
1201871137 DUP	232424001	Soil	11:00	11:05	29-JUN-09 12:20	pH	20	20	8.89	21.8'C			3.101
1201871137 DUP	232424001	Soil	11:00	11:05	29-JUN-09 12:20	pH 2	20	20	8.89	21.8'C			3.21
232426001		Soil	11:00	11:05	29-JUN-09 12:21	pH	20	20	7.79	21.8'C			
232426001		Soil	11:00	11:05	29-JUN-09 12:21	pH 2	20	20	7.79	21.8'C			
1201871138 DUP	232426001	Soil	11:00	11:05	29-JUN-09 12:23	pH	20	20	7.98	21.7'C			2.41
1201871138 DUP	232426001	Soil	11:00	11:05	29-JUN-09 12:23	pH 2	20	20	7.97	21.7'C			2.284
CCV			11:00	11:05	29-JUN-09 12:25	pH	20	20	7.02	21.6'C	7	100.286	
CCV			11:00	11:05	29-JUN-09 12:25	pH 2	20	20	7.02	21.6'C	7	100.286	
232426002		Soil	11:00	11:05	29-JUN-09 12:28	pH	20	20	8.56	21.8'C			
232426002		Soil	11:00	11:05	29-JUN-09 12:28	pH 2	20	20	8.57	21.8'C			
232429001		Soil	11:00	11:05	29-JUN-09 12:28	pH	20	20	8.27	21.7'C			
232429001		Soil	11:00	11:05	29-JUN-09 12:28	pH 2	20	20	8.28	21.7'C			
232429002		Soil	11:00	11:05	29-JUN-09 12:30	pH	20	20	7.24	21.6'C			
232429002		Soil	11:00	11:05	29-JUN-09 12:30	pH 2	20	20	7.24	21.6'C			
232429003		Soil	11:00	11:05	29-JUN-09 12:33	pH	20	20	8.04	21.4'C			
232429003		Soil	11:00	11:05	29-JUN-09 12:33	pH 2	20	20	8.05	21.5'C			
232429004		Soil	11:00	11:05	29-JUN-09 12:36	pH	20	20	7.97	21.4'C			
232429004		Soil	11:00	11:05	29-JUN-09 12:36	pH 2	20	20	7.98	21.4'C			
CCV			11:00	11:05	29-JUN-09 12:37	pH	20	20	7.02	21.7'C	7	100.286	
CCV			11:00	11:05	29-JUN-09 12:37	pH 2	20	20	7.03	21.7'C	7	100.429	
232429005		Soil	11:00	11:05	29-JUN-09 12:42	pH	20	20	7.85	21.7'C			
232429005		Soil	11:00	11:05	29-JUN-09 12:42	pH 2	20	20	7.84	21.7'C			
232429006		Soil	11:00	11:05	29-JUN-09 12:42	pH	20	20	7.3	21.6'C			
232429006		Soil	11:00	11:05	29-JUN-09 12:42	pH 2	20	20	7.3	21.6'C			

pH / Corrosivity LogBook

Analyst: RXG2
Batch: 881124
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201871139	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
232429007		Soil	11:00	11:05	29-JUN-09 12:43	pH	20	20	7.62	21.6'C			
232429007		Soil	11:00	11:05	29-JUN-09 12:43	pH 2	20	20	7.62	21.6'C			
232429008		Soil	11:00	11:05	29-JUN-09 12:45	pH	20	20	6.77	21.7'C			
232429008		Soil	11:00	11:05	29-JUN-09 12:45	pH 2	20	20	6.77	21.7'C			
232429009		Soil	11:00	11:05	29-JUN-09 12:48	pH	20	20	7.11	21.5'C			
232429009		Soil	11:00	11:05	29-JUN-09 12:48	pH 2	20	20	7.12	21.5'C			
CCV			11:00	11:05	29-JUN-09 12:49	pH	20	20	7.03	21.8'C	7	100.429	
CCV			11:00	11:05	29-JUN-09 12:49	pH 2	20	20	7.03	21.7'C	7	100.429	
232429010		Soil	11:00	11:05	29-JUN-09 12:52	pH	20	20	6.38	21.7'C			
232429010		Soil	11:00	11:05	29-JUN-09 12:52	pH 2	20	20	6.38	21.7'C			
232429011		Soil	11:00	11:05	29-JUN-09 12:52	pH	20	20	7.88	21.4'C			
232429011		Soil	11:00	11:05	29-JUN-09 12:52	pH 2	20	20	7.88	21.4'C			
232429012		Soil	11:00	11:05	29-JUN-09 12:53	pH	20	20	6.56	20.7'C			
232429012		Soil	11:00	11:05	29-JUN-09 12:53	pH 2	20	20	6.56	20.7'C			
232429013		Soil	11:00	11:05	29-JUN-09 12:54	pH	20	20	6.9	21.3'C			
232429013		Soil	11:00	11:05	29-JUN-09 12:54	pH 2	20	20	6.91	21.3'C			
232429014		Soil	11:00	11:05	29-JUN-09 12:56	pH	20	20	7.53	20.9'C			
232429014		Soil	11:00	11:05	29-JUN-09 12:56	pH 2	20	20	7.52	20.9'C			
CCV			11:00	11:05	29-JUN-09 12:58	pH	20	20	7.03	20.7'C	7	100.429	
CCV			11:00	11:05	29-JUN-09 12:58	pH 2	20	20	7.03	20.7'C	7	100.429	
232429015		Soil	11:00	11:05	29-JUN-09 13:00	pH	20	20	7.28	20.7'C			
232429015		Soil	11:00	11:05	29-JUN-09 13:00	pH 2	20	20	7.28	20.7'C			
CCV			11:00	11:05	29-JUN-09 13:00	pH	20	20	7.01	20.9'C	7	100.143	
CCV			11:00	11:05	29-JUN-09 13:00	pH 2	20	20	7.01	20.9'C	7	100.143	

Comments:

pH / Corrosivity LogBook

Calibration Information:
Run Date: 29-JUN-09 12:11
Instrument: PHX742
Analyst: RXG2

Standard	Observed	Theoretical		C	%Recovery
IMM090629-PH1	4.01	4	SU	21.6	100.25
IMM090629-PH-	7.01	7	SU	21.7	100.14
UPH090629b3-2	10.02	10	SU	21.7	100.2
UPH090629-03e-	2.08	2	SU	21.5	104
090629F30-2	11.94	12	SU	21.5	99.5
IMM090629g3-2	7.01	7	SU	21.5	100.14

Miscellaneous

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
10-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
IC	EPA 300.0	Solid	LANL
Batch ID:	**Sample Numbers:**		
880973	See Below		

Potentially affected work order(s)(SDG): 232424(09-2473),232426(09-2475)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/MSD: QC 1201870670MS, 1201870671MSD	1. The MS and MSD recoveries fall outside of the GEL acceptance limits but within the client specified limits.

Originator's Name:

Mary Sherwood 10-JUL-09

Data Validator/Group Leader:

Julia Hamilton 10-JUL-09

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2473-1

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881036	**Method:**	SW846 9012A
Prep Batch :	881035	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232425001	CAMO-09-10468
1201870882	Method Blank (MB)
1201870883	232370001(CAMO-09-6053) Sample Duplicate (DUP)
1201870884	232341002(CAMO-09-10819) Sample Duplicate (DUP)
1201870885	232370001(CAMO-09-6053) Matrix Spike (MS)
1201870886	232341002(CAMO-09-10819) Matrix Spike (MS)
1201870887	232370001(CAMO-09-6053) Matrix Spike Duplicate (MSD)
1201870888	232341002(CAMO-09-10819) Matrix Spike Duplicate (MSD)
1201870889	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within

acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232341002 (CAMO-09-10819) and 232370001 (CAMO-09-6053).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201870883 (CAMO-09-6053) and 1201870884 (CAMO-09-10819).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis

The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation

An NCR was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product: **Nitrate Nitrite by Cadmium Reduction**

Analytical Batch: 881227 **Method:** EPA 353.2

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 353.2:

Sample ID	Client ID
232425001	CAMO-09-10468
1201871446	Method Blank (MB)
1201871447	232370001(CAMO-09-6053) Sample Duplicate (DUP)
1201871448	232370001(CAMO-09-6053) Post Spike (PS)
1201871449	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-128 REV# 5.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8500 Series.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232370001 (CAMO-09-6053).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recovery for this sample set was within the required acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following samples in this sample group were diluted due to matrix interference: 1201871447 (CAMO-09-6053), 1201871448 (CAMO-09-6053) and 232425001 (CAMO-09-10468).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 16July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2473-1 GEL Work Order: 232425

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2473-1

Client Sample ID:	CAMO-09-10468	Project:	LANL01004
Sample ID:	232425001	Client ID:	LANL010
Matrix:	W		
Collect Date:	23-JUN-09 12:00		
Receive Date:	26-JUN-09		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal										
SW9012A Cyanide, Total "As Received"										
Cyanide, Total	J	2.25	1.66	5.00	ug/L	1	AXC2 07/02/09	0947	881036	1
Nutrient Analysis										
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"										
Nitrogen, Nitrate/Nitrite	J	0.0775	0.050	0.250	mg/L	5	AXH3 06/29/09	1453	881227	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0847	881035

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 10, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232425

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Flow Injection Analysis											
Batch 881036											
QC1201870883 232370001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)	AXC2	07/02/09 09:41
QC1201870884 232341002 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)		07/02/09 09:37
QC1201870889 LCS											
Cyanide, Total	50.0				51.2	ug/L		102	(90%-110%)		07/02/09 09:35
QC1201870882 MB											
Cyanide, Total				U	5.00	ug/L					07/02/09 09:34
QC1201870885 232370001 MS											
Cyanide, Total	100	U	ND		103	ug/L		103	(60%-127%)		07/02/09 09:41
QC1201870886 232341002 MS											
Cyanide, Total	100	U	ND		102	ug/L		102	(60%-127%)		07/02/09 09:38
QC1201870887 232370001 MSD											
Cyanide, Total	100	U	ND		106	ug/L	2.87	106	(0%-20%)		07/02/09 09:42
QC1201870888 232341002 MSD											
Cyanide, Total	100	U	ND		106	ug/L	3.85	106	(0%-20%)		07/02/09 09:39
Nutrient Analysis											
Batch 881227											
QC1201871447 232370001 DUP											
Nitrogen, Nitrate/Nitrite		J	0.059	J	0.0625	mg/L	N/A ^		(+/-0.250)	AXH3	06/29/09 14:45
QC1201871449 LCS											
Nitrogen, Nitrate/Nitrite	1.00				1.02	mg/L		102	(90%-110%)		06/29/09 14:43
QC1201871446 MB											
Nitrogen, Nitrate/Nitrite				J	0.0156	mg/L					06/29/09 14:42
QC1201871448 232370001 PS											
Nitrogen, Nitrate/Nitrite	1.00	J	0.0118		0.949	mg/L		93.7	(90%-110%)		06/29/09 14:47

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range

QC Summary

Workorder: 232425

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 10-JUL-2009 10:56

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2473-1**

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**02-JUL-2009 09:29:22**	**OM_7-2-2009_09-19-36**	**143**	**150**	**95**	**(90%-110%)**	**Yes**
CCV	02-JUL-2009 09:43:39	OM_7-2-2009_09-19-36	95.6	100	96	(90%-110%)	Yes
CCV	02-JUL-2009 09:56:05	OM_7-2-2009_09-19-36	103	100	103	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**02-JUL-2009 09:31:12**	**OM_7-2-2009_09-19-36**	**-1.5**	**5**	**Yes**
CCB	02-JUL-2009 09:45:29	OM_7-2-2009_09-19-36	-1.03	5	Yes
CCB	02-JUL-2009 09:57:55	OM_7-2-2009_09-19-36	-0.586	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 10-JUL-2009 10:56

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2473-1**

Nutrient Analysis

Method: EPA 353.2 Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8500 Series

Parmname: Nitrogen, Nitrate/Nitrite

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**29-JUN-2009 13:53:21**	**OM_6-29-2009_13-43-51**	**0.987**	**1**	**99**	**(90%-110%)**	**Yes**
CCV	29-JUN-2009 14:31:35	OM_6-29-2009_13-43-51	1.06	1	106	(90%-110%)	Yes
CCV	29-JUN-2009 14:48:18	OM_6-29-2009_13-43-51	1.06	1	106	(90%-110%)	Yes
CCV	29-JUN-2009 14:57:47	OM_6-29-2009_13-43-51	1.06	1	106	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**29-JUN-2009 13:55:42**	**OM_6-29-2009_13-43-51**	**0.00502**	**0.05**	**Yes**
CCB	29-JUN-2009 14:33:56	OM_6-29-2009_13-43-51	0.00474	0.05	Yes
CCB	29-JUN-2009 14:50:40	OM_6-29-2009_13-43-51	0.00488	0.05	Yes
CCB	29-JUN-2009 15:00:09	OM_6-29-2009_13-43-51	0.00491	0.05	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881035

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870889	URF1091135-02	.0125	mL
MS	1201870885	URF1091135-02	.025	mL
MS	1201870886	URF1091135-02	.025	mL
MSD	1201870887	URF1091135-02	.025	mL
MSD	1201870888	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870882		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
LCS	1201870889		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232341002		EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
DUP	1201870884	232341002	EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
MS	1201870886	232341002	EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
MSD	1201870888	232341002	EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
SAMPLE	232370001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
DUP	1201870883	232370001	SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
MS	1201870885	232370001	SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
MSD	1201870887	232370001	SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232425001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232432001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232482002		EPA 335.4	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232510001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090702-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/2/2009 9:22:13	OM_7-2-2009_09-19-36
150 ppb		1	axc2	7/2/2009 9:23:04	OM_7-2-2009_09-19-36
100 ppb		1	axc2	7/2/2009 9:23:57	OM_7-2-2009_09-19-36
50 ppb		1	axc2	7/2/2009 9:24:50	OM_7-2-2009_09-19-36
10 ppb		1	axc2	7/2/2009 9:25:43	OM_7-2-2009_09-19-36
CRDL 5.0 ppb		1	axc2	7/2/2009 9:26:37	OM_7-2-2009_09-19-36
ICAL-00		1	axc2	7/2/2009 9:27:31	OM_7-2-2009_09-19-36
ICV		1	axc2	7/2/2009 9:29:22	OM_7-2-2009_09-19-36
ICB		1	axc2	7/2/2009 9:31:12	OM_7-2-2009_09-19-36
CRDL		1	axc2	7/2/2009 9:33:01	OM_7-2-2009_09-19-36
1201870882	881036	1	axc2	7/2/2009 9:34:51	OM_7-2-2009_09-19-36
1201870889	881036	1	axc2	7/2/2009 9:35:44	OM_7-2-2009_09-19-36
232341002	881036	1	axc2	7/2/2009 9:36:37	OM_7-2-2009_09-19-36
1201870884	881036	1	axc2	7/2/2009 9:37:31	OM_7-2-2009_09-19-36
1201870886	881036	1	axc2	7/2/2009 9:38:24	OM_7-2-2009_09-19-36
1201870888	881036	1	axc2	7/2/2009 9:39:17	OM_7-2-2009_09-19-36
232370001	881036	1	axc2	7/2/2009 9:40:09	OM_7-2-2009_09-19-36
1201870883	881036	1	axc2	7/2/2009 9:41:02	OM_7-2-2009_09-19-36
1201870885	881036	1	axc2	7/2/2009 9:41:55	OM_7-2-2009_09-19-36
1201870887	881036	1	axc2	7/2/2009 9:42:47	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:43:39	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:45:29	OM_7-2-2009_09-19-36
232425001	881036	1	axc2	7/2/2009 9:47:17	OM_7-2-2009_09-19-36
232432001	881036	1	axc2	7/2/2009 9:48:10	OM_7-2-2009_09-19-36
232482002	881036	1	axc2	7/2/2009 9:49:02	OM_7-2-2009_09-19-36
232510001	881036	1	axc2	7/2/2009 9:49:54	OM_7-2-2009_09-19-36
1201871532	881270	1	axc2	7/2/2009 9:50:45	OM_7-2-2009_09-19-36
1201871536	881270	50	axc2	7/2/2009 9:51:39	OM_7-2-2009_09-19-36
232465001	881270	1	axc2	7/2/2009 9:52:32	OM_7-2-2009_09-19-36
232509006	881270	1	axc2	7/2/2009 9:53:26	OM_7-2-2009_09-19-36
1201871533	881270	1	axc2	7/2/2009 9:54:19	OM_7-2-2009_09-19-36
1201871534	881270	1	axc2	7/2/2009 9:55:12	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:56:05	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:57:55	OM_7-2-2009_09-19-36
1201871535	881270	1	axc2	7/2/2009 9:59:45	OM_7-2-2009_09-19-36
232582001	881270	1	axc2	7/2/2009 10:00:37	OM_7-2-2009_09-19-36
232582002	881270	1	axc2	7/2/2009 10:01:30	OM_7-2-2009_09-19-36
232585001	881270	1	axc2	7/2/2009 10:02:23	OM_7-2-2009_09-19-36
232585002	881270	1	axc2	7/2/2009 10:03:15	OM_7-2-2009_09-19-36
232585003	881270	1	axc2	7/2/2009 10:04:07	OM_7-2-2009_09-19-36
232591001	881270	1	axc2	7/2/2009 10:05:00	OM_7-2-2009_09-19-36
1201871541	881272	1	axc2	7/2/2009 10:05:51	OM_7-2-2009_09-19-36
1201871543	881272	1	axc2	7/2/2009 10:06:44	OM_7-2-2009_09-19-36
232465001	881272	1	axc2	7/2/2009 10:07:35	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:08:28	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:10:18	OM_7-2-2009_09-19-36
1201871542	881272	1	axc2	7/2/2009 10:12:09	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:13:01	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:14:52	OM_7-2-2009_09-19-36

Author: axc2 Date : 7/2/2009

Original Run Filename: OM_7-2-2009_09-19-36.OMN created 7/2/2009 09:19:36
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-2-2009_09-19-36.OMN last modified 7/2/2009 10:15:57
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090702-01	1	S1	200	8.98	7/2/2009@09:22:13			200 ppb
WCN090702-02	1	S2	150	6.83	7/2/2009@09:23:04			150 ppb
WCN090702-03	1	S3	100	4.37	7/2/2009@09:23:57			100 ppb
WCN090702-04	1	S4	50.0	2.32	7/2/2009@09:24:50			50 ppb
WCN090702-05	1	S5	10.0	0.586	7/2/2009@09:25:43			10 ppb
WCN090702-06	1	S6	5.00	0.295	7/2/2009@09:26:37			CRDL 5.0 ppb
WCN090702-08	1	S7	0.00	0.0308	7/2/2009@09:27:31			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99974 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090702-07	1	S8	143	6.45	7/2/2009@09:29:22			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090702-08	1	S7	-1.50	-3.75e-4	7/2/2009@09:31:12			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.50 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.50 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090702-06	1	S6	5.03	0.291	7/2/2009@09:33:01			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	5.03 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	5.03 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870882|881036|MB	1	1	0.440	0.0860	7/2/2009@09:34:51			
1201870889||LCS	1	2	51.2	2.35	7/2/2009@09:35:44			
232341002	1	3	-0.350	0.0509	7/2/2009@09:36:37			
1201870884||DUP	1	4	0.739	0.0994	7/2/2009@09:37:31			
1201870886||MS	1	5	102	4.60	7/2/2009@09:38:24			
1201870888||MSD	1	6	106	4.80	7/2/2009@09:39:17			
232370001	1	7	0.145	0.0729	7/2/2009@09:40:09			
1201870883||DUP	1	8	-0.522	0.0432	7/2/2009@09:41:02			
1201870885||MS	1	9	103	4.66	7/2/2009@09:41:55			
1201870887||MSD	1	10	106	4.79	7/2/2009@09:42:47			
WCN090702-03	1	S3	95.6	4.32	7/2/2009@09:43:39			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-4.4 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.03	0.0204	7/2/2009@09:45:29			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.03 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.03 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232425001	1	11	2.25	0.167	7/2/2009@09:47:17			
232432001	1	12	0.839	0.104	7/2/2009@09:48:10			
232482002	1	13	3.65	0.229	7/2/2009@09:49:02			
232510001	1	14	-0.112	0.0615	7/2/2009@09:49:54			
1201871532|881270|MB	1	15	3.33	0.215	7/2/2009@09:50:45			
1201871536||LCS	1	16	35.0	1.62	7/2/2009@09:51:39		50.00	
232465001	1	17	7.81	0.414	7/2/2009@09:52:32			
232509006	1	18	3.82	0.237	7/2/2009@09:53:26			
1201871533||DUP	1	19	4.04	0.246	7/2/2009@09:54:19			
1201871534||MS	1	20	105	4.73	7/2/2009@09:55:12			
WCN090702-03	1	S3	103	4.64	7/2/2009@09:56:05			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-0.586	0.0403	7/2/2009@09:57:55			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.586 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.586 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201871535||MSD	1	21	99.2	4.49	7/2/2009@09:59:45			
232582001	1	22	0.545	0.0907	7/2/2009@10:00:37			
232582002	1	23	3.17	0.208	7/2/2009@10:01:30			
232585001	1	24	0.846	0.104	7/2/2009@10:02:23			
232585002	1	25	4.51	0.267	7/2/2009@10:03:15			
232585003	1	26	1.34	0.126	7/2/2009@10:04:07			
232591001	1	27	1.16	0.118	7/2/2009@10:05:00			
1201871541|881272|MB	1	28	-0.342	0.0512	7/2/2009@10:05:51			
1201871543||LCS	1	29	0.253	0.0777	7/2/2009@10:06:44			
232465001	1	30	27.3	1.28	7/2/2009@10:07:35			
WCN090702-03	1	S3	102	4.62	7/2/2009@10:08:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.57	-0.00337	7/2/2009@10:10:18			CCB
		Known Conc:	0.00					

DQM Test: > + Concentration Limit								
Result:			-1.57 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.57 > -5.00					
Message			CCB Passed					
Action			Continue					
1201871542||DUP	1	31	48.0	2.20	7/2/2009@10:12:09			
WCN090702-03	1	S3	108	4.87	7/2/2009@10:13:01			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			7.7 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			7.7 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN090702-08	1	S7	-0.342	0.0512	7/2/2009@10:14:52			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-0.342 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-0.342 > -5.00					
Message			CCB Passed					
Action			Continue					

Analyte Properties Table for OM_7-2-2009_09-19-36.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2

Date : 7/2/2009

Channel 1: Current View

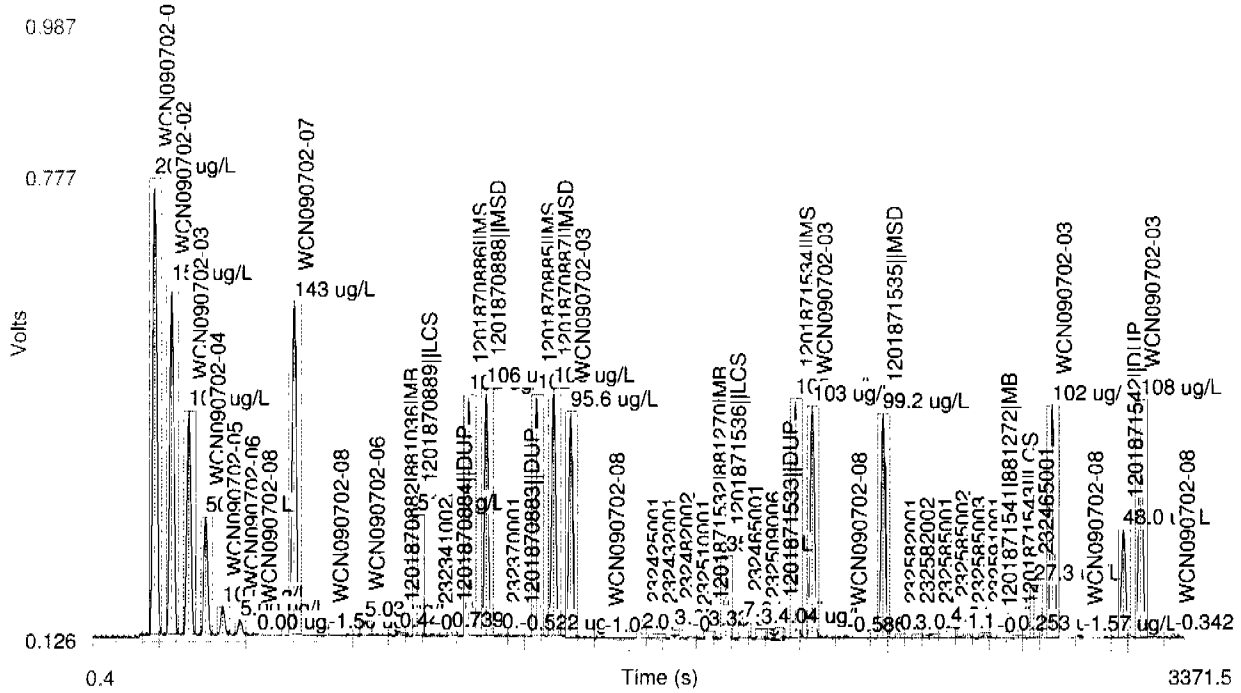

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.98	0.640	-0.0	7/2/2009	09:23:15
2	150	1	6.83	0.489	-1.3	7/2/2009	09:24:07
3	100	1	4.37	0.313	3.4	7/2/2009	09:25:00
4	50.0	1	2.32	0.165	-1.2	7/2/2009	09:25:53
5	10.0	1	0.586	0.0398	-14.0	7/2/2009	09:26:46
6	5.00	1	0.295	0.0201	-1.4	7/2/2009	09:27:40
7	0.00	1	0.0308	8.07e-4		7/2/2009	09:28:34

Figure 1: TCYANIDE

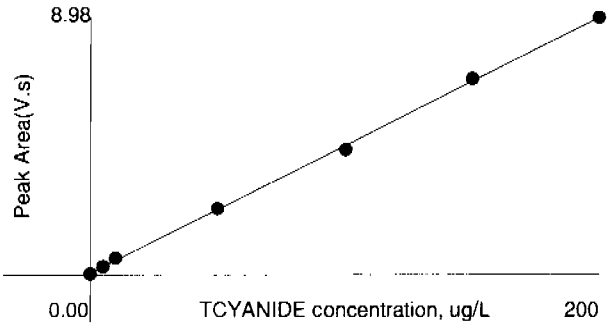

Area = 0.0445 * Conc + 0.0682
Conc = 22.4 * Area - 1.49
Correlation Coefficient (r) = 0.99974

No Weighting

Nitrate Nitrite by Cadmium Reduction

This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
		1	axh3	6/29/2009 13:44:53	OM_6-29-2009_13-43-51
1.0 PPM		1	axh3	6/29/2009 13:46:05	OM_6-29-2009_13-43-51
0.5 ppm		1	axh3	6/29/2009 13:47:18	OM_6-29-2009_13-43-51
0.1 ppm		1	axh3	6/29/2009 13:48:31	OM_6-29-2009_13-43-51
0.05 ppm		1	axh3	6/29/2009 13:49:44	OM_6-29-2009_13-43-51
ICAL-00		1	axh3	6/29/2009 13:50:58	OM_6-29-2009_13-43-51
1.0 ppm ICV		1	axh3	6/29/2009 13:53:21	OM_6-29-2009_13-43-51
ICB		1	axh3	6/29/2009 13:55:42	OM_6-29-2009_13-43-51
Nitrate 1.0 ppm		1	axh3	6/29/2009 13:58:02	OM_6-29-2009_13-43-51
Nitrite 1.0 ppm		1	axh3	6/29/2009 14:00:22	OM_6-29-2009_13-43-51
1201870843	881024	1	axh3	6/29/2009 14:02:43	OM_6-29-2009_13-43-51
1201870852	881024	1	axh3	6/29/2009 14:03:56	OM_6-29-2009_13-43-51
231989001	881024	5	axh3	6/29/2009 14:05:09	OM_6-29-2009_13-43-51
1201870844	881024	5	axh3	6/29/2009 14:06:22	OM_6-29-2009_13-43-51
1201870848	881024	5	axh3	6/29/2009 14:07:34	OM_6-29-2009_13-43-51
231989002	881024	5	axh3	6/29/2009 14:08:47	OM_6-29-2009_13-43-51
231989003	881024	5	axh3	6/29/2009 14:09:59	OM_6-29-2009_13-43-51
231989004	881024	5	axh3	6/29/2009 14:11:12	OM_6-29-2009_13-43-51
231989005	881024	5	axh3	6/29/2009 14:12:24	OM_6-29-2009_13-43-51
231989006	881024	5	axh3	6/29/2009 14:13:37	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:14:49	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 14:17:10	OM_6-29-2009_13-43-51
231989007	881024	5	axh3	6/29/2009 14:19:30	OM_6-29-2009_13-43-51
231989008	881024	5	axh3	6/29/2009 14:20:43	OM_6-29-2009_13-43-51
232341002	881024	5	axh3	6/29/2009 14:21:54	OM_6-29-2009_13-43-51
232435002	881024	5	axh3	6/29/2009 14:23:06	OM_6-29-2009_13-43-51
1201870847	881024	5	axh3	6/29/2009 14:24:17	OM_6-29-2009_13-43-51
1201870851	881024	5	axh3	6/29/2009 14:25:30	OM_6-29-2009_13-43-51
232437001	881024	25	axh3	6/29/2009 14:26:44	OM_6-29-2009_13-43-51
1201870846	881024	25	axh3	6/29/2009 14:27:57	OM_6-29-2009_13-43-51
1201870850	881024	25	axh3	6/29/2009 14:29:10	OM_6-29-2009_13-43-51
232468001	881024	1	axh3	6/29/2009 14:30:22	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:31:35	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 14:33:56	OM_6-29-2009_13-43-51
232468002	881024	1	axh3	6/29/2009 14:36:17	OM_6-29-2009_13-43-51
232468003	881024	1	axh3	6/29/2009 14:37:29	OM_6-29-2009_13-43-51
232468004	881024	1	axh3	6/29/2009 14:38:42	OM_6-29-2009_13-43-51
232468005	881024	1	axh3	6/29/2009 14:39:54	OM_6-29-2009_13-43-51
232468006	881024	1	axh3	6/29/2009 14:41:06	OM_6-29-2009_13-43-51
1201871446	881227	1	axh3	6/29/2009 14:42:18	OM_6-29-2009_13-43-51
1201871449	881227	1	axh3	6/29/2009 14:43:30	OM_6-29-2009_13-43-51
232370001	881227	5	axh3	6/29/2009 14:44:43	OM_6-29-2009_13-43-51
1201871447	881227	5	axh3	6/29/2009 14:45:54	OM_6-29-2009_13-43-51
1201871448	881227	5	axh3	6/29/2009 14:47:06	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:48:18	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 14:50:40	OM_6-29-2009_13-43-51
232425001	881227	5	axh3	6/29/2009 14:53:01	OM_6-29-2009_13-43-51
232432001	881227	5	axh3	6/29/2009 14:54:14	OM_6-29-2009_13-43-51
232510001	881227	5	axh3	6/29/2009 14:55:27	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:57:47	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 15:00:09	OM_6-29-2009_13-43-51

Author: lachat

Date : 6/29/2009

Original Run Filename: OM_6-29-2009_13-43-51.OMN created 6/29/2009 13:43:51
Original Run Author's Signature: [lachat]
Current Run Filename: OM_6-29-2009_13-43-51.OMN last modified 6/29/2009 15:01:31
Current Run Author's Signature: [lachat]
Description: EPA 353.2
Cadmium Colum 9057AAJ
LCS nominal 1.0 mg/L

Sample	Rep.	Cup No.	Channel 1 NO3 + NO2 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR090629-26	1	S9	1.50	16.4	6/29/2009@13:44:53			
WTR090629-25	1	S10	1.00	11.9	6/29/2009@13:46:05			1.0 PPM
WTR090629-24	1	S11	0.500	5.59	6/29/2009@13:47:18			0.5 ppm
WTR090629-23	1	S12	0.100	1.10	6/29/2009@13:48:31			0.1 ppm
WTR090629-21	1	S13	0.0500	0.203	6/29/2009@13:49:44			0.05 ppm
0.0ppm	1	S15	0.00	-0.0163	6/29/2009@13:50:58			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99837 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR090629-27 ICV	1	S16	0.987	11.1	6/29/2009@13:53:21			1.0 ppm ICV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.987 < 1.10					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.987 > 0.894					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
ICB	1	S15	0.00502	-0.0144	6/29/2009@13:55:42			ICB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00502 < 0.0500					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00502 > -0.0500					
		Message	ICB Passed					
		Action	Continue					
WTR090629-22	1	S1	0.987	11.1	6/29/2009@13:58:02			Nitrate 1.0 ppm
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.987 < 1.10					
		Message	Nitrate Standard Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.987 > 0.894					
		Message	Nitrate Standard Passed					
		Action	Continue					
WTR090629-28	1	S2	0.964	10.8	6/29/2009@14:00:22			Nitrite 1.0 ppm
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.964 < 1.10					
		Message	Nitrite Standard Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.964 > 0.894					
		Message	Nitrite Standard Passed					
		Action	Continue					
1201870843|881024|MB	1	1	0.0159	0.109	6/29/2009@14:02:43			
1201870852||LCS	1	2	1.02	11.4	6/29/2009@14:03:56			
231989001	1	3	0.141	1.53	6/29/2009@14:05:09		5.00	
1201870844||DUP	1	4	0.137	1.48	6/29/2009@14:06:22		5.00	
1201870848||PS	1	5	1.09	12.3	6/29/2009@14:07:34		5.00	

231989002	1	6	0.270	2.98	6/29/2009@14:08:47	5.00	
231989003	1	7	0.181	1.97	6/29/2009@14:09:59	5.00	
231989004	1	8	0.181	1.97	6/29/2009@14:11:12	5.00	
231989005	1	9	0.0120	0.0641	6/29/2009@14:12:24	5.00	
231989006	1	10	0.353	3.91	6/29/2009@14:13:37	5.00	
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:14:49		1.0 ppm CCV
	Known Conc:		1.00				
DQM Test: > + Concentration Limit							
Result:			1.06 < 1.10				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			1.06 > 0.894				
Message			CCV Passed				
Action			Continue				
CCB	1	S15	0.00506	-0.0140	6/29/2009@14:17:10		CCB
	Known Conc:		0.00				
DQM Test: > + Concentration Limit							
Result:			0.00506 < 0.0500				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.00506 > -0.0500				
Message			CCB Passed				
Action			Continue				
231989007	1	11	0.390	4.33	6/29/2009@14:19:30	5.00	
231989008	1	12	0.181	1.98	6/29/2009@14:20:43	5.00	
232341002	1	13	0.0717	0.738	6/29/2009@14:21:54	5.00	
232435002	1	14	0.0893	0.937	6/29/2009@14:23:06	5.00	
1201870847||DUP	1	15	0.0862	0.902	6/29/2009@14:24:17	5.00	
1201870851||PS	1	16	1.04	11.7	6/29/2009@14:25:30	5.00	
232437001	1	17	0.554	6.18	6/29/2009@14:26:44	25.00	
1201870846||DUP	1	18	0.522	5.82	6/29/2009@14:27:57	25.00	
1201870850||PS	1	19	1.47	16.5	6/29/2009@14:29:10	25.00	
232468001	1	20	-0.0137	-0.226	6/29/2009@14:30:22		
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:31:35		1.0 ppm CCV
	Known Conc:		1.00				
DQM Test: > + Concentration Limit							
Result:			1.06 < 1.10				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			1.06 > 0.894				
Message			CCV Passed				
Action			Continue				
CCB	1	S15	0.00474	-0.0176	6/29/2009@14:33:56		CCB
	Known Conc:		0.00				
DQM Test: > + Concentration Limit							
Result:			0.00474 < 0.0500				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.00474 > -0.0500				
Message			CCB Passed				
Action			Continue				
232468002	1	21	-0.0206	-0.304	6/29/2009@14:36:17		
232468003	1	22	-0.0214	-0.313	6/29/2009@14:37:29		
232468004	1	23	-0.0176	-0.270	6/29/2009@14:38:42		
232468005	1	24	0.0207	0.163	6/29/2009@14:39:54		
232468006	1	25	0.0212	0.169	6/29/2009@14:41:06		
1201871446|881227|MB	1	26	0.0156	0.105	6/29/2009@14:42:18		
1201871449||LCS	1	27	1.02	11.5	6/29/2009@14:43:30		
232370001	1	28	0.0118	0.0627	6/29/2009@14:44:43	5.00	
1201871447||DUP	1	29	0.0125	0.0700	6/29/2009@14:45:54	5.00	
1201871448||PS	1	30	0.949	10.6	6/29/2009@14:47:06	5.00	
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:48:18		1.0 ppm CCV
	Known Conc:		1.00				
DQM Test: > + Concentration Limit							

		Result:	1.06 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.06 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00488	-0.0160	6/29/2009@14:50:40			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00488 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00488 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
232425001	1	31	0.0155	0.104	6/29/2009@14:53:01		5.00	
232432001	1	32	0.0130	0.0755	6/29/2009@14:54:14		5.00	
232510001	1	33	0.0126	0.0714	6/29/2009@14:55:27		5.00	
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:57:47			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	1.06 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.06 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00491	-0.0157	6/29/2009@15:00:09			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00491 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00491 > -0.0500					
		Message	CCB Passed					
		Action	Continue					

Author: lachat

Date : 6/29/2009

Channel 1 (NO3 + NO2) : Current View

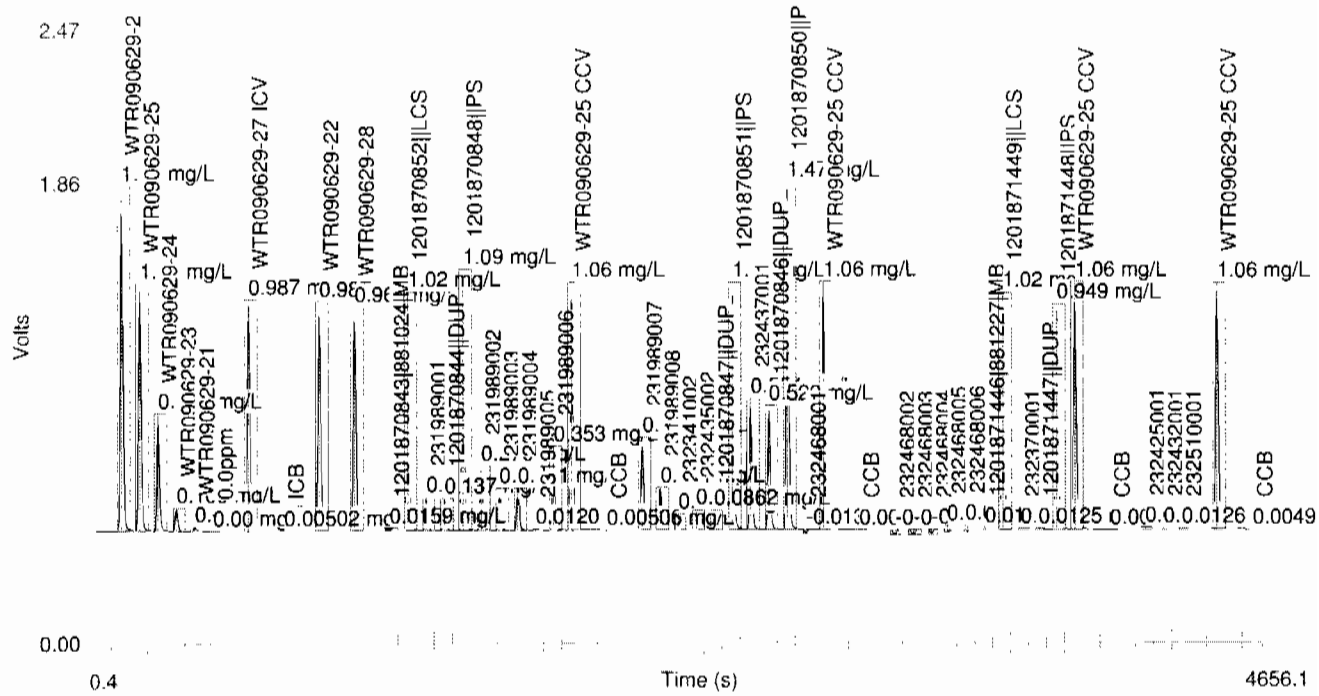

Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	16.4	1.39	2.7	6/29/2009	13:46:13
2	1.00	1	11.9	0.999	-6.1	6/29/2009	13:47:25
3	0.500	1	5.59	0.470	-0.2	6/29/2009	13:48:38
4	0.100	1	1.10	0.0923	-2.6	6/29/2009	13:49:51
5	0.0500	1	0.203	0.0169	60.2	6/29/2009	13:51:04
6	0.00	1	-0.0163	-0.00109		6/29/2009	13:52:18

Figure 1: NO3 + NO2

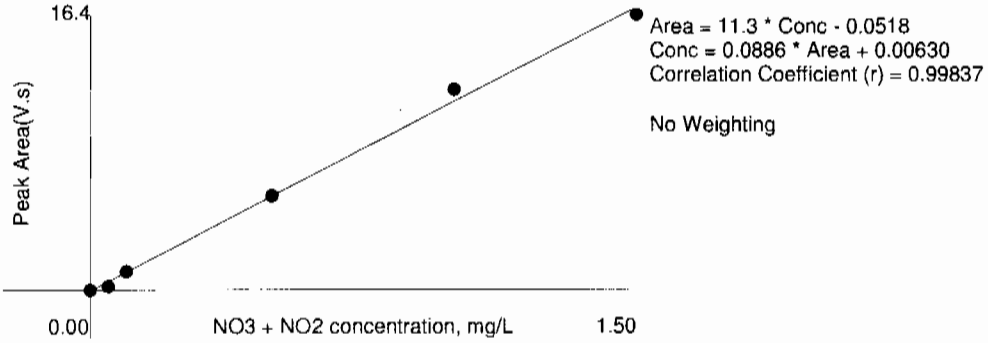

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2473

Method/Analysis Information

Procedure:	**Dry Weight-Percent Moisture**
Analytical Method:	
Analytical Batch Number:	881093

Sample ID	Client ID
232424001	CAMO-09-10463
1201871062	232426001(CAMO-09-7143) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-020 REV# 9.

Calibration Information:

Quality Control (QC) Information:

Designated QC
The following sample was used for QC: 232426001 (CAMO-09-7143). The QC was from LANL work order 232426.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU. Not Applicable.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
Not Applicable. The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882525
Prep Batch Number:	881112

Sample ID	Client ID
232424001	CAMO-09-10463
1201874395	Method Blank (MB)
1201874396	232511006(CAMO-09-6531) Sample Duplicate (DUP)
1201874397	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874395 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232511006 (CAMO-09-6531). The QC was from LANL work order 232511.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOTH**
Analytical Method:	DOE EML HASL-300, Th-01-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882541
Prep Batch Number:	881112

Sample ID	Client ID
232424001	CAMO-09-10463
1201874438	Method Blank (MB)
1201874439	232582002(CAMO-09-10465) Sample Duplicate (DUP)
1201874440	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-038 REV# 12.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874438 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232582002 (CAMO-09-10465). The QC was from LANL work order 232582.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	885014
Prep Batch Number:	881112

Sample ID	Client ID
232424001	CAMO-09-10463
1201880401	Method Blank (MB)
1201880402	232511006(CAMO-09-6531) Sample Duplicate (DUP)
1201880403	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201880401 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232511006 (CAMO-09-6531). The QC was from LANL work order 232511.

QC Information
Refer to Non-Conformance Report.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Batch was reprepped to verify results.

Miscellaneous Information:

NCR Documentation

Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 712253 was generated due to RDL less than MDA, Failed Recovery for Surrogate or Tracer and Other. 1. Samples 232069002, 232076001, 232076002, 232076003, 232424001, 232511002, 232511004, 232511005, and 232511006 do not meet the detection limits for U-235 due to the high standard deviation. 2. Sample 232069002 does not meet the client tracer yield requirements, however it does meet the GEL standard tracer yield requirements and has over 400 tracer counts. The sample was analyzed twice with similar results. 3. Sample 232511003 does not meet the resolution requirements of having a full width half maximum of 100 keV or less, however the tracer yield requirements and detection limits were met. 1. When a blank population is performed, the MDA is greater than the detection limit due to high standard deviation. Reporting results. 2. Project Manager notified. Reporting results. 3. Reporting results.

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

The MDCs are calculated using a blank population.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881219
Prep Batch Number:	881112

Sample ID	Client ID
232424001	CAMO-09-10463
1201871423	Method Blank (MB)
1201871424	232424001(CAMO-09-10463) Sample Duplicate (DUP)
1201871425	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in November 2008, January 2009, May 2009 and June 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232424001 (CAMO-09-10463). The QC was from LANL work order 232424.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank results for the following are greater than 1.65 times the CSU, but less than the minimum detectable activity: U-235. 1201871423 (MB).

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The results for the following were greater than the decision level in the method blank, but less than the minimum detectable activity: Th-234 and U-235. 1201871423 (MB).

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to high peak-width.	Uranium-235	232424001	CAMO-09-10463
UI	Data rejected due to interference.	Bismuth-211	232424001	CAMO-09-10463
			1201871424	CAMO-09-10463(232424001DUP)
		Cadmium-109	232424001	CAMO-09-10463
			1201871424	CAMO-09-10463(232424001DUP)
		Radium-224	232424001	CAMO-09-10463
			1201871424	CAMO-09-10463(232424001DUP)
UI	Data rejected due to low abundance.	Bismuth-214	1201871424	CAMO-09-10463(232424001DUP)
		Cesium-134	232424001	CAMO-09-10463
		Radium-226	1201871424	CAMO-09-10463(232424001DUP)
		Strontium-85	232424001	CAMO-09-10463
			1201871423	MB for batch 881219

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883013

Sample ID	Client ID
232424001	CAMO-09-10463
1201875577	Method Blank (MB)
1201875578	232433003(CAMO-09-6008) Sample Duplicate (DUP)
1201875579	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232433003 (CAMO-09-6008). The QC was from LANL work order 232433.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Sample 1201875578 (CAMO-09-6008) was recounted due to high relative percent difference/relative error ratio.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 7/16/09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 712253
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
16-JUL-09	Radiochemistry	Specifications	Process
Instrument Type: ALPHA SPECTROMETER	**Test / Method:** DOE EML HASL-300, U-02-RC Modified	**Matrix Type:** Solid	**Client Code:** LANL
Batch ID: 885014	**Sample Numbers:** See Below		

Potentially affected work order(s)(SDG): 232045(09-2370),232069(09-2405),232076(09-2394),232424(09-2473),232426(09-2475),232511(09-2501)

Application Issues:

RDL less than MDA

Failed Recovery for Surrogate or Tracer

Other

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Samples 232069002, 232076001, 232076002, 232076003, 232424001, 232511002, 232511004, 232511005, and 232511006 do not meet the detection limits for U-235 due to the high standard deviation.	1. When a blank population is performed, the MDA is greater than the detection limit due to high standard deviation. Reporting results.
2. Sample 232069002 does not meet the client tracer yield requirements, however it does meet the GEL standard tracer yield requirements and has over 400 tracer counts. The sample was analyzed twice with similar results.	2. Project Manager notified. Reporting results.
3. Sample 232511003 does not meet the resolution requirements of having a full width half maximum of 100 keV or less, however the tracer yield requirements and detection limits were met.	3. Reporting results.

Originator's Name:
Jessica Downey 16-JUL-09

Data Validator/Group Leader:
Eric Brimstin 16-JUL-09

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2473 GEL Work Order: 232424

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/14/09

Reviewed by

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 16, 2009

Client Sample ID:	CAMO-09-10463	Project:	LANL01004
Sample ID:	232424001	Client ID:	LANL010
Matrix:	R		
Collect Date:	23-JUN-09		
Receive Date:	26-JUN-09		
Collector:	Client		
Moisture:	4.16%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	-1.47E-10	0.0226	+/-0.00174	0.050	pCi/g		AXD2	07/09/09	1737	882525	2
Plutonium-239/240	U	-0.00369	0.0272	+/-0.00275	0.050	pCi/g						
ISOTH "Dry Weight Corrected"												
Thorium-228		0.822	0.389	+/-0.106	0.100	pCi/g		HAKB	07/08/09	1919	882541	3
Thorium-230		0.437	0.298	+/-0.067	0.100	pCi/g						
Thorium-232		0.759	0.110	+/-0.0951	0.100	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.511	0.290	+/-0.0686	0.100	pCi/g		AXD2	07/15/09	2113	885014	4
Uranium-235/236	U	0.0394	0.133	+/-0.0178	0.100	pCi/g						
Uranium-238		0.350	0.113	+/-0.0555	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.221	0.306	+/-0.0961	0.200	pCi/g		MXR1	07/07/09	0603	881219	7
Bismuth-211	UI	3.10	0.379	+/-0.279		pCi/g						
Bismuth-214		1.01	0.129	+/-0.0988	0.200	pCi/g						
Cadmium-109	UI	2.45	1.65	+/-0.506		pCi/g						
Cerium-139	U	-0.0127	0.0558	+/-0.0165	0.050	pCi/g						
Cesium-134	UI	0.133	0.115	+/-0.030	0.100	pCi/g						
Cesium-137	U	-0.0572	0.0671	+/-0.0226	0.100	pCi/g						
Cobalt-60	U	-0.00257	0.0809	+/-0.0245	0.100	pCi/g						
Europium-152	U	-0.0428	0.196	+/-0.066	0.200	pCi/g						
Lanthanum-140	U	-0.0476	0.165	+/-0.054		pCi/g						
Lead-212		1.55	0.103	+/-0.0837	0.100	pCi/g						
Lead-214		1.08	0.130	+/-0.101	0.100	pCi/g						
Mercury-203	U	0.0241	0.0798	+/-0.0232	0.100	pCi/g						
Potassium-40		36.5	0.537	+/-1.70	1.00	pCi/g						
Radium-223	U	-0.304	1.26	+/-0.391		pCi/g						
Radium-224	UI	3.30	1.18	+/-0.778		pCi/g						
Radium-226		1.01	0.129	+/-0.0988		pCi/g						
Radium-228		1.71	0.264	+/-0.182	0.500	pCi/g						
Ruthenium-106	U	0.328	0.691	+/-0.193	0.800	pCi/g						
Sodium-22	U	0.000929	0.092	+/-0.0276	0.080	pCi/g						
Strontium-85	UI	0.107	0.0856	+/-0.0254		pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 16, 2009

Client Sample ID: CAMO-09-10463
Sample ID: 232424001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Thallium-208		0.512	0.0664	+/-0.0437	0.080	pCi/g						
Thorium-227	U	0.157	0.770	+/-0.225		pCi/g						
Thorium-231	U	-0.304	1.26	+/-0.391		pCi/g						
Thorium-234	U	2.03	2.44	+/-1.24	2.00	pCi/g						
Tin-113	U	-0.0181	0.0854	+/-0.0267	0.100	pCi/g						
Uranium-235	UI	0.424	0.394	+/-0.247	0.500	pCi/g						
Yttrium-88	U	0.00321	0.0532	+/-0.016	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		1140	154	+/-103	250	pCi/L		KXK2	07/14/09	1442	883013	8

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Th-01-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	EML HASL 300, 4.5.2.3
8	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	93.0	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	86.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.0	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.

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Client Sample ID: CAMO-09-10463
Sample ID: 232424001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 16, 2009

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232424

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882525										
QC1201874396 232511006 DUP										
Plutonium-238		2.98		2.92	pCi/g	0.0957		(0-1)	AXD2	07/09/0917:37
TPU:		+/-0.156		+/-0.154						
Yield:		95.5		93.1						
Plutonium-239/240		8.56		8.62	pCi/g	0.0339		(0-1)		
TPU:		+/-0.427		+/-0.431						
Yield:		95.5		93.1						
QC1201874397 LCS										
Plutonium-238				7.39	pCi/g			(75%-125%)		
TPU:				+/-0.521						
Yield:				88.5						
Plutonium-239/240	41.8			40.8	pCi/g		97.6	(75%-125%)		
TPU:				+/-2.41						
Yield:				88.5						
QC1201874395 MB										
Plutonium-238			U	0.00802	pCi/g					
TPU:				+/-0.00622						
Yield:				86.0						
Plutonium-239/240			U	-0.0016	pCi/g					
TPU:				+/-0.00278						
Yield:				86.0						
Batch 882541										
QC1201874439 232582002 DUP										
Thorium-228		1.01		0.898	pCi/g	0.265		(0-1)	HAKB	07/08/0919:19
TPU:		+/-0.111		+/-0.107						
Yield:		97.1		102						
Thorium-230		0.423		0.363	pCi/g	0.246		(0-1)		
TPU:		+/-0.0631		+/-0.0586						
Yield:		97.1		102						
Thorium-232		0.823		0.863	pCi/g	0.103		(0-1)		
TPU:		+/-0.0956		+/-0.0986						
Yield:		97.1		102						
QC1201874440 LCS										
Thorium-228			U	0.939	pCi/g			(75%-125%)		07/08/0919:19
TPU:				+/-0.182						
Yield:				87.3						
Thorium-230	25.6			26.9	pCi/g		105	(75%-125%)		
TPU:				+/-2.17						
Yield:				87.3						
Thorium-232				1.31	pCi/g			(75%-125%)		
TPU:				+/-0.191						
Yield:				87.3						
QC1201874438 MB										
Thorium-228			U	-0.00128	pCi/g					07/08/0919:19

QC Summary

Workorder: 232424

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882541										
	TPU:			+/-0.00693						
	Yield:			86.5						
Thorium-230			U	0.0143	pCi/g					
	TPU:			+/-0.0062						
	Yield:			86.5						
Thorium-232			U	-0.00188	pCi/g					
	TPU:			+/-0.0029						
	Yield:			86.5						
Batch 885014										
QC1201880402 232511006 DUP										
Uranium-233/234		0.906		1.01	pCi/g	0.262		(0-1)	AXD2	07/15/0921:13
	TPU:	+/-0.0998		+/-0.0951						
	Yield:	98.5		93.9						
Uranium-235/236	U	0.0454		0.101	pCi/g	0.614		(0-1)		
	TPU:	+/-0.0216		+/-0.0236						
	Yield:	98.5		93.9						
Uranium-238		1.17		1.13	pCi/g	0.0911		(0-1)		
	TPU:	+/-0.119		+/-0.105						
	Yield:	98.5		93.9						
QC1201880403 LCS										
Uranium-233/234				6.06	pCi/g			(75%-125%)		07/15/0921:13
	TPU:			+/-0.492						
	Yield:			96.2						
Uranium-235/236				0.272	pCi/g			(75%-125%)		
	TPU:			+/-0.0733						
	Yield:			96.2						
Uranium-238	5.75			5.54	pCi/g		96.3	(75%-125%)		
	TPU:			+/-0.456						
	Yield:			96.2						
QC1201880401 MB										
Uranium-233/234			U	-0.00719	pCi/g					07/15/0921:13
	TPU:			+/-0.00538						
	Yield:			96.4						
Uranium-235/236			U	-0.0093	pCi/g					
	TPU:			+/-0.0057						
	Yield:			96.4						
Uranium-238			U	0.00	pCi/g					
	TPU:			+/-0.00188						
	Yield:			96.4						
Rad Gamma Spec										
Batch 881219										
QC1201871424 232424001 DUP										
Americium-241	U	0.221	U	0.109	pCi/g	0.279		(0-1)	MXR1	07/07/0908:27
	TPU:	+/-0.0961		+/-0.105						
Bismuth-211	UI	3.10	UI	3.04	pCi/g	0.0525		(0-1)		
	TPU:	+/-0.279		+/-0.254						
Bismuth-214		1.01	UI	1.00	pCi/g	0.0192		(0-1)		
	TPU:	+/-0.0988		+/-0.0837						
Cadmium-109	UI	2.45	UI	2.67	pCi/g	0.105		(0-1)		

QC Summary

Workorder: 232424

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881219										
	TPU:	+/-0.506		+/-0.572						
Cerium-139	U	-0.0127	U	-0.00565	pCi/g	0.118		(0-1)		
	TPU:	+/-0.0165		+/-0.0133						
Cesium-134	UI	0.133	U	0.0529	pCi/g	0.748		(0-1)		
	TPU:	+/-0.030		+/-0.0235						
Cesium-137	U	-0.0572	U	-0.0188	pCi/g	0.443		(0-1)		
	TPU:	+/-0.0226		+/-0.0208						
Cobalt-60	U	-0.00257	U	0.0588	pCi/g	0.685		(0-1)		
	TPU:	+/-0.0245		+/-0.0202						
Europium-152	U	-0.0428	U	-0.0504	pCi/g	0.0334		(0-1)		
	TPU:	+/-0.066		+/-0.0484						
Lanthanum-140	U	-0.0476	U	-0.028	pCi/g	0.101		(0-1)		
	TPU:	+/-0.054		+/-0.0428						
Lead-212		1.55		1.46	pCi/g	0.285		(0-1)		
	TPU:	+/-0.0837		+/-0.0796						
Lead-214		1.08		1.06	pCi/g	0.0491		(0-1)		
	TPU:	+/-0.101		+/-0.0927						
Mercury-203	U	0.0241	U	0.0478	pCi/g	0.266		(0-1)		
	TPU:	+/-0.0232		+/-0.0212						
Potassium-40		36.5		37.4	pCi/g	0.133		(0-1)		
	TPU:	+/-1.70		+/-1.69						
Radium-223	U	-0.304	U	-0.672	pCi/g	0.257		(0-1)		
	TPU:	+/-0.391		+/-0.325						
Radium-224	UI	3.30	UI	4.18	pCi/g	0.318		(0-1)		
	TPU:	+/-0.778		+/-0.609						
Radium-226		1.01	UI	1.00	pCi/g	0.0192		(0-1)		
	TPU:	+/-0.0988		+/-0.0837						
Radium-228		1.71		1.34	pCi/g	0.509		(0-1)		
	TPU:	+/-0.182		+/-0.174						
Ruthenium-106	U	0.328	U	-0.137	pCi/g	0.633		(0-1)		
	TPU:	+/-0.193		+/-0.174						
Sodium-22	U	0.000929	U	0.000354	pCi/g	0.00533		(0-1)		
	TPU:	+/-0.0276		+/-0.0265						
Strontium-85	UI	0.107	U	0.0476	pCi/g	0.650		(0-1)		
	TPU:	+/-0.0254		+/-0.0201						
Thallium-208		0.512		0.444	pCi/g	0.379		(0-1)		
	TPU:	+/-0.0437		+/-0.0462						
Thorium-227	U	0.157	U	0.343	pCi/g	0.227		(0-1)		
	TPU:	+/-0.225		+/-0.184						
Thorium-231	U	-0.304	U	-0.672	pCi/g	0.257		(0-1)		
	TPU:	+/-0.391		+/-0.325						
Thorium-234	U	2.03	U	0.542	pCi/g	0.354		(0-1)		
	TPU:	+/-1.24		+/-0.867						
Tin-113	U	-0.0181	U	-0.00334	pCi/g	0.152		(0-1)		
	TPU:	+/-0.0267		+/-0.0218						
Uranium-235	UI	0.424	U	0.0372	pCi/g	0.554		(0-1)		
	TPU:	+/-0.247		+/-0.102						
Yttrium-88	U	0.00321	U	-0.00667	pCi/g	0.174		(0-1)		
	TPU:	+/-0.016		+/-0.0124						
QC1201871425 LCS										
Americium-241	16.3			16.0	pCi/g		98	(75%-125%)		07/07/0908:19

QC Summary

Workorder: 232424

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881219										
		TPU:		+/-0.737						
Bismuth-211				2.67	pCi/g					
		TPU:		+/-0.462						
Bismuth-214				1.15	pCi/g					
		TPU:		+/-0.168						
Cadmium-109				54.9	pCi/g					
		TPU:		+/-2.49						
Cerium-139			U	0.0657	pCi/g					
		TPU:		+/-0.0266						
Cesium-134			U	0.141	pCi/g					
		TPU:		+/-0.0627						
Cesium-137	5.78			6.44	pCi/g		112	(75%-125%)		
		TPU:		+/-0.263						
Cobalt-60	7.10			7.44	pCi/g		105	(75%-125%)		
		TPU:		+/-0.290						
Europium-152			U	0.101	pCi/g					
		TPU:		+/-0.115						
Lanthanum-140			U	0.00704	pCi/g					
		TPU:		+/-0.0494						
Lead-212				1.45	pCi/g					
		TPU:		+/-0.128						
Lead-214				0.927	pCi/g					
		TPU:		+/-0.162						
Mercury-203			U	0.00971	pCi/g					
		TPU:		+/-0.035						
Potassium-40			U	0.851	pCi/g					
		TPU:		+/-0.335						
Radium-223			U	0.763	pCi/g					
		TPU:		+/-0.681						
Radium-224				8.07	pCi/g					
		TPU:		+/-0.972						
Radium-226				1.15	pCi/g					
		TPU:		+/-0.168						
Radium-228				1.41	pCi/g					
		TPU:		+/-0.317						
Ruthenium-106			U	-0.159	pCi/g					
		TPU:		+/-0.358						
Sodium-22			U	-0.0642	pCi/g					
		TPU:		+/-0.0369						
Strontium-85			U	0.106	pCi/g					
		TPU:		+/-0.0437						
Thallium-208				0.495	pCi/g					
		TPU:		+/-0.0729						
Thorium-227			U	0.843	pCi/g					
		TPU:		+/-0.381						
Thorium-231			U	0.763	pCi/g					
		TPU:		+/-0.681						
Thorium-234			U	-0.644	pCi/g					
		TPU:		+/-0.617						
Tin-113			U	0.0761	pCi/g					
		TPU:		+/-0.0493						

QC Summary

Workorder: 232424

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881219										
Uranium-235			U	0.164	pCi/g					
	TPU:			+/-0.175						
Yttrium-88			U	0.00432	pCi/g					
	TPU:			+/-0.0302						
QC1201871423 MB										
Americium-241			U	0.0324	pCi/g					07/07/0908:11
	TPU:			+/-0.0505						
Bismuth-211			U	-0.00403	pCi/g					
	TPU:			+/-0.0726						
Bismuth-214			U	0.0331	pCi/g					
	TPU:			+/-0.0328						
Cadmium-109			U	0.0647	pCi/g					
	TPU:			+/-0.210						
Cerium-139			U	-0.0211	pCi/g					
	TPU:			+/-0.00865						
Cesium-134			U	0.0108	pCi/g					
	TPU:			+/-0.0129						
Cesium-137			U	0.0103	pCi/g					
	TPU:			+/-0.0116						
Cobalt-60			U	0.00453	pCi/g					
	TPU:			+/-0.0109						
Europium-152			U	-0.0594	pCi/g					
	TPU:			+/-0.0303						
Lanthanum-140			U	-0.0124	pCi/g					
	TPU:			+/-0.0221						
Lead-212			U	-0.0069	pCi/g					
	TPU:			+/-0.0187						
Lead-214			U	0.0349	pCi/g					
	TPU:			+/-0.0252						
Mercury-203			U	-0.00206	pCi/g					
	TPU:			+/-0.0136						
Potassium-40			U	0.196	pCi/g					
	TPU:			+/-0.175						
Radium-223			U	-0.0975	pCi/g					
	TPU:			+/-0.182						
Radium-224			U	-0.203	pCi/g					
	TPU:			+/-0.197						
Radium-226			U	0.0331	pCi/g					
	TPU:			+/-0.0328						
Radium-228			U	0.0117	pCi/g					
	TPU:			+/-0.0434						
Ruthenium-106			U	0.0893	pCi/g					
	TPU:			+/-0.108						
Sodium-22			U	0.00161	pCi/g					
	TPU:			+/-0.00953						
Strontium-85			UI	0.0486	pCi/g					
	TPU:			+/-0.0124						
Thallium-208			U	-0.00746	pCi/g					
	TPU:			+/-0.0126						
Thorium-227			U	-0.00368	pCi/g					
	TPU:			+/-0.119						

QC Summary

Workorder: 232424

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881219										
Thorium-231			U	-0.0975	pCi/g					
	TPU:			+/-0.182						
Thorium-234			U	0.634	pCi/g					
	TPU:			+/-0.749						
Tin-113			U	-0.0194	pCi/g					
	TPU:			+/-0.0132						
Uranium-235			U	0.170	pCi/g					
	TPU:			+/-0.0829						
Yttrium-88			U	-0.0122	pCi/g					
	TPU:			+/-0.0118						
Rad Liquid Scintillation										
Batch 883013										
QC1201875578 232433003 DUP										
Tritium	U	116	U	152	pCi/L	0.170		(0-1)	KXK2	07/16/0912:15
	TPU:	+/-52.8		+/-53.8						
QC1201875579 LCS										
Tritium	5730			5360	pCi/L		93.4	(75%-125%)		07/15/0913:22
	TPU:			+/-464						
QC1201875577 MB										
Tritium			U	108	pCi/L					07/15/0912:18
	TPU:			+/-69.7						

Notes:
The Qualifiers in this report are defined as follows:

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 232424

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time

P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RA□ DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 882528 Product: PU Date: 7/10/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		~~NA~~ OD 7/10/09
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/10/09

Secondary Review Performed By: [signature] 7/15/09

7/16 - 7/17

LAM

P ✓

Plutonium Que Sheet

06-JUL-09

Batch #: 882525 Analyst: AXD2 First Client Due Date:17-JUL-09 Internal Due Date:06-JUL-09

Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 12621A Expiration Date: 7/11/10 Vol: 0.1

LCS Isotope(s): Pu-239/Pu-238 LCS Code: / Expiration Date: / Vol: /

Spike Isotope(s): Pu-239/Pu-238 Spike Code: / Expiration Date: / Vol: /

Prep Date: 7/6/09 Initials: AXP Pipet ID: 29711058 Balance ID: 50410272 Witness: ME 7/06/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Pu Det #
232069001-1	CAMO-09-10142	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	1	1	1.248	47
232069002-1	CAMO-09-10141	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	2	2	1.258	48
232069003-1	CAMO-09-10143	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	3	3	1.250	~~64~~ 65
232069004-1	CAMO-09-10153	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	4	4	1.253	66
232069005-1	CAMO-09-10144	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	5	5	1.251	67
232069006-1	CAMO-09-10154	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	6	6	1.250	68
232424001-1	CAMO-09-10463	SAMPLE		.05 pCi/g	SOIL	LANL010	23-JUN-09	7	7	1.245	69
232426001-1	CAMO-09-7143	SAMPLE		.05 pCi/g	SOIL	LANL010	23-JUN-09	8	8	1.253	70
232426002-1	CAMO-09-7144	SAMPLE		.05 pCi/g	SOIL	LANL010	23-JUN-09	9	9	1.251	71
232511001-1	CAMO-09-6519	SAMPLE		.05 pCi/g	SOIL	LANL010	24-JUN-09	10	10	1.251	72
232511002-1	CAMO-09-6518	SAMPLE		.05 pCi/g	SOIL	LANL010	24-JUN-09	11	11	1.252	73
232511003-1	CAMO-09-6527	SAMPLE		.05 pCi/g	SOIL	LANL010	24-JUN-09	12	12	1.259	74
~~232511004-1~~	~~CAMO-09-6529~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~24-JUN-09~~	~~13~~	~~13~~	~~1.252~~ 1.252	~~75~~
~~232511005-1~~	~~CAMO-09-6528~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~24-JUN-09~~	~~14~~	~~14~~	~~1.251~~	~~76~~
232511006-1	CAMO-09-6531	SAMPLE		.05 pCi/g	SOIL	LANL010	24-JUN-09	15	15	1.258	77
1201874395-1	MB for batch 882525	MB		.05 pCi/g	SOIL	QC ACCOUNT		16	16	~~1.259~~ 1.0	78
1201874396-1	CAMO-09-6531(232511006DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	24-JUN-09	17	17	1.256	79
1201874397-1	LCS for batch 882525	LCS		.05 pCi/g	SOIL	QC ACCOUNT		18	18	0.115	80

AO 7/10/09 AO 7/10/09

1517

* SRM 0244-B exp. 4/30/20

Choose SOP Used: GL-RAD-A-011 / GL-RAD-A-045 / GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: 7/10/09

Blank Correction Report

Batch ID 882525

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874396	DUP	Plutonium-238	1.26 g	2.92	0.154	0.0217	.006365079	pCi/g	NO
		Plutonium-239/240	1.26 g	8.62	0.431	0.0261	-.00126984	pCi/g	NO
1201874397	LCS	Plutonium-238	0.115 g	7.39	0.521	0.244	.069739130	pCi/g	NO
		Plutonium-239/240	0.115 g	40.8	2.41	0.293	-.01391304	pCi/g	NO
1201874395	MB	Plutonium-238	1.00 g	0.00802	0.00622	0.0295	.00802	pCi/g	YES
		Plutonium-239/240	1.00 g	-0.0016	0.00278	0.0354	-.0016	pCi/g	NO
232069001	CAMO-09-10142	Plutonium-238	1.25 g	-0.00272	0.00578	0.025	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.0068	0.00451	0.0301	-.00128	pCi/g	YES
232069002	CAMO-09-10141	Plutonium-238	1.26 g	0.00925	0.00783	0.0243	.006365079	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00528	0.00374	0.0292	-.00126984	pCi/g	NO
232069003	CAMO-09-10143	Plutonium-238	1.25 g	0.00652	0.00703	0.024	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0182	0.0059	0.0288	-.00128	pCi/g	NO
232069004	CAMO-09-10153	Plutonium-238	1.25 g	-0.0233	0.00797	0.0238	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00258	0.00409	0.0286	-.00128	pCi/g	NO
232069005	CAMO-09-10144	Plutonium-238	1.25 g	-0.00368	0.00506	0.0226	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00368	0.00245	0.0271	-.00128	pCi/g	NO
232069006	CAMO-09-10154	Plutonium-238	1.25 g	-0.00138	0.00239	0.0254	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00276	0.0039	0.0305	-.00128	pCi/g	NO
232424001	CAMO-09-10463	Plutonium-238	1.25 g	-1.47E-10	0.00174	0.0226	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00369	0.00275	0.0272	-.00128	pCi/g	NO
232426001	CAMO-09-7143	Plutonium-238	1.25 g	0.00695	0.00569	0.0213	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00116	0.00505	0.0256	-.00128	pCi/g	NO
232426002	CAMO-09-7144	Plutonium-238	1.25 g	0.477	0.033	0.020	.006416	pCi/g	NO
		Plutonium-239/240	1.25 g	14.0	0.682	0.024	-.00128	pCi/g	NO
232511001	CAMO-09-6519	Plutonium-238	1.25 g	6.50	0.330	0.0224	.006416	pCi/g	NO
		Plutonium-239/240	1.25 g	5.81	0.296	0.0269	-.00128	pCi/g	NO
232511002	CAMO-09-6518	Plutonium-238	1.25 g	2.70	0.142	0.0215	.006416	pCi/g	NO
		Plutonium-239/240	1.25 g	14.8	0.731	0.0258	-.00128	pCi/g	NO
232511003	CAMO-09-6527	Plutonium-238	1.26 g	-0.0115	0.00615	0.0236	.006365079	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0128	0.00484	0.0283	-.00126984	pCi/g	NO
232511006	CAMO-09-6531	Plutonium-238	1.26 g	2.98	0.156	0.0215	.006365079	pCi/g	NO
		Plutonium-239/240	1.26 g	8.56	0.427	0.0258	-.00126984	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232424001_PU
SAMPLE QTY: 1.249 G

DETECTOR NUMBER :78795
AVERAGE %EFFICIENCY :31.5901
% YIELD : 92.995

COUNT DATE: 9-JUL-2009 17:37:09
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B069.CNF;1031
PCI/G : 1.478E+00	PCI/G : 1.478E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.91261 dpm	EFF FILE : W069.CNF;273
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	1.000	-3.000	4.000	4.1684	99.90000	-3.69E-03	2.75E-03	1.19E-02	2.72E-02	2.75E-03
PU-236	5749.000	4.000	-4.000	8.000	3.3854	100.0000	-4.97E-03	4.30E-03	9.67E-03	2.27E-02	4.30E-03
PU-238	5499.000	1.000	0.000	1.000	3.3734	99.90000	-1.47E-10	1.74E-03	9.64E-03	2.26E-02	1.74E-03
PU242	4890.000	1241.000	1236.000	5.000	2.2361	100.0000	1.52E+00	8.59E-02	6.39E-03	1.61E-02	4.33E-02
PU-244	4589.000	3.000	1.000	2.000	4.1569	99.90000	1.23E-03	2.75E-03	1.19E-02	2.71E-02	2.75E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

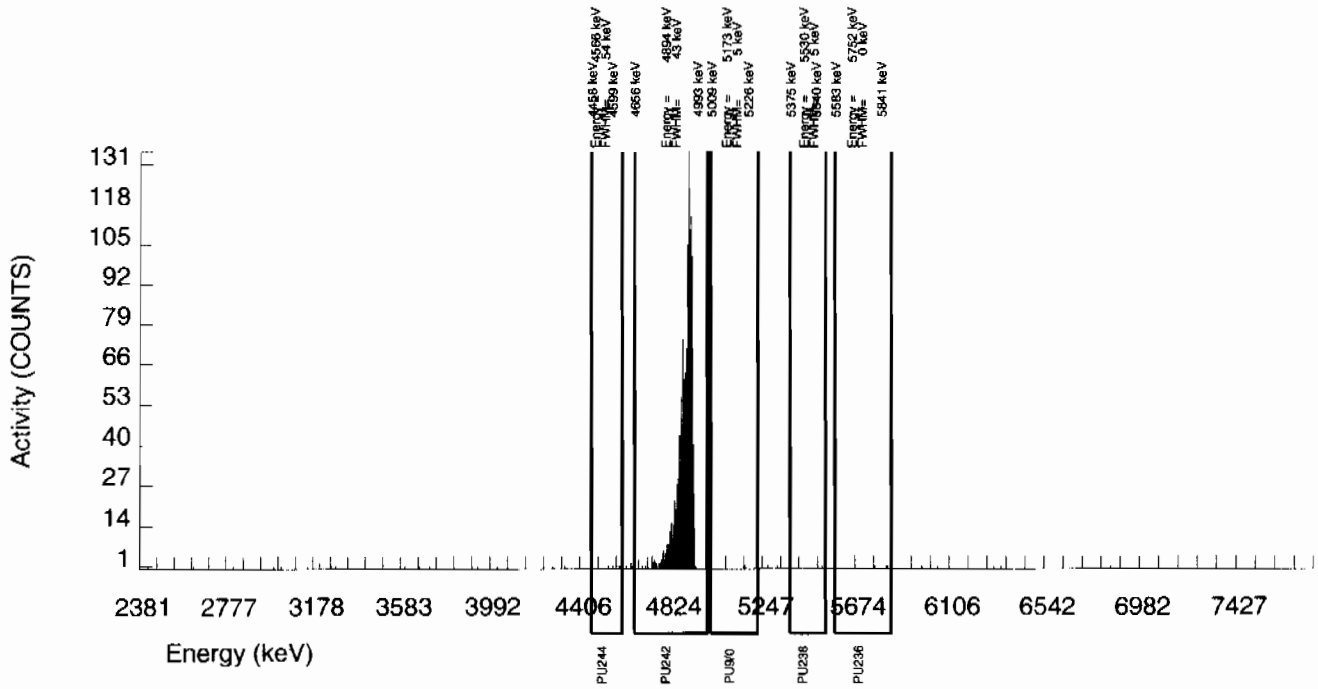

Alpha Spectroscopy Software Version 2 0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511006_PU
SAMPLE QTY: 1.258 G

DETECTOR NUMBER :67576
AVERAGE %EFFICIENCY :32.2019
% YIELD : 95.509

COUNT DATE: 9-JUL-2009 17:37:11
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B077.CNF;949
PCI/G : 1.467E+00	PCI/G : 1.467E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.01839 dpm	EFF FILE : W077.CNF;249
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	7351.000	7349.000	2.000	4.1684	99.90000	8.56E+00	4.27E-01	1.13E-02	2.58E-02	9.99E-02
PU-236	5749.000	2.000	-6.000	8.000	3.3854	100.0000	-7.06E-03	3.72E-03	9.17E-03	2.15E-02	3.72E-03
PU-238	5499.000	2563.000	2557.000	6.000	3.3734	99.90000	2.98E+00	1.56E-01	9.15E-03	2.14E-02	5.91E-02
PU242	4890.000	1297.000	1294.000	3.000	1.7321	100.0000	1.51E+00	8.43E-02	4.69E-03	1.25E-02	4.20E-02
PU-244	4589.000	14.000	14.000	0.000	4.1569	99.90000	1.63E-02	4.43E-03	1.13E-02	2.57E-02	4.36E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

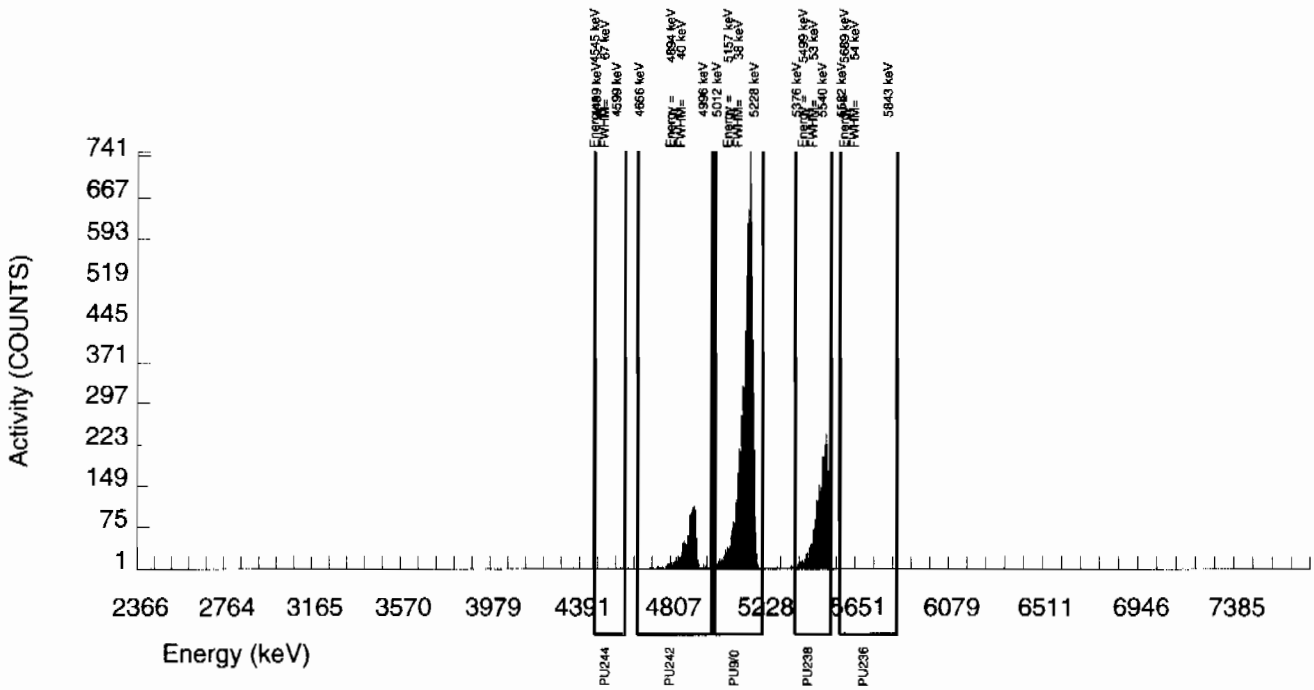

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 6-JUL-2009 00:00:00.

SAMPLE ID : S1201874395_PU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :67577
AVERAGE %EFFICIENCY :32.6940
% YIELD : 86.002

COUNT DATE: 9-JUL-2009 17:37:11
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B078.CNF;949
PCI/G : 1.846E+00	PCI/G : 1.846E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.61839 dpm	EFF FILE : W078.CNF;239
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	1.000	-1.000	2.000	4.1684	99.90000	-1.60E-03	2.78E-03	1.56E-02	3.54E-02	2.78E-03
PU-236	5749.000	7.000	0.000	7.000	3.3854	100.0000	7.66E-10	6.01E-03	1.26E-02	2.96E-02	6.01E-03
PU-238	5499.000	10.000	5.000	5.000	3.3734	99.90000	8.02E-03	6.22E-03	1.26E-02	2.95E-02	6.21E-03
PU242	4890.000	1186.000	1183.000	3.000	1.7321	100.0000	1.90E+00	1.09E-01	6.46E-03	1.73E-02	5.52E-02
PU-244	4589.000	3.000	-1.000	4.000	4.1569	99.90000	-1.60E-03	4.24E-03	1.55E-02	3.54E-02	4.24E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

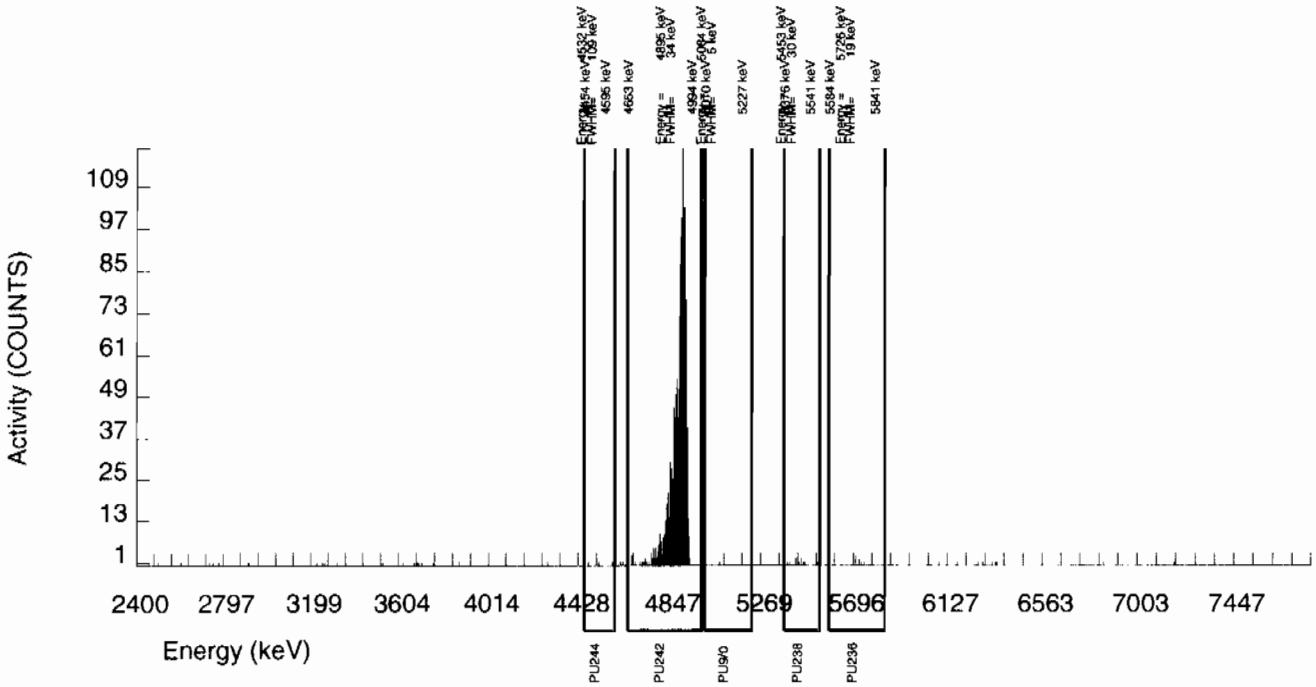

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S1201874396_PU
SAMPLE QTY: 1.256 G

DETECTOR NUMBER :67598
AVERAGE %EFFICIENCY :32.6964
% YIELD : 93.120

COUNT DATE: 9-JUL-2009 17:37:11
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B079.CNF;949
PCI/G : 1.470E+00	PCI/G : 1.470E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.91786 dpm	EFF FILE : W079.CNF;250
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	7315.000	7313.000	2.000	4.1684	99.90000	8.62E+00	4.31E-01	1.14E-02	2.61E-02	1.01E-01
PU-236	5749.000	5.000	1.000	4.000	3.3854	100.0000	1.19E-03	3.57E-03	9.28E-03	2.17E-02	3.57E-03
PU-238	5499.000	2489.000	2477.000	12.000	3.3734	99.90000	2.92E+00	1.54E-01	9.25E-03	2.17E-02	5.90E-02
PU242	4890.000	1282.000	1281.000	1.000	1.0000	100.0000	1.51E+00	8.46E-02	2.74E-03	8.67E-03	4.22E-02
PU-244	4589.000	18.000	16.000	2.000	4.1569	99.90000	1.89E-02	5.35E-03	1.14E-02	2.60E-02	5.27E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

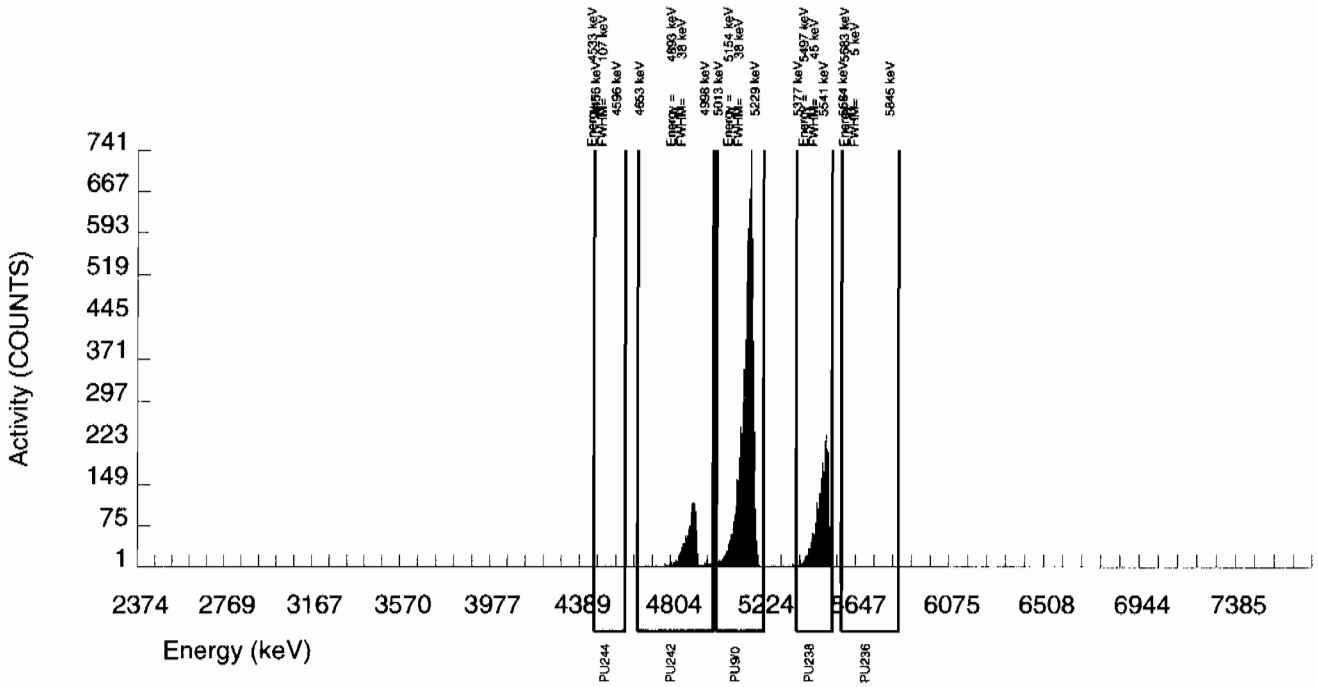

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 6-JUL-2009 00:00:00.

SAMPLE ID : S1201874397_PU
SAMPLE QTY: 0.115 G

DETECTOR NUMBER :78197
AVERAGE %EFFICIENCY :33.4265
% YIELD : 88.526

COUNT DATE: 9-JUL-2009 17:37:11
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B080.CNF;952
PCI/G : 1.605E+01	PCI/G : 1.605E+01	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.72459 dpm	EFF FILE : W080.CNF;260
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	3083.000	3078.000	5.000	4.1684	99.90000	4.08E+01	2.41E+00	1.28E-01	2.93E-01	7.36E-01
PU-236	5749.000	0.000	0.000	0.000	3.3854	100.0000	0.00E+00	1.33E-02	1.04E-01	2.44E-01	1.33E-02
PU-238	5499.000	558.000	558.000	0.000	3.3734	99.90000	7.39E+00	5.21E-01	1.04E-01	2.44E-01	3.13E-01
PU242	4890.000	1258.000	1245.000	13.000	3.6056	100.0000	1.65E+01	1.04E+00	1.11E-01	2.58E-01	4.72E-01
PU-244	4589.000	9.000	7.000	2.000	4.1569	99.90000	9.28E-02	4.43E-02	1.28E-01	2.92E-01	4.39E-02

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

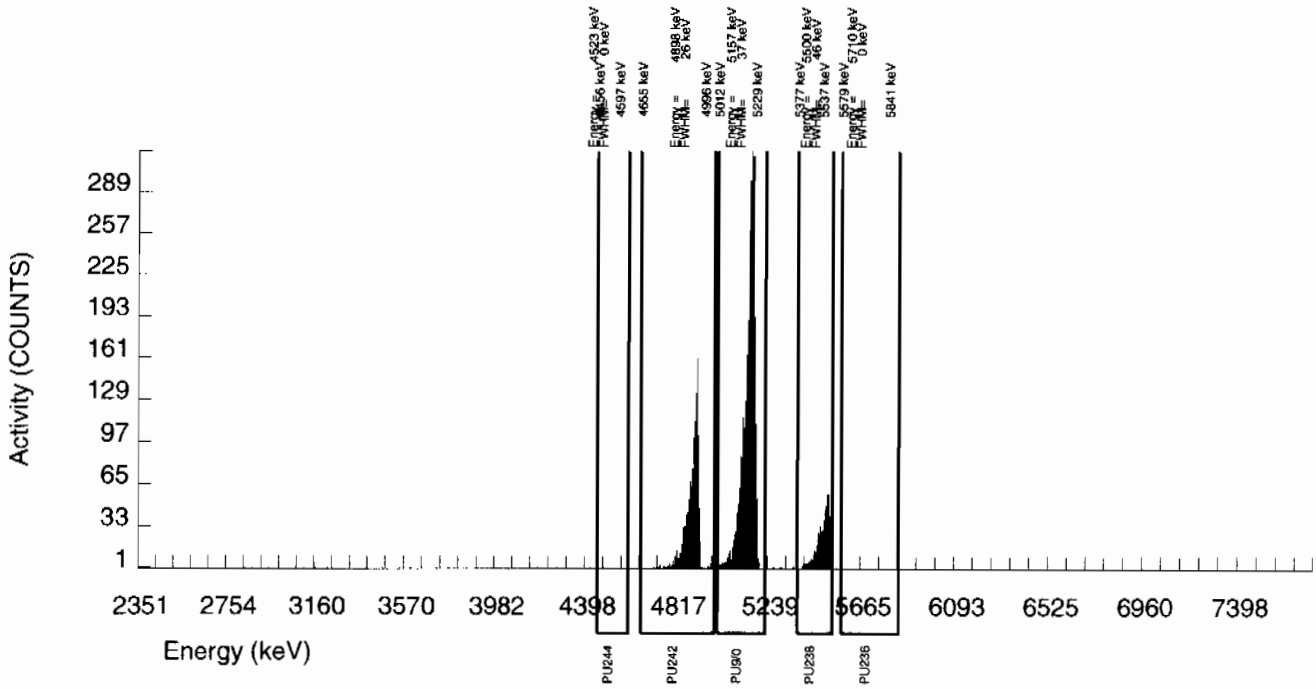

Radiochemistry Batch Checklist, Rev 9

Batch# 882541 Product: Th Date: 7/14/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/14/09

Secondary Review Performed By: [signature] 7/15/09

LANL

7/9 - 7/20

Thorium Que Sheet

06-JUL-09

Batch #: 882541 **Analyst:** HAKB **First Client Due Date:** 20-JUL-09 **Internal Due Date** 09-JUL-09

Tracer Isotope: Th-229 **Tracer Code:** 0934-6 **Expiration Date:** 4/28/10 **Vol:** 25.1
LCS Isotope: Th-232 **LCS Code:** SRM 0244-A **Expiration Date:** 10/31/20 **Vol:** 0.101 g
Spike Isotope: Th-232 **Spike Code:** NA **Expiration Date:** NA **Vol:** NA
Prep Date: 7/6/09 **Initials:** HAKB **Pipet ID:** 2971058 **Balance ID:** 50410272 **Witness:** KM 7-6-09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Th Det #
232424001-1	CAMO-09-10463	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	1	1	0.254	183
~~232582001-1~~	~~CAMO-09-10464~~	~~SAMPLE~~		~~.1 pCi/g~~	~~SOIL~~	~~LANL010~~	~~25-JUN-09~~	~~2~~	~~2~~	~~0.257~~	~~184~~
232582002-1	CAMO-09-10465	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	3	3	0.258	185
1201874438-1	MB for batch 882541	MB		.1 pCi/g	SOIL	QC ACCOUNT		4	4	1.00	186
1201874439-1	CAMO-09-10465(232582002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	25-JUN-09	5	5	0.256	187
1201874440-1	LCS for batch 882541	* LCS		.1 pCi/g	SOIL	QC ACCOUNT		6	6	0.101	188

* SRM 0244-A

1525

Data Reviewed By: 7/14/09
GEL Laboratories LLC, Radiochemistry Division

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Choose SOP Used: GL-RAD-A-038, GL-RAD-A-045, GL-RAD-A-043, GL-RAD-A-032

Blank Correction Report

Batch ID 882541

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874439	DUP	Thorium-228	0.256 g	0.898	0.107	0.343	-.005	pCi/g	NO
		Thorium-230	0.256 g	0.363	0.0586	0.263	.055859375	pCi/g	NO
		Thorium-232	0.256 g	0.863	0.0986	0.0969	-.00734375	pCi/g	NO
1201874440	LCS	Thorium-228	0.101 g	0.939	0.182	0.982	-.01267327	pCi/g	NO
		Thorium-230	0.101 g	26.9	2.17	0.752	.141584158	pCi/g	NO
		Thorium-232	0.101 g	1.31	0.191	0.277	-.01861386	pCi/g	NO
1201874438	MB	Thorium-228	1.00 g	-0.00128	0.00693	0.102	-.00128	pCi/g	NO
		Thorium-230	1.00 g	0.0143	0.0062	0.0778	.0143	pCi/g	YES
		Thorium-232	1.00 g	-0.00188	0.0029	0.0287	-.00188	pCi/g	NO
232424001	CAMO-09-10463	Thorium-228	0.254 g	0.822	0.106	0.389	-.00503937	pCi/g	NO
		Thorium-230	0.254 g	0.437	0.067	0.298	.056299213	pCi/g	NO
		Thorium-232	0.254 g	0.759	0.0951	0.110	-.00740157	pCi/g	NO
232582002	CAMO-09-10465	Thorium-228	0.258 g	1.01	0.111	0.347	-.00496124	pCi/g	NO
		Thorium-230	0.258 g	0.423	0.0631	0.266	.055426357	pCi/g	NO
		Thorium-232	0.258 g	0.823	0.0956	0.0979	-.00728682	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882541
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232424001_TH
SAMPLE QTY: 0.254 G

DETECTOR NUMBER :74441
AVERAGE %EFFICIENCY :26.1606
% YIELD : 86.628

COUNT DATE: 8-JUL-2009 19:19:07
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B183.CNF;105
PCI/G : 4.630E+01	PCI/G : 4.630E+01	NOMINAL : 2.21252 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 1.91666 dpm	EFF FILE : W183.CNF;33
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	5.000	3.000	2.000	1.8961	68.10000	6.27E-02	5.55E-02	5.07E-02	1.33E-01	5.53E-02
TH-228	5363.000	115.000	103.330	10.000	10.0923	99.94000	8.22E-01	1.06E-01	1.84E-01	3.89E-01	8.84E-02
TH229	4900.000	503.000	499.000	4.000	2.0000	99.52000	3.92E+00	3.28E-01	3.66E-02	9.45E-02	1.77E-01
TH-230	4625.000	60.000	55.882	1.000	7.5977	100.0000	4.37E-01	6.70E-02	1.38E-01	2.98E-01	5.95E-02
TH-232	3972.000	100.000	97.052	2.000	2.4339	100.0000	7.59E-01	9.51E-02	4.43E-02	1.10E-01	7.87E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

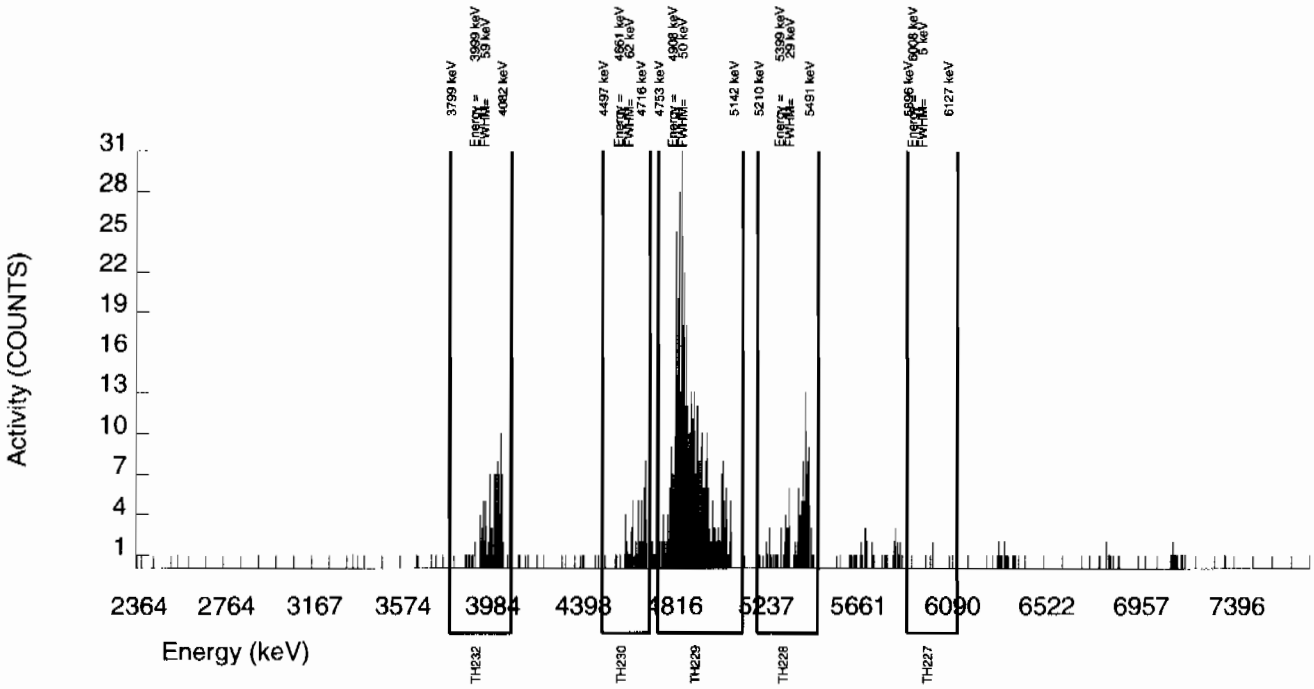

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882541
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232582002_TH
SAMPLE QTY: 0.258 G

DETECTOR NUMBER :68615
AVERAGE %EFFICIENCY :25.7763
% YIELD : 97.081

COUNT DATE: 8-JUL-2009 19:19:12
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B185.CNF;87
PCI/G : 4.558E+01	PCI/G : 4.558E+01	NOMINAL : 2.21252 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.14794 dpm	EFF FILE : W185.CNF;33
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	1.000	-1.000	2.000	1.8961	68.10000	-1.73E-02	3.00E-02	4.52E-02	1.18E-01	3.00E-02
TH-228	5363.000	149.000	143.156	4.000	10.0923	99.94000	1.01E+00	1.11E-01	1.64E-01	3.47E-01	8.70E-02
TH229	4900.000	551.000	551.000	0.000	0.0000	99.52000	3.86E+00	3.12E-01	0.00E+00	1.90E-02	1.65E-01
TH-230	4625.000	66.000	60.557	2.000	7.5977	100.0000	4.23E-01	6.31E-02	1.23E-01	2.66E-01	5.61E-02
TH-232	3972.000	121.000	117.954	2.000	2.4339	100.0000	8.23E-01	9.56E-02	3.95E-02	9.79E-02	7.70E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

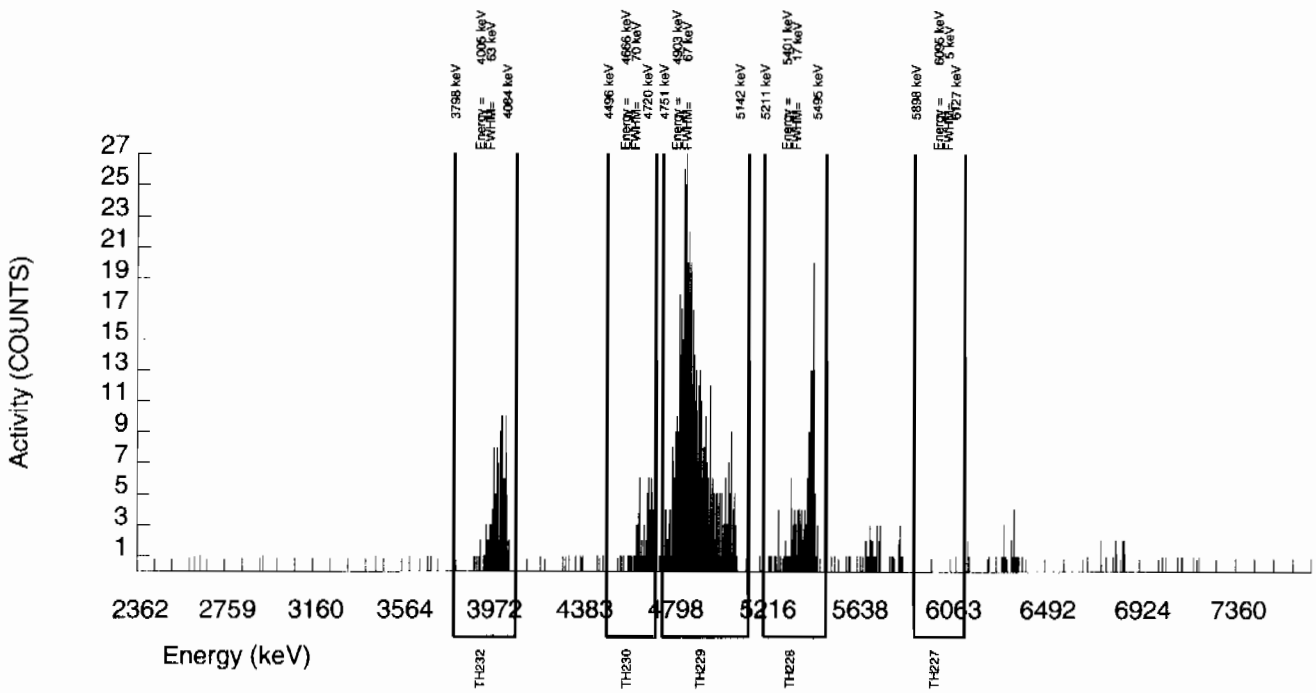

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882541
SAMPLE DATE : 6-JUL-2009 00:00:00.

SAMPLE ID : S1201874438_TH
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :68616
AVERAGE %EFFICIENCY :25.4593
% YIELD : 86.517

COUNT DATE: 8-JUL-2009 19:19:15
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B186.CNF;87
PCI/G : 1.176E+01	PCI/G : 1.176E+01	NOMINAL : 2.21252 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 1.91419 dpm	EFF FILE : W186.CNF;34
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	3.000	0.000	3.000	1.8961	68.10000	0.00E+00	8.27E-03	1.32E-02	3.46E-02	8.27E-03
TH-228	5363.000	7.000	-0.623	6.000	10.0923	99.94000	-1.28E-03	6.92E-03	4.80E-02	1.02E-01	6.92E-03
TH229	4900.000	487.000	485.000	2.000	1.4142	99.52000	9.97E-01	8.29E-02	6.76E-03	1.91E-02	4.54E-02
TH-230	4625.000	11.000	6.969	1.000	7.5977	100.0000	1.43E-02	6.20E-03	3.61E-02	7.78E-02	6.12E-03
TH-232	3972.000	1.000	-0.921	1.000	2.4339	100.0000	-1.88E-03	2.90E-03	1.16E-02	2.87E-02	2.89E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

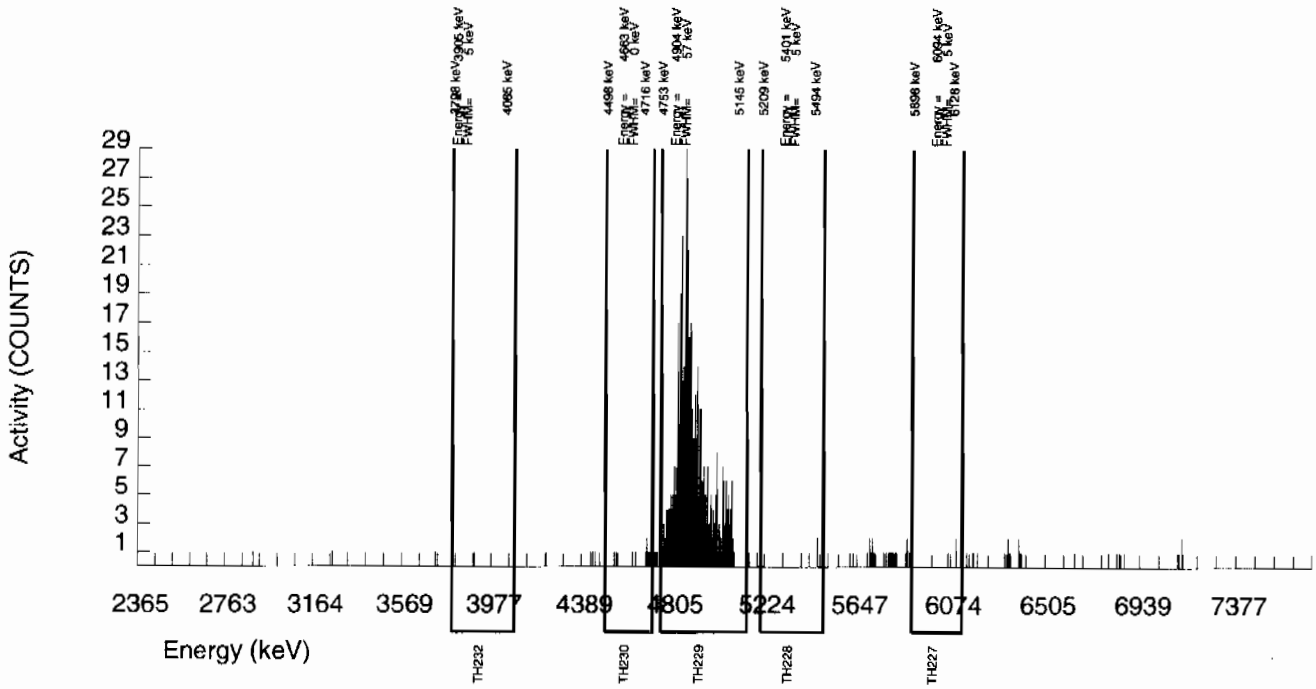

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882541
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S1201874439_TH
SAMPLE QTY: 0.256 G

DETECTOR NUMBER :68620
AVERAGE %EFFICIENCY :24.8701
% YIELD : 102.445

COUNT DATE: 8-JUL-2009 19:19:18
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B187.CNF;87
PCI/G : 4.594E+01	PCI/G : 4.594E+01	NOMINAL : 2.21252 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.26661 dpm	EFF FILE : W187.CNF;33
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	4.000	1.000	3.000	1.8961	68.10000	1.71E-02	4.53E-02	4.47E-02	1.17E-01	4.53E-02
TH-228	5363.000	142.000	128.122	12.000	10.0923	99.94000	8.98E-01	1.07E-01	1.62E-01	3.43E-01	8.64E-02
TH229	4900.000	567.000	561.000	6.000	2.4495	99.52000	3.89E+00	3.20E-01	3.95E-02	9.79E-02	1.66E-01
TH-230	4625.000	59.000	52.495	3.000	7.5977	100.0000	3.63E-01	5.86E-02	1.22E-01	2.63E-01	5.28E-02
TH-232	3972.000	127.000	124.935	1.000	2.4339	100.0000	8.63E-01	9.86E-02	3.91E-02	9.69E-02	7.78E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

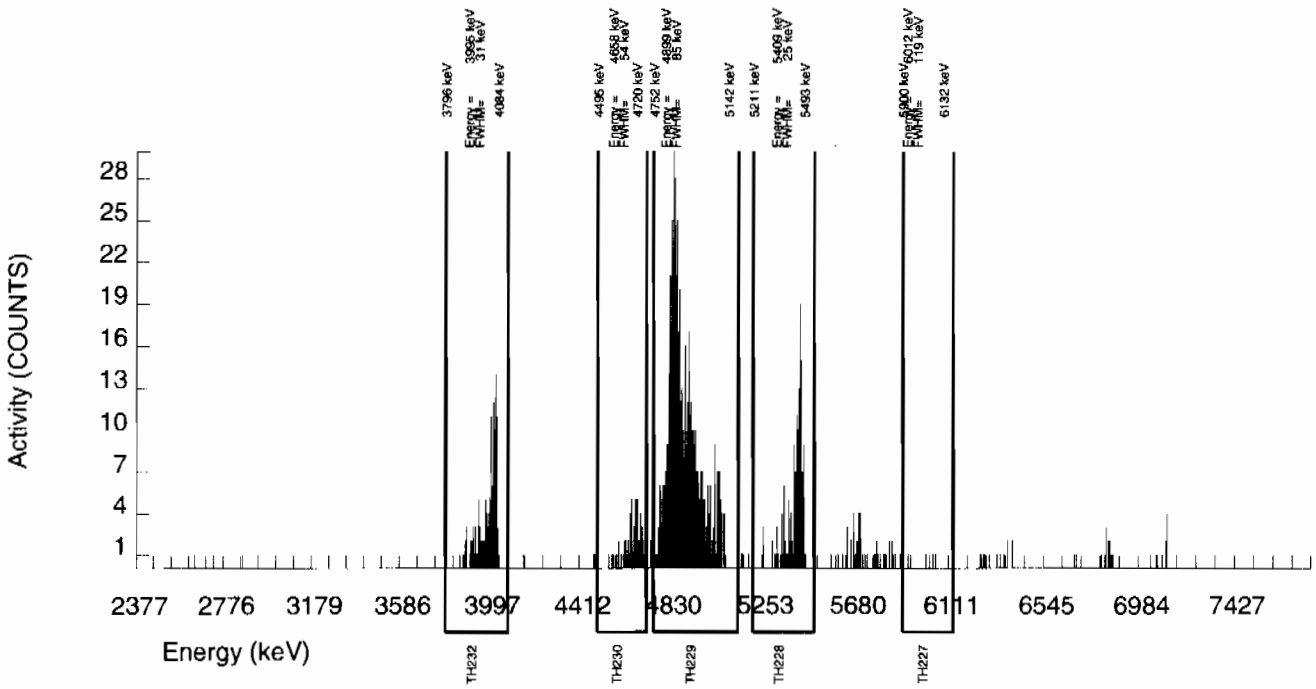

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882541
SAMPLE DATE : 6-JUL-2009 00:00:00.

SAMPLE ID : S1201874440_TH
SAMPLE QTY: 0.101 G

DETECTOR NUMBER :68621
AVERAGE %EFFICIENCY :25.8624
% YIELD : 87.275

COUNT DATE: 8-JUL-2009 19:19:20
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B188.CNF;87
PCI/G : 1.164E+02	PCI/G : 1.164E+02	NOMINAL : 2.21252 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 1.93098 dpm	EFF FILE : W188.CNF;34
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	32.000	26.000	6.000	1.8961	68.10000	8.48E-01	2.11E-01	1.28E-01	3.35E-01	2.01E-01
TH-228	5363.000	61.000	47.336	12.000	10.0923	99.94000	9.39E-01	1.82E-01	4.64E-01	9.82E-01	1.68E-01
TH229	4900.000	498.000	497.000	1.000	1.0000	99.52000	9.87E+00	8.72E-01	4.62E-02	1.46E-01	4.44E-01
TH-230	4625.000	1363.000	1358.895	1.000	7.5977	100.0000	2.69E+01	2.17E+00	3.49E-01	7.52E-01	7.29E-01
TH-232	3972.000	68.000	66.056	1.000	2.4339	100.0000	1.31E+00	1.91E-01	1.12E-01	2.77E-01	1.63E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

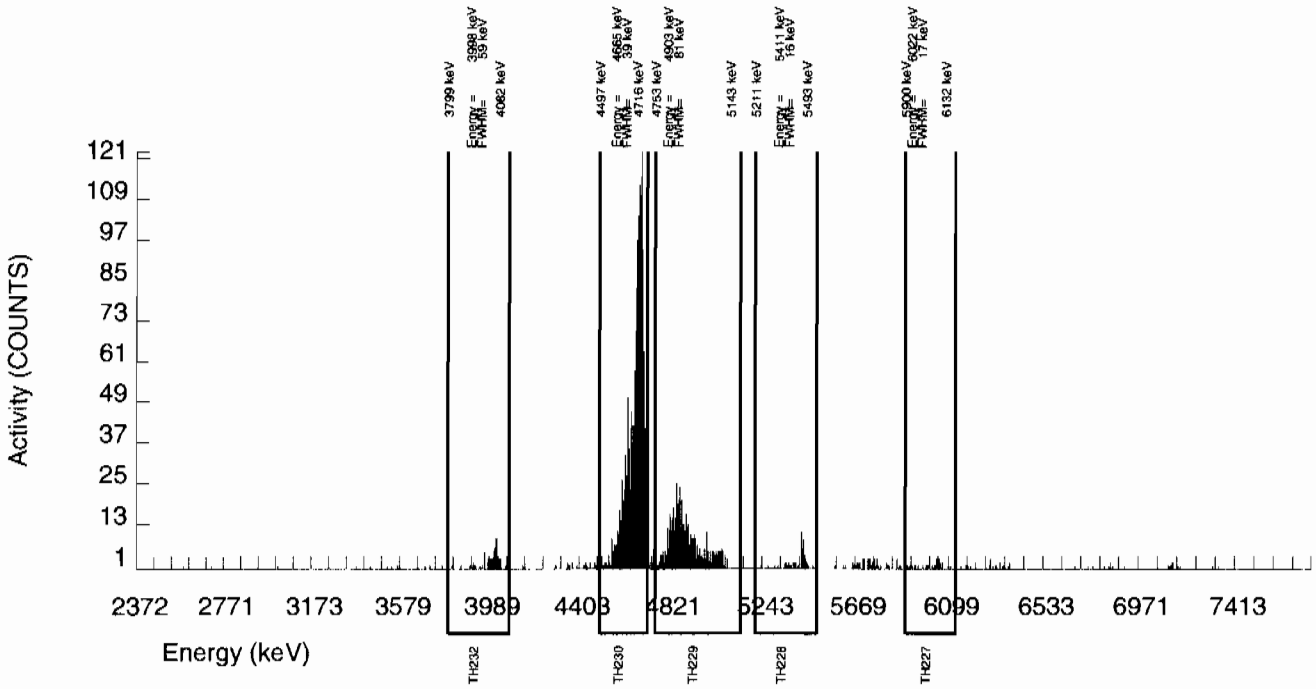

Radiochemistry Batch Checklist, Rev 9

Batch# 885014 Product: U Date: 7/16/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.		✓	NCM# 712253
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.		✓	NCM# 712253
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		NCM# 712253
Batch non-conformances second reviewed and disposition verified to be completed.	✓		NCM# 712253
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: 7/16/09

Secondary Review Performed By: 7/16/09

7/16/11 - 7/17 07/17/09

P ✓

Uranium Que Sheet

14-JUL-09

Batch #: 885014 **Analyst:** AXD2 **First Client Due Date:** 17-JUL-09 **Internal Due Date:** 11-JUL-09

Tracer Isotope: U-232 U-236 **Tracer Code:** 1283-B **Expiration Date:** 12/16/09 **Vol:** 0.1 ml

LCS Isotope: U-238 **LCS Code:** SRM 0244-A **Expiration Date:** 10/31/20 **Vol:** 0.1 g

Spike Isotope: U-238 **Spike Code:** N/A **Expiration Date:** N/A **Vol:** N/A

Prep Date: 7/14/09 **Initials:** MDA **Pipet ID:** 2971058 **Balance ID:** 50410272 **Witness:** KM 7-14-09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet Dry Aliquot (g) (l / f)	U Det #
232045001-3	CAMO-09-10150	SAMPLE		.1 pCi/g	SOIL	LANL010	16-JUN-09	1	101	0.313	138
232069001-3	CAMO-09-10142	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	2	102	0.299	139
232069002-3	CAMO-09-10141	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	3	103	0.293	140
232069003-3	CAMO-09-10143	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	4	104	0.306	141
232069004-3	CAMO-09-10153	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	5	105	0.303	142
232069005-3	CAMO-09-10144	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	6	106	0.313	144
232069006-3	CAMO-09-10154	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	7	107	0.313	145
232076001-3	CAMO-09-6611	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	8	108	0.302	146
232076002-3	CAMO-09-6612	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	9	109	0.299	147
232076003-3	CAMO-09-6610	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	10	110	0.299	148
232424001-3	CAMO-09-10463	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	11	111	0.299	149
232426001-3	CAMO-09-7143	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	12	112	0.304	~~150~~ 161
232426002-3	CAMO-09-7144	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	13	113	0.300	151
232511001-3	CAMO-09-6519	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	14	114	0.304	152
232511002-3	CAMO-09-6518	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	15	115	0.308	153
232511003-3	CAMO-09-6527	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	16	116	0.298	154
232511004-3	CAMO-09-6529	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	17	117	0.304	155
232511005-3	CAMO-09-6528	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	18	118	0.299	156
232511006-3	CAMO-09-6531	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	19	119	0.303	157
1201880401-1	MB for batch 885014	MB		UCF pCi/g to pCi/	SOIL	QC ACCOUNT		20	120	~~0.313~~	158
1201880402-3	CAMO-09-6531(232511006DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	24-JUN-09	21	121	0.306	171
1201880403-1	LCS for batch 885014	LCS		UCF pCi/g to pCi/	SOIL	QC ACCOUNT		SRM 22	122	0.100	172

1533 - 1

Choose SOP used: GL-RAD-A-011
GL-RAD-A-038
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: 7/16/09

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 885014

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201880402	DUP	Uranium-233/234	0.306 g	1.01	0.0951	0.186	-.02349673	pCi/g	NO
		Uranium-235/236	0.306 g	0.101	0.0236	0.085	-.03039216	pCi/g	NO
		Uranium-238	0.306 g	1.13	0.105	0.0722	0	pCi/g	NO
1201880403	LCS	Uranium-233/234	0.100 g	6.06	0.492	0.557	-.0719	pCi/g	NO
		Uranium-235/236	0.100 g	0.272	0.0733	0.255	-.093	pCi/g	NO
		Uranium-238	0.100 g	5.54	0.456	0.217	0	pCi/g	NO
1201880401	MB	Uranium-233/234	1.00 g	-0.00719	0.00538	0.0855	-.00719	pCi/g	NO
		Uranium-235/236	1.00 g	-0.0093	0.0057	0.0392	-.0093	pCi/g	NO
		Uranium-238	1.00 g	0.00	0.00188	0.0333	0	pCi/g	NO
232045001	CAMO-09-10150	Uranium-233/234	0.313 g	0.920	0.105	0.261	-.02297125	pCi/g	NO
		Uranium-235/236	0.313 g	0.064	0.026	0.120	-.02971246	pCi/g	NO
		Uranium-238	0.313 g	0.983	0.104	0.102	0	pCi/g	NO
232069001	CAMO-09-10142	Uranium-233/234	0.299 g	0.709	0.0854	0.282	-.02404682	pCi/g	NO
		Uranium-235/236	0.299 g	0.0384	0.0232	0.129	-.03110368	pCi/g	NO
		Uranium-238	0.299 g	0.683	0.0852	0.110	0	pCi/g	NO
232069002	CAMO-09-10141	Uranium-233/234	0.293 g	0.726	0.129	0.656	-.02453925	pCi/g	NO
		Uranium-235/236	0.293 g	0.0178	0.0309	0.301	-.03174061	pCi/g	NO
		Uranium-238	0.293 g	0.794	0.130	0.255	0	pCi/g	NO
232069003	CAMO-09-10143	Uranium-233/234	0.306 g	1.13	0.121	0.294	-.02349673	pCi/g	NO
		Uranium-235/236	0.306 g	0.0798	0.0282	0.135	-.03039216	pCi/g	NO
		Uranium-238	0.306 g	1.07	0.114	0.114	0	pCi/g	NO
232069004	CAMO-09-10153	Uranium-233/234	0.303 g	0.725	0.0879	0.264	-.02372937	pCi/g	NO
		Uranium-235/236	0.303 g	0.0502	0.0218	0.121	-.03069307	pCi/g	NO
		Uranium-238	0.303 g	0.883	0.0952	0.103	0	pCi/g	NO
232069005	CAMO-09-10144	Uranium-233/234	0.313 g	1.12	0.113	0.259	-.02297125	pCi/g	NO
		Uranium-235/236	0.313 g	0.0351	0.0188	0.118	-.02971246	pCi/g	NO
		Uranium-238	0.313 g	1.04	0.108	0.101	0	pCi/g	NO
232069006	CAMO-09-10154	Uranium-233/234	0.313 g	0.728	0.0852	0.261	-.02297125	pCi/g	NO
		Uranium-235/236	0.313 g	0.120	0.0321	0.119	-.02971246	pCi/g	NO
		Uranium-238	0.313 g	0.900	0.0963	0.101	0	pCi/g	NO
232076001	CAMO-09-6611	Uranium-233/234	0.302 g	0.823	0.0927	0.275	-.02380795	pCi/g	NO
		Uranium-235/236	0.302 g	0.0299	0.0184	0.126	-.03079470	pCi/g	NO
		Uranium-238	0.302 g	0.853	0.0939	0.107	0	pCi/g	NO
232076002	CAMO-09-6612	Uranium-233/234	0.299 g	0.888	0.0985	0.269	-.02404682	pCi/g	NO
		Uranium-235/236	0.299 g	0.0293	0.0208	0.123	-.03110368	pCi/g	NO
		Uranium-238	0.299 g	0.900	0.098	0.105	0	pCi/g	NO
232076003	CAMO-09-6610	Uranium-233/234	0.299 g	0.915	0.100	0.274	-.02404682	pCi/g	NO
		Uranium-235/236	0.299 g	0.0372	0.0199	0.125	-.03110368	pCi/g	NO
		Uranium-238	0.299 g	0.885	0.0961	0.107	0	pCi/g	NO
232424001	CAMO-09-10463	Uranium-233/234	0.299 g	0.511	0.0686	0.290	-.02404682	pCi/g	NO
		Uranium-235/236	0.299 g	0.0394	0.0178	0.133	-.03110368	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232424001	CAMO-09-10463	Uranium-238	0.299 g	0.350	0.0555	0.113	0	pCi/g	NO
232511001	CAMO-09-6519	Uranium-233/234	0.304 g	1.50	0.141	0.269	-.02365132	pCi/g	NO
		Uranium-235/236	0.304 g	0.0876	0.028	0.123	-.03059211	pCi/g	NO
		Uranium-238	0.304 g	1.17	0.118	0.105	0	pCi/g	NO
232511002	CAMO-09-6518	Uranium-233/234	0.308 g	1.09	0.115	0.290	-.02334416	pCi/g	NO
		Uranium-235/236	0.308 g	0.0789	0.030	0.133	-.03019481	pCi/g	NO
		Uranium-238	0.308 g	1.37	0.134	0.113	0	pCi/g	NO
232511003	CAMO-09-6527	Uranium-233/234	0.298 g	1.06	0.114	0.305	-.02412752	pCi/g	NO
		Uranium-235/236	0.298 g	0.0663	0.0314	0.140	-.03120605	pCi/g	NO
		Uranium-238	0.298 g	1.13	0.119	0.119	0	pCi/g	NO
232511004	CAMO-09-6529	Uranium-233/234	0.304 g	1.36	0.133	0.276	-.02365132	pCi/g	NO
		Uranium-235/236	0.304 g	0.0675	0.023	0.127	-.03059211	pCi/g	NO
		Uranium-238	0.304 g	1.00	0.106	0.107	0	pCi/g	NO
232511005	CAMO-09-6528	Uranium-233/234	0.299 g	2.54	0.220	0.282	-.02404682	pCi/g	NO
		Uranium-235/236	0.299 g	0.107	0.0334	0.129	-.03110368	pCi/g	NO
		Uranium-238	0.299 g	1.05	0.110	0.110	0	pCi/g	NO
232511006	CAMO-09-6531	Uranium-233/234	0.303 g	0.906	0.0998	0.278	-.02372937	pCi/g	NO
		Uranium-235/236	0.303 g	0.0454	0.0216	0.128	-.03069307	pCi/g	NO
		Uranium-238	0.303 g	1.17	0.119	0.108	0	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 23-JUN-2009 00:00:00

SAMPLE ID : S0232424001_UU
SAMPLE QTY: 0.299 G

DETECTOR NUMBER :33449
AVERAGE %EFFICIENCY :24.9030
% YIELD : 94.983

COUNT DATE:15-JUL-2009 21:13:07
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B149.CNF;335
PCI/G : 3.933E+01	PCI/G : 3.933E+01	NOMINAL : 5.29629 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.03058 dpm	EFF FILE : W149.CNF;98
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	86.000	80.222	2.000	9.1924	100.0000	5.11E-01	6.86E-02	1.36E-01	2.90E-01	5.85E-02
U232	5302.100	1257.000	1252.000	5.000	2.2361	100.0000	7.98E+00	6.05E-01	3.31E-02	8.35E-02	2.26E-01
U-235	4391.000	5.000	5.000	0.000	3.0409	80.90000	3.94E-02	1.78E-02	5.57E-02	1.33E-01	1.76E-02
U-238	4184.730	58.000	55.000	3.000	3.2215	100.0000	3.50E-01	5.55E-02	4.77E-02	1.13E-01	4.97E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

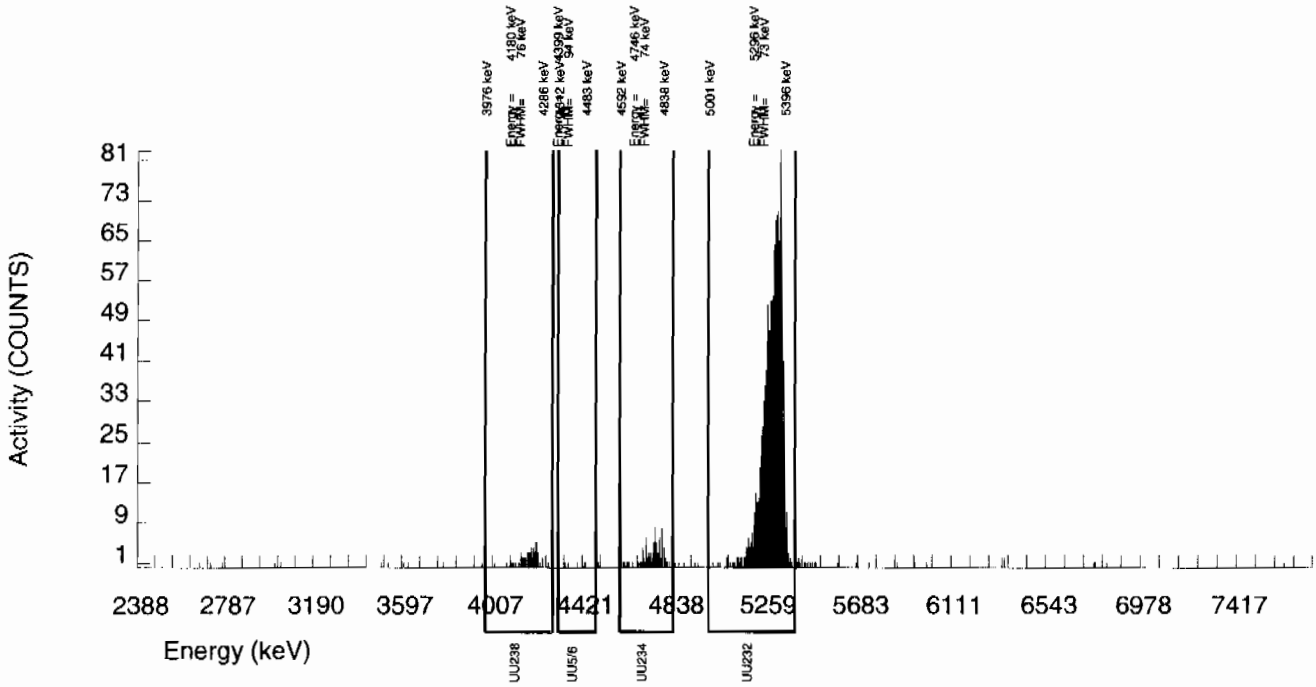

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511006_UU
SAMPLE QTY: 0.303 G

DETECTOR NUMBER :75555
AVERAGE %EFFICIENCY :24.6763
% YIELD : 98.459

COUNT DATE:15-JUL-2009 21:13:27
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B157.CNF;333
PCI/G : 3.881E+01	PCI/G : 3.881E+01	NOMINAL : 5.29615 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.21452 dpm	EFF FILE : W157.CNF;95
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	157.000	148.120	5.000	9.1924	100.0000	9.06E-01	9.98E-02	1.31E-01	2.78E-01	7.69E-02
U232	5302.100	1291.000	1286.000	5.000	2.2361	100.0000	7.87E+00	5.95E-01	3.18E-02	8.02E-02	2.20E-01
U-235	4391.000	7.000	6.000	1.000	3.0409	80.90000	4.54E-02	2.16E-02	5.35E-02	1.28E-01	2.14E-02
U-238	4184.730	193.000	192.000	1.000	3.2215	100.0000	1.17E+00	1.19E-01	4.59E-02	1.08E-01	8.52E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

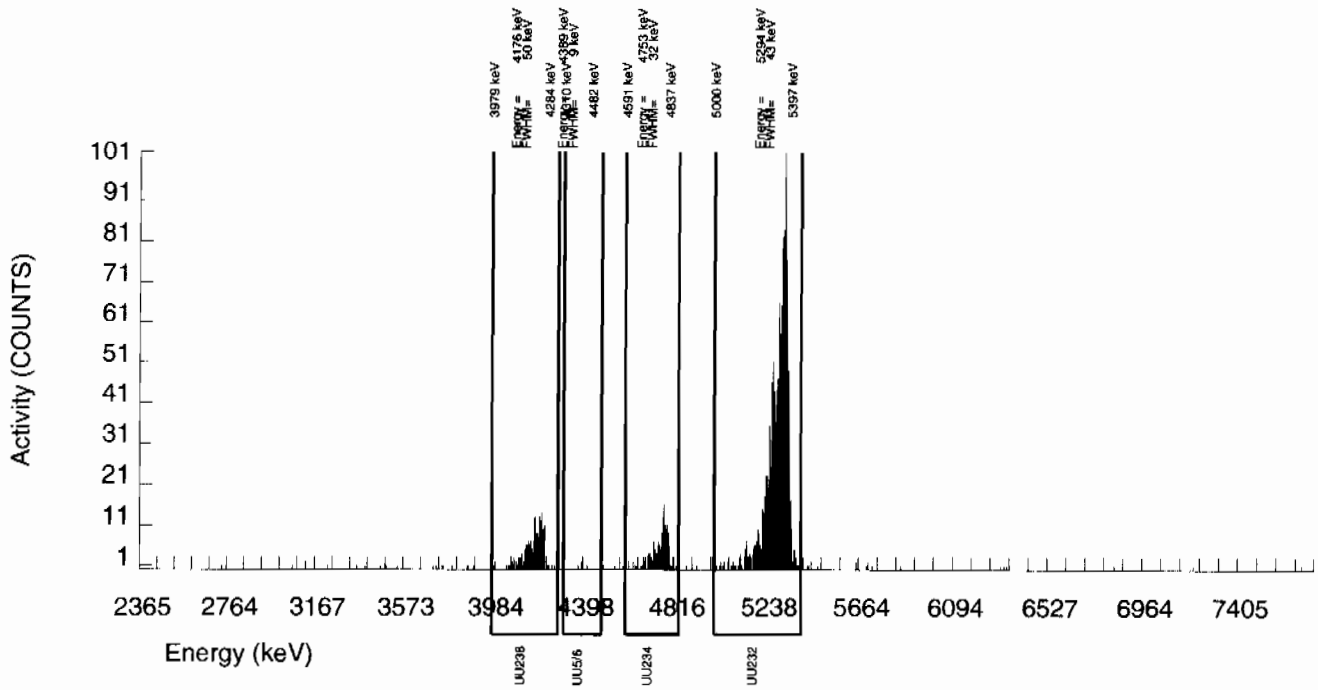

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 14-JUL-2009 00:00:00

SAMPLE ID : S1201880401_UU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :33451
AVERAGE %EFFICIENCY :24.8480
% YIELD : 96.410

COUNT DATE:15-JUL-2009 21:13:30
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B158.CNF;334
PCI/G : 1.176E+01	PCI/G : 1.176E+01	NOMINAL : 5.29335 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.10332 dpm	EFF FILE : W158.CNF;98
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	6.000	-3.826	6.000	9.1924	100.0000	-7.19E-03	5.38E-03	4.02E-02	8.55E-02	5.38E-03
U232	5302.100	1279.000	1268.000	11.000	3.3166	100.0000	2.38E+00	1.79E-01	1.45E-02	3.41E-02	6.75E-02
U-235	4391.000	1.000	-4.000	5.000	3.0409	80.90000	-9.30E-03	5.70E-03	1.64E-02	3.92E-02	5.69E-03
U-238	4184.730	0.000	0.000	0.000	3.2215	100.0000	0.00E+00	1.88E-03	1.41E-02	3.33E-02	1.88E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

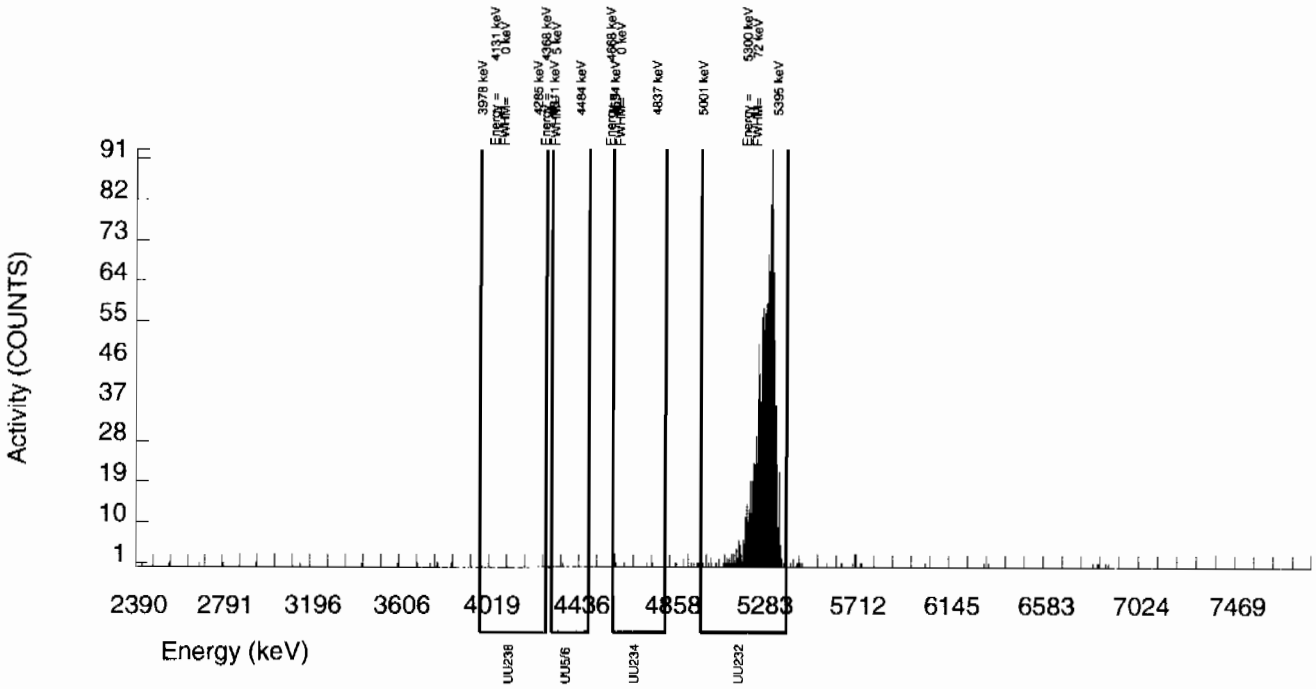

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S1201880402_UU
SAMPLE QTY: 0.306 G

DETECTOR NUMBER :78260
AVERAGE %EFFICIENCY :38.4334
% YIELD : 93.890

COUNT DATE:15-JUL-2009 21:13:33
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B171.CNF;112
PCI/G : 3.843E+01	PCI/G : 3.843E+01	NOMINAL : 5.29615 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.97255 dpm	EFF FILE : W171.CNF;51
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	259.000	247.237	6.000	9.1924	100.0000	1.01E+00	9.51E-02	8.72E-02	1.86E-01	6.57E-02
U232	5302.100	1925.000	1910.000	15.000	3.8730	100.0000	7.80E+00	5.61E-01	3.68E-02	8.46E-02	1.80E-01
U-235	4391.000	20.000	20.000	0.000	3.0409	80.90000	1.01E-01	2.36E-02	3.57E-02	8.50E-02	2.26E-02
U-238	4184.730	290.000	278.000	12.000	3.2215	100.0000	1.13E+00	1.05E-01	3.06E-02	7.22E-02	7.09E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

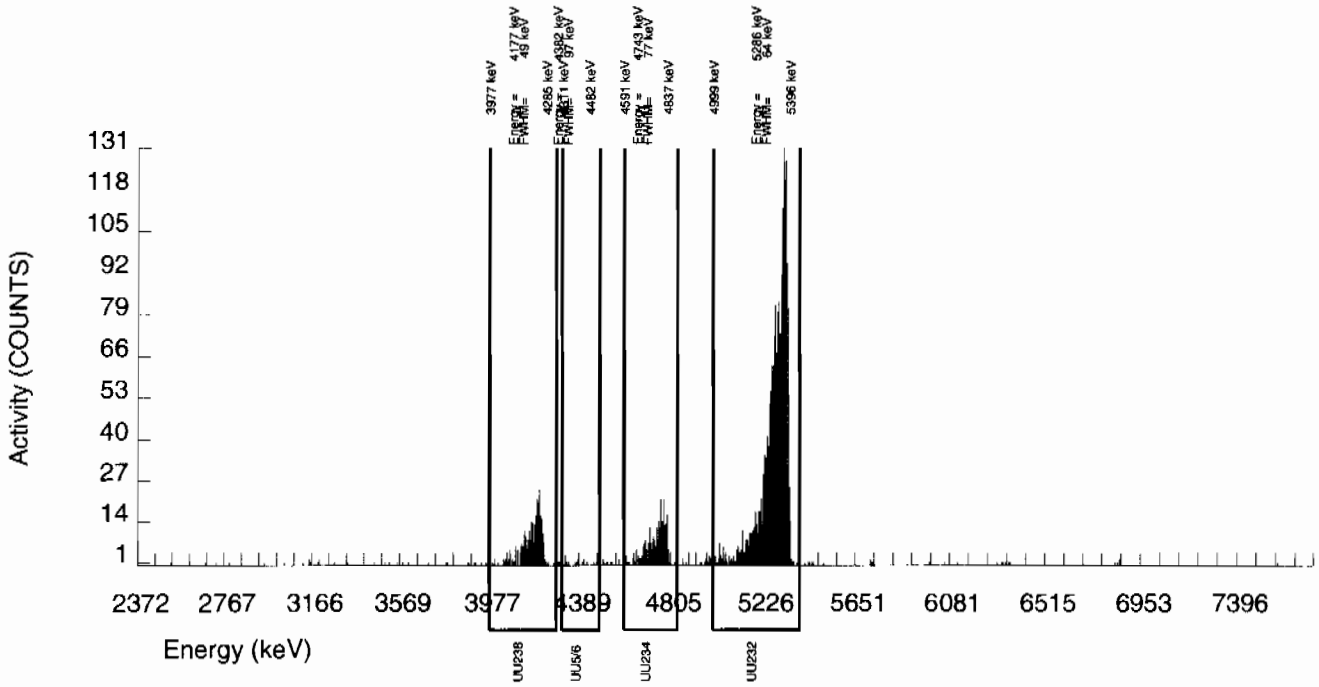

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 14-JUL-2009 00:00:00

SAMPLE ID : S1201880403_UU
SAMPLE QTY: 0.100 G

DETECTOR NUMBER :78772
AVERAGE %EFFICIENCY :38.2609
% YIELD : 96.190

COUNT DATE:15-JUL-2009 21:13:35
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B172.CNF;110
PCI/G : 1.176E+02	PCI/G : 1.176E+02	NOMINAL : 5.29335 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.09166 dpm	EFF FILE : W172.CNF;44
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	506.000	495.122	5.000	9.1924	100.0000	6.06E+00	4.92E-01	2.62E-01	5.57E-01	2.75E-01
U232	5302.100	1953.000	1948.000	5.000	2.2361	100.0000	2.38E+01	1.70E+00	6.37E-02	1.61E-01	5.42E-01
U-235	4391.000	20.000	18.000	2.000	3.0409	80.90000	2.72E-01	7.33E-02	1.07E-01	2.55E-01	7.10E-02
U-238	4184.730	455.000	453.000	2.000	3.2215	100.0000	5.54E+00	4.56E-01	9.17E-02	2.17E-01	2.62E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

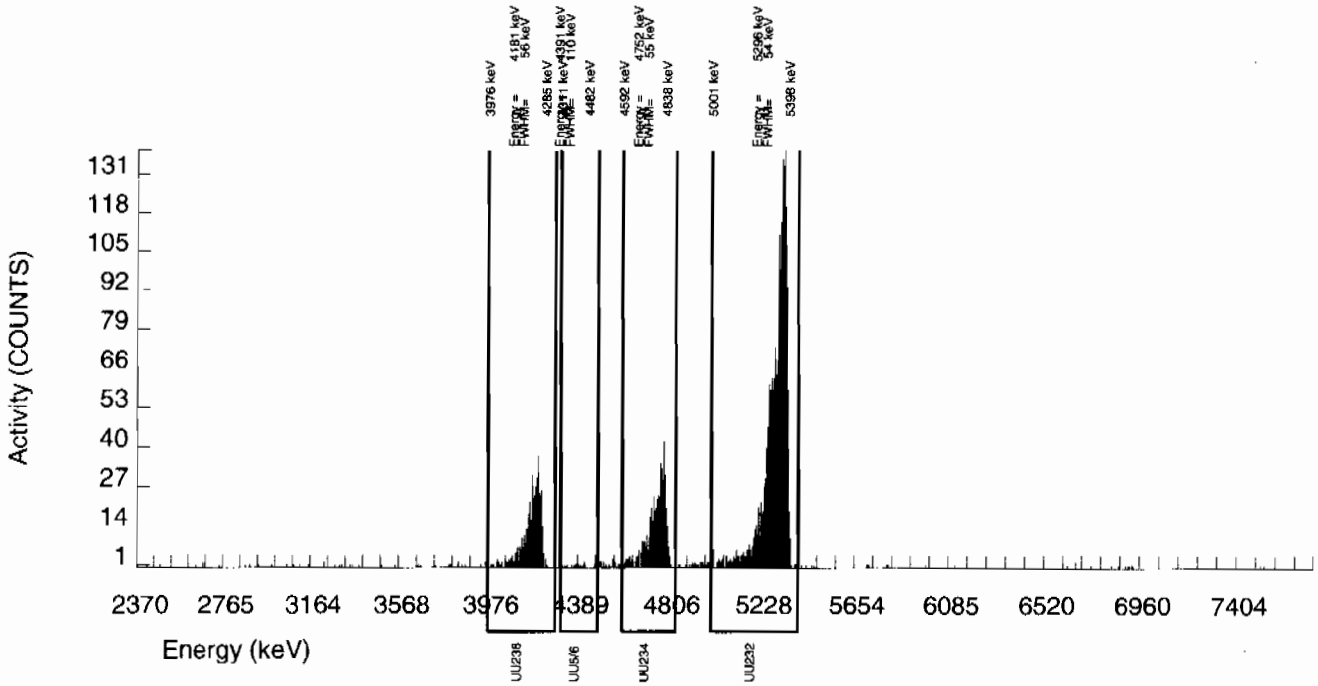

Radiochemistry Batch Checklist, Rev 9

Batch# 881249 Product: γ / LANL Date: 7/14/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			n/a
Samples have been blank corrected (if required)			n/a
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			n/a
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			n/a
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			n/a
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			n/a
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			n/a
Batch non-conformances second reviewed and disposition verified to be completed.			n/a
Aliquot Correction completed if required.			n/a
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Maggie Stamps 7/14/09

Secondary Review Performed By: [illegible] 7/14/09

7/20

Gamma Spec Que Sheet 1.G.-7/7/09

06/30/2009

Batch #:881219 **Analyst:** MXR1 **First Client DueDate**07/20/2009 **Internal Due Date:** 07/09/2009

Gamma Spike Isotope: Mixed Gamma **Spike Code:** N/a **Expiration Date:** N/a **Vol:** N/a **Nominal Concentration:** N/a

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1.0mL **Nominal Concentration:** Cs137-5.776 Co60-7.101 Am241-16.31

Initials: MS **Prep Date:** 6/30/09 **Witness:** N/a

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
232424001-1	CAMO-09-10463	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	116.50	1	6/30/09
232433001-1	CAMO-09-6007	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	122.39	2	
232433002-1	CAMO-09-6006	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	121.04	4	
232433003-1	CAMO-09-6008	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	103.26	5	
232433004-1	CAMO-09-6009	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	137.71	6	
232433005-1	CAMO-09-6034	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	77.49	8	
232433006-1	CAMO-09-6043	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	92.89	11	
232433007-1	CAMO-09-6045	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	105.82	12	
232433008-1	CAMO-09-6041	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	108.51	13	
232433009-1	CAMO-09-6040	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	58.66	14	
232433010-1	CAMO-09-6044	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	78.03	15	
232433011-1	CAMO-09-6035	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	121.42	16	
232433012-1	CAMO-09-6038	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	75.90	17	
232433013-1	CAMO-09-6039	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	105.65	18	
232433014-1	CAMO-09-6042	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	80.36	22	
232433015-1	CAMO-09-6049	SAMPLE		.05 pCi/g	LANL010	SOIL	23-JUN-09 12:00:00	122.28	23	
1201871423-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	6/30/09	137.71	2	
1201871424-1	DUP CAMO-09-10463(232424001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	23-JUN-09 12:00:00	119.46	4	
1201871425-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	6/30/09	151.73	5	

GEL Laboratories LLC, Radiochemistry Division

history + dailies

Data Reviewed By: Margie Stamps 7/14/09
J. Arlene 7/14/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881219	232424001	SAMPLE	07-JUL-09	Americium-241	0.2211	0.3061	0.200
				Cerium-139	-0.01267	0.05584	0.050
				Sodium-22	0.00093	0.09198	0.080
				Thorium-234	2.031	2.438	2.00
881219	232433001	SAMPLE	07-JUL-09	Americium-241	-8.08E-06	0.3243	0.200
				Cerium-139	0.01177	0.05441	0.050
				Sodium-22	-0.02189	0.08293	0.080
				Thorium-234	1.112	2.62	2.00
881219	232433002	SAMPLE	07-JUL-09	Americium-241	-0.09923	0.3394	0.200
				Thorium-234	0.4954	2.848	2.00
881219	232433003	SAMPLE	07-JUL-09	Cerium-139	-0.00307	0.05922	0.050
				Cesium-134	0.04202	0.1062	0.100
				Europium-152	0.07887	0.2057	0.200
				Sodium-22	-0.0205	0.0962	0.080
				Tin-113	0.00117	0.1042	0.100
881219	232433004	SAMPLE	07-JUL-09	Americium-241	-0.00603	0.3538	0.200
				Cerium-139	-0.01199	0.05816	0.050
				Sodium-22	-0.06759	0.08188	0.080
				Thorium-234	0.9715	2.972	2.00
881219	232433005	SAMPLE	07-JUL-09	Americium-241	0.04505	0.3705	0.200
				Cerium-139	-0.00754	0.06223	0.050
				Cesium-134	0.03567	0.1103	0.100
				Europium-152	0.0773	0.2302	0.200
				Sodium-22	-0.02886	0.09783	0.080
881219	232433006	SAMPLE	07-JUL-09	Americium-241	-0.07842	0.2441	0.200
				Cerium-139	-0.01325	0.05835	0.050
				Cesium-134	0.1102	0.1145	0.100
881219	232433007	SAMPLE	07-JUL-09	Americium-241	0.04025	0.2846	0.200
				Cerium-139	-0.03669	0.05251	0.050
				Sodium-22	-0.02361	0.08893	0.080
881219	232433008	SAMPLE	07-JUL-09	Cerium-139	0.00799	0.06211	0.050
				Europium-152	-0.01484	0.2291	0.200
				Sodium-22	-0.01046	0.1068	0.080
				Tin-113	0.00081	0.1036	0.100
881219	232433009	SAMPLE	07-JUL-09	Americium-241	0.02742	0.255	0.200
				Cerium-139	0.02234	0.05806	0.050
				Cesium-134	0.1149	0.1169	0.100
				Sodium-22	-0.01124	0.08251	0.080
881219	232433010	SAMPLE	07-JUL-09	Americium-241	-0.04863	0.6873	0.200
				Cerium-139	-0.02008	0.07859	0.050
				Cesium-134	0.06242	0.1399	0.100
				Europium-152	0.00439	0.2662	0.200
				Mercury-203	0.0812	0.1064	0.100
				Ruthenium-106	0.2516	0.9443	0.800
				Sodium-22	0.01503	0.123	0.080
				Tin-113	0.01641	0.1348	0.100

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881219	232433010	SAMPLE	07-JUL-09	Uranium-235	0.4658	0.5558	0.500
				Yttrium-88	0.06253	0.1058	0.100
881219	232433011	SAMPLE	07-JUL-09	Americium-241	0.03932	0.3119	0.200
				Cerium-139	-0.00276	0.05526	0.050
				Sodium-22	0.02274	0.08615	0.080
				Thorium-234	2.169	2.518	2.00
881219	232433012	SAMPLE	07-JUL-09	Cerium-139	0.00847	0.06389	0.050
				Cesium-134	0.07556	0.1261	0.100
				Europium-152	-0.05633	0.2317	0.200
				Sodium-22	-0.02776	0.09258	0.080
				Tin-113	5.73E-05	0.1106	0.100
881219	232433013	SAMPLE	07-JUL-09	Americium-241	0.1565	0.3272	0.200
				Thorium-234	1.697	2.578	2.00
881219	232433014	SAMPLE	07-JUL-09	Americium-241	0.04738	0.2579	0.200
				Cerium-139	-0.0348	0.05496	0.050
				Cesium-134	0.06574	0.1028	0.100
				Sodium-22	0.01019	0.08711	0.080
881219	232433015	SAMPLE	07-JUL-09	Americium-241	0.09487	0.2512	0.200
881219	1201871423	MB	07-JUL-09				
881219	1201871424	DUP	07-JUL-09	Americium-241	0.1091	0.3744	0.200
				Sodium-22	0.00035	0.08849	0.080
				Thorium-234	0.5417	3.041	2.00
881219	1201871425	LCS	07-JUL-09	Cerium-139	0.06566	0.09612	0.050
				Cesium-134	0.1409	0.2266	0.100
				Europium-152	0.101	0.3582	0.200
				Mercury-203	0.00971	0.1247	0.100
				Potassium-40	0.8505	1.323	1.00
				Ruthenium-106	-0.1586	1.175	0.800
				Sodium-22	-0.06415	0.1062	0.080
				Tin-113	0.07611	0.1766	0.100
				Uranium-235	0.1641	0.6198	0.500
				Yttrium-88	0.00432	0.1004	0.100

GEL QUALS

Batch ID: 881219

Report run on: July 14, 2009 11:49 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232424001-1 07-JUL-2009 06:03	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.097			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.445			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1328		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.297			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1068			
	Uranium-235	UI	UI	UI	Data rejected due to high peak-width.		.4239		.5	.5
232433001-1 07-JUL-2009 06:04	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.456			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.043			
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.498			
232433002-1 07-JUL-2009 06:04	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.476			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		.9898		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to low abundance.		3.016			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1298		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.312			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		.9898			
232433003-1 07-JUL-2009 06:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.846			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.087		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.711			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.994			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.087			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1288			

GEL QUALS

Batch ID: 881219

Report run on: July 14, 2009 11:49 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232433004-1 07-JUL-2009 06:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.013			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.831			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1396		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to no valid peak.		.08752		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.55			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1071			
232433005-1 07-JUL-2009 06:06	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.358			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.146			
232433006-1 07-JUL-2009 06:38	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.33			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.871			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.225			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09246			
232433007-1 07-JUL-2009 06:39	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.549			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		5.064			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1286		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.795			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08739			
232433008-1 07-JUL-2009 06:39	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.754			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.212			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.199		.1	.1

GEL QUALS

Batch ID: 881219

Report run on: July 14, 2009 11:49 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232433008-1 07-JUL-2009 06:39	Radium-224	UI	UI	UI	Data rejected due to interference.		4.82			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.2258			
232433009-1 07-JUL-2009 06:40	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.587			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.941			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.942			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1			
232433010-1 07-JUL-2009 06:40	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.265			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.833			
	Radium-224	UI	UI	UI	Data rejected due to interference.		6.031			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.2574			
232433011-1 07-JUL-2009 06:41	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.265			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.203			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.931			
232433012-1 07-JUL-2009 07:03	Americium-241	UI	UI	UI	Data rejected due to low abundance.		.1781		.2	.2
	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.1			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.335		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.079			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.949			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.335			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1132			

GEL QUALS

Batch ID: 881219

Report run on: July 14, 2009 11:49 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232433013-1 07-JUL-2009 07:04	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.829			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.958			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.646			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1258			
232433014-1 07-JUL-2009 07:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.257			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.083		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.83			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.145			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.083			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1976			
232433015-1 07-JUL-2009 07:06	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.718			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.229			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1073		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.593			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09025			
1201871423-1 MB 07-JUL-2009 08:11	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.04857			
1201871424-1 DUP 07-JUL-2009 08:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.041			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.002		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.671			
	Radium-224	UI	UI	UI	Data rejected due to interference. ~~NA~~ ME 7/14/09		4.179			

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GEL QUALS

Batch ID: 881219

Report run on: July 14, 2009 11:49 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
1201871424-1 DUP 07-JUL-2009 08:27	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.002			

Gamma Review Report based on Result > MDA for Batch:881219

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232424001	23-JUN-09 12:00	07-JUL-09 06:03	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.707	0.1822	pCi/g	0.2639	N	911.6	3	1.852	IDENTIFIED	9.402	☐	
Americium-243 INT		0.4553	0.05477	pCi/g	0.1001	N	74.74	2	1.573	IDENTIFIED	11.27	☐	
Annihilation Rad.		0.1391	0.04308	pCi/g	0.05159	N	511.3	3	2.433	IDENTIFIED	30.85	☐	
Pb214 Bismuth-211 INT		3.097	0.2788	pCi/g	0.3786	Y	352.3	4	1.402	IDENTIFIED	8.427	☑ UI	
Bismuth-212	HE	0.8524	0.1997	pCi/g	0.6646	N	727.7	1	1.862	FAIL_ABUND	23.12	☐	
Bismuth-214 ✓		1.009	0.0988	pCi/g	0.1286	0.200	609.7	4	1.629	IDENTIFIED	9.069	☐	
Pb214 Cadmium-109 INT		2.445	0.5057	pCi/g	1.649	Y	87.25	3	1.117	IDENTIFIED	20.17	☑ UI	
Cerium-141	HE	0.1234	0.07132	pCi/g	0.1151	N	144.8	3	4.958	IDENTIFIED	57.72	☐	
Cerium-143		124.2	45.87	pCi/g	0	N	144.8	3	4.958	NOT_IDENTI	57.72	☐	
Cesium-134 LA		0.1328	0.02997	pCi/g	0.1152	0.100	511.3	3	2.433	NOT_IDENTI	30.85	☑ UI	Data rejected due to low abundance.
Gross Gamma		9.072	1.658	pCi/g	2.835	N		0				☐	
Iodine-133	HE	629.1	1129	pCi/g	0	N	511.3	3	2.433	FAIL_DECAY	30.85	☐	
Krypton-85	HE	21.13	5.021	pCi/g	16.93	N	239	9	1.185	NOT_IDENTI	3.982	☐	
Lead-212 ✓		1.551	0.0837	pCi/g	0.1033	0.100	239	9	1.185	IDENTIFIED	3.982	☐	
Lead-214 ✓		1.077	0.101	pCi/g	0.1299	0.100	352.3	4	1.402	IDENTIFIED	8.427	☐	
Lutetium-177	HE	2.09	0.7997	pCi/g	1.963	N	209.6	1	1.271	FAIL_ABUND	38.16	☐	
Neptunium-237	HE	0.7072	0.1635	pCi/g	0.4691	N	87.25	3	1.117	IDENTIFIED	20.17	☐	
Niobium-97	HE	6831	15380	pCi/g	0	N	239	9	1.185	NOT_IDENTI	3.982	☐	
Polonium-212 nr		1.551	0.0837	pCi/g	0.1033	N	239	9	1.185	IDENTIFIED	3.982	☐	
Polonium-214 nr		1.077	0.101	pCi/g	0.1299	N	352.3	4	1.402	IDENTIFIED	8.427	☐	
Polonium-216 nr		1.551	0.0837	pCi/g	0.1033	N	239	9	1.185	IDENTIFIED	3.982	☐	
Polonium-218 nr		1.077	0.101	pCi/g	0.1299	N	352.3	4	1.402	IDENTIFIED	8.427	☐	
Potassium-40 ✓		36.5	1.698	pCi/g	0.5368	1.00	1461	1	1.983	IDENTIFIED	3.004	☐	
Pb214 Radium-224 INT		3.297	0.7781	pCi/g	1.175	Y	242	1	1.789	IDENTIFIED	23.43	☑ UI	
Radium-226 ✓		1.009	0.0988	pCi/g	0.1286	Y	609.7	4	1.629	IDENTIFIED	9.069	☐	
Radium-228 ✓		1.707	0.1822	pCi/g	0.2639	0.500	911.6	3	1.852	IDENTIFIED	9.402	☐	
Sodium-24	HE	89990	94500	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1068	0.02538	pCi/g	0.08558	Y	239	9	1.185	NOT_IDENTI	3.982	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	2.10E+14	5.23E+14	pCi/g	0	N	239	9	1.185	NOT_IDENTI	3.982	☐	
Thallium-200		370	111.8	pCi/g	0	N	74.74	2	1.573	NOT_IDENTI	11.27	☐	
Thallium-208 ✓		0.5124	0.04366	pCi/g	0.06639	0.080	583.6	1	1.374	IDENTIFIED	7.908	☐	
Thorium-228 ✓		1.551	0.0837	pCi/g	0.1033	N	239	9	1.185	IDENTIFIED	3.982	☐	
Thorium-230 ✓		1.009	0.0988	pCi/g	0.1285	N	609.7	4	1.629	IDENTIFIED	9.069	☐	
Thorium-232 ✓		1.707	0.1822	pCi/g	0.2639	N	911.6	3	1.852	IDENTIFIED	9.402	☐	
Tin-126	HE	0.2408	0.04981	pCi/g	0.1621	N	87.25	3	1.117	IDENTIFIED	20.17	☐	
Titanium-44 LA		0.3806	0.03291	pCi/g	0.09123	N	77.12	1	1.088	FAIL_ABUND	7.522	☐	
Total Uranium		6.2396	3.68E-06	ug/g	3.6293	N		0				☐	
Uranium-234 ✓		1.009	0.0988	pCi/g	0.1285	N	609.7	4	1.629	IDENTIFIED	9.069	☐	
Uranium-235 ↑PW		0.4239	0.2471	pCi/g	0.3935	0.500	144.8	3	4.958	IDENTIFIED	57.72	☑ UI	Data rejected due to high peak-width.
Zirconium-97		7.03E+05	2.98E+05	pCi/g	0	N	239	9	1.185	NOT_IDENTI	3.982	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433001	23-JUN-09 12:00	07-JUL-09 06:04	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.459	0.2175	pCi/g	0.2408	N	911.3	3	1.959	IDENTIFIED	13.71	☐	
Americium-243 INT		0.3287	0.04107	pCi/g	0.09633	N	74.77	2	1.042	IDENTIFIED	11.38	☐	
Annihilation Rad.	HE	0.09796	0.03486	pCi/g	0.05501	N	511.1	1	2.397	IDENTIFIED	35.44	☐	
Pb214 Bismuth-211 INT		3.456	0.2387	pCi/g	0.3446	Y	351.9	4	1.283	IDENTIFIED	5.603	☑ UI	
Bismuth-212 LA		1.359	0.2615	pCi/g	0.768	N	727.3	1	1.312	FAIL_ABUND	18.73	☐	
Bismuth-214 ✓		1.009	0.08621	pCi/g	0.1107	0.200	609.3	4	1.513	IDENTIFIED	7.463	☐	

Pb214	Cadmium-109 INT	3.043	0.5146	pCi/g	1.314	Y	87.25	5	1.065	IDENTIFIED	15.86	☑ UI	
	Cerium-143	248	50.68	pCi/g	0	N	87.25	5	1.065	FAIL_DECAY	15.86	☐	
	Gross Gamma	8.935	1.532	pCi/g	2.778	N		0				☐	
	Iodine-123 HE	1.63E+05	5.18E+05	pCi/g	0	N	87.25	5	1.065	NOT_IDENTI	15.86	☐	
	Lead-212 ✓	1.452	0.1016	pCi/g	0.1157	0.100	238.5	5	1.096	IDENTIFIED	5.156	☐	
	Lead-214 ✓	1.202	0.08878	pCi/g	0.1201	0.100	351.9	4	1.283	IDENTIFIED	5.603	☐	
	Lutetium-177 HE	2.092	0.6346	pCi/g	1.821	N	209.1	1	0.6883	FAIL_ABUND	30.09	☐	
	Neptunium-237 INT	0.8801	0.1744	pCi/g	0.4235	N	87.25	5	1.065	IDENTIFIED	15.86	☐	
	Polonium-212 nr	1.452	0.1016	pCi/g	0.1157	N	238.5	5	1.096	IDENTIFIED	5.156	☐	
	Polonium-214 nr	1.202	0.08878	pCi/g	0.1201	N	351.9	4	1.283	IDENTIFIED	5.603	☐	
	Polonium-216 nr	1.452	0.1016	pCi/g	0.1157	N	238.5	5	1.096	IDENTIFIED	5.156	☐	
	Polonium-218 nr	1.202	0.08878	pCi/g	0.1201	N	351.9	4	1.283	IDENTIFIED	5.603	☐	
	Potassium-40 ✓	35.24	1.679	pCi/g	0.5986	1.00	1461	1	2.083	IDENTIFIED	2.994	☐	
Pb214	Radium-224 INT	2.498	0.6845	pCi/g	1.515	Y	241.8	1	1.539	IDENTIFIED	27.08	☑ UI	
	Radium-226 ✓	1.009	0.08621	pCi/g	0.1107	Y	609.3	4	1.513	IDENTIFIED	7.463	☐	
	Radium-228 ✓	1.459	0.2175	pCi/g	0.2408	0.500	911.3	3	1.959	IDENTIFIED	13.71	☐	
	Sodium-24 HE	59910	88820	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Thallium-200	308	102.8	pCi/g	0	N	74.77	2	1.042	NOT_IDENTI	11.38	☐	
	Thallium-208 ✓	0.5058	0.0522	pCi/g	0.06616	0.080	583.4	1	1.52	IDENTIFIED	9.646	☐	
	Thorium-228 ✓	1.452	0.1016	pCi/g	0.1157	N	238.5	5	1.096	IDENTIFIED	5.156	☐	
	Thorium-230 ✓	1.009	0.08621	pCi/g	0.1107	N	609.3	4	1.513	IDENTIFIED	7.463	☐	
	Thorium-232 ✓	1.459	0.2175	pCi/g	0.2408	N	911.3	3	1.959	IDENTIFIED	13.71	☐	
	Tin-126 INT	0.2997	0.05069	pCi/g	0.1302	N	87.25	5	1.065	IDENTIFIED	15.86	☐	
	Titanium-44 LA	0.3287	0.03117	pCi/g	0.07769	N	77.11	1	1.028	FAIL_ABUND	7.887	☐	
	Uranium-234 ✓	1.009	0.08621	pCi/g	0.1107	N	609.3	4	1.513	IDENTIFIED	7.463	☐	
	Zirconium-97 HE	5.33E+05	2.83E+05	pCi/g	0	N	238.5	5	1.096	NOT_IDENTI	5.156	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433002	23-JUN-09 12:00	07-JUL-09 06:04	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.437	0.154	pCi/g	0.2026	N	910.5	3	1.714	IDENTIFIED	9.231	☐	
	Americium-243 INT	0.3064	0.04254	pCi/g	0.09988	N	74.84	2	0.983	IDENTIFIED	12.65	☐	
	Annihilation Rad. HE	0.1029	0.03319	pCi/g	0.04683	N	510.6	3	2.315	IDENTIFIED	32.13	☐	
	Barium-137m nr	0.1358	0.02864	pCi/g	0.06041	N	661	2	1.386	IDENTIFIED	20.94	☐	
Pb214	Bismuth-211 INT	3.476	0.2498	pCi/g	0.2932	Y	351.7	4	1.138	IDENTIFIED	6.345	☑ UI	
	Bismuth-212 HE	0.9189	0.1971	pCi/g	0.6272	N	726.9	1	1.179	FAIL_ABUND	21.11	☐	
	Bismuth-214 LA	0.9898	0.08074	pCi/g	0.2699	0.200	608.9	4	1.428	FAIL_ABUND	7.283	☑ UI	Data rejected due to low abundance.
	Cadmium-109 LA	3.016	0.4821	pCi/g	1.608	Y	510.6	3	2.315	NOT_IDENTI	32.13	☑ UI	Data rejected due to low abundance.
	Cerium-143	380.8	56.97	pCi/g	0	N	327.8	1	1.689	FAIL_DECAY	26.33	☐	
	Cesium-134 LA	0.1298	0.02993	pCi/g	0.08377	0.100	794.5	2	1.337	FAIL_ABUND	22.81	☑ UI	Data rejected due to low abundance.
	Cesium-137 ✓	0.1436	0.03028	pCi/g	0.06386	0.100	661	2	1.386	IDENTIFIED	20.94	☐	
	Gross Gamma	7.604	1.172	pCi/g	2.329	N		0				☐	
	Iodine-123 HE	52250	4.53E+05	pCi/g	0	N	510.6	3	2.315	NOT_IDENTI	32.13	☐	
	Iodine-135 HE	8.15E+13	8.46E+13	pCi/g	0	N	794.5	2	1.337	NOT_IDENTI	22.81	☐	
	Lead-212 ✓	1.373	0.07604	pCi/g	0.08344	0.100	238.5	6	1.137	IDENTIFIED	3.815	☐	
	Lead-214 ✓	1.209	0.09244	pCi/g	0.1022	0.100	351.7	4	1.138	IDENTIFIED	6.345	☐	
	Lutetium-177 LA	3.573	0.8434	pCi/g	1.725	N	209.7	1	1.292	FAIL_ABUND	23.37	☐	
	Neptunium-237 ~~INT~~ LA	1.092	0.1985	pCi/g	0.4777	N	92.82	1	1.531	NOT_IDENTI	21.33	☐	
	Niobium-97	32160	10880	pCi/g	0	N	238.5	6	1.137	NOT_IDENTI	3.815	☐	
	Polonium-212 nr	1.373	0.07604	pCi/g	0.08344	N	238.5	6	1.137	IDENTIFIED	3.815	☐	
	Polonium-214 nr	1.209	0.09244	pCi/g	0.1022	N	351.7	4	1.138	IDENTIFIED	6.345	☐	
	Polonium-216 nr	1.373	0.07604	pCi/g	0.08344	N	238.5	6	1.137	IDENTIFIED	3.815	☐	
	Polonium-218 nr	1.209	0.09244	pCi/g	0.1022	N	351.7	4	1.138	IDENTIFIED	6.345	☐	
	Potassium-40 ✓	20.7	1.062	pCi/g	0.4636	1.00	1459	1	2.072	IDENTIFIED	3.698	☐	
Pb214	Radium-224 INT	5.312	0.7069	pCi/g	0.9497	Y	241.5	1	2.035	IDENTIFIED	12.88	☑ UI	
	Radium-226 LA	0.9898	0.08074	pCi/g	0.2699	Y	608.9	4	1.428	FAIL_ABUND	7.283	☑ UI	Data rejected due to low abundance.
	Radium-228 ✓	1.437	0.154	pCi/g	0.2026	0.500	910.5	3	1.714	IDENTIFIED	9.231	☐	
	Thallium-200 HE	21.37	88.31	pCi/g	0	N	74.84	2	0.983	NOT_IDENTI	12.65	☐	

Thallium-208 ✓	0.397	0.04283	pCi/g	0.0551	0.080	582.8	1	1.308	IDENTIFIED	10.32		
Thorium-228 ✓	1.373	0.07604	pCi/g	0.08343	N	238.5	6	1.137	IDENTIFIED	3.815		
Thorium-230 LA	0.9898	0.08074	pCi/g	0.2699	N	608.9	4	1.428	FAIL_ABUND	7.283		
Thorium-232 ✓	1.437	0.154	pCi/g	0.2026	N	910.5	3	1.714	IDENTIFIED	9.231		
Tin-126 LA	0.2984	0.04779	pCi/g	0.1595	N	968.3	1	2.264	NOT_IDENTI	11.34		
Titanium-44 LA	0.3257	0.03267	pCi/g	0.0809	N	77.14	1	1.063	FAIL_ABUND	8.225		
Uranium-234 LA	0.9898	0.08074	pCi/g	0.2699	N	608.9	4	1.428	FAIL_ABUND	7.283		
Zirconium-97	9.92E+05	2.54E+05	pCi/g	0	N	238.5	6	1.137	NOT_IDENTI	3.815		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433003	23-JUN-09 12:00	07-JUL-09 06:05	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		2.127	0.2311	pCi/g	0.2835	N	911.1	3	1.926	IDENTIFIED	8.928		
Americium-243 INT		0.4203	0.03397	pCi/g	0.06797	N	74.83	1	1.203	IDENTIFIED	7.071		
Annihilation Rad.	HE	0.08619	0.05238	pCi/g	0.06276	N	511	2	1.713	IDENTIFIED	60.69		
Barium-137m NV		0.2315	0.04738	pCi/g	0.08995	N	661.5	2	1.858	IDENTIFIED	20.2		
Bismuth-210 ✓		3.777	0.5716	pCi/g	1.043	N	46.45	3	1.302	IDENTIFIED	14.62		
Pb-214 Bismuth-211 INT		3.846	0.3222	pCi/g	0.416	Y	351.8	4	1.318	IDENTIFIED	7.388	✓ UI	
Bismuth-212 LA		1.769	0.3378	pCi/g	0.9544	N	727.1	1	1.816	FAIL_ABUND	18.55		
Bismuth-214 LA		1.087	0.1132	pCi/g	0.3348	0.200	609.4	4	1.427	FAIL_ABUND	9.529	☑ UI	Data rejected due to low abundance.
Pb-214 Cadmium-109 INT		2.711	0.4921	pCi/g	1.3	Y	87.39	3	1.194	IDENTIFIED	17.75	✓ UI	
Cerium-143		394.3	69.85	pCi/g	0	N	328	1	0.8937	FAIL_DECAY	43.67		
Cesium-137 ✓		0.2447	0.05009	pCi/g	0.09509	0.100	661.5	2	1.858	IDENTIFIED	20.2		
Gross Gamma		10.6	1.589	pCi/g	4.521	N		0					
Iodine-133	HE	2100	1369	pCi/g	0	N	511	2	1.713	FAIL_DECAY	60.69		
Iodine-135	HE	1.27E+14	1.20E+14	pCi/g	0	N	1125	1	4.663	FAIL_DECAY	12.96		
Krypton-85	HE	25.48	5.782	pCi/g	19.36	N	238.6	9	1.343	NOT_IDENTI	3.697		
Lead-210 ✓		3.777	0.5716	pCi/g	1.043	N	46.45	3	1.302	IDENTIFIED	14.62		
Lead-212 ✓		1.826	0.1194	pCi/g	0.1093	0.100	238.6	9	1.343	IDENTIFIED	3.697		
Lead-214 ✓		1.338	0.1174	pCi/g	0.145	0.100	351.8	4	1.318	IDENTIFIED	7.388		
Lutetium-177	HE	2.673	0.8765	pCi/g	2.144	N	209.5	1	1.41	FAIL_ABUND	32.42		
Neptunium-237 INT		0.7841	0.1637	pCi/g	0.3958	N	87.39	3	1.194	IDENTIFIED	17.75		
Niobium-95m	HE	0.4232	0.092	pCi/g	0.2876	N	238.6	9	1.343	NOT_IDENTI	3.697		
Niobium-97	HE	22540	22270	pCi/g	0	N	238.6	9	1.343	NOT_IDENTI	3.697		
Polonium-210 NV		3.777	0.5667	pCi/g	1.043	N	46.45	3	1.302	IDENTIFIED	14.62		
Polonium-212 NV		1.826	0.1194	pCi/g	0.1093	N	238.6	9	1.343	IDENTIFIED	3.697		
Polonium-214 NV		1.338	0.1174	pCi/g	0.145	N	351.8	4	1.318	IDENTIFIED	7.388		
Polonium-216 NV		1.826	0.1194	pCi/g	0.1093	N	238.6	9	1.343	IDENTIFIED	3.697		
Polonium-218 NV		1.338	0.1174	pCi/g	0.145	N	351.8	4	1.318	IDENTIFIED	7.388		
Potassium-40 ✓		29.55	1.382	pCi/g	0.7794	1.00	1460	1	2.013	IDENTIFIED	3.493		
Pb-214 Radium-224 INT		4.994	0.8855	pCi/g	1.244	Y	241.6	1	1.95	IDENTIFIED	17.04	✓ UI	
Radium-226 LA		1.087	0.1132	pCi/g	0.3348	Y	609.4	4	1.427	FAIL_ABUND	9.529	☑ UI	Data rejected due to low abundance.
Radium-228 ✓		2.127	0.2311	pCi/g	0.2835	0.500	911.1	3	1.926	IDENTIFIED	8.928		
Sodium-24	HE	12710	1.01E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Strontium-85 LA		0.1288	0.02922	pCi/g	0.09786	Y	238.6	9	1.343	NOT_IDENTI	3.697	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5957	0.06249	pCi/g	0.08116	0.080	583.1	1	1.739	IDENTIFIED	9.824		
Thorium-228 ✓		1.826	0.1194	pCi/g	0.1093	N	238.6	9	1.343	IDENTIFIED	3.697		
Thorium-230 LA		1.087	0.1131	pCi/g	0.3348	N	609.4	4	1.427	FAIL_ABUND	9.529		
Thorium-232 ✓		2.127	0.2311	pCi/g	0.2835	N	911.1	3	1.926	IDENTIFIED	8.928		
Thorium-234 ✓		2.309	0.6152	pCi/g	1.173	2.00	63.1	2	1.192	IDENTIFIED	25.12		
Tin-126 INT		0.267	0.04847	pCi/g	0.1279	N	87.39	3	1.194	IDENTIFIED	17.75		
Titanium-44 LA		0.4386	0.0278	pCi/g	0.07675	N	77.05	1	1.157	FAIL_ABUND	5.004		
Total Uranium		6.9747	1.83E-06	ug/g	1.7495	N		0					
Uranium-234 LA		1.087	0.1131	pCi/g	0.3348	N	609.4	4	1.427	FAIL_ABUND	9.529		
Uranium-238	HE	2.309	0.6152	pCi/g	1.173	N	63.1	2	1.192	IDENTIFIED	25.12		
Zirconium-97		1.06E+06	3.69E+05	pCi/g	0	N	238.6	9	1.343	NOT_IDENTI	3.697		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433004	23-JUN-09 12:00	07-JUL-09 06:05	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.872	0.1838	pCi/g	0.2316	N	911	3	1.483	IDENTIFIED	8.38	☐	
Americium-243 INT		0.3411	0.0411	pCi/g	0.1206	N	75.03	2	1.049	IDENTIFIED	11.17	☐	
Annihilation Rad.		0.1591	0.04071	pCi/g	0.05333	N	511.2	2	1.633	IDENTIFIED	25.44	☐	
Pb214 Bismuth-211 INT		4.013	0.2951	pCi/g	0.3975	Y	351.8	4	1.317	IDENTIFIED	6.608	☑ UI	
Bismuth-212 LA		1.507	0.2748	pCi/g	0.7715	N	727.5	1	2.108	FAIL_ABUND	17.84	☐	
Bismuth-214 ✓		1.175	0.09147	pCi/g	0.1254	0.200	609.2	4	1.375	IDENTIFIED	6.857	☐	
Pb214 Cadmium-109 INT		3.831	0.468	pCi/g	1.56	Y	87.27	3	1.221	IDENTIFIED	11.19	☑ UI	
Cerium-143		415.6	67.95	pCi/g	0	N	328	1	1.235	FAIL_DECAY	50.87	☐	
Cesium-134 LA		0.1396	0.03166	pCi/g	0.1033	0.100	794.9	2	0.8869	FAIL_ABUND	22.45	☑ UI	Data rejected due to low abundance.
Gross Gamma		9.941	1.444	pCi/g	3.293	N		0				☐	
Iodine-133	HE	920.3	1120	pCi/g	0	N	511.2	2	1.633	FAIL_DECAY	25.44	☐	
Iodine-135	HE	1.53E+14	1.16E+14	pCi/g	0	N	794.9	2	0.8869	NOT_IDENTI	22.45	☐	
Krypton-85	HE	21.19	4.636	pCi/g	16.06	N	238.7	7	1.192	NOT_IDENTI	3.329	☐	
Lead-212 ✓		1.798	0.08929	pCi/g	0.1056	0.100	238.7	7	1.192	IDENTIFIED	3.329	☐	
Lead-214 ✓		1.396	0.1089	pCi/g	0.1385	0.100	351.8	4	1.317	IDENTIFIED	6.608	☐	
Lutetium-177	HE	3.226	0.7506	pCi/g	2.08	N	209.2	1	1.582	FAIL_ABUND	23.09	☐	
Mercury-203 MP		0.08752	0.02762	pCi/g	0.07769	0.100	277.8	1	1.254	IDENTIFIED	31.4	☑ UI	
Neptunium-237 INT		1.108	0.1772	pCi/g	0.4844	N	87.27	3	1.221	IDENTIFIED	11.19	☐	
Polonium-212 NR		1.798	0.08929	pCi/g	0.1056	N	238.7	7	1.192	IDENTIFIED	3.329	☐	
Polonium-214 NR		1.396	0.1089	pCi/g	0.1385	N	351.8	4	1.317	IDENTIFIED	6.608	☐	
Polonium-216 NR		1.798	0.08929	pCi/g	0.1056	N	238.7	7	1.192	IDENTIFIED	3.329	☐	
Polonium-218 NR		1.396	0.1089	pCi/g	0.1385	N	351.8	4	1.317	IDENTIFIED	6.608	☐	
Potassium-40 ✓		34.76	1.533	pCi/g	0.6284	1.00	1460	1	2.107	IDENTIFIED	2.918	☐	
Pb214 Radium-224 INT		4.55	0.6205	pCi/g	1.202	Y	241.7	1	1.555	IDENTIFIED	13.32	☑ UI	
Radium-226 ✓		1.175	0.09147	pCi/g	0.1254	Y	609.2	4	1.375	IDENTIFIED	6.857	☐	
Radium-228 ✓		1.872	0.1838	pCi/g	0.2316	0.500	911	3	1.483	IDENTIFIED	8.38	☐	
Strontium-85 LA		0.1071	0.02343	pCi/g	0.08119	Y	238.7	7	1.192	NOT_IDENTI	3.329	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	197.2	104.2	pCi/g	0	N	75.03	2	1.049	NOT_IDENTI	11.17	☐	
Thallium-208 ✓		0.5291	0.04357	pCi/g	0.0703	0.080	583.2	1	1.599	IDENTIFIED	7.605	☐	
Thorium-228 ✓		1.798	0.08929	pCi/g	0.1056	N	238.7	7	1.192	IDENTIFIED	3.329	☐	
Thorium-230 ✓		1.175	0.09147	pCi/g	0.1254	N	609.2	4	1.375	IDENTIFIED	6.857	☐	
Thorium-232 ✓		1.872	0.1838	pCi/g	0.2316	N	911	3	1.483	IDENTIFIED	8.38	☐	
Tin-126 INT		0.3773	0.04609	pCi/g	0.1545	N	87.27	3	1.221	IDENTIFIED	11.19	☐	
Titanium-44 LA		0.4157	0.03428	pCi/g	0.09958	N	77.23	1	1.119	FAIL_ABUND	6.867	☐	
Uranium-234 ✓		1.175	0.09147	pCi/g	0.1254	N	609.2	4	1.375	IDENTIFIED	6.857	☐	
Zirconium-97		8.62E+05	3.02E+05	pCi/g	0	N	238.7	7	1.192	NOT_IDENTI	3.329	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433005	23-JUN-09 12:00	07-JUL-09 06:06	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.463	0.2013	pCi/g	0.2567	N	910.7	3	1.281	IDENTIFIED	12.12	☐	
Americium-243 INT		0.3066	0.05346	pCi/g	0.1207	N	74.82	1	1.148	IDENTIFIED	16.6	☐	
Annihilation Rad.	HE	0.1513	0.06019	pCi/g	0.06335	N	510.9	1	2.033	IDENTIFIED	39.68	☐	
Barium-137m NR		0.7823	0.06253	pCi/g	0.07993	N	661.3	3	1.74	IDENTIFIED	7.563	☐	
Pb214 Bismuth-211 INT		3.358	0.3194	pCi/g	0.4434	Y	351.7	4	1.534	IDENTIFIED	8.916	☑ UI	
Bismuth-214 ✓		1.079	0.1163	pCi/g	0.1624	0.200	609	4	1.566	IDENTIFIED	10.09	☐	
Cerium-143		299.8	67.73	pCi/g	0	N	661.3	3	1.74	FAIL_DECAY	7.563	☐	
Cesium-137 ✓		0.827	0.06613	pCi/g	0.08449	0.100	661.3	3	1.74	IDENTIFIED	7.563	☐	
Gross Gamma		7.904	1.313	pCi/g	2.704	N		0				☐	
Lead-212 ✓		1.334	0.08471	pCi/g	0.1272	0.100	238.5	5	1.078	IDENTIFIED	5.17	☐	
Lead-214 ✓		1.168	0.1152	pCi/g	0.1545	0.100	351.7	4	1.534	IDENTIFIED	8.916	☐	
Neptunium-237	HE	0.5747	0.2119	pCi/g	0.5213	N	86.91	2	1.068	IDENTIFIED	34.93	☐	
Polonium-212 NR		1.334	0.08471	pCi/g	0.1272	N	238.5	5	1.078	IDENTIFIED	5.17	☐	
Polonium-214 NR		1.168	0.1152	pCi/g	0.1545	N	351.7	4	1.534	IDENTIFIED	8.916	☐	
Polonium-216 NR		1.334	0.08471	pCi/g	0.1272	N	238.5	5	1.078	IDENTIFIED	5.17	☐	
Polonium-218 NR		1.168	0.1152	pCi/g	0.1545	N	351.7	4	1.534	IDENTIFIED	8.916	☐	

	Potassium-40 ✓		22.55	1.453	pCi/g	0.7322	1.00	1460	1	1.956	IDENTIFIED	4.852	☐
Pb214	Radium-224 INT		3.146	0.9248	pCi/g	1.448	Y	241.3	1	1.868	IDENTIFIED	29.25	☑ UI
	Radium-226 ✓		1.079	0.1163	pCi/g	0.1624	Y	609	4	1.566	IDENTIFIED	10.09	☐
	Radium-228 ✓		1.463	0.2013	pCi/g	0.2567	0.500	910.7	3	1.281	IDENTIFIED	12.12	☐
	Sodium-24	HE	1.29E+05	1.15E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐
	Thallium-208 ✓		0.4581	0.06461	pCi/g	0.08562	0.080	583	1	1.543	IDENTIFIED	13.72	☐
	Thorium-228 ✓		1.334	0.08471	pCi/g	0.1272	N	238.5	5	1.078	IDENTIFIED	5.17	☐
	Thorium-230 ✓		1.079	0.1163	pCi/g	0.1624	N	609	4	1.566	IDENTIFIED	10.09	☐
	Thorium-232 ✓		1.463	0.2013	pCi/g	0.2567	N	910.7	3	1.281	IDENTIFIED	12.12	☐
	Thorium-234 ✓		4.509	1.785	pCi/g	2.864	2.00	63.05	2	1.525	IDENTIFIED	38.41	☐
	Tin-126	HE	0.1957	0.06926	pCi/g	0.1887	N	86.91	2	1.068	IDENTIFIED	34.93	☐
	Titanium-44 LA		0.3587	0.037	pCi/g	0.1046	N	77.19	1	0.9202	FAIL_ABUND	8.803	☐
	Total Uranium		13.546	5.31E-06	ug/g	4.2634	N		0				☐
	Uranium-234 ✓		1.079	0.1163	pCi/g	0.1624	N	609	4	1.566	IDENTIFIED	10.09	☐
	Uranium-238	HE	4.509	1.785	pCi/g	2.864	N	63.05	2	1.525	IDENTIFIED	38.41	☐
	Zirconium-97		1.85E+06	3.83E+05	pCi/g	0	N	238.5	5	1.078	NOT_IDENTI	5.17	☐

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433006	23-JUN-09 12:00	07-JUL-09 06:38	13.8	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓		1.722	0.2063	pCi/g	0.273	N	910.9	3	1.68	IDENTIFIED	10.7	☐	
	Americium-243 INT		0.4323	0.03715	pCi/g	0.09629	N	74.26	1	0.8995	IDENTIFIED	7.692	☐	
	Annihilation Rad.		0.207	0.04232	pCi/g	0.06055	N	510.4	2	2.019	IDENTIFIED	20.22	☐	
	Barium-137m	HE	0.1154	0.03106	pCi/g	0.07162	N	661.8	2	1.168	IDENTIFIED	26.69	☐	
Pb214	Bismuth-211 INT		4.33	0.2969	pCi/g	0.388	Y	351.5	4	1.105	IDENTIFIED	5.896	☑ UI	
	Bismuth-212	HE	0.8675	0.3066	pCi/g	0.7749	N	727.7	1	1.174	FAIL_ABUND	35.06	☐	
	Bismuth-214 ✓		1.236	0.11	pCi/g	0.1375	0.200	608.9	4	1.35	IDENTIFIED	7.806	☐	
Pb214	Cadmium-109 INT		1.871	0.3105	pCi/g	1.47	Y	89.41	1	0.8585	IDENTIFIED	15.98	☑ UI	
	Cerium-143		612.4	90.54	pCi/g	0	N	294.7	1	1.165	FAIL_DECAY	9.784	☐	
	Cesium-137 ✓		0.122	0.03284	pCi/g	0.07571	0.100	661.8	2	1.168	IDENTIFIED	26.69	☐	
	Gross Gamma		10.7	1.692	pCi/g	5.449	N		0				☐	
	Iodine-133	HE	2115	1201	pCi/g	0	N	510.4	2	2.019	FAIL_DECAY	20.22	☐	
	Iodine-135	HE	7.02E+13	1.21E+14	pCi/g	0	N	795.1	1	0.7813	NOT_IDENTI	38.3	☐	
	Krypton-85	HE	18.29	5.054	pCi/g	16.51	N	238.1	9	0.9739	NOT_IDENTI	3.383	☐	
	Lead-212 ✓		1.904	0.1008	pCi/g	0.1055	0.100	238.1	9	0.9739	IDENTIFIED	3.383	☐	
	Lead-214 ✓		1.506	0.1105	pCi/g	0.1354	0.100	351.5	4	1.105	IDENTIFIED	5.896	☐	
	Lutetium-177	HE	3.263	0.7396	pCi/g	2.136	N	208.6	1	0.9186	FAIL_ABUND	22.46	☐	
	Neptunium-237 INT		1.298	0.2184	pCi/g	0.5117	N	86.55	2	1.371	IDENTIFIED	12.5	☐	
	Niobium-95m LA		1.395	0.1128	pCi/g	0.3831	N	238.1	9	0.9739	NOT_IDENTI	3.383	☐	
	Niobium-97	HE	16770	17330	pCi/g	0	N	238.1	9	0.9739	NOT_IDENTI	3.383	☐	
	Polonium-212 nr		1.904	0.1008	pCi/g	0.1055	N	238.1	9	0.9739	IDENTIFIED	3.383	☐	
	Polonium-214 nr		1.506	0.1105	pCi/g	0.1354	N	351.5	4	1.105	IDENTIFIED	5.896	☐	
	Polonium-216 nr		1.904	0.1008	pCi/g	0.1055	N	238.1	9	0.9739	IDENTIFIED	3.383	☐	
	Polonium-218 nr		1.506	0.1105	pCi/g	0.1354	N	351.5	4	1.105	IDENTIFIED	5.896	☐	
	Potassium-40 ✓		31.89	1.483	pCi/g	0.6733	1.00	1461	2	1.765	IDENTIFIED	3.223	☐	
Pb214	Radium-224 INT		5.225	0.7268	pCi/g	1.201	Y	241.2	1	1.742	IDENTIFIED	13.48	☑ UI	
	Radium-226 ✓		1.236	0.11	pCi/g	0.1375	Y	608.9	4	1.35	IDENTIFIED	7.806	☐	
	Radium-228 ✓		1.722	0.2063	pCi/g	0.273	0.500	910.9	3	1.68	IDENTIFIED	10.7	☐	
	Sodium-24	HE	66070	91340	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Strontium-85 LA		0.09246	0.02555	pCi/g	0.08345	Y	238.1	9	0.9739	NOT_IDENTI	3.383	☑ UI	Data rejected due to low abundance.
	Thallium-208 ✓		0.586	0.05205	pCi/g	0.07305	0.080	582.9	1	1.295	IDENTIFIED	8.073	☐	
	Thorium-228 ✓		1.904	0.1008	pCi/g	0.1055	N	238.1	9	0.9739	IDENTIFIED	3.383	☐	
	Thorium-230 ✓		1.236	0.11	pCi/g	0.1375	N	608.9	4	1.35	IDENTIFIED	7.806	☐	
	Thorium-232 ✓		1.722	0.2063	pCi/g	0.273	N	910.9	3	1.68	IDENTIFIED	10.7	☐	
	Thorium-234 ✓		2.313	0.9211	pCi/g	2.184	2.00	62.77	2	0.974	IDENTIFIED	38.89	☐	
	Tin-126 INT		0.4421	0.05875	pCi/g	0.1453	N	86.55	2	1.371	IDENTIFIED	12.5	☐	
	Titanium-44 LA		0.2573	0.03128	pCi/g	0.08149	N	1461	2	1.765	NOT_IDENTI	3.223	☐	
	Total Uranium		6.9447	2.74E-06	ug/g	3.252	N		0				☐	

Uranium-234 ✓		1.236	0.11	pCi/g	0.1375	N	608.9	4	1.35	IDENTIFIED	7.806	☐
Uranium-238	HE	2.313	0.9211	pCi/g	2.184	N	62.77	2	0.974	IDENTIFIED	38.89	☐
Zirconium-97		1.97E+06	3.84E+05	pCi/g	0	N	238.1	9	0.9739	NOT_IDENTI	3.383	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433007	23-JUN-09 12:00	07-JUL-09 06:39	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.961	0.2102	pCi/g	0.2436	N	911.8	3	1.529	IDENTIFIED	9.205	☐	
Americium-243 INT		0.4005	0.0425	pCi/g	0.1072	N	74.88	1	0.8443	IDENTIFIED	10.05	☐	
Annihilation Rad.	HE	0.1261	0.04596	pCi/g	0.05691	N	511.5	3	2.133	IDENTIFIED	36.31	☐	
Barium-137m NR		0.1536	0.02647	pCi/g	0.07346	N	661.9	2	1.399	IDENTIFIED	16.92	☐	
Pb214 Bismuth-211 INT		4.549	0.2734	pCi/g	0.3439	Y	352	4	1.344	IDENTIFIED	5.123	☑ UI	
Bismuth-212 LA		1.801	0.3392	pCi/g	0.795	N	728.3	1	1.999	FAIL_ABUND	18.33	☐	
Bismuth-214 ✓		1.305	0.1042	pCi/g	0.1411	0.200	609.6	4	1.296	IDENTIFIED	6.839	☐	
Pb214 Cadmium-109 INT		5.064	0.6864	pCi/g	1.352	Y	87.21	4	1.29	IDENTIFIED	13.01	☑ UI	
Cerium-143		263.3	54.15	pCi/g	0	N	328.4	1	1.131	FAIL_DECAY	45.97	☐	
Cesium-134 LA		0.1286	0.03059	pCi/g	0.1144	0.100	511.5	3	2.133	NOT_IDENTI	36.31	☑ UI	Data rejected due to low abundance.
Cesium-137 ✓		0.1624	0.02798	pCi/g	0.07765	0.100	661.9	2	1.399	IDENTIFIED	16.92	☐	
Gross Gamma		11.32	1.721	pCi/g	3.435	N		0				☐	
Iodine-123	HE	3.54E+05	5.70E+05	pCi/g	0	N	87.21	4	1.29	NOT_IDENTI	13.01	☐	
Iodine-135	HE	2.42E+14	1.25E+14	pCi/g	0	N	511.5	3	2.133	NOT_IDENTI	36.31	☐	
Krypton-85	HE	17.29	4.741	pCi/g	16.87	N	238.7	8	1.143	NOT_IDENTI	3.42	☐	
Lead-212 ✓		1.894	0.09336	pCi/g	0.09588	0.100	238.7	8	1.143	IDENTIFIED	3.42	☐	
Lead-214 ✓		1.582	0.1037	pCi/g	0.1205	0.100	352	4	1.344	IDENTIFIED	5.123	☐	
Lutetium-177	HE	2.057	0.7967	pCi/g	1.852	N	209.4	1	0.9882	FAIL_ABUND	38.64	☐	
Neptunium-237 INT		1.465	0.2495	pCi/g	0.3975	N	87.21	4	1.29	IDENTIFIED	13.01	☐	
Niobium-97	HE	16670	17500	pCi/g	0	N	238.7	8	1.143	NOT_IDENTI	3.42	☐	
Polonium-212 NR		1.894	0.09336	pCi/g	0.09588	N	238.7	8	1.143	IDENTIFIED	3.42	☐	
Polonium-214 NR		1.582	0.1037	pCi/g	0.1205	N	352	4	1.344	IDENTIFIED	5.123	☐	
Polonium-216 NR		1.894	0.09336	pCi/g	0.09588	N	238.7	8	1.143	IDENTIFIED	3.42	☐	
Polonium-218 NR		1.582	0.1037	pCi/g	0.1205	N	352	4	1.344	IDENTIFIED	5.123	☐	
Potassium-40 ✓		36.88	1.705	pCi/g	0.5179	1.00	1462	1	2.078	IDENTIFIED	2.945	☐	
Pb214 Radium-224 INT		4.795	0.7005	pCi/g	1.091	Y	241.7	1	1.661	IDENTIFIED	14.35	☑ UI	
Radium-226 ✓		1.305	0.1042	pCi/g	0.1411	Y	609.6	4	1.296	IDENTIFIED	6.839	☐	
Radium-228 ✓		1.961	0.2102	pCi/g	0.2436	0.500	911.8	3	1.529	IDENTIFIED	9.205	☐	
Sodium-24	HE	53590	1.03E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.08739	0.02397	pCi/g	0.08529	Y	238.7	8	1.143	NOT_IDENTI	3.42	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.6352	0.05055	pCi/g	0.07157	0.080	583.6	1	1.515	IDENTIFIED	7.109	☐	
Thorium-228 ✓		1.894	0.09336	pCi/g	0.09587	N	238.7	8	1.143	IDENTIFIED	3.42	☐	
Thorium-230 ✓		1.305	0.1042	pCi/g	0.1411	N	609.6	4	1.296	IDENTIFIED	6.839	☐	
Thorium-232 ✓		1.961	0.2102	pCi/g	0.2436	N	911.8	3	1.529	IDENTIFIED	9.205	☐	
Thorium-234 ✓		2.814	1.196	pCi/g	2.317	2.00	63.49	2	0.8257	IDENTIFIED	41.66	☐	
Tin-126 INT		0.4988	0.0676	pCi/g	0.1338	N	87.21	4	1.29	IDENTIFIED	13.01	☐	
Titanium-44 LA		0.4643	0.03398	pCi/g	0.09216	N	77.15	1	0.9235	FAIL_ABUND	6.447	☐	
Total Uranium		8.318	3.56E-06	ug/g	3.4502	N		0				☐	
Uranium-234 ✓		1.305	0.1042	pCi/g	0.1411	N	609.6	4	1.296	IDENTIFIED	6.839	☐	
Uranium-238	HE	2.814	1.196	pCi/g	2.317	N	63.49	2	0.8257	IDENTIFIED	41.66	☐	
Zirconium-97	HE	95610	3.05E+05	pCi/g	0	N	238.7	8	1.143	NOT_IDENTI	3.42	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433008	23-JUN-09 12:00	07-JUL-09 06:39	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.7	0.2095	pCi/g	0.3507	N	911.9	3	1.165	IDENTIFIED	11.18	☐	
Americium-243 INT		0.3793	0.03537	pCi/g	0.07255	N	75.23	2	0.984	IDENTIFIED	8.275	☐	
Annihilation Rad.		0.2155	0.05645	pCi/g	0.06301	N	511.5	1	1.817	IDENTIFIED	25.97	☐	
Barium-137m NR		0.2721	0.05346	pCi/g	0.08975	N	662.3	3	1.647	IDENTIFIED	19.22	☐	
Bismuth-210	HE	1.337	0.4783	pCi/g	0.9836	N	47.03	3	1.042	IDENTIFIED	35.52	☐	

Pb214	Bismuth-211 INT	3.754	0.3136	pCi/g	0.4725	Y	352.4	4	1.407	IDENTIFIED	7.523	☑ UI	
	Bismuth-212 HE	1.707	0.4343	pCi/g	0.9802	N	727.9	1	1.77	FAIL_ABUND	24.98	☐	
	Bismuth-214 ✓	1.185	0.1282	pCi/g	0.1622	0.200	609.8	4	1.252	IDENTIFIED	9.752	☐	
Pb214	Cadmium-109 INT	4.212	0.5733	pCi/g	1.174	Y	87.67	3	1.277	IDENTIFIED	13.02	☑ UI	
	Cerium-143	159.8	51.19	pCi/g	0	N	662.3	3	1.647	NOT_IDENTI	19.22	☐	
	Cesium-134 LA	0.199	0.04779	pCi/g	0.1407	0.100	795.6	1	1.679	FAIL_ABUND	23.67	☑ UI	Data rejected due to low abundance.
	Cesium-137 ✓	0.2877	0.05652	pCi/g	0.09487	0.100	662.3	3	1.647	IDENTIFIED	19.22	☐	
	Gross Gamma	10.08	1.633	pCi/g	3.498	N		0				☐	
	Krypton-85 LA	44.66	6.73	pCi/g	23.36	N	239.1	7	1.222	NOT_IDENTI	3.639	☐	
	Lead-210 HE	1.337	0.4783	pCi/g	0.9836	N	47.03	3	1.042	IDENTIFIED	35.52	☐	
	Lead-212 ✓	1.895	0.1103	pCi/g	0.1148	0.100	239.1	7	1.222	IDENTIFIED	3.639	☐	
	Lead-214 ✓	1.306	0.1143	pCi/g	0.1647	0.100	352.4	4	1.407	IDENTIFIED	7.523	☐	
	Lutetium-177 HE	2.482	0.9169	pCi/g	2.123	N	209.8	2	1.051	FAIL_ABUND	36.72	☐	
	Neptunium-237 INT	1.218	0.208	pCi/g	0.3382	N	87.67	3	1.277	IDENTIFIED	13.02	☐	
	Polonium-210 HE	1.337	0.4776	pCi/g	0.9836	N	47.03	3	1.042	IDENTIFIED	35.52	☐	
	Polonium-212 NV	1.895	0.1103	pCi/g	0.1148	N	239.1	7	1.222	IDENTIFIED	3.639	☐	
	Polonium-214 NV	1.306	0.1143	pCi/g	0.1647	N	352.4	4	1.407	IDENTIFIED	7.523	☐	
	Polonium-216 NV	1.895	0.1103	pCi/g	0.1148	N	239.1	7	1.222	IDENTIFIED	3.639	☐	
	Polonium-218 NV	1.306	0.1143	pCi/g	0.1647	N	352.4	4	1.407	IDENTIFIED	7.523	☐	
	Potassium-40 ✓	29.91	1.406	pCi/g	0.8551	1.00	1461	1	1.932	IDENTIFIED	3.57	☐	
Pb214	Radium-224 INT	4.82	0.7645	pCi/g	1.307	Y	242.1	1	1.917	IDENTIFIED	15.36	☑ UI	
	Radium-226 ✓	1.185	0.1282	pCi/g	0.1622	Y	609.8	4	1.252	IDENTIFIED	9.752	☐	
	Radium-228 ✓	1.7	0.2095	pCi/g	0.3507	0.500	911.9	3	1.165	IDENTIFIED	11.18	☐	
	Strontium-85 LA	0.2258	0.03403	pCi/g	0.1181	Y	239.1	7	1.222	NOT_IDENTI	3.639	☑ UI	Data rejected due to low abundance.
	Thallium-200 HE	202.7	135.5	pCi/g	0	N	75.23	2	0.984	NOT_IDENTI	8.275	☐	
	Thallium-208 ✓	0.5994	0.05997	pCi/g	0.08751	0.080	583.7	1	1.499	IDENTIFIED	9.108	☐	
	Thorium-228 ✓	1.895	0.1103	pCi/g	0.1148	N	239.1	7	1.222	IDENTIFIED	3.639	☐	
	Thorium-230 ✓	1.185	0.1282	pCi/g	0.1622	N	609.8	4	1.252	IDENTIFIED	9.752	☐	
	Thorium-232 ✓	1.7	0.2095	pCi/g	0.3507	N	911.9	3	1.165	IDENTIFIED	11.18	☐	
	Thorium-234 ✓	2.715	0.7446	pCi/g	1.185	2.00	63.63	2	1.026	IDENTIFIED	25.85	☐	
	Tin-126 INT	0.4148	0.05646	pCi/g	0.1155	N	87.67	3	1.277	IDENTIFIED	13.02	☐	
	Titanium-44 LA	0.4174	0.02897	pCi/g	0.07879	N	77.5	1	1.07	FAIL_ABUND	5.498	☐	
	Total Uranium	8.1747	2.22E-06	ug/g	1.7668	N		0				☐	
	Tungsten-181 HE	0.4614	0.1312	pCi/g	0.4231	N	209.8	2	1.051	NOT_IDENTI	36.72	☐	
	Uranium-234 ✓	1.185	0.1282	pCi/g	0.1622	N	609.8	4	1.252	IDENTIFIED	9.752	☐	
	Uranium-238 ✓	2.715	0.7446	pCi/g	1.185	N	63.63	2	1.026	IDENTIFIED	25.85	☐	
	Zirconium-97 HE	1.32E+05	3.95E+05	pCi/g	0	N	239.1	7	1.222	NOT_IDENTI	3.639	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433009	23-JUN-09 12:00	07-JUL-09 06:40	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.609	0.2239	pCi/g	0.2552	N	911.2	3	2.258	IDENTIFIED	12.62	☐	
Americium-243 INT		0.4615	0.0536	pCi/g	0.09671	N	74.92	2	1.583	IDENTIFIED	10.99	☐	
Annihilation Rad.	HE	0.1051	0.05324	pCi/g	0.06023	N	510.8	1	2.153	IDENTIFIED	50.56	☐	
Barium-137m NV		0.3909	0.05031	pCi/g	0.07814	N	661.3	3	1.693	IDENTIFIED	12.52	☐	
Pb214 Bismuth-211 INT		3.587	0.3049	pCi/g	0.4236	Y	351.6	4	1.61	IDENTIFIED	7.889	☑ UI	
Bismuth-212	HE	1.029	0.2422	pCi/g	0.8128	N	727.2	1	1.242	FAIL_ABUND	23.15	☐	
Bismuth-214 ✓		1.17	0.109	pCi/g	0.1451	0.200	608.9	4	1.636	IDENTIFIED	8.435	☐	
Pb214 Cadmium-109 INT		3.941	0.6961	pCi/g	1.437	Y	87.29	5	1.46	IDENTIFIED	17.12	☑ UI	
Cerium-143		593.5	86.72	pCi/g	0	N	661.3	3	1.693	FAIL_DECAY	12.52	☐	
Cesium-137 ✓		0.4132	0.05319	pCi/g	0.0826	0.100	661.3	3	1.693	IDENTIFIED	12.52	☐	
Gross Gamma		9.696	1.885	pCi/g	4.911	N		0				☐	
Iodine-123	HE	4.37E+05	6.65E+05	pCi/g	0	N	87.29	5	1.46	NOT_IDENTI	17.12	☐	
Krypton-85	HE	19.78	5.578	pCi/g	17.56	N	238.4	9	1.258	NOT_IDENTI	4.629	☐	
Lead-212 ✓		1.527	0.08996	pCi/g	0.11	0.100	238.4	9	1.258	IDENTIFIED	4.629	☐	
Lead-214 ✓		1.248	0.111	pCi/g	0.1477	0.100	351.6	4	1.61	IDENTIFIED	7.889	☐	
Neptunium-237 INT		1.14	0.2331	pCi/g	0.4202	N	87.29	5	1.46	IDENTIFIED	17.12	☐	
Niobium-95m LA		0.5552	0.1035	pCi/g	0.3097	N	238.4	9	1.258	NOT_IDENTI	4.629	☐	

Niobium-97		54440	19860	pCi/g	0	N	238.4	9	1.258	NOT_IDENTI	4.629	☐	
Polonium-212 NV		1.527	0.08996	pCi/g	0.11	N	238.4	9	1.258	IDENTIFIED	4.629	☐	
Polonium-214 NV		1.248	0.111	pCi/g	0.1477	N	351.6	4	1.61	IDENTIFIED	7.889	☐	
Polonium-216 NV		1.527	0.08996	pCi/g	0.11	N	238.4	9	1.258	IDENTIFIED	4.629	☐	
Polonium-218 NV		1.248	0.111	pCi/g	0.1477	N	351.6	4	1.61	IDENTIFIED	7.889	☐	
Potassium-40 ✓		24.59	1.41	pCi/g	0.6855	1.00	1461	1	2.237	IDENTIFIED	4.435	☐	
PbZ14 Radium-224 INT		4.942	0.7528	pCi/g	1.252	Y	241.3	1	1.983	IDENTIFIED	14.96	☑ UI	
Radium-226 ✓		1.17	0.109	pCi/g	0.1451	Y	608.9	4	1.636	IDENTIFIED	8.435	☐	
Radium-228 ✓		1.609	0.2239	pCi/g	0.2552	0.500	911.2	3	2.258	IDENTIFIED	12.62	☐	
Sodium-24	HE	1.38E+05	1.21E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1	0.02821	pCi/g	0.0888	Y	238.4	9	1.258	NOT_IDENTI	4.629	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	10.43	126.8	pCi/g	0	N	74.92	2	1.583	NOT_IDENTI	10.99	☐	
Thallium-208 ✓		0.5718	0.0553	pCi/g	0.07073	0.080	583.1	1	1.771	IDENTIFIED	9.046	☐	
Thorium-228 ✓		1.527	0.08996	pCi/g	0.11	N	238.4	9	1.258	IDENTIFIED	4.629	☐	
Thorium-230 ✓		1.17	0.109	pCi/g	0.145	N	608.9	4	1.636	IDENTIFIED	8.435	☐	
Thorium-232 ✓		1.609	0.2239	pCi/g	0.2552	N	911.2	3	2.258	IDENTIFIED	12.62	☐	
Thorium-234 ✓		7.924	1.32	pCi/g	2.173	2.00	63.38	2	1.167	IDENTIFIED	14.27	☐	
Tin-126 INT		0.3882	0.06856	pCi/g	0.142	N	87.29	5	1.46	IDENTIFIED	17.12	☐	
Titanium-44 LA		0.4053	0.03526	pCi/g	0.09093	N	77.16	1	1.359	FAIL_ABUND	7.8	☐	
Total Uranium		23.592	3.93E-06	ug/g	3.2354	N		0				☐	
Tungsten-181	HE	1.211	0.247	pCi/g	0.7212	N	87.29	5	1.46	NOT_IDENTI	17.12	☐	
Uranium-234 ✓		1.17	0.109	pCi/g	0.145	N	608.9	4	1.636	IDENTIFIED	8.435	☐	
Uranium-238 ✓		7.924	1.32	pCi/g	2.173	N	63.38	2	1.167	IDENTIFIED	14.27	☐	
Zirconium-97		2.40E+06	4.16E+05	pCi/g	0	N	238.4	9	1.258	NOT_IDENTI	4.629	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433010	23-JUN-09 12:00	07-JUL-09 06:40	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.802	0.2701	pCi/g	0.3545	N	911.3	3	1.941	IDENTIFIED	13.92	☐	
Americium-243 INT		0.4011	0.07463	pCi/g	0.1701	N	74.91	1	1.16	IDENTIFIED	17.76	☐	
Annihilation Rad.	HE	0.12	0.0578	pCi/g	0.08138	N	511	3	1.918	IDENTIFIED	48.1	☐	
Barium-137m	HE	0.196	0.04992	pCi/g	0.09769	N	661.7	2	0.8083	IDENTIFIED	25.34	☐	
PbZ14 Bismuth-211 INT		4.265	0.3914	pCi/g	0.565	Y	352.1	4	1.474	IDENTIFIED	8.512	☑ UI	
Bismuth-212	HE	1.162	0.4478	pCi/g	1.055	N	727.8	1	1.205	FAIL_ABUND	38.35	☐	
Bismuth-214 ✓		1.58	0.1396	pCi/g	0.1879	0.200	609.3	4	1.435	IDENTIFIED	8.019	☐	
PbZ14 Cadmium-109 INT		3.833	1.008	pCi/g	2.859	Y	87.11	3	1.081	IDENTIFIED	25.66	☑ UI	
Cerium-143		704.8	105.7	pCi/g	0	N	328	1	0.6428	NOT_IDENTI	76.15	☐	
Cesium-137 ✓		0.2072	0.05277	pCi/g	0.1033	0.100	661.7	2	0.8083	IDENTIFIED	25.34	☐	
Gross Gamma		10.9	2.239	pCi/g	4.978	N		0				☐	
Iodine-133	HE	2611	1769	pCi/g	0	N	511	3	1.918	FAIL_DECAY	48.1	☐	
Iodine-135	HE	9.12E+13	1.58E+14	pCi/g	0	N	511	3	1.918	NOT_IDENTI	48.1	☐	
Krypton-85 LA		50.92	7.759	pCi/g	27.21	N	238.7	10	1.431	NOT_IDENTI	4.696	☐	
Lead-212 ✓		2.094	0.1311	pCi/g	0.1528	0.100	238.7	10	1.431	IDENTIFIED	4.696	☐	
Lead-214 ✓		1.483	0.1415	pCi/g	0.1911	0.100	352.1	4	1.474	IDENTIFIED	8.512	☐	
Lutetium-177	HE	4.369	1.015	pCi/g	2.909	N	209.3	1	1.622	FAIL_ABUND	22.98	☐	
Neptunium-237	HE	1.109	0.3131	pCi/g	0.6578	N	87.11	3	1.081	IDENTIFIED	25.66	☐	
Niobium-95m	HE	0.4838	0.1204	pCi/g	0.381	N	238.7	10	1.431	NOT_IDENTI	4.696	☐	
Niobium-97	HE	24630	26780	pCi/g	0	N	238.7	10	1.431	NOT_IDENTI	4.696	☐	
Polonium-212 NV		2.094	0.1311	pCi/g	0.1528	N	238.7	10	1.431	IDENTIFIED	4.696	☐	
Polonium-214 NV		1.483	0.1415	pCi/g	0.1911	N	352.1	4	1.474	IDENTIFIED	8.512	☐	
Polonium-216 NV		2.094	0.1311	pCi/g	0.1528	N	238.7	10	1.431	IDENTIFIED	4.696	☐	
Polonium-218 NV		1.483	0.1415	pCi/g	0.1911	N	352.1	4	1.474	IDENTIFIED	8.512	☐	
Potassium-40 ✓		28.38	1.641	pCi/g	0.9623	1.00	1461	1	1.869	IDENTIFIED	4.338	☐	
PbZ14 Radium-224 INT		6.031	1.068	pCi/g	1.739	Y	241.7	1	1.728	IDENTIFIED	17.36	☑ UI	
Radium-226 ✓		1.58	0.1396	pCi/g	0.1879	Y	609.3	4	1.435	IDENTIFIED	8.019	☐	
Radium-228 ✓		1.802	0.2701	pCi/g	0.3545	0.500	911.3	3	1.941	IDENTIFIED	13.92	☐	
Strontium-85 LA		0.2574	0.03923	pCi/g	0.1375	Y	238.7	10	1.431	NOT_IDENTI	4.696	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	2.94E+14	9.06E+14	pCi/g	0	N	238.7	10	1.431	NOT_IDENTI	4.696	☐	

Thallium-208 ✓		0.6621	0.05796	pCi/g	0.09156	0.080	583.2	1	1.785	IDENTIFIED	8.154	☐
Thorium-228 ✓		2.094	0.1311	pCi/g	0.1528	N	238.7	10	1.431	IDENTIFIED	4.696	☐
Thorium-230 ✓		1.58	0.1396	pCi/g	0.1879	N	609.3	4	1.435	IDENTIFIED	8.019	☐
Thorium-232 ✓		1.802	0.2701	pCi/g	0.3545	N	911.3	3	1.941	IDENTIFIED	13.92	☐
Thorium-234 ✓		8.401	3.339	pCi/g	4.735	2.00	63.54	2	1.41	IDENTIFIED	38.5	☐
Tin-126	HE	0.3775	0.09927	pCi/g	0.2522	N	87.11	3	1.081	IDENTIFIED	25.66	☐
Titanium-44 LA		0.4903	0.06026	pCi/g	0.1538	N	77.19	1	1.348	FAIL_ABUND	10.97	☐
Total Uranium		25.21	9.93E-06	ug/g	7.0486	N		0				☐
Uranium-234 ✓		1.58	0.1396	pCi/g	0.1879	N	609.3	4	1.435	IDENTIFIED	8.019	☐
Uranium-238	HE	8.401	3.339	pCi/g	4.735	N	63.54	2	1.41	IDENTIFIED	38.5	☐
Zirconium-97		1.53E+06	4.97E+05	pCi/g	0	N	238.7	10	1.431	NOT_IDENTI	4.696	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433011	23-JUN-09 12:00	07-JUL-09 06:41	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		2.015	0.198	pCi/g	0.2341	N	911	3	1.776	IDENTIFIED	7.83	☐	
Americium-243 INT		0.4727	0.04472	pCi/g	0.1092	N	74.98	2	1.131	IDENTIFIED	8.644	☐	
Annihilation Rad.	HE	0.1162	0.03815	pCi/g	0.0515	N	510.7	1	1.748	IDENTIFIED	32.7	☐	
Pb214 Bismuth-211 INT		4.265	0.2803	pCi/g	0.3462	Y	351.9	4	1.15	IDENTIFIED	5.793	☑ UI	
Bismuth-212 ✓		1.223	0.2108	pCi/g	0.569	N	727.5	1	1.4	IDENTIFIED	16.68	☐	
Bismuth-214 ✓		1.307	0.09369	pCi/g	0.1173	0.200	609.4	4	1.238	IDENTIFIED	5.953	☐	
Pb214 Cadmium-109 INT		3.203	0.5772	pCi/g	1.499	Y	87.36	3	1.086	IDENTIFIED	17.5	☑ UI	
Cerium-143		484.1	70.7	pCi/g	0	N	327.7	1	3.065	FAIL_DECAY	22.04	☐	
Gross Gamma		11.18	1.556	pCi/g	4.336	N		0				☐	
Iodine-135	HE	2.74E+13	1.06E+14	pCi/g	0	N	795.4	1	1.27	NOT_IDENTI	58.17	☐	
Lead-212 ✓		1.977	0.0904	pCi/g	0.09616	0.100	238.7	6	0.9892	IDENTIFIED	2.911	☐	
Lead-214 ✓		1.484	0.1049	pCi/g	0.1234	0.100	351.9	4	1.15	IDENTIFIED	5.793	☐	
Lutetium-177 LA		3.637	0.6999	pCi/g	1.94	N	209.3	1	1.108	FAIL_ABUND	19.06	☐	
Neptunium-237 INT		0.9264	0.1924	pCi/g	0.4186	N	87.36	3	1.086	IDENTIFIED	17.5	☐	
Niobium-97	HE	9347	14080	pCi/g	0	N	238.7	6	0.9892	NOT_IDENTI	2.911	☐	
Polonium-212 nv		1.977	0.0904	pCi/g	0.09616	N	238.7	6	0.9892	IDENTIFIED	2.911	☐	
Polonium-214 nv		1.484	0.1049	pCi/g	0.1234	N	351.9	4	1.15	IDENTIFIED	5.793	☐	
Polonium-216 nv		1.977	0.0904	pCi/g	0.09616	N	238.7	6	0.9892	IDENTIFIED	2.911	☐	
Polonium-218 nv		1.484	0.1049	pCi/g	0.1234	N	351.9	4	1.15	IDENTIFIED	5.793	☐	
Potassium-40 ✓		37.96	1.879	pCi/g	0.544	1.00	1460	1	1.748	IDENTIFIED	2.603	☐	
Pb214 Radium-224 INT		5.931	0.6983	pCi/g	1.094	Y	241.6	1	1.87	IDENTIFIED	11.45	☑ UI	
Radium-226 ✓		1.307	0.09369	pCi/g	0.1173	Y	609.4	4	1.238	IDENTIFIED	5.953	☐	
Radium-228 ✓		2.015	0.198	pCi/g	0.2341	0.500	911	3	1.776	IDENTIFIED	7.83	☐	
Sodium-24	HE	99770	70090	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-200	HE	154.3	102.9	pCi/g	0	N	74.98	2	1.131	NOT_IDENTI	8.644	☐	
Thallium-208 ✓		0.5462	0.04254	pCi/g	0.0646	0.080	583.2	1	1.317	IDENTIFIED	6.985	☐	
Thorium-228 ✓		1.977	0.0904	pCi/g	0.09615	N	238.7	6	0.9892	IDENTIFIED	2.911	☐	
Thorium-230 ✓		1.307	0.09369	pCi/g	0.1173	N	609.4	4	1.238	IDENTIFIED	5.953	☐	
Thorium-232 ✓		2.015	0.198	pCi/g	0.2341	N	911	3	1.776	IDENTIFIED	7.83	☐	
Tin-126 INT		0.3155	0.05685	pCi/g	0.1606	N	87.36	3	1.086	IDENTIFIED	17.5	☐	
Titanium-44 LA		0.4206	0.02896	pCi/g	0.09922	N	77.31	1	0.7986	FAIL_ABUND	5.665	☐	
Total Uranium		6.4838	2.94E-06	ug/g	3.7484	N		0				☐	
Uranium-234 ✓		1.307	0.09369	pCi/g	0.1173	N	609.4	4	1.238	IDENTIFIED	5.953	☐	
Zirconium-97		8.81E+05	3.08E+05	pCi/g	0	N	238.7	6	0.9892	NOT_IDENTI	2.911	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433012	23-JUN-09 12:00	07-JUL-09 07:03	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.391	0.2176	pCi/g	0.3594	N	911.2	3	1.47	IDENTIFIED	14.79	☐	
Americium-241 LA		0.1781	0.04855	pCi/g	0.144	0.200	63.51	3	0.9092	NOT_IDENTI	11.84	☑ UI	Data rejected due to low abundance.
Americium-243 INT		0.3377	0.03114	pCi/g	0.07743	N	75.11	2	0.9019	IDENTIFIED	8.192	☐	
Annihilation Rad.	HE	0.1704	0.04821	pCi/g	0.07789	N	510.7	2	1.991	IDENTIFIED	28.09	☐	

	Barium-137m NV	2.926	0.1421	pCi/g	0.07944	N	661.6	2	1.358	IDENTIFIED	3.067	☐	
	Bismuth-210 ✓	6.299	0.6548	pCi/g	1.137	N	46.85	3	0.8715	IDENTIFIED	9.585	☐	
PbZ14	Bismuth-211 INT	3.1	0.3313	pCi/g	0.4753	Y	352	4	1.233	IDENTIFIED	10.07	☑ UI	
	Bismuth-212 HE	0.9601	0.3141	pCi/g	0.8402	N	726.7	1	1.841	FAIL_ABUND	32.39	☐	
	Bismuth-214 LA	1.335	0.1249	pCi/g	0.3696	0.200	609.2	4	1.391	FAIL_ABUND	8.209	☑ UI	Data rejected due to low abundance.
PbZ14	Cadmium-109 INT	3.079	0.4752	pCi/g	1.292	Y	87.42	3	1.057	IDENTIFIED	14.9	☑ UI	
	Cerium-143	379.7	72.94	pCi/g	0	N	144.1	1	1.213	FAIL_DECAY	54.73	☐	
	Cesium-137 ✓	3.093	0.1504	pCi/g	0.08397	0.100	661.6	2	1.358	IDENTIFIED	3.067	☐	
	Gross Gamma	11.34	1.729	pCi/g	4.445	N		0				☐	
	Iodine-133 HE	1930	1711	pCi/g	0	N	510.7	2	1.991	FAIL_DECAY	28.09	☐	
	Krypton-85 HE	22.37	6.531	pCi/g	20.71	N	238.8	8	0.9503	NOT_IDENTI	4.512	☐	
	Lead-210 ✓	6.299	0.6548	pCi/g	1.137	N	46.85	3	0.8715	IDENTIFIED	9.585	☐	
	Lead-212 ✓	1.481	0.09318	pCi/g	0.1206	0.100	238.8	8	0.9503	IDENTIFIED	4.512	☐	
	Lead-214 ✓	1.078	0.1186	pCi/g	0.1657	0.100	352	4	1.233	IDENTIFIED	10.07	☐	
	Neptunium-237 INT	0.8905	0.1653	pCi/g	0.3724	N	87.42	3	1.057	IDENTIFIED	14.9	☐	
	Niobium-97	87550	26310	pCi/g	0	N	238.8	8	0.9503	NOT_IDENTI	4.512	☐	
	Polonium-210 NV	6.299	0.6429	pCi/g	1.137	N	46.85	3	0.8715	IDENTIFIED	9.585	☐	
	Polonium-212 NV	1.481	0.09318	pCi/g	0.1206	N	238.8	8	0.9503	IDENTIFIED	4.512	☐	
	Polonium-214 NV	1.078	0.1186	pCi/g	0.1657	N	352	4	1.233	IDENTIFIED	10.07	☐	
	Polonium-216 NV	1.481	0.09318	pCi/g	0.1206	N	238.8	8	0.9503	IDENTIFIED	4.512	☐	
	Polonium-218 NV	1.078	0.1186	pCi/g	0.1657	N	352	4	1.233	IDENTIFIED	10.07	☐	
	Potassium-40 ✓	26.44	1.372	pCi/g	0.7562	1.00	1460	1	2.064	IDENTIFIED	4.181	☐	
PbZ14	Radium-224 INT	3.949	0.8802	pCi/g	1.374	Y	241.8	1	1.851	IDENTIFIED	21.97	☑ UI	
	Radium-226 LA	1.335	0.1249	pCi/g	0.3696	Y	609.2	4	1.391	FAIL_ABUND	8.209	☑ UI	Data rejected due to low abundance.
	Radium-228 ✓	1.391	0.2176	pCi/g	0.3594	0.500	911.2	3	1.47	IDENTIFIED	14.79	☐	
	Strontium-85 LA	0.1132	0.03303	pCi/g	0.1047	Y	238.8	8	0.9503	NOT_IDENTI	4.512	☑ UI	Data rejected due to low abundance.
	Thallium-200 HE	193.3	158.7	pCi/g	0	N	75.11	2	0.9019	NOT_IDENTI	8.192	☐	
	Thallium-208 ✓	0.4413	0.05326	pCi/g	0.08184	0.080	583	1	1.4	IDENTIFIED	11.4	☐	
	Thorium-228 ✓	1.481	0.09318	pCi/g	0.1206	N	238.8	8	0.9503	IDENTIFIED	4.512	☐	
	Thorium-230 LA	1.335	0.1249	pCi/g	0.3696	N	609.2	4	1.391	FAIL_ABUND	8.209	☐	
	Thorium-232 ✓	1.391	0.2176	pCi/g	0.3594	N	911.2	3	1.47	IDENTIFIED	14.79	☐	
	Thorium-234 ✓	4.474	0.6673	pCi/g	1.377	2.00	63.51	3	0.9092	IDENTIFIED	11.84	☐	
	Tin-126 INT	0.3033	0.0468	pCi/g	0.1271	N	87.42	3	1.057	IDENTIFIED	14.9	☐	
	Titanium-44 LA	0.3498	0.02498	pCi/g	0.07899	N	77.34	1	0.8844	FAIL_ABUND	5.779	☐	
	Total Uranium	13.468	1.99E-06	ug/g	2.0516	N		0				☐	
	Tungsten-181 LA	1.256	0.1617	pCi/g	0.4874	N	209.2	1	1.012	NOT_IDENTI	53.08	☐	
	Uranium-234 LA	1.335	0.1249	pCi/g	0.3696	N	609.2	4	1.391	FAIL_ABUND	8.209	☐	
	Uranium-238 ✓	4.474	0.6673	pCi/g	1.377	N	63.51	3	0.9092	IDENTIFIED	11.84	☐	
	Zirconium-97	2.06E+06	5.03E+05	pCi/g	0	N	238.8	8	0.9503	NOT_IDENTI	4.512	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433013	23-JUN-09 12:00	07-JUL-09 07:04	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

	Actinium-228 ✓	1.559	0.1854	pCi/g	0.2139	N	911.6	3	1.779	IDENTIFIED	9.88	☐	
	Americium-243 INT	0.4069	0.04691	pCi/g	0.09556	N	74.93	2	1.236	IDENTIFIED	10.74	☐	
	Annihilation Rad.	0.1401	0.03122	pCi/g	0.04144	N	511.2	1	1.504	IDENTIFIED	22.04	☐	
	Barium-137m NV	0.145	0.03478	pCi/g	0.05346	N	661.5	2	1.875	IDENTIFIED	23.68	☐	
PbZ14	Bismuth-211 INT	3.829	0.2471	pCi/g	0.2933	Y	352.1	4	1.426	IDENTIFIED	5.599	☑ UI	
	Bismuth-212 HE	0.7907	0.2153	pCi/g	0.6176	N	727.9	1	2.033	FAIL_ABUND	26.76	☐	
	Bismuth-214 ✓	1.151	0.09897	pCi/g	0.1015	0.200	609.4	4	1.639	IDENTIFIED	7.345	☐	
PbZ14	Cadmium-109 INT	2.958	0.531	pCi/g	1.411	Y	87.26	4	1.173	IDENTIFIED	17.35	☑ UI	
	Cerium-143	337	55.42	pCi/g	0	N	327.8	1	1.147	NOT_IDENTI	62.66	☐	
	Cesium-135 HE	0.3057	0.08006	pCi/g	0.2568	N	795.5	2	1.544	NOT_IDENTI	36.53	☐	
	Cesium-137 ✓	0.1533	0.03677	pCi/g	0.05652	0.100	661.5	2	1.875	IDENTIFIED	23.68	☐	
	Gross Gamma	10.18	1.463	pCi/g	2.539	N		0				☐	
	Iodine-123 HE	3.61E+05	5.04E+05	pCi/g	0	N	87.26	4	1.173	NOT_IDENTI	17.35	☐	
	Iodine-135 HE	1.21E+14	1.08E+14	pCi/g	0	N	795.5	2	1.544	NOT_IDENTI	36.53	☐	
	Krypton-85 LA	24.88	3.963	pCi/g	13.6	N	238.8	8	1.251	NOT_IDENTI	3.263	☐	

Lead-212 ✓	1.722	0.08332	pCi/g	0.08397	0.100	238.8	8	1.251	IDENTIFIED	3.263	☐	
Lead-214 ✓	1.332	0.09273	pCi/g	0.1073	0.100	352.1	4	1.426	IDENTIFIED	5.599	☐	
Lutetium-177 LA	3.145	0.6518	pCi/g	1.683	N	209.7	1	1.349	FAIL_ABUND	20.55	☐	
Neptunium-237 INT	0.8554	0.1771	pCi/g	0.4502	N	87.26	4	1.173	IDENTIFIED	17.35	☐	
Polonium-212 nr	1.722	0.08332	pCi/g	0.08397	N	238.8	8	1.251	IDENTIFIED	3.263	☐	
Polonium-214 nr	1.332	0.09273	pCi/g	0.1073	N	352.1	4	1.426	IDENTIFIED	5.599	☐	
Polonium-216 nr	1.722	0.08332	pCi/g	0.08397	N	238.8	8	1.251	IDENTIFIED	3.263	☐	
Polonium-218 nr	1.332	0.09273	pCi/g	0.1073	N	352.1	4	1.426	IDENTIFIED	5.599	☐	
Potassium-40 ✓	35.89	1.606	pCi/g	0.473	1.00	1461	1	2.058	IDENTIFIED	2.374	☐	
PbZH Radium-224 INT	4.646	0.6244	pCi/g	0.9544	Y	241.7	1	1.679	IDENTIFIED	13.15	☑ UI	
Radium-226 ✓	1.151	0.09897	pCi/g	0.1015	Y	609.4	4	1.639	IDENTIFIED	7.345	☐	
Radium-228 ✓	1.559	0.1854	pCi/g	0.2139	0.500	911.6	3	1.779	IDENTIFIED	9.88	☐	
Strontium-85 LA	0.1258	0.02004	pCi/g	0.06878	Y	238.8	8	1.251	NOT_IDENTI	3.263	☑ UI	Data rejected due to low abundance.
Technetium-99m HE	1.23E+14	5.45E+14	pCi/g	0	N	238.8	8	1.251	NOT_IDENTI	3.263	☐	
Thallium-200 HE	122.5	89.87	pCi/g	0	N	74.93	2	1.236	NOT_IDENTI	10.74	☐	
Thallium-208 ✓	0.5754	0.04294	pCi/g	0.05652	0.080	583.3	1	1.276	IDENTIFIED	6.35	☐	
Thorium-228 ✓	1.722	0.08332	pCi/g	0.08397	N	238.8	8	1.251	IDENTIFIED	3.263	☐	
Thorium-230 ✓	1.151	0.09897	pCi/g	0.1015	N	609.4	4	1.639	IDENTIFIED	7.345	☐	
Thorium-232 ✓	1.559	0.1854	pCi/g	0.2139	N	911.6	3	1.779	IDENTIFIED	9.88	☐	
Tin-126 INT	0.2913	0.0523	pCi/g	0.1452	N	87.26	4	1.173	IDENTIFIED	17.35	☐	
Titanium-44 LA	0.4238	0.03283	pCi/g	0.08903	N	77.2	1	1.027	FAIL_ABUND	6.483	☐	
Total Uranium	5.0659	3.43E-06	ug/g	3.8379	N		0				☐	
Uranium-234 ✓	1.151	0.09897	pCi/g	0.1015	N	609.4	4	1.639	IDENTIFIED	7.345	☐	
Zirconium-97	6.38E+05	2.71E+05	pCi/g	0	N	238.8	8	1.251	NOT_IDENTI	3.263	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433014	23-JUN-09 12:00	07-JUL-09 07:05	13.8	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.604	0.1965	pCi/g	0.2022	N	911.9	3	2.101	IDENTIFIED	10.53	☐	
Americium-243 INT	0.3755	0.04742	pCi/g	0.09932	N	74.89	2	1.268	IDENTIFIED	12.01	☐	
Annihilation Rad. HE	0.08597	0.03791	pCi/g	0.05184	N	511.4	1	2.287	IDENTIFIED	43.98	☐	
Barium-137m nr	0.5185	0.0438	pCi/g	0.05842	N	661.9	2	2.13	IDENTIFIED	7.589	☐	
PbZH Bismuth-211 INT	3.257	0.2883	pCi/g	0.3602	Y	352	4	1.61	IDENTIFIED	8.264	☑ UI	
Bismuth-212 LA	1.404	0.2442	pCi/g	0.6871	N	727.8	1	2.45	FAIL_ABUND	16.71	☐	
Bismuth-214 LA	1.083	0.0982	pCi/g	0.276	0.200	609.8	4	1.478	FAIL_ABUND	7.924	☑ UI	Data rejected due to low abundance.
PbZH Cadmium-109 INT	2.83	0.6285	pCi/g	1.82	Y	87.24	5	1.276	IDENTIFIED	21.76	☑ UI	
Cerium-143	403.5	65.82	pCi/g	0	N	329.2	1	1.745	FAIL_DECAY	37.31	☐	
Cesium-137 ✓	0.5481	0.04632	pCi/g	0.06176	0.100	661.9	2	2.13	IDENTIFIED	7.589	☐	
Gross Gamma	9.398	1.453	pCi/g	2.507	N		0				☐	
Iodine-123 HE	4.13E+05	6.51E+05	pCi/g	0	N	87.24	5	1.276	NOT_IDENTI	21.76	☐	
Krypton-85 LA	39.07	5.394	pCi/g	18.36	N	238.8	9	1.323	NOT_IDENTI	3.795	☐	
Lead-212 ✓	1.659	0.08606	pCi/g	0.0982	0.100	238.8	9	1.323	IDENTIFIED	3.795	☐	
Lead-214 ✓	1.133	0.1046	pCi/g	0.1276	0.100	352	4	1.61	IDENTIFIED	8.264	☐	
Neptunium-237 HE	0.8184	0.2004	pCi/g	0.4599	N	87.24	5	1.276	IDENTIFIED	21.76	☐	
Niobium-97	76410	17740	pCi/g	0	N	238.8	9	1.323	NOT_IDENTI	3.795	☐	
Polonium-212 nr	1.659	0.08606	pCi/g	0.0982	N	238.8	9	1.323	IDENTIFIED	3.795	☐	
Polonium-214 nr	1.133	0.1046	pCi/g	0.1276	N	352	4	1.61	IDENTIFIED	8.264	☐	
Polonium-216 nr	1.659	0.08606	pCi/g	0.0982	N	238.8	9	1.323	IDENTIFIED	3.795	☐	
Polonium-218 nr	1.133	0.1046	pCi/g	0.1276	N	352	4	1.61	IDENTIFIED	8.264	☐	
Potassium-40 ✓	31.42	1.454	pCi/g	0.6941	1.00	1462	1	2.976	IDENTIFIED	3.052	☐	
PbZH Radium-224 INT	5.145	0.7425	pCi/g	1.116	Y	241.8	1	1.81	IDENTIFIED	14.17	☑ UI	
Radium-226 LA	1.083	0.0982	pCi/g	0.276	Y	609.8	4	1.478	FAIL_ABUND	7.924	☑ UI	Data rejected due to low abundance.
Radium-228 ✓	1.604	0.1965	pCi/g	0.2022	0.500	911.9	3	2.101	IDENTIFIED	10.53	☐	
Silver-110m HE	0.08709	0.02284	pCi/g	0.07377	N	87.24	5	1.276	NOT_IDENTI	21.76	☐	
Sodium-24 HE	1.92E+05	1.14E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA	0.1976	0.02727	pCi/g	0.09285	Y	238.8	9	1.323	NOT_IDENTI	3.795	☑ UI	Data rejected due to low abundance.
Technetium-99m HE	1.09E+15	6.55E+14	pCi/g	0	N	238.8	9	1.323	NOT_IDENTI	3.795	☐	
Thallium-200 HE	70.9	108	pCi/g	0	N	74.89	2	1.268	NOT_IDENTI	12.01	☐	

Thallium-208 ✓		0.5398	0.04882	pCi/g	0.05802	0.080	583.4	1	1.426	IDENTIFIED	8.184	☐
Thorium-228 ✓		1.659	0.08606	pCi/g	0.09819	N	238.8	9	1.323	IDENTIFIED	3.795	☐
Thorium-230 LA		1.083	0.0982	pCi/g	0.276	N	609.8	4	1.478	FAIL_ABUND	7.924	☐
Thorium-232 ✓		1.604	0.1965	pCi/g	0.2022	N	911.9	3	2.101	IDENTIFIED	10.53	☐
Thorium-234 ✓		2.756	1.099	pCi/g	2.126	2.00	63.2	2	1.277	IDENTIFIED	38.92	☐
Tin-126	HE	0.2787	0.0619	pCi/g	0.1658	N	87.24	5	1.276	IDENTIFIED	21.76	☐
Titanium-44 LA		0.4068	0.03493	pCi/g	0.08895	N	77.25	1	1.276	FAIL_ABUND	7.606	☐
Total Uranium		8.3309	3.27E-06	ug/g	3.165	N		0				☐
Uranium-234 LA		1.083	0.0982	pCi/g	0.276	N	609.8	4	1.478	FAIL_ABUND	7.924	☐
Uranium-238	HE	2.756	1.099	pCi/g	2.126	N	63.2	2	1.277	IDENTIFIED	38.92	☐
Zirconium-97		9.45E+05	3.34E+05	pCi/g	0	N	238.8	9	1.323	NOT_IDENTI	3.795	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232433015	23-JUN-09 12:00	07-JUL-09 07:06	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.422	0.1799	pCi/g	0.2366	N	911.4	3	1.877	IDENTIFIED	11.26	☐	
Americium-243 INT		0.3644	0.03668	pCi/g	0.07892	N	74.88	2	0.8601	IDENTIFIED	9.03	☐	
Annihilation Rad.		0.1617	0.03606	pCi/g	0.04269	N	511.4	1	2.113	IDENTIFIED	22.11	☐	
Barium-137m M		0.1864	0.03903	pCi/g	0.06419	N	662.1	3	1.734	IDENTIFIED	20.78	☐	
PB214 Bismuth-211 INT		3.718	0.2454	pCi/g	0.2989	Y	352	4	1.144	IDENTIFIED	5.742	☑ UI	
Bismuth-212 LA		1.68	0.2689	pCi/g	0.7958	N	727.3	1	2.015	FAIL_ABUND	15.5	☐	
Bismuth-214 ✓		1.123	0.08487	pCi/g	0.1159	0.200	609.6	4	1.322	IDENTIFIED	6.554	☐	
PB214 Cadmium-109 INT		3.229	0.4557	pCi/g	0.9527	Y	87.28	4	1.181	IDENTIFIED	13.25	☑ UI	
Cerium-143		157.7	38.15	pCi/g	0	N	662.1	3	1.734	FAIL_DECAY	20.78	☐	
Cesium-134 LA		0.1073	0.04139	pCi/g	0.09831	0.100	796.1	1	1.516	FAIL_ABUND	38.4	☑ UI	Data rejected due to low abundance.
Cesium-137 ✓		0.197	0.04126	pCi/g	0.06785	0.100	662.1	3	1.734	IDENTIFIED	20.78	☐	
Gross Gamma		7.699	1.173	pCi/g	2.305	N		0				☐	
Iodine-123	HE	63260	4.45E+05	pCi/g	0	N	87.28	4	1.181	NOT_IDENTI	13.25	☐	
Krypton-85	HE	17.85	3.827	pCi/g	14.46	N	238.8	9	0.9929	NOT_IDENTI	4.887	☐	
Lead-212 ✓		1.232	0.07477	pCi/g	0.1178	0.100	238.8	9	0.9929	IDENTIFIED	4.887	☐	
Lead-214 ✓		1.293	0.0918	pCi/g	0.1042	0.100	352	4	1.144	IDENTIFIED	5.742	☐	
Neptunium-237 INT		0.9339	0.1632	pCi/g	0.3507	N	87.28	4	1.181	IDENTIFIED	13.25	☐	
Niobium-97	HE	16330	14990	pCi/g	0	N	238.8	9	0.9929	NOT_IDENTI	4.887	☐	
Polonium-212 M		1.232	0.07477	pCi/g	0.1178	N	238.8	9	0.9929	IDENTIFIED	4.887	☐	
Polonium-214 M		1.293	0.0918	pCi/g	0.1042	N	352	4	1.144	IDENTIFIED	5.742	☐	
Polonium-216 M		1.232	0.07477	pCi/g	0.1178	N	238.8	9	0.9929	IDENTIFIED	4.887	☐	
Polonium-218 M		1.293	0.0918	pCi/g	0.1042	N	352	4	1.144	IDENTIFIED	5.742	☐	
Potassium-40 ✓		19.94	1.154	pCi/g	0.6223	1.00	1461	1	2.05	IDENTIFIED	4.416	☐	
PB214 Radium-224 INT		2.593	0.5023	pCi/g	1.19	Y	241.7	1	1.362	IDENTIFIED	19.17	☑ UI	
Radium-226 ✓		1.123	0.08487	pCi/g	0.1159	Y	609.6	4	1.322	IDENTIFIED	6.554	☐	
Radium-228 ✓		1.422	0.1799	pCi/g	0.2366	0.500	911.4	3	1.877	IDENTIFIED	11.26	☐	
Strontium-85 LA		0.09025	0.01935	pCi/g	0.07312	Y	238.8	9	0.9929	NOT_IDENTI	4.887	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	3.72E+12	4.15E+14	pCi/g	0	N	238.8	9	0.9929	NOT_IDENTI	4.887	☐	
Thallium-200	HE	18.39	92.42	pCi/g	0	N	74.88	2	0.8601	NOT_IDENTI	9.03	☐	
Thallium-208 ✓		0.3813	0.04102	pCi/g	0.06129	0.080	583.6	1	1.261	IDENTIFIED	10.26	☐	
Thorium-228 ✓		1.232	0.07477	pCi/g	0.1178	N	238.8	9	0.9929	IDENTIFIED	4.887	☐	
Thorium-230 ✓		1.123	0.08487	pCi/g	0.1159	N	609.6	4	1.322	IDENTIFIED	6.554	☐	
Thorium-232 ✓		1.422	0.1799	pCi/g	0.2366	N	911.4	3	1.877	IDENTIFIED	11.26	☐	
Tin-126 INT		0.318	0.04487	pCi/g	0.09435	N	87.28	4	1.181	IDENTIFIED	13.25	☐	
Titanium-44 LA		0.3651	0.02818	pCi/g	0.07047	N	77.18	1	0.9137	FAIL_ABUND	6.268	☐	
Total Uranium		3.8451	3.12E-06	ug/g	2.8794	N		0				☐	
Uranium-234 ✓		1.123	0.08487	pCi/g	0.1159	N	609.6	4	1.322	IDENTIFIED	6.554	☐	
Zirconium-97	HE	1.25E+05	2.78E+05	pCi/g	0	N	238.8	9	0.9929	NOT_IDENTI	4.887	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871423		07-JUL-09 08:11	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Iodine-133	HE	6.869	3.806	pCi/g	0	N	511	1	2.767	FAIL_DECAY	824.9		
Krypton-85	HE	10.28	2.622	pCi/g	9.569	N	143.6	3	0.7071	NOT_IDENTI	48.16		
Strontium-85	LA	0.04857	0.01239	pCi/g	0.04521	Y	143.6	3	0.7071	NOT_IDENTI	48.16	UI	Data rejected due to low abundance.
Total Uranium		1.9639	2.23E-06	ug/g	1.831	N		0					
Zirconium-97	HE	528.7	326.6	pCi/g	0	N	143.6	3	0.7071	NOT_IDENTI	48.16		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871424	23-JUN-09 12:00	07-JUL-09 08:27	13.9	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228		1.344	0.1744	pCi/g	0.2287	N	910.5	3	2.17	IDENTIFIED	11.77		
Americium-243	INT	0.3909	0.05401	pCi/g	0.1008	N	74.9	1	1.316	IDENTIFIED	12.57		
Annihilation Rad.		0.1455	0.03676	pCi/g	0.04835	N	510.2	1	2.042	IDENTIFIED	25.11		
PB214 Bismuth-211	INT	3.041	0.2543	pCi/g	0.3121	Y	351.7	4	1.268	IDENTIFIED	7.65	UI	
Bismuth-214	LA	1.002	0.08367	pCi/g	0.2778	0.200	608.8	4	1.252	FAIL_ABUND	7.499	UI	Data rejected due to low abundance.
PB214 Cadmium-109	INT	2.671	0.5723	pCi/g	1.266	Y	87.34	4	1.399	IDENTIFIED	20.57	UI	
Cerium-143		320	56.54	pCi/g	0	N	87.34	4	1.399	FAIL_DECAY	20.57		
Cesium-135	NP	0.5674	0.1433	pCi/g	0.2485	N	269.6	2	1.356	IDENTIFIED	24.91		
Gross Gamma		9.355	1.347	pCi/g	2.402	N		0					
Iodine-135	HE	1.50E+14	1.34E+14	pCi/g	0	N	269.6	2	1.356	NOT_IDENTI	24.91		
Lead-212		1.458	0.07963	pCi/g	0.09457	0.100	238.4	6	1.063	IDENTIFIED	3.702		
Lead-214		1.058	0.09267	pCi/g	0.1088	0.100	351.7	4	1.268	IDENTIFIED	7.65		
Neptunium-237	HE	0.7723	0.1837	pCi/g	0.4174	N	87.34	4	1.399	IDENTIFIED	20.57		
Polonium-212	NP	1.458	0.07963	pCi/g	0.09457	N	238.4	6	1.063	IDENTIFIED	3.702		
Polonium-214	NP	1.058	0.09267	pCi/g	0.1088	N	351.7	4	1.268	IDENTIFIED	7.65		
Polonium-216	NP	1.458	0.07963	pCi/g	0.09457	N	238.4	6	1.063	IDENTIFIED	3.702		
Polonium-218	NP	1.058	0.09267	pCi/g	0.1088	N	351.7	4	1.268	IDENTIFIED	7.65		
Potassium-40		37.4	1.685	pCi/g	0.4162	1.00	1459	1	1.974	IDENTIFIED	2.771		
PB214 Radium-224	INT	4.179	0.6087	pCi/g	1.076	Y	241.3	1	1.694	IDENTIFIED	14.18	UI	
Radium-226	LA	1.002	0.08367	pCi/g	0.2778	Y	608.8	4	1.252	FAIL_ABUND	7.499	UI	Data rejected due to low abundance.
Radium-228		1.344	0.1744	pCi/g	0.2287	0.500	910.5	3	2.17	IDENTIFIED	11.77		
Sodium-24	HE	40690	92360	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Technetium-99m	HE	6.42E+14	5.78E+14	pCi/g	0	N	238.4	6	1.063	NOT_IDENTI	3.702		
Thallium-208		0.4443	0.04621	pCi/g	0.06324	0.080	582.7	1	1.441	IDENTIFIED	9.913		
Thorium-228		1.458	0.07963	pCi/g	0.09456	N	238.4	6	1.063	IDENTIFIED	3.702		
Thorium-230	LA	1.002	0.08367	pCi/g	0.2778	N	608.8	4	1.252	FAIL_ABUND	7.499		
Thorium-232		1.344	0.1744	pCi/g	0.2287	N	910.5	3	2.17	IDENTIFIED	11.77		
Tin-126	INT	0.263	0.05636	pCi/g	0.1257	N	87.34	4	1.399	IDENTIFIED	20.57		
Titanium-44	LA	0.3294	0.03348	pCi/g	0.08106	N	77.09	1	0.939	FAIL_ABUND	8.393		
Uranium-234	LA	1.002	0.08367	pCi/g	0.2778	N	608.8	4	1.252	FAIL_ABUND	7.499		
Zirconium-97		1.04E+06	2.93E+05	pCi/g	0	N	238.4	6	1.063	NOT_IDENTI	3.702		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871425		07-JUL-09 08:19	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228		1.409	0.3166	pCi/g	0.6766	N	910.9	3	2.014	IDENTIFIED	21.61		
Americium-241		15.95	0.7367	pCi/g	0.2449	0.200	59.45	1	1.287	IDENTIFIED	1.161		
Americium-243		0.2927	0.04609	pCi/g	0.1194	N	74.8	1	1.359	IDENTIFIED	15.25		
Arsenic-73		2.561	0.5514	pCi/g	0.9208	N	53.59	1	2.202	IDENTIFIED	21.2		
Barium-137m		6.096	0.2485	pCi/g	0.1358	N	661.5	3	1.728	IDENTIFIED	2.409		
Bismuth-211		2.666	0.4617	pCi/g	0.7361	Y	351.7	4	1.411	IDENTIFIED	16.86		
Bismuth-214		1.147	0.1681	pCi/g	0.4112	0.200	609.3	4	1.978	FAIL_ABUND	14.04		
Cadmium-109		54.85	2.49	pCi/g	2.106	Y	88.02	3	1.249	IDENTIFIED	2.474		
Cerium-143	HE	11.59	3.197	pCi/g	10.08	N	661.5	3	1.728	FAIL_ABUND	2.409		
Cesium-137		6.444	0.2632	pCi/g	0.1435	0.100	661.5	3	1.728	IDENTIFIED	2.409		
Cobalt-57		0.4065	0.04348	pCi/g	0.07356	N	122.1	2	1.243	IDENTIFIED	8.001		

Cobalt-60		**7.436**	0.2899	pCi/g	**0.1183**	**0.100**	1332	1	2.005	IDENTIFIED	2.612	☐ 1054
Gross Gamma		**33.59**	3.093	pCi/g	**6.18**	N		0				☐
Iodine-135	HE	**9.13E+06**	1.23E+07	pCi/g	**0**	N	510.3	1	0.9275	NOT_IDENTI	78.92	☐
Lead-212		**1.445**	0.1276	pCi/g	**0.2128**	**0.100**	238.6	7	1.178	IDENTIFIED	6.995	☐
Lead-214		**0.9273**	0.1624	pCi/g	**0.2461**	**0.100**	351.7	4	1.411	IDENTIFIED	16.86	☐
Neptunium-237		**11.48**	1.3	pCi/g	**1.353**	N	93.56	1	1.626	NOT_IDENTI	23.18	☐
Niobium-97		**850.6**	82.23	pCi/g	**0**	N	238.6	7	1.178	NOT_IDENTI	6.995	☐
Polonium-212		**1.445**	0.1276	pCi/g	**0.2128**	N	238.6	7	1.178	IDENTIFIED	6.995	☐
Polonium-214		**0.9273**	0.1624	pCi/g	**0.2461**	N	351.7	4	1.411	IDENTIFIED	16.86	☐
Polonium-216		**1.445**	0.1276	pCi/g	**0.2128**	N	238.6	7	1.178	IDENTIFIED	6.995	☐
Polonium-218		**0.9273**	0.1624	pCi/g	**0.2461**	N	351.7	4	1.411	IDENTIFIED	16.86	☐
Radium-224		**8.072**	0.9718	pCi/g	**3.186**	Y	122.1	2	1.243	NOT_IDENTI	8.001	☐
Radium-226		**1.147**	0.1681	pCi/g	**0.4112**	Y	609.3	4	1.978	FAIL_ABUND	14.04	☐
Radium-228		**1.409**	0.3166	pCi/g	**0.6766**	**0.500**	910.9	3	2.014	IDENTIFIED	21.61	☐
Silver-110m		**0.4596**	0.05616	pCi/g	**0.2038**	N	88.02	3	1.249	NOT_IDENTI	2.474	☐
Sodium-24	HE	**2.476**	96.95	pCi/g	**0**	N	0	1	0	NOT_IDENTI	0	☐
Technetium-99m	HE	**8.24E+06**	1.61E+07	pCi/g	**0**	N	238.6	7	1.178	NOT_IDENTI	6.995	☐
Thallium-208		**0.4954**	0.0729	pCi/g	**0.126**	**0.080**	583.2	1	1.907	IDENTIFIED	14.25	☐
Thorium-228		**1.445**	0.1276	pCi/g	**0.2128**	N	238.6	7	1.178	IDENTIFIED	6.995	☐
Thorium-230		**1.147**	0.1681	pCi/g	**0.4112**	N	609.3	4	1.978	FAIL_ABUND	14.04	☐
Thorium-232		**1.409**	0.3166	pCi/g	**0.6766**	N	910.9	3	2.014	IDENTIFIED	21.61	☐
Tin-126		**5.454**	0.2476	pCi/g	**0.2092**	N	88.02	3	1.249	IDENTIFIED	2.474	☐
Titanium-44		**0.3087**	0.03113	pCi/g	**0.1024**	N	77.05	1	1.133	FAIL_ABUND	9.302	☐
Uranium-234		**1.147**	0.1681	pCi/g	**0.4112**	N	609.3	4	1.978	FAIL_ABUND	14.04	☐
Zirconium-97	HE	**1764**	1061	pCi/g	**0**	N	238.6	7	1.178	NOT_IDENTI	6.995	☐

*** = Number of isotopes identified with a keyline at this energy.

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertanty	Units	DL	RDL
881219	232433014	SAMPLE	07-JUL-09	Thallium-200	70.9	108	pCi/g	0	N
				Thallium-208	0.5398	0.04882	pCi/g	0.02903	0.080
				Thorium-234	2.756	1.099	pCi/g	1.063	2.00
				Uranium-235	0.2824	0.1692	pCi/g	0.1883	0.500
				Yttrium-88	0.04019	0.0179	pCi/g	0.03396	0.100
				Zirconium-97	9.45E+05	3.34E+05	pCi/g	0	N
881219	232433015	SAMPLE	07-JUL-09	Bismuth-211	3.718	0.2454	pCi/g	0.1495	Y
				Bismuth-214	1.123	0.08487	pCi/g	0.05798	0.200
				Cadmium-109	3.229	0.4557	pCi/g	0.4766	Y
				Cerium-143	157.7	38.15	pCi/g	0	N
				Cesium-134	0.1073	0.04139	pCi/g	0.04918	0.100
				Cesium-137	0.197	0.04126	pCi/g	0.03395	0.100
				Gross Gamma	7.699	1.173	pCi/g	1.099	N
				Iodine-123	63260	4.45E+05	pCi/g	0	N
				Krypton-85	17.85	3.827	pCi/g	7.234	N
				Lead-212	1.232	0.07477	pCi/g	0.05895	0.100
				Lead-214	1.293	0.0918	pCi/g	0.05214	0.100
				Mercury-203	0.0405	0.01903	pCi/g	0.03474	0.100
				Nioblum-97	16330	14990	pCi/g	0	N
				Potassium-40	19.94	1.154	pCi/g	0.3113	1.00
				Radium-224	2.593	0.5023	pCi/g	0.5952	Y
				Radium-226	1.123	0.08487	pCi/g	0.05798	Y
				Radium-228	1.422	0.1799	pCi/g	0.1184	0.500
				Strontium-85	0.09025	0.01935	pCi/g	0.03658	Y
				Technetium-99m	3.72E+12	4.15E+14	pCi/g	0	N
				Thallium-200	18.39	92.42	pCi/g	0	N
				Thallium-208	0.3813	0.04102	pCi/g	0.03067	0.080
				Thorium-234	1.28	1.049	pCi/g	0.9675	2.00
				Zirconium-97	1.25E+05	2.78E+05	pCi/g	0	N
881219	1201871423	MB	07-JUL-09	Iodine-133	6.869	3.806	pCi/g	0	N
				Krypton-85	10.28	2.622	pCi/g	4.787	N
				Strontium-85	0.04857	0.01239	pCi/g	0.02262	Y
				Thorium-234	0.6338	0.7486	pCi/g	0.6153	2.00
				Uranium-235	0.1696	0.08287	pCi/g	0.09657	0.500
				Zirconium-97	528.7	326.6	pCi/g	0	N
881219	1201871424	DUP	07-JUL-09	Bismuth-211	3.041	0.2543	pCi/g	0.1562	Y
				Bismuth-214	1.092	0.08367	pCi/g	0.139	0.200

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:03:59.53

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232424001.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:03:34.
Sample ID         : G232424001           Sample quantity  : 1.16500E+02 GRAM
Detector name     : GAM01                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.08  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.32*	65	395	1.17	127.41	123	10	9.05E-03	60.2	
2	4	74.74	380	397	1.57	150.25	143	16	5.28E-02	11.3	2.43E+00
3	4	77.12	497	306	1.09	155.00	143	16	6.91E-02	7.5	
4	0	87.25*	142	267	1.12	175.27	173	6	1.97E-02	20.2	
5	0	93.14*	77	500	1.76	187.05	182	10	1.06E-02	59.6	
6	0	144.84*	82	466	4.96	290.43	285	14	1.14E-02	57.7	
7	0	186.35*	185	316	1.58	373.45	368	11	2.57E-02	21.1	
8	0	209.63	84	266	1.27	420.01	414	10	1.16E-02	38.2	
9	4	239.02*	954	155	1.18	478.77	472	24	1.32E-01	4.0	1.08E+00
10	4	242.02*	178	246	1.79	484.77	472	24	2.47E-02	23.4	
11	0	270.07	102	151	1.62	540.86	536	9	1.42E-02	23.8	
12	1	295.68	273	111	1.40	592.08	586	23	3.79E-02	8.9	2.14E+00
13	1	300.78	85	110	1.47	602.27	586	23	1.17E-02	26.4	
14	0	338.55	145	168	1.30	677.80	673	10	2.01E-02	18.7	
15	0	352.26*	410	180	1.40	705.22	700	13	5.69E-02	8.4	
16	0	511.33*	105	139	2.43	1023.29	1014	18	1.46E-02	30.9	
17	0	583.60*	292	58	1.37	1167.80	1162	11	4.06E-02	7.9	
18	0	609.68*	305	93	1.63	1219.93	1215	14	4.23E-02	9.1	
19	0	727.68	56	32	1.86	1455.86	1451	10	7.81E-03	23.1	
20	0	769.12	21	96	0.94	1538.71	1535	12	2.92E-03	95.8	
21	0	911.56*	216	42	1.85	1823.48	1817	13	3.00E-02	9.4	
22	4	964.89	52	23	2.55	1930.08	1924	21	7.18E-03	26.4	9.23E-01
23	4	969.29*	118	38	1.60	1938.87	1924	21	1.64E-02	13.6	
24	0	1120.80*	63	42	1.61	2241.76	2234	14	8.75E-03	26.1	
25	0	1461.31*	1165	10	1.98	2922.39	2916	14	1.62E-01	3.0	
26	0	1731.25	10	12	1.39	3461.89	3454	10	1.35E-03	75.2	
27	0	1765.34*	23	6	2.50	3530.00	3523	13	3.17E-03	35.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 08:04:02

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232424001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:03:34
Sample ID : G232424001 Sample quantity : 116.50 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA1 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.08 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.650E+01	3.397E+00	5.387E-01	3.829E-02	67.753
CD-109	+	88.03	*	2.445E+00	1.011E+00	1.608E+00	1.480E-01	1.520
SN-126	+	64.28		8.041E-01	9.762E-01	9.385E-01	1.411E-01	0.857
	+	86.94		1.001E+00	5.793E-01	6.934E-01	2.875E-01	1.444
	+	87.57	*	2.408E-01	9.962E-02	1.581E-01	1.451E-02	1.523
CE-141	+	145.44	*	1.234E-01	1.426E-01	1.128E-01	6.629E-03	1.094
TL-208		277.35		2.650E-01	4.252E-01	7.237E-01	7.659E-02	0.366
	+	510.84		6.439E-01	4.025E-01	2.370E-01	2.371E-02	2.717
	+	583.14	*	5.124E-01	8.731E-02	6.600E-02	4.182E-03	7.764
		860.37		5.009E-01	3.969E-01	7.139E-01	5.395E-02	0.702
BI-211		72.87		9.889E+00	3.755E+00	6.496E+00	5.441E-01	1.522
	+	351.07	*	3.097E+00	5.576E-01	3.744E-01	2.371E-02	8.273
PB-212	+	74.81		2.808E+00	7.248E-01	5.991E-01	7.542E-02	4.687
	+	77.11		2.063E+00	3.566E-01	3.376E-01	2.877E-02	6.109
	+	87.30		1.114E+00	4.740E-01	7.798E-01	1.057E-01	1.428
	+	238.63	*	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
	+	300.09		2.142E+00	1.143E+00	1.422E+00	1.177E-01	1.507
PO-212	+	74.81		2.808E+00	7.248E-01	5.991E-01	7.542E-02	4.687
	+	77.11		2.063E+00	3.566E-01	3.376E-01	2.877E-02	6.109
	+	87.30		1.114E+00	4.740E-01	7.798E-01	1.057E-01	1.428
		115.19		-1.232E+00	4.228E+00	6.625E+00	4.308E-01	-0.186
	+	238.63	*	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
	+	300.09		2.142E+00	1.143E+00	1.422E+00	1.177E-01	1.507
BI-214	+	609.31	*	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
	+	768.36		7.823E-01	1.501E+00	1.087E+00	9.146E-02	0.720
		934.06		-5.240E-01	1.274E+00	1.974E+00	1.848E-01	-0.265
	+	1120.29		1.104E+00	5.848E-01	6.008E-01	5.344E-02	1.838
		1238.11		2.163E-01	1.196E+00	2.027E+00	1.691E-01	0.107
		1377.67		3.301E-01	1.169E+00	2.009E+00	1.881E-01	0.164
	+	1764.49		5.558E-01	3.976E-01	2.822E-01	1.679E-02	1.969
PB-214	+	74.81		4.838E+00	1.218E+00	1.032E+00	1.159E-01	4.687
	+	77.11		3.536E+00	6.681E-01	5.788E-01	6.616E-02	6.109
	+	87.30		1.908E+00	8.029E-01	1.336E+00	1.599E-01	1.428
	+	241.98		1.739E+00	8.265E-01	6.128E-01	4.924E-02	2.837

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	295.21		1.212E+00	2.405E-01	2.489E-01	2.131E-02	4.871
	+	351.92	*	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
PO-214	+	74.81		4.838E+00	1.218E+00	1.032E+00	1.159E-01	4.687
	+	77.11		3.536E+00	6.681E-01	5.788E-01	6.616E-02	6.109
	+	87.30		1.908E+00	8.029E-01	1.336E+00	1.599E-01	1.428
	+	241.98		1.739E+00	8.265E-01	6.128E-01	4.924E-02	2.837
	+	295.21		1.212E+00	2.405E-01	2.489E-01	2.131E-02	4.871
	+	351.92	*	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
PO-216	+	74.81		2.808E+00	7.248E-01	5.991E-01	7.542E-02	4.687
	+	77.11		2.063E+00	3.566E-01	3.376E-01	2.877E-02	6.109
	+	87.30		1.114E+00	4.740E-01	7.798E-01	1.057E-01	1.428
	+	238.63	*	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
	+	300.09		2.142E+00	1.143E+00	1.422E+00	1.177E-01	1.507
PO-218	+	74.81		4.838E+00	1.218E+00	1.032E+00	1.159E-01	4.687
	+	77.11		3.536E+00	6.681E-01	5.788E-01	6.616E-02	6.109
	+	87.30		1.908E+00	8.029E-01	1.336E+00	1.599E-01	1.428
	+	241.98		1.739E+00	8.265E-01	6.128E-01	4.924E-02	2.837
	+	295.21		1.212E+00	2.405E-01	2.489E-01	2.131E-02	4.871
	+	351.92	*	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
RA-224	+	240.98	*	3.297E+00	1.556E+00	1.158E+00	6.661E-02	2.847
RA-226	+	609.31	*	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
	+	768.36		7.823E-01	1.501E+00	1.087E+00	9.146E-02	0.720
		934.06		-5.240E-01	1.274E+00	1.974E+00	1.848E-01	-0.265
	+	1120.29		1.104E+00	5.848E-01	6.008E-01	5.344E-02	1.838
		1238.11		2.163E-01	1.196E+00	2.027E+00	1.691E-01	0.107
		1377.67		3.301E-01	1.169E+00	2.009E+00	1.881E-01	0.164
	+	1764.49		5.558E-01	3.976E-01	2.822E-01	1.679E-02	1.969
AC-228	+	338.32		1.206E+00	6.663E-01	4.233E-01	1.725E-01	2.849
	+	911.07	*	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
	+	969.11		1.645E+00	5.839E-01	4.451E-01	1.012E-01	3.695
RA-228	+	338.32		1.206E+00	6.663E-01	4.233E-01	1.725E-01	2.849
	+	911.07	*	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
	+	969.11		1.645E+00	5.839E-01	4.451E-01	1.012E-01	3.695
TH-228		84.40		3.278E+00	3.252E+00	4.793E+00	6.399E-01	0.684
	+	238.60	*	1.551E+00	1.674E-01	1.017E-01	7.412E-03	15.244
	+	300.10		2.142E+00	1.694E+00	1.422E+00	8.380E-01	1.506
TH-230	+	609.31	*	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
	+	768.36		7.823E-01	1.501E+00	1.087E+00	9.146E-02	0.720
		934.06		-5.240E-01	1.274E+00	1.974E+00	1.848E-01	-0.265
	+	1120.29		1.104E+00	5.847E-01	6.008E-01	5.344E-02	1.838
		1238.11		2.163E-01	1.196E+00	2.027E+00	1.691E-01	0.107
		1377.67		3.301E-01	1.169E+00	2.009E+00	1.881E-01	0.164
	+	1764.49		5.558E-01	3.976E-01	2.822E-01	1.679E-02	1.969
TH-232	+	338.32		1.206E+00	4.551E-01	4.233E-01	2.434E-02	2.849
	+	911.07	*	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
	+	969.11		1.645E+00	5.839E-01	4.451E-01	1.012E-01	3.695
TH-234	+	63.29	*	2.031E+00	2.474E+00	2.370E+00	4.236E-01	0.857
	+	92.38		8.314E-01	1.002E+00	9.470E-01	1.709E-01	0.878
U-234	+	609.31	*	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	768.36		7.823E-01	1.501E+00	1.087E+00	9.146E-02	0.720
		934.06		-5.240E-01	1.274E+00	1.974E+00	1.848E-01	-0.265
	+	1120.29		1.104E+00	5.847E-01	6.008E-01	5.344E-02	1.838
		1238.11		2.163E-01	1.196E+00	2.027E+00	1.691E-01	0.107
		1377.67		3.301E-01	1.169E+00	2.009E+00	1.881E-01	0.164
	+	1764.49		5.558E-01	3.976E-01	2.822E-01	1.679E-02	1.969
U-235		89.95		-4.485E-01	1.913E+00	2.099E+00	6.492E-01	-0.214
	+	93.35		9.995E-01	1.223E+00	1.129E+00	3.157E-01	0.885
		105.00		9.675E-01	1.211E+00	1.951E+00	5.750E-01	0.496
	+	143.76	*	4.239E-01	4.941E-01	3.857E-01	6.271E-02	1.099
		163.35		1.051E-01	5.357E-01	9.101E-01	1.624E-01	0.115
	+	185.71		2.096E-01	8.924E-02	8.081E-02	4.406E-03	2.594
		205.31		-2.020E-02	6.687E-01	9.822E-01	1.759E-01	-0.021
NP-237	+	86.50	*	7.072E-01	3.269E-01	4.575E-01	1.032E-01	1.546
		95.87		-1.697E-01	1.170E+00	1.649E+00	4.032E-01	-0.103
U-238	+	63.29	*	2.031E+00	2.474E+00	2.370E+00	4.236E-01	0.857
	+	92.38		8.314E-01	9.931E-01	9.470E-01	8.081E-02	0.878
AM-243	+	74.67	*	4.553E-01	1.095E-01	9.747E-02	8.214E-03	4.671
	+	86.72		2.652E+01	1.097E+01	1.725E+01	1.571E+00	1.537
		117.66		-6.006E-01	4.322E+00	6.815E+00	4.335E-01	-0.088
		142.18		1.613E+01	2.171E+01	3.381E+01	1.925E+00	0.477
ANH-511	+	511.00	*	1.391E-01	8.617E-02	5.121E-02	2.836E-03	2.716

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-3.094E-01	3.832E-01	5.712E-01	3.733E-02	-0.542
NA-22		1274.54	*	9.293E-04	5.512E-02	9.217E-02	5.908E-03	0.010
NA-24		1368.53	*	8.999E-02	5.512E-02	Half-Life too short		
AL-26		1129.67		1.364E+00	2.176E+00	3.724E+00	2.184E-01	0.366
		1808.65	*	5.647E-03	2.955E-02	5.056E-02	2.915E-03	0.112
TI-44		67.85		1.854E-02	6.555E-02	8.776E-02	7.298E-03	0.211
	+	78.38	*	3.806E-01	6.581E-02	8.887E-02	7.623E-03	4.283
SC-46		889.25	*	-5.948E-02	4.950E-02	7.027E-02	4.938E-03	-0.846
	+	1120.51		1.869E-01	9.820E-02	1.397E-01	8.292E-03	1.338
V-48		944.10		3.342E-01	9.884E-01	1.668E+00	1.159E-01	0.200
		983.50	*	6.140E-02	8.757E-02	1.519E-01	1.030E-02	0.404
		1312.09		1.289E-02	9.308E-02	1.575E-01	1.062E-02	0.082
CR-51		320.08	*	-4.172E-01	4.060E-01	6.174E-01	3.996E-02	-0.676
MN-52		744.21		8.409E-02	2.433E-01	4.144E-01	2.378E-02	0.203
		848.13		1.870E+00	6.865E+00	1.156E+01	7.689E-01	0.162
		935.52		1.439E-01	2.166E-01	3.808E-01	2.659E-02	0.378
		1246.25		-3.838E+00	8.512E+00	1.368E+01	8.401E-01	-0.281
		1333.61		-1.267E+00	5.282E+00	8.529E+00	5.910E-01	-0.149
		1434.06	*	6.055E-03	2.148E-01	3.573E-01	2.444E-02	0.017
MN-54		834.83	*	-1.017E-02	4.419E-02	7.091E-02	4.632E-03	-0.143
CO-56		846.75	*	1.167E-02	4.776E-02	8.015E-02	5.322E-03	0.146
		977.42		-4.020E-01	3.847E+00	6.182E+00	4.209E-01	-0.065

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1037.82		5.872E-02	3.647E-01	6.008E-01	4.260E-02	0.098
		1175.09		-4.663E-01	2.862E+00	4.735E+00	2.614E-01	-0.098
		1238.25		1.483E-02	1.191E-01	2.012E-01	1.292E-02	0.074
		1360.21		2.093E-01	1.048E+00	1.793E+00	1.239E-01	0.117
		1771.40		-3.666E-01	3.543E-01	4.680E-01	2.771E-02	-0.783
CO-57		122.06	*	-1.275E-02	2.993E-02	4.645E-02	2.852E-03	-0.275
		136.48		-6.693E-02	2.233E-01	3.742E-01	2.514E-02	-0.179
CO-58		810.76	*	-1.897E-02	4.339E-02	6.798E-02	4.314E-03	-0.279
FE-59		142.65		4.450E+00	3.277E+00	5.253E+00	2.986E-01	0.847
		192.34		1.445E-01	1.071E+00	1.747E+00	2.038E-01	0.083
		1099.22	*	5.040E-03	1.239E-01	2.004E-01	1.412E-02	0.025
		1291.56		-6.316E-03	1.542E-01	2.561E-01	2.054E-02	-0.025
CO-60		1173.22		-4.870E-02	5.987E-02	9.317E-02	5.129E-03	-0.523
		1332.49	*	-2.574E-03	4.905E-02	8.110E-02	5.620E-03	-0.032
ZN-65		1115.52	*	2.571E-02	1.311E-01	1.870E-01	1.119E-02	0.138
GE-68		1077.35	*	-2.524E-01	1.756E+00	2.792E+00	1.743E-01	-0.090
AS-73		53.44	*	6.306E-01	1.087E+00	1.814E+00	1.544E-01	0.348
AS-74		595.88	*	8.431E-02	9.965E-02	1.777E-01	9.506E-03	0.475
		634.78		-1.058E-01	3.719E-01	6.046E-01	3.137E-02	-0.175
SE-75		66.05		-2.635E+00	6.311E+00	8.884E+00	9.056E-01	-0.297
		96.73		-3.829E-02	9.174E-01	1.302E+00	1.723E-01	-0.029
		121.11		-5.476E-02	1.578E-01	2.459E-01	2.329E-02	-0.223
		136.00		-1.042E-02	4.230E-02	7.107E-02	4.187E-03	-0.147
		198.60		-9.936E-01	2.039E+00	3.248E+00	2.244E-01	-0.306
		264.65	*	4.522E-02	5.363E-02	8.302E-02	4.885E-03	0.545
		279.53		8.306E-02	1.233E-01	2.107E-01	1.330E-02	0.394
		303.91		1.044E+00	2.783E+00	4.128E+00	3.949E-01	0.253
		400.65		-1.028E-02	2.868E-01	4.631E-01	4.109E-02	-0.022
BR-77	+	87.88		3.556E+02	1.471E+02	2.478E+02	2.280E+01	1.435
		200.40		1.021E+02	1.217E+02	2.110E+02	1.170E+01	0.484
	+	239.00		1.673E+02	1.643E+01	2.778E+01	1.596E+00	6.021
		249.79		-1.691E+01	5.773E+01	8.219E+01	4.754E+00	-0.206
		281.68		-2.864E+01	7.060E+01	1.137E+02	6.647E+00	-0.252
		297.23		2.120E+02	5.168E+01	9.714E+01	5.682E+00	2.183
		303.76		8.690E+01	1.592E+02	2.393E+02	1.398E+01	0.363
		439.47		7.682E+01	1.160E+02	1.962E+02	1.082E+01	0.391
		484.57		-4.738E+01	1.883E+02	2.953E+02	1.638E+01	-0.160
		520.65	*	9.548E-01	8.355E+00	1.347E+01	7.444E-01	0.071
		574.64		6.519E-01	1.628E+02	2.732E+02	1.481E+01	0.002
		578.91		5.989E+00	7.398E+01	1.094E+02	5.916E+00	0.055
		585.48		1.135E+03	2.153E+02	4.113E+02	2.215E+01	2.760
		755.35		1.037E+02	1.366E+02	2.401E+02	1.401E+01	0.432
		817.79		8.423E+00	1.054E+02	1.746E+02	1.114E+01	0.048
SR-82		698.33		-3.132E+01	4.021E+01	6.233E+01	3.335E+00	-0.503
		776.49	*	-1.549E-01	4.727E-01	6.428E-01	3.868E-02	-0.241
		1395.20		-2.769E+00	1.257E+01	2.019E+01	1.390E+00	-0.137
RB-83		520.41	*	6.168E-03	8.108E-02	1.302E-01	7.200E-03	0.047
		529.64		4.915E-02	1.138E-01	1.983E-01	1.094E-02	0.248
		552.65		-6.288E-02	2.172E-01	3.566E-01	1.952E-02	-0.176

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-84		881.50	*	-9.763E-02	8.775E-02	1.265E-01	8.798E-03	-0.772
KR-85		513.99	*	2.113E+01	1.004E+01	1.681E+01	9.304E-01	1.257
SR-85		513.99	*	1.068E-01	5.076E-02	8.496E-02	4.703E-03	1.257
RB-86		1076.63	*	-2.441E-01	1.083E+00	1.708E+00	1.068E-01	-0.143
Y-88		898.02		3.130E-02	5.159E-02	8.919E-02	6.385E-03	0.351
		1836.01	*	3.207E-03	3.203E-02	5.352E-02	3.029E-03	0.060
ZR-88		392.90	*	1.251E-02	3.531E-02	5.870E-02	3.173E-03	0.213
Y-91		1204.90	*	-7.012E+00	2.359E+01	3.848E+01	2.224E+00	-0.182
NB-94		702.63	*	2.994E-02	3.825E-02	6.759E-02	3.642E-03	0.443
		871.10		-2.090E-02	4.351E-02	6.772E-02	4.646E-03	-0.309
NB-95		765.79	*	2.722E-02	5.356E-02	8.161E-02	4.835E-03	0.334
NB-95M		235.69	*	-4.054E-02	1.492E-01	2.138E-01	1.598E-02	-0.190
ZR-95		724.18		4.508E-03	1.173E-01	1.693E-01	1.128E-02	0.027
		756.15	*	3.507E-02	8.511E-02	1.456E-01	1.029E-02	0.241
NB-97		657.90	*	6.831E-03	8.511E-02	Half-Life too short		
		1024.50		-6.211E-01	8.511E-02	Half-Life too short		
ZR-97		254.15		7.464E-01	8.511E-02	Half-Life too short		
		355.39		5.616E-01	8.511E-02	Half-Life too short		
		507.63	*	7.031E-01	8.511E-02	Half-Life too short		
		602.52		-1.286E+00	8.511E-02	Half-Life too short		
		1021.30		5.426E-01	8.511E-02	Half-Life too short		
		1147.95		-1.361E+00	8.511E-02	Half-Life too short		
		1362.66		5.059E-01	8.511E-02	Half-Life too short		
		1750.46		-1.720E+00	8.511E-02	Half-Life too short		
MO-99		140.51		4.453E+00	2.216E+01	3.354E+01	9.033E+00	0.133
		181.06		5.908E+00	1.432E+01	2.172E+01	3.695E+00	0.272
		366.43		4.233E+00	7.182E+01	1.173E+02	6.568E+00	0.036
		739.58	*	-4.644E-01	1.006E+01	1.657E+01	2.276E+00	-0.028
		778.00		-1.866E+01	2.838E+01	4.373E+01	2.637E+00	-0.427
TC-99M		140.51	*	2.103E+08	2.838E+01	Half-Life too short		
RH-101		127.23		2.002E-02	3.754E-02	6.092E-02	3.650E-03	0.329
		198.01	*	1.323E-03	3.709E-02	6.057E-02	3.348E-03	0.022
		325.23		-4.225E-01	2.711E-01	3.973E-01	2.303E-02	-1.064
RH-102		418.52		-1.072E-01	3.312E-01	5.213E-01	2.854E-02	-0.206
		475.06	*	3.447E-03	3.510E-02	5.676E-02	3.148E-03	0.061
		631.29		-2.281E-02	6.181E-02	9.980E-02	5.195E-03	-0.229
		697.49		-9.222E-03	9.328E-02	1.535E-01	8.206E-03	-0.060
		766.84		2.608E-01	1.432E-01	2.469E-01	1.465E-02	1.056
		1046.59		8.863E-02	1.413E-01	2.436E-01	1.569E-02	0.364
		1112.84		2.162E-01	3.238E-01	5.113E-01	3.065E-02	0.423
RU-103		497.08	*	-4.632E-03	4.643E-02	7.362E-02	9.225E-03	-0.063
	+	610.33		1.063E+01	2.518E+00	3.177E+00	4.841E-01	3.346
RH-106	+	511.85		6.929E-01	4.293E-01	5.155E-01	2.854E-02	1.344
		621.84	*	3.277E-01	3.880E-01	6.872E-01	7.886E-02	0.477
		1050.47		1.606E-01	2.766E+00	4.499E+00	2.887E-01	0.036
RU-106	+	511.85		6.929E-01	4.293E-01	5.155E-01	2.854E-02	1.344
		621.84	*	3.277E-01	3.866E-01	6.872E-01	3.607E-02	0.477
		1050.47		1.606E-01	2.766E+00	4.499E+00	2.887E-01	0.036
AG-108M		433.93	*	2.910E-02	3.640E-02	6.244E-02	3.763E-03	0.466

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---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		614.37		-8.284E-03	5.090E-02	7.260E-02	4.223E-03	-0.114
		722.95		-6.469E-03	5.591E-02	7.915E-02	4.804E-03	-0.082
AG-110M		657.75	*	1.761E-02	4.168E-02	7.175E-02	3.944E-03	0.245
		677.61		6.297E-02	3.687E-01	6.217E-01	3.465E-02	0.101
		706.67		-2.150E-01	2.462E-01	3.761E-01	2.178E-02	-0.572
		763.93		-6.767E-02	1.992E-01	2.707E-01	1.694E-02	-0.250
		884.67		6.530E-02	6.051E-02	1.091E-01	7.991E-03	0.599
		937.48		5.669E-03	1.180E-01	1.934E-01	1.423E-02	0.029
		1384.27		-2.461E-02	1.882E-01	3.065E-01	2.206E-02	-0.080
IN-111		171.28		-3.509E-01	7.912E-01	1.306E+00	7.005E-02	-0.269
		245.39	*	-6.609E-02	8.699E-01	1.437E+00	8.292E-02	-0.046
IN-113M		391.69	*	-1.806E-02	5.343E-02	8.453E-02	4.917E-03	-0.214
SN-113		391.69	*	-1.806E-02	5.343E-02	8.453E-02	4.917E-03	-0.214
IN-114M		190.27	*	7.382E-02	2.176E-01	3.284E-01	1.800E-02	0.225
CD-115		260.90		-6.128E+01	9.823E+01	1.567E+02	9.116E+00	-0.391
		492.35		2.424E+01	2.836E+01	4.858E+01	2.695E+00	0.499
		527.90	*	1.080E+00	7.890E+00	1.344E+01	7.419E-01	0.080
SN-117M		156.02		1.060E-01	2.331E+00	3.945E+00	2.161E-01	0.027
		158.56	*	-4.368E-02	5.812E-02	9.500E-02	5.169E-03	-0.460
SB-122		563.90	*	7.341E-01	1.673E+00	2.902E+00	1.581E-01	0.253
		692.80		-1.622E+01	3.553E+01	5.660E+01	3.003E+00	-0.287
I-123		159.00	*	-4.523E-01	3.553E+01	Half-Life too short		
		528.96		5.126E+01	3.553E+01	Half-Life too short		
TE-123M		159.00	*	-1.249E-02	3.218E-02	5.346E-02	2.950E-03	-0.234
I-124		602.71	*	-5.242E-01	6.852E-01	9.978E-01	5.314E-02	-0.525
		722.78		-1.984E+00	4.840E+00	6.599E+00	3.667E-01	-0.301
		1325.50		-5.101E+00	3.523E+01	5.764E+01	3.957E+00	-0.088
		1376.25		3.763E+01	2.933E+01	5.589E+01	3.857E+00	0.673
		1509.49		-8.329E-01	1.201E+01	1.955E+01	1.313E+00	-0.043
		1691.02		-3.364E+00	3.858E+00	5.129E+00	3.192E-01	-0.656
SB-124		602.71		-3.761E-02	4.916E-02	7.158E-02	3.814E-03	-0.525
		645.85		4.756E-02	5.816E-01	9.763E-01	5.821E-02	0.049
		709.31		-9.342E-01	3.281E+00	5.050E+00	2.749E-01	-0.185
		713.82		-4.911E-01	1.837E+00	2.968E+00	2.978E-01	-0.165
		722.78		-2.063E-01	5.034E-01	6.862E-01	4.009E-02	-0.301
	+	968.20		1.667E+01	4.685E+00	8.738E+00	5.986E-01	1.907
		1045.16		1.864E+00	3.029E+00	5.215E+00	3.363E-01	0.357
		1325.50		-5.666E-01	3.913E+00	6.403E+00	4.395E-01	-0.088
		1368.21		5.189E-01	2.020E+00	3.472E+00	4.323E-01	0.149
		1436.60		6.044E-01	3.863E+00	6.563E+00	4.487E-01	0.092
		1691.02	*	-8.253E-02	9.467E-02	1.258E-01	8.415E-03	-0.656
SB-125		427.89	*	8.587E-02	1.078E-01	1.843E-01	1.061E-02	0.466
		463.38		9.943E-01	3.688E-01	6.883E-01	4.503E-02	1.445
		600.56		7.841E-02	2.058E-01	3.544E-01	2.236E-02	0.221
		635.90		-1.143E-01	3.129E-01	5.055E-01	3.171E-02	-0.226
TE-125M		109.28	*	-4.082E+00	1.081E+01	1.658E+01	1.480E+00	-0.246
I-126		388.63		-1.076E-01	2.249E-01	3.519E-01	1.911E-02	-0.306
		666.33	*	2.745E-01	1.859E-01	3.466E-01	1.763E-02	0.792
		753.82		6.401E-01	1.655E+00	2.827E+00	1.645E-01	0.226

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-126		223.80		6.683E-01	4.245E+00	7.123E+00	4.042E-01	0.094
		278.60		1.457E+00	2.609E+00	4.432E+00	2.591E-01	0.329
	+	296.50		1.118E+01	2.105E+00	3.752E+00	2.195E-01	2.981
		414.70		-8.512E-03	8.376E-02	1.344E-01	7.344E-03	-0.063
		415.30		-1.390E+00	6.828E+00	1.086E+01	5.939E-01	-0.128
		555.20		4.352E+00	4.063E+00	7.392E+00	4.042E-01	0.589
		573.80		2.012E-01	1.113E+00	1.894E+00	1.027E-01	0.106
		593.00		-7.291E-01	9.626E-01	1.506E+00	8.075E-02	-0.484
		656.30		3.520E+00	3.562E+00	6.410E+00	3.256E-01	0.549
		666.33		1.143E-01	7.744E-02	1.444E-01	7.345E-03	0.792
		675.00		1.822E+00	2.107E+00	3.759E+00	1.939E-01	0.485
		695.00		1.492E-01	8.245E-02	1.564E-01	8.325E-03	0.954
		697.00		2.049E-01	2.921E-01	5.124E-01	2.736E-02	0.400
		720.50	*	4.509E-02	1.622E-01	2.683E-01	1.486E-02	0.168
		856.80		-3.848E-01	5.751E-01	8.830E-01	5.943E-02	-0.436
		989.30		-1.473E-01	1.481E+00	2.377E+00	1.605E-01	-0.062
		1034.80		1.889E+00	1.030E+01	1.699E+01	1.106E+00	0.111
		1213.00		-6.809E+00	5.607E+00	8.339E+00	4.877E-01	-0.817
SB-127		61.10		1.363E+01	5.697E+01	8.364E+01	8.887E+00	0.163
		252.40		-9.280E-01	3.934E+00	6.403E+00	2.654E+00	-0.145
		290.80		-1.150E+01	2.253E+01	3.118E+01	2.715E+00	-0.369
		411.60		4.829E+00	1.167E+01	1.939E+01	2.702E+00	0.249
		444.90		-1.426E+00	9.216E+00	1.465E+01	1.499E+00	-0.097
		473.00		1.520E-01	1.556E+00	2.517E+00	2.679E-01	0.060
		543.00		-4.082E-01	1.416E+01	2.377E+01	2.954E+00	-0.017
		603.60		8.246E-01	1.084E+01	1.664E+01	1.679E+00	0.050
		685.20	*	1.070E-01	1.267E+00	2.121E+00	1.826E-01	0.050
		698.50		-9.727E+00	1.444E+01	2.250E+01	3.150E+00	-0.432
		722.20		-1.930E-01	3.165E+01	4.544E+01	3.867E+00	-0.004
		783.80		1.803E+00	3.712E+00	6.351E+00	6.606E-01	0.284
XE-127		57.60		-1.112E-01	7.026E+00	1.141E+01	9.735E-01	-0.010
	+	145.22		1.365E+00	1.578E+00	1.342E+00	7.570E-02	1.017
		172.10		-1.805E-02	1.291E-01	2.159E-01	1.159E-02	-0.084
		202.84	*	-1.943E-02	5.412E-02	8.598E-02	4.778E-03	-0.226
		374.96		3.031E-02	2.144E-01	3.521E-01	1.950E-02	0.086
I-131		80.18		9.255E-01	4.876E+00	7.066E+00	6.159E-01	0.131
		284.30		-1.245E+00	1.557E+00	2.441E+00	1.582E-01	-0.510
		364.48	*	-5.347E-02	1.196E-01	1.884E-01	1.185E-02	-0.284
		636.97		6.697E-01	1.584E+00	2.736E+00	1.623E-01	0.245
		722.89		-3.567E+00	8.699E+00	1.186E+01	6.675E-01	-0.301
TE-132		49.72		-1.697E+01	1.927E+01	2.995E+01	3.026E+00	-0.567
		111.76		-2.906E+00	2.656E+01	4.151E+01	3.739E+00	-0.070
		116.30		-1.437E+01	2.429E+01	3.742E+01	3.294E+00	-0.384
		228.16	*	-4.452E-01	5.787E-01	9.198E-01	1.293E-01	-0.484
BA-133		53.15		4.762E+00	4.726E+00	8.024E+00	6.821E-01	0.593
		79.62		1.713E-01	1.558E+00	2.247E+00	3.424E-01	0.076
		81.00		-1.776E-01	1.298E-01	1.672E-01	2.664E-02	-1.062
		276.40		1.040E-01	4.222E-01	7.055E-01	9.160E-02	0.147
		302.84		1.629E-01	1.928E-01	2.949E-01	3.444E-02	0.553

---- Non-Identified Nuclides ----

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		356.01	*	-1.701E-02	5.567E-02	7.692E-02	8.840E-03	-0.221
		383.85		-5.580E-02	3.528E-01	5.659E-01	6.054E-02	-0.099
I-133	+	510.53		4.751E-01	3.528E-01	Half-Life too short		
		529.87	*	6.291E-04	3.528E-01	Half-Life too short		
		706.58		-1.427E-01	3.528E-01	Half-Life too short		
		856.28		-1.291E-01	3.528E-01	Half-Life too short		
		875.33		1.346E-02	3.528E-01	Half-Life too short		
		1236.41		4.349E-02	3.528E-01	Half-Life too short		
		1298.22		5.700E-03	3.528E-01	Half-Life too short		
CS-134		475.35		1.354E+00	2.197E+00	3.705E+00	2.055E-01	0.365
		563.23		3.116E-01	4.166E-01	7.380E-01	4.117E-02	0.422
		569.32		5.789E-03	2.258E-01	3.799E-01	2.134E-02	0.015
		604.70		-1.451E-02	4.295E-02	6.006E-02	3.215E-03	-0.242
		795.84	*	1.328E-01	5.995E-02	1.149E-01	7.208E-03	1.156
		801.93		-1.675E-01	4.525E-01	7.163E-01	4.518E-02	-0.234
		1038.57		-1.277E+00	4.790E+00	7.512E+00	4.874E-01	-0.170
		1167.94		7.008E-01	3.396E+00	5.798E+00	3.219E-01	0.121
		1365.15		-1.547E+00	1.391E+00	1.894E+00	1.400E-01	-0.817
CS-135		268.24	*	1.545E-01	2.025E-01	3.099E-01	2.380E-02	0.499
I-135		288.45		8.838E+08	2.025E-01	Half-Life too short		
		417.63		7.473E+08	2.025E-01	Half-Life too short		
		546.56		-3.923E+08	2.025E-01	Half-Life too short		
		836.80		-2.819E+08	2.025E-01	Half-Life too short		
		1038.76		-2.469E+08	2.025E-01	Half-Life too short		
		1124.00		1.495E+09	2.025E-01	Half-Life too short		
		1131.51		-1.522E+08	2.025E-01	Half-Life too short		
		1260.41	*	-6.170E+07	2.025E-01	Half-Life too short		
		1457.56		8.780E+09	2.025E-01	Half-Life too short		
		1678.03		1.994E+08	2.025E-01	Half-Life too short		
		1706.46		-4.668E+08	2.025E-01	Half-Life too short		
		1791.20		-6.612E+07	2.025E-01	Half-Life too short		
CS-136		66.91		-5.516E-01	9.632E-01	1.339E+00	2.045E-01	-0.412
	+	86.29		2.925E+00	1.242E+00	2.050E+00	2.697E-01	1.427
		153.22		1.175E-01	6.606E-01	1.125E+00	7.872E-02	0.104
		163.89		-3.786E-01	1.130E+00	1.878E+00	1.298E-01	-0.202
		176.55		8.453E-02	3.786E-01	6.426E-01	3.958E-02	0.132
		273.65		-1.024E-01	5.284E-01	7.538E-01	5.011E-02	-0.136
		340.57		2.924E-01	1.812E-01	2.872E-01	1.754E-02	1.018
		818.51		-2.433E-02	8.497E-02	1.357E-01	8.676E-03	-0.179
		1048.07	*	-7.098E-02	1.277E-01	1.934E-01	1.337E-02	-0.367
		1235.34		-5.791E-02	7.187E-01	1.195E+00	1.210E-01	-0.048
BA-137M		661.65	*	-5.408E-02	4.269E-02	6.313E-02	3.188E-03	-0.857
CS-137		661.65	*	-5.717E-02	4.512E-02	6.674E-02	3.389E-03	-0.857
CE-139		165.85	*	-1.267E-02	3.306E-02	5.481E-02	2.927E-03	-0.231
BA-140		162.64		1.966E-01	8.000E-01	1.362E+00	8.387E-02	0.144
		304.84		-4.664E-01	1.590E+00	2.225E+00	6.075E-01	-0.210
		423.70		-3.407E-02	1.958E+00	3.157E+00	1.002E+00	-0.011
		537.32	*	-2.659E-02	2.663E-01	4.447E-01	1.444E-01	-0.060
LA-140		328.77		4.999E-01	3.295E-01	5.830E-01	3.780E-02	0.857

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		432.53		-9.564E-01	2.273E+00	3.541E+00	2.174E-01	-0.270
		487.03		-3.740E-02	1.532E-01	2.402E-01	1.524E-02	-0.156
		751.79		-1.699E-01	1.923E+00	3.151E+00	2.237E-01	-0.054
		815.85		-3.703E-02	3.301E-01	5.359E-01	4.102E-02	-0.069
		867.82		4.128E-01	1.662E+00	2.784E+00	2.060E-01	0.148
		919.63		-3.603E-01	3.335E+00	5.226E+00	4.920E-01	-0.069
		925.24		2.645E-01	1.341E+00	2.229E+00	1.711E-01	0.119
		1596.49	*	-4.764E-02	1.079E-01	1.652E-01	1.077E-02	-0.288
CE-143		57.37		-2.585E-04	1.079E-01	Half-Life too short		
		231.56		1.329E-03	1.079E-01	Half-Life too short		
		293.26	*	1.242E-04	1.079E-01	Half-Life too short		
		350.59		8.495E-03	1.079E-01	Half-Life too short		
		490.36		-2.260E-04	1.079E-01	Half-Life too short		
		664.57		5.089E-04	1.079E-01	Half-Life too short		
		721.93		7.066E-05	1.079E-01	Half-Life too short		
CE-144		80.11		3.826E-01	2.514E+00	3.635E+00	3.151E-01	0.105
		133.54	*	3.885E-02	2.370E-01	3.776E-01	5.370E-02	0.103
PM-144		476.78		4.711E-02	7.872E-02	1.324E-01	8.917E-03	0.356
		618.01		-4.160E-03	4.147E-02	6.487E-02	3.662E-03	-0.064
		696.49	*	2.899E-02	4.016E-02	7.058E-02	3.769E-03	0.411
		778.57		-1.236E+00	2.616E+00	4.106E+00	2.480E-01	-0.301
PR-144		696.49	*	1.963E+00	2.720E+00	4.780E+00	2.550E-01	0.411
		1489.15		2.321E+00	1.133E+01	1.947E+01	1.315E+00	0.119
PM-146		453.90	*	-6.797E-03	4.906E-02	7.795E-02	6.582E-03	-0.087
		633.02		-2.099E-01	1.558E+00	2.566E+00	9.427E-01	-0.082
		735.90		1.260E-01	1.850E-01	3.183E-01	8.868E-02	0.396
		747.13		-4.856E-02	1.126E-01	1.784E-01	2.228E-02	-0.272
ND-147		91.11		4.414E-01	4.492E-01	5.371E-01	5.059E-02	0.822
		319.41		-4.103E+00	3.544E+00	5.352E+00	3.112E-01	-0.767
		439.89		7.839E+00	6.226E+00	1.098E+01	6.060E-01	0.714
		531.02	*	-1.207E-01	5.735E-01	9.502E-01	1.273E-01	-0.127
PM-149		285.90	*	1.182E+01	6.959E+01	1.157E+02	1.642E+01	0.102
EU-152		121.78		-4.548E-02	8.684E-02	1.340E-01	1.055E-02	-0.339
		244.69		2.445E-01	3.865E-01	6.604E-01	3.808E-02	0.370
		344.27	*	-4.280E-02	1.320E-01	1.942E-01	1.257E-02	-0.220
		443.98		1.117E-02	1.159E+00	1.868E+00	1.031E-01	0.006
		778.89		-1.143E-01	3.055E-01	4.848E-01	2.927E-02	-0.236
		867.32		-9.591E-02	1.081E+00	1.754E+00	1.197E-01	-0.055
	+	964.01		8.296E-01	4.417E-01	6.764E-01	4.645E-02	1.226
		1085.78		-1.838E-01	5.108E-01	7.904E-01	4.891E-02	-0.233
		1112.02		-7.156E-02	4.415E-01	6.551E-01	3.931E-02	-0.109
		1407.95		3.158E-02	2.488E-01	4.187E-01	2.877E-02	0.075
GD-153		69.67		8.599E-01	2.098E+00	3.090E+00	2.572E-01	0.278
		83.37		1.476E+01	1.876E+01	2.752E+01	2.439E+00	0.536
		97.43	*	-6.398E-03	9.847E-02	1.395E-01	1.104E-02	-0.046
		103.18		-1.274E-01	1.187E-01	1.785E-01	1.314E-02	-0.714
EU-154		123.07		-2.200E-02	6.199E-02	9.650E-02	9.259E-03	-0.228
		247.94		3.791E-01	4.609E-01	7.103E-01	6.767E-02	0.534
		591.81		-5.293E-01	6.519E-01	1.007E+00	9.593E-02	-0.525

---- Non-Identified Nuclides ----

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		723.30		-4.386E-02	2.324E-01	3.259E-01	2.244E-02	-0.135
		756.87		3.246E-01	9.420E-01	1.602E+00	1.628E-01	0.203
		873.19		-1.614E-01	3.717E-01	5.803E-01	6.434E-02	-0.278
		996.32		-4.709E-01	4.955E-01	7.130E-01	1.207E-01	-0.660
		1004.76		-2.700E-01	2.830E-01	4.102E-01	4.218E-02	-0.658
		1274.45	*	-6.479E-03	1.531E-01	2.544E-01	2.474E-02	-0.025
EU-155		48.70		-4.579E+00	3.298E+00	4.980E+00	3.919E-01	-0.920
		60.01		4.703E+00	6.141E+00	9.311E+00	7.901E-01	0.505
	+	86.54		2.899E-01	1.200E-01	2.022E-01	1.856E-02	1.433
		105.31	*	1.070E-01	1.205E-01	2.000E-01	1.461E-02	0.535
TB-160	+	86.79		7.647E-01	3.163E-01	5.296E-01	4.826E-02	1.444
		197.04		3.731E-01	6.031E-01	1.037E+00	5.727E-02	0.360
		215.65		4.954E-01	8.160E-01	1.399E+00	7.880E-02	0.354
		298.57		1.549E-01	1.327E-01	2.312E-01	1.352E-02	0.670
		879.36	*	-7.745E-02	1.787E-01	2.701E-01	1.874E-02	-0.287
		962.29		1.047E+00	5.957E-01	1.053E+00	7.241E-02	0.994
	+	966.15		5.623E-01	2.994E-01	5.449E-01	3.737E-02	1.032
		1177.93		8.808E-02	4.638E-01	7.911E-01	4.387E-02	0.111
		1271.85		1.831E-01	9.332E-01	1.587E+00	1.012E-01	0.115
HO-166M		80.57		-3.250E-02	3.300E-01	4.703E-01	4.088E-02	-0.069
		184.41		9.400E-02	4.650E-02	7.549E-02	4.110E-03	1.245
		280.46		-4.996E-02	9.793E-02	1.567E-01	9.162E-03	-0.319
		410.95		1.743E-01	2.980E-01	5.013E-01	2.736E-02	0.348
		711.68	*	5.116E-02	6.655E-02	1.179E-01	6.443E-03	0.434
		752.31		-2.947E-02	3.340E-01	5.474E-01	3.179E-02	-0.054
		810.29		-2.606E-02	6.790E-02	1.072E-01	6.766E-03	-0.243
TM-171		51.35		5.993E+00	4.034E+01	6.621E+01	5.544E+00	0.091
		52.39		2.373E+01	2.071E+01	3.537E+01	2.993E+00	0.671
		59.40		2.686E+01	3.370E+01	5.118E+01	4.354E+00	0.525
		66.72	*	-1.775E+01	3.727E+01	5.227E+01	4.349E+00	-0.340
LU-176	+	88.36		5.712E-01	2.363E-01	4.036E-01	3.692E-02	1.415
		201.83		-1.022E-02	3.309E-02	5.458E-02	3.030E-03	-0.187
		306.84	*	1.103E-02	3.393E-02	5.012E-02	2.927E-03	0.220
		401.10		-2.527E+00	7.649E+00	1.207E+01	6.556E-01	-0.209
LU-177		112.95		6.105E-01	1.693E+00	2.704E+00	1.795E-01	0.226
	+	208.36	*	2.090E+00	1.599E+00	1.932E+00	1.080E-01	1.082
LU-177M		52.97		2.252E+00	2.137E+00	3.635E+00	3.087E-01	0.620
		54.07		3.252E-01	1.110E+00	1.832E+00	1.562E-01	0.178
		61.30		6.429E-01	1.874E+00	2.768E+00	2.335E-01	0.232
		121.62		-1.548E-01	4.367E-01	6.801E-01	4.182E-02	-0.228
		147.16		1.784E-01	8.034E-01	1.216E+00	6.825E-02	0.147
		171.86		6.335E-02	5.235E-01	8.858E-01	4.756E-02	0.072
		218.09		-7.258E-01	9.487E-01	1.521E+00	8.587E-02	-0.477
	+	268.79		2.533E+00	1.217E+00	1.652E+00	9.636E-02	1.533
		319.02		-2.647E-01	3.042E-01	4.700E-01	2.733E-02	-0.563
		367.43		1.278E+00	1.087E+00	1.902E+00	1.063E-01	0.672
		413.65	*	-7.427E-02	2.135E-01	3.362E-01	1.837E-02	-0.221
HF-181		56.28		-1.517E+00	1.166E+00	1.765E+00	1.508E-01	-0.859
		57.53		-2.063E-02	5.934E-01	9.627E-01	8.215E-02	-0.021

---- Non-Identified Nuclides ----

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		65.20		4.563E-01	1.216E+00	1.792E+00	1.494E-01	0.255
		133.02		6.756E-02	7.434E-02	1.226E-01	7.185E-03	0.551
		136.25		-9.742E-02	4.822E-01	8.117E-01	4.707E-02	-0.120
		345.85		1.234E-01	2.385E-01	3.746E-01	2.141E-02	0.329
		482.03	*	-3.195E-03	5.276E-02	8.281E-02	4.595E-03	-0.039
W-181		56.28		-6.028E-01	4.632E-01	7.010E-01	5.990E-02	-0.860
		57.53		-8.331E-03	2.358E-01	3.826E-01	3.265E-02	-0.022
		65.20	*	1.799E-01	4.795E-01	7.067E-01	5.891E-02	0.255
TA-182		67.75		1.650E-02	1.428E-01	2.073E-01	1.724E-02	0.080
		100.10		9.022E-02	1.944E-01	3.173E-01	2.424E-02	0.284
		152.43		-3.424E-01	3.803E-01	5.958E-01	3.295E-02	-0.575
		222.10		1.599E-01	3.883E-01	6.594E-01	3.736E-02	0.242
		1001.68		1.137E+00	2.736E+00	4.712E+00	3.153E-01	0.241
	+	1121.28		5.178E-01	2.720E-01	3.822E-01	2.267E-02	1.355
		1189.05		2.368E-01	4.300E-01	7.518E-01	4.241E-02	0.315
		1221.42	*	-4.000E-03	2.709E-01	4.530E-01	2.683E-02	-0.009
		1230.97		8.258E-02	6.352E-01	1.074E+00	6.450E-02	0.077
RE-183		57.98		2.987E-02	2.431E-01	3.788E-01	3.230E-02	0.079
		59.32		1.038E-01	1.368E-01	2.073E-01	1.764E-02	0.501
		67.20		-1.361E-01	2.607E-01	3.646E-01	3.032E-02	-0.373
		162.32	*	7.598E-02	1.235E-01	2.134E-01	1.149E-02	0.356
	+	208.81		2.134E+00	1.633E+00	1.978E+00	1.106E-01	1.079
		291.72		-4.261E-01	1.244E+00	1.747E+00	1.022E-01	-0.244
RE-184		57.98		1.110E-01	9.030E-01	1.407E+00	1.200E-01	0.079
		59.32		3.853E-01	5.077E-01	7.695E-01	6.548E-02	0.501
		67.20		-5.052E-01	9.679E-01	1.354E+00	1.126E-01	-0.373
		161.27		3.228E-01	4.020E-01	6.995E-01	3.779E-02	0.462
		216.55		3.494E-02	2.922E-01	4.900E-01	2.762E-02	0.071
		252.85	*	-9.442E-02	2.664E-01	4.328E-01	2.508E-02	-0.218
		318.01		5.778E-02	5.203E-01	8.585E-01	4.994E-02	0.067
		792.07		-2.123E+00	1.283E+00	1.782E+00	1.097E-01	-1.191
		903.28		-1.322E+00	1.279E+00	1.787E+00	1.267E-01	-0.740
		920.93		-3.278E-03	5.827E-01	9.496E-01	6.681E-02	-0.003
OS-185		59.72		4.063E-01	3.595E-01	5.560E-01	4.725E-02	0.731
		61.14		5.293E-02	2.051E-01	3.015E-01	2.545E-02	0.176
		69.30		1.956E-01	3.744E-01	5.549E-01	4.616E-02	0.353
		592.07		-1.813E+00	2.660E+00	4.179E+00	2.242E-01	-0.434
		646.12	*	1.562E-02	5.044E-02	8.622E-02	4.426E-03	0.181
		717.42		1.780E-01	1.034E+00	1.739E+00	9.586E-02	0.102
		874.81		-8.376E-02	7.087E-01	1.145E+00	7.897E-02	-0.073
		880.27		-5.226E-01	9.707E-01	1.499E+00	1.041E-01	-0.349
RE-188		155.03	*	1.732E-01	1.832E-01	3.211E-01	1.764E-02	0.539
		477.96		-4.010E+00	3.755E+00	5.463E+00	3.031E-01	-0.734
		633.10		-3.957E-01	3.106E+00	5.126E+00	2.664E-01	-0.077
W-188	+	63.58		8.054E+01	9.726E+01	1.094E+02	9.158E+00	0.736
		227.08		-1.731E+01	1.428E+01	2.226E+01	1.267E+00	-0.778
		290.67	*	-4.641E+00	9.854E+00	1.369E+01	8.009E-01	-0.339
IR-192	+	295.96		9.127E-01	1.721E-01	3.064E-01	1.820E-02	2.979
		308.46		1.644E-02	1.170E-01	1.935E-01	1.142E-02	0.085

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		316.51	*	5.312E-02	4.031E-02	7.108E-02	4.158E-03	0.747
		468.07		-1.100E-01	8.387E-02	1.199E-01	7.752E-03	-0.918
		604.41		6.332E-03	5.514E-01	8.038E-01	8.932E-02	0.008
		612.46		2.500E+00	1.071E+00	1.854E+00	1.333E-01	1.348
AU-195		65.12		1.039E-01	2.237E-01	3.311E-01	2.761E-02	0.314
		66.83		-7.124E-02	1.235E-01	1.721E-01	1.432E-02	-0.414
	+	75.70		1.466E+00	3.526E-01	5.346E-01	4.524E-02	2.742
		98.88	*	6.787E-02	2.516E-01	4.043E-01	3.138E-02	0.168
		129.76		1.680E+00	3.340E+00	5.408E+00	3.208E-01	0.311
TL-200		367.94	*	3.700E-04	3.340E+00	Half-Life too short		
		579.30		7.381E-05	3.340E+00	Half-Life too short		
		828.27		-6.337E-04	3.340E+00	Half-Life too short		
		1205.75		7.531E-04	3.340E+00	Half-Life too short		
TL-201		68.90		2.625E+00	4.893E+00	6.652E+00	5.533E-01	0.395
		70.82		1.165E+00	2.517E+00	3.715E+00	3.097E-01	0.314
		80.30		-1.945E+00	4.558E+00	6.369E+00	5.526E-01	-0.305
		135.34		-1.180E+01	2.043E+01	3.387E+01	1.970E+00	-0.349
		167.43	*	2.826E+00	5.645E+00	9.710E+00	5.189E-01	0.291
TL-202		68.90		2.981E-01	5.557E-01	7.555E-01	6.284E-02	0.395
		70.82		1.319E-01	2.851E-01	4.208E-01	3.508E-02	0.314
		80.30		-2.204E-01	5.164E-01	7.216E-01	6.261E-02	-0.305
		439.56	*	5.174E-02	7.743E-02	1.310E-01	7.225E-03	0.395
HG-203		70.83		6.121E-01	1.310E+00	1.931E+00	2.593E-01	0.317
		72.87		1.927E+00	7.568E-01	1.266E+00	1.651E-01	1.522
		82.60		6.764E-01	1.214E+00	1.991E+00	2.760E-01	0.340
		279.20	*	2.414E-02	4.643E-02	7.869E-02	4.880E-03	0.307
BI-207		72.80		5.117E-01	2.159E-01	3.722E-01	3.117E-02	1.375
	+	74.97		8.171E-01	1.966E-01	2.672E-01	2.255E-02	3.058
		84.90		3.110E-01	2.377E-01	3.564E-01	3.197E-02	0.873
		569.67		8.519E-03	3.546E-02	6.063E-02	3.294E-03	0.141
		1063.62	*	-9.732E-03	6.090E-02	9.645E-02	6.109E-03	-0.101
		1770.23		2.731E-01	5.593E-01	9.068E-01	5.375E-02	0.301
TL-207		81.07		-4.757E-01	2.870E-01	3.688E-01	3.217E-02	-1.290
		83.78		1.046E-01	1.622E-01	2.364E-01	2.102E-02	0.443
		94.90		4.811E-01	2.843E-01	4.408E-01	3.617E-02	1.092
		122.32		1.054E-01	2.038E+00	3.241E+00	2.262E-01	0.033
	+	144.24		1.374E+00	1.589E+00	1.361E+00	9.691E-02	1.009
		154.21		4.666E-01	4.275E-01	7.526E-01	5.096E-02	0.620
	+	269.46		5.966E-01	2.867E-01	4.151E-01	2.530E-02	1.437
		323.87	*	-3.042E-01	7.814E-01	1.241E+00	2.049E-01	-0.245
	+	338.28		5.036E+00	1.951E+00	2.750E+00	2.889E-01	1.831
		445.03		-3.726E-01	2.749E+00	4.377E+00	4.428E-01	-0.085
PO-209		260.50		-8.903E+00	1.108E+01	1.749E+01	1.017E+00	-0.509
		262.80		1.807E+00	3.033E+01	5.032E+01	2.929E+00	0.036
		896.60	*	2.525E+00	9.416E+00	1.579E+01	1.120E+00	0.160
BI-210		46.50	*	1.946E+00	4.846E+00	7.954E+00	6.300E-01	0.245
PB-210		46.50	*	1.946E+00	4.846E+00	7.954E+00	6.300E-01	0.245
PO-210		46.50	*	1.946E+00	4.845E+00	7.954E+00	5.461E-01	0.245
PB-211		404.84	*	4.757E-01	1.111E+00	1.789E+00	1.115E+00	0.266

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		427.08		2.098E+00	2.678E+00	4.045E+00	2.499E+00	0.519
		831.96		-4.832E-01	1.436E+00	2.223E+00	1.388E+00	-0.217
BI-212	+	727.18	*	8.524E-01	3.994E-01	6.622E-01	5.006E-02	1.287
		785.46		1.631E-01	2.314E+00	3.834E+00	2.337E-01	0.043
		1620.62		3.049E-01	1.460E+00	2.485E+00	1.602E-01	0.123
PO-215		81.07		-4.757E-01	2.870E-01	3.688E-01	3.217E-02	-1.290
		83.78		1.046E-01	1.622E-01	2.364E-01	2.102E-02	0.443
		94.90		4.811E-01	2.843E-01	4.408E-01	3.617E-02	1.092
		122.32		1.054E-01	2.038E+00	3.241E+00	2.262E-01	0.033
	+	144.24		1.374E+00	1.589E+00	1.361E+00	9.691E-02	1.009
		154.21		4.666E-01	4.275E-01	7.526E-01	5.096E-02	0.620
	+	269.46		5.966E-01	2.867E-01	4.151E-01	2.530E-02	1.437
		323.87	*	-3.042E-01	7.814E-01	1.241E+00	2.049E-01	-0.245
	+	338.28		5.036E+00	1.951E+00	2.750E+00	2.889E-01	1.831
		445.03		-3.726E-01	2.749E+00	4.377E+00	4.428E-01	-0.085
RN-219	+	271.23		7.654E-01	3.702E-01	5.279E-01	4.292E-02	1.450
		401.81	*	-1.569E-01	4.796E-01	7.566E-01	1.018E-01	-0.207
RN-220		549.76	*	-1.814E+01	2.857E+01	4.547E+01	2.492E+00	-0.399
RA-223		81.07		-4.757E-01	2.870E-01	3.688E-01	3.217E-02	-1.290
		83.78		1.046E-01	1.622E-01	2.364E-01	2.102E-02	0.443
		94.90		4.811E-01	2.843E-01	4.408E-01	3.617E-02	1.092
		122.32		1.054E-01	2.038E+00	3.241E+00	2.262E-01	0.033
	+	144.24		1.374E+00	1.589E+00	1.361E+00	9.691E-02	1.009
		154.21		4.666E-01	4.275E-01	7.526E-01	5.096E-02	0.620
	+	269.46		5.966E-01	2.867E-01	4.151E-01	2.530E-02	1.437
		323.87	*	-3.042E-01	7.814E-01	1.241E+00	2.049E-01	-0.245
	+	338.28		5.036E+00	1.951E+00	2.750E+00	2.889E-01	1.831
		445.03		-3.726E-01	2.749E+00	4.377E+00	4.428E-01	-0.085
AC-227		79.80		2.760E-01	1.955E+00	2.825E+00	6.079E-01	0.098
		236.00		-4.263E-02	2.789E-01	4.031E-01	4.198E-02	-0.106
		256.20	*	1.571E-01	4.507E-01	7.587E-01	1.059E-01	0.207
		286.10		1.751E-01	1.799E+00	2.979E+00	3.452E-01	0.059
	+	299.80		3.969E+00	2.191E+00	3.069E+00	5.003E-01	1.293
		304.40		-2.781E-01	2.522E+00	3.598E+00	6.228E-01	-0.077
		334.20		3.962E-01	2.859E+00	4.146E+00	7.596E-01	0.096
TH-227		79.80		2.760E-01	1.955E+00	2.825E+00	6.156E-01	0.098
	+	94.00		3.213E+00	3.891E+00	4.187E+00	9.069E-01	0.767
		236.00		-4.263E-02	2.789E-01	4.031E-01	3.633E-02	-0.106
		256.20	*	1.571E-01	4.509E-01	7.587E-01	1.282E-01	0.207
		286.10		1.751E-01	1.807E+00	2.979E+00	2.984E+00	0.059
	+	299.80		3.969E+00	2.191E+00	3.069E+00	5.003E-01	1.293
		304.40		-2.781E-01	2.522E+00	3.598E+00	6.228E-01	-0.077
		334.20		3.962E-01	2.859E+00	4.146E+00	7.596E-01	0.096
TH-229		85.43		4.075E-01	2.354E-01	3.584E-01	3.229E-02	1.137
	+	88.47		3.288E-01	1.360E-01	2.325E-01	2.122E-02	1.414
		100.00		7.192E-02	2.080E-01	3.353E-01	2.565E-02	0.214
		193.63	*	1.073E-01	5.555E-01	9.388E-01	5.164E-02	0.114
	+	210.97		1.694E+00	1.296E+00	1.541E+00	8.638E-02	1.099
PA-231		283.67	*	-9.340E-01	1.784E+00	2.842E+00	3.923E-01	-0.329

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	301.29		1.588E+00	8.538E-01	1.301E+00	1.363E-01	1.220
TH-231		81.07		-4.757E-01	2.870E-01	3.688E-01	3.217E-02	-1.290
		83.78		1.046E-01	1.622E-01	2.364E-01	2.102E-02	0.443
		94.90		4.811E-01	2.843E-01	4.408E-01	3.617E-02	1.092
		122.32		1.054E-01	2.038E+00	3.241E+00	2.262E-01	0.033
	+	144.24		1.374E+00	1.589E+00	1.361E+00	9.691E-02	1.009
		154.21		4.666E-01	4.275E-01	7.526E-01	5.096E-02	0.620
	+	269.46		5.966E-01	2.867E-01	4.151E-01	2.530E-02	1.437
		323.87	*	-3.042E-01	7.814E-01	1.241E+00	2.049E-01	-0.245
	+	338.28		5.036E+00	1.951E+00	2.750E+00	2.889E-01	1.831
		445.03		-3.726E-01	2.749E+00	4.377E+00	4.428E-01	-0.085
U-231		84.21		4.710E+00	5.483E+00	8.067E+00	7.197E-01	0.584
	+	92.29		2.533E+00	3.026E+00	3.659E+00	3.127E-01	0.692
		95.87	*	-1.535E-01	1.058E+00	1.492E+00	1.207E-01	-0.103
		108.00		-1.404E+00	1.949E+00	2.936E+00	2.048E-01	-0.478
PA-233	+	75.28		2.385E+01	6.488E+00	8.075E+00	1.232E+00	2.953
	+	86.59		4.715E+00	2.289E+00	3.285E+00	8.861E-01	1.435
	+	300.12		1.107E+00	6.023E-01	8.663E-01	1.166E-01	1.277
		311.98	*	-1.311E-02	7.955E-02	1.292E-01	7.996E-03	-0.101
		340.50		1.710E+00	1.026E+00	1.525E+00	3.500E-01	1.121
		398.62		-7.516E-01	2.470E+00	3.898E+00	1.005E+00	-0.193
		415.76		-7.362E-01	1.987E+00	3.112E+00	6.378E-01	-0.237
PA-234	+	63.00		2.368E+00	2.876E+00	3.245E+00	4.988E-01	0.730
		94.67		5.113E-01	2.135E-01	3.319E-01	4.028E-02	1.541
		98.44		5.543E-04	1.092E-01	1.655E-01	9.211E-02	0.003
		99.86		2.238E-01	5.287E-01	8.552E-01	6.553E-02	0.262
		111.00		-4.314E-02	2.136E-01	3.366E-01	3.650E-02	-0.128
		131.20		-1.353E-01	1.279E-01	1.915E-01	1.130E-02	-0.707
		152.70		-1.526E-01	3.528E-01	5.843E-01	9.180E-02	-0.261
	+	186.00		5.660E+00	2.948E+00	3.129E+00	9.540E-01	1.809
		226.40		-3.584E-01	4.513E-01	7.181E-01	8.261E-02	-0.499
		227.20		-6.046E-01	4.883E-01	7.601E-01	4.326E-02	-0.796
		248.90		5.429E-01	1.032E+00	1.554E+00	3.337E-01	0.349
		293.70		2.711E+00	1.051E+00	1.634E+00	2.630E-01	1.659
		369.80		-3.426E-01	1.042E+00	1.653E+00	3.431E-01	-0.207
		568.70		-4.066E-02	1.161E+00	1.944E+00	1.057E-01	-0.021
		569.50		3.172E-02	3.149E-01	5.328E-01	2.895E-02	0.060
		574.00		1.662E-01	1.712E+00	2.896E+00	1.570E-01	0.057
		699.00		-8.386E-01	8.811E-01	1.323E+00	2.360E-01	-0.634
		706.10		-7.999E-01	1.270E+00	1.906E+00	8.402E-01	-0.420
		733.00		-2.688E-02	5.114E-01	7.289E-01	1.547E-01	-0.037
		742.81		-2.759E-01	1.660E+00	2.685E+00	1.797E+00	-0.103
		796.30		2.469E+00	1.325E+00	2.221E+00	5.859E-01	1.112
		805.60		-1.330E-01	1.160E+00	1.885E+00	5.668E-01	-0.071
		819.60		1.714E+00	1.590E+00	2.660E+00	9.997E-01	0.645
		826.30		-9.850E-01	1.055E+00	1.401E+00	6.219E-01	-0.703
		831.60		-2.242E-01	7.320E-01	1.160E+00	3.398E-01	-0.193
		876.40		5.456E-01	1.150E+00	1.734E+00	1.780E+00	0.315
		880.51		-1.708E-01	3.459E-01	5.360E-01	3.723E-02	-0.319

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		883.24		2.083E-01	3.819E-01	6.150E-01	4.122E-01	0.339
		899.00		6.532E-01	1.088E+00	1.820E+00	7.907E-01	0.359
		925.00		9.846E-02	1.526E+00	2.504E+00	1.758E-01	0.039
		926.50		2.136E-03	2.143E-01	3.497E-01	8.664E-02	0.006
		946.00	*	1.012E-01	3.951E-01	6.586E-01	1.189E-01	0.154
		949.00		1.125E-01	6.175E-01	1.022E+00	7.082E-02	0.110
		980.50		-3.484E-01	9.863E-01	1.544E+00	1.049E-01	-0.226
		1394.10		-3.875E-01	1.421E+00	2.226E+00	1.444E+00	-0.174
PA-234M		766.41		3.841E+01	3.703E+01	3.876E+01	2.962E+01	0.991
		1001.03	*	6.447E+00	8.859E+00	1.564E+01	1.528E+00	0.412
NP-236		94.67		3.898E-01	1.583E-01	2.520E-01	2.075E-02	1.547
		98.44		4.157E-04	8.256E-02	1.251E-01	9.765E-03	0.003
		111.00		-3.263E-02	1.616E-01	2.546E-01	1.722E-02	-0.128
		160.31	*	5.321E-02	9.009E-02	1.556E-01	8.427E-03	0.342
NP-239		99.55		1.072E-01	1.757E-01	2.865E-01	2.205E-02	0.374
		117.00	*	-3.624E-02	2.180E-01	3.434E-01	2.197E-02	-0.106
	+	209.75		1.707E+00	1.306E+00	1.583E+00	8.862E-02	1.078
		228.18		-1.957E-01	2.517E-01	4.020E-01	2.290E-02	-0.487
		277.60		8.901E-02	2.058E-01	3.474E-01	2.031E-02	0.256
		334.30		2.153E-01	1.619E+00	2.347E+00	1.353E-01	0.092
AM-241		59.54	*	2.211E-01	1.922E-01	2.974E-01	2.718E-02	0.744
CM-243		99.55		1.103E-01	1.808E-01	2.948E-01	2.268E-02	0.374
		103.76	*	4.130E-02	1.079E-01	1.753E-01	1.281E-02	0.236
		117.00		-3.729E-02	2.243E-01	3.533E-01	2.260E-02	-0.106
	+	209.75		1.682E+00	1.287E+00	1.560E+00	8.735E-02	1.078
		228.18		-1.977E-01	2.543E-01	4.061E-01	2.313E-02	-0.487
		277.60		8.973E-02	2.075E-01	3.502E-01	2.047E-02	0.256
CM-247		278.00		4.970E-01	8.409E-01	1.431E+00	8.367E-02	0.347
		287.40		5.954E-01	1.438E+00	2.424E+00	1.418E-01	0.246
		402.60	*	-3.627E-02	4.308E-02	6.517E-02	3.542E-03	-0.556
CF-249		252.85		-3.563E-01	1.005E+00	1.633E+00	9.462E-02	-0.218
		333.44		-1.305E-01	2.232E-01	3.024E-01	1.745E-02	-0.431
		387.95	*	7.824E-04	4.671E-02	7.585E-02	4.123E-03	0.010
CF-251		176.60	*	-5.841E-04	1.415E-01	2.379E-01	1.284E-02	-0.002
		227.00		-5.194E-01	4.346E-01	6.783E-01	3.860E-02	-0.766
		285.00		-1.734E+00	2.020E+00	3.153E+00	1.845E-01	-0.550

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232424001      *
* Acquisition date :  7-JUL-2009 06:03:34 Detector SN#     :                *
* Detector ID        : GAM01              Sensitivity     : 5.000          *
* Geometry           : CAN                Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.08     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232424001           Analyst initials: MXR1          *
* Batch Number       : 881219               Sample Quantity : 1.1650E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.650E+01	3.329E+00	5.368E-01	0.000E+00
CD-109	2.445E+00	9.913E-01	1.649E+00	0.000E+00
SN-126	2.408E-01	9.763E-02	1.621E-01	0.000E+00
CE-141	1.234E-01	1.398E-01	1.151E-01	0.000E+00
TL-208	5.124E-01	8.556E-02	6.639E-02	0.000E+00
BI-211	3.097E+00	5.465E-01	3.786E-01	0.000E+00
PB-212	1.551E+00	1.641E-01	1.033E-01	0.000E+00
PO-212	1.551E+00	1.641E-01	1.033E-01	0.000E+00
BI-214	1.009E+00	1.937E-01	1.286E-01	0.000E+00
PB-214	1.077E+00	1.979E-01	1.299E-01	0.000E+00
PO-214	1.077E+00	1.979E-01	1.299E-01	0.000E+00
PO-216	1.551E+00	1.641E-01	1.033E-01	0.000E+00
PO-218	1.077E+00	1.979E-01	1.299E-01	0.000E+00
RA-224	3.297E+00	1.525E+00	1.175E+00	0.000E+00
RA-226	1.009E+00	1.937E-01	1.286E-01	0.000E+00
AC-228	1.707E+00	3.572E-01	2.639E-01	0.000E+00
RA-228	1.707E+00	3.572E-01	2.639E-01	0.000E+00
TH-228	1.551E+00	1.641E-01	1.033E-01	0.000E+00
TH-230	1.009E+00	1.937E-01	1.285E-01	0.000E+00
TH-232	1.707E+00	3.572E-01	2.639E-01	0.000E+00
TH-234	2.031E+00	2.424E+00	2.438E+00	0.000E+00
U-234	1.009E+00	1.937E-01	1.285E-01	0.000E+00
U-235	4.239E-01	4.843E-01	3.935E-01	0.000E+00
NP-237	7.072E-01	3.204E-01	4.691E-01	0.000E+00
U-238	2.031E+00	2.424E+00	2.438E+00	0.000E+00
AM-243	4.553E-01	1.073E-01	1.001E-01	0.000E+00
ANH-511	1.391E-01	8.444E-02	5.159E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	-3.094E-01	3.756E-01	5.758E-01	0.000E+00	NOT IDENT.
NA-22	9.293E-04	5.402E-02	9.198E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.852E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	5.647E-03	2.896E-02	5.027E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.449E-02	9.123E-02	0.000E+00	FAIL ABUN
SC-46	-5.948E-02	4.851E-02	7.039E-02	0.000E+00	FAIL ABUN
V-48	6.140E-02	8.582E-02	1.520E-01	0.000E+00	NOT IDENT.
CR-51	-4.172E-01	3.979E-01	6.249E-01	0.000E+00	NOT IDENT.
MN-52	6.055E-03	2.105E-01	3.561E-01	0.000E+00	NOT IDENT.
MN-54	-1.017E-02	4.330E-02	7.107E-02	0.000E+00	NOT IDENT.
CO-56	1.167E-02	4.681E-02	8.032E-02	0.000E+00	NOT IDENT.
CO-57	-1.275E-02	2.934E-02	4.747E-02	0.000E+00	NOT IDENT.
CO-58	-1.897E-02	4.252E-02	6.816E-02	0.000E+00	NOT IDENT.
FE-59	5.040E-03	1.214E-01	2.003E-01	0.000E+00	NOT IDENT.
CO-60	-2.574E-03	4.807E-02	8.089E-02	0.000E+00	NOT IDENT.
ZN-65	2.571E-02	1.285E-01	1.869E-01	0.000E+00	NOT IDENT.
GE-68	-2.524E-01	1.720E+00	2.791E+00	0.000E+00	NOT IDENT.
AS-73	6.306E-01	1.065E+00	1.869E+00	0.000E+00	NOT IDENT.
AS-74	8.431E-02	9.765E-02	1.787E-01	0.000E+00	NOT IDENT.
SE-75	4.522E-02	5.256E-02	8.419E-02	0.000E+00	NOT IDENT.
BR-77	9.548E-01	8.188E+00	1.356E+01	0.000E+00	FAIL ABUN
SR-82	-1.549E-01	4.633E-01	6.447E-01	0.000E+00	NOT IDENT.
RB-83	6.168E-03	7.946E-02	1.312E-01	0.000E+00	NOT IDENT.
RB-84	-9.763E-02	8.600E-02	1.267E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.842E+00	1.693E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.974E-02	8.558E-02	0.000E+00	NOT IDENT.
RB-86	-2.441E-01	1.061E+00	1.708E+00	0.000E+00	NOT IDENT.
Y-88	3.207E-03	3.139E-02	5.320E-02	0.000E+00	NOT IDENT.
ZR-88	1.251E-02	3.460E-02	5.929E-02	0.000E+00	NOT IDENT.
Y-91	-7.012E+00	2.312E+01	3.842E+01	0.000E+00	NOT IDENT.
NB-94	2.994E-02	3.748E-02	6.787E-02	0.000E+00	NOT IDENT.
NB-95	2.722E-02	5.249E-02	8.186E-02	0.000E+00	NOT IDENT.
NB-95M	-4.054E-02	1.462E-01	2.171E-01	0.000E+00	NOT IDENT.
ZR-95	3.507E-02	8.341E-02	1.461E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.015E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.832E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-4.644E-01	9.859E+00	1.662E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.026E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.323E-03	3.635E-02	6.160E-02	0.000E+00	NOT IDENT.
RH-102	3.447E-03	3.440E-02	5.722E-02	0.000E+00	NOT IDENT.
RU-103	-4.632E-03	4.551E-02	7.418E-02	0.000E+00	FAIL ABUN
RH-106	3.277E-01	3.803E-01	6.909E-01	0.000E+00	FAIL ABUN
RU-106	3.277E-01	3.788E-01	6.909E-01	0.000E+00	FAIL ABUN
AG-108M	2.910E-02	3.567E-02	6.301E-02	0.000E+00	NOT IDENT.
AG-110M	1.761E-02	4.084E-02	7.209E-02	0.000E+00	NOT IDENT.
IN-111	-6.609E-02	8.525E-01	1.459E+00	0.000E+00	NOT IDENT.
IN-113M	-1.806E-02	5.236E-02	8.538E-02	0.000E+00	NOT IDENT.
SN-113	-1.806E-02	5.236E-02	8.538E-02	0.000E+00	NOT IDENT.
IN-114M	7.382E-02	2.133E-01	3.341E-01	0.000E+00	NOT IDENT.
CD-115	1.080E+00	7.732E+00	1.354E+01	0.000E+00	NOT IDENT.
SN-117M	-4.368E-02	5.696E-02	9.683E-02	0.000E+00	NOT IDENT.
SB-122	7.341E-01	1.639E+00	2.920E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.142E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.249E-02	3.154E-02	5.449E-02	0.000E+00	NOT IDENT.
I-124	-5.242E-01	6.715E-01	1.003E+00	0.000E+00	NOT IDENT.
SB-124	-8.253E-02	9.278E-02	1.252E-01	0.000E+00	FAIL ABUN
SB-125	8.587E-02	1.056E-01	1.860E-01	0.000E+00	NOT IDENT.
TE-125M	-4.082E+00	1.060E+01	1.696E+01	0.000E+00	NOT IDENT.
I-126	2.745E-01	1.822E-01	3.482E-01	0.000E+00	NOT IDENT.
SB-126	4.509E-02	1.589E-01	2.693E-01	0.000E+00	FAIL ABUN
SB-127	1.070E-01	1.242E+00	2.130E+00	0.000E+00	NOT IDENT.
XE-127	-1.943E-02	5.304E-02	8.742E-02	0.000E+00	FAIL ABUN
I-131	-5.347E-02	1.172E-01	1.904E-01	0.000E+00	NOT IDENT.
TE-132	-4.452E-01	5.671E-01	9.341E-01	0.000E+00	NOT IDENT.
BA-133	-1.701E-02	5.455E-02	7.777E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.212E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.875E-02	1.152E-01	0.000E+00	NOT IDENT.
CS-135	1.545E-01	1.984E-01	3.142E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.319E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.098E-02	1.251E-01	1.933E-01	0.000E+00	FAIL ABUN
BA-137M	-5.408E-02	4.183E-02	6.343E-02	0.000E+00	NOT IDENT.
CS-137	-5.717E-02	4.422E-02	6.705E-02	0.000E+00	NOT IDENT.
CE-139	-1.267E-02	3.240E-02	5.584E-02	0.000E+00	NOT IDENT.
BA-140	-2.659E-02	2.609E-01	4.477E-01	0.000E+00	NOT IDENT.
LA-140	-4.764E-02	1.057E-01	1.645E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.990E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.885E-02	2.323E-01	3.855E-01	0.000E+00	NOT IDENT.
PM-144	2.899E-02	3.936E-02	7.088E-02	0.000E+00	NOT IDENT.

PR-144	1.963E+00	2.665E+00	4.799E+00	0.000E+00	NOT IDENT.
PM-146	-6.797E-03	4.808E-02	7.861E-02	0.000E+00	NOT IDENT.
ND-147	-1.207E-01	5.621E-01	9.568E-01	0.000E+00	NOT IDENT.
PM-149	1.182E+01	6.820E+01	1.173E+02	0.000E+00	NOT IDENT.
EU-152	-4.280E-02	1.293E-01	1.964E-01	0.000E+00	FAIL ABUN
GD-153	-6.398E-03	9.650E-02	1.429E-01	0.000E+00	NOT IDENT.
EU-154	-6.479E-03	1.500E-01	2.539E-01	0.000E+00	NOT IDENT.
EU-155	1.070E-01	1.181E-01	2.047E-01	0.000E+00	FAIL ABUN
TB-160	-7.745E-02	1.751E-01	2.706E-01	0.000E+00	FAIL ABUN
HO-166M	5.116E-02	6.522E-02	1.184E-01	0.000E+00	NOT IDENT.
TM-171	-1.775E+01	3.652E+01	5.374E+01	0.000E+00	NOT IDENT.
LU-176	1.103E-02	3.325E-02	5.075E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.567E+00	1.963E+00	0.000E+00	FAIL ABUN
LU-177M	-7.427E-02	2.092E-01	3.394E-01	0.000E+00	FAIL ABUN
HF-181	-3.195E-03	5.170E-02	8.347E-02	0.000E+00	NOT IDENT.
W-181	1.799E-01	4.699E-01	7.267E-01	0.000E+00	NOT IDENT.
TA-182	-4.000E-03	2.655E-01	4.523E-01	0.000E+00	FAIL ABUN
RE-183	7.598E-02	1.210E-01	2.174E-01	0.000E+00	FAIL ABUN
RE-184	-9.442E-02	2.611E-01	4.391E-01	0.000E+00	NOT IDENT.
OS-185	1.562E-02	4.943E-02	8.664E-02	0.000E+00	NOT IDENT.
RE-188	1.732E-01	1.795E-01	3.274E-01	0.000E+00	NOT IDENT.
W-188	-4.641E+00	9.657E+00	1.387E+01	0.000E+00	FAIL ABUN
IR-192	5.312E-02	3.950E-02	7.195E-02	0.000E+00	FAIL ABUN
AU-195	6.787E-02	2.466E-01	4.140E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.191E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.826E+00	5.532E+00	9.892E+00	0.000E+00	NOT IDENT.
TL-202	5.174E-02	7.588E-02	1.322E-01	0.000E+00	NOT IDENT.
HG-203	2.414E-02	4.550E-02	7.976E-02	0.000E+00	NOT IDENT.
BI-207	-9.732E-03	5.968E-02	9.642E-02	0.000E+00	FAIL ABUN
TL-207	-3.042E-01	7.658E-01	1.256E+00	0.000E+00	FAIL ABUN
PO-209	2.525E+00	9.228E+00	1.581E+01	0.000E+00	NOT IDENT.
BI-210	1.946E+00	4.749E+00	8.206E+00	0.000E+00	NOT IDENT.
PB-210	1.946E+00	4.749E+00	8.206E+00	0.000E+00	NOT IDENT.
PO-210	1.946E+00	4.748E+00	8.206E+00	0.000E+00	NOT IDENT.
PB-211	4.757E-01	1.088E+00	1.806E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.914E-01	6.646E-01	0.000E+00	FAIL ABUN
PO-215	-3.042E-01	7.658E-01	1.256E+00	0.000E+00	FAIL ABUN
RN-219	-1.569E-01	4.700E-01	7.641E-01	0.000E+00	FAIL ABUN
RN-220	-1.814E+01	2.800E+01	4.577E+01	0.000E+00	NOT IDENT.
RA-223	-3.042E-01	7.658E-01	1.256E+00	0.000E+00	FAIL ABUN
AC-227	1.571E-01	4.416E-01	7.696E-01	0.000E+00	FAIL ABUN
TH-227	1.571E-01	4.419E-01	7.696E-01	0.000E+00	FAIL ABUN
TH-229	1.073E-01	5.444E-01	9.550E-01	0.000E+00	FAIL ABUN
PA-231	-9.340E-01	1.749E+00	2.881E+00	0.000E+00	FAIL ABUN
TH-231	-3.042E-01	7.658E-01	1.256E+00	0.000E+00	FAIL ABUN
U-231	-1.535E-01	1.037E+00	1.528E+00	0.000E+00	FAIL ABUN
PA-233	-1.311E-02	7.796E-02	1.308E-01	0.000E+00	FAIL ABUN
PA-234	1.012E-01	3.872E-01	6.592E-01	0.000E+00	FAIL ABUN
PA-234M	6.447E+00	8.682E+00	1.565E+01	0.000E+00	NOT IDENT.
NP-236	5.321E-02	8.829E-02	1.586E-01	0.000E+00	NOT IDENT.
NP-239	-3.624E-02	2.137E-01	3.511E-01	0.000E+00	FAIL ABUN
AM-241	2.211E-01	1.883E-01	3.061E-01	0.000E+00	NOT IDENT.
CM-243	4.130E-02	1.058E-01	1.795E-01	0.000E+00	FAIL ABUN
CM-247	-3.627E-02	4.222E-02	6.581E-02	0.000E+00	NOT IDENT.
CF-249	7.824E-04	4.577E-02	7.663E-02	0.000E+00	NOT IDENT.
CF-251	-5.841E-04	1.387E-01	2.423E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:04:00.58

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232424001.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 06:03:34.
Sample ID         : G232424001           Sample quantity  : 1.16500E+02 GRAM
Detector name     : GAM01                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.08  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1165	10.67*	9.639E-01	3.650E+01	3.650E+01	9.31
CD-109	88.03	142	3.72*	5.142E+00	2.395E+00	2.445E+00	41.37
SN-126	64.28	65	9.60	2.720E+00	8.041E-01	8.041E-01	121.40
	86.94	142	8.90	5.142E+00	1.001E+00	1.001E+00	57.86
	87.57	142	37.00*	5.142E+00	2.408E-01	2.408E-01	41.37
CE-141	145.44	82	48.40*	5.927E+00	9.195E-02	1.234E-01	115.60
TL-208	277.35	------	6.80	3.972E+00	------ Line Not Found		------
	510.84	105	21.60	2.436E+00	6.439E-01	6.439E-01	62.51
	583.14	292	84.20*	2.181E+00	5.124E-01	5.124E-01	17.04
	860.37	------	12.46	1.552E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.875E+00	------ Line Not Found		------
	351.07	410	12.94*	3.294E+00	3.097E+00	3.097E+00	18.00
PB-212	74.81	380	10.70	4.076E+00	2.808E+00	2.808E+00	25.81
	77.11	497	18.00	4.315E+00	2.063E+00	2.063E+00	17.29
	87.30	142	8.00	5.142E+00	1.114E+00	1.114E+00	42.56
	238.63	954	44.60*	4.442E+00	1.551E+00	1.551E+00	10.80
	300.09	85	3.41	3.731E+00	2.142E+00	2.142E+00	53.39
PO-212	74.81	380	10.70	4.076E+00	2.808E+00	2.808E+00	25.81
	77.11	497	18.00	4.315E+00	2.063E+00	2.063E+00	17.29
	87.30	142	8.00	5.142E+00	1.114E+00	1.114E+00	42.56
	115.19	------	0.60	6.067E+00	------ Line Not Found		------
	238.63	954	44.60*	4.442E+00	1.551E+00	1.551E+00	10.80
	300.09	85	3.41	3.731E+00	2.142E+00	2.142E+00	53.39
BI-214	609.31	305	46.30*	2.101E+00	1.009E+00	1.009E+00	19.59
	768.36	21	5.04	1.716E+00	7.823E-01	7.823E-01	191.85
	934.06	------	3.21	1.440E+00	------ Line Not Found		------
	1120.29	63	15.10	1.218E+00	1.104E+00	1.104E+00	52.96
	1238.11	------	5.94	1.113E+00	------ Line Not Found		------
	1377.67	------	4.11	1.013E+00	------ Line Not Found		------
	1764.49	23	15.80	8.365E-01	5.558E-01	5.558E-01	71.54
PB-214	74.81	380	6.21	4.076E+00	4.838E+00	4.838E+00	25.17
	77.11	497	10.50	4.315E+00	3.536E+00	3.536E+00	18.89

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	142	4.67	5.142E+00	1.908E+00	1.908E+00	42.08
	241.98	178	7.49	4.402E+00	1.739E+00	1.739E+00	47.54
	295.21	273	19.20	3.781E+00	1.212E+00	1.212E+00	19.84
	351.92	410	37.20*	3.294E+00	1.077E+00	1.077E+00	18.74
PO-214	74.81	380	6.21	4.076E+00	4.838E+00	4.838E+00	25.17
	77.11	497	10.50	4.315E+00	3.536E+00	3.536E+00	18.89
	87.30	142	4.67	5.142E+00	1.908E+00	1.908E+00	42.08
	241.98	178	7.49	4.402E+00	1.739E+00	1.739E+00	47.54
	295.21	273	19.20	3.781E+00	1.212E+00	1.212E+00	19.84
	351.92	410	37.20*	3.294E+00	1.077E+00	1.077E+00	18.74
PO-216	74.81	380	10.70	4.076E+00	2.808E+00	2.808E+00	25.81
	77.11	497	18.00	4.315E+00	2.063E+00	2.063E+00	17.29
	87.30	142	8.00	5.142E+00	1.114E+00	1.114E+00	42.56
	238.63	954	44.60*	4.442E+00	1.551E+00	1.551E+00	10.80
	300.09	85	3.41	3.731E+00	2.142E+00	2.142E+00	53.39
PO-218	74.81	380	6.21	4.076E+00	4.838E+00	4.838E+00	25.17
	77.11	497	10.50	4.315E+00	3.536E+00	3.536E+00	18.89
	87.30	142	4.67	5.142E+00	1.908E+00	1.908E+00	42.08
	241.98	178	7.49	4.402E+00	1.739E+00	1.739E+00	47.54
	295.21	273	19.20	3.781E+00	1.212E+00	1.212E+00	19.84
	351.92	410	37.20*	3.294E+00	1.077E+00	1.077E+00	18.74
RA-224	240.98	178	3.95*	4.402E+00	3.297E+00	3.297E+00	47.21
RA-226	609.31	305	46.30*	2.101E+00	1.009E+00	1.009E+00	19.59
	768.36	21	5.04	1.716E+00	7.823E-01	7.823E-01	191.85
	934.06	------	3.21	1.440E+00	------ Line Not Found		------
	1120.29	63	15.10	1.218E+00	1.104E+00	1.104E+00	52.96
	1238.11	------	5.94	1.113E+00	------ Line Not Found		------
	1377.67	------	4.11	1.013E+00	------ Line Not Found		------
	1764.49	23	15.80	8.365E-01	5.558E-01	5.558E-01	71.54
AC-228	338.32	145	11.40	3.399E+00	1.206E+00	1.206E+00	55.25
	911.07	216	27.70*	1.472E+00	1.707E+00	1.707E+00	21.35
	969.11	118	16.60	1.392E+00	1.645E+00	1.645E+00	35.50
RA-228	338.32	145	11.40	3.399E+00	1.206E+00	1.206E+00	55.25
	911.07	216	27.70*	1.472E+00	1.707E+00	1.707E+00	21.35
	969.11	118	16.60	1.392E+00	1.645E+00	1.645E+00	35.50
TH-228	84.40	------	1.21	4.941E+00	------ Line Not Found		------
	238.60	954	44.60*	4.442E+00	1.551E+00	1.551E+00	10.80
	300.10	85	3.41	3.731E+00	2.142E+00	2.142E+00	79.09
TH-230	609.31	305	46.30*	2.101E+00	1.009E+00	1.009E+00	19.59
	768.36	21	5.04	1.716E+00	7.823E-01	7.823E-01	191.85
	934.06	------	3.21	1.440E+00	------ Line Not Found		------
	1120.29	63	15.10	1.218E+00	1.104E+00	1.104E+00	52.96
	1238.11	------	5.94	1.113E+00	------ Line Not Found		------
	1377.67	------	4.11	1.013E+00	------ Line Not Found		------
	1764.49	23	15.80	8.365E-01	5.558E-01	5.558E-01	71.54
TH-232	338.32	145	11.40	3.399E+00	1.206E+00	1.206E+00	37.74
	911.07	216	27.70*	1.472E+00	1.707E+00	1.707E+00	21.35
	969.11	118	16.60	1.392E+00	1.645E+00	1.645E+00	35.50
TH-234	63.29	65	3.80*	2.720E+00	2.031E+00	2.031E+00	121.78

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	92.38	77	5.41	5.483E+00	8.314E-01	8.314E-01	120.50
U-234	609.31	305	46.30*	2.101E+00	1.009E+00	1.009E+00	19.59
	768.36	21	5.04	1.716E+00	7.823E-01	7.823E-01	191.85
	934.06	------	3.21	1.440E+00	------ Line Not Found		------
	1120.29	63	15.10	1.218E+00	1.104E+00	1.104E+00	52.96
	1238.11	------	5.94	1.113E+00	------ Line Not Found		------
	1377.67	------	4.11	1.013E+00	------ Line Not Found		------
	1764.49	23	15.80	8.365E-01	5.558E-01	5.558E-01	71.54
U-235	89.95	------	2.70	5.310E+00	------ Line Not Found		------
	93.35	77	4.50	5.483E+00	9.995E-01	9.995E-01	122.39
	105.00	------	2.10	5.910E+00	------ Line Not Found		------
	143.76	82	10.50*	5.927E+00	4.239E-01	4.239E-01	116.58
	163.35	------	4.70	5.647E+00	------ Line Not Found		------
	185.71	185	54.00	5.257E+00	2.096E-01	2.096E-01	42.57
	205.31	------	4.70	4.943E+00	------ Line Not Found		------
NP-237	86.50	142	12.60*	5.142E+00	7.072E-01	7.072E-01	46.23
	95.87	------	2.60	5.609E+00	------ Line Not Found		------
U-238	63.29	65	3.80*	2.720E+00	2.031E+00	2.031E+00	121.78
	92.38	77	5.41	5.483E+00	8.314E-01	8.314E-01	119.45
AM-243	74.67	380	66.00*	4.076E+00	4.553E-01	4.553E-01	24.06
	86.72	142	0.34	5.142E+00	2.652E+01	2.652E+01	41.37
	117.66	------	0.55	6.083E+00	------ Line Not Found		------
	142.18	------	0.13	5.960E+00	------ Line Not Found		------
ANH-511	511.00	105	100.00*	2.436E+00	1.391E-01	1.391E-01	61.95

Flag: "*" = Keyline

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

Total number of lines in spectrum 27
Number of unidentified lines 1
Number of lines tentatively identified by NID 26 96.30%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.650E+01	3.650E+01	0.340E+01	9.31	
CD-109	464.00D	1.02	2.395E+00	2.445E+00	1.011E+00	41.37	
SN-126	1.00E+05Y	1.00	2.408E-01	2.408E-01	0.996E-01	41.37	
CE-141	32.50D	1.34	9.195E-02	1.234E-01	1.426E-01	115.60	
TL-208	1.41E+10Y	1.00	5.124E-01	5.124E-01	0.873E-01	17.04	
BI-211	7.04E+08Y	1.00	3.097E+00	3.097E+00	0.558E+00	18.00	
PB-212	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.167E+00	10.80	
PO-212	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.167E+00	10.80	
BI-214	1600.00Y	1.00	1.009E+00	1.009E+00	0.198E+00	19.59	
PB-214	1600.00Y	1.00	1.077E+00	1.077E+00	0.202E+00	18.74	
PO-214	1600.00Y	1.00	1.077E+00	1.077E+00	0.202E+00	18.74	
PO-216	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.167E+00	10.80	
PO-218	1600.00Y	1.00	1.077E+00	1.077E+00	0.202E+00	18.74	
RA-224	1.41E+10Y	1.00	3.297E+00	3.297E+00	1.556E+00	47.21	
RA-226	1600.00Y	1.00	1.009E+00	1.009E+00	0.198E+00	19.59	
AC-228	1.41E+10Y	1.00	1.707E+00	1.707E+00	0.364E+00	21.35	
RA-228	1.41E+10Y	1.00	1.707E+00	1.707E+00	0.364E+00	21.35	
TH-228	1.41E+10Y	1.00	1.551E+00	1.551E+00	0.167E+00	10.80	
TH-230	4.47E+09Y	1.00	1.009E+00	1.009E+00	0.198E+00	19.59	
TH-232	1.41E+10Y	1.00	1.707E+00	1.707E+00	0.364E+00	21.35	
TH-234	4.47E+09Y	1.00	2.031E+00	2.031E+00	2.474E+00	121.78	
U-234	4.47E+09Y	1.00	1.009E+00	1.009E+00	0.198E+00	19.59	
U-235	7.04E+08Y	1.00	4.239E-01	4.239E-01	4.941E-01	116.58	
NP-237	2.14E+06Y	1.00	7.072E-01	7.072E-01	3.269E-01	46.23	
U-238	4.47E+09Y	1.00	2.031E+00	2.031E+00	2.474E+00	121.78	
AM-243	7380.00Y	1.00	4.553E-01	4.553E-01	1.095E-01	24.06	
ANH-511	1.00E+09Y	1.00	1.391E-01	1.391E-01	0.862E-01	61.95	
	Total Activity :		7.051E+01	7.060E+01			

Grand Total Activity : 7.051E+01 7.060E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	209.63	84	266	1.27	420.01	414	10	1.16E-02	76.3	4.87E+00	T
0	270.07	102	151	1.62	540.86	536	9	1.42E-02	47.7	4.05E+00	T
0	727.68	56	32	1.86	1455.86	1451	10	7.81E-03	46.2	1.80E+00	T
4	964.89	52	23	2.55	1930.08	1924	21	7.18E-03	52.8	1.40E+00	T
0	1731.25	10	12	1.39	3461.89	3454	10	1.35E-03	****	8.47E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 08:04:06.15

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232424001.CNF;1 *
* Acquisition date  : 7-JUL-2009 06:03:34.  Detector SN#     :             *
* Detector ID       : GAM01                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.08          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 23-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232424001            Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 1.16500E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56.1MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.650E+01	3.397E+00	5.387E-01	3.829E-02	67.753
CD-109	2.445E+00	1.011E+00	1.608E+00	1.480E-01	1.520
SN-126	2.408E-01	9.962E-02	1.581E-01	1.451E-02	1.523
CE-141	1.234E-01	1.426E-01	1.128E-01	6.629E-03	1.094
TL-208	5.124E-01	8.731E-02	6.600E-02	4.182E-03	7.764
BI-211	3.097E+00	5.576E-01	3.744E-01	2.371E-02	8.273
PB-212	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
PO-212	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
BI-214	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
PB-214	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
PO-214	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
PO-216	1.551E+00	1.674E-01	1.017E-01	7.413E-03	15.243
PO-218	1.077E+00	2.020E-01	1.285E-01	1.054E-02	8.386
RA-224	3.297E+00	1.556E+00	1.158E+00	6.661E-02	2.847
RA-226	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
AC-228	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
RA-228	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
TH-228	1.551E+00	1.674E-01	1.017E-01	7.412E-03	15.244

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
TH-232	1.707E+00	3.645E-01	2.636E-01	2.663E-02	6.478
TH-234	2.031E+00	2.474E+00	2.370E+00	4.236E-01	0.857
U-234	1.009E+00	1.976E-01	1.278E-01	9.478E-03	7.889
U-235	4.239E-01	4.941E-01	3.857E-01	6.271E-02	1.099
NP-237	7.072E-01	3.269E-01	4.575E-01	1.032E-01	1.546
U-238	2.031E+00	2.474E+00	2.370E+00	4.236E-01	0.857
AM-243	4.553E-01	1.095E-01	9.747E-02	8.214E-03	4.671
ANH-511	1.391E-01	8.617E-02	5.121E-02	2.836E-03	2.716

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-3.094E-01		3.832E-01	5.712E-01	3.733E-02	-0.542
NA-22	9.293E-04		5.512E-02	9.217E-02	5.908E-03	0.010
NA-24	8.999E-02		9.450E-02	Half-Life too short		
AL-26	5.647E-03		2.955E-02	5.056E-02	2.915E-03	0.112
TI-44	3.806E-01	+	6.581E-02	8.887E-02	7.623E-03	4.283
SC-46	-5.948E-02		4.950E-02	7.027E-02	4.938E-03	-0.846
V-48	6.140E-02		8.757E-02	1.519E-01	1.030E-02	0.404
CR-51	-4.172E-01		4.060E-01	6.174E-01	3.996E-02	-0.676
MN-52	6.055E-03		2.148E-01	3.573E-01	2.444E-02	0.017
MN-54	-1.017E-02		4.419E-02	7.091E-02	4.632E-03	-0.143
CO-56	1.167E-02		4.776E-02	8.015E-02	5.322E-03	0.146
CO-57	-1.275E-02		2.993E-02	4.645E-02	2.852E-03	-0.275
CO-58	-1.897E-02		4.339E-02	6.798E-02	4.314E-03	-0.279
FE-59	5.040E-03		1.239E-01	2.004E-01	1.412E-02	0.025
CO-60	-2.574E-03		4.905E-02	8.110E-02	5.620E-03	-0.032
ZN-65	2.571E-02		1.311E-01	1.870E-01	1.119E-02	0.138
GE-68	-2.524E-01		1.756E+00	2.792E+00	1.743E-01	-0.090
AS-73	6.306E-01		1.087E+00	1.814E+00	1.544E-01	0.348
AS-74	8.431E-02		9.965E-02	1.777E-01	9.506E-03	0.475
SE-75	4.522E-02		5.363E-02	8.302E-02	4.885E-03	0.545
BR-77	9.548E-01		8.355E+00	1.347E+01	7.444E-01	0.071
SR-82	-1.549E-01		4.727E-01	6.428E-01	3.868E-02	-0.241
RB-83	6.168E-03		8.108E-02	1.302E-01	7.200E-03	0.047
RB-84	-9.763E-02		8.775E-02	1.265E-01	8.798E-03	-0.772
KR-85	2.113E+01		1.004E+01	1.681E+01	9.304E-01	1.257
SR-85	1.068E-01		5.076E-02	8.496E-02	4.703E-03	1.257
RB-86	-2.441E-01		1.083E+00	1.708E+00	1.068E-01	-0.143
Y-88	3.207E-03		3.203E-02	5.352E-02	3.029E-03	0.060
ZR-88	1.251E-02		3.531E-02	5.870E-02	3.173E-03	0.213
Y-91	-7.012E+00		2.359E+01	3.848E+01	2.224E+00	-0.182
NB-94	2.994E-02		3.825E-02	6.759E-02	3.642E-03	0.443
NB-95	2.722E-02		5.356E-02	8.161E-02	4.835E-03	0.334
NB-95M	-4.054E-02		1.492E-01	2.138E-01	1.598E-02	-0.190
ZR-95	3.507E-02		8.511E-02	1.456E-01	1.029E-02	0.241

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	6.831E-03		1.538E-02	Half-Life too short		
ZR-97	7.031E-01		2.976E-01	Half-Life too short		
MO-99	-4.644E-01		1.006E+01	1.657E+01	2.276E+00	-0.028
TC-99M	2.103E+08		5.233E+08	Half-Life too short		
RH-101	1.323E-03		3.709E-02	6.057E-02	3.348E-03	0.022
RH-102	3.447E-03		3.510E-02	5.676E-02	3.148E-03	0.061
RU-103	-4.632E-03		4.643E-02	7.362E-02	9.225E-03	-0.063
RH-106	3.277E-01		3.880E-01	6.872E-01	7.886E-02	0.477
RU-106	3.277E-01		3.866E-01	6.872E-01	3.607E-02	0.477
AG-108M	2.910E-02		3.640E-02	6.244E-02	3.763E-03	0.466
AG-110M	1.761E-02		4.168E-02	7.175E-02	3.944E-03	0.245
IN-111	-6.609E-02		8.699E-01	1.437E+00	8.292E-02	-0.046
IN-113M	-1.806E-02		5.343E-02	8.453E-02	4.917E-03	-0.214
SN-113	-1.806E-02		5.343E-02	8.453E-02	4.917E-03	-0.214
IN-114M	7.382E-02		2.176E-01	3.284E-01	1.800E-02	0.225
CD-115	1.080E+00		7.890E+00	1.344E+01	7.419E-01	0.080
SN-117M	-4.368E-02		5.812E-02	9.500E-02	5.169E-03	-0.460
SB-122	7.341E-01		1.673E+00	2.902E+00	1.581E-01	0.253
I-123	-4.523E-01		5.828E-01	Half-Life too short		
TE-123M	-1.249E-02		3.218E-02	5.346E-02	2.950E-03	-0.234
I-124	-5.242E-01		6.852E-01	9.978E-01	5.314E-02	-0.525
SB-124	-8.253E-02		9.467E-02	1.258E-01	8.415E-03	-0.656
SB-125	8.587E-02		1.078E-01	1.843E-01	1.061E-02	0.466
TE-125M	-4.082E+00		1.081E+01	1.658E+01	1.480E+00	-0.246
I-126	2.745E-01		1.859E-01	3.466E-01	1.763E-02	0.792
SB-126	4.509E-02		1.622E-01	2.683E-01	1.486E-02	0.168
SB-127	1.070E-01		1.267E+00	2.121E+00	1.826E-01	0.050
XE-127	-1.943E-02		5.412E-02	8.598E-02	4.778E-03	-0.226
I-131	-5.347E-02		1.196E-01	1.884E-01	1.185E-02	-0.284
TE-132	-4.452E-01		5.787E-01	9.198E-01	1.293E-01	-0.484
BA-133	-1.701E-02		5.567E-02	7.692E-02	8.840E-03	-0.221
I-133	6.291E-04		1.129E-03	Half-Life too short		
CS-134	1.328E-01		5.995E-02	1.149E-01	7.208E-03	1.156
CS-135	1.545E-01		2.025E-01	3.099E-01	2.380E-02	0.499
I-135	-6.170E+07		1.183E+08	Half-Life too short		
CS-136	-7.098E-02		1.277E-01	1.934E-01	1.337E-02	-0.367
BA-137M	-5.408E-02		4.269E-02	6.313E-02	3.188E-03	-0.857
CS-137	-5.717E-02		4.512E-02	6.674E-02	3.389E-03	-0.857
CE-139	-1.267E-02		3.306E-02	5.481E-02	2.927E-03	-0.231
BA-140	-2.659E-02		2.663E-01	4.447E-01	1.444E-01	-0.060
LA-140	-4.764E-02		1.079E-01	1.652E-01	1.077E-02	-0.288
CE-143	1.242E-04		4.587E-05	Half-Life too short		
CE-144	3.885E-02		2.370E-01	3.776E-01	5.370E-02	0.103
PM-144	2.899E-02		4.016E-02	7.058E-02	3.769E-03	0.411
PR-144	1.963E+00		2.720E+00	4.780E+00	2.550E-01	0.411
PM-146	-6.797E-03		4.906E-02	7.795E-02	6.582E-03	-0.087
ND-147	-1.207E-01		5.735E-01	9.502E-01	1.273E-01	-0.127
PM-149	1.182E+01		6.959E+01	1.157E+02	1.642E+01	0.102

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-4.280E-02		1.320E-01	1.942E-01	1.257E-02	-0.220
GD-153	-6.398E-03		9.847E-02	1.395E-01	1.104E-02	-0.046
EU-154	-6.479E-03		1.531E-01	2.544E-01	2.474E-02	-0.025
EU-155	1.070E-01		1.205E-01	2.000E-01	1.461E-02	0.535
TB-160	-7.745E-02		1.787E-01	2.701E-01	1.874E-02	-0.287
HO-166M	5.116E-02		6.655E-02	1.179E-01	6.443E-03	0.434
TM-171	-1.775E+01		3.727E+01	5.227E+01	4.349E+00	-0.340
LU-176	1.103E-02		3.393E-02	5.012E-02	2.927E-03	0.220
LU-177	2.090E+00	+	1.599E+00	1.932E+00	1.080E-01	1.082
LU-177M	-7.427E-02		2.135E-01	3.362E-01	1.837E-02	-0.221
HF-181	-3.195E-03		5.276E-02	8.281E-02	4.595E-03	-0.039
W-181	1.799E-01		4.795E-01	7.067E-01	5.891E-02	0.255
TA-182	-4.000E-03		2.709E-01	4.530E-01	2.683E-02	-0.009
RE-183	7.598E-02		1.235E-01	2.134E-01	1.149E-02	0.356
RE-184	-9.442E-02		2.664E-01	4.328E-01	2.508E-02	-0.218
OS-185	1.562E-02		5.044E-02	8.622E-02	4.426E-03	0.181
RE-188	1.732E-01		1.832E-01	3.211E-01	1.764E-02	0.539
W-188	-4.641E+00		9.854E+00	1.369E+01	8.009E-01	-0.339
IR-192	5.312E-02		4.031E-02	7.108E-02	4.158E-03	0.747
AU-195	6.787E-02		2.516E-01	4.043E-01	3.138E-02	0.168
TL-200	3.700E-04		1.118E-04	Half-Life too short		
TL-201	2.826E+00		5.645E+00	9.710E+00	5.189E-01	0.291
TL-202	5.174E-02		7.743E-02	1.310E-01	7.225E-03	0.395
HG-203	2.414E-02		4.643E-02	7.869E-02	4.880E-03	0.307
BI-207	-9.732E-03		6.090E-02	9.645E-02	6.109E-03	-0.101
TL-207	-3.042E-01		7.814E-01	1.241E+00	2.049E-01	-0.245
PO-209	2.525E+00		9.416E+00	1.579E+01	1.120E+00	0.160
BI-210	1.946E+00		4.846E+00	7.954E+00	6.300E-01	0.245
PB-210	1.946E+00		4.846E+00	7.954E+00	6.300E-01	0.245
PO-210	1.946E+00		4.845E+00	7.954E+00	5.461E-01	0.245
PB-211	4.757E-01		1.111E+00	1.789E+00	1.115E+00	0.266
BI-212	8.524E-01	+	3.994E-01	6.622E-01	5.006E-02	1.287
PO-215	-3.042E-01		7.814E-01	1.241E+00	2.049E-01	-0.245
RN-219	-1.569E-01		4.796E-01	7.566E-01	1.018E-01	-0.207
RN-220	-1.814E+01		2.857E+01	4.547E+01	2.492E+00	-0.399
RA-223	-3.042E-01		7.814E-01	1.241E+00	2.049E-01	-0.245
AC-227	1.571E-01		4.507E-01	7.587E-01	1.059E-01	0.207
TH-227	1.571E-01		4.509E-01	7.587E-01	1.282E-01	0.207
TH-229	1.073E-01		5.555E-01	9.388E-01	5.164E-02	0.114
PA-231	-9.340E-01		1.784E+00	2.842E+00	3.923E-01	-0.329
TH-231	-3.042E-01		7.814E-01	1.241E+00	2.049E-01	-0.245
U-231	-1.535E-01		1.058E+00	1.492E+00	1.207E-01	-0.103
PA-233	-1.311E-02		7.955E-02	1.292E-01	7.996E-03	-0.101
PA-234	1.012E-01		3.951E-01	6.586E-01	1.189E-01	0.154
PA-234M	6.447E+00		8.859E+00	1.564E+01	1.528E+00	0.412
NP-236	5.321E-02		9.009E-02	1.556E-01	8.427E-03	0.342
NP-239	-3.624E-02		2.180E-01	3.434E-01	2.197E-02	-0.106
AM-241	2.211E-01		1.922E-01	2.974E-01	2.718E-02	0.744

Sample ID : G232424001 Acquisition date : 7-JUL-2009 06:03:34

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.130E-02		1.079E-01	1.753E-01	1.281E-02	0.236
CM-247	-3.627E-02		4.308E-02	6.517E-02	3.542E-03	-0.556
CF-249	7.824E-04		4.671E-02	7.585E-02	4.123E-03	0.010
CF-251	-5.841E-04		1.415E-01	2.379E-01	1.284E-02	-0.002

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232424001            *
* Acquisition date :  7-JUL-2009 06:03:34 Detector SN#    :                 *
* Detector ID      : GAM01                Sensitivity     : 5.000           *
* Geometry         : CAN                  Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:01.08     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 23-JUN-2009 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G232424001           Analyst initials: MXR1            *
* Batch Number     : 881219               Sample Quantity : 1.1650E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.650E+01	3.329E+00	2.686E-01	1.698E+00
CD-109	2.445E+00	9.913E-01	8.250E-01	5.057E-01
SN-126	2.408E-01	9.763E-02	8.111E-02	4.981E-02
CE-141	1.234E-01	1.398E-01	5.758E-02	7.132E-02
TL-208	5.124E-01	8.556E-02	3.322E-02	4.366E-02
BI-211	3.097E+00	5.465E-01	1.894E-01	2.788E-01
PB-212	1.551E+00	1.641E-01	5.167E-02	8.370E-02
PO-212	1.551E+00	1.641E-01	5.167E-02	8.370E-02
BI-214	1.009E+00	1.937E-01	6.431E-02	9.880E-02
PB-214	1.077E+00	1.979E-01	6.500E-02	1.010E-01
PO-214	1.077E+00	1.979E-01	6.500E-02	1.010E-01
PO-216	1.551E+00	1.641E-01	5.167E-02	8.370E-02
PO-218	1.077E+00	1.979E-01	6.500E-02	1.010E-01
RA-224	3.297E+00	1.525E+00	5.881E-01	7.781E-01
RA-226	1.009E+00	1.937E-01	6.431E-02	9.880E-02
AC-228	1.707E+00	3.572E-01	1.320E-01	1.822E-01
RA-228	1.707E+00	3.572E-01	1.320E-01	1.822E-01
TH-228	1.551E+00	1.641E-01	5.166E-02	8.370E-02
TH-230	1.009E+00	1.937E-01	6.431E-02	9.880E-02
TH-232	1.707E+00	3.572E-01	1.320E-01	1.822E-01
TH-234	2.031E+00	2.424E+00	1.220E+00	1.237E+00
U-234	1.009E+00	1.937E-01	6.431E-02	9.880E-02
U-235	4.239E-01	4.843E-01	1.969E-01	2.471E-01
NP-237	7.072E-01	3.204E-01	2.347E-01	1.635E-01
U-238	2.031E+00	2.424E+00	1.220E+00	1.237E+00
AM-243	4.553E-01	1.073E-01	5.008E-02	5.477E-02
ANH-511	1.391E-01	8.444E-02	2.581E-02	4.308E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-3.094E-01	3.756E-01	2.881E-01	1.916E-01	NOT IDENT.
NA-22	9.293E-04	5.402E-02	4.601E-02	2.756E-02	NOT IDENT.
NA-24	8.999E+04	1.852E+05	0.000E+00	9.450E+04	SHORT HLIF
AL-26	5.647E-03	2.896E-02	2.515E-02	1.477E-02	NOT IDENT.
TI-44	3.806E-01	6.449E-02	4.564E-02	3.291E-02	FAIL ABUN
SC-46	-5.948E-02	4.851E-02	3.521E-02	2.475E-02	FAIL ABUN
V-48	6.140E-02	8.582E-02	7.604E-02	4.379E-02	NOT IDENT.
CR-51	-4.172E-01	3.979E-01	3.126E-01	2.030E-01	NOT IDENT.
MN-52	6.055E-03	2.105E-01	1.782E-01	1.074E-01	NOT IDENT.
MN-54	-1.017E-02	4.330E-02	3.556E-02	2.209E-02	NOT IDENT.
CO-56	1.167E-02	4.681E-02	4.018E-02	2.388E-02	NOT IDENT.
CO-57	-1.275E-02	2.934E-02	2.375E-02	1.497E-02	NOT IDENT.
CO-58	-1.897E-02	4.252E-02	3.410E-02	2.170E-02	NOT IDENT.
FE-59	5.040E-03	1.214E-01	1.002E-01	6.195E-02	NOT IDENT.
CO-60	-2.574E-03	4.807E-02	4.047E-02	2.452E-02	NOT IDENT.
ZN-65	2.571E-02	1.285E-01	9.348E-02	6.554E-02	NOT IDENT.
GE-68	-2.524E-01	1.720E+00	1.396E+00	8.778E-01	NOT IDENT.
AS-73	6.306E-01	1.065E+00	9.351E-01	5.433E-01	NOT IDENT.
AS-74	8.431E-02	9.765E-02	8.940E-02	4.982E-02	NOT IDENT.
SE-75	4.522E-02	5.256E-02	4.212E-02	2.682E-02	NOT IDENT.
BR-77	9.548E-01	8.188E+00	6.785E+00	4.178E+00	FAIL ABUN
SR-82	-1.549E-01	4.633E-01	3.226E-01	2.364E-01	NOT IDENT.
RB-83	6.168E-03	7.946E-02	6.563E-02	4.054E-02	NOT IDENT.
RB-84	-9.763E-02	8.600E-02	6.339E-02	4.388E-02	NOT IDENT.
KR-85	2.113E+01	9.842E+00	8.471E+00	5.021E+00	NOT IDENT.
SR-85	1.068E-01	4.974E-02	4.281E-02	2.538E-02	NOT IDENT.
RB-86	-2.441E-01	1.061E+00	8.543E-01	5.414E-01	NOT IDENT.
Y-88	3.207E-03	3.139E-02	2.662E-02	1.601E-02	NOT IDENT.
ZR-88	1.251E-02	3.460E-02	2.966E-02	1.765E-02	NOT IDENT.
Y-91	-7.012E+00	2.312E+01	1.922E+01	1.179E+01	NOT IDENT.
NB-94	2.994E-02	3.748E-02	3.395E-02	1.912E-02	NOT IDENT.
NB-95	2.722E-02	5.249E-02	4.096E-02	2.678E-02	NOT IDENT.
NB-95M	-4.054E-02	1.462E-01	1.086E-01	7.458E-02	NOT IDENT.
ZR-95	3.507E-02	8.341E-02	7.308E-02	4.256E-02	NOT IDENT.
NB-97	6.831E+03	3.015E+04	0.000E+00	1.538E+04	SHORT HLIF
ZR-97	7.031E+05	5.832E+05	0.000E+00	2.976E+05	SHORT HLIF
MO-99	-4.644E-01	9.859E+00	8.317E+00	5.030E+00	NOT IDENT.
TC-99M	2.103E+14	1.026E+15	0.000E+00	5.233E+14	SHORT HLIF
RH-101	1.323E-03	3.635E-02	3.082E-02	1.855E-02	NOT IDENT.
RH-102	3.447E-03	3.440E-02	2.863E-02	1.755E-02	NOT IDENT.
RU-103	-4.632E-03	4.551E-02	3.711E-02	2.322E-02	FAIL ABUN
RH-106	3.277E-01	3.803E-01	3.456E-01	1.940E-01	FAIL ABUN
RU-106	3.277E-01	3.788E-01	3.456E-01	1.933E-01	FAIL ABUN
AG-108M	2.910E-02	3.567E-02	3.152E-02	1.820E-02	NOT IDENT.
AG-110M	1.761E-02	4.084E-02	3.607E-02	2.084E-02	NOT IDENT.
IN-111	-6.609E-02	8.525E-01	7.298E-01	4.350E-01	NOT IDENT.
IN-113M	-1.806E-02	5.236E-02	4.271E-02	2.672E-02	NOT IDENT.
SN-113	-1.806E-02	5.236E-02	4.271E-02	2.672E-02	NOT IDENT.
IN-114M	7.382E-02	2.133E-01	1.672E-01	1.088E-01	NOT IDENT.
CD-115	1.080E+00	7.732E+00	6.773E+00	3.945E+00	NOT IDENT.
SN-117M	-4.368E-02	5.696E-02	4.845E-02	2.906E-02	NOT IDENT.
SB-122	7.341E-01	1.639E+00	1.461E+00	8.363E-01	NOT IDENT.
I-123	-4.523E+05	1.142E+06	0.000E+00	5.828E+05	SHORT HLIF
TE-123M	-1.249E-02	3.154E-02	2.726E-02	1.609E-02	NOT IDENT.
I-124	-5.242E-01	6.715E-01	5.020E-01	3.426E-01	NOT IDENT.
SB-124	-8.253E-02	9.278E-02	6.263E-02	4.733E-02	FAIL ABUN
SB-125	8.587E-02	1.056E-01	9.307E-02	5.390E-02	NOT IDENT.
TE-125M	-4.082E+00	1.060E+01	8.487E+00	5.407E+00	NOT IDENT.
I-126	2.745E-01	1.822E-01	1.742E-01	9.295E-02	NOT IDENT.
SB-126	4.509E-02	1.589E-01	1.347E-01	8.108E-02	FAIL ABUN
SB-127	1.070E-01	1.242E+00	1.066E+00	6.337E-01	NOT IDENT.
XE-127	-1.943E-02	5.304E-02	4.374E-02	2.706E-02	FAIL ABUN
I-131	-5.347E-02	1.172E-01	9.526E-02	5.982E-02	NOT IDENT.
TE-132	-4.452E-01	5.671E-01	4.673E-01	2.893E-01	NOT IDENT.
BA-133	-1.701E-02	5.455E-02	3.891E-02	2.783E-02	NOT IDENT.
I-133	6.291E+02	2.212E+03	0.000E+00	1.129E+03	SHORT HLIF
CS-134	1.328E-01	5.875E-02	5.764E-02	2.997E-02	NOT IDENT.
CS-135	1.545E-01	1.984E-01	1.572E-01	1.012E-01	NOT IDENT.
I-135	-6.170E+13	2.319E+14	0.000E+00	1.183E+14	SHORT HLIF
CS-136	-7.098E-02	1.251E-01	9.673E-02	6.383E-02	FAIL ABUN
BA-137M	-5.408E-02	4.183E-02	3.173E-02	2.134E-02	NOT IDENT.
CS-137	-5.717E-02	4.422E-02	3.354E-02	2.256E-02	NOT IDENT.
CE-139	-1.267E-02	3.240E-02	2.794E-02	1.653E-02	NOT IDENT.
BA-140	-2.659E-02	2.609E-01	2.240E-01	1.331E-01	NOT IDENT.
LA-140	-4.764E-02	1.057E-01	8.230E-02	5.395E-02	NOT IDENT.
CE-143	1.242E+02	8.990E+01	0.000E+00	4.587E+01	SHORT HLIF
CE-144	3.885E-02	2.323E-01	1.929E-01	1.185E-01	NOT IDENT.
PM-144	2.899E-02	3.936E-02	3.546E-02	2.008E-02	NOT IDENT.

PR-144	1.963E+00	2.665E+00	2.401E+00	1.360E+00	NOT IDENT.
PM-146	-6.797E-03	4.808E-02	3.933E-02	2.453E-02	NOT IDENT.
ND-147	-1.207E-01	5.621E-01	4.787E-01	2.868E-01	NOT IDENT.
PM-149	1.182E+01	6.820E+01	5.866E+01	3.480E+01	NOT IDENT.
EU-152	-4.280E-02	1.293E-01	9.828E-02	6.598E-02	FAIL ABUN
GD-153	-6.398E-03	9.650E-02	7.151E-02	4.924E-02	NOT IDENT.
EU-154	-6.479E-03	1.500E-01	1.270E-01	7.654E-02	NOT IDENT.
EU-155	1.070E-01	1.181E-01	1.024E-01	6.025E-02	FAIL ABUN
TB-160	-7.745E-02	1.751E-01	1.354E-01	8.936E-02	FAIL ABUN
HO-166M	5.116E-02	6.522E-02	5.924E-02	3.328E-02	NOT IDENT.
TM-171	-1.775E+01	3.652E+01	2.689E+01	1.863E+01	NOT IDENT.
LU-176	1.103E-02	3.325E-02	2.539E-02	1.696E-02	FAIL ABUN
LU-177	2.090E+00	1.567E+00	9.823E-01	7.997E-01	FAIL ABUN
LU-177M	-7.427E-02	2.092E-01	1.698E-01	1.067E-01	FAIL ABUN
HF-181	-3.195E-03	5.170E-02	4.176E-02	2.638E-02	NOT IDENT.
W-181	1.799E-01	4.699E-01	3.636E-01	2.398E-01	NOT IDENT.
TA-182	-4.000E-03	2.655E-01	2.263E-01	1.355E-01	FAIL ABUN
RE-183	7.598E-02	1.210E-01	1.088E-01	6.175E-02	FAIL ABUN
RE-184	-9.442E-02	2.611E-01	2.197E-01	1.332E-01	NOT IDENT.
OS-185	1.562E-02	4.943E-02	4.335E-02	2.522E-02	NOT IDENT.
RE-188	1.732E-01	1.795E-01	1.638E-01	9.160E-02	NOT IDENT.
W-188	-4.641E+00	9.657E+00	6.938E+00	4.927E+00	FAIL ABUN
IR-192	5.312E-02	3.950E-02	3.600E-02	2.015E-02	FAIL ABUN
AU-195	6.787E-02	2.466E-01	2.071E-01	1.258E-01	FAIL ABUN
TL-200	3.700E+02	2.191E+02	0.000E+00	1.118E+02	SHORT HLIF
TL-201	2.826E+00	5.532E+00	4.949E+00	2.823E+00	NOT IDENT.
TL-202	5.174E-02	7.588E-02	6.613E-02	3.872E-02	NOT IDENT.
HG-203	2.414E-02	4.550E-02	3.990E-02	2.322E-02	NOT IDENT.
BI-207	-9.732E-03	5.968E-02	4.824E-02	3.045E-02	FAIL ABUN
TL-207	-3.042E-01	7.658E-01	6.282E-01	3.907E-01	FAIL ABUN
PO-209	2.525E+00	9.228E+00	7.910E+00	4.708E+00	NOT IDENT.
BI-210	1.946E+00	4.749E+00	4.105E+00	2.423E+00	NOT IDENT.
PB-210	1.946E+00	4.749E+00	4.105E+00	2.423E+00	NOT IDENT.
PO-210	1.946E+00	4.748E+00	4.105E+00	2.423E+00	NOT IDENT.
PB-211	4.757E-01	1.088E+00	9.037E-01	5.553E-01	NOT IDENT.
BI-212	8.524E-01	3.914E-01	3.325E-01	1.997E-01	FAIL ABUN
PO-215	-3.042E-01	7.658E-01	6.282E-01	3.907E-01	FAIL ABUN
RN-219	-1.569E-01	4.700E-01	3.823E-01	2.398E-01	FAIL ABUN
RN-220	-1.814E+01	2.800E+01	2.290E+01	1.428E+01	NOT IDENT.
RA-223	-3.042E-01	7.658E-01	6.282E-01	3.907E-01	FAIL ABUN
AC-227	1.571E-01	4.416E-01	3.850E-01	2.253E-01	FAIL ABUN
TH-227	1.571E-01	4.419E-01	3.850E-01	2.254E-01	FAIL ABUN
TH-229	1.073E-01	5.444E-01	4.778E-01	2.777E-01	FAIL ABUN
PA-231	-9.340E-01	1.749E+00	1.441E+00	8.921E-01	FAIL ABUN
TH-231	-3.042E-01	7.658E-01	6.282E-01	3.907E-01	FAIL ABUN
U-231	-1.535E-01	1.037E+00	7.645E-01	5.289E-01	FAIL ABUN
PA-233	-1.311E-02	7.796E-02	6.545E-02	3.978E-02	FAIL ABUN
PA-234	1.012E-01	3.872E-01	3.298E-01	1.975E-01	FAIL ABUN
PA-234M	6.447E+00	8.682E+00	7.828E+00	4.430E+00	NOT IDENT.
NP-236	5.321E-02	8.829E-02	7.934E-02	4.505E-02	NOT IDENT.
NP-239	-3.624E-02	2.137E-01	1.756E-01	1.090E-01	FAIL ABUN
AM-241	2.211E-01	1.883E-01	1.531E-01	9.609E-02	NOT IDENT.
CM-243	4.130E-02	1.058E-01	8.980E-02	5.396E-02	FAIL ABUN
CM-247	-3.627E-02	4.222E-02	3.293E-02	2.154E-02	NOT IDENT.
CF-249	7.824E-04	4.577E-02	3.834E-02	2.335E-02	NOT IDENT.
CF-251	-5.841E-04	1.387E-01	1.212E-01	7.076E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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46.50	207.8987
46.50	207.8987
46.50	207.8987
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49.72	242.2876
51.35	226.5355
52.39	208.3465
52.97	217.9243
53.15	218.0013
53.44	232.6662
54.07	238.1515
56.28	271.5349
56.28	271.5369
57.37	0.0000
57.53	230.3019
57.53	230.3030
57.60	230.3321
57.98	227.5613
57.98	227.5613
59.32	212.6854
59.32	212.6854
59.40	212.7168
59.54	197.0100
59.72	197.0749
60.01	209.7988
61.10	246.5654
61.14	246.5832
61.30	246.6541
63.00	266.4327
63.29	266.5689
63.29	266.5689
63.58	266.7051
64.28	292.4639
65.12	296.0742
65.20	296.1154
65.20	296.1154
66.05	317.2762
66.72	320.8314
66.83	327.2771
66.91	327.3225
67.20	327.4836
67.20	327.4836
67.75	305.4030
67.85	296.3931
68.90	290.5080
68.90	290.5080
69.30	293.3736
69.67	296.7633
70.82	303.7552
70.82	303.7552
70.83	303.7595
72.80	304.1997
72.87	304.2342
72.87	304.2342
74.67	305.1123
74.81	305.1799
74.81	305.1799
74.81	305.1799
74.81	305.1799
74.81	305.1799
74.81	305.1799
74.97	305.2576
75.28	305.4088
75.70	305.6103
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77.11	306.2868
77.11	306.2868

77.11	306.2868
77.11	306.2868
77.11	306.2868
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79.80	288.5419
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80.30	326.2848
80.57	308.4660
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81.07	396.8995
81.07	396.8995
81.07	396.8995
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83.78	311.5941
83.78	311.5941
83.78	311.5941
83.78	311.5941
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84.40	292.1820
84.90	280.8978
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86.29	383.5224
86.50	383.6397
86.54	390.2475
86.59	390.2765
86.72	390.3497
86.79	444.7465
86.94	444.8433
87.30	458.9229
87.30	458.9229
87.30	458.9229
87.30	458.9229
87.30	458.9229
87.30	458.9229
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87.88	372.8555
88.03	412.5404
88.36	359.9049
88.47	359.9615
89.95	413.6715
91.11	414.3486
92.29	346.4145
92.38	346.4575
92.38	346.4575
93.35	346.9255
94.00	237.9620
94.67	234.8490
94.67	234.8501
94.90	243.2550
94.90	243.2550
94.90	243.2550
94.90	243.2550
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95.87	265.2665
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97.43	240.7489
98.44	241.0752
98.44	241.0752
98.88	227.8160
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99.55	217.9597
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100.00	224.8011
100.10	230.4246
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103.76	232.6539
105.00	224.0208
105.31	224.1098
108.00	270.0797
109.28	259.1963
111.00	264.2890
111.00	264.2890

111.76	269.0793
112.95	258.1033
115.19	274.7705
116.30	272.8561
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117.00	246.8057
117.66	241.2825
121.11	253.7518
121.62	252.7547
121.78	263.1436
122.06	263.2298
122.32	243.7620
122.32	243.7620
122.32	243.7620
122.32	243.7620
123.07	268.1429
127.23	253.2383
129.76	259.7610
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135.34	269.5376
136.00	254.8448
136.25	249.6577
136.48	249.7207
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140.51	0.0000
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142.65	232.8510
143.76	257.8503
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144.24	257.9795
144.24	257.9795
144.24	257.9795
145.22	258.2446
145.44	258.3026
147.16	252.3832
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152.70	256.6670
153.22	239.8613
154.21	216.8928
154.21	216.8928
154.21	216.8928
154.21	216.8928
155.03	221.5372
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159.00	268.1492
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161.27	238.1850
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162.64	255.6026
163.35	251.2750
163.89	263.1190
165.85	252.7823
167.43	223.3255
171.28	236.8419
171.86	220.6285
172.10	232.4824
176.55	223.4107
176.60	232.5412
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184.41	257.1487
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186.00	235.4395
190.27	206.7837
192.34	221.9531
193.63	210.1662
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201.83	243.3354
202.84	239.9434
205.31	233.3849
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208.81	219.4303

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209.75	196.7015
210.97	216.4359
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216.55	195.3322
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223.80	196.4567
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227.20	219.8159
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228.18	203.7941
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236.00	199.2656
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238.63	181.4225
238.63	181.4225
239.00	181.4730
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241.98	181.8767
241.98	181.8767
241.98	181.8767
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245.39	182.3353
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248.90	147.0169
249.79	170.3416
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252.85	173.6289
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256.20	168.2121
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268.79	141.2578
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269.46	149.1750
269.46	149.1750
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277.60	152.9684
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278.60	149.1199
279.20	152.1460
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284.30	164.5613
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301.29	146.3453
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323.87	132.1542
323.87	132.1542
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338.28	119.9689
338.28	119.9689
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351.92	110.5870
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391.69	114.0974
392.90	95.1430
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439.89	69.2959
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445.03	92.2645
445.03	92.2645
445.03	92.2645
445.03	92.2645
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513.99	69.9182
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569.50	73.4082
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592.07	65.7409
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602.71	87.1696
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609.31	68.9812
609.31	68.9812

609.31	68.9812
610.33	69.0083
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614.37	73.1640
618.01	77.1625
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621.84	61.8202
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661.65	84.6087
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696.49	56.7904
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722.78	72.8485
722.89	72.8522
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735.90	53.6599
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744.21	55.7656
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752.31	61.8018
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756.15	55.9869
756.87	56.9833
763.93	52.5195
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766.84	44.3551
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768.36	39.4463
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911.07	51.5002
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969.11	47.1072
969.11	47.1072
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1077.35	59.2297
1085.78	50.7224
1099.22	56.3062
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1120.29	54.4214
1120.29	54.4214
1120.29	54.4214
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1238.11	75.5288
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1325.50	35.1708
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1360.21	19.1512
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1365.15	29.7159
1368.21	22.0613
1368.53	0.0000
1376.25	19.2155
1377.67	26.9097
1377.67	26.9097
1377.67	26.9097
1377.67	26.9097
1384.27	25.0225
1394.10	25.0732
1395.20	25.0785
1407.95	30.9466
1434.06	17.4998
1436.60	15.5632
1457.56	0.0000
1460.81	13.6838
1489.15	10.8120
1509.49	13.8149
1596.49	26.0815
1620.62	14.1065
1678.03	0.0000
1691.02	18.3677
1691.02	18.3677

1706.46	0.0000
1750.46	0.0000
1764.49	6.2012
1764.49	6.2012
1764.49	6.2012
1764.49	6.2012
1770.23	7.0940
1771.40	25.8687
1791.20	0.0000
1808.65	6.2476
1836.01	6.2761

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232424001

Total Uranium Activity	6.2396E+00	ug/g
Total Uranium Counting Unc.	7.2160E+00	ug/g
Total Uranium Tpu	3.6816E-06	ug/g
Total Uranium Mda	3.6293E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID   : G232424001      *
*   ANALYST       : MXR1                      DETECTOR    : GAM01           *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 06:03:34.60    SAMPLE ALQT:  116.500 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.072E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.658E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.835E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.364E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:12:11.88

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871423.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:11:44.
Sample ID         : G1201871423          Sample quantity  : 1.37710E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.56  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.29*	23	150	1.03	125.78	121	11	3.13E-03	117.8	
2	0	92.53*	15	172	1.16	184.28	179	10	2.07E-03	208.3	
3	0	143.63*	40	83	0.71	286.54	283	7	5.60E-03	48.2	
4	0	185.75*	26	138	1.26	370.83	366	10	3.55E-03	104.9	
5	0	511.04*	3	52	2.77	1021.75	1015	15	3.67E-04	824.9	
6	0	609.39*	13	31	1.45	1218.58	1213	11	1.77E-03	98.9	
7	0	1460.60*	8	3	1.40	2922.20	2914	15	1.11E-03	89.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:12:14

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871423.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:11:44
Sample ID : G1201871423 Sample quantity : 137.71 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA2 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.56 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	1.959E-01	3.499E-01	4.568E-01	3.386E-02	0.429
TH-234	+	63.29	*	6.338E-01	1.497E+00	1.155E+00	2.111E-01	0.549
	+	92.38		1.337E-01	5.577E-01	4.341E-01	8.302E-02	0.308
U-235		89.95		9.130E-02	5.859E-01	8.909E-01	2.824E-01	0.102
	+	93.35		1.608E-01	6.714E-01	5.350E-01	1.531E-01	0.300
		105.00		-5.032E-01	5.791E-01	8.657E-01	2.572E-01	-0.581
	+	143.76	*	1.696E-01	1.657E-01	1.840E-01	3.027E-02	0.922
		163.35		-2.128E-01	3.027E-01	4.376E-01	8.005E-02	-0.486
	+	185.71		2.368E-02	4.973E-02	4.333E-02	3.105E-03	0.547
		205.31		-3.554E-02	3.385E-01	5.022E-01	9.360E-02	-0.071
U-238	+	63.29	*	6.338E-01	1.497E+00	1.155E+00	2.111E-01	0.549
	+	92.38		1.337E-01	5.573E-01	4.341E-01	4.614E-02	0.308
ANH-511	+	511.00	*	2.762E-03	4.556E-02	3.220E-02	2.106E-03	0.086

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.623E-02	1.892E-01	3.122E-01	2.295E-02	0.116
NA-22		1274.54	*	1.611E-03	1.906E-02	3.199E-02	2.139E-03	0.050
NA-24		1368.53	*	-5.633E-05	1.906E-02	Half-Life too short		
AL-26		1129.67		-4.332E-01	8.886E-01	1.341E+00	8.482E-02	-0.323
		1808.65	*	1.551E-02	2.462E-02	4.643E-02	2.615E-03	0.334
TI-44		67.85		-4.884E-03	2.536E-02	3.797E-02	3.674E-03	-0.129
		78.38	*	-4.926E-03	1.660E-02	2.737E-02	2.917E-03	-0.180
SC-46		889.25	*	-1.073E-03	2.261E-02	3.638E-02	3.352E-03	-0.029
		1120.51		-1.345E-02	2.959E-02	4.760E-02	3.085E-03	-0.283
V-48		944.10		2.904E-01	3.997E-01	7.184E-01	6.389E-02	0.404
		983.50	*	4.934E-02	2.839E-02	5.868E-02	4.962E-03	0.841
		1312.09		1.180E-02	3.420E-02	5.980E-02	4.256E-03	0.197
CR-51		320.08	*	7.057E-02	1.756E-01	3.032E-01	2.703E-02	0.233
MN-52		744.21		-3.811E-02	5.235E-02	7.611E-02	5.602E-03	-0.501
		848.13		-1.349E+00	1.634E+00	2.293E+00	1.987E-01	-0.588
		935.52		-2.060E-03	5.982E-02	9.179E-02	8.243E-03	-0.022

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1246.25		9.519E-01	1.112E+00	2.175E+00	1.380E-01	0.438
		1333.61		-1.172E-01	1.104E+00	1.765E+00	1.299E-01	-0.066
		1434.06	*	-1.834E-03	6.166E-02	9.967E-02	7.161E-03	-0.018
MN-54		834.83	*	-1.068E-02	2.016E-02	2.986E-02	2.536E-03	-0.358
CO-56		846.75	*	-1.470E-02	2.323E-02	3.395E-02	2.936E-03	-0.433
		977.42		-4.363E-01	1.466E+00	2.210E+00	1.885E-01	-0.197
		1037.82		7.878E-02	1.838E-01	3.265E-01	2.698E-02	0.241
		1175.09		-5.658E-01	8.861E-01	1.243E+00	6.902E-02	-0.455
		1238.25		-1.852E-02	3.414E-02	5.028E-02	3.316E-03	-0.368
		1360.21		-2.993E-01	5.457E-01	7.713E-01	5.649E-02	-0.388
		1771.40		-1.751E-01	1.646E-01	1.901E-01	1.111E-02	-0.921
CO-57		122.06	*	-5.960E-05	1.250E-02	2.057E-02	1.214E-03	-0.003
		136.48		1.637E-02	1.178E-01	1.946E-01	1.353E-02	0.084
CO-58		810.76	*	-2.890E-03	2.247E-02	3.602E-02	2.957E-03	-0.080
FE-59	+	142.65		1.939E+00	1.872E+00	2.713E+00	1.677E-01	0.715
		192.34		-3.584E-01	5.301E-01	7.999E-01	1.010E-01	-0.448
		1099.22	*	3.732E-02	4.653E-02	8.701E-02	6.697E-03	0.429
		1291.56		3.878E-03	4.986E-02	8.345E-02	6.915E-03	0.046
CO-60		1173.22		-1.148E-02	1.813E-02	2.524E-02	1.397E-03	-0.455
		1332.49	*	4.525E-02	2.179E-02	3.732E-02	2.747E-03	0.121
ZN-65		1115.52	*	-3.686E-02	5.202E-02	7.661E-02	5.039E-03	-0.481
GE-68		1077.35	*	4.267E-01	6.411E-01	1.191E+00	8.550E-02	0.358
AS-73		53.44	*	5.673E-01	5.483E-01	1.001E+00	8.958E-02	0.567
AS-74		595.88	*	2.517E-02	4.455E-02	7.911E-02	5.169E-03	0.318
		634.78		-6.195E-02	1.538E-01	2.426E-01	1.569E-02	-0.255
SE-75		66.05		5.239E-01	2.541E+00	3.961E+00	4.429E-01	0.132
		96.73		8.111E-02	4.519E-01	6.863E-01	9.817E-02	0.118
		121.11		-2.452E-03	6.442E-02	1.058E-01	9.900E-03	-0.023
		136.00		9.158E-03	2.179E-02	3.670E-02	2.253E-03	0.250
		198.60		1.212E-01	1.075E+00	1.659E+00	1.413E-01	0.073
		264.65	*	1.334E-02	2.430E-02	4.271E-02	3.829E-03	0.312
		279.53		-8.538E-03	7.743E-02	1.230E-01	1.173E-02	-0.069
		303.91		-1.645E-01	1.192E+00	1.964E+00	2.282E-01	-0.084
		400.65		-4.045E-02	1.433E-01	2.268E-01	2.131E-02	-0.178
BR-77		87.88		4.287E+00	9.312E+00	1.458E+01	1.721E+00	0.294
		200.40		2.287E+00	9.884E+00	1.608E+01	1.204E+00	0.142
		239.00		-2.645E-01	6.326E-01	1.029E+00	8.600E-02	-0.257
		249.79		-4.629E+00	4.309E+00	6.656E+00	5.721E-01	-0.695
		281.68		-3.930E+00	6.063E+00	9.638E+00	8.870E-01	-0.408
		297.23		1.089E-01	3.245E+00	5.440E+00	4.862E-01	0.020
		303.76		-1.676E+00	1.098E+01	1.808E+01	1.592E+00	-0.093
		439.47		-1.595E+00	9.225E+00	1.468E+01	9.385E-01	-0.109
		484.57		-5.853E+00	1.487E+01	2.275E+01	1.480E+00	-0.257
		520.65	*	5.884E-01	7.066E-01	1.245E+00	8.156E-02	0.472
		574.64		-9.586E+00	1.323E+01	2.030E+01	1.330E+00	-0.472
		578.91		1.038E+00	5.385E+00	9.246E+00	6.056E-01	0.112
		585.48		6.920E-01	1.053E+01	1.780E+01	1.165E+00	0.039
		755.35		7.308E+00	9.625E+00	1.757E+01	1.317E+00	0.416
		817.79		1.088E+00	8.424E+00	1.404E+01	1.162E+00	0.078

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SR-82		698.33		5.588E+00	1.606E+01	2.779E+01	1.894E+00	0.201
		776.49	*	2.001E-02	1.781E-01	2.972E-01	2.305E-02	0.067
		1395.20		4.253E-01	5.343E+00	8.875E+00	6.448E-01	0.048
RB-83		520.41	*	3.147E-02	4.258E-02	7.429E-02	4.865E-03	0.424
		529.64		2.414E-02	6.596E-02	1.103E-01	7.232E-03	0.219
		552.65		3.245E-02	9.895E-02	1.739E-01	1.141E-02	0.187
RB-84		881.50	*	1.702E-03	3.386E-02	5.546E-02	5.052E-03	0.031
KR-85		513.99	*	1.028E+01	5.245E+00	9.344E+00	6.114E-01	1.100
SR-85		513.99	*	4.857E-02	2.478E-02	4.415E-02	2.889E-03	1.100
RB-86		1076.63	*	2.725E-02	3.172E-01	5.375E-01	3.864E-02	0.051
Y-88		898.02		7.787E-03	2.492E-02	4.234E-02	3.968E-03	0.184
		1836.01	*	-1.220E-02	2.361E-02	3.321E-02	1.821E-03	-0.367
ZR-88		392.90	*	-1.979E-03	1.687E-02	2.727E-02	1.695E-03	-0.073
Y-91		1204.90	*	-1.554E+00	8.362E+00	1.333E+01	7.839E-01	-0.117
NB-94		702.63	*	-1.782E-02	2.134E-02	3.139E-02	2.156E-03	-0.568
		871.10		-1.108E-02	2.244E-02	3.356E-02	3.011E-03	-0.330
NB-95		765.79	*	2.702E-02	2.627E-02	4.599E-02	3.506E-03	0.588
NB-95M		235.69	*	-6.551E-02	6.366E-02	9.939E-02	9.512E-03	-0.659
ZR-95		724.18		-2.373E-02	5.574E-02	8.707E-02	6.972E-03	-0.273
		756.15	*	2.261E-02	3.666E-02	6.571E-02	5.581E-03	0.344
NB-97		657.90	*	-1.606E-06	3.666E-02	Half-Life too short		
		1024.50		-9.312E-04	3.666E-02	Half-Life too short		
ZR-97		254.15		1.774E-03	3.666E-02	Half-Life too short		
		355.39		-1.111E-03	3.666E-02	Half-Life too short		
		507.63	*	5.287E-04	3.666E-02	Half-Life too short		
		602.52		-1.194E-03	3.666E-02	Half-Life too short		
		1021.30		7.471E-04	3.666E-02	Half-Life too short		
		1147.95		3.176E-04	3.666E-02	Half-Life too short		
		1362.66		4.745E-04	3.666E-02	Half-Life too short		
		1750.46		5.766E-04	3.666E-02	Half-Life too short		
MO-99		140.51		-2.006E-01	2.411E+00	3.488E+00	9.426E-01	-0.058
		181.06		2.467E-01	1.519E+00	2.212E+00	3.896E-01	0.112
		366.43		-3.678E+00	7.880E+00	1.238E+01	8.813E-01	-0.297
		739.58	*	9.843E-01	9.265E-01	1.740E+00	2.520E-01	0.566
		778.00		1.925E+00	2.727E+00	4.938E+00	3.839E-01	0.390
TC-99M		140.51	*	-9.642E-01	2.727E+00	Half-Life too short		
RH-101		127.23		6.313E-03	1.796E-02	3.022E-02	1.791E-03	0.209
		198.01	*	-7.348E-03	2.112E-02	3.143E-02	2.336E-03	-0.234
		325.23		4.561E-02	1.223E-01	2.105E-01	1.752E-02	0.217
RH-102		418.52		9.166E-02	1.813E-01	3.114E-01	1.968E-02	0.294
		475.06	*	1.059E-02	1.911E-02	3.278E-02	2.126E-03	0.323
		631.29		2.750E-02	3.280E-02	6.024E-02	3.901E-03	0.456
		697.49		2.557E-02	4.454E-02	7.917E-02	5.390E-03	0.323
		766.84		2.494E-02	7.184E-02	1.166E-01	8.906E-03	0.214
		1046.59		2.310E-02	6.195E-02	1.101E-01	8.404E-03	0.210
		1112.84		1.304E-02	1.170E-01	1.985E-01	1.312E-02	0.066
RU-103		497.08	*	7.189E-03	2.351E-02	3.916E-02	5.088E-03	0.184
	+	610.33		3.118E-01	6.183E-01	8.515E-01	1.337E-01	0.366
RH-106	+	511.85		1.359E-02	2.243E-01	3.124E-01	2.043E-02	0.044

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		621.84	*	8.930E-02	2.153E-01	3.755E-01	4.542E-02	0.238
		1050.47		-4.969E-01	1.209E+00	1.869E+00	1.416E-01	-0.266
RU-106	+	511.85		1.359E-02	2.243E-01	3.124E-01	2.043E-02	0.044
		621.84	*	8.930E-02	2.152E-01	3.755E-01	2.439E-02	0.238
		1050.47		-4.969E-01	1.209E+00	1.869E+00	1.416E-01	-0.266
AG-108M		433.93	*	-2.695E-03	1.894E-02	3.024E-02	2.066E-03	-0.089
		614.37		1.206E-02	2.635E-02	4.127E-02	2.868E-03	0.292
		722.95		-1.663E-02	2.796E-02	4.273E-02	3.210E-03	-0.389
CD-109		88.03	*	6.468E-02	4.205E-01	6.411E-01	7.573E-02	0.101
AG-110M		657.75	*	-1.189E-03	2.156E-02	3.563E-02	2.405E-03	-0.033
		677.61		1.382E-01	1.722E-01	3.160E-01	2.179E-02	0.437
		706.67		1.291E-01	1.333E-01	2.447E-01	1.764E-02	0.527
		763.93		5.816E-02	9.711E-02	1.721E-01	1.355E-02	0.338
		884.67		-1.275E-02	2.873E-02	4.290E-02	4.038E-03	-0.297
		937.48		-3.779E-02	6.006E-02	8.460E-02	7.835E-03	-0.447
		1384.27		-1.311E-02	1.023E-01	1.625E-01	1.230E-02	-0.081
IN-111		171.28		-2.464E-02	9.200E-02	1.453E-01	9.985E-03	-0.170
		245.39	*	3.736E-02	9.711E-02	1.688E-01	1.434E-02	0.221
IN-113M		391.69	*	-1.936E-02	2.637E-02	3.967E-02	2.608E-03	-0.488
SN-113		391.69	*	-1.936E-02	2.637E-02	3.967E-02	2.608E-03	-0.488
IN-114M		190.27	*	5.360E-02	1.128E-01	1.685E-01	1.224E-02	0.318
CD-115		260.90		-8.604E-01	6.836E+00	1.141E+01	1.009E+00	-0.075
		492.35		7.401E-01	2.047E+00	3.441E+00	2.242E-01	0.215
		527.90	*	3.576E-01	6.462E-01	1.103E+00	7.232E-02	0.324
SN-117M		156.02		-3.562E-01	8.827E-01	1.388E+00	9.015E-02	-0.257
		158.56	*	-8.652E-03	2.191E-02	3.444E-02	2.260E-03	-0.251
SB-122		563.90	*	-6.955E-02	1.565E-01	2.485E-01	1.630E-02	-0.280
		692.80		-2.130E+00	3.354E+00	5.036E+00	3.402E-01	-0.423
I-123		159.00	*	-7.973E-05	3.354E+00	Half-Life too short		
		528.96		1.444E-02	3.354E+00	Half-Life too short		
TE-123M		159.00	*	-7.149E-03	1.628E-02	2.549E-02	1.694E-03	-0.280
I-124		602.71	*	-4.791E-02	1.379E-01	1.995E-01	1.302E-02	-0.240
		722.78		-5.222E-01	8.108E-01	1.231E+00	8.748E-02	-0.424
		1325.50		-2.564E+00	5.740E+00	8.492E+00	6.180E-01	-0.302
		1376.25		2.842E+00	4.902E+00	8.956E+00	6.537E-01	0.317
		1509.49		-1.444E+00	2.599E+00	3.558E+00	2.485E-01	-0.406
		1691.02		-5.253E-01	6.550E-01	8.047E-01	5.039E-02	-0.653
SB-124		602.71		-9.244E-03	2.661E-02	3.849E-02	2.512E-03	-0.240
		645.85		-4.021E-02	2.990E-01	4.901E-01	3.489E-02	-0.082
		709.31		-1.023E+00	1.722E+00	2.636E+00	1.831E-01	-0.388
		713.82		6.130E-02	9.172E-01	1.529E+00	1.673E-01	0.040
		722.78		-1.460E-01	2.268E-01	3.444E-01	2.524E-02	-0.424
		968.20		-3.419E-02	1.423E+00	2.157E+00	1.861E-01	-0.016
		1045.16		4.416E-01	1.295E+00	2.285E+00	1.749E-01	0.193
		1325.50		-7.658E-01	1.715E+00	2.537E+00	1.846E-01	-0.302
		1368.21		-5.776E-01	9.973E-01	1.402E+00	1.777E-01	-0.412
		1436.60		0.000E+00	2.483E+00	4.038E+00	2.899E-01	0.000
		1691.02	*	-3.465E-02	4.322E-02	5.308E-02	3.569E-03	-0.653
SB-125		427.89	*	-1.343E-02	6.103E-02	9.699E-02	6.382E-03	-0.138

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		463.38		-9.436E-02	1.709E-01	2.577E-01	1.891E-02	-0.366
		600.56		1.221E-02	1.161E-01	1.967E-01	1.445E-02	0.062
		635.90		-7.679E-02	1.562E-01	2.427E-01	1.788E-02	-0.316
TE-125M		109.28	*	-8.148E-01	4.958E+00	8.121E+00	7.650E-01	-0.100
I-126		388.63		7.195E-02	8.396E-02	1.493E-01	9.446E-03	0.482
		666.33	*	-3.413E-02	7.550E-02	1.184E-01	7.636E-03	-0.288
		753.82		8.161E-02	5.916E-01	9.921E-01	7.418E-02	0.082
SB-126		223.80		6.160E-02	1.591E+00	2.530E+00	2.027E-01	0.024
		278.60		-3.750E-01	1.183E+00	1.852E+00	1.709E-01	-0.203
		296.50		3.151E-01	5.261E-01	9.209E-01	8.242E-02	0.342
		414.70		-1.894E-02	2.970E-02	4.484E-02	2.828E-03	-0.422
		415.30		-2.893E-01	2.463E+00	3.966E+00	2.502E-01	-0.073
		555.20		-9.526E-01	1.443E+00	2.220E+00	1.457E-01	-0.429
		573.80		-4.860E-01	4.171E-01	5.998E-01	3.931E-02	-0.810
		593.00		-3.704E-01	4.128E-01	6.041E-01	3.949E-02	-0.613
		656.30		-9.363E-01	1.410E+00	2.151E+00	1.380E-01	-0.435
		666.33		-1.401E-02	3.099E-02	4.858E-02	3.134E-03	-0.288
		675.00		-5.240E-01	8.154E-01	1.238E+00	8.110E-02	-0.423
		695.00		3.528E-03	2.810E-02	4.736E-02	3.211E-03	0.074
		697.00		6.422E-02	1.005E-01	1.801E-01	1.225E-02	0.357
		720.50	*	3.040E-02	6.046E-02	1.059E-01	7.498E-03	0.287
		856.80		-1.717E-01	1.950E-01	2.718E-01	2.387E-02	-0.632
		989.30		-5.816E-02	5.453E-01	8.606E-01	7.217E-02	-0.068
		1034.80		-6.730E-01	3.440E+00	5.583E+00	4.354E-01	-0.121
		1213.00		-7.986E-01	1.751E+00	2.423E+00	1.446E-01	-0.330
SN-126	+	64.28		2.509E-01	5.922E-01	5.925E-01	9.240E-02	0.423
		86.94		-6.722E-02	1.742E-01	2.669E-01	1.123E-01	-0.252
		87.57	*	1.294E-02	4.218E-02	6.519E-02	7.667E-03	0.199
SB-127		61.10		-6.408E+00	9.436E+00	1.373E+01	1.312E+00	-0.467
		252.40		1.411E-01	6.680E-01	1.142E+00	4.749E-01	0.124
		290.80		-8.705E-01	3.077E+00	5.023E+00	4.867E-01	-0.173
		411.60		-1.837E+00	1.861E+00	2.667E+00	3.521E-01	-0.689
		444.90		-1.300E+00	1.548E+00	2.250E+00	2.081E-01	-0.578
		473.00		-2.661E-02	2.880E-01	4.604E-01	4.484E-02	-0.058
		543.00		-9.331E-01	2.490E+00	3.756E+00	4.406E-01	-0.248
		603.60		-7.358E-01	2.093E+00	2.893E+00	2.688E-01	-0.254
		685.20	*	3.772E-02	1.872E-01	3.193E-01	2.502E-02	0.118
		698.50		1.331E+00	2.154E+00	3.842E+00	5.213E-01	0.346
		722.20		-8.103E-01	4.776E+00	7.718E+00	6.092E-01	-0.105
		783.80		-2.040E-01	5.282E-01	8.150E-01	8.275E-02	-0.250
XE-127		57.60		1.135E+00	3.234E+00	5.657E+00	4.951E-01	0.201
		145.22		4.958E-01	3.769E-01	6.143E-01	3.831E-02	0.807
		172.10		-4.216E-02	6.330E-02	9.667E-02	6.657E-03	-0.436
		202.84	*	-2.600E-02	2.430E-02	3.503E-02	2.642E-03	-0.742
		374.96		-5.146E-03	1.018E-01	1.666E-01	1.137E-02	-0.031
I-131		80.18		-4.738E-01	1.104E+00	1.800E+00	1.955E-01	-0.263
		284.30		-9.820E-02	4.761E-01	7.845E-01	7.490E-02	-0.125
		364.48	*	2.987E-02	3.820E-02	6.747E-02	5.190E-03	0.443
		636.97		-3.437E-01	4.917E-01	7.444E-01	5.242E-02	-0.462

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.89		-1.433E+00	2.409E+00	3.681E+00	2.622E-01	-0.389
TE-132		49.72		-1.156E+00	3.168E+00	4.737E+00	4.372E-01	-0.244
		111.76		8.257E-01	3.462E+00	5.550E+00	4.367E-01	0.149
		116.30		-6.280E-01	2.821E+00	4.579E+00	3.357E-01	-0.137
		228.16	*	-7.498E-02	8.273E-02	1.188E-01	1.702E-02	-0.631
BA-133		53.15		2.110E+00	2.596E+00	4.677E+00	4.186E-01	0.451
		79.62		-4.479E-01	6.067E-01	9.589E-01	1.587E-01	-0.467
		81.00		-1.722E-02	4.643E-02	7.590E-02	1.309E-02	-0.227
		276.40		-1.296E-01	2.439E-01	3.925E-01	5.804E-02	-0.330
		302.84		4.371E-03	8.598E-02	1.442E-01	1.935E-02	0.030
		356.01	*	-2.969E-02	2.785E-02	4.067E-02	5.073E-03	-0.730
		383.85		-5.226E-02	1.891E-01	3.013E-01	3.394E-02	-0.173
I-133	+	510.53		5.596E-05	1.891E-01	Half-Life too short		
		529.87	*	6.869E-06	1.891E-01	Half-Life too short		
		706.58		5.252E-04	1.891E-01	Half-Life too short		
		856.28		-5.369E-04	1.891E-01	Half-Life too short		
		875.33		9.397E-05	1.891E-01	Half-Life too short		
		1236.41		2.240E-04	1.891E-01	Half-Life too short		
		1298.22		2.747E-04	1.891E-01	Half-Life too short		
CS-134		475.35		6.433E-01	1.258E+00	2.147E+00	1.393E-01	0.300
		563.23		-1.027E-01	2.036E-01	3.212E-01	2.141E-02	-0.320
		569.32		4.592E-02	1.167E-01	2.051E-01	1.376E-02	0.224
		604.70		-4.691E-03	2.295E-02	3.229E-02	2.116E-03	-0.145
		795.84	*	1.080E-02	2.575E-02	4.482E-02	3.615E-03	0.241
		801.93		1.108E-01	2.468E-01	4.292E-01	3.487E-02	0.258
		1038.57		8.584E-01	2.348E+00	4.144E+00	3.211E-01	0.207
		1167.94		8.207E-01	1.079E+00	2.059E+00	1.160E-01	0.399
		1365.15		1.142E-01	6.919E-01	1.175E+00	9.136E-02	0.097
CS-135		268.24	*	-7.630E-02	9.398E-02	1.473E-01	1.517E-02	-0.518
I-135		288.45		-7.776E+00	9.398E-02	Half-Life too short		
		417.63		3.913E+01	9.398E-02	Half-Life too short		
		546.56		1.064E+00	9.398E-02	Half-Life too short		
		836.80		-2.443E+01	9.398E-02	Half-Life too short		
		1038.76		1.048E+01	9.398E-02	Half-Life too short		
		1124.00		-4.657E+01	9.398E-02	Half-Life too short		
		1131.51		-7.460E+00	9.398E-02	Half-Life too short		
		1260.41	*	-2.804E+00	9.398E-02	Half-Life too short		
		1457.56		4.484E+01	9.398E-02	Half-Life too short		
		1678.03		9.716E+00	9.398E-02	Half-Life too short		
		1706.46		-3.100E+01	9.398E-02	Half-Life too short		
		1791.20		-2.775E+01	9.398E-02	Half-Life too short		
CS-136		66.91		9.824E-03	2.811E-01	4.308E-01	6.891E-02	0.023
		86.29		-1.467E-01	3.454E-01	5.615E-01	8.424E-02	-0.261
		153.22		7.682E-02	2.448E-01	4.070E-01	3.145E-02	0.189
		163.89		-5.318E-01	4.536E-01	6.307E-01	5.040E-02	-0.843
		176.55		3.252E-02	1.455E-01	2.383E-01	1.806E-02	0.136
		273.65		2.872E-02	1.869E-01	3.178E-01	3.068E-02	0.090
		340.57		3.304E-02	4.646E-02	8.198E-02	6.708E-03	0.403
		818.51		-1.064E-02	3.082E-02	4.761E-02	3.945E-03	-0.223

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1048.07	*	-1.769E-02	4.013E-02	6.196E-02	4.968E-03	-0.286
		1235.34		1.058E-02	1.446E-01	2.425E-01	2.481E-02	0.044
BA-137M		661.65	*	9.717E-03	2.201E-02	3.854E-02	2.467E-03	0.252
CS-137		661.65	*	1.027E-02	2.327E-02	4.074E-02	2.617E-03	0.252
CE-139		165.85	*	-2.109E-02	1.729E-02	2.516E-02	1.703E-03	-0.838
BA-140		162.64		-4.334E-02	3.146E-01	4.811E-01	3.518E-02	-0.090
		304.84		-1.379E-01	5.160E-01	8.386E-01	2.355E-01	-0.164
		423.70		-3.735E-01	7.922E-01	1.206E+00	3.846E-01	-0.310
		537.32	*	7.402E-02	1.042E-01	1.781E-01	5.816E-02	0.416
LA-140		328.77		3.992E-02	1.068E-01	1.836E-01	1.605E-02	0.217
		432.53		-5.664E-02	8.107E-01	1.308E+00	9.058E-02	-0.043
		487.03		3.676E-02	5.693E-02	9.879E-02	7.111E-03	0.372
		751.79		4.326E-02	6.652E-01	1.105E+00	9.394E-02	0.039
		815.85		1.002E-01	1.264E-01	2.306E-01	2.140E-02	0.434
		867.82		2.163E-01	5.850E-01	1.003E+00	9.400E-02	0.216
		919.63		1.761E-01	1.089E+00	1.810E+00	2.003E-01	0.097
		925.24		5.250E-02	4.804E-01	7.901E-01	7.583E-02	0.066
		1596.49	*	-1.244E-02	4.424E-02	7.012E-02	4.684E-03	-0.177
CE-141		145.44	*	2.675E-02	3.240E-02	5.094E-02	3.289E-03	0.525
CE-143		57.37		8.337E-02	1.309E+01	2.237E+01	2.206E+00	0.004
		231.56		1.957E+01	3.114E+01	5.099E+01	1.602E+01	0.384
		293.26	*	4.940E-01	1.479E+00	2.538E+00	5.470E-01	0.195
		350.59		6.393E+00	2.077E+01	3.511E+01	1.078E+01	0.182
		490.36		-1.264E+01	3.758E+01	5.767E+01	1.789E+01	-0.219
		664.57		3.410E+00	1.612E+01	2.743E+01	8.710E+00	0.124
		721.93		-1.220E+00	1.815E+01	2.972E+01	8.533E+00	-0.041
CE-144		80.11		-4.448E-01	9.736E-01	1.583E+00	1.717E-01	-0.281
		133.54	*	-3.965E-02	1.179E-01	1.882E-01	2.689E-02	-0.211
PM-144		476.78		1.208E-02	4.301E-02	7.171E-02	5.395E-03	0.168
		618.01		-9.445E-03	2.069E-02	3.275E-02	2.230E-03	-0.288
		696.49	*	4.969E-03	1.967E-02	3.367E-02	2.289E-03	0.148
		778.57		9.354E-01	1.319E+00	2.383E+00	1.855E-01	0.392
PR-144		696.49	*	3.353E-01	1.328E+00	2.272E+00	1.544E-01	0.148
		1489.15		5.570E+00	7.428E+00	1.415E+01	9.965E-01	0.394
PM-146		453.90	*	3.326E-03	2.701E-02	4.441E-02	4.024E-03	0.075
		633.02		-2.991E-01	8.319E-01	1.310E+00	4.839E-01	-0.228
		735.90		-5.276E-02	9.103E-02	1.352E-01	3.815E-02	-0.390
		747.13		-4.514E-03	5.050E-02	8.197E-02	1.092E-02	-0.055
ND-147	+	91.11		4.118E-02	1.716E-01	1.927E-01	2.219E-02	0.214
		319.41		-2.750E-01	1.223E+00	1.991E+00	1.686E-01	-0.138
		439.89		3.881E-01	2.097E+00	3.483E+00	2.227E-01	0.111
		531.02	*	1.084E-02	2.283E-01	3.675E-01	5.095E-02	0.029
PM-149		285.90	*	1.942E+00	4.923E+00	8.500E+00	1.344E+00	0.228
EU-152		121.78		6.605E-03	3.752E-02	6.263E-02	4.824E-03	0.105
		244.69		6.551E-02	2.018E-01	3.492E-01	2.962E-02	0.188
		344.27	*	-5.941E-02	6.066E-02	9.028E-02	7.560E-03	-0.658
		443.98		-6.350E-01	6.309E-01	8.998E-01	5.765E-02	-0.706
		778.89		9.235E-02	1.588E-01	2.818E-01	2.194E-02	0.328
		867.32		8.014E-02	5.258E-01	8.748E-01	7.804E-02	0.092

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		964.01		-9.017E-04	1.637E-01	2.633E-01	2.285E-02	-0.003
		1085.78		1.016E-01	2.160E-01	3.887E-01	2.739E-02	0.261
		1112.02		7.323E-02	1.659E-01	2.969E-01	1.967E-02	0.247
		1407.95		1.356E-02	1.256E-01	2.091E-01	1.514E-02	0.065
GD-153		69.67		2.420E-02	7.947E-01	1.349E+00	1.327E-01	0.018
		83.37		-2.733E+00	7.940E+00	1.223E+01	1.372E+00	-0.224
		97.43	*	-3.473E-03	4.730E-02	7.128E-02	6.778E-03	-0.049
		103.18		4.262E-02	5.318E-02	9.328E-02	7.895E-03	0.457
EU-154		123.07		5.140E-03	2.658E-02	4.440E-02	4.201E-03	0.116
		247.94		-3.094E-02	2.180E-01	3.648E-01	4.168E-02	-0.085
		591.81		-3.751E-01	4.128E-01	6.172E-01	6.314E-02	-0.608
		723.30		-7.726E-02	1.175E-01	1.780E-01	1.458E-02	-0.434
		756.87		2.947E-02	4.372E-01	7.265E-01	8.142E-02	0.041
		873.19		3.662E-02	1.836E-01	3.078E-01	3.851E-02	0.119
		996.32		-4.170E-01	2.774E-01	3.154E-01	5.555E-02	-1.322
		1004.76		-3.308E-02	1.306E-01	2.110E-01	2.390E-02	-0.157
		1274.45	*	5.695E-03	5.374E-02	9.064E-02	8.980E-03	0.063
EU-155		48.70		-4.832E-01	2.186E+00	3.323E+00	2.776E-01	-0.145
		60.01		-2.150E+00	3.290E+00	4.799E+00	4.188E-01	-0.448
		86.54		-1.636E-02	4.728E-02	7.735E-02	9.042E-03	-0.212
		105.31	*	-5.828E-02	5.775E-02	8.829E-02	7.268E-03	-0.660
TB-160		86.79		-4.965E-02	1.237E-01	1.918E-01	2.235E-02	-0.259
		197.04		-1.466E-01	3.402E-01	5.036E-01	3.733E-02	-0.291
		215.65		-1.002E-01	4.159E-01	6.465E-01	5.061E-02	-0.155
		298.57		2.203E-04	6.263E-02	1.047E-01	9.329E-03	0.002
		879.36	*	-1.240E-02	7.979E-02	1.262E-01	1.146E-02	-0.098
		962.29		8.973E-02	2.720E-01	4.619E-01	4.017E-02	0.194
		966.15		2.176E-02	1.081E-01	1.795E-01	1.554E-02	0.121
		1177.93		4.298E-02	1.437E-01	2.531E-01	1.413E-02	0.170
		1271.85		4.171E-02	2.940E-01	4.999E-01	3.320E-02	0.083
HO-166M		80.57		-6.077E-02	1.278E-01	2.075E-01	2.261E-02	-0.293
	+	184.41		1.776E-02	3.730E-02	4.592E-02	3.278E-03	0.387
		280.46		-3.154E-02	6.274E-02	9.643E-02	8.892E-03	-0.327
		410.95		-5.653E-02	1.487E-01	2.325E-01	1.463E-02	-0.243
		711.68	*	-6.302E-03	3.967E-02	6.426E-02	4.481E-03	-0.098
		752.31		1.613E-02	1.631E-01	2.722E-01	2.030E-02	0.059
		810.29		-1.236E-02	3.782E-02	5.881E-02	4.810E-03	-0.210
TM-171		51.35		-9.647E+00	2.289E+01	3.808E+01	3.385E+00	-0.253
		52.39		8.277E+00	1.177E+01	2.108E+01	1.885E+00	0.393
		59.40		6.001E+00	1.747E+01	2.769E+01	2.392E+00	0.217
		66.72	*	-1.427E-01	1.552E+01	2.369E+01	2.267E+00	-0.006
LU-176		88.36		8.212E-03	1.019E-01	1.543E-01	1.807E-02	0.053
		201.83		-2.195E-03	1.654E-02	2.608E-02	1.961E-03	-0.084
		306.84	*	7.477E-03	1.526E-02	2.651E-02	2.318E-03	0.282
		401.10		-4.453E-01	4.038E+00	6.526E+00	4.080E-01	-0.068
LU-177		112.95		1.524E-01	4.431E-01	7.148E-01	5.020E-02	0.213
		208.36	*	1.626E-01	3.181E-01	5.031E-01	3.856E-02	0.323
LU-177M		52.97		9.630E-01	1.146E+00	2.068E+00	1.851E-01	0.466
		54.07		3.844E-01	5.732E-01	1.025E+00	9.155E-02	0.375

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		61.30		-5.688E-01	9.570E-01	1.405E+00	1.257E-01	-0.405
		121.62		6.642E-02	1.866E-01	3.158E-01	1.875E-02	0.210
		147.16		-7.050E-02	4.101E-01	5.862E-01	3.681E-02	-0.120
		171.86		-2.279E-01	2.882E-01	4.355E-01	2.997E-02	-0.523
		218.09		1.870E-01	4.909E-01	8.050E-01	6.346E-02	0.232
		268.79		-2.944E-01	4.487E-01	7.133E-01	6.430E-02	-0.413
		319.02		3.395E-02	1.479E-01	2.512E-01	2.129E-02	0.135
		367.43		1.217E-01	5.691E-01	9.564E-01	6.778E-02	0.127
		413.65	*	-1.020E-01	1.015E-01	1.452E-01	9.154E-03	-0.702
HF-181		56.28		-3.472E-01	5.342E-01	8.682E-01	7.669E-02	-0.400
		57.53		8.503E-02	2.772E-01	4.835E-01	4.233E-02	0.176
		65.20		8.750E-02	4.847E-01	7.538E-01	7.104E-02	0.116
		133.02		-3.540E-02	3.462E-02	5.247E-02	3.151E-03	-0.675
		136.25		5.495E-02	2.335E-01	3.883E-01	2.353E-02	0.142
		345.85		-7.058E-03	9.941E-02	1.633E-01	1.268E-02	-0.043
		482.03	*	-1.341E-02	2.218E-02	3.276E-02	2.129E-03	-0.409
W-181		56.28		-1.475E-01	2.271E-01	3.691E-01	3.260E-02	-0.400
		57.53		3.602E-02	1.179E-01	2.057E-01	1.801E-02	0.175
		65.20	*	3.693E-02	2.046E-01	3.182E-01	2.998E-02	0.116
TA-182		67.75		-1.264E-03	5.711E-02	8.699E-02	8.410E-03	-0.015
		100.10		-4.275E-02	9.249E-02	1.487E-01	1.338E-02	-0.287
		152.43		-5.762E-02	1.840E-01	2.918E-01	1.869E-02	-0.197
		222.10		-1.213E-01	1.977E-01	2.951E-01	2.353E-02	-0.411
		1001.68		-7.097E-02	1.404E+00	2.279E+00	1.877E-01	-0.031
		1121.28		-1.599E-02	8.301E-02	1.388E-01	8.977E-03	-0.115
		1189.05		-5.537E-03	1.214E-01	1.989E-01	1.135E-02	-0.028
		1221.42	*	5.043E-02	9.016E-02	1.637E-01	9.928E-03	0.308
		1230.97		8.362E-02	1.629E-01	3.009E-01	1.858E-02	0.278
RE-183		57.98		9.585E-02	1.168E-01	2.029E-01	1.771E-02	0.472
		59.32		3.699E-02	6.552E-02	1.060E-01	9.157E-03	0.349
		67.20		8.339E-03	1.004E-01	1.546E-01	1.487E-02	0.054
		162.32	*	2.617E-02	6.412E-02	1.021E-01	6.803E-03	0.256
		208.81		5.939E-02	5.914E-01	9.061E-01	6.954E-02	0.066
		291.72		-2.977E-01	5.062E-01	8.023E-01	7.250E-02	-0.371
RE-184		57.98		3.695E-01	4.504E-01	7.822E-01	6.827E-02	0.472
		59.32		1.425E-01	2.524E-01	4.081E-01	3.527E-02	0.349
		67.20		3.213E-02	3.869E-01	5.957E-01	5.730E-02	0.054
		161.27		-2.103E-03	2.062E-01	3.337E-01	2.215E-02	-0.006
		216.55		1.950E-02	1.525E-01	2.450E-01	1.923E-02	0.080
		252.85	*	7.365E-02	1.405E-01	2.462E-01	2.133E-02	0.299
		318.01		-4.541E-02	2.653E-01	4.343E-01	3.691E-02	-0.105
		792.07		-2.187E-01	5.438E-01	8.338E-01	6.628E-02	-0.262
		903.28		-3.872E-01	5.435E-01	7.581E-01	7.040E-02	-0.511
		920.93		-1.037E-01	2.759E-01	4.172E-01	3.807E-02	-0.248
OS-185		59.72		3.139E-02	1.781E-01	2.783E-01	2.414E-02	0.113
		61.14		-6.804E-02	1.027E-01	1.498E-01	1.336E-02	-0.454
		69.30		-5.302E-02	1.380E-01	2.273E-01	2.229E-02	-0.233
		592.07		-1.796E+00	1.677E+00	2.404E+00	1.572E-01	-0.747
		646.12	*	-9.904E-03	2.625E-02	4.169E-02	2.686E-03	-0.238

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		717.42		1.289E-01	5.529E-01	9.400E-01	6.619E-02	0.137
		874.81		1.906E-01	3.516E-01	6.176E-01	5.571E-02	0.309
		880.27		-2.834E-01	4.556E-01	6.593E-01	5.995E-02	-0.430
RE-188		155.03	*	-3.811E-02	9.181E-02	1.443E-01	9.335E-03	-0.264
		477.96		1.943E-01	1.785E+00	2.920E+00	1.895E-01	0.067
		633.10		-5.610E-01	1.547E+00	2.457E+00	1.590E-01	-0.228
W-188	+	63.58		2.357E+01	5.556E+01	6.081E+01	5.624E+00	0.388
		227.08		-2.499E-01	7.162E+00	1.130E+01	9.137E-01	-0.022
		290.67	*	-3.619E-01	3.945E+00	6.551E+00	5.932E-01	-0.055
IR-192		295.96		2.679E-02	5.745E-02	9.963E-02	8.986E-03	0.269
		308.46		-2.768E-03	5.519E-02	9.162E-02	8.021E-03	-0.030
		316.51	*	1.704E-03	2.019E-02	3.386E-02	2.896E-03	0.050
		468.07		1.481E-02	4.044E-02	6.806E-02	4.951E-03	0.218
		604.41		-1.381E-01	3.021E-01	4.063E-01	4.768E-02	-0.340
		612.46		7.939E-02	4.608E-01	6.893E-01	5.604E-02	0.115
AU-195		65.12		2.343E-02	9.678E-02	1.513E-01	1.425E-02	0.155
		66.83		-1.700E-03	5.003E-02	7.618E-02	7.300E-03	-0.022
		75.70		-1.356E-02	8.487E-02	1.417E-01	1.472E-02	-0.096
		98.88	*	-3.355E-02	1.311E-01	2.024E-01	1.867E-02	-0.166
		129.76		4.254E-01	1.590E+00	2.657E+00	1.583E-01	0.160
TL-200		367.94	*	5.269E-01	2.065E+00	3.484E+00	2.463E-01	0.151
		579.30		-1.136E+01	1.550E+01	2.385E+01	1.562E+00	-0.476
		828.27		-8.119E-01	1.655E+01	2.674E+01	2.249E+00	-0.030
		1205.75		-9.930E-01	8.302E+00	1.340E+01	7.895E-01	-0.074
TL-201		68.90		-2.309E-01	4.243E-01	6.557E-01	6.408E-02	-0.352
		70.82		2.705E-02	2.270E-01	3.873E-01	3.850E-02	0.070
		80.30		-2.549E-01	4.086E-01	6.558E-01	7.127E-02	-0.389
		135.34		1.058E+00	2.527E+00	4.255E+00	2.571E-01	0.249
		167.43	*	7.838E-01	7.061E-01	1.231E+00	8.367E-02	0.637
TL-202		68.90		-7.851E-02	1.443E-01	2.229E-01	2.178E-02	-0.352
		70.82		9.172E-03	7.696E-02	1.313E-01	1.305E-02	0.070
		80.30		-8.645E-02	1.386E-01	2.224E-01	2.417E-02	-0.389
		439.56	*	-1.259E-05	2.717E-02	4.414E-02	2.822E-03	0.000
HG-203		70.83		5.393E-02	4.615E-01	7.872E-01	1.140E-01	0.069
		72.87		5.549E-02	2.626E-01	4.500E-01	6.404E-02	0.123
		82.60		-3.092E-01	5.365E-01	8.071E-01	1.246E-01	-0.383
		279.20	*	-2.057E-03	2.715E-02	4.328E-02	4.099E-03	-0.048
BI-207		72.80		-5.149E-03	8.768E-02	1.476E-01	1.494E-02	-0.035
		74.97		-4.024E-03	4.899E-02	8.223E-02	8.487E-03	-0.049
		84.90		-5.359E-02	1.006E-01	1.521E-01	1.736E-02	-0.352
		569.67		9.485E-03	1.811E-02	3.226E-02	2.115E-03	0.294
		1063.62	*	5.003E-03	3.170E-02	5.425E-02	4.007E-03	0.092
		1770.23		-2.881E-01	3.287E-01	4.039E-01	2.363E-02	-0.713
TL-207		81.07		-3.046E-03	1.004E-01	1.685E-01	1.845E-02	-0.018
		83.78		-1.118E-02	6.803E-02	1.060E-01	1.194E-02	-0.106
		94.90		5.156E-02	1.335E-01	2.065E-01	2.073E-02	0.250
		122.32		-3.437E-01	9.182E-01	1.466E+00	9.932E-02	-0.234
	+	144.24		5.496E-01	5.311E-01	7.165E-01	5.424E-02	0.767
		154.21		7.744E-02	2.181E-01	3.637E-01	2.749E-02	0.213

---- Non-Identified Nuclides ----

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		269.46		-2.285E-02	1.129E-01	1.870E-01	1.720E-02	-0.122
		323.87	*	-9.747E-02	3.634E-01	5.867E-01	1.031E-01	-0.166
		338.28		-3.047E-02	5.443E-01	8.966E-01	1.065E-01	-0.034
		445.03		-1.249E+00	1.462E+00	2.117E+00	2.250E-01	-0.590
TL-208		277.35		7.531E-02	2.394E-01	4.110E-01	5.240E-02	0.183
	+	510.84		1.279E-02	2.109E-01	3.038E-01	3.218E-02	0.042
		583.14	*	-7.461E-03	2.512E-02	3.980E-02	2.923E-03	-0.187
		860.37		6.801E-02	1.718E-01	2.962E-01	2.799E-02	0.230
PO-209		260.50		3.247E-01	5.631E+00	9.540E+00	8.427E-01	0.034
		262.80		-3.242E+00	1.573E+01	2.606E+01	2.315E+00	-0.124
		896.60	*	2.740E+00	4.672E+00	8.251E+00	7.684E-01	0.332
BI-210		46.50	*	1.278E+00	3.759E+00	5.613E+00	4.523E-01	0.228
PB-210		46.50	*	1.278E+00	3.759E+00	5.613E+00	4.523E-01	0.228
PO-210		46.50	*	1.278E+00	3.759E+00	5.613E+00	3.942E-01	0.228
BI-211		72.87		3.132E-01	1.482E+00	2.540E+00	2.572E-01	0.123
		351.07	*	-4.029E-03	1.453E-01	2.261E-01	1.832E-02	-0.018
PB-211		404.84	*	6.734E-02	6.028E-01	9.943E-01	6.203E-01	0.068
		427.08		-1.717E-01	1.339E+00	2.142E+00	1.325E+00	-0.080
		831.96		3.744E-01	6.752E-01	1.136E+00	7.114E-01	0.330
BI-212		727.18	*	6.771E-02	1.717E-01	2.980E-01	2.616E-02	0.227
		785.46		-3.526E-01	1.030E+00	1.600E+00	1.259E-01	-0.220
		1620.62		4.358E-01	6.943E-01	1.345E+00	8.852E-02	0.324
PB-212		74.81		-1.997E-02	1.687E-01	2.825E-01	3.930E-02	-0.071
		77.11		4.585E-02	9.319E-02	1.620E-01	1.706E-02	0.283
		87.30		-5.030E-02	2.039E-01	2.999E-01	4.621E-02	-0.168
		238.63	*	-6.895E-03	3.737E-02	6.175E-02	5.850E-03	-0.112
		300.09		-5.650E-02	4.575E-01	7.562E-01	8.049E-02	-0.075
PO-212		74.81		-1.997E-02	1.687E-01	2.825E-01	3.930E-02	-0.071
		77.11		4.585E-02	9.319E-02	1.620E-01	1.706E-02	0.283
		87.30		-5.030E-02	2.039E-01	2.999E-01	4.621E-02	-0.168
		115.19		-1.453E+00	1.951E+00	3.040E+00	2.046E-01	-0.478
		238.63	*	-6.895E-03	3.737E-02	6.175E-02	5.850E-03	-0.112
		300.09		-5.650E-02	4.575E-01	7.562E-01	8.049E-02	-0.075
BI-214	+	609.31	*	3.311E-02	6.552E-02	8.953E-02	7.454E-03	0.370
		768.36		1.273E-01	4.297E-01	7.334E-01	7.111E-02	0.174
		934.06		3.220E-01	7.207E-01	1.199E+00	1.312E-01	0.269
		1120.29		-4.429E-02	1.787E-01	2.967E-01	2.750E-02	-0.149
		1238.11		-1.957E-01	3.610E-01	5.314E-01	4.505E-02	-0.368
		1377.67		3.146E-01	5.920E-01	1.068E+00	1.031E-01	0.295
		1764.49		-1.977E-01	1.667E-01	2.468E-01	1.451E-02	-0.801
PB-214		74.81		-3.442E-02	2.907E-01	4.867E-01	6.177E-02	-0.071
		77.11		7.859E-02	1.599E-01	2.778E-01	3.611E-02	0.283
		87.30		-8.617E-02	3.493E-01	5.137E-01	7.209E-02	-0.168
		241.98		-1.144E-01	2.146E-01	3.501E-01	3.542E-02	-0.327
		295.21		1.448E-02	8.103E-02	1.375E-01	1.503E-02	0.105
		351.92	*	3.487E-02	5.034E-02	8.320E-02	8.002E-03	0.419
PO-214		74.81		-3.442E-02	2.907E-01	4.867E-01	6.177E-02	-0.071
		77.11		7.859E-02	1.599E-01	2.778E-01	3.611E-02	0.283
		87.30		-8.617E-02	3.493E-01	5.137E-01	7.209E-02	-0.168

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		241.98		-1.144E-01	2.146E-01	3.501E-01	3.542E-02	-0.327
		295.21		1.448E-02	8.103E-02	1.375E-01	1.503E-02	0.105
		351.92	*	3.487E-02	5.034E-02	8.320E-02	8.002E-03	0.419
PO-215		81.07		-3.046E-03	1.004E-01	1.685E-01	1.845E-02	-0.018
		83.78		-1.118E-02	6.803E-02	1.060E-01	1.194E-02	-0.106
		94.90		5.156E-02	1.335E-01	2.065E-01	2.073E-02	0.250
		122.32		-3.437E-01	9.182E-01	1.466E+00	9.932E-02	-0.234
	+	144.24		5.496E-01	5.311E-01	7.165E-01	5.424E-02	0.767
		154.21		7.744E-02	2.181E-01	3.637E-01	2.749E-02	0.213
		269.46		-2.285E-02	1.129E-01	1.870E-01	1.720E-02	-0.122
		323.87	*	-9.747E-02	3.634E-01	5.867E-01	1.031E-01	-0.166
		338.28		-3.047E-02	5.443E-01	8.966E-01	1.065E-01	-0.034
		445.03		-1.249E+00	1.462E+00	2.117E+00	2.250E-01	-0.590
PO-216		74.81		-1.997E-02	1.687E-01	2.825E-01	3.930E-02	-0.071
		77.11		4.585E-02	9.319E-02	1.620E-01	1.706E-02	0.283
		87.30		-5.030E-02	2.039E-01	2.999E-01	4.621E-02	-0.168
		238.63	*	-6.895E-03	3.737E-02	6.175E-02	5.850E-03	-0.112
		300.09		-5.650E-02	4.575E-01	7.562E-01	8.049E-02	-0.075
PO-218		74.81		-3.442E-02	2.907E-01	4.867E-01	6.177E-02	-0.071
		77.11		7.859E-02	1.599E-01	2.778E-01	3.611E-02	0.283
		87.30		-8.617E-02	3.493E-01	5.137E-01	7.209E-02	-0.168
		241.98		-1.144E-01	2.146E-01	3.501E-01	3.542E-02	-0.327
		295.21		1.448E-02	8.103E-02	1.375E-01	1.503E-02	0.105
		351.92	*	3.487E-02	5.034E-02	8.320E-02	8.002E-03	0.419
RN-219		271.23		1.884E-01	1.430E-01	2.619E-01	2.799E-02	0.720
		401.81	*	1.591E-01	2.401E-01	4.199E-01	5.796E-02	0.379
RN-220		549.76	*	-4.296E+00	1.530E+01	2.337E+01	1.533E+00	-0.184
RA-223		81.07		-3.046E-03	1.004E-01	1.685E-01	1.845E-02	-0.018
		83.78		-1.118E-02	6.803E-02	1.060E-01	1.194E-02	-0.106
		94.90		5.156E-02	1.335E-01	2.065E-01	2.073E-02	0.250
		122.32		-3.437E-01	9.182E-01	1.466E+00	9.932E-02	-0.234
	+	144.24		5.496E-01	5.311E-01	7.165E-01	5.424E-02	0.767
		154.21		7.744E-02	2.181E-01	3.637E-01	2.749E-02	0.213
		269.46		-2.285E-02	1.129E-01	1.870E-01	1.720E-02	-0.122
		323.87	*	-9.747E-02	3.634E-01	5.867E-01	1.031E-01	-0.166
		338.28		-3.047E-02	5.443E-01	8.966E-01	1.065E-01	-0.034
		445.03		-1.249E+00	1.462E+00	2.117E+00	2.250E-01	-0.590
RA-224		240.98	*	-2.031E-01	3.948E-01	6.448E-01	5.416E-02	-0.315
RA-226	+	609.31	*	3.311E-02	6.552E-02	8.953E-02	7.454E-03	0.370
		768.36		1.273E-01	4.297E-01	7.334E-01	7.111E-02	0.174
		934.06		3.220E-01	7.207E-01	1.199E+00	1.312E-01	0.269
		1120.29		-4.429E-02	1.787E-01	2.967E-01	2.750E-02	-0.149
		1238.11		-1.957E-01	3.610E-01	5.314E-01	4.505E-02	-0.368
		1377.67		3.146E-01	5.920E-01	1.068E+00	1.031E-01	0.295
		1764.49		-1.977E-01	1.667E-01	2.468E-01	1.451E-02	-0.801
AC-227		79.80		-4.705E-01	7.708E-01	1.228E+00	2.760E-01	-0.383
		236.00		-1.656E-01	1.295E-01	1.965E-01	2.360E-02	-0.843
		256.20	*	-3.683E-03	2.375E-01	4.005E-01	6.173E-02	-0.009
		286.10		4.737E-01	9.531E-01	1.658E+00	2.245E-01	0.286

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		299.80		1.184E-01	8.300E-01	1.403E+00	2.473E-01	0.084
		304.40		-3.716E-01	1.162E+00	1.882E+00	3.485E-01	-0.198
		334.20		1.625E-01	1.182E+00	1.988E+00	3.812E-01	0.082
TH-227		79.80		-4.705E-01	7.710E-01	1.228E+00	2.792E-01	-0.383
	+	94.00		5.167E-01	2.156E+00	2.296E+00	5.160E-01	0.225
		236.00		-1.656E-01	1.292E-01	1.965E-01	2.126E-02	-0.843
		256.20	*	-3.683E-03	2.375E-01	4.005E-01	7.256E-02	-0.009
		286.10		4.737E-01	1.063E+00	1.658E+00	1.664E+00	0.286
		299.80		1.184E-01	8.300E-01	1.403E+00	2.473E-01	0.084
		304.40		-3.716E-01	1.162E+00	1.882E+00	3.485E-01	-0.198
		334.20		1.625E-01	1.182E+00	1.988E+00	3.812E-01	0.082
AC-228		338.32		-7.832E-03	1.303E-01	2.145E-01	8.825E-02	-0.037
		911.07	*	1.173E-02	8.685E-02	1.394E-01	1.632E-02	0.084
		969.11		2.333E-02	1.445E-01	2.249E-01	5.249E-02	0.104
RA-228		338.32		-7.832E-03	1.303E-01	2.145E-01	8.825E-02	-0.037
		911.07	*	1.173E-02	8.685E-02	1.394E-01	1.632E-02	0.084
		969.11		2.333E-02	1.445E-01	2.249E-01	5.249E-02	0.104
TH-228		84.40		-9.080E-01	1.404E+00	2.108E+00	3.177E-01	-0.431
		238.60	*	-6.975E-03	3.736E-02	6.172E-02	5.847E-03	-0.113
		300.10		-5.609E-02	4.587E-01	7.564E-01	4.487E-01	-0.074
TH-229		85.43		-8.729E-02	1.011E-01	1.492E-01	1.713E-02	-0.585
		88.47		6.366E-03	5.867E-02	8.906E-02	1.040E-02	0.071
		100.00		-6.571E-02	1.090E-01	1.630E-01	1.470E-02	-0.403
		193.63	*	-8.556E-02	3.136E-01	4.908E-01	3.601E-02	-0.174
		210.97		-3.147E-02	4.909E-01	7.395E-01	5.711E-02	-0.043
TH-230	+	609.31	*	3.311E-02	6.551E-02	8.953E-02	7.454E-03	0.370
		768.36		1.273E-01	4.297E-01	7.334E-01	7.111E-02	0.174
		934.06		3.220E-01	7.207E-01	1.199E+00	1.312E-01	0.269
		1120.29		-4.429E-02	1.787E-01	2.967E-01	2.750E-02	-0.149
		1238.11		-1.957E-01	3.610E-01	5.314E-01	4.505E-02	-0.368
		1377.67		3.146E-01	5.920E-01	1.068E+00	1.031E-01	0.295
		1764.49		-1.977E-01	1.667E-01	2.468E-01	1.451E-02	-0.801
PA-231		283.67	*	-4.692E-01	9.617E-01	1.543E+00	2.393E-01	-0.304
		301.29		7.532E-02	3.336E-01	5.676E-01	7.046E-02	0.133
TH-231		81.07		-3.046E-03	1.004E-01	1.685E-01	1.845E-02	-0.018
		83.78		-1.118E-02	6.803E-02	1.060E-01	1.194E-02	-0.106
		94.90		5.156E-02	1.335E-01	2.065E-01	2.073E-02	0.250
		122.32		-3.437E-01	9.182E-01	1.466E+00	9.932E-02	-0.234
	+	144.24		5.496E-01	5.311E-01	7.165E-01	5.424E-02	0.767
		154.21		7.744E-02	2.181E-01	3.637E-01	2.749E-02	0.213
		269.46		-2.285E-02	1.129E-01	1.870E-01	1.720E-02	-0.122
		323.87	*	-9.747E-02	3.634E-01	5.867E-01	1.031E-01	-0.166
		338.28		-3.047E-02	5.443E-01	8.966E-01	1.065E-01	-0.034
		445.03		-1.249E+00	1.462E+00	2.117E+00	2.250E-01	-0.590
U-231		84.21		-2.041E-01	8.048E-01	1.245E+00	1.410E-01	-0.164
	+	92.29		1.414E-01	5.894E-01	8.192E-01	8.724E-02	0.173
		95.87	*	-3.685E-02	1.823E-01	2.678E-01	2.633E-02	-0.138
		108.00		2.541E-01	3.120E-01	5.450E-01	4.203E-02	0.466
TH-232		338.32		-7.832E-03	1.303E-01	2.145E-01	1.712E-02	-0.037

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		911.07	*	1.173E-02	8.685E-02	1.394E-01	1.632E-02	0.084
		969.11		2.333E-02	1.445E-01	2.249E-01	5.249E-02	0.104
PA-233		75.28		-6.880E-02	1.442E+00	2.426E+00	3.974E-01	-0.028
		86.59		-2.667E-01	7.733E-01	1.260E+00	3.520E-01	-0.212
		300.12		-2.856E-02	2.365E-01	3.909E-01	5.874E-02	-0.073
		311.98	*	-1.115E-02	4.172E-02	6.790E-02	6.030E-03	-0.164
		340.50		2.642E-01	3.435E-01	6.007E-01	1.417E-01	0.440
		398.62		-1.881E-01	1.198E+00	1.923E+00	4.992E-01	-0.098
		415.76		5.173E-01	1.007E+00	1.727E+00	3.581E-01	0.300
PA-234	+	63.00		7.387E-01	1.744E+00	1.979E+00	3.130E-01	0.373
		94.67		6.647E-02	9.693E-02	1.531E-01	2.061E-02	0.434
		98.44		-1.640E-02	5.609E-02	8.532E-02	4.770E-02	-0.192
		99.86		-1.507E-01	2.771E-01	4.167E-01	3.768E-02	-0.362
		111.00		-3.551E-02	1.172E-01	1.816E-01	2.030E-02	-0.196
		131.20		1.058E-02	6.029E-02	1.001E-01	5.983E-03	0.106
		152.70		-7.204E-02	1.850E-01	2.911E-01	4.670E-02	-0.247
	+	186.00		6.395E-01	1.356E+00	1.863E+00	5.746E-01	0.343
		226.40		1.175E-01	2.443E-01	4.025E-01	5.172E-02	0.292
		227.20		-9.140E-03	2.615E-01	4.125E-01	3.337E-02	-0.022
		248.90		-3.906E-01	5.046E-01	7.891E-01	1.767E-01	-0.495
		293.70		1.375E-01	3.800E-01	6.536E-01	1.143E-01	0.210
		369.80		4.561E-02	5.365E-01	8.905E-01	1.887E-01	0.051
		568.70		3.019E-01	6.126E-01	1.086E+00	7.120E-02	0.278
		569.50		6.399E-02	1.627E-01	2.859E-01	1.874E-02	0.224
		574.00		-1.101E+00	9.224E-01	1.320E+00	8.647E-02	-0.834
		699.00		3.530E-01	4.212E-01	7.634E-01	1.400E-01	0.462
		706.10		6.227E-01	7.377E-01	1.251E+00	5.539E-01	0.498
		733.00		1.445E-01	2.055E-01	3.702E-01	8.030E-02	0.390
		742.81		6.455E-02	7.743E-01	1.290E+00	8.650E-01	0.050
		796.30		2.250E-01	5.216E-01	9.028E-01	2.425E-01	0.249
		805.60		-2.628E-01	6.254E-01	9.492E-01	2.896E-01	-0.277
		819.60		-1.660E-01	7.169E-01	1.121E+00	4.255E-01	-0.148
		826.30		-2.242E-01	4.263E-01	6.033E-01	2.697E-01	-0.372
		831.60		2.787E-01	3.326E-01	6.017E-01	1.793E-01	0.463
		876.40		4.205E-01	6.596E-01	9.173E-01	9.434E-01	0.458
		880.51		-1.104E-01	1.742E-01	2.514E-01	2.287E-02	-0.439
		883.24		2.460E-02	1.625E-01	2.694E-01	1.813E-01	0.091
		899.00		3.473E-01	5.114E-01	8.838E-01	3.876E-01	0.393
		925.00		2.771E-02	7.522E-01	1.223E+00	1.111E-01	0.023
		926.50		5.340E-02	1.116E-01	1.927E-01	4.902E-02	0.277
		946.00	*	9.780E-02	1.977E-01	3.420E-01	6.458E-02	0.286
		949.00		-1.120E-01	2.888E-01	4.351E-01	3.847E-02	-0.257
		980.50		-2.058E-01	4.488E-01	6.598E-01	5.602E-02	-0.312
		1394.10		-1.063E-01	7.203E-01	1.129E+00	7.327E-01	-0.094
PA-234M		766.41		7.563E+00	1.301E+01	1.962E+01	1.503E+01	0.385
		1001.03	*	-1.490E+00	4.877E+00	7.624E+00	8.303E-01	-0.195
U-234	+	609.31	*	3.311E-02	6.551E-02	8.953E-02	7.454E-03	0.370
		768.36		1.273E-01	4.297E-01	7.334E-01	7.111E-02	0.174
		934.06		3.220E-01	7.207E-01	1.199E+00	1.312E-01	0.269

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1120.29		-4.429E-02	1.787E-01	2.967E-01	2.750E-02	-0.149
		1238.11		-1.957E-01	3.610E-01	5.314E-01	4.505E-02	-0.368
		1377.67		3.146E-01	5.920E-01	1.068E+00	1.031E-01	0.295
		1764.49		-1.977E-01	1.667E-01	2.468E-01	1.451E-02	-0.801
NP-236		94.67		5.085E-02	7.341E-02	1.162E-01	1.173E-02	0.438
		98.44		-1.241E-02	4.185E-02	6.450E-02	6.005E-03	-0.192
		111.00		-2.686E-02	8.861E-02	1.374E-01	1.001E-02	-0.196
		160.31	*	-6.883E-03	4.798E-02	7.689E-02	5.082E-03	-0.090
NP-237		86.50	*	-5.135E-02	1.170E-01	1.893E-01	4.483E-02	-0.271
		95.87		-1.174E-01	5.812E-01	8.528E-01	2.139E-01	-0.138
NP-239		99.55		-3.431E-02	9.158E-02	1.394E-01	1.269E-02	-0.246
		117.00	*	4.829E-02	9.687E-02	1.660E-01	1.079E-02	0.291
		209.75		-3.899E-01	5.069E-01	7.186E-01	5.530E-02	-0.543
		228.18		-1.276E-01	1.407E-01	2.034E-01	1.650E-02	-0.627
		277.60		-6.186E-02	1.315E-01	2.031E-01	1.870E-02	-0.305
		334.30		9.963E-02	6.703E-01	1.129E+00	9.132E-02	0.088
AM-241		59.54	*	3.236E-02	1.009E-01	1.597E-01	1.479E-02	0.203
AM-243		74.67	*	-2.618E-03	2.763E-02	4.634E-02	4.770E-03	-0.056
		86.72		-1.498E+00	4.326E+00	7.076E+00	8.242E-01	-0.212
		117.66		-3.818E-03	1.899E+00	3.132E+00	2.010E-01	-0.001
	+	142.18		1.425E+01	1.375E+01	1.805E+01	1.114E+00	0.789
CM-243		99.55		-3.529E-02	9.419E-02	1.434E-01	1.305E-02	-0.246
		103.76	*	1.788E-02	5.090E-02	8.665E-02	7.251E-03	0.206
		117.00		4.965E-02	9.961E-02	1.707E-01	1.109E-02	0.291
		209.75		-3.842E-01	4.994E-01	7.080E-01	5.448E-02	-0.543
		228.18		-1.288E-01	1.421E-01	2.054E-01	1.666E-02	-0.627
		277.60		-6.234E-02	1.325E-01	2.047E-01	1.884E-02	-0.305
CM-247		278.00		-2.409E-01	5.494E-01	8.518E-01	7.849E-02	-0.283
		287.40		4.497E-01	7.331E-01	1.289E+00	1.175E-01	0.349
		402.60	*	4.345E-03	2.279E-02	3.803E-02	2.380E-03	0.114
CF-249		252.85		2.853E-01	5.442E-01	9.537E-01	8.262E-02	0.299
		333.44		-5.428E-02	9.244E-02	1.436E-01	1.165E-02	-0.378
		387.95	*	2.169E-02	2.545E-02	4.516E-02	2.869E-03	0.480
CF-251		176.60	*	1.579E-02	7.549E-02	1.235E-01	8.618E-03	0.128
		227.00		-8.091E-03	2.323E-01	3.664E-01	2.962E-02	-0.022
		285.00		2.479E-01	1.065E+00	1.819E+00	1.664E-01	0.136

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
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*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871423    *
* Acquisition date :  7-JUL-2009 08:11:44 Detector SN#     :               *
* Detector ID        : GAM02               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.56      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 30-JUN-2009 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201871423          Analyst initials: MXR1         *
* Batch Number       : 881219               Sample Quantity : 1.3771E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	1.959E-01	3.429E-01	4.582E-01	0.000E+00
TH-234	6.338E-01	1.467E+00	1.230E+00	0.000E+00
U-235	1.696E-01	1.624E-01	1.930E-01	0.000E+00
U-238	6.338E-01	1.467E+00	1.230E+00	0.000E+00
ANH-511	2.762E-03	4.465E-02	3.298E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	3.623E-02	1.854E-01	3.201E-01	0.000E+00	NOT IDENT.
NA-22	1.611E-03	1.868E-02	3.218E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.306E+01	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.551E-02	2.413E-02	4.637E-02	0.000E+00	NOT IDENT.
TI-44	-4.926E-03	1.626E-02	2.903E-02	0.000E+00	NOT IDENT.
SC-46	-1.073E-03	2.215E-02	3.686E-02	0.000E+00	NOT IDENT.
V-48	4.934E-02	2.783E-02	5.933E-02	0.000E+00	NOT IDENT.
CR-51	7.057E-02	1.721E-01	3.133E-01	0.000E+00	NOT IDENT.
MN-52	-1.834E-03	6.043E-02	1.000E-01	0.000E+00	NOT IDENT.
MN-54	-1.068E-02	1.976E-02	3.028E-02	0.000E+00	NOT IDENT.
CO-56	-1.470E-02	2.277E-02	3.442E-02	0.000E+00	NOT IDENT.
CO-57	-5.960E-05	1.225E-02	2.165E-02	0.000E+00	NOT IDENT.
CO-58	-2.890E-03	2.202E-02	3.656E-02	0.000E+00	NOT IDENT.
FE-59	3.732E-02	4.560E-02	8.778E-02	0.000E+00	FAIL ABUN
CO-60	4.525E-03	2.135E-02	3.751E-02	0.000E+00	NOT IDENT.
ZN-65	-3.686E-02	5.097E-02	7.727E-02	0.000E+00	NOT IDENT.
GE-68	4.267E-01	6.283E-01	1.202E+00	0.000E+00	NOT IDENT.
AS-73	5.673E-01	5.374E-01	1.069E+00	0.000E+00	NOT IDENT.
AS-74	2.517E-02	4.366E-02	8.078E-02	0.000E+00	NOT IDENT.
SE-75	1.334E-02	2.382E-02	4.430E-02	0.000E+00	NOT IDENT.
BR-77	5.884E-01	6.925E-01	1.275E+00	0.000E+00	NOT IDENT.
SR-82	2.001E-02	1.745E-01	3.019E-01	0.000E+00	NOT IDENT.

RB-83	3.147E-02	4.173E-02	7.606E-02	0.000E+00	NOT IDENT.
RB-84	1.702E-03	3.319E-02	5.620E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	5.140E+00	9.569E+00	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.429E-02	4.521E-02	0.000E+00	NOT IDENT.
RB-86	2.725E-02	3.108E-01	5.424E-01	0.000E+00	NOT IDENT.
Y-88	-1.220E-02	2.313E-02	3.316E-02	0.000E+00	NOT IDENT.
ZR-88	-1.979E-03	1.653E-02	2.808E-02	0.000E+00	NOT IDENT.
Y-91	-1.554E+00	8.194E+00	1.342E+01	0.000E+00	NOT IDENT.
NB-94	-1.782E-02	2.091E-02	3.195E-02	0.000E+00	NOT IDENT.
NB-95	2.702E-02	2.574E-02	4.673E-02	0.000E+00	NOT IDENT.
NB-95M	-6.551E-02	6.239E-02	1.033E-01	0.000E+00	NOT IDENT.
ZR-95	2.261E-02	3.593E-02	6.678E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.855E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.401E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	9.843E-01	9.080E-01	1.770E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.136E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-7.348E-03	2.070E-02	3.277E-02	0.000E+00	NOT IDENT.
RH-102	1.059E-02	1.873E-02	3.363E-02	0.000E+00	NOT IDENT.
RU-103	7.189E-03	2.304E-02	4.013E-02	0.000E+00	FAIL ABUN
RH-106	8.930E-02	2.110E-01	3.831E-01	0.000E+00	FAIL ABUN
RU-106	8.930E-02	2.109E-01	3.831E-01	0.000E+00	FAIL ABUN
AG-108M	-2.695E-03	1.856E-02	3.107E-02	0.000E+00	NOT IDENT.
CD-109	6.468E-02	4.121E-01	6.787E-01	0.000E+00	NOT IDENT.
AG-110M	-1.189E-03	2.113E-02	3.631E-02	0.000E+00	NOT IDENT.
IN-111	3.736E-02	9.517E-02	1.753E-01	0.000E+00	NOT IDENT.
IN-113M	-1.936E-02	2.584E-02	4.084E-02	0.000E+00	NOT IDENT.
SN-113	-1.936E-02	2.584E-02	4.084E-02	0.000E+00	NOT IDENT.
IN-114M	5.360E-02	1.106E-01	1.759E-01	0.000E+00	NOT IDENT.
CD-115	3.576E-01	6.333E-01	1.129E+00	0.000E+00	NOT IDENT.
SN-117M	-8.652E-03	2.147E-02	3.607E-02	0.000E+00	NOT IDENT.
SB-122	-6.955E-02	1.533E-01	2.540E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.779E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-7.149E-03	1.595E-02	2.670E-02	0.000E+00	NOT IDENT.
I-124	-4.791E-02	1.352E-01	2.036E-01	0.000E+00	NOT IDENT.
SB-124	-3.465E-02	4.236E-02	5.309E-02	0.000E+00	NOT IDENT.
SB-125	-1.343E-02	5.981E-02	9.968E-02	0.000E+00	NOT IDENT.
TE-125M	-8.148E-01	4.858E+00	8.563E+00	0.000E+00	NOT IDENT.
I-126	-3.413E-02	7.399E-02	1.206E-01	0.000E+00	NOT IDENT.
SB-126	3.040E-02	5.925E-02	1.078E-01	0.000E+00	NOT IDENT.
SN-126	1.294E-02	4.134E-02	6.902E-02	0.000E+00	FAIL ABUN
SB-127	3.772E-02	1.834E-01	3.252E-01	0.000E+00	NOT IDENT.
XE-127	-2.600E-02	2.382E-02	3.652E-02	0.000E+00	NOT IDENT.
I-131	2.987E-02	3.743E-02	6.955E-02	0.000E+00	NOT IDENT.
TE-132	-7.498E-02	8.108E-02	1.236E-01	0.000E+00	NOT IDENT.
BA-133	-2.969E-02	2.730E-02	4.194E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.460E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.080E-02	2.523E-02	4.551E-02	0.000E+00	NOT IDENT.
CS-135	-7.630E-02	9.211E-02	1.527E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	8.429E+06	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.769E-02	3.932E-02	6.257E-02	0.000E+00	NOT IDENT.
BA-137M	9.717E-03	2.157E-02	3.928E-02	0.000E+00	NOT IDENT.
CS-137	1.027E-02	2.280E-02	4.152E-02	0.000E+00	NOT IDENT.
CE-139	-2.109E-02	1.695E-02	2.633E-02	0.000E+00	NOT IDENT.
BA-140	7.402E-02	1.021E-01	1.822E-01	0.000E+00	NOT IDENT.
LA-140	-1.244E-02	4.335E-02	7.021E-02	0.000E+00	NOT IDENT.
CE-141	2.675E-02	3.176E-02	5.343E-02	0.000E+00	NOT IDENT.
CE-143	4.940E-01	1.450E+00	2.628E+00	0.000E+00	NOT IDENT.
CE-144	-3.965E-02	1.155E-01	1.977E-01	0.000E+00	NOT IDENT.
PM-144	4.969E-03	1.928E-02	3.428E-02	0.000E+00	NOT IDENT.
PR-144	3.353E-01	1.301E+00	2.313E+00	0.000E+00	NOT IDENT.
PM-146	3.326E-03	2.647E-02	4.559E-02	0.000E+00	NOT IDENT.
ND-147	1.084E-02	2.238E-01	3.762E-01	0.000E+00	FAIL ABUN
PM-149	1.942E+00	4.825E+00	8.804E+00	0.000E+00	NOT IDENT.
EU-152	-5.941E-02	5.945E-02	9.317E-02	0.000E+00	NOT IDENT.
GD-153	-3.473E-03	4.635E-02	7.532E-02	0.000E+00	NOT IDENT.
EU-154	5.695E-03	5.266E-02	9.116E-02	0.000E+00	NOT IDENT.
EU-155	-5.828E-02	5.660E-02	9.316E-02	0.000E+00	NOT IDENT.
TB-160	-1.240E-02	7.819E-02	1.279E-01	0.000E+00	NOT IDENT.
HO-166M	-6.302E-03	3.887E-02	6.539E-02	0.000E+00	FAIL ABUN
TM-171	-1.427E-01	1.521E+01	2.520E+01	0.000E+00	NOT IDENT.
LU-176	7.477E-03	1.496E-02	2.742E-02	0.000E+00	NOT IDENT.
LU-177	1.626E-01	3.118E-01	5.241E-01	0.000E+00	NOT IDENT.
LU-177M	-1.020E-01	9.950E-02	1.494E-01	0.000E+00	NOT IDENT.
HF-181	-1.341E-02	2.174E-02	3.359E-02	0.000E+00	NOT IDENT.
W-181	3.693E-02	2.005E-01	3.387E-01	0.000E+00	NOT IDENT.
TA-182	5.043E-02	8.835E-02	1.648E-01	0.000E+00	NOT IDENT.
RE-183	2.617E-02	6.284E-02	1.068E-01	0.000E+00	NOT IDENT.
RE-184	7.365E-02	1.377E-01	2.556E-01	0.000E+00	NOT IDENT.

OS-185	-9.904E-03	2.572E-02	4.251E-02	0.000E+00	NOT IDENT.
RE-188	-3.811E-02	8.997E-02	1.512E-01	0.000E+00	NOT IDENT.
W-188	-3.619E-01	3.866E+00	6.783E+00	0.000E+00	FAIL ABUN
IR-192	1.704E-03	1.979E-02	3.500E-02	0.000E+00	NOT IDENT.
AU-195	-3.355E-02	1.285E-01	2.138E-01	0.000E+00	NOT IDENT.
TL-200	5.269E-01	2.023E+00	3.591E+00	0.000E+00	NOT IDENT.
TL-201	7.838E-01	6.920E-01	1.288E+00	0.000E+00	NOT IDENT.
TL-202	-1.259E-05	2.663E-02	4.534E-02	0.000E+00	NOT IDENT.
HG-203	-2.057E-03	2.661E-02	4.485E-02	0.000E+00	NOT IDENT.
BI-207	5.003E-03	3.106E-02	5.476E-02	0.000E+00	NOT IDENT.
TL-207	-9.747E-02	3.561E-01	6.062E-01	0.000E+00	FAIL ABUN
TL-208	-7.461E-03	2.462E-02	4.066E-02	0.000E+00	FAIL ABUN
PO-209	2.740E+00	4.578E+00	8.357E+00	0.000E+00	NOT IDENT.
BI-210	1.278E+00	3.684E+00	6.010E+00	0.000E+00	NOT IDENT.
PB-210	1.278E+00	3.684E+00	6.010E+00	0.000E+00	NOT IDENT.
PO-210	1.278E+00	3.684E+00	6.010E+00	0.000E+00	NOT IDENT.
BI-211	-4.029E-03	1.423E-01	2.333E-01	0.000E+00	NOT IDENT.
PB-211	6.734E-02	5.907E-01	1.023E+00	0.000E+00	NOT IDENT.
BI-212	6.771E-02	1.683E-01	3.031E-01	0.000E+00	NOT IDENT.
PB-212	-6.895E-03	3.662E-02	6.417E-02	0.000E+00	NOT IDENT.
PO-212	-6.895E-03	3.662E-02	6.417E-02	0.000E+00	NOT IDENT.
BI-214	3.311E-02	6.421E-02	9.138E-02	0.000E+00	FAIL ABUN
PB-214	3.487E-02	4.934E-02	8.583E-02	0.000E+00	NOT IDENT.
PO-214	3.487E-02	4.934E-02	8.583E-02	0.000E+00	NOT IDENT.
PO-215	-9.747E-02	3.561E-01	6.062E-01	0.000E+00	FAIL ABUN
PO-216	-6.895E-03	3.662E-02	6.417E-02	0.000E+00	NOT IDENT.
PO-218	3.487E-02	4.934E-02	8.583E-02	0.000E+00	NOT IDENT.
RN-219	1.591E-01	2.353E-01	4.320E-01	0.000E+00	NOT IDENT.
RN-220	-4.296E+00	1.499E+01	2.390E+01	0.000E+00	NOT IDENT.
RA-223	-9.747E-02	3.561E-01	6.062E-01	0.000E+00	FAIL ABUN
RA-224	-2.031E-01	3.869E-01	6.700E-01	0.000E+00	NOT IDENT.
RA-226	3.311E-02	6.421E-02	9.138E-02	0.000E+00	FAIL ABUN
AC-227	-3.683E-03	2.328E-01	4.156E-01	0.000E+00	NOT IDENT.
TH-227	-3.683E-03	2.328E-01	4.156E-01	0.000E+00	FAIL ABUN
AC-228	1.173E-02	8.512E-02	1.412E-01	0.000E+00	NOT IDENT.
RA-228	1.173E-02	8.512E-02	1.412E-01	0.000E+00	NOT IDENT.
TH-228	-6.975E-03	3.661E-02	6.414E-02	0.000E+00	NOT IDENT.
TH-229	-8.556E-02	3.073E-01	5.120E-01	0.000E+00	NOT IDENT.
TH-230	3.311E-02	6.420E-02	9.138E-02	0.000E+00	FAIL ABUN
PA-231	-4.692E-01	9.425E-01	1.599E+00	0.000E+00	NOT IDENT.
TH-231	-9.747E-02	3.561E-01	6.062E-01	0.000E+00	FAIL ABUN
U-231	-3.685E-02	1.787E-01	2.831E-01	0.000E+00	FAIL ABUN
TH-232	1.173E-02	8.512E-02	1.412E-01	0.000E+00	NOT IDENT.
PA-233	-1.115E-02	4.089E-02	7.021E-02	0.000E+00	NOT IDENT.
PA-234	9.780E-02	1.938E-01	3.461E-01	0.000E+00	FAIL ABUN
PA-234M	-1.490E+00	4.780E+00	7.705E+00	0.000E+00	NOT IDENT.
U-234	3.311E-02	6.420E-02	9.138E-02	0.000E+00	FAIL ABUN
NP-236	-6.883E-03	4.702E-02	8.050E-02	0.000E+00	NOT IDENT.
NP-237	-5.135E-02	1.147E-01	2.005E-01	0.000E+00	NOT IDENT.
NP-239	4.829E-02	9.494E-02	1.748E-01	0.000E+00	NOT IDENT.
AM-241	3.236E-02	9.891E-02	1.703E-01	0.000E+00	NOT IDENT.
AM-243	-2.618E-03	2.707E-02	4.921E-02	0.000E+00	FAIL ABUN
CM-243	1.788E-02	4.988E-02	9.146E-02	0.000E+00	NOT IDENT.
CM-247	4.345E-03	2.233E-02	3.913E-02	0.000E+00	NOT IDENT.
CF-249	2.169E-02	2.494E-02	4.650E-02	0.000E+00	NOT IDENT.
CF-251	1.579E-02	7.398E-02	1.291E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:12:12.91

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871423.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:11:44.
Sample ID         : G1201871423          Sample quantity  : 1.37710E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.56  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	8	10.67*	1.046E+00	1.959E-01	1.959E-01	178.59
TH-234	63.29	23	3.80*	2.554E+00	6.338E-01	6.338E-01	236.25
	92.38	15	5.41	5.608E+00	1.337E-01	1.337E-01	417.09
U-235	89.95	------	2.70	5.447E+00	------	Line Not Found	------
	93.35	15	4.50	5.608E+00	1.608E-01	1.608E-01	417.64
	105.00	------	2.10	6.127E+00	------	Line Not Found	------
	143.76	40	10.50*	6.167E+00	1.696E-01	1.696E-01	97.72
	163.35	------	4.70	5.849E+00	------	Line Not Found	------
	185.71	26	54.00	5.447E+00	2.368E-02	2.368E-02	209.98
	205.31	------	4.70	5.110E+00	------	Line Not Found	------
U-238	63.29	23	3.80*	2.554E+00	6.338E-01	6.338E-01	236.25
	92.38	15	5.41	5.608E+00	1.337E-01	1.337E-01	416.79
ANH-511	511.00	3	100.00*	2.608E+00	2.762E-03	2.762E-03	1649.75

Flag: "*" = Keyline

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

Total number of lines in spectrum 7
Number of unidentified lines 0
Number of lines tentatively identified by NID 7 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.959E-01	1.959E-01	3.499E-01	178.59	
TH-234	4.47E+09Y	1.00	6.338E-01	6.338E-01	14.97E-01	236.25	
U-235	7.04E+08Y	1.00	1.696E-01	1.696E-01	1.657E-01	97.72	
U-238	4.47E+09Y	1.00	6.338E-01	6.338E-01	14.97E-01	236.25	
ANH-511	1.00E+09Y	1.00	2.762E-03	2.762E-03	45.56E-03	1649.75	
		Total Activity :	1.636E+00	1.636E+00			
		Grand Total Activity :	1.636E+00	1.636E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	609.39	13	31	1.45	1218.58	1213	11	1.77E-03	****	2.27E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:12:17.99

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871423.CNF;1  *
* Acquisition date  : 7-JUL-2009 08:11:44.  Detector SN#     :            *
* Detector ID       : GAM02                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.56          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201871423           Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 1.37710E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 1-NOV-2008 14:03:38.86MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.959E-01	3.499E-01	4.568E-01	3.386E-02	0.429
TH-234	6.338E-01	1.497E+00	1.155E+00	2.111E-01	0.549
U-235	1.696E-01	1.657E-01	1.840E-01	3.027E-02	0.922
U-238	6.338E-01	1.497E+00	1.155E+00	2.111E-01	0.549
ANH-511	2.762E-03	4.556E-02	3.220E-02	2.106E-03	0.086

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.623E-02		1.892E-01	3.122E-01	2.295E-02	0.116
NA-22	1.611E-03		1.906E-02	3.199E-02	2.139E-03	0.050
NA-24	-5.633E-05		4.238E-05	Half-Life too short		
AL-26	1.551E-02		2.462E-02	4.643E-02	2.615E-03	0.334
TI-44	-4.926E-03		1.660E-02	2.737E-02	2.917E-03	-0.180
SC-46	-1.073E-03		2.261E-02	3.638E-02	3.352E-03	-0.029
V-48	4.934E-02		2.839E-02	5.868E-02	4.962E-03	0.841

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CR-51	7.057E-02		1.756E-01	3.032E-01	2.703E-02	0.233
MN-52	-1.834E-03		6.166E-02	9.967E-02	7.161E-03	-0.018
MN-54	-1.068E-02		2.016E-02	2.986E-02	2.536E-03	-0.358
CO-56	-1.470E-02		2.323E-02	3.395E-02	2.936E-03	-0.433
CO-57	-5.960E-05		1.250E-02	2.057E-02	1.214E-03	-0.003
CO-58	-2.890E-03		2.247E-02	3.602E-02	2.957E-03	-0.080
FE-59	3.732E-02		4.653E-02	8.701E-02	6.697E-03	0.429
CO-60	4.525E-03		2.179E-02	3.732E-02	2.747E-03	0.121
ZN-65	-3.686E-02		5.202E-02	7.661E-02	5.039E-03	-0.481
GE-68	4.267E-01		6.411E-01	1.191E+00	8.550E-02	0.358
AS-73	5.673E-01		5.483E-01	1.001E+00	8.958E-02	0.567
AS-74	2.517E-02		4.455E-02	7.911E-02	5.169E-03	0.318
SE-75	1.334E-02		2.430E-02	4.271E-02	3.829E-03	0.312
BR-77	5.884E-01		7.066E-01	1.245E+00	8.156E-02	0.472
SR-82	2.001E-02		1.781E-01	2.972E-01	2.305E-02	0.067
RB-83	3.147E-02		4.258E-02	7.429E-02	4.865E-03	0.424
RB-84	1.702E-03		3.386E-02	5.546E-02	5.052E-03	0.031
KR-85	1.028E+01		5.245E+00	9.344E+00	6.114E-01	1.100
SR-85	4.857E-02		2.478E-02	4.415E-02	2.889E-03	1.100
RB-86	2.725E-02		3.172E-01	5.375E-01	3.864E-02	0.051
Y-88	-1.220E-02		2.361E-02	3.321E-02	1.821E-03	-0.367
ZR-88	-1.979E-03		1.687E-02	2.727E-02	1.695E-03	-0.073
Y-91	-1.554E+00		8.362E+00	1.333E+01	7.839E-01	-0.117
NB-94	-1.782E-02		2.134E-02	3.139E-02	2.156E-03	-0.568
NB-95	2.702E-02		2.627E-02	4.599E-02	3.506E-03	0.588
NB-95M	-6.551E-02		6.366E-02	9.939E-02	9.512E-03	-0.659
ZR-95	2.261E-02		3.666E-02	6.571E-02	5.581E-03	0.344
NB-97	-1.606E-06		1.456E-05	Half-Life too short		
ZR-97	5.287E-04		3.266E-04	Half-Life too short		
MO-99	9.843E-01		9.265E-01	1.740E+00	2.520E-01	0.566
TC-99M	-9.642E-01		5.793E+00	Half-Life too short		
RH-101	-7.348E-03		2.112E-02	3.143E-02	2.336E-03	-0.234
RH-102	1.059E-02		1.911E-02	3.278E-02	2.126E-03	0.323
RU-103	7.189E-03		2.351E-02	3.916E-02	5.088E-03	0.184
RH-106	8.930E-02		2.153E-01	3.755E-01	4.542E-02	0.238
RU-106	8.930E-02		2.152E-01	3.755E-01	2.439E-02	0.238
AG-108M	-2.695E-03		1.894E-02	3.024E-02	2.066E-03	-0.089
CD-109	6.468E-02		4.205E-01	6.411E-01	7.573E-02	0.101
AG-110M	-1.189E-03		2.156E-02	3.563E-02	2.405E-03	-0.033
IN-111	3.736E-02		9.711E-02	1.688E-01	1.434E-02	0.221
IN-113M	-1.936E-02		2.637E-02	3.967E-02	2.608E-03	-0.488
SN-113	-1.936E-02		2.637E-02	3.967E-02	2.608E-03	-0.488
IN-114M	5.360E-02		1.128E-01	1.685E-01	1.224E-02	0.318
CD-115	3.576E-01		6.462E-01	1.103E+00	7.232E-02	0.324
SN-117M	-8.652E-03		2.191E-02	3.444E-02	2.260E-03	-0.251
SB-122	-6.955E-02		1.565E-01	2.485E-01	1.630E-02	-0.280
I-123	-7.973E-05		9.077E-05	Half-Life too short		
TE-123M	-7.149E-03		1.628E-02	2.549E-02	1.694E-03	-0.280

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-124	-4.791E-02		1.379E-01	1.995E-01	1.302E-02	-0.240
SB-124	-3.465E-02		4.322E-02	5.308E-02	3.569E-03	-0.653
SB-125	-1.343E-02		6.103E-02	9.699E-02	6.382E-03	-0.138
TE-125M	-8.148E-01		4.958E+00	8.121E+00	7.650E-01	-0.100
I-126	-3.413E-02		7.550E-02	1.184E-01	7.636E-03	-0.288
SB-126	3.040E-02		6.046E-02	1.059E-01	7.498E-03	0.287
SN-126	1.294E-02		4.218E-02	6.519E-02	7.667E-03	0.199
SB-127	3.772E-02		1.872E-01	3.193E-01	2.502E-02	0.118
XE-127	-2.600E-02		2.430E-02	3.503E-02	2.642E-03	-0.742
I-131	2.987E-02		3.820E-02	6.747E-02	5.190E-03	0.443
TE-132	-7.498E-02		8.273E-02	1.188E-01	1.702E-02	-0.631
BA-133	-2.969E-02		2.785E-02	4.067E-02	5.073E-03	-0.730
I-133	6.869E-06		3.806E-06	Half-Life too short		
CS-134	1.080E-02		2.575E-02	4.482E-02	3.615E-03	0.241
CS-135	-7.630E-02		9.398E-02	1.473E-01	1.517E-02	-0.518
I-135	-2.804E+00		4.301E+00	Half-Life too short		
CS-136	-1.769E-02		4.013E-02	6.196E-02	4.968E-03	-0.286
BA-137M	9.717E-03		2.201E-02	3.854E-02	2.467E-03	0.252
CS-137	1.027E-02		2.327E-02	4.074E-02	2.617E-03	0.252
CE-139	-2.109E-02		1.729E-02	2.516E-02	1.703E-03	-0.838
BA-140	7.402E-02		1.042E-01	1.781E-01	5.816E-02	0.416
LA-140	-1.244E-02		4.424E-02	7.012E-02	4.684E-03	-0.177
CE-141	2.675E-02		3.240E-02	5.094E-02	3.289E-03	0.525
CE-143	4.940E-01		1.479E+00	2.538E+00	5.470E-01	0.195
CE-144	-3.965E-02		1.179E-01	1.882E-01	2.689E-02	-0.211
PM-144	4.969E-03		1.967E-02	3.367E-02	2.289E-03	0.148
PR-144	3.353E-01		1.328E+00	2.272E+00	1.544E-01	0.148
PM-146	3.326E-03		2.701E-02	4.441E-02	4.024E-03	0.075
ND-147	1.084E-02		2.283E-01	3.675E-01	5.095E-02	0.029
PM-149	1.942E+00		4.923E+00	8.500E+00	1.344E+00	0.228
EU-152	-5.941E-02		6.066E-02	9.028E-02	7.560E-03	-0.658
GD-153	-3.473E-03		4.730E-02	7.128E-02	6.778E-03	-0.049
EU-154	5.695E-03		5.374E-02	9.064E-02	8.980E-03	0.063
EU-155	-5.828E-02		5.775E-02	8.829E-02	7.268E-03	-0.660
TB-160	-1.240E-02		7.979E-02	1.262E-01	1.146E-02	-0.098
HO-166M	-6.302E-03		3.967E-02	6.426E-02	4.481E-03	-0.098
TM-171	-1.427E-01		1.552E+01	2.369E+01	2.267E+00	-0.006
LU-176	7.477E-03		1.526E-02	2.651E-02	2.318E-03	0.282
LU-177	1.626E-01		3.181E-01	5.031E-01	3.856E-02	0.323
LU-177M	-1.020E-01		1.015E-01	1.452E-01	9.154E-03	-0.702
HF-181	-1.341E-02		2.218E-02	3.276E-02	2.129E-03	-0.409
W-181	3.693E-02		2.046E-01	3.182E-01	2.998E-02	0.116
TA-182	5.043E-02		9.016E-02	1.637E-01	9.928E-03	0.308
RE-183	2.617E-02		6.412E-02	1.021E-01	6.803E-03	0.256
RE-184	7.365E-02		1.405E-01	2.462E-01	2.133E-02	0.299
OS-185	-9.904E-03		2.625E-02	4.169E-02	2.686E-03	-0.238
RE-188	-3.811E-02		9.181E-02	1.443E-01	9.335E-03	-0.264
W-188	-3.619E-01		3.945E+00	6.551E+00	5.932E-01	-0.055

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IR-192	1.704E-03		2.019E-02	3.386E-02	2.896E-03	0.050
AU-195	-3.355E-02		1.311E-01	2.024E-01	1.867E-02	-0.166
TL-200	5.269E-01		2.065E+00	3.484E+00	2.463E-01	0.151
TL-201	7.838E-01		7.061E-01	1.231E+00	8.367E-02	0.637
TL-202	-1.259E-05		2.717E-02	4.414E-02	2.822E-03	0.000
HG-203	-2.057E-03		2.715E-02	4.328E-02	4.099E-03	-0.048
BI-207	5.003E-03		3.170E-02	5.425E-02	4.007E-03	0.092
TL-207	-9.747E-02		3.634E-01	5.867E-01	1.031E-01	-0.166
TL-208	-7.461E-03		2.512E-02	3.980E-02	2.923E-03	-0.187
PO-209	2.740E+00		4.672E+00	8.251E+00	7.684E-01	0.332
BI-210	1.278E+00		3.759E+00	5.613E+00	4.523E-01	0.228
PB-210	1.278E+00		3.759E+00	5.613E+00	4.523E-01	0.228
PO-210	1.278E+00		3.759E+00	5.613E+00	3.942E-01	0.228
BI-211	-4.029E-03		1.453E-01	2.261E-01	1.832E-02	-0.018
PB-211	6.734E-02		6.028E-01	9.943E-01	6.203E-01	0.068
BI-212	6.771E-02		1.717E-01	2.980E-01	2.616E-02	0.227
PB-212	-6.895E-03		3.737E-02	6.175E-02	5.850E-03	-0.112
PO-212	-6.895E-03		3.737E-02	6.175E-02	5.850E-03	-0.112
BI-214	3.311E-02	+	6.552E-02	8.953E-02	7.454E-03	0.370
PB-214	3.487E-02		5.034E-02	8.320E-02	8.002E-03	0.419
PO-214	3.487E-02		5.034E-02	8.320E-02	8.002E-03	0.419
PO-215	-9.747E-02		3.634E-01	5.867E-01	1.031E-01	-0.166
PO-216	-6.895E-03		3.737E-02	6.175E-02	5.850E-03	-0.112
PO-218	3.487E-02		5.034E-02	8.320E-02	8.002E-03	0.419
RN-219	1.591E-01		2.401E-01	4.199E-01	5.796E-02	0.379
RN-220	-4.296E+00		1.530E+01	2.337E+01	1.533E+00	-0.184
RA-223	-9.747E-02		3.634E-01	5.867E-01	1.031E-01	-0.166
RA-224	-2.031E-01		3.948E-01	6.448E-01	5.416E-02	-0.315
RA-226	3.311E-02	+	6.552E-02	8.953E-02	7.454E-03	0.370
AC-227	-3.683E-03		2.375E-01	4.005E-01	6.173E-02	-0.009
TH-227	-3.683E-03		2.375E-01	4.005E-01	7.256E-02	-0.009
AC-228	1.173E-02		8.685E-02	1.394E-01	1.632E-02	0.084
RA-228	1.173E-02		8.685E-02	1.394E-01	1.632E-02	0.084
TH-228	-6.975E-03		3.736E-02	6.172E-02	5.847E-03	-0.113
TH-229	-8.556E-02		3.136E-01	4.908E-01	3.601E-02	-0.174
TH-230	3.311E-02	+	6.551E-02	8.953E-02	7.454E-03	0.370
PA-231	-4.692E-01		9.617E-01	1.543E+00	2.393E-01	-0.304
TH-231	-9.747E-02		3.634E-01	5.867E-01	1.031E-01	-0.166
U-231	-3.685E-02		1.823E-01	2.678E-01	2.633E-02	-0.138
TH-232	1.173E-02		8.685E-02	1.394E-01	1.632E-02	0.084
PA-233	-1.115E-02		4.172E-02	6.790E-02	6.030E-03	-0.164
PA-234	9.780E-02		1.977E-01	3.420E-01	6.458E-02	0.286
PA-234M	-1.490E+00		4.877E+00	7.624E+00	8.303E-01	-0.195
U-234	3.311E-02	+	6.551E-02	8.953E-02	7.454E-03	0.370
NP-236	-6.883E-03		4.798E-02	7.689E-02	5.082E-03	-0.090
NP-237	-5.135E-02		1.170E-01	1.893E-01	4.483E-02	-0.271
NP-239	4.829E-02		9.687E-02	1.660E-01	1.079E-02	0.291
AM-241	3.236E-02		1.009E-01	1.597E-01	1.479E-02	0.203

Sample ID : G1201871423 Acquisition date : 7-JUL-2009 08:11:44

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	-2.618E-03		2.763E-02	4.634E-02	4.770E-03	-0.056
CM-243	1.788E-02		5.090E-02	8.665E-02	7.251E-03	0.206
CM-247	4.345E-03		2.279E-02	3.803E-02	2.380E-03	0.114
CF-249	2.169E-02		2.545E-02	4.516E-02	2.869E-03	0.480
CF-251	1.579E-02		7.549E-02	1.235E-01	8.618E-03	0.128

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871423          *
* Acquisition date  :  7-JUL-2009 08:11:44 Detector SN#     :               *
* Detector ID       : GAM02                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.56      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871423          Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.3771E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	1.959E-01	3.429E-01	2.292E-01	1.750E-01
TH-234	6.338E-01	1.467E+00	6.153E-01	7.486E-01
U-235	1.696E-01	1.624E-01	9.657E-02	8.287E-02
U-238	6.338E-01	1.467E+00	6.153E-01	7.486E-01
ANH-511	2.762E-03	4.465E-02	1.650E-02	2.278E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	3.623E-02	1.854E-01	1.602E-01	9.458E-02	NOT IDENT.
NA-22	1.611E-03	1.868E-02	1.610E-02	9.530E-03	NOT IDENT.
NA-24	-5.633E+01	8.306E+01	0.000E+00	4.238E+01	SHORT HLIF
AL-26	1.551E-02	2.413E-02	2.320E-02	1.231E-02	NOT IDENT.
TI-44	-4.926E-03	1.626E-02	1.452E-02	8.298E-03	NOT IDENT.
SC-46	-1.073E-03	2.215E-02	1.844E-02	1.130E-02	NOT IDENT.
V-48	4.934E-02	2.783E-02	2.968E-02	1.420E-02	NOT IDENT.
CR-51	7.057E-02	1.721E-01	1.567E-01	8.782E-02	NOT IDENT.
MN-52	-1.834E-03	6.043E-02	5.003E-02	3.083E-02	NOT IDENT.
MN-54	-1.068E-02	1.976E-02	1.515E-02	1.008E-02	NOT IDENT.
CO-56	-1.470E-02	2.277E-02	1.722E-02	1.162E-02	NOT IDENT.
CO-57	-5.960E-05	1.225E-02	1.083E-02	6.251E-03	NOT IDENT.
CO-58	-2.890E-03	2.202E-02	1.829E-02	1.124E-02	NOT IDENT.
FE-59	3.732E-02	4.560E-02	4.392E-02	2.327E-02	FAIL ABUN
CO-60	4.525E-03	2.135E-02	1.877E-02	1.090E-02	NOT IDENT.
ZN-65	-3.686E-02	5.097E-02	3.866E-02	2.601E-02	NOT IDENT.
GE-68	4.267E-01	6.283E-01	6.013E-01	3.206E-01	NOT IDENT.
AS-73	5.673E-01	5.374E-01	5.350E-01	2.742E-01	NOT IDENT.
AS-74	2.517E-02	4.366E-02	4.042E-02	2.227E-02	NOT IDENT.
SE-75	1.334E-02	2.382E-02	2.216E-02	1.215E-02	NOT IDENT.
BR-77	5.884E-01	6.925E-01	6.379E-01	3.533E-01	NOT IDENT.
SR-82	2.001E-02	1.745E-01	1.511E-01	8.904E-02	NOT IDENT.

RB-83	3.147E-02	4.173E-02	3.805E-02	2.129E-02	NOT IDENT.
RB-84	1.702E-03	3.319E-02	2.812E-02	1.693E-02	NOT IDENT.
KR-85	1.028E+01	5.140E+00	4.787E+00	2.622E+00	NOT IDENT.
SR-85	4.857E-02	2.429E-02	2.262E-02	1.239E-02	NOT IDENT.
RB-86	2.725E-02	3.108E-01	2.714E-01	1.586E-01	NOT IDENT.
Y-88	-1.220E-02	2.313E-02	1.659E-02	1.180E-02	NOT IDENT.
ZR-88	-1.979E-03	1.653E-02	1.405E-02	8.434E-03	NOT IDENT.
Y-91	-1.554E+00	8.194E+00	6.716E+00	4.181E+00	NOT IDENT.
NB-94	-1.782E-02	2.091E-02	1.599E-02	1.067E-02	NOT IDENT.
NB-95	2.702E-02	2.574E-02	2.338E-02	1.313E-02	NOT IDENT.
NB-95M	-6.551E-02	6.239E-02	5.169E-02	3.183E-02	NOT IDENT.
ZR-95	2.261E-02	3.593E-02	3.341E-02	1.833E-02	NOT IDENT.
NB-97	-1.606E+00	2.855E+01	0.000E+00	1.456E+01	SHORT HLIF
ZR-97	5.287E+02	6.401E+02	0.000E+00	3.266E+02	SHORT HLIF
MO-99	9.843E-01	9.080E-01	8.854E-01	4.633E-01	NOT IDENT.
TC-99M	-9.642E+05	1.136E+07	0.000E+00	5.793E+06	SHORT HLIF
RH-101	-7.348E-03	2.070E-02	1.640E-02	1.056E-02	NOT IDENT.
RH-102	1.059E-02	1.873E-02	1.682E-02	9.556E-03	NOT IDENT.
RU-103	7.189E-03	2.304E-02	2.008E-02	1.175E-02	FAIL ABUN
RH-106	8.930E-02	2.110E-01	1.917E-01	1.077E-01	FAIL ABUN
RU-106	8.930E-02	2.109E-01	1.917E-01	1.076E-01	FAIL ABUN
AG-108M	-2.695E-03	1.856E-02	1.555E-02	9.468E-03	NOT IDENT.
CD-109	6.468E-02	4.121E-01	3.396E-01	2.102E-01	NOT IDENT.
AG-110M	-1.189E-03	2.113E-02	1.817E-02	1.078E-02	NOT IDENT.
IN-111	3.736E-02	9.517E-02	8.770E-02	4.855E-02	NOT IDENT.
IN-113M	-1.936E-02	2.584E-02	2.043E-02	1.318E-02	NOT IDENT.
SN-113	-1.936E-02	2.584E-02	2.043E-02	1.318E-02	NOT IDENT.
IN-114M	5.360E-02	1.106E-01	8.801E-02	5.641E-02	NOT IDENT.
CD-115	3.576E-01	6.333E-01	5.651E-01	3.231E-01	NOT IDENT.
SN-117M	-8.652E-03	2.147E-02	1.804E-02	1.095E-02	NOT IDENT.
SB-122	-6.955E-02	1.533E-01	1.271E-01	7.824E-02	NOT IDENT.
I-123	-7.973E+01	1.779E+02	0.000E+00	9.077E+01	SHORT HLIF
TE-123M	-7.149E-03	1.595E-02	1.336E-02	8.138E-03	NOT IDENT.
I-124	-4.791E-02	1.352E-01	1.019E-01	6.897E-02	NOT IDENT.
SB-124	-3.465E-02	4.236E-02	2.656E-02	2.161E-02	NOT IDENT.
SB-125	-1.343E-02	5.981E-02	4.987E-02	3.051E-02	NOT IDENT.
TE-125M	-8.148E-01	4.858E+00	4.284E+00	2.479E+00	NOT IDENT.
I-126	-3.413E-02	7.399E-02	6.033E-02	3.775E-02	NOT IDENT.
SB-126	3.040E-02	5.925E-02	5.392E-02	3.023E-02	NOT IDENT.
SN-126	1.294E-02	4.134E-02	3.453E-02	2.109E-02	FAIL ABUN
SB-127	3.772E-02	1.834E-01	1.627E-01	9.359E-02	NOT IDENT.
XE-127	-2.600E-02	2.382E-02	1.827E-02	1.215E-02	NOT IDENT.
I-131	2.987E-02	3.743E-02	3.480E-02	1.910E-02	NOT IDENT.
TE-132	-7.498E-02	8.108E-02	6.183E-02	4.137E-02	NOT IDENT.
BA-133	-2.969E-02	2.730E-02	2.098E-02	1.393E-02	NOT IDENT.
I-133	6.869E+00	7.460E+00	0.000E+00	3.806E+00	SHORT HLIF
CS-134	1.080E-02	2.523E-02	2.277E-02	1.287E-02	NOT IDENT.
CS-135	-7.630E-02	9.211E-02	7.640E-02	4.699E-02	NOT IDENT.
I-135	-2.804E+06	8.429E+06	0.000E+00	4.301E+06	SHORT HLIF
CS-136	-1.769E-02	3.932E-02	3.130E-02	2.006E-02	NOT IDENT.
BA-137M	9.717E-03	2.157E-02	1.965E-02	1.100E-02	NOT IDENT.
CS-137	1.027E-02	2.280E-02	2.077E-02	1.163E-02	NOT IDENT.
CE-139	-2.109E-02	1.695E-02	1.317E-02	8.647E-03	NOT IDENT.
BA-140	7.402E-02	1.021E-01	9.115E-02	5.208E-02	NOT IDENT.
LA-140	-1.244E-02	4.335E-02	3.512E-02	2.212E-02	NOT IDENT.
CE-141	2.675E-02	3.176E-02	2.673E-02	1.620E-02	NOT IDENT.
CE-143	4.940E-01	1.450E+00	1.315E+00	7.397E-01	NOT IDENT.
CE-144	-3.965E-02	1.155E-01	9.890E-02	5.893E-02	NOT IDENT.
PM-144	4.969E-03	1.928E-02	1.715E-02	9.836E-03	NOT IDENT.
PR-144	3.353E-01	1.301E+00	1.157E+00	6.638E-01	NOT IDENT.
PM-146	3.326E-03	2.647E-02	2.281E-02	1.351E-02	NOT IDENT.
ND-147	1.084E-02	2.238E-01	1.882E-01	1.142E-01	FAIL ABUN
PM-149	1.942E+00	4.825E+00	4.405E+00	2.462E+00	NOT IDENT.
EU-152	-5.941E-02	5.945E-02	4.661E-02	3.033E-02	NOT IDENT.
GD-153	-3.473E-03	4.635E-02	3.768E-02	2.365E-02	NOT IDENT.
EU-154	5.695E-03	5.266E-02	4.561E-02	2.687E-02	NOT IDENT.
EU-155	-5.828E-02	5.660E-02	4.661E-02	2.888E-02	NOT IDENT.
TB-160	-1.240E-02	7.819E-02	6.398E-02	3.989E-02	NOT IDENT.
HO-166M	-6.302E-03	3.887E-02	3.271E-02	1.983E-02	FAIL ABUN
TM-171	-1.427E-01	1.521E+01	1.261E+01	7.759E+00	NOT IDENT.
LU-176	7.477E-03	1.496E-02	1.372E-02	7.632E-03	NOT IDENT.
LU-177	1.626E-01	3.118E-01	2.622E-01	1.591E-01	NOT IDENT.
LU-177M	-1.020E-01	9.950E-02	7.472E-02	5.076E-02	NOT IDENT.
HF-181	-1.341E-02	2.174E-02	1.681E-02	1.109E-02	NOT IDENT.
W-181	3.693E-02	2.005E-01	1.694E-01	1.023E-01	NOT IDENT.
TA-182	5.043E-02	8.835E-02	8.244E-02	4.508E-02	NOT IDENT.
RE-183	2.617E-02	6.284E-02	5.345E-02	3.206E-02	NOT IDENT.
RE-184	7.365E-02	1.377E-01	1.279E-01	7.024E-02	NOT IDENT.

OS-185	-9.904E-03	2.572E-02	2.127E-02	1.312E-02	NOT IDENT.
RE-188	-3.811E-02	8.997E-02	7.562E-02	4.590E-02	NOT IDENT.
W-188	-3.619E-01	3.866E+00	3.394E+00	1.972E+00	FAIL ABUN
IR-192	1.704E-03	1.979E-02	1.751E-02	1.010E-02	NOT IDENT.
AU-195	-3.355E-02	1.285E-01	1.070E-01	6.555E-02	NOT IDENT.
TL-200	5.269E-01	2.023E+00	1.797E+00	1.032E+00	NOT IDENT.
TL-201	7.838E-01	6.920E-01	6.444E-01	3.531E-01	NOT IDENT.
TL-202	-1.259E-05	2.663E-02	2.268E-02	1.359E-02	NOT IDENT.
HG-203	-2.057E-03	2.661E-02	2.244E-02	1.357E-02	NOT IDENT.
BI-207	5.003E-03	3.106E-02	2.740E-02	1.585E-02	NOT IDENT.
TL-207	-9.747E-02	3.561E-01	3.033E-01	1.817E-01	FAIL ABUN
TL-208	-7.461E-03	2.462E-02	2.034E-02	1.256E-02	FAIL ABUN
PO-209	2.740E+00	4.578E+00	4.181E+00	2.336E+00	NOT IDENT.
BI-210	1.278E+00	3.684E+00	3.007E+00	1.880E+00	NOT IDENT.
PB-210	1.278E+00	3.684E+00	3.007E+00	1.880E+00	NOT IDENT.
PO-210	1.278E+00	3.684E+00	3.007E+00	1.879E+00	NOT IDENT.
BI-211	-4.029E-03	1.423E-01	1.167E-01	7.263E-02	NOT IDENT.
PB-211	6.734E-02	5.907E-01	5.118E-01	3.014E-01	NOT IDENT.
BI-212	6.771E-02	1.683E-01	1.517E-01	8.587E-02	NOT IDENT.
PB-212	-6.895E-03	3.662E-02	3.210E-02	1.868E-02	NOT IDENT.
PO-212	-6.895E-03	3.662E-02	3.210E-02	1.868E-02	NOT IDENT.
BI-214	3.311E-02	6.421E-02	4.572E-02	3.276E-02	FAIL ABUN
PB-214	3.487E-02	4.934E-02	4.294E-02	2.517E-02	NOT IDENT.
PO-214	3.487E-02	4.934E-02	4.294E-02	2.517E-02	NOT IDENT.
PO-215	-9.747E-02	3.561E-01	3.033E-01	1.817E-01	FAIL ABUN
PO-216	-6.895E-03	3.662E-02	3.210E-02	1.868E-02	NOT IDENT.
PO-218	3.487E-02	4.934E-02	4.294E-02	2.517E-02	NOT IDENT.
RN-219	1.591E-01	2.353E-01	2.161E-01	1.201E-01	NOT IDENT.
RN-220	-4.296E+00	1.499E+01	1.196E+01	7.651E+00	NOT IDENT.
RA-223	-9.747E-02	3.561E-01	3.033E-01	1.817E-01	FAIL ABUN
RA-224	-2.031E-01	3.869E-01	3.352E-01	1.974E-01	NOT IDENT.
RA-226	3.311E-02	6.421E-02	4.572E-02	3.276E-02	FAIL ABUN
AC-227	-3.683E-03	2.328E-01	2.079E-01	1.188E-01	NOT IDENT.
TH-227	-3.683E-03	2.328E-01	2.079E-01	1.188E-01	FAIL ABUN
AC-228	1.173E-02	8.512E-02	7.063E-02	4.343E-02	NOT IDENT.
RA-228	1.173E-02	8.512E-02	7.063E-02	4.343E-02	NOT IDENT.
TH-228	-6.975E-03	3.661E-02	3.209E-02	1.868E-02	NOT IDENT.
TH-229	-8.556E-02	3.073E-01	2.562E-01	1.568E-01	NOT IDENT.
TH-230	3.311E-02	6.420E-02	4.572E-02	3.276E-02	FAIL ABUN
PA-231	-4.692E-01	9.425E-01	7.998E-01	4.809E-01	NOT IDENT.
TH-231	-9.747E-02	3.561E-01	3.033E-01	1.817E-01	FAIL ABUN
U-231	-3.685E-02	1.787E-01	1.416E-01	9.116E-02	FAIL ABUN
TH-232	1.173E-02	8.512E-02	7.063E-02	4.343E-02	NOT IDENT.
PA-233	-1.115E-02	4.089E-02	3.512E-02	2.086E-02	NOT IDENT.
PA-234	9.780E-02	1.938E-01	1.731E-01	9.886E-02	FAIL ABUN
PA-234M	-1.490E+00	4.780E+00	3.855E+00	2.439E+00	NOT IDENT.
U-234	3.311E-02	6.420E-02	4.572E-02	3.276E-02	FAIL ABUN
NP-236	-6.883E-03	4.702E-02	4.028E-02	2.399E-02	NOT IDENT.
NP-237	-5.135E-02	1.147E-01	1.003E-01	5.850E-02	NOT IDENT.
NP-239	4.829E-02	9.494E-02	8.744E-02	4.844E-02	NOT IDENT.
AM-241	3.236E-02	9.891E-02	8.519E-02	5.046E-02	NOT IDENT.
AM-243	-2.618E-03	2.707E-02	2.462E-02	1.381E-02	FAIL ABUN
CM-243	1.788E-02	4.988E-02	4.576E-02	2.545E-02	NOT IDENT.
CM-247	4.345E-03	2.233E-02	1.958E-02	1.140E-02	NOT IDENT.
CF-249	2.169E-02	2.494E-02	2.326E-02	1.272E-02	NOT IDENT.
CF-251	1.579E-02	7.398E-02	6.459E-02	3.775E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	76.4899
46.50	76.4899
46.50	76.4899
48.70	83.3096
49.72	81.1109
51.35	85.3297
52.39	74.7155
52.97	70.6545
53.15	70.6966
53.44	64.8675
54.07	70.0669
56.28	85.0220
56.28	85.0227
57.37	76.7849
57.53	72.5555
57.53	72.5560
57.60	72.5715
57.98	65.6484
57.98	65.6484
59.32	70.8143
59.32	70.8143
59.40	77.2710
59.54	76.0158
59.72	76.0576
60.01	87.7372
61.10	95.7949
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63.00	78.1126
63.29	78.1793
63.29	78.1793
63.58	78.2459
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65.12	82.5270
65.20	82.5461
65.20	82.5461
66.05	74.8669
66.72	78.9569
66.83	78.9821
66.91	76.3666
67.20	76.4294
67.20	76.4294
67.75	77.8674
67.85	81.8499
68.90	91.0931
68.90	91.0931
69.30	88.3662
69.67	83.1498
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70.82	86.0734
70.83	86.0759
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74.97	96.9011
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75.70	99.7825
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77.11	85.7111
77.11	85.7111

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80.18	94.5626
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80.30	100.9579
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81.07	88.3932
81.07	88.3932
81.07	88.3932
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86.79	107.5484
86.94	107.5869
87.30	106.8461
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87.30	106.8461
87.30	106.8461
87.30	106.8461
87.30	106.8461
87.57	91.6403
87.88	84.7592
88.03	93.1289
88.36	100.1558
88.47	100.1816
89.95	101.9216
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92.29	107.6142
92.38	107.6358
92.38	107.6358
93.35	115.3751
94.00	102.8618
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94.67	95.9591
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94.90	97.4203
94.90	97.4203
94.90	97.4203
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95.87	108.9486
96.73	100.6492
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98.44	98.6516
98.44	98.6516
98.88	95.8968
99.55	91.2808
99.55	91.2808
99.86	96.0987
100.00	96.1274
100.10	101.8608
103.18	73.7787
103.76	82.5024
105.00	100.9882
105.31	104.9024
108.00	84.1901
109.28	111.5730
111.00	112.9290
111.00	112.9290

111.76	95.5491
112.95	92.8411
115.19	103.0614
116.30	90.4942
117.00	71.9013
117.00	71.9013
117.66	74.9501
121.11	72.4601
121.62	72.5288
121.78	74.5380
122.06	74.5766
122.32	85.5556
122.32	85.5556
122.32	85.5556
122.32	85.5556
123.07	75.7120
127.23	94.3543
129.76	100.8301
131.20	98.0538
133.02	122.7035
133.54	107.5894
135.34	95.7059
136.00	93.7763
136.25	95.8555
136.48	95.8933
140.51	104.7642
140.51	0.0000
142.18	101.9659
142.65	102.0444
143.76	88.2910
144.24	75.9584
144.24	75.9584
144.24	75.9584
144.24	75.9584
145.22	79.1856
145.44	79.2144
147.16	102.7987
152.43	99.4763
152.70	99.5188
153.22	87.0190
154.21	82.9531
154.21	82.9531
154.21	82.9531
154.21	82.9531
155.03	101.9840
156.02	101.0879
158.56	102.5395
159.00	0.0000
159.00	104.7242
160.31	101.7529
161.27	98.7160
162.32	73.3567
162.64	84.0283
163.35	91.5710
163.89	98.0392
165.85	114.3558
167.43	78.1996
171.28	101.2606
171.86	108.8927
172.10	105.6941
176.55	87.9148
176.60	87.9206
181.06	81.9160
184.41	93.8157
185.71	101.1257
186.00	101.1659
190.27	89.5825
192.34	106.4639
193.63	96.6466
197.04	98.1943
198.01	93.8489
198.60	81.6208
200.40	79.5688
201.83	81.9594
202.84	100.0517
205.31	84.5772
208.36	79.2399
208.81	84.9480

209.75	97.5199
209.75	97.5199
210.97	81.7676
215.65	82.2371
216.55	75.4659
218.09	72.1696
222.10	82.8750
223.80	77.2745
226.40	70.5691
227.00	76.4072
227.08	76.4146
227.20	76.4246
228.16	90.4208
228.18	90.4232
228.18	90.4232
231.56	67.5003
235.69	96.4665
236.00	100.8873
236.00	100.8873
238.60	72.1479
238.63	72.1504
238.63	72.1504
238.63	72.1504
239.00	79.2217
240.98	97.9236
241.98	103.3310
241.98	103.3310
241.98	103.3310
244.69	78.8378
245.39	76.2394
247.94	75.5630
248.90	83.6513
249.79	91.7485
252.40	73.2483
252.85	69.7092
252.85	69.7092
254.15	0.0000
256.20	76.2375
256.20	76.2375
260.50	64.8710
260.90	67.6025
262.80	67.7364
264.65	56.1033
268.24	80.8342
268.79	76.3352
269.46	76.3878
269.46	76.3878
269.46	76.3878
269.46	76.3878
271.23	53.7496
273.65	76.7133
276.40	91.5771
277.35	75.1646
277.60	70.5990
277.60	70.5990
278.00	71.5444
278.60	70.6695
279.20	67.0385
279.53	66.1421
280.46	68.0415
281.68	83.7740
283.67	73.7915
284.30	69.2230
285.00	60.9576
285.90	60.0865
286.10	60.0984
286.10	60.0984
287.40	53.6944
288.45	0.0000
290.67	60.3652
290.80	64.0884
291.72	67.8627
293.26	57.7220
293.70	58.6780
295.21	63.4263
295.21	63.4263
295.21	63.4263
295.96	59.7383

296.50	58.8347
297.23	65.4167
298.57	66.4357
299.80	59.9551
299.80	59.9551
300.09	65.5940
300.09	65.5940
300.09	65.5940
300.10	65.5940
300.12	65.5951
301.29	59.1010
302.84	60.1260
303.76	60.1777
303.91	60.1855
304.40	66.7987
304.40	66.7987
304.84	64.9433
306.84	53.7489
308.46	59.4951
311.98	67.2656
316.51	58.0299
318.01	57.1555
319.02	49.5792
319.41	56.2731
320.08	44.8542
323.87	48.8366
323.87	48.8366
323.87	48.8366
323.87	48.8366
325.23	44.1013
328.77	45.2006
333.44	51.1780
334.20	39.6161
334.20	39.6161
334.30	39.6199
338.28	48.4825
338.28	48.4825
338.28	48.4825
338.28	48.4825
338.32	48.4840
338.32	48.4840
338.32	48.4840
340.50	41.7737
340.57	42.7479
344.27	64.3232
345.85	48.7946
350.59	55.8458
351.07	56.8486
351.92	47.0801
351.92	47.0801
351.92	47.0801
355.39	0.0000
356.01	65.9378
364.48	43.6019
366.43	58.5580
367.43	49.6651
367.94	47.6982
369.80	47.7686
374.96	43.9671
383.85	50.3105
387.95	40.3760
388.63	38.3772
391.69	52.6387
391.69	52.6387
392.90	41.5418
398.62	39.6861
400.65	42.8043
401.10	43.8379
401.81	33.6611
402.60	42.8665
404.84	48.0492
410.95	47.2392
411.60	53.4266
413.65	49.3901
414.70	47.3687
415.30	42.2381
415.76	36.0692
417.63	0.0000

418.52	39.2391
423.70	46.6404
427.08	45.7141
427.89	48.8589
432.53	37.5463
433.93	35.4952
439.47	40.8728
439.56	37.7312
439.89	33.5464
443.98	52.5650
444.90	48.3900
445.03	48.3942
445.03	48.3942
445.03	48.3942
445.03	48.3942
453.90	37.0449
463.38	44.7372
468.07	38.4653
473.00	46.0940
475.06	35.4220
475.35	36.5022
476.78	36.5364
477.59	37.6308
477.96	35.4890
482.03	36.6604
484.57	38.8806
487.03	30.2879
490.36	41.1926
492.35	32.5612
497.08	35.9246
507.63	0.0000
510.53	0.0000
510.84	43.9188
511.00	43.9227
511.85	43.9459
511.85	43.9459
513.99	26.4018
513.99	26.4018
520.41	29.8180
520.65	28.7184
527.90	32.1719
528.96	0.0000
529.64	33.3160
529.87	0.0000
531.02	35.5664
537.32	23.4276
543.00	32.4604
546.56	0.0000
549.76	29.2167
552.65	22.5122
555.20	32.4650
563.23	33.5195
563.90	31.7205
568.70	29.9884
569.32	29.0898
569.50	29.0930
569.67	27.2776
573.80	43.7449
574.00	43.7496
574.64	39.2060
578.91	31.9879
579.30	42.9644
583.14	32.0631
585.48	34.8559
591.81	45.1013
592.07	46.0291
593.00	42.3681
595.88	32.2870
600.56	37.9170
602.52	0.0000
602.71	37.0352
602.71	37.0352
603.60	32.4211
604.41	40.1584
604.70	35.5304
609.31	36.2369
609.31	36.2369
609.31	36.2369

609.31	36.2369
610.33	43.3843
612.46	34.1261
614.37	27.9492
618.01	39.2043
621.84	33.6709
621.84	33.6709
631.29	21.6181
633.02	30.1039
633.10	30.1055
634.78	29.1896
635.90	29.2063
636.97	34.8790
645.85	33.1432
646.12	35.0416
656.30	38.0771
657.75	31.4362
657.90	0.0000
661.65	26.7251
661.65	26.7251
664.57	29.6316
666.33	35.3975
666.33	35.3975
675.00	34.5876
677.61	18.2778
685.20	21.2421
692.80	29.0720
695.00	23.2822
696.49	24.2694
696.49	24.2694
697.00	21.3625
697.49	22.3385
698.33	24.2908
698.50	21.3775
699.00	20.4109
702.63	37.9707
706.10	25.3551
706.58	0.0000
706.67	24.3866
709.31	39.0674
711.68	32.2660
713.82	26.4259
717.42	28.4308
720.50	26.5083
721.93	33.4023
722.20	33.4065
722.78	40.2953
722.78	40.2953
722.89	39.3145
722.95	39.3154
723.30	40.3053
724.18	36.3876
727.18	23.6355
733.00	15.7988
735.90	28.6736
739.58	13.8653
742.81	20.8288
744.21	26.7963
747.13	20.8693
751.79	22.9045
752.31	22.9096
753.82	23.9221
755.35	15.9586
756.15	16.9622
756.87	20.9600
763.93	22.0269
765.79	20.0405
766.41	24.0557
766.84	26.0647
768.36	25.0793
768.36	25.0793
768.36	25.0793
768.36	25.0793
776.49	21.1415
778.00	16.1184
778.57	17.1299
778.89	19.1480
783.80	26.2583

785.46	25.2661
792.07	24.3246
795.84	18.2729
796.30	19.2918
801.93	21.3732
805.60	26.5034
810.29	26.5554
810.76	23.4958
815.85	15.3563
817.79	20.4917
818.51	24.5971
819.60	20.5068
826.30	17.4794
828.27	13.3774
831.60	11.3349
831.96	13.3977
834.83	22.6999
836.80	0.0000
846.75	26.9572
848.13	28.0099
856.28	0.0000
856.80	30.1895
860.37	18.7651
867.32	20.9077
867.82	19.8660
871.10	26.1737
873.19	18.8604
874.81	17.8243
875.33	0.0000
876.40	13.6386
879.36	21.0068
880.27	24.1668
880.51	24.1691
881.50	16.8195
883.24	15.7793
884.67	21.0508
889.25	20.0335
896.60	16.9184
898.02	19.0437
899.00	13.7589
903.28	21.2021
911.07	15.9492
911.07	15.9492
911.07	15.9492
919.63	17.0676
920.93	22.4120
925.00	20.3086
925.24	20.3104
926.50	17.1117
934.06	10.7251
934.06	10.7251
934.06	10.7251
934.06	10.7251
935.52	12.8771
937.48	19.3298
944.10	15.0708
946.00	18.3132
949.00	23.7257
962.29	17.3391
964.01	20.6027
966.15	20.6189
968.20	18.4622
969.11	15.2089
969.11	15.2089
969.11	15.2089
977.42	15.2544
980.50	20.7251
983.50	5.4598
989.30	21.8843
996.32	37.2962
1001.03	20.8763
1001.68	17.5840
1004.76	22.0039
1021.30	0.0000
1024.50	0.0000
1034.80	19.4542
1037.82	17.6192
1038.57	16.6963

1038.76	0.0000
1045.16	14.8743
1046.59	13.0213
1048.07	18.6117
1050.47	16.7637
1050.47	16.7637
1063.62	17.7731
1076.63	14.0918
1077.35	10.3367
1085.78	12.2499
1099.22	12.3033
1112.02	12.3547
1112.84	14.2590
1115.52	24.7368
1120.29	16.1983
1120.29	16.1983
1120.29	16.1983
1120.29	16.1983
1120.51	19.0584
1121.28	17.1570
1124.00	0.0000
1129.67	17.2024
1131.51	0.0000
1147.95	0.0000
1167.94	6.7701
1173.22	11.6250
1175.09	12.6006
1177.93	8.7312
1189.05	9.7343
1204.90	14.6710
1205.75	13.6964
1213.00	16.6673
1221.42	10.8120
1230.97	5.9141
1235.34	8.8824
1236.41	0.0000
1238.11	7.9017
1238.11	7.9017
1238.11	7.9017
1238.11	7.9017
1238.25	7.9020
1246.25	4.9504
1260.41	0.0000
1271.85	7.9792
1274.45	7.9850
1274.54	7.9854
1291.56	8.0241
1298.22	0.0000
1312.09	11.0967
1325.50	14.1755
1325.50	14.1755
1332.49	9.1304
1333.61	11.1629
1360.21	12.2661
1362.66	0.0000
1365.15	8.1882
1368.21	13.3169
1368.53	0.0000
1376.25	8.2126
1377.67	9.2424
1377.67	9.2424
1377.67	9.2424
1377.67	9.2424
1384.27	12.3452
1394.10	10.3145
1395.20	9.2856
1407.95	12.4224
1434.06	11.4646
1436.60	12.5151
1457.56	0.0000
1460.81	16.1907
1489.15	5.2844
1509.49	10.6222
1596.49	14.8750
1620.62	3.7398
1678.03	0.0000
1691.02	8.5502
1691.02	8.5502

1706.46	0.0000
1750.46	0.0000
1764.49	3.8616
1764.49	3.8616
1764.49	3.8616
1764.49	3.8616
1770.23	10.6325
1771.40	12.5688
1791.20	0.0000
1808.65	5.8470
1836.01	8.8208

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871423

Total Uranium Activity	1.9639E+00	ug/g
Total Uranium Counting Unc.	4.3660E+00	ug/g
Total Uranium Tpu	2.2275E-06	ug/g
Total Uranium Mda	1.8310E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID   : G1201871423     *
*   ANALYST       : MXR1                      DETECTOR    : GAM02           *
*   SAMPLE DATE   : 30-JUN-2009 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:11:44.37    SAMPLE ALQT:  137.710 GRAM    *
*                                                                           *
*****************************************************************************
```

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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.009E-01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.634E-01
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.224E-01
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.513E-01
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:27:52.32

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871424.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:27:26.
Sample ID         : G1201871424          Sample quantity  : 1.19460E+02 GRAM
Detector name     : GAM04                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.19  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	4	74.90	300	354	1.32	149.84	145	14	4.16E-02	12.6	7.00E-01
2	4	77.09*	401	253	0.94	154.22	145	14	5.57E-02	8.4	
3	0	87.34	156	315	1.40	174.72	171	7	2.16E-02	20.6	
4	5	89.92	121	165	1.00	179.88	178	12	1.68E-02	17.3	1.82E+00
5	5	92.81*	153	338	1.53	185.66	178	12	2.13E-02	24.2	
6	0	185.90*	132	278	1.07	371.87	367	10	1.83E-02	26.0	
7	0	209.42	75	246	1.03	418.91	414	9	1.04E-02	39.7	
8	4	238.45*	999	134	1.06	476.97	472	17	1.39E-01	3.7	1.25E+00
9	4	241.32	251	190	1.69	482.71	472	17	3.49E-02	14.2	
10	0	269.63	128	206	1.36	539.34	532	13	1.77E-02	24.9	
11	0	277.08	35	113	1.12	554.23	551	6	4.89E-03	50.8	
12	1	294.92*	302	106	1.34	589.92	584	24	4.20E-02	8.5	2.25E+00
13	1	299.98	73	93	1.34	600.03	584	24	1.01E-02	26.9	
14	0	337.98	175	170	1.03	676.04	672	10	2.43E-02	15.8	
15	0	351.68*	454	166	1.27	703.44	697	13	6.31E-02	7.6	
16	0	462.86	65	101	1.80	925.82	920	13	9.01E-03	34.2	
17	0	510.20*	127	137	2.04	1020.50	1013	16	1.76E-02	25.1	
18	0	582.70*	292	116	1.44	1165.50	1159	14	4.06E-02	9.9	
19	0	608.84*	350	87	1.25	1217.77	1212	11	4.86E-02	7.5	
20	0	727.00	51	100	1.21	1454.08	1447	14	7.05E-03	43.8	
21	0	859.92	32	48	1.33	1719.92	1715	9	4.41E-03	43.5	
22	0	910.52*	196	67	2.17	1821.10	1813	15	2.72E-02	11.8	
23	4	963.55	59	33	2.49	1927.16	1921	21	8.15E-03	29.0	1.64E+00
24	4	968.08	142	61	1.94	1936.21	1921	21	1.97E-02	13.4	
25	0	1119.38	137	53	1.80	2238.78	2230	19	1.91E-02	15.2	
26	0	1459.47*	1366	9	1.97	2918.83	2909	19	1.90E-01	2.8	
27	0	1588.76	42	5	4.75	3177.34	3167	19	5.85E-03	19.8	
28	0	1762.78*	73	0	1.70	3525.29	3519	15	1.01E-02	12.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:27:55

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871424.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:27:26
Sample ID : G1201871424 Sample quantity : 119.46 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA4 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.19 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.740E+01	3.371E+00	4.172E-01	2.965E-02	89.633
CD-109	+	88.03	*	2.671E+00	1.145E+00	1.230E+00	1.478E-01	2.172
SN-126		64.28		5.422E-01	6.467E-01	1.110E+00	1.913E-01	0.488
	+	86.94		1.093E+00	6.444E-01	5.732E-01	2.418E-01	1.907
	+	87.57	*	2.630E-01	1.127E-01	1.220E-01	1.463E-02	2.156
CS-135	+	268.24	*	5.674E-01	2.865E-01	2.443E-01	2.036E-02	2.323
TL-208	+	277.35		3.754E-01	3.835E-01	6.295E-01	6.956E-02	0.596
	+	510.84		6.734E-01	3.449E-01	2.216E-01	2.224E-02	3.038
	+	583.14	*	4.443E-01	9.241E-02	6.272E-02	3.947E-03	7.083
	+	860.37		4.592E-01	4.017E-01	4.793E-01	3.998E-02	0.958
BI-211		72.87		2.563E+00	3.745E+00	5.843E+00	6.699E-01	0.439
	+	351.07	*	3.041E+00	5.086E-01	3.078E-01	2.079E-02	9.882
PB-212	+	74.81		2.411E+00	7.033E-01	5.994E-01	8.860E-02	4.023
	+	77.11		1.785E+00	3.629E-01	3.309E-01	3.796E-02	5.395
	+	87.30		1.216E+00	5.353E-01	6.338E-01	9.886E-02	1.919
	+	238.63	*	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
	+	300.09		1.646E+00	8.963E-01	1.123E+00	9.884E-02	1.466
PO-212	+	74.81		2.411E+00	7.033E-01	5.994E-01	8.860E-02	4.023
	+	77.11		1.785E+00	3.629E-01	3.309E-01	3.796E-02	5.395
	+	87.30		1.216E+00	5.353E-01	6.338E-01	9.886E-02	1.919
		115.19		3.020E-01	3.321E+00	5.497E+00	4.137E-01	0.055
	+	238.63	*	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
	+	300.09		1.646E+00	8.963E-01	1.123E+00	9.884E-02	1.466
PB-214	+	74.81		4.154E+00	1.189E+00	1.033E+00	1.409E-01	4.023
	+	77.11		3.060E+00	6.644E-01	5.672E-01	7.811E-02	5.395
	+	87.30		2.084E+00	9.074E-01	1.086E+00	1.546E-01	1.919
	+	241.98		2.204E+00	6.538E-01	5.593E-01	4.873E-02	3.940
	+	295.21		1.197E+00	2.301E-01	1.966E-01	1.785E-02	6.090
	+	351.92	*	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
PO-214	+	74.81		4.154E+00	1.189E+00	1.033E+00	1.409E-01	4.023
	+	77.11		3.060E+00	6.644E-01	5.672E-01	7.811E-02	5.395
	+	87.30		2.084E+00	9.074E-01	1.086E+00	1.546E-01	1.919
	+	241.98		2.204E+00	6.538E-01	5.593E-01	4.873E-02	3.940
	+	295.21		1.197E+00	2.301E-01	1.966E-01	1.785E-02	6.090

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
PO-216	+	74.81		2.411E+00	7.033E-01	5.994E-01	8.860E-02	4.023
	+	77.11		1.785E+00	3.629E-01	3.309E-01	3.796E-02	5.395
	+	87.30		1.216E+00	5.353E-01	6.338E-01	9.886E-02	1.919
	+	238.63	*	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
	+	300.09		1.646E+00	8.963E-01	1.123E+00	9.884E-02	1.466
PO-218	+	74.81		4.154E+00	1.189E+00	1.033E+00	1.409E-01	4.023
	+	77.11		3.060E+00	6.644E-01	5.672E-01	7.811E-02	5.395
	+	87.30		2.084E+00	9.074E-01	1.086E+00	1.546E-01	1.919
	+	241.98		2.204E+00	6.538E-01	5.593E-01	4.873E-02	3.940
	+	295.21		1.197E+00	2.301E-01	1.966E-01	1.785E-02	6.090
	+	351.92	*	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
RA-224	+	240.98	*	4.179E+00	1.217E+00	1.057E+00	7.046E-02	3.954
AC-228	+	338.32		1.293E+00	6.671E-01	3.771E-01	1.540E-01	3.429
	+	911.07	*	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
	+	969.11		1.718E+00	6.084E-01	3.609E-01	8.323E-02	4.760
RA-228	+	338.32		1.293E+00	6.671E-01	3.771E-01	1.540E-01	3.429
	+	911.07	*	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
	+	969.11		1.718E+00	6.084E-01	3.609E-01	8.323E-02	4.760
TH-228		84.40		8.737E-01	2.766E+00	4.215E+00	6.487E-01	0.207
	+	238.60	*	1.458E+00	1.593E-01	9.284E-02	7.456E-03	15.706
	+	300.10		1.646E+00	1.314E+00	1.123E+00	6.626E-01	1.466
TH-232	+	338.32		1.293E+00	4.157E-01	3.771E-01	2.370E-02	3.429
	+	911.07	*	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
	+	969.11		1.718E+00	6.084E-01	3.609E-01	8.323E-02	4.760
NP-237	+	86.50	*	7.723E-01	3.674E-01	4.052E-01	9.654E-02	1.906
		95.87		-6.221E-01	1.027E+00	1.456E+00	3.667E-01	-0.427
AM-243	+	74.67	*	3.909E-01	1.080E-01	9.765E-02	1.118E-02	4.003
	+	86.72		2.896E+01	1.241E+01	1.524E+01	1.818E+00	1.900
		117.66		-5.861E+00	3.786E+00	5.727E+00	4.180E-01	-1.023
		142.18		-4.303E+00	1.749E+01	2.820E+01	1.845E+00	-0.153
ANH-511	+	511.00	*	1.455E-01	7.352E-02	4.789E-02	2.678E-03	3.038

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-8.768E-02	3.348E-01	5.346E-01	3.541E-02	-0.164
NA-22		1274.54	*	3.539E-04	5.290E-02	8.858E-02	5.791E-03	0.004
NA-24		1368.53	*	4.069E-02	5.290E-02	Half-Life too short		
AL-26		1129.67		1.625E+00	1.948E+00	3.400E+00	2.193E-01	0.478
		1808.65	*	-1.486E-02	2.582E-02	3.474E-02	2.060E-03	-0.428
TI-44		67.85		-1.671E-02	5.313E-02	8.826E-02	1.026E-02	-0.189
	+	78.38	*	3.294E-01	6.697E-02	7.860E-02	9.038E-03	4.191
SC-46		889.25	*	-2.648E-03	4.287E-02	7.017E-02	5.675E-03	-0.038
	+	1120.51		3.567E-01	1.111E-01	1.449E-01	9.492E-03	2.461
V-48		944.10		-4.860E-01	9.345E-01	1.448E+00	1.158E-01	-0.336
		983.50	*	-1.340E-02	7.330E-02	1.174E-01	9.096E-03	-0.114
		1312.09		1.323E-02	7.593E-02	1.295E-01	8.723E-03	0.102

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CR-51		320.08	*	1.050E-01	3.269E-01	5.585E-01	3.933E-02	0.188
MN-52		744.21		1.921E-01	2.035E-01	3.671E-01	2.179E-02	0.523
		848.13		1.693E+00	6.186E+00	1.048E+01	7.800E-01	0.161
		935.52		-5.931E-02	2.268E-01	3.617E-01	2.909E-02	-0.164
		1246.25		3.233E-02	7.795E+00	1.307E+01	8.320E-01	0.002
		1333.61		3.216E+00	4.516E+00	8.166E+00	5.596E-01	0.394
		1434.06	*	-9.802E-02	1.828E-01	2.736E-01	1.867E-02	-0.358
MN-54		834.83	*	2.022E-02	4.007E-02	6.914E-02	5.003E-03	0.292
CO-56		846.75	*	2.258E-02	4.138E-02	7.180E-02	5.326E-03	0.315
		977.42		1.068E-01	2.768E+00	4.544E+00	3.539E-01	0.024
		1037.82		9.124E-02	3.378E-01	5.649E-01	4.446E-02	0.162
		1175.09		-1.761E+00	2.671E+00	4.009E+00	2.388E-01	-0.439
		1238.25		1.373E-01	1.143E-01	2.065E-01	1.374E-02	0.665
		1360.21		2.642E-01	1.028E+00	1.770E+00	1.213E-01	0.149
		1771.40		3.803E-02	2.302E-01	3.877E-01	2.354E-02	0.098
CO-57		122.06	*	-1.840E-02	2.547E-02	4.038E-02	2.803E-03	-0.456
		136.48		-2.284E-02	1.983E-01	3.223E-01	2.397E-02	-0.071
CO-58		810.76	*	2.005E-02	4.175E-02	7.215E-02	4.981E-03	0.278
FE-59		142.65		-9.060E-02	2.623E+00	4.272E+00	2.792E-01	-0.021
		192.34		-4.419E-01	9.059E-01	1.412E+00	1.717E-01	-0.313
		1099.22	*	-7.812E-02	1.046E-01	1.557E-01	1.190E-02	-0.502
		1291.56		-4.810E-02	1.329E-01	2.133E-01	1.724E-02	-0.225
CO-60		1173.22		1.545E-02	5.465E-02	9.032E-02	5.371E-03	0.171
		1332.49	*	5.877E-02	4.048E-02	7.869E-02	5.392E-03	0.747
ZN-65		1115.52	*	1.559E-01	9.842E-02	1.698E-01	1.123E-02	0.918
GE-68		1077.35	*	7.004E-02	1.438E+00	2.344E+00	1.637E-01	0.030
AS-73		53.44	*	1.389E+00	1.480E+00	2.605E+00	3.408E-01	0.533
AS-74		595.88	*	1.034E-01	1.006E-01	1.742E-01	9.195E-03	0.594
		634.78		-1.979E-01	3.802E-01	5.775E-01	2.921E-02	-0.343
SE-75		66.05		-3.816E+00	5.948E+00	9.653E+00	1.267E+00	-0.395
		96.73		-3.070E-01	8.494E-01	1.236E+00	1.792E-01	-0.248
		121.11		4.586E-02	1.354E-01	2.260E-01	2.268E-02	0.203
		136.00		4.991E-03	3.692E-02	6.076E-02	4.072E-03	0.082
		198.60		-1.132E+00	1.861E+00	2.868E+00	2.213E-01	-0.395
		264.65	*	2.858E-02	4.539E-02	7.111E-02	4.783E-03	0.402
		279.53		1.252E-01	1.110E-01	1.793E-01	1.266E-02	0.698
		303.91		-3.027E-01	2.071E+00	3.024E+00	3.028E-01	-0.100
		400.65		1.959E-02	2.490E-01	4.131E-01	3.719E-02	0.047
BR-77	+	87.88		3.998E+02	1.713E+02	2.382E+02	2.862E+01	1.679
		200.40		1.342E+02	1.115E+02	1.893E+02	1.235E+01	0.709
	+	239.00		1.619E+02	1.613E+01	2.635E+01	1.756E+00	6.145
		249.79		2.905E+01	4.261E+01	7.486E+01	4.999E+00	0.388
		281.68		-5.002E+01	6.115E+01	9.444E+01	6.271E+00	-0.530
		297.23		8.173E+01	3.674E+01	6.800E+01	4.474E+00	1.202
		303.76		2.228E+01	1.203E+02	1.810E+02	1.185E+01	0.123
		439.47		3.816E+01	9.924E+01	1.674E+02	9.498E+00	0.228
		484.57		-3.270E+00	1.690E+02	2.749E+02	1.551E+01	-0.012
		520.65	*	-3.109E+00	6.586E+00	1.017E+01	5.664E-01	-0.306
		574.64		5.358E+01	1.485E+02	2.465E+02	1.326E+01	0.217

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		578.91		-2.174E+00	7.409E+01	1.036E+02	5.553E+00	-0.021
		585.48		1.102E+02	1.573E+02	2.359E+02	1.258E+01	0.467
		755.35		-1.918E+01	1.250E+02	2.057E+02	1.252E+01	-0.093
		817.79		7.799E+01	9.442E+01	1.684E+02	1.175E+01	0.463
SR-82		698.33		2.063E+00	3.499E+01	5.893E+01	3.142E+00	0.035
		776.49	*	-1.988E-01	3.958E-01	6.291E-01	4.015E-02	-0.316
		1395.20		-4.596E+00	1.179E+01	1.854E+01	1.269E+00	-0.248
RB-83		520.41	*	-2.004E-02	6.146E-02	9.635E-02	5.366E-03	-0.208
		529.64		3.932E-02	1.127E-01	1.802E-01	9.988E-03	0.218
		552.65		1.095E-01	1.950E-01	3.304E-01	1.807E-02	0.331
RB-84		881.50	*	-1.877E-02	6.982E-02	1.118E-01	8.901E-03	-0.168
KR-85		513.99	*	9.406E+00	7.963E+00	1.269E+01	7.089E-01	0.741
SR-85		513.99	*	4.759E-02	4.029E-02	6.421E-02	3.587E-03	0.741
RB-86		1076.63	*	-2.122E-01	8.750E-01	1.383E+00	9.668E-02	-0.153
Y-88		898.02		-1.487E-02	4.049E-02	6.389E-02	5.286E-03	-0.233
		1836.01	*	-6.665E-03	2.473E-02	3.653E-02	2.132E-03	-0.182
ZR-88		392.90	*	-1.405E-02	3.060E-02	4.891E-02	2.752E-03	-0.287
Y-91		1204.90	*	7.853E+00	2.277E+01	3.773E+01	2.312E+00	0.208
NB-94		702.63	*	-4.604E-03	3.469E-02	5.753E-02	3.099E-03	-0.080
		871.10		-4.299E-03	3.379E-02	5.497E-02	4.287E-03	-0.078
NB-95		765.79	*	1.883E-02	4.241E-02	7.321E-02	4.563E-03	0.257
NB-95M		235.69	*	1.141E-01	1.326E-01	1.979E-01	1.624E-02	0.576
ZR-95		724.18		7.106E-02	1.100E-01	1.715E-01	1.157E-02	0.414
		756.15	*	-6.217E-04	7.347E-02	1.224E-01	8.913E-03	-0.005
NB-97		657.90	*	-1.564E-03	7.347E-02	Half-Life too short		
		1024.50		-1.083E+00	7.347E-02	Half-Life too short		
ZR-97		254.15		-1.215E+00	7.347E-02	Half-Life too short		
		355.39		2.445E-01	7.347E-02	Half-Life too short		
		507.63	*	1.043E+00	7.347E-02	Half-Life too short		
		602.52		-9.553E-01	7.347E-02	Half-Life too short		
		1021.30		1.219E+00	7.347E-02	Half-Life too short		
		1147.95		-9.216E-01	7.347E-02	Half-Life too short		
		1362.66		-6.876E-02	7.347E-02	Half-Life too short		
		1750.46		1.418E+00	7.347E-02	Half-Life too short		
MO-99		140.51		1.057E+01	1.905E+01	3.099E+01	8.404E+00	0.341
		181.06		-3.997E+00	1.322E+01	1.852E+01	3.215E+00	-0.216
		366.43		-5.628E+00	5.929E+01	9.774E+01	5.842E+00	-0.058
		739.58	*	-9.020E+00	8.637E+00	1.286E+01	1.776E+00	-0.702
		778.00		3.095E-02	2.514E+01	4.183E+01	2.679E+00	0.001
TC-99M		140.51	*	6.417E+08	2.514E+01	Half-Life too short		
RH-101		127.23		1.508E-03	3.146E-02	5.172E-02	3.513E-03	0.029
		198.01	*	-1.684E-02	3.388E-02	5.253E-02	3.421E-03	-0.321
		325.23		-2.210E-01	2.235E-01	3.508E-01	2.245E-02	-0.630
RH-102		418.52		-7.190E-02	2.999E-01	4.850E-01	2.746E-02	-0.148
		475.06	*	1.428E-02	3.010E-02	5.088E-02	2.877E-03	0.281
		631.29		7.011E-02	6.034E-02	1.060E-01	5.383E-03	0.662
		697.49		3.742E-03	8.219E-02	1.383E-01	7.360E-03	0.027
		766.84		2.722E-02	1.149E-01	1.949E-01	1.217E-02	0.140
		1046.59		3.414E-02	1.299E-01	2.168E-01	1.574E-02	0.158

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1112.84		-1.950E-01	2.866E-01	3.557E-01	2.358E-02	-0.548
RU-103		497.08	*	1.027E-02	3.723E-02	6.199E-02	7.789E-03	0.166
	+	610.33		1.058E+01	2.260E+00	2.774E+00	4.218E-01	3.814
RH-106		511.85		3.552E-01	2.387E-01	4.483E-01	2.506E-02	0.792
		621.84	*	-1.365E-01	3.474E-01	5.347E-01	6.108E-02	-0.255
		1050.47		-1.035E+00	2.815E+00	4.407E+00	3.186E-01	-0.235
RU-106		511.85		3.552E-01	2.387E-01	4.483E-01	2.506E-02	0.792
		621.84	*	-1.365E-01	3.471E-01	5.347E-01	2.747E-02	-0.255
		1050.47		-1.035E+00	2.815E+00	4.407E+00	3.186E-01	-0.235
AG-108M		433.93	*	-1.465E-02	3.323E-02	5.267E-02	3.254E-03	-0.278
		614.37		-6.906E-03	4.645E-02	6.360E-02	3.642E-03	-0.109
		722.95		-2.180E-02	4.726E-02	6.471E-02	3.982E-03	-0.337
AG-110M		657.75	*	3.981E-04	3.714E-02	6.259E-02	3.344E-03	0.006
		677.61		-1.543E-02	2.882E-01	4.820E-01	2.638E-02	-0.032
		706.67		1.474E-01	2.126E-01	3.756E-01	2.182E-02	0.392
		763.93		-2.006E-01	1.725E-01	2.573E-01	1.683E-02	-0.780
		884.67		3.315E-02	5.074E-02	8.894E-02	7.393E-03	0.373
		937.48		-1.573E-01	1.179E-01	1.636E-01	1.369E-02	-0.961
		1384.27		-2.200E-02	1.394E-01	2.255E-01	1.613E-02	-0.098
IN-111		171.28		3.693E-01	7.233E-01	1.187E+00	7.569E-02	0.311
		245.39	*	9.929E-02	8.360E-01	1.186E+00	7.912E-02	0.084
IN-113M		391.69	*	-3.336E-03	4.356E-02	7.160E-02	4.314E-03	-0.047
SN-113		391.69	*	-3.336E-03	4.356E-02	7.160E-02	4.314E-03	-0.047
IN-114M		190.27	*	2.476E-01	1.879E-01	2.931E-01	1.897E-02	0.845
CD-115		260.90		-7.753E+01	7.917E+01	1.261E+02	8.421E+00	-0.615
		492.35		-1.342E+01	2.312E+01	3.558E+01	2.003E+00	-0.377
		527.90	*	3.338E+00	7.313E+00	1.231E+01	6.828E-01	0.271
SN-117M		156.02		9.699E-01	2.044E+00	3.395E+00	2.178E-01	0.286
		158.56	*	-2.062E-02	5.072E-02	8.056E-02	5.153E-03	-0.256
SB-122		563.90	*	-1.204E+00	1.482E+00	2.185E+00	1.185E-01	-0.551
		692.80		-6.531E+00	3.228E+01	5.326E+01	2.803E+00	-0.123
I-123		159.00	*	-4.323E-01	3.228E+01	Half-Life too short		
		528.96		3.602E+01	3.228E+01	Half-Life too short		
TE-123M		159.00	*	-1.052E-02	2.763E-02	4.393E-02	2.840E-03	-0.240
I-124		602.71	*	-2.930E-01	6.719E-01	8.896E-01	4.665E-02	-0.329
		722.78		-1.850E+00	4.002E+00	5.480E+00	3.095E-01	-0.338
		1325.50		-2.504E+01	3.093E+01	4.632E+01	3.156E+00	-0.541
		1376.25		3.440E+01	2.576E+01	4.945E+01	3.388E+00	0.696
		1509.49		1.596E+01	1.324E+01	2.551E+01	1.720E+00	0.626
		1691.02		-1.434E+00	3.037E+00	4.425E+00	2.805E-01	-0.324
SB-124		602.71		-2.070E-02	4.747E-02	6.284E-02	3.297E-03	-0.329
		645.85		1.250E-01	5.152E-01	8.850E-01	5.164E-02	0.141
		709.31		-3.387E-02	2.811E+00	4.703E+00	2.574E-01	-0.007
		713.82		1.375E+00	1.639E+00	2.924E+00	2.941E-01	0.470
		722.78		-1.895E-01	4.099E-01	5.611E-01	3.327E-02	-0.338
	+	968.20		1.743E+01	4.880E+00	8.007E+00	6.284E-01	2.177
		1045.16		7.487E-01	2.759E+00	4.608E+00	3.352E-01	0.162
		1325.50		-2.739E+00	3.383E+00	5.066E+00	3.452E-01	-0.541
		1368.21		6.300E-01	1.721E+00	3.007E+00	3.734E-01	0.210

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1436.60		-2.264E+00	3.075E+00	4.329E+00	2.953E-01	-0.523
		1691.02	*	-3.463E-02	7.337E-02	1.069E-01	7.263E-03	-0.324
SB-125		427.89	*	-2.565E-02	9.307E-02	1.497E-01	8.862E-03	-0.171
	+	463.38		6.745E-01	4.640E-01	5.567E-01	3.700E-02	1.212
		600.56		2.357E-02	1.914E-01	3.101E-01	1.936E-02	0.076
		635.90		-3.447E-01	3.064E-01	4.355E-01	2.685E-02	-0.791
TE-125M		109.28	*	1.877E+00	9.140E+00	1.477E+01	1.465E+00	0.127
I-126		388.63		2.998E-02	1.853E-01	3.098E-01	1.757E-02	0.097
		666.33	*	2.280E-02	1.732E-01	2.945E-01	1.453E-02	0.077
		753.82		1.245E+00	1.467E+00	2.613E+00	1.585E-01	0.476
SB-126		223.80		-4.779E-01	3.840E+00	6.063E+00	4.016E-01	-0.079
		278.60		3.805E+00	2.490E+00	4.100E+00	2.726E-01	0.928
		296.50		8.078E+00	1.662E+00	3.152E+00	2.075E-01	2.563
		414.70		7.597E-03	7.079E-02	1.174E-01	6.645E-03	0.065
		415.30		3.051E+00	5.867E+00	1.001E+01	5.665E-01	0.305
		555.20		-1.172E+00	3.721E+00	5.825E+00	3.179E-01	-0.201
		573.80		-9.162E-01	1.029E+00	1.521E+00	8.186E-02	-0.603
		593.00		-7.493E-01	9.862E-01	1.477E+00	7.820E-02	-0.507
		656.30		8.708E-01	3.184E+00	5.478E+00	2.693E-01	0.159
		666.33		9.502E-03	7.218E-02	1.227E-01	6.052E-03	0.077
		675.00		-8.734E-01	1.744E+00	2.798E+00	1.410E-01	-0.312
		695.00		4.962E-02	7.750E-02	1.362E-01	7.204E-03	0.364
		697.00		1.649E-03	2.592E-01	4.349E-01	2.312E-02	0.004
		720.50	*	2.155E-02	1.577E-01	2.332E-01	1.311E-02	0.092
		856.80		2.839E-02	5.473E-01	7.890E-01	5.976E-02	0.036
		989.30		1.125E+00	1.334E+00	2.353E+00	1.814E-01	0.478
		1034.80		-7.549E+00	9.395E+00	1.392E+01	1.025E+00	-0.542
		1213.00		1.374E+00	5.828E+00	9.540E+00	5.891E-01	0.144
SB-127		61.10		-3.435E+01	6.163E+01	1.014E+02	1.390E+01	-0.339
		252.40		-7.374E-01	3.347E+00	5.590E+00	2.324E+00	-0.132
		290.80		3.287E+00	1.764E+01	2.658E+01	2.463E+00	0.124
		411.60		-6.732E+00	9.900E+00	1.544E+01	2.167E+00	-0.436
		444.90		4.113E+00	7.313E+00	1.251E+01	1.293E+00	0.329
		473.00		-6.325E-01	1.415E+00	2.225E+00	2.387E-01	-0.284
		543.00		5.054E-01	1.293E+01	2.096E+01	2.611E+00	0.024
		603.60		-1.181E+01	1.184E+01	1.447E+01	1.458E+00	-0.816
		685.20	*	-6.028E-01	1.015E+00	1.608E+00	1.383E-01	-0.375
		698.50		-9.489E-01	1.295E+01	2.159E+01	3.025E+00	-0.044
		722.20		-7.587E+00	2.671E+01	3.746E+01	3.223E+00	-0.203
		783.80		1.580E+00	2.841E+00	4.952E+00	5.285E-01	0.319
XE-127		57.60		-8.389E+00	8.661E+00	1.387E+01	1.737E+00	-0.605
		145.22		6.403E-01	6.429E-01	1.095E+00	7.127E-02	0.585
		172.10		6.075E-02	1.165E-01	1.912E-01	1.220E-02	0.318
		202.84	*	-1.486E-02	4.550E-02	7.146E-02	4.671E-03	-0.208
		374.96		2.866E-02	1.945E-01	3.255E-01	1.909E-02	0.088
I-131		80.18		9.690E-01	4.330E+00	6.593E+00	7.642E-01	0.147
		284.30		1.231E-01	1.237E+00	2.098E+00	1.509E-01	0.059
		364.48	*	-4.317E-03	1.023E-01	1.694E-01	1.125E-02	-0.025
		636.97		7.874E-01	1.482E+00	2.481E+00	1.443E-01	0.317

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.89		-3.428E+00	7.127E+00	9.730E+00	5.566E-01	-0.352
TE-132		49.72		2.814E+01	3.183E+01	5.606E+01	7.696E+00	0.502
		111.76		-2.841E+00	2.169E+01	3.558E+01	3.530E+00	-0.080
		116.30		-1.106E+01	1.992E+01	3.188E+01	3.052E+00	-0.347
		228.16	*	2.277E-01	5.232E-01	8.509E-01	1.232E-01	0.268
BA-133		53.15		3.669E+00	6.599E+00	1.148E+01	1.502E+00	0.320
		79.62		2.720E-01	1.373E+00	2.087E+00	3.558E-01	0.130
		81.00		-3.780E-02	1.054E-01	1.547E-01	2.734E-02	-0.244
	+	276.40		3.709E-01	3.799E-01	6.441E-01	8.611E-02	0.576
		302.84		9.363E-02	1.394E-01	2.180E-01	2.627E-02	0.429
		356.01	*	-1.057E-02	4.600E-02	6.572E-02	7.698E-03	-0.161
		383.85		1.025E-01	3.045E-01	5.150E-01	5.583E-02	0.199
I-133	+	510.53		5.383E-01	3.045E-01	Half-Life too short		
		529.87	*	-2.424E-04	3.045E-01	Half-Life too short		
		706.58		1.075E-01	3.045E-01	Half-Life too short		
		856.28		-1.913E-02	3.045E-01	Half-Life too short		
		875.33		2.275E-02	3.045E-01	Half-Life too short		
		1236.41		2.766E-01	3.045E-01	Half-Life too short		
		1298.22		-3.402E-02	3.045E-01	Half-Life too short		
CS-134		475.35		1.068E+00	1.965E+00	3.339E+00	1.888E-01	0.320
		563.23		-1.553E-01	3.592E-01	5.517E-01	3.066E-02	-0.282
		569.32		1.375E-01	1.880E-01	3.228E-01	1.804E-02	0.426
		604.70		-2.563E-02	4.118E-02	5.313E-02	2.800E-03	-0.482
		795.84	*	5.289E-02	4.697E-02	8.536E-02	5.753E-03	0.620
		801.93		2.099E-01	4.483E-01	7.544E-01	5.137E-02	0.278
		1038.57		1.584E+00	4.296E+00	7.252E+00	5.316E-01	0.218
		1167.94		-1.398E+00	3.088E+00	4.752E+00	2.856E-01	-0.294
		1365.15		-3.372E-01	1.308E+00	2.099E+00	1.541E-01	-0.161
I-135		288.45		-4.885E+08	1.308E+00	Half-Life too short		
		417.63		-7.939E+08	1.308E+00	Half-Life too short		
		546.56		2.292E+08	1.308E+00	Half-Life too short		
		836.80		2.501E+08	1.308E+00	Half-Life too short		
		1038.76		2.020E+08	1.308E+00	Half-Life too short		
		1124.00		-5.924E+08	1.308E+00	Half-Life too short		
		1131.51		3.222E+07	1.308E+00	Half-Life too short		
		1260.41	*	1.501E+08	1.308E+00	Half-Life too short		
		1457.56		6.162E+10	1.308E+00	Half-Life too short		
		1678.03		-4.930E+08	1.308E+00	Half-Life too short		
		1706.46		-2.568E+08	1.308E+00	Half-Life too short		
		1791.20		1.090E+08	1.308E+00	Half-Life too short		
CS-136		66.91		-4.289E-01	8.680E-01	1.416E+00	2.454E-01	-0.303
	+	86.29		3.211E+00	1.410E+00	1.928E+00	2.938E-01	1.666
		153.22		-3.637E-01	5.876E-01	9.237E-01	7.150E-02	-0.394
		163.89		-9.900E-01	9.279E-01	1.409E+00	1.086E-01	-0.703
		176.55		-1.007E-01	3.342E-01	5.300E-01	3.739E-02	-0.190
		273.65		1.722E-01	5.566E-01	6.325E-01	4.667E-02	0.272
		340.57		1.287E-01	1.245E-01	1.982E-01	1.309E-02	0.649
		818.51		5.198E-02	7.123E-02	1.260E-01	8.821E-03	0.412
		1048.07	*	-1.198E-02	1.175E-01	1.889E-01	1.451E-02	-0.063

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1235.34		5.883E-01	7.141E-01	1.255E+00	1.291E-01	0.469
BA-137M		661.65	*	-1.774E-02	3.943E-02	6.598E-02	3.218E-03	-0.269
CS-137		661.65	*	-1.876E-02	4.168E-02	6.975E-02	3.422E-03	-0.269
CE-139		165.85	*	-5.650E-03	2.663E-02	4.257E-02	2.705E-03	-0.133
BA-140		162.64		9.360E-02	6.488E-01	1.059E+00	7.449E-02	0.088
		304.84		-1.961E-01	1.177E+00	1.713E+00	4.703E-01	-0.114
		423.70		-1.129E+00	1.908E+00	2.947E+00	9.360E-01	-0.383
		537.32	*	-1.283E-01	2.479E-01	3.762E-01	1.222E-01	-0.341
LA-140		328.77		2.036E-01	2.974E-01	5.143E-01	3.606E-02	0.396
		432.53		9.819E-01	1.900E+00	3.240E+00	2.038E-01	0.303
		487.03		4.118E-02	1.320E-01	2.202E-01	1.415E-02	0.187
		751.79		-1.831E-01	1.737E+00	2.871E+00	2.094E-01	-0.064
		815.85		-6.930E-02	3.330E-01	5.415E-01	4.413E-02	-0.128
		867.82		-9.389E-01	1.274E+00	1.926E+00	1.590E-01	-0.487
		919.63		-5.645E-01	2.723E+00	4.372E+00	4.482E-01	-0.129
		925.24		1.676E-01	1.057E+00	1.765E+00	1.530E-01	0.095
		1596.49	*	-2.800E-02	8.565E-02	1.091E-01	7.186E-03	-0.257
CE-141		145.44	*	4.700E-02	5.817E-02	9.830E-02	6.599E-03	0.478
CE-143		57.37		-6.613E-04	5.817E-02	Half-Life too short		
		231.56		-1.636E-03	5.817E-02	Half-Life too short		
		293.26	*	3.200E-04	5.817E-02	Half-Life too short		
	+	350.59		1.275E-02	5.817E-02	Half-Life too short		
		490.36		4.793E-05	5.817E-02	Half-Life too short		
		664.57		-7.672E-05	5.817E-02	Half-Life too short		
		721.93		-9.146E-07	5.817E-02	Half-Life too short		
CE-144		80.11		5.248E-01	2.219E+00	3.381E+00	3.907E-01	0.155
		133.54	*	-1.493E-01	2.009E-01	3.150E-01	4.592E-02	-0.474
PM-144		476.78		-2.244E-02	6.998E-02	1.112E-01	7.581E-03	-0.202
		618.01		-2.175E-03	3.331E-02	5.296E-02	2.938E-03	-0.041
		696.49	*	1.980E-02	3.525E-02	6.170E-02	3.278E-03	0.321
		778.57		-1.773E-01	2.265E+00	3.740E+00	2.399E-01	-0.047
PR-144		696.49	*	1.341E+00	2.387E+00	4.178E+00	2.218E-01	0.321
		1489.15		-3.289E+00	9.179E+00	1.392E+01	9.423E-01	-0.236
PM-146		453.90	*	2.899E-02	4.519E-02	7.734E-02	6.602E-03	0.375
		633.02		-1.484E-02	1.566E+00	2.498E+00	9.173E-01	-0.006
		735.90		8.990E-02	1.546E-01	2.676E-01	7.463E-02	0.336
		747.13		-4.692E-02	9.564E-02	1.523E-01	1.917E-02	-0.308
ND-147	+	91.11		6.231E-01	2.285E-01	4.490E-01	5.265E-02	1.388
		319.41		1.088E+00	2.755E+00	4.730E+00	3.049E-01	0.230
		439.89		-4.459E+00	5.629E+00	8.665E+00	4.917E-01	-0.515
		531.02	*	9.398E-02	5.687E-01	8.956E-01	1.201E-01	0.105
PM-149		285.90	*	3.726E+01	5.744E+01	9.999E+01	1.453E+01	0.373
EU-152		121.78		-4.879E-02	7.438E-02	1.183E-01	1.008E-02	-0.412
		244.69		1.728E-01	3.427E-01	5.024E-01	3.352E-02	0.344
		344.27	*	-5.044E-02	9.688E-02	1.500E-01	1.038E-02	-0.336
		443.98		3.715E-01	9.283E-01	1.569E+00	8.900E-02	0.237
		778.89		-8.242E-03	2.609E-01	4.327E-01	2.776E-02	-0.019
		867.32		-7.175E-01	8.100E-01	1.200E+00	9.288E-02	-0.598
	+	964.01		8.186E-01	4.792E-01	6.443E-01	5.074E-02	1.270

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1085.78		1.532E-01	4.468E-01	7.497E-01	5.176E-02	0.204
		1112.02		-2.176E-01	4.110E-01	5.254E-01	3.488E-02	-0.414
		1407.95		2.042E-01	1.926E-01	3.626E-01	2.480E-02	0.563
GD-153		69.67		-1.283E-01	1.914E+00	3.069E+00	3.544E-01	-0.042
		83.37		9.017E+00	1.569E+01	2.425E+01	2.839E+00	0.372
		97.43	*	4.342E-02	8.064E-02	1.312E-01	1.287E-02	0.331
		103.18		-5.469E-02	1.027E-01	1.658E-01	1.475E-02	-0.330
EU-154		123.07		-3.529E-02	5.212E-02	8.270E-02	8.371E-03	-0.427
		247.94		-3.910E-01	3.715E-01	5.427E-01	5.479E-02	-0.720
		591.81		-1.115E+00	7.292E-01	1.001E+00	9.492E-02	-1.115
		723.30		-9.743E-02	2.044E-01	2.798E-01	1.948E-02	-0.348
		756.87		9.923E-02	8.079E-01	1.361E+00	1.404E-01	0.073
		873.19		1.434E-01	3.020E-01	5.213E-01	6.100E-02	0.275
		996.32		-3.025E-01	4.230E-01	6.342E-01	1.098E-01	-0.477
		1004.76		-5.185E-01	2.265E-01	2.476E-01	2.699E-02	-2.094
		1274.45	*	4.847E-02	1.447E-01	2.496E-01	2.449E-02	0.194
EU-155		48.70		2.872E+00	5.467E+00	9.535E+00	1.099E+00	0.301
		60.01		1.067E+00	6.707E+00	1.144E+01	1.389E+00	0.093
	+	86.54		3.166E-01	1.357E-01	1.919E-01	2.298E-02	1.650
		105.31	*	6.015E-02	1.069E-01	1.812E-01	1.579E-02	0.332
TB-160	+	86.79		8.359E-01	3.583E-01	5.142E-01	6.135E-02	1.626
		197.04		-4.126E-01	5.699E-01	8.722E-01	5.675E-02	-0.473
		215.65		1.248E-01	7.676E-01	1.234E+00	8.138E-02	0.101
	+	298.57		2.366E-01	1.281E-01	1.965E-01	1.292E-02	1.204
		879.36	*	-2.923E-04	1.403E-01	2.312E-01	1.834E-02	-0.001
	+	962.29		1.493E+00	8.742E-01	1.095E+00	8.634E-02	1.364
		966.15		1.346E+00	3.176E-01	6.160E-01	4.842E-02	2.184
		1177.93		-4.815E-02	4.220E-01	6.712E-01	4.010E-02	-0.072
		1271.85		-3.183E-03	8.359E-01	1.398E+00	9.105E-02	-0.002
HO-166M		80.57		-1.644E-02	2.850E-01	4.269E-01	4.939E-02	-0.039
	+	184.41		1.008E-01	5.288E-02	6.094E-02	3.925E-03	1.654
		280.46		7.154E-02	8.692E-02	1.377E-01	9.150E-03	0.519
		410.95		-3.929E-02	2.416E-01	3.933E-01	2.224E-02	-0.100
		711.68	*	-5.120E-02	6.446E-02	1.007E-01	5.541E-03	-0.509
		752.31		1.255E-01	2.967E-01	5.119E-01	3.095E-02	0.245
		810.29		3.539E-02	6.513E-02	1.130E-01	7.765E-03	0.313
TM-171		51.35		-2.354E+01	6.094E+01	1.017E+02	1.317E+01	-0.231
		52.39		-1.270E+01	3.054E+01	5.087E+01	6.654E+00	-0.250
		59.40		1.626E+01	3.588E+01	6.197E+01	7.557E+00	0.262
		66.72	*	-1.839E+01	3.376E+01	5.504E+01	6.435E+00	-0.334
LU-176	+	88.36		6.238E-01	2.673E-01	3.698E-01	4.407E-02	1.687
		201.83		-1.124E-02	2.866E-02	4.487E-02	2.931E-03	-0.250
		306.84	*	-1.368E-02	2.491E-02	3.710E-02	2.422E-03	-0.369
		401.10		4.083E+00	6.407E+00	1.105E+01	6.233E-01	0.370
LU-177		112.95		4.758E-01	1.335E+00	2.239E+00	1.734E-01	0.213
	+	208.36	*	1.694E+00	1.351E+00	1.684E+00	1.105E-01	1.006
LU-177M		52.97		-1.063E-01	3.052E+00	5.181E+00	6.784E-01	-0.021
		54.07		1.320E+00	1.481E+00	2.604E+00	3.395E-01	0.507
		61.30		-1.003E+00	1.979E+00	3.266E+00	3.940E-01	-0.307

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		121.62		-1.104E-01	3.749E-01	6.077E-01	4.232E-02	-0.182
		147.16		-5.778E-01	6.196E-01	9.599E-01	6.228E-02	-0.602
		171.86		2.440E-01	4.778E-01	7.842E-01	5.001E-02	0.311
		218.09		-2.163E-01	8.937E-01	1.404E+00	9.273E-02	-0.154
	+	268.79		2.835E+00	1.425E+00	1.510E+00	1.007E-01	1.878
		319.02		1.291E-01	2.330E-01	4.039E-01	2.604E-02	0.320
		367.43		-1.926E-01	8.748E-01	1.429E+00	8.522E-02	-0.135
		413.65	*	-6.420E-03	1.743E-01	2.862E-01	1.619E-02	-0.022
HF-181		56.28		-8.669E-01	1.427E+00	2.342E+00	2.986E-01	-0.370
		57.53		-6.780E-01	7.307E-01	1.174E+00	1.471E-01	-0.578
		65.20		-4.447E-01	1.175E+00	1.935E+00	2.281E-01	-0.230
		133.02		-3.732E-02	6.305E-02	1.002E-01	6.687E-03	-0.372
		136.25		-1.413E-02	4.266E-01	6.963E-01	4.610E-02	-0.020
		345.85		5.710E-02	1.927E-01	2.905E-01	1.805E-02	0.197
		482.03	*	5.423E-03	4.400E-02	7.237E-02	4.086E-03	0.075
W-181		56.28		-3.446E-01	5.661E-01	9.290E-01	1.184E-01	-0.371
		57.53		-2.690E-01	2.902E-01	4.661E-01	5.841E-02	-0.577
		65.20	*	-1.752E-01	4.627E-01	7.622E-01	8.984E-02	-0.230
TA-182		67.75		-3.966E-02	1.261E-01	2.095E-01	2.438E-02	-0.189
		100.10		-2.656E-03	1.709E-01	2.832E-01	2.651E-02	-0.009
		152.43		-3.211E-01	3.172E-01	4.876E-01	3.141E-02	-0.658
		222.10		-5.074E-02	3.551E-01	5.604E-01	3.709E-02	-0.091
		1001.68		2.999E+00	2.121E+00	3.923E+00	2.989E-01	0.765
		1121.28		6.166E-01	1.967E-01	3.789E-01	2.478E-02	1.628
		1189.05		9.500E-02	3.644E-01	6.006E-01	3.626E-02	0.158
		1221.42	*	-1.710E-01	2.274E-01	3.573E-01	2.223E-02	-0.479
		1230.97		-4.633E-01	5.999E-01	9.467E-01	5.943E-02	-0.489
RE-183		57.98		-3.024E-01	2.869E-01	4.572E-01	5.692E-02	-0.661
		59.32		6.193E-02	1.460E-01	2.520E-01	3.076E-02	0.246
		67.20		-9.642E-02	2.326E-01	3.817E-01	4.452E-02	-0.253
		162.32	*	2.951E-02	1.005E-01	1.653E-01	1.053E-02	0.179
	+	208.81		1.714E+00	1.367E+00	1.720E+00	1.129E-01	0.996
		291.72		6.712E-02	9.653E-01	1.441E+00	9.517E-02	0.047
RE-184		57.98		-1.123E+00	1.065E+00	1.697E+00	2.113E-01	-0.661
		59.32		2.297E-01	5.417E-01	9.346E-01	1.141E-01	0.246
		67.20		-3.578E-01	8.632E-01	1.416E+00	1.652E-01	-0.253
		161.27		1.192E-01	3.250E-01	5.367E-01	3.424E-02	0.222
		216.55		6.431E-03	2.817E-01	4.495E-01	2.965E-02	0.014
		252.85	*	-1.190E-01	2.235E-01	3.683E-01	2.460E-02	-0.323
		318.01		4.039E-02	4.076E-01	6.868E-01	4.434E-02	0.059
		792.07		-5.345E-01	9.948E-01	1.569E+00	1.037E-01	-0.341
		903.28		4.879E-01	1.125E+00	1.706E+00	1.400E-01	0.286
		920.93		1.829E-02	4.579E-01	7.552E-01	6.132E-02	0.024
OS-185		59.72		2.168E-01	3.922E-01	6.797E-01	8.268E-02	0.319
		61.14		-1.192E-01	2.177E-01	3.586E-01	4.330E-02	-0.332
		69.30		-1.063E-01	3.280E-01	5.443E-01	6.294E-02	-0.195
		592.07		-4.343E+00	2.959E+00	4.131E+00	2.189E-01	-1.051
		646.12	*	4.902E-03	4.413E-02	7.506E-02	3.742E-03	0.065
		717.42		2.597E-01	9.399E-01	1.608E+00	8.971E-02	0.161

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		874.81		3.306E-01	5.994E-01	1.042E+00	8.185E-02	0.317
		880.27		2.158E-01	7.736E-01	1.312E+00	1.042E-01	0.165
RE-188		155.03	*	2.068E-01	1.605E-01	2.762E-01	1.774E-02	0.749
		477.96		-1.032E+00	3.226E+00	5.127E+00	2.897E-01	-0.201
		633.10		-1.695E-01	3.116E+00	4.950E+00	2.509E-01	-0.034
W-188		63.58		5.461E+01	6.747E+01	1.164E+02	1.385E+01	0.469
		227.08		-6.033E+00	1.277E+01	1.970E+01	1.307E+00	-0.306
		290.67	*	1.071E+00	7.552E+00	1.134E+01	7.496E-01	0.094
IR-192	+	295.96		9.022E-01	1.642E-01	2.796E-01	1.864E-02	3.226
		308.46		-4.040E-03	9.013E-02	1.508E-01	9.917E-03	-0.027
		316.51	*	-2.132E-02	3.120E-02	4.981E-02	3.234E-03	-0.428
		468.07		-3.597E-02	7.492E-02	1.011E-01	6.642E-03	-0.356
		604.41		-6.685E-01	5.807E-01	6.920E-01	7.662E-02	-0.966
		612.46		5.603E-02	8.021E-01	1.129E+00	8.038E-02	0.050
AU-195		65.12		-7.834E-02	2.155E-01	3.552E-01	4.188E-02	-0.221
		66.83		-5.868E-02	1.110E-01	1.811E-01	2.116E-02	-0.324
	+	75.70		1.259E+00	3.479E-01	5.017E-01	5.747E-02	2.509
		98.88	*	1.288E-01	2.228E-01	3.787E-01	3.621E-02	0.340
		129.76		3.501E+00	2.879E+00	4.950E+00	3.335E-01	0.707
TL-200		367.94	*	-1.387E-05	2.879E+00	Half-Life too short		
		579.30		3.757E-04	2.879E+00	Half-Life too short		
		828.27		9.322E-04	2.879E+00	Half-Life too short		
		1205.75		5.447E-04	2.879E+00	Half-Life too short		
TL-201		68.90		-1.553E+00	4.040E+00	6.685E+00	7.741E-01	-0.232
		70.82		8.852E-01	2.462E+00	3.795E+00	4.368E-01	0.233
		80.30		7.806E-01	3.935E+00	5.983E+00	6.917E-01	0.130
		135.34		1.499E+01	1.797E+01	3.052E+01	2.025E+00	0.491
		167.43	*	3.478E+00	4.661E+00	7.840E+00	4.984E-01	0.444
TL-202		68.90		-1.734E-01	4.511E-01	7.464E-01	8.643E-02	-0.232
		70.82		9.856E-02	2.741E-01	4.225E-01	4.863E-02	0.233
		80.30		8.694E-02	4.383E-01	6.664E-01	7.704E-02	0.130
		439.56	*	1.999E-02	6.429E-02	1.079E-01	6.121E-03	0.185
HG-203		70.83		4.560E-01	1.253E+00	1.931E+00	3.012E-01	0.236
		72.87		5.003E-01	7.328E-01	1.141E+00	1.735E-01	0.439
		82.60		-8.020E-01	1.120E+00	1.714E+00	2.714E-01	-0.468
		279.20	*	4.779E-02	4.245E-02	6.840E-02	4.762E-03	0.699
BI-207		72.80		1.328E-01	2.181E-01	3.393E-01	3.890E-02	0.391
	+	74.97		7.016E-01	1.939E-01	2.550E-01	2.921E-02	2.751
		84.90		1.385E-01	2.058E-01	3.188E-01	3.761E-02	0.434
		569.67		2.627E-03	3.022E-02	4.903E-02	2.648E-03	0.054
		1063.62	*	-8.746E-03	6.033E-02	9.644E-02	6.859E-03	-0.091
		1770.23		2.061E-02	4.923E-01	8.078E-01	4.908E-02	0.026
TL-207		81.07		-7.464E-02	2.325E-01	3.426E-01	3.971E-02	-0.218
		83.78		1.781E-01	1.323E-01	2.109E-01	2.474E-02	0.844
		94.90		-1.984E-02	2.483E-01	3.617E-01	3.727E-02	-0.055
		122.32		-1.312E+00	1.765E+00	2.795E+00	2.150E-01	-0.469
		144.24		3.322E-01	6.730E-01	1.121E+00	8.768E-02	0.296
		154.21		3.814E-01	3.704E-01	6.307E-01	4.756E-02	0.605
	+	269.46		6.675E-01	3.357E-01	3.627E-01	2.502E-02	1.840

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		323.87	*	-6.717E-01	6.506E-01	1.001E+00	1.675E-01	-0.671
	+	338.28		5.399E+00	1.800E+00	2.520E+00	2.724E-01	2.143
		445.03		1.111E+00	2.131E+00	3.635E+00	3.707E-01	0.306
PO-209		260.50		-6.461E+00	8.756E+00	1.419E+01	9.473E-01	-0.455
		262.80		-1.193E+01	2.626E+01	3.999E+01	2.670E+00	-0.298
		896.60	*	1.297E+00	7.254E+00	1.217E+01	9.985E-01	0.107
BI-210		46.50	*	-6.088E+00	9.384E+00	1.529E+01	1.333E+00	-0.398
PB-210		46.50	*	-6.088E+00	9.384E+00	1.529E+01	1.333E+00	-0.398
PO-210		46.50	*	-6.088E+00	9.381E+00	1.529E+01	1.188E+00	-0.398
PB-211		404.84	*	-1.887E-01	9.429E-01	1.521E+00	9.477E-01	-0.124
		427.08		-2.158E-01	2.095E+00	3.409E+00	2.107E+00	-0.063
		831.96		-2.971E-01	1.373E+00	2.209E+00	1.380E+00	-0.135
BI-212	+	727.18	*	6.645E-01	5.843E-01	6.735E-01	5.148E-02	0.987
		785.46		-3.313E-01	1.809E+00	2.958E+00	1.926E-01	-0.112
		1620.62		1.057E+00	1.202E+00	2.278E+00	1.487E-01	0.464
BI-214	+	609.31	*	1.002E+00	1.673E-01	2.757E-01	2.026E-02	3.634
		768.36		1.667E-01	7.832E-01	1.326E+00	1.146E-01	0.126
		934.06		1.208E+00	1.188E+00	2.134E+00	2.172E-01	0.566
	+	1120.29		2.106E+00	6.706E-01	8.587E-01	8.000E-02	2.452
		1238.11		1.347E+00	1.141E+00	2.055E+00	1.752E-01	0.655
		1377.67		1.300E+00	9.760E-01	1.878E+00	1.751E-01	0.693
		1764.49		1.220E+00	4.146E-01	8.267E-01	5.040E-02	1.475
PO-215		81.07		-7.464E-02	2.325E-01	3.426E-01	3.971E-02	-0.218
		83.78		1.781E-01	1.323E-01	2.109E-01	2.474E-02	0.844
		94.90		-1.984E-02	2.483E-01	3.617E-01	3.727E-02	-0.055
		122.32		-1.312E+00	1.765E+00	2.795E+00	2.150E-01	-0.469
		144.24		3.322E-01	6.730E-01	1.121E+00	8.768E-02	0.296
		154.21		3.814E-01	3.704E-01	6.307E-01	4.756E-02	0.605
	+	269.46		6.675E-01	3.357E-01	3.627E-01	2.502E-02	1.840
		323.87	*	-6.717E-01	6.506E-01	1.001E+00	1.675E-01	-0.671
	+	338.28		5.399E+00	1.800E+00	2.520E+00	2.724E-01	2.143
		445.03		1.111E+00	2.131E+00	3.635E+00	3.707E-01	0.306
RN-219		271.23		2.239E-01	2.659E-01	4.192E-01	3.666E-02	0.534
		401.81	*	1.746E-01	4.046E-01	6.867E-01	9.298E-02	0.254
RN-220		549.76	*	1.117E+01	2.621E+01	4.390E+01	2.405E+00	0.254
RA-223		81.07		-7.464E-02	2.325E-01	3.426E-01	3.971E-02	-0.218
		83.78		1.781E-01	1.323E-01	2.109E-01	2.474E-02	0.844
		94.90		-1.984E-02	2.483E-01	3.617E-01	3.727E-02	-0.055
		122.32		-1.312E+00	1.765E+00	2.795E+00	2.150E-01	-0.469
		144.24		3.322E-01	6.730E-01	1.121E+00	8.768E-02	0.296
		154.21		3.814E-01	3.704E-01	6.307E-01	4.756E-02	0.605
	+	269.46		6.675E-01	3.357E-01	3.627E-01	2.502E-02	1.840
		323.87	*	-6.717E-01	6.506E-01	1.001E+00	1.675E-01	-0.671
	+	338.28		5.399E+00	1.800E+00	2.520E+00	2.724E-01	2.143
		445.03		1.111E+00	2.131E+00	3.635E+00	3.707E-01	0.306
RA-226	+	609.31	*	1.002E+00	1.673E-01	2.757E-01	2.026E-02	3.634
		768.36		1.667E-01	7.832E-01	1.326E+00	1.146E-01	0.126
		934.06		1.208E+00	1.188E+00	2.134E+00	2.172E-01	0.566
	+	1120.29		2.106E+00	6.706E-01	8.587E-01	8.000E-02	2.452

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.347E+00	1.141E+00	2.055E+00	1.752E-01	0.655
		1377.67		1.300E+00	9.760E-01	1.878E+00	1.751E-01	0.693
		1764.49		1.220E+00	4.146E-01	8.267E-01	5.040E-02	1.475
AC-227		79.80		3.294E-01	1.738E+00	2.640E+00	6.027E-01	0.125
		236.00		2.590E-01	2.685E-01	4.006E-01	4.388E-02	0.646
		256.20	*	3.426E-01	3.662E-01	6.452E-01	9.258E-02	0.531
		286.10		5.468E-01	1.448E+00	2.490E+00	2.987E-01	0.220
	+	299.80		3.050E+00	1.715E+00	2.516E+00	4.170E-01	1.212
		304.40		-4.940E-01	1.834E+00	2.642E+00	4.639E-01	-0.187
		334.20		-1.685E+00	2.843E+00	3.956E+00	7.321E-01	-0.426
TH-227		79.80		3.294E-01	1.738E+00	2.640E+00	6.095E-01	0.125
	+	94.00		6.282E+00	3.355E+00	3.395E+00	7.668E-01	1.850
		236.00		2.590E-01	2.682E-01	4.006E-01	3.858E-02	0.646
		256.20	*	3.426E-01	3.677E-01	6.452E-01	1.111E-01	0.531
		286.10		5.468E-01	1.547E+00	2.490E+00	2.496E+00	0.220
	+	299.80		3.050E+00	1.715E+00	2.516E+00	4.170E-01	1.212
		304.40		-4.940E-01	1.834E+00	2.642E+00	4.639E-01	-0.187
		334.20		-1.685E+00	2.843E+00	3.956E+00	7.321E-01	-0.426
TH-229		85.43		1.925E-01	2.071E-01	3.235E-01	3.829E-02	0.595
	+	88.47		3.591E-01	1.539E-01	2.119E-01	2.519E-02	1.695
		100.00		2.567E-03	1.791E-01	2.972E-01	2.787E-02	0.009
		193.63	*	-5.977E-01	4.944E-01	7.360E-01	4.776E-02	-0.812
		210.97		6.545E-02	8.697E-01	1.241E+00	8.158E-02	0.053
TH-230	+	609.31	*	1.002E+00	1.673E-01	2.757E-01	2.026E-02	3.634
		768.36		1.667E-01	7.832E-01	1.325E+00	1.146E-01	0.126
		934.06		1.208E+00	1.188E+00	2.134E+00	2.172E-01	0.566
	+	1120.29		2.105E+00	6.706E-01	8.587E-01	8.000E-02	2.452
		1238.11		1.347E+00	1.141E+00	2.055E+00	1.752E-01	0.655
		1377.67		1.300E+00	9.760E-01	1.878E+00	1.751E-01	0.693
		1764.49		1.220E+00	4.146E-01	8.267E-01	5.040E-02	1.475
PA-231		283.67	*	-9.027E-01	1.430E+00	2.309E+00	3.268E-01	-0.391
	+	301.29		1.220E+00	6.690E-01	9.706E-01	1.057E-01	1.257
TH-231		81.07		-7.464E-02	2.325E-01	3.426E-01	3.971E-02	-0.218
		83.78		1.781E-01	1.323E-01	2.109E-01	2.474E-02	0.844
		94.90		-1.984E-02	2.483E-01	3.617E-01	3.727E-02	-0.055
		122.32		-1.312E+00	1.765E+00	2.795E+00	2.150E-01	-0.469
		144.24		3.322E-01	6.730E-01	1.121E+00	8.768E-02	0.296
		154.21		3.814E-01	3.704E-01	6.307E-01	4.756E-02	0.605
	+	269.46		6.675E-01	3.357E-01	3.627E-01	2.502E-02	1.840
		323.87	*	-6.717E-01	6.506E-01	1.001E+00	1.675E-01	-0.671
	+	338.28		5.399E+00	1.800E+00	2.520E+00	2.724E-01	2.143
		445.03		1.111E+00	2.131E+00	3.635E+00	3.707E-01	0.306
U-231		84.21		1.267E+00	4.741E+00	7.212E+00	8.478E-01	0.176
	+	92.29		5.035E+00	2.494E+00	3.021E+00	3.287E-01	1.667
		95.87	*	-5.721E-01	9.355E-01	1.339E+00	1.354E-01	-0.427
		108.00		-1.015E+00	1.701E+00	2.648E+00	2.192E-01	-0.383
PA-233	+	75.28		2.048E+01	6.227E+00	7.535E+00	1.289E+00	2.717
	+	86.59		5.149E+00	2.565E+00	3.125E+00	8.767E-01	1.648
	+	300.12		8.504E-01	4.718E-01	6.991E-01	9.637E-02	1.216

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		311.98	*	1.563E-02	6.272E-02	1.067E-01	7.275E-03	0.146
		340.50		8.194E-01	6.796E-01	1.057E+00	2.441E-01	0.775
		398.62		-6.382E-01	2.075E+00	3.338E+00	8.619E-01	-0.191
		415.76		1.290E+00	1.675E+00	2.873E+00	5.903E-01	0.449
PA-234		63.00		2.193E-01	2.052E+00	3.457E+00	6.072E-01	0.063
		94.67		5.904E-02	1.771E-01	2.642E-01	3.610E-02	0.223
		98.44		9.133E-02	1.037E-01	1.566E-01	8.760E-02	0.583
		99.86		2.474E-02	4.545E-01	7.558E-01	7.104E-02	0.033
		111.00		-7.986E-03	1.757E-01	2.895E-01	3.362E-02	-0.028
		131.20		-6.030E-02	1.070E-01	1.706E-01	1.144E-02	-0.354
		152.70		-3.221E-01	3.199E-01	4.867E-01	7.814E-02	-0.662
	+	186.00		3.629E+00	2.193E+00	2.357E+00	7.233E-01	1.540
		226.40		-1.250E-01	4.059E-01	6.329E-01	7.594E-02	-0.197
		227.20		-1.826E-01	4.379E-01	6.783E-01	4.500E-02	-0.269
		248.90		-3.025E-01	8.343E-01	1.282E+00	2.788E-01	-0.236
	+	293.70		5.747E+00	1.354E+00	1.713E+00	2.808E-01	3.354
		369.80		1.529E-01	8.248E-01	1.385E+00	2.889E-01	0.110
		568.70		9.592E-01	9.355E-01	1.647E+00	8.903E-02	0.582
		569.50		8.310E-02	2.667E-01	4.415E-01	2.385E-02	0.188
		574.00		-1.003E+00	1.561E+00	2.363E+00	1.272E-01	-0.424
		699.00		1.588E-01	7.611E-01	1.296E+00	2.311E-01	0.123
		706.10		4.366E-01	1.078E+00	1.835E+00	8.092E-01	0.238
		733.00		-6.114E-02	4.645E-01	6.640E-01	1.412E-01	-0.092
		742.81		5.425E-01	1.426E+00	2.381E+00	1.594E+00	0.228
		796.30		9.875E-01	9.448E-01	1.650E+00	4.372E-01	0.598
		805.60		-7.515E-02	1.082E+00	1.784E+00	5.385E-01	-0.042
		819.60		5.039E-02	1.213E+00	2.019E+00	7.609E-01	0.025
		826.30		3.256E-01	8.961E-01	1.514E+00	6.732E-01	0.215
		831.60		-5.038E-01	7.507E-01	1.147E+00	3.380E-01	-0.439
		876.40		3.678E-01	9.323E-01	1.467E+00	1.507E+00	0.251
		880.51		9.319E-02	2.839E-01	4.836E-01	3.843E-02	0.193
		883.24		-5.563E-02	3.055E-01	4.903E-01	3.292E-01	-0.113
		899.00		-6.459E-01	9.074E-01	1.305E+00	5.693E-01	-0.495
		925.00		1.929E-01	1.177E+00	1.966E+00	1.592E-01	0.098
		926.50		-1.983E-02	1.762E-01	2.855E-01	7.166E-02	-0.069
		946.00	*	-1.120E-03	3.381E-01	5.538E-01	1.023E-01	-0.002
		949.00		1.076E-01	5.143E-01	8.591E-01	6.843E-02	0.125
		980.50		-1.832E-02	7.502E-01	1.222E+00	9.495E-02	-0.015
		1394.10		3.716E-03	1.246E+00	2.071E+00	1.343E+00	0.002
PA-234M		766.41		9.008E+00	1.901E+01	3.072E+01	2.348E+01	0.293
		1001.03	*	9.086E+00	7.155E+00	1.300E+01	1.356E+00	0.699
TH-234		63.29	*	5.417E-01	1.734E+00	2.941E+00	5.819E-01	0.184
	+	92.38		1.626E+00	8.456E-01	9.792E-01	1.885E-01	1.660
U-234	+	609.31	*	1.002E+00	1.673E-01	2.757E-01	2.026E-02	3.634
		768.36		1.667E-01	7.832E-01	1.325E+00	1.146E-01	0.126
		934.06		1.208E+00	1.188E+00	2.134E+00	2.172E-01	0.566
	+	1120.29		2.105E+00	6.706E-01	8.587E-01	8.000E-02	2.452
		1238.11		1.347E+00	1.141E+00	2.055E+00	1.752E-01	0.655
		1377.67		1.300E+00	9.760E-01	1.878E+00	1.751E-01	0.693

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1764.49		1.220E+00	4.146E-01	8.267E-01	5.040E-02	1.475
U-235	+	89.95		2.688E+00	1.264E+00	1.931E+00	6.134E-01	1.392
	+	93.35		1.954E+00	1.099E+00	1.143E+00	3.281E-01	1.710
		105.00		1.309E+00	1.101E+00	1.801E+00	5.377E-01	0.727
		143.76	*	3.717E-02	2.039E-01	3.351E-01	5.555E-02	0.111
		163.35		7.807E-03	4.279E-01	6.935E-01	1.260E-01	0.011
	+	185.71		1.344E-01	7.050E-02	8.728E-02	5.628E-03	1.540
		205.31		-1.917E-02	5.558E-01	7.883E-01	1.438E-01	-0.024
NP-236		94.67		4.535E-02	1.343E-01	2.005E-01	2.076E-02	0.226
		98.44		6.906E-02	6.857E-02	1.184E-01	1.141E-02	0.583
		111.00		-6.041E-03	1.329E-01	2.190E-01	1.739E-02	-0.028
		160.31	*	8.572E-02	7.546E-02	1.290E-01	8.237E-03	0.664
U-238		63.29	*	5.417E-01	1.734E+00	2.941E+00	5.819E-01	0.184
	+	92.38		1.626E+00	8.052E-01	9.792E-01	1.063E-01	1.660
NP-239		99.55		4.340E-02	1.529E-01	2.569E-01	2.428E-02	0.169
		117.00	*	-2.203E-01	1.833E-01	2.828E-01	2.081E-02	-0.779
	+	209.75		1.369E+00	1.092E+00	1.393E+00	9.151E-02	0.983
		228.18		9.723E-02	2.236E-01	3.642E-01	2.417E-02	0.267
	+	277.60		1.811E-01	1.843E-01	3.203E-01	2.131E-02	0.565
		334.30		-9.962E-01	1.600E+00	2.234E+00	1.412E-01	-0.446
AM-241		59.54	*	1.091E-01	2.091E-01	3.619E-01	4.569E-02	0.301
CM-243		99.55		4.466E-02	1.573E-01	2.643E-01	2.498E-02	0.169
		103.76	*	-1.053E-02	9.502E-02	1.566E-01	1.380E-02	-0.067
		117.00		-2.267E-01	1.886E-01	2.910E-01	2.141E-02	-0.779
	+	209.75		1.350E+00	1.076E+00	1.373E+00	9.020E-02	0.983
		228.18		9.824E-02	2.259E-01	3.680E-01	2.442E-02	0.267
	+	277.60		1.825E-01	1.858E-01	3.229E-01	2.148E-02	0.565
CM-247	+	278.00		7.509E-01	7.642E-01	1.370E+00	9.108E-02	0.548
		287.40		-2.396E-01	1.152E+00	1.916E+00	1.268E-01	-0.125
		402.60	*	-4.710E-03	3.607E-02	5.893E-02	3.326E-03	-0.080
CF-249		252.85		-4.490E-01	8.429E-01	1.389E+00	9.278E-02	-0.323
		333.44		3.064E-02	2.047E-01	3.043E-01	1.927E-02	0.101
		387.95	*	-1.547E-02	4.009E-02	6.372E-02	3.620E-03	-0.243
CF-251		176.60	*	-3.712E-02	1.232E-01	1.954E-01	1.250E-02	-0.190
		227.00		-2.665E-01	3.914E-01	5.960E-01	3.954E-02	-0.447
		285.00		5.330E-01	1.594E+00	2.740E+00	1.816E-01	0.195

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871424    *
* Acquisition date :  7-JUL-2009 08:27:26 Detector SN#    :                *
* Detector ID        : GAM04               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.19      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 23-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201871424         Analyst initials: MXR1          *
* Batch Number       : 881219              Sample Quantity : 1.1946E+02 GRAM *
* Recovery           :    1.00000          Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  5-MAY-2009 14:25:41 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.740E+01	3.303E+00	4.162E-01	0.000E+00
CD-109	2.671E+00	1.122E+00	1.266E+00	0.000E+00
SN-126	2.630E-01	1.105E-01	1.257E-01	0.000E+00
CS-135	5.674E-01	2.808E-01	2.485E-01	0.000E+00
TL-208	4.443E-01	9.056E-02	6.324E-02	0.000E+00
BI-211	3.041E+00	4.984E-01	3.121E-01	0.000E+00
PB-212	1.458E+00	1.561E-01	9.457E-02	0.000E+00
PO-212	1.458E+00	1.561E-01	9.457E-02	0.000E+00
PB-214	1.058E+00	1.816E-01	1.088E-01	0.000E+00
PO-214	1.058E+00	1.816E-01	1.088E-01	0.000E+00
PO-216	1.458E+00	1.561E-01	9.457E-02	0.000E+00
PO-218	1.058E+00	1.816E-01	1.088E-01	0.000E+00
RA-224	4.179E+00	1.193E+00	1.076E+00	0.000E+00
AC-228	1.344E+00	3.419E-01	2.287E-01	0.000E+00
RA-228	1.344E+00	3.419E-01	2.287E-01	0.000E+00
TH-228	1.458E+00	1.561E-01	9.456E-02	0.000E+00
TH-232	1.344E+00	3.419E-01	2.287E-01	0.000E+00
NP-237	7.723E-01	3.600E-01	4.174E-01	0.000E+00
AM-243	3.909E-01	1.059E-01	1.008E-01	0.000E+00
ANH-511	1.455E-01	7.205E-02	4.835E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-8.768E-02	3.281E-01	5.402E-01	0.000E+00	NOT IDENT.
NA-22	3.539E-04	5.184E-02	8.849E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.810E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.486E-02	2.531E-02	3.456E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.563E-02	8.106E-02	0.000E+00	FAIL ABUN
SC-46	-2.648E-03	4.201E-02	7.040E-02	0.000E+00	FAIL ABUN
V-48	-1.340E-02	7.183E-02	1.177E-01	0.000E+00	NOT IDENT.

CR-51	1.050E-01	3.204E-01	5.670E-01	0.000E+00	NOT IDENT.
MN-52	-9.802E-02	1.792E-01	2.729E-01	0.000E+00	NOT IDENT.
MN-54	2.022E-02	3.927E-02	6.941E-02	0.000E+00	NOT IDENT.
CO-56	2.258E-02	4.055E-02	7.207E-02	0.000E+00	NOT IDENT.
CO-57	-1.840E-02	2.496E-02	4.144E-02	0.000E+00	NOT IDENT.
CO-58	2.005E-02	4.091E-02	7.247E-02	0.000E+00	NOT IDENT.
FE-59	-7.812E-02	1.025E-01	1.558E-01	0.000E+00	NOT IDENT.
CO-60	5.877E-02	3.967E-02	7.857E-02	0.000E+00	NOT IDENT.
ZN-65	1.559E-01	9.645E-02	1.699E-01	0.000E+00	NOT IDENT.
GE-68	7.004E-02	1.410E+00	2.346E+00	0.000E+00	NOT IDENT.
AS-73	1.389E+00	1.450E+00	2.698E+00	0.000E+00	NOT IDENT.
AS-74	1.034E-01	9.855E-02	1.755E-01	0.000E+00	NOT IDENT.
SE-75	2.858E-02	4.449E-02	7.234E-02	0.000E+00	NOT IDENT.
BR-77	-3.109E+00	6.454E+00	1.027E+01	0.000E+00	FAIL ABUN
SR-82	-1.988E-01	3.879E-01	6.321E-01	0.000E+00	NOT IDENT.
RB-83	-2.004E-02	6.023E-02	9.727E-02	0.000E+00	NOT IDENT.
RB-84	-1.877E-02	6.842E-02	1.121E-01	0.000E+00	NOT IDENT.
KR-85	9.406E+00	7.804E+00	1.281E+01	0.000E+00	NOT IDENT.
SR-85	4.759E-02	3.948E-02	6.483E-02	0.000E+00	NOT IDENT.
RB-86	-2.122E-01	8.575E-01	1.384E+00	0.000E+00	NOT IDENT.
Y-88	-6.665E-03	2.423E-02	3.634E-02	0.000E+00	NOT IDENT.
ZR-88	-1.405E-02	2.999E-02	4.953E-02	0.000E+00	NOT IDENT.
Y-91	7.853E+00	2.232E+01	3.771E+01	0.000E+00	NOT IDENT.
NB-94	-4.604E-03	3.400E-02	5.787E-02	0.000E+00	NOT IDENT.
NB-95	1.883E-02	4.156E-02	7.357E-02	0.000E+00	NOT IDENT.
NB-95M	1.141E-01	1.300E-01	2.016E-01	0.000E+00	NOT IDENT.
ZR-95	-6.217E-04	7.201E-02	1.230E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.918E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.742E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-9.020E+00	8.464E+00	1.293E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.133E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.684E-02	3.320E-02	5.361E-02	0.000E+00	NOT IDENT.
RH-102	1.428E-02	2.950E-02	5.142E-02	0.000E+00	NOT IDENT.
RU-103	1.027E-02	3.649E-02	6.261E-02	0.000E+00	FAIL ABUN
RH-106	-1.365E-01	3.404E-01	5.387E-01	0.000E+00	NOT IDENT.
RU-106	-1.365E-01	3.401E-01	5.387E-01	0.000E+00	NOT IDENT.
AG-108M	-1.465E-02	3.256E-02	5.328E-02	0.000E+00	NOT IDENT.
AG-110M	3.981E-04	3.640E-02	6.302E-02	0.000E+00	NOT IDENT.
IN-111	9.929E-02	8.193E-01	1.207E+00	0.000E+00	NOT IDENT.
IN-113M	-3.336E-03	4.269E-02	7.251E-02	0.000E+00	NOT IDENT.
SN-113	-3.336E-03	4.269E-02	7.251E-02	0.000E+00	NOT IDENT.
IN-114M	2.476E-01	1.842E-01	2.993E-01	0.000E+00	NOT IDENT.
CD-115	3.338E+00	7.166E+00	1.242E+01	0.000E+00	NOT IDENT.
SN-117M	-2.062E-02	4.971E-02	8.243E-02	0.000E+00	NOT IDENT.
SB-122	-1.204E+00	1.452E+00	2.203E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.112E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.052E-02	2.708E-02	4.495E-02	0.000E+00	NOT IDENT.
I-124	-2.930E-01	6.585E-01	8.965E-01	0.000E+00	NOT IDENT.
SB-124	-3.463E-02	7.190E-02	1.064E-01	0.000E+00	FAIL ABUN
SB-125	-2.565E-02	9.121E-02	1.515E-01	0.000E+00	FAIL ABUN
TE-125M	1.877E+00	8.957E+00	1.518E+01	0.000E+00	NOT IDENT.
I-126	2.280E-02	1.698E-01	2.964E-01	0.000E+00	NOT IDENT.
SB-126	2.155E-02	1.545E-01	2.346E-01	0.000E+00	NOT IDENT.
SB-127	-6.028E-01	9.949E-01	1.618E+00	0.000E+00	NOT IDENT.
XE-127	-1.486E-02	4.459E-02	7.292E-02	0.000E+00	NOT IDENT.
I-131	-4.317E-03	1.003E-01	1.717E-01	0.000E+00	NOT IDENT.
TE-132	2.277E-01	5.127E-01	8.671E-01	0.000E+00	NOT IDENT.
BA-133	-1.057E-02	4.508E-02	6.663E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.364E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.289E-02	4.603E-02	8.575E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.622E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.198E-02	1.151E-01	1.892E-01	0.000E+00	FAIL ABUN
BA-137M	-1.774E-02	3.864E-02	6.642E-02	0.000E+00	NOT IDENT.
CS-137	-1.876E-02	4.084E-02	7.021E-02	0.000E+00	NOT IDENT.
CE-139	-5.650E-03	2.610E-02	4.354E-02	0.000E+00	NOT IDENT.
BA-140	-1.283E-01	2.430E-01	3.796E-01	0.000E+00	NOT IDENT.
LA-140	-2.800E-02	8.394E-02	1.087E-01	0.000E+00	NOT IDENT.
CE-141	4.700E-02	5.701E-02	1.007E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.108E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.493E-01	1.969E-01	3.230E-01	0.000E+00	NOT IDENT.
PM-144	1.980E-02	3.454E-02	6.207E-02	0.000E+00	NOT IDENT.
PR-144	1.341E+00	2.339E+00	4.204E+00	0.000E+00	NOT IDENT.
PM-146	2.899E-02	4.428E-02	7.820E-02	0.000E+00	NOT IDENT.
ND-147	9.398E-02	5.574E-01	9.038E-01	0.000E+00	FAIL ABUN
PM-149	3.726E+01	5.629E+01	1.016E+02	0.000E+00	NOT IDENT.
EU-152	-5.044E-02	9.494E-02	1.522E-01	0.000E+00	FAIL ABUN
GD-153	4.342E-02	7.903E-02	1.349E-01	0.000E+00	NOT IDENT.
EU-154	4.847E-02	1.418E-01	2.494E-01	0.000E+00	NOT IDENT.

EU-155	6.015E-02	1.048E-01	1.862E-01	0.000E+00	FAIL ABUN
TB-160	-2.923E-04	1.375E-01	2.320E-01	0.000E+00	FAIL ABUN
HO-166M	-5.120E-02	6.317E-02	1.013E-01	0.000E+00	FAIL ABUN
TM-171	-1.839E+01	3.309E+01	5.686E+01	0.000E+00	NOT IDENT.
LU-176	-1.368E-02	2.441E-02	3.769E-02	0.000E+00	FAIL ABUN
LU-177	1.694E+00	1.324E+00	1.718E+00	0.000E+00	FAIL ABUN
LU-177M	-6.420E-03	1.708E-01	2.897E-01	0.000E+00	FAIL ABUN
HF-181	5.423E-03	4.312E-02	7.313E-02	0.000E+00	NOT IDENT.
W-181	-1.752E-01	4.535E-01	7.877E-01	0.000E+00	NOT IDENT.
TA-182	-1.710E-01	2.228E-01	3.571E-01	0.000E+00	NOT IDENT.
RE-183	2.951E-02	9.848E-02	1.691E-01	0.000E+00	FAIL ABUN
RE-184	-1.190E-01	2.190E-01	3.749E-01	0.000E+00	NOT IDENT.
OS-185	4.902E-03	4.325E-02	7.558E-02	0.000E+00	NOT IDENT.
RE-188	2.068E-01	1.573E-01	2.827E-01	0.000E+00	NOT IDENT.
W-188	1.071E+00	7.401E+00	1.153E+01	0.000E+00	NOT IDENT.
IR-192	-2.132E-02	3.058E-02	5.057E-02	0.000E+00	FAIL ABUN
AU-195	1.288E-01	2.184E-01	3.896E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.911E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.478E+00	4.568E+00	8.018E+00	0.000E+00	NOT IDENT.
TL-202	1.999E-02	6.300E-02	1.091E-01	0.000E+00	NOT IDENT.
HG-203	4.779E-02	4.160E-02	6.955E-02	0.000E+00	NOT IDENT.
BI-207	-8.746E-03	5.912E-02	9.655E-02	0.000E+00	FAIL ABUN
TL-207	-6.717E-01	6.376E-01	1.016E+00	0.000E+00	FAIL ABUN
PO-209	1.297E+00	7.109E+00	1.221E+01	0.000E+00	NOT IDENT.
BI-210	-6.088E+00	9.196E+00	1.586E+01	0.000E+00	NOT IDENT.
PB-210	-6.088E+00	9.196E+00	1.586E+01	0.000E+00	NOT IDENT.
PO-210	-6.088E+00	9.193E+00	1.586E+01	0.000E+00	NOT IDENT.
PB-211	-1.887E-01	9.240E-01	1.539E+00	0.000E+00	NOT IDENT.
BI-212	6.645E-01	5.726E-01	6.773E-01	0.000E+00	FAIL ABUN
BI-214	0.000E+00	1.640E-01	2.778E-01	0.000E+00	FAIL ABUN
PO-215	-6.717E-01	6.376E-01	1.016E+00	0.000E+00	FAIL ABUN
RN-219	1.746E-01	3.965E-01	6.953E-01	0.000E+00	NOT IDENT.
RN-220	1.117E+01	2.568E+01	4.428E+01	0.000E+00	NOT IDENT.
RA-223	-6.717E-01	6.376E-01	1.016E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	1.640E-01	2.778E-01	0.000E+00	FAIL ABUN
AC-227	3.426E-01	3.589E-01	6.567E-01	0.000E+00	FAIL ABUN
TH-227	3.426E-01	3.603E-01	6.567E-01	0.000E+00	FAIL ABUN
TH-229	-5.977E-01	4.845E-01	7.514E-01	0.000E+00	FAIL ABUN
TH-230	0.000E+00	1.640E-01	2.778E-01	0.000E+00	FAIL ABUN
PA-231	-9.027E-01	1.401E+00	2.348E+00	0.000E+00	FAIL ABUN
TH-231	-6.717E-01	6.376E-01	1.016E+00	0.000E+00	FAIL ABUN
U-231	-5.721E-01	9.168E-01	1.378E+00	0.000E+00	FAIL ABUN
PA-233	1.563E-02	6.146E-02	1.083E-01	0.000E+00	FAIL ABUN
PA-234	-1.120E-03	3.313E-01	5.552E-01	0.000E+00	FAIL ABUN
PA-234M	9.086E+00	7.012E+00	1.302E+01	0.000E+00	NOT IDENT.
TH-234	5.417E-01	1.700E+00	3.041E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	1.640E-01	2.778E-01	0.000E+00	FAIL ABUN
U-235	3.717E-02	1.998E-01	3.433E-01	0.000E+00	FAIL ABUN
NP-236	8.572E-02	7.395E-02	1.320E-01	0.000E+00	NOT IDENT.
U-238	5.417E-01	1.700E+00	3.041E+00	0.000E+00	FAIL ABUN
NP-239	-2.203E-01	1.796E-01	2.904E-01	0.000E+00	FAIL ABUN
AM-241	1.091E-01	2.049E-01	3.744E-01	0.000E+00	NOT IDENT.
CM-243	-1.053E-02	9.312E-02	1.610E-01	0.000E+00	FAIL ABUN
CM-247	-4.710E-03	3.534E-02	5.966E-02	0.000E+00	FAIL ABUN
CF-249	-1.547E-02	3.929E-02	6.454E-02	0.000E+00	NOT IDENT.
CF-251	-3.712E-02	1.207E-01	1.997E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:27:53.35

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871424.CNF;1
Sample date       : 23-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:27:26.
Sample ID         : G1201871424          Sample quantity  : 1.19460E+02 GRAM
Detector name     : GAM04                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.19  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881219               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1366	10.67*	1.075E+00	3.740E+01	3.740E+01	9.01
CD-109	88.03	156	3.72*	5.025E+00	2.616E+00	2.671E+00	42.86
SN-126	64.28	------	9.60	2.203E+00	------ Line Not Found		------
	86.94	156	8.90	5.025E+00	1.093E+00	1.093E+00	58.93
	87.57	156	37.00*	5.025E+00	2.630E-01	2.630E-01	42.86
CS-135	268.24	128	16.00*	4.417E+00	5.674E-01	5.674E-01	50.51
TL-208	277.35	35	6.80	4.329E+00	3.754E-01	3.754E-01	102.15
	510.84	127	21.60	2.733E+00	6.734E-01	6.734E-01	51.22
	583.14	292	84.20*	2.456E+00	4.443E-01	4.443E-01	20.80
	860.37	32	12.46	1.745E+00	4.592E-01	4.592E-01	87.47
BI-211	72.87	------	1.27	3.384E+00	------ Line Not Found		------
	351.07	454	12.94*	3.628E+00	3.041E+00	3.041E+00	16.72
PB-212	74.81	300	10.70	3.650E+00	2.411E+00	2.411E+00	29.17
	77.11	401	18.00	3.926E+00	1.785E+00	1.785E+00	20.33
	87.30	156	8.00	5.025E+00	1.216E+00	1.216E+00	44.01
	238.63	999	44.60*	4.828E+00	1.458E+00	1.458E+00	10.92
	300.09	73	3.41	4.083E+00	1.646E+00	1.646E+00	54.45
PO-212	74.81	300	10.70	3.650E+00	2.411E+00	2.411E+00	29.17
	77.11	401	18.00	3.926E+00	1.785E+00	1.785E+00	20.33
	87.30	156	8.00	5.025E+00	1.216E+00	1.216E+00	44.01
	115.19	------	0.60	6.408E+00	------ Line Not Found		------
	238.63	999	44.60*	4.828E+00	1.458E+00	1.458E+00	10.92
	300.09	73	3.41	4.083E+00	1.646E+00	1.646E+00	54.45
PB-214	74.81	300	6.21	3.650E+00	4.154E+00	4.154E+00	28.61
	77.11	401	10.50	3.926E+00	3.060E+00	3.060E+00	21.71
	87.30	156	4.67	5.025E+00	2.084E+00	2.084E+00	43.54
	241.98	251	7.49	4.787E+00	2.204E+00	2.204E+00	29.67
	295.21	302	19.20	4.135E+00	1.197E+00	1.197E+00	19.22
	351.92	454	37.20*	3.628E+00	1.058E+00	1.058E+00	17.52
PO-214	74.81	300	6.21	3.650E+00	4.154E+00	4.154E+00	28.61
	77.11	401	10.50	3.926E+00	3.060E+00	3.060E+00	21.71
	87.30	156	4.67	5.025E+00	2.084E+00	2.084E+00	43.54

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	251	7.49	4.787E+00	2.204E+00	2.204E+00	29.67
	295.21	302	19.20	4.135E+00	1.197E+00	1.197E+00	19.22
	351.92	454	37.20*	3.628E+00	1.058E+00	1.058E+00	17.52
PO-216	74.81	300	10.70	3.650E+00	2.411E+00	2.411E+00	29.17
	77.11	401	18.00	3.926E+00	1.785E+00	1.785E+00	20.33
	87.30	156	8.00	5.025E+00	1.216E+00	1.216E+00	44.01
	238.63	999	44.60*	4.828E+00	1.458E+00	1.458E+00	10.92
	300.09	73	3.41	4.083E+00	1.646E+00	1.646E+00	54.45
PO-218	74.81	300	6.21	3.650E+00	4.154E+00	4.154E+00	28.61
	77.11	401	10.50	3.926E+00	3.060E+00	3.060E+00	21.71
	87.30	156	4.67	5.025E+00	2.084E+00	2.084E+00	43.54
	241.98	251	7.49	4.787E+00	2.204E+00	2.204E+00	29.67
	295.21	302	19.20	4.135E+00	1.197E+00	1.197E+00	19.22
	351.92	454	37.20*	3.628E+00	1.058E+00	1.058E+00	17.52
RA-224	240.98	251	3.95*	4.787E+00	4.179E+00	4.179E+00	29.13
AC-228	338.32	175	11.40	3.737E+00	1.293E+00	1.293E+00	51.59
	911.07	196	27.70*	1.654E+00	1.344E+00	1.344E+00	25.95
	969.11	142	16.60	1.560E+00	1.718E+00	1.718E+00	35.41
RA-228	338.32	175	11.40	3.737E+00	1.293E+00	1.293E+00	51.59
	911.07	196	27.70*	1.654E+00	1.344E+00	1.344E+00	25.95
	969.11	142	16.60	1.560E+00	1.718E+00	1.718E+00	35.41
TH-228	84.40	------	1.21	4.745E+00	------ Line Not Found		------
	238.60	999	44.60*	4.828E+00	1.458E+00	1.458E+00	10.92
	300.10	73	3.41	4.083E+00	1.646E+00	1.646E+00	79.82
TH-232	338.32	175	11.40	3.737E+00	1.293E+00	1.293E+00	32.15
	911.07	196	27.70*	1.654E+00	1.344E+00	1.344E+00	25.95
	969.11	142	16.60	1.560E+00	1.718E+00	1.718E+00	35.41
NP-237	86.50	156	12.60*	5.025E+00	7.723E-01	7.723E-01	47.57
	95.87	------	2.60	5.678E+00	------ Line Not Found		------
AM-243	74.67	300	66.00*	3.650E+00	3.909E-01	3.909E-01	27.63
	86.72	156	0.34	5.025E+00	2.896E+01	2.896E+01	42.86
	117.66	------	0.55	6.445E+00	------ Line Not Found		------
	142.18	------	0.13	6.417E+00	------ Line Not Found		------
ANH-511	511.00	127	100.00*	2.733E+00	1.455E-01	1.455E-01	50.54

Flag: "*" = Keyline

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

Total number of lines in spectrum 28
Number of unidentified lines 2
Number of lines tentatively identified by NID 26 92.86%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.740E+01	3.740E+01	0.337E+01	9.01	
CD-109	464.00D	1.02	2.616E+00	2.671E+00	1.145E+00	42.86	
SN-126	1.00E+05Y	1.00	2.630E-01	2.630E-01	1.127E-01	42.86	
CS-135	2.30E+06Y	1.00	5.674E-01	5.674E-01	2.865E-01	50.51	
TL-208	1.41E+10Y	1.00	4.443E-01	4.443E-01	0.924E-01	20.80	
BI-211	7.04E+08Y	1.00	3.041E+00	3.041E+00	0.509E+00	16.72	
PB-212	1.41E+10Y	1.00	1.458E+00	1.458E+00	0.159E+00	10.92	
PO-212	1.41E+10Y	1.00	1.458E+00	1.458E+00	0.159E+00	10.92	
PB-214	1600.00Y	1.00	1.058E+00	1.058E+00	0.185E+00	17.52	
PO-214	1600.00Y	1.00	1.058E+00	1.058E+00	0.185E+00	17.52	
PO-216	1.41E+10Y	1.00	1.458E+00	1.458E+00	0.159E+00	10.92	
PO-218	1600.00Y	1.00	1.058E+00	1.058E+00	0.185E+00	17.52	
RA-224	1.41E+10Y	1.00	4.179E+00	4.179E+00	1.217E+00	29.13	
AC-228	1.41E+10Y	1.00	1.344E+00	1.344E+00	0.349E+00	25.95	
RA-228	1.41E+10Y	1.00	1.344E+00	1.344E+00	0.349E+00	25.95	
TH-228	1.41E+10Y	1.00	1.458E+00	1.458E+00	0.159E+00	10.92	
TH-232	1.41E+10Y	1.00	1.344E+00	1.344E+00	0.349E+00	25.95	
NP-237	2.14E+06Y	1.00	7.723E-01	7.723E-01	3.674E-01	47.57	
AM-243	7380.00Y	1.00	3.909E-01	3.909E-01	1.080E-01	27.63	
ANH-511	1.00E+09Y	1.00	1.455E-01	1.455E-01	0.735E-01	50.54	
	Total Activity :		6.286E+01	6.291E+01			

Grand Total Activity : 6.286E+01 6.291E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.92	121	165	1.00	179.88	178	12	1.68E-02	34.7	5.25E+00	T
5	92.81	153	338	1.53	185.66	178	12	2.13E-02	48.3	5.47E+00	T
0	185.90	132	278	1.07	371.87	367	10	1.83E-02	52.1	5.70E+00	T
0	209.42	75	246	1.03	418.91	414	9	1.04E-02	79.5	5.28E+00	T
0	462.86	65	101	1.80	925.82	920	13	9.01E-03	68.5	2.95E+00	T
0	608.84	350	87	1.25	1217.77	1212	11	4.86E-02	15.0	2.37E+00	T
0	727.00	51	100	1.21	1454.08	1447	14	7.05E-03	87.6	2.03E+00	T
4	963.55	59	33	2.49	1927.16	1921	21	8.15E-03	58.0	1.57E+00	T
0	1119.38	137	53	1.80	2238.78	2230	19	1.91E-02	30.5	1.36E+00	T
0	1588.76	42	5	4.75	3177.34	3167	19	5.85E-03	39.6	1.01E+00	
0	1762.78	73	0	1.70	3525.29	3519	15	1.01E-02	24.6	9.53E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:27:59.20

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*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871424.CNF;1 *
* Acquisition date : 7-JUL-2009 08:27:26.  Detector SN#    :                *
* Detector ID      : GAM04                 Sensitivity     : 5.00000        *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:01.19         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 23-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G1201871424           Analyst initials: MXR1           *
* Batch Number     : 881219                Sample Quantity : 1.19460E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 5-MAY-2009 14:25:41.36MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.740E+01	3.371E+00	4.172E-01	2.965E-02	89.633
CD-109	2.671E+00	1.145E+00	1.230E+00	1.478E-01	2.172
SN-126	2.630E-01	1.127E-01	1.220E-01	1.463E-02	2.156
CS-135	5.674E-01	2.865E-01	2.443E-01	2.036E-02	2.323
TL-208	4.443E-01	9.241E-02	6.272E-02	3.947E-03	7.083
BI-211	3.041E+00	5.086E-01	3.078E-01	2.079E-02	9.882
PB-212	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
PO-212	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
PB-214	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
PO-214	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
PO-216	1.458E+00	1.593E-01	9.285E-02	7.457E-03	15.704
PO-218	1.058E+00	1.853E-01	1.073E-01	9.152E-03	9.861
RA-224	4.179E+00	1.217E+00	1.057E+00	7.046E-02	3.954
AC-228	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
RA-228	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
TH-228	1.458E+00	1.593E-01	9.284E-02	7.456E-03	15.706
TH-232	1.344E+00	3.489E-01	2.281E-01	2.486E-02	5.895
NP-237	7.723E-01	3.674E-01	4.052E-01	9.654E-02	1.906

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	3.909E-01	1.080E-01	9.765E-02	1.118E-02	4.003
ANH-511	1.455E-01	7.352E-02	4.789E-02	2.678E-03	3.038

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-8.768E-02		3.348E-01	5.346E-01	3.541E-02	-0.164
NA-22	3.539E-04		5.290E-02	8.858E-02	5.791E-03	0.004
NA-24	4.069E-02		9.236E-02	Half-Life too short		
AL-26	-1.486E-02		2.582E-02	3.474E-02	2.060E-03	-0.428
TI-44	3.294E-01	+	6.697E-02	7.860E-02	9.038E-03	4.191
SC-46	-2.648E-03		4.287E-02	7.017E-02	5.675E-03	-0.038
V-48	-1.340E-02		7.330E-02	1.174E-01	9.096E-03	-0.114
CR-51	1.050E-01		3.269E-01	5.585E-01	3.933E-02	0.188
MN-52	-9.802E-02		1.828E-01	2.736E-01	1.867E-02	-0.358
MN-54	2.022E-02		4.007E-02	6.914E-02	5.003E-03	0.292
CO-56	2.258E-02		4.138E-02	7.180E-02	5.326E-03	0.315
CO-57	-1.840E-02		2.547E-02	4.038E-02	2.803E-03	-0.456
CO-58	2.005E-02		4.175E-02	7.215E-02	4.981E-03	0.278
FE-59	-7.812E-02		1.046E-01	1.557E-01	1.190E-02	-0.502
CO-60	5.877E-02		4.048E-02	7.869E-02	5.392E-03	0.747
ZN-65	1.559E-01		9.842E-02	1.698E-01	1.123E-02	0.918
GE-68	7.004E-02		1.438E+00	2.344E+00	1.637E-01	0.030
AS-73	1.389E+00		1.480E+00	2.605E+00	3.408E-01	0.533
AS-74	1.034E-01		1.006E-01	1.742E-01	9.195E-03	0.594
SE-75	2.858E-02		4.539E-02	7.111E-02	4.783E-03	0.402
BR-77	-3.109E+00		6.586E+00	1.017E+01	5.664E-01	-0.306
SR-82	-1.988E-01		3.958E-01	6.291E-01	4.015E-02	-0.316
RB-83	-2.004E-02		6.146E-02	9.635E-02	5.366E-03	-0.208
RB-84	-1.877E-02		6.982E-02	1.118E-01	8.901E-03	-0.168
KR-85	9.406E+00		7.963E+00	1.269E+01	7.089E-01	0.741
SR-85	4.759E-02		4.029E-02	6.421E-02	3.587E-03	0.741
RB-86	-2.122E-01		8.750E-01	1.383E+00	9.668E-02	-0.153
Y-88	-6.665E-03		2.473E-02	3.653E-02	2.132E-03	-0.182
ZR-88	-1.405E-02		3.060E-02	4.891E-02	2.752E-03	-0.287
Y-91	7.853E+00		2.277E+01	3.773E+01	2.312E+00	0.208
NB-94	-4.604E-03		3.469E-02	5.753E-02	3.099E-03	-0.080
NB-95	1.883E-02		4.241E-02	7.321E-02	4.563E-03	0.257
NB-95M	1.141E-01		1.326E-01	1.979E-01	1.624E-02	0.576
ZR-95	-6.217E-04		7.347E-02	1.224E-01	8.913E-03	-0.005
NB-97	-1.564E-03		1.489E-02	Half-Life too short		
ZR-97	1.043E+00		2.930E-01	Half-Life too short		
MO-99	-9.020E+00		8.637E+00	1.286E+01	1.776E+00	-0.702
TC-99M	6.417E+08		5.779E+08	Half-Life too short		
RH-101	-1.684E-02		3.388E-02	5.253E-02	3.421E-03	-0.321
RH-102	1.428E-02		3.010E-02	5.088E-02	2.877E-03	0.281
RU-103	1.027E-02		3.723E-02	6.199E-02	7.789E-03	0.166

Sample ID : G1201871424 Acquisition date : 7-JUL-2009 08:27:26

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-106	-1.365E-01		3.474E-01	5.347E-01	6.108E-02	-0.255
RU-106	-1.365E-01		3.471E-01	5.347E-01	2.747E-02	-0.255
AG-108M	-1.465E-02		3.323E-02	5.267E-02	3.254E-03	-0.278
AG-110M	3.981E-04		3.714E-02	6.259E-02	3.344E-03	0.006
IN-111	9.929E-02		8.360E-01	1.186E+00	7.912E-02	0.084
IN-113M	-3.336E-03		4.356E-02	7.160E-02	4.314E-03	-0.047
SN-113	-3.336E-03		4.356E-02	7.160E-02	4.314E-03	-0.047
IN-114M	2.476E-01		1.879E-01	2.931E-01	1.897E-02	0.845
CD-115	3.338E+00		7.313E+00	1.231E+01	6.828E-01	0.271
SN-117M	-2.062E-02		5.072E-02	8.056E-02	5.153E-03	-0.256
SB-122	-1.204E+00		1.482E+00	2.185E+00	1.185E-01	-0.551
I-123	-4.323E-01		5.675E-01	Half-Life too short		
TE-123M	-1.052E-02		2.763E-02	4.393E-02	2.840E-03	-0.240
I-124	-2.930E-01		6.719E-01	8.896E-01	4.665E-02	-0.329
SB-124	-3.463E-02		7.337E-02	1.069E-01	7.263E-03	-0.324
SB-125	-2.565E-02		9.307E-02	1.497E-01	8.862E-03	-0.171
TE-125M	1.877E+00		9.140E+00	1.477E+01	1.465E+00	0.127
I-126	2.280E-02		1.732E-01	2.945E-01	1.453E-02	0.077
SB-126	2.155E-02		1.577E-01	2.332E-01	1.311E-02	0.092
SB-127	-6.028E-01		1.015E+00	1.608E+00	1.383E-01	-0.375
XE-127	-1.486E-02		4.550E-02	7.146E-02	4.671E-03	-0.208
I-131	-4.317E-03		1.023E-01	1.694E-01	1.125E-02	-0.025
TE-132	2.277E-01		5.232E-01	8.509E-01	1.232E-01	0.268
BA-133	-1.057E-02		4.600E-02	6.572E-02	7.698E-03	-0.161
I-133	-2.424E-04		1.206E-03	Half-Life too short		
CS-134	5.289E-02		4.697E-02	8.536E-02	5.753E-03	0.620
I-135	1.501E+08		1.338E+08	Half-Life too short		
CS-136	-1.198E-02		1.175E-01	1.889E-01	1.451E-02	-0.063
BA-137M	-1.774E-02		3.943E-02	6.598E-02	3.218E-03	-0.269
CS-137	-1.876E-02		4.168E-02	6.975E-02	3.422E-03	-0.269
CE-139	-5.650E-03		2.663E-02	4.257E-02	2.705E-03	-0.133
BA-140	-1.283E-01		2.479E-01	3.762E-01	1.222E-01	-0.341
LA-140	-2.800E-02		8.565E-02	1.091E-01	7.186E-03	-0.257
CE-141	4.700E-02		5.817E-02	9.830E-02	6.599E-03	0.478
CE-143	3.200E-04		5.654E-05	Half-Life too short		
CE-144	-1.493E-01		2.009E-01	3.150E-01	4.592E-02	-0.474
PM-144	1.980E-02		3.525E-02	6.170E-02	3.278E-03	0.321
PR-144	1.341E+00		2.387E+00	4.178E+00	2.218E-01	0.321
PM-146	2.899E-02		4.519E-02	7.734E-02	6.602E-03	0.375
ND-147	9.398E-02		5.687E-01	8.956E-01	1.201E-01	0.105
PM-149	3.726E+01		5.744E+01	9.999E+01	1.453E+01	0.373
EU-152	-5.044E-02		9.688E-02	1.500E-01	1.038E-02	-0.336
GD-153	4.342E-02		8.064E-02	1.312E-01	1.287E-02	0.331
EU-154	4.847E-02		1.447E-01	2.496E-01	2.449E-02	0.194
EU-155	6.015E-02		1.069E-01	1.812E-01	1.579E-02	0.332
TB-160	-2.923E-04		1.403E-01	2.312E-01	1.834E-02	-0.001
HO-166M	-5.120E-02		6.446E-02	1.007E-01	5.541E-03	-0.509
TM-171	-1.839E+01		3.376E+01	5.504E+01	6.435E+00	-0.334

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-176	-1.368E-02		2.491E-02	3.710E-02	2.422E-03	-0.369
LU-177	1.694E+00	+	1.351E+00	1.684E+00	1.105E-01	1.006
LU-177M	-6.420E-03		1.743E-01	2.862E-01	1.619E-02	-0.022
HF-181	5.423E-03		4.400E-02	7.237E-02	4.086E-03	0.075
W-181	-1.752E-01		4.627E-01	7.622E-01	8.984E-02	-0.230
TA-182	-1.710E-01		2.274E-01	3.573E-01	2.223E-02	-0.479
RE-183	2.951E-02		1.005E-01	1.653E-01	1.053E-02	0.179
RE-184	-1.190E-01		2.235E-01	3.683E-01	2.460E-02	-0.323
OS-185	4.902E-03		4.413E-02	7.506E-02	3.742E-03	0.065
RE-188	2.068E-01		1.605E-01	2.762E-01	1.774E-02	0.749
W-188	1.071E+00		7.552E+00	1.134E+01	7.496E-01	0.094
IR-192	-2.132E-02		3.120E-02	4.981E-02	3.234E-03	-0.428
AU-195	1.288E-01		2.228E-01	3.787E-01	3.621E-02	0.340
TL-200	-1.387E-05		9.750E-05	Half-Life too short		
TL-201	3.478E+00		4.661E+00	7.840E+00	4.984E-01	0.444
TL-202	1.999E-02		6.429E-02	1.079E-01	6.121E-03	0.185
HG-203	4.779E-02		4.245E-02	6.840E-02	4.762E-03	0.699
BI-207	-8.746E-03		6.033E-02	9.644E-02	6.859E-03	-0.091
TL-207	-6.717E-01		6.506E-01	1.001E+00	1.675E-01	-0.671
PO-209	1.297E+00		7.254E+00	1.217E+01	9.985E-01	0.107
BI-210	-6.088E+00		9.384E+00	1.529E+01	1.333E+00	-0.398
PB-210	-6.088E+00		9.384E+00	1.529E+01	1.333E+00	-0.398
PO-210	-6.088E+00		9.381E+00	1.529E+01	1.188E+00	-0.398
PB-211	-1.887E-01		9.429E-01	1.521E+00	9.477E-01	-0.124
BI-212	6.645E-01	+	5.843E-01	6.735E-01	5.148E-02	0.987
BI-214	1.002E+00	+	1.673E-01	2.757E-01	2.026E-02	3.634
PO-215	-6.717E-01		6.506E-01	1.001E+00	1.675E-01	-0.671
RN-219	1.746E-01		4.046E-01	6.867E-01	9.298E-02	0.254
RN-220	1.117E+01		2.621E+01	4.390E+01	2.405E+00	0.254
RA-223	-6.717E-01		6.506E-01	1.001E+00	1.675E-01	-0.671
RA-226	1.002E+00	+	1.673E-01	2.757E-01	2.026E-02	3.634
AC-227	3.426E-01		3.662E-01	6.452E-01	9.258E-02	0.531
TH-227	3.426E-01		3.677E-01	6.452E-01	1.111E-01	0.531
TH-229	-5.977E-01		4.944E-01	7.360E-01	4.776E-02	-0.812
TH-230	1.002E+00	+	1.673E-01	2.757E-01	2.026E-02	3.634
PA-231	-9.027E-01		1.430E+00	2.309E+00	3.268E-01	-0.391
TH-231	-6.717E-01		6.506E-01	1.001E+00	1.675E-01	-0.671
U-231	-5.721E-01		9.355E-01	1.339E+00	1.354E-01	-0.427
PA-233	1.563E-02		6.272E-02	1.067E-01	7.275E-03	0.146
PA-234	-1.120E-03		3.381E-01	5.538E-01	1.023E-01	-0.002
PA-234M	9.086E+00		7.155E+00	1.300E+01	1.356E+00	0.699
TH-234	5.417E-01		1.734E+00	2.941E+00	5.819E-01	0.184
U-234	1.002E+00	+	1.673E-01	2.757E-01	2.026E-02	3.634
U-235	3.717E-02		2.039E-01	3.351E-01	5.555E-02	0.111
NP-236	8.572E-02		7.546E-02	1.290E-01	8.237E-03	0.664
U-238	5.417E-01		1.734E+00	2.941E+00	5.819E-01	0.184
NP-239	-2.203E-01		1.833E-01	2.828E-01	2.081E-02	-0.779
AM-241	1.091E-01		2.091E-01	3.619E-01	4.569E-02	0.301

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.053E-02		9.502E-02	1.566E-01	1.380E-02	-0.067
CM-247	-4.710E-03		3.607E-02	5.893E-02	3.326E-03	-0.080
CF-249	-1.547E-02		4.009E-02	6.372E-02	3.620E-03	-0.243
CF-251	-3.712E-02		1.232E-01	1.954E-01	1.250E-02	-0.190

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871424          *
* Acquisition date :  7-JUL-2009 08:27:26 Detector SN#    :                 *
* Detector ID      : GAM04                Sensitivity     : 5.000          *
* Geometry         : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.19     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 23-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID        : G1201871424          Analyst initials: MXR1           *
* Batch Number     : 881219               Sample Quantity : 1.1946E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  5-MAY-2009 14:25:41 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.740E+01	3.303E+00	2.082E-01	1.685E+00
CD-109	2.671E+00	1.122E+00	6.336E-01	5.723E-01
SN-126	2.630E-01	1.105E-01	6.287E-02	5.636E-02
CS-135	5.674E-01	2.808E-01	1.243E-01	1.433E-01
TL-208	4.443E-01	9.056E-02	3.164E-02	4.621E-02
BI-211	3.041E+00	4.984E-01	1.562E-01	2.543E-01
PB-212	1.458E+00	1.561E-01	4.731E-02	7.963E-02
PO-212	1.458E+00	1.561E-01	4.731E-02	7.963E-02
PB-214	1.058E+00	1.816E-01	5.443E-02	9.267E-02
PO-214	1.058E+00	1.816E-01	5.443E-02	9.267E-02
PO-216	1.458E+00	1.561E-01	4.731E-02	7.963E-02
PO-218	1.058E+00	1.816E-01	5.443E-02	9.267E-02
RA-224	4.179E+00	1.193E+00	5.385E-01	6.087E-01
AC-228	1.344E+00	3.419E-01	1.144E-01	1.744E-01
RA-228	1.344E+00	3.419E-01	1.144E-01	1.744E-01
TH-228	1.458E+00	1.561E-01	4.731E-02	7.963E-02
TH-232	1.344E+00	3.419E-01	1.144E-01	1.744E-01
NP-237	7.723E-01	3.600E-01	2.088E-01	1.837E-01
AM-243	3.909E-01	1.059E-01	5.041E-02	5.401E-02
ANH-511	1.455E-01	7.205E-02	2.419E-02	3.676E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-8.768E-02	3.281E-01	2.703E-01	1.674E-01	NOT IDENT.
NA-22	3.539E-04	5.184E-02	4.427E-02	2.645E-02	NOT IDENT.
NA-24	4.069E+04	1.810E+05	0.000E+00	9.236E+04	SHORT HLIF
AL-26	-1.486E-02	2.531E-02	1.729E-02	1.291E-02	NOT IDENT.
TI-44	3.294E-01	6.563E-02	4.055E-02	3.348E-02	FAIL ABUN
SC-46	-2.648E-03	4.201E-02	3.522E-02	2.143E-02	FAIL ABUN
V-48	-1.340E-02	7.183E-02	5.886E-02	3.665E-02	NOT IDENT.

CR-51	1.050E-01	3.204E-01	2.837E-01	1.635E-01	NOT IDENT.
MN-52	-9.802E-02	1.792E-01	1.365E-01	9.141E-02	NOT IDENT.
MN-54	2.022E-02	3.927E-02	3.473E-02	2.003E-02	NOT IDENT.
CO-56	2.258E-02	4.055E-02	3.606E-02	2.069E-02	NOT IDENT.
CO-57	-1.840E-02	2.496E-02	2.073E-02	1.273E-02	NOT IDENT.
CO-58	2.005E-02	4.091E-02	3.625E-02	2.087E-02	NOT IDENT.
FE-59	-7.812E-02	1.025E-01	7.794E-02	5.231E-02	NOT IDENT.
CO-60	5.877E-02	3.967E-02	3.931E-02	2.024E-02	NOT IDENT.
ZN-65	1.559E-01	9.645E-02	8.498E-02	4.921E-02	NOT IDENT.
GE-68	7.004E-02	1.410E+00	1.174E+00	7.192E-01	NOT IDENT.
AS-73	1.389E+00	1.450E+00	1.350E+00	7.399E-01	NOT IDENT.
AS-74	1.034E-01	9.855E-02	8.782E-02	5.028E-02	NOT IDENT.
SE-75	2.858E-02	4.449E-02	3.619E-02	2.270E-02	NOT IDENT.
BR-77	-3.109E+00	6.454E+00	5.137E+00	3.293E+00	FAIL ABUN
SR-82	-1.988E-01	3.879E-01	3.163E-01	1.979E-01	NOT IDENT.
RB-83	-2.004E-02	6.023E-02	4.866E-02	3.073E-02	NOT IDENT.
RB-84	-1.877E-02	6.842E-02	5.610E-02	3.491E-02	NOT IDENT.
KR-85	9.406E+00	7.804E+00	6.411E+00	3.981E+00	NOT IDENT.
SR-85	4.759E-02	3.948E-02	3.244E-02	2.014E-02	NOT IDENT.
RB-86	-2.122E-01	8.575E-01	6.925E-01	4.375E-01	NOT IDENT.
Y-88	-6.665E-03	2.423E-02	1.818E-02	1.236E-02	NOT IDENT.
ZR-88	-1.405E-02	2.999E-02	2.478E-02	1.530E-02	NOT IDENT.
Y-91	7.853E+00	2.232E+01	1.887E+01	1.139E+01	NOT IDENT.
NB-94	-4.604E-03	3.400E-02	2.895E-02	1.735E-02	NOT IDENT.
NB-95	1.883E-02	4.156E-02	3.681E-02	2.121E-02	NOT IDENT.
NB-95M	1.141E-01	1.300E-01	1.009E-01	6.631E-02	NOT IDENT.
ZR-95	-6.217E-04	7.201E-02	6.155E-02	3.674E-02	NOT IDENT.
NB-97	-1.564E+03	2.918E+04	0.000E+00	1.489E+04	SHORT HLIF
ZR-97	1.043E+06	5.742E+05	0.000E+00	2.930E+05	SHORT HLIF
MO-99	-9.020E+00	8.464E+00	6.467E+00	4.319E+00	NOT IDENT.
TC-99M	6.417E+14	1.133E+15	0.000E+00	5.779E+14	SHORT HLIF
RH-101	-1.684E-02	3.320E-02	2.682E-02	1.694E-02	NOT IDENT.
RH-102	1.428E-02	2.950E-02	2.573E-02	1.505E-02	NOT IDENT.
RU-103	1.027E-02	3.649E-02	3.133E-02	1.862E-02	FAIL ABUN
RH-106	-1.365E-01	3.404E-01	2.695E-01	1.737E-01	NOT IDENT.
RU-106	-1.365E-01	3.401E-01	2.695E-01	1.735E-01	NOT IDENT.
AG-108M	-1.465E-02	3.256E-02	2.666E-02	1.661E-02	NOT IDENT.
AG-110M	3.981E-04	3.640E-02	3.153E-02	1.857E-02	NOT IDENT.
IN-111	9.929E-02	8.193E-01	6.041E-01	4.180E-01	NOT IDENT.
IN-113M	-3.336E-03	4.269E-02	3.628E-02	2.178E-02	NOT IDENT.
SN-113	-3.336E-03	4.269E-02	3.628E-02	2.178E-02	NOT IDENT.
IN-114M	2.476E-01	1.842E-01	1.497E-01	9.397E-02	NOT IDENT.
CD-115	3.338E+00	7.166E+00	6.214E+00	3.656E+00	NOT IDENT.
SN-117M	-2.062E-02	4.971E-02	4.124E-02	2.536E-02	NOT IDENT.
SB-122	-1.204E+00	1.452E+00	1.102E+00	7.409E-01	NOT IDENT.
I-123	-4.323E+05	1.112E+06	0.000E+00	5.675E+05	SHORT HLIF
TE-123M	-1.052E-02	2.708E-02	2.249E-02	1.382E-02	NOT IDENT.
I-124	-2.930E-01	6.585E-01	4.485E-01	3.360E-01	NOT IDENT.
SB-124	-3.463E-02	7.190E-02	5.324E-02	3.668E-02	FAIL ABUN
SB-125	-2.565E-02	9.121E-02	7.578E-02	4.653E-02	FAIL ABUN
TE-125M	1.877E+00	8.957E+00	7.594E+00	4.570E+00	NOT IDENT.
I-126	2.280E-02	1.698E-01	1.483E-01	8.662E-02	NOT IDENT.
SB-126	2.155E-02	1.545E-01	1.174E-01	7.883E-02	NOT IDENT.
SB-127	-6.028E-01	9.949E-01	8.096E-01	5.076E-01	NOT IDENT.
XE-127	-1.486E-02	4.459E-02	3.648E-02	2.275E-02	NOT IDENT.
I-131	-4.317E-03	1.003E-01	8.588E-02	5.115E-02	NOT IDENT.
TE-132	2.277E-01	5.127E-01	4.338E-01	2.616E-01	NOT IDENT.
BA-133	-1.057E-02	4.508E-02	3.334E-02	2.300E-02	FAIL ABUN
I-133	-2.424E+02	2.364E+03	0.000E+00	1.206E+03	SHORT HLIF
CS-134	5.289E-02	4.603E-02	4.290E-02	2.348E-02	NOT IDENT.
I-135	1.501E+14	2.622E+14	0.000E+00	1.338E+14	SHORT HLIF
CS-136	-1.198E-02	1.151E-01	9.465E-02	5.875E-02	FAIL ABUN
BA-137M	-1.774E-02	3.864E-02	3.323E-02	1.971E-02	NOT IDENT.
CS-137	-1.876E-02	4.084E-02	3.513E-02	2.084E-02	NOT IDENT.
CE-139	-5.650E-03	2.610E-02	2.178E-02	1.331E-02	NOT IDENT.
BA-140	-1.283E-01	2.430E-01	1.899E-01	1.240E-01	NOT IDENT.
LA-140	-2.800E-02	8.394E-02	5.439E-02	4.283E-02	NOT IDENT.
CE-141	4.700E-02	5.701E-02	5.037E-02	2.908E-02	NOT IDENT.
CE-143	3.200E+02	1.108E+02	0.000E+00	5.654E+01	SHORT HLIF
CE-144	-1.493E-01	1.969E-01	1.616E-01	1.004E-01	NOT IDENT.
PM-144	1.980E-02	3.454E-02	3.106E-02	1.762E-02	NOT IDENT.
PR-144	1.341E+00	2.339E+00	2.103E+00	1.193E+00	NOT IDENT.
PM-146	2.899E-02	4.428E-02	3.912E-02	2.259E-02	NOT IDENT.
ND-147	9.398E-02	5.574E-01	4.522E-01	2.844E-01	FAIL ABUN
PM-149	3.726E+01	5.629E+01	5.085E+01	2.872E+01	NOT IDENT.
EU-152	-5.044E-02	9.494E-02	7.612E-02	4.844E-02	FAIL ABUN
GD-153	4.342E-02	7.903E-02	6.751E-02	4.032E-02	NOT IDENT.
EU-154	4.847E-02	1.418E-01	1.248E-01	7.236E-02	NOT IDENT.

EU-155	6.015E-02	1.048E-01	9.318E-02	5.346E-02	FAIL ABUN
TB-160	-2.923E-04	1.375E-01	1.161E-01	7.017E-02	FAIL ABUN
HO-166M	-5.120E-02	6.317E-02	5.066E-02	3.223E-02	FAIL ABUN
TM-171	-1.839E+01	3.309E+01	2.845E+01	1.688E+01	NOT IDENT.
LU-176	-1.368E-02	2.441E-02	1.885E-02	1.245E-02	FAIL ABUN
LU-177	1.694E+00	1.324E+00	8.593E-01	6.753E-01	FAIL ABUN
LU-177M	-6.420E-03	1.708E-01	1.449E-01	8.714E-02	FAIL ABUN
HF-181	5.423E-03	4.312E-02	3.658E-02	2.200E-02	NOT IDENT.
W-181	-1.752E-01	4.535E-01	3.941E-01	2.314E-01	NOT IDENT.
TA-182	-1.710E-01	2.228E-01	1.787E-01	1.137E-01	NOT IDENT.
RE-183	2.951E-02	9.848E-02	8.458E-02	5.024E-02	FAIL ABUN
RE-184	-1.190E-01	2.190E-01	1.876E-01	1.117E-01	NOT IDENT.
OS-185	4.902E-03	4.325E-02	3.781E-02	2.207E-02	NOT IDENT.
RE-188	2.068E-01	1.573E-01	1.415E-01	8.026E-02	NOT IDENT.
W-188	1.071E+00	7.401E+00	5.767E+00	3.776E+00	NOT IDENT.
IR-192	-2.132E-02	3.058E-02	2.530E-02	1.560E-02	FAIL ABUN
AU-195	1.288E-01	2.184E-01	1.949E-01	1.114E-01	FAIL ABUN
TL-200	-1.387E+01	1.911E+02	0.000E+00	9.750E+01	SHORT HLIF
TL-201	3.478E+00	4.568E+00	4.011E+00	2.330E+00	NOT IDENT.
TL-202	1.999E-02	6.300E-02	5.460E-02	3.214E-02	NOT IDENT.
HG-203	4.779E-02	4.160E-02	3.479E-02	2.123E-02	NOT IDENT.
BI-207	-8.746E-03	5.912E-02	4.830E-02	3.016E-02	FAIL ABUN
TL-207	-6.717E-01	6.376E-01	5.082E-01	3.253E-01	FAIL ABUN
PO-209	1.297E+00	7.109E+00	6.106E+00	3.627E+00	NOT IDENT.
BI-210	-6.088E+00	9.196E+00	7.935E+00	4.692E+00	NOT IDENT.
PB-210	-6.088E+00	9.196E+00	7.935E+00	4.692E+00	NOT IDENT.
PO-210	-6.088E+00	9.193E+00	7.935E+00	4.690E+00	NOT IDENT.
PB-211	-1.887E-01	9.240E-01	7.702E-01	4.714E-01	NOT IDENT.
BI-212	6.645E-01	5.726E-01	3.388E-01	2.921E-01	FAIL ABUN
BI-214	1.002E+00	1.640E-01	1.390E-01	8.367E-02	FAIL ABUN
PO-215	-6.717E-01	6.376E-01	5.082E-01	3.253E-01	FAIL ABUN
RN-219	1.746E-01	3.965E-01	3.479E-01	2.023E-01	NOT IDENT.
RN-220	1.117E+01	2.568E+01	2.216E+01	1.310E+01	NOT IDENT.
RA-223	-6.717E-01	6.376E-01	5.082E-01	3.253E-01	FAIL ABUN
RA-226	1.002E+00	1.640E-01	1.390E-01	8.367E-02	FAIL ABUN
AC-227	3.426E-01	3.589E-01	3.285E-01	1.831E-01	FAIL ABUN
TH-227	3.426E-01	3.603E-01	3.285E-01	1.838E-01	FAIL ABUN
TH-229	-5.977E-01	4.845E-01	3.759E-01	2.472E-01	FAIL ABUN
TH-230	1.002E+00	1.640E-01	1.390E-01	8.367E-02	FAIL ABUN
PA-231	-9.027E-01	1.401E+00	1.175E+00	7.148E-01	FAIL ABUN
TH-231	-6.717E-01	6.376E-01	5.082E-01	3.253E-01	FAIL ABUN
U-231	-5.721E-01	9.168E-01	6.892E-01	4.678E-01	FAIL ABUN
PA-233	1.563E-02	6.146E-02	5.420E-02	3.136E-02	FAIL ABUN
PA-234	-1.120E-03	3.313E-01	2.778E-01	1.690E-01	FAIL ABUN
PA-234M	9.086E+00	7.012E+00	6.516E+00	3.578E+00	NOT IDENT.
TH-234	5.417E-01	1.700E+00	1.521E+00	8.671E-01	FAIL ABUN
U-234	1.002E+00	1.640E-01	1.390E-01	8.367E-02	FAIL ABUN
U-235	3.717E-02	1.998E-01	1.718E-01	1.020E-01	FAIL ABUN
NP-236	8.572E-02	7.395E-02	6.604E-02	3.773E-02	NOT IDENT.
U-238	5.417E-01	1.700E+00	1.521E+00	8.671E-01	FAIL ABUN
NP-239	-2.203E-01	1.796E-01	1.453E-01	9.166E-02	FAIL ABUN
AM-241	1.091E-01	2.049E-01	1.873E-01	1.045E-01	NOT IDENT.
CM-243	-1.053E-02	9.312E-02	8.053E-02	4.751E-02	FAIL ABUN
CM-247	-4.710E-03	3.534E-02	2.985E-02	1.803E-02	FAIL ABUN
CF-249	-1.547E-02	3.929E-02	3.229E-02	2.005E-02	NOT IDENT.
CF-251	-3.712E-02	1.207E-01	9.990E-02	6.159E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	191.1772
46.50	191.1772
46.50	191.1772
48.70	167.5112
49.72	161.9751
51.35	191.2910
52.39	201.3964
52.97	195.6333
53.15	175.7226
53.44	163.6738
54.07	163.9559
56.28	187.7398
56.28	187.7414
57.37	0.0000
57.53	194.5210
57.53	194.5221
57.60	196.3177
57.98	203.5616
57.98	203.5616
59.32	174.2016
59.32	174.2016
59.40	174.2372
59.54	175.1841
59.72	176.1498
60.01	192.2248
61.10	227.3978
61.14	227.4206
61.30	227.5124
63.00	229.3674
63.29	225.9587
63.29	225.9587
63.58	212.7132
64.28	211.2858
65.12	246.7028
65.20	246.7504
65.20	246.7504
66.05	249.9509
66.72	235.9397
66.83	236.0023
66.91	235.1467
67.20	233.5042
67.20	233.5042
67.75	237.4181
67.85	237.4742
68.90	243.4871
68.90	243.4871
69.30	241.9008
69.67	237.2134
70.82	234.5644
70.82	234.5644
70.83	234.5697
72.80	260.2744
72.87	260.3150
72.87	260.3150
74.67	254.9366
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74.81	255.0157
74.81	255.0157
74.81	255.0157
74.81	255.0157
74.81	255.0157
74.97	255.1048
75.28	255.2787
75.70	255.5135
77.11	256.2954
77.11	256.2954
77.11	256.2954

77.11	256.2954
77.11	256.2954
77.11	256.2954
78.38	234.3452
79.62	226.6209
79.80	226.7067
79.80	226.7067
80.11	224.0712
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80.30	224.1596
80.30	224.1596
80.57	232.6459
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81.07	251.0170
81.07	251.0170
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83.78	213.1574
83.78	213.1574
83.78	213.1574
84.21	258.2587
84.40	258.3583
84.90	255.8098
85.43	264.5242
86.29	298.8092
86.50	298.9337
86.54	298.9580
86.59	298.9871
86.72	303.2968
86.79	303.3378
86.94	303.4297
87.30	303.6478
87.30	303.6478
87.30	303.6478
87.30	303.6478
87.30	303.6478
87.30	303.6478
87.57	243.0482
87.88	243.1964
88.03	243.2686
88.36	243.4274
88.47	243.4799
89.95	332.2046
91.11	219.1215
92.29	219.6185
92.38	219.6561
92.38	219.6561
93.35	220.0614
94.00	231.7787
94.67	230.6354
94.67	230.6379
94.90	240.7694
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94.90	240.7694
94.90	240.7694
95.87	245.5137
95.87	245.5137
96.73	250.2206
97.43	218.8653
98.44	208.6923
98.44	208.6923
98.88	221.3724
99.55	219.7153
99.55	219.7153
99.86	221.7667
100.00	221.8228
100.10	221.8649
103.18	237.6378
103.76	229.1436
105.00	198.5049
105.31	221.9790
108.00	245.5117
109.28	217.6212
111.00	220.2231
111.00	220.2231

111.76	226.4098
112.95	206.1479
115.19	206.9122
116.30	223.1575
117.00	241.2845
117.00	241.2845
117.66	262.4169
121.11	223.8906
121.62	237.0759
121.78	250.1424
122.06	250.2531
122.32	250.3560
122.32	250.3560
122.32	250.3560
122.32	250.3560
123.07	249.6484
127.23	239.1547
129.76	230.9618
131.20	264.9640
133.02	244.3066
133.54	245.5158
135.34	195.0957
136.00	210.6207
136.25	215.8122
136.48	217.9304
140.51	210.9704
140.51	0.0000
142.18	250.6729
142.65	243.6127
143.76	229.5201
144.24	230.7106
144.24	230.7106
144.24	230.7106
144.24	230.7106
145.22	199.9481
145.44	204.1542
147.16	239.9623
152.43	233.3261
152.70	245.9726
153.22	228.3385
154.21	184.5902
154.21	184.5902
154.21	184.5902
154.21	184.5902
155.03	183.7443
156.02	206.0648
158.56	227.8542
159.00	0.0000
159.00	223.7641
160.31	178.6840
161.27	183.1420
162.32	187.6304
162.64	189.8288
163.35	184.6962
163.89	212.4410
165.85	183.1577
167.43	158.9840
171.28	183.3400
171.86	188.8369
172.10	188.8924
176.55	205.0351
176.60	205.0486
181.06	201.8141
184.41	200.9842
185.71	206.2016
186.00	206.2708
190.27	159.5861
192.34	202.2944
193.63	213.6025
197.04	206.6903
198.01	202.4907
198.60	210.3734
200.40	170.8563
201.83	207.7974
202.84	203.5797
205.31	185.7255
208.36	179.6270
208.81	178.0339

209.75	188.3027
209.75	188.3027
210.97	208.7505
215.65	195.1266
216.55	206.6010
218.09	204.6745
222.10	190.7654
223.80	184.2737
226.40	181.3432
227.00	191.7241
227.08	184.8917
227.20	184.9147
228.16	159.9581
228.18	159.9609
228.18	159.9609
231.56	0.0000
235.69	157.1366
236.00	183.0933
236.00	183.0933
238.60	187.0258
238.63	187.0307
238.63	187.0307
238.63	187.0307
239.00	187.0983
240.98	187.4592
241.98	187.6421
241.98	187.6421
241.98	187.6421
244.69	128.9061
245.39	139.4507
247.94	170.0794
248.90	155.0760
249.79	131.2843
252.40	156.1737
252.85	162.3845
252.85	162.3845
254.15	0.0000
256.20	131.1940
256.20	131.1940
260.50	144.0924
260.90	144.1447
262.80	138.1948
264.65	122.0986
268.24	140.6561
268.79	140.7260
269.46	140.8104
269.46	140.8104
269.46	140.8104
269.46	140.8104
271.23	145.6737
273.65	118.0781
276.40	143.4717
277.35	160.6428
277.60	140.7506
277.60	140.7506
278.00	123.5578
278.60	120.7479
279.20	119.3733
279.53	110.7758
280.46	112.3059
281.68	148.2514
283.67	135.3561
284.30	120.9856
285.00	113.8299
285.90	113.0142
286.10	121.1717
286.10	121.1717
287.40	128.5488
288.45	0.0000
290.67	122.0071
290.80	122.0194
291.72	126.4750
293.26	0.0000
293.70	113.7638
295.21	113.9069
295.21	113.9069
295.21	113.9069
295.96	113.9793

296.50	114.0289
297.23	114.0995
298.57	114.2254
299.80	114.3417
299.80	114.3417
300.09	114.3703
300.09	114.3703
300.09	114.3703
300.10	114.3703
300.12	114.3723
301.29	114.4829
302.84	93.9031
303.76	99.8484
303.91	108.6712
304.40	105.7764
304.40	105.7764
304.84	105.8150
306.84	121.4438
308.46	116.9967
311.98	117.3281
316.51	114.0456
318.01	102.1129
319.02	93.8322
319.41	94.7908
320.08	97.6300
323.87	137.0880
323.87	137.0880
323.87	137.0880
323.87	137.0880
325.23	148.4366
328.77	144.1635
333.44	142.8015
334.20	160.9336
334.20	160.9336
334.30	160.9441
338.28	120.6953
338.28	120.6953
338.28	120.6953
338.28	120.6953
338.32	120.6992
338.32	120.6992
338.32	120.6992
340.50	102.7637
340.57	102.7687
344.27	115.8259
345.85	91.0356
350.59	0.0000
351.07	98.0509
351.92	98.1122
351.92	98.1122
351.92	98.1122
355.39	0.0000
356.01	100.8885
364.48	101.8901
366.43	97.2180
367.43	100.1771
367.94	0.0000
369.80	93.5913
374.96	101.6771
383.85	98.4078
387.95	98.6837
388.63	92.8633
391.69	97.9538
391.69	97.9538
392.90	106.8561
398.62	100.3782
400.65	93.6156
401.10	81.8146
401.81	88.7572
402.60	95.7094
404.84	102.7686
410.95	99.2111
411.60	111.1643
413.65	95.4097
414.70	94.4810
415.30	87.5529
415.76	82.6023
417.63	0.0000

418.52	103.6858
423.70	109.0316
427.08	93.2256
427.89	94.2768
432.53	77.4523
433.93	94.6340
439.47	80.8167
439.56	80.8215
439.89	104.0797
443.98	73.9501
444.90	66.8973
445.03	66.9023
445.03	66.9023
445.03	66.9023
445.03	66.9023
453.90	80.5128
463.38	68.6705
468.07	87.1563
473.00	93.7993
475.06	77.3998
475.35	76.3802
476.78	88.8397
477.59	90.9487
477.96	92.0026
482.03	83.9292
484.57	87.1646
487.03	75.8571
490.36	0.0000
492.35	72.9597
497.08	61.6585
507.63	0.0000
510.53	0.0000
510.84	80.0339
511.00	80.0414
511.85	80.0786
511.85	80.0786
513.99	69.2015
513.99	69.2015
520.41	60.3398
520.65	63.5248
527.90	63.7720
528.96	0.0000
529.64	63.8324
529.87	0.0000
531.02	68.1367
537.32	75.8427
543.00	64.2847
546.56	0.0000
549.76	62.3613
552.65	59.2247
555.20	70.0841
563.23	69.2910
563.90	72.5636
568.70	48.8548
569.32	54.3015
569.50	61.9089
569.67	65.1727
573.80	85.9892
574.00	80.5558
574.64	66.4246
578.91	82.0618
579.30	0.0000
583.14	78.7346
585.48	92.8406
591.81	105.4307
592.07	106.5407
593.00	91.2068
595.88	72.6266
600.56	77.2034
602.52	0.0000
602.71	86.5587
602.71	86.5587
603.60	98.9680
604.41	102.5422
604.70	88.4106
609.31	83.2896
609.31	83.2896
609.31	83.2896

609.31	83.2896
610.33	62.0549
612.46	70.9922
614.37	74.6095
618.01	67.8431
621.84	75.7633
621.84	75.7633
631.29	57.0746
633.02	73.9217
633.10	73.9237
634.78	78.4659
635.90	86.3571
636.97	59.4697
645.85	65.7962
646.12	67.6080
656.30	64.2987
657.75	74.3085
657.90	0.0000
661.65	68.9919
661.65	68.9919
664.57	0.0000
666.33	68.2269
666.33	68.2269
675.00	60.2717
677.61	54.8555
685.20	59.6235
692.80	69.9437
695.00	66.3258
696.49	61.7599
696.49	61.7599
697.00	70.0718
697.49	74.6976
698.33	73.8008
698.50	76.5744
699.00	71.9767
702.63	71.1648
706.10	61.0887
706.58	0.0000
706.67	58.3258
709.31	65.8067
711.68	77.9338
713.82	52.0023
717.42	63.2420
720.50	62.0817
721.93	0.0000
722.20	63.6788
722.78	66.8026
722.78	66.8026
722.89	66.8043
722.95	66.8061
723.30	71.4782
724.18	63.7322
727.18	64.4348
733.00	68.6462
735.90	52.4836
739.58	68.5195
742.81	52.6326
744.21	45.1395
747.13	65.9070
751.79	66.9750
752.31	60.3844
753.82	53.8118
755.35	68.0150
756.15	61.4231
756.87	59.5501
763.93	80.5736
765.79	59.7639
766.41	61.6754
766.84	70.2277
768.36	73.1180
768.36	73.1180
768.36	73.1180
768.36	73.1180
776.49	68.5916
778.00	55.2869
778.57	53.3928
778.89	52.4460
783.80	48.7252

785.46	61.1844
792.07	63.2591
795.84	45.1147
796.30	45.1228
801.93	50.9931
805.60	60.6998
810.29	54.0518
810.76	52.1306
815.85	60.9374
817.79	41.6227
818.51	42.6024
819.60	45.5255
826.30	51.4667
828.27	0.0000
831.60	78.8128
831.96	67.1453
834.83	56.5019
836.80	0.0000
846.75	47.9449
848.13	50.9069
856.28	0.0000
856.80	57.2880
860.37	50.8064
867.32	51.2637
867.82	50.2865
871.10	44.4232
873.19	40.5045
874.81	41.5160
875.33	0.0000
876.40	41.5396
879.36	45.5440
880.27	41.5970
880.51	41.6011
881.50	48.5514
883.24	50.5642
884.67	39.6787
889.25	53.6533
896.60	39.8457
898.02	45.8461
899.00	53.8378
903.28	39.9395
911.07	51.0610
911.07	51.0610
911.07	51.0610
919.63	48.1992
920.93	43.1974
925.00	40.2402
925.24	40.2432
926.50	43.2803
934.06	37.3369
934.06	37.3369
934.06	37.3369
934.06	37.3369
935.52	50.4810
937.48	61.6270
944.10	55.6902
946.00	52.6855
949.00	53.7531
962.29	52.6329
964.01	53.0029
966.15	53.0397
968.20	47.6328
969.11	40.8398
969.11	40.8398
969.11	40.8398
977.42	35.8323
980.50	42.0180
983.50	49.2398
989.30	42.1381
996.32	60.7746
1001.03	37.1391
1001.68	33.0195
1004.76	65.0718
1021.30	0.0000
1024.50	0.0000
1034.80	57.3499
1037.82	43.8354
1038.57	43.8457

1038.76	0.0000
1045.16	47.0742
1046.59	47.0940
1048.07	53.3981
1050.47	61.8204
1050.47	61.8204
1063.62	52.6025
1076.63	53.8663
1077.35	50.7094
1085.78	44.4835
1099.22	60.6126
1112.02	55.1481
1112.84	55.1632
1115.52	26.7126
1120.29	39.5889
1120.29	39.5889
1120.29	39.5889
1120.29	39.5889
1120.51	39.5925
1121.28	39.6016
1124.00	0.0000
1129.67	43.9889
1131.51	0.0000
1147.95	0.0000
1167.94	67.2524
1173.22	57.5754
1175.09	66.3018
1177.93	58.7408
1189.05	56.7404
1204.90	61.3730
1205.75	0.0000
1213.00	75.7888
1221.42	75.2301
1230.97	91.9840
1235.34	79.1973
1236.41	0.0000
1238.11	72.8056
1238.11	72.8056
1238.11	72.8056
1238.11	72.8056
1238.25	72.8088
1246.25	68.3482
1260.41	0.0000
1271.85	50.2141
1274.45	46.5271
1274.54	52.1104
1291.56	42.9958
1298.22	0.0000
1312.09	28.1897
1325.50	39.6006
1325.50	39.6006
1332.49	17.0021
1333.61	23.6206
1360.21	23.7783
1362.66	0.0000
1365.15	27.6170
1368.21	20.0139
1368.53	0.0000
1376.25	18.1434
1377.67	16.2398
1377.67	16.2398
1377.67	16.2398
1377.67	16.2398
1384.27	18.1797
1394.10	23.9777
1395.20	29.7411
1407.95	17.3225
1434.06	19.3677
1436.60	17.4412
1457.56	0.0000
1460.81	10.7198
1489.15	11.7715
1509.49	12.8117
1596.49	15.5027
1620.62	9.0905
1678.03	0.0000
1691.02	13.3269
1691.02	13.3269

1706.46	0.0000
1750.46	0.0000
1764.49	10.7030
1764.49	10.7030
1764.49	10.7030
1764.49	10.7030
1770.23	12.5010
1771.40	10.4199
1791.20	0.0000
1808.65	9.4468
1836.01	6.3315

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871424

Total Uranium Activity	1.6286E+00	ug/g
Total Uranium Counting Unc.	5.0571E+00	ug/g
Total Uranium Tpu	2.5801E-06	ug/g
Total Uranium Mda	4.5262E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G1201871424      *
*   ANALYST       : MXR1                      DETECTOR   : GAM04            *
*   SAMPLE DATE   : 23-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:27:26.76    SAMPLE ALQT:  119.460 GRAM    *
*                                                                           *
*****************************************************************************


         GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.355E+00
         GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.347E+00
         GROSS GAMMA MDA    (pCi/GRAM  )   : 2.402E+00
         GROSS GAMMA DLC    (pCi/GRAM  )   : 1.152E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:19:45.58

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871425.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:19:11.
Sample ID         : G1201871425          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.96  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	7	49.57	404	1153	1.91	100.31	96	35	1.12E-01	15.2	1.68E+01
2	7	51.67	300	1493	1.99	104.50	96	35	8.34E-02	26.2	
3	7	53.59*	396	1581	2.20	108.35	96	35	1.10E-01	21.2	
4	7	59.45	9289	767	1.29	120.07	96	35	2.58E+00	1.2	
5	1	74.80*	314	607	1.36	150.75	146	15	8.71E-02	15.3	2.46E+00
6	1	77.05*	488	547	1.13	155.25	146	15	1.36E-01	9.3	
7	0	88.02	3200	755	1.25	177.17	172	12	8.89E-01	2.5	
8	0	93.56*	210	508	1.63	188.27	184	12	5.84E-02	23.2	
9	0	122.14	488	315	1.24	245.40	241	9	1.35E-01	8.0	
10	0	136.04	102	345	1.28	273.18	268	10	2.83E-02	35.5	
11	0	186.14*	196	394	3.05	373.34	368	13	5.45E-02	22.2	
12	0	209.04	69	255	0.94	419.11	414	8	1.91E-02	42.1	
13	0	238.61*	622	360	1.18	478.23	474	10	1.73E-01	7.0	
14	0	295.22	203	231	1.25	591.38	585	12	5.64E-02	16.5	
15	0	338.26*	127	187	1.57	677.40	673	10	3.53E-02	22.2	
16	0	351.73*	245	325	1.41	704.32	699	14	6.81E-02	16.9	
17	0	510.31*	38	192	0.93	1021.28	1015	12	1.06E-02	78.9	
18	0	583.20*	190	119	1.91	1166.95	1159	14	5.29E-02	14.2	
19	0	609.29*	233	145	1.98	1219.08	1211	19	6.47E-02	14.0	
20	0	661.51	2234	141	1.73	1323.44	1317	15	6.20E-01	2.4	
21	0	860.66	32	77	1.43	1721.36	1716	10	8.95E-03	54.0	
22	0	910.94*	119	134	2.01	1821.81	1816	12	3.31E-02	21.6	
23	0	968.46	121	176	1.54	1936.73	1928	16	3.35E-02	26.6	
24	0	1172.88	1824	77	1.93	2345.08	2334	21	5.07E-01	2.6	
25	0	1332.23	1624	32	2.00	2663.35	2656	17	4.51E-01	2.6	
26	0	1764.43*	29	11	1.79	3526.42	3518	15	8.08E-03	32.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 09:19:48

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871425.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:19:11
Sample ID : G1201871425 Sample quantity : 151.73 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.96 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	4.065E-01	8.695E-02	6.862E-02	9.736E-03	5.924
	+	136.48		7.201E-01	5.200E-01	5.584E-01	7.480E-02	1.289
CO-60	+	1173.22		7.485E+00	5.873E-01	1.511E-01	8.764E-03	49.542
	+	1332.49	*	7.436E+00	5.797E-01	1.172E-01	6.779E-03	63.471
AS-73	+	53.44	*	2.561E+00	1.103E+00	8.428E-01	6.344E-02	3.039
CD-109	+	88.03	*	5.485E+01	4.980E+00	1.950E+00	1.485E-01	28.131
SN-126		64.28		-6.833E-01	5.176E-01	7.185E-01	1.071E-01	-0.951
	+	86.94		2.267E+01	9.400E+00	8.313E-01	3.422E-01	27.276
	+	87.57	*	5.454E+00	4.952E-01	1.936E-01	1.474E-02	28.170
BA-137M	+	661.65	*	6.096E+00	4.970E-01	1.320E-01	8.683E-03	46.170
CS-137	+	661.65	*	6.444E+00	5.265E-01	1.396E-01	9.209E-03	46.170
TM-171	+	51.35		6.572E+01	3.480E+01	2.847E+01	2.072E+00	2.308
	+	52.39		3.665E+01	1.941E+01	1.583E+01	1.171E+00	2.316
	+	59.40		2.707E+03	2.332E+02	3.815E+01	3.162E+00	70.966
		66.72	*	4.256E+00	3.067E+01	4.568E+01	3.670E+00	0.093
TL-208		277.35		2.611E-02	7.204E-01	1.217E+00	1.561E-01	0.021
	+	510.84		3.436E-01	5.435E-01	5.513E-01	5.792E-02	0.623
	+	583.14	*	4.954E-01	1.458E-01	1.221E-01	8.985E-03	4.057
	+	860.37		8.050E-01	8.734E-01	1.200E+00	1.218E-01	0.671
BI-211		72.87		4.420E+00	4.004E+00	6.120E+00	4.818E-01	0.722
	+	351.07	*	2.666E+00	9.233E-01	7.044E-01	5.582E-02	3.784
PB-212	+	74.81		1.805E+00	5.930E-01	6.793E-01	8.282E-02	2.658
	+	77.11		1.674E+00	3.375E-01	4.057E-01	3.158E-02	4.125
	+	87.30		2.523E+01	3.407E+00	8.947E-01	1.125E-01	28.193
	+	238.63	*	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
		300.09		2.067E+00	1.689E+00	2.642E+00	2.809E-01	0.782
PO-212	+	74.81		1.805E+00	5.930E-01	6.793E-01	8.282E-02	2.658
	+	77.11		1.674E+00	3.375E-01	4.057E-01	3.158E-02	4.125
	+	87.30		2.523E+01	3.407E+00	8.947E-01	1.125E-01	28.193
		115.19		-9.700E-01	5.664E+00	9.297E+00	1.183E+00	-0.104
	+	238.63	*	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
		300.09		2.067E+00	1.689E+00	2.642E+00	2.809E-01	0.782
PB-214	+	74.81		3.111E+00	1.006E+00	1.170E+00	1.261E-01	2.658
	+	77.11		2.869E+00	6.185E-01	6.955E-01	7.575E-02	4.125

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		4.321E+01	5.147E+00	1.533E+00	1.661E-01	28.193
		241.98		1.614E+00	8.273E-01	1.260E+00	1.420E-01	1.281
	+	295.21		1.290E+00	4.492E-01	4.449E-01	4.864E-02	2.899
	+	351.92	*	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
PO-214	+	74.81		3.111E+00	1.006E+00	1.170E+00	1.261E-01	2.658
	+	77.11		2.869E+00	6.185E-01	6.955E-01	7.575E-02	4.125
	+	87.30		4.321E+01	5.147E+00	1.533E+00	1.661E-01	28.193
		241.98		1.614E+00	8.273E-01	1.260E+00	1.420E-01	1.281
	+	295.21		1.290E+00	4.492E-01	4.449E-01	4.864E-02	2.899
	+	351.92	*	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
PO-216	+	74.81		1.805E+00	5.930E-01	6.793E-01	8.282E-02	2.658
	+	77.11		1.674E+00	3.375E-01	4.057E-01	3.158E-02	4.125
	+	87.30		2.523E+01	3.407E+00	8.947E-01	1.125E-01	28.193
	+	238.63	*	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
		300.09		2.067E+00	1.689E+00	2.642E+00	2.809E-01	0.782
PO-218	+	74.81		3.111E+00	1.006E+00	1.170E+00	1.261E-01	2.658
	+	77.11		2.869E+00	6.185E-01	6.955E-01	7.575E-02	4.125
	+	87.30		4.321E+01	5.147E+00	1.533E+00	1.661E-01	28.193
		241.98		1.614E+00	8.273E-01	1.260E+00	1.420E-01	1.281
	+	295.21		1.290E+00	4.492E-01	4.449E-01	4.864E-02	2.899
	+	351.92	*	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
AC-228	+	338.32		1.517E+00	9.177E-01	7.898E-01	3.246E-01	1.921
	+	911.07	*	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124
	+	969.11		2.515E+00	1.466E+00	1.012E+00	2.389E-01	2.486
RA-228	+	338.32		1.517E+00	9.177E-01	7.898E-01	3.246E-01	1.921
	+	911.07	*	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124
	+	969.11		2.515E+00	1.466E+00	1.012E+00	2.389E-01	2.486
TH-228		84.40		-1.741E+00	4.155E+00	6.002E+00	7.521E-01	-0.290
	+	238.60	*	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.163
		300.10		2.072E+00	2.077E+00	2.643E+00	1.568E+00	0.784
TH-232	+	338.32		1.517E+00	6.837E-01	7.898E-01	6.192E-02	1.921
	+	911.07	*	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124
	+	969.11		2.515E+00	1.466E+00	1.012E+00	2.389E-01	2.486
AM-241	+	59.54	*	1.595E+01	1.473E+00	2.247E-01	2.010E-02	70.973
AM-243	+	74.67	*	2.927E-01	9.217E-02	1.101E-01	8.623E-03	2.659
	+	86.72		6.006E+02	5.453E+01	2.201E+01	1.678E+00	27.294
		117.66		-7.067E-01	7.075E+00	1.020E+01	1.351E+00	-0.069
		142.18		1.558E+01	3.033E+01	4.909E+01	6.101E+00	0.317
ANH-511	+	511.00	*	7.421E-02	1.172E-01	1.137E-01	7.280E-03	0.652

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	9.321E-01	7.314E-01	1.275E+00	9.133E-02	0.731
NA-22		1274.54	*	-6.415E-02	7.381E-02	1.051E-01	6.119E-03	-0.611
NA-24		1368.53	*	2.476E-06	7.381E-02	Half-Life too short		
AL-26		1129.67		-8.450E-01	3.939E+00	6.305E+00	4.224E-01	-0.134
		1808.65	*	9.822E-03	5.256E-02	8.970E-02	5.147E-03	0.110

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40		1460.81	*	8.505E-01	6.696E-01	1.313E+00	8.167E-02	0.648
TI-44		67.85		4.457E-02	5.018E-02	8.033E-02	6.428E-03	0.555
	+	78.38	*	3.087E-01	6.226E-02	9.457E-02	7.338E-03	3.265
SC-46		889.25	*	-6.909E-02	1.106E-01	1.762E-01	1.770E-02	-0.392
		1120.51		1.504E-01	1.216E-01	2.144E-01	1.475E-02	0.702
V-48		944.10		-1.661E+00	2.061E+00	3.229E+00	3.123E-01	-0.514
		983.50	*	1.525E-01	1.497E-01	2.611E-01	2.391E-02	0.584
		1312.09		1.354E-02	8.713E-02	1.440E-01	8.346E-03	0.094
CR-51		320.08	*	-2.875E-01	6.133E-01	1.003E+00	8.873E-02	-0.287
MN-52		744.21		-1.305E-01	2.059E-01	3.291E-01	2.555E-02	-0.397
		848.13		-4.247E-02	6.747E+00	1.120E+01	1.050E+00	-0.004
		935.52		1.643E-01	3.086E-01	5.239E-01	5.121E-02	0.314
		1246.25		-1.728E+00	3.456E+00	5.137E+00	2.987E-01	-0.336
	+	1333.61		3.646E+02	2.843E+01	4.202E+01	2.432E+00	8.678
		1434.06	*	2.247E-02	1.355E-01	2.321E-01	1.359E-02	0.097
MN-54		834.83	*	-9.222E-03	1.004E-01	1.661E-01	1.522E-02	-0.056
CO-56		846.75	*	1.848E-03	9.716E-02	1.616E-01	1.512E-02	0.011
		977.42		-3.471E+00	8.011E+00	1.249E+01	1.154E+00	-0.278
		1037.82		-1.222E-01	7.765E-01	1.259E+00	1.110E-01	-0.097
		1175.09		3.039E+02	2.376E+01	3.607E+01	2.092E+00	8.426
		1238.25		1.537E-02	1.088E-01	1.795E-01	1.109E-02	0.086
		1360.21		3.844E-01	1.515E+00	2.624E+00	1.524E-01	0.147
		1771.40		-9.165E-01	5.013E-01	5.245E-01	3.029E-02	-1.747
CO-58		810.76	*	-1.732E-02	9.136E-02	1.503E-01	1.323E-02	-0.115
FE-59		142.65		1.368E+00	4.038E+00	6.682E+00	8.274E-01	0.205
		192.34		-1.199E+00	1.876E+00	2.546E+00	3.651E-01	-0.471
		1099.22	*	-4.212E-02	2.127E-01	3.424E-01	2.773E-02	-0.123
		1291.56		-1.039E-01	1.577E-01	2.264E-01	1.682E-02	-0.459
ZN-65		1115.52	*	-1.907E-01	2.408E-01	3.707E-01	2.590E-02	-0.514
GE-68		1077.35	*	-9.552E-01	3.495E+00	5.607E+00	4.306E-01	-0.170
AS-74		595.88	*	8.842E-02	1.445E-01	2.443E-01	1.607E-02	0.362
		634.78		-1.109E-01	5.994E-01	9.549E-01	6.294E-02	-0.116
SE-75		66.05		-1.269E+00	4.904E+00	7.195E+00	7.178E-01	-0.176
		96.73		-2.830E-01	1.137E+00	1.640E+00	2.290E-01	-0.173
	+	121.11		2.132E+00	4.809E-01	5.558E-01	8.735E-02	3.835
	+	136.00		1.320E-01	9.525E-02	1.165E-01	1.520E-02	1.133
		198.60		-3.601E+00	3.358E+00	5.141E+00	5.557E-01	-0.700
		264.65	*	-1.290E-02	8.649E-02	1.372E-01	1.310E-02	-0.094
		279.53		2.785E-02	2.001E-01	3.394E-01	3.250E-02	0.082
		303.91		-4.069E+00	4.124E+00	6.573E+00	7.622E-01	-0.619
		400.65		2.222E-01	5.507E-01	9.305E-01	8.515E-02	0.239
BR-77	+	87.88		1.236E+03	1.122E+02	1.081E+02	8.226E+00	11.436
		200.40		-7.287E+00	3.259E+01	5.223E+01	5.215E+00	-0.140
	+	239.00		2.392E+01	4.087E+00	5.555E+00	5.445E-01	4.307
		249.79		4.782E+00	1.320E+01	2.154E+01	2.088E+00	0.222
		281.68		2.202E+00	1.813E+01	3.072E+01	2.837E+00	0.072
		297.23		2.275E+01	1.352E+01	2.140E+01	1.911E+00	1.063
		303.76		-3.711E+01	3.779E+01	6.043E+01	5.307E+00	-0.614
		439.47		-6.264E-01	3.628E+01	5.979E+01	3.645E+00	-0.010

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		484.57		-1.647E+01	5.562E+01	8.967E+01	5.652E+00	-0.184
		520.65	*	-3.100E-01	2.552E+00	4.140E+00	2.662E-01	-0.075
		574.64		-3.157E+01	5.345E+01	7.794E+01	5.107E+00	-0.405
		578.91		-3.738E+00	2.154E+01	2.966E+01	1.946E+00	-0.126
		585.48		1.222E+02	5.073E+01	8.368E+01	5.496E+00	1.460
		755.35		1.035E+01	4.071E+01	6.921E+01	5.489E+00	0.150
		817.79		-4.302E-01	3.574E+01	5.947E+01	5.287E+00	-0.007
SR-82		698.33		-8.277E+01	6.635E+01	9.638E+01	6.837E+00	-0.859
		776.49	*	5.880E-02	7.062E-01	1.186E+00	9.788E-02	0.050
		1395.20		-9.330E-01	1.253E+01	2.066E+01	1.206E+00	-0.045
RB-83		520.41	*	7.316E-03	1.530E-01	2.508E-01	1.613E-02	0.029
		529.64		-7.842E-02	2.331E-01	3.725E-01	2.405E-02	-0.211
		552.65		-7.824E-02	4.289E-01	6.901E-01	4.494E-02	-0.113
RB-84		881.50	*	-4.565E-02	1.685E-01	2.743E-01	2.720E-02	-0.166
KR-85		513.99	*	2.245E+01	1.850E+01	2.861E+01	1.834E+00	0.785
SR-85		513.99	*	1.061E-01	8.738E-02	1.351E-01	8.663E-03	0.785
RB-86		1076.63	*	-6.211E-01	1.672E+00	2.662E+00	2.048E-01	-0.233
Y-88		898.02		-7.249E-02	1.225E-01	1.953E-01	1.997E-02	-0.371
		1836.01	*	4.324E-03	6.037E-02	1.003E-01	5.739E-03	0.043
ZR-88		392.90	*	2.093E-02	6.758E-02	1.138E-01	6.625E-03	0.184
Y-91		1204.90	*	5.657E+00	2.892E+01	4.795E+01	2.786E+00	0.118
NB-94		702.63	*	1.575E-03	7.800E-02	1.254E-01	8.972E-03	0.013
		871.10		-2.442E-03	9.791E-02	1.621E-01	1.580E-02	-0.015
NB-95		765.79	*	5.738E-02	9.313E-02	1.613E-01	1.304E-02	0.356
NB-95M		235.69	*	3.098E-01	2.542E-01	3.791E-01	4.147E-02	0.817
ZR-95		724.18		-3.142E-02	1.991E-01	3.306E-01	2.750E-02	-0.095
		756.15	*	1.477E-01	1.554E-01	2.746E-01	2.440E-02	0.538
NB-97		657.90	*	8.506E-04	1.554E-01	Half-Life too short		
		1024.50		1.969E-03	1.554E-01	Half-Life too short		
ZR-97		254.15		7.321E-04	1.554E-01	Half-Life too short		
		355.39		1.174E-03	1.554E-01	Half-Life too short		
		507.63	*	1.764E-03	1.554E-01	Half-Life too short		
		602.52		-2.366E-03	1.554E-01	Half-Life too short		
		1021.30		2.100E-04	1.554E-01	Half-Life too short		
		1147.95		-2.117E-03	1.554E-01	Half-Life too short		
		1362.66		-4.004E-03	1.554E-01	Half-Life too short		
		1750.46		3.001E-03	1.554E-01	Half-Life too short		
MO-99		140.51		1.779E+00	6.956E+00	1.013E+01	2.956E+00	0.176
		181.06		3.097E+00	4.710E+00	6.920E+00	1.312E+00	0.448
		366.43		5.090E+00	2.514E+01	4.227E+01	2.901E+00	0.120
		739.58	*	1.591E+00	3.787E+00	6.507E+00	9.552E-01	0.244
		778.00		-1.509E-01	1.111E+01	1.853E+01	1.534E+00	-0.008
TC-99M		140.51	*	8.236E+00	1.111E+01	Half-Life too short		
RH-101		127.23		1.489E-02	5.767E-02	8.902E-02	1.226E-02	0.167
		198.01	*	-4.003E-02	6.281E-02	9.851E-02	9.838E-03	-0.406
		325.23		2.658E-01	4.562E-01	7.829E-01	6.444E-02	0.340
RH-102		418.52		-3.293E-01	6.897E-01	1.113E+00	6.654E-02	-0.296
		475.06	*	-7.389E-02	7.592E-02	1.181E-01	7.399E-03	-0.626
		631.29		-1.029E-01	1.259E-01	1.908E-01	1.258E-02	-0.539

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		697.49		-8.309E-02	1.844E-01	2.864E-01	2.028E-02	-0.290
		766.84		2.204E-01	2.526E-01	4.433E-01	3.593E-02	0.497
		1046.59		1.865E-01	3.273E-01	5.562E-01	4.564E-02	0.335
		1112.84		-2.461E-01	6.078E-01	9.630E-01	6.767E-02	-0.256
RU-103		497.08	*	3.230E-02	8.352E-02	1.398E-01	1.804E-02	0.231
	+	610.33		1.080E+01	3.477E+00	3.731E+00	5.870E-01	2.894
RH-106		511.85		3.096E-01	4.569E-01	7.426E-01	4.755E-02	0.417
		621.84	*	-1.586E-01	7.168E-01	1.140E+00	1.385E-01	-0.139
		1050.47		-3.480E+00	6.569E+00	1.036E+01	8.437E-01	-0.336
RU-106		511.85		3.096E-01	4.569E-01	7.426E-01	4.755E-02	0.417
		621.84	*	-1.586E-01	7.166E-01	1.140E+00	7.518E-02	-0.139
		1050.47		-3.480E+00	6.569E+00	1.036E+01	8.437E-01	-0.336
AG-108M		433.93	*	-2.576E-03	8.313E-02	1.370E-01	8.964E-03	-0.019
		614.37		1.974E-02	9.732E-02	1.387E-01	9.744E-03	0.142
		722.95		-7.597E-02	9.955E-02	1.588E-01	1.245E-02	-0.478
AG-110M		657.75	*	4.596E-01	1.123E-01	1.982E-01	1.370E-02	2.319
		677.61		4.396E-02	7.075E-01	1.144E+00	8.124E-02	0.038
		706.67		-2.916E-01	4.971E-01	7.632E-01	5.721E-02	-0.382
		763.93		-4.249E-01	4.010E-01	6.238E-01	5.190E-02	-0.681
		884.67		4.769E-02	1.378E-01	2.332E-01	2.381E-02	0.205
		937.48		4.121E-01	3.457E-01	6.045E-01	6.062E-02	0.682
		1384.27		4.108E-02	2.277E-01	3.914E-01	2.419E-02	0.105
IN-111		171.28		-4.834E-02	2.635E-01	4.257E-01	4.233E-02	-0.114
		245.39	*	-4.238E-01	3.524E-01	5.082E-01	4.951E-02	-0.834
IN-113M		391.69	*	7.611E-02	9.864E-02	1.695E-01	1.051E-02	0.449
SN-113		391.69	*	7.611E-02	9.864E-02	1.695E-01	1.051E-02	0.449
IN-114M		190.27	*	2.003E-01	3.422E-01	5.016E-01	5.009E-02	0.399
CD-115		260.90		5.929E-01	2.278E+01	3.648E+01	3.488E+00	0.016
		492.35		9.970E-01	7.537E+00	1.245E+01	7.887E-01	0.080
		527.90	*	-2.707E-01	2.217E+00	3.593E+00	2.318E-01	-0.075
SN-117M		156.02		2.371E+00	2.601E+00	4.395E+00	4.846E-01	0.540
		158.56	*	-4.257E-02	6.447E-02	1.021E-01	1.097E-02	-0.417
SB-122		563.90	*	2.884E-02	6.371E-01	1.039E+00	6.792E-02	0.028
		692.80		3.575E+00	1.398E+01	2.287E+01	1.604E+00	0.156
I-123		159.00	*	-1.162E-04	1.398E+01	Half-Life too short		
		528.96		-1.468E-02	1.398E+01	Half-Life too short		
TE-123M		159.00	*	-1.062E-02	4.661E-02	7.538E-02	8.100E-03	-0.141
I-124		602.71	*	-5.812E-02	4.624E-01	6.385E-01	4.204E-02	-0.091
		722.78		-2.742E+00	2.887E+00	4.548E+00	3.387E-01	-0.603
		1325.50		-2.373E+00	2.183E+01	2.944E+01	1.705E+00	-0.081
		1376.25		1.094E+01	1.246E+01	2.335E+01	1.359E+00	0.469
		1509.49		2.013E+00	7.573E+00	1.307E+01	7.681E-01	0.154
		1691.02		5.743E-01	1.861E+00	3.247E+00	1.895E-01	0.177
SB-124		602.71		-1.124E-02	8.944E-02	1.235E-01	8.133E-03	-0.091
		645.85		7.086E-01	1.109E+00	1.865E+00	1.352E-01	0.380
		709.31		2.373E+00	5.769E+00	9.935E+00	7.204E-01	0.239
		713.82		-1.685E+00	3.547E+00	5.766E+00	6.425E-01	-0.292
		722.78		-7.687E-01	8.094E-01	1.275E+00	9.770E-02	-0.603
	+	968.20		2.367E+01	1.280E+01	1.380E+01	1.293E+00	1.715

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1045.16		-9.982E-01	6.564E+00	1.065E+01	8.762E-01	-0.094
		1325.50		-7.104E-01	6.536E+00	8.815E+00	5.104E-01	-0.081
		1368.21		-9.890E-02	2.356E+00	3.911E+00	4.647E-01	-0.025
		1436.60		2.786E+00	5.241E+00	9.477E+00	5.551E-01	0.294
		1691.02	*	3.798E-02	1.230E-01	2.147E-01	1.359E-02	0.177
SB-125		427.89	*	1.032E-01	2.279E-01	3.845E-01	2.411E-02	0.268
		463.38		6.765E-01	7.283E-01	1.247E+00	8.879E-02	0.542
		600.56		1.185E-01	4.201E-01	6.551E-01	4.844E-02	0.181
		635.90		-3.133E-02	6.247E-01	1.005E+00	7.519E-02	-0.031
TE-125M		109.28	*	-6.671E+00	1.278E+01	2.068E+01	2.655E+00	-0.323
I-126		388.63		-7.551E-02	3.116E-01	5.110E-01	3.041E-02	-0.148
		666.33	*	-3.988E-02	3.186E-01	4.364E-01	2.898E-02	-0.091
		753.82		-1.820E-01	2.248E+00	3.741E+00	2.958E-01	-0.049
SB-126		223.80		-3.534E+00	5.335E+00	8.322E+00	8.247E-01	-0.425
		278.60		1.827E+00	3.073E+00	5.304E+00	4.927E-01	0.345
	+	296.50		8.307E+00	2.846E+00	3.614E+00	3.232E-01	2.298
		414.70		1.714E-02	1.143E-01	1.905E-01	1.135E-02	0.090
		415.30		6.983E-02	9.415E+00	1.558E+01	9.288E-01	0.004
		555.20		-1.836E+00	6.078E+00	9.701E+00	6.323E-01	-0.189
		573.80		4.100E-02	1.556E+00	2.533E+00	1.659E-01	0.016
		593.00		-1.592E+00	1.306E+00	1.915E+00	1.259E-01	-0.831
		656.30		-2.050E+00	5.873E+00	7.859E+00	5.171E-01	-0.261
		666.33		-1.637E-02	1.308E-01	1.791E-01	1.190E-02	-0.091
		675.00		-4.133E-01	3.015E+00	4.802E+00	3.247E-01	-0.086
		695.00		7.798E-02	1.166E-01	1.961E-01	1.382E-02	0.398
		697.00		-3.469E-02	4.138E-01	6.606E-01	4.673E-02	-0.053
		720.50	*	-7.017E-03	2.216E-01	3.711E-01	2.752E-02	-0.019
		856.80		-3.151E-02	9.006E-01	1.283E+00	1.220E-01	-0.025
		989.30		-1.698E+00	2.406E+00	3.764E+00	3.418E-01	-0.451
		1034.80		-4.062E+00	1.589E+01	2.558E+01	2.148E+00	-0.159
		1213.00		-2.015E-01	4.475E+00	7.219E+00	4.196E-01	-0.028
SB-127		61.10		8.730E+02	8.248E+01	5.947E+01	5.308E+00	14.681
		252.40		-1.628E+00	2.216E+00	3.243E+00	1.356E+00	-0.502
		290.80		-1.478E+00	1.146E+01	1.665E+01	1.614E+00	-0.089
		411.60		-3.092E+00	6.883E+00	1.111E+01	1.449E+00	-0.278
		444.90		-1.418E+00	5.869E+00	9.550E+00	8.641E-01	-0.148
		473.00		-3.144E-01	1.065E+00	1.722E+00	1.651E-01	-0.183
		543.00		-2.697E+00	9.342E+00	1.493E+01	1.746E+00	-0.181
		603.60		-2.665E+00	7.209E+00	9.701E+00	9.054E-01	-0.275
		685.20	*	-2.918E-01	7.929E-01	1.239E+00	9.959E-02	-0.236
		698.50		-8.199E+00	8.913E+00	1.323E+01	1.813E+00	-0.620
		722.20		-1.164E+01	1.741E+01	2.796E+01	2.292E+00	-0.416
		783.80		1.098E-01	2.076E+00	3.477E+00	3.670E-01	0.032
XE-127		57.60		2.543E+02	2.219E+01	1.868E+01	1.504E+00	13.611
		145.22		-7.477E-01	1.014E+00	1.597E+00	1.938E-01	-0.468
		172.10		-1.833E-01	1.867E-01	2.894E-01	2.879E-02	-0.633
		202.84	*	5.994E-02	8.567E-02	1.323E-01	1.320E-02	0.453
		374.96		5.006E-02	3.754E-01	6.283E-01	4.100E-02	0.080
I-131		80.18		1.339E+00	3.504E+00	5.232E+00	4.050E-01	0.256

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		284.30		-1.975E-01	1.502E+00	2.515E+00	2.408E-01	-0.079
		364.48	*	1.083E-01	1.244E-01	2.158E-01	1.610E-02	0.502
		636.97		3.928E-01	1.856E+00	3.042E+00	2.178E-01	0.129
		722.89		-6.604E+00	8.560E+00	1.365E+01	1.019E+00	-0.484
TE-132	+	49.72		9.410E+00	2.960E+00	4.109E+00	3.196E-01	2.290
		111.76		-1.912E+00	8.679E+00	1.423E+01	1.771E+00	-0.134
		116.30		3.824E+00	8.982E+00	1.402E+01	1.871E+00	0.273
		228.16	*	7.492E-04	2.651E-01	4.268E-01	6.571E-02	0.002
BA-133	+	53.15		1.158E+01	4.988E+00	5.187E+00	3.886E-01	2.233
		79.62		2.437E+00	1.926E+00	2.921E+00	4.306E-01	0.834
		81.00		-2.964E-02	1.492E-01	2.178E-01	3.355E-02	-0.136
		276.40		-1.189E-01	7.061E-01	1.182E+00	1.759E-01	-0.101
		302.84		-1.520E-01	2.878E-01	4.707E-01	6.311E-02	-0.323
		356.01	*	6.431E-02	1.022E-01	1.543E-01	1.905E-02	0.417
		383.85		-3.645E-01	6.754E-01	1.089E+00	1.206E-01	-0.335
I-133	+	510.53		1.485E-03	6.754E-01	Half-Life too short		
		529.87	*	-1.390E-06	6.754E-01	Half-Life too short		
		706.58		-1.158E-03	6.754E-01	Half-Life too short		
		856.28		3.103E-04	6.754E-01	Half-Life too short		
		875.33		3.451E-05	6.754E-01	Half-Life too short		
		1236.41		6.822E-04	6.754E-01	Half-Life too short		
		1298.22		6.545E-04	6.754E-01	Half-Life too short		
CS-134		475.35		-3.946E+00	4.994E+00	7.858E+00	4.924E-01	-0.502
		563.23		-4.623E-03	8.116E-01	1.320E+00	8.766E-02	-0.004
		569.32		2.268E-01	4.566E-01	7.653E-01	5.126E-02	0.296
		604.70		-1.521E-02	8.104E-02	1.111E-01	7.347E-03	-0.137
		795.84	*	1.409E-01	1.255E-01	2.214E-01	1.906E-02	0.637
		801.93		1.156E-01	1.021E+00	1.714E+00	1.490E-01	0.067
		1038.57		-6.223E+00	1.056E+01	1.656E+01	1.380E+00	-0.376
		1167.94		1.573E+00	7.146E+00	1.023E+01	6.049E-01	0.154
		1365.15		-1.382E-01	1.878E+00	3.104E+00	1.981E-01	-0.045
CS-135		268.24	*	2.307E-01	3.332E-01	5.480E-01	5.863E-02	0.421
I-135		288.45		4.604E+01	3.332E-01	Half-Life too short		
		417.63		-3.197E+01	3.332E-01	Half-Life too short		
		546.56		-2.470E+01	3.332E-01	Half-Life too short		
		836.80		8.711E+01	3.332E-01	Half-Life too short		
		1038.76		-8.431E+01	3.332E-01	Half-Life too short		
		1124.00		-3.437E+02	3.332E-01	Half-Life too short		
		1131.51		2.918E+01	3.332E-01	Half-Life too short		
		1260.41	*	9.126E+00	3.332E-01	Half-Life too short		
		1457.56		2.486E+01	3.332E-01	Half-Life too short		
		1678.03		8.550E-01	3.332E-01	Half-Life too short		
		1706.46		1.277E+01	3.332E-01	Half-Life too short		
		1791.20		5.300E+00	3.332E-01	Half-Life too short		
CS-136		66.91		-1.222E-01	5.764E-01	8.469E-01	1.280E-01	-0.144
		86.29		2.892E+01	3.937E+00	3.474E+00	4.240E-01	8.326
		153.22		-5.467E-01	7.611E-01	1.203E+00	1.457E-01	-0.454
		163.89		-4.406E-02	1.269E+00	2.069E+00	2.284E-01	-0.021
		176.55		3.820E-01	4.251E-01	7.163E-01	7.442E-02	0.533

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		273.65		-8.427E-01	6.477E-01	9.599E-01	9.496E-02	-0.878
		340.57		2.693E-01	1.955E-01	3.073E-01	2.471E-02	0.876
		818.51		3.181E-02	1.284E-01	2.172E-01	1.934E-02	0.146
		1048.07	*	1.572E-01	2.036E-01	3.501E-01	2.997E-02	0.449
		1235.34		-1.094E-02	5.168E-01	8.350E-01	8.342E-02	-0.013
CE-139		165.85	*	6.566E-02	5.313E-02	9.032E-02	8.968E-03	0.727
BA-140		162.64		-5.902E-01	8.886E-01	1.406E+00	1.508E-01	-0.420
		304.84		-1.517E+00	1.759E+00	2.750E+00	7.719E-01	-0.552
		423.70		-3.624E-01	3.070E+00	5.040E+00	1.604E+00	-0.072
		537.32	*	-1.722E-01	4.032E-01	6.335E-01	2.068E-01	-0.272
LA-140		328.77		3.001E-02	3.972E-01	6.670E-01	5.763E-02	0.045
		432.53		1.844E+00	3.375E+00	5.717E+00	3.797E-01	0.323
		487.03		-1.271E-02	2.094E-01	3.423E-01	2.404E-02	-0.037
		751.79		-3.432E-01	2.586E+00	4.272E+00	3.792E-01	-0.080
		815.85		-1.845E-01	5.487E-01	8.930E-01	8.778E-02	-0.207
		867.82		1.661E+00	2.603E+00	4.303E+00	4.346E-01	0.386
		919.63		3.998E+00	6.000E+00	1.006E+01	1.183E+00	0.397
		925.24		8.240E-01	2.401E+00	4.042E+00	4.192E-01	0.204
		1596.49	*	7.041E-03	9.879E-02	1.653E-01	9.713E-03	0.043
CE-141		145.44	*	-7.833E-02	8.994E-02	1.405E-01	1.718E-02	-0.557
CE-143		57.37		6.658E+02	6.783E+01	6.234E+01	5.734E+00	10.681
		231.56		-5.332E+01	1.013E+02	1.566E+02	4.996E+01	-0.340
		293.26	*	1.159E+01	6.394E+00	9.607E+00	2.070E+00	1.206
	+	350.59		4.162E+02	1.897E+02	1.697E+02	5.206E+01	2.452
		490.36		1.582E+01	1.339E+02	2.210E+02	6.848E+01	0.072
		664.57		1.442E+03	4.747E+02	2.608E+02	8.291E+01	5.530
		721.93		-4.808E+01	6.609E+01	1.034E+02	2.977E+01	-0.465
CE-144		80.11		1.149E+00	3.094E+00	4.618E+00	3.569E-01	0.249
		133.54	*	-2.861E-01	4.095E-01	5.631E-01	1.043E-01	-0.508
PM-144		476.78		1.832E-01	1.695E-01	2.928E-01	2.149E-02	0.626
		618.01		4.845E-02	8.179E-02	1.208E-01	8.333E-03	0.401
		696.49	*	2.805E-02	8.130E-02	1.337E-01	9.448E-03	0.210
		778.57		-6.013E-01	5.185E+00	8.589E+00	7.115E-01	-0.070
PR-144		696.49	*	1.893E+00	5.486E+00	9.022E+00	6.375E-01	0.210
		1489.15		4.110E+00	1.632E+01	2.845E+01	1.671E+00	0.144
PM-146		453.90	*	2.801E-02	1.079E-01	1.799E-01	1.597E-02	0.156
		633.02		-2.141E+00	3.267E+00	4.863E+00	1.797E+00	-0.440
		735.90		-6.306E-03	3.568E-01	5.971E-01	1.691E-01	-0.011
		747.13		2.334E-01	2.001E-01	3.577E-01	4.849E-02	0.652
ND-147		91.11		5.544E-01	3.432E-01	4.142E-01	3.684E-02	1.338
		319.41		-1.631E+00	4.097E+00	6.730E+00	5.647E-01	-0.242
		439.89		-1.328E+00	8.799E+00	1.440E+01	8.782E-01	-0.092
		531.02	*	3.954E-04	7.999E-01	1.306E+00	1.804E-01	0.000
PM-149		285.90	*	-6.283E-02	1.558E+01	2.623E+01	4.153E+00	-0.002
EU-152	+	121.78		1.202E+00	2.639E-01	3.173E-01	4.746E-02	3.789
		244.69		-5.664E-01	7.634E-01	1.080E+00	1.053E-01	-0.524
		344.27	*	1.010E-01	2.291E-01	3.427E-01	2.818E-02	0.295
		443.98		-3.134E-01	2.388E+00	3.910E+00	2.392E-01	-0.080
		778.89		-1.048E-01	6.133E-01	1.012E+00	8.388E-02	-0.104

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		867.32		-7.849E-02	2.462E+00	3.777E+00	3.658E-01	-0.021
		964.01		7.300E-01	1.026E+00	1.529E+00	1.440E-01	0.477
		1085.78		3.828E-01	1.155E+00	1.930E+00	1.453E-01	0.198
		1112.02		-3.905E-01	8.700E-01	1.374E+00	9.678E-02	-0.284
		1407.95		2.071E-01	2.649E-01	4.951E-01	2.893E-02	0.418
GD-153		69.67		1.541E-01	1.966E+00	2.918E+00	2.320E-01	0.053
		83.37		2.190E+00	2.443E+01	3.364E+01	2.582E+00	0.065
		97.43	*	4.989E-02	1.172E-01	1.752E-01	1.624E-02	0.285
		103.18		-1.345E-02	1.543E-01	2.551E-01	2.638E-02	-0.053
EU-154	+	123.07		8.436E-01	1.909E-01	2.200E-01	3.506E-02	3.835
		247.94		-1.164E-01	7.262E-01	1.155E+00	1.423E-01	-0.101
		591.81		-1.289E+00	1.341E+00	2.007E+00	2.058E-01	-0.642
		723.30		-2.982E-01	4.168E-01	6.673E-01	5.665E-02	-0.447
		756.87		1.758E+00	1.858E+00	3.275E+00	3.768E-01	0.537
		873.19		1.434E-01	8.557E-01	1.433E+00	1.876E-01	0.100
		996.32		-3.955E-01	1.055E+00	1.689E+00	3.030E-01	-0.234
		1004.76		4.149E-01	5.806E-01	9.969E-01	1.178E-01	0.416
		1274.45	*	-1.329E-01	2.028E-01	2.979E-01	2.785E-02	-0.446
EU-155	+	48.70		5.606E+00	1.754E+00	2.325E+00	1.620E-01	2.411
	+	60.01		5.172E+02	4.455E+01	2.529E+01	2.094E+00	20.452
	+	86.54		6.549E+00	6.001E-01	5.177E-01	4.001E-02	12.651
		105.31	*	8.369E-02	1.622E-01	2.738E-01	2.966E-02	0.306
TB-160	+	86.79		1.628E+01	1.479E+00	1.370E+00	1.045E-01	11.889
		197.04		2.719E-01	9.838E-01	1.608E+00	1.606E-01	0.169
		215.65		3.189E-02	1.339E+00	2.163E+00	2.152E-01	0.015
		298.57		1.752E-01	2.339E-01	3.576E-01	3.182E-02	0.490
		879.36	*	2.964E-02	3.637E-01	6.047E-01	5.975E-02	0.049
		962.29		1.204E+00	1.780E+00	2.645E+00	2.498E-01	0.455
		966.15		9.892E-01	7.066E-01	1.090E+00	1.024E-01	0.907
		1177.93		6.230E-01	7.765E-01	1.196E+00	6.938E-02	0.521
		1271.85		7.774E-01	9.648E-01	1.736E+00	1.009E-01	0.448
HO-166M		80.57		1.441E-04	4.106E-01	6.044E-01	4.667E-02	0.000
		184.41		8.824E-02	7.230E-02	1.097E-01	1.095E-02	0.804
		280.46		-2.363E-02	1.665E-01	2.789E-01	2.582E-02	-0.085
		410.95		-1.437E-01	5.561E-01	9.084E-01	5.392E-02	-0.158
		711.68	*	2.001E-02	1.387E-01	2.351E-01	1.713E-02	0.085
		752.31		-1.326E-02	6.308E-01	1.054E+00	8.312E-02	-0.013
		810.29		3.007E-02	1.471E-01	2.484E-01	2.179E-02	0.121
LU-176	+	88.36		1.294E+01	1.175E+00	1.131E+00	8.678E-02	11.435
		201.83		1.090E-02	5.654E-02	9.221E-02	9.205E-03	0.118
		306.84	*	1.419E-02	5.035E-02	8.559E-02	7.454E-03	0.166
		401.10		2.336E+00	1.520E+01	2.539E+01	1.492E+00	0.092
LU-177		112.95		2.792E-01	1.121E+00	1.871E+00	2.295E-01	0.149
	+	208.36	*	1.261E+00	1.070E+00	1.575E+00	1.571E-01	0.800
LU-177M	+	52.97		5.011E+00	2.158E+00	2.249E+00	1.680E-01	2.228
	+	54.07		2.839E+00	1.223E+00	1.272E+00	9.672E-02	2.233
		61.30		6.570E+01	5.940E+00	5.340E+00	4.393E-01	12.303
	+	121.62		5.969E+00	1.277E+00	1.573E+00	2.216E-01	3.794
		147.16		-4.534E-01	1.055E+00	1.695E+00	2.025E-01	-0.267

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		171.86		-7.354E-01	8.467E-01	1.321E+00	1.314E-01	-0.557
		218.09		-1.603E-01	1.646E+00	2.643E+00	2.627E-01	-0.061
		268.79		2.397E+00	1.615E+00	2.731E+00	2.581E-01	0.878
		319.02		-2.510E-01	5.061E-01	8.272E-01	6.949E-02	-0.303
		367.43		7.634E-01	1.878E+00	3.188E+00	2.175E-01	0.239
		413.65	*	1.091E-01	3.915E-01	6.568E-01	3.909E-02	0.166
HF-181		56.28		6.225E+00	9.161E-01	1.491E+00	1.175E-01	4.175
		57.53		1.960E+01	1.726E+00	1.530E+00	1.230E-01	12.809
		65.20		-7.208E-01	8.624E-01	1.235E+00	9.988E-02	-0.583
		133.02		-1.490E-01	1.200E-01	1.590E-01	2.109E-02	-0.938
	+	136.25		1.418E+00	1.023E+00	1.246E+00	1.617E-01	1.138
		345.85		-8.562E-02	4.073E-01	5.823E-01	4.424E-02	-0.147
		482.03	*	-6.177E-02	9.331E-02	1.474E-01	9.277E-03	-0.419
W-181		56.28		2.649E+00	3.897E-01	6.342E-01	4.999E-02	4.177
		57.53		8.311E+00	7.321E-01	6.500E-01	5.228E-02	12.785
		65.20	*	-3.043E-01	3.641E-01	5.216E-01	4.216E-02	-0.583
TA-182		67.75		8.264E-02	1.142E-01	1.821E-01	1.458E-02	0.454
		100.10		-6.100E-02	2.629E-01	4.003E-01	3.907E-02	-0.152
		152.43		-7.037E-02	5.435E-01	8.844E-01	1.009E-01	-0.080
		222.10		-2.505E-01	6.661E-01	1.054E+00	1.046E-01	-0.238
		1001.68		-1.043E+00	5.319E+00	8.627E+00	7.680E-01	-0.121
		1121.28		3.206E-01	3.343E-01	5.809E-01	3.987E-02	0.552
		1189.05		2.670E-01	4.906E-01	8.445E-01	4.904E-02	0.316
		1221.42	*	-3.200E-01	2.645E-01	3.535E-01	2.055E-02	-0.905
		1230.97		-2.441E-01	6.490E-01	1.000E+00	5.816E-02	-0.244
RE-183	+	57.98		1.800E+01	1.551E+00	7.984E-01	6.468E-02	22.552
	+	59.32		1.035E+01	8.914E-01	5.135E-01	4.251E-02	20.153
		67.20		-5.312E-02	2.097E-01	3.077E-01	2.469E-02	-0.173
		162.32	*	-1.431E-01	1.826E-01	2.872E-01	2.968E-02	-0.498
	+	208.81		2.347E+00	1.992E+00	2.928E+00	2.919E-01	0.802
		291.72		-1.191E-01	1.868E+00	2.727E+00	2.466E-01	-0.044
RE-184	+	57.98		6.941E+01	5.979E+00	3.078E+00	2.493E-01	22.552
	+	59.32		3.987E+01	3.434E+00	1.978E+00	1.637E-01	20.153
		67.20		-2.047E-01	8.083E-01	1.186E+00	9.514E-02	-0.173
		161.27		-5.139E-01	6.049E-01	9.473E-01	9.900E-02	-0.542
		216.55		-1.254E-01	5.077E-01	8.097E-01	8.051E-02	-0.155
		252.85	*	-4.365E-01	4.556E-01	6.909E-01	6.675E-02	-0.632
		318.01		-1.109E-01	8.622E-01	1.436E+00	1.210E-01	-0.077
		792.07		7.919E-01	2.551E+00	4.332E+00	3.678E-01	0.183
		903.28		-2.372E+00	3.100E+00	4.463E+00	4.523E-01	-0.531
		920.93		-4.017E-01	1.429E+00	2.322E+00	2.309E-01	-0.173
OS-185	+	59.72		2.879E+01	2.480E+00	1.418E+00	1.176E-01	20.303
		61.14		9.040E+00	7.985E-01	6.351E-01	5.228E-02	14.235
		69.30		3.477E-01	3.138E-01	5.048E-01	4.019E-02	0.689
		592.07		-5.318E+00	5.167E+00	7.709E+00	5.068E-01	-0.690
		646.12	*	5.543E-02	9.692E-02	1.624E-01	1.070E-02	0.341
		717.42		3.978E-01	2.009E+00	3.413E+00	2.515E-01	0.117
		874.81		9.164E-02	1.584E+00	2.637E+00	2.586E-01	0.035
		880.27		-7.307E-01	2.090E+00	3.377E+00	3.342E-01	-0.216

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188		155.03	*	2.560E-01	2.705E-01	4.575E-01	5.093E-02	0.560
		477.96		7.851E+00	7.214E+00	1.248E+01	7.835E-01	0.629
		633.10		-3.820E+00	5.961E+00	9.164E+00	6.041E-01	-0.417
W-188		63.58		-6.303E+01	4.730E+01	6.658E+01	5.419E+00	-0.947
		227.08		1.973E+01	2.351E+01	3.913E+01	3.870E+00	0.504
		290.67	*	-3.031E+00	1.488E+01	2.151E+01	1.950E+00	-0.141
IR-192	+	295.96		9.142E-01	3.134E-01	3.999E-01	3.605E-02	2.286
		308.46		8.813E-02	1.818E-01	3.116E-01	2.715E-02	0.283
		316.51	*	4.568E-02	6.399E-02	1.107E-01	9.396E-03	0.413
		468.07		-1.034E-02	1.635E-01	2.679E-01	1.893E-02	-0.039
		604.41		-3.010E-01	1.045E+00	1.417E+00	1.668E-01	-0.212
		612.46		1.516E+00	1.752E+00	2.630E+00	2.155E-01	0.576
AU-195		65.12		-1.383E-01	1.709E-01	2.451E-01	1.982E-02	-0.564
		66.83		1.636E-02	9.961E-02	1.485E-01	1.193E-02	0.110
	+	75.70		9.196E-01	2.896E-01	4.848E-01	3.787E-02	1.897
		98.88	*	7.955E-02	3.417E-01	5.054E-01	4.820E-02	0.157
		129.76		6.016E+00	5.063E+00	8.049E+00	1.091E+00	0.747
TL-200		367.94	*	3.016E+00	6.811E+00	1.159E+01	7.882E-01	0.260
		579.30		3.927E+00	5.894E+01	8.322E+01	5.459E+00	0.047
		828.27		-1.116E+01	9.302E+01	1.536E+02	1.391E+01	-0.073
		1205.75		1.435E+01	2.827E+01	4.845E+01	2.815E+00	0.296
TL-201		68.90		1.249E+00	8.913E-01	1.444E+00	1.151E-01	0.865
		70.82		-3.178E-01	5.712E-01	8.266E-01	6.548E-02	-0.384
		80.30		5.088E-01	1.271E+00	1.899E+00	1.467E-01	0.268
	+	135.34		1.513E+01	1.091E+01	1.338E+01	1.747E+00	1.131
		167.43	*	2.414E+00	2.225E+00	3.765E+00	3.738E-01	0.641
TL-202		68.90		4.257E-01	3.038E-01	4.923E-01	3.925E-02	0.865
		70.82		-1.080E-01	1.942E-01	2.810E-01	2.226E-02	-0.384
		80.30		1.730E-01	4.323E-01	6.457E-01	4.988E-02	0.268
		439.56	*	-3.918E-03	1.095E-01	1.802E-01	1.099E-02	-0.022
HG-203		70.83		-6.529E-01	1.168E+00	1.686E+00	2.222E-01	-0.387
		72.87		7.829E-01	7.135E-01	1.084E+00	1.380E-01	0.722
		82.60		3.506E-01	1.825E+00	2.291E+00	3.020E-01	0.153
		279.20	*	9.709E-03	6.997E-02	1.187E-01	1.128E-02	0.082
BI-207		72.80		2.259E-01	2.323E-01	3.539E-01	2.787E-02	0.638
	+	74.97		5.251E-01	1.654E-01	2.506E-01	1.961E-02	2.095
		84.90		2.528E-01	3.112E-01	4.700E-01	3.597E-02	0.538
		569.67		2.939E-02	7.216E-02	1.203E-01	7.872E-03	0.244
		1063.62	*	6.047E-02	1.501E-01	2.523E-01	1.998E-02	0.240
		1770.23		-1.697E-01	8.784E-01	1.146E+00	6.618E-02	-0.148
TL-207		81.07		-6.925E-02	3.298E-01	4.815E-01	3.713E-02	-0.144
		83.78		-9.884E-02	2.003E-01	2.886E-01	2.214E-02	-0.342
	+	94.90		1.201E+00	5.661E-01	5.699E-01	5.023E-02	2.106
	+	122.32		2.867E+01	6.206E+00	7.528E+00	1.097E+00	3.808
		144.24		4.334E-01	1.130E+00	1.871E+00	2.427E-01	0.232
		154.21		1.055E-01	6.811E-01	1.121E+00	1.333E-01	0.094
		269.46		4.443E-01	3.988E-01	6.657E-01	6.393E-02	0.667
		323.87	*	7.628E-01	1.361E+00	2.326E+00	4.080E-01	0.328
	+	338.28		6.335E+00	2.909E+00	4.077E+00	4.802E-01	1.554

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-2.550E+00	5.592E+00	8.987E+00	9.397E-01	-0.284
PO-209		260.50		7.958E-01	1.910E+01	3.061E+01	2.928E+00	0.026
		262.80		-1.253E+01	5.454E+01	8.616E+01	8.216E+00	-0.145
		896.60	*	5.259E+00	2.269E+01	3.806E+01	3.869E+00	0.138
BI-210		46.50	*	2.199E+00	1.402E+00	2.270E+00	1.771E-01	0.969
PB-210		46.50	*	2.199E+00	1.402E+00	2.270E+00	1.771E-01	0.969
PO-210		46.50	*	2.199E+00	1.399E+00	2.270E+00	1.527E-01	0.969
PB-211		404.84	*	-1.318E+00	2.272E+00	3.398E+00	2.119E+00	-0.388
		427.08		-2.894E-01	5.101E+00	8.397E+00	5.192E+00	-0.034
		831.96		-6.435E-01	3.336E+00	5.444E+00	3.415E+00	-0.118
BI-212		727.18	*	5.698E-01	6.800E-01	1.194E+00	1.083E-01	0.477
		785.46		1.555E+00	4.197E+00	7.170E+00	6.014E-01	0.217
		1620.62		1.930E+00	1.972E+00	3.822E+00	2.243E-01	0.505
BI-214	+	609.31	*	1.147E+00	3.363E-01	3.990E-01	3.344E-02	2.876
		768.36		1.513E+00	1.698E+00	2.978E+00	3.000E-01	0.508
		934.06		6.692E-01	3.678E+00	6.133E+00	7.118E-01	0.109
		1120.29		9.234E-01	7.588E-01	1.333E+00	1.273E-01	0.693
		1238.11		1.827E-01	1.152E+00	1.905E+00	1.555E-01	0.096
		1377.67		1.025E+00	1.411E+00	2.600E+00	2.235E-01	0.394
	+	1764.49		1.058E+00	6.816E-01	1.124E+00	6.495E-02	0.942
PO-215		81.07		-6.925E-02	3.298E-01	4.815E-01	3.713E-02	-0.144
		83.78		-9.884E-02	2.003E-01	2.886E-01	2.214E-02	-0.342
	+	94.90		1.201E+00	5.661E-01	5.699E-01	5.023E-02	2.106
	+	122.32		2.867E+01	6.206E+00	7.528E+00	1.097E+00	3.808
		144.24		4.334E-01	1.130E+00	1.871E+00	2.427E-01	0.232
		154.21		1.055E-01	6.811E-01	1.121E+00	1.333E-01	0.094
		269.46		4.443E-01	3.988E-01	6.657E-01	6.393E-02	0.667
		323.87	*	7.628E-01	1.361E+00	2.326E+00	4.080E-01	0.328
	+	338.28		6.335E+00	2.909E+00	4.077E+00	4.802E-01	1.554
		445.03		-2.550E+00	5.592E+00	8.987E+00	9.397E-01	-0.284
RN-219		271.23		4.596E-01	5.137E-01	8.500E-01	9.335E-02	0.541
		401.81	*	-7.704E-02	9.307E-01	1.536E+00	2.095E-01	-0.050
RN-220		549.76	*	4.294E+00	5.912E+01	9.678E+01	6.297E+00	0.044
RA-223		81.07		-6.925E-02	3.298E-01	4.815E-01	3.713E-02	-0.144
		83.78		-9.884E-02	2.003E-01	2.886E-01	2.214E-02	-0.342
	+	94.90		1.201E+00	5.661E-01	5.699E-01	5.023E-02	2.106
	+	122.32		2.867E+01	6.206E+00	7.528E+00	1.097E+00	3.808
		144.24		4.334E-01	1.130E+00	1.871E+00	2.427E-01	0.232
		154.21		1.055E-01	6.811E-01	1.121E+00	1.333E-01	0.094
		269.46		4.443E-01	3.988E-01	6.657E-01	6.393E-02	0.667
		323.87	*	7.628E-01	1.361E+00	2.326E+00	4.080E-01	0.328
	+	338.28		6.335E+00	2.909E+00	4.077E+00	4.802E-01	1.554
		445.03		-2.550E+00	5.592E+00	8.987E+00	9.397E-01	-0.284
RA-224		240.98	*	8.072E+00	1.944E+00	3.021E+00	2.956E-01	2.672
RA-226	+	609.31	*	1.147E+00	3.363E-01	3.990E-01	3.344E-02	2.876
		768.36		1.513E+00	1.698E+00	2.978E+00	3.000E-01	0.508
		934.06		6.692E-01	3.678E+00	6.133E+00	7.118E-01	0.109
		1120.29		9.234E-01	7.588E-01	1.333E+00	1.273E-01	0.693
		1238.11		1.827E-01	1.152E+00	1.905E+00	1.555E-01	0.096

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		1.025E+00	1.411E+00	2.600E+00	2.235E-01	0.394
	+	1764.49		1.058E+00	6.816E-01	1.124E+00	6.495E-02	0.942
AC-227		79.80		2.716E+00	2.468E+00	3.686E+00	7.800E-01	0.737
		236.00		1.248E+00	5.540E-01	8.392E-01	1.101E-01	1.487
		256.20	*	8.432E-01	7.585E-01	1.263E+00	2.012E-01	0.668
		286.10		-5.585E-01	3.007E+00	5.020E+00	6.806E-01	-0.111
		299.80		3.151E+00	3.175E+00	4.868E+00	8.575E-01	0.647
		304.40		-4.314E+00	3.950E+00	6.170E+00	1.142E+00	-0.699
		334.20		3.538E+00	5.304E+00	8.000E+00	1.530E+00	0.442
TH-227		79.80		2.716E+00	2.470E+00	3.686E+00	7.903E-01	0.737
	+	94.00		9.604E+00	4.919E+00	4.949E+00	1.079E+00	1.941
		236.00		1.248E+00	5.502E-01	8.392E-01	1.010E-01	1.487
		256.20	*	8.432E-01	7.627E-01	1.263E+00	2.344E-01	0.668
		286.10		-5.585E-01	3.058E+00	5.020E+00	5.041E+00	-0.111
		299.80		3.151E+00	3.175E+00	4.868E+00	8.575E-01	0.647
		304.40		-4.314E+00	3.950E+00	6.170E+00	1.142E+00	-0.699
		334.20		3.538E+00	5.304E+00	8.000E+00	1.530E+00	0.442
TH-229		85.43		1.399E+00	3.508E-01	5.568E-01	4.256E-02	2.512
	+	88.47		7.447E+00	6.761E-01	6.504E-01	5.001E-02	11.450
		100.00		-9.602E-02	3.029E-01	4.345E-01	4.233E-02	-0.221
		193.63	*	2.167E-01	1.003E+00	1.584E+00	1.582E-01	0.137
		210.97		6.452E-01	1.654E+00	2.386E+00	2.377E-01	0.270
TH-230	+	609.31	*	1.147E+00	3.363E-01	3.990E-01	3.344E-02	2.876
		768.36		1.513E+00	1.698E+00	2.978E+00	3.000E-01	0.508
		934.06		6.692E-01	3.677E+00	6.133E+00	7.118E-01	0.109
		1120.29		9.234E-01	7.588E-01	1.333E+00	1.273E-01	0.693
		1238.11		1.827E-01	1.152E+00	1.905E+00	1.555E-01	0.096
		1377.67		1.025E+00	1.411E+00	2.600E+00	2.235E-01	0.394
	+	1764.49		1.058E+00	6.816E-01	1.124E+00	6.495E-02	0.942
PA-231		283.67	*	4.274E-01	2.988E+00	5.064E+00	7.860E-01	0.084
		301.29		1.611E+00	1.225E+00	1.989E+00	2.465E-01	0.810
TH-231		81.07		-6.925E-02	3.298E-01	4.815E-01	3.713E-02	-0.144
		83.78		-9.884E-02	2.003E-01	2.886E-01	2.214E-02	-0.342
	+	94.90		1.201E+00	5.661E-01	5.699E-01	5.023E-02	2.106
	+	122.32		2.867E+01	6.206E+00	7.528E+00	1.097E+00	3.808
		144.24		4.334E-01	1.130E+00	1.871E+00	2.427E-01	0.232
		154.21		1.055E-01	6.811E-01	1.121E+00	1.333E-01	0.094
		269.46		4.443E-01	3.988E-01	6.657E-01	6.393E-02	0.667
		323.87	*	7.628E-01	1.361E+00	2.326E+00	4.080E-01	0.328
	+	338.28		6.335E+00	2.909E+00	4.077E+00	4.802E-01	1.554
		445.03		-2.550E+00	5.592E+00	8.987E+00	9.397E-01	-0.284
U-231		84.21		-1.444E+00	2.410E+00	3.457E+00	2.649E-01	-0.418
	+	92.29		2.622E+00	1.236E+00	1.393E+00	1.164E-01	1.882
		95.87	*	1.824E-01	4.523E-01	6.749E-01	6.065E-02	0.270
		108.00		-8.583E-01	8.668E-01	1.371E+00	1.545E-01	-0.626
PA-233	+	75.28		1.533E+01	5.206E+00	7.693E+00	1.147E+00	1.993
	+	86.59		1.068E+02	2.880E+01	8.552E+00	2.268E+00	12.486
		300.12		1.076E+00	8.804E-01	1.366E+00	2.052E-01	0.787
		311.98	*	-5.171E-02	1.277E-01	2.100E-01	1.854E-02	-0.246

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		340.50		2.117E+00	1.511E+00	2.268E+00	5.339E-01	0.934
		398.62		1.257E+00	4.760E+00	7.977E+00	2.064E+00	0.158
		415.76		3.804E-02	3.875E+00	6.413E+00	1.323E+00	0.006
PA-234		63.00		-7.616E-01	1.437E+00	2.093E+00	3.192E-01	-0.364
	+	94.67		8.564E-01	4.110E-01	4.206E-01	5.261E-02	2.036
		98.44		9.707E-03	1.434E-01	2.101E-01	1.175E-01	0.046
		99.86		-2.615E-01	7.654E-01	1.096E+00	1.065E-01	-0.238
		111.00		5.784E-02	2.807E-01	4.682E-01	6.829E-02	0.124
		131.20		-3.480E-02	2.104E-01	3.009E-01	4.040E-02	-0.116
		152.70		-1.086E-01	5.504E-01	8.926E-01	1.660E-01	-0.122
	+	186.00		8.582E+00	4.671E+00	4.356E+00	1.377E+00	1.970
		226.40		8.109E-01	8.039E-01	1.339E+00	1.884E-01	0.606
		227.20		7.289E-01	8.589E-01	1.430E+00	1.414E-01	0.510
		248.90		6.386E-01	1.606E+00	2.615E+00	5.977E-01	0.244
		293.70		4.129E+00	1.723E+00	2.624E+00	4.590E-01	1.574
		369.80		-1.833E+00	1.925E+00	2.983E+00	6.295E-01	-0.615
		568.70		1.454E-01	2.323E+00	3.792E+00	2.481E-01	0.038
		569.50		3.124E-01	6.387E-01	1.070E+00	7.002E-02	0.292
		574.00		-5.911E-01	3.573E+00	5.582E+00	3.657E-01	-0.106
		699.00		-1.091E+00	1.720E+00	2.617E+00	4.827E-01	-0.417
		706.10		-4.903E-01	2.462E+00	3.877E+00	1.719E+00	-0.126
		733.00		-2.310E-01	8.949E-01	1.473E+00	3.214E-01	-0.157
		742.81		-1.595E+00	3.279E+00	5.006E+00	3.360E+00	-0.319
		796.30		3.070E+00	2.553E+00	4.315E+00	1.166E+00	0.712
		805.60		-3.869E-01	2.574E+00	4.244E+00	1.302E+00	-0.091
		819.60		6.845E-01	3.306E+00	5.559E+00	2.118E+00	0.123
		826.30		-1.480E+00	2.363E+00	3.620E+00	1.622E+00	-0.409
		831.60		5.249E-02	1.701E+00	2.834E+00	8.498E-01	0.019
		876.40		1.572E-01	2.442E+00	4.055E+00	4.173E+00	0.039
		880.51		-2.669E-01	7.981E-01	1.291E+00	1.278E-01	-0.207
		883.24		-1.643E-01	8.265E-01	1.340E+00	9.033E-01	-0.123
		899.00		2.780E-01	2.474E+00	4.119E+00	1.814E+00	0.067
		925.00		1.309E+00	3.793E+00	6.387E+00	6.321E-01	0.205
		926.50		1.397E-01	5.731E-01	9.579E-01	2.465E-01	0.146
		946.00	*	6.488E-01	9.620E-01	1.635E+00	3.149E-01	0.397
		949.00		2.721E-01	1.420E+00	2.368E+00	2.276E-01	0.115
		980.50		1.350E-01	2.150E+00	3.554E+00	3.270E-01	0.038
		1394.10		4.807E-01	1.667E+00	2.871E+00	1.860E+00	0.167
PA-234M		766.41		2.785E+01	4.638E+01	7.161E+01	5.487E+01	0.389
		1001.03	*	-4.339E+00	1.796E+01	2.903E+01	3.311E+00	-0.149
TH-234		63.29	*	-6.440E-01	1.234E+00	1.797E+00	3.193E-01	-0.358
	+	92.38		2.485E+00	1.237E+00	1.317E+00	2.366E-01	1.887
U-234	+	609.31	*	1.147E+00	3.363E-01	3.990E-01	3.344E-02	2.876
		768.36		1.513E+00	1.698E+00	2.978E+00	3.000E-01	0.508
		934.06		6.692E-01	3.677E+00	6.133E+00	7.118E-01	0.109
		1120.29		9.234E-01	7.588E-01	1.333E+00	1.273E-01	0.693
		1238.11		1.827E-01	1.152E+00	1.905E+00	1.555E-01	0.096
		1377.67		1.025E+00	1.411E+00	2.600E+00	2.235E-01	0.394
	+	1764.49		1.058E+00	6.816E-01	1.124E+00	6.495E-02	0.942

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-235		89.95		3.403E+01	1.080E+01	4.715E+00	1.446E+00	7.218
	+	93.35		2.988E+00	1.619E+00	1.564E+00	4.378E-01	1.911
		105.00		9.106E-01	1.622E+00	2.707E+00	8.258E-01	0.336
		143.76	*	1.641E-01	3.502E-01	5.805E-01	1.136E-01	0.283
		163.35		-4.449E-01	8.495E-01	1.348E+00	2.676E-01	-0.330
	+	185.71		3.178E-01	1.444E-01	1.593E-01	1.590E-02	1.995
		205.31		-2.473E-02	1.158E+00	1.633E+00	3.222E-01	-0.015
NP-236	+	94.67		6.496E-01	3.063E-01	3.192E-01	2.800E-02	2.035
		98.44		7.372E-03	1.083E-01	1.588E-01	1.502E-02	0.046
		111.00		4.375E-02	2.123E-01	3.542E-01	4.204E-02	0.124
		160.31	*	-2.205E-02	1.385E-01	2.246E-01	2.372E-02	-0.098
NP-237		86.50	*	1.148E+01	2.599E+00	1.252E+00	2.755E-01	9.162
		95.87		5.822E-01	1.450E+00	2.155E+00	5.336E-01	0.270
U-238		63.29	*	-6.440E-01	1.234E+00	1.797E+00	3.193E-01	-0.358
	+	92.38		2.485E+00	1.172E+00	1.317E+00	1.102E-01	1.887
NP-239		99.55		-3.625E-02	2.535E-01	3.673E-01	3.548E-02	-0.099
		117.00	*	1.221E-01	3.456E-01	5.108E-01	6.692E-02	0.239
	+	209.75		2.000E+00	1.697E+00	2.492E+00	2.484E-01	0.803
		228.18		-5.952E-04	4.549E-01	7.320E-01	7.234E-02	-0.001
		277.60		8.387E-02	3.458E-01	5.890E-01	5.483E-02	0.142
		334.30		1.965E+00	2.983E+00	4.527E+00	3.605E-01	0.434
CM-243		99.55		-3.728E-02	2.607E-01	3.777E-01	3.649E-02	-0.099
		103.76	*	1.805E-01	1.461E-01	2.514E-01	2.628E-02	0.718
		117.00		1.256E-01	3.554E-01	5.252E-01	6.881E-02	0.239
	+	209.75		1.971E+00	1.672E+00	2.456E+00	2.448E-01	0.803
		228.18		-6.011E-04	4.594E-01	7.392E-01	7.306E-02	-0.001
		277.60		8.451E-02	3.485E-01	5.935E-01	5.524E-02	0.142
CM-247		278.00		1.843E-01	1.428E+00	2.421E+00	2.252E-01	0.076
		287.40		1.947E-01	2.429E+00	4.001E+00	3.653E-01	0.049
		402.60	*	3.919E-02	8.311E-02	1.409E-01	8.292E-03	0.278
CF-249		252.85		-1.691E+00	1.765E+00	2.676E+00	2.586E-01	-0.632
		333.44		7.464E-02	3.980E-01	5.861E-01	4.683E-02	0.127
		387.95	*	-4.038E-02	9.084E-02	1.474E-01	8.817E-03	-0.274
CF-251		176.60	*	1.938E-01	2.207E-01	3.717E-01	3.702E-02	0.521
		227.00		5.687E-01	7.665E-01	1.271E+00	1.257E-01	0.447
		285.00		-4.060E-02	3.438E+00	5.788E+00	5.311E-01	-0.007

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871425    *
* Acquisition date :  7-JUL-2009 08:19:11 Detector SN#     :               *
* Detector ID        : GAM05               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 01:00:01.96      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 30-JUN-2009 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201871425          Analyst initials: MXR1         *
* Batch Number       : 881219               Sample Quantity : 1.5173E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	4.065E-01	8.521E-02	7.356E-02	0.000E+00
CO-60	7.436E+00	5.681E-01	1.183E-01	0.000E+00
AS-73	2.561E+00	1.081E+00	9.208E-01	0.000E+00
CD-109	5.485E+01	4.881E+00	2.106E+00	0.000E+00
SN-126	5.454E+00	4.853E-01	2.092E-01	0.000E+00
BA-137M	6.096E+00	4.870E-01	1.358E-01	0.000E+00
CS-137	6.444E+00	5.159E-01	1.435E-01	0.000E+00
TM-171	4.256E+00	3.006E+01	4.965E+01	0.000E+00
TL-208	4.954E-01	1.429E-01	1.260E-01	0.000E+00
BI-211	2.666E+00	9.049E-01	7.361E-01	0.000E+00
PB-212	1.445E+00	2.501E-01	2.128E-01	0.000E+00
PO-212	1.445E+00	2.501E-01	2.128E-01	0.000E+00
PB-214	9.273E-01	3.183E-01	2.461E-01	0.000E+00
PO-214	9.273E-01	3.183E-01	2.461E-01	0.000E+00
PO-216	1.445E+00	2.501E-01	2.128E-01	0.000E+00
PO-218	9.273E-01	3.183E-01	2.461E-01	0.000E+00
AC-228	1.409E+00	6.206E-01	6.766E-01	0.000E+00
RA-228	1.409E+00	6.206E-01	6.766E-01	0.000E+00
TH-228	1.445E+00	2.501E-01	2.128E-01	0.000E+00
TH-232	1.409E+00	6.206E-01	6.766E-01	0.000E+00
AM-241	1.595E+01	1.444E+00	2.449E-01	0.000E+00
AM-243	2.927E-01	9.033E-02	1.194E-01	0.000E+00
ANH-511	7.421E-02	1.149E-01	1.177E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	9.321E-01	7.167E-01	1.322E+00	0.000E+00	NOT IDENT.
NA-22	-6.415E-02	7.234E-02	1.062E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.900E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	9.822E-03	5.151E-02	8.984E-02	0.000E+00	NOT IDENT.

K-40	8.505E-01	6.562E-01	1.323E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.102E-02	1.024E-01	0.000E+00	FAIL ABUN
SC-46	-6.909E-02	1.084E-01	1.799E-01	0.000E+00	NOT IDENT.
V-48	1.525E-01	1.467E-01	2.657E-01	0.000E+00	NOT IDENT.
CR-51	-2.875E-01	6.011E-01	1.051E+00	0.000E+00	NOT IDENT.
MN-52	2.247E-02	1.328E-01	2.339E-01	0.000E+00	FAIL ABUN
MN-54	-9.222E-03	9.841E-02	1.698E-01	0.000E+00	NOT IDENT.
CO-56	1.848E-03	9.522E-02	1.652E-01	0.000E+00	NOT IDENT.
CO-58	-1.732E-02	8.954E-02	1.537E-01	0.000E+00	NOT IDENT.
FE-59	-4.212E-02	2.085E-01	3.475E-01	0.000E+00	NOT IDENT.
ZN-65	-1.907E-01	2.360E-01	3.761E-01	0.000E+00	NOT IDENT.
GE-68	-9.552E-01	3.425E+00	5.694E+00	0.000E+00	NOT IDENT.
AS-74	8.842E-02	1.416E-01	2.519E-01	0.000E+00	NOT IDENT.
SE-75	-1.290E-02	8.476E-02	1.443E-01	0.000E+00	FAIL ABUN
BR-77	-3.100E-01	2.501E+00	4.284E+00	0.000E+00	FAIL ABUN
SR-82	5.880E-02	6.921E-01	1.215E+00	0.000E+00	NOT IDENT.
RB-83	7.316E-03	1.500E-01	2.595E-01	0.000E+00	NOT IDENT.
RB-84	-4.565E-02	1.651E-01	2.801E-01	0.000E+00	NOT IDENT.
KR-85	2.245E+01	1.813E+01	2.961E+01	0.000E+00	NOT IDENT.
SR-85	1.061E-01	8.563E-02	1.399E-01	0.000E+00	NOT IDENT.
RB-86	-6.211E-01	1.638E+00	2.704E+00	0.000E+00	NOT IDENT.
Y-88	4.324E-03	5.917E-02	1.004E-01	0.000E+00	NOT IDENT.
ZR-88	2.093E-02	6.623E-02	1.185E-01	0.000E+00	NOT IDENT.
Y-91	5.657E+00	2.834E+01	4.855E+01	0.000E+00	NOT IDENT.
NB-94	1.575E-03	7.644E-02	1.288E-01	0.000E+00	NOT IDENT.
NB-95	5.738E-02	9.127E-02	1.652E-01	0.000E+00	NOT IDENT.
NB-95M	3.098E-01	2.491E-01	4.000E-01	0.000E+00	NOT IDENT.
ZR-95	1.477E-01	1.523E-01	2.815E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.612E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.080E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.591E+00	3.712E+00	6.673E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.150E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-4.003E-02	6.155E-02	1.044E-01	0.000E+00	NOT IDENT.
RH-102	-7.389E-02	7.441E-02	1.225E-01	0.000E+00	NOT IDENT.
RU-103	3.230E-02	8.185E-02	1.448E-01	0.000E+00	FAIL ABUN
RH-106	-1.586E-01	7.025E-01	1.175E+00	0.000E+00	NOT IDENT.
RU-106	-1.586E-01	7.023E-01	1.175E+00	0.000E+00	NOT IDENT.
AG-108M	-2.576E-03	8.147E-02	1.424E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	1.101E-01	2.038E-01	0.000E+00	NOT IDENT.
IN-111	-4.238E-01	3.454E-01	5.357E-01	0.000E+00	NOT IDENT.
IN-113M	7.611E-02	9.667E-02	1.766E-01	0.000E+00	NOT IDENT.
SN-113	7.611E-02	9.667E-02	1.766E-01	0.000E+00	NOT IDENT.
IN-114M	2.003E-01	3.354E-01	5.321E-01	0.000E+00	NOT IDENT.
CD-115	-2.707E-01	2.173E+00	3.716E+00	0.000E+00	NOT IDENT.
SN-117M	-4.257E-02	6.318E-02	1.087E-01	0.000E+00	NOT IDENT.
SB-122	2.884E-02	6.243E-01	1.073E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.997E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.062E-02	4.568E-02	8.029E-02	0.000E+00	NOT IDENT.
I-124	-5.812E-02	4.532E-01	6.582E-01	0.000E+00	NOT IDENT.
SB-124	3.798E-02	1.206E-01	2.155E-01	0.000E+00	FAIL ABUN
SB-125	1.032E-01	2.233E-01	3.998E-01	0.000E+00	NOT IDENT.
TE-125M	-6.671E+00	1.252E+01	2.222E+01	0.000E+00	NOT IDENT.
I-126	-3.988E-02	3.123E-01	4.487E-01	0.000E+00	NOT IDENT.
SB-126	-7.017E-03	2.172E-01	3.808E-01	0.000E+00	FAIL ABUN
SB-127	-2.918E-01	7.770E-01	1.273E+00	0.000E+00	NOT IDENT.
XE-127	5.994E-02	8.395E-02	1.401E-01	0.000E+00	NOT IDENT.
I-131	1.083E-01	1.219E-01	2.253E-01	0.000E+00	NOT IDENT.
TE-132	7.492E-04	2.598E-01	4.507E-01	0.000E+00	FAIL ABUN
BA-133	6.431E-02	1.001E-01	1.611E-01	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.714E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.409E-01	1.230E-01	2.266E-01	0.000E+00	NOT IDENT.
CS-135	2.307E-01	3.266E-01	5.764E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.418E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.572E-01	1.995E-01	3.558E-01	0.000E+00	NOT IDENT.
CE-139	6.566E-02	5.207E-02	9.612E-02	0.000E+00	NOT IDENT.
BA-140	-1.722E-01	3.952E-01	6.550E-01	0.000E+00	NOT IDENT.
LA-140	7.041E-03	9.681E-02	1.661E-01	0.000E+00	NOT IDENT.
CE-141	-7.833E-02	8.814E-02	1.500E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	6.266E+00	1.008E+01	0.000E+00	FAIL ABUN
CE-144	-2.861E-01	4.013E-01	6.023E-01	0.000E+00	NOT IDENT.
PM-144	2.805E-02	7.967E-02	1.373E-01	0.000E+00	NOT IDENT.
PR-144	1.893E+00	5.377E+00	9.266E+00	0.000E+00	NOT IDENT.
PM-146	2.801E-02	1.057E-01	1.868E-01	0.000E+00	NOT IDENT.
ND-147	3.954E-04	7.839E-01	1.350E+00	0.000E+00	NOT IDENT.
PM-149	-6.283E-02	1.527E+01	2.755E+01	0.000E+00	NOT IDENT.
EU-152	1.010E-01	2.245E-01	3.582E-01	0.000E+00	FAIL ABUN
GD-153	4.989E-02	1.149E-01	1.888E-01	0.000E+00	NOT IDENT.
EU-154	-1.329E-01	1.988E-01	3.012E-01	0.000E+00	FAIL ABUN

EU-155	8.369E-02	1.590E-01	2.945E-01	0.000E+00	FAIL ABUN
TB-160	2.964E-02	3.564E-01	6.174E-01	0.000E+00	FAIL ABUN
HO-166M	2.001E-02	1.360E-01	2.413E-01	0.000E+00	NOT IDENT.
LU-176	1.419E-02	4.934E-02	8.973E-02	0.000E+00	FAIL ABUN
LU-177	1.261E+00	1.049E+00	1.667E+00	0.000E+00	FAIL ABUN
LU-177M	1.091E-01	3.837E-01	6.835E-01	0.000E+00	FAIL ABUN
HF-181	-6.177E-02	9.145E-02	1.528E-01	0.000E+00	FAIL ABUN
W-181	-3.043E-01	3.568E-01	5.673E-01	0.000E+00	NOT IDENT.
TA-182	-3.200E-01	2.592E-01	3.578E-01	0.000E+00	NOT IDENT.
RE-183	-1.431E-01	1.790E-01	3.058E-01	0.000E+00	FAIL ABUN
RE-184	-4.365E-01	4.465E-01	7.278E-01	0.000E+00	FAIL ABUN
OS-185	5.543E-02	9.498E-02	1.672E-01	0.000E+00	FAIL ABUN
RE-188	2.560E-01	2.651E-01	4.876E-01	0.000E+00	NOT IDENT.
W-188	-3.031E+00	1.458E+01	2.258E+01	0.000E+00	NOT IDENT.
IR-192	4.568E-02	6.271E-02	1.160E-01	0.000E+00	FAIL ABUN
AU-195	7.955E-02	3.349E-01	5.445E-01	0.000E+00	FAIL ABUN
TL-200	3.016E+00	6.675E+00	1.209E+01	0.000E+00	NOT IDENT.
TL-201	2.414E+00	2.181E+00	4.006E+00	0.000E+00	FAIL ABUN
TL-202	-3.918E-03	1.073E-01	1.873E-01	0.000E+00	NOT IDENT.
HG-203	9.709E-03	6.857E-02	1.247E-01	0.000E+00	NOT IDENT.
BI-207	6.047E-02	1.471E-01	2.563E-01	0.000E+00	FAIL ABUN
TL-207	7.628E-01	1.334E+00	2.436E+00	0.000E+00	FAIL ABUN
PO-209	5.259E+00	2.223E+01	3.883E+01	0.000E+00	NOT IDENT.
BI-210	2.199E+00	1.374E+00	2.488E+00	0.000E+00	NOT IDENT.
PB-210	2.199E+00	1.374E+00	2.488E+00	0.000E+00	NOT IDENT.
PO-210	2.199E+00	1.371E+00	2.488E+00	0.000E+00	NOT IDENT.
PB-211	-1.318E+00	2.227E+00	3.538E+00	0.000E+00	NOT IDENT.
BI-212	5.698E-01	6.664E-01	1.225E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	3.296E-01	4.112E-01	0.000E+00	FAIL ABUN
PO-215	7.628E-01	1.334E+00	2.436E+00	0.000E+00	FAIL ABUN
RN-219	-7.704E-02	9.120E-01	1.599E+00	0.000E+00	NOT IDENT.
RN-220	4.294E+00	5.794E+01	1.000E+02	0.000E+00	NOT IDENT.
RA-223	7.628E-01	1.334E+00	2.436E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.905E+00	3.186E+00	0.000E+00	NOT IDENT.
RA-226	0.000E+00	3.296E-01	4.112E-01	0.000E+00	FAIL ABUN
AC-227	8.432E-01	7.433E-01	1.330E+00	0.000E+00	NOT IDENT.
TH-227	8.432E-01	7.475E-01	1.330E+00	0.000E+00	FAIL ABUN
TH-229	2.167E-01	9.825E-01	1.679E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	3.296E-01	4.112E-01	0.000E+00	FAIL ABUN
PA-231	4.274E-01	2.928E+00	5.320E+00	0.000E+00	NOT IDENT.
TH-231	7.628E-01	1.334E+00	2.436E+00	0.000E+00	FAIL ABUN
U-231	1.824E-01	4.432E-01	7.275E-01	0.000E+00	FAIL ABUN
PA-233	-5.171E-02	1.252E-01	2.200E-01	0.000E+00	FAIL ABUN
PA-234	6.488E-01	9.427E-01	1.666E+00	0.000E+00	FAIL ABUN
PA-234M	-4.339E+00	1.760E+01	2.954E+01	0.000E+00	NOT IDENT.
TH-234	-6.440E-01	1.210E+00	1.955E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	3.296E-01	4.112E-01	0.000E+00	FAIL ABUN
U-235	1.641E-01	3.432E-01	6.198E-01	0.000E+00	FAIL ABUN
NP-236	-2.205E-02	1.357E-01	2.392E-01	0.000E+00	FAIL ABUN
NP-237	0.000E+00	2.547E+00	1.353E+00	0.000E+00	NOT IDENT.
U-238	-6.440E-01	1.210E+00	1.955E+00	0.000E+00	FAIL ABUN
NP-239	1.221E-01	3.387E-01	5.480E-01	0.000E+00	FAIL ABUN
CM-243	1.805E-01	1.431E-01	2.705E-01	0.000E+00	FAIL ABUN
CM-247	3.919E-02	8.145E-02	1.467E-01	0.000E+00	NOT IDENT.
CF-249	-4.038E-02	8.902E-02	1.537E-01	0.000E+00	NOT IDENT.
CF-251	1.938E-01	2.163E-01	3.949E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:19:46.65

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871425.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 08:19:11.
Sample ID         : G1201871425          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.96  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881219                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	488	85.51*	7.072E+00	3.989E-01	4.065E-01	21.39
	136.48	102	10.60	6.738E+00	7.066E-01	7.201E-01	72.22
CO-60	1173.22	1824	100.00	1.209E+00	7.466E+00	7.485E+00	7.85
	1332.49	1624	100.00*	1.084E+00	7.416E+00	7.436E+00	7.80
AS-73	53.44	396	10.30*	7.910E+00	2.403E+00	2.561E+00	43.07
CD-109	88.03	3200	3.72*	7.845E+00	5.425E+01	5.485E+01	9.08
SN-126	64.28	------	9.60	8.070E+00	------ Line Not Found		------
	86.94	3200	8.90	7.845E+00	2.267E+01	2.267E+01	41.46
	87.57	3200	37.00*	7.845E+00	5.454E+00	5.454E+00	9.08
BA-137M	661.65	2234	89.98*	2.016E+00	6.094E+00	6.096E+00	8.15
CS-137	661.65	2234	85.12*	2.016E+00	6.442E+00	6.444E+00	8.17
TM-171	51.35	300	0.29	7.851E+00	6.525E+01	6.572E+01	52.95
	52.39	300	0.52	7.851E+00	3.639E+01	3.665E+01	52.95
	59.40	9289	0.21	8.029E+00	2.688E+03	2.707E+03	8.61
	66.72	------	0.16*	8.075E+00	------ Line Not Found		------
TL-208	277.35	------	6.80	4.261E+00	------ Line Not Found		------
	510.84	38	21.60	2.546E+00	3.436E-01	3.436E-01	158.18
	583.14	190	84.20*	2.259E+00	4.954E-01	4.954E-01	29.43
	860.37	32	12.46	1.589E+00	8.050E-01	8.050E-01	108.50
BI-211	72.87	------	1.27	8.052E+00	------ Line Not Found		------
	351.07	245	12.94*	3.517E+00	2.666E+00	2.666E+00	34.64
PB-212	74.81	314	10.70	8.036E+00	1.805E+00	1.805E+00	32.85
	77.11	488	18.00	8.013E+00	1.674E+00	1.674E+00	20.17
	87.30	3200	8.00	7.845E+00	2.523E+01	2.523E+01	13.51
	238.63	622	44.60*	4.773E+00	1.445E+00	1.445E+00	17.66
	300.09	------	3.41	4.005E+00	------ Line Not Found		------
PO-212	74.81	314	10.70	8.036E+00	1.805E+00	1.805E+00	32.85
	77.11	488	18.00	8.013E+00	1.674E+00	1.674E+00	20.17
	87.30	3200	8.00	7.845E+00	2.523E+01	2.523E+01	13.51
	115.19	------	0.60	7.241E+00	------ Line Not Found		------
	238.63	622	44.60*	4.773E+00	1.445E+00	1.445E+00	17.66
	300.09	------	3.41	4.005E+00	------ Line Not Found		------

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	314	6.21	8.036E+00	3.111E+00	3.111E+00	32.35
	77.11	488	10.50	8.013E+00	2.869E+00	2.869E+00	21.56
	87.30	3200	4.67	7.845E+00	4.321E+01	4.321E+01	11.91
	241.98	------	7.49	4.724E+00	------ Line Not Found		------
	295.21	203	19.20	4.057E+00	1.290E+00	1.290E+00	34.83
	351.92	245	37.20*	3.517E+00	9.273E-01	9.273E-01	35.03
PO-214	74.81	314	6.21	8.036E+00	3.111E+00	3.111E+00	32.35
	77.11	488	10.50	8.013E+00	2.869E+00	2.869E+00	21.56
	87.30	3200	4.67	7.845E+00	4.321E+01	4.321E+01	11.91
	241.98	------	7.49	4.724E+00	------ Line Not Found		------
	295.21	203	19.20	4.057E+00	1.290E+00	1.290E+00	34.83
	351.92	245	37.20*	3.517E+00	9.273E-01	9.273E-01	35.03
PO-216	74.81	314	10.70	8.036E+00	1.805E+00	1.805E+00	32.85
	77.11	488	18.00	8.013E+00	1.674E+00	1.674E+00	20.17
	87.30	3200	8.00	7.845E+00	2.523E+01	2.523E+01	13.51
	238.63	622	44.60*	4.773E+00	1.445E+00	1.445E+00	17.66
	300.09	------	3.41	4.005E+00	------ Line Not Found		------
PO-218	74.81	314	6.21	8.036E+00	3.111E+00	3.111E+00	32.35
	77.11	488	10.50	8.013E+00	2.869E+00	2.869E+00	21.56
	87.30	3200	4.67	7.845E+00	4.321E+01	4.321E+01	11.91
	241.98	------	7.49	4.724E+00	------ Line Not Found		------
	295.21	203	19.20	4.057E+00	1.290E+00	1.290E+00	34.83
	351.92	245	37.20*	3.517E+00	9.273E-01	9.273E-01	35.03
AC-228	338.32	127	11.40	3.633E+00	1.517E+00	1.517E+00	60.49
	911.07	119	27.70*	1.510E+00	1.409E+00	1.409E+00	44.95
	969.11	121	16.60	1.430E+00	2.515E+00	2.515E+00	58.27
RA-228	338.32	127	11.40	3.633E+00	1.517E+00	1.517E+00	60.49
	911.07	119	27.70*	1.510E+00	1.409E+00	1.409E+00	44.95
	969.11	121	16.60	1.430E+00	2.515E+00	2.515E+00	58.27
TH-228	84.40	------	1.21	7.908E+00	------ Line Not Found		------
	238.60	622	44.60*	4.773E+00	1.445E+00	1.445E+00	17.66
	300.10	------	3.41	4.005E+00	------ Line Not Found		------
TH-232	338.32	127	11.40	3.633E+00	1.517E+00	1.517E+00	45.07
	911.07	119	27.70*	1.510E+00	1.409E+00	1.409E+00	44.95
	969.11	121	16.60	1.430E+00	2.515E+00	2.515E+00	58.27
AM-241	59.54	9289	35.90*	8.029E+00	1.595E+01	1.595E+01	9.24
AM-243	74.67	314	66.00*	8.036E+00	2.927E-01	2.927E-01	31.49
	86.72	3200	0.34	7.845E+00	6.006E+02	6.006E+02	9.08
	117.66	------	0.55	7.181E+00	------ Line Not Found		------
	142.18	------	0.13	6.593E+00	------ Line Not Found		------
ANH-511	511.00	38	100.00*	2.546E+00	7.421E-02	7.421E-02	157.96

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

Total number of lines in spectrum 26
Number of unidentified lines 0
Number of lines tentatively identified by NID 26 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	3.989E-01	4.065E-01	0.870E-01	21.39	
CO-60	5.27Y	1.00	7.416E+00	7.436E+00	0.580E+00	7.80	
AS-73	80.30D	1.07	2.403E+00	2.561E+00	1.103E+00	43.07	
CD-109	464.00D	1.01	5.425E+01	5.485E+01	0.498E+01	9.08	
SN-126	1.00E+05Y	1.00	5.454E+00	5.454E+00	0.495E+00	9.08	
BA-137M	30.17Y	1.00	6.094E+00	6.096E+00	0.497E+00	8.15	
CS-137	30.17Y	1.00	6.442E+00	6.444E+00	0.526E+00	8.17	
TM-171	1.92Y	1.01	3.639E+01	3.665E+01	1.941E+01	52.95	K
TL-208	1.41E+10Y	1.00	4.954E-01	4.954E-01	1.458E-01	29.43	
BI-211	7.04E+08Y	1.00	2.666E+00	2.666E+00	0.923E+00	34.64	
PB-212	1.41E+10Y	1.00	1.445E+00	1.445E+00	0.255E+00	17.66	
PO-212	1.41E+10Y	1.00	1.445E+00	1.445E+00	0.255E+00	17.66	
PB-214	1600.00Y	1.00	9.273E-01	9.273E-01	3.248E-01	35.03	
PO-214	1600.00Y	1.00	9.273E-01	9.273E-01	3.248E-01	35.03	
PO-216	1.41E+10Y	1.00	1.445E+00	1.445E+00	0.255E+00	17.66	
PO-218	1600.00Y	1.00	9.273E-01	9.273E-01	3.248E-01	35.03	
AC-228	1.41E+10Y	1.00	1.409E+00	1.409E+00	0.633E+00	44.95	
RA-228	1.41E+10Y	1.00	1.409E+00	1.409E+00	0.633E+00	44.95	
TH-228	1.41E+10Y	1.00	1.445E+00	1.445E+00	0.255E+00	17.66	
TH-232	1.41E+10Y	1.00	1.409E+00	1.409E+00	0.633E+00	44.95	
AM-241	432.20Y	1.00	1.595E+01	1.595E+01	0.147E+01	9.24	
AM-243	7380.00Y	1.00	2.927E-01	2.927E-01	0.922E-01	31.49	
ANH-511	1.00E+09Y	1.00	7.421E-02	7.421E-02	11.72E-02	157.96	
		Total Activity :	1.511E+02	1.522E+02			

Grand Total Activity : 1.511E+02 1.522E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
7	49.57	404	1153	1.91	100.31	96	35	1.12E-01	30.5	7.77E+00	T
0	93.56	210	508	1.63	188.27	184	12	5.84E-02	46.4	7.74E+00	T
0	186.14	196	394	3.05	373.34	368	13	5.45E-02	44.3	5.65E+00	T
0	209.04	69	255	0.94	419.11	414	8	1.91E-02	84.3	5.24E+00	T
0	609.29	233	145	1.98	1219.08	1211	19	6.47E-02	28.1	2.17E+00	T
0	1764.43	29	11	1.79	3526.42	3518	15	8.08E-03	64.2	8.61E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 09:19:51.60

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*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871425.CNF;1 *
* Acquisition date  : 7-JUL-2009 08:19:11.  Detector SN#     :             *
* Detector ID       : GAM05                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 01:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 01:00:01.96          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201871425           Analyst initials: MXR1         *
* Batch Number      : 881219                Sample Quantity : 1.51730E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00.5MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	4.065E-01	8.695E-02	6.862E-02	9.736E-03	5.924
CO-60	7.436E+00	5.797E-01	1.172E-01	6.779E-03	63.471
AS-73	2.561E+00	1.103E+00	8.428E-01	6.344E-02	3.039
CD-109	5.485E+01	4.980E+00	1.950E+00	1.485E-01	28.131
SN-126	5.454E+00	4.952E-01	1.936E-01	1.474E-02	28.170
BA-137M	6.096E+00	4.970E-01	1.320E-01	8.683E-03	46.170
CS-137	6.444E+00	5.265E-01	1.396E-01	9.209E-03	46.170
TM-171	3.665E+01	1.941E+01	4.568E+01	3.670E+00	0.802
TL-208	4.954E-01	1.458E-01	1.221E-01	8.985E-03	4.057
BI-211	2.666E+00	9.233E-01	7.044E-01	5.582E-02	3.784
PB-212	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
PO-212	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
PB-214	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
PO-214	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
PO-216	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.162
PO-218	9.273E-01	3.248E-01	2.355E-01	2.229E-02	3.938
AC-228	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124
RA-228	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.445E+00	2.552E-01	2.018E-01	2.175E-02	7.163
TH-232	1.409E+00	6.332E-01	6.633E-01	8.209E-02	2.124
AM-241	1.595E+01	1.473E+00	2.247E-01	2.010E-02	70.973
AM-243	2.927E-01	9.217E-02	1.101E-01	8.623E-03	2.659
ANH-511	7.421E-02	1.172E-01	1.137E-01	7.280E-03	0.652

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	9.321E-01		7.314E-01	1.275E+00	9.133E-02	0.731
NA-22	-6.415E-02		7.381E-02	1.051E-01	6.119E-03	-0.611
NA-24	2.476E-06		9.695E-05	Half-Life too short		
AL-26	9.822E-03		5.256E-02	8.970E-02	5.147E-03	0.110
K-40	8.505E-01		6.696E-01	1.313E+00	8.167E-02	0.648
TI-44	3.087E-01	+	6.226E-02	9.457E-02	7.338E-03	3.265
SC-46	-6.909E-02		1.106E-01	1.762E-01	1.770E-02	-0.392
V-48	1.525E-01		1.497E-01	2.611E-01	2.391E-02	0.584
CR-51	-2.875E-01		6.133E-01	1.003E+00	8.873E-02	-0.287
MN-52	2.247E-02		1.355E-01	2.321E-01	1.359E-02	0.097
MN-54	-9.222E-03		1.004E-01	1.661E-01	1.522E-02	-0.056
CO-56	1.848E-03		9.716E-02	1.616E-01	1.512E-02	0.011
CO-58	-1.732E-02		9.136E-02	1.503E-01	1.323E-02	-0.115
FE-59	-4.212E-02		2.127E-01	3.424E-01	2.773E-02	-0.123
ZN-65	-1.907E-01		2.408E-01	3.707E-01	2.590E-02	-0.514
GE-68	-9.552E-01		3.495E+00	5.607E+00	4.306E-01	-0.170
AS-74	8.842E-02		1.445E-01	2.443E-01	1.607E-02	0.362
SE-75	-1.290E-02		8.649E-02	1.372E-01	1.310E-02	-0.094
BR-77	-3.100E-01		2.552E+00	4.140E+00	2.662E-01	-0.075
SR-82	5.880E-02		7.062E-01	1.186E+00	9.788E-02	0.050
RB-83	7.316E-03		1.530E-01	2.508E-01	1.613E-02	0.029
RB-84	-4.565E-02		1.685E-01	2.743E-01	2.720E-02	-0.166
KR-85	2.245E+01		1.850E+01	2.861E+01	1.834E+00	0.785
SR-85	1.061E-01		8.738E-02	1.351E-01	8.663E-03	0.785
RB-86	-6.211E-01		1.672E+00	2.662E+00	2.048E-01	-0.233
Y-88	4.324E-03		6.037E-02	1.003E-01	5.739E-03	0.043
ZR-88	2.093E-02		6.758E-02	1.138E-01	6.625E-03	0.184
Y-91	5.657E+00		2.892E+01	4.795E+01	2.786E+00	0.118
NB-94	1.575E-03		7.800E-02	1.254E-01	8.972E-03	0.013
NB-95	5.738E-02		9.313E-02	1.613E-01	1.304E-02	0.356
NB-95M	3.098E-01		2.542E-01	3.791E-01	4.147E-02	0.817
ZR-95	1.477E-01		1.554E-01	2.746E-01	2.440E-02	0.538
NB-97	8.506E-04		8.223E-05	Half-Life too short		
ZR-97	1.764E-03		1.061E-03	Half-Life too short		
MO-99	1.591E+00		3.787E+00	6.507E+00	9.552E-01	0.244
TC-99M	8.236E+00		1.607E+01	Half-Life too short		
RH-101	-4.003E-02		6.281E-02	9.851E-02	9.838E-03	-0.406
RH-102	-7.389E-02		7.592E-02	1.181E-01	7.399E-03	-0.626

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RU-103	3.230E-02		8.352E-02	1.398E-01	1.804E-02	0.231
RH-106	-1.586E-01		7.168E-01	1.140E+00	1.385E-01	-0.139
RU-106	-1.586E-01		7.166E-01	1.140E+00	7.518E-02	-0.139
AG-108M	-2.576E-03		8.313E-02	1.370E-01	8.964E-03	-0.019
AG-110M	4.596E-01		1.123E-01	1.982E-01	1.370E-02	2.319
IN-111	-4.238E-01		3.524E-01	5.082E-01	4.951E-02	-0.834
IN-113M	7.611E-02		9.864E-02	1.695E-01	1.051E-02	0.449
SN-113	7.611E-02		9.864E-02	1.695E-01	1.051E-02	0.449
IN-114M	2.003E-01		3.422E-01	5.016E-01	5.009E-02	0.399
CD-115	-2.707E-01		2.217E+00	3.593E+00	2.318E-01	-0.075
SN-117M	-4.257E-02		6.447E-02	1.021E-01	1.097E-02	-0.417
SB-122	2.884E-02		6.371E-01	1.039E+00	6.792E-02	0.028
I-123	-1.162E-04		2.549E-04	Half-Life too short		
TE-123M	-1.062E-02		4.661E-02	7.538E-02	8.100E-03	-0.141
I-124	-5.812E-02		4.624E-01	6.385E-01	4.204E-02	-0.091
SB-124	3.798E-02		1.230E-01	2.147E-01	1.359E-02	0.177
SB-125	1.032E-01		2.279E-01	3.845E-01	2.411E-02	0.268
TE-125M	-6.671E+00		1.278E+01	2.068E+01	2.655E+00	-0.323
I-126	-3.988E-02		3.186E-01	4.364E-01	2.898E-02	-0.091
SB-126	-7.017E-03		2.216E-01	3.711E-01	2.752E-02	-0.019
SB-127	-2.918E-01		7.929E-01	1.239E+00	9.959E-02	-0.236
XE-127	5.994E-02		8.567E-02	1.323E-01	1.320E-02	0.453
I-131	1.083E-01		1.244E-01	2.158E-01	1.610E-02	0.502
TE-132	7.492E-04		2.651E-01	4.268E-01	6.571E-02	0.002
BA-133	6.431E-02		1.022E-01	1.543E-01	1.905E-02	0.417
I-133	-1.390E-06		1.385E-05	Half-Life too short		
CS-134	1.409E-01		1.255E-01	2.214E-01	1.906E-02	0.637
CS-135	2.307E-01		3.332E-01	5.480E-01	5.863E-02	0.421
I-135	9.126E+00		1.234E+01	Half-Life too short		
CS-136	1.572E-01		2.036E-01	3.501E-01	2.997E-02	0.449
CE-139	6.566E-02		5.313E-02	9.032E-02	8.968E-03	0.727
BA-140	-1.722E-01		4.032E-01	6.335E-01	2.068E-01	-0.272
LA-140	7.041E-03		9.879E-02	1.653E-01	9.713E-03	0.043
CE-141	-7.833E-02		8.994E-02	1.405E-01	1.718E-02	-0.557
CE-143	1.159E+01		6.394E+00	9.607E+00	2.070E+00	1.206
CE-144	-2.861E-01		4.095E-01	5.631E-01	1.043E-01	-0.508
PM-144	2.805E-02		8.130E-02	1.337E-01	9.448E-03	0.210
PR-144	1.893E+00		5.486E+00	9.022E+00	6.375E-01	0.210
PM-146	2.801E-02		1.079E-01	1.799E-01	1.597E-02	0.156
ND-147	3.954E-04		7.999E-01	1.306E+00	1.804E-01	0.000
PM-149	-6.283E-02		1.558E+01	2.623E+01	4.153E+00	-0.002
EU-152	1.010E-01		2.291E-01	3.427E-01	2.818E-02	0.295
GD-153	4.989E-02		1.172E-01	1.752E-01	1.624E-02	0.285
EU-154	-1.329E-01		2.028E-01	2.979E-01	2.785E-02	-0.446
EU-155	8.369E-02		1.622E-01	2.738E-01	2.966E-02	0.306
TB-160	2.964E-02		3.637E-01	6.047E-01	5.975E-02	0.049
HO-166M	2.001E-02		1.387E-01	2.351E-01	1.713E-02	0.085
LU-176	1.419E-02		5.035E-02	8.559E-02	7.454E-03	0.166

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	1.261E+00	+	1.070E+00	1.575E+00	1.571E-01	0.800
LU-177M	1.091E-01		3.915E-01	6.568E-01	3.909E-02	0.166
HF-181	-6.177E-02		9.331E-02	1.474E-01	9.277E-03	-0.419
W-181	-3.043E-01		3.641E-01	5.216E-01	4.216E-02	-0.583
TA-182	-3.200E-01		2.645E-01	3.535E-01	2.055E-02	-0.905
RE-183	-1.431E-01		1.826E-01	2.872E-01	2.968E-02	-0.498
RE-184	-4.365E-01		4.556E-01	6.909E-01	6.675E-02	-0.632
OS-185	5.543E-02		9.692E-02	1.624E-01	1.070E-02	0.341
RE-188	2.560E-01		2.705E-01	4.575E-01	5.093E-02	0.560
W-188	-3.031E+00		1.488E+01	2.151E+01	1.950E+00	-0.141
IR-192	4.568E-02		6.399E-02	1.107E-01	9.396E-03	0.413
AU-195	7.955E-02		3.417E-01	5.054E-01	4.820E-02	0.157
TL-200	3.016E+00		6.811E+00	1.159E+01	7.882E-01	0.260
TL-201	2.414E+00		2.225E+00	3.765E+00	3.738E-01	0.641
TL-202	-3.918E-03		1.095E-01	1.802E-01	1.099E-02	-0.022
HG-203	9.709E-03		6.997E-02	1.187E-01	1.128E-02	0.082
BI-207	6.047E-02		1.501E-01	2.523E-01	1.998E-02	0.240
TL-207	7.628E-01		1.361E+00	2.326E+00	4.080E-01	0.328
PO-209	5.259E+00		2.269E+01	3.806E+01	3.869E+00	0.138
BI-210	2.199E+00		1.402E+00	2.270E+00	1.771E-01	0.969
PB-210	2.199E+00		1.402E+00	2.270E+00	1.771E-01	0.969
PO-210	2.199E+00		1.399E+00	2.270E+00	1.527E-01	0.969
PB-211	-1.318E+00		2.272E+00	3.398E+00	2.119E+00	-0.388
BI-212	5.698E-01		6.800E-01	1.194E+00	1.083E-01	0.477
BI-214	1.147E+00	+	3.363E-01	3.990E-01	3.344E-02	2.876
PO-215	7.628E-01		1.361E+00	2.326E+00	4.080E-01	0.328
RN-219	-7.704E-02		9.307E-01	1.536E+00	2.095E-01	-0.050
RN-220	4.294E+00		5.912E+01	9.678E+01	6.297E+00	0.044
RA-223	7.628E-01		1.361E+00	2.326E+00	4.080E-01	0.328
RA-224	8.072E+00		1.944E+00	3.021E+00	2.956E-01	2.672
RA-226	1.147E+00	+	3.363E-01	3.990E-01	3.344E-02	2.876
AC-227	8.432E-01		7.585E-01	1.263E+00	2.012E-01	0.668
TH-227	8.432E-01		7.627E-01	1.263E+00	2.344E-01	0.668
TH-229	2.167E-01		1.003E+00	1.584E+00	1.582E-01	0.137
TH-230	1.147E+00	+	3.363E-01	3.990E-01	3.344E-02	2.876
PA-231	4.274E-01		2.988E+00	5.064E+00	7.860E-01	0.084
TH-231	7.628E-01		1.361E+00	2.326E+00	4.080E-01	0.328
U-231	1.824E-01		4.523E-01	6.749E-01	6.065E-02	0.270
PA-233	-5.171E-02		1.277E-01	2.100E-01	1.854E-02	-0.246
PA-234	6.488E-01		9.620E-01	1.635E+00	3.149E-01	0.397
PA-234M	-4.339E+00		1.796E+01	2.903E+01	3.311E+00	-0.149
TH-234	-6.440E-01		1.234E+00	1.797E+00	3.193E-01	-0.358
U-234	1.147E+00	+	3.363E-01	3.990E-01	3.344E-02	2.876
U-235	1.641E-01		3.502E-01	5.805E-01	1.136E-01	0.283
NP-236	-2.205E-02		1.385E-01	2.246E-01	2.372E-02	-0.098
NP-237	1.148E+01		2.599E+00	1.252E+00	2.755E-01	9.162
U-238	-6.440E-01		1.234E+00	1.797E+00	3.193E-01	-0.358
NP-239	1.221E-01		3.456E-01	5.108E-01	6.692E-02	0.239

Sample ID : G1201871425 Acquisition date : 7-JUL-2009 08:19:11

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.805E-01		1.461E-01	2.514E-01	2.628E-02	0.718
CM-247	3.919E-02		8.311E-02	1.409E-01	8.292E-03	0.278
CF-249	-4.038E-02		9.084E-02	1.474E-01	8.817E-03	-0.274
CF-251	1.938E-01		2.207E-01	3.717E-01	3.702E-02	0.521

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871425          *
* Acquisition date  :  7-JUL-2009 08:19:11 Detector SN#     :               *
* Detector ID       : GAM05                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 01:00:01.96      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871425          Analyst initials: MXR1           *
* Batch Number      : 881219               Sample Quantity : 1.5173E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	4.065E-01	8.521E-02	3.680E-02	4.348E-02
CO-60	7.436E+00	5.681E-01	5.919E-02	2.899E-01
AS-73	2.561E+00	1.081E+00	4.607E-01	5.514E-01
CD-109	5.485E+01	4.881E+00	1.054E+00	2.490E+00
SN-126	5.454E+00	4.853E-01	1.046E-01	2.476E-01
BA-137M	6.096E+00	4.870E-01	6.794E-02	2.485E-01
CS-137	6.444E+00	5.159E-01	7.182E-02	2.632E-01
TM-171	4.256E+00	3.006E+01	2.484E+01	1.533E+01
TL-208	4.954E-01	1.429E-01	6.303E-02	7.290E-02
BI-211	2.666E+00	9.049E-01	3.683E-01	4.617E-01
PB-212	1.445E+00	2.501E-01	1.065E-01	1.276E-01
PO-212	1.445E+00	2.501E-01	1.065E-01	1.276E-01
PB-214	9.273E-01	3.183E-01	1.231E-01	1.624E-01
PO-214	9.273E-01	3.183E-01	1.231E-01	1.624E-01
PO-216	1.445E+00	2.501E-01	1.065E-01	1.276E-01
PO-218	9.273E-01	3.183E-01	1.231E-01	1.624E-01
AC-228	1.409E+00	6.206E-01	3.385E-01	3.166E-01
RA-228	1.409E+00	6.206E-01	3.385E-01	3.166E-01
TH-228	1.445E+00	2.501E-01	1.065E-01	1.276E-01
TH-232	1.409E+00	6.206E-01	3.385E-01	3.166E-01
AM-241	1.595E+01	1.444E+00	1.225E-01	7.367E-01
AM-243	2.927E-01	9.033E-02	5.972E-02	4.609E-02
ANH-511	7.421E-02	1.149E-01	5.891E-02	5.862E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	9.321E-01	7.167E-01	6.615E-01	3.657E-01	NOT IDENT.
NA-22	-6.415E-02	7.234E-02	5.314E-02	3.691E-02	NOT IDENT.
NA-24	2.476E+00	1.900E+02	0.000E+00	9.695E+01	SHORT HLIF
AL-26	9.822E-03	5.151E-02	4.495E-02	2.628E-02	NOT IDENT.

K-40	8.505E-01	6.562E-01	6.618E-01	3.348E-01	NOT IDENT.
TI-44	3.087E-01	6.102E-02	5.124E-02	3.113E-02	FAIL ABUN
SC-46	-6.909E-02	1.084E-01	8.999E-02	5.528E-02	NOT IDENT.
V-48	1.525E-01	1.467E-01	1.329E-01	7.487E-02	NOT IDENT.
CR-51	-2.875E-01	6.011E-01	5.257E-01	3.067E-01	NOT IDENT.
MN-52	2.247E-02	1.328E-01	1.170E-01	6.777E-02	FAIL ABUN
MN-54	-9.222E-03	9.841E-02	8.495E-02	5.021E-02	NOT IDENT.
CO-56	1.848E-03	9.522E-02	8.264E-02	4.858E-02	NOT IDENT.
CO-58	-1.732E-02	8.954E-02	7.691E-02	4.568E-02	NOT IDENT.
FE-59	-4.212E-02	2.085E-01	1.738E-01	1.064E-01	NOT IDENT.
ZN-65	-1.907E-01	2.360E-01	1.881E-01	1.204E-01	NOT IDENT.
GE-68	-9.552E-01	3.425E+00	2.849E+00	1.747E+00	NOT IDENT.
AS-74	8.842E-02	1.416E-01	1.260E-01	7.225E-02	NOT IDENT.
SE-75	-1.290E-02	8.476E-02	7.221E-02	4.325E-02	FAIL ABUN
BR-77	-3.100E-01	2.501E+00	2.143E+00	1.276E+00	FAIL ABUN
SR-82	5.880E-02	6.921E-01	6.079E-01	3.531E-01	NOT IDENT.
RB-83	7.316E-03	1.500E-01	1.298E-01	7.651E-02	NOT IDENT.
RB-84	-4.565E-02	1.651E-01	1.401E-01	8.424E-02	NOT IDENT.
KR-85	2.245E+01	1.813E+01	1.481E+01	9.249E+00	NOT IDENT.
SR-85	1.061E-01	8.563E-02	6.998E-02	4.369E-02	NOT IDENT.
RB-86	-6.211E-01	1.638E+00	1.353E+00	8.359E-01	NOT IDENT.
Y-88	4.324E-03	5.917E-02	5.024E-02	3.019E-02	NOT IDENT.
ZR-88	2.093E-02	6.623E-02	5.930E-02	3.379E-02	NOT IDENT.
Y-91	5.657E+00	2.834E+01	2.429E+01	1.446E+01	NOT IDENT.
NB-94	1.575E-03	7.644E-02	6.441E-02	3.900E-02	NOT IDENT.
NB-95	5.738E-02	9.127E-02	8.266E-02	4.657E-02	NOT IDENT.
NB-95M	3.098E-01	2.491E-01	2.001E-01	1.271E-01	NOT IDENT.
ZR-95	1.477E-01	1.523E-01	1.408E-01	7.768E-02	NOT IDENT.
NB-97	8.506E+02	1.612E+02	0.000E+00	8.223E+01	SHORT HLIF
ZR-97	1.764E+03	2.080E+03	0.000E+00	1.061E+03	SHORT HLIF
MO-99	1.591E+00	3.712E+00	3.338E+00	1.894E+00	NOT IDENT.
TC-99M	8.236E+06	3.150E+07	0.000E+00	1.607E+07	SHORT HLIF
RH-101	-4.003E-02	6.155E-02	5.222E-02	3.141E-02	NOT IDENT.
RH-102	-7.389E-02	7.441E-02	6.128E-02	3.796E-02	NOT IDENT.
RU-103	3.230E-02	8.185E-02	7.243E-02	4.176E-02	FAIL ABUN
RH-106	-1.586E-01	7.025E-01	5.877E-01	3.584E-01	NOT IDENT.
RU-106	-1.586E-01	7.023E-01	5.877E-01	3.583E-01	NOT IDENT.
AG-108M	-2.576E-03	8.147E-02	7.124E-02	4.156E-02	NOT IDENT.
AG-110M	4.596E-01	1.101E-01	1.020E-01	5.616E-02	NOT IDENT.
IN-111	-4.238E-01	3.454E-01	2.680E-01	1.762E-01	NOT IDENT.
IN-113M	7.611E-02	9.667E-02	8.837E-02	4.932E-02	NOT IDENT.
SN-113	7.611E-02	9.667E-02	8.837E-02	4.932E-02	NOT IDENT.
IN-114M	2.003E-01	3.354E-01	2.662E-01	1.711E-01	NOT IDENT.
CD-115	-2.707E-01	2.173E+00	1.859E+00	1.109E+00	NOT IDENT.
SN-117M	-4.257E-02	6.318E-02	5.440E-02	3.223E-02	NOT IDENT.
SB-122	2.884E-02	6.243E-01	5.370E-01	3.185E-01	NOT IDENT.
I-123	-1.162E+02	4.997E+02	0.000E+00	2.549E+02	SHORT HLIF
TE-123M	-1.062E-02	4.568E-02	4.017E-02	2.331E-02	NOT IDENT.
I-124	-5.812E-02	4.532E-01	3.293E-01	2.312E-01	NOT IDENT.
SB-124	3.798E-02	1.206E-01	1.078E-01	6.152E-02	FAIL ABUN
SB-125	1.032E-01	2.233E-01	2.000E-01	1.139E-01	NOT IDENT.
TE-125M	-6.671E+00	1.252E+01	1.112E+01	6.390E+00	NOT IDENT.
I-126	-3.988E-02	3.123E-01	2.245E-01	1.593E-01	NOT IDENT.
SB-126	-7.017E-03	2.172E-01	1.905E-01	1.108E-01	FAIL ABUN
SB-127	-2.918E-01	7.770E-01	6.370E-01	3.965E-01	NOT IDENT.
XE-127	5.994E-02	8.395E-02	7.008E-02	4.283E-02	NOT IDENT.
I-131	1.083E-01	1.219E-01	1.127E-01	6.220E-02	NOT IDENT.
TE-132	7.492E-04	2.598E-01	2.255E-01	1.326E-01	FAIL ABUN
BA-133	6.431E-02	1.001E-01	8.062E-02	5.108E-02	FAIL ABUN
I-133	-1.390E+00	2.714E+01	0.000E+00	1.385E+01	SHORT HLIF
CS-134	1.409E-01	1.230E-01	1.134E-01	6.273E-02	NOT IDENT.
CS-135	2.307E-01	3.266E-01	2.884E-01	1.666E-01	NOT IDENT.
I-135	9.126E+06	2.418E+07	0.000E+00	1.234E+07	SHORT HLIF
CS-136	1.572E-01	1.995E-01	1.780E-01	1.018E-01	NOT IDENT.
CE-139	6.566E-02	5.207E-02	4.809E-02	2.657E-02	NOT IDENT.
BA-140	-1.722E-01	3.952E-01	3.277E-01	2.016E-01	NOT IDENT.
LA-140	7.041E-03	9.681E-02	8.310E-02	4.939E-02	NOT IDENT.
CE-141	-7.833E-02	8.814E-02	7.504E-02	4.497E-02	NOT IDENT.
CE-143	1.159E+01	6.266E+00	5.045E+00	3.197E+00	FAIL ABUN
CE-144	-2.861E-01	4.013E-01	3.013E-01	2.048E-01	NOT IDENT.
PM-144	2.805E-02	7.967E-02	6.869E-02	4.065E-02	NOT IDENT.
PR-144	1.893E+00	5.377E+00	4.636E+00	2.743E+00	NOT IDENT.
PM-146	2.801E-02	1.057E-01	9.346E-02	5.393E-02	NOT IDENT.
ND-147	3.954E-04	7.839E-01	6.756E-01	3.999E-01	NOT IDENT.
PM-149	-6.283E-02	1.527E+01	1.378E+01	7.790E+00	NOT IDENT.
EU-152	1.010E-01	2.245E-01	1.792E-01	1.145E-01	FAIL ABUN
GD-153	4.989E-02	1.149E-01	9.445E-02	5.862E-02	NOT IDENT.
EU-154	-1.329E-01	1.988E-01	1.507E-01	1.014E-01	FAIL ABUN

EU-155	8.369E-02	1.590E-01	1.473E-01	8.110E-02	FAIL ABUN
TB-160	2.964E-02	3.564E-01	3.089E-01	1.819E-01	FAIL ABUN
HO-166M	2.001E-02	1.360E-01	1.207E-01	6.937E-02	NOT IDENT.
LU-176	1.419E-02	4.934E-02	4.489E-02	2.517E-02	FAIL ABUN
LU-177	1.261E+00	1.049E+00	8.342E-01	5.350E-01	FAIL ABUN
LU-177M	1.091E-01	3.837E-01	3.420E-01	1.958E-01	FAIL ABUN
HF-181	-6.177E-02	9.145E-02	7.645E-02	4.666E-02	FAIL ABUN
W-181	-3.043E-01	3.568E-01	2.838E-01	1.820E-01	NOT IDENT.
TA-182	-3.200E-01	2.592E-01	1.790E-01	1.323E-01	NOT IDENT.
RE-183	-1.431E-01	1.790E-01	1.530E-01	9.131E-02	FAIL ABUN
RE-184	-4.365E-01	4.465E-01	3.641E-01	2.278E-01	FAIL ABUN
OS-185	5.543E-02	9.498E-02	8.363E-02	4.846E-02	FAIL ABUN
RE-188	2.560E-01	2.651E-01	2.439E-01	1.352E-01	NOT IDENT.
W-188	-3.031E+00	1.458E+01	1.130E+01	7.438E+00	NOT IDENT.
IR-192	4.568E-02	6.271E-02	5.802E-02	3.199E-02	FAIL ABUN
AU-195	7.955E-02	3.349E-01	2.724E-01	1.709E-01	FAIL ABUN
TL-200	3.016E+00	6.675E+00	6.050E+00	3.406E+00	NOT IDENT.
TL-201	2.414E+00	2.181E+00	2.004E+00	1.113E+00	FAIL ABUN
TL-202	-3.918E-03	1.073E-01	9.369E-02	5.473E-02	NOT IDENT.
HG-203	9.709E-03	6.857E-02	6.238E-02	3.498E-02	NOT IDENT.
BI-207	6.047E-02	1.471E-01	1.282E-01	7.505E-02	FAIL ABUN
TL-207	7.628E-01	1.334E+00	1.219E+00	6.805E-01	FAIL ABUN
PO-209	5.259E+00	2.223E+01	1.943E+01	1.134E+01	NOT IDENT.
BI-210	2.199E+00	1.374E+00	1.245E+00	7.008E-01	NOT IDENT.
PB-210	2.199E+00	1.374E+00	1.245E+00	7.008E-01	NOT IDENT.
PO-210	2.199E+00	1.371E+00	1.245E+00	6.995E-01	NOT IDENT.
PB-211	-1.318E+00	2.227E+00	1.770E+00	1.136E+00	NOT IDENT.
BI-212	5.698E-01	6.664E-01	6.131E-01	3.400E-01	NOT IDENT.
BI-214	1.147E+00	3.296E-01	2.057E-01	1.681E-01	FAIL ABUN
PO-215	7.628E-01	1.334E+00	1.219E+00	6.805E-01	FAIL ABUN
RN-219	-7.704E-02	9.120E-01	8.001E-01	4.653E-01	NOT IDENT.
RN-220	4.294E+00	5.794E+01	5.003E+01	2.956E+01	NOT IDENT.
RA-223	7.628E-01	1.334E+00	1.219E+00	6.805E-01	FAIL ABUN
RA-224	8.072E+00	1.905E+00	1.594E+00	9.718E-01	NOT IDENT.
RA-226	1.147E+00	3.296E-01	2.057E-01	1.681E-01	FAIL ABUN
AC-227	8.432E-01	7.433E-01	6.652E-01	3.792E-01	NOT IDENT.
TH-227	8.432E-01	7.475E-01	6.652E-01	3.814E-01	FAIL ABUN
TH-229	2.167E-01	9.825E-01	8.402E-01	5.013E-01	FAIL ABUN
TH-230	1.147E+00	3.296E-01	2.057E-01	1.681E-01	FAIL ABUN
PA-231	4.274E-01	2.928E+00	2.661E+00	1.494E+00	NOT IDENT.
TH-231	7.628E-01	1.334E+00	1.219E+00	6.805E-01	FAIL ABUN
U-231	1.824E-01	4.432E-01	3.640E-01	2.261E-01	FAIL ABUN
PA-233	-5.171E-02	1.252E-01	1.101E-01	6.386E-02	FAIL ABUN
PA-234	6.488E-01	9.427E-01	8.335E-01	4.810E-01	FAIL ABUN
PA-234M	-4.339E+00	1.760E+01	1.478E+01	8.980E+00	NOT IDENT.
TH-234	-6.440E-01	1.210E+00	9.783E-01	6.171E-01	FAIL ABUN
U-234	1.147E+00	3.296E-01	2.057E-01	1.681E-01	FAIL ABUN
U-235	1.641E-01	3.432E-01	3.101E-01	1.751E-01	FAIL ABUN
NP-236	-2.205E-02	1.357E-01	1.197E-01	6.925E-02	FAIL ABUN
NP-237	1.148E+01	2.547E+00	6.771E-01	1.300E+00	NOT IDENT.
U-238	-6.440E-01	1.210E+00	9.783E-01	6.171E-01	FAIL ABUN
NP-239	1.221E-01	3.387E-01	2.742E-01	1.728E-01	FAIL ABUN
CM-243	1.805E-01	1.431E-01	1.354E-01	7.303E-02	FAIL ABUN
CM-247	3.919E-02	8.145E-02	7.341E-02	4.155E-02	NOT IDENT.
CF-249	-4.038E-02	8.902E-02	7.688E-02	4.542E-02	NOT IDENT.
CF-251	1.938E-01	2.163E-01	1.976E-01	1.103E-01	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	661.8311
46.50	661.8311
46.50	661.8311
48.70	918.0296
49.72	777.8190
51.35	780.3343
52.39	781.9202
52.97	782.7969
53.15	783.0673
53.44	783.5044
54.07	784.4473
56.28	787.7078
56.28	787.7128
57.37	789.3004
57.53	789.5315
57.53	789.5349
57.60	789.6320
57.98	790.1813
57.98	790.1813
59.32	792.1021
59.32	792.1021
59.40	792.2159
59.54	792.4152
59.72	792.6714
60.01	793.0817
61.10	794.6191
61.14	794.6760
61.30	794.9004
63.00	588.4161
63.29	588.7115
63.29	588.7115
63.58	650.0878
64.28	668.3438
65.12	651.8052
65.20	651.8932
65.20	651.8932
66.05	629.4641
66.72	621.3965
66.83	621.5132
66.91	652.3104
67.20	665.7971
67.20	665.7971
67.75	613.9241
67.85	604.2606
68.90	568.6227
68.90	568.6227
69.30	592.2432
69.67	656.7632
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74.81	644.3915
74.97	644.5535
75.28	644.8641
75.70	645.2836
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77.11	646.6882
77.11	646.6882

77.11	646.6882
77.11	646.6882
77.11	646.6882
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79.80	565.7380
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83.78	635.1403
84.21	650.5624
84.40	650.7421
84.90	619.6295
85.43	618.5971
86.29	614.8389
86.50	615.0231
86.54	615.0580
86.59	639.2245
86.72	639.3436
86.79	639.4057
86.94	639.5428
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87.30	597.6134
87.30	597.6134
87.30	597.6134
87.30	597.6134
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87.88	598.1040
88.03	598.2321
88.36	598.5101
88.47	598.6019
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91.11	417.2282
92.29	417.9063
92.38	417.9584
92.38	417.9584
93.35	339.3754
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94.67	339.9824
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94.90	340.0872
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95.87	326.7876
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97.43	295.3322
98.44	309.5159
98.44	309.5159
98.88	302.0290
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99.55	326.8466
99.86	334.6534
100.00	334.7146
100.10	330.1531
103.18	333.3925
103.76	293.1397
105.00	312.9171
105.31	311.1071
108.00	344.1459
109.28	321.3886
111.00	300.6604
111.00	300.6604

111.76	316.5212
112.95	302.3477
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116.30	293.7675
117.00	294.7942
117.00	294.7942
117.66	316.9935
121.11	313.5428
121.62	310.5732
121.78	313.3903
122.06	313.4910
122.32	317.1344
122.32	317.1344
122.32	317.1344
122.32	317.1344
123.07	290.5614
127.23	317.3151
129.76	294.3424
131.20	344.2104
133.02	378.4247
133.54	353.0766
135.34	293.1341
136.00	293.3420
136.25	288.4131
136.48	288.4834
140.51	286.4970
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142.18	283.3135
142.65	287.3396
143.76	274.5483
144.24	274.6853
144.24	274.6853
144.24	274.6853
144.24	274.6853
145.22	310.3423
145.44	309.4015
147.16	297.7907
152.43	287.1539
152.70	290.2859
153.22	316.9319
154.21	287.6606
154.21	287.6606
154.21	287.6606
154.21	287.6606
155.03	259.3078
156.02	258.5378
158.56	300.1555
159.00	0.0000
159.00	279.7859
160.31	285.2707
161.27	305.0486
162.32	316.6639
162.64	316.7603
163.35	309.7724
163.89	296.5452
165.85	277.4945
167.43	285.1367
171.28	275.7899
171.86	303.9468
172.10	304.0139
176.55	238.5725
176.60	238.5830
181.06	246.0240
184.41	290.3959
185.71	305.6397
186.00	305.7174
190.27	271.6305
192.34	326.1964
193.63	292.4730
197.04	277.8633
198.01	306.7472
198.60	327.0738
200.40	309.4872
201.83	310.9183
202.84	292.7051
205.31	314.3723
208.36	305.0891
208.81	291.2786

209.75	282.9271
209.75	282.9271
210.97	288.3521
215.65	276.7232
216.55	293.0840
218.09	293.4388
222.10	298.6870
223.80	309.9148
226.40	250.8163
227.00	260.7074
227.08	255.2921
227.20	255.3154
228.16	281.5957
228.18	281.6017
228.18	281.6017
231.56	287.7731
235.69	265.9221
236.00	267.7332
236.00	267.7332
238.60	348.4603
238.63	348.4676
238.63	348.4676
238.63	348.4676
239.00	348.5646
240.98	298.5770
241.98	260.1283
241.98	260.1283
241.98	260.1283
244.69	311.1270
245.39	317.1577
247.94	242.7197
248.90	215.2867
249.79	209.9014
252.40	240.1748
252.85	253.5385
252.85	253.5385
254.15	0.0000
256.20	196.4303
256.20	196.4303
260.50	219.2863
260.90	216.0062
262.80	234.1287
264.65	234.4267
268.24	245.0784
268.79	221.6593
269.46	240.8022
269.46	240.8022
269.46	240.8022
269.46	240.8022
271.23	245.5763
273.65	301.0134
276.40	235.8544
277.35	233.2992
277.60	226.1329
277.60	226.1329
278.00	226.1911
278.60	217.2677
279.20	223.6662
279.53	221.9105
280.46	231.9776
281.68	220.4221
283.67	211.6655
284.30	219.8954
285.00	216.3749
285.90	213.7857
286.10	218.3445
286.10	218.3445
287.40	204.5226
288.45	0.0000
290.67	212.0251
290.80	212.0422
291.72	207.6211
293.26	206.3104
293.70	209.4033
295.21	226.9207
295.21	226.9207
295.21	226.9207
295.96	259.8538

296.50	261.4644
297.23	241.8125
298.57	213.0990
299.80	196.5077
299.80	196.5077
300.09	188.9264
300.09	188.9264
300.09	188.9264
300.10	188.9277
300.12	188.9290
301.29	192.1198
302.84	230.7683
303.76	246.4772
303.91	246.5001
304.40	252.0755
304.40	252.0755
304.84	240.2264
306.84	202.8846
308.46	196.6569
311.98	202.6111
316.51	176.3905
318.01	191.3411
319.02	206.2587
319.41	203.5295
320.08	201.7618
323.87	195.7288
323.87	195.7288
323.87	195.7288
323.87	195.7288
325.23	201.4588
328.77	216.7679
333.44	202.1305
334.20	185.1095
334.20	185.1095
334.30	185.1192
338.28	202.0781
338.28	202.0781
338.28	202.0781
338.28	202.0781
338.32	202.0834
338.32	202.0834
338.32	202.0834
340.50	187.3511
340.57	187.3584
344.27	179.9355
345.85	198.8897
350.59	208.8488
351.07	194.7692
351.92	179.1501
351.92	179.1501
351.92	179.1501
355.39	0.0000
356.01	168.5372
364.48	157.6210
366.43	171.0989
367.43	171.1934
367.94	168.3855
369.80	209.5076
374.96	184.3112
383.85	201.5046
387.95	204.8279
388.63	207.7866
391.69	184.9969
391.69	184.9969
392.90	197.6478
398.62	183.7308
400.65	178.1152
401.10	186.8721
401.81	188.8777
402.60	176.3569
404.84	202.7545
410.95	195.5996
411.60	200.5332
413.65	182.2246
414.70	189.1476
415.30	187.2539
415.76	189.2471
417.63	0.0000

418.52	207.0934
423.70	203.7115
427.08	202.0897
427.89	192.3561
432.53	186.8921
433.93	204.7373
439.47	189.4992
439.56	189.5063
439.89	193.4854
443.98	193.8658
444.90	187.0251
445.03	192.9743
445.03	192.9743
445.03	192.9743
445.03	192.9743
453.90	180.8714
463.38	200.6442
468.07	209.0842
473.00	194.5186
475.06	211.7624
475.35	211.7907
476.78	161.7095
477.59	152.7255
477.96	158.7811
482.03	183.2375
484.57	157.2416
487.03	147.3242
490.36	148.5558
492.35	144.6409
497.08	139.8783
507.63	0.0000
510.53	0.0000
510.84	173.3546
511.00	158.0709
511.85	159.8289
511.85	159.8289
513.99	136.1499
513.99	136.1499
520.41	138.2333
520.65	142.3427
527.90	132.5116
528.96	0.0000
529.64	140.8331
529.87	0.0000
531.02	131.6594
537.32	140.2566
543.00	129.2175
546.56	0.0000
549.76	119.2142
552.65	126.6197
555.20	134.0265
563.23	124.0406
563.90	124.0726
568.70	128.4924
569.32	122.2559
569.50	123.3094
569.67	125.4082
573.80	124.5665
574.00	129.1146
574.64	136.1287
578.91	108.3865
579.30	104.9072
583.14	101.9139
585.48	117.4327
591.81	115.9673
592.07	117.0324
593.00	120.2399
595.88	93.9758
600.56	113.7175
602.52	0.0000
602.71	116.4587
602.71	116.4587
603.60	121.7916
604.41	116.5339
604.70	111.2498
609.31	107.1991
609.31	107.1991
609.31	107.1991

609.31	107.1991
610.33	107.2410
612.46	118.6649
614.37	106.3428
618.01	99.3900
621.84	110.9088
621.84	110.9088
631.29	118.7939
633.02	114.5861
633.10	114.5887
634.78	106.0890
635.90	107.2046
636.97	106.1736
645.85	104.3697
646.12	104.3792
656.30	113.4082
657.75	86.4512
657.90	0.0000
661.65	108.2153
661.65	108.2153
664.57	90.2730
666.33	110.2026
666.33	110.2026
675.00	106.5583
677.61	103.3914
685.20	110.2148
692.80	107.2234
695.00	97.4524
696.49	109.5532
696.49	109.5532
697.00	115.0514
697.49	123.8365
698.33	135.9308
698.50	127.1695
699.00	124.9992
702.63	107.5895
706.10	111.0137
706.58	0.0000
706.67	124.2283
709.31	101.7839
711.68	104.6183
713.82	120.3072
717.42	109.4199
720.50	115.9768
721.93	130.7676
722.20	130.7791
722.78	140.0168
722.78	140.0168
722.89	134.4957
722.95	134.4987
723.30	134.5135
724.18	120.7283
727.18	103.3229
733.00	114.6152
735.90	109.1750
739.58	94.4857
742.81	103.8607
744.21	104.8363
747.13	71.5060
751.79	99.5179
752.31	99.5332
753.82	102.3753
755.35	102.4268
756.15	91.2769
756.87	93.1600
763.93	142.8616
765.79	111.1824
766.41	112.1387
766.84	105.6110
768.36	104.7288
768.36	104.7288
768.36	104.7288
768.36	104.7288
776.49	95.6271
778.00	97.5487
778.57	96.6275
778.89	99.4526
783.80	102.4270

785.46	101.5400
792.07	129.0730
795.84	119.7937
796.30	114.1514
801.93	116.2434
805.60	116.3760
810.29	100.4360
810.76	108.0323
815.85	113.8965
817.79	109.2163
818.51	105.4401
819.60	111.1776
826.30	133.3036
828.27	120.9978
831.60	126.8441
831.96	132.5805
834.83	137.4697
836.80	0.0000
846.75	112.0941
848.13	109.2639
856.28	0.0000
856.80	108.7232
860.37	106.7770
867.32	116.9566
867.82	104.1196
871.10	123.5182
873.19	120.6970
874.81	121.7216
875.33	0.0000
876.40	125.6439
879.36	115.1118
880.27	124.8165
880.51	123.8594
881.50	123.8932
883.24	123.9557
884.67	114.3197
889.25	141.6335
896.60	134.1564
898.02	153.6604
899.00	128.4121
903.28	146.7492
911.07	145.4472
911.07	145.4472
911.07	145.4472
919.63	136.6364
920.93	157.5967
925.00	142.0972
925.24	143.0861
926.50	148.0385
934.06	153.2642
934.06	153.2642
934.06	153.2642
934.06	153.2642
935.52	143.4960
937.48	126.8584
944.10	161.5710
946.00	132.0835
949.00	143.0441
962.29	162.9425
964.01	157.9236
966.15	169.9079
968.20	145.7768
969.11	108.8281
969.11	108.8281
969.11	108.8281
977.42	118.2124
980.50	117.4070
983.50	103.5599
989.30	128.6536
996.32	119.8999
1001.03	114.0464
1001.68	114.0649
1004.76	94.1301
1021.30	0.0000
1024.50	0.0000
1034.80	105.9698
1037.82	97.9709
1038.57	109.1030

1038.76	0.0000
1045.16	116.3710
1046.59	102.2411
1048.07	97.2148
1050.47	120.5785
1050.47	120.5785
1063.62	104.7141
1076.63	112.1932
1077.35	113.2357
1085.78	107.3370
1099.22	97.4392
1112.02	114.2068
1112.84	112.1712
1115.52	124.5991
1120.29	85.5667
1120.29	85.5667
1120.29	85.5667
1120.29	85.5667
1120.51	85.5735
1121.28	85.5870
1124.00	0.0000
1129.67	78.5296
1131.51	0.0000
1147.95	0.0000
1167.94	84.0105
1173.22	62.6367
1175.09	50.1328
1177.93	50.1660
1189.05	36.6734
1204.90	42.0654
1205.75	36.8144
1213.00	34.7671
1221.42	41.1677
1230.97	37.0251
1235.34	31.7664
1236.41	0.0000
1238.11	29.6668
1238.11	29.6668
1238.11	29.6668
1238.11	29.6668
1238.25	29.6680
1246.25	25.4746
1260.41	0.0000
1271.85	19.2144
1274.45	37.3826
1274.54	40.5884
1291.56	26.8016
1298.22	0.0000
1312.09	21.5356
1325.50	35.1731
1325.50	35.1731
1332.49	30.2809
1333.61	20.3986
1360.21	20.5122
1362.66	0.0000
1365.15	19.6003
1368.21	17.7442
1368.53	0.0000
1376.25	14.9676
1377.67	14.9721
1377.67	14.9721
1377.67	14.9721
1377.67	14.9721
1384.27	15.9292
1394.10	13.1445
1395.20	15.9648
1407.95	12.2401
1434.06	15.1440
1436.60	13.2578
1457.56	0.0000
1460.81	14.2728
1489.15	10.5247
1509.49	19.2111
1596.49	17.5737
1620.62	7.8449
1678.03	0.0000
1691.02	10.9225
1691.02	10.9225

1706.46	0.0000
1750.46	0.0000
1764.49	7.0391
1764.49	7.0391
1764.49	7.0391
1764.49	7.0391
1770.23	10.5688
1771.40	31.2098
1791.20	0.0000
1808.65	9.1174
1836.01	11.1941

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871425

Total Uranium Activity	-1.8399E+00	ug/g
Total Uranium Counting Unc.	3.6020E+00	ug/g
Total Uranium Tpu	1.8377E-06	ug/g
Total Uranium Mda	2.9140E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881219                    SAMPLE ID  : G1201871425      *
*   ANALYST       : MXR1                      DETECTOR   : GAM05            *
*   SAMPLE DATE   : 30-JUN-2009 00:00:00.00   COUNT TIME :    0 01:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:19:11.42    SAMPLE ALQT:  151.730 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 3.359E+01
GROSS GAMMA ERROR (pCi/GRAM) : 3.093E+00
GROSS GAMMA MDA (pCi/GRAM) : 6.180E+00
GROSS GAMMA DLC (pCi/GRAM) : 3.029E+00

Radiochemistry Batch Checklist, Rev 9

Batch# 883013 Product: H3 Date: 7-16-09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature]

Secondary Review Performed By: [signature] 7/16/09

LANL 7-20-09

Tritium Que Sheet

14-JUL-09

Batch #: 883013 **Analyst:** KXK2 **First Client Due Date** 20-JUL-09 **Internal Due Date:** 09-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** ——— **Expiration Date:** ——— **Vol:** ———

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.2

Prep Date: 7/9/09 **Initials:** KXK2 **Pipet ID:** 29709168 **Witness:** DRS 7/9/09 copied: KKG 7/14/09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Total Moisture ~~Dist Vol (mL)~~ KKG 7/14/09
232424001-1	CAMO-09-10463	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-2	1	KKG 7/14/09	424.12	406.73	17.39
232426001-1	CAMO-09-7143	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-3	2		566.45	525.10	41.35
232426002-1	CAMO-09-7144	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-4	3		630.82	565.85	64.97
232433002-1	CAMO-09-6006	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-5	4		515.56	456.79	58.77
232433003-1	CAMO-09-6008	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	3-2	5		466.00	358.35	107.65
232433004-1	CAMO-09-6009	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-7	6		608.39	504.96	103.43
232433005-1	CAMO-09-6034	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-8	7		311.60	242.11	69.49
232433006-1	CAMO-09-6043	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-9	8		475.72	438.61	37.11
232433007-1	CAMO-09-6045	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-10	9		551.95	507.79	44.16
232433008-1	CAMO-09-6041	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	40-11	10		590.28	560.18	30.10
232433009-1	CAMO-09-6040	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-1	11		277.16	201.77	75.39
232433010-1	CAMO-09-6044	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-2	12		342.53	299.03	43.50
232433011-1	CAMO-09-6035	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-3	13		519.46	499.20	20.26
232433012-1	CAMO-09-6038	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-4	14		328.63	245.82	82.81
232433013-1	CAMO-09-6039	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-5	15		542.95	493.54	49.41
232433014-1	CAMO-09-6042	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-6	16		381.48	313.96	67.52
232433015-1	CAMO-09-6049	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	18-7	17		531.50	470.38	61.12
1201875577-1	MB for batch 883013	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	18-8	18		40.00	0	40.00
1201875578-1	CAMO-09-6008(232433003DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	23-JUN-09	10	3-3	5		466.00	358.35	107.65
1201875579-1	LCS for batch 883013	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	3-1	19		40.00	0	40.00

Bkg Rack #: _____

dailies ✓

1738

Comments: _____

Bkg prepared with dead water? Yes/No

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656*

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Ecoscint Ultra)*

Data Reviewed By: _____

GEL Laboratories LLC, Radiochemistry Division

DATE	7/9/2009	INITIALS	KXK2		BATCH NUMBER	883013

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232424001	424.12	0.041	17.39	406.73	10	701
232426001	566.45	0.073	41.35	525.10	10	32
232426002	630.82	0.103	64.97	565.85	10	614
KKG 7/14/09 [redacted]						>1mL collected
232433002	515.56	0.114	58.77	456.79	10	106
232433003	466.00	0.231	107.65	358.35	10	601
232433004	608.39	0.170	103.43	504.96	10	5
232433005	311.60	0.223	69.49	242.11	10	532
232433006	475.72	0.078	37.11	438.61	10	24
232433007	551.95	0.080	44.16	507.79	10	306
232433008	590.28	0.051	30.10	560.18	10	1707
232433009	277.16	0.272	75.39	201.77	10	45
232433010	342.53	0.127	43.50	299.03	10	10
232433011	519.46	0.039	20.26	499.20	10	1603
232433012	328.63	0.252	82.81	245.82	10	761
232433013	542.95	0.091	49.41	493.54	10	23
232433014	381.48	0.177	67.52	313.96	10	610
232433015	531.5	0.115	61.12	470.38	10	1201
MB	40	1	40.00	0.00	10	912
LCS	40	1	40.00	0.00	10	101

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.5

Batch : 883013
Analyst : KXK2
Prep Date : 7/9/2009

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2545.86
LCS Volume Added: 0.20

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL Ecoscint Ultra

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002584 ml
Pipet, 1.0 ml Stdev : +/- 0.005480 ml
Pipet, 5.0 ml Stdev : +/- 0.025729 ml

Procedure Code : LSC_VH3S
Parmname : Tritium
Required MDC : 250 pCi/L
Halflife of Tritium : 12.28 years

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232424001.1	424.12	0.0174	0.0100	2.5729E-05	406.73	4.10%	1	6/23/2009 12:00
2	232426001.1	566.45	0.0414	0.0100	2.5729E-05	525.10	7.30%	2	6/23/2009 12:00
3	232426002.1	630.82	0.0650	0.0100	2.5729E-05	565.85	10.30%	3	6/23/2009 12:00
4	232433002.1	515.56	0.0588	0.0100	2.5729E-05	456.79	11.40%	4	6/23/2009 12:00
5	232433003.1	466.00	0.1077	0.0100	2.5729E-05	358.35	23.10%	5	6/23/2009 12:00
6	232433004.1	608.39	0.1034	0.0100	2.5729E-05	504.96	17.00%	6	6/23/2009 12:00
7	232433005.1	311.60	0.0695	0.0100	2.5729E-05	242.11	22.30%	7	6/23/2009 12:00
8	232433006.1	475.72	0.0371	0.0100	2.5729E-05	438.61	7.80%	8	6/23/2009 12:00
9	232433007.1	551.95	0.0442	0.0100	2.5729E-05	507.79	8.00%	9	6/23/2009 12:00
10	232433008.1	590.28	0.0301	0.0100	2.5729E-05	560.18	5.10%	10	6/23/2009 12:00
11	232433009.1	277.16	0.0754	0.0100	2.5729E-05	201.77	27.20%	11	6/23/2009 12:00
12	232433010.1	342.53	0.0435	0.0100	2.5729E-05	299.03	12.70%	12	6/23/2009 12:00
13	232433011.1	519.46	0.0203	0.0100	2.5729E-05	499.20	3.90%	13	6/23/2009 12:00
14	232433012.1	328.63	0.0828	0.0100	2.5729E-05	245.82	25.20%	14	6/23/2009 12:00
15	232433013.1	542.95	0.0494	0.0100	2.5729E-05	493.54	9.10%	15	6/23/2009 12:00
16	232433014.1	381.48	0.0675	0.0100	2.5729E-05	313.96	17.70%	16	6/23/2009 12:00
17	232433015.1	531.50	0.0611	0.0100	2.5729E-05	470.38	11.50%	17	6/23/2009 12:00
18	1201875577.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	18	7/9/2009 0:00
19	1201875578.1	466.00	0.1077	0.0100	2.5729E-05	358.35	23.10%	5	6/23/2009 12:00
20	1201875579.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	19	7/9/2009 0:00

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	40-2	95	118.8	8.34	2.51	95	7/14/2009 14:42	0.997	LSCRED	8/6/2008	8/31/2009	0.2312	0.00792	40-1	7/14/2009 13:03
2	40-3	95	118.7	8.03	2.51	95	7/14/2009 16:21	0.997	LSCRED	8/6/2008	8/31/2009	0.2313	0.00792	40-1	7/14/2009 13:03
3	40-4	95	116.4	13.47	2.51	95	7/14/2009 18:00	0.997	LSCRED	8/6/2008	8/31/2009	0.2328	0.00792	40-1	7/14/2009 13:03
4	40-5	95	117.7	5.37	2.51	95	7/14/2009 19:39	0.997	LSCRED	8/6/2008	8/31/2009	0.2320	0.00792	40-1	7/14/2009 13:03
5	3-2	95	122.4	3.78	3.18	95	7/16/2009 10:37	0.996	LSCBLUE	8/6/2008	8/31/2009	0.2345	0.00792	3-1	7/16/2009 8:59
6	40-7	95	117.1	4.58	2.51	95	7/14/2009 22:56	0.997	LSCRED	8/6/2008	8/31/2009	0.2324	0.00792	40-1	7/14/2009 13:03
7	40-8	95	118.1	4.66	2.51	95	7/15/2009 0:35	0.997	LSCRED	8/6/2008	8/31/2009	0.2317	0.00792	40-1	7/14/2009 13:03
8	40-9	95	118.2	4.13	2.51	95	7/15/2009 2:14	0.997	LSCRED	8/6/2008	8/31/2009	0.2316	0.00792	40-1	7/14/2009 13:03
9	40-10	95	119	3.86	2.51	95	7/15/2009 3:52	0.997	LSCRED	8/6/2008	8/31/2009	0.2311	0.00792	40-1	7/14/2009 13:03
10	40-11	95	120.2	3.77	2.51	95	7/15/2009 5:31	0.997	LSCRED	8/6/2008	8/31/2009	0.2303	0.00792	40-1	7/14/2009 13:03
11	18-1	30	117	2.7	2.51	95	7/15/2009 8:35	0.997	LSCRED	8/6/2008	8/31/2009	0.2324	0.00792	40-1	7/14/2009 13:03
12	18-2	30	118.8	3.4	2.51	95	7/15/2009 9:07	0.997	LSCRED	8/6/2008	8/31/2009	0.2312	0.00792	40-1	7/14/2009 13:03
13	18-3	30	116.2	3.5	2.51	95	7/15/2009 9:39	0.997	LSCRED	8/6/2008	8/31/2009	0.2329	0.00792	40-1	7/14/2009 13:03
14	18-4	30	112.3	3.67	2.51	95	7/15/2009 10:11	0.997	LSCRED	8/6/2008	8/31/2009	0.2350	0.00792	40-1	7/14/2009 13:03
15	18-5	30	111.3	2.83	2.51	95	7/15/2009 10:43	0.997	LSCRED	8/6/2008	8/31/2009	0.2354	0.00792	40-1	7/14/2009 13:03
16	18-6	30	115.6	3.1	2.51	95	7/15/2009 11:14	0.997	LSCRED	8/6/2008	8/31/2009	0.2333	0.00792	40-1	7/14/2009 13:03
17	18-7	30	119	2.57	2.51	95	7/15/2009 11:46	0.997	LSCRED	8/6/2008	8/31/2009	0.2311	0.00792	40-1	7/14/2009 13:03
18	18-8	30	115.3	3.07	2.51	95	7/15/2009 12:18	0.999	LSCRED	8/6/2008	8/31/2009	0.2334	0.00792	40-1	7/14/2009 13:03
19	3-3	95	122	3.97	3.18	95	7/16/2009 12:15	0.996	LSCBLUE	8/6/2008	8/31/2009	0.2351	0.00792	3-1	7/16/2009 8:59
20	3-1	15	113.8	30.33	2.51	95	7/15/2009 13:22	0.999	LSCRED	8/6/2008	8/31/2009	0.2342	0.00792	40-1	7/14/2009 13:03

1741

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

* - RPD changed to 0% due to activity below MDC for 1201875578.1

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	104.6748	73.9013	250	153.9741	**1139.3695**	0.059	5.830	0.338	66.0464	103.2435		SAMPLE				
2	104.6450	73.8802	250	153.9303	**1078.4783**	0.061	5.520	0.333	65.0775	99.3836		SAMPLE				
3	103.9810	73.4114	250	152.9535	**2127.7392**	0.038	10.960	0.410	79.6222	168.2275		SAMPLE				
4	104.3471	73.6700	250	153.4922	**557.1866**	0.101	2.860	0.288	56.1094	68.2219		SAMPLE				
5	116.2343	82.0624	250	170.2133	**115.6812**	0.451	0.600	0.271	52.1861	52.8043		SAMPLE				
6	104.1773	73.5501	250	153.2424	**402.6221**	0.132	2.070	0.273	53.1360	60.0813		SAMPLE				
7	104.4685	73.7556	250	153.6707	**419.3511**	0.128	2.150	0.275	53.5842	61.0271		SAMPLE				
8	104.4995	73.7776	250	153.7163	**316.0700**	0.163	1.620	0.264	51.5811	56.0821		SAMPLE				
9	104.7460	73.9516	250	154.0789	**264.0129**	0.192	1.350	0.259	50.6407	53.8757		SAMPLE				
10	105.1350	74.2262	250	154.6511	**247.3272**	0.204	1.260	0.257	50.4684	53.3271		SAMPLE				
11	150.3353	106.1380	250	231.7223	**36.9479**	1.796	0.190	0.341	66.3516	66.4015		SAMPLE				
12	151.1024	106.6796	250	232.9046	**173.9546**	0.420	0.890	0.374	73.0683	74.0659		SAMPLE				
13	150.0207	105.9159	250	231.2374	**192.1149**	0.382	0.990	0.378	73.4053	74.6148		SAMPLE				
14	148.7074	104.9887	250	229.2131	**223.1338**	0.333	1.160	0.386	74.1895	75.7997		SAMPLE				
15	148.4321	104.7944	250	228.7888	**61.4402**	1.086	0.320	0.347	66.7197	66.8568		SAMPLE				
16	149.7958	105.7571	250	230.8907	**114.3211**	0.611	0.590	0.360	69.7968	70.2494		SAMPLE				
17	151.1950	106.7449	250	233.0473	**11.7345**	5.580	0.060	0.335	65.4773	65.4824		SAMPLE				
18	149.3287	105.4274	250	230.1708	**108.1698**	0.641	0.560	0.359	69.3105	69.7187		MB				
19	115.9395	81.8543	250	169.7816	**151.9273**	0.347	0.790	0.274	52.7594	53.8100	232433003.1	DUP	0.0%	0.1700		
20	197.4244	139.3834	250	317.2657	**5355.2083**	0.052	27.820	1.431	275.5046	463.6966		LCS			5733.9171	93.4%

1742

ID: TRITIUM 16 JUL 2009 09:12

USER: 3 COMMENT: BLUE

PRESET TIME : 95.00

DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	:EDIT
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AOC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0	RWM LIST	: OFF
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 20.0 - 270.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 990.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	3-1	95.00	122.5	3.18	11.98	36.87	3.39	0.70	97.64
2	3-2	95.00	122.4	3.78	11.07	39.47	3.28	0.98	195.90
3	3-3	95.00	122.0	3.97	10.66	38.29	3.33	0.75	294.08

Sample Count Start Time:	16 Jul 2009 08:59:31		
Data Capture Date	16 Jul 2009 10:34:40		
User Filename	S03071603-1A.XLS		
	U03071603-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	BLUE		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	3-1	95.00
H#, Total Counts:	122.5	3511	
Start, End, X-Axis:	0	990	Channel Number

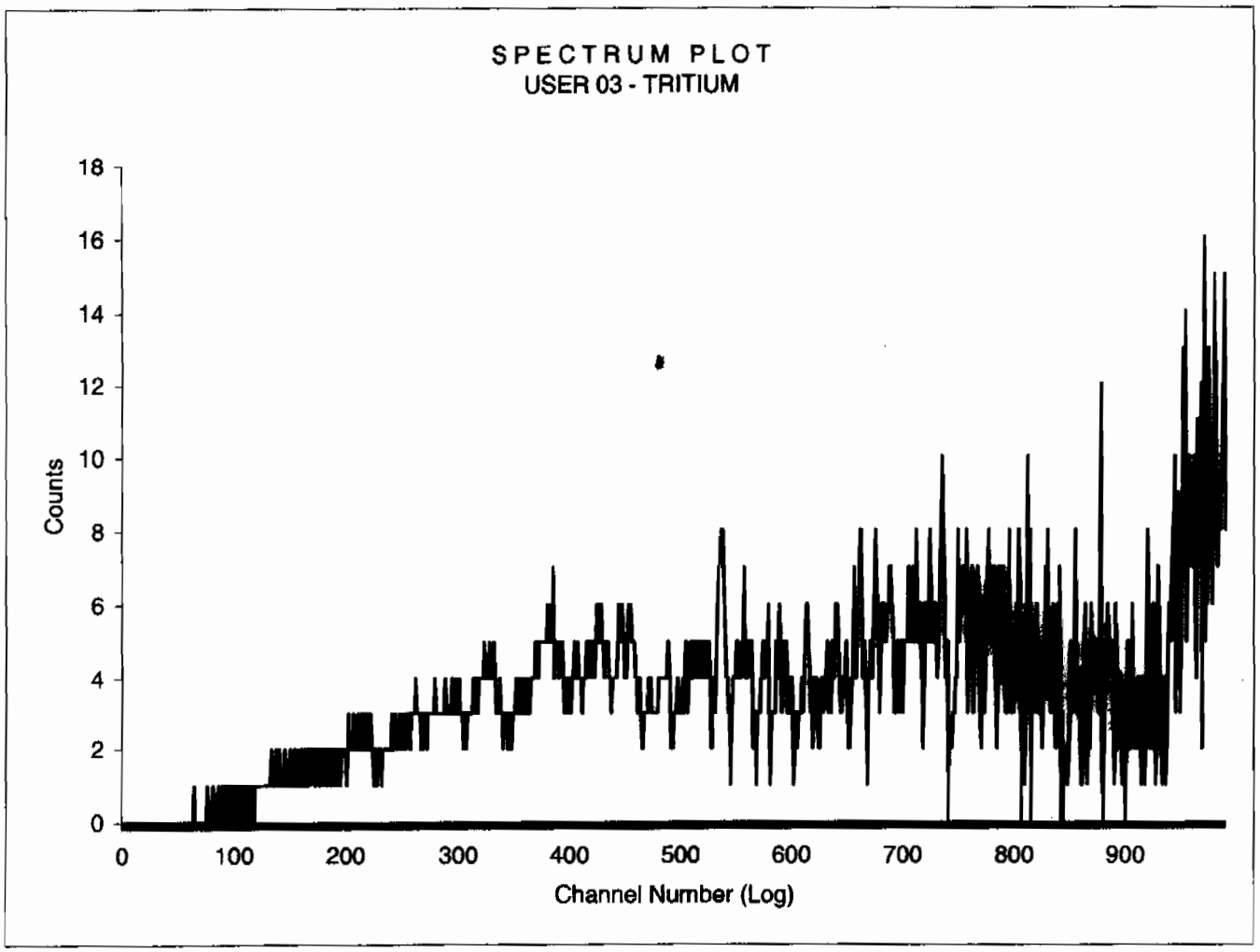

Sample Count Start Time:	16 Jul 2009 10:37:47		
Data Capture Date	16 Jul 2009 12:12:56		
User Filename	S03071603-2A.XLS		
	U03071603-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	BLUE		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	3-2	95.00
H#, Total Counts:	122.4	3750	
Start, End, X-Axis:	0	990	Channel Number

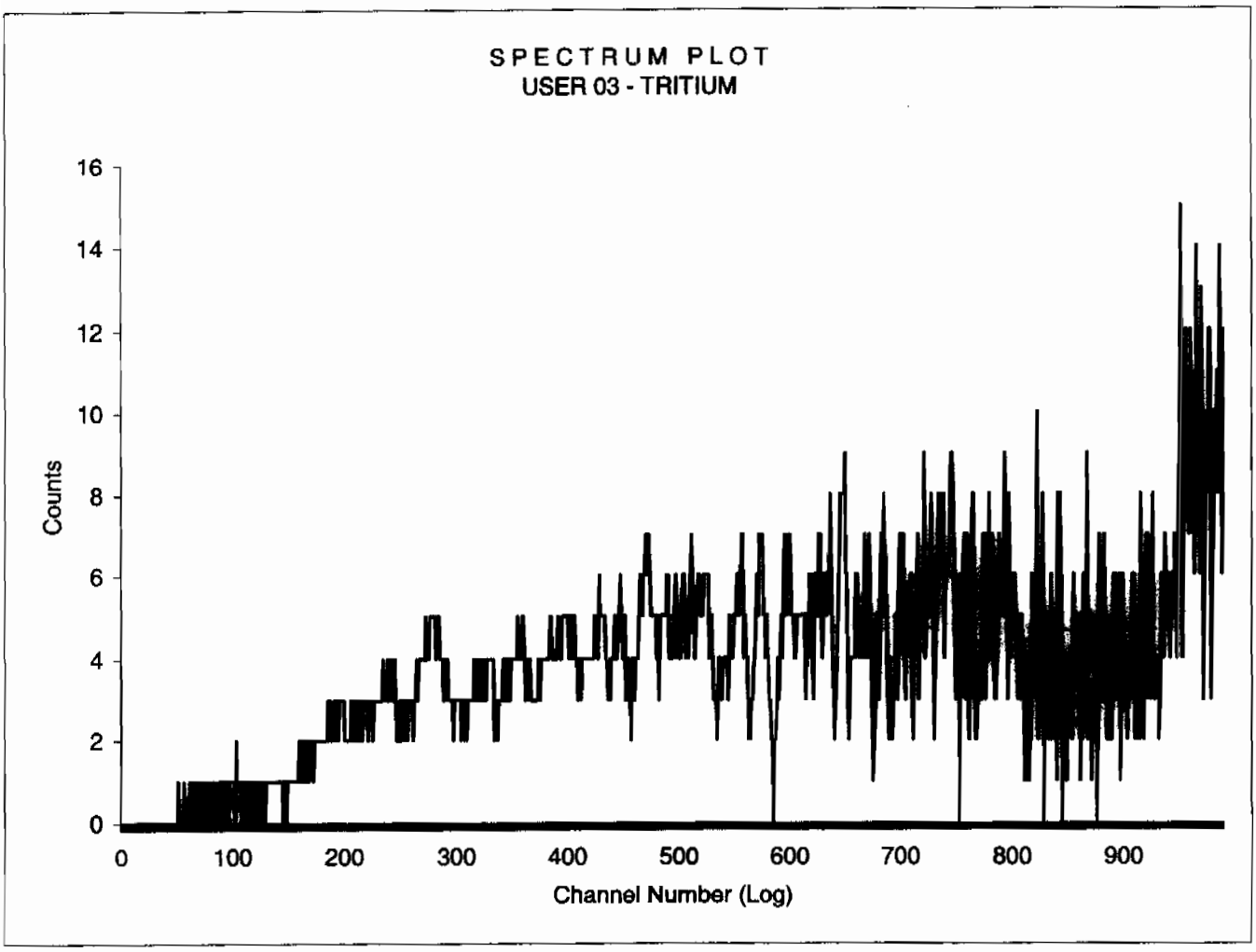

Sample Count Start Time:	16 Jul 2009 12:15:58		
Data Capture Date	16 Jul 2009 13:51:06		
User Filename	S03071603-3A.XLS		
	U03071603-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	BLUE		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	3-3	95.00
H#, Total Counts:	122.0	3638	
Start, End, X-Axis:	0	990	Channel Number

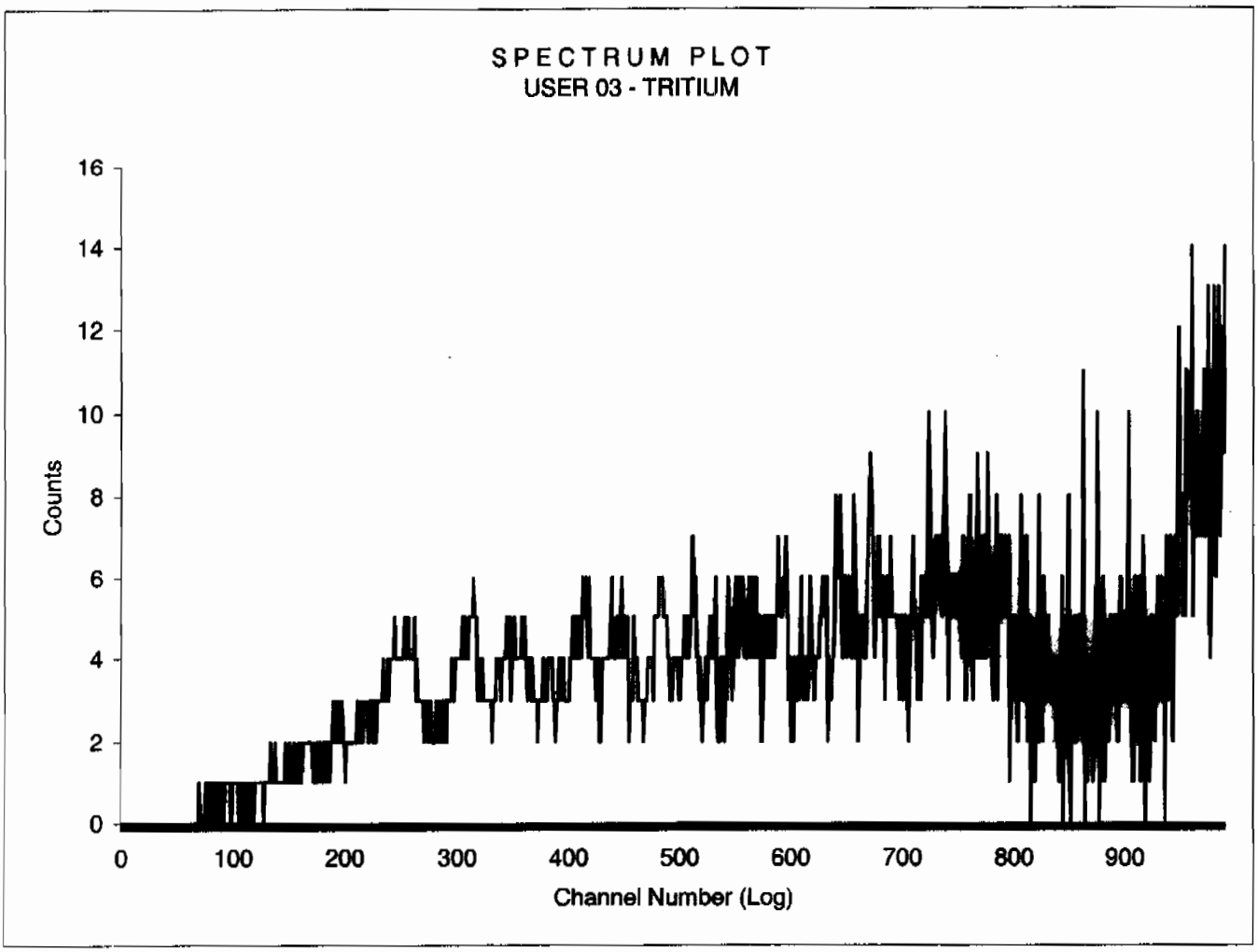

Filename: 2:48 PMab

Instrument Type	LS 6000
Data Capture Date	14 Jul 2009 13:00:15
User Filename	C:\LSCCAPTURE\BROWN\USER03\UN071401.BSF

User Number	3
User Id	TRITIUM
User Comments	RED

Scintillator Choice:	LIQUID

Sam	Rack	Time	H#	Raw CPM1	Raw CPM2	CPM Iso1	%Err1	CPM Iso2	%Err2	LumEx	ElTime
1	40-1	95.00	118.6	5.98	45.49	2.51	20.04	41.98	3.30	7.21	98.65
2	40-2	95.00	118.8	10.44	55.31	8.34	7.95	53.19	2.87	3.66	197.52
3	40-3	95.00	118.7	10.08	60.15	8.03	8.11	58.06	2.74	3.34	296.38
4	40-4	95.00	116.4	15.21	69.19	13.47	5.94	67.43	2.53	2.44	395.16
5	40-5	95.00	117.7	7.19	56.38	5.37	10.25	54.54	2.83	3.14	493.94
6	40-6	95.00	117.2	7.87	54.39	5.04	11.05	52.02	2.91	4.14	592.87
7	40-7	95.00	117.1	5.96	51.75	4.58	10.94	50.36	2.93	2.56	691.50
8	40-8	95.00	118.1	5.96	51.28	4.66	10.74	49.99	2.94	2.43	790.15
9	40-9	95.00	118.2	5.92	50.83	4.13	12.10	49.02	2.98	3.37	888.92
10	40-10	95.00	119.0	5.13	48.85	3.86	12.03	47.58	3.01	2.46	987.54
11	40-11	95.00	120.2	4.99	47.59	3.77	12.16	46.36	3.05	2.47	1086.16
12	40-12	0.05	117.2	0.00	20.00	0.00	0.00	20.00	200.00	16.74	1087.08
13	18-1	0.05	120.4	0.00	100.00	0.00	0.00	100.00	89.44	8.88	1088.14
14	18-2	0.05	118.3	0.00	60.00	0.00	0.00	60.00	115.47	11.68	1089.07
15	18-3	0.05	113.5	0.00	20.00	0.00	0.00	20.00	200.00	47.00	1089.97
16	18-4	0.05	112.9	0.00	60.00	0.00	0.00	60.00	115.47	14.30	1090.87
17	18-5	0.05	117.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1091.77
18	18-6	0.05	120.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1092.68
19	18-7	0.05	117.1	20.00	60.00	20.00	200.00	60.00	115.47	12.32	1093.58
20	18-8	0.05	117.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1094.50
21	18-9	0.05	116.3	20.00	20.00	20.00	200.00	20.00	200.00	36.35	1095.40

2-16-09

7/14/09

7/14/09

1747

Filename: 2:58 PMab

Instrument Type	LS 6000
Data Capture Date	15 Jul 2009 08:34:26
User Filename	C:\LSCCAPTURE\BROWN\USER03\UN071501.BSF

User Number	3
User Id	TRITIUM
User Comments	RED

Scintillator Choice:	LIQUID

Sam	Rack	Time	H#	Raw CPM1	Raw CPM2	CPM Iso1	%Err1	CPM Iso2	%Err2	LumEx
1	18-1	30.00	117.0	3.93	41.53	2.70	26.83	40.30	5.84	2.80
2	18-2	30.00	118.8	4.57	43.13	3.40	22.95	41.97	5.71	2.66
3	18-3	30.00	116.2	5.03	44.53	3.50	23.41	43.00	5.67	3.36
4	18-4	30.00	112.3	4.73	45.07	3.67	21.67	44.00	5.57	2.35
5	18-5	30.00	111.3	3.97	40.47	2.83	25.67	39.33	5.91	2.75
6	18-6	30.00	115.6	4.70	45.37	3.10	25.54	43.77	5.62	3.48
7	18-7	30.00	119.0	4.40	44.37	2.57	29.85	42.53	5.72	4.04
8	18-8	30.00	115.3	4.13	42.63	3.07	24.21	41.57	5.74	2.48
~~9~~	~~18-9~~	~~30.00~~	~~116.0~~	~~4.13~~	~~42.67~~	~~2.53~~	~~29.31~~	~~41.07~~	~~5.81~~	~~3.7~~

7/16/09

Filename: 2:59 PMab

Instrument Type	LS 6000
Data Capture Date	15 Jul 2009 13:21:52
User Filename	C:\LSCCAPTURE\BROWN\USER02\UN071501.BSF

User Number	2
User Id	TRITIUM
User Comments	RED

Scintillator Choice:	LIQUID

Sam	Rack	Time	H#	Raw CPM1	Raw CPM2	CPM Iso1	%Err1	CPM Iso2	%Err2	LumEx
1	3-1	15.00	113.8	31.60	82.00	30.33	9.57	80.73	5.79	1.59

Sample Count Start Time:	14 Jul 2009 13:03:54		
Data Capture Date	14 Jul 2009 14:39:20		
User Filename	S03071440-1A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	40-1	95.00
H#, Total Counts:	118.6	3988	
Start, End, X-Axis:	0	990	Channel Number

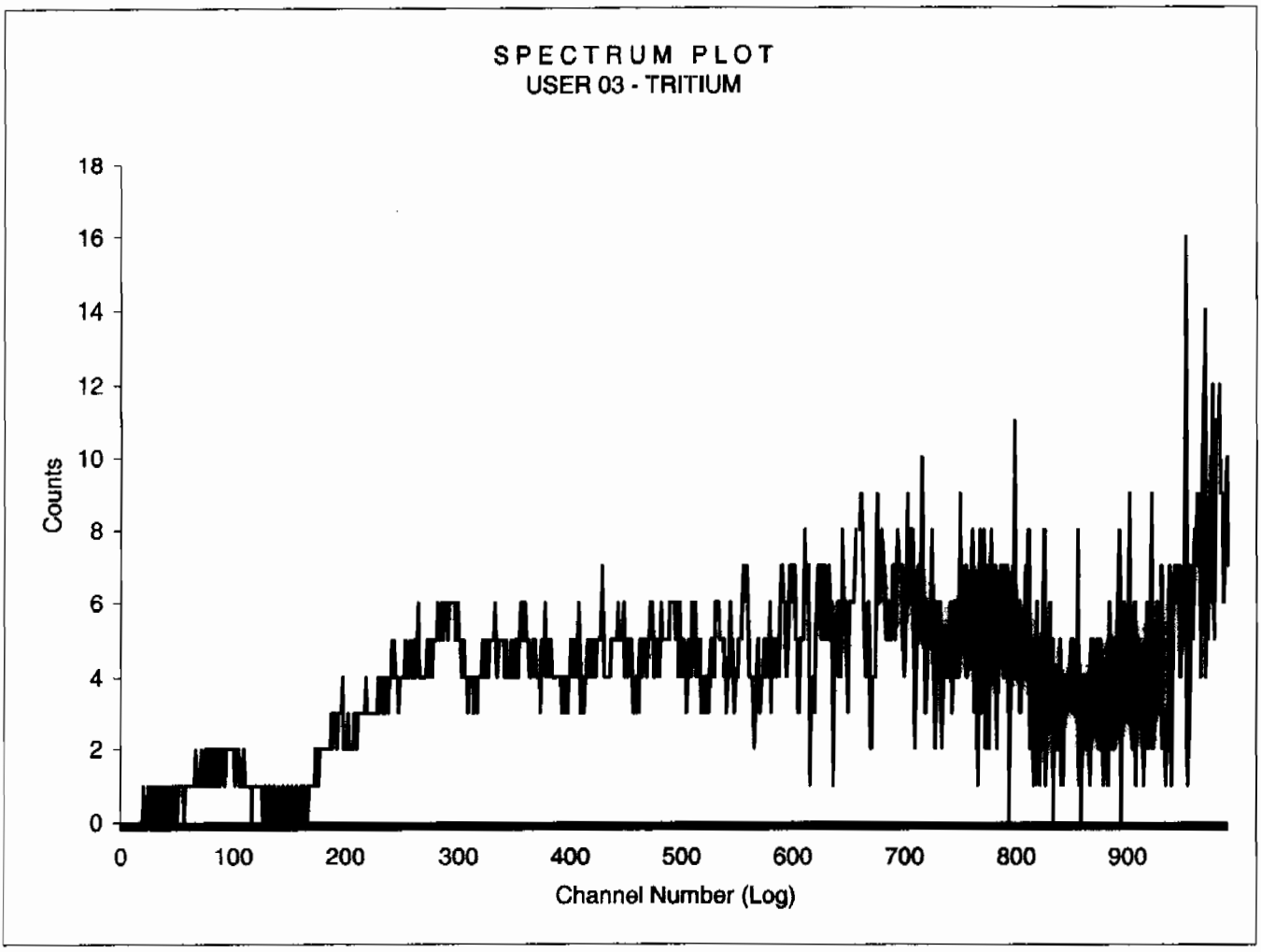

Sample Count Start Time:	14 Jul 2009 14:42:46		
Data Capture Date	14 Jul 2009 16:18:42		
User Filename	S03071440-2A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	40-2	95.00
H#, Total Counts:	118.8	5053	
Start, End, X-Axis:	0	990	Channel Number

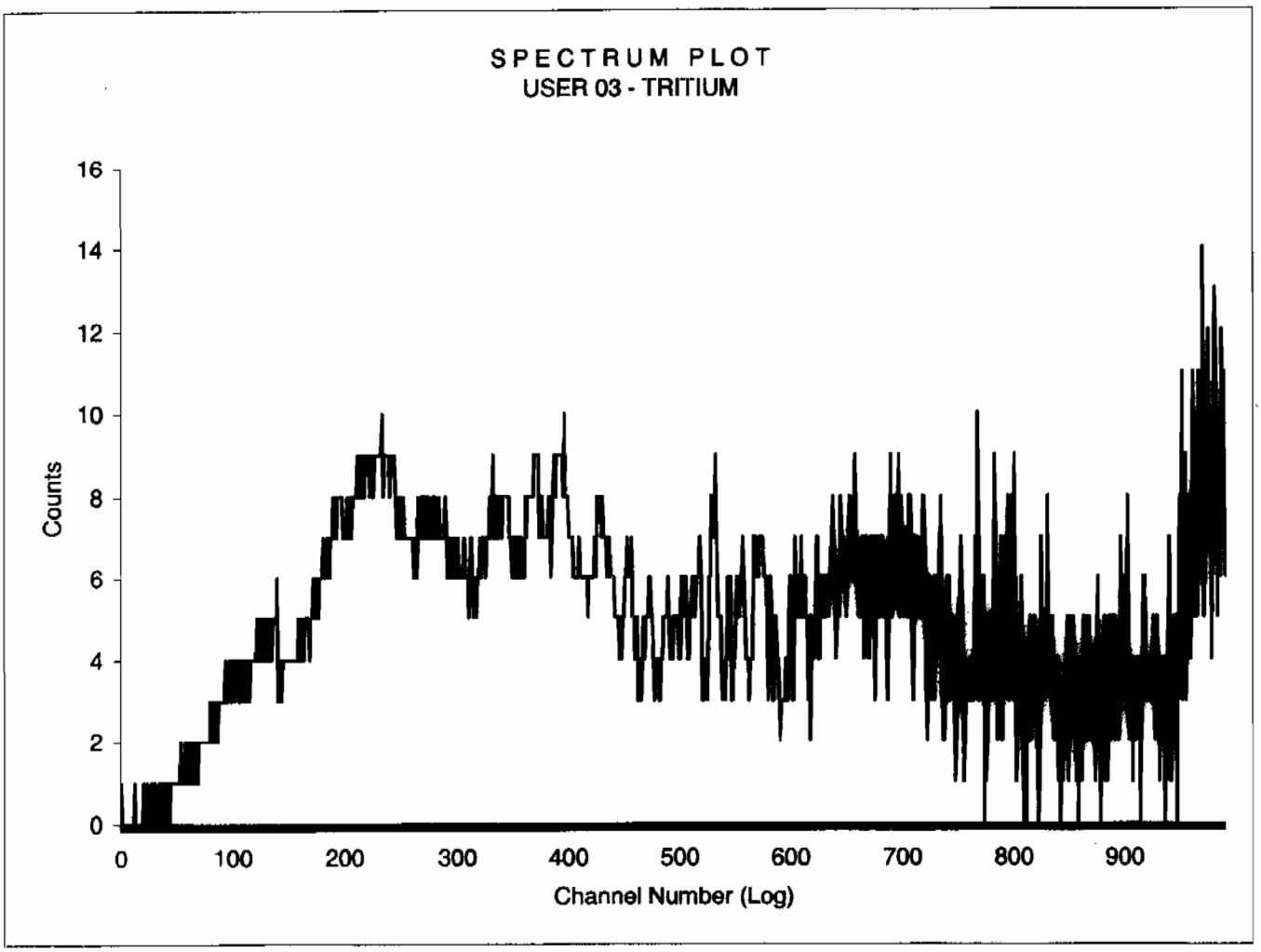

Sample Count Start Time:	14 Jul 2009 16:21:38		
Data Capture Date	14 Jul 2009 17:57:04		
User Filename	S03071440-3A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	40-3	95.00
H#, Total Counts:	118.7	5516	
Start, End, X-Axis:	0	990	Channel Number

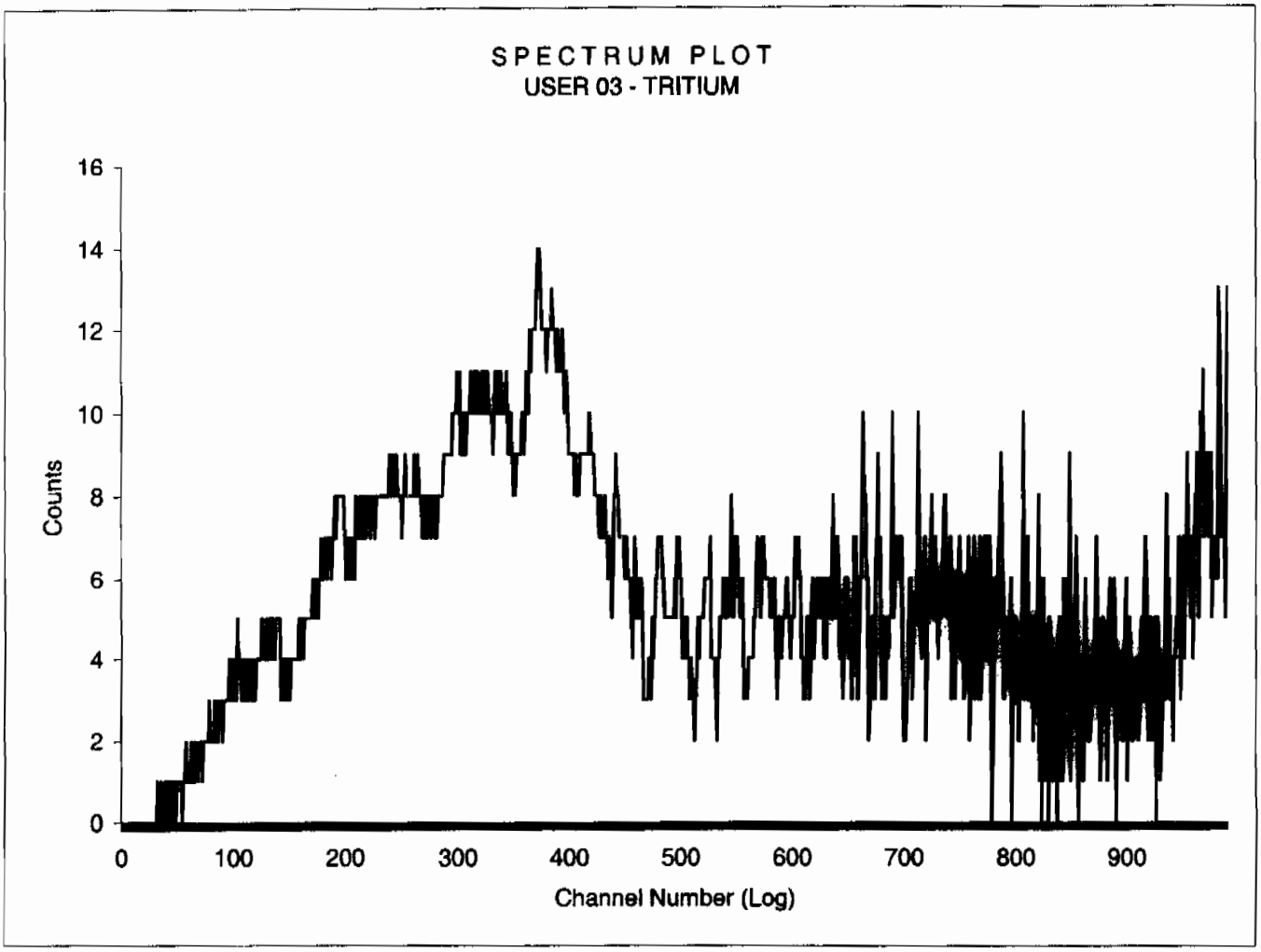

Sample Count Start Time:	14 Jul 2009 18:00:25		
Data Capture Date	14 Jul 2009 19:35:51		
User Filename	S03071440-4A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	40-4	95.00
H#, Total Counts:	116.4	6374	
Start, End, X-Axis:	0	990	Channel Number

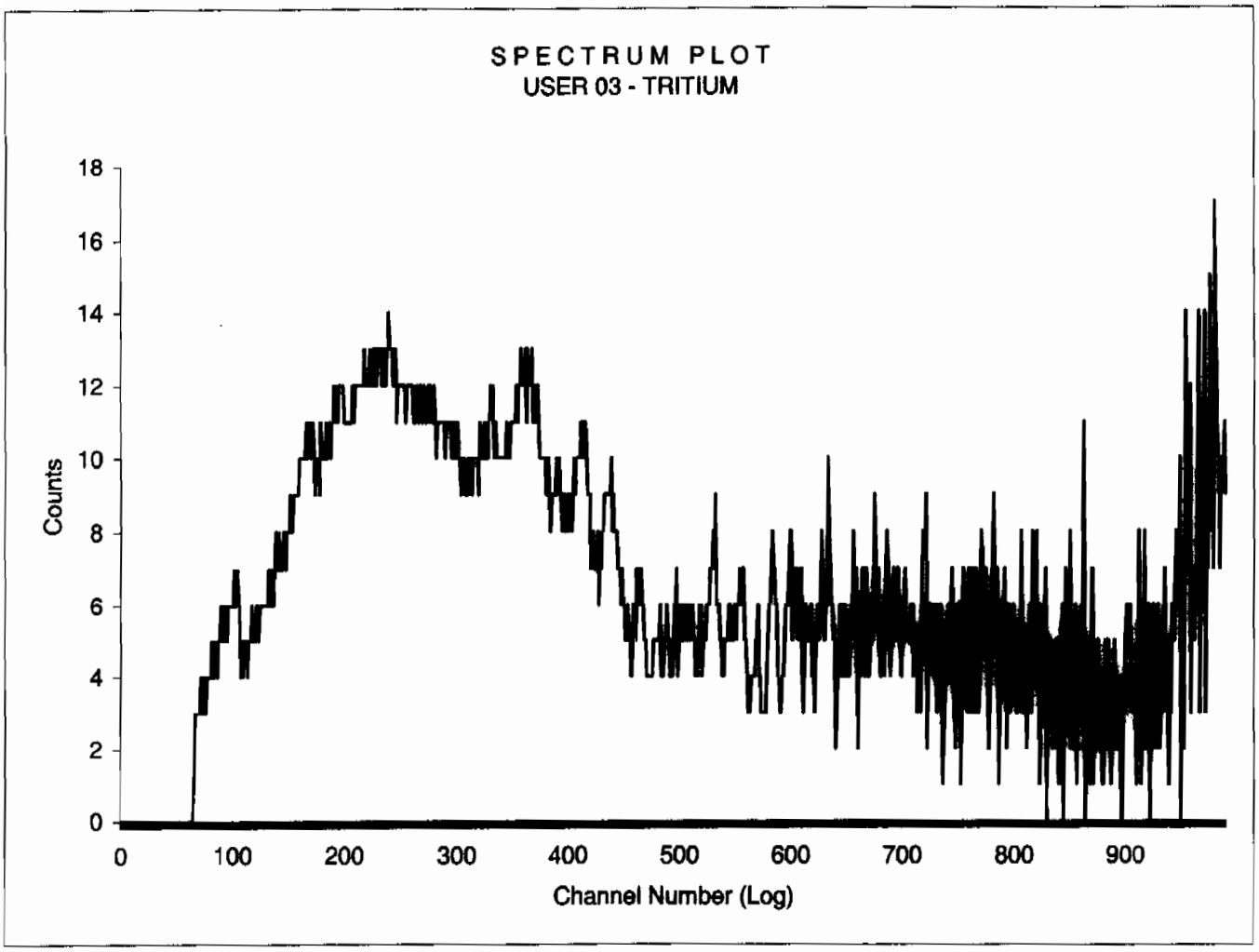

Sample Count Start Time:	14 Jul 2009 19:39:11		
Data Capture Date	14 Jul 2009 21:14:38		
User Filename	S03071440-5A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	40-5	95.00
H#, Total Counts:	117.7	5181	
Start, End, X-Axis:	0	990	Channel Number

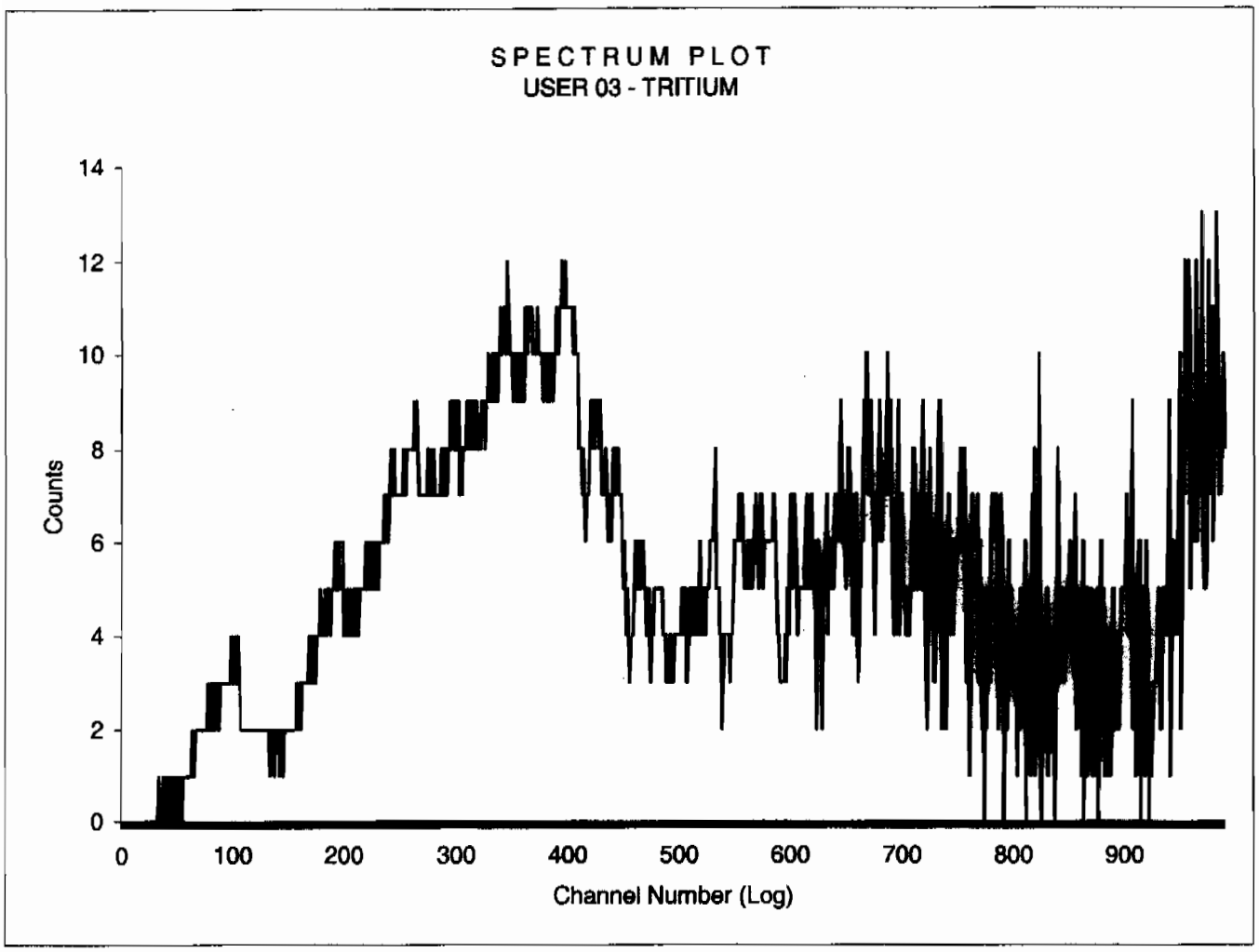

Sample Count Start Time:	14 Jul 2009 22:56:45		
Data Capture Date	15 Jul 2009 00:32:12		
User Filename	S03071540-7A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	40-7	95.00
H#, Total Counts:	117.1	4784	
Start, End, X-Axis:	0	990	Channel Number

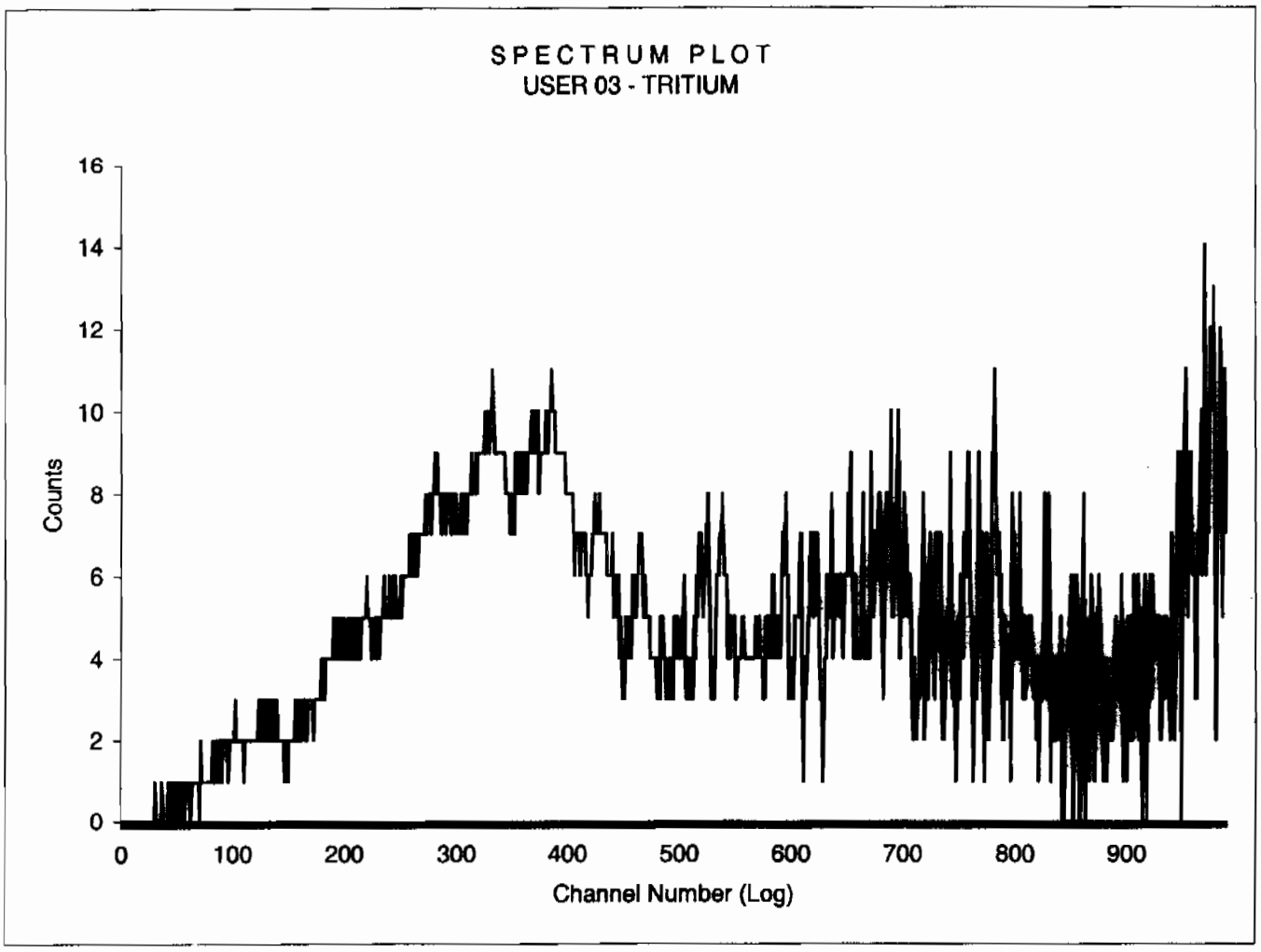

Sample Count Start Time:	15 Jul 2009 00:35:24		
Data Capture Date	15 Jul 2009 02:10:50		
User Filename	S03071540-8A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	40-8	95.00
H#, Total Counts:	118.1	4749	
Start, End, X-Axis:	0	990	Channel Number

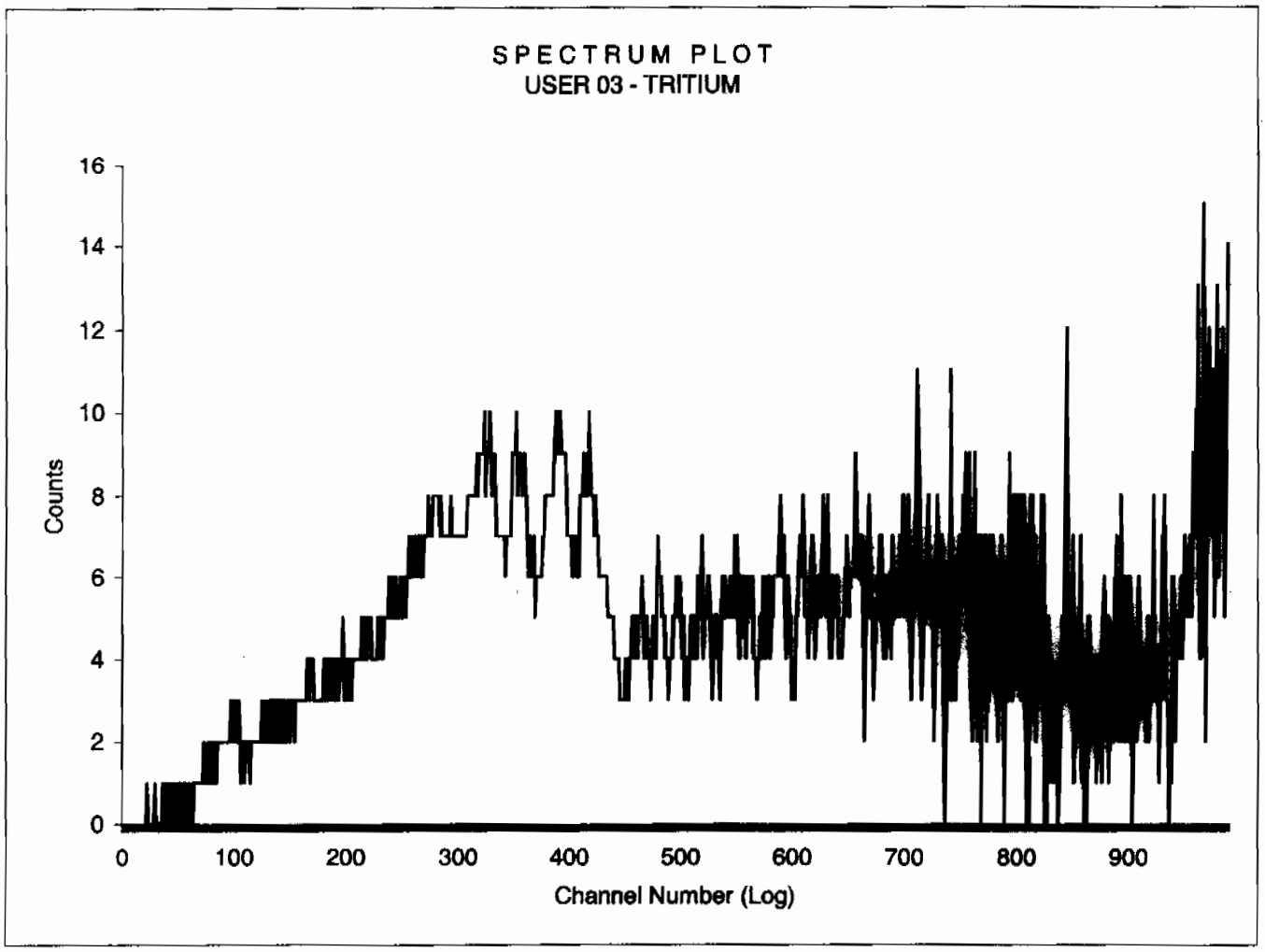

Sample Count Start Time:	15 Jul 2009 02:14:10		
Data Capture Date	15 Jul 2009 03:49:37		
User Filename	S03071540-9A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	40-9	95.00
H#, Total Counts:	118.2	4657	
Start, End, X-Axis:	0	990	Channel Number

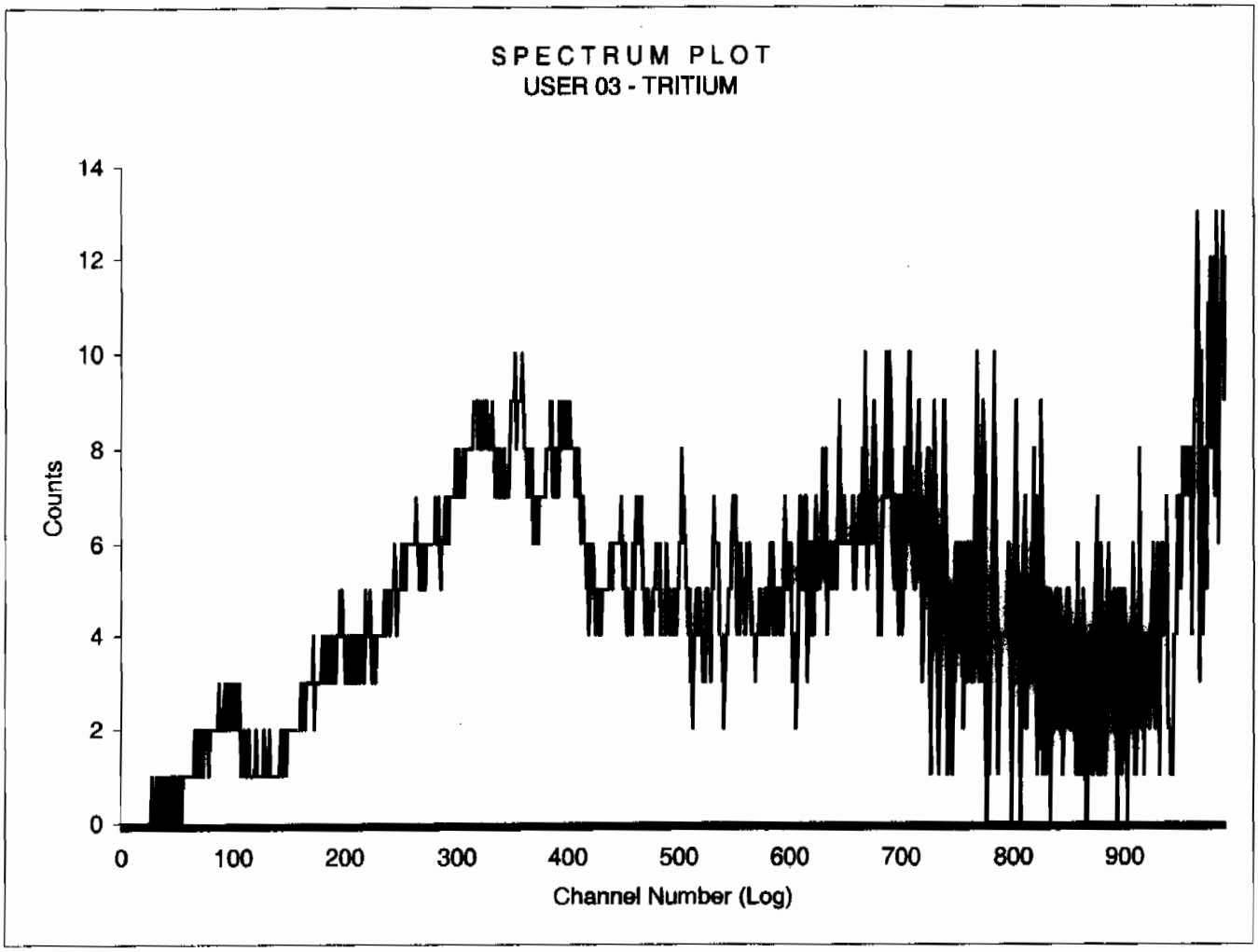

Sample Count Start Time:	15 Jul 2009 03:52:47		
Data Capture Date	15 Jul 2009 05:28:14		
User Filename	S03071540-10A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	40-10	95.00
H#, Total Counts:	119.0	4520	
Start, End, X-Axis:	0	990	Channel Number

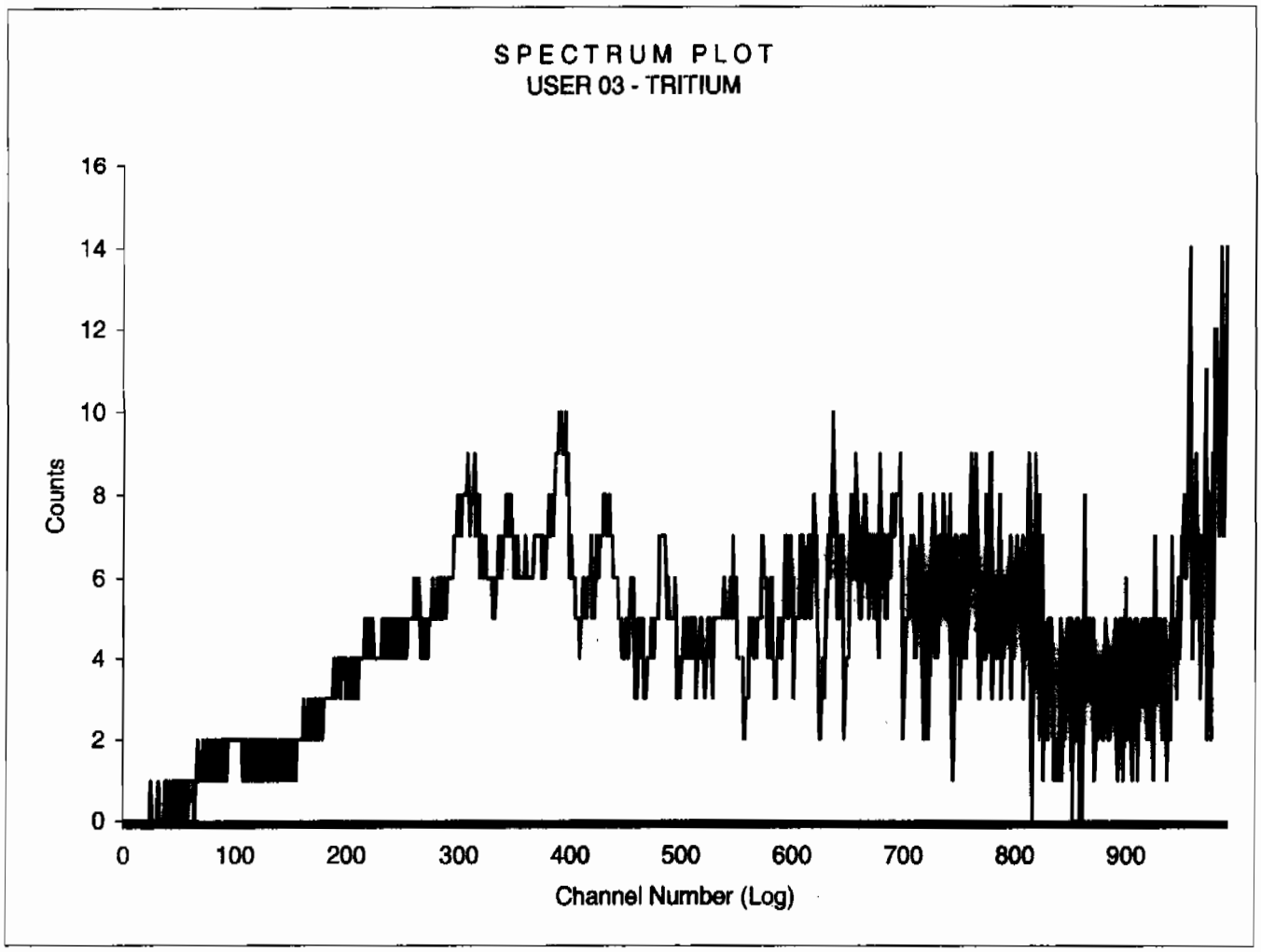

Sample Count Start Time:	15 Jul 2009 05:31:25		
Data Capture Date	15 Jul 2009 07:06:57		
User Filename	S03071540-11A.XLS		
	U03071440-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	40-11	95.00
H#, Total Counts:	120.2	4404	
Start, End, X-Axis:	0	990	Channel Number

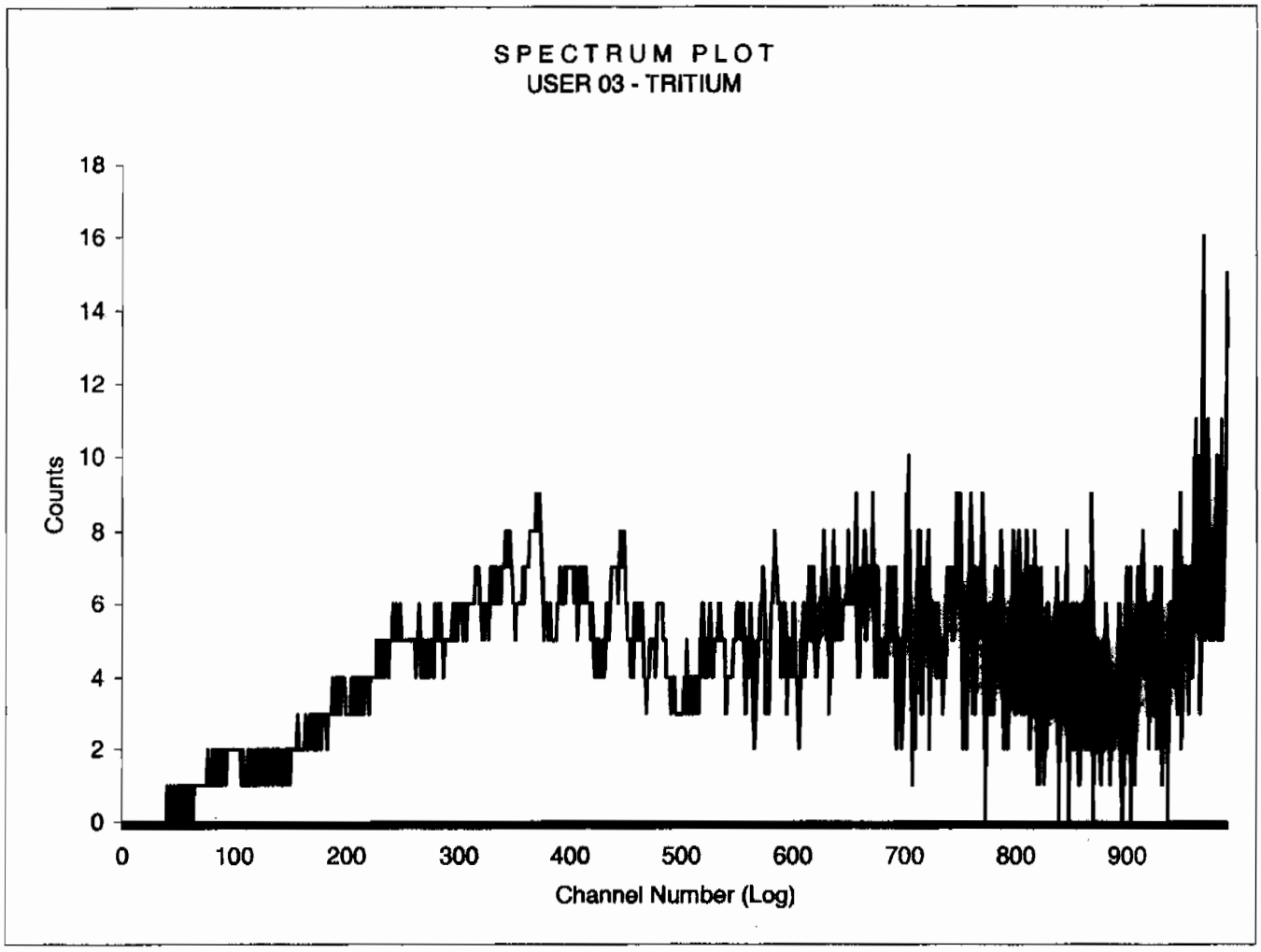

Sample Count Start Time:	15 Jul 2009 08:35:45		
Data Capture Date	15 Jul 2009 09:06:09		
User Filename	S03071518-1B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	18-1	30.00
H#, Total Counts:	117.0	1209	
Start, End, X-Axis:	0	990	Channel Number

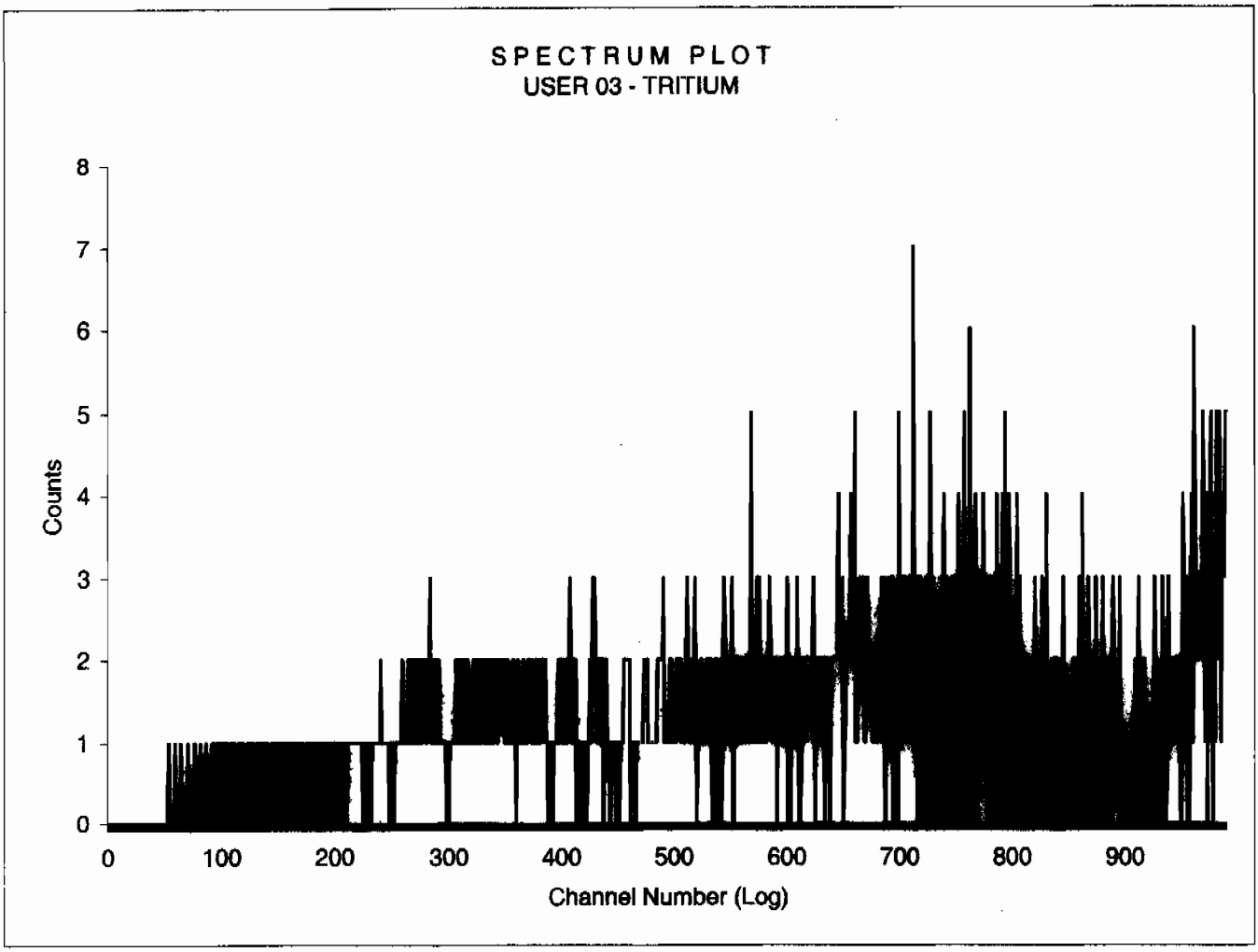

Sample Count Start Time:	15 Jul 2009 09:07:34		
Data Capture Date	15 Jul 2009 09:37:59		
User Filename	S03071518-2B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	18-2	30.00
H#, Total Counts:	118.8	1259	
Start, End, X-Axis:	0	990	Channel Number

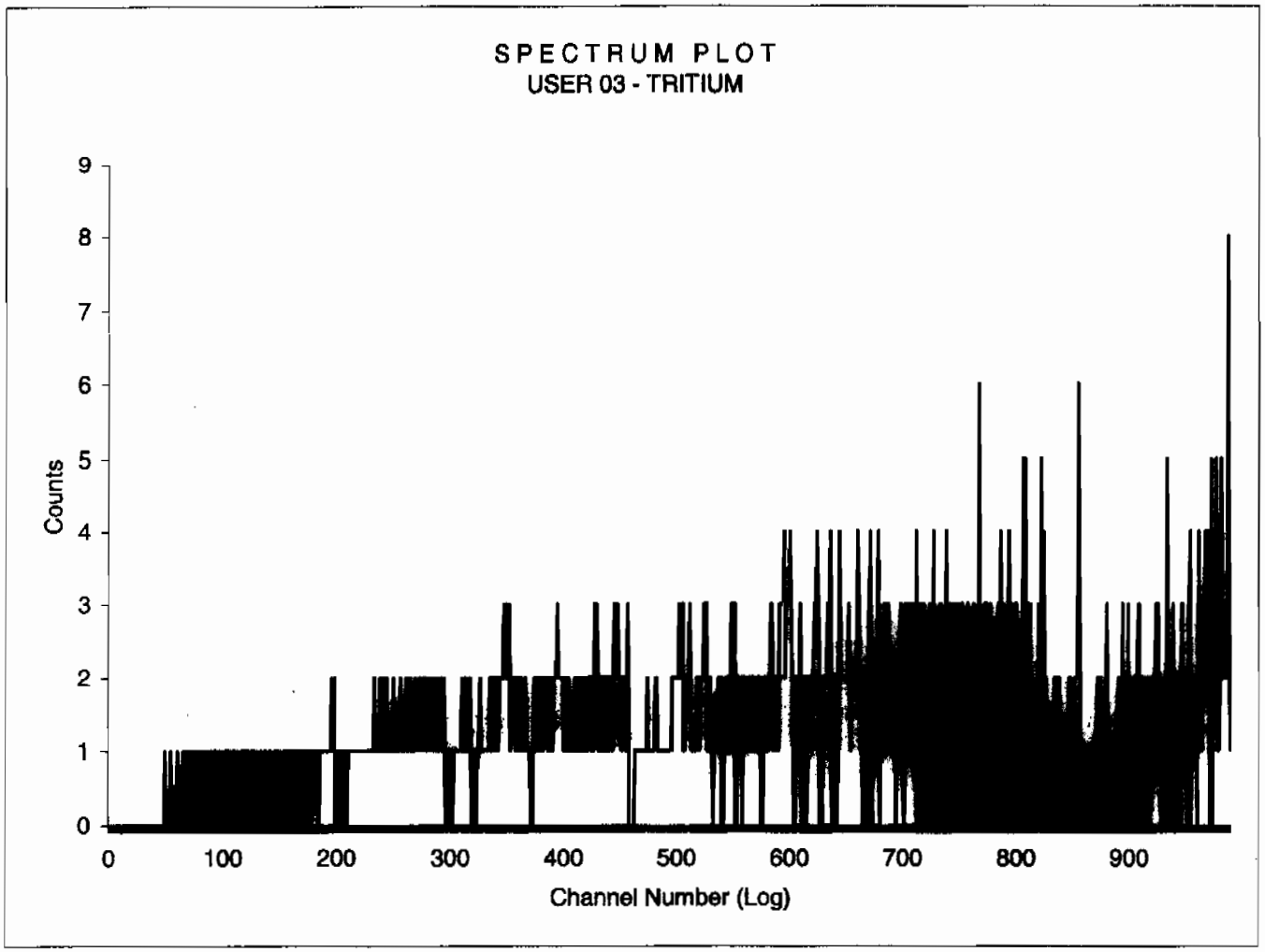

Sample Count Start Time:	15 Jul 2009 09:39:25		
Data Capture Date	15 Jul 2009 10:09:50		
User Filename	S03071518-3B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	18-3	30.00
H#, Total Counts:	116.2	1290	
Start, End, X-Axis:	0	990	Channel Number

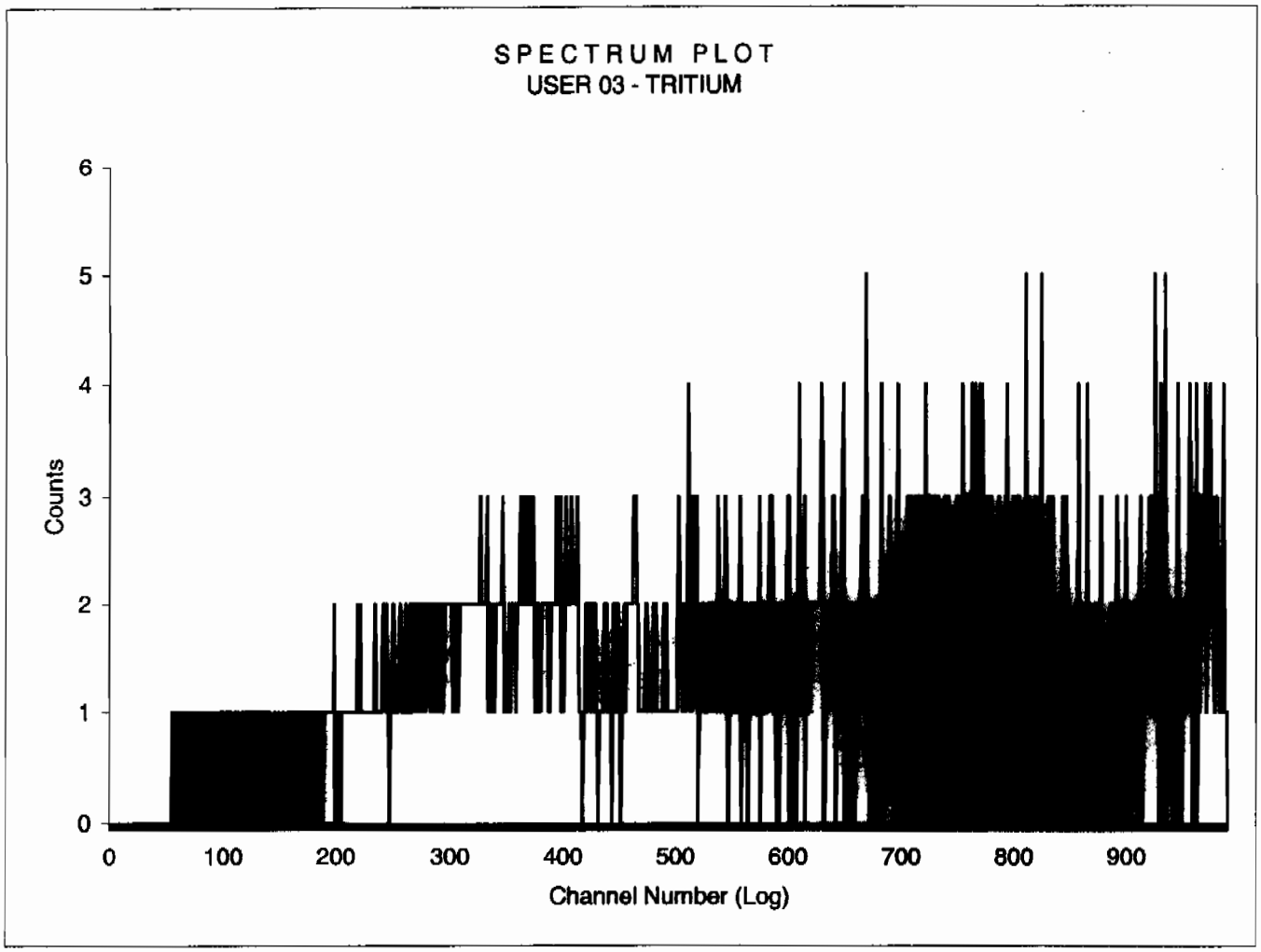

Sample Count Start Time:	15 Jul 2009 10:11:14		
Data Capture Date	15 Jul 2009 10:41:39		
User Filename	S03071518-4B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	18-4	30.00
H#, Total Counts:	112.3	1320	
Start, End, X-Axis:	0	990	Channel Number

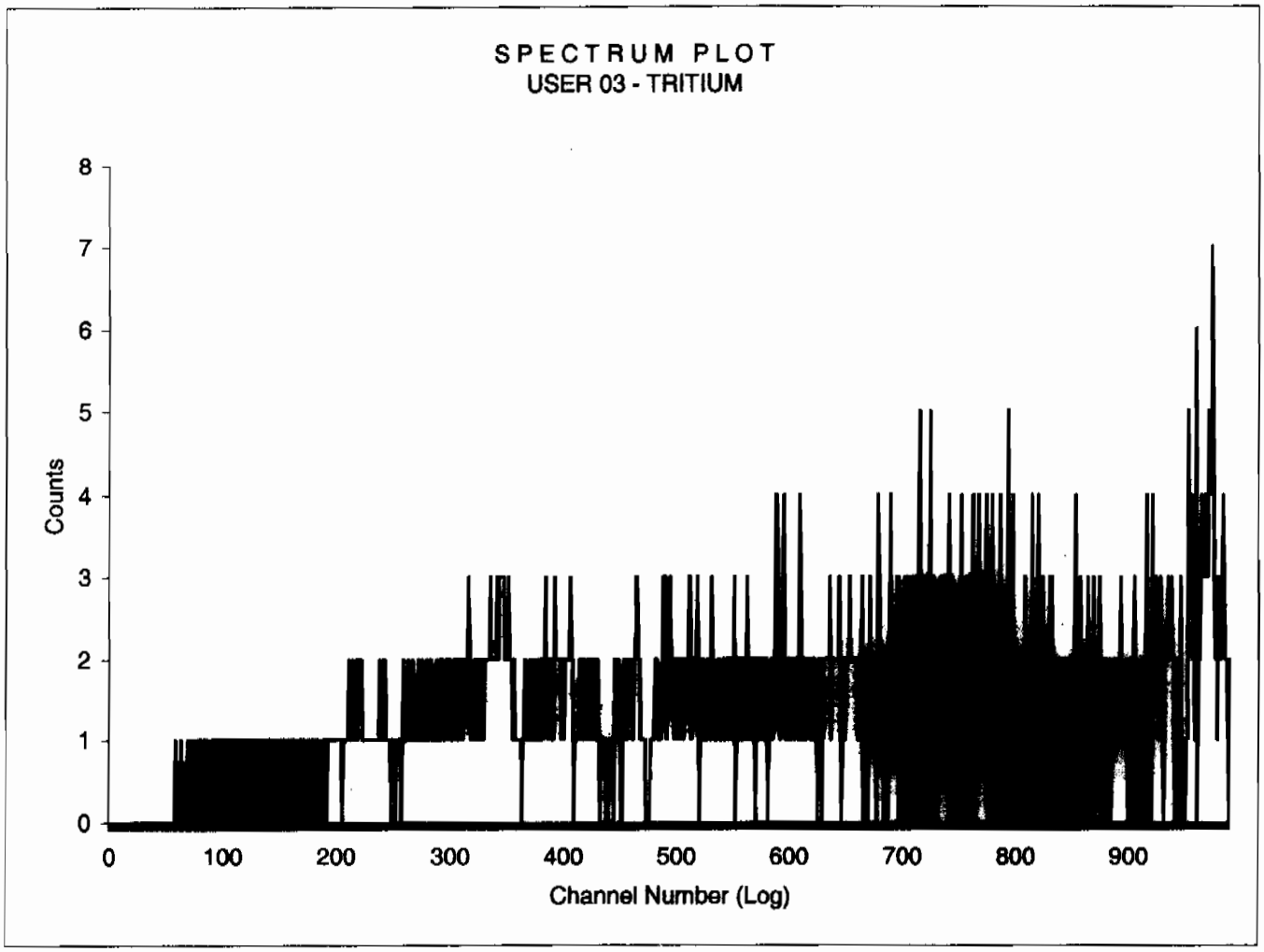

Sample Count Start Time:	15 Jul 2009 10:43:04		
Data Capture Date	15 Jul 2009 11:13:28		
User Filename	S03071518-5B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	18-5	30.00
H#, Total Counts:	111.3	1180	
Start, End, X-Axis:	0	990	Channel Number

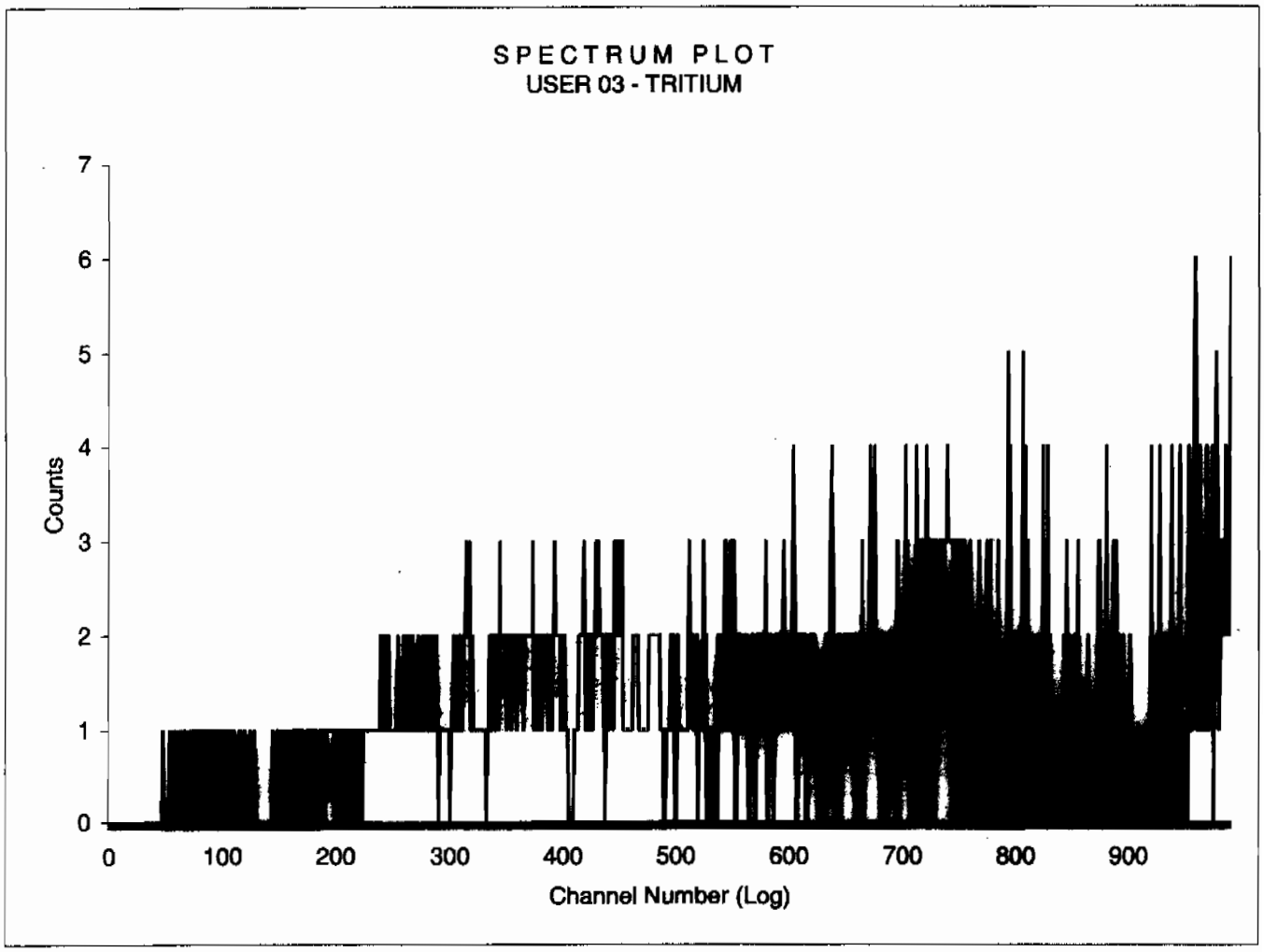

Sample Count Start Time:	15 Jul 2009 11:14:55		
Data Capture Date	15 Jul 2009 11:45:21		
User Filename	S03071518-6B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	18-6	30.00
H#, Total Counts:	115.6	1313	
Start, End, X-Axis:	0	990	Channel Number

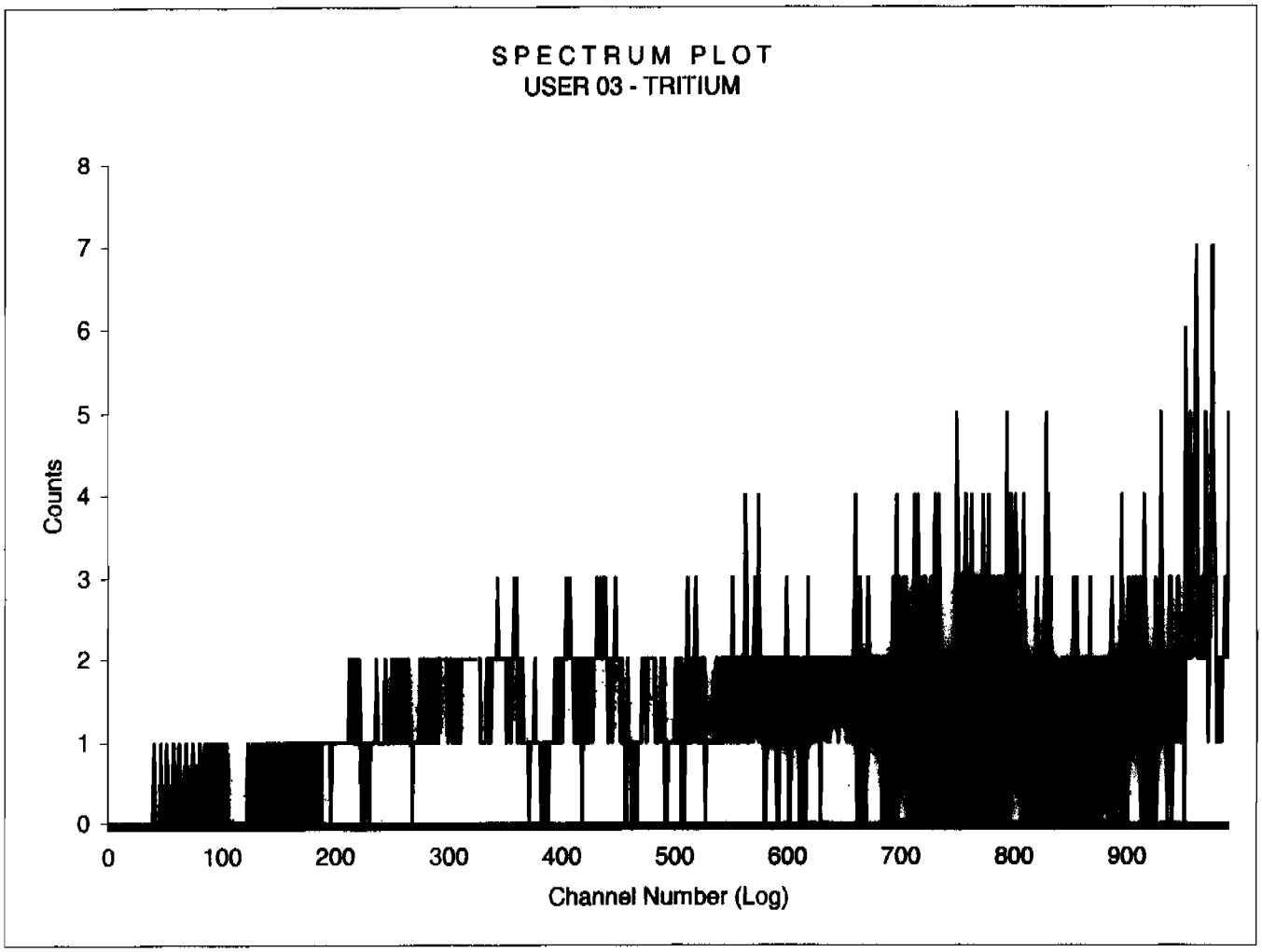

Sample Count Start Time:	15 Jul 2009 11:46:50		
Data Capture Date	15 Jul 2009 12:17:15		
User Filename	S03071518-7B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	18-7	30.00
H#, Total Counts:	119.0	1276	
Start, End, X-Axis:	0	990	Channel Number

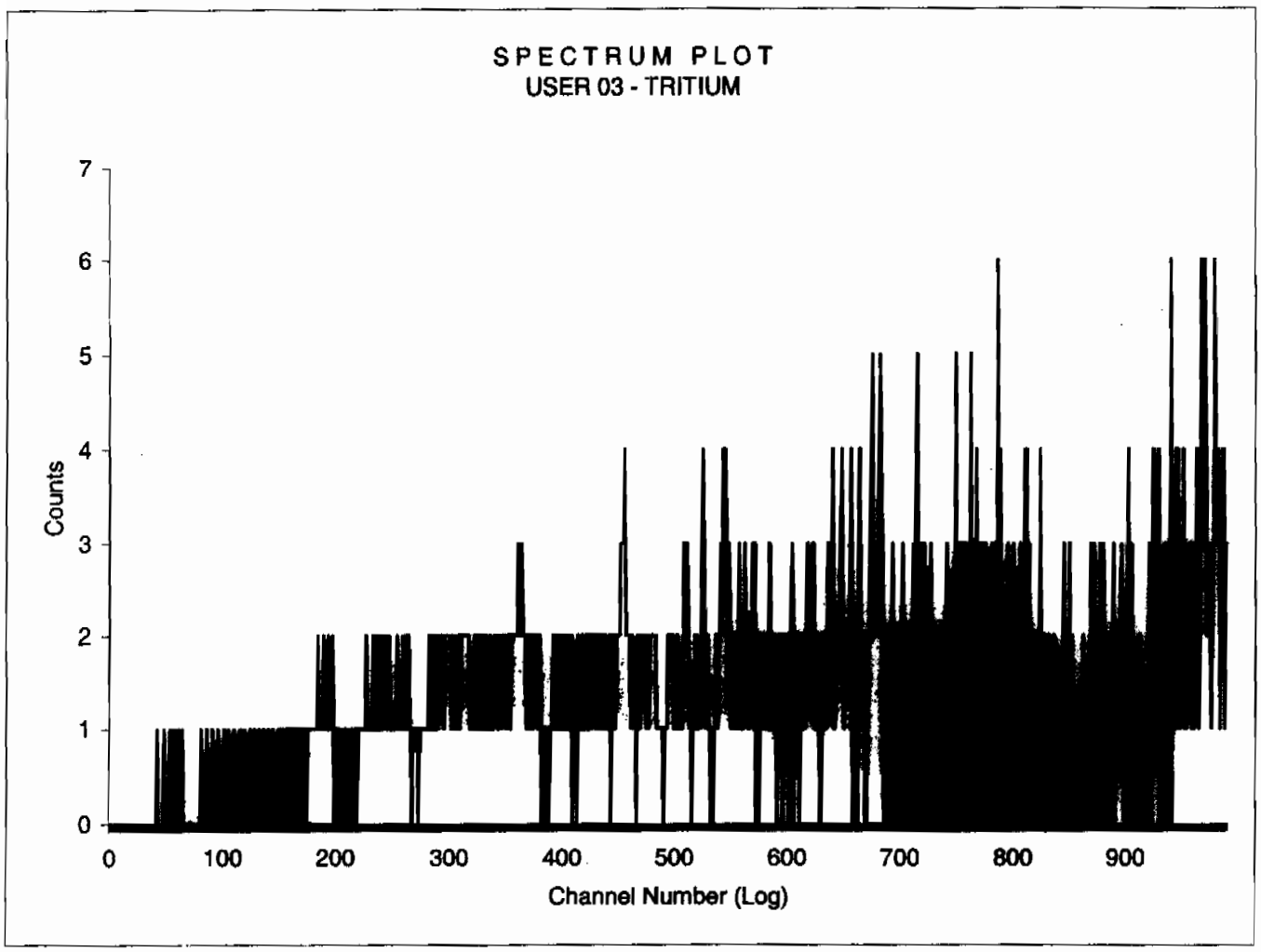

Sample Count Start Time:	15 Jul 2009 12:18:37		
Data Capture Date	15 Jul 2009 12:49:03		
User Filename	S03071518-8B.XLS		
	U03071518-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	18-8	30.00
H#, Total Counts:	115.3	1247	
Start, End, X-Axis:	0	990	Channel Number

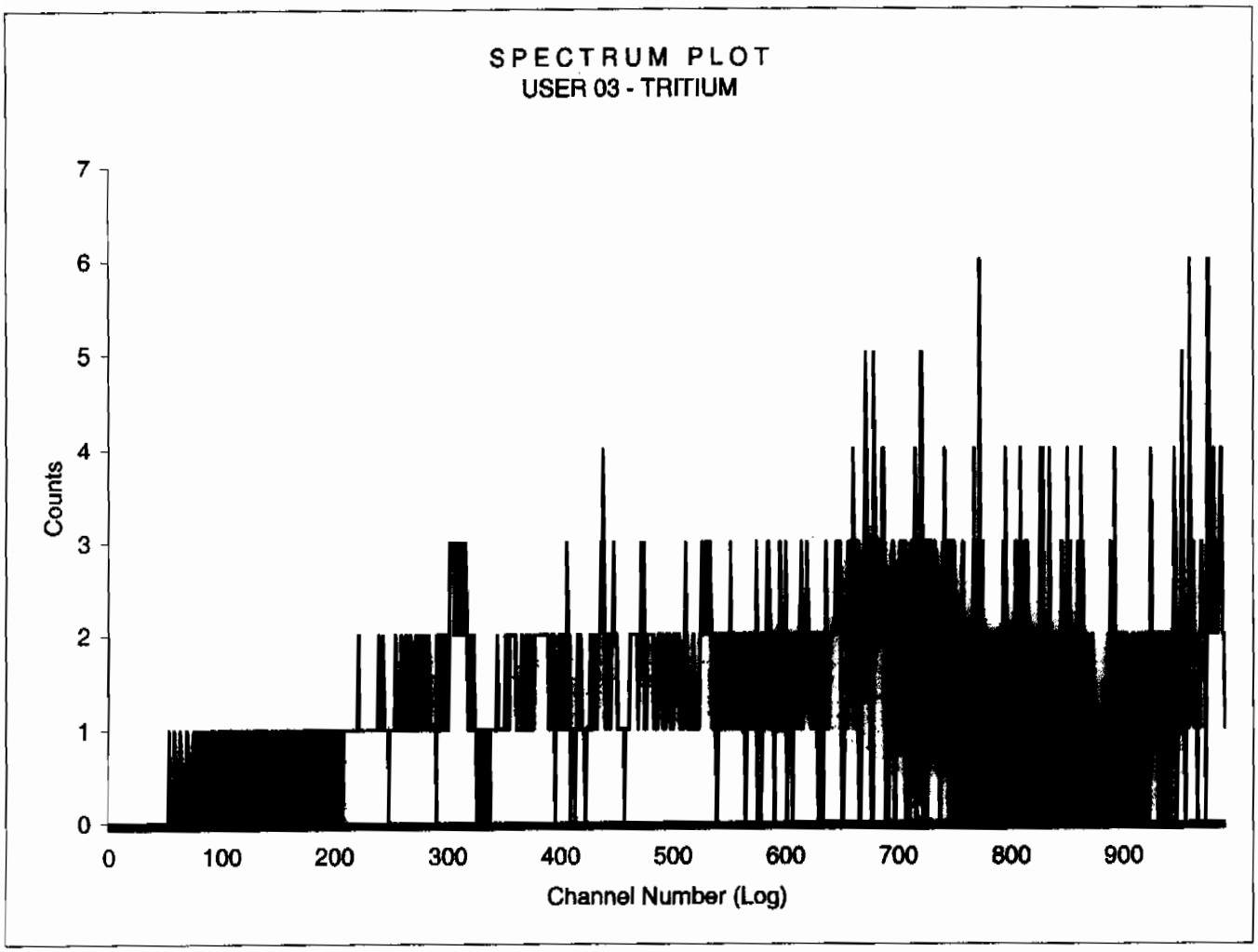

Sample Count Start Time:	15 Jul 2009 13:22:45		
Data Capture Date	15 Jul 2009 13:37:30		
User Filename	S02071503-1A.XLS		
	U02071503-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	RED		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	3-1	15.00
H#, Total Counts:	113.8	1211	
Start, End, X-Axis:	0	990	Channel Number

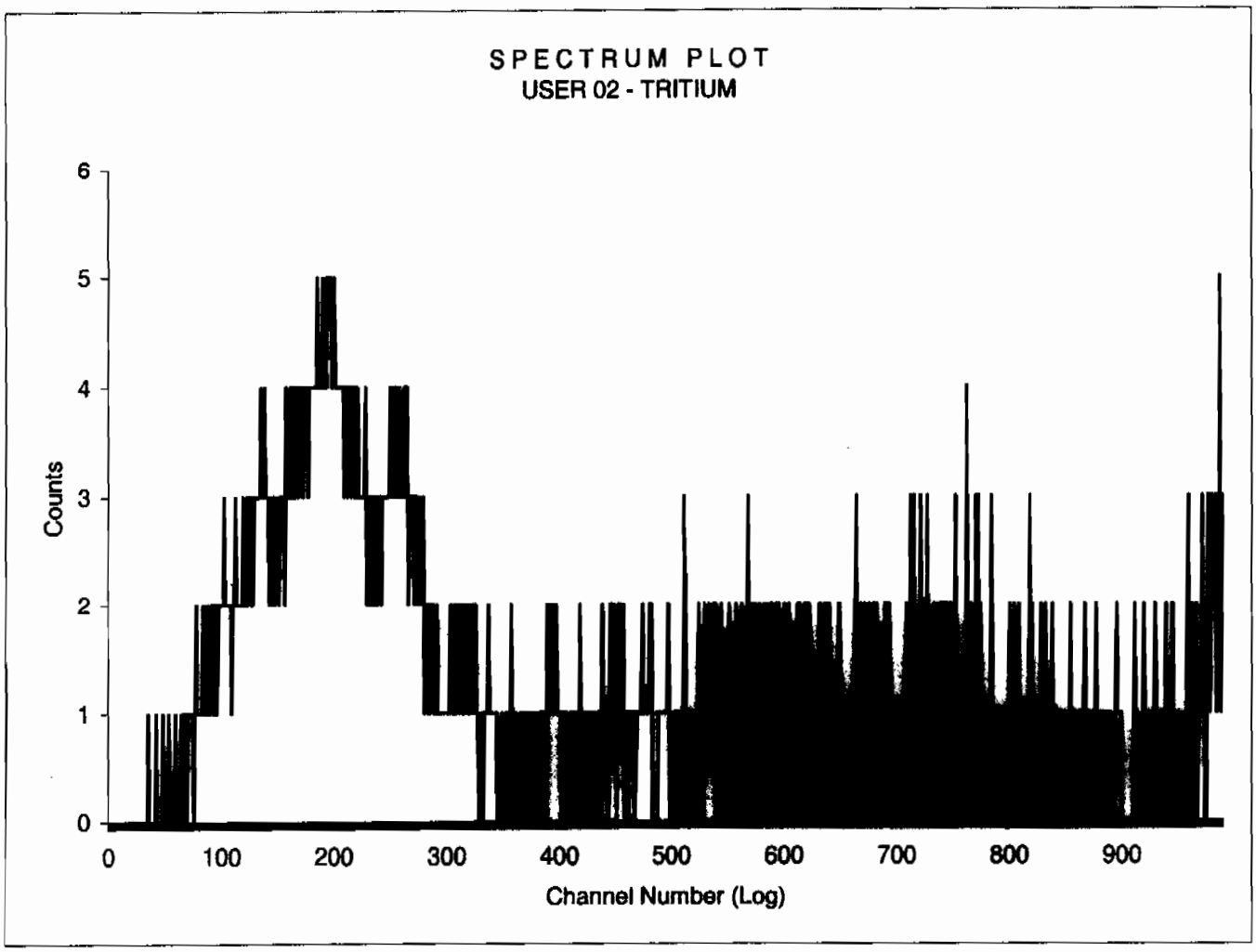

BACKGROUND AND EFFICIENCY DATA

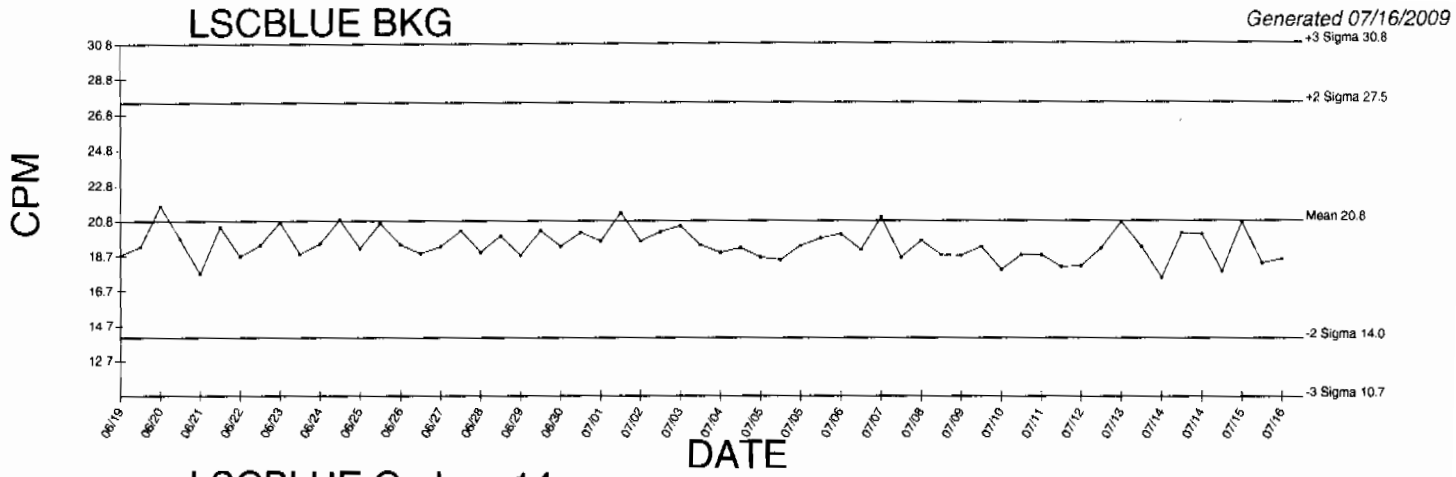

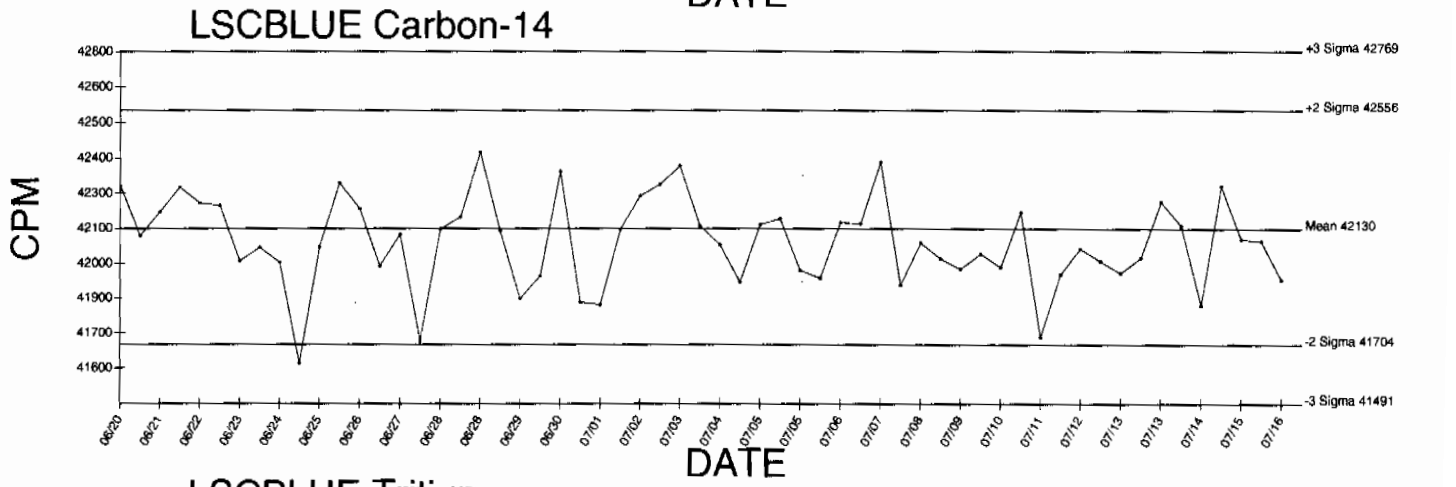

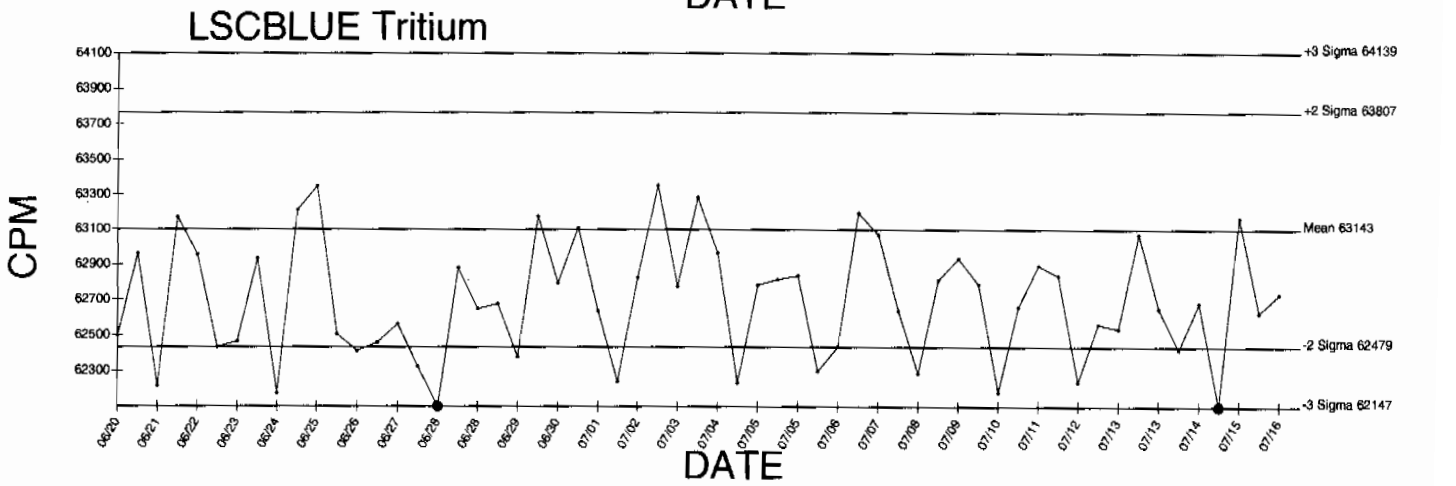

● Denotes Outlier

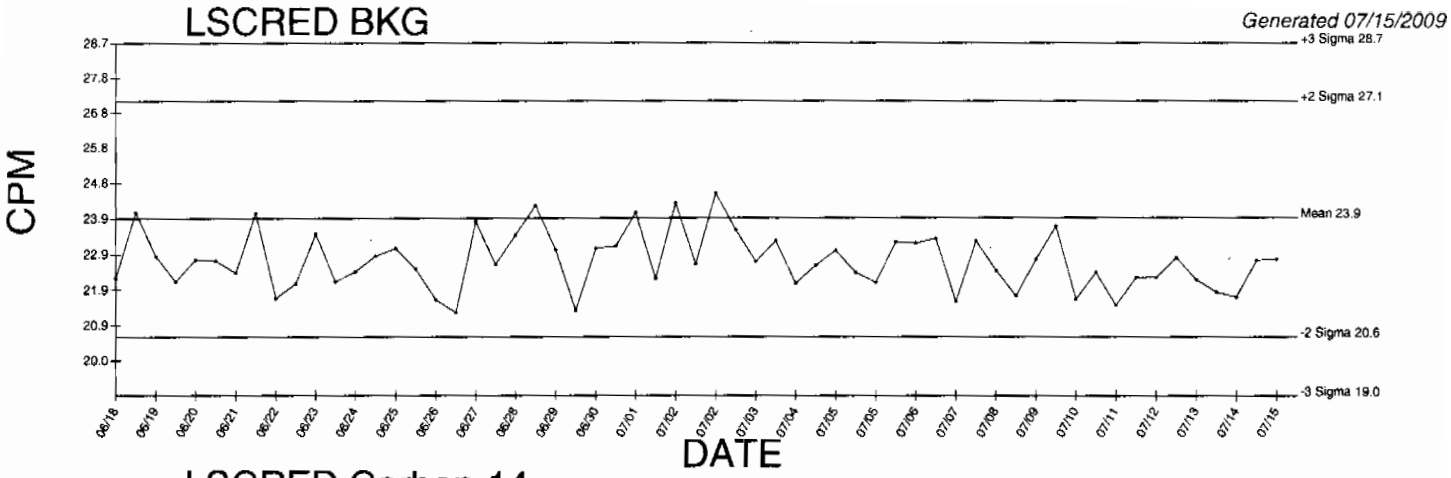

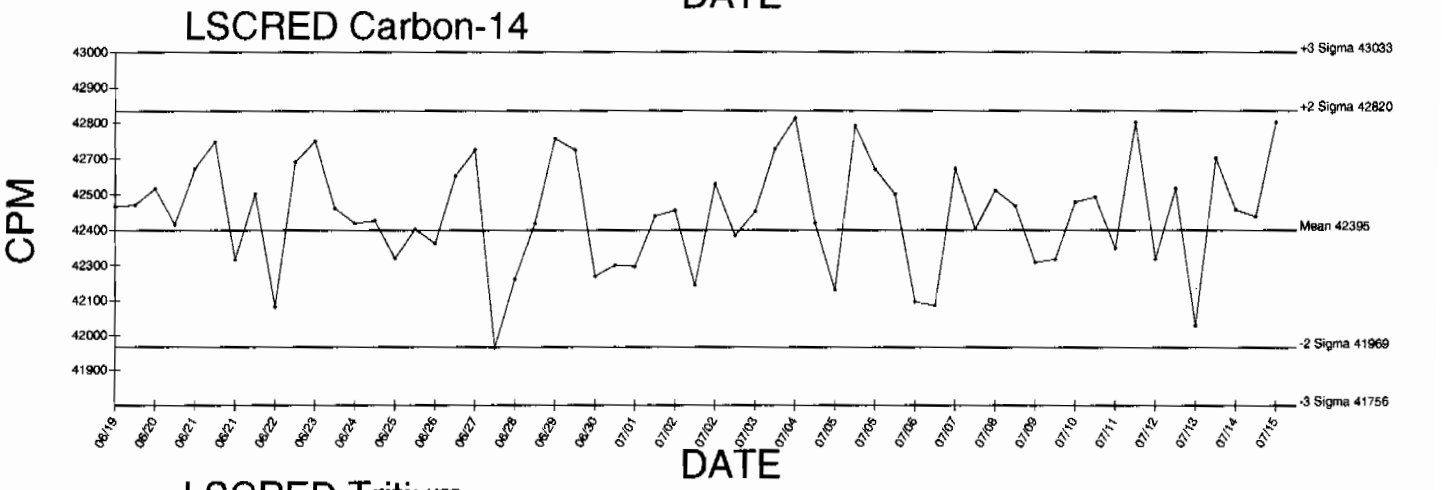

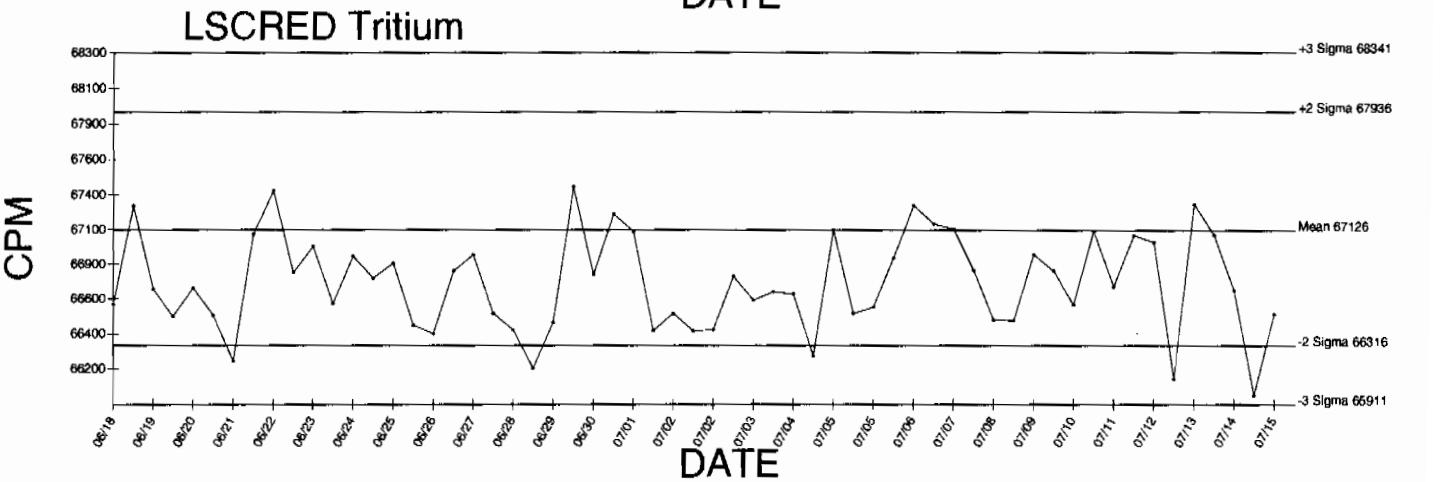

● Denotes Outlier

QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.306636 through 0.326636

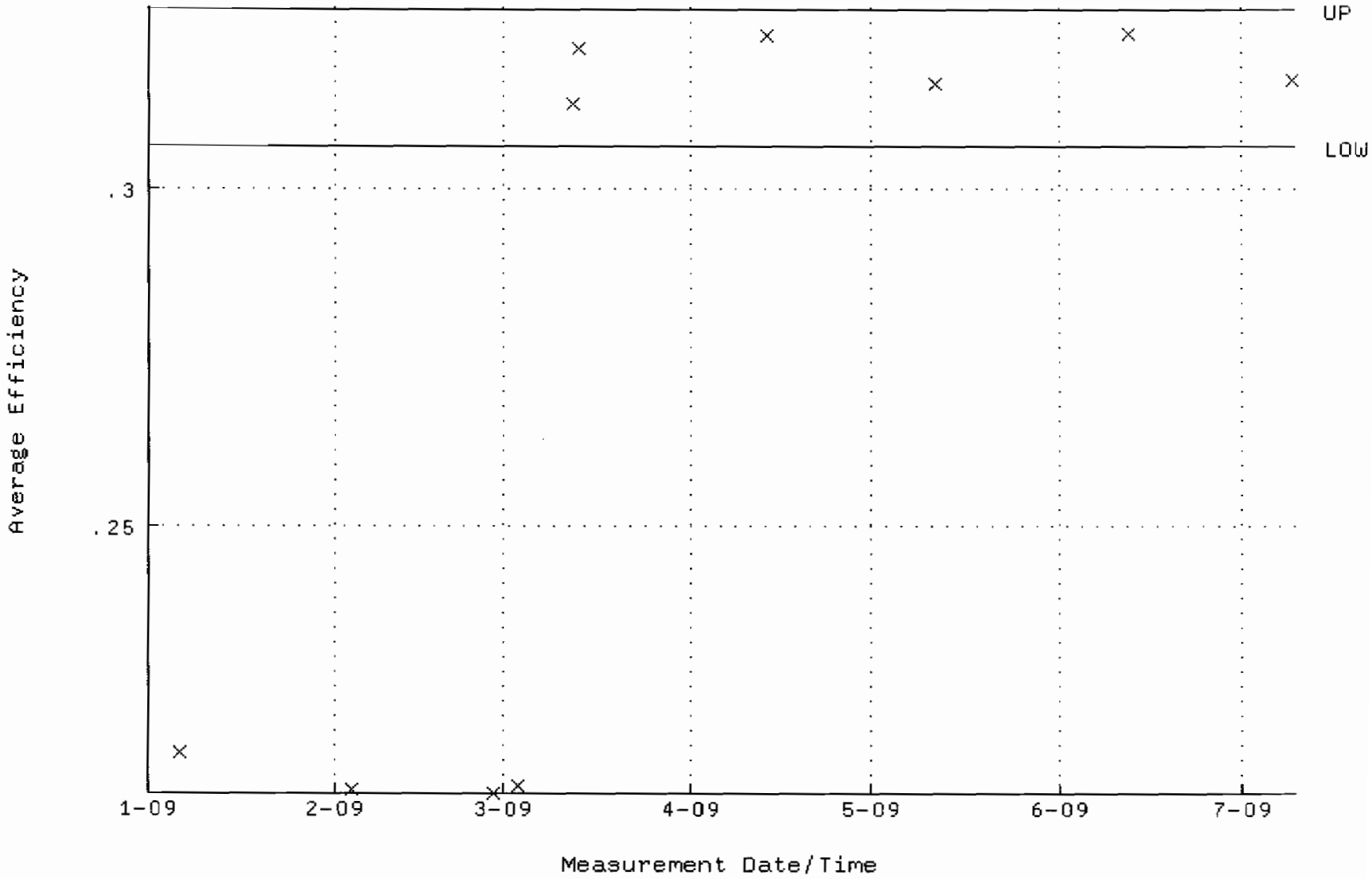

QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 89.6479 through 99.0845

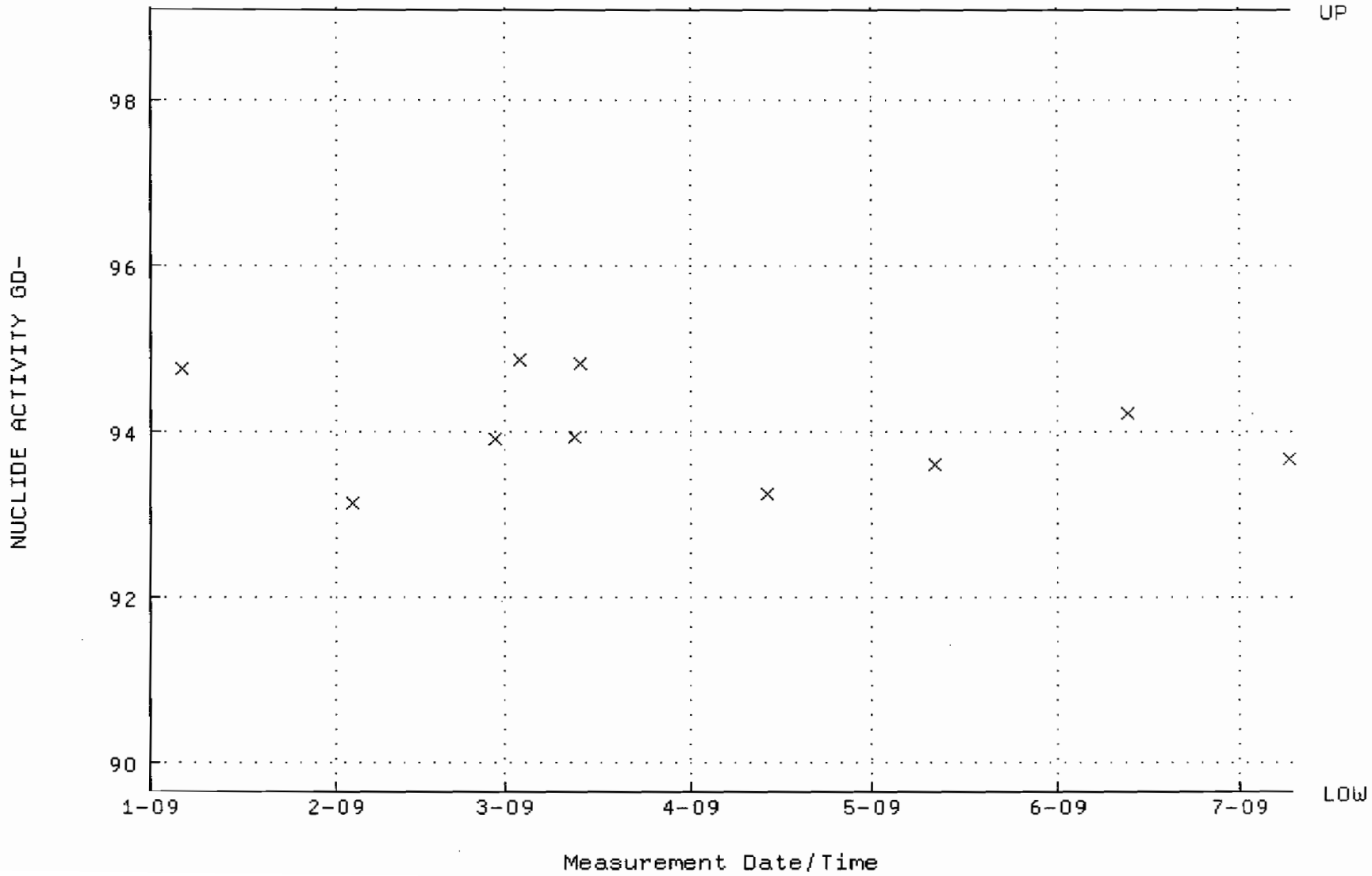

QA filename : DKA100:[ENV_ALPHA.QA.B]B069.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

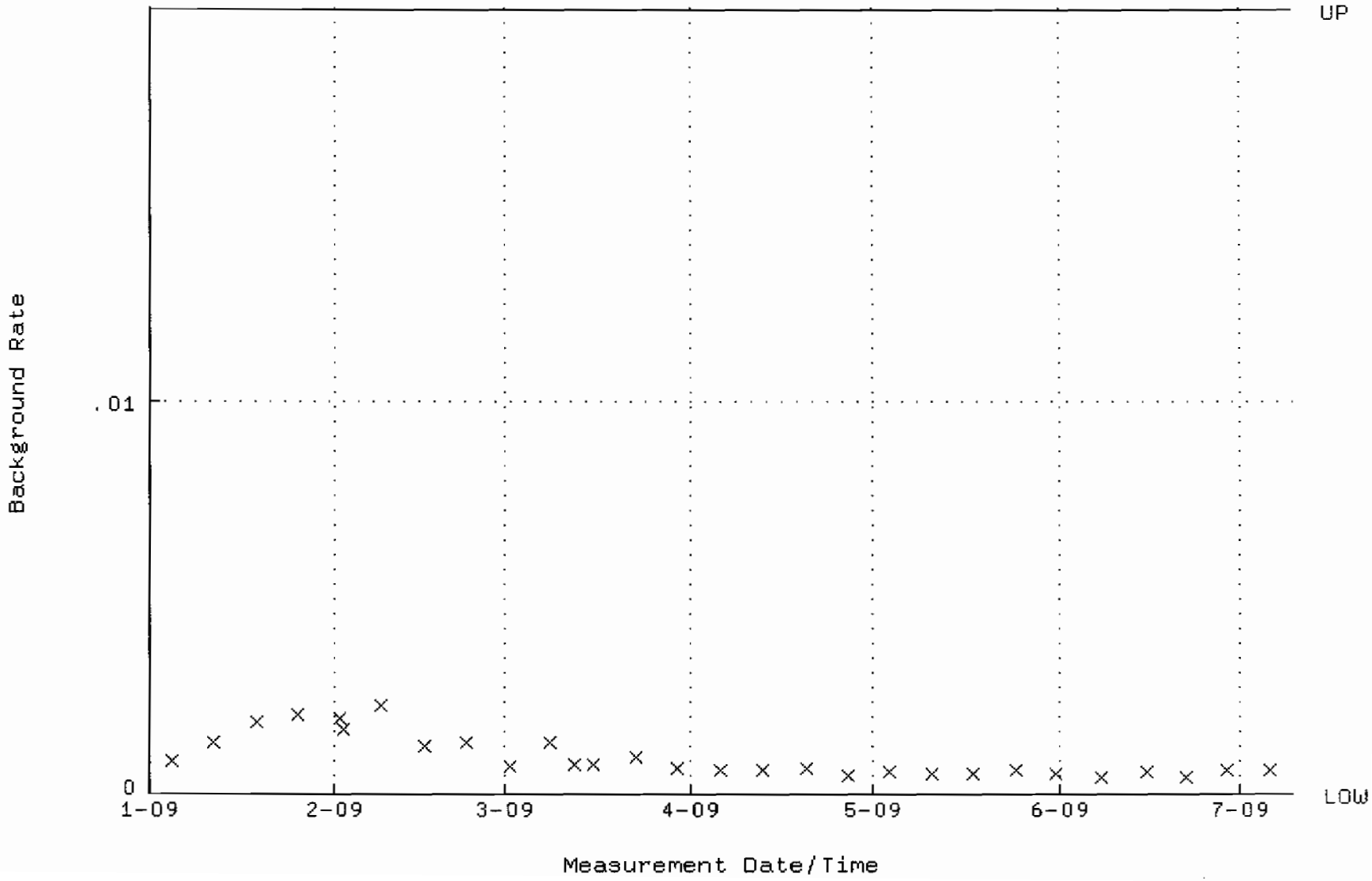

QA filename : DKA100:[ENV_ALPHA.QA.W]W077.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000

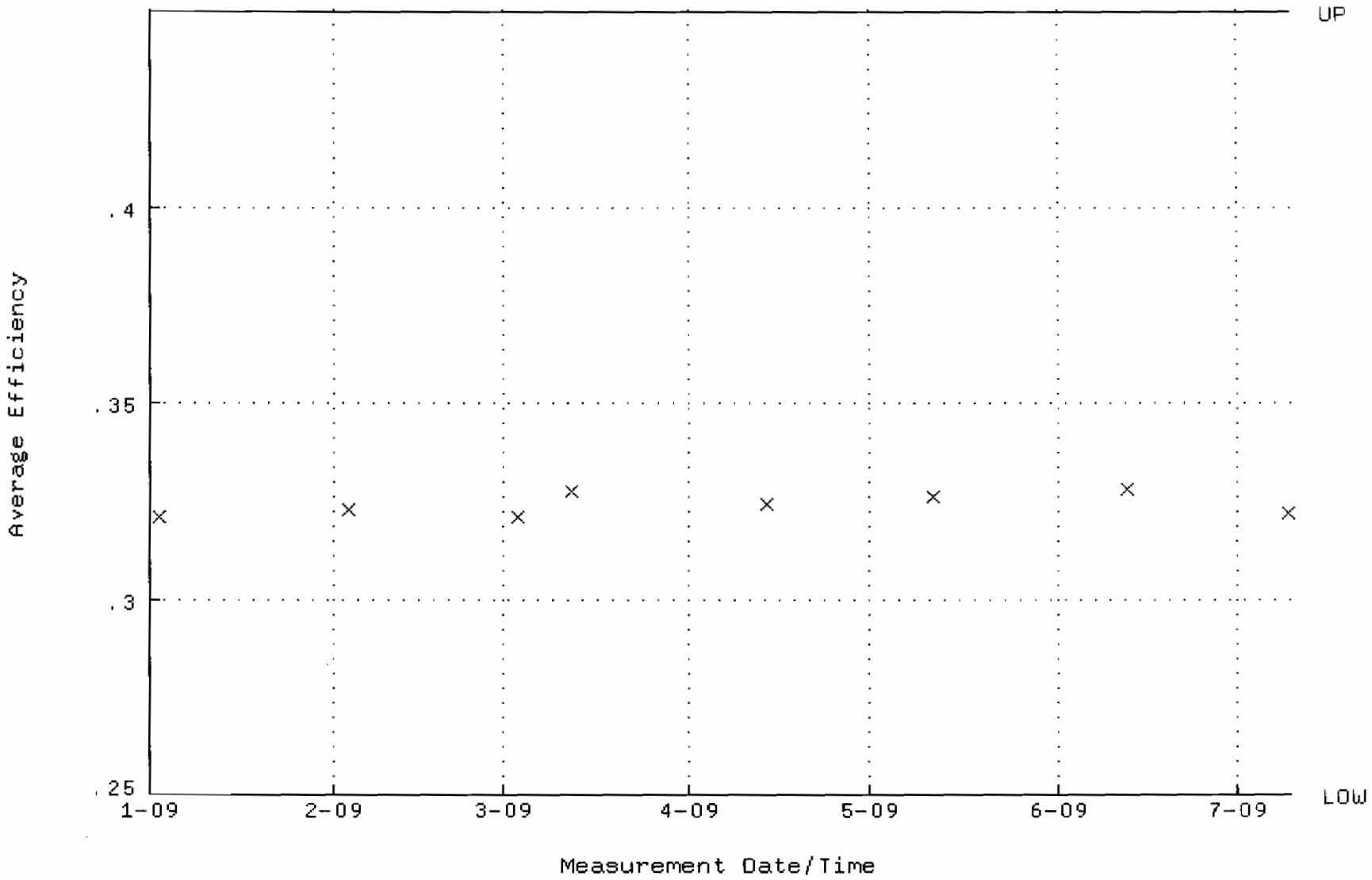

QA filename : DKA100:[ENV_ALPHA.QA.W]W077.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000

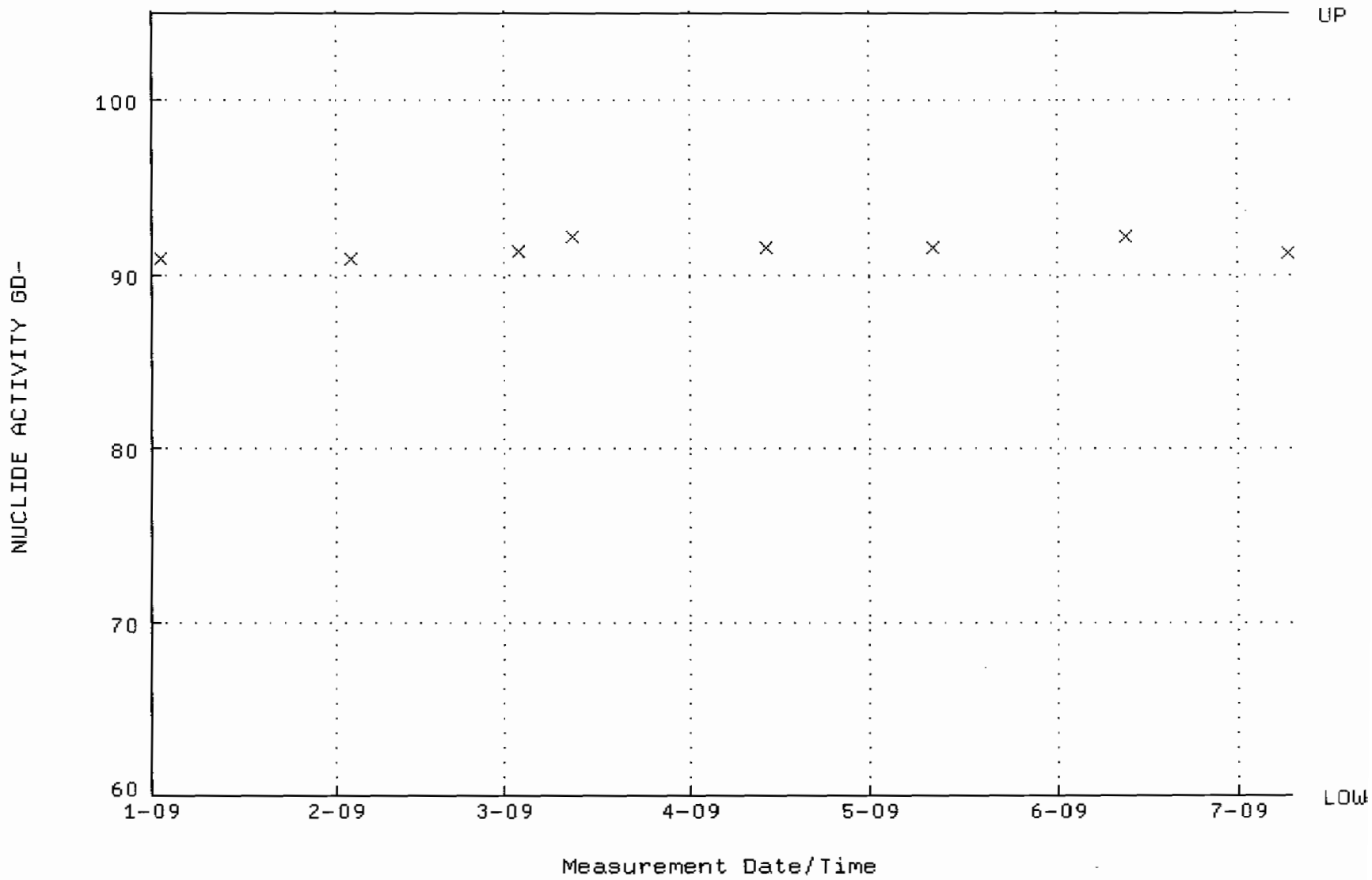

QA filename : DKA100:[ENV_ALPHA.QA.B]B077.QAF;3
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:34 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

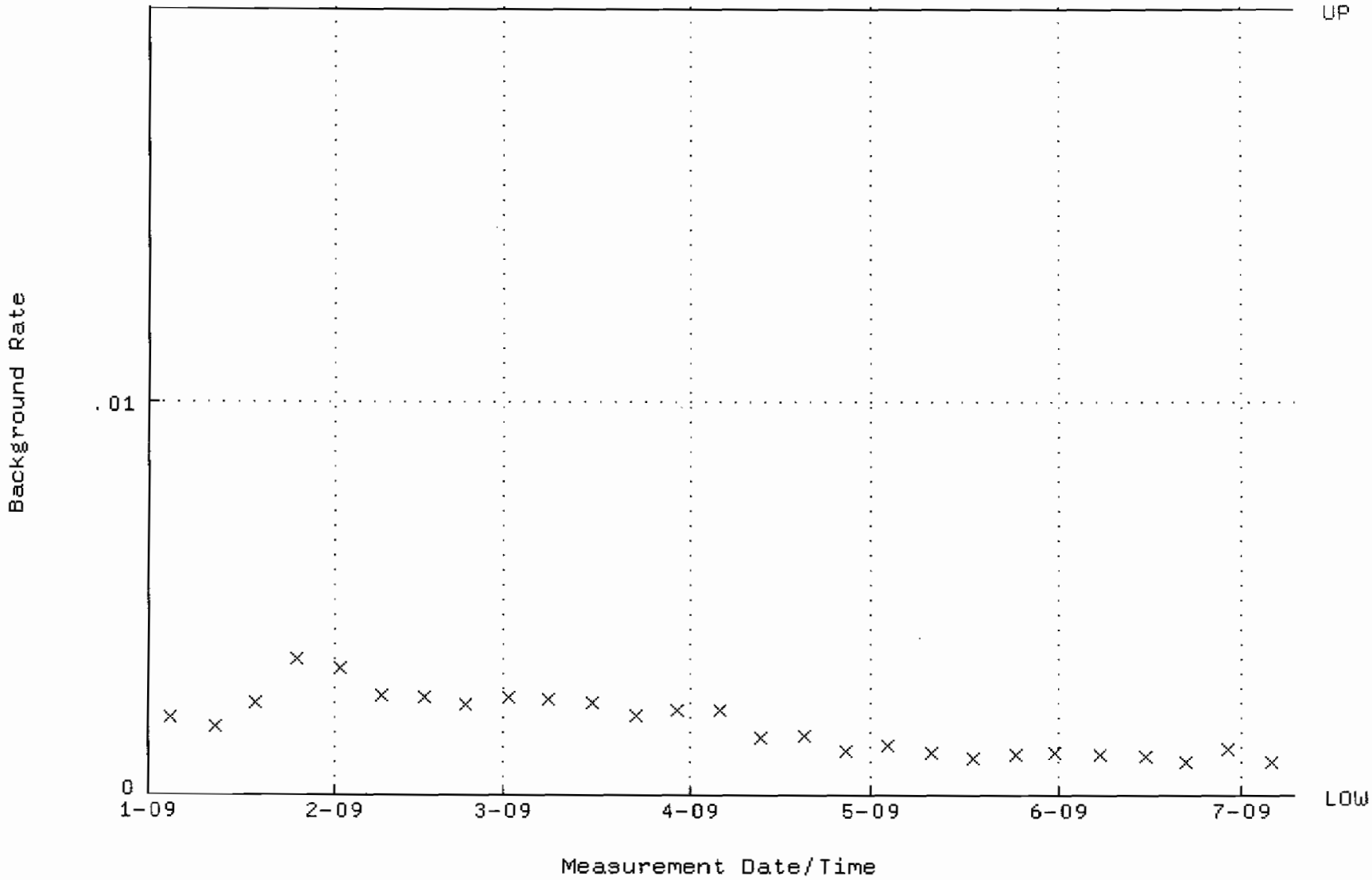

QA filename : DKA100:[ENV_ALPHA.QA.W]W078.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000

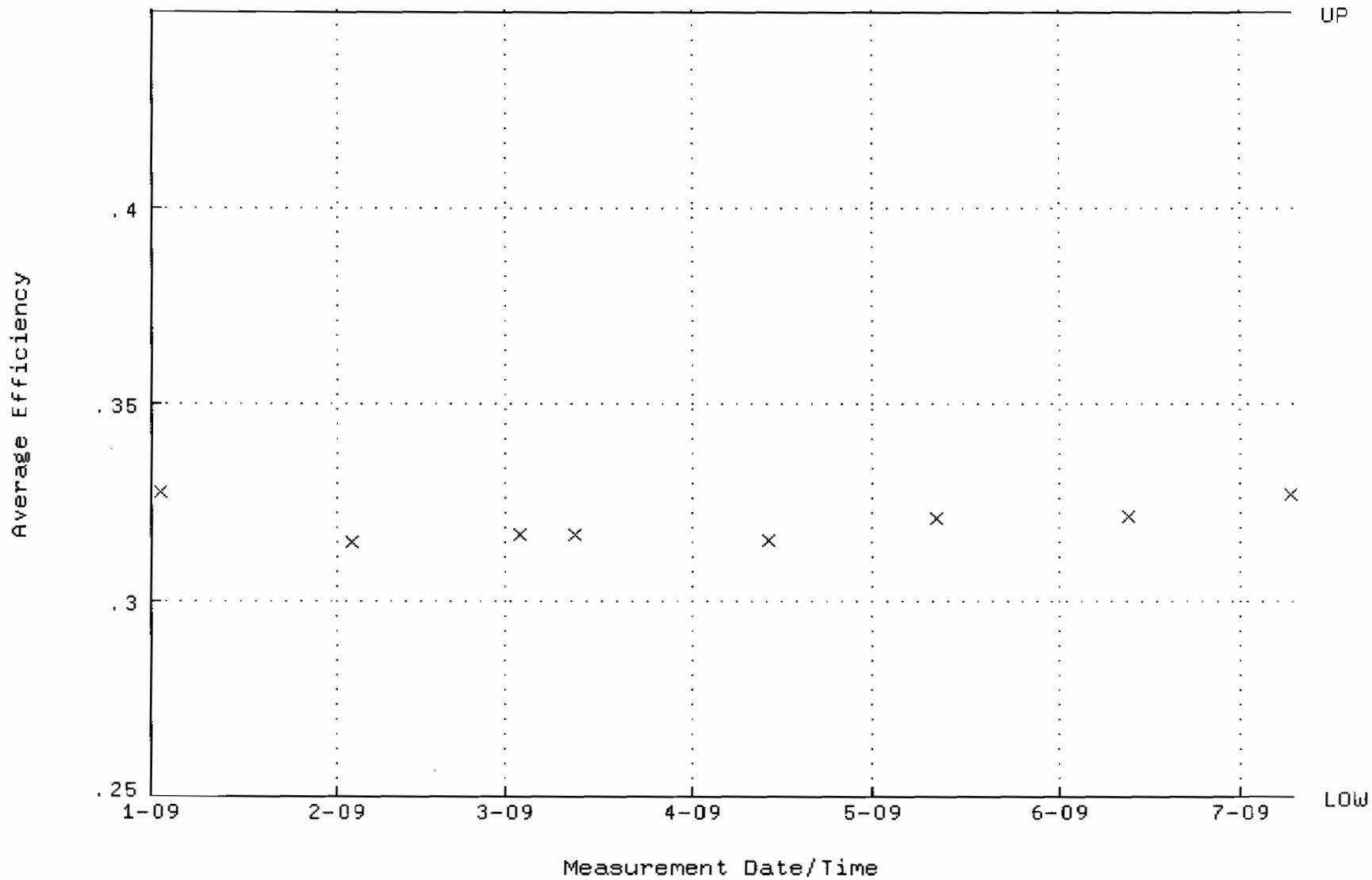

QA filename : DKA100:[ENV_ALPHA.QA.W]W078.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000

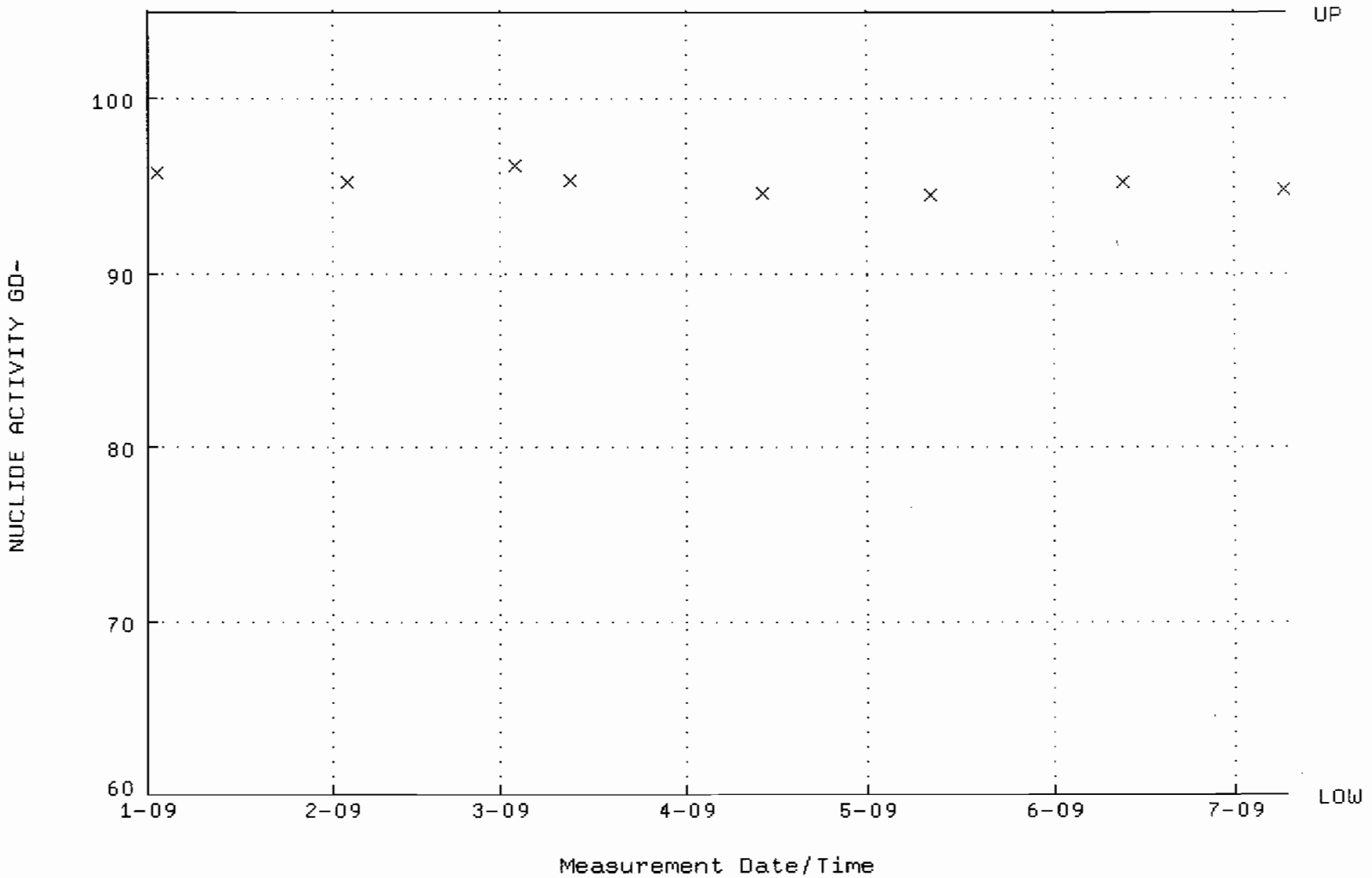

QA filename : DKA100:[ENV_ALPHA.QA.B]B078.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:34 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

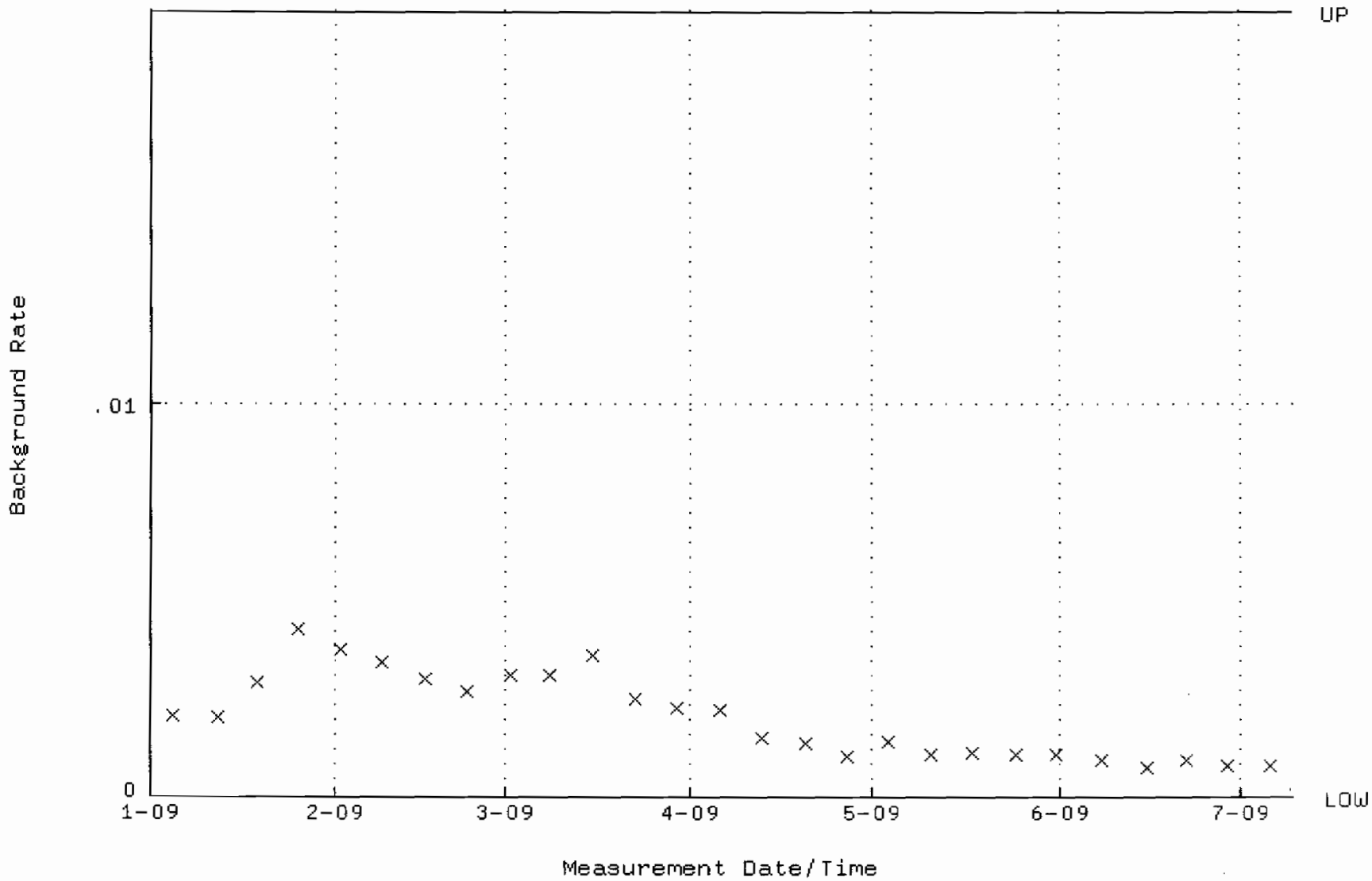

QA filename : DKA100:[ENV_ALPHA.QA.W]W079.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000

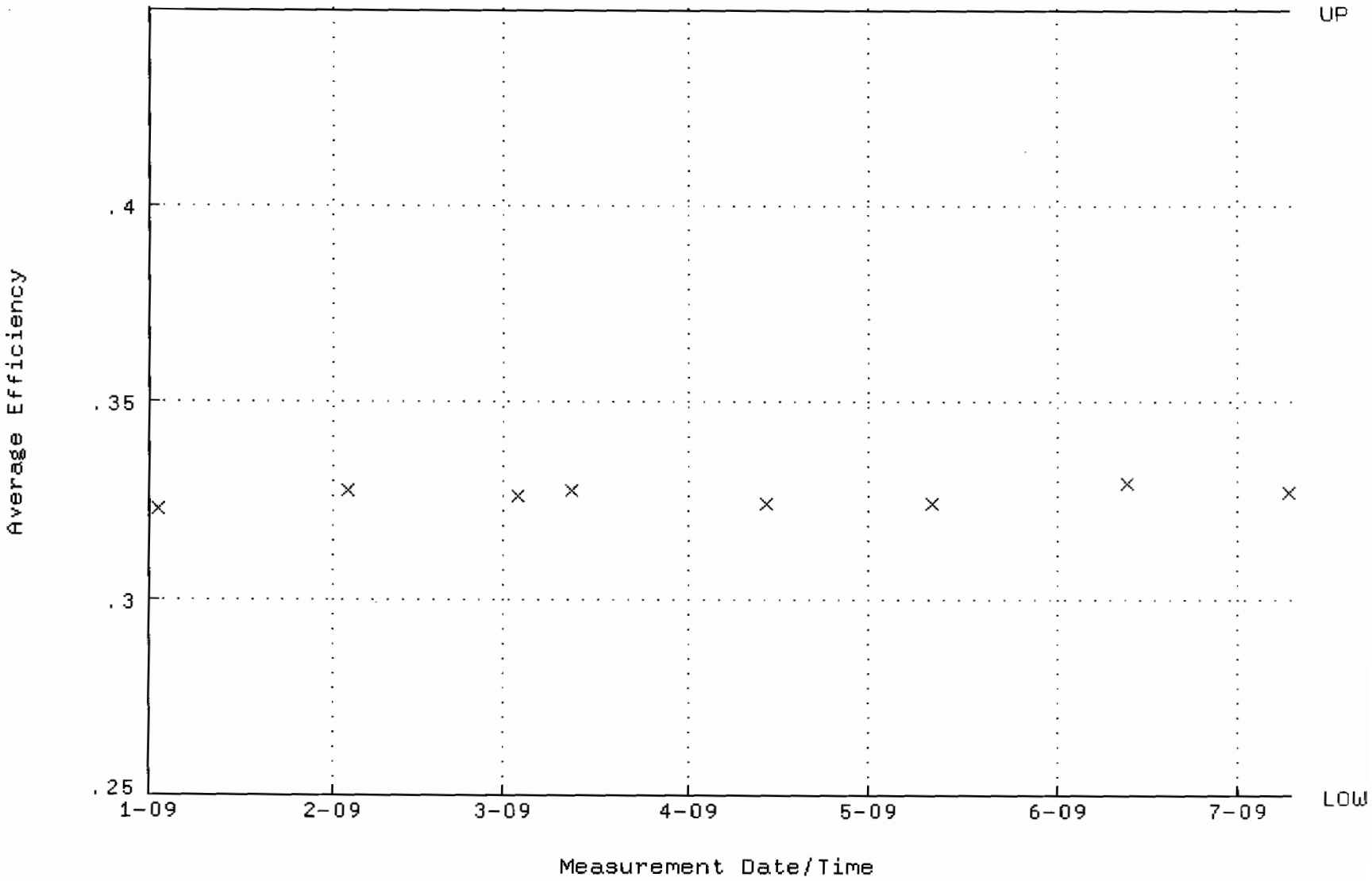

QA filename : DKA100:[ENV_ALPHA.QA.W]W079.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000

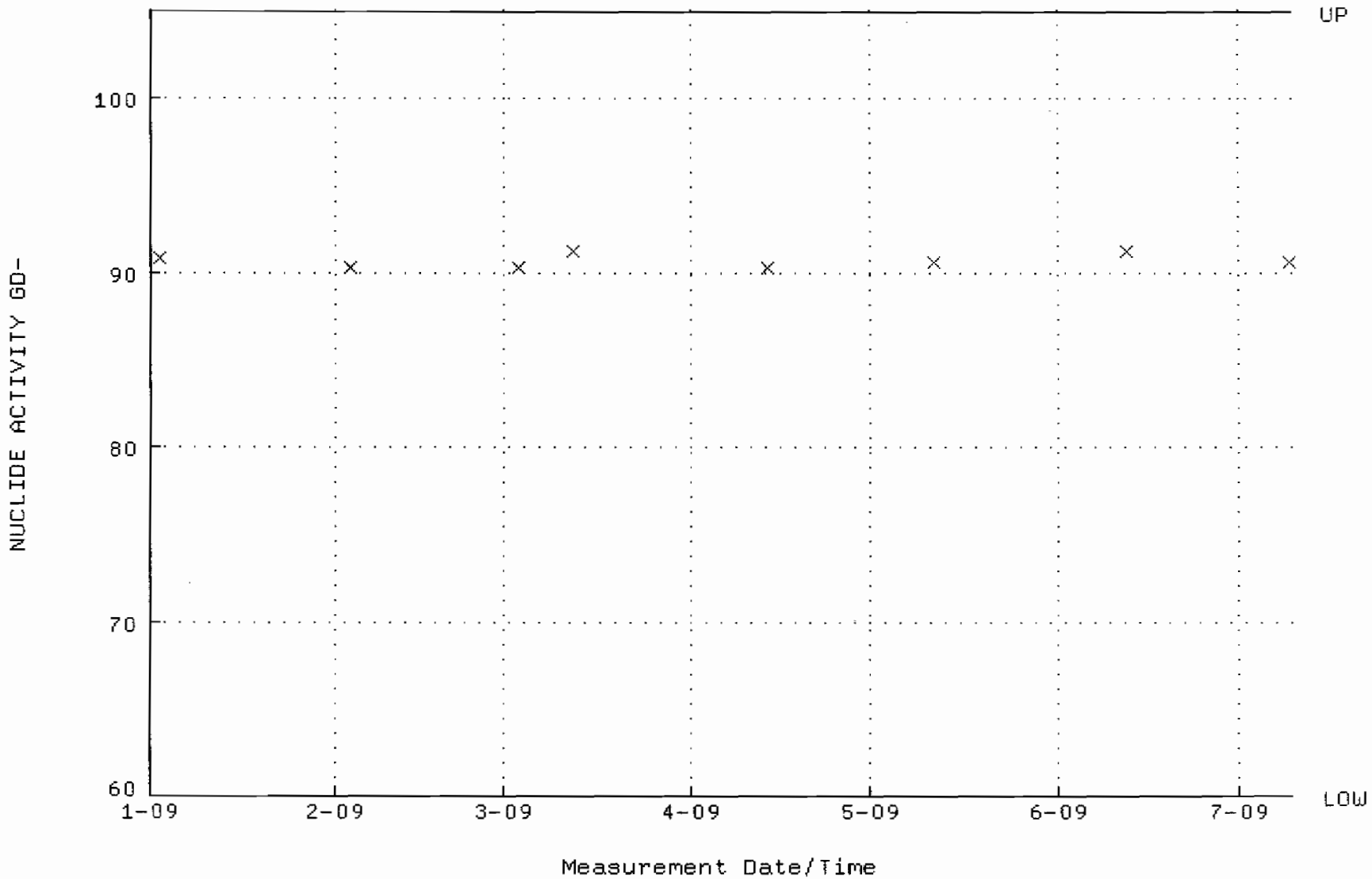

QA filename : DKA100:[ENV_ALPHA.QA.B]B079.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:34 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

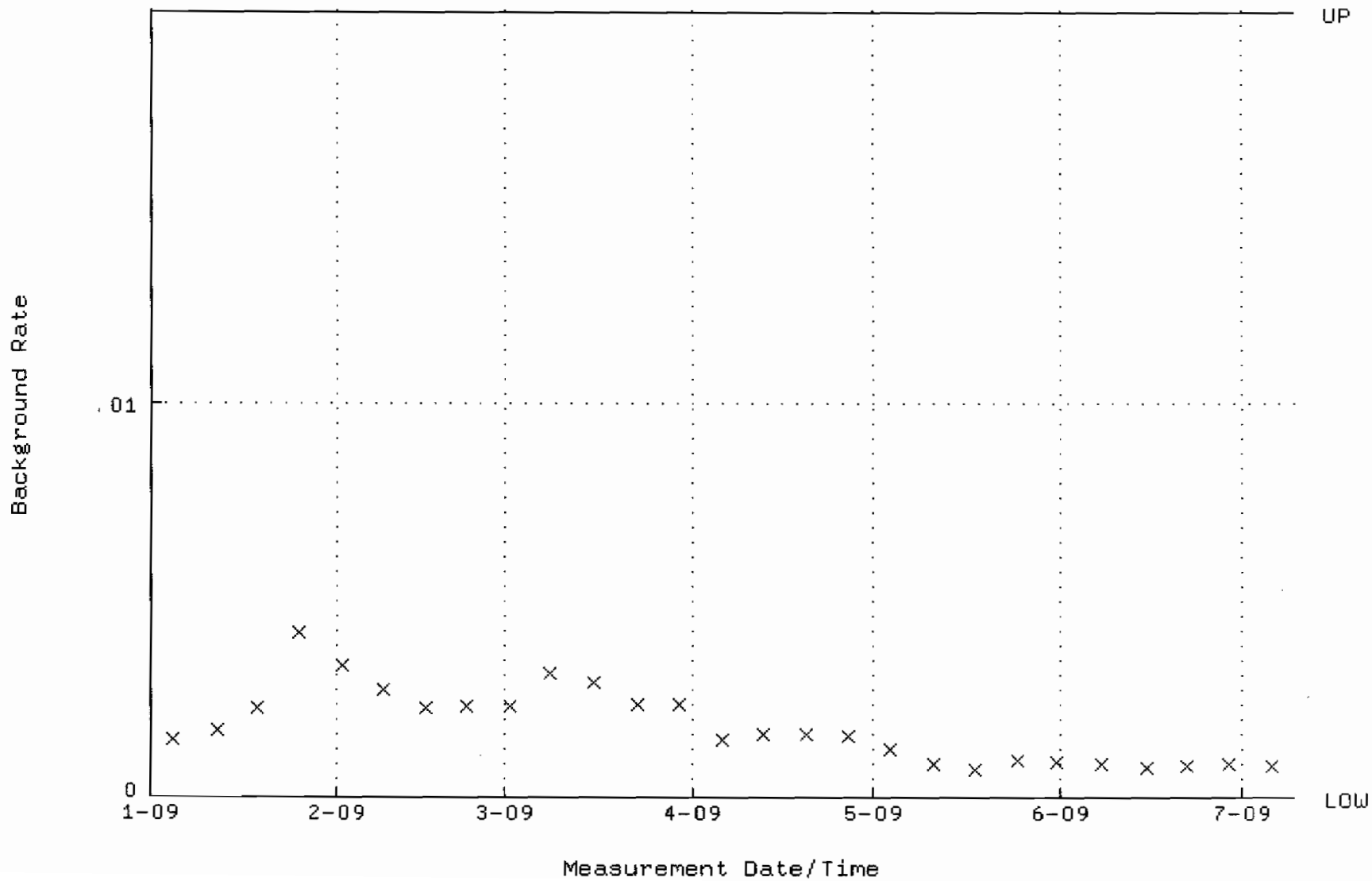

QA filename : DKA100:[ENV_ALPHA.QA.W]W080.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.324032 through 0.344032

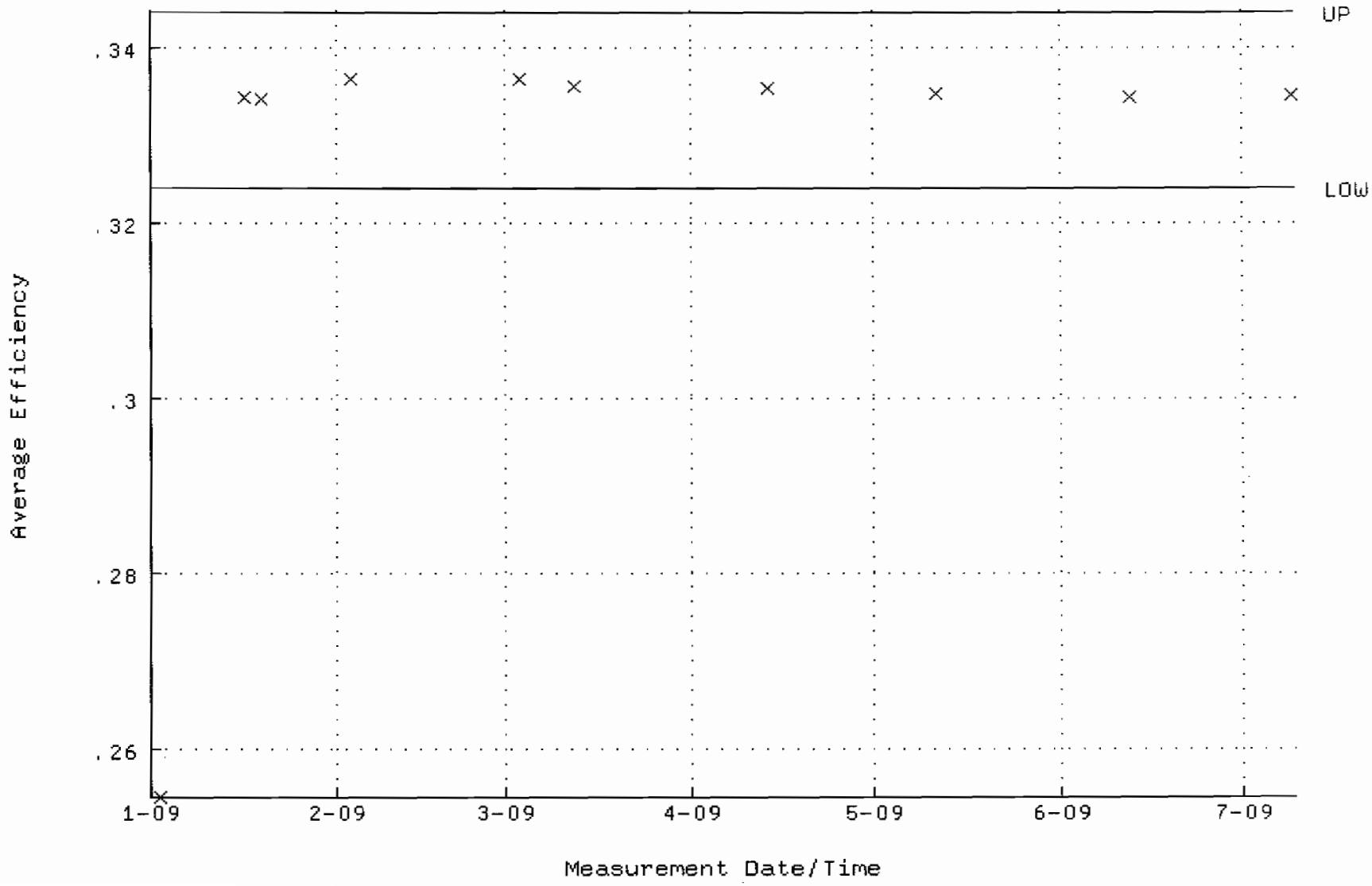

QA filename : DKA100:[ENV_ALPHA.QA.W]W080.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 86.5393 through 95.6487

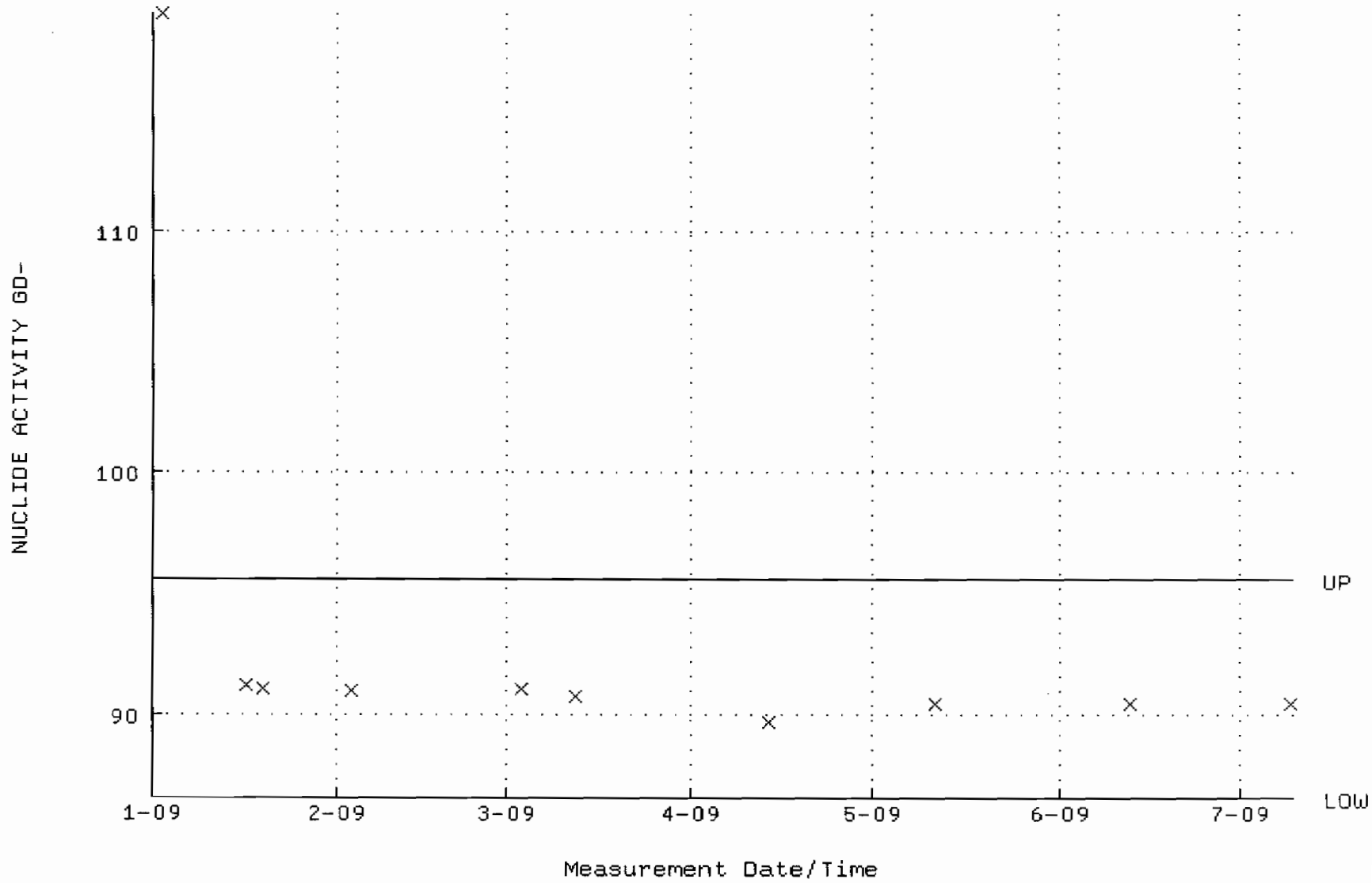

QA filename : DKA100:[ENV_ALPHA.QA.B]B080.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:34 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

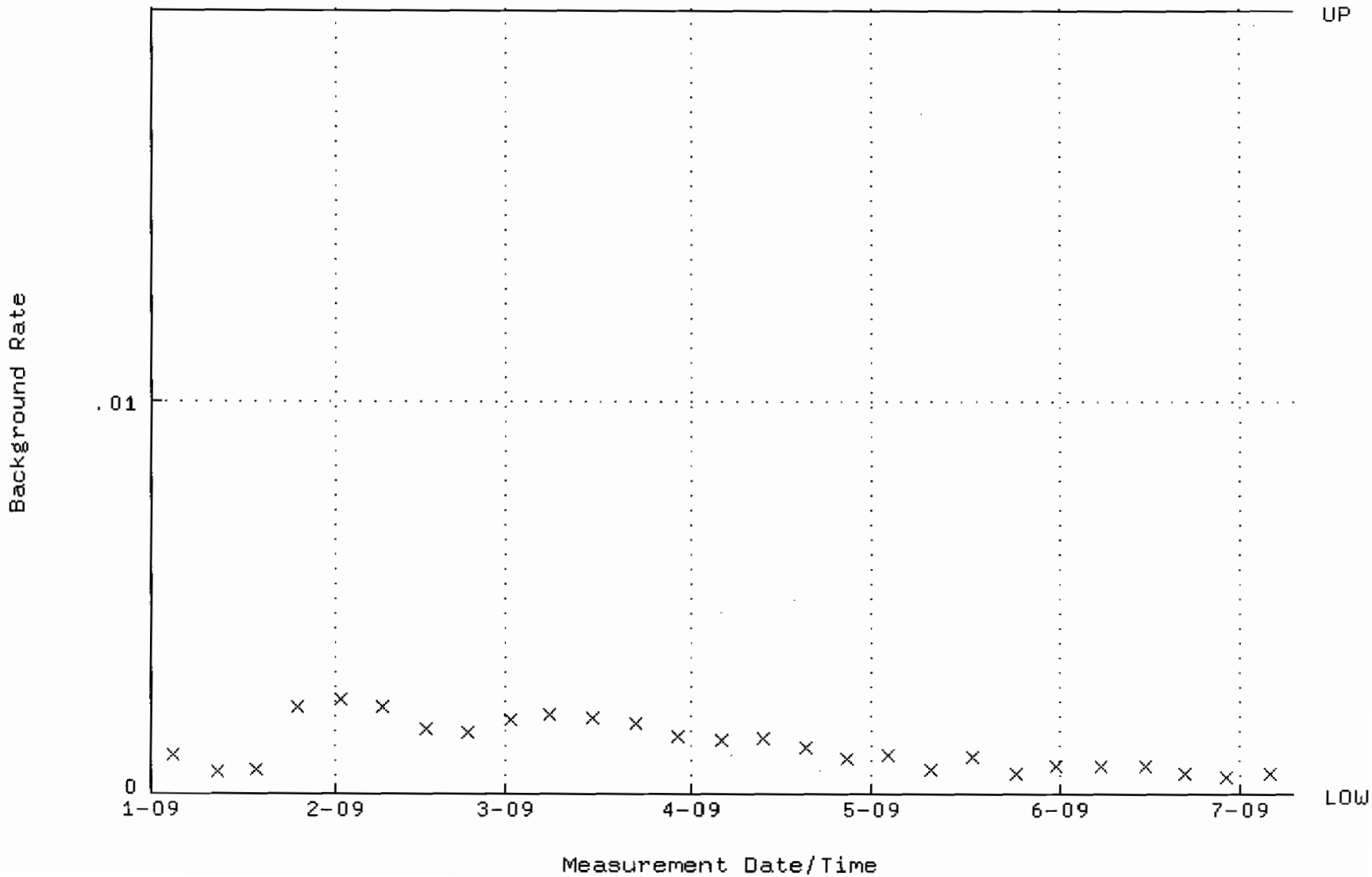

QA filename : DKA100:[ENV_ALPHA.QA.W]W149.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:32 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.242495 through 0.262495

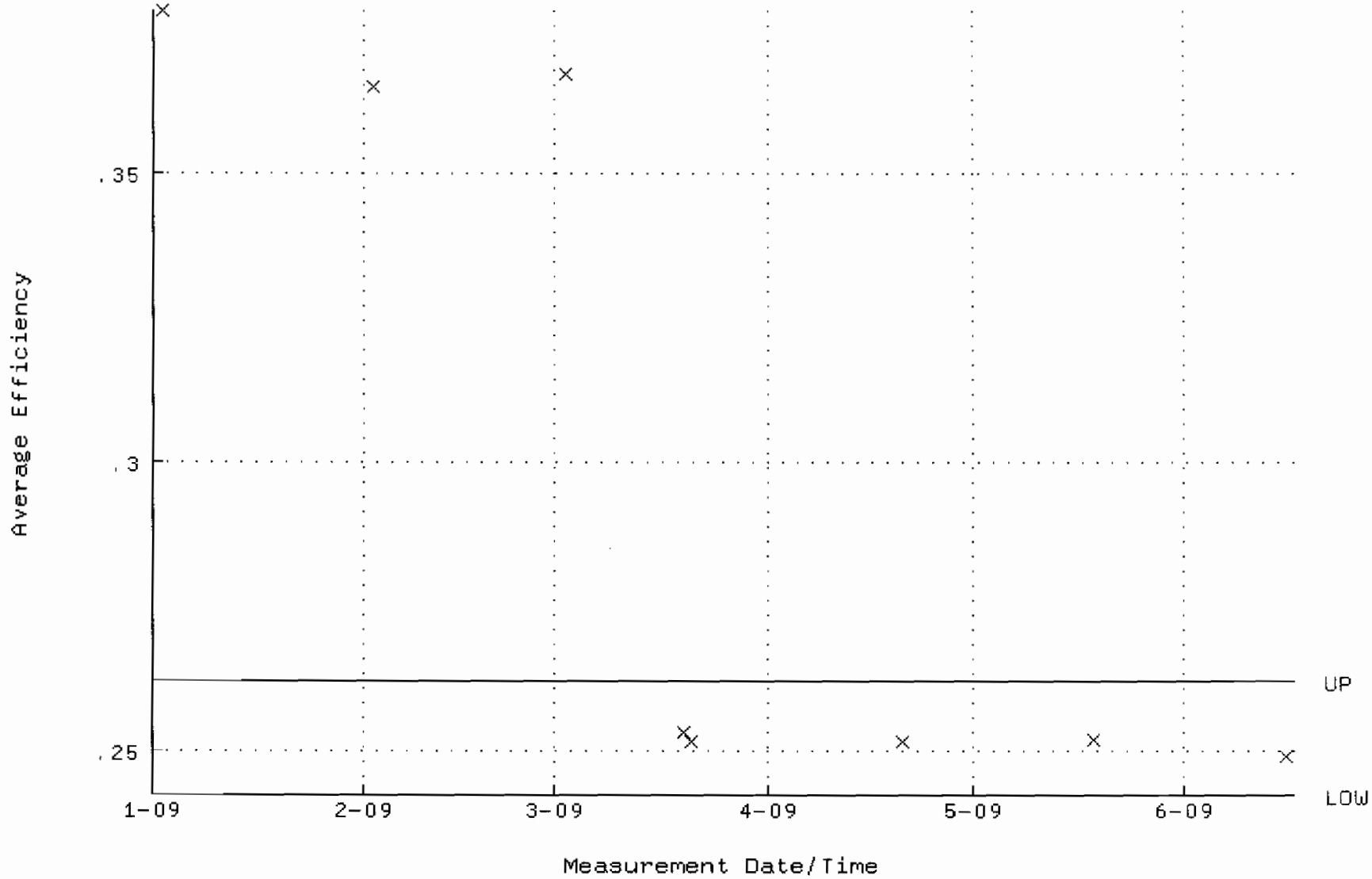

QA filename : DKA100:[ENV_ALPHA.QA.W]W149.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:32 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.8126 through 93.7402

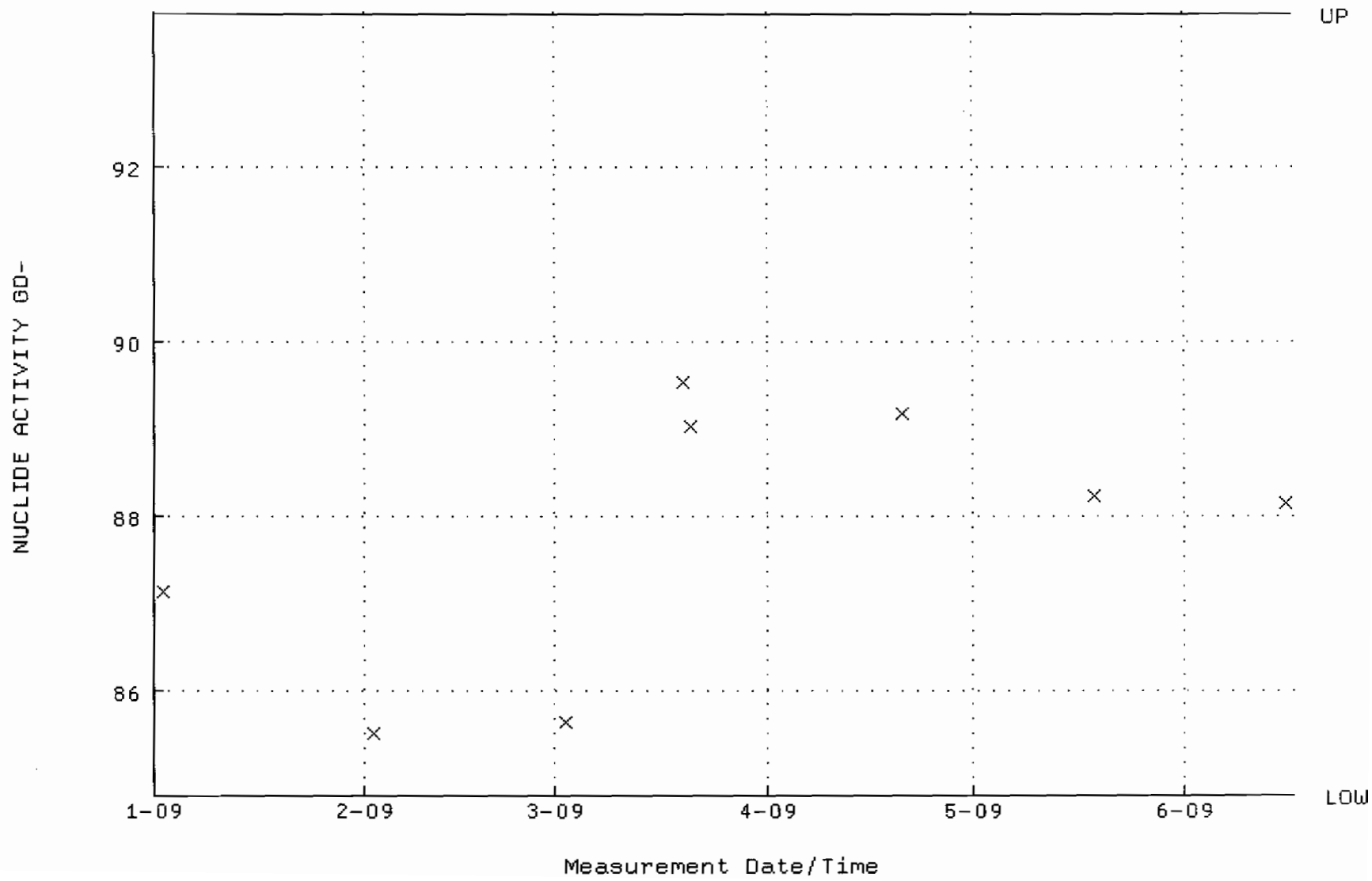

QA filename : DKA100:[ENV_ALPHA.QA.B]B149.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:21 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

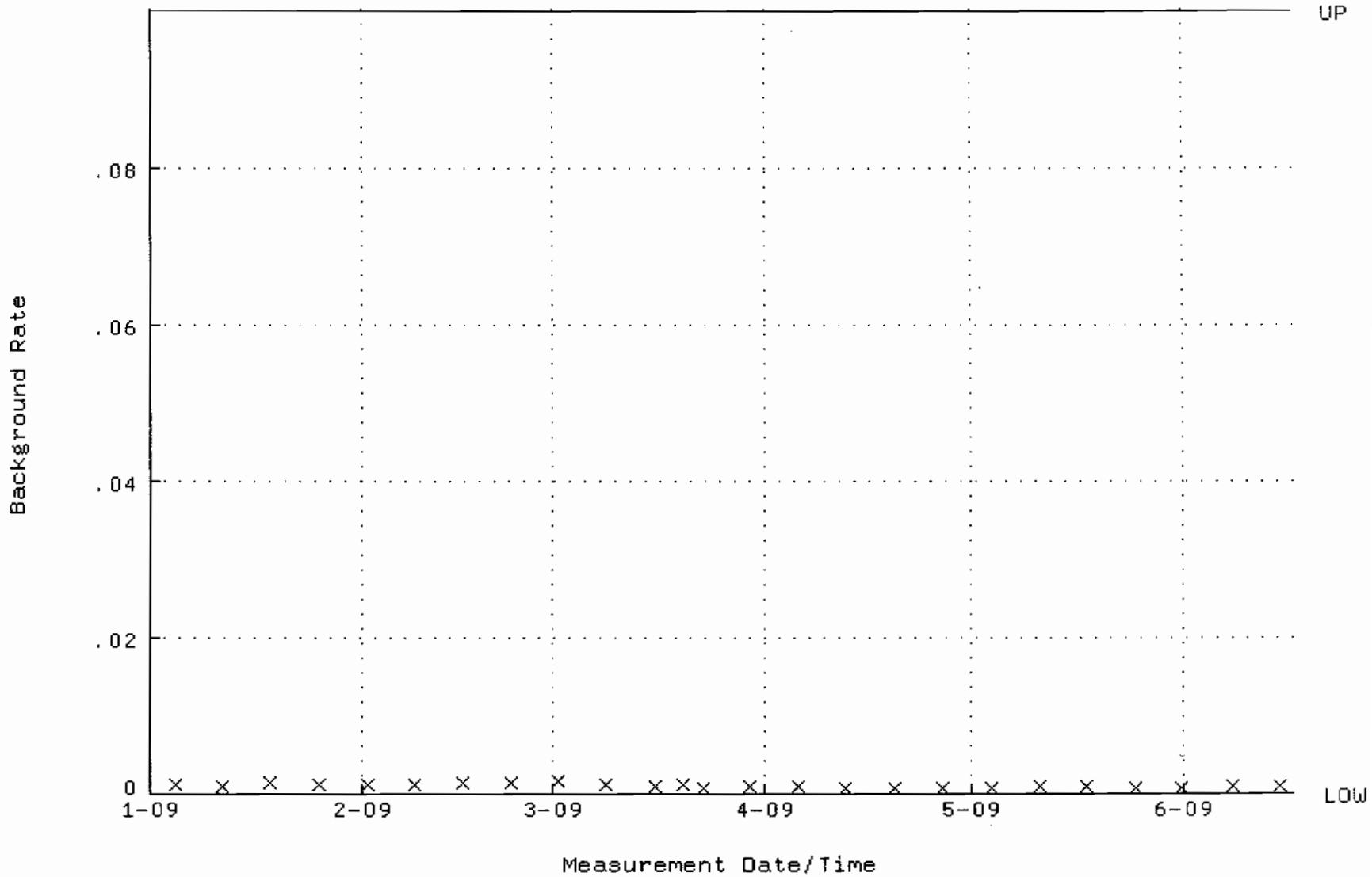

QA filename : DKA100:[ENV_ALPHA.QA.W]W157.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:10 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.237137 through 0.257137

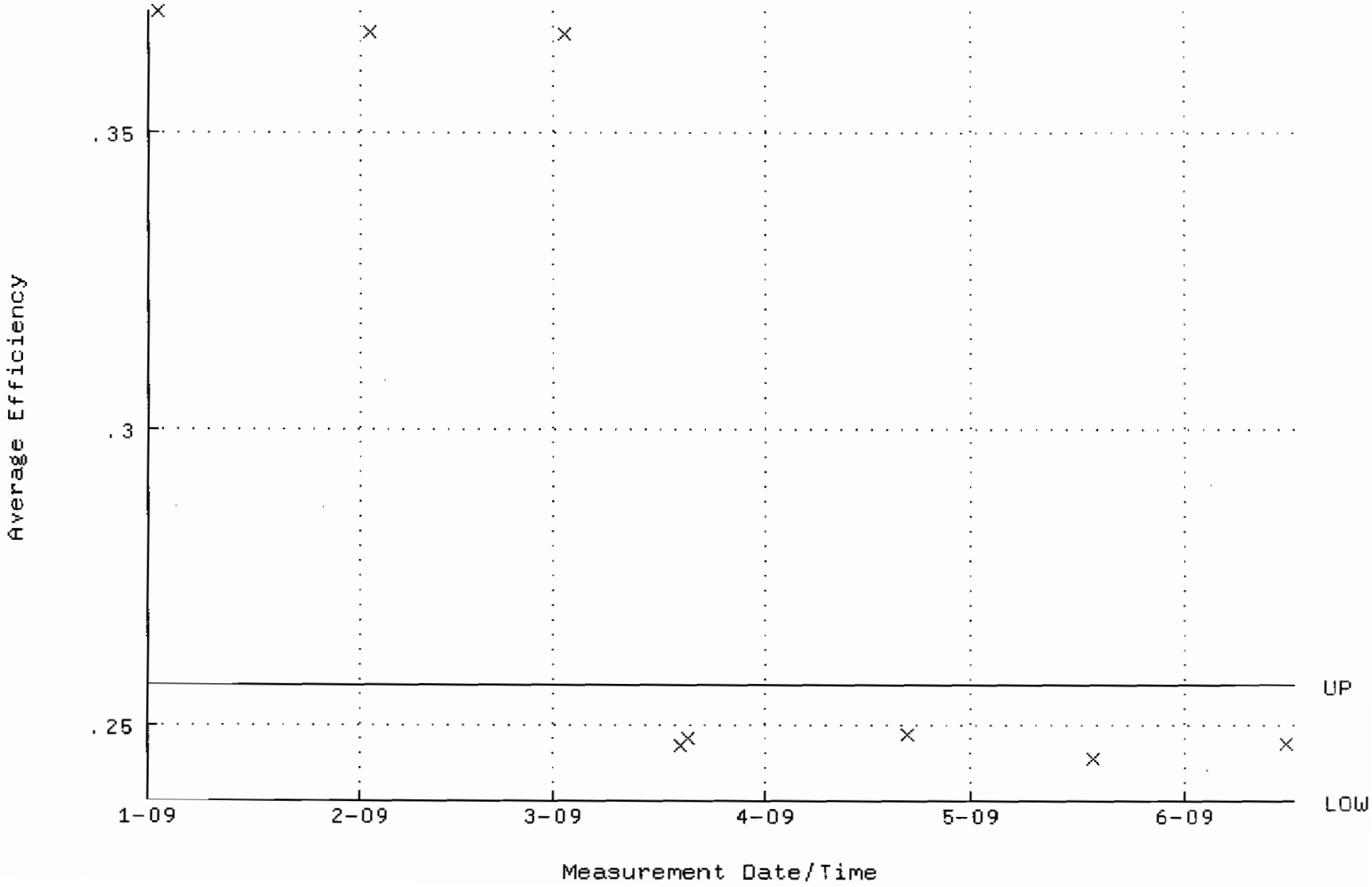

QA filename : DKA100:[ENV_ALPHA.QA.W]W157.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:10 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 85.9292 through 94.9744

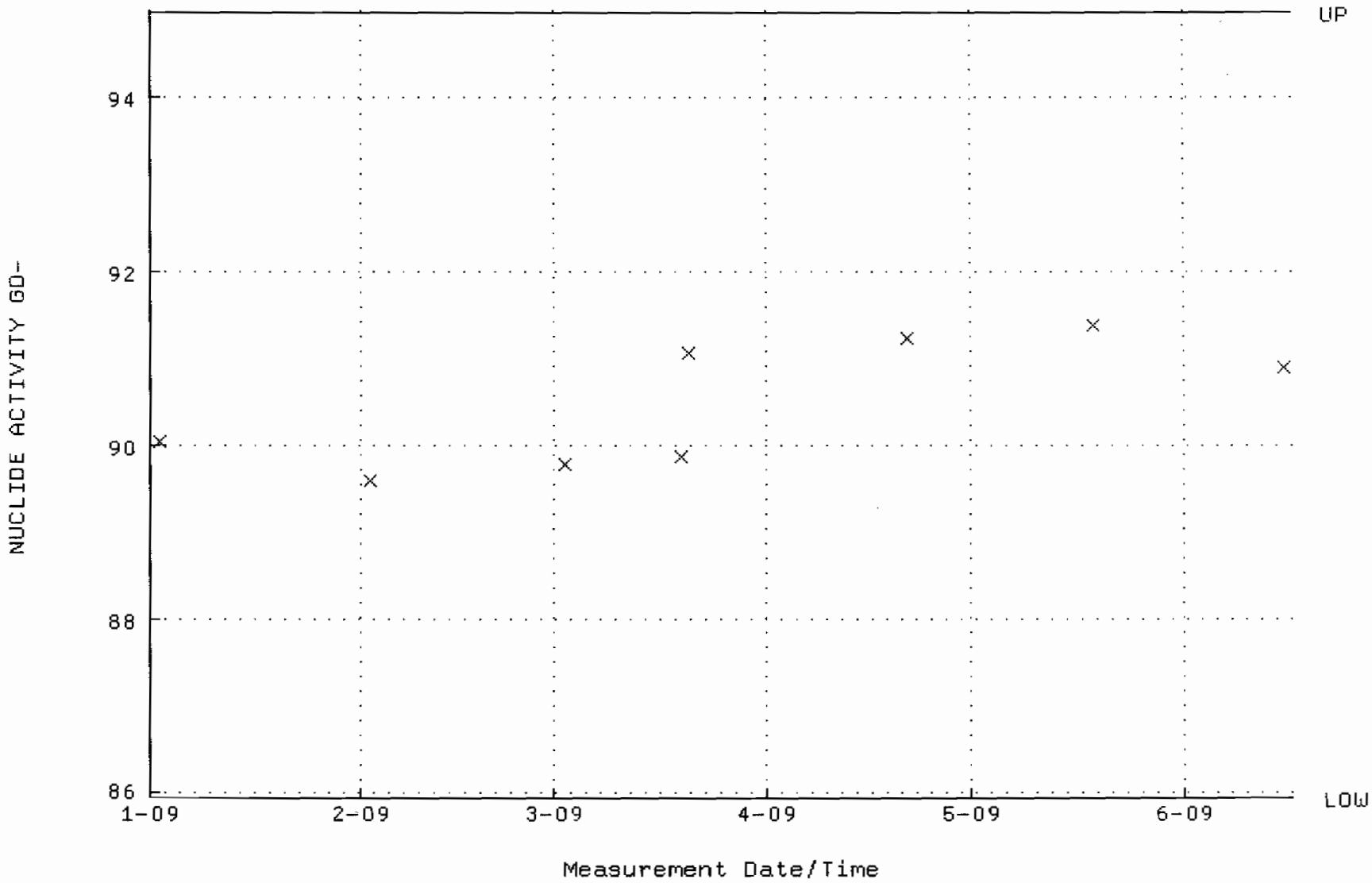

QA filename : DKA100:[ENV_ALPHA.QA.B]B157.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

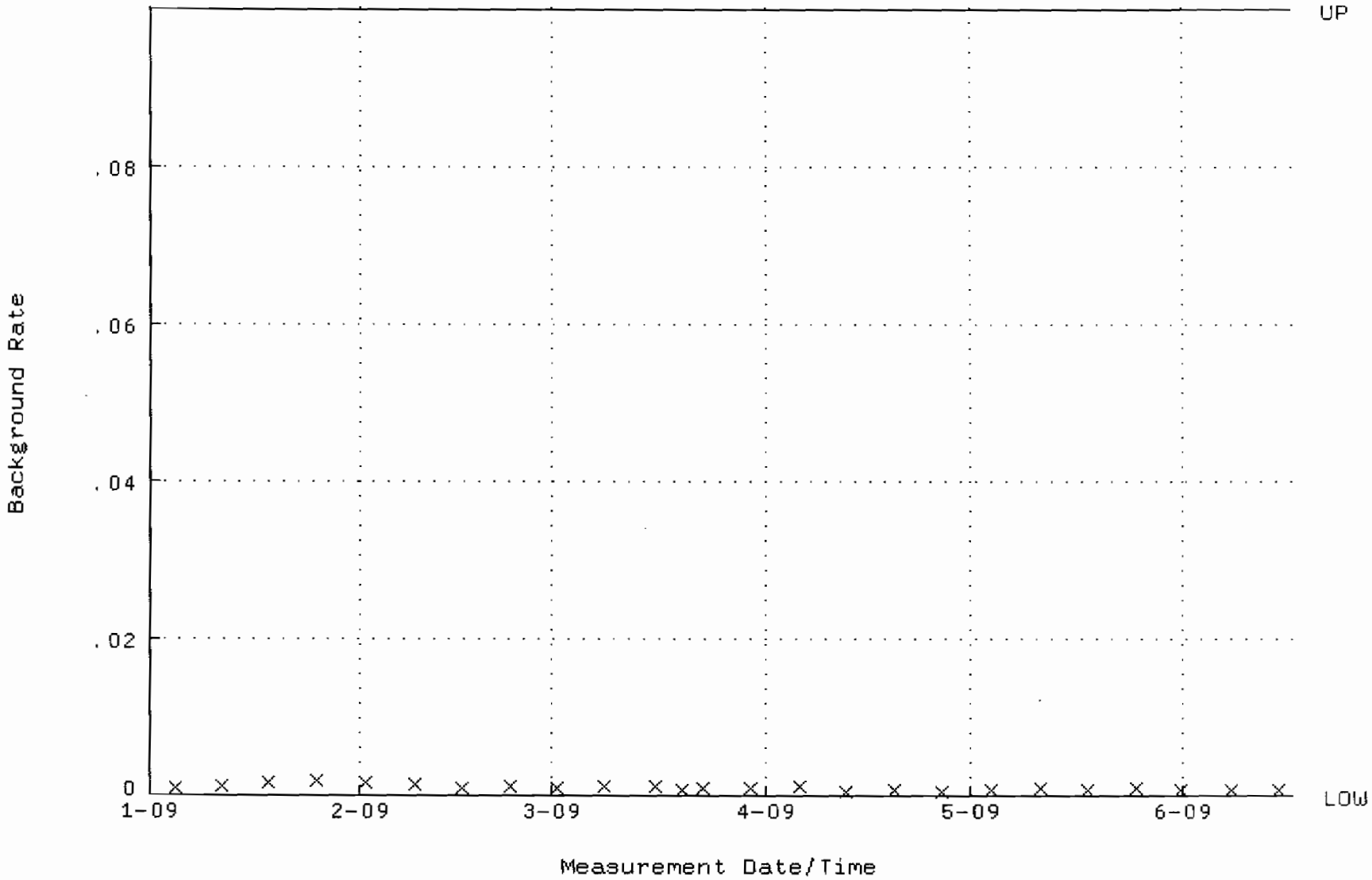

QA filename : DKA100:[ENV_ALPHA.QA.W]W158.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:14 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.241466 through 0.261466

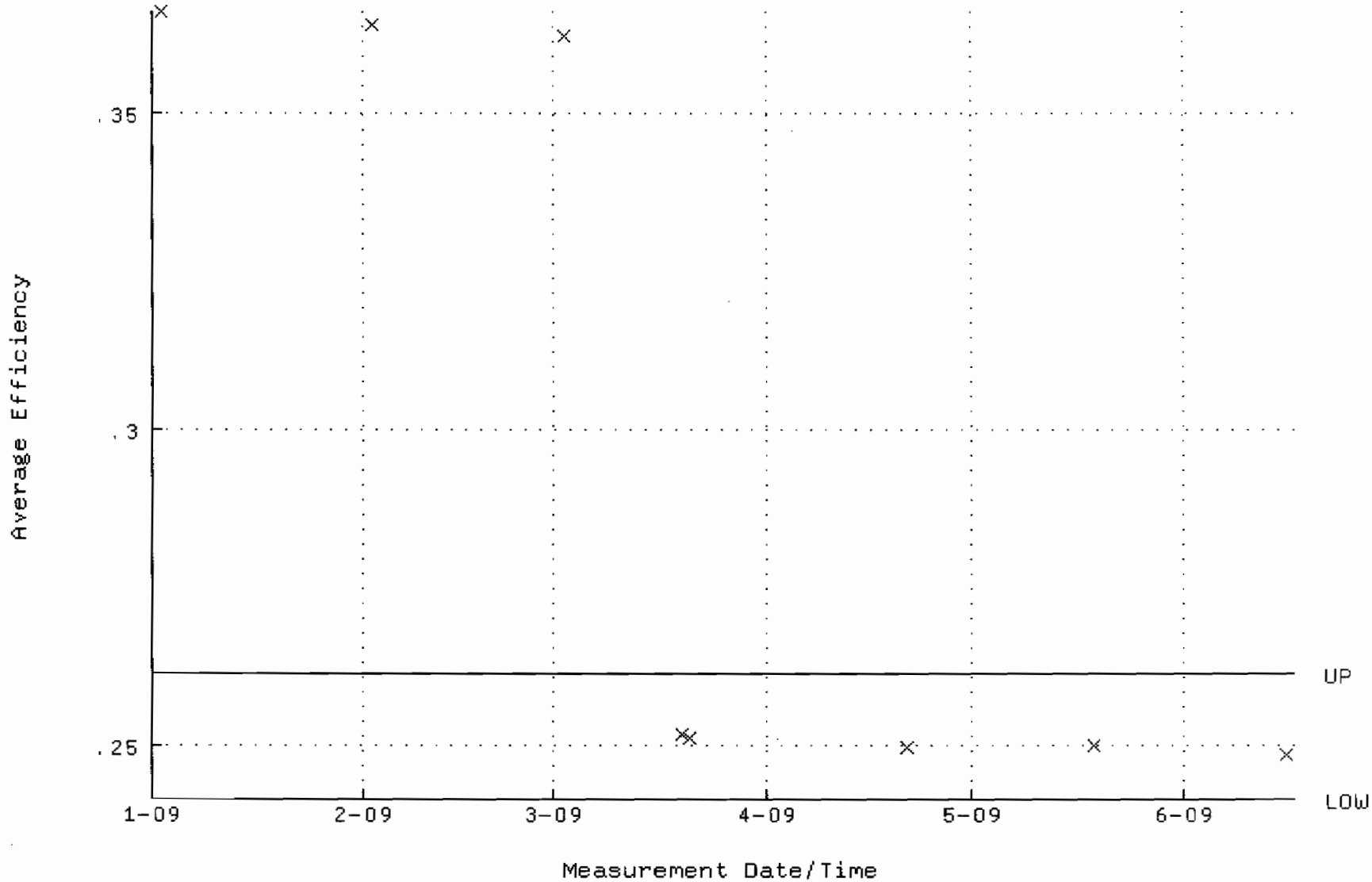

QA filename : DKA100:[ENV_ALPHA.QA.W]W158.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:14 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.6414 through 93.5510

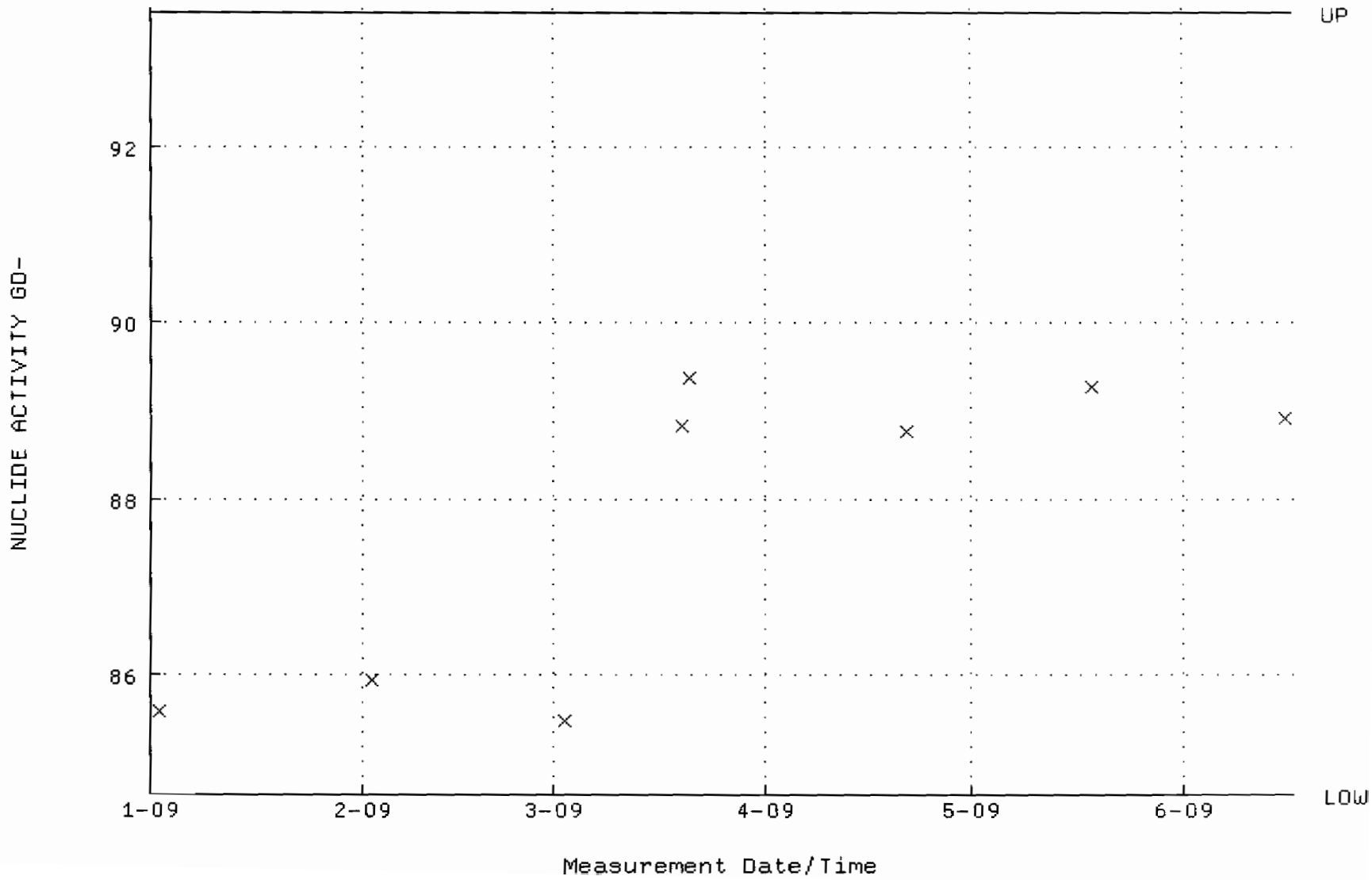

QA filename : DKA100:[ENV_ALPHA.QA.B]B158.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:55 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

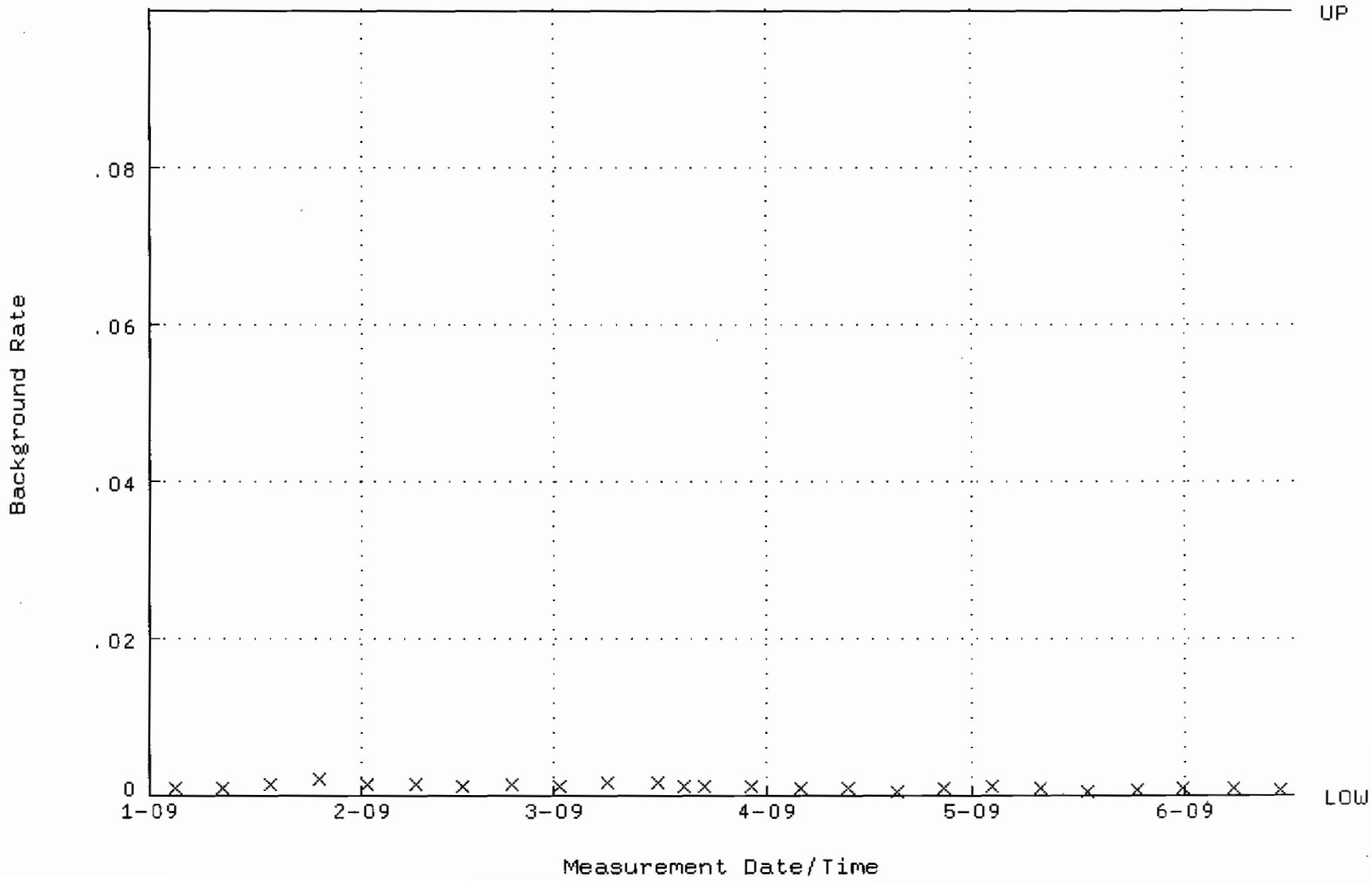

QA filename : DKA100:[ENV_ALPHA.QA.W]W171.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:09:38 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.375364 through 0.395364

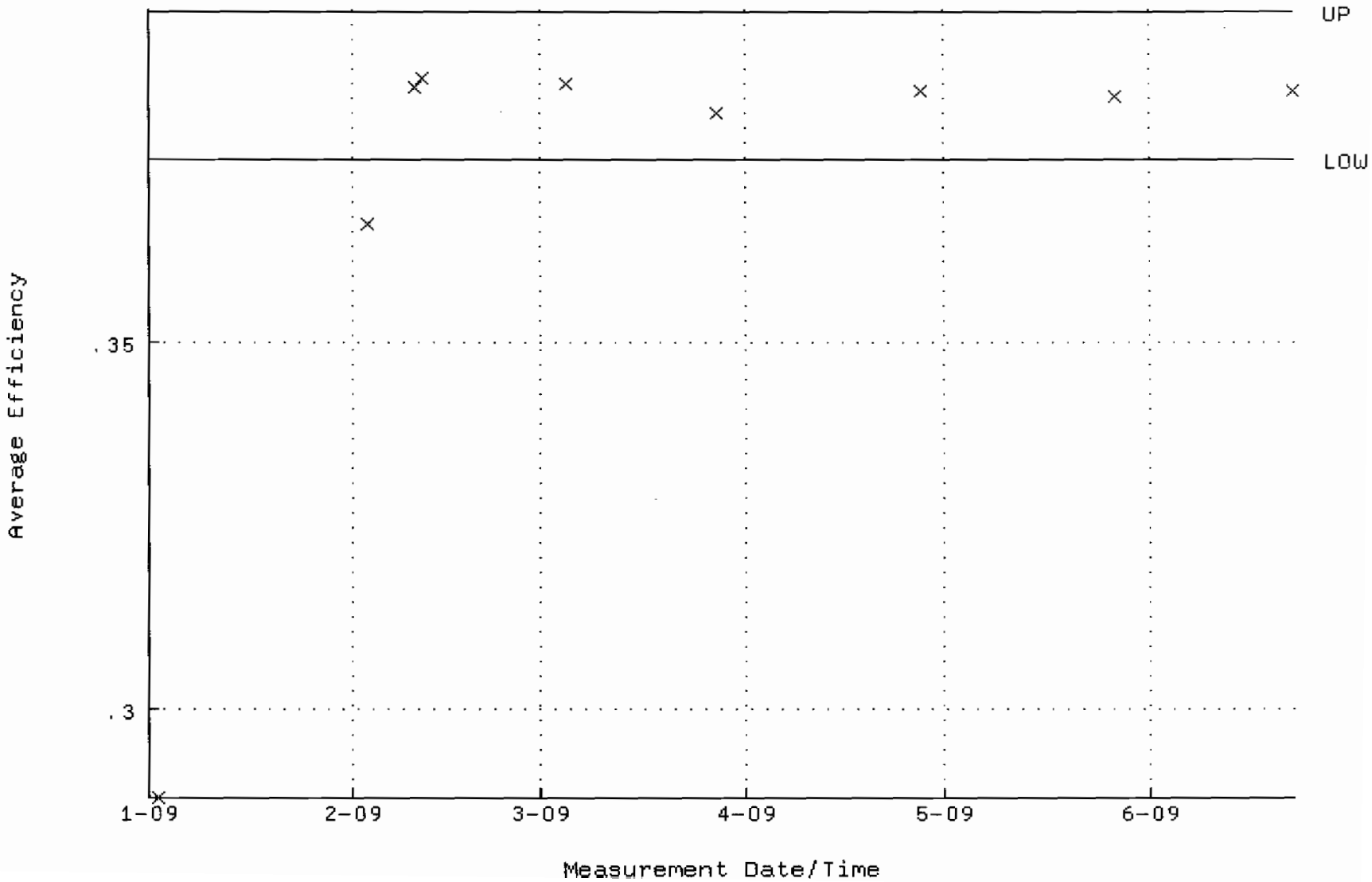

QA filename : DKA100:[ENV_ALPHA.QA.W]W171.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:09:38 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 84.7539 through 93.6753

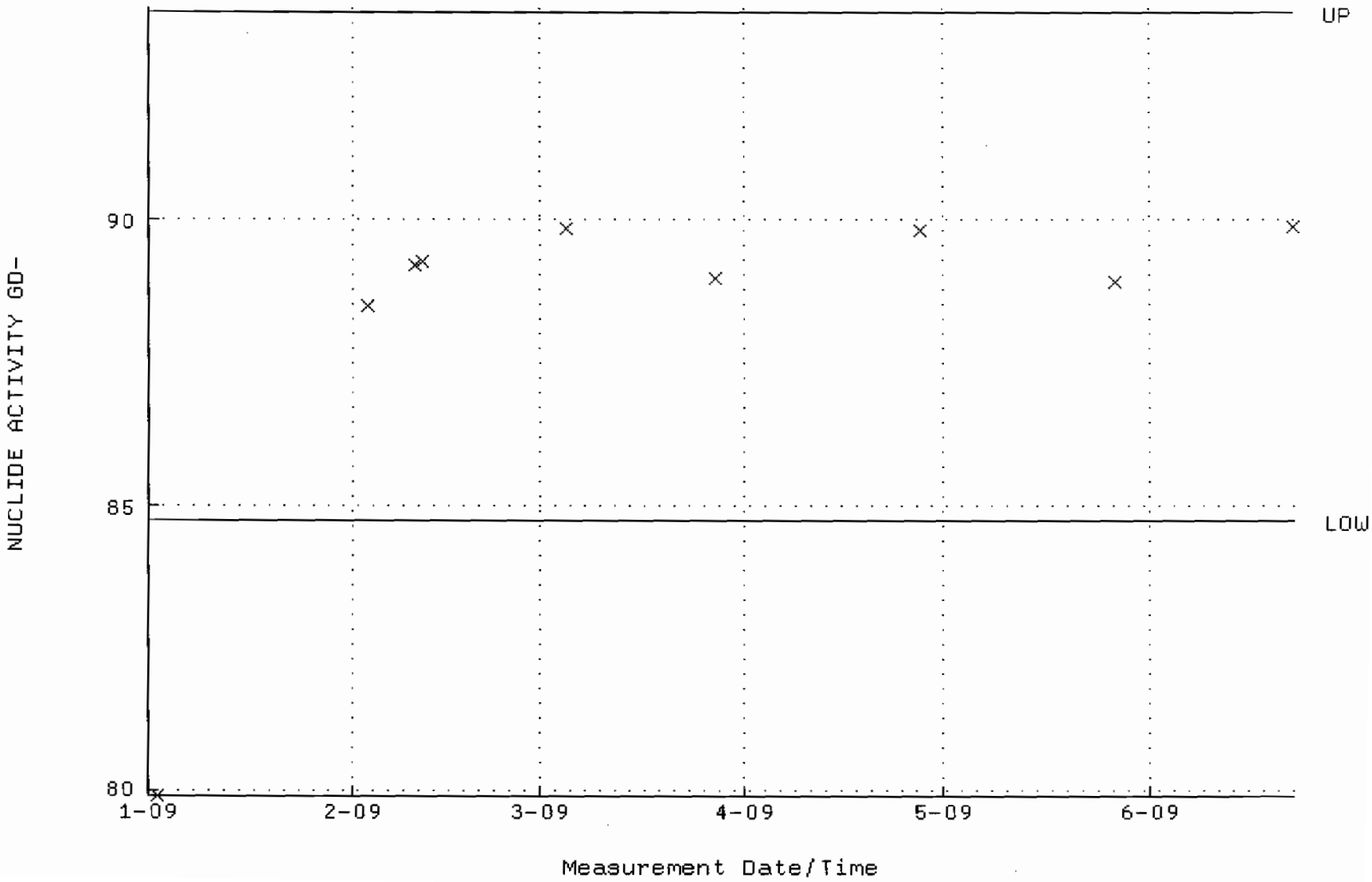

QA filename : DKA100:[ENV_ALPHA.QA.B]B171.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:25:42 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

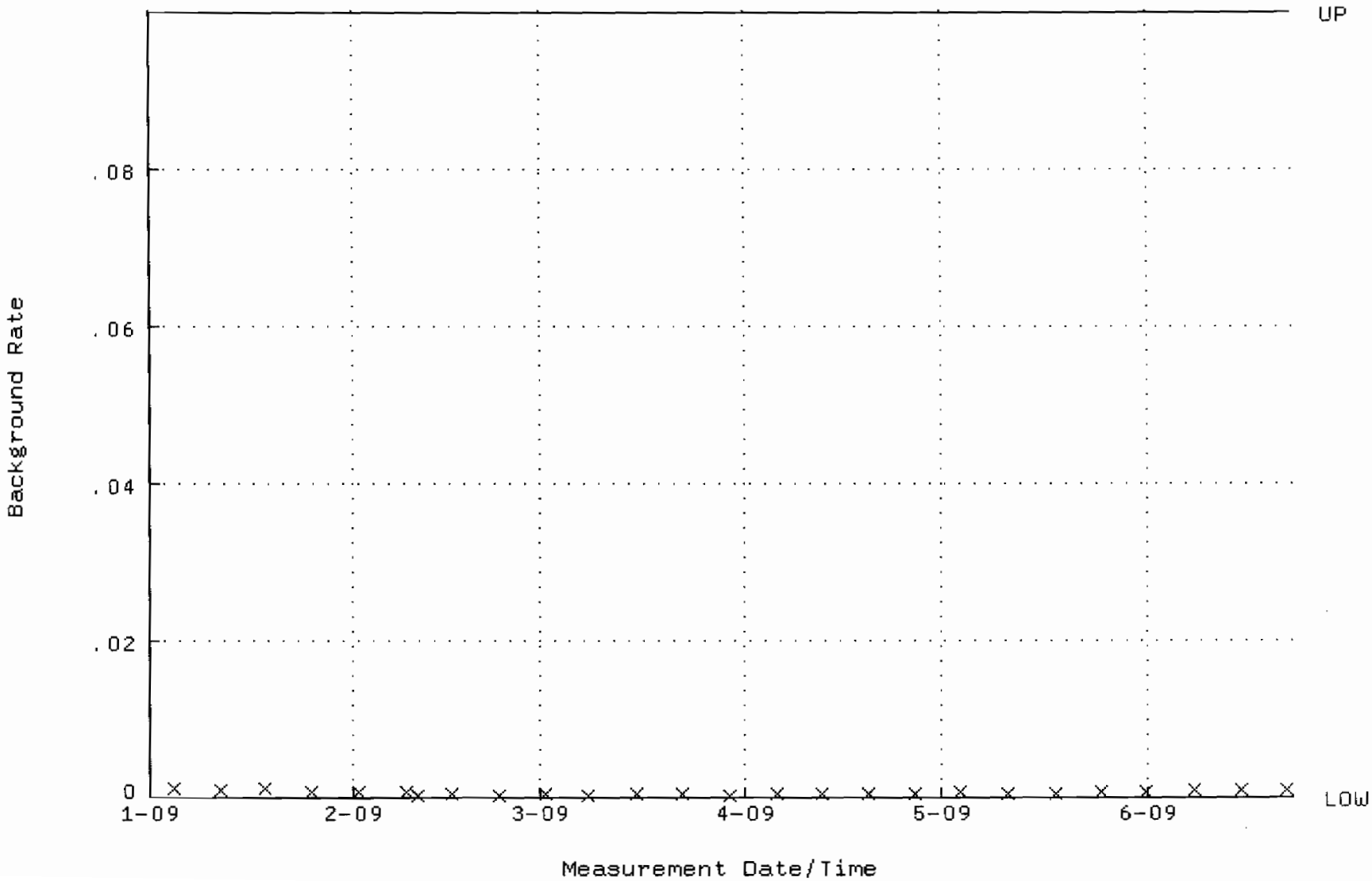

QA filename : DKA100:[ENV_ALPHA.QA.W]W172.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:09:49 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.373575 through 0.393575

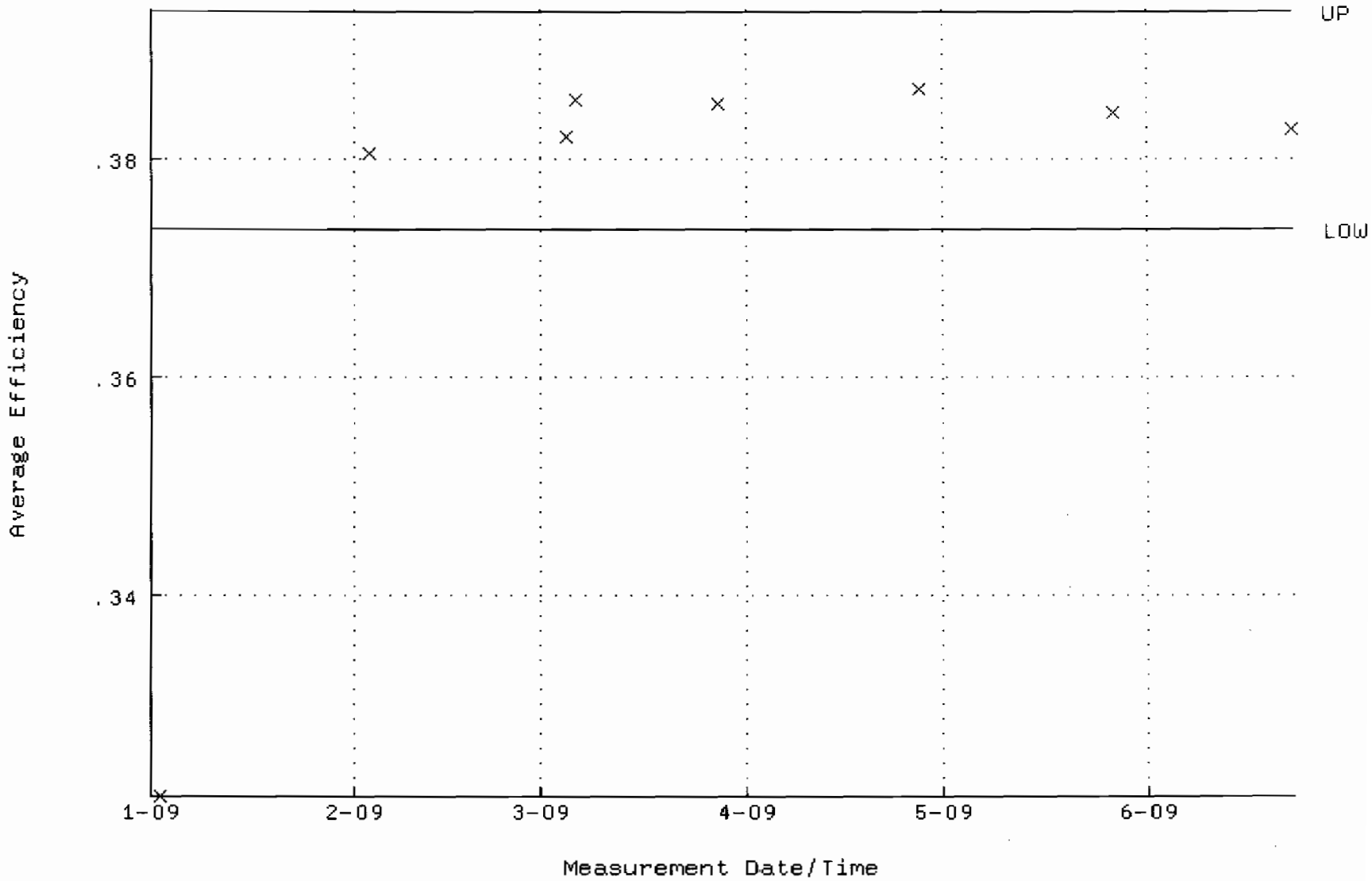

QA filename : DKA100:[ENV_ALPHA.QA.W]W172.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:09:49 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 86.5089 through 95.6151

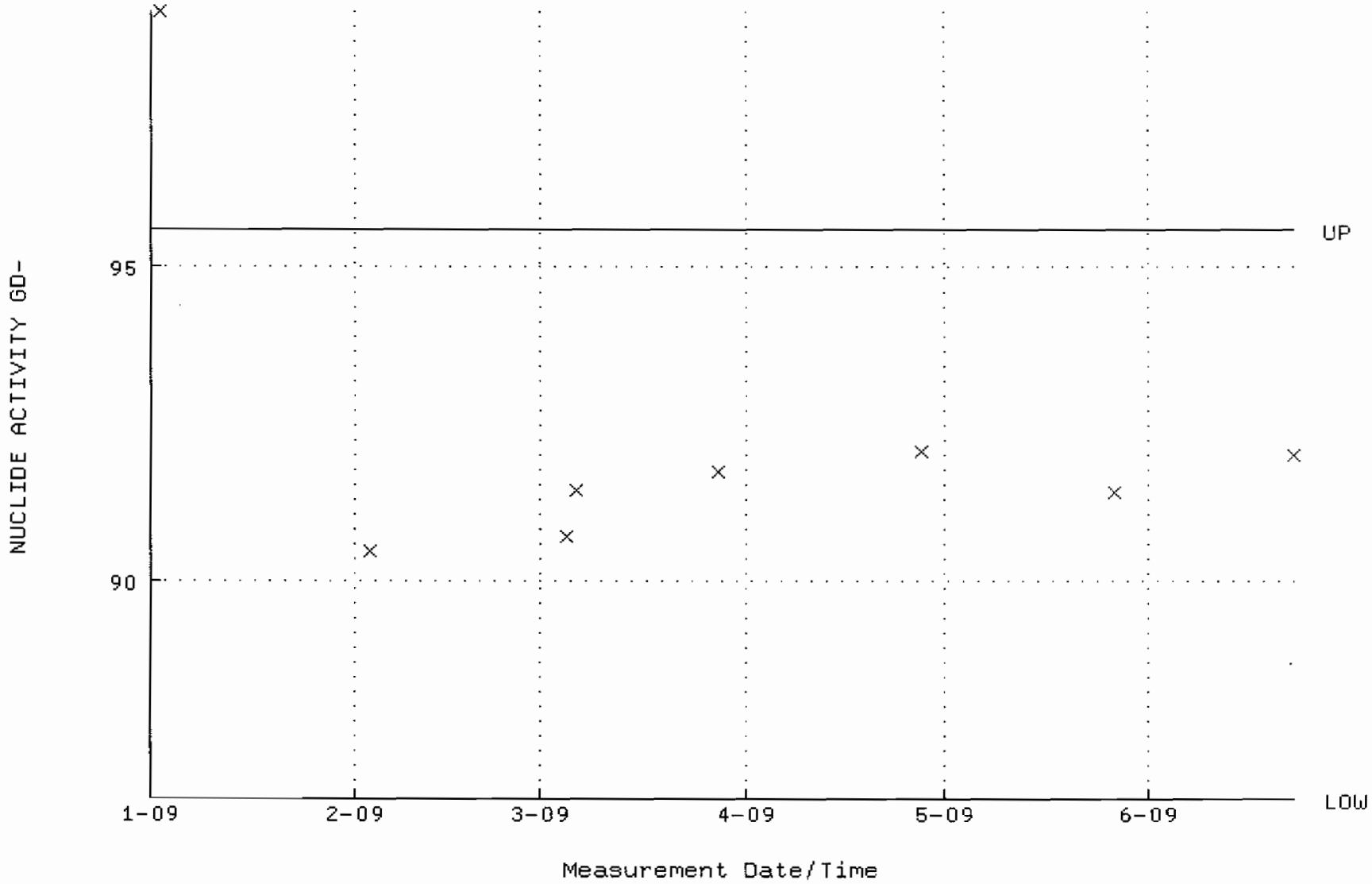

QA filename : DKA100:[ENV_ALPHA.QA.B]B172.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:25:46 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

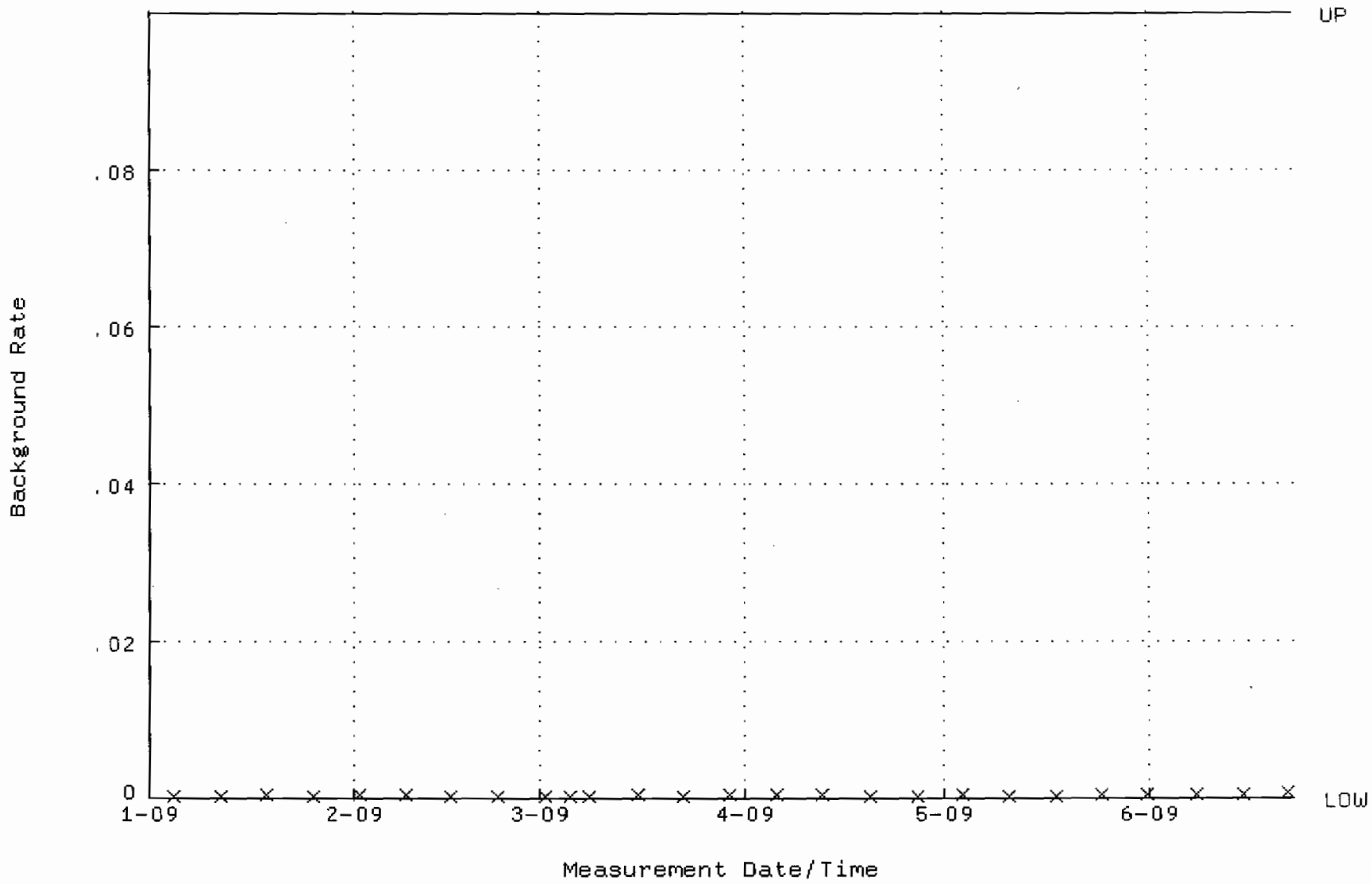

QA filename : DKA100:[ENV_ALPHA.QA.W]W183.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-JAN-2009 12:57:46 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.254364 through 0.274364

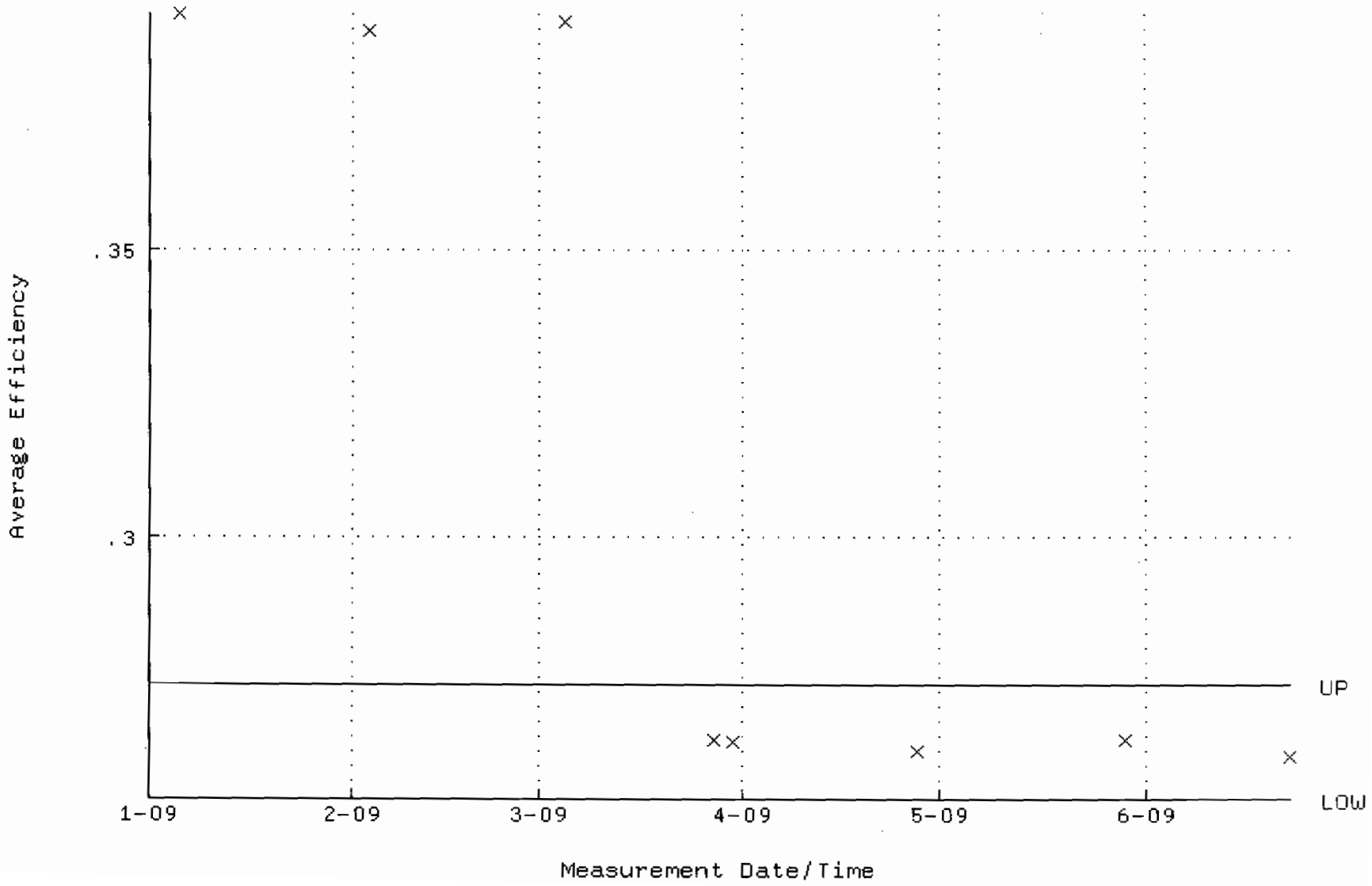

QA filename : DKA100:[ENV_ALPHA.QA.W]W183.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-JAN-2009 12:57:46 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 86.8927 through 96.0393

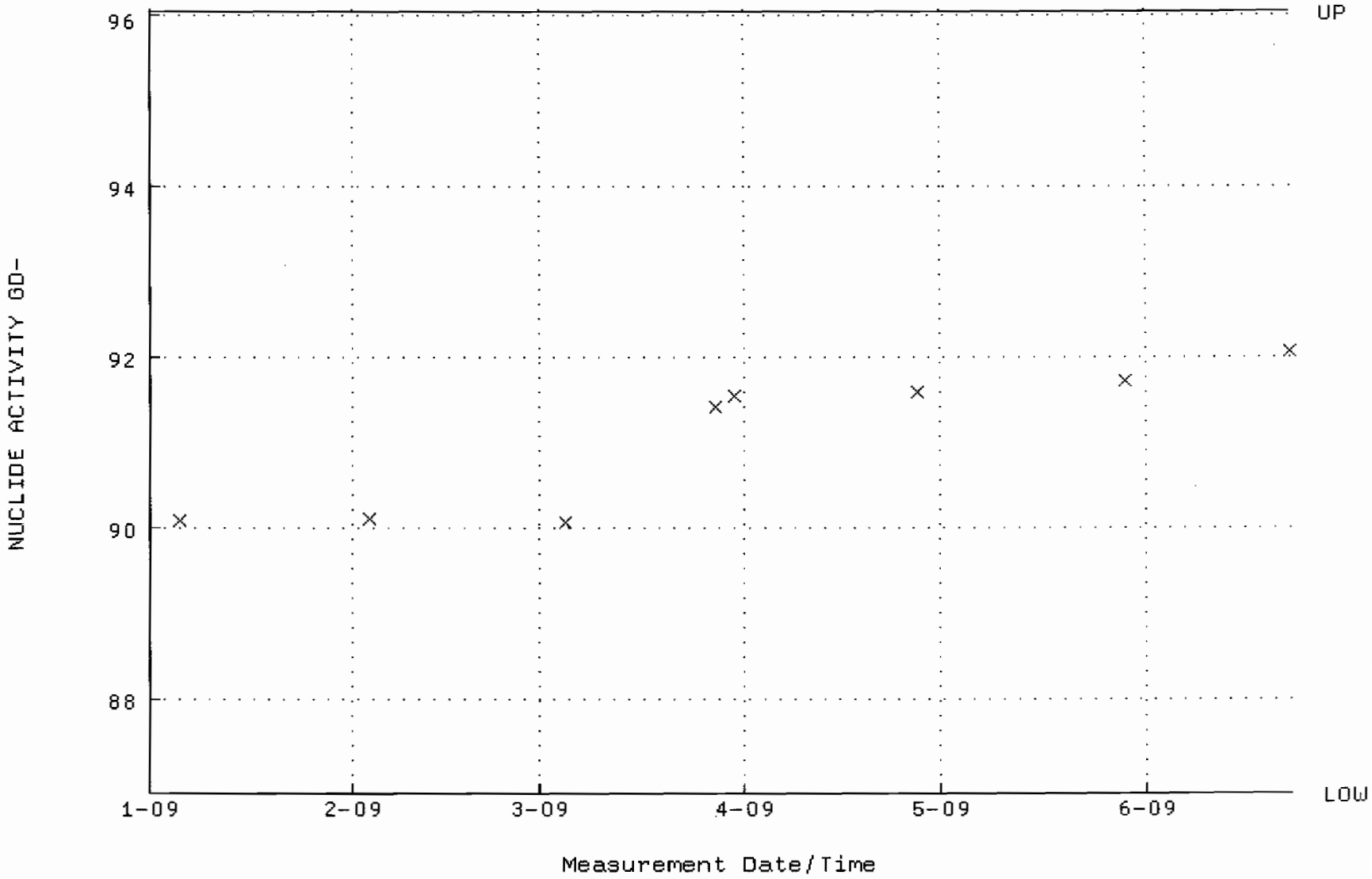

QA filename : DKA100:[ENV_ALPHA.QA.B]B183.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:28 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

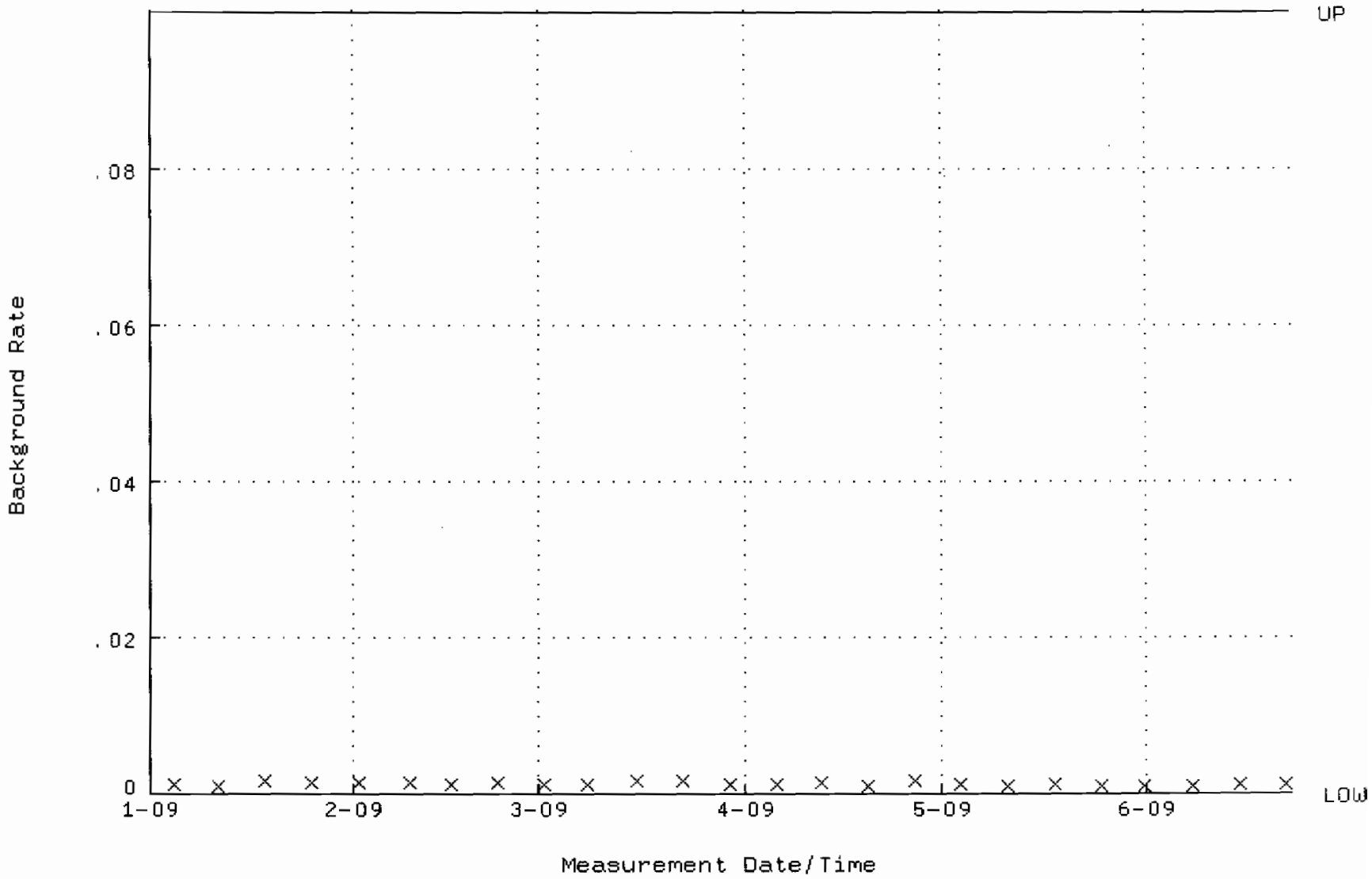

QA filename : DKA100:[ENV_ALPHA.QA.W]W185.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:29 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.249628 through 0.269628

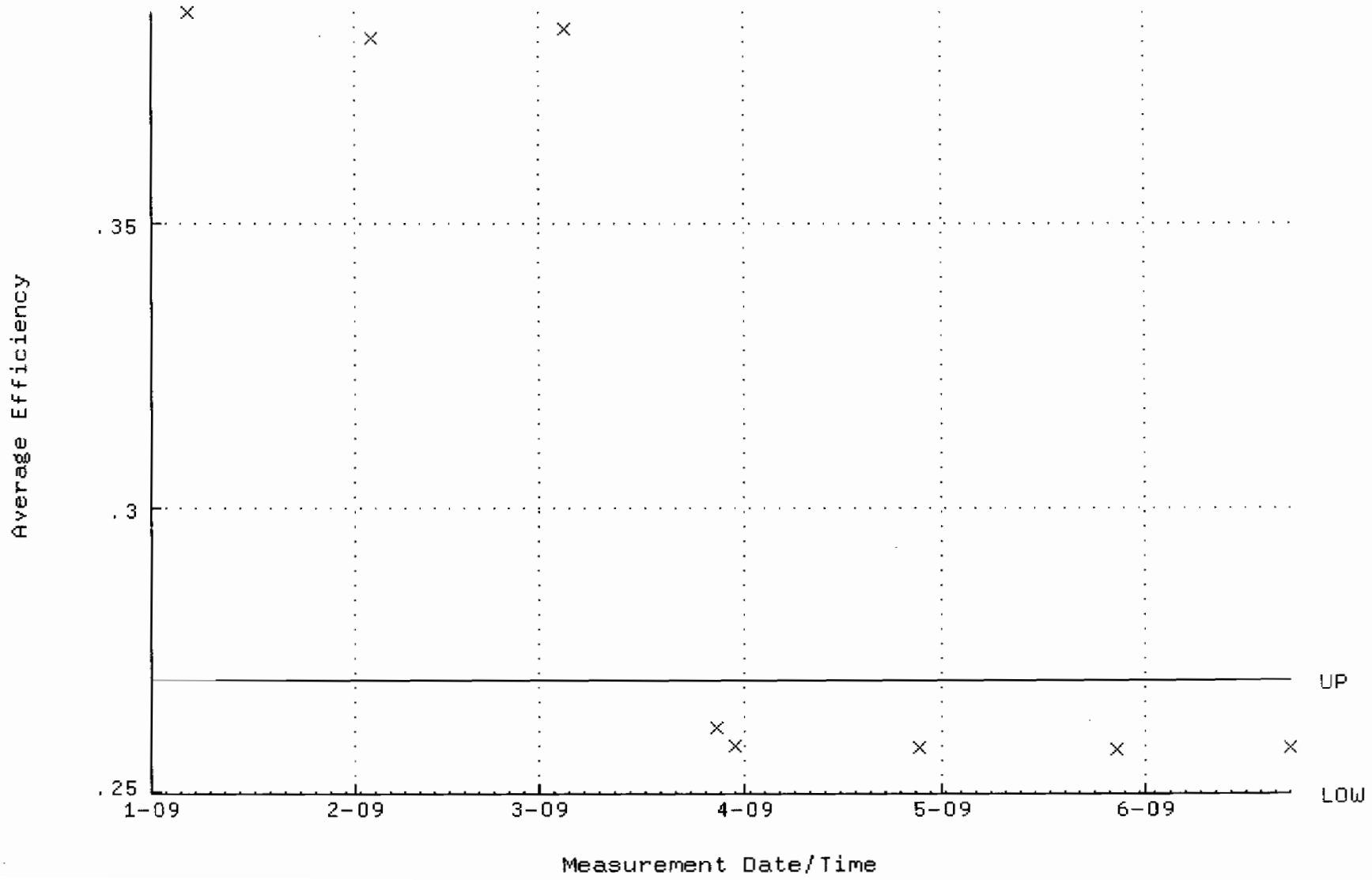

QA filename : DKA100:[ENV_ALPHA.QA.W]W185.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:29 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 84.3502 through 93.2292

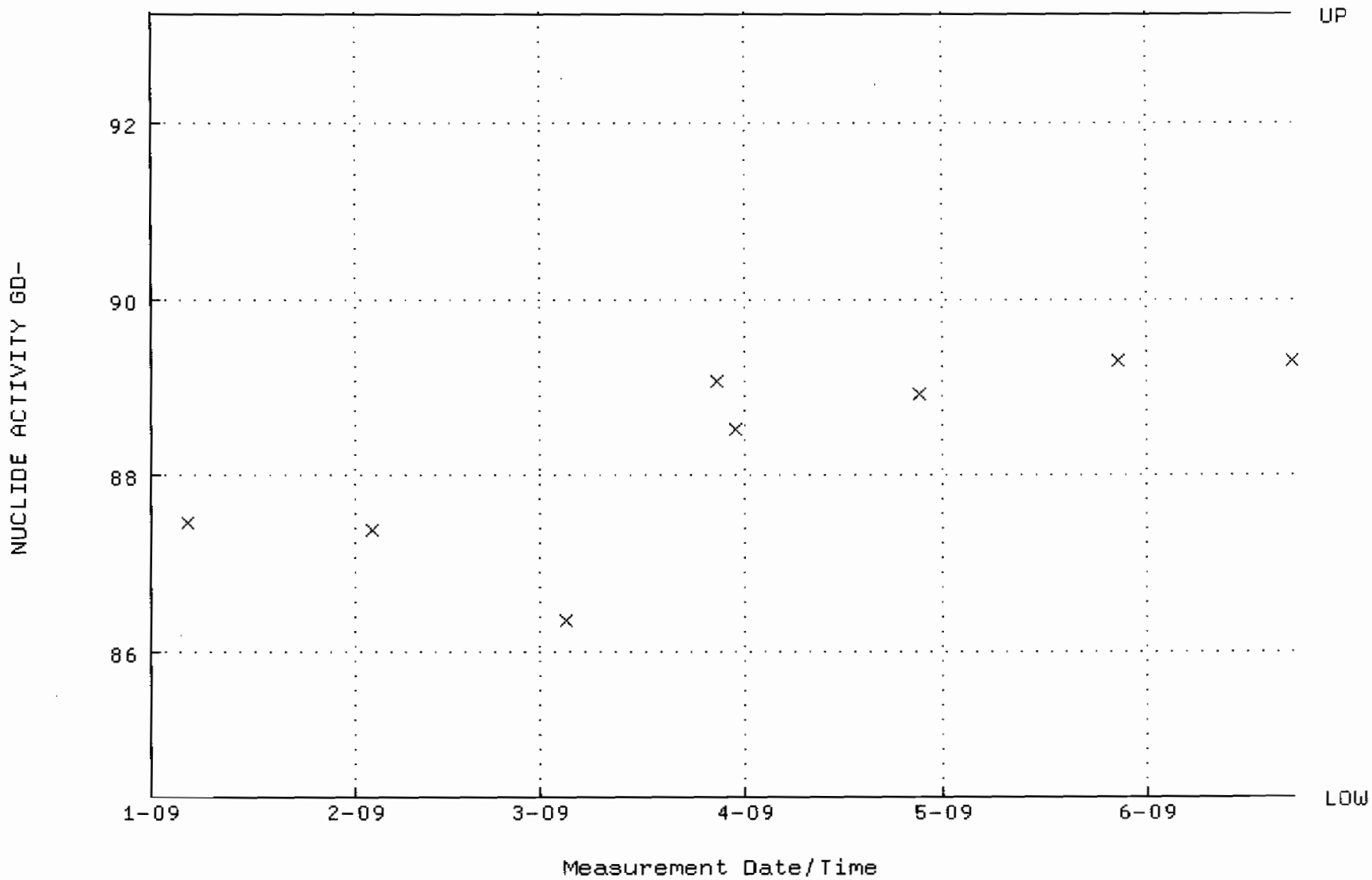

QA filename : DKA100:[ENV_ALPHA.QA.B]B185.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:36 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

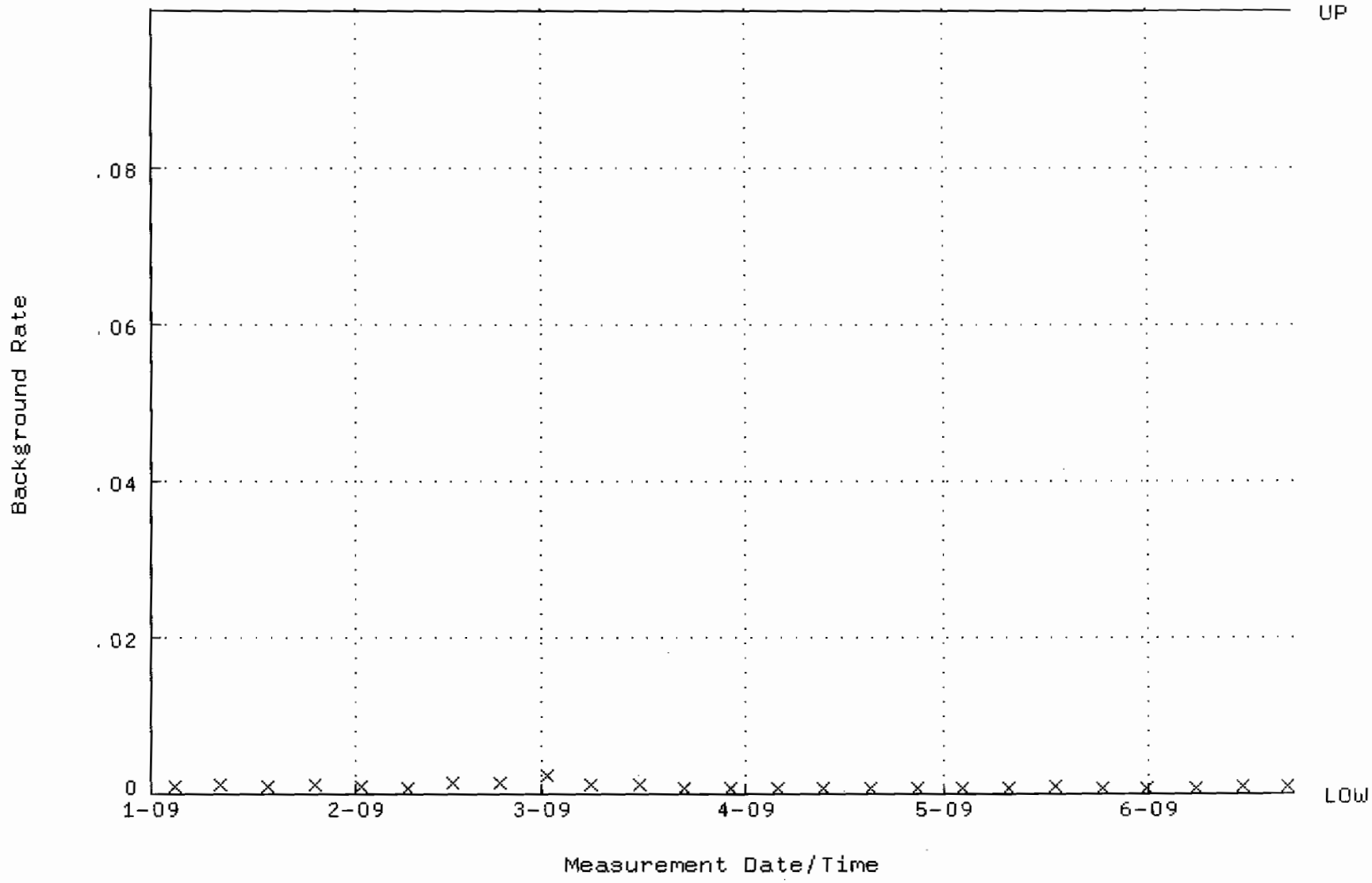

QA filename : DKA100:[ENV_ALPHA.QA.W]W186.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:33 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.242649 through 0.262649

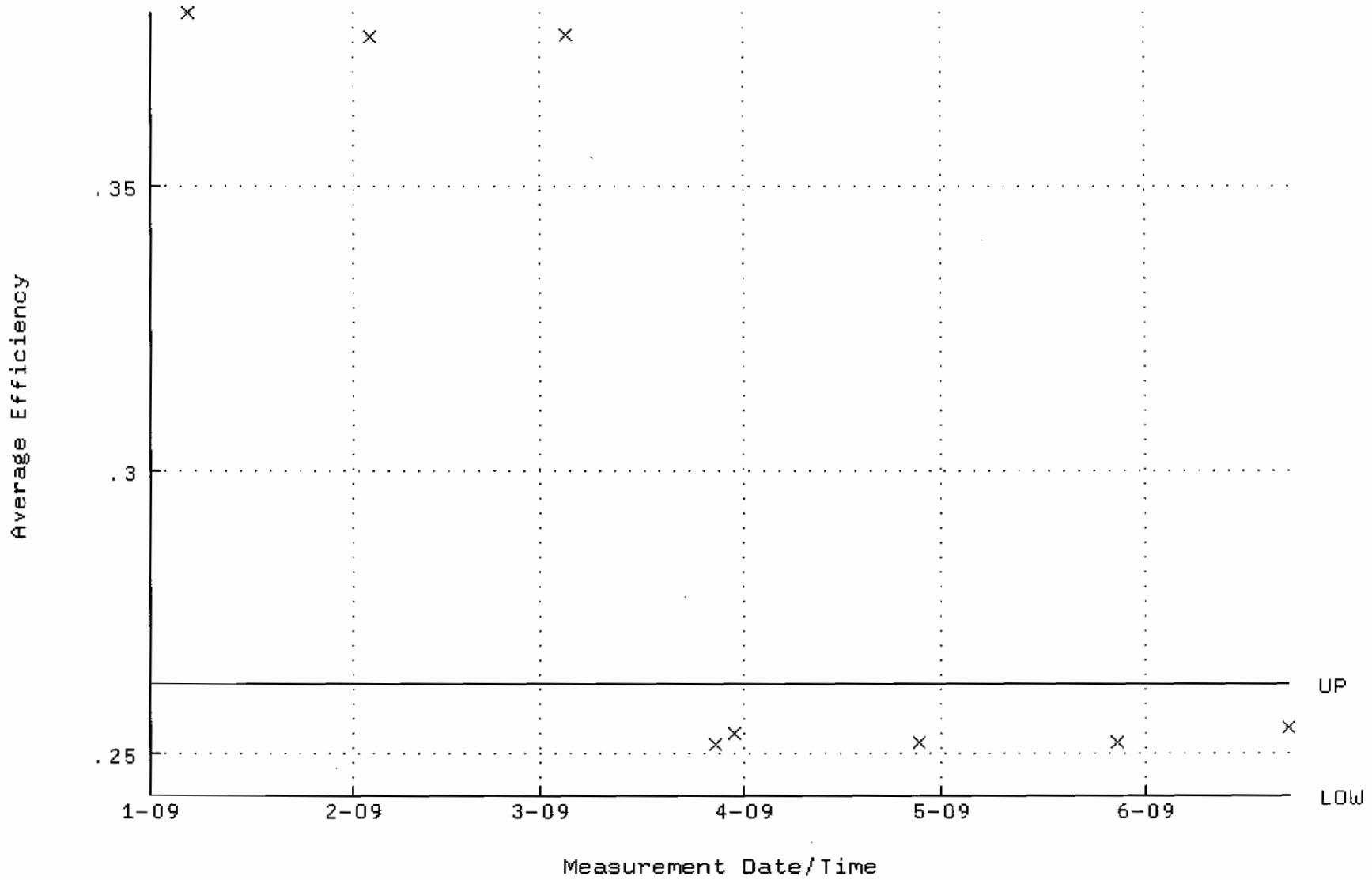

QA filename : DKA100:[ENV_ALPHA.QA.W]W186.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:33 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 82.6495 through 91.3495

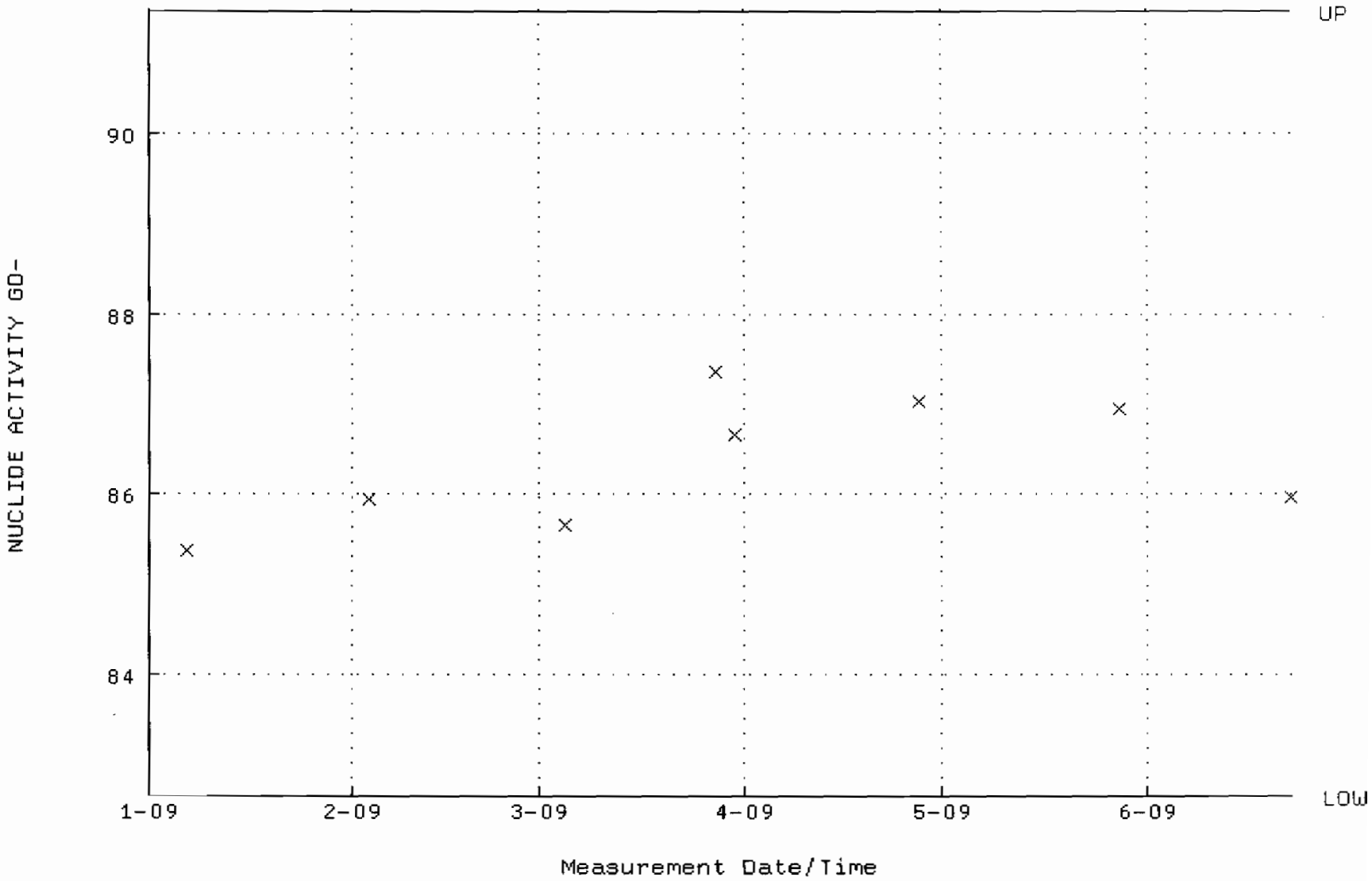

QA filename : DKA100:[ENV_ALPHA.QA.B]B186.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:40 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

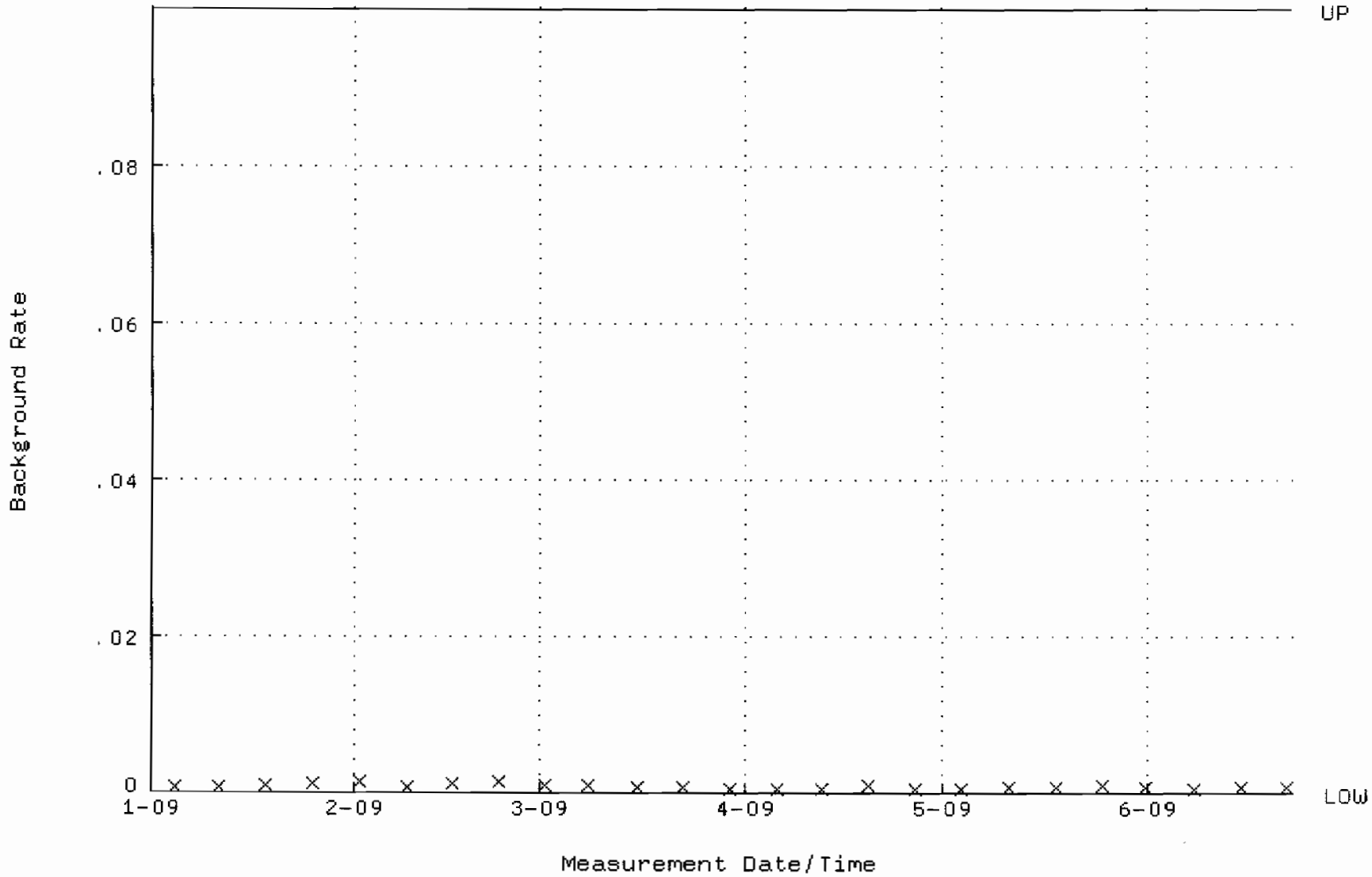

QA filename : DKA100:[ENV_ALPHA.QA.W]W187.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:37 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.241464 through 0.261464

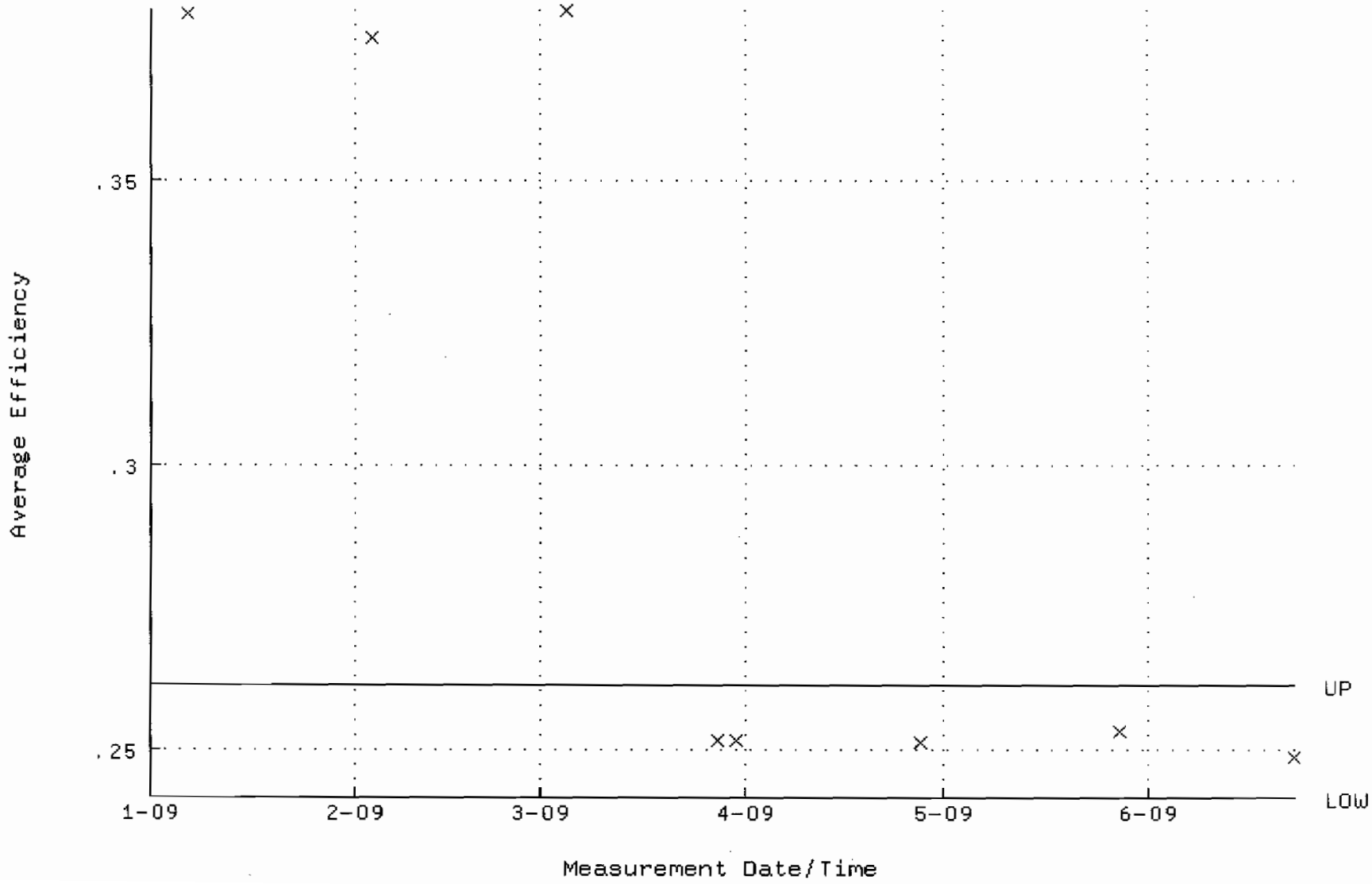

QA filename : DKA100:[ENV_ALPHA.QA.W]W187.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:37 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 85.5888 through 94.5982

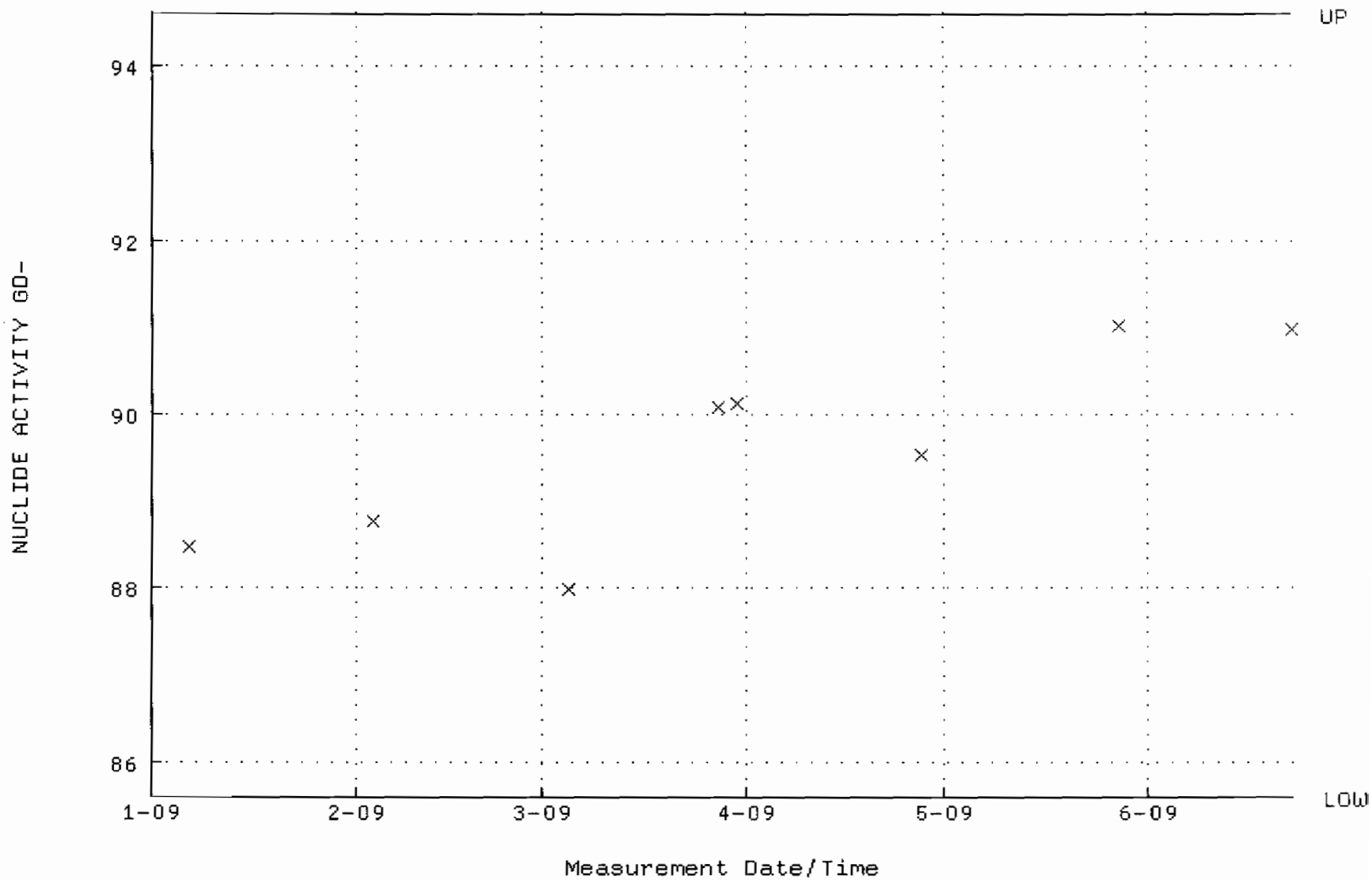

QA filename : DKA100:[ENV_ALPHA.QA.B]B187.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:44 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

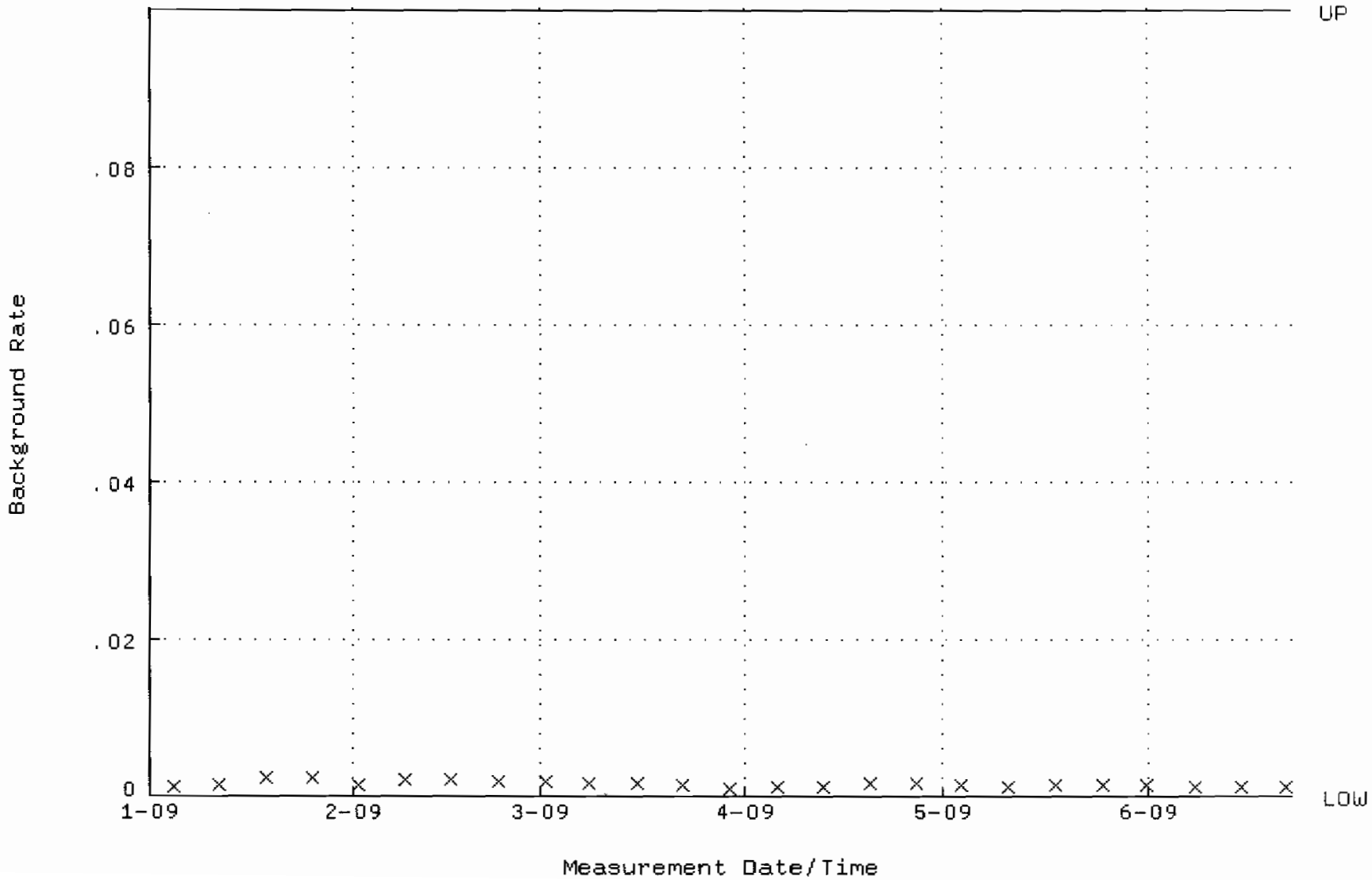

QA filename : DKA100:[ENV_ALPHA.QA.W]W188.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:41 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.249341 through 0.269341

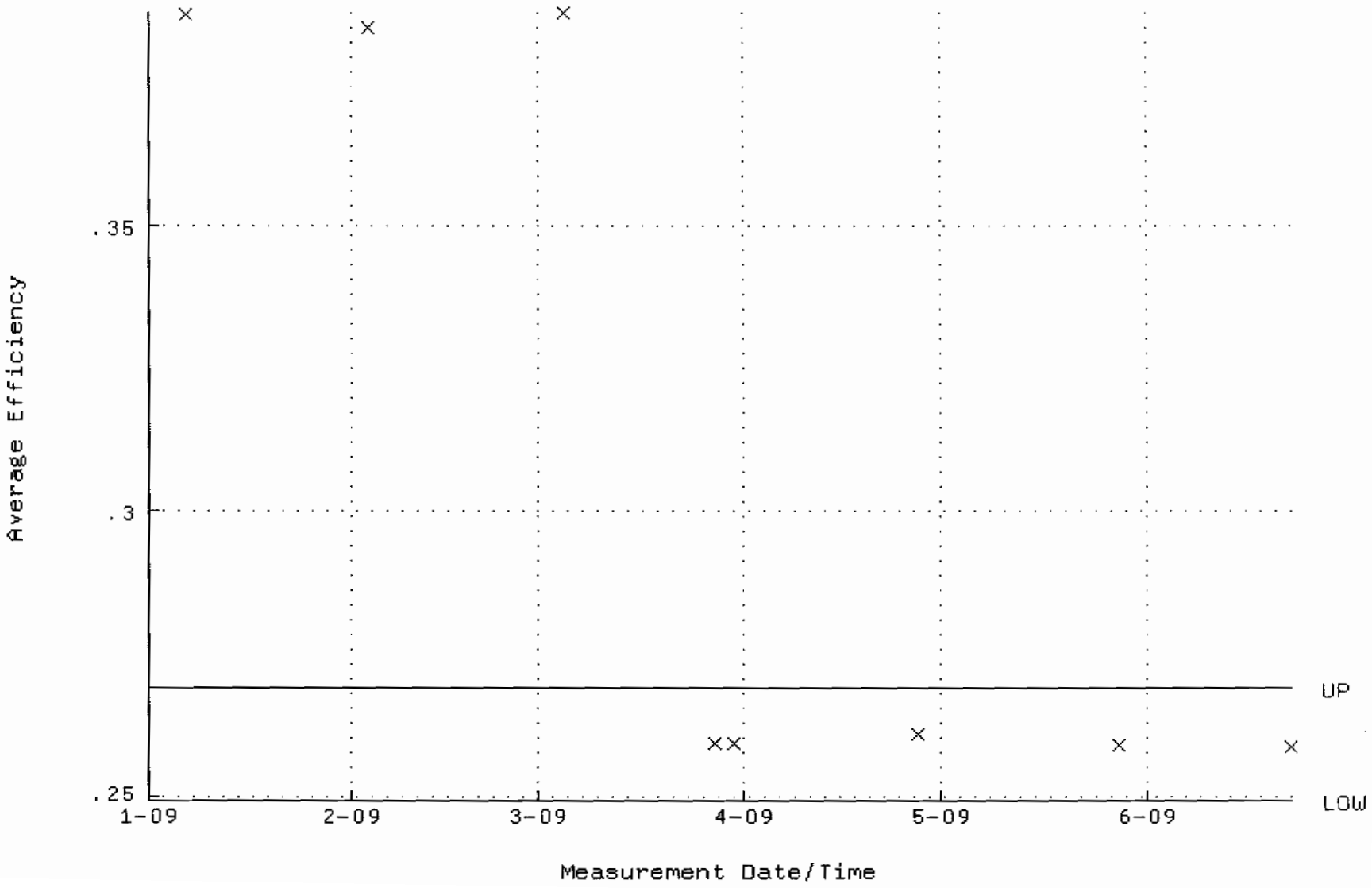

QA filename : DKA100:[ENV_ALPHA.QA.W]W188.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:41 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 83.6747 through 92.4825

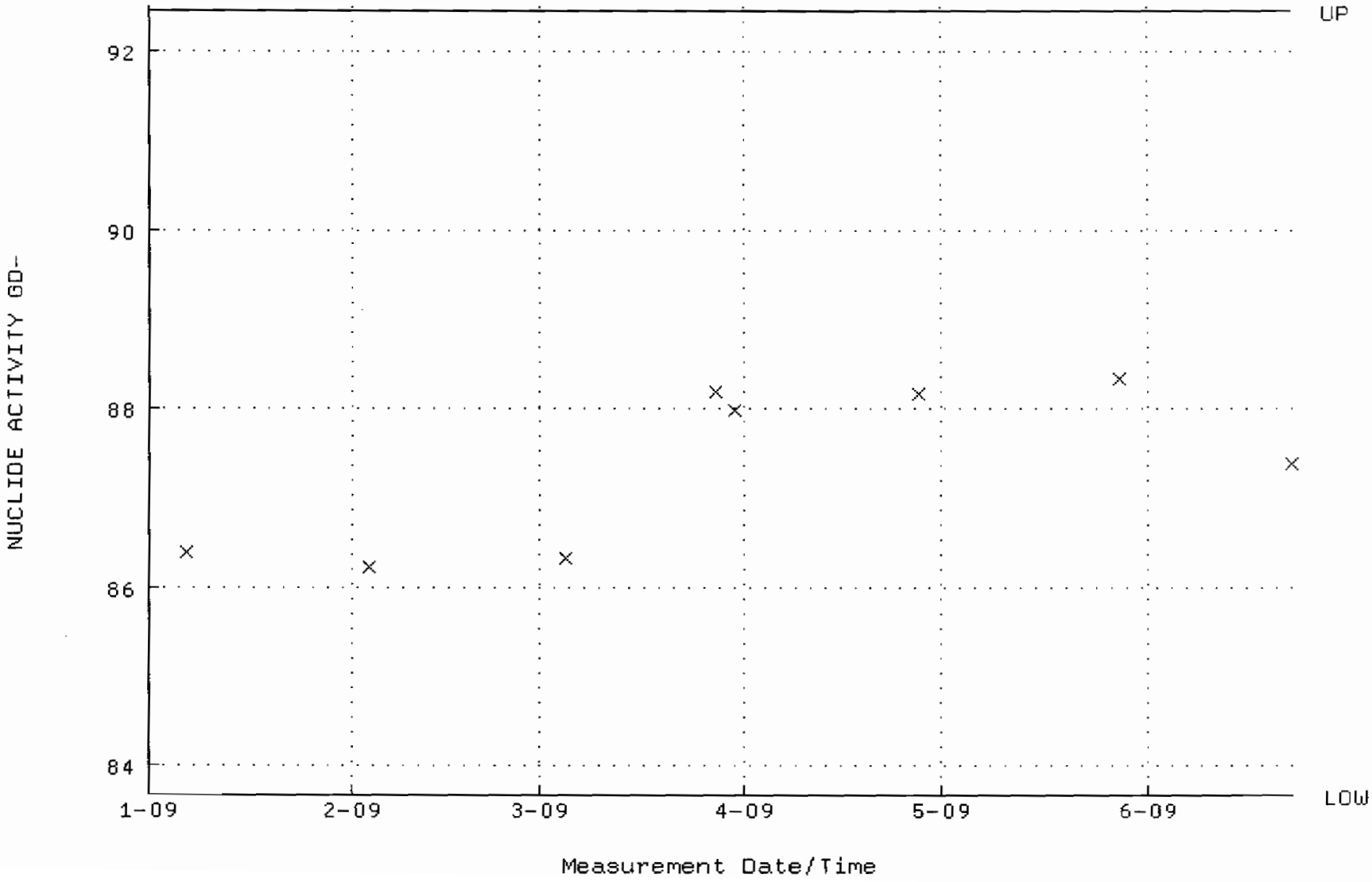

QA filename : DKA100:[ENV_ALPHA.QA.B]B188.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:47 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

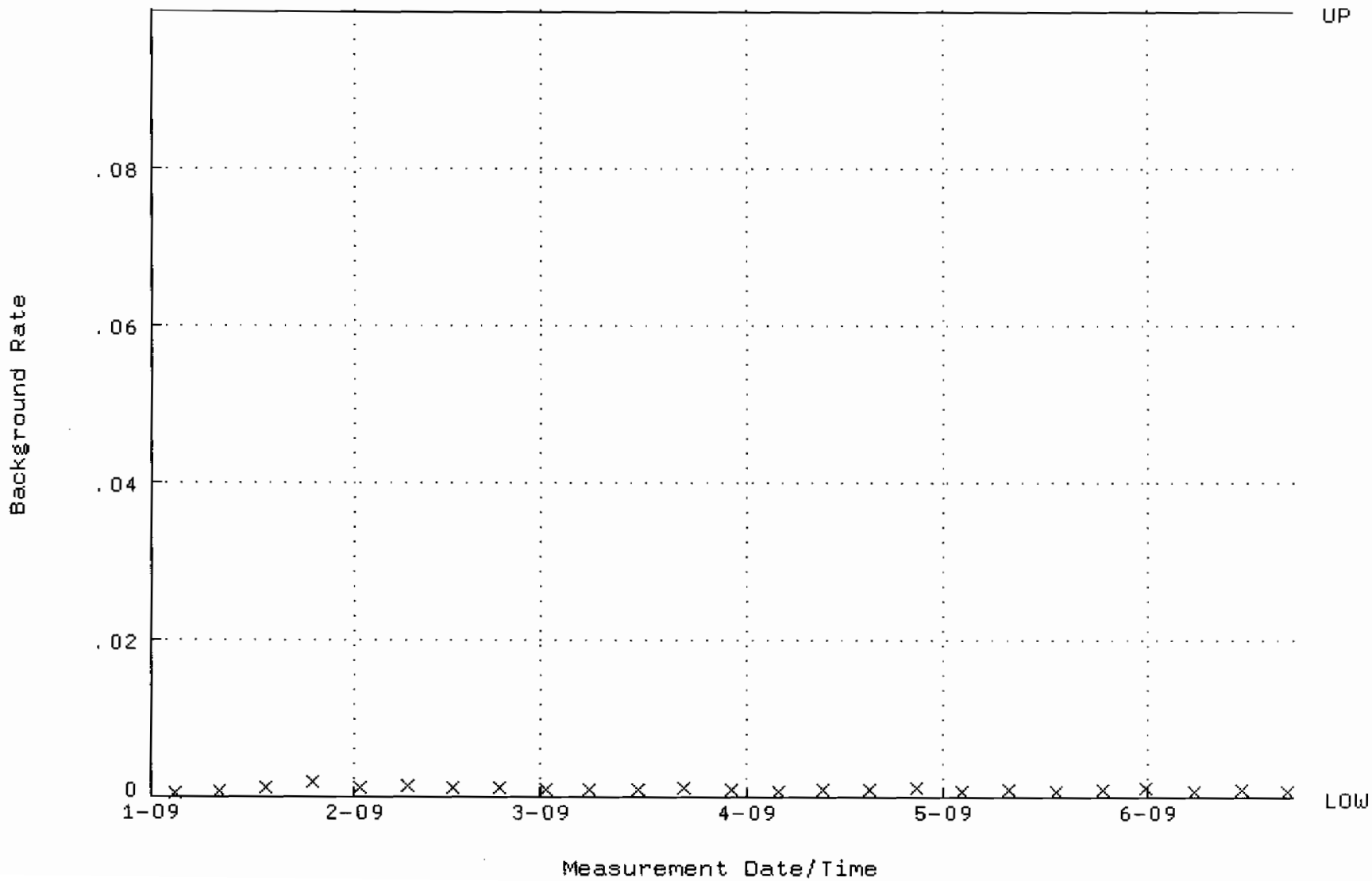

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

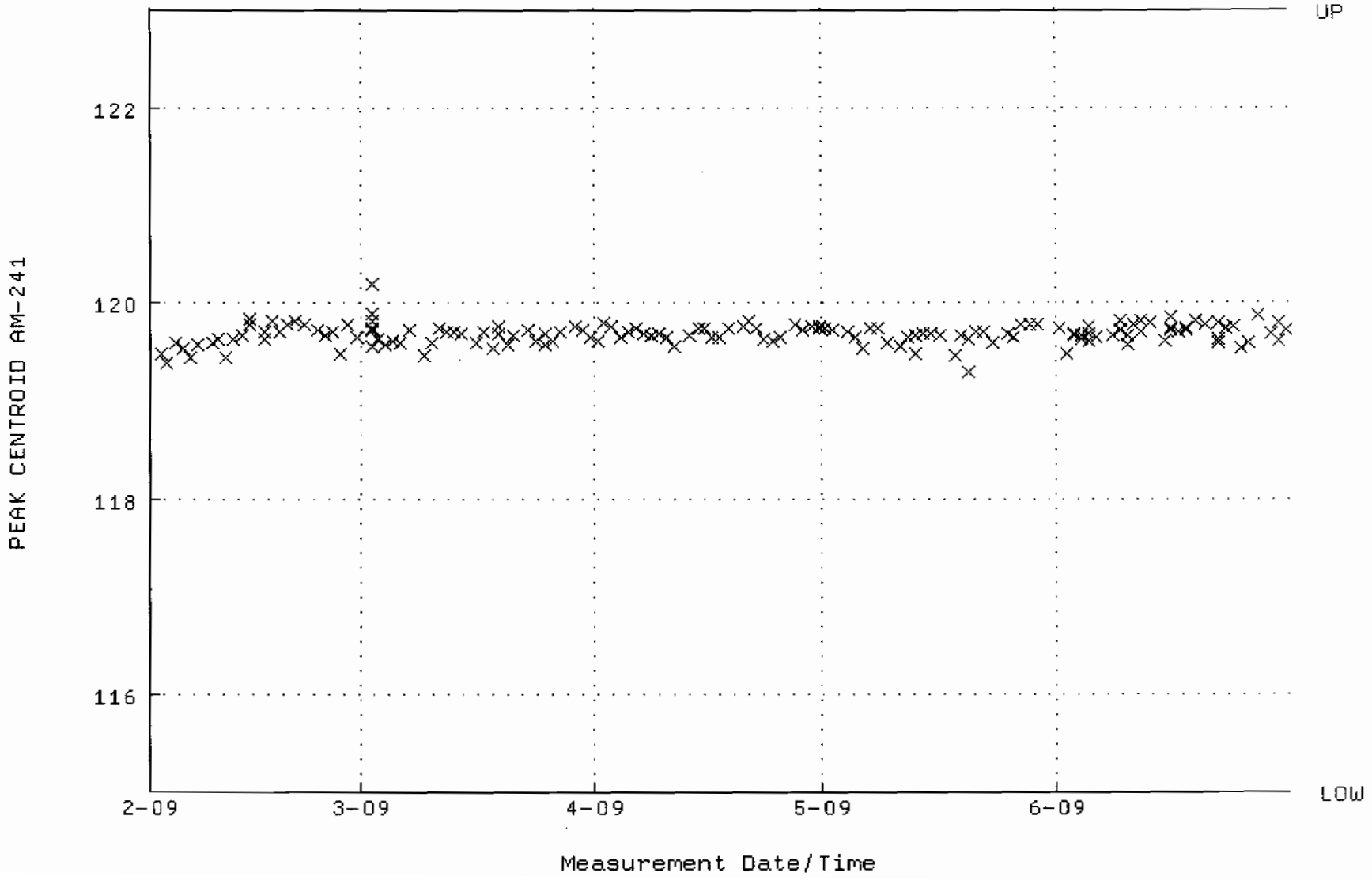

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM01.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:08:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.59940 through 1.87060

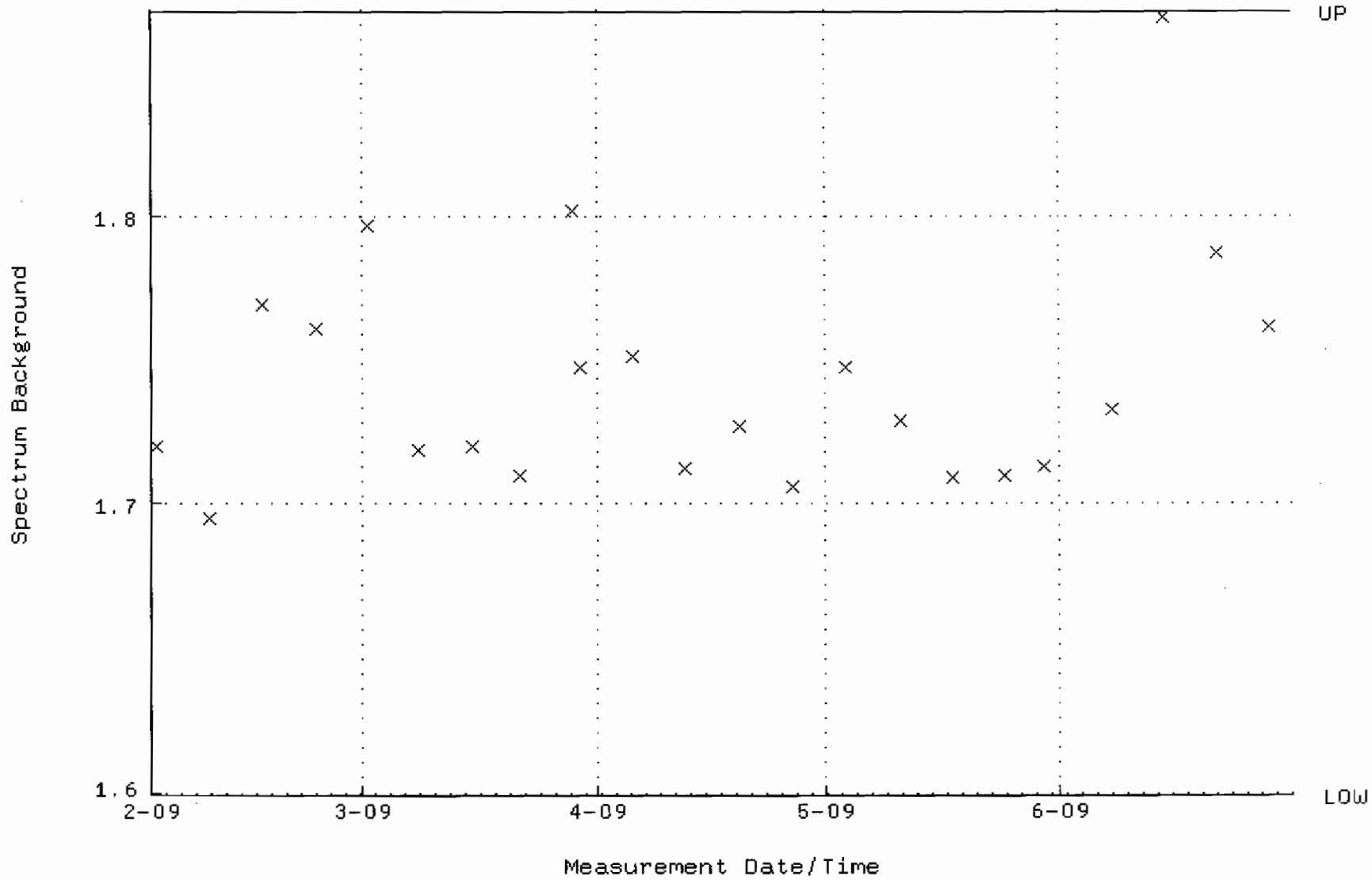

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM02_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:44 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

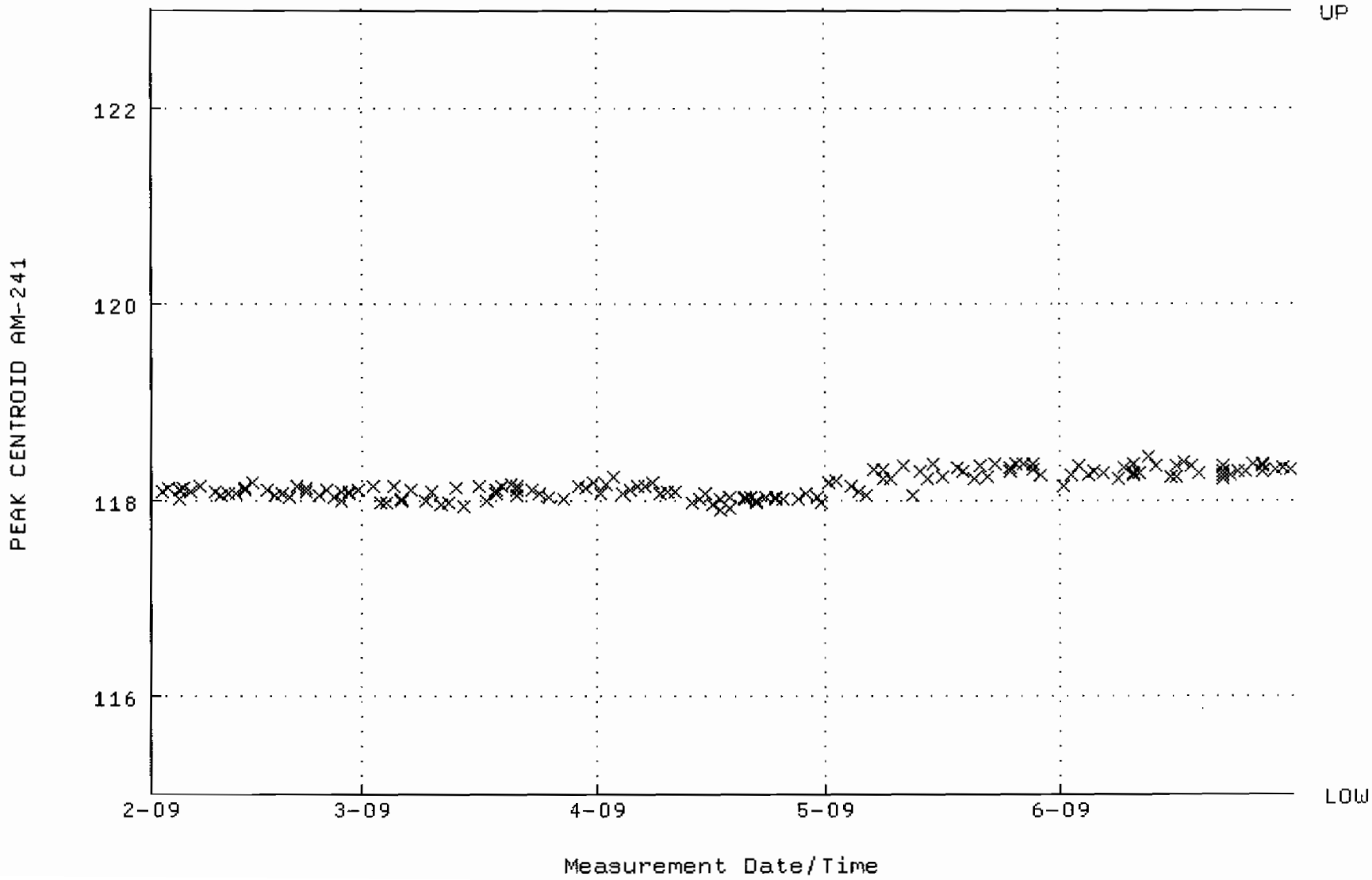

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM02.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.93670 through 2.08210

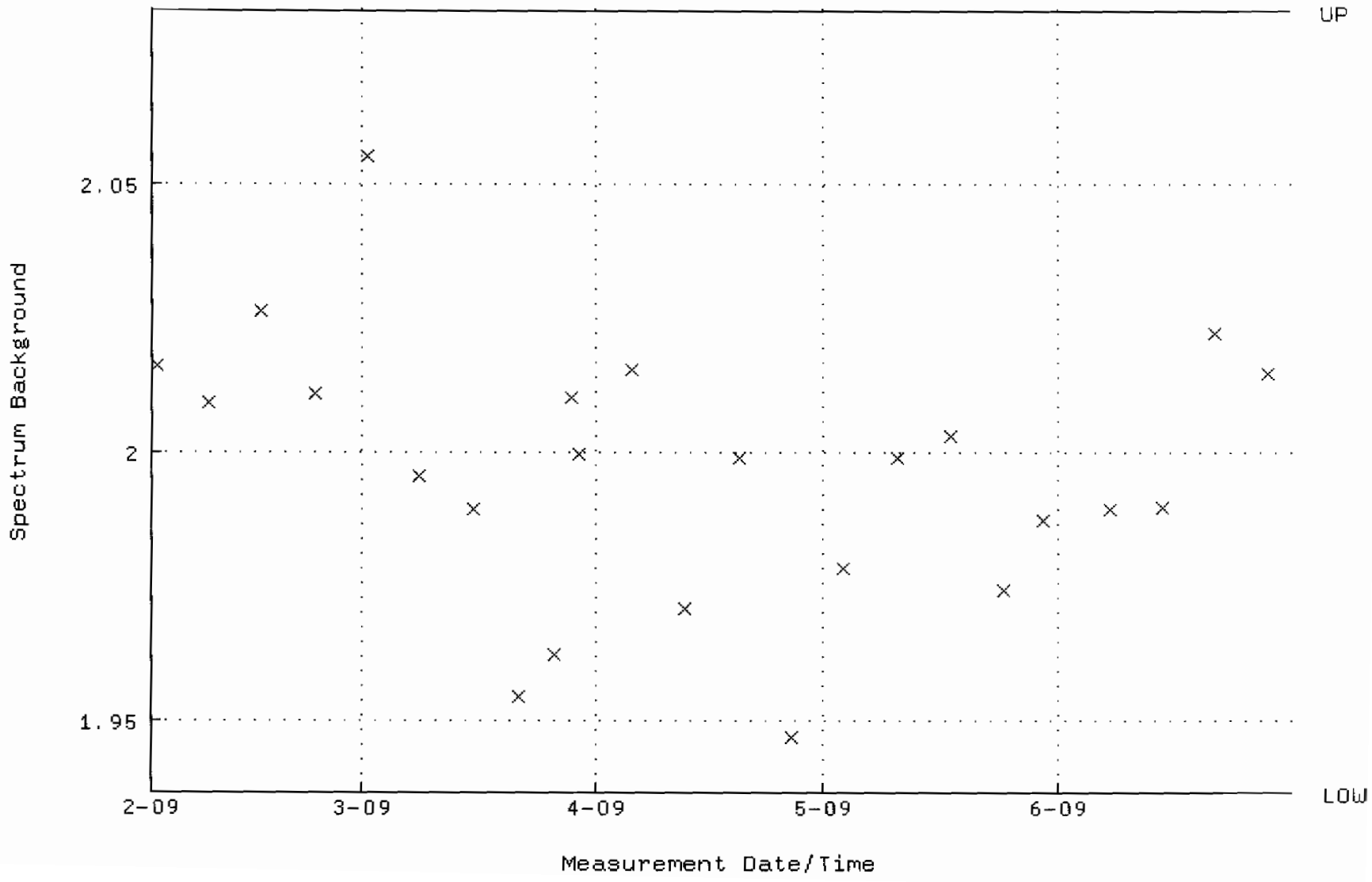

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM04_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:53 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

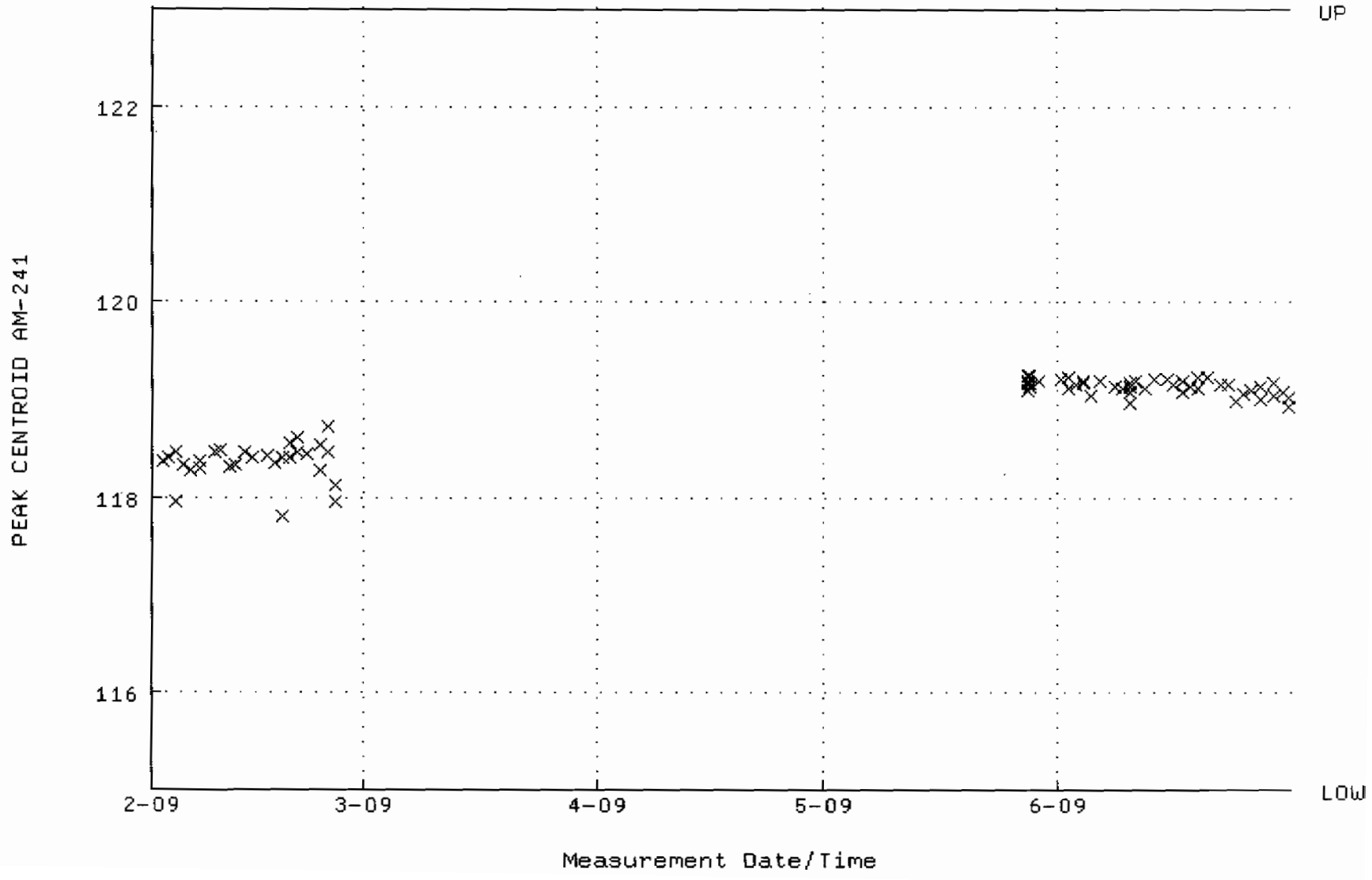

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM04.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:38 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.22211 through 1.49369

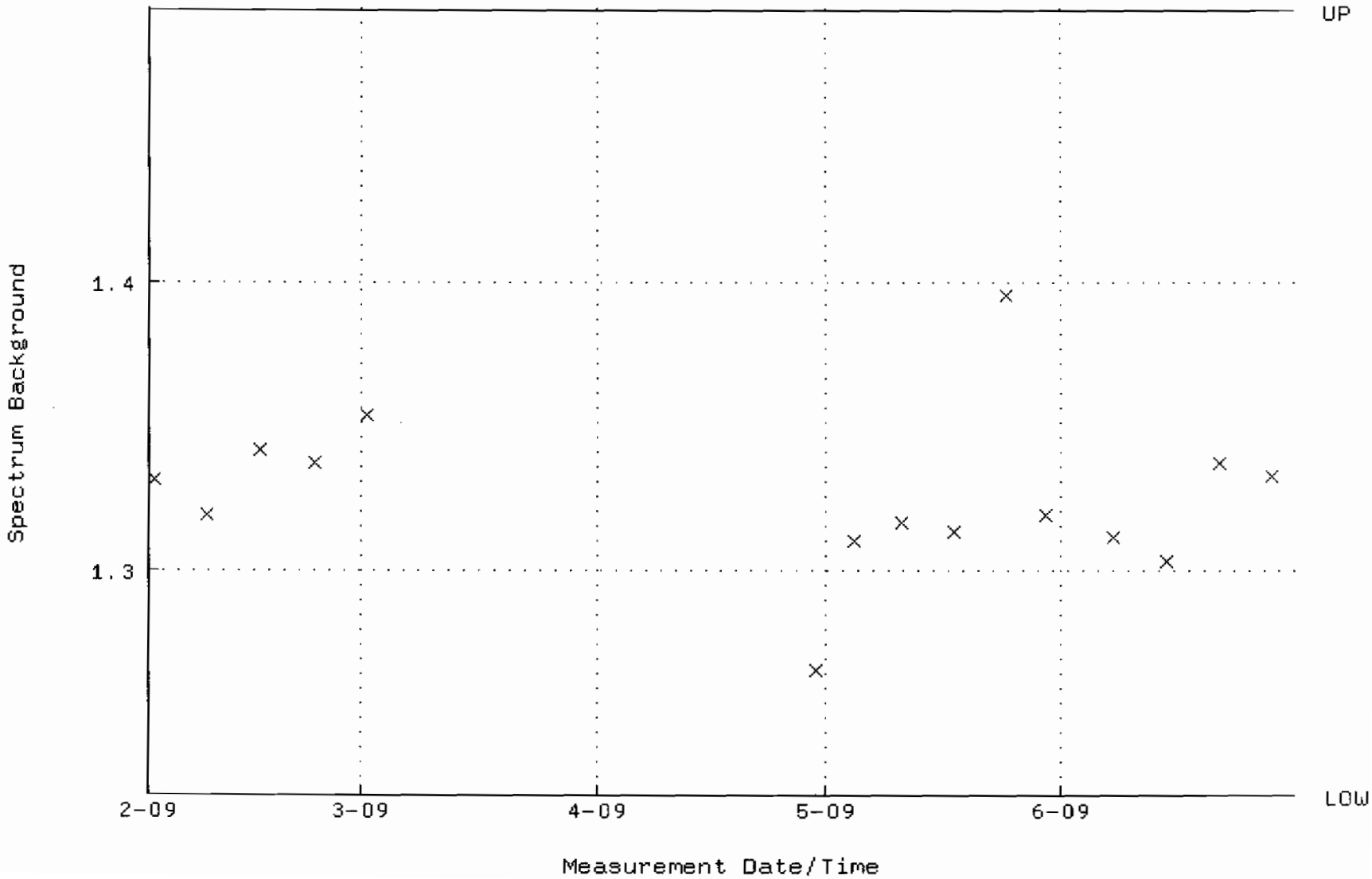

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:01 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

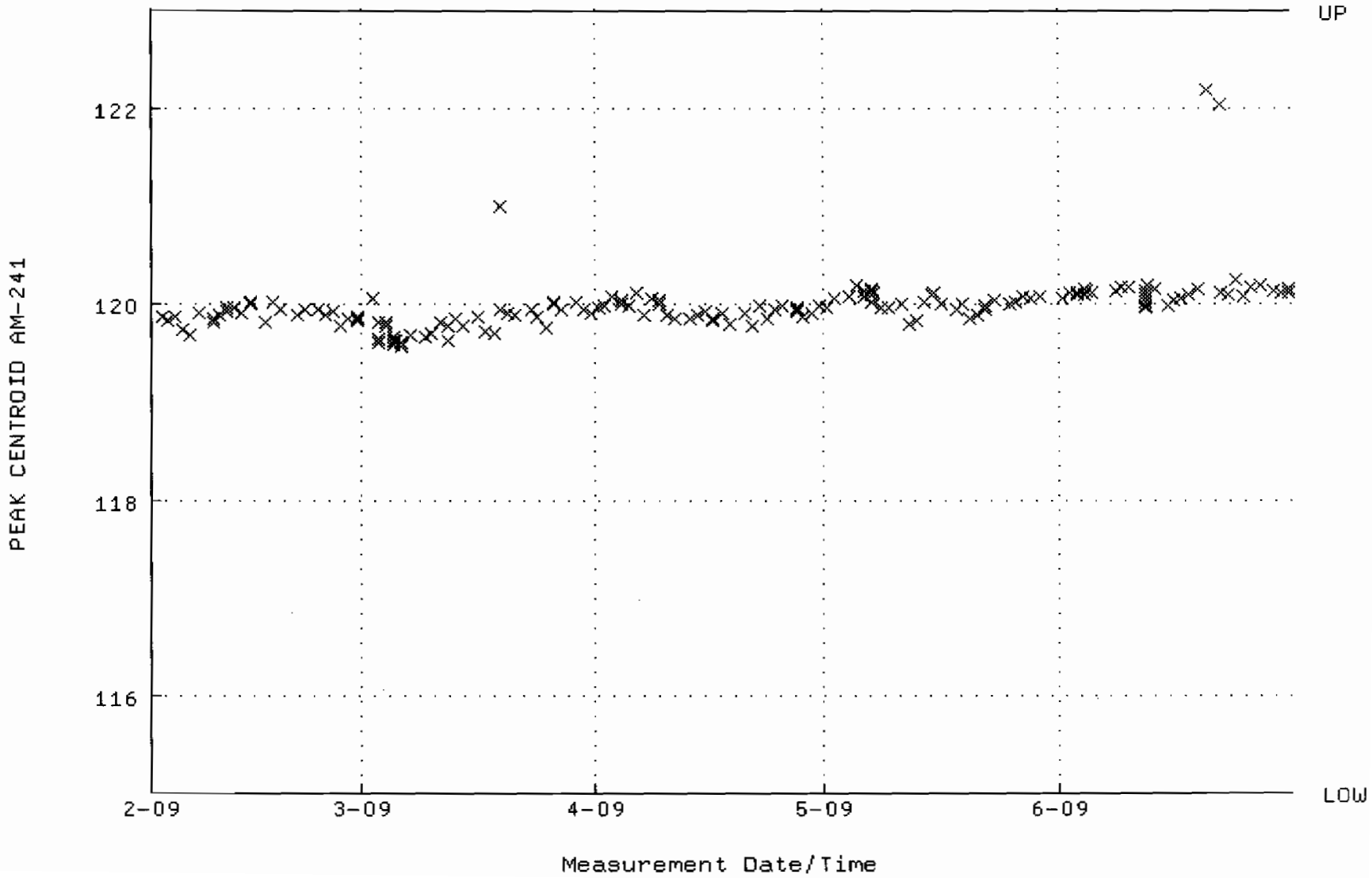

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM05.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.60580 through 1.72440

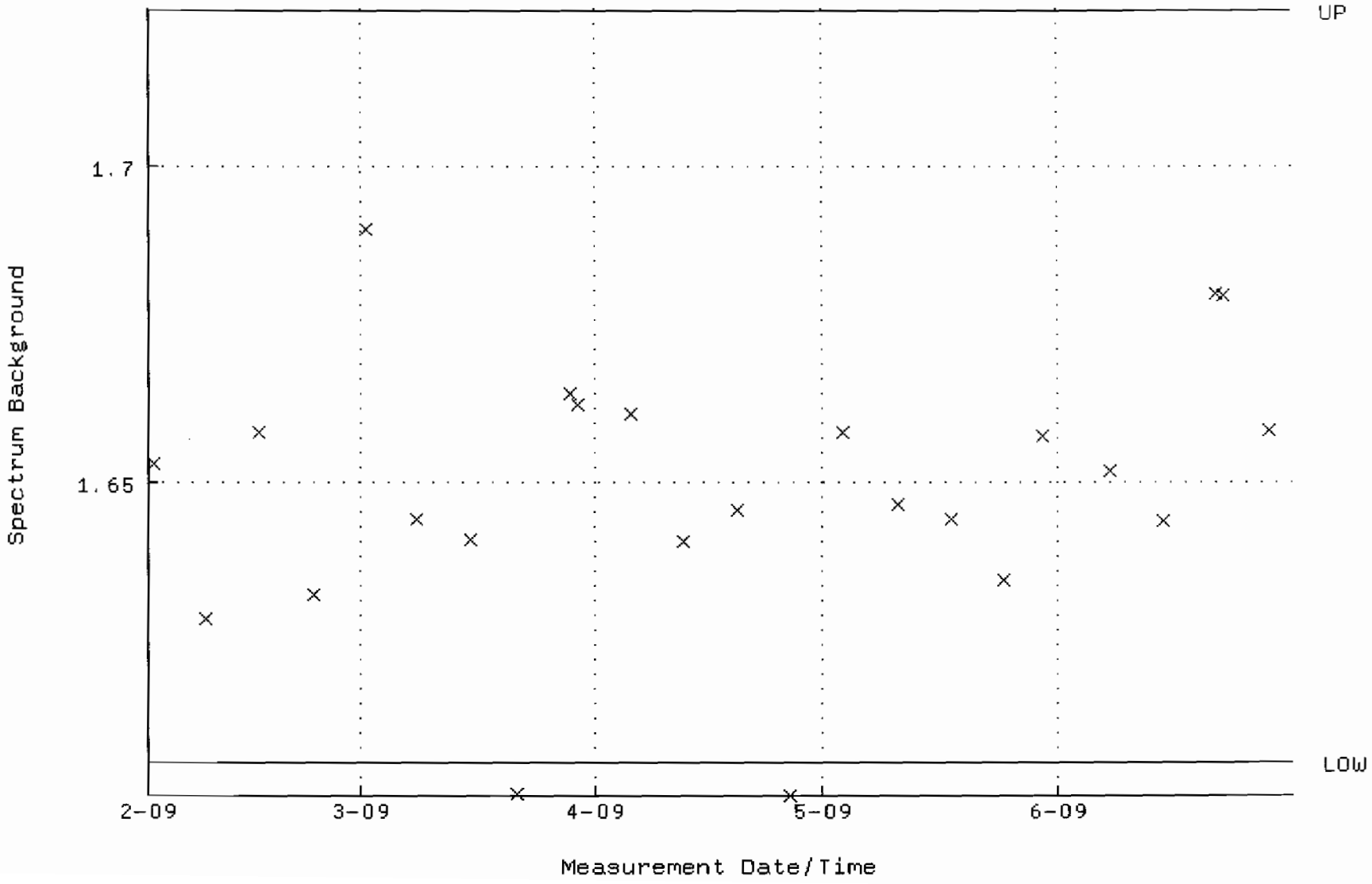

STANDARDS DATA

Amersham International plc
Amersham Laboratories

0134

NAMAS
CALIBRATION
No. 0146

[redacted]

Description

Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement

Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy

The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity

No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data

Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks:

The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

W. F. Case

W.F. Case

RC-5-024-061

1826

Amersham
The Health Science Group

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

Mary Jo Adams 4/9/09
Amanda L. Fehr 4/9/09

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATA 4/14/2000 Jeff C Neff 12/1/04

Angela L. Johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	425 ± 24	22.1 ± 1.3	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01-05

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: [redacted]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 13
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special Instructions Below	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

LAB USE

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

Sample Tracking SMO USE
Date Entered (mm/dd/yy)
Entered by

QC Initials

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well decontamination rad materials being sent to GEL on behalf of Hank Mintzer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry		DP	Weston / 7577 / 845-0867

1. Relinquished by	Org.	Date	Time	4. Relinquished by	Org.	Date
1. Received by	Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by	Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by	Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by	Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by	Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

1831

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATA 4/14/2000

Amanda L. Fehr 4/30/04
Matt L. Kuhl 5/1/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log In

9911627-01 -> 0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: [illegible]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 13
SMO Authorization: [signature]
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

1834

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab

Sample Tracking LAB USE
Date Entered (mm/dd/yy)
Entered by

Turnaround Time ☒Normal ☐Rush Required Report Date

QC Initials

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized rad materials being sent to GEL on behalf of Hank Mintzer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DEP	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. EM77	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

0934

ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 - U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

72858-278

Th-229 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:	Th-229
ACTIVITY (dps):	3.842 E3
HALF-LIFE:	7340 years
CALIBRATION DATE:	May 2, 2006 12:00 EST
RELATIVE EXPANDED UNCERTAINTY (k=2):	3.5%

Impurities: Th-228 5.7 dps
Th-230 24 dps
Th-232 1.5 dps

5.05657 grams 0.5M HNO_3 solution.

P O NUMBER 2724RD, Item 1

SOURCE PREPARED BY: M Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 05-02-2006

RECEIVED 5/5/06 MLK

1835

RCS-041-110

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0934
Prepared By:	Daniel Roy
Carrier Conc:	0.05M HNO3
Reference Date:	05/02/2006
Ampoule Mass (g):	5.05657 g
Uncertainty:	+/- 3.5 %
LogBook No:	RC-S-041-110

A Solution Material Info	
Isotope:	Thorium-229
Prepared By:	Daniel Roy
Prep Date:	04/23/2008
Verification Date:	04/23/2008
Expiration Date:	04/29/2010
Primary Code:	0934-A
Dilution(mL):	100 mL
Mass of Parent(g):	4.8973 g
Density(g/mL):	1.0143
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(4.8973 g) * (3842 dps) * (60 dpm/dps) / (5.05657 g * 100 mL) = 2232.5917 dpm/mL
(4.8973 g) * (3842 dps) * (60 dpm/dps) / (1.0143 g/mL)/ (5.05657 g * 100 mL) = 2201.0332 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
04/23/2008	Daniel Roy	2.5898	250	0934-B	22.8009 dpm/ml	04/23/2008	04/23/2009
09/25/2008	Daniel Roy	2.6237	250	0934-C	23.0994 dpm/ml	09/25/2008	09/25/2009
12/16/2008	Daniel Roy	2.6547	250	0934-D	23.3723 dpm/ml	12/16/2008	12/16/2009
01/09/2009	Daniel Roy	2.5399	250	0934-E	22.3616 dpm/ml	01/09/2009	01/09/2010
04/03/2009	Mary Aders	2.5434	250	0934-F	22.3924 dpm/ml	04/03/2009	04/03/2010
04/22/2009	Mary Aders	2.5138	250	0934-G	22.1318 dpm/ml	04/28/2009	04/28/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Th-229 Standard 0934-G

M. Aders	Isotope	Value	Uncertainty
4/28/2009	0934-G	0.976	0.1700
	0934-G	0.995	0.1750
	0934-G	0.951	0.1680

Mean Value (Counting) =	0.974	97.73	**Pass**
Stdev =	0.022068076		**Rule 3 (Pass/Fail)**

Target =	0.997
Lower Limit =	0.929863847
Upper Limit =	1.018136153
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.044136153
10 % of Mean =	0.0974
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard 0934-G using 0.1 mL for each source. Each standard was combined with 0.1 mL of Th-232 standard 0163-A-1 and 100 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 2 mL of DI water. Two mL of 49% HF was added to precipitate neodymium(and Thorium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Th-229 were calculated by comparison to Th-232 certified values.

4/29/09

4/29/09

ANALYTICS
Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

Rec'd 11/30/06
RC-S-045-073-0

ANALYTICS
An Isotope Products Laboratories Company

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ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info

Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info

Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David Dry 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

	Isotope	Result	
	Mixed Gamma N1	440.7	pCi/L
	Mixed Gamma N2	461.1	pCi/L
	Mixed Gamma N3	467.4	pCi/L
Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**
Certificate Value =	444.3738739	pCi/L	
Lower Limit =	428.4865624	pCi/L	
Upper Limit =	484.3134376	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	27.91343762		
10 % of Mean =	45.64000000		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr 12/4/2008	**Isotope**	**Result** **pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L		**Rule 3 (Pass/Fail)**
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

12/4/08
Amanda L. Fehr
12/4/08

Eckert & Ziegler
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www.analyticsinc.com

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

1844
End of Certificate

RECEIVED 12/15/08
RC-S-OE

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

	Serial #	Value		Uncertainty	
Analyst: D. Roy					
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L

Mean Value (Counting) =	2.407	pCi/L	**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L		**Rule 3 (Pass/Fail)**

Target =	2.397	pCi/L
Lower Limit =	2.259244371	pCi/L
Upper Limit =	2.554088963	pCi/L
Rule 1 Pass/Fail	**Pass**	
Two sigma =	0.147422296	
10 % of Mean =	0.240666667	
Rule 2 (Pass/Fail)	**Pass**	

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09
1/5/09

1380 Seaboard Industrial Blvd.

1262

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

aithersburg, Maryland 20899
anuary 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

RECEIVED 11/5/05

a, 30318

1847

*Notes and references ...

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994** [b]*
Massic activity of the solution [c]	**26.31 Bq·g^{-1}**
Relative expanded uncertainty (k=2)	**0.72%** [d] [e]
Solution density	**(1.105 ± 0.002) g·mL^{-1} at 20 °C** [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L^{-1})	Mass Fraction (g·g^{-1})
	H_2O HNO_3 $^{242}Pu^{+6}$	50 3.2 8×10^{-7}	0.81 0.19 2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) Bq·g^{-1} [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three 4πα liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	$^{239}Pu + ^{240}Pu$ <0.000 001 [u]	$^{239}Pu + ^{240}Pu$ 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	$^{238}Pu + ^{241}Am$ <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One µSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (µSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 $s^{-1} \cdot g^{-1}$ for energies less than 3.1 MeV,
0.03 $s^{-1} \cdot g^{-1}$ for energies between 3.1 and 4.4 MeV, and
0.003 $s^{-1} \cdot g^{-1}$ for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
$5 \times 10\text{-}5$ $s^{-1} \cdot g^{-1}$ for energies between 19 and 39 keV,
$7 \times 10\text{-}5$ $s^{-1} \cdot g^{-1}$ for energies between 49 and 92 keV,
$2 \times 10\text{-}5$ $s^{-1} \cdot g^{-1}$ for energies between 106 and 507 keV,
$1 \times 10\text{-}5$ $s^{-1} \cdot g^{-1}$ for energies between 515 and 1456 keV, and
$5 \times 10\text{-}6$ $s^{-1} \cdot g^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i| \cdot (x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i| \cdot (x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i| \cdot u(x_i)/y = |\partial y/\partial x_i| \cdot (x_i/y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i| \cdot (x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}·{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1262
Prepared By:	Daniel Roy
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-048-143

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Mary Aders
Prep Date:	05/08/2009
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	1262-A
Dilution(mL):	200 mL
Mass of Parent(g):	5.3306 g
Density(g/mL):	1.0000
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (200 mL) = 42.0744 dpm/mL
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0000 g/mL) / (200 mL) = 42.0744 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1262-*A*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	1262-A	1.830	0.2560
	1262-A	1.890	0.2630
	1262-A	1.810	0.2520

Mean Value (Counting) =	1.843	97.26	**Pass**
Stdev =	0.04163332		**Rule 3 (Pass/Fail)**

Target =	1.90
Lower Limit =	1.760066693
Upper Limit =	1.926599973
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.08326664
10 % of Mean =	0.184333333
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1262-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-Y and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Five drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 48% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

Mary Jr. Aders 5/15/09

05/15/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 881219**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232424001	SAMPLE	MXR1	GAM01	07-JUL-09 06:03	DONE	CAN	30-JAN-09 00:00
232433001	SAMPLE	MXR1	GAM02	07-JUL-09 06:04	DONE	CAN	01-NOV-08 00:00
232433002	SAMPLE	MXR1	GAM04	07-JUL-09 06:04	DONE	CAN	05-MAY-09 00:00
232433003	SAMPLE	MXR1	GAM05	07-JUL-09 06:05	DONE	CAN	11-JUN-09 00:00
232433004	SAMPLE	MXR1	GAM06	07-JUL-09 06:05	DONE	CAN	04-FEB-09 00:00
232433005	SAMPLE	MXR1	GAM08	07-JUL-09 06:06	DONE	CAN	30-JAN-09 00:00
232433006	SAMPLE	MXR1	GAM11	07-JUL-09 06:38	DONE	CAN	01-NOV-08 00:00
232433007	SAMPLE	MXR1	GAM12	07-JUL-09 06:39	DONE	CAN	10-FEB-09 00:00
232433008	SAMPLE	MXR1	GAM13	07-JUL-09 06:39	DONE	CAN	02-FEB-09 00:00
232433009	SAMPLE	MXR1	GAM14	07-JUL-09 06:40	DONE	CAN	06-MAR-09 00:00
232433010	SAMPLE	MXR1	GAM15	07-JUL-09 06:40	DONE	CAN	16-FEB-09 00:00
232433011	SAMPLE	MXR1	GAM16	07-JUL-09 06:41	DONE	CAN	13-NOV-08 00:00
232433012	SAMPLE	MXR1	GAM17	07-JUL-09 07:03	DONE	CAN	27-JAN-09 00:00
232433013	SAMPLE	MXR1	GAM18	07-JUL-09 07:04	DONE	CAN	23-APR-09 00:00
232433014	SAMPLE	MXR1	GAM22	07-JUL-09 07:05	DONE	CAN	18-FEB-09 00:00
232433015	SAMPLE	MXR1	GAM23	07-JUL-09 07:06	DONE	CAN	02-JUN-09 00:00
1201871423	MB	MXR1	GAM02	07-JUL-09 08:11	DONE	CAN	01-NOV-08 00:00
1201871425	LCS	MXR1	GAM05	07-JUL-09 08:19	DONE	CAN	11-JUN-09 00:00
1201871424	DUP	MXR1	GAM04	07-JUL-09 08:27	DONE	CAN	05-MAY-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882525**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232069001	SAMPLE	AXD2	1047	09-JUL-09 17:37	DONE		
232069002	SAMPLE	AXD2	1048	09-JUL-09 17:37	DONE		
232069003	SAMPLE	AXD2	1065	09-JUL-09 17:37	DONE		
232069004	SAMPLE	AXD2	1066	09-JUL-09 17:37	DONE		
232069005	SAMPLE	AXD2	1067	09-JUL-09 17:37	DONE		
232069006	SAMPLE	AXD2	1068	09-JUL-09 17:37	DONE		
232424001	SAMPLE	AXD2	1069	09-JUL-09 17:37	DONE		
232426001	SAMPLE	AXD2	1070	09-JUL-09 17:37	DONE		
232426002	SAMPLE	AXD2	1071	09-JUL-09 17:37	DONE		
232511001	SAMPLE	AXD2	1072	09-JUL-09 17:37	DONE		
232511002	SAMPLE	AXD2	1073	09-JUL-09 17:37	DONE		
232511003	SAMPLE	AXD2	1074	09-JUL-09 17:37	DONE		
232511004	SAMPLE	AXD2	1075	09-JUL-09 17:37	DUSE		
232511005	SAMPLE	AXD2	1076	09-JUL-09 17:37	DUSE		
232511006	SAMPLE	AXD2	1077	09-JUL-09 17:37	DONE		
1201874395	MB	AXD2	1078	09-JUL-09 17:37	DONE		
1201874396	DUP	AXD2	1079	09-JUL-09 17:37	DONE		
1201874397	LCS	AXD2	1080	09-JUL-09 17:37	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882541**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232424001	SAMPLE	HAKB	1183	08-JUL-09 19:19	DONE		
232582001	SAMPLE	HAKB	1184	08-JUL-09 19:19	DUSE		
232582002	SAMPLE	HAKB	1185	08-JUL-09 19:19	DONE		
1201874438	MB	HAKB	1186	08-JUL-09 19:19	DONE		
1201874439	DUP	HAKB	1187	08-JUL-09 19:19	DONE		
1201874440	LCS	HAKB	1188	08-JUL-09 19:19	DONE		

Instrument Run Log

Instrument Type: LSC **Batch ID: 883013**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232424001	SAMPLE	KXK2	LSCRED	14-JUL-09 14:42	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232426001	SAMPLE	KXK2	LSCRED	14-JUL-09 16:21	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232426002	SAMPLE	KXK2	LSCRED	14-JUL-09 18:00	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433002	SAMPLE	KXK2	LSCRED	14-JUL-09 19:39	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433004	SAMPLE	KXK2	LSCRED	14-JUL-09 22:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433005	SAMPLE	KXK2	LSCRED	15-JUL-09 00:35	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433006	SAMPLE	KXK2	LSCRED	15-JUL-09 02:14	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433007	SAMPLE	KXK2	LSCRED	15-JUL-09 03:52	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433008	SAMPLE	KXK2	LSCRED	15-JUL-09 05:31	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433009	SAMPLE	KXK2	LSCRED	15-JUL-09 08:35	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433010	SAMPLE	KXK2	LSCRED	15-JUL-09 09:07	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433011	SAMPLE	KXK2	LSCRED	15-JUL-09 09:39	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433012	SAMPLE	KXK2	LSCRED	15-JUL-09 10:11	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433013	SAMPLE	KXK2	LSCRED	15-JUL-09 10:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433014	SAMPLE	KXK2	LSCRED	15-JUL-09 11:14	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433015	SAMPLE	KXK2	LSCRED	15-JUL-09 11:46	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875577	MB	KXK2	LSCRED	15-JUL-09 12:18	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875579	LCS	KXK2	LSCRED	15-JUL-09 13:22	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433003	SAMPLE	KXK2	LSCBLUE	16-JUL-09 10:37	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875578	DUP	KXK2	LSCBLUE	16-JUL-09 12:15	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 885014**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232045001	SAMPLE	AXD2	1138	15-JUL-09 21:12	DONE		
232069001	SAMPLE	AXD2	1139	15-JUL-09 21:12	DONE		
232069002	SAMPLE	AXD2	1140	15-JUL-09 21:12	DONE		
232069003	SAMPLE	AXD2	1141	15-JUL-09 21:12	DONE		
232069004	SAMPLE	AXD2	1142	15-JUL-09 21:12	DONE		
232069005	SAMPLE	AXD2	1144	15-JUL-09 21:12	DONE		
232069006	SAMPLE	AXD2	1145	15-JUL-09 21:12	DONE		
232076001	SAMPLE	AXD2	1146	15-JUL-09 21:12	DONE		
232076002	SAMPLE	AXD2	1147	15-JUL-09 21:13	DONE		
232076003	SAMPLE	AXD2	1148	15-JUL-09 21:13	DONE		
232424001	SAMPLE	AXD2	1149	15-JUL-09 21:13	DONE		
232426002	SAMPLE	AXD2	1151	15-JUL-09 21:13	DUSE		
232511001	SAMPLE	AXD2	1152	15-JUL-09 21:13	DONE		
232511002	SAMPLE	AXD2	1153	15-JUL-09 21:13	DONE		
232511003	SAMPLE	AXD2	1154	15-JUL-09 21:13	DONE		
232511004	SAMPLE	AXD2	1155	15-JUL-09 21:13	DONE		
232511005	SAMPLE	AXD2	1156	15-JUL-09 21:13	DONE		
232511006	SAMPLE	AXD2	1157	15-JUL-09 21:13	DONE		
1201880401	MB	AXD2	1158	15-JUL-09 21:13	DONE		
1201880402	DUP	AXD2	1171	15-JUL-09 21:13	DONE		
1201880403	LCS	AXD2	1172	15-JUL-09 21:13	DONE		
232426001	SAMPLE	AXD2	1161	16-JUL-09 07:25	DUSE		

Thursday, June 25, 2009

REQUEST NUMBER: 09-2472

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

These Samples are on:

LANL Request Number:09-2472

Per Agreement Number:176450010

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10463	R	6/23/2009	
		2	CAMO-09-10463	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2472

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2472

REQUEST NUMBER: 09-2472

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10463	1	GLASS	8290	Ice	R
CAMO-09-10463	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/25/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10463

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		0915	SUB-MEDIA:	UA	
PRS ID:	03-007	ok	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	MO-605001	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	5.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	7.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Regular~~ 15 Day J.B. 6/23/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Brown / Tan, indurated, dry tuff w/ brown claylike intrusio

FR; CAMO-09-10468

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 03-007-09 (S) of Sigma fence and bldg. 3-159.

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 6$ dpm

$\beta/\gamma \leq 1326$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Nickolas Gallegos

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/23/09 1505	Sheri Sherwood	6/23/09 3:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10468

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/23/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1000	SUB-MEDIA:	OTHER	
PRS ID:	03-007	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605001	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	UF	
TOP DEPTH:	0	ok	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	W		EXCAVATED: YES / NO / (NA)		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / (NA)

BOREHOLE: YES / NO / (NA) BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
2		8290	1 LITER AMBER GLASS	Ice J. B 6/27/09	N	
1	15-Day Regular J. B 6/27/09	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-10463

SAMPLE COMMENTS: None

LOCATION DESC: 03-007-09

FIELD SCREENING/MEASUREMENT RESULTS: None

COLLECTED BY (PRINT) J. Branch **REVIEWED BY (PRINT)** Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature)	6.23.09 1505	(Printed Name) (Signature)	6/23/09 1509
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-10463	ARS Sample ID:	ARS2-09-00074-016
Sample Collection Date:	06/23/09 09:15	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	26.68	67.07	133.72	67.15	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	35.33	15.72	20.18	16.31		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	23.86	9.78	2.24	9.80		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	14.67	0.13	14.67	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.32	0.28	0.11	0.28	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	45.58	0.10	45.58	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.28	0.50	0.20	0.50	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.02	0.56	0.21	0.56		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.06	0.55	0.50	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	-0.09	130.83	0.29	130.83	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.58	3.33	1.59	3.43		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.21	0.27	0.12	0.27		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.38

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00074	Request or PO Number:	
Client Sample ID:	CAMO-09-10463	ARS Sample ID:	ARS2-09-00074-016
Sample Collection Date:	06/23/09 09:15	Date Received:	06/24/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/24/09 15:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	26.68	67.07	133.72	67.15	U	pCi/g	EPA 900.0M	6/24/2009	LR	N/A
GROSS BETA	35.33	15.72	20.18	16.31		pCi/g	EPA 900.0M	6/24/2009	LR	N/A
NA-22	0.00	0.00	0.14	0.00	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
K-40	23.86	9.78	2.24	9.80		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CO-60	0.00	14.67	0.15	14.67	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-134	0.32	0.28	0.11	0.28	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
CS-137	-0.01	45.58	0.10	45.58	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
EU-152	0.28	0.50	0.20	0.50	SI	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
PB-212	1.02	0.56	0.21	0.56		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
RA-226	1.06	0.55	0.30	0.55		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-235	-0.09	130.83	0.29	130.83	U	pCi/g	EPA 901.1M	6/24/2009	ME	N/A
U-238	3.58	3.33	1.59	3.43		pCi/g	EPA 901.1M	6/24/2009	ME	N/A
AM-241	0.21	0.27	0.12	0.27		pCi/g	EPA 901.1M	6/24/2009	ME	N/A

NOTES: % Moisture: 0.38

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5123-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2472 VALIDATION DATE: 07/20/09 LAB CODE: ALTC

CONTRACT LABORATORY NAME: Vista Analytical Laboratory

VALIDATOR: Monica Dymerski ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☒ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the ICAL was not analyzed within thirty days of the samples. No sample data were qualified as a result.
2. The ICV %D was >20% with positive bias for 1,2,3,4,7,8-HxCDD. The associated sample result was an ND and, thus, was not qualified.
3. It should be noted that ICV standards are not available for 13C-OCDF and 13C-1,2,3,4-TCDF, which are used in the quantitation of OCDF; 13C-2,3,7,8-TCDF; 13C-1,2,3,7,8-PeCDF and 13C-2,3,4,7,8-PECDF. Thus, ICV %Ds could not be evaluated for these compounds. No sample data were qualified as a result.
4. It should be noted that laboratory ion abundance limits were used for the evaluation of the PeCDD compounds since the laboratory uses an alternate ion for these masses sue to interferences.
5. It should be noted that MS/MSD analyses were not performed with the samples. No sample data were qualified as a

DATA VALIDATION COVER SHEET

5123-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

result.

Reviewed by: Mary Donivan Level: II Date: 07/20/09

VALIDATOR'S SIGNATURE: DATE: 07/20/09

Form 5123-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time and qualitative criteria for target compound identification were not met.	R, DF0	R, DF0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF0b	R, DF0b
☐	☒	☐	3. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF1d	R, DF1d
☐	☒	☐	4. The sample result is ≤5 times the concentration of the related analyte in the method blank.	N/A	U, DF4
☐	☒	☐	5. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, DF4a
☐	☐	☒	6. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	N/A	U, DF4d
☐	☒	☐	7. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF4e	R, DF4e
☐	☒	☐	8. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, DF7	J, DF7
☐	☒	☐	9. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria.	UJ, R, DF7a	J, DF7a
☐	☒	☐	10. The affected analytes were analyzed with an out of range ion abundance in the initial calibration and/or CCV.	R, DF7b	R, DF7b
☒	☐	☐	11. The ICV and/or CCV were recovered outside the method specific limits.	UJ, R, DF7c	J, R, DF7c
☐	☒	☐	12. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DF7d	J, DF7d

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DF7f	R, DF7f
☐	☒	☐	14. The affected analyte is considered rejected because the ion abundances did not meet specifications.	N/A	R, DF8
☐	☒	☐	15. The ion abundance documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF8a	R, DF8a
☐	☒	☐	16. If GC column performance was not evaluated at the required frequency or if method criteria were not met, qualify all associated detects as J and all associated non-detects as UJ.	UJ, DF8b	J, DF8b
☐	☐	☒	17. If 2, 3, 7, 8-TCDF was detected in a sample and the result was not confirmed on a second column with successful analysis of the GC column performance mix, qualify all associated detects as U.	N/A	U, DF8c
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, DF9	J-, DF9
☐	☒	☐	19. The holding time was >2 times the applicable holding time requirement.	R, DF9a	J-, DF9a
☐	☒	☐	20. The LCS percent recovery was <10%.	R, DF12	J-, DF12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, DF12a	J-, DF12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DF12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12c	R, DF12c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 **Dioxin/Furan Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	24. The MS/MSD percent recovery was <10%.	R, DF12d	R, DF12d
☐	☐	☒	25. The MS/MSD percent recovery was >10% but <70%.	UJ, DF12e	J, DF12e
☐	☐	☒	26. The MS/MSD percent recovery was >70%	N/A	J+, DF12f
☐	☐	☒	27. The MS/MSD relative percent difference was >30%.	UJ, DF12g	J, DF12g
☐	☒	☐	28. The fortification sample percent recovery was <10%.	R, DF12h	J-, DF12h
☐	☒	☐	29. The fortification sample percent recovery was <40% but >10%	UJ, DF12i	J-, DF12i
☐	☒	☐	30. The fortification sample percent recovery was >135%.	N/A	J+, DF12j
☐	☒	☐	31. The fortification sample documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12k	R, DF12k
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference.	R, DF15	UJ, DF15
☐	☒	☐	33. Sample clean-up was not performed. If run log notations, spectral data and/or internal standard or labeled compound recoveries indicate interferences and extract cleanup was not performed, qualify all associated detects as J and all non-detects as UJ.	RJ, DF15a	J, DF15a
☐	☒	☐	34. The instrument performance sample did not pass method acceptance criteria.	R, DF16	R, DF16
☐	☒	☐	35. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, DF16c	R, DF16c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 **Dioxin/Furan Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	**36. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.**	**UJ, R, DF19**	**J, R, DR19**
☐	☒	☐	**37. Duplicate, dilution, or reanalysis.**	**UJ, DF88**	**J, DF88**

Sample ID: **CAMO-09-10463** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31838-001	Date Received:	26-Jun-09
Project:	09-2472	Sample Size:	10.4 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	95.7	Date Analyzed DB-5:	30-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	0915						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0499		
1,2,3,7,8-PeCDD	ND	0.0476		
1,2,3,4,7,8-HxCDD	ND	0.148		
1,2,3,6,7,8-HxCDD	ND	0.143		
1,2,3,7,8,9-HxCDD	ND	0.140		
1,2,3,4,6,7,8-HpCDD	ND	0.174		
OCDD	2.20			J
2,3,7,8-TCDF	ND	0.0353		
1,2,3,7,8-PeCDF	ND	0.0362		
2,3,4,7,8-PeCDF	ND	0.0403		
1,2,3,4,7,8-HxCDF	ND	0.0468		
1,2,3,6,7,8-HxCDF	ND	0.0509		
2,3,4,6,7,8-HxCDF	ND	0.0599		
1,2,3,7,8,9-HxCDF	ND	0.0808		
1,2,3,4,6,7,8-HpCDF	ND	0.0884		
1,2,3,4,7,8,9-HpCDF	ND	0.0916		
OCDF	ND	0.0937		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	92.7	40 - 135	
	13C-1,2,3,7,8-PeCDD	97.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	80.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	104	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	93.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	102	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	80.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	83.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	84.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.8	40 - 135	
	13C-OCDF	104	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.3	40 - 135	

Totals		
Total TCDD	ND	0.0499
Total PeCDD	ND	0.0476
Total HxCDD	ND	0.144
Total HpCDD	ND	0.174
Total TCDF	ND	0.0353
Total PeCDF	ND	0.0382
Total HxCDF	ND	0.0596
Total HpCDF	ND	0.0900

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.00220**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:47

MLD 07/20/09

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2472

REQUEST NUMBER: 09-2472

31838

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10463	1	GLASS	8290	Ice	R
CAMO-09-10463	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/25/09	1400	B. Benedict	Bettina Benedict	6/26/09	1001
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:	Date	Time	Remarks:
Printed Name	Signature		

Thursday, June 25, 2009

REQUEST NUMBER: 09-2472

31838

2.3°C

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2472
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009
TURNAROUND/REPORT DUE: 7/10/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10463	R	6/23/2009	
		2	CAMO-09-10463	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2472

Vista
Analytical Laboratory

July 01, 2009

Vista Project I.D.: 31838

Mr. Keith Greene
Los Alamos National Laboratory
ER Sample Management Office
TA-3, Building 271, DP O1-U
Los Alamos, NM 87545

Dear Mr. Greene,

Enclosed are the results for the one soil sample received at Vista Analytical Laboratory on June 26, 2009 under your Project Name "09-2472". This sample was extracted and analyzed using EPA Method 8290 for tetra-though-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier

Martha M. Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Vista

Section I: Sample Inventory Report

Date Received: **6/26/2009**

Vista Lab. ID	Client Sample ID
31838-001	CAMO-09-10463

SECTION II

Vista

Method Blank | **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2207	Lab Sample:	0-MB001
Sample Size:	10.0 g	Date Extracted:	27-Jun-09	Date Analyzed DB-5:	29-Jun-09
				Date Analyzed DB-225:	NA

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0620		
1,2,3,7,8-PeCDD	ND	0.0656		
1,2,3,4,7,8-HxCDD	ND	0.104		
1,2,3,6,7,8-HxCDD	ND	0.107		
1,2,3,7,8,9-HxCDD	ND	0.102		
1,2,3,4,6,7,8-HpCDD	ND	0.110		
OCDD	ND		0.581	
2,3,7,8-TCDF	ND	0.0489		
1,2,3,7,8-PeCDF	ND	0.0551		
2,3,4,7,8-PeCDF	ND	0.0576		
1,2,3,4,7,8-HxCDF	ND	0.0437		
1,2,3,6,7,8-HxCDF	ND	0.0480		
2,3,4,6,7,8-HxCDF	ND	0.0560		
1,2,3,7,8,9-HxCDF	ND	0.0699		
1,2,3,4,6,7,8-HpCDF	ND	0.0793		
1,2,3,4,7,8,9-HpCDF	ND	0.0857		
OCDF	ND	0.114		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	97.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	99.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	94.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	94.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	97.7	40 - 135	
	13C-OCDF	97.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.3	40 - 135	

Totals		
Total TCDD	ND	0.0620
Total PeCDD	ND	0.0656
Total HxCDD	ND	0.104
Total HpCDD	ND	0.110
Total TCDF	ND	0.0489
Total PeCDF	ND	0.0564
Total HxCDF	ND	0.0544
Total HpCDF	ND	0.0825

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:47

Vista

OPR Results — **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2207	Lab Sample:	0-OPR001
Sample Size:	10.0 g	Date Extracted:	27-Jun-09	Date Analyzed DB-5:	29-Jun-09
				Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	9.72	7 - 13	IS	13C-2,3,7,8-TCDD	94.5	40 - 135	
1,2,3,7,8-PeCDD	50.0	47.6	35 - 65		13C-1,2,3,7,8-PeCDD	89.6	40 - 135	
1,2,3,4,7,8-HxCDD	50.0	47.1	35 - 65		13C-1,2,3,4,7,8-HxCDD	89.4	40 - 135	
1,2,3,6,7,8-HxCDD	50.0	47.5	35 - 65		13C-1,2,3,6,7,8-HxCDD	83.1	40 - 135	
1,2,3,7,8,9-HxCDD	50.0	50.3	35 - 65		13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
1,2,3,4,6,7,8-HpCDD	50.0	45.9	35 - 65		13C-OCDD	108	40 - 135	
OCDD	100	91.7	70 - 130		13C-2,3,7,8-TCDF	98.5	40 - 135	
2,3,7,8-TCDF	10.0	8.93	7 - 13		13C-1,2,3,7,8-PeCDF	106	40 - 135	
1,2,3,7,8-PeCDF	50.0	44.8	35 - 65		13C-2,3,4,7,8-PeCDF	96.2	40 - 135	
2,3,4,7,8-PeCDF	50.0	42.9	35 - 65		13C-1,2,3,4,7,8-HxCDF	91.6	40 - 135	
1,2,3,4,7,8-HxCDF	50.0	45.9	35 - 65		13C-1,2,3,6,7,8-HxCDF	85.1	40 - 135	
1,2,3,6,7,8-HxCDF	50.0	45.1	35 - 65		13C-2,3,4,6,7,8-HxCDF	79.5	40 - 135	
2,3,4,6,7,8-HxCDF	50.0	46.1	35 - 65		13C-1,2,3,7,8,9-HxCDF	90.7	40 - 135	
1,2,3,7,8,9-HxCDF	50.0	46.2	35 - 65		13C-1,2,3,4,6,7,8-HpCDF	88.5	40 - 135	
1,2,3,4,6,7,8-HpCDF	50.0	46.6	35 - 65		13C-1,2,3,4,7,8,9-HpCDF	95.2	40 - 135	
1,2,3,4,7,8,9-HpCDF	50.0	48.2	35 - 65		13C-OCDF	99.4	40 - 135	
OCDF	100	91.2	70 - 130	CRS	37Cl-2,3,7,8-TCDD	90.4	40 - 135	

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:47

Vista

Sample ID: CAMO-09-10463 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31838-001	Date Received:	26-Jun-09
Project:	09-2472	Sample Size:	10.4 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	23-Jun-09	%Solids:	95.7	Date Analyzed DB-5:	30-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	0915						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0499		
1,2,3,7,8-PeCDD	ND	0.0476		
1,2,3,4,7,8-HxCDD	ND	0.148		
1,2,3,6,7,8-HxCDD	ND	0.143		
1,2,3,7,8,9-HxCDD	ND	0.140		
1,2,3,4,6,7,8-HpCDD	ND	0.174		
OCDD	2.20			J
2,3,7,8-TCDF	ND	0.0353		
1,2,3,7,8-PeCDF	ND	0.0362		
2,3,4,7,8-PeCDF	ND	0.0403		
1,2,3,4,7,8-HxCDF	ND	0.0468		
1,2,3,6,7,8-HxCDF	ND	0.0509		
2,3,4,6,7,8-HxCDF	ND	0.0599		
1,2,3,7,8,9-HxCDF	ND	0.0808		
1,2,3,4,6,7,8-HpCDF	ND	0.0884		
1,2,3,4,7,8,9-HpCDF	ND	0.0916		
OCDF	ND	0.0937		

Totals		
Total TCDD	ND	0.0499
Total PeCDD	ND	0.0476
Total HxCDD	ND	0.144
Total HpCDD	ND	0.174
Total TCDF	ND	0.0353
Total PeCDF	ND	0.0382
Total HxCDF	ND	0.0596
Total HpCDF	ND	0.0900

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	92.7	40 - 135	
	13C-1,2,3,7,8-PeCDD	97.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	80.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	104	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	93.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	102	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	80.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	83.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	84.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.8	40 - 135	
	13C-OCDF	104	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.3	40 - 135	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.00220**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:47

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The amount detected is above the High Calibration Limit.**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
H	**The signal-to-noise ratio is greater than 10:1.**
I	**Chemical Interference**
J	**The amount detected is below the Low Calibration Limit.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

Thursday, June 25, 2009

REQUEST NUMBER: 09-2472

31838

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on: 2.3°C
LANL Request Number:09-2472
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/25/2009
TURNAROUND/REPORT DUE: 7/10/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10463	R	6/23/2009	
		2	CAMO-09-10463	R	6/23/2009	

Final Page of REQUEST NUMBER 09-2472

Thursday, June 25, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2472

REQUEST NUMBER: 09-2472

31838

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/10/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10463	1	GLASS	8290	Ice	R
CAMO-09-10463	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/25/09	1400	B. Benedict	Bettina Benedict	6/26/09	1001
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31838 TAT 15

Samples Arrival:	Date/Time 6/26/09 0858	Initials: UBLB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 6/26/09 1000	Initials: UBLB	Location: WR-2 Shelf/Rack: G3

Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C 2.3°C	Time: 09M	Thermometer ID: IR-1				

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill	Trk # 7209 7847 5620	✓		
Sample Container Intact?		✓		
Sample Custody Seals Intact?		✓		
Chain of Custody / Sample Documentation Present?		✓		
COC Anomaly/Sample Acceptance Form completed?			✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	None		
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

	date	time	
CAMO-09-10463	6/23/09	0915	A & B jars

Sample Login 3/2007 mh

EXTRACTION INFORMATION

PROCESS SHEET

Project No.-AR: 31838-1 of 1

RUSH

Prep Due: 7/4/2009

Hold Due: 7/23/2009

Client: Los Alamos National Laboratory(LOANM01F

Client Manager: Martha M. Maier

Method: EPA Method 8290 | PCDD/F (Tetra - Octa)

Project Due: 7/10/2009

TAT: 14

Split Type:

Matrix: Soil

LabID	Recon	Client-ID	Description	Date Received	SLoc	Shelf
001	☑	CAMO-09-10463		6/26/2009	WR-2	G-3

% SOLIDS EJ 6/26/09

Instructions:

Report Options

Report Level:

EDD Type:

Report Group: Dioxins NoMDL with %Solid

TEQ Type: EPA(Default) : Min

Samples Reconciled By: EJ 6/26/09

Vial Box ID: MAXI

Date Requested 7/3/2009

Percent Solids

Vista Analytical Laboratory

Project: 31838-1 of 1

Sample ID	Chemist/Date EJ 6/24/09		Chemist/Date DB 6/27/09	Comments
	Boat Wt.	Sample + Boat Wt.	Residue + Boat Wt.	
001	1.34	3.41	3.32	

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

%Solids 3/2007 rmh

Project: 31838

Extraction Set: 2207

Chemist: F. Bishop 6/27/09

Method(s): EPA Method 8290 | PCDD/F (Tetra - Octa)

C	ALTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/ WIT DATE	CRS CHEM/WIT DATE	AP CHEM/Date	ABSG CHEM/Date	AA CHEM/Date	Florisil CHEM/Date	RS CHEM/WIT DATE
☐	0_2207_MB001	10.00	(10.00)	FEB DB 6/27/09	TEH DB 6/28/09	NA	TEH 6/28/09	TEH 6/28/09	TEH 6/28/09	TEH DB 6/28/09
☐	0_2207_OPR001	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	31838_2207_001	10.46	10.43	↓	↓	↓	↓	↓	↓	↓

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP.: SEFUN SOX SDS	Check Out:
(V4)	(V4)	(V6)	(H)	6/27		Chemist: FEB 6/27/09
PCDD/F 0809100A, 10µl	PCDD/F 0809116B, 10µl	PCDD/F 10µl 0809100C	PCDD/F 10µl 0809100D	Start: 1430	SOLV: TOL	
PCB	PCB	PCB	PCB	Stop: 0600 6/28	Other: N/A	Check-In: Chemist: ↓
PAH	PAH	PAH	PAH		Final Volume(s): 20µl C4	

Comments:

SAMPLE DATA

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 12:26:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:26:55 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1	2,3,7,8-TCDD			NO	1.08	10.000					0.0620	
2	1,2,3,7,8-PeCDD			NO	1.03	10.000					0.0656	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.104	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.107	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.102	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.110	
7	OCDD	1.71e3	0.73	YES	1.18	10.000	41.69	1.001	~~0.64676~~	ND	0.134	0.58063
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0489	
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.0551	
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0576	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.0437	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.0480	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.0560	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.0699	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.0793	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.0857	
17	OCDF			NO	1.10	10.000					0.114	
18	13C-2,3,7,8-TCDD	1.00e6	0.79	NO	1.01	10.000	26.09	1.023	190.31	95.2	0.347	
19	13C-1,2,3,7,8-PeCDD	7.78e5	0.63	NO	0.827	10.000	30.73	1.205	181.09	90.5	0.293	
20	13C-1,2,3,4,7,8-HxCDD	7.00e5	1.26	NO	0.916	10.000	34.17	0.988	184.79	92.4	0.442	
21	13C-1,2,3,6,7,8-HxCDD	6.42e5	1.24	NO	0.921	10.000	34.28	0.991	168.53	84.3	0.440	
22	13C-1,2,3,4,6,7,8-HpCDD	6.02e5	1.06	NO	0.708	10.000	38.21	1.105	205.61	103	0.764	
23	13C-OCDD	8.95e5	0.89	NO	0.503	10.000	41.66	1.204	430.56	108	0.514	
24	13C-2,3,7,8-TCDF	1.39e6	0.79	NO	0.977	10.000	25.33	0.993	195.62	97.8	0.209	
25	13C-1,2,3,7,8-PeCDF	1.30e6	1.58	NO	0.896	10.000	29.51	1.157	199.16	99.6	0.361	
26	13C-2,3,4,7,8-PeCDF	1.24e6	1.57	NO	0.900	10.000	30.46	1.194	188.73	94.4	0.359	
27	13C-1,2,3,4,7,8-HxCDF	9.06e5	0.52	NO	1.17	10.000	33.25	0.961	187.46	93.7	0.521	
28	13C-1,2,3,6,7,8-HxCDF	1.04e6	0.52	NO	1.52	10.000	33.37	0.965	165.20	82.6	0.401	
29	13C-2,3,4,6,7,8-HxCDF	8.51e5	0.53	NO	1.25	10.000	34.00	0.983	164.84	82.4	0.487	
30	13C-1,2,3,7,8,9-HxCDF	8.19e5	0.52	NO	1.05	10.000	35.00	1.012	188.05	94.0	0.578	

6/30/09

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 12:26:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:26:55 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

31	13C-1,2,3,4,6,7,8-HpCDF	6.24e5	0.44	NO	0.868	10.000	36.87	1.066	173.82	86.9	0.617
32	13C-1,2,3,4,7,8,9-HpCDF	5.87e5	0.45	NO	0.727	10.000	38.78	1.121	195.36	97.7	0.737
33	13C-OCDF	1.22e6	0.91	NO	0.760	10.000	41.90	1.211	389.70	97.4	0.310
34	37Cl-2,3,7,8-TCDD	2.48e5			0.668	10.000	26.12	1.024	71.447	89.3	0.0919
35	13C-1,2,3,4-TCDD	1.04e6	0.80	NO	1.00	10.000	25.51	0.000	200.00	100	0.353
36	13C-1,2,3,4-TCDF	1.46e6	0.78	NO	1.00	10.000	24.10	0.000	200.00	100	0.204
37	13C-1,2,3,7,8,9-HxCDD	8.27e5	1.24	NO	1.00	10.000	34.59	0.000	200.00	100	0.405
38	Total Tetra-Dioxins				1.08	10.000					0.0289
39	Total Penta-Dioxins				1.03	10.000					0.0223
40	Total Hexa-Dioxins				1.13	10.000					0.0402
41	Total Hepta-Dioxins				1.06	10.000					0.0600
42	Total Tetra-Furans				1.09	10.000					0.0189
43	1st Func. Penta-Furans				1.16	10.000					0.0152
44	Total Penta-Furans				1.16	10.000					0.0218
45	Total Hexa-Furans				1.28	10.000					0.0283
46	Total Hepta-Furans				1.69	10.000					0.0395

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

2,3,7,8-TCDD

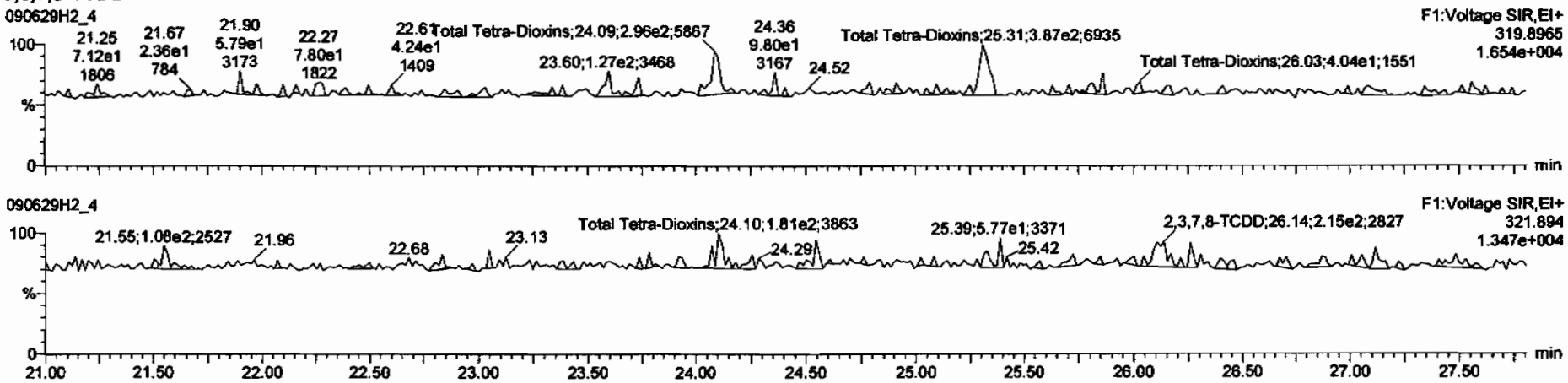

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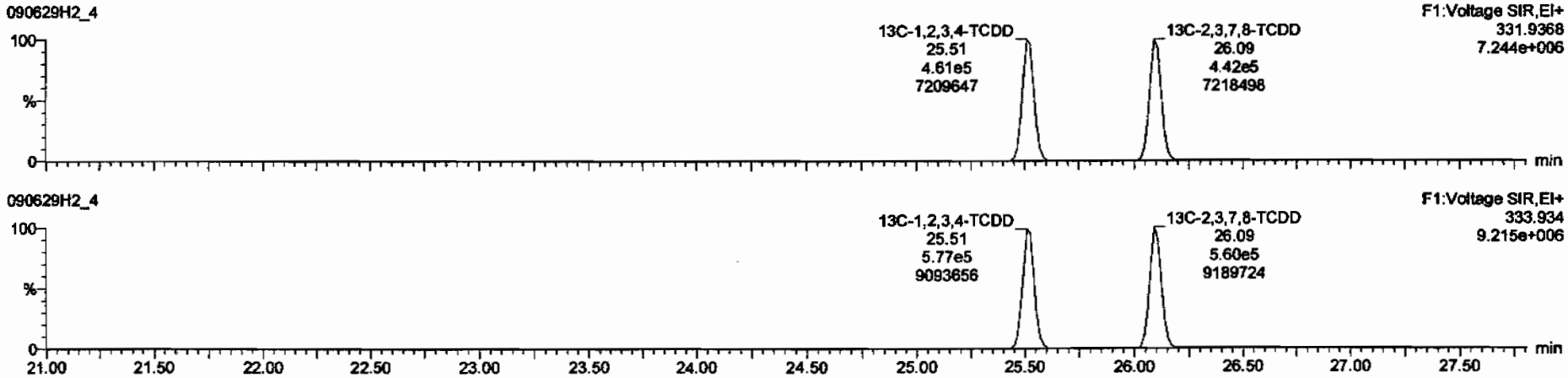

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

37Cl-2,3,7,8-TCDD

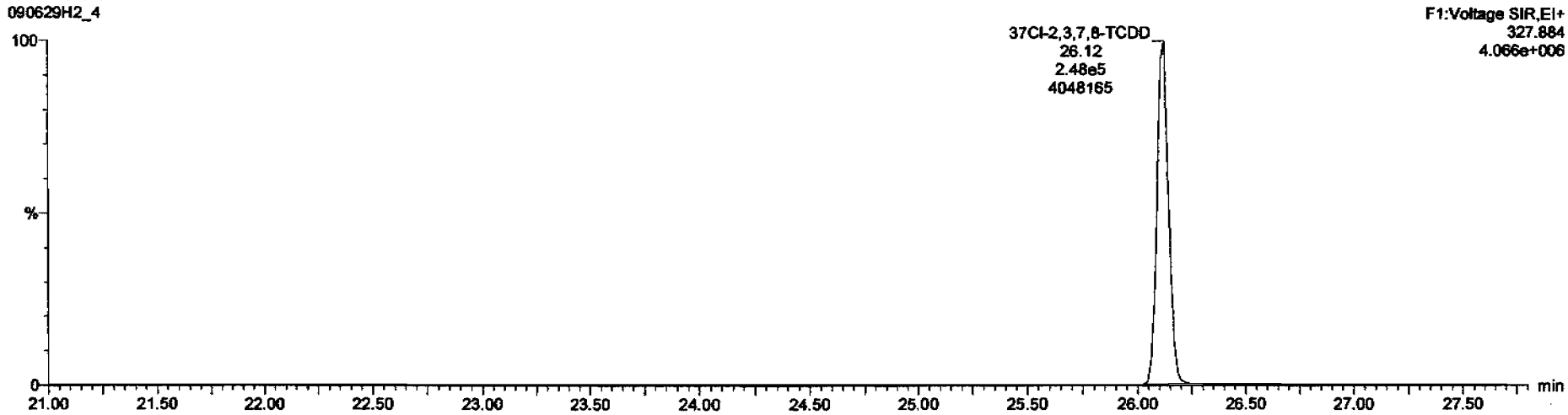

13C-1,2,3,4-TCDD

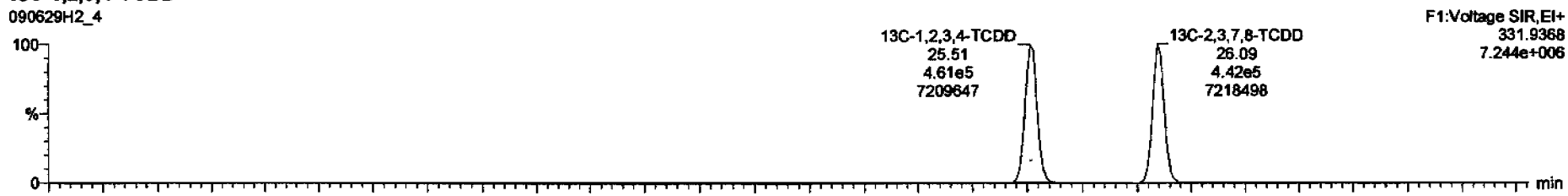

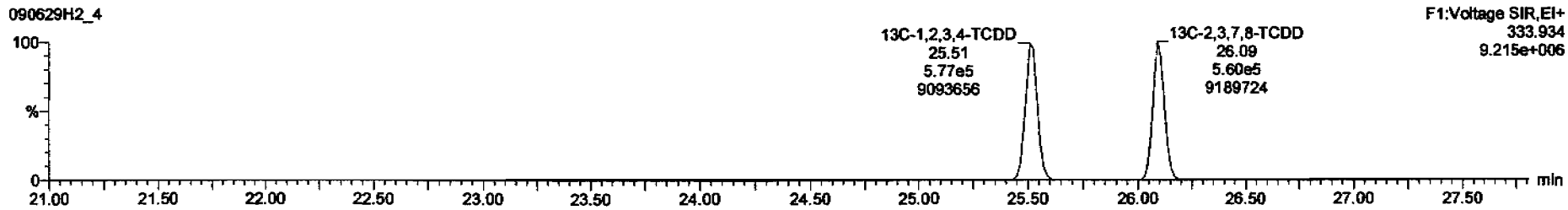

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,7,8-PeCDD

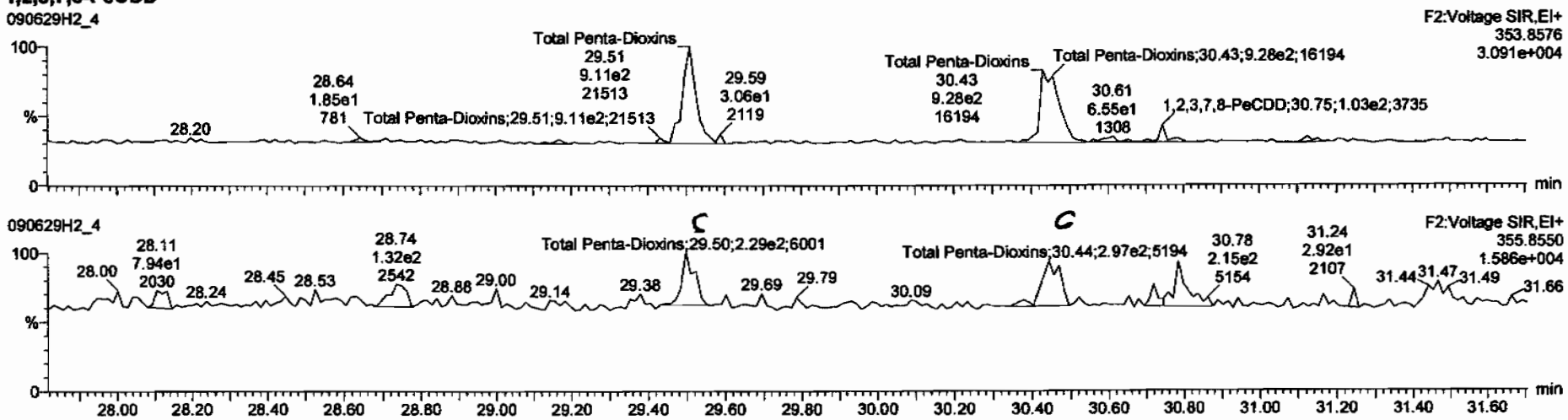

13C-1,2,3,7,8-PeCDD

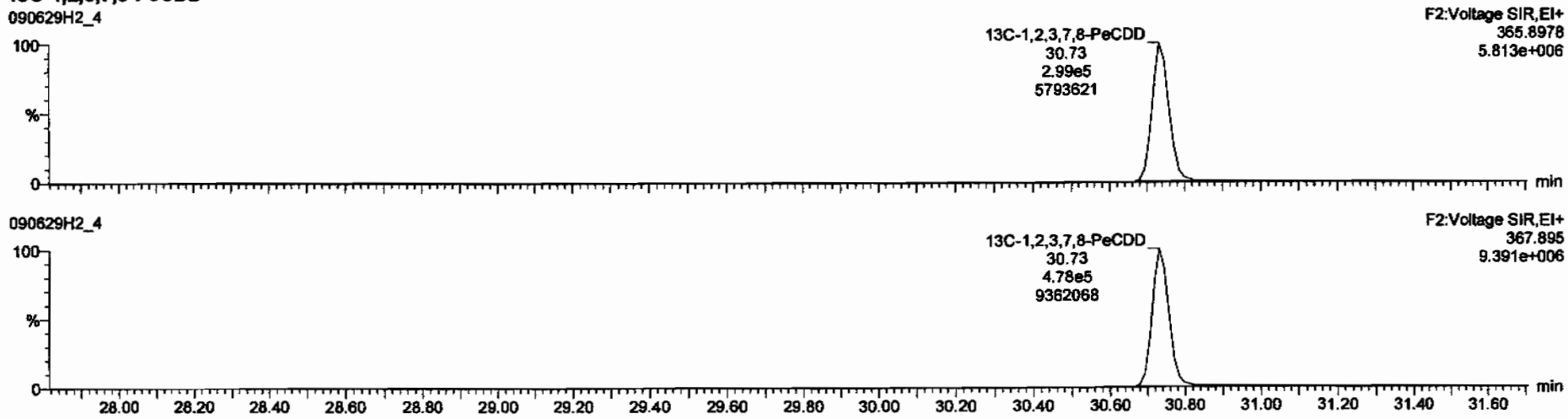

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,7,8-HxCDD

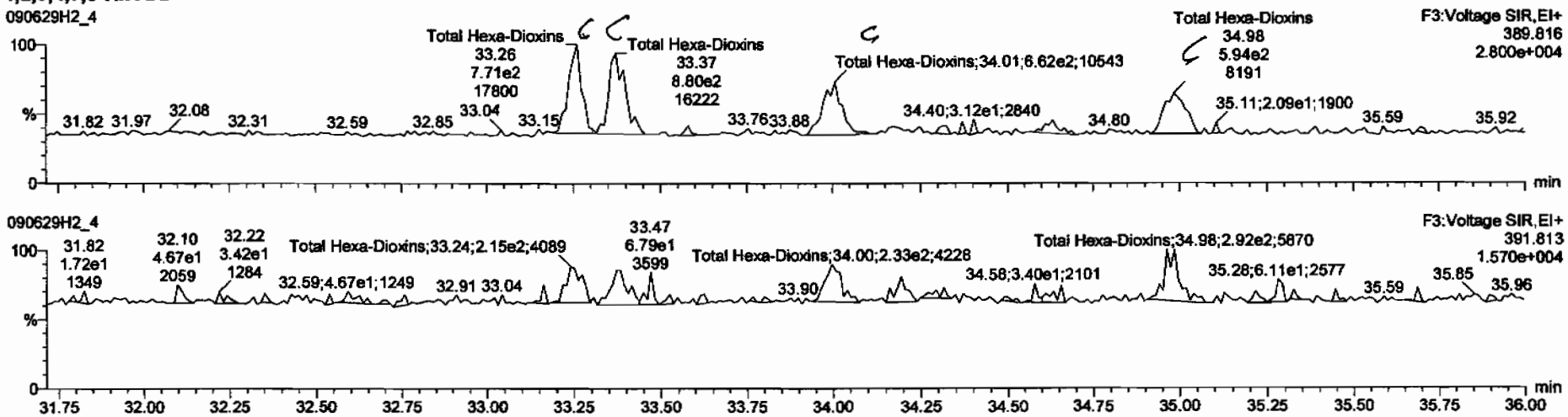

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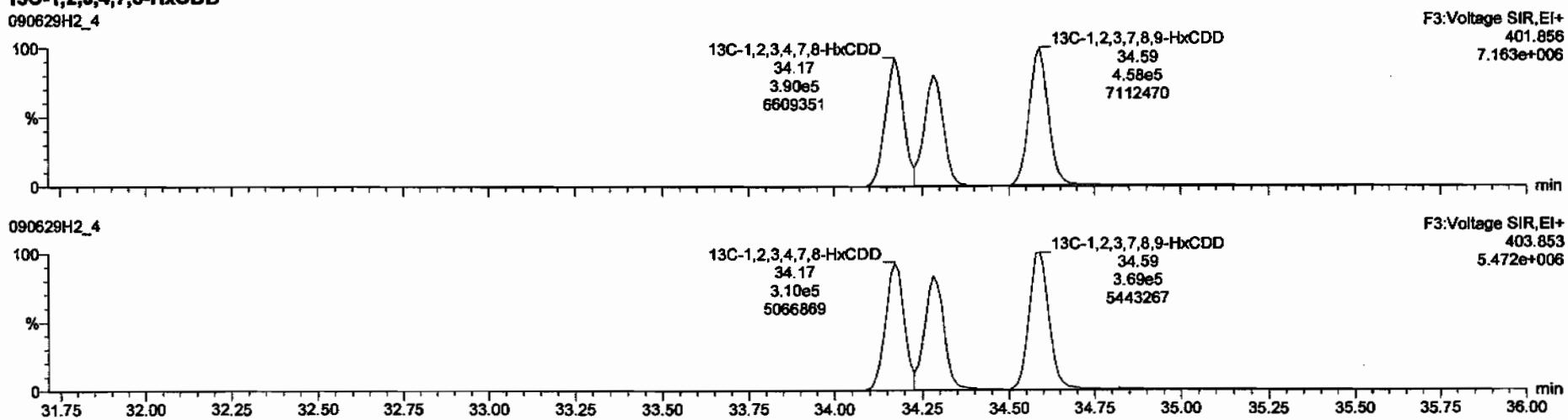

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,6,7,8-HpCDD

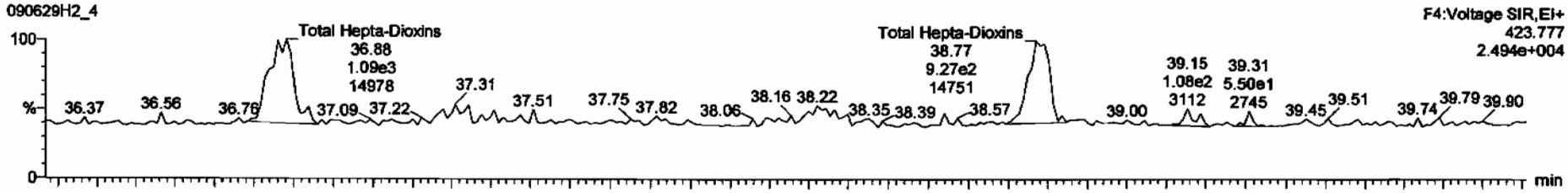

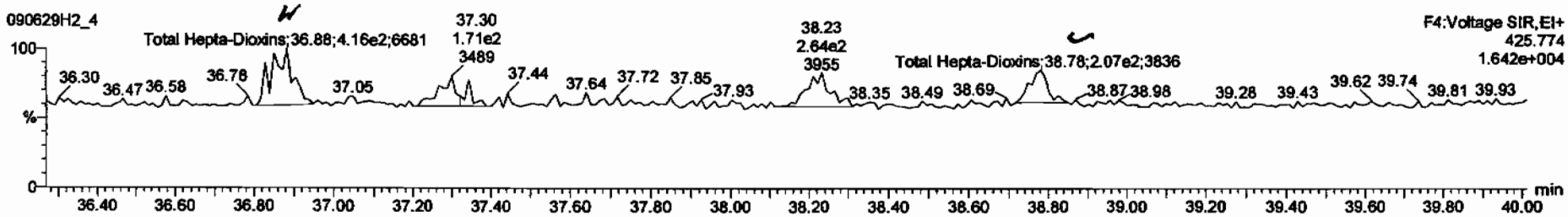

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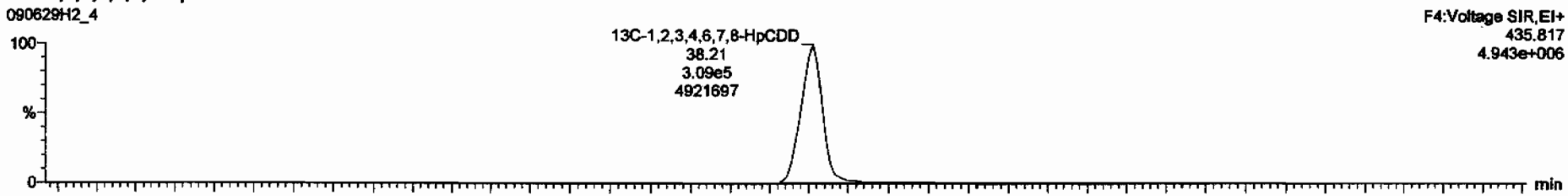

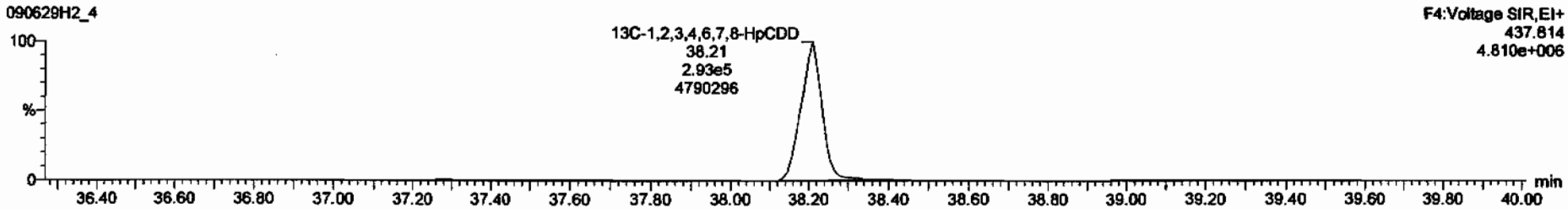

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

OCDD

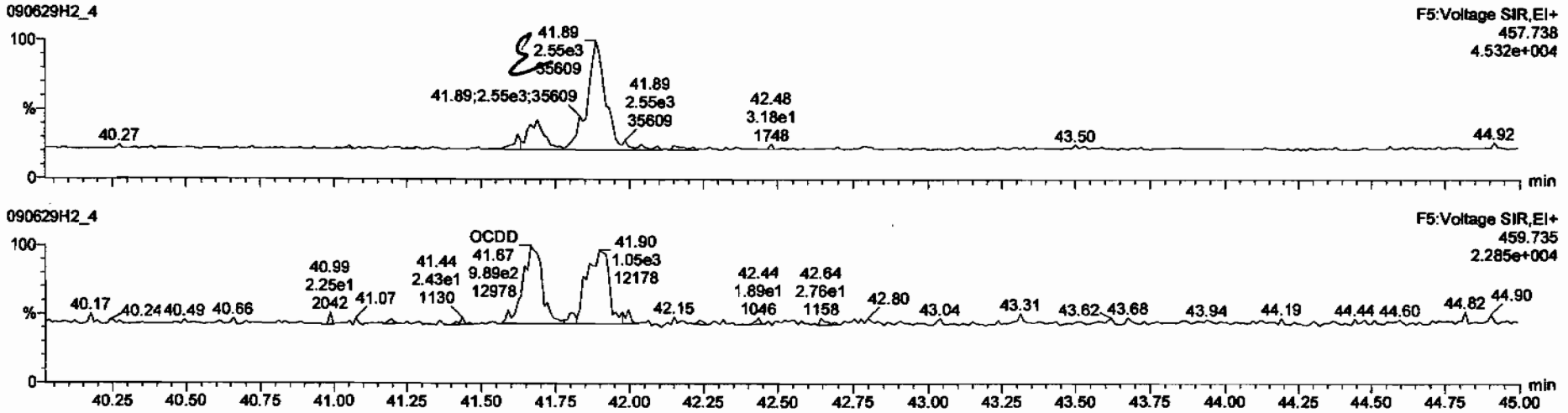

13C-OCDD

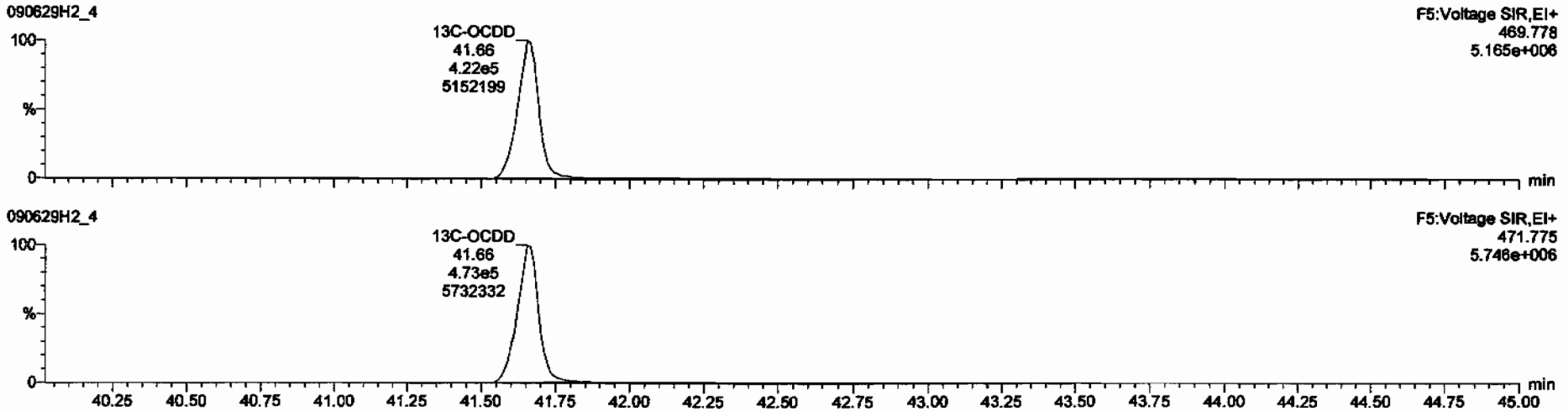

TargetLynx - 090629f2-4.qld * - [Chromatogram]

090629H2_4 - 0_2207_MB001 - 0_2207_MB001

4	1,2,3,6,7,8-HxCDD	9.12e1	1.14	NO	1.13	10.000	34.31	1.001	0.0253		0.107	0.0253
5	1,2,3,7,8,9-HxCDD	1.85e2	2.28	YES	1.10	10.000	34.63	1.010	0.0501		0.102	0.0342
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.110	
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0489	

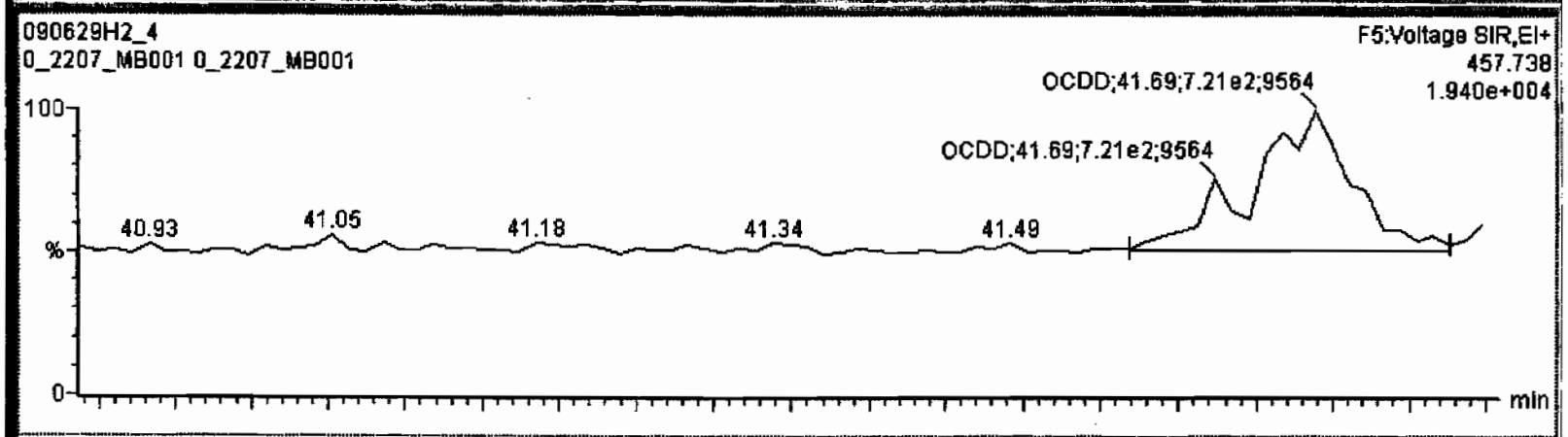

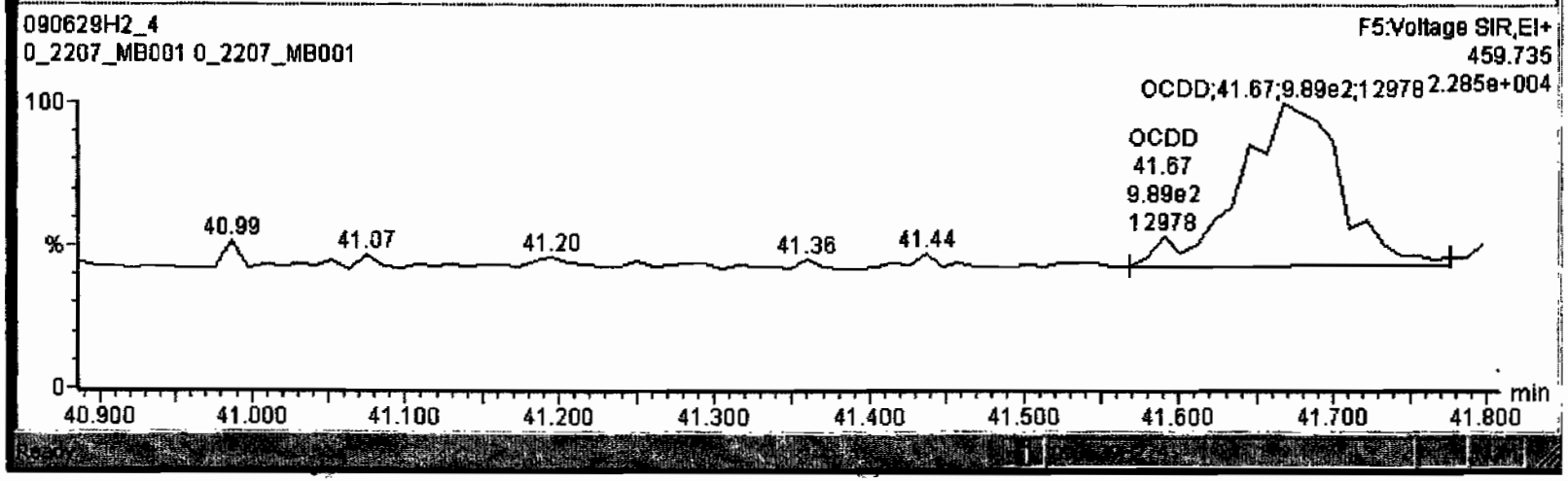

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

2,3,7,8-TCDF

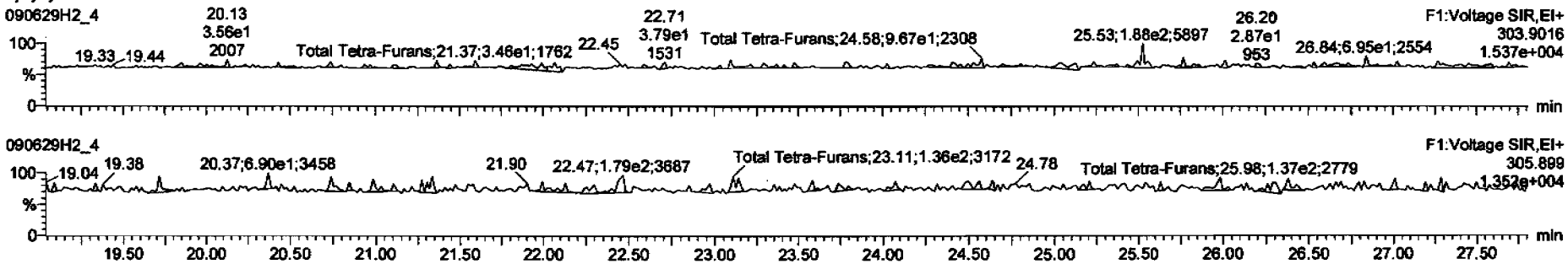

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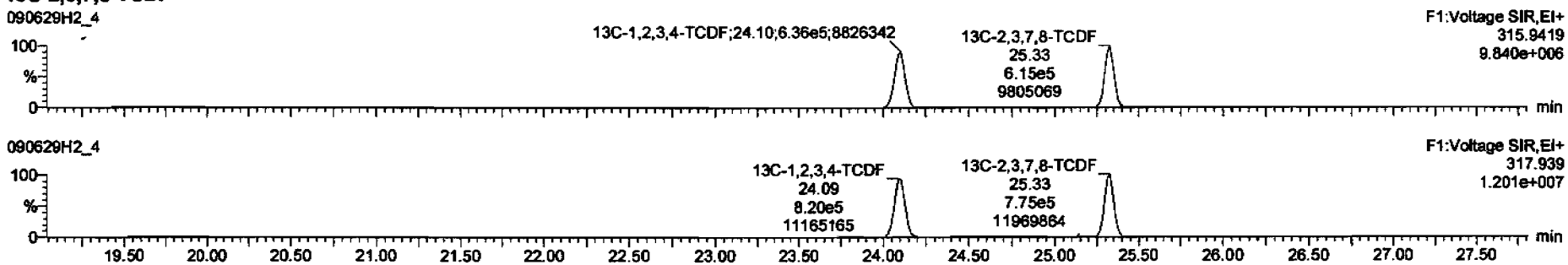

DPE1

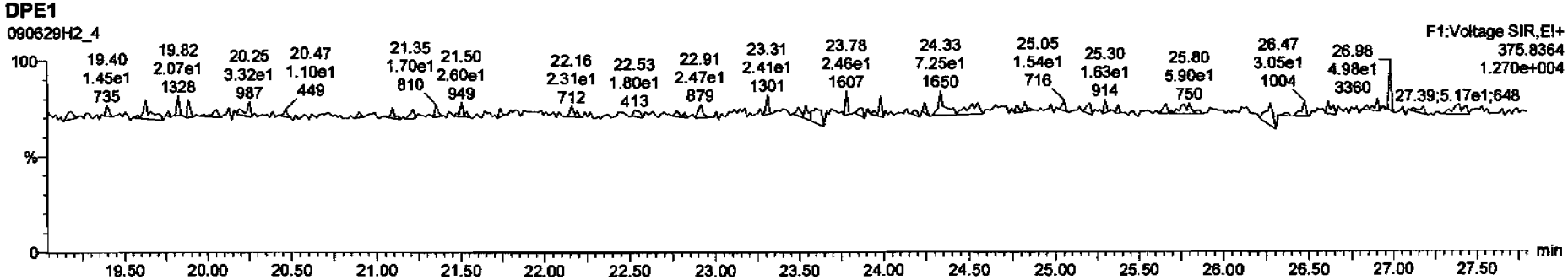

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1st Func. Penta-Furans

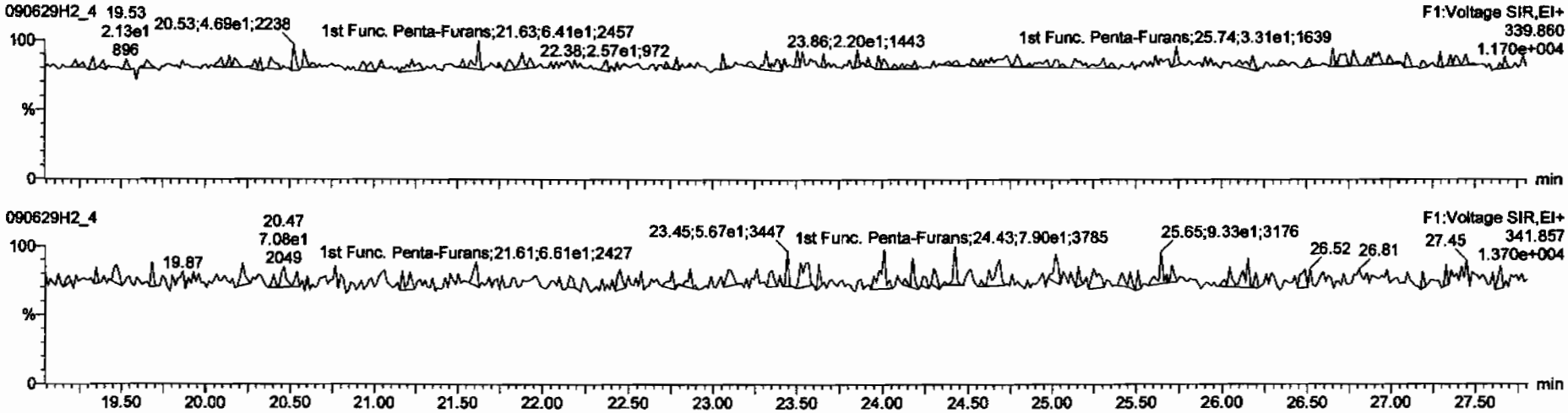

DPE6

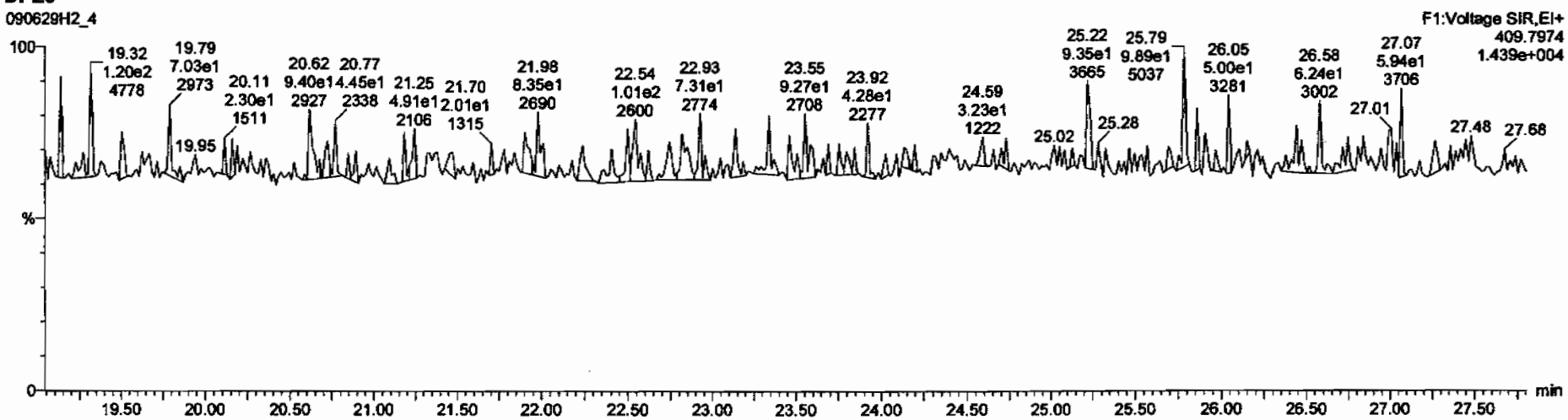

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Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,7,8-PeCDF

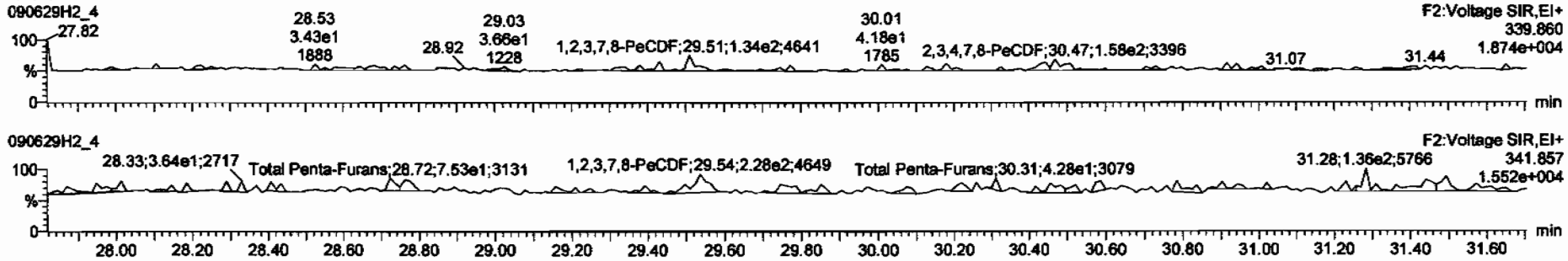

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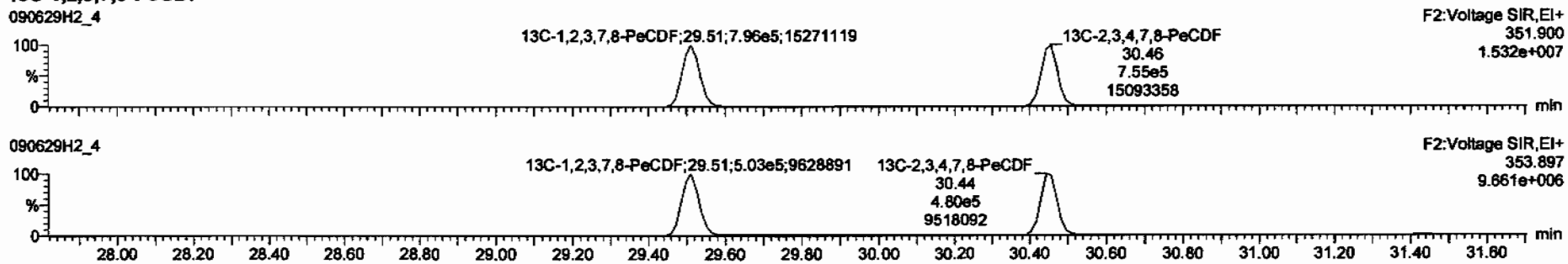

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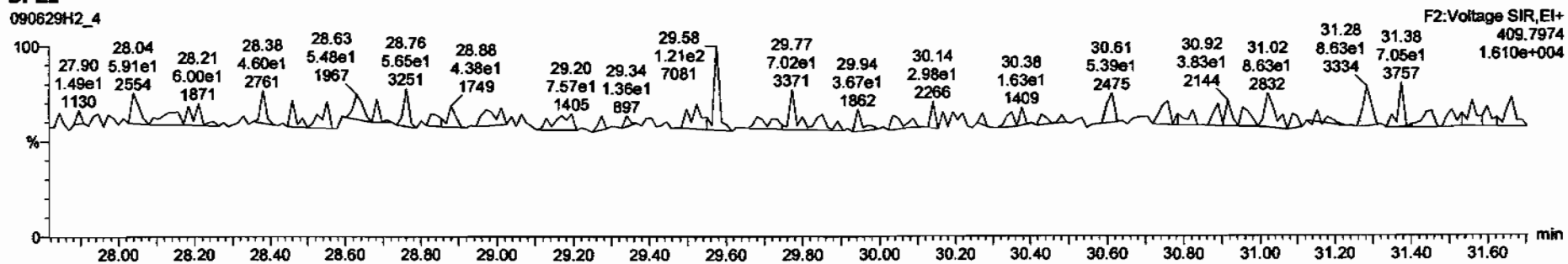

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Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,7,8-HxCDF

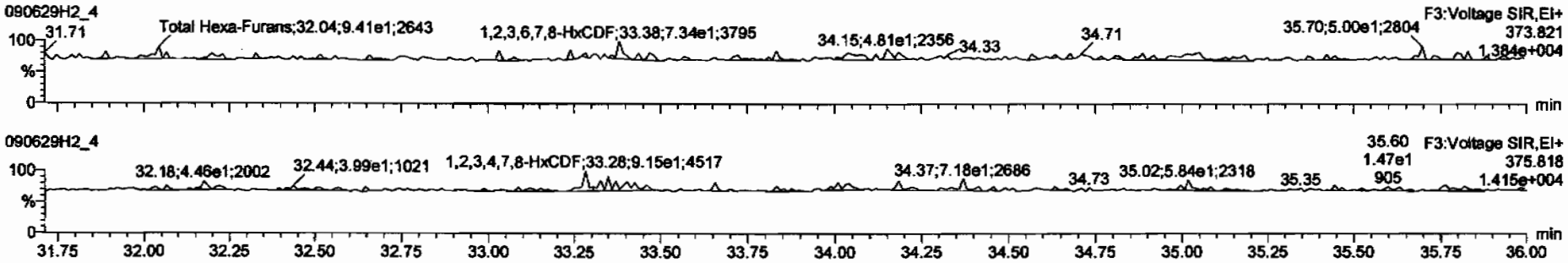

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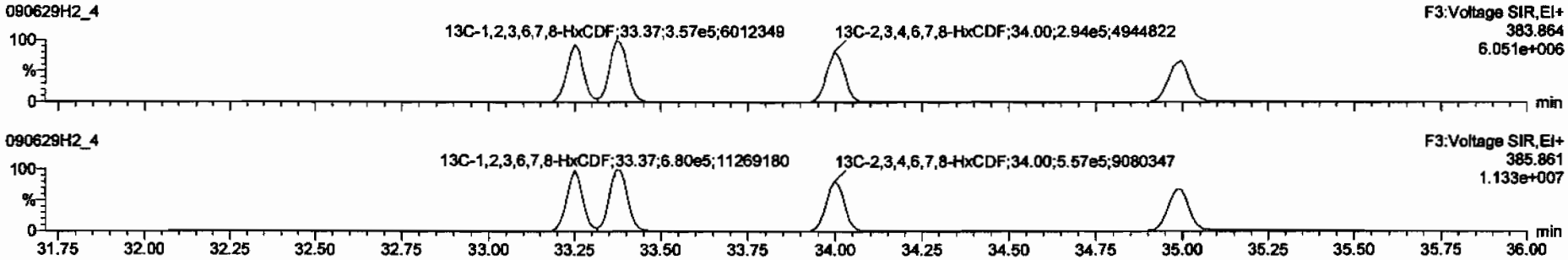

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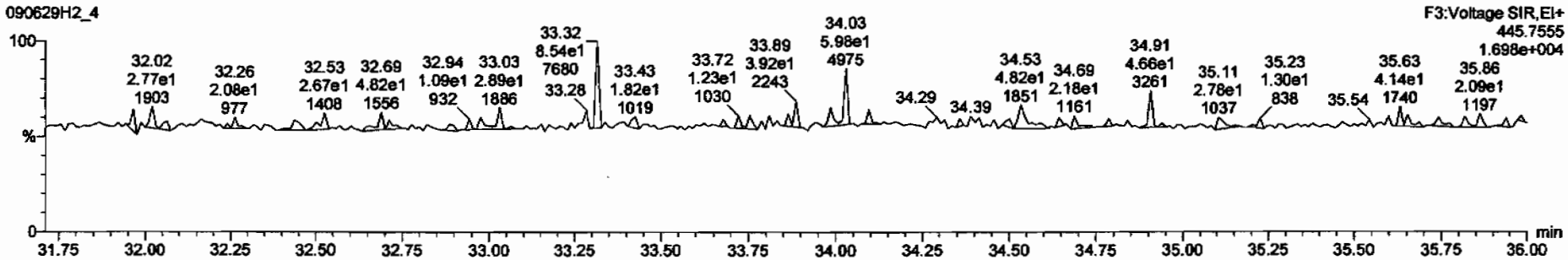

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Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,6,7,8-HpCDF

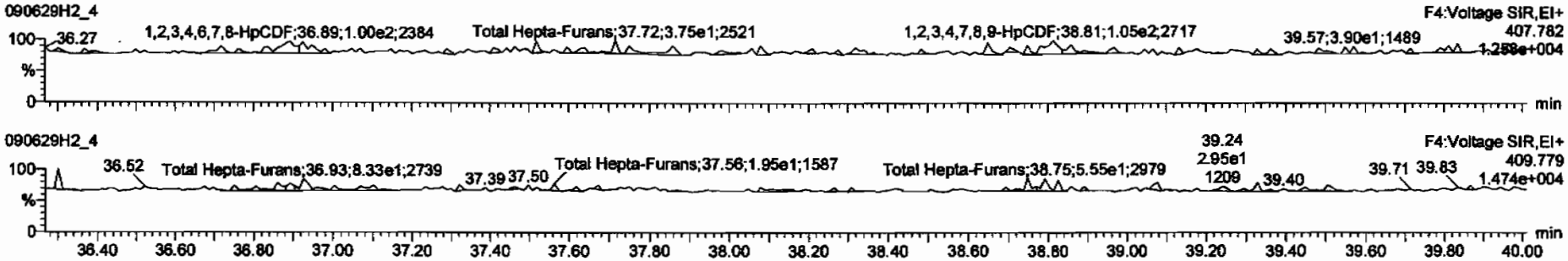

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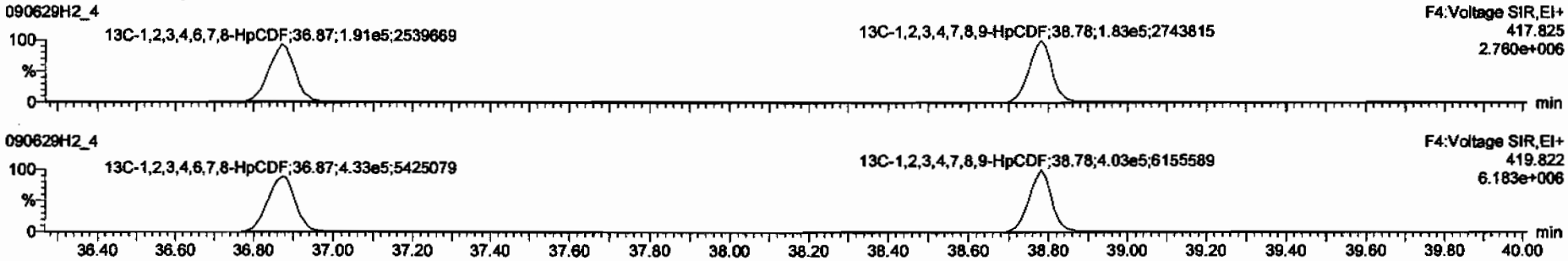

DPE4

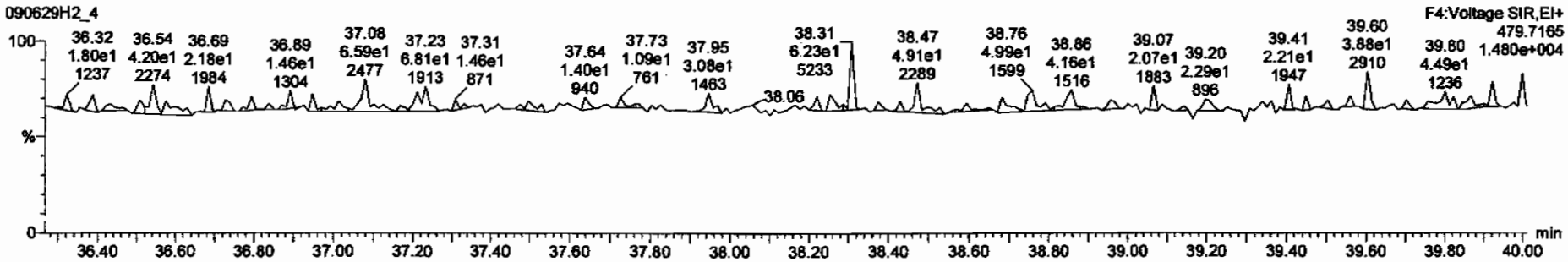

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

OCDF

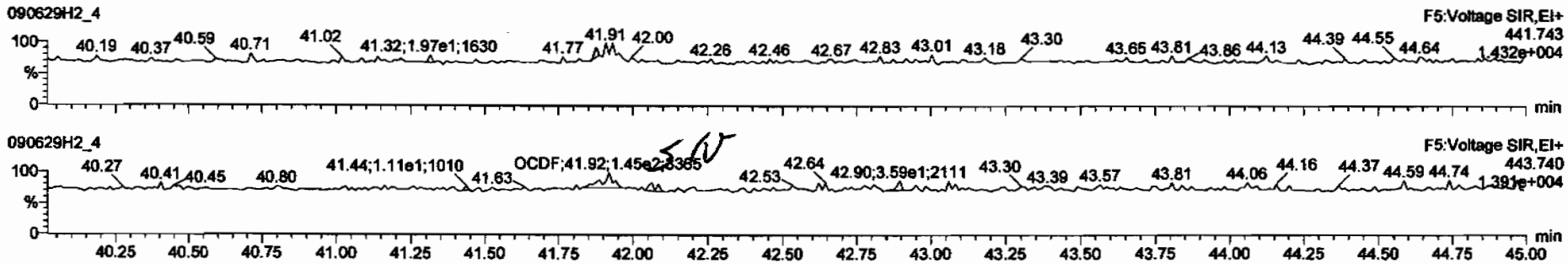

13C-OCDF

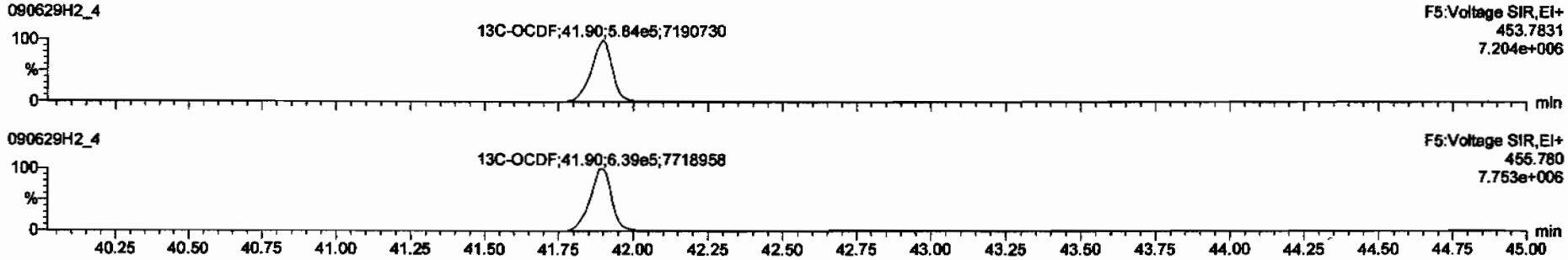

DPE5

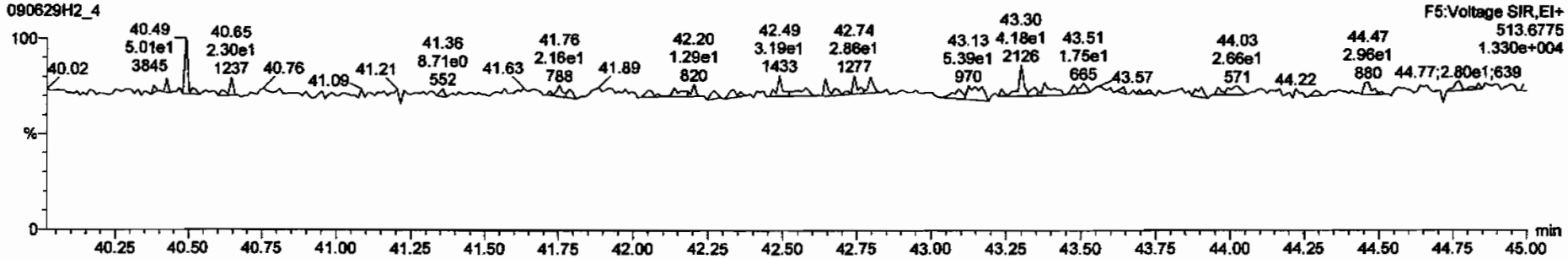

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

PFK1

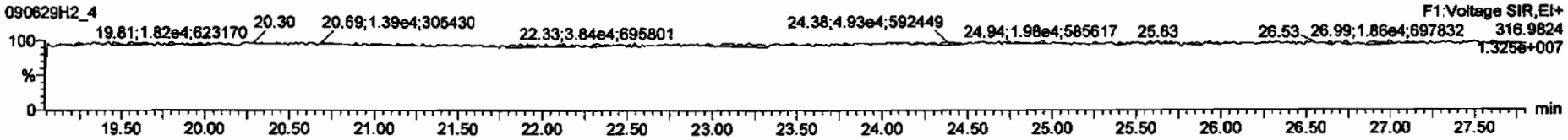

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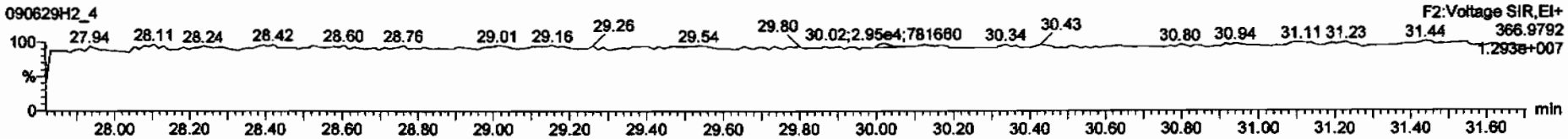

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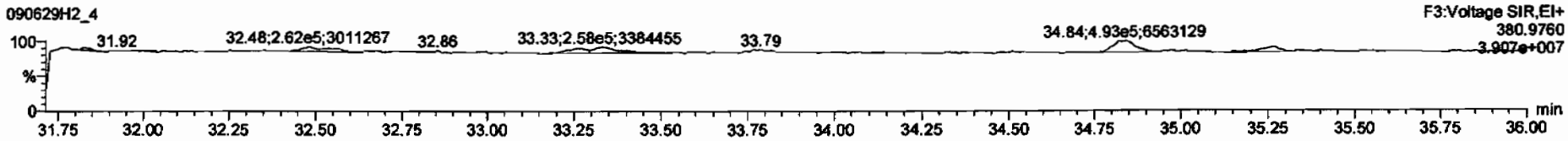

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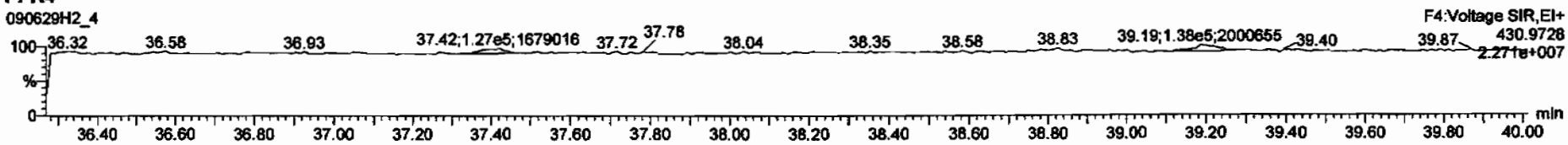

PFK5

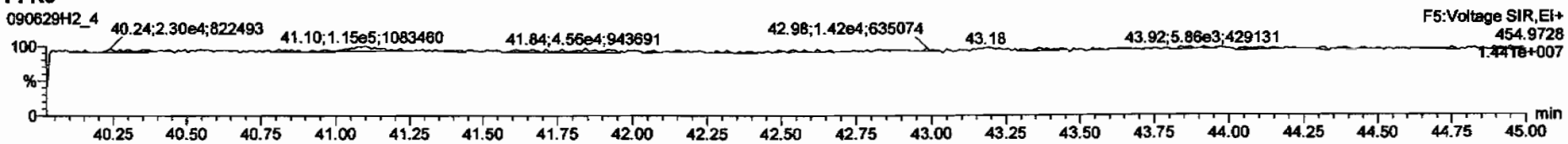

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 12:18:05 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:18:32 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1	2,3,7,8-TCDD	1.02e5	0.78	NO	1.08	1.000	26.11	1.001	9.7213	97.2	0.0303	9.7213
2	1,2,3,7,8-PeCDD	3.71e5	0.62	NO	1.03	1.000	30.75	1.000	47.556	95.1	0.0495	47.556
3	1,2,3,4,7,8-HxCDD	3.18e5	1.25	NO	1.00	1.000	34.18	1.001	47.134	94.3	0.122	47.134
4	1,2,3,6,7,8-HxCDD	3.36e5	1.27	NO	1.13	1.000	34.29	1.001	47.464	94.9	0.119	47.464
5	1,2,3,7,8,9-HxCDD	3.61e5	1.25	NO	1.10	1.000	34.59	1.009	50.262	101	0.116	50.262
6	1,2,3,4,6,7,8-HpCDD	2.93e5	1.04	NO	1.06	1.000	38.22	1.000	45.856	91.7	0.202	45.856
7	OCDD	4.84e5	0.85	NO	1.18	1.000	41.68	1.000	91.654	91.7	0.154	91.654
8	2,3,7,8-TCDF	1.30e5	0.77	NO	1.09	1.000	25.33	1.001	8.9329	89.3	0.0247	8.9329
9	1,2,3,7,8-PeCDF	6.87e5	1.57	NO	1.16	1.000	29.51	1.000	44.778	89.6	0.0478	44.778
10	2,3,4,7,8-PeCDF	5.78e5	1.56	NO	1.12	1.000	30.46	1.000	42.923	85.8	0.0519	42.923
11	1,2,3,4,7,8-HxCDF	5.70e5	1.26	NO	1.41	1.000	33.26	1.001	45.926	91.9	0.0809	45.926
12	1,2,3,6,7,8-HxCDF	5.86e5	1.27	NO	1.22	1.000	33.38	1.000	45.078	90.2	0.0821	45.078
13	2,3,4,6,7,8-HxCDF	4.82e5	1.25	NO	1.28	1.000	34.01	1.001	46.095	92.2	0.107	46.095
14	1,2,3,7,8,9-HxCDF	4.56e5	1.30	NO	1.26	1.000	35.00	1.000	46.233	92.5	0.127	46.233
15	1,2,3,4,6,7,8-HpCDF	4.97e5	1.05	NO	1.69	1.000	36.88	1.001	46.551	93.1	0.146	46.551
16	1,2,3,4,7,8,9-HpCDF	4.06e5	1.03	NO	1.48	1.000	38.79	1.000	48.188	96.4	0.175	48.188
17	OCDF	6.20e5	0.92	NO	1.10	1.000	41.91	1.000	91.187	91.2	0.0934	91.187
18	13C-2,3,7,8-TCDD	9.75e5	0.79	NO	1.01	1.000	26.09	1.023	94.464	94.5	0.185	
19	13C-1,2,3,7,8-PeCDD	7.54e5	0.63	NO	0.827	1.000	30.73	1.205	89.641	89.6	0.0957	
20	13C-1,2,3,4,7,8-HxCDD	6.73e5	1.27	NO	0.916	1.000	34.16	0.988	89.402	89.4	0.284	
21	13C-1,2,3,6,7,8-HxCDD	6.29e5	1.26	NO	0.921	1.000	34.27	0.991	83.057	83.1	0.282	
22	13C-1,2,3,4,6,7,8-HpCDD	6.00e5	1.07	NO	0.708	1.000	38.21	1.105	102.98	103	0.369	
23	13C-OCDD	8.96e5	0.92	NO	0.503	1.000	41.67	1.205	216.81	108	0.300	
24	13C-2,3,7,8-TCDF	1.34e6	0.79	NO	0.977	1.000	25.31	0.992	98.459	98.5	0.111	
25	13C-1,2,3,7,8-PeCDF	1.32e6	1.56	NO	0.896	1.000	29.50	1.156	106.13	106	0.179	
26	13C-2,3,4,7,8-PeCDF	1.21e6	1.58	NO	0.900	1.000	30.44	1.193	96.249	96.2	0.178	
27	13C-1,2,3,4,7,8-HxCDF	8.80e5	0.53	NO	1.17	1.000	33.24	0.961	91.572	91.6	0.293	
28	13C-1,2,3,6,7,8-HxCDF	1.06e6	0.52	NO	1.52	1.000	33.37	0.965	85.133	85.1	0.225	
29	13C-2,3,4,6,7,8-HxCDF	8.17e5	0.52	NO	1.25	1.000	33.99	0.983	79.507	79.5	0.274	
30	13C-1,2,3,7,8,9-HxCDF	7.85e5	0.52	NO	1.05	1.000	34.99	1.012	90.673	90.7	0.325	

6/30/09
6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 12:18:05 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:18:32 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

31	13C-1,2,3,4,6,7,8-HpCDF	6.32e5	0.45	NO	0.868	1.000	36.86	1.066	88.541	88.5	0.426
32	13C-1,2,3,4,7,8,9-HpCDF	5.69e5	0.44	NO	0.727	1.000	38.78	1.122	95.182	95.2	0.509
33	13C-OCDF	1.24e6	0.89	NO	0.760	1.000	41.90	1.212	198.73	99.4	0.199
34	37Cl-2,3,7,8-TCDD	2.46e5			0.668	1.000	26.11	1.023	36.149	90.4	0.0332
35	13C-1,2,3,4-TCDD	1.02e6	0.79	NO	1.00	1.000	25.51	0.000	100.00	100	0.188
36	13C-1,2,3,4-TCDF	1.39e6	0.77	NO	1.00	1.000	24.09	0.000	100.00	100	0.108
37	13C-1,2,3,7,8,9-HxCDD	8.22e5	1.23	NO	1.00	1.000	34.58	0.000	100.00	100	0.260

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

2,3,7,8-TCDD

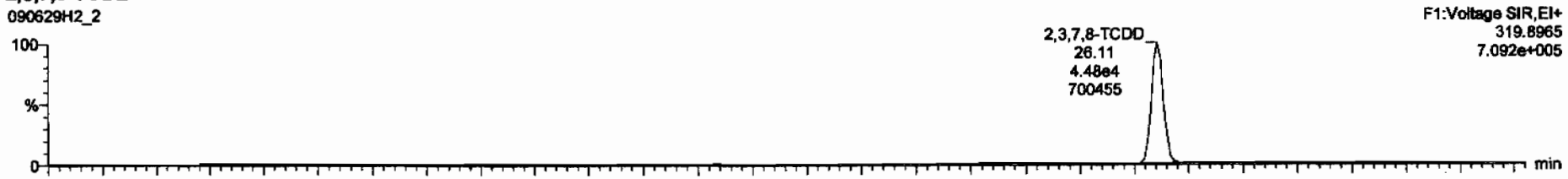

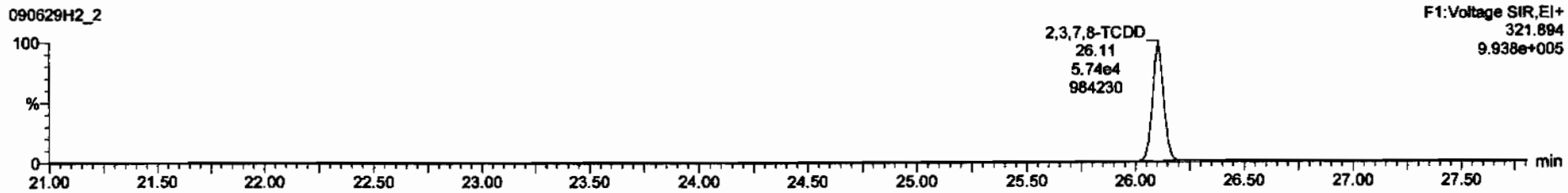

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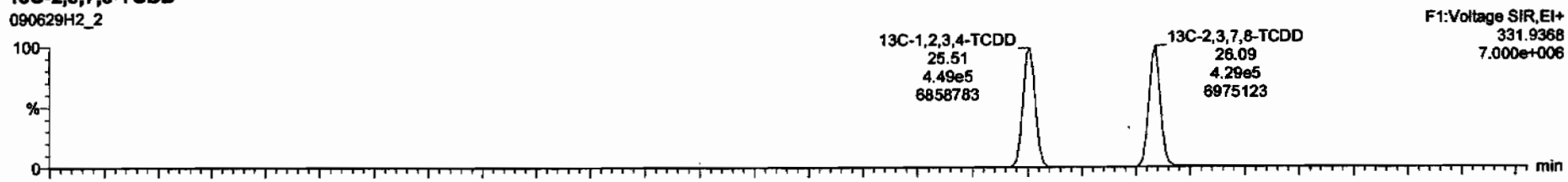

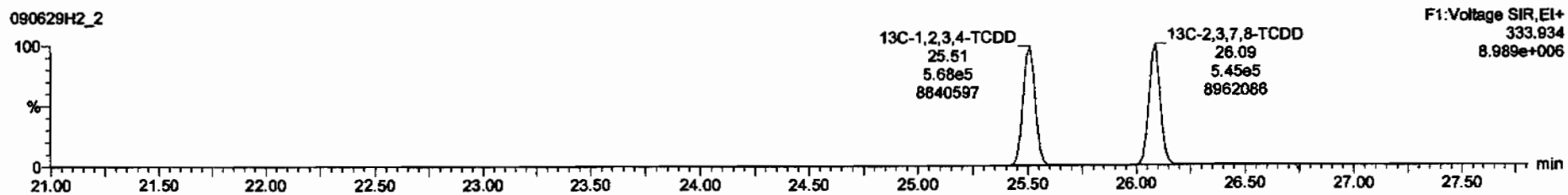

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

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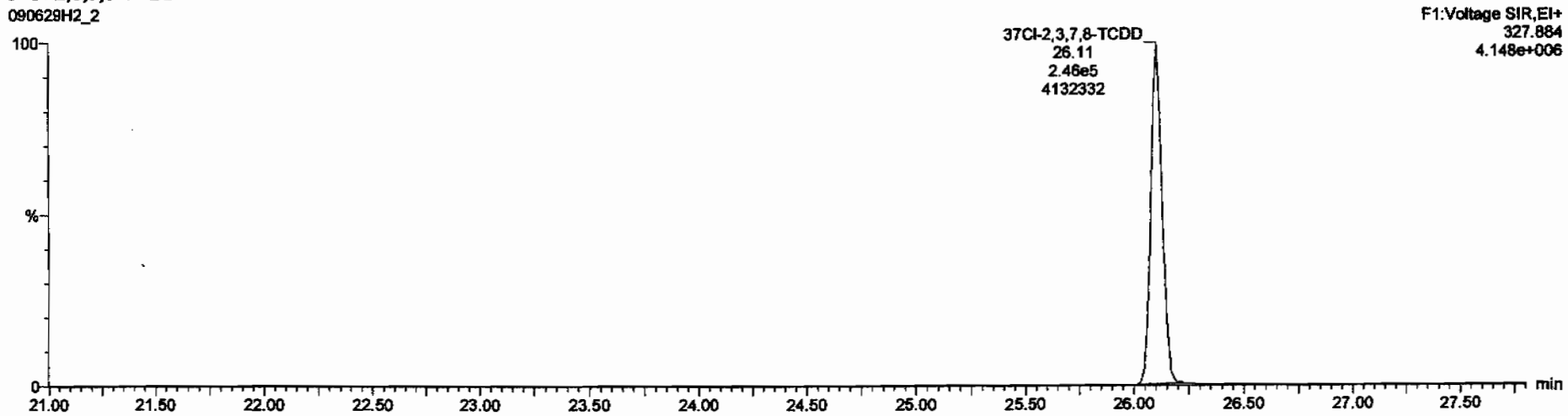

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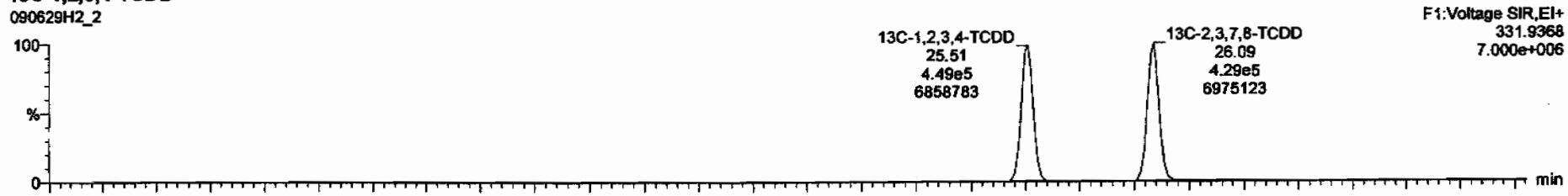

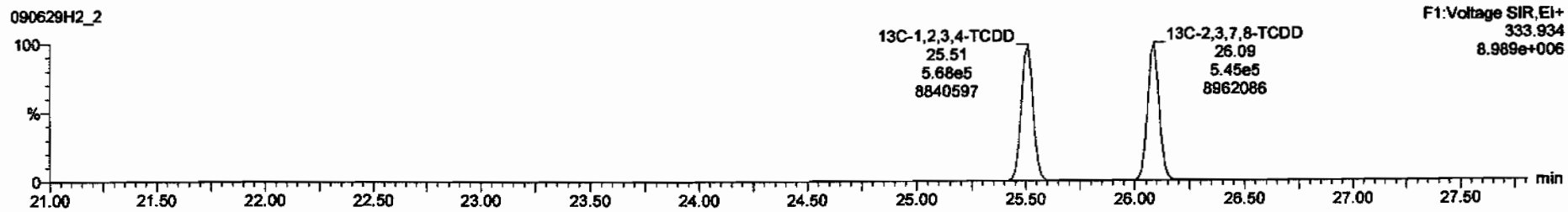

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,7,8-PeCDD

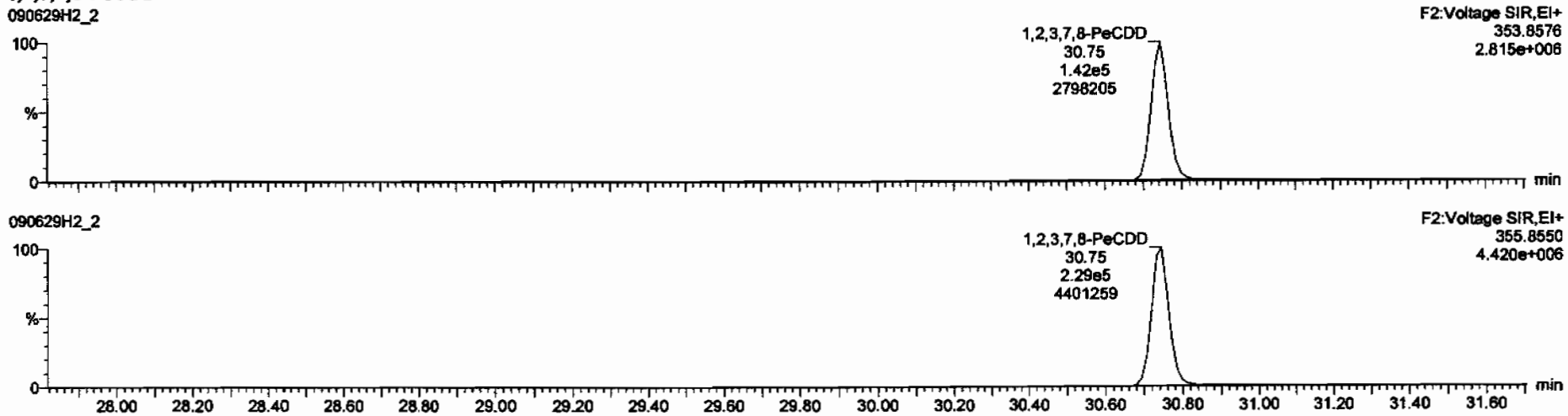

13C-1,2,3,7,8-PeCDD

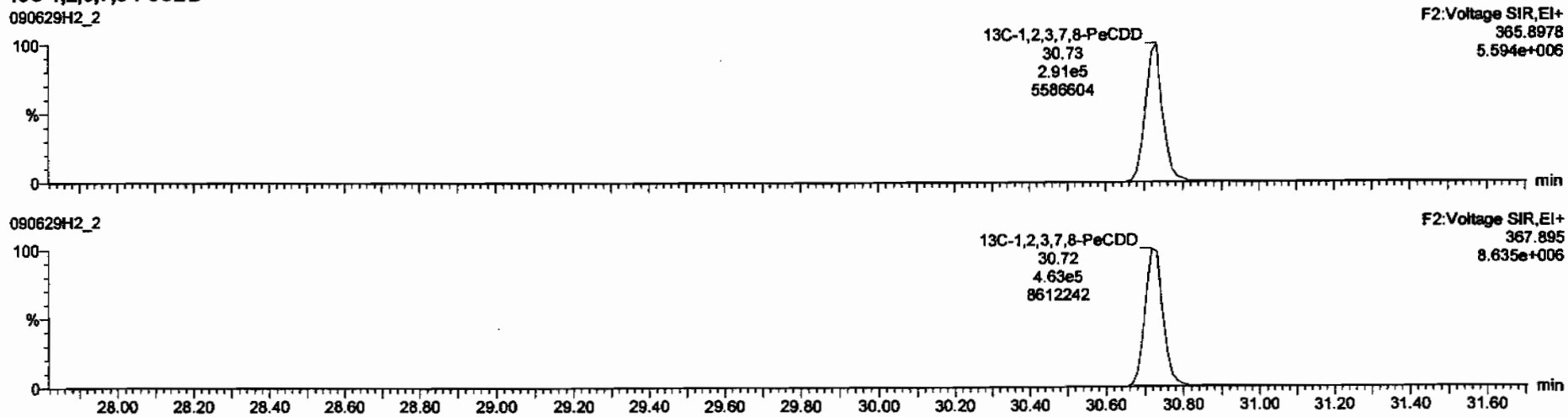

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,7,8-HxCDD

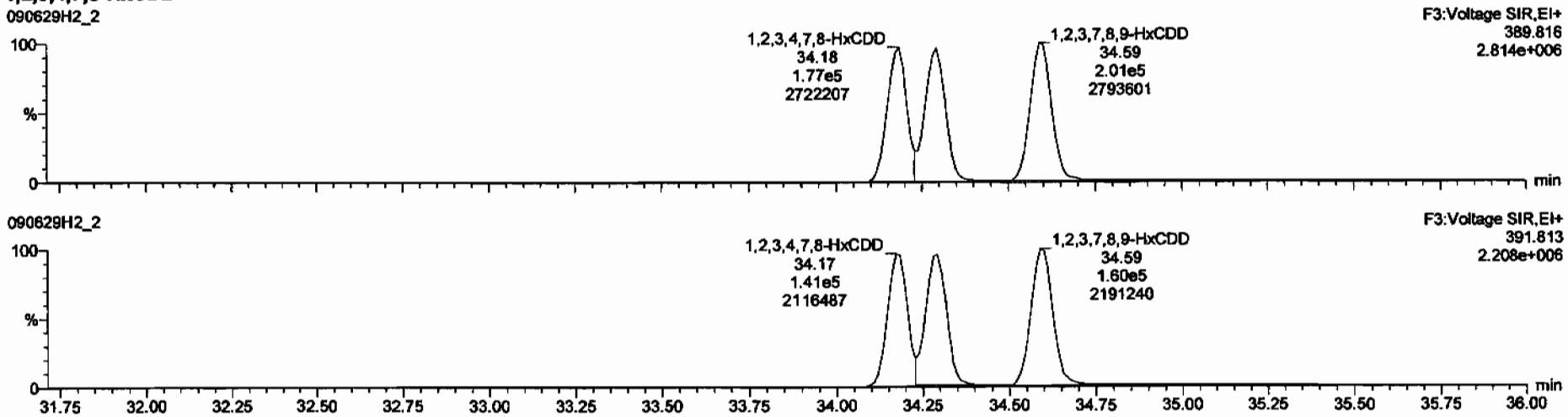

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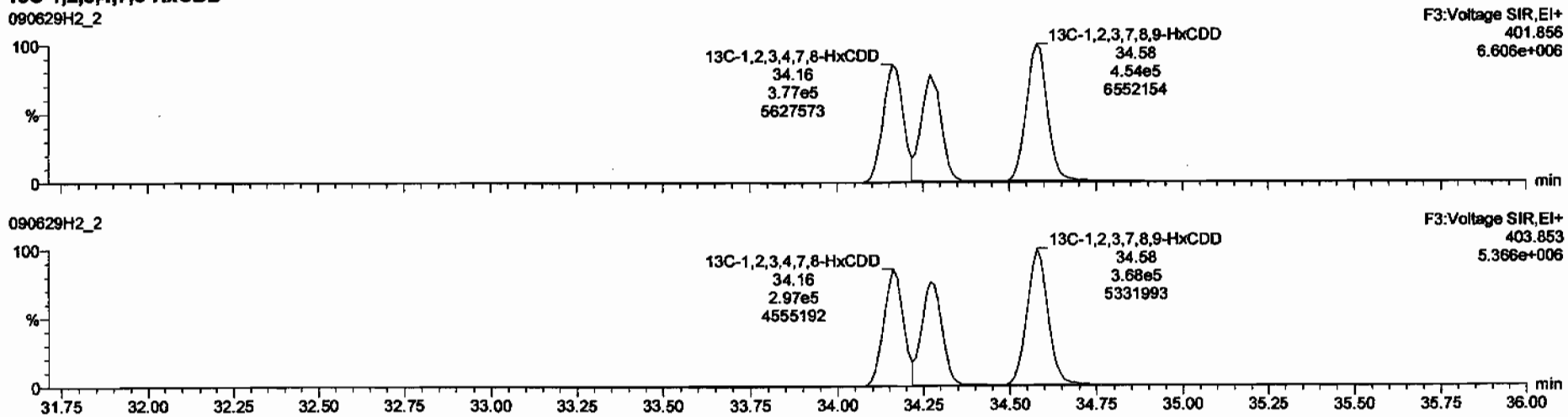

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,6,7,8-HpCDD

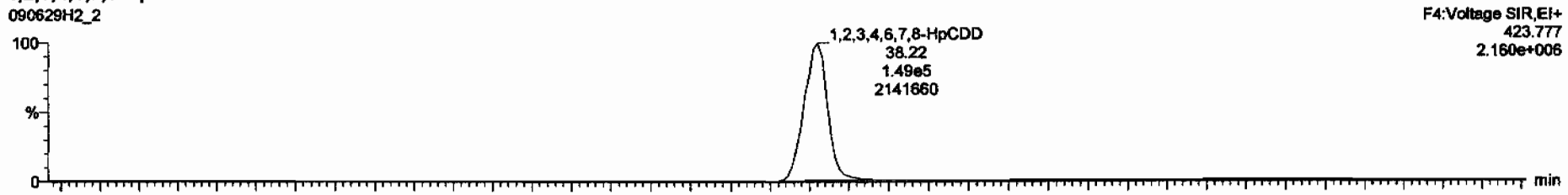

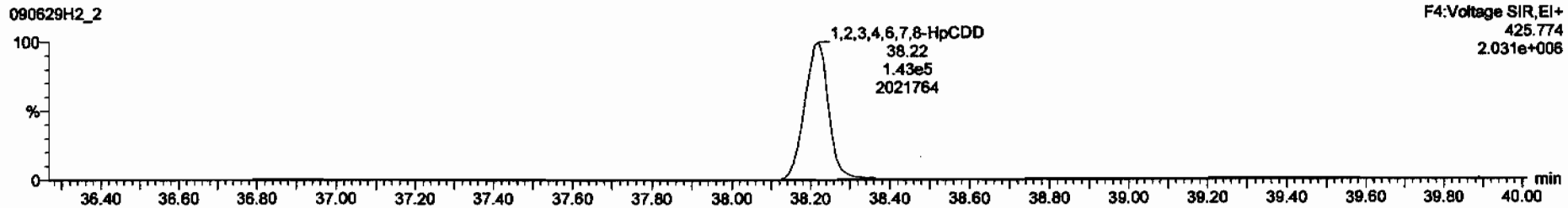

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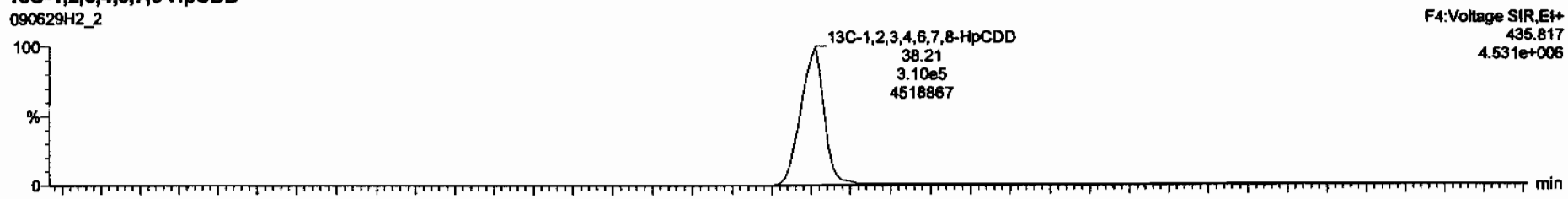

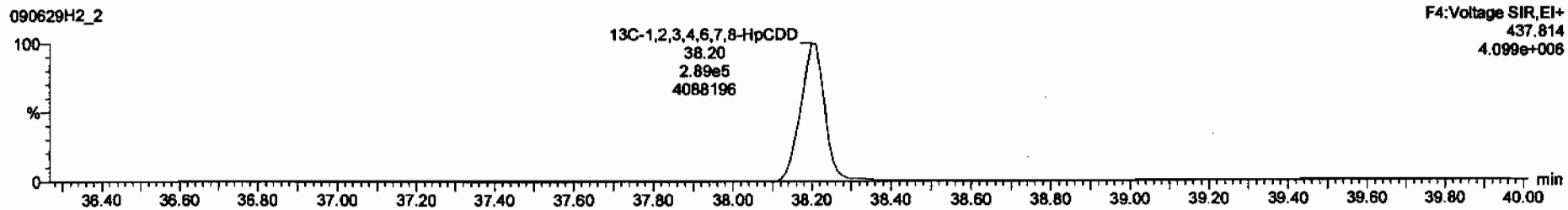

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

OCDD

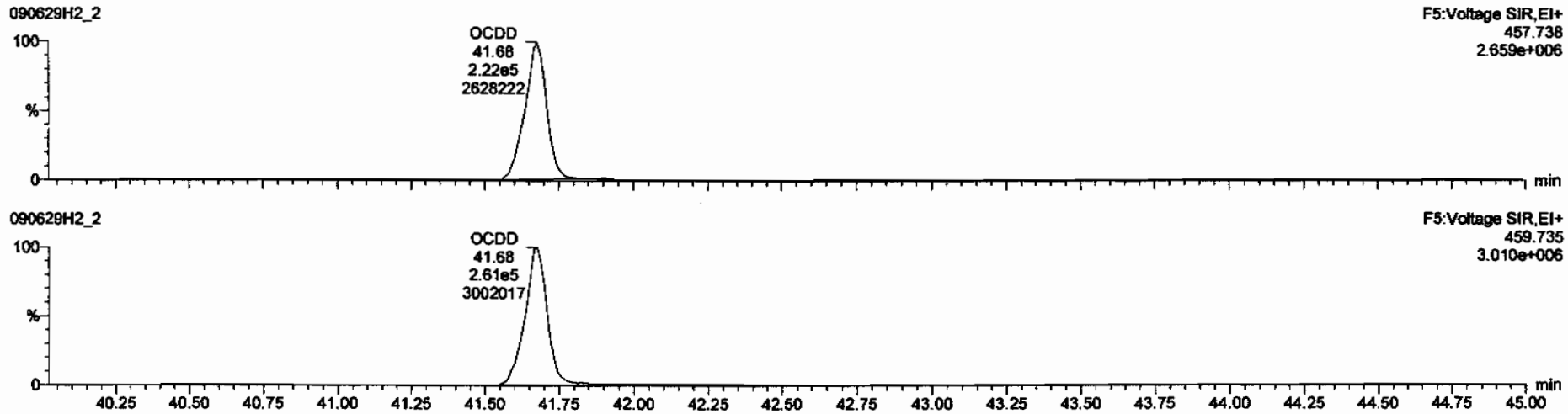

13C-OCDD

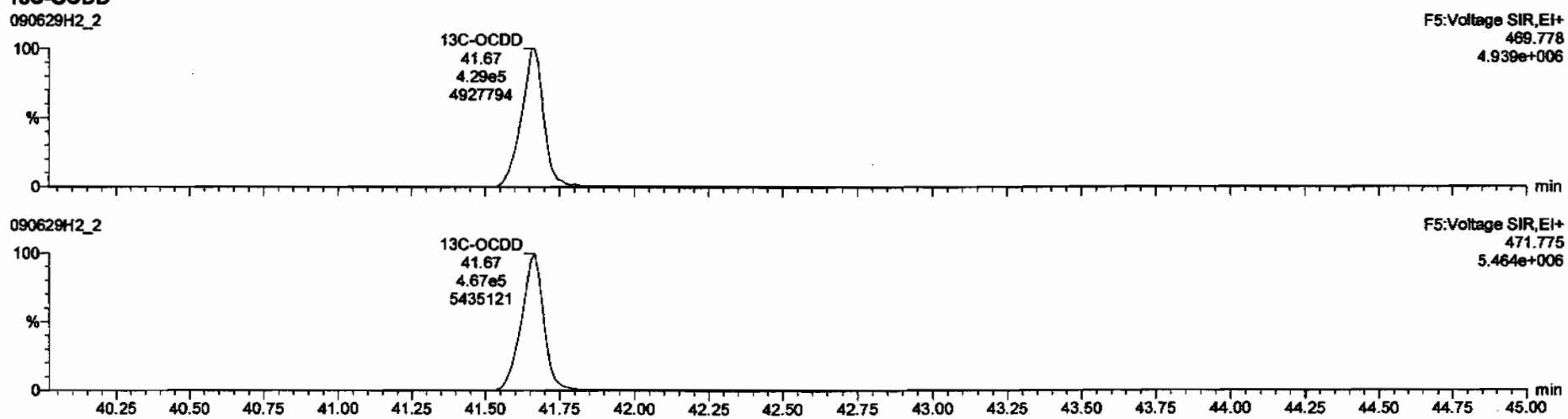

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

2,3,7,8-TCDF

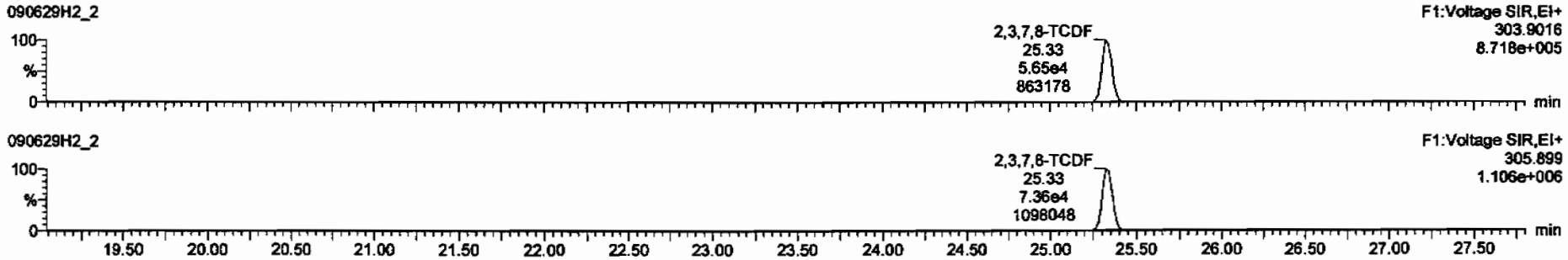

13C-2,3,7,8-TCDF

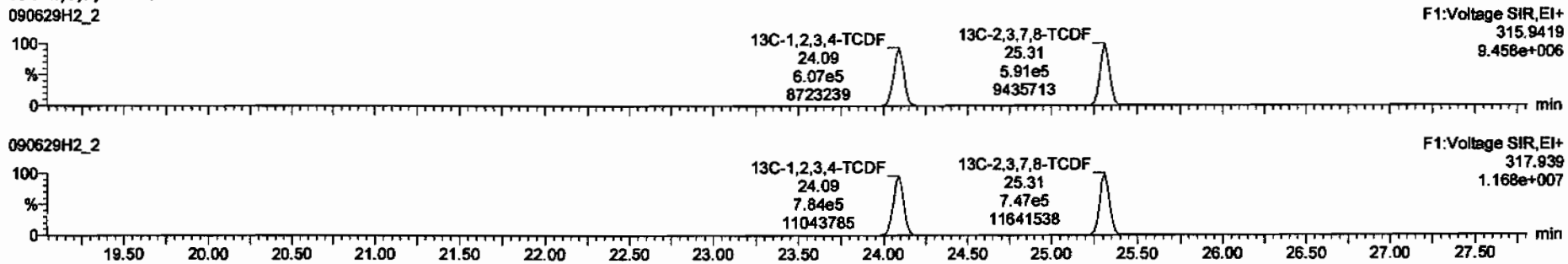

DPE1

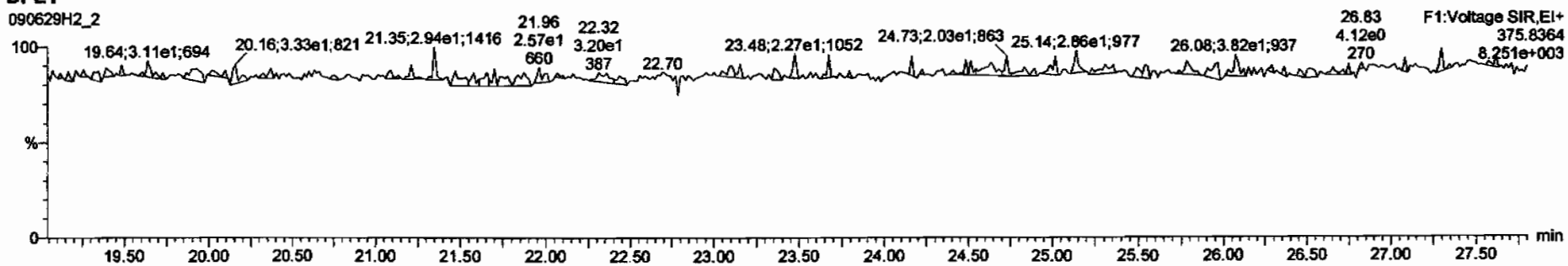

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

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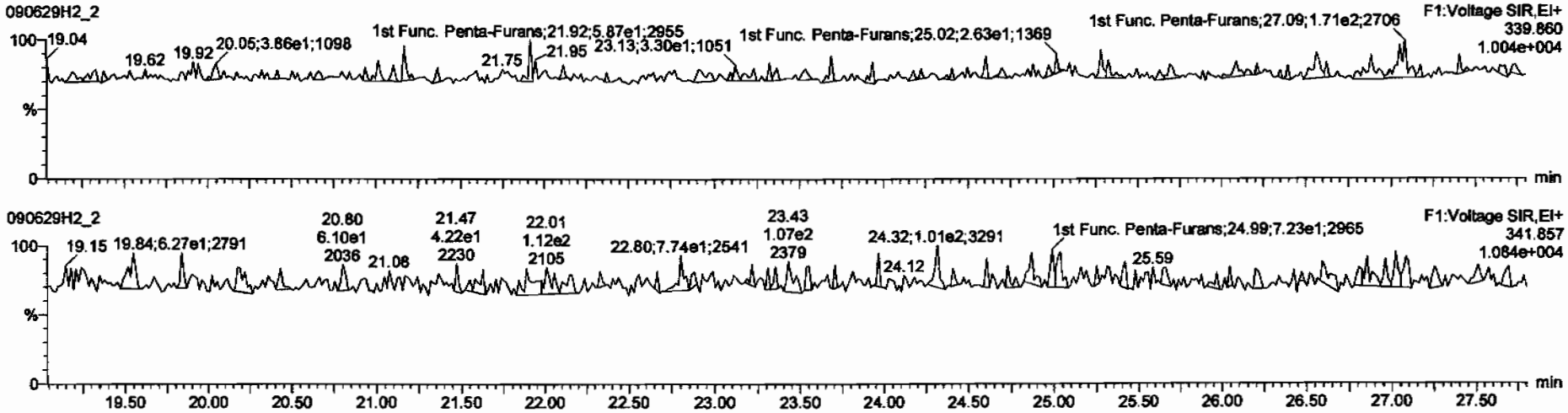

DPE6

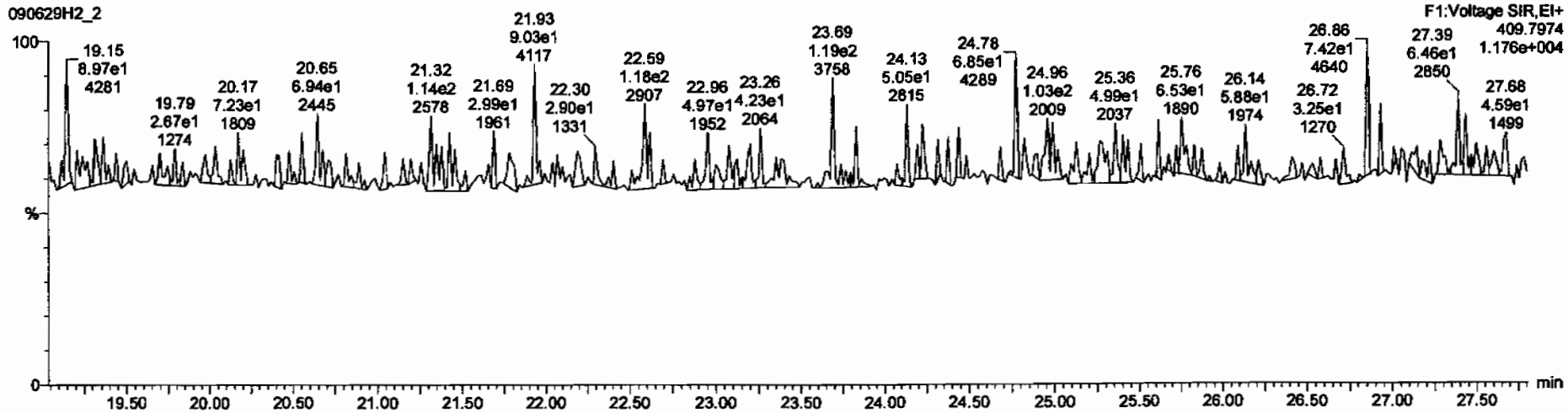

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

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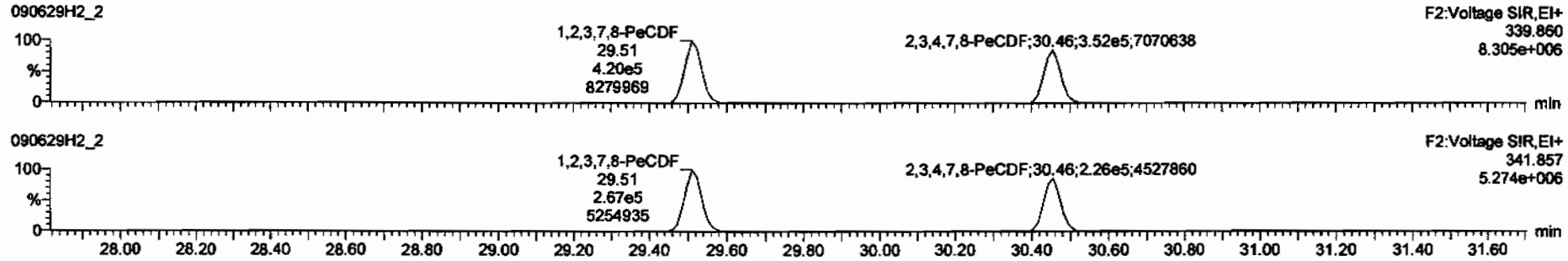

13C-1,2,3,7,8-PeCDF

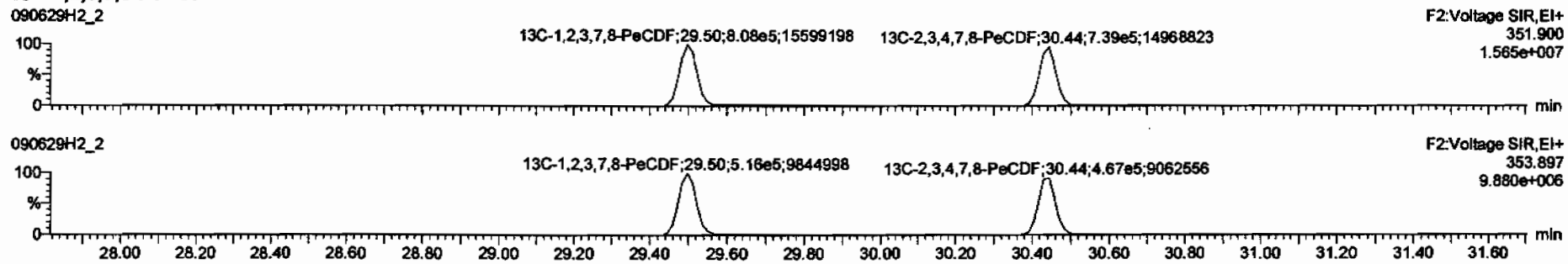

DPE2

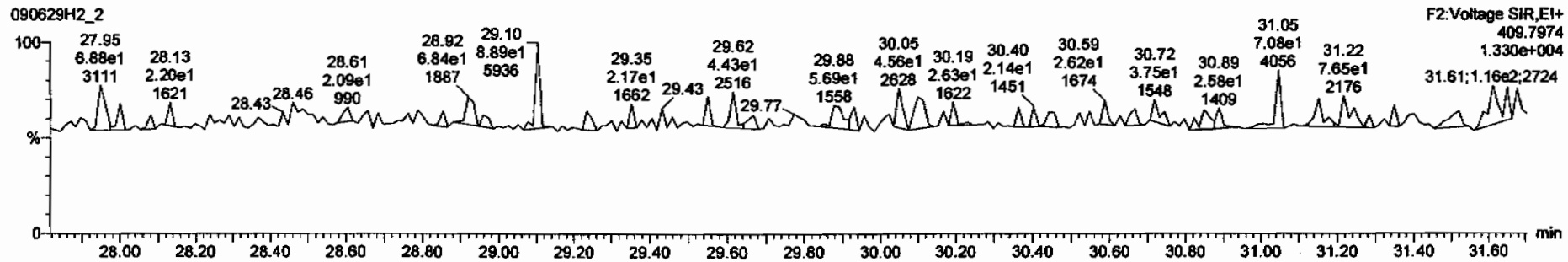

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,7,8-HxCDF

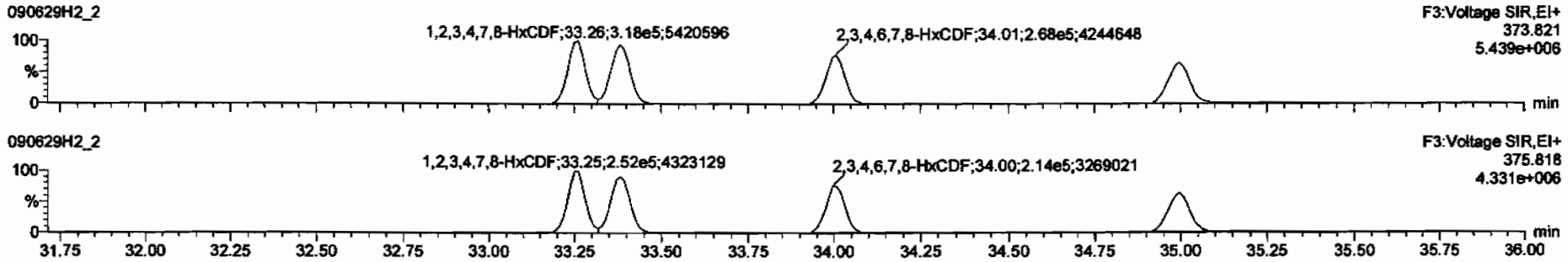

13C-1,2,3,4,7,8-HxCDF

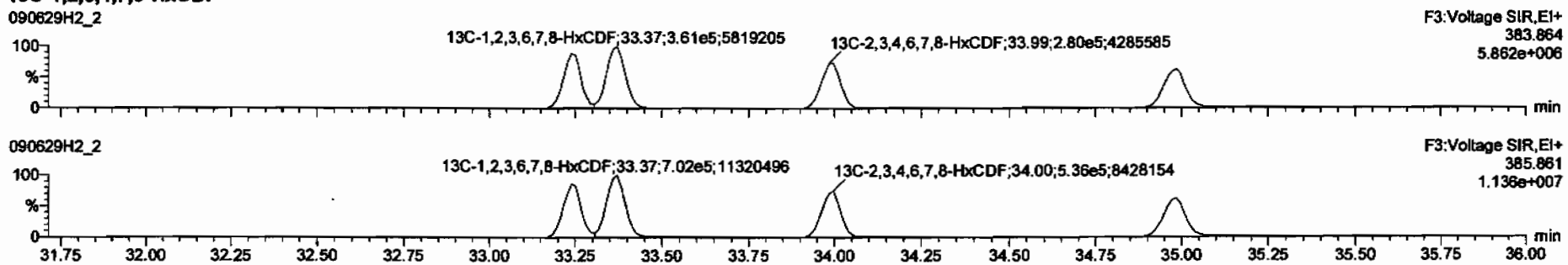

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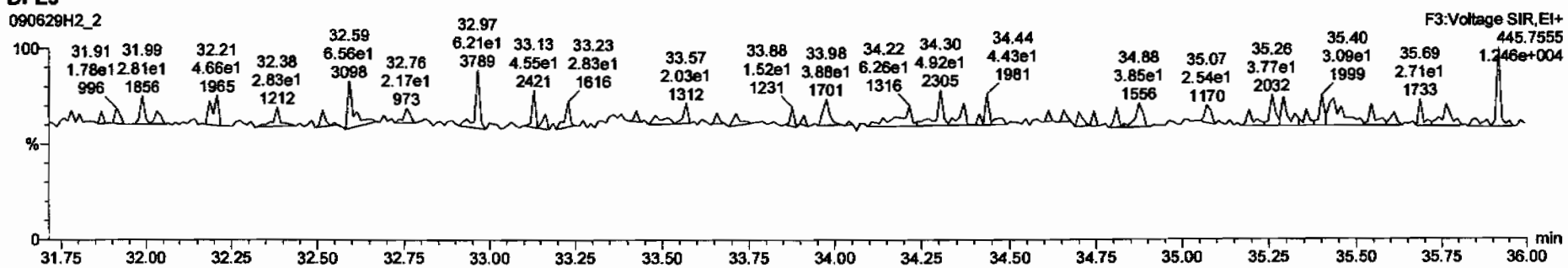

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,6,7,8-HpCDF

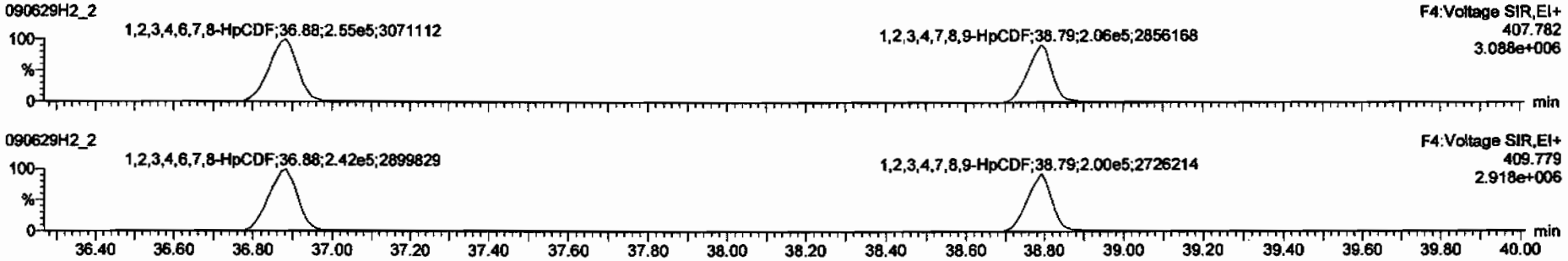

13C-1,2,3,4,6,7,8-HpCDF

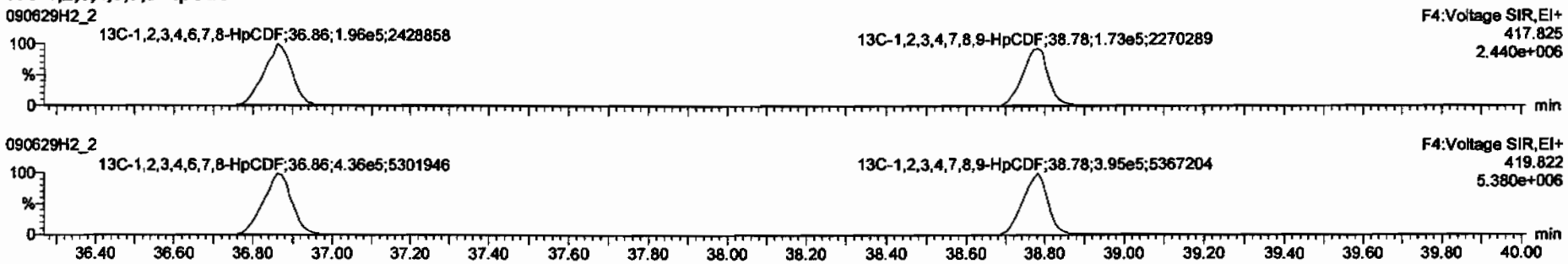

DPE4

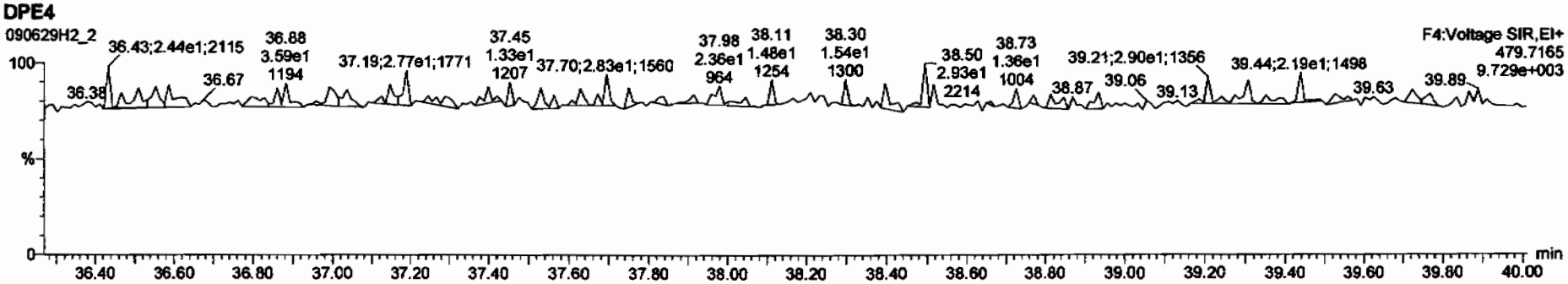

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

OCDF

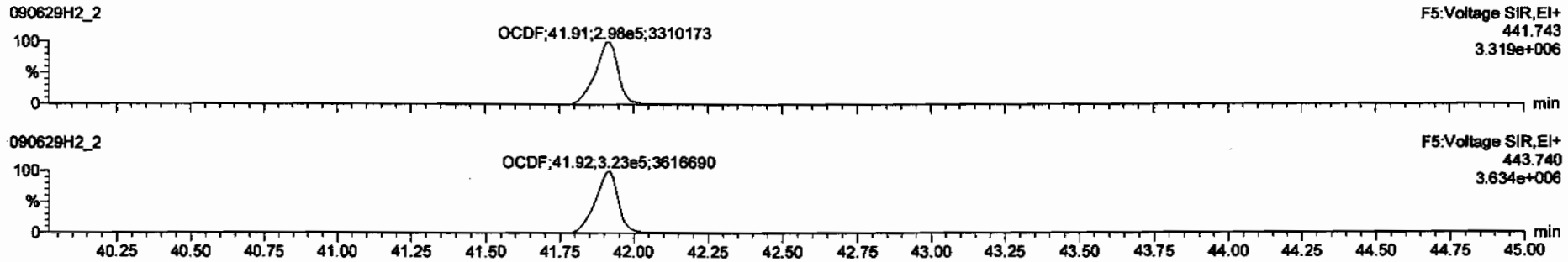

13C-OCDF

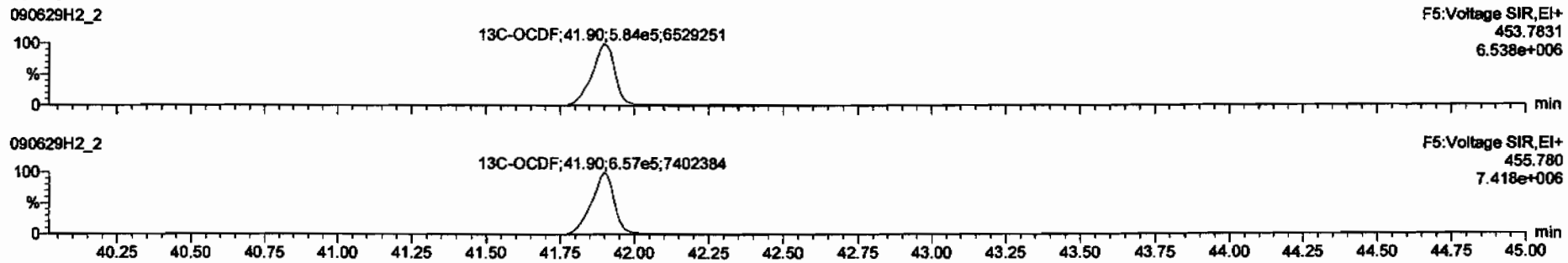

DPE5

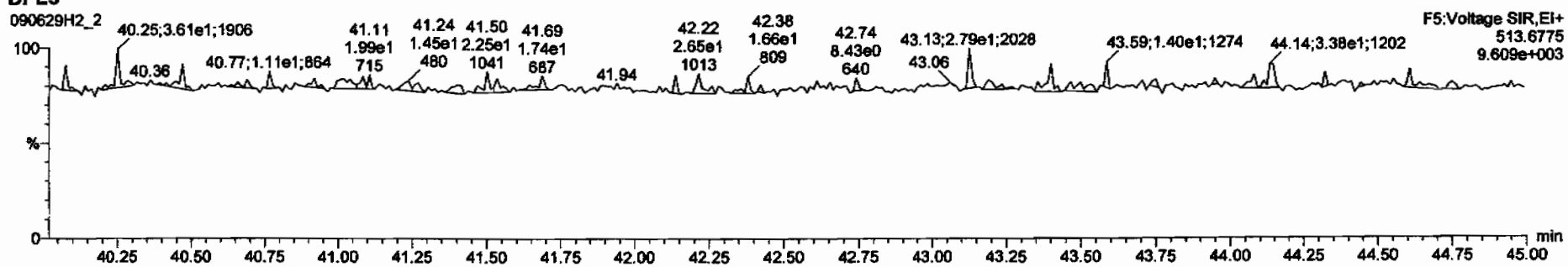

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

PFK1

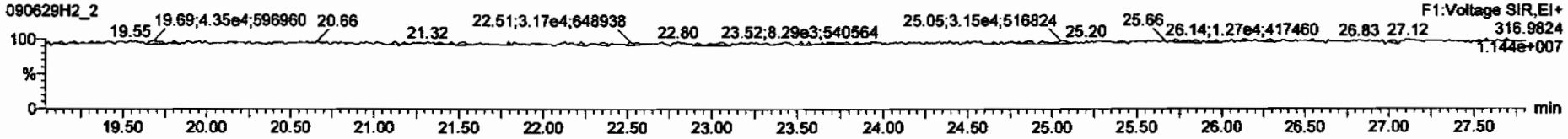

PFK2

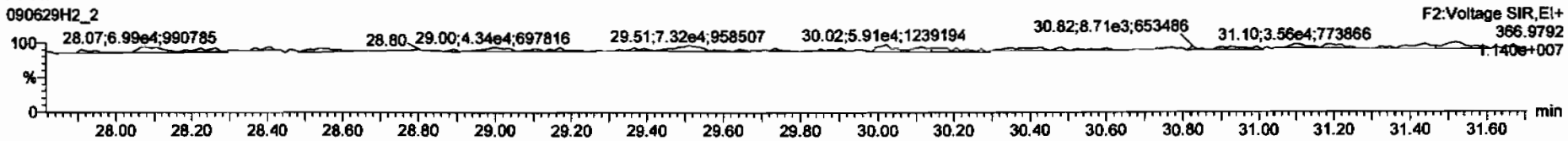

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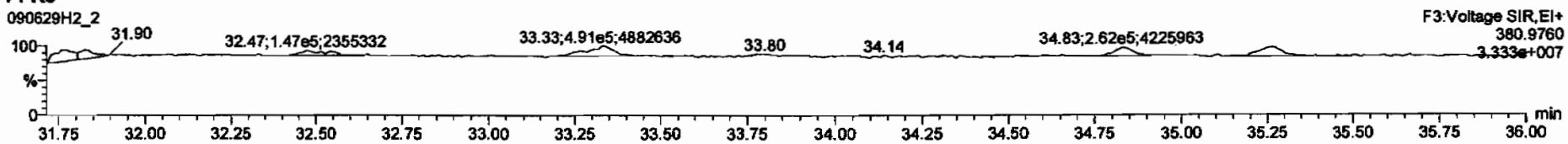

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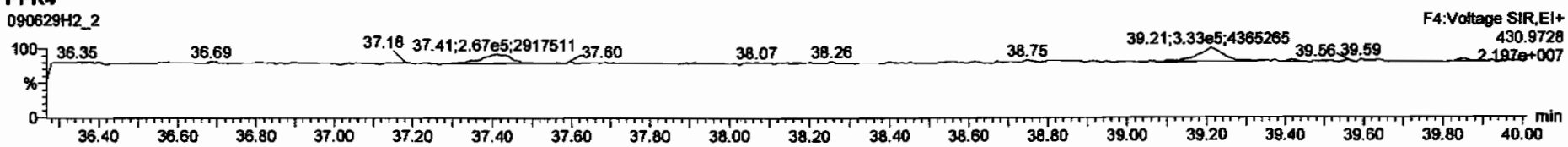

PFK5

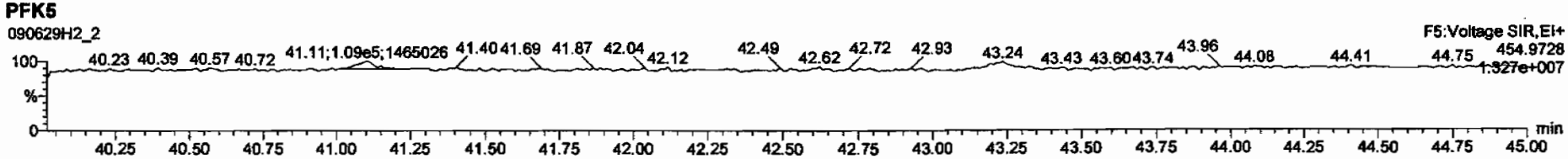

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-5.qld

Last Altered: Tuesday, June 30, 2009 1:30:34 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 1:30:55 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

1	2,3,7,8-TCDD			NO	1.08	9.977					0.0499	
2	1,2,3,7,8-PeCDD			NO	1.03	9.977					0.0476	
3	1,2,3,4,7,8-HxCDD			NO	1.00	9.977					0.148	
4	1,2,3,6,7,8-HxCDD			NO	1.13	9.977					0.143	
5	1,2,3,7,8,9-HxCDD			NO	1.10	9.977					0.140	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	9.977					0.174	
7	OCDD	5.32e3	0.88	NO	1.18	9.977	41.72	1.001	2.1956		0.269	~~2.1956~~
8	2,3,7,8-TCDF			NO	1.09	9.977					0.0353	
9	1,2,3,7,8-PeCDF			NO	1.16	9.977					0.0362	
10	2,3,4,7,8-PeCDF			NO	1.12	9.977					0.0403	
11	1,2,3,4,7,8-HxCDF			NO	1.41	9.977					0.0468	
12	1,2,3,6,7,8-HxCDF			NO	1.22	9.977					0.0509	
13	2,3,4,6,7,8-HxCDF			NO	1.28	9.977					0.0599	
14	1,2,3,7,8,9-HxCDF			NO	1.26	9.977					0.0808	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	9.977					0.0884	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	9.977					0.0916	
17	OCDF			NO	1.10	9.977					0.0937	
18	13C-2,3,7,8-TCDD	8.56e5	0.78	NO	1.01	9.977	26.06	1.023	185.83	92.7	0.260	
19	13C-1,2,3,7,8-PeCDD	7.37e5	0.62	NO	0.827	9.977	30.71	1.205	196.05	97.8	0.195	
20	13C-1,2,3,4,7,8-HxCDD	6.22e5	1.31	NO	0.916	9.977	34.16	0.988	179.24	89.4	0.546	
21	13C-1,2,3,6,7,8-HxCDD	5.64e5	1.20	NO	0.921	9.977	34.27	0.991	161.82	80.7	0.543	
22	13C-1,2,3,4,6,7,8-HpCDD	5.58e5	1.03	NO	0.708	9.977	38.21	1.105	208.07	104	0.904	
23	13C-OCDD	8.25e5	0.92	NO	0.503	9.977	41.70	1.206	433.77	108	0.705	
24	13C-2,3,7,8-TCDF	1.16e6	0.79	NO	0.977	9.977	25.30	0.993	187.18	93.4	0.186	
25	13C-1,2,3,7,8-PeCDF	1.16e6	1.57	NO	0.896	9.977	29.49	1.157	204.55	102	0.376	
26	13C-2,3,4,7,8-PeCDF	1.10e6	1.57	NO	0.900	9.977	30.42	1.194	192.73	96.1	0.375	
27	13C-1,2,3,4,7,8-HxCDF	8.15e5	0.52	NO	1.17	9.977	33.23	0.961	184.11	91.8	0.622	
28	13C-1,2,3,6,7,8-HxCDF	9.31e5	0.54	NO	1.52	9.977	33.36	0.965	161.89	80.8	0.479	
29	13C-2,3,4,6,7,8-HxCDF	7.49e5	0.53	NO	1.25	9.977	33.99	0.983	158.46	79.0	0.582	
30	13C-1,2,3,7,8,9-HxCDF	6.68e5	0.52	NO	1.05	9.977	34.97	1.011	167.49	83.6	0.691	

6/30/09
6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-5.qld

Last Altered: Tuesday, June 30, 2009 1:30:34 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 1:30:55 PM Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

31	13C-1,2,3,4,6,7,8-HpCDF	5.57e5	0.44	NO	0.868	9.977	36.86	1.066	169.55	84.6	0.720
32	13C-1,2,3,4,7,8,9-HpCDF	5.28e5	0.44	NO	0.727	9.977	38.79	1.122	192.13	95.8	0.860
33	13C-OCDF	1.20e6	0.90	NO	0.760	9.977	41.93	1.213	416.21	104	0.422
34	37Cl-2,3,7,8-TCDD	2.15e5			0.668	9.977	26.09	1.024	70.799	88.3	0.0704
35	13C-1,2,3,4-TCDD	9.10e5	0.78	NO	1.00	9.977	25.48	0.000	200.46	100	0.264
36	13C-1,2,3,4-TCDF	1.27e6	0.77	NO	1.00	9.977	24.07	0.000	200.46	100	0.182
37	13C-1,2,3,7,8,9-HxCDD	7.59e5	1.26	NO	1.00	9.977	34.58	0.000	200.46	100	0.500
38	Total Tetra-Dioxins				1.08	9.977					0.0230
39	Total Penta-Dioxins				1.03	9.977					0.0156
40	Total Hexa-Dioxins				1.13	9.977					0.0811
41	Total Hepta-Dioxins				1.06	9.977					0.120
42	Total Tetra-Furans				1.09	9.977					0.0115
43	1st Func. Penta-Furans				1.16	9.977					0.0100
44	Total Penta-Furans				1.16	9.977					0.0134
45	Total Hexa-Furans				1.28	9.977					0.0366
46	Total Hepta-Furans				1.69	9.977					0.0477

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-5.qld

Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

2,3,7,8-TCDD

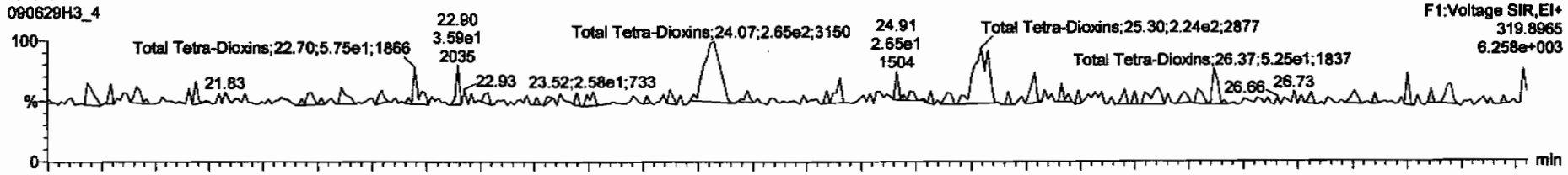

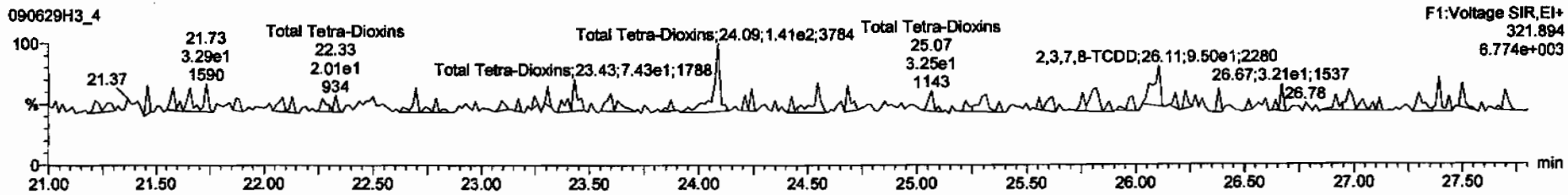

13C-2,3,7,8-TCDD

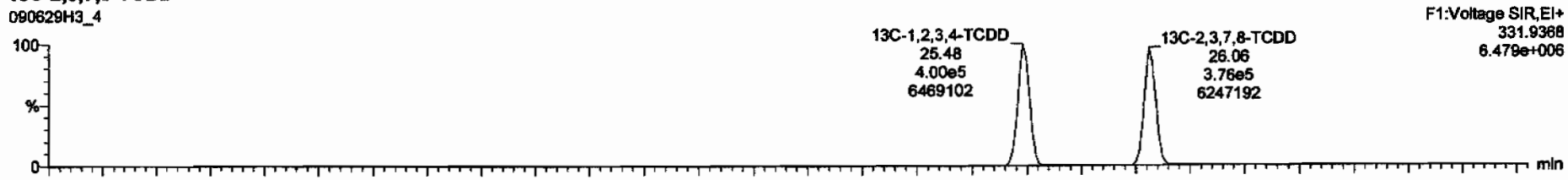

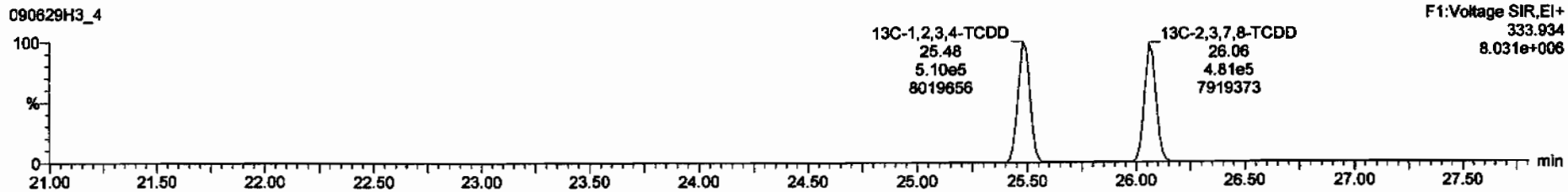

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-5.qld

Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

37Cl-2,3,7,8-TCDD

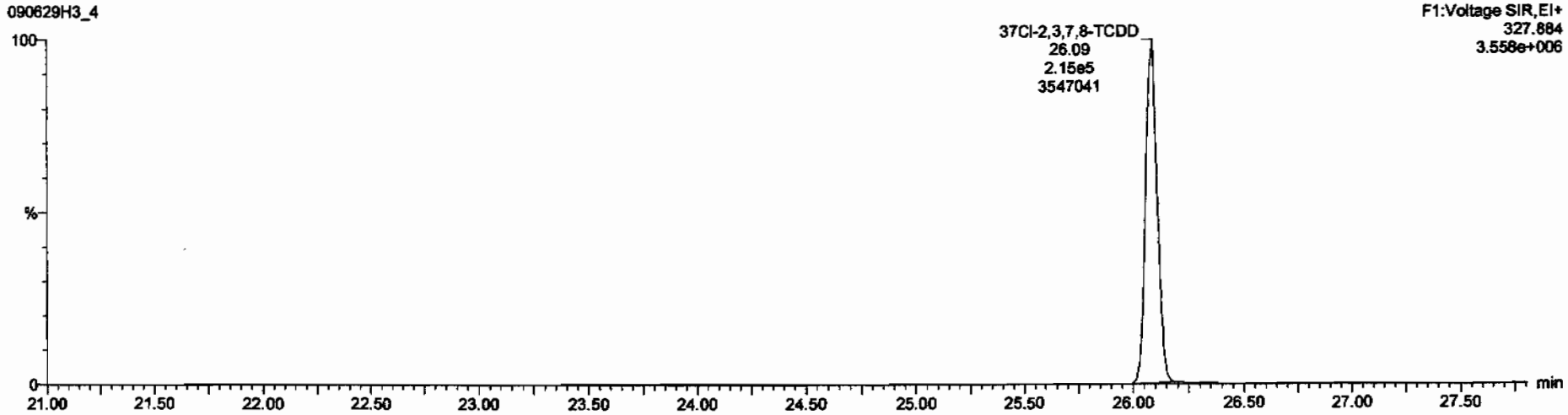

13C-1,2,3,4-TCDD

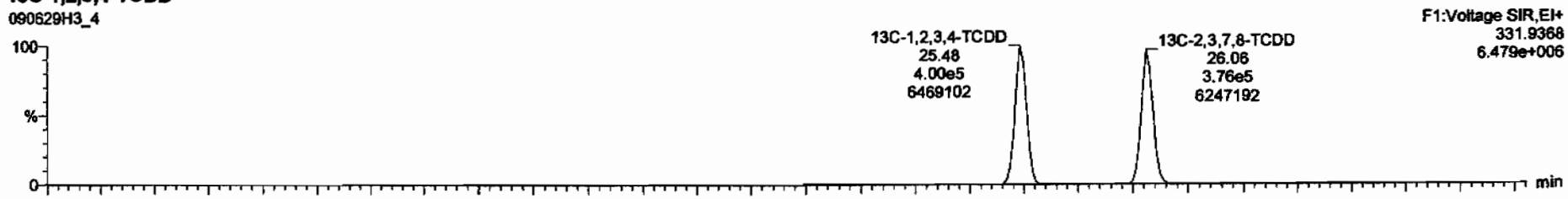

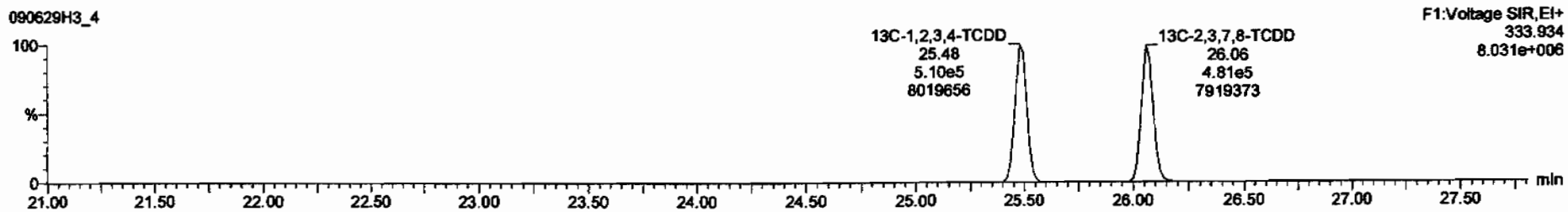

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Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

1,2,3,7,8-PeCDD

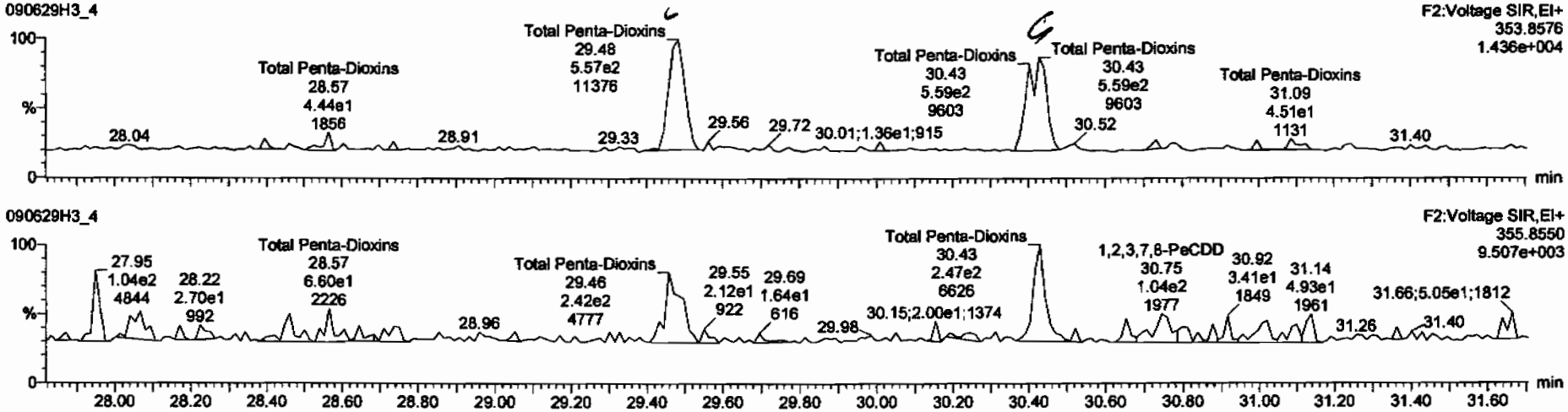

13C-1,2,3,7,8-PeCDD

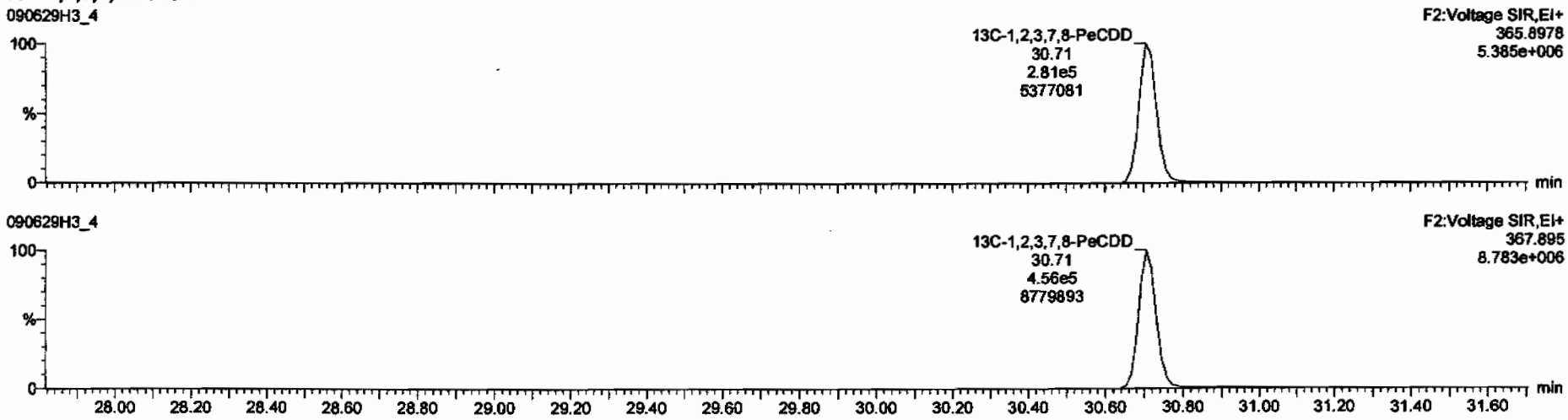

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Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

1,2,3,4,7,8-HxCDD

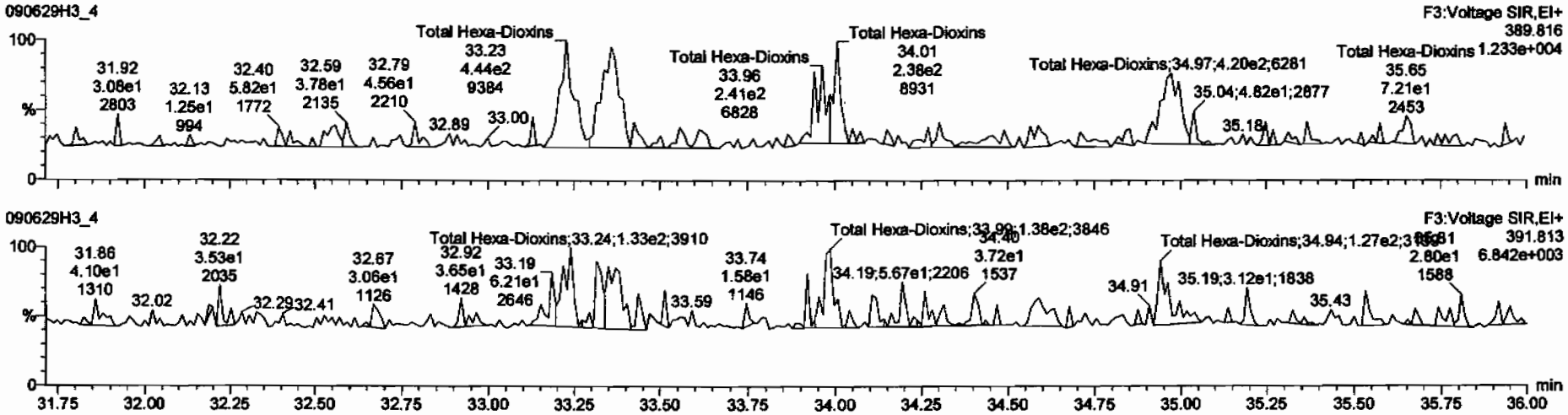

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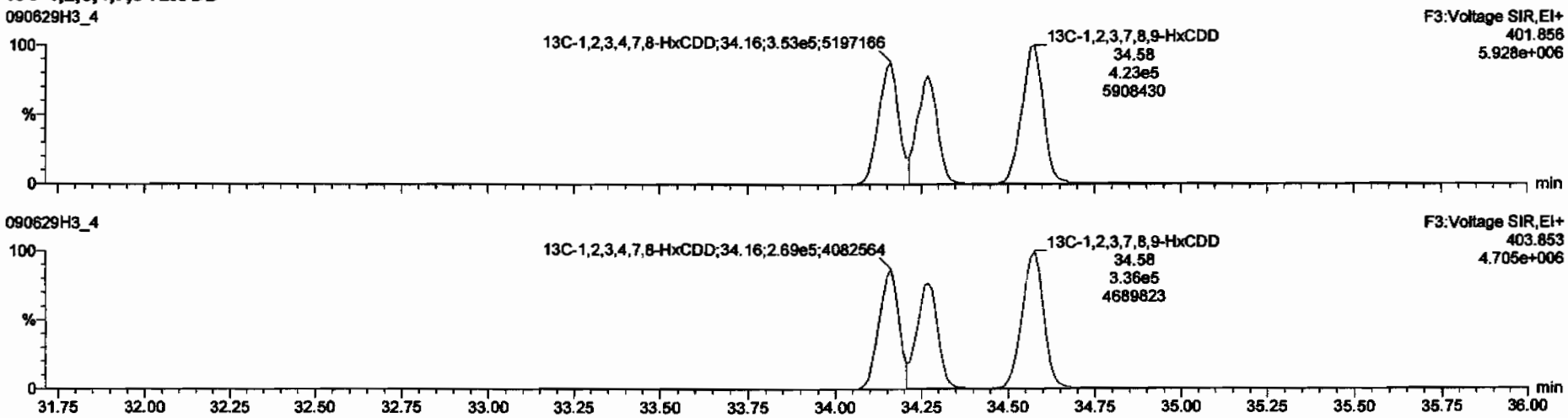

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Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

1,2,3,4,6,7,8-HpCDD

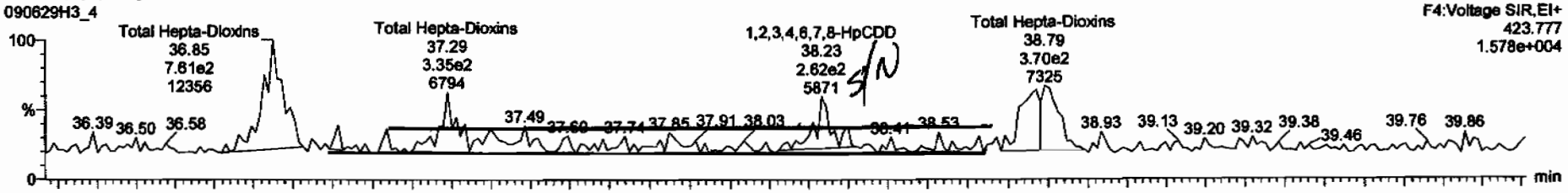

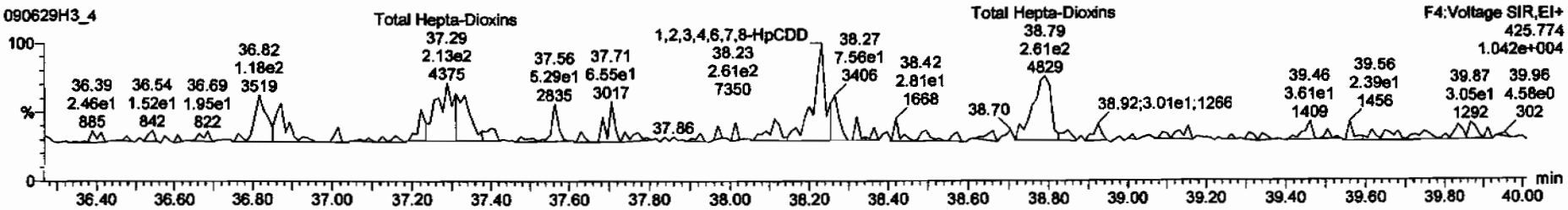

13C-1,2,3,4,6,7,8-HpCDD

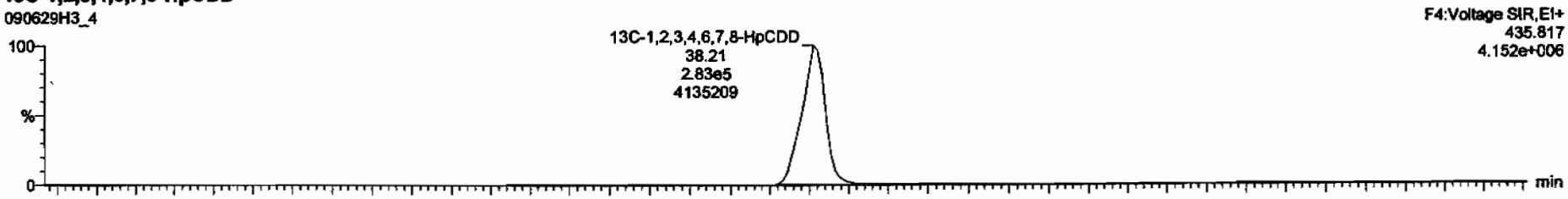

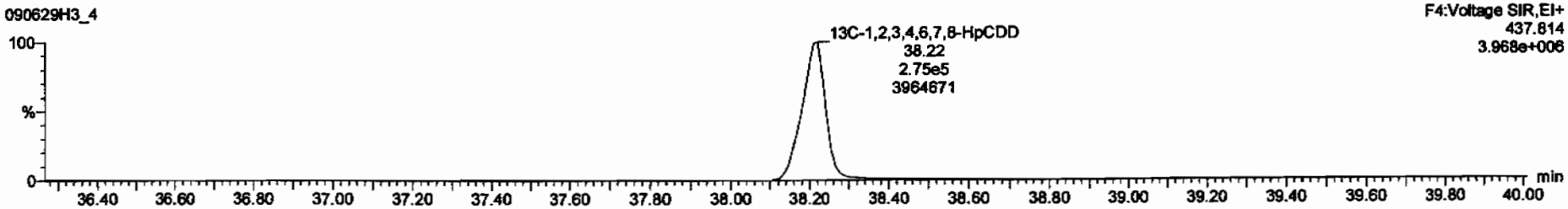

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-5.qld

Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

OCDD

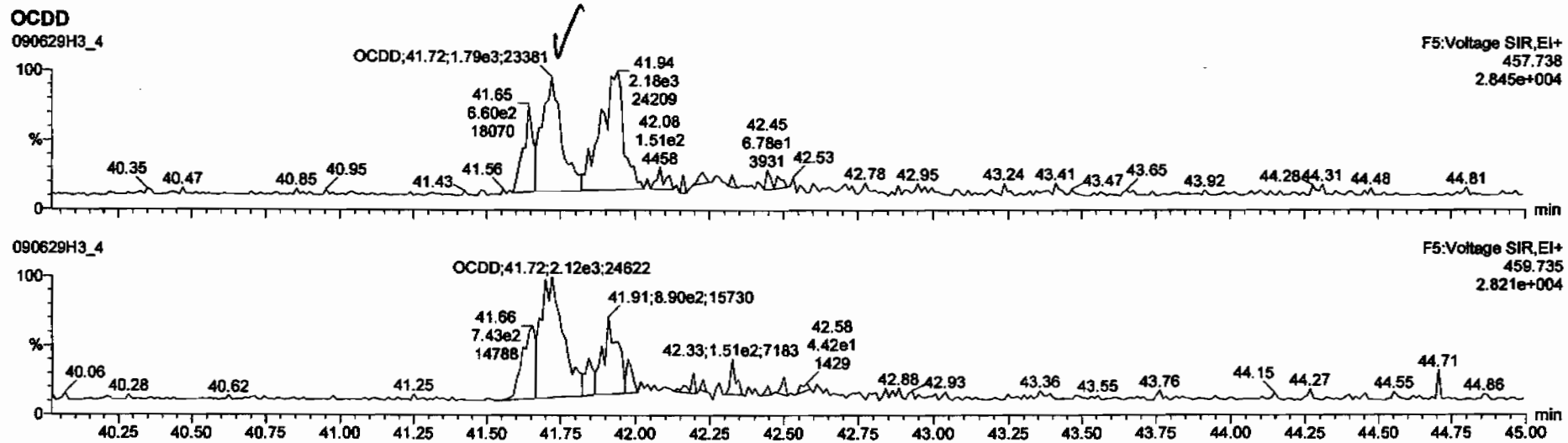

13C-OCDD

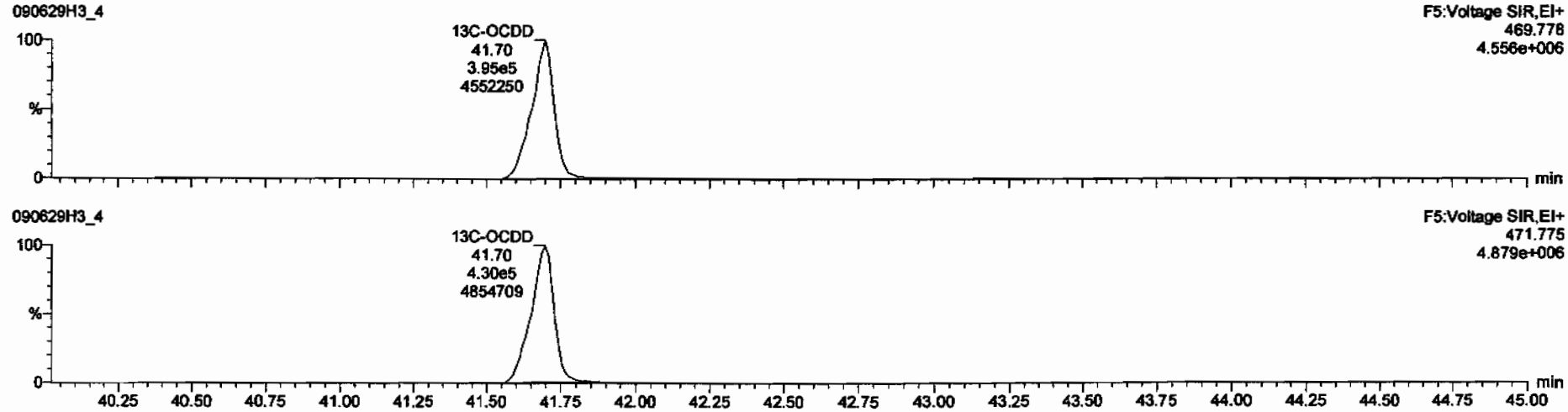

TargetLynx - 090629h3-5.qld * - [Chromatogram]

090629H3_4 - 31838_2207_001 CAMO-09-10463 10.43 - CAMO-09-10463

2,3,7,8-TCDF	7.76e1	0.81	NO	1.09	9.977	25.28	0.999	0.0124		0.0353	0.0124
1,2,3,7,8-PeCDF	1.52e2	0.57	YES	1.16	9.977	29.50	1.000	0.0227		0.0362	0.0136
2,3,4,7,8-PeCDF	2.35e2	0.94	YES	1.12	9.977	30.47	1.002	0.0384		0.0403	0.0306
1,2,3,4,7,8-HxCDF	5.04e1	1.68	YES	1.41	9.977	33.23	1.000	0.00879		0.0468	0.00735

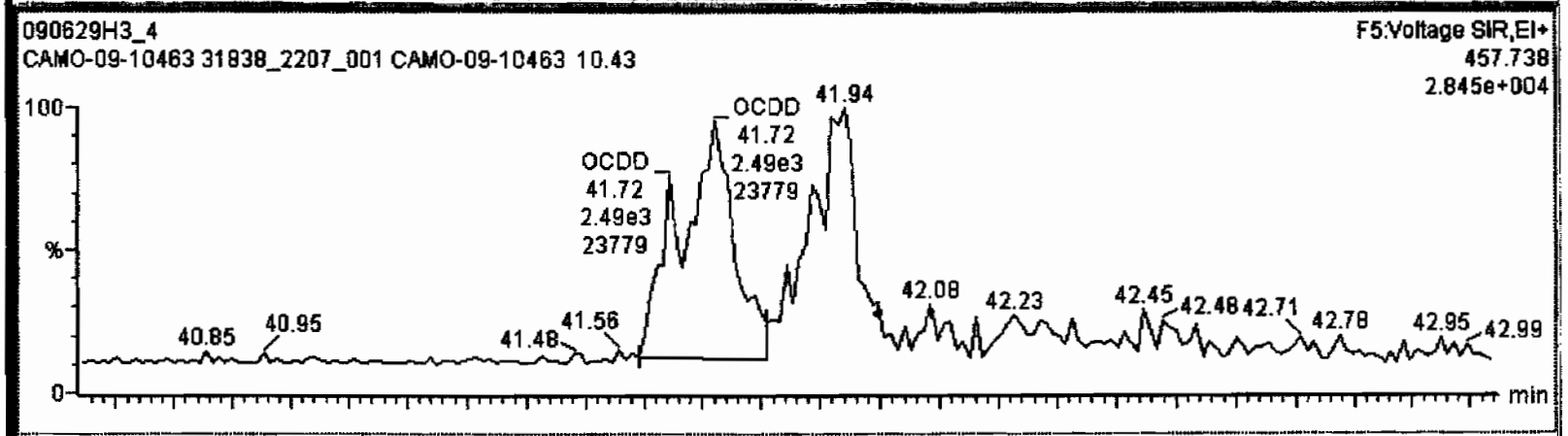

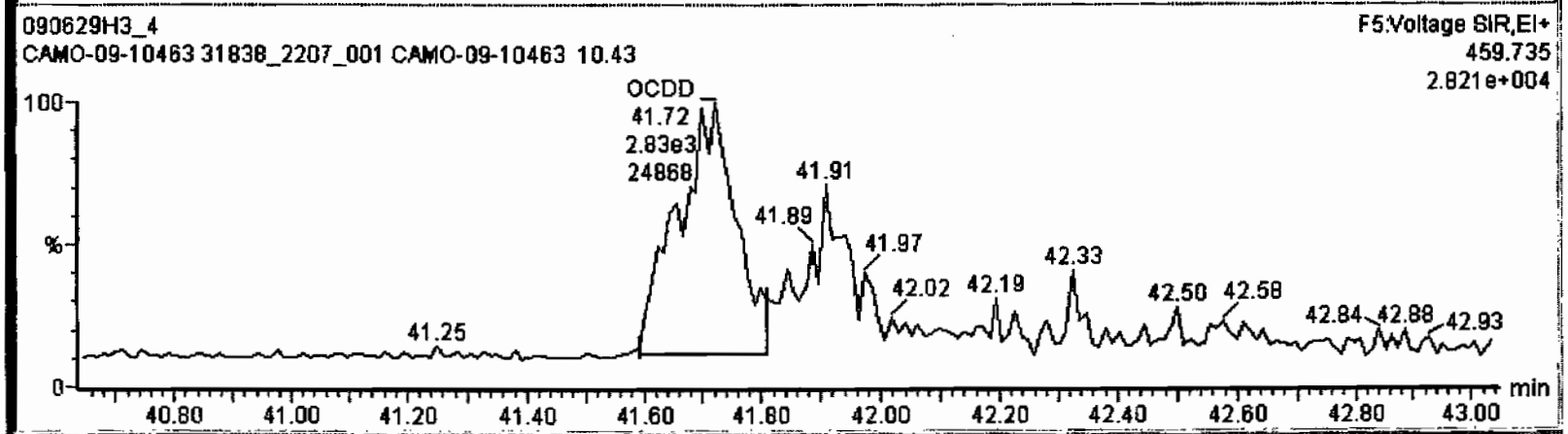

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Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

2,3,7,8-TCDF

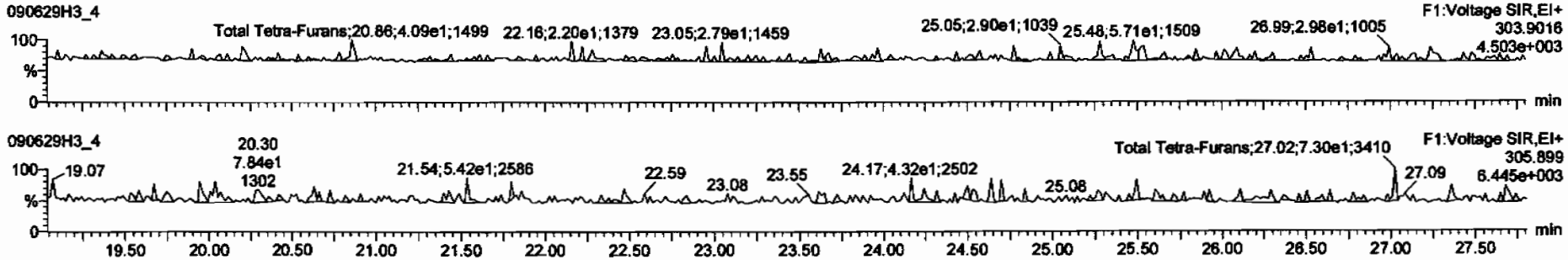

13C-2,3,7,8-TCDF

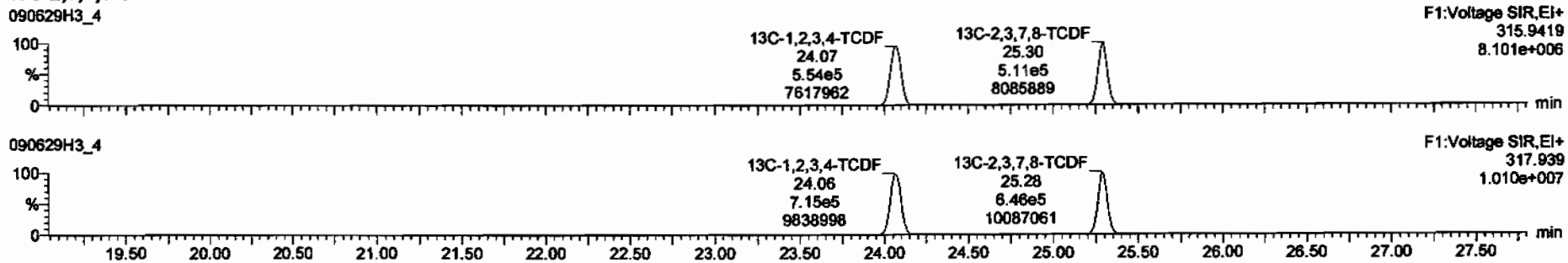

DPE1

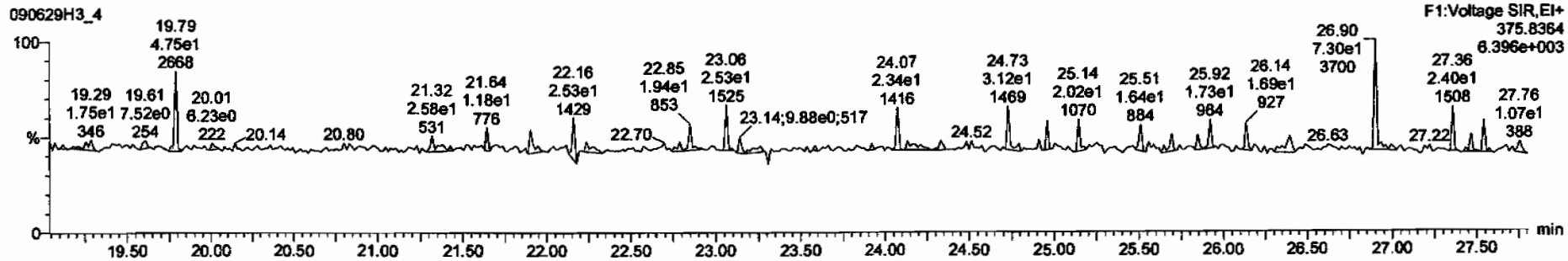

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-5.qld

Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

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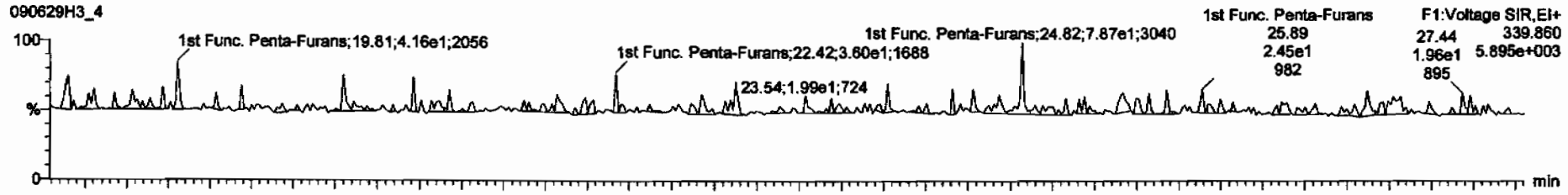

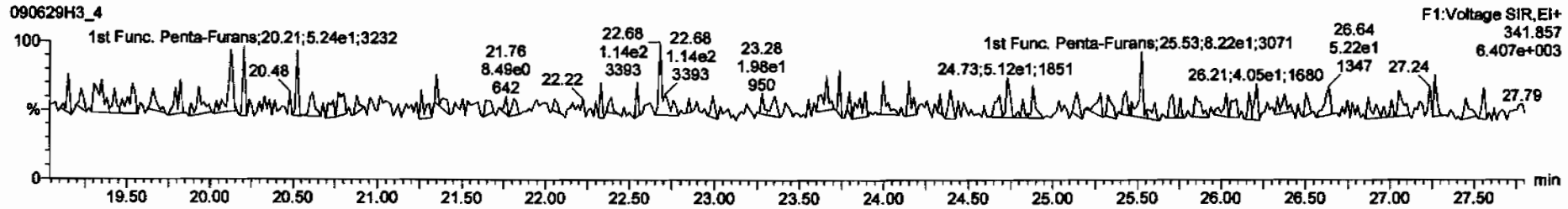

DPE6

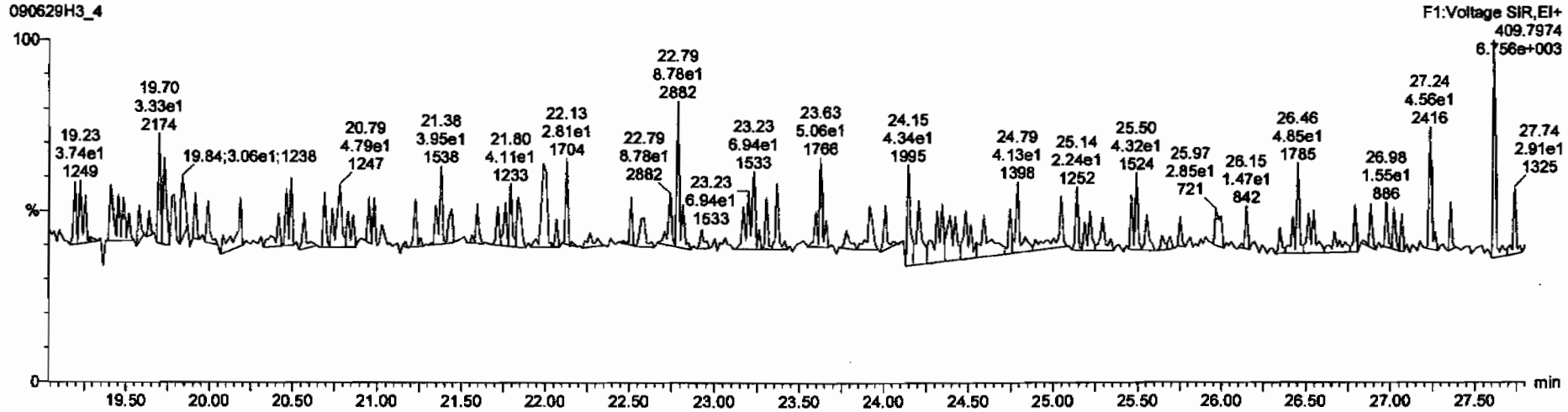

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Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

1,2,3,7,8-PeCDF

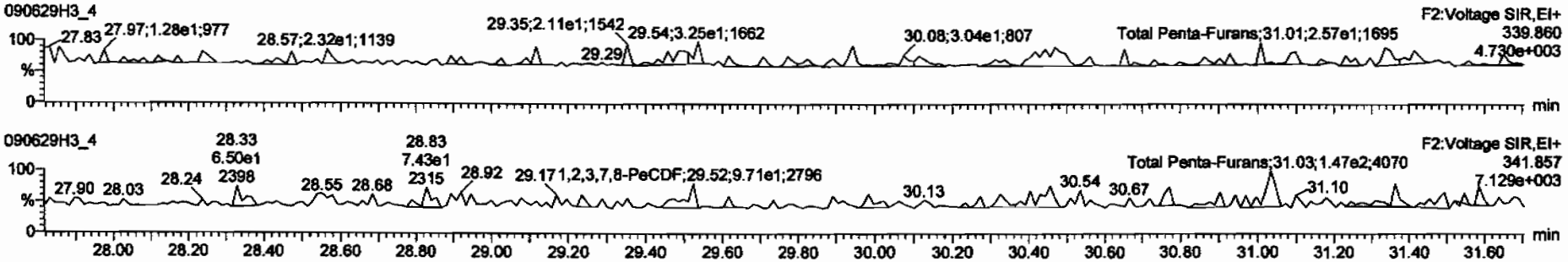

13C-1,2,3,7,8-PeCDF

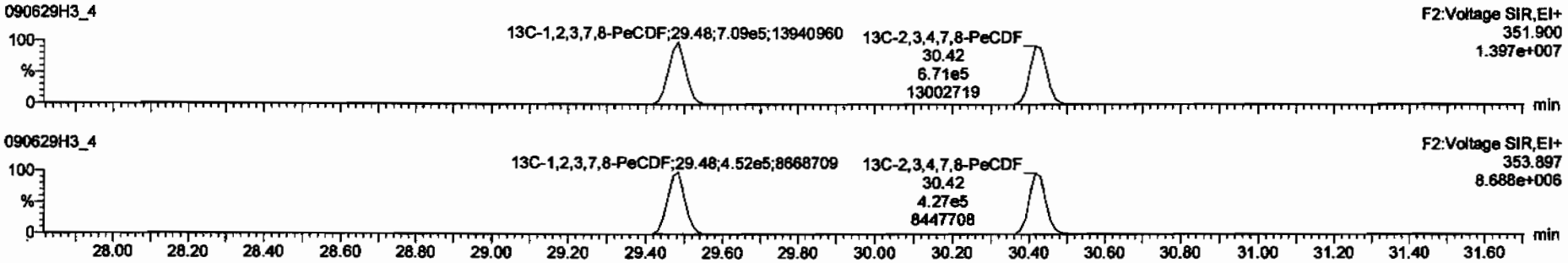

DPE2

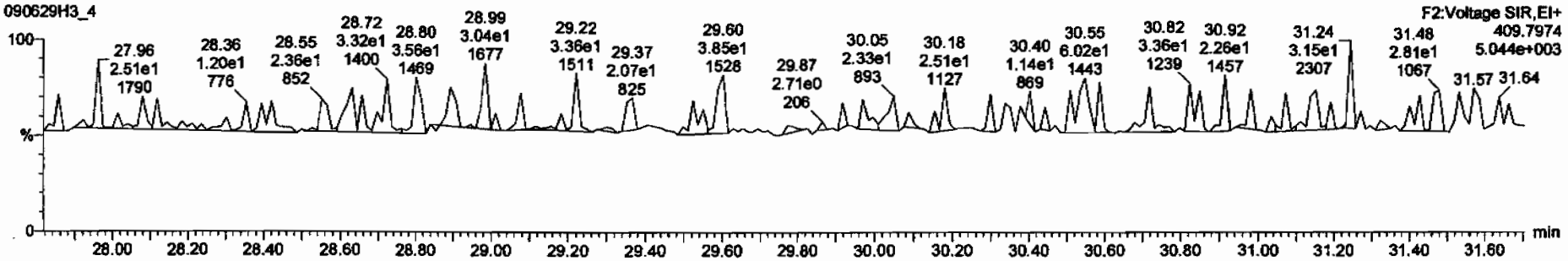

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Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

1,2,3,4,7,8-HxCDF

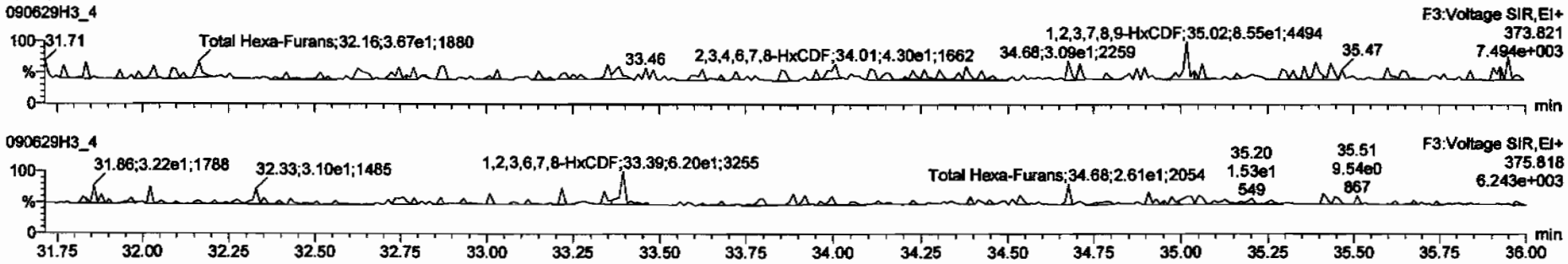

13C-1,2,3,4,7,8-HxCDF

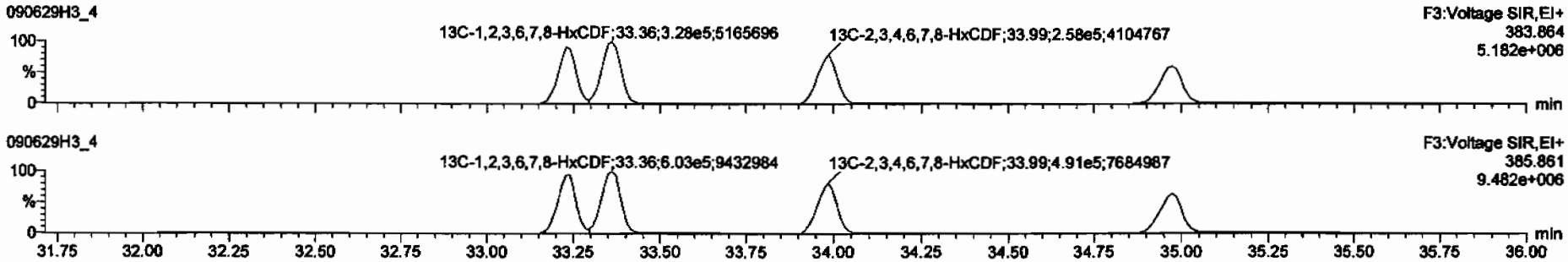

DPE3

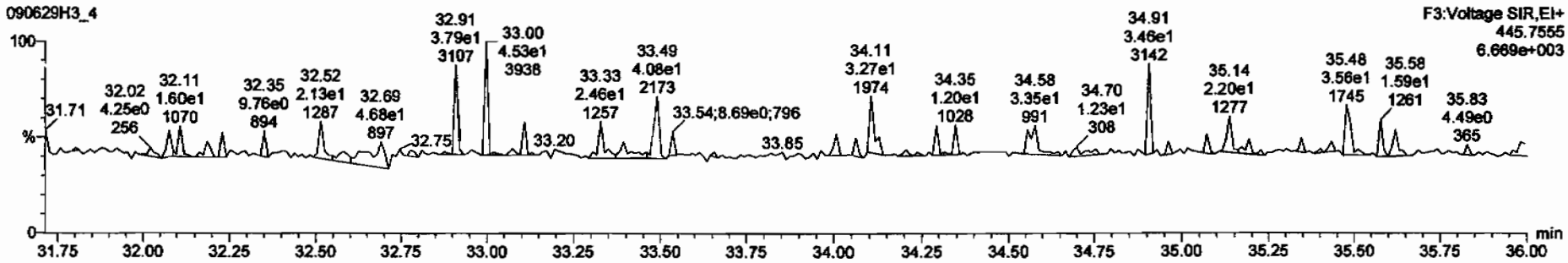

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Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

1,2,3,4,6,7,8-HpCDF

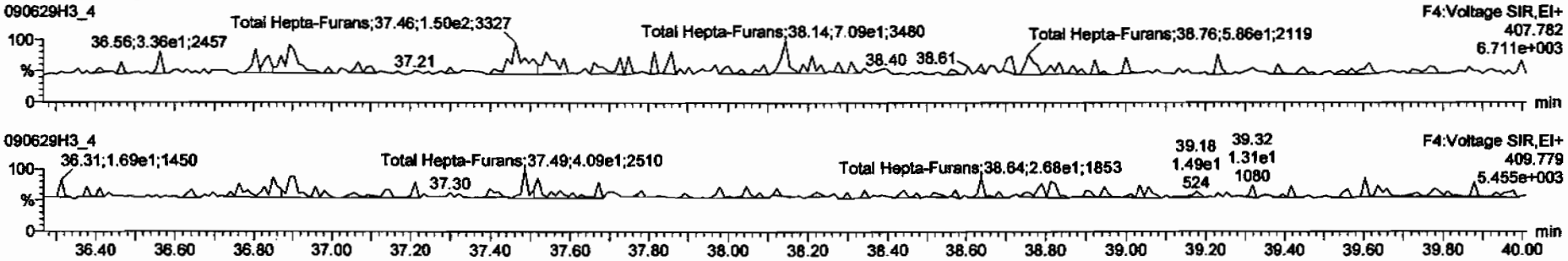

13C-1,2,3,4,6,7,8-HpCDF

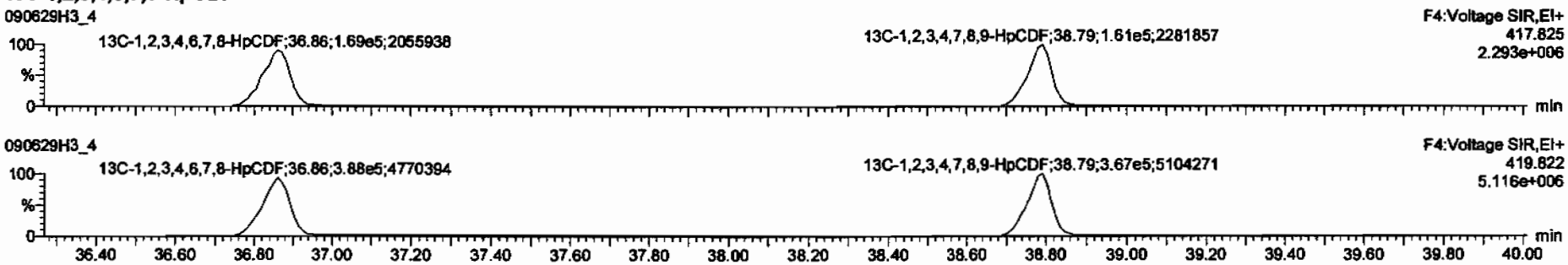

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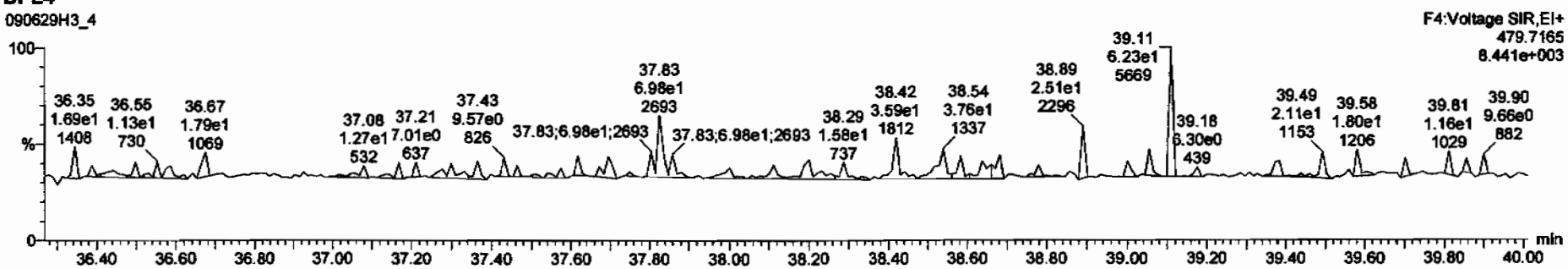

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Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

OCDF

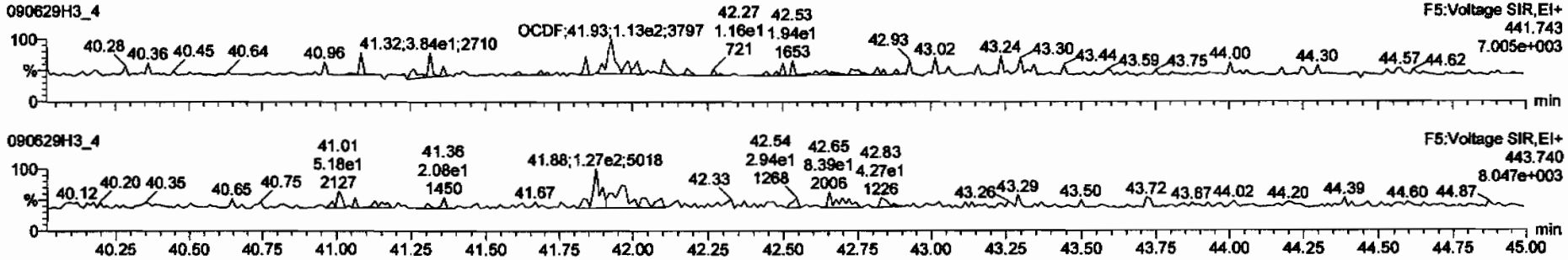

13C-OCDF

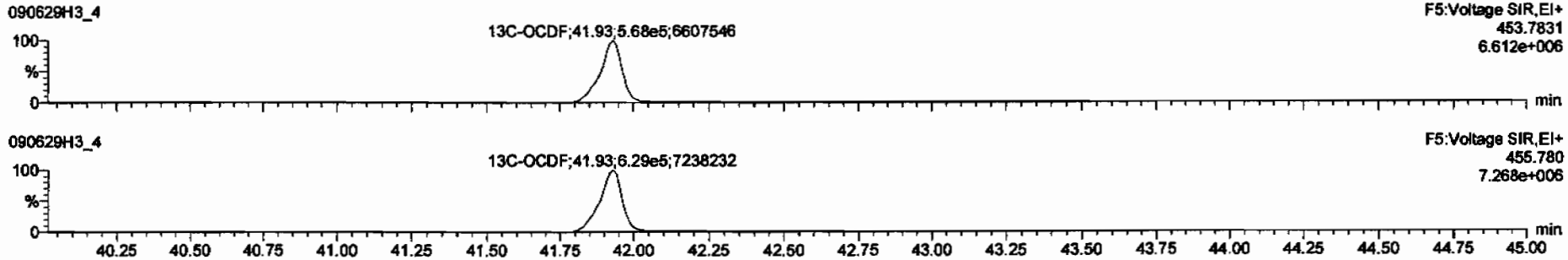

DPE5

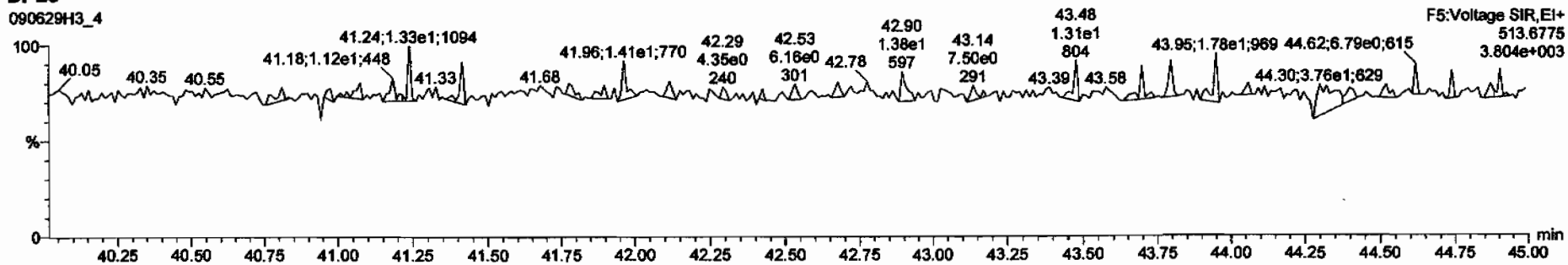

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-5.qld

Last Altered: Tuesday, June 30, 2009 08:21:23 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:21:41 Pacific Daylight Time

Name: 090629H3_4, Date: 30-Jun-2009, Time: 06:41:59, ID: 31838_2207_001 CAMO-09-10463 10.43, Description: CAMO-09-10463

PFK1

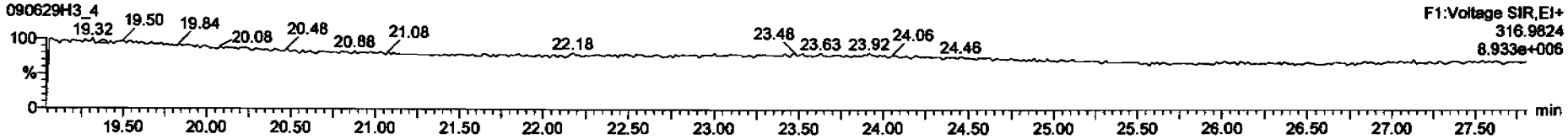

PFK2

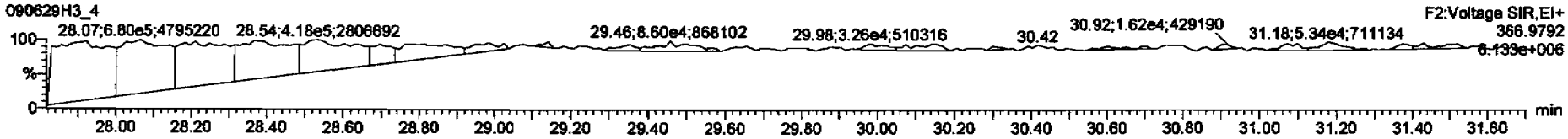

PFK3

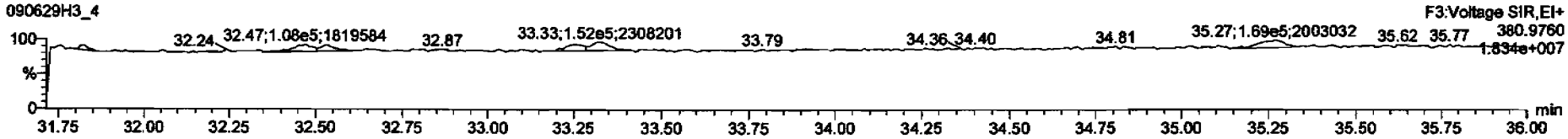

PFK4

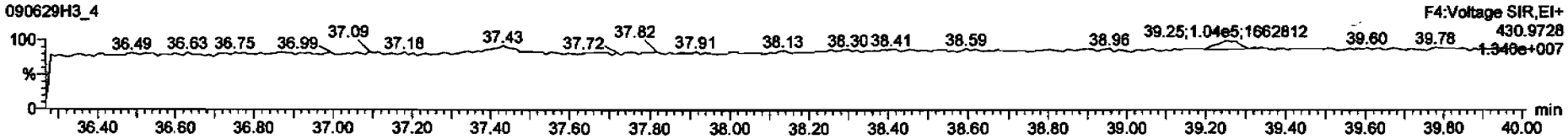

PFK5

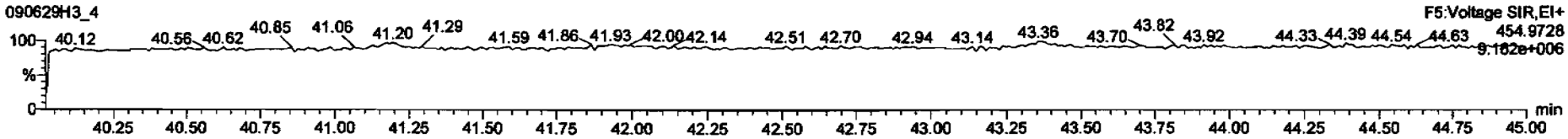

CALIBRATION DATA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1

GC Column ID: DB-5
Analysis Date: 29-Jun-09 Analysis Time: 14:01:48

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	NO	9.71	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	46.2	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	NO	46.2	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	NO	44.8	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	46.5	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	46.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.89	0.76-1.02	NO	88.2	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.74	0.65-0.89	NO	8.51	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	42.8	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	42.3	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.6	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	45.2	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	NO	44.6	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	45.5	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	46.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	87.4	63.0	159.0	Yes	80.0	120.0	Yes

8290 on 1/2

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/25/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1

GC Column ID: DB-5
Analysis Date: 29-Jun-09 Analysis Time: 14:01:48

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	100	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	97.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	111	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	257	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	108	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	103	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	NO	102	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	98.9	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	92.1	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	92.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	96.1	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	NO	99.7	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	103	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	224	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					10.0	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

8290 only

Analyst: [signature]
Date: 6/29/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, June 29, 2009 14:58:46 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:59:04 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.73
2	1,2,8,9-TCDD (Last)	26.98
3	1,2,4,7,9-PeCDD (First)	28.62
4	1,2,3,8,9-PeCDD (Last)	31.13
5	12,4,6,7,9-HxCDD (First)	32.59
6	1,2,3,7,8,9-HxCDD (Last)	34.60
7	1,2,3,4,6,7,9-HpCDD (First)	37.30
8	1,2,3,4,6,7,8-HpCDD (Last)	38.22
9	1,3,6,8-TCDF (First)	20.65
10	1,2,8,9-TCDF (Last)	27.15
11	1,3,4,6,8-PeCDF (First)	27.07
12	1,2,3,8,9-PeCDF (Last)	31.39
13	1,2,3,4,6,8-HxCDF (First)	32.03
14	1,2,3,4,8,9-HxCDF (Last)	35.00
15	1,2,3,4,6,7,8-HpCDF (First)	36.89
16	1,2,3,4,7,8,9-HpCDF (Last)	38.79

6/29/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090629H2-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090629H2_1

Analysis Date: 29-Jun-09

Analysis Time: 14:01:48

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.024	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [illegible]

Date: 6/29/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090629H2-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090629H2_1

Analysis Date: 29-Jun-09

Analysis Time: 14:01:48

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.121	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.211	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 6/29/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:22 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.17e4	0.81	NO	1.08	1.000	26.12	1.001	9.7118	97.1	0.0460	9.7118
2	1,2,3,7,8-PeCDD	2.60e5	0.61	NO	1.03	1.000	30.76	1.001	46.227	92.5	0.121	46.227
3	1,2,3,4,7,8-HxCDD	2.30e5	1.29	NO	1.00	1.000	34.19	1.001	46.188	92.4	0.161	46.188
4	1,2,3,6,7,8-HxCDD	2.39e5	1.22	NO	1.13	1.000	34.30	1.001	44.764	89.5	0.165	44.764
5	1,2,3,7,8,9-HxCDD	2.49e5	1.23	NO	1.10	1.000	34.60	1.009	46.510	93.0	0.158	46.510
6	1,2,3,4,6,7,8-HpCDD	2.03e5	1.05	NO	1.06	1.000	38.22	1.000	46.004	92.0	0.227	46.004
7	OCDD	3.54e5	0.89	NO	1.18	1.000	41.69	1.000	88.157	88.2	0.122	88.157
8	2,3,7,8-TCDF	9.14e4	0.74	NO	1.09	1.000	25.34	1.001	8.5130	85.1	0.0431	8.5130
9	1,2,3,7,8-PeCDF	4.26e5	1.60	NO	1.16	1.000	29.52	1.000	42.829	85.7	0.0905	42.829
10	2,3,4,7,8-PeCDF	4.04e5	1.56	NO	1.12	1.000	30.47	1.000	42.300	84.6	0.0888	42.300
11	1,2,3,4,7,8-HxCDF	3.75e5	1.27	NO	1.41	1.000	33.26	1.000	43.569	87.1	0.132	43.569
12	1,2,3,6,7,8-HxCDF	4.08e5	1.29	NO	1.22	1.000	33.39	1.000	45.197	90.4	0.132	45.197
13	2,3,4,6,7,8-HxCDF	3.49e5	1.24	NO	1.28	1.000	34.02	1.001	44.630	89.3	0.156	44.630
14	1,2,3,7,8,9-HxCDF	3.01e5	1.27	NO	1.26	1.000	35.00	1.000	44.852	89.7	0.212	44.852
15	1,2,3,4,6,7,8-HpCDF	3.51e5	1.04	NO	1.69	1.000	36.89	1.001	45.504	91.0	0.164	45.504
16	1,2,3,4,7,8,9-HpCDF	2.71e5	1.06	NO	1.48	1.000	38.79	1.000	46.451	92.9	0.194	46.451
17	OCDF	4.29e5	0.91	NO	1.10	1.000	41.92	1.001	87.361	87.4	0.166	87.361
18	13C-2,3,7,8-TCDD	6.85e5	0.79	NO	1.01	1.000	26.09	1.023	102.81	103	0.182	
19	13C-1,2,3,7,8-PeCDD	5.45e5	0.64	NO	0.827	1.000	30.73	1.205	100.32	100	0.177	
20	13C-1,2,3,4,7,8-HxCDD	4.98e5	1.24	NO	0.916	1.000	34.17	0.988	103.08	103	0.348	
21	13C-1,2,3,6,7,8-HxCDD	4.75e5	1.24	NO	0.921	1.000	34.28	0.991	97.757	97.8	0.346	
22	13C-1,2,3,4,6,7,8-HpCDD	4.14e5	1.07	NO	0.708	1.000	38.21	1.105	110.81	111	0.366	
23	13C-OCDD	6.81e5	0.89	NO	0.503	1.000	41.68	1.205	256.92	128	0.308	
24	13C-2,3,7,8-TCDF	9.87e5	0.78	NO	0.977	1.000	25.31	0.992	108.47	108	0.129	
25	13C-1,2,3,7,8-PeCDF	8.58e5	1.56	NO	0.896	1.000	29.51	1.157	102.85	103	0.256	
26	13C-2,3,4,7,8-PeCDF	8.53e5	1.55	NO	0.900	1.000	30.46	1.194	101.87	102	0.255	
27	13C-1,2,3,4,7,8-HxCDF	6.10e5	0.53	NO	1.17	1.000	33.25	0.961	98.948	98.9	0.314	
28	13C-1,2,3,6,7,8-HxCDF	7.38e5	0.53	NO	1.52	1.000	33.38	0.965	92.136	92.1	0.242	
29	13C-2,3,4,6,7,8-HxCDF	6.12e5	0.52	NO	1.25	1.000	34.00	0.983	92.862	92.9	0.294	
30	13C-1,2,3,7,8,9-HxCDF	5.34e5	0.51	NO	1.05	1.000	34.98	1.011	96.148	96.1	0.348	

JF 6/25/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:22 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	4.56e5	0.45	NO	0.868	1.000	36.87	1.066	99.653	99.7	0.432
32	13C-1,2,3,4,7,8,9-HpCDF	3.93e5	0.45	NO	0.727	1.000	38.79	1.121	102.70	103	0.516
33	13C-OCDF	8.97e5	0.88	NO	0.760	1.000	41.90	1.211	223.90	112	0.228
34	37Cl-2,3,7,8-TCDD	4.39e4			0.668	1.000	26.12	1.024	9.9972	100	0.0673
35	13C-1,2,3,4-TCDD	6.56e5	0.78	NO	1.00	1.000	25.51	0.000	100.00	100	0.184
36	13C-1,2,3,4-TCDF	9.31e5	0.78	NO	1.00	1.000	24.09	0.000	100.00	100	0.126
37	13C-1,2,3,7,8,9-HxCDD	5.27e5	1.24	NO	1.00	1.000	34.59	0.000	100.00	100	0.319

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 8:02:11 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:02:26 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

090629H2_1	ST090629H2-1 1613 CS3 080917I		29-Jun-09	14:01:48
090629H2_2	0_2207_OPR001		29-Jun-09	14:52:10
090629H2_3	solvent blank		29-Jun-09	15:41:42
090629H2_4	0_2207_MB001		29-Jun-09	16:31:15
090629H2_5	31831_2207_001 CAMO-09-10460	10.45	29-Jun-09	17:20:45
090629H2_6	31831_2207_002 CAMO-09-10461	11.42	29-Jun-09	18:10:16
090629H2_7	31831_2207_003 CAMO-09-10462	10.55	29-Jun-09	18:59:49
090629H2_8	31831_2207_004 CAMO-09-10467	10.57	29-Jun-09	19:49:21
090629H2_9	31832_2207_001 CAMO-09-10480	11.15	29-Jun-09	20:38:54
090629H2_10	31833_2207_001 CAMO-09-6005	12.18	29-Jun-09	21:28:25
090629H2_11	31833_2207_002 CAMO-09-6047	12.12	29-Jun-09	22:17:56
090629H2_12	31837_2207_001 CAMO-09-6006	11.31	29-Jun-09	23:07:29
090629H2_13	31837_2207_002 CAMO-09-6007	10.42	29-Jun-09	23:56:59
090629H2_14	31837_2207_003 CAMO-09-6008	13.14	30-Jun-09	00:46:29
090629H2_15	31837_2207_004 CAMO-09-6009	12.25	30-Jun-09	01:36:02
090629H2_16	solvent blank		30-Jun-09	02:25:34
090629H2_17	ST090629H2-2 1613 CS3 080917I		30-Jun-09	03:15:05

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090629H2-1 End Calibration ID: ST090629H2-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range? (A)	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits		NO
-S/N > 2.5:1		✓
-CS1 within 12-hour clock		✓

Comments: (A) 8290 only JL 6/30/09

Reviewed by: DMS 6/30/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 rmh

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, June 29, 2009 13:58:42 Pacific Daylight Time

M 292.9824 R 12499

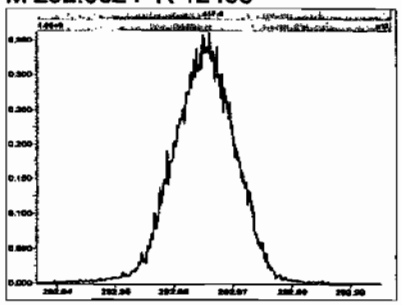

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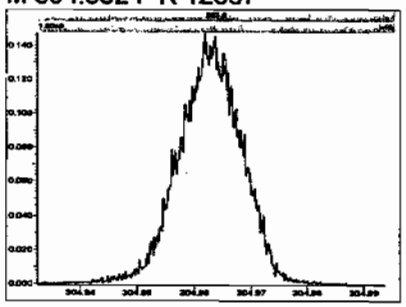

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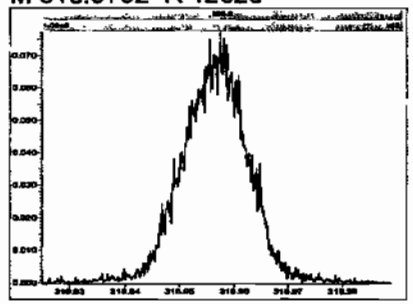

M 330.9792 R 11904

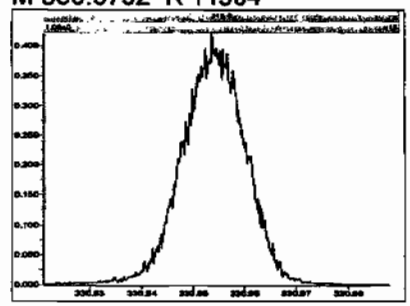

M 342.9792 R 11734

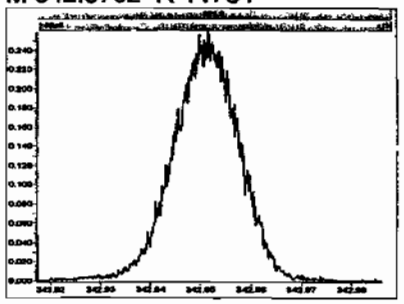

M 354.9792 R 11416

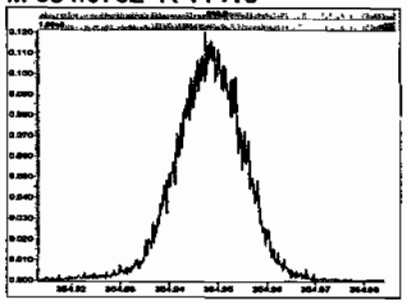

M 366.9792 R 11573

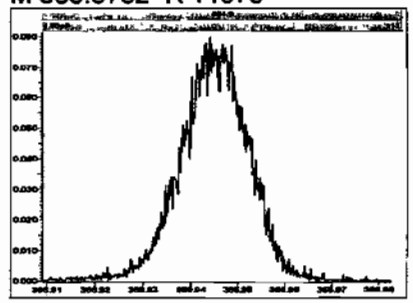

M 380.9760 R 11064

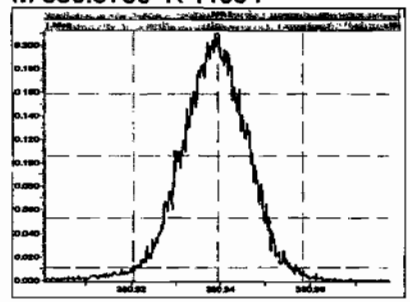

M 392.9760 R 11468

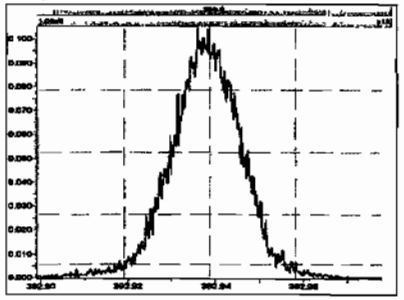

M 404.9760 R 10964

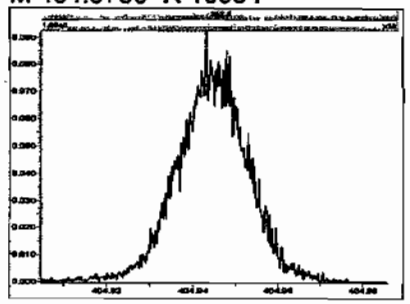

M 416.9760 R 10681

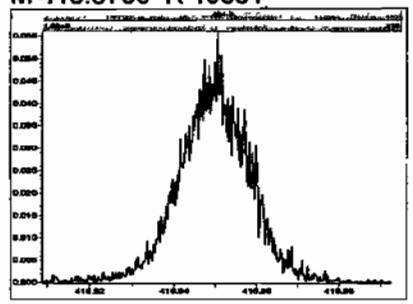

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, June 29, 2009 13:59:22 Pacific Daylight Time

M 330.9792 R 12376

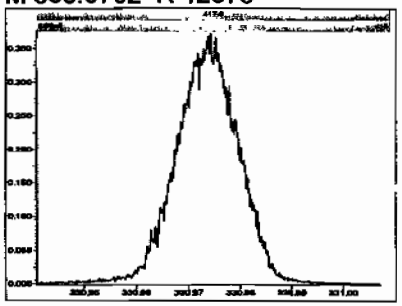

M 342.9792 R 12624

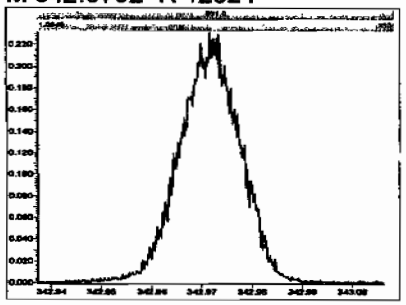

M 354.9792 R 12137

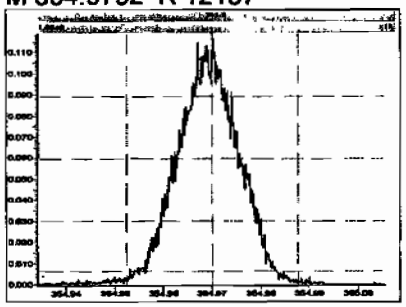

M 366.9792 R 11848

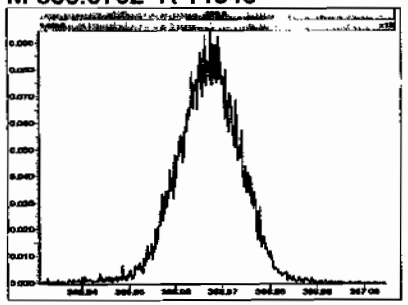

M 380.9760 R 12075

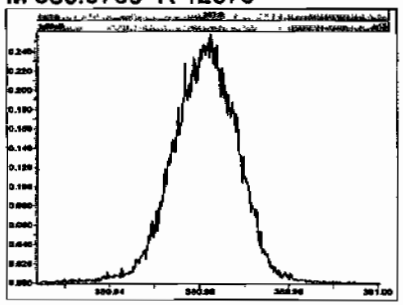

M 392.9760 R 11570

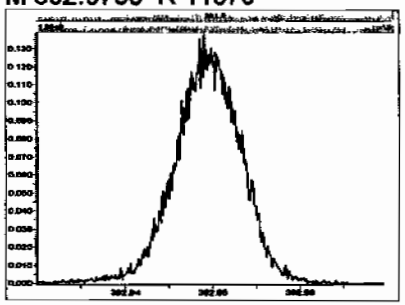

M 404.9760 R 11736

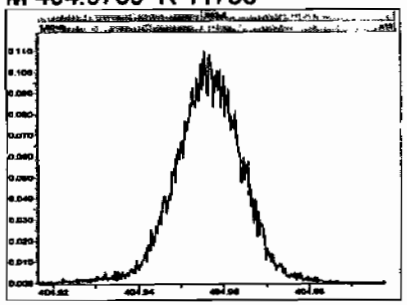

M 416.9760 R 11850

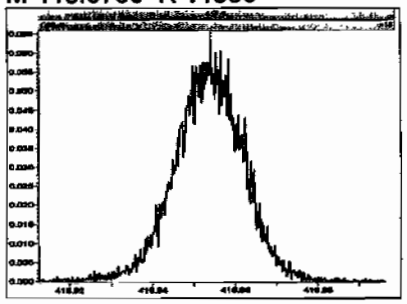

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, June 29, 2009 14:00:04 Pacific Daylight Time

M 366.9792 R 12500

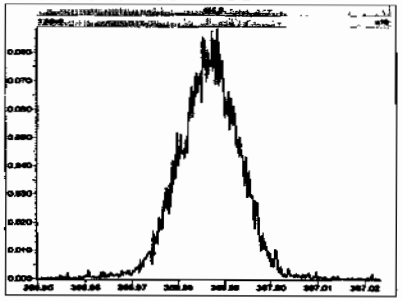

M 380.9760 R 12134

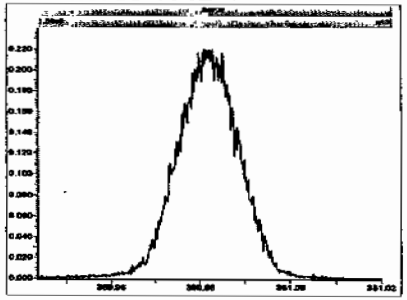

M 392.9760 R 12079

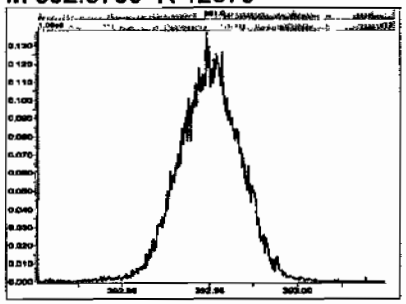

M 404.9760 R 12136

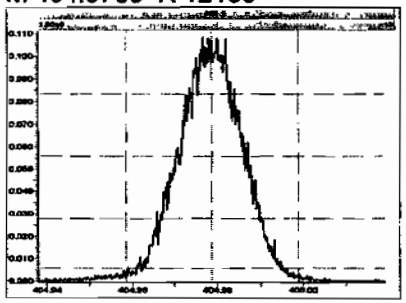

M 416.9760 R 12379

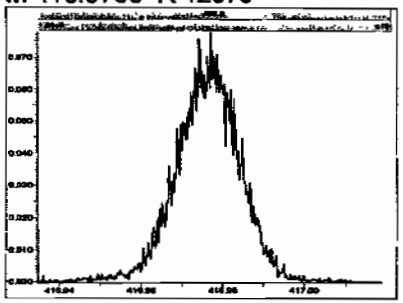

M 430.9728 R 11789

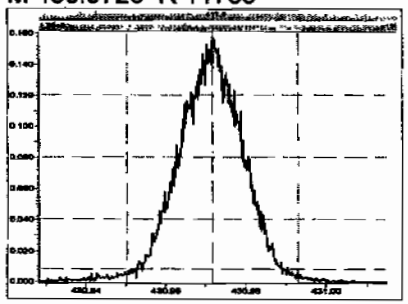

M 442.9728 R 12077

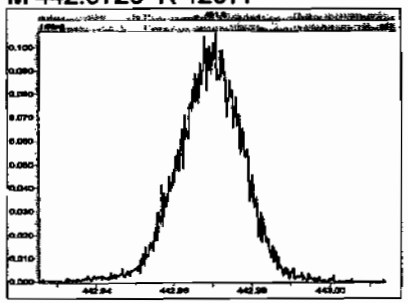

M 454.9728 R 12379

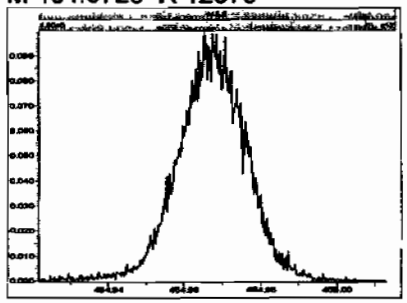

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, June 29, 2009 14:00:39 Pacific Daylight Time

M 404.9760 R 13086

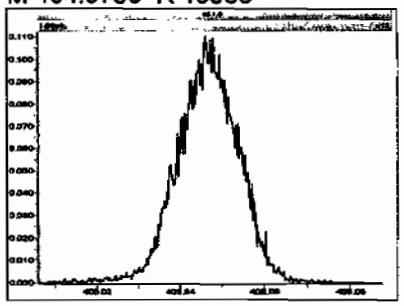

M 416.9760 R 13021

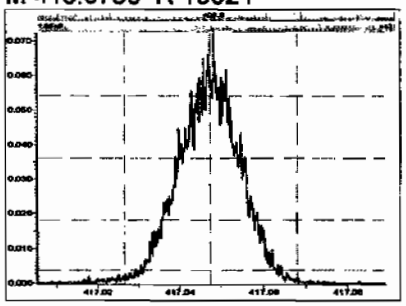

M 430.9728 R 13088

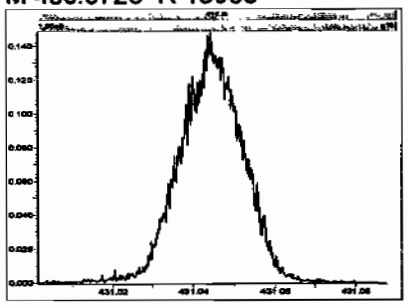

M 442.9728 R 12692

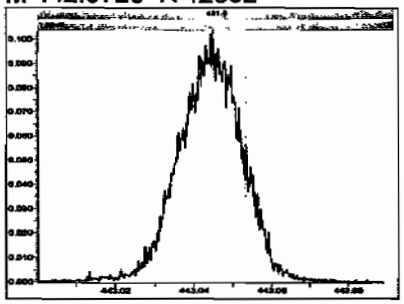

M 454.9728 R 12691

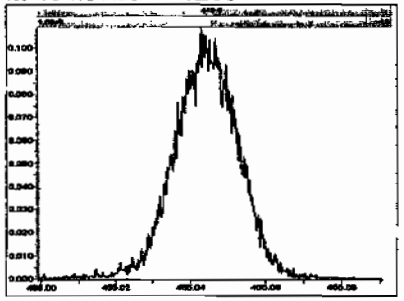

M 466.9728 R 12952

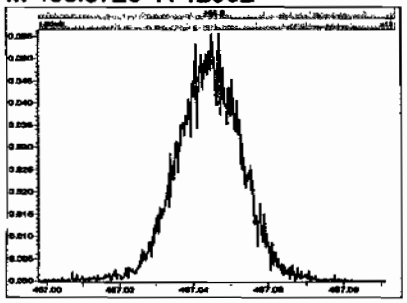

M 480.9696 R 12628

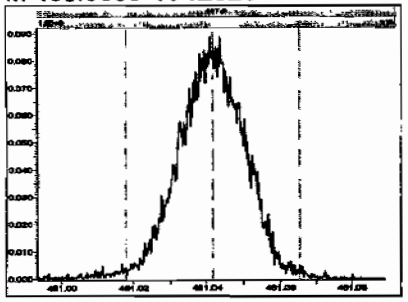

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, June 29, 2009 14:01:11 Pacific Daylight Time

M 430.9728 R 12132

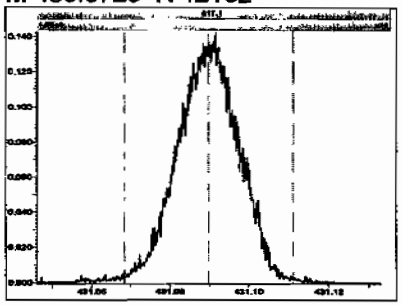

M 442.9728 R 12135

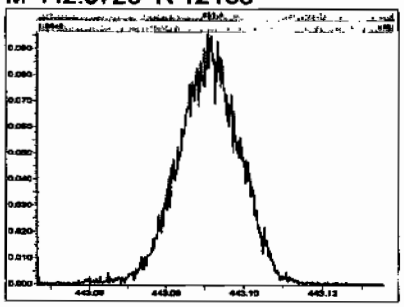

M 454.9728 R 12317

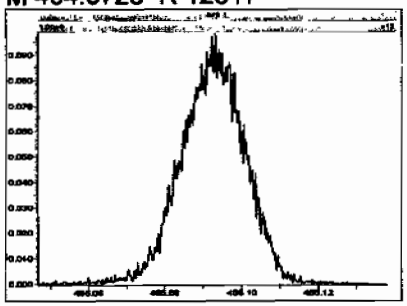

M 466.9728 R 12136

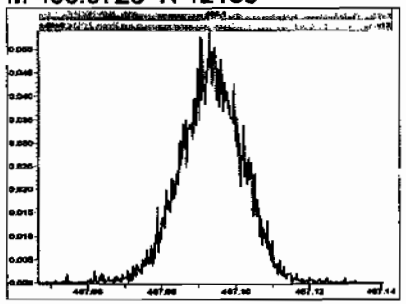

M 480.9696 R 12499

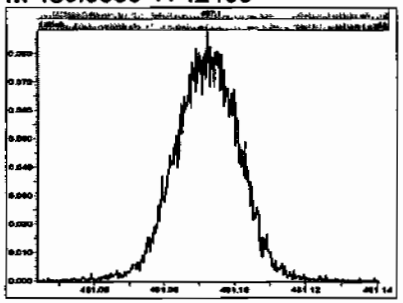

M 492.9696 R 12378

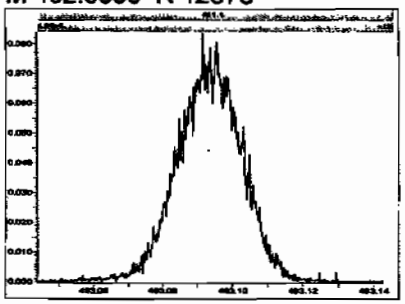

M 504.9696 R 12019

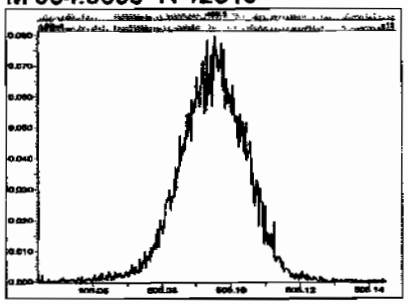

M 516.9697 R 11576

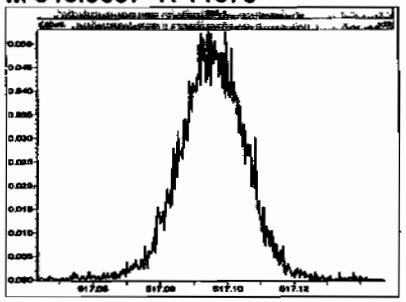

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Last Altered: Monday, June 29, 2009 14:58:46 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:59:04 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

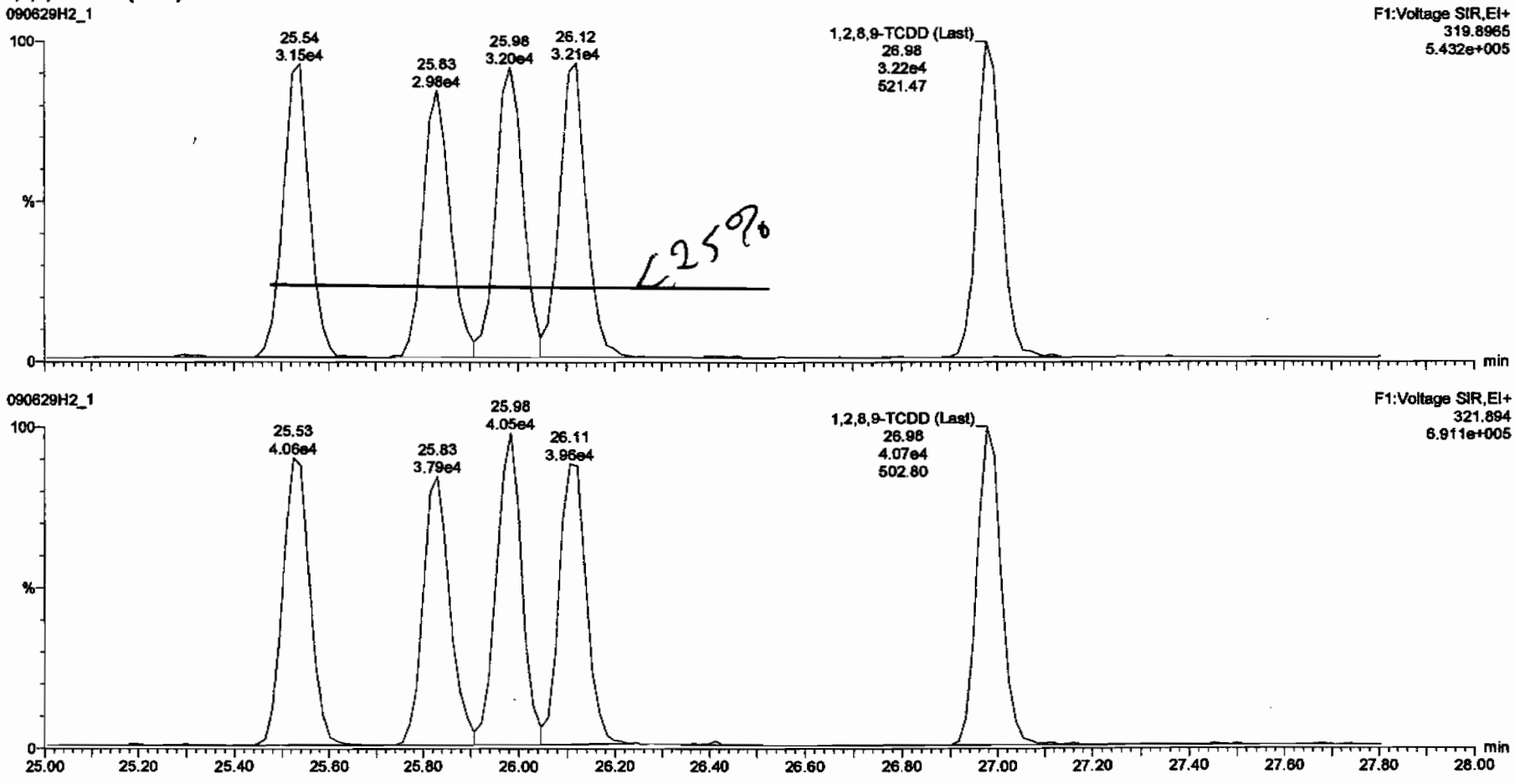

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

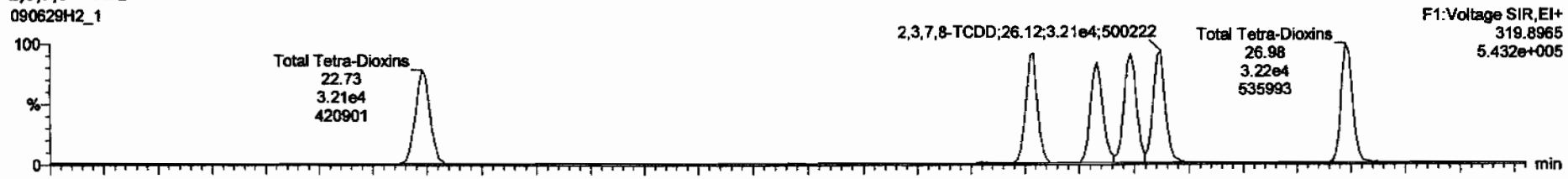

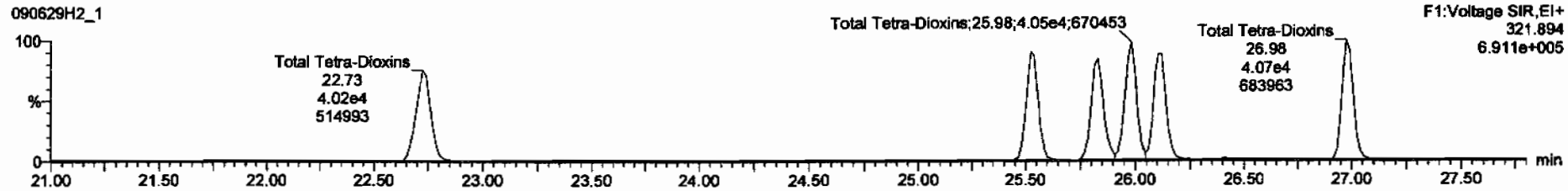

13C-2,3,7,8-TCDD

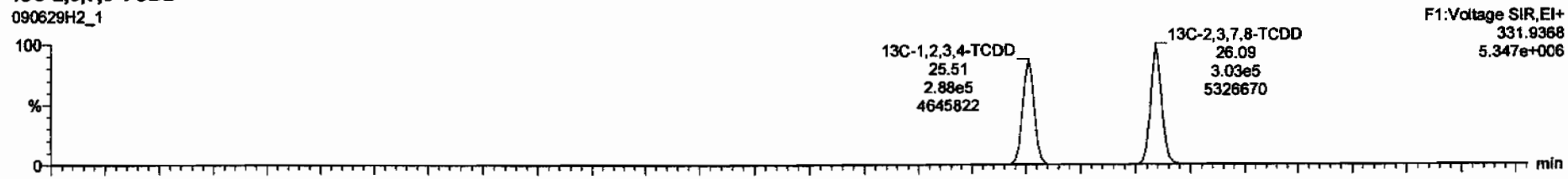

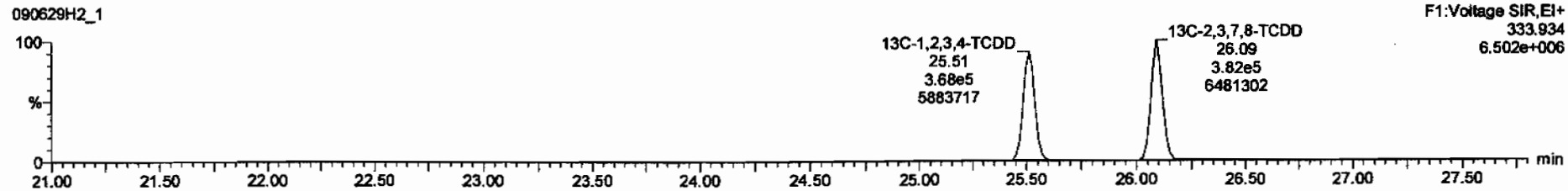

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

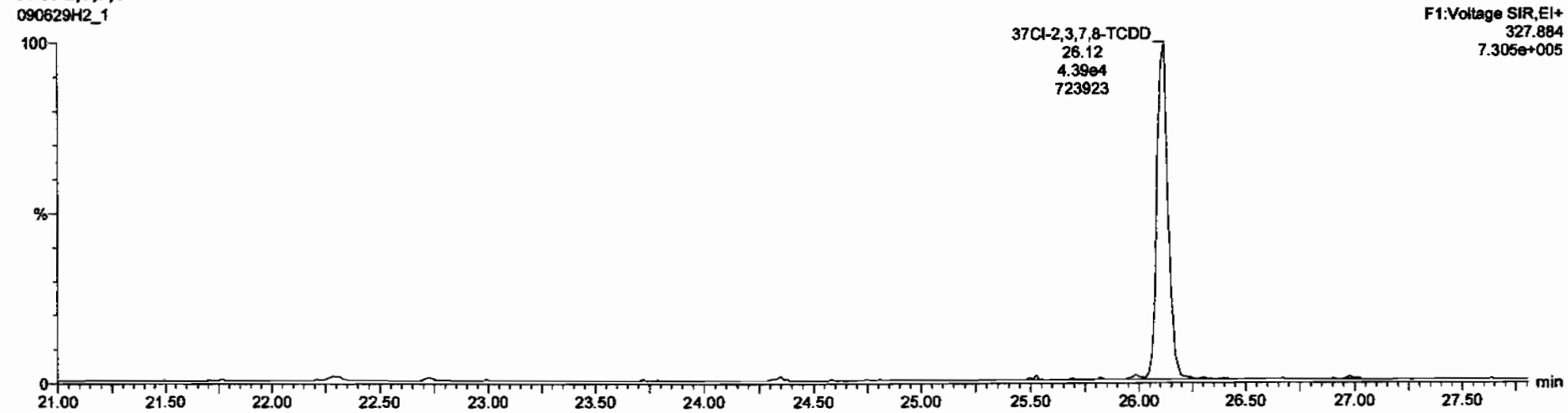

13C-1,2,3,4-TCDD

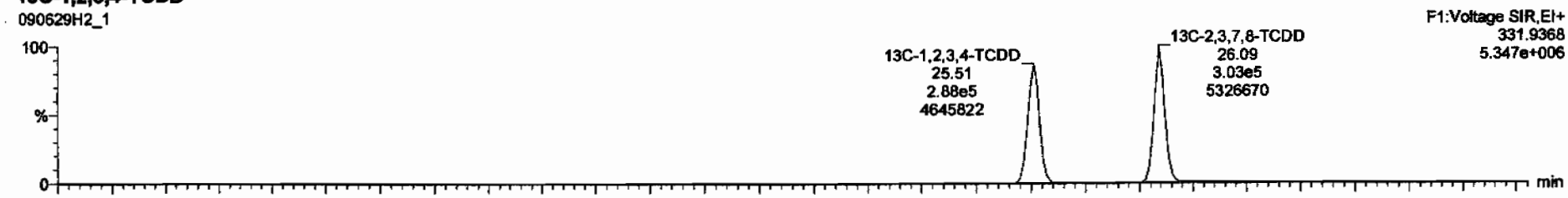

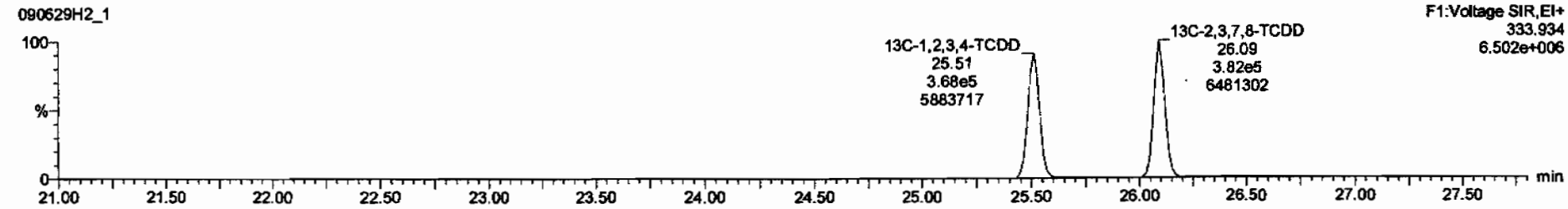

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Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

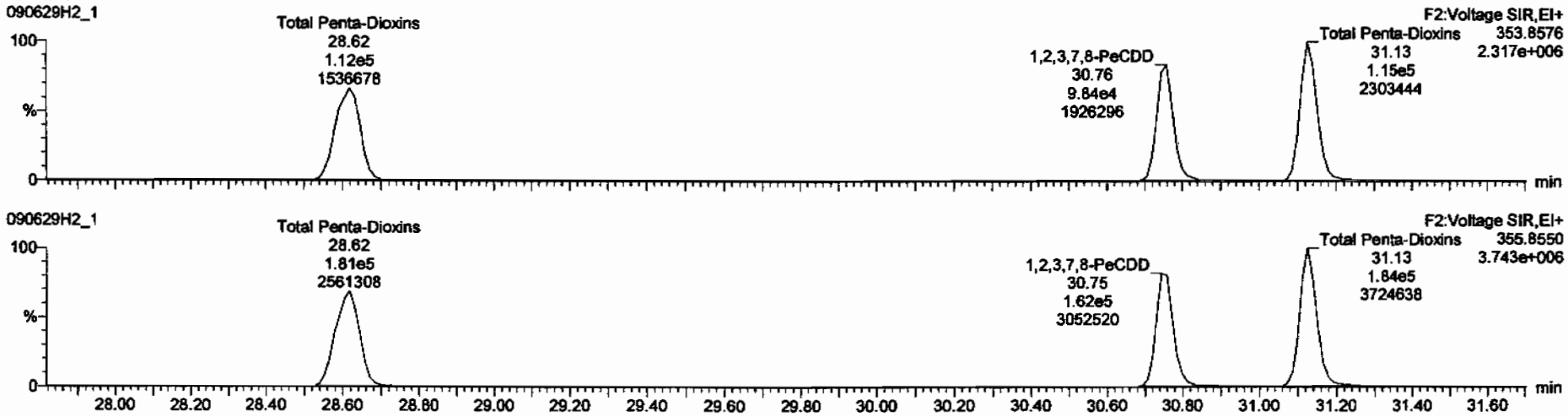

13C-1,2,3,7,8-PeCDD

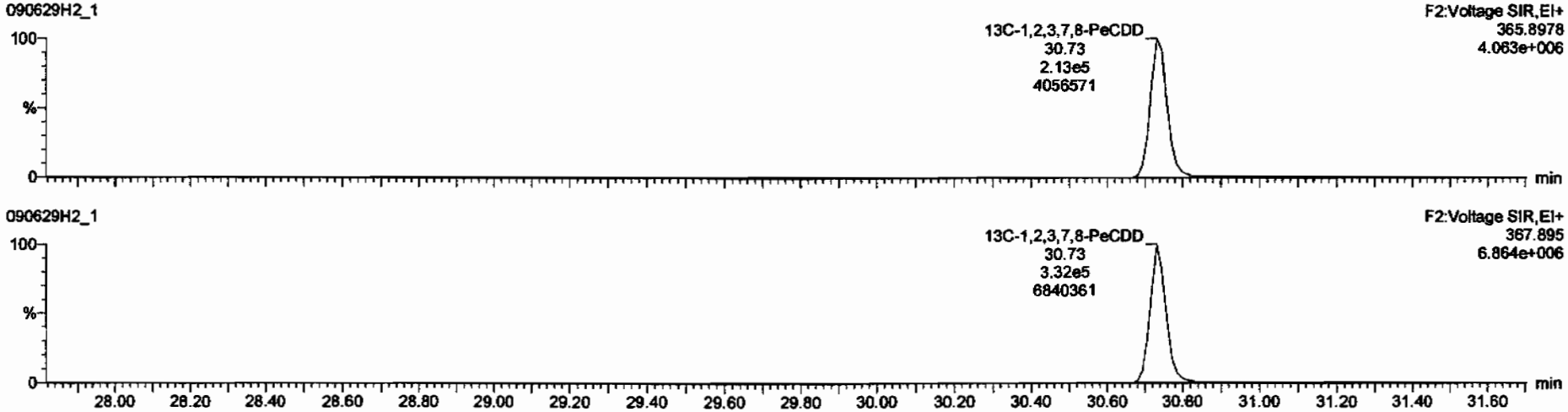

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Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

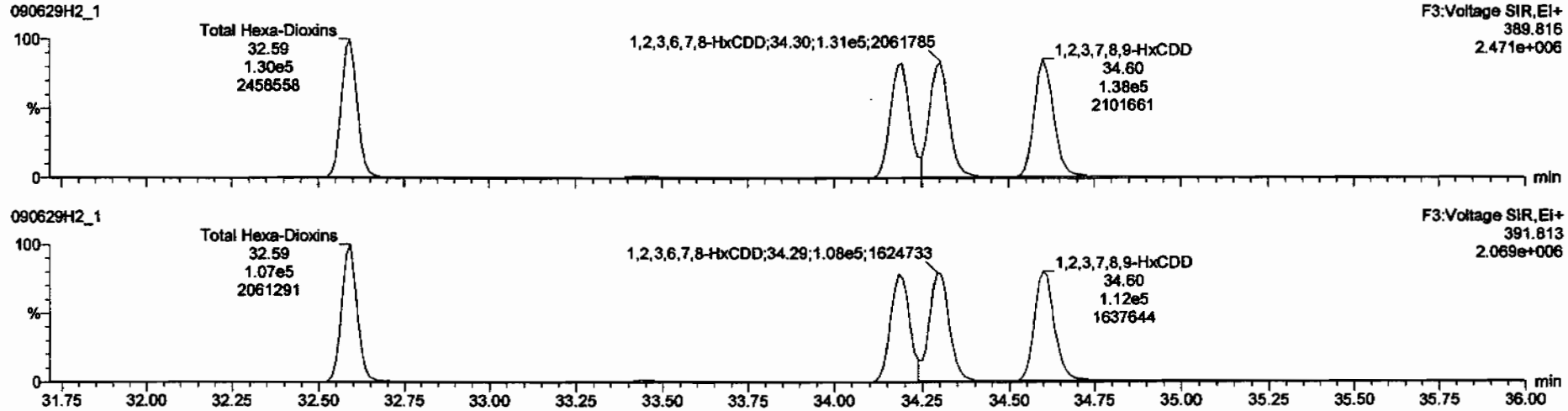

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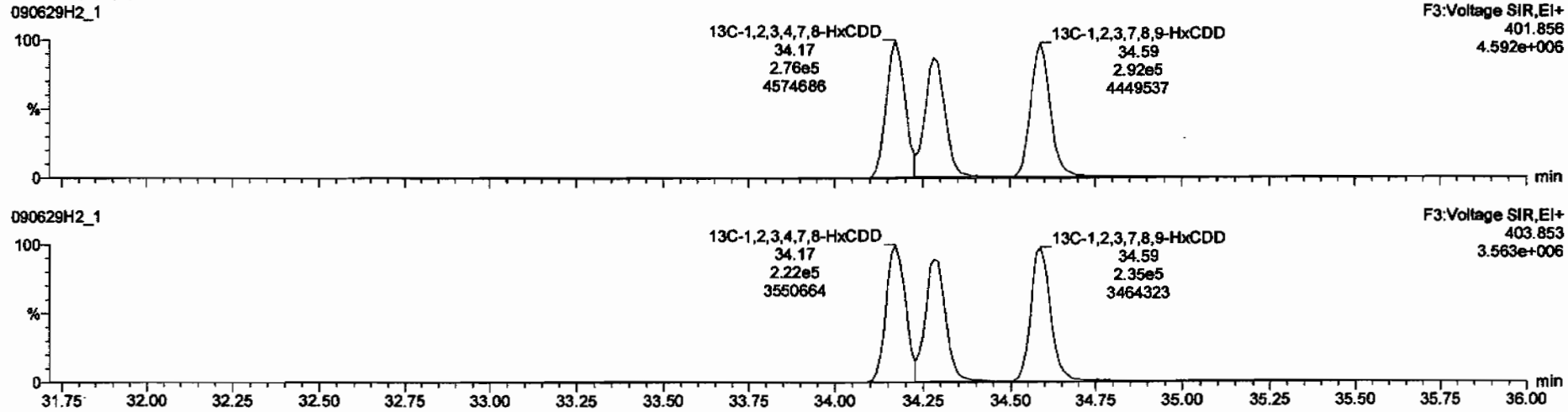

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Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

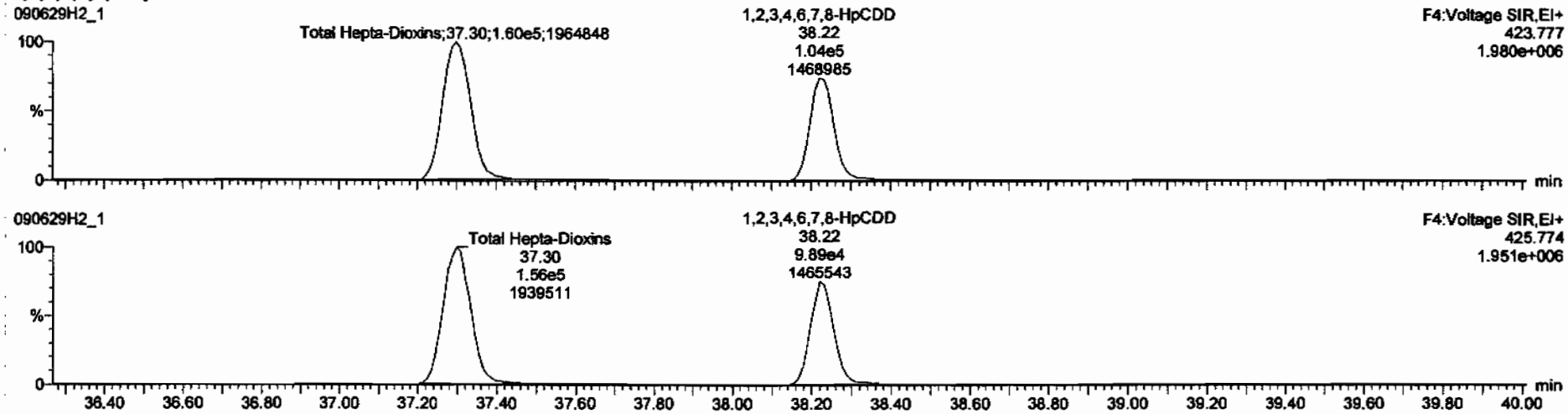

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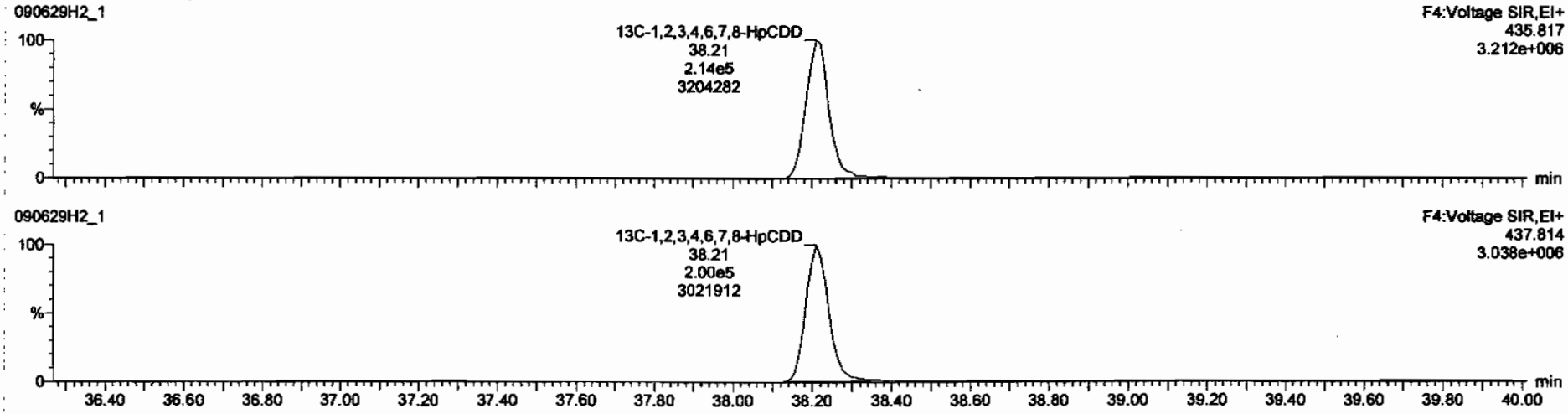

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

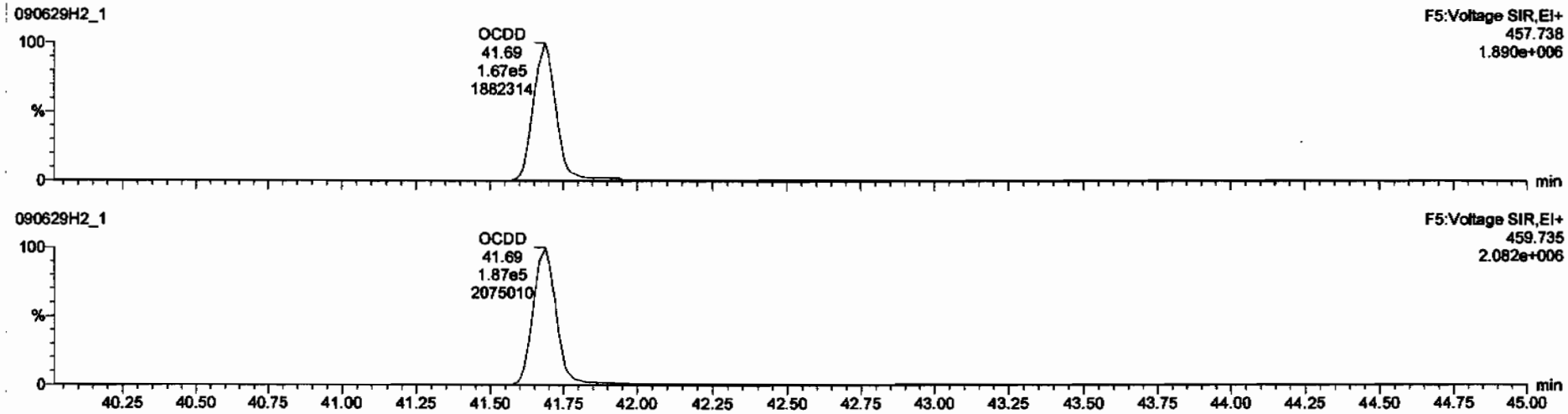

13C-OCDD

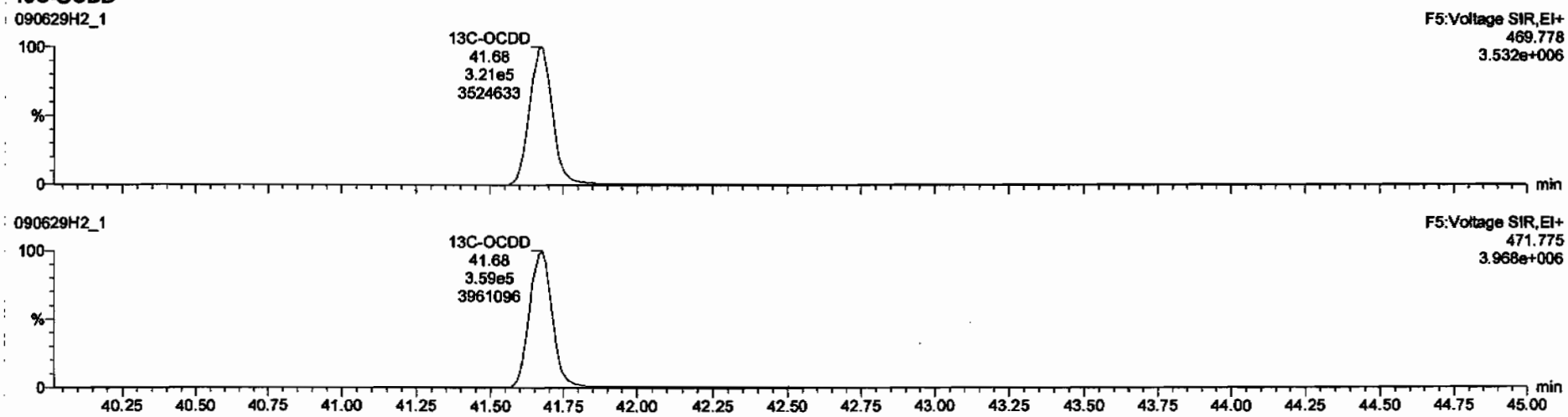

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Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

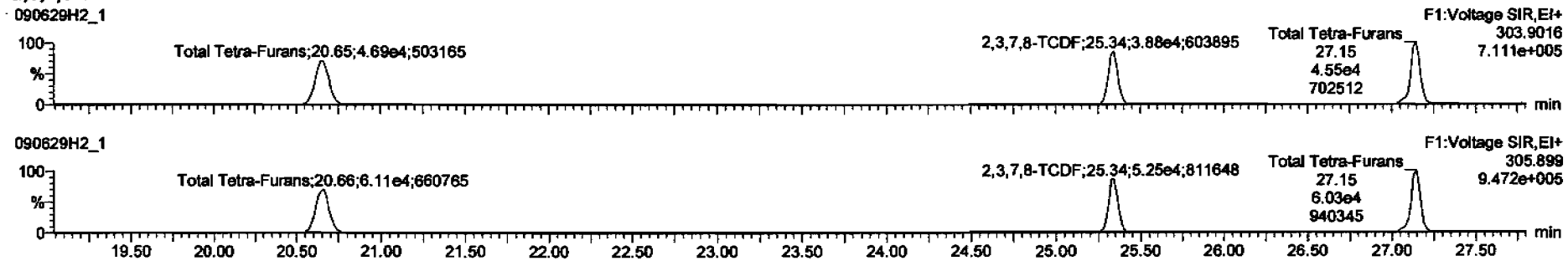

13C-2,3,7,8-TCDF

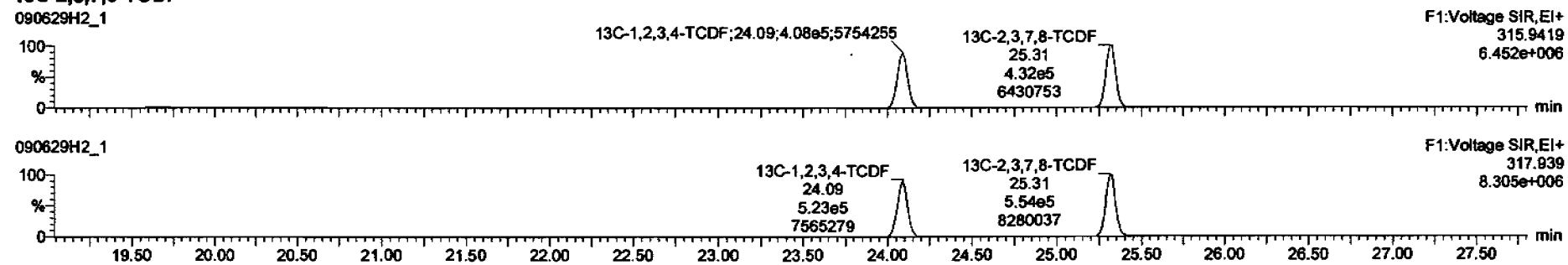

DPE1

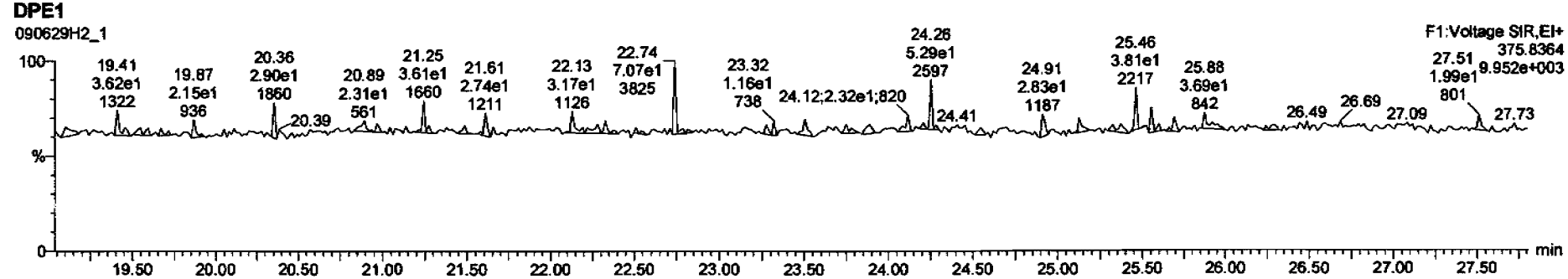

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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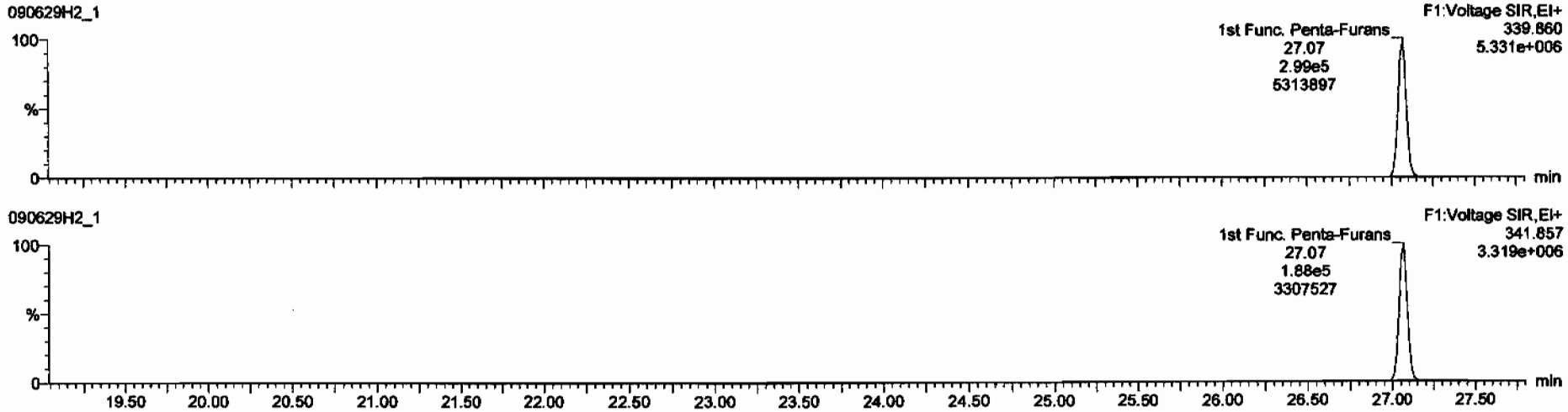

DPE6

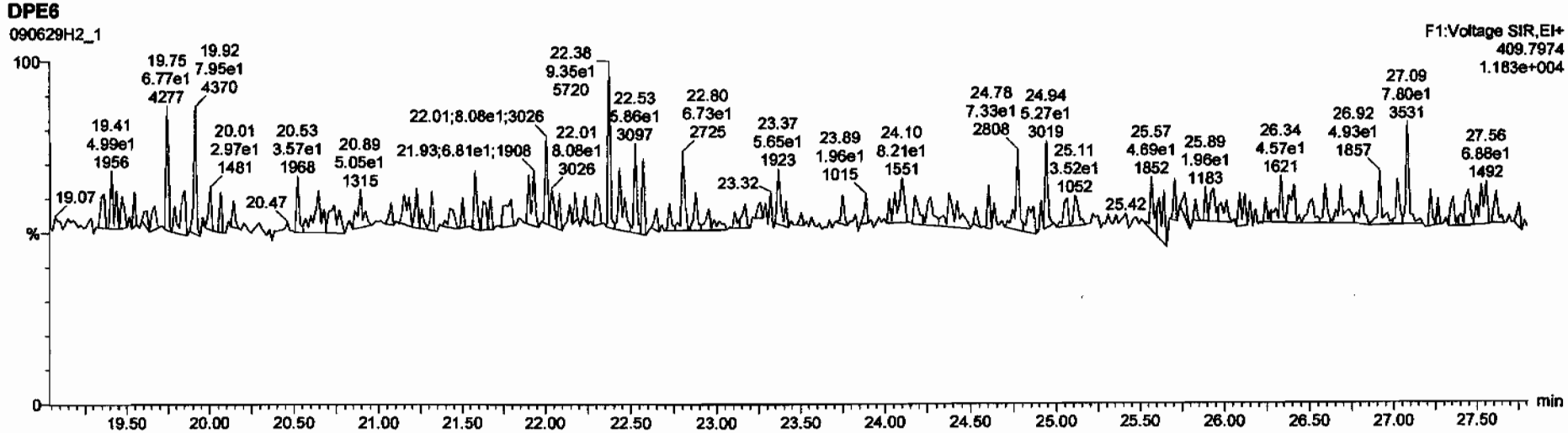

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

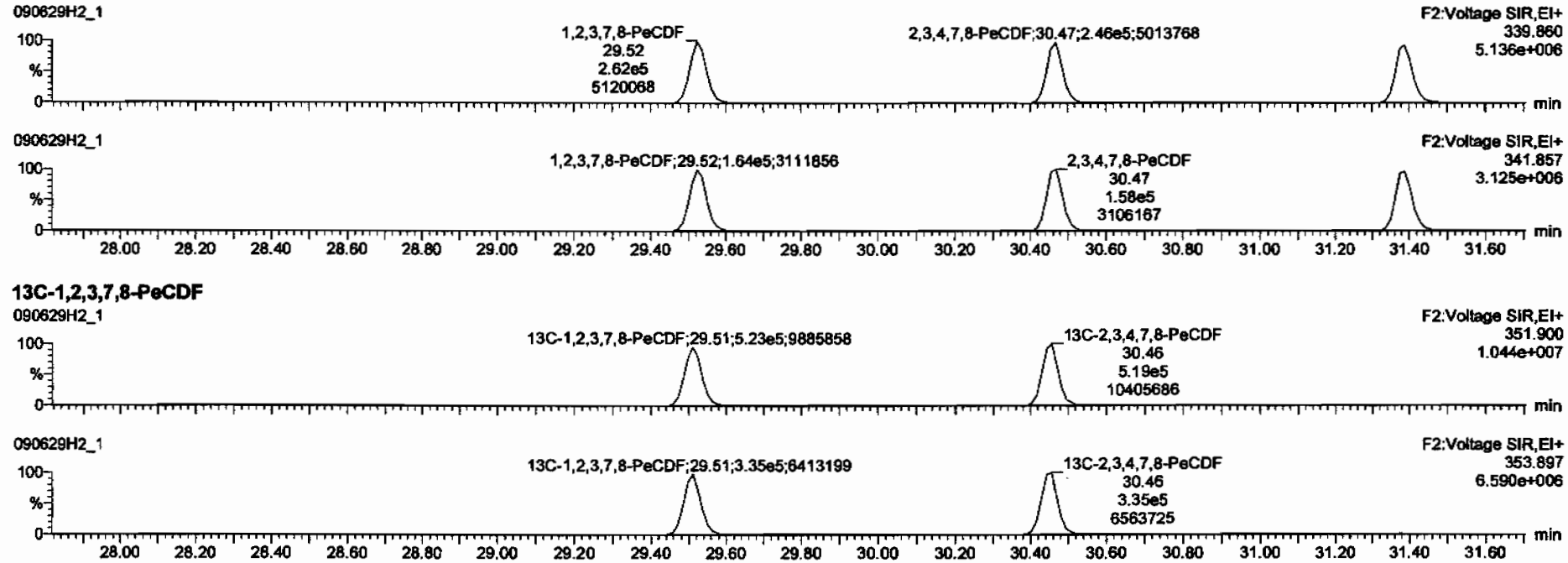

13C-1,2,3,7,8-PeCDF

DPE2

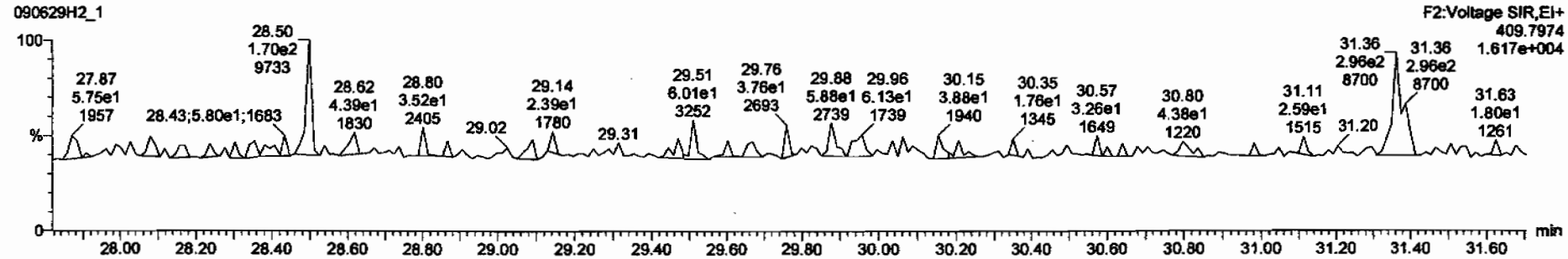

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDF

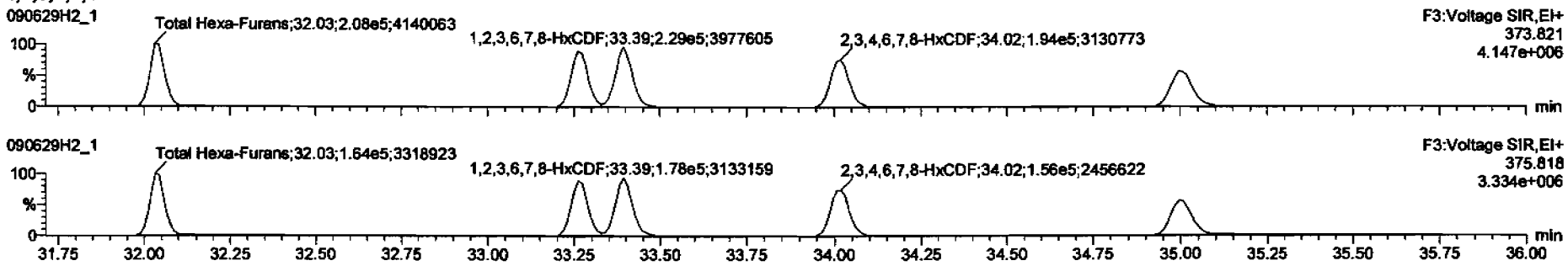

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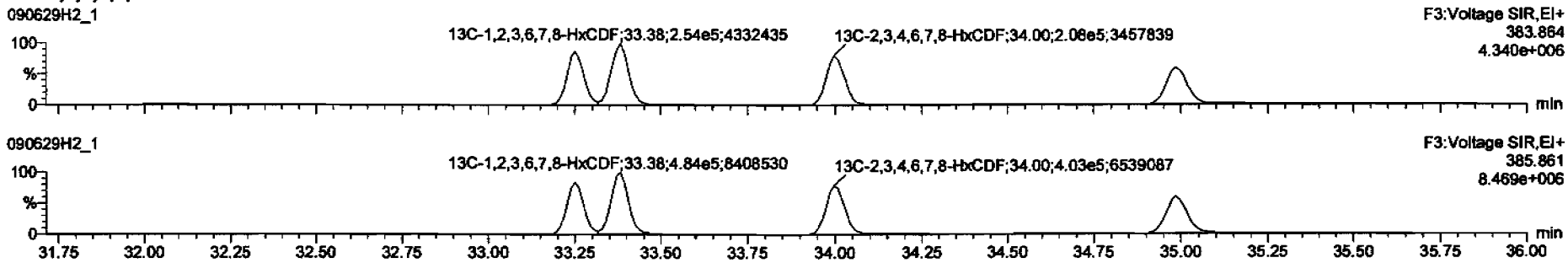

DPE3

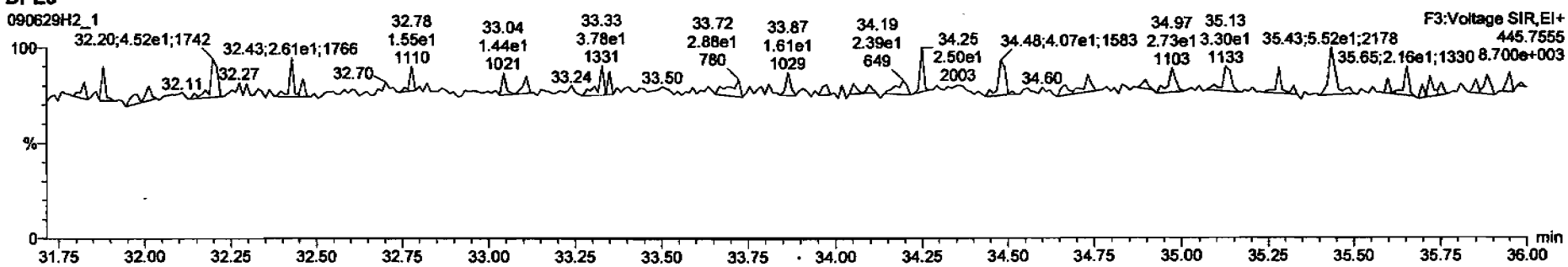

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDF

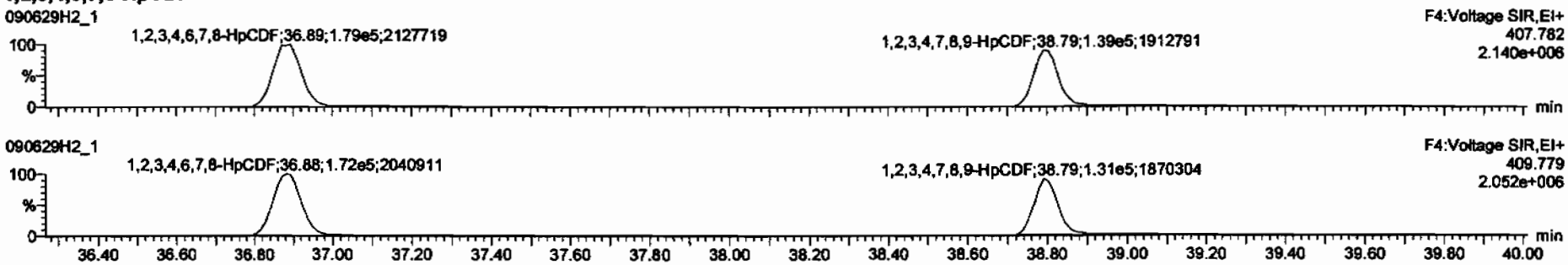

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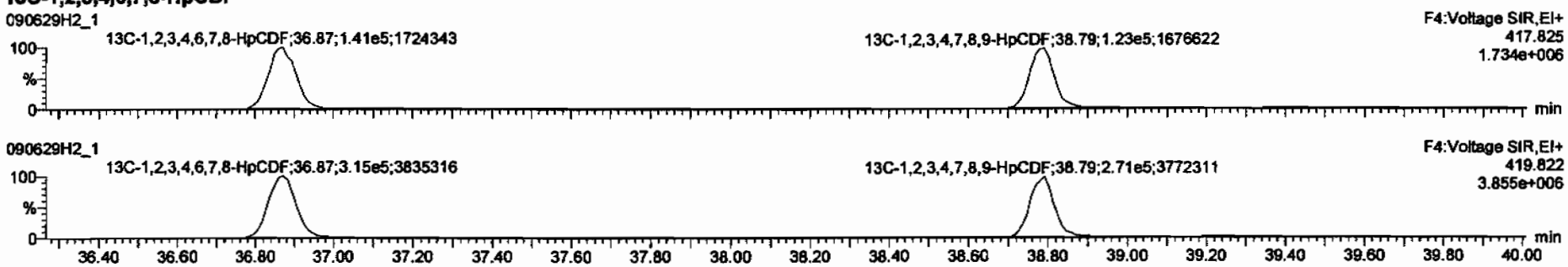

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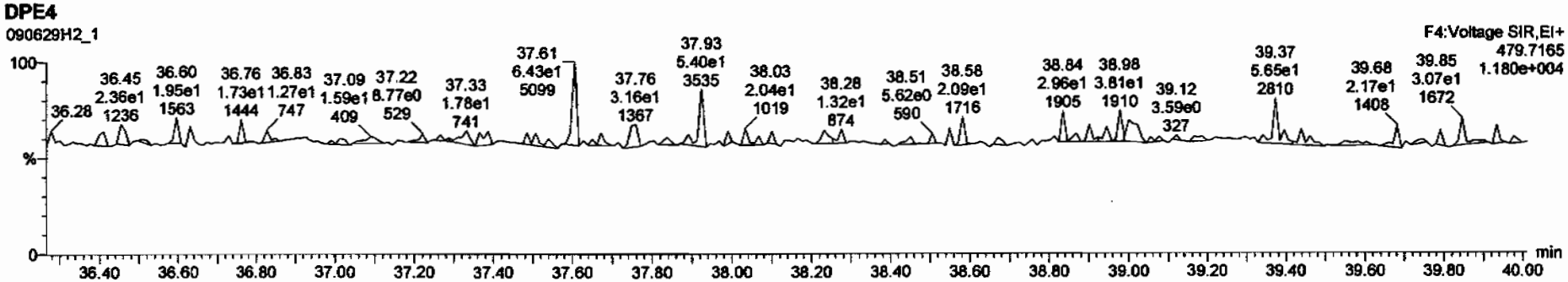

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDF

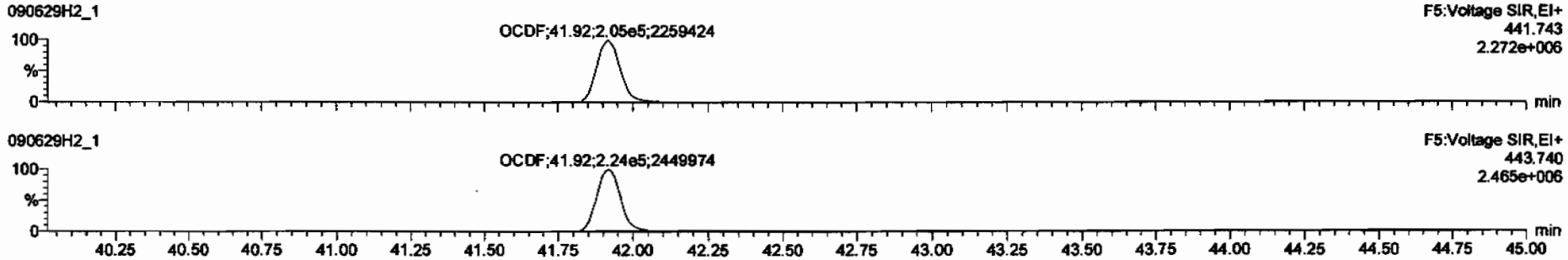

13C-OCDF

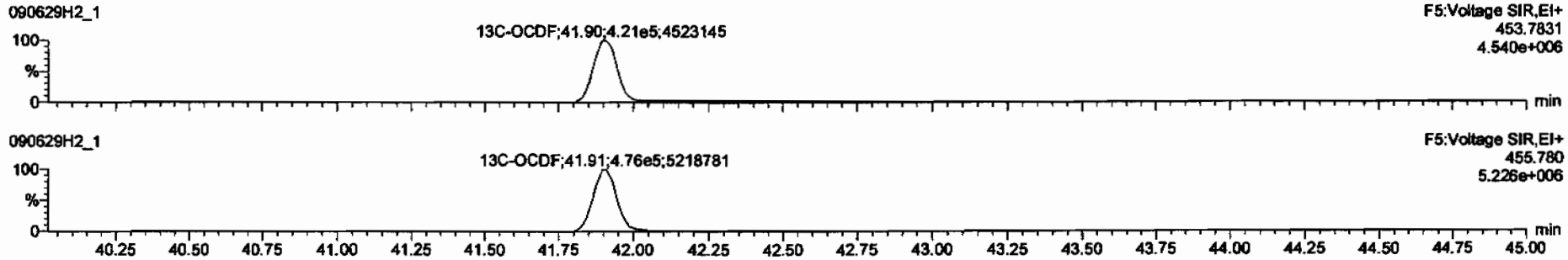

DPE5

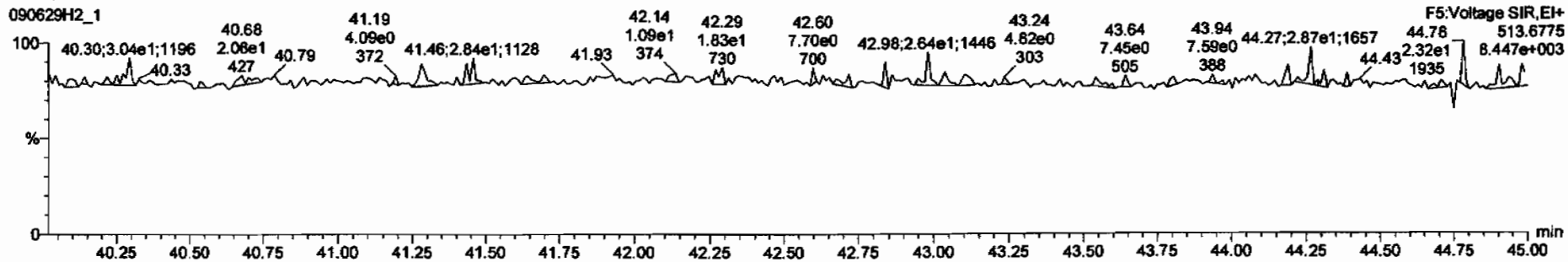

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

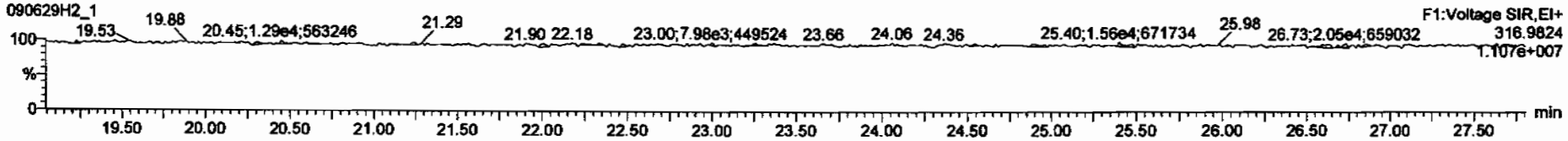

PFK2

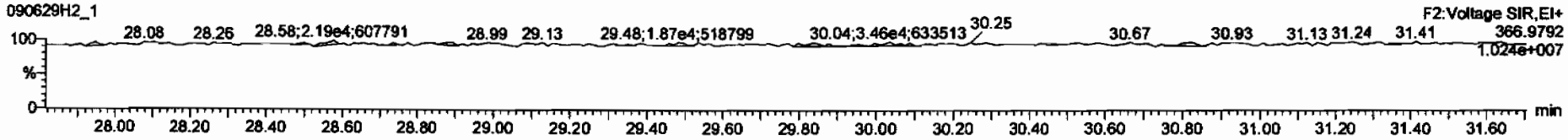

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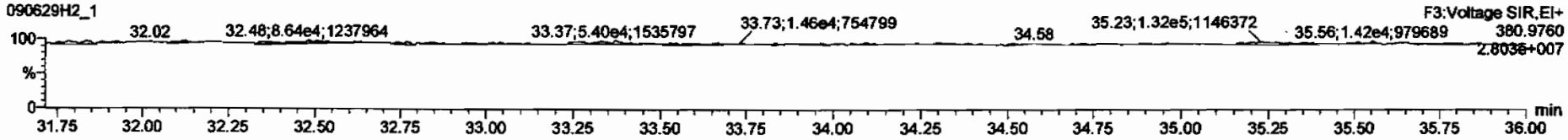

PFK4

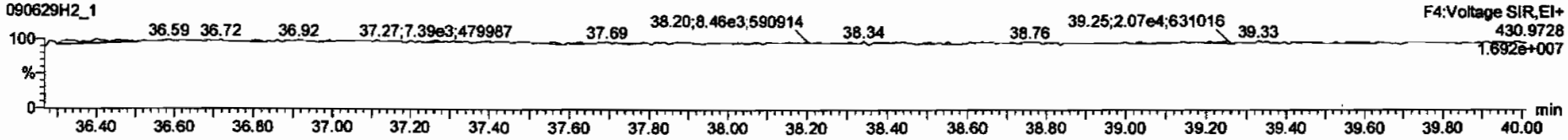

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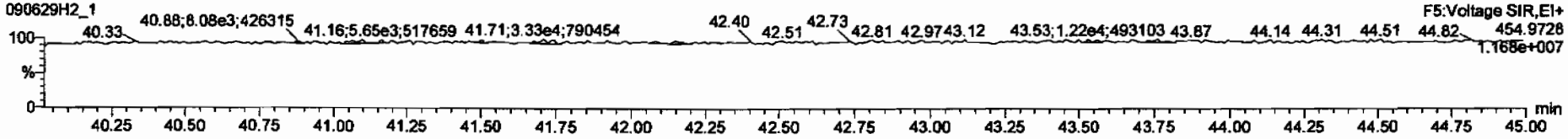

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 03:15:05

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	9.31	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	46.1	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	NO	45.9	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	NO	45.8	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	94.5	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	8.56	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	42.0	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	41.9	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.0	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.1	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	NO	45.2	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	NO	46.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	87.9	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

8290 only

Analyst: [signature]
Date: 6/30/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 03:15:05

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	102	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	98.6	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	95.4	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	111	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	253	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	99.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	99.5	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	104	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	88.2	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	92.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	96.9	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	NO	97.6	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.37-0.51	NO	102	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	220	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.28	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/30/09

8290 only

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 07:53:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:53:59 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.71
2	1,2,8,9-TCDD (Last)	26.96
3	1,2,4,7,9-PeCDD (First)	28.60
4	1,2,3,8,9-PeCDD (Last)	31.11
5	12,4,6,7,9-HxCDD (First)	32.57
6	1,2,3,7,8,9-HxCDD (Last)	34.59
7	1,2,3,4,6,7,9-HpCDD (First)	37.28
8	1,2,3,4,6,7,8-HpCDD (Last)	38.21
9	1,3,6,8-TCDF (First)	20.65
10	1,2,8,9-TCDF (Last)	27.13
11	1,3,4,6,8-PeCDF (First)	27.05
12	1,2,3,8,9-PeCDF (Last)	31.38
13	1,2,3,4,6,8-HxCDF (First)	32.02
14	1,2,3,4,8,9-HxCDF (Last)	34.98
15	1,2,3,4,6,7,8-HpCDF (First)	36.87
16	1,2,3,4,7,8,9-HpCDF (Last)	38.78

6/30/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090629H2-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090629H2_17

Analysis Date: 30-Jun-09

Analysis Time: 03:15:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.156	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 6/30/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09

Analysis Time: 03:15:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:52:16 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.64e4	0.78	NO	1.08	1.000	26.09	1.001	9.3054	93.1	0.0520	9.3054
2	1,2,3,7,8-PeCDD	2.85e5	0.62	NO	1.03	1.000	30.73	1.000	46.057	92.1	0.0816	46.057
3	1,2,3,4,7,8-HxCDD	2.47e5	1.29	NO	1.00	1.000	34.17	1.001	45.946	91.9	0.162	45.946
4	1,2,3,6,7,8-HxCDD	2.55e5	1.22	NO	1.13	1.000	34.28	1.000	45.285	90.6	0.163	45.285
5	1,2,3,7,8,9-HxCDD	2.69e5	1.27	NO	1.10	1.000	34.59	1.009	47.002	94.0	0.156	47.002
6	1,2,3,4,6,7,8-HpCDD	2.18e5	1.02	NO	1.06	1.000	38.21	1.001	45.782	91.6	0.225	45.782
7	OCDD	4.03e5	0.90	NO	1.18	1.000	41.68	1.001	94.461	94.5	0.308	94.461
8	2,3,7,8-TCDF	1.00e5	0.78	NO	1.09	1.000	25.31	1.001	8.5616	85.6	0.0417	8.5616
9	1,2,3,7,8-PeCDF	4.47e5	1.59	NO	1.16	1.000	29.51	1.001	42.017	84.0	0.0688	42.017
10	2,3,4,7,8-PeCDF	4.33e5	1.59	NO	1.12	1.000	30.44	1.000	41.931	83.9	0.0650	41.931
11	1,2,3,4,7,8-HxCDF	4.19e5	1.26	NO	1.41	1.000	33.25	1.001	43.046	86.1	0.106	43.046
12	1,2,3,6,7,8-HxCDF	4.09e5	1.27	NO	1.22	1.000	33.38	1.001	43.960	87.9	0.117	43.960
13	2,3,4,6,7,8-HxCDF	3.72e5	1.26	NO	1.28	1.000	34.00	1.000	44.070	88.1	0.134	44.070
14	1,2,3,7,8,9-HxCDF	3.30e5	1.30	NO	1.26	1.000	34.98	1.001	45.199	90.4	0.175	45.199
15	1,2,3,4,6,7,8-HpCDF	3.65e5	1.05	NO	1.69	1.000	36.87	1.001	44.842	89.7	0.169	44.842
16	1,2,3,4,7,8,9-HpCDF	2.92e5	1.01	NO	1.48	1.000	38.78	1.000	46.704	93.4	0.202	46.704
17	OCDF	4.59e5	0.91	NO	1.10	1.000	41.91	1.000	87.929	87.9	0.141	87.929
18	13C-2,3,7,8-TCDD	7.61e5	0.78	NO	1.01	1.000	26.08	1.023	102.46	102	0.194	
19	13C-1,2,3,7,8-PeCDD	5.98e5	0.62	NO	0.827	1.000	30.72	1.205	98.644	98.6	0.140	
20	13C-1,2,3,4,7,8-HxCDD	5.38e5	1.24	NO	0.916	1.000	34.15	0.988	103.25	103	0.299	
21	13C-1,2,3,6,7,8-HxCDD	4.99e5	1.27	NO	0.921	1.000	34.27	0.991	95.445	95.4	0.297	
22	13C-1,2,3,4,6,7,8-HpCDD	4.48e5	1.06	NO	0.708	1.000	38.19	1.105	111.41	111	0.357	
23	13C-OCDD	7.24e5	0.89	NO	0.503	1.000	41.66	1.205	253.46	127	0.358	
24	13C-2,3,7,8-TCDF	1.08e6	0.80	NO	0.977	1.000	25.30	0.992	106.74	107	0.133	
25	13C-1,2,3,7,8-PeCDF	9.19e5	1.60	NO	0.896	1.000	29.48	1.156	99.409	99.4	0.213	
26	13C-2,3,4,7,8-PeCDF	9.23e5	1.60	NO	0.900	1.000	30.43	1.194	99.514	99.5	0.212	
27	13C-1,2,3,4,7,8-HxCDF	6.90e5	0.51	NO	1.17	1.000	33.23	0.961	103.81	104	0.358	
28	13C-1,2,3,6,7,8-HxCDF	7.61e5	0.54	NO	1.52	1.000	33.36	0.965	88.199	88.2	0.275	
29	13C-2,3,4,6,7,8-HxCDF	6.60e5	0.51	NO	1.25	1.000	33.99	0.983	92.908	92.9	0.335	
30	13C-1,2,3,7,8,9-HxCDF	5.80e5	0.53	NO	1.05	1.000	34.96	1.011	96.898	96.9	0.397	

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:52:16 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	4.82e5	0.43	NO	0.868	1.000	36.85	1.066	97.619	97.6	0.442
32	13C-1,2,3,4,7,8,9-HpCDF	4.22e5	0.43	NO	0.727	1.000	38.77	1.122	102.27	102	0.529
33	13C-OCDF	9.51e5	0.91	NO	0.760	1.000	41.90	1.212	220.45	110	0.289
34	37Cl-2,3,7,8-TCDD	4.54e4			0.668	1.000	26.09	1.023	9.2813	92.8	0.0686
35	13C-1,2,3,4-TCDD	7.32e5	0.79	NO	1.00	1.000	25.50	0.000	100.00	100	0.196
36	13C-1,2,3,4-TCDF	1.03e6	0.78	NO	1.00	1.000	24.07	0.000	100.00	100	0.130
37	13C-1,2,3,7,8,9-HxCDD	5.68e5	1.27	NO	1.00	1.000	34.57	0.000	100.00	100	0.274

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 8:02:11 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:02:26 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

090629H2_1	ST090629H2-1 1613 CS3 080917I		29-Jun-09	14:01:48
090629H2_2	0_2207_OPR001		29-Jun-09	14:52:10
090629H2_3	solvent blank		29-Jun-09	15:41:42
090629H2_4	0_2207_MB001		29-Jun-09	16:31:15
090629H2_5	31831_2207_001 CAMO-09-10460	10.45	29-Jun-09	17:20:45
090629H2_6	31831_2207_002 CAMO-09-10461	11.42	29-Jun-09	18:10:16
090629H2_7	31831_2207_003 CAMO-09-10462	10.55	29-Jun-09	18:59:49
090629H2_8	31831_2207_004 CAMO-09-10467	10.57	29-Jun-09	19:49:21
090629H2_9	31832_2207_001 CAMO-09-10480	11.15	29-Jun-09	20:38:54
090629H2_10	31833_2207_001 CAMO-09-6005	12.18	29-Jun-09	21:28:25
090629H2_11	31833_2207_002 CAMO-09-6047	12.12	29-Jun-09	22:17:56
090629H2_12	31837_2207_001 CAMO-09-6006	11.31	29-Jun-09	23:07:29
090629H2_13	31837_2207_002 CAMO-09-6007	10.42	29-Jun-09	23:56:59
090629H2_14	31837_2207_003 CAMO-09-6008	13.14	30-Jun-09	00:46:29
090629H2_15	31837_2207_004 CAMO-09-6009	12.25	30-Jun-09	01:36:02
090629H2_16	solvent blank		30-Jun-09	02:25:34
090629H2_17	ST090629H2-2 1613 CS3 080917I		30-Jun-09	03:15:05

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:00:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:00:29 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

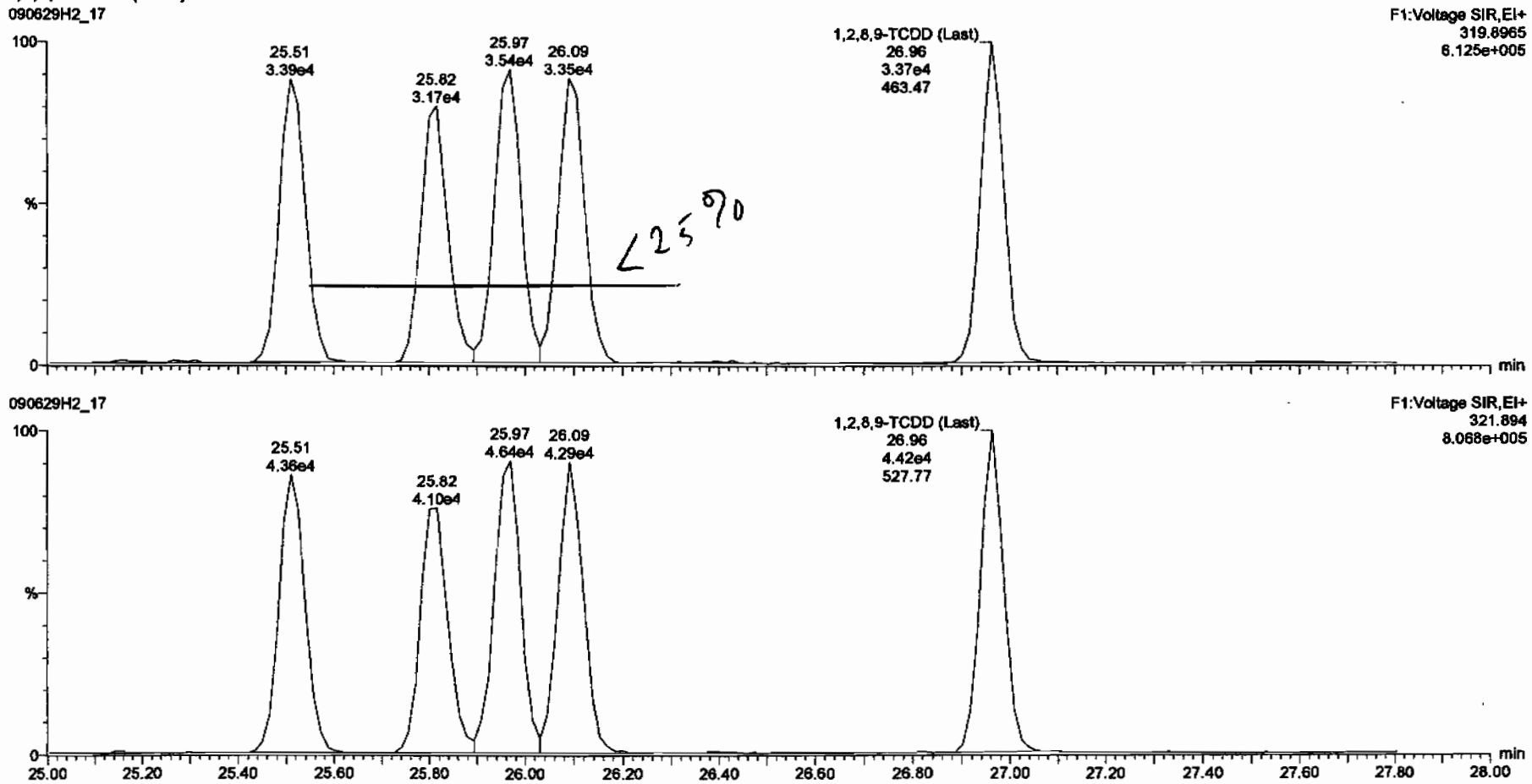

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

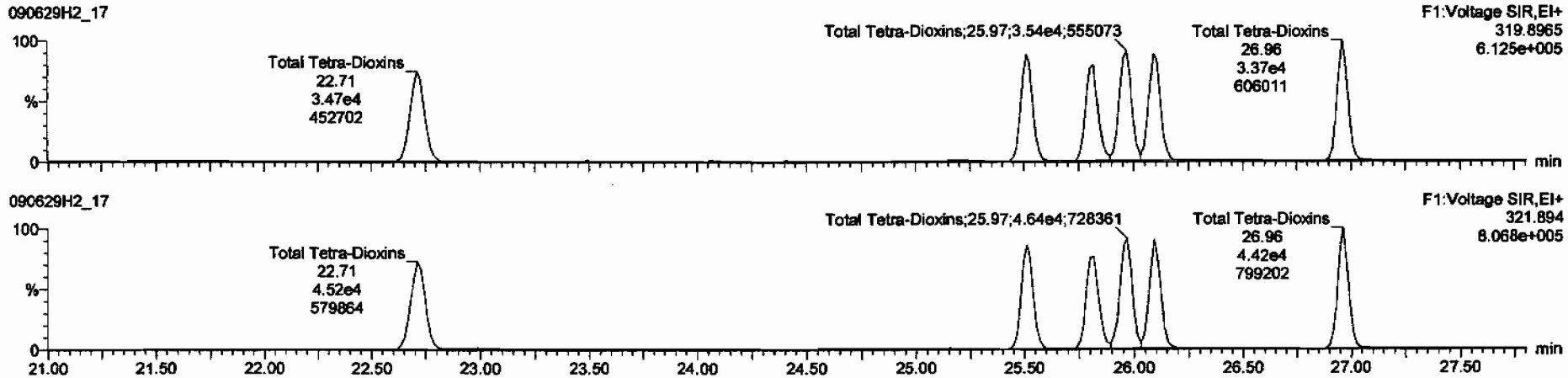

13C-2,3,7,8-TCDD

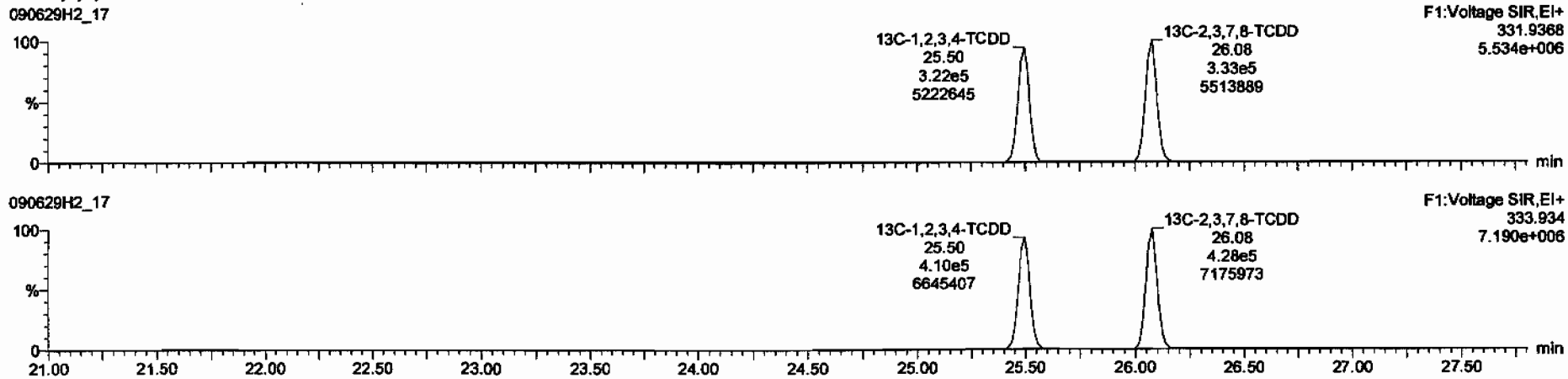

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

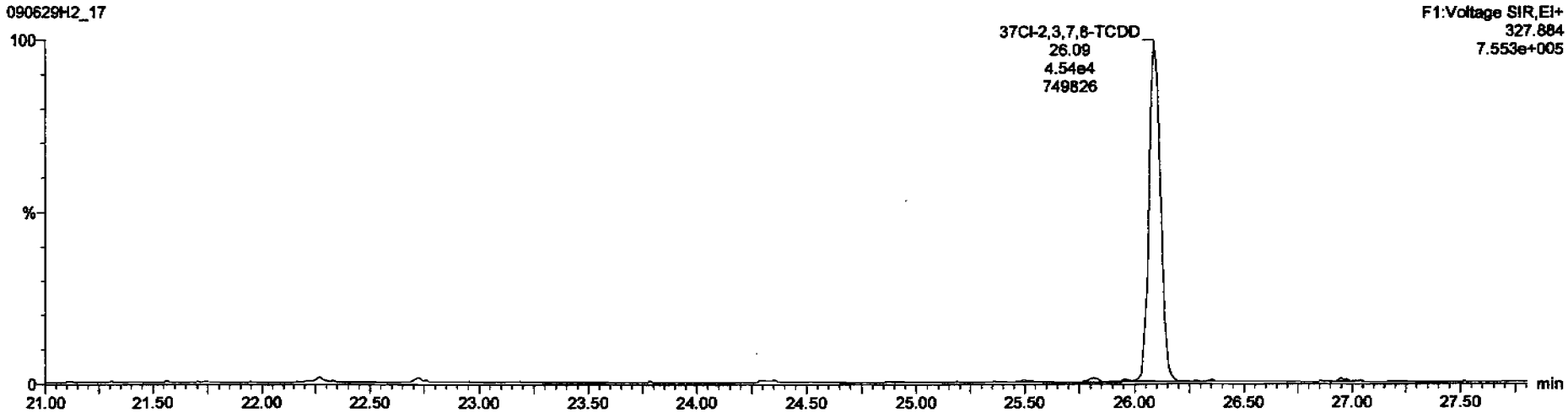

13C-1,2,3,4-TCDD

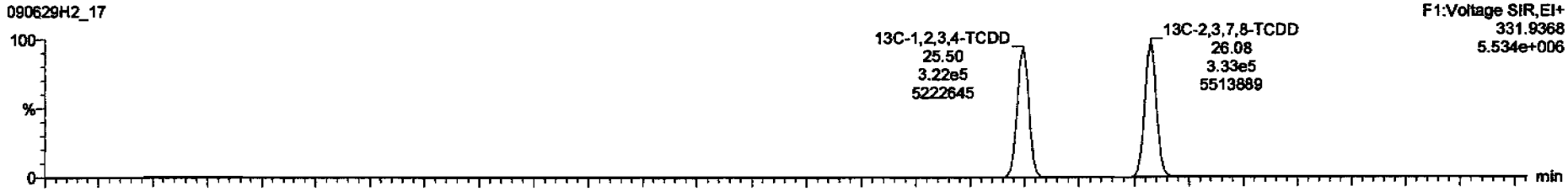

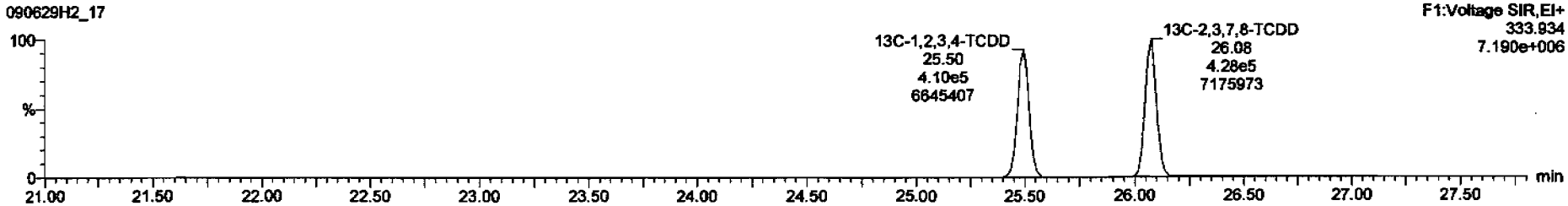

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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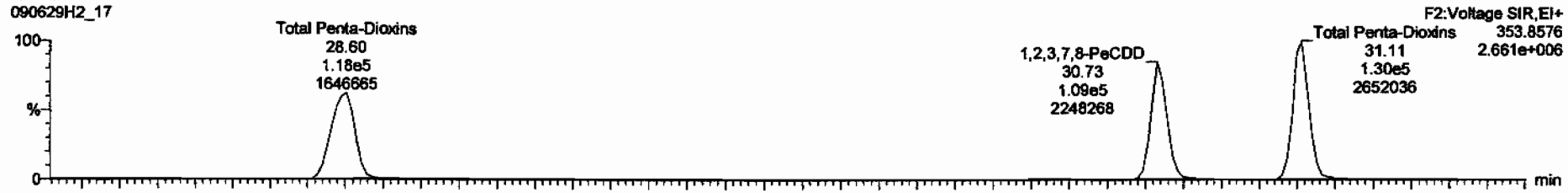

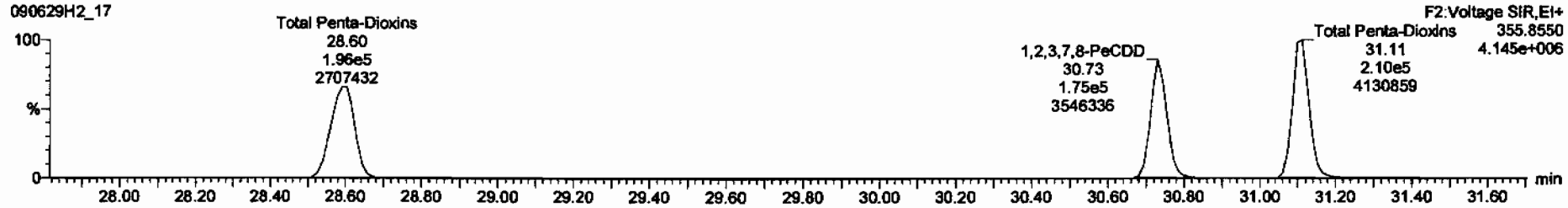

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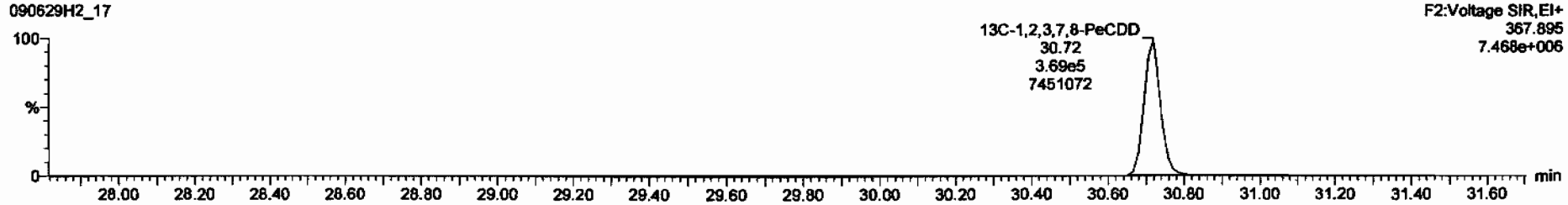

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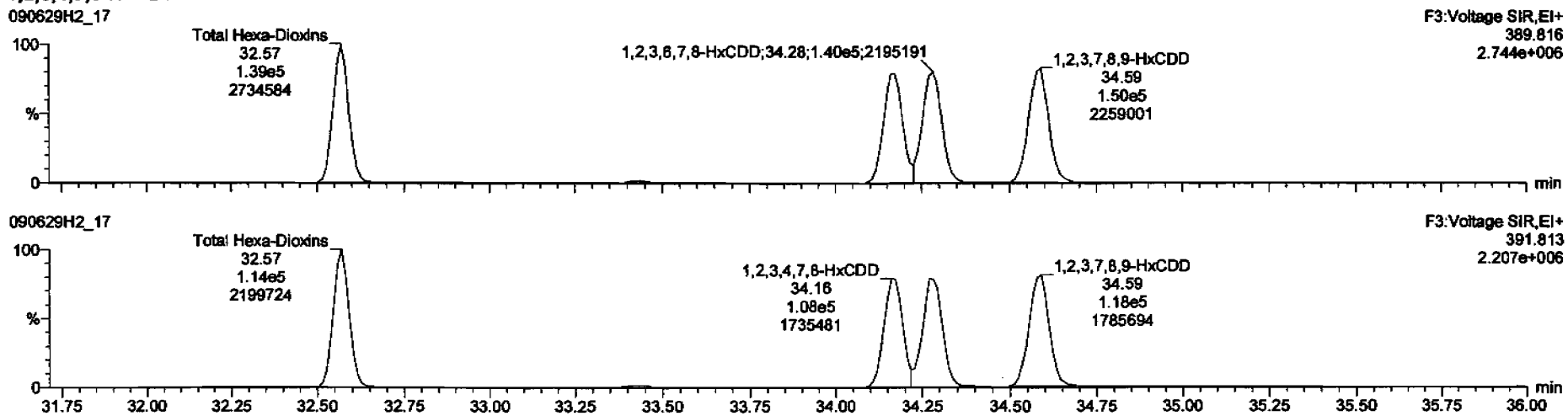

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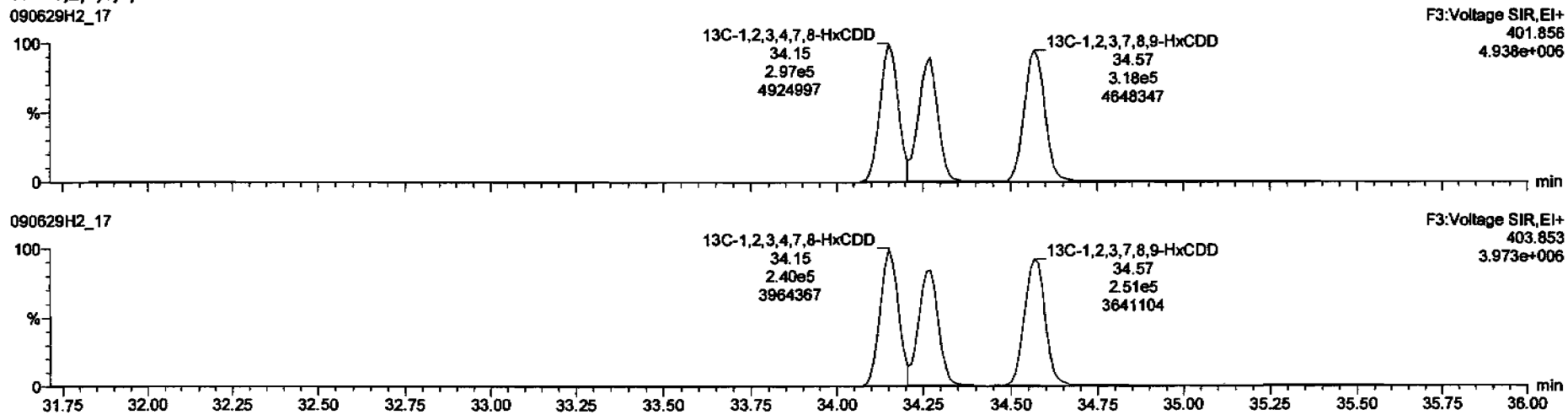

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1,2,3,4,6,7,8-HpCDD

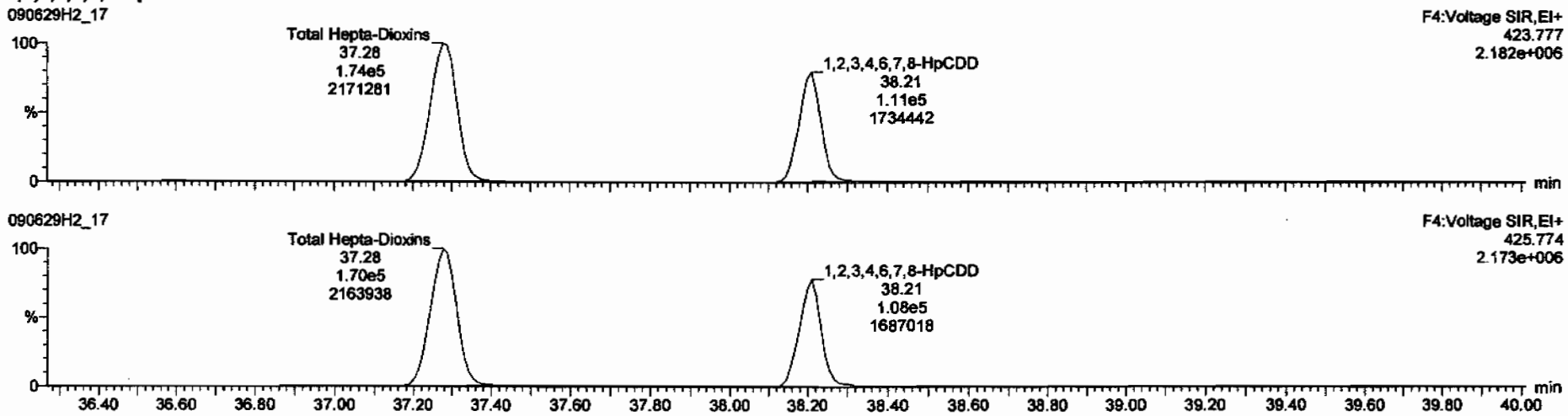

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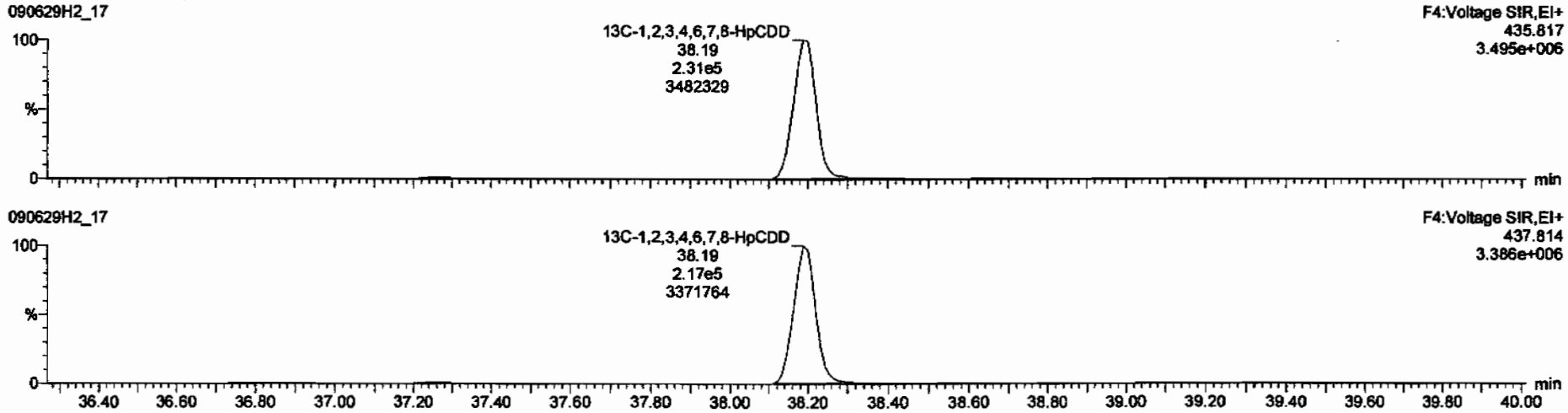

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Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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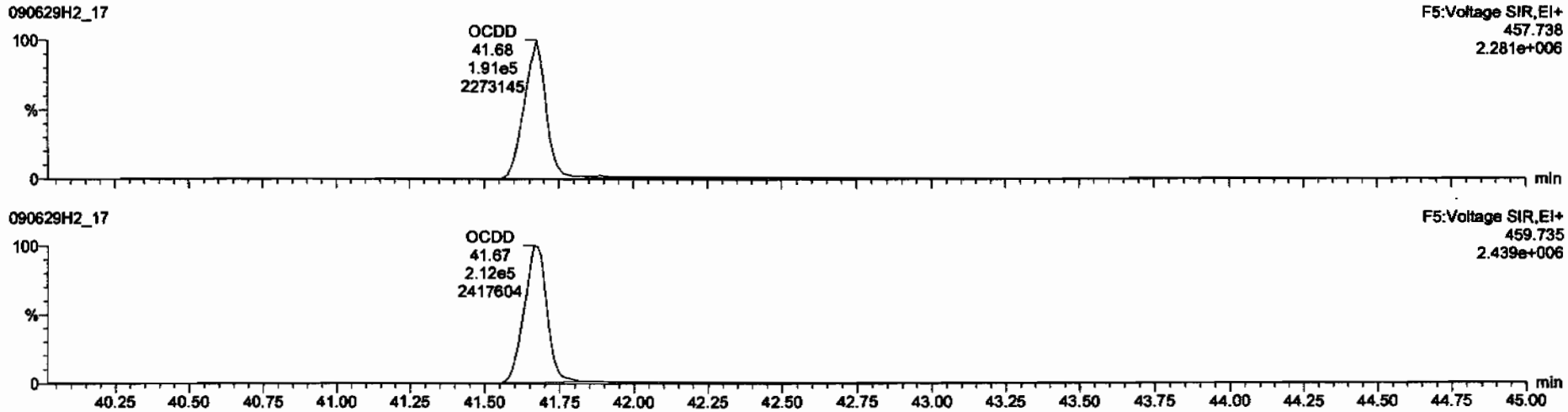

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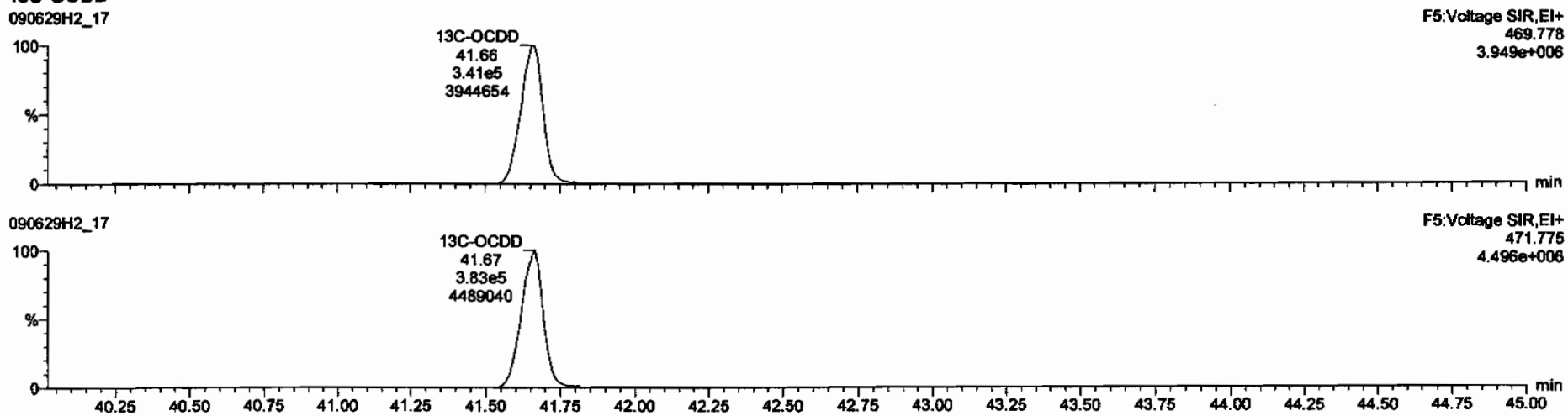

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2,3,7,8-TCDF

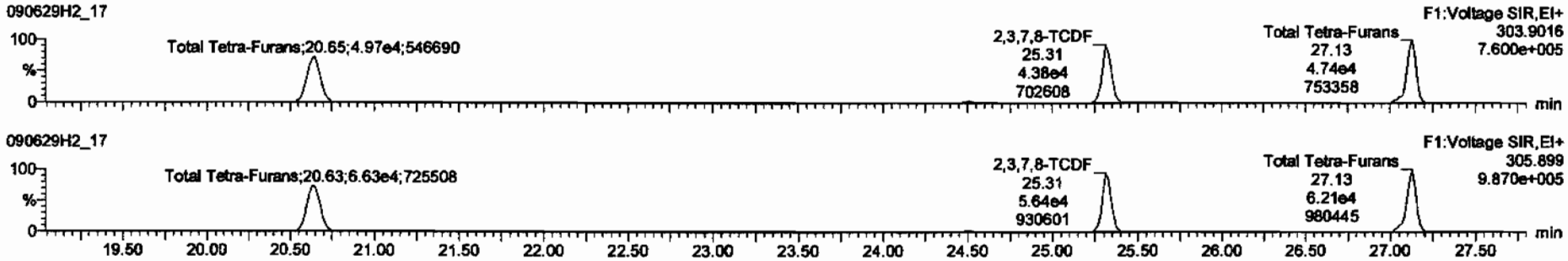

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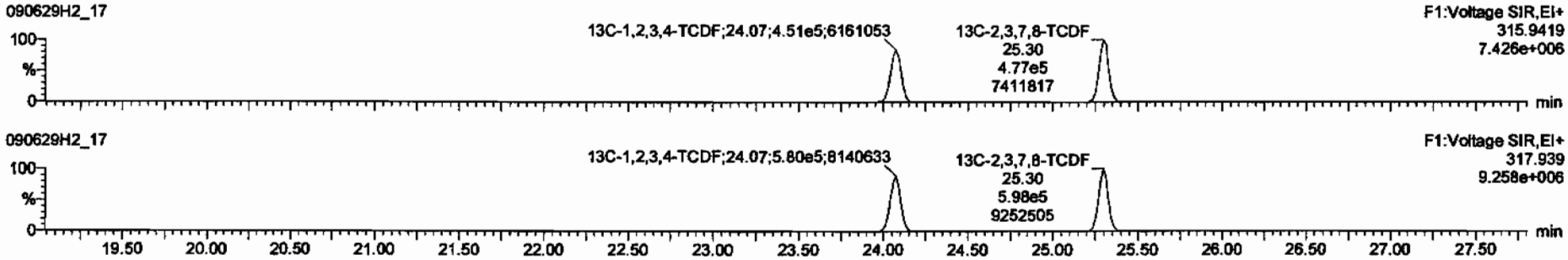

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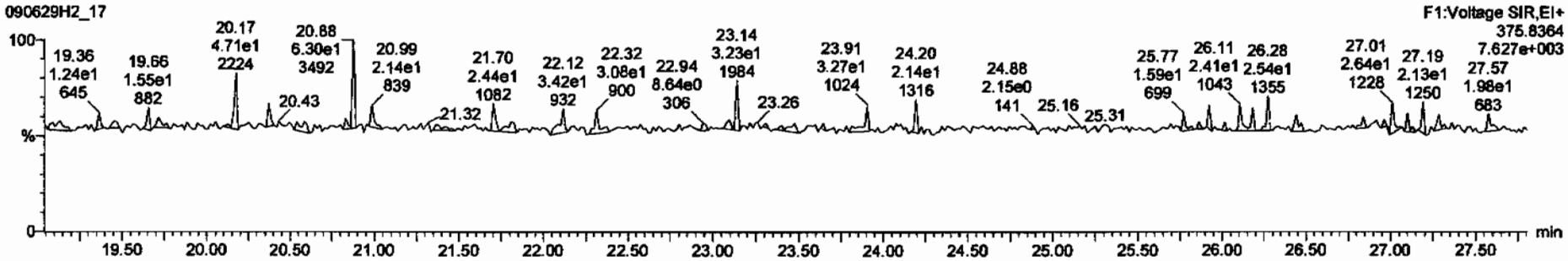

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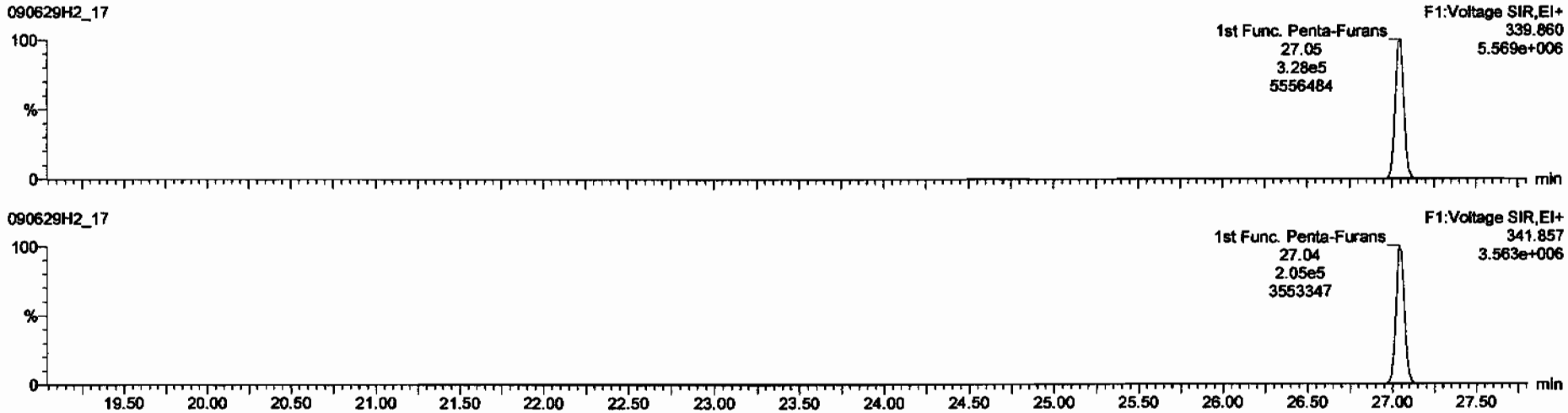

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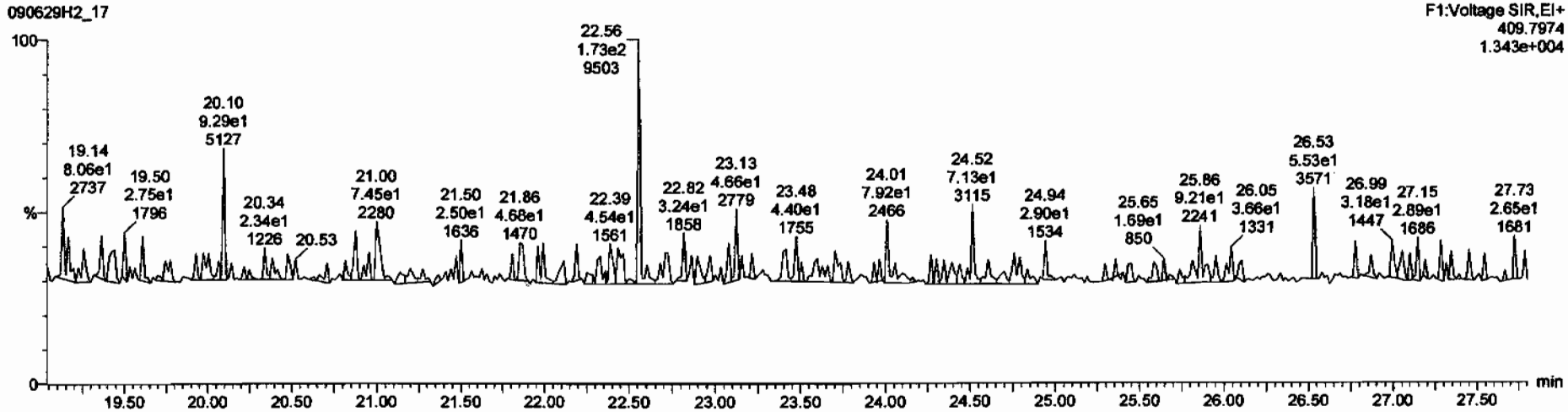

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1,2,3,7,8-PeCDF

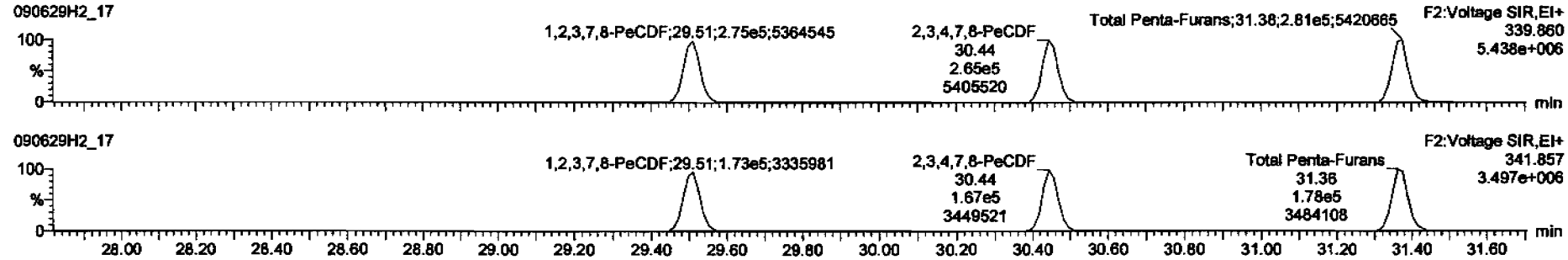

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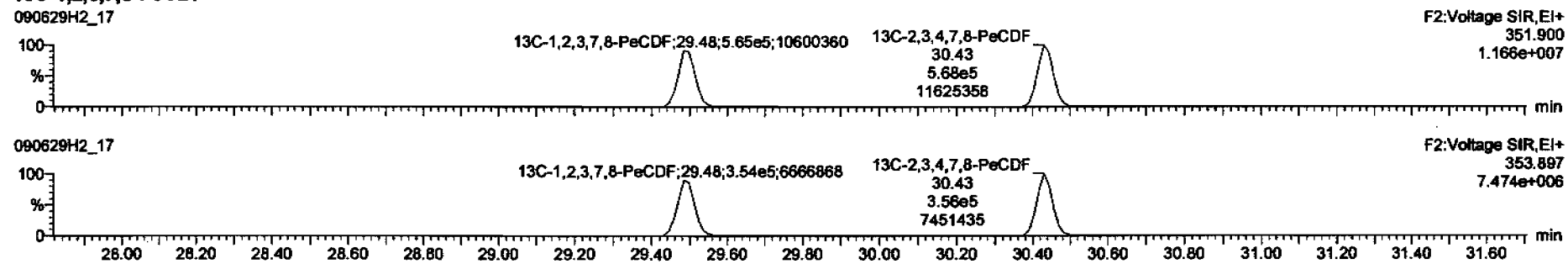

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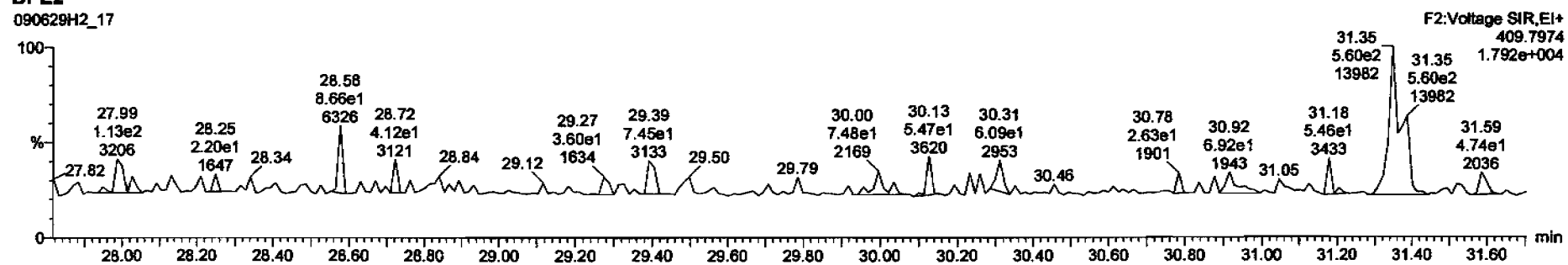

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1,2,3,4,7,8-HxCDF

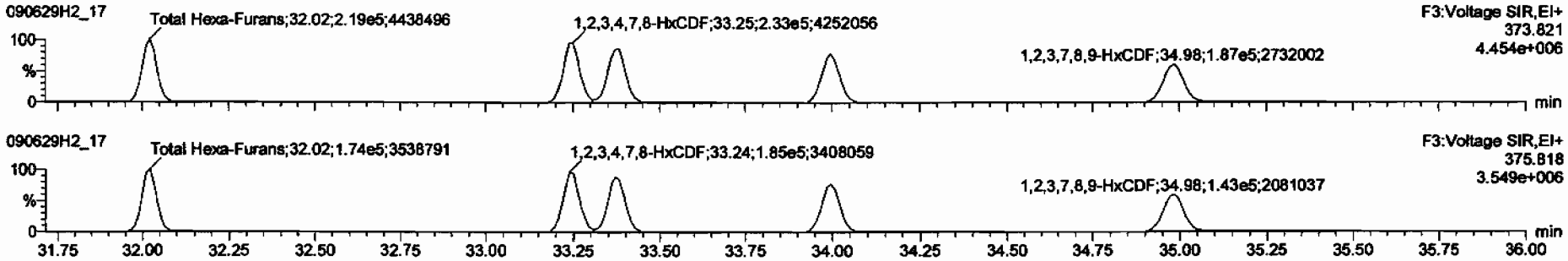

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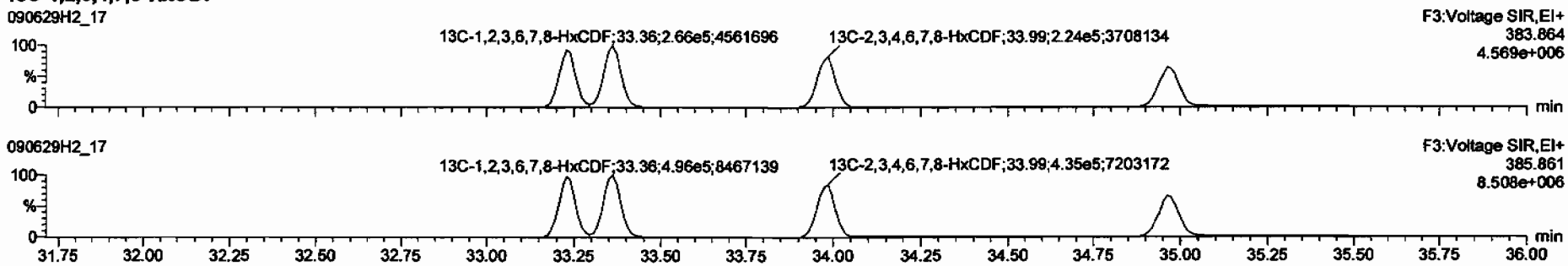

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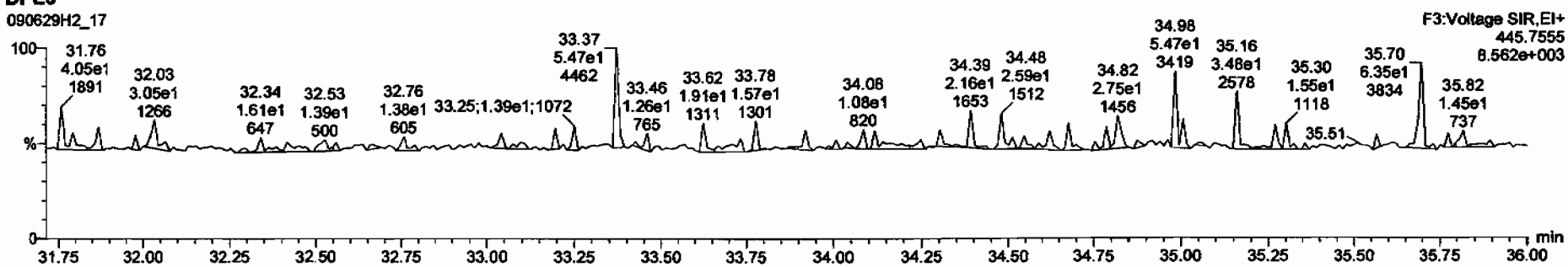

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1,2,3,4,6,7,8-HpCDF

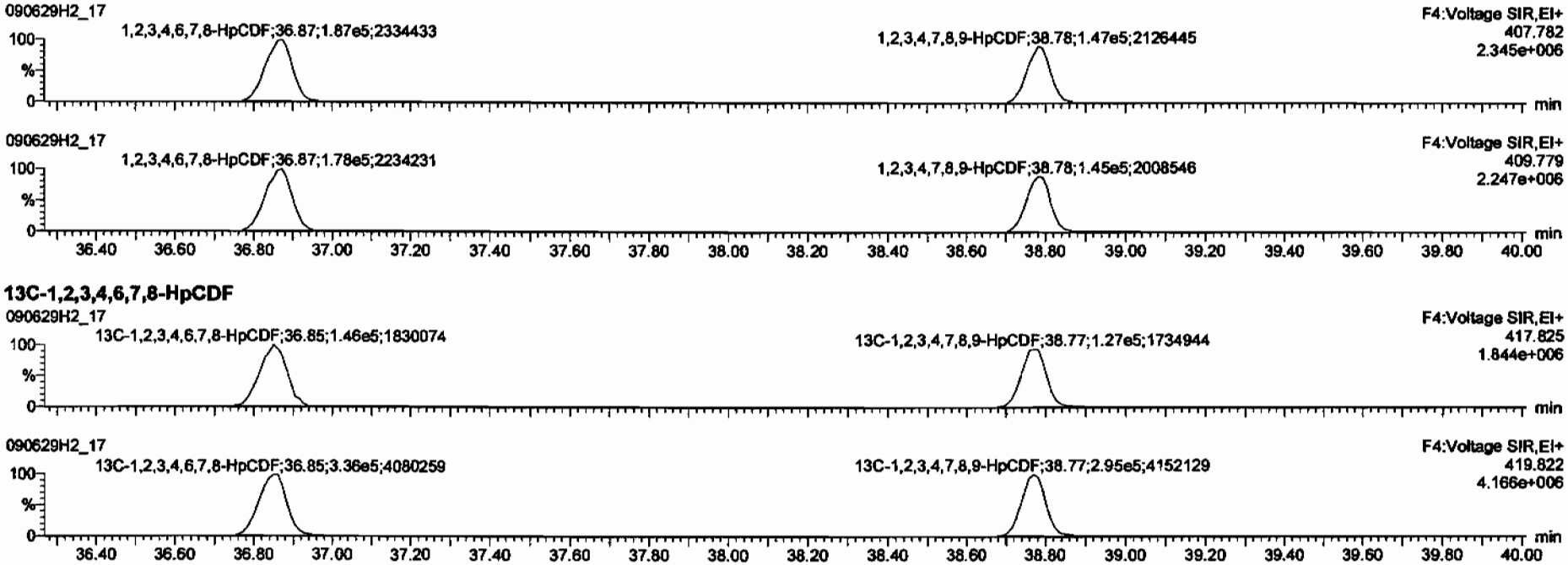

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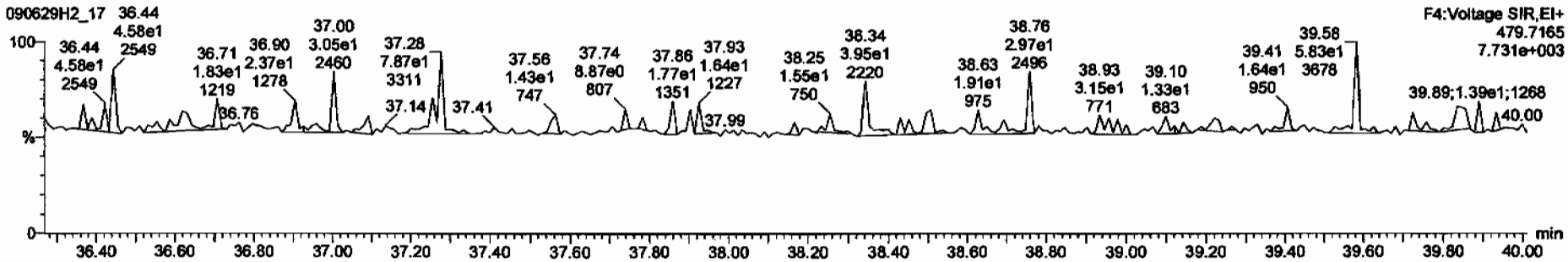

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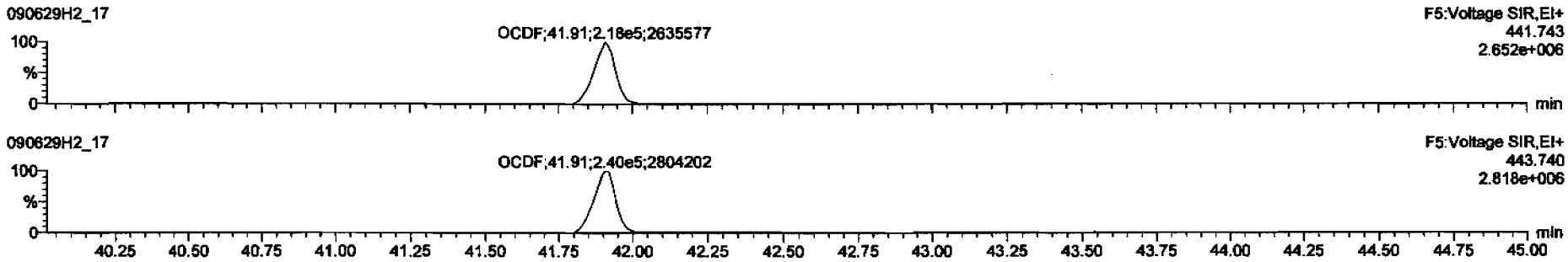

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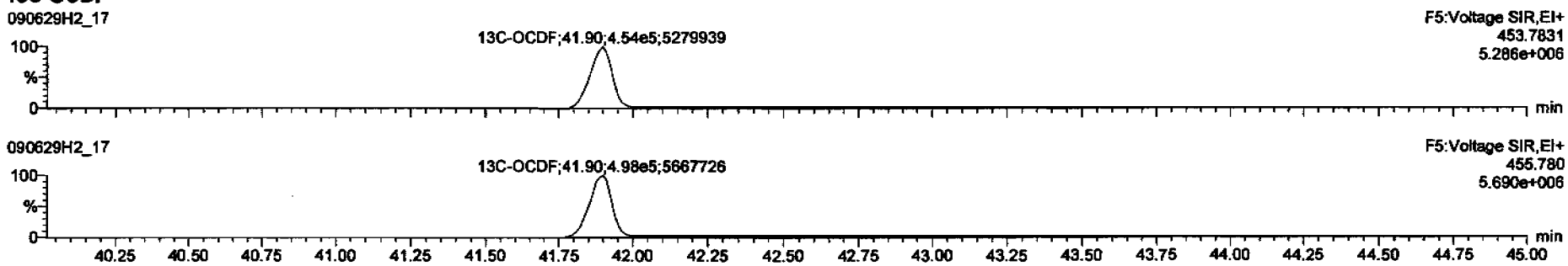

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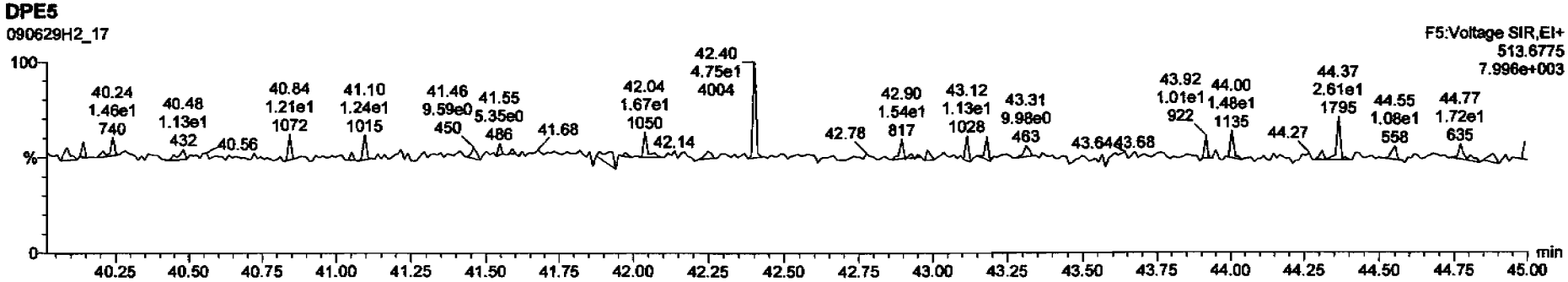

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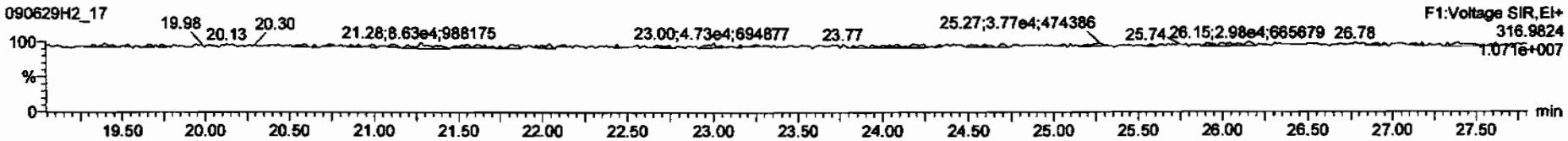

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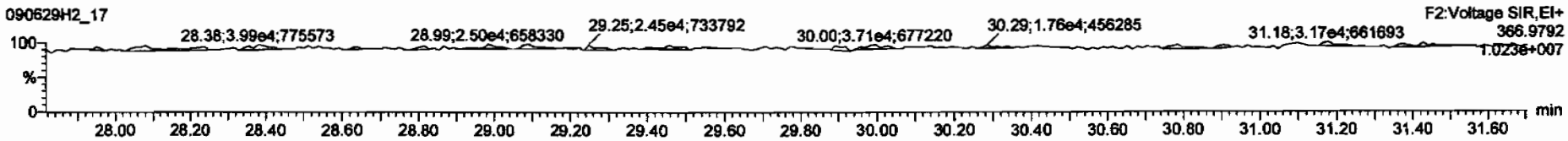

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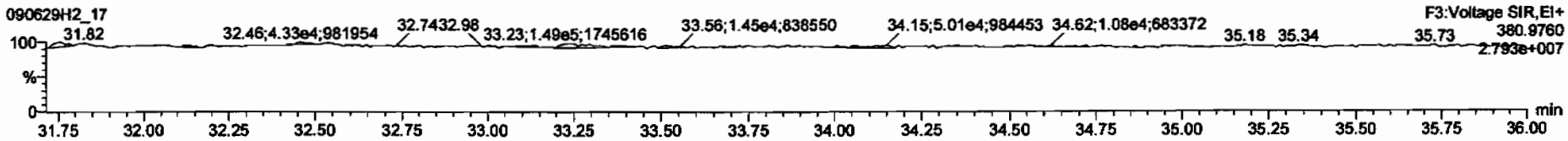

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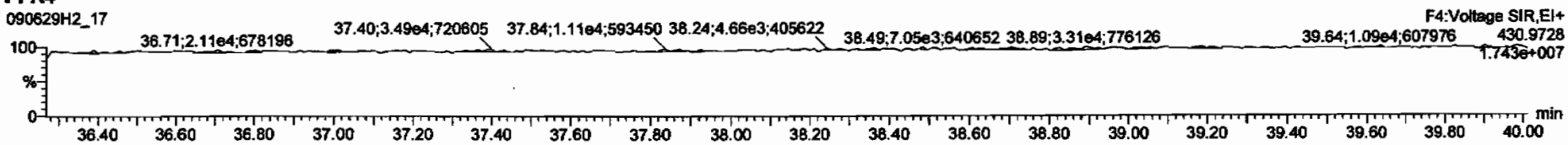

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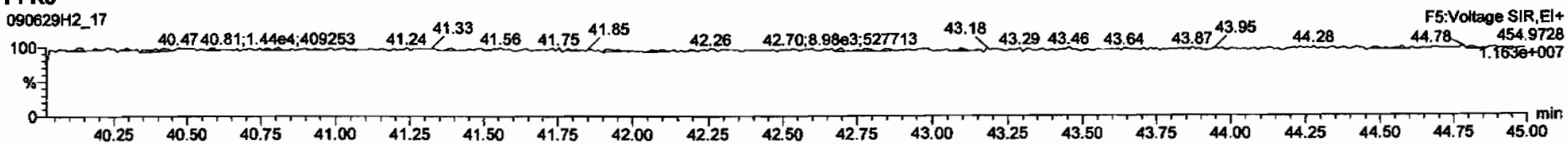

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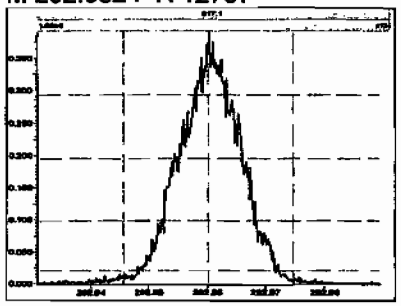

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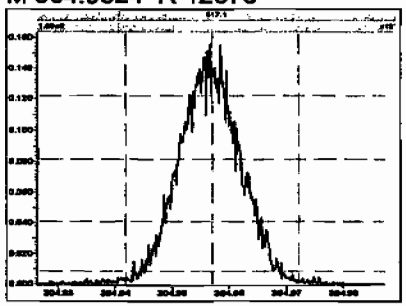

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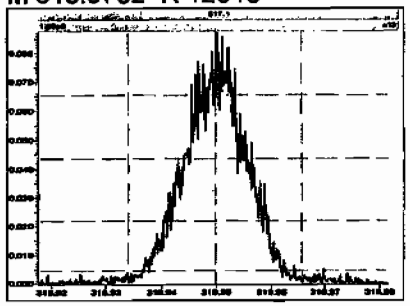

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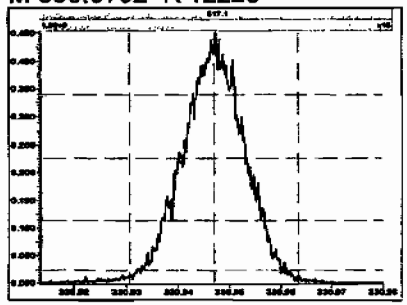

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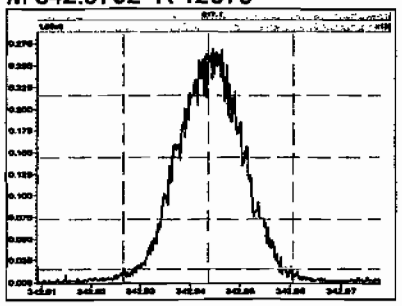

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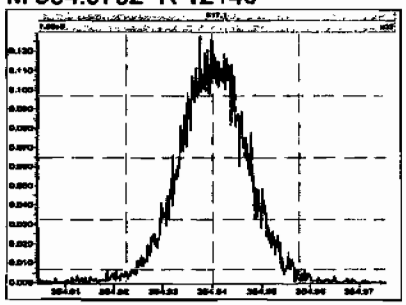

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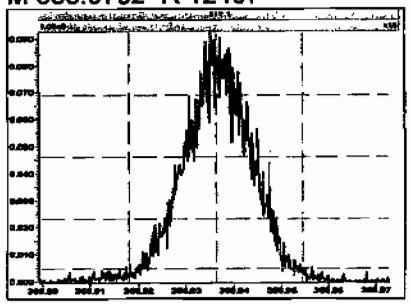

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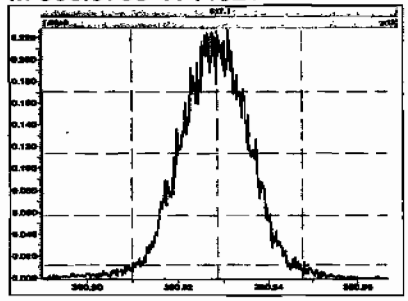

M 392.9760 R 11041

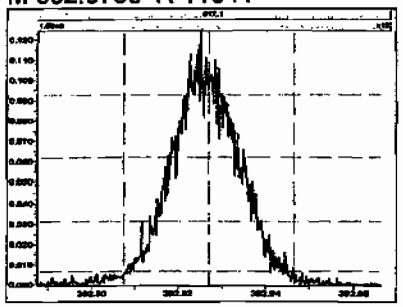

M 404.9760 R 11893

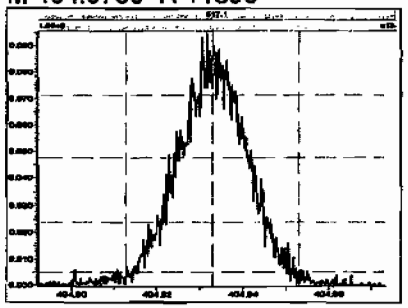

M 416.9760 R 11717

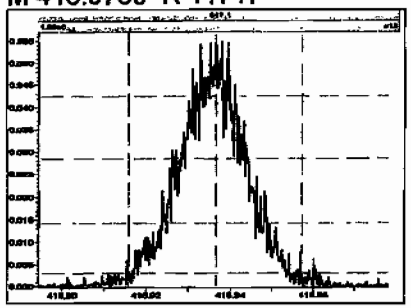

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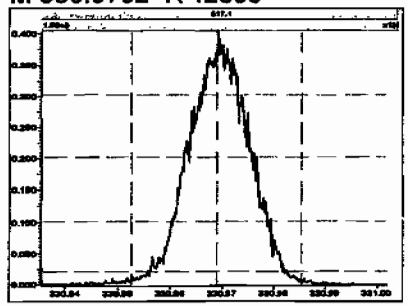

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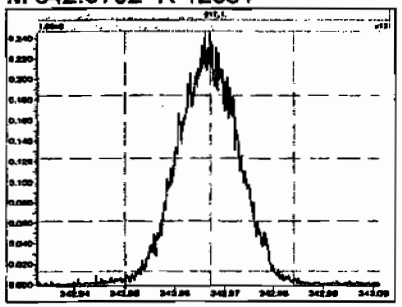

M 354.9792 R 13091

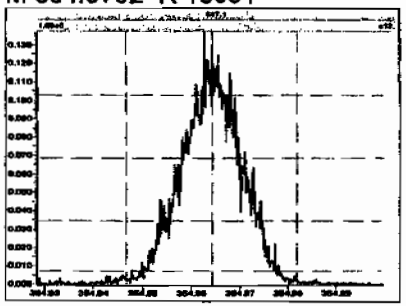

M 366.9792 R 12472

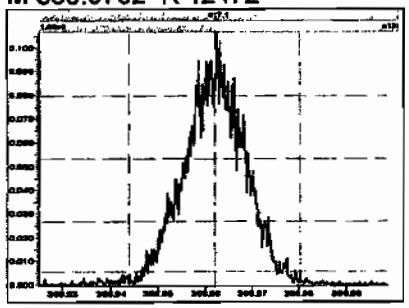

M 380.9760 R 12226

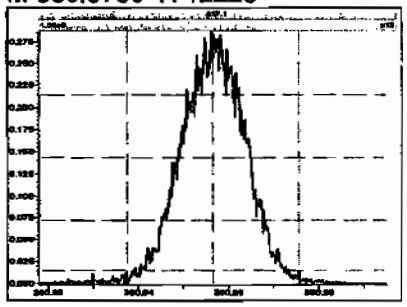

M 392.9760 R 12225

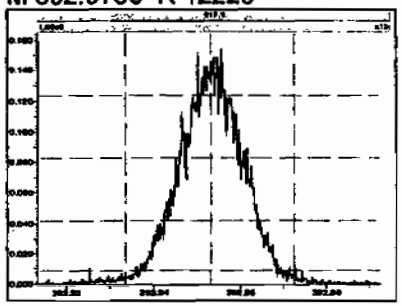

M 404.9760 R 12048

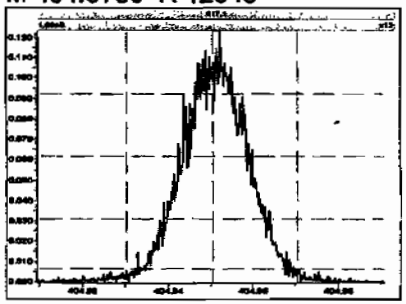

M 416.9760 R 12040

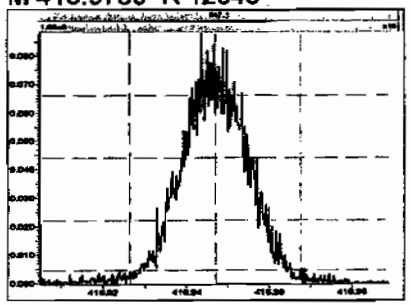

M 366.9792 R 13192

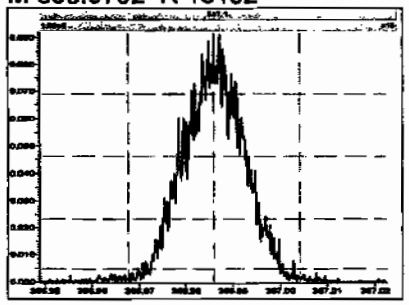

M 380.9760 R 12567

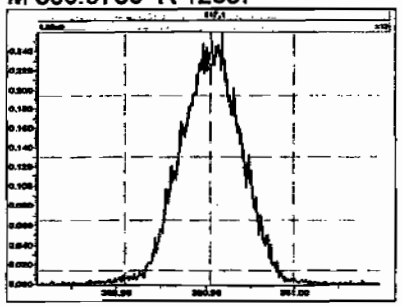

M 392.9760 R 13088

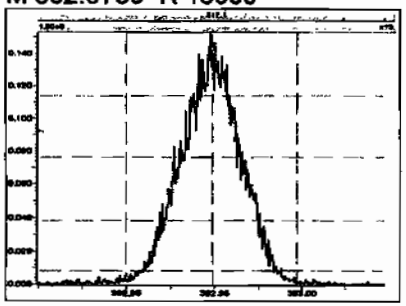

M 404.9760 R 12953

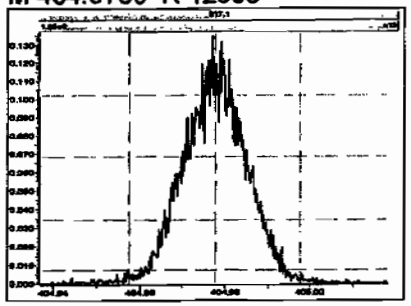

M 416.9760 R 13006

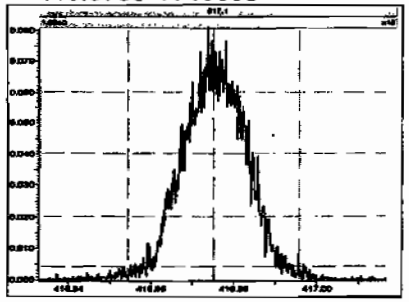

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M 430.9728 R 12442

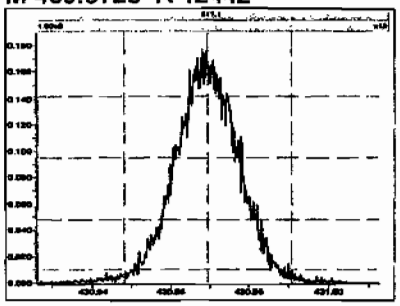

M 442.9728 R 12255

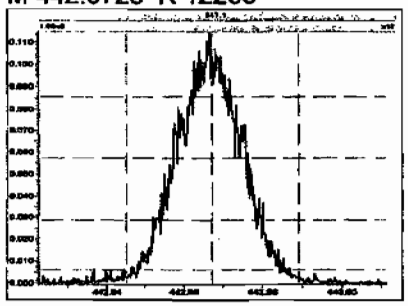

M 454.9728 R 11857

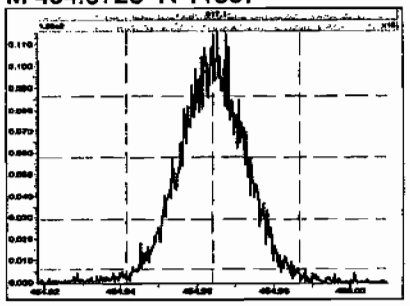

M 404.9760 R 13262

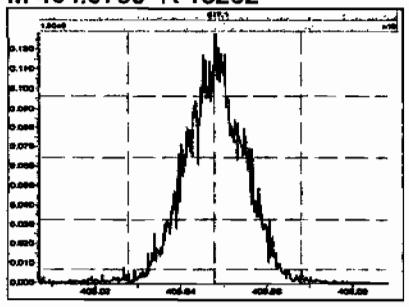

M 416.9760 R 14097

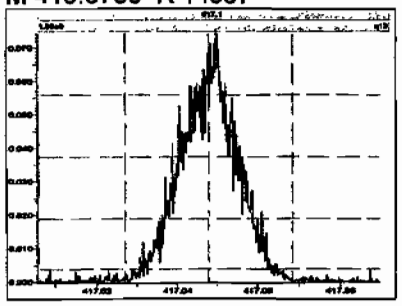

M 430.9728 R 12853

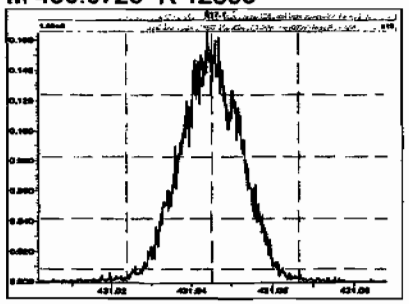

M 442.9728 R 12445

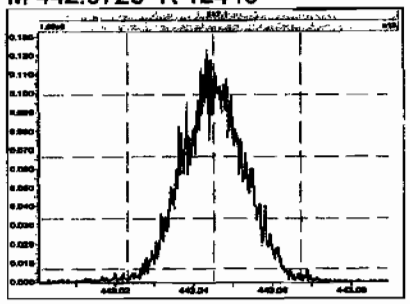

M 454.9728 R 12477

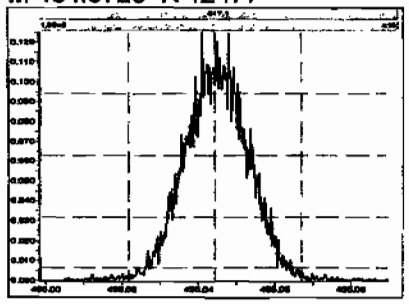

M 466.9728 R 12756

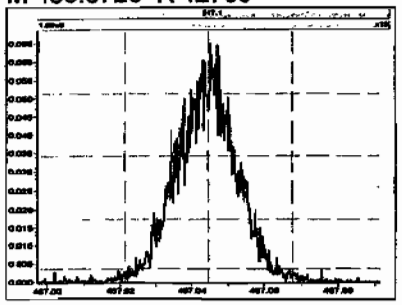

M 480.9696 R 12196

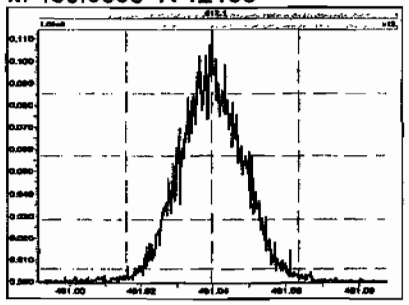

M 430.9728 R 12755

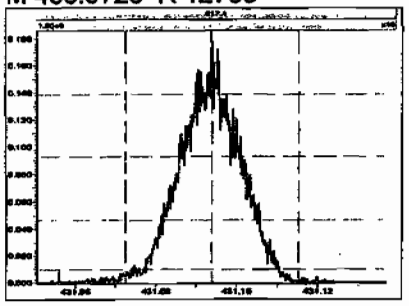

M 442.9728 R 13170

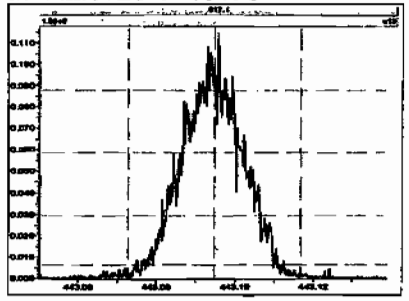

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M 454.9728 R 13440

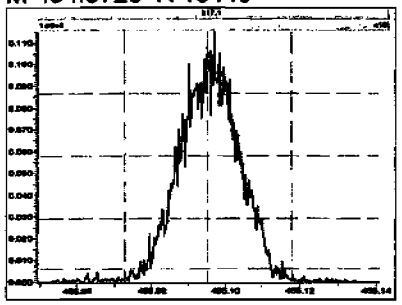

M 466.9728 R 13371

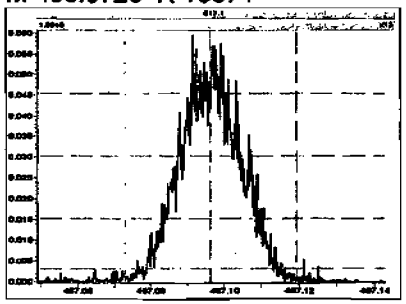

M 480.9696 R 12490

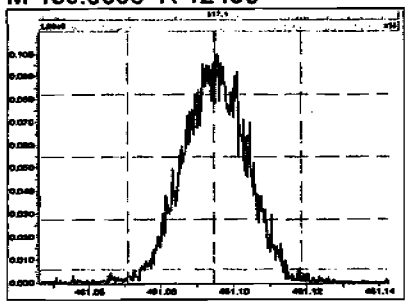

M 492.9696 R 12376

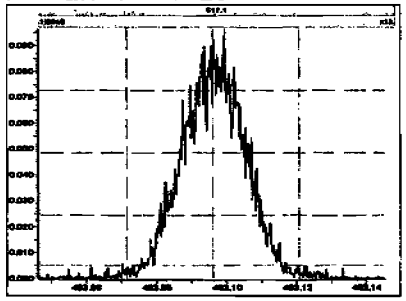

M 504.9696 R 12438

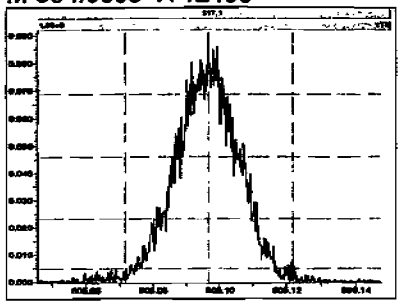

M 516.9697 R 13269

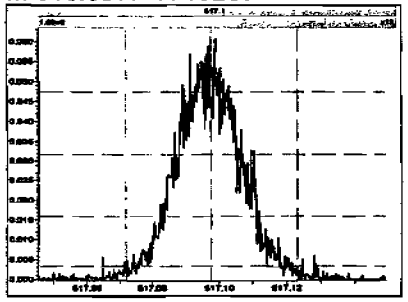

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_1

CCAL ID: ST090629H3-1

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 04:13:15

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	9.16	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	45.7	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	44.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	46.4	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	45.3	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.89	0.76-1.02	NO	95.2	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	NO	8.44	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	42.2	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	41.8	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.5	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	45.0	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	45.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.92	0.76-1.02	NO	89.1	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/30/09

8290 only

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_1

CCAL ID: ST090629H3-1

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 04:13:15

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	99.2	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	106	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	96.2	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	110	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	249	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	108	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	100	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	101	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	101	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	87.6	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	92.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	NO	95.7	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	96.1	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	NO	102	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.89	0.76-1.02	NO	216	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.34	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/30/09

8290 only

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 07:54:09 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:54:16 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.73
2	1,2,8,9-TCDD (Last)	26.96
3	1,2,4,7,9-PeCDD (First)	28.60
4	1,2,3,8,9-PeCDD (Last)	31.11
5	12,4,6,7,9-HxCDD (First)	32.57
6	1,2,3,7,8,9-HxCDD (Last)	34.59
7	1,2,3,4,6,7,9-HpCDD (First)	37.29
8	1,2,3,4,6,7,8-HpCDD (Last)	38.22
9	1,3,6,8-TCDF (First)	20.63
10	1,2,8,9-TCDF (Last)	27.13
11	1,3,4,6,8-PeCDF (First)	27.05
12	1,2,3,8,9-PeCDF (Last)	31.38
13	1,2,3,4,6,8-HxCDF (First)	32.02
14	1,2,3,4,8,9-HxCDF (Last)	34.98
15	1,2,3,4,6,7,8-HpCDF (First)	36.87
16	1,2,3,4,7,8,9-HpCDF (Last)	38.79

J 6/30/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090629H3-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090629H3_1

Analysis Date: 30-Jun-09

Analysis Time: 04:13:15

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 6/30/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090629H3-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090629H3_1

Analysis Date: 30-Jun-09

Analysis Time: 04:13:15

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 6/31/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629h3-1.qld

Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:05:06 AM Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	6.81e4	0.77	NO	1.08	1.000	26.09	1.001	9.1602	91.6	0.0622	9.1602
2	1,2,3,7,8-PeCDD	2.56e5	0.62	NO	1.03	1.000	30.75	1.001	45.670	91.3	0.105	45.670
3	1,2,3,4,7,8-HxCDD	2.21e5	1.24	NO	1.00	1.000	34.17	1.000	44.644	89.3	0.182	44.644
4	1,2,3,6,7,8-HxCDD	2.30e5	1.28	NO	1.13	1.000	34.28	1.000	45.273	90.5	0.193	45.273
5	1,2,3,7,8,9-HxCDD	2.42e5	1.23	NO	1.10	1.000	34.59	1.009	46.438	92.9	0.180	46.438
6	1,2,3,4,6,7,8-HpCDD	1.93e5	1.07	NO	1.06	1.000	38.22	1.001	45.323	90.6	0.201	45.323
7	OCDD	3.58e5	0.89	NO	1.18	1.000	41.69	1.001	95.191	95.2	0.253	95.191
8	2,3,7,8-TCDF	8.94e4	0.76	NO	1.09	1.000	25.33	1.001	8.4359	84.4	0.0427	8.4359
9	1,2,3,7,8-PeCDF	4.05e5	1.57	NO	1.16	1.000	29.51	1.000	42.152	84.3	0.0702	42.152
10	2,3,4,7,8-PeCDF	3.91e5	1.59	NO	1.12	1.000	30.46	1.000	41.823	83.6	0.0709	41.823
11	1,2,3,4,7,8-HxCDF	3.75e5	1.26	NO	1.41	1.000	33.25	1.000	43.990	88.0	0.136	43.990
12	1,2,3,6,7,8-HxCDF	3.69e5	1.26	NO	1.22	1.000	33.38	1.000	44.476	89.0	0.141	44.476
13	2,3,4,6,7,8-HxCDF	3.39e5	1.26	NO	1.28	1.000	34.00	1.000	44.983	90.0	0.164	44.983
14	1,2,3,7,8,9-HxCDF	2.91e5	1.29	NO	1.26	1.000	34.98	1.000	44.943	89.9	0.213	44.943
15	1,2,3,4,6,7,8-HpCDF	3.22e5	1.05	NO	1.69	1.000	36.87	1.000	44.798	89.6	0.183	44.798
16	1,2,3,4,7,8,9-HpCDF	2.56e5	1.04	NO	1.48	1.000	38.79	1.000	45.687	91.4	0.220	45.687
17	OCDF	4.10e5	0.92	NO	1.10	1.000	41.92	1.001	89.058	89.1	0.130	89.058
18	13C-2,3,7,8-TCDD	6.90e5	0.78	NO	1.01	1.000	26.08	1.023	102.96	103	0.223	
19	13C-1,2,3,7,8-PeCDD	5.42e5	0.63	NO	0.827	1.000	30.72	1.205	99.238	99.2	0.194	
20	13C-1,2,3,4,7,8-HxCDD	4.95e5	1.27	NO	0.916	1.000	34.16	0.988	105.69	106	0.378	
21	13C-1,2,3,6,7,8-HxCDD	4.52e5	1.24	NO	0.921	1.000	34.27	0.991	96.150	96.2	0.376	
22	13C-1,2,3,4,6,7,8-HpCDD	4.00e5	1.05	NO	0.708	1.000	38.20	1.105	110.42	110	0.441	
23	13C-OCDD	6.38e5	0.89	NO	0.503	1.000	41.67	1.205	248.57	124	0.429	
24	13C-2,3,7,8-TCDF	9.75e5	0.78	NO	0.977	1.000	25.30	0.992	107.82	108	0.146	
25	13C-1,2,3,7,8-PeCDF	8.29e5	1.58	NO	0.896	1.000	29.50	1.157	99.974	100	0.253	
26	13C-2,3,4,7,8-PeCDF	8.37e5	1.57	NO	0.900	1.000	30.44	1.194	100.51	101	0.252	
27	13C-1,2,3,4,7,8-HxCDF	6.05e5	0.52	NO	1.17	1.000	33.24	0.961	101.28	101	0.369	
28	13C-1,2,3,6,7,8-HxCDF	6.80e5	0.52	NO	1.52	1.000	33.37	0.965	87.588	87.6	0.284	
29	13C-2,3,4,6,7,8-HxCDF	5.89e5	0.52	NO	1.25	1.000	33.99	0.983	92.271	92.3	0.346	
30	13C-1,2,3,7,8,9-HxCDF	5.15e5	0.52	NO	1.05	1.000	34.97	1.011	95.715	95.7	0.410	

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629h3-1.qld

Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:05:06 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917i, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	4.26e5	0.44	NO	0.868	1.000	36.86	1.066	96.066	96.1	0.455
32	13C-1,2,3,4,7,8,9-HpCDF	3.78e5	0.44	NO	0.727	1.000	38.78	1.122	101.86	102	0.544
33	13C-OCDF	8.40e5	0.89	NO	0.760	1.000	41.90	1.212	216.42	108	0.266
34	37Cl-2,3,7,8-TCDD	4.12e4			0.668	1.000	26.09	1.023	9.3397	93.4	0.0588
35	13C-1,2,3,4-TCDD	6.60e5	0.79	NO	1.00	1.000	25.50	0.000	100.00	100	0.227
36	13C-1,2,3,4-TCDF	9.26e5	0.78	NO	1.00	1.000	24.07	0.000	100.00	100	0.142
37	13C-1,2,3,7,8,9-HxCDD	5.11e5	1.23	NO	1.00	1.000	34.58	0.000	100.00	100	0.347

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 9:23:40 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 9:23:58 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

	090629H3_1	ST090629H3-1 1613 CS3 080917I	30-Jun-09	04:13:15
	090629H3_2	solvent blank	30-Jun-09	05:02:50
	090629H3_3	31837_2207_005 CAMO-09-6049 11.23	30-Jun-09	05:52:25
	090629H3_4	31838_2207_001 CAMO-09-10463 10.43	30-Jun-09	06:41:59
	090629H3_5	solvent blank	30-Jun-09	07:31:32
	090629H3_6	ST090629H3-2 1613 CS3 080917I	30-Jun-09	08:21:05

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090629H3-1 End Calibration ID: ST090629H3-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range? (A)	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits	NA	
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments: (A) 8290 only 6/30/09

Reviewed by: DMS 6/30/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 rmh

Printed: Tuesday, June 30, 2009 04:13:13 Pacific Daylight Time

M 292.9824 R 12757

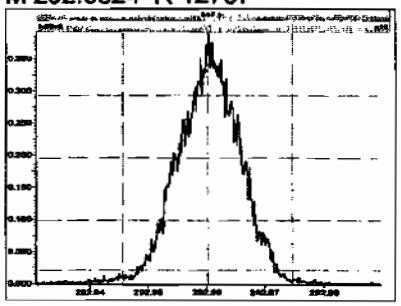

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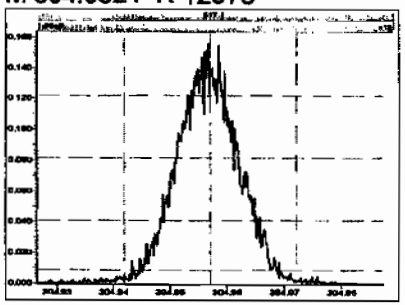

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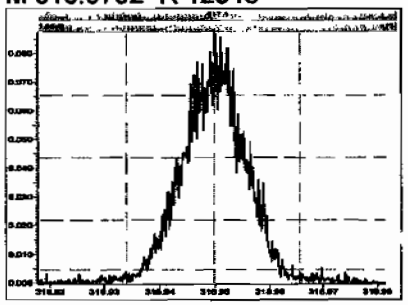

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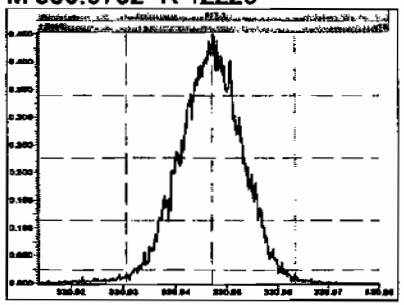

M 342.9792 R 12079

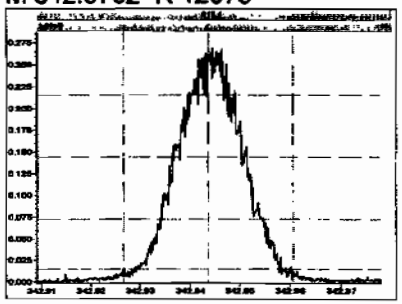

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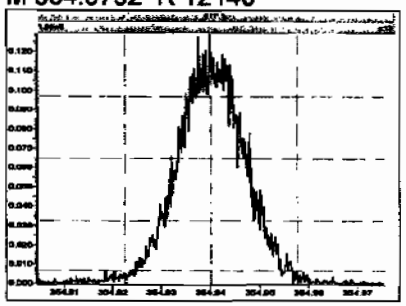

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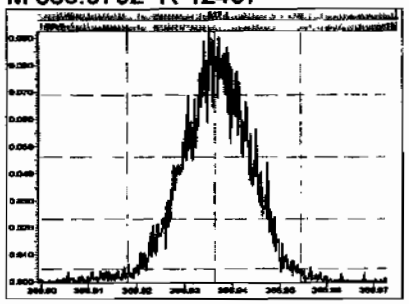

M 380.9760 R 11521

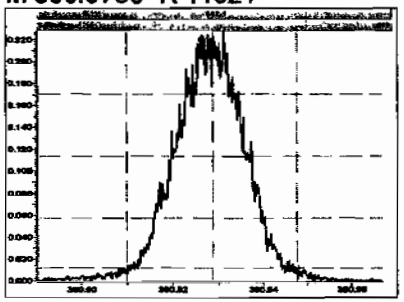

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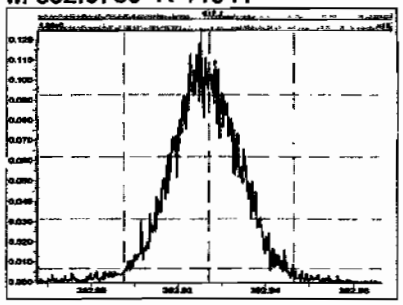

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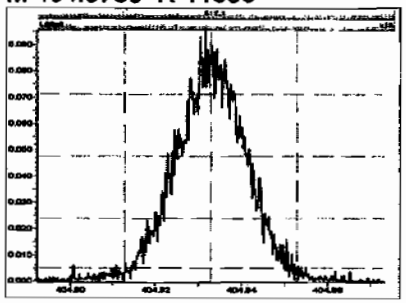

M 416.9760 R 11717

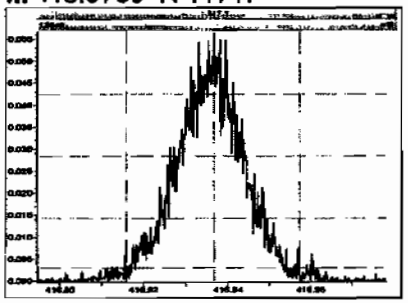

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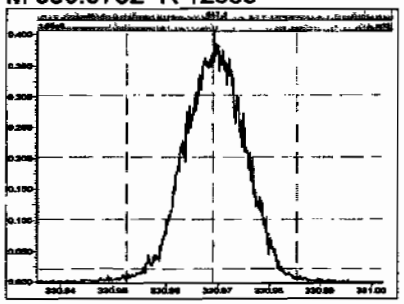

Printed: Tuesday, June 30, 2009 04:13:13 Pacific Daylight Time

M 342.9792 R 12531

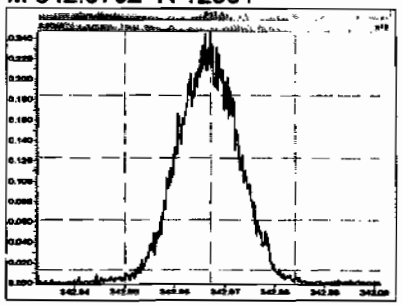

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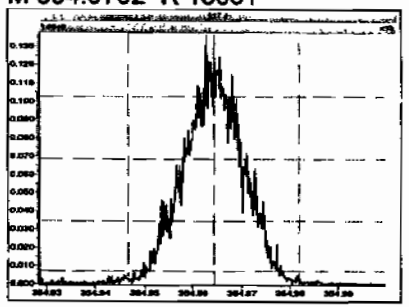

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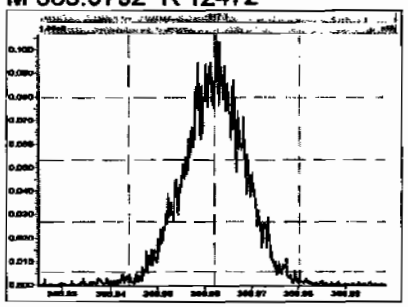

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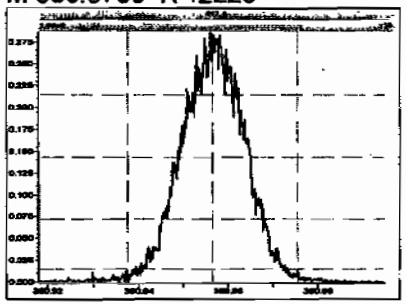

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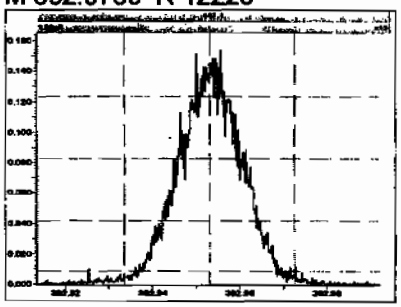

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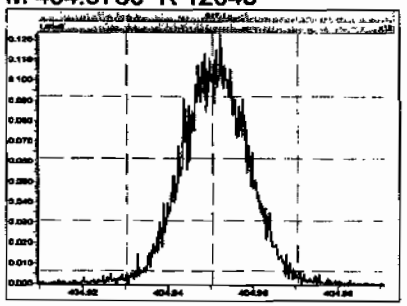

M 416.9760 R 12040

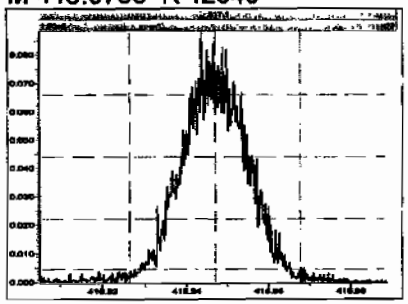

M 366.9792 R 13192

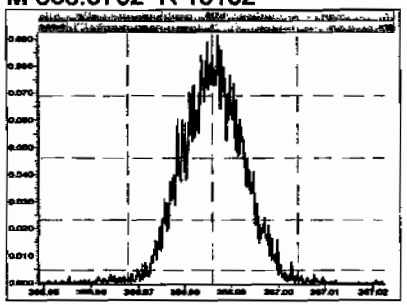

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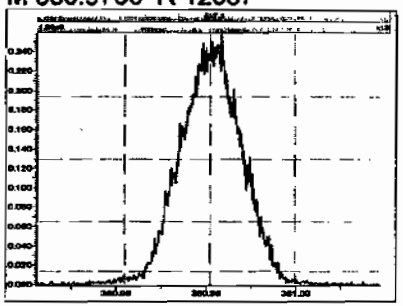

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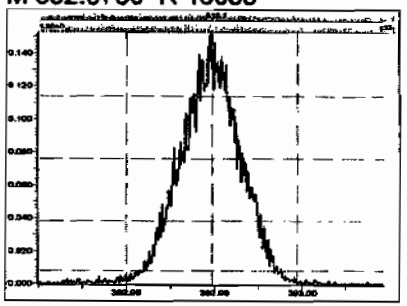

M 404.9760 R 12953

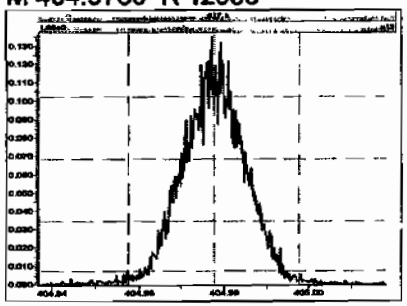

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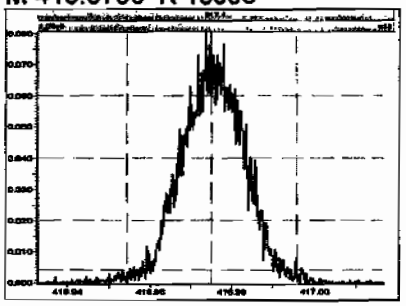

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M 430.9728 R 12442

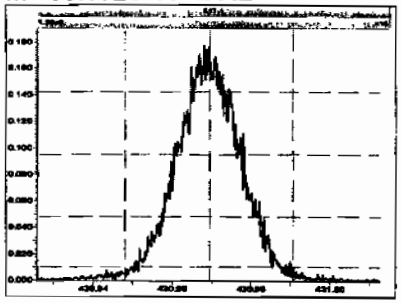

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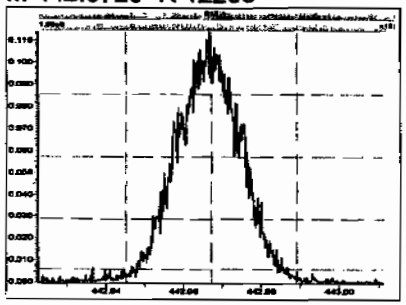

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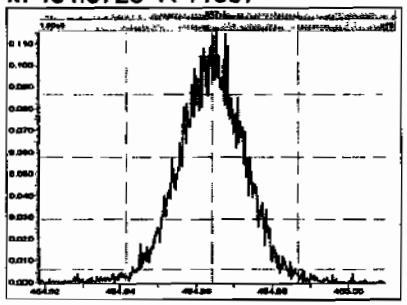

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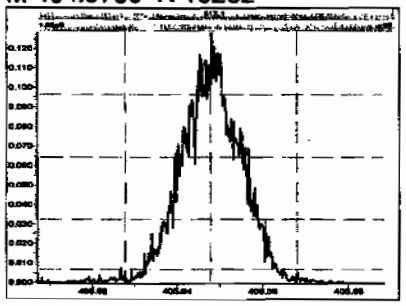

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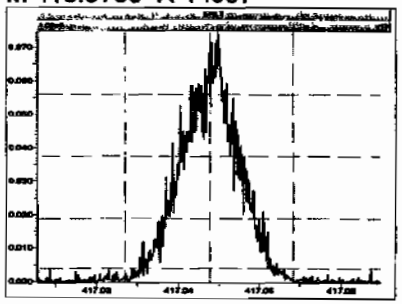

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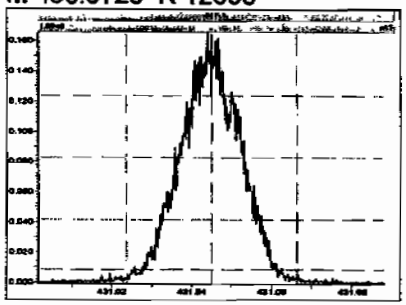

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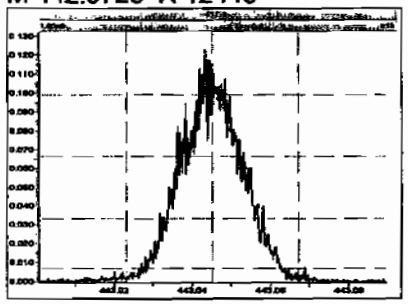

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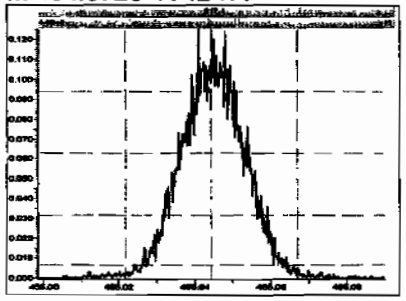

M 466.9728 R 12756

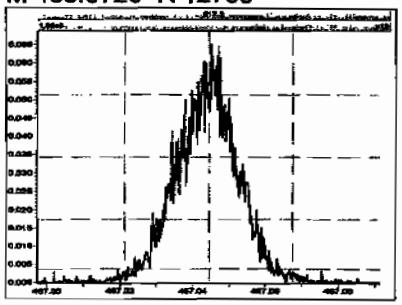

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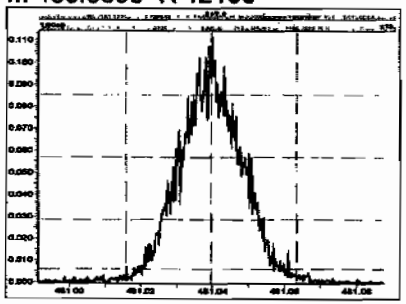

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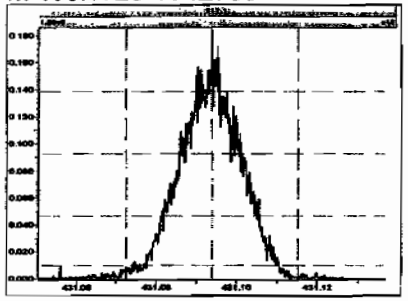

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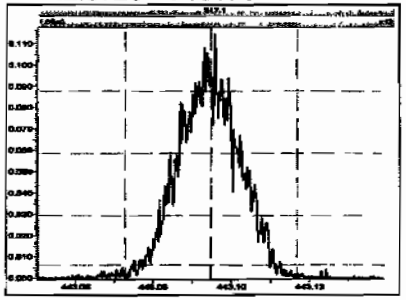

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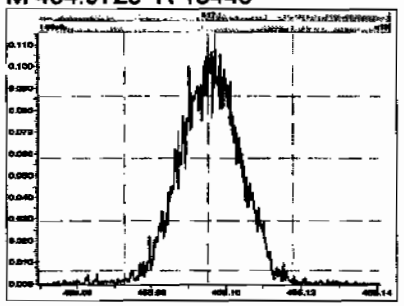

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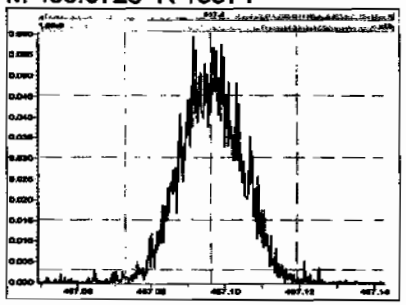

M 480.9696 R 12490

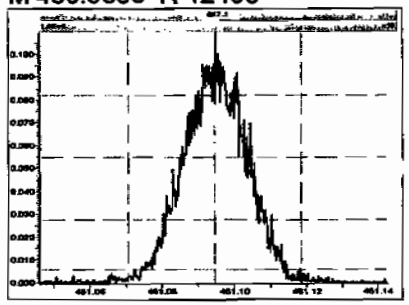

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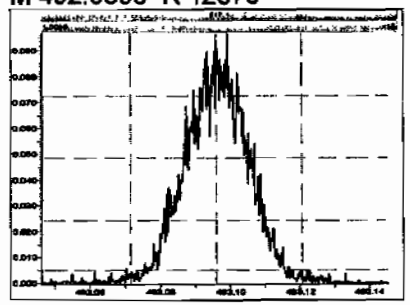

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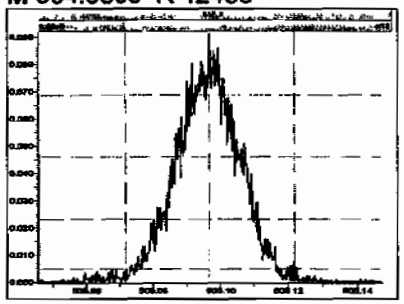

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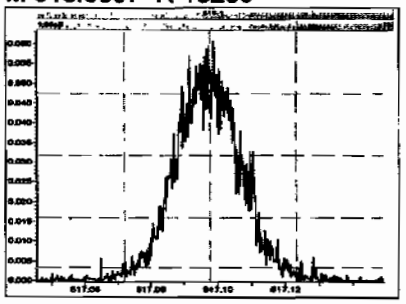

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

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Printed: Tuesday, June 30, 2009 07:54:16 Pacific Daylight Time

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Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

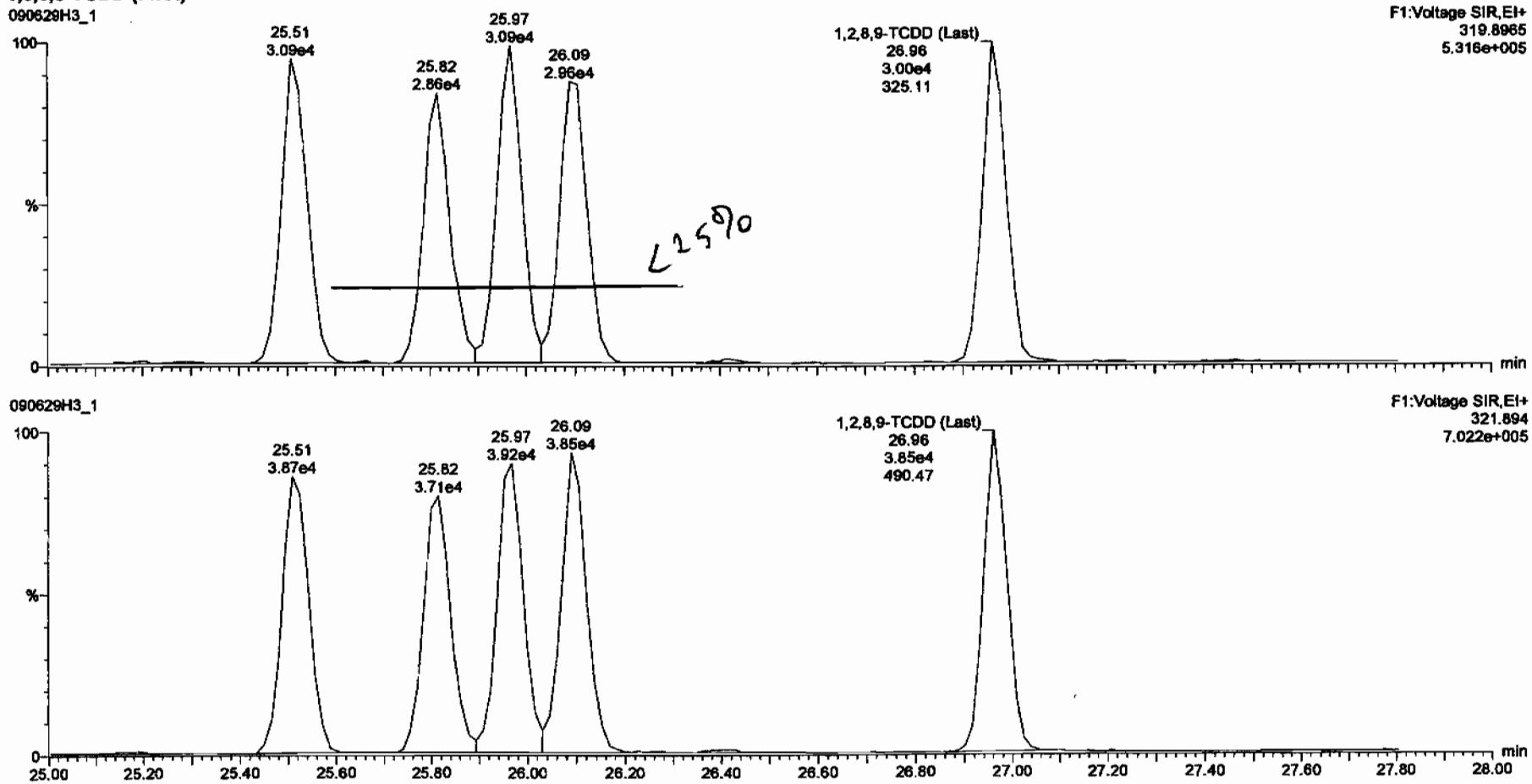

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629h3-1.qld

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2,3,7,8-TCDD

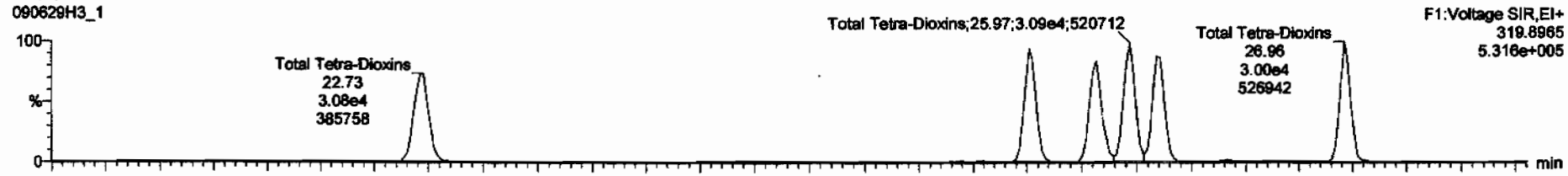

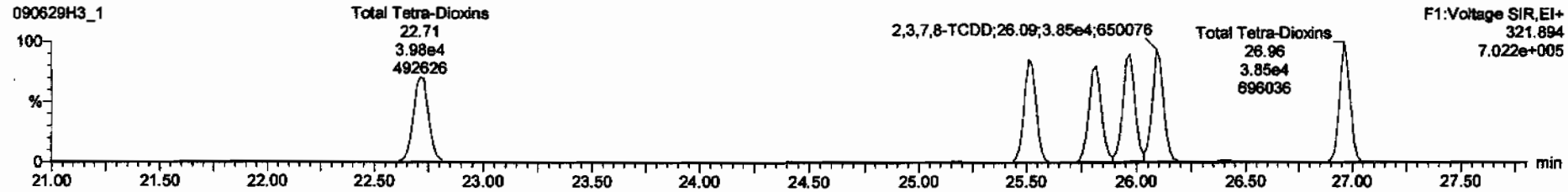

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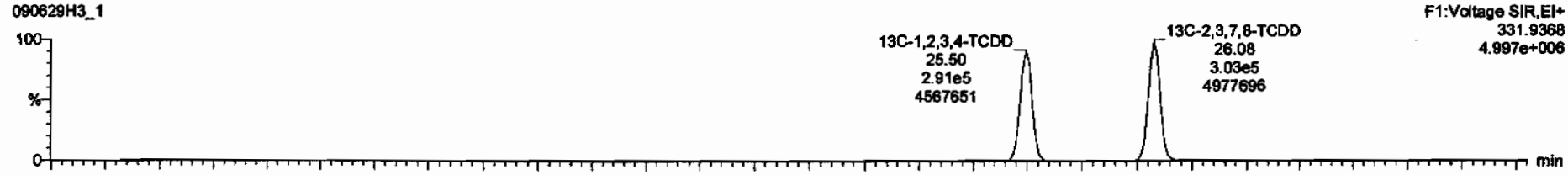

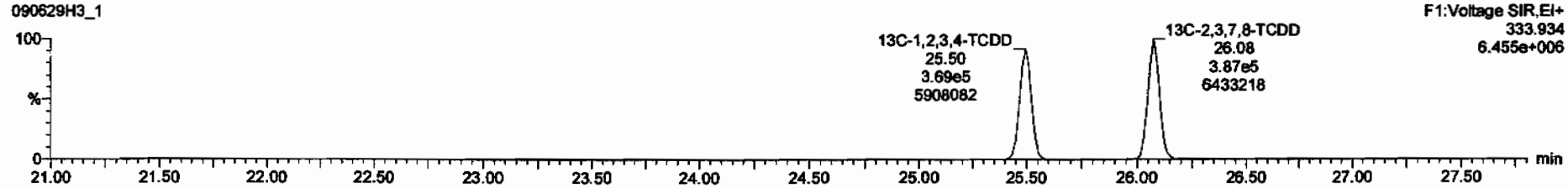

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37Cl-2,3,7,8-TCDD

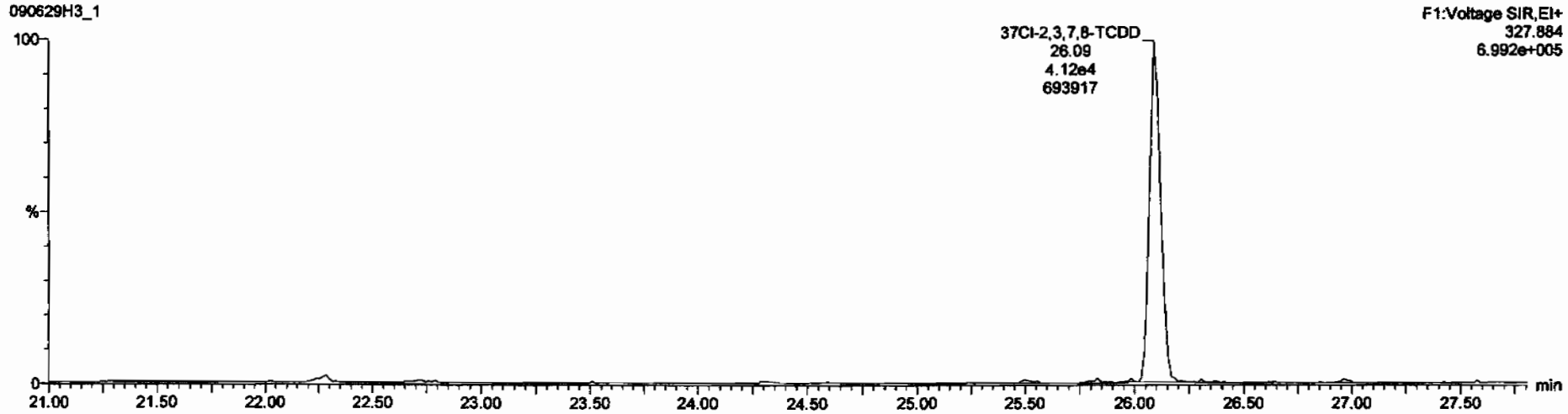

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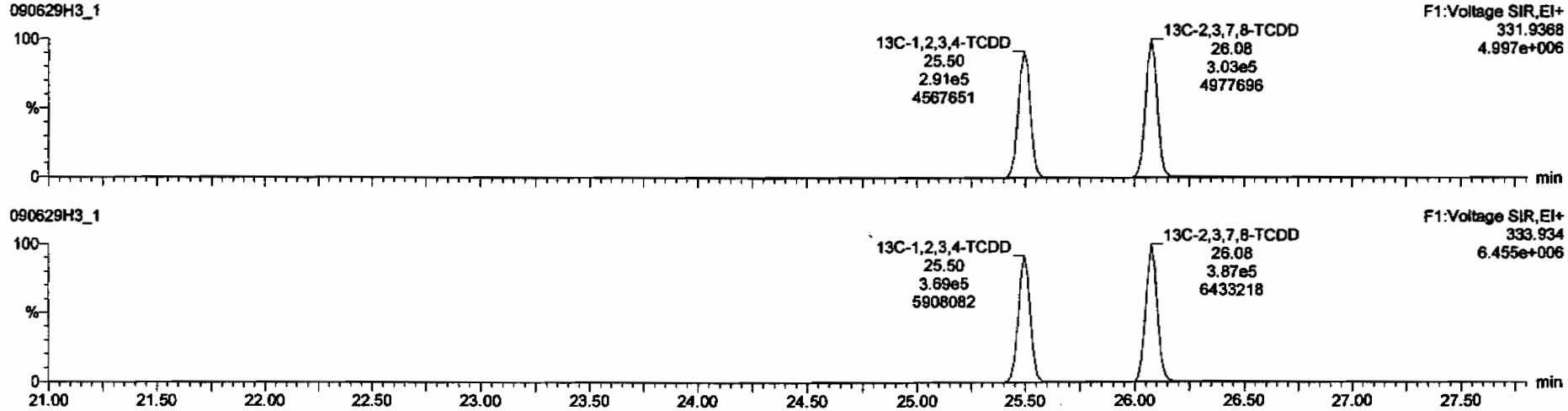

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1,2,3,7,8-PeCDD

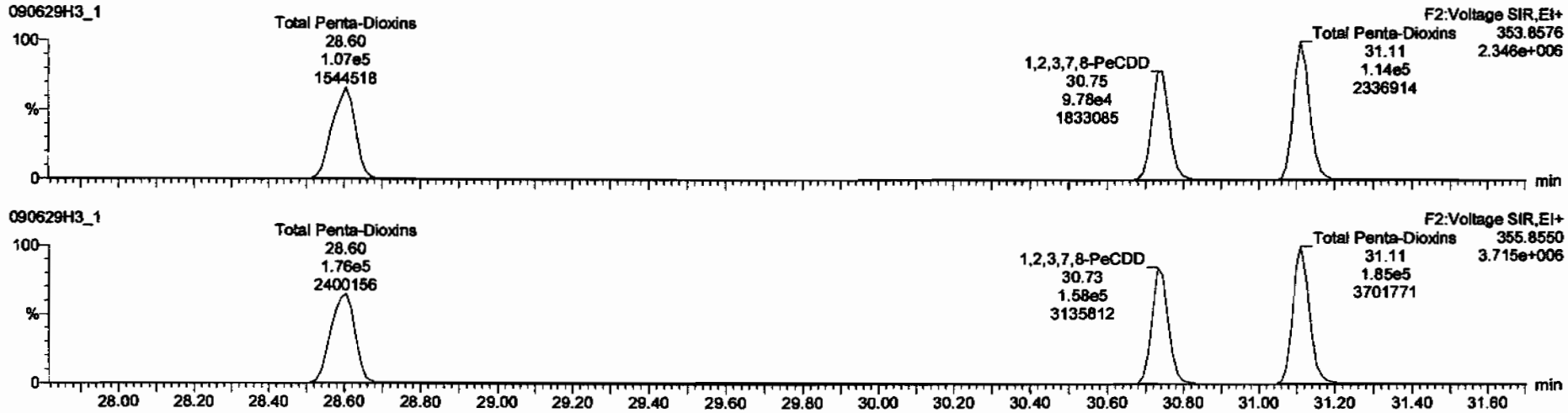

13C-1,2,3,7,8-PeCDD

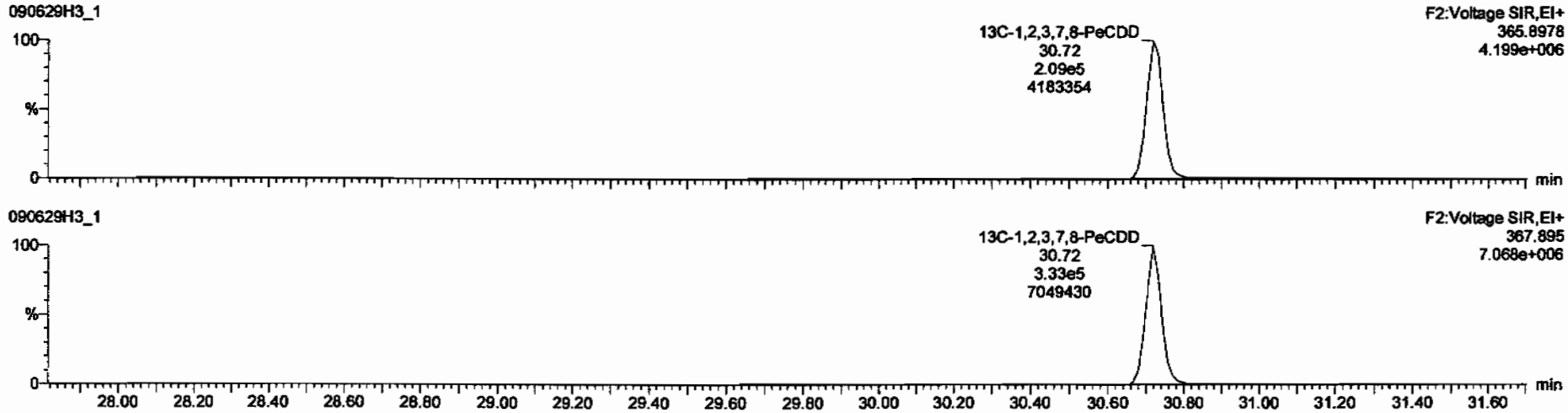

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1,2,3,4,7,8-HxCDD

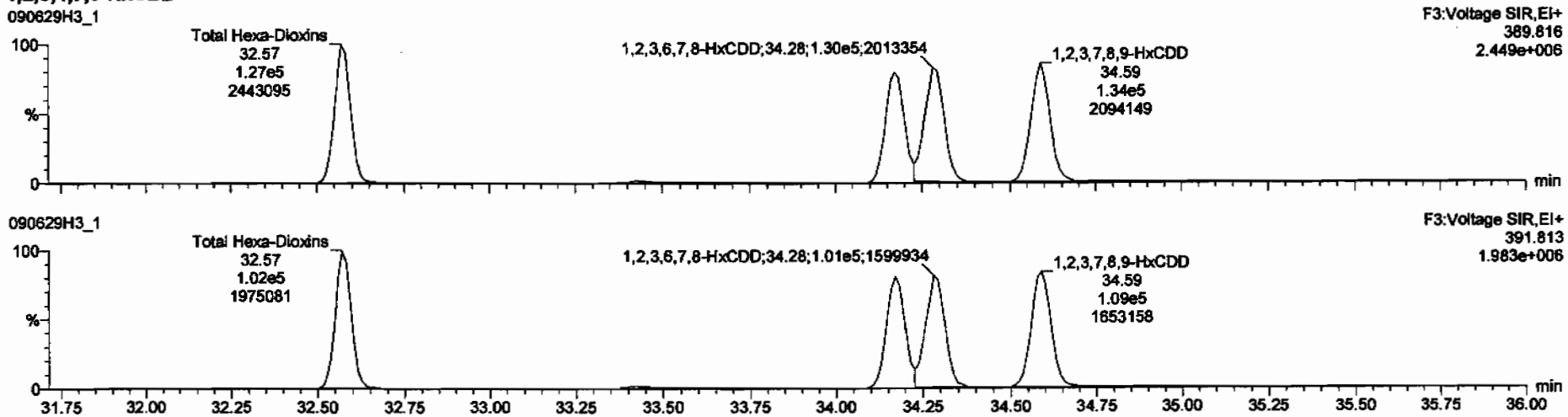

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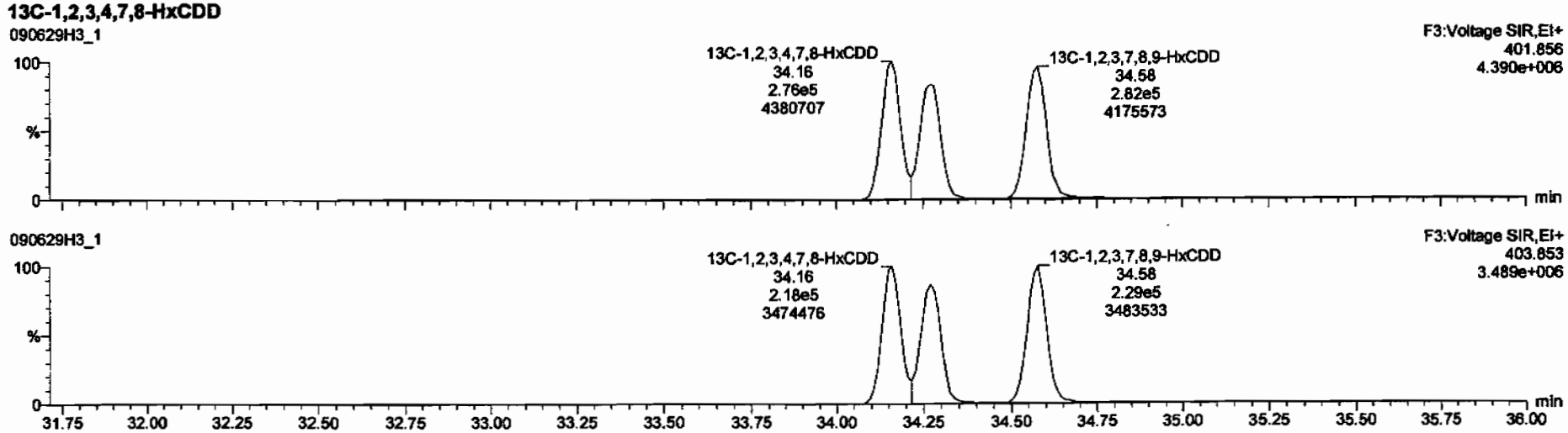

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1,2,3,4,6,7,8-HpCDD

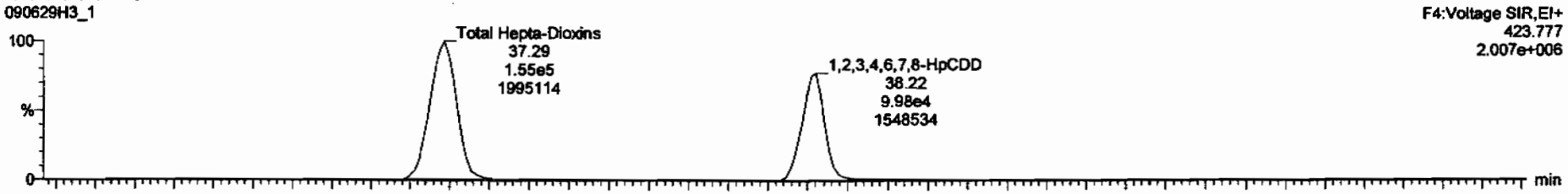

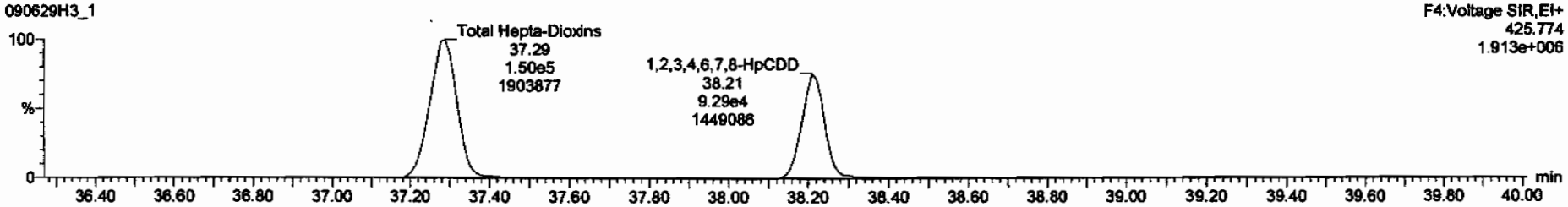

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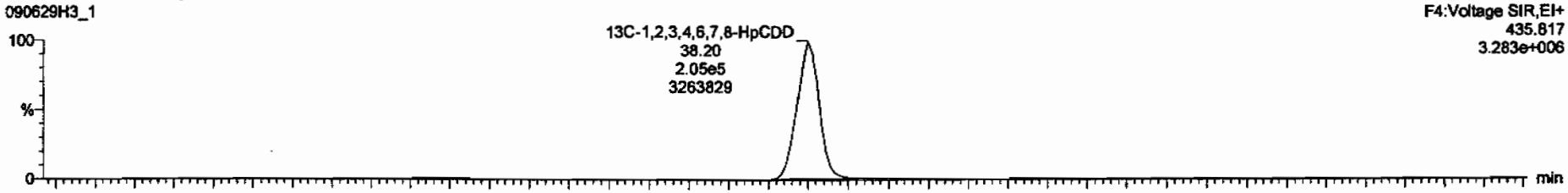

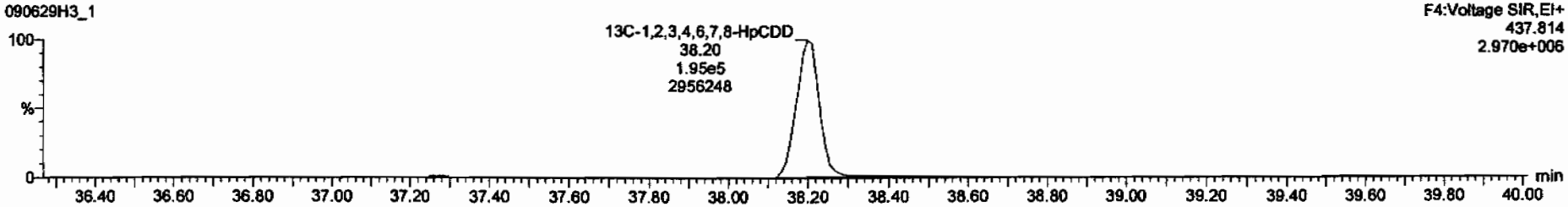

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OCDD

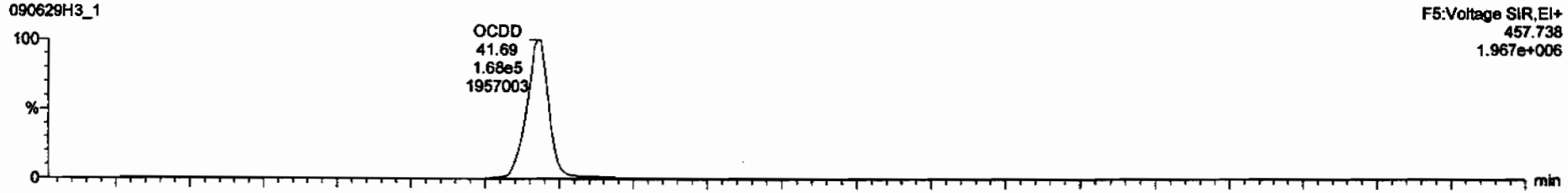

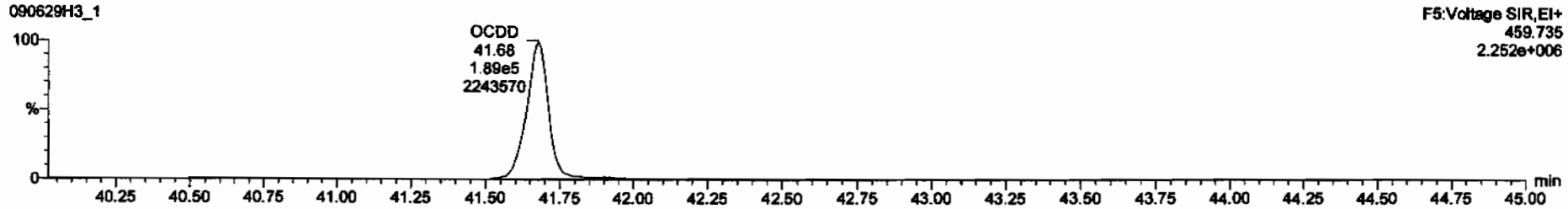

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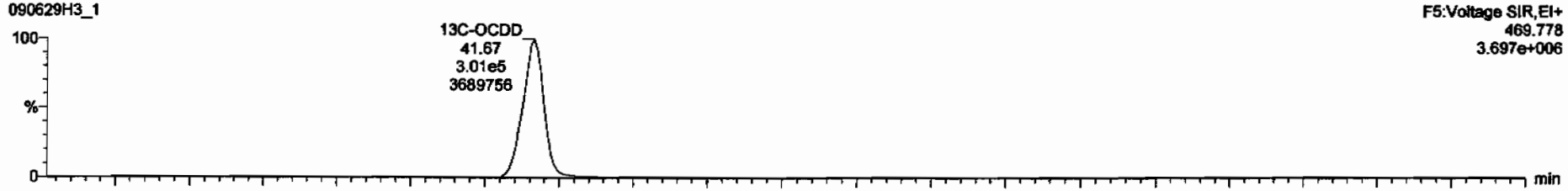

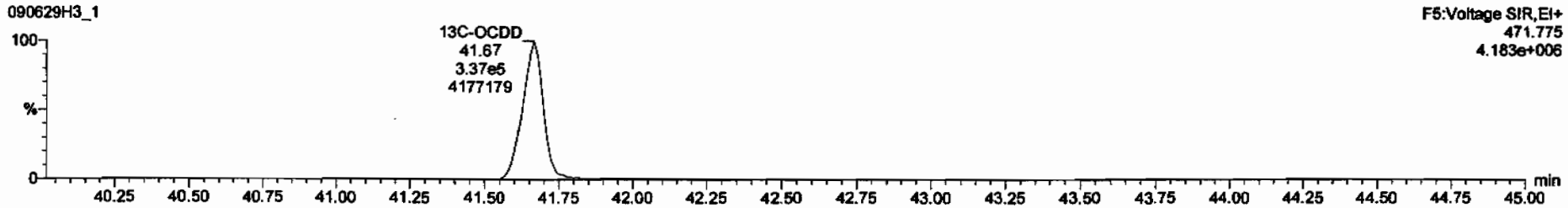

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2,3,7,8-TCDF

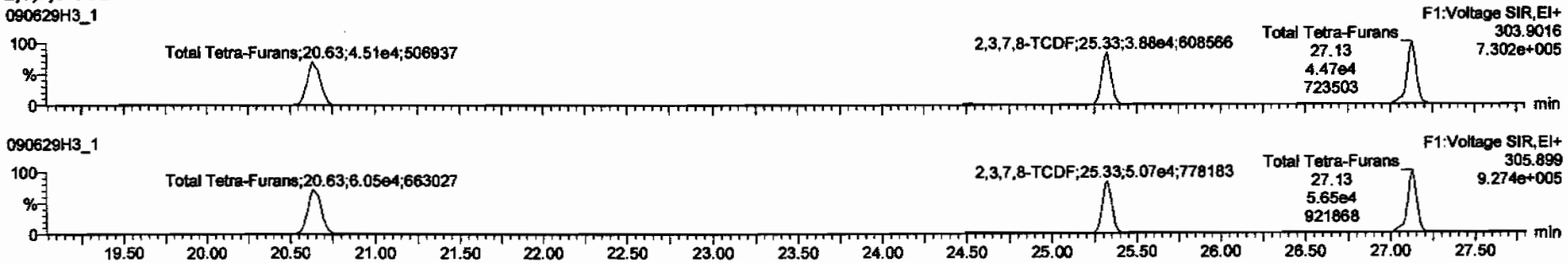

13C-2,3,7,8-TCDF

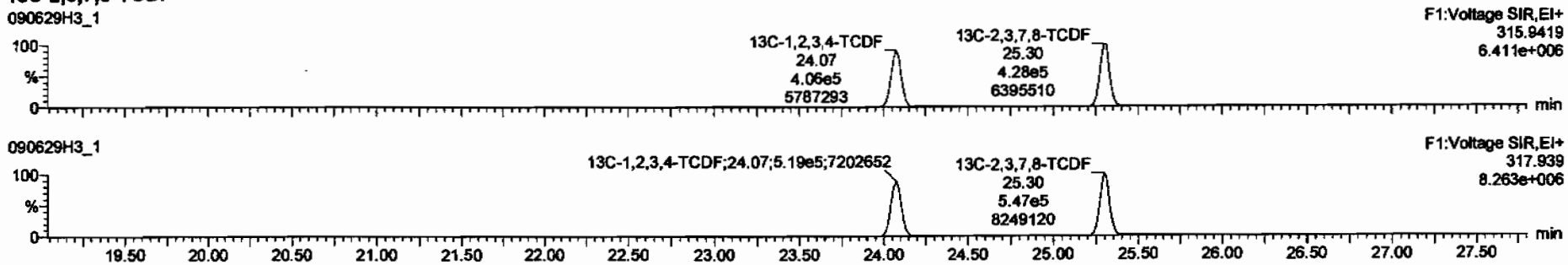

DPE1

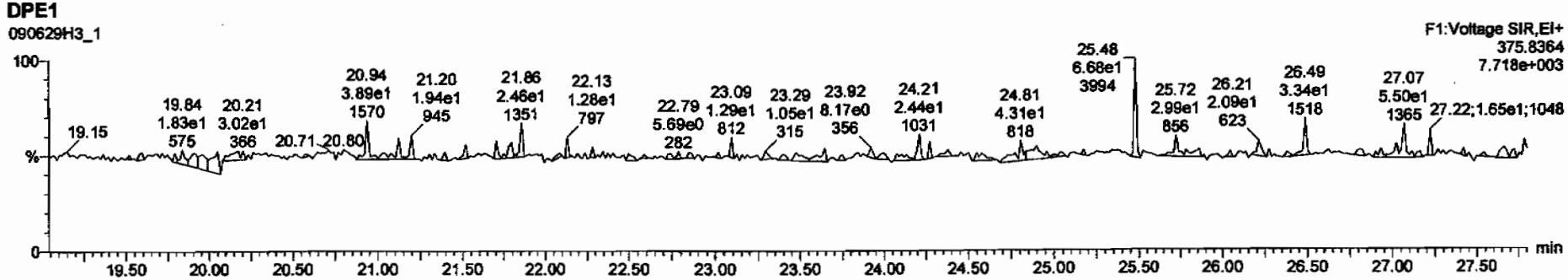

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Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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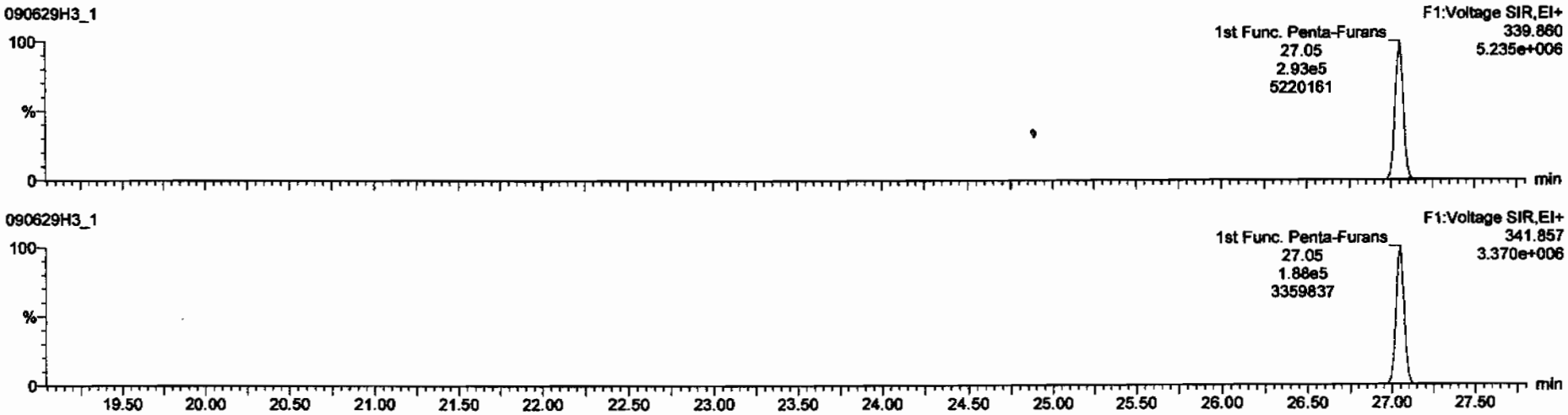

DPE6

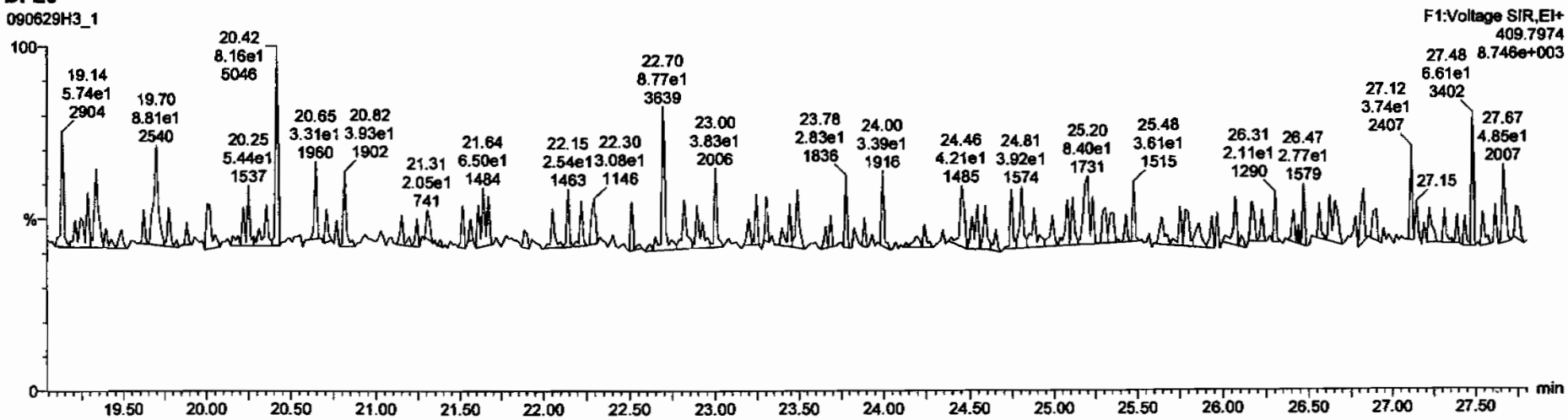

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Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

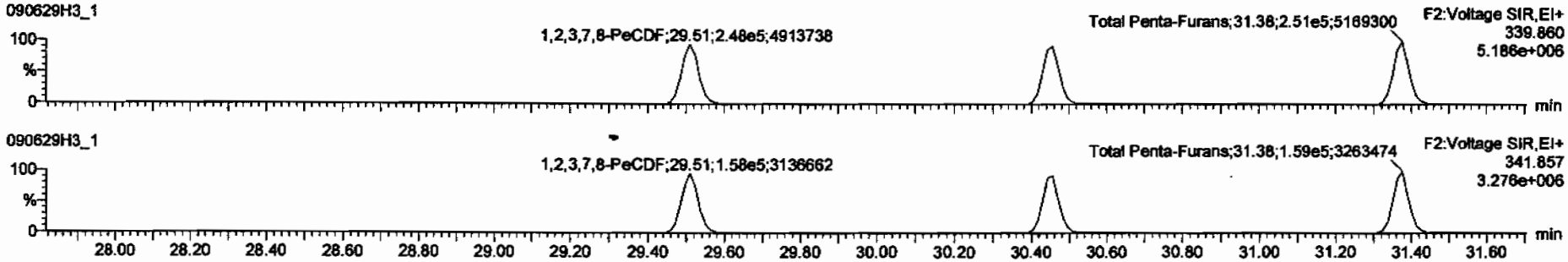

13C-1,2,3,7,8-PeCDF

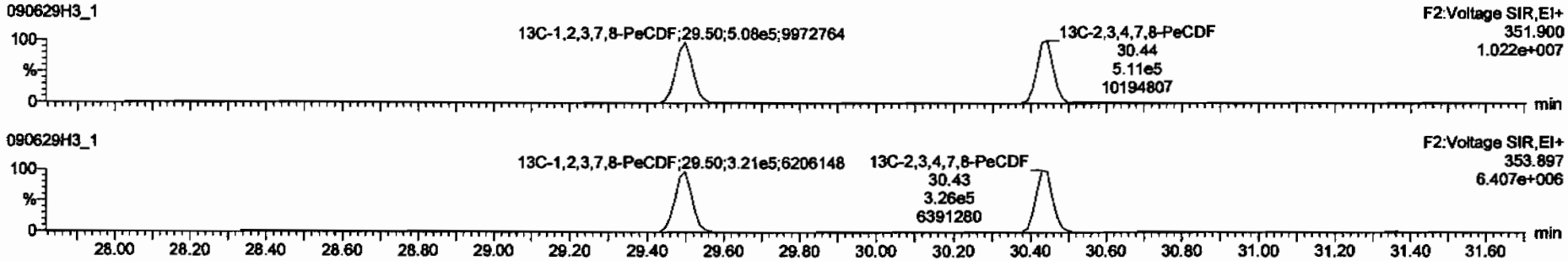

DPE2

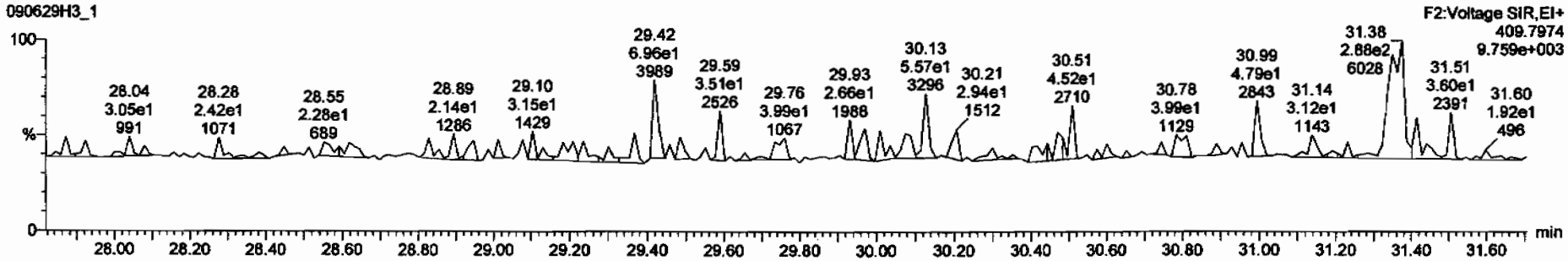

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Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDF

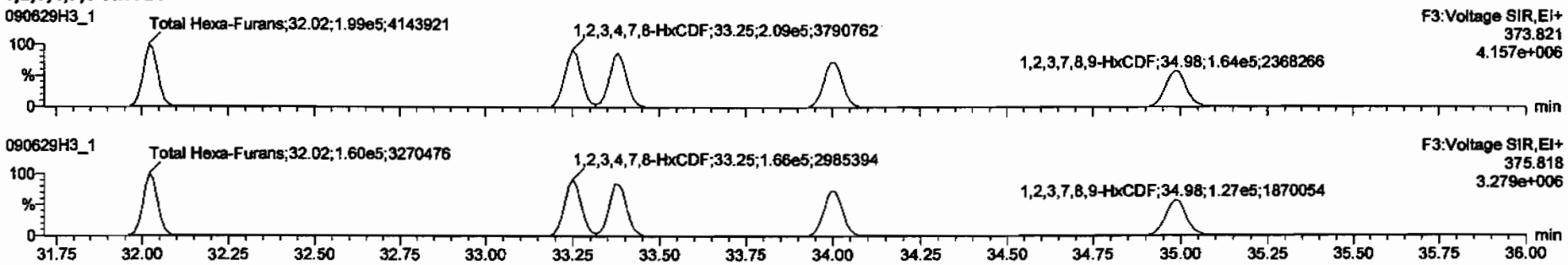

13C-1,2,3,4,7,8-HxCDF

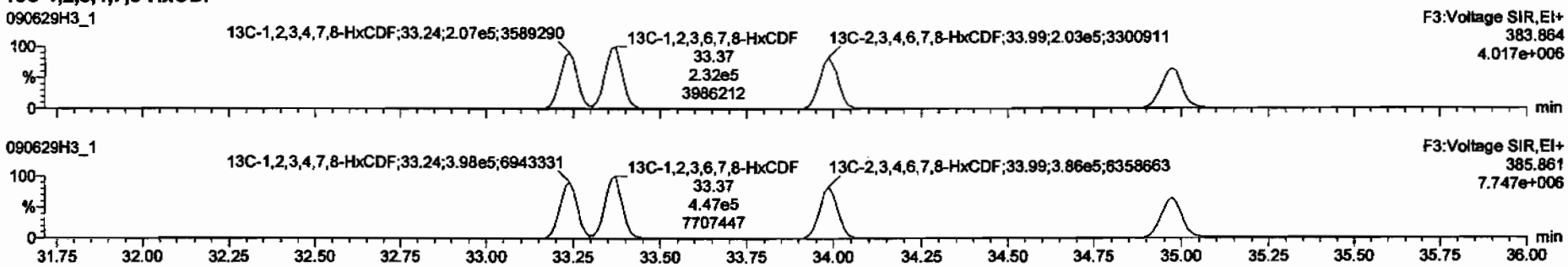

DPE3

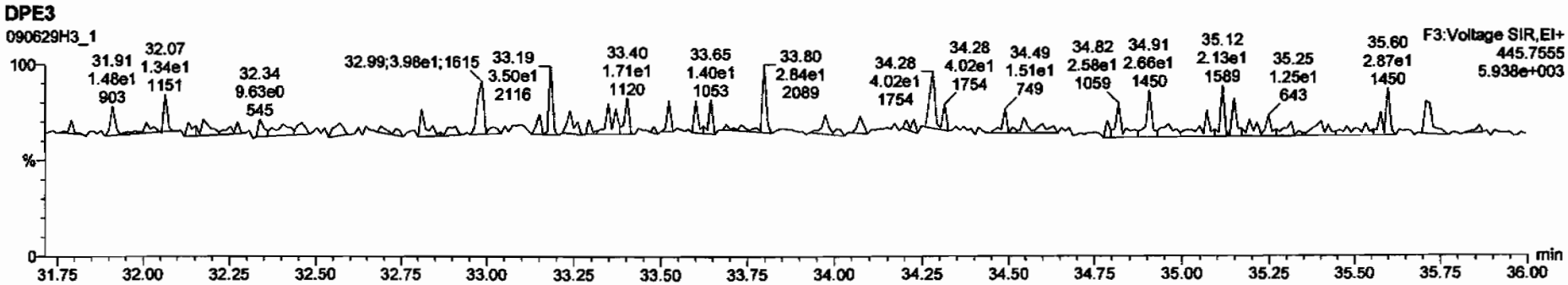

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Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDF

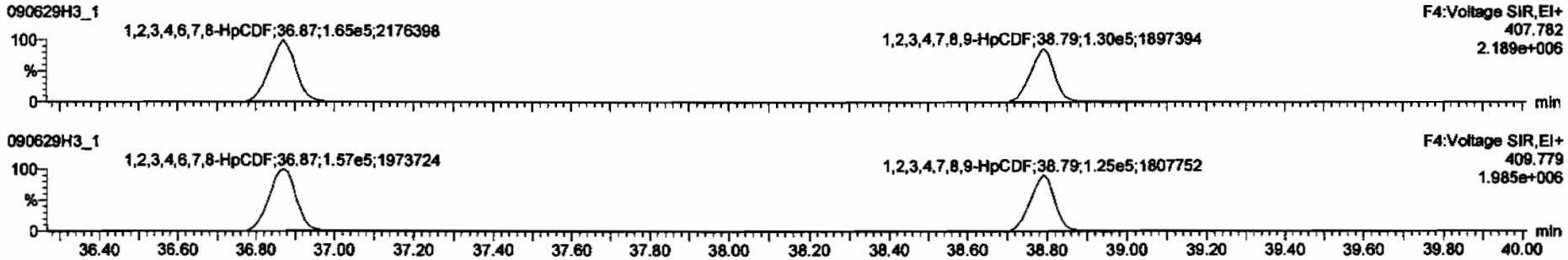

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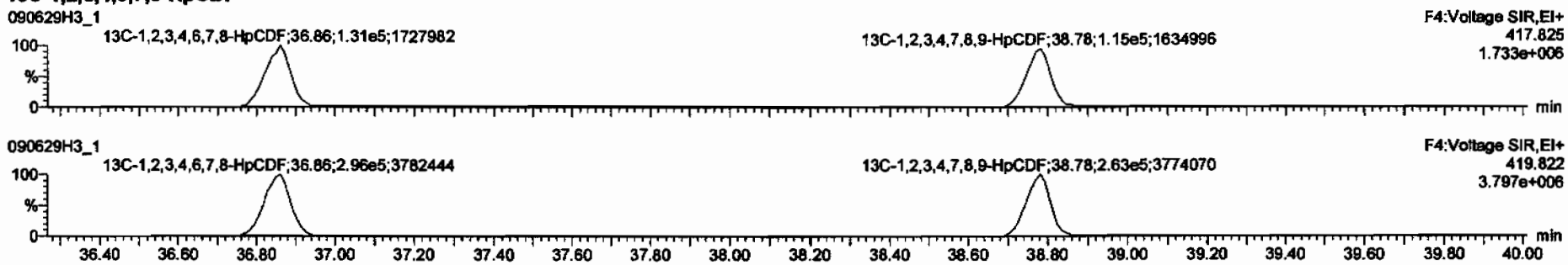

DPE4

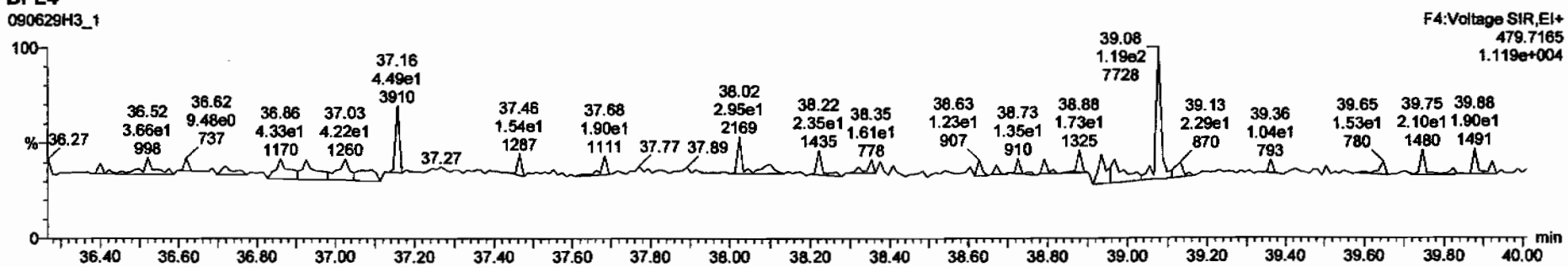

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629h3-1.qld

Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDF

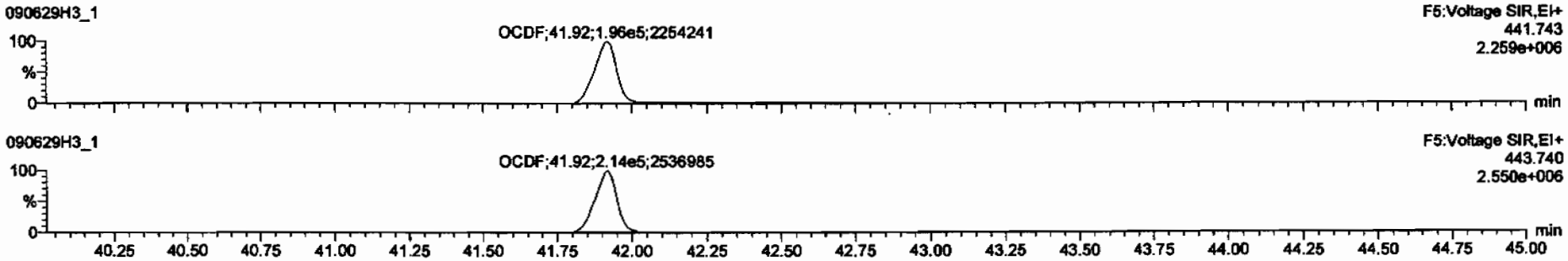

13C-OCDF

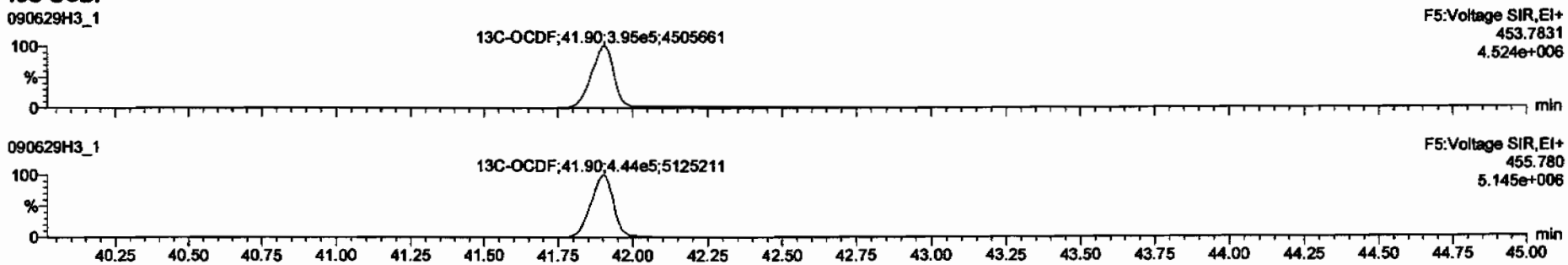

DPE5

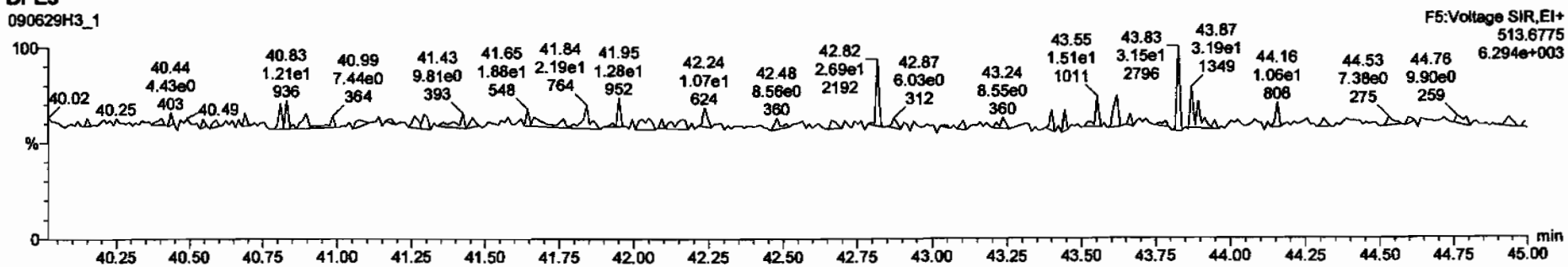

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Last Altered: Tuesday, June 30, 2009 8:02:52 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:04:52 AM Pacific Daylight Time

Name: 090629H3_1, Date: 30-Jun-2009, Time: 04:13:15, ID: ST090629H3-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

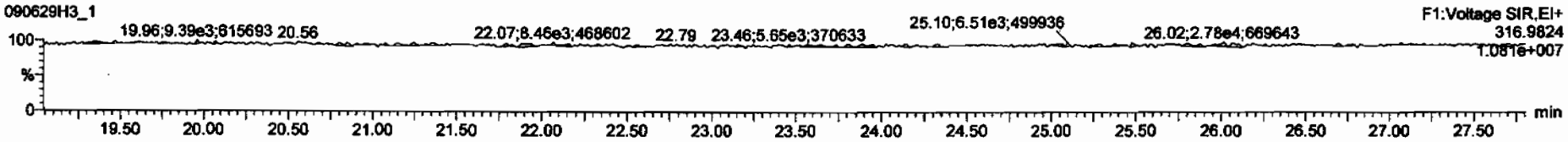

PFK2

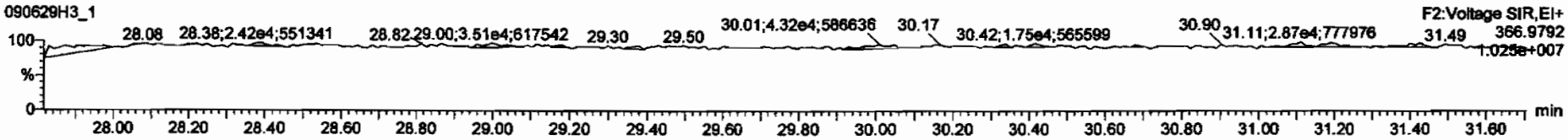

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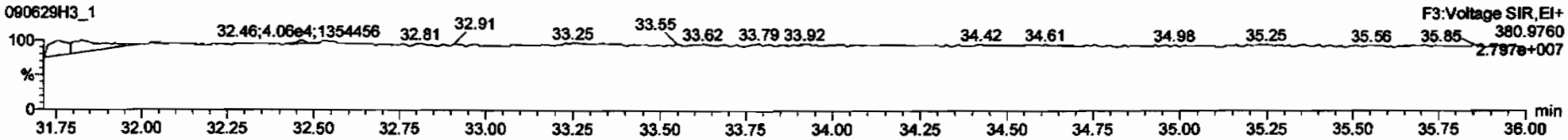

PFK4

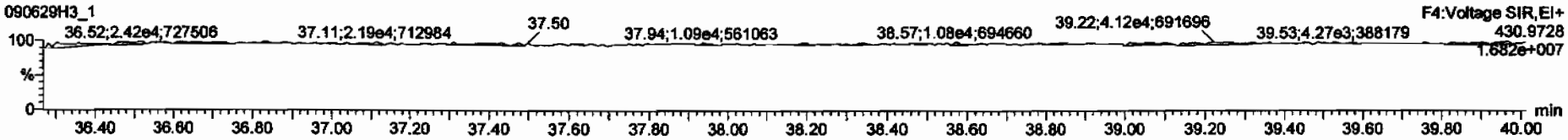

PFK5

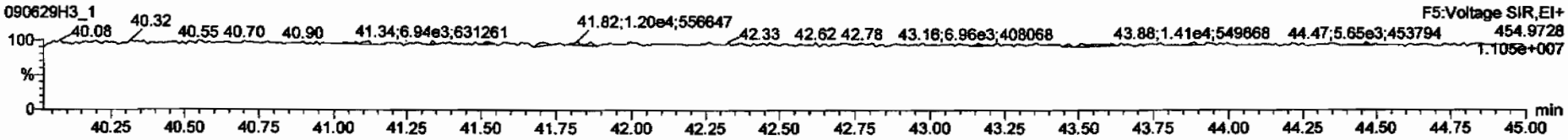

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_6

CCAL ID: ST090629H3-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 08:21:05

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	NO	8.99	7.8 8.2	12.9 12.3 (4)	Yes	8.00	12.0	Yes
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	45.9	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	45.1	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	45.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	44.6	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.87	0.76-1.02	NO	89.9	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	8.51	8.4 8.6	12.0 11.6 (4)	Yes	8.00	12.0	Yes
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	42.3	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	42.1	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.6	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.9	44.0	57.0	No	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	45.1	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.9	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	45.3	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.90	0.76-1.02	NO	86.9	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290 only
Date: 6/30/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090629H3-2

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_6

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 08:21:05

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	104	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	98.3	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	105	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	96.3	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	NO	109	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.92	0.76-1.02	NO	243	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	99.3	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	99.9	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	103	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	89.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	93.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	97.9	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	95.0	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	NO	101	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	215	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.21	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290 only
Date: 6/30/09

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 09:23:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:23:21 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.71
2	1,2,8,9-TCDD (Last)	26.96
3	1,2,4,7,9-PeCDD (First)	28.60
4	1,2,3,8,9-PeCDD (Last)	31.11
5	12,4,6,7,9-HxCDD (First)	32.58
6	1,2,3,7,8,9-HxCDD (Last)	34.59
7	1,2,3,4,6,7,9-HpCDD (First)	37.29
8	1,2,3,4,6,7,8-HpCDD (Last)	38.22
9	1,3,6,8-TCDF (First)	20.63
10	1,2,8,9-TCDF (Last)	27.13
11	1,3,4,6,8-PeCDF (First)	27.05
12	1,2,3,8,9-PeCDF (Last)	31.38
13	1,2,3,4,6,8-HxCDF (First)	32.02
14	1,2,3,4,8,9-HxCDF (Last)	34.98
15	1,2,3,4,6,7,8-HpCDF (First)	36.88
16	1,2,3,4,7,8,9-HpCDF (Last)	38.80

6/30/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_6

CCAL ID: ST090629H3-2
GC Column ID: DB-5
Analysis Date: 30-Jun-09
Analysis Time: 08:21:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]
Date: 6/30/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H3_6

CCAL ID: ST090629H3-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09

Analysis Time: 08:21:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 6/30/05

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-7.qld

Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:22:05 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	5.79e4	0.81	NO	1.08	1.000	26.09	1.001	8.9857	89.9	0.0570	8.9857
2	1,2,3,7,8-PeCDD	2.19e5	0.63	NO	1.03	1.000	30.75	1.001	45.890	91.8	0.128	45.890
3	1,2,3,4,7,8-HxCDD	1.88e5	1.24	NO	1.00	1.000	34.17	1.000	45.053	90.1	0.196	45.053
4	1,2,3,6,7,8-HxCDD	1.98e5	1.28	NO	1.13	1.000	34.28	1.000	45.618	91.2	0.204	45.618
5	1,2,3,7,8,9-HxCDD	2.07e5	1.28	NO	1.10	1.000	34.59	1.009	46.981	94.0	0.193	46.981
6	1,2,3,4,6,7,8-HpCDD	1.59e5	1.05	NO	1.06	1.000	38.22	1.000	44.620	89.2	0.213	44.620
7	OCDD	2.81e5	0.87	NO	1.18	1.000	41.69	1.000	89.865	89.9	0.201	89.865
8	2,3,7,8-TCDF	7.70e4	0.77	NO	1.09	1.000	25.33	1.001	8.5069	85.1	0.0505	8.5069
9	1,2,3,7,8-PeCDF	3.47e5	1.59	NO	1.16	1.000	29.51	1.000	42.308	84.6	0.107	42.308
10	2,3,4,7,8-PeCDF	3.36e5	1.59	NO	1.12	1.000	30.46	1.000	42.070	84.1	0.108	42.070
11	1,2,3,4,7,8-HxCDF	3.21e5	1.26	NO	1.41	1.000	33.26	1.001	43.631	87.3	0.113	43.631
12	1,2,3,6,7,8-HxCDF	3.15e5	1.27	NO	1.22	1.000	33.38	1.000	43.888	87.8	0.117	43.888
13	2,3,4,6,7,8-HxCDF	2.94e5	1.29	NO	1.28	1.000	34.01	1.000	45.062	90.1	0.138	45.062
14	1,2,3,7,8,9-HxCDF	2.53e5	1.30	NO	1.26	1.000	34.98	1.000	44.854	89.7	0.178	44.854
15	1,2,3,4,6,7,8-HpCDF	2.72e5	1.05	NO	1.69	1.000	36.88	1.001	44.945	89.9	0.242	44.945
16	1,2,3,4,7,8,9-HpCDF	2.14e5	1.04	NO	1.48	1.000	38.80	1.000	45.285	90.6	0.281	45.285
17	OCDF	3.39e5	0.90	NO	1.10	1.000	41.93	1.000	86.944	86.9	0.130	86.944
18	13C-2,3,7,8-TCDD	5.98e5	0.78	NO	1.01	1.000	26.08	1.023	103.62	104	0.222	
19	13C-1,2,3,7,8-PeCDD	4.62e5	0.61	NO	0.827	1.000	30.72	1.205	98.251	98.3	0.135	
20	13C-1,2,3,4,7,8-HxCDD	4.16e5	1.25	NO	0.916	1.000	34.16	0.988	104.52	105	0.387	
21	13C-1,2,3,6,7,8-HxCDD	3.85e5	1.23	NO	0.921	1.000	34.27	0.991	96.340	96.3	0.385	
22	13C-1,2,3,4,6,7,8-HpCDD	3.35e5	1.04	NO	0.708	1.000	38.21	1.105	108.73	109	0.540	
23	13C-OCDD	5.30e5	0.92	NO	0.503	1.000	41.68	1.205	242.98	121	0.462	
24	13C-2,3,7,8-TCDF	8.32e5	0.79	NO	0.977	1.000	25.30	0.992	107.12	107	0.143	
25	13C-1,2,3,7,8-PeCDF	7.07e5	1.58	NO	0.896	1.000	29.50	1.157	99.294	99.3	0.229	
26	13C-2,3,4,7,8-PeCDF	7.14e5	1.57	NO	0.900	1.000	30.44	1.194	99.859	99.9	0.229	
27	13C-1,2,3,4,7,8-HxCDF	5.21e5	0.52	NO	1.17	1.000	33.24	0.961	102.63	103	0.437	
28	13C-1,2,3,6,7,8-HxCDF	5.87e5	0.52	NO	1.52	1.000	33.37	0.965	88.977	89.0	0.336	
29	13C-2,3,4,6,7,8-HxCDF	5.09e5	0.52	NO	1.25	1.000	34.00	0.983	93.858	93.9	0.409	
30	13C-1,2,3,7,8,9-HxCDF	4.48e5	0.51	NO	1.05	1.000	34.97	1.011	97.933	97.9	0.485	

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-7.qld

Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:22:05 Pacific Daylight Time

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	3.58e5	0.44	NO	0.868	1.000	36.85	1.066	95.023	95.0	0.457
32	13C-1,2,3,4,7,8,9-HpCDF	3.19e5	0.44	NO	0.727	1.000	38.79	1.122	101.22	101	0.546
33	13C-OCDF	7.10e5	0.88	NO	0.760	1.000	41.92	1.212	215.35	108	0.318
34	37Cl-2,3,7,8-TCDD	3.50e4			0.668	1.000	26.09	1.023	9.2112	92.1	0.0689
35	13C-1,2,3,4-TCDD	5.68e5	0.80	NO	1.00	1.000	25.50	0.000	100.00	100	0.226
36	13C-1,2,3,4-TCDF	7.95e5	0.79	NO	1.00	1.000	24.07	0.000	100.00	100	0.140
37	13C-1,2,3,7,8,9-HxCDD	4.34e5	1.23	NO	1.00	1.000	34.58	0.000	100.00	100	0.355

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 9:23:40 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 9:23:58 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

	090629H3_1	ST090629H3-1 1613 CS3 080917I	30-Jun-09	04:13:15
	090629H3_2	solvent blank	30-Jun-09	05:02:50
	090629H3_3	31837_2207_005 CAMO-09-6049 11.23	30-Jun-09	05:52:25
	090629H3_4	31838_2207_001 CAMO-09-10463 10.43	30-Jun-09	06:41:59
	090629H3_5	solvent blank	30-Jun-09	07:31:32
	090629H3_6	ST090629H3-2 1613 CS3 080917I	30-Jun-09	08:21:05

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 09:23:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:23:21 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

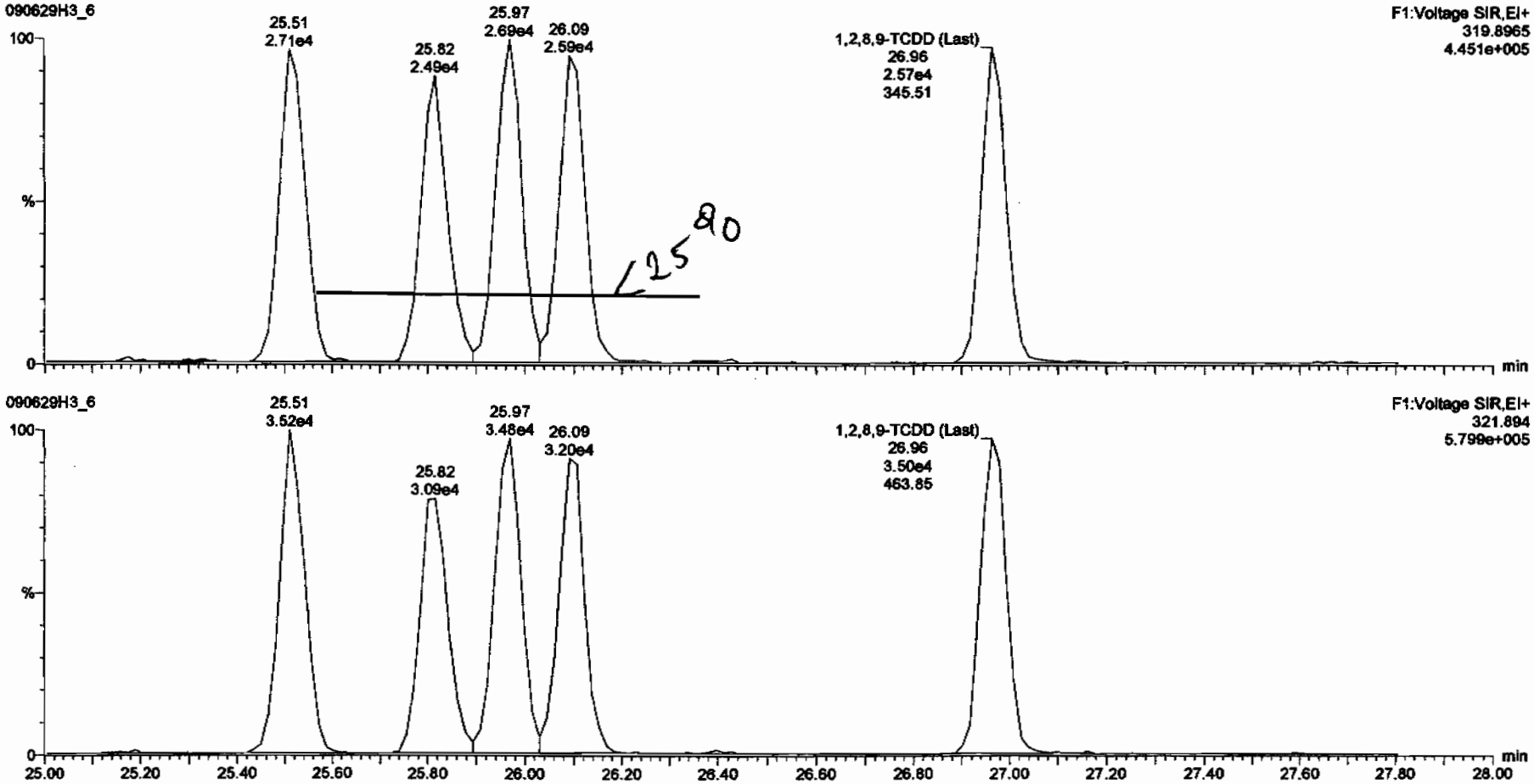

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Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:21:49 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

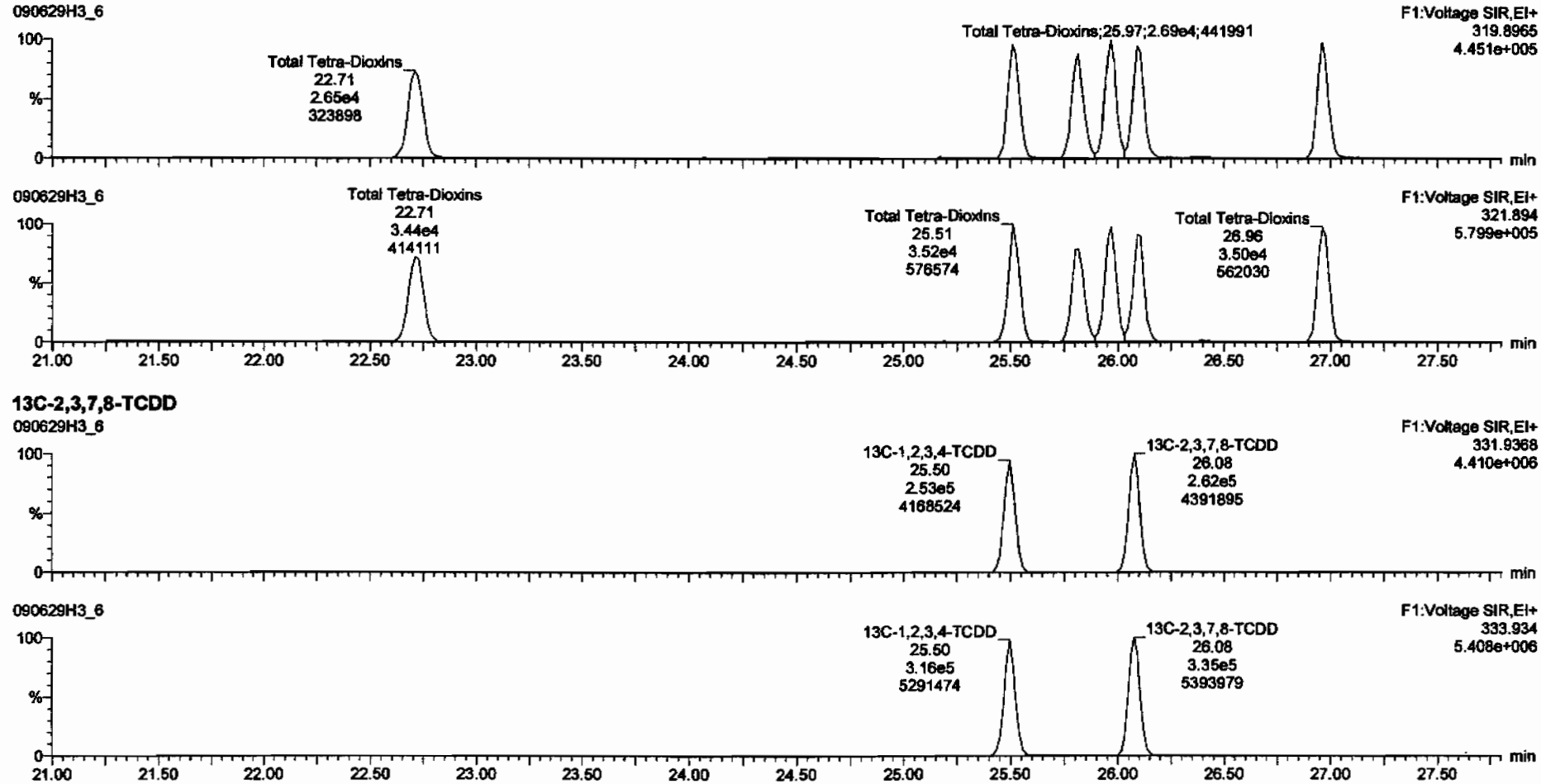

13C-2,3,7,8-TCDD

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-7.qld

Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:21:49 Pacific Daylight Time

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

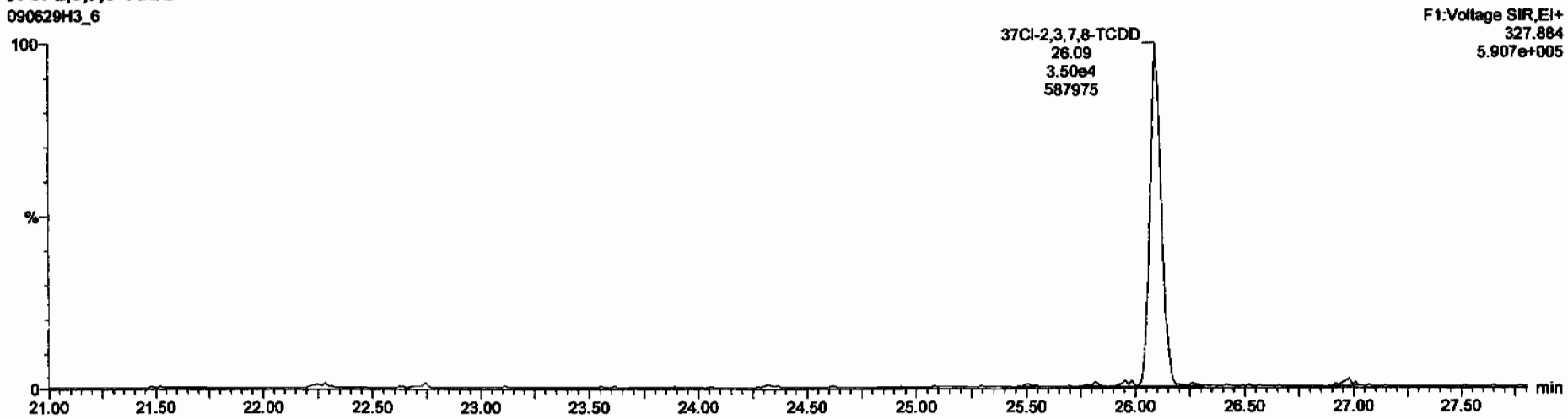

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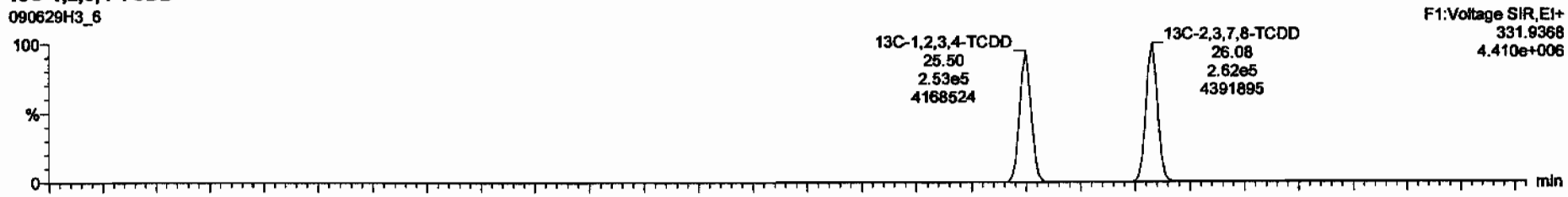

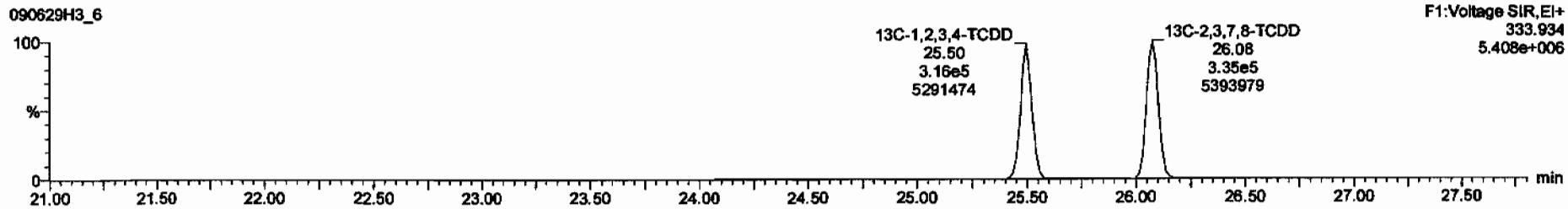

Dataset: C:\MassLynx\Default.pro\Results\090629h3\090629h3-7.qld

Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:21:49 Pacific Daylight Time

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

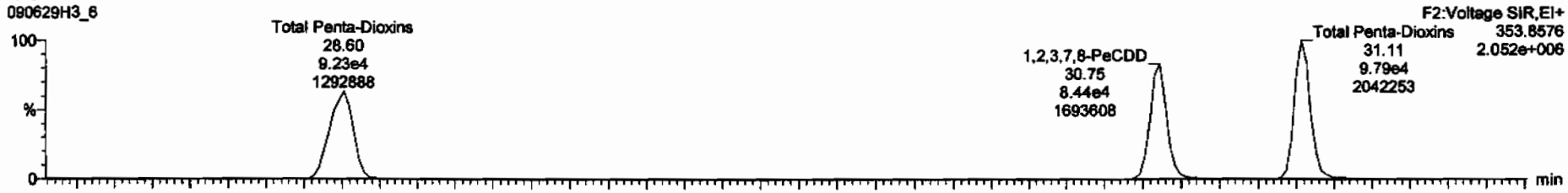

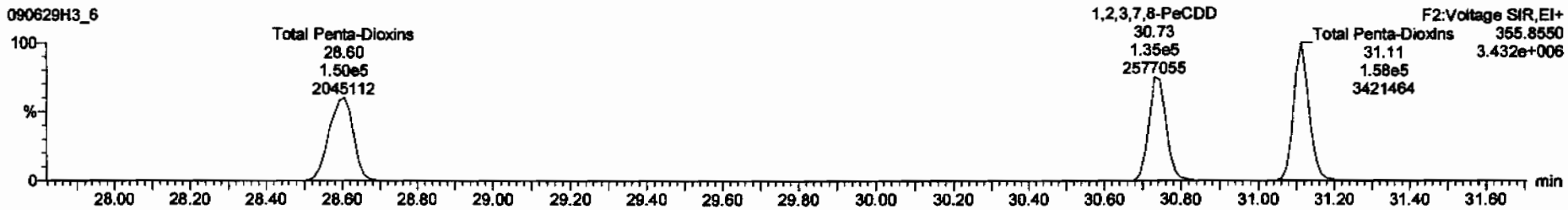

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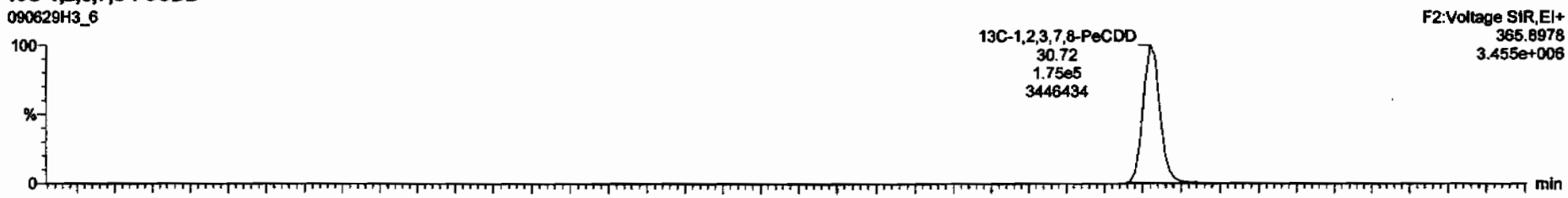

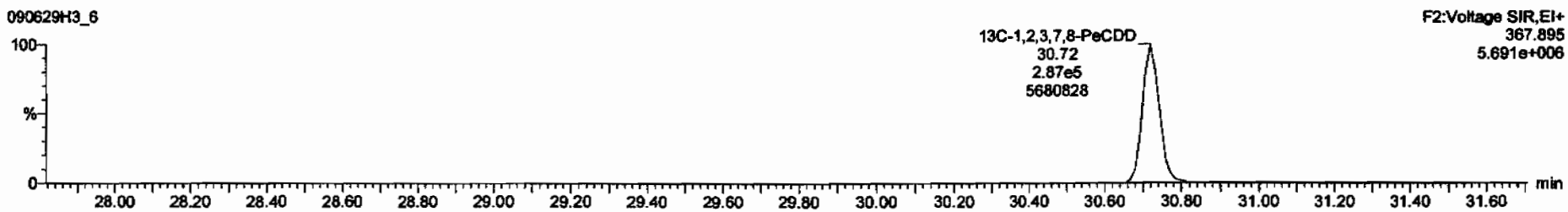

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Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:21:49 Pacific Daylight Time

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

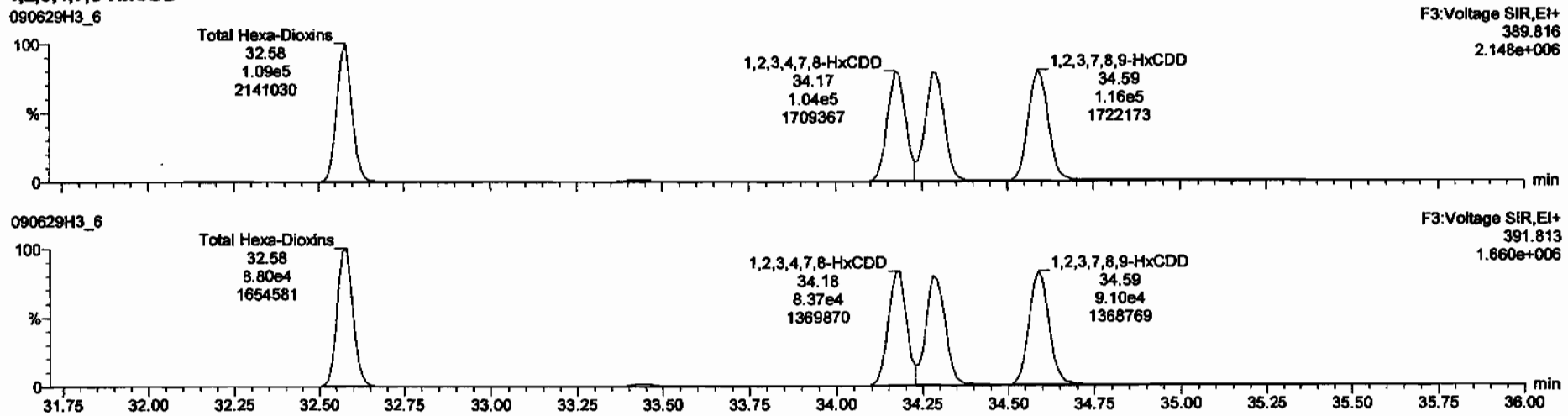

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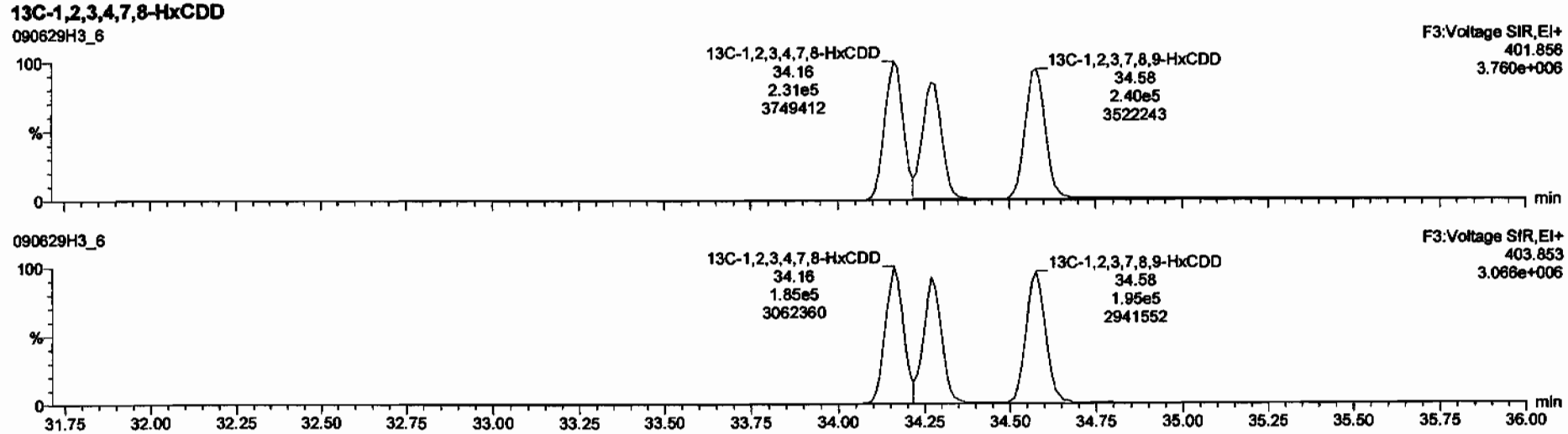

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Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:21:49 Pacific Daylight Time

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

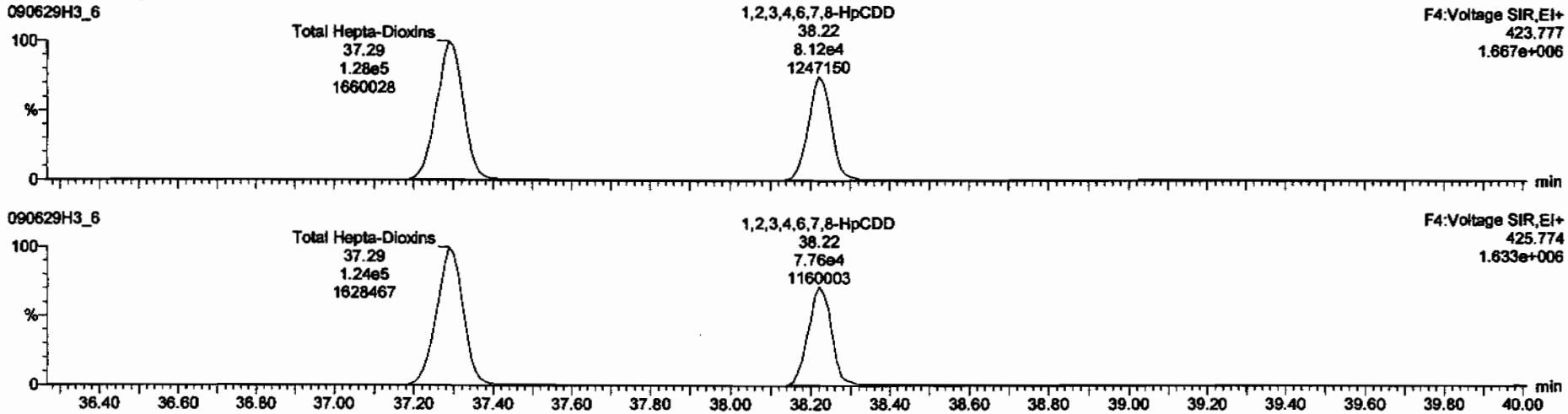

13C-1,2,3,4,6,7,8-HpCDD

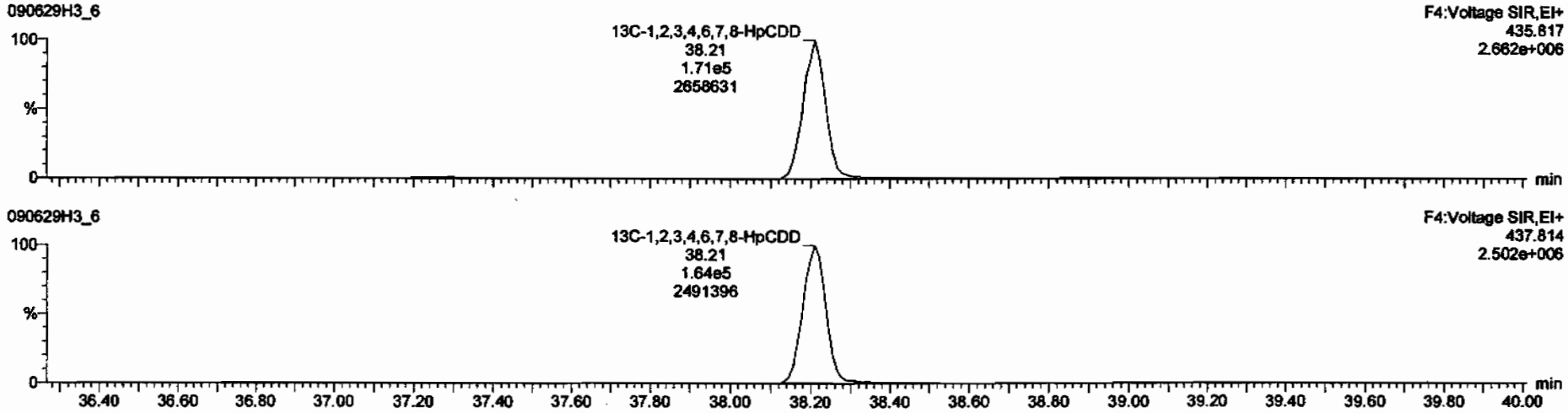

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Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:21:49 Pacific Daylight Time

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

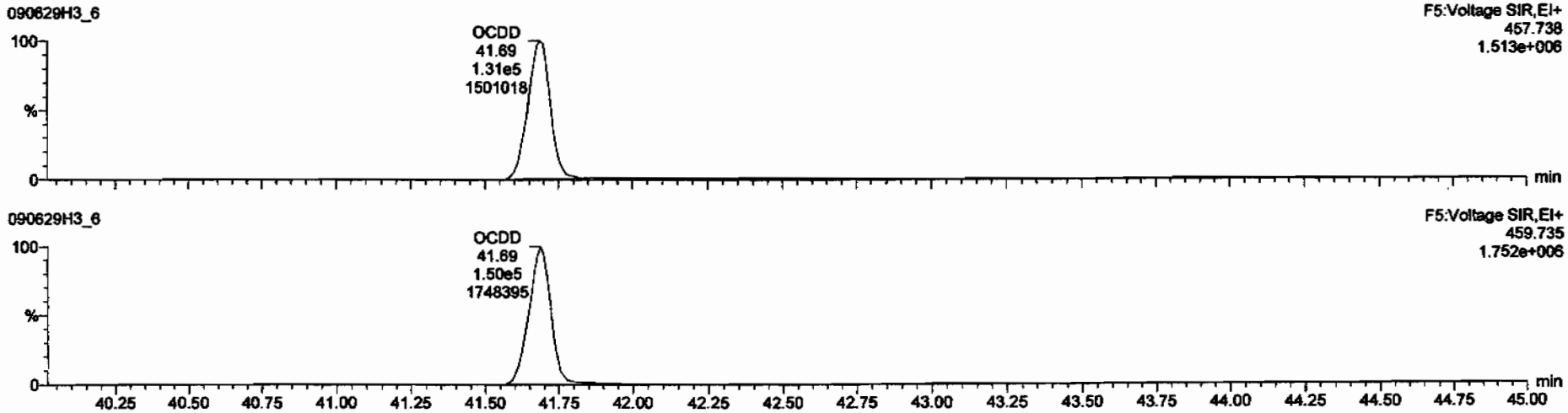

13C-OCDD

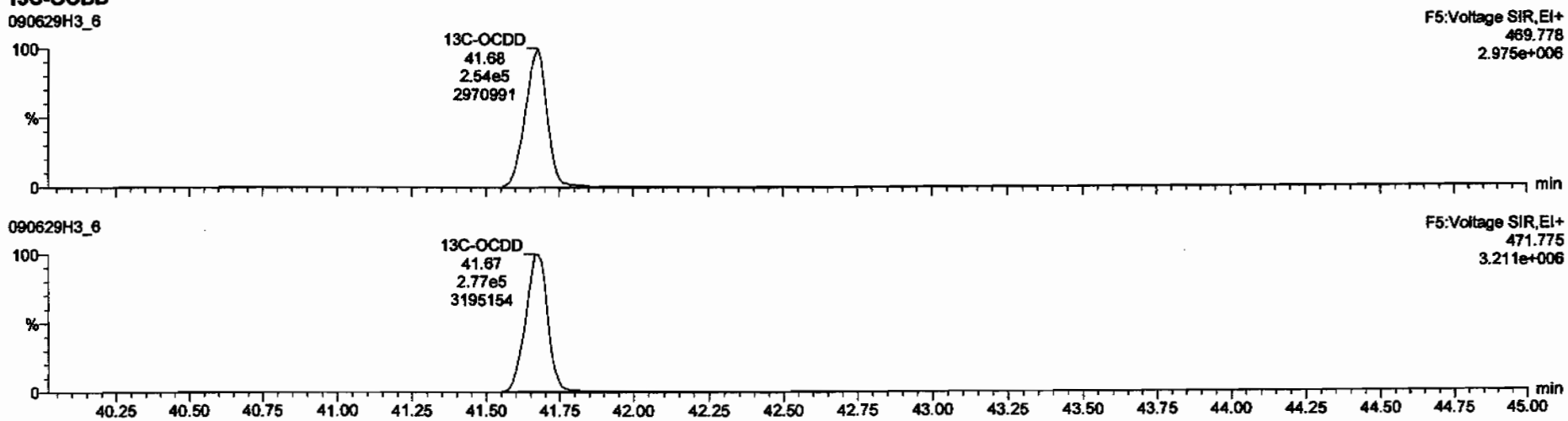

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Last Altered: Tuesday, June 30, 2009 09:21:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 09:21:49 Pacific Daylight Time

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

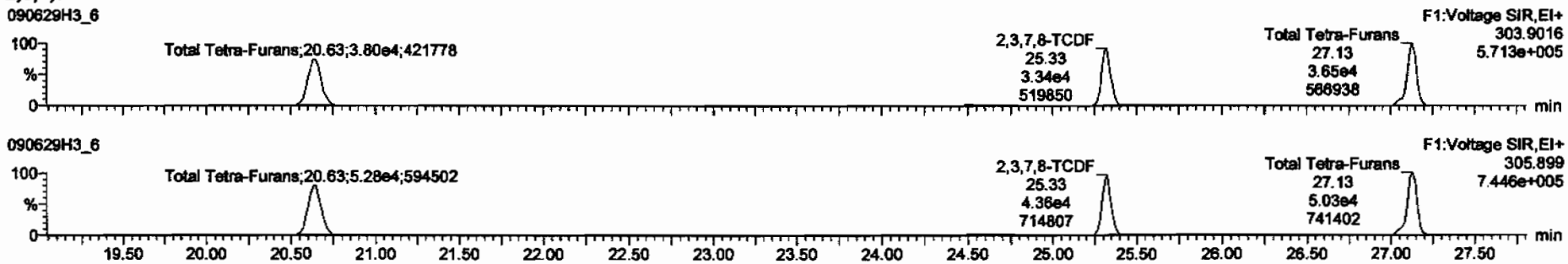

13C-2,3,7,8-TCDF

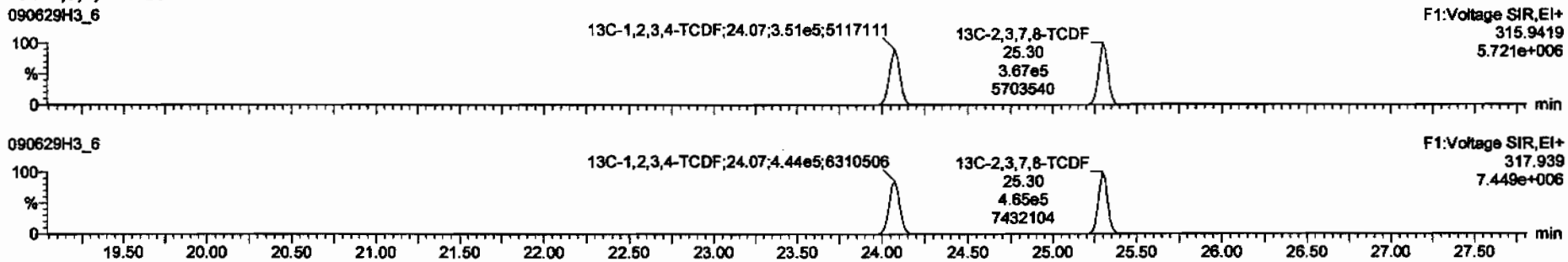

DPE1

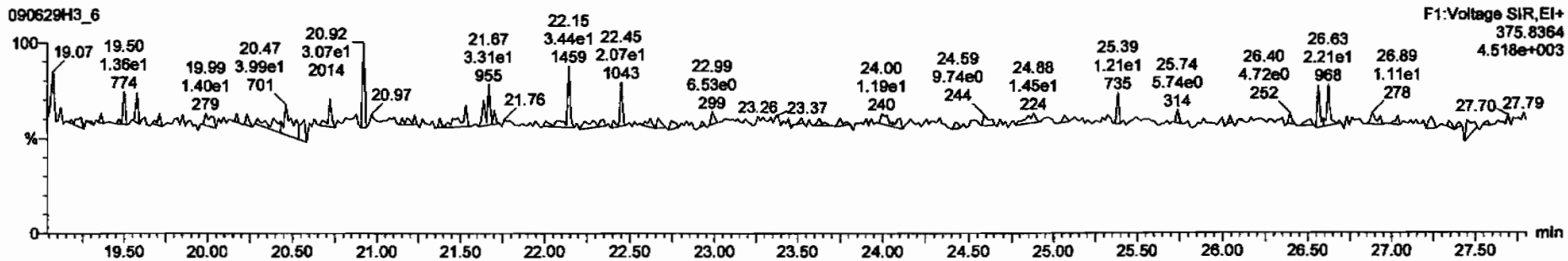

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Printed: Tuesday, June 30, 2009 09:21:49 Pacific Daylight Time

Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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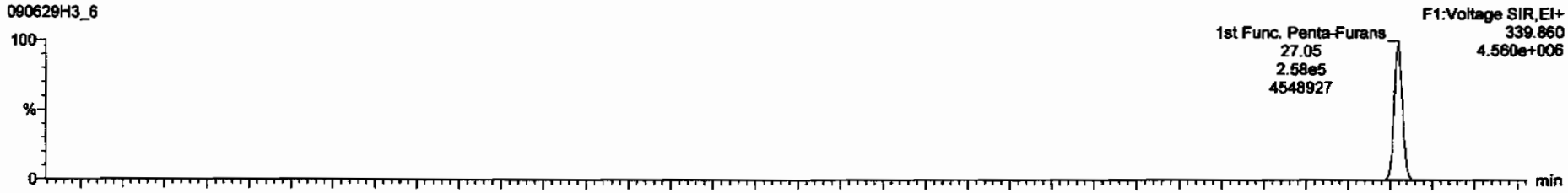

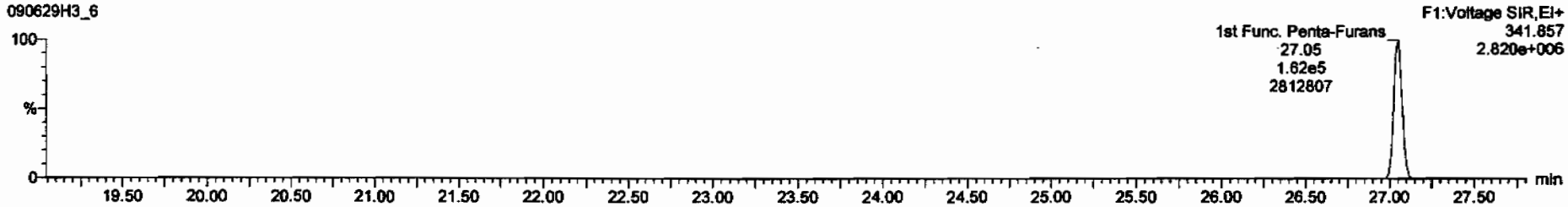

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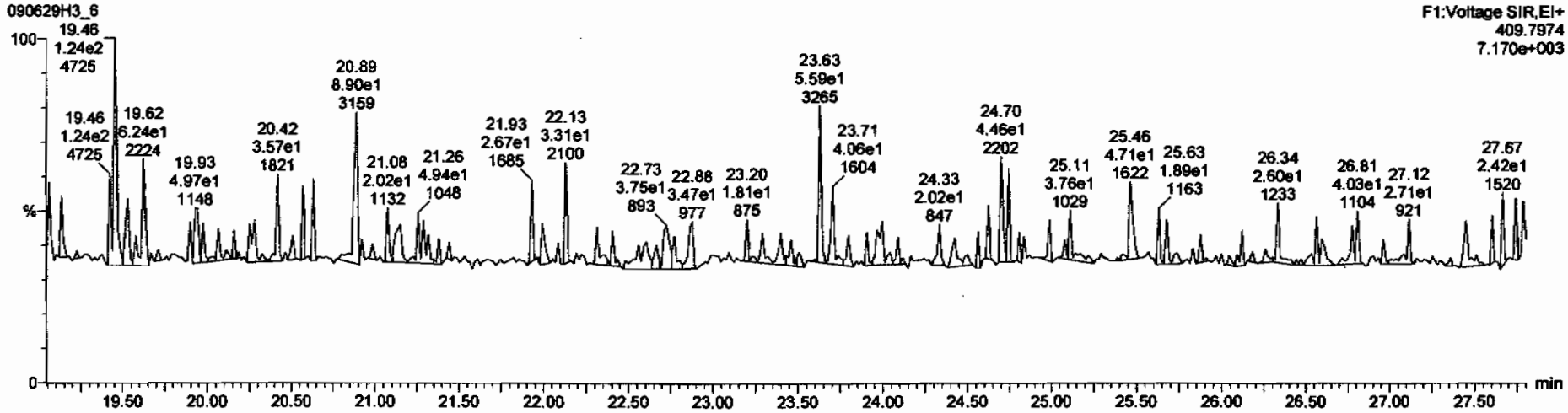

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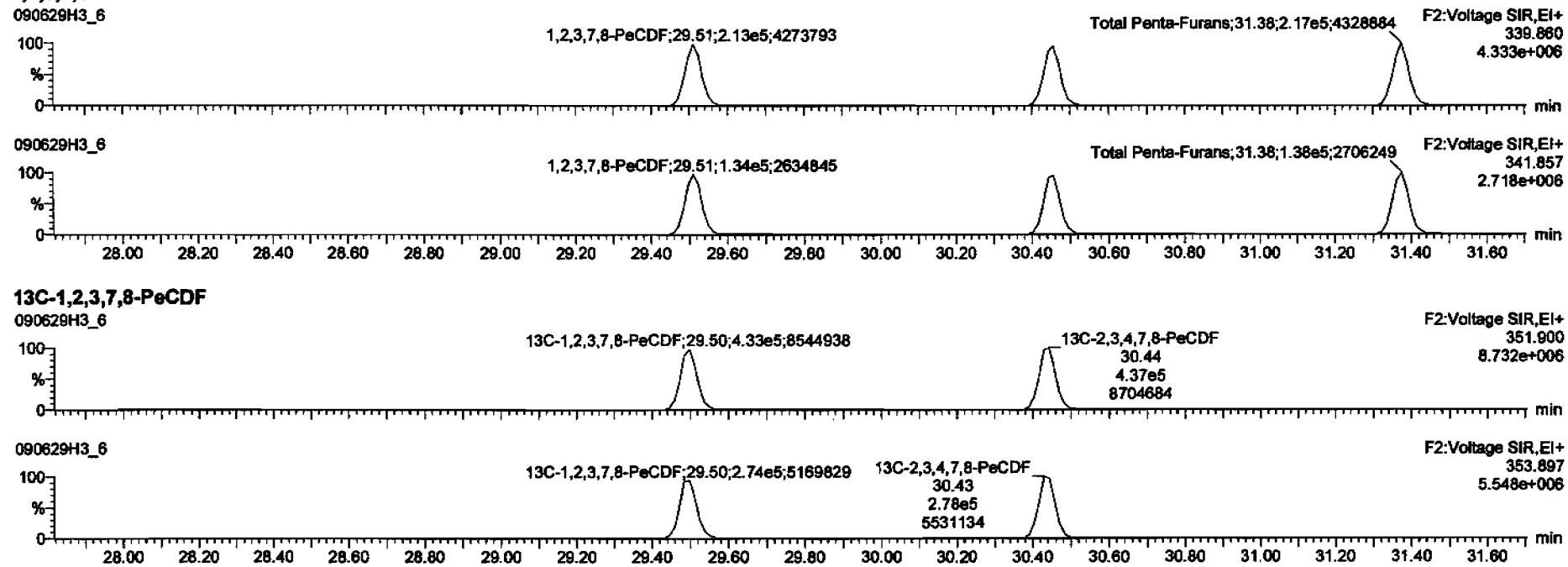

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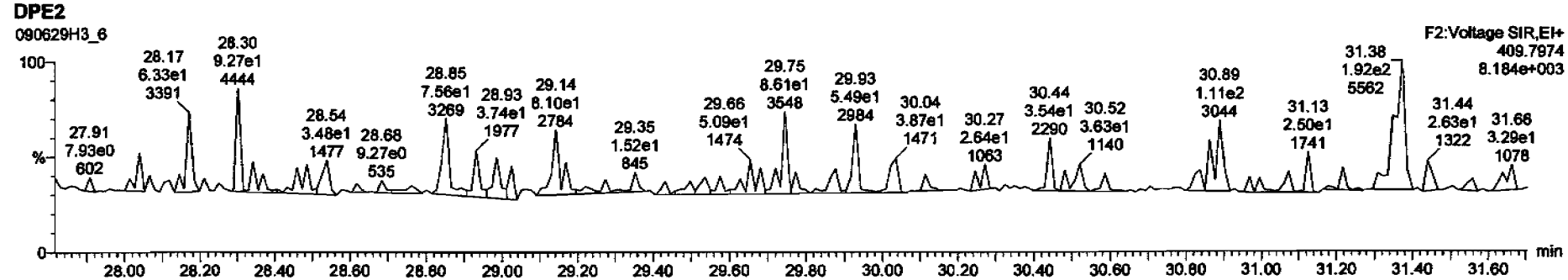

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Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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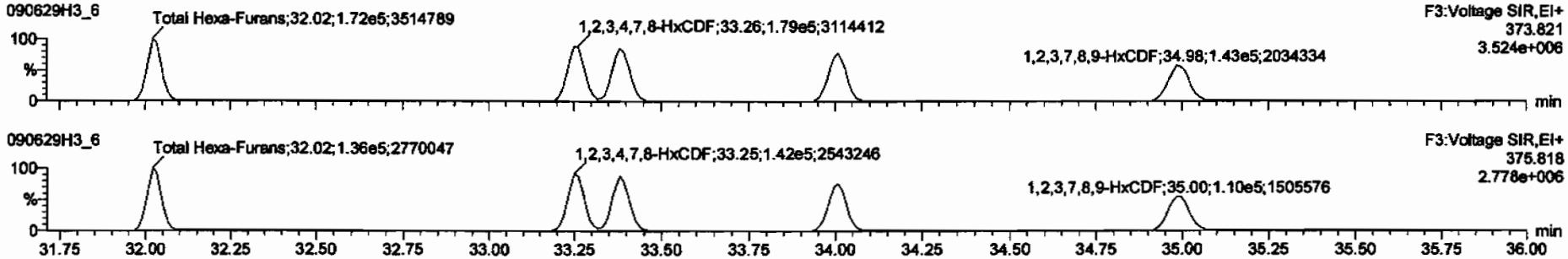

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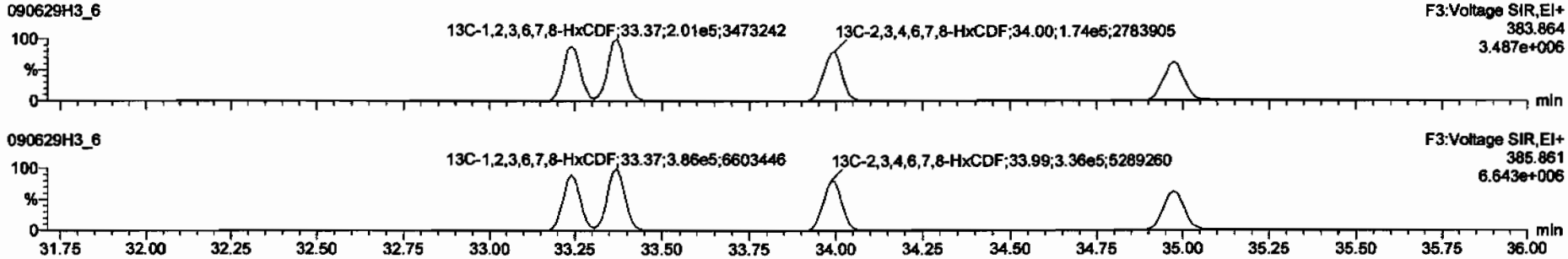

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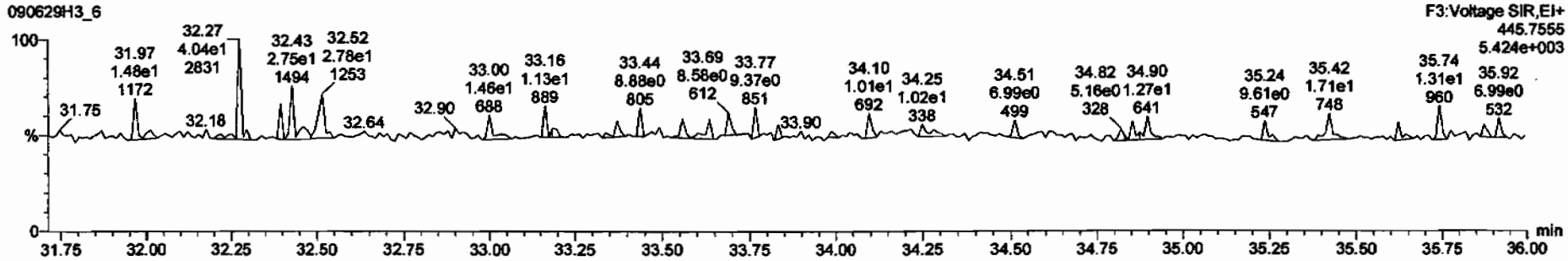

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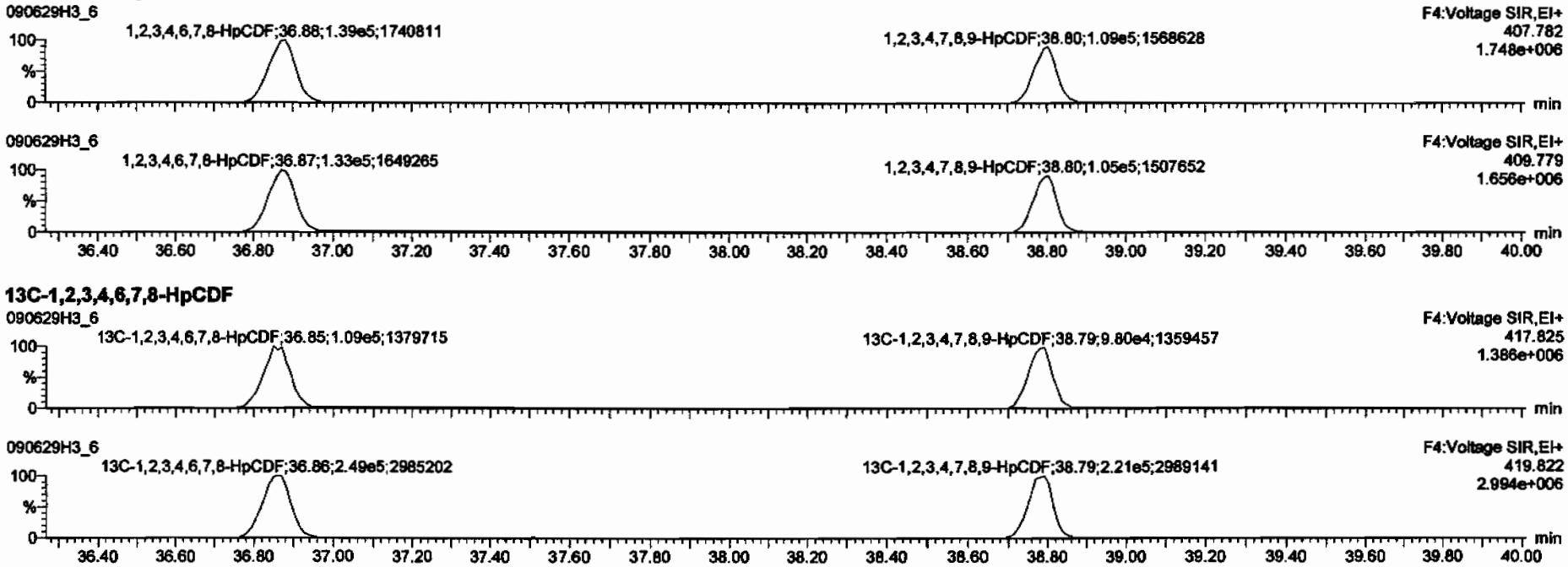

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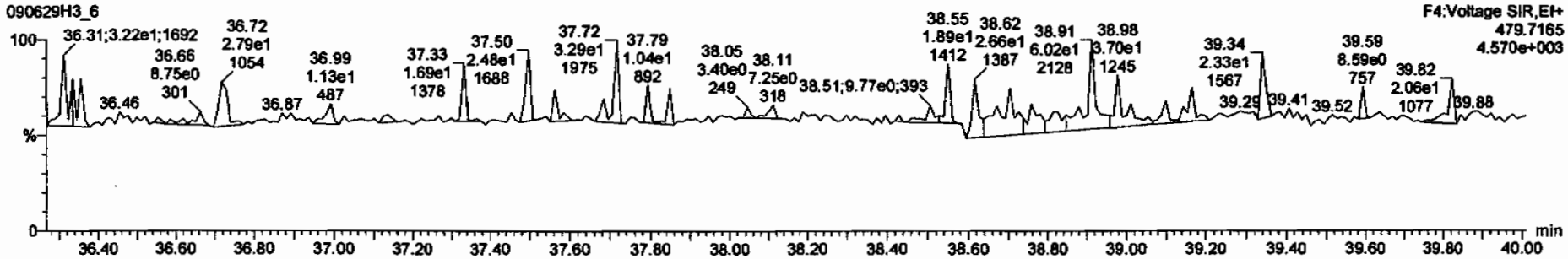

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Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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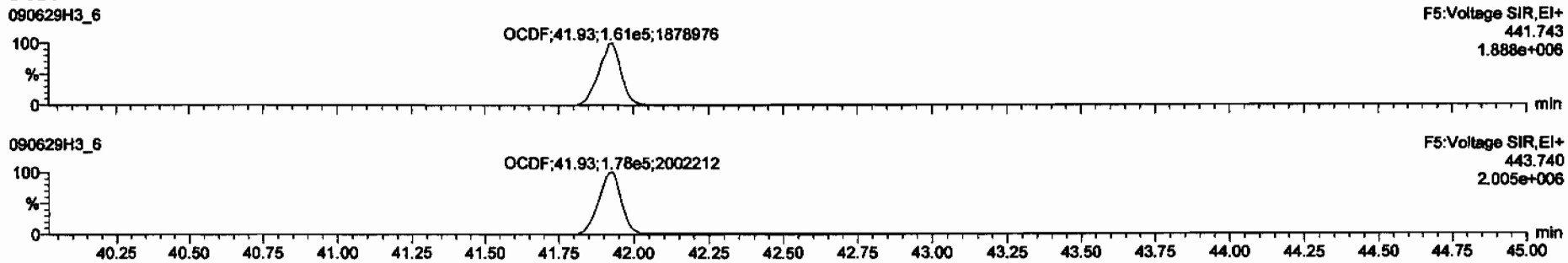

13C-OCDF

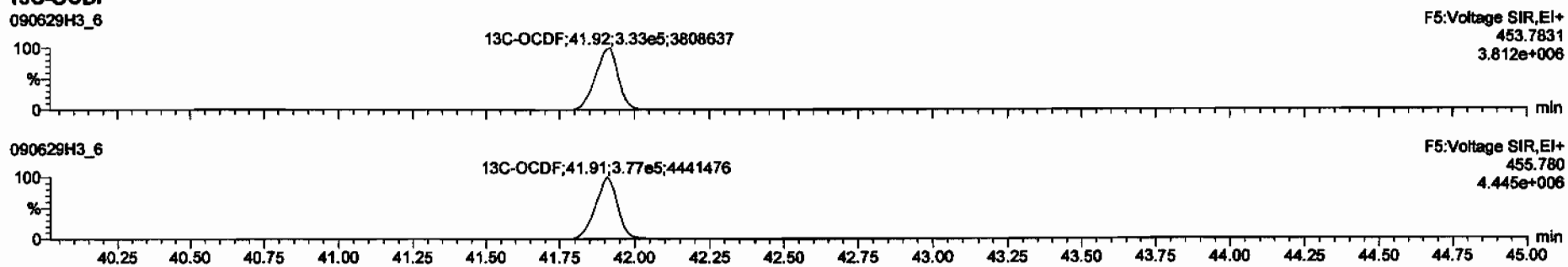

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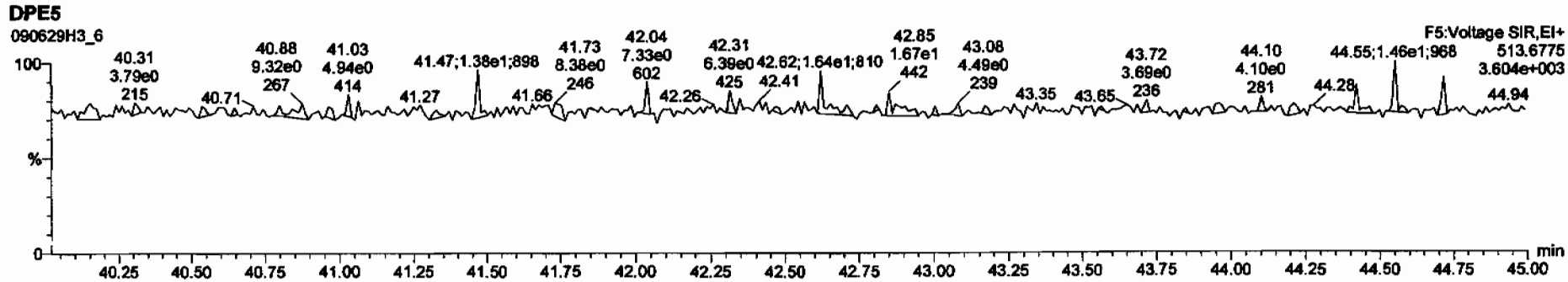

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Name: 090629H3_6, Date: 30-Jun-2009, Time: 08:21:05, ID: ST090629H3-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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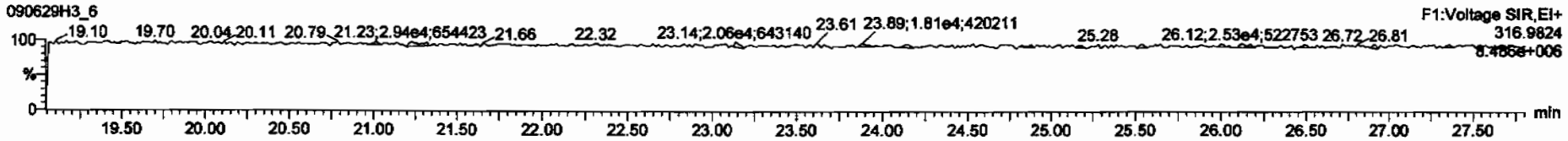

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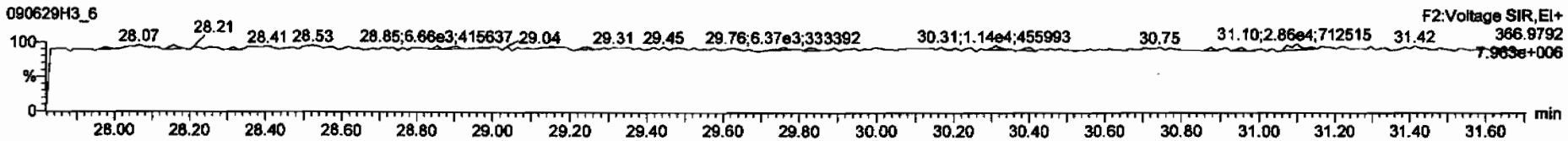

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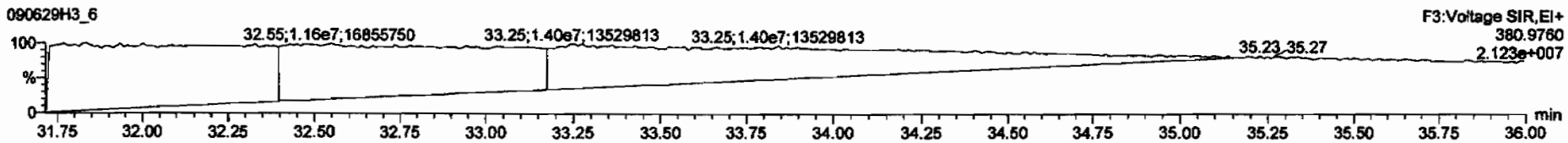

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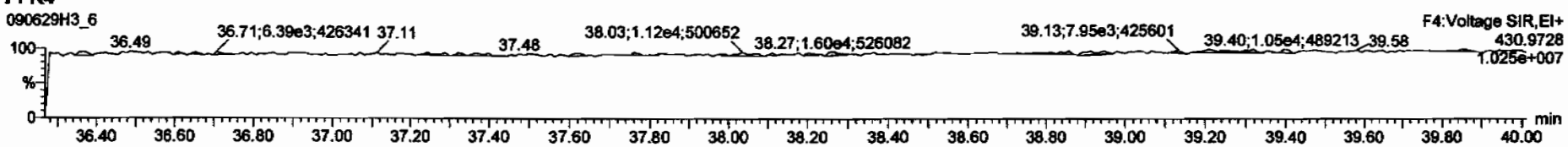

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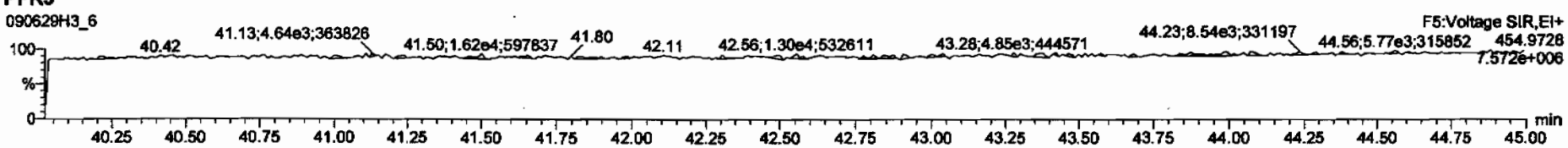

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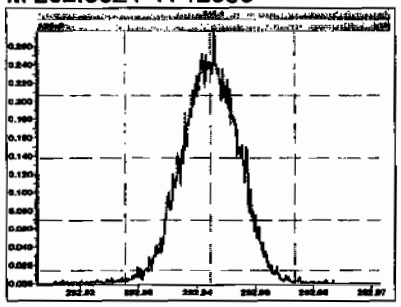

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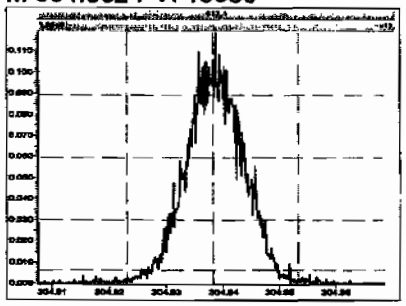

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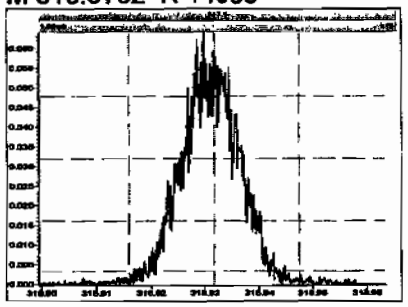

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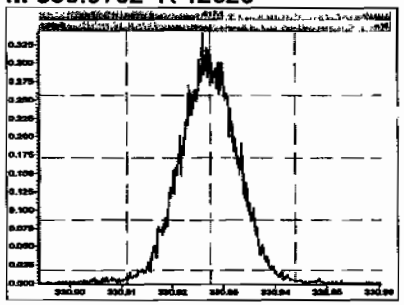

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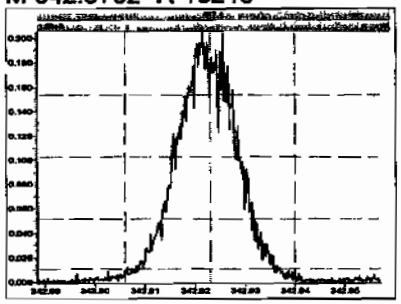

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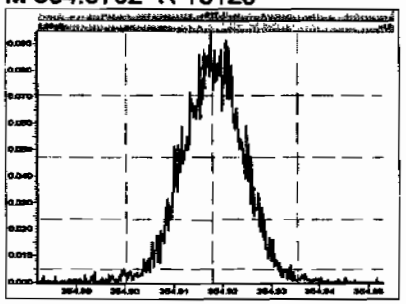

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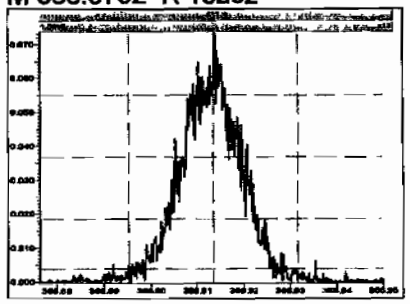

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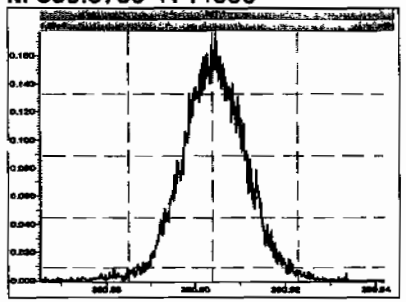

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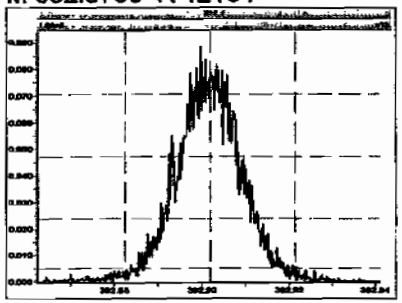

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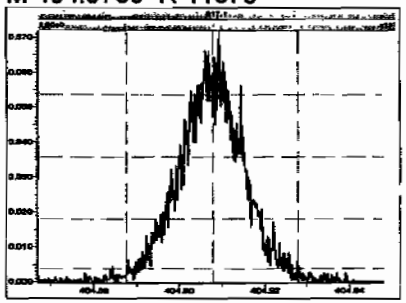

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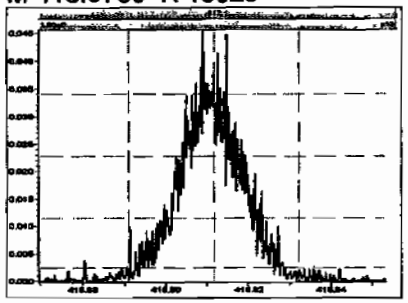

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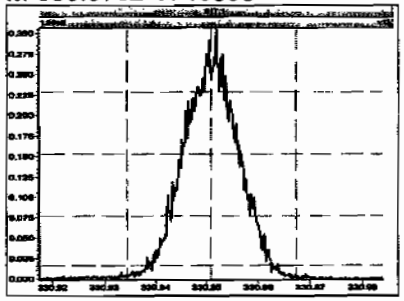

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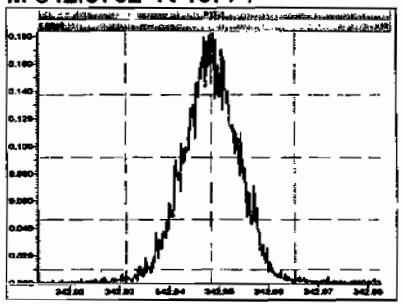

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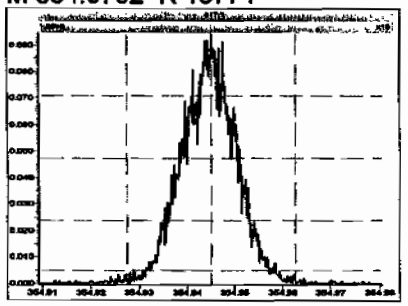

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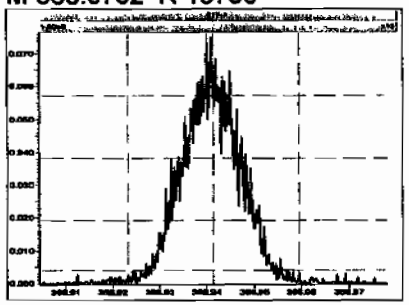

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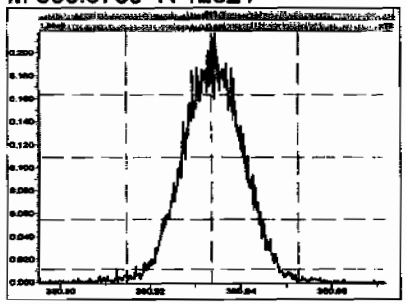

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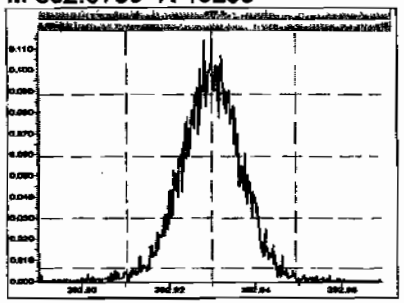

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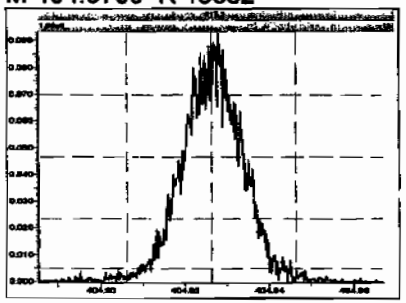

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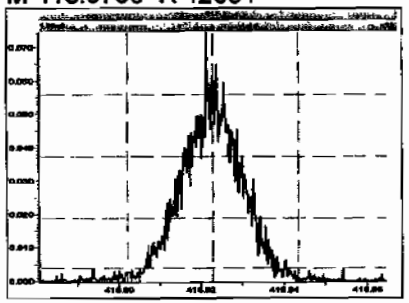

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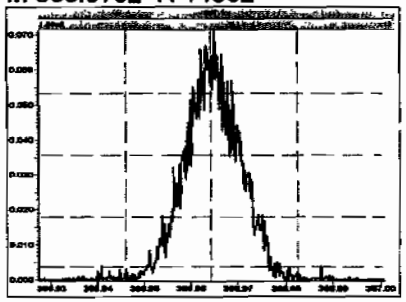

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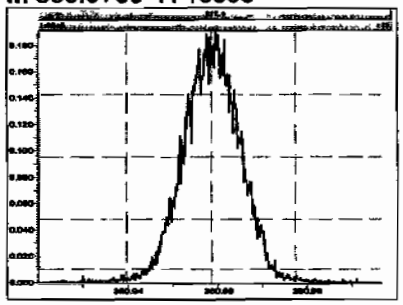

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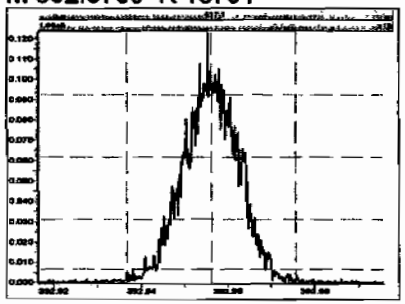

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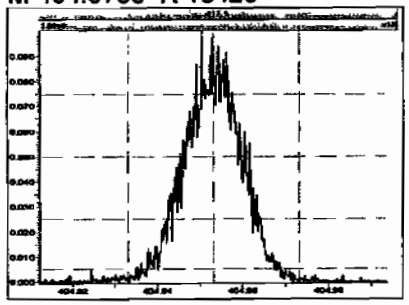

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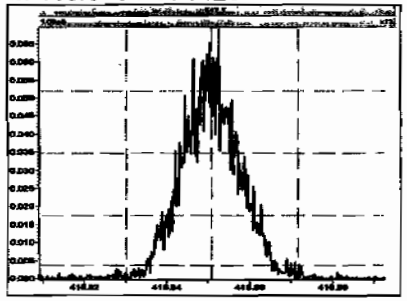

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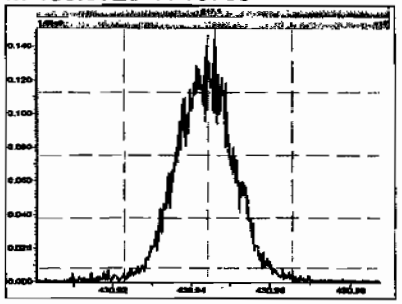

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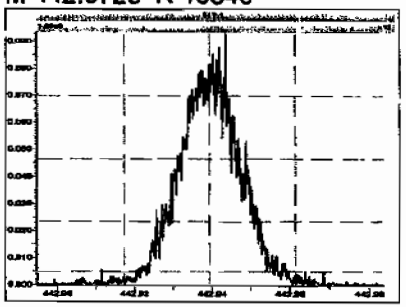

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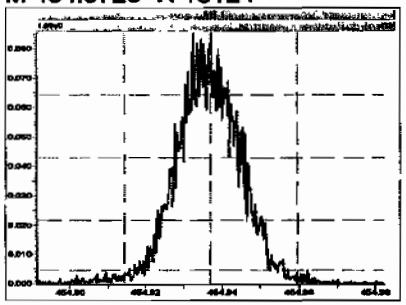

M 404.9760 R 14089

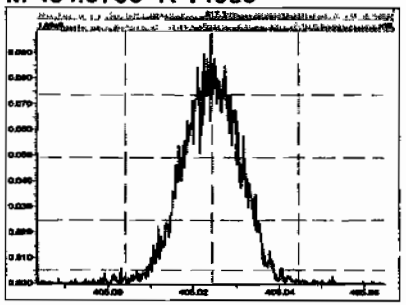

M 416.9760 R 14970

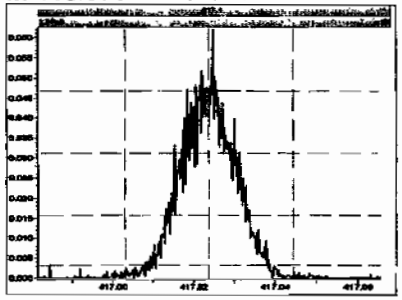

M 430.9728 R 13662

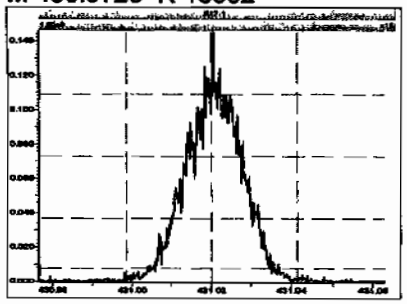

M 442.9728 R 13970

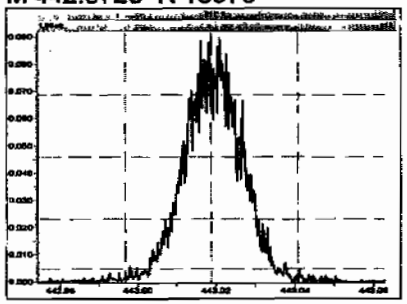

M 454.9728 R 13409

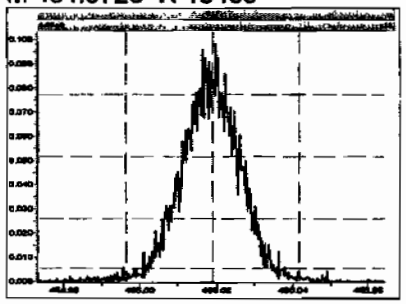

M 466.9728 R 14619

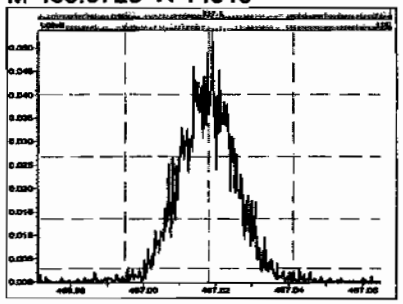

M 480.9696 R 13932

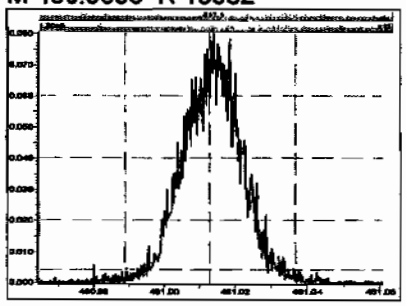

M 430.9728 R 13791

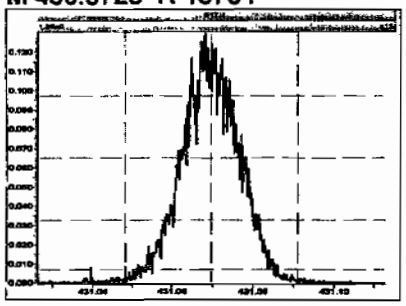

M 442.9728 R 13670

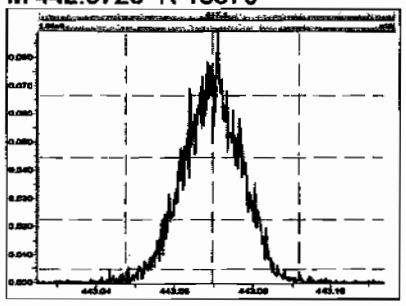

Printed: Tuesday, June 30, 2009 09:19:12 Pacific Daylight Time

M 454.9728 R 13378

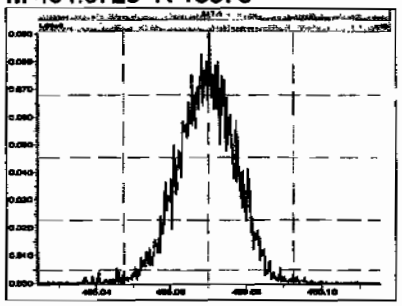

M 466.9728 R 13791

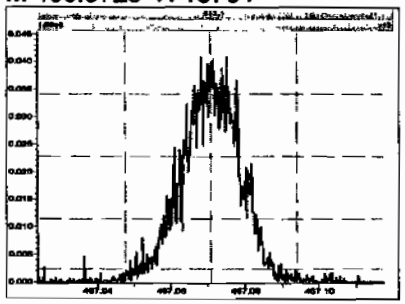

M 480.9696 R 13450

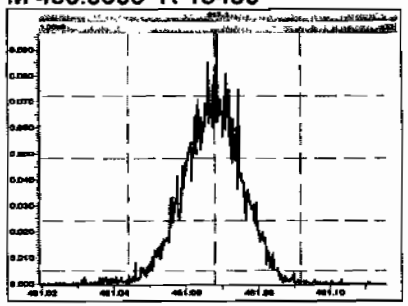

M 492.9696 R 13578

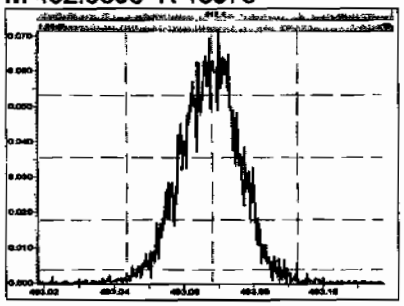

M 504.9696 R 13940

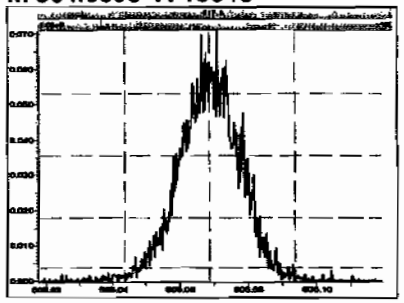

M 516.9697 R 13596

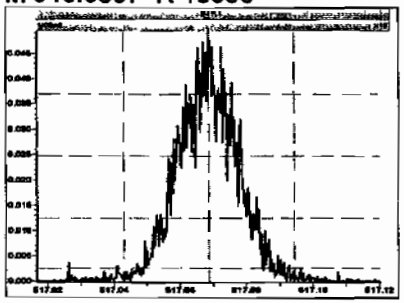

ICAL

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Compound name: 2,3,7,8-TCDD
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	10.0	0.82	NO	25.98	1.001	7.90e4	7.49e5	9.78	-2.2	1.05
090212H1_3	0.250	0.85	NO	26.00	1.001	1.54e3	5.94e5	0.240	-4.1	1.03
090212H1_4	0.500	0.71	NO	25.98	1.001	3.65e3	6.33e5	0.536	7.1	1.16
090212H1_5	2.00	0.72	NO	26.00	1.001	1.40e4	6.64e5	1.95	-2.5	1.05
090212H1_6	40.0	0.77	NO	25.98	1.001	3.33e5	7.81e5	39.5	-1.3	1.06
090212H1_7	200	0.78	NO	26.00	1.001	1.92e6	8.66e5	206	3.0	1.11

Compound name: 1,2,3,7,8-PeCDD
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	50.0	0.63	NO	30.65	1.000	3.03e5	6.02e5	48.6	-2.7	1.01
090212H1_3	1.25	0.69	NO	30.67	1.000	6.36e3	4.83e5	1.27	1.9	1.05
090212H1_4	2.50	0.60	NO	30.67	1.000	1.30e4	4.97e5	2.53	1.1	1.04
090212H1_5	10.0	0.61	NO	30.67	1.000	5.28e4	5.23e5	9.77	-2.3	1.01
090212H1_6	200	0.63	NO	30.67	1.000	1.31e6	6.35e5	200	-0.1	1.03
090212H1_7	1000	0.63	NO	30.67	1.000	8.09e6	7.66e5	1020	2.2	1.06

2/13/09
MMS 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.00153
RRF SD: 0.0317187, Relative SD: 3.16702
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	ID	RT	RRT	Response	IS Response	Conc	%Dev	RRF
090212H1_1	50.0	1.26	NO	34.10	1.000	2.54e5	5.27e5	48.0	-3.9	0.962
090212H1_3	1.25	1.42	NO	34.11	1.000	5.16e3	4.08e5	1.26	1.0	1.01
090212H1_4	2.50	1.28	NO	34.11	1.001	1.10e4	4.22e5	2.61	4.2	1.04
090212H1_5	10.0	1.32	NO	34.12	1.000	4.31e4	4.47e5	9.64	-3.6	0.965
090212H1_6	200	1.27	NO	34.11	1.000	1.12e6	5.53e5	203	1.4	1.02
090212H1_7	1000	1.25	NO	34.12	1.000	7.63e6	7.54e5	1010	1.0	1.01

Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	ID	RT	RRT	Response	IS Response	Conc	%Dev	RRF
090212H1_1	50.0	1.27	NO	34.21	1.000	2.90e5	5.42e5	47.6	-4.8	1.07
090212H1_3	1.25	1.20	NO	34.23	1.001	6.02e3	4.14e5	1.29	3.4	1.16
090212H1_4	2.50	1.24	NO	34.23	1.001	1.23e4	4.20e5	2.60	3.9	1.17
090212H1_5	10.0	1.26	NO	34.24	1.001	4.91e4	4.60e5	9.48	-5.2	1.07
090212H1_6	200	1.30	NO	34.22	1.000	1.29e6	5.59e5	205	2.7	1.16
090212H1_7	1000	1.26	NO	34.23	1.000	8.08e6	7.18e5	1000	0.0	1.13

Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.10201
RRF SD: 0.0447729, Relative SD: 4.06282
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	ID	RT	RRT	Response	IS Response	Conc	%Dev	RRF
090212H1_1	50.0	1.28	NO	34.51	1.009	2.83e5	0.00e0	48.1	-3.9	1.06
090212H1_3	1.25	1.27	NO	34.53	1.010	5.79e3	0.00e0	1.28	2.4	1.13

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 1,2,3,7,8,9-HxCDD

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50	1.28	NO	34.52	1.009	1.21e4	0.00e0	2.60	4.0	1.15
090212H1_5	10.0	1.22	NO	34.53	1.009	4.70e4	0.00e0	9.41	-5.9	1.04
090212H1_6	200	1.32	NO	34.52	1.009	1.26e6	0.00e0	207	3.3	1.14
090212H1_7	1000	1.25	NO	34.53	1.009	8.13e6	0.00e0	1000	0.2	1.10

Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.03	NO	38.17	1.000	2.11e5	4.13e5	48.0	-4.0	1.02
090212H1_3	1.25	1.15	NO	38.18	1.000	4.52e3	3.21e5	1.32	5.7	1.12
090212H1_4	2.50	1.07	NO	38.18	1.000	8.68e3	3.21e5	2.54	1.7	1.08
090212H1_5	10.0	1.07	NO	38.19	1.001	3.41e4	3.36e5	9.55	-4.5	1.02
090212H1_6	200	1.07	NO	38.19	1.000	9.19e5	4.29e5	201	0.7	1.07
090212H1_7	1000	1.05	NO	38.19	1.001	6.29e6	5.88e5	1000	0.5	1.07

Compound name: OCDD
Response Factor: 1.17831
RRF SD: 0.0736447, Relative SD: 6.25001
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRF	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.91	NO	41.63	1.000	3.30e5	5.87e5	95.3	-4.7	1.12
090212H1_3	2.50	0.89	NO	41.67	1.001	7.09e3	4.40e5	2.74	9.5	1.29
090212H1_4	5.00	0.87	NO	41.65	1.000	1.25e4	4.37e5	4.85	-3.0	1.14
090212H1_5	20.0	0.85	NO	41.66	1.000	5.10e4	4.67e5	18.5	-7.3	1.09
090212H1_6	400	0.92	NO	41.68	1.000	1.48e6	6.21e5	404	1.1	1.19
090212H1_7	2000	0.89	NO	41.67	1.001	1.10e7	8.92e5	2090	4.4	1.23

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 2,3,7,8-TCDF
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA		RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
	090212H1_1	10.0	0.78	NO	25.19	1.001	1.14e5	1.07e6	9.75	-2.5	1.06
	090212H1_3	0.250	0.83	NO	25.19	1.001	2.44e3	8.63e5	0.260	4.1	1.13
	090212H1_4	0.500	0.84	NO	25.20	1.001	4.98e3	9.06e5	0.506	1.2	1.10
	090212H1_5	2.00	0.81	NO	25.20	1.001	1.97e4	9.70e5	1.87	-6.4	1.02
	090212H1_6	40.0	0.79	NO	25.20	1.001	4.71e5	1.08e6	40.1	0.3	1.09
	090212H1_7	200	0.79	NO	25.20	1.001	2.66e6	1.18e6	207	3.4	1.12

Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA		RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
	090212H1_1	50.0	1.61	NO	29.42	1.000	5.65e5	9.82e5	49.6	-0.7	1.15
	090212H1_3	1.25	1.63	NO	29.43	1.000	1.11e4	7.63e5	1.25	0.1	1.16
	090212H1_4	2.50	1.74	NO	29.43	1.000	2.29e4	7.80e5	2.53	1.3	1.17
	090212H1_5	10.0	1.61	NO	29.43	1.000	9.64e4	8.78e5	9.48	-5.2	1.10
	090212H1_6	200	1.62	NO	29.43	1.000	2.36e6	9.96e5	204	2.0	1.18
	090212H1_7	1000	1.60	NO	29.45	1.000	1.42e7	1.20e6	1030	2.5	1.19

Compound name: 2,3,4,7,8-PeCDF
Response Factor: 1.11789
RRF SD: 0.0264655, Relative SD: 2.36745
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA		RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
	090212H1_1	50.0	1.56	NO	30.35	1.000	5.35e5	9.65e5	49.6	-0.8	1.11
	090212H1_3	1.25	1.51	NO	30.36	1.000	1.08e4	7.68e5	1.25	0.4	1.12

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 2,3,4,7,8-PeCDF

Name	Std Conc	RA	Out	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	2.50	1.61	NO	30.36	1.000	2.28e4	7.94e5	2.57	2.6	1.15
090212H1_5	10.0	1.64	NO	30.38	1.000	9.28e4	8.67e5	9.58	-4.2	1.07
090212H1_6	200	1.60	NO	30.36	1.000	2.28e6	1.01e6	203	1.5	1.13
090212H1_7	1000	1.59	NO	30.38	1.000	1.37e7	1.22e6	1010	0.5	1.12

Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.41088
RRF SD: 0.0512913, Relative SD: 3.6354
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Out	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.27	NO	33.19	1.001	4.59e5	6.74e5	48.3	-3.3	1.36
090212H1_3	1.25	1.35	NO	33.19	1.000	9.88e3	5.28e5	1.33	6.0	1.50
090212H1_4	2.50	1.32	NO	33.19	1.000	1.96e4	5.45e5	2.54	1.8	1.44
090212H1_5	10.0	1.31	NO	33.20	1.000	7.94e4	5.86e5	9.61	-3.9	1.36
090212H1_6	200	1.27	NO	33.20	1.001	1.99e6	7.08e5	199	-0.5	1.40
090212H1_7	1000	1.27	NO	33.20	1.000	1.28e7	9.05e5	1000	-0.0	1.41

Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.22218
RRF SD: 0.0229408, Relative SD: 1.87703
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Out	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.25	NO	33.31	1.000	5.49e5	9.02e5	49.8	-0.4	1.22
090212H1_3	1.25	1.21	NO	33.32	1.000	1.07e4	6.79e5	1.29	3.1	1.26
090212H1_4	2.50	1.37	NO	33.31	1.000	2.16e4	6.99e5	2.52	1.0	1.23
090212H1_5	10.0	1.34	NO	33.33	1.000	8.96e4	7.51e5	9.76	-2.4	1.19
090212H1_6	200	1.27	NO	33.32	1.000	2.27e6	9.34e5	199	-0.5	1.22
090212H1_7	1000	1.27	NO	33.33	1.001	1.41e7	1.17e6	992	-0.8	1.21

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	ISResp	Conc	Dev	RRF
090212H1_1	50.0	1.29	NO	33.92	1.000	4.53e5	7.19e5	49.2	-1.6	1.26
090212H1_3	1.25	1.38	NO	33.93	1.000	9.11e3	5.78e5	1.23	-1.5	1.26
090212H1_4	2.50	1.28	NO	33.93	1.001	1.91e4	5.74e5	2.60	3.9	1.33
090212H1_5	10.0	1.25	NO	33.94	1.000	7.70e4	6.20e5	9.71	-2.9	1.24
090212H1_6	200	1.26	NO	33.93	1.000	1.95e6	7.64e5	200	-0.2	1.28
090212H1_7	1000	1.30	NO	33.94	1.000	1.26e7	9.59e5	1020	2.3	1.31

Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.25756
RRF SD: 0.0204635, Relative SD: 1.62723
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	ISResp	Conc	Dev	RRF
090212H1_1	50.0	1.25	NO	34.91	1.000	3.76e5	6.05e5	49.5	-1.0	1.24
090212H1_3	1.25	1.37	NO	34.91	1.000	7.41e3	4.73e5	1.24	-0.4	1.25
090212H1_4	2.50	1.24	NO	34.92	1.001	1.51e4	4.79e5	2.50	0.2	1.26
090212H1_5	10.0	1.28	NO	34.93	1.000	6.29e4	5.10e5	9.81	-1.9	1.23
090212H1_6	200	1.25	NO	34.92	1.001	1.68e6	6.50e5	206	2.9	1.29
090212H1_7	1000	1.28	NO	34.92	1.000	1.08e7	8.57e5	1000	0.3	1.26

Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	ISResp	Conc	Dev	RRF
090212H1_1	50.0	1.05	NO	36.81	1.000	4.18e5	5.07e5	48.8	-2.3	1.65
090212H1_3	1.25	1.05	NO	36.84	1.001	8.84e3	3.97e5	1.32	5.5	1.78

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Compound name: 1,2,3,4,6,7,8-HpCDF

Name	Std Conc	RF	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50	1.04	NO	36.82	1.000	1.73e4	3.94e5	2.60	4.0	1.76
090212H1_5	10.0	1.05	NO	36.84	1.001	6.64e4	4.25e5	9.25	-7.5	1.56
090212H1_6	200	1.06	NO	36.83	1.000	1.78e6	5.26e5	200	-0.1	1.69
090212H1_7	1000	1.06	NO	36.83	1.000	1.17e7	6.89e5	1010	0.5	1.70

Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.46054
RRF SD: 0.0286004, Relative SD: 1.93175
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.05	NO	38.73	1.000	3.09e5	4.20e5	49.7	-0.5	1.47
090212H1_3	1.25	0.89	NO	38.75	1.001	6.11e3	3.26e5	1.27	1.3	1.50
090212H1_4	2.50	0.99	NO	38.73	1.000	1.20e4	3.25e5	2.49	-0.4	1.47
090212H1_5	10.0	1.07	NO	38.74	1.000	4.97e4	3.47e5	9.66	-3.4	1.43
090212H1_6	200	1.04	NO	38.75	1.000	1.34e6	4.47e5	202	0.9	1.49
090212H1_7	1000	1.03	NO	38.75	1.000	9.18e6	6.08e5	1020	2.1	1.51

Compound name: OCDF
Response Factor: 1.09622
RRF SD: 0.0644136, Relative SD: 5.87597
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.93	NO	41.88	1.001	4.66e5	8.78e5	96.7	-3.3	1.06
090212H1_3	2.50	0.90	NO	41.89	1.001	1.01e4	6.65e5	2.76	10.6	1.21
090212H1_4	5.00	0.84	NO	41.88	1.001	1.79e4	6.44e5	5.08	1.6	1.11
090212H1_5	20.0	0.95	NO	41.88	1.000	7.14e4	6.95e5	18.8	-6.2	1.03
090212H1_6	400	0.94	NO	41.90	1.000	2.10e6	9.52e5	402	0.4	1.10
090212H1_7	2000	0.92	NO	41.89	1.000	1.48e7	1.39e6	1940	-3.1	1.06

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Compound name: 13C-2,3,7,8-TCDD
Response Factor: 1.01489
RRF SD: 0.0275825, Relative SD: 2.71777
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	Int	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.95	1.022	7.49e5	7.37e5	100	0.1	1.02
090212H1_3	100	0.80	NO	25.97	1.022	5.94e5	6.03e5	97.2	-2.8	0.986
090212H1_4	100	0.78	NO	25.97	1.022	6.33e5	6.33e5	98.5	-1.5	1.00
090212H1_5	100	0.78	NO	25.97	1.022	6.64e5	6.68e5	97.9	-2.1	0.994
090212H1_6	100	0.79	NO	25.97	1.022	7.81e5	7.54e5	102	2.0	1.04
090212H1_7	100	0.79	NO	25.97	1.022	8.66e5	8.18e5	104	4.3	1.06

Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.827461
RRF SD: 0.0577323, Relative SD: 6.97704
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	Int	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.64	NO	30.64	1.207	6.02e5	7.37e5	98.7	-1.3	0.817
090212H1_3	100	0.63	NO	30.65	1.207	4.83e5	6.03e5	96.8	-3.2	0.801
090212H1_4	100	0.61	NO	30.65	1.207	4.97e5	6.33e5	94.9	-5.1	0.786
090212H1_5	100	0.64	NO	30.65	1.207	5.23e5	6.68e5	94.6	-5.4	0.783
090212H1_6	100	0.65	NO	30.65	1.207	6.35e5	7.54e5	102	1.7	0.842
090212H1_7	100	0.64	NO	30.65	1.207	7.66e5	8.18e5	113	13.2	0.937

Compound name: 13C-1,2,3,4,7,8-HxCDD
Response Factor: 0.916247
RRF SD: 0.0122736, Relative SD: 1.33955
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	Int	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.08	0.988	5.27e5	5.79e5	99.4	-0.6	0.911
090212H1_3	100	1.26	NO	34.10	0.988	4.08e5	4.37e5	102	2.0	0.934

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Compound name: 13C-1,2,3,4,7,8-HxCDD

Name	Std Conc	RF	Out	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_4	100	1.26	NO	34.08	0.988	4.22e5	4.66e5	98.7	-1.3	0.904
090212H1_5	100	1.24	NO	34.11	0.988	4.47e5	4.90e5	99.6	-0.4	0.913
090212H1_6	100	1.25	NO	34.10	0.988	5.53e5	6.10e5	98.9	-1.1	0.907
090212H1_7	100	1.25	NO	34.11	0.988	7.54e5	8.12e5	101	1.4	0.929

Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.920893
RRF SD: 0.0250009, Relative SD: 2.71486
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	Out	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	100	1.26	NO	34.19	0.991	5.42e5	5.79e5	102	1.7	0.936
090212H1_3	100	1.23	NO	34.21	0.991	4.14e5	4.37e5	103	2.9	0.948
090212H1_4	100	1.29	NO	34.21	0.991	4.20e5	4.66e5	97.7	-2.3	0.900
090212H1_5	100	1.25	NO	34.22	0.991	4.60e5	4.90e5	102	2.1	0.940
090212H1_6	100	1.27	NO	34.21	0.991	5.59e5	6.10e5	99.5	-0.5	0.916
090212H1_7	100	1.23	NO	34.22	0.991	7.18e5	8.12e5	96.0	-4.0	0.884

Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.708388
RRF SD: 0.019948, Relative SD: 2.81596
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	Out	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	100	1.07	NO	38.16	1.106	4.13e5	5.79e5	101	0.7	0.713
090212H1_3	100	1.09	NO	38.17	1.106	3.21e5	4.37e5	104	3.9	0.736
090212H1_4	100	1.05	NO	38.17	1.106	3.21e5	4.66e5	97.1	-2.9	0.688
090212H1_5	100	1.06	NO	38.17	1.106	3.36e5	4.90e5	96.8	-3.2	0.686
090212H1_6	100	1.06	NO	38.18	1.106	4.29e5	6.10e5	99.3	-0.7	0.703
090212H1_7	100	1.04	NO	38.17	1.106	5.88e5	8.12e5	102	2.2	0.724

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Compound name: 13C-OCDD
Response Factor: 0.502588
RRF SD: 0.0283515, Relative SD: 5.6411
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Area	IS Area	Conc	%Dev	RRF
090212H1_1	200	0.89	NO	41.62	1.206	5.87e5	5.79e5	202	0.9	0.507
090212H1_3	200	0.92	NO	41.65	1.207	4.40e5	4.37e5	200	0.2	0.504
090212H1_4	200	0.90	NO	41.63	1.206	4.37e5	4.66e5	187	-6.7	0.469
090212H1_5	200	0.89	NO	41.65	1.206	4.67e5	4.90e5	190	-5.0	0.477
090212H1_6	200	0.91	NO	41.67	1.207	6.21e5	6.10e5	203	1.4	0.510
090212H1_7	200	0.93	NO	41.65	1.206	8.92e5	8.12e5	219	9.3	0.549

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.976814
RRF SD: 0.0185774, Relative SD: 1.90184
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Area	IS Area	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.16	0.991	1.07e6	1.11e6	98.8	-1.2	0.965
090212H1_3	100	0.79	NO	25.17	0.991	8.63e5	9.05e5	97.5	-2.5	0.953
090212H1_4	100	0.78	NO	25.17	0.991	9.06e5	9.34e5	99.3	-0.7	0.970
090212H1_5	100	0.79	NO	25.17	0.991	9.70e5	9.83e5	101	1.1	0.987
090212H1_6	100	0.77	NO	25.17	0.991	1.08e6	1.10e6	100	0.4	0.980
090212H1_7	100	0.76	NO	25.17	0.991	1.18e6	1.18e6	103	2.9	1.01

Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 0.896189
RRF SD: 0.0663113, Relative SD: 7.39926
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Area	IS Area	Conc	%Dev	RRF
090212H1_1	100	1.58	NO	29.41	1.158	9.82e5	1.11e6	98.4	-1.6	0.882
090212H1_3	100	1.57	NO	29.42	1.158	7.63e5	9.05e5	94.0	-6.0	0.842

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Compound name: 13C-1,2,3,7,8-PeCDF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	100	1.57	NO	29.42	1.158	7.80e5	9.34e5	93.1	-6.9	0.835
090212H1_5	100	1.58	NO	29.42	1.158	8.78e5	9.83e5	99.7	-0.3	0.894
090212H1_6	100	1.56	NO	29.42	1.158	9.96e5	1.10e6	101	1.0	0.905
090212H1_7	100	1.52	NO	29.43	1.159	1.20e6	1.18e6	114	13.7	1.02

Compound name: 13C-2,3,4,7,8-PeCDF
Response Factor: 0.899625
RRF SD: 0.0716088, Relative SD: 7.95986
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	1.57	NO	30.34	1.195	9.65e5	1.11e6	96.3	-3.7	0.866
090212H1_3	100	1.54	NO	30.35	1.195	7.68e5	9.05e5	94.2	-5.8	0.848
090212H1_4	100	1.52	NO	30.35	1.195	7.94e5	9.34e5	94.5	-5.5	0.850
090212H1_5	100	1.59	NO	30.36	1.195	8.67e5	9.83e5	98.1	-1.9	0.882
090212H1_6	100	1.55	NO	30.35	1.195	1.01e6	1.10e6	102	1.6	0.914
090212H1_7	100	1.54	NO	30.36	1.195	1.22e6	1.18e6	115	15.3	1.04

Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.16919
RRF SD: 0.0331609, Relative SD: 2.83622
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.54	NO	33.16	0.961	6.74e5	5.79e5	99.5	-0.5	1.16
090212H1_3	100	0.54	NO	33.17	0.961	5.28e5	4.37e5	104	3.5	1.21
090212H1_4	100	0.52	NO	33.17	0.961	5.45e5	4.66e5	99.9	-0.1	1.17
090212H1_5	100	0.54	NO	33.19	0.961	5.86e5	4.90e5	102	2.3	1.20
090212H1_6	100	0.53	NO	33.17	0.961	7.08e5	6.10e5	99.4	-0.6	1.16
090212H1_7	100	0.53	NO	33.19	0.961	9.05e5	8.12e5	95.3	-4.7	1.11

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Compound name: 13C-1,2,3,6,7,8-HxCDF
Response Factor: 1.51914
RRF SD: 0.0457416, Relative SD: 3.01103
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsOut	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.55	NO	33.29	0.965	9.02e5	5.79e5	103	2.5	1.56
090212H1_3	100	0.52	NO	33.31	0.965	6.79e5	4.37e5	102	2.4	1.56
090212H1_4	100	0.53	NO	33.29	0.965	6.99e5	4.66e5	98.7	-1.3	1.50
090212H1_5	100	0.53	NO	33.32	0.965	7.51e5	4.90e5	101	1.0	1.53
090212H1_6	100	0.52	NO	33.31	0.965	9.34e5	6.10e5	101	0.8	1.53
090212H1_7	100	0.54	NO	33.31	0.965	1.17e6	8.12e5	94.6	-5.4	1.44

Compound name: 13C-2,3,4,6,7,8-HxCDF
Response Factor: 1.24921
RRF SD: 0.0473005, Relative SD: 3.78643
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsOut	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.54	NO	33.91	0.983	7.19e5	5.79e5	99.3	-0.7	1.24
090212H1_3	100	0.53	NO	33.92	0.983	5.78e5	4.37e5	106	6.0	1.32
090212H1_4	100	0.55	NO	33.91	0.983	5.74e5	4.66e5	98.4	-1.6	1.23
090212H1_5	100	0.55	NO	33.93	0.983	6.20e5	4.90e5	101	1.3	1.27
090212H1_6	100	0.53	NO	33.92	0.983	7.64e5	6.10e5	100	0.4	1.25
090212H1_7	100	0.53	NO	33.93	0.983	9.59e5	8.12e5	94.5	-5.5	1.18

Compound name: 13C-1,2,3,7,8,9-HxCDF
Response Factor: 1.05297
RRF SD: 0.0198461, Relative SD: 1.88477
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsOut	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.53	NO	34.90	1.011	6.05e5	5.79e5	99.2	-0.8	1.04
090212H1_3	100	0.52	NO	34.90	1.011	4.73e5	4.37e5	103	2.9	1.08

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Compound name: 13C-1,2,3,7,8,9-HxCDF

Name	Std Conc.	RF	IN	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_4	100	0.53	NO	34.90	1.011	4.79e5	4.66e5	97.6	-2.4	1.03
090212H1_5	100	0.54	NO	34.92	1.011	5.10e5	4.90e5	98.9	-1.1	1.04
090212H1_6	100	0.52	NO	34.90	1.011	6.50e5	6.10e5	101	1.2	1.07
090212H1_7	100	0.53	NO	34.91	1.011	8.57e5	8.12e5	100	0.2	1.05

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 0.868264
RRF SD: 0.0231201, Relative SD: 2.6628
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RF	IN	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	100	0.46	NO	36.80	1.066	5.07e5	5.79e5	101	0.8	0.875
090212H1_3	100	0.44	NO	36.81	1.066	3.97e5	4.37e5	105	4.7	0.909
090212H1_4	100	0.44	NO	36.81	1.066	3.94e5	4.66e5	97.3	-2.7	0.845
090212H1_5	100	0.44	NO	36.82	1.066	4.25e5	4.90e5	99.9	-0.1	0.868
090212H1_6	100	0.46	NO	36.82	1.066	5.26e5	6.10e5	99.5	-0.5	0.864
090212H1_7	100	0.45	NO	36.82	1.066	6.89e5	8.12e5	97.7	-2.3	0.849

Compound name: 13C-1,2,3,4,7,8,9-HpCDF
Response Factor: 0.726514
RRF SD: 0.0207066, Relative SD: 2.85014
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RF	IN	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	100	0.46	NO	38.72	1.122	4.20e5	5.79e5	99.8	-0.2	0.725
090212H1_3	100	0.45	NO	38.73	1.122	3.26e5	4.37e5	103	2.8	0.747
090212H1_4	100	0.45	NO	38.72	1.122	3.25e5	4.66e5	95.9	-4.1	0.696
090212H1_5	100	0.44	NO	38.73	1.122	3.47e5	4.90e5	97.6	-2.4	0.709
090212H1_6	100	0.45	NO	38.74	1.122	4.47e5	6.10e5	101	1.0	0.734
090212H1_7	100	0.44	NO	38.74	1.122	6.08e5	8.12e5	103	3.0	0.748

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 13C-OCDF
Response Factor: 0.759527
RRF SD: 0.058777, Relative SD: 7.73863
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	R²	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	200	0.91	NO	41.85	1.213	8.78e5	5.79e5	200	-0.2	0.758
090212H1_3	200	0.88	NO	41.86	1.213	6.65e5	4.37e5	200	0.2	0.761
090212H1_4	200	0.90	NO	41.85	1.213	6.44e5	4.66e5	182	-9.1	0.690
090212H1_5	200	0.90	NO	41.86	1.213	6.95e5	4.90e5	187	-6.6	0.710
090212H1_6	200	0.90	NO	41.89	1.213	9.52e5	6.10e5	206	2.8	0.781
090212H1_7	200	0.90	NO	41.88	1.213	1.39e6	8.12e5	226	12.8	0.857

Compound name: 37Cl-2,3,7,8-TCDD
Response Factor: 0.668396
RRF SD: 0.0327668, Relative SD: 4.90231
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	R²	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0			25.98	1.023	4.66e4	7.37e5	9.46	-5.4	0.632
090212H1_3	0.250			25.97	1.022	1.08e3	6.03e5	0.269	7.5	0.718
090212H1_4	0.500			25.98	1.023	2.17e3	6.33e5	0.512	2.4	0.685
090212H1_5	2.00			25.98	1.023	8.69e3	6.68e5	1.95	-2.7	0.650
090212H1_6	40.0			25.98	1.023	1.93e5	7.54e5	38.4	-4.1	0.641
090212H1_7	200			25.98	1.023	1.12e6	8.18e5	205	2.3	0.684

Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	R²	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.81	NO	25.39	0.000	7.37e5	7.37e5	100	0.0	1.00
090212H1_3	100	0.79	NO	25.40	0.000	6.03e5	6.03e5	100	0.0	1.00

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 13C-1,2,3,4-TCDD

Name	IS Conc.	RA	Int	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF
090212H1_4	100	0.79	NO	25.40	0.000	6.33e5	6.33e5	100	0.0	1.00
090212H1_5	100	0.78	NO	25.40	0.000	6.68e5	6.68e5	100	0.0	1.00
090212H1_6	100	0.78	NO	25.40	0.000	7.54e5	7.54e5	100	0.0	1.00
090212H1_7	100	0.79	NO	25.40	0.000	8.18e5	8.18e5	100	0.0	1.00

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 4.96507e-017, Relative SD: 4.96507e-015
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	IS Conc.	RA	Int	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF
090212H1_1	100	0.78	NO	23.95	0.000	1.11e6	1.11e6	100	0.0	1.00
090212H1_3	100	0.77	NO	23.95	0.000	9.05e5	9.05e5	100	0.0	1.00
090212H1_4	100	0.77	NO	23.95	0.000	9.34e5	9.34e5	100	0.0	1.00
090212H1_5	100	0.76	NO	23.97	0.000	9.83e5	9.83e5	100	0.0	1.00
090212H1_6	100	0.77	NO	23.97	0.000	1.10e6	1.10e6	100	-0.0	1.00
090212H1_7	100	0.78	NO	23.97	0.000	1.18e6	1.18e6	100	0.0	1.00

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	IS Conc.	RA	Int	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF
090212H1_1	100	1.22	NO	34.50	0.000	5.79e5	5.79e5	100	0.0	1.00
090212H1_3	100	1.23	NO	34.51	0.000	4.37e5	4.37e5	100	0.0	1.00
090212H1_4	100	1.25	NO	34.51	0.000	4.66e5	4.66e5	100	0.0	1.00
090212H1_5	100	1.18	NO	34.52	0.000	4.90e5	4.90e5	100	0.0	1.00
090212H1_6	100	1.26	NO	34.52	0.000	6.10e5	6.10e5	100	0.0	1.00
090212H1_7	100	1.22	NO	34.52	0.000	8.12e5	8.12e5	100	0.0	1.00

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Compound name: Total Tetra-Dioxins
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	10.0						7.49e5	60.1		
090212H1_3	0.250						5.94e5	0.240		
090212H1_4	0.500						6.33e5	0.536		
090212H1_5	2.00						6.64e5	1.95		
090212H1_6	40.0						7.81e5	39.5		
090212H1_7	200						8.66e5	206		

Compound name: Total Penta-Dioxins
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0						6.02e5	159		
090212H1_3	1.25						4.83e5	1.30		
090212H1_4	2.50						4.97e5	2.53		
090212H1_5	10.0						5.23e5	9.77		
090212H1_6	200						6.35e5	200		
090212H1_7	1000						7.66e5	1020		

Compound name: Total Hexa-Dioxins
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0						0.00e0	191		
090212H1_3	1.25						0.00e0	3.85		

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Compound name: Total Hexa-Dioxins

	Name	Std Conc.	RT	Area	RT	RRT	Response	IS Area	Conc.	%D	RRF
	090212H1_4	2.50					0.00e0		7.81		
	090212H1_5	10.0					0.00e0		28.5		
	090212H1_6	200					0.00e0		615		
	090212H1_7	1000					0.00e0		3010		

Compound name: Total Hepta-Dioxins
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc.	RT	Area	RT	RRT	Response	IS Area	Conc.	%D	RRF
	090212H1_1	50.0						4.13e5	127		
	090212H1_3	1.25						3.21e5	1.38		
	090212H1_4	2.50						3.21e5	2.60		
	090212H1_5	10.0						3.36e5	9.55		
	090212H1_6	200						4.29e5	203		
	090212H1_7	1000						5.88e5	1010		

Compound name: Total Tetra-Furans
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc.	RT	Area	RT	RRT	Response	IS Area	Conc.	%D	RRF
	090212H1_1	10.0						1.07e6	35.3		
	090212H1_3	0.250						8.63e5	0.269		
	090212H1_4	0.500						9.06e5	0.506		
	090212H1_5	2.00						9.70e5	1.88		
	090212H1_6	40.0						1.08e6	40.6		
	090212H1_7	200						1.18e6	209		

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 1st Func. Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	ISTD	Conc	RRF
090212H1_1	50.0					0.00e0	46.2	
090212H1_3	1.25					0.00e0	0.00241	
090212H1_4	2.50					0.00e0	0.0270	
090212H1_5	10.0					0.00e0	0.0198	
090212H1_6	200					0.00e0	0.00694	
090212H1_7	1000					0.00e0	0.00731	

Compound name: Total Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	ISTD	Conc	RRF
090212H1_1	50.0					0.00e0	147	
090212H1_3	1.25					0.00e0	2.51	
090212H1_4	2.50					0.00e0	5.10	
090212H1_5	10.0					0.00e0	19.1	
090212H1_6	200					0.00e0	412	
090212H1_7	1000					0.00e0	2040	

Compound name: Total Hexa-Furans
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	ISTD	Conc	RRF
090212H1_1	50.0					0.00e0	250	
090212H1_3	1.25					0.00e0	5.09	

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: Total Hexa-Furans

Name	Std Conc	RT	RRT	IS Resp	Conc	%Dev	RRF
090212H1_4	2.50			0.00e0	10.2		
090212H1_5	10.0			0.00e0	38.9		
090212H1_6	200			0.00e0	804		
090212H1_7	1000			0.00e0	4020		

Compound name: Total Hepta-Furans
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	RRT	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0			0.00e0	98.6		
090212H1_3	1.25			0.00e0	2.59		
090212H1_4	2.50			0.00e0	5.09		
090212H1_5	10.0			0.00e0	18.9		
090212H1_6	200			0.00e0	403		
090212H1_7	1000			0.00e0	2030		

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	RRT	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00						
090212H1_3	1.00						
090212H1_4	1.00						
090212H1_5	1.00						
090212H1_6	1.00						
090212H1_7	1.00						

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qid

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Compound name: PFK2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sc	Conc	RA	RT	RRT	Resp	S/N	Conc	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: PFK3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sc	Conc	RA	RT	RRT	Resp	S/N	Conc	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: PFK4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sc	Conc	RA	RT	RRT	Resp	S/N	Conc	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									

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Compound name: PFK4

Name	Std. Conc.	RA	RT	RRF	RCS	SRCS	Conc.	Dev.	RH
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RA	RT	RRF	RCS	SRCS	Conc.	Dev.	RH
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RA	RT	RRF	RCS	SRCS	Conc.	Dev.	RH
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: DPE2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

Compound name: DPE3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

Compound name: DPE4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: DPE4

	090212H1_6	1.00							
	090212H1_7	1.00							

Compound name: DPE5
No Calibration
Response type: External Std, Area
Curve type: RF

	090212H1_1	1.00							
	090212H1_3	1.00							
	090212H1_4	1.00							
	090212H1_5	1.00							
	090212H1_6	1.00							
	090212H1_7	1.00							

Compound name: DPE6
No Calibration
Response type: External Std, Area
Curve type: RF

	090212H1_1	1.00							
	090212H1_3	1.00							
	090212H1_4	1.00							
	090212H1_5	1.00							
	090212H1_6	1.00							
	090212H1_7	1.00							

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090212H1-1

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	NO	9.78	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	48.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	48.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	48.1	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	48.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.91	0.76-1.02	NO	95.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	9.75	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	48.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	49.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	48.8	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	49.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.93	0.76-1.02	NO	96.7	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	100	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	98.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	99.4	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	102	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	98.8	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.5	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	NO	103	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	99.2	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	101	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	99.8	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	200	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.46	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.58
2	1,2,8,9-TCDD (Last)	26.86
3	1,2,4,7,9-PeCDD (First)	28.51
4	1,2,3,8,9-PeCDD (Last)	31.03
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.01
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.28
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.91
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

2/13/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory | CCAL ID: ST090212H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10 | GC Column ID: DB-5

VER Data file name: 090212H1_1 | Analysis Date: 12-Feb-09 | Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.90e4	0.82	NO	1.08	1.000	25.96	1.001	9.7764	97.8	0.0390	9.7764
2	1,2,3,7,8-PeCDD	3.03e5	0.63	NO	1.03	1.000	30.65	1.000	48.635	97.3	0.124	48.635
3	1,2,3,4,7,8-HxCDD	2.54e5	1.26	NO	1.00	1.000	34.10	1.000	48.035	96.1	0.187	48.035
4	1,2,3,6,7,8-HxCDD	2.90e5	1.27	NO	1.13	1.000	34.21	1.000	47.595	95.2	0.184	47.595
5	1,2,3,7,8,9-HxCDD	2.83e5	1.28	NO	1.10	1.000	34.51	1.009	48.051	96.1	0.180	48.051
6	1,2,3,4,6,7,8-HpCDD	2.11e5	1.03	NO	1.06	1.000	38.17	1.000	47.989	96.0	0.341	47.989
7	OCDD	3.30e5	0.91	NO	1.18	1.000	41.63	1.000	95.331	95.3	0.179	95.331
8	2,3,7,8-TCDF	1.14e5	0.78	NO	1.09	1.000	25.19	1.001	9.7515	97.5	0.0409	9.7515
9	1,2,3,7,8-PeCDF	5.65e5	1.61	NO	1.16	1.000	29.42	1.000	49.643	99.3	0.123	49.643
10	2,3,4,7,8-PeCDF	5.35e5	1.56	NO	1.12	1.000	30.35	1.000	49.591	99.2	0.120	49.591
11	1,2,3,4,7,8-HxCDF	4.59e5	1.27	NO	1.41	1.000	33.19	1.001	48.331	96.7	0.150	48.331
12	1,2,3,6,7,8-HxCDF	5.49e5	1.25	NO	1.22	1.000	33.31	1.000	49.809	99.6	0.137	49.809
13	2,3,4,6,7,8-HxCDF	4.53e5	1.29	NO	1.28	1.000	33.92	1.000	49.224	98.4	0.172	49.224
14	1,2,3,7,8,9-HxCDF	3.76e5	1.25	NO	1.26	1.000	34.91	1.000	49.483	99.0	0.252	49.483
15	1,2,3,4,6,7,8-HpCDF	4.18e5	1.05	NO	1.69	1.000	36.81	1.000	48.842	97.7	0.180	48.842
16	1,2,3,4,7,8,9-HpCDF	3.09e5	1.05	NO	1.48	1.000	38.73	1.000	49.738	99.5	0.251	49.738
17	OCDF	4.66e5	0.93	NO	1.10	1.000	41.88	1.001	96.743	96.7	0.177	96.743
18	13C-2,3,7,8-TCDD	7.49e5	0.77	NO	1.01	1.000	25.95	1.022	100.15	100	0.141	
19	13C-1,2,3,7,8-PeCDD	6.02e5	0.64	NO	0.827	1.000	30.64	1.207	98.735	98.7	0.269	
20	13C-1,2,3,4,7,8-HxCDD	5.27e5	1.26	NO	0.916	1.000	34.08	0.988	99.432	99.4	0.335	
21	13C-1,2,3,6,7,8-HxCDD	5.42e5	1.26	NO	0.921	1.000	34.19	0.991	101.67	102	0.334	
22	13C-1,2,3,4,6,7,8-HpCDD	4.13e5	1.07	NO	0.708	1.000	38.16	1.106	100.67	101	0.425	
23	13C-OCDD	5.87e5	0.89	NO	0.503	1.000	41.62	1.206	201.71	101	0.424	
24	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	0.977	1.000	25.16	0.991	98.780	98.8	0.129	
25	13C-1,2,3,7,8-PeCDF	9.82e5	1.58	NO	0.896	1.000	29.41	1.158	98.441	98.4	0.304	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.57	NO	0.900	1.000	30.34	1.195	96.306	96.3	0.303	
27	13C-1,2,3,4,7,8-HxCDF	6.74e5	0.54	NO	1.17	1.000	33.16	0.961	99.512	99.5	0.469	
28	13C-1,2,3,6,7,8-HxCDF	9.02e5	0.55	NO	1.52	1.000	33.29	0.965	102.54	103	0.361	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.54	NO	1.25	1.000	33.91	0.983	99.345	99.3	0.439	
30	13C-1,2,3,7,8,9-HxCDF	6.05e5	0.53	NO	1.05	1.000	34.90	1.011	99.208	99.2	0.521	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	31 13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.46	NO	0.868	1.000	36.80	1.066	100.83	101	0.602
	32 13C-1,2,3,4,7,8,9-HpCDF	4.20e5	0.46	NO	0.727	1.000	38.72	1.122	99.796	99.8	0.719
	33 13C-OCDF	8.78e5	0.91	NO	0.760	1.000	41.85	1.213	199.65	99.8	0.296
	34 37Cl-2,3,7,8-TCDD	4.66e4			0.668	1.000	25.98	1.023	9.4592	94.6	0.0533
	35 13C-1,2,3,4-TCDD	7.37e5	0.81	NO	1.00	1.000	25.39	0.000	100.00	100	0.144
	36 13C-1,2,3,4-TCDF	1.11e6	0.78	NO	1.00	1.000	23.95	0.000	100.00	100	0.126
	37 13C-1,2,3,7,8,9-HxCDD	5.79e5	1.22	NO	1.00	1.000	34.50	0.000	100.00	100	0.307

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 7:21:09 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:21:55 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Compound name: 1,3,6,8-TCDD (First)

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	090212H1_2	solvent blank	12-Feb-09	11:59:18
	090212H1_3	ST090212H1-2 1613 CS0 080917F	12-Feb-09	12:49:08
	090212H1_4	ST090212H1-3 1613 CS1 080917CG	12-Feb-09	13:38:34
	090212H1_5	ST090212H1-4 1613 CS2 080917H	12-Feb-09	14:28:11
	090212H1_6	ST090212H1-5 1613 CS4 080917J	12-Feb-09	15:17:39
	090212H1_7	ST090212H1-6 1613 CS5 080917K	12-Feb-09	16:07:03
	090212H1_8	solvent blank	12-Feb-09	16:56:26
	090212H1_9	SSS090212H1-1 Sec Src Std L070913A	12-Feb-09	17:45:49

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:13 Pacific Standard Time

M 292.9824 R 13157

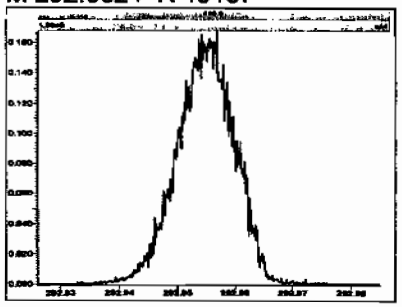

M 304.9824 R 14289

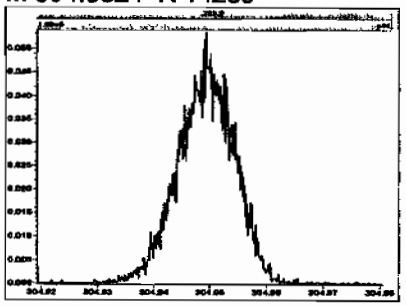

M 318.9792 R 13655

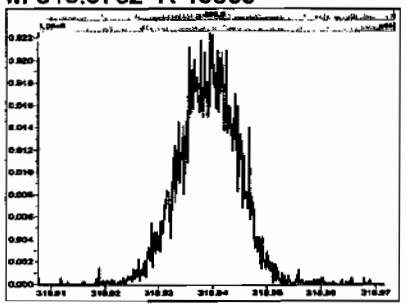

M 330.9792 R 12819

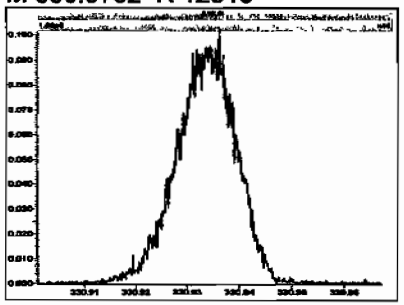

M 342.9792 R 13085

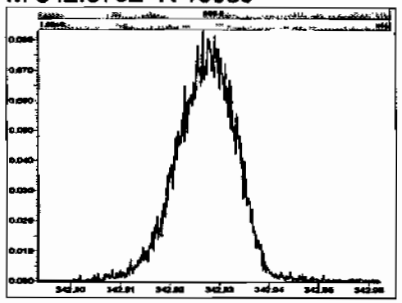

M 354.9792 R 13440

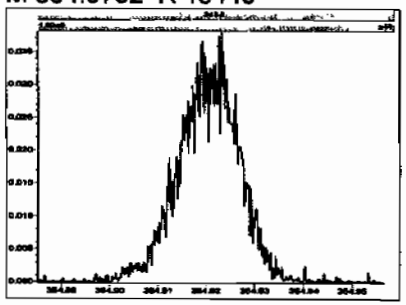

M 366.9792 R 11572

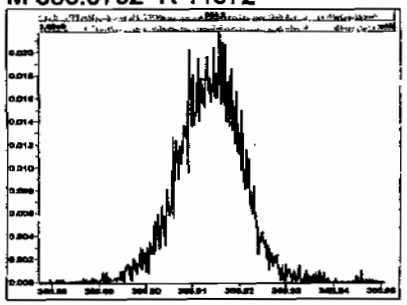

M 380.9760 R 13365

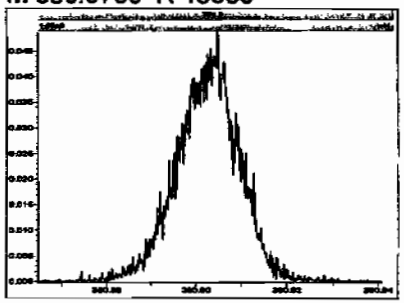

M 392.9760 R 13660

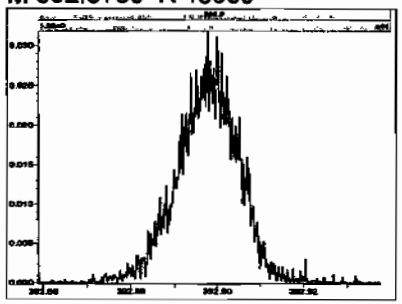

M 404.9760 R 13160

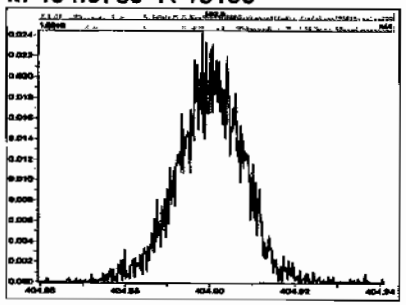

M 416.9760 R 15061

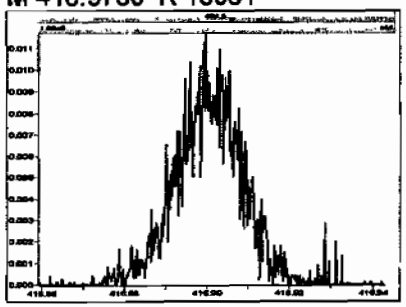

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:36 Pacific Standard Time

M 330.9792 R 13661

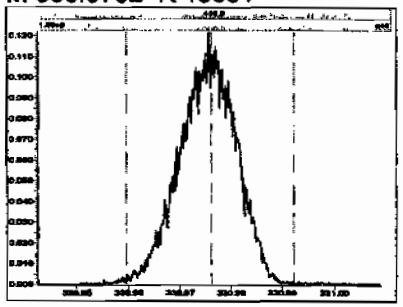

M 342.9792 R 12688

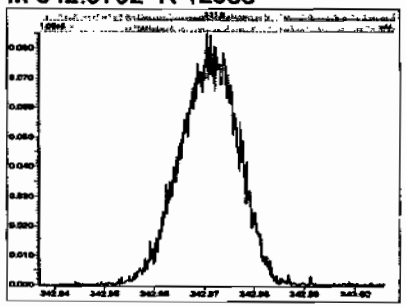

M 354.9792 R 13813

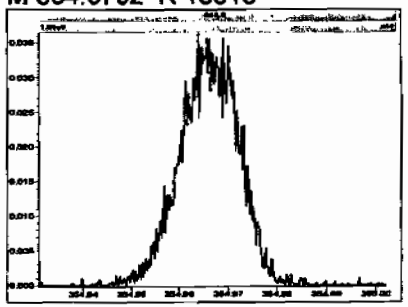

M 366.9792 R 13735

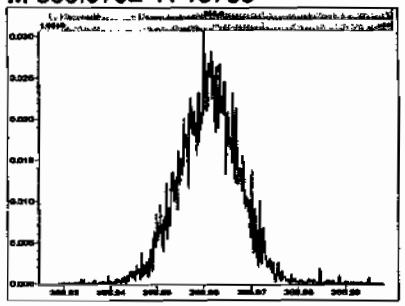

M 380.9760 R 13225

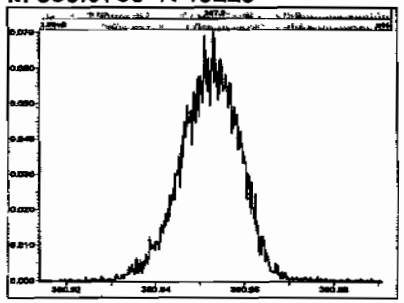

M 392.9760 R 13090

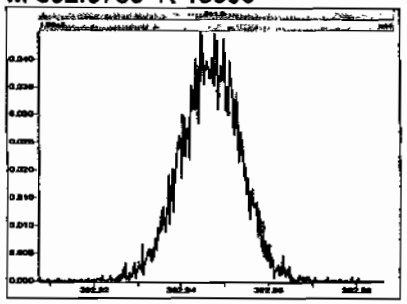

M 404.9760 R 13368

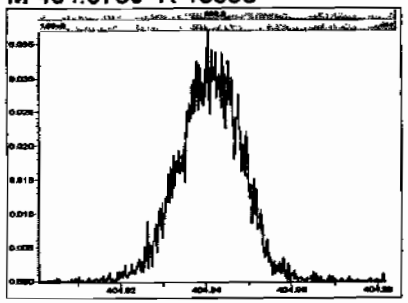

M 416.9760 R 13510

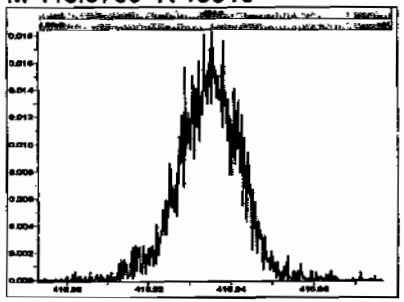

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:57 Pacific Standard Time

M 366.9792 R 13441

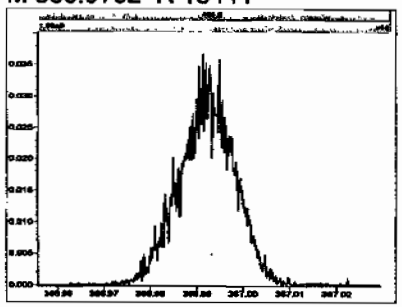

M 380.9760 R 13367

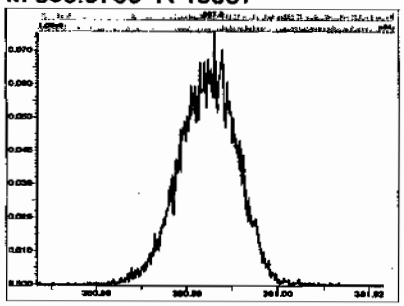

M 392.9760 R 13733

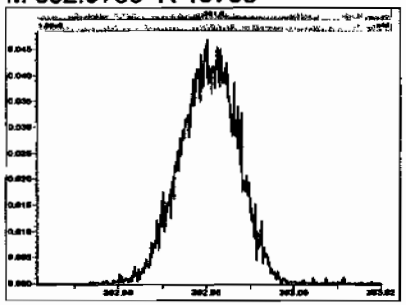

M 404.9760 R 12136

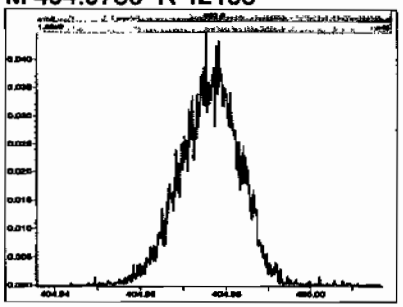

M 416.9760 R 13887

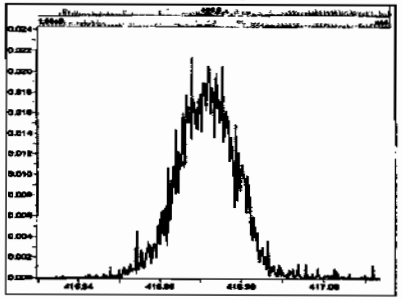

M 430.9728 R 13515

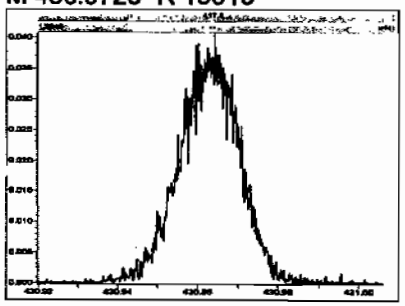

M 442.9728 R 14124

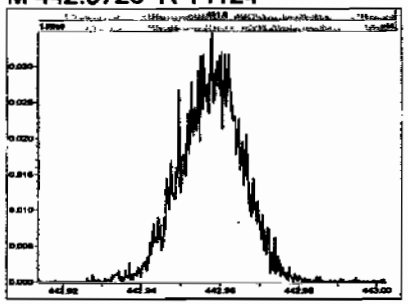

M 454.9728 R 13225

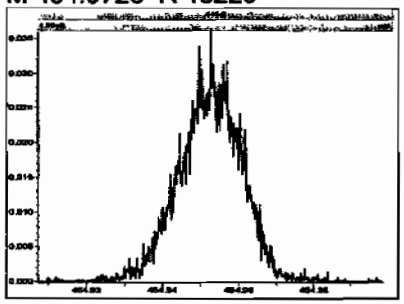

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:16 Pacific Standard Time

M 404.9760 R 13299

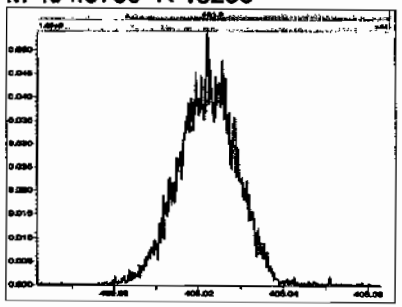

M 416.9760 R 14124

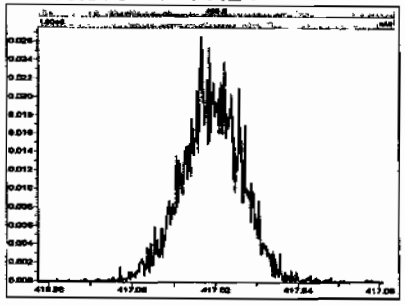

M 430.9728 R 13019

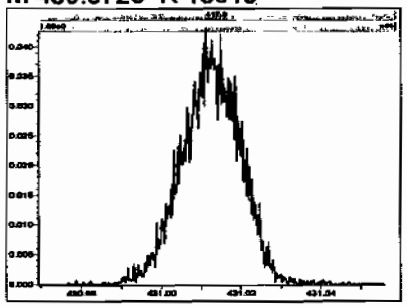

M 442.9728 R 13022

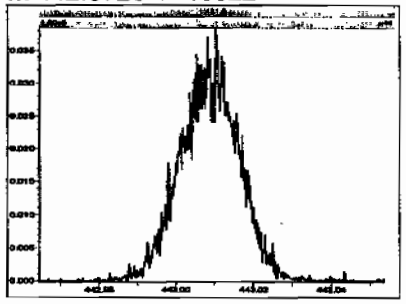

M 454.9728 R 12953

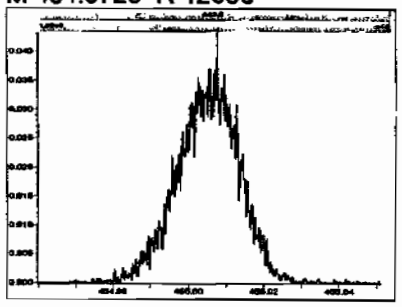

M 466.9728 R 12692

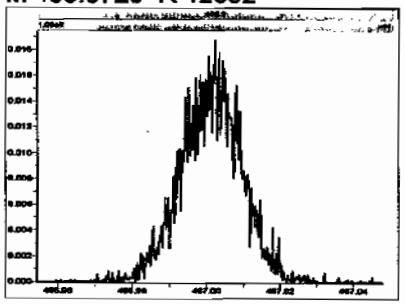

M 480.9696 R 14882

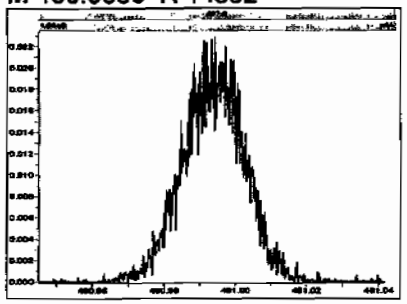

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:41 Pacific Standard Time

M 430.9728 R 12434

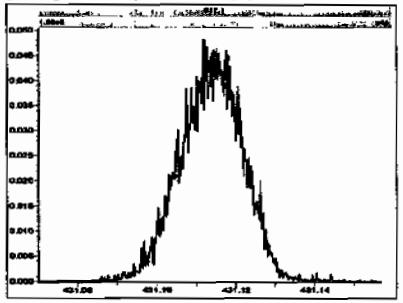

M 442.9728 R 12886

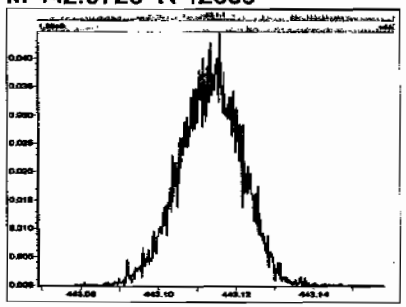

M 454.9728 R 12021

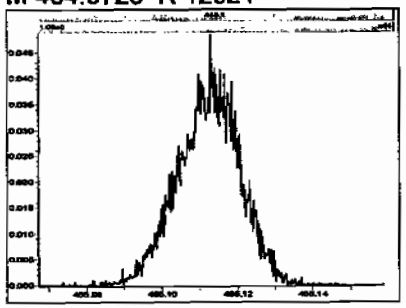

M 466.9728 R 12954

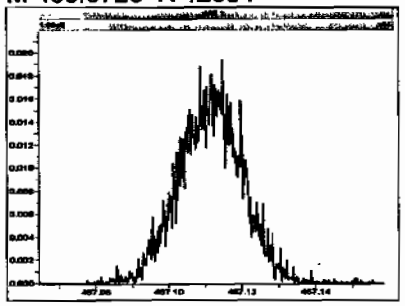

M 480.9696 R 11520

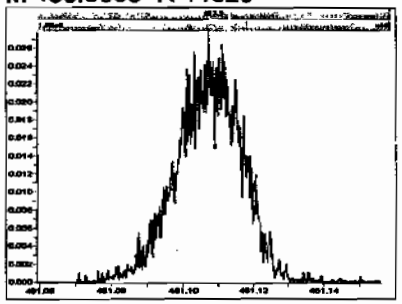

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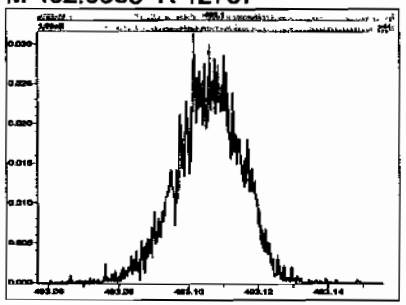

M 504.9696 R 11211

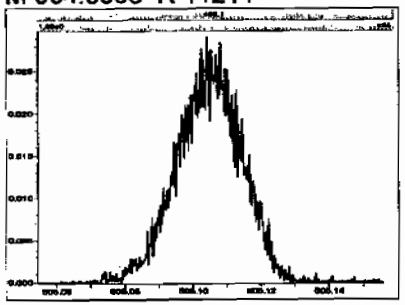

M 516.9697 R 11516

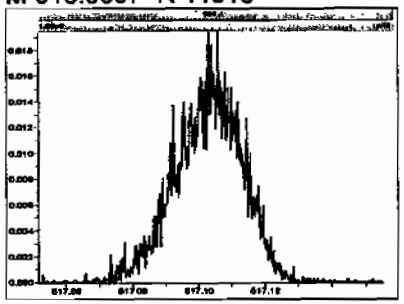

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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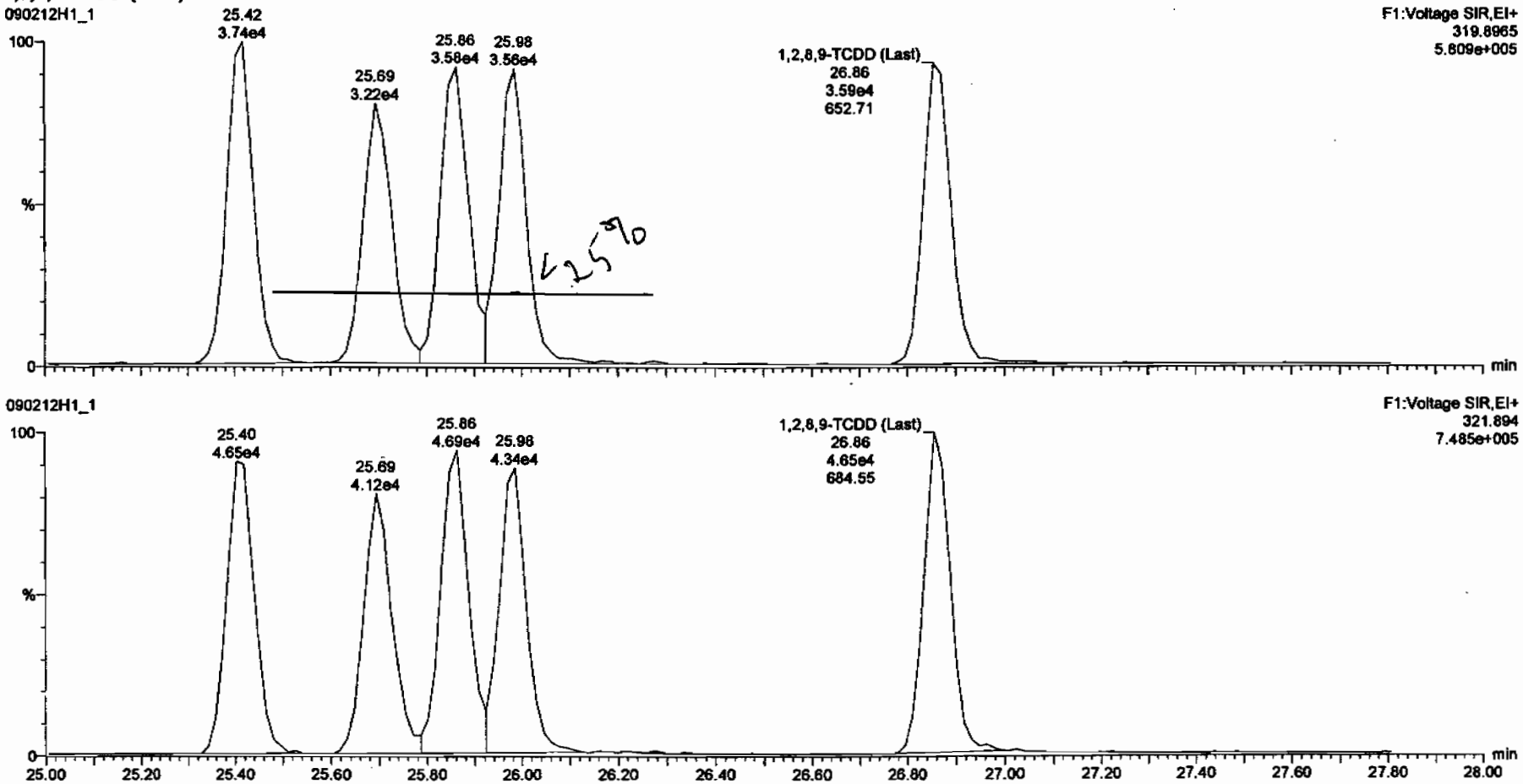

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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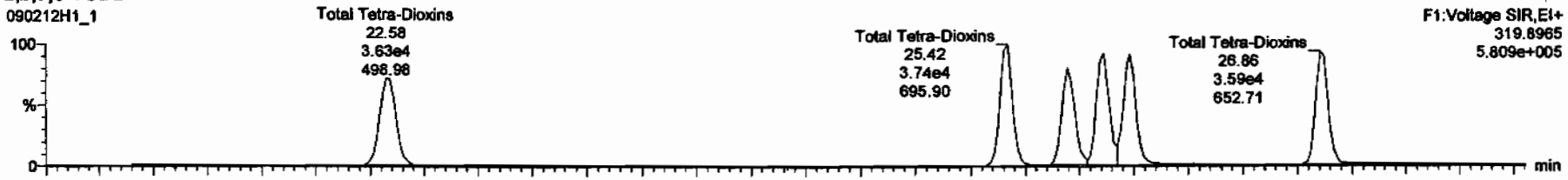

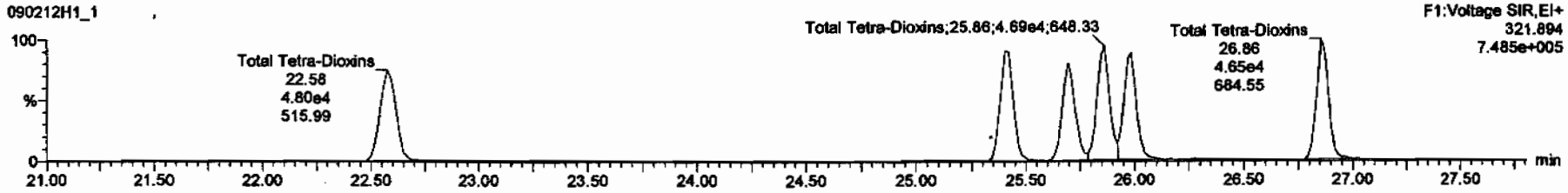

13C-2,3,7,8-TCDD

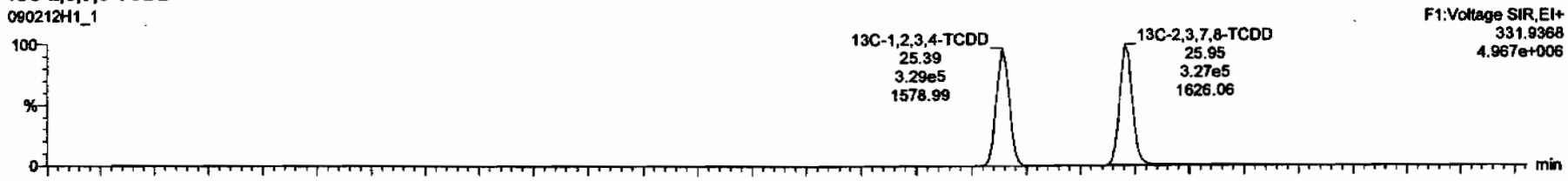

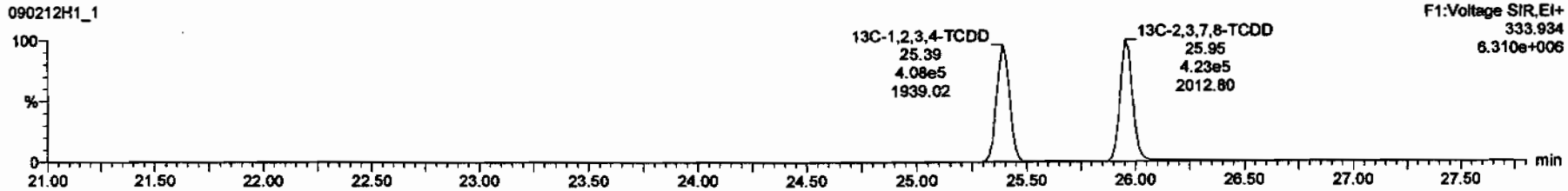

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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37Cl-2,3,7,8-TCDD

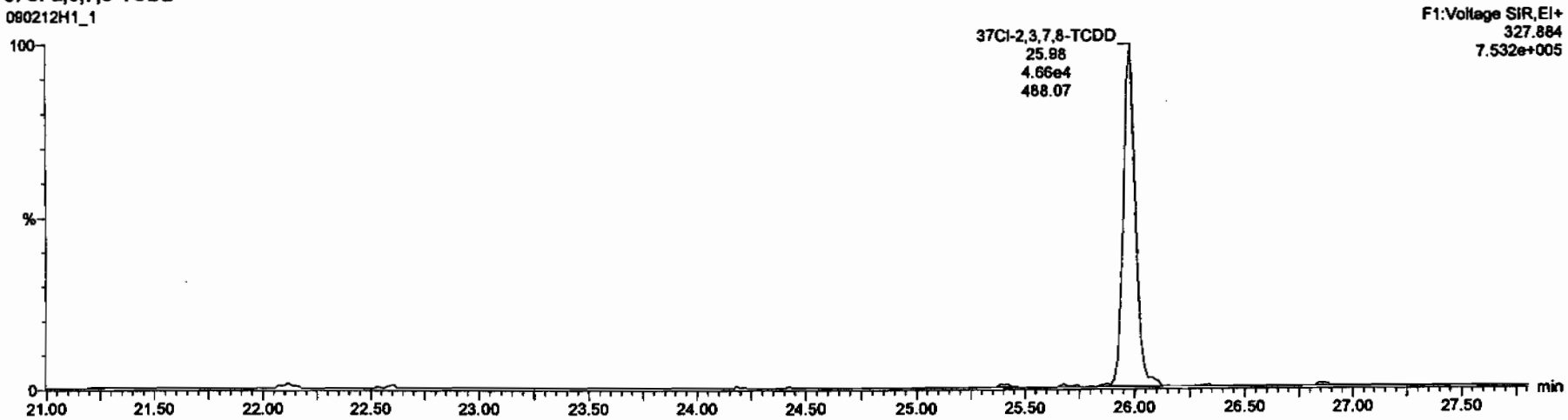

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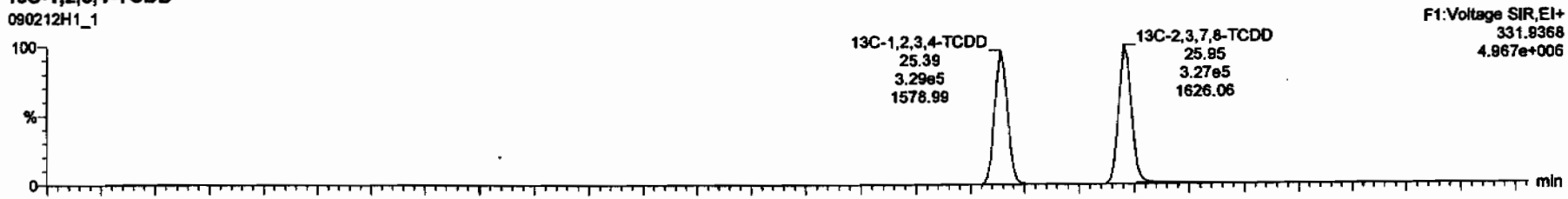

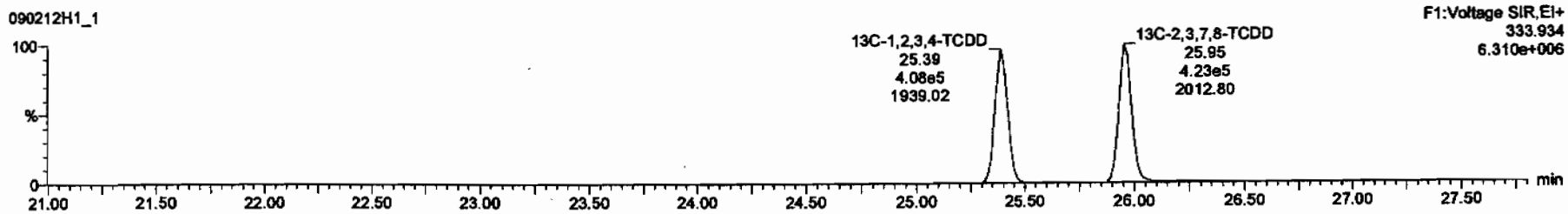

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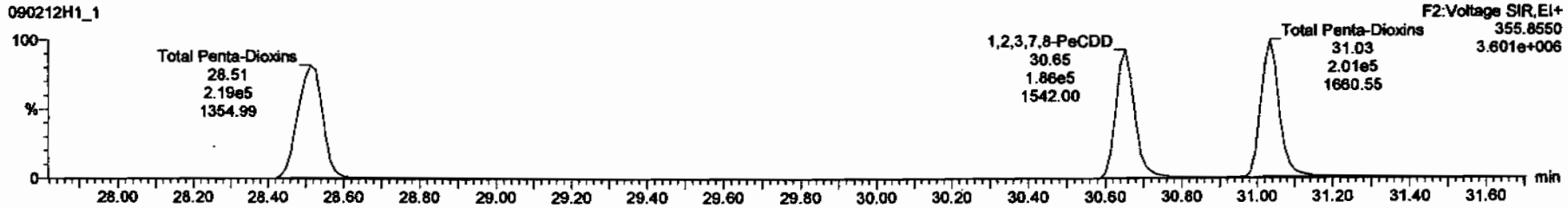

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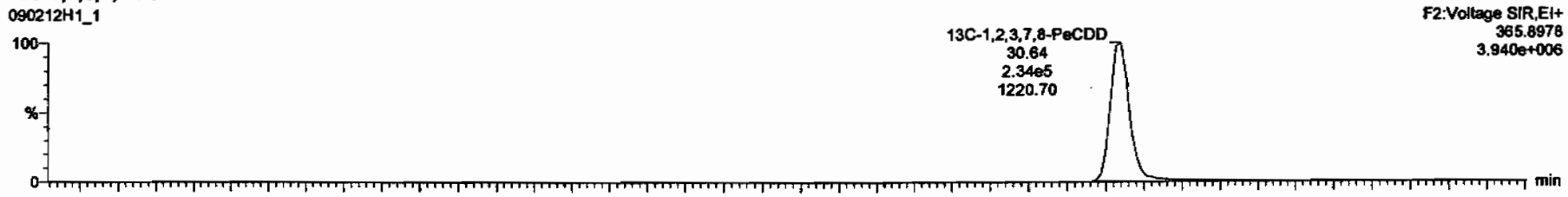

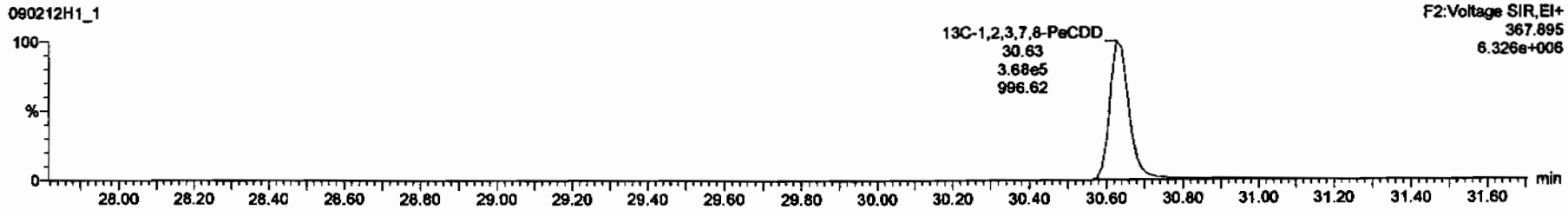

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1,2,3,4,7,8-HxCDD

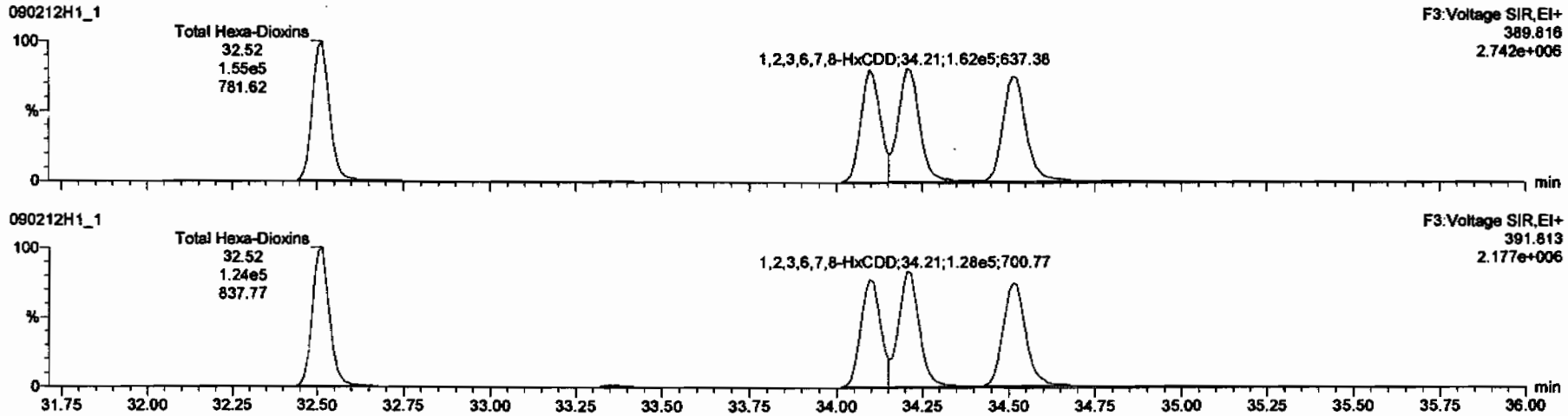

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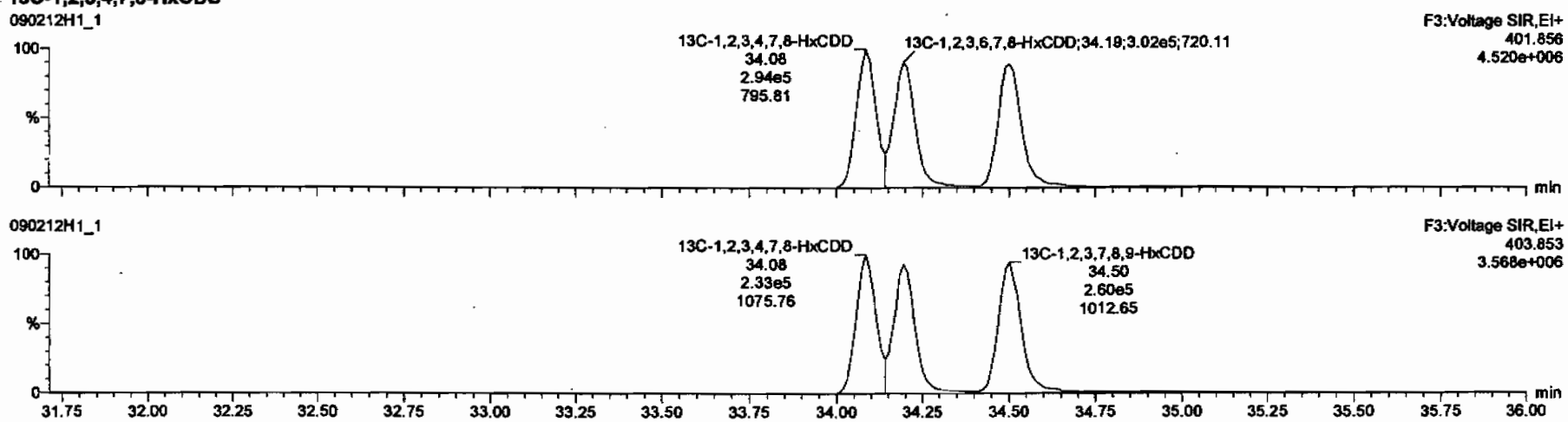

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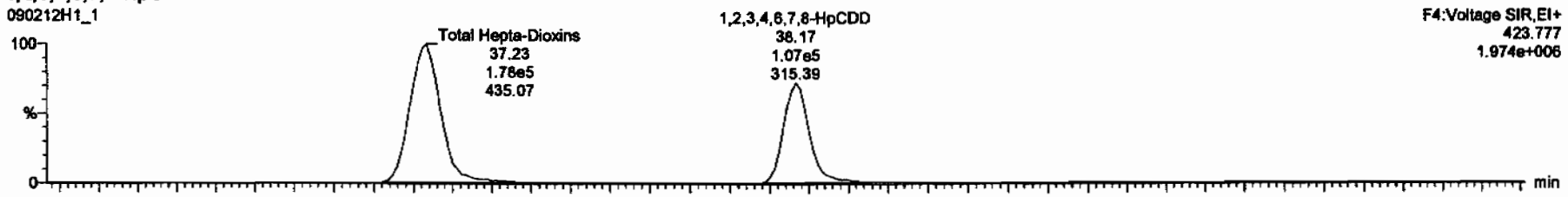

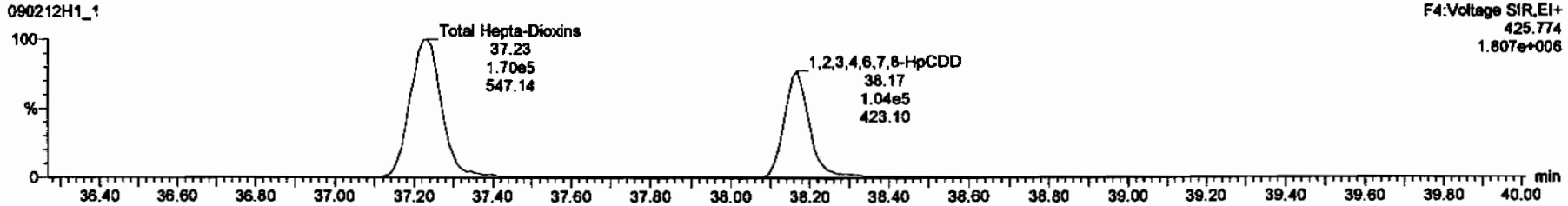

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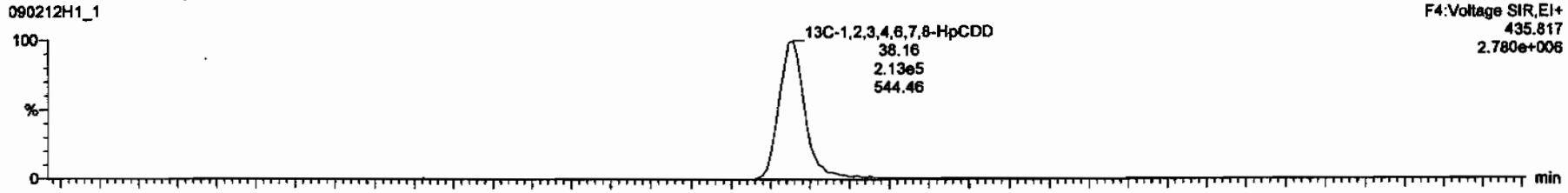

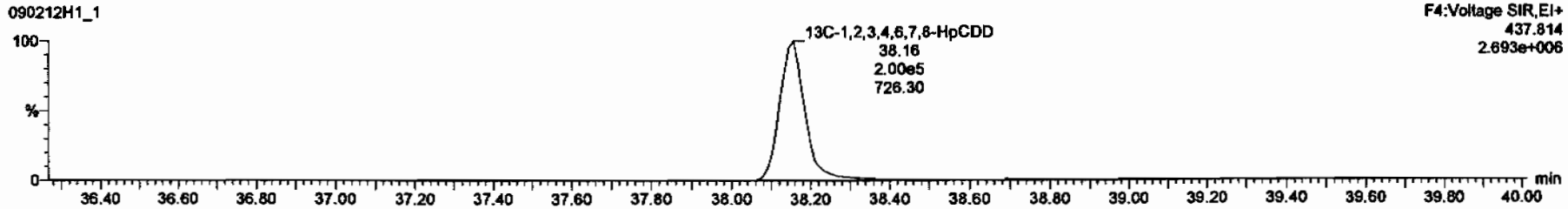

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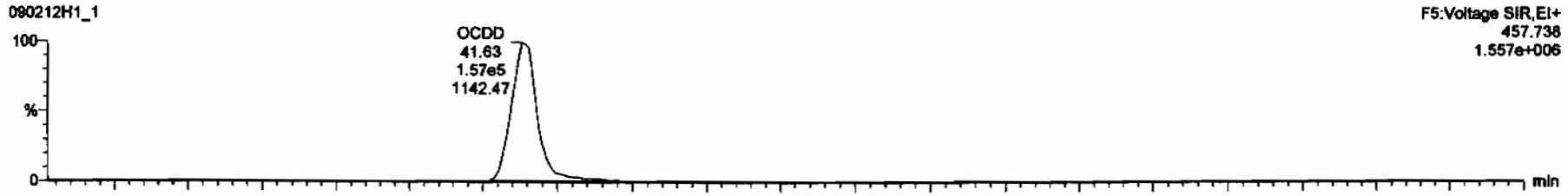

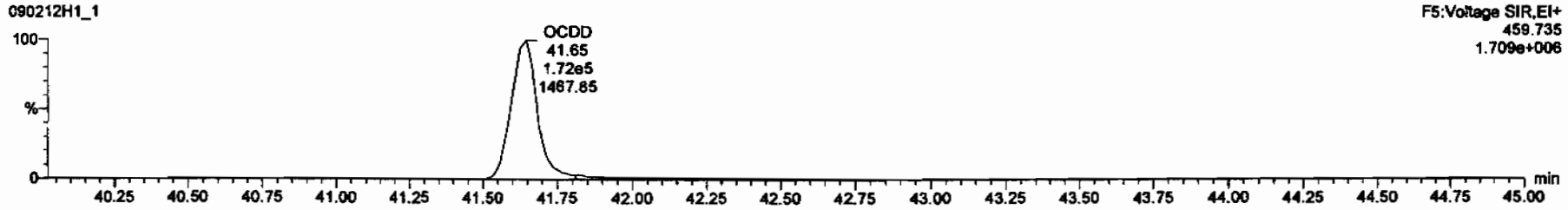

13C-OCDD

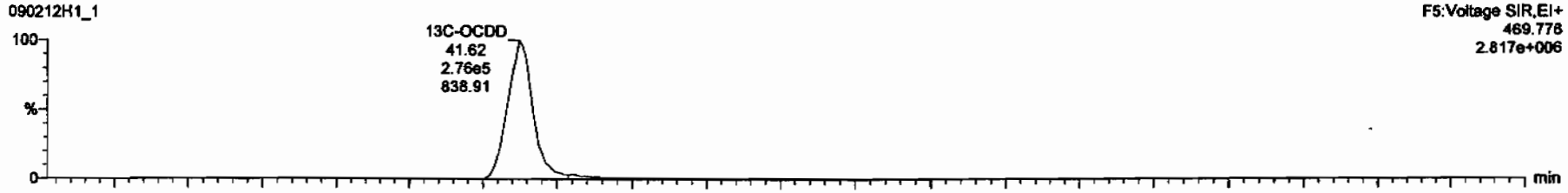

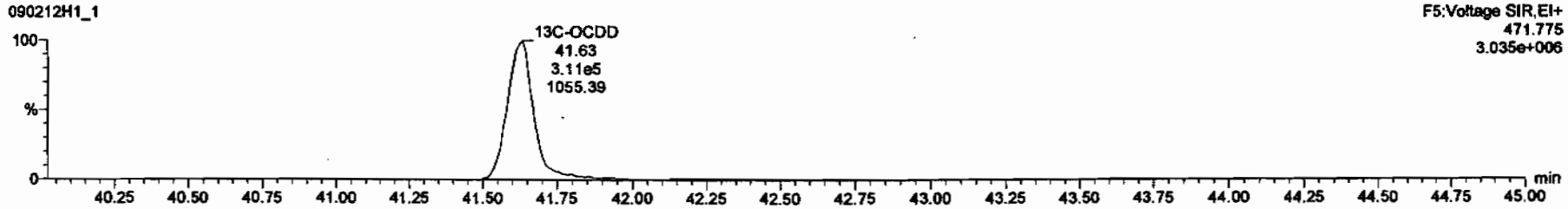

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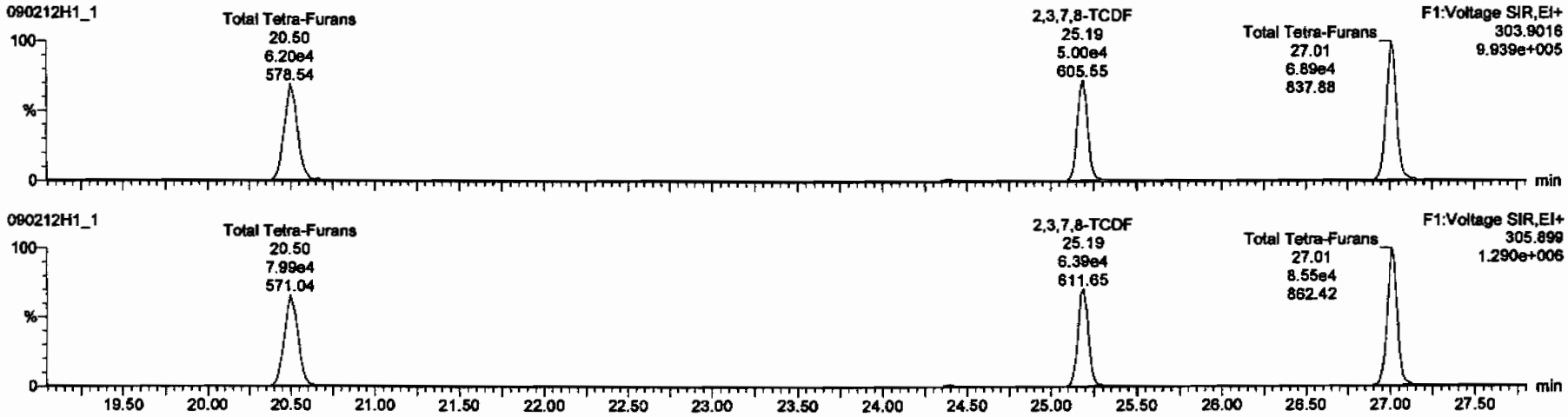

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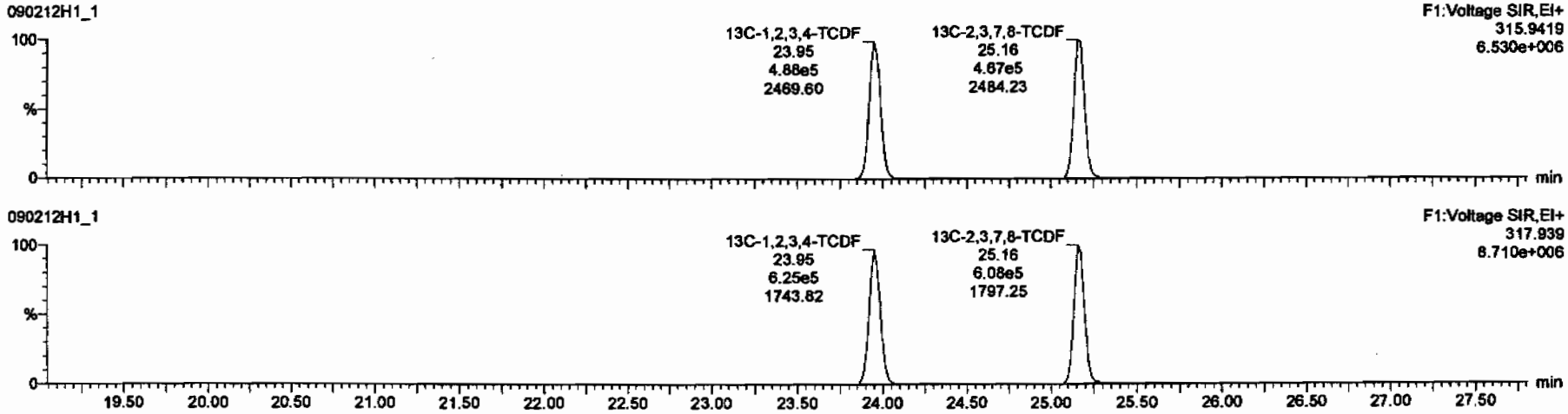

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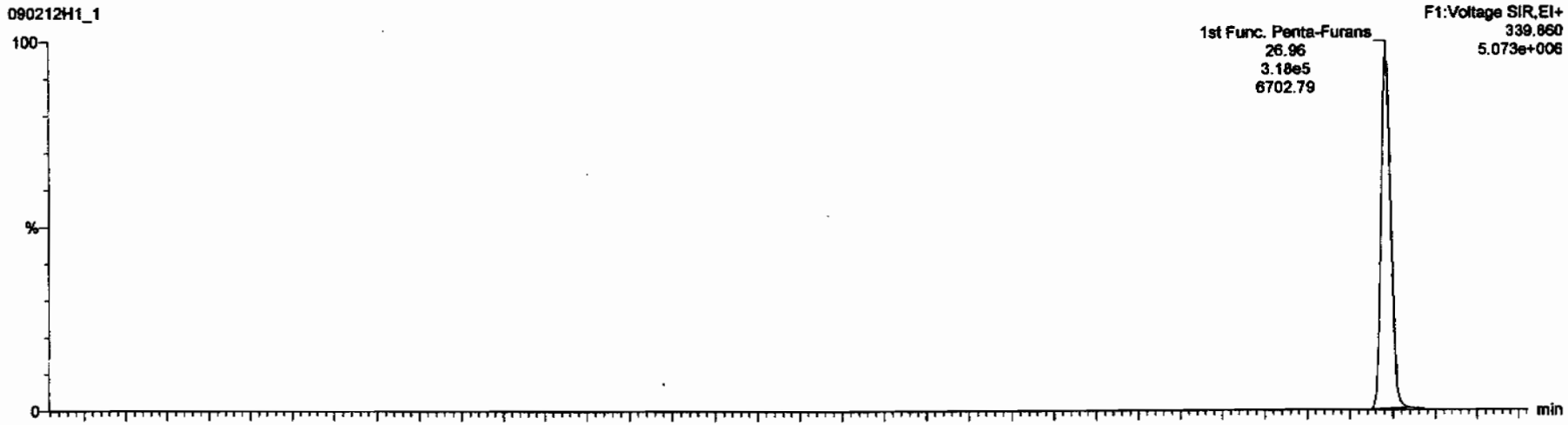

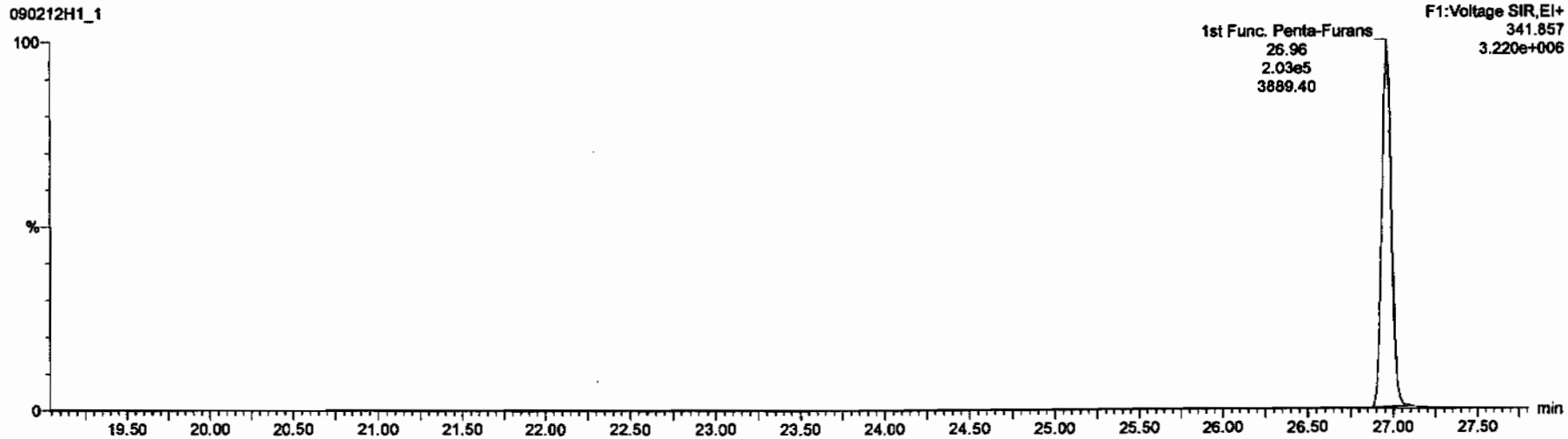

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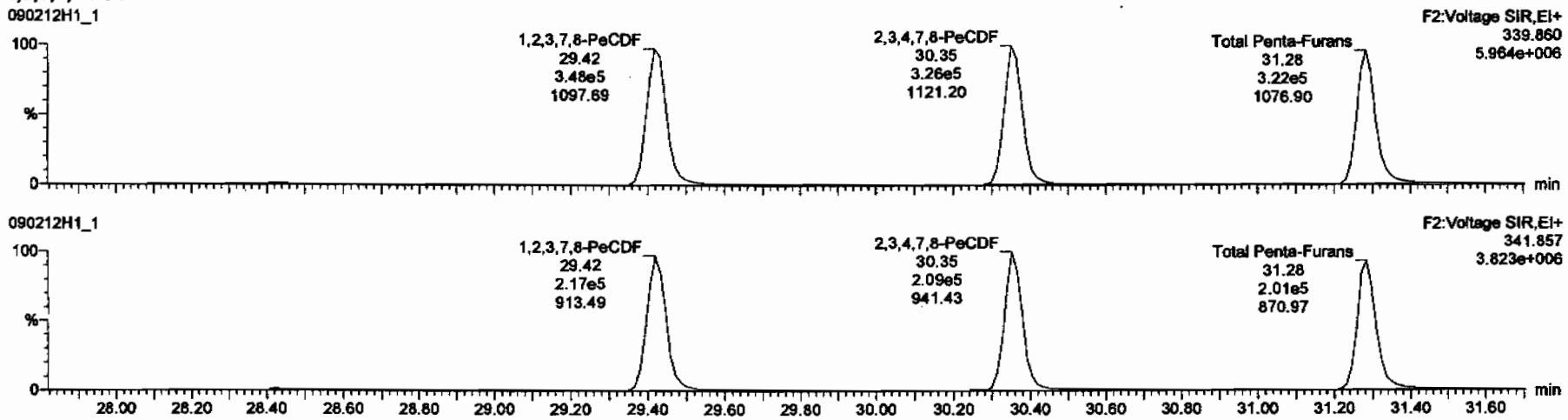

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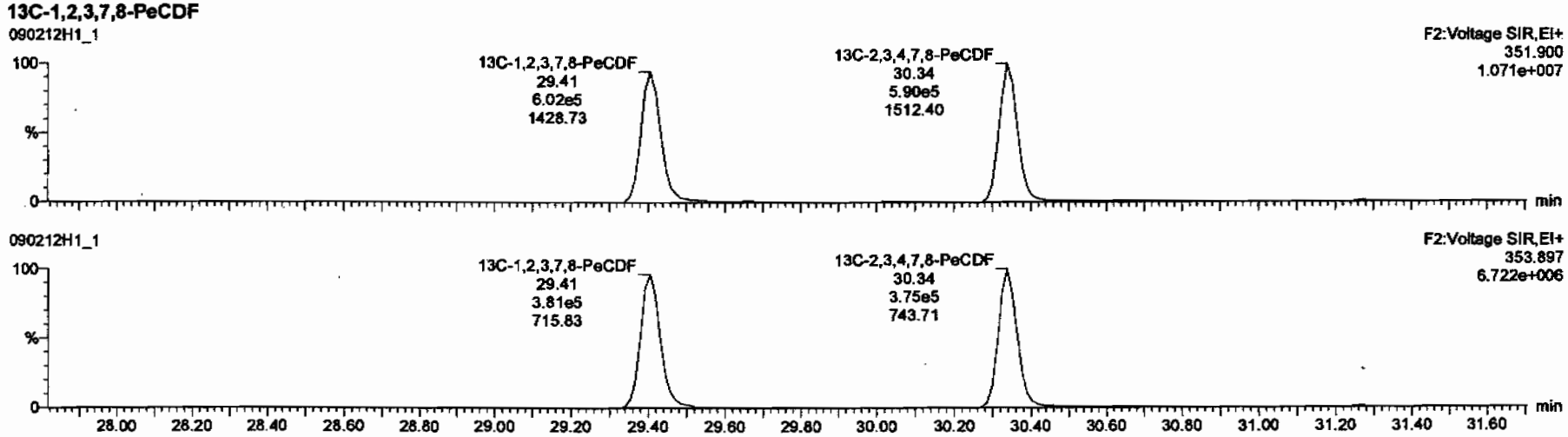

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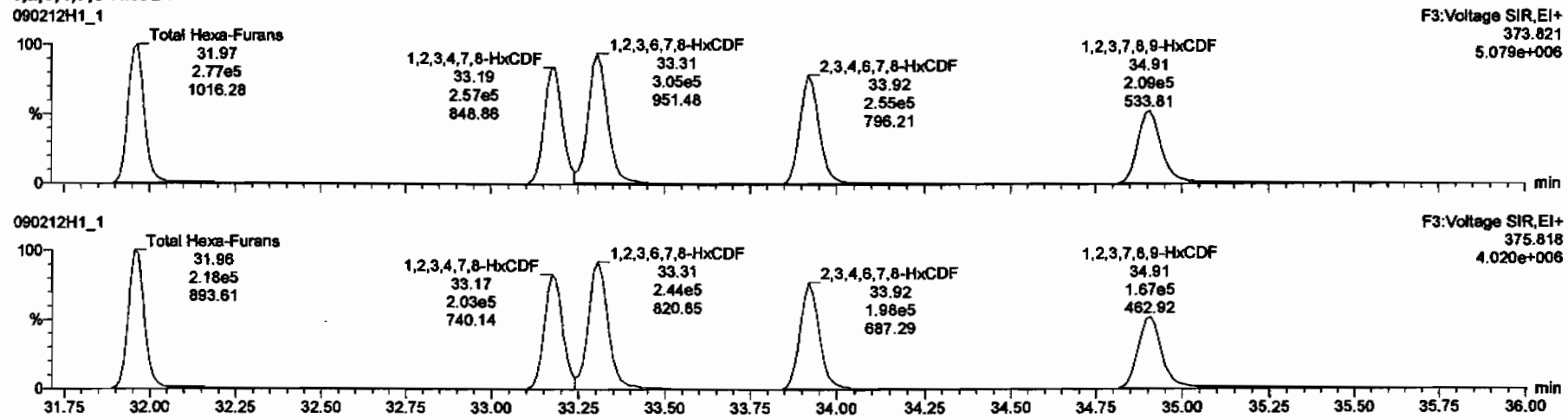

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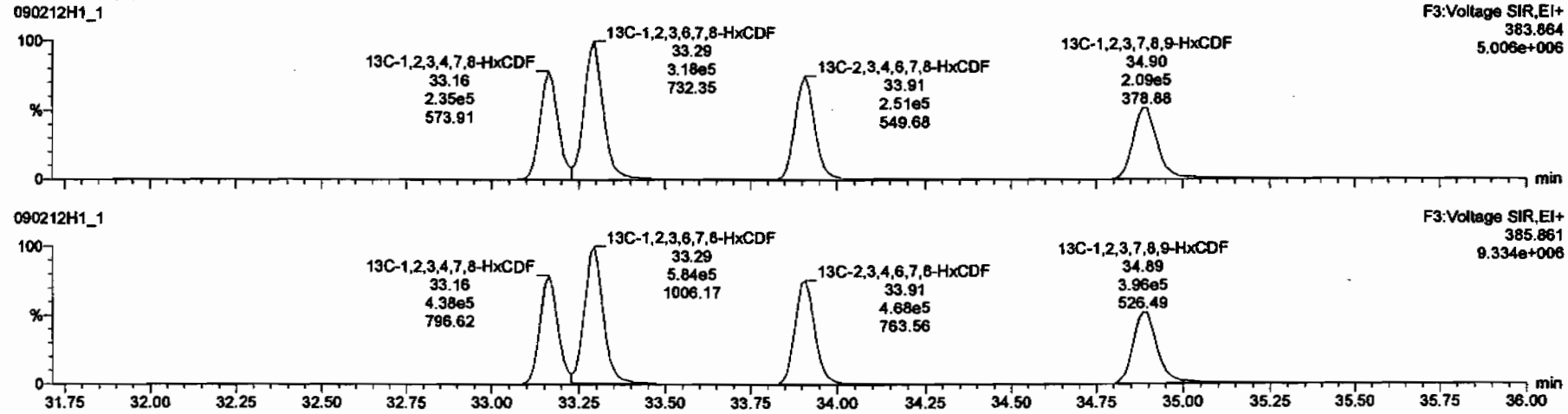

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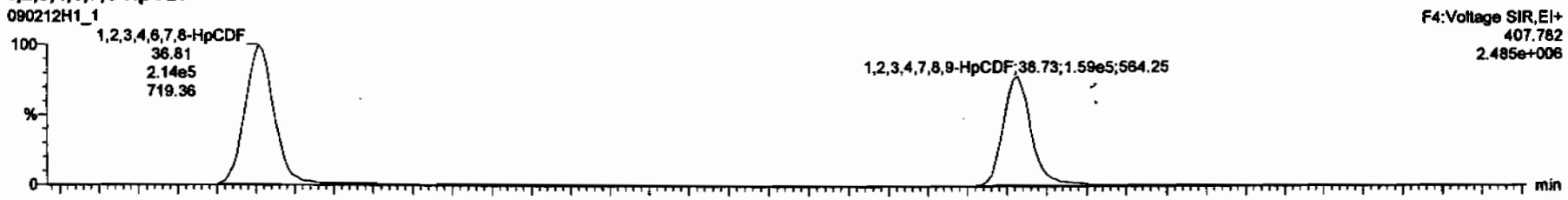

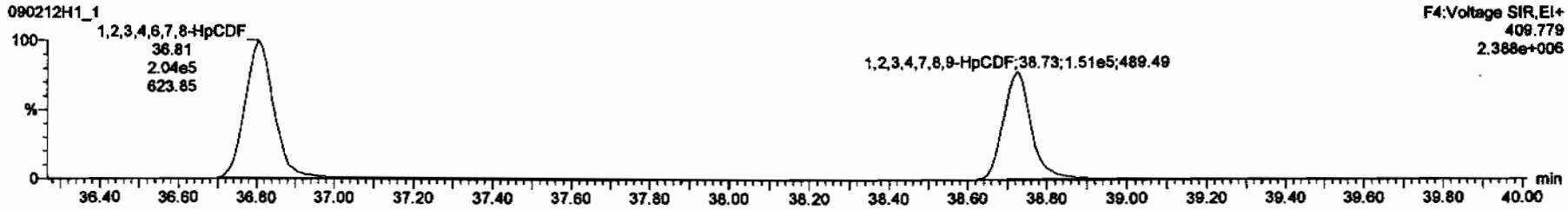

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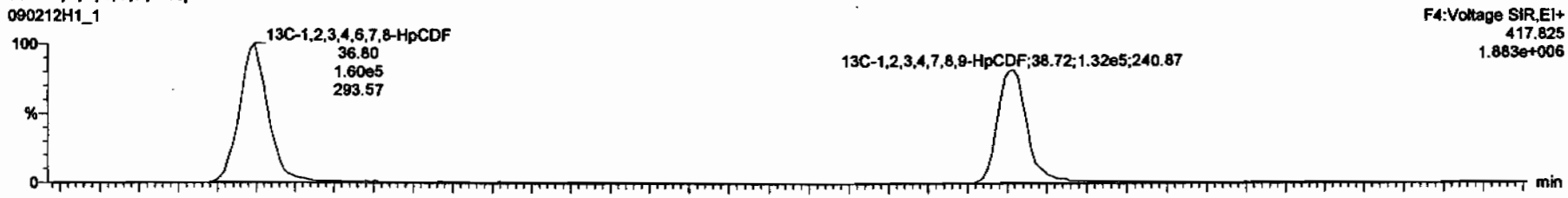

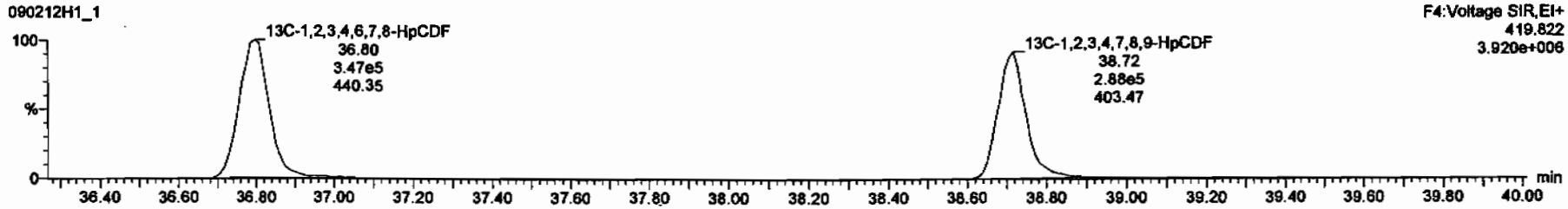

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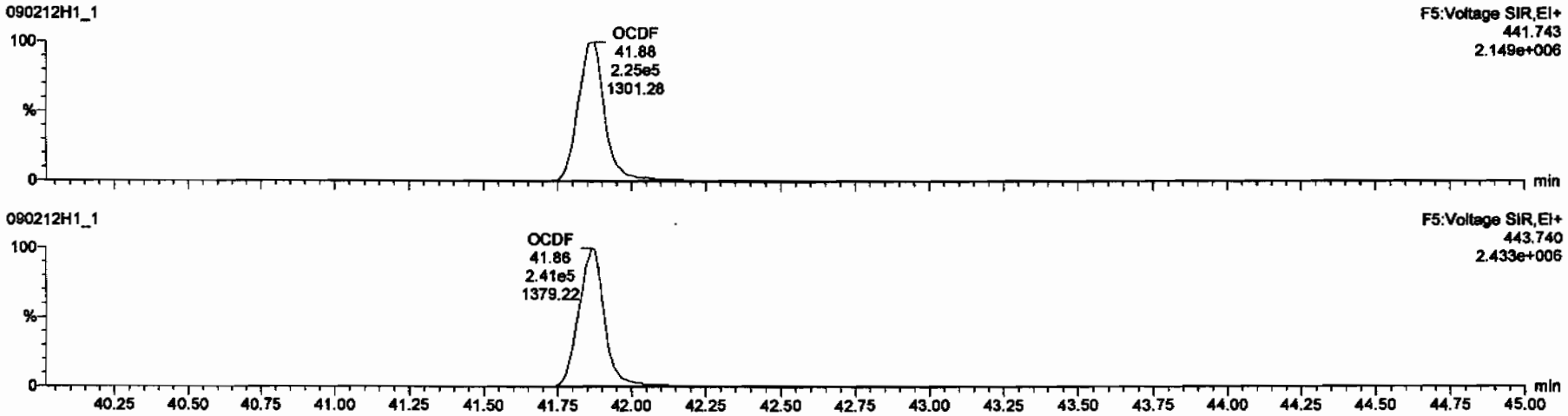

13C-OCDF

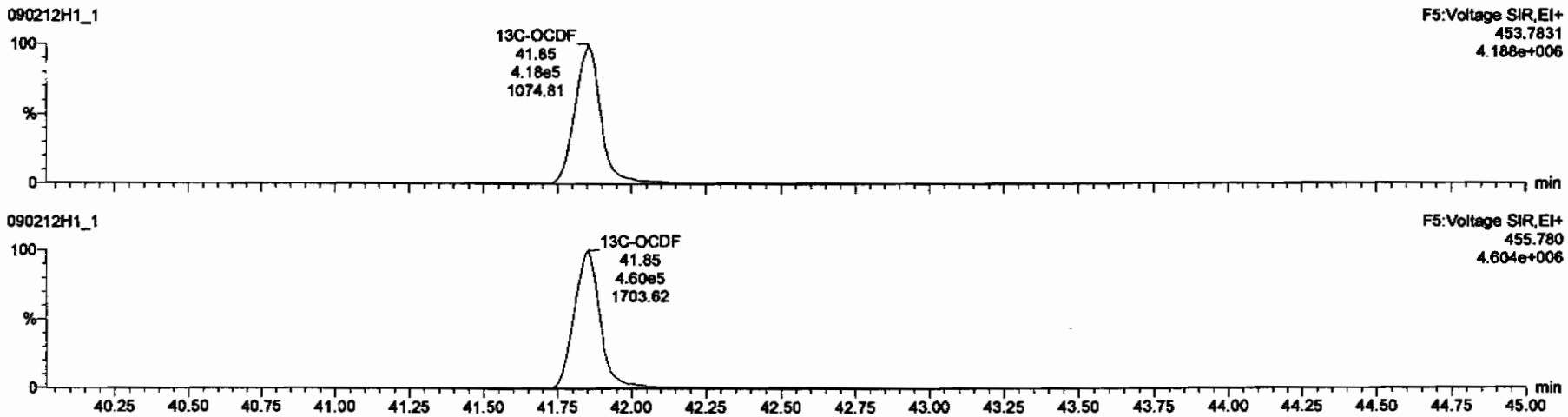

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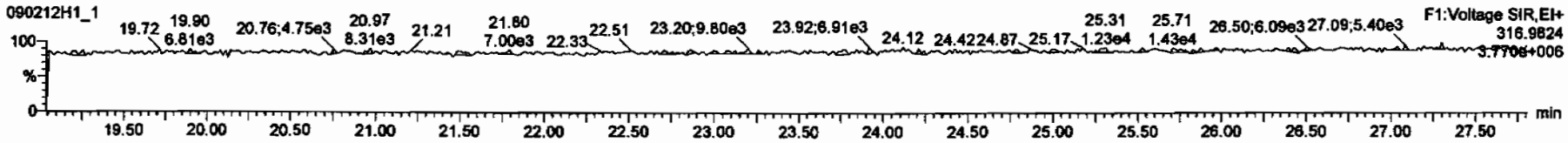

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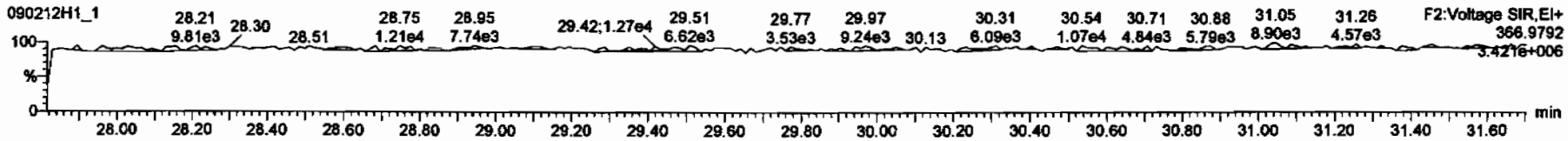

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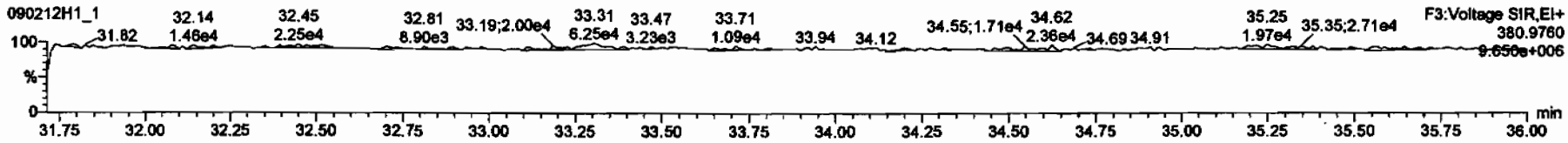

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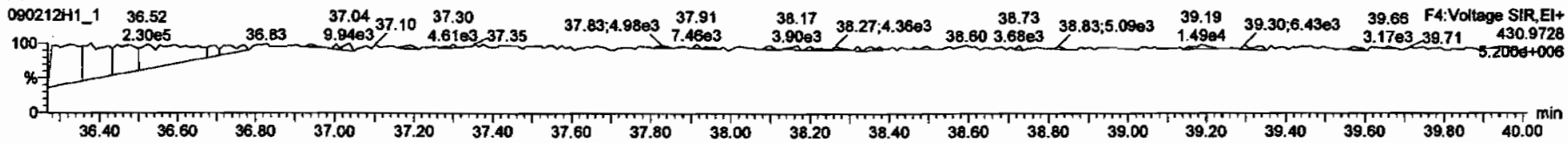

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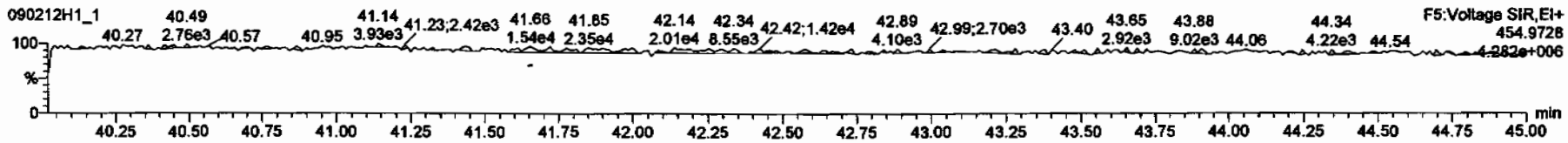

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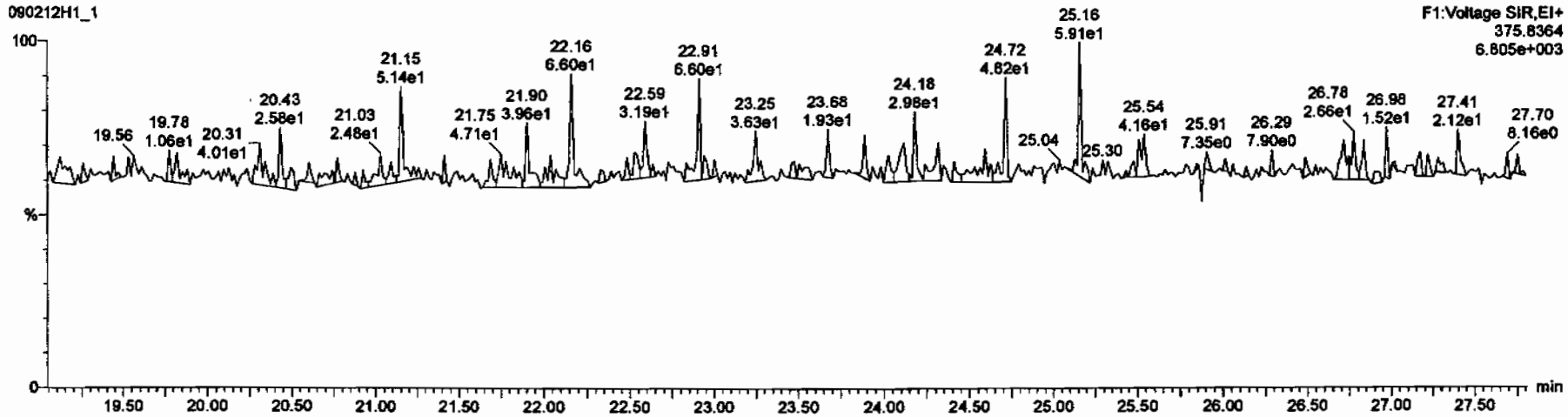

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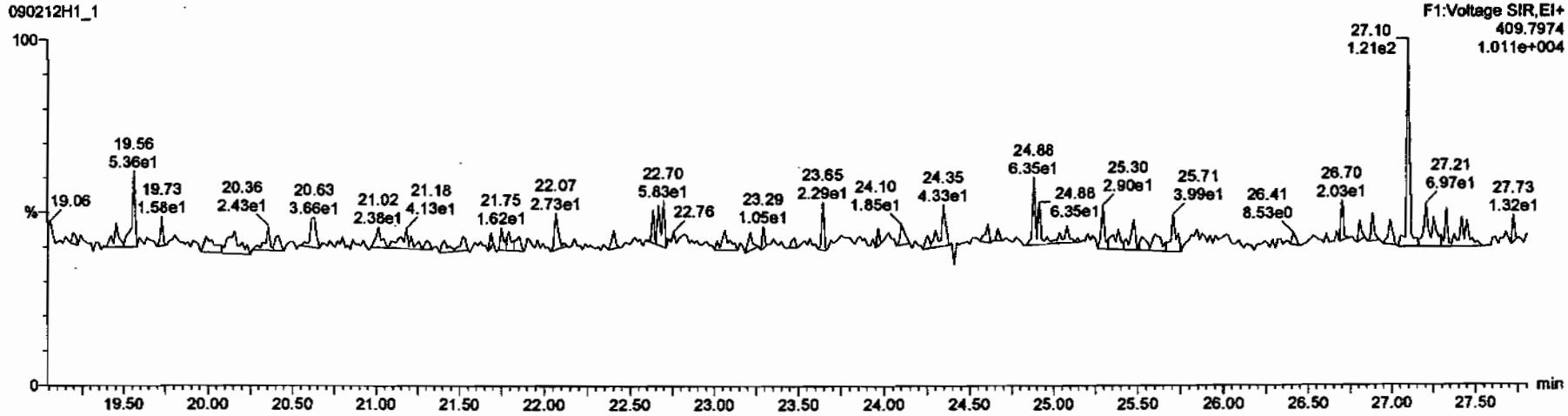

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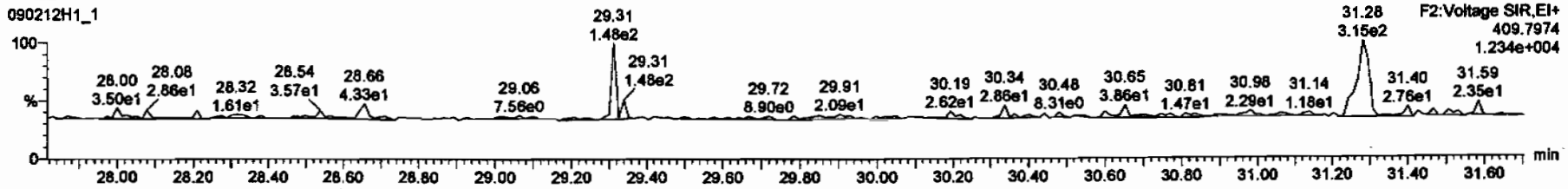

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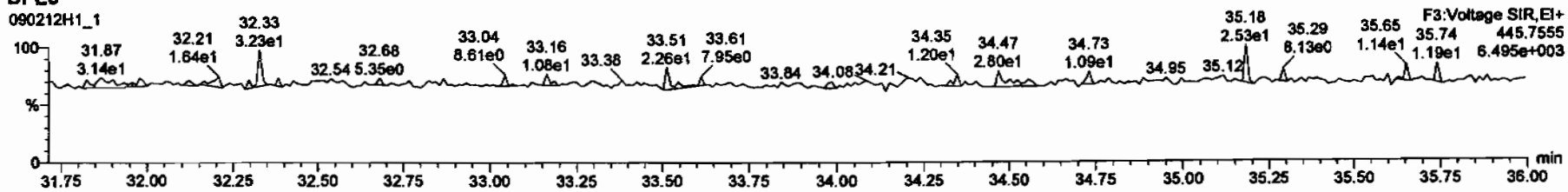

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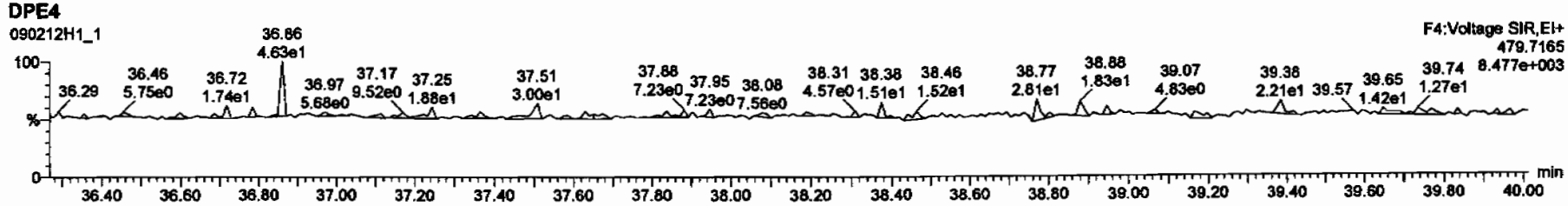

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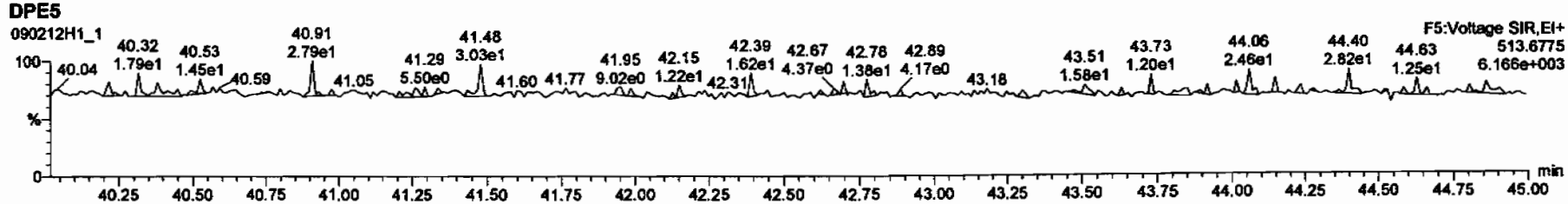

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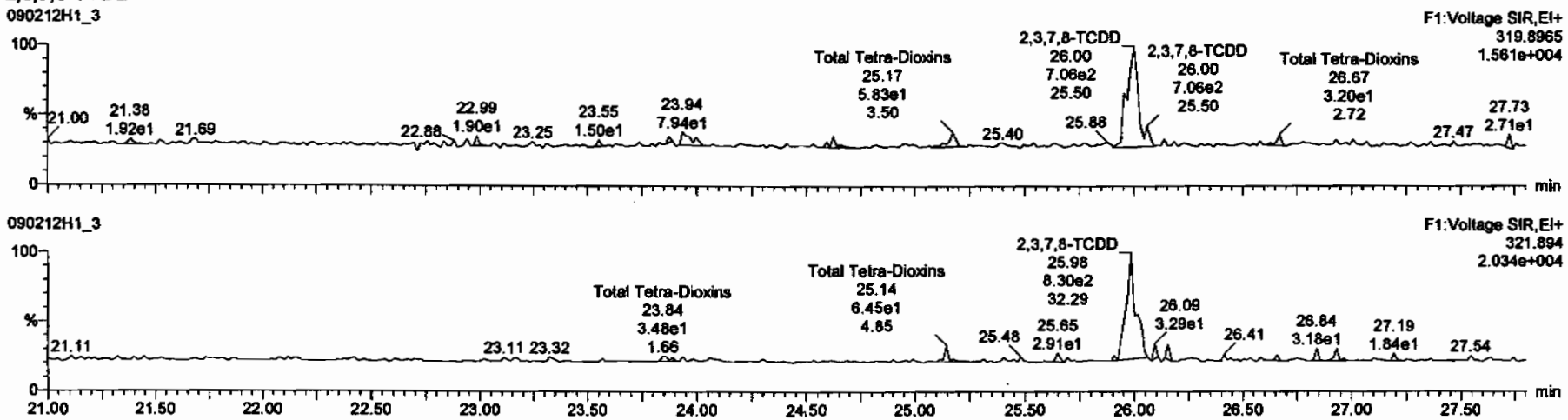

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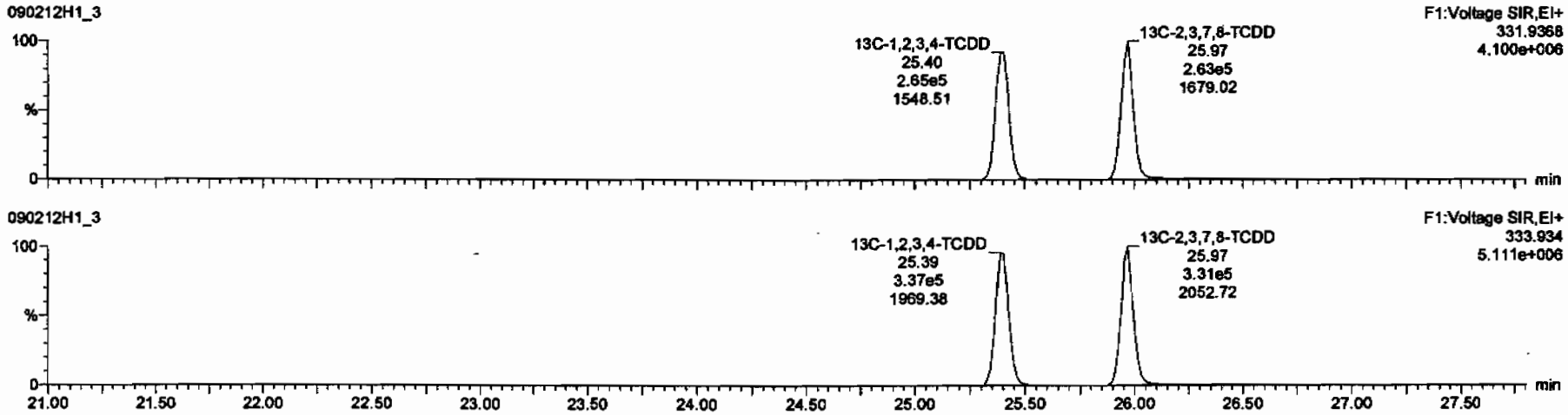

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37Cl-2,3,7,8-TCDD

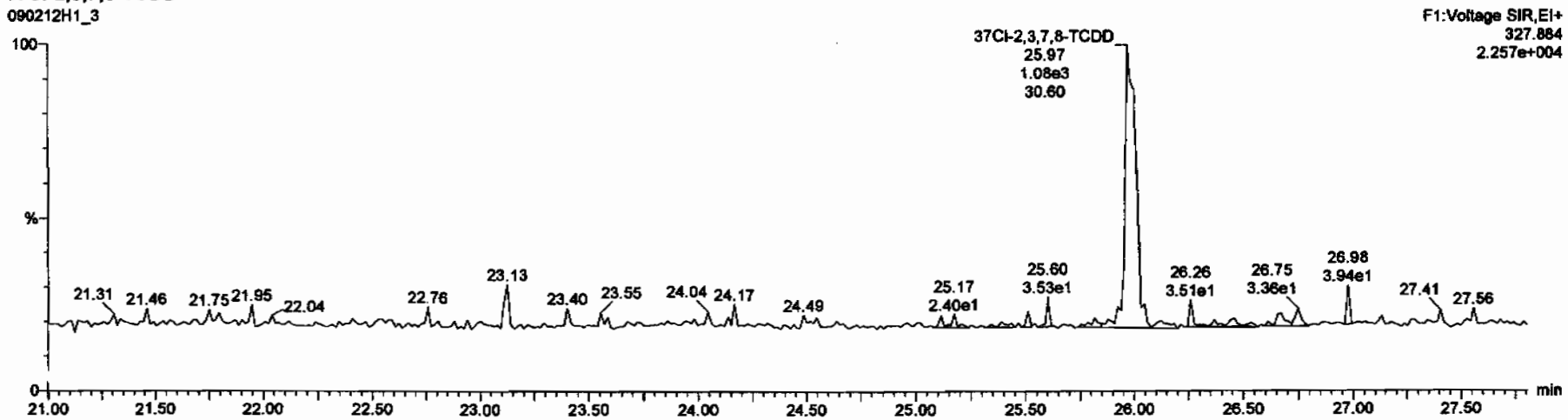

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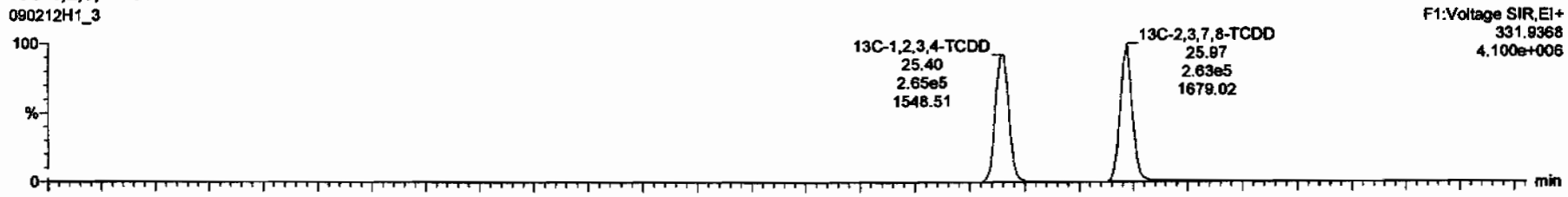

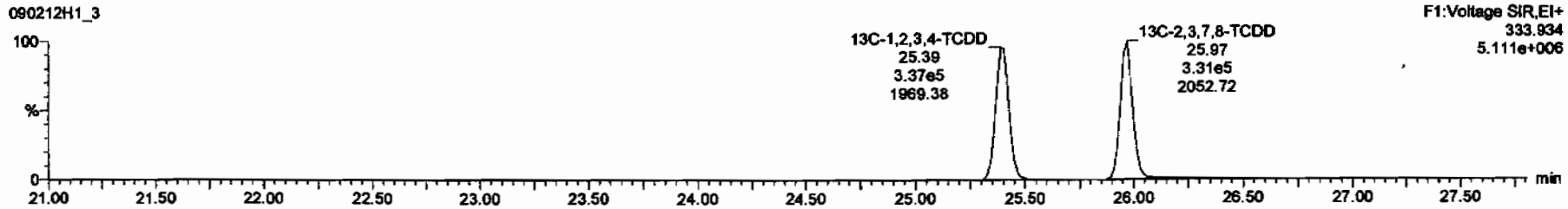

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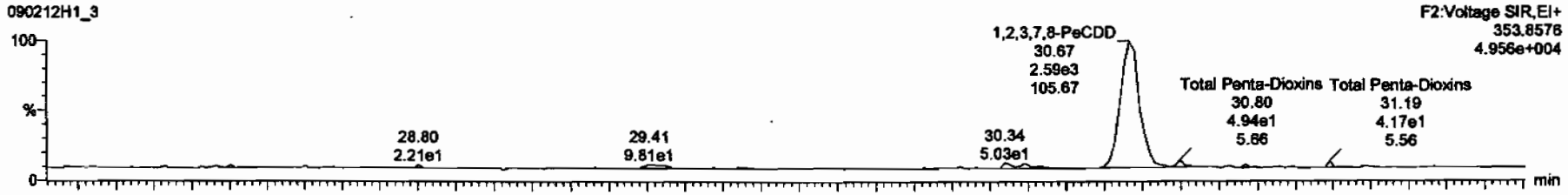

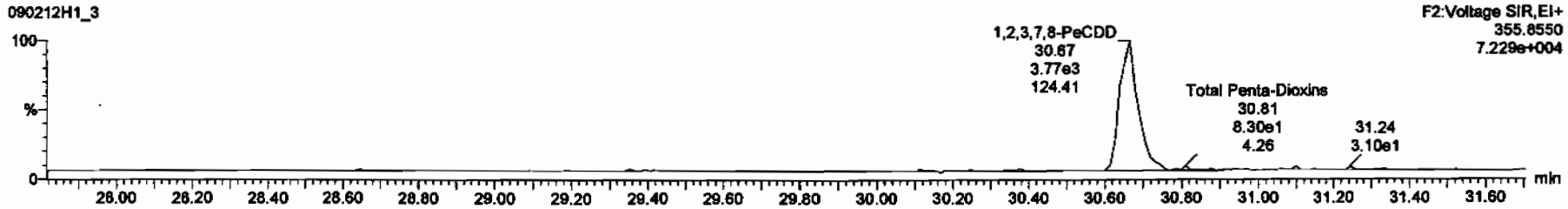

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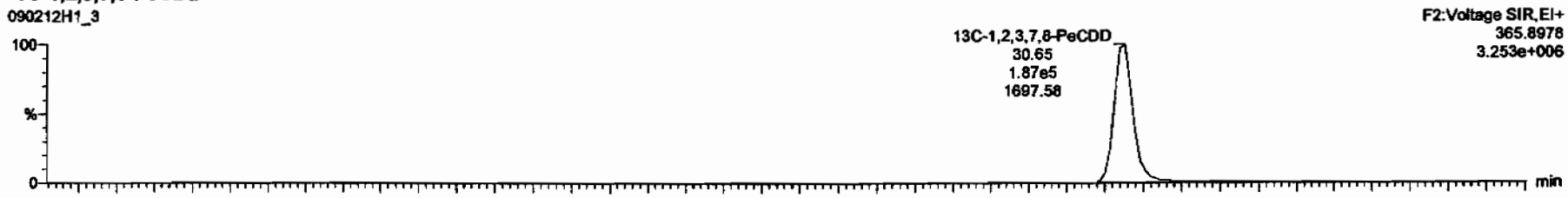

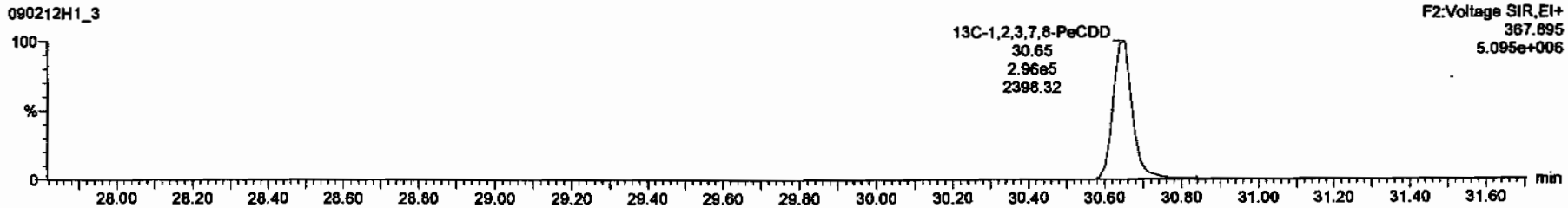

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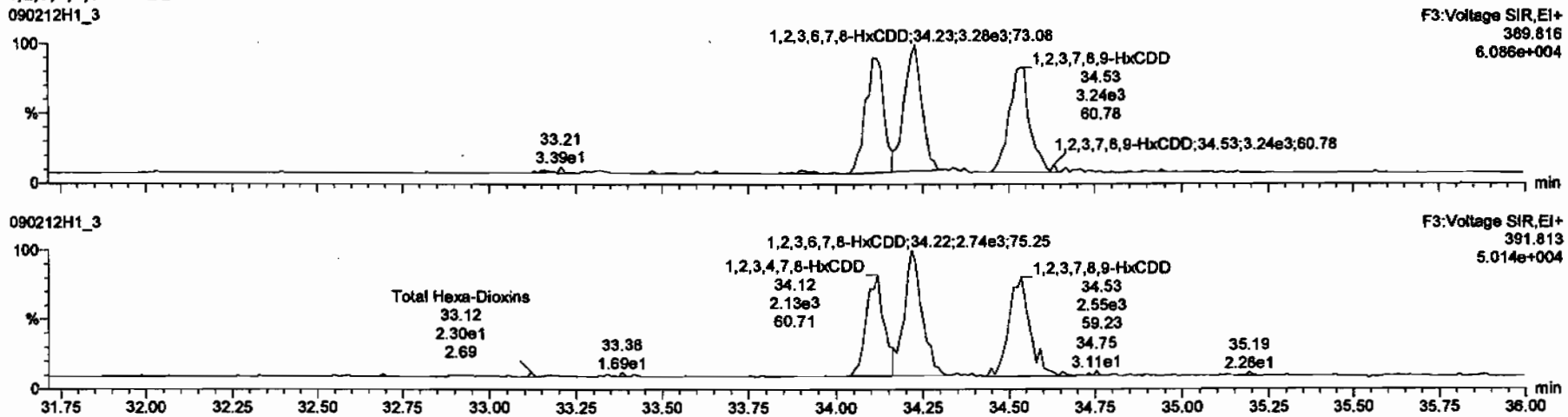

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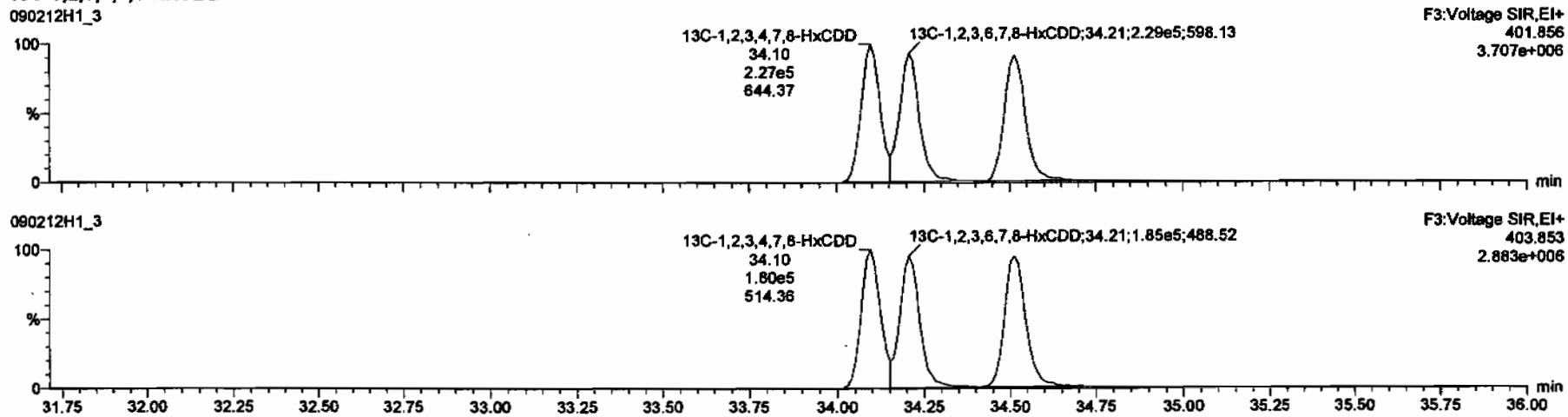

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1,2,3,4,6,7,8-HpCDD

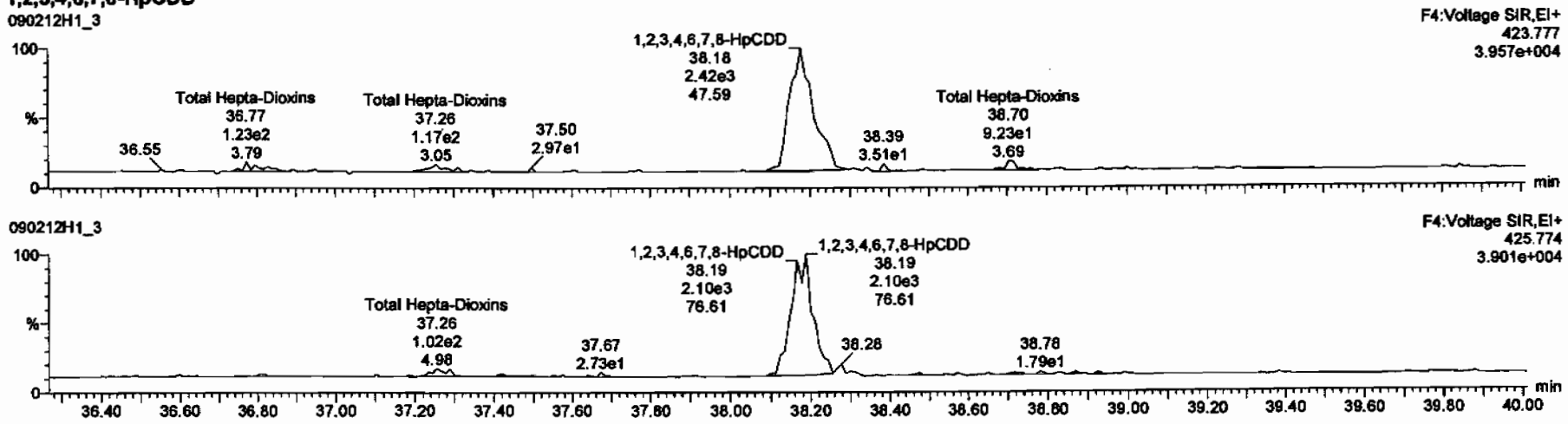

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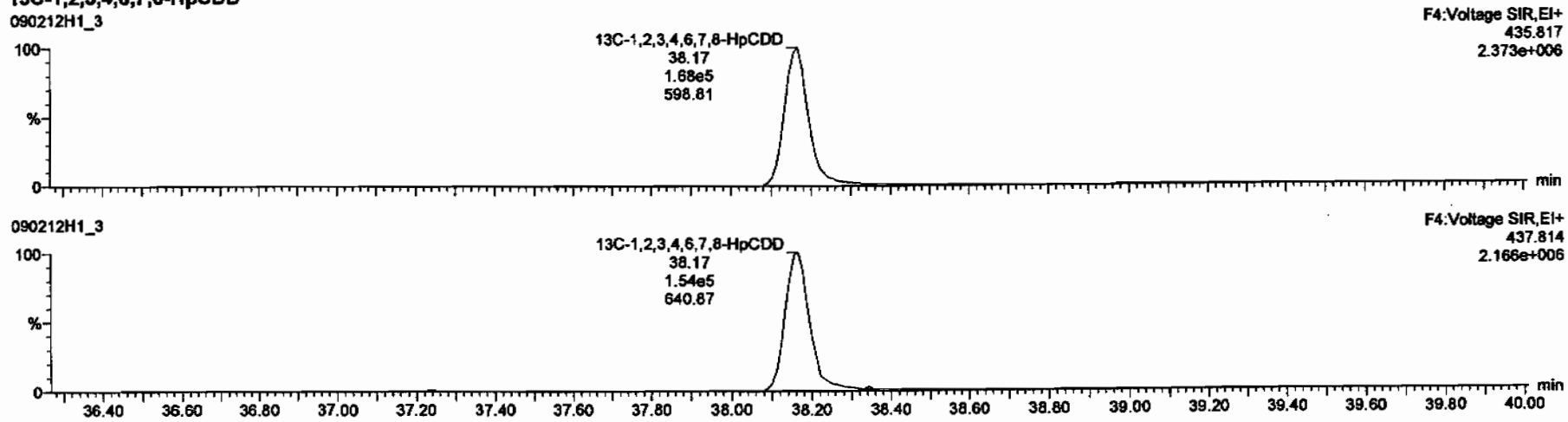

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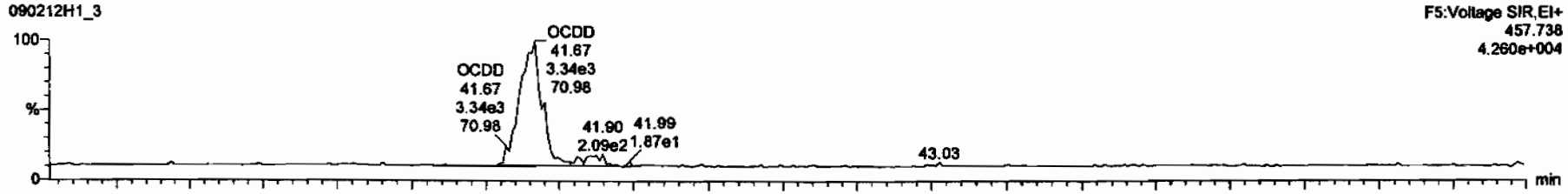

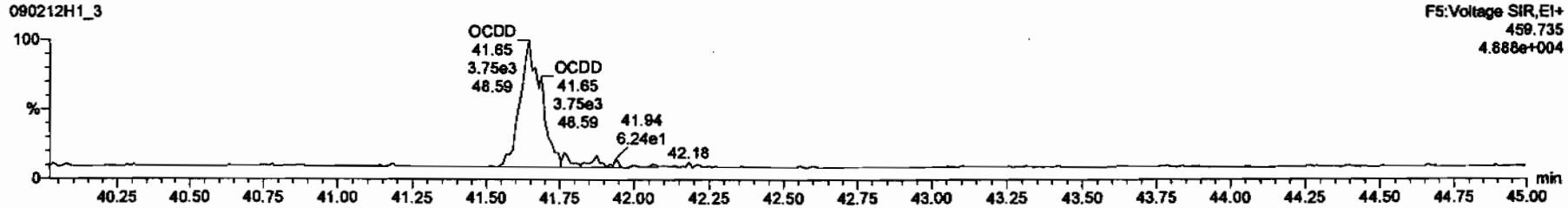

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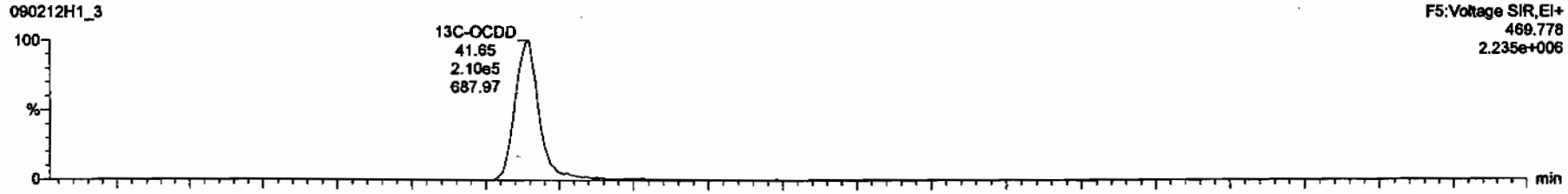

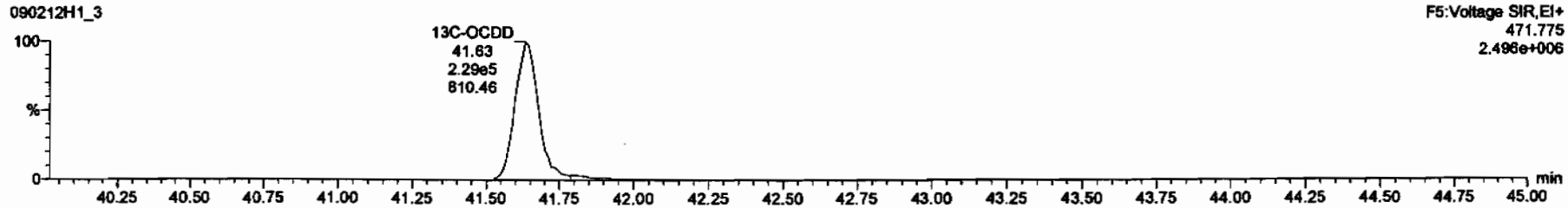

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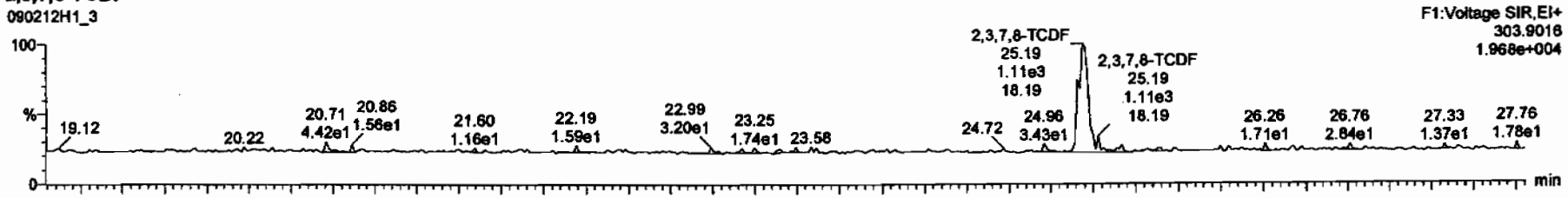

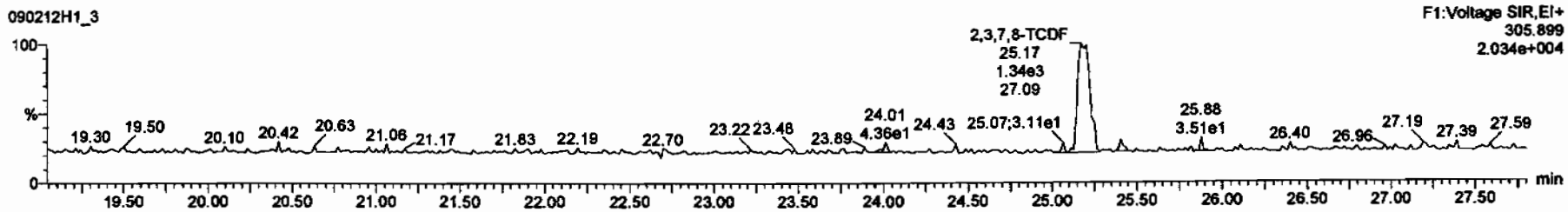

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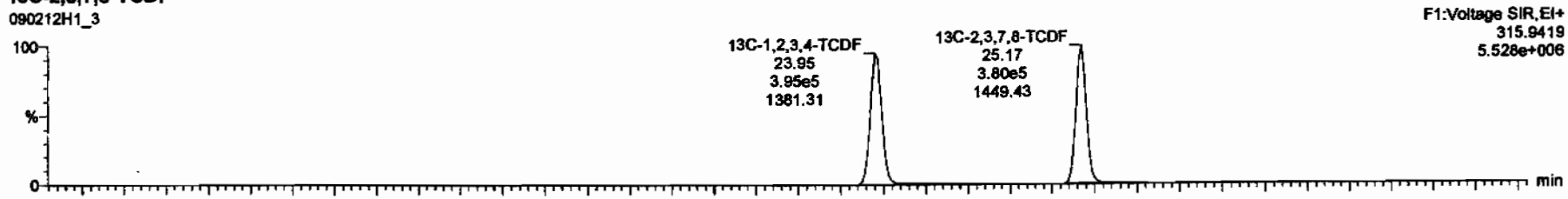

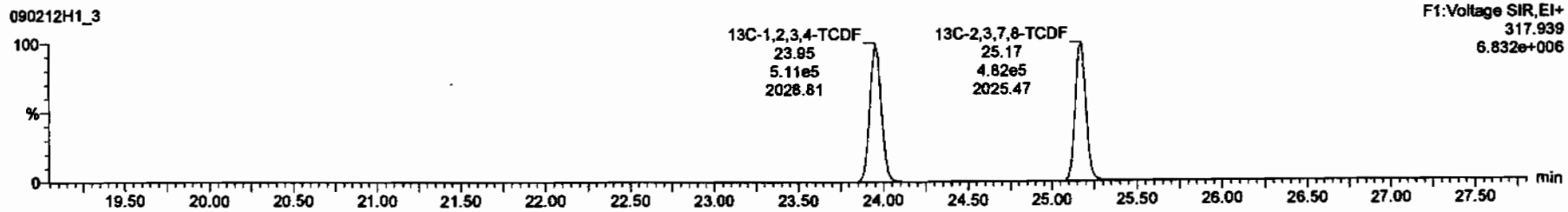

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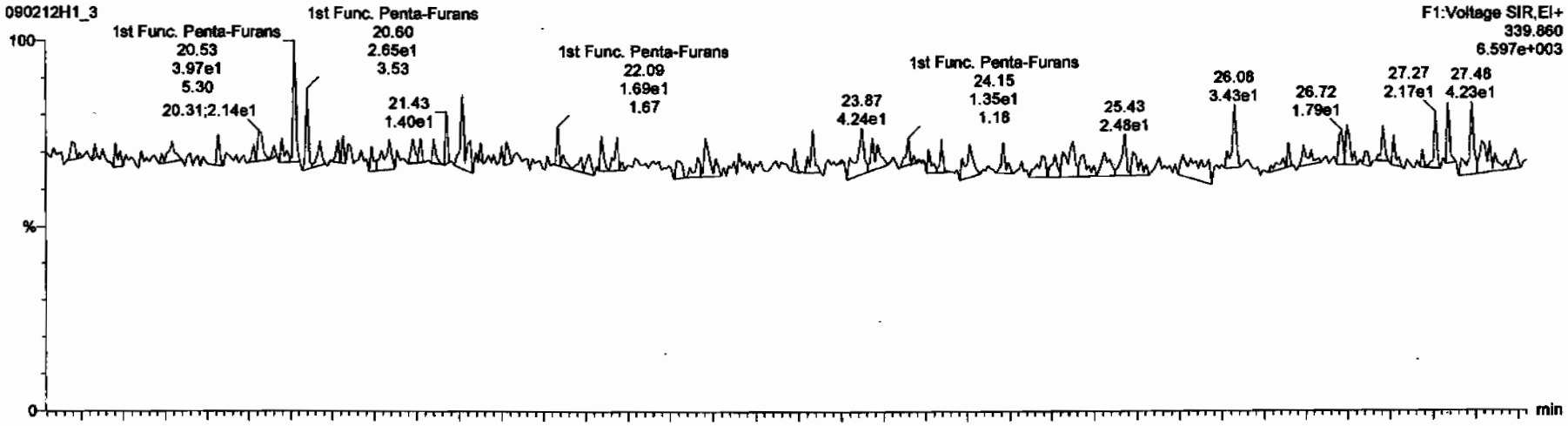

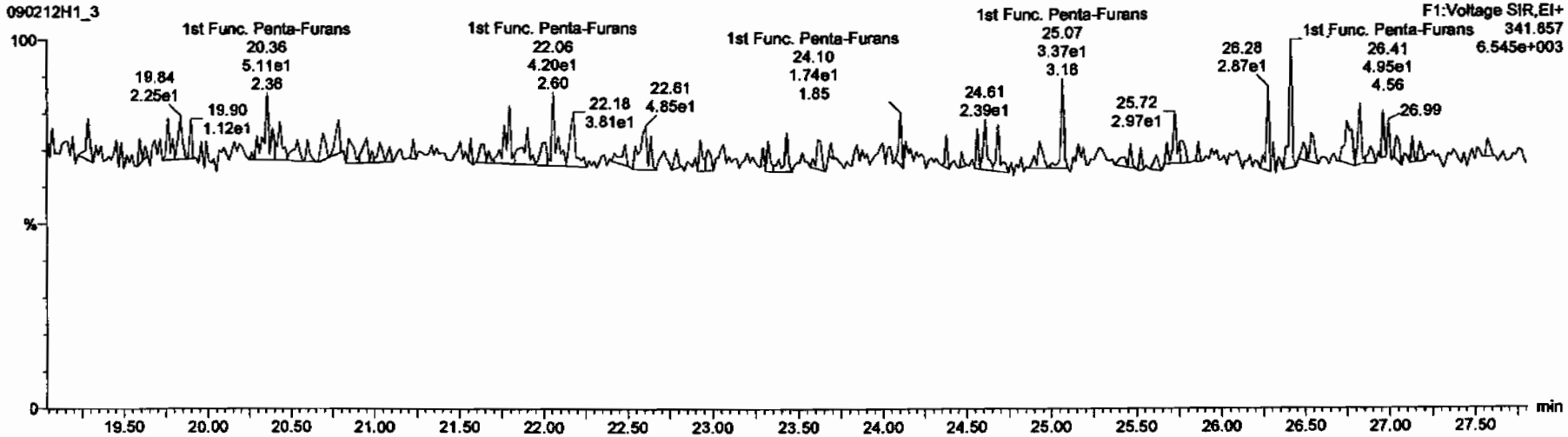

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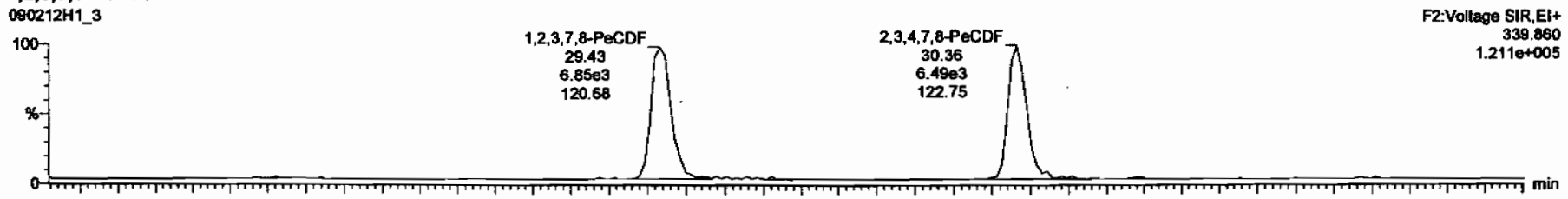

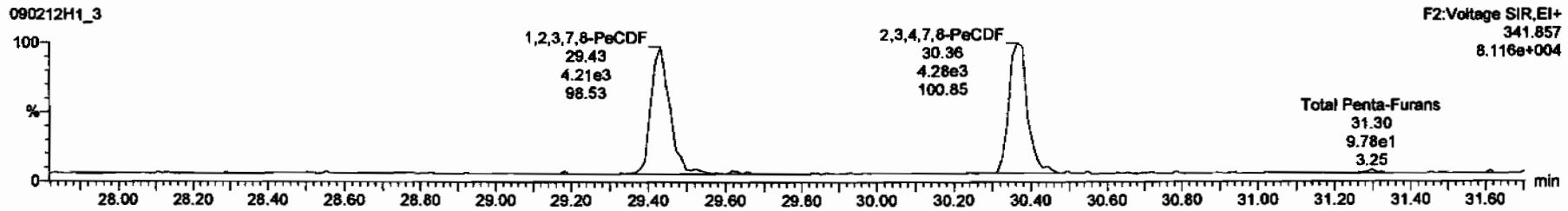

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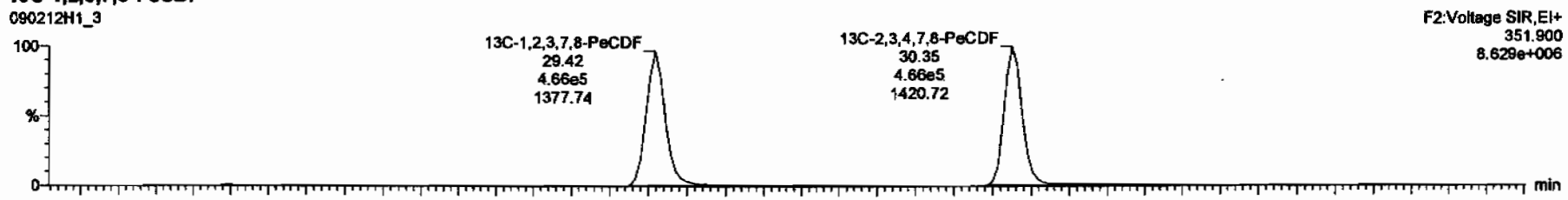

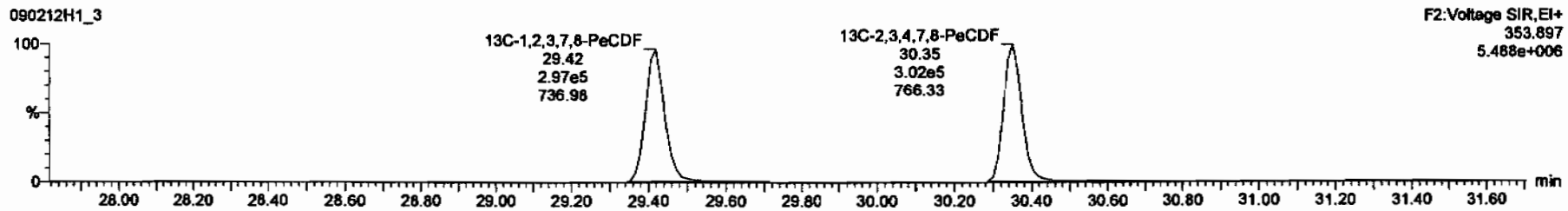

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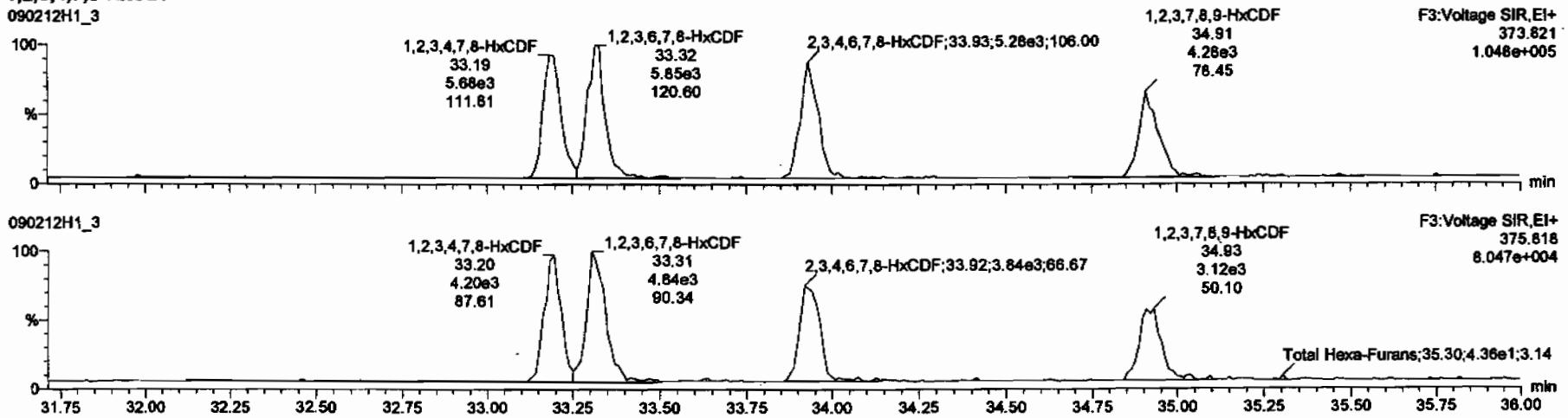

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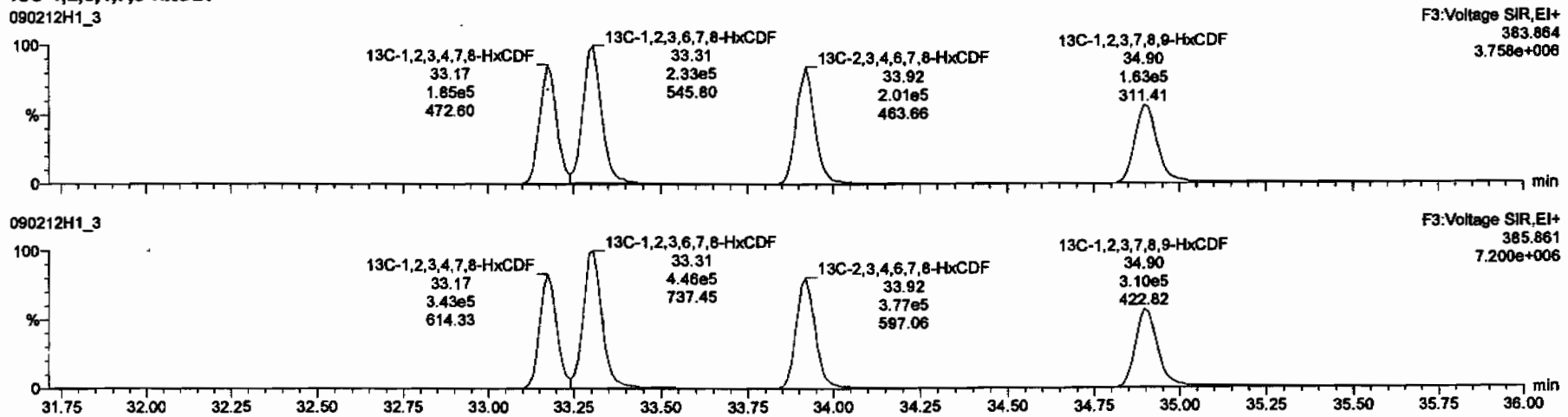

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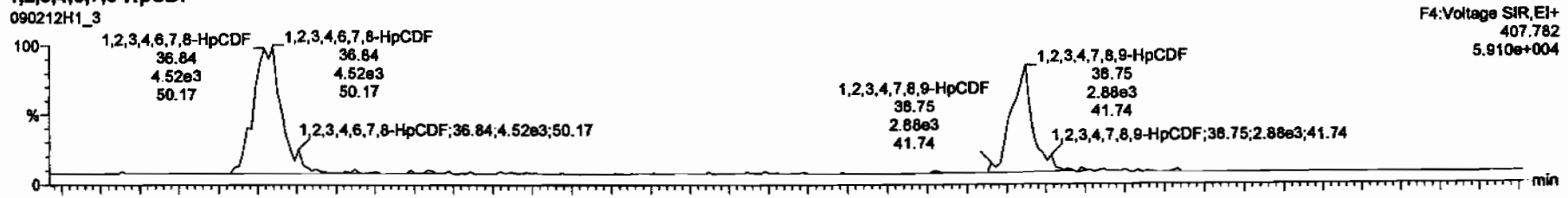

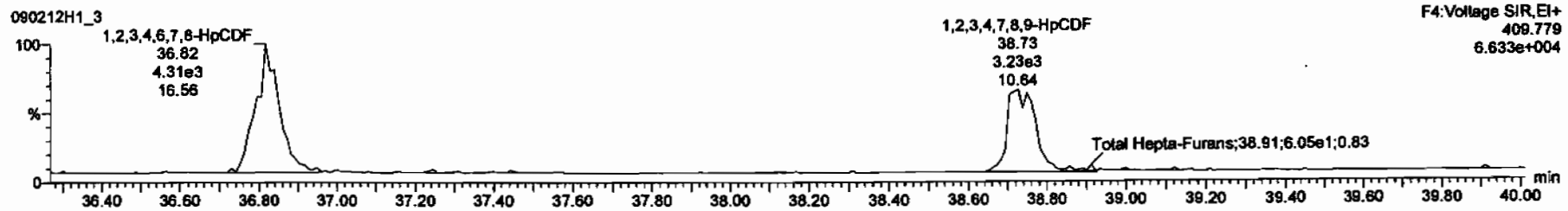

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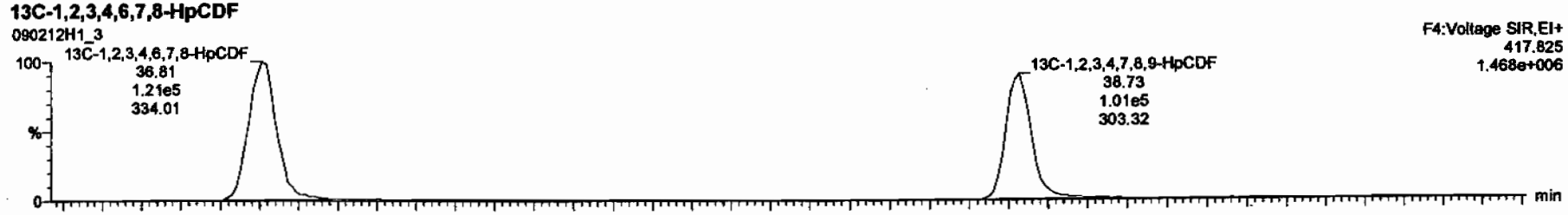

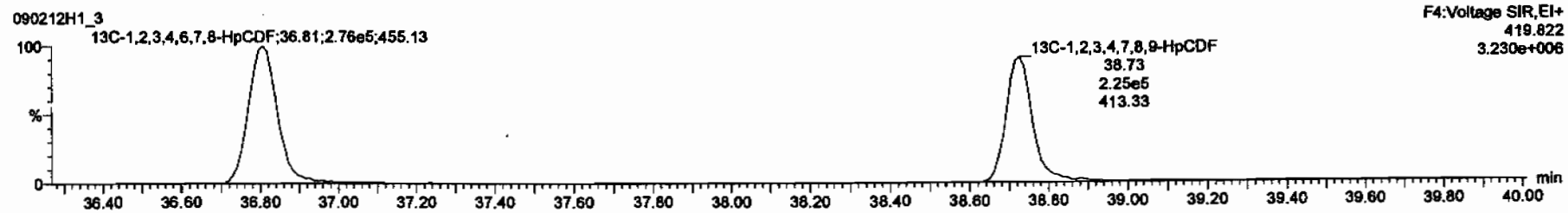

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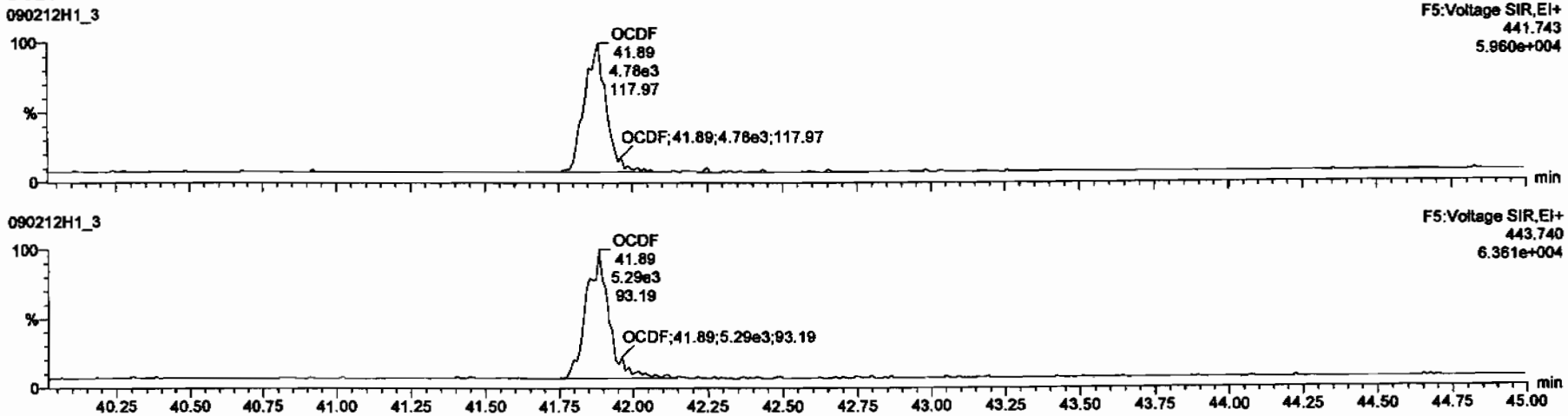

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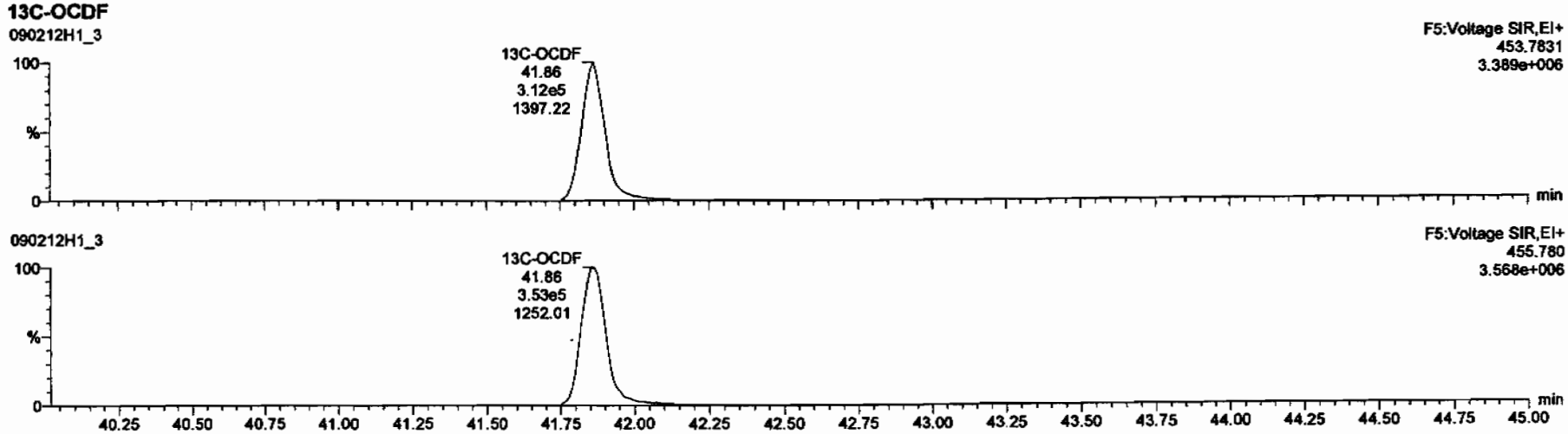

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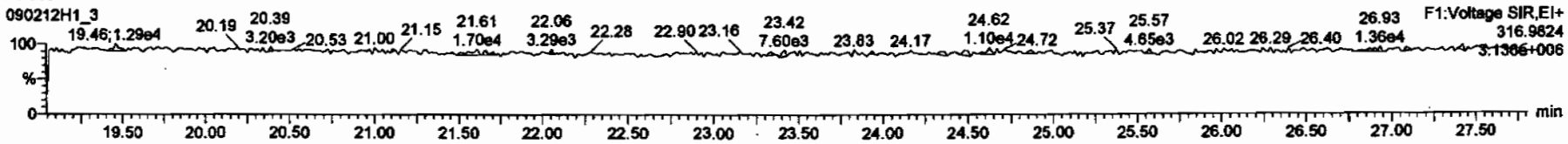

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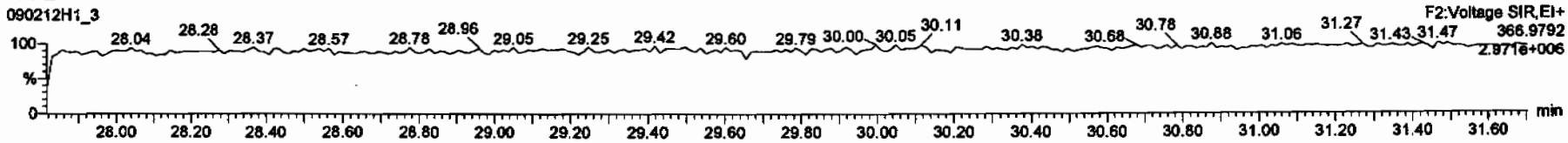

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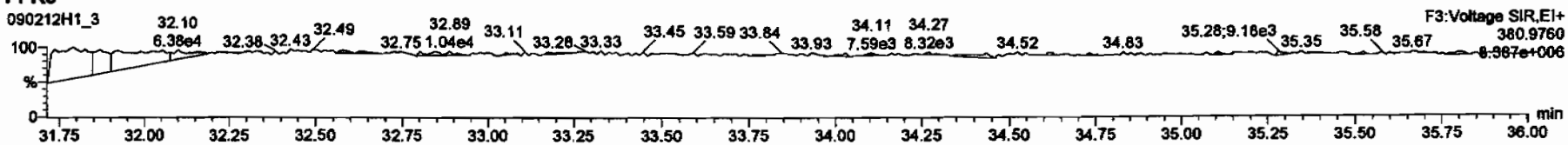

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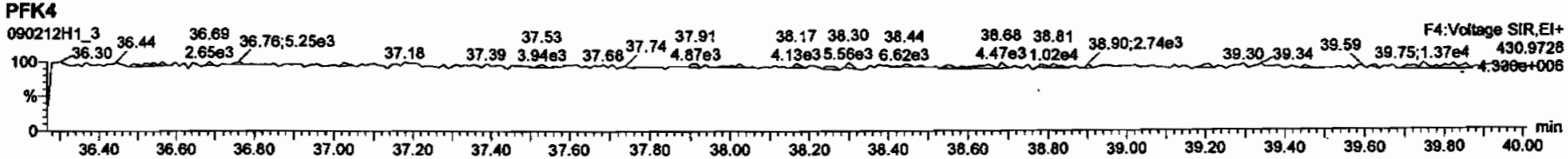

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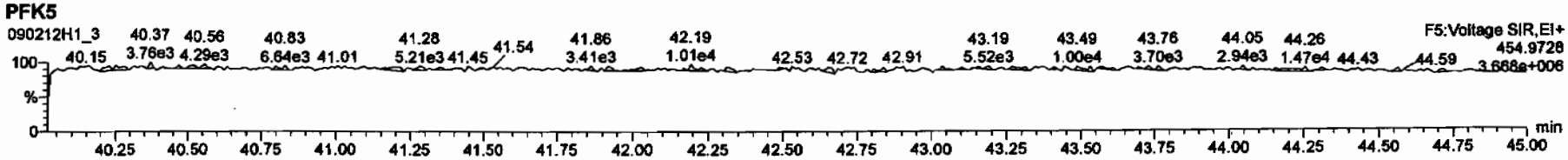

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DPE1

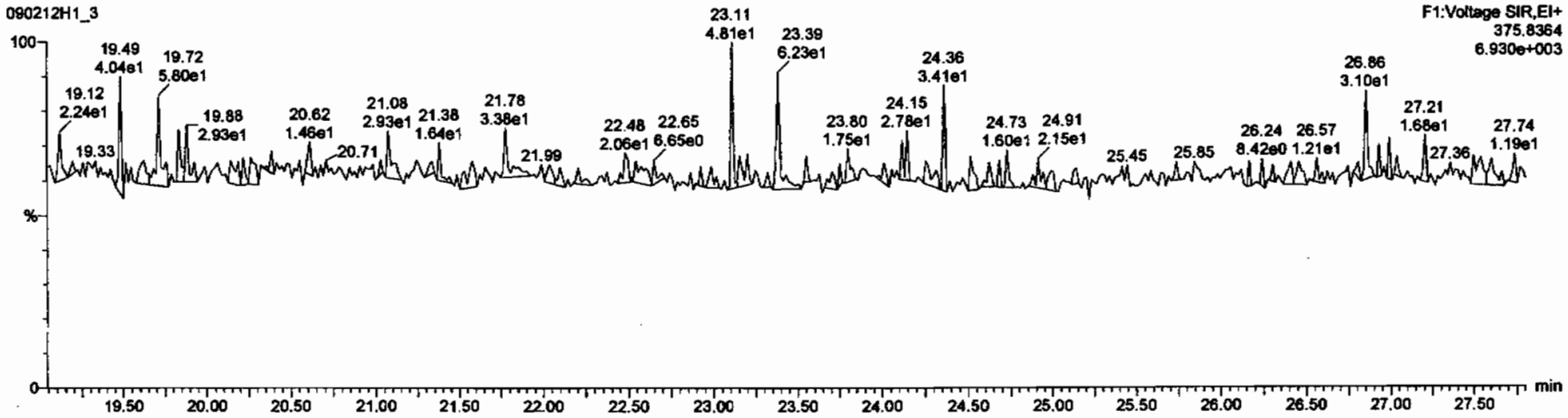

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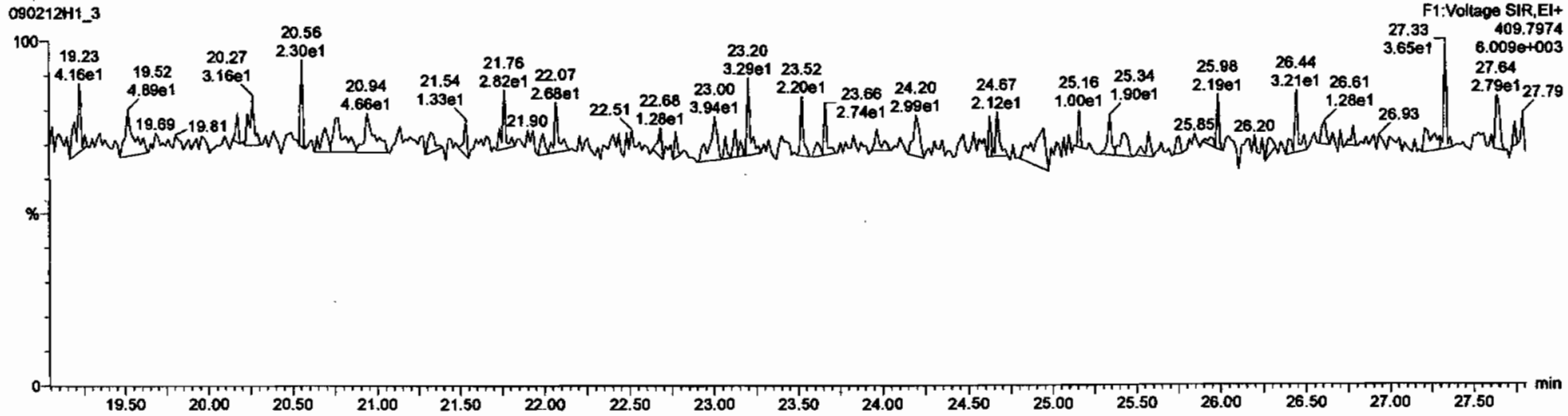

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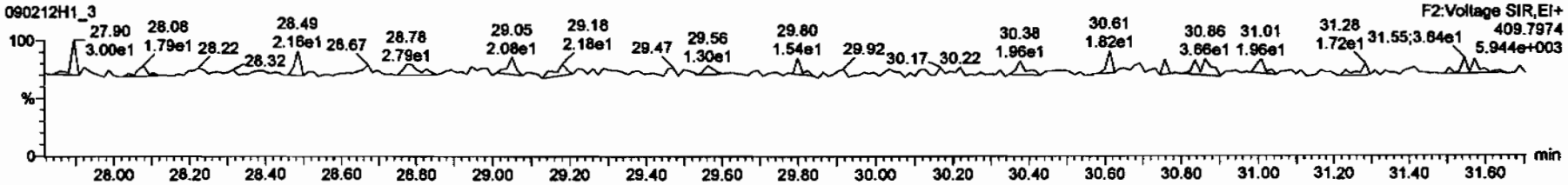

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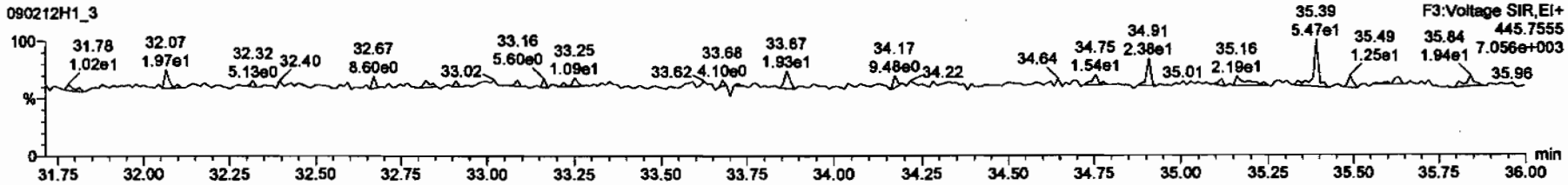

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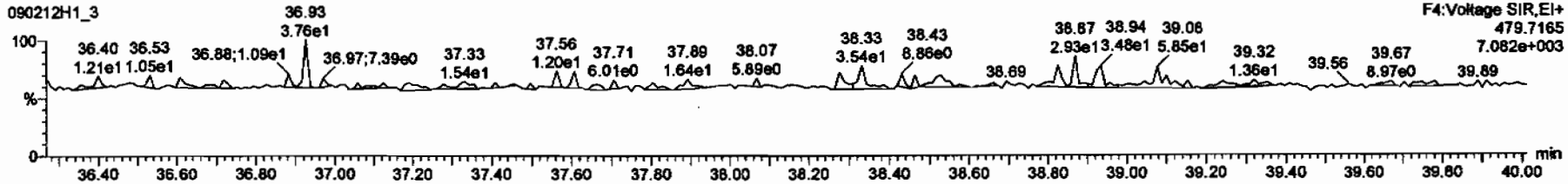

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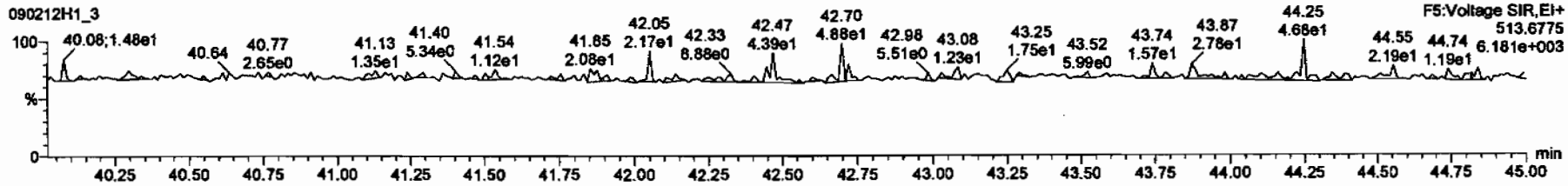

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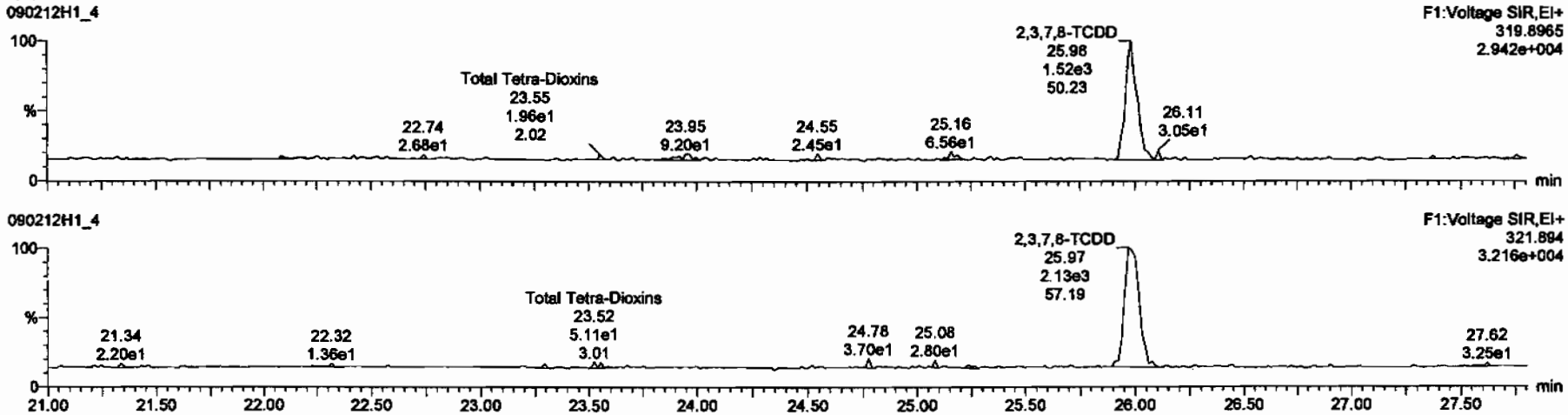

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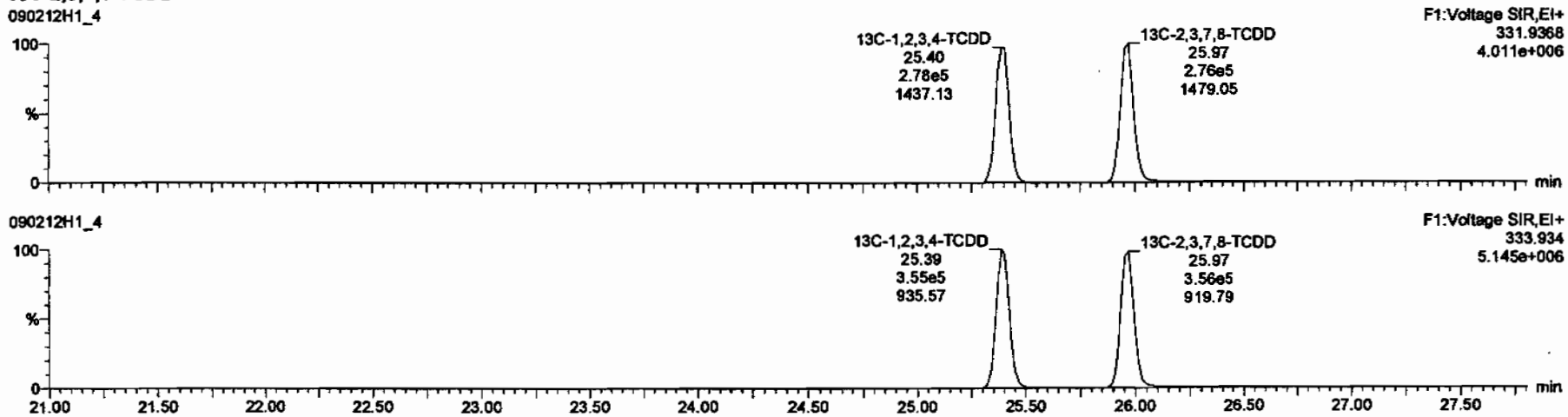

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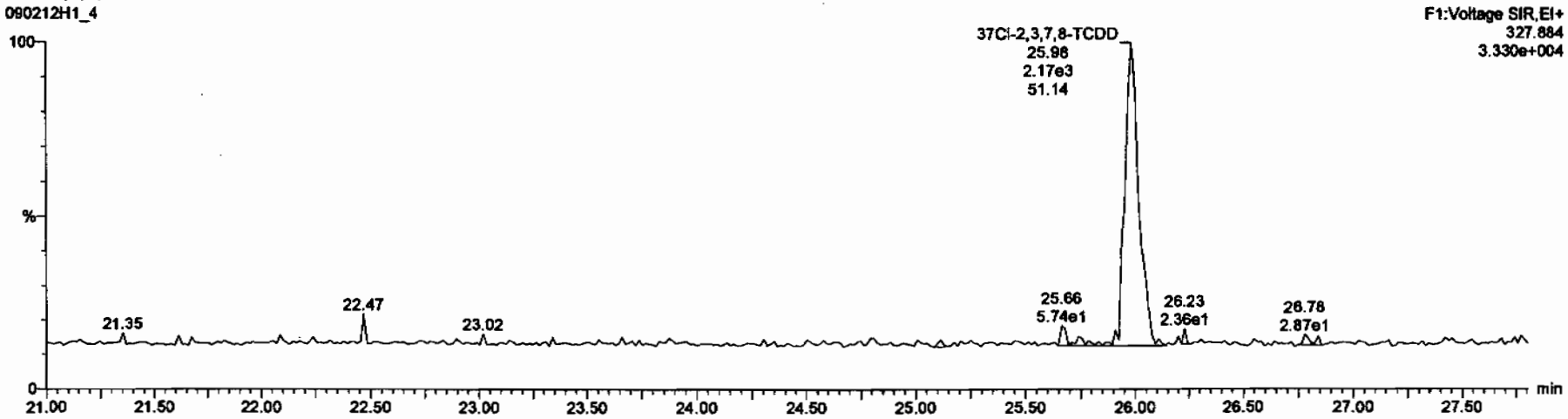

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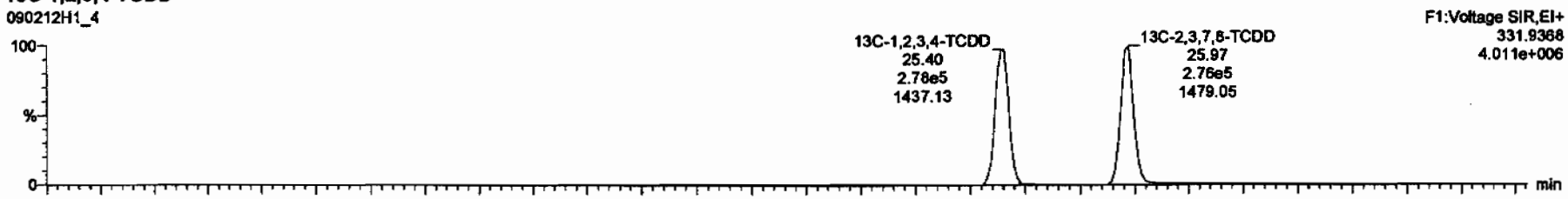

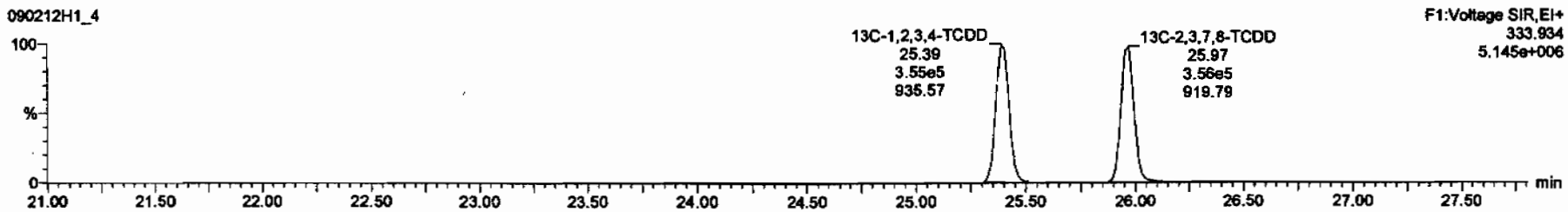

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1,2,3,7,8-PeCDD

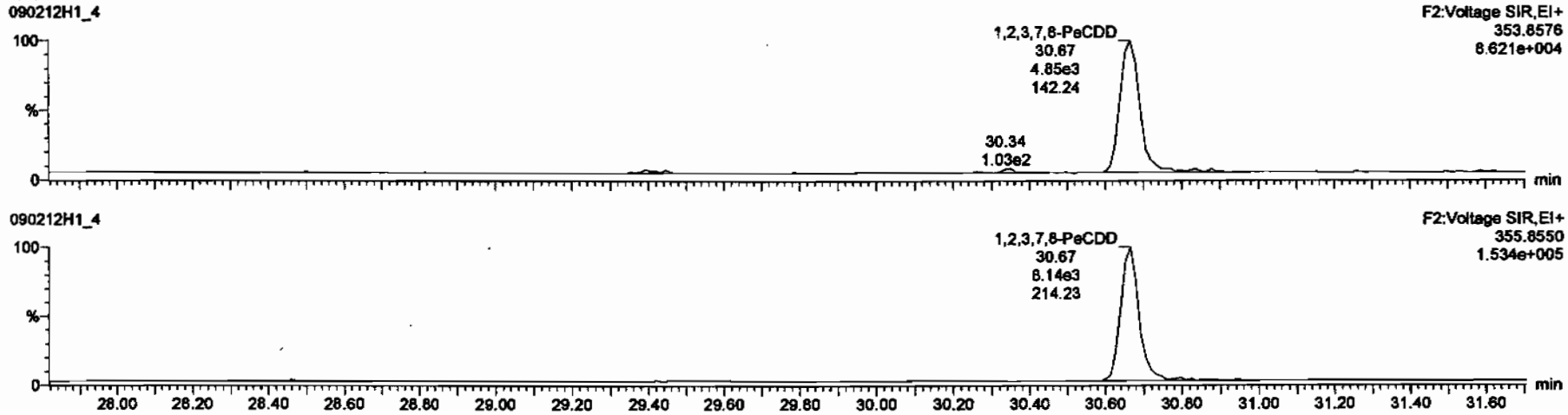

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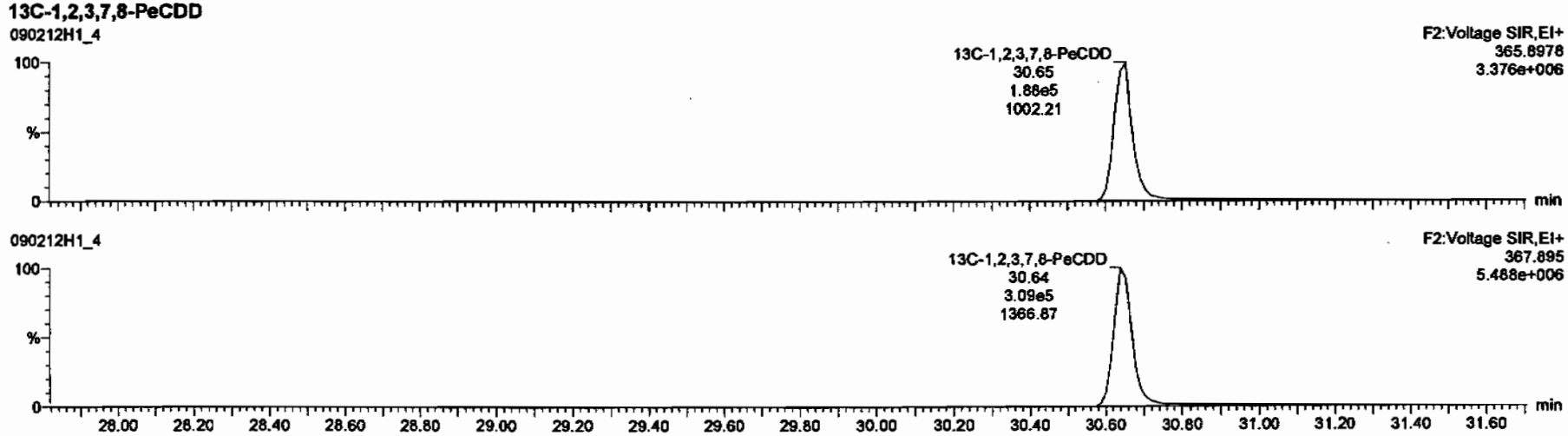

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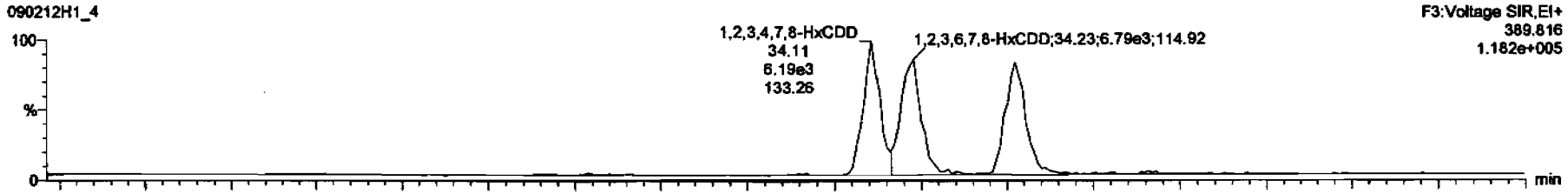

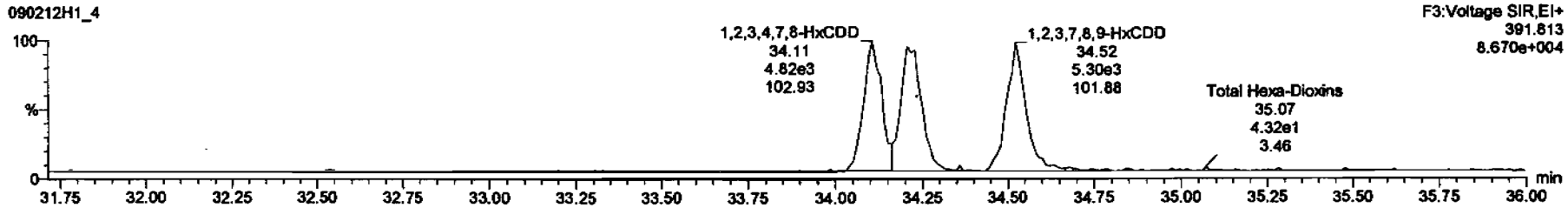

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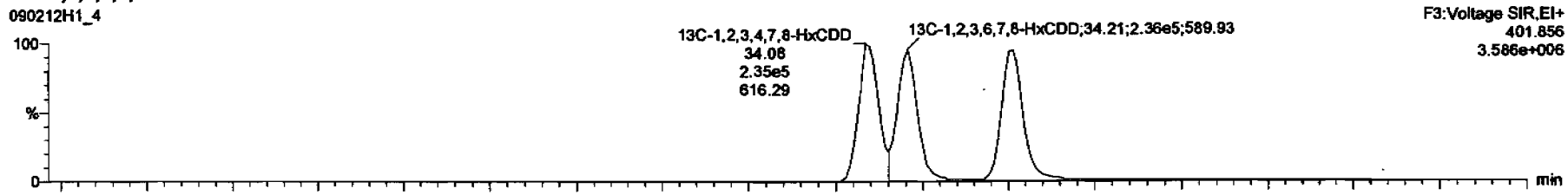

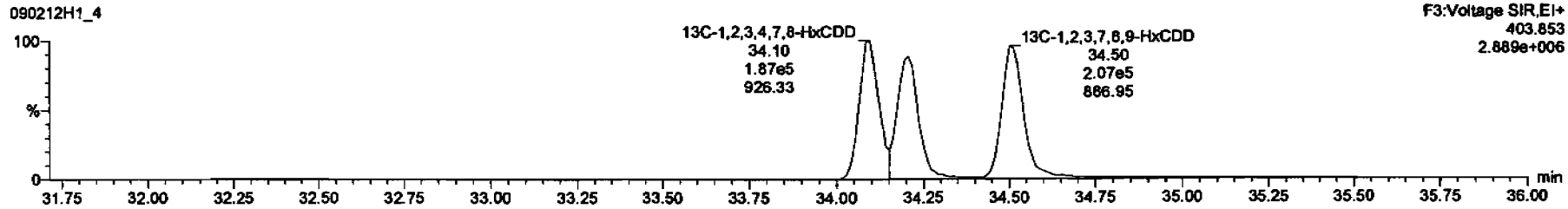

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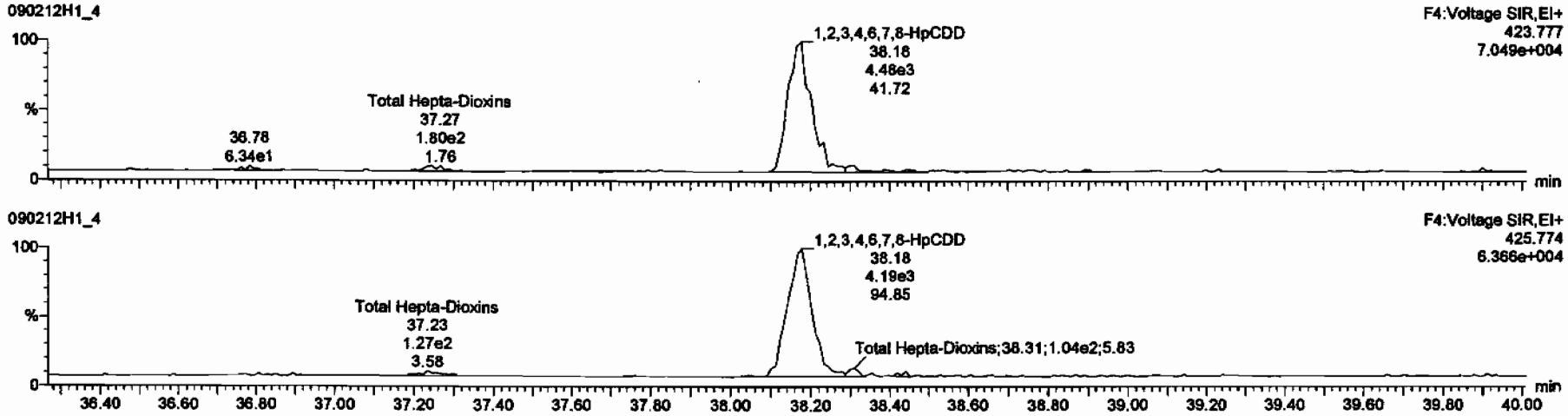

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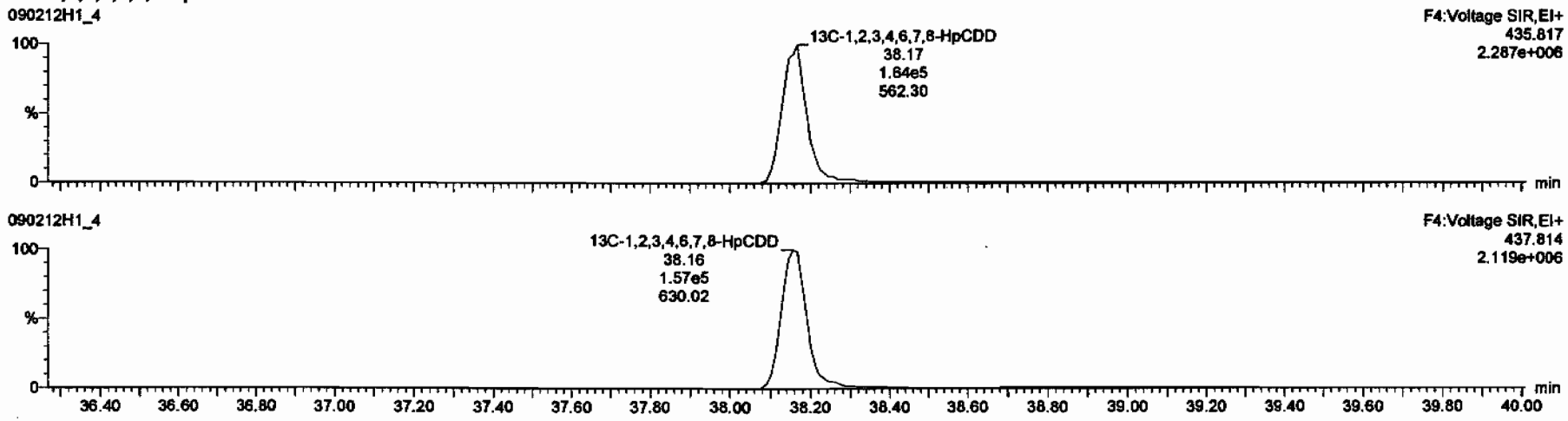

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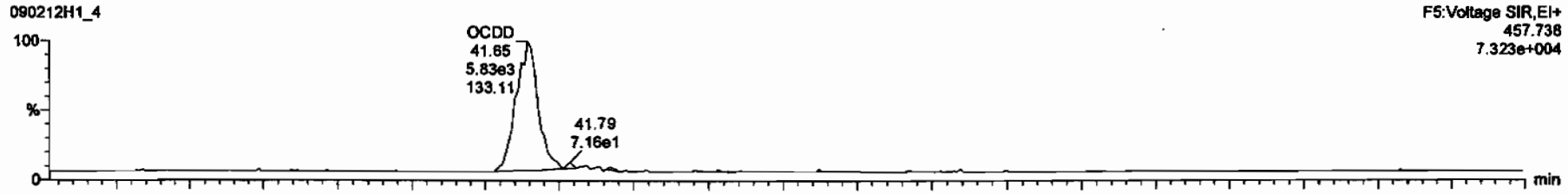

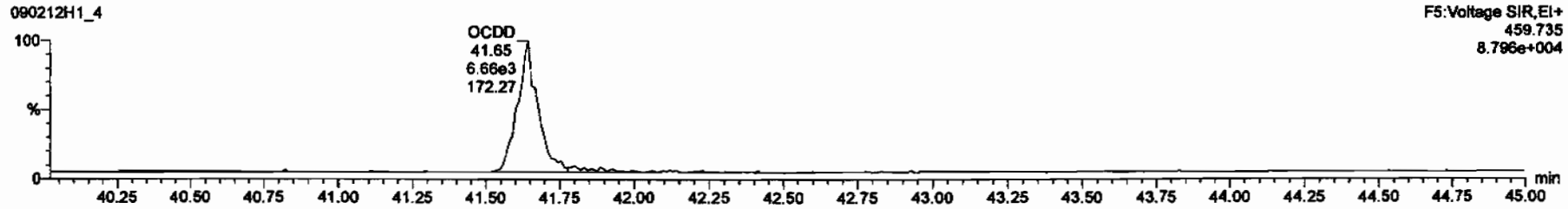

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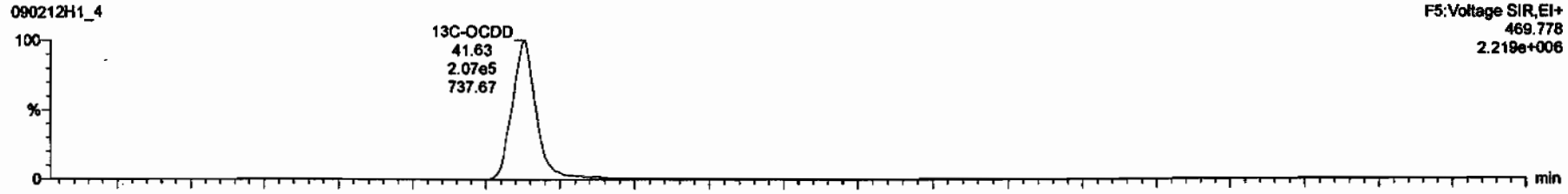

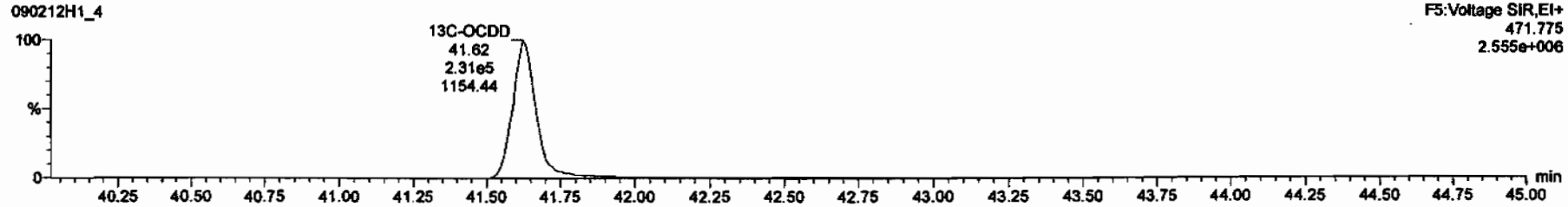

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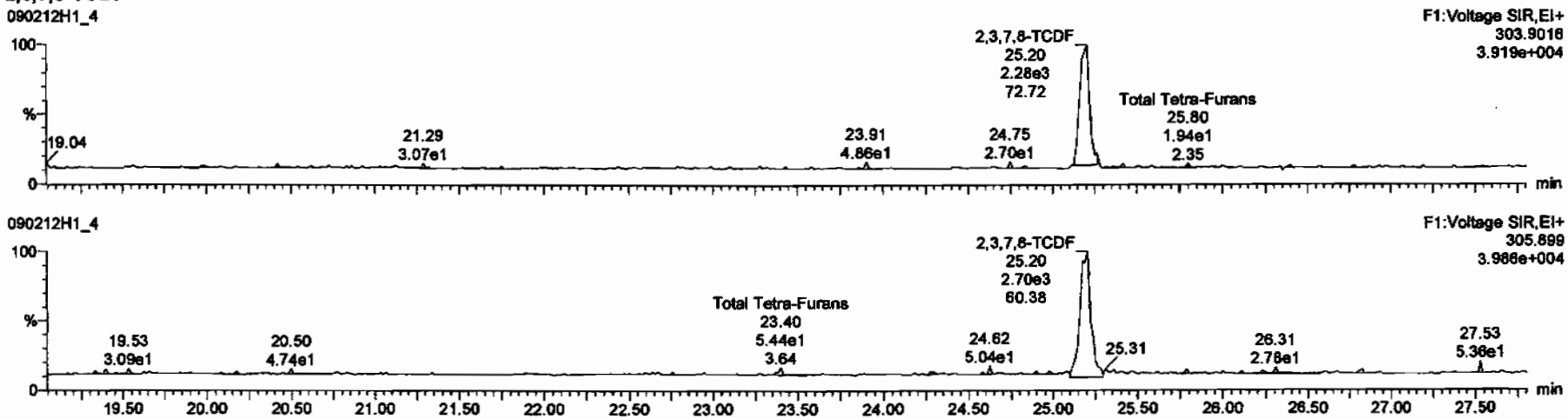

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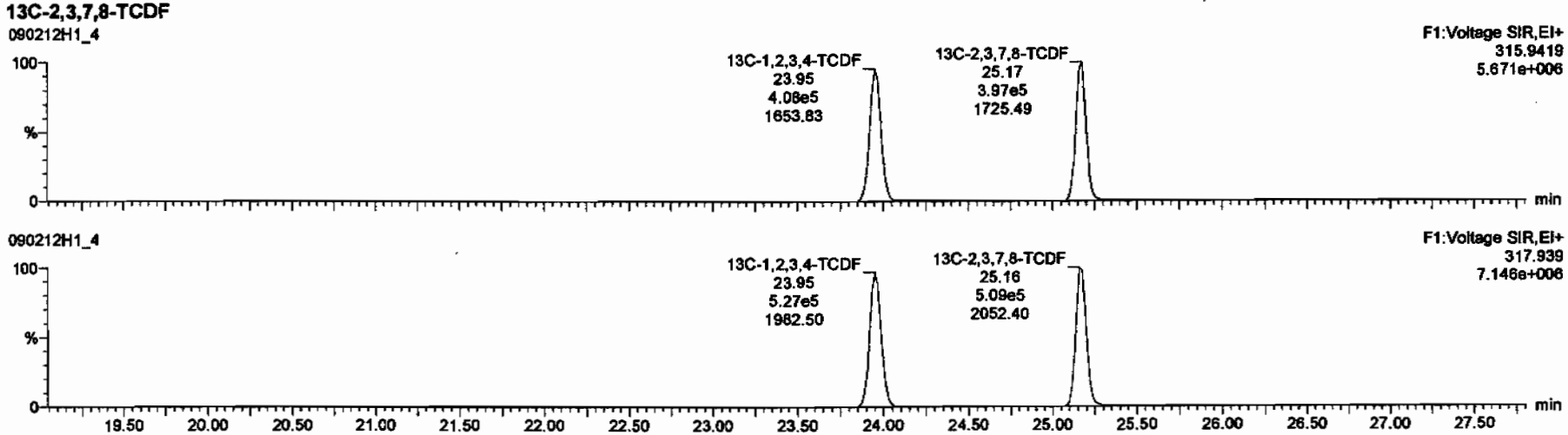

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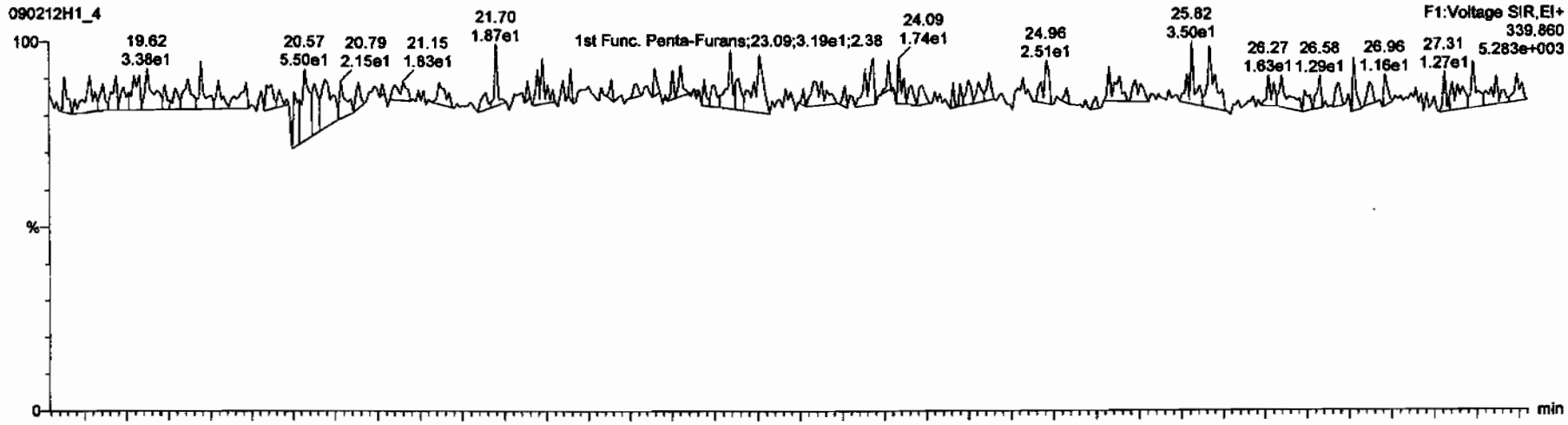

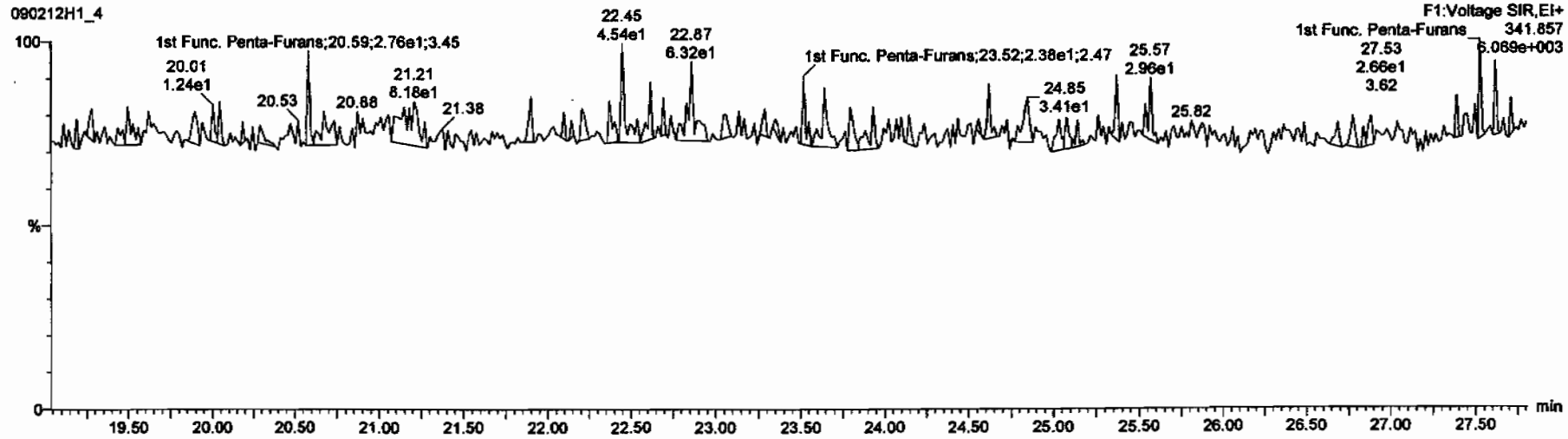

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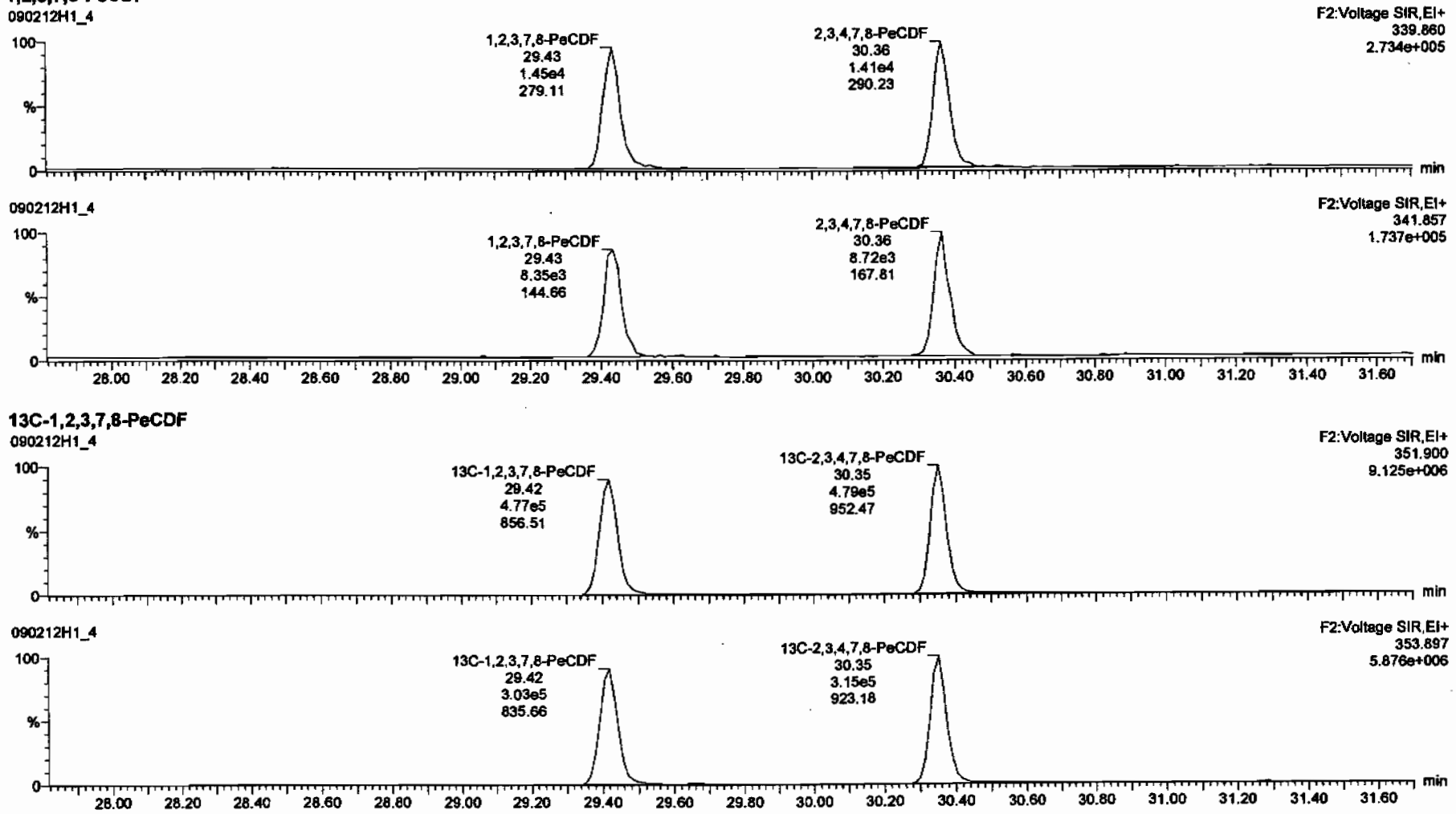

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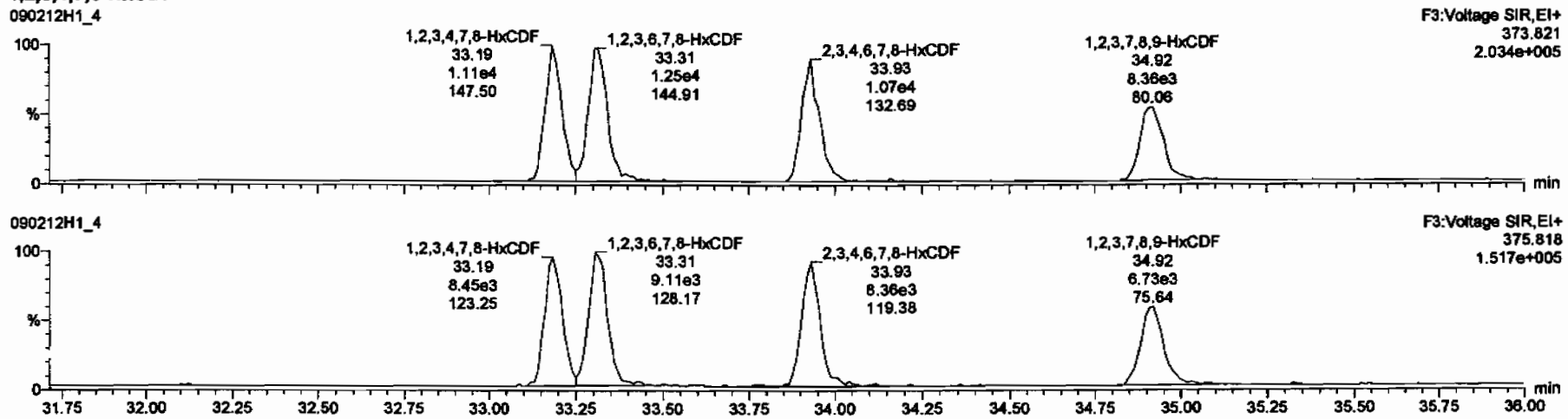

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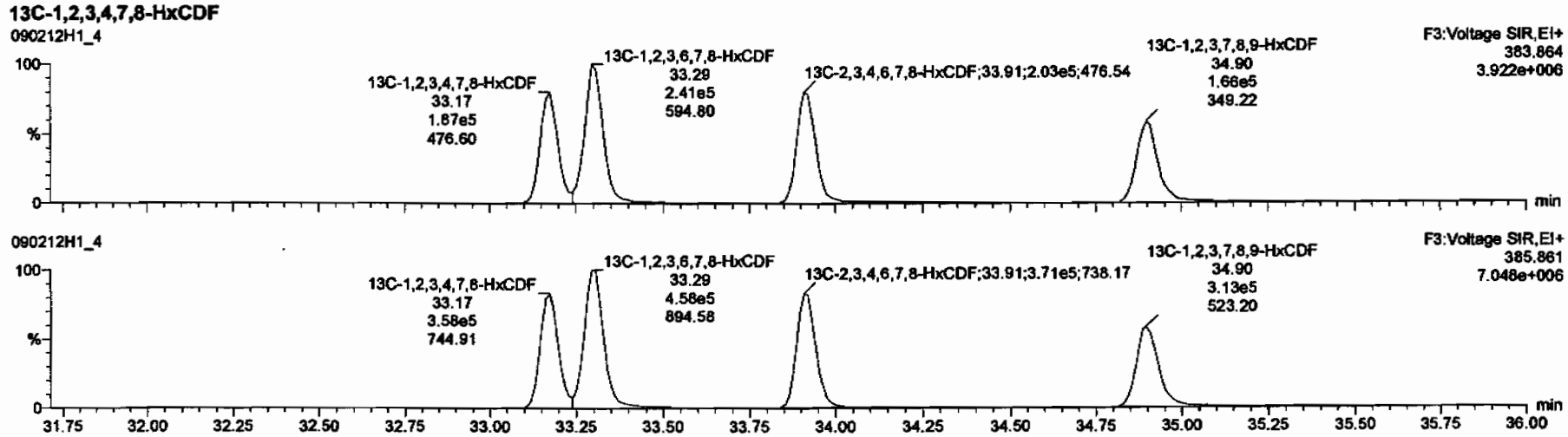

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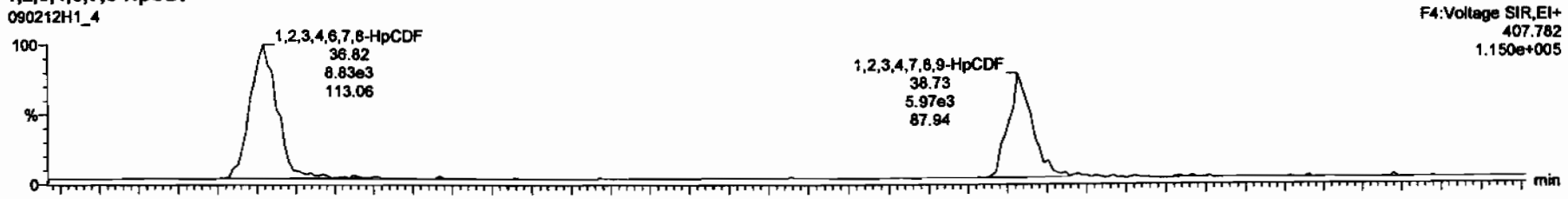

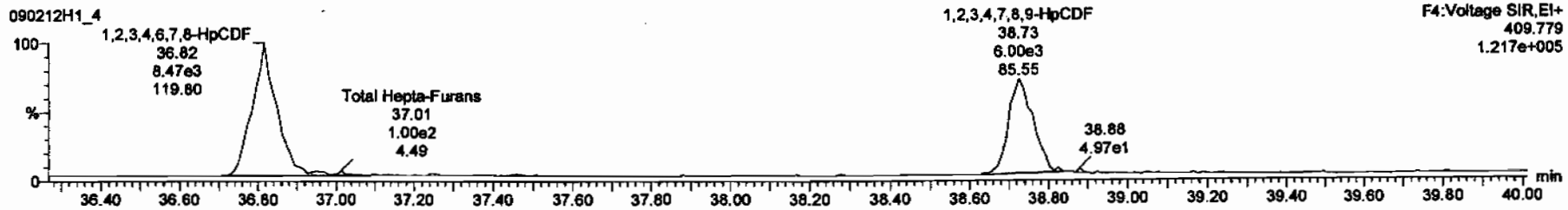

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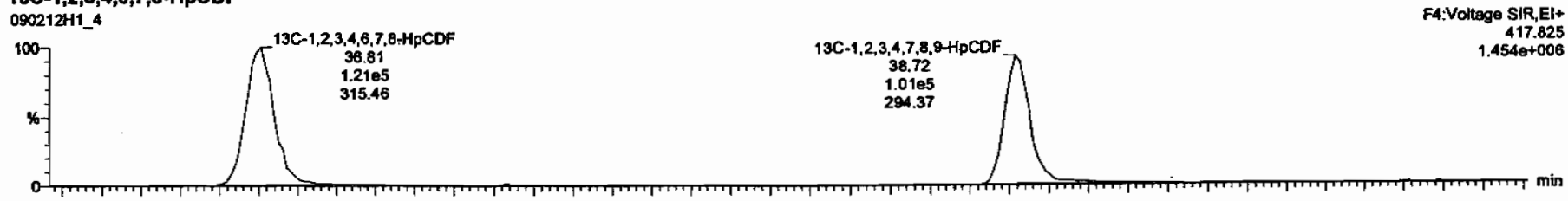

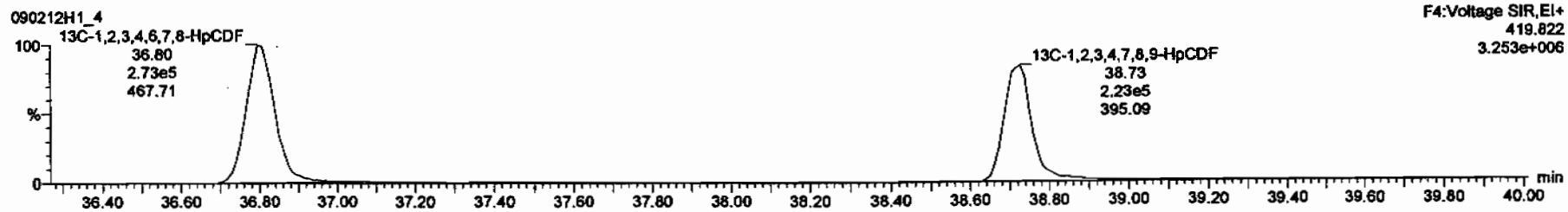

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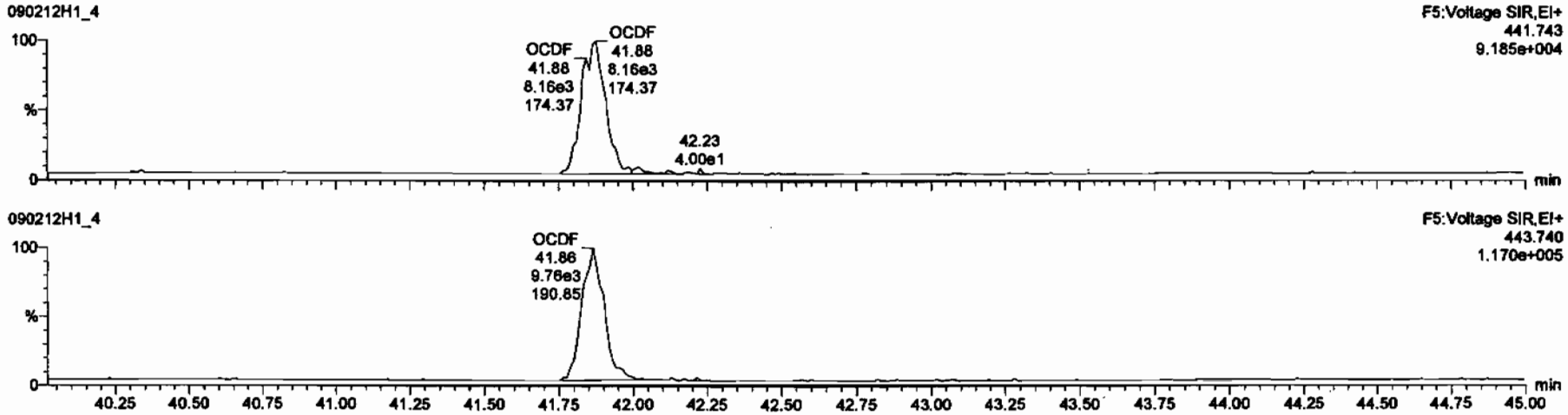

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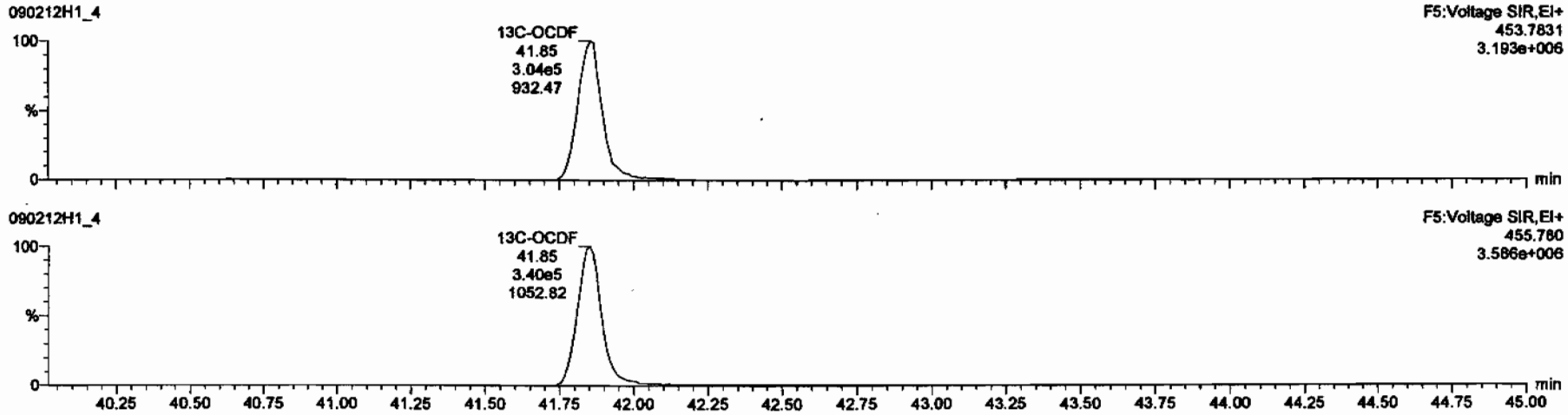

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PFK1

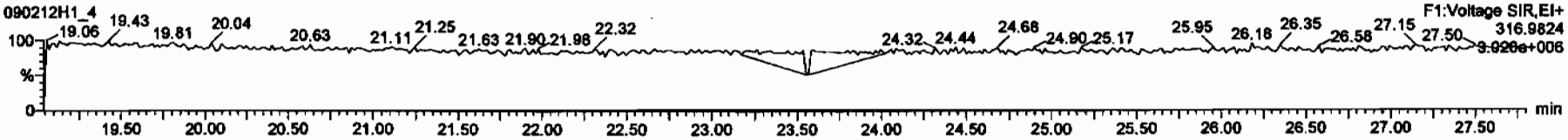

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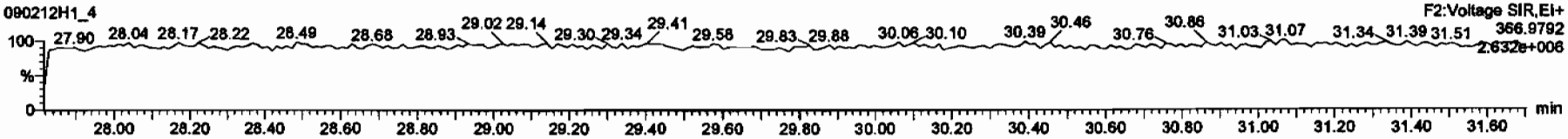

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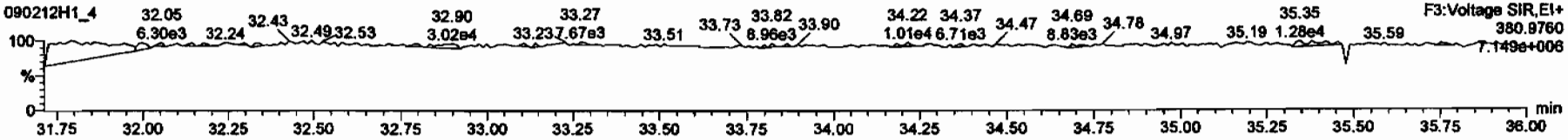

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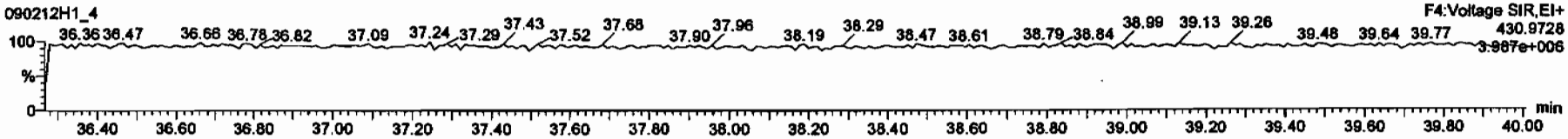

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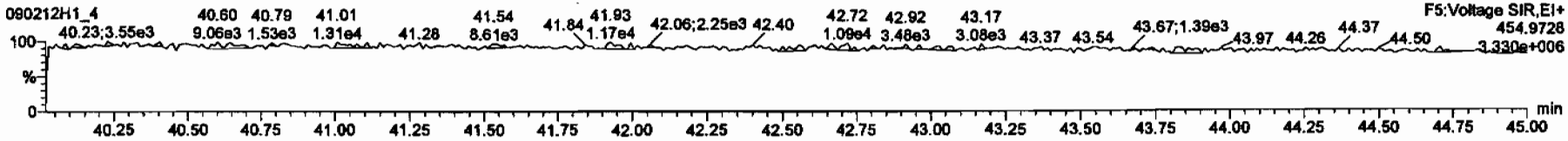

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DPE1

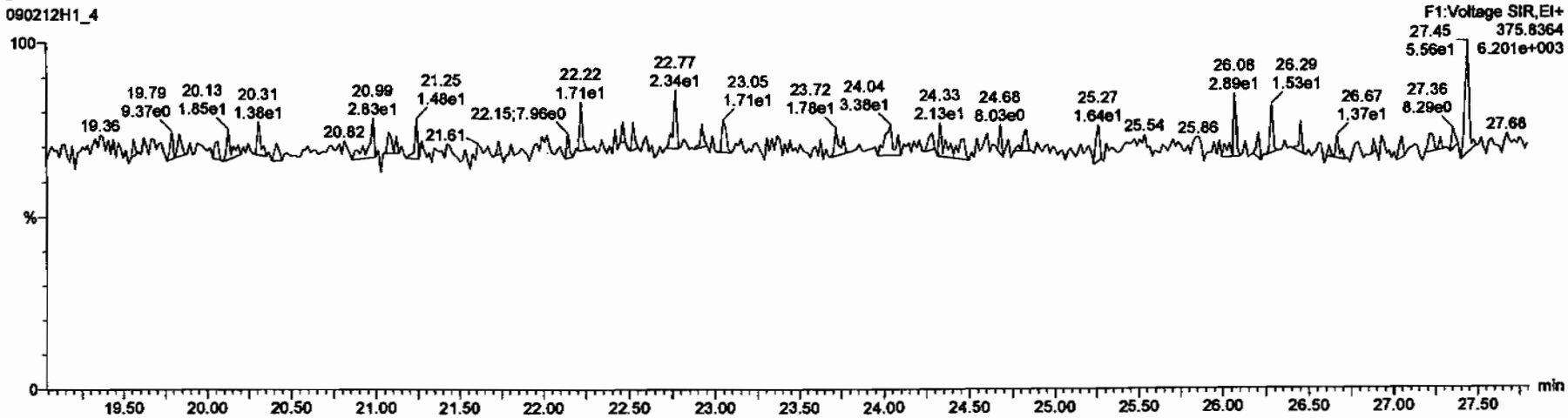

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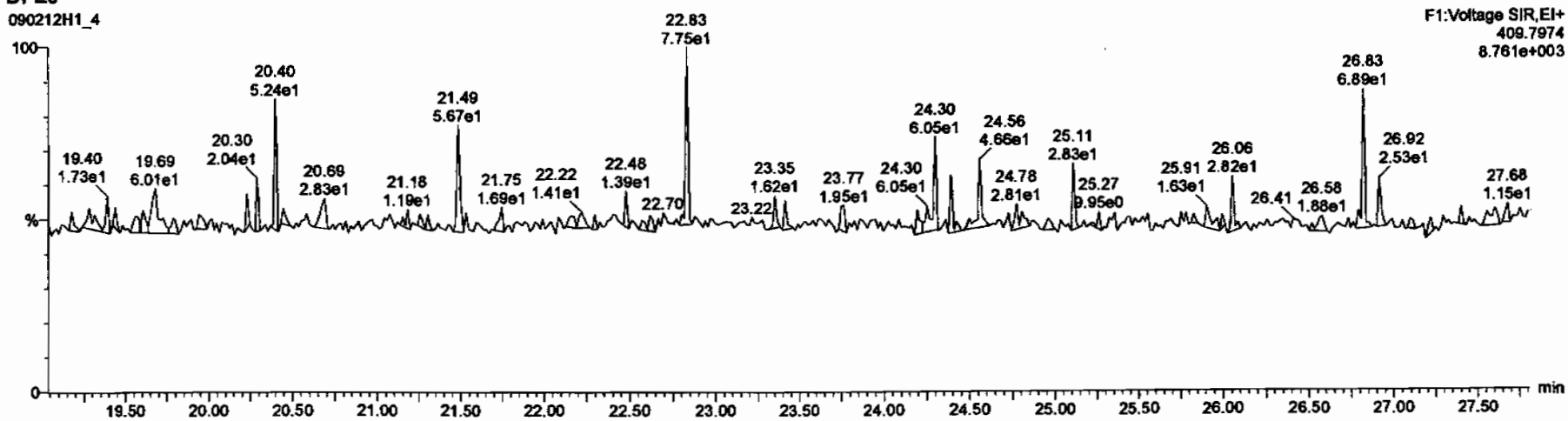

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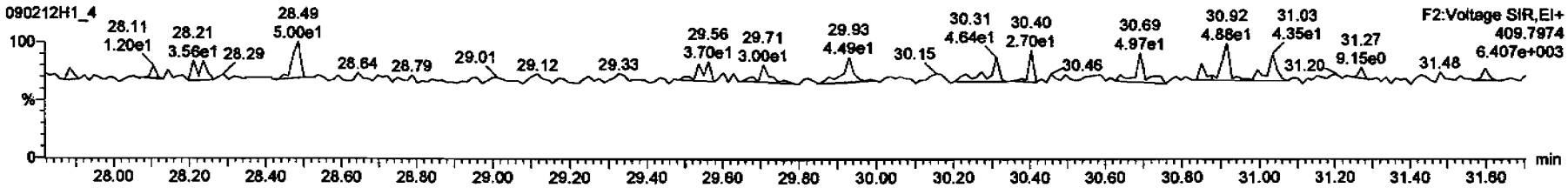

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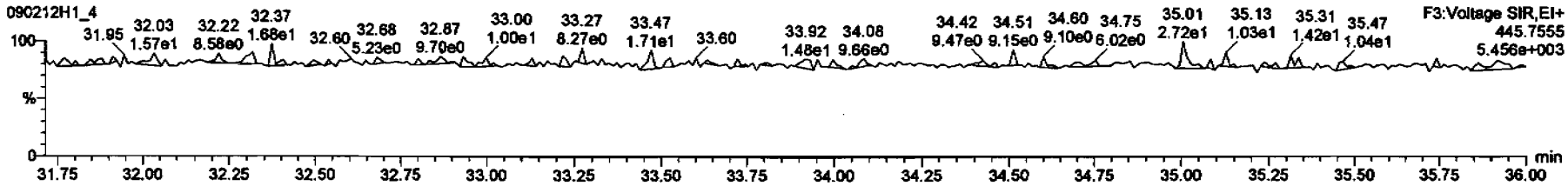

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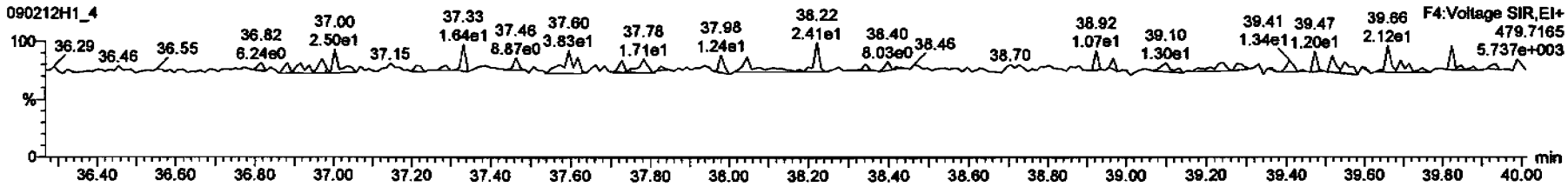

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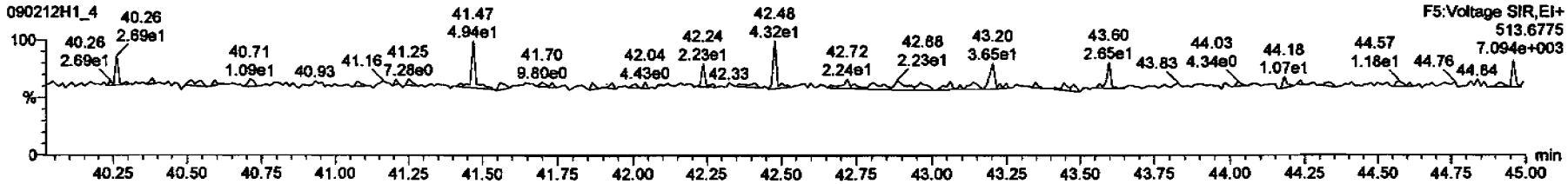

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2,3,7,8-TCDD

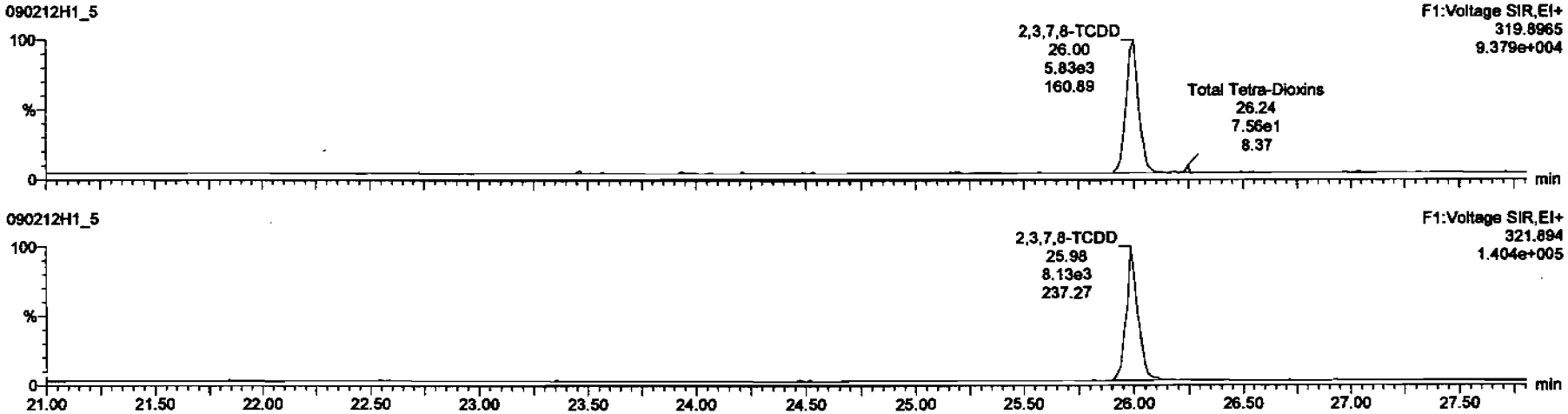

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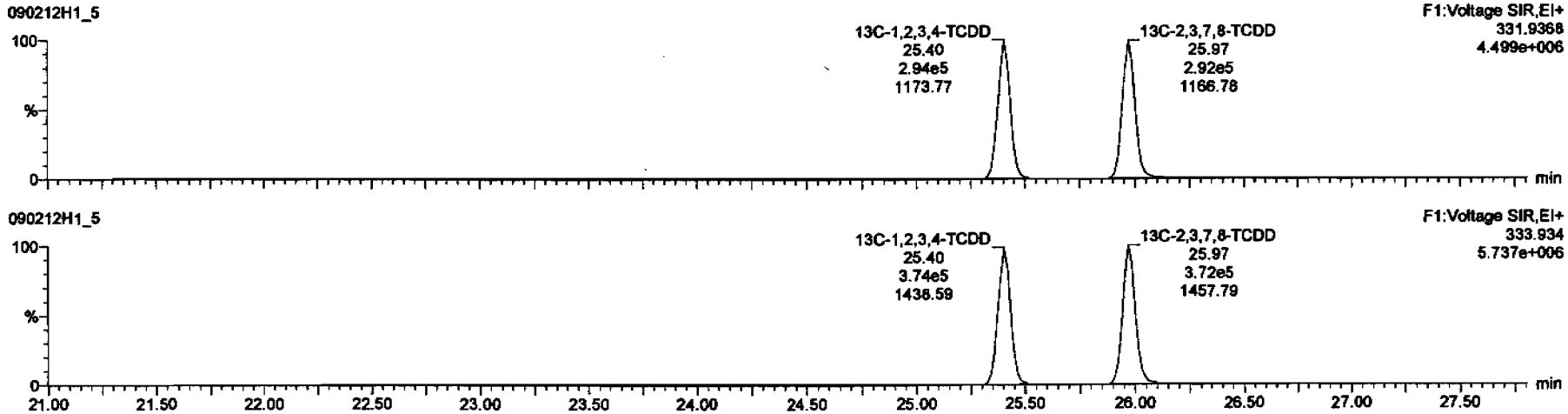

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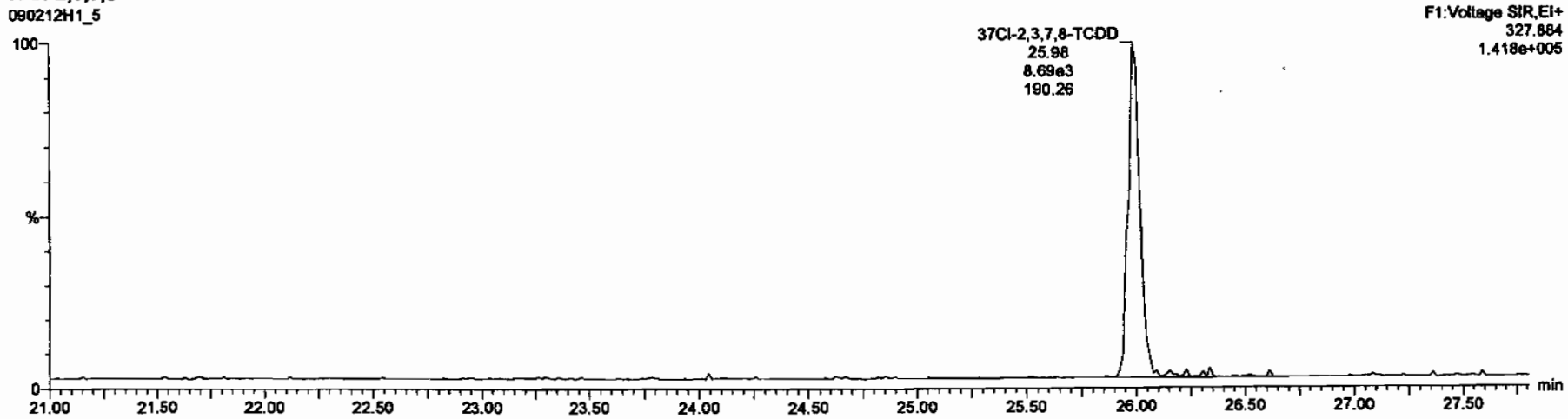

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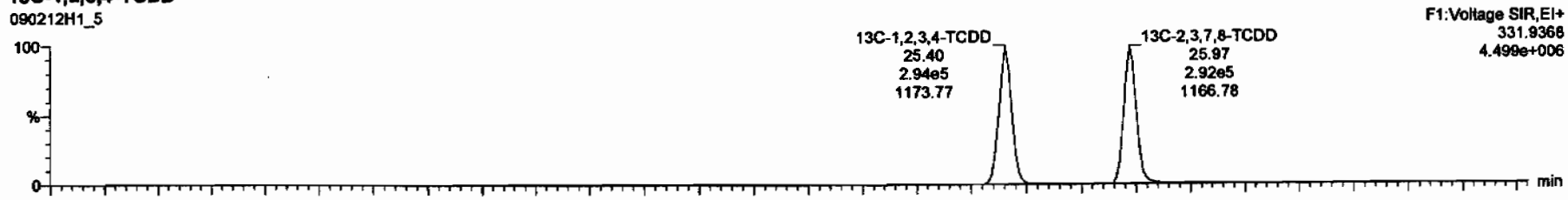

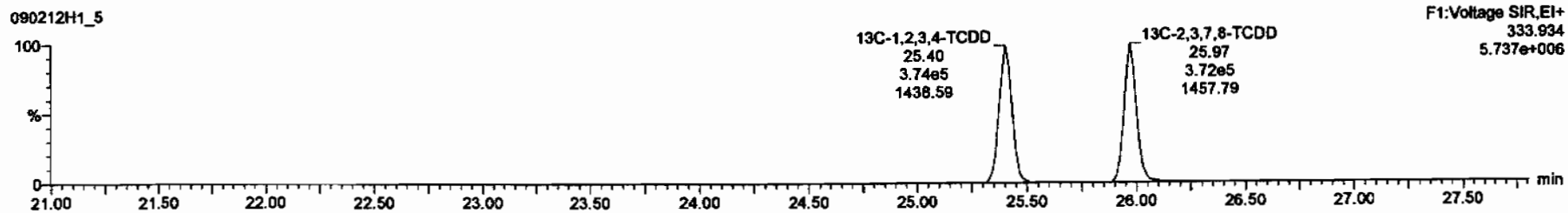

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1,2,3,7,8-PeCDD

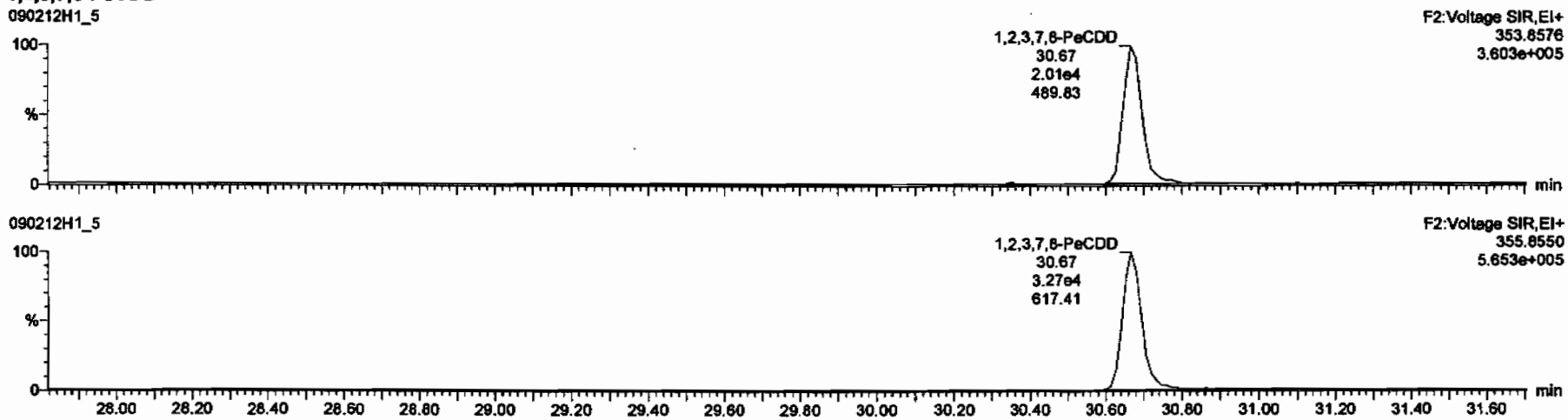

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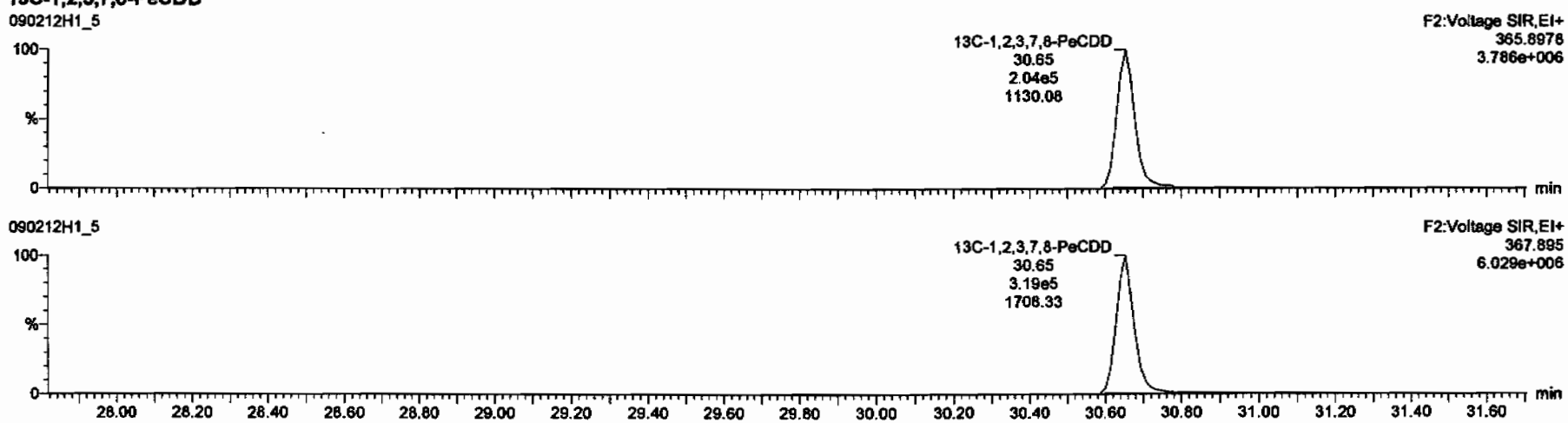

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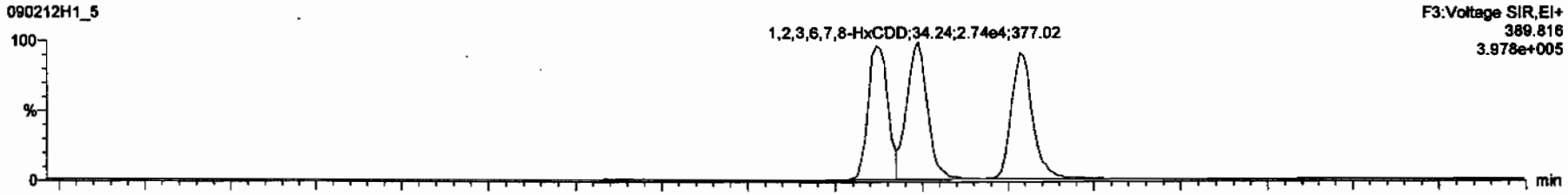

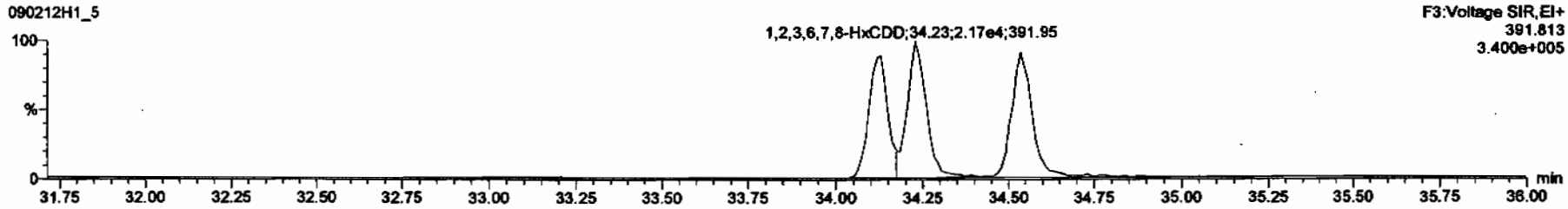

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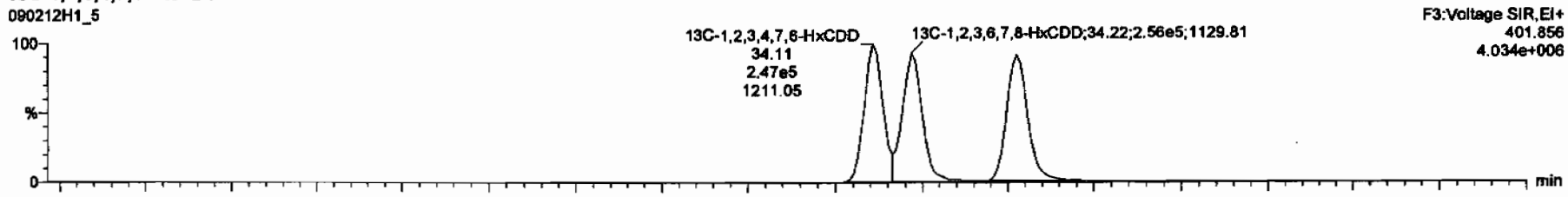

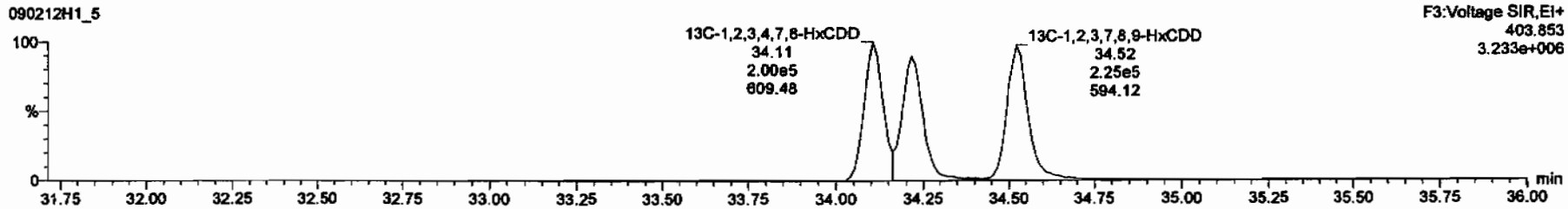

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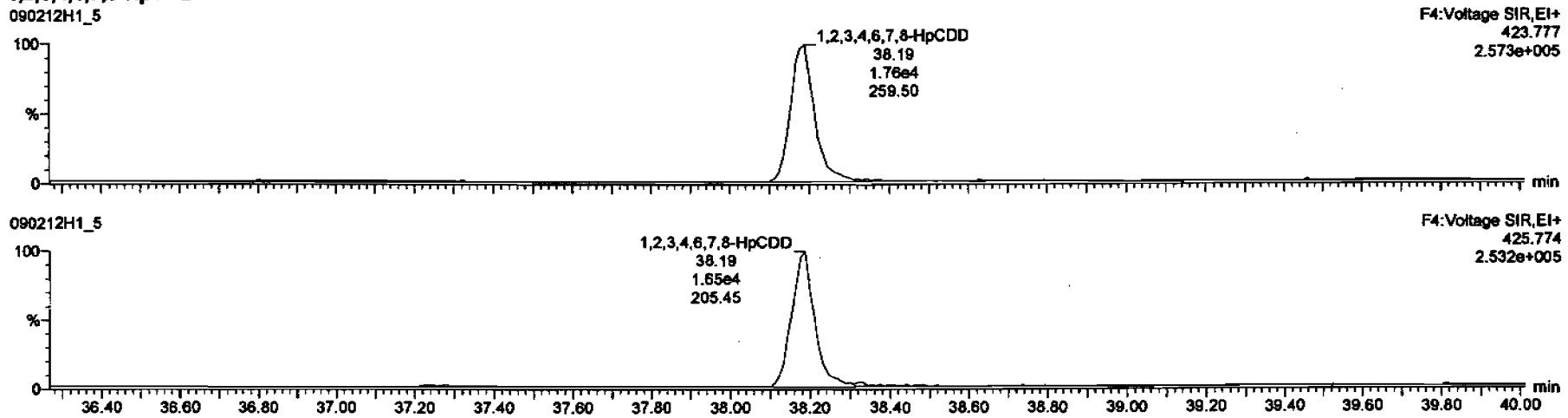

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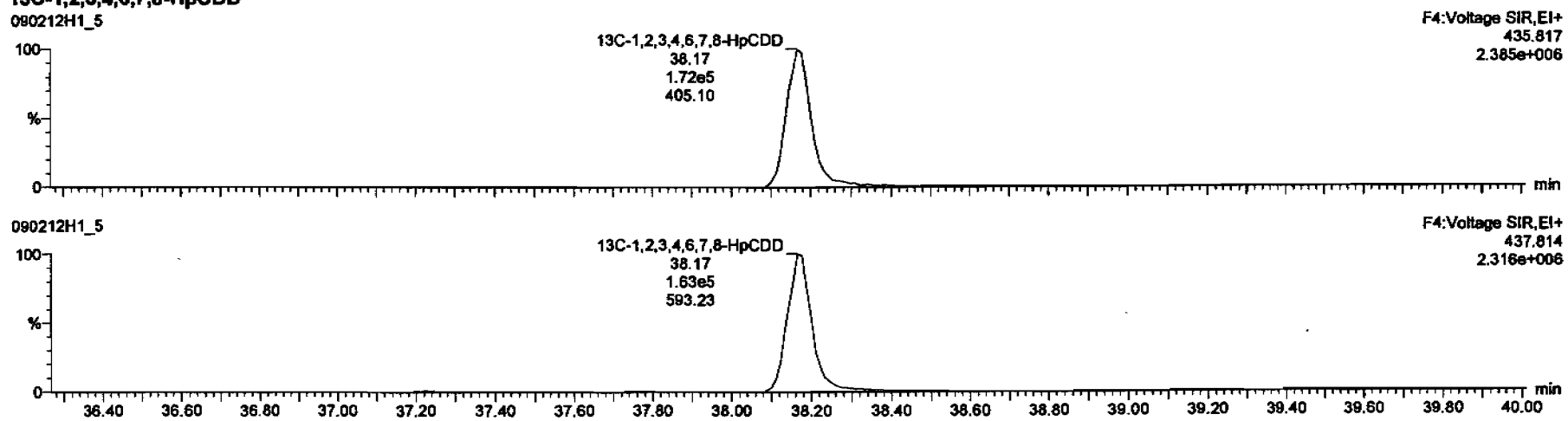

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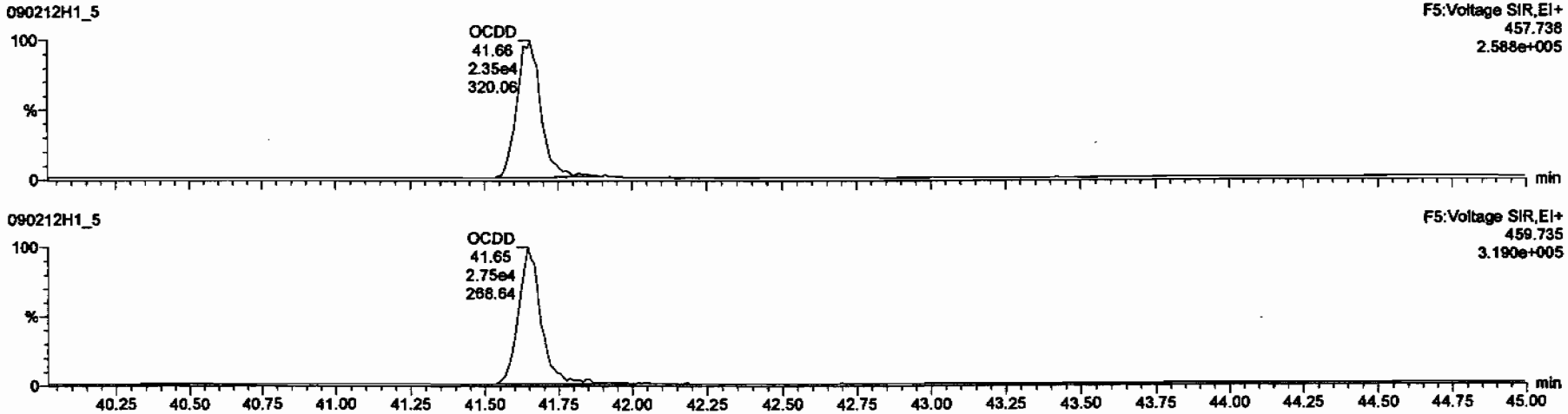

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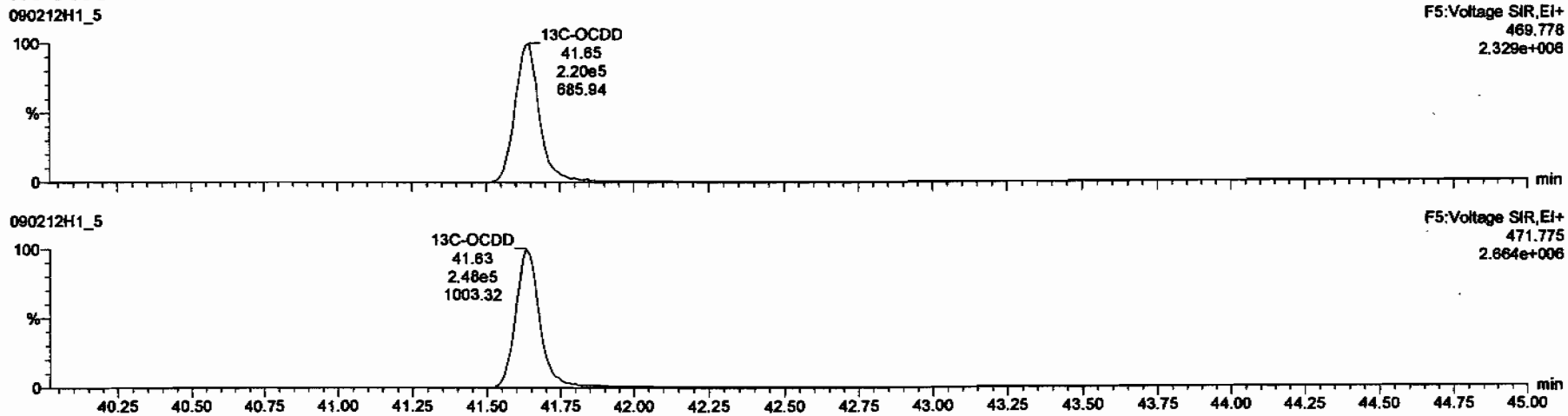

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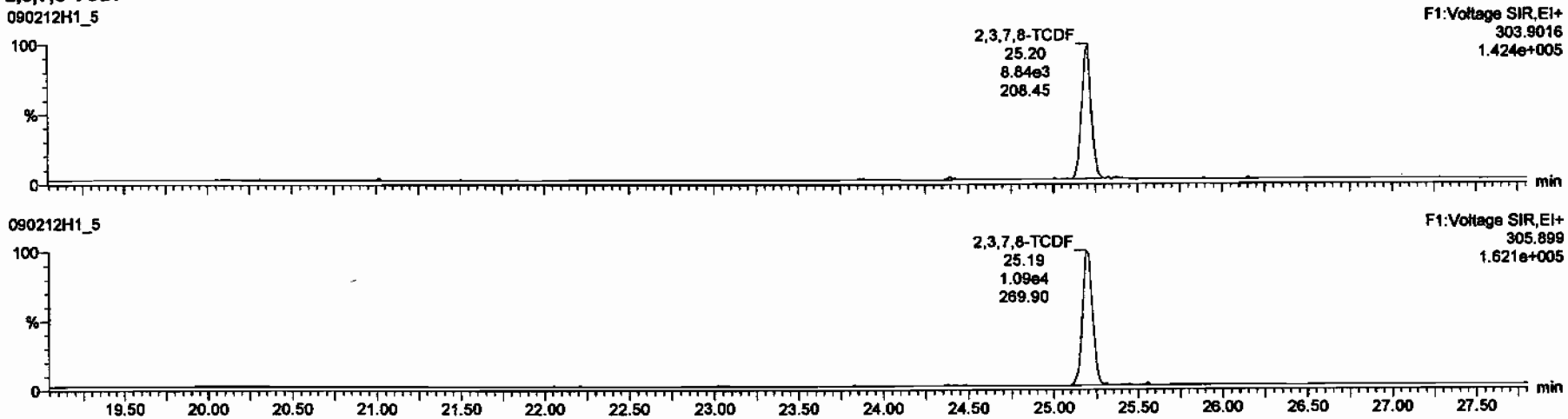

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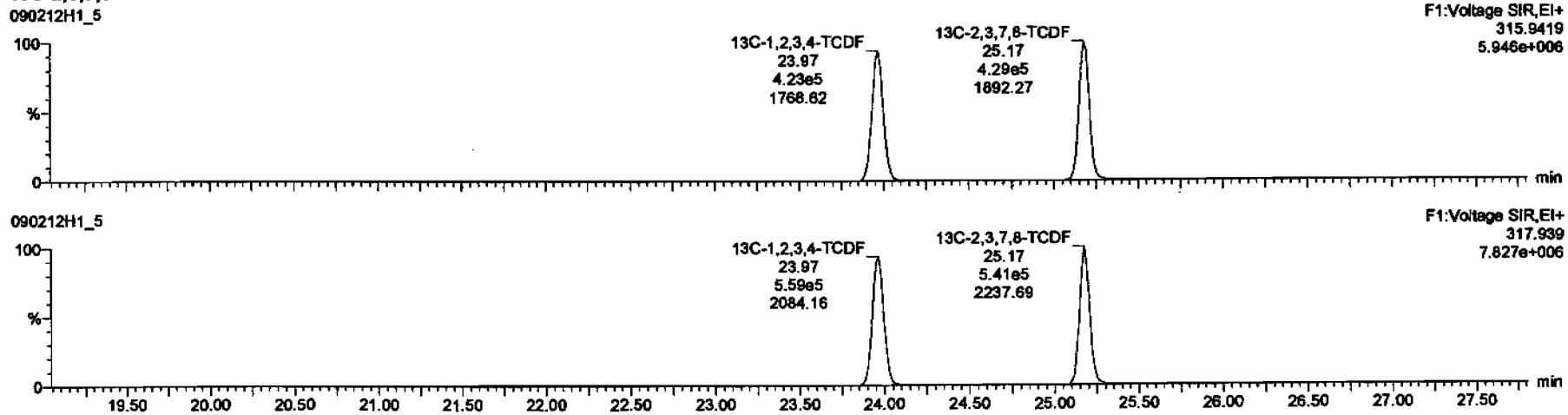

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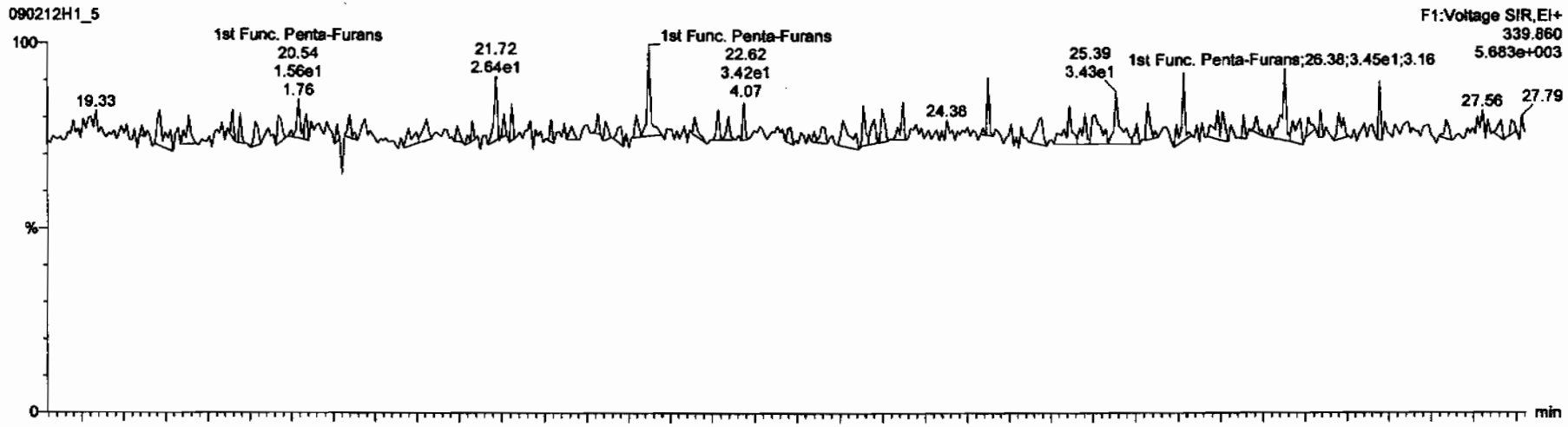

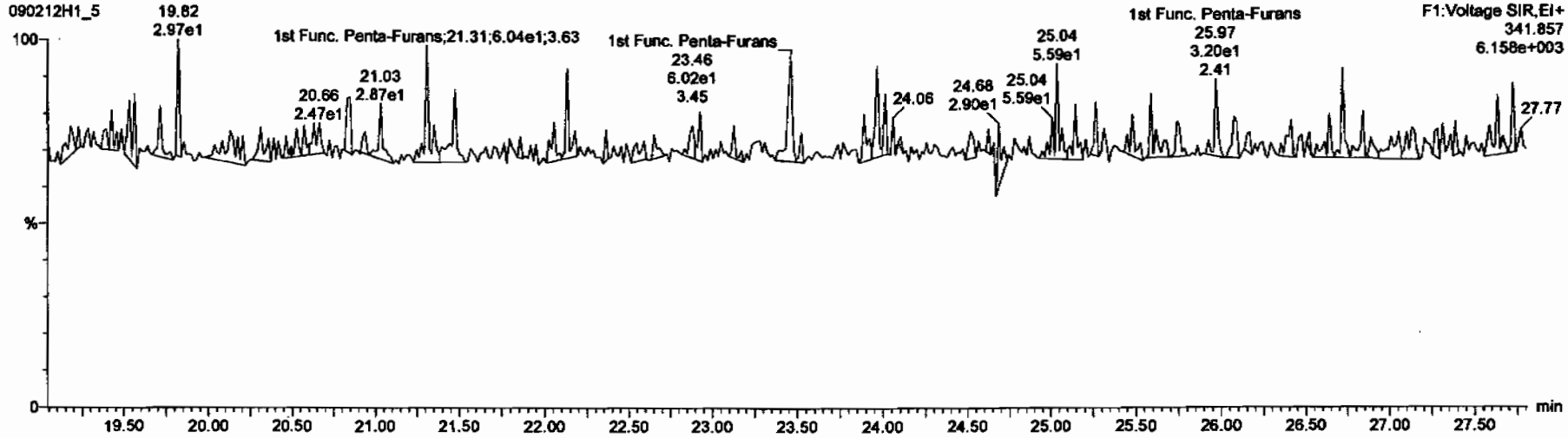

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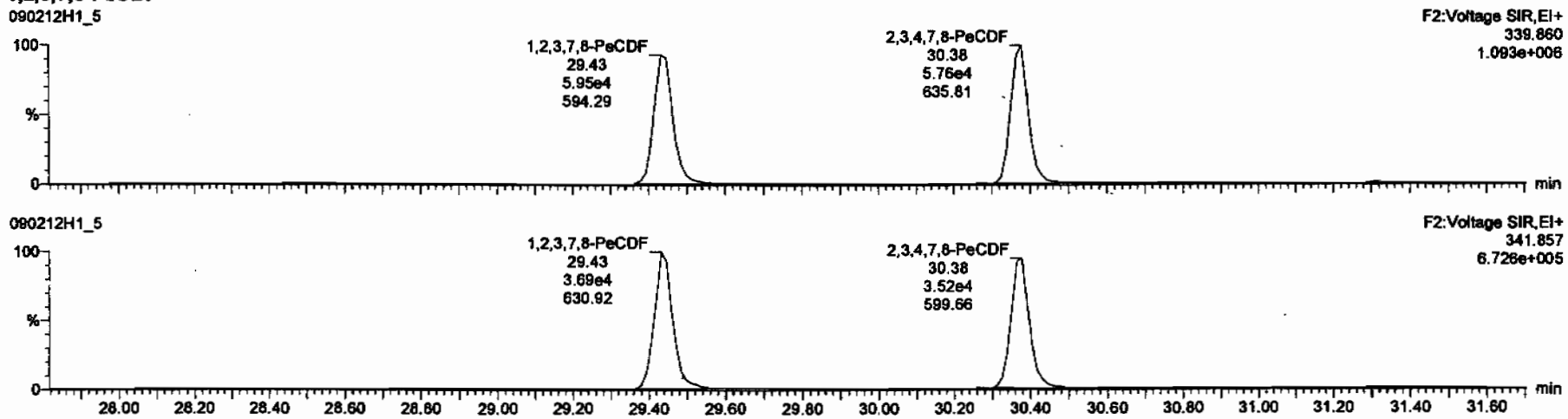

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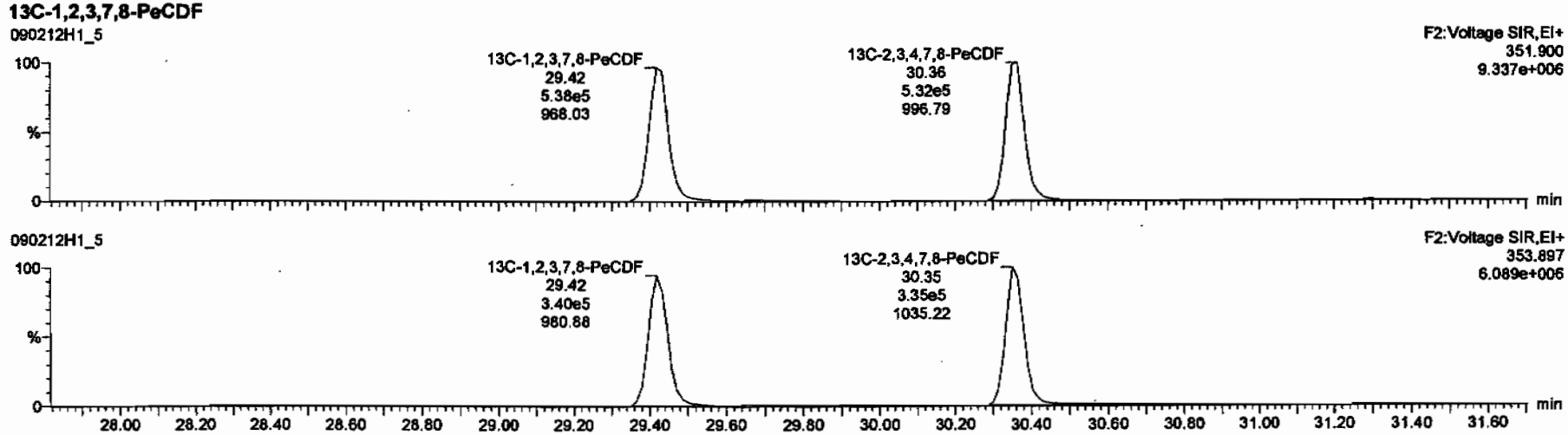

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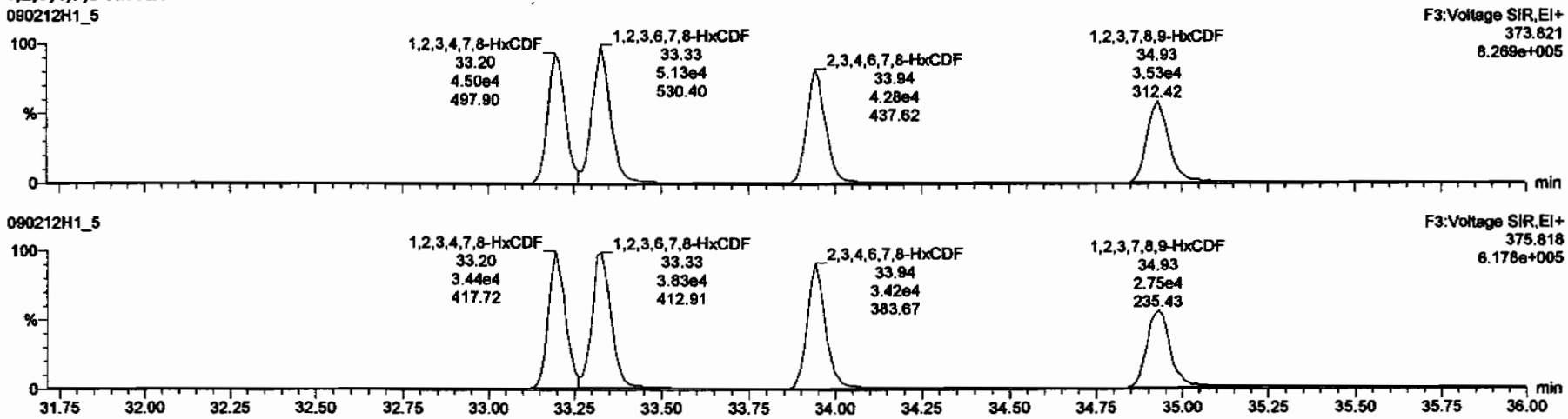

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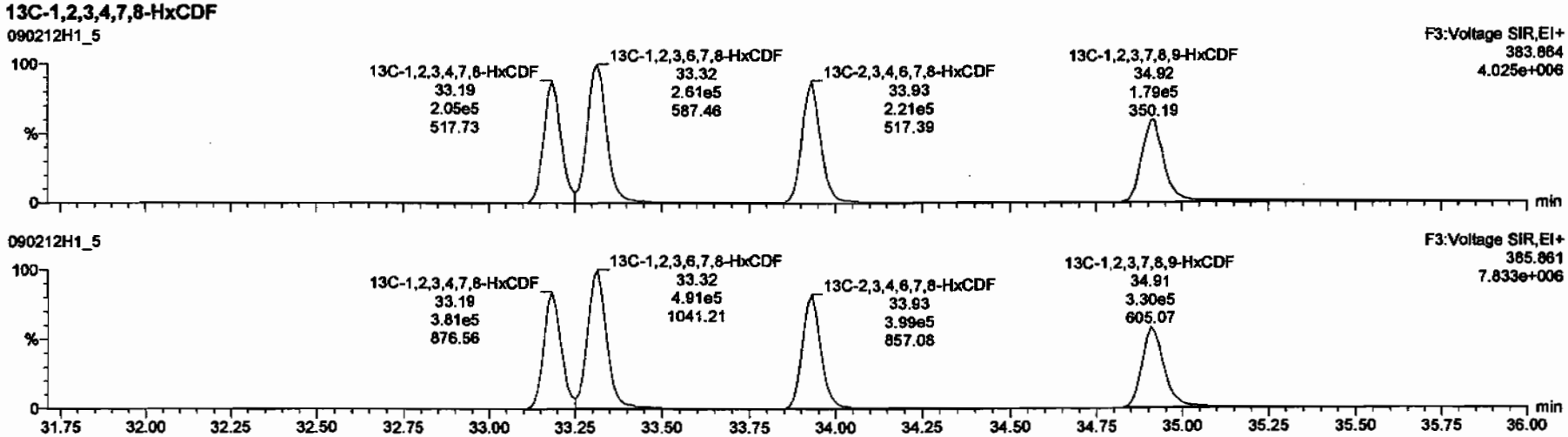

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1,2,3,4,6,7,8-HpCDF

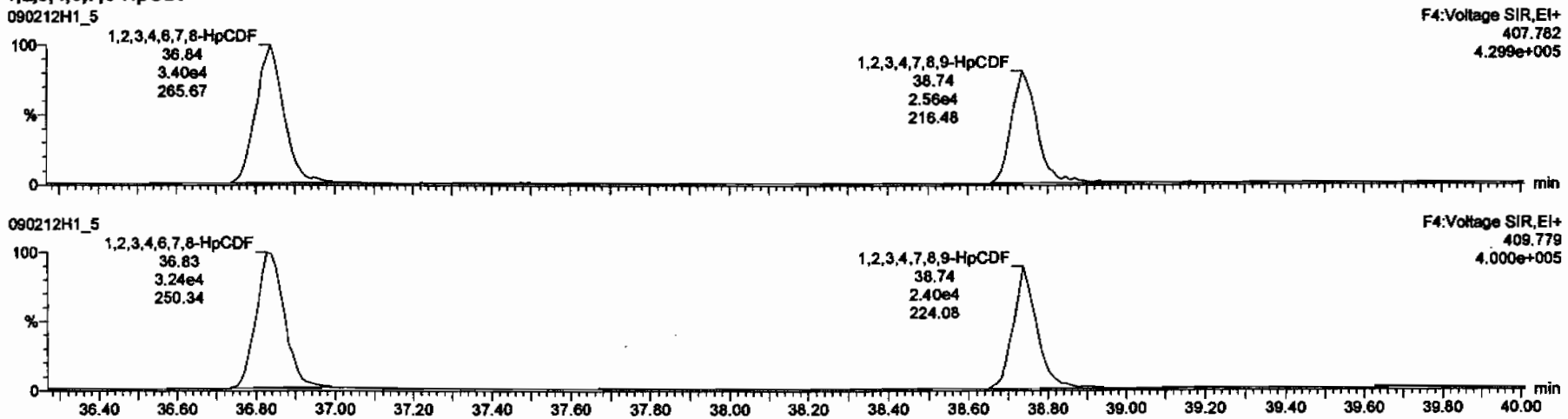

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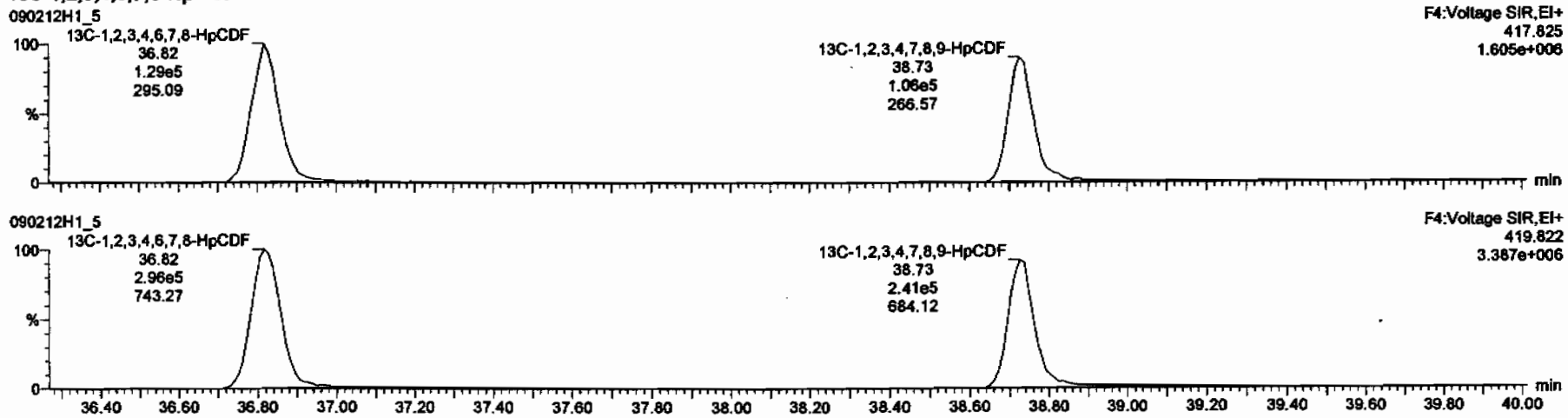

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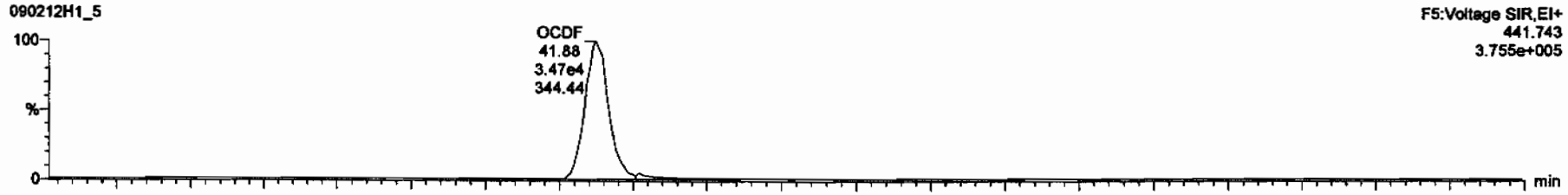

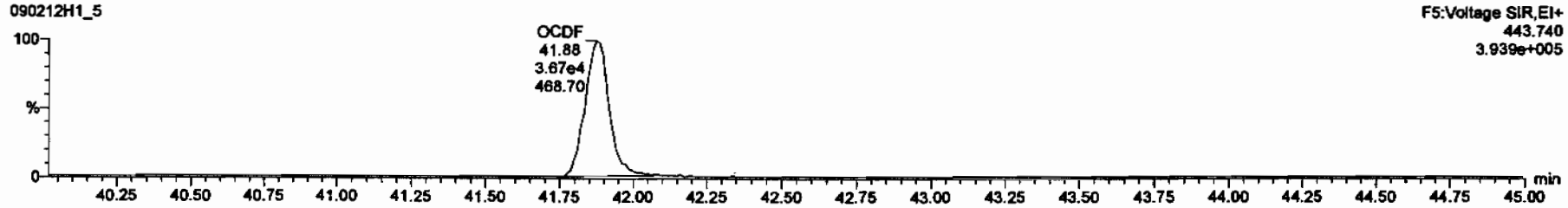

13C-OCDF

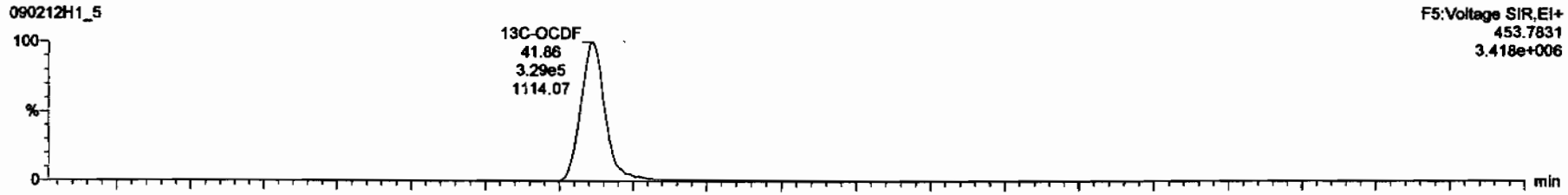

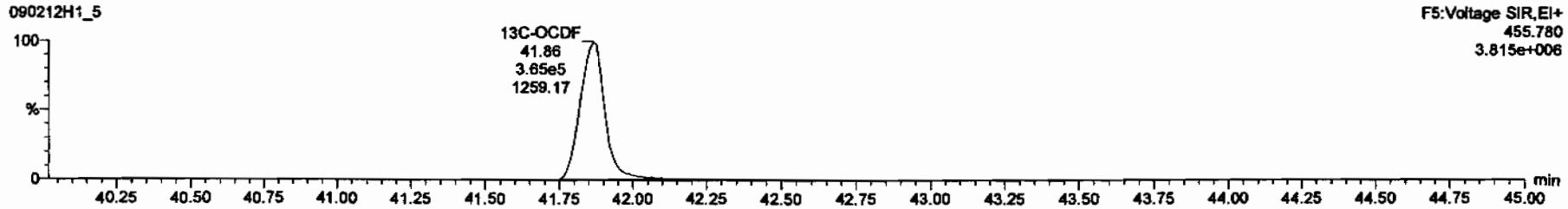

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PFK1

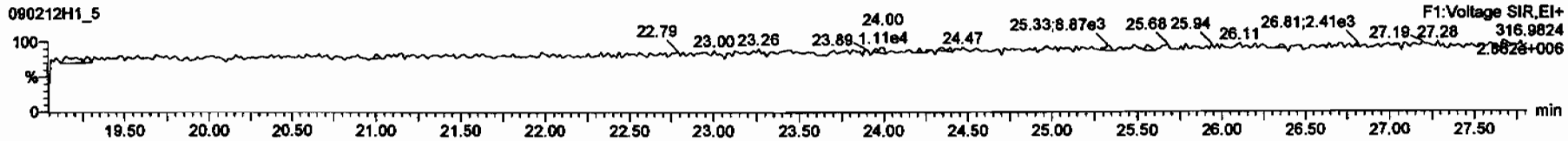

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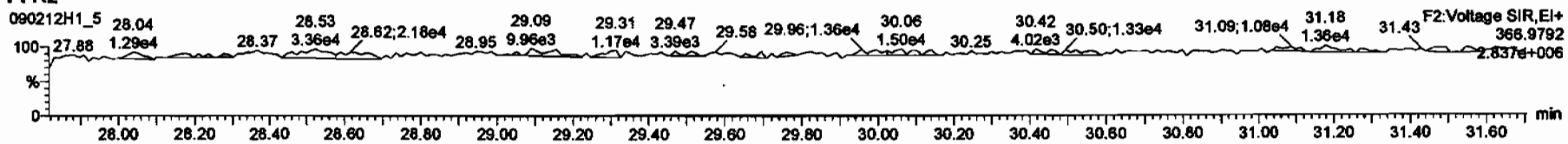

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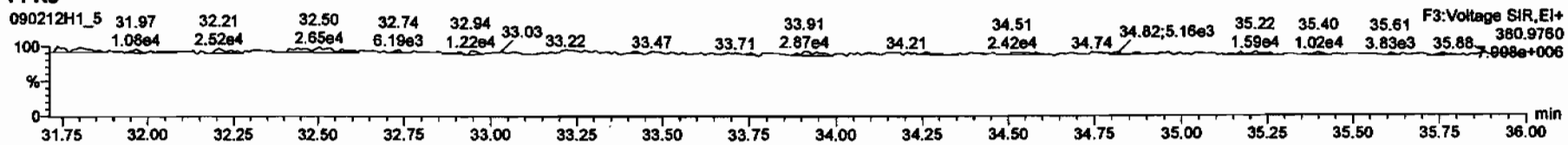

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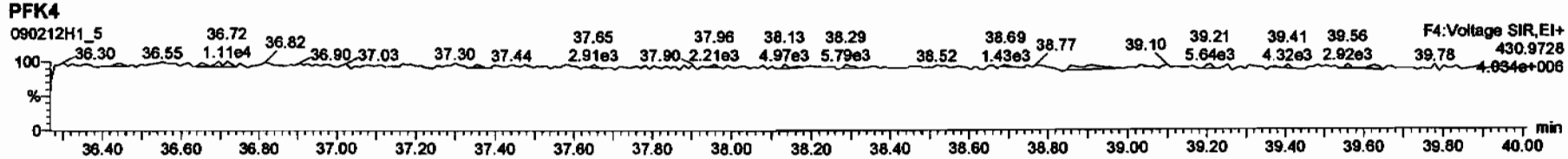

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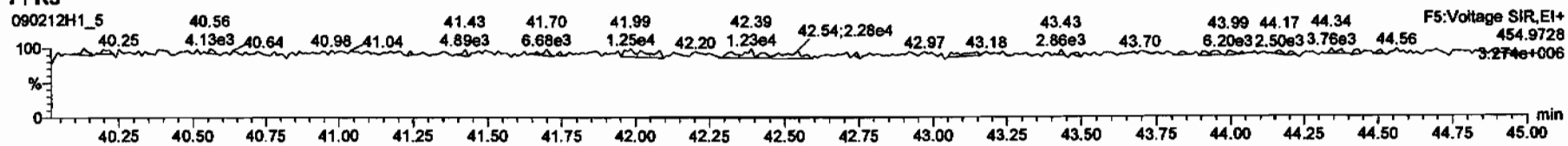

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DPE1

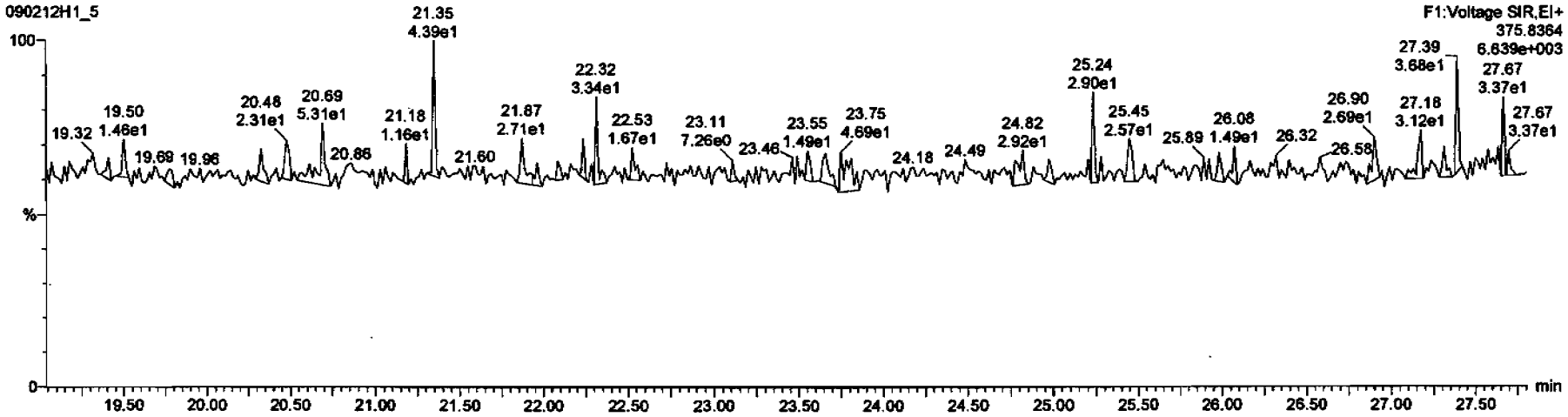

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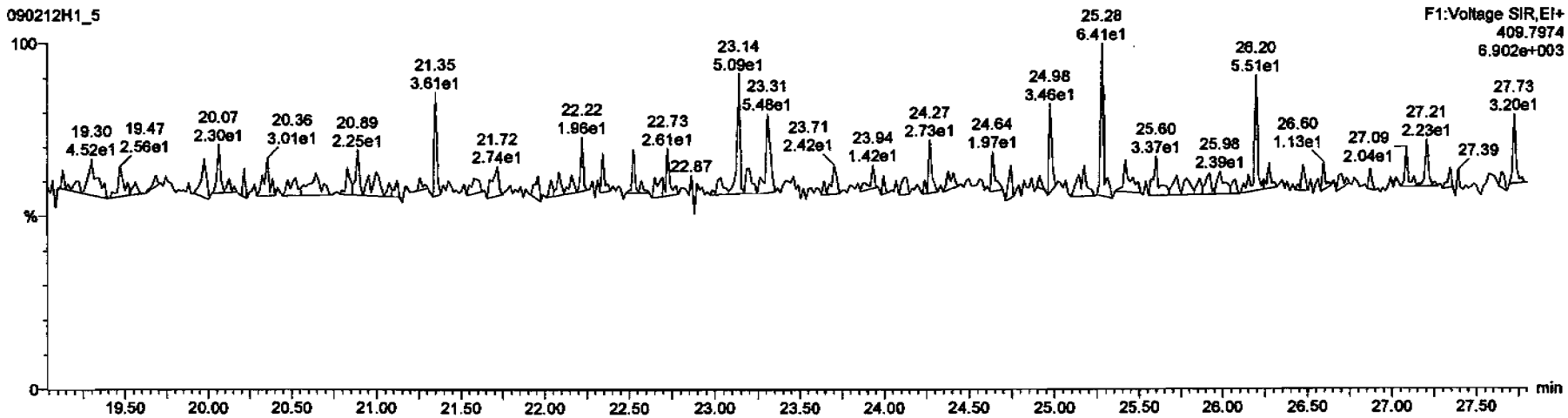

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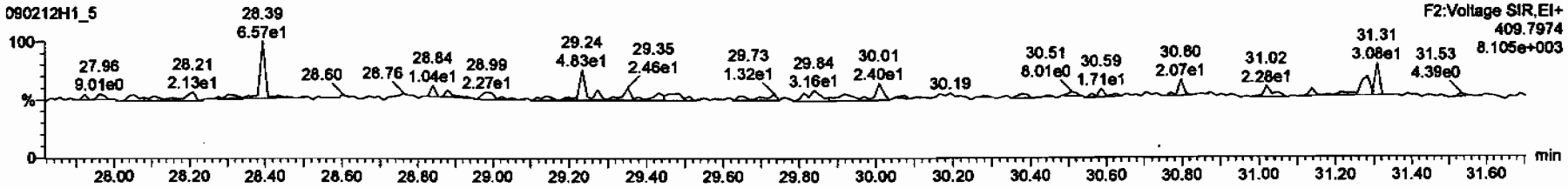

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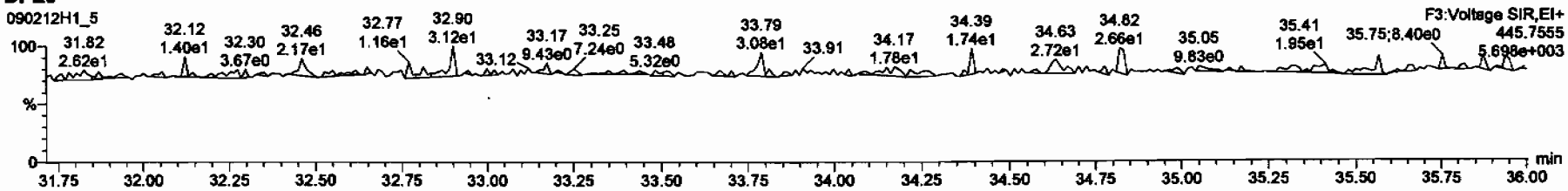

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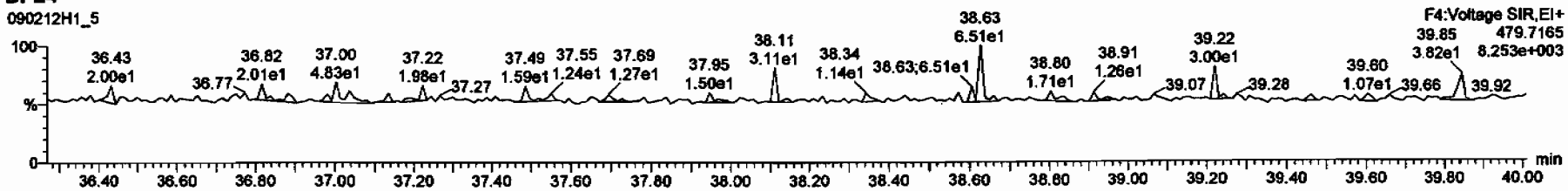

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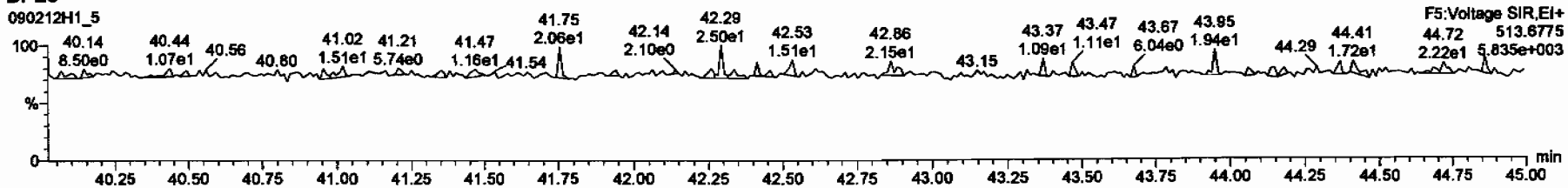

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2,3,7,8-TCDD

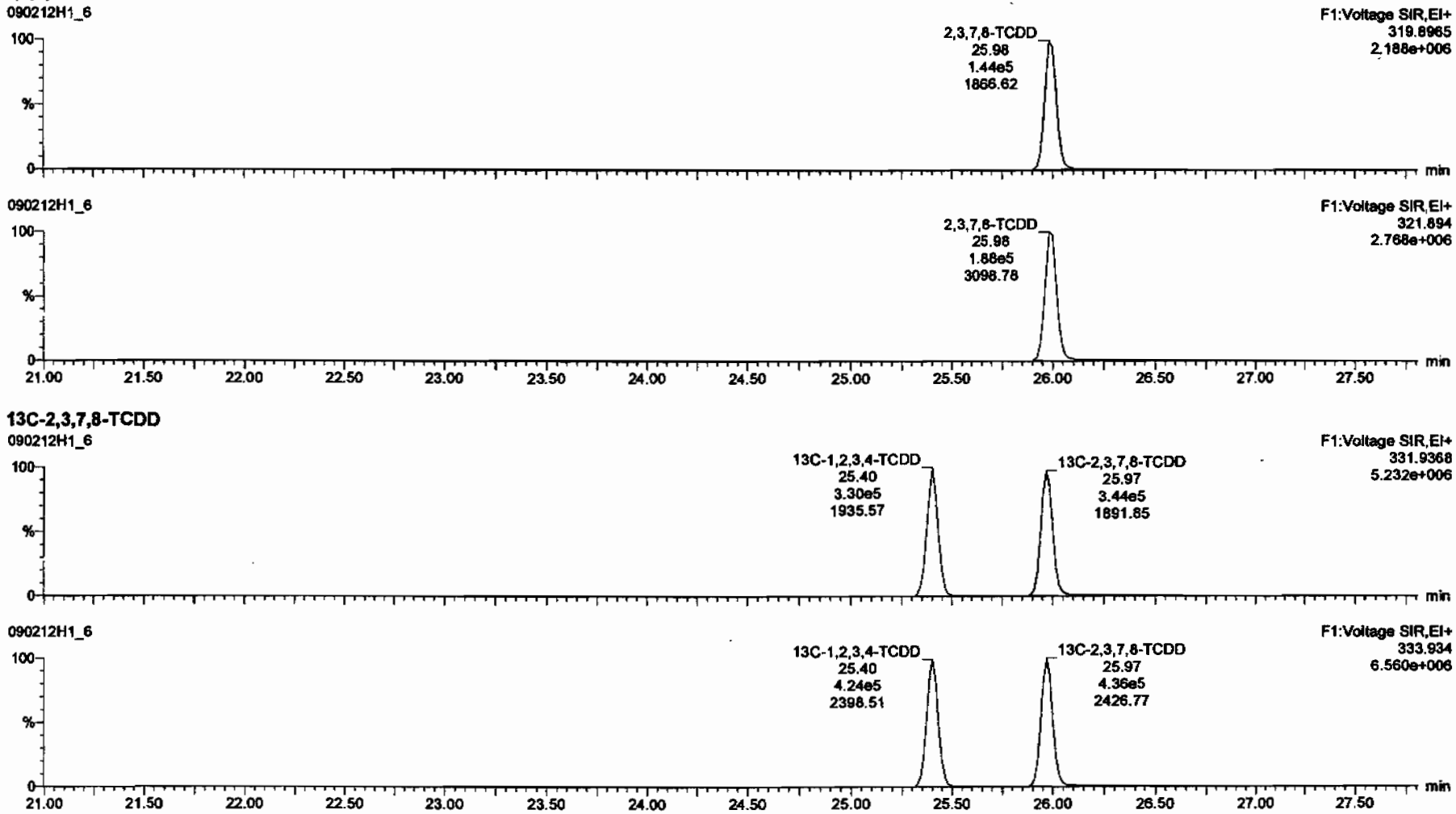

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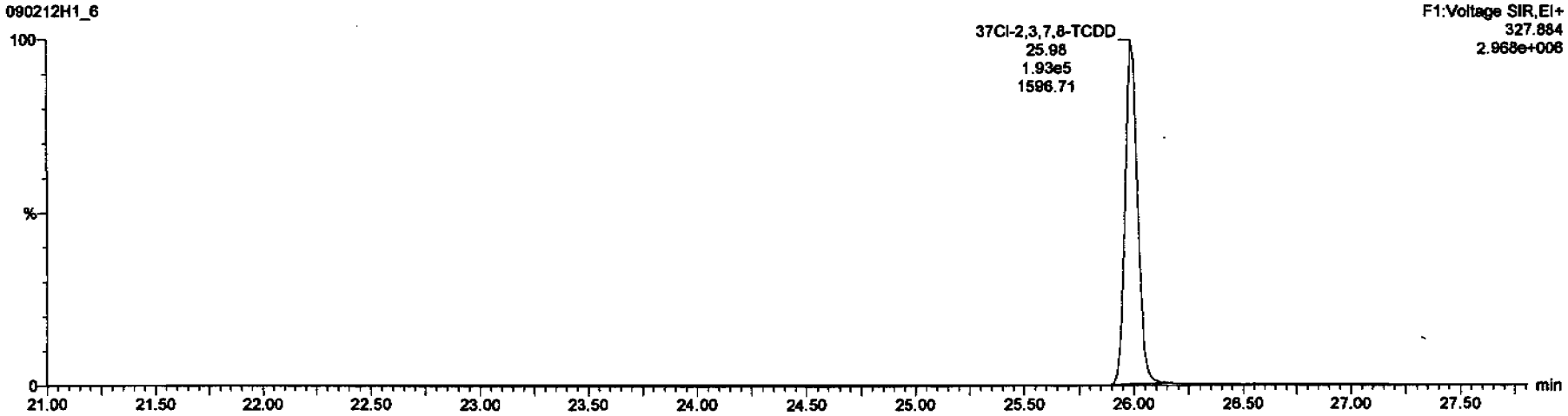

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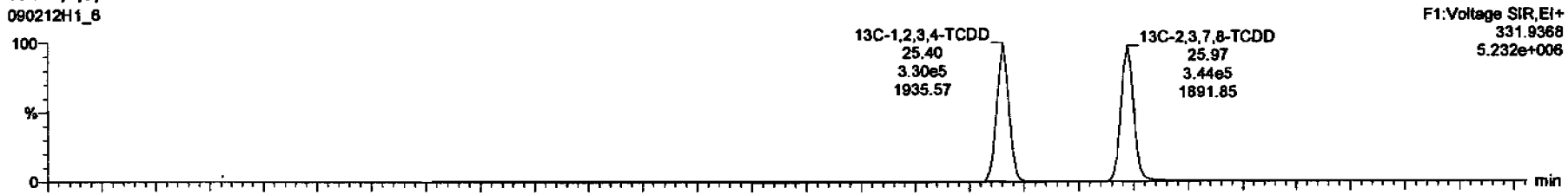

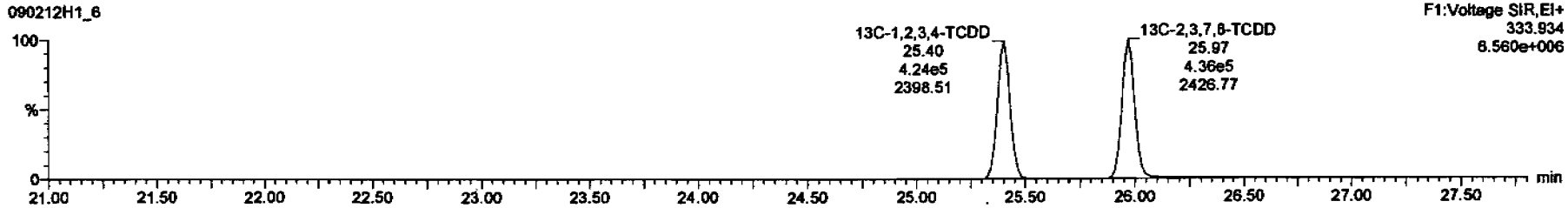

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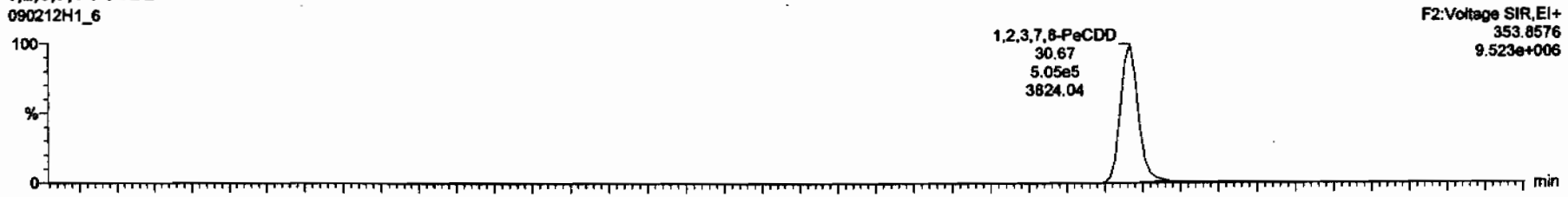

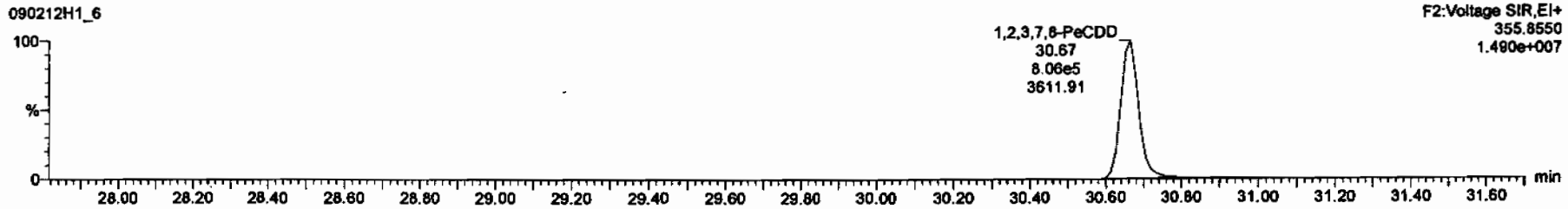

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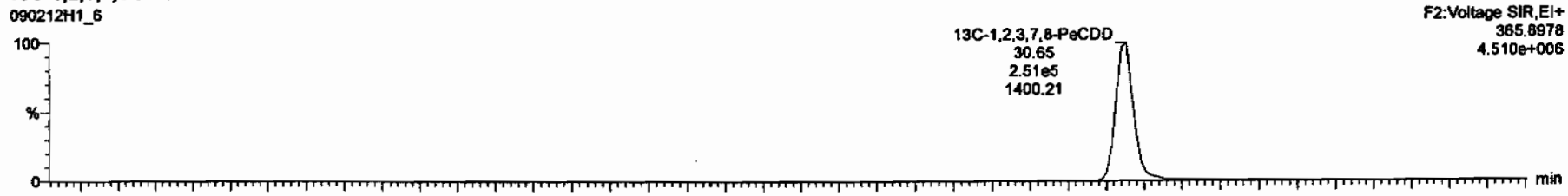

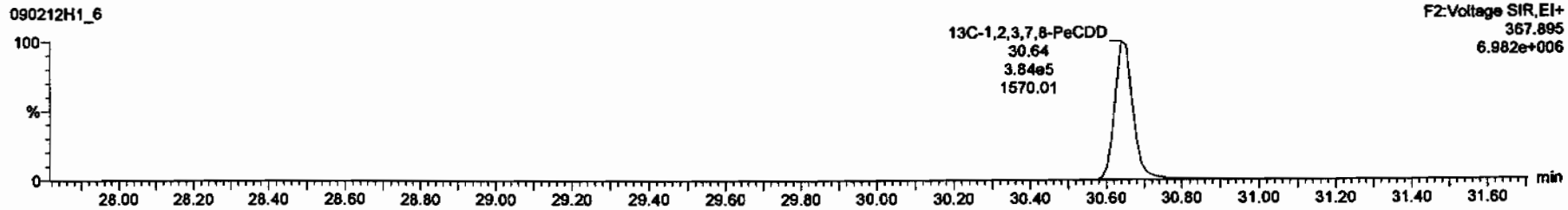

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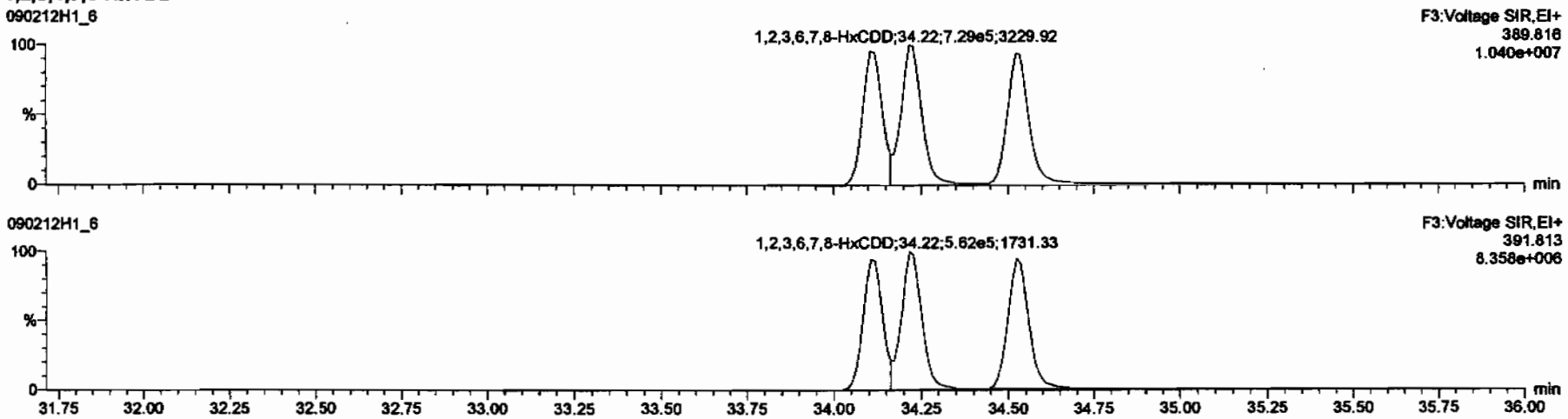

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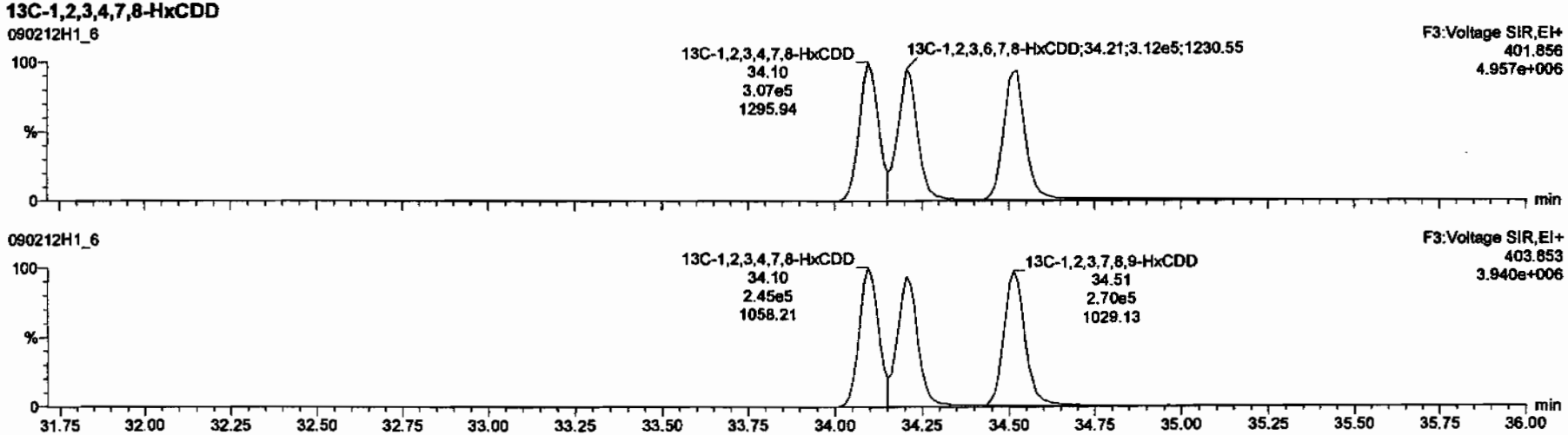

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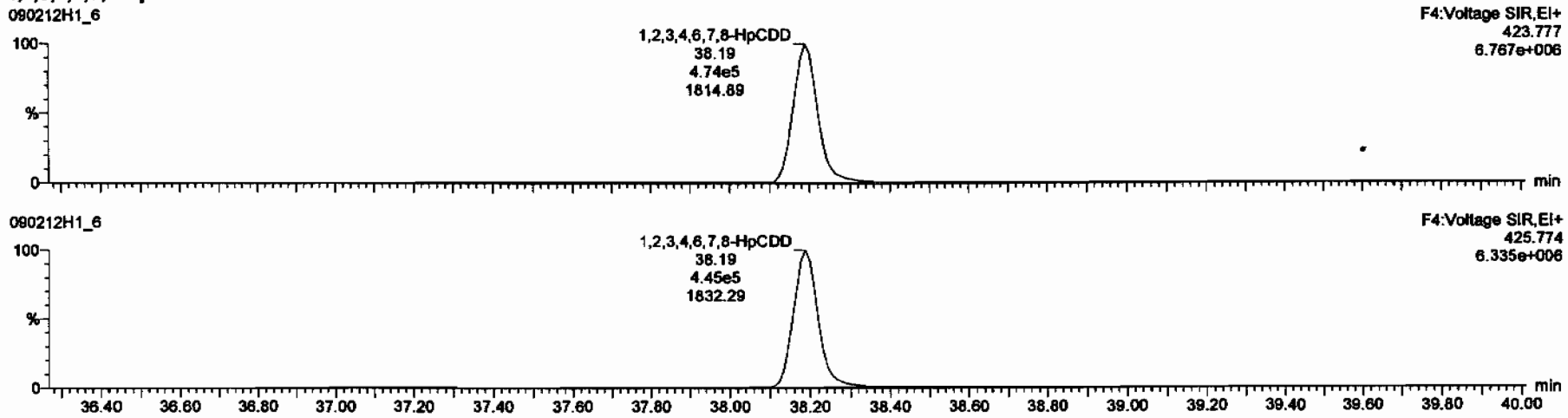

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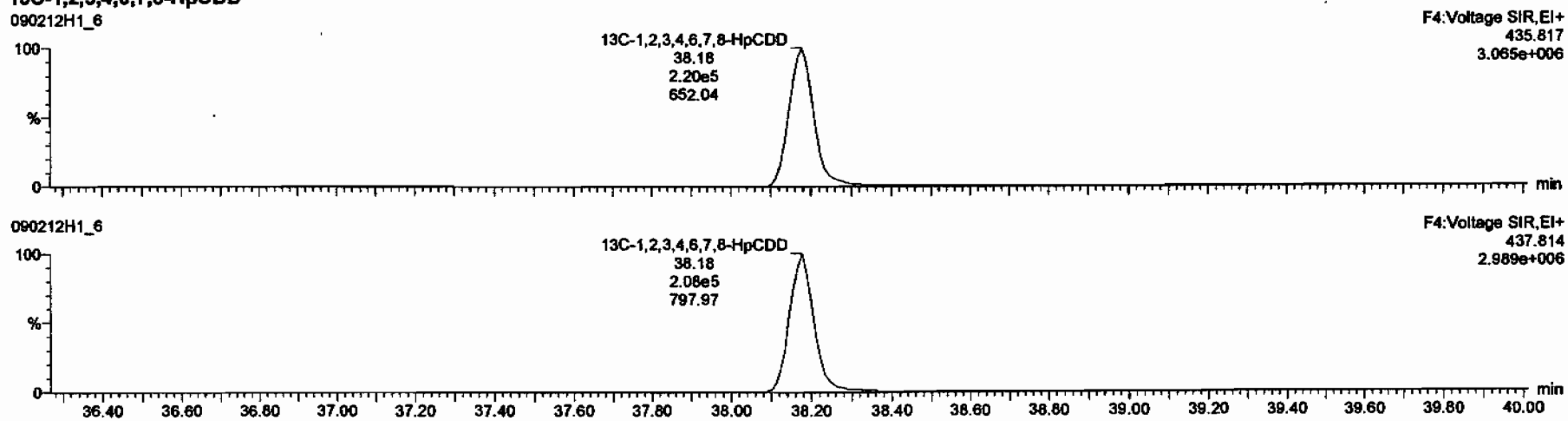

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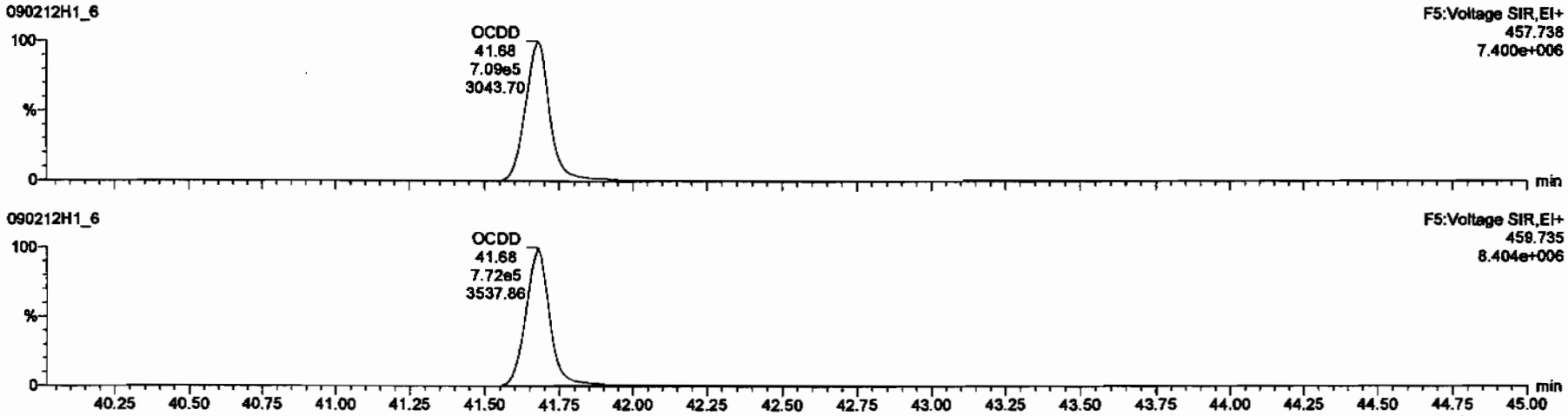

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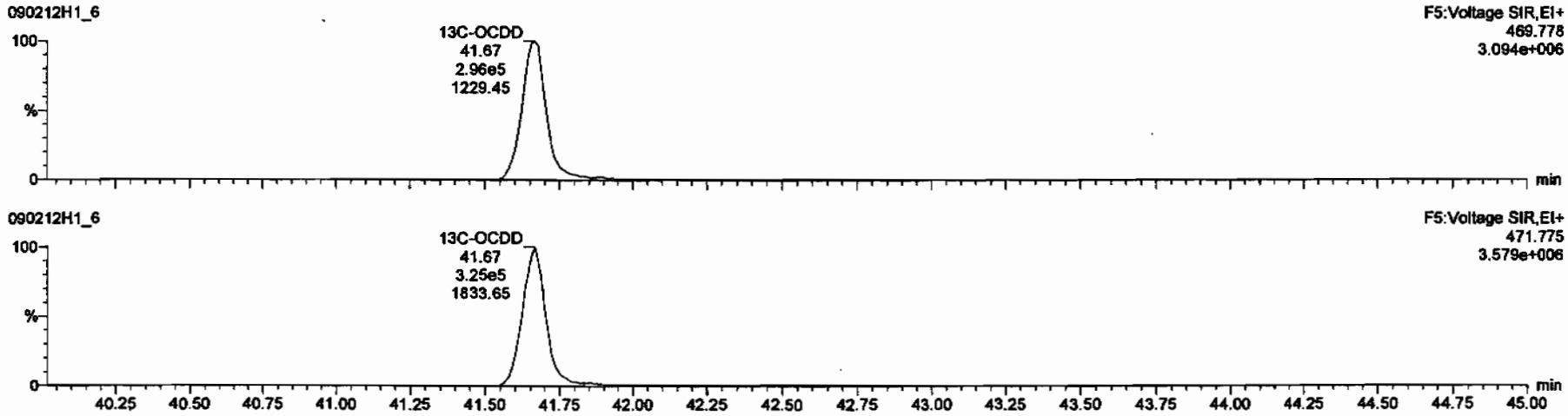

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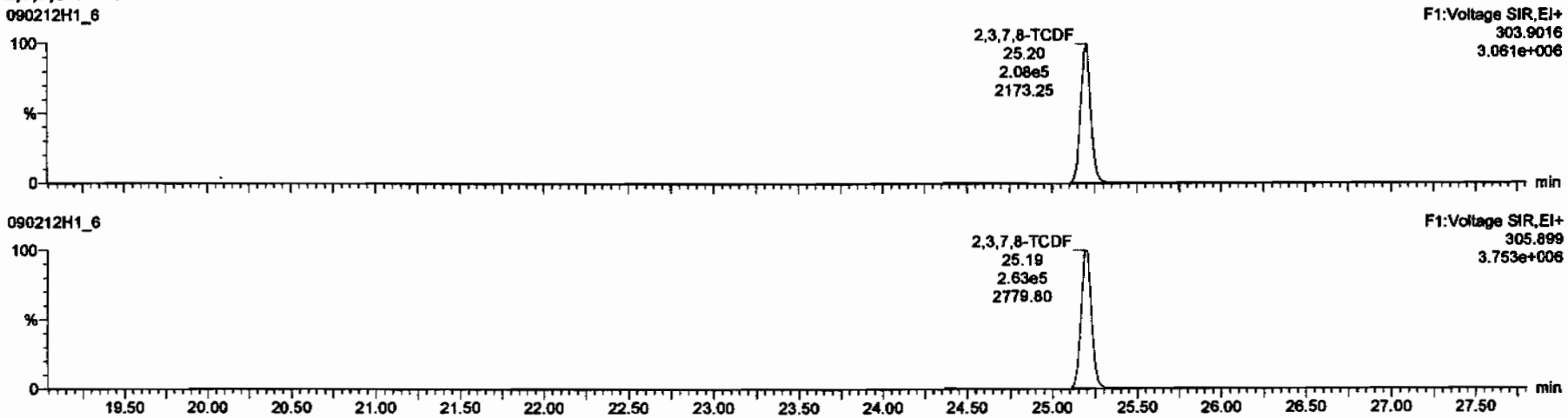

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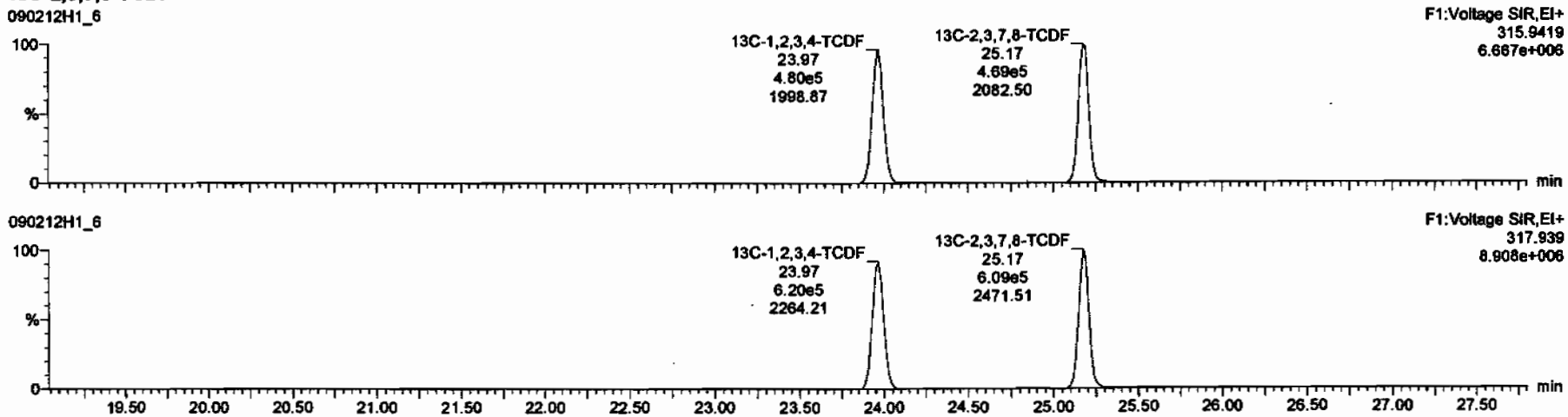

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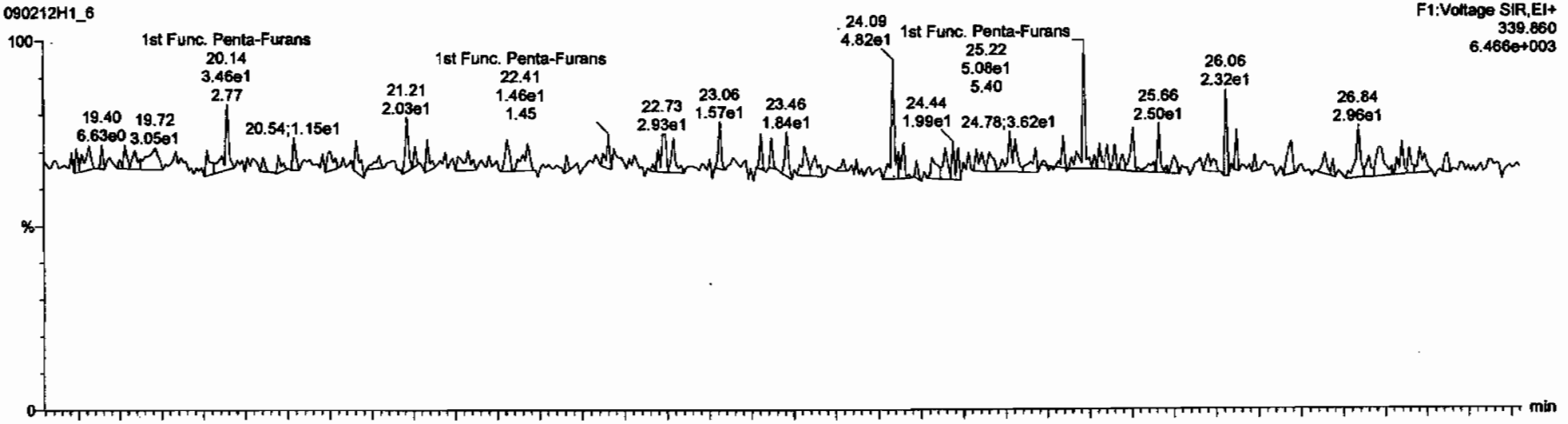

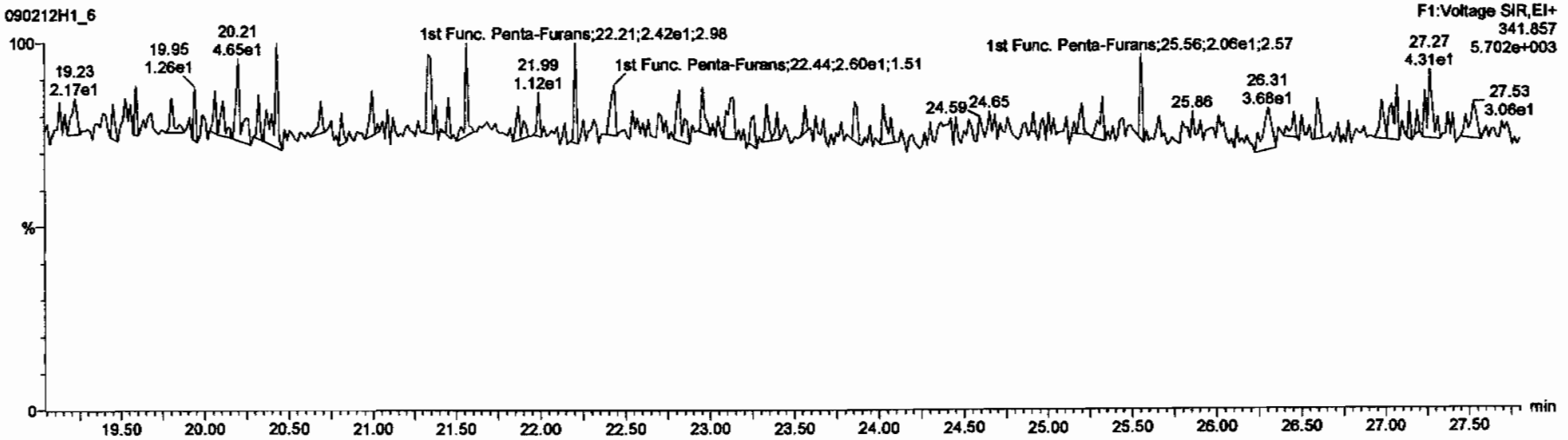

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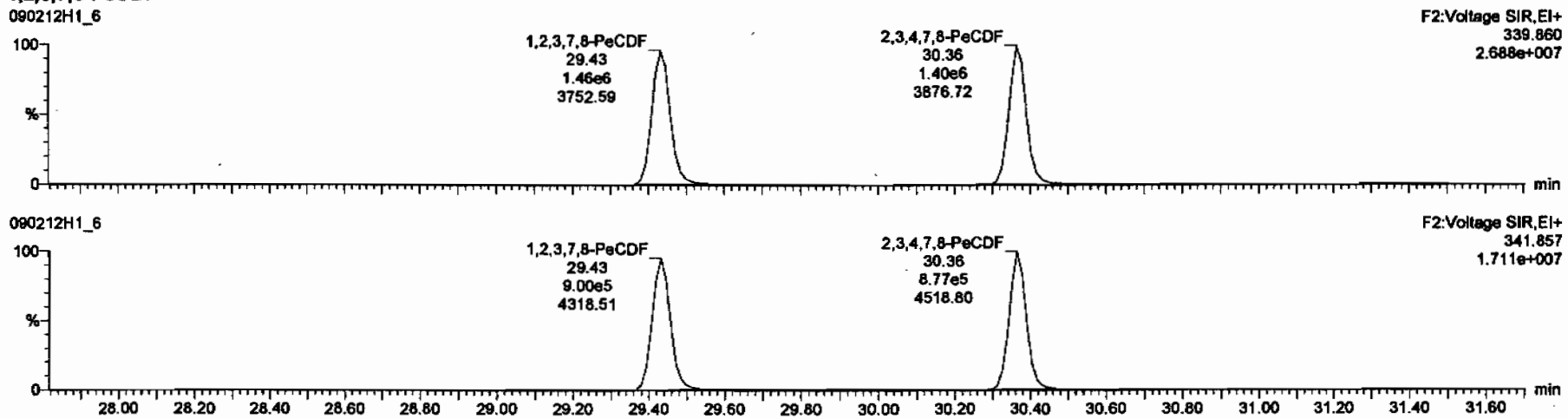

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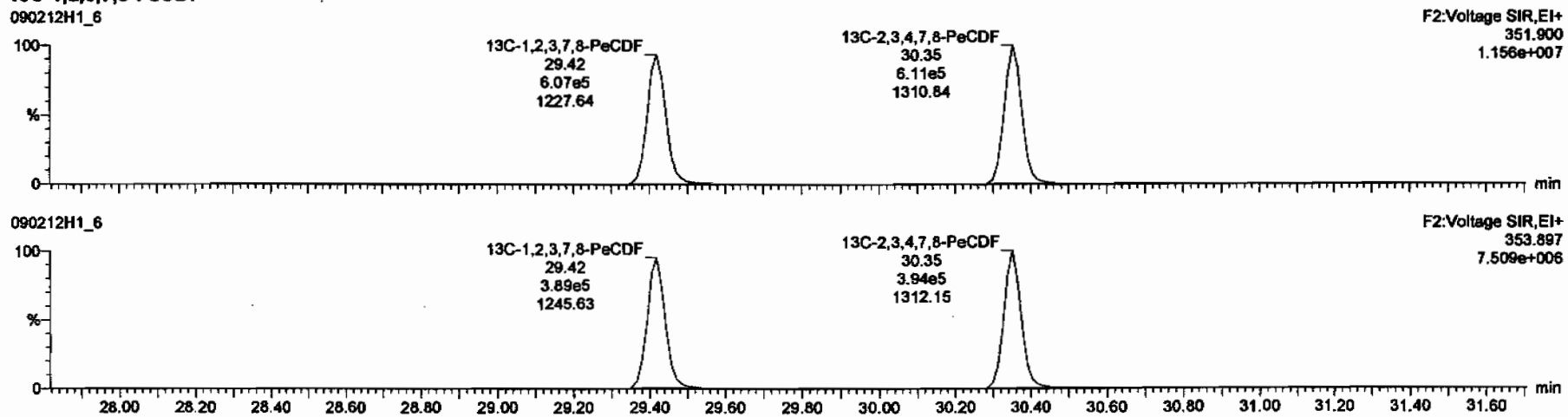

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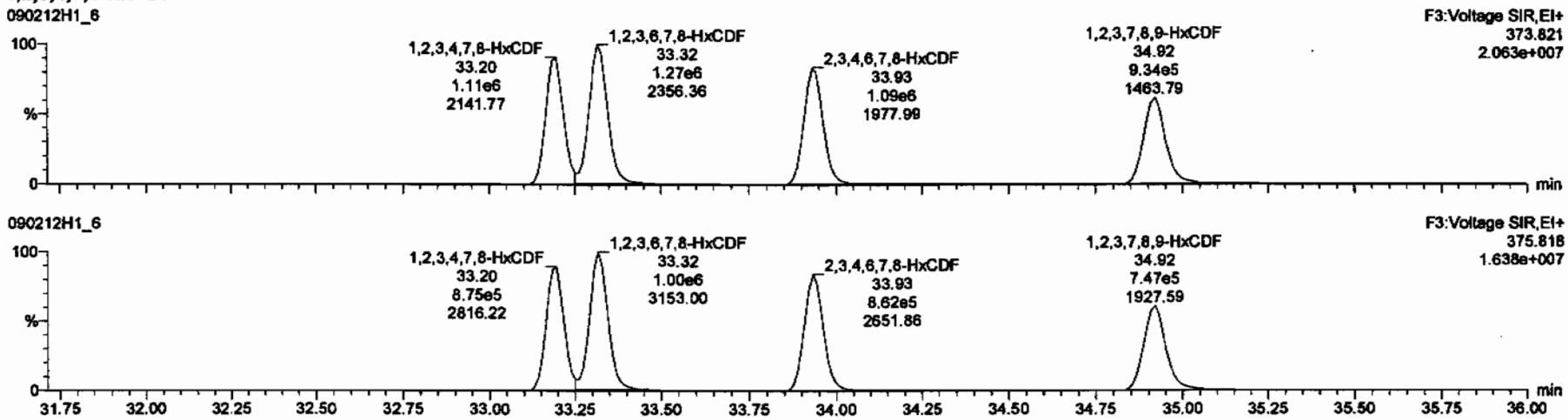

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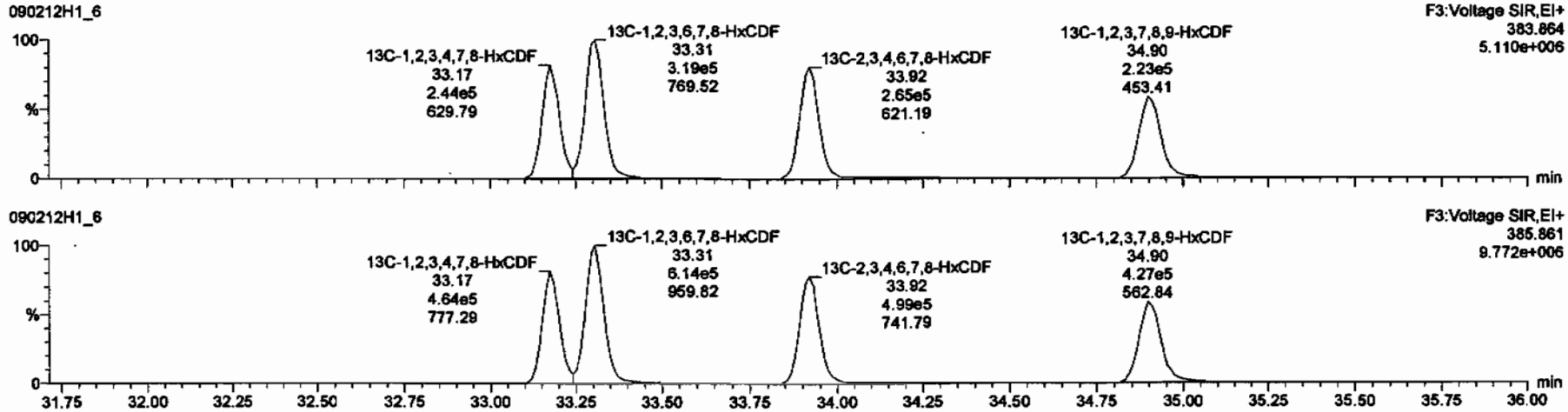

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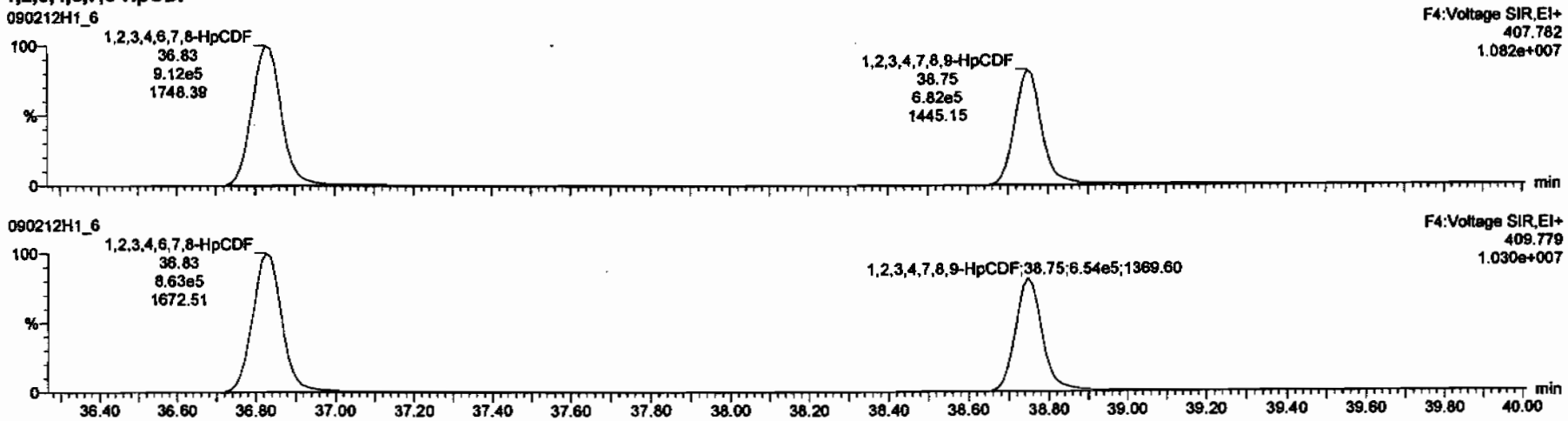

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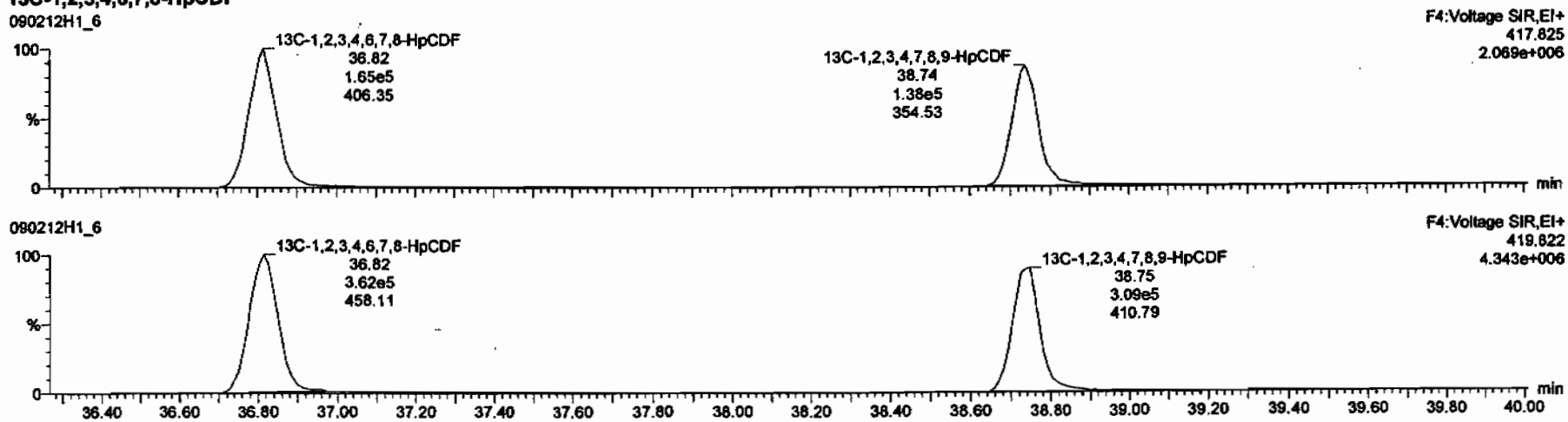

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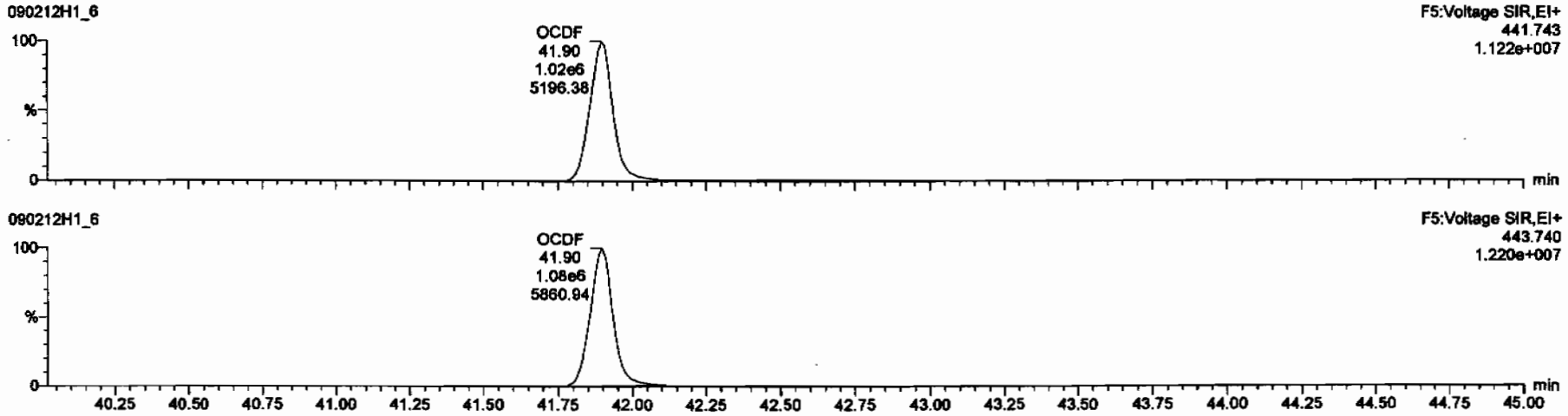

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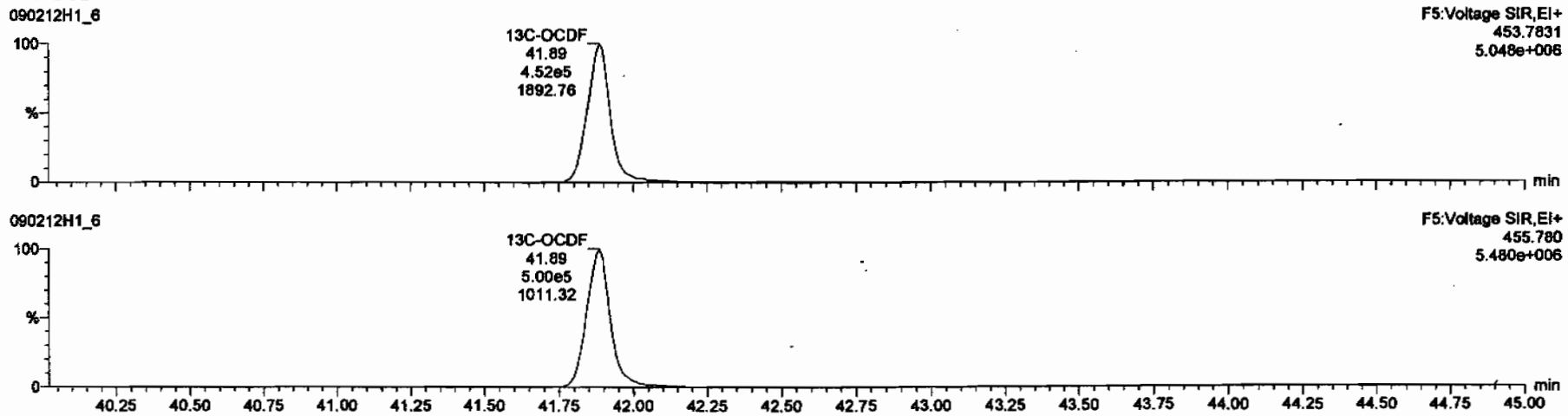

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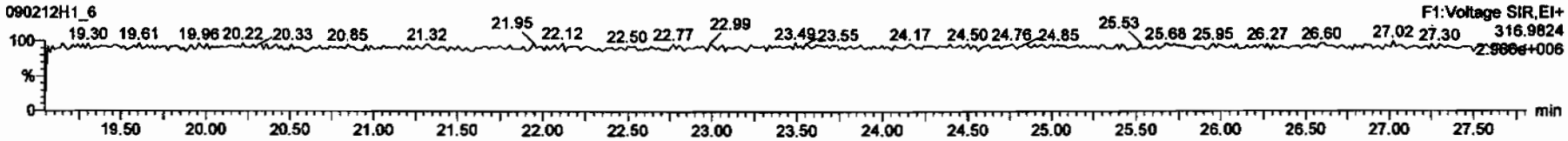

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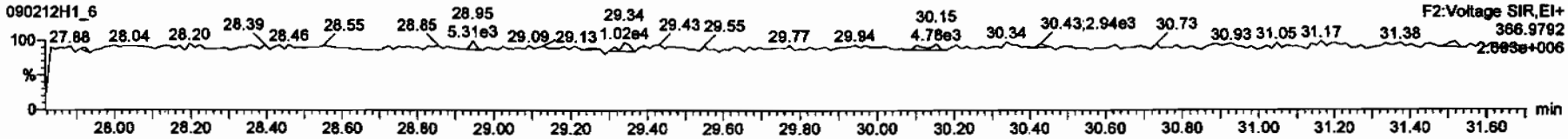

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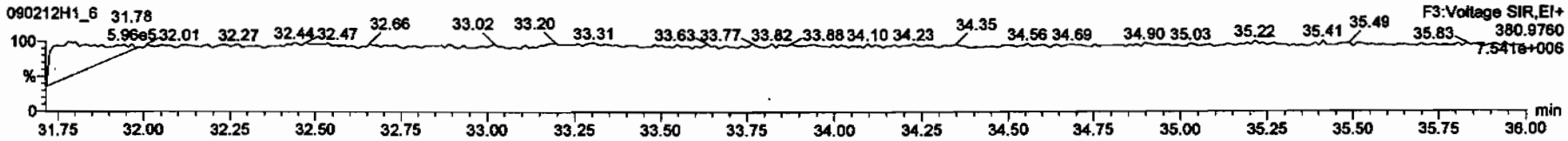

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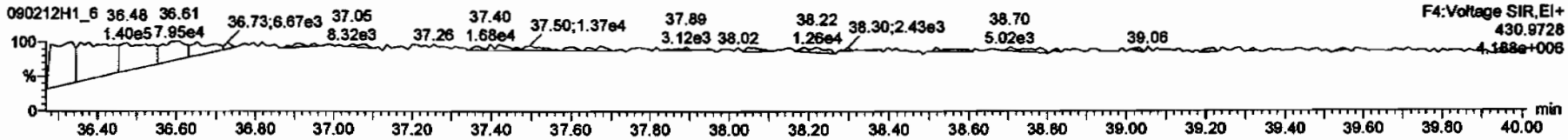

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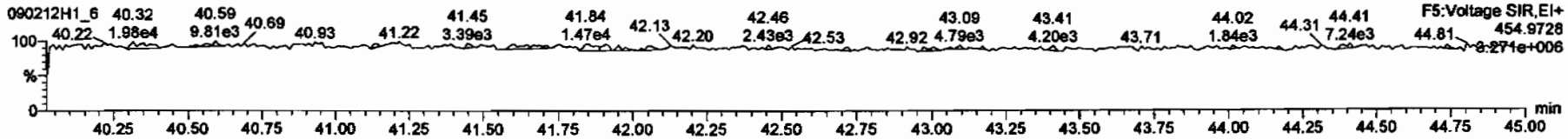

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DPE1

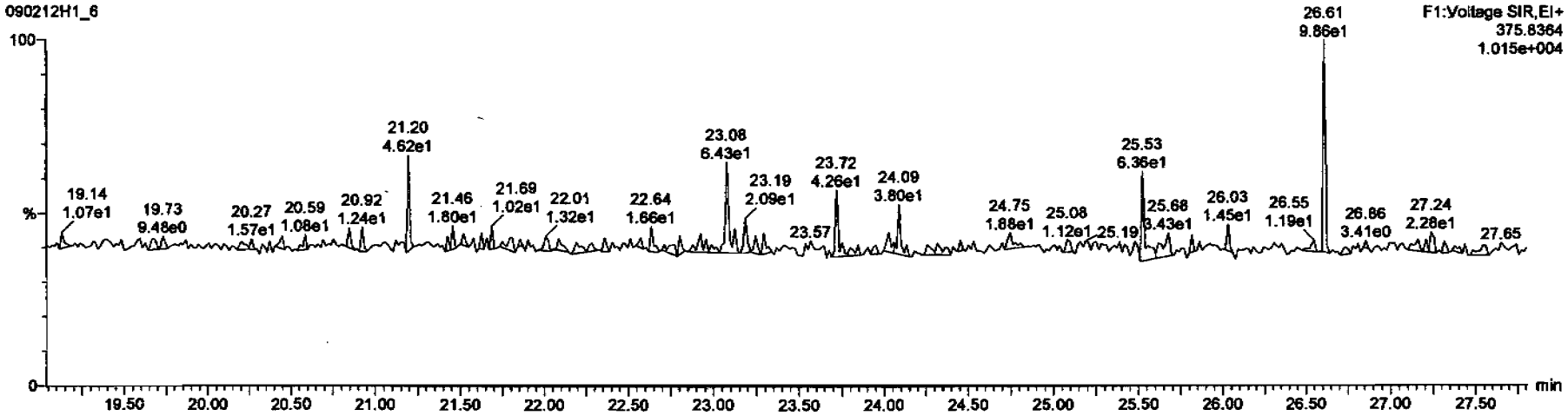

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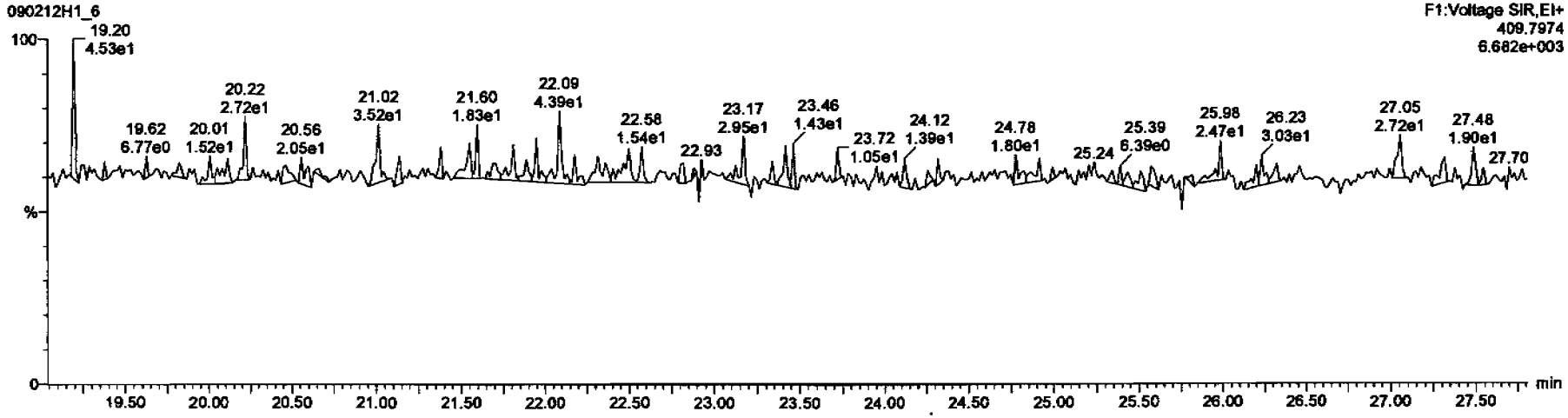

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DPE2

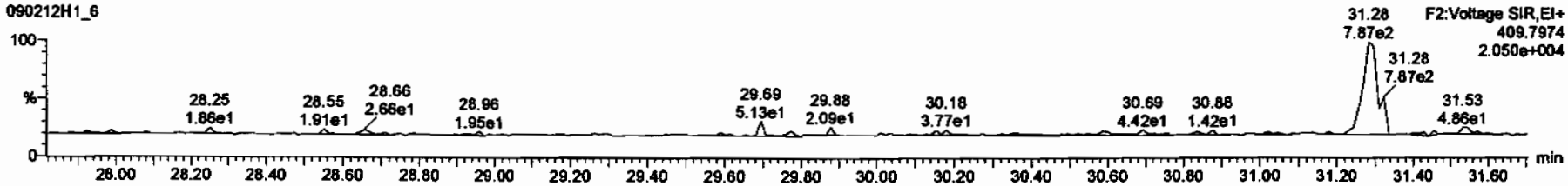

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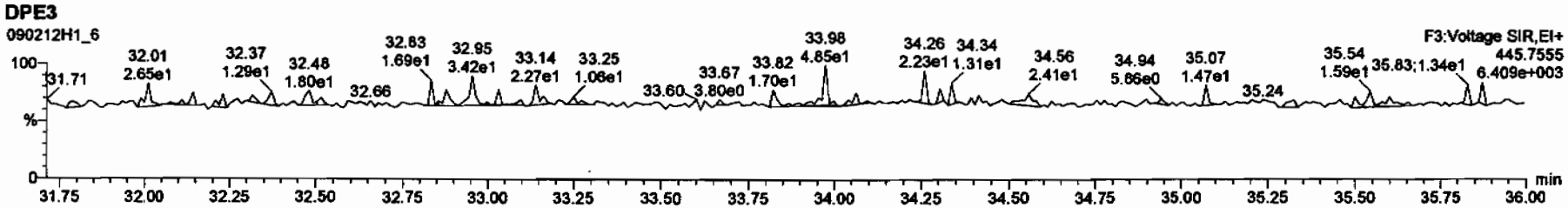

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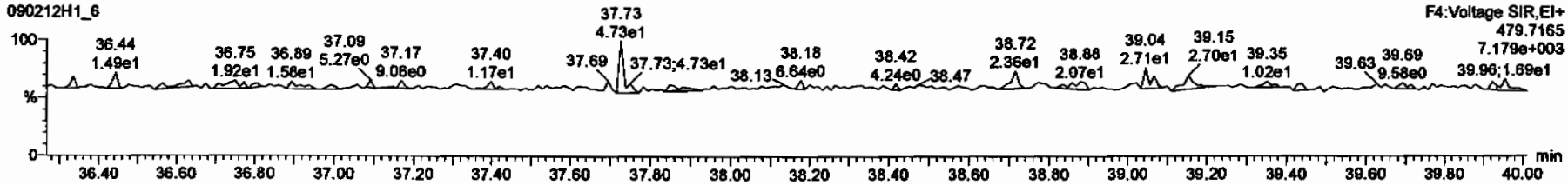

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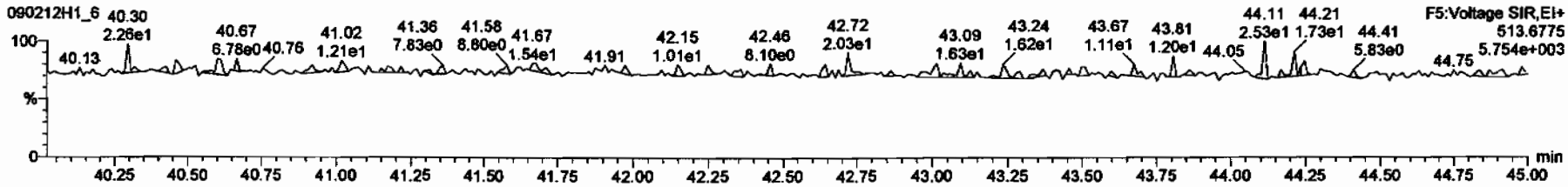

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Name: 090212H1_7, Date: 12-Feb-2009, Time: 16:07:03, ID: ST090212H1-6 1613 CS5 080917K, Description: 1613 CS5 080917K

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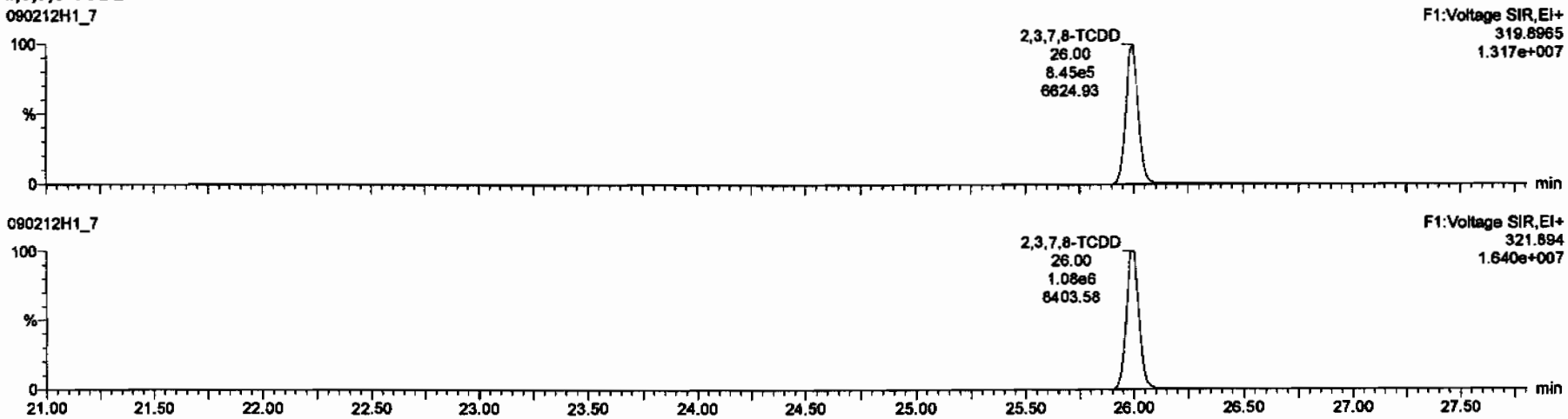

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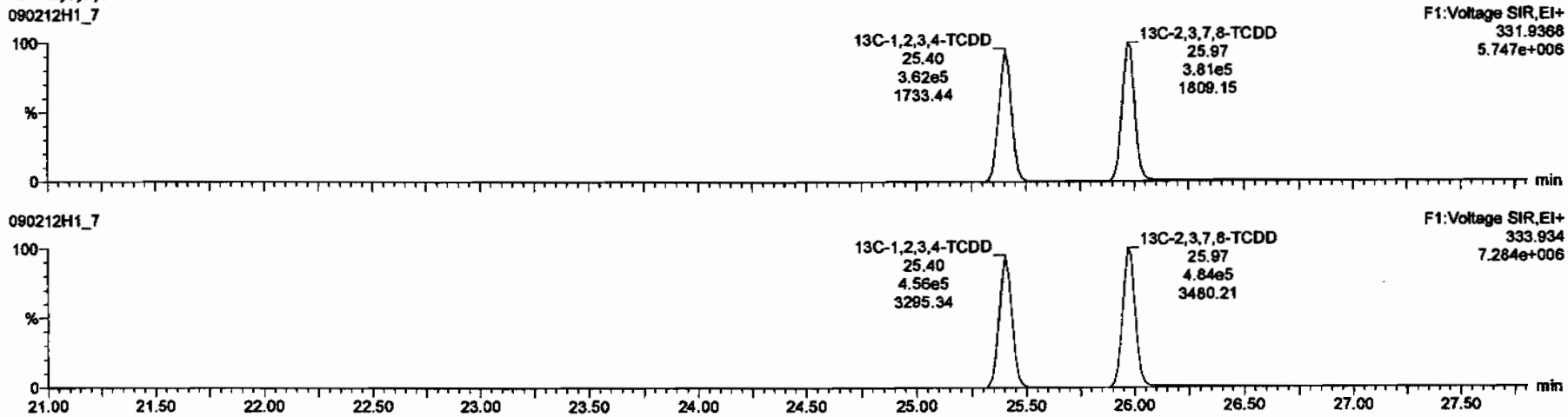

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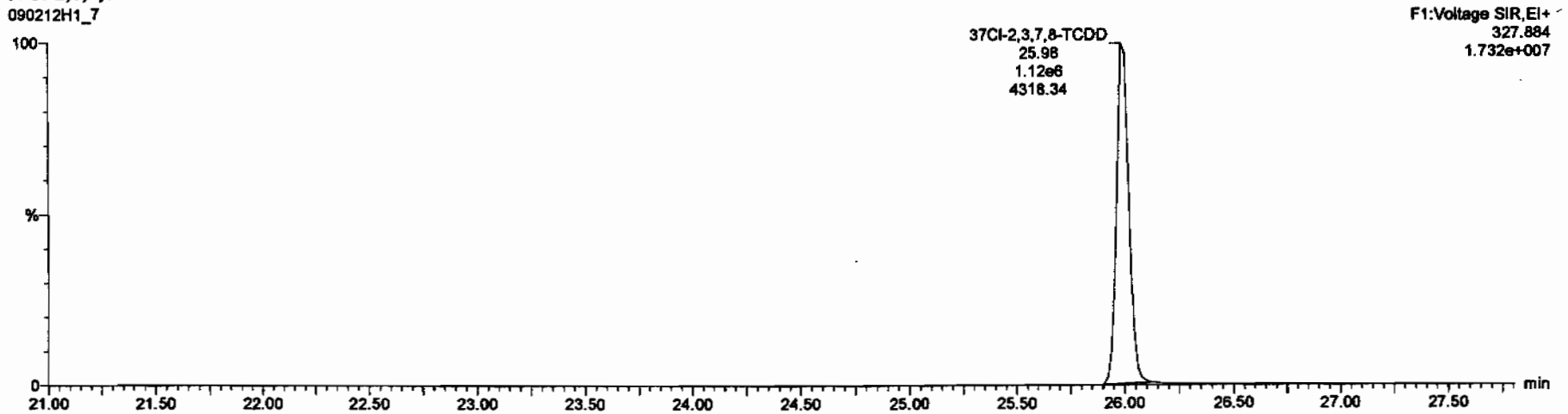

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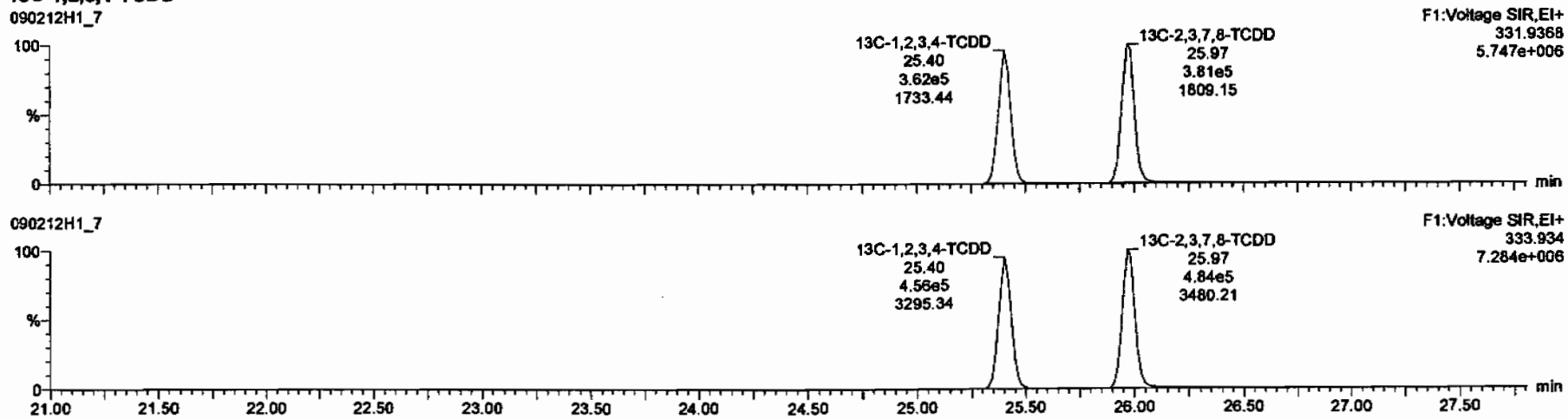

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1,2,3,7,8-PeCDD

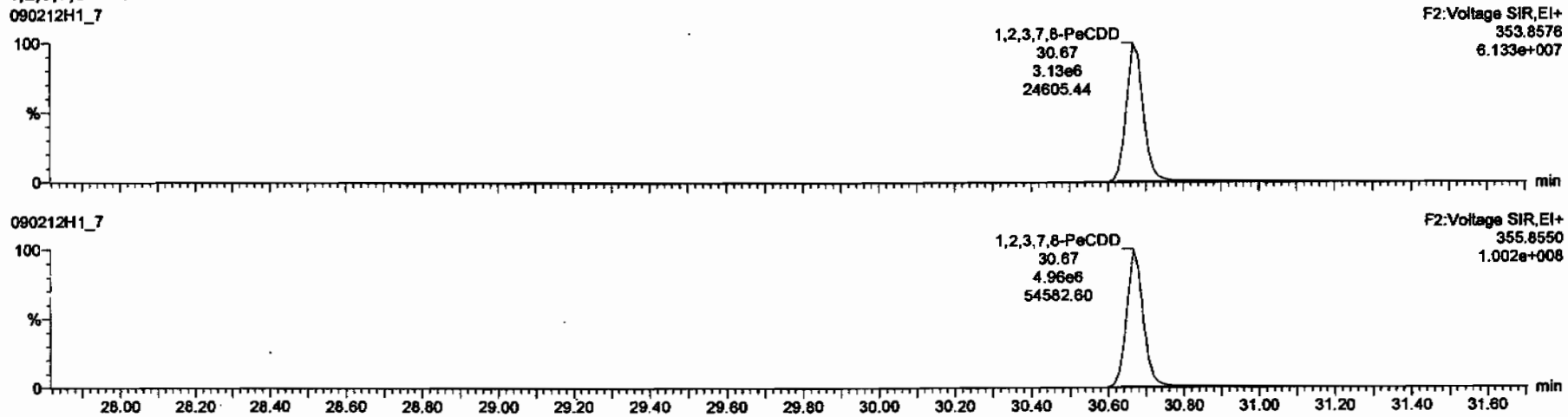

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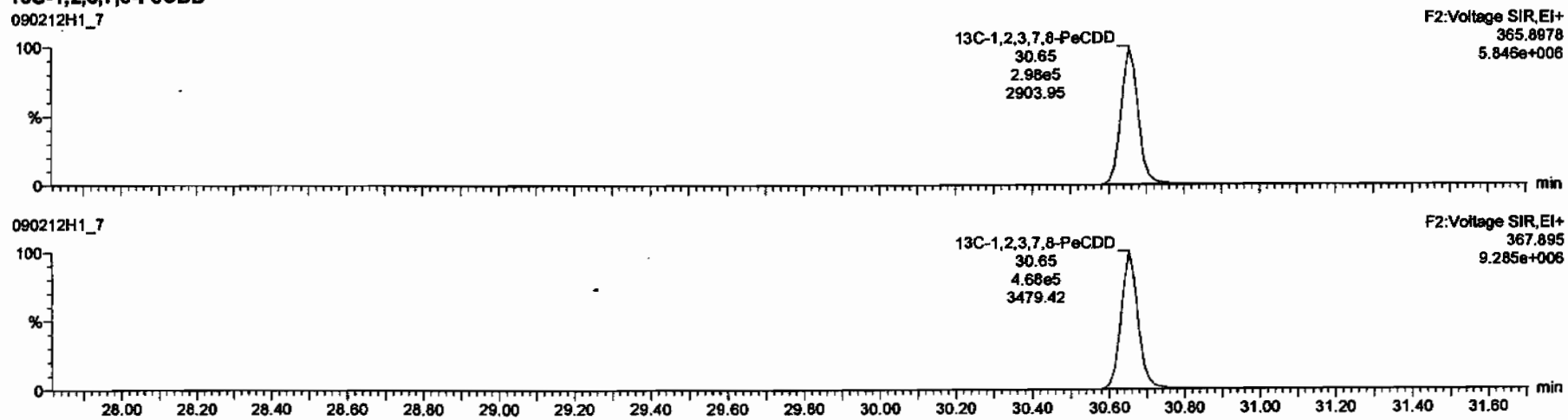

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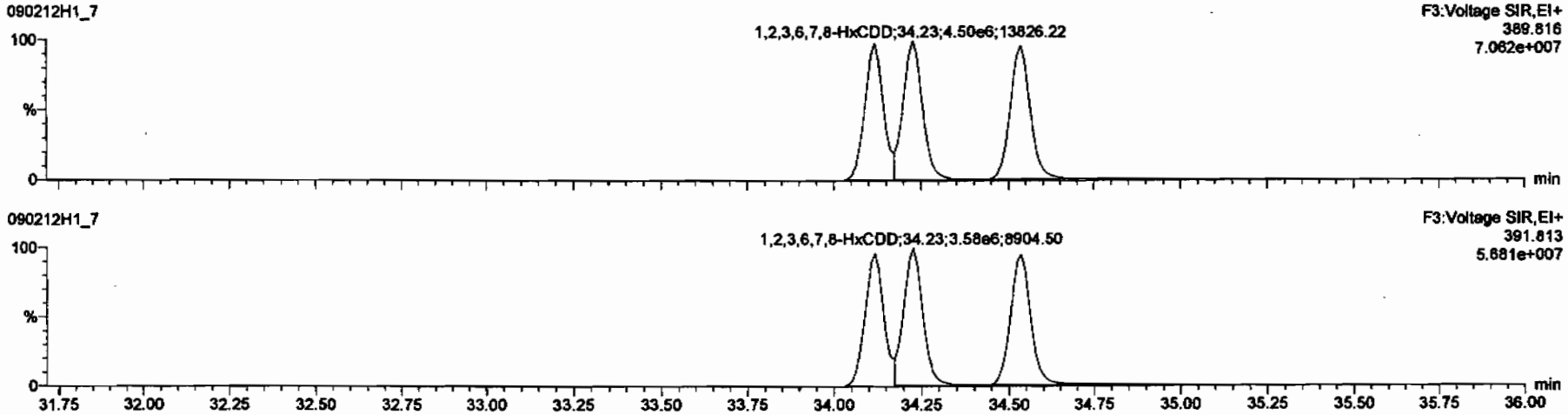

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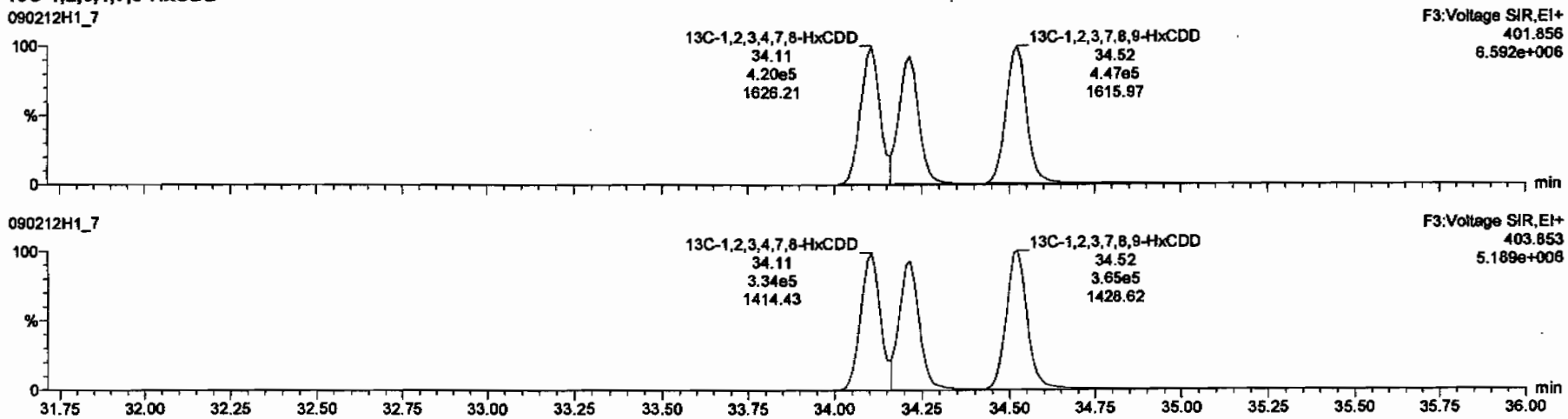

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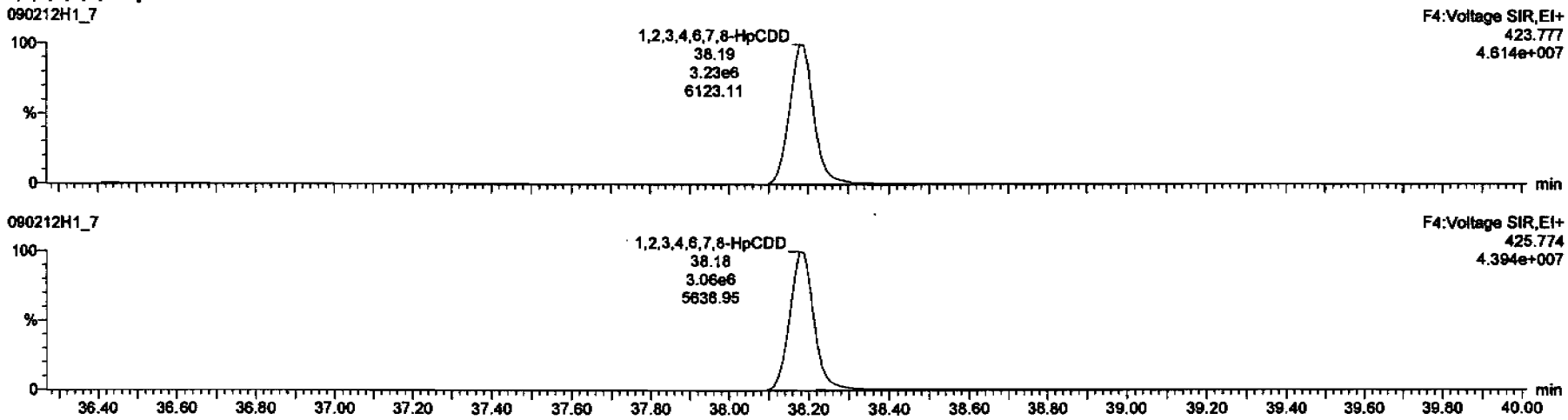

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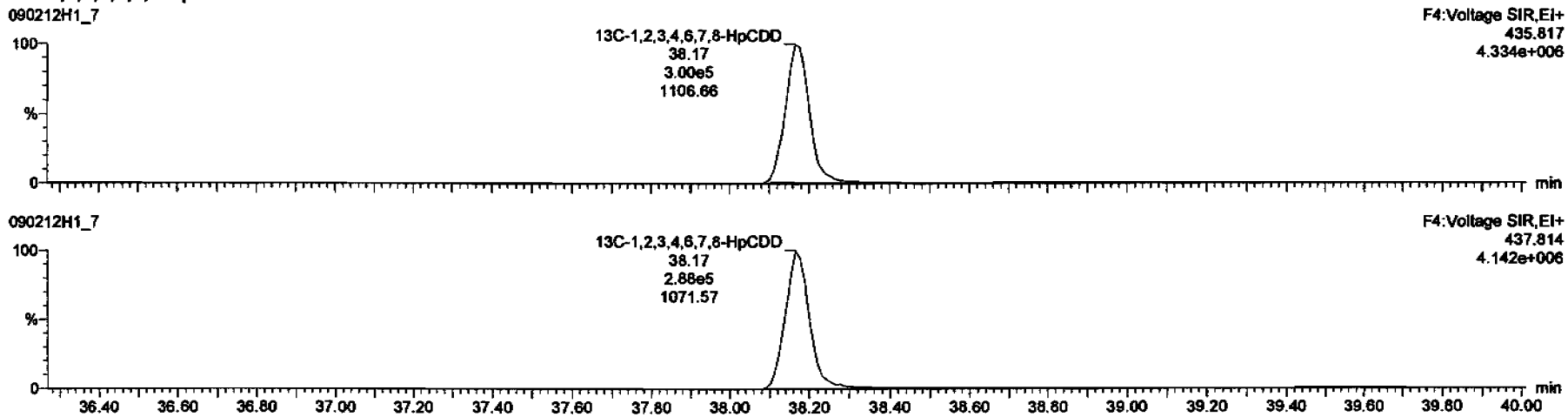

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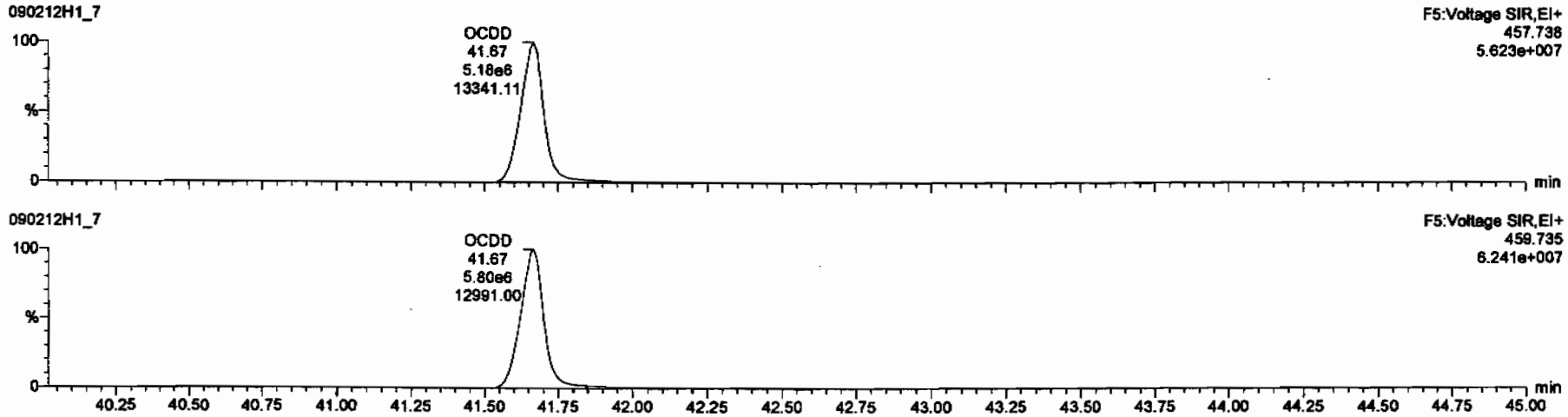

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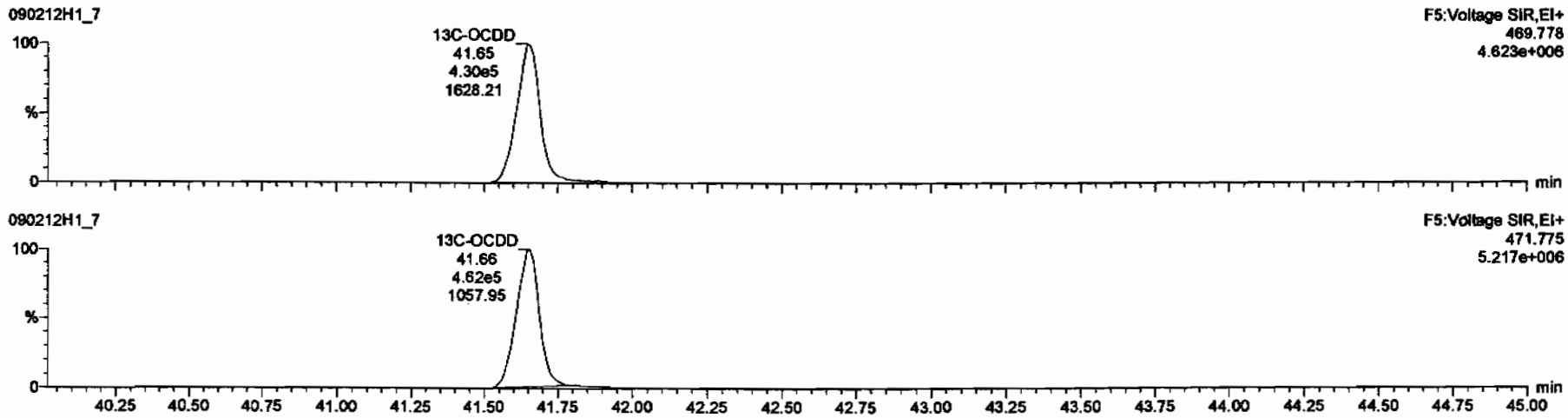

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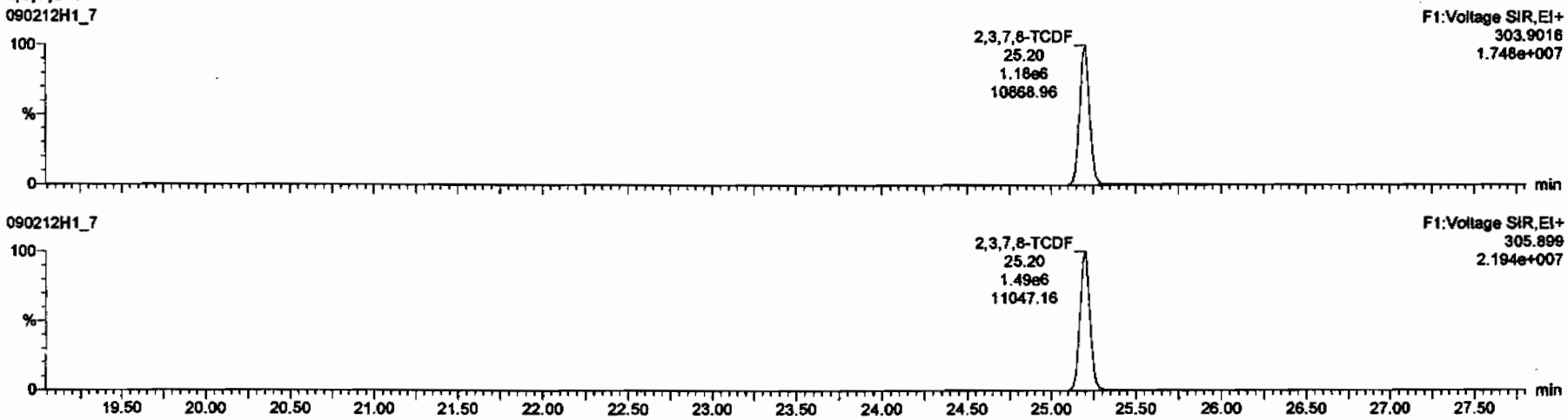

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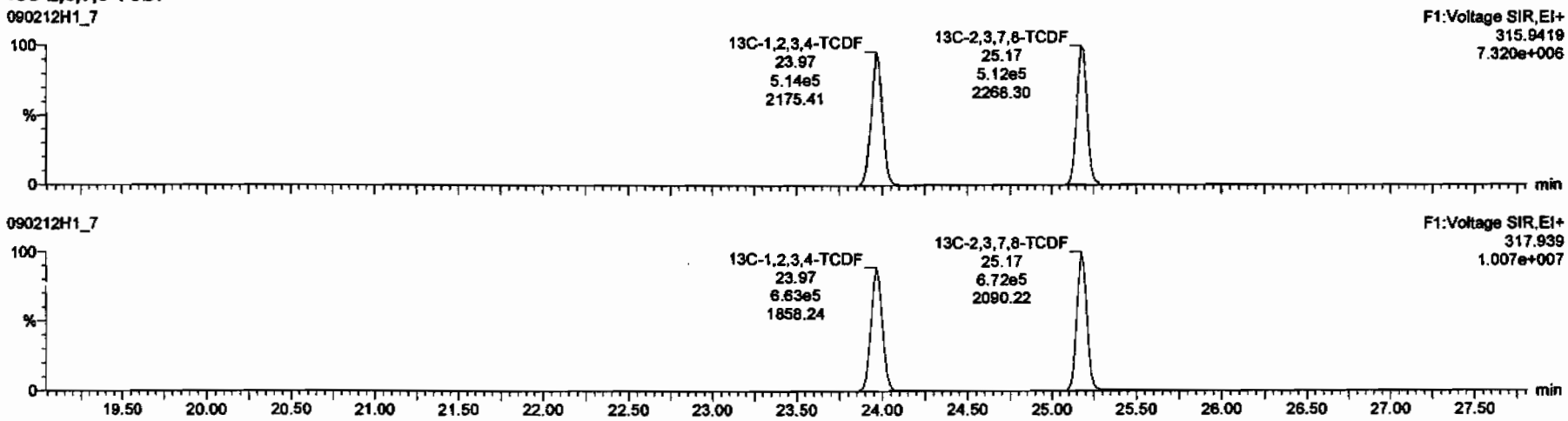

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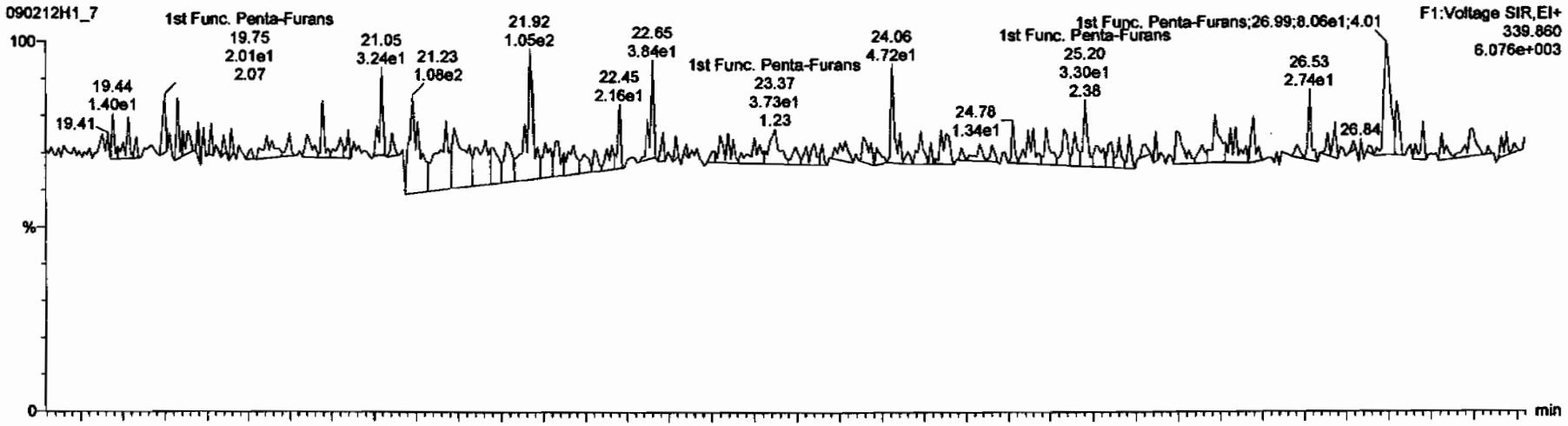

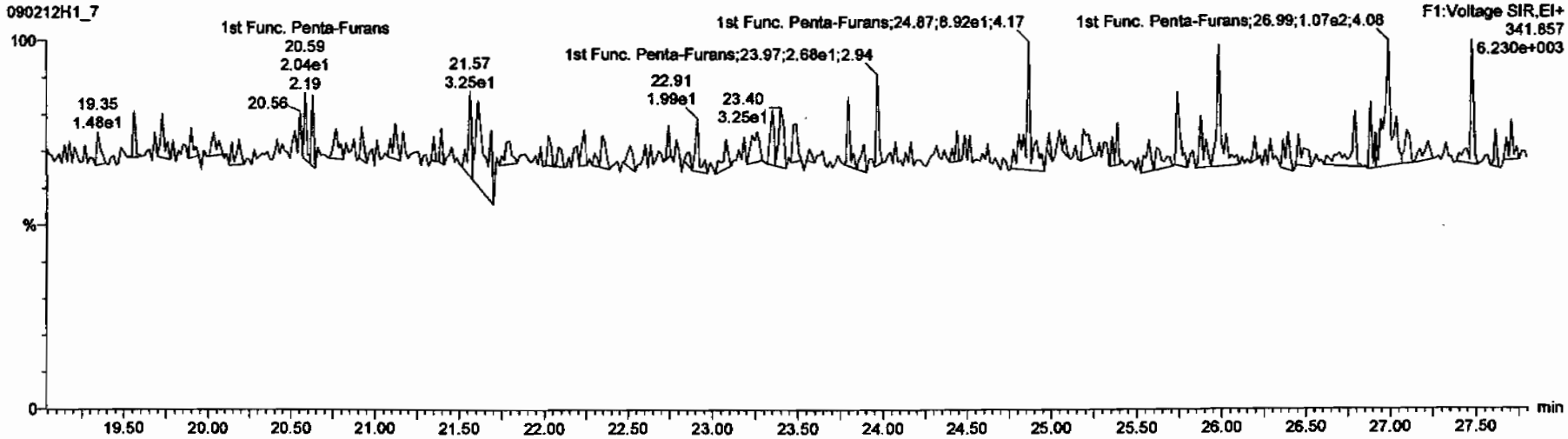

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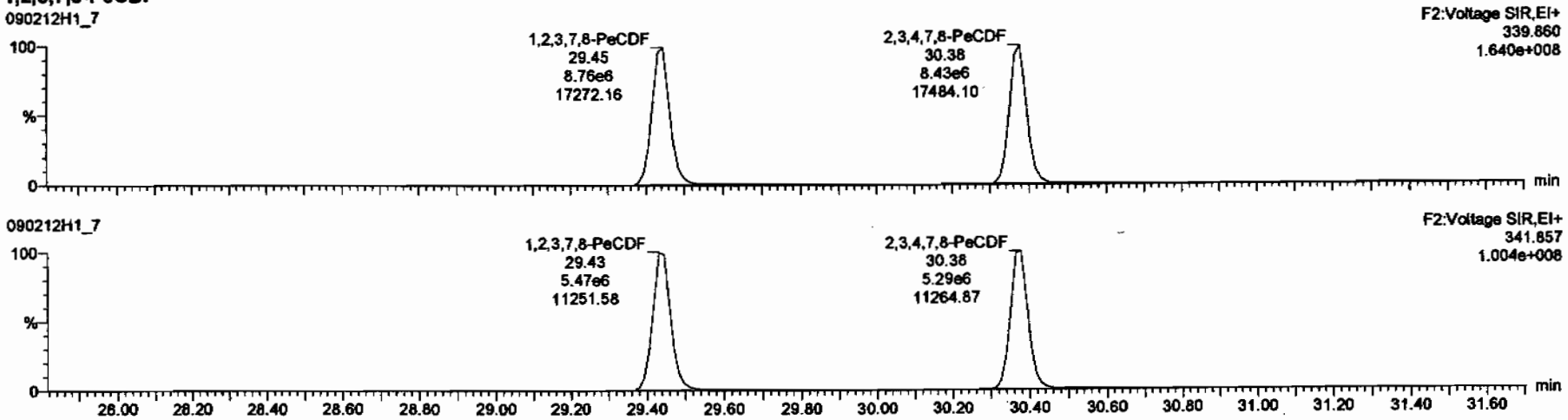

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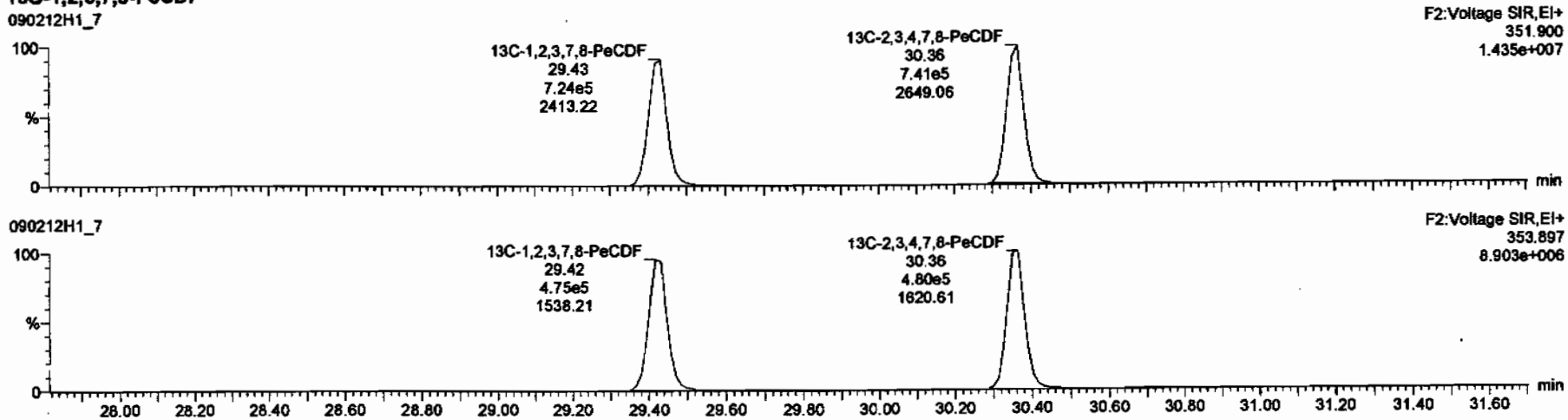

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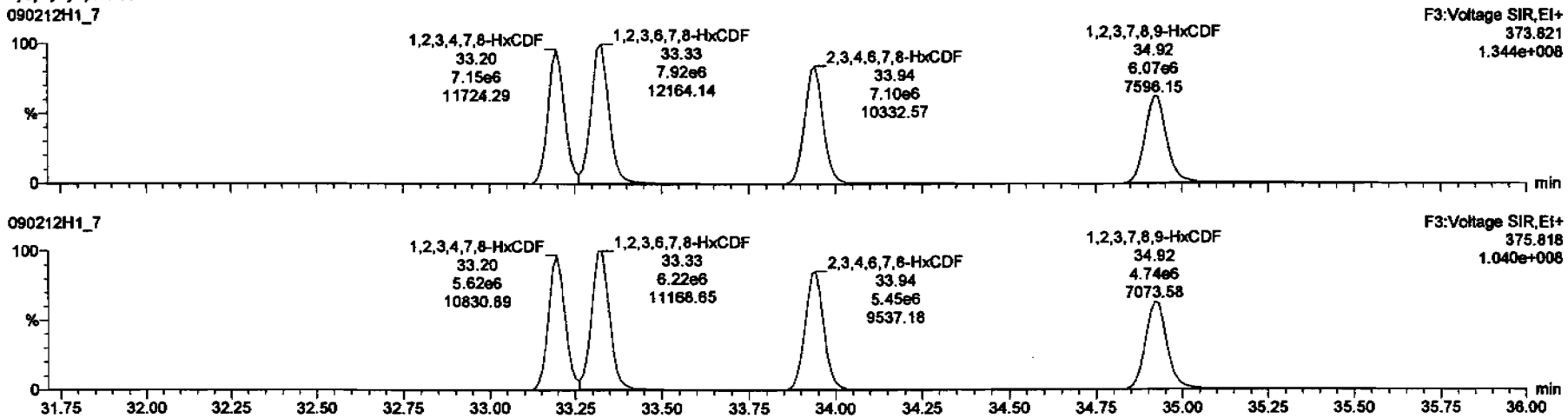

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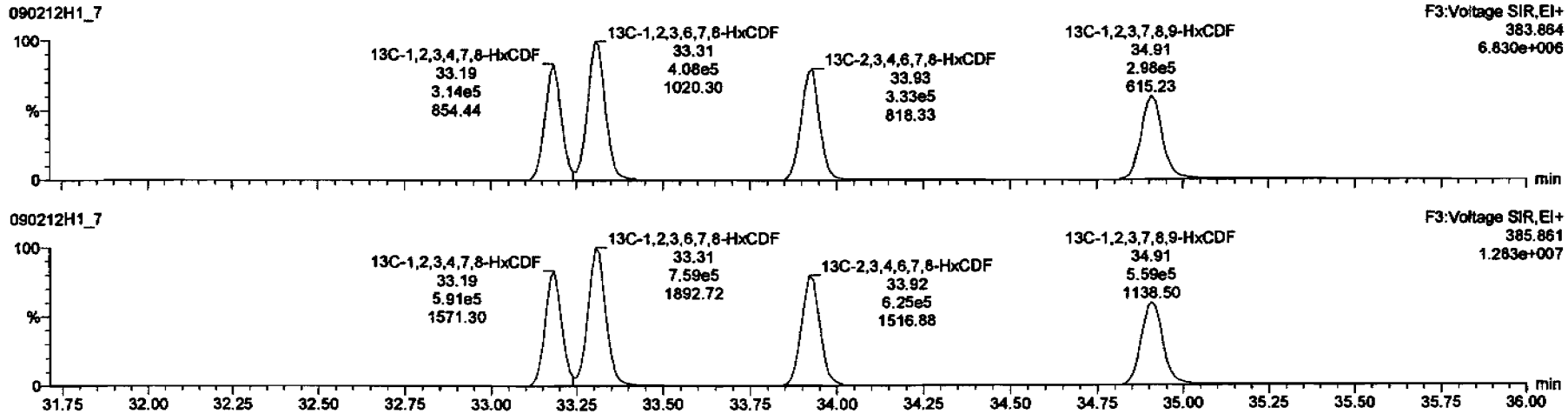

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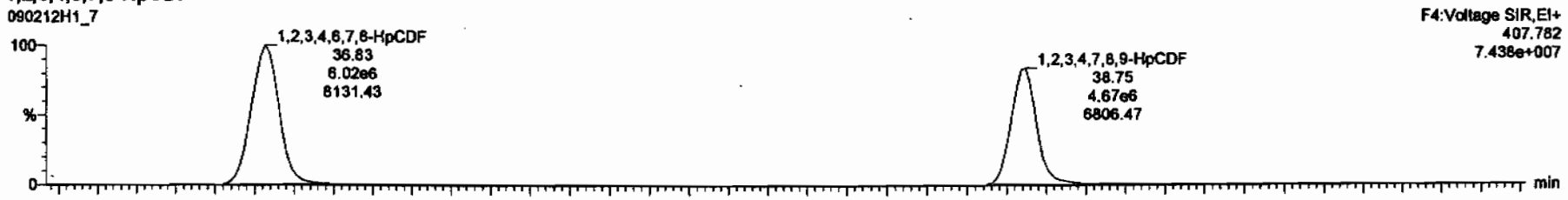

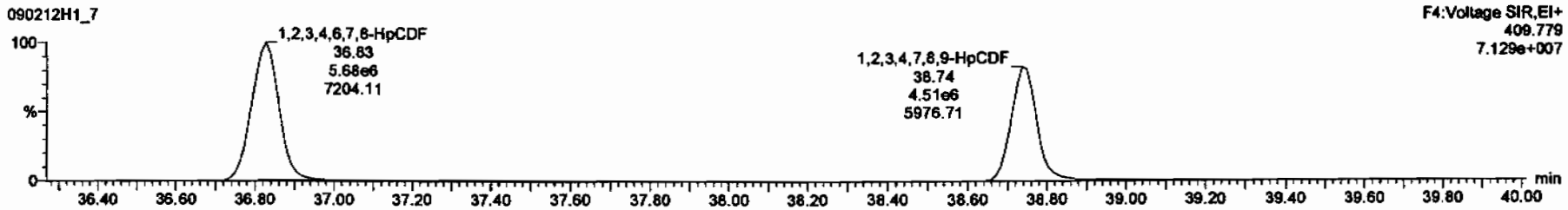

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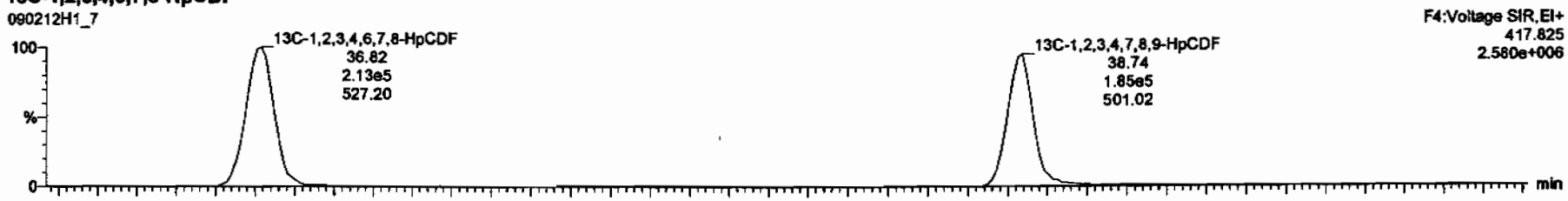

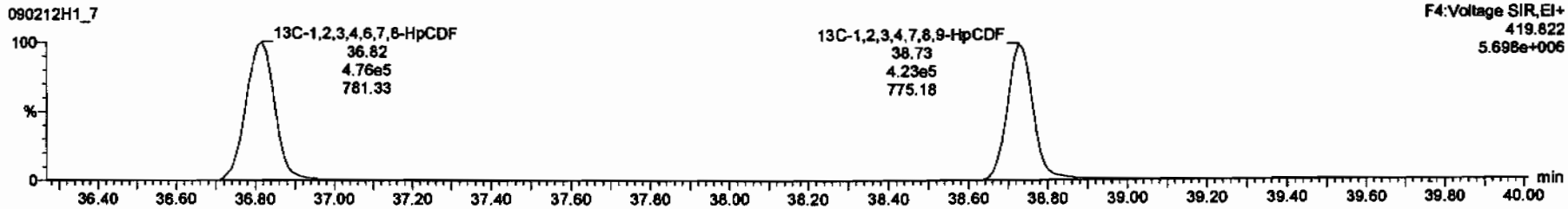

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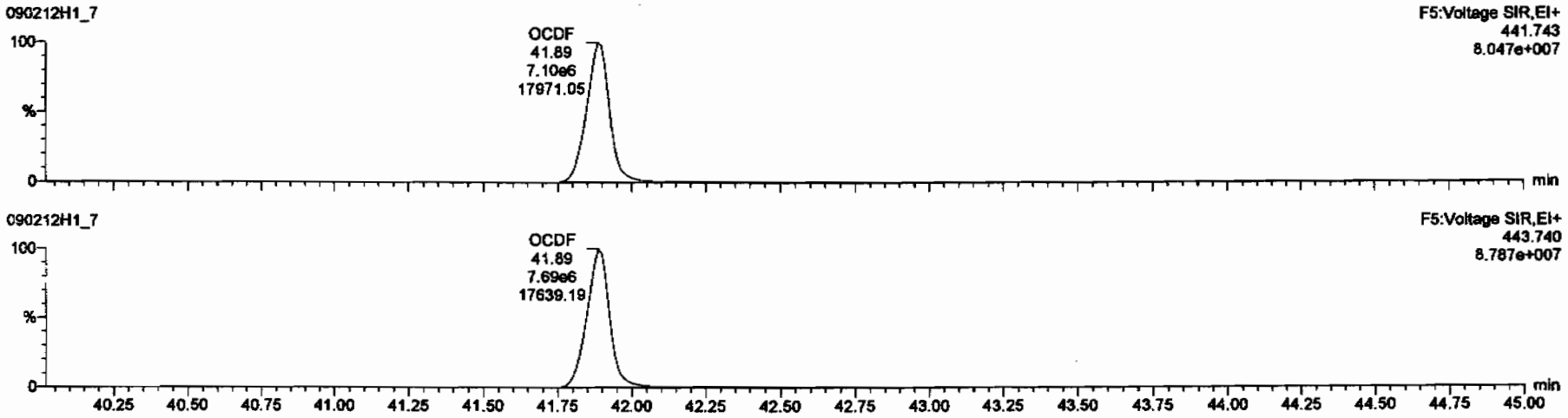

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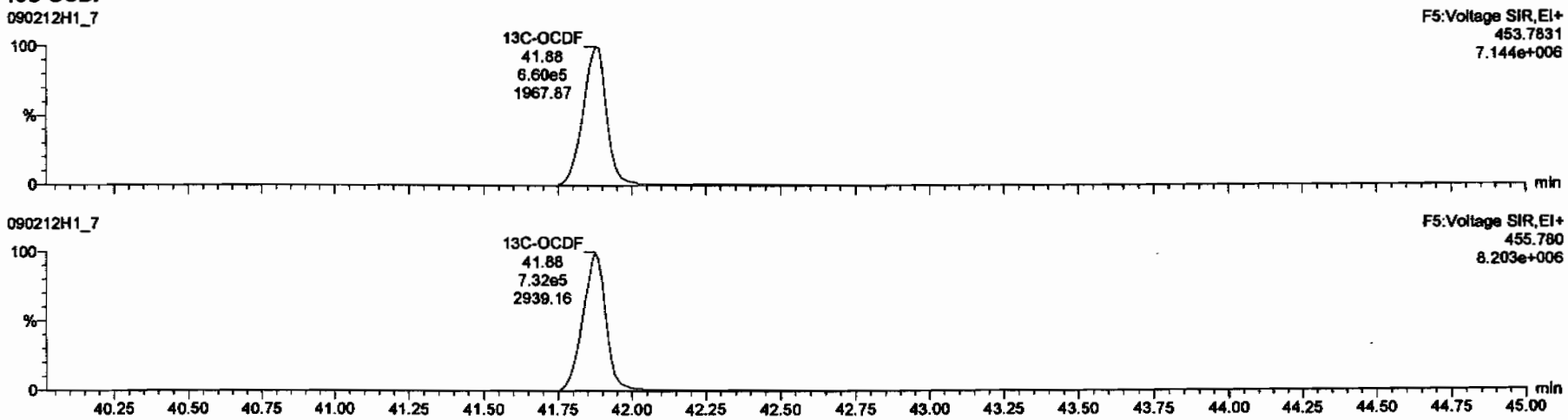

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PFK1

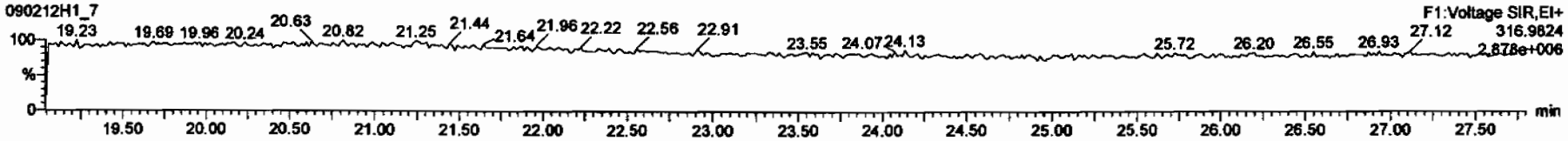

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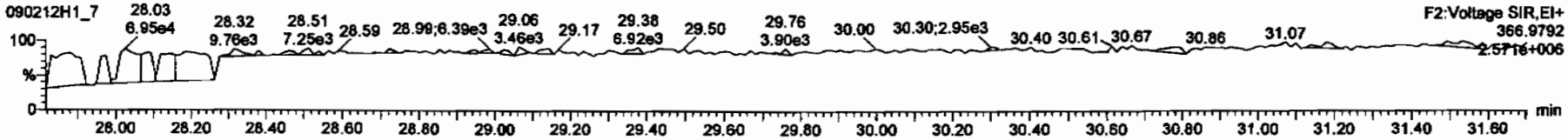

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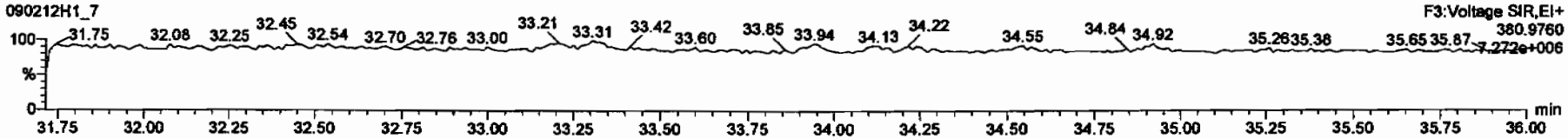

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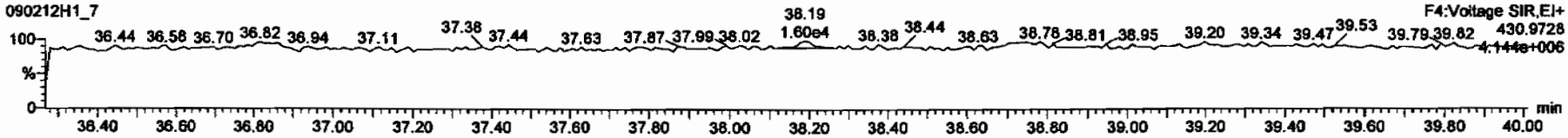

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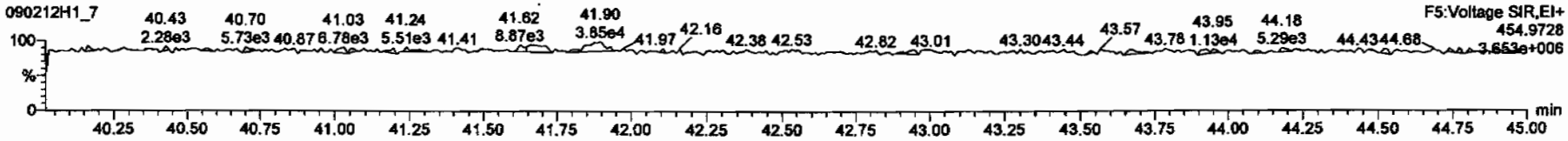

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Name: 090212H1_7, Date: 12-Feb-2009, Time: 16:07:03, ID: ST090212H1-6 1613 CS5 080917K, Description: 1613 CS5 080917K

DPE1

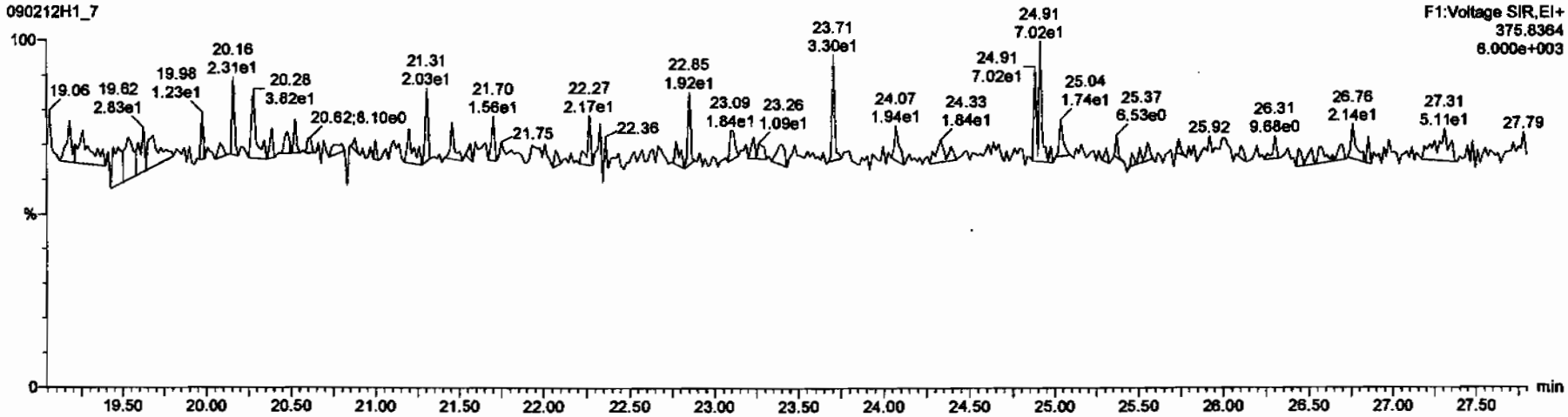

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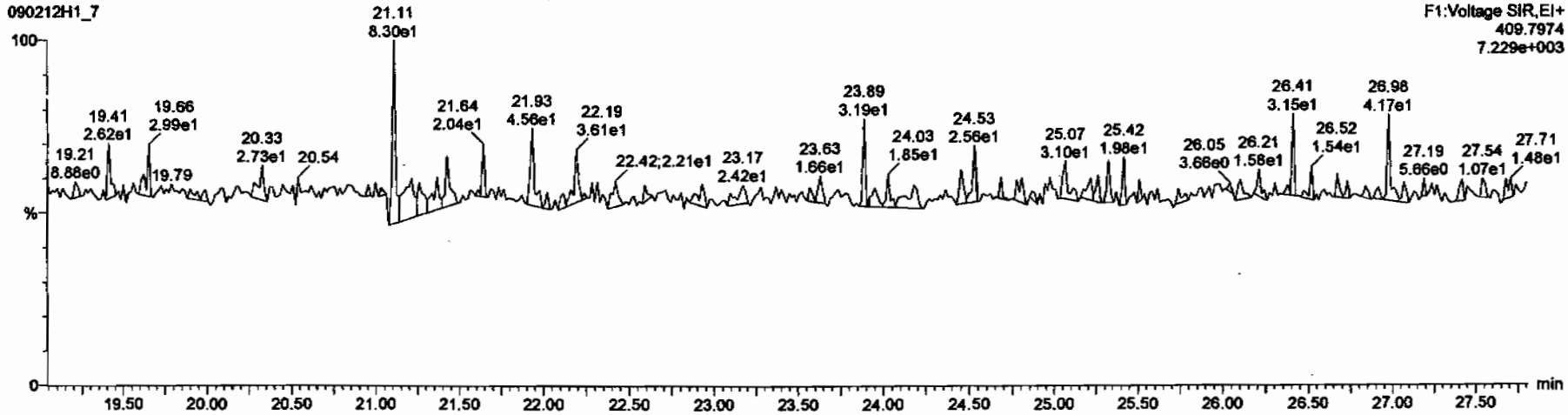

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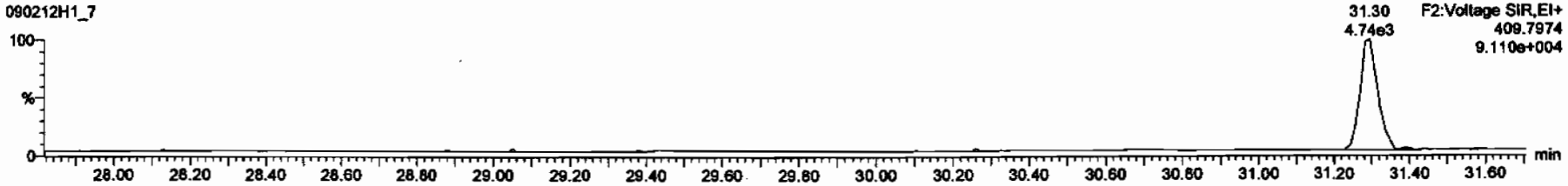

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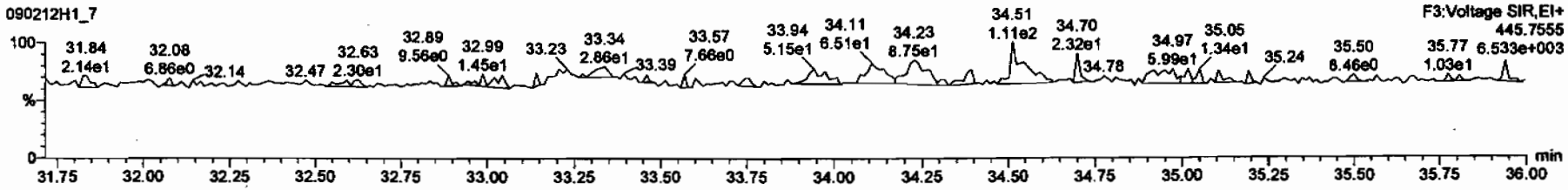

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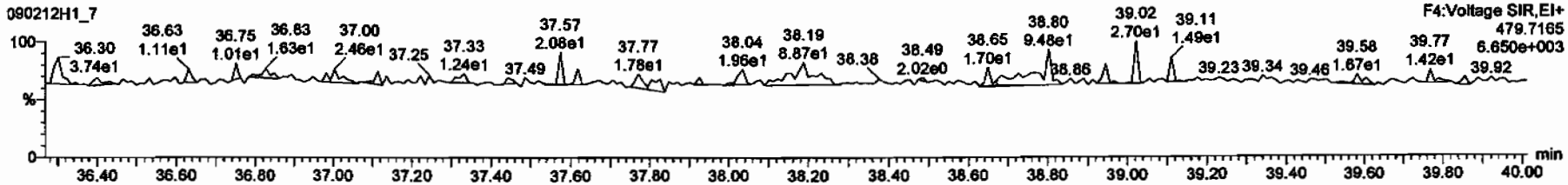

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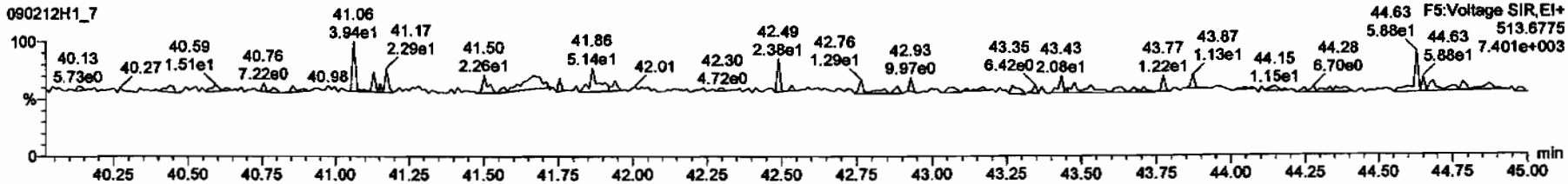

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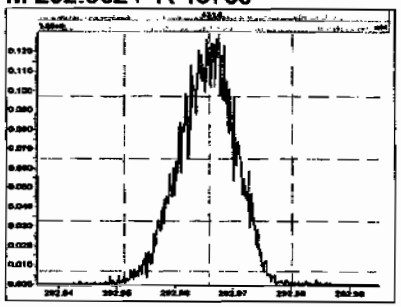

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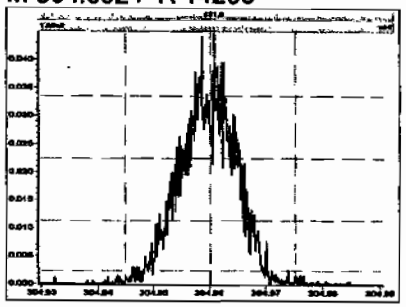

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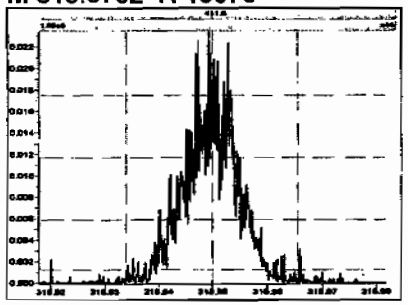

M 330.9792 R 13699

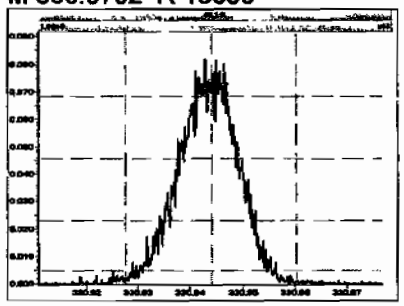

M 342.9792 R 13710

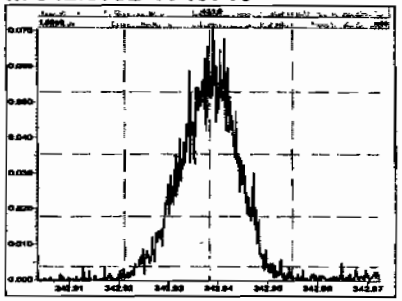

M 354.9792 R 14492

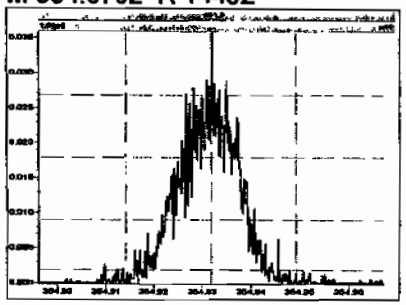

M 366.9792 R 14631

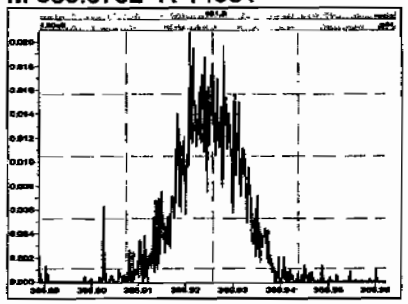

M 380.9760 R 13026

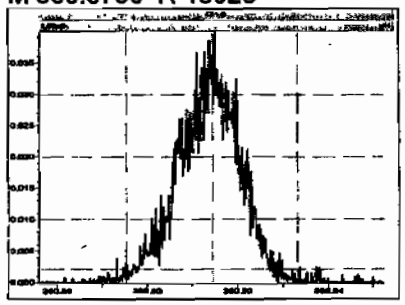

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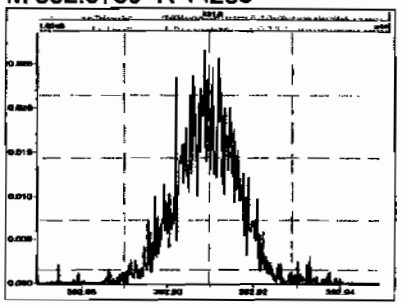

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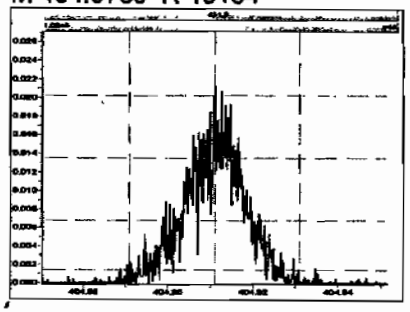

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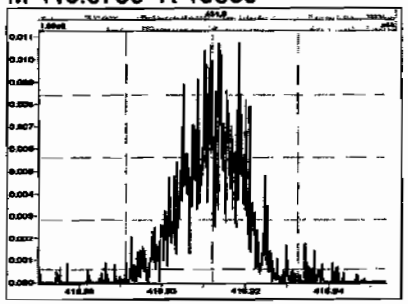

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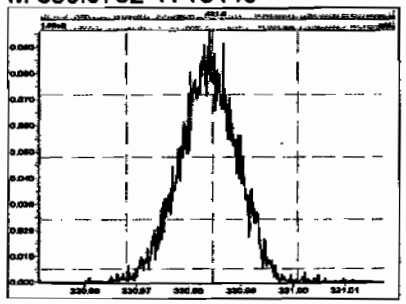

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M 342.9792 R 13880

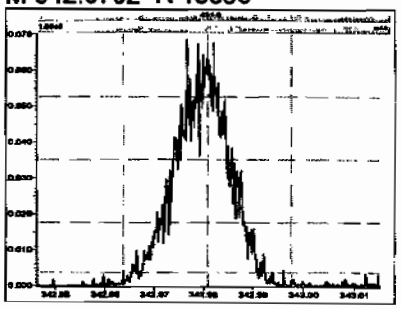

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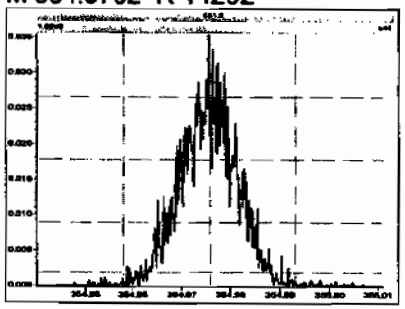

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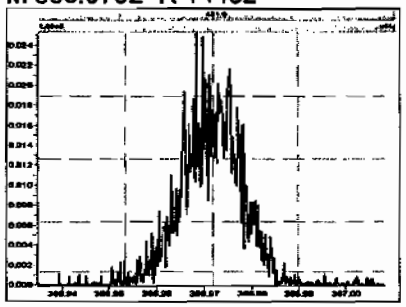

M 380.9760 R 13928

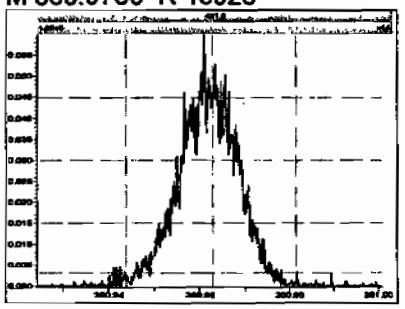

M 392.9760 R 14536

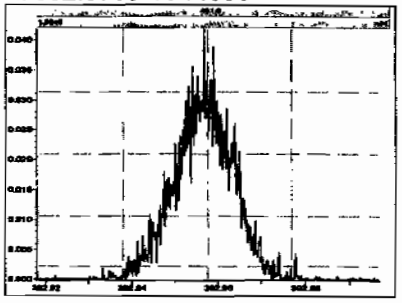

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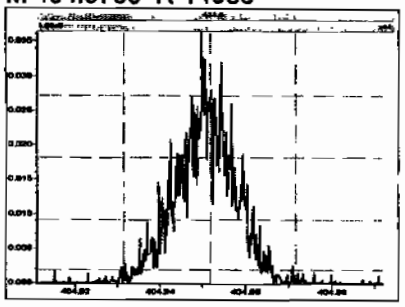

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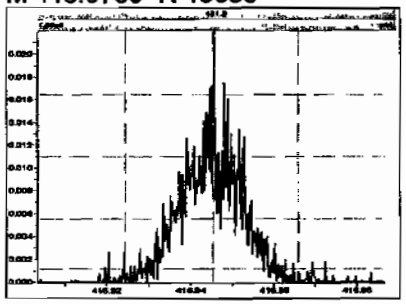

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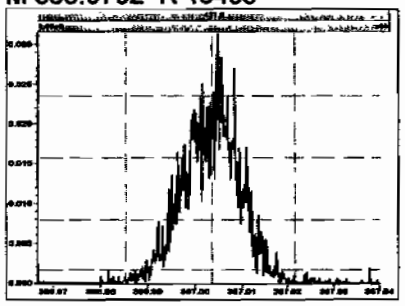

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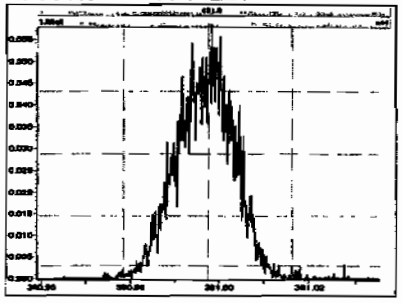

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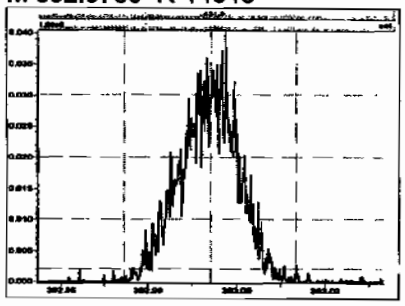

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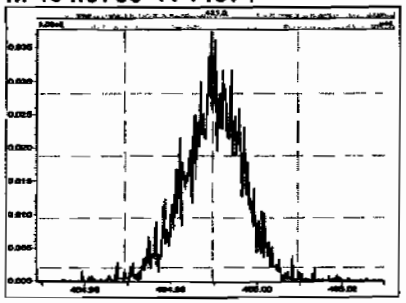

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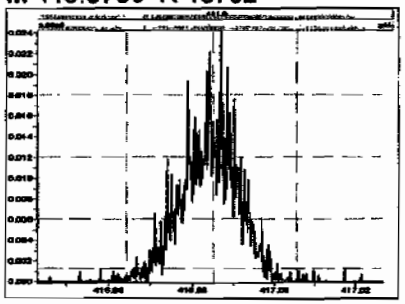

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M 430.9728 R 14874

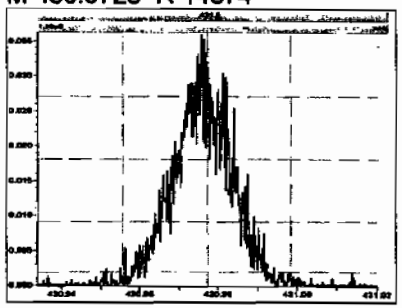

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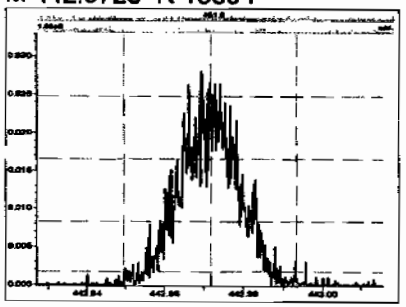

M 454.9728 R 13981

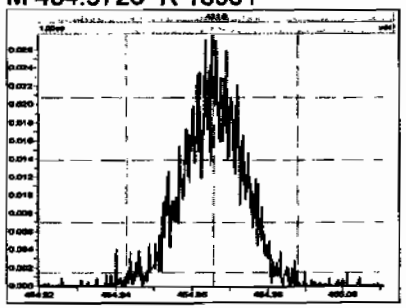

M 404.9760 R 14384

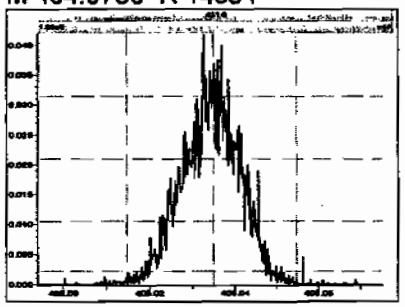

M 416.9760 R 16486

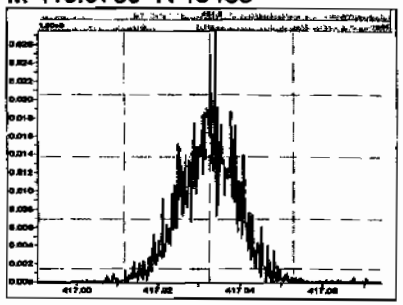

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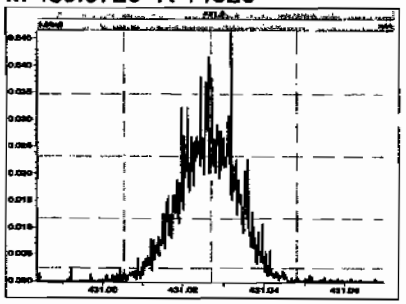

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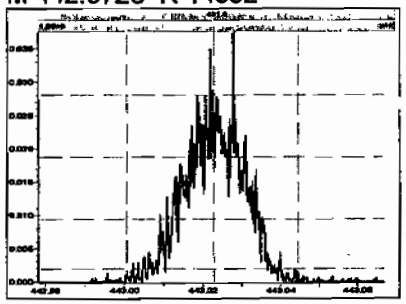

M 454.9728 R 13746

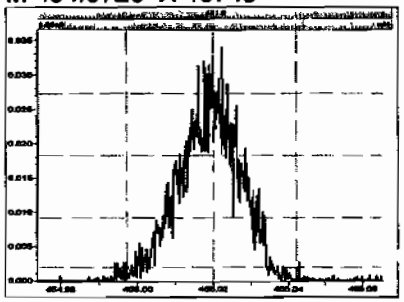

M 466.9728 R 16090

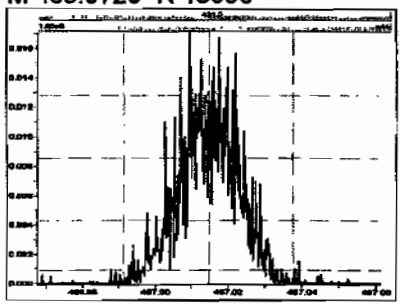

M 480.9696 R 13927

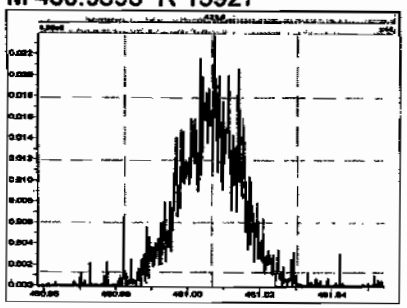

M 430.9728 R 12991

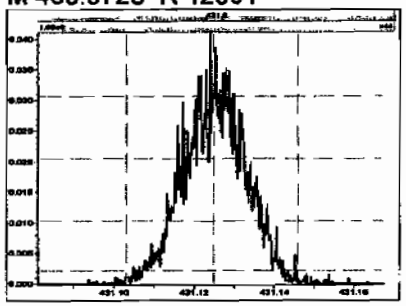

M 442.9728 R 13058

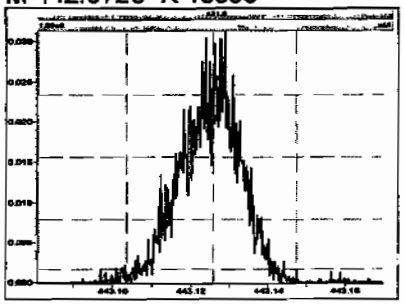

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M 454.9728 R 12791

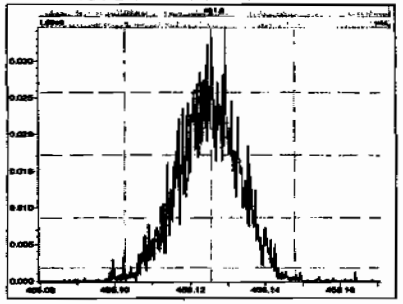

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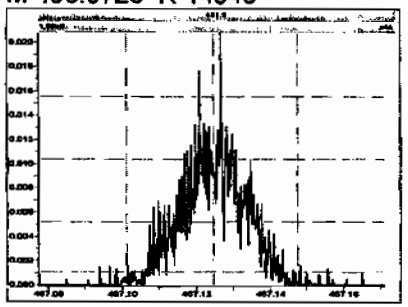

M 480.9696 R 12740

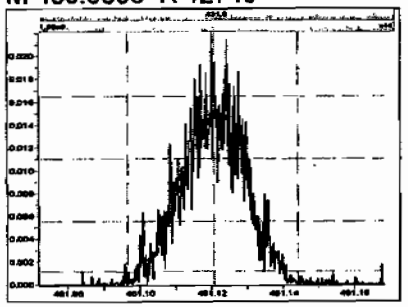

M 492.9696 R 15128

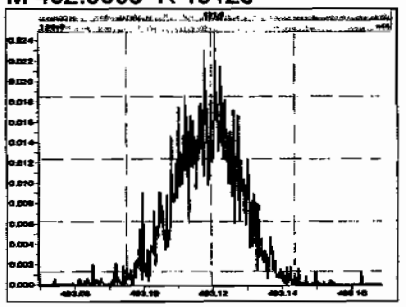

M 504.9696 R 13236

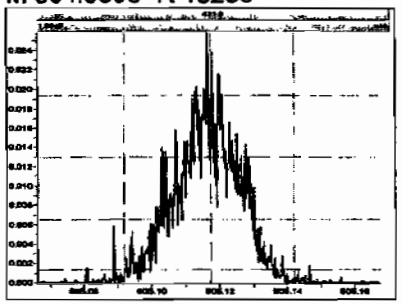

M 516.9697 R 17182

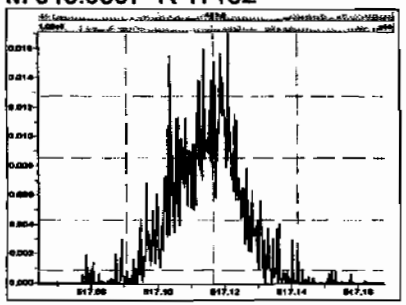

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2	1,2,3,7,8-PeCDD	1.01e5	0.61	NO	1.03	1.000	30.65	1.000	47.444		0.172	47.444
3	1,2,3,4,7,8-HxCDD	9.43e4	1.26	NO	1.00	1.000	34.11	1.001	60.533		0.392	60.533
4	1,2,3,6,7,8-HxCDD	8.97e4	1.28	NO	1.13	1.000	34.22	1.000	41.292		0.312	41.292
5	1,2,3,7,8,9-HxCDD	9.40e4	1.29	NO	1.10	1.000	34.52	1.009	48.966		0.335	48.966
6	1,2,3,4,6,7,8-HpCDD	7.06e4	1.02	NO	1.06	1.000	38.18	1.001	47.757		0.360	47.757
7	OCDD	1.05e5	0.91	NO	1.18	1.000	41.66	1.000	87.851		0.375	87.851
8	2,3,7,8-TCDF	3.59e4	0.80	NO	1.09	1.000	25.20	1.001	9.2692		0.0713	9.2692
9	1,2,3,7,8-PeCDF	1.90e5	1.60	NO	1.16	1.000	29.43	1.001	47.569		0.197	47.569
10	2,3,4,7,8-PeCDF	1.76e5	1.60	NO	1.12	1.000	30.36	1.001	49.959		0.207	49.959
11	1,2,3,4,7,8-HxCDF	1.51e5	1.22	NO	1.41	1.000	33.19	1.000	47.242		0.234	47.242
12	1,2,3,6,7,8-HxCDF	1.99e5	1.24	NO	1.22	1.000	33.31	1.000	52.247		0.205	52.247
13	2,3,4,6,7,8-HxCDF	1.49e5	1.26	NO	1.28	1.000	33.93	1.001	48.194		0.285	48.194
14	1,2,3,7,8,9-HxCDF	1.18e5	1.28	NO	1.26	1.000	34.91	1.000	50.089		0.402	50.089
15	1,2,3,4,6,7,8-HpCDF	1.26e5	1.05	NO	1.69	1.000	36.81	1.000	45.609		0.324	45.609
16	1,2,3,4,7,8,9-HpCDF	9.92e4	1.09	NO	1.48	1.000	38.74	1.000	53.044		0.451	53.044
17	OCDF	1.36e5	0.92	NO	1.10	1.000	41.88	1.001	~~77825~~		102	77825
18	13C-2,3,7,8-TCDD	2.60e5	0.79	NO	1.01	1.000	25.97	1.022	100.68	101	0.251	
19	13C-1,2,3,7,8-PeCDD	2.07e5	0.62	NO	0.827	1.000	30.64	1.206	98.194	98.2	0.366	
20	13C-1,2,3,4,7,8-HxCDD	1.56e5	1.23	NO	0.916	1.000	34.08	0.988	96.272	96.3	1.12	
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22	13C-1,2,3,4,6,7,8-HpCDD	1.39e5	1.04	NO	0.708	1.000	38.16	1.106	111.12	111	0.936	
23	13C-OCDD	2.03e5	0.90	NO	0.503	1.000	41.65	1.207	229.27	115	1.10	
24	13C-2,3,7,8-TCDF	3.56e5	0.77	NO	0.977	1.000	25.17	0.991	47241	~~47200~~	47.8	
25	13C-1,2,3,7,8-PeCDF	3.45e5	1.53	NO	0.896	1.000	29.41	1.158	49875	~~49900~~	135	
26	13C-2,3,4,7,8-PeCDF	3.15e5	1.57	NO	0.900	1.000	30.34	1.194	45355	~~45400~~	135	
27	13C-1,2,3,4,7,8-HxCDF	2.27e5	0.52	NO	1.17	1.000	33.17	0.962	110.01	110	1.09	
28	13C-1,2,3,6,7,8-HxCDF	3.11e5	0.53	NO	1.52	1.000	33.29	0.965	116.12	116	0.841	
29	13C-2,3,4,6,7,8-HxCDF	2.41e5	0.53	NO	1.25	1.000	33.91	0.983	109.27	109	1.02	
30	13C-1,2,3,7,8,9-HxCDF	1.87e5	0.53	NO	1.05	1.000	34.90	1.011	100.48	100	1.21	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	Name	Resp	RA		RRF	RWC	RT	RRT	Conc	IR	EMP
	31 13C-1,2,3,4,6,7,8-HpCDF	1.64e5	0.42	NO	0.868	1.000	36.80	1.066	107.17	107	0.875
	32 13C-1,2,3,4,7,8,9-HpCDF	1.26e5	0.43	NO	0.727	1.000	38.73	1.122	98.571	98.6	1.05
	33 13C-OCDF	3.18e2	0.17	YES	0.760	1.000	41.82	1.212	0.23753	~~0.119~~	0.197
	34 37Cl-2,3,7,8-TCDD	2.82e4			0.668	1.000	25.98	1.023	16.616	166	0.0976
	35 13C-1,2,3,4-TCDD	2.54e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.254
	36 13C-1,2,3,4-TCDF	7.72e2	0.44	YES	1.00	1.000	23.92	0.000	100.00	100	46.7
	37 13C-1,2,3,7,8,9-HxCDD	1.76e5	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	1.03

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDD

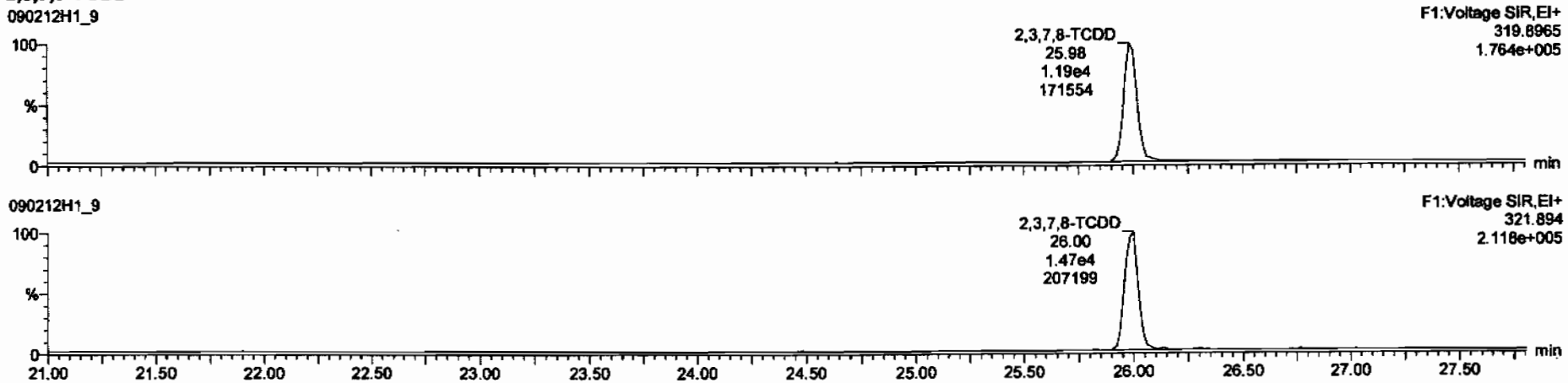

13C-2,3,7,8-TCDD

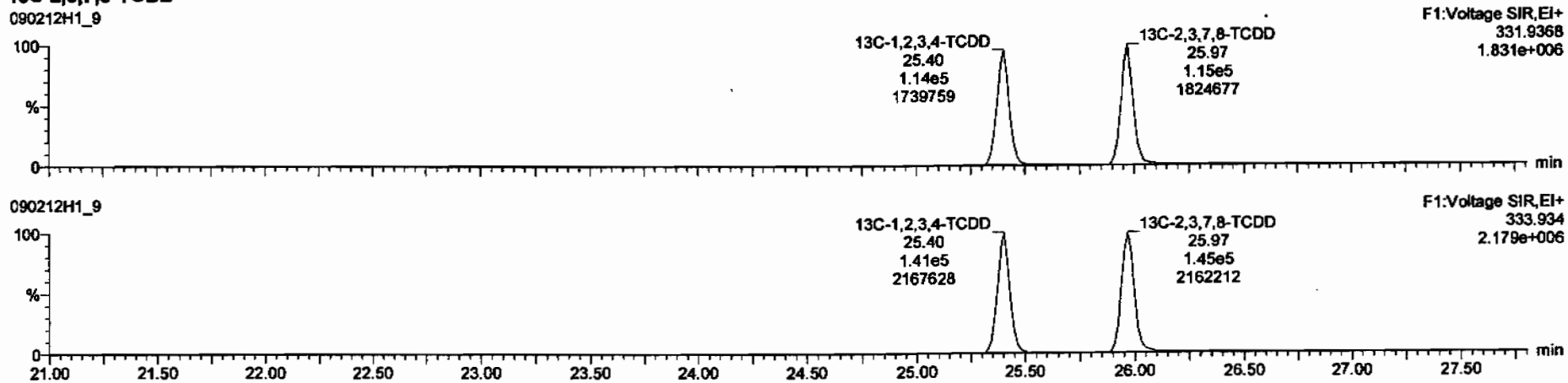

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

37Cl-2,3,7,8-TCDD

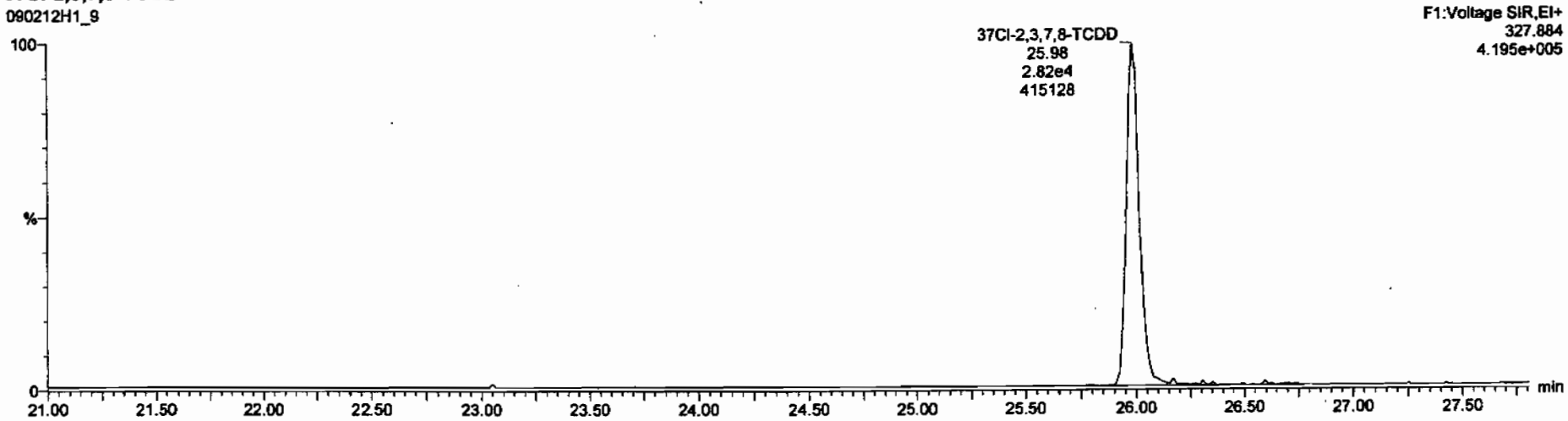

13C-1,2,3,4-TCDD

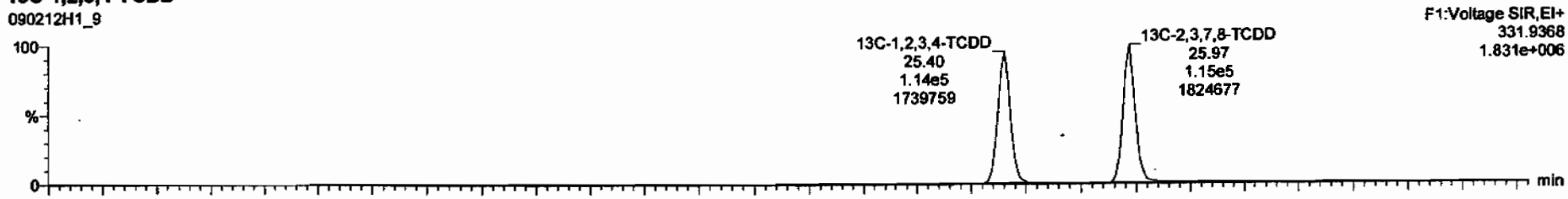

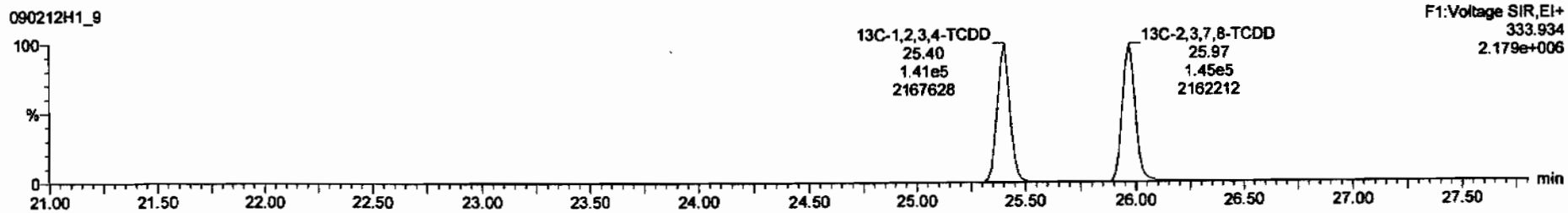

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,7,8-PeCDD

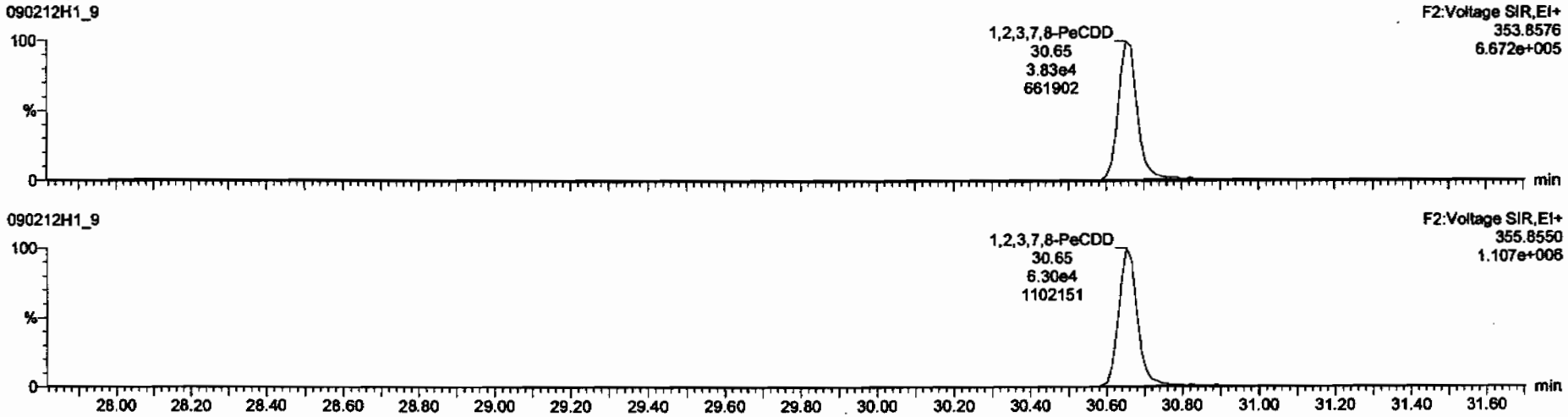

13C-1,2,3,7,8-PeCDD

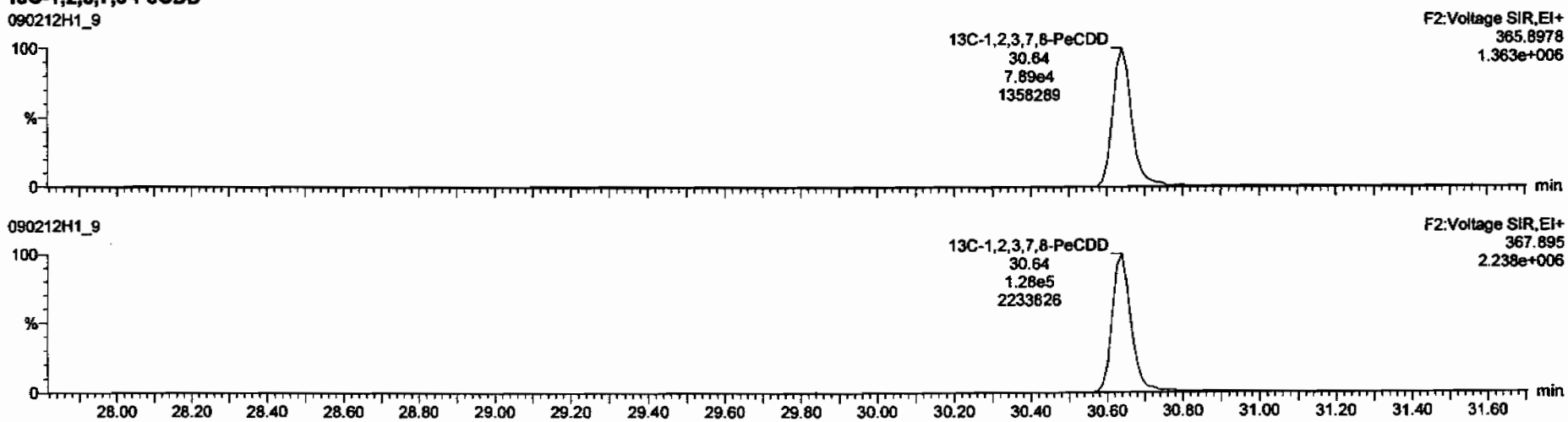

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,7,8-HxCDD

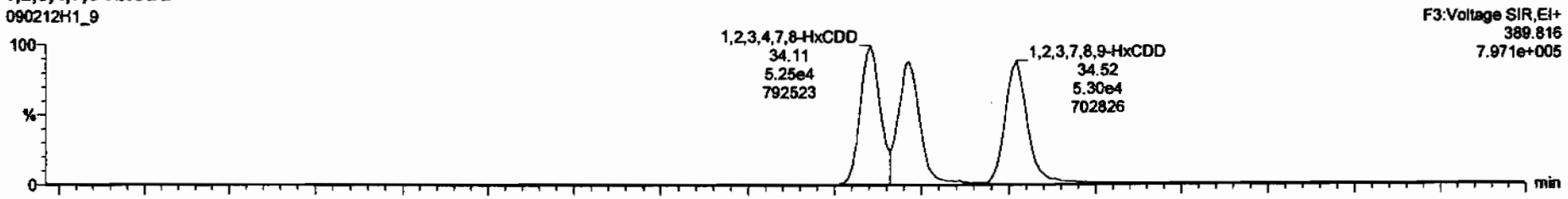

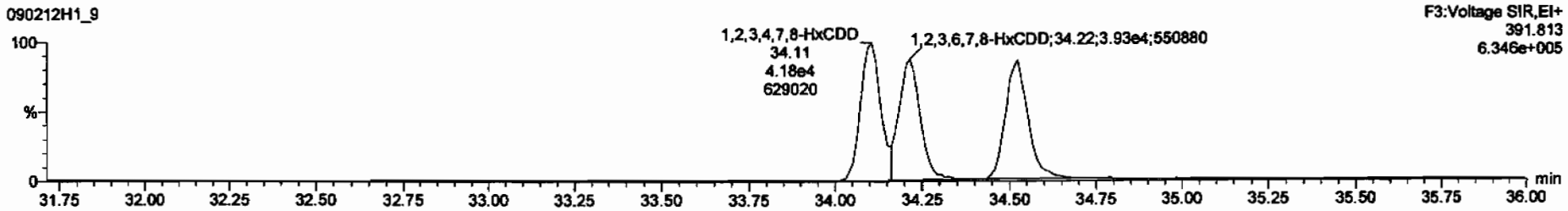

13C-1,2,3,4,7,8-HxCDD

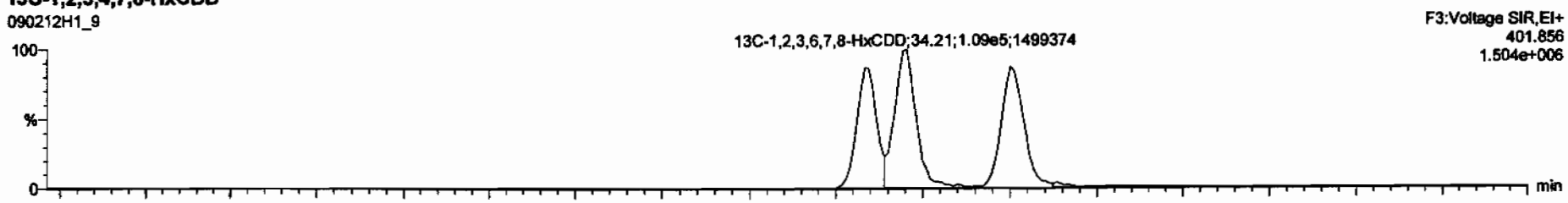

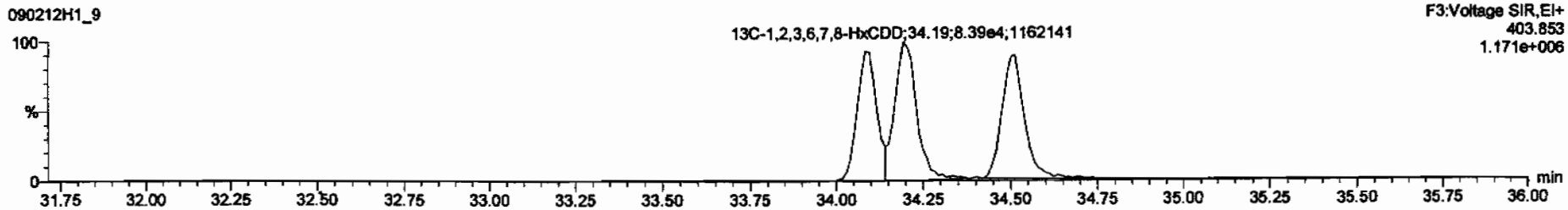

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,6,7,8-HpCDD

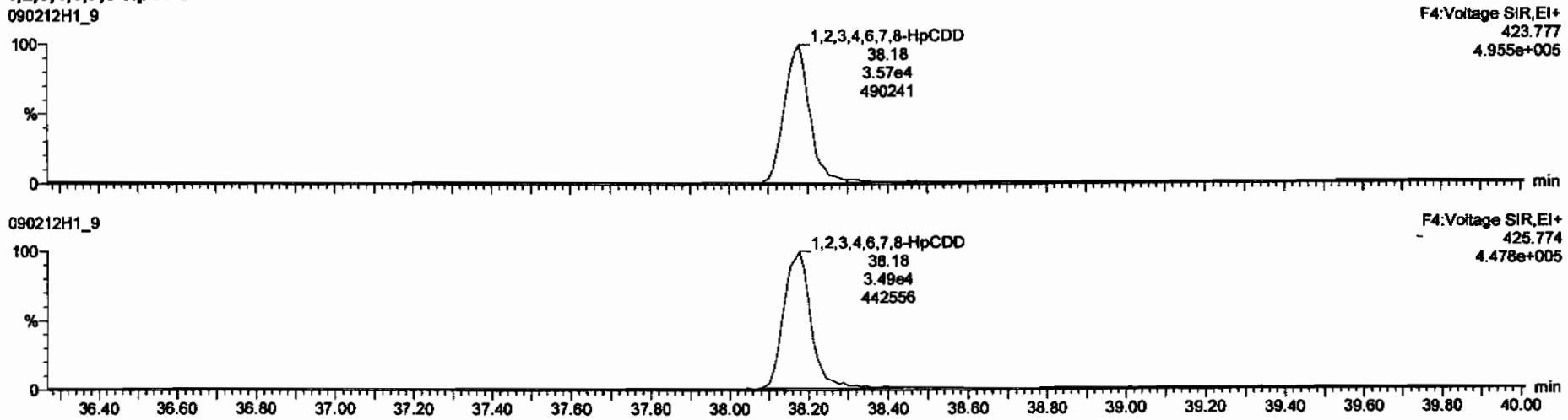

13C-1,2,3,4,6,7,8-HpCDD

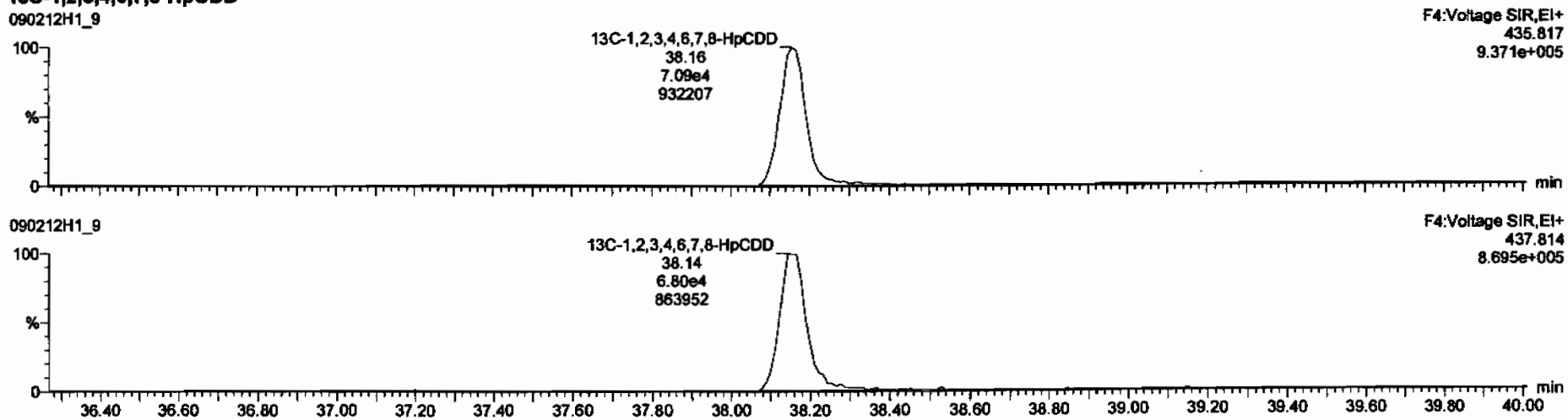

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

OCDD

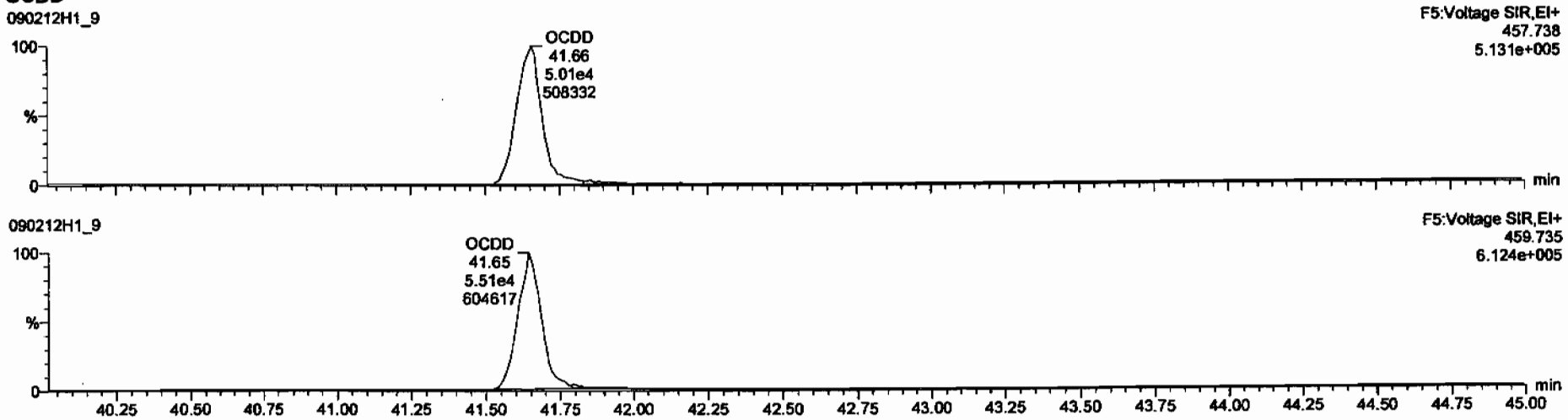

13C-OCDD

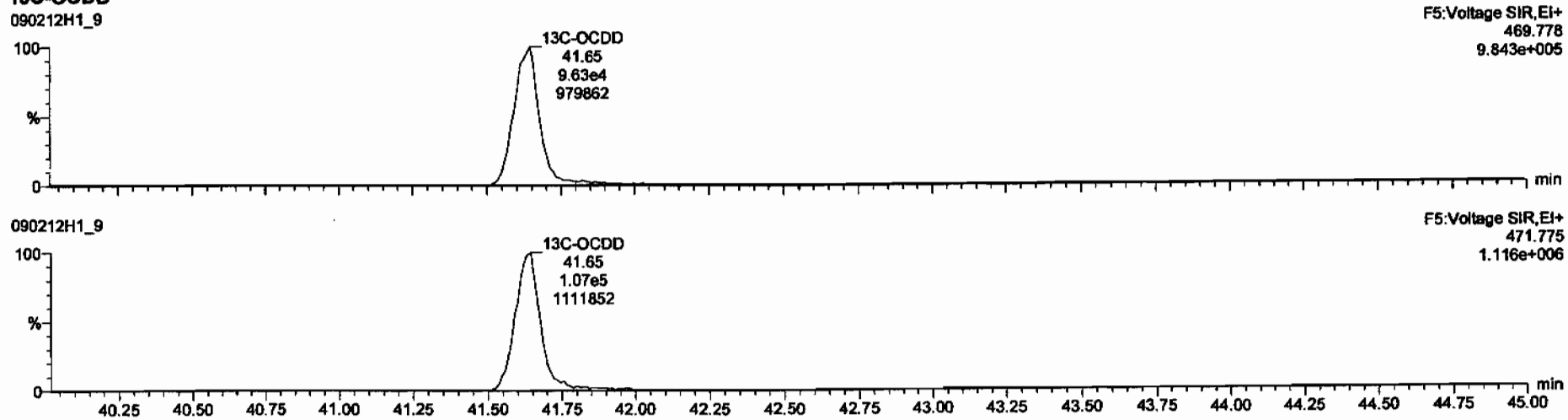

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDF

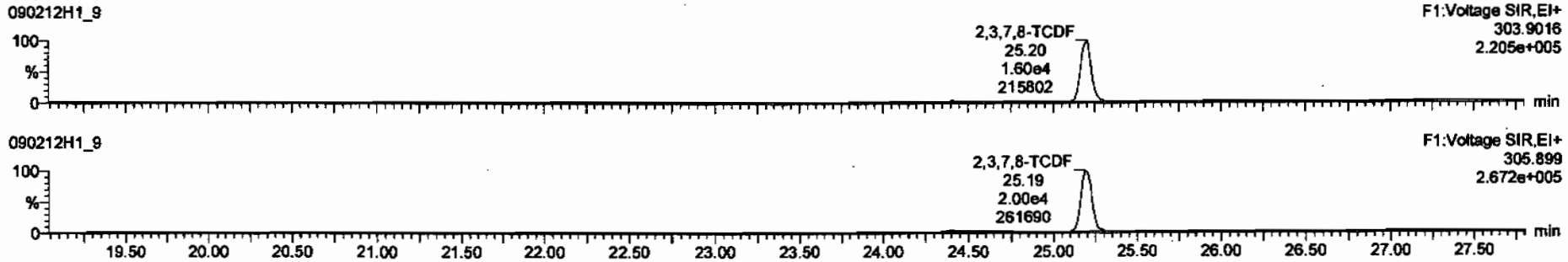

13C-2,3,7,8-TCDF

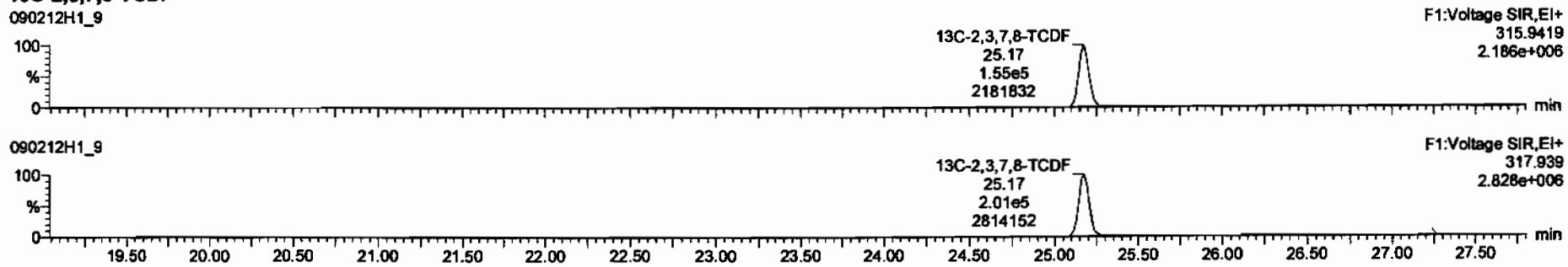

DPE1

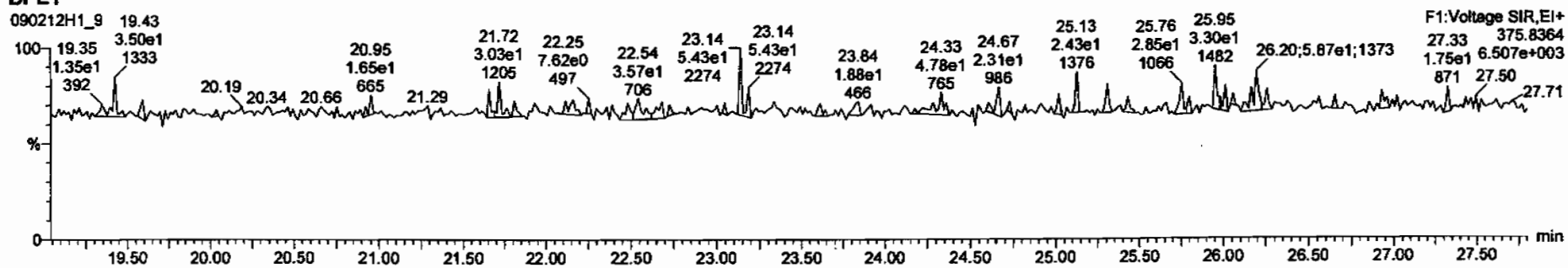

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

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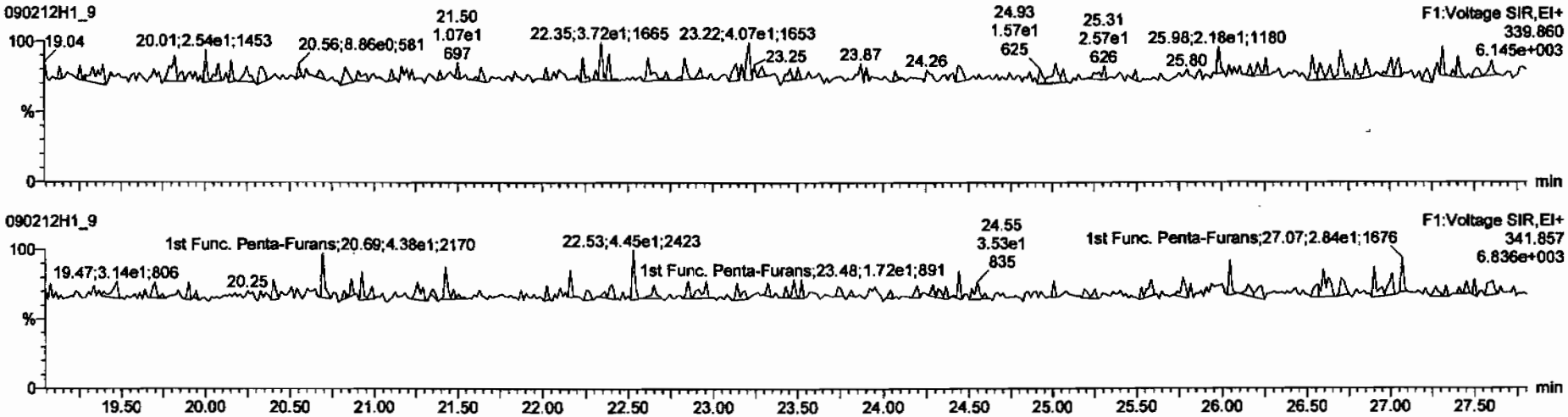

DPE6

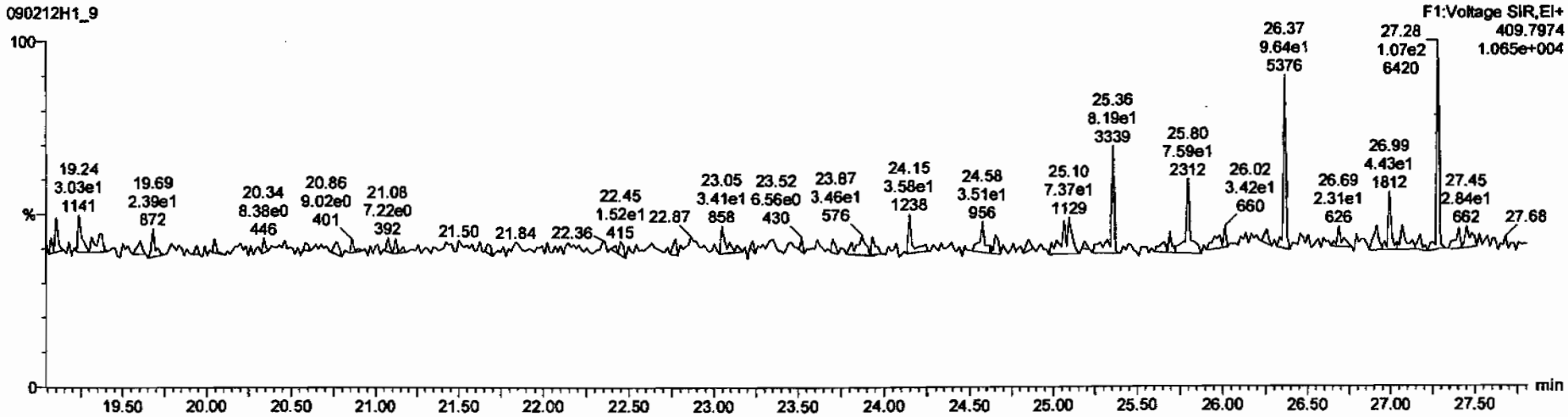

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1,2,3,7,8-PeCDF

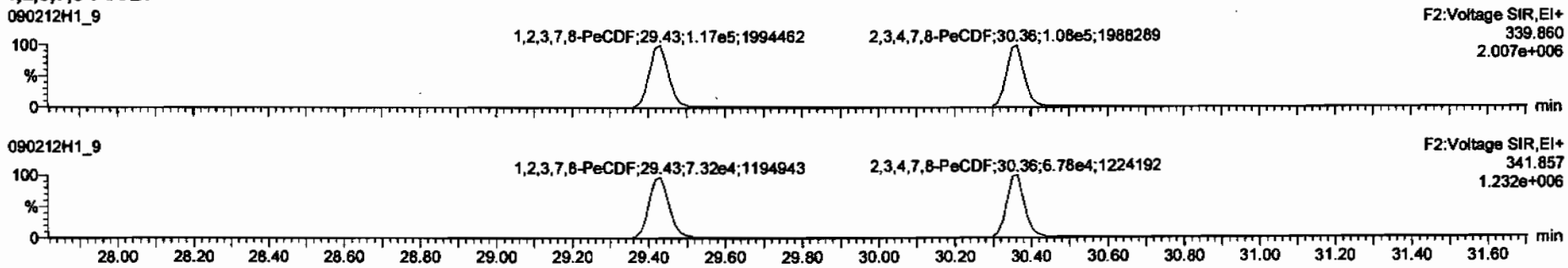

13C-1,2,3,7,8-PeCDF

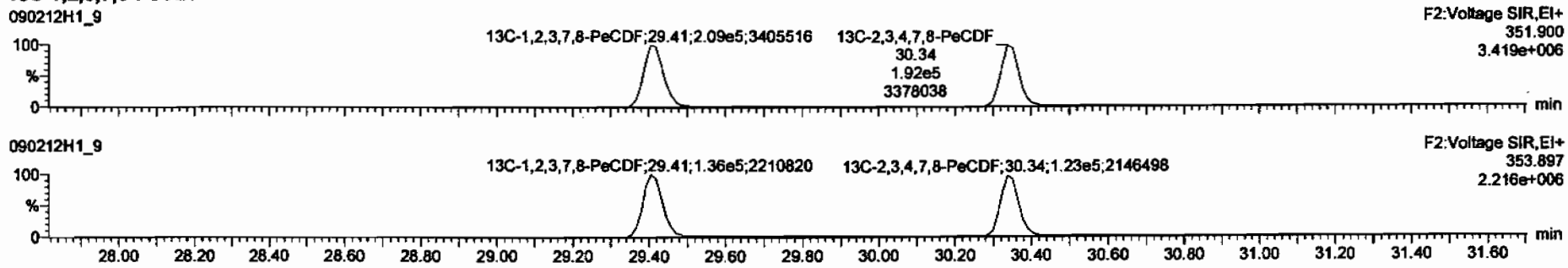

DPE2

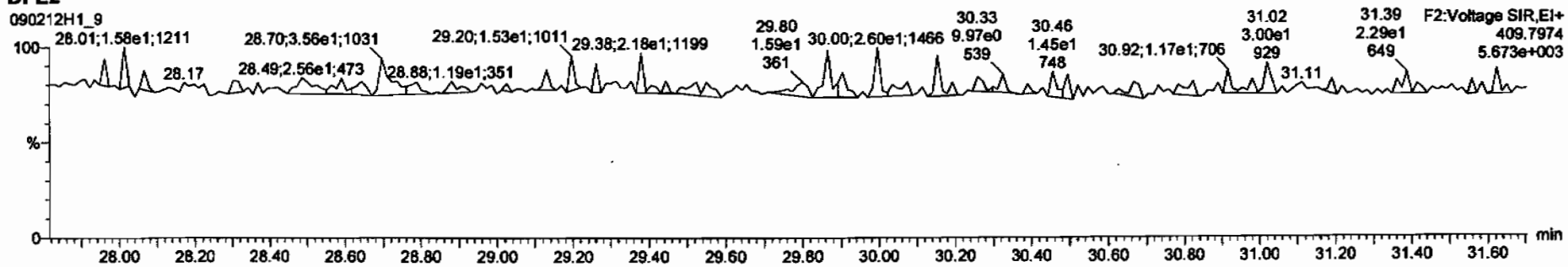

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,7,8-HxCDF

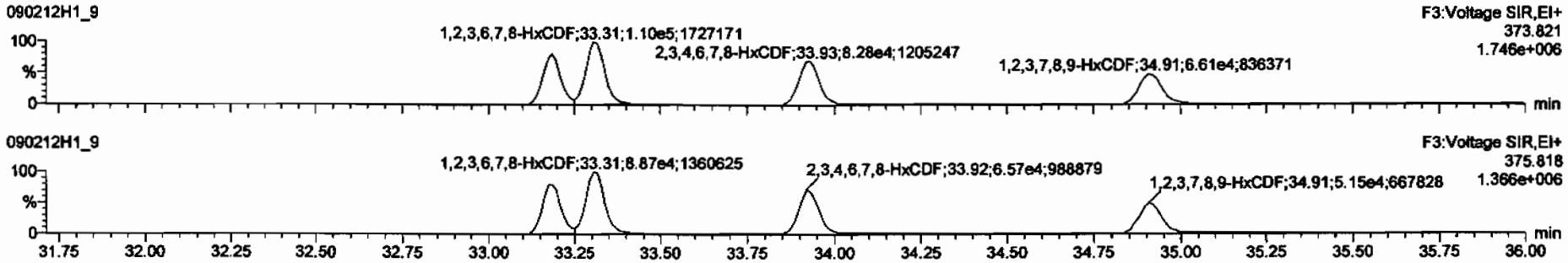

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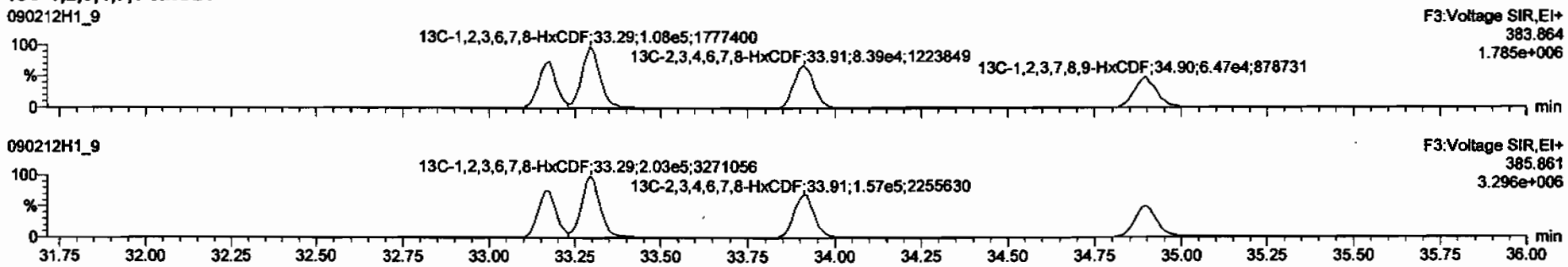

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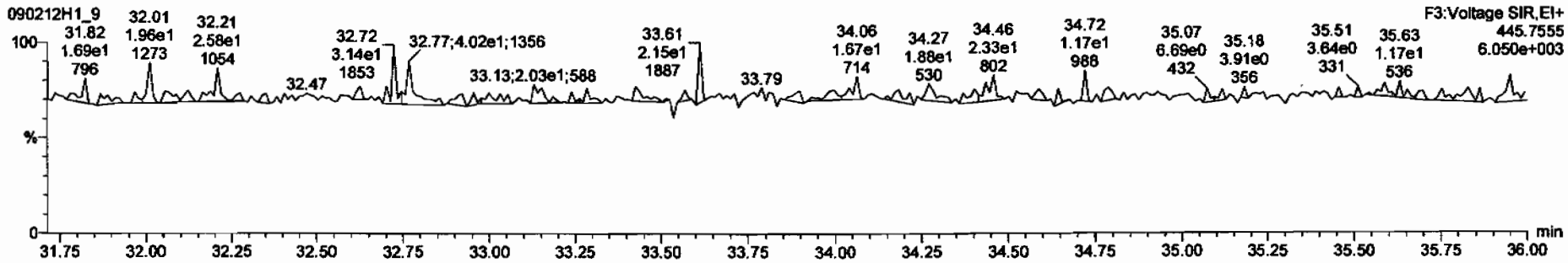

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1,2,3,4,6,7,8-HpCDF

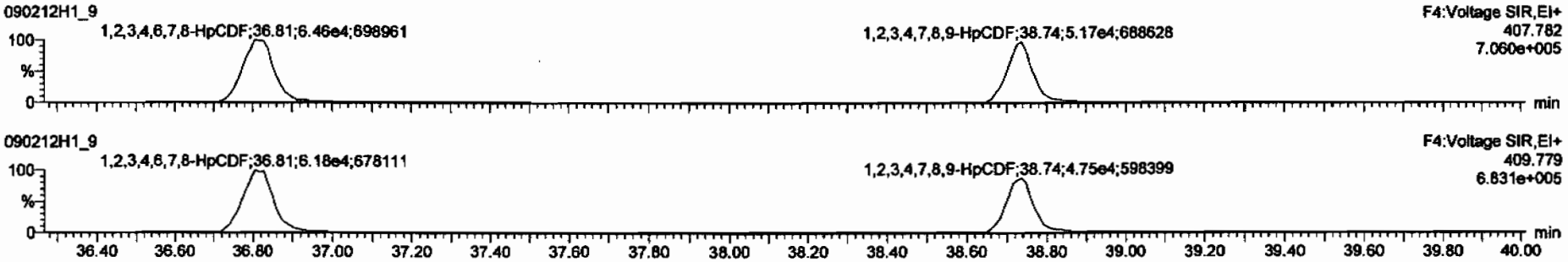

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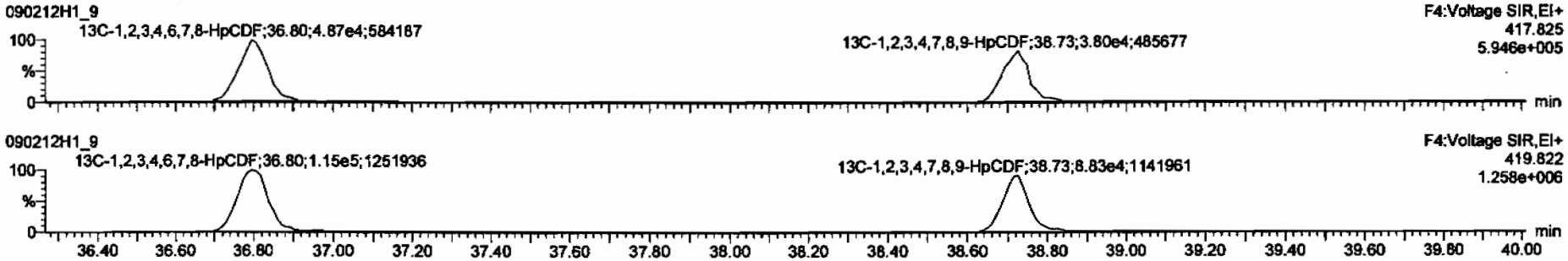

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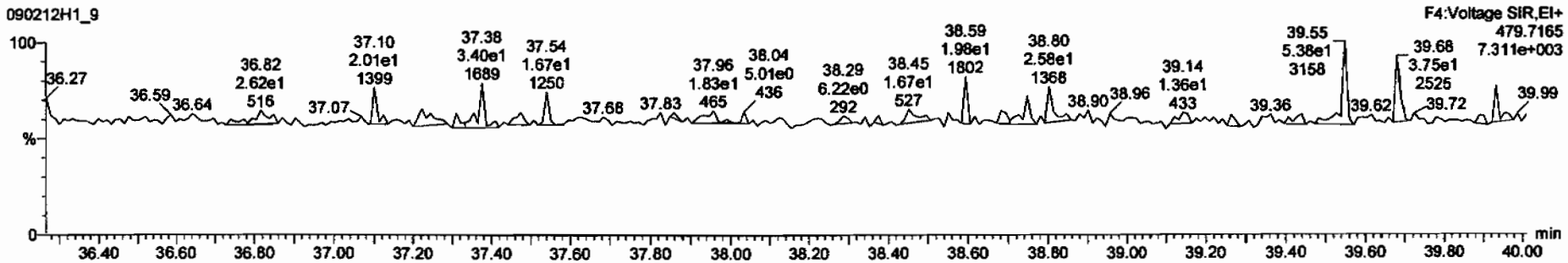

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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OCDF

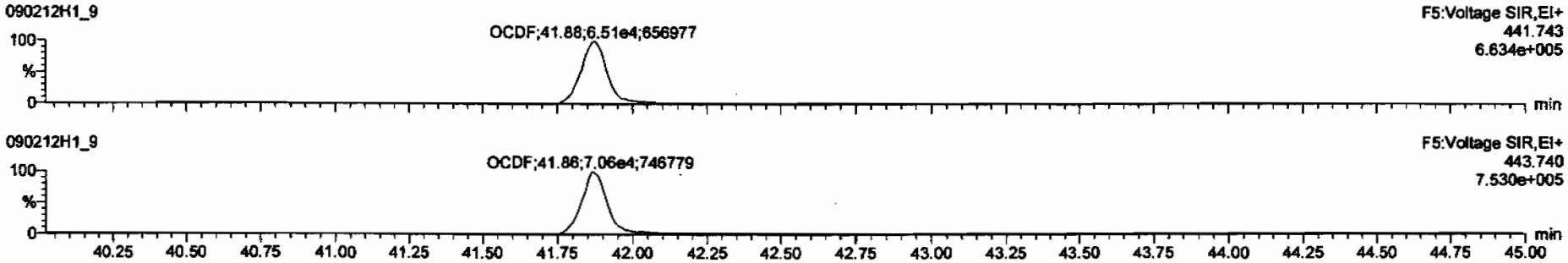

13C-OCDF

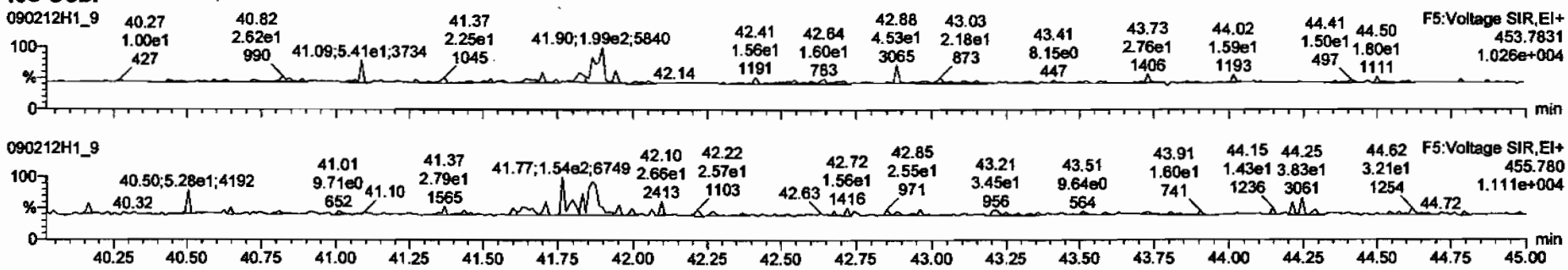

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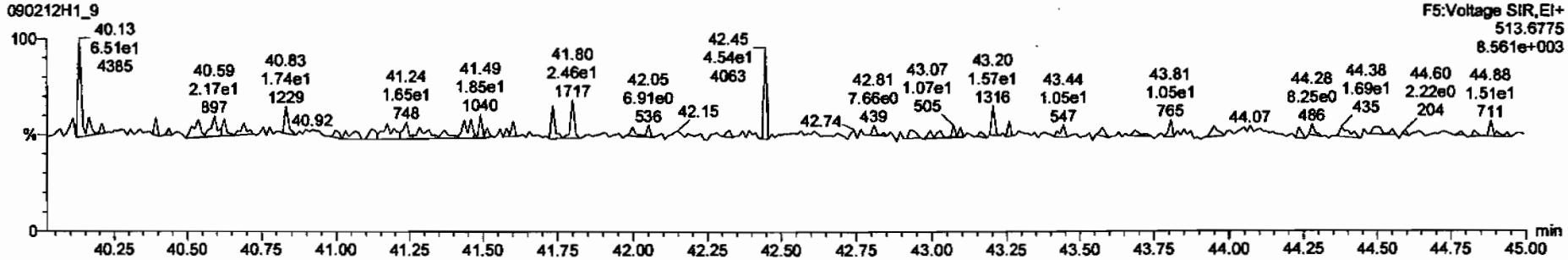

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

PFK1

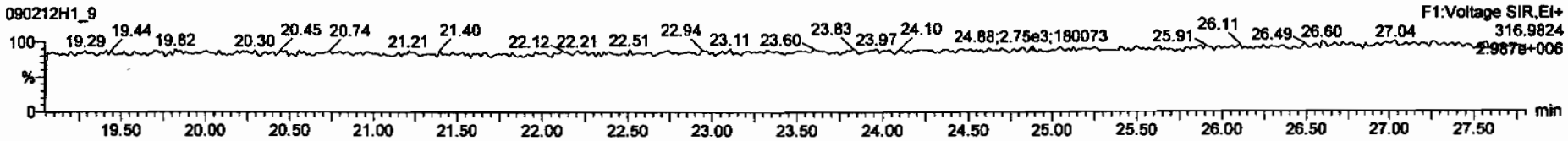

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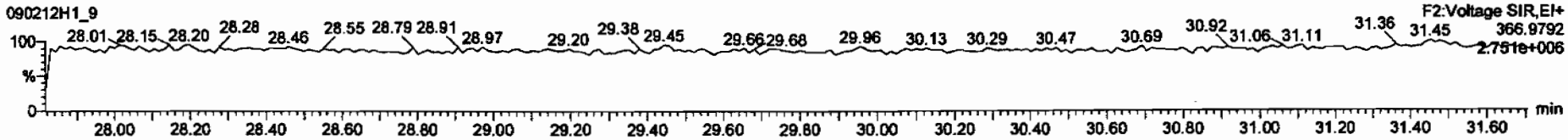

PFK3

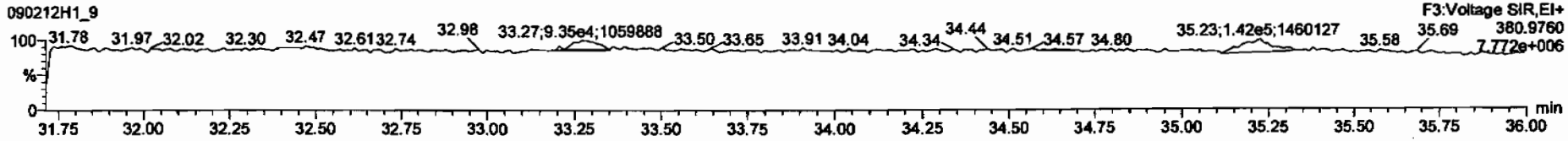

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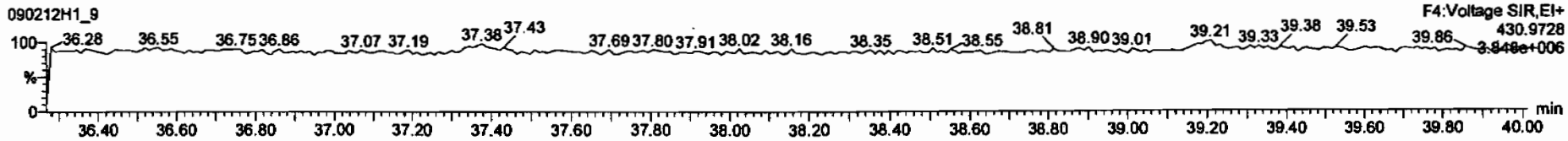

PFK5

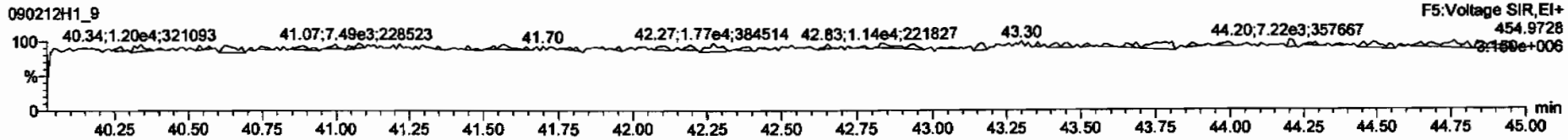

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2458

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2458

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	EPA:906.0	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	HASL-300:ISOPU	1	CAMO-09-10460	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2458

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	HASL-300:ISOU	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	SW-846:6010B	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	SW-846:6850	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	SW-846:9012A	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	SW-846:9045C	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2458

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2458

REQUEST NUMBER: 09-2458

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
~~CAMO-09-10462~~	~~1~~	~~POLY~~	~~GS+TAL Metals~~	~~Ice~~	~~R~~
CAMO-09-10462	1	POLY	H3	Ice	R
CAMO-09-10462	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10462	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10460	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10460	1	POLY	H3	Ice	R
CAMO-09-10460	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10460	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10461	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10461	1	POLY	H3	Ice	R
CAMO-09-10461	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10461	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10467	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10467	1	POLY	H3	Ice	R
CAMO-09-10467	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10467	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
Jerylee Day		6/24/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10460

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	OBT4	OK
TIME COLLECTED (HH:MM)		1145	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	MO-604995	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	7.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	8.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	15 day					
1	~~Regular~~ N59 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Brown / Tan, indurated, dry tuff w/ Brown rootlike intrusion containing minor clay.

FTB: CAMO-09-10470

SAMPLE COMMENTS: Sample collected 5.0' below Tuff interface.

LOCATION DESC: 03-00702 (E) of bldg. 3-159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq$ 37 dpm

$\beta/\gamma \leq$ 927 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 1720

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10461

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06 / 22 /2009	MEDIA:	QBT4	OK
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	mo-604996	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	8.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	J.B 6/22/09 ~~9.0~~ 9.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 day ~~Regular~~ INSG 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
		GS+TAL Metals	1 LITER POLY	Ice		
		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Tan / Grey, indurated, dry, tuff, w/ clay like intrusion.

SAMPLE COMMENTS: Sample collected 5.0' below tuff interface.

LOCATION DESC: 03-007-03 @ of bldg. 3159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 20$ dpm

$\beta/\gamma \leq 624$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 1620

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10462

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	OK
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	MO-604999	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	6.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	7.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 dAY Regular 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	N69	8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Brown / Tan, indurated, dry tuff

FD: CAMO-09-10467

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 03-007-07 (S) of sigma fence (E) of bldg. 3-159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 8$ dpm

$\beta/\gamma \leq 110$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Nikolas Gallegos

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/22/09 1605	(Printed Name) Sherri Sherwood	6/22/09 4:20

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10467

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	OK
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	UNK	MO-604999	FIELD QC TYPE:	FD	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	6.0	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	7.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 day ~~Regular~~ NSG	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	6-23-09	8270C+~~8082~~ J. 8/12/09	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
		H3	500 ML POLY	Ice		
		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-10462

Brown/Tan, indurated, dry tuff.

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 03-007-07 (S) of Sigma fence (E) of bldg. 3-159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 8$ dpm

$\beta/\gamma \leq 110$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Nickolas Gallegos

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 4:20

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10470

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1145	SUB-MEDIA:	OTHER	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604995	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	OK	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	J.B. 6/22/09 ~~Routine~~ 15 day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-10460

6-23-09

SAMPLE COMMENTS: None

LOCATION DESC: 03-007-02

FIELD SCREENING/MEASUREMENT RESULTS: None

COLLECTED BY (PRINT) J. Branch REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) Sherri Sherwood	4:20
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10460	ARS Sample ID:	ARS2-09-00073-012
Sample Collection Date:	06/22/09 11:45	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	76.82	67.89	133.72	88.39	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	49.32	17.65	20.15	18.65		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.30	0.27	0.10	0.27	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	17.11	6.67	1.55	6.89		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.06	10.15	0.19	10.15	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.11	0.13	0.07	0.13	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	13.25	0.06	13.25	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.33	0.36	0.12	0.36	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.18	0.46	0.15	0.46		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-228	2.34	1.29	0.37	1.27		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	0.70	0.54	0.16	0.54		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	2.14	2.66	1.23	2.70		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.55	0.39	0.12	0.39		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.04

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00073
Client Sample ID: CAMO-09-10461
Sample Collection Date: 06/22/09 12:45
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00073-013
Date Received: 06/23/09 00:00
Report Date: 06/23/09 16:09

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	18.47	62.34	133.66	62.39	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	39.76	16.01	19.98	16.73		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.09	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	32.61	10.09	1.81	10.14		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.14	0.21	0.12	0.21		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.22	0.16	0.09	0.16	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	15.46	0.07	15.46	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.80	0.38	0.14	0.38	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.49	0.54	0.16	0.55		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	1.13	0.69	0.82	0.69		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	2.07	1.51	0.48	1.51		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	7.19	3.47	1.15	3.84		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.03	0.11	0.06	0.11	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.26

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10462	ARS Sample ID:	ARS2-09-00073-014
Sample Collection Date:	06/22/09 15:00	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:02

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	75.71	86.11	127.53	86.60	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	32.27	15.90	20.61	16.38		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	25.56	8.93	1.78	8.96		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	11.66	0.13	11.66	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	15.25	0.07	15.25	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	1.07	0.59	0.14	0.59	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.63	0.56	0.16	0.56		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-228	3.64	1.17	0.21	1.18		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	1.45	0.88	0.18	0.88		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	2.96	2.69	1.23	2.77		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.17	0.34	0.14	0.34		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 0.84

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10467	ARS Sample ID:	ARS2-09-00073-015
Sample Collection Date:	06/22/09 15:00	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.64	86.53	128.32	86.99	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	35.47	16.90	21.30	17.45		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.06	0.13	0.11	0.13	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	27.35	8.90	1.67	8.94		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	10.91	0.11	10.91	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.11	0.10	0.08	0.10	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	14.27	0.07	14.27	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	11.34	0.13	11.34	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	0.99	0.44	0.15	0.44		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	2.18	1.14	0.29	1.14		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	-0.07	97.28	0.22	97.28	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	4.92	3.06	1.16	3.26		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.07	0.19	0.09	0.19	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 0.57

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2458 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: Charissa Lewis DATE: 7/28/09

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☒	☐	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☒	☐	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☒	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10462

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347001

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 93.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	2.82	ug/kg		1	01-JUL-09 17:58	per0701051a
	Perchlorate-O(18)			5.19	ug/kg		1	01-JUL-09 17:58	per0701051a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

CLL
7/28/09

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10460

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347002

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 91.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.545	2.18	0.554	ug/kg	J	1	01-JUL-09 18:23	per0701054a
	Perchlorate-O(18)			5.47	ug/kg		1	01-JUL-09 18:23	per0701054a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

CLL
7/28/09

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Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10461

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347003

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 88

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.565	2.26	0.746	ug/kg	J	1	01-JUL-09 18:31	per0701055a
	Perchlorate-O(18)			5.63	ug/kg		1	01-JUL-09 18:31	per0701055a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

CLL
7/28/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10467

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347004

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 95.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.524	2.09	2.94	ug/kg		1	01-JUL-09 19:04	per0701059a
	Perchlorate-O(18)			5.05	ug/kg		1	01-JUL-09 19:04	per0701059a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

CLL
7/28/09

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DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2458 VALIDATION DATE: 7/29/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☒ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB, Sb, Ca, Cu and Fe were detected. All the sample results for Sb and the Cu results for all samples *except* CAMO-09-10460 were detects ≤5X the MB concentrations and, thus, were qualified U,I4. The Cu result for sample -10460 was a detect >5X but ≤50X the MB concentration and, thus, was qualified J,I4a. The remaining associated sample results were NDs and, thus, were not qualified.
2. In the ICBs/CCBs, Tl, Sb and Fe were detected. All the sample results for Sb and the Tl results for samples -10461 and -10467 were detects ≤5X the greatest blank concentrations and, thus, were qualified U,I4b. The remaining associated sample results were detects >5X the greatest blank concentrations and, thus, were not qualified.
3. The MS %Rs were < the laboratory LAL but ≥10% for Ca, Mn, Ni and Hg. The Hg result for sample -10467 was an ND and, thus, was qualified UJ,I6a. The remaining associated sample results were detects and, thus, were qualified J-,I6a. The soil MS %Rs were > the laboratory UAL for Al and Fe. However, the associated parent

DATA VALIDATION COVER SHEET

5118-1

Records Use only

Data Validation Cover Sheet

sample concentrations were >4X the spike concentrations. Thus, no sample data were qualified, based on professional judgment.

4. Results > the MDLs but < the PQLs were "J" flagged by the laboratory and, thus, were not further qualified J,I1.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: Chandra Lewis DATE: 7/29/09

Form 5118-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☒	☐	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☐	☒	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☐	☒	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
–1–
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09–2458 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232347001 **BASIS:** Dry Weight **DATE COLLECTED** 22–JUN–09

CLIENT ID: CAMO–09–10462 **LEVEL:** Low **DATE RECEIVED** 25–JUN–09

MATRIX: SOIL **%SOLIDS:** 93.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429–90–5	Aluminum	3880000	ug/Kg		7010	20600	20600	1	P	JWJ	06/30/09 05:27	063009–1	880674
7440–36–0	Antimony U,I4	1170	ug/Kg		320	1030	1030	1	P	JWJ	06/30/09 05:27	063009–1	880674
7440–38–2	Arsenic	2230	ug/kg		207	1030	1030	2	MS	BAJ	07/01/09 02:45	090630–2	880691
7440–39–3	Barium	38500	ug/Kg		103	515	515	1	P	JWJ	06/30/09 05:27	063009–1	880674
7440–41–7	Beryllium	953	ug/kg		103	516	516	10	MS	BAJ	07/02/09 07:10	090701–6	880691
7440–43–9	Cadmium	515	ug/Kg	U	103	515	515	1	P	JWJ	06/30/09 05:27	063009–1	880674
7440–70–2	Calcium J-,I6a	1570000	ug/Kg	N	3090	10300	10300	1	P	JWJ	06/30/09 05:27	063009–1	880674
7440–47–3	Chromium	4050	ug/Kg		103	515	515	1	P	JWJ	06/30/09 05:27	063009–1	880674
7440–48–4	Cobalt	1040	ug/Kg		206	515	515	1	P	JWJ	06/30/09 05:27	063009–1	880674
7440–50–8	Copper U,I4	1280	ug/Kg		309	1030	1030	1	P	JWJ	06/30/09 05:27	063009–1	880674
7439–89–6	Iron	13300000	ug/Kg		2580	10300	10300	1	P	JWJ	06/30/09 05:27	063009–1	880674
7439–92–1	Lead	4170	ug/Kg		258	1030	1030	1	P	JWJ	06/30/09 05:27	063009–1	880674
7439–95–4	Magnesium	955000	ug/Kg	N	8760	30900	30900	1	P	JWJ	06/30/09 05:27	063009–1	880674
7439–96–5	Manganese J-,I6a	163000	ug/Kg	*N	206	1030	1030	1	P	JWJ	06/30/09 05:27	063009–1	880674
7439–97–6	Mercury	46.9	ug/kg	*N	3.69	10.8	10.8	1	AV	JXL1	07/06/09 09:56	070609S1–7	880850
7440–02–0	Nickel	9330	ug/kg	N	516	2070	2070	10	MS	BAJ	07/02/09 07:10	090701–6	880691
7440–09–7	Potassium	551000	ug/Kg		5150	15500	15500	1	P	JWJ	06/30/09 05:27	063009–1	880674
7782–49–2	Selenium	1030	ug/kg	U	516	1030	1030	2	MS	BAJ	07/01/09 02:45	090630–2	880691
7440–22–4	Silver	349	ug/Kg	J	103	515	515	1	P	JWJ	06/30/09 05:27	063009–1	880674
7440–23–5	Sodium	379000	ug/Kg		4640	15500	15500	1	P	JWJ	06/30/09 05:27	063009–1	880674
7440–28–0	Thallium	402	ug/kg		62	207	207	2	MS	BAJ	07/01/09 21:15	090701–3	880691
7440–62–2	Vanadium	7370	ug/Kg		103	515	515	1	P	JWJ	06/30/09 05:27	063009–1	880674
7440–66–6	Zinc	35300	ug/Kg		206	1030	1030	1	P	JWJ	06/30/09 05:27	063009–1	880674

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880674	880673	SW846 3050B	0.519	g	50	mL	06/29/09	BXA1
880691	880690	SW846 3050B	0.518	g	50	mL	06/29/09	BXA1
880850	880849	SW846 7471A Prep	0.592	g	30	mL	07/02/09	TXB3

CLL
7/29/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09 -2458 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232347002 **BASIS:** Dry Weight **DATE COLLECTED** 22-JUN-09

CLIENT ID: CAMO-09-10460 **LEVEL:** Low **DATE RECEIVED** 25-JUN-09

MATRIX: SOIL **%SOLIDS:** 91.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	6400000	ug/Kg		7360	21600	21600	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-36-0	Antimony U,I4	724	ug/Kg	J	335	1080	1080	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-38-2	Arsenic	2830	ug/kg		213	1070	1070	2	MS	BAJ	07/01/09 03:28	090630-2	880691
7440-39-3	Barium	110000	ug/Kg		108	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-41-7	Beryllium	1990	ug/kg		107	533	533	10	MS	BAJ	07/02/09 07:22	090701-6	880691
7440-43-9	Cadmium	117	ug/Kg	J	108	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-70-2	Calcium J-,I6a	1580000	ug/Kg	N	3250	10800	10800	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-47-3	Chromium	6870	ug/Kg		108	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-48-4	Cobalt	4020	ug/Kg		216	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-50-8	Copper J,I4a	3910	ug/Kg		325	1080	1080	1	P	JWJ	06/30/09 05:49	063009-1	880674
7439-89-6	Iron	12600000	ug/Kg		2700	10800	10800	1	P	JWJ	06/30/09 05:49	063009-1	880674
7439-92-1	Lead	11700	ug/Kg		270	1080	1080	1	P	JWJ	06/30/09 05:49	063009-1	880674
7439-95-4	Magnesium	1580000	ug/Kg	N	9200	32500	32500	1	P	JWJ	06/30/09 05:49	063009-1	880674
7439-96-5	Manganese J-,I6a	945000	ug/Kg	*N	216	1080	1080	1	P	JWJ	06/30/09 05:49	063009-1	880674
7439-97-6	Mercury	4.77	ug/kg	J*N	4.14	12.2	12.2	1	AV	JXL1	07/06/09 10:06	070609S1-7	880850
7440-02-0	Nickel	21800	ug/kg	N	533	2130	2130	10	MS	BAJ	07/02/09 07:22	090701-6	880691
7440-09-7	Potassium	917000	ug/Kg		5410	16200	16200	1	P	JWJ	06/30/09 05:49	063009-1	880674
7782-49-2	Selenium	1070	ug/kg	U	533	1070	1070	2	MS	BAJ	07/01/09 03:28	090630-2	880691
7440-22-4	Silver	431	ug/Kg	J	108	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-23-5	Sodium	341000	ug/Kg		4870	16200	16200	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-28-0	Thallium	479	ug/kg		63.9	213	213	2	MS	BAJ	07/01/09 21:31	090701-3	880691
7440-62-2	Vanadium	11900	ug/Kg		108	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-66-6	Zinc	61000	ug/Kg		216	1080	1080	1	P	JWJ	06/30/09 05:49	063009-1	880674

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880674	880673	SW846 3050B	0.504	g	50	mL	06/29/09	BXA1
880691	880690	SW846 3050B	0.512	g	50	mL	06/29/09	BXA1
880850	880849	SW846 7471A Prep	0.538	g	30	mL	07/02/09	TXB3

CLL
7/29/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2458 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232347003 **BASIS:** Dry Weight **DATE COLLECTED** 22-JUN-09

CLIENT ID: CAMO-09-10461 **LEVEL:** Low **DATE RECEIVED** 25-JUN-09

MATRIX: SOIL **%SOLIDS:** 88

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4570000	ug/Kg		7450	21900	21900	1	P	JWJ	06/30/09 05:52	063009-1	880674
7440-36-0	Antimony U,I4	747	ug/Kg	J	340	1100	1100	1	P	JWJ	06/30/09 05:52	063009-1	880674
7440-38-2	Arsenic	1040	ug/kg	J	226	1130	1130	2	MS	BAJ	07/01/09 03:34	090630-2	880691
7440-39-3	Barium	39100	ug/Kg		110	548	548	1	P	JWJ	06/30/09 05:52	063009-1	880674
7440-41-7	Beryllium	1110	ug/kg		113	565	565	10	MS	BAJ	07/02/09 07:24	090701-6	880691
7440-43-9	Cadmium	548	ug/Kg	U	110	548	548	1	P	JWJ	06/30/09 05:52	063009-1	880674
7440-70-2	Calcium J-,I6a	1170000	ug/Kg	N	3290	11000	11000	1	P	JWJ	06/30/09 05:52	063009-1	880674
7440-47-3	Chromium	5380	ug/Kg		110	548	548	1	P	JWJ	06/30/09 05:52	063009-1	880674
7440-48-4	Cobalt	1080	ug/Kg		219	548	548	1	P	JWJ	06/30/09 05:52	063009-1	880674
7440-50-8	Copper U,I4	1940	ug/Kg		329	1100	1100	1	P	JWJ	06/30/09 05:52	063009-1	880674
7439-89-6	Iron	10500000	ug/Kg		2740	11000	11000	1	P	JWJ	06/30/09 05:52	063009-1	880674
7439-92-1	Lead	8930	ug/Kg		274	1100	1100	1	P	JWJ	06/30/09 05:52	063009-1	880674
7439-95-4	Magnesium	1330000	ug/Kg	N	9310	32900	32900	1	P	JWJ	06/30/09 05:52	063009-1	880674
7439-96-5	Manganese J-,I6a	227000	ug/Kg	*N	219	1100	1100	1	P	JWJ	06/30/09 05:52	063009-1	880674
7439-97-6	Mercury	21.9	ug/kg	*N	4.45	13.1	13.1	1	AV	JXL1	07/06/09 10:08	070609S1-7	880850
7440-02-0	Nickel	5560	ug/kg	N	565	2260	2260	10	MS	BAJ	07/02/09 07:24	090701-6	880691
7440-09-7	Potassium	803000	ug/Kg		5480	16400	16400	1	P	JWJ	06/30/09 05:52	063009-1	880674
7782-49-2	Selenium	1130	ug/kg	U	565	1130	1130	2	MS	BAJ	07/01/09 03:34	090630-2	880691
7440-22-4	Silver	263	ug/Kg	J	110	548	548	1	P	JWJ	06/30/09 05:52	063009-1	880674
7440-23-5	Sodium	217000	ug/Kg		4930	16400	16400	1	P	JWJ	06/30/09 05:52	063009-1	880674
7440-28-0	Thallium U,I4b	241	ug/kg		67.8	226	226	2	MS	BAJ	07/01/09 21:34	090701-3	880691
7440-62-2	Vanadium	8990	ug/Kg		110	548	548	1	P	JWJ	06/30/09 05:52	063009-1	880674
7440-66-6	Zinc	57500	ug/Kg		219	1100	1100	1	P	JWJ	06/30/09 05:52	063009-1	880674

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880674	880673	SW846 3050B	0.516	g	50	mL	06/29/09	BXA1
880691	880690	SW846 3050B	0.5	g	50	mL	06/29/09	BXA1
880850	880849	SW846 7471A Prep	0.518	g	30	mL	07/02/09	TXB3

CLL
7/29/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2458 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232347004 **BASIS:** Dry Weight **DATE COLLECTED** 22-JUN-09

CLIENT ID: CAMO-09-10467 **LEVEL:** Low **DATE RECEIVED** 25-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3810000	ug/Kg		7110	20900	20900	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-36-0	Antimony U,I4	604	ug/Kg	J	324	1050	1050	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-38-2	Arsenic	2080	ug/kg		208	1040	1040	2	MS	BAJ	07/01/09 03:41	090630-2	880691
7440-39-3	Barium	26900	ug/Kg		105	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-41-7	Beryllium	975	ug/kg		104	520	520	10	MS	BAJ	07/02/09 07:25	090701-6	880691
7440-43-9	Cadmium	523	ug/Kg	U	105	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-70-2	Calcium J-,I6a	1150000	ug/Kg	N	3140	10500	10500	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-47-3	Chromium	4260	ug/Kg		105	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-48-4	Cobalt	803	ug/Kg		209	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-50-8	Copper U,I4	1020	ug/Kg	J	314	1050	1050	1	P	JWJ	06/30/09 05:55	063009-1	880674
7439-89-6	Iron	12600000	ug/Kg		2610	10500	10500	1	P	JWJ	06/30/09 05:55	063009-1	880674
7439-92-1	Lead	3550	ug/Kg		261	1050	1050	1	P	JWJ	06/30/09 05:55	063009-1	880674
7439-95-4	Magnesium	976000	ug/Kg	N	8890	31400	31400	1	P	JWJ	06/30/09 05:55	063009-1	880674
7439-96-5	Manganese J-,I6a	119000	ug/Kg	*N	209	1050	1050	1	P	JWJ	06/30/09 05:55	063009-1	880674
7439-97-6	Mercury UJ,I6a	12.2	ug/kg	U*N	4.15	12.2	12.2	1	AV	JXL1	07/06/09 10:10	070609S1-7	880850
7440-02-0	Nickel J-,I6a	5990	ug/kg	N	520	2080	2080	10	MS	BAJ	07/02/09 07:25	090701-6	880691
7440-09-7	Potassium	575000	ug/Kg		5230	15700	15700	1	P	JWJ	06/30/09 05:55	063009-1	880674
7782-49-2	Selenium	1040	ug/kg	U	520	1040	1040	2	MS	BAJ	07/01/09 03:41	090630-2	880691
7440-22-4	Silver	252	ug/Kg	J	105	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-23-5	Sodium	356000	ug/Kg		4700	15700	15700	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-28-0	Thallium U,I4b	205	ug/kg	J	62.4	208	208	2	MS	BAJ	07/01/09 21:36	090701-3	880691
7440-62-2	Vanadium	6820	ug/Kg		105	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-66-6	Zinc	35100	ug/Kg		209	1050	1050	1	P	JWJ	06/30/09 05:55	063009-1	880674

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880674	880673	SW846 3050B	0.501	g	50	mL	06/29/09	BXA1
880691	880690	SW846 3050B	0.504	g	50	mL	06/29/09	BXA1
880850	880849	SW846 7471A Prep	0.515	g	30	mL	07/02/09	TXB3

CLL
7/29/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2458 VALIDATION DATE: 7/29/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☒ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The MS %R was < the laboratory LAL but ≥10% for nitrate-N. The nitrate-N result for sample CAMO-09-10461 was a detect and, thus, was qualified J-,I6a. The remaining associated sample results were NDs and, thus, were qualified UJ,I6a.
2. It should be noted that the matrix QC analyses for total cyanide were performed on a parent sample from another LANL RN. No sample data were qualified.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: Charissa Lewis DATE: 7/29/09

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☐	☒	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2458

Client Sample ID:	CAMO-09-10467	Project:	LANL01004
Sample ID:	232347004	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	4.53%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 22.1C	H	9.07		0.010	0.100	SU	1	EXF1 06/26/09	1219	880644	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	162		62.5	230	ug/kg	1	AXC2 07/06/09	1116	881032	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.314	1.05	mg/kg	1	MAR1 07/10/09	1543	880627	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0845	880626
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2458

Client Sample ID:	CAMO-09-10462	Project:	LANL01004
Sample ID:	232347001	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	6.53%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 23.3C	H	8.92		0.010	0.100	SU	1	EXF1 06/26/09	1211	880644	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		70.0	257	ug/kg	1	AXC2 07/06/09	1114	881032	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.321	1.07	mg/kg	1	MAR1 07/10/09	1250	880627	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0845	880626
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2458

Client Sample ID:	CAMO-09-10460	Project:	LANL01004
Sample ID:	232347002	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	8.31%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 23.1C	H	8.40		0.010	0.100	SU	1	EXF1 06/26/09	1212	880644	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		74.2	273	ug/kg	1	AXC2 07/06/09	1115	881032	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.327	1.09	mg/kg	1	MAR1 07/10/09	1446	880627	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0845	880626
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2458

Client Sample ID:	CAMO-09-10461	Project:	LANL01004
Sample ID:	232347003	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	11.5%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 23.0C	H	8.87		0.010	0.100	SU	1	EXF1 06/26/09	1216	880644	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		76.9	283	ug/kg	1	AXC2 07/06/09	1116	881032	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	1.66	J-,I6a	0.339	1.13	mg/kg	1	MAR1 07/10/09	1515	880627	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0845	880626
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

CLL
7/29/09

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2458 VALIDATION DATE: 7/29/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☒ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The gamma spec results that were rejected by the laboratory due to interference, low abundance or no valid peak were qualified R,R5a. In the QC samples, several results were also rejected by the laboratory due to interference or low abundance. No sample data were qualified as a result.
2. The reported results that were ≤ the MDCs were qualified U,R5.
3. It should be noted that an MS was not analyzed for tritium. However, an LCS was analyzed and met acceptance criteria. Therefore, no sample data were qualified.
4. It should be noted that the duplicate parent sample for isotopic Pu was from another LANL RN. No sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: Chandra Lewis	DATE: 7/29/09
Form 5119-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☐	☒	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10462	Project:	LANL01004
Sample ID:	232347001	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	6.53%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.0025	U,R5	0.0223	+/-0.00729	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240	U	0.00375	U,R5	0.0273	+/-0.00545	0.050	pCi/g						
ISOTH "Dry Weight Corrected"													
Thorium-228		1.15		0.422	+/-0.129	0.100	pCi/g		MXA1	07/07/09	2012	881079	4
Thorium-230		0.383		0.381	+/-0.0614	0.100	pCi/g						
Thorium-232		0.884		0.115	+/-0.104	0.100	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.400		0.188	+/-0.0502	0.100	pCi/g		AXD2	07/10/09	2119	881676	5
Uranium-235/236	U	0.0205	U,R5	0.0863	+/-0.0103	0.100	pCi/g						
Uranium-238		0.389		0.0733	+/-0.049	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0377	U,R5	0.107	+/-0.0335	0.200	pCi/g		MXR1	07/06/09	1110	880723	6
Bismuth-211	UI	3.40	R,R5a	0.346	+/-0.275		pCi/g						
Bismuth-214		0.809		0.126	+/-0.109	0.200	pCi/g						
Cadmium-109	UI	3.43	R,R5a	0.970	+/-0.391		pCi/g						
Cerium-139	U	0.00322	U,R5	0.0518	+/-0.0153	0.050	pCi/g						
Cesium-134	UI	0.123	R,R5a	0.106	+/-0.0303	0.100	pCi/g						
Cesium-137	U	-0.0461	U,R5	0.072	+/-0.024	0.100	pCi/g						
Cobalt-60	U	0.0206		0.0716	+/-0.0208	0.100	pCi/g						
Europium-152	U	0.0854		0.180	+/-0.0714	0.200	pCi/g						
Lanthanum-140	U	0.136		0.168	+/-0.0438		pCi/g						
Lead-212		1.57		0.0962	+/-0.103	0.100	pCi/g						
Lead-214		1.18		0.121	+/-0.101	0.100	pCi/g						
Mercury-203	U	0.0427	U,R5	0.078	+/-0.0246	0.100	pCi/g						
Potassium-40		34.1		0.372	+/-1.47	1.00	pCi/g						
Radium-223	U	0.686	U,R5	1.18	+/-0.373		pCi/g						
Radium-224	UI	4.11	R,R5a	1.10	+/-0.855		pCi/g						
Radium-226		0.809		0.126	+/-0.109		pCi/g						
Radium-228		1.54		0.252	+/-0.204	0.500	pCi/g						
Ruthenium-106	U	-0.131	U,R5	0.636	+/-0.199	0.800	pCi/g						
Sodium-22	U	-0.0127		0.093	+/-0.0293	0.080	pCi/g						
Strontium-85	U	-0.16		0.0755	+/-0.0277		pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10462
Sample ID: 232347001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Thallium-208	UI	0.514	R,R5a	0.143	+/-0.0464	0.080	pCi/g						
Thorium-227	U	0.380	U,R5	0.714	+/-0.210		pCi/g						
Thorium-231	U	0.686	U,R5	1.18	+/-0.373		pCi/g						
Thorium-234	UI	1.04	R,R5a	1.04	+/-0.450	2.00	pCi/g						
Tin-113	U	0.0149	U,R5	0.0852	+/-0.0248	0.100	pCi/g						
Uranium-235	U	0.046		0.374	+/-0.112	0.500	pCi/g						
Yttrium-88	U	-0.00755		0.0521	+/-0.0169	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		320		206	+/-69.3	250	pCi/L		KXK2	07/14/09	1804	883020	7

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EML HASL 300, 4.5.2.3
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	86.4	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	91.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	88.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low

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GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10460
Sample ID: 232347002
Matrix: R
Collect Date: 22-JUN-09
Receive Date: 25-JUN-09
Collector: Client
Moisture: 8.31%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.0101	U,R5	0.0258	+/-0.00807	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240	U	0.00	U,R5	0.0316	+/-0.00457	0.050	pCi/g						
ISOTH "Dry Weight Corrected"													
Thorium-228		1.11		0.392	+/-0.120	0.100	pCi/g		MXA1	07/07/09	2012	881079	4
Thorium-230		0.525		0.353	+/-0.0725	0.100	pCi/g						
Thorium-232		0.949		0.106	+/-0.106	0.100	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.376		0.167	+/-0.0478	0.100	pCi/g		AXD2	07/10/09	2119	881676	5
Uranium-235/236	U	0.00	U,R5	0.0765	+/-0.0144	0.100	pCi/g						
Uranium-238		0.353		0.065	+/-0.0445	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.0228	U,R5	0.300	+/-0.0884	0.200	pCi/g		MXR1	07/06/09	1110	880723	6
Bismuth-211	UI	2.85	R,R5a	0.353	+/-0.245		pCi/g						
Bismuth-214		0.927		0.110	+/-0.0829	0.200	pCi/g						
Cadmium-109	U	1.51	U,R5	1.57	+/-0.632		pCi/g						
Cerium-139	U	0.00062		0.0471	+/-0.0135	0.050	pCi/g						
Cesium-134	U	0.0761		0.0943	+/-0.0425	0.100	pCi/g						
Cesium-137	U	0.00301		0.0627	+/-0.0185	0.100	pCi/g						
Cobalt-60	U	-0.0312		0.0666	+/-0.0218	0.100	pCi/g						
Europium-152	U	-0.117		0.154	+/-0.0584	0.200	pCi/g						
Lanthanum-140	U	-0.0828		0.110	+/-0.0414		pCi/g						
Lead-212		1.44		0.0884	+/-0.0769	0.100	pCi/g						
Lead-214		0.992		0.123	+/-0.089	0.100	pCi/g						
Mercury-203	U	-0.0201	U,R5	0.0628	+/-0.0192	0.100	pCi/g						
Potassium-40		31.5		0.461	+/-1.64	1.00	pCi/g						
Radium-223	U	-0.0556	U,R5	1.08	+/-0.369		pCi/g						
Radium-224	UI	3.51	R,R5a	1.01	+/-0.626		pCi/g						
Radium-226		0.927		0.110	+/-0.0829		pCi/g						
Radium-228		1.32		0.231	+/-0.154	0.500	pCi/g						
Ruthenium-106	U	0.0874	U,R5	0.558	+/-0.162	0.800	pCi/g						
Sodium-22	U	-0.000633		0.0769	+/-0.0231	0.080	pCi/g						
Strontium-85	U	0.0342		0.0617	+/-0.0199		pCi/g						
Thallium-208		0.378		0.0577	+/-0.0383	0.080	pCi/g						

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10460
Sample ID: 232347002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Thorium-227	U	-0.125	U.R5	0.586	+/-0.176		pCi/g						
Thorium-231	U	-0.0556		1.08	+/-0.369		pCi/g						
Thorium-234	U	0.0546		2.45	+/-0.732	2.00	pCi/g						
Tin-113	U	0.00391		0.0739	+/-0.0222	0.100	pCi/g						
Uranium-235	U	0.0115		0.348	+/-0.106	0.500	pCi/g						
Yttrium-88	U	0.00965		0.056	+/-0.0162	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		965		211	+/-101	250	pCi/L		KXK2	07/14/09	1943	883020	7

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EML HASL 300, 4.5.2.3
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	80.0	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	96.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis

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7/29/09

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10461	Project:	LANL01004
Sample ID:	232347003	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	11.5%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	-0.00236	U,R5	0.0211	+/-0.00237	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240	U	-0.00118	U,R5	0.0258	+/-0.00264	0.050	pCi/g						
ISOTH "Dry Weight Corrected"													
Thorium-228		0.935		0.416	+/-0.110	0.100	pCi/g		MXA1	07/07/09	2012	881079	4
Thorium-230		0.468		0.375	+/-0.0688	0.100	pCi/g						
Thorium-232		0.842		0.113	+/-0.0997	0.100	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.325		0.161	+/-0.041	0.100	pCi/g		AXD2	07/10/09	2119	881676	5
Uranium-235/236	U	0.00872	U,R5	0.0735	+/-0.00875	0.100	pCi/g						
Uranium-238		0.300		0.0625	+/-0.039	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.00935	U,R5	0.105	+/-0.0326	0.200	pCi/g		MXR1	07/06/09	1111	880723	6
Bismuth-211	UI	3.10	R,R5a	0.359	+/-0.232		pCi/g						
Bismuth-214		0.951		0.170	+/-0.096	0.200	pCi/g						
Cadmium-109	UI	2.63	R,R5a	1.31	+/-0.427		pCi/g						
Cerium-139	U	-0.023	U,R5	0.0534	+/-0.0168	0.050	pCi/g						
Cesium-134	U	0.0656		0.115	+/-0.032	0.100	pCi/g						
Cesium-137	U	-0.0569		0.0745	+/-0.0249	0.100	pCi/g						
Cobalt-60	U	-0.0562		0.0725	+/-0.0258	0.100	pCi/g						
Europium-152	U	0.0476		0.197	+/-0.0709	0.200	pCi/g						
Lanthanum-140	U	-0.0103		0.187	+/-0.0583		pCi/g						
Lead-212		1.40		0.0964	+/-0.085	0.100	pCi/g						
Lead-214		1.08		0.125	+/-0.0855	0.100	pCi/g						
Mercury-203	U	0.0513	U,R5	0.0817	+/-0.023	0.100	pCi/g						
Potassium-40		32.6		0.756	+/-1.43	1.00	pCi/g						
Radium-223	U	0.266	U,R5	1.31	+/-0.387		pCi/g						
Radium-224	UI	3.99	R,R5a	1.10	+/-0.599		pCi/g						
Radium-226		0.951		0.170	+/-0.096		pCi/g						
Radium-228		1.75		0.309	+/-0.212	0.500	pCi/g						
Ruthenium-106	U	0.00108	U,R5	0.704	+/-0.213	0.800	pCi/g						
Sodium-22	U	-0.0273		0.0968	+/-0.0302	0.080	pCi/g						
Strontium-85	U	0.0535		0.0857	+/-0.0272		pCi/g						
Thallium-208		0.418		0.0794	+/-0.0522	0.080	pCi/g						

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10461
Sample ID: 232347003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Thorium-227	U	-0.225	U,R5	0.722	+/-0.218		pCi/g						
Thorium-231	U	0.266		1.31	+/-0.387		pCi/g						
Thorium-234	U	0.991		1.05	+/-0.616	2.00	pCi/g						
Tin-113	U	0.0108		0.0868	+/-0.0261	0.100	pCi/g						
Uranium-235	U	-0.0184		0.383	+/-0.117	0.500	pCi/g						
Yttrium-88	U	0.0202		0.0715	+/-0.0199	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		1170		210	+/-113	250	pCi/L		KXK2	07/14/09	2121	883020	7

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EML HASL 300, 4.5.2.3
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	96.1	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	92.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	97.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis

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Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10467	Project:	LANL01004
Sample ID:	232347004	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	4.53%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00984	U,R5	0.022	+/-0.00579	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240	U	-0.00737	U,R5	0.0268	+/-0.00325	0.050	pCi/g						
ISOTH "Dry Weight Corrected"													
Thorium-228		1.04		0.413	+/-0.122	0.100	pCi/g		MXA1	07/07/09	2012	881079	4
Thorium-230		0.629		0.372	+/-0.084	0.100	pCi/g						
Thorium-232		0.819		0.112	+/-0.0983	0.100	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.425		0.093	+/-0.0414	0.100	pCi/g		AXD2	07/14/09	0906	881676	5
Uranium-235/236	U	0.0354	U,R5	0.0426	+/-0.011	0.100	pCi/g						
Uranium-238		0.341		0.0362	+/-0.0355	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.132	U,R5	0.203	+/-0.0713	0.200	pCi/g		MXR1	07/06/09	1112	880723	7
Bismuth-211	UI	3.19	R,R5a	0.314	+/-0.247		pCi/g						
Bismuth-214		0.968		0.111	+/-0.0889	0.200	pCi/g						
Cadmium-109	UI	2.35	R,R5a	1.31	+/-0.371		pCi/g						
Cerium-139	U	-0.0129	U,R5	0.047	+/-0.0145	0.050	pCi/g						
Cesium-134	U	0.052		0.0988	+/-0.0331	0.100	pCi/g						
Cesium-137	U	0.0167		0.0657	+/-0.0195	0.100	pCi/g						
Cobalt-60	U	0.0491		0.0837	+/-0.0232	0.100	pCi/g						
Europium-152	U	0.043		0.160	+/-0.0776	0.200	pCi/g						
Lanthanum-140	U	0.0164		0.126	+/-0.0378		pCi/g						
Lead-212		1.51		0.0886	+/-0.0781	0.100	pCi/g						
Lead-214		1.11		0.110	+/-0.0908	0.100	pCi/g						
Mercury-203	U	-0.024	U,R5	0.0678	+/-0.0205	0.100	pCi/g						
Potassium-40		36.9		0.599	+/-1.69	1.00	pCi/g						
Radium-223	U	-0.482	U,R5	1.08	+/-0.335		pCi/g						
Radium-224	UI	3.89	R,R5a	1.01	+/-0.699		pCi/g						
Radium-226		0.968		0.111	+/-0.0889		pCi/g						
Radium-228		1.31		0.248	+/-0.182	0.500	pCi/g						
Ruthenium-106	U	0.0745	U,R5	0.552	+/-0.166	0.800	pCi/g						
Sodium-22	U	-0.0329		0.0821	+/-0.0266	0.080	pCi/g						
Strontium-85	U	0.0485		0.0623	+/-0.0194		pCi/g						
Thallium-208		0.498		0.0601	+/-0.0411	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10467
Sample ID: 232347004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Thorium-227	U	-0.0136	U,R5	0.653	+/-0.191		pCi/g						
Thorium-231	U	-0.482		1.08	+/-0.335		pCi/g						
Thorium-234	U	1.53		1.85	+/-0.763	2.00	pCi/g						
Tin-113	U	0.0201		0.0766	+/-0.0222	0.100	pCi/g						
Uranium-235	U	-0.101		0.351	+/-0.110	0.500	pCi/g						
Yttrium-88	U	0.0229		0.0577	+/-0.0151	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	149		207	+/-64.3	250	pCi/L		KXK2	07/14/09	2259	883020	8

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	EML HASL 300, 4.5.2.3
8	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	83.3	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	96.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	103	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low

CLL
7/29/09

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2458

REQUEST NUMBER: 09-2458

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232347 1/

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10462	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10462	1	POLY	H3	Ice	R
CAMO-09-10462	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10462	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10460	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10460	1	POLY	H3	Ice	R
CAMO-09-10460	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10460	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10461	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10461	1	POLY	H3	Ice	R
CAMO-09-10461	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10461	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10467	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10467	1	POLY	H3	Ice	R
CAMO-09-10467	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10467	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
Jennifer Jay	6/24/09	1400	Patricia Dent P. Dent	6/25/09	08:45
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name / Signature

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2458

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2458
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009
TURNAROUND/REPORT DUE: 7/9/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	EPA:906.0	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	HASL-300:ISOPU	1	CAMO-09-10460	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2458

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	HASL-300:ISOU	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	SW-846:6010B	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	SW-846:6850	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	SW-846:9012A	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	SW-846:9045C	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2458

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

June 26, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232347
SDG: 09-2458

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 25, 2009, and analyzed for General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2458
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232347
SDG: 09-2458

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232347
SDG # : 09-2458

June 26, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 25, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

List of current GEL Certifications as of 26 June 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2458

REQUEST NUMBER: 09-2458

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232347

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10462	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10462	1	POLY	H3	Ice	R
CAMO-09-10462	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10462	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10460	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10460	1	POLY	H3	Ice	R
CAMO-09-10460	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10460	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10461	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10461	1	POLY	H3	Ice	R
CAMO-09-10461	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10461	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10467	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10467	1	POLY	H3	Ice	R
CAMO-09-10467	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10467	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
Jerylee Joy		6/24/09	1400	Patricia Dent	P. Dent	6/25/09	08:45
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2458

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2458

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	EPA:906.0	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	HASL-300:ISOPU	1	CAMO-09-10460	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2458

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	HASL-300:ISOU	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
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		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
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		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
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		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
	SW-846:9045C	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2458

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2458**
Received By: Patricia Dent	**Date Received: JUNE 25, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) 2-5,23
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5528 4C
7209 7847 5491 2C
7209 7847 5469 3C
7209 7847 5470 4C
7209 7847 5506 5C
7209 7847 5458 23C

PM (or PMA) review: Initials PAC Date 6-26-09

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA03 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 51.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

4°C

Ref: 6b018amr1a01282xme

[redacted]

Delivery Address Barcode

BILL SENDER

PRIORITY OVERNIGHT

THU
Deliver By:
25JUN09

TRK# 7289 7847 5528 Form 0201

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRITLV3 04-09

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA03 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 53.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018amr1a01Saguke

[redacted]

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

THU
Deliver By:
25JUN09

TRK# 7289 7847 5491 Form 0201

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRITV3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 52.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 5b019aar2a0512bgdo

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5488 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 158148-434 NRIT V3.04-05

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 51.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 5b019aar2a0512bgdo

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5470 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 158148-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA60 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 52.0 LB MAN
System#: 9814176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr1a015aguko

Delivery Address Barcode

5°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5506 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 158148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA60 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 53.0 LB MAN
System#: 9814176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5458 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 158148-434 NRIT V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

LC/MS/MS PERCHLORATE ANALYSIS

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2458

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881210
Prep Batch Number:	881208

Sample Analysis

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201871403	Interference Check Sample (ICS)
1201871399	Method Blank (MB)
1201871400	Laboratory Control Sample (LCS)
1201871401	232347001(CAMO-09-10462) Matrix Spike (MS)
1201871402	232347001(CAMO-09-10462) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232347001 (CAMO-09-10462) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards Prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert M Maier **Date:** 07/07/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10462

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347001

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 93.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	2.82	ug/kg		1	01-JUL-09 17:58	per0701051a
	Perchlorate-O(18)			5.19	ug/kg		1	01-JUL-09 17:58	per0701051a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10460

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347002

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 91.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.545	2.18	0.554	ug/kg	J	1	01-JUL-09 18:23	per0701054a
	Perchlorate-O(18)			5.47	ug/kg		1	01-JUL-09 18:23	per0701054a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10461

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347003

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 88

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.565	2.26	0.746	ug/kg	J	1	01-JUL-09 18:31	per0701055a
	Perchlorate-O(18)			5.63	ug/kg		1	01-JUL-09 18:31	per0701055a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10467

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347004

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 95.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.524	2.09	2.94	ug/kg		1	01-JUL-09 19:04	per0701059a
	Perchlorate-O(18)			5.05	ug/kg		1	01-JUL-09 19:04	per0701059a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09-2458

Extract Batch Code: 881208

Date Filtered: 29-JUN-09

Matrix: SOIL

Sample ID: 1201871400

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	1.92	ug/kg	96		70 – 130
Perchlorate–O(18)		4.5	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2458

Extract Batch Code: 881208

Date Filtered: 29–JUN–09

Matrix: SOIL

Sample ID: 1201871403

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.05	ug/kg	102		70 – 130
Perchlorate–O(18)		4.76	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701048a
Date: 01-Jul-2009
Time: 17:34:01
ID: 1201871403
Vial: 2:1,C

|LANL|881210|SOLZD|IKS|1|

CWW 07-02-09

Perchlorate

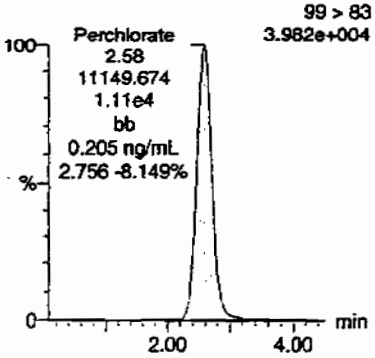

Perchlorate

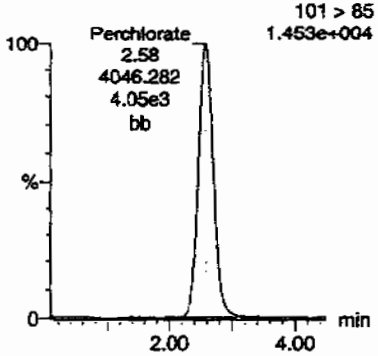

Perchlorate-101

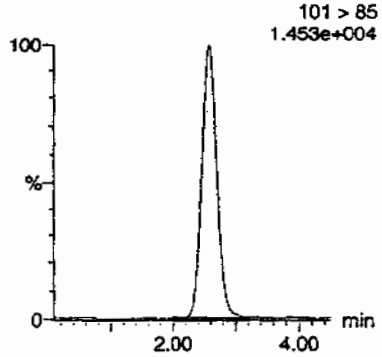

Perchlorate-O(18)

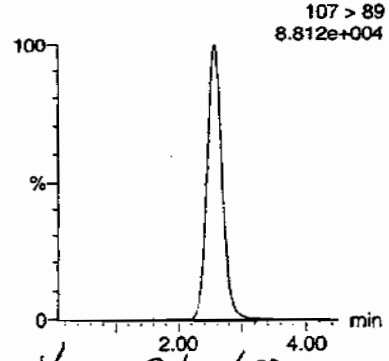

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871403	Perchlorate	99 > 83	2.58	11149.674	11149.674	bb			0.2046	102.28	2.28	4776.1...	2.76
1201871403	Perchlorate-101	101 > 85	2.58	4046.282	4046.282	bb			0.2028	101.40	1.40	1435.2...	
1201871403	Perchlorate-O(18)	107 > 89	2.56	24308.160	24308.160	bb			0.4760	95.19	-4.81	6491.0...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09-2458

Extract Batch Code: 881208

Date Extracted: 29-JUN-09

GEL MS/PS ID: 1201871401

Client ID: CAMO-09-10462

GEL MSD/PSD ID: 1201871402

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.14	2.82	ug/kg	5.16	109	4.69	87.3	9.63	30	75 – 125
Perchlorate-O(18)	0	5.19	ug/kg	5.33		5.12		4.07		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2458

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	01-JUL-09	per0701001a	IPB001
Perchlorate-101	0.00	0	NA	01-JUL-09	per0701001a	IPB001
Perchlorate	0.00	0	NA	01-JUL-09	per0701002a	IPB001
Perchlorate-101	0.00	0	NA	01-JUL-09	per0701002a	IPB001

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070109a.mdb 01 Jul 2009 12:10:01
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070109a.cdb 02 Jul 2009 07:24:30

Name: per0701001a
Date: 01-Jul-2009
Time: 10:54:25
ID: IPB001
Vial: 1:1,A

CWW 07-02-09

Perchlorate

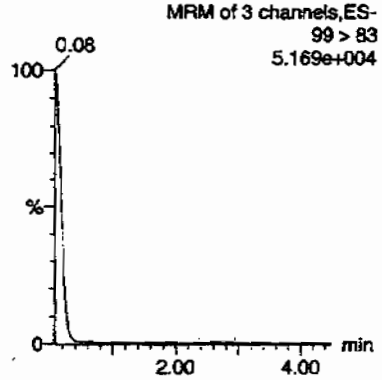

Perchlorate

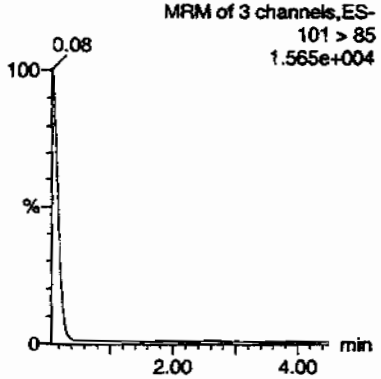

Perchlorate-101

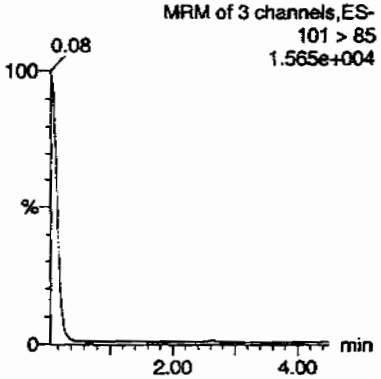

Perchlorate-O(18)

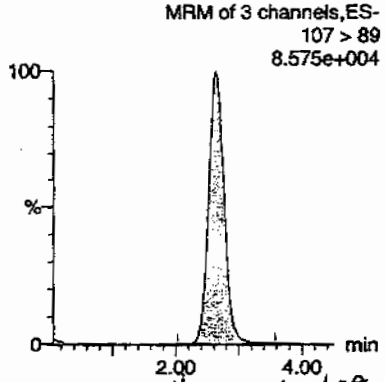

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.66	49.406	49.406	bb			0.0009			5.982	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.64	24564.691	24564.691	bb			0.4810	96.20	-3.80	5193.1...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701002a
Date: 01-Jul-2009
Time: 11:02:50
ID: IPB001
Vial: 1:1,A

CWW 07-02-09

Perchlorate

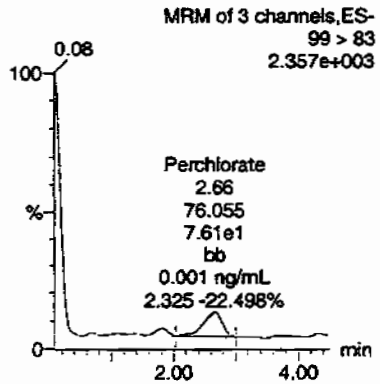

Perchlorate

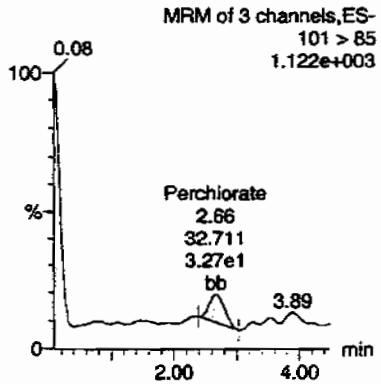

Perchlorate-101

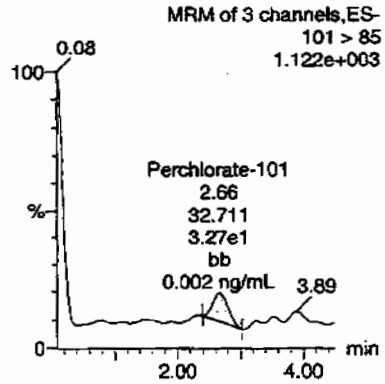

Perchlorate-O(18)

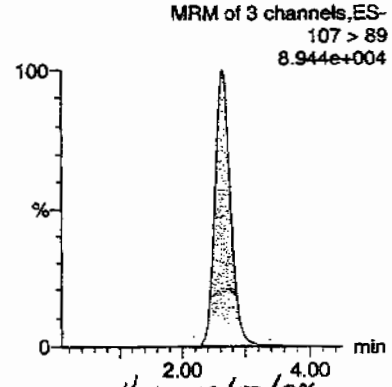

Anne 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.66	76.055	76.055	bb			0.0014			16.332	2.33
IPB001	Perchlorate-101	101 > 85	2.66	32.711	32.711	bb			0.0016			11.080	
IPB001	Perchlorate-O(18)	107 > 89	2.64	25490.703	25490.703	bb			0.4991	99.82	-0.18	2802.3...	

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09--2458

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	01-JUL-09	per0701008a	IPB002
Perchlorate-101	0.00	0	NA	01-JUL-09	per0701008a	IPB002
Perchlorate	0.00	0	NA	01-JUL-09	per0701010a	IPB003
Perchlorate-101	0.00	0	NA	01-JUL-09	per0701010a	IPB003
Perchlorate	0.00	0	NA	01-JUL-09	per0701022a	IPB004
Perchlorate-101	0.00	0	NA	01-JUL-09	per0701022a	IPB004
Perchlorate	0.00	0	NA	01-JUL-09	per0701033a	IPB005
Perchlorate-101	0.00	0	NA	01-JUL-09	per0701033a	IPB005
Perchlorate	0.00	0	NA	01-JUL-09	per0701044a	IPB006
Perchlorate-101	0.00	0	NA	01-JUL-09	per0701044a	IPB006
Perchlorate	0.00	0	NA	01-JUL-09	per0701057a	IPB007
Perchlorate-101	0.00	0	NA	01-JUL-09	per0701057a	IPB007
Perchlorate	0.00	0	NA	01-JUL-09	per0701070a	IPB008

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2458

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	01-JUL-09	per0701070a	IPB008

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701008a
Date: 01-Jul-2009
Time: 12:04:05
ID: IPB002
Vial: 1:1,A

07-02-09

Perchlorate

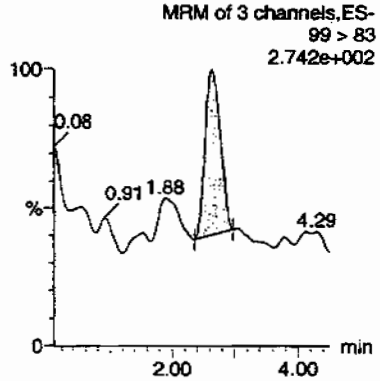

Perchlorate

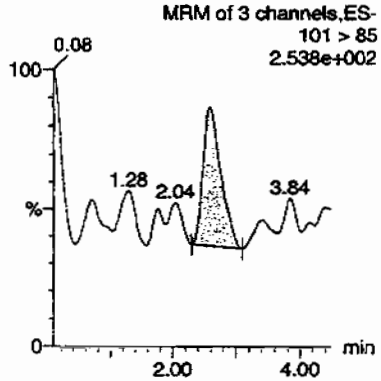

Perchlorate-101

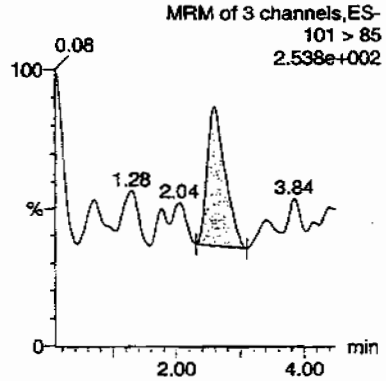

Perchlorate-O(18)

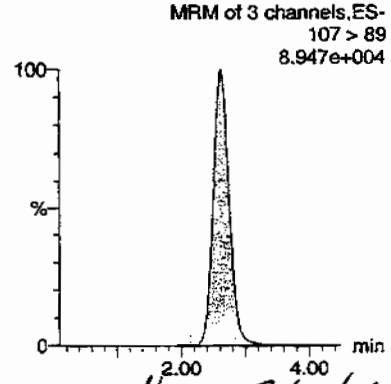

Hrm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.64	46.964	46.964	bb			0.0009			11.914	1.10
IPB002	Perchlorate-101	101 > 85	2.59	42.835	42.835	bb			0.0021			14.302	
IPB002	Perchlorate-O(18)	107 > 89	2.61	25538.781	25538.781	bb			0.5000	100.01 ✓	0.01	4126.7...	

OKAY
LA 0502

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701010a
Date: 01-Jul-2009
Time: 12:20:34
ID: IPB003
Vial: 1:1,A

CWD 07-02-09

Perchlorate

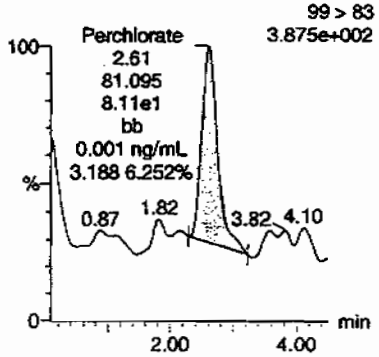

Perchlorate

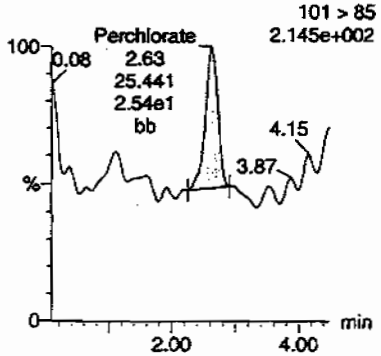

Perchlorate-101

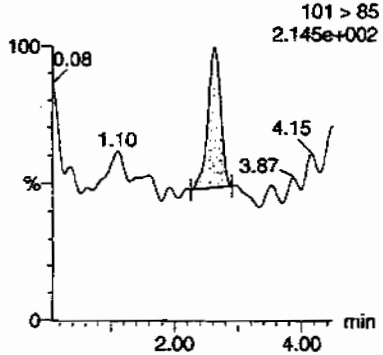

Perchlorate-O(18)

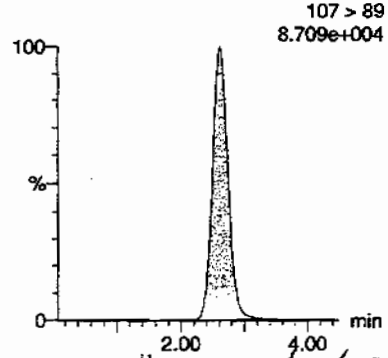

Hum 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.61	81.095	81.095	bb			0.0015			12.199	3.19
IPB003	Perchlorate-101	101 > 85	2.63	25.441	25.441	bb			0.0013			8.394	
IPB003	Perchlorate-O(18)	107 > 89	2.61	24698.920	24698.920	bb			0.4836	96.72	-3.28	3133.5...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701022a
Date: 01-Jul-2009
Time: 13:59:27
ID: IPB004
Vial: 1:1,A

CWW 07-02-09

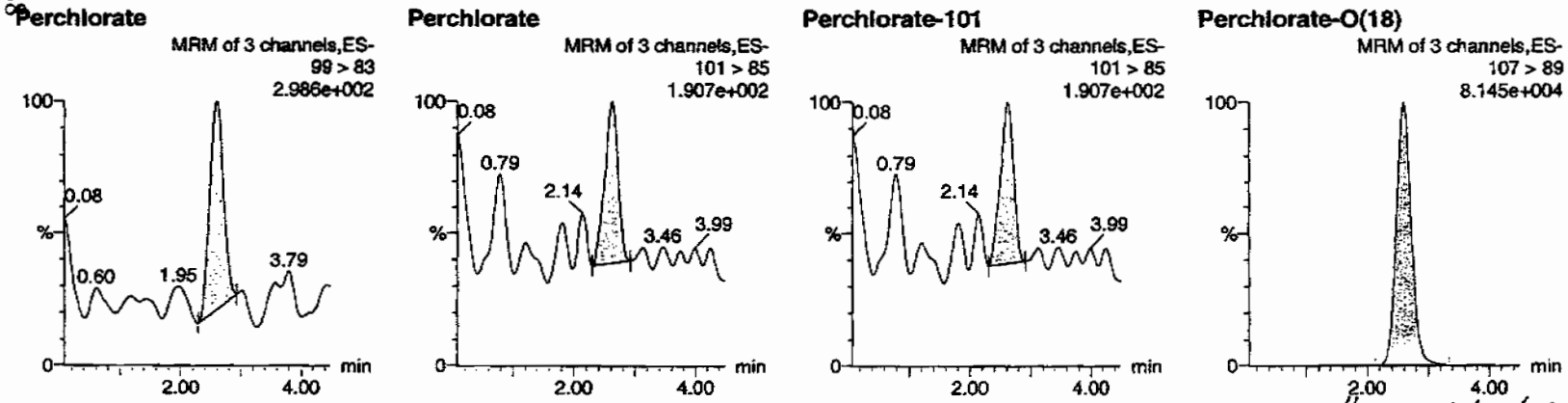

HNM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.59	63.504	63.504	bb			0.0012			23.712	2.11
IPB004	Perchlorate-101	101 > 85	2.63	30.093	30.093	bb			0.0015			4.572	
IPB004	Perchlorate-O(18)	107 > 89	2.60	23150.107	23150.107	bb			0.4533	90.66	-9.34	3355.9...	

ok94
LO.0500

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701033a
Date: 01-Jul-2009
Time: 15:30:09
ID: IPB005
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CWW 07-02-09

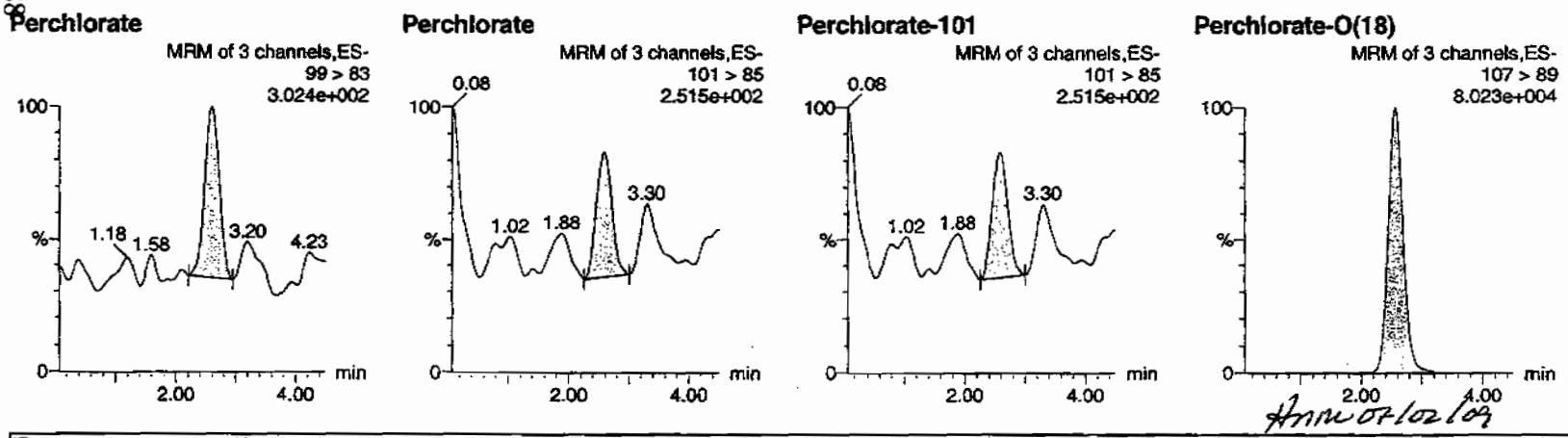

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83	2.59	56.302	56.302	bb			0.0010			13.274	1.52
IPB005	Perchlorate-101	101 > 85	2.59	36.924	36.924	bb			0.0019			4.826	
IPB005	Perchlorate-O(18)	107 > 89	2.56	22773.992	22773.992	bb			0.4459	89.18	-10.82	3791.8...	

OKAY
<0.0500

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Date: 01-Jul-2009
Time: 17:00:52
ID: IPB006
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07-02-09

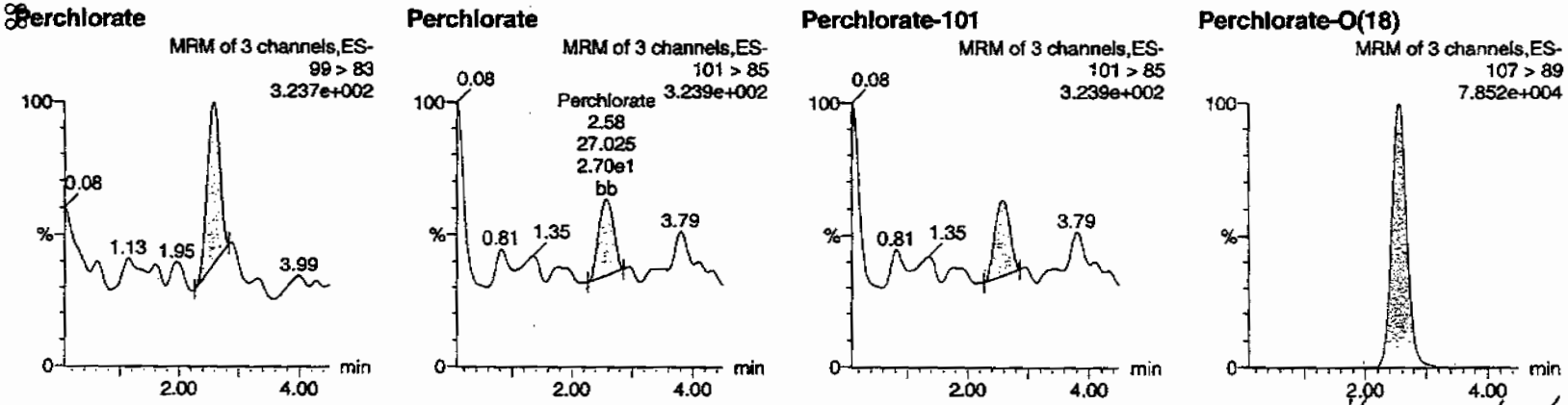

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	2.59	47.843	47.843	bb			0.0009			15.575	1.77
IPB006	Perchlorate-101	101 > 85	2.58	27.025	27.025	bb			0.0014			12.086	
IPB006	Perchlorate-O(18)	107 > 89	2.55	22037.490	22037.490	bb			0.4315	86.30	-13.70	7493.5...	

okay
LQ 0.500

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Date: 01-Jul-2009
Time: 18:48:16
ID: IPB007
Vial: 1:1,A

CWW 07-02-09

Perchlorate

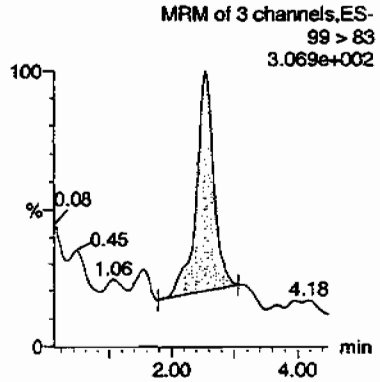

Perchlorate

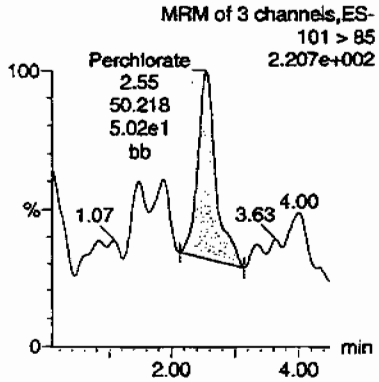

Perchlorate-101

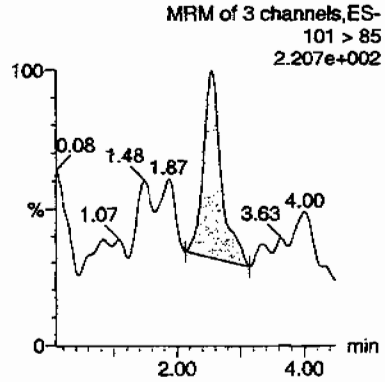

Perchlorate-O(18)

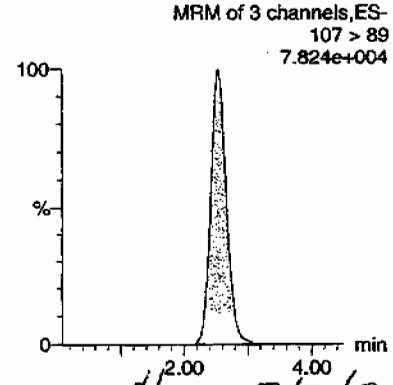

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83	2.54	80.913	80.913	bb			0.0015			41.066	1.61
IPB007	Perchlorate-101	101 > 85	2.55	50.218	50.218	bb			0.0025			19.221	
IPB007	Perchlorate-O(18)	107 > 89	2.54	22100.811	22100.811	bb			0.4327	86.55	-13.45	4624.2...	

OKAY
LD.0500

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701070a
Date: 01-Jul-2009
Time: 20:35:47
ID: IPB008
Vial: 1:1,A

CWW 07-02-09

Perchlorate

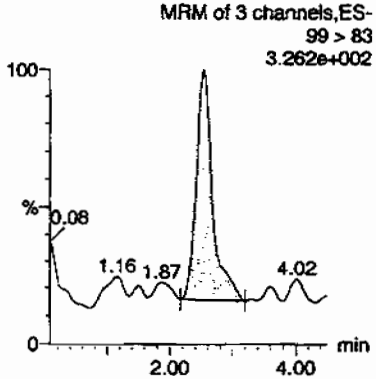

Perchlorate

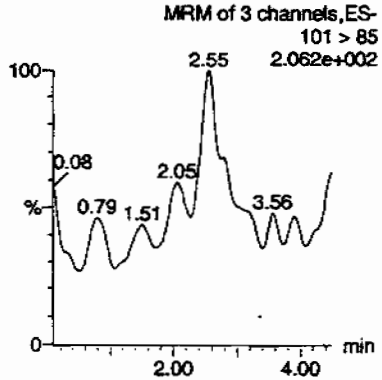

Perchlorate-101

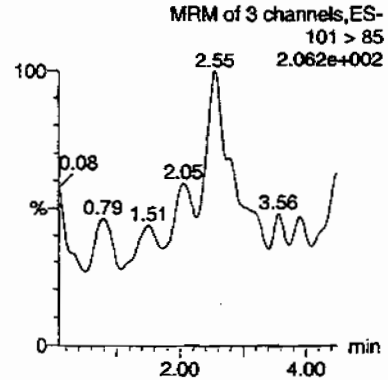

Perchlorate-O(18)

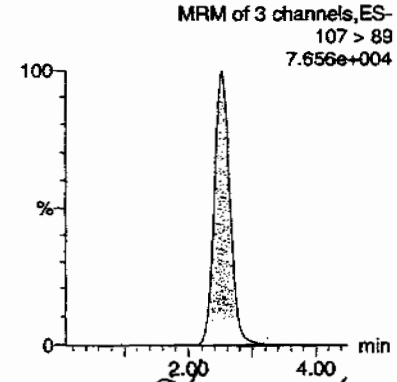

AMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83	2.54	84.984	84.984	bb			0.0016			14.349	0.00
IPB008	Perchlorate-101	101 > 85											
IPB008	Perchlorate-O(18)	107 > 89	2.51	21464.076	21464.076	bb			0.4203	84.05	-15.95	7084.3...	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1_Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWW 01-09-08

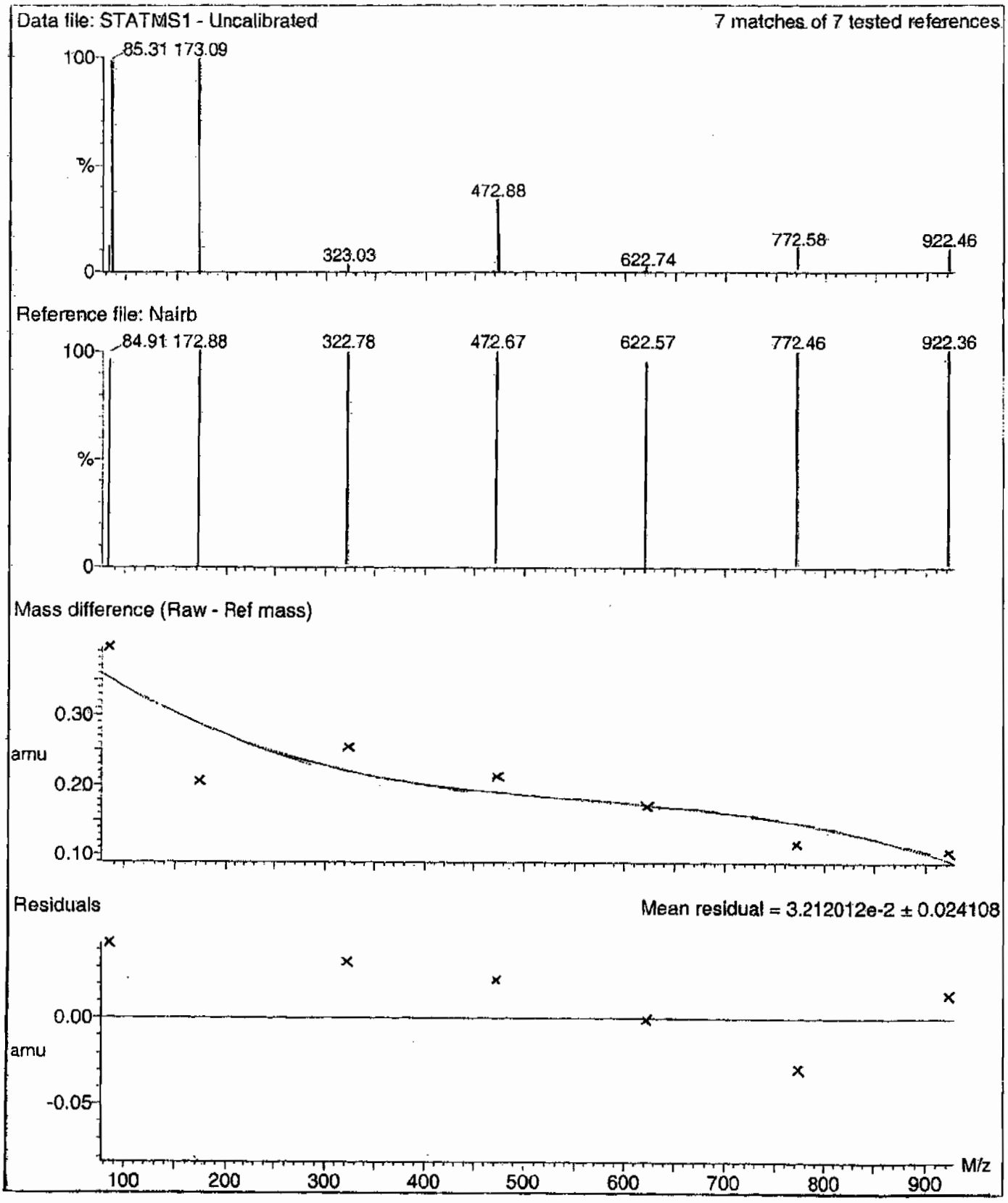

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Calibration Report - MS1 Scanning

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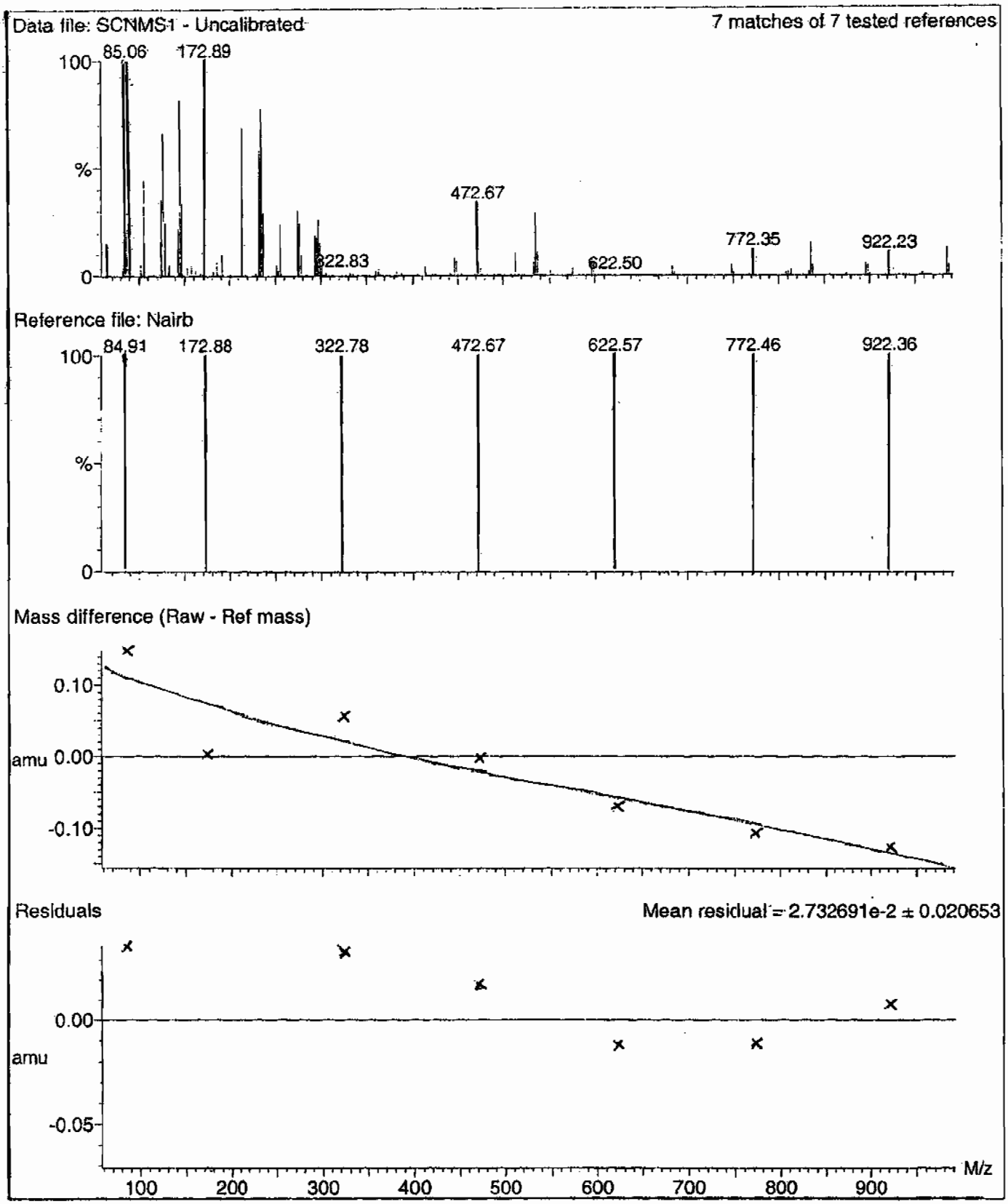

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Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

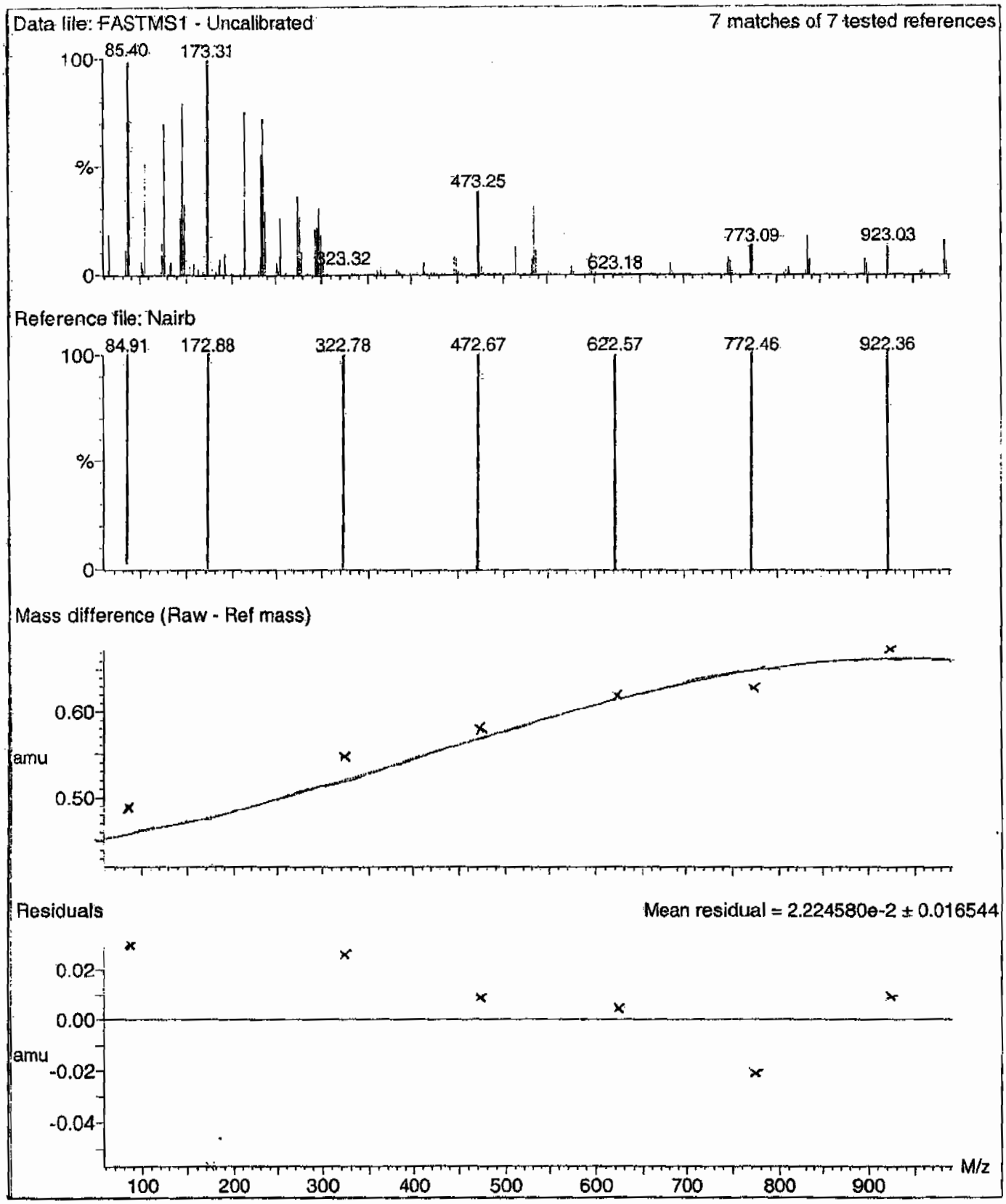

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

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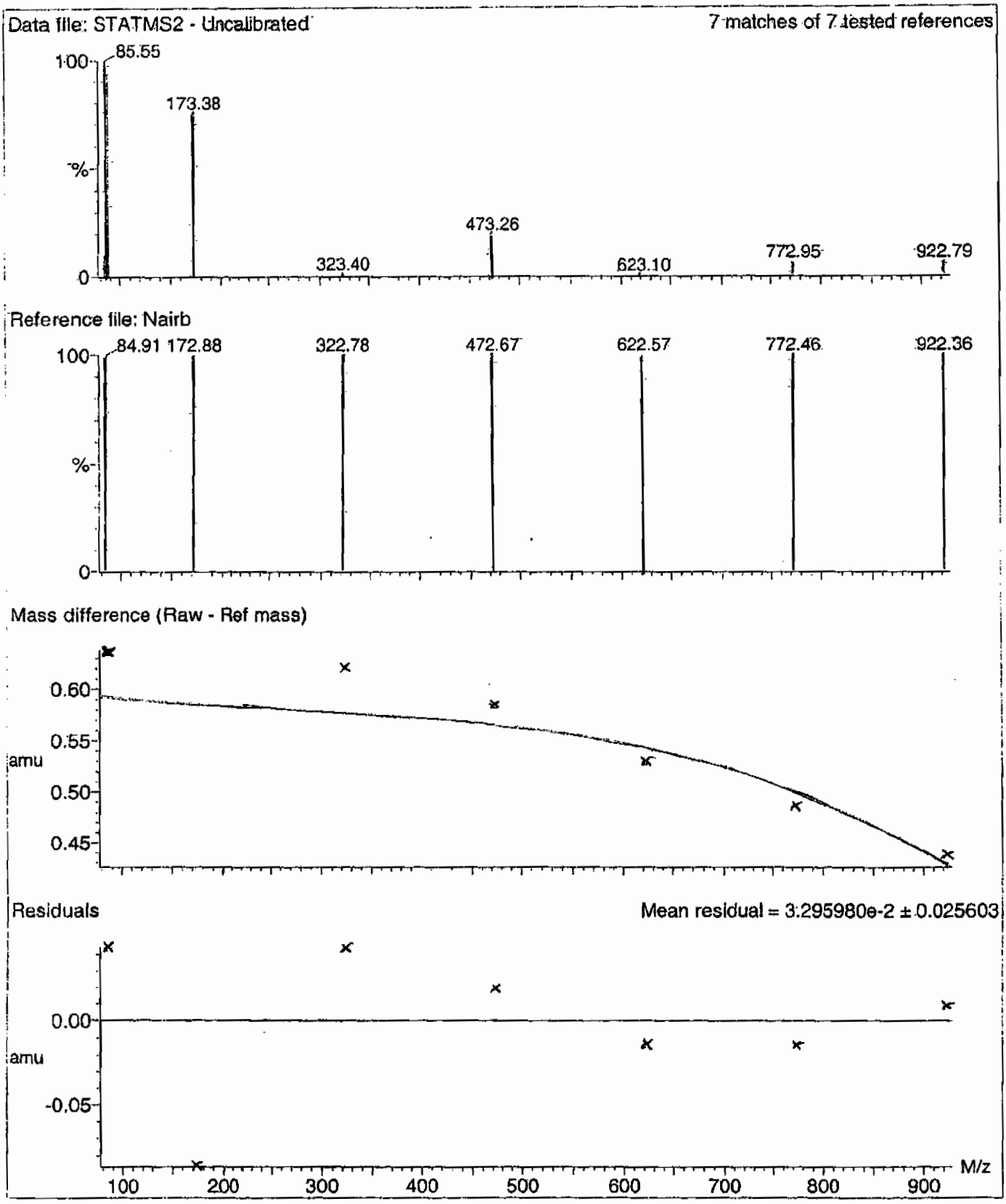

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Calibration Report - MS2 Scanning

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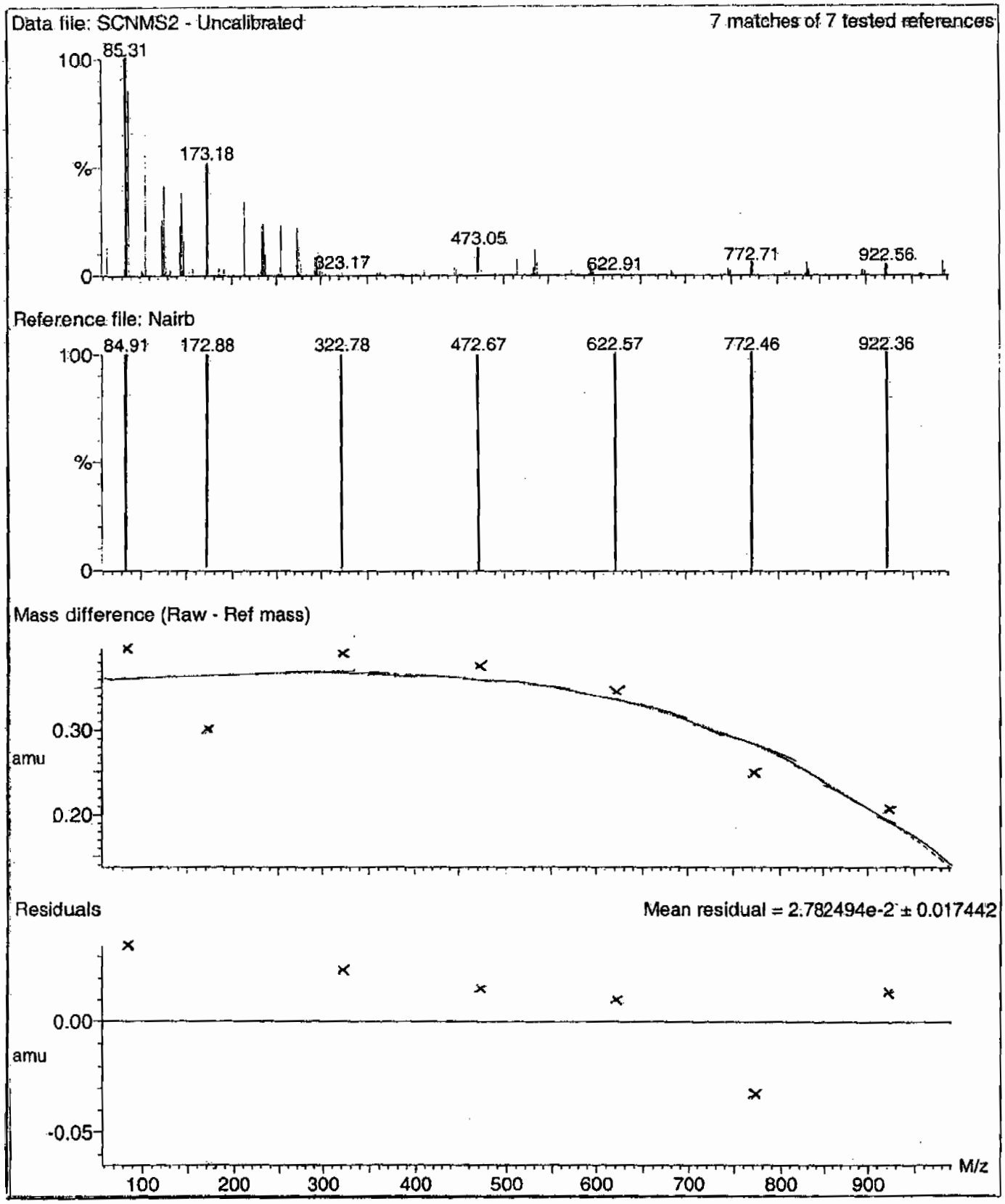

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

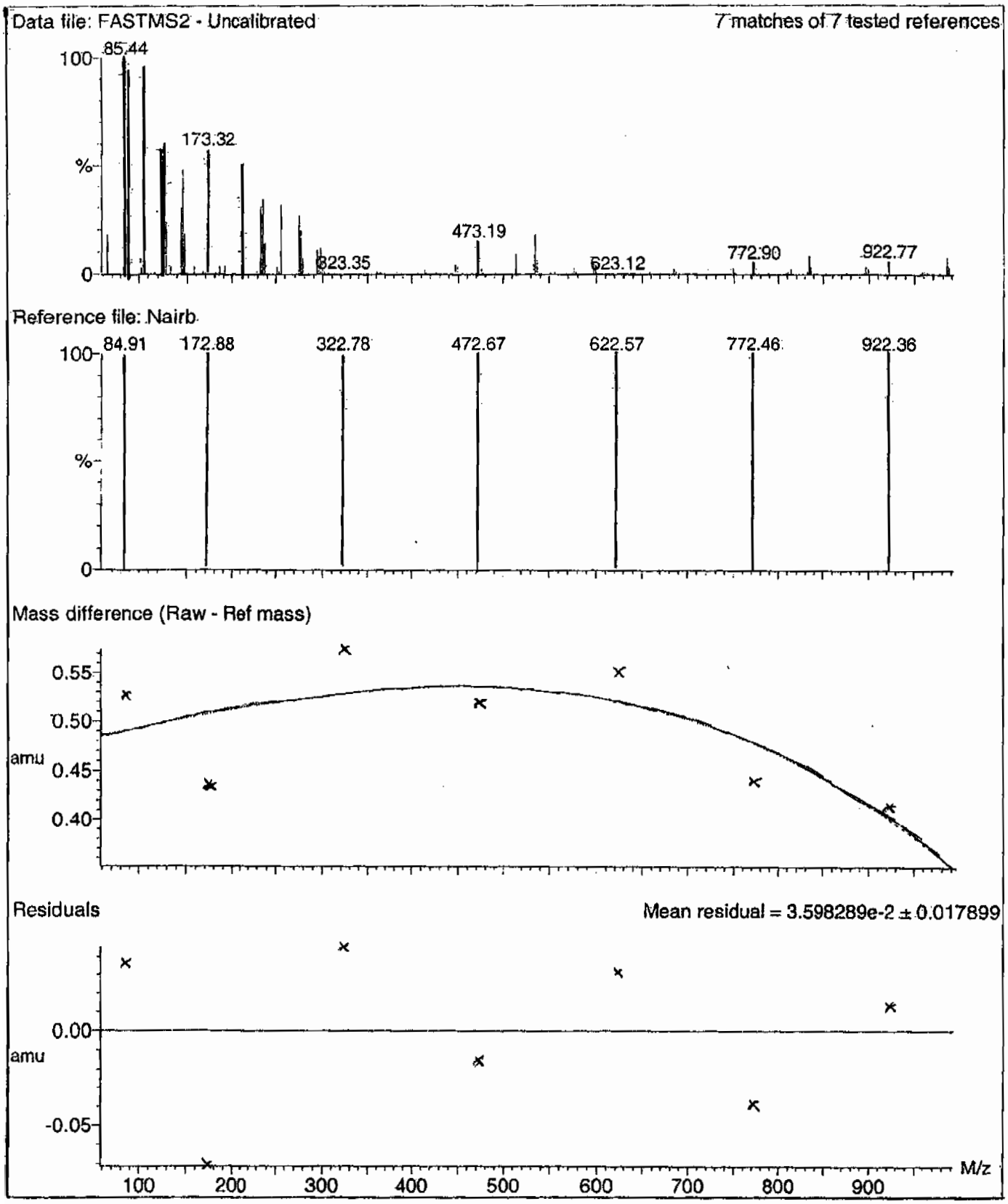

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Wednesday, July 01, 2009 10:43:16 Eastern Daylight Time

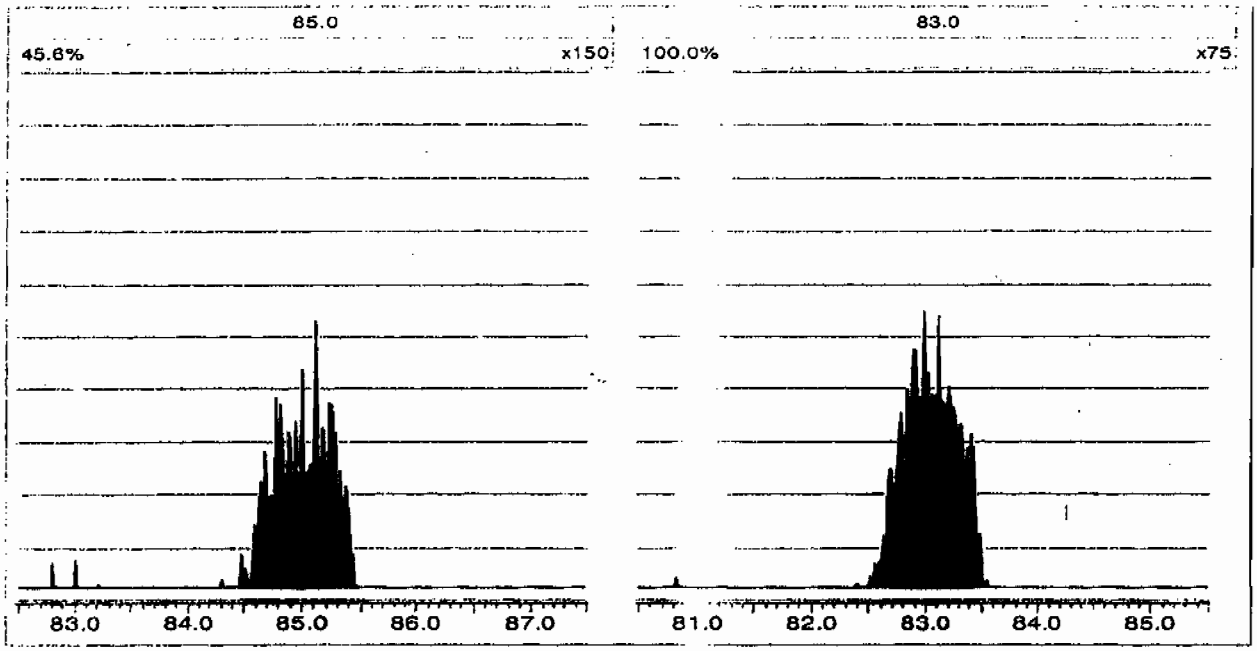

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2458

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	**per0701006a**	**01-JUL-09**	**26293.3**				
Lower Area Limit			**13146.65**				
Upper Area Limit			**52586.6**				
1201871399	per0701046a	01-JUL-09 17:17	21754.9	2.55	2.57602	1.01	
1201871400	per0701047a	01-JUL-09 17:25	23006.2	2.55	2.5636	1.005	
1201871403	per0701048a	01-JUL-09 17:34	24308.2	2.56	2.57613	1.006	
232347001	per0701051a	01-JUL-09 17:58	24789.4	2.54	2.55112	1.004	
1201871401	per0701052a	01-JUL-09 18:06	25431.7	2.54	2.56358	1.009	
1201871402	per0701053a	01-JUL-09 18:15	24417.9	2.54	2.55112	1.004	
232347002	per0701054a	01-JUL-09 18:23	25634.7	2.55	2.56357	1.005	
232347003	per0701055a	01-JUL-09 18:31	25457.5	2.54	2.55112	1.004	

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Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2458

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0701006a**	**01–JUL–09**	**26293.3**				
Lower Area Limit			**13146.65**				
Upper Area Limit			**52586.6**				
232347004	per0701059a	01–JUL–09 19:04	24635.6	2.54	2.55115	1.004	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10462

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347001

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 93.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	2.82	ug/kg		1	01-JUL-09 17:58	per0701051a
	Perchlorate-O(18)			5.19	ug/kg		1	01-JUL-09 17:58	per0701051a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701051a
Date: 01-Jul-2009
Time: 17:58:40
ID: 232347001
Vial: 2:1,F

|LANL|881210|50120|1|

cwd 07-02-09

Page 37 of 188

Perchlorate

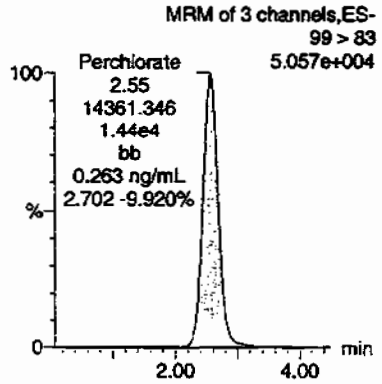

Perchlorate

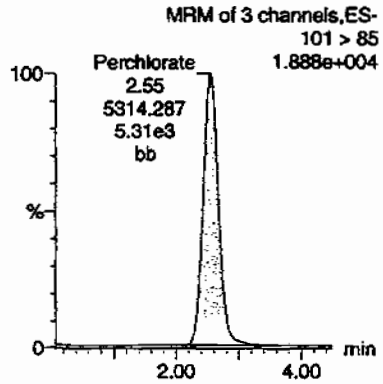

Perchlorate-101

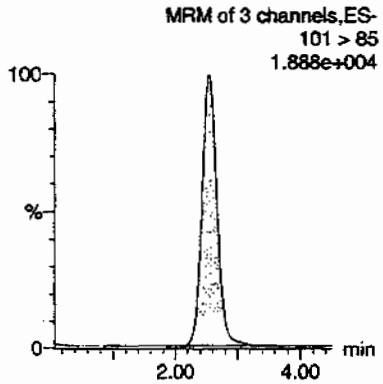

Perchlorate-O(18)

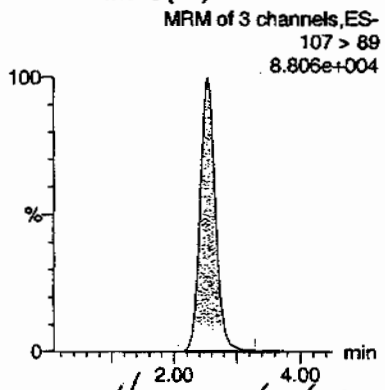

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232347001	Perchlorate	99 > 83	2.55	14361.346	14361.346	bb			0.2635			3502.1...	2.70
232347001	Perchlorate-101	101 > 85	2.55	5314.287	5314.287	bb			0.2664			754.864	
232347001	Perchlorate-O(18)	107 > 89	2.54	24789.393	24789.393	bb			0.4854	97.08	-2.92	8827.0...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10460

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347002

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 91.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.545	2.18	0.554	ug/kg	J	1	01-JUL-09 18:23	per0701054a
	Perchlorate-O(18)			5.47	ug/kg		1	01-JUL-09 18:23	per0701054a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701054a
Date: 01-Jul-2009
Time: 18:23:21
ID: 232347002 | LANL | 881210 | 50020 | 1 |
Vial: 2:2,C

CWW 07-02-09

Perchlorate

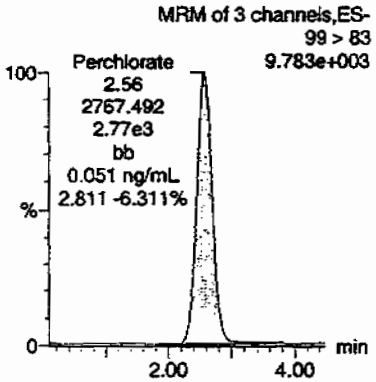

Perchlorate

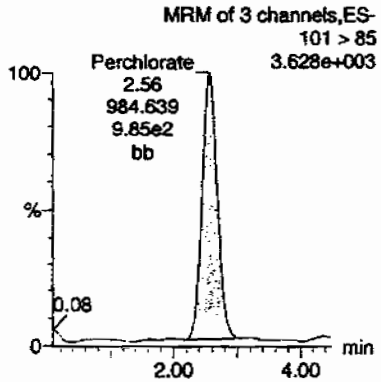

Perchlorate-101

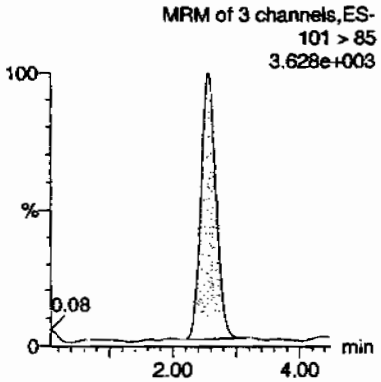

Perchlorate-O(18)

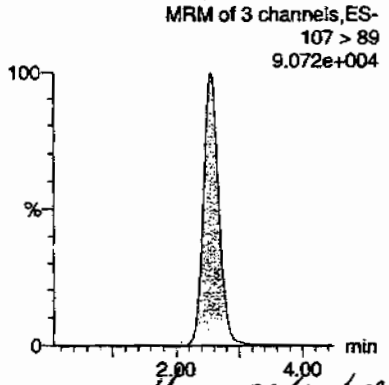

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232347002	Perchlorate	99 > 83	2.56	2767.492	2767.492	bb			0.0508			632.909	2.81
232347002	Perchlorate-101	101 > 85	2.56	984.639	984.639	bb			0.0494			656.287	
232347002	Perchlorate-O(18)	107 > 89	2.55	25634.697	25634.697	bb			0.5019	100.39	0.39	19357....	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10461

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347003

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 88

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.565	2.26	0.746	ug/kg	J	1	01-JUL-09 18:31	per0701055a
	Perchlorate-O(18)			5.63	ug/kg		1	01-JUL-09 18:31	per0701055a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Page 1 of 188

Name: per0701055a
Date: 01-Jul-2009
Time: 18:31:35
ID: 232347003
Vial: 2:2,D

|LANL|881210|50120|1|

CWO 07-02-09

Perchlorate

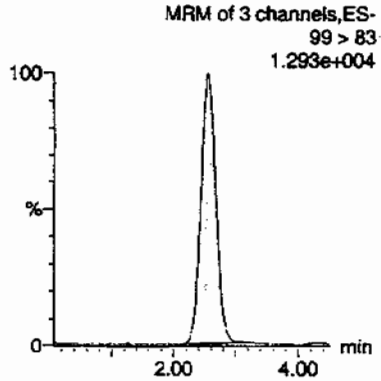

Perchlorate

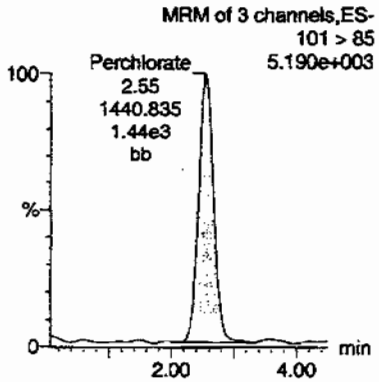

Perchlorate-101

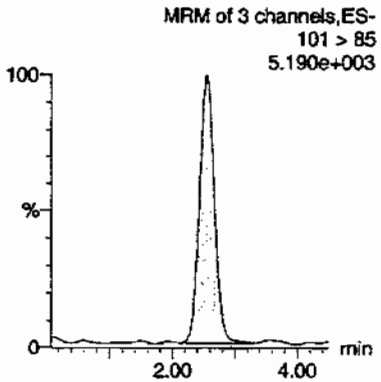

Perchlorate-O(18)

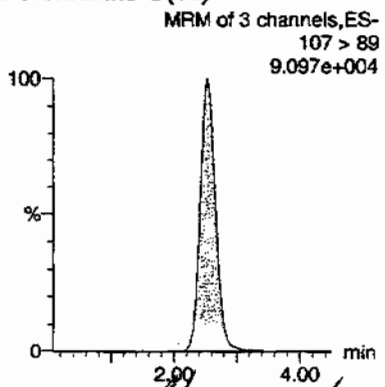

AMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232347003	Perchlorate	99 > 83	2.55	3598.156	3598.156	bb			0.0660			623.506	2.50
232347003	Perchlorate-101	101 > 85	2.55	1440.835	1440.835	bb			0.0722			212.552	
232347003	Perchlorate-O(18)	107 > 89	2.54	25457.467	25457.467	bb			0.4985	99.69	-0.31	2583.1...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10467

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 232347004

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 95.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.524	2.09	2.94	ug/kg		1	01-JUL-09 19:04	per0701059a
	Perchlorate-O(18)			5.05	ug/kg		1	01-JUL-09 19:04	per0701059a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701059a
Date: 01-Jul-2009
Time: 19:04:44
ID: 232347004
Vial: 2:2,E

|LANL|881210|50620|11|

CWO 07-02-09

Perchlorate

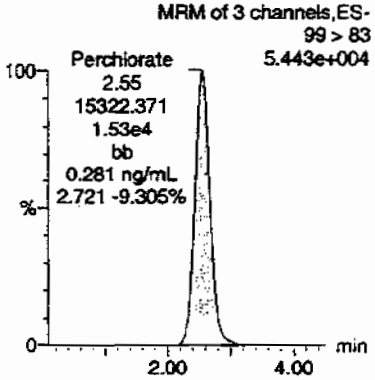

Perchlorate

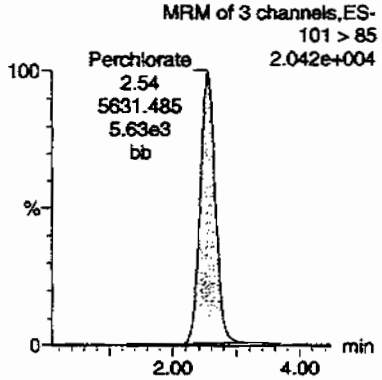

Perchlorate-101

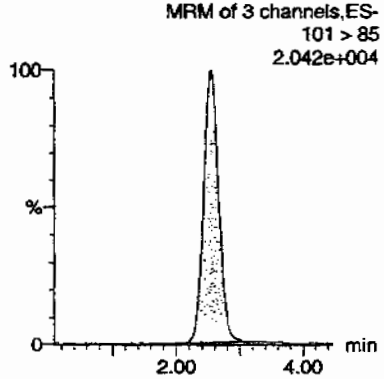

Perchlorate-O(18)

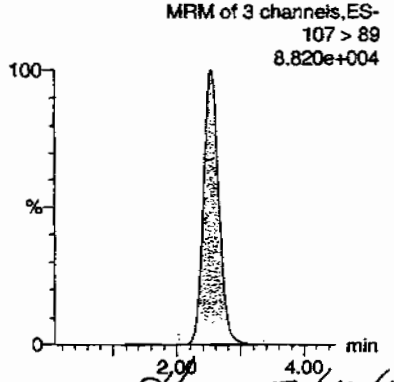

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232347004	Perchlorate	99 > 83	2.55	15322.371	15322.371	bb			0.2811			6216.4...	2.72
232347004	Perchlorate-101	101 > 85	2.54	5631.485	5631.485	bb			0.2823			260.329	
232347004	Perchlorate-O(18)	107 > 89	2.54	24635.584	24635.584	bb			0.4824	96.47	-3.53	12368....	

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2458

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 01–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 54505.72

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2458

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 01–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 19951.18

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070109a.mdb 01 Jul 2009 12:10:01
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070109a.cdb 02 Jul 2009 07:24:30

Compound name: Perchlorate
Response Factor: 54505.7
RRF SD: 1176.27, % Relative SD: 2.15807
Response type: External Std, Area
Curve type: RF

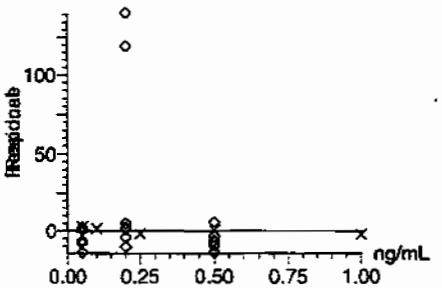

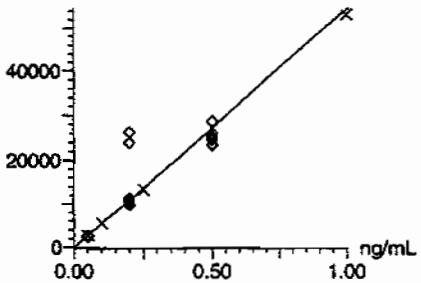

CWW
07-02-09

Compound name: Perchlorate-101
Response Factor: 19951.2
RRF SD: 548.059, % Relative SD: 2.747
Response type: External Std, Area
Curve type: RF

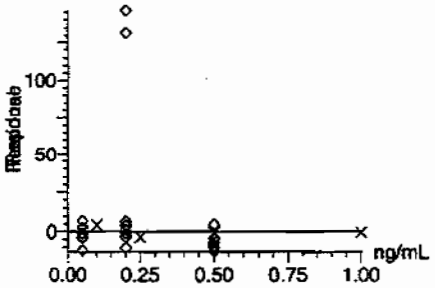

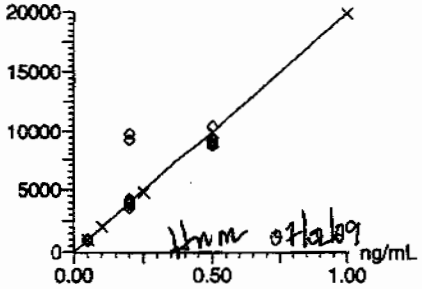

Hmm 07/02/09

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Compound name: Perchlorate-O(18)
Response Factor: 51072.6
RRF SD: 1175.28, % Relative SD: 2.30119
Response type: External Std, Area
Curve type: RF

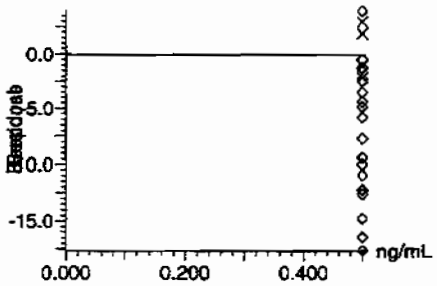

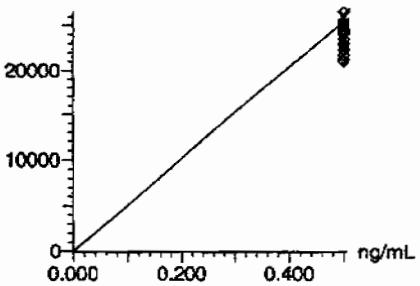

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2458

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.53	105.52	01–JUL–09 12:12	per0701009a
Perchlorate Isotope Ratio		2.75		01–JUL–09 12:12	per0701009a
Perchlorate–101	.5	.52	104.75	01–JUL–09 12:12	per0701009a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701009a
Date: 01-Jul-2009
Time: 12:12:19
ID: WCL090610-06ICV
Vial: 1:2,A

Pass
and
07-02-09

Perchlorate

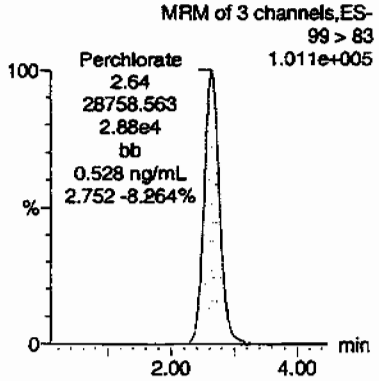

Perchlorate

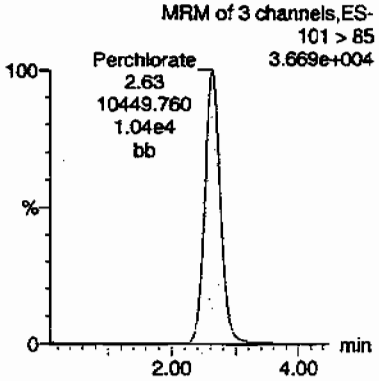

Perchlorate-101

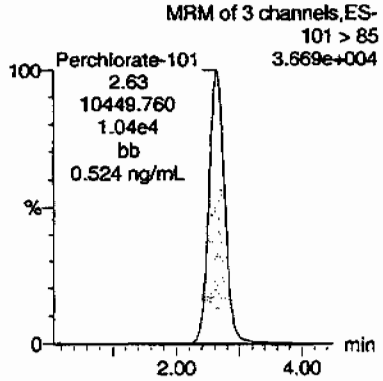

Perchlorate-O(18)

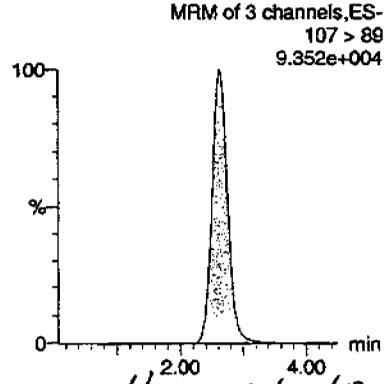

Hmc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06ICV	Perchlorate	99 > 83	2.64	28758.563	28758.563	bb			0.5276	105.52	5.52	9714.9...	2.75
WCL090610-06ICV	Perchlorate-101	101 > 85	2.63	10449.760	10449.760	bb			0.5238	104.75	4.75	1403.6...	
WCL090610-06ICV	Perchlorate-O(18)	107 > 89	2.61	26543.766	26543.766	bb			0.5197	103.95	3.95	6555.3...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2458

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.46	92.04	01–JUL–09 13:51	per0701021a
Perchlorate Isotope Ratio		2.76		01–JUL–09 13:51	per0701021a
Perchlorate–101	.5	.46	91.25	01–JUL–09 13:51	per0701021a
Perchlorate	.5	.45	90.24	01–JUL–09 15:21	per0701032a
Perchlorate Isotope Ratio		2.74		01–JUL–09 15:21	per0701032a
Perchlorate–101	.5	.45	89.87	01–JUL–09 15:21	per0701032a
Perchlorate	.5	.47	93.83	01–JUL–09 16:52	per0701043a
Perchlorate Isotope Ratio		2.69		01–JUL–09 16:52	per0701043a
Perchlorate–101	.5	.48	95.39	01–JUL–09 16:52	per0701043a
Perchlorate	.5	.48	96.04	01–JUL–09 18:39	per0701056a
Perchlorate Isotope Ratio		2.82		01–JUL–09 18:39	per0701056a
Perchlorate–101	.5	.47	93.11	01–JUL–09 18:39	per0701056a
Perchlorate	.5	.43	85.8	01–JUL–09 20:27	per0701069a

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2458

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate Isotope Ratio		2.69		01–JUL–09 20:27	per0701069a
Perchlorate–101	.5	.44	87.28	01–JUL–09 20:27	per0701069a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701021a
Date: 01-Jul-2009
Time: 13:51:12
ID: WCL090610-06CCV
Vial: 1:2,A

Pwas
aw
07-02-09

Perchlorate

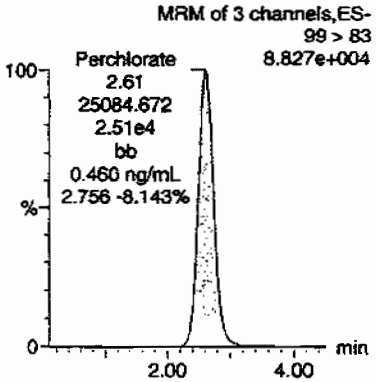

Perchlorate

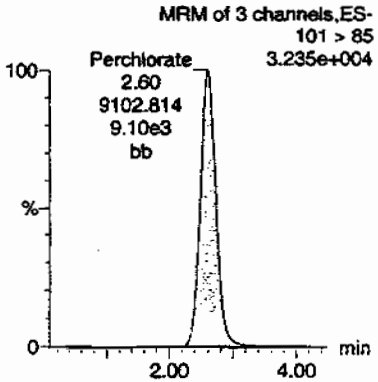

Perchlorate-101

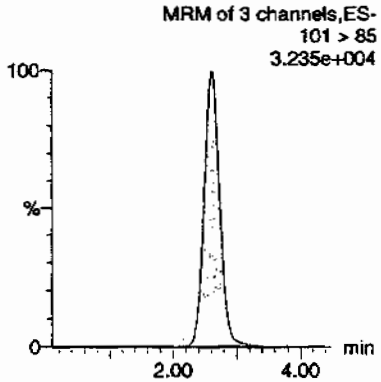

Perchlorate-O(18)

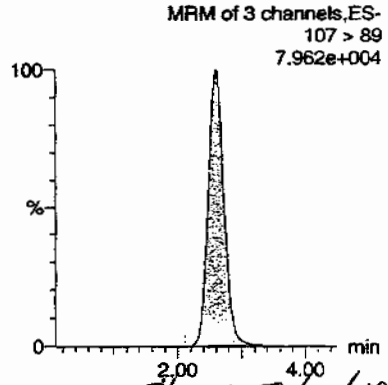

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.61	25084.672	25084.672	bb			0.4602	92.04	-7.96	9361.1...	2.76
WCL090610-06CCV	Perchlorate-101	101 > 85	2.60	9102.814	9102.814	bb			0.4563	91.25	-8.75	1049.0...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.59	22411.676	22411.676	bb			0.4388	87.76	-12.24	4872.6...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701032a
Date: 01-Jul-2009
Time: 15:21:55
ID: WCL090610-06CCV
Vial: 1:2,A

Page 88 of 188

Pass
07-02-09

Perchlorate

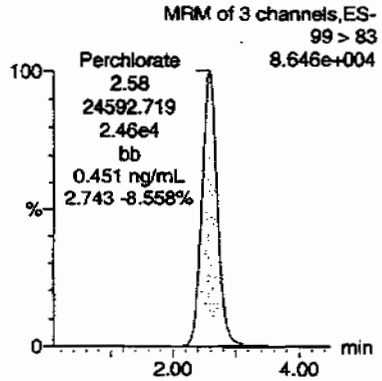

Perchlorate

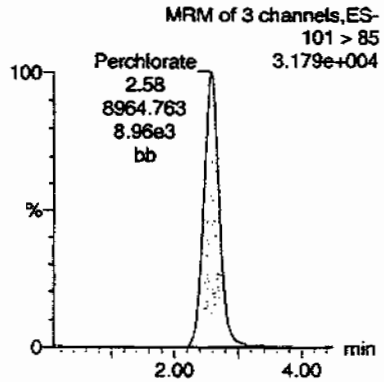

Perchlorate-101

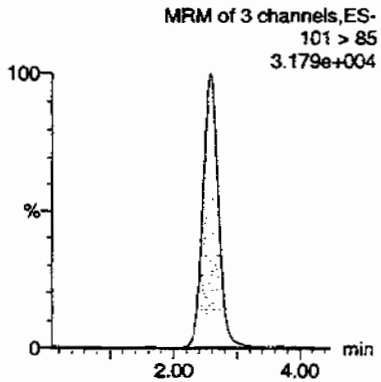

Perchlorate-O(18)

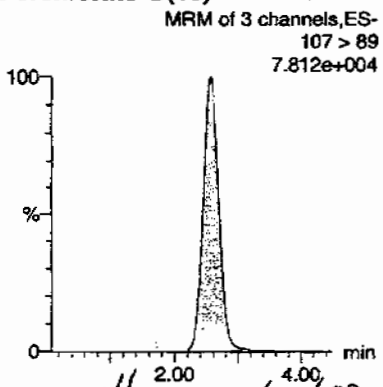

Hmc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.58	24592.719	24592.719	bb			0.4512	90.24	-9.76	3932.3...	2.74
WCL090610-06CCV	Perchlorate-101	101 > 85	2.58	8964.763	8964.763	bb			0.4493	89.87	-10.13	2152.6...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.56	22317.896	22317.896	bb			0.4370	87.40	-12.60	656.097	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Pass
07-02-09

Name: per0701043a
Date: 01-Jul-2009
Time: 16:52:38
ID: WCL090610-06CCV
Vial: 1:2,A

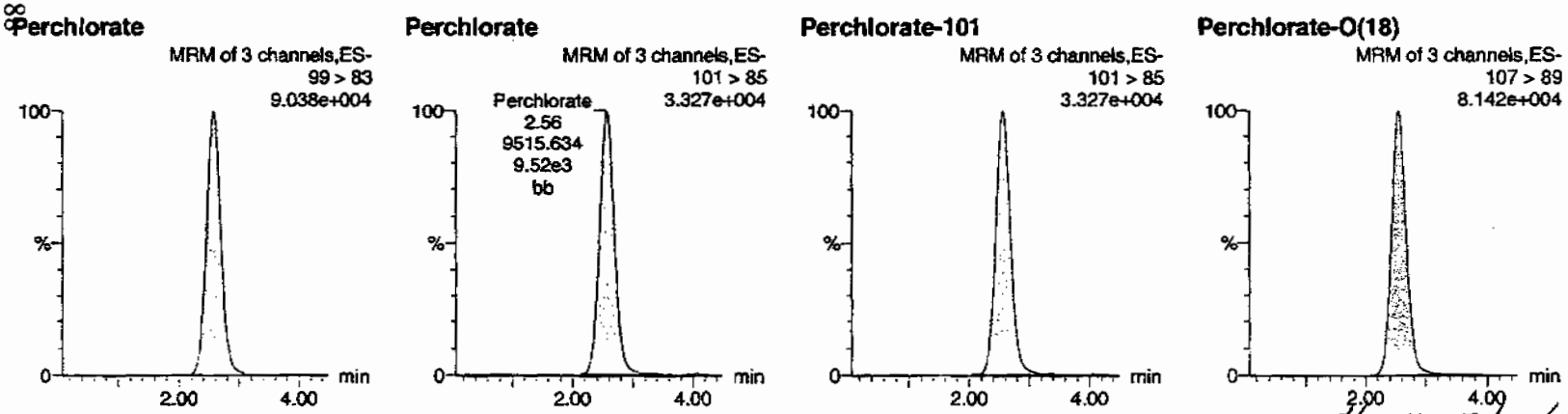

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.56	25570.629	25570.629	bb			0.4691	93.83	-6.17	6213.7...	2.69
WCL090610-06CCV	Perchlorate-101	101 > 85	2.56	9515.634	9515.634	bb			0.4769	95.39	-4.61	1118.3...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.55	22977.973	22977.973	bb			0.4499	89.98	-10.02	4541.5...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701056a
Date: 01-Jul-2009
Time: 18:39:48
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
07-02-09

Perchlorate

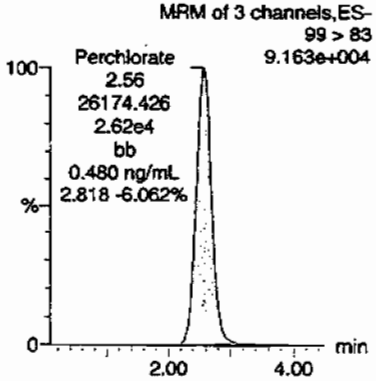

Perchlorate

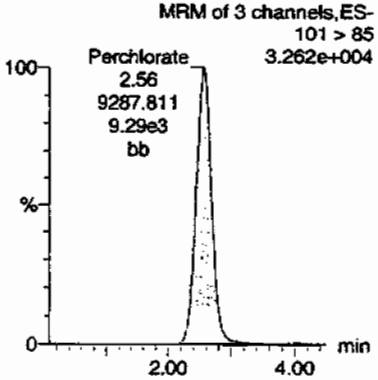

Perchlorate-101

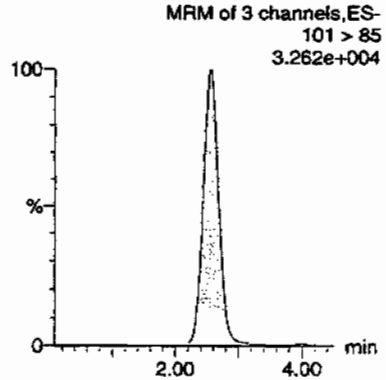

Perchlorate-O(18)

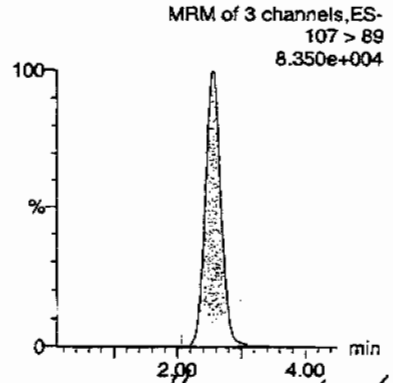

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.56	26174.426	26174.426	bb			0.4802	96.04	-3.96	14089....	2.82
WCL090610-06CCV	Perchlorate-101	101 > 85	2.56	9287.811	9287.811	bb			0.4655	93.11	-6.89	3038.9...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.55	23575.309	23575.309	bb			0.4616	92.32	-7.68	3475.6...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701069a
Date: 01-Jul-2009
Time: 20:27:19
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
aw
07-02-09

Perchlorate

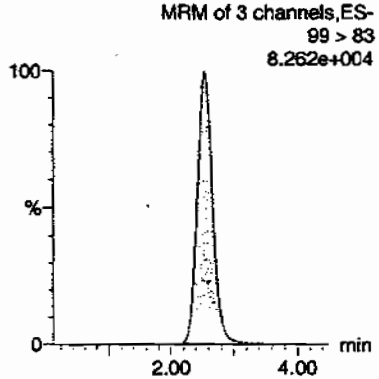

Perchlorate

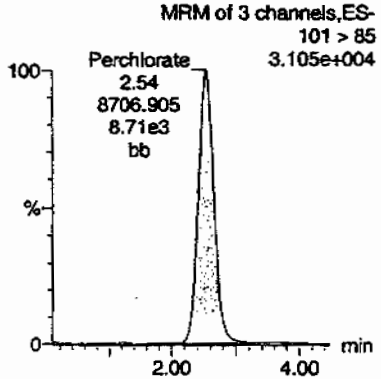

Perchlorate-101

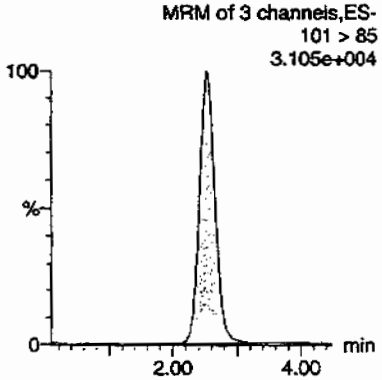

Perchlorate-O(18)

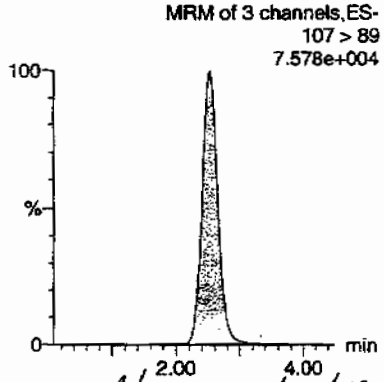

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.54	23382.703	23382.703	bb			0.4290	85.80	-14.20	6678.1...	2.69
WCL090610-06CCV	Perchlorate-101	101 > 85	2.54	8706.905	8706.905	bb			0.4364	87.28	-12.72	2888.0...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.53	21349.877	21349.877	bb			0.4180	83.61	-16.39	419.974	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2458

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	102.45	01-JUL-09 12:28	per0701011a
Perchlorate Isotope Ratio		2.62		01-JUL-09 12:28	per0701011a
Perchlorate-101	.05	.05	106.99	01-JUL-09 12:28	per0701011a
Perchlorate	.05	.05	93.74	01-JUL-09 14:07	per0701023a
Perchlorate Isotope Ratio		2.68		01-JUL-09 14:07	per0701023a
Perchlorate-101	.05	.05	95.68	01-JUL-09 14:07	per0701023a
Perchlorate	.05	.05	91.64	01-JUL-09 15:38	per0701034a
Perchlorate Isotope Ratio		2.54		01-JUL-09 15:38	per0701034a
Perchlorate-101	.05	.05	98.58	01-JUL-09 15:38	per0701034a
Perchlorate	.05	.05	101.06	01-JUL-09 17:09	per0701045a
Perchlorate Isotope Ratio		2.7		01-JUL-09 17:09	per0701045a

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2458

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate–101	.05	.05	102.11	01–JUL–09 17:09	per0701045a
Perchlorate	.05	.05	100.43	01–JUL–09 18:56	per0701058a
Perchlorate Isotope Ratio		2.84		01–JUL–09 18:56	per0701058a
Perchlorate–101	.05	.05	96.54	01–JUL–09 18:56	per0701058a
Perchlorate	.05	.05	93.24	01–JUL–09 20:44	per0701071a
Perchlorate Isotope Ratio		2.91		01–JUL–09 20:44	per0701071a
Perchlorate–101	.05	.04	87.63	01–JUL–09 20:44	per0701071a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Page 76 of 188

Name: per0701011a
Date: 01-Jul-2009
Time: 12:28:48
ID: WCL090610-07CRI
Vial: 1:2,B

Pres
Cmo
07-02-09

Perchlorate

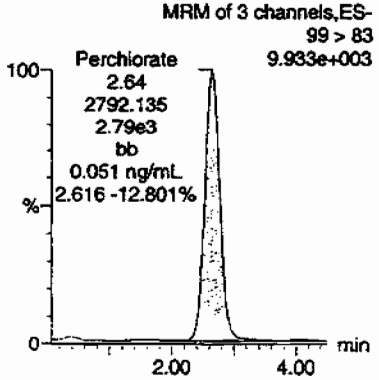

Perchlorate

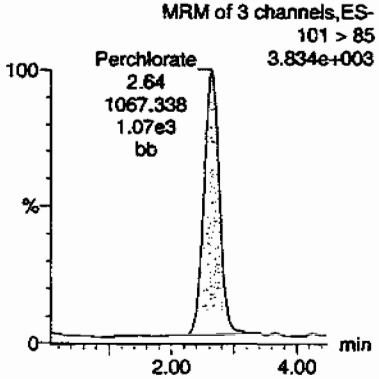

Perchlorate-101

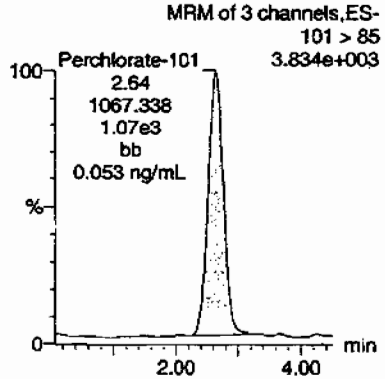

Perchlorate-O(18)

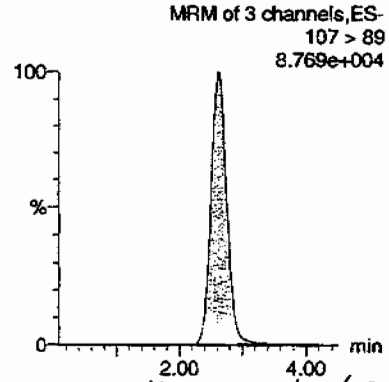

Hbm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.64	2792.135	2792.135	bb			0.0512	102.45	2.45	1309.2...	2.62
WCL090610-07CRI	Perchlorate-101	101 > 85	2.64	1067.338	1067.338	bb			0.0535	106.99	6.99	469.506	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.63	24908.549	24908.549	bb			0.4877	97.54	-2.46	3535.4...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qid

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701023a
Date: 01-Jul-2009
Time: 14:07:41
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
and
07-02-09

Perchlorate

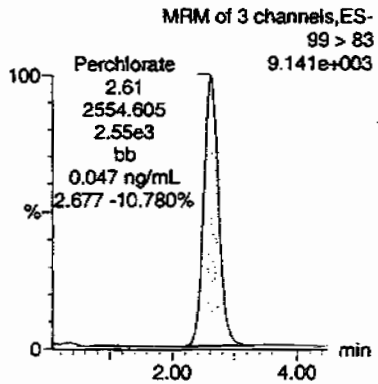

Perchlorate

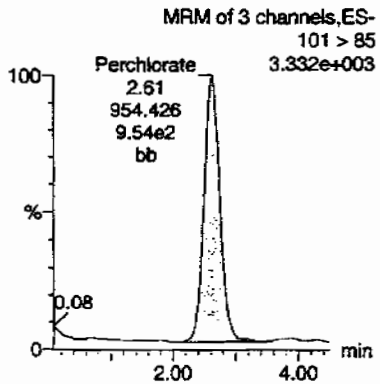

Perchlorate-101

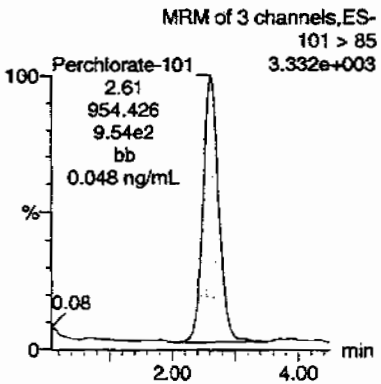

Perchlorate-O(18)

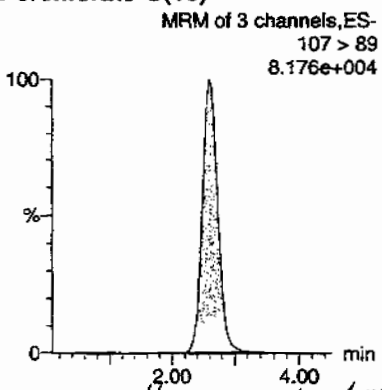

Arm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.61	2554.605	2554.605	bb			0.0469	93.74	-6.26	531.538	2.68
WCL090610-07CRI	Perchlorate-101	101 > 85	2.61	954.426	954.426	bb			0.0478	95.68	-4.32	217.520	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.60	23158.055	23158.055	bb			0.4534	90.69	-9.31	1225.6...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Page 78 of 118

Name: per0701034a
Date: 01-Jul-2009
Time: 15:38:24
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
07-01-09

Perchlorate

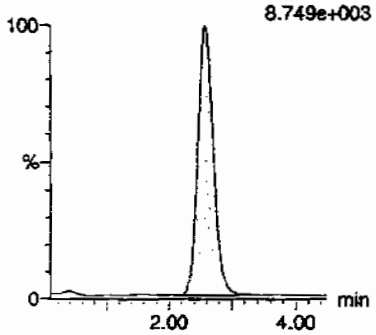

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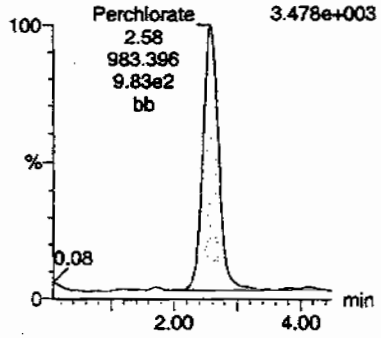

Perchlorate-101

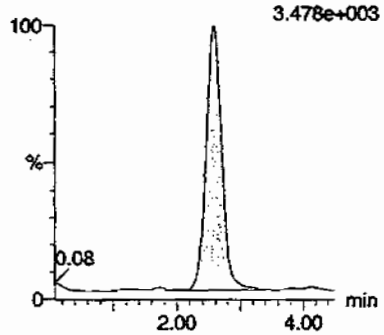

Perchlorate-O(18)

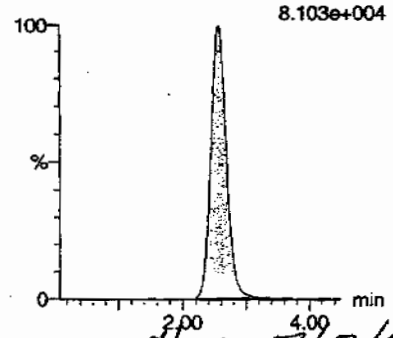

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.58	2497.578	2497.578	bb			0.0458	91.64	-8.36	511.436	2.54
WCL090610-07CRI	Perchlorate-101	101 > 85	2.58	983.396	983.396	bb			0.0493	98.58	-1.42	473.891	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.56	22748.477	22748.477	bb			0.4454	89.08	-10.92	5866.9...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701045a
Date: 01-Jul-2009
Time: 17:09:06
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
aw
07-02-09

Perchlorate

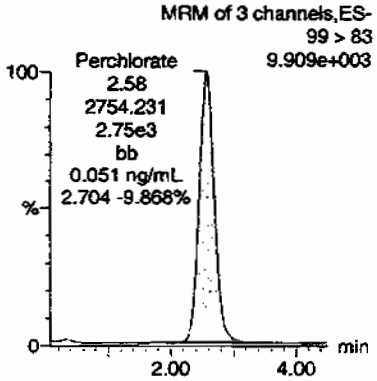

Perchlorate

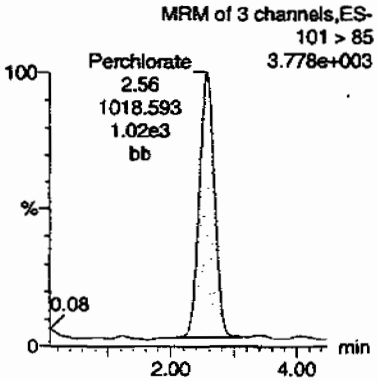

Perchlorate-101

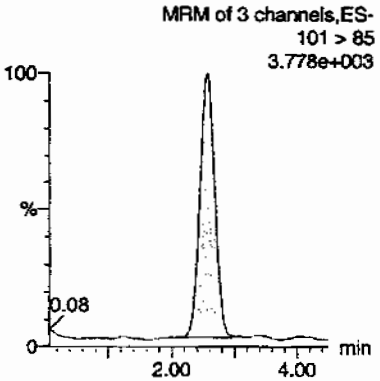

Perchlorate-O(18)

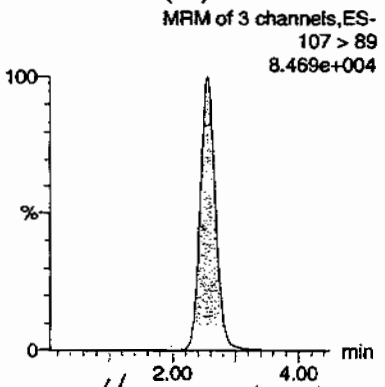

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.58	2754.231	2754.231	bb			0.0505	101.06	1.06	2453.6...	2.70
WCL090610-07CRI	Perchlorate-101	101 > 85	2.56	1018.593	1018.593	bb			0.0511	102.11	2.11	800.039	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.55	24057.582	24057.582	bb			0.4710	94.21	-5.79	2929.1...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Pass
aw
07-02-09

Name: per0701058a
Date: 01-Jul-2009
Time: 18:56:30
ID: WCL090610-07CRI
Vial: 1:2,B

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Perchlorate

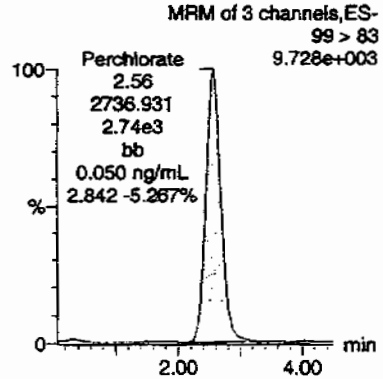

Perchlorate

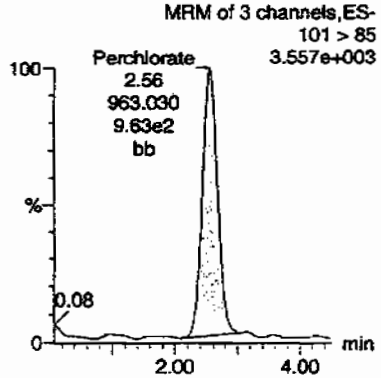

Perchlorate-101

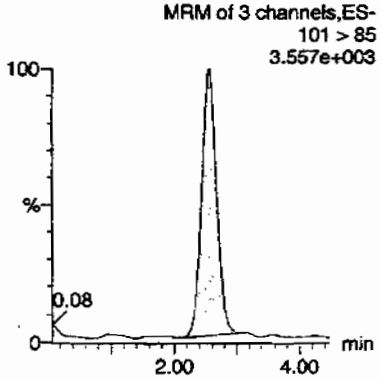

Perchlorate-O(18)

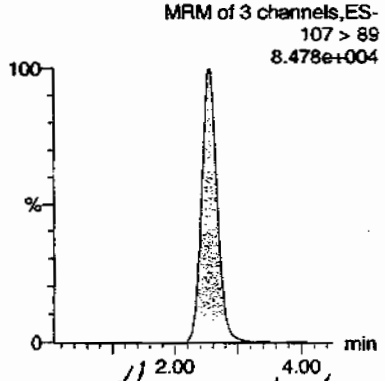

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.56	2736.931	2736.931	bb			0.0502	100.43	0.43	372.637	2.84
WCL090610-07CRI	Perchlorate-101	101 > 85	2.56	963.030	963.030	bb			0.0483	96.54	-3.46	137.419	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.55	24059.672	24059.672	bb			0.4711	94.22	-5.78	7156.9...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701071a
Date: 01-Jul-2009
Time: 20:44:02
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
aw
07-02-09

Perchlorate

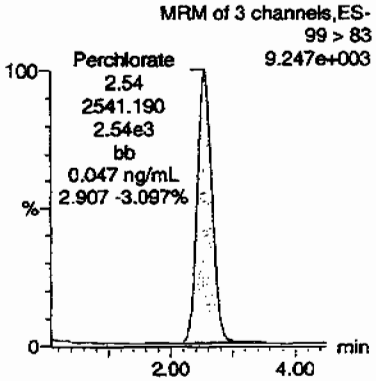

Perchlorate

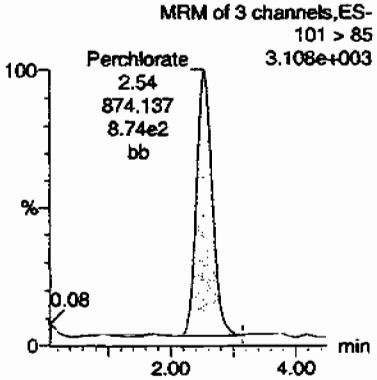

Perchlorate-101

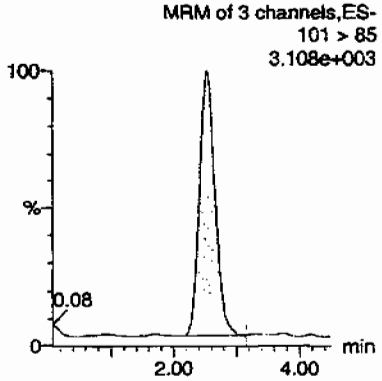

Perchlorate-O(18)

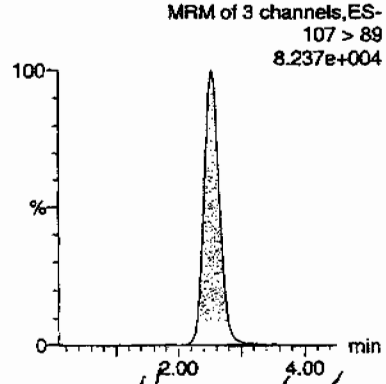

Hnm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.54	2541.190	2541.190	bb			0.0466	93.24	-6.76	1872.5...	2.91
WCL090610-07CRI	Perchlorate-101	101 > 85	2.54	874.137	874.137	bb			0.0438	87.63	-12.37	219.401	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.53	23134.523	23134.523	bb			0.4530	90.59	-9.41	4145.6...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 29–JUN–09

GEL Job No (SDG): 09–2458

GEL Sample ID: 1201871399

Date Filtered: 29–JUN–09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.5	2	0.500	ug/kg	U	1	01–JUL–09 17:17	per0701046a
	Perchlorate–O(18)			4.26	ug/kg		1	01–JUL–09 17:17	per0701046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701046a
Date: 01-Jul-2009
Time: 17:17:22
ID: 1201871399
Vial: 2:1,A

ILAWL | 881210 | 50120 | MB | 11

CWW 07-02-09

Perchlorate

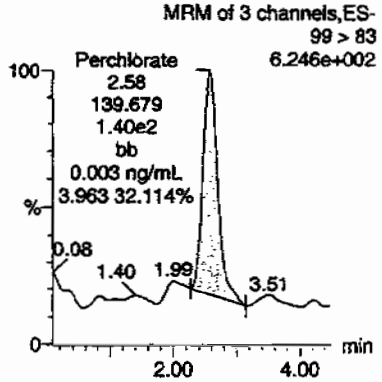

Perchlorate

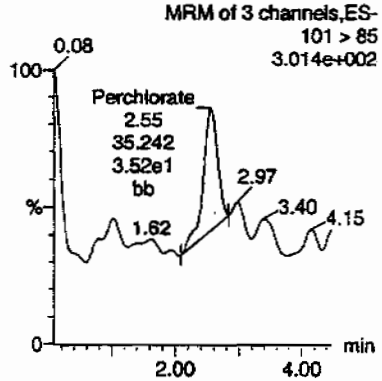

Perchlorate-101

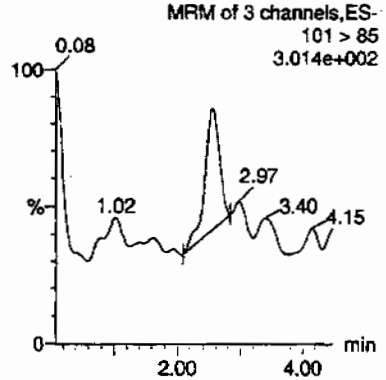

Perchlorate-O(18)

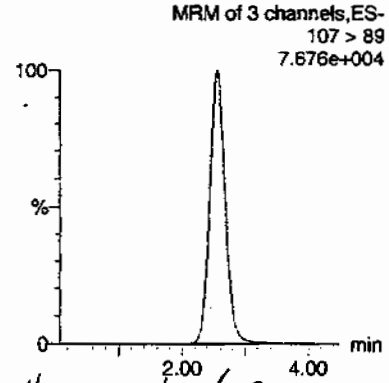

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871399	Perchlorate	99 > 83	2.58	139.679	139.679	bb			0.0026			133.567	3.96
1201871399	Perchlorate-101	101 > 85	2.55	35.242	35.242	bb			0.0018			15.786	
1201871399	Perchlorate-O(18)	107 > 89	2.55	21754.889	21754.889	bb			0.4260	85.19	-14.81	3325.5...	

OKAY LOQ 0.0500

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 29-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 1201871400

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	1.92	ug/kg	J	1	01-JUL-09 17:25	per0701047a
	Perchlorate-O(18)			4.50	ug/kg		1	01-JUL-09 17:25	per0701047a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701047a
Date: 01-Jul-2009
Time: 17:25:48
ID: 1201871400 |LANL|881210|5020|LCS|1|
Vial: 2:1,B

CWW 07-02-09

Perchlorate

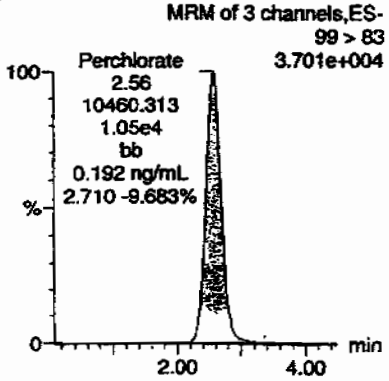

Perchlorate

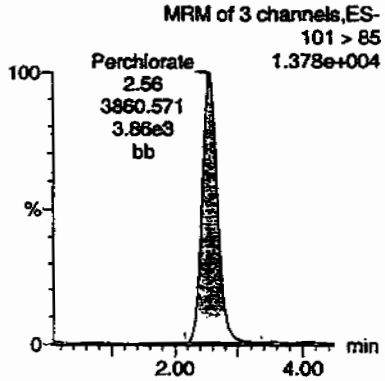

Perchlorate-101

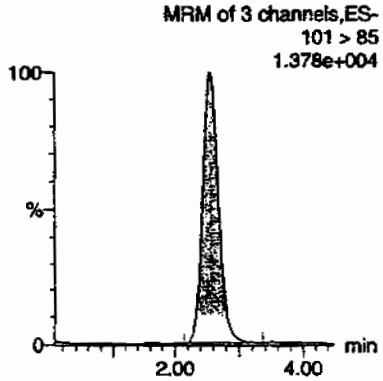

Perchlorate-O(18)

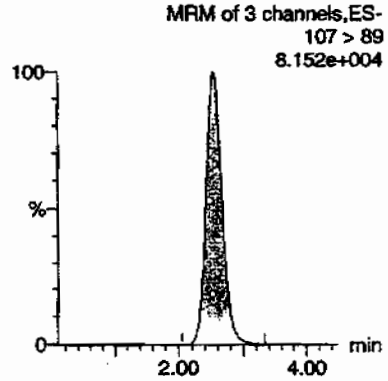

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871400	Perchlorate	99 > 83	2.56	10460.313	10460.313	bb			0.1919	95.96	-4.04	4111.9...	2.71
1201871400	Perchlorate-101	101 > 85	2.56	3860.571	3860.571	bb			0.1935	96.75	-3.25	1177.4...	
1201871400	Perchlorate-O(18)	107 > 89	2.55	23006.162	23006.162	bb			0.4505	90.09	-9.91	1884.3...	

$\frac{10460.313}{54505.7} = 0.1919$

Hmm 07/02/09

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10462MS

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 1201871401

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 93.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	5.16	ug/kg		1	01-JUL-09 18:06	per0701052a
	Perchlorate-O(18)			5.33	ug/kg		1	01-JUL-09 18:06	per0701052a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701052a
Date: 01-Jul-2009
Time: 18:06:52
ID: 1201871401
Vial: 2:2,A

|LANL|881210|50120|MS|1|

WD 07-02-09

Perchlorate

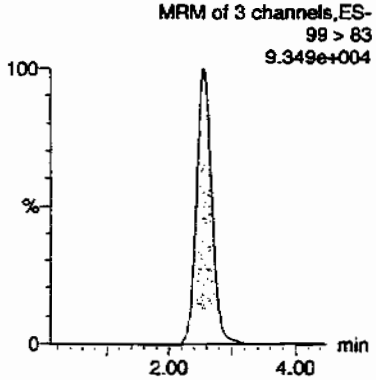

Perchlorate

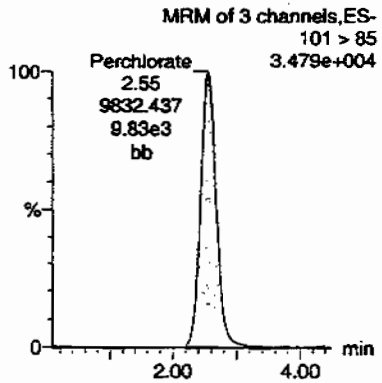

Perchlorate-101

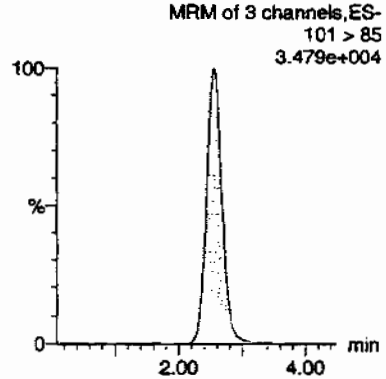

Perchlorate-O(18)

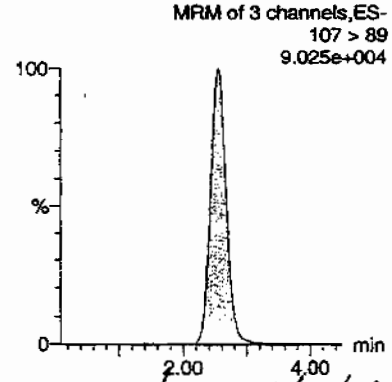

HNM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871401	Perchlorate	99 > 83	2.56	26292.652	26292.652	bb			0.4824	241.19	141.19	8246.4...	2.67
1201871401	Perchlorate-101	101 > 85	2.55	9832.437	9832.437	bb			0.4928	246.41	146.41	3440.4...	
1201871401	Perchlorate-O(18)	107 > 89	2.54	25431.664	25431.664	bb			0.4980	99.59	-0.41	9504.8...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10462MSD

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2458

GEL Sample ID: 1201871402

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 93.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	4.69	ug/kg		1	01-JUL-09 18:15	per0701053a
	Perchlorate-O(18)			5.12	ug/kg		1	01-JUL-09 18:15	per0701053a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Name: per0701053a
Date: 01-Jul-2009
Time: 18:15:07
ID: 1201871402
Vial: 2:2,B

|LANL|881210|50120|M50|1|

CWW 07-02-09

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Perchlorate

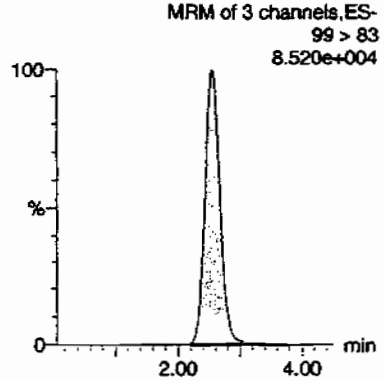

Perchlorate

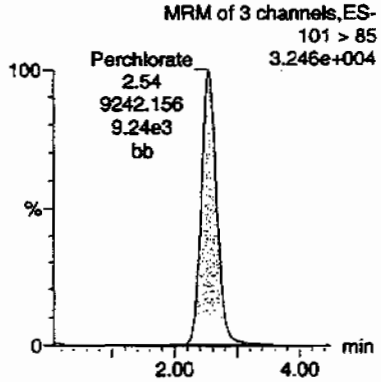

Perchlorate-101

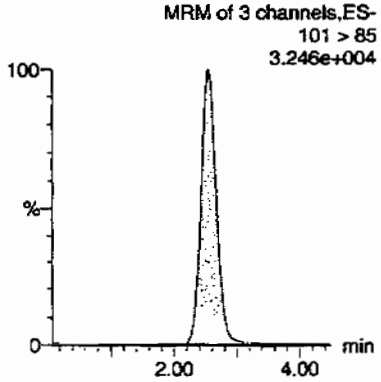

Perchlorate-O(18)

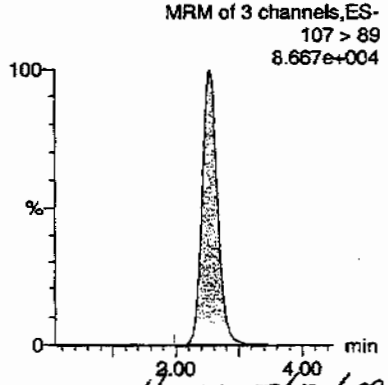

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871402	Perchlorate	99 > 83	2.55	23876.094	23876.094	bb			0.4380	219.02	119.02	7842.4...	2.58
1201871402	Perchlorate-101	101 > 85	2.54	9242.156	9242.156	bb			0.4632	231.62	131.62	2549.8...	
1201871402	Perchlorate-O(18)	107 > 89	2.54	24417.879	24417.879	bb			0.4781	95.62	-4.38	594.552	

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 881208 **Verified by:**

Analyst: Jareth Shirley

Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6

Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201871399 MB	29-JUN-2009 12:54:23	2	20	10
1201871400 LCS	29-JUN-2009 12:54:23	2	20	10
232278001	29-JUN-2009 12:54:23	2	20	10
232278002	29-JUN-2009 12:54:23	2	20	10
232347001	29-JUN-2009 12:54:23	2	20	10
1201871401 MS (232347001)	29-JUN-2009 12:54:23	2	20	10
1201871402 MSD (232347001)	29-JUN-2009 12:54:23	2	20	10
232347002	29-JUN-2009 12:54:23	2	20	10
232347003	29-JUN-2009 12:54:23	2	20	10
232347004	29-JUN-2009 12:54:23	2	20	10
232357001	29-JUN-2009 12:54:23	2	20	10
232357002	29-JUN-2009 12:54:23	2	20	10
232367001	29-JUN-2009 12:54:23	2	20	10
232367002	29-JUN-2009 12:54:23	2	20	10
232367003	29-JUN-2009 12:54:23	2	20	10
232367004	29-JUN-2009 12:54:23	2	20	10
232367005	29-JUN-2009 12:54:23	2	20	10
232367006	29-JUN-2009 12:54:23	2	20	10
232367007	29-JUN-2009 12:54:23	2	20	10
232367008	29-JUN-2009 12:54:23	2	20	10
232367009	29-JUN-2009 12:54:23	2	20	10
232367010	29-JUN-2009 12:54:23	2	20	10
232367011	29-JUN-2009 12:54:23	2	20	10
1201871403 ICS	29-JUN-2009 12:54:23	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201871403	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
LCS	1201871400	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MS	1201871401	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MSD	1201871402	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL

Comments:

Desalting cartridges used: 090603-1-H & 090401-Ba

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 07/01/09
Extr. Injection Volume: 20uL
Sequence Number: per070109a
Initial Calibration Date: 07/01/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: [illegible]
Date: 07/02/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090618-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0701001a	IPB001	CWW	7/1/2009 10:54			1		USE	B
per0701002a	IPB001	CWW	7/1/2009 11:02			1		USE	B
per0701003a	WCLICAL-01	CWW	7/1/2009 11:22			1		USE	I
per0701004a	WCLICAL-02	CWW	7/1/2009 11:31			1		USE	I
per0701005a	WCLICAL-03	CWW	7/1/2009 11:39			1		USE	I
per0701006a	WCLICAL-04	CWW	7/1/2009 11:47			1		USE	I
per0701007a	WCLICAL-05	CWW	7/1/2009 11:55			1		USE	I
per0701008a	IPB002	CWW	7/1/2009 12:04			1		USE	B
per0701009a	WCLICV	CWW	7/1/2009 12:12			1		USE	C
per0701010a	IPB003	CWW	7/1/2009 12:20			1		USE	B
per0701011a	WCLCRI	CWW	7/1/2009 12:28			1		USE	C
per0701012a	1201865599	CWW	7/1/2009 12:37	878816	VARIOUS	1	LANL	USE	S
per0701013a	1201865600	CWW	7/1/2009 12:45	878816	VARIOUS	1	LANL	USE	S
per0701014a	1201865603	CWW	7/1/2009 12:53	878816	VARIOUS	1	LANL	USE	S
per0701015a	232037001	CWW	7/1/2009 13:01	878816	09-2367	1	LANL	USE	S
per0701016a	232037002	CWW	7/1/2009 13:10	878816	09-2367	1	LANL	USE	S
per0701017a	1201865601	CWW	7/1/2009 13:18	878816	09-2367	1	LANL	USE	S
per0701018a	1201865602	CWW	7/1/2009 13:26	878816	09-2367	1	LANL	USE	S
per0701019a	232037003	CWW	7/1/2009 13:34	878816	09-2367	1	LANL	USE	S
per0701020a	232037004	CWW	7/1/2009 13:42	878816	09-2367	1	LANL	USE	S
per0701021a	WCLCCV	CWW	7/1/2009 13:51			1		USE	C
per0701022a	IPB004	CWW	7/1/2009 13:59			1		USE	B
per0701023a	WCLCRI	CWW	7/1/2009 14:07			1		USE	C
per0701024a	232037005	CWW	7/1/2009 14:15	878816	09-2367	1	LANL	USE	S
per0701025a	232037006	CWW	7/1/2009 14:24	878816	09-2367	1	LANL	USE	S
per0701026a	232037007	CWW	7/1/2009 14:32	878816	09-2367	1	LANL	USE	S
per0701027a	232037008	CWW	7/1/2009 14:40	878816	09-2367	1	LANL	USE	S
per0701028a	232037009	CWW	7/1/2009 14:48	878816	09-2367	1	LANL	USE	S
per0701029a	232047001	CWW	7/1/2009 14:57	878816	09-2373	1	LANL	USE	S

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per0701030a	232047002	CWW	7/1/2009 15:05	878816	09-2373	1	LANL	USE	S
per0701031a	232047003	CWW	7/1/2009 15:13	878816	09-2373	1	LANL	USE	S
per0701032a	WCLCCV	CWW	7/1/2009 15:21			1		USE	C
per0701033a	IPB005	CWW	7/1/2009 15:30			1		USE	B
per0701034a	WCLCRI	CWW	7/1/2009 15:38			1		USE	C
per0701035a	232047004	CWW	7/1/2009 15:46	878816	09-2373	1	LANL	USE	S
per0701036a	232047005	CWW	7/1/2009 15:54	878816	09-2373	1	LANL	USE	S
per0701037a	232047006	CWW	7/1/2009 16:03	878816	09-2373	1	LANL	USE	S
per0701038a	232047007	CWW	7/1/2009 16:11	878816	09-2373	1	LANL	USE	S
per0701039a	232047008	CWW	7/1/2009 16:19	878816	09-2373	1	LANL	USE	S
per0701040a	232076001	CWW	7/1/2009 16:27	878816	09-2394	1	LANL	USE	S
per0701041a	232076002	CWW	7/1/2009 16:36	878816	09-2394	1	LANL	USE	S
per0701042a	232076003	CWW	7/1/2009 16:44	878816	09-2394	1	LANL	USE	S
per0701043a	WCLCCV	CWW	7/1/2009 16:52			1		USE	C
per0701044a	IPB006	CWW	7/1/2009 17:00			1		USE	B
per0701045a	WCLCRI	CWW	7/1/2009 17:09			1		USE	C
per0701046a	1201871399	CWW	7/1/2009 17:17	881210	VARIOUS	1	LANL	USE	S
per0701047a	1201871400	CWW	7/1/2009 17:25	881210	VARIOUS	1	LANL	USE	S
per0701048a	1201871403	CWW	7/1/2009 17:34	881210	VARIOUS	1	LANL	USE	S
per0701049a	232278001	CWW	7/1/2009 17:42	881210	09-2437	1	LANL	USE	S
per0701050a	232278002	CWW	7/1/2009 17:50	881210	09-2437	1	LANL	USE	S
per0701051a	232347001	CWW	7/1/2009 17:58	881210	09-2458	1	LANL	USE	S
per0701052a	1201871401	CWW	7/1/2009 18:06	881210	09-2458	1	LANL	USE	S
per0701053a	1201871402	CWW	7/1/2009 18:15	881210	09-2458	1	LANL	USE	S
per0701054a	232347002	CWW	7/1/2009 18:23	881210	09-2458	1	LANL	USE	S
per0701055a	232347003	CWW	7/1/2009 18:31	881210	09-2458	1	LANL	USE	S
per0701056a	WCLCCV	CWW	7/1/2009 18:39			1		USE	C
per0701057a	IPB007	CWW	7/1/2009 18:48			1		USE	B
per0701058a	WCLCRI	CWW	7/1/2009 18:56			1		USE	C
per0701059a	232347004	CWW	7/1/2009 19:04	881210	09-2458	1	LANL	USE	S
per0701060a	232357001	CWW	7/1/2009 19:13	881210	09-2455	1	LANL	USE	S
per0701061a	232357002	CWW	7/1/2009 19:21	881210	09-2455	1	LANL	USE	S
per0701062a	232367001	CWW	7/1/2009 19:29	881210	09-2452	1	LANL	USE	S
per0701063a	232367002	CWW	7/1/2009 19:37	881210	09-2452	1	LANL	USE	S
per0701064a	232367003	CWW	7/1/2009 19:46	881210	09-2452	1	LANL	USE	S
per0701065a	232367004	CWW	7/1/2009 19:54	881210	09-2452	1	LANL	USE	S
per0701066a	232367005	CWW	7/1/2009 20:02	881210	09-2452	1	LANL	USE	S

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per0701067a	232367006	CWW	7/1/2009 20:10	881210	09-2452	1	LANL	USE	S
per0701068a	232367007	CWW	7/1/2009 20:19	881210	09-2452	1	LANL	USE	S
per0701069a	WCLCCV	CWW	7/1/2009 20:27			1		USE	C
per0701070a	IPB008	CWW	7/1/2009 20:35			1		USE	B
per0701071a	WCLCRI	CWW	7/1/2009 20:44			1		USE	C
per0701072a	232367008	CWW	7/1/2009 20:52	881210	09-2452	1	LANL	USE	S
per0701073a	232367009	CWW	7/1/2009 21:00	881210	09-2452	1	LANL	USE	S
per0701074a	232367010	CWW	7/1/2009 21:08	881210	09-2452	1	LANL	USE	S
per0701075a	232367011	CWW	7/1/2009 21:17	881210	09-2452	1	LANL	USE	S
per0701076a	IPB009	CWW	7/1/2009 21:25			1		USE	B
per0701077a	Cartridge screen	CWW	7/1/2009 21:33	In-house		1	GEL	USE	B
per0701078a	WCLCCV	CWW	7/1/2009 21:42			1		USE	C
per0701079a	IPB010	CWW	7/1/2009 21:50			1		USE	B
per0701080a	WCLCRI	CWW	7/1/2009 21:59			1		USE	C

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2458

Sample Analysis

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201869986	Method Blank (MB) **ICP**
1201869987	Laboratory Control Sample (LCS)
1201869990	232347001(CAMO-09-10462L) Serial Dilution (SD)
1201869988	232347001(CAMO-09-10462D) Sample Duplicate (DUP)
1201869989	232347001(CAMO-09-10462S) Matrix Spike (MS)
1201869991	232347001(CAMO-09-10462SD) Matrix Spike Duplicate (MSD)
1201870017	Method Blank (MB) **ICP-MS**
1201870018	Laboratory Control Sample (LCS)
1201870021	232347001(CAMO-09-10462L) Serial Dilution (SD)
1201870019	232347001(CAMO-09-10462D) Sample Duplicate (DUP)
1201870020	232347001(CAMO-09-10462S) Matrix Spike (MS)
1201870022	232347001(CAMO-09-10462SD) Matrix Spike Duplicate (MSD)
1201870335	Method Blank (MB) **CVAA**
1201870336	Laboratory Control Sample (LCS)
1201870339	232347001(CAMO-09-10462L) Serial Dilution (SD)
1201870337	232347001(CAMO-09-10462D) Sample Duplicate (DUP)
1201870338	232347001(CAMO-09-10462S) Matrix Spike (MS)
1201870340	232347001(CAMO-09-10462SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch: 880674, 880691 and 880850

Prep Batch :	880673, 880690 and 880849
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 4300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established

acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following sample was selected as the quality control (QC) sample for this SDG: 232347001 (CAMO-09-10462)-ICP, ICP-MS and CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of calcium, manganese, nickel and mercury as indicated by the "N" qualifiers.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of calcium, magnesium, manganese, nickel and mercury as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements with the exception of manganese and mercury as indicated by the "*" qualifier.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS. Per the SOP, samples ICP-MS required a 10x dilution due to relatively high native sample concentration of an internal standard for nickel and beryllium.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: NCR ID 706857, NCR ID 708100 and NCR ID 708508. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Nick Edel Elmore **Date:** 7/20/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2458 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232347001 **BASIS:** Dry Weight **DATE COLLECTED** 22-JUN-09

CLIENT ID: CAMO-09-10462 **LEVEL:** Low **DATE RECEIVED** 25-JUN-09

MATRIX: SOIL **%SOLIDS:** 93.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3880000	ug/Kg		7010	20600	20600	1	P	JWJ	06/30/09 05:27	063009-1	880674
7440-36-0	Antimony	1170	ug/Kg		320	1030	1030	1	P	JWJ	06/30/09 05:27	063009-1	880674
7440-38-2	Arsenic	2230	ug/kg		207	1030	1030	2	MS	BAJ	07/01/09 02:45	090630-2	880691
7440-39-3	Barium	38500	ug/Kg		103	515	515	1	P	JWJ	06/30/09 05:27	063009-1	880674
7440-41-7	Beryllium	953	ug/kg		103	516	516	10	MS	BAJ	07/02/09 07:10	090701-6	880691
7440-43-9	Cadmium	515	ug/Kg	U	103	515	515	1	P	JWJ	06/30/09 05:27	063009-1	880674
7440-70-2	Calcium	1570000	ug/Kg	N	3090	10300	10300	1	P	JWJ	06/30/09 05:27	063009-1	880674
7440-47-3	Chromium	4050	ug/Kg		103	515	515	1	P	JWJ	06/30/09 05:27	063009-1	880674
7440-48-4	Cobalt	1040	ug/Kg		206	515	515	1	P	JWJ	06/30/09 05:27	063009-1	880674
7440-50-8	Copper	1280	ug/Kg		309	1030	1030	1	P	JWJ	06/30/09 05:27	063009-1	880674
7439-89-6	Iron	13300000	ug/Kg		2580	10300	10300	1	P	JWJ	06/30/09 05:27	063009-1	880674
7439-92-1	Lead	4170	ug/Kg		258	1030	1030	1	P	JWJ	06/30/09 05:27	063009-1	880674
7439-95-4	Magnesium	955000	ug/Kg	N	8760	30900	30900	1	P	JWJ	06/30/09 05:27	063009-1	880674
7439-96-5	Manganese	163000	ug/Kg	*N	206	1030	1030	1	P	JWJ	06/30/09 05:27	063009-1	880674
7439-97-6	Mercury	46.9	ug/kg	*N	3.69	10.8	10.8	1	AV	JXL1	07/06/09 09:56	070609S1-7	880850
7440-02-0	Nickel	9330	ug/kg	N	516	2070	2070	10	MS	BAJ	07/02/09 07:10	090701-6	880691
7440-09-7	Potassium	551000	ug/Kg		5150	15500	15500	1	P	JWJ	06/30/09 05:27	063009-1	880674
7782-49-2	Selenium	1030	ug/kg	U	516	1030	1030	2	MS	BAJ	07/01/09 02:45	090630-2	880691
7440-22-4	Silver	349	ug/Kg	J	103	515	515	1	P	JWJ	06/30/09 05:27	063009-1	880674
7440-23-5	Sodium	379000	ug/Kg		4640	15500	15500	1	P	JWJ	06/30/09 05:27	063009-1	880674
7440-28-0	Thallium	402	ug/kg		62	207	207	2	MS	BAJ	07/01/09 21:15	090701-3	880691
7440-62-2	Vanadium	7370	ug/Kg		103	515	515	1	P	JWJ	06/30/09 05:27	063009-1	880674
7440-66-6	Zinc	35300	ug/Kg		206	1030	1030	1	P	JWJ	06/30/09 05:27	063009-1	880674

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880674	880673	SW846 3050B	0.519	g	50	mL	06/29/09	BXA1
880691	880690	SW846 3050B	0.518	g	50	mL	06/29/09	BXA1
880850	880849	SW846 7471A Prep	0.592	g	30	mL	07/02/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2458 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232347002 **BASIS:** Dry Weight **DATE COLLECTED** 22-JUN-09

CLIENT ID: CAMO-09-10460 **LEVEL:** Low **DATE RECEIVED** 25-JUN-09

MATRIX: SOIL **%SOLIDS:** 91.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	6400000	ug/Kg		7360	21600	21600	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-36-0	Antimony	724	ug/Kg	J	335	1080	1080	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-38-2	Arsenic	2830	ug/kg		213	1070	1070	2	MS	BAJ	07/01/09 03:28	090630-2	880691
7440-39-3	Barium	110000	ug/Kg		108	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-41-7	Beryllium	1990	ug/kg		107	533	533	10	MS	BAJ	07/02/09 07:22	090701-6	880691
7440-43-9	Cadmium	117	ug/Kg	J	108	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-70-2	Calcium	1580000	ug/Kg	N	3250	10800	10800	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-47-3	Chromium	6870	ug/Kg		108	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-48-4	Cobalt	4020	ug/Kg		216	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-50-8	Copper	3910	ug/Kg		325	1080	1080	1	P	JWJ	06/30/09 05:49	063009-1	880674
7439-89-6	Iron	12600000	ug/Kg		2700	10800	10800	1	P	JWJ	06/30/09 05:49	063009-1	880674
7439-92-1	Lead	11700	ug/Kg		270	1080	1080	1	P	JWJ	06/30/09 05:49	063009-1	880674
7439-95-4	Magnesium	1580000	ug/Kg	N	9200	32500	32500	1	P	JWJ	06/30/09 05:49	063009-1	880674
7439-96-5	Manganese	945000	ug/Kg	*N	216	1080	1080	1	P	JWJ	06/30/09 05:49	063009-1	880674
7439-97-6	Mercury	4.77	ug/kg	J*N	4.14	12.2	12.2	1	AV	JXL1	07/06/09 10:06	070609S1-7	880850
7440-02-0	Nickel	21800	ug/kg	N	533	2130	2130	10	MS	BAJ	07/02/09 07:22	090701-6	880691
7440-09-7	Potassium	917000	ug/Kg		5410	16200	16200	1	P	JWJ	06/30/09 05:49	063009-1	880674
7782-49-2	Selenium	1070	ug/kg	U	533	1070	1070	2	MS	BAJ	07/01/09 03:28	090630-2	880691
7440-22-4	Silver	431	ug/Kg	J	108	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-23-5	Sodium	341000	ug/Kg		4870	16200	16200	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-28-0	Thallium	479	ug/kg		63.9	213	213	2	MS	BAJ	07/01/09 21:31	090701-3	880691
7440-62-2	Vanadium	11900	ug/Kg		108	541	541	1	P	JWJ	06/30/09 05:49	063009-1	880674
7440-66-6	Zinc	61000	ug/Kg		216	1080	1080	1	P	JWJ	06/30/09 05:49	063009-1	880674

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880674	880673	SW846 3050B	0.504	g	50	mL	06/29/09	BXA1
880691	880690	SW846 3050B	0.512	g	50	mL	06/29/09	BXA1
880850	880849	SW846 7471A Prep	0.538	g	30	mL	07/02/09	TXB3

METALS
–1–
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09–2458 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232347003 **BASIS:** Dry Weight **DATE COLLECTED** 22–JUN–09

CLIENT ID: CAMO–09–10461 **LEVEL:** Low **DATE RECEIVED** 25–JUN–09

MATRIX: SOIL **%SOLIDS:** 88

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429–90–5	Aluminum	4570000	ug/Kg		7450	21900	21900	1	P	JWJ	06/30/09 05:52	063009–1	880674
7440–36–0	Antimony	747	ug/Kg	J	340	1100	1100	1	P	JWJ	06/30/09 05:52	063009–1	880674
7440–38–2	Arsenic	1040	ug/kg	J	226	1130	1130	2	MS	BAJ	07/01/09 03:34	090630–2	880691
7440–39–3	Barium	39100	ug/Kg		110	548	548	1	P	JWJ	06/30/09 05:52	063009–1	880674
7440–41–7	Beryllium	1110	ug/kg		113	565	565	10	MS	BAJ	07/02/09 07:24	090701–6	880691
7440–43–9	Cadmium	548	ug/Kg	U	110	548	548	1	P	JWJ	06/30/09 05:52	063009–1	880674
7440–70–2	Calcium	1170000	ug/Kg	N	3290	11000	11000	1	P	JWJ	06/30/09 05:52	063009–1	880674
7440–47–3	Chromium	5380	ug/Kg		110	548	548	1	P	JWJ	06/30/09 05:52	063009–1	880674
7440–48–4	Cobalt	1080	ug/Kg		219	548	548	1	P	JWJ	06/30/09 05:52	063009–1	880674
7440–50–8	Copper	1940	ug/Kg		329	1100	1100	1	P	JWJ	06/30/09 05:52	063009–1	880674
7439–89–6	Iron	10500000	ug/Kg		2740	11000	11000	1	P	JWJ	06/30/09 05:52	063009–1	880674
7439–92–1	Lead	8930	ug/Kg		274	1100	1100	1	P	JWJ	06/30/09 05:52	063009–1	880674
7439–95–4	Magnesium	1330000	ug/Kg	N	9310	32900	32900	1	P	JWJ	06/30/09 05:52	063009–1	880674
7439–96–5	Manganese	227000	ug/Kg	*N	219	1100	1100	1	P	JWJ	06/30/09 05:52	063009–1	880674
7439–97–6	Mercury	21.9	ug/kg	*N	4.45	13.1	13.1	1	AV	JXL1	07/06/09 10:08	070609S1–7	880850
7440–02–0	Nickel	5560	ug/kg	N	565	2260	2260	10	MS	BAJ	07/02/09 07:24	090701–6	880691
7440–09–7	Potassium	803000	ug/Kg		5480	16400	16400	1	P	JWJ	06/30/09 05:52	063009–1	880674
7782–49–2	Selenium	1130	ug/kg	U	565	1130	1130	2	MS	BAJ	07/01/09 03:34	090630–2	880691
7440–22–4	Silver	263	ug/Kg	J	110	548	548	1	P	JWJ	06/30/09 05:52	063009–1	880674
7440–23–5	Sodium	217000	ug/Kg		4930	16400	16400	1	P	JWJ	06/30/09 05:52	063009–1	880674
7440–28–0	Thallium	241	ug/kg		67.8	226	226	2	MS	BAJ	07/01/09 21:34	090701–3	880691
7440–62–2	Vanadium	8990	ug/Kg		110	548	548	1	P	JWJ	06/30/09 05:52	063009–1	880674
7440–66–6	Zinc	57500	ug/Kg		219	1100	1100	1	P	JWJ	06/30/09 05:52	063009–1	880674

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880674	880673	SW846 3050B	0.516	g	50	mL	06/29/09	BXA1
880691	880690	SW846 3050B	0.5	g	50	mL	06/29/09	BXA1
880850	880849	SW846 7471A Prep	0.518	g	30	mL	07/02/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2458 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232347004 **BASIS:** Dry Weight **DATE COLLECTED** 22-JUN-09

CLIENT ID: CAMO-09-10467 **LEVEL:** Low **DATE RECEIVED** 25-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3810000	ug/Kg		7110	20900	20900	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-36-0	Antimony	604	ug/Kg	J	324	1050	1050	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-38-2	Arsenic	2080	ug/kg		208	1040	1040	2	MS	BAJ	07/01/09 03:41	090630-2	880691
7440-39-3	Barium	26900	ug/Kg		105	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-41-7	Beryllium	975	ug/kg		104	520	520	10	MS	BAJ	07/02/09 07:25	090701-6	880691
7440-43-9	Cadmium	523	ug/Kg	U	105	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-70-2	Calcium	1150000	ug/Kg	N	3140	10500	10500	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-47-3	Chromium	4260	ug/Kg		105	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-48-4	Cobalt	803	ug/Kg		209	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-50-8	Copper	1020	ug/Kg	J	314	1050	1050	1	P	JWJ	06/30/09 05:55	063009-1	880674
7439-89-6	Iron	12600000	ug/Kg		2610	10500	10500	1	P	JWJ	06/30/09 05:55	063009-1	880674
7439-92-1	Lead	3550	ug/Kg		261	1050	1050	1	P	JWJ	06/30/09 05:55	063009-1	880674
7439-95-4	Magnesium	976000	ug/Kg	N	8890	31400	31400	1	P	JWJ	06/30/09 05:55	063009-1	880674
7439-96-5	Manganese	119000	ug/Kg	*N	209	1050	1050	1	P	JWJ	06/30/09 05:55	063009-1	880674
7439-97-6	Mercury	12.2	ug/kg	U*N	4.15	12.2	12.2	1	AV	JXL1	07/06/09 10:10	070609S1-7	880850
7440-02-0	Nickel	5990	ug/kg	N	520	2080	2080	10	MS	BAJ	07/02/09 07:25	090701-6	880691
7440-09-7	Potassium	575000	ug/Kg		5230	15700	15700	1	P	JWJ	06/30/09 05:55	063009-1	880674
7782-49-2	Selenium	1040	ug/kg	U	520	1040	1040	2	MS	BAJ	07/01/09 03:41	090630-2	880691
7440-22-4	Silver	252	ug/Kg	J	105	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-23-5	Sodium	356000	ug/Kg		4700	15700	15700	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-28-0	Thallium	205	ug/kg	J	62.4	208	208	2	MS	BAJ	07/01/09 21:36	090701-3	880691
7440-62-2	Vanadium	6820	ug/Kg		105	523	523	1	P	JWJ	06/30/09 05:55	063009-1	880674
7440-66-6	Zinc	35100	ug/Kg		209	1050	1050	1	P	JWJ	06/30/09 05:55	063009-1	880674

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880674	880673	SW846 3050B	0.501	g	50	mL	06/29/09	BXA1
880691	880690	SW846 3050B	0.504	g	50	mL	06/29/09	BXA1
880850	880849	SW846 7471A Prep	0.515	g	30	mL	07/02/09	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2458

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Antimony	517	ug/L	500	ug/L	103.3	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Barium	525	ug/L	500	ug/L	104.9	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Chromium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Cobalt	471	ug/L	500	ug/L	94.3	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Copper	518	ug/L	500	ug/L	103.5	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Iron	5220	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Lead	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Magnesium	5300	ug/L	5000	ug/L	106	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Manganese	515	ug/L	500	ug/L	103	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Potassium	2480	ug/L	2500	ug/L	99.4	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Silver	254	ug/L	250	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Sodium	2610	ug/L	2500	ug/L	104.6	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Vanadium	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Zinc	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	30-JUN-09 02:58	063009-1
	Arsenic	49.3	ug/L	50	ug/L	98.6	90.0 – 110.0	MS	01-JUL-09 01:32	090630-2
	Selenium	49.5	ug/L	50	ug/L	98.9	90.0 – 110.0	MS	01-JUL-09 01:32	090630-2
	Thallium	53.9	ug/L	50	ug/L	107.8	90.0 – 110.0	MS	01-JUL-09 20:54	090701-3
	Beryllium	50.6	ug/L	50	ug/L	101.1	90.0 – 110.0	MS	02-JUL-09 06:41	090701-6
	Nickel	51.2	ug/L	50	ug/L	102.4	90.0 – 110.0	MS	02-JUL-09 06:41	090701-6
	Mercury	5.02	ug/L	5	ug/L	100.5	90.0 – 110.0	AV	06-JUL-09 09:42	070609S1-7
CCV01										
	Aluminum	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Antimony	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Barium	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Cadmium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Calcium	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30-JUN-09 03:28	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2458

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Copper	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Iron	5190	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Lead	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Magnesium	5240	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Manganese	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Potassium	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Silver	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Vanadium	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Zinc	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30-JUN-09 03:28	063009-1
	Arsenic	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	01-JUL-09 02:02	090630-2
	Selenium	52.1	ug/L	50	ug/L	104.1	90.0 – 110.0	MS	01-JUL-09 02:02	090630-2
	Thallium	53.2	ug/L	50	ug/L	106.3	90.0 – 110.0	MS	01-JUL-09 21:06	090701-3
	Beryllium	52.9	ug/L	50	ug/L	105.8	90.0 – 110.0	MS	02-JUL-09 06:50	090701-6
	Nickel	53.6	ug/L	50	ug/L	107.1	90.0 – 110.0	MS	02-JUL-09 06:50	090701-6
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 – 120.0	AV	06-JUL-09 09:48	070609S1-7
CCV02										
	Aluminum	5120	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Antimony	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Barium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Cadmium	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Calcium	5170	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Chromium	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Cobalt	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Copper	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Iron	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Lead	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Magnesium	5210	ug/L	5000	ug/L	104.3	90.0 – 110.0	P	30-JUN-09 04:03	063009-1
	Manganese	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-JUN-09 04:03	063009-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2458

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5100	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	30–JUN–09 04:03	063009–1
	Silver	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 04:03	063009–1
	Sodium	10200	ug/L	10000	ug/L	101.9	90.0 – 110.0	P	30–JUN–09 04:03	063009–1
	Vanadium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30–JUN–09 04:03	063009–1
	Zinc	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	30–JUN–09 04:03	063009–1
	Arsenic	46.8	ug/L	50	ug/L	93.6	90.0 – 110.0	MS	01–JUL–09 02:21	090630–2
	Selenium	46.7	ug/L	50	ug/L	93.5	90.0 – 110.0	MS	01–JUL–09 02:21	090630–2
	Thallium	55.1	ug/L	50	ug/L	110.2	90.0 – 110.0	MS	01–JUL–09 21:27	090701–3
	Beryllium	52.1	ug/L	50	ug/L	104.3	90.0 – 110.0	MS	02–JUL–09 07:03	090701–6
	Nickel	54.8	ug/L	50	ug/L	109.7	90.0 – 110.0	MS	02–JUL–09 07:03	090701–6
	Mercury	4.88	ug/L	5	ug/L	97.7	80.0 – 120.0	AV	06–JUL–09 10:12	070609S1–7
CCV03										
	Aluminum	5130	ug/L	5000	ug/L	102.6	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Antimony	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Barium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Cadmium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Calcium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Chromium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Cobalt	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Copper	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Iron	5160	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Lead	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Magnesium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Manganese	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Potassium	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Silver	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Sodium	10200	ug/L	10000	ug/L	102.5	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Vanadium	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Zinc	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30–JUN–09 04:16	063009–1
	Arsenic	48.8	ug/L	50	ug/L	97.6	90.0 – 110.0	MS	01–JUL–09 03:16	090630–2

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2458

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Selenium	49.2	ug/L	50	ug/L	98.3	90.0 – 110.0	MS	01-JUL-09 03:16	090630-2
	Thallium	53.5	ug/L	50	ug/L	106.9	90.0 – 110.0	MS	01-JUL-09 21:38	090701-3
	Beryllium	52.2	ug/L	50	ug/L	104.4	90.0 – 110.0	MS	02-JUL-09 07:18	090701-6
	Nickel	54.1	ug/L	50	ug/L	108.1	90.0 – 110.0	MS	02-JUL-09 07:18	090701-6
CCV04										
	Aluminum	5190	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Antimony	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Barium	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Cadmium	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Calcium	5240	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Chromium	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Cobalt	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Copper	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Iron	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Lead	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Magnesium	5270	ug/L	5000	ug/L	105.4	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Manganese	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Potassium	5160	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Silver	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Sodium	10300	ug/L	10000	ug/L	102.5	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Vanadium	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Zinc	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 04:43	063009-1
	Arsenic	49	ug/L	50	ug/L	97.9	90.0 – 110.0	MS	01-JUL-09 03:47	090630-2
	Selenium	49.5	ug/L	50	ug/L	99	90.0 – 110.0	MS	01-JUL-09 03:47	090630-2
	Beryllium	51.7	ug/L	50	ug/L	103.4	90.0 – 110.0	MS	02-JUL-09 07:27	090701-6
	Nickel	53.8	ug/L	50	ug/L	107.6	90.0 – 110.0	MS	02-JUL-09 07:27	090701-6
CCV05										
	Aluminum	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Antimony	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Barium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 05:14	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2458

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cadmium	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Calcium	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Chromium	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Cobalt	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Copper	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Iron	5180	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Magnesium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Manganese	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Potassium	5120	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Silver	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Sodium	10300	ug/L	10000	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Vanadium	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
	Zinc	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	30-JUN-09 05:14	063009-1
CCV06										
	Aluminum	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Antimony	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Barium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Cadmium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Calcium	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Chromium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Cobalt	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Copper	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Iron	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Lead	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Magnesium	5220	ug/L	5000	ug/L	104.4	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Manganese	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Potassium	5140	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Sodium	10300	ug/L	10000	ug/L	103.2	90.0 – 110.0	P	30-JUN-09 05:36	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2458

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Vanadium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
	Zinc	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	30-JUN-09 05:36	063009-1
CCV07										
	Aluminum	5210	ug/L	5000	ug/L	104.2	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Antimony	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Barium	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Cadmium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Calcium	5200	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Cobalt	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Copper	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Iron	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Lead	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Magnesium	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Manganese	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Potassium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Silver	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Vanadium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 05:58	063009-1
	Zinc	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	30-JUN-09 05:58	063009-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2458

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS5,MER536,OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Arsenic	4.72	ug/L	5	ug/L	94.4	70.0 – 130.0	MS	01-JUL-09 01:44	090630-2
	Selenium	5.06	ug/L	5	ug/L	101.3	70.0 – 130.0	MS	01-JUL-09 01:44	090630-2
	Thallium	1.28	ug/L	1	ug/L	128.3	70.0 – 130.0	MS	01-JUL-09 20:59	090701-3
	Beryllium	.55	ug/L	.5	ug/L	110	70.0 – 130.0	MS	02-JUL-09 06:44	090701-6
	Nickel	2.03	ug/L	2	ug/L	101.4	70.0 – 130.0	MS	02-JUL-09 06:44	090701-6
	Mercury	.141	ug/L	.2	ug/L	70.5	70.0 – 130.0	AV	06-JUL-09 09:46	070609S1-7
PQL01										
	Aluminum	204	ug/L	200	ug/L	102.2	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Antimony	9.03	ug/L	10	ug/L	90.3	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Barium	5	ug/L	5	ug/L	100	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Cadmium	5.28	ug/L	5	ug/L	105.6	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Calcium	97.8	ug/L	100	ug/L	97.8	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Chromium	4.95	ug/L	5	ug/L	99	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Cobalt	4.76	ug/L	5	ug/L	95.3	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Copper	9.82	ug/L	10	ug/L	98.2	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Iron	109	ug/L	100	ug/L	108.9	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Lead	8.4	ug/L	10	ug/L	84	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Magnesium	306	ug/L	300	ug/L	102	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Manganese	10.5	ug/L	10	ug/L	104.5	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Potassium	128	ug/L	150	ug/L	85.1	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Silver	5.6	ug/L	5	ug/L	112	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Sodium	157	ug/L	150	ug/L	104.4	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Vanadium	5.4	ug/L	5	ug/L	108	70.0 – 130.0	P	30-JUN-09 03:04	063009-1
	Zinc	10	ug/L	10	ug/L	100.4	70.0 – 130.0	P	30-JUN-09 03:04	063009-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2458

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	30–JUN–09 03:01	063009–1
	Antimony	5.7	+/–10	J	3.1	10.0	SOL	P	30–JUN–09 03:01	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 03:01	063009–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 03:01	063009–1
	Calcium	30.0	+/–100	U	30.0	100	SOL	P	30–JUN–09 03:01	063009–1
	Chromium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 03:01	063009–1
	Cobalt	2.0	+/–5	U	2.0	5.0	SOL	P	30–JUN–09 03:01	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	30–JUN–09 03:01	063009–1
	Iron	25.0	+/–100	U	25.0	100	SOL	P	30–JUN–09 03:01	063009–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	30–JUN–09 03:01	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	30–JUN–09 03:01	063009–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 03:01	063009–1
	Potassium	50.0	+/–150	U	50.0	150	SOL	P	30–JUN–09 03:01	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 03:01	063009–1
	Sodium	45.0	+/–150	U	45.0	150	SOL	P	30–JUN–09 03:01	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 03:01	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 03:01	063009–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	01–JUL–09 01:38	090630–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	01–JUL–09 01:38	090630–2
	Thallium	0.364	+/–1	J	0.3	1.0	SOL	MS	01–JUL–09 20:56	090701–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	02–JUL–09 06:43	090701–6
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	02–JUL–09 06:43	090701–6
	Mercury	–0.1	+/–.2	J	0.068	0.2	SOL	AV	06–JUL–09 09:44	070609S1–7
CCB01										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	30–JUN–09 03:31	063009–1
	Antimony	4.88	+/–10	J	3.1	10.0	SOL	P	30–JUN–09 03:31	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 03:31	063009–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 03:31	063009–1
	Calcium	30.0	+/–100	U	30.0	100	SOL	P	30–JUN–09 03:31	063009–1
	Chromium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 03:31	063009–1
	Cobalt	2.0	+/–5	U	2.0	5.0	SOL	P	30–JUN–09 03:31	063009–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2458

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	30–JUN–09 03:31	063009–1
	Iron	25.0	+/–100	U	25.0	100	SOL	P	30–JUN–09 03:31	063009–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	30–JUN–09 03:31	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	30–JUN–09 03:31	063009–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 03:31	063009–1
	Potassium	50.0	+/–150	U	50.0	150	SOL	P	30–JUN–09 03:31	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 03:31	063009–1
	Sodium	45.0	+/–150	U	45.0	150	SOL	P	30–JUN–09 03:31	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 03:31	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 03:31	063009–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	01–JUL–09 02:09	090630–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	01–JUL–09 02:09	090630–2
	Thallium	0.374	+/–1	J	0.3	1.0	SOL	MS	01–JUL–09 21:08	090701–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	02–JUL–09 06:51	090701–6
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	02–JUL–09 06:51	090701–6
	Mercury	–0.078	+/–.2	J	0.068	0.2	SOL	AV	06–JUL–09 09:50	070609S1–7
CCB02										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	30–JUN–09 04:06	063009–1
	Antimony	3.1	+/–10	U	3.1	10.0	SOL	P	30–JUN–09 04:06	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 04:06	063009–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 04:06	063009–1
	Calcium	30.0	+/–100	U	30.0	100	SOL	P	30–JUN–09 04:06	063009–1
	Chromium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 04:06	063009–1
	Cobalt	2.0	+/–5	U	2.0	5.0	SOL	P	30–JUN–09 04:06	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	30–JUN–09 04:06	063009–1
	Iron	25.0	+/–100	U	25.0	100	SOL	P	30–JUN–09 04:06	063009–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	30–JUN–09 04:06	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	30–JUN–09 04:06	063009–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 04:06	063009–1
	Potassium	50.0	+/–150	U	50.0	150	SOL	P	30–JUN–09 04:06	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 04:06	063009–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2458

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 04:06	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:06	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 04:06	063009-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	01-JUL-09 02:27	090630-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	01-JUL-09 02:27	090630-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	01-JUL-09 21:29	090701-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	02-JUL-09 07:05	090701-6
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	02-JUL-09 07:05	090701-6
	Mercury	-0.104	+/-.2	J	0.068	0.2	SOL	AV	06-JUL-09 10:14	070609S1-7
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 04:19	063009-1
	Antimony	4.18	+/-10	J	3.1	10.0	SOL	P	30-JUN-09 04:19	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 04:19	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 04:19	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 04:19	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 04:19	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 04:19	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 04:19	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 04:19	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 04:19	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 04:19	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 04:19	063009-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	01-JUL-09 03:22	090630-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	01-JUL-09 03:22	090630-2
	Thallium	0.338	+/-1	J	0.3	1.0	SOL	MS	01-JUL-09 21:41	090701-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	02-JUL-09 07:20	090701-6

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2458

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	02–JUL–09 07:20	090701–6
CCB04										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	30–JUN–09 04:46	063009–1
	Antimony	4.68	+/–10	J	3.1	10.0	SOL	P	30–JUN–09 04:46	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 04:46	063009–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 04:46	063009–1
	Calcium	30.0	+/–100	U	30.0	100	SOL	P	30–JUN–09 04:46	063009–1
	Chromium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 04:46	063009–1
	Cobalt	2.0	+/–5	U	2.0	5.0	SOL	P	30–JUN–09 04:46	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	30–JUN–09 04:46	063009–1
	Iron	25.0	+/–100	U	25.0	100	SOL	P	30–JUN–09 04:46	063009–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	30–JUN–09 04:46	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	30–JUN–09 04:46	063009–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 04:46	063009–1
	Potassium	50.0	+/–150	U	50.0	150	SOL	P	30–JUN–09 04:46	063009–1
	Silver	1.16	+/–5	J	1.0	5.0	SOL	P	30–JUN–09 04:46	063009–1
	Sodium	45.0	+/–150	U	45.0	150	SOL	P	30–JUN–09 04:46	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 04:46	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 04:46	063009–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	01–JUL–09 03:53	090630–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	01–JUL–09 03:53	090630–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	02–JUL–09 07:29	090701–6
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	02–JUL–09 07:29	090701–6
CCB05										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	30–JUN–09 05:17	063009–1
	Antimony	3.1	+/–10	U	3.1	10.0	SOL	P	30–JUN–09 05:17	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 05:17	063009–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 05:17	063009–1
	Calcium	30.0	+/–100	U	30.0	100	SOL	P	30–JUN–09 05:17	063009–1
	Chromium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 05:17	063009–1
	Cobalt	2.0	+/–5	U	2.0	5.0	SOL	P	30–JUN–09 05:17	063009–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2458

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 05:17	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 05:17	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 05:17	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 05:17	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 05:17	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 05:17	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 05:17	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 05:17	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 05:17	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 05:17	063009-1
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 05:39	063009-1
	Antimony	3.67	+/-10	J	3.1	10.0	SOL	P	30-JUN-09 05:39	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 05:39	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 05:39	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 05:39	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 05:39	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 05:39	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 05:39	063009-1
	Iron	25.76	+/-100	J	25.0	100	SOL	P	30-JUN-09 05:39	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 05:39	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 05:39	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 05:39	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 05:39	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 05:39	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 05:39	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 05:39	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 05:39	063009-1
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 06:01	063009-1
	Antimony	3.63	+/-10	J	3.1	10.0	SOL	P	30-JUN-09 06:01	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2458

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:01	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:01	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 06:01	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:01	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 06:01	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 06:01	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 06:01	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 06:01	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 06:01	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 06:01	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 06:01	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:01	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 06:01	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 06:01	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 06:01	063009-1

METALS
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PREPARATION BLANK SUMMARY

SDG NO. 09-2458

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201869986								
	Antimony	648	ug/Kg	+/-998.004	J	P	309	998
	Barium	99.8	ug/Kg	+/-499.002	U	P	99.8	499
	Cadmium	99.8	ug/Kg	+/-499.002	U	P	99.8	499
	Calcium	3260	ug/Kg	+/-9980.04	J	P	2990	9980
	Chromium	99.8	ug/Kg	+/-499.002	U	P	99.8	499
	Cobalt	200	ug/Kg	+/-499.002	U	P	200	499
	Copper	482	ug/Kg	+/-998.004	J	P	299	998
	Iron	6490	ug/Kg	+/-9980.04	J	P	2500	9980
	Lead	250	ug/Kg	+/-998.004	U	P	250	998
	Magnesium	8480	ug/Kg	+/-29940.12	U	P	8480	29900
	Manganese	200	ug/Kg	+/-998.004	U	P	200	998
	Potassium	4990	ug/Kg	+/-14970.06	U	P	4990	15000
	Silver	99.8	ug/Kg	+/-499.002	U	P	99.8	499
	Sodium	4490	ug/Kg	+/-14970.06	U	P	4490	15000
	Aluminum	6790	ug/Kg	+/-19960.08	U	P	6790	20000
	Vanadium	99.8	ug/Kg	+/-499.002	U	P	99.8	499
	Zinc	200	ug/Kg	+/-998.004	U	P	200	998
1201870017								
	Arsenic	192	ug/kg	+/-957.854	U	MS	192	958
	Beryllium	19.2	ug/kg	+/-95.785	U	MS	19.2	95.8
	Nickel	95.8	ug/kg	+/-383.142	U	MS	95.8	383
	Selenium	479	ug/kg	+/-957.854	U	MS	479	958
	Thallium	57.5	ug/kg	+/-191.571	U	MS	57.5	192
1201870335								
	Mercury	3.48	ug/kg	+/-10.221	U	AV	3.48	10.2

METALS
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Interference Check Sample

SDG No: 09–2458

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA1

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 – 120.0	30–JUN–09 03:08	063009–1
	Antimony	–11.9	ug/L					30–JUN–09 03:08	063009–1
	Barium	5.01	ug/L					30–JUN–09 03:08	063009–1
	Cadmium	0.713	ug/L					30–JUN–09 03:08	063009–1
	Calcium	488000	ug/L	500000	ug/L	97.5	80.0 – 120.0	30–JUN–09 03:08	063009–1
	Chromium	–3.65	ug/L					30–JUN–09 03:08	063009–1
	Cobalt	–1.47	ug/L					30–JUN–09 03:08	063009–1
	Copper	–11.0	ug/L					30–JUN–09 03:08	063009–1
	Iron	187000	ug/L	200000	ug/L	93.7	80.0 – 120.0	30–JUN–09 03:08	063009–1
	Lead	6.5	ug/L					30–JUN–09 03:08	063009–1
	Magnesium	485000	ug/L	500000	ug/L	97	80.0 – 120.0	30–JUN–09 03:08	063009–1
	Manganese	–4.1	ug/L					30–JUN–09 03:08	063009–1
	Potassium	–44.3	ug/L					30–JUN–09 03:08	063009–1
	Silver	1.63	ug/L					30–JUN–09 03:08	063009–1
	Sodium	18.0	ug/L					30–JUN–09 03:08	063009–1
	Vanadium	–0.455	ug/L					30–JUN–09 03:08	063009–1
	Zinc	8.31	ug/L					30–JUN–09 03:08	063009–1
ICSAB01									
	Aluminum	506000	ug/L	500000	ug/L	101	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Antimony	513	ug/L	500	ug/L	103	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Barium	504	ug/L	500	ug/L	101	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Cadmium	464	ug/L	500	ug/L	92.8	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Calcium	483000	ug/L	500000	ug/L	96.5	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Chromium	479	ug/L	500	ug/L	95.8	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Cobalt	460	ug/L	500	ug/L	91.9	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Copper	545	ug/L	500	ug/L	109	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Iron	186000	ug/L	200000	ug/L	93.2	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Lead	496	ug/L	500	ug/L	99.2	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Magnesium	482000	ug/L	500000	ug/L	96.5	80.0 – 120.0	30–JUN–09 03:11	063009–1

METALS
–4–
Interference Check Sample

SDG No: 09–2458

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	478	ug/L	500	ug/L	95.6	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Potassium	5170	ug/L	5000	ug/L	103	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Silver	271	ug/L	250	ug/L	109	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Sodium	5230	ug/L	5000	ug/L	105	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Vanadium	522	ug/L	500	ug/L	104	80.0 – 120.0	30–JUN–09 03:11	063009–1
	Zinc	485	ug/L	500	ug/L	97.1	80.0 – 120.0	30–JUN–09 03:11	063009–1

METALS
-4-
Interference Check Sample

SDG No: 09-2458

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	-0.253	ug/L					01-JUL-09 01:50	090630-2
	Selenium	-1.53	ug/L					01-JUL-09 01:50	090630-2
ICSAB01									
	Arsenic	19.4	ug/L	20	ug/L	96.9	80.0 - 120.0	01-JUL-09 01:56	090630-2
	Selenium	18.9	ug/L	20	ug/L	94.4	80.0 - 120.0	01-JUL-09 01:56	090630-2

METALS
-4-
Interference Check Sample

SDG No: 09-2458

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Thallium	0.06	ug/L					01-JUL-09 21:01	090701-3
ICSAB01									
	Thallium	21.3	ug/L	20	ug/L	107	80.0 - 120.0	01-JUL-09 21:03	090701-3

METALS
-4-
Interference Check Sample

SDG No: 09-2458

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.043	ug/L					02-JUL-09 06:46	090701-6
	Nickel	2.9	ug/L					02-JUL-09 06:46	090701-6
ICSAB01									
	Beryllium	19.2	ug/L	20	ug/L	96.1	80.0 - 120.0	02-JUL-09 06:48	090701-6
	Nickel	22.0	ug/L	22.7	ug/L	96.9	80.0 - 120.0	02-JUL-09 06:48	090701-6

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2458 **Client ID** CAMO-09-10462S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 93.5

Sample ID: 232347001 **Spike ID:** 1201869989

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		5340000		3880000		529000	275	N/A	P
Antimony	ug/Kg	75-125	51000		1170		52900	94.3		P
Barium	ug/Kg	75-125	78200		38500		52900	75.1		P
Cadmium	ug/Kg	75-125	51800		103	U	52900	97.9		P
Calcium	ug/Kg	75-125	1810000		1570000		529000	44.7	N	P
Chromium	ug/Kg	75-125	55200		4050		52900	96.7		P
Cobalt	ug/Kg	75-125	50500		1040		52900	93.6		P
Copper	ug/Kg	75-125	55700		1280		52900	103		P
Iron	ug/Kg		14300000		13300000		529000	190	N/A	P
Lead	ug/Kg	75-125	55600		4170		52900	97.4		P
Magnesium	ug/Kg	75-125	1610000		955000		529000	125		P
Manganese	ug/Kg	75-125	187000		163000		52900	45.5	N	P
Potassium	ug/Kg	75-125	1170000		551000		529000	117		P
Silver	ug/Kg	75-125	52300		349	J	52900	98.3		P
Sodium	ug/Kg	75-125	874000		379000		529000	93.6		P
Vanadium	ug/Kg	75-125	59500		7370		52900	98.6		P
Zinc	ug/Kg	75-125	87400		35300		52900	98.6		P

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2458 **Client ID** CAMO-09-10462SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 93.5

Sample ID: 232347001 **Spike ID:** 1201869991

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		5650000		3880000		523000	338	N/A	P
Antimony	ug/Kg	75-125	50200		1170		52300	93.6		P
Barium	ug/Kg	75-125	78500		38500		52300	76.4		P
Cadmium	ug/Kg	75-125	51300		103	U	52300	97.9		P
Calcium	ug/Kg	75-125	1960000		1570000		523000	73.9	N	P
Chromium	ug/Kg	75-125	54300		4050		52300	96		P
Cobalt	ug/Kg	75-125	50000		1040		52300	93.6		P
Copper	ug/Kg	75-125	55500		1280		52300	104		P
Iron	ug/Kg		15200000		13300000		523000	361	N/A	P
Lead	ug/Kg	75-125	55100		4170		52300	97.3		P
Magnesium	ug/Kg	75-125	1700000		955000		523000	142	N	P
Manganese	ug/Kg	75-125	200000		163000		52300	71.5	N	P
Potassium	ug/Kg	75-125	1200000		551000		523000	124		P
Silver	ug/Kg	75-125	51900		349	J	52300	98.6		P
Sodium	ug/Kg	75-125	888000		379000		523000	97.2		P
Vanadium	ug/Kg	75-125	59600		7370		52300	99.8		P
Zinc	ug/Kg	75-125	93200		35300		52300	110		P

METALS
–5a–

Matrix Spike Summary

SDG NO. 09–2458 **Client ID** CAMO–09–10462S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 93.5

Sample ID: 232347001 **Spike ID:** 1201870020

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75–125	10200		2230		8370	95		MS
Beryllium	ug/kg	75–125	6620		953		5230	108		MS
Nickel	ug/kg	75–125	11500		9330		5230	40.8	N	MS
Selenium	ug/kg	75–125	1950		516	U	2090	90.7		MS
Thallium	ug/kg	75–125	10800		402		10500	99.1		MS

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2458 **Client ID** CAMO-09-10462SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 93.5

Sample ID: 232347001 **Spike ID:** 1201870022

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	9970		2230		8410	92		MS
Beryllium	ug/kg	75-125	6430		953		5250	104		MS
Nickel	ug/kg	75-125	10900		9330		5250	30.5	N	MS
Selenium	ug/kg	75-125	1910		516	U	2100	88		MS
Thallium	ug/kg	75-125	10800		402		10500	99.2		MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2458 **Client ID** CAMO-09-10462S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 93.5

Sample ID: 232347001 **Spike ID:** 1201870338

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	126		46.9		111	71.3	N	AV

METALS
–5a–
Matrix Spike Duplicate Summary

SDG NO. 09–2458 **Client ID** CAMO–09–10462SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 93.5

Sample ID: 232347001 **Spike ID:** 1201870340

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75–125	137		46.9		123	73.1	N	AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2458

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10462D

Sample ID: 232347001 **Duplicate ID:** 1201869988 **Percent Solids for Dup:** 93.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	3880000		3770000		2.91		P
Antimony	ug/Kg	+/–1060	1170		1370		15.7		P
Barium	ug/Kg	+/–20%	38500		38800		.655		P
Cadmium	ug/Kg		103	U	106	U			P
Calcium	ug/Kg	+/–20%	1570000		1320000		17.1		P
Chromium	ug/Kg	+/–20%	4050		4090		.8		P
Cobalt	ug/Kg	+/–528	1040		969		7.33		P
Copper	ug/Kg	+/–1060	1280		1100		14.5		P
Iron	ug/Kg	+/–20%	13300000		13200000		1.15		P
Lead	ug/Kg	+/–1060	4170		4210		1.04		P
Magnesium	ug/Kg	+/–20%	955000		1050000		9.77		P
Manganese	ug/Kg	+/–20%	163000		203000		21.9	*	P
Potassium	ug/Kg	+/–20%	551000		618000		11.4		P
Silver	ug/Kg	+/–528	349	J	320	J	8.57		P
Sodium	ug/Kg	+/–20%	379000		355000		6.61		P
Vanadium	ug/Kg	+/–20%	7370		7570		2.61		P
Zinc	ug/Kg	+/–20%	35300		37200		5.07		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2458

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10462SD

Sample ID: 1201869989 **Duplicate ID:** 1201869991 **Percent Solids for Dup:** 93.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	5340000		5650000		5.73		P
Antimony	ug/Kg	+/–20	51000		50200		1.68		P
Barium	ug/Kg	+/–20	78200		78500		.401		P
Cadmium	ug/Kg	+/–20	51800		51300		.94		P
Calcium	ug/Kg	+/–20	1810000		1960000		8		P
Chromium	ug/Kg	+/–20	55200		54300		1.56		P
Cobalt	ug/Kg	+/–20	50500		50000		.935		P
Copper	ug/Kg	+/–20	55700		55500		.38		P
Iron	ug/Kg	+/–20	14300000		15200000		5.97		P
Lead	ug/Kg	+/–20	55600		55100		.972		P
Magnesium	ug/Kg	+/–20	1610000		1700000		5.07		P
Manganese	ug/Kg	+/–20	187000		200000		6.93		P
Potassium	ug/Kg	+/–20	1170000		1200000		2.97		P
Silver	ug/Kg	+/–20	52300		51900		.735		P
Sodium	ug/Kg	+/–20	874000		888000		1.58		P
Vanadium	ug/Kg	+/–20	59500		59600		.145		P
Zinc	ug/Kg	+/–20	87400		93200		6.33		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2458

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10462D

Sample ID: 232347001 **Duplicate ID:** 1201870019 **Percent Solids for Dup:** 93.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/–1040	2230		2100		6.35		MS
Beryllium	ug/kg	+/–521	953		1290		29.7		MS
Nickel	ug/kg	+/–2090	9330		7820		17.6		MS
Selenium	ug/kg		516	U	521	U			MS
Thallium	ug/kg	+/–209	402		291		32.3		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2458

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10462SD

Sample ID: 1201870020 **Duplicate ID:** 1201870022 **Percent Solids for Dup:** 93.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/–20	10200		9970		2.13		MS
Beryllium	ug/kg	+/–20	6620		6430		2.82		MS
Nickel	ug/kg	+/–20	11500		10900		4.78		MS
Selenium	ug/kg	+/–20	1950		1910		2.54		MS
Thallium	ug/kg	+/–20	10800		10800		.487		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2458

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-10462D

Sample ID: 232347001 **Duplicate ID:** 1201870337 **Percent Solids for Dup:** 93.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-12.8	46.9		24.2		64.1	*	AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2458

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10462SD

Sample ID: 1201870338 **Duplicate ID:** 1201870340 **Percent Solids for Dup:** 93.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/–20	126		137		7.73		AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2458

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201869987								
	Aluminum	ug/Kg	7290000	7630000		105	63.5-118	P
	Antimony	ug/Kg	121000	126000		104	39.1-132.1	P
	Barium	ug/Kg	475000	496000		104	82-110.6	P
	Cadmium	ug/Kg	116000	123000		106	77.9-115.2	P
	Calcium	ug/Kg	3720000	3900000		105	77.4-111.7	P
	Chromium	ug/Kg	84000	81400		96.9	66.6-116.5	P
	Cobalt	ug/Kg	83000	86900		105	79-113.9	P
	Copper	ug/Kg	105000	104000		99.5	77.6-112	P
	Iron	ug/Kg	20000000	20600000		103	51.5-145.5	P
	Lead	ug/Kg	161000	176000		109	83.1-114.7	P
	Magnesium	ug/Kg	2980000	3180000		107	81-114.3	P
	Manganese	ug/Kg	398000	400000		100	76.6-106.6	P
	Potassium	ug/Kg	2390000	2440000		102	72.2-111.1	P
	Silver	ug/Kg	133000	138000		104	81.7-115.7	P
	Sodium	ug/Kg	614000	600000		97.7	71.5-109.3	P
	Vanadium	ug/Kg	166000	159000		96	65-118.6	P
	Zinc	ug/Kg	195000	205000		105	82.8-111.9	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2458

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201870018								
	Arsenic	ug/kg	255000	248000		97.2	83-120	MS
	Beryllium	ug/kg	86400	96900		112	81.2-126.8	MS
	Nickel	ug/kg	101000	110000		109	83.3-121.4	MS
	Selenium	ug/kg	171000	178000		104	80.2-125.9	MS
	Thallium	ug/kg	203000	238000		117	78-123.2	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2458

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201870336								
	Mercury	ug/kg	5150	4990		96.9	71.6-128.3	AV

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 09–2458 **Client ID** CAMO–09–10462L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232347001 **Serial Dilution ID:** 1201869990

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	37700		37100		1.59		10	P
Antimony	11.3		15.5	U	100			P
Barium	374		366		2.27		10	P
Cadmium	1	U	5	U				P
Calcium	15200		14600		4.28		10	P
Chromium	39.3		39		.763			P
Cobalt	10.1		10	U	100			P
Copper	12.4		18.2	J	46.8			P
Iron	129000		127000		1.94		10	P
Lead	40.5		36.1	J	11			P
Magnesium	9260		9100		1.73		10	P
Manganese	1580		1550		1.9		10	P
Potassium	5350		4980		6.92		10	P
Silver	3.38	J	5.2	J	53.8			P
Sodium	3680		3620		1.63		10	P
Vanadium	71.5		69.5		2.8		10	P
Zinc	343		359		4.66		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2458 **Client ID** CAMO-09-10462L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232347001 **Serial Dilution ID:** 1201870021

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	10.8		8.8	J	18.5			MS
Beryllium	.923		.865	J	6.28			MS
Nickel	9.03		8.85	J	1.99			MS
Selenium	2.5	U	12.5	U				MS
Thallium	1.95		3.68	J	88.7			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2458 **Client ID** CAMO-09-10462L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232347001 **Serial Dilution ID:** 1201870339

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.866		.392	J	54.7			AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2458 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880673						
1201869986	MB for batch 880673	MB	S	29-JUN-09	.501g	50mL	
1201869987	LCS for batch 880673	LCS	S	29-JUN-09	.513g	50mL	
1201869989	CAMO-09-10462S	MS	S	29-JUN-09	.506g	50mL	
1201869991	CAMO-09-10462SD	MSD	S	29-JUN-09	.511g	50mL	
1201869988	CAMO-09-10462D	DUP	S	29-JUN-09	.507g	50mL	
232347001	CAMO-09-10462	SAMPLE	S	29-JUN-09	.519g	50mL	
232347002	CAMO-09-10460	SAMPLE	S	29-JUN-09	.504g	50mL	
232347003	CAMO-09-10461	SAMPLE	S	29-JUN-09	.516g	50mL	
232347004	CAMO-09-10467	SAMPLE	S	29-JUN-09	.501g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2458 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880690						
1201870017	MB for batch 880690	MB	S	29-JUN-09	.522g	50mL	
1201870018	LCS for batch 880690	LCS	S	29-JUN-09	.521g	50mL	
1201870020	CAMO-09-10462S	MS	S	29-JUN-09	.511g	50mL	
1201870022	CAMO-09-10462SD	MSD	S	29-JUN-09	.509g	50mL	
1201870019	CAMO-09-10462D	DUP	S	29-JUN-09	.513g	50mL	
232347001	CAMO-09-10462	SAMPLE	S	29-JUN-09	.518g	50mL	
232347002	CAMO-09-10460	SAMPLE	S	29-JUN-09	.512g	50mL	
232347003	CAMO-09-10461	SAMPLE	S	29-JUN-09	.5g	50mL	
232347004	CAMO-09-10467	SAMPLE	S	29-JUN-09	.504g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2458 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880849						
1201870335	MB for batch 880849	MB	S	02-JUL-09	.587g	30mL	
1201870336	LCS for batch 880849	LCS	S	02-JUL-09	.201g	30mL	
1201870338	CAMO-09-10462S	MS	S	02-JUL-09	.576g	30mL	
1201870340	CAMO-09-10462SD	MSD	S	02-JUL-09	.523g	30mL	
1201870337	CAMO-09-10462D	DUP	S	02-JUL-09	.5g	30mL	
232347001	CAMO-09-10462	SAMPLE	S	02-JUL-09	.592g	30mL	
232347002	CAMO-09-10460	SAMPLE	S	02-JUL-09	.538g	30mL	
232347003	CAMO-09-10461	SAMPLE	S	02-JUL-09	.518g	30mL	
232347004	CAMO-09-10467	SAMPLE	S	02-JUL-09	.515g	30mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 01-JUL-09 **End Date:** 01-JUL-09

Client Sdg: 09-2458
Method MS
Data File: 090630-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	01:14			X															X					
S10	1	01:20			X															X					
S100	1	01:26			X															X					
ICV01	1	01:32			X															X					
ICB01	1	01:38			X															X					
CRDL01	1	01:44			X															X					
ICSA01	1	01:50			X															X					
ICSAB01	1	01:56			X															X					
CCV01	1	02:02			X															X					
CCB01	1	02:09			X															X					
LR01	1	02:15			X															X					
CCV02	1	02:21			X															X					
CCB02	1	02:27			X															X					
1201870017	2	02:33			X															X					
1201870018	40	02:39			X															X					
232347001	2	02:45			X															X					
1201870019	2	02:51			X															X					
1201870020	2	02:58			X															X					
1201870022	2	03:04			X															X					
1201870021	10	03:10			X															X					
CCV03	1	03:16			X															X					
CCB03	1	03:22			X															X					
232347002	2	03:28			X															X					
232347003	2	03:34			X															X					
232347004	2	03:41			X															X					
CCV04	1	03:47			X															X					
CCB04	1	03:53			X															X					

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 01–JUL–09 **End Date:** 02–JUL–09

Client Sdg: 09–2458
Method MS
Data File: 090701–3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	20:47																					X		
S10	1	20:49																					X		
S100	1	20:52																					X		
ICV01	1	20:54																					X		
ICB01	1	20:56																					X		
CRDL01	1	20:59																					X		
ICSA01	1	21:01																					X		
ICSAB01	1	21:03																					X		
CCV01	1	21:06																					X		
CCB01	1	21:08																					X		
1201870017	2	21:10																					X		
1201870018	40	21:13																					X		
232347001	2	21:15																					X		
1201870019	2	21:17																					X		
1201870020	2	21:20																					X		
1201870022	2	21:22																					X		
1201870021	10	21:24																					X		
CCV02	1	21:27																					X		
CCB02	1	21:29																					X		
232347002	2	21:31																					X		
232347003	2	21:34																					X		
232347004	2	21:36																					X		
CCV03	1	21:38																					X		
CCB03	1	21:41																					X		

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 01-JUL-09 **End Date:** 02-JUL-09

Client Sdg: 09-2458
Method MS
Data File: 090701-6

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	06:36					X											X							
S10	1	06:38					X											X							
S100	1	06:39					X											X							
ICV01	1	06:41					X											X							
ICB01	1	06:43					X											X							
CRDL01	1	06:44					X											X							
ICSA01	1	06:46					X											X							
ICSAB01	1	06:48					X											X							
CCV01	1	06:50					X											X							
CCB01	1	06:51					X											X							
1201870017	2	06:53					X											X							
1201870018	40	06:55					X											X							
ZZZZZZ	2	06:56																							
ZZZZZZ	2	06:58																							
ZZZZZZ	2	07:00																							
ZZZZZZ	2	07:02																							
CCV02	1	07:03					X											X							
CCB02	1	07:05					X											X							
232347001	10	07:10					X											X							
1201870019	10	07:11					X											X							
1201870020	10	07:13					X											X							
1201870022	10	07:15					X											X							
1201870021	50	07:17					X											X							
CCV03	1	07:18					X											X							
CCB03	1	07:20					X											X							
232347002	10	07:22					X											X							
232347003	10	07:24					X											X							
232347004	10	07:25					X											X							
CCV04	1	07:27					X											X							
CCB04	1	07:29					X											X							

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 06-JUL-09 **End Date:** 06-JUL-09

Client Sdg: 09-2458
Method AV
Data File: 070609S1-7

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:31															X								
S0.2	1	09:32															X								
S0.5	1	09:34															X								
S2.0	1	09:36															X								
S5.0	1	09:38															X								
S10	1	09:40															X								
ICV01	1	09:42															X								
ICB01	1	09:44															X								
CRDL01	1	09:46															X								
CCV01	1	09:48															X								
CCB01	1	09:50															X								
1201870335	1	09:52															X								
1201870336	10	09:54															X								
232347001	1	09:56															X								
1201870337	1	09:58															X								
1201870338	1	10:00															X								
1201870340	1	10:02															X								
1201870339	5	10:04															X								
232347002	1	10:06															X								
232347003	1	10:08															X								
232347004	1	10:10															X								
CCV02	1	10:12															X								
CCB02	1	10:14															X								

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA1
Start Date: 30-JUN-09 **End Date:** 30-JUN-09

Client Sdg: 09-2458
Method P
Data File: 063009-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	02:45	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	02:48		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	02:51	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	02:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	02:57	X						X				X		X							X			
ICV01	1	02:58	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	03:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	03:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	03:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	03:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	03:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	03:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	03:20																							
ZZZZZZ	1	03:23																							
CCV01	1	03:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	03:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	03:38																							
ZZZZZZ	1	03:42																							
ZZZZZZ	1	03:45																							
ZZZZZZ	1	03:49																							
ZZZZZZ	1	03:52																							
ZZZZZZ	1	03:56																							
ZZZZZZ	1	03:59																							
CCV02	1	04:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	04:06	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV03	1	04:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	04:19	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	04:23																							
ZZZZZZ	1	04:26																							
ZZZZZZ	1	04:30																							
ZZZZZZ	1	04:34																							
ZZZZZZ	1	04:36																							
ZZZZZZ	5	04:39																							
CCV04	1	04:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	04:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	04:49																							
ZZZZZZ	2	04:53																							
ZZZZZZ	1	04:56																							
ZZZZZZ	1	04:59																							
ZZZZZZ	1	05:02																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	05:05																							
ZZZZZZ	5	05:08																							
ZZZZZZ	1	05:11																							
CCV05	1	05:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	05:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869986	1	05:21	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869987	2	05:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232347001	1	05:27	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869988	1	05:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869989	1	05:33	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV06	1	05:36	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	05:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869991	1	05:42	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869990	5	05:45	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232347002	1	05:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232347003	1	05:52	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232347004	1	05:55	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV07	1	05:58	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	06:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Standards

METALS
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Instrument Detection Limits

SDG NO. 09-2458

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
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Instrument Detection Limits

SDG NO. 09-2458

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
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Instrument Detection Limits

SDG NO. 09-2458

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 23-JUL-07

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.1	10
	Arsenic	188.979	5.0	15
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	30.0	100
	Chromium	267.716	1.0	5
	Cobalt	228.616	2.0	5
	Copper	324.752	3.0	10
	Iron	238.204	25.0	100
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.0	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	15
	Silver	328.068	1.0	5
	Sodium	589.592	45.0	150
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	2.0	10

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2458
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.08714	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.36980	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.01008	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2458
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	4.75140	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-33.0980	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	2.44121
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	1.49970	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	176.49
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	4.07230	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	3.65700

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2458
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	38.0301
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	1.47380
Arsenic	188.979	-0.49261	0.00000	0.00000	0.00000	1.83900
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.31446	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.19492	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	-2.33110
Copper	324.752	-0.05080	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.01248	0.00000	0.00000	0.00000	-2.95230
Magnesium	279.077	1.68320	0.00000	0.00000	0.00000	-24.9658
Manganese	257.61	-0.17632	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	-0.03930	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	1.17810	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.07891	0.00000	0.34018	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.0660
Silver	328.068	-0.07890	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	3.84480	0.00000
Tin	189.927	-0.05585	0.00000	-0.13696	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	-0.08158	0.00000	0.00000	0.00000	-6.97050
Zinc	213.857	0.11260	0.00000	0.04420	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2458
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Selenium	Silicon	Silver
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-1.09390	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	5.19130	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2458
Effective Dates: 01-MAY-09

Parmname	Wavelength	Thallium	Tin	Titanium	Uranium	Vanadium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	-3.74360	-0.55870	0.00000
Arsenic	188.979	0.00000	0.00000	-2.71110	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	-2.10080
Beryllium	313.107	0.00000	0.00000	-2.91300	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	-0.71290	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	-1.47980
Cobalt	228.616	0.00000	0.00000	2.08900	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.84100	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	-21.8313	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	38.5869	36.0710	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	-6.85200
Thallium	190.801	0.00000	0.00000	-7.24690	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	-1.61770	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA1
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2458
Effective Dates: 01-MAY-09

Parmname	Wavelength	Zinc
Aluminum	396.153	0.00000
Antimony	206.836	0.00000
Arsenic	188.979	0.00000
Barium	233.527	0.00000
Beryllium	313.107	0.00000
Boron	249.677	0.00000
Cadmium	226.502	0.00000
Chromium	267.716	0.00000
Cobalt	228.616	0.00000
Copper	324.752	0.00000
Iron	238.204	0.00000
Lead	220.353	0.00000
Magnesium	279.077	0.00000
Manganese	257.61	0.00000
Molybdenum	202.031	0.00000
Nickel	231.604	0.00000
Phosphorous	214.914	0.00000
Selenium	196.026	0.00000
Silicon	251.611	0.00000
Silver	328.068	0.00000
Thallium	190.801	0.00000
Tin	189.927	0.00000
Titanium	334.94	0.00000
Uranium	409.014	0.00000
Vanadium	292.402	0.00000
Zinc	213.857	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2458

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS5

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2458

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA 1

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

Raw Data

6/30/2009 02:35:43 Hg ReAlign... Actual peak offset (nm): 0.005
Drift (nm): 0.000 Slit adjustment: 0

Analysis Begun

Start Time: 6/30/2009 02:45:03 **Plasma On Time: 6/29/2009 11:03:38**
Logged In Analyst: optima **Technique: ICP Continuous**
Spectrometer Model: Optima 4300 DV, S/N 077N1030502Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\062909.sif
Batch ID:
Results Data Set: 063009
Results Library: c:\pe\optima1\Results\Results.mdb

Method Loaded
Method Name: Gen Eng fast_new Si **Method Last Saved: 6/30/2009 02:36:56**
IEC File: 042009.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 6/30/2009 02:45:05**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time

1	Sc RADIAL	165140.8	165140.8	99.3	%	02:45:39
1	Al 396.153Radial†	-141.6	-142.7	[0.00]	µg/L	02:45:39
1	Ca 317.933Radial†	869.6	876.1	[0.00]	µg/L	02:45:59
1	Fe 238.204 Radial†	-29.8	-30.0	[0.00]	µg/L	02:45:59
1	K 766.490 Radial†	895.3	902.0	[0.00]	µg/L	02:45:39
1	Mg 279.077 IEC†	49.9	50.2	[0.00]	µg/L	02:45:59
1	Na 589.592 Radial†	114.4	115.2	[0.00]	µg/L	02:45:39
1	Sr 421.552†	-36.9	-37.2	[0.00]	µg/L	02:45:39
1	Sc 361.383	2076982.1	2076982.1	100.03	%	02:47:01
1	Y 371.029	1356555.9	1356555.9	99.982	%	02:47:01
1	Ag 328.068†	-983.3	-983.0	[0.00]	µg/L	02:47:06
1	As 188.979†	-3.8	-3.8	[0.00]	µg/L	02:47:27
1	B 249.677†	217.1	217.0	[0.00]	µg/L	02:47:06
1	Ba 233.527†	-91.7	-91.7	[0.00]	µg/L	02:47:27
1	Be 313.107†	3372.7	3371.7	[0.00]	µg/L	02:47:06
1	Cd 226.502†	-139.6	-139.6	[0.00]	µg/L	02:47:27
1	Co 228.616†	-94.1	-94.1	[0.00]	µg/L	02:47:27
1	Cr 267.716†	-198.4	-198.4	[0.00]	µg/L	02:47:06
1	Cu 324.752†	4838.6	4837.2	[0.00]	µg/L	02:47:06
1	Mn 257.610†	73.7	73.7	[0.00]	µg/L	02:47:06
1	Mo 202.031†	5.3	5.3	[0.00]	µg/L	02:47:27
1	Ni 231.604†	436.5	436.4	[0.00]	µg/L	02:47:27
1	P 214.914†	251.8	251.7	[0.00]	µg/L	02:47:27
1	Pb 220.353†	65.7	65.7	[0.00]	µg/L	02:47:27
1	S 181.975 Axial†	44.2	44.2	[0.00]	µg/L	02:47:27
1	Sb 206.836†	25.6	25.6	[0.00]	µg/L	02:47:27
1	Se 196.026†	21.7	21.7	[0.00]	µg/L	02:47:27
1	SiO2†	3175.9	3174.9	[0.00]	µg/L	02:47:06
1	Si 251.611†	345.4	345.3	[0.00]	µg/L	02:47:27
1	Sn 189.927†	7.5	7.5	[0.00]	µg/L	02:47:27
1	Ti 334.940†	1345.1	1344.7	[0.00]	µg/L	02:47:06
1	Tl 190.801†	-27.3	-27.2	[0.00]	µg/L	02:47:27
1	U 409.014†	-17.2	-17.2	[0.00]	µg/L	02:47:06
1	V 292.402†	-205.6	-205.5	[0.00]	µg/L	02:47:06
1	Zn 213.857†	732.5	732.3	[0.00]	µg/L	02:47:27
2	Sc RADIAL	165837.4	165837.4	99.7	%	02:46:04
2	Al 396.153Radial†	-158.7	-159.2	[0.00]	µg/L	02:46:04
2	Ca 317.933Radial†	892.7	895.6	[0.00]	µg/L	02:46:25
2	Fe 238.204 Radial†	-26.1	-26.1	[0.00]	µg/L	02:46:25
2	K 766.490 Radial†	865.5	868.3	[0.00]	µg/L	02:46:04
2	Mg 279.077 IEC†	55.2	55.3	[0.00]	µg/L	02:46:25
2	Na 589.592 Radial†	120.1	120.5	[0.00]	µg/L	02:46:04
2	Sr 421.552†	-11.2	-11.3	[0.00]	µg/L	02:46:04
2	Sc 361.383	2086301.4	2086301.4	100.48	%	02:47:33
2	Y 371.029	1362967.0	1362967.0	100.45	%	02:47:33
2	Ag 328.068†	-939.7	-935.2	[0.00]	µg/L	02:47:38
2	As 188.979†	2.8	2.8	[0.00]	µg/L	02:47:59
2	B 249.677†	203.9	203.0	[0.00]	µg/L	02:47:38
2	Ba 233.527†	-86.0	-85.6	[0.00]	µg/L	02:47:59
2	Be 313.107†	3353.4	3337.4	[0.00]	µg/L	02:47:38
2	Cd 226.502†	-141.4	-140.7	[0.00]	µg/L	02:47:59
2	Co 228.616†	-90.5	-90.1	[0.00]	µg/L	02:47:59
2	Cr 267.716†	-169.1	-168.3	[0.00]	µg/L	02:47:38
2	Cu 324.752†	4979.4	4955.7	[0.00]	µg/L	02:47:38
2	Mn 257.610†	76.9	76.5	[0.00]	µg/L	02:47:38
2	Mo 202.031†	2.4	2.3	[0.00]	µg/L	02:47:59
2	Ni 231.604†	432.1	430.1	[0.00]	µg/L	02:47:59
2	P 214.914†	250.3	249.1	[0.00]	µg/L	02:47:59
2	Pb 220.353†	65.7	65.4	[0.00]	µg/L	02:47:59
2	S 181.975 Axial†	45.3	45.1	[0.00]	µg/L	02:47:59
2	Sb 206.836†	24.6	24.5	[0.00]	µg/L	02:47:59
2	Se 196.026†	19.3	19.2	[0.00]	µg/L	02:47:59
2	SiO2†	3252.4	3236.9	[0.00]	µg/L	02:47:38
2	Si 251.611†	348.7	347.0	[0.00]	µg/L	02:47:59
2	Sn 189.927†	11.0	10.9	[0.00]	µg/L	02:47:59
2	Ti 334.940†	1094.3	1089.1	[0.00]	µg/L	02:47:38
2	Tl 190.801†	-26.6	-26.5	[0.00]	µg/L	02:47:59
2	U 409.014†	-63.7	-63.4	[0.00]	µg/L	02:47:38
2	V 292.402†	-238.5	-237.3	[0.00]	µg/L	02:47:38
2	Zn 213.857†	729.7	726.2	[0.00]	µg/L	02:47:59
3	Sc RADIAL	168138.3	168138.3	101	%	02:46:30

3	Al 396.153Radial†	-150.0	-148.5	[0.00]	µg/L	02:46:30
3	Ca 317.933Radial†	884.3	875.0	[0.00]	µg/L	02:46:51
3	Fe 238.204 Radial†	-26.1	-25.9	[0.00]	µg/L	02:46:51
3	K 766.490 Radial†	828.8	820.1	[0.00]	µg/L	02:46:30
3	Mg 279.077 IEC†	46.1	45.6	[0.00]	µg/L	02:46:51
3	Na 589.592 Radial†	119.4	118.1	[0.00]	µg/L	02:46:30
3	Sr 421.552†	22.8	22.5	[0.00]	µg/L	02:46:30
3	Sc 361.383	2065830.5	2065830.5	99.492	%	02:48:05
3	Y 371.029	1350875.6	1350875.6	99.563	%	02:48:05
3	Ag 328.068†	-978.8	-983.8	[0.00]	µg/L	02:48:10
3	As 188.979†	1.6	1.6	[0.00]	µg/L	02:48:31
3	B 249.677†	211.0	212.0	[0.00]	µg/L	02:48:10
3	Ba 233.527†	-91.4	-91.8	[0.00]	µg/L	02:48:31
3	Be 313.107†	3363.7	3380.8	[0.00]	µg/L	02:48:10
3	Cd 226.502†	-145.5	-146.2	[0.00]	µg/L	02:48:31
3	Co 228.616†	-98.3	-98.8	[0.00]	µg/L	02:48:31
3	Cr 267.716†	-188.5	-189.5	[0.00]	µg/L	02:48:10
3	Cu 324.752†	4928.6	4953.7	[0.00]	µg/L	02:48:10
3	Mn 257.610†	116.7	117.3	[0.00]	µg/L	02:48:10
3	Mo 202.031†	0.8	0.9	[0.00]	µg/L	02:48:31
3	Ni 231.604†	431.2	433.4	[0.00]	µg/L	02:48:31
3	P 214.914†	259.0	260.4	[0.00]	µg/L	02:48:31
3	Pb 220.353†	69.9	70.3	[0.00]	µg/L	02:48:31
3	S 181.975 Axial†	43.7	43.9	[0.00]	µg/L	02:48:31
3	Sb 206.836†	19.5	19.6	[0.00]	µg/L	02:48:31
3	Se 196.026†	20.3	20.4	[0.00]	µg/L	02:48:31
3	SiO2†	3201.9	3218.2	[0.00]	µg/L	02:48:10
3	Si 251.611†	344.2	345.9	[0.00]	µg/L	02:48:31
3	Sn 189.927†	6.3	6.3	[0.00]	µg/L	02:48:31
3	Ti 334.940†	1057.6	1063.0	[0.00]	µg/L	02:48:10
3	Tl 190.801†	-29.7	-29.8	[0.00]	µg/L	02:48:31
3	U 409.014†	-4.1	-4.1	[0.00]	µg/L	02:48:10
3	V 292.402†	-174.3	-175.2	[0.00]	µg/L	02:48:10
3	Zn 213.857†	736.2	739.9	[0.00]	µg/L	02:48:31

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	2076371.3	10249.11	0.49%	100.00	%
Sc RADIAL	166372.2	1568.69	0.94%	100	%
Y 371.029	1356799.5	6049.35	0.45%	100.00	%
Ag 328.068†	-967.3	27.83	2.88%	[0.00]	µg/L
Al 396.153Radial†	-150.1	8.42	5.61%	[0.00]	µg/L
As 188.979†	0.2	3.48	>999.9%	[0.00]	µg/L
B 249.677†	210.7	7.12	3.38%	[0.00]	µg/L
Ba 233.527†	-89.7	3.53	3.94%	[0.00]	µg/L
Be 313.107†	3363.3	22.90	0.68%	[0.00]	µg/L
Ca 317.933Radial†	882.2	11.57	1.31%	[0.00]	µg/L
Cd 226.502†	-142.2	3.54	2.49%	[0.00]	µg/L
Co 228.616†	-94.3	4.37	4.63%	[0.00]	µg/L
Cr 267.716†	-185.4	15.47	8.35%	[0.00]	µg/L
Cu 324.752†	4915.5	67.85	1.38%	[0.00]	µg/L
Fe 238.204 Radial†	-27.3	2.31	8.45%	[0.00]	µg/L
K 766.490 Radial†	863.5	41.14	4.76%	[0.00]	µg/L
Mg 279.077 IEC†	50.4	4.87	9.67%	[0.00]	µg/L
Mn 257.610†	89.2	24.43	27.40%	[0.00]	µg/L
Mo 202.031†	2.8	2.26	79.92%	[0.00]	µg/L
Na 589.592 Radial†	117.9	2.65	2.25%	[0.00]	µg/L
Ni 231.604†	433.3	3.17	0.73%	[0.00]	µg/L
P 214.914†	253.7	5.91	2.33%	[0.00]	µg/L
Pb 220.353†	67.1	2.73	4.06%	[0.00]	µg/L
S 181.975 Axial†	44.4	0.62	1.41%	[0.00]	µg/L
Sb 206.836†	23.2	3.23	13.91%	[0.00]	µg/L
Se 196.026†	20.4	1.23	6.01%	[0.00]	µg/L
SiO2†	3210.0	31.78	0.99%	[0.00]	µg/L
Si 251.611†	346.1	0.87	0.25%	[0.00]	µg/L
Sn 189.927†	8.2	2.40	29.09%	[0.00]	µg/L
Sr 421.552†	-8.6	29.95	346.54%	[0.00]	µg/L
Ti 334.940†	1165.6	155.68	13.36%	[0.00]	µg/L
Tl 190.801†	-27.8	1.75	6.28%	[0.00]	µg/L

U 409.014†	-28.3	31.17	110.31%	[0.00]	µg/L
V 292.402†	-206.0	31.06	15.08%	[0.00]	µg/L
Zn 213.857†	732.8	6.89	0.94%	[0.00]	µg/L

ERROR: VMerror
OFFENDING COMMAND: array

OPERAND STACK:
RelativeColorimetric.Panasonic DP-85.PSSmooth
RelativeColorimetric.Panasonic DP-85.PSSmooth
--nostringval--

2	S 181.975 Axial†	71.5	32.8	0.5701	µg/L	0.5701 ppb	03:16:24
2	Sb 206.836†	22.5	1.1	-24.155	µg/L	-24.155 ppb	03:16:24
2	Se 196.026†	-129.0	-159.5	-61.605	µg/L	-61.605 ppb	03:16:24
2	SiO2†	2645.8	-356.4	-61.462	µg/L	-61.462 ppb	03:16:24
2	Si 251.611†	-455.2	-837.0	-50.751	µg/L	-50.751 ppb	03:16:24
2	Sn 189.927†	-429.5	-471.4	52.836	µg/L	52.836 ppb	03:16:24
2	Ti 334.940†	14063.2	14001.8	15.179	µg/L	15.179 ppb	03:16:03
2	Tl 190.801†	-3.5	24.0	-15.426	µg/L	-15.426 ppb	03:16:24
2	U 409.014†	141233.1	152351.2	14520	µg/L	14520 ppb	03:16:03
2	V 292.402†	-5213.9	-5417.3	3.7741	µg/L	3.7741 ppb	03:16:03
2	Zn 213.857†	3409.1	2943.9	24.291	µg/L	24.291 ppb	03:16:24
3	Sc RADIAL	164721.1	164721.1	99.0	%		03:15:15
3	Al 396.153Radial†	1192434.5	1204536.6	502240	µg/L	502240 ppb	03:15:09
3	Ca 317.933Radial†	2577831.2	2602787.2	486440	µg/L	486440 ppb	03:15:09
3	Fe 238.204 Radial†	658237.2	664862.2	460250	µg/L	460250 ppb	03:15:09
3	K 766.490 Radial†	782.2	-73.4	-39.582	µg/L	-39.582 ppb	03:15:15
3	Mg 279.077 IEC†	236012.9	238328.2	478360	µg/L	478360 ppb	03:15:15
3	Na 589.592 Radial†	1986228.8	2006019.3	482670	µg/L	482670 ppb	03:15:09
3	Sr 421.552†	1307.0	1328.7	5.7054	µg/L	5.7054 ppb	03:15:15
3	Sc 361.383	1915113.9	1915113.9	92.234	%		03:16:30
3	Y 371.029	1220902.1	1220902.1	89.984	%		03:16:30
3	Ag 328.068†	-4931.6	-4379.6	-1.1977	µg/L	-1.1977 ppb	03:16:36
3	As 188.979†	35.7	38.6	213.87	µg/L	213.87 ppb	03:16:56
3	B 249.677†	4792.9	4985.8	52.075	µg/L	52.075 ppb	03:16:36
3	Ba 233.527†	259.2	370.8	8.9591	µg/L	8.9591 ppb	03:16:56
3	Be 313.107†	-2775.6	-6372.7	-3.5658	µg/L	-3.5658 ppb	03:16:36
3	Cd 226.502†	1345.3	1600.7	11.873	µg/L	11.873 ppb	03:16:36
3	Co 228.616†	13.9	109.4	4.8489	µg/L	4.8489 ppb	03:16:56
3	Cr 267.716†	-385.5	-232.5	-4.5390	µg/L	-4.5390 ppb	03:16:36
3	Cu 324.752†	-8002.3	-13591.6	-34.877	µg/L	-34.877 ppb	03:16:36
3	Mn 257.610†	-13330.2	-14541.8	-39.171	µg/L	-39.171 ppb	03:16:36
3	Mo 202.031†	-240.1	-263.1	-9.9085	µg/L	-9.9085 ppb	03:16:56
3	Ni 231.604†	356.6	-46.6	-2.3272	µg/L	-2.3272 ppb	03:16:56
3	P 214.914†	436.8	219.8	15.578	µg/L	15.578 ppb	03:16:56
3	Pb 220.353†	6.5	-60.0	11.847	µg/L	11.847 ppb	03:16:56
3	S 181.975 Axial†	81.0	43.4	46.011	µg/L	46.011 ppb	03:16:56
3	Sb 206.836†	17.2	-4.6	-28.982	µg/L	-28.982 ppb	03:16:56
3	Se 196.026†	-136.8	-168.7	-69.505	µg/L	-69.505 ppb	03:16:56
3	SiO2†	2603.2	-387.6	-66.840	µg/L	-66.840 ppb	03:16:56
3	Si 251.611†	-425.7	-807.6	-48.597	µg/L	-48.597 ppb	03:16:56
3	Sn 189.927†	-431.5	-476.1	50.627	µg/L	50.627 ppb	03:16:56
3	Ti 334.940†	14312.4	14352.0	15.937	µg/L	15.937 ppb	03:16:36
3	Tl 190.801†	-6.2	21.1	-19.777	µg/L	-19.777 ppb	03:16:56
3	U 409.014†	142547.3	154578.4	14734	µg/L	14734 ppb	03:16:36
3	V 292.402†	-5207.3	-5439.8	3.9497	µg/L	3.9497 ppb	03:16:36
3	Zn 213.857†	3390.7	2943.4	24.344	µg/L	24.344 ppb	03:16:56

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1922451.2	92.587	%	0.3092				0.33%
Sc RADIAL	163760.8	98.4	%	0.53				0.54%
Y 371.029	1225086.8	90.292	%	0.2691				0.30%
Ag 328.068†	-4360.2	-1.0083	µg/L	0.34714	-1.0083	ppb	0.34714	34.43%
Al 396.153Radial†	1205905.1	502810	µg/L	1467.5	502810	ppb	1467.5	0.29%
QC value within limits for Al 396.153Radial Recovery = 100.56%								
As 188.979†	38.6	214.12	µg/L	1.196	214.12	ppb	1.196	0.56%
B 249.677†	4964.8	51.158	µg/L	1.2344	51.158	ppb	1.2344	2.41%
Ba 233.527†	365.3	8.8259	µg/L	0.41467	8.8259	ppb	0.41467	4.70%
Be 313.107†	-6135.3	-3.4303	µg/L	0.17576	-3.4303	ppb	0.17576	5.12%
Ca 317.933Radial†	2604250.7	486720	µg/L	1617.3	486720	ppb	1617.3	0.33%
QC value within limits for Ca 317.933Radial Recovery = 97.34%								
Cd 226.502†	1590.0	11.490	µg/L	0.3981	11.490	ppb	0.3981	3.47%
Co 228.616†	113.1	5.0242	µg/L	0.22017	5.0242	ppb	0.22017	4.38%
Cr 267.716†	-237.3	-4.6299	µg/L	0.44043	-4.6299	ppb	0.44043	9.51%
Cu 324.752†	-13544.7	-34.505	µg/L	0.9496	-34.505	ppb	0.9496	2.75%
Fe 238.204 Radial†	665272.2	460530	µg/L	1556.4	460530	ppb	1556.4	0.34%
QC value within limits for Fe 238.204 Radial Recovery = 92.11%								
K 766.490 Radial†	-19.8	-10.665	µg/L	26.9697	-10.665	ppb	26.9697	252.89%
Mg 279.077 IEC†	239958.2	481640	µg/L	2877.2	481640	ppb	2877.2	0.60%

QC value within limits for Mg 279.077 IEC Recovery = 96.33%

Mn 257.610†	-14364.8	-38.655 µg/L	0.4940	-38.655 ppb	0.4940	1.28%
Mo 202.031†	-244.4	-7.9031 µg/L	1.77835	-7.9031 ppb	1.77835	22.50%
Na 589.592 Radial†	2007677.9	483070 µg/L	1500.6	483070 ppb	1500.6	0.31%

QC value within limits for Na 589.592 Radial Recovery = 96.61%

Ni 231.604†	-53.9	-2.6864 µg/L	0.35102	-2.6864 ppb	0.35102	13.07%
P 214.914†	216.6	10.173 µg/L	5.1382	10.173 ppb	5.1382	50.51%
Pb 220.353†	-61.8	11.631 µg/L	1.0770	11.631 ppb	1.0770	9.26%
S 181.975 Axial†	38.9	26.441 µg/L	23.3665	26.441 ppb	23.3665	88.37%
Sb 206.836†	4.2	-21.532 µg/L	9.0502	-21.532 ppb	9.0502	42.03%
Se 196.026†	-160.6	-61.530 µg/L	8.0125	-61.530 ppb	8.0125	13.02%
SiO2†	-354.2	-61.079 µg/L	5.9616	-61.079 ppb	5.9616	9.76%
Si 251.611†	-815.9	-49.256 µg/L	1.2969	-49.256 ppb	1.2969	2.63%
Sn 189.927†	-473.0	52.498 µg/L	1.7278	52.498 ppb	1.7278	3.29%
Sr 421.552†	1316.8	5.6539 µg/L	0.19641	5.6539 ppb	0.19641	3.47%
Ti 334.940†	14217.4	15.620 µg/L	0.3940	15.620 ppb	0.3940	2.52%
Tl 190.801†	20.6	-20.452 µg/L	5.3959	-20.452 ppb	5.3959	26.38%
U 409.014†	152941.4	14576 µg/L	138.3	14576 ppb	138.3	0.95%

QC value within limits for U 409.014 Recovery = 97.18%

V 292.402†	-5400.0	4.1524 µg/L	0.51080	4.1524 ppb	0.51080	12.30%
Zn 213.857†	2944.8	24.270 µg/L	0.0860	24.270 ppb	0.0860	0.35%

All analyte(s) passed QC.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 108
Date Collected: 6/30/2009 03:17:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	169350.7	169350.7	102	%			03:17:47
1	Al 396.153Radial†	1107.3	1238.0	142.04	µg/L	142.04	ppb	03:18:08
1	Ca 317.933Radial†	2191.6	1270.9	237.52	µg/L	237.52	ppb	03:18:08
1	Fe 238.204 Radial†	153.9	178.6	450.56	µg/L	450.56	ppb	03:18:08
1	K 766.490 Radial†	555788.4	545149.7	293950	µg/L	293950	ppb	03:17:42
1	Mg 279.077 IEC†	-49.7	-99.2	45.992	µg/L	45.992	ppb	03:18:08
1	Na 589.592 Radial†	1579.2	1433.5	344.91	µg/L	344.91	ppb	03:17:47
1	Sr 421.552†	2322043.1	2281211.6	9795.1	µg/L	9795.1	ppb	03:17:42
1	Sc 361.383	2052435.4	2052435.4	98.847	%			03:19:41
1	Y 371.029	1321860.0	1321860.0	97.425	%			03:19:41
1	Ag 328.068†	-6294.1	-5400.1	23.039	µg/L	23.039	ppb	03:19:41
1	As 188.979†	6489.9	6565.4	9843.0	µg/L	9843.0	ppb	03:19:47
1	B 249.677†	125958.1	127216.4	5021.6	µg/L	5021.6	ppb	03:19:41
1	Ba 233.527†	604911.5	612055.8	15010	µg/L	15010	ppb	03:19:41
1	Be 313.107†	5076275.3	5132112.3	2977.5	µg/L	2977.5	ppb	03:19:31
1	Cd 226.502†	436762.0	441997.8	10211	µg/L	10211	ppb	03:19:41
1	Co 228.616†	214323.5	216917.3	9880.4	µg/L	9880.4	ppb	03:19:41
1	Cr 267.716†	1270892.7	1285899.5	24646	µg/L	24646	ppb	03:19:41
1	Cu 324.752†	2890009.2	2918797.4	20775	µg/L	20775	ppb	03:19:41
1	Mn 257.610†	3330316.2	3369065.8	9769.5	µg/L	9769.5	ppb	03:19:41
1	Mo 202.031†	91401.9	92465.0	9837.7	µg/L	9837.7	ppb	03:19:41
1	Ni 231.604†	199181.8	201071.4	9984.0	µg/L	9984.0	ppb	03:19:41
1	P 214.914†	10676.4	10547.2	13809	µg/L	13809	ppb	03:19:47
1	Pb 220.353†	108655.4	109855.4	25270	µg/L	25270	ppb	03:19:41
1	S 181.975 Axial†	12024.5	12120.4	50976	µg/L	50976	ppb	03:19:47
1	Sb 206.836†	11990.2	12106.8	10284	µg/L	10284	ppb	03:19:47
1	Se 196.026†	9047.6	9132.7	9792.6	µg/L	9792.6	ppb	03:19:47
1	SiO2†	581580.8	585153.3	100910	µg/L	100910	ppb	03:19:41
1	Si 251.611†	672539.3	680036.4	45988	µg/L	45988	ppb	03:19:41
1	Sn 189.927†	23927.2	24198.0	10462	µg/L	10462	ppb	03:19:47
1	Ti 334.940†	4312441.7	4361568.5	9950.6	µg/L	9950.6	ppb	03:19:31
1	Tl 190.801†	6788.9	6895.9	9945.3	µg/L	9945.3	ppb	03:19:47
1	U 409.014†	1053.8	1094.4	105.23	µg/L	105.23	ppb	03:19:41
1	V 292.402†	939402.1	950563.6	10109	µg/L	10109	ppb	03:19:41
1	Zn 213.857†	638002.1	644709.8	14983	µg/L	14983	ppb	03:19:41
2	Sc RADIAL	172163.9	172163.9	103	%			03:18:20
2	Al 396.153Radial†	909.5	1029.0	58.823	µg/L	58.823	ppb	03:18:40
2	Ca 317.933Radial†	1717.0	777.1	145.23	µg/L	145.23	ppb	03:18:40
2	Fe 238.204 Radial†	36.1	62.3	366.45	µg/L	366.45	ppb	03:18:40
2	K 766.490 Radial†	566867.8	546934.4	294910	µg/L	294910	ppb	03:18:15
2	Mg 279.077 IEC†	-94.2	-141.4	-41.354	µg/L	-41.354	ppb	03:18:40
2	Na 589.592 Radial†	970.2	819.6	197.20	µg/L	197.20	ppb	03:18:20
2	Sr 421.552†	2374144.8	2294285.1	9851.3	µg/L	9851.3	ppb	03:18:15
2	Sc 361.383	2063587.5	2063587.5	99.384	%			03:20:07
2	Y 371.029	1325506.5	1325506.5	97.694	%			03:20:07
2	Ag 328.068†	-6208.8	-5279.9	23.316	µg/L	23.316	ppb	03:20:07
2	As 188.979†	6545.9	6586.2	9874.2	µg/L	9874.2	ppb	03:20:12
2	B 249.677†	125125.8	125690.3	4961.4	µg/L	4961.4	ppb	03:20:07
2	Ba 233.527†	601638.1	605454.9	14848	µg/L	14848	ppb	03:20:07
2	Be 313.107†	5064565.8	5092577.0	2954.5	µg/L	2954.5	ppb	03:19:56
2	Cd 226.502†	434053.6	436884.7	10093	µg/L	10093	ppb	03:20:07
2	Co 228.616†	213116.6	214531.1	9771.6	µg/L	9771.6	ppb	03:20:07
2	Cr 267.716†	1263235.2	1271246.2	24365	µg/L	24365	ppb	03:20:07
2	Cu 324.752†	2877145.2	2890053.3	20570	µg/L	20570	ppb	03:20:07
2	Mn 257.610†	3312235.1	3332665.0	9663.9	µg/L	9663.9	ppb	03:20:07
2	Mo 202.031†	90944.9	91505.5	9735.6	µg/L	9735.6	ppb	03:20:07
2	Ni 231.604†	197954.0	198747.0	9868.6	µg/L	9868.6	ppb	03:20:07
2	P 214.914†	10790.3	10603.5	13938	µg/L	13938	ppb	03:20:12
2	Pb 220.353†	108122.4	108725.0	25010	µg/L	25010	ppb	03:20:07

2	S 181.975 Axial†	12154.8	12185.7	51251	µg/L	51251 ppb	03:20:12
2	Sb 206.836†	12077.8	12129.4	10305	µg/L	10305 ppb	03:20:12
2	Se 196.026†	9128.6	9164.7	9826.9	µg/L	9826.9 ppb	03:20:12
2	SiO2†	578792.7	579168.3	99874	µg/L	99874 ppb	03:20:07
2	Si 251.611†	669355.0	673155.5	45515	µg/L	45515 ppb	03:20:07
2	Sn 189.927†	24147.6	24289.0	10502	µg/L	10502 ppb	03:20:12
2	Ti 334.940†	4300847.6	4326325.5	9870.2	µg/L	9870.2 ppb	03:19:56
2	Tl 190.801†	6851.0	6921.3	9982.2	µg/L	9982.2 ppb	03:20:12
2	U 409.014†	1069.7	1104.6	106.24	µg/L	106.24 ppb	03:20:07
2	V 292.402†	934406.9	940401.5	10001	µg/L	10001 ppb	03:20:07
2	Zn 213.857†	634696.0	637895.1	14824	µg/L	14824 ppb	03:20:07
3	Sc RADIAL	171181.1	171181.1	103	%		03:18:53
3	Al 396.153Radial†	815.3	942.5	21.115	µg/L	21.115 ppb	03:19:13
3	Ca 317.933Radial†	1497.5	573.2	107.13	µg/L	107.13 ppb	03:19:13
3	Fe 238.204 Radial†	-38.4	-10.0	318.36	µg/L	318.36 ppb	03:19:13
3	K 766.490 Radial†	563046.9	546365.8	294610	µg/L	294610 ppb	03:18:47
3	Mg 279.077 IEC†	-116.6	-163.7	-85.023	µg/L	-85.023 ppb	03:19:13
3	Na 589.592 Radial†	765.9	626.5	150.74	µg/L	150.74 ppb	03:18:53
3	Sr 421.552†	2357120.9	2290911.3	9836.8	µg/L	9836.8 ppb	03:18:47
3	Sc 361.383	2075851.1	2075851.1	99.975	%		03:20:32
3	Y 371.029	1333126.9	1333126.9	98.255	%		03:20:32
3	Ag 328.068†	-6329.8	-5364.1	22.907	µg/L	22.907 ppb	03:20:32
3	As 188.979†	6464.5	6465.9	9693.7	µg/L	9693.7 ppb	03:20:37
3	B 249.677†	126546.6	126367.7	4988.2	µg/L	4988.2 ppb	03:20:32
3	Ba 233.527†	608462.7	608704.9	14927	µg/L	14927 ppb	03:20:32
3	Be 313.107†	5051702.9	5049605.5	2929.6	µg/L	2929.6 ppb	03:20:21
3	Cd 226.502†	439331.4	439583.7	10155	µg/L	10155 ppb	03:20:32
3	Co 228.616†	215661.8	215810.2	9830.1	µg/L	9830.1 ppb	03:20:32
3	Cr 267.716†	1277986.3	1278491.9	24504	µg/L	24504 ppb	03:20:32
3	Cu 324.752†	2905310.5	2901123.0	20649	µg/L	20649 ppb	03:20:32
3	Mn 257.610†	3348724.6	3349474.6	9712.7	µg/L	9712.7 ppb	03:20:32
3	Mo 202.031†	91889.7	91909.9	9778.7	µg/L	9778.7 ppb	03:20:32
3	Ni 231.604†	200302.2	199919.1	9926.8	µg/L	9926.8 ppb	03:20:32
3	P 214.914†	10626.5	10375.4	13547	µg/L	13547 ppb	03:20:37
3	Pb 220.353†	109472.1	109432.4	25173	µg/L	25173 ppb	03:20:32
3	S 181.975 Axial†	11973.7	11932.3	50185	µg/L	50185 ppb	03:20:37
3	Sb 206.836†	11905.7	11885.4	10095	µg/L	10095 ppb	03:20:37
3	Se 196.026†	8978.2	8960.0	9607.4	µg/L	9607.4 ppb	03:20:37
3	SiO2†	585418.2	582354.9	100420	µg/L	100420 ppb	03:20:32
3	Si 251.611†	677526.9	677350.6	45815	µg/L	45815 ppb	03:20:32
3	Sn 189.927†	23795.1	23792.8	10287	µg/L	10287 ppb	03:20:37
3	Ti 334.940†	4294395.6	4294306.2	9797.2	µg/L	9797.2 ppb	03:20:21
3	Tl 190.801†	6767.5	6797.1	9802.0	µg/L	9802.0 ppb	03:20:37
3	U 409.014†	1098.3	1126.8	108.39	µg/L	108.39 ppb	03:20:32
3	V 292.402†	944208.0	944650.6	10046	µg/L	10046 ppb	03:20:32
3	Zn 213.857†	641459.9	640887.8	14894	µg/L	14894 ppb	03:20:32

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	2063958.0	99.402	%	0.5641				0.57%
Sc RADIAL	170898.6	103	%	0.9				0.84%
Y 371.029	1326831.1	97.791	%	0.4237				0.43%
Ag 328.068†	-5348.0	23.087	µg/L	0.2088	23.087	ppb	0.2088	0.90%
Al 396.153Radial†	1069.8	73.994	µg/L	61.8756	73.994	ppb	61.8756	83.62%
As 188.979†	6539.1	9803.6	µg/L	96.50	9803.6	ppb	96.50	0.98%
QC value within limits for As 188.979 Recovery = 98.04%								
B 249.677†	126424.8	4990.4	µg/L	30.17	4990.4	ppb	30.17	0.60%
QC value within limits for B 249.677 Recovery = 99.81%								
Ba 233.527†	608738.5	14928	µg/L	80.9	14928	ppb	80.9	0.54%
QC value within limits for Ba 233.527 Recovery = 99.52%								
Be 313.107†	5091431.6	2953.9	µg/L	23.93	2953.9	ppb	23.93	0.81%
QC value within limits for Be 313.107 Recovery = 98.46%								
Ca 317.933Radial†	873.7	163.29	µg/L	67.047	163.29	ppb	67.047	41.06%
Cd 226.502†	439488.7	10153	µg/L	59.1	10153	ppb	59.1	0.58%
QC value within limits for Cd 226.502 Recovery = 101.53%								
Co 228.616†	215752.9	9827.4	µg/L	54.42	9827.4	ppb	54.42	0.55%
QC value within limits for Co 228.616 Recovery = 98.27%								
Cr 267.716†	1278545.9	24505	µg/L	140.4	24505	ppb	140.4	0.57%
QC value within limits for Cr 267.716 Recovery = 98.02%								

Cu 324.752†	2903324.6	20665 µg/L	103.2	20665 ppb	103.2	0.50%
QC value within limits for Cu 324.752 Recovery = 103.32%						
Fe 238.204 Radial†	76.9	378.46 µg/L	66.909	378.46 ppb	66.909	17.68%
K 766.490 Radial†	546150.0	294490 µg/L	491.6	294490 ppb	491.6	0.17%
QC value within limits for K 766.490 Radial Recovery = 98.16%						
Mg 279.077 IEC†	-134.8	-26.795 µg/L	66.7101	-26.795 ppb	66.7101	248.97%
Mn 257.610†	3350401.8	9715.3 µg/L	52.83	9715.3 ppb	52.83	0.54%
QC value within limits for Mn 257.610 Recovery = 97.15%						
Mo 202.031†	91960.1	9784.0 µg/L	51.26	9784.0 ppb	51.26	0.52%
QC value within limits for Mo 202.031 Recovery = 97.84%						
Na 589.592 Radial†	959.8	230.95 µg/L	101.391	230.95 ppb	101.391	43.90%
Ni 231.604†	199912.5	9926.5 µg/L	57.71	9926.5 ppb	57.71	0.58%
QC value within limits for Ni 231.604 Recovery = 99.26%						
P 214.914†	10508.7	13765 µg/L	199.5	13765 ppb	199.5	1.45%
QC value within limits for P 214.914 Recovery = 91.77%						
Pb 220.353†	109337.6	25151 µg/L	131.4	25151 ppb	131.4	0.52%
QC value within limits for Pb 220.353 Recovery = 100.61%						
S 181.975 Axial†	12079.5	50804 µg/L	553.3	50804 ppb	553.3	1.09%
QC value within limits for S 181.975 Axial Recovery = 101.61%						
Sb 206.836†	12040.6	10228 µg/L	115.9	10228 ppb	115.9	1.13%
QC value within limits for Sb 206.836 Recovery = 102.28%						
Se 196.026†	9085.8	9742.3 µg/L	118.07	9742.3 ppb	118.07	1.21%
QC value within limits for Se 196.026 Recovery = 97.42%						
SiO2†	582225.5	100400 µg/L	516.4	100400 ppb	516.4	0.51%
QC value within limits for SiO2 Recovery = 93.83%						
Si 251.611†	676847.5	45773 µg/L	239.4	45773 ppb	239.4	0.52%
QC value within limits for Si 251.611 Recovery = 91.55%						
Sn 189.927†	24093.3	10417 µg/L	114.2	10417 ppb	114.2	1.10%
QC value within limits for Sn 189.927 Recovery = 104.17%						
Sr 421.552†	2288802.7	9827.7 µg/L	29.14	9827.7 ppb	29.14	0.30%
QC value within limits for Sr 421.552 Recovery = 98.28%						
Ti 334.940†	4327400.0	9872.7 µg/L	76.75	9872.7 ppb	76.75	0.78%
QC value within limits for Ti 334.940 Recovery = 98.73%						
Tl 190.801†	6871.4	9909.8 µg/L	95.21	9909.8 ppb	95.21	0.96%
QC value within limits for Tl 190.801 Recovery = 99.10%						
U 409.014†	1108.6	106.62 µg/L	1.613	106.62 ppb	1.613	1.51%
V 292.402†	945205.3	10052 µg/L	54.3	10052 ppb	54.3	0.54%
QC value within limits for V 292.402 Recovery = 100.52%						
Zn 213.857†	641164.2	14900 µg/L	79.4	14900 ppb	79.4	0.53%
QC value within limits for Zn 213.857 Recovery = 99.34%						

All analyte(s) passed QC.

Analysis Begun

Start Time: 6/30/2009 03:28:04
Plasma On Time: 6/29/2009 11:03:38
Logged In Analyst: optima
Technique: ICP Continuous
Spectrometer Model: Optima 4300 DV, S/N 077N1030502**Autosampler Model:** AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\062909.sif
Batch ID:
Results Data Set: 063009
Results Library: c:\pe\optima1\Results\Results.mdb

Method Loaded
Method Name: Gen Eng fast_new Si
Method Last Saved: 6/30/2009 02:36:56
IEC File: 042009.iec
MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1
Autosampler Location: 7
Sample ID: CCV
Date Collected: 6/30/2009 03:28:06
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168011.8	168011.8	101	%			03:28:40
1	Al 396.153Radial†	12431.8	12460.6	5176.5	µg/L	5176.5	ppb	03:28:45
1	Ca 317.933Radial†	29199.9	28032.7	5239.1	µg/L	5239.1	ppb	03:28:45
1	Fe 238.204 Radial†	7573.9	7527.3	5227.8	µg/L	5227.8	ppb	03:28:45

1	K 766.490 Radial†	10485.8	9520.0	5133.3 µg/L	5133.3 ppb	03:28:45
1	Mg 279.077 IEC†	2697.9	2621.2	5273.4 µg/L	5273.4 ppb	03:28:45
1	Na 589.592 Radial†	43459.3	42917.2	10326 µg/L	10326 ppb	03:28:40
1	Sr 421.552†	120358.6	119192.7	511.79 µg/L	511.79 ppb	03:28:40
1	Sc 361.383	2052663.8	2052663.8	98.858 %		03:29:19
1	Y 371.029	1334152.5	1334152.5	98.331 %		03:29:19
1	Ag 328.068†	58049.6	59687.4	509.76 µg/L	509.76 ppb	03:29:24
1	As 188.979†	332.9	336.5	506.43 µg/L	506.43 ppb	03:29:45
1	B 249.677†	12969.0	12908.1	507.89 µg/L	507.89 ppb	03:29:24
1	Ba 233.527†	20551.1	20878.1	512.35 µg/L	512.35 ppb	03:29:24
1	Be 313.107†	877285.8	884054.8	509.37 µg/L	509.37 ppb	03:29:19
1	Cd 226.502†	21891.3	22286.3	514.83 µg/L	514.83 ppb	03:29:24
1	Co 228.616†	11073.6	11295.8	514.52 µg/L	514.52 ppb	03:29:24
1	Cr 267.716†	26194.3	26682.2	511.85 µg/L	511.85 ppb	03:29:24
1	Cu 324.752†	75574.2	71531.5	509.83 µg/L	509.83 ppb	03:29:24
1	Mn 257.610†	174501.1	176427.4	511.63 µg/L	511.63 ppb	03:29:19
1	Mo 202.031†	4660.4	4711.4	501.47 µg/L	501.47 ppb	03:29:45
1	Ni 231.604†	10705.5	10395.9	516.19 µg/L	516.19 ppb	03:29:24
1	P 214.914†	1766.6	1533.3	2424.1 µg/L	2424.1 ppb	03:29:45
1	Pb 220.353†	2227.2	2185.8	503.43 µg/L	503.43 ppb	03:29:45
1	S 181.975 Axial†	274.9	233.7	981.46 µg/L	981.46 ppb	03:29:45
1	Sb 206.836†	599.8	583.5	498.90 µg/L	498.90 ppb	03:29:45
1	Se 196.026†	485.9	471.1	506.44 µg/L	506.44 ppb	03:29:45
1	SiO2†	34770.1	31961.7	5511.6 µg/L	5511.6 ppb	03:29:24
1	Si 251.611†	37118.3	37200.9	2524.7 µg/L	2524.7 ppb	03:29:24
1	Sn 189.927†	1149.7	1154.7	502.09 µg/L	502.09 ppb	03:29:45
1	Ti 334.940†	219950.0	221324.8	504.76 µg/L	504.76 ppb	03:29:19
1	Tl 190.801†	326.9	358.5	516.41 µg/L	516.41 ppb	03:29:45
1	U 409.014†	5365.5	5455.7	523.31 µg/L	523.31 ppb	03:29:24
1	V 292.402†	47470.9	48225.2	514.15 µg/L	514.15 ppb	03:29:24
1	Zn 213.857†	22403.8	21929.8	508.94 µg/L	508.94 ppb	03:29:24
2	Sc RADIAL	170346.6	170346.6	102 %		03:28:51
2	Al 396.153Radial†	12523.7	12381.6	5143.4 µg/L	5143.4 ppb	03:28:56
2	Ca 317.933Radial†	29433.2	27864.2	5207.6 µg/L	5207.6 ppb	03:28:56
2	Fe 238.204 Radial†	7635.4	7484.6	5198.1 µg/L	5198.1 ppb	03:28:56
2	K 766.490 Radial†	10581.3	9470.9	5106.8 µg/L	5106.8 ppb	03:28:56
2	Mg 279.077 IEC†	2721.8	2607.9	5246.8 µg/L	5246.8 ppb	03:28:56
2	Na 589.592 Radial†	43458.4	42326.5	10184 µg/L	10184 ppb	03:28:51
2	Sr 421.552†	120564.8	117760.4	505.64 µg/L	505.64 ppb	03:28:51
2	Sc 361.383	2048444.0	2048444.0	98.655 %		03:29:52
2	Y 371.029	1333803.0	1333803.0	98.305 %		03:29:52
2	Ag 328.068†	57116.1	58862.1	502.76 µg/L	502.76 ppb	03:29:58
2	As 188.979†	333.3	337.6	508.00 µg/L	508.00 ppb	03:30:18
2	B 249.677†	12855.3	12819.9	504.41 µg/L	504.41 ppb	03:29:58
2	Ba 233.527†	20691.6	21063.4	516.89 µg/L	516.89 ppb	03:29:58
2	Be 313.107†	878124.3	886732.8	510.92 µg/L	510.92 ppb	03:29:52
2	Cd 226.502†	21843.9	22283.9	514.78 µg/L	514.78 ppb	03:29:58
2	Co 228.616†	11001.4	11245.7	512.24 µg/L	512.24 ppb	03:29:58
2	Cr 267.716†	26812.5	27363.4	524.89 µg/L	524.89 ppb	03:29:58
2	Cu 324.752†	76684.6	72814.5	518.96 µg/L	518.96 ppb	03:29:58
2	Mn 257.610†	174724.9	177017.9	513.34 µg/L	513.34 ppb	03:29:52
2	Mo 202.031†	4685.1	4746.1	505.16 µg/L	505.16 ppb	03:30:18
2	Ni 231.604†	10633.8	10345.5	513.69 µg/L	513.69 ppb	03:29:58
2	P 214.914†	1768.0	1538.4	2431.1 µg/L	2431.1 ppb	03:30:18
2	Pb 220.353†	2250.4	2214.0	509.90 µg/L	509.90 ppb	03:30:18
2	S 181.975 Axial†	283.7	243.2	1021.4 µg/L	1021.4 ppb	03:30:18
2	Sb 206.836†	608.1	593.1	507.07 µg/L	507.07 ppb	03:30:18
2	Se 196.026†	476.0	462.0	496.67 µg/L	496.67 ppb	03:30:18
2	SiO2†	34664.3	31926.9	5505.6 µg/L	5505.6 ppb	03:29:58
2	Si 251.611†	37163.5	37324.1	2532.9 µg/L	2532.9 ppb	03:29:58
2	Sn 189.927†	1158.9	1166.5	507.18 µg/L	507.18 ppb	03:30:18
2	Ti 334.940†	220080.8	221915.7	506.11 µg/L	506.11 ppb	03:29:52
2	Tl 190.801†	320.5	352.7	507.98 µg/L	507.98 ppb	03:30:18
2	U 409.014†	5431.7	5534.0	530.86 µg/L	530.86 ppb	03:29:58
2	V 292.402†	47327.1	48178.4	513.69 µg/L	513.69 ppb	03:29:58
2	Zn 213.857†	22556.1	22130.8	513.63 µg/L	513.63 ppb	03:29:58
3	Sc RADIAL	170495.2	170495.2	102 %		03:29:01
3	Al 396.153Radial†	12419.0	12268.8	5096.7 µg/L	5096.7 ppb	03:29:07
3	Ca 317.933Radial†	29164.7	27577.2	5154.0 µg/L	5154.0 ppb	03:29:07
3	Fe 238.204 Radial†	7543.9	7388.8	5131.6 µg/L	5131.6 ppb	03:29:07
3	K 766.490 Radial†	10506.7	9389.1	5062.7 µg/L	5062.7 ppb	03:29:07

3	Mg 279.077 IEC†	2706.8	2590.9	5212.6 µg/L	5212.6 ppb	03:29:07
3	Na 589.592 Radial†	43361.4	42194.9	10152 µg/L	10152 ppb	03:29:01
3	Sr 421.552†	120085.0	117189.6	503.19 µg/L	503.19 ppb	03:29:01
3	Sc 361.383	2080507.7	2080507.7	100.20 %		03:30:25
3	Y 371.029	1351096.6	1351096.6	99.580 %		03:30:25
3	Ag 328.068†	57889.0	58741.2	501.67 µg/L	501.67 ppb	03:30:31
3	As 188.979†	332.1	331.2	498.44 µg/L	498.44 ppb	03:30:51
3	B 249.677†	12975.9	12739.4	501.26 µg/L	501.26 ppb	03:30:31
3	Ba 233.527†	20456.1	20505.2	503.20 µg/L	503.20 ppb	03:30:31
3	Be 313.107†	881588.1	876472.0	505.00 µg/L	505.00 ppb	03:30:25
3	Cd 226.502†	21791.8	21890.6	505.69 µg/L	505.69 ppb	03:30:31
3	Co 228.616†	11024.1	11096.5	505.44 µg/L	505.44 ppb	03:30:31
3	Cr 267.716†	26083.4	26217.0	502.92 µg/L	502.92 ppb	03:30:31
3	Cu 324.752†	75315.0	70249.7	500.69 µg/L	500.69 ppb	03:30:31
3	Mn 257.610†	175393.2	174955.3	507.36 µg/L	507.36 ppb	03:30:25
3	Mo 202.031†	4676.2	4664.1	496.43 µg/L	496.43 ppb	03:30:51
3	Ni 231.604†	10610.3	10155.9	504.27 µg/L	504.27 ppb	03:30:31
3	P 214.914†	1763.5	1506.2	2381.5 µg/L	2381.5 ppb	03:30:51
3	Pb 220.353†	2229.1	2157.5	496.92 µg/L	496.92 ppb	03:30:51
3	S 181.975 Axial†	276.6	231.6	972.74 µg/L	972.74 ppb	03:30:51
3	Sb 206.836†	604.4	579.9	495.84 µg/L	495.84 ppb	03:30:51
3	Se 196.026†	486.9	465.5	500.35 µg/L	500.35 ppb	03:30:51
3	SiO2†	34666.5	31387.5	5412.6 µg/L	5412.6 ppb	03:30:31
3	Si 251.611†	37024.6	36604.9	2483.9 µg/L	2483.9 ppb	03:30:31
3	Sn 189.927†	1156.8	1146.3	498.41 µg/L	498.41 ppb	03:30:51
3	Ti 334.940†	220879.0	219274.3	500.08 µg/L	500.08 ppb	03:30:25
3	Tl 190.801†	316.4	343.6	494.96 µg/L	494.96 ppb	03:30:51
3	U 409.014†	5378.0	5395.5	517.55 µg/L	517.55 ppb	03:30:31
3	V 292.402†	47212.0	47324.2	504.58 µg/L	504.58 ppb	03:30:31
3	Zn 213.857†	22315.4	21538.2	499.86 µg/L	499.86 ppb	03:30:31

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2060538.5	99.237	%	0.8391				0.85%
Sc RADIAL	169617.9	102	%	0.8				0.82%
Y 371.029	1339684.0	98.739	%	0.7286				0.74%
Ag 328.068†	59096.9	504.73	µg/L	4.391	504.73	ppb	4.391	0.87%
QC value within limits for Ag 328.068 Recovery = 100.95%								
Al 396.153Radial†	12370.3	5138.9	µg/L	40.07	5138.9	ppb	40.07	0.78%
QC value within limits for Al 396.153Radial Recovery = 102.78%								
As 188.979†	335.1	504.29	µg/L	5.126	504.29	ppb	5.126	1.02%
QC value within limits for As 188.979 Recovery = 100.86%								
B 249.677†	12822.5	504.52	µg/L	3.317	504.52	ppb	3.317	0.66%
QC value within limits for B 249.677 Recovery = 100.90%								
Ba 233.527†	20815.6	510.81	µg/L	6.974	510.81	ppb	6.974	1.37%
QC value within limits for Ba 233.527 Recovery = 102.16%								
Be 313.107†	882419.9	508.43	µg/L	3.067	508.43	ppb	3.067	0.60%
QC value within limits for Be 313.107 Recovery = 101.69%								
Ca 317.933Radial†	27824.7	5200.3	µg/L	43.04	5200.3	ppb	43.04	0.83%
QC value within limits for Ca 317.933Radial Recovery = 104.01%								
Cd 226.502†	22153.6	511.77	µg/L	5.263	511.77	ppb	5.263	1.03%
QC value within limits for Cd 226.502 Recovery = 102.35%								
Co 228.616†	11212.7	510.73	µg/L	4.724	510.73	ppb	4.724	0.92%
QC value within limits for Co 228.616 Recovery = 102.15%								
Cr 267.716†	26754.2	513.22	µg/L	11.051	513.22	ppb	11.051	2.15%
QC value within limits for Cr 267.716 Recovery = 102.64%								
Cu 324.752†	71531.9	509.83	µg/L	9.132	509.83	ppb	9.132	1.79%
QC value within limits for Cu 324.752 Recovery = 101.97%								
Fe 238.204 Radial†	7466.9	5185.9	µg/L	49.24	5185.9	ppb	49.24	0.95%
QC value within limits for Fe 238.204 Radial Recovery = 103.72%								
K 766.490 Radial†	9460.0	5101.0	µg/L	35.65	5101.0	ppb	35.65	0.70%
QC value within limits for K 766.490 Radial Recovery = 102.02%								
Mg 279.077 IEC†	2606.7	5244.3	µg/L	30.47	5244.3	ppb	30.47	0.58%
QC value within limits for Mg 279.077 IEC Recovery = 104.89%								
Mn 257.610†	176133.5	510.78	µg/L	3.081	510.78	ppb	3.081	0.60%
QC value within limits for Mn 257.610 Recovery = 102.16%								
Mo 202.031†	4707.2	501.02	µg/L	4.382	501.02	ppb	4.382	0.87%
QC value within limits for Mo 202.031 Recovery = 100.20%								
Na 589.592 Radial†	42479.5	10221	µg/L	92.6	10221	ppb	92.6	0.91%

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   QC value within limits for Na 589.592 Radial  Recovery = 102.21%
Ni 231.604†            10299.1      511.39 µg/L        6.286      511.39 ppb        6.286   1.23%
   QC value within limits for Ni 231.604  Recovery = 102.28%
P 214.914†              1526.0      2412.2 µg/L       26.83      2412.2 ppb       26.83   1.11%
   QC value within limits for P 214.914  Recovery = 96.49%
Pb 220.353†             2185.8      503.42 µg/L        6.486      503.42 ppb        6.486   1.29%
   QC value within limits for Pb 220.353  Recovery = 100.68%
S 181.975 Axial†         236.2      991.86 µg/L       25.935      991.86 ppb       25.935   2.61%
   QC value within limits for S 181.975 Axial  Recovery = 99.19%
Sb 206.836†              585.5      500.60 µg/L        5.807      500.60 ppb        5.807   1.16%
   QC value within limits for Sb 206.836  Recovery = 100.12%
Se 196.026†              466.2      501.15 µg/L        4.935      501.15 ppb        4.935   0.98%
   QC value within limits for Se 196.026  Recovery = 100.23%
SiO2†                  31758.7      5476.6 µg/L       55.51      5476.6 ppb       55.51   1.01%
   QC value within limits for SiO2  Recovery = 102.41%
Si 251.611†            37043.3      2513.9 µg/L       26.25      2513.9 ppb       26.25   1.04%
   QC value within limits for Si 251.611  Recovery = 100.55%
Sn 189.927†             1155.8      502.56 µg/L        4.401      502.56 ppb        4.401   0.88%
   QC value within limits for Sn 189.927  Recovery = 100.51%
Sr 421.552†           118047.6      506.88 µg/L        4.431      506.88 ppb        4.431   0.87%
   QC value within limits for Sr 421.552  Recovery = 101.38%
Ti 334.940†           220838.3      503.65 µg/L        3.161      503.65 ppb        3.161   0.63%
   QC value within limits for Ti 334.940  Recovery = 100.73%
Tl 190.801†              351.6      506.45 µg/L       10.808      506.45 ppb       10.808   2.13%
   QC value within limits for Tl 190.801  Recovery = 101.29%
U 409.014†              5461.8      523.91 µg/L        6.672      523.91 ppb        6.672   1.27%
   QC value within limits for U 409.014  Recovery = 104.78%
V 292.402†             47909.3      510.81 µg/L        5.397      510.81 ppb        5.397   1.06%
   QC value within limits for V 292.402  Recovery = 102.16%
Zn 213.857†            21866.2      507.47 µg/L        6.999      507.47 ppb        6.999   1.38%
   QC value within limits for Zn 213.857  Recovery = 101.49%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 03:31:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168118.3	168118.3	101	%			03:31:33
1	Al 396.153Radial†	-176.5	-24.5	-10.247	µg/L	-10.247	ppb	03:31:33
1	Ca 317.933Radial†	914.1	22.4	4.1812	µg/L	4.1812	ppb	03:31:53
1	Fe 238.204 Radial†	-7.3	20.1	13.922	µg/L	13.922	ppb	03:31:53
1	K 766.490 Radial†	813.8	-58.2	-31.359	µg/L	-31.359	ppb	03:31:33
1	Mg 279.077 IEC†	42.8	-8.0	-16.140	µg/L	-16.140	ppb	03:31:53
1	Na 589.592 Radial†	173.7	53.9	12.977	µg/L	12.977	ppb	03:31:33
1	Sr 421.552†	200.5	207.1	0.8892	µg/L	0.8892	ppb	03:31:33
1	Sc 361.383	2042809.0	2042809.0	98.384	%			03:32:55
1	Y 371.029	1334985.3	1334985.3	98.392	%			03:32:55
1	Ag 328.068†	-891.5	61.2	0.5241	µg/L	0.5241	ppb	03:33:01
1	As 188.979†	3.9	3.7	5.6148	µg/L	5.6148	ppb	03:33:21
1	B 249.677†	232.9	26.1	1.0242	µg/L	1.0242	ppb	03:33:01
1	Ba 233.527†	-83.0	5.3	0.1317	µg/L	0.1317	ppb	03:33:21
1	Be 313.107†	3546.9	241.9	0.1396	µg/L	0.1396	ppb	03:33:01
1	Cd 226.502†	-132.4	7.6	0.1736	µg/L	0.1736	ppb	03:33:21
1	Co 228.616†	-91.2	1.6	0.0735	µg/L	0.0735	ppb	03:33:21
1	Cr 267.716†	-177.3	5.1	0.0992	µg/L	0.0992	ppb	03:33:01
1	Cu 324.752†	4829.4	-6.8	-0.0462	µg/L	-0.0462	ppb	03:33:01
1	Mn 257.610†	171.6	85.2	0.2472	µg/L	0.2472	ppb	03:33:01
1	Mo 202.031†	9.1	6.5	0.6883	µg/L	0.6883	ppb	03:33:21
1	Ni 231.604†	436.3	10.2	0.5057	µg/L	0.5057	ppb	03:33:21
1	P 214.914†	248.5	-1.1	-1.8800	µg/L	-1.8800	ppb	03:33:21
1	Pb 220.353†	73.8	7.9	1.8250	µg/L	1.8250	ppb	03:33:21
1	S 181.975 Axial†	40.5	-3.2	-13.625	µg/L	-13.625	ppb	03:33:21
1	Sb 206.836†	28.9	6.1	5.2571	µg/L	5.2571	ppb	03:33:21
1	Se 196.026†	19.8	-0.3	-0.3509	µg/L	-0.3509	ppb	03:33:21
1	SiO2†	3187.0	29.3	5.0603	µg/L	5.0603	ppb	03:33:01
1	Si 251.611†	376.8	36.9	2.5280	µg/L	2.5280	ppb	03:33:21
1	Sn 189.927†	9.0	0.9	0.4035	µg/L	0.4035	ppb	03:33:21
1	Ti 334.940†	1238.6	93.4	0.2128	µg/L	0.2128	ppb	03:33:01
1	Tl 190.801†	-28.9	-1.5	-2.1905	µg/L	-2.1905	ppb	03:33:21
1	U 409.014†	-38.3	-10.7	-1.0330	µg/L	-1.0330	ppb	03:33:01
1	V 292.402†	-143.4	60.3	0.6413	µg/L	0.6413	ppb	03:33:01
1	Zn 213.857†	731.1	10.3	0.2390	µg/L	0.2390	ppb	03:33:21
2	Sc RADIAL	168345.8	168345.8	101	%			03:31:59
2	Al 396.153Radial†	-171.2	-19.1	-7.9580	µg/L	-7.9580	ppb	03:31:59
2	Ca 317.933Radial†	900.9	8.1	1.5195	µg/L	1.5195	ppb	03:32:19
2	Fe 238.204 Radial†	-15.6	11.9	8.2410	µg/L	8.2410	ppb	03:32:19
2	K 766.490 Radial†	740.7	-131.5	-70.898	µg/L	-70.898	ppb	03:31:59
2	Mg 279.077 IEC†	42.8	-8.0	-16.196	µg/L	-16.196	ppb	03:32:19
2	Na 589.592 Radial†	156.4	36.6	8.8043	µg/L	8.8043	ppb	03:31:59
2	Sr 421.552†	137.1	144.2	0.6191	µg/L	0.6191	ppb	03:31:59
2	Sc 361.383	2059913.1	2059913.1	99.207	%			03:33:28
2	Y 371.029	1345943.4	1345943.4	99.200	%			03:33:28
2	Ag 328.068†	-886.6	73.7	0.6281	µg/L	0.6281	ppb	03:33:33
2	As 188.979†	-1.9	-2.1	-3.1182	µg/L	-3.1182	ppb	03:33:54
2	B 249.677†	272.9	64.4	2.5409	µg/L	2.5409	ppb	03:33:33
2	Ba 233.527†	-75.6	13.5	0.3324	µg/L	0.3324	ppb	03:33:54
2	Be 313.107†	3566.3	231.4	0.1339	µg/L	0.1339	ppb	03:33:33
2	Cd 226.502†	-129.6	11.5	0.2636	µg/L	0.2636	ppb	03:33:54
2	Co 228.616†	-94.4	-0.8	-0.0400	µg/L	-0.0400	ppb	03:33:54
2	Cr 267.716†	-147.9	36.3	0.6962	µg/L	0.6962	ppb	03:33:33
2	Cu 324.752†	4799.4	-77.7	-0.5523	µg/L	-0.5523	ppb	03:33:33
2	Mn 257.610†	150.1	62.1	0.1802	µg/L	0.1802	ppb	03:33:33
2	Mo 202.031†	0.0	-2.8	-0.2958	µg/L	-0.2958	ppb	03:33:54
2	Ni 231.604†	441.9	12.2	0.6066	µg/L	0.6066	ppb	03:33:54
2	P 214.914†	246.9	-4.9	-7.8119	µg/L	-7.8119	ppb	03:33:54
2	Pb 220.353†	64.0	-2.7	-0.6099	µg/L	-0.6099	ppb	03:33:54

2	S 181.975 Axial†	40.6	-3.5	-14.670	µg/L	-14.670 ppb	03:33:54
2	Sb 206.836†	23.2	0.2	0.1567	µg/L	0.1567 ppb	03:33:54
2	Se 196.026†	19.4	-0.9	-0.9517	µg/L	-0.9517 ppb	03:33:54
2	SiO2†	3143.7	-41.2	-7.0989	µg/L	-7.0989 ppb	03:33:33
2	Si 251.611†	357.7	14.5	0.9437	µg/L	0.9437 ppb	03:33:54
2	Sn 189.927†	12.8	4.6	1.9993	µg/L	1.9993 ppb	03:33:54
2	Ti 334.940†	1294.1	138.8	0.3166	µg/L	0.3166 ppb	03:33:33
2	Tl 190.801†	-30.8	-3.2	-4.6801	µg/L	-4.6801 ppb	03:33:54
2	U 409.014†	-58.9	-31.1	-2.9942	µg/L	-2.9942 ppb	03:33:33
2	V 292.402†	-161.4	43.4	0.4519	µg/L	0.4519 ppb	03:33:33
2	Zn 213.857†	734.4	7.5	0.1735	µg/L	0.1735 ppb	03:33:54
3	Sc RADIAL	166298.6	166298.6	100.0	%		03:32:25
3	Al 396.153Radial†	-143.7	6.4	2.6198	µg/L	2.6198 ppb	03:32:25
3	Ca 317.933Radial†	896.0	14.2	2.6476	µg/L	2.6476 ppb	03:32:45
3	Fe 238.204 Radial†	-9.9	17.4	12.057	µg/L	12.057 ppb	03:32:45
3	K 766.490 Radial†	801.6	-61.5	-33.176	µg/L	-33.176 ppb	03:32:25
3	Mg 279.077 IEC†	47.4	-3.0	-5.9362	µg/L	-5.9362 ppb	03:32:45
3	Na 589.592 Radial†	176.1	58.3	14.018	µg/L	14.018 ppb	03:32:25
3	Sr 421.552†	140.9	149.6	0.6425	µg/L	0.6425 ppb	03:32:25
3	Sc 361.383	2056606.9	2056606.9	99.048	%		03:34:00
3	Y 371.029	1343415.6	1343415.6	99.014	%		03:34:00
3	Ag 328.068†	-938.6	19.6	0.1712	µg/L	0.1712 ppb	03:34:05
3	As 188.979†	-0.6	-0.8	-1.2644	µg/L	-1.2644 ppb	03:34:26
3	B 249.677†	248.3	40.0	1.5763	µg/L	1.5763 ppb	03:34:05
3	Ba 233.527†	-80.1	8.8	0.2173	µg/L	0.2173 ppb	03:34:26
3	Be 313.107†	3501.6	171.9	0.0988	µg/L	0.0988 ppb	03:34:05
3	Cd 226.502†	-135.7	5.2	0.1226	µg/L	0.1226 ppb	03:34:26
3	Co 228.616†	-94.2	-0.8	-0.0342	µg/L	-0.0342 ppb	03:34:26
3	Cr 267.716†	-181.9	1.7	0.0340	µg/L	0.0340 ppb	03:34:05
3	Cu 324.752†	4857.0	-11.8	-0.0827	µg/L	-0.0827 ppb	03:34:05
3	Mn 257.610†	150.4	62.6	0.1817	µg/L	0.1817 ppb	03:34:05
3	Mo 202.031†	14.8	12.1	1.2882	µg/L	1.2882 ppb	03:34:26
3	Ni 231.604†	466.7	37.9	1.8844	µg/L	1.8844 ppb	03:34:26
3	P 214.914†	255.0	3.8	6.1493	µg/L	6.1493 ppb	03:34:26
3	Pb 220.353†	73.9	7.4	1.7158	µg/L	1.7158 ppb	03:34:26
3	S 181.975 Axial†	40.9	-3.1	-13.109	µg/L	-13.109 ppb	03:34:26
3	Sb 206.836†	33.7	10.8	9.2386	µg/L	9.2386 ppb	03:34:26
3	Se 196.026†	22.2	2.0	2.1430	µg/L	2.1430 ppb	03:34:26
3	SiO2†	3166.8	-12.7	-2.1980	µg/L	-2.1980 ppb	03:34:05
3	Si 251.611†	382.2	39.8	2.7406	µg/L	2.7406 ppb	03:34:26
3	Sn 189.927†	8.2	-0.0	0.0026	µg/L	0.0026 ppb	03:34:26
3	Ti 334.940†	1161.9	7.5	0.0169	µg/L	0.0169 ppb	03:34:05
3	Tl 190.801†	-28.5	-0.9	-1.3698	µg/L	-1.3698 ppb	03:34:26
3	U 409.014†	1.0	29.2	2.8100	µg/L	2.8100 ppb	03:34:05
3	V 292.402†	-153.5	51.0	0.5533	µg/L	0.5533 ppb	03:34:05
3	Zn 213.857†	728.8	3.0	0.0604	µg/L	0.0604 ppb	03:34:26

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2053109.7	98.880	%	0.4369				0.44%
Sc RADIAL	167587.6	101	%	0.7				0.67%
Y 371.029	1341448.1	98.869	%	0.4229				0.43%
Ag 328.068†	51.5	0.4411	µg/L	0.23949	0.4411	ppb	0.23949	54.29%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-12.4	-5.1950	µg/L	6.86387	-5.1950	ppb	6.86387	132.13%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.3	0.4107	µg/L	4.60115	0.4107	ppb	4.60115	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	43.5	1.7138	µg/L	0.76767	1.7138	ppb	0.76767	44.79%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	9.2	0.2271	µg/L	0.10072	0.2271	ppb	0.10072	44.34%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	215.1	0.1241	µg/L	0.02207	0.1241	ppb	0.02207	17.78%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	14.9	2.7828	µg/L	1.33600	2.7828	ppb	1.33600	48.01%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	8.1	0.1866	µg/L	0.07142	0.1866	ppb	0.07142	38.27%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-0.0	-0.0002	µg/L	0.06391	-0.0002	ppb	0.06391	>999.9%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              14.4      0.2764 µg/L       0.36496      0.2764 ppb       0.36496 132.02%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -32.1     -0.2270 µg/L       0.28223     -0.2270 ppb       0.28223 124.30%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       16.5      11.407 µg/L        2.8960      11.407 ppb        2.8960  25.39%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -83.7     -45.144 µg/L       22.3215     -45.144 ppb       22.3215  49.44%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -6.3     -12.757 µg/L        5.9073     -12.757 ppb        5.9073  46.31%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              70.0      0.2031 µg/L       0.03825      0.2031 ppb       0.03825  18.84%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.3      0.5602 µg/L       0.79976      0.5602 ppb       0.79976 142.76%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       49.6      11.933 µg/L        2.7592      11.933 ppb        2.7592  23.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              20.1      0.9989 µg/L       0.76852      0.9989 ppb       0.76852  76.93%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -0.7     -1.1809 µg/L       7.00680     -1.1809 ppb       7.00680 593.36%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               4.2      0.9770 µg/L       1.37532      0.9770 ppb       1.37532 140.77%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -3.3     -13.801 µg/L        0.7957     -13.801 ppb        0.7957   5.77%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               5.7      4.8841 µg/L       4.55239      4.8841 ppb       4.55239  93.21%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               0.3      0.2801 µg/L       1.64102      0.2801 ppb       1.64102 585.84%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    -8.2     -1.4122 µg/L       6.11757     -1.4122 ppb       6.11757 433.19%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              30.4      2.0708 µg/L       0.98187      2.0708 ppb       0.98187  47.42%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.9      0.8018 µg/L       1.05625      0.8018 ppb       1.05625 131.73%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             167.0      0.7169 µg/L       0.14967      0.7169 ppb       0.14967  20.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              79.9      0.1821 µg/L       0.15221      0.1821 ppb       0.15221  83.57%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -1.9     -2.7468 µg/L       1.72385     -2.7468 ppb       1.72385  62.76%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -4.2     -0.4057 µg/L       2.95251     -0.4057 ppb       2.95251 727.75%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               51.6      0.5488 µg/L       0.09480      0.5488 ppb       0.09480  17.27%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               6.9      0.1576 µg/L       0.09035      0.1576 ppb       0.09035  57.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 04:03:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168237.2	168237.2	101	%			04:04:05
1	Al 396.153Radial†	12277.9	12291.9	5106.2	µg/L	5106.2	ppb	04:04:10
1	Ca 317.933Radial†	28848.7	27646.7	5167.0	µg/L	5167.0	ppb	04:04:10
1	Fe 238.204 Radial†	7490.9	7435.2	5163.7	µg/L	5163.7	ppb	04:04:10
1	K 766.490 Radial†	10484.7	9505.0	5125.2	µg/L	5125.2	ppb	04:04:10
1	Mg 279.077 IEC†	2685.9	2605.7	5242.3	µg/L	5242.3	ppb	04:04:10
1	Na 589.592 Radial†	42644.3	42053.6	10119	µg/L	10119	ppb	04:04:05
1	Sr 421.552†	118087.3	116786.9	501.46	µg/L	501.46	ppb	04:04:05
1	Sc 361.383	2051773.8	2051773.8	98.815	%			04:04:44
1	Y 371.029	1331797.3	1331797.3	98.157	%			04:04:44
1	Ag 328.068†	57207.6	58860.8	502.69	µg/L	502.69	ppb	04:04:49
1	As 188.979†	337.6	341.4	513.68	µg/L	513.68	ppb	04:05:10
1	B 249.677†	12719.4	12661.3	498.16	µg/L	498.16	ppb	04:04:49
1	Ba 233.527†	20186.9	20518.6	503.53	µg/L	503.53	ppb	04:04:49
1	Be 313.107†	869944.4	877010.3	505.32	µg/L	505.32	ppb	04:04:44
1	Cd 226.502†	21370.5	21768.9	502.88	µg/L	502.88	ppb	04:04:49
1	Co 228.616†	10877.7	11102.5	505.72	µg/L	505.72	ppb	04:04:49
1	Cr 267.716†	25666.4	26159.5	501.82	µg/L	501.82	ppb	04:04:49
1	Cu 324.752†	74298.7	70273.9	500.87	µg/L	500.87	ppb	04:04:49
1	Mn 257.610†	173083.8	175069.6	507.69	µg/L	507.69	ppb	04:04:44
1	Mo 202.031†	4643.8	4696.7	499.90	µg/L	499.90	ppb	04:05:10
1	Ni 231.604†	10496.4	10188.9	505.91	µg/L	505.91	ppb	04:04:49
1	P 214.914†	1764.9	1532.4	2424.3	µg/L	2424.3	ppb	04:05:10
1	Pb 220.353†	2213.9	2173.3	500.56	µg/L	500.56	ppb	04:05:10
1	S 181.975 Axial†	277.8	236.8	994.31	µg/L	994.31	ppb	04:05:10
1	Sb 206.836†	595.1	579.1	495.09	µg/L	495.09	ppb	04:05:10
1	Se 196.026†	476.5	461.8	496.40	µg/L	496.40	ppb	04:05:10
1	SiO2†	34093.2	31291.9	5396.1	µg/L	5396.1	ppb	04:04:49
1	Si 251.611†	36462.7	36553.7	2480.1	µg/L	2480.1	ppb	04:04:49
1	Sn 189.927†	1152.0	1157.6	503.31	µg/L	503.31	ppb	04:05:10
1	Ti 334.940†	218109.4	219558.6	500.73	µg/L	500.73	ppb	04:04:44
1	Tl 190.801†	311.5	343.0	494.10	µg/L	494.10	ppb	04:05:10
1	U 409.014†	5321.9	5413.9	519.31	µg/L	519.31	ppb	04:04:49
1	V 292.402†	46569.6	47334.0	504.71	µg/L	504.71	ppb	04:04:49
1	Zn 213.857†	22040.8	21572.2	500.65	µg/L	500.65	ppb	04:04:49
2	Sc RADIAL	168844.8	168844.8	101	%			04:04:15
2	Al 396.153Radial†	12446.1	12414.0	5157.2	µg/L	5157.2	ppb	04:04:21
2	Ca 317.933Radial†	28985.6	27678.9	5173.0	µg/L	5173.0	ppb	04:04:21
2	Fe 238.204 Radial†	7528.8	7445.9	5171.3	µg/L	5171.3	ppb	04:04:21
2	K 766.490 Radial†	10455.6	9439.0	5089.7	µg/L	5089.7	ppb	04:04:21
2	Mg 279.077 IEC†	2684.9	2595.2	5221.2	µg/L	5221.2	ppb	04:04:21
2	Na 589.592 Radial†	43288.0	42536.1	10235	µg/L	10235	ppb	04:04:15
2	Sr 421.552†	119716.3	117971.8	506.55	µg/L	506.55	ppb	04:04:15
2	Sc 361.383	2051713.9	2051713.9	98.812	%			04:05:17
2	Y 371.029	1335147.5	1335147.5	98.404	%			04:05:17
2	Ag 328.068†	57779.6	59441.3	507.65	µg/L	507.65	ppb	04:05:22
2	As 188.979†	332.4	336.2	505.90	µg/L	505.90	ppb	04:05:43
2	B 249.677†	12832.7	12776.2	502.70	µg/L	502.70	ppb	04:05:22
2	Ba 233.527†	20351.0	20685.3	507.62	µg/L	507.62	ppb	04:05:22
2	Be 313.107†	876620.0	883791.9	509.22	µg/L	509.22	ppb	04:05:17
2	Cd 226.502†	21659.5	22061.9	509.64	µg/L	509.64	ppb	04:05:22
2	Co 228.616†	10993.9	11220.3	511.07	µg/L	511.07	ppb	04:05:22
2	Cr 267.716†	25986.2	26483.9	508.04	µg/L	508.04	ppb	04:05:22
2	Cu 324.752†	75150.6	71138.2	507.02	µg/L	507.02	ppb	04:05:22
2	Mn 257.610†	174423.4	176430.5	511.64	µg/L	511.64	ppb	04:05:17
2	Mo 202.031†	4631.4	4684.2	498.58	µg/L	498.58	ppb	04:05:43
2	Ni 231.604†	10593.8	10287.8	510.82	µg/L	510.82	ppb	04:05:22
2	P 214.914†	1754.6	1521.9	2406.1	µg/L	2406.1	ppb	04:05:43
2	Pb 220.353†	2198.8	2158.1	497.06	µg/L	497.06	ppb	04:05:43

2	S 181.975 Axial†	277.5	236.4	992.88 µg/L	992.88 ppb	04:05:43
2	Sb 206.836†	594.8	578.7	494.76 µg/L	494.76 ppb	04:05:43
2	Se 196.026†	481.1	466.5	501.47 µg/L	501.47 ppb	04:05:43
2	SiO2†	34453.6	31657.7	5459.2 µg/L	5459.2 ppb	04:05:22
2	Si 251.611†	36914.9	37012.4	2511.7 µg/L	2511.7 ppb	04:05:22
2	Sn 189.927†	1151.8	1157.4	503.24 µg/L	503.24 ppb	04:05:43
2	Ti 334.940†	219885.6	221362.6	504.85 µg/L	504.85 ppb	04:05:17
2	Tl 190.801†	312.5	344.1	495.67 µg/L	495.67 ppb	04:05:43
2	U 409.014†	5257.7	5349.1	513.08 µg/L	513.08 ppb	04:05:22
2	V 292.402†	47059.6	47831.2	509.95 µg/L	509.95 ppb	04:05:22
2	Zn 213.857†	22221.1	21755.4	504.89 µg/L	504.89 ppb	04:05:22
3	Sc RADIAL	169119.3	169119.3	102 %		04:04:26
3	Al 396.153Radial†	12351.7	12301.2	5110.1 µg/L	5110.1 ppb	04:04:32
3	Ca 317.933Radial†	28939.1	27586.8	5155.8 µg/L	5155.8 ppb	04:04:32
3	Fe 238.204 Radial†	7534.6	7439.6	5166.8 µg/L	5166.8 ppb	04:04:32
3	K 766.490 Radial†	10490.3	9456.5	5099.0 µg/L	5099.0 ppb	04:04:32
3	Mg 279.077 IEC†	2668.7	2574.9	5180.5 µg/L	5180.5 ppb	04:04:32
3	Na 589.592 Radial†	43221.6	42401.6	10202 µg/L	10202 ppb	04:04:26
3	Sr 421.552†	119704.0	117768.2	505.68 µg/L	505.68 ppb	04:04:26
3	Sc 361.383	2061643.5	2061643.5	99.291 %		04:05:50
3	Y 371.029	1338139.0	1338139.0	98.625 %		04:05:50
3	Ag 328.068†	57402.0	58779.3	502.01 µg/L	502.01 ppb	04:05:56
3	As 188.979†	335.9	338.1	508.76 µg/L	508.76 ppb	04:06:16
3	B 249.677†	12808.8	12689.6	499.28 µg/L	499.28 ppb	04:05:56
3	Ba 233.527†	20337.7	20572.7	504.85 µg/L	504.85 ppb	04:05:56
3	Be 313.107†	875946.8	878841.0	506.37 µg/L	506.37 ppb	04:05:50
3	Cd 226.502†	21666.0	21962.9	507.36 µg/L	507.36 ppb	04:05:56
3	Co 228.616†	10964.8	11137.5	507.31 µg/L	507.31 ppb	04:05:56
3	Cr 267.716†	25863.0	26233.1	503.23 µg/L	503.23 ppb	04:05:56
3	Cu 324.752†	74785.8	70404.5	501.80 µg/L	501.80 ppb	04:05:56
3	Mn 257.610†	174199.5	175354.8	508.52 µg/L	508.52 ppb	04:05:50
3	Mo 202.031†	4656.1	4686.5	498.82 µg/L	498.82 ppb	04:06:16
3	Ni 231.604†	10567.4	10209.6	506.94 µg/L	506.94 ppb	04:05:56
3	P 214.914†	1762.1	1521.0	2405.5 µg/L	2405.5 ppb	04:06:16
3	Pb 220.353†	2219.3	2168.1	499.35 µg/L	499.35 ppb	04:06:16
3	S 181.975 Axial†	275.8	233.4	980.00 µg/L	980.00 ppb	04:06:16
3	Sb 206.836†	595.0	576.1	492.52 µg/L	492.52 ppb	04:06:16
3	Se 196.026†	486.7	469.8	505.00 µg/L	505.00 ppb	04:06:16
3	SiO2†	34360.9	31396.3	5414.1 µg/L	5414.1 ppb	04:05:56
3	Si 251.611†	36721.2	36637.4	2485.9 µg/L	2485.9 ppb	04:05:56
3	Sn 189.927†	1153.9	1153.9	501.71 µg/L	501.71 ppb	04:06:16
3	Ti 334.940†	219697.5	220101.3	501.97 µg/L	501.97 ppb	04:05:50
3	Tl 190.801†	316.9	347.1	499.90 µg/L	499.90 ppb	04:06:16
3	U 409.014†	5291.2	5357.3	513.87 µg/L	513.87 ppb	04:05:56
3	V 292.402†	46919.5	47460.7	506.04 µg/L	506.04 ppb	04:05:56
3	Zn 213.857†	22157.5	21583.0	500.89 µg/L	500.89 ppb	04:05:56

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2055043.7	98.973	%	0.2753				0.28%
Sc RADIAL	168733.8	101	%	0.3				0.27%
Y 371.029	1335028.0	98.395	%	0.2338				0.24%
Ag 328.068†	59027.1	504.11	µg/L	3.077	504.11	ppb	3.077	0.61%
QC value within limits for Ag 328.068 Recovery = 100.82%								
Al 396.153Radial†	12335.7	5124.5	µg/L	28.36	5124.5	ppb	28.36	0.55%
QC value within limits for Al 396.153Radial Recovery = 102.49%								
As 188.979†	338.6	509.44	µg/L	3.936	509.44	ppb	3.936	0.77%
QC value within limits for As 188.979 Recovery = 101.89%								
B 249.677†	12709.0	500.05	µg/L	2.363	500.05	ppb	2.363	0.47%
QC value within limits for B 249.677 Recovery = 100.01%								
Ba 233.527†	20592.2	505.34	µg/L	2.088	505.34	ppb	2.088	0.41%
QC value within limits for Ba 233.527 Recovery = 101.07%								
Be 313.107†	879881.1	506.97	µg/L	2.022	506.97	ppb	2.022	0.40%
QC value within limits for Be 313.107 Recovery = 101.39%								
Ca 317.933Radial†	27637.5	5165.3	µg/L	8.73	5165.3	ppb	8.73	0.17%
QC value within limits for Ca 317.933Radial Recovery = 103.31%								
Cd 226.502†	21931.2	506.63	µg/L	3.439	506.63	ppb	3.439	0.68%
QC value within limits for Cd 226.502 Recovery = 101.33%								
Co 228.616†	11153.4	508.03	µg/L	2.751	508.03	ppb	2.751	0.54%

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   QC value within limits for Co 228.616  Recovery = 101.61%
Cr 267.716†            26292.2      504.36 µg/L        3.262      504.36 ppb        3.262   0.65%
   QC value within limits for Cr 267.716  Recovery = 100.87%
Cu 324.752†            70605.5      503.23 µg/L        3.317      503.23 ppb        3.317   0.66%
   QC value within limits for Cu 324.752  Recovery = 100.65%
Fe 238.204 Radial†      7440.2      5167.3 µg/L         3.81      5167.3 ppb         3.81   0.07%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.35%
K 766.490 Radial†       9466.8      5104.6 µg/L        18.42      5104.6 ppb        18.42   0.36%
   QC value within limits for K 766.490 Radial  Recovery = 102.09%
Mg 279.077 IEC†         2592.0      5214.7 µg/L        31.44      5214.7 ppb        31.44   0.60%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.29%
Mn 257.610†           175618.3      509.28 µg/L        2.081      509.28 ppb        2.081   0.41%
   QC value within limits for Mn 257.610  Recovery = 101.86%
Mo 202.031†             4689.1      499.10 µg/L        0.704      499.10 ppb        0.704   0.14%
   QC value within limits for Mo 202.031  Recovery = 99.82%
Na 589.592 Radial†     42330.4       10185 µg/L         59.9       10185 ppb         59.9   0.59%
   QC value within limits for Na 589.592 Radial  Recovery = 101.85%
Ni 231.604†            10228.8      507.89 µg/L        2.590      507.89 ppb        2.590   0.51%
   QC value within limits for Ni 231.604  Recovery = 101.58%
P 214.914†              1525.1      2412.0 µg/L        10.67      2412.0 ppb        10.67   0.44%
   QC value within limits for P 214.914  Recovery = 96.48%
Pb 220.353†             2166.5      498.99 µg/L        1.776      498.99 ppb        1.776   0.36%
   QC value within limits for Pb 220.353  Recovery = 99.80%
S 181.975 Axial†         235.5      989.06 µg/L        7.882      989.06 ppb        7.882   0.80%
   QC value within limits for S 181.975 Axial  Recovery = 98.91%
Sb 206.836†              577.9      494.12 µg/L        1.399      494.12 ppb        1.399   0.28%
   QC value within limits for Sb 206.836  Recovery = 98.82%
Se 196.026†              466.0      500.95 µg/L        4.323      500.95 ppb        4.323   0.86%
   QC value within limits for Se 196.026  Recovery = 100.19%
SiO2†                  31448.6      5423.1 µg/L        32.49      5423.1 ppb        32.49   0.60%
   QC value within limits for SiO2  Recovery = 101.41%
Si 251.611†            36734.5      2492.6 µg/L        16.82      2492.6 ppb        16.82   0.67%
   QC value within limits for Si 251.611  Recovery = 99.70%
Sn 189.927†             1156.3      502.75 µg/L        0.904      502.75 ppb        0.904   0.18%
   QC value within limits for Sn 189.927  Recovery = 100.55%
Sr 421.552†           117509.0      504.56 µg/L        2.720      504.56 ppb        2.720   0.54%
   QC value within limits for Sr 421.552  Recovery = 100.91%
Ti 334.940†           220340.8      502.51 µg/L        2.111      502.51 ppb        2.111   0.42%
   QC value within limits for Ti 334.940  Recovery = 100.50%
Tl 190.801†              344.7      496.56 µg/L        2.998      496.56 ppb        2.998   0.60%
   QC value within limits for Tl 190.801  Recovery = 99.31%
U 409.014†              5373.4      515.42 µg/L        3.396      515.42 ppb        3.396   0.66%
   QC value within limits for U 409.014  Recovery = 103.08%
V 292.402†             47542.0      506.90 µg/L        2.721      506.90 ppb        2.721   0.54%
   QC value within limits for V 292.402  Recovery = 101.38%
Zn 213.857†            21636.9      502.14 µg/L        2.383      502.14 ppb        2.383   0.47%
   QC value within limits for Zn 213.857  Recovery = 100.43%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 04:06:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	164372.4	164372.4	98.8	%			04:06:58
1	Al 396.153Radial†	-145.5	2.9	1.1859	µg/L	1.1859	ppb	04:06:58
1	Ca 317.933Radial†	870.9	-0.7	-0.1299	µg/L	-0.1299	ppb	04:07:19
1	Fe 238.204 Radial†	-21.6	5.5	3.8011	µg/L	3.8011	ppb	04:07:19
1	K 766.490 Radial†	858.0	5.0	2.6827	µg/L	2.6827	ppb	04:06:58
1	Mg 279.077 IEC†	51.4	1.7	3.3385	µg/L	3.3385	ppb	04:07:19
1	Na 589.592 Radial†	117.7	1.2	0.2771	µg/L	0.2771	ppb	04:06:58
1	Sr 421.552†	37.8	46.9	0.2015	µg/L	0.2015	ppb	04:06:58
1	Sc 361.383	2033017.9	2033017.9	97.912	%			04:08:20
1	Y 371.029	1327781.3	1327781.3	97.861	%			04:08:20
1	Ag 328.068†	-812.9	137.1	1.1652	µg/L	1.1652	ppb	04:08:26
1	As 188.979†	2.8	2.6	3.9388	µg/L	3.9388	ppb	04:08:47
1	B 249.677†	226.4	20.5	0.8096	µg/L	0.8096	ppb	04:08:26
1	Ba 233.527†	-75.3	12.8	0.3138	µg/L	0.3138	ppb	04:08:47
1	Be 313.107†	3527.6	239.5	0.1378	µg/L	0.1378	ppb	04:08:26
1	Cd 226.502†	-141.0	-1.8	-0.0398	µg/L	-0.0398	ppb	04:08:47
1	Co 228.616†	-103.1	-11.0	-0.4984	µg/L	-0.4984	ppb	04:08:47
1	Cr 267.716†	-182.4	-0.9	-0.0170	µg/L	-0.0170	ppb	04:08:26
1	Cu 324.752†	4839.9	27.6	0.1967	µg/L	0.1967	ppb	04:08:26
1	Mn 257.610†	99.0	12.0	0.0347	µg/L	0.0347	ppb	04:08:26
1	Mo 202.031†	5.1	2.4	0.2522	µg/L	0.2522	ppb	04:08:47
1	Ni 231.604†	452.3	28.6	1.4246	µg/L	1.4246	ppb	04:08:47
1	P 214.914†	243.5	-5.0	-8.3272	µg/L	-8.3272	ppb	04:08:47
1	Pb 220.353†	46.0	-20.1	-4.6390	µg/L	-4.6390	ppb	04:08:47
1	S 181.975 Axial†	37.1	-6.5	-27.296	µg/L	-27.296	ppb	04:08:47
1	Sb 206.836†	27.1	4.4	3.7828	µg/L	3.7828	ppb	04:08:47
1	Se 196.026†	13.4	-6.7	-7.1912	µg/L	-7.1912	ppb	04:08:47
1	SiO2†	3100.1	-43.8	-7.5463	µg/L	-7.5463	ppb	04:08:26
1	Si 251.611†	369.6	31.4	2.2475	µg/L	2.2475	ppb	04:08:47
1	Sn 189.927†	3.0	-5.2	-2.2357	µg/L	-2.2357	ppb	04:08:47
1	Ti 334.940†	1175.5	35.0	0.0799	µg/L	0.0799	ppb	04:08:26
1	Tl 190.801†	-24.9	2.4	3.4347	µg/L	3.4347	ppb	04:08:47
1	U 409.014†	-13.4	14.6	1.4011	µg/L	1.4011	ppb	04:08:26
1	V 292.402†	-157.9	44.7	0.4767	µg/L	0.4767	ppb	04:08:26
1	Zn 213.857†	728.3	11.0	0.2503	µg/L	0.2503	ppb	04:08:47
2	Sc RADIAL	165467.2	165467.2	99.5	%			04:07:24
2	Al 396.153Radial†	-130.5	18.9	7.8707	µg/L	7.8707	ppb	04:07:24
2	Ca 317.933Radial†	882.1	4.7	0.8831	µg/L	0.8831	ppb	04:07:44
2	Fe 238.204 Radial†	-22.3	4.9	3.4162	µg/L	3.4162	ppb	04:07:44
2	K 766.490 Radial†	832.1	-26.8	-14.440	µg/L	-14.440	ppb	04:07:24
2	Mg 279.077 IEC†	36.0	-14.2	-28.534	µg/L	-28.534	ppb	04:07:44
2	Na 589.592 Radial†	107.2	-10.2	-2.4549	µg/L	-2.4549	ppb	04:07:24
2	Sr 421.552†	-12.7	-4.1	-0.0175	µg/L	-0.0175	ppb	04:07:24
2	Sc 361.383	2046283.3	2046283.3	98.551	%			04:08:53
2	Y 371.029	1337997.1	1337997.1	98.614	%			04:08:53
2	Ag 328.068†	-872.7	81.8	0.6952	µg/L	0.6952	ppb	04:08:58
2	As 188.979†	5.6	5.4	8.1538	µg/L	8.1538	ppb	04:09:19
2	B 249.677†	247.5	40.4	1.5945	µg/L	1.5945	ppb	04:08:58
2	Ba 233.527†	-76.8	11.7	0.2880	µg/L	0.2880	ppb	04:09:19
2	Be 313.107†	3471.2	158.9	0.0909	µg/L	0.0909	ppb	04:08:58
2	Cd 226.502†	-143.8	-3.7	-0.0815	µg/L	-0.0815	ppb	04:09:19
2	Co 228.616†	-94.3	-1.4	-0.0619	µg/L	-0.0619	ppb	04:09:19
2	Cr 267.716†	-161.7	21.3	0.4077	µg/L	0.4077	ppb	04:08:58
2	Cu 324.752†	4781.5	-63.8	-0.4533	µg/L	-0.4533	ppb	04:08:58
2	Mn 257.610†	133.5	46.3	0.1344	µg/L	0.1344	ppb	04:08:58
2	Mo 202.031†	5.1	2.3	0.2495	µg/L	0.2495	ppb	04:09:19
2	Ni 231.604†	446.9	20.2	1.0027	µg/L	1.0027	ppb	04:09:19
2	P 214.914†	250.1	0.1	0.2507	µg/L	0.2507	ppb	04:09:19
2	Pb 220.353†	68.6	2.4	0.5587	µg/L	0.5587	ppb	04:09:19

2	S 181.975 Axial†	39.6	-4.2	-17.712 µg/L	-17.712 ppb	04:09:19
2	Sb 206.836†	20.2	-2.7	-2.3175 µg/L	-2.3175 ppb	04:09:19
2	Se 196.026†	16.8	-3.4	-3.6012 µg/L	-3.6012 ppb	04:09:19
2	SiO2†	3165.9	2.5	0.4249 µg/L	0.4249 ppb	04:08:58
2	Si 251.611†	356.1	15.3	1.0177 µg/L	1.0177 ppb	04:09:19
2	Sn 189.927†	10.7	2.6	1.1300 µg/L	1.1300 ppb	04:09:19
2	Ti 334.940†	1098.4	-51.0	-0.1164 µg/L	-0.1164 ppb	04:08:58
2	Tl 190.801†	-22.8	4.7	6.8241 µg/L	6.8241 ppb	04:09:19
2	U 409.014†	24.4	53.0	5.1007 µg/L	5.1007 ppb	04:08:58
2	V 292.402†	-180.9	22.5	0.2477 µg/L	0.2477 ppb	04:08:58
2	Zn 213.857†	725.5	3.4	0.0756 µg/L	0.0756 ppb	04:09:19
3	Sc RADIAL	163968.3	163968.3	98.6 %		04:07:50
3	Al 396.153Radial†	-140.0	8.1	3.3731 µg/L	3.3731 ppb	04:07:50
3	Ca 317.933Radial†	879.1	9.8	1.8257 µg/L	1.8257 ppb	04:08:10
3	Fe 238.204 Radial†	-20.0	7.1	4.8994 µg/L	4.8994 ppb	04:08:10
3	K 766.490 Radial†	862.0	11.1	5.9962 µg/L	5.9962 ppb	04:07:50
3	Mg 279.077 IEC†	46.6	-3.1	-6.2065 µg/L	-6.2065 ppb	04:08:10
3	Na 589.592 Radial†	163.4	47.9	11.521 µg/L	11.521 ppb	04:07:50
3	Sr 421.552†	134.0	144.6	0.6210 µg/L	0.6210 ppb	04:07:50
3	Sc 361.383	2070993.7	2070993.7	99.741 %		04:09:25
3	Y 371.029	1352696.0	1352696.0	99.698 %		04:09:25
3	Ag 328.068†	-971.7	-6.9	-0.0584 µg/L	-0.0584 ppb	04:09:31
3	As 188.979†	1.0	0.8	1.1550 µg/L	1.1550 ppb	04:09:51
3	B 249.677†	235.6	25.5	1.0051 µg/L	1.0051 ppb	04:09:31
3	Ba 233.527†	-77.3	12.2	0.2993 µg/L	0.2993 ppb	04:09:51
3	Be 313.107†	3412.4	57.9	0.0332 µg/L	0.0332 ppb	04:09:31
3	Cd 226.502†	-129.2	12.6	0.2919 µg/L	0.2919 ppb	04:09:51
3	Co 228.616†	-83.1	11.0	0.4990 µg/L	0.4990 ppb	04:09:51
3	Cr 267.716†	-147.1	37.9	0.7266 µg/L	0.7266 ppb	04:09:31
3	Cu 324.752†	4734.0	-169.3	-1.2040 µg/L	-1.2040 ppb	04:09:31
3	Mn 257.610†	114.8	25.9	0.0752 µg/L	0.0752 ppb	04:09:31
3	Mo 202.031†	-0.0	-2.9	-0.3036 µg/L	-0.3036 ppb	04:09:51
3	Ni 231.604†	437.3	5.1	0.2532 µg/L	0.2532 ppb	04:09:51
3	P 214.914†	248.6	-4.4	-6.9635 µg/L	-6.9635 ppb	04:09:51
3	Pb 220.353†	52.3	-14.7	-3.3907 µg/L	-3.3907 ppb	04:09:51
3	S 181.975 Axial†	35.8	-8.5	-35.707 µg/L	-35.707 ppb	04:09:51
3	Sb 206.836†	30.6	7.4	6.3460 µg/L	6.3460 ppb	04:09:51
3	Se 196.026†	19.8	-0.5	-0.5726 µg/L	-0.5726 ppb	04:09:51
3	SiO2†	3106.6	-95.4	-16.448 µg/L	-16.448 ppb	04:09:31
3	Si 251.611†	371.2	26.1	1.7155 µg/L	1.7155 ppb	04:09:51
3	Sn 189.927†	13.8	5.6	2.4098 µg/L	2.4098 ppb	04:09:51
3	Ti 334.940†	1152.4	-10.2	-0.0233 µg/L	-0.0233 ppb	04:09:31
3	Tl 190.801†	-22.5	5.3	7.6833 µg/L	7.6833 ppb	04:09:51
3	U 409.014†	-9.4	18.8	1.8115 µg/L	1.8115 ppb	04:09:31
3	V 292.402†	-213.7	-8.2	-0.0854 µg/L	-0.0854 ppb	04:09:31
3	Zn 213.857†	731.5	0.6	0.0174 µg/L	0.0174 ppb	04:09:51

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2050098.3	98.735	%	0.9282				0.94%
Sc RADIAL	164602.6	98.9	%	0.47				0.47%
Y 371.029	1339491.5	98.724	%	0.9231				0.94%
Ag 328.068†	70.7	0.6007	µg/L	0.61726	0.6007	ppb	0.61726	102.76%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.9	4.1432	µg/L	3.40833	4.1432	ppb	3.40833	82.26%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.9	4.4159	µg/L	3.52370	4.4159	ppb	3.52370	79.80%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	28.8	1.1364	µg/L	0.40862	1.1364	ppb	0.40862	35.96%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	12.2	0.3003	µg/L	0.01292	0.3003	ppb	0.01292	4.30%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	152.1	0.0873	µg/L	0.05239	0.0873	ppb	0.05239	60.00%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.6	0.8597	µg/L	0.97800	0.8597	ppb	0.97800	113.77%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	2.3	0.0569	µg/L	0.20459	0.0569	ppb	0.20459	359.86%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-0.5	-0.0204	µg/L	0.50003	-0.0204	ppb	0.50003	>999.9%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              19.4      0.3724 µg/L       0.37305      0.3724 ppb        0.37305 100.17%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -68.5     -0.4869 µg/L       0.70094     -0.4869 ppb        0.70094 143.96%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        5.8      4.0389 µg/L       0.76968      4.0389 ppb        0.76968  19.06%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -3.6     -1.9205 µg/L      10.96839     -1.9205 ppb       10.96839 571.13%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -5.2     -10.467 µg/L       16.3581     -10.467 ppb        16.3581 156.28%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              28.1      0.0814 µg/L       0.05012      0.0814 ppb        0.05012  61.55%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               0.6      0.0661 µg/L       0.32015      0.0661 ppb        0.32015 484.67%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       12.9      3.1143 µg/L       7.40714      3.1143 ppb        7.40714 237.85%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              18.0      0.8935 µg/L       0.59331      0.8935 ppb        0.59331  66.40%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -3.1     -5.0134 µg/L       4.60952     -5.0134 ppb        4.60952  91.94%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             -10.8     -2.4903 µg/L       2.71326     -2.4903 ppb        2.71326 108.95%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -6.4     -26.905 µg/L        9.0038     -26.905 ppb         9.0038  33.47%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               3.0      2.6038 µg/L       4.45048      2.6038 ppb        4.45048 170.92%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -3.5     -3.7883 µg/L       3.31328     -3.7883 ppb        3.31328  87.46%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                   -45.6     -7.8564 µg/L       8.44065     -7.8564 ppb        8.44065 107.44%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              24.2      1.6602 µg/L       0.61679      1.6602 ppb        0.61679  37.15%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.0      0.4347 µg/L       2.39953      0.4347 ppb        2.39953 552.01%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              62.5      0.2683 µg/L       0.32447      0.2683 ppb        0.32447 120.93%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -8.7     -0.0199 µg/L       0.09819     -0.0199 ppb        0.09819 492.23%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               4.1      5.9807 µg/L       2.24640      5.9807 ppb        2.24640  37.56%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               28.8      2.7711 µg/L       2.02790      2.7711 ppb        2.02790  73.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               19.7      0.2130 µg/L       0.28267      0.2130 ppb        0.28267 132.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               5.0      0.1144 µg/L       0.12122      0.1144 ppb        0.12122 105.93%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 6/30/2009 04:16:43
Logged In Analyst: optima
Spectrometer Model: Optima 4300 DV, S/N 077N1030502

Plasma On Time: 6/29/2009 11:03:38
Technique: ICP Continuous
Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\063009.SIF
Batch ID:
Results Data Set: 063009
Results Library: c:\pe\optima1\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 04:16:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168134.0	168134.0	101	%			04:17:19
1	Al 396.153Radial†	12321.1	12342.1	5127.1	µg/L	5127.1	ppb	04:17:24
1	Ca 317.933Radial†	28800.0	27616.0	5161.2	µg/L	5161.2	ppb	04:17:24
1	Fe 238.204 Radial†	7500.7	7449.4	5173.6	µg/L	5173.6	ppb	04:17:24
1	K 766.490 Radial†	10445.4	9472.5	5107.7	µg/L	5107.7	ppb	04:17:24
1	Mg 279.077 IEC†	2678.4	2599.9	5230.7	µg/L	5230.7	ppb	04:17:24
1	Na 589.592 Radial†	43077.1	42507.7	10228	µg/L	10228	ppb	04:17:19
1	Sr 421.552†	119003.9	117765.6	505.67	µg/L	505.67	ppb	04:17:19
1	Sc 361.383	2054700.2	2054700.2	98.956	%			04:17:58
1	Y 371.029	1333358.8	1333358.8	98.272	%			04:17:58
1	Ag 328.068†	57384.5	58957.0	503.51	µg/L	503.51	ppb	04:18:04
1	As 188.979†	336.5	339.9	511.39	µg/L	511.39	ppb	04:18:24
1	B 249.677†	12755.3	12679.1	498.87	µg/L	498.87	ppb	04:18:04
1	Ba 233.527†	20232.2	20535.3	503.94	µg/L	503.94	ppb	04:18:04
1	Be 313.107†	869208.1	875012.4	504.17	µg/L	504.17	ppb	04:17:58
1	Cd 226.502†	21522.3	21891.4	505.71	µg/L	505.71	ppb	04:18:04
1	Co 228.616†	10918.5	11128.0	506.88	µg/L	506.88	ppb	04:18:04
1	Cr 267.716†	25797.4	26254.8	503.65	µg/L	503.65	ppb	04:18:04
1	Cu 324.752†	74501.1	70371.3	501.56	µg/L	501.56	ppb	04:18:04
1	Mn 257.610†	173020.4	174756.1	506.78	µg/L	506.78	ppb	04:17:58
1	Mo 202.031†	4647.0	4693.1	499.52	µg/L	499.52	ppb	04:18:24
1	Ni 231.604†	10538.5	10216.4	507.28	µg/L	507.28	ppb	04:18:04
1	P 214.914†	1756.1	1520.9	2405.3	µg/L	2405.3	ppb	04:18:24
1	Pb 220.353†	2221.4	2177.7	501.57	µg/L	501.57	ppb	04:18:24
1	S 181.975 Axial†	285.4	244.1	1024.9	µg/L	1024.9	ppb	04:18:24
1	Sb 206.836†	602.5	585.6	500.73	µg/L	500.73	ppb	04:18:24
1	Se 196.026†	477.6	462.2	496.82	µg/L	496.82	ppb	04:18:24
1	SiO2†	34141.4	31291.5	5396.0	µg/L	5396.0	ppb	04:18:04
1	Si 251.611†	36617.1	36657.2	2487.5	µg/L	2487.5	ppb	04:18:04
1	Sn 189.927†	1141.2	1145.0	497.87	µg/L	497.87	ppb	04:18:24
1	Ti 334.940†	218296.0	219432.8	500.44	µg/L	500.44	ppb	04:17:58
1	Tl 190.801†	322.9	354.2	510.20	µg/L	510.20	ppb	04:18:24
1	U 409.014†	5320.5	5404.9	518.45	µg/L	518.45	ppb	04:18:04
1	V 292.402†	46761.1	47460.3	506.04	µg/L	506.04	ppb	04:18:04
1	Zn 213.857†	22080.5	21580.6	500.83	µg/L	500.83	ppb	04:18:04
2	Sc RADIAL	167739.1	167739.1	101	%			04:17:30
2	Al 396.153Radial†	12334.8	12384.4	5144.7	µg/L	5144.7	ppb	04:17:35
2	Ca 317.933Radial†	28855.8	27738.4	5184.1	µg/L	5184.1	ppb	04:17:35
2	Fe 238.204 Radial†	7479.2	7445.6	5171.0	µg/L	5171.0	ppb	04:17:35
2	K 766.490 Radial†	10391.1	9442.9	5091.7	µg/L	5091.7	ppb	04:17:35
2	Mg 279.077 IEC†	2681.2	2609.0	5249.0	µg/L	5249.0	ppb	04:17:35
2	Na 589.592 Radial†	43184.9	42715.1	10278	µg/L	10278	ppb	04:17:30
2	Sr 421.552†	119463.7	118498.8	508.81	µg/L	508.81	ppb	04:17:30
2	Sc 361.383	2061848.1	2061848.1	99.301	%			04:18:31
2	Y 371.029	1339263.7	1339263.7	98.708	%			04:18:31
2	Ag 328.068†	57739.6	59113.6	504.84	µg/L	504.84	ppb	04:18:37
2	As 188.979†	332.1	334.2	502.90	µg/L	502.90	ppb	04:18:57

2	B 249.677†	12809.1	12688.6	499.24 µg/L	499.24 ppb	04:18:37
2	Ba 233.527†	20320.2	20553.0	504.37 µg/L	504.37 ppb	04:18:37
2	Be 313.107†	879097.0	881925.9	508.15 µg/L	508.15 ppb	04:18:31
2	Cd 226.502†	21621.9	21916.4	506.29 µg/L	506.29 ppb	04:18:37
2	Co 228.616†	10981.5	11153.1	508.02 µg/L	508.02 ppb	04:18:37
2	Cr 267.716†	25917.8	26285.8	504.24 µg/L	504.24 ppb	04:18:37
2	Cu 324.752†	74986.5	70599.2	503.19 µg/L	503.19 ppb	04:18:37
2	Mn 257.610†	175014.0	176157.6	510.85 µg/L	510.85 ppb	04:18:31
2	Mo 202.031†	4672.9	4703.0	500.58 µg/L	500.58 ppb	04:18:57
2	Ni 231.604†	10576.4	10217.6	507.34 µg/L	507.34 ppb	04:18:37
2	P 214.914†	1766.3	1525.0	2411.8 µg/L	2411.8 ppb	04:18:57
2	Pb 220.353†	2212.3	2160.7	497.66 µg/L	497.66 ppb	04:18:57
2	S 181.975 Axial†	277.9	235.5	989.07 µg/L	989.07 ppb	04:18:57
2	Sb 206.836†	599.7	580.7	496.48 µg/L	496.48 ppb	04:18:57
2	Se 196.026†	480.1	463.0	497.73 µg/L	497.73 ppb	04:18:57
2	SiO2†	34385.7	31417.9	5417.8 µg/L	5417.8 ppb	04:18:37
2	Si 251.611†	36834.0	36747.3	2493.5 µg/L	2493.5 ppb	04:18:37
2	Sn 189.927†	1148.2	1148.1	499.21 µg/L	499.21 ppb	04:18:57
2	Ti 334.940†	220585.6	220973.7	503.96 µg/L	503.96 ppb	04:18:31
2	Tl 190.801†	313.1	343.1	494.23 µg/L	494.23 ppb	04:18:57
2	U 409.014†	5347.6	5413.5	519.27 µg/L	519.27 ppb	04:18:37
2	V 292.402†	46977.9	47514.8	506.63 µg/L	506.63 ppb	04:18:37
2	Zn 213.857†	22188.8	21612.3	501.57 µg/L	501.57 ppb	04:18:37
3	Sc RADIAL	169018.7	169018.7	102 %		04:17:41
3	Al 396.153Radial†	12355.5	12312.1	5114.7 µg/L	5114.7 ppb	04:17:46
3	Ca 317.933Radial†	28836.4	27502.7	5140.1 µg/L	5140.1 ppb	04:17:46
3	Fe 238.204 Radial†	7495.7	7405.6	5143.4 µg/L	5143.4 ppb	04:17:46
3	K 766.490 Radial†	10479.5	9452.0	5096.6 µg/L	5096.6 ppb	04:17:46
3	Mg 279.077 IEC†	2686.4	2594.0	5218.7 µg/L	5218.7 ppb	04:17:46
3	Na 589.592 Radial†	43313.0	42516.9	10230 µg/L	10230 ppb	04:17:41
3	Sr 421.552†	119883.7	118015.1	506.74 µg/L	506.74 ppb	04:17:41
3	Sc 361.383	2062008.7	2062008.7	99.308 %		04:19:05
3	Y 371.029	1339237.8	1339237.8	98.706 %		04:19:05
3	Ag 328.068†	57899.5	59270.1	506.19 µg/L	506.19 ppb	04:19:10
3	As 188.979†	334.6	336.7	506.63 µg/L	506.63 ppb	04:19:31
3	B 249.677†	12889.3	12768.4	502.40 µg/L	502.40 ppb	04:19:10
3	Ba 233.527†	20437.2	20669.2	507.23 µg/L	507.23 ppb	04:19:10
3	Be 313.107†	873440.6	876161.1	504.83 µg/L	504.83 ppb	04:19:05
3	Cd 226.502†	21754.4	22048.1	509.33 µg/L	509.33 ppb	04:19:10
3	Co 228.616†	11010.3	11181.3	509.30 µg/L	509.30 ppb	04:19:10
3	Cr 267.716†	26062.0	26428.9	506.99 µg/L	506.99 ppb	04:19:10
3	Cu 324.752†	75357.5	70966.8	505.80 µg/L	505.80 ppb	04:19:10
3	Mn 257.610†	173856.2	174978.0	507.43 µg/L	507.43 ppb	04:19:05
3	Mo 202.031†	4649.6	4679.2	498.04 µg/L	498.04 ppb	04:19:31
3	Ni 231.604†	10627.3	10268.0	509.84 µg/L	509.84 ppb	04:19:10
3	P 214.914†	1760.2	1518.8	2401.2 µg/L	2401.2 ppb	04:19:31
3	Pb 220.353†	2216.8	2165.1	498.66 µg/L	498.66 ppb	04:19:31
3	S 181.975 Axial†	280.1	237.6	997.99 µg/L	997.99 ppb	04:19:31
3	Sb 206.836†	590.7	571.6	488.68 µg/L	488.68 ppb	04:19:31
3	Se 196.026†	481.5	464.4	499.19 µg/L	499.19 ppb	04:19:31
3	SiO2†	34587.7	31618.6	5452.4 µg/L	5452.4 ppb	04:19:10
3	Si 251.611†	37006.6	36918.2	2505.4 µg/L	2505.4 ppb	04:19:10
3	Sn 189.927†	1154.7	1154.5	501.98 µg/L	501.98 ppb	04:19:31
3	Ti 334.940†	218955.1	219314.6	500.17 µg/L	500.17 ppb	04:19:05
3	Tl 190.801†	317.7	347.8	500.91 µg/L	500.91 ppb	04:19:31
3	U 409.014†	5401.9	5467.8	524.50 µg/L	524.50 ppb	04:19:10
3	V 292.402†	47234.3	47769.3	509.30 µg/L	509.30 ppb	04:19:10
3	Zn 213.857†	22317.2	21739.8	504.54 µg/L	504.54 ppb	04:19:10

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2059519.0	99.188	%	0.2010				0.20%
Sc RADIAL	168297.3	101	%	0.4				0.39%
Y 371.029	1337286.8	98.562	%	0.2507				0.25%
Ag 328.068†	59113.6	504.85	µg/L	1.337	504.85	ppb	1.337	0.26%
QC value within limits for Ag 328.068 Recovery = 100.97%								
Al 396.153Radial†	12346.2	5128.9	µg/L	15.09	5128.9	ppb	15.09	0.29%
QC value within limits for Al 396.153Radial Recovery = 102.58%								
As 188.979†	336.9	506.97	µg/L	4.258	506.97	ppb	4.258	0.84%

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   QC value within limits for As 188.979  Recovery = 101.39%
B 249.677†            12712.1      500.17 µg/L         1.941      500.17 ppb          1.941   0.39%
   QC value within limits for B 249.677  Recovery = 100.03%
Ba 233.527†           20585.8      505.18 µg/L         1.786      505.18 ppb          1.786   0.35%
   QC value within limits for Ba 233.527  Recovery = 101.04%
Be 313.107†          877699.8      505.71 µg/L         2.134      505.71 ppb          2.134   0.42%
   QC value within limits for Be 313.107  Recovery = 101.14%
Ca 317.933Radial†     27619.0      5161.8 µg/L        22.04      5161.8 ppb         22.04   0.43%
   QC value within limits for Ca 317.933Radial  Recovery = 103.24%
Cd 226.502†           21952.0      507.11 µg/L         1.948      507.11 ppb          1.948   0.38%
   QC value within limits for Cd 226.502  Recovery = 101.42%
Co 228.616†           11154.2      508.07 µg/L         1.213      508.07 ppb          1.213   0.24%
   QC value within limits for Co 228.616  Recovery = 101.61%
Cr 267.716†           26323.2      504.96 µg/L         1.781      504.96 ppb          1.781   0.35%
   QC value within limits for Cr 267.716  Recovery = 100.99%
Cu 324.752†           70645.8      503.52 µg/L         2.136      503.52 ppb          2.136   0.42%
   QC value within limits for Cu 324.752  Recovery = 100.70%
Fe 238.204 Radial†     7433.5      5162.7 µg/L        16.75      5162.7 ppb         16.75   0.32%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.25%
K 766.490 Radial†      9455.8      5098.7 µg/L         8.17      5098.7 ppb          8.17   0.16%
   QC value within limits for K 766.490 Radial  Recovery = 101.97%
Mg 279.077 IEC†        2601.0      5232.8 µg/L        15.25      5232.8 ppb         15.25   0.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.66%
Mn 257.610†          175297.2      508.35 µg/L         2.184      508.35 ppb          2.184   0.43%
   QC value within limits for Mn 257.610  Recovery = 101.67%
Mo 202.031†            4691.8      499.38 µg/L         1.277      499.38 ppb          1.277   0.26%
   QC value within limits for Mo 202.031  Recovery = 99.88%
Na 589.592 Radial†    42579.9       10245 µg/L         28.2       10245 ppb          28.2   0.28%
   QC value within limits for Na 589.592 Radial  Recovery = 102.45%
Ni 231.604†           10234.0      508.15 µg/L         1.464      508.15 ppb          1.464   0.29%
   QC value within limits for Ni 231.604  Recovery = 101.63%
P 214.914†             1521.6      2406.1 µg/L         5.37      2406.1 ppb          5.37   0.22%
   QC value within limits for P 214.914  Recovery = 96.24%
Pb 220.353†            2167.8      499.30 µg/L         2.032      499.30 ppb          2.032   0.41%
   QC value within limits for Pb 220.353  Recovery = 99.86%
S 181.975 Axial†        239.1      1004.0 µg/L        18.66      1004.0 ppb         18.66   1.86%
   QC value within limits for S 181.975 Axial  Recovery = 100.40%
Sb 206.836†             579.3      495.30 µg/L         6.110      495.30 ppb          6.110   1.23%
   QC value within limits for Sb 206.836  Recovery = 99.06%
Se 196.026†             463.2      497.91 µg/L         1.195      497.91 ppb          1.195   0.24%
   QC value within limits for Se 196.026  Recovery = 99.58%
SiO2†                31442.7      5422.1 µg/L        28.44      5422.1 ppb         28.44   0.52%
   QC value within limits for SiO2  Recovery = 101.40%
Si 251.611†          36774.3      2495.5 µg/L         9.12      2495.5 ppb          9.12   0.37%
   QC value within limits for Si 251.611  Recovery = 99.82%
Sn 189.927†            1149.2      499.69 µg/L         2.096      499.69 ppb          2.096   0.42%
   QC value within limits for Sn 189.927  Recovery = 99.94%
Sr 421.552†          118093.2      507.07 µg/L         1.601      507.07 ppb          1.601   0.32%
   QC value within limits for Sr 421.552  Recovery = 101.41%
Ti 334.940†          219907.0      501.53 µg/L         2.111      501.53 ppb          2.111   0.42%
   QC value within limits for Ti 334.940  Recovery = 100.31%
Tl 190.801†             348.4      501.78 µg/L         8.020      501.78 ppb          8.020   1.60%
   QC value within limits for Tl 190.801  Recovery = 100.36%
U 409.014†             5428.7      520.74 µg/L         3.284      520.74 ppb          3.284   0.63%
   QC value within limits for U 409.014  Recovery = 104.15%
V 292.402†            47581.5      507.32 µg/L         1.739      507.32 ppb          1.739   0.34%
   QC value within limits for V 292.402  Recovery = 101.46%
Zn 213.857†           21644.2      502.31 µg/L         1.962      502.31 ppb          1.962   0.39%
   QC value within limits for Zn 213.857  Recovery = 100.46%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 04:19:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	165488.4	165488.4	99.5	%			04:20:12
1	Al 396.153Radial†	-150.9	-1.6	-0.6744	µg/L	-0.6744	ppb	04:20:12
1	Ca 317.933Radial†	890.2	12.7	2.3772	µg/L	2.3772	ppb	04:20:33
1	Fe 238.204 Radial†	-19.9	7.4	5.0751	µg/L	5.0751	ppb	04:20:33
1	K 766.490 Radial†	816.4	-42.7	-23.032	µg/L	-23.032	ppb	04:20:12
1	Mg 279.077 IEC†	40.8	-9.4	-18.804	µg/L	-18.804	ppb	04:20:33
1	Na 589.592 Radial†	146.6	29.5	7.0864	µg/L	7.0864	ppb	04:20:12
1	Sr 421.552†	32.3	41.1	0.1763	µg/L	0.1763	ppb	04:20:12
1	Sc 361.383	2048979.5	2048979.5	98.681	%			04:21:34
1	Y 371.029	1337733.4	1337733.4	98.595	%			04:21:34
1	Ag 328.068†	-919.1	35.9	0.3096	µg/L	0.3096	ppb	04:21:40
1	As 188.979†	-0.9	-1.1	-1.6241	µg/L	-1.6241	ppb	04:22:01
1	B 249.677†	248.7	41.4	1.6310	µg/L	1.6310	ppb	04:21:40
1	Ba 233.527†	-86.3	2.3	0.0578	µg/L	0.0578	ppb	04:22:01
1	Be 313.107†	3570.3	254.7	0.1461	µg/L	0.1461	ppb	04:21:40
1	Cd 226.502†	-144.3	-4.0	-0.0889	µg/L	-0.0889	ppb	04:22:01
1	Co 228.616†	-102.7	-9.8	-0.4433	µg/L	-0.4433	ppb	04:22:01
1	Cr 267.716†	-155.7	27.6	0.5305	µg/L	0.5305	ppb	04:21:40
1	Cu 324.752†	4849.4	-1.4	-0.0089	µg/L	-0.0089	ppb	04:21:40
1	Mn 257.610†	121.2	33.6	0.0976	µg/L	0.0976	ppb	04:21:40
1	Mo 202.031†	7.2	4.4	0.4725	µg/L	0.4725	ppb	04:22:01
1	Ni 231.604†	439.7	12.3	0.6132	µg/L	0.6132	ppb	04:22:01
1	P 214.914†	253.5	3.2	5.2448	µg/L	5.2448	ppb	04:22:01
1	Pb 220.353†	63.4	-2.8	-0.6585	µg/L	-0.6585	ppb	04:22:01
1	S 181.975 Axial†	34.0	-9.9	-41.659	µg/L	-41.659	ppb	04:22:01
1	Sb 206.836†	22.6	-0.3	-0.2739	µg/L	-0.2739	ppb	04:22:01
1	Se 196.026†	16.7	-3.5	-3.7983	µg/L	-3.7983	ppb	04:22:01
1	SiO2†	3157.2	-10.6	-1.8294	µg/L	-1.8294	ppb	04:21:40
1	Si 251.611†	347.2	5.7	0.3454	µg/L	0.3454	ppb	04:22:01
1	Sn 189.927†	11.3	3.2	1.3851	µg/L	1.3851	ppb	04:22:01
1	Ti 334.940†	1121.3	-29.3	-0.0668	µg/L	-0.0668	ppb	04:21:40
1	Tl 190.801†	-25.9	1.6	2.3461	µg/L	2.3461	ppb	04:22:01
1	U 409.014†	31.3	60.0	5.7726	µg/L	5.7726	ppb	04:21:40
1	V 292.402†	-135.5	68.7	0.7388	µg/L	0.7388	ppb	04:21:40
1	Zn 213.857†	729.0	6.0	0.1372	µg/L	0.1372	ppb	04:22:01
2	Sc RADIAL	167942.0	167942.0	101	%			04:20:38
2	Al 396.153Radial†	-209.6	-57.5	-23.975	µg/L	-23.975	ppb	04:20:38
2	Ca 317.933Radial†	871.6	-18.7	-3.5026	µg/L	-3.5026	ppb	04:20:58
2	Fe 238.204 Radial†	-22.5	5.0	3.4491	µg/L	3.4491	ppb	04:20:58
2	K 766.490 Radial†	883.6	11.9	6.4095	µg/L	6.4095	ppb	04:20:38
2	Mg 279.077 IEC†	52.5	1.6	3.2140	µg/L	3.2140	ppb	04:20:58
2	Na 589.592 Radial†	149.8	30.4	7.3217	µg/L	7.3217	ppb	04:20:38
2	Sr 421.552†	67.1	75.1	0.3226	µg/L	0.3226	ppb	04:20:38
2	Sc 361.383	2035897.6	2035897.6	98.051	%			04:22:06
2	Y 371.029	1330554.0	1330554.0	98.066	%			04:22:06
2	Ag 328.068†	-911.9	37.3	0.3205	µg/L	0.3205	ppb	04:22:12
2	As 188.979†	3.2	3.0	4.5226	µg/L	4.5226	ppb	04:22:33
2	B 249.677†	236.7	30.7	1.2118	µg/L	1.2118	ppb	04:22:12
2	Ba 233.527†	-78.4	9.8	0.2405	µg/L	0.2405	ppb	04:22:33
2	Be 313.107†	3535.1	242.0	0.1392	µg/L	0.1392	ppb	04:22:12
2	Cd 226.502†	-136.3	3.2	0.0715	µg/L	0.0715	ppb	04:22:33
2	Co 228.616†	-103.9	-11.6	-0.5282	µg/L	-0.5282	ppb	04:22:33
2	Cr 267.716†	-213.6	-32.5	-0.6210	µg/L	-0.6210	ppb	04:22:12
2	Cu 324.752†	4802.9	-17.1	-0.1213	µg/L	-0.1213	ppb	04:22:12
2	Mn 257.610†	104.4	17.3	0.0503	µg/L	0.0503	ppb	04:22:12
2	Mo 202.031†	5.1	2.3	0.2482	µg/L	0.2482	ppb	04:22:33
2	Ni 231.604†	448.1	23.8	1.1824	µg/L	1.1824	ppb	04:22:33
2	P 214.914†	253.7	5.1	8.2953	µg/L	8.2953	ppb	04:22:33
2	Pb 220.353†	66.1	0.2	0.0566	µg/L	0.0566	ppb	04:22:33

2	S 181.975 Axial†	37.7	-5.9	-25.010	µg/L	-25.010 ppb	04:22:33
2	Sb 206.836†	28.1	5.4	4.6475	µg/L	4.6475 ppb	04:22:33
2	Se 196.026†	11.6	-8.6	-9.2105	µg/L	-9.2105 ppb	04:22:33
2	SiO2†	3132.9	-14.8	-2.5558	µg/L	-2.5558 ppb	04:22:12
2	Si 251.611†	358.6	19.6	1.3847	µg/L	1.3847 ppb	04:22:33
2	Sn 189.927†	5.8	-2.3	-1.0003	µg/L	-1.0003 ppb	04:22:33
2	Ti 334.940†	1159.8	17.3	0.0395	µg/L	0.0395 ppb	04:22:12
2	Tl 190.801†	-31.9	-4.7	-6.8323	µg/L	-6.8323 ppb	04:22:33
2	U 409.014†	-75.2	-48.5	-4.6615	µg/L	-4.6615 ppb	04:22:12
2	V 292.402†	-149.1	53.9	0.5641	µg/L	0.5641 ppb	04:22:12
2	Zn 213.857†	732.9	14.6	0.3368	µg/L	0.3368 ppb	04:22:33
3	Sc RADIAL	166376.6	166376.6	100	%		04:21:04
3	Al 396.153Radial†	-181.2	-31.0	-12.949	µg/L	-12.949 ppb	04:21:04
3	Ca 317.933Radial†	871.1	-11.2	-2.0851	µg/L	-2.0851 ppb	04:21:24
3	Fe 238.204 Radial†	-25.2	2.2	1.4941	µg/L	1.4941 ppb	04:21:24
3	K 766.490 Radial†	918.3	54.8	29.526	µg/L	29.526 ppb	04:21:04
3	Mg 279.077 IEC†	50.9	0.6	1.1199	µg/L	1.1199 ppb	04:21:24
3	Na 589.592 Radial†	119.0	1.0	0.2434	µg/L	0.2434 ppb	04:21:04
3	Sr 421.552†	24.4	33.1	0.1419	µg/L	0.1419 ppb	04:21:04
3	Sc 361.383	2060039.0	2060039.0	99.213	%		04:22:39
3	Y 371.029	1345935.2	1345935.2	99.199	%		04:22:39
3	Ag 328.068†	-840.4	120.3	1.0224	µg/L	1.0224 ppb	04:22:44
3	As 188.979†	-1.2	-1.4	-2.0769	µg/L	-2.0769 ppb	04:23:05
3	B 249.677†	221.0	12.1	0.4761	µg/L	0.4761 ppb	04:22:44
3	Ba 233.527†	-77.7	11.4	0.2807	µg/L	0.2807 ppb	04:23:05
3	Be 313.107†	3617.6	282.9	0.1626	µg/L	0.1626 ppb	04:22:44
3	Cd 226.502†	-140.3	0.7	0.0182	µg/L	0.0182 ppb	04:23:05
3	Co 228.616†	-99.5	-6.0	-0.2724	µg/L	-0.2724 ppb	04:23:05
3	Cr 267.716†	-184.6	-0.7	-0.0119	µg/L	-0.0119 ppb	04:22:44
3	Cu 324.752†	4797.4	-80.1	-0.5698	µg/L	-0.5698 ppb	04:22:44
3	Mn 257.610†	127.1	39.0	0.1131	µg/L	0.1131 ppb	04:22:44
3	Mo 202.031†	4.7	1.9	0.2041	µg/L	0.2041 ppb	04:23:05
3	Ni 231.604†	440.5	10.7	0.5345	µg/L	0.5345 ppb	04:23:05
3	P 214.914†	241.4	-10.4	-16.993	µg/L	-16.993 ppb	04:23:05
3	Pb 220.353†	63.9	-2.8	-0.6372	µg/L	-0.6372 ppb	04:23:05
3	S 181.975 Axial†	42.1	-2.0	-8.3068	µg/L	-8.3068 ppb	04:23:05
3	Sb 206.836†	32.5	9.5	8.1557	µg/L	8.1557 ppb	04:23:05
3	Se 196.026†	19.9	-0.4	-0.4422	µg/L	-0.4422 ppb	04:23:05
3	SiO2†	3151.8	-33.3	-5.7386	µg/L	-5.7386 ppb	04:22:44
3	Si 251.611†	358.0	14.7	1.0201	µg/L	1.0201 ppb	04:23:05
3	Sn 189.927†	7.1	-1.1	-0.4727	µg/L	-0.4727 ppb	04:23:05
3	Ti 334.940†	1156.8	0.4	0.0009	µg/L	0.0009 ppb	04:22:44
3	Tl 190.801†	-29.6	-2.0	-2.9277	µg/L	-2.9277 ppb	04:23:05
3	U 409.014†	-14.2	13.9	1.3413	µg/L	1.3413 ppb	04:22:44
3	V 292.402†	-165.3	39.4	0.4196	µg/L	0.4196 ppb	04:22:44
3	Zn 213.857†	726.6	-0.4	-0.0112	µg/L	-0.0112 ppb	04:23:05

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2048305.4	98.648	%	0.5820				0.59%
Sc RADIAL	166602.4	100	%	0.7				0.75%
Y 371.029	1338074.2	98.620	%	0.5672				0.58%
Ag 328.068†	64.5	0.5508	µg/L	0.40844	0.5508	ppb	0.40844	74.15%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-30.0	-12.533	µg/L	11.6558	-12.533	ppb	11.6558	93.00%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.2	0.2739	µg/L	3.68643	0.2739	ppb	3.68643	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	28.1	1.1063	µg/L	0.58464	1.1063	ppb	0.58464	52.85%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.8	0.1930	µg/L	0.11879	0.1930	ppb	0.11879	61.54%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	259.9	0.1493	µg/L	0.01201	0.1493	ppb	0.01201	8.05%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-5.7	-1.0702	µg/L	3.06848	-1.0702	ppb	3.06848	286.72%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	-0.0	0.0003	µg/L	0.08168	0.0003	ppb	0.08168	>999.9%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-9.1	-0.4146	µg/L	0.13028	-0.4146	ppb	0.13028	31.42%

```
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -1.8     -0.0341 µg/L       0.57606     -0.0341 ppb        0.57606 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -32.8     -0.2333 µg/L       0.29672     -0.2333 ppb        0.29672 127.16%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.8      3.3394 µg/L       1.79302      3.3394 ppb        1.79302  53.69%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†           8.0      4.3013 µg/L      26.34248      4.3013 ppb       26.34248 612.44%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -2.4     -4.8235 µg/L      12.15294     -4.8235 ppb       12.15294 251.95%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                30.0      0.0870 µg/L       0.03273      0.0870 ppb        0.03273  37.63%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.9      0.3082 µg/L       0.14394      0.3082 ppb        0.14394  46.70%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         20.3      4.8838 µg/L       4.02044      4.8838 ppb        4.02044  82.32%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                15.6      0.7767 µg/L       0.35353      0.7767 ppb        0.35353  45.51%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -0.7     -1.1511 µg/L      13.80439     -1.1511 ppb       13.80439 >999.9%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -1.8     -0.4130 µg/L       0.40689     -0.4130 ppb        0.40689  98.51%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.9     -24.992 µg/L      16.6762     -24.992 ppb        16.6762  66.73%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 4.9      4.1764 µg/L       4.23448      4.1764 ppb        4.23448 101.39%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -4.2     -4.4836 µg/L       4.42413     -4.4836 ppb        4.42413  98.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     -19.6     -3.3746 µg/L       2.07924     -3.3746 ppb        2.07924  61.61%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                13.3      0.9167 µg/L       0.52730      0.9167 ppb        0.52730  57.52%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -0.1     -0.0293 µg/L       1.25299     -0.0293 ppb        1.25299 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                49.8      0.2136 µg/L       0.09594      0.2136 ppb        0.09594  44.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                -3.9     -0.0088 µg/L       0.05382     -0.0088 ppb        0.05382 610.24%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -1.7     -2.4713 µg/L       4.60618     -2.4713 ppb        4.60618 186.39%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                  8.5      0.8174 µg/L       5.23676      0.8174 ppb        5.23676 640.63%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 54.0      0.5741 µg/L       0.15983      0.5741 ppb        0.15983  27.84%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 6.7      0.1543 µg/L       0.17460      0.1543 ppb        0.17460 113.17%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 04:43:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	169247.6	169247.6	102	%			04:43:58
1	Al 396.153Radial†	12563.2	12499.9	5192.8	µg/L	5192.8	ppb	04:44:04
1	Ca 317.933Radial†	29448.5	28065.9	5245.3	µg/L	5245.3	ppb	04:44:04
1	Fe 238.204 Radial†	7606.0	7504.1	5211.6	µg/L	5211.6	ppb	04:44:04
1	K 766.490 Radial†	10637.3	9593.1	5172.7	µg/L	5172.7	ppb	04:44:04
1	Mg 279.077 IEC†	2722.3	2625.7	5282.5	µg/L	5282.5	ppb	04:44:04
1	Na 589.592 Radial†	43276.0	42422.8	10207	µg/L	10207	ppb	04:43:58
1	Sr 421.552†	119847.7	117820.2	505.90	µg/L	505.90	ppb	04:43:58
1	Sc 361.383	2063596.7	2063596.7	99.385	%			04:44:37
1	Y 371.029	1340760.7	1340760.7	98.818	%			04:44:37
1	Ag 328.068†	58064.7	59391.4	507.23	µg/L	507.23	ppb	04:44:43
1	As 188.979†	333.4	335.2	504.46	µg/L	504.46	ppb	04:45:04
1	B 249.677†	12923.8	12793.2	503.36	µg/L	503.36	ppb	04:44:43
1	Ba 233.527†	20544.3	20761.2	509.48	µg/L	509.48	ppb	04:44:43
1	Be 313.107†	880184.0	882269.4	508.34	µg/L	508.34	ppb	04:44:37
1	Cd 226.502†	21905.0	22182.8	512.43	µg/L	512.43	ppb	04:44:43
1	Co 228.616†	11076.2	11239.1	511.94	µg/L	511.94	ppb	04:44:43
1	Cr 267.716†	26215.5	26563.2	509.56	µg/L	509.56	ppb	04:44:43
1	Cu 324.752†	75414.8	70966.1	505.80	µg/L	505.80	ppb	04:44:43
1	Mn 257.610†	175046.6	176041.1	510.51	µg/L	510.51	ppb	04:44:37
1	Mo 202.031†	4697.4	4723.6	502.77	µg/L	502.77	ppb	04:45:04
1	Ni 231.604†	10687.1	10320.0	512.42	µg/L	512.42	ppb	04:44:43
1	P 214.914†	1780.2	1537.6	2431.8	µg/L	2431.8	ppb	04:45:04
1	Pb 220.353†	2229.6	2176.2	501.25	µg/L	501.25	ppb	04:45:04
1	S 181.975 Axial†	280.2	237.6	997.58	µg/L	997.58	ppb	04:45:04
1	Sb 206.836†	606.1	586.6	501.55	µg/L	501.55	ppb	04:45:04
1	Se 196.026†	482.6	465.2	500.09	µg/L	500.09	ppb	04:45:04
1	SiO2†	34588.7	31592.8	5448.0	µg/L	5448.0	ppb	04:44:43
1	Si 251.611†	37126.7	37010.5	2511.6	µg/L	2511.6	ppb	04:44:43
1	Sn 189.927†	1155.5	1154.4	501.98	µg/L	501.98	ppb	04:45:04
1	Ti 334.940†	220514.9	220714.4	503.36	µg/L	503.36	ppb	04:44:37
1	Tl 190.801†	320.1	350.0	504.07	µg/L	504.07	ppb	04:45:04
1	U 409.014†	5311.9	5373.1	515.37	µg/L	515.37	ppb	04:44:43
1	V 292.402†	47377.0	47876.3	510.46	µg/L	510.46	ppb	04:44:43
1	Zn 213.857†	22411.2	21817.1	506.33	µg/L	506.33	ppb	04:44:43
2	Sc RADIAL	167506.1	167506.1	101	%			04:44:09
2	Al 396.153Radial†	12431.7	12497.7	5191.9	µg/L	5191.9	ppb	04:44:15
2	Ca 317.933Radial†	29091.4	28012.2	5235.3	µg/L	5235.3	ppb	04:44:15
2	Fe 238.204 Radial†	7556.5	7532.7	5231.4	µg/L	5231.4	ppb	04:44:15
2	K 766.490 Radial†	10483.5	9549.1	5149.0	µg/L	5149.0	ppb	04:44:15
2	Mg 279.077 IEC†	2683.3	2614.7	5260.5	µg/L	5260.5	ppb	04:44:15
2	Na 589.592 Radial†	43129.0	42719.1	10279	µg/L	10279	ppb	04:44:09
2	Sr 421.552†	119444.6	118644.6	509.44	µg/L	509.44	ppb	04:44:09
2	Sc 361.383	2055507.7	2055507.7	98.995	%			04:45:11
2	Y 371.029	1338374.6	1338374.6	98.642	%			04:45:11
2	Ag 328.068†	57858.1	59412.7	507.40	µg/L	507.40	ppb	04:45:16
2	As 188.979†	328.5	331.6	499.01	µg/L	499.01	ppb	04:45:37
2	B 249.677†	12931.7	12852.3	505.68	µg/L	505.68	ppb	04:45:16
2	Ba 233.527†	20435.9	20733.0	508.79	µg/L	508.79	ppb	04:45:16
2	Be 313.107†	886921.4	892560.4	514.27	µg/L	514.27	ppb	04:45:11
2	Cd 226.502†	21751.3	22114.2	510.85	µg/L	510.85	ppb	04:45:16
2	Co 228.616†	11008.8	11214.9	510.83	µg/L	510.83	ppb	04:45:16
2	Cr 267.716†	25994.2	26443.5	507.27	µg/L	507.27	ppb	04:45:16
2	Cu 324.752†	75172.8	71020.3	506.19	µg/L	506.19	ppb	04:45:16
2	Mn 257.610†	176407.9	178109.3	516.51	µg/L	516.51	ppb	04:45:11
2	Mo 202.031†	4692.1	4736.8	504.18	µg/L	504.18	ppb	04:45:37
2	Ni 231.604†	10640.2	10314.9	512.17	µg/L	512.17	ppb	04:45:16
2	P 214.914†	1772.8	1537.1	2431.1	µg/L	2431.1	ppb	04:45:37
2	Pb 220.353†	2238.2	2193.8	505.29	µg/L	505.29	ppb	04:45:37

2	S 181.975 Axial†	283.4	241.9	1015.9 µg/L	1015.9 ppb	04:45:37
2	Sb 206.836†	597.3	580.1	495.99 µg/L	495.99 ppb	04:45:37
2	Se 196.026†	483.3	467.8	502.92 µg/L	502.92 ppb	04:45:37
2	SiO2†	34489.9	31630.0	5454.4 µg/L	5454.4 ppb	04:45:16
2	Si 251.611†	36922.2	36950.9	2507.0 µg/L	2507.0 ppb	04:45:16
2	Sn 189.927†	1161.1	1164.7	506.41 µg/L	506.41 ppb	04:45:37
2	Ti 334.940†	222213.6	223303.5	509.27 µg/L	509.27 ppb	04:45:11
2	Tl 190.801†	316.0	347.0	499.88 µg/L	499.88 ppb	04:45:37
2	U 409.014†	5256.5	5338.1	512.00 µg/L	512.00 ppb	04:45:16
2	V 292.402†	47104.1	47788.2	509.53 µg/L	509.53 ppb	04:45:16
2	Zn 213.857†	22305.5	21799.1	505.91 µg/L	505.91 ppb	04:45:16
3	Sc RADIAL	167880.6	167880.6	101 %		04:44:20
3	Al 396.153Radial†	12420.7	12459.2	5175.8 µg/L	5175.8 ppb	04:44:26
3	Ca 317.933Radial†	29125.2	27981.3	5229.5 µg/L	5229.5 ppb	04:44:26
3	Fe 238.204 Radial†	7576.8	7536.1	5233.7 µg/L	5233.7 ppb	04:44:26
3	K 766.490 Radial†	10548.2	9590.0	5171.0 µg/L	5171.0 ppb	04:44:26
3	Mg 279.077 IEC†	2690.5	2615.9	5262.8 µg/L	5262.8 ppb	04:44:26
3	Na 589.592 Radial†	43169.7	42663.9	10265 µg/L	10265 ppb	04:44:20
3	Sr 421.552†	119534.7	118469.3	508.69 µg/L	508.69 ppb	04:44:20
3	Sc 361.383	2056072.6	2056072.6	99.022 %		04:45:44
3	Y 371.029	1336425.7	1336425.7	98.498 %		04:45:44
3	Ag 328.068†	57799.0	59336.9	506.76 µg/L	506.76 ppb	04:45:50
3	As 188.979†	323.0	325.9	490.57 µg/L	490.57 ppb	04:46:10
3	B 249.677†	12867.1	12783.4	502.96 µg/L	502.96 ppb	04:45:50
3	Ba 233.527†	20413.2	20704.4	508.09 µg/L	508.09 ppb	04:45:50
3	Be 313.107†	882408.7	887757.0	511.51 µg/L	511.51 ppb	04:45:44
3	Cd 226.502†	21707.7	22064.2	509.70 µg/L	509.70 ppb	04:45:50
3	Co 228.616†	10957.3	11159.8	508.32 µg/L	508.32 ppb	04:45:50
3	Cr 267.716†	26007.4	26449.5	507.38 µg/L	507.38 ppb	04:45:50
3	Cu 324.752†	75053.9	70879.4	505.19 µg/L	505.19 ppb	04:45:50
3	Mn 257.610†	175632.0	177276.8	514.09 µg/L	514.09 ppb	04:45:44
3	Mo 202.031†	4688.9	4732.4	503.70 µg/L	503.70 ppb	04:46:10
3	Ni 231.604†	10627.3	10298.9	511.38 µg/L	511.38 ppb	04:45:50
3	P 214.914†	1763.8	1527.5	2415.7 µg/L	2415.7 ppb	04:46:10
3	Pb 220.353†	2229.4	2184.2	503.08 µg/L	503.08 ppb	04:46:10
3	S 181.975 Axial†	279.5	237.9	998.98 µg/L	998.98 ppb	04:46:10
3	Sb 206.836†	594.9	577.5	493.78 µg/L	493.78 ppb	04:46:10
3	Se 196.026†	477.1	461.4	495.99 µg/L	495.99 ppb	04:46:10
3	SiO2†	34435.6	31565.5	5443.3 µg/L	5443.3 ppb	04:45:50
3	Si 251.611†	36840.9	36858.5	2500.6 µg/L	2500.6 ppb	04:45:50
3	Sn 189.927†	1168.6	1171.9	509.52 µg/L	509.52 ppb	04:46:10
3	Ti 334.940†	221127.8	222145.3	506.63 µg/L	506.63 ppb	04:45:44
3	Tl 190.801†	320.0	351.0	505.62 µg/L	505.62 ppb	04:46:10
3	U 409.014†	5351.3	5432.4	521.07 µg/L	521.07 ppb	04:45:50
3	V 292.402†	47030.0	47700.3	508.62 µg/L	508.62 ppb	04:45:50
3	Zn 213.857†	22211.0	21697.4	503.53 µg/L	503.53 ppb	04:45:50

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2058392.3	99.134	%	0.2175				0.22%
Sc RADIAL	168211.4	101	%	0.6				0.54%
Y 371.029	1338520.3	98.653	%	0.1600				0.16%
Ag 328.068†	59380.4	507.13	µg/L	0.335	507.13	ppb	0.335	0.07%
QC value within limits for Ag 328.068 Recovery = 101.43%								
Al 396.153Radial†	12485.6	5186.8	µg/L	9.55	5186.8	ppb	9.55	0.18%
QC value within limits for Al 396.153Radial Recovery = 103.74%								
As 188.979†	330.9	498.01	µg/L	6.999	498.01	ppb	6.999	1.41%
QC value within limits for As 188.979 Recovery = 99.60%								
B 249.677†	12809.6	504.00	µg/L	1.469	504.00	ppb	1.469	0.29%
QC value within limits for B 249.677 Recovery = 100.80%								
Ba 233.527†	20732.9	508.79	µg/L	0.698	508.79	ppb	0.698	0.14%
QC value within limits for Ba 233.527 Recovery = 101.76%								
Be 313.107†	887528.9	511.38	µg/L	2.967	511.38	ppb	2.967	0.58%
QC value within limits for Be 313.107 Recovery = 102.28%								
Ca 317.933Radial†	28019.8	5236.7	µg/L	8.00	5236.7	ppb	8.00	0.15%
QC value within limits for Ca 317.933Radial Recovery = 104.73%								
Cd 226.502†	22120.4	510.99	µg/L	1.374	510.99	ppb	1.374	0.27%
QC value within limits for Cd 226.502 Recovery = 102.20%								
Co 228.616†	11204.6	510.36	µg/L	1.852	510.36	ppb	1.852	0.36%

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   QC value within limits for Co 228.616  Recovery = 102.07%
Cr 267.716†            26485.4      508.07 µg/L        1.293      508.07 ppb        1.293   0.25%
   QC value within limits for Cr 267.716  Recovery = 101.61%
Cu 324.752†            70955.2      505.73 µg/L        0.506      505.73 ppb        0.506   0.10%
   QC value within limits for Cu 324.752  Recovery = 101.15%
Fe 238.204 Radial†      7524.3      5225.6 µg/L       12.12      5225.6 ppb       12.12   0.23%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.51%
K 766.490 Radial†       9577.4      5164.3 µg/L       13.25      5164.3 ppb       13.25   0.26%
   QC value within limits for K 766.490 Radial  Recovery = 103.29%
Mg 279.077 IEC†         2618.8      5268.6 µg/L       12.08      5268.6 ppb       12.08   0.23%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.37%
Mn 257.610†           177142.4      513.70 µg/L        3.018      513.70 ppb        3.018   0.59%
   QC value within limits for Mn 257.610  Recovery = 102.74%
Mo 202.031†             4731.0      503.55 µg/L        0.716      503.55 ppb        0.716   0.14%
   QC value within limits for Mo 202.031  Recovery = 100.71%
Na 589.592 Radial†     42601.9       10250 µg/L       37.9        10250 ppb       37.9   0.37%
   QC value within limits for Na 589.592 Radial  Recovery = 102.50%
Ni 231.604†            10311.3      511.99 µg/L        0.544      511.99 ppb        0.544   0.11%
   QC value within limits for Ni 231.604  Recovery = 102.40%
P 214.914†              1534.1      2426.2 µg/L        9.11      2426.2 ppb        9.11   0.38%
   QC value within limits for P 214.914  Recovery = 97.05%
Pb 220.353†             2184.8      503.21 µg/L        2.026      503.21 ppb        2.026   0.40%
   QC value within limits for Pb 220.353  Recovery = 100.64%
S 181.975 Axial†         239.1      1004.1 µg/L       10.17      1004.1 ppb       10.17   1.01%
   QC value within limits for S 181.975 Axial  Recovery = 100.41%
Sb 206.836†              581.4      497.11 µg/L        4.001      497.11 ppb        4.001   0.80%
   QC value within limits for Sb 206.836  Recovery = 99.42%
Se 196.026†              464.8      499.66 µg/L        3.480      499.66 ppb        3.480   0.70%
   QC value within limits for Se 196.026  Recovery = 99.93%
SiO2†                  31596.1      5448.6 µg/L        5.58      5448.6 ppb        5.58   0.10%
   QC value within limits for SiO2  Recovery = 101.89%
Si 251.611†            36940.0      2506.4 µg/L        5.49      2506.4 ppb        5.49   0.22%
   QC value within limits for Si 251.611  Recovery = 100.26%
Sn 189.927†             1163.7      505.97 µg/L        3.788      505.97 ppb        3.788   0.75%
   QC value within limits for Sn 189.927  Recovery = 101.19%
Sr 421.552†           118311.4      508.01 µg/L        1.865      508.01 ppb        1.865   0.37%
   QC value within limits for Sr 421.552  Recovery = 101.60%
Ti 334.940†           222054.4      506.42 µg/L        2.959      506.42 ppb        2.959   0.58%
   QC value within limits for Ti 334.940  Recovery = 101.28%
Tl 190.801†              349.3      503.19 µg/L        2.967      503.19 ppb        2.967   0.59%
   QC value within limits for Tl 190.801  Recovery = 100.64%
U 409.014†              5381.2      516.15 µg/L        4.584      516.15 ppb        4.584   0.89%
   QC value within limits for U 409.014  Recovery = 103.23%
V 292.402†             47788.3      509.54 µg/L        0.921      509.54 ppb        0.921   0.18%
   QC value within limits for V 292.402  Recovery = 101.91%
Zn 213.857†            21771.2      505.26 µg/L        1.509      505.26 ppb        1.509   0.30%
   QC value within limits for Zn 213.857  Recovery = 101.05%
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 04:46:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	166968.0	166968.0	100	%			04:46:52
1	Al 396.153Radial†	-145.4	5.2	2.1824	µg/L	2.1824	ppb	04:46:52
1	Ca 317.933Radial†	892.8	7.4	1.3823	µg/L	1.3823	ppb	04:47:13
1	Fe 238.204 Radial†	-10.8	16.6	11.490	µg/L	11.490	ppb	04:47:13
1	K 766.490 Radial†	849.9	-16.6	-8.9430	µg/L	-8.9430	ppb	04:46:52
1	Mg 279.077 IEC†	38.6	-11.9	-23.949	µg/L	-23.949	ppb	04:47:13
1	Na 589.592 Radial†	152.0	33.5	8.0640	µg/L	8.0640	ppb	04:46:52
1	Sr 421.552†	-0.5	8.2	0.0350	µg/L	0.0350	ppb	04:46:52
1	Sc 361.383	2046295.9	2046295.9	98.552	%			04:48:15
1	Y 371.029	1336328.3	1336328.3	98.491	%			04:48:15
1	Ag 328.068†	-848.4	106.5	0.9054	µg/L	0.9054	ppb	04:48:21
1	As 188.979†	0.8	0.6	0.8966	µg/L	0.8966	ppb	04:48:41
1	B 249.677†	234.1	26.9	1.0568	µg/L	1.0568	ppb	04:48:21
1	Ba 233.527†	-82.6	5.9	0.1446	µg/L	0.1446	ppb	04:48:41
1	Be 313.107†	3605.1	294.8	0.1692	µg/L	0.1692	ppb	04:48:21
1	Cd 226.502†	-130.2	10.0	0.2301	µg/L	0.2301	ppb	04:48:41
1	Co 228.616†	-96.4	-3.4	-0.1578	µg/L	-0.1578	ppb	04:48:41
1	Cr 267.716†	-176.0	6.8	0.1313	µg/L	0.1313	ppb	04:48:21
1	Cu 324.752†	4930.2	87.1	0.6214	µg/L	0.6214	ppb	04:48:21
1	Mn 257.610†	154.8	68.0	0.1972	µg/L	0.1972	ppb	04:48:21
1	Mo 202.031†	-0.5	-3.4	-0.3583	µg/L	-0.3583	ppb	04:48:41
1	Ni 231.604†	437.1	10.2	0.5079	µg/L	0.5079	ppb	04:48:41
1	P 214.914†	241.2	-9.0	-14.751	µg/L	-14.751	ppb	04:48:41
1	Pb 220.353†	58.5	-7.8	-1.7972	µg/L	-1.7972	ppb	04:48:41
1	S 181.975 Axial†	34.6	-9.3	-39.033	µg/L	-39.033	ppb	04:48:41
1	Sb 206.836†	30.2	7.4	6.3621	µg/L	6.3621	ppb	04:48:41
1	Se 196.026†	14.2	-6.0	-6.4572	µg/L	-6.4572	ppb	04:48:41
1	SiO2†	3210.6	47.8	8.2366	µg/L	8.2366	ppb	04:48:21
1	Si 251.611†	385.0	44.5	3.0544	µg/L	3.0544	ppb	04:48:41
1	Sn 189.927†	10.3	2.2	0.9585	µg/L	0.9585	ppb	04:48:41
1	Ti 334.940†	1129.1	-19.8	-0.0453	µg/L	-0.0453	ppb	04:48:21
1	Tl 190.801†	-19.8	7.8	11.220	µg/L	11.220	ppb	04:48:41
1	U 409.014†	-43.0	-15.4	-1.4836	µg/L	-1.4836	ppb	04:48:21
1	V 292.402†	-175.7	27.7	0.2888	µg/L	0.2888	ppb	04:48:21
1	Zn 213.857†	729.9	7.8	0.1785	µg/L	0.1785	ppb	04:48:41
2	Sc RADIAL	166415.3	166415.3	100	%			04:47:18
2	Al 396.153Radial†	-160.1	-9.9	-4.1138	µg/L	-4.1138	ppb	04:47:18
2	Ca 317.933Radial†	882.0	-0.4	-0.0817	µg/L	-0.0817	ppb	04:47:39
2	Fe 238.204 Radial†	-21.1	6.3	4.3267	µg/L	4.3267	ppb	04:47:39
2	K 766.490 Radial†	1000.5	136.7	73.722	µg/L	73.722	ppb	04:47:18
2	Mg 279.077 IEC†	42.8	-7.6	-15.230	µg/L	-15.230	ppb	04:47:39
2	Na 589.592 Radial†	131.6	13.6	3.2769	µg/L	3.2769	ppb	04:47:18
2	Sr 421.552†	43.4	52.0	0.2234	µg/L	0.2234	ppb	04:47:18
2	Sc 361.383	2044409.0	2044409.0	98.461	%			04:48:47
2	Y 371.029	1334923.3	1334923.3	98.388	%			04:48:47
2	Ag 328.068†	-818.3	136.2	1.1599	µg/L	1.1599	ppb	04:48:53
2	As 188.979†	1.2	1.0	1.4862	µg/L	1.4862	ppb	04:49:13
2	B 249.677†	249.4	42.6	1.6819	µg/L	1.6819	ppb	04:48:53
2	Ba 233.527†	-91.6	-3.3	-0.0791	µg/L	-0.0791	ppb	04:49:13
2	Be 313.107†	4318.9	1023.1	0.5891	µg/L	0.5891	ppb	04:48:53
2	Cd 226.502†	-127.2	12.9	0.3013	µg/L	0.3013	ppb	04:49:13
2	Co 228.616†	-99.2	-6.5	-0.2968	µg/L	-0.2968	ppb	04:49:13
2	Cr 267.716†	-151.3	31.7	0.6081	µg/L	0.6081	ppb	04:48:53
2	Cu 324.752†	5011.6	174.4	1.2419	µg/L	1.2419	ppb	04:48:53
2	Mn 257.610†	293.3	208.7	0.6053	µg/L	0.6053	ppb	04:48:53
2	Mo 202.031†	-4.6	-7.5	-0.7939	µg/L	-0.7939	ppb	04:49:13
2	Ni 231.604†	455.6	29.4	1.4626	µg/L	1.4626	ppb	04:49:13
2	P 214.914†	255.5	5.8	9.2418	µg/L	9.2418	ppb	04:49:13
2	Pb 220.353†	53.9	-12.4	-2.8647	µg/L	-2.8647	ppb	04:49:13

2	S 181.975 Axial†	39.8	-4.0	-16.766 µg/L	-16.766 ppb		04:49:13
2	Sb 206.836†	26.9	4.0	3.4671 µg/L	3.4671 ppb		04:49:13
2	Se 196.026†	13.2	-7.0	-7.5222 µg/L	-7.5222 ppb		04:49:13
2	SiO2†	3237.0	77.6	13.378 µg/L	13.378 ppb		04:48:53
2	Si 251.611†	372.4	32.1	2.1191 µg/L	2.1191 ppb		04:49:13
2	Sn 189.927†	12.2	4.1	1.7836 µg/L	1.7836 ppb		04:49:13
2	Ti 334.940†	1344.3	199.7	0.4556 µg/L	0.4556 ppb		04:48:53
2	Tl 190.801†	-25.6	1.8	2.6105 µg/L	2.6105 ppb		04:49:13
2	U 409.014†	-2.0	26.3	2.5268 µg/L	2.5268 ppb		04:48:53
2	V 292.402†	-136.1	67.8	0.7154 µg/L	0.7154 ppb		04:48:53
2	Zn 213.857†	731.8	10.4	0.2327 µg/L	0.2327 ppb		04:49:13
3	Sc RADIAL	165864.5	165864.5	99.7 %			04:47:44
3	Al 396.153Radial†	-138.4	11.3	4.7335 µg/L	4.7335 ppb		04:47:44
3	Ca 317.933Radial†	897.6	18.1	3.3793 µg/L	3.3793 ppb		04:48:05
3	Fe 238.204 Radial†	-17.1	10.2	7.0547 µg/L	7.0547 ppb		04:48:05
3	K 766.490 Radial†	855.4	-5.5	-2.9564 µg/L	-2.9564 ppb		04:47:44
3	Mg 279.077 IEC†	45.5	-4.7	-9.4769 µg/L	-9.4769 ppb		04:48:05
3	Na 589.592 Radial†	167.6	50.1	12.060 µg/L	12.060 ppb		04:47:44
3	Sr 421.552†	-5.2	3.4	0.0146 µg/L	0.0146 ppb		04:47:44
3	Sc 361.383	2058381.0	2058381.0	99.134 %			04:49:19
3	Y 371.029	1344164.6	1344164.6	99.069 %			04:49:19
3	Ag 328.068†	-794.1	166.2	1.4142 µg/L	1.4142 ppb		04:49:25
3	As 188.979†	7.3	7.1	10.713 µg/L	10.713 ppb		04:49:45
3	B 249.677†	240.0	31.4	1.2371 µg/L	1.2371 ppb		04:49:25
3	Ba 233.527†	-73.5	15.5	0.3817 µg/L	0.3817 ppb		04:49:45
3	Be 313.107†	3532.1	199.7	0.1150 µg/L	0.1150 ppb		04:49:25
3	Cd 226.502†	-136.8	4.1	0.1003 µg/L	0.1003 ppb		04:49:45
3	Co 228.616†	-97.7	-4.2	-0.1938 µg/L	-0.1938 ppb		04:49:45
3	Cr 267.716†	-182.9	0.9	0.0178 µg/L	0.0178 ppb		04:49:25
3	Cu 324.752†	4854.7	-18.4	-0.1301 µg/L	-0.1301 ppb		04:49:25
3	Mn 257.610†	106.1	17.9	0.0518 µg/L	0.0518 ppb		04:49:25
3	Mo 202.031†	0.4	-2.5	-0.2605 µg/L	-0.2605 ppb		04:49:45
3	Ni 231.604†	451.6	22.2	1.1060 µg/L	1.1060 ppb		04:49:45
3	P 214.914†	245.7	-5.8	-9.4717 µg/L	-9.4717 ppb		04:49:45
3	Pb 220.353†	60.9	-5.7	-1.3272 µg/L	-1.3272 ppb		04:49:45
3	S 181.975 Axial†	38.8	-5.3	-22.128 µg/L	-22.128 ppb		04:49:45
3	Sb 206.836†	27.9	4.9	4.2049 µg/L	4.2049 ppb		04:49:45
3	Se 196.026†	18.7	-1.6	-1.6768 µg/L	-1.6768 ppb		04:49:45
3	SiO2†	3174.1	-8.2	-1.4147 µg/L	-1.4147 ppb		04:49:25
3	Si 251.611†	393.1	50.4	3.4236 µg/L	3.4236 ppb		04:49:45
3	Sn 189.927†	12.2	4.0	1.7444 µg/L	1.7444 ppb		04:49:45
3	Ti 334.940†	1195.4	40.3	0.0918 µg/L	0.0918 ppb		04:49:25
3	Tl 190.801†	-22.3	5.4	7.7429 µg/L	7.7429 ppb		04:49:45
3	U 409.014†	29.1	57.6	5.5359 µg/L	5.5359 ppb		04:49:25
3	V 292.402†	-140.1	64.7	0.6908 µg/L	0.6908 ppb		04:49:25
3	Zn 213.857†	726.2	-0.3	-0.0122 µg/L	-0.0122 ppb		04:49:45

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2049695.3	98.715	%	0.3651				0.37%
Sc RADIAL	166415.9	100	%	0.3				0.33%
Y 371.029	1338472.1	98.649	%	0.3670				0.37%
Ag 328.068†	136.3	1.1598	µg/L	0.25442	1.1598	ppb	0.25442	21.94%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	2.2	0.9340	µg/L	4.55387	0.9340	ppb	4.55387	487.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.9	4.3653	µg/L	5.50526	4.3653	ppb	5.50526	126.12%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	33.6	1.3252	µg/L	0.32173	1.3252	ppb	0.32173	24.28%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	6.0	0.1491	µg/L	0.23041	0.1491	ppb	0.23041	154.55%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	505.9	0.2911	µg/L	0.25950	0.2911	ppb	0.25950	89.14%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	8.3	1.5600	µg/L	1.73730	1.5600	ppb	1.73730	111.37%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	9.0	0.2105	µg/L	0.10189	0.2105	ppb	0.10189	48.39%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-4.7	-0.2161	µg/L	0.07212	-0.2161	ppb	0.07212	33.37%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               13.1      0.2524 µg/L       0.31320      0.2524 ppb        0.31320 124.09%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               81.0      0.5778 µg/L       0.68706      0.5778 ppb        0.68706 118.92%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        11.0      7.6239 µg/L       3.61550      7.6239 ppb        3.61550  47.42%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         38.2      20.608 µg/L       46.0957      20.608 ppb        46.0957 223.68%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -8.1     -16.219 µg/L        7.2868     -16.219 ppb         7.2868  44.93%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               98.2      0.2848 µg/L       0.28694      0.2848 ppb        0.28694 100.76%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -4.4     -0.4709 µg/L       0.28395     -0.4709 ppb        0.28395  60.30%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        32.4      7.8004 µg/L       4.39771      7.8004 ppb        4.39771  56.38%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               20.6      1.0255 µg/L       0.48238      1.0255 ppb        0.48238  47.04%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -3.0     -4.9937 µg/L      12.60771     -4.9937 ppb       12.60771 252.47%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -8.7     -1.9964 µg/L       0.78785     -1.9964 ppb        0.78785  39.46%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -6.2     -25.976 µg/L       11.6214     -25.976 ppb        11.6214  44.74%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                5.5      4.6780 µg/L       1.50438      4.6780 ppb        1.50438  32.16%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.9     -5.2187 µg/L       3.11329     -5.2187 ppb        3.11329  59.66%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     39.0      6.7335 µg/L       7.51028      6.7335 ppb        7.51028 111.54%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               42.4      2.8657 µg/L       0.67243      2.8657 ppb        0.67243  23.46%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                3.5      1.4955 µg/L       0.46542      1.4955 ppb        0.46542  31.12%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               21.2      0.0910 µg/L       0.11511      0.0910 ppb        0.11511 126.50%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               73.4      0.1673 µg/L       0.25885      0.1673 ppb        0.25885 154.69%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                5.0      7.1911 µg/L       4.33114      7.1911 ppb        4.33114  60.23%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                22.8      2.1930 µg/L       3.52164      2.1930 ppb        3.52164 160.58%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                53.4      0.5650 µg/L       0.23953      0.5650 ppb        0.23953  42.40%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                6.0      0.1330 µg/L       0.12861      0.1330 ppb        0.12861  96.71%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 05:14:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	172227.2	172227.2	104	%			05:15:10
1	Al 396.153Radial†	12633.3	12353.9	5132.1	µg/L	5132.1	ppb	05:15:15
1	Ca 317.933Radial†	29400.2	27518.5	5143.0	µg/L	5143.0	ppb	05:15:15
1	Fe 238.204 Radial†	7675.3	7441.7	5168.2	µg/L	5168.2	ppb	05:15:15
1	K 766.490 Radial†	10648.4	9422.9	5080.9	µg/L	5080.9	ppb	05:15:15
1	Mg 279.077 IEC†	2739.3	2595.8	5222.3	µg/L	5222.3	ppb	05:15:15
1	Na 589.592 Radial†	43834.1	42226.0	10160	µg/L	10160	ppb	05:15:10
1	Sr 421.552†	121134.7	117025.3	502.49	µg/L	502.49	ppb	05:15:10
1	Sc 361.383	2084836.1	2084836.1	100.41	%			05:15:49
1	Y 371.029	1355707.9	1355707.9	99.920	%			05:15:49
1	Ag 328.068†	58493.9	59223.7	505.78	µg/L	505.78	ppb	05:15:55
1	As 188.979†	340.0	338.4	509.27	µg/L	509.27	ppb	05:16:15
1	B 249.677†	12917.0	12653.9	497.87	µg/L	497.87	ppb	05:15:55
1	Ba 233.527†	20511.8	20518.2	503.52	µg/L	503.52	ppb	05:15:55
1	Be 313.107†	883142.0	876193.0	504.87	µg/L	504.87	ppb	05:15:49
1	Cd 226.502†	21774.5	21828.2	504.25	µg/L	504.25	ppb	05:15:55
1	Co 228.616†	11035.8	11085.3	504.91	µg/L	504.91	ppb	05:15:55
1	Cr 267.716†	26151.0	26230.2	503.18	µg/L	503.18	ppb	05:15:55
1	Cu 324.752†	75908.3	70684.6	503.79	µg/L	503.79	ppb	05:15:55
1	Mn 257.610†	177245.2	176436.4	511.66	µg/L	511.66	ppb	05:15:49
1	Mo 202.031†	4700.7	4678.8	497.99	µg/L	497.99	ppb	05:16:15
1	Ni 231.604†	10617.9	10141.5	503.56	µg/L	503.56	ppb	05:15:55
1	P 214.914†	1781.0	1520.1	2403.6	µg/L	2403.6	ppb	05:16:15
1	Pb 220.353†	2250.4	2174.1	500.74	µg/L	500.74	ppb	05:16:15
1	S 181.975 Axial†	276.8	231.3	971.49	µg/L	971.49	ppb	05:16:15
1	Sb 206.836†	603.5	577.8	494.02	µg/L	494.02	ppb	05:16:15
1	Se 196.026†	484.1	461.7	496.29	µg/L	496.29	ppb	05:16:15
1	SiO2†	34822.6	31471.2	5427.0	µg/L	5427.0	ppb	05:15:55
1	Si 251.611†	37277.0	36779.6	2495.6	µg/L	2495.6	ppb	05:15:55
1	Sn 189.927†	1159.2	1146.3	498.42	µg/L	498.42	ppb	05:16:15
1	Ti 334.940†	225269.5	223189.3	509.01	µg/L	509.01	ppb	05:15:49
1	Tl 190.801†	327.0	353.5	509.30	µg/L	509.30	ppb	05:16:15
1	U 409.014†	5376.2	5382.6	516.31	µg/L	516.31	ppb	05:15:55
1	V 292.402†	47555.3	47568.2	507.17	µg/L	507.17	ppb	05:15:55
1	Zn 213.857†	22415.3	21591.5	501.10	µg/L	501.10	ppb	05:15:55
2	Sc RADIAL	167457.3	167457.3	101	%			05:15:21
2	Al 396.153Radial†	12541.6	12610.5	5239.1	µg/L	5239.1	ppb	05:15:26
2	Ca 317.933Radial†	29011.4	27941.2	5222.0	µg/L	5222.0	ppb	05:15:26
2	Fe 238.204 Radial†	7557.8	7536.2	5233.8	µg/L	5233.8	ppb	05:15:26
2	K 766.490 Radial†	10583.7	9651.7	5204.3	µg/L	5204.3	ppb	05:15:26
2	Mg 279.077 IEC†	2710.0	2642.0	5315.2	µg/L	5315.2	ppb	05:15:26
2	Na 589.592 Radial†	43832.4	43430.4	10450	µg/L	10450	ppb	05:15:21
2	Sr 421.552†	121062.2	120286.4	516.49	µg/L	516.49	ppb	05:15:21
2	Sc 361.383	2076921.7	2076921.7	100.03	%			05:16:22
2	Y 371.029	1350159.9	1350159.9	99.511	%			05:16:22
2	Ag 328.068†	58864.5	59816.3	510.85	µg/L	510.85	ppb	05:16:28
2	As 188.979†	333.7	333.4	501.81	µg/L	501.81	ppb	05:16:48
2	B 249.677†	13088.8	12874.6	506.56	µg/L	506.56	ppb	05:16:28
2	Ba 233.527†	20704.4	20788.6	510.16	µg/L	510.16	ppb	05:16:28
2	Be 313.107†	880000.8	876404.3	504.97	µg/L	504.97	ppb	05:16:22
2	Cd 226.502†	21973.6	22109.9	510.75	µg/L	510.75	ppb	05:16:28
2	Co 228.616†	11137.8	11229.2	511.48	µg/L	511.48	ppb	05:16:28
2	Cr 267.716†	26340.3	26518.7	508.71	µg/L	508.71	ppb	05:16:28
2	Cu 324.752†	76399.2	71463.4	509.35	µg/L	509.35	ppb	05:16:28
2	Mn 257.610†	175270.2	175134.6	507.88	µg/L	507.88	ppb	05:16:22
2	Mo 202.031†	4674.9	4670.8	497.15	µg/L	497.15	ppb	05:16:48
2	Ni 231.604†	10754.8	10318.6	512.36	µg/L	512.36	ppb	05:16:28
2	P 214.914†	1773.8	1519.7	2401.9	µg/L	2401.9	ppb	05:16:48
2	Pb 220.353†	2245.4	2177.6	501.54	µg/L	501.54	ppb	05:16:48

2	S 181.975 Axial†	279.4	235.0	986.68 µg/L	986.68 ppb	05:16:48
2	Sb 206.836†	594.4	571.0	488.14 µg/L	488.14 ppb	05:16:48
2	Se 196.026†	488.5	467.9	502.99 µg/L	502.99 ppb	05:16:48
2	SiO2†	34992.7	31773.4	5479.1 µg/L	5479.1 ppb	05:16:28
2	Si 251.611†	37551.6	37195.5	2524.5 µg/L	2524.5 ppb	05:16:28
2	Sn 189.927†	1163.0	1154.4	501.99 µg/L	501.99 ppb	05:16:48
2	Ti 334.940†	221445.5	220221.3	502.24 µg/L	502.24 ppb	05:16:22
2	Tl 190.801†	317.7	345.4	497.52 µg/L	497.52 ppb	05:16:48
2	U 409.014†	5392.1	5418.9	519.78 µg/L	519.78 ppb	05:16:28
2	V 292.402†	47943.9	48137.2	513.18 µg/L	513.18 ppb	05:16:28
2	Zn 213.857†	22617.6	21878.8	507.76 µg/L	507.76 ppb	05:16:28
3	Sc RADIAL	171569.2	171569.2	103 %		05:15:32
3	Al 396.153Radial†	12489.9	12261.7	5093.6 µg/L	5093.6 ppb	05:15:37
3	Ca 317.933Radial†	29008.7	27247.8	5092.4 µg/L	5092.4 ppb	05:15:37
3	Fe 238.204 Radial†	7578.5	7376.3	5122.9 µg/L	5122.9 ppb	05:15:37
3	K 766.490 Radial†	10611.7	9426.8	5083.0 µg/L	5083.0 ppb	05:15:37
3	Mg 279.077 IEC†	2697.7	2565.6	5161.9 µg/L	5161.9 ppb	05:15:37
3	Na 589.592 Radial†	43952.7	42503.3	10227 µg/L	10227 ppb	05:15:32
3	Sr 421.552†	121612.8	117937.6	506.40 µg/L	506.40 ppb	05:15:32
3	Sc 361.383	2059512.6	2059512.6	99.188 %		05:16:55
3	Y 371.029	1338819.3	1338819.3	98.675 %		05:16:55
3	Ag 328.068†	57729.6	59169.5	505.31 µg/L	505.31 ppb	05:17:01
3	As 188.979†	339.0	341.6	513.93 µg/L	513.93 ppb	05:17:21
3	B 249.677†	12826.5	12720.9	500.53 µg/L	500.53 ppb	05:17:01
3	Ba 233.527†	20249.0	20504.5	503.19 µg/L	503.19 ppb	05:17:01
3	Be 313.107†	877081.2	880897.4	507.56 µg/L	507.56 ppb	05:16:55
3	Cd 226.502†	21494.7	21812.8	503.90 µg/L	503.90 ppb	05:17:01
3	Co 228.616†	10901.3	11084.9	504.91 µg/L	504.91 ppb	05:17:01
3	Cr 267.716†	25768.1	26164.4	501.92 µg/L	501.92 ppb	05:17:01
3	Cu 324.752†	74890.8	70588.3	503.10 µg/L	503.10 ppb	05:17:01
3	Mn 257.610†	174518.1	175857.5	509.98 µg/L	509.98 ppb	05:16:55
3	Mo 202.031†	4673.0	4708.4	501.14 µg/L	501.14 ppb	05:17:21
3	Ni 231.604†	10484.1	10136.7	503.32 µg/L	503.32 ppb	05:17:01
3	P 214.914†	1768.1	1528.8	2418.1 µg/L	2418.1 ppb	05:17:21
3	Pb 220.353†	2227.7	2178.8	501.82 µg/L	501.82 ppb	05:17:21
3	S 181.975 Axial†	278.2	236.1	991.61 µg/L	991.61 ppb	05:17:21
3	Sb 206.836†	601.5	583.2	498.64 µg/L	498.64 ppb	05:17:21
3	Se 196.026†	477.3	460.7	495.30 µg/L	495.30 ppb	05:17:21
3	SiO2†	34350.4	31421.6	5418.5 µg/L	5418.5 ppb	05:17:01
3	Si 251.611†	36776.4	36731.4	2492.2 µg/L	2492.2 ppb	05:17:01
3	Sn 189.927†	1155.2	1156.4	502.75 µg/L	502.75 ppb	05:17:21
3	Ti 334.940†	220724.3	221365.5	504.85 µg/L	504.85 ppb	05:16:55
3	Tl 190.801†	318.7	349.1	502.92 µg/L	502.92 ppb	05:17:21
3	U 409.014†	5400.9	5473.3	525.04 µg/L	525.04 ppb	05:17:01
3	V 292.402†	46896.0	47485.9	506.33 µg/L	506.33 ppb	05:17:01
3	Zn 213.857†	22082.8	21530.7	499.68 µg/L	499.68 ppb	05:17:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2073756.8	99.874	%	0.6239				0.62%
Sc RADIAL	170417.9	102	%	1.6				1.52%
Y 371.029	1348229.0	99.368	%	0.6345				0.64%
Ag 328.068†	59403.1	507.31	µg/L	3.071	507.31	ppb	3.071	0.61%
QC value within limits for Ag 328.068 Recovery = 101.46%								
Al 396.153Radial†	12408.7	5154.9	µg/L	75.42	5154.9	ppb	75.42	1.46%
QC value within limits for Al 396.153Radial Recovery = 103.10%								
As 188.979†	337.8	508.33	µg/L	6.112	508.33	ppb	6.112	1.20%
QC value within limits for As 188.979 Recovery = 101.67%								
B 249.677†	12749.8	501.65	µg/L	4.455	501.65	ppb	4.455	0.89%
QC value within limits for B 249.677 Recovery = 100.33%								
Ba 233.527†	20603.8	505.62	µg/L	3.932	505.62	ppb	3.932	0.78%
QC value within limits for Ba 233.527 Recovery = 101.12%								
Be 313.107†	877831.6	505.80	µg/L	1.525	505.80	ppb	1.525	0.30%
QC value within limits for Be 313.107 Recovery = 101.16%								
Ca 317.933Radial†	27569.2	5152.5	µg/L	65.31	5152.5	ppb	65.31	1.27%
QC value within limits for Ca 317.933Radial Recovery = 103.05%								
Cd 226.502†	21917.0	506.30	µg/L	3.861	506.30	ppb	3.861	0.76%
QC value within limits for Cd 226.502 Recovery = 101.26%								
Co 228.616†	11133.1	507.10	µg/L	3.790	507.10	ppb	3.790	0.75%

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   QC value within limits for Co 228.616  Recovery = 101.42%
Cr 267.716†            26304.4      504.60 µg/L         3.616      504.60 ppb          3.616   0.72%
   QC value within limits for Cr 267.716  Recovery = 100.92%
Cu 324.752†            70912.1      505.41 µg/L         3.423      505.41 ppb          3.423   0.68%
   QC value within limits for Cu 324.752  Recovery = 101.08%
Fe 238.204 Radial†      7451.4      5175.0 µg/L        55.76      5175.0 ppb         55.76   1.08%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.50%
K 766.490 Radial†       9500.4      5122.8 µg/L        70.63      5122.8 ppb         70.63   1.38%
   QC value within limits for K 766.490 Radial  Recovery = 102.46%
Mg 279.077 IEC†         2601.1      5233.1 µg/L        77.23      5233.1 ppb         77.23   1.48%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.66%
Mn 257.610†           175809.5      509.84 µg/L         1.891      509.84 ppb          1.891   0.37%
   QC value within limits for Mn 257.610  Recovery = 101.97%
Mo 202.031†             4686.0      498.76 µg/L         2.105      498.76 ppb          2.105   0.42%
   QC value within limits for Mo 202.031  Recovery = 99.75%
Na 589.592 Radial†     42719.9       10279 µg/L       151.8        10279 ppb        151.8   1.48%
   QC value within limits for Na 589.592 Radial  Recovery = 102.79%
Ni 231.604†            10199.0      506.41 µg/L         5.150      506.41 ppb          5.150   1.02%
   QC value within limits for Ni 231.604  Recovery = 101.28%
P 214.914†              1522.9      2407.9 µg/L         8.91      2407.9 ppb          8.91   0.37%
   QC value within limits for P 214.914  Recovery = 96.32%
Pb 220.353†             2176.8      501.37 µg/L         0.562      501.37 ppb          0.562   0.11%
   QC value within limits for Pb 220.353  Recovery = 100.27%
S 181.975 Axial†         234.1      983.26 µg/L        10.489      983.26 ppb         10.489   1.07%
   QC value within limits for S 181.975 Axial  Recovery = 98.33%
Sb 206.836†              577.3      493.60 µg/L         5.263      493.60 ppb          5.263   1.07%
   QC value within limits for Sb 206.836  Recovery = 98.72%
Se 196.026†              463.4      498.19 µg/L         4.184      498.19 ppb          4.184   0.84%
   QC value within limits for Se 196.026  Recovery = 99.64%
SiO2†                  31555.4      5441.5 µg/L        32.84      5441.5 ppb         32.84   0.60%
   QC value within limits for SiO2  Recovery = 101.76%
Si 251.611†            36902.2      2504.1 µg/L        17.72      2504.1 ppb         17.72   0.71%
   QC value within limits for Si 251.611  Recovery = 100.16%
Sn 189.927†             1152.4      501.05 µg/L         2.312      501.05 ppb          2.312   0.46%
   QC value within limits for Sn 189.927  Recovery = 100.21%
Sr 421.552†           118416.4      508.46 µg/L         7.224      508.46 ppb          7.224   1.42%
   QC value within limits for Sr 421.552  Recovery = 101.69%
Ti 334.940†           221592.0      505.37 µg/L         3.416      505.37 ppb          3.416   0.68%
   QC value within limits for Ti 334.940  Recovery = 101.07%
Tl 190.801†              349.4      503.25 µg/L         5.895      503.25 ppb          5.895   1.17%
   QC value within limits for Tl 190.801  Recovery = 100.65%
U 409.014†              5425.0      520.38 µg/L         4.400      520.38 ppb          4.400   0.85%
   QC value within limits for U 409.014  Recovery = 104.08%
V 292.402†             47730.4      508.89 µg/L         3.738      508.89 ppb          3.738   0.73%
   QC value within limits for V 292.402  Recovery = 101.78%
Zn 213.857†            21667.0      502.85 µg/L         4.313      502.85 ppb          4.313   0.86%
   QC value within limits for Zn 213.857  Recovery = 100.57%
All analyte(s) passed QC.
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Sequence No.: 20
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 05:17:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	165718.7	165718.7	99.6	%			05:18:03
1	Al 396.153Radial†	-141.3	8.3	3.4527	µg/L	3.4527	ppb	05:18:03
1	Ca 317.933Radial†	899.3	20.6	3.8510	µg/L	3.8510	ppb	05:18:23
1	Fe 238.204 Radial†	-7.3	20.1	13.871	µg/L	13.871	ppb	05:18:23
1	K 766.490 Radial†	843.0	-17.2	-9.2481	µg/L	-9.2481	ppb	05:18:03
1	Mg 279.077 IEC†	50.9	0.7	1.4491	µg/L	1.4491	ppb	05:18:23
1	Na 589.592 Radial†	143.6	26.3	6.3191	µg/L	6.3191	ppb	05:18:03
1	Sr 421.552†	63.7	72.6	0.3119	µg/L	0.3119	ppb	05:18:03
1	Sc 361.383	2066032.6	2066032.6	99.502	%			05:19:25
1	Y 371.029	1348705.3	1348705.3	99.403	%			05:19:25
1	Ag 328.068†	-873.4	89.6	0.7604	µg/L	0.7604	ppb	05:19:31
1	As 188.979†	5.1	4.9	7.3538	µg/L	7.3538	ppb	05:19:51
1	B 249.677†	236.7	27.2	1.0712	µg/L	1.0712	ppb	05:19:31
1	Ba 233.527†	-78.8	10.5	0.2575	µg/L	0.2575	ppb	05:19:51
1	Be 313.107†	3547.7	202.1	0.1176	µg/L	0.1176	ppb	05:19:31
1	Cd 226.502†	-121.1	20.5	0.4759	µg/L	0.4759	ppb	05:19:51
1	Co 228.616†	-99.9	-6.1	-0.2795	µg/L	-0.2795	ppb	05:19:51
1	Cr 267.716†	-183.4	1.1	0.0202	µg/L	0.0202	ppb	05:19:31
1	Cu 324.752†	4795.9	-95.7	-0.6791	µg/L	-0.6791	ppb	05:19:31
1	Mn 257.610†	230.4	142.4	0.4130	µg/L	0.4130	ppb	05:19:31
1	Mo 202.031†	3.2	0.4	0.0411	µg/L	0.0411	ppb	05:19:51
1	Ni 231.604†	436.5	5.4	0.2705	µg/L	0.2705	ppb	05:19:51
1	P 214.914†	249.2	-3.2	-5.1420	µg/L	-5.1420	ppb	05:19:51
1	Pb 220.353†	63.1	-3.7	-0.8596	µg/L	-0.8596	ppb	05:19:51
1	S 181.975 Axial†	39.3	-4.9	-20.609	µg/L	-20.609	ppb	05:19:51
1	Sb 206.836†	23.3	0.2	0.2016	µg/L	0.2016	ppb	05:19:51
1	Se 196.026†	22.6	2.2	2.4138	µg/L	2.4138	ppb	05:19:51
1	SiO2†	3148.0	-46.2	-7.9741	µg/L	-7.9741	ppb	05:19:31
1	Si 251.611†	383.9	39.7	2.7141	µg/L	2.7141	ppb	05:19:51
1	Sn 189.927†	9.4	1.2	0.5163	µg/L	0.5163	ppb	05:19:51
1	Ti 334.940†	1372.5	213.8	0.4877	µg/L	0.4877	ppb	05:19:31
1	Tl 190.801†	-24.5	3.2	4.6454	µg/L	4.6454	ppb	05:19:51
1	U 409.014†	35.2	63.6	6.1173	µg/L	6.1173	ppb	05:19:31
1	V 292.402†	-202.0	3.0	0.0431	µg/L	0.0431	ppb	05:19:31
1	Zn 213.857†	710.6	-18.6	-0.4370	µg/L	-0.4370	ppb	05:19:51
2	Sc RADIAL	166541.2	166541.2	100	%			05:18:29
2	Al 396.153Radial†	-156.8	-6.5	-2.6998	µg/L	-2.6998	ppb	05:18:29
2	Ca 317.933Radial†	871.5	-11.6	-2.1711	µg/L	-2.1711	ppb	05:18:49
2	Fe 238.204 Radial†	-11.5	15.9	10.980	µg/L	10.980	ppb	05:18:49
2	K 766.490 Radial†	807.0	-57.3	-30.909	µg/L	-30.909	ppb	05:18:29
2	Mg 279.077 IEC†	41.5	-9.0	-18.073	µg/L	-18.073	ppb	05:18:49
2	Na 589.592 Radial†	165.7	47.6	11.457	µg/L	11.457	ppb	05:18:29
2	Sr 421.552†	7.6	16.2	0.0697	µg/L	0.0697	ppb	05:18:29
2	Sc 361.383	2062257.0	2062257.0	99.320	%			05:19:57
2	Y 371.029	1348118.6	1348118.6	99.360	%			05:19:57
2	Ag 328.068†	-904.7	56.4	0.4841	µg/L	0.4841	ppb	05:20:03
2	As 188.979†	-1.0	-1.2	-1.7592	µg/L	-1.7592	ppb	05:20:23
2	B 249.677†	218.7	9.6	0.3746	µg/L	0.3746	ppb	05:20:03
2	Ba 233.527†	-79.2	10.0	0.2457	µg/L	0.2457	ppb	05:20:23
2	Be 313.107†	3435.7	95.9	0.0561	µg/L	0.0561	ppb	05:20:03
2	Cd 226.502†	-127.1	14.1	0.3230	µg/L	0.3230	ppb	05:20:23
2	Co 228.616†	-100.8	-7.1	-0.3272	µg/L	-0.3272	ppb	05:20:23
2	Cr 267.716†	-158.4	25.9	0.4966	µg/L	0.4966	ppb	05:20:03
2	Cu 324.752†	4825.9	-56.6	-0.4012	µg/L	-0.4012	ppb	05:20:03
2	Mn 257.610†	159.8	71.8	0.2082	µg/L	0.2082	ppb	05:20:03
2	Mo 202.031†	-3.8	-6.6	-0.7022	µg/L	-0.7022	ppb	05:20:23
2	Ni 231.604†	452.1	21.9	1.0920	µg/L	1.0920	ppb	05:20:23
2	P 214.914†	248.9	-3.1	-5.0009	µg/L	-5.0009	ppb	05:20:23
2	Pb 220.353†	60.7	-6.0	-1.3826	µg/L	-1.3826	ppb	05:20:23

2	S 181.975 Axial†	39.7	-4.4	-18.583	µg/L	-18.583 ppb	05:20:23
2	Sb 206.836†	23.2	0.1	0.0722	µg/L	0.0722 ppb	05:20:23
2	Se 196.026†	16.7	-3.6	-3.8275	µg/L	-3.8275 ppb	05:20:23
2	SiO2†	3235.7	47.8	8.2443	µg/L	8.2443 ppb	05:20:03
2	Si 251.611†	409.3	66.0	4.4300	µg/L	4.4300 ppb	05:20:23
2	Sn 189.927†	16.7	8.6	3.7176	µg/L	3.7176 ppb	05:20:23
2	Ti 334.940†	1310.6	154.0	0.3513	µg/L	0.3513 ppb	05:20:03
2	Tl 190.801†	-24.7	3.0	4.2932	µg/L	4.2932 ppb	05:20:23
2	U 409.014†	-82.9	-55.2	-5.3150	µg/L	-5.3150 ppb	05:20:03
2	V 292.402†	-130.5	74.6	0.7754	µg/L	0.7754 ppb	05:20:03
2	Zn 213.857†	735.2	7.4	0.1700	µg/L	0.1700 ppb	05:20:23
3	Sc RADIAL	163672.9	163672.9	98.4	%		05:18:55
3	Al 396.153Radial†	-134.5	13.4	5.6184	µg/L	5.6184 ppb	05:18:55
3	Ca 317.933Radial†	892.3	24.8	4.6311	µg/L	4.6311 ppb	05:19:15
3	Fe 238.204 Radial†	-14.6	12.5	8.6595	µg/L	8.6595 ppb	05:19:15
3	K 766.490 Radial†	833.4	-16.3	-8.7967	µg/L	-8.7967 ppb	05:18:55
3	Mg 279.077 IEC†	36.5	-13.2	-26.648	µg/L	-26.648 ppb	05:19:15
3	Na 589.592 Radial†	133.9	18.2	4.3681	µg/L	4.3681 ppb	05:18:55
3	Sr 421.552†	-16.3	-7.9	-0.0339	µg/L	-0.0339 ppb	05:18:55
3	Sc 361.383	2048624.7	2048624.7	98.664	%		05:20:29
3	Y 371.029	1337702.1	1337702.1	98.592	%		05:20:29
3	Ag 328.068†	-935.3	19.3	0.1658	µg/L	0.1658 ppb	05:20:35
3	As 188.979†	6.5	6.4	9.6318	µg/L	9.6318 ppb	05:20:55
3	B 249.677†	254.6	47.4	1.8680	µg/L	1.8680 ppb	05:20:35
3	Ba 233.527†	-92.0	-3.5	-0.0857	µg/L	-0.0857 ppb	05:20:55
3	Be 313.107†	3503.8	187.9	0.1085	µg/L	0.1085 ppb	05:20:35
3	Cd 226.502†	-137.0	3.3	0.0733	µg/L	0.0733 ppb	05:20:55
3	Co 228.616†	-94.6	-1.5	-0.0712	µg/L	-0.0712 ppb	05:20:55
3	Cr 267.716†	-174.0	9.0	0.1735	µg/L	0.1735 ppb	05:20:35
3	Cu 324.752†	4839.3	-10.7	-0.0747	µg/L	-0.0747 ppb	05:20:35
3	Mn 257.610†	183.2	96.5	0.2798	µg/L	0.2798 ppb	05:20:35
3	Mo 202.031†	-3.0	-5.9	-0.6226	µg/L	-0.6226 ppb	05:20:55
3	Ni 231.604†	451.0	23.8	1.1844	µg/L	1.1844 ppb	05:20:55
3	P 214.914†	248.2	-2.2	-3.4885	µg/L	-3.4885 ppb	05:20:55
3	Pb 220.353†	60.9	-5.4	-1.2429	µg/L	-1.2429 ppb	05:20:55
3	S 181.975 Axial†	36.5	-7.4	-30.986	µg/L	-30.986 ppb	05:20:55
3	Sb 206.836†	29.1	6.3	5.4094	µg/L	5.4094 ppb	05:20:55
3	Se 196.026†	13.6	-6.7	-7.1334	µg/L	-7.1334 ppb	05:20:55
3	SiO2†	3148.4	-19.0	-3.2795	µg/L	-3.2795 ppb	05:20:35
3	Si 251.611†	364.6	23.4	1.5553	µg/L	1.5553 ppb	05:20:55
3	Sn 189.927†	12.5	4.4	1.8906	µg/L	1.8906 ppb	05:20:55
3	Ti 334.940†	1234.6	85.7	0.1955	µg/L	0.1955 ppb	05:20:35
3	Tl 190.801†	-27.8	-0.3	-0.4999	µg/L	-0.4999 ppb	05:20:55
3	U 409.014†	-62.4	-35.0	-3.3695	µg/L	-3.3695 ppb	05:20:35
3	V 292.402†	-187.8	15.7	0.1564	µg/L	0.1564 ppb	05:20:35
3	Zn 213.857†	730.3	7.4	0.1665	µg/L	0.1665 ppb	05:20:55

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2058971.4	99.162	%	0.4410				0.44%
Sc RADIAL	165310.9	99.4	%	0.89				0.89%
Y 371.029	1344842.0	99.119	%	0.4562				0.46%
Ag 328.068†	55.1	0.4701	µg/L	0.29754	0.4701	ppb	0.29754	63.29%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.1	2.1238	µg/L	4.31543	2.1238	ppb	4.31543	203.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.4	5.0755	µg/L	6.02758	5.0755	ppb	6.02758	118.76%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	28.1	1.1046	µg/L	0.74728	1.1046	ppb	0.74728	67.65%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.7	0.1392	µg/L	0.19486	0.1392	ppb	0.19486	140.02%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	162.0	0.0941	µg/L	0.03318	0.0941	ppb	0.03318	35.28%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.3	2.1036	µg/L	3.72258	2.1036	ppb	3.72258	176.96%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	12.6	0.2907	µg/L	0.20323	0.2907	ppb	0.20323	69.90%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-4.9	-0.2260	µg/L	0.13612	-0.2260	ppb	0.13612	60.24%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              12.0      0.2301 µg/L       0.24321      0.2301 ppb        0.24321 105.71%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -54.3     -0.3850 µg/L       0.30251     -0.3850 ppb        0.30251  78.58%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       16.1      11.170 µg/L        2.6112      11.170 ppb         2.6112  23.38%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -30.3     -16.318 µg/L       12.6384     -16.318 ppb        12.6384  77.45%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -7.2     -14.424 µg/L       14.3995     -14.424 ppb        14.3995  99.83%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             103.6      0.3003 µg/L       0.10393      0.3003 ppb        0.10393  34.60%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -4.0     -0.4279 µg/L       0.40815     -0.4279 ppb        0.40815  95.39%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       30.7      7.3813 µg/L       3.66182      7.3813 ppb        3.66182  49.61%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              17.1      0.8490 µg/L       0.50308      0.8490 ppb        0.50308  59.26%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -2.8     -4.5438 µg/L       0.91664     -4.5438 ppb        0.91664  20.17%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -5.0     -1.1617 µg/L       0.27080     -1.1617 ppb        0.27080  23.31%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -5.6     -23.393 µg/L        6.6537     -23.393 ppb         6.6537  28.44%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               2.2      1.8944 µg/L       3.04480      1.8944 ppb        3.04480 160.73%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -2.7     -2.8491 µg/L       4.84822     -2.8491 ppb        4.84822 170.17%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    -5.8     -1.0031 µg/L       8.34542     -1.0031 ppb        8.34542 831.98%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†              43.1      2.8998 µg/L       1.44628      2.8998 ppb        1.44628  49.88%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               4.7      2.0415 µg/L       1.60595      2.0415 ppb        1.60595  78.67%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              27.0      0.1159 µg/L       0.17744      0.1159 ppb        0.17744 153.10%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             151.2      0.3448 µg/L       0.14623      0.3448 ppb        0.14623  42.41%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               1.9      2.8129 µg/L       2.87438      2.8129 ppb        2.87438 102.19%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -8.9     -0.8557 µg/L       6.11669     -0.8557 ppb        6.11669 714.79%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               31.1      0.3250 µg/L       0.39419      0.3250 ppb        0.39419 121.30%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              -1.3     -0.0335 µg/L       0.34947     -0.0335 ppb        0.34947 >999.9%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 21
Sample ID: 1201869986|880674|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 315
Date Collected: 6/30/2009 05:21:04
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869986|880674|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	162394.3	162394.3	97.6	%			05:21:39
1	Al 396.153Radial†	-104.2	43.4	18.099	µg/L	18.099	ppb	05:21:39
1	Ca 317.933Radial†	1011.2	153.8	28.736	µg/L	28.736	ppb	05:21:59
1	Fe 238.204 Radial†	33.4	61.5	42.570	µg/L	42.570	ppb	05:21:59
1	K 766.490 Radial†	884.5	42.7	23.030	µg/L	23.030	ppb	05:21:39
1	Mg 279.077 IEC†	37.2	-12.3	-24.795	µg/L	-24.795	ppb	05:21:59
1	Na 589.592 Radial†	153.1	38.9	9.3489	µg/L	9.3489	ppb	05:21:39
1	Sr 421.552†	50.5	60.4	0.2592	µg/L	0.2592	ppb	05:21:39
1	Sc 361.383	2026208.9	2026208.9	97.584	%			05:23:01
1	Y 371.029	1320743.7	1320743.7	97.343	%			05:23:01
1	Ag 328.068†	-929.4	14.9	0.1311	µg/L	0.1311	ppb	05:23:07
1	As 188.979†	-1.9	-2.1	-3.1331	µg/L	-3.1331	ppb	05:23:27
1	B 249.677†	315.2	112.4	4.4222	µg/L	4.4222	ppb	05:23:07
1	Ba 233.527†	-76.0	11.9	0.2906	µg/L	0.2906	ppb	05:23:27
1	Be 313.107†	3359.4	79.2	0.0479	µg/L	0.0479	ppb	05:23:07
1	Cd 226.502†	-142.1	-3.5	-0.0772	µg/L	-0.0772	ppb	05:23:27
1	Co 228.616†	-99.8	-8.0	-0.3663	µg/L	-0.3663	ppb	05:23:27
1	Cr 267.716†	-149.6	32.1	0.6155	µg/L	0.6155	ppb	05:23:07
1	Cu 324.752†	5452.2	671.6	4.7861	µg/L	4.7861	ppb	05:23:07
1	Mn 257.610†	322.7	241.5	0.7007	µg/L	0.7007	ppb	05:23:07
1	Mo 202.031†	0.4	-2.4	-0.2582	µg/L	-0.2582	ppb	05:23:27
1	Ni 231.604†	460.7	38.8	1.9289	µg/L	1.9289	ppb	05:23:27
1	P 214.914†	257.6	10.3	17.319	µg/L	17.319	ppb	05:23:27
1	Pb 220.353†	71.6	6.3	1.4315	µg/L	1.4315	ppb	05:23:27
1	S 181.975 Axial†	42.1	-1.3	-5.3504	µg/L	-5.3504	ppb	05:23:27
1	Sb 206.836†	28.1	5.5	4.7485	µg/L	4.7485	ppb	05:23:27
1	Se 196.026†	11.2	-8.9	-9.5304	µg/L	-9.5304	ppb	05:23:27
1	SiO2†	3294.6	166.2	28.656	µg/L	28.656	ppb	05:23:07
1	Si 251.611†	576.3	244.5	14.498	µg/L	14.498	ppb	05:23:27
1	Sn 189.927†	147.1	142.5	61.611	µg/L	61.611	ppb	05:23:27
1	Ti 334.940†	1490.9	362.2	0.8254	µg/L	0.8254	ppb	05:23:07
1	Tl 190.801†	-35.6	-8.6	-12.467	µg/L	-12.467	ppb	05:23:27
1	U 409.014†	38.6	67.9	6.5167	µg/L	6.5167	ppb	05:23:07
1	V 292.402†	-183.6	17.9	0.2012	µg/L	0.2012	ppb	05:23:07
1	Zn 213.857†	769.7	55.9	1.2810	µg/L	1.2810	ppb	05:23:27
2	Sc RADIAL	163173.5	163173.5	98.1	%			05:22:05
2	Al 396.153Radial†	-137.7	9.7	4.0464	µg/L	4.0464	ppb	05:22:05
2	Ca 317.933Radial†	1007.4	144.9	27.086	µg/L	27.086	ppb	05:22:25
2	Fe 238.204 Radial†	27.7	55.6	38.492	µg/L	38.492	ppb	05:22:25
2	K 766.490 Radial†	877.9	31.6	17.063	µg/L	17.063	ppb	05:22:05
2	Mg 279.077 IEC†	37.3	-12.3	-24.811	µg/L	-24.811	ppb	05:22:25
2	Na 589.592 Radial†	146.1	31.0	7.4558	µg/L	7.4558	ppb	05:22:05
2	Sr 421.552†	71.2	81.3	0.3489	µg/L	0.3489	ppb	05:22:05
2	Sc 361.383	2010750.6	2010750.6	96.840	%			05:23:33
2	Y 371.029	1311263.0	1311263.0	96.644	%			05:23:33
2	Ag 328.068†	-924.8	12.3	0.1123	µg/L	0.1123	ppb	05:23:39
2	As 188.979†	1.8	1.6	2.4163	µg/L	2.4163	ppb	05:24:00
2	B 249.677†	260.5	58.3	2.2900	µg/L	2.2900	ppb	05:23:39
2	Ba 233.527†	-88.0	-1.1	-0.0266	µg/L	-0.0266	ppb	05:24:00
2	Be 313.107†	3413.4	161.5	0.0946	µg/L	0.0946	ppb	05:23:39
2	Cd 226.502†	-143.1	-5.6	-0.1308	µg/L	-0.1308	ppb	05:24:00
2	Co 228.616†	-97.0	-5.8	-0.2660	µg/L	-0.2660	ppb	05:24:00
2	Cr 267.716†	-150.5	30.0	0.5747	µg/L	0.5747	ppb	05:23:39
2	Cu 324.752†	5399.1	659.7	4.7008	µg/L	4.7008	ppb	05:23:39
2	Mn 257.610†	276.5	196.3	0.5696	µg/L	0.5696	ppb	05:23:39
2	Mo 202.031†	-0.0	-2.9	-0.3028	µg/L	-0.3028	ppb	05:24:00
2	Ni 231.604†	455.4	36.9	1.8374	µg/L	1.8374	ppb	05:24:00
2	P 214.914†	253.8	8.4	14.159	µg/L	14.159	ppb	05:24:00
2	Pb 220.353†	64.2	-0.8	-0.1965	µg/L	-0.1965	ppb	05:24:00

2	S 181.975 Axial†	36.6	-6.6	-27.851	µg/L	-27.851 ppb	05:24:00
2	Sb 206.836†	27.3	4.9	4.2384	µg/L	4.2384 ppb	05:24:00
2	Se 196.026†	11.6	-8.5	-9.0643	µg/L	-9.0643 ppb	05:24:00
2	SiO2†	3313.8	212.0	36.554	µg/L	36.554 ppb	05:23:39
2	Si 251.611†	587.5	260.6	15.663	µg/L	15.663 ppb	05:24:00
2	Sn 189.927†	143.5	139.9	60.499	µg/L	60.499 ppb	05:24:00
2	Ti 334.940†	1396.6	276.6	0.6301	µg/L	0.6301 ppb	05:23:39
2	Tl 190.801†	-24.2	2.8	4.0994	µg/L	4.0994 ppb	05:24:00
2	U 409.014†	-49.2	-22.5	-2.1789	µg/L	-2.1789 ppb	05:23:39
2	V 292.402†	-137.0	64.5	0.6788	µg/L	0.6788 ppb	05:23:39
2	Zn 213.857†	783.3	76.1	1.7540	µg/L	1.7540 ppb	05:24:00
3	Sc RADIAL	163050.2	163050.2	98.0	%		05:22:31
3	Al 396.153Radial†	-109.6	38.3	15.931	µg/L	15.931 ppb	05:22:31
3	Ca 317.933Radial†	1085.3	225.2	42.090	µg/L	42.090 ppb	05:22:51
3	Fe 238.204 Radial†	134.8	164.9	114.14	µg/L	114.14 ppb	05:22:51
3	K 766.490 Radial†	824.0	-22.7	-12.236	µg/L	-12.236 ppb	05:22:31
3	Mg 279.077 IEC†	45.7	-3.8	-7.7325	µg/L	-7.7325 ppb	05:22:51
3	Na 589.592 Radial†	131.7	16.5	3.9630	µg/L	3.9630 ppb	05:22:31
3	Sr 421.552†	51.0	60.6	0.2604	µg/L	0.2604 ppb	05:22:31
3	Sc 361.383	2002256.7	2002256.7	96.431	%		05:24:06
3	Y 371.029	1306850.3	1306850.3	96.319	%		05:24:06
3	Ag 328.068†	-899.2	34.8	0.3036	µg/L	0.3036 ppb	05:24:11
3	As 188.979†	-4.0	-4.4	-6.4454	µg/L	-6.4454 ppb	05:24:32
3	B 249.677†	266.9	66.1	2.5730	µg/L	2.5730 ppb	05:24:11
3	Ba 233.527†	-84.1	2.5	0.0604	µg/L	0.0604 ppb	05:24:32
3	Be 313.107†	3440.5	204.6	0.1209	µg/L	0.1209 ppb	05:24:11
3	Cd 226.502†	-137.1	-0.1	-0.0120	µg/L	-0.0120 ppb	05:24:32
3	Co 228.616†	-104.6	-14.2	-0.6473	µg/L	-0.6473 ppb	05:24:32
3	Cr 267.716†	-154.7	25.0	0.4780	µg/L	0.4780 ppb	05:24:11
3	Cu 324.752†	5415.8	700.7	5.0028	µg/L	5.0028 ppb	05:24:11
3	Mn 257.610†	302.7	224.8	0.6526	µg/L	0.6526 ppb	05:24:11
3	Mo 202.031†	8.8	6.3	0.6786	µg/L	0.6786 ppb	05:24:32
3	Ni 231.604†	453.9	37.5	1.8641	µg/L	1.8641 ppb	05:24:32
3	P 214.914†	256.7	12.5	20.804	µg/L	20.804 ppb	05:24:32
3	Pb 220.353†	60.0	-4.9	-1.1419	µg/L	-1.1419 ppb	05:24:32
3	S 181.975 Axial†	42.2	-0.6	-2.4084	µg/L	-2.4084 ppb	05:24:32
3	Sb 206.836†	34.2	12.2	10.492	µg/L	10.492 ppb	05:24:32
3	Se 196.026†	20.8	1.1	1.2340	µg/L	1.2340 ppb	05:24:32
3	SiO2†	3300.4	212.6	36.653	µg/L	36.653 ppb	05:24:11
3	Si 251.611†	595.2	271.2	16.299	µg/L	16.299 ppb	05:24:32
3	Sn 189.927†	147.0	144.2	62.368	µg/L	62.368 ppb	05:24:32
3	Ti 334.940†	1619.8	514.1	1.1715	µg/L	1.1715 ppb	05:24:11
3	Tl 190.801†	-29.4	-2.6	-3.7655	µg/L	-3.7655 ppb	05:24:32
3	U 409.014†	-80.5	-55.3	-5.3411	µg/L	-5.3411 ppb	05:24:11
3	V 292.402†	-207.4	-9.0	-0.0899	µg/L	-0.0899 ppb	05:24:11
3	Zn 213.857†	767.6	63.2	1.4463	µg/L	1.4463 ppb	05:24:32

Mean Data: 1201869986|880674|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2013072.1	96.951	%	0.5849				0.60%
Sc RADIAL	162872.7	97.9	%	0.25				0.26%
Y 371.029	1312952.3	96.768	%	0.5232				0.54%
Ag 328.068†	20.7	0.1823	µg/L	0.10540	0.1823	ppb	0.10540	57.81%
Al 396.153Radial†	30.4	12.692	µg/L	7.5655	12.692	ppb	7.5655	59.61%
As 188.979†	-1.6	-2.3874	µg/L	4.47766	-2.3874	ppb	4.47766	187.55%
B 249.677†	78.9	3.0951	µg/L	1.15802	3.0951	ppb	1.15802	37.41%
Ba 233.527†	4.4	0.1082	µg/L	0.16388	0.1082	ppb	0.16388	151.53%
Be 313.107†	148.4	0.0878	µg/L	0.03698	0.0878	ppb	0.03698	42.11%
Ca 317.933Radial†	174.6	32.637	µg/L	8.2276	32.637	ppb	8.2276	25.21%
Cd 226.502†	-3.0	-0.0733	µg/L	0.05950	-0.0733	ppb	0.05950	81.12%
Co 228.616†	-9.3	-0.4265	µg/L	0.19764	-0.4265	ppb	0.19764	46.33%
Cr 267.716†	29.0	0.5561	µg/L	0.07062	0.5561	ppb	0.07062	12.70%
Cu 324.752†	677.4	4.8299	µg/L	0.15570	4.8299	ppb	0.15570	3.22%
Fe 238.204 Radial†	94.0	65.069	µg/L	42.5496	65.069	ppb	42.5496	65.39%
K 766.490 Radial†	17.2	9.2855	µg/L	18.87561	9.2855	ppb	18.87561	203.28%
Mg 279.077 IEC†	-9.5	-19.113	µg/L	9.8558	-19.113	ppb	9.8558	51.57%
Mn 257.610†	220.9	0.6409	µg/L	0.06632	0.6409	ppb	0.06632	10.35%
Mo 202.031†	0.3	0.0392	µg/L	0.55416	0.0392	ppb	0.55416	>999.9%
Na 589.592 Radial†	28.8	6.9226	µg/L	2.73226	6.9226	ppb	2.73226	39.47%

Ni 231.604†	37.7	1.8768	µg/L	0.04707	1.8768	ppb	0.04707 2.51%
P 214.914†	10.4	17.427	µg/L	3.3242	17.427	ppb	3.3242 19.07%
Pb 220.353†	0.2	0.0310	µg/L	1.30167	0.0310	ppb	1.30167 >999.9%
S 181.975 Axial†	-2.8	-11.870	µg/L	13.9181	-11.870	ppb	13.9181 117.25%
Sb 206.836†	7.6	6.4929	µg/L	3.47266	6.4929	ppb	3.47266 53.48%
Se 196.026†	-5.4	-5.7869	µg/L	6.08477	-5.7869	ppb	6.08477 105.15%
SiO2†	196.9	33.954	µg/L	4.5888	33.954	ppb	4.5888 13.51%
Si 251.611†	258.8	15.487	µg/L	0.9129	15.487	ppb	0.9129 5.89%
Sn 189.927†	142.2	61.493	µg/L	0.9400	61.493	ppb	0.9400 1.53%
Sr 421.552†	67.4	0.2895	µg/L	0.05145	0.2895	ppb	0.05145 17.77%
Ti 334.940†	384.3	0.8756	µg/L	0.27420	0.8756	ppb	0.27420 31.31%
Tl 190.801†	-2.8	-4.0443	µg/L	8.28667	-4.0443	ppb	8.28667 204.90%
U 409.014†	-3.3	-0.3344	µg/L	6.14034	-0.3344	ppb	6.14034 >999.9%
V 292.402†	24.5	0.2634	µg/L	0.38810	0.2634	ppb	0.38810 147.34%
Zn 213.857†	65.1	1.4938	µg/L	0.24002	1.4938	ppb	0.24002 16.07%

Sequence No.: 22
Sample ID: 1201869987|880674|2
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 316
Date Collected: 6/30/2009 05:24:40
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869987|880674|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	170731.4	170731.4	103	%			05:25:13
1	Al 396.153Radial†	95305.7	93022.5	38769	µg/L	38769	ppb	05:25:13
1	Ca 317.933Radial†	109388.1	105712.9	19757	µg/L	19757	ppb	05:25:18
1	Fe 238.204 Radial†	154409.5	150494.3	104190	µg/L	104190	ppb	05:25:18
1	K 766.490 Radial†	24355.9	22870.5	12332	µg/L	12332	ppb	05:25:18
1	Mg 279.077 IEC†	8361.4	8097.5	16115	µg/L	16115	ppb	05:25:18
1	Na 589.592 Radial†	13078.5	12626.6	3038.1	µg/L	3038.1	ppb	05:25:18
1	Sr 421.552†	206914.6	201640.2	865.81	µg/L	865.81	ppb	05:25:13
1	Sc 361.383	2056955.8	2056955.8	99.065	%			05:25:53
1	Y 371.029	1357594.2	1357594.2	100.06	%			05:25:53
1	Ag 328.068†	80758.4	82488.0	712.87	µg/L	712.87	ppb	05:25:59
1	As 188.979†	911.9	920.3	1459.6	µg/L	1459.6	ppb	05:26:19
1	B 249.677†	19733.7	19709.3	745.23	µg/L	745.23	ppb	05:25:59
1	Ba 233.527†	103230.5	104294.5	2555.8	µg/L	2555.8	ppb	05:25:59
1	Be 313.107†	834826.9	839343.4	488.03	µg/L	488.03	ppb	05:25:53
1	Cd 226.502†	27322.8	27722.9	632.27	µg/L	632.27	ppb	05:25:59
1	Co 228.616†	9681.6	9867.3	446.24	µg/L	446.24	ppb	05:25:59
1	Cr 267.716†	21439.6	21827.4	419.30	µg/L	419.30	ppb	05:25:59
1	Cu 324.752†	77779.2	73597.9	537.84	µg/L	537.84	ppb	05:25:59
1	Mn 257.610†	700609.0	707132.9	2051.2	µg/L	2051.2	ppb	05:25:53
1	Mo 202.031†	4217.3	4254.2	456.72	µg/L	456.72	ppb	05:26:19
1	Ni 231.604†	11466.9	11141.9	553.39	µg/L	553.39	ppb	05:25:59
1	P 214.914†	2809.7	2582.5	4034.4	µg/L	4034.4	ppb	05:26:19
1	Pb 220.353†	3928.3	3898.2	899.66	µg/L	899.66	ppb	05:26:19
1	S 181.975 Axial†	295.3	253.7	1049.4	µg/L	1049.4	ppb	05:26:19
1	Sb 206.836†	765.5	749.5	645.92	µg/L	645.92	ppb	05:26:19
1	Se 196.026†	836.4	823.8	928.76	µg/L	928.76	ppb	05:26:19
1	SiO2†	54282.7	51585.1	8895.5	µg/L	8895.5	ppb	05:25:59
1	Si 251.611†	59783.5	60001.7	4043.4	µg/L	4043.4	ppb	05:25:59
1	Sn 189.927†	1296.9	1300.9	594.07	µg/L	594.07	ppb	05:26:19
1	Ti 334.940†	867890.6	874916.9	1995.4	µg/L	1995.4	ppb	05:25:53
1	Tl 190.801†	569.3	602.5	871.90	µg/L	871.90	ppb	05:26:19
1	U 409.014†	-341.1	-316.1	-51.897	µg/L	-51.897	ppb	05:25:53
1	V 292.402†	75729.1	76649.9	821.22	µg/L	821.22	ppb	05:25:59
1	Zn 213.857†	46047.6	45749.4	1059.8	µg/L	1059.8	ppb	05:25:59
2	Sc RADIAL	168624.0	168624.0	101	%			05:25:24
2	Al 396.153Radial†	95721.3	94593.1	39424	µg/L	39424	ppb	05:25:24
2	Ca 317.933Radial†	109728.4	107380.8	20069	µg/L	20069	ppb	05:25:29
2	Fe 238.204 Radial†	155020.2	152977.4	105910	µg/L	105910	ppb	05:25:29
2	K 766.490 Radial†	24589.4	23397.6	12616	µg/L	12616	ppb	05:25:29
2	Mg 279.077 IEC†	8409.8	8247.1	16413	µg/L	16413	ppb	05:25:29
2	Na 589.592 Radial†	13157.2	12863.6	3095.1	µg/L	3095.1	ppb	05:25:29
2	Sr 421.552†	207676.9	204912.2	879.86	µg/L	879.86	ppb	05:25:24
2	Sc 361.383	2054011.3	2054011.3	98.923	%			05:26:27
2	Y 371.029	1356674.5	1356674.5	99.991	%			05:26:27
2	Ag 328.068†	80078.8	81917.9	708.13	µg/L	708.13	ppb	05:26:32
2	As 188.979†	904.1	913.8	1451.0	µg/L	1451.0	ppb	05:26:53
2	B 249.677†	19548.8	19551.0	738.44	µg/L	738.44	ppb	05:26:32
2	Ba 233.527†	102282.8	103486.0	2535.9	µg/L	2535.9	ppb	05:26:32
2	Be 313.107†	834904.4	840629.8	488.78	µg/L	488.78	ppb	05:26:27
2	Cd 226.502†	27010.1	27446.3	625.75	µg/L	625.75	ppb	05:26:32
2	Co 228.616†	9629.8	9828.9	444.48	µg/L	444.48	ppb	05:26:32
2	Cr 267.716†	21195.7	21611.8	415.16	µg/L	415.16	ppb	05:26:32
2	Cu 324.752†	77156.3	73080.7	534.39	µg/L	534.39	ppb	05:26:32
2	Mn 257.610†	700744.2	708283.4	2054.5	µg/L	2054.5	ppb	05:26:27
2	Mo 202.031†	4216.0	4259.0	457.30	µg/L	457.30	ppb	05:26:53
2	Ni 231.604†	11323.6	11013.6	547.01	µg/L	547.01	ppb	05:26:32
2	P 214.914†	2815.4	2592.4	4049.4	µg/L	4049.4	ppb	05:26:53
2	Pb 220.353†	3935.6	3911.3	902.71	µg/L	902.71	ppb	05:26:53

2	S 181.975 Axial†	293.0	251.8	1041.1 µg/L	1041.1 ppb	05:26:53
2	Sb 206.836†	760.6	745.6	642.63 µg/L	642.63 ppb	05:26:53
2	Se 196.026†	834.0	822.6	928.20 µg/L	928.20 ppb	05:26:53
2	SiO2†	53800.5	51176.2	8825.0 µg/L	8825.0 ppb	05:26:32
2	Si 251.611†	59393.6	59694.0	4022.1 µg/L	4022.1 ppb	05:26:32
2	Sn 189.927†	1284.2	1289.9	589.85 µg/L	589.85 ppb	05:26:53
2	Ti 334.940†	867827.7	876109.3	1998.1 µg/L	1998.1 ppb	05:26:27
2	Tl 190.801†	565.7	599.7	867.93 µg/L	867.93 ppb	05:26:53
2	U 409.014†	-254.2	-228.7	-43.844 µg/L	-43.844 ppb	05:26:27
2	V 292.402†	75059.6	76082.8	815.39 µg/L	815.39 ppb	05:26:32
2	Zn 213.857†	45544.2	45307.2	1049.4 µg/L	1049.4 ppb	05:26:32
3	Sc RADIAL	168543.5	168543.5	101 %		05:25:35
3	Al 396.153Radial†	95174.8	94098.8	39218 µg/L	39218 ppb	05:25:35
3	Ca 317.933Radial†	110351.8	108048.0	20193 µg/L	20193 ppb	05:25:40
3	Fe 238.204 Radial†	155764.8	153785.5	106470 µg/L	106470 ppb	05:25:40
3	K 766.490 Radial†	24540.9	23361.3	12597 µg/L	12597 ppb	05:25:40
3	Mg 279.077 IEC†	8444.2	8285.0	16488 µg/L	16488 ppb	05:25:40
3	Na 589.592 Radial†	13151.6	12864.2	3095.3 µg/L	3095.3 ppb	05:25:40
3	Sr 421.552†	206578.2	203925.6	875.62 µg/L	875.62 ppb	05:25:35
3	Sc 361.383	2061500.6	2061500.6	99.284 %		05:27:01
3	Y 371.029	1359517.2	1359517.2	100.20 %		05:27:01
3	Ag 328.068†	80392.7	81939.9	708.37 µg/L	708.37 ppb	05:27:06
3	As 188.979†	903.0	909.3	1444.8 µg/L	1444.8 ppb	05:27:27
3	B 249.677†	19662.1	19593.2	739.93 µg/L	739.93 ppb	05:27:06
3	Ba 233.527†	102935.3	103767.5	2542.8 µg/L	2542.8 ppb	05:27:06
3	Be 313.107†	834055.0	836708.1	486.50 µg/L	486.50 ppb	05:27:01
3	Cd 226.502†	27242.9	27581.5	628.83 µg/L	628.83 ppb	05:27:06
3	Co 228.616†	9710.1	9874.4	446.57 µg/L	446.57 ppb	05:27:06
3	Cr 267.716†	21421.8	21761.7	418.03 µg/L	418.03 ppb	05:27:06
3	Cu 324.752†	77633.2	73277.7	535.87 µg/L	535.87 ppb	05:27:06
3	Mn 257.610†	700411.3	705374.5	2046.1 µg/L	2046.1 ppb	05:27:01
3	Mo 202.031†	4231.2	4258.9	457.31 µg/L	457.31 ppb	05:27:27
3	Ni 231.604†	11368.9	11017.6	547.21 µg/L	547.21 ppb	05:27:06
3	P 214.914†	2845.8	2612.6	4081.5 µg/L	4081.5 ppb	05:27:27
3	Pb 220.353†	3944.9	3906.2	901.50 µg/L	901.50 ppb	05:27:27
3	S 181.975 Axial†	296.5	254.3	1051.3 µg/L	1051.3 ppb	05:27:27
3	Sb 206.836†	767.5	749.8	646.17 µg/L	646.17 ppb	05:27:27
3	Se 196.026†	843.2	828.8	935.08 µg/L	935.08 ppb	05:27:27
3	SiO2†	54089.8	51270.0	8841.2 µg/L	8841.2 ppb	05:27:06
3	Si 251.611†	59646.7	59730.9	4024.9 µg/L	4024.9 ppb	05:27:06
3	Sn 189.927†	1294.9	1296.0	592.65 µg/L	592.65 ppb	05:27:27
3	Ti 334.940†	867558.9	872651.5	1990.2 µg/L	1990.2 ppb	05:27:01
3	Tl 190.801†	570.6	602.5	871.92 µg/L	871.92 ppb	05:27:27
3	U 409.014†	-225.9	-199.3	-41.133 µg/L	-41.133 ppb	05:27:01
3	V 292.402†	75468.9	76219.3	816.88 µg/L	816.88 ppb	05:27:06
3	Zn 213.857†	45818.6	45416.3	1051.9 µg/L	1051.9 ppb	05:27:06

Mean Data: 1201869987|880674|2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2057489.3	99.091	%	0.1817				0.18%
Sc RADIAL	169299.6	102	%	0.7				0.73%
Y 371.029	1357928.6	100.08	%	0.107				0.11%
Ag 328.068†	82115.3	709.79	µg/L	2.668	709.79	ppb	2.668	0.38%
Al 396.153Radial†	93904.8	39137	µg/L	334.8	39137	ppb	334.8	0.86%
As 188.979†	914.5	1451.8	µg/L	7.44	1451.8	ppb	7.44	0.51%
B 249.677†	19617.8	741.20	µg/L	3.569	741.20	ppb	3.569	0.48%
Ba 233.527†	103849.3	2544.8	µg/L	10.06	2544.8	ppb	10.06	0.40%
Be 313.107†	838893.8	487.77	µg/L	1.160	487.77	ppb	1.160	0.24%
Ca 317.933Radial†	107047.2	20006	µg/L	224.8	20006	ppb	224.8	1.12%
Cd 226.502†	27583.6	628.95	µg/L	3.260	628.95	ppb	3.260	0.52%
Co 228.616†	9856.9	445.76	µg/L	1.122	445.76	ppb	1.122	0.25%
Cr 267.716†	21733.6	417.50	µg/L	2.121	417.50	ppb	2.121	0.51%
Cu 324.752†	73318.7	536.03	µg/L	1.731	536.03	ppb	1.731	0.32%
Fe 238.204 Radial†	152419.1	105530	µg/L	1187.3	105530	ppb	1187.3	1.13%
K 766.490 Radial†	23209.8	12515	µg/L	158.7	12515	ppb	158.7	1.27%
Mg 279.077 IEC†	8209.9	16339	µg/L	197.3	16339	ppb	197.3	1.21%
Mn 257.610†	706930.3	2050.6	µg/L	4.25	2050.6	ppb	4.25	0.21%
Mo 202.031†	4257.4	457.11	µg/L	0.335	457.11	ppb	0.335	0.07%
Na 589.592 Radial†	12784.8	3076.1	µg/L	32.96	3076.1	ppb	32.96	1.07%

Ni 231.604†	11057.7	549.20	µg/L	3.626	549.20	ppb	3.626	0.66%
P 214.914†	2595.8	4055.1	µg/L	24.05	4055.1	ppb	24.05	0.59%
Pb 220.353†	3905.3	901.29	µg/L	1.540	901.29	ppb	1.540	0.17%
S 181.975 Axial†	253.3	1047.3	µg/L	5.43	1047.3	ppb	5.43	0.52%
Sb 206.836†	748.3	644.91	µg/L	1.976	644.91	ppb	1.976	0.31%
Se 196.026†	825.1	930.68	µg/L	3.822	930.68	ppb	3.822	0.41%
SiO2†	51343.7	8853.9	µg/L	36.94	8853.9	ppb	36.94	0.42%
Si 251.611†	59808.9	4030.1	µg/L	11.59	4030.1	ppb	11.59	0.29%
Sn 189.927†	1295.6	592.19	µg/L	2.146	592.19	ppb	2.146	0.36%
Sr 421.552†	203492.7	873.76	µg/L	7.207	873.76	ppb	7.207	0.82%
Ti 334.940†	874559.2	1994.6	µg/L	4.01	1994.6	ppb	4.01	0.20%
Tl 190.801†	601.6	870.59	µg/L	2.301	870.59	ppb	2.301	0.26%
U 409.014†	-248.0	-45.625	µg/L	5.5985	-45.625	ppb	5.5985	12.27%
V 292.402†	76317.3	817.83	µg/L	3.030	817.83	ppb	3.030	0.37%
Zn 213.857†	45491.0	1053.7	µg/L	5.45	1053.7	ppb	5.45	0.52%

Sequence No.: 23
Sample ID: 232347001|880674|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 317
Date Collected: 6/30/2009 05:27:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232347001|880674|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168984.4	168984.4	102	%			05:28:08
1	Al 396.153Radial†	90677.2	89425.7	37287	µg/L	37287	ppb	05:28:08
1	Ca 317.933Radial†	83171.8	81003.9	15139	µg/L	15139	ppb	05:28:08
1	Fe 238.204 Radial†	187971.5	185093.1	128130	µg/L	128130	ppb	05:28:08
1	K 766.490 Radial†	10929.1	9896.7	5336.4	µg/L	5336.4	ppb	05:28:14
1	Mg 279.077 IEC†	4830.4	4705.3	9244.1	µg/L	9244.1	ppb	05:28:14
1	Na 589.592 Radial†	15673.5	15313.3	3684.5	µg/L	3684.5	ppb	05:28:14
1	Sr 421.552†	27349.7	26935.6	115.66	µg/L	115.66	ppb	05:28:14
1	Sc 361.383	2074805.6	2074805.6	99.925	%			05:28:48
1	Y 371.029	1439164.6	1439164.6	106.07	%			05:28:48
1	Ag 328.068†	-1809.6	-843.7	3.3733	µg/L	3.3733	ppb	05:28:54
1	As 188.979†	16.8	16.6	133.75	µg/L	133.75	ppb	05:29:14
1	B 249.677†	1772.8	1563.5	21.425	µg/L	21.425	ppb	05:28:54
1	Ba 233.527†	15033.5	15134.5	370.75	µg/L	370.75	ppb	05:28:54
1	Be 313.107†	25251.3	21907.1	24.002	µg/L	24.002	ppb	05:28:54
1	Cd 226.502†	306.1	448.5	0.3720	µg/L	0.3720	ppb	05:28:54
1	Co 228.616†	303.1	397.6	9.9324	µg/L	9.9324	ppb	05:29:14
1	Cr 267.716†	1881.2	2068.0	39.701	µg/L	39.701	ppb	05:28:54
1	Cu 324.752†	4178.9	-733.5	12.001	µg/L	12.001	ppb	05:28:54
1	Mn 257.610†	542773.3	543093.8	1575.7	µg/L	1575.7	ppb	05:28:48
1	Mo 202.031†	46.4	43.6	9.6784	µg/L	9.6784	ppb	05:29:14
1	Ni 231.604†	1168.7	736.3	36.589	µg/L	36.589	ppb	05:29:14
1	P 214.914†	1244.5	991.7	1485.2	µg/L	1485.2	ppb	05:29:14
1	Pb 220.353†	239.0	172.0	41.387	µg/L	41.387	ppb	05:29:14
1	S 181.975 Axial†	159.6	115.3	464.64	µg/L	464.64	ppb	05:29:14
1	Sb 206.836†	25.7	2.5	15.490	µg/L	15.490	ppb	05:29:14
1	Se 196.026†	-50.3	-70.8	-17.685	µg/L	-17.685	ppb	05:29:14
1	SiO2†	94022.7	90883.6	15672	µg/L	15672	ppb	05:28:54
1	Si 251.611†	105828.9	105562.7	7157.2	µg/L	7157.2	ppb	05:28:54
1	Sn 189.927†	-11.0	-19.3	27.711	µg/L	27.711	ppb	05:29:14
1	Ti 334.940†	1717589.3	1717719.9	3918.3	µg/L	3918.3	ppb	05:28:48
1	Tl 190.801†	-50.0	-22.2	-11.487	µg/L	-11.487	ppb	05:29:14
1	U 409.014†	-1327.3	-1300.1	-150.55	µg/L	-150.55	ppb	05:28:48
1	V 292.402†	5511.3	5721.4	70.716	µg/L	70.716	ppb	05:28:54
1	Zn 213.857†	15603.2	14882.2	339.48	µg/L	339.48	ppb	05:28:54
2	Sc RADIAL	170561.3	170561.3	103	%			05:28:19
2	Al 396.153Radial†	92484.7	90363.3	37677	µg/L	37677	ppb	05:28:19
2	Ca 317.933Radial†	84629.5	81668.6	15263	µg/L	15263	ppb	05:28:19
2	Fe 238.204 Radial†	191410.5	186736.6	129270	µg/L	129270	ppb	05:28:19
2	K 766.490 Radial†	10929.8	9797.9	5283.2	µg/L	5283.2	ppb	05:28:25
2	Mg 279.077 IEC†	4858.0	4688.3	9207.9	µg/L	9207.9	ppb	05:28:25
2	Na 589.592 Radial†	15657.2	15154.7	3646.4	µg/L	3646.4	ppb	05:28:25
2	Sr 421.552†	27231.9	26571.7	114.09	µg/L	114.09	ppb	05:28:25
2	Sc 361.383	2056585.5	2056585.5	99.047	%			05:29:22
2	Y 371.029	1427389.6	1427389.6	105.20	%			05:29:22
2	Ag 328.068†	-1774.7	-824.5	3.6349	µg/L	3.6349	ppb	05:29:27
2	As 188.979†	17.2	17.1	135.45	µg/L	135.45	ppb	05:29:48
2	B 249.677†	1783.0	1589.5	22.094	µg/L	22.094	ppb	05:29:27
2	Ba 233.527†	15116.0	15351.2	376.06	µg/L	376.06	ppb	05:29:27
2	Be 313.107†	25478.6	22360.4	24.348	µg/L	24.348	ppb	05:29:27
2	Cd 226.502†	298.2	443.2	0.1673	µg/L	0.1673	ppb	05:29:27
2	Co 228.616†	302.1	399.4	9.9510	µg/L	9.9510	ppb	05:29:48
2	Cr 267.716†	1855.2	2058.4	39.520	µg/L	39.520	ppb	05:29:27
2	Cu 324.752†	4200.2	-675.0	12.571	µg/L	12.571	ppb	05:29:27
2	Mn 257.610†	541487.7	546608.0	1585.9	µg/L	1585.9	ppb	05:29:22
2	Mo 202.031†	54.1	51.8	10.594	µg/L	10.594	ppb	05:29:48
2	Ni 231.604†	1173.3	751.3	37.335	µg/L	37.335	ppb	05:29:48
2	P 214.914†	1232.8	991.0	1482.7	µg/L	1482.7	ppb	05:29:48
2	Pb 220.353†	222.3	157.3	38.018	µg/L	38.018	ppb	05:29:48

2	S 181.975 Axial†	158.9	116.0	467.41	µg/L	467.41 ppb	05:29:48
2	Sb 206.836†	17.9	-5.2	9.0523	µg/L	9.0523 ppb	05:29:48
2	Se 196.026†	-51.0	-71.9	-18.359	µg/L	-18.359 ppb	05:29:48
2	SiO2†	94666.5	92367.2	15928	µg/L	15928 ppb	05:29:27
2	Si 251.611†	106640.6	107320.4	7277.8	µg/L	7277.8 ppb	05:29:27
2	Sn 189.927†	-19.6	-28.1	24.207	µg/L	24.207 ppb	05:29:48
2	Ti 334.940†	1715289.4	1730626.1	3947.8	µg/L	3947.8 ppb	05:29:22
2	Tl 190.801†	-51.5	-24.1	-14.159	µg/L	-14.159 ppb	05:29:48
2	U 409.014†	-1241.3	-1224.9	-143.55	µg/L	-143.55 ppb	05:29:22
2	V 292.402†	5589.9	5849.7	72.181	µg/L	72.181 ppb	05:29:27
2	Zn 213.857†	15703.2	15121.4	345.01	µg/L	345.01 ppb	05:29:27
3	Sc RADIAL	167951.6	167951.6	101	%		05:28:30
3	Al 396.153Radial†	91897.2	91183.1	38019	µg/L	38019 ppb	05:28:30
3	Ca 317.933Radial†	83487.5	81820.2	15292	µg/L	15292 ppb	05:28:30
3	Fe 238.204 Radial†	189226.8	187474.6	129780	µg/L	129780 ppb	05:28:30
3	K 766.490 Radial†	11037.4	10070.1	5429.9	µg/L	5429.9 ppb	05:28:36
3	Mg 279.077 IEC†	4849.4	4753.4	9338.1	µg/L	9338.1 ppb	05:28:36
3	Na 589.592 Radial†	15698.9	15433.3	3713.4	µg/L	3713.4 ppb	05:28:36
3	Sr 421.552†	27314.2	27066.0	116.22	µg/L	116.22 ppb	05:28:36
3	Sc 361.383	2072857.7	2072857.7	99.831	%		05:29:55
3	Y 371.029	1439257.6	1439257.6	106.08	%		05:29:55
3	Ag 328.068†	-1851.6	-887.4	3.1387	µg/L	3.1387 ppb	05:30:01
3	As 188.979†	19.6	19.4	139.23	µg/L	139.23 ppb	05:30:22
3	B 249.677†	1793.8	1586.2	21.803	µg/L	21.803 ppb	05:30:01
3	Ba 233.527†	15149.6	15265.0	373.95	µg/L	373.95 ppb	05:30:01
3	Be 313.107†	25342.9	22022.5	24.072	µg/L	24.072 ppb	05:30:01
3	Cd 226.502†	307.2	449.9	0.2736	µg/L	0.2736 ppb	05:30:01
3	Co 228.616†	314.8	409.6	10.478	µg/L	10.478 ppb	05:30:22
3	Cr 267.716†	1831.3	2019.8	38.780	µg/L	38.780 ppb	05:30:01
3	Cu 324.752†	4224.8	-683.6	12.578	µg/L	12.578 ppb	05:30:01
3	Mn 257.610†	541995.5	542825.1	1574.9	µg/L	1574.9 ppb	05:29:55
3	Mo 202.031†	54.8	52.1	10.644	µg/L	10.644 ppb	05:30:22
3	Ni 231.604†	1166.0	734.7	36.508	µg/L	36.508 ppb	05:30:22
3	P 214.914†	1243.2	991.6	1483.2	µg/L	1483.2 ppb	05:30:22
3	Pb 220.353†	241.2	174.5	42.004	µg/L	42.004 ppb	05:30:22
3	S 181.975 Axial†	156.1	112.0	450.49	µg/L	450.49 ppb	05:30:22
3	Sb 206.836†	18.6	-4.5	9.4622	µg/L	9.4622 ppb	05:30:22
3	Se 196.026†	-47.3	-67.8	-13.682	µg/L	-13.682 ppb	05:30:22
3	SiO2†	94806.6	91757.3	15823	µg/L	15823 ppb	05:30:01
3	Si 251.611†	106760.9	106595.8	7228.8	µg/L	7228.8 ppb	05:30:01
3	Sn 189.927†	-27.2	-35.5	21.137	µg/L	21.137 ppb	05:30:22
3	Ti 334.940†	1716588.1	1718332.2	3919.7	µg/L	3919.7 ppb	05:29:55
3	Tl 190.801†	-51.4	-23.7	-13.708	µg/L	-13.708 ppb	05:30:22
3	U 409.014†	-1353.6	-1327.6	-153.52	µg/L	-153.52 ppb	05:29:55
3	V 292.402†	5591.0	5806.5	71.751	µg/L	71.751 ppb	05:30:01
3	Zn 213.857†	15790.6	15084.6	344.11	µg/L	344.11 ppb	05:30:01

Mean Data: 232347001|880674|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2068082.9	99.601	%	0.4818				0.48%
Sc RADIAL	169165.8	102	%	0.8				0.78%
Y 371.029	1435270.6	105.78	%	0.503				0.48%
Ag 328.068†	-851.9	3.3823	µg/L	0.24825	3.3823	ppb	0.24825	7.34%
Al 396.153Radial†	90324.0	37661	µg/L	366.6	37661	ppb	366.6	0.97%
As 188.979†	17.7	136.14	µg/L	2.805	136.14	ppb	2.805	2.06%
B 249.677†	1579.7	21.774	µg/L	0.3355	21.774	ppb	0.3355	1.54%
Ba 233.527†	15250.2	373.59	µg/L	2.673	373.59	ppb	2.673	0.72%
Be 313.107†	22096.7	24.140	µg/L	0.1830	24.140	ppb	0.1830	0.76%
Ca 317.933Radial†	81497.6	15231	µg/L	81.1	15231	ppb	81.1	0.53%
Cd 226.502†	447.2	0.2709	µg/L	0.10238	0.2709	ppb	0.10238	37.79%
Co 228.616†	402.2	10.121	µg/L	0.3099	10.121	ppb	0.3099	3.06%
Cr 267.716†	2048.7	39.334	µg/L	0.4880	39.334	ppb	0.4880	1.24%
Cu 324.752†	-697.3	12.383	µg/L	0.3310	12.383	ppb	0.3310	2.67%
Fe 238.204 Radial†	186434.8	129060	µg/L	843.9	129060	ppb	843.9	0.65%
K 766.490 Radial†	9921.6	5349.8	µg/L	74.31	5349.8	ppb	74.31	1.39%
Mg 279.077 IEC†	4715.7	9263.4	µg/L	67.20	9263.4	ppb	67.20	0.73%
Mn 257.610†	544175.6	1578.8	µg/L	6.12	1578.8	ppb	6.12	0.39%
Mo 202.031†	49.2	10.306	µg/L	0.5437	10.306	ppb	0.5437	5.28%
Na 589.592 Radial†	15300.4	3681.4	µg/L	33.62	3681.4	ppb	33.62	0.91%

Ni 231.604†	740.8	36.811	µg/L	0.4557	36.811	ppb	0.4557	1.24%
P 214.914†	991.4	1483.7	µg/L	1.31	1483.7	ppb	1.31	0.09%
Pb 220.353†	167.9	40.469	µg/L	2.1456	40.469	ppb	2.1456	5.30%
S 181.975 Axial†	114.4	460.85	µg/L	9.073	460.85	ppb	9.073	1.97%
Sb 206.836†	-2.4	11.335	µg/L	3.6045	11.335	ppb	3.6045	31.80%
Se 196.026†	-70.2	-16.575	µg/L	2.5284	-16.575	ppb	2.5284	15.25%
SiO2†	91669.4	15808	µg/L	128.6	15808	ppb	128.6	0.81%
Si 251.611†	106492.9	7221.3	µg/L	60.68	7221.3	ppb	60.68	0.84%
Sn 189.927†	-27.6	24.352	µg/L	3.2891	24.352	ppb	3.2891	13.51%
Sr 421.552†	26857.8	115.32	µg/L	1.100	115.32	ppb	1.100	0.95%
Ti 334.940†	1722226.0	3928.6	µg/L	16.61	3928.6	ppb	16.61	0.42%
Tl 190.801†	-23.3	-13.118	µg/L	1.4301	-13.118	ppb	1.4301	10.90%
U 409.014†	-1284.2	-149.21	µg/L	5.122	-149.21	ppb	5.122	3.43%
V 292.402†	5792.5	71.549	µg/L	0.7531	71.549	ppb	0.7531	1.05%
Zn 213.857†	15029.4	342.87	µg/L	2.964	342.87	ppb	2.964	0.86%

Sequence No.: 24
Sample ID: 1201869988|880674|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 318
Date Collected: 6/30/2009 05:30:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869988|880674|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	170203.2	170203.2	102	%			05:31:03
1	Al 396.153Radial†	87120.8	85309.9	35570	µg/L	35570	ppb	05:31:03
1	Ca 317.933Radial†	69570.3	67122.1	12545	µg/L	12545	ppb	05:31:08
1	Fe 238.204 Radial†	183682.8	179575.7	124310	µg/L	124310	ppb	05:31:03
1	K 766.490 Radial†	11978.0	10844.9	5847.7	µg/L	5847.7	ppb	05:31:08
1	Mg 279.077 IEC†	5232.6	5064.4	9972.5	µg/L	9972.5	ppb	05:31:08
1	Na 589.592 Radial†	14407.6	13965.3	3360.2	µg/L	3360.2	ppb	05:31:08
1	Sr 421.552†	22249.5	21757.3	93.422	µg/L	93.422	ppb	05:31:08
1	Sc 361.383	2061298.5	2061298.5	99.274	%			05:31:43
1	Y 371.029	1428642.8	1428642.8	105.30	%			05:31:43
1	Ag 328.068†	-1795.0	-840.8	3.1079	µg/L	3.1079	ppb	05:31:48
1	As 188.979†	15.2	15.1	129.85	µg/L	129.85	ppb	05:32:09
1	B 249.677†	1638.7	1440.0	17.750	µg/L	17.750	ppb	05:31:48
1	Ba 233.527†	14845.9	15044.2	368.55	µg/L	368.55	ppb	05:31:48
1	Be 313.107†	22888.2	19692.2	23.144	µg/L	23.144	ppb	05:31:48
1	Cd 226.502†	296.7	441.1	0.4984	µg/L	0.4984	ppb	05:31:48
1	Co 228.616†	287.4	383.8	9.0067	µg/L	9.0067	ppb	05:32:09
1	Cr 267.716†	1835.8	2034.6	39.064	µg/L	39.064	ppb	05:32:09
1	Cu 324.752†	4074.5	-811.2	10.935	µg/L	10.935	ppb	05:31:48
1	Mn 257.610†	659955.7	664692.3	1928.3	µg/L	1928.3	ppb	05:31:43
1	Mo 202.031†	45.2	42.7	9.4290	µg/L	9.4290	ppb	05:32:09
1	Ni 231.604†	1226.6	802.3	39.868	µg/L	39.868	ppb	05:32:09
1	P 214.914†	1399.1	1155.6	1757.2	µg/L	1757.2	ppb	05:32:09
1	Pb 220.353†	231.8	166.3	39.975	µg/L	39.975	ppb	05:32:09
1	S 181.975 Axial†	125.7	82.2	325.84	µg/L	325.84	ppb	05:32:09
1	Sb 206.836†	28.8	5.8	19.057	µg/L	19.057	ppb	05:32:09
1	Se 196.026†	-33.7	-54.3	-2.1419	µg/L	-2.1419	ppb	05:32:09
1	SiO2†	101440.1	98971.8	17067	µg/L	17067	ppb	05:31:48
1	Si 251.611†	114594.6	115086.4	7810.5	µg/L	7810.5	ppb	05:31:48
1	Sn 189.927†	-13.2	-21.6	25.403	µg/L	25.403	ppb	05:32:09
1	Ti 334.940†	1768354.5	1780119.6	4060.8	µg/L	4060.8	ppb	05:31:43
1	Tl 190.801†	-54.1	-26.7	-18.103	µg/L	-18.103	ppb	05:32:09
1	U 409.014†	-1343.4	-1325.0	-151.97	µg/L	-151.97	ppb	05:31:43
1	V 292.402†	5638.3	5885.6	72.134	µg/L	72.134	ppb	05:31:48
1	Zn 213.857†	16116.9	15501.9	354.24	µg/L	354.24	ppb	05:31:48
2	Sc RADIAL	168788.6	168788.6	101	%			05:31:14
2	Al 396.153Radial†	87923.9	86815.2	36198	µg/L	36198	ppb	05:31:14
2	Ca 317.933Radial†	69522.2	67644.6	12642	µg/L	12642	ppb	05:31:19
2	Fe 238.204 Radial†	184682.4	182065.7	126040	µg/L	126040	ppb	05:31:14
2	K 766.490 Radial†	11973.6	10938.7	5898.3	µg/L	5898.3	ppb	05:31:19
2	Mg 279.077 IEC†	5233.8	5108.5	10058	µg/L	10058	ppb	05:31:19
2	Na 589.592 Radial†	14444.2	14119.5	3397.3	µg/L	3397.3	ppb	05:31:19
2	Sr 421.552†	22218.9	21909.5	94.076	µg/L	94.076	ppb	05:31:19
2	Sc 361.383	2088954.7	2088954.7	100.61	%			05:32:16
2	Y 371.029	1448513.7	1448513.7	106.76	%			05:32:16
2	Ag 328.068†	-1802.1	-823.9	3.3849	µg/L	3.3849	ppb	05:32:22
2	As 188.979†	20.8	20.5	139.35	µg/L	139.35	ppb	05:32:42
2	B 249.677†	1616.3	1395.9	15.469	µg/L	15.469	ppb	05:32:22
2	Ba 233.527†	15071.7	15070.6	369.19	µg/L	369.19	ppb	05:32:22
2	Be 313.107†	22945.0	19443.4	22.953	µg/L	22.953	ppb	05:32:22
2	Cd 226.502†	311.9	452.2	0.6315	µg/L	0.6315	ppb	05:32:22
2	Co 228.616†	293.0	385.6	9.1235	µg/L	9.1235	ppb	05:32:42
2	Cr 267.716†	1838.7	2013.0	38.650	µg/L	38.650	ppb	05:32:42
2	Cu 324.752†	4045.1	-894.8	10.572	µg/L	10.572	ppb	05:32:22
2	Mn 257.610†	666519.5	662415.4	1921.7	µg/L	1921.7	ppb	05:32:16
2	Mo 202.031†	59.2	56.0	10.914	µg/L	10.914	ppb	05:32:42
2	Ni 231.604†	1213.6	773.0	38.415	µg/L	38.415	ppb	05:32:42
2	P 214.914†	1407.6	1145.4	1738.7	µg/L	1738.7	ppb	05:32:42
2	Pb 220.353†	237.8	169.2	40.666	µg/L	40.666	ppb	05:32:42

2	S 181.975 Axial†	132.1	86.9	345.37	µg/L	345.37 ppb	05:32:42
2	Sb 206.836†	19.3	-4.1	10.545	µg/L	10.545 ppb	05:32:42
2	Se 196.026†	-38.5	-58.6	-5.9659	µg/L	-5.9659 ppb	05:32:42
2	SiO2†	102356.1	98529.5	16991	µg/L	16991 ppb	05:32:22
2	Si 251.611†	115424.8	114383.4	7762.6	µg/L	7762.6 ppb	05:32:22
2	Sn 189.927†	-24.3	-32.4	21.160	µg/L	21.160 ppb	05:32:42
2	Ti 334.940†	1784855.2	1772938.0	4044.4	µg/L	4044.4 ppb	05:32:16
2	Tl 190.801†	-55.2	-27.1	-18.744	µg/L	-18.744 ppb	05:32:42
2	U 409.014†	-1197.0	-1161.5	-136.57	µg/L	-136.57 ppb	05:32:16
2	V 292.402†	5681.3	5853.1	71.967	µg/L	71.967 ppb	05:32:22
2	Zn 213.857†	16255.1	15424.4	352.31	µg/L	352.31 ppb	05:32:22
3	Sc RADIAL	171485.9	171485.9	103	%		05:31:25
3	Al 396.153Radial†	87449.8	84992.2	35438	µg/L	35438 ppb	05:31:25
3	Ca 317.933Radial†	69337.7	66387.8	12407	µg/L	12407 ppb	05:31:30
3	Fe 238.204 Radial†	183948.6	178490.5	123560	µg/L	123560 ppb	05:31:25
3	K 766.490 Radial†	12040.1	10817.6	5833.0	µg/L	5833.0 ppb	05:31:30
3	Mg 279.077 IEC†	5237.6	5031.0	9906.6	µg/L	9906.6 ppb	05:31:30
3	Na 589.592 Radial†	14435.2	13886.8	3341.3	µg/L	3341.3 ppb	05:31:30
3	Sr 421.552†	22201.6	21548.2	92.524	µg/L	92.524 ppb	05:31:30
3	Sc 361.383	2078525.0	2078525.0	100.10	%		05:32:50
3	Y 371.029	1441144.5	1441144.5	106.22	%		05:32:50
3	Ag 328.068†	-1861.7	-892.4	2.6049	µg/L	2.6049 ppb	05:32:56
3	As 188.979†	23.0	22.8	140.80	µg/L	140.80 ppb	05:33:16
3	B 249.677†	1658.4	1446.0	18.225	µg/L	18.225 ppb	05:32:56
3	Ba 233.527†	14796.9	14871.3	364.31	µg/L	364.31 ppb	05:32:56
3	Be 313.107†	22663.7	19276.9	22.829	µg/L	22.829 ppb	05:32:56
3	Cd 226.502†	289.5	431.3	0.3351	µg/L	0.3351 ppb	05:32:56
3	Co 228.616†	298.0	392.0	9.4332	µg/L	9.4332 ppb	05:33:16
3	Cr 267.716†	1820.9	2004.4	38.484	µg/L	38.484 ppb	05:33:16
3	Cu 324.752†	3973.8	-945.9	9.8752	µg/L	9.8752 ppb	05:32:56
3	Mn 257.610†	661388.1	660613.7	1916.4	µg/L	1916.4 ppb	05:32:50
3	Mo 202.031†	52.0	49.1	10.077	µg/L	10.077 ppb	05:33:16
3	Ni 231.604†	1220.3	785.8	39.049	µg/L	39.049 ppb	05:33:16
3	P 214.914†	1400.6	1145.5	1741.6	µg/L	1741.6 ppb	05:33:16
3	Pb 220.353†	230.3	162.9	39.196	µg/L	39.196 ppb	05:33:16
3	S 181.975 Axial†	134.5	90.0	358.80	µg/L	358.80 ppb	05:33:16
3	Sb 206.836†	17.8	-5.5	9.2898	µg/L	9.2898 ppb	05:33:16
3	Se 196.026†	-46.8	-67.1	-16.202	µg/L	-16.202 ppb	05:33:16
3	SiO2†	100912.1	97597.5	16830	µg/L	16830 ppb	05:32:56
3	Si 251.611†	113981.0	113516.8	7703.0	µg/L	7703.0 ppb	05:32:56
3	Sn 189.927†	-22.1	-30.3	21.402	µg/L	21.402 ppb	05:33:16
3	Ti 334.940†	1771694.4	1768693.0	4034.7	µg/L	4034.7 ppb	05:32:50
3	Tl 190.801†	-57.5	-29.6	-22.468	µg/L	-22.468 ppb	05:33:16
3	U 409.014†	-1296.2	-1266.6	-146.20	µg/L	-146.20 ppb	05:32:50
3	V 292.402†	5594.1	5794.3	71.122	µg/L	71.122 ppb	05:32:56
3	Zn 213.857†	16090.6	15341.1	350.53	µg/L	350.53 ppb	05:32:56

Mean Data: 1201869988|880674|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2076259.4	99.995	%	0.6726				0.67%
Sc RADIAL	170159.2	102	%	0.8				0.79%
Y 371.029	1439433.7	106.09	%	0.740				0.70%
Ag 328.068†	-852.4	3.0326	µg/L	0.39544	3.0326	ppb	0.39544	13.04%
Al 396.153Radial†	85705.8	35736	µg/L	406.0	35736	ppb	406.0	1.14%
As 188.979†	19.5	136.66	µg/L	5.946	136.66	ppb	5.946	4.35%
B 249.677†	1427.3	17.148	µg/L	1.4736	17.148	ppb	1.4736	8.59%
Ba 233.527†	14995.4	367.35	µg/L	2.652	367.35	ppb	2.652	0.72%
Be 313.107†	19470.9	22.975	µg/L	0.1584	22.975	ppb	0.1584	0.69%
Ca 317.933Radial†	67051.5	12531	µg/L	118.0	12531	ppb	118.0	0.94%
Cd 226.502†	441.5	0.4883	µg/L	0.14842	0.4883	ppb	0.14842	30.39%
Co 228.616†	387.1	9.1878	µg/L	0.22042	9.1878	ppb	0.22042	2.40%
Cr 267.716†	2017.3	38.733	µg/L	0.2985	38.733	ppb	0.2985	0.77%
Cu 324.752†	-884.0	10.460	µg/L	0.5384	10.460	ppb	0.5384	5.15%
Fe 238.204 Radial†	180044.0	124640	µg/L	1268.9	124640	ppb	1268.9	1.02%
K 766.490 Radial†	10867.1	5859.7	µg/L	34.27	5859.7	ppb	34.27	0.58%
Mg 279.077 IEC†	5068.0	9979.1	µg/L	76.02	9979.1	ppb	76.02	0.76%
Mn 257.610†	662573.8	1922.1	µg/L	5.93	1922.1	ppb	5.93	0.31%
Mo 202.031†	49.3	10.140	µg/L	0.7447	10.140	ppb	0.7447	7.34%
Na 589.592 Radial†	13990.5	3366.3	µg/L	28.49	3366.3	ppb	28.49	0.85%

Ni 231.604†	787.0	39.111	µg/L	0.7286	39.111	ppb	0.7286	1.86%
P 214.914†	1148.8	1745.8	µg/L	9.93	1745.8	ppb	9.93	0.57%
Pb 220.353†	166.2	39.946	µg/L	0.7355	39.946	ppb	0.7355	1.84%
S 181.975 Axial†	86.4	343.34	µg/L	16.571	343.34	ppb	16.571	4.83%
Sb 206.836†	-1.2	12.964	µg/L	5.3139	12.964	ppb	5.3139	40.99%
Se 196.026†	-60.0	-8.1032	µg/L	7.26958	-8.1032	ppb	7.26958	89.71%
SiO2†	98366.3	16963	µg/L	121.0	16963	ppb	121.0	0.71%
Si 251.611†	114328.9	7758.7	µg/L	53.84	7758.7	ppb	53.84	0.69%
Sn 189.927†	-28.1	22.655	µg/L	2.3826	22.655	ppb	2.3826	10.52%
Sr 421.552†	21738.3	93.341	µg/L	0.7788	93.341	ppb	0.7788	0.83%
Ti 334.940†	1773916.9	4046.6	µg/L	13.18	4046.6	ppb	13.18	0.33%
Tl 190.801†	-27.8	-19.772	µg/L	2.3574	-19.772	ppb	2.3574	11.92%
U 409.014†	-1251.0	-144.91	µg/L	7.777	-144.91	ppb	7.777	5.37%
V 292.402†	5844.4	71.741	µg/L	0.5423	71.741	ppb	0.5423	0.76%
Zn 213.857†	15422.5	352.36	µg/L	1.855	352.36	ppb	1.855	0.53%

Sequence No.: 25
Sample ID: 1201869989|880674|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 319
Date Collected: 6/30/2009 05:33:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869989|880674|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	167210.8	167210.8	101	%			05:34:03
1	Al 396.153Radial†	121287.7	120829.6	50363	µg/L	50363	ppb	05:33:58
1	Ca 317.933Radial†	92995.8	91647.2	17128	µg/L	17128	ppb	05:34:03
1	Fe 238.204 Radial†	196632.9	195674.1	135470	µg/L	135470	ppb	05:33:58
1	K 766.490 Radial†	21490.2	20519.0	11064	µg/L	11064	ppb	05:34:03
1	Mg 279.077 IEC†	7814.8	7725.2	15315	µg/L	15315	ppb	05:34:03
1	Na 589.592 Radial†	34702.1	34410.1	8279.4	µg/L	8279.4	ppb	05:34:03
1	Sr 421.552†	136483.1	135807.3	583.13	µg/L	583.13	ppb	05:33:58
1	Sc 361.383	2078898.7	2078898.7	100.12	%			05:34:38
1	Y 371.029	1445879.1	1445879.1	106.57	%			05:34:38
1	Ag 328.068†	55450.7	56350.6	492.01	µg/L	492.01	ppb	05:34:43
1	As 188.979†	325.9	325.3	602.69	µg/L	602.69	ppb	05:35:04
1	B 249.677†	14115.3	13887.5	505.59	µg/L	505.59	ppb	05:34:43
1	Ba 233.527†	29972.0	30025.3	736.43	µg/L	736.43	ppb	05:34:43
1	Be 313.107†	875095.1	870667.9	514.07	µg/L	514.07	ppb	05:34:38
1	Cd 226.502†	21403.4	21519.5	486.87	µg/L	486.87	ppb	05:34:43
1	Co 228.616†	10582.4	10663.9	476.80	µg/L	476.80	ppb	05:35:04
1	Cr 267.716†	26907.7	27060.4	519.14	µg/L	519.14	ppb	05:34:43
1	Cu 324.752†	75933.2	70925.4	523.02	µg/L	523.02	ppb	05:34:43
1	Mn 257.610†	608754.4	607925.2	1763.7	µg/L	1763.7	ppb	05:34:38
1	Mo 202.031†	4520.0	4511.7	485.34	µg/L	485.34	ppb	05:35:04
1	Ni 231.604†	10707.3	10261.0	509.53	µg/L	509.53	ppb	05:35:04
1	P 214.914†	1635.5	1379.8	2036.6	µg/L	2036.6	ppb	05:35:04
1	Pb 220.353†	2338.2	2268.3	524.87	µg/L	524.87	ppb	05:35:04
1	S 181.975 Axial†	1280.2	1234.2	5168.7	µg/L	5168.7	ppb	05:35:04
1	Sb 206.836†	568.7	544.8	480.63	µg/L	480.63	ppb	05:35:04
1	Se 196.026†	400.1	379.1	466.69	µg/L	466.69	ppb	05:35:04
1	SiO2†	106260.2	102921.0	17748	µg/L	17748	ppb	05:34:43
1	Si 251.611†	120136.7	119644.6	8072.0	µg/L	8072.0	ppb	05:34:43
1	Sn 189.927†	1101.6	1092.0	511.10	µg/L	511.10	ppb	05:35:04
1	Ti 334.940†	2089097.6	2085392.2	4757.1	µg/L	4757.1	ppb	05:34:38
1	Tl 190.801†	177.0	204.6	318.90	µg/L	318.90	ppb	05:35:04
1	U 409.014†	2967.9	2992.5	260.82	µg/L	260.82	ppb	05:34:43
1	V 292.402†	51471.4	51614.8	560.05	µg/L	560.05	ppb	05:34:43
1	Zn 213.857†	36485.9	35708.8	822.62	µg/L	822.62	ppb	05:34:43
2	Sc RADIAL	168744.8	168744.8	101	%			05:34:14
2	Al 396.153Radial†	122502.7	120930.4	50405	µg/L	50405	ppb	05:34:09
2	Ca 317.933Radial†	93537.6	91340.2	17071	µg/L	17071	ppb	05:34:14
2	Fe 238.204 Radial†	197875.4	195120.5	135090	µg/L	135090	ppb	05:34:09
2	K 766.490 Radial†	21646.4	20478.6	11042	µg/L	11042	ppb	05:34:14
2	Mg 279.077 IEC†	7856.3	7695.5	15256	µg/L	15256	ppb	05:34:14
2	Na 589.592 Radial†	34980.8	34371.0	8270.0	µg/L	8270.0	ppb	05:34:14
2	Sr 421.552†	137562.4	135636.8	582.40	µg/L	582.40	ppb	05:34:09
2	Sc 361.383	2062044.0	2062044.0	99.310	%			05:35:11
2	Y 371.029	1434741.8	1434741.8	105.74	%			05:35:11
2	Ag 328.068†	55905.2	57260.9	499.75	µg/L	499.75	ppb	05:35:17
2	As 188.979†	337.0	339.1	623.01	µg/L	623.01	ppb	05:35:38
2	B 249.677†	14341.8	14230.8	519.26	µg/L	519.26	ppb	05:35:17
2	Ba 233.527†	30130.2	30429.2	746.34	µg/L	746.34	ppb	05:35:17
2	Be 313.107†	869884.6	872565.3	515.19	µg/L	515.19	ppb	05:35:11
2	Cd 226.502†	21564.9	21856.9	494.69	µg/L	494.69	ppb	05:35:17
2	Co 228.616†	10555.3	10722.9	479.48	µg/L	479.48	ppb	05:35:38
2	Cr 267.716†	27105.4	27479.1	527.18	µg/L	527.18	ppb	05:35:17
2	Cu 324.752†	76715.7	72333.2	532.99	µg/L	532.99	ppb	05:35:17
2	Mn 257.610†	604252.3	608361.6	1765.0	µg/L	1765.0	ppb	05:35:11
2	Mo 202.031†	4504.4	4532.9	487.58	µg/L	487.58	ppb	05:35:38
2	Ni 231.604†	10701.7	10342.8	513.59	µg/L	513.59	ppb	05:35:38
2	P 214.914†	1633.4	1391.0	2053.7	µg/L	2053.7	ppb	05:35:38
2	Pb 220.353†	2330.2	2279.3	527.40	µg/L	527.40	ppb	05:35:38

2	S 181.975 Axial†	1289.8	1254.4	5253.5 µg/L	5253.5 ppb	05:35:38
2	Sb 206.836†	572.9	553.6	488.21 µg/L	488.21 ppb	05:35:38
2	Se 196.026†	380.0	362.2	448.40 µg/L	448.40 ppb	05:35:38
2	SiO2†	106910.2	104443.0	18011 µg/L	18011 ppb	05:35:17
2	Si 251.611†	120939.0	121433.2	8195.2 µg/L	8195.2 ppb	05:35:17
2	Sn 189.927†	1097.6	1097.0	513.17 µg/L	513.17 ppb	05:35:38
2	Ti 334.940†	2076064.2	2089323.4	4766.1 µg/L	4766.1 ppb	05:35:11
2	Tl 190.801†	179.9	209.0	325.31 µg/L	325.31 ppb	05:35:38
2	U 409.014†	2959.6	3008.4	262.42 µg/L	262.42 ppb	05:35:17
2	V 292.402†	51841.9	52408.1	568.41 µg/L	568.41 ppb	05:35:17
2	Zn 213.857†	36764.2	36286.8	836.13 µg/L	836.13 ppb	05:35:17
3	Sc RADIAL	167723.1	167723.1	101 %		05:34:25
3	Al 396.153Radial†	122435.6	121599.5	50684 µg/L	50684 ppb	05:34:20
3	Ca 317.933Radial†	92863.2	91233.0	17051 µg/L	17051 ppb	05:34:25
3	Fe 238.204 Radial†	197248.9	195687.5	135480 µg/L	135480 ppb	05:34:20
3	K 766.490 Radial†	21472.5	20436.1	11019 µg/L	11019 ppb	05:34:25
3	Mg 279.077 IEC†	7802.7	7689.4	15243 µg/L	15243 ppb	05:34:25
3	Na 589.592 Radial†	34711.6	34314.1	8256.3 µg/L	8256.3 ppb	05:34:25
3	Sr 421.552†	137592.6	136493.0	586.08 µg/L	586.08 ppb	05:34:20
3	Sc 361.383	2076471.6	2076471.6	100.00 %		05:35:45
3	Y 371.029	1443599.1	1443599.1	106.40 %		05:35:45
3	Ag 328.068†	55489.3	56454.0	492.88 µg/L	492.88 ppb	05:35:50
3	As 188.979†	325.6	325.3	602.80 µg/L	602.80 ppb	05:36:11
3	B 249.677†	14153.3	13942.0	507.74 µg/L	507.74 ppb	05:35:50
3	Ba 233.527†	29915.1	30003.4	735.90 µg/L	735.90 ppb	05:35:50
3	Be 313.107†	878655.8	875250.1	516.77 µg/L	516.77 ppb	05:35:45
3	Cd 226.502†	21392.7	21533.8	487.20 µg/L	487.20 ppb	05:35:50
3	Co 228.616†	10571.7	10665.5	476.83 µg/L	476.83 ppb	05:36:11
3	Cr 267.716†	26898.5	27082.6	519.57 µg/L	519.57 ppb	05:35:50
3	Cu 324.752†	76143.5	71224.3	525.15 µg/L	525.15 ppb	05:35:50
3	Mn 257.610†	610554.3	610435.7	1771.0 µg/L	1771.0 ppb	05:35:45
3	Mo 202.031†	4505.7	4502.7	484.38 µg/L	484.38 ppb	05:36:11
3	Ni 231.604†	10713.4	10279.6	510.45 µg/L	510.45 ppb	05:36:11
3	P 214.914†	1631.7	1377.9	2033.2 µg/L	2033.2 ppb	05:36:11
3	Pb 220.353†	2343.3	2276.1	526.68 µg/L	526.68 ppb	05:36:11
3	S 181.975 Axial†	1281.2	1236.8	5179.4 µg/L	5179.4 ppb	05:36:11
3	Sb 206.836†	566.1	542.8	479.05 µg/L	479.05 ppb	05:36:11
3	Se 196.026†	400.7	380.2	467.87 µg/L	467.87 ppb	05:36:11
3	SiO2†	106082.1	102867.0	17739 µg/L	17739 ppb	05:35:50
3	Si 251.611†	120059.3	119707.4	8075.5 µg/L	8075.5 ppb	05:35:50
3	Sn 189.927†	1106.3	1098.0	513.67 µg/L	513.67 ppb	05:36:11
3	Ti 334.940†	2095811.6	2094544.8	4778.0 µg/L	4778.0 ppb	05:35:45
3	Tl 190.801†	180.7	208.5	324.63 µg/L	324.63 ppb	05:36:11
3	U 409.014†	3038.6	3066.7	267.96 µg/L	267.96 ppb	05:35:50
3	V 292.402†	51442.4	51645.9	560.38 µg/L	560.38 ppb	05:35:50
3	Zn 213.857†	36451.9	35717.3	822.80 µg/L	822.80 ppb	05:35:50

Mean Data: 1201869989|880674|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2072471.4	99.812	%	0.4388				0.44%
Sc RADIAL	167892.9	101	%	0.5				0.47%
Y 371.029	1441406.7	106.24	%	0.434				0.41%
Ag 328.068†	56688.5	494.88	µg/L	4.239	494.88	ppb	4.239	0.86%
Al 396.153Radial†	121119.8	50484	µg/L	174.5	50484	ppb	174.5	0.35%
As 188.979†	329.9	609.50	µg/L	11.699	609.50	ppb	11.699	1.92%
B 249.677†	14020.1	510.86	µg/L	7.352	510.86	ppb	7.352	1.44%
Ba 233.527†	30152.6	739.56	µg/L	5.882	739.56	ppb	5.882	0.80%
Be 313.107†	872827.8	515.34	µg/L	1.353	515.34	ppb	1.353	0.26%
Ca 317.933Radial†	91406.8	17083	µg/L	40.2	17083	ppb	40.2	0.24%
Cd 226.502†	21636.7	489.59	µg/L	4.421	489.59	ppb	4.421	0.90%
Co 228.616†	10684.1	477.70	µg/L	1.537	477.70	ppb	1.537	0.32%
Cr 267.716†	27207.4	521.96	µg/L	4.520	521.96	ppb	4.520	0.87%
Cu 324.752†	71494.3	527.05	µg/L	5.250	527.05	ppb	5.250	1.00%
Fe 238.204 Radial†	195494.0	135350	µg/L	223.9	135350	ppb	223.9	0.17%
K 766.490 Radial†	20477.9	11042	µg/L	22.3	11042	ppb	22.3	0.20%
Mg 279.077 IEC†	7703.4	15271	µg/L	38.4	15271	ppb	38.4	0.25%
Mn 257.610†	608907.5	1766.6	µg/L	3.89	1766.6	ppb	3.89	0.22%
Mo 202.031†	4515.8	485.77	µg/L	1.643	485.77	ppb	1.643	0.34%
Na 589.592 Radial†	34365.1	8268.6	µg/L	11.62	8268.6	ppb	11.62	0.14%

Ni 231.604†	10294.5	511.19 µg/L	2.129	511.19 ppb	2.129	0.42%
P 214.914†	1382.9	2041.2 µg/L	10.97	2041.2 ppb	10.97	0.54%
Pb 220.353†	2274.5	526.31 µg/L	1.304	526.31 ppb	1.304	0.25%
S 181.975 Axial†	1241.8	5200.5 µg/L	46.21	5200.5 ppb	46.21	0.89%
Sb 206.836†	547.1	482.63 µg/L	4.899	482.63 ppb	4.899	1.02%
Se 196.026†	373.9	460.99 µg/L	10.916	460.99 ppb	10.916	2.37%
SiO2†	103410.3	17832 µg/L	154.3	17832 ppb	154.3	0.87%
Si 251.611†	120261.7	8114.2 µg/L	70.17	8114.2 ppb	70.17	0.86%
Sn 189.927†	1095.7	512.65 µg/L	1.365	512.65 ppb	1.365	0.27%
Sr 421.552†	135979.0	583.87 µg/L	1.946	583.87 ppb	1.946	0.33%
Ti 334.940†	2089753.4	4767.0 µg/L	10.48	4767.0 ppb	10.48	0.22%
Tl 190.801†	207.4	322.94 µg/L	3.523	322.94 ppb	3.523	1.09%
U 409.014†	3022.6	263.73 µg/L	3.749	263.73 ppb	3.749	1.42%
V 292.402†	51889.6	562.95 µg/L	4.737	562.95 ppb	4.737	0.84%
Zn 213.857†	35904.3	827.18 µg/L	7.751	827.18 ppb	7.751	0.94%

Sequence No.: 26
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected; 6/30/2009 05:36:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168512.9	168512.9	101	%			05:36:56
1	Al 396.153Radial†	12578.5	12568.8	5221.6	µg/L	5221.6	ppb	05:37:01
1	Ca 317.933Radial†	29047.7	27796.5	5195.0	µg/L	5195.0	ppb	05:37:01
1	Fe 238.204 Radial†	7621.1	7551.6	5244.5	µg/L	5244.5	ppb	05:37:01
1	K 766.490 Radial†	10688.8	9689.5	5224.7	µg/L	5224.7	ppb	05:37:01
1	Mg 279.077 IEC†	2686.6	2602.1	5235.0	µg/L	5235.0	ppb	05:37:01
1	Na 589.592 Radial†	43758.3	43084.4	10367	µg/L	10367	ppb	05:36:56
1	Sr 421.552†	120419.3	118898.2	510.53	µg/L	510.53	ppb	05:36:56
1	Sc 361.383	2087588.6	2087588.6	100.54	%			05:37:35
1	Y 371.029	1357655.6	1357655.6	100.06	%			05:37:35
1	Ag 328.068†	58739.9	59391.6	507.22	µg/L	507.22	ppb	05:37:40
1	As 188.979†	336.7	334.7	503.64	µg/L	503.64	ppb	05:38:01
1	B 249.677†	13054.7	12773.9	502.58	µg/L	502.58	ppb	05:37:40
1	Ba 233.527†	20689.3	20667.9	507.19	µg/L	507.19	ppb	05:37:40
1	Be 313.107†	885298.1	877177.8	505.42	µg/L	505.42	ppb	05:37:35
1	Cd 226.502†	21986.2	22010.2	508.45	µg/L	508.45	ppb	05:37:40
1	Co 228.616†	11166.1	11200.4	510.17	µg/L	510.17	ppb	05:37:40
1	Cr 267.716†	26403.8	26447.4	507.34	µg/L	507.34	ppb	05:37:40
1	Cu 324.752†	76188.9	70864.0	505.08	µg/L	505.08	ppb	05:37:40
1	Mn 257.610†	176389.5	175352.5	508.51	µg/L	508.51	ppb	05:37:35
1	Mo 202.031†	4731.2	4702.9	500.57	µg/L	500.57	ppb	05:38:01
1	Ni 231.604†	10749.7	10258.6	509.38	µg/L	509.38	ppb	05:37:40
1	P 214.914†	1776.9	1513.6	2392.8	µg/L	2392.8	ppb	05:38:01
1	Pb 220.353†	2251.2	2172.0	500.27	µg/L	500.27	ppb	05:38:01
1	S 181.975 Axial†	282.7	236.9	994.65	µg/L	994.65	ppb	05:38:01
1	Sb 206.836†	599.7	573.3	490.10	µg/L	490.10	ppb	05:38:01
1	Se 196.026†	484.3	461.3	495.89	µg/L	495.89	ppb	05:38:01
1	SiO2†	34914.2	31516.5	5434.8	µg/L	5434.8	ppb	05:37:40
1	Si 251.611†	37490.7	36943.2	2507.0	µg/L	2507.0	ppb	05:37:40
1	Sn 189.927†	1166.7	1152.2	501.00	µg/L	501.00	ppb	05:38:01
1	Ti 334.940†	223094.9	220730.5	503.40	µg/L	503.40	ppb	05:37:35
1	Tl 190.801†	318.6	344.7	496.51	µg/L	496.51	ppb	05:38:01
1	U 409.014†	5395.6	5394.8	517.46	µg/L	517.46	ppb	05:37:40
1	V 292.402†	47755.7	47705.1	508.64	µg/L	508.64	ppb	05:37:40
1	Zn 213.857†	22495.4	21641.7	502.24	µg/L	502.24	ppb	05:37:40
2	Sc RADIAL	171136.1	171136.1	103	%			05:37:06
2	Al 396.153Radial†	12536.9	12338.0	5125.5	µg/L	5125.5	ppb	05:37:12
2	Ca 317.933Radial†	28960.3	27271.9	5096.9	µg/L	5096.9	ppb	05:37:12
2	Fe 238.204 Radial†	7623.2	7438.4	5165.9	µg/L	5165.9	ppb	05:37:12
2	K 766.490 Radial†	10589.4	9431.2	5085.4	µg/L	5085.4	ppb	05:37:12
2	Mg 279.077 IEC†	2724.2	2597.9	5226.7	µg/L	5226.7	ppb	05:37:12
2	Na 589.592 Radial†	43608.7	42276.9	10172	µg/L	10172	ppb	05:37:06
2	Sr 421.552†	120504.8	117159.0	503.06	µg/L	503.06	ppb	05:37:06
2	Sc 361.383	2091074.2	2091074.2	100.71	%			05:38:08
2	Y 371.029	1360303.4	1360303.4	100.26	%			05:38:08
2	Ag 328.068†	58298.4	58855.8	502.64	µg/L	502.64	ppb	05:38:14
2	As 188.979†	327.5	325.0	489.20	µg/L	489.20	ppb	05:38:34
2	B 249.677†	12995.2	12693.2	499.42	µg/L	499.42	ppb	05:38:14
2	Ba 233.527†	20516.0	20461.5	502.13	µg/L	502.13	ppb	05:38:14
2	Be 313.107†	887726.5	878121.3	505.96	µg/L	505.96	ppb	05:38:08
2	Cd 226.502†	21802.2	21791.0	503.38	µg/L	503.38	ppb	05:38:14
2	Co 228.616†	11032.4	11049.2	503.28	µg/L	503.28	ppb	05:38:14
2	Cr 267.716†	26052.1	26054.3	499.80	µg/L	499.80	ppb	05:38:14
2	Cu 324.752†	75610.3	70163.1	500.08	µg/L	500.08	ppb	05:38:14
2	Mn 257.610†	176813.1	175480.7	508.88	µg/L	508.88	ppb	05:38:08
2	Mo 202.031†	4725.7	4689.6	499.15	µg/L	499.15	ppb	05:38:34
2	Ni 231.604†	10647.1	10139.0	503.43	µg/L	503.43	ppb	05:38:14
2	P 214.914†	1788.1	1521.8	2407.1	µg/L	2407.1	ppb	05:38:34
2	Pb 220.353†	2248.5	2165.5	498.78	µg/L	498.78	ppb	05:38:34

2	S 181.975 Axial†	279.0	232.7	977.05 µg/L	977.05 ppb	05:38:34
2	Sb 206.836†	598.4	571.0	488.16 µg/L	488.16 ppb	05:38:34
2	Se 196.026†	480.7	456.9	491.19 µg/L	491.19 ppb	05:38:34
2	SiO2†	34613.9	31160.5	5373.5 µg/L	5373.5 ppb	05:38:14
2	Si 251.611†	37099.1	36492.2	2475.7 µg/L	2475.7 ppb	05:38:14
2	Sn 189.927†	1178.9	1162.4	505.37 µg/L	505.37 ppb	05:38:34
2	Ti 334.940†	223204.7	220469.7	502.81 µg/L	502.81 ppb	05:38:08
2	Tl 190.801†	323.9	349.4	503.34 µg/L	503.34 ppb	05:38:34
2	U 409.014†	5326.7	5317.5	510.04 µg/L	510.04 ppb	05:38:14
2	V 292.402†	47364.9	47237.9	503.68 µg/L	503.68 ppb	05:38:14
2	Zn 213.857†	22343.0	21453.1	497.87 µg/L	497.87 ppb	05:38:14
3	Sc RADIAL	169923.9	169923.9	102 %		05:37:18
3	Al 396.153Radial†	12549.1	12436.9	5166.8 µg/L	5166.8 ppb	05:37:23
3	Ca 317.933Radial†	28929.1	27442.2	5128.8 µg/L	5128.8 ppb	05:37:23
3	Fe 238.204 Radial†	7554.9	7424.3	5156.2 µg/L	5156.2 ppb	05:37:23
3	K 766.490 Radial†	10574.2	9489.7	5117.0 µg/L	5117.0 ppb	05:37:23
3	Mg 279.077 IEC†	2686.6	2580.1	5190.8 µg/L	5190.8 ppb	05:37:23
3	Na 589.592 Radial†	44332.0	43287.5	10415 µg/L	10415 ppb	05:37:18
3	Sr 421.552†	122357.2	119808.4	514.44 µg/L	514.44 ppb	05:37:18
3	Sc 361.383	2091261.6	2091261.6	100.72 %		05:38:41
3	Y 371.029	1361230.8	1361230.8	100.33 %		05:38:41
3	Ag 328.068†	58194.1	58747.1	501.72 µg/L	501.72 ppb	05:38:47
3	As 188.979†	337.6	335.0	504.10 µg/L	504.10 ppb	05:39:07
3	B 249.677†	12948.5	12645.6	497.55 µg/L	497.55 ppb	05:38:47
3	Ba 233.527†	20507.0	20450.7	501.86 µg/L	501.86 ppb	05:38:47
3	Be 313.107†	887477.3	877795.0	505.77 µg/L	505.77 ppb	05:38:41
3	Cd 226.502†	21878.2	21864.5	505.08 µg/L	505.08 ppb	05:38:47
3	Co 228.616†	11093.0	11108.4	505.97 µg/L	505.97 ppb	05:38:47
3	Cr 267.716†	26179.7	26178.7	502.19 µg/L	502.19 ppb	05:38:47
3	Cu 324.752†	75573.6	70120.0	499.77 µg/L	499.77 ppb	05:38:47
3	Mn 257.610†	176702.2	175354.8	508.52 µg/L	508.52 ppb	05:38:41
3	Mo 202.031†	4706.9	4670.6	497.13 µg/L	497.13 ppb	05:39:07
3	Ni 231.604†	10671.9	10162.6	504.60 µg/L	504.60 ppb	05:38:47
3	P 214.914†	1770.2	1503.9	2377.8 µg/L	2377.8 ppb	05:39:07
3	Pb 220.353†	2239.2	2156.1	496.60 µg/L	496.60 ppb	05:39:07
3	S 181.975 Axial†	282.7	236.3	992.34 µg/L	992.34 ppb	05:39:07
3	Sb 206.836†	605.4	577.8	494.06 µg/L	494.06 ppb	05:39:07
3	Se 196.026†	492.1	468.2	503.28 µg/L	503.28 ppb	05:39:07
3	SiO2†	34674.8	31217.9	5383.3 µg/L	5383.3 ppb	05:38:47
3	Si 251.611†	37194.2	36583.2	2482.2 µg/L	2482.2 ppb	05:38:47
3	Sn 189.927†	1167.0	1150.4	500.19 µg/L	500.19 ppb	05:39:07
3	Ti 334.940†	223014.0	220260.5	502.33 µg/L	502.33 ppb	05:38:41
3	Tl 190.801†	322.9	348.5	501.93 µg/L	501.93 ppb	05:39:07
3	U 409.014†	5323.8	5314.1	509.72 µg/L	509.72 ppb	05:38:47
3	V 292.402†	47437.1	47305.4	504.37 µg/L	504.37 ppb	05:38:47
3	Zn 213.857†	22369.9	21477.9	498.45 µg/L	498.45 ppb	05:38:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2089974.8	100.66	%	0.100				0.10%
Sc RADIAL	169857.6	102	%	0.8				0.77%
Y 371.029	1359729.9	100.22	%	0.137				0.14%
Ag 328.068†	58998.2	503.86	µg/L	2.946	503.86	ppb	2.946	0.58%
QC value within limits for Ag 328.068 Recovery = 100.77%								
Al 396.153Radial†	12447.9	5171.3	µg/L	48.24	5171.3	ppb	48.24	0.93%
QC value within limits for Al 396.153Radial Recovery = 103.43%								
As 188.979†	331.6	498.98	µg/L	8.477	498.98	ppb	8.477	1.70%
QC value within limits for As 188.979 Recovery = 99.80%								
B 249.677†	12704.2	499.85	µg/L	2.546	499.85	ppb	2.546	0.51%
QC value within limits for B 249.677 Recovery = 99.97%								
Ba 233.527†	20526.7	503.73	µg/L	3.003	503.73	ppb	3.003	0.60%
QC value within limits for Ba 233.527 Recovery = 100.75%								
Be 313.107†	877698.0	505.72	µg/L	0.274	505.72	ppb	0.274	0.05%
QC value within limits for Be 313.107 Recovery = 101.14%								
Ca 317.933Radial†	27503.5	5140.2	µg/L	50.01	5140.2	ppb	50.01	0.97%
QC value within limits for Ca 317.933Radial Recovery = 102.80%								
Cd 226.502†	21888.6	505.64	µg/L	2.577	505.64	ppb	2.577	0.51%
QC value within limits for Cd 226.502 Recovery = 101.13%								
Co 228.616†	11119.3	506.48	µg/L	3.471	506.48	ppb	3.471	0.69%

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   QC value within limits for Co 228.616  Recovery = 101.30%
Cr 267.716†            26226.8      503.11 µg/L        3.852      503.11 ppb        3.852   0.77%
   QC value within limits for Cr 267.716  Recovery = 100.62%
Cu 324.752†            70382.4      501.64 µg/L        2.979      501.64 ppb        2.979   0.59%
   QC value within limits for Cu 324.752  Recovery = 100.33%
Fe 238.204 Radial†      7471.4      5188.9 µg/L       48.43      5188.9 ppb       48.43   0.93%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.78%
K 766.490 Radial†       9536.8      5142.4 µg/L       73.04      5142.4 ppb       73.04   1.42%
   QC value within limits for K 766.490 Radial  Recovery = 102.85%
Mg 279.077 IEC†         2593.4      5217.5 µg/L       23.49      5217.5 ppb       23.49   0.45%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.35%
Mn 257.610†           175396.0      508.64 µg/L        0.213      508.64 ppb        0.213   0.04%
   QC value within limits for Mn 257.610  Recovery = 101.73%
Mo 202.031†             4687.7      498.95 µg/L        1.729      498.95 ppb        1.729   0.35%
   QC value within limits for Mo 202.031  Recovery = 99.79%
Na 589.592 Radial†     42882.9       10318 µg/L      128.6        10318 ppb      128.6   1.25%
   QC value within limits for Na 589.592 Radial  Recovery = 103.18%
Ni 231.604†            10186.7      505.80 µg/L        3.147      505.80 ppb        3.147   0.62%
   QC value within limits for Ni 231.604  Recovery = 101.16%
P 214.914†              1513.1      2392.6 µg/L       14.65      2392.6 ppb       14.65   0.61%
   QC value within limits for P 214.914  Recovery = 95.70%
Pb 220.353†             2164.5      498.55 µg/L        1.843      498.55 ppb        1.843   0.37%
   QC value within limits for Pb 220.353  Recovery = 99.71%
S 181.975 Axial†         235.3      988.01 µg/L        9.565      988.01 ppb        9.565   0.97%
   QC value within limits for S 181.975 Axial  Recovery = 98.80%
Sb 206.836†              574.0      490.77 µg/L        3.004      490.77 ppb        3.004   0.61%
   QC value within limits for Sb 206.836  Recovery = 98.15%
Se 196.026†              462.1      496.79 µg/L        6.095      496.79 ppb        6.095   1.23%
   QC value within limits for Se 196.026  Recovery = 99.36%
SiO2†                  31298.3      5397.2 µg/L       32.96      5397.2 ppb       32.96   0.61%
   QC value within limits for SiO2  Recovery = 100.93%
Si 251.611†            36672.9      2488.3 µg/L       16.49      2488.3 ppb       16.49   0.66%
   QC value within limits for Si 251.611  Recovery = 99.53%
Sn 189.927†             1155.0      502.19 µg/L        2.783      502.19 ppb        2.783   0.55%
   QC value within limits for Sn 189.927  Recovery = 100.44%
Sr 421.552†           118621.9      509.34 µg/L        5.780      509.34 ppb        5.780   1.13%
   QC value within limits for Sr 421.552  Recovery = 101.87%
Ti 334.940†           220486.9      502.85 µg/L        0.536      502.85 ppb        0.536   0.11%
   QC value within limits for Ti 334.940  Recovery = 100.57%
Tl 190.801†              347.5      500.59 µg/L        3.608      500.59 ppb        3.608   0.72%
   QC value within limits for Tl 190.801  Recovery = 100.12%
U 409.014†              5342.1      512.41 µg/L        4.379      512.41 ppb        4.379   0.85%
   QC value within limits for U 409.014  Recovery = 102.48%
V 292.402†             47416.1      505.56 µg/L        2.687      505.56 ppb        2.687   0.53%
   QC value within limits for V 292.402  Recovery = 101.11%
Zn 213.857†            21524.2      499.52 µg/L        2.372      499.52 ppb        2.372   0.47%
   QC value within limits for Zn 213.857  Recovery = 99.90%
All analyte(s) passed QC.
```

Sequence No.: 27
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 05:39:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	167065.3	167065.3	100	%			05:39:49
1	Al 396.153Radial†	-117.8	32.8	13.669	µg/L	13.669	ppb	05:39:49
1	Ca 317.933Radial†	911.4	25.4	4.7536	µg/L	4.7536	ppb	05:40:09
1	Fe 238.204 Radial†	20.9	48.1	33.282	µg/L	33.282	ppb	05:40:09
1	K 766.490 Radial†	939.1	71.7	38.674	µg/L	38.674	ppb	05:39:49
1	Mg 279.077 IEC†	51.1	0.5	0.9918	µg/L	0.9918	ppb	05:40:09
1	Na 589.592 Radial†	146.9	28.4	6.8229	µg/L	6.8229	ppb	05:39:49
1	Sr 421.552†	141.3	149.4	0.6414	µg/L	0.6414	ppb	05:39:49
1	Sc 361.383	2058288.0	2058288.0	99.129	%			05:41:11
1	Y 371.029	1344890.3	1344890.3	99.122	%			05:41:11
1	Ag 328.068†	-949.8	9.2	0.0845	µg/L	0.0845	ppb	05:41:17
1	As 188.979†	6.3	6.2	9.2464	µg/L	9.2464	ppb	05:41:37
1	B 249.677†	238.0	29.4	1.1492	µg/L	1.1492	ppb	05:41:17
1	Ba 233.527†	-82.4	6.6	0.1632	µg/L	0.1632	ppb	05:41:37
1	Be 313.107†	3663.0	331.8	0.1925	µg/L	0.1925	ppb	05:41:17
1	Cd 226.502†	-141.5	-0.6	-0.0103	µg/L	-0.0103	ppb	05:41:37
1	Co 228.616†	-103.3	-9.9	-0.4517	µg/L	-0.4517	ppb	05:41:37
1	Cr 267.716†	-143.7	40.4	0.7742	µg/L	0.7742	ppb	05:41:17
1	Cu 324.752†	4851.4	-21.5	-0.1487	µg/L	-0.1487	ppb	05:41:17
1	Mn 257.610†	188.9	101.4	0.2943	µg/L	0.2943	ppb	05:41:17
1	Mo 202.031†	5.9	3.1	0.3320	µg/L	0.3320	ppb	05:41:37
1	Ni 231.604†	449.7	20.4	1.0141	µg/L	1.0141	ppb	05:41:37
1	P 214.914†	251.2	-0.3	-0.4937	µg/L	-0.4937	ppb	05:41:37
1	Pb 220.353†	65.0	-1.6	-0.3618	µg/L	-0.3618	ppb	05:41:37
1	S 181.975 Axial†	36.6	-7.4	-31.209	µg/L	-31.209	ppb	05:41:37
1	Sb 206.836†	28.2	5.2	4.4685	µg/L	4.4685	ppb	05:41:37
1	Se 196.026†	16.8	-3.5	-3.7313	µg/L	-3.7313	ppb	05:41:37
1	SiO2†	3173.4	-8.7	-1.5000	µg/L	-1.5000	ppb	05:41:17
1	Si 251.611†	387.2	44.5	3.0009	µg/L	3.0009	ppb	05:41:37
1	Sn 189.927†	10.2	2.1	0.9017	µg/L	0.9017	ppb	05:41:37
1	Ti 334.940†	1431.3	278.3	0.6348	µg/L	0.6348	ppb	05:41:17
1	Tl 190.801†	-19.6	8.1	11.639	µg/L	11.639	ppb	05:41:37
1	U 409.014†	53.0	81.7	7.8520	µg/L	7.8520	ppb	05:41:17
1	V 292.402†	-154.1	50.5	0.5516	µg/L	0.5516	ppb	05:41:17
1	Zn 213.857†	737.7	11.3	0.2587	µg/L	0.2587	ppb	05:41:37
2	Sc RADIAL	166899.8	166899.8	100	%			05:40:15
2	Al 396.153Radial†	-169.1	-18.4	-7.6967	µg/L	-7.6967	ppb	05:40:15
2	Ca 317.933Radial†	898.3	13.2	2.4680	µg/L	2.4680	ppb	05:40:35
2	Fe 238.204 Radial†	5.1	32.4	22.409	µg/L	22.409	ppb	05:40:35
2	K 766.490 Radial†	954.8	88.3	47.624	µg/L	47.624	ppb	05:40:15
2	Mg 279.077 IEC†	47.1	-3.5	-6.9709	µg/L	-6.9709	ppb	05:40:35
2	Na 589.592 Radial†	168.5	50.0	12.030	µg/L	12.030	ppb	05:40:15
2	Sr 421.552†	85.2	93.6	0.4017	µg/L	0.4017	ppb	05:40:15
2	Sc 361.383	2097407.8	2097407.8	101.01	%			05:41:43
2	Y 371.029	1372154.3	1372154.3	101.13	%			05:41:43
2	Ag 328.068†	-864.6	111.4	0.9489	µg/L	0.9489	ppb	05:41:49
2	As 188.979†	6.9	6.6	9.9068	µg/L	9.9068	ppb	05:42:09
2	B 249.677†	211.8	-1.0	-0.0472	µg/L	-0.0472	ppb	05:41:49
2	Ba 233.527†	-67.5	22.9	0.5613	µg/L	0.5613	ppb	05:42:09
2	Be 313.107†	3690.6	290.2	0.1676	µg/L	0.1676	ppb	05:41:49
2	Cd 226.502†	-134.9	8.6	0.2017	µg/L	0.2017	ppb	05:42:09
2	Co 228.616†	-95.1	0.2	0.0091	µg/L	0.0091	ppb	05:42:09
2	Cr 267.716†	-177.5	9.7	0.1857	µg/L	0.1857	ppb	05:41:49
2	Cu 324.752†	4824.8	-139.1	-0.9874	µg/L	-0.9874	ppb	05:41:49
2	Mn 257.610†	173.7	82.8	0.2403	µg/L	0.2403	ppb	05:41:49
2	Mo 202.031†	4.3	1.4	0.1539	µg/L	0.1539	ppb	05:42:09
2	Ni 231.604†	443.6	5.8	0.2907	µg/L	0.2907	ppb	05:42:09
2	P 214.914†	247.7	-8.5	-13.712	µg/L	-13.712	ppb	05:42:09
2	Pb 220.353†	59.3	-8.4	-1.9336	µg/L	-1.9336	ppb	05:42:09

2	S 181.975 Axial†	40.8	-4.0	-16.692 µg/L	-16.692 ppb	05:42:09
2	Sb 206.836†	30.3	6.8	5.7937 µg/L	5.7937 ppb	05:42:09
2	Se 196.026†	23.6	2.9	3.1458 µg/L	3.1458 ppb	05:42:09
2	SiO2†	3177.3	-64.6	-11.143 µg/L	-11.143 ppb	05:41:49
2	Si 251.611†	370.1	20.3	1.3907 µg/L	1.3907 ppb	05:42:09
2	Sn 189.927†	7.3	-1.0	-0.4290 µg/L	-0.4290 ppb	05:42:09
2	Ti 334.940†	1305.2	126.5	0.2885 µg/L	0.2885 ppb	05:41:49
2	Tl 190.801†	-33.0	-4.8	-6.8978 µg/L	-6.8978 ppb	05:42:09
2	U 409.014†	22.6	50.7	4.8688 µg/L	4.8688 ppb	05:41:49
2	V 292.402†	-163.9	43.8	0.4731 µg/L	0.4731 ppb	05:41:49
2	Zn 213.857†	729.0	-11.1	-0.2590 µg/L	-0.2590 ppb	05:42:09
3	Sc RADIAL	166910.7	166910.7	100 %		05:40:40
3	Al 396.153Radial†	-125.9	24.6	10.267 µg/L	10.267 ppb	05:40:40
3	Ca 317.933Radial†	893.2	8.1	1.5180 µg/L	1.5180 ppb	05:41:01
3	Fe 238.204 Radial†	3.9	31.2	21.599 µg/L	21.599 ppb	05:41:01
3	K 766.490 Radial†	879.0	12.7	6.8299 µg/L	6.8299 ppb	05:40:40
3	Mg 279.077 IEC†	43.6	-6.9	-13.900 µg/L	-13.900 ppb	05:41:01
3	Na 589.592 Radial†	102.3	-16.0	-3.8472 µg/L	-3.8472 ppb	05:40:40
3	Sr 421.552†	38.4	46.9	0.2013 µg/L	0.2013 ppb	05:40:40
3	Sc 361.383	2084466.2	2084466.2	100.39 %		05:42:15
3	Y 371.029	1360563.3	1360563.3	100.28 %		05:42:15
3	Ag 328.068†	-908.4	62.4	0.5312 µg/L	0.5312 ppb	05:42:21
3	As 188.979†	6.2	6.0	8.9442 µg/L	8.9442 ppb	05:42:41
3	B 249.677†	224.1	12.6	0.4898 µg/L	0.4898 ppb	05:42:21
3	Ba 233.527†	-75.5	14.5	0.3546 µg/L	0.3546 ppb	05:42:41
3	Be 313.107†	3602.6	225.3	0.1297 µg/L	0.1297 ppb	05:42:21
3	Cd 226.502†	-141.4	1.4	0.0328 µg/L	0.0328 ppb	05:42:41
3	Co 228.616†	-106.4	-11.6	-0.5289 µg/L	-0.5289 ppb	05:42:41
3	Cr 267.716†	-158.0	28.0	0.5357 µg/L	0.5357 ppb	05:42:21
3	Cu 324.752†	4879.9	-54.6	-0.3854 µg/L	-0.3854 ppb	05:42:21
3	Mn 257.610†	194.2	104.3	0.3026 µg/L	0.3026 ppb	05:42:21
3	Mo 202.031†	5.0	2.2	0.2348 µg/L	0.2348 ppb	05:42:41
3	Ni 231.604†	453.1	18.1	0.9004 µg/L	0.9004 ppb	05:42:41
3	P 214.914†	251.8	-2.9	-4.6696 µg/L	-4.6696 ppb	05:42:41
3	Pb 220.353†	71.2	3.8	0.8673 µg/L	0.8673 ppb	05:42:41
3	S 181.975 Axial†	38.3	-6.2	-26.287 µg/L	-26.287 ppb	05:42:41
3	Sb 206.836†	24.2	0.9	0.7528 µg/L	0.7528 ppb	05:42:41
3	Se 196.026†	22.1	1.6	1.7653 µg/L	1.7653 ppb	05:42:41
3	SiO2†	3168.6	-53.7	-9.2676 µg/L	-9.2676 ppb	05:42:21
3	Si 251.611†	373.0	25.4	1.6718 µg/L	1.6718 ppb	05:42:41
3	Sn 189.927†	12.8	4.5	1.9664 µg/L	1.9664 ppb	05:42:41
3	Ti 334.940†	1218.1	47.8	0.1090 µg/L	0.1090 ppb	05:42:21
3	Tl 190.801†	-23.9	4.0	5.8386 µg/L	5.8386 ppb	05:42:41
3	U 409.014†	4.7	32.9	3.1615 µg/L	3.1615 ppb	05:42:21
3	V 292.402†	-201.8	5.0	0.0610 µg/L	0.0610 ppb	05:42:21
3	Zn 213.857†	736.1	0.4	0.0054 µg/L	0.0054 ppb	05:42:41

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2080054.0	100.18	%	0.960				0.96%
Sc RADIAL	166958.6	100	%	0.1				0.06%
Y 371.029	1359202.6	100.18	%	1.008				1.01%
Ag 328.068†	61.0	0.5215	µg/L	0.43229	0.5215	ppb	0.43229	82.89%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	13.0	5.4129	µg/L	11.47994	5.4129	ppb	11.47994	212.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	6.2	9.3658	µg/L	0.49230	9.3658	ppb	0.49230	5.26%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	13.6	0.5306	µg/L	0.59921	0.5306	ppb	0.59921	112.93%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	14.7	0.3597	µg/L	0.19909	0.3597	ppb	0.19909	55.35%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	282.4	0.1633	µg/L	0.03161	0.1633	ppb	0.03161	19.36%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	15.6	2.9132	µg/L	1.66315	2.9132	ppb	1.66315	57.09%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	3.1	0.0747	µg/L	0.11202	0.0747	ppb	0.11202	149.93%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-7.1	-0.3238	µg/L	0.29087	-0.3238	ppb	0.29087	89.83%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                26.0      0.4985 µg/L       0.29598      0.4985 ppb        0.29598  59.37%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -71.7     -0.5072 µg/L       0.43236     -0.5072 ppb        0.43236  85.25%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         37.2      25.763 µg/L        6.5239      25.763 ppb         6.5239  25.32%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          57.6      31.042 µg/L       21.4408      31.042 ppb        21.4408  69.07%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -3.3     -6.6264 µg/L       7.45191     -6.6264 ppb        7.45191 112.46%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                96.2      0.2790 µg/L       0.03380      0.2790 ppb        0.03380  12.11%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.2      0.2402 µg/L       0.08918      0.2402 ppb        0.08918  37.12%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         20.8      5.0021 µg/L       8.09389      5.0021 ppb        8.09389 161.81%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.8      0.7350 µg/L       0.38901      0.7350 ppb        0.38901  52.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -3.9     -6.2916 µg/L       6.75658     -6.2916 ppb        6.75658 107.39%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -2.1     -0.4760 µg/L       1.40394     -0.4760 ppb        1.40394 294.92%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.9     -24.729 µg/L        7.3831     -24.729 ppb         7.3831  29.86%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 4.3      3.6717 µg/L       2.61320      3.6717 ppb        2.61320  71.17%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.4      0.3933 µg/L       3.63804      0.3933 ppb        3.63804 925.07%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                     -42.4     -7.3034 µg/L       5.11267     -7.3034 ppb        5.11267  70.00%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†                30.1      2.0211 µg/L       0.86005      2.0211 ppb        0.86005  42.55%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.9      0.8130 µg/L       1.20015      0.8130 ppb        1.20015 147.62%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                96.6      0.4148 µg/L       0.22032      0.4148 ppb        0.22032  53.11%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               150.9      0.3441 µg/L       0.26724      0.3441 ppb        0.26724  77.66%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 2.4      3.5265 µg/L       9.48200      3.5265 ppb        9.48200 268.88%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 55.1      5.2941 µg/L       2.37402      5.2941 ppb        2.37402  44.84%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 33.1      0.3619 µg/L       0.26355      0.3619 ppb        0.26355  72.82%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 0.2      0.0017 µg/L       0.25887      0.0017 ppb        0.25887 >999.9%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 28
Sample ID: 1201869991|880674|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 320
Date Collected: 6/30/2009 05:42:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869991|880674|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	165834.8	165834.8	99.7	%			05:43:31
1	Al 396.153Radial†	128444.3	129010.7	53774	µg/L	53774	ppb	05:43:26
1	Ca 317.933Radial†	100078.3	99520.4	18600	µg/L	18600	ppb	05:43:31
1	Fe 238.204 Radial†	208585.2	209288.4	144900	µg/L	144900	ppb	05:43:26
1	K 766.490 Radial†	21982.8	21190.5	11426	µg/L	11426	ppb	05:43:31
1	Mg 279.077 IEC†	8162.2	8138.2	16129	µg/L	16129	ppb	05:43:31
1	Na 589.592 Radial†	35066.2	35061.9	8436.2	µg/L	8436.2	ppb	05:43:31
1	Sr 421.552†	136457.3	136908.1	587.86	µg/L	587.86	ppb	05:43:26
1	Sc 361.383	2063967.5	2063967.5	99.403	%			05:44:06
1	Y 371.029	1435522.0	1435522.0	105.80	%			05:44:06
1	Ag 328.068†	54887.1	56184.3	491.36	µg/L	491.36	ppb	05:44:12
1	As 188.979†	325.4	327.2	613.15	µg/L	613.15	ppb	05:44:32
1	B 249.677†	13916.8	13789.8	498.77	µg/L	498.77	ppb	05:44:12
1	Ba 233.527†	29974.0	30243.9	741.79	µg/L	741.79	ppb	05:44:12
1	Be 313.107†	869271.7	871132.4	515.00	µg/L	515.00	ppb	05:44:06
1	Cd 226.502†	21191.5	21461.1	484.80	µg/L	484.80	ppb	05:44:12
1	Co 228.616†	10519.0	10676.6	476.91	µg/L	476.91	ppb	05:44:32
1	Cr 267.716†	26482.9	26827.5	514.69	µg/L	514.69	ppb	05:44:12
1	Cu 324.752†	75504.5	71042.7	525.12	µg/L	525.12	ppb	05:44:12
1	Mn 257.610†	653055.2	656890.7	1905.8	µg/L	1905.8	ppb	05:44:06
1	Mo 202.031†	4481.5	4505.6	485.07	µg/L	485.07	ppb	05:44:32
1	Ni 231.604†	10715.4	10346.5	513.78	µg/L	513.78	ppb	05:44:32
1	P 214.914†	1752.0	1508.9	2237.6	µg/L	2237.6	ppb	05:44:32
1	Pb 220.353†	2309.7	2256.4	522.31	µg/L	522.31	ppb	05:44:32
1	S 181.975 Axial†	1285.6	1248.9	5228.8	µg/L	5228.8	ppb	05:44:32
1	Sb 206.836†	565.6	545.7	482.22	µg/L	482.22	ppb	05:44:32
1	Se 196.026†	384.6	366.5	457.37	µg/L	457.37	ppb	05:44:32
1	SiO2†	93007.1	90356.0	15581	µg/L	15581	ppb	05:44:12
1	Si 251.611†	104872.1	105156.2	7061.8	µg/L	7061.8	ppb	05:44:12
1	Sn 189.927†	1090.7	1089.0	512.55	µg/L	512.55	ppb	05:44:32
1	Ti 334.940†	2172879.9	2184772.6	4983.8	µg/L	4983.8	ppb	05:44:06
1	Tl 190.801†	172.7	201.6	315.49	µg/L	315.49	ppb	05:44:32
1	U 409.014†	3018.5	3064.9	265.86	µg/L	265.86	ppb	05:44:12
1	V 292.402†	51366.7	51881.4	563.64	µg/L	563.64	ppb	05:44:12
1	Zn 213.857†	38760.8	38260.9	881.73	µg/L	881.73	ppb	05:44:12
2	Sc RADIAL	168943.2	168943.2	102	%			05:43:42
2	Al 396.153Radial†	130861.8	129020.4	53778	µg/L	53778	ppb	05:43:37
2	Ca 317.933Radial†	101968.1	99534.1	18602	µg/L	18602	ppb	05:43:42
2	Fe 238.204 Radial†	211860.6	208663.7	144460	µg/L	144460	ppb	05:43:37
2	K 766.490 Radial†	22369.1	21165.2	11413	µg/L	11413	ppb	05:43:42
2	Mg 279.077 IEC†	8322.4	8145.4	16144	µg/L	16144	ppb	05:43:42
2	Na 589.592 Radial†	35792.4	35129.7	8452.5	µg/L	8452.5	ppb	05:43:42
2	Sr 421.552†	138969.6	136863.3	587.67	µg/L	587.67	ppb	05:43:37
2	Sc 361.383	2058082.6	2058082.6	99.119	%			05:44:39
2	Y 371.029	1432438.8	1432438.8	105.57	%			05:44:39
2	Ag 328.068†	55802.1	57265.3	500.56	µg/L	500.56	ppb	05:44:45
2	As 188.979†	329.7	332.5	620.75	µg/L	620.75	ppb	05:45:06
2	B 249.677†	14190.2	14105.7	511.37	µg/L	511.37	ppb	05:44:45
2	Ba 233.527†	30561.6	30922.9	758.44	µg/L	758.44	ppb	05:44:45
2	Be 313.107†	871128.3	875506.1	517.60	µg/L	517.60	ppb	05:44:39
2	Cd 226.502†	21601.9	21936.0	495.79	µg/L	495.79	ppb	05:44:45
2	Co 228.616†	10533.2	10721.1	478.88	µg/L	478.88	ppb	05:45:06
2	Cr 267.716†	26891.9	27316.2	524.06	µg/L	524.06	ppb	05:44:45
2	Cu 324.752†	76674.4	72440.2	535.01	µg/L	535.01	ppb	05:44:45
2	Mn 257.610†	654168.9	659892.8	1914.5	µg/L	1914.5	ppb	05:44:39
2	Mo 202.031†	4486.4	4523.5	486.95	µg/L	486.95	ppb	05:45:06
2	Ni 231.604†	10733.7	10395.8	516.23	µg/L	516.23	ppb	05:45:06
2	P 214.914†	1735.1	1496.8	2216.6	µg/L	2216.6	ppb	05:45:06
2	Pb 220.353†	2327.9	2281.5	528.07	µg/L	528.07	ppb	05:45:06

2	S 181.975 Axial†	1281.6	1248.6	5227.5 µg/L	5227.5 ppb	05:45:06
2	Sb 206.836†	564.0	545.8	482.35 µg/L	482.35 ppb	05:45:06
2	Se 196.026†	389.6	372.6	463.74 µg/L	463.74 ppb	05:45:06
2	SiO2†	94638.5	92269.5	15911 µg/L	15911 ppb	05:44:45
2	Si 251.611†	106618.3	107219.6	7203.5 µg/L	7203.5 ppb	05:44:45
2	Sn 189.927†	1082.3	1083.6	510.12 µg/L	510.12 ppb	05:45:06
2	Ti 334.940†	2179181.2	2197380.4	5012.5 µg/L	5012.5 ppb	05:44:39
2	Tl 190.801†	183.5	213.0	332.03 µg/L	332.03 ppb	05:45:06
2	U 409.014†	2976.3	3031.0	262.69 µg/L	262.69 ppb	05:44:45
2	V 292.402†	52234.1	52904.3	574.41 µg/L	574.41 ppb	05:44:45
2	Zn 213.857†	39382.4	38999.5	899.02 µg/L	899.02 ppb	05:44:45
3	Sc RADIAL	166417.8	166417.8	100 %		05:43:53
3	Al 396.153Radial†	130454.6	130569.0	54423 µg/L	54423 ppb	05:43:48
3	Ca 317.933Radial†	101850.4	100940.2	18865 µg/L	18865 ppb	05:43:53
3	Fe 238.204 Radial†	210838.4	210808.0	145950 µg/L	145950 ppb	05:43:48
3	K 766.490 Radial†	22426.2	21556.6	11624 µg/L	11624 ppb	05:43:53
3	Mg 279.077 IEC†	8325.1	8272.4	16397 µg/L	16397 ppb	05:43:53
3	Na 589.592 Radial†	35707.7	35580.0	8560.9 µg/L	8560.9 ppb	05:43:53
3	Sr 421.552†	138562.6	138533.3	594.84 µg/L	594.84 ppb	05:43:48
3	Sc 361.383	2055571.5	2055571.5	98.998 %		05:45:13
3	Y 371.029	1433259.6	1433259.6	105.64 %		05:45:13
3	Ag 328.068†	55239.0	56765.3	496.41 µg/L	496.41 ppb	05:45:19
3	As 188.979†	325.2	328.2	615.55 µg/L	615.55 ppb	05:45:39
3	B 249.677†	14023.9	13955.1	504.97 µg/L	504.97 ppb	05:45:19
3	Ba 233.527†	30158.2	30553.1	749.37 µg/L	749.37 ppb	05:45:19
3	Be 313.107†	870231.9	875674.3	517.72 µg/L	517.72 ppb	05:45:13
3	Cd 226.502†	21281.8	21639.3	488.82 µg/L	488.82 ppb	05:45:19
3	Co 228.616†	10502.0	10702.6	478.02 µg/L	478.02 ppb	05:45:39
3	Cr 267.716†	26551.1	27005.2	518.10 µg/L	518.10 ppb	05:45:19
3	Cu 324.752†	75936.0	71788.9	530.58 µg/L	530.58 ppb	05:45:19
3	Mn 257.610†	653942.7	660470.6	1916.2 µg/L	1916.2 ppb	05:45:13
3	Mo 202.031†	4486.2	4528.8	487.57 µg/L	487.57 ppb	05:45:39
3	Ni 231.604†	10700.9	10375.9	515.24 µg/L	515.24 ppb	05:45:39
3	P 214.914†	1739.1	1502.9	2226.0 µg/L	2226.0 ppb	05:45:39
3	Pb 220.353†	2327.6	2284.1	528.72 µg/L	528.72 ppb	05:45:39
3	S 181.975 Axial†	1286.1	1254.7	5253.1 µg/L	5253.1 ppb	05:45:39
3	Sb 206.836†	552.8	535.2	473.27 µg/L	473.27 ppb	05:45:39
3	Se 196.026†	391.6	375.1	467.04 µg/L	467.04 ppb	05:45:39
3	SiO2†	93674.3	91412.1	15763 µg/L	15763 ppb	05:45:19
3	Si 251.611†	105490.9	106212.2	7133.3 µg/L	7133.3 ppb	05:45:19
3	Sn 189.927†	1084.3	1087.0	512.04 µg/L	512.04 ppb	05:45:39
3	Ti 334.940†	2181006.9	2201910.4	5022.9 µg/L	5022.9 ppb	05:45:13
3	Tl 190.801†	181.9	211.6	330.07 µg/L	330.07 ppb	05:45:39
3	U 409.014†	2924.8	2982.7	257.73 µg/L	257.73 ppb	05:45:19
3	V 292.402†	51742.1	52471.7	569.96 µg/L	569.96 ppb	05:45:19
3	Zn 213.857†	38915.1	38576.1	889.01 µg/L	889.01 ppb	05:45:19

Mean Data: 1201869991|880674|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2059207.2	99.173	%	0.2076				0.21%
Sc RADIAL	167065.3	100	%	1.0				0.99%
Y 371.029	1433740.1	105.67	%	0.118				0.11%
Ag 328.068†	56738.3	496.11	µg/L	4.608	496.11	ppb	4.608	0.93%
Al 396.153Radial†	129533.3	53992	µg/L	373.9	53992	ppb	373.9	0.69%
As 188.979†	329.3	616.48	µg/L	3.887	616.48	ppb	3.887	0.63%
B 249.677†	13950.2	505.04	µg/L	6.302	505.04	ppb	6.302	1.25%
Ba 233.527†	30573.3	749.87	µg/L	8.336	749.87	ppb	8.336	1.11%
Be 313.107†	874104.3	516.77	µg/L	1.537	516.77	ppb	1.537	0.30%
Ca 317.933Radial†	99998.2	18689	µg/L	152.5	18689	ppb	152.5	0.82%
Cd 226.502†	21678.8	489.80	µg/L	5.562	489.80	ppb	5.562	1.14%
Co 228.616†	10700.1	477.93	µg/L	0.988	477.93	ppb	0.988	0.21%
Cr 267.716†	27049.6	518.95	µg/L	4.747	518.95	ppb	4.747	0.91%
Cu 324.752†	71757.3	530.24	µg/L	4.953	530.24	ppb	4.953	0.93%
Fe 238.204 Radial†	209586.7	145100	µg/L	763.4	145100	ppb	763.4	0.53%
K 766.490 Radial†	21304.1	11487	µg/L	118.1	11487	ppb	118.1	1.03%
Mg 279.077 IEC†	8185.3	16224	µg/L	150.6	16224	ppb	150.6	0.93%
Mn 257.610†	659084.7	1912.1	µg/L	5.57	1912.1	ppb	5.57	0.29%
Mo 202.031†	4519.3	486.53	µg/L	1.302	486.53	ppb	1.302	0.27%
Na 589.592 Radial†	35257.2	8483.2	µg/L	67.75	8483.2	ppb	67.75	0.80%

Ni 231.604†	10372.7	515.08 µg/L	1.232	515.08 ppb	1.232	0.24%
P 214.914†	1502.9	2226.7 µg/L	10.51	2226.7 ppb	10.51	0.47%
Pb 220.353†	2274.0	526.37 µg/L	3.529	526.37 ppb	3.529	0.67%
S 181.975 Axial†	1250.7	5236.5 µg/L	14.40	5236.5 ppb	14.40	0.28%
Sb 206.836†	542.2	479.28 µg/L	5.207	479.28 ppb	5.207	1.09%
Se 196.026†	371.4	462.72 µg/L	4.914	462.72 ppb	4.914	1.06%
SiO2†	91345.9	15752 µg/L	165.3	15752 ppb	165.3	1.05%
Si 251.611†	106196.0	7132.8 µg/L	70.86	7132.8 ppb	70.86	0.99%
Sn 189.927†	1086.6	511.57 µg/L	1.283	511.57 ppb	1.283	0.25%
Sr 421.552†	137434.9	590.12 µg/L	4.086	590.12 ppb	4.086	0.69%
Ti 334.940†	2194687.8	5006.4 µg/L	20.26	5006.4 ppb	20.26	0.40%
Tl 190.801†	208.7	325.87 µg/L	9.034	325.87 ppb	9.034	2.77%
U 409.014†	3026.2	262.09 µg/L	4.098	262.09 ppb	4.098	1.56%
V 292.402†	52419.1	569.34 µg/L	5.416	569.34 ppb	5.416	0.95%
Zn 213.857†	38612.2	889.92 µg/L	8.682	889.92 ppb	8.682	0.98%

Sequence No.: 29
Sample ID: 1201869990|880674|5
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 321
Date Collected: 6/30/2009 05:45:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869990|880674|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	167357.2	167357.2	101	%			05:46:21
1	Al 396.153Radial†	18036.3	18080.2	7538.7	µg/L	7538.7	ppb	05:46:21
1	Ca 317.933Radial†	16759.3	15778.4	2948.9	µg/L	2948.9	ppb	05:46:41
1	Fe 238.204 Radial†	37066.4	36875.6	25527	µg/L	25527	ppb	05:46:41
1	K 766.490 Radial†	2792.8	1912.9	1031.4	µg/L	1031.4	ppb	05:46:21
1	Mg 279.077 IEC†	989.0	932.8	1832.4	µg/L	1832.4	ppb	05:46:41
1	Na 589.592 Radial†	3201.5	3064.7	737.40	µg/L	737.40	ppb	05:46:41
1	Sr 421.552†	5421.2	5397.9	23.178	µg/L	23.178	ppb	05:46:41
1	Sc 361.383	2060769.6	2060769.6	99.249	%			05:47:44
1	Y 371.029	1360921.3	1360921.3	100.30	%			05:47:44
1	Ag 328.068†	-1069.4	-110.1	1.1633	µg/L	1.1633	ppb	05:47:49
1	As 188.979†	5.5	5.3	29.704	µg/L	29.704	ppb	05:48:10
1	B 249.677†	521.5	314.8	4.3982	µg/L	4.3982	ppb	05:47:49
1	Ba 233.527†	2899.9	3011.6	73.775	µg/L	73.775	ppb	05:47:49
1	Be 313.107†	7662.2	4356.9	4.7550	µg/L	4.7550	ppb	05:47:49
1	Cd 226.502†	-53.1	88.6	0.0508	µg/L	0.0508	ppb	05:48:10
1	Co 228.616†	-16.4	77.8	1.9266	µg/L	1.9266	ppb	05:48:10
1	Cr 267.716†	208.4	395.4	7.5916	µg/L	7.5916	ppb	05:47:49
1	Cu 324.752†	4917.3	39.0	3.7086	µg/L	3.7086	ppb	05:47:49
1	Mn 257.610†	106339.5	107055.4	310.60	µg/L	310.60	ppb	05:47:49
1	Mo 202.031†	4.7	1.9	1.2073	µg/L	1.2073	ppb	05:48:10
1	Ni 231.604†	605.1	176.4	8.7685	µg/L	8.7685	ppb	05:48:10
1	P 214.914†	438.9	188.5	280.89	µg/L	280.89	ppb	05:48:10
1	Pb 220.353†	90.6	24.1	5.9192	µg/L	5.9192	ppb	05:48:10
1	S 181.975 Axial†	65.6	21.7	87.387	µg/L	87.387	ppb	05:48:10
1	Sb 206.836†	19.2	-3.9	-0.7154	µg/L	-0.7154	ppb	05:48:10
1	Se 196.026†	15.5	-4.8	6.4899	µg/L	6.4899	ppb	05:48:10
1	SiO2†	21104.8	18054.6	3113.4	µg/L	3113.4	ppb	05:47:49
1	Si 251.611†	21252.6	21067.4	1428.8	µg/L	1428.8	ppb	05:47:49
1	Sn 189.927†	1.4	-6.8	4.2201	µg/L	4.2201	ppb	05:48:10
1	Ti 334.940†	337457.0	338846.3	772.95	µg/L	772.95	ppb	05:47:44
1	Tl 190.801†	-34.3	-6.7	-5.6816	µg/L	-5.6816	ppb	05:48:10
1	U 409.014†	-407.7	-382.6	-41.872	µg/L	-41.872	ppb	05:47:49
1	V 292.402†	929.6	1142.6	14.093	µg/L	14.093	ppb	05:47:49
1	Zn 213.857†	3851.6	3147.9	71.911	µg/L	71.911	ppb	05:47:49
2	Sc RADIAL	171800.2	171800.2	103	%			05:46:47
2	Al 396.153Radial†	17921.7	17505.6	7299.1	µg/L	7299.1	ppb	05:46:47
2	Ca 317.933Radial†	16855.8	15441.0	2885.8	µg/L	2885.8	ppb	05:47:07
2	Fe 238.204 Radial†	37308.3	36156.9	25030	µg/L	25030	ppb	05:47:07
2	K 766.490 Radial†	2716.5	1767.2	952.92	µg/L	952.92	ppb	05:46:47
2	Mg 279.077 IEC†	999.6	917.6	1802.7	µg/L	1802.7	ppb	05:47:07
2	Na 589.592 Radial†	3180.8	2962.3	712.77	µg/L	712.77	ppb	05:47:07
2	Sr 421.552†	5431.2	5268.3	22.621	µg/L	22.621	ppb	05:47:07
2	Sc 361.383	2054081.9	2054081.9	98.927	%			05:48:16
2	Y 371.029	1358344.0	1358344.0	100.11	%			05:48:16
2	Ag 328.068†	-1078.7	-123.0	1.0136	µg/L	1.0136	ppb	05:48:22
2	As 188.979†	0.3	0.1	21.534	µg/L	21.534	ppb	05:48:42
2	B 249.677†	546.8	342.1	5.6325	µg/L	5.6325	ppb	05:48:22
2	Ba 233.527†	2857.8	2978.6	72.967	µg/L	72.967	ppb	05:48:22
2	Be 313.107†	7689.9	4410.0	4.8080	µg/L	4.8080	ppb	05:48:22
2	Cd 226.502†	-53.3	88.2	0.0857	µg/L	0.0857	ppb	05:48:42
2	Co 228.616†	-11.1	83.1	2.1569	µg/L	2.1569	ppb	05:48:42
2	Cr 267.716†	219.8	407.6	7.8251	µg/L	7.8251	ppb	05:48:22
2	Cu 324.752†	4903.6	41.3	3.6583	µg/L	3.6583	ppb	05:48:22
2	Mn 257.610†	106618.5	107686.3	312.43	µg/L	312.43	ppb	05:48:22
2	Mo 202.031†	13.2	10.5	2.1049	µg/L	2.1049	ppb	05:48:42
2	Ni 231.604†	602.3	175.5	8.7233	µg/L	8.7233	ppb	05:48:42
2	P 214.914†	442.2	193.3	289.10	µg/L	289.10	ppb	05:48:42
2	Pb 220.353†	94.6	28.5	6.9164	µg/L	6.9164	ppb	05:48:42

2	S 181.975 Axial†	67.3	23.7	95.508 µg/L	95.508 ppb	05:48:42
2	Sb 206.836†	26.0	3.1	5.3212 µg/L	5.3212 ppb	05:48:42
2	Se 196.026†	1.5	-19.0	-8.9524 µg/L	-8.9524 ppb	05:48:42
2	SiO2†	21214.3	18234.5	3144.4 µg/L	3144.4 ppb	05:48:22
2	Si 251.611†	21255.7	21140.3	1433.6 µg/L	1433.6 ppb	05:48:22
2	Sn 189.927†	-2.4	-10.7	2.4102 µg/L	2.4102 ppb	05:48:42
2	Ti 334.940†	339709.5	342230.2	780.68 µg/L	780.68 ppb	05:48:16
2	Tl 190.801†	-30.7	-3.2	-0.5052 µg/L	-0.5052 ppb	05:48:42
2	U 409.014†	-323.1	-298.3	-33.672 µg/L	-33.672 ppb	05:48:22
2	V 292.402†	911.5	1127.4	13.912 µg/L	13.912 ppb	05:48:22
2	Zn 213.857†	3856.0	3165.1	72.348 µg/L	72.348 ppb	05:48:22
3	Sc RADIAL	169498.6	169498.6	102 %		05:47:13
3	Al 396.153Radial†	17958.0	17776.9	7412.2 µg/L	7412.2 ppb	05:47:13
3	Ca 317.933Radial†	16743.7	15552.6	2906.7 µg/L	2906.7 ppb	05:47:33
3	Fe 238.204 Radial†	37091.8	36435.0	25222 µg/L	25222 ppb	05:47:33
3	K 766.490 Radial†	2777.8	1863.1	1004.6 µg/L	1004.6 ppb	05:47:13
3	Mg 279.077 IEC†	1005.1	936.2	1839.7 µg/L	1839.7 ppb	05:47:33
3	Na 589.592 Radial†	3179.1	3002.6	722.44 µg/L	722.44 ppb	05:47:33
3	Sr 421.552†	5385.7	5295.0	22.736 µg/L	22.736 ppb	05:47:33
3	Sc 361.383	2076161.5	2076161.5	99.990 %		05:48:49
3	Y 371.029	1369555.3	1369555.3	100.94 %		05:48:49
3	Ag 328.068†	-1101.4	-134.2	0.9327 µg/L	0.9327 ppb	05:48:54
3	As 188.979†	9.2	9.0	34.873 µg/L	34.873 ppb	05:49:15
3	B 249.677†	496.6	286.0	3.3574 µg/L	3.3574 ppb	05:48:54
3	Ba 233.527†	2870.0	2960.0	72.510 µg/L	72.510 ppb	05:48:54
3	Be 313.107†	7747.4	4384.9	4.7571 µg/L	4.7571 ppb	05:48:54
3	Cd 226.502†	-45.1	97.1	0.2679 µg/L	0.2679 ppb	05:49:15
3	Co 228.616†	-24.1	70.2	1.5926 µg/L	1.5926 ppb	05:49:15
3	Cr 267.716†	230.0	415.4	7.9736 µg/L	7.9736 ppb	05:48:54
3	Cu 324.752†	4937.4	22.3	3.5491 µg/L	3.5491 ppb	05:48:54
3	Mn 257.610†	105950.6	105872.1	307.17 µg/L	307.17 ppb	05:48:54
3	Mo 202.031†	8.4	5.5	1.5816 µg/L	1.5816 ppb	05:49:15
3	Ni 231.604†	599.4	166.1	8.2573 µg/L	8.2573 ppb	05:49:15
3	P 214.914†	438.5	184.8	275.21 µg/L	275.21 ppb	05:49:15
3	Pb 220.353†	103.8	36.6	8.7976 µg/L	8.7976 ppb	05:49:15
3	S 181.975 Axial†	62.0	17.6	70.158 µg/L	70.158 ppb	05:49:15
3	Sb 206.836†	18.3	-4.9	-1.6234 µg/L	-1.6234 ppb	05:49:15
3	Se 196.026†	12.4	-8.0	2.8285 µg/L	2.8285 ppb	05:49:15
3	SiO2†	21069.9	17862.0	3080.2 µg/L	3080.2 ppb	05:48:54
3	Si 251.611†	21208.7	20864.8	1414.9 µg/L	1414.9 ppb	05:48:54
3	Sn 189.927†	5.3	-3.0	5.8082 µg/L	5.8082 ppb	05:49:15
3	Ti 334.940†	337869.2	336737.8	768.14 µg/L	768.14 ppb	05:48:49
3	Tl 190.801†	-33.4	-5.5	-3.9616 µg/L	-3.9616 ppb	05:49:15
3	U 409.014†	-414.7	-386.5	-42.188 µg/L	-42.188 ppb	05:48:54
3	V 292.402†	896.5	1102.6	13.648 µg/L	13.648 ppb	05:48:54
3	Zn 213.857†	3840.0	3107.6	70.990 µg/L	70.990 ppb	05:48:54

Mean Data: 1201869990|880674|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2063671.0	99.388	%	0.5453				0.55%
Sc RADIAL	169552.0	102	%	1.3				1.31%
Y 371.029	1362940.2	100.45	%	0.433				0.43%
Ag 328.068†	-122.4	1.0366	µg/L	0.11699	1.0366	ppb	0.11699	11.29%
Al 396.153Radial†	17787.6	7416.6	µg/L	119.88	7416.6	ppb	119.88	1.62%
As 188.979†	4.8	28.704	µg/L	6.7255	28.704	ppb	6.7255	23.43%
B 249.677†	314.3	4.4627	µg/L	1.13894	4.4627	ppb	1.13894	25.52%
Ba 233.527†	2983.4	73.084	µg/L	0.6405	73.084	ppb	0.6405	0.88%
Be 313.107†	4383.9	4.7734	µg/L	0.03004	4.7734	ppb	0.03004	0.63%
Ca 317.933Radial†	15590.7	2913.8	µg/L	32.13	2913.8	ppb	32.13	1.10%
Cd 226.502†	91.3	0.1348	µg/L	0.11658	0.1348	ppb	0.11658	86.48%
Co 228.616†	77.0	1.8921	µg/L	0.28375	1.8921	ppb	0.28375	15.00%
Cr 267.716†	406.1	7.7968	µg/L	0.19255	7.7968	ppb	0.19255	2.47%
Cu 324.752†	34.2	3.6387	µg/L	0.08156	3.6387	ppb	0.08156	2.24%
Fe 238.204 Radial†	36489.2	25260	µg/L	250.9	25260	ppb	250.9	0.99%
K 766.490 Radial†	1847.8	996.33	µg/L	39.913	996.33	ppb	39.913	4.01%
Mg 279.077 IEC†	928.9	1824.9	µg/L	19.58	1824.9	ppb	19.58	1.07%
Mn 257.610†	106871.3	310.07	µg/L	2.670	310.07	ppb	2.670	0.86%
Mo 202.031†	6.0	1.6313	µg/L	0.45087	1.6313	ppb	0.45087	27.64%
Na 589.592 Radial†	3009.9	724.20	µg/L	12.408	724.20	ppb	12.408	1.71%

Ni 231.604†	172.7	8.5830	µg/L	0.28298	8.5830	ppb	0.28298	3.30%
P 214.914†	188.9	281.73	µg/L	6.982	281.73	ppb	6.982	2.48%
Pb 220.353†	29.8	7.2111	µg/L	1.46166	7.2111	ppb	1.46166	20.27%
S 181.975 Axial†	21.0	84.351	µg/L	12.9447	84.351	ppb	12.9447	15.35%
Sb 206.836†	-1.9	0.9941	µg/L	3.77477	0.9941	ppb	3.77477	379.71%
Se 196.026†	-10.6	0.1220	µg/L	8.06909	0.1220	ppb	8.06909	>999.9%
SiO2†	18050.4	3112.7	µg/L	32.12	3112.7	ppb	32.12	1.03%
Si 251.611†	21024.2	1425.8	µg/L	9.73	1425.8	ppb	9.73	0.68%
Sn 189.927†	-6.8	4.1462	µg/L	1.70019	4.1462	ppb	1.70019	41.01%
Sr 421.552†	5320.4	22.845	µg/L	0.2940	22.845	ppb	0.2940	1.29%
Ti 334.940†	339271.4	773.92	µg/L	6.322	773.92	ppb	6.322	0.82%
Tl 190.801†	-5.2	-3.3828	µg/L	2.63628	-3.3828	ppb	2.63628	77.93%
U 409.014†	-355.8	-39.244	µg/L	4.8283	-39.244	ppb	4.8283	12.30%
V 292.402†	1124.2	13.884	µg/L	0.2242	13.884	ppb	0.2242	1.61%
Zn 213.857†	3140.2	71.750	µg/L	0.6932	71.750	ppb	0.6932	0.97%

Sequence No.: 30
Sample ID: 232347002|880674|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 322
Date Collected: 6/30/2009 05:49:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232347002|880674|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168286.6	168286.6	101	%			05:50:02
1	Al 396.153Radial†	142498.3	141027.4	58802	µg/L	58802	ppb	05:49:57
1	Ca 317.933Radial†	79677.9	77889.2	14557	µg/L	14557	ppb	05:50:02
1	Fe 238.204 Radial†	169134.2	167237.5	115770	µg/L	115770	ppb	05:50:02
1	K 766.490 Radial†	16609.8	15557.4	8388.7	µg/L	8388.7	ppb	05:50:02
1	Mg 279.077 IEC†	7447.8	7312.7	14507	µg/L	14507	ppb	05:50:02
1	Na 589.592 Radial†	13302.9	13033.6	3136.0	µg/L	3136.0	ppb	05:50:02
1	Sr 421.552†	29646.8	29318.2	125.89	µg/L	125.89	ppb	05:50:02
1	Sc 361.383	2055970.0	2055970.0	99.017	%			05:50:36
1	Y 371.029	1478109.2	1478109.2	108.94	%			05:50:36
1	Ag 328.068†	-1600.8	-649.4	4.3298	µg/L	4.3298	ppb	05:50:42
1	As 188.979†	34.3	34.4	149.57	µg/L	149.57	ppb	05:51:02
1	B 249.677†	1587.2	1392.3	18.555	µg/L	18.555	ppb	05:50:42
1	Ba 233.527†	41356.4	41856.5	1025.2	µg/L	1025.2	ppb	05:50:42
1	Be 313.107†	16959.1	13764.1	18.330	µg/L	18.330	ppb	05:50:42
1	Cd 226.502†	297.2	442.3	1.2478	µg/L	1.2478	ppb	05:50:42
1	Co 228.616†	878.7	981.8	37.244	µg/L	37.244	ppb	05:51:02
1	Cr 267.716†	3108.0	3324.3	63.827	µg/L	63.827	ppb	05:50:42
1	Cu 324.752†	7747.6	2908.9	36.265	µg/L	36.265	ppb	05:50:42
1	Mn 257.610†	2988292.6	3017856.2	8751.8	µg/L	8751.8	ppb	05:50:36
1	Mo 202.031†	39.5	37.1	8.4953	µg/L	8.4953	ppb	05:51:02
1	Ni 231.604†	2886.6	2481.9	123.35	µg/L	123.35	ppb	05:51:02
1	P 214.914†	1104.1	861.3	1289.9	µg/L	1289.9	ppb	05:51:02
1	Pb 220.353†	519.7	457.7	109.17	µg/L	109.17	ppb	05:51:02
1	S 181.975 Axial†	88.4	44.9	169.60	µg/L	169.60	ppb	05:51:02
1	Sb 206.836†	21.6	-1.4	10.761	µg/L	10.761	ppb	05:51:02
1	Se 196.026†	-32.9	-53.7	-6.4976	µg/L	-6.4976	ppb	05:51:02
1	SiO2†	100530.1	98317.7	16954	µg/L	16954	ppb	05:50:42
1	Si 251.611†	113606.3	114387.5	7779.0	µg/L	7779.0	ppb	05:50:42
1	Sn 189.927†	-30.6	-39.1	16.539	µg/L	16.539	ppb	05:51:02
1	Ti 334.940†	1554042.7	1568297.8	3577.5	µg/L	3577.5	ppb	05:50:36
1	Tl 190.801†	-71.0	-43.9	-73.186	µg/L	-73.186	ppb	05:51:02
1	U 409.014†	-1805.0	-1794.6	-195.76	µg/L	-195.76	ppb	05:50:36
1	V 292.402†	9359.7	9658.6	111.21	µg/L	111.21	ppb	05:50:42
1	Zn 213.857†	25208.2	24725.6	570.36	µg/L	570.36	ppb	05:50:42
2	Sc RADIAL	167496.7	167496.7	101	%			05:50:13
2	Al 396.153Radial†	143865.5	143049.8	59646	µg/L	59646	ppb	05:50:08
2	Ca 317.933Radial†	80409.8	78987.7	14762	µg/L	14762	ppb	05:50:13
2	Fe 238.204 Radial†	170770.0	169650.8	117440	µg/L	117440	ppb	05:50:13
2	K 766.490 Radial†	16955.8	15978.4	8615.8	µg/L	8615.8	ppb	05:50:13
2	Mg 279.077 IEC†	7538.9	7437.9	14756	µg/L	14756	ppb	05:50:13
2	Na 589.592 Radial†	13430.9	13222.8	3181.5	µg/L	3181.5	ppb	05:50:13
2	Sr 421.552†	30059.2	29866.0	128.24	µg/L	128.24	ppb	05:50:13
2	Sc 361.383	2064954.5	2064954.5	99.450	%			05:51:10
2	Y 371.029	1484842.2	1484842.2	109.44	%			05:51:10
2	Ag 328.068†	-1669.8	-711.8	3.9205	µg/L	3.9205	ppb	05:51:15
2	As 188.979†	36.7	36.7	154.34	µg/L	154.34	ppb	05:51:36
2	B 249.677†	1591.4	1389.5	17.919	µg/L	17.919	ppb	05:51:15
2	Ba 233.527†	40728.9	41043.8	1005.3	µg/L	1005.3	ppb	05:51:15
2	Be 313.107†	16681.9	13410.8	18.092	µg/L	18.092	ppb	05:51:15
2	Cd 226.502†	287.4	431.2	0.8625	µg/L	0.8625	ppb	05:51:15
2	Co 228.616†	884.9	984.1	37.379	µg/L	37.379	ppb	05:51:36
2	Cr 267.716†	3067.1	3269.4	62.773	µg/L	62.773	ppb	05:51:15
2	Cu 324.752†	7720.5	2847.7	36.054	µg/L	36.054	ppb	05:51:15
2	Mn 257.610†	2988646.9	3005081.5	8714.8	µg/L	8714.8	ppb	05:51:10
2	Mo 202.031†	46.4	43.8	9.2779	µg/L	9.2779	ppb	05:51:36
2	Ni 231.604†	2878.9	2461.5	122.34	µg/L	122.34	ppb	05:51:36
2	P 214.914†	1108.9	861.4	1288.3	µg/L	1288.3	ppb	05:51:36
2	Pb 220.353†	512.3	448.0	106.98	µg/L	106.98	ppb	05:51:36

2	S 181.975 Axial†	97.0	53.2	204.00	µg/L	204.00 ppb	05:51:36
2	Sb 206.836†	9.6	-13.6	0.2912	µg/L	0.2912 ppb	05:51:36
2	Se 196.026†	-31.0	-51.6	-3.6119	µg/L	-3.6119 ppb	05:51:36
2	SiO2†	99123.6	96461.6	16634	µg/L	16634 ppb	05:51:15
2	Si 251.611†	111904.9	112177.6	7626.4	µg/L	7626.4 ppb	05:51:15
2	Sn 189.927†	-27.3	-35.7	18.509	µg/L	18.509 ppb	05:51:36
2	Ti 334.940†	1555480.6	1562915.0	3565.2	µg/L	3565.2 ppb	05:51:10
2	Tl 190.801†	-67.5	-40.0	-67.523	µg/L	-67.523 ppb	05:51:36
2	U 409.014†	-1791.4	-1773.1	-194.02	µg/L	-194.02 ppb	05:51:10
2	V 292.402†	9232.3	9489.3	109.57	µg/L	109.57 ppb	05:51:15
2	Zn 213.857†	24782.8	24187.0	557.62	µg/L	557.62 ppb	05:51:15
3	Sc RADIAL	168408.5	168408.5	101	%		05:50:24
3	Al 396.153Radial†	142991.6	141412.7	58963	µg/L	58963 ppb	05:50:19
3	Ca 317.933Radial†	79190.2	77350.4	14456	µg/L	14456 ppb	05:50:24
3	Fe 238.204 Radial†	168198.6	166192.1	115050	µg/L	115050 ppb	05:50:24
3	K 766.490 Radial†	16672.0	15607.0	8415.5	µg/L	8415.5 ppb	05:50:24
3	Mg 279.077 IEC†	7429.4	7289.2	14461	µg/L	14461 ppb	05:50:24
3	Na 589.592 Radial†	13309.8	13030.9	3135.4	µg/L	3135.4 ppb	05:50:24
3	Sr 421.552†	29693.9	29343.5	126.00	µg/L	126.00 ppb	05:50:24
3	Sc 361.383	2070957.1	2070957.1	99.739	%		05:51:43
3	Y 371.029	1489561.7	1489561.7	109.78	%		05:51:43
3	Ag 328.068†	-1679.2	-716.2	3.6990	µg/L	3.6990 ppb	05:51:49
3	As 188.979†	29.7	29.5	141.77	µg/L	141.77 ppb	05:52:09
3	B 249.677†	1645.8	1439.5	20.644	µg/L	20.644 ppb	05:51:49
3	Ba 233.527†	41412.1	41610.1	1019.2	µg/L	1019.2 ppb	05:51:49
3	Be 313.107†	16932.2	13613.1	18.248	µg/L	18.248 ppb	05:51:49
3	Cd 226.502†	292.2	435.2	1.1396	µg/L	1.1396 ppb	05:51:49
3	Co 228.616†	879.0	975.6	36.960	µg/L	36.960 ppb	05:52:09
3	Cr 267.716†	3132.8	3326.4	63.866	µg/L	63.866 ppb	05:51:49
3	Cu 324.752†	7780.4	2885.2	35.999	µg/L	35.999 ppb	05:51:49
3	Mn 257.610†	3008062.2	3015837.3	8745.9	µg/L	8745.9 ppb	05:51:43
3	Mo 202.031†	41.5	38.7	8.6440	µg/L	8.6440 ppb	05:52:09
3	Ni 231.604†	2875.5	2449.8	121.76	µg/L	121.76 ppb	05:52:09
3	P 214.914†	1098.8	847.9	1268.9	µg/L	1268.9 ppb	05:52:09
3	Pb 220.353†	516.3	450.5	107.53	µg/L	107.53 ppb	05:52:09
3	S 181.975 Axial†	91.6	47.5	180.56	µg/L	180.56 ppb	05:52:09
3	Sb 206.836†	19.7	-3.5	9.0223	µg/L	9.0223 ppb	05:52:09
3	Se 196.026†	-32.3	-52.8	-5.9593	µg/L	-5.9593 ppb	05:52:09
3	SiO2†	100461.2	97513.8	16816	µg/L	16816 ppb	05:51:49
3	Si 251.611†	113362.0	113312.3	7704.5	µg/L	7704.5 ppb	05:51:49
3	Sn 189.927†	-31.2	-39.5	16.169	µg/L	16.169 ppb	05:52:09
3	Ti 334.940†	1566057.7	1568986.3	3579.0	µg/L	3579.0 ppb	05:51:43
3	Tl 190.801†	-70.3	-42.6	-71.306	µg/L	-71.306 ppb	05:52:09
3	U 409.014†	-1788.0	-1764.4	-192.70	µg/L	-192.70 ppb	05:51:43
3	V 292.402†	9332.1	9562.6	110.14	µg/L	110.14 ppb	05:51:49
3	Zn 213.857†	25117.1	24450.0	563.96	µg/L	563.96 ppb	05:51:49

Mean Data: 232347002|880674|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2063960.5	99.402	%	0.3633				0.37%
Sc RADIAL	168063.9	101	%	0.3				0.29%
Y 371.029	1484171.0	109.39	%	0.424				0.39%
Ag 328.068†	-692.5	3.9831	µg/L	0.32006	3.9831	ppb	0.32006	8.04%
Al 396.153Radial†	141830.0	59137	µg/L	447.7	59137	ppb	447.7	0.76%
As 188.979†	33.6	148.56	µg/L	6.345	148.56	ppb	6.345	4.27%
B 249.677†	1407.1	19.039	µg/L	1.4255	19.039	ppb	1.4255	7.49%
Ba 233.527†	41503.4	1016.6	µg/L	10.21	1016.6	ppb	10.21	1.00%
Be 313.107†	13596.0	18.223	µg/L	0.1213	18.223	ppb	0.1213	0.67%
Ca 317.933Radial†	78075.8	14592	µg/L	156.0	14592	ppb	156.0	1.07%
Cd 226.502†	436.2	1.0833	µg/L	0.19873	1.0833	ppb	0.19873	18.35%
Co 228.616†	980.5	37.194	µg/L	0.2139	37.194	ppb	0.2139	0.58%
Cr 267.716†	3306.7	63.489	µg/L	0.6200	63.489	ppb	0.6200	0.98%
Cu 324.752†	2880.6	36.106	µg/L	0.1406	36.106	ppb	0.1406	0.39%
Fe 238.204 Radial†	167693.5	116090	µg/L	1227.9	116090	ppb	1227.9	1.06%
K 766.490 Radial†	15714.3	8473.3	µg/L	124.09	8473.3	ppb	124.09	1.46%
Mg 279.077 IEC†	7346.6	14574	µg/L	158.7	14574	ppb	158.7	1.09%
Mn 257.610†	3012925.0	8737.5	µg/L	19.91	8737.5	ppb	19.91	0.23%
Mo 202.031†	39.9	8.8058	µg/L	0.41562	8.8058	ppb	0.41562	4.72%
Na 589.592 Radial†	13095.8	3151.0	µg/L	26.47	3151.0	ppb	26.47	0.84%

Ni 231.604†	2464.4	122.48 µg/L	0.808	122.48 ppb	0.808	0.66%
P 214.914†	856.9	1282.3 µg/L	11.71	1282.3 ppb	11.71	0.91%
Pb 220.353†	452.1	107.89 µg/L	1.135	107.89 ppb	1.135	1.05%
S 181.975 Axial†	48.5	184.72 µg/L	17.572	184.72 ppb	17.572	9.51%
Sb 206.836†	-6.2	6.6915 µg/L	5.61063	6.6915 ppb	5.61063	83.85%
Se 196.026†	-52.7	-5.3562 µg/L	1.53447	-5.3562 ppb	1.53447	28.65%
SiO2†	97431.0	16801 µg/L	160.5	16801 ppb	160.5	0.96%
Si 251.611†	113292.4	7703.3 µg/L	76.28	7703.3 ppb	76.28	0.99%
Sn 189.927†	-38.1	17.072 µg/L	1.2582	17.072 ppb	1.2582	7.37%
Sr 421.552†	29509.2	126.71 µg/L	1.328	126.71 ppb	1.328	1.05%
Ti 334.940†	1566733.0	3573.9 µg/L	7.59	3573.9 ppb	7.59	0.21%
Tl 190.801†	-42.2	-70.672 µg/L	2.8845	-70.672 ppb	2.8845	4.08%
U 409.014†	-1777.4	-194.16 µg/L	1.532	-194.16 ppb	1.532	0.79%
V 292.402†	9570.1	110.31 µg/L	0.834	110.31 ppb	0.834	0.76%
Zn 213.857†	24454.2	563.98 µg/L	6.370	563.98 ppb	6.370	1.13%

Sequence No.: 31
Sample ID: 232347003|880674|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 323
Date Collected: 6/30/2009 05:52:18
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232347003|880674|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168630.9	168630.9	101	%			05:52:51
1	Al 396.153Radial†	100786.5	99586.6	41523	µg/L	41523	ppb	05:52:51
1	Ca 317.933Radial†	58818.3	57148.2	10681	µg/L	10681	ppb	05:52:56
1	Fe 238.204 Radial†	140700.6	138843.3	96115	µg/L	96115	ppb	05:52:56
1	K 766.490 Radial†	14731.1	13670.3	7371.2	µg/L	7371.2	ppb	05:52:56
1	Mg 279.077 IEC†	6278.8	6144.3	12191	µg/L	12191	ppb	05:52:56
1	Na 589.592 Radial†	8444.8	8213.8	1976.3	µg/L	1976.3	ppb	05:52:56
1	Sr 421.552†	15200.9	15005.9	64.433	µg/L	64.433	ppb	05:52:56
1	Sc 361.383	2063135.4	2063135.4	99.363	%			05:53:30
1	Y 371.029	1424182.2	1424182.2	104.97	%			05:53:30
1	Ag 328.068†	-1587.0	-629.8	2.7542	µg/L	2.7542	ppb	05:53:36
1	As 188.979†	16.5	16.4	108.35	µg/L	108.35	ppb	05:53:56
1	B 249.677†	1397.3	1195.6	16.972	µg/L	16.972	ppb	05:53:36
1	Ba 233.527†	14344.1	14525.9	355.88	µg/L	355.88	ppb	05:53:36
1	Be 313.107†	17714.1	14464.4	18.790	µg/L	18.790	ppb	05:53:36
1	Cd 226.502†	193.5	336.9	0.2931	µg/L	0.2931	ppb	05:53:56
1	Co 228.616†	286.5	382.6	9.9129	µg/L	9.9129	ppb	05:53:56
1	Cr 267.716†	2349.2	2549.7	48.948	µg/L	48.948	ppb	05:53:36
1	Cu 324.752†	5580.9	701.1	17.909	µg/L	17.909	ppb	05:53:36
1	Mn 257.610†	704774.4	709206.7	2057.2	µg/L	2057.2	ppb	05:53:30
1	Mo 202.031†	21.5	18.8	5.7736	µg/L	5.7736	ppb	05:53:56
1	Ni 231.604†	1196.9	771.3	38.330	µg/L	38.330	ppb	05:53:56
1	P 214.914†	1302.0	1056.6	1628.7	µg/L	1628.7	ppb	05:53:56
1	Pb 220.353†	401.9	337.4	80.178	µg/L	80.178	ppb	05:53:56
1	S 181.975 Axial†	93.7	50.0	194.10	µg/L	194.10	ppb	05:53:56
1	Sb 206.836†	19.0	-4.2	8.8795	µg/L	8.8795	ppb	05:53:56
1	Se 196.026†	-33.6	-54.3	-15.929	µg/L	-15.929	ppb	05:53:56
1	SiO2†	88410.2	85767.4	14790	µg/L	14790	ppb	05:53:36
1	Si 251.611†	99461.6	99753.6	6766.6	µg/L	6766.6	ppb	05:53:36
1	Sn 189.927†	-29.5	-37.9	11.176	µg/L	11.176	ppb	05:53:56
1	Ti 334.940†	1568080.8	1576975.1	3597.4	µg/L	3597.4	ppb	05:53:30
1	Tl 190.801†	-47.7	-20.2	-12.420	µg/L	-12.420	ppb	05:53:56
1	U 409.014†	-1123.9	-1102.8	-125.14	µg/L	-125.14	ppb	05:53:30
1	V 292.402†	6782.5	7032.1	81.960	µg/L	81.960	ppb	05:53:36
1	Zn 213.857†	23213.2	22629.3	523.16	µg/L	523.16	ppb	05:53:36
2	Sc RADIAL	169615.5	169615.5	102	%			05:53:02
2	Al 396.153Radial†	101661.3	99867.5	41640	µg/L	41640	ppb	05:53:02
2	Ca 317.933Radial†	59161.6	57148.1	10681	µg/L	10681	ppb	05:53:07
2	Fe 238.204 Radial†	141473.9	138796.0	96082	µg/L	96082	ppb	05:53:07
2	K 766.490 Radial†	14692.5	13548.1	7305.3	µg/L	7305.3	ppb	05:53:07
2	Mg 279.077 IEC†	6274.9	6104.6	12111	µg/L	12111	ppb	05:53:07
2	Na 589.592 Radial†	8479.6	8199.5	1972.9	µg/L	1972.9	ppb	05:53:07
2	Sr 421.552†	15329.5	15045.1	64.601	µg/L	64.601	ppb	05:53:07
2	Sc 361.383	2073600.1	2073600.1	99.867	%			05:54:04
2	Y 371.029	1432625.3	1432625.3	105.59	%			05:54:04
2	Ag 328.068†	-1641.3	-676.2	2.3580	µg/L	2.3580	ppb	05:54:09
2	As 188.979†	18.5	18.3	111.32	µg/L	111.32	ppb	05:54:30
2	B 249.677†	1423.8	1215.0	17.747	µg/L	17.747	ppb	05:54:09
2	Ba 233.527†	14457.7	14566.7	356.88	µg/L	356.88	ppb	05:54:09
2	Be 313.107†	17780.0	14440.4	18.916	µg/L	18.916	ppb	05:54:09
2	Cd 226.502†	193.8	336.2	0.2731	µg/L	0.2731	ppb	05:54:30
2	Co 228.616†	290.7	385.5	9.9427	µg/L	9.9427	ppb	05:54:30
2	Cr 267.716†	2368.0	2556.6	49.080	µg/L	49.080	ppb	05:54:09
2	Cu 324.752†	5547.5	639.3	17.465	µg/L	17.465	ppb	05:54:09
2	Mn 257.610†	717946.7	718817.1	2085.0	µg/L	2085.0	ppb	05:54:04
2	Mo 202.031†	21.5	18.7	5.7701	µg/L	5.7701	ppb	05:54:30
2	Ni 231.604†	1196.9	765.2	38.026	µg/L	38.026	ppb	05:54:30
2	P 214.914†	1303.8	1051.8	1621.0	µg/L	1621.0	ppb	05:54:30
2	Pb 220.353†	412.5	345.9	82.162	µg/L	82.162	ppb	05:54:30

2	S 181.975 Axial†	86.6	42.4	162.13 µg/L	162.13 ppb	05:54:30
2	Sb 206.836†	14.2	-9.0	4.8730 µg/L	4.8730 ppb	05:54:30
2	Se 196.026†	-14.8	-35.2	4.5001 µg/L	4.5001 ppb	05:54:30
2	SiO2†	88729.3	85637.9	14768 µg/L	14768 ppb	05:54:09
2	Si 251.611†	99790.0	99577.3	6752.8 µg/L	6752.8 ppb	05:54:09
2	Sn 189.927†	-35.5	-43.8	8.6219 µg/L	8.6219 ppb	05:54:30
2	Ti 334.940†	1596958.0	1597926.6	3645.2 µg/L	3645.2 ppb	05:54:04
2	Tl 190.801†	-52.5	-24.8	-18.831 µg/L	-18.831 ppb	05:54:30
2	U 409.014†	-1224.1	-1197.5	-134.23 µg/L	-134.23 ppb	05:54:04
2	V 292.402†	6803.9	7019.1	81.805 µg/L	81.805 ppb	05:54:09
2	Zn 213.857†	23368.1	22666.5	524.04 µg/L	524.04 ppb	05:54:09
3	Sc RADIAL	168351.2	168351.2	101 %		05:53:13
3	Al 396.153Radial†	101588.3	100544.2	41923 µg/L	41923 ppb	05:53:13
3	Ca 317.933Radial†	59054.9	57478.5	10742 µg/L	10742 ppb	05:53:18
3	Fe 238.204 Radial†	141220.3	139587.6	96630 µg/L	96630 ppb	05:53:18
3	K 766.490 Radial†	14628.7	13593.2	7329.7 µg/L	7329.7 ppb	05:53:18
3	Mg 279.077 IEC†	6289.6	6165.3	12232 µg/L	12232 ppb	05:53:18
3	Na 589.592 Radial†	8475.7	8258.2	1987.0 µg/L	1987.0 ppb	05:53:18
3	Sr 421.552†	15328.3	15156.7	65.080 µg/L	65.080 ppb	05:53:18
3	Sc 361.383	2051832.7	2051832.7	98.818 %		05:54:37
3	Y 371.029	1421431.7	1421431.7	104.76 %		05:54:37
3	Ag 328.068†	-1661.2	-713.8	2.0868 µg/L	2.0868 ppb	05:54:43
3	As 188.979†	15.8	15.8	107.98 µg/L	107.98 ppb	05:55:03
3	B 249.677†	1423.5	1229.9	18.162 µg/L	18.162 ppb	05:54:43
3	Ba 233.527†	14369.2	14630.7	358.45 µg/L	358.45 ppb	05:54:43
3	Be 313.107†	17672.1	14520.1	18.988 µg/L	18.988 ppb	05:54:43
3	Cd 226.502†	197.9	342.4	0.3651 µg/L	0.3651 ppb	05:55:03
3	Co 228.616†	285.1	382.8	9.8024 µg/L	9.8024 ppb	05:55:03
3	Cr 267.716†	2350.0	2563.5	49.213 µg/L	49.213 ppb	05:54:43
3	Cu 324.752†	5523.6	674.1	17.786 µg/L	17.786 ppb	05:54:43
3	Mn 257.610†	711833.0	720256.9	2089.2 µg/L	2089.2 ppb	05:54:37
3	Mo 202.031†	22.6	20.0	5.9299 µg/L	5.9299 ppb	05:55:03
3	Ni 231.604†	1170.1	750.8	37.311 µg/L	37.311 ppb	05:55:03
3	P 214.914†	1295.5	1057.3	1629.4 µg/L	1629.4 ppb	05:55:03
3	Pb 220.353†	408.8	346.6	82.344 µg/L	82.344 ppb	05:55:03
3	S 181.975 Axial†	88.4	45.1	173.38 µg/L	173.38 ppb	05:55:03
3	Sb 206.836†	16.1	-6.9	6.7055 µg/L	6.7055 ppb	05:55:03
3	Se 196.026†	-26.2	-46.9	-7.7932 µg/L	-7.7932 ppb	05:55:03
3	SiO2†	88624.5	86474.3	14912 µg/L	14912 ppb	05:54:43
3	Si 251.611†	99675.7	100521.6	6817.8 µg/L	6817.8 ppb	05:54:43
3	Sn 189.927†	-33.1	-41.7	9.6752 µg/L	9.6752 ppb	05:55:03
3	Ti 334.940†	1584140.9	1601920.6	3654.3 µg/L	3654.3 ppb	05:54:37
3	Tl 190.801†	-53.3	-26.1	-20.725 µg/L	-20.725 ppb	05:55:03
3	U 409.014†	-1320.4	-1307.9	-144.97 µg/L	-144.97 ppb	05:54:37
3	V 292.402†	6789.8	7077.0	82.445 µg/L	82.445 ppb	05:54:43
3	Zn 213.857†	23285.0	22830.6	527.84 µg/L	527.84 ppb	05:54:43

Mean Data: 232347003|880674|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2062856.0	99.349	%	0.5243				0.53%
Sc RADIAL	168865.8	101	%	0.4				0.39%
Y 371.029	1426079.7	105.11	%	0.430				0.41%
Ag 328.068†	-673.3	2.3997	µg/L	0.33567	2.3997	ppb	0.33567	13.99%
Al 396.153Radial†	99999.5	41695	µg/L	205.2	41695	ppb	205.2	0.49%
As 188.979†	16.9	109.21	µg/L	1.831	109.21	ppb	1.831	1.68%
B 249.677†	1213.5	17.627	µg/L	0.6041	17.627	ppb	0.6041	3.43%
Ba 233.527†	14574.4	357.07	µg/L	1.295	357.07	ppb	1.295	0.36%
Be 313.107†	14475.0	18.898	µg/L	0.1001	18.898	ppb	0.1001	0.53%
Ca 317.933Radial†	57258.2	10701	µg/L	35.6	10701	ppb	35.6	0.33%
Cd 226.502†	338.5	0.3105	µg/L	0.04836	0.3105	ppb	0.04836	15.58%
Co 228.616†	383.6	9.8860	µg/L	0.07390	9.8860	ppb	0.07390	0.75%
Cr 267.716†	2556.6	49.081	µg/L	0.1324	49.081	ppb	0.1324	0.27%
Cu 324.752†	671.5	17.720	µg/L	0.2294	17.720	ppb	0.2294	1.29%
Fe 238.204 Radial†	139075.6	96276	µg/L	307.4	96276	ppb	307.4	0.32%
K 766.490 Radial†	13603.9	7335.4	µg/L	33.32	7335.4	ppb	33.32	0.45%
Mg 279.077 IEC†	6138.0	12178	µg/L	61.6	12178	ppb	61.6	0.51%
Mn 257.610†	716093.6	2077.1	µg/L	17.42	2077.1	ppb	17.42	0.84%
Mo 202.031†	19.2	5.8245	µg/L	0.09128	5.8245	ppb	0.09128	1.57%
Na 589.592 Radial†	8223.8	1978.7	µg/L	7.36	1978.7	ppb	7.36	0.37%

Ni 231.604†	762.5	37.889	µg/L	0.5231	37.889	ppb	0.5231	1.38%
P 214.914†	1055.2	1626.4	µg/L	4.65	1626.4	ppb	4.65	0.29%
Pb 220.353†	343.3	81.561	µg/L	1.2012	81.561	ppb	1.2012	1.47%
S 181.975 Axial†	45.8	176.54	µg/L	16.215	176.54	ppb	16.215	9.19%
Sb 206.836†	-6.7	6.8194	µg/L	2.00568	6.8194	ppb	2.00568	29.41%
Se 196.026†	-45.5	-6.4073	µg/L	10.28480	-6.4073	ppb	10.28480	160.52%
SiO2†	85959.9	14823	µg/L	77.6	14823	ppb	77.6	0.52%
Si 251.611†	99950.8	6779.1	µg/L	34.21	6779.1	ppb	34.21	0.50%
Sn 189.927†	-41.1	9.8245	µg/L	1.28382	9.8245	ppb	1.28382	13.07%
Sr 421.552†	15069.2	64.705	µg/L	0.3360	64.705	ppb	0.3360	0.52%
Ti 334.940†	1592274.1	3632.3	µg/L	30.57	3632.3	ppb	30.57	0.84%
Tl 190.801†	-23.7	-17.325	µg/L	4.3526	-17.325	ppb	4.3526	25.12%
U 409.014†	-1202.7	-134.78	µg/L	9.928	-134.78	ppb	9.928	7.37%
V 292.402†	7042.7	82.070	µg/L	0.3341	82.070	ppb	0.3341	0.41%
Zn 213.857†	22708.8	525.01	µg/L	2.492	525.01	ppb	2.492	0.47%

Sequence No.: 32
Sample ID: 232347004|880674|1
Analyst: JWJ
Initial Sample Wt:
Dilution:

Autosampler Location: 324
Date Collected: 6/30/2009 05:55:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232347004|880674|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	169816.3	169816.3	102	%			05:55:45
1	Al 396.153Radial†	88634.2	86986.7	36270	µg/L	36270	ppb	05:55:45
1	Ca 317.933Radial†	60556.1	58445.7	10923	µg/L	10923	ppb	05:55:51
1	Fe 238.204 Radial†	177069.5	173505.6	120110	µg/L	120110	ppb	05:55:45
1	K 766.490 Radial†	11268.9	10176.8	5487.5	µg/L	5487.5	ppb	05:55:51
1	Mg 279.077 IEC†	4880.6	4731.3	9309.7	µg/L	9309.7	ppb	05:55:51
1	Na 589.592 Radial†	14378.7	13969.1	3361.1	µg/L	3361.1	ppb	05:55:51
1	Sr 421.552†	20274.1	19871.5	85.325	µg/L	85.325	ppb	05:55:51
1	Sc 361.383	2075900.3	2075900.3	99.977	%			05:56:25
1	Y 371.029	1434615.9	1434615.9	105.74	%			05:56:25
1	Ag 328.068†	-1853.9	-887.0	2.3392	µg/L	2.3392	ppb	05:56:30
1	As 188.979†	22.9	22.7	137.48	µg/L	137.48	ppb	05:56:51
1	B 249.677†	1622.3	1412.0	17.966	µg/L	17.966	ppb	05:56:30
1	Ba 233.527†	10407.5	10499.5	257.24	µg/L	257.24	ppb	05:56:30
1	Be 313.107†	21739.3	18380.9	21.254	µg/L	21.254	ppb	05:56:30
1	Cd 226.502†	299.4	441.6	0.8222	µg/L	0.8222	ppb	05:56:30
1	Co 228.616†	237.6	332.0	7.4593	µg/L	7.4593	ppb	05:56:51
1	Cr 267.716†	1933.8	2119.6	40.683	µg/L	40.683	ppb	05:56:51
1	Cu 324.752†	4045.4	-869.2	9.9570	µg/L	9.9570	ppb	05:56:30
1	Mn 257.610†	393321.7	393321.8	1141.3	µg/L	1141.3	ppb	05:56:25
1	Mo 202.031†	37.8	35.0	8.4439	µg/L	8.4439	ppb	05:56:51
1	Ni 231.604†	1063.4	630.4	31.325	µg/L	31.325	ppb	05:56:51
1	P 214.914†	1205.4	951.9	1429.5	µg/L	1429.5	ppb	05:56:51
1	Pb 220.353†	208.0	140.9	34.240	µg/L	34.240	ppb	05:56:51
1	S 181.975 Axial†	126.9	82.5	327.87	µg/L	327.87	ppb	05:56:51
1	Sb 206.836†	11.9	-11.4	2.9715	µg/L	2.9715	ppb	05:56:51
1	Se 196.026†	-37.8	-58.3	-8.2226	µg/L	-8.2226	ppb	05:56:51
1	SiO2†	84550.0	81359.2	14030	µg/L	14030	ppb	05:56:30
1	Si 251.611†	94927.9	94603.4	6408.1	µg/L	6408.1	ppb	05:56:30
1	Sn 189.927†	-6.8	-15.0	26.827	µg/L	26.827	ppb	05:56:51
1	Ti 334.940†	1609956.9	1609156.6	3670.8	µg/L	3670.8	ppb	05:56:25
1	Tl 190.801†	-52.6	-24.7	-14.903	µg/L	-14.903	ppb	05:56:51
1	U 409.014†	-1421.4	-1393.5	-157.60	µg/L	-157.60	ppb	05:56:25
1	V 292.402†	5043.6	5250.7	65.069	µg/L	65.069	ppb	05:56:30
1	Zn 213.857†	15448.1	14718.8	336.24	µg/L	336.24	ppb	05:56:30
2	Sc RADIAL	167821.4	167821.4	101	%			05:55:56
2	Al 396.153Radial†	88681.9	88066.2	36720	µg/L	36720	ppb	05:55:56
2	Ca 317.933Radial†	61166.6	59756.2	11168	µg/L	11168	ppb	05:56:02
2	Fe 238.204 Radial†	176180.8	174686.8	120930	µg/L	120930	ppb	05:55:56
2	K 766.490 Radial†	11281.0	10320.2	5564.8	µg/L	5564.8	ppb	05:56:02
2	Mg 279.077 IEC†	4891.8	4799.1	9444.8	µg/L	9444.8	ppb	05:56:02
2	Na 589.592 Radial†	14587.1	14343.2	3451.1	µg/L	3451.1	ppb	05:56:02
2	Sr 421.552†	20536.4	20367.7	87.456	µg/L	87.456	ppb	05:56:02
2	Sc 361.383	2083332.1	2083332.1	100.34	%			05:56:58
2	Y 371.029	1440046.0	1440046.0	106.14	%			05:56:58
2	Ag 328.068†	-1869.5	-895.9	2.3293	µg/L	2.3293	ppb	05:57:04
2	As 188.979†	17.8	17.5	130.36	µg/L	130.36	ppb	05:57:24
2	B 249.677†	1609.0	1392.9	16.957	µg/L	16.957	ppb	05:57:04
2	Ba 233.527†	10473.2	10527.9	257.93	µg/L	257.93	ppb	05:57:04
2	Be 313.107†	21920.4	18483.8	21.318	µg/L	21.318	ppb	05:57:04
2	Cd 226.502†	283.9	425.1	0.3849	µg/L	0.3849	ppb	05:57:04
2	Co 228.616†	240.5	334.0	7.5477	µg/L	7.5477	ppb	05:57:24
2	Cr 267.716†	1943.7	2122.6	40.740	µg/L	40.740	ppb	05:57:24
2	Cu 324.752†	4004.2	-924.7	9.6719	µg/L	9.6719	ppb	05:57:04
2	Mn 257.610†	394512.4	393105.1	1140.7	µg/L	1140.7	ppb	05:56:58
2	Mo 202.031†	44.6	41.6	9.1797	µg/L	9.1797	ppb	05:57:24
2	Ni 231.604†	1084.8	647.9	32.198	µg/L	32.198	ppb	05:57:24
2	P 214.914†	1205.2	947.5	1421.4	µg/L	1421.4	ppb	05:57:24
2	Pb 220.353†	207.7	139.9	34.035	µg/L	34.035	ppb	05:57:24

2	S 181.975 Axial†	126.7	81.9	325.12 µg/L	325.12 ppb	05:57:24
2	Sb 206.836†	19.3	-4.0	9.3242 µg/L	9.3242 ppb	05:57:24
2	Se 196.026†	-46.4	-66.7	-16.909 µg/L	-16.909 ppb	05:57:24
2	SiO2†	85212.6	81717.9	14092 µg/L	14092 ppb	05:57:04
2	Si 251.611†	95642.7	94977.1	6433.9 µg/L	6433.9 ppb	05:57:04
2	Sn 189.927†	-11.6	-19.8	25.002 µg/L	25.002 ppb	05:57:24
2	Ti 334.940†	1616436.6	1609870.2	3672.4 µg/L	3672.4 ppb	05:56:58
2	Tl 190.801†	-41.1	-13.1	1.8159 µg/L	1.8159 ppb	05:57:24
2	U 409.014†	-1332.1	-1299.4	-148.73 µg/L	-148.73 ppb	05:56:58
2	V 292.402†	5075.3	5264.4	65.299 µg/L	65.299 ppb	05:57:04
2	Zn 213.857†	15532.6	14747.9	336.86 µg/L	336.86 ppb	05:57:04
3	Sc RADIAL	171428.3	171428.3	103 %		05:56:07
3	Al 396.153Radial†	89755.4	87258.2	36383 µg/L	36383 ppb	05:56:07
3	Ca 317.933Radial†	61412.6	58719.1	10974 µg/L	10974 ppb	05:56:13
3	Fe 238.204 Radial†	178740.1	173495.7	120100 µg/L	120100 ppb	05:56:07
3	K 766.490 Radial†	11307.6	10110.6	5451.8 µg/L	5451.8 ppb	05:56:13
3	Mg 279.077 IEC†	4903.3	4708.3	9263.6 µg/L	9263.6 ppb	05:56:13
3	Na 589.592 Radial†	14662.8	14112.3	3395.6 µg/L	3395.6 ppb	05:56:13
3	Sr 421.552†	20556.1	19958.5	85.698 µg/L	85.698 ppb	05:56:13
3	Sc 361.383	2086541.1	2086541.1	100.49 %		05:57:32
3	Y 371.029	1441702.5	1441702.5	106.26 %		05:57:32
3	Ag 328.068†	-1835.8	-859.5	2.5726 µg/L	2.5726 ppb	05:57:37
3	As 188.979†	12.4	12.2	121.67 µg/L	121.67 ppb	05:57:58
3	B 249.677†	1614.0	1395.5	17.316 µg/L	17.316 ppb	05:57:37
3	Ba 233.527†	10426.8	10465.7	256.41 µg/L	256.41 ppb	05:57:37
3	Be 313.107†	21853.5	18383.7	21.213 µg/L	21.213 ppb	05:57:37
3	Cd 226.502†	249.2	390.1	-0.3600 µg/L	-0.3600 ppb	05:57:37
3	Co 228.616†	251.2	344.3	8.0503 µg/L	8.0503 ppb	05:57:58
3	Cr 267.716†	1955.7	2131.6	40.912 µg/L	40.912 ppb	05:57:58
3	Cu 324.752†	4003.0	-932.1	9.5089 µg/L	9.5089 ppb	05:57:37
3	Mn 257.610†	393599.1	391591.5	1136.3 µg/L	1136.3 ppb	05:57:32
3	Mo 202.031†	44.5	41.4	9.1286 µg/L	9.1286 ppb	05:57:58
3	Ni 231.604†	1087.8	649.2	32.261 µg/L	32.261 ppb	05:57:58
3	P 214.914†	1197.2	937.7	1406.2 µg/L	1406.2 ppb	05:57:58
3	Pb 220.353†	205.9	137.8	33.535 µg/L	33.535 ppb	05:57:58
3	S 181.975 Axial†	125.8	80.8	320.83 µg/L	320.83 ppb	05:57:58
3	Sb 206.836†	14.4	-8.9	5.0368 µg/L	5.0368 ppb	05:57:58
3	Se 196.026†	-41.8	-62.0	-12.220 µg/L	-12.220 ppb	05:57:58
3	SiO2†	84890.1	81266.3	14014 µg/L	14014 ppb	05:57:37
3	Si 251.611†	95334.4	94523.6	6403.3 µg/L	6403.3 ppb	05:57:37
3	Sn 189.927†	-17.8	-25.9	22.103 µg/L	22.103 ppb	05:57:58
3	Ti 334.940†	1611662.9	1602642.1	3655.9 µg/L	3655.9 ppb	05:57:32
3	Tl 190.801†	-55.6	-27.5	-19.015 µg/L	-19.015 ppb	05:57:58
3	U 409.014†	-1373.5	-1338.5	-152.32 µg/L	-152.32 ppb	05:57:32
3	V 292.402†	5082.1	5263.3	65.214 µg/L	65.214 ppb	05:57:37
3	Zn 213.857†	15464.9	14656.7	334.78 µg/L	334.78 ppb	05:57:37

Mean Data: 232347004|880674|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2081924.5	100.27	%	0.263				0.26%
Sc RADIAL	169688.7	102	%	1.1				1.06%
Y 371.029	1438788.1	106.04	%	0.273				0.26%
Ag 328.068†	-880.8	2.4137	µg/L	0.13769	2.4137	ppb	0.13769	5.70%
Al 396.153Radial†	87437.0	36457	µg/L	234.1	36457	ppb	234.1	0.64%
As 188.979†	17.5	129.83	µg/L	7.918	129.83	ppb	7.918	6.10%
B 249.677†	1400.1	17.413	µg/L	0.5118	17.413	ppb	0.5118	2.94%
Ba 233.527†	10497.7	257.19	µg/L	0.764	257.19	ppb	0.764	0.30%
Be 313.107†	18416.1	21.262	µg/L	0.0532	21.262	ppb	0.0532	0.25%
Ca 317.933Radial†	58973.6	11022	µg/L	129.2	11022	ppb	129.2	1.17%
Cd 226.502†	418.9	0.2824	µg/L	0.59775	0.2824	ppb	0.59775	211.70%
Co 228.616†	336.8	7.6858	µg/L	0.31878	7.6858	ppb	0.31878	4.15%
Cr 267.716†	2124.6	40.778	µg/L	0.1190	40.778	ppb	0.1190	0.29%
Cu 324.752†	-908.7	9.7126	µg/L	0.22678	9.7126	ppb	0.22678	2.33%
Fe 238.204 Radial†	173896.0	120380	µg/L	474.1	120380	ppb	474.1	0.39%
K 766.490 Radial†	10202.5	5501.3	µg/L	57.75	5501.3	ppb	57.75	1.05%
Mg 279.077 IEC†	4746.2	9339.4	µg/L	94.17	9339.4	ppb	94.17	1.01%
Mn 257.610†	392672.8	1139.4	µg/L	2.73	1139.4	ppb	2.73	0.24%
Mo 202.031†	39.3	8.9174	µg/L	0.41084	8.9174	ppb	0.41084	4.61%
Na 589.592 Radial†	14141.5	3402.6	µg/L	45.41	3402.6	ppb	45.41	1.33%

Ni 231.604†	642.5	31.928	µg/L	0.5233	31.928	ppb	0.5233	1.64%
P 214.914†	945.7	1419.0	µg/L	11.83	1419.0	ppb	11.83	0.83%
Pb 220.353†	139.5	33.937	µg/L	0.3629	33.937	ppb	0.3629	1.07%
S 181.975 Axial†	81.7	324.61	µg/L	3.546	324.61	ppb	3.546	1.09%
Sb 206.836†	-8.1	5.7775	µg/L	3.24046	5.7775	ppb	3.24046	56.09%
Se 196.026†	-62.3	-12.450	µg/L	4.3477	-12.450	ppb	4.3477	34.92%
SiO2†	81447.8	14045	µg/L	41.1	14045	ppb	41.1	0.29%
Si 251.611†	94701.4	6415.1	µg/L	16.47	6415.1	ppb	16.47	0.26%
Sn 189.927†	-20.3	24.644	µg/L	2.3820	24.644	ppb	2.3820	9.67%
Sr 421.552†	20065.9	86.160	µg/L	1.1377	86.160	ppb	1.1377	1.32%
Ti 334.940†	1607222.9	3666.4	µg/L	9.09	3666.4	ppb	9.09	0.25%
Tl 190.801†	-21.8	-10.701	µg/L	11.0331	-10.701	ppb	11.0331	103.10%
U 409.014†	-1343.8	-152.88	µg/L	4.465	-152.88	ppb	4.465	2.92%
V 292.402†	5259.5	65.194	µg/L	0.1166	65.194	ppb	0.1166	0.18%
Zn 213.857†	14707.8	335.96	µg/L	1.066	335.96	ppb	1.066	0.32%

Sequence No.: 33
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 05:58:06
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	170361.1	170361.1	102	%			05:58:40
1	Al 396.153Radial†	12753.9	12605.4	5236.9	µg/L	5236.9	ppb	05:58:46
1	Ca 317.933Radial†	29399.3	27828.7	5201.0	µg/L	5201.0	ppb	05:58:46
1	Fe 238.204 Radial†	7757.5	7603.2	5280.0	µg/L	5280.0	ppb	05:58:46
1	K 766.490 Radial†	10800.7	9684.3	5221.9	µg/L	5221.9	ppb	05:58:46
1	Mg 279.077 IEC†	2714.3	2600.3	5231.4	µg/L	5231.4	ppb	05:58:46
1	Na 589.592 Radial†	43645.4	42505.5	10227	µg/L	10227	ppb	05:58:40
1	Sr 421.552†	120551.7	117737.6	505.55	µg/L	505.55	ppb	05:58:40
1	Sc 361.383	2090877.7	2090877.7	100.70	%			05:59:19
1	Y 371.029	1364802.5	1364802.5	100.59	%			05:59:19
1	Ag 328.068†	58613.7	59174.3	505.37	µg/L	505.37	ppb	05:59:25
1	As 188.979†	335.3	332.7	500.81	µg/L	500.81	ppb	05:59:46
1	B 249.677†	12965.3	12664.7	498.26	µg/L	498.26	ppb	05:59:25
1	Ba 233.527†	20619.9	20566.5	504.71	µg/L	504.71	ppb	05:59:25
1	Be 313.107†	886038.6	876528.0	505.05	µg/L	505.05	ppb	05:59:19
1	Cd 226.502†	21843.1	21833.7	504.37	µg/L	504.37	ppb	05:59:25
1	Co 228.616†	11083.5	11100.9	505.64	µg/L	505.64	ppb	05:59:25
1	Cr 267.716†	26251.3	26254.6	503.64	µg/L	503.64	ppb	05:59:25
1	Cu 324.752†	76158.8	70714.9	504.02	µg/L	504.02	ppb	05:59:25
1	Mn 257.610†	176638.3	175323.6	508.43	µg/L	508.43	ppb	05:59:19
1	Mo 202.031†	4742.8	4707.1	501.01	µg/L	501.01	ppb	05:59:46
1	Ni 231.604†	10746.9	10239.0	508.41	µg/L	508.41	ppb	05:59:25
1	P 214.914†	1789.4	1523.3	2408.7	µg/L	2408.7	ppb	05:59:46
1	Pb 220.353†	2246.7	2164.0	498.42	µg/L	498.42	ppb	05:59:46
1	S 181.975 Axial†	283.5	237.2	996.09	µg/L	996.09	ppb	05:59:46
1	Sb 206.836†	615.6	588.1	502.86	µg/L	502.86	ppb	05:59:46
1	Se 196.026†	485.5	461.7	496.42	µg/L	496.42	ppb	05:59:46
1	SiO2†	34806.7	31355.2	5407.0	µg/L	5407.0	ppb	05:59:25
1	Si 251.611†	37304.9	36700.0	2490.1	µg/L	2490.1	ppb	05:59:25
1	Sn 189.927†	1169.4	1153.0	501.38	µg/L	501.38	ppb	05:59:46
1	Ti 334.940†	223556.0	220839.4	503.65	µg/L	503.65	ppb	05:59:19
1	Tl 190.801†	323.2	348.8	502.50	µg/L	502.50	ppb	05:59:46
1	U 409.014†	5426.5	5417.1	519.59	µg/L	519.59	ppb	05:59:25
1	V 292.402†	47618.9	47494.5	506.43	µg/L	506.43	ppb	05:59:25
1	Zn 213.857†	22455.3	21566.7	500.48	µg/L	500.48	ppb	05:59:25
2	Sc RADIAL	172342.5	172342.5	104	%			05:58:51
2	Al 396.153Radial†	12644.5	12356.6	5133.3	µg/L	5133.3	ppb	05:58:57
2	Ca 317.933Radial†	29468.0	27564.9	5151.7	µg/L	5151.7	ppb	05:58:57
2	Fe 238.204 Radial†	7719.2	7479.1	5194.2	µg/L	5194.2	ppb	05:58:57
2	K 766.490 Radial†	10636.7	9404.7	5071.1	µg/L	5071.1	ppb	05:58:57
2	Mg 279.077 IEC†	2734.9	2589.7	5210.1	µg/L	5210.1	ppb	05:58:57
2	Na 589.592 Radial†	44089.0	42443.7	10212	µg/L	10212	ppb	05:58:51
2	Sr 421.552†	121588.0	117384.6	504.03	µg/L	504.03	ppb	05:58:51
2	Sc 361.383	2097650.4	2097650.4	101.02	%			05:59:53
2	Y 371.029	1363450.9	1363450.9	100.49	%			05:59:53
2	Ag 328.068†	58787.8	59158.8	505.23	µg/L	505.23	ppb	05:59:58
2	As 188.979†	337.2	333.6	502.05	µg/L	502.05	ppb	06:00:19
2	B 249.677†	13029.9	12687.1	499.17	µg/L	499.17	ppb	05:59:58
2	Ba 233.527†	20688.1	20567.9	504.74	µg/L	504.74	ppb	05:59:58
2	Be 313.107†	891260.0	878855.5	506.38	µg/L	506.38	ppb	05:59:53
2	Cd 226.502†	21959.4	21878.8	505.41	µg/L	505.41	ppb	05:59:58
2	Co 228.616†	11139.2	11120.6	506.53	µg/L	506.53	ppb	05:59:58
2	Cr 267.716†	26361.8	26279.7	504.13	µg/L	504.13	ppb	05:59:58
2	Cu 324.752†	76278.8	70589.5	503.12	µg/L	503.12	ppb	05:59:58
2	Mn 257.610†	177643.5	175752.3	509.67	µg/L	509.67	ppb	05:59:53
2	Mo 202.031†	4728.2	4677.4	497.85	µg/L	497.85	ppb	06:00:19
2	Ni 231.604†	10707.5	10165.6	504.75	µg/L	504.75	ppb	05:59:58
2	P 214.914†	1777.6	1505.8	2380.3	µg/L	2380.3	ppb	06:00:19
2	Pb 220.353†	2245.0	2155.1	496.36	µg/L	496.36	ppb	06:00:19

2	S 181.975 Axial†	277.9	230.7	968.79 µg/L	968.79 ppb	06:00:19
2	Sb 206.836†	608.7	579.3	495.32 µg/L	495.32 ppb	06:00:19
2	Se 196.026†	482.9	457.6	491.89 µg/L	491.89 ppb	06:00:19
2	SiO2†	34907.5	31343.4	5405.0 µg/L	5405.0 ppb	05:59:58
2	Si 251.611†	37437.6	36711.7	2491.1 µg/L	2491.1 ppb	05:59:58
2	Sn 189.927†	1165.8	1145.7	498.17 µg/L	498.17 ppb	06:00:19
2	Ti 334.940†	224355.8	220914.3	503.82 µg/L	503.82 ppb	05:59:53
2	Tl 190.801†	318.1	342.8	493.70 µg/L	493.70 ppb	06:00:19
2	U 409.014†	5412.2	5385.5	516.58 µg/L	516.58 ppb	05:59:58
2	V 292.402†	47832.1	47552.9	507.01 µg/L	507.01 ppb	05:59:58
2	Zn 213.857†	22520.4	21559.2	500.34 µg/L	500.34 ppb	05:59:58
3	Sc RADIAL	170206.3	170206.3	102 %		05:59:02
3	Al 396.153Radial†	12782.3	12644.5	5253.3 µg/L	5253.3 ppb	05:59:08
3	Ca 317.933Radial†	29548.2	28000.4	5233.1 µg/L	5233.1 ppb	05:59:08
3	Fe 238.204 Radial†	7747.7	7600.5	5278.2 µg/L	5278.2 ppb	05:59:08
3	K 766.490 Radial†	10721.9	9616.9	5185.5 µg/L	5185.5 ppb	05:59:08
3	Mg 279.077 IEC†	2754.1	2641.7	5314.4 µg/L	5314.4 ppb	05:59:08
3	Na 589.592 Radial†	43849.9	42744.2	10285 µg/L	10285 ppb	05:59:02
3	Sr 421.552†	121078.0	118359.2	508.21 µg/L	508.21 ppb	05:59:02
3	Sc 361.383	2085178.3	2085178.3	100.42 %		06:00:26
3	Y 371.029	1356595.0	1356595.0	99.985 %		06:00:26
3	Ag 328.068†	58563.0	59283.0	506.29 µg/L	506.29 ppb	06:00:32
3	As 188.979†	333.6	332.0	499.69 µg/L	499.69 ppb	06:00:52
3	B 249.677†	12986.4	12720.9	500.48 µg/L	500.48 ppb	06:00:32
3	Ba 233.527†	20505.0	20508.1	503.28 µg/L	503.28 ppb	06:00:32
3	Be 313.107†	887362.2	880251.0	507.19 µg/L	507.19 ppb	06:00:26
3	Cd 226.502†	21827.1	21877.1	505.37 µg/L	505.37 ppb	06:00:32
3	Co 228.616†	11062.2	11109.8	506.03 µg/L	506.03 ppb	06:00:32
3	Cr 267.716†	26212.9	26287.5	504.28 µg/L	504.28 ppb	06:00:32
3	Cu 324.752†	76121.0	70883.9	505.23 µg/L	505.23 ppb	06:00:32
3	Mn 257.610†	176873.2	176037.0	510.50 µg/L	510.50 ppb	06:00:26
3	Mo 202.031†	4686.2	4663.6	496.39 µg/L	496.39 ppb	06:00:52
3	Ni 231.604†	10649.2	10171.0	505.02 µg/L	505.02 ppb	06:00:32
3	P 214.914†	1764.2	1503.0	2375.3 µg/L	2375.3 ppb	06:00:52
3	Pb 220.353†	2222.6	2146.1	494.29 µg/L	494.29 ppb	06:00:52
3	S 181.975 Axial†	272.0	226.4	950.86 µg/L	950.86 ppb	06:00:52
3	Sb 206.836†	602.5	576.8	493.13 µg/L	493.13 ppb	06:00:52
3	Se 196.026†	479.9	457.5	491.83 µg/L	491.83 ppb	06:00:52
3	SiO2†	34696.9	31340.3	5404.5 µg/L	5404.5 ppb	06:00:32
3	Si 251.611†	37274.8	36771.3	2495.3 µg/L	2495.3 ppb	06:00:32
3	Sn 189.927†	1153.3	1140.2	495.85 µg/L	495.85 ppb	06:00:52
3	Ti 334.940†	223466.3	221356.9	504.83 µg/L	504.83 ppb	06:00:26
3	Tl 190.801†	315.5	342.0	492.67 µg/L	492.67 ppb	06:00:52
3	U 409.014†	5403.0	5408.5	518.76 µg/L	518.76 ppb	06:00:32
3	V 292.402†	47576.3	47581.4	507.31 µg/L	507.31 ppb	06:00:32
3	Zn 213.857†	22429.4	21601.9	501.32 µg/L	501.32 ppb	06:00:32

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2091235.4	100.72	%	0.301				0.30%
Sc RADIAL	170970.0	103	%	0.7				0.70%
Y 371.029	1361616.1	100.36	%	0.324				0.32%
Ag 328.068†	59205.4	505.63	µg/L	0.578	505.63	ppb	0.578	0.11%
QC value within limits for Ag 328.068 Recovery = 101.13%								
Al 396.153Radial†	12535.5	5207.8	µg/L	65.10	5207.8	ppb	65.10	1.25%
QC value within limits for Al 396.153Radial Recovery = 104.16%								
As 188.979†	332.8	500.85	µg/L	1.179	500.85	ppb	1.179	0.24%
QC value within limits for As 188.979 Recovery = 100.17%								
B 249.677†	12690.9	499.31	µg/L	1.116	499.31	ppb	1.116	0.22%
QC value within limits for B 249.677 Recovery = 99.86%								
Ba 233.527†	20547.5	504.24	µg/L	0.835	504.24	ppb	0.835	0.17%
QC value within limits for Ba 233.527 Recovery = 100.85%								
Be 313.107†	878544.9	506.21	µg/L	1.082	506.21	ppb	1.082	0.21%
QC value within limits for Be 313.107 Recovery = 101.24%								
Ca 317.933Radial†	27798.0	5195.3	µg/L	41.00	5195.3	ppb	41.00	0.79%
QC value within limits for Ca 317.933Radial Recovery = 103.91%								
Cd 226.502†	21863.2	505.05	µg/L	0.589	505.05	ppb	0.589	0.12%
QC value within limits for Cd 226.502 Recovery = 101.01%								
Co 228.616†	11110.4	506.07	µg/L	0.444	506.07	ppb	0.444	0.09%

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   QC value within limits for Co 228.616  Recovery = 101.21%
Cr 267.716†            26273.9      504.02 µg/L         0.331      504.02 ppb          0.331   0.07%
   QC value within limits for Cr 267.716  Recovery = 100.80%
Cu 324.752†            70729.4      504.12 µg/L         1.057      504.12 ppb          1.057   0.21%
   QC value within limits for Cu 324.752  Recovery = 100.82%
Fe 238.204 Radial†      7560.9      5250.8 µg/L        49.05      5250.8 ppb         49.05   0.93%
   QC value within limits for Fe 238.204 Radial  Recovery = 105.02%
K 766.490 Radial†       9568.6      5159.5 µg/L        78.67      5159.5 ppb         78.67   1.52%
   QC value within limits for K 766.490 Radial  Recovery = 103.19%
Mg 279.077 IEC†         2610.6      5252.0 µg/L        55.07      5252.0 ppb         55.07   1.05%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.04%
Mn 257.610†           175704.3      509.53 µg/L         1.041      509.53 ppb          1.041   0.20%
   QC value within limits for Mn 257.610  Recovery = 101.91%
Mo 202.031†             4682.7      498.42 µg/L         2.364      498.42 ppb          2.364   0.47%
   QC value within limits for Mo 202.031  Recovery = 99.68%
Na 589.592 Radial†     42564.5       10241 µg/L          38.2       10241 ppb           38.2   0.37%
   QC value within limits for Na 589.592 Radial  Recovery = 102.41%
Ni 231.604†            10191.9      506.06 µg/L         2.036      506.06 ppb          2.036   0.40%
   QC value within limits for Ni 231.604  Recovery = 101.21%
P 214.914†              1510.7      2388.1 µg/L        18.02      2388.1 ppb         18.02   0.75%
   QC value within limits for P 214.914  Recovery = 95.53%
Pb 220.353†             2155.1      496.36 µg/L         2.068      496.36 ppb          2.068   0.42%
   QC value within limits for Pb 220.353  Recovery = 99.27%
S 181.975 Axial†         231.5      971.91 µg/L        22.778      971.91 ppb         22.778   2.34%
   QC value within limits for S 181.975 Axial  Recovery = 97.19%
Sb 206.836†              581.4      497.10 µg/L         5.106      497.10 ppb          5.106   1.03%
   QC value within limits for Sb 206.836  Recovery = 99.42%
Se 196.026†              458.9      493.38 µg/L         2.631      493.38 ppb          2.631   0.53%
   QC value within limits for Se 196.026  Recovery = 98.68%
SiO2†                  31346.3      5405.5 µg/L          1.36      5405.5 ppb          1.36   0.03%
   QC value within limits for SiO2  Recovery = 101.08%
Si 251.611†            36727.7      2492.2 µg/L          2.75      2492.2 ppb          2.75   0.11%
   QC value within limits for Si 251.611  Recovery = 99.69%
Sn 189.927†             1146.3      498.46 µg/L         2.779      498.46 ppb          2.779   0.56%
   QC value within limits for Sn 189.927  Recovery = 99.69%
Sr 421.552†           117827.1      505.93 µg/L         2.119      505.93 ppb          2.119   0.42%
   QC value within limits for Sr 421.552  Recovery = 101.19%
Ti 334.940†           221036.8      504.10 µg/L         0.637      504.10 ppb          0.637   0.13%
   QC value within limits for Ti 334.940  Recovery = 100.82%
Tl 190.801†              344.5      496.29 µg/L         5.402      496.29 ppb          5.402   1.09%
   QC value within limits for Tl 190.801  Recovery = 99.26%
U 409.014†              5403.7      518.31 µg/L         1.556      518.31 ppb          1.556   0.30%
   QC value within limits for U 409.014  Recovery = 103.66%
V 292.402†             47542.9      506.91 µg/L         0.449      506.91 ppb          0.449   0.09%
   QC value within limits for V 292.402  Recovery = 101.38%
Zn 213.857†            21575.9      500.71 µg/L         0.530      500.71 ppb          0.530   0.11%
   QC value within limits for Zn 213.857  Recovery = 100.14%
All analyte(s) passed QC.
```

Sequence No.: 34
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 06:01:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	168967.9	168967.9	102	%			06:01:34
1	Al 396.153Radial†	-171.0	-18.3	-7.6151	µg/L	-7.6151	ppb	06:01:34
1	Ca 317.933Radial†	881.8	-14.0	-2.6175	µg/L	-2.6175	ppb	06:01:54
1	Fe 238.204 Radial†	-0.0	27.3	18.894	µg/L	18.894	ppb	06:01:54
1	K 766.490 Radial†	772.9	-102.5	-55.245	µg/L	-55.245	ppb	06:01:34
1	Mg 279.077 IEC†	46.0	-5.1	-10.199	µg/L	-10.199	ppb	06:01:54
1	Na 589.592 Radial†	155.9	35.5	8.5499	µg/L	8.5499	ppb	06:01:34
1	Sr 421.552†	184.9	190.7	0.8188	µg/L	0.8188	ppb	06:01:34
1	Sc 361.383	2062181.5	2062181.5	99.317	%			06:02:56
1	Y 371.029	1346929.8	1346929.8	99.273	%			06:02:56
1	Ag 328.068†	-926.9	34.0	0.2922	µg/L	0.2922	ppb	06:03:02
1	As 188.979†	3.7	3.5	5.2107	µg/L	5.2107	ppb	06:03:22
1	B 249.677†	199.5	-9.8	-0.3934	µg/L	-0.3934	ppb	06:03:02
1	Ba 233.527†	-73.4	15.8	0.3870	µg/L	0.3870	ppb	06:03:22
1	Be 313.107†	3538.3	199.3	0.1155	µg/L	0.1155	ppb	06:03:02
1	Cd 226.502†	-128.5	12.8	0.2969	µg/L	0.2969	ppb	06:03:22
1	Co 228.616†	-104.6	-11.0	-0.5016	µg/L	-0.5016	ppb	06:03:22
1	Cr 267.716†	-184.8	-0.7	-0.0130	µg/L	-0.0130	ppb	06:03:02
1	Cu 324.752†	4781.7	-101.0	-0.7161	µg/L	-0.7161	ppb	06:03:02
1	Mn 257.610†	161.5	73.4	0.2131	µg/L	0.2131	ppb	06:03:02
1	Mo 202.031†	2.6	-0.2	-0.0239	µg/L	-0.0239	ppb	06:03:22
1	Ni 231.604†	442.8	12.6	0.6268	µg/L	0.6268	ppb	06:03:22
1	P 214.914†	248.1	-3.9	-6.1665	µg/L	-6.1665	ppb	06:03:22
1	Pb 220.353†	58.8	-7.9	-1.8153	µg/L	-1.8153	ppb	06:03:22
1	S 181.975 Axial†	41.4	-2.7	-11.190	µg/L	-11.190	ppb	06:03:22
1	Sb 206.836†	31.6	8.6	7.4104	µg/L	7.4104	ppb	06:03:22
1	Se 196.026†	20.9	0.7	0.7236	µg/L	0.7236	ppb	06:03:22
1	SiO2†	3151.3	-37.0	-6.3851	µg/L	-6.3851	ppb	06:03:02
1	Si 251.611†	381.2	37.8	2.5232	µg/L	2.5232	ppb	06:03:22
1	Sn 189.927†	14.0	5.8	2.5196	µg/L	2.5196	ppb	06:03:22
1	Ti 334.940†	1296.1	139.4	0.3182	µg/L	0.3182	ppb	06:03:02
1	Tl 190.801†	-27.6	0.1	0.1531	µg/L	0.1531	ppb	06:03:22
1	U 409.014†	7.4	35.7	3.4300	µg/L	3.4300	ppb	06:03:02
1	V 292.402†	-173.2	31.6	0.3411	µg/L	0.3411	ppb	06:03:02
1	Zn 213.857†	735.0	7.2	0.1672	µg/L	0.1672	ppb	06:03:22
2	Sc RADIAL	168380.0	168380.0	101	%			06:02:00
2	Al 396.153Radial†	-129.2	22.5	9.3977	µg/L	9.3977	ppb	06:02:00
2	Ca 317.933Radial†	883.7	-9.1	-1.6915	µg/L	-1.6915	ppb	06:02:20
2	Fe 238.204 Radial†	-12.8	14.7	10.158	µg/L	10.158	ppb	06:02:20
2	K 766.490 Radial†	789.3	-83.6	-45.080	µg/L	-45.080	ppb	06:02:00
2	Mg 279.077 IEC†	46.0	-4.9	-9.8520	µg/L	-9.8520	ppb	06:02:20
2	Na 589.592 Radial†	175.7	55.6	13.382	µg/L	13.382	ppb	06:02:00
2	Sr 421.552†	200.8	207.1	0.8891	µg/L	0.8891	ppb	06:02:00
2	Sc 361.383	2080824.4	2080824.4	100.21	%			06:03:28
2	Y 371.029	1359296.3	1359296.3	100.18	%			06:03:28
2	Ag 328.068†	-902.4	66.9	0.5682	µg/L	0.5682	ppb	06:03:34
2	As 188.979†	-4.6	-4.8	-7.1973	µg/L	-7.1973	ppb	06:03:55
2	B 249.677†	234.2	23.0	0.9042	µg/L	0.9042	ppb	06:03:34
2	Ba 233.527†	-88.8	1.1	0.0266	µg/L	0.0266	ppb	06:03:55
2	Be 313.107†	3476.4	105.7	0.0611	µg/L	0.0611	ppb	06:03:34
2	Cd 226.502†	-135.2	7.3	0.1643	µg/L	0.1643	ppb	06:03:55
2	Co 228.616†	-98.0	-3.5	-0.1595	µg/L	-0.1595	ppb	06:03:55
2	Cr 267.716†	-202.2	-16.4	-0.3134	µg/L	-0.3134	ppb	06:03:34
2	Cu 324.752†	4808.2	-117.6	-0.8357	µg/L	-0.8357	ppb	06:03:34
2	Mn 257.610†	176.0	86.5	0.2508	µg/L	0.2508	ppb	06:03:34
2	Mo 202.031†	-0.7	-3.5	-0.3698	µg/L	-0.3698	ppb	06:03:55
2	Ni 231.604†	446.6	12.4	0.6165	µg/L	0.6165	ppb	06:03:55
2	P 214.914†	249.4	-4.9	-7.8600	µg/L	-7.8600	ppb	06:03:55
2	Pb 220.353†	62.9	-4.4	-0.9972	µg/L	-0.9972	ppb	06:03:55

2	S 181.975 Axial†	39.5	-4.9	-20.665 µg/L	-20.665 ppb	06:03:55
2	Sb 206.836†	24.1	0.8	0.6677 µg/L	0.6677 ppb	06:03:55
2	Se 196.026†	23.3	2.8	3.0486 µg/L	3.0486 ppb	06:03:55
2	SiO2†	3098.3	-118.3	-20.400 µg/L	-20.400 ppb	06:03:34
2	Si 251.611†	370.5	23.6	1.6721 µg/L	1.6721 ppb	06:03:55
2	Sn 189.927†	7.1	-1.1	-0.4876 µg/L	-0.4876 ppb	06:03:55
2	Ti 334.940†	1230.4	62.2	0.1420 µg/L	0.1420 ppb	06:03:34
2	Tl 190.801†	-29.6	-1.7	-2.5033 µg/L	-2.5033 ppb	06:03:55
2	U 409.014†	-82.5	-54.1	-5.2041 µg/L	-5.2041 ppb	06:03:34
2	V 292.402†	-195.8	10.7	0.1026 µg/L	0.1026 ppb	06:03:34
2	Zn 213.857†	720.6	-13.7	-0.3225 µg/L	-0.3225 ppb	06:03:55
3	Sc RADIAL	169845.1	169845.1	102 %		06:02:26
3	Al 396.153Radial†	-139.7	13.3	5.5579 µg/L	5.5579 ppb	06:02:26
3	Ca 317.933Radial†	863.4	-36.5	-6.8157 µg/L	-6.8157 ppb	06:02:46
3	Fe 238.204 Radial†	-11.3	16.3	11.230 µg/L	11.230 ppb	06:02:46
3	K 766.490 Radial†	812.3	-67.8	-36.562 µg/L	-36.562 ppb	06:02:26
3	Mg 279.077 IEC†	43.1	-8.2	-16.532 µg/L	-16.532 ppb	06:02:46
3	Na 589.592 Radial†	121.1	0.6	0.1518 µg/L	0.1518 ppb	06:02:26
3	Sr 421.552†	110.1	116.4	0.5000 µg/L	0.5000 ppb	06:02:26
3	Sc 361.383	2051225.1	2051225.1	98.789 %		06:04:00
3	Y 371.029	1341690.6	1341690.6	98.886 %		06:04:00
3	Ag 328.068†	-863.3	93.4	0.7953 µg/L	0.7953 ppb	06:04:06
3	As 188.979†	3.7	3.6	5.3638 µg/L	5.3638 ppb	06:04:27
3	B 249.677†	227.9	20.1	0.7884 µg/L	0.7884 ppb	06:04:06
3	Ba 233.527†	-74.5	14.3	0.3499 µg/L	0.3499 ppb	06:04:27
3	Be 313.107†	3440.6	119.4	0.0693 µg/L	0.0693 ppb	06:04:06
3	Cd 226.502†	-123.9	16.7	0.3936 µg/L	0.3936 ppb	06:04:27
3	Co 228.616†	-107.3	-14.3	-0.6531 µg/L	-0.6531 ppb	06:04:27
3	Cr 267.716†	-146.0	37.5	0.7198 µg/L	0.7198 ppb	06:04:06
3	Cu 324.752†	4742.3	-115.1	-0.8176 µg/L	-0.8176 ppb	06:04:06
3	Mn 257.610†	163.6	76.5	0.2218 µg/L	0.2218 ppb	06:04:06
3	Mo 202.031†	-0.1	-2.9	-0.3111 µg/L	-0.3111 ppb	06:04:27
3	Ni 231.604†	444.6	16.8	0.8351 µg/L	0.8351 ppb	06:04:27
3	P 214.914†	246.9	-3.8	-6.1328 µg/L	-6.1328 ppb	06:04:27
3	Pb 220.353†	63.1	-3.2	-0.7547 µg/L	-0.7547 ppb	06:04:27
3	S 181.975 Axial†	33.1	-10.9	-45.857 µg/L	-45.857 ppb	06:04:27
3	Sb 206.836†	26.2	3.3	2.8235 µg/L	2.8235 ppb	06:04:27
3	Se 196.026†	19.0	-1.2	-1.3207 µg/L	-1.3207 ppb	06:04:27
3	SiO2†	3083.8	-88.5	-15.254 µg/L	-15.254 ppb	06:04:06
3	Si 251.611†	374.0	32.5	2.2760 µg/L	2.2760 ppb	06:04:27
3	Sn 189.927†	7.0	-1.2	-0.4988 µg/L	-0.4988 ppb	06:04:27
3	Ti 334.940†	1260.2	110.1	0.2514 µg/L	0.2514 ppb	06:04:06
3	Tl 190.801†	-21.8	5.7	8.2838 µg/L	8.2838 ppb	06:04:27
3	U 409.014†	91.3	120.6	11.604 µg/L	11.604 ppb	06:04:06
3	V 292.402†	-163.8	40.2	0.4421 µg/L	0.4421 ppb	06:04:06
3	Zn 213.857†	719.4	-4.6	-0.1084 µg/L	-0.1084 ppb	06:04:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	2064743.6	99.440	%	0.7207				0.72%
Sc RADIAL	169064.3	102	%	0.4				0.44%
Y 371.029	1349305.6	99.448	%	0.6663				0.67%
Ag 328.068†	64.8	0.5519	µg/L	0.25198	0.5519	ppb	0.25198	45.66%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.8	2.4468	µg/L	8.92287	2.4468	ppb	8.92287	364.67%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.7	1.1257	µg/L	7.20839	1.1257	ppb	7.20839	640.33%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	11.1	0.4330	µg/L	0.71808	0.4330	ppb	0.71808	165.83%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.4	0.2545	µg/L	0.19823	0.2545	ppb	0.19823	77.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	141.5	0.0820	µg/L	0.02929	0.0820	ppb	0.02929	35.73%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-19.8	-3.7082	µg/L	2.73069	-3.7082	ppb	2.73069	73.64%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	12.3	0.2849	µg/L	0.11507	0.2849	ppb	0.11507	40.39%
QC value within limits for Cd 226.502 Recovery = Not calculated								
Co 228.616†	-9.6	-0.4381	µg/L	0.25287	-0.4381	ppb	0.25287	57.72%

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   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 6.8      0.1311 µg/L       0.53146      0.1311 ppb        0.53146 405.26%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -111.2     -0.7898 µg/L       0.06445     -0.7898 ppb        0.06445   8.16%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         19.4      13.427 µg/L        4.7643      13.427 ppb         4.7643  35.48%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -84.6     -45.629 µg/L        9.3534     -45.629 ppb         9.3534  20.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -6.1     -12.194 µg/L        3.7608     -12.194 ppb         3.7608  30.84%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               78.8      0.2286 µg/L       0.01972      0.2286 ppb        0.01972   8.63%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -2.2     -0.2349 µg/L       0.18515     -0.2349 ppb        0.18515  78.81%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        30.6      7.3613 µg/L       6.69484      7.3613 ppb        6.69484  90.95%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               13.9      0.6928 µg/L       0.12336      0.6928 ppb        0.12336  17.81%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -4.2     -6.7198 µg/L       0.98763     -6.7198 ppb        0.98763  14.70%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -5.2     -1.1891 µg/L       0.55572     -1.1891 ppb        0.55572  46.73%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -6.2     -25.904 µg/L       17.9174     -25.904 ppb        17.9174  69.17%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.2      3.6339 µg/L       3.44361      3.6339 ppb        3.44361  94.76%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                0.8      0.8171 µg/L       2.18616      0.8171 ppb        2.18616 267.54%
   QC value within limits for Se 196.026  Recovery = Not calculated
SiO2†                    -81.3     -14.013 µg/L        7.0892     -14.013 ppb         7.0892  50.59%
   QC value within limits for SiO2  Recovery = Not calculated
Si 251.611†               31.3      2.1571 µg/L       0.43784      2.1571 ppb        0.43784  20.30%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.2      0.5111 µg/L       1.73947      0.5111 ppb        1.73947 340.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              171.4      0.7360 µg/L       0.20736      0.7360 ppb        0.20736  28.17%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              103.9      0.2372 µg/L       0.08896      0.2372 ppb        0.08896  37.50%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.4      1.9779 µg/L       5.62028      1.9779 ppb        5.62028 284.16%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                34.1      3.2766 µg/L       8.40505      3.2766 ppb        8.40505 256.52%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                27.5      0.2952 µg/L       0.17430      0.2952 ppb        0.17430  59.04%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -3.7     -0.0879 µg/L       0.24550     -0.0879 ppb        0.24550 279.20%
   QC value within limits for Zn 213.857  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, June 30, 2009 11:14:37
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default2\Sample.513
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	4586.1	4586.136	103.360	2.3
	Mg	24.0	47035.1	47035.106	296.605	0.6
	Co	58.9	84523.9	84523.920	511.827	0.6
	Rh	102.9	158254.6	158254.558	1021.491	0.6
	In	114.9	193591.7	193591.744	1352.521	0.7
	Pb	208.0	192199.7	192199.737	1352.951	0.7
⌈>	Ba	137.9	189715.9	189715.916	1161.084	0.6
⌊	Ba++	69.0	4640.2	0.024	0.000	1.0
⌈>	Ce	139.9	242560.0	242559.973	1617.063	0.7
⌊	CeO	155.9	4742.7	0.020	0.000	1.0
	Bkgd	220.0	12.8	12.800	1.525	11.9

Current Optimization File Data

Current Value	Description
0.88	Nebulizer Gas Flow
8.00	Lens Voltage
1450.00	ICP RF Power
-1950.00	Analog Stage Voltage
1350.00	Pulse Stage Voltage
250.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	15	7.8	6280.4
Co	59	15	8.3	83148.6
In	115	15	10.3	188431.6

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	591	2045	0.649
Be	9.0	9.0	2050	2060	0.659
Mg	24.0	24.0	5687	2060	0.619
Mg	25.0	24.9	5929	2050	0.621
Mg	26.0	26.0	6183	2080	0.646
Co	58.9	58.9	14185	2090	0.643
Rh	102.9	102.9	24874	2140	0.669
In	114.9	114.9	27788	2165	0.649
Ce	139.9	139.9	33872	2190	0.641
Pb	206.0	206.0	49948	2275	0.648
Pb	207.0	207.0	50159	2240	0.640
Pb	208.0	208.0	50451	2260	0.689
U	238.1	238.0	57723	2265	0.733

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, July 01, 2009 01:14:11
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\Blank.174

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		154	
	Be	9		ug/L		22	
	B	11		ug/L		732	
	Na	23		ug/L		68498	
	Mg	24		ug/L		12673	
	Al	27		ug/L		19347	
	P	31		ug/L		7652	
	K	39		ug/L		491663	
	Ca	43		ug/L		348	
>	Sc	45		ug/L		346744	
	Ti	47		ug/L		292	
	V	51		ug/L		8883	
	Cr	52		ug/L		1035	
	Cr	53		ug/L		74616	
	Mn	55		ug/L		1441	
	Fe	57		ug/L		4611	
	Co	59		ug/L		209	
	Ni	60		ug/L		126	
	Cu	63		ug/L		728	
	Cu	65		ug/L		402	
	Zn	66		ug/L		760	
	Zn	67		ug/L		12974	
	Zn	68		ug/L		1604	
>	Ge	74		ug/L		347070	
	As	75		ug/L		258	
	Se	77		ug/L		4285	
	Se	82		ug/L		-1	
	Kr	83		ug/L		89	
	Sr	88		ug/L		356	
	Y	89		ug/L		72	
	Mo	98		ug/L		174	
	Ag	107		ug/L		95	
	Cd	111		ug/L		51	
	Cd	114		ug/L		87	
>	In	115		ug/L		201545	
	Sn	120		ug/L		241	
	Sb	121		ug/L		212	
	Sb	123		ug/L		171	
	Ba	135		ug/L		57	
	Ba	137		ug/L		92	
	Ho	165		ug/L		54	
>	Lu	175		ug/L		306539	
	Tl	205		ug/L		846	
	Pb	208		ug/L		1610	
	Bi	209		ug/L		123	
	Th	232		ug/L		982	
	U	238		ug/L		1168	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, July 01, 2009 01:20:17
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\Standard 1.175

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	1.201	19639	0.056
	Be	9	**10.000**	**ug/L**	1.291	4918	0.014
	B	11	**20.000**	**ug/L**	3.004	9621	0.025
	Na	23	**1000.000**	**ug/L**	3.437	3769974	10.551
	Mg	24	**1000.000**	**ug/L**	6.086	2743626	7.783
	Al	27	**1000.000**	**ug/L**	2.471	3765864	10.681
	P	31	**1000.000**	**ug/L**	0.858	208814	0.573
	K	39	**1000.000**	**ug/L**	3.836	4722246	12.045
	Ca	43	**1000.000**	**ug/L**	4.459	10242	0.028
>	Sc	45		**ug/L**		350773	350772.709
	Ti	47	**10.000**	**ug/L**	4.254	4960	0.013
	V	51	**10.000**	**ug/L**	5.880	66688	0.165
	Cr	52	**10.000**	**ug/L**	0.597	44990	0.125
	Cr	53		**ug/L**		75686	0.001
	Mn	55	**10.000**	**ug/L**	0.816	70960	0.198
	Fe	57	**1000.000**	**ug/L**	1.800	145429	0.401
	Co	59	**10.000**	**ug/L**	1.756	56198	0.160
	Ni	60	**10.000**	**ug/L**	0.834	12372	0.035
	Cu	63		**ug/L**		30079	0.084
	Cu	65	**10.000**	**ug/L**	0.932	14650	0.041
	Zn	66	**10.000**	**ug/L**	2.278	9471	0.025
	Zn	67		**ug/L**		13228	0.001
	Zn	68		**ug/L**		7987	0.018
>	Ge	74		**ug/L**		348291	348290.730
	As	75	**10.000**	**ug/L**	1.784	8998	0.025
	Se	77		**ug/L**		4636	0.001
	Se	82	**10.000**	**ug/L**	2.382	823	0.002
	Kr	83		**ug/L**		86	-0.000
	Sr	88	**10.000**	**ug/L**	1.764	103623	0.500
	Y	89		**ug/L**		71	-0.000
	Mo	98	**10.000**	**ug/L**	1.231	27302	0.131
	Ag	107	**10.000**	**ug/L**	2.168	48360	0.234
	Cd	111	**10.000**	**ug/L**	1.082	11275	0.054
	Cd	114		**ug/L**		26180	0.126
>	In	115		**ug/L**		206387	206387.067
	Sn	120	**10.000**	**ug/L**	1.334	44636	0.215
	Sb	121	**10.000**	**ug/L**	1.713	36670	0.177
	Sb	123		**ug/L**		28520	0.137
	Ba	135		**ug/L**		10612	0.034
	Ba	137	**10.000**	**ug/L**	1.119	18813	0.060
	Ho	165		**ug/L**		43	-0.000
>	Lu	175		**ug/L**		310568	310568.384
	Tl	205	**10.000**	**ug/L**	1.220	121972	0.390
	Pb	208	**10.000**	**ug/L**	1.256	194531	0.621
	Bi	209		**ug/L**		163	0.000
	Th	232	**10.000**	**ug/L**	2.307	251891	0.808
	U	238	**10.000**	**ug/L**	1.491	268528	0.861

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, July 01, 2009 01:26:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\Standard 2.176

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**99.955**	ug/L	1.906	194242	0.532
	Be	9	**99.965**	ug/L	1.431	49230	0.135
	B	11	**199.981**	ug/L	0.846	92341	0.251
	Na	23	**10001.466**	ug/L	0.826	39183340	107.097
	Mg	24	**10002.012**	ug/L	1.496	29027893	79.447
	Al	27	**9998.879**	ug/L	4.904	38592714	105.613
	P	31	**9990.828**	ug/L	2.329	1924034	5.246
	K	39	**9993.029**	ug/L	4.370	41617699	112.525
	Ca	43	**9999.027**	ug/L	0.360	102319	0.279
>	Sc	45		ug/L		365183	365183.414
	Ti	47	**100.033**	ug/L	1.729	50543	0.138
	V	51	**99.956**	ug/L	0.826	584680	1.575
	Cr	52	**99.971**	ug/L	1.485	445693	1.217
	Cr	53		ug/L		123974	0.124
	Mn	55	**99.953**	ug/L	1.584	692574	1.892
	Fe	57	**9989.557**	ug/L	1.721	1330488	3.630
	Co	59	**99.946**	ug/L	1.703	553194	1.514
	Ni	60	**99.958**	ug/L	0.854	122360	0.335
	Cu	63		ug/L		289360	0.790
	Cu	65	**99.972**	ug/L	0.218	144558	0.395
	Zn	66	**99.991**	ug/L	0.841	90925	0.248
	Zn	67		ug/L		26795	0.036
	Zn	68		ug/L		68724	0.184
>	Ge	74		ug/L		363541	363541.059
	As	75	**100.057**	ug/L	1.103	97053	0.266
	Se	77		ug/L		11221	0.019
	Se	82	**100.023**	ug/L	2.136	8802	0.024
	Kr	83		ug/L		95	0.000
	Sr	88	**99.955**	ug/L	1.160	1016281	4.786
	Y	89		ug/L		158	0.000
	Mo	98	**100.010**	ug/L	1.089	282008	1.328
	Ag	107	**99.968**	ug/L	1.541	480858	2.265
	Cd	111	**99.989**	ug/L	1.788	114178	0.538
	Cd	114		ug/L		263789	1.242
>	In	115		ug/L		212260	212259.526
	Sn	120	**99.998**	ug/L	0.634	456055	2.147
	Sb	121	**100.004**	ug/L	0.844	376631	1.773
	Sb	123		ug/L		291124	1.371
	Ba	135		ug/L		110342	0.329
	Ba	137	**99.958**	ug/L	0.362	194114	0.578
	Ho	165		ug/L		49	-0.000
>	Lu	175		ug/L		335421	335421.479
	Tl	205	**99.902**	ug/L	0.985	1191391	3.549
	Pb	208	**99.941**	ug/L	0.502	1968410	5.863
	Bi	209		ug/L		514	0.001
	Th	232	**99.750**	ug/L	0.168	2164024	6.449
	U	238	**99.748**	ug/L	1.665	2302594	6.860

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, July 01, 2009 01:32:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 1.177

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.373**	ug/L	2.062	100677	0.268
	Be	9	**50.447**	ug/L	0.823	25539	0.068
	B	11	**108.158**	ug/L	3.253	51688	0.136
	Na	23	**5361.973**	ug/L	2.552	21624001	57.417
	Mg	24	**5185.375**	ug/L	3.909	15471155	41.188
	Al	27	**5180.674**	ug/L	12.909	20564454	54.721
	P	31	**5275.522**	ug/L	0.696	1047822	2.770
	K	39	**5325.442**	ug/L	3.753	23038369	59.966
	Ca	43	**4991.119**	ug/L	1.371	52678	0.139
>	Sc	45		ug/L		375268	375268.002
	Ti	47	**50.405**	ug/L	1.498	26328	0.069
	V	51	**51.386**	ug/L	2.567	313567	0.810
	Cr	52	**52.200**	ug/L	0.680	239658	0.636
	Cr	53		ug/L		102440	0.058
	Mn	55	**49.046**	ug/L	0.313	349988	0.928
	Fe	57	**5266.108**	ug/L	1.478	722986	1.913
	Co	59	**51.616**	ug/L	1.137	293656	0.782
	Ni	60	**51.823**	ug/L	1.807	65245	0.174
	Cu	63		ug/L		147989	0.392
	Cu	65	**49.006**	ug/L	0.645	73038	0.193
	Zn	66	**51.099**	ug/L	1.282	48038	0.127
	Zn	67		ug/L		19931	0.016
	Zn	68		ug/L		36527	0.093
>	Ge	74		ug/L		372707	372707.001
	As	75	**49.296**	ug/L	1.575	49165	0.131
	Se	77		ug/L		8196	0.010
	Se	82	**49.462**	ug/L	2.674	4462	0.012
	Kr	83		ug/L		100	0.000
	Sr	88	**51.737**	ug/L	0.509	536924	2.477
	Y	89		ug/L		137	0.000
	Mo	98	**48.201**	ug/L	1.488	138769	0.640
	Ag	107	**50.195**	ug/L	1.044	246417	1.137
	Cd	111	**51.055**	ug/L	6.942	59522	0.275
	Cd	114		ug/L		142220	0.656
>	In	115		ug/L		216576	216575.506
	Sn	120	**50.007**	ug/L	0.900	232825	1.074
	Sb	121	**51.156**	ug/L	1.290	196666	0.907
	Sb	123		ug/L		152287	0.702
	Ba	135		ug/L		56126	0.166
	Ba	137	**50.538**	ug/L	0.735	99128	0.292
	Ho	165		ug/L		77	0.000
>	Lu	175		ug/L		338620	338620.440
	Tl	205	**50.035**	ug/L	0.409	602875	1.778
	Pb	208	**51.507**	ug/L	0.535	1024894	3.022
	Bi	209		ug/L		353	0.001
	Th	232	**56.434**	ug/L	1.431	1236385	3.648
	U	238	**57.466**	ug/L	0.151	1339526	3.952

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	100.746				
	Be	9	100.893				
	B	11	108.158				
	Na	23	107.239				
	Mg	24	103.707				
	Al	27	102.588				
	P	31	105.510				
	K	39	106.509				
	Ca	43	99.822				
>	Sc	45		108.2			
	Ti	47	100.809				
	V	51	102.771				
	Cr	52	104.400				
	Cr	53					
	Mn	55	98.092				
	Fe	57	105.322				
	Co	59	103.233				
	Ni	60	103.646				
	Cu	63					
	Cu	65	98.012				
	Zn	66	102.199				
	Zn	67					
	Zn	68					
>	Ge	74		107.4			
	As	75	98.592				
	Se	77					
	Se	82	98.923				
	Kr	83					
	Sr	88	103.474				
	Y	89					
	Mo	98	96.401				
	Ag	107	100.389				
	Cd	111	102.110				
	Cd	114					
>	In	115		107.5			
	Sn	120	100.015				
	Sb	121	102.312				
	Sb	123					
	Ba	135					
	Ba	137	101.076				
	Ho	165					
>	Lu	175		110.5			
	Tl	205	100.070				
	Pb	208	103.013				
	Bi	209					
	Th	232	112.867				
	U	238	114.932				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Th	232	ICV is out of limits (+/- 10%)
QC Std 1	U	238	ICV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, July 01, 2009 01:38:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 2.178

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.005**	ug/L	171.513	172	0.000
	Be	9	**-0.001**	ug/L	681.928	23	-0.000
	B	11	**5.401**	ug/L	18.389	3257	0.007
	Na	23	**-1.092**	ug/L	194.489	68164	-0.012
	Mg	24	**0.098**	ug/L	822.209	13673	0.001
	Al	27	**-0.897**	ug/L	129.408	17011	-0.009
	P	31	**-3.876**	ug/L	37.182	7351	-0.002
	K	39	**0.967**	ug/L	661.935	524828	0.011
	Ca	43	**-1.350**	ug/L	352.367	354	-0.000
>	Sc	45		ug/L		367094	367093.649
	Ti	47	**-0.074**	ug/L	11.836	272	-0.000
	V	51	**0.286**	ug/L	245.294	11007	0.005
	Cr	52	**0.166**	ug/L	27.003	1834	0.002
	Cr	53		ug/L		82149	0.009
	Mn	55	**-0.016**	ug/L	71.359	1413	-0.000
	Fe	57	**0.875**	ug/L	117.095	4998	0.000
	Co	59	**0.004**	ug/L	115.994	242	0.000
	Ni	60	**0.005**	ug/L	64.104	140	0.000
	Cu	63		ug/L		832	0.000
	Cu	65	**-0.001**	ug/L	1149.359	423	-0.000
	Zn	66	**0.002**	ug/L	1672.458	798	0.000
	Zn	67		ug/L		13317	-0.001
	Zn	68		ug/L		1548	-0.000
>	Ge	74		ug/L		363121	363120.710
	As	75	**-0.108**	ug/L	172.923	166	-0.000
	Se	77		ug/L		5088	0.002
	Se	82	**0.122**	ug/L	149.719	10	0.000
	Kr	83		ug/L		93	-0.000
	Sr	88	**0.007**	ug/L	54.372	447	0.000
	Y	89		ug/L		54	-0.000
	Mo	98	**0.018**	ug/L	59.488	233	0.000
	Ag	107	**0.008**	ug/L	94.288	138	0.000
	Cd	111	**-0.002**	ug/L	502.636	51	-0.000
	Cd	114		ug/L		118	0.000
>	In	115		ug/L		211660	211659.880
	Sn	120	**0.018**	ug/L	93.673	337	0.000
	Sb	121	**0.166**	ug/L	20.156	845	0.003
	Sb	123		ug/L		674	0.002
	Ba	135		ug/L		68	0.000
	Ba	137	**0.005**	ug/L	101.890	108	0.000
	Ho	165		ug/L		51	-0.000
>	Lu	175		ug/L		325499	325498.633
	Tl	205	**0.224**	ug/L	27.018	3488	0.008
	Pb	208	**0.004**	ug/L	133.216	1782	0.000
	Bi	209		ug/L		105	-0.000
	Th	232	**0.070**	ug/L	43.214	2510	0.005
	U	238	**0.004**	ug/L	141.548	1325	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		105.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		104.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		106.2			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, July 01, 2009 01:44:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 3.179

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**11.059**	ug/L	1.864	21565	0.059
	Be	9	**0.596**	ug/L	10.724	315	0.001
	B	11	**17.764**	ug/L	2.665	8875	0.022
	Na	23	**291.875**	ug/L	6.659	1208790	3.125
	Mg	24	**12.726**	ug/L	19.232	50089	0.101
	Al	27	**15.363**	ug/L	22.821	79559	0.162
	P	31	**53.012**	ug/L	3.500	18163	0.028
	K	39	**332.145**	ug/L	1.511	1877724	3.740
	Ca	43	**106.207**	ug/L	8.919	1444	0.003
>	Sc	45		ug/L		364048	364048.270
	Ti	47	**8.780**	ug/L	1.891	4701	0.012
	V	51	**10.309**	ug/L	1.967	68466	0.162
	Cr	52	**3.418**	ug/L	2.067	16234	0.042
	Cr	53		ug/L		76847	-0.004
	Mn	55	**5.484**	ug/L	2.595	39297	0.104
	Fe	57	**26.171**	ug/L	6.839	8300	0.010
	Co	59	**1.111**	ug/L	1.514	6346	0.017
	Ni	60	**2.192**	ug/L	4.418	2804	0.007
	Cu	63		ug/L		4142	0.009
	Cu	65	**1.139**	ug/L	5.794	2058	0.004
	Zn	66	**10.593**	ug/L	2.656	10352	0.026
	Zn	67		ug/L		13434	-0.000
	Zn	68		ug/L		8369	0.018
>	Ge	74		ug/L		363821	363820.975
	As	75	**4.722**	ug/L	8.619	4842	0.013
	Se	77		ug/L		4968	0.001
	Se	82	**5.063**	ug/L	6.007	445	0.001
	Kr	83		ug/L		92	-0.000
	Sr	88	**11.284**	ug/L	2.555	114324	0.540
	Y	89		ug/L		43	-0.000
	Mo	98	**0.482**	ug/L	2.781	1533	0.006
	Ag	107	**1.093**	ug/L	1.025	5325	0.025
	Cd	111	**1.123**	ug/L	4.061	1327	0.006
	Cd	114		ug/L		2880	0.013
>	In	115		ug/L		210957	210956.742
	Sn	120	**5.354**	ug/L	2.180	24500	0.115
	Sb	121	**2.056**	ug/L	2.766	7911	0.036
	Sb	123		ug/L		6095	0.028
	Ba	135		ug/L		2356	0.007
	Ba	137	**2.124**	ug/L	0.608	4056	0.012
	Ho	165		ug/L		45	-0.000
>	Lu	175		ug/L		322134	322134.019
	Tl	205	**1.162**	ug/L	1.386	14188	0.041
	Pb	208	**2.208**	ug/L	1.840	43408	0.130
	Bi	209		ug/L		112	-0.000
	Th	232	**1.285**	ug/L	2.077	27792	0.083
	U	238	**0.285**	ug/L	2.083	7538	0.020

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	110.586				
	Be	9	119.129				
	B	11	118.424				
	Na	23	116.750				
	Mg	24	84.838				
	Al	27	102.421				
	P	31	106.025				
	K	39	110.715				
	Ca	43	106.207				
>	Sc	45		105.0			
	Ti	47	87.802				
	V	51	103.089				
	Cr	52	113.923				
	Cr	53					
	Mn	55	109.685				
	Fe	57	104.685				
	Co	59	111.110				
	Ni	60	109.592				
	Cu	63					
	Cu	65	113.892				
	Zn	66	105.929				
	Zn	67					
	Zn	68					
>	Ge	74		104.8			
	As	75	94.440				
	Se	77					
	Se	82	101.261				
	Kr	83					
	Sr	88	112.839				
	Y	89					
	Mo	98	96.434				
	Ag	107	109.335				
	Cd	111	112.325				
	Cd	114					
>	In	115		104.7			
	Sn	120	107.079				
	Sb	121	102.810				
	Sb	123					
	Ba	135					
	Ba	137	106.191				
	Ho	165					
>	Lu	175		105.1			
	Tl	205	116.206				
	Pb	208	110.388				
	Bi	209					
	Th	232	128.516				
	U	238	142.457				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	U	238	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, July 01, 2009 01:50:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 4.180

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.095**	ug/L	12.645	330	0.001
	Be	9	**0.058**	ug/L	17.677	49	0.000
	B	11	**1.555**	ug/L	13.130	1405	0.002
	Na	23	**99501.321**	ug/L	1.087	368746120	1065.473
	Mg	24	**94588.323**	ug/L	2.481	260004440	751.327
	Al	27	**92896.397**	ug/L	3.888	339578048	981.214
	P	31	**99126.067**	ug/L	0.450	18018275	52.050
	K	39	**105425.315**	ug/L	4.087	411222501	1187.124
	Ca	43	**95419.409**	ug/L	1.402	922210	2.664
>	Sc	45		ug/L		346025	346025.320
	Ti	47	**1739.350**	ug/L	1.111	827888	2.392
	V	51	**0.516**	ug/L	57.638	11675	0.008
	Cr	52	**3.062**	ug/L	2.654	13934	0.037
	Cr	53		ug/L		57841	-0.048
	Mn	55	**5.990**	ug/L	0.529	40677	0.113
	Fe	57	**94008.292**	ug/L	1.528	11823848	34.158
	Co	59	**0.354**	ug/L	1.322	2066	0.005
	Ni	60	**2.953**	ug/L	0.721	3547	0.010
	Cu	63		ug/L		6742	0.017
	Cu	65	**2.812**	ug/L	1.734	4243	0.011
	Zn	66	**3.434**	ug/L	1.274	3806	0.009
	Zn	67		ug/L		10780	-0.007
	Zn	68		ug/L		1790	0.000
>	Ge	74		ug/L		355537	355536.772
	As	75	**-0.253**	ug/L	92.253	25	-0.001
	Se	77		ug/L		5854	0.004
	Se	82	**-1.533**	ug/L	15.616	-133	-0.000
	Kr	83		ug/L		285	0.001
	Sr	88	**1.283**	ug/L	0.088	12884	0.061
	Y	89		ug/L		433	0.002
	Mo	98	**1911.443**	ug/L	1.747	5171236	25.377
	Ag	107	**0.075**	ug/L	1.110	440	0.002
	Cd	111	**0.385**	ug/L	7.346	473	0.002
	Cd	114		ug/L		6487	0.031
>	In	115		ug/L		203796	203796.064
	Sn	120	**0.186**	ug/L	1.677	1059	0.004
	Sb	121	**0.065**	ug/L	13.483	449	0.001
	Sb	123		ug/L		374	0.001
	Ba	135		ug/L		803	0.002
	Ba	137	**0.638**	ug/L	2.341	1444	0.004
	Ho	165		ug/L		893	0.002
>	Lu	175		ug/L		361501	361500.675
	Tl	205	**0.028**	ug/L	25.233	1360	0.001
	Pb	208	**0.154**	ug/L	5.096	5159	0.009
	Bi	209		ug/L		775	0.002
	Th	232	**0.006**	ug/L	175.091	1296	0.000
	U	238	**-0.032**	ug/L	4.570	579	-0.002

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	99.501				
	Mg	24	94.588				
	Al	27	92.896				
	P	31	99.126				
	K	39	105.425				
	Ca	43	95.419				
>	Sc	45		99.8			
	Ti	47	86.967				
	V	51					
	Cr	52	82.747				
	Cr	53					
	Mn	55	103.277				
	Fe	57	94.008				
	Co	59	141.741				
	Ni	60	109.353				
	Cu	63					
	Cu	65	96.982				
	Zn	66	95.393				
	Zn	67					
	Zn	68					
>	Ge	74		102.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	106.950				
	Y	89					
	Mo	98	95.572				
	Ag	107					
	Cd	111	96.161				
	Cd	114					
>	In	115		101.1			
	Sn	120					
	Sb	121	64.884				
	Sb	123					
	Ba	135					
	Ba	137	95.279				
	Ho	165					
>	Lu	175		117.9			
	Tl	205					
	Pb	208	76.903				
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, July 01, 2009 01:56:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 5.181

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**20.192**	ug/L	2.995	36955	0.107
	Be	9	**18.641**	ug/L	0.763	8636	0.025
	B	11	**18.361**	ug/L	1.601	8618	0.023
	Na	23	**101923.258**	ug/L	6.520	374436646	1091.407
	Mg	24	**96322.499**	ug/L	2.760	262319548	765.101
	Al	27	**95884.724**	ug/L	2.248	347334427	1012.778
	P	31	**97478.126**	ug/L	2.337	17555856	51.184
	K	39	**103161.594**	ug/L	2.981	398737192	1161.634
	Ca	43	**94815.091**	ug/L	0.834	907968	2.647
>	Sc	45		ug/L		342863	342862.673
	Ti	47	**1717.323**	ug/L	1.649	809807	2.361
	V	51	**20.182**	ug/L	2.656	117814	0.318
	Cr	52	**22.696**	ug/L	1.786	95779	0.276
	Cr	53		ug/L		65127	-0.025
	Mn	55	**25.999**	ug/L	1.371	170157	0.492
	Fe	57	**93547.768**	ug/L	1.193	11657421	33.991
	Co	59	**20.416**	ug/L	1.438	106237	0.309
	Ni	60	**21.107**	ug/L	1.634	24351	0.071
	Cu	63		ug/L		57863	0.167
	Cu	65	**21.478**	ug/L	0.721	29469	0.085
	Zn	66	**21.527**	ug/L	2.189	19722	0.053
	Zn	67		ug/L		13146	-0.000
	Zn	68		ug/L		13704	0.034
>	Ge	74		ug/L		354995	354995.255
	As	75	**19.384**	ug/L	4.806	18570	0.052
	Se	77		ug/L		6767	0.007
	Se	82	**18.879**	ug/L	3.869	1621	0.005
	Kr	83		ug/L		242	0.000
	Sr	88	**22.421**	ug/L	1.834	222609	1.074
	Y	89		ug/L		403	0.002
	Mo	98	**1859.639**	ug/L	1.770	5111612	24.689
	Ag	107	**18.671**	ug/L	2.697	87667	0.423
	Cd	111	**18.685**	ug/L	0.184	20854	0.100
	Cd	114		ug/L		54589	0.263
>	In	115		ug/L		207054	207054.021
	Sn	120	**20.137**	ug/L	1.755	89762	0.432
	Sb	121	**20.982**	ug/L	1.547	77244	0.372
	Sb	123		ug/L		60262	0.290
	Ba	135		ug/L		22638	0.063
	Ba	137	**19.128**	ug/L	1.593	40072	0.111
	Ho	165		ug/L		893	0.002
>	Lu	175		ug/L		361092	361092.069
	Tl	205	**18.728**	ug/L	0.785	241273	0.665
	Pb	208	**19.006**	ug/L	0.354	404492	1.115
	Bi	209		ug/L		877	0.002
	Th	232	**21.741**	ug/L	0.349	508670	1.405
	U	238	**22.219**	ug/L	2.321	553051	1.528

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	100.960				
	Be	9	93.204				
	B	11	91.807				
	Na	23	101.923				
	Mg	24	96.322				
	Al	27	95.885				
	P	31	97.478				
	K	39	103.162				
	Ca	43	94.815				
>	Sc	45		98.9			
	Ti	47	85.866				
	V	51	100.908				
	Cr	52	95.765				
	Cr	53					
	Mn	55	100.771				
	Fe	57	93.548				
	Co	59	100.820				
	Ni	60	92.981				
	Cu	63					
	Cu	65	93.790				
	Zn	66	91.217				
	Zn	67					
	Zn	68					
>	Ge	74		102.3			
	As	75	96.918				
	Se	77					
	Se	82	94.393				
	Kr	83					
	Sr	88	105.759				
	Y	89					
	Mo	98	92.982				
	Ag	107	93.353				
	Cd	111	91.595				
	Cd	114					
>	In	115		102.7			
	Sn	120	100.686				
	Sb	121	104.388				
	Sb	123					
	Ba	135					
	Ba	137	92.541				
	Ho	165					
>	Lu	175		117.8			
	Tl	205	93.642				
	Pb	208	94.089				
	Bi	209					
	Th	232	108.703				
	U	238	111.096				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 01, 2009 02:02:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 6.182

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**58.451**	ug/L	2.560	102156	0.311
	Be	9	**55.585**	ug/L	1.575	24617	0.075
	B	11	**110.512**	ug/L	1.923	46186	0.139
	Na	23	**5482.312**	ug/L	3.214	19340169	58.705
	Mg	24	**5529.417**	ug/L	2.106	14427686	43.921
	Al	27	**4979.096**	ug/L	3.857	17280408	52.591
	P	31	**5420.977**	ug/L	0.847	941593	2.846
	K	39	**5436.800**	ug/L	5.579	20570415	61.220
	Ca	43	**5254.645**	ug/L	2.689	48482	0.147
>	Sc	45		ug/L		328267	328266.630
	Ti	47	**52.407**	ug/L	0.682	23932	0.072
	V	51	**53.557**	ug/L	1.102	285506	0.844
	Cr	52	**53.980**	ug/L	1.216	216741	0.657
	Cr	53		ug/L		91913	0.065
	Mn	55	**51.705**	ug/L	2.521	322619	0.979
	Fe	57	**5698.285**	ug/L	1.278	683974	2.070
	Co	59	**55.160**	ug/L	1.139	274491	0.836
	Ni	60	**55.667**	ug/L	3.452	61289	0.186
	Cu	63		ug/L		139476	0.423
	Cu	65	**52.681**	ug/L	0.776	68651	0.208
	Zn	66	**52.835**	ug/L	1.233	44328	0.131
	Zn	67		ug/L		17731	0.016
	Zn	68		ug/L		32978	0.094
>	Ge	74		ug/L		332852	332851.927
	As	75	**51.767**	ug/L	2.657	46078	0.138
	Se	77		ug/L		7349	0.010
	Se	82	**52.055**	ug/L	3.622	4192	0.013
	Kr	83		ug/L		86	0.000
	Sr	88	**53.454**	ug/L	0.425	501967	2.560
	Y	89		ug/L		121	0.000
	Mo	98	**51.005**	ug/L	1.867	132864	0.677
	Ag	107	**53.019**	ug/L	2.327	235498	1.201
	Cd	111	**54.960**	ug/L	1.627	57957	0.296
	Cd	114		ug/L		133891	0.683
>	In	115		ug/L		195985	195985.036
	Sn	120	**51.301**	ug/L	2.607	216089	1.102
	Sb	121	**52.293**	ug/L	0.907	181920	0.927
	Sb	123		ug/L		140770	0.717
	Ba	135		ug/L		51546	0.181
	Ba	137	**55.269**	ug/L	1.289	90882	0.320
	Ho	165		ug/L		72	0.000
>	Lu	175		ug/L		283913	283912.626
	Tl	205	**54.363**	ug/L	1.397	549134	1.931
	Pb	208	**56.228**	ug/L	1.127	937970	3.299
	Bi	209		ug/L		323	0.001
	Th	232	**62.990**	ug/L	1.512	1157074	4.072
	U	238	**64.256**	ug/L	0.748	1255700	4.419

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	116.902				
	Be	9	111.171				
	B	11	110.512				
	Na	23	109.646				
	Mg	24	110.588				
	Al	27	98.596				
	P	31	108.420				
	K	39	108.736				
	Ca	43	105.093				
>	Sc	45		94.7			
	Ti	47	104.815				
	V	51	107.113				
	Cr	52	107.959				
	Cr	53					
	Mn	55	103.410				
	Fe	57	113.966				
	Co	59	110.321				
	Ni	60	111.334				
	Cu	63					
	Cu	65	105.362				
	Zn	66	105.671				
	Zn	67					
	Zn	68					
>	Ge	74		95.9			
	As	75	103.533				
	Se	77					
	Se	82	104.109				
	Kr	83					
	Sr	88	106.907				
	Y	89					
	Mo	98	102.011				
	Ag	107	106.038				
	Cd	111	109.919				
	Cd	114					
>	In	115		97.2			
	Sn	120	102.602				
	Sb	121	104.586				
	Sb	123					
	Ba	135					
	Ba	137	110.539				
	Ho	165					
>	Lu	175		92.6			
	Tl	205	108.727				
	Pb	208	112.457				
	Bi	209					
	Th	232	125.980				
	U	238	128.511				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
QC Std 6	Be	9	CCV is out of limits (+/- 10%)
QC Std 6	B	11	CCV is out of limits (+/- 10%)
QC Std 6	Mg	24	CCV is out of limits (+/- 10%)
QC Std 6	Fe	57	CCV is out of limits (+/- 10%)
QC Std 6	Co	59	CCV is out of limits (+/- 10%)
QC Std 6	Ni	60	CCV is out of limits (+/- 10%)

QC Std 6	Ba	137CCV is out of limits (+/- 10%)
QC Std 6	Pb	208CCV is out of limits (+/- 10%)
QC Std 6	Th	232CCV is out of limits (+/- 10%)
QC Std 6	U	238CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 01, 2009 02:09:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 7.183

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.018**	ug/L	41.971	183	0.000
	Be	9	**0.014**	ug/L	70.764	28	0.000
	B	11	**3.139**	ug/L	16.246	2056	0.004
	Na	23	**2.521**	ug/L	153.938	76206	0.027
	Mg	24	**2.913**	ug/L	39.748	20348	0.023
	Al	27	**2.076**	ug/L	94.715	26359	0.022
	P	31	**-2.321**	ug/L	164.562	7087	-0.001
	K	39	**-0.592**	ug/L	802.993	480285	-0.007
	Ca	43	**-1.634**	ug/L	305.387	325	-0.000
>	Sc	45		ug/L		340275	340274.796
	Ti	47	**0.017**	ug/L	555.233	294	0.000
	V	51	**0.234**	ug/L	195.251	9987	0.004
	Cr	52	**-0.051**	ug/L	109.926	807	-0.001
	Cr	53		ug/L		73150	-0.000
	Mn	55	**-0.026**	ug/L	57.033	1245	-0.000
	Fe	57	**2.606**	ug/L	106.623	4843	0.001
	Co	59	**0.003**	ug/L	120.377	220	0.000
	Ni	60	**0.009**	ug/L	96.006	134	0.000
	Cu	63		ug/L		751	0.000
	Cu	65	**0.003**	ug/L	256.474	398	0.000
	Zn	66	**-0.008**	ug/L	365.175	743	-0.000
	Zn	67		ug/L		11974	-0.002
	Zn	68		ug/L		1410	-0.001
>	Ge	74		ug/L		342294	342293.771
	As	75	**-0.349**	ug/L	47.926	-65	-0.001
	Se	77		ug/L		4671	0.001
	Se	82	**0.069**	ug/L	204.588	5	0.000
	Kr	83		ug/L		81	-0.000
	Sr	88	**0.004**	ug/L	182.762	390	0.000
	Y	89		ug/L		48	-0.000
	Mo	98	**0.096**	ug/L	32.289	425	0.001
	Ag	107	**0.008**	ug/L	42.395	130	0.000
	Cd	111	**-0.002**	ug/L	626.115	48	-0.000
	Cd	114		ug/L		100	0.000
>	In	115		ug/L		198847	198846.905
	Sn	120	**0.011**	ug/L	69.597	283	0.000
	Sb	121	**0.066**	ug/L	18.057	440	0.001
	Sb	123		ug/L		349	0.001
	Ba	135		ug/L		52	-0.000
	Ba	137	**0.003**	ug/L	279.267	89	0.000
	Ho	165		ug/L		46	-0.000
>	Lu	175		ug/L		283148	283147.570
	Tl	205	**0.232**	ug/L	28.348	3113	0.008
	Pb	208	**0.006**	ug/L	88.942	1583	0.000
	Bi	209		ug/L		99	-0.000
	Th	232	**0.089**	ug/L	37.270	2541	0.006
	U	238	**0.007**	ug/L	123.455	1219	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.1		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			98.6		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.7		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			92.4		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Wednesday, July 01, 2009 02:15:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 10.184

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**948.047**	ug/L	4.358	1701068	5.041
	Be	9	**944.930**	ug/L	2.942	429872	1.274
	B	11	**1.706**	ug/L	12.531	1434	0.002
	Na	23	**52421.096**	ug/L	0.902	189575827	561.332
	Mg	24	**48619.656**	ug/L	2.299	130358390	386.192
	Al	27	**47092.438**	ug/L	0.672	167991814	497.412
	P	31	**24153.996**	ug/L	0.709	4289558	12.683
	K	39	**48019.084**	ug/L	2.314	183117875	540.711
	Ca	43	**46683.729**	ug/L	1.121	440403	1.303
>	Sc	45		ug/L		337654	337653.910
	Ti	47	**34.429**	ug/L	3.298	16261	0.047
	V	51	**826.311**	ug/L	2.183	4404350	13.023
	Cr	52	**854.087**	ug/L	1.840	3511878	10.401
	Cr	53		ug/L		508993	1.293
	Mn	55	**835.739**	ug/L	2.190	5341605	15.821
	Fe	57	**45055.374**	ug/L	1.380	5530893	16.371
	Co	59	**815.210**	ug/L	1.722	4169360	12.350
	Ni	60	**858.561**	ug/L	2.798	970343	2.875
	Cu	63		ug/L		2274735	6.735
	Cu	65	**838.970**	ug/L	2.551	1118329	3.312
	Zn	66	**2000.333**	ug/L	0.896	1682939	4.960
	Zn	67		ug/L		318792	0.902
	Zn	68		ug/L		1293745	3.810
>	Ge	74		ug/L		339192	339192.283
	As	75	**883.223**	ug/L	1.568	797261	2.350
	Se	77		ug/L		34140	0.088
	Se	82	**472.959**	ug/L	1.102	38830	0.114
	Kr	83		ug/L		156	0.000
	Sr	88	**887.865**	ug/L	0.433	8639061	42.514
	Y	89		ug/L		470	0.002
	Mo	98	**907.630**	ug/L	1.124	2448682	12.050
	Ag	107	**217.087**	ug/L	1.050	999583	4.919
	Cd	111	**882.622**	ug/L	0.241	964358	4.746
	Cd	114		ug/L		2266619	11.154
>	In	115		ug/L		203196	203196.234
	Sn	120	**909.470**	ug/L	1.013	3968434	19.529
	Sb	121	**234.546**	ug/L	1.437	845307	4.159
	Sb	123		ug/L		663594	3.265
	Ba	135		ug/L		2439468	6.485
	Ba	137	**1973.327**	ug/L	1.606	4297044	11.418
	Ho	165		ug/L		343	0.001
>	Lu	175		ug/L		376354	376353.557
	Tl	205	**444.423**	ug/L	2.967	5942008	15.789
	Pb	208	**4460.329**	ug/L	0.764	98467908	261.658
	Bi	209		ug/L		18579	0.049
	Th	232	**2425.583**	ug/L	1.028	59015910	156.807
	U	238	**5116.166**	ug/L	0.864	132407907	351.852

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	94.805				
	Be	9	94.493				
	B	11					
	Na	23	104.842				
	Mg	24	97.239				
	Al	27	94.185				
	P	31	96.616				
	K	39	96.038				
	Ca	43	93.367				
>	Sc	45		97.4			
	Ti	47					
	V	51	82.631				
	Cr	52	85.409				
	Cr	53					
	Mn	55	83.574				
	Fe	57	90.111				
	Co	59	81.521				
	Ni	60	85.856				
	Cu	63					
	Cu	65	83.897				
	Zn	66	80.013				
	Zn	67					
	Zn	68					
>	Ge	74		97.7			
	As	75	88.322				
	Se	77					
	Se	82	94.592				
	Kr	83					
	Sr	88	88.787				
	Y	89					
	Mo	98	90.763				
	Ag	107	86.835				
	Cd	111	88.262				
	Cd	114					
>	In	115		100.8			
	Sn	120	90.947				
	Sb	121	93.818				
	Sb	123					
	Ba	135					
	Ba	137	78.933				
	Ho	165					
>	Lu	175		122.8			
	Tl	205	88.885				
	Pb	208	89.207				
	Bi	209					
	Th	232	97.023				
	U	238	102.323				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	V	51	LRS is out of limits (+/- 10%)
QC Std 10	Cr	52	LRS is out of limits (+/- 10%)
QC Std 10	Mn	55	LRS is out of limits (+/- 10%)
QC Std 10	Co	59	LRS is out of limits (+/- 10%)
QC Std 10	Ni	60	LRS is out of limits (+/- 10%)
QC Std 10	Cu	65	LRS is out of limits (+/- 10%)
QC Std 10	Zn	66	LRS is out of limits (+/- 10%)

QC Std 10	As	75LRS is out of limits (+/- 10%)
QC Std 10	Sr	88LRS is out of limits (+/- 10%)
QC Std 10	Ag	107LRS is out of limits (+/- 10%)
QC Std 10	Cd	111LRS is out of limits (+/- 10%)
QC Std 10	Ba	137LRS is out of limits (+/- 10%)
Lu 175 Int Std for QCLu		175
QC Std 10	Tl	205LRS is out of limits (+/- 10%)
QC Std 10	Pb	208LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Wednesday, July 01, 2009 02:21:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 11.185

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.313**	ug/L	1.722	97186	0.273
	Be	9	**50.408**	ug/L	0.273	24184	0.068
	B	11	**100.861**	ug/L	3.311	45720	0.126
	Na	23	**5233.390**	ug/L	6.516	19998136	56.040
	Mg	24	**5157.435**	ug/L	0.482	14580728	40.966
	Al	27	**4738.765**	ug/L	1.260	17818389	50.053
	P	31	**5080.417**	ug/L	1.005	956506	2.668
	K	39	**5238.731**	ug/L	3.200	21480802	58.990
	Ca	43	**4795.168**	ug/L	0.797	47969	0.134
>	Sc	45		ug/L		355610	355610.239
	Ti	47	**47.437**	ug/L	1.521	23495	0.065
	V	51	**48.418**	ug/L	2.308	280475	0.763
	Cr	52	**48.836**	ug/L	0.668	212545	0.595
	Cr	53		ug/L		89309	0.036
	Mn	55	**47.185**	ug/L	0.364	319136	0.893
	Fe	57	**5051.291**	ug/L	1.679	657386	1.835
	Co	59	**49.548**	ug/L	0.474	267138	0.751
	Ni	60	**49.767**	ug/L	1.424	59389	0.167
	Cu	63		ug/L		133862	0.374
	Cu	65	**47.207**	ug/L	0.566	66688	0.186
	Zn	66	**48.835**	ug/L	1.194	43855	0.121
	Zn	67		ug/L		18238	0.014
	Zn	68		ug/L		32909	0.088
>	Ge	74		ug/L		355761	355761.245
	As	75	**46.810**	ug/L	0.324	44574	0.125
	Se	77		ug/L		6841	0.007
	Se	82	**46.732**	ug/L	1.056	4024	0.011
	Kr	83		ug/L		98	0.000
	Sr	88	**48.904**	ug/L	1.298	491969	2.342
	Y	89		ug/L		105	0.000
	Mo	98	**46.862**	ug/L	0.533	130804	0.622
	Ag	107	**48.348**	ug/L	2.563	230053	1.096
	Cd	111	**50.197**	ug/L	1.271	56713	0.270
	Cd	114		ug/L		131633	0.627
>	In	115		ug/L		209954	209953.947
	Sn	120	**47.287**	ug/L	1.201	213412	1.015
	Sb	121	**49.153**	ug/L	1.633	183184	0.872
	Sb	123		ug/L		141446	0.673
	Ba	135		ug/L		51184	0.158
	Ba	137	**48.365**	ug/L	0.288	90595	0.280
	Ho	165		ug/L		84	0.000
>	Lu	175		ug/L		323376	323376.441
	Tl	205	**50.047**	ug/L	0.527	575864	1.778
	Pb	208	**50.779**	ug/L	1.369	964887	2.979
	Bi	209		ug/L		317	0.001
	Th	232	**56.232**	ug/L	2.355	1176342	3.635
	U	238	**58.027**	ug/L	2.208	1291448	3.991

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	102.626				
	Be	9	100.816				
	B	11	100.861				
	Na	23	104.668				
	Mg	24	103.149				
	Al	27	93.837				
	P	31	101.608				
	K	39	104.775				
	Ca	43	95.903				
>	Sc	45		102.6			
	Ti	47	94.873				
	V	51	96.835				
	Cr	52	97.672				
	Cr	53					
	Mn	55	94.370				
	Fe	57	101.026				
	Co	59	99.096				
	Ni	60	99.534				
	Cu	63					
	Cu	65	94.414				
	Zn	66	97.670				
	Zn	67					
	Zn	68					
>	Ge	74		102.5			
	As	75	93.620				
	Se	77					
	Se	82	93.464				
	Kr	83					
	Sr	88	97.809				
	Y	89					
	Mo	98	93.724				
	Ag	107	96.696				
	Cd	111	100.395				
	Cd	114					
>	In	115		104.2			
	Sn	120	94.573				
	Sb	121	98.307				
	Sb	123					
	Ba	135					
	Ba	137	96.731				
	Ho	165					
>	Lu	175		105.5			
	Tl	205	100.095				
	Pb	208	101.559				
	Bi	209					
	Th	232	112.465				
	U	238	116.054				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Th	232	CCV is out of limits (+/- 10%)
QC Std 11	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Wednesday, July 01, 2009 02:27:25
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 12.186

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.094**	ug/L	17.833	313	0.001
	Be	9	**0.026**	ug/L	65.628	32	0.000
	B	11	**3.236**	ug/L	14.753	2042	0.004
	Na	23	**-0.616**	ug/L	167.177	63140	-0.007
	Mg	24	**0.995**	ug/L	151.386	14675	0.008
	Al	27	**0.441**	ug/L	313.855	20015	0.005
	P	31	**-4.789**	ug/L	4.144	6467	-0.003
	K	39	**-0.073**	ug/L	12699.549	468943	-0.001
	Ca	43	**-2.161**	ug/L	86.876	312	-0.000
>	Sc	45		ug/L		330706	330706.039
	Ti	47	**-0.094**	ug/L	29.903	236	-0.000
	V	51	**-0.076**	ug/L	847.480	8082	-0.001
	Cr	52	**0.060**	ug/L	40.045	1227	0.001
	Cr	53		ug/L		70661	-0.001
	Mn	55	**-0.009**	ug/L	53.542	1320	-0.000
	Fe	57	**0.195**	ug/L	342.193	4422	0.000
	Co	59	**0.033**	ug/L	38.498	368	0.001
	Ni	60	**0.040**	ug/L	44.541	165	0.000
	Cu	63		ug/L		851	0.000
	Cu	65	**0.046**	ug/L	42.231	443	0.000
	Zn	66	**0.060**	ug/L	67.696	772	0.000
	Zn	67		ug/L		12089	-0.001
	Zn	68		ug/L		1487	-0.000
>	Ge	74		ug/L		329886	329886.201
	As	75	**-0.570**	ug/L	87.795	-252	-0.002
	Se	77		ug/L		4162	0.000
	Se	82	**0.230**	ug/L	62.366	18	0.000
	Kr	83		ug/L		71	-0.000
	Sr	88	**0.022**	ug/L	27.841	539	0.001
	Y	89		ug/L		47	-0.000
	Mo	98	**0.095**	ug/L	12.204	410	0.001
	Ag	107	**0.014**	ug/L	49.960	152	0.000
	Cd	111	**0.028**	ug/L	41.793	77	0.000
	Cd	114		ug/L		147	0.000
>	In	115		ug/L		192473	192473.051
	Sn	120	**0.096**	ug/L	11.103	629	0.002
	Sb	121	**0.497**	ug/L	12.036	1900	0.009
	Sb	123		ug/L		1443	0.007
	Ba	135		ug/L		98	0.000
	Ba	137	**0.054**	ug/L	32.832	178	0.000
	Ho	165		ug/L		42	-0.000
>	Lu	175		ug/L		289563	289563.219
	Tl	205	**0.418**	ug/L	12.966	5105	0.015
	Pb	208	**0.099**	ug/L	33.564	3215	0.006
	Bi	209		ug/L		82	-0.000
	Th	232	**0.187**	ug/L	27.722	4433	0.012
	U	238	**0.137**	ug/L	36.485	3851	0.009

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		95.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		94.5			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870017
Sample Date/Time: Wednesday, July 01, 2009 02:33:33
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870017.187

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.005**	ug/L	131.597	158	0.000
	Be	9	**-0.002**	ug/L	685.041	20	-0.000
	B	11	**1.082**	ug/L	14.441	1159	0.001
	Na	23	**-3.908**	ug/L	26.102	52095	-0.042
	Mg	24	**-1.211**	ug/L	6.450	9003	-0.010
	Al	27	**0.670**	ug/L	51.597	21015	0.007
	P	31	**15.098**	ug/L	23.859	10023	0.008
	K	39	**-15.594**	ug/L	22.959	415283	-0.176
	Ca	43	**2.636**	ug/L	86.356	360	0.000
>	Sc	45		ug/L		334435	334435.258
	Ti	47	**0.054**	ug/L	146.194	306	0.000
	V	51	**-0.194**	ug/L	34.671	7540	-0.003
	Cr	52	**0.417**	ug/L	12.549	2699	0.005
	Cr	53		ug/L		46878	-0.075
	Mn	55	**0.227**	ug/L	21.323	2830	0.004
	Fe	57	**7.271**	ug/L	17.734	5329	0.003
	Co	59	**0.001**	ug/L	345.113	205	0.000
	Ni	60	**0.126**	ug/L	4.657	263	0.000
	Cu	63		ug/L		1024	0.001
	Cu	65	**0.078**	ug/L	16.501	490	0.000
	Zn	66	**0.116**	ug/L	40.585	829	0.000
	Zn	67		ug/L		7491	-0.015
	Zn	68		ug/L		1296	-0.001
>	Ge	74		ug/L		334808	334808.448
	As	75	**-0.395**	ug/L	75.402	-102	-0.001
	Se	77		ug/L		2440	-0.005
	Se	82	**0.275**	ug/L	64.060	22	0.000
	Kr	83		ug/L		76	-0.000
	Sr	88	**0.009**	ug/L	89.857	429	0.000
	Y	89		ug/L		50	-0.000
	Mo	98	**0.012**	ug/L	55.017	202	0.000
	Ag	107	**-0.008**	ug/L	25.683	58	-0.000
	Cd	111	**-0.017**	ug/L	8.428	31	-0.000
	Cd	114		ug/L		54	-0.000
>	In	115		ug/L		197339	197338.714
	Sn	120	**0.092**	ug/L	9.666	627	0.002
	Sb	121	**0.106**	ug/L	41.936	578	0.002
	Sb	123		ug/L		448	0.001
	Ba	135		ug/L		85	0.000
	Ba	137	**0.028**	ug/L	28.453	139	0.000
	Ho	165		ug/L		45	-0.000
>	Lu	175		ug/L		299231	299230.887
	Tl	205	**0.168**	ug/L	13.624	2615	0.006
	Pb	208	**0.137**	ug/L	22.437	3977	0.008
	Bi	209		ug/L		68	-0.000
	Th	232	**0.086**	ug/L	36.845	2622	0.006
	U	238	**0.020**	ug/L	160.110	1538	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		96.5			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870018
Sample Date/Time: Wednesday, July 01, 2009 02:39:39
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 880691|40|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870018.188

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.244**	ug/L	3.222	4399	0.012
	Be	9	**24.236**	ug/L	0.199	11636	0.033
	B	11	**35.668**	ug/L	3.415	16653	0.045
	Na	23	**141.938**	ug/L	15.737	610971	1.520
	Mg	24	**805.668**	ug/L	3.275	2287282	6.400
	Al	27	**2499.309**	ug/L	2.059	9402836	26.399
	P	31	**184.475**	ug/L	0.673	42281	0.097
	K	39	**711.674**	ug/L	3.825	3353569	8.014
	Ca	43	**900.643**	ug/L	1.550	9295	0.025
>	Sc	45		ug/L		355489	355488.699
	Ti	47	**71.336**	ug/L	0.963	35168	0.098
	V	51	**31.659**	ug/L	0.798	186485	0.499
	Cr	52	**17.376**	ug/L	1.079	76277	0.212
	Cr	53		ug/L		62085	-0.041
	Mn	55	**90.416**	ug/L	2.413	609832	1.712
	Fe	57	**3012.469**	ug/L	2.627	393752	1.095
	Co	59	**21.462**	ug/L	0.943	115801	0.325
	Ni	60	**25.661**	ug/L	0.775	30672	0.086
	Cu	63		ug/L		72270	0.201
	Cu	65	**25.324**	ug/L	0.628	35952	0.100
	Zn	66	**53.224**	ug/L	0.248	47070	0.132
	Zn	67		ug/L		15987	0.008
	Zn	68		ug/L		36060	0.098
>	Ge	74		ug/L		350851	350851.053
	As	75	**64.568**	ug/L	2.793	60528	0.172
	Se	77		ug/L		6138	0.005
	Se	82	**46.273**	ug/L	2.788	3930	0.011
	Kr	83		ug/L		96	0.000
	Sr	88	**41.832**	ug/L	0.722	412775	2.003
	Y	89		ug/L		36196	0.175
	Mo	98	**20.121**	ug/L	2.118	55181	0.267
	Ag	107	**4.854**	ug/L	1.794	22741	0.110
	Cd	111	**30.672**	ug/L	1.943	34007	0.165
	Cd	114		ug/L		79149	0.384
>	In	115		ug/L		205892	205892.444
	Sn	120	**12.786**	ug/L	0.640	56776	0.275
	Sb	121	**8.086**	ug/L	1.322	29737	0.143
	Sb	123		ug/L		22970	0.111
	Ba	135		ug/L		123520	0.407
	Ba	137	**123.053**	ug/L	0.946	216016	0.712
	Ho	165		ug/L		2356	0.008
>	Lu	175		ug/L		303260	303260.353
	Tl	205	**55.598**	ug/L	1.007	599810	1.975
	Pb	208	**44.630**	ug/L	0.841	795520	2.618
	Bi	209		ug/L		1567	0.005
	Th	232	**4.142**	ug/L	2.015	82165	0.268
	U	238	**0.530**	ug/L	2.549	12210	0.036

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		102.5			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.9			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232347001
Sample Date/Time: Wednesday, July 01, 2009 02:45:46
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\232347001.189

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.216**	ug/L	2.936	114555	0.278
	Be	9	**3.976**	ug/L	3.465	2233	0.005
	B	11	**11.011**	ug/L	5.708	6554	0.014
	Na	23	**1404.709**	ug/L	2.838	6277362	15.042
	Mg	24	**6534.859**	ug/L	4.414	21392489	51.907
	Al	27	**41896.038**	ug/L	4.372	182558672	442.525
	P	31	**511.436**	ug/L	2.356	119735	0.269
	K	39	**4627.385**	ug/L	6.053	22072244	52.106
	Ca	43	**8400.595**	ug/L	2.462	97053	0.235
>	Sc	45		ug/L		412149	412149.303
	Ti	47	**1139.195**	ug/L	1.214	645812	1.566
	V	51	**49.162**	ug/L	1.707	329819	0.775
	Cr	52	**27.489**	ug/L	1.523	139154	0.335
	Cr	53		ug/L		55698	-0.080
	Mn	55	**1500.435**	ug/L	2.284	11704168	28.405
	Fe	57	**52618.236**	ug/L	4.566	7878178	19.119
	Co	59	**10.401**	ug/L	2.487	65160	0.158
	Ni	60	**36.921**	ug/L	2.857	51072	0.124
	Cu	63		ug/L		59554	0.142
	Cu	65	**18.235**	ug/L	1.404	30141	0.072
	Zn	66	**145.749**	ug/L	1.791	118861	0.361
	Zn	67		ug/L		28022	0.048
	Zn	68		ug/L		95895	0.289
>	Ge	74		ug/L		327020	327019.612
	As	75	**10.816**	ug/L	3.349	9650	0.029
	Se	77		ug/L		2279	-0.005
	Se	82	**0.266**	ug/L	220.486	21	0.000
	Kr	83		ug/L		242	0.000
	Sr	88	**98.366**	ug/L	1.661	920625	4.710
	Y	89		ug/L		1150736	5.890
	Mo	98	**4.996**	ug/L	2.790	13126	0.066
	Ag	107	**0.463**	ug/L	4.358	2142	0.010
	Cd	111	**1.825**	ug/L	2.591	1967	0.010
	Cd	114		ug/L		656	0.003
>	In	115		ug/L		195410	195409.617
	Sn	120	**6.287**	ug/L	2.426	26609	0.135
	Sb	121	**0.296**	ug/L	6.211	1229	0.005
	Sb	123		ug/L		955	0.004
	Ba	135		ug/L		622461	1.841
	Ba	137	**547.680**	ug/L	1.124	1071320	3.169
	Ho	165		ug/L		84045	0.248
>	Lu	175		ug/L		338022	338022.410
	Tl	205	**1.806**	ug/L	2.145	22618	0.064
	Pb	208	**27.170**	ug/L	1.448	540580	1.594
	Bi	209		ug/L		9573	0.028
	Th	232	**27.272**	ug/L	0.779	597013	1.763
	U	238	**2.648**	ug/L	1.583	62829	0.182

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		118.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		110.3			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EEE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1201870019
Sample Date/Time: Wednesday, July 01, 2009 02:51:54
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870019.190

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.922**	ug/L	1.132	128042	0.281
	Be	9	**4.457**	ug/L	1.247	2758	0.006
	B	11	**10.522**	ug/L	3.300	6953	0.013
	Na	23	**1605.096**	ug/L	8.925	7898146	17.188
	Mg	24	**7102.633**	ug/L	7.709	25644274	56.417
	Al	27	**41466.683**	ug/L	2.086	199017330	437.990
	P	31	**570.248**	ug/L	1.458	146056	0.299
	K	39	**5066.037**	ug/L	4.048	26556056	57.045
	Ca	43	**8337.138**	ug/L	2.025	106204	0.233
>	Sc	45		ug/L		454299	454299.461
	Ti	47	**1151.829**	ug/L	2.096	719884	1.584
	V	51	**43.983**	ug/L	2.703	326542	0.693
	Cr	52	**26.204**	ug/L	2.796	146321	0.319
	Cr	53		ug/L		55777	-0.092
	Mn	55	**896.948**	ug/L	2.610	7715520	16.980
	Fe	57	**52188.178**	ug/L	2.438	8620220	18.963
	Co	59	**9.378**	ug/L	1.989	64815	0.142
	Ni	60	**27.577**	ug/L	2.661	42111	0.092
	Cu	63		ug/L		59864	0.130
	Cu	65	**16.655**	ug/L	2.088	30398	0.066
	Zn	66	**159.297**	ug/L	0.492	146343	0.395
	Zn	67		ug/L		31445	0.048
	Zn	68		ug/L		113209	0.303
>	Ge	74		ug/L		368471	368470.782
	As	75	**10.052**	ug/L	1.510	10129	0.027
	Se	77		ug/L		2342	-0.006
	Se	82	**0.593**	ug/L	26.227	52	0.000
	Kr	83		ug/L		257	0.000
	Sr	88	**87.503**	ug/L	0.099	928937	4.190
	Y	89		ug/L		1268491	5.723
	Mo	98	**4.446**	ug/L	1.569	13274	0.059
	Ag	107	**0.436**	ug/L	0.951	2292	0.010
	Cd	111	**1.694**	ug/L	6.637	2073	0.009
	Cd	114		ug/L		471	0.002
>	In	115		ug/L		221614	221614.445
	Sn	120	**6.747**	ug/L	1.594	32377	0.145
	Sb	121	**0.249**	ug/L	1.062	1210	0.004
	Sb	123		ug/L		942	0.003
	Ba	135		ug/L		386402	1.005
	Ba	137	**304.947**	ug/L	1.073	678221	1.765
	Ho	165		ug/L		94842	0.247
>	Lu	175		ug/L		384280	384279.833
	Tl	205	**1.222**	ug/L	0.341	17747	0.043
	Pb	208	**23.744**	ug/L	1.682	537309	1.393
	Bi	209		ug/L		9012	0.023
	Th	232	**24.795**	ug/L	1.384	617228	1.603
	U	238	**2.552**	ug/L	0.851	68901	0.175

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		131.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		106.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		110.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		125.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)
Fe 57 Upper, S, EEE	Fe	57	Sample is out of limits (over linear range)
Lu 175 Int Std for sa	Lu	175	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1201870020
Sample Date/Time: Wednesday, July 01, 2009 02:58:03
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870020.191

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**76.002**	ug/L	1.637	179443	0.404
	Be	9	**23.632**	ug/L	1.122	14156	0.032
	B	11	**49.323**	ug/L	2.594	28371	0.062
	Na	23	**2461.127**	ug/L	3.869	11782438	26.354
	Mg	24	**7431.305**	ug/L	3.118	26200790	59.028
	Al	27	**41354.053**	ug/L	6.173	193720290	436.800
	P	31	**1369.805**	ug/L	0.533	328870	0.719
	K	39	**5781.897**	ug/L	6.925	29528748	65.106
	Ca	43	**10360.432**	ug/L	1.782	128788	0.289
>	Sc	45		ug/L		443596	443596.176
	Ti	47	**1312.348**	ug/L	0.601	800833	1.805
	V	51	**68.377**	ug/L	0.888	489412	1.078
	Cr	52	**46.950**	ug/L	0.534	254943	0.572
	Cr	53		ug/L		68448	-0.061
	Mn	55	**597.435**	ug/L	0.757	5018969	11.310
	Fe	57	**54587.540**	ug/L	0.516	8804048	19.835
	Co	59	**28.408**	ug/L	0.483	191175	0.430
	Ni	60	**43.113**	ug/L	0.586	64194	0.144
	Cu	63		ug/L		126769	0.284
	Cu	65	**35.967**	ug/L	2.040	63493	0.142
	Zn	66	**173.878**	ug/L	0.883	152989	0.431
	Zn	67		ug/L		32797	0.056
	Zn	68		ug/L		117552	0.328
>	Ge	74		ug/L		353084	353083.618
	As	75	**48.653**	ug/L	1.749	45964	0.129
	Se	77		ug/L		2926	-0.004
	Se	82	**9.334**	ug/L	5.036	797	0.002
	Kr	83		ug/L		287	0.001
	Sr	88	**109.931**	ug/L	0.165	1118590	5.264
	Y	89		ug/L		1259136	5.927
	Mo	98	**28.950**	ug/L	1.755	81826	0.384
	Ag	107	**25.607**	ug/L	0.434	123356	0.580
	Cd	111	**7.053**	ug/L	2.229	8109	0.038
	Cd	114		ug/L		14027	0.066
>	In	115		ug/L		212435	212435.380
	Sn	120	**28.184**	ug/L	1.468	128811	0.605
	Sb	121	**48.659**	ug/L	0.480	183510	0.863
	Sb	123		ug/L		142137	0.668
	Ba	135		ug/L		380168	1.020
	Ba	137	**307.512**	ug/L	1.463	663535	1.779
	Ho	165		ug/L		94752	0.254
>	Lu	175		ug/L		372848	372848.481
	Tl	205	**51.079**	ug/L	2.020	677448	1.815
	Pb	208	**116.851**	ug/L	0.981	2557427	6.855
	Bi	209		ug/L		8614	0.023
	Th	232	**52.298**	ug/L	2.177	1261469	3.381
	U	238	**32.631**	ug/L	1.537	837998	2.244

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		127.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		121.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)
Fe 57 Upper, S, EEE	Fe	57	Sample is out of limits (over linear range)
Lu 175 Int Std for sa	Lu	175	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1201870022
Sample Date/Time: Wednesday, July 01, 2009 03:04:12
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870022.192

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**66.082**	ug/L	1.918	163378	0.351
	Be	9	**22.175**	ug/L	2.514	13908	0.030
	B	11	**47.122**	ug/L	3.421	28423	0.059
	Na	23	**2227.779**	ug/L	7.960	11170199	23.855
	Mg	24	**6949.340**	ug/L	3.610	25644274	55.199
	Al	27	**35561.608**	ug/L	4.918	174423933	375.618
	P	31	**1263.855**	ug/L	1.455	318446	0.664
	K	39	**5559.200**	ug/L	5.657	29726928	62.598
	Ca	43	**9148.068**	ug/L	1.984	119074	0.255
>	Sc	45		ug/L		464440	464439.615
	Ti	47	**1150.206**	ug/L	0.516	734940	1.582
	V	51	**63.327**	ug/L	1.070	475430	0.998
	Cr	52	**42.346**	ug/L	0.460	240877	0.516
	Cr	53		ug/L		66699	-0.072
	Mn	55	**755.362**	ug/L	0.625	6643064	14.300
	Fe	57	**50529.009**	ug/L	1.088	8532548	18.360
	Co	59	**34.639**	ug/L	1.973	243969	0.525
	Ni	60	**40.386**	ug/L	1.442	62966	0.135
	Cu	63		ug/L		126845	0.271
	Cu	65	**34.211**	ug/L	1.490	63263	0.135
	Zn	66	**150.664**	ug/L	2.174	143635	0.374
	Zn	67		ug/L		30879	0.043
	Zn	68		ug/L		111188	0.286
>	Ge	74		ug/L		382365	382365.388
	As	75	**47.443**	ug/L	1.947	48535	0.126
	Se	77		ug/L		2965	-0.005
	Se	82	**9.064**	ug/L	4.706	837	0.002
	Kr	83		ug/L		263	0.000
	Sr	88	**100.214**	ug/L	1.631	1087567	4.799
	Y	89		ug/L		1274187	5.624
	Mo	98	**26.762**	ug/L	1.320	80689	0.355
	Ag	107	**24.111**	ug/L	1.518	123873	0.546
	Cd	111	**6.464**	ug/L	0.144	7932	0.035
	Cd	114		ug/L		14189	0.062
>	In	115		ug/L		226575	226575.184
	Sn	120	**25.927**	ug/L	2.345	126392	0.557
	Sb	121	**43.998**	ug/L	1.792	176973	0.780
	Sb	123		ug/L		137172	0.605
	Ba	135		ug/L		371782	0.937
	Ba	137	**280.182**	ug/L	4.183	643313	1.621
	Ho	165		ug/L		93775	0.236
>	Lu	175		ug/L		396935	396934.592
	Tl	205	**47.857**	ug/L	2.139	675912	1.700
	Pb	208	**120.433**	ug/L	2.778	2805364	7.065
	Bi	209		ug/L		9071	0.022
	Th	232	**48.658**	ug/L	2.074	1249629	3.146
	U	238	**30.421**	ug/L	2.603	831759	2.092

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		133.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		110.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		112.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		129.5			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)
Fe 57 Upper, S, EEE	Fe	57	Sample is out of limits (over linear range)
Lu 175 Int Std for sa	Lu	175	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1201870021
Sample Date/Time: Wednesday, July 01, 2009 03:10:21
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 880691|10|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\1201870021.193

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.881**	ug/L	2.771	21715	0.058
	Be	9	**0.869**	ug/L	3.257	459	0.001
	B	11	**4.032**	ug/L	9.264	2669	0.005
	Na	23	**326.603**	ug/L	7.465	1376872	3.497
	Mg	24	**1572.388**	ug/L	2.742	4666390	12.490
	Al	27	**9223.423**	ug/L	6.029	36322554	97.422
	P	31	**112.605**	ug/L	2.101	30248	0.059
	K	39	**1086.982**	ug/L	2.572	5087640	12.240
	Ca	43	**1903.151**	ug/L	1.718	20170	0.053
>	Sc	45		ug/L		372502	372502.251
	Ti	47	**266.487**	ug/L	0.953	136810	0.366
	V	51	**10.868**	ug/L	2.555	73345	0.171
	Cr	52	**6.151**	ug/L	0.953	29016	0.075
	Cr	53		ug/L		50495	-0.080
	Mn	55	**338.131**	ug/L	0.930	2385952	6.401
	Fe	57	**12208.461**	ug/L	0.334	1657399	4.436
	Co	59	**2.308**	ug/L	1.089	13251	0.035
	Ni	60	**8.447**	ug/L	1.364	10671	0.028
	Cu	63		ug/L		12925	0.033
	Cu	65	**4.227**	ug/L	2.339	6648	0.017
	Zn	66	**30.803**	ug/L	1.691	28029	0.076
	Zn	67		ug/L		12282	-0.003
	Zn	68		ug/L		22273	0.058
>	Ge	74		ug/L		356784	356783.683
	As	75	**1.758**	ug/L	6.930	1935	0.005
	Se	77		ug/L		2576	-0.005
	Se	82	**0.199**	ug/L	111.278	16	0.000
	Kr	83		ug/L		119	0.000
	Sr	88	**18.535**	ug/L	1.182	189068	0.887
	Y	89		ug/L		243116	1.143
	Mo	98	**0.904**	ug/L	2.956	2735	0.012
	Ag	107	**0.082**	ug/L	11.616	493	0.002
	Cd	111	**0.300**	ug/L	9.313	396	0.002
	Cd	114		ug/L		157	0.000
>	In	115		ug/L		212617	212617.375
	Sn	120	**1.113**	ug/L	1.032	5335	0.024
	Sb	121	**0.054**	ug/L	11.116	427	0.001
	Sb	123		ug/L		356	0.001
	Ba	135		ug/L		130719	0.389
	Ba	137	**118.572**	ug/L	1.782	230253	0.686
	Ho	165		ug/L		16323	0.048
>	Lu	175		ug/L		335481	335480.565
	Tl	205	**0.455**	ug/L	3.579	6348	0.016
	Pb	208	**5.359**	ug/L	1.235	107217	0.314
	Bi	209		ug/L		1947	0.005
	Th	232	**5.370**	ug/L	1.706	117546	0.347
	U	238	**0.474**	ug/L	3.126	12212	0.033

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		107.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		109.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, July 01, 2009 03:16:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 8.194

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.797**	ug/L	2.399	95969	0.265
	Be	9	**49.504**	ug/L	2.192	24171	0.067
	B	11	**99.171**	ug/L	0.324	45774	0.124
	Na	23	**5104.373**	ug/L	2.672	19855873	54.658
	Mg	24	**5159.058**	ug/L	2.302	14850639	40.979
	Al	27	**4846.073**	ug/L	3.036	18539637	51.186
	P	31	**5259.768**	ug/L	0.360	1007654	2.762
	K	39	**4853.635**	ug/L	8.360	20319594	54.654
	Ca	43	**4931.682**	ug/L	1.538	50216	0.138
>	Sc	45		ug/L		361959	361958.979
	Ti	47	**49.222**	ug/L	1.154	24804	0.068
	V	51	**50.741**	ug/L	1.642	298689	0.800
	Cr	52	**51.296**	ug/L	2.208	227105	0.625
	Cr	53		ug/L		91855	0.039
	Mn	55	**48.897**	ug/L	1.475	336564	0.926
	Fe	57	**5280.072**	ug/L	0.716	699175	1.919
	Co	59	**52.041**	ug/L	1.725	285523	0.788
	Ni	60	**52.184**	ug/L	1.168	63366	0.175
	Cu	63		ug/L		143280	0.394
	Cu	65	**49.560**	ug/L	1.659	71232	0.196
	Zn	66	**50.253**	ug/L	0.963	46200	0.125
	Zn	67		ug/L		18498	0.013
	Zn	68		ug/L		35052	0.092
>	Ge	74		ug/L		364397	364397.009
	As	75	**48.817**	ug/L	0.536	47601	0.130
	Se	77		ug/L		7503	0.008
	Se	82	**49.170**	ug/L	0.960	4336	0.012
	Kr	83		ug/L		85	-0.000
	Sr	88	**50.841**	ug/L	1.029	525975	2.434
	Y	89		ug/L		272	0.001
	Mo	98	**46.538**	ug/L	1.667	133537	0.618
	Ag	107	**49.378**	ug/L	0.706	241628	1.119
	Cd	111	**51.399**	ug/L	2.647	59694	0.276
	Cd	114		ug/L		139555	0.646
>	In	115		ug/L		215892	215891.908
	Sn	120	**48.766**	ug/L	2.188	226250	1.047
	Sb	121	**49.049**	ug/L	1.760	187952	0.870
	Sb	123		ug/L		144677	0.669
	Ba	135		ug/L		55161	0.161
	Ba	137	**49.763**	ug/L	3.693	98324	0.288
	Ho	165		ug/L		88	0.000
>	Lu	175		ug/L		341453	341453.209
	Tl	205	**50.235**	ug/L	1.638	610103	1.785
	Pb	208	**50.694**	ug/L	2.631	1016557	2.974
	Bi	209		ug/L		323	0.001
	Th	232	**55.810**	ug/L	2.752	1232272	3.608
	U	238	**56.670**	ug/L	3.033	1330990	3.897

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	99.594				
	Be	9	99.007				
	B	11	99.171				
	Na	23	102.087				
	Mg	24	103.181				
	Al	27	95.962				
	P	31	105.195				
	K	39	97.073				
	Ca	43	98.634				
>	Sc	45		104.4			
	Ti	47	98.445				
	V	51	101.483				
	Cr	52	102.593				
	Cr	53					
	Mn	55	97.794				
	Fe	57	105.601				
	Co	59	104.083				
	Ni	60	104.368				
	Cu	63					
	Cu	65	99.120				
	Zn	66	100.506				
	Zn	67					
	Zn	68					
>	Ge	74		105.0			
	As	75	97.633				
	Se	77					
	Se	82	98.341				
	Kr	83					
	Sr	88	101.682				
	Y	89					
	Mo	98	93.076				
	Ag	107	98.757				
	Cd	111	102.798				
	Cd	114					
>	In	115		107.1			
	Sn	120	97.533				
	Sb	121	98.097				
	Sb	123					
	Ba	135					
	Ba	137	99.525				
	Ho	165					
>	Lu	175		111.4			
	Tl	205	100.469				
	Pb	208	101.388				
	Bi	209					
	Th	232	111.621				
	U	238	113.340				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 8	Th	232CCV is out of limits (+/- 10%)
QC Std 8	U	238CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, July 01, 2009 03:22:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 9.195

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.034**	ug/L	30.538	220	0.000
	Be	9	**0.011**	ug/L	31.547	27	0.000
	B	11	**3.133**	ug/L	16.054	2123	0.004
	Na	23	**-0.148**	ug/L	1795.036	68834	-0.002
	Mg	24	**-0.294**	ug/L	644.141	12006	-0.002
	Al	27	**1.902**	ug/L	56.038	26692	0.020
	P	31	**-3.187**	ug/L	34.714	7170	-0.002
	K	39	**-3.044**	ug/L	120.740	486481	-0.034
	Ca	43	**-0.503**	ug/L	205.716	348	-0.000
>	Sc	45		ug/L		351630	351630.039
	Ti	47	**-0.003**	ug/L	2468.817	295	-0.000
	V	51	**0.440**	ug/L	152.018	11430	0.007
	Cr	52	**0.068**	ug/L	71.304	1339	0.001
	Cr	53		ug/L		74059	-0.005
	Mn	55	**0.014**	ug/L	97.566	1556	0.000
	Fe	57	**2.418**	ug/L	20.402	4985	0.001
	Co	59	**0.008**	ug/L	15.710	255	0.000
	Ni	60	**0.025**	ug/L	36.696	158	0.000
	Cu	63		ug/L		773	0.000
	Cu	65	**0.010**	ug/L	320.531	421	0.000
	Zn	66	**-0.010**	ug/L	376.089	774	-0.000
	Zn	67		ug/L		12277	-0.003
	Zn	68		ug/L		1534	-0.000
>	Ge	74		ug/L		357547	357546.695
	As	75	**-0.437**	ug/L	64.591	-149	-0.001
	Se	77		ug/L		4544	0.000
	Se	82	**0.174**	ug/L	36.773	14	0.000
	Kr	83		ug/L		82	-0.000
	Sr	88	**0.009**	ug/L	36.441	463	0.000
	Y	89		ug/L		89	0.000
	Mo	98	**0.025**	ug/L	25.473	252	0.000
	Ag	107	**0.011**	ug/L	30.280	149	0.000
	Cd	111	**-0.006**	ug/L	127.346	46	-0.000
	Cd	114		ug/L		118	0.000
>	In	115		ug/L		209732	209731.716
	Sn	120	**0.024**	ug/L	42.592	359	0.001
	Sb	121	**0.141**	ug/L	24.790	746	0.003
	Sb	123		ug/L		564	0.002
	Ba	135		ug/L		77	0.000
	Ba	137	**0.017**	ug/L	11.633	128	0.000
	Ho	165		ug/L		48	-0.000
>	Lu	175		ug/L		321773	321773.055
	Tl	205	**0.158**	ug/L	27.484	2696	0.006
	Pb	208	**0.023**	ug/L	39.238	2120	0.001
	Bi	209		ug/L		119	-0.000
	Th	232	**0.053**	ug/L	43.779	2134	0.003
	U	238	**0.017**	ug/L	19.171	1612	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		104.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		105.0			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232347002
Sample Date/Time: Wednesday, July 01, 2009 03:28:46
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|2|ba|
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\232347002.196

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**70.795**	ug/L	2.559	178377	0.376
	Be	9	**6.615**	ug/L	1.931	4250	0.009
	B	11	**17.872**	ug/L	2.347	11612	0.022
	Na	23	**1896.754**	ug/L	3.472	9717082	20.311
	Mg	24	**13233.958**	ug/L	7.417	49863865	105.119
	Al	27	**84471.815**	ug/L	3.889	422817235	892.229
	P	31	**417.072**	ug/L	1.489	114141	0.219
	K	39	**10246.857**	ug/L	1.382	55292086	115.383
	Ca	43	**10539.917**	ug/L	0.263	139824	0.294
>	Sc	45		ug/L		473500	473500.164
	Ti	47	**834.056**	ug/L	1.285	543323	1.147
	V	51	**91.553**	ug/L	0.688	695305	1.443
	Cr	52	**50.613**	ug/L	1.801	293158	0.616
	Cr	53		ug/L		76705	-0.053
	Mn	55	**3233.310**	ug/L	0.191	28986018	61.210
	Fe	57	**61342.198**	ug/L	1.940	10556655	22.289
	Co	59	**41.615**	ug/L	1.581	298711	0.630
	Ni	60	**76.660**	ug/L	2.506	121651	0.257
	Cu	63		ug/L		147116	0.309
	Cu	65	**39.236**	ug/L	1.533	73876	0.155
	Zn	66	**223.499**	ug/L	1.329	196359	0.554
	Zn	67		ug/L		46273	0.094
	Zn	68		ug/L		167244	0.469
>	Ge	74		ug/L		352957	352957.049
	As	75	**13.303**	ug/L	1.433	12753	0.035
	Se	77		ug/L		2645	-0.005
	Se	82	**0.095**	ug/L	584.927	7	0.000
	Kr	83		ug/L		437	0.001
	Sr	88	**167.147**	ug/L	1.616	1717419	8.003
	Y	89		ug/L		1838768	8.570
	Mo	98	**2.121**	ug/L	1.845	6227	0.028
	Ag	107	**0.420**	ug/L	3.970	2141	0.010
	Cd	111	**2.334**	ug/L	5.157	2745	0.013
	Cd	114		ug/L		1260	0.005
>	In	115		ug/L		214587	214587.302
	Sn	120	**1.657**	ug/L	2.315	7889	0.036
	Sb	121	**0.233**	ug/L	6.255	1113	0.004
	Sb	123		ug/L		883	0.003
	Ba	135		ug/L		1488432	3.696
	Ba	137	**1194.362**	ug/L	1.397	2784127	6.911
	Ho	165		ug/L		170167	0.422
>	Lu	175		ug/L		402945	402944.762
	Tl	205	**1.886**	ug/L	1.458	28110	0.067
	Pb	208	**82.811**	ug/L	2.818	1958271	4.858
	Bi	209		ug/L		20254	0.050
	Th	232	**35.306**	ug/L	2.508	920403	2.282
	U	238	**2.774**	ug/L	1.026	78388	0.191

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		136.6			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		106.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		131.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	Sample is out of limits (over linear range)
Sc 45 Int Std for sam	Sc	45	
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EEE	Fe	57	Sample is out of limits (over linear range)
Lu 175 Int Std for sa	Lu	175	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 232347003
Sample Date/Time: Wednesday, July 01, 2009 03:34:53
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\232347003.197

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**84.805**	ug/L	1.386	205564	0.451
	Be	9	**3.426**	ug/L	4.233	2132	0.005
	B	11	**9.260**	ug/L	0.827	6250	0.012
	Na	23	**1270.702**	ug/L	2.585	6287524	13.607
	Mg	24	**6787.428**	ug/L	3.417	24575762	53.913
	Al	27	**34439.461**	ug/L	4.145	165721655	363.765
	P	31	**721.628**	ug/L	1.261	182630	0.379
	K	39	**4819.979**	ug/L	1.809	25366978	54.275
	Ca	43	**5191.990**	ug/L	1.279	66479	0.145
>	Sc	45		ug/L		455434	455434.061
	Ti	47	**849.718**	ug/L	0.088	532526	1.168
	V	51	**37.437**	ug/L	1.686	280399	0.590
	Cr	52	**22.689**	ug/L	1.887	127184	0.276
	Cr	53		ug/L		54301	-0.096
	Mn	55	**714.816**	ug/L	0.643	6165160	13.532
	Fe	57	**34539.329**	ug/L	0.442	5721929	12.550
	Co	59	**5.089**	ug/L	2.469	35385	0.077
	Ni	60	**18.731**	ug/L	2.947	28729	0.063
	Cu	63		ug/L		55489	0.120
	Cu	65	**15.483**	ug/L	0.671	28367	0.061
	Zn	66	**204.944**	ug/L	1.479	191800	0.508
	Zn	67		ug/L		42111	0.075
	Zn	68		ug/L		157682	0.415
>	Ge	74		ug/L		375833	375832.996
	As	75	**4.608**	ug/L	6.027	4887	0.012
	Se	77		ug/L		2258	-0.006
	Se	82	**0.137**	ug/L	251.528	12	0.000
	Kr	83		ug/L		243	0.000
	Sr	88	**61.915**	ug/L	1.326	689740	2.965
	Y	89		ug/L		1061355	4.565
	Mo	98	**1.751**	ug/L	2.454	5606	0.023
	Ag	107	**0.371**	ug/L	4.229	2061	0.008
	Cd	111	**1.230**	ug/L	7.557	1596	0.007
	Cd	114		ug/L		523	0.002
>	In	115		ug/L		232527	232527.319
	Sn	120	**4.556**	ug/L	2.503	23026	0.098
	Sb	121	**0.163**	ug/L	2.957	916	0.003
	Sb	123		ug/L		732	0.002
	Ba	135		ug/L		1126428	2.854
	Ba	137	**805.822**	ug/L	0.785	1840404	4.663
	Ho	165		ug/L		77858	0.197
>	Lu	175		ug/L		394678	394678.268
	Tl	205	**0.966**	ug/L	1.603	14640	0.034
	Pb	208	**51.365**	ug/L	2.154	1191331	3.013
	Bi	209		ug/L		21208	0.053
	Th	232	**23.005**	ug/L	1.689	588223	1.487
	U	238	**1.570**	ug/L	1.843	44124	0.108

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		131.3			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		108.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		115.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		128.8			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)
Lu 175 Int Std for sa	Lu	175	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 232347004
Sample Date/Time: Wednesday, July 01, 2009 03:41:01
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\232347004.198

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.454**	ug/L	0.887	114869	0.263
	Be	9	**3.740**	ug/L	1.964	2226	0.005
	B	11	**8.149**	ug/L	2.251	5377	0.010
	Na	23	**1683.063**	ug/L	7.410	7951495	18.022
	Mg	24	**6212.044**	ug/L	15.855	21553878	49.343
	Al	27	**35229.264**	ug/L	3.018	162316415	372.107
	P	31	**554.858**	ug/L	1.656	136666	0.291
	K	39	**4142.016**	ug/L	3.233	20963677	46.640
	Ca	43	**7723.538**	ug/L	1.221	94460	0.216
>	Sc	45		ug/L		436061	436061.301
	Ti	47	**1231.748**	ug/L	0.221	738951	1.694
	V	51	**41.933**	ug/L	2.136	299326	0.661
	Cr	52	**23.845**	ug/L	1.591	127910	0.290
	Cr	53		ug/L		52855	-0.094
	Mn	55	**783.277**	ug/L	0.870	6468558	14.828
	Fe	57	**52905.068**	ug/L	1.041	8387257	19.223
	Co	59	**8.373**	ug/L	1.205	55568	0.127
	Ni	60	**24.135**	ug/L	0.350	35399	0.081
	Cu	63		ug/L		52296	0.118
	Cu	65	**15.219**	ug/L	0.928	26703	0.060
	Zn	66	**142.040**	ug/L	0.918	122058	0.352
	Zn	67		ug/L		27018	0.041
	Zn	68		ug/L		93088	0.266
>	Ge	74		ug/L		344431	344431.097
	As	75	**10.004**	ug/L	2.389	9424	0.027
	Se	77		ug/L		2216	-0.006
	Se	82	**0.378**	ug/L	79.324	31	0.000
	Kr	83		ug/L		259	0.000
	Sr	88	**79.107**	ug/L	1.142	786427	3.788
	Y	89		ug/L		1274178	6.140
	Mo	98	**4.725**	ug/L	1.473	13196	0.063
	Ag	107	**0.412**	ug/L	1.036	2037	0.009
	Cd	111	**1.737**	ug/L	4.129	1990	0.009
	Cd	114		ug/L		430	0.002
>	In	115		ug/L		207549	207548.741
	Sn	120	**7.839**	ug/L	1.727	35179	0.168
	Sb	121	**0.276**	ug/L	4.874	1235	0.005
	Sb	123		ug/L		946	0.004
	Ba	135		ug/L		330062	0.899
	Ba	137	**272.152**	ug/L	3.535	578204	1.575
	Ho	165		ug/L		95267	0.259
>	Lu	175		ug/L		367125	367125.484
	Tl	205	**0.992**	ug/L	0.941	13954	0.035
	Pb	208	**25.551**	ug/L	0.937	552214	1.499
	Bi	209		ug/L		8102	0.022
	Th	232	**26.731**	ug/L	0.970	635604	1.728
	U	238	**2.668**	ug/L	1.256	68755	0.183

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		125.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		119.8			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc 45	
Ti 47 Upper, S, EEE	Ti 47	Sample is out of limits (over linear range)
Fe 57 Upper, S, EEE	Fe 57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, July 01, 2009 03:47:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 8.199

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.845**	ug/L	1.563	95677	0.265
	Be	9	**49.432**	ug/L	1.236	24037	0.067
	B	11	**101.676**	ug/L	1.207	46707	0.127
	Na	23	**5467.576**	ug/L	10.828	21136241	58.547
	Mg	24	**5057.901**	ug/L	6.244	14486121	40.176
	Al	27	**4947.203**	ug/L	3.412	18861834	52.255
	P	31	**5291.387**	ug/L	1.615	1009259	2.778
	K	39	**5618.308**	ug/L	6.496	23341831	63.264
	Ca	43	**4996.912**	ug/L	2.296	50640	0.140
>	Sc	45		ug/L		360476	360476.453
	Ti	47	**49.754**	ug/L	1.735	24959	0.068
	V	51	**51.581**	ug/L	3.626	302103	0.813
	Cr	52	**51.829**	ug/L	1.544	228532	0.631
	Cr	53		ug/L		89451	0.033
	Mn	55	**49.389**	ug/L	1.112	338471	0.935
	Fe	57	**5278.576**	ug/L	3.749	695735	1.918
	Co	59	**52.160**	ug/L	2.261	284961	0.790
	Ni	60	**52.052**	ug/L	2.759	62935	0.174
	Cu	63		ug/L		143090	0.395
	Cu	65	**49.036**	ug/L	2.113	70180	0.194
	Zn	66	**50.530**	ug/L	1.361	45935	0.125
	Zn	67		ug/L		17725	0.012
	Zn	68		ug/L		35021	0.093
>	Ge	74		ug/L		360389	360388.957
	As	75	**48.963**	ug/L	2.414	47222	0.130
	Se	77		ug/L		7181	0.008
	Se	82	**49.509**	ug/L	3.230	4320	0.012
	Kr	83		ug/L		94	0.000
	Sr	88	**51.887**	ug/L	1.519	529086	2.485
	Y	89		ug/L		419	0.002
	Mo	98	**47.922**	ug/L	1.459	135560	0.636
	Ag	107	**50.247**	ug/L	2.276	242333	1.139
	Cd	111	**53.072**	ug/L	2.053	60776	0.285
	Cd	114		ug/L		140896	0.662
>	In	115		ug/L		212840	212840.082
	Sn	120	**50.023**	ug/L	1.505	228816	1.074
	Sb	121	**50.380**	ug/L	0.197	190354	0.893
	Sb	123		ug/L		146796	0.689
	Ba	135		ug/L		55425	0.163
	Ba	137	**50.478**	ug/L	0.561	99196	0.292
	Ho	165		ug/L		111	0.000
>	Lu	175		ug/L		339276	339275.662
	Tl	205	**51.080**	ug/L	0.414	616667	1.815
	Pb	208	**52.078**	ug/L	2.067	1038151	3.055
	Bi	209		ug/L		336	0.001
	Th	232	**57.001**	ug/L	0.934	1251161	3.685
	U	238	**57.906**	ug/L	2.555	1352027	3.982

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	99.691				
	Be	9	98.865				
	B	11	101.676				
	Na	23	109.352				
	Mg	24	101.158				
	Al	27	97.964				
	P	31	105.828				
	K	39	112.366				
	Ca	43	99.938				
>	Sc	45		104.0			
	Ti	47	99.508				
	V	51	103.162				
	Cr	52	103.658				
	Cr	53					
	Mn	55	98.777				
	Fe	57	105.572				
	Co	59	104.321				
	Ni	60	104.105				
	Cu	63					
	Cu	65	98.073				
	Zn	66	101.059				
	Zn	67					
	Zn	68					
>	Ge	74		103.8			
	As	75	97.927				
	Se	77					
	Se	82	99.018				
	Kr	83					
	Sr	88	103.774				
	Y	89					
	Mo	98	95.844				
	Ag	107	100.493				
	Cd	111	106.143				
	Cd	114					
>	In	115		105.6			
	Sn	120	100.045				
	Sb	121	100.760				
	Sb	123					
	Ba	135					
	Ba	137	100.956				
	Ho	165					
>	Lu	175		110.7			
	Tl	205	102.159				
	Pb	208	104.157				
	Bi	209					
	Th	232	114.001				
	U	238	115.813				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	K	39	CCV is out of limits (+/- 10%)
QC Std 8	Th	232	CCV is out of limits (+/- 10%)
QC Std 8	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, July 01, 2009 03:53:17
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090630\QC Std 9.200

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.034**	ug/L	15.754	226	0.000
	Be	9	**0.005**	ug/L	147.115	25	0.000
	B	11	**2.987**	ug/L	23.880	2118	0.004
	Na	23	**2.998**	ug/L	69.225	83244	0.032
	Mg	24	**0.610**	ug/L	140.958	15008	0.005
	Al	27	**2.148**	ug/L	104.220	28363	0.023
	P	31	**-2.833**	ug/L	16.720	7453	-0.001
	K	39	**0.658**	ug/L	1308.889	516188	0.007
	Ca	43	**-3.045**	ug/L	14.520	333	-0.000
>	Sc	45		ug/L		362159	362158.595
	Ti	47	**-0.024**	ug/L	134.266	293	-0.000
	V	51	**-0.044**	ug/L	629.279	9017	-0.001
	Cr	52	**0.055**	ug/L	56.909	1325	0.001
	Cr	53		ug/L		72859	-0.014
	Mn	55	**0.078**	ug/L	34.383	2042	0.001
	Fe	57	**2.413**	ug/L	105.106	5131	0.001
	Co	59	**0.007**	ug/L	45.842	256	0.000
	Ni	60	**0.008**	ug/L	179.814	141	0.000
	Cu	63		ug/L		796	0.000
	Cu	65	**0.013**	ug/L	105.658	438	0.000
	Zn	66	**0.007**	ug/L	157.564	799	0.000
	Zn	67		ug/L		12179	-0.004
	Zn	68		ug/L		1587	-0.000
>	Ge	74		ug/L		361931	361931.106
	As	75	**-0.513**	ug/L	78.395	-222	-0.001
	Se	77		ug/L		4390	-0.000
	Se	82	**0.053**	ug/L	278.755	4	0.000
	Kr	83		ug/L		82	-0.000
	Sr	88	**0.011**	ug/L	39.382	487	0.001
	Y	89		ug/L		129	0.000
	Mo	98	**0.017**	ug/L	50.209	233	0.000
	Ag	107	**0.008**	ug/L	10.480	139	0.000
	Cd	111	**-0.010**	ug/L	69.098	42	-0.000
	Cd	114		ug/L		108	0.000
>	In	115		ug/L		213267	213267.226
	Sn	120	**0.022**	ug/L	13.767	356	0.000
	Sb	121	**0.130**	ug/L	20.727	717	0.002
	Sb	123		ug/L		558	0.002
	Ba	135		ug/L		89	0.000
	Ba	137	**0.027**	ug/L	44.273	152	0.000
	Ho	165		ug/L		60	0.000
>	Lu	175		ug/L		331610	331610.078
	Tl	205	**0.157**	ug/L	24.520	2764	0.006
	Pb	208	**0.023**	ug/L	32.176	2183	0.001
	Bi	209		ug/L		108	-0.000
	Th	232	**0.051**	ug/L	40.289	2163	0.003
	U	238	**0.019**	ug/L	20.320	1688	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		104.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		104.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		108.2			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Wednesday, July 01, 2009 15:54:20
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default2\Sample.523
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	4899.8	4899.840	33.170	0.7
	Mg	24.0	51953.1	51953.108	602.635	1.2
	Co	58.9	84497.4	84497.360	361.684	0.4
	Rh	102.9	160063.6	160063.614	1881.354	1.2
	In	114.9	213811.8	213811.830	1629.165	0.8
	Pb	208.0	211367.3	211367.301	2087.287	1.0
⌈>	Ba	137.9	205635.1	205635.064	1915.365	0.9
⌊	Ba++	69.0	4699.6	0.023	0.000	2.0
⌈>	Ce	139.9	256281.4	256281.398	2901.942	1.1
⌊	CeO	155.9	5157.2	0.020	0.001	2.7
	Bkgd	220.0	15.7	15.700	2.361	15.0

Current Optimization File Data

Current Value	Description
0.88	Nebulizer Gas Flow
8.00	Lens Voltage
1450.00	ICP RF Power
-1950.00	Analog Stage Voltage
1350.00	Pulse Stage Voltage
250.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	15	8.3	5664.5
Co	59	15	8.8	87549.5
In	115	15	10.0	209728.3

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	594	2045	0.639
Be	9.0	9.0	2056	2060	0.633
Mg	24.0	24.0	5683	2060	0.638
Mg	25.0	25.0	5925	2050	0.627
Mg	26.0	25.9	6180	2080	0.628
Co	58.9	58.9	14169	2090	0.639
Rh	102.9	102.9	24872	2140	0.653
In	114.9	114.9	27798	2165	0.640
Ce	139.9	139.9	33870	2190	0.625
Pb	206.0	206.0	49948	2275	0.634
Pb	207.0	207.0	50159	2240	0.633
Pb	208.0	208.0	50451	2260	0.684
U	238.1	238.1	57734	2265	0.730

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, July 01, 2009 20:47:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\Blank.243

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		ug/L		26	
>	Sc	45		ug/L		370866	
	Ni	60		ug/L		132	
>	Lu	175		ug/L		471842	
	Tl	205		ug/L		1910	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Simple Linear	
Sc	45	Simple Linear	
Ni	60	Simple Linear	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					
	Ni	60					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, July 01, 2009 20:49:57
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\Standard 1.244

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**10.000**	**ug/L**	8.978	5104	0.014
>	Sc	45		**ug/L**		366145	366145.164
	Ni	60	**10.000**	**ug/L**	10.162	16375	0.045
>	Lu	175		**ug/L**		474191	474190.649
	Tl	205	**10.000**	**ug/L**	11.379	220088	0.462

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					
	Ni	60					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, July 01, 2009 20:52:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\Standard 2.245

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**99.968**	**ug/L**	6.757	49731	0.135
>	Sc	45		**ug/L**		369194	369193.963
	Ni	60	**99.955**	**ug/L**	11.106	157211	0.427
>	Lu	175		**ug/L**		488663	488662.700
	Tl	205	**99.791**	**ug/L**	8.805	1862358	3.816

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					
	Ni	60					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, July 01, 2009 20:54:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 1.246

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.067**	**ug/L**	11.664	26662	0.070
>	Sc	45		**ug/L**		380379	380379.411
	Ni	60	**52.421**	**ug/L**	7.155	85174	0.224
>	Lu	175		**ug/L**		475949	475948.994
	Tl	205	**53.892**	**ug/L**	12.563	976715	2.061

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	104.134				
>	Sc	45		102.6			
	Ni	60	104.842				
>	Lu	175		100.9			
	Tl	205	107.785				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, July 01, 2009 20:56:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 2.247

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.010**	**ug/L**	192.674	32	0.000
>	Sc	45		**ug/L**		388161	388161.032
	Ni	60	**0.002**	**ug/L**	716.575	140	0.000
>	Lu	175		**ug/L**		487994	487994.033
	Tl	205	**0.364**	**ug/L**	17.759	8721	0.014

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		104.7			
	Ni	60					
>	Lu	175		103.4			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, July 01, 2009 20:59:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 3.248

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.477**	**ug/L**	10.447	278	0.001
>	Sc	45		**ug/L**		391004	391003.919
	Ni	60	**2.051**	**ug/L**	6.113	3558	0.009
>	Lu	175		**ug/L**		476196	476196.217
	Tl	205	**1.283**	**ug/L**	9.354	25206	0.049

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	95.387				
>	Sc	45		105.4			
	Ni	60	102.565				
>	Lu	175		100.9			
	Tl	205	128.288				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, July 01, 2009 21:01:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 4.249

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.082**	**ug/L**	21.059	61	0.000
>	Sc	45		**ug/L**		338073	338072.987
	Ni	60	**3.037**	**ug/L**	11.436	4487	0.013
>	Lu	175		**ug/L**		430759	430758.653
	Tl	205	**0.060**	**ug/L**	11.228	2722	0.002

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		91.2			
	Ni	60	112.497				
>	Lu	175		91.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, July 01, 2009 21:03:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 5.250

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**20.045**	**ug/L**	10.488	8772	0.027
>	Sc	45		**ug/L**		324815	324815.158
	Ni	60	**22.627**	**ug/L**	6.966	31403	0.097
>	Lu	175		**ug/L**		426531	426531.020
	Tl	205	**21.308**	**ug/L**	7.978	348277	0.815

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	100.224				
>	Sc	45		87.6			
	Ni	60	99.677				
>	Lu	175		90.4			
	Tl	205	106.539				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 01, 2009 21:06:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 6.251

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.653**	**ug/L**	9.369	25399	0.071
>	Sc	45		**ug/L**		358372	358372.130
	Ni	60	**53.511**	**ug/L**	10.252	81839	0.228
>	Lu	175		**ug/L**		484640	484640.419
	Tl	205	**53.162**	**ug/L**	7.283	986884	2.033

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	105.306				
>	Sc	45		96.6			
	Ni	60	107.021				
>	Lu	175		102.7			
	Tl	205	106.324				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 01, 2009 21:08:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 7.252

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.002**	**ug/L**	1146.766	27	0.000
>	Sc	45		**ug/L**		371725	371725.232
	Ni	60	**0.002**	**ug/L**	349.226	136	0.000
>	Lu	175		**ug/L**		476347	476347.154
	Tl	205	**0.374**	**ug/L**	9.916	8715	0.014

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		100.2			
	Ni	60					
>	Lu	175		101.0			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870017
Sample Date/Time: Wednesday, July 01, 2009 21:10:42
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\1201870017.253

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.013**	**ug/L**	45.405	21	-0.000
>	Sc	45		**ug/L**		396981	396981.005
	Ni	60	**0.133**	**ug/L**	6.151	367	0.001
>	Lu	175		**ug/L**		506557	506556.890
	Tl	205	**0.109**	**ug/L**	13.995	4161	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		107.0			
	Ni	60					
>	Lu	175		107.4			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870018
Sample Date/Time: Wednesday, July 01, 2009 21:13:01
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 880691|40|baj
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\1201870018.254

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**25.571**	**ug/L**	8.416	12944	0.035
>	Sc	45		**ug/L**		375143	375142.649
	Ni	60	**28.982**	**ug/L**	10.672	46418	0.124
>	Lu	175		**ug/L**		491456	491456.242
	Tl	205	**61.928**	**ug/L**	9.808	1162525	2.368

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		101.2			
	Ni	60					
>	Lu	175		104.2			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232347001
Sample Date/Time: Wednesday, July 01, 2009 21:15:20
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\232347001.255

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.751**	**ug/L**	10.228	2391	0.005
>	Sc	45		**ug/L**		467544	467544.050
	Ni	60	**34.578**	**ug/L**	5.367	69165	0.148
>	Lu	175		**ug/L**		525036	525036.292
	Tl	205	**1.948**	**ug/L**	5.095	41216	0.074

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		126.1			
	Ni	60					
>	Lu	175		111.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1201870019
Sample Date/Time: Wednesday, July 01, 2009 21:17:40
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\1201870019.256

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**4.428**	**ug/L**	3.591	2964	0.006
>	Sc	45		**ug/L**		490486	490486.432
	Ni	60	**26.907**	**ug/L**	10.953	56323	0.115
>	Lu	175		**ug/L**		522185	522185.376
	Tl	205	**1.393**	**ug/L**	9.790	29873	0.053

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		132.3			
	Ni	60					
>	Lu	175		110.7			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1201870020
Sample Date/Time: Wednesday, July 01, 2009 21:20:00
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\1201870020.257

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**23.466**	**ug/L**	10.287	15373	0.032
>	Sc	45		**ug/L**		486048	486048.279
	Ni	60	**39.607**	**ug/L**	5.455	82278	0.169
>	Lu	175		**ug/L**		527414	527414.095
	Tl	205	**51.483**	**ug/L**	10.461	1037405	1.969

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		131.1			
	Ni	60					
>	Lu	175		111.8			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for san	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1201870022
Sample Date/Time: Wednesday, July 01, 2009 21:22:21
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\1201870022.258

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**23.642**	**ug/L**	10.430	15253	0.032
>	Sc	45		**ug/L**		477986	477986.086
	Ni	60	**39.909**	**ug/L**	6.316	81583	0.170
>	Lu	175		**ug/L**		523402	523402.388
	Tl	205	**51.532**	**ug/L**	10.620	1028692	1.970

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		128.9			
	Ni	60					
>	Lu	175		110.9			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1201870021
Sample Date/Time: Wednesday, July 01, 2009 21:24:43
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 880691|10|baj
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\1201870021.259

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.898**	**ug/L**	7.384	508	0.001
>	Sc	45		**ug/L**		396149	396148.582
	Ni	60	**8.477**	**ug/L**	6.433	14465	0.036
>	Lu	175		**ug/L**		491222	491221.757
	Tl	205	**0.736**	**ug/L**	7.960	15785	0.028

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovr	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		106.8			
	Ni	60					
>	Lu	175		104.1			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, July 01, 2009 21:27:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 8.260

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.078**	**ug/L**	12.149	26096	0.070
>	Sc	45		**ug/L**		372488	372487.567
	Ni	60	**53.921**	**ug/L**	6.102	85788	0.230
>	Lu	175		**ug/L**		476580	476580.064
	Tl	205	**55.088**	**ug/L**	11.236	1001716	2.106

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	104.155				
>	Sc	45		100.4			
	Ni	60	107.841				
>	Lu	175		101.0			
	Tl	205	110.177				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Tl	205	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, July 01, 2009 21:29:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 9.261

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.013**	**ug/L**	83.622	20	-0.000
>	Sc	45		**ug/L**		383315	383315.078
	Ni	60	**0.009**	**ug/L**	62.782	150	0.000
>	Lu	175		**ug/L**		485958	485958.156
	Tl	205	**0.269**	**ug/L**	14.285	6940	0.010

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		103.4			
	Ni	60					
>	Lu	175		103.0			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232347002
Sample Date/Time: Wednesday, July 01, 2009 21:31:44
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\232347002.262

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**7.010**	**ug/L**	9.247	4627	0.009
>	Sc	45		**ug/L**		486622	486621.901
	Ni	60	**75.986**	**ug/L**	11.848	157324	0.324
>	Lu	175		**ug/L**		501009	501009.393
	Tl	205	**2.250**	**ug/L**	15.143	44385	0.086

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		131.2			
	Ni	60					
>	Lu	175		106.2			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 232347003
Sample Date/Time: Wednesday, July 01, 2009 21:34:03
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\232347003.263

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.651**	**ug/L**	11.972	2307	0.005
>	Sc	45		**ug/L**		463405	463405.329
	Ni	60	**19.109**	**ug/L**	10.514	37860	0.082
>	Lu	175		**ug/L**		536265	536265.259
	Tl	205	**1.065**	**ug/L**	9.491	23976	0.041

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		125.0			
	Ni	60					
>	Lu	175		113.7			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sar	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 232347004
Sample Date/Time: Wednesday, July 01, 2009 21:36:23
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\232347004.264

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.572**	**ug/L**	10.025	2334	0.005
>	Sc	45		**ug/L**		479448	479448.459
	Ni	60	**22.723**	**ug/L**	8.011	46500	0.097
>	Lu	175		**ug/L**		536649	536648.784
	Tl	205	**0.988**	**ug/L**	13.383	22309	0.038

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		129.3			
	Ni	60					
>	Lu	175		113.7			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 01, 2009 21:38:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 6.265

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.424**	**ug/L**	7.253	25667	0.068
>	Sc	45		**ug/L**		376967	376966.983
	Ni	60	**52.684**	**ug/L**	10.271	84754	0.225
>	Lu	175		**ug/L**		485091	485090.858
	Tl	205	**53.465**	**ug/L**	7.634	991042	2.044

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	100.848				
>	Sc	45		101.6			
	Ni	60	105.368				
>	Lu	175		102.8			
	Tl	205	106.931				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 01, 2009 21:41:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be ni and tl.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 7.266

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.008**	**ug/L**	95.288	23	-0.000
>	Sc	45		**ug/L**		382787	382787.162
	Ni	60	**0.004**	**ug/L**	248.357	141	0.000
>	Lu	175		**ug/L**		492183	492183.452
	Tl	205	**0.338**	**ug/L**	13.248	8325	0.013

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		103.2			
	Ni	60					
>	Lu	175		104.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Thursday, July 02, 2009 06:36:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\Blank.353

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		ug/L		29	
>	Sc	45		ug/L		320599	
	Ni	60		ug/L		151	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Thursday, July 02, 2009 06:38:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\Standard 1.354

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**10.000**	**ug/L**	2.432	4990	0.015
>	Sc	45		**ug/L**		329180	329180.457
	Ni	60	**10.000**	**ug/L**	2.007	14435	0.043

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Thursday, July 02, 2009 06:39:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\Standard 2.355

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**99.987**	**ug/L**	0.150	47409	0.149
>	Sc	45		**ug/L**		318591	318590.514
	Ni	60	**100.002**	**ug/L**	1.375	138712	0.435

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Thursday, July 02, 2009 06:41:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 1.356

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.561**	**ug/L**	1.753	24142	0.075
>	Sc	45		**ug/L**		320648	320647.502
	Ni	60	**51.174**	**ug/L**	2.622	71507	0.223

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	101.122				
>	Sc	45		100.0			
	Ni	60	102.348				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Thursday, July 02, 2009 06:43:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 2.357

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.024**	**ug/L**	66.743	40	0.000
>	Sc	45		**ug/L**		311439	311439.309
	Ni	60	**-0.011**	**ug/L**	67.649	131	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9					
|>	Sc	45		97.1			
⌊	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Thursday, July 02, 2009 06:44:57
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 3.358

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.550**	**ug/L**	5.124	287	0.001
>	Sc	45		**ug/L**		315040	315040.191
	Ni	60	**2.028**	**ug/L**	1.917	2926	0.009

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	110.065				
>	Sc	45		98.3			
	Ni	60	101.384				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Thursday, July 02, 2009 06:46:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 4.359

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.043**	**ug/L**	71.901	45	0.000
>	Sc	45		**ug/L**		291004	291003.975
	Ni	60	**2.904**	**ug/L**	2.109	3812	0.013

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		90.8			
	Ni	60	107.547				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Thursday, July 02, 2009 06:48:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 5.360

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**19.210**	**ug/L**	4.144	8122	0.029
>	Sc	45		**ug/L**		283521	283521.022
	Ni	60	**21.988**	**ug/L**	4.670	27228	0.096

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9	96.048				
>	Sc	45		88.4			
	Ni	60	96.861				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 02, 2009 06:50:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 6.361

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.889**	**ug/L**	0.139	23330	0.079
>	Sc	45		**ug/L**		296233	296233.148
	Ni	60	**53.564**	**ug/L**	0.438	69145	0.233

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9	105.778				
|>	Sc	45		92.4			
⌊	Ni	60	107.128				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 02, 2009 06:51:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 7.362

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Be	9	**0.020**	**ug/L**	73.543	36	0.000
| >	Sc	45		**ug/L**		295696	295696.196
⌊	Ni	60	**-0.002**	**ug/L**	520.010	137	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		92.2			
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870017
Sample Date/Time: Thursday, July 02, 2009 06:53:29
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 880691|2|baj
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\1201870017.363

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.009**	**ug/L**	101.757	24	-0.000
>	Sc	45		**ug/L**		304896	304896.395
	Ni	60	**0.123**	**ug/L**	13.224	307	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9					
|>	Sc	45		95.1			
⌊	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870018
Sample Date/Time: Thursday, July 02, 2009 06:55:11
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 880691|40|baj
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\1201870018.364

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**25.230**	**ug/L**	1.918	11612	0.038
>	Sc	45		**ug/L**		308697	308697.098
	Ni	60	**28.567**	**ug/L**	1.730	38492	0.124

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		96.3			
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 02, 2009 07:03:57
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 6.369

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.127**	**ug/L**	0.778	23492	0.078
>	Sc	45		**ug/L**		302645	302644.511
	Ni	60	**54.832**	**ug/L**	0.725	72311	0.238

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	104.253				
>	Sc	45		94.4			
	Ni	60	109.663				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 02, 2009 07:05:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 7.370

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.027**	**ug/L**	46.845	40	0.000
>	Sc	45		**ug/L**		300954	300954.414
	Ni	60	**0.012**	**ug/L**	44.332	157	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9					
|>	Sc	45		93.9			
⌊	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232347001
Sample Date/Time: Thursday, July 02, 2009 07:10:09
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|10|baj
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\232347001.371

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.923**	**ug/L**	3.200	462	0.001
>	Sc	45		**ug/L**		315406	315406.196
	Ni	60	**9.032**	**ug/L**	2.117	12536	0.039

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		98.4			
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870019
Sample Date/Time: Thursday, July 02, 2009 07:11:53
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 880691|10|baj
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\1201870019.372

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**1.233**	**ug/L**	3.072	593	0.002
>	Sc	45		**ug/L**		308276	308276.137
	Ni	60	**7.499**	**ug/L**	0.827	10199	0.033

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		96.2			
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870020
Sample Date/Time: Thursday, July 02, 2009 07:13:37
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 880691|10|baj
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\1201870020.373

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**6.321**	**ug/L**	2.045	2930	0.009
>	Sc	45		**ug/L**		308658	308657.734
	Ni	60	**10.950**	**ug/L**	0.893	14845	0.048

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		96.3			
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870022
Sample Date/Time: Thursday, July 02, 2009 07:15:22
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 880691|10|baj
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\1201870022.374

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**6.121**	**ug/L**	1.144	2848	0.009
>	Sc	45		**ug/L**		309724	309723.752
	Ni	60	**10.398**	**ug/L**	1.087	14151	0.045

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[	Be	9					
|>	Sc	45		96.6			
[	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201870021
Sample Date/Time: Thursday, July 02, 2009 07:17:07
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 880691|50|baj
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\1201870021.375

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.173**	**ug/L**	20.854	101	0.000
>	Sc	45		**ug/L**		289759	289758.561
	Ni	60	**1.773**	**ug/L**	3.277	2370	0.008

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		90.4			
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, July 02, 2009 07:18:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 8.376

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.194**	**ug/L**	2.248	22762	0.078
>	Sc	45		**ug/L**		292958	292958.311
	Ni	60	**54.063**	**ug/L**	1.348	69003	0.235

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9	104.388				
>	Sc	45		91.4			
	Ni	60	108.125				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, July 02, 2009 07:20:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 9.377

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.003**	**ug/L**	86.678	28	0.000
>	Sc	45		**ug/L**		294185	294185.495
	Ni	60	**0.005**	**ug/L**	259.276	145	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		91.8			
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232347002
Sample Date/Time: Thursday, July 02, 2009 07:22:19
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|10|baj
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\232347002.378

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**1.869**	**ug/L**	7.620	845	0.003
>	Sc	45		**ug/L**		295224	295224.074
	Ni	60	**20.444**	**ug/L**	11.927	26269	0.089

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9					
|>	Sc	45		92.1			
⌊	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232347003
Sample Date/Time: Thursday, July 02, 2009 07:24:02
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|10|baj
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\232347003.379

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.979**	**ug/L**	4.060	466	0.001
>	Sc	45		**ug/L**		300742	300741.964
	Ni	60	**4.916**	**ug/L**	0.876	6570	0.021

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Be	9					
|>	Sc	45		93.8			
⌊	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232347004
Sample Date/Time: Thursday, July 02, 2009 07:25:46
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880691|10|baj
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\232347004.380

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.938**	**ug/L**	3.318	451	0.001
>	Sc	45		**ug/L**		303663	303663.153
	Ni	60	**5.763**	**ug/L**	1.225	7753	0.025

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		94.7			
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, July 02, 2009 07:27:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 6.381

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**51.680**	**ug/L**	1.509	22620	0.077
>	Sc	45		**ug/L**		293950	293950.281
	Ni	60	**53.799**	**ug/L**	0.108	68913	0.234

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Be	9	103.361				
|>	Sc	45		91.7			
⌊	Ni	60	107.598				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, July 02, 2009 07:29:11
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\be and ni.mth
Dataset File: c:\elandata\Dataset\090701\QC Std 7.382

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.014**	**ug/L**	44.959	32	0.000
>	Sc	45		**ug/L**		286143	286143.146
	Ni	60	**0.001**	**ug/L**	220.825	136	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45		89.3			
	Ni	60					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL
Method Description: 7471A, ILM04 ANALYST JXL1
Element: Hg

Date: 07/06/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 070609S1.SIF Results Data Set Name: 070609S1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/06/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0037	0.0037	09:30:25	No
2			0.0038	0.0038	09:31:00	No
Mean:			0.0037			
SD :			0.0001			
%RSD:			2.4216			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/06/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0041	0.0079	09:32:24	No
2			0.0038	0.0075	09:32:59	No
Mean:			0.0039			
SD :			0.0002			
%RSD:			6.0843			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.01972
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/06/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0086	0.0124	09:34:22	No
2			0.0084	0.0121	09:34:56	No
Mean:			0.0085			
SD :			0.0002			
%RSD:			1.9253			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99736 Slope: 0.01689
Intercept : 0.00021

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/06/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0293	0.0331	09:36:21	No
2			0.0287	0.0325	09:36:55	No
Mean:			0.0290			
SD :			0.0004			
%RSD:			1.4421			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99886 Slope: 0.01422
Intercept : 0.00077

==========

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/06/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0698	0.0735	09:38:20	No
2			0.0693	0.0731	09:38:54	No
Mean:			0.0695			
SD :			0.0003			
%RSD:			0.4809			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99973 Slope: 0.01376
Intercept : 0.00102

==========

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/06/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1307	0.1345	09:40:20	No
2			0.1335	0.1372	09:40:55	No
Mean:			0.1321			
SD :			0.0020			
%RSD:			1.4816			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99964 Slope: 0.01316
Intercept : 0.00169

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0037	---	----	----	----
S0.2	0.0039	0.200	0.171	0.0002	6.1
S0.5	0.0085	0.500	0.518	0.0002	1.9
S2.0	0.0290	2.000	2.077	0.0004	1.4
S5.0	0.0695	5.000	5.155	0.0003	0.5
S10	0.1321	10.000	9.907	0.0020	1.5

Correlation Coefficient: 0.99964 Slope: 0.01316 Intercept: 0.0017

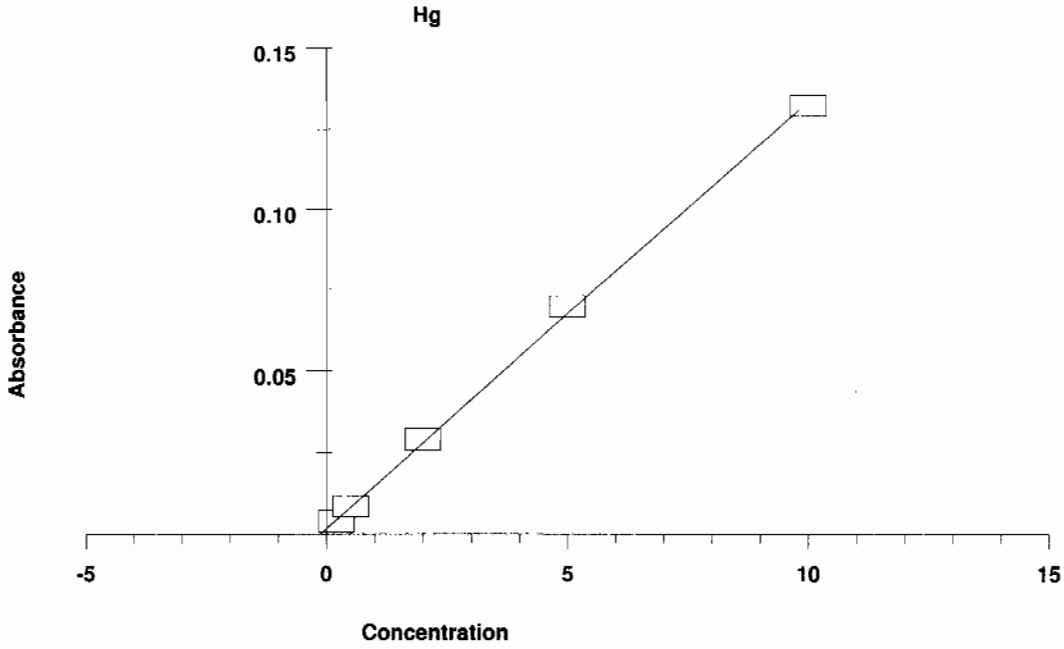

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/06/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.023	5.023	0.0678	0.0715	09:42:23	No
2	5.024	5.024	0.0678	0.0716	09:42:59	No
Mean:	5.023	5.023	0.0678			
SD :	0.0010	0.0010	0.0000			
%RSD:						

QC value within specified limits.

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/06/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.091	-0.091	0.0005	0.0042	09:44:21	No
2	-0.108	-0.108	0.0003	0.0040	09:44:56	No
Mean:	-0.100	-0.100	0.0004			
SD :	0.0119	0.0119	0.0002			
%RSD:	12.0	12.0	41.5348			

QC value within specified limits.

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/06/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.140	0.140	0.0035	0.0073	09:46:18	No
2	0.142	0.142	0.0036	0.0073	09:46:53	No
Mean:	0.141	0.141	0.0035			
SD :	0.0010	0.0010	0.0000			
%RSD:	0.7	0.7	0.3579			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/06/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.073	5.073	0.0685	0.0722	09:48:18	No
2	4.968	4.968	0.0671	0.0708	09:48:53	No
Mean:	5.020	5.020	0.0678			
SD :	0.0739	0.0739	0.0010			
%RSD:	1.5	1.5	1.4356			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/06/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.079	-0.079	0.0006	0.0044	09:50:21	No
2	-0.077	-0.077	0.0007	0.0044	09:50:55	No
Mean:	-0.078	-0.078	0.0007			
SD :	0.0016	0.0016	0.0000			
%RSD:	2.1	2.1	3.2873			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/06/2009
Sample ID: 1201870335|i||880850|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.056	-0.056	0.0009	0.0047	09:52:21	No
2	-0.039	-0.039	0.0012	0.0049	09:52:55	No
Mean:	-0.048	-0.048	0.0011			
SD :	0.0126	0.0126	0.0002			
%RSD:	26.5	26.5	15.5846			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/06/2009
Sample ID: 1201870336|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.345	3.345	0.0457	0.0495	09:54:19	No
2	3.344	3.344	0.0457	0.0494	09:54:54	No
Mean:	3.344	3.344	0.0457			
SD :	0.0008	0.0008	0.0000			
%RSD:						

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/06/2009
Sample ID: 232347001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.876	0.876	0.0132	0.0170	09:56:20	No
2	0.855	0.855	0.0129	0.0167	09:56:54	No
Mean:	0.866	0.866	0.0131			
SD :	0.0151	0.0151	0.0002			
%RSD:	1.7	1.7	1.5180			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/06/2009
Sample ID: 1201870337|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.368	0.368	0.0065	0.0103	09:58:20	No
2	0.384	0.384	0.0067	0.0105	09:58:55	No
Mean:	0.376	0.376	0.0066			
SD :	0.0114	0.0114	0.0002			
%RSD:	3.0	3.0	2.2668			

Element: Hg Seq. No.: 16 AS Loc.: 16 Date: 07/06/2009
Sample ID: 1201870338|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.286	2.286	0.0318	0.0355	10:00:23	No
2	2.252	2.252	0.0313	0.0351	10:00:58	No
Mean:	2.269	2.269	0.0316			
SD :	0.0241	0.0241	0.0003			
%RSD:	1.1	1.1	1.0056			

Element: Hg Seq. No.: 17 AS Loc.: 17 Date: 07/06/2009
Sample ID: 1201870340|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.222	2.222	0.0309	0.0347	10:02:22	No
2	2.230	2.230	0.0310	0.0348	10:02:57	No
Mean:	2.226	2.226	0.0310			
SD :	0.0057	0.0057	0.0001			
%RSD:	0.3	0.3	0.2409			

Element: Hg Seq. No.: 18 AS Loc.: 18 Date: 07/06/2009
Sample ID: 1201870339|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.074	0.074	0.0027	0.0064	10:04:19	No
2	0.083	0.083	0.0028	0.0065	10:04:54	No
Mean:	0.078	0.078	0.0027			
SD :	0.0064	0.0064	0.0001			
%RSD:	8.1	8.1	3.0849			

Element: Hg Seq. No.: 19 AS Loc.: 19 Date: 07/06/2009
Sample ID: 232347002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.076	0.076	0.0027	0.0064	10:06:16	No
2	0.081	0.081	0.0028	0.0065	10:06:51	No
Mean:	0.078	0.078	0.0027			
SD :	0.0038	0.0038	0.0000			
%RSD:	4.8	4.8	1.8274			

Element: Hg Seq. No.: 20 AS Loc.: 20 Date: 07/06/2009
Sample ID: 232347003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.341	0.341	0.0062	0.0099	10:08:12	No
2	0.330	0.330	0.0060	0.0098	10:08:47	No
Mean:	0.335	0.335	0.0061			
SD :	0.0077	0.0077	0.0001			

%RSD: 2.3 2.3 1.6705

==========

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/06/2009
Sample ID: 232347004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.056	0.056	0.0024	0.0062	10:10:09	No
2	0.053	0.053	0.0024	0.0061	10:10:44	No
Mean:	0.054	0.054	0.0024			
SD :	0.0026	0.0026	0.0000			
%RSD:	4.7	4.7	1.3974			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/06/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.922	4.922	0.0665	0.0702	10:12:09	No
2	4.844	4.844	0.0655	0.0692	10:12:44	No
Mean:	4.883	4.883	0.0660			
SD :	0.0552	0.0552	0.0007			
%RSD:	1.1	1.1	1.1013			

QC value within specified limits.

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Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/06/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.097	-0.097	0.0004	0.0042	10:14:12	No
2	-0.111	-0.111	0.0002	0.0040	10:14:46	No
Mean:	-0.104	-0.104	0.0003			
SD :	0.0096	0.0096	0.0001			
%RSD:	9.2	9.2	39.8615			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/06/2009
Sample ID: 1201873018|i||881907|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.093	-0.093	0.0005	0.0042	10:16:11	No
2	-0.090	-0.090	0.0005	0.0043	10:16:47	No
Mean:	-0.091	-0.091	0.0005			
SD :	0.0019	0.0019	0.0000			
%RSD:	2.1	2.1	5.1394			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/06/2009
Sample ID: 1201873019|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.031	2.031	0.0284	0.0322	10:18:10	No
2	1.985	1.985	0.0278	0.0316	10:18:45	No
Mean:	2.008	2.008	0.0281			
SD :	0.0323	0.0323	0.0004			
%RSD:	1.6	1.6	1.5102			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/06/2009
Sample ID: 232668013|i|||

Miscellaneous

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 880690

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870018	UI647733-01	.521	g
MS	1201870020	UI042709-A	.5	mL
MS	1201870020	UI042709-B	.5	mL
MSD	1201870022	UI042709-A	.5	mL
MSD	1201870022	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870017		SW846 3050B	29-JUN-2009 15:46	0.522 g	50 mL	95.78544	SOIL
LCS	1201870018		SW846 3050B	29-JUN-2009 15:46	0.521 g	50 mL	95.96929	SOIL
SAMPLE	232347001		SW846 3050B	29-JUN-2009 15:46	0.518 g	50 mL	96.5251	SOIL
DUP	1201870019	232347001	SW846 3050B	29-JUN-2009 15:46	0.513 g	50 mL	97.46589	SOIL
MS	1201870020	232347001	SW846 3050B	29-JUN-2009 15:46	0.511 g	50 mL	97.84736	SOIL
MSD	1201870022	232347001	SW846 3050B	29-JUN-2009 15:46	0.509 g	50 mL	98.23183	SOIL
SDILT	1201870021	232347001	SW846 3050B	29-JUN-2009 15:46	0.518 g	50 mL	96.5251	SOIL
SAMPLE	232347002		SW846 3050B	29-JUN-2009 15:46	0.512 g	50 mL	97.65625	SOIL
SAMPLE	232347003		SW846 3050B	29-JUN-2009 15:46	0.5 g	50 mL	100	SOIL
SAMPLE	232347004		SW846 3050B	29-JUN-2009 15:46	0.504 g	50 mL	99.20635	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments sample#232347001 is a brown, fine soil.

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 880673

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201869987	UI652380	.513	g
MS	1201869989	UI090622-01	.25	mL
MS	1201869989	UI090622-06	.25	mL
MSD	1201869991	UI090622-01	.25	mL
MSD	1201869991	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201869986		SW846 3050B	29-JUN-2009 15:55	0.501 g	50 mL	99.8004	SOIL
LCS	1201869987		SW846 3050B	29-JUN-2009 15:55	0.513 g	50 mL	97.46589	SOIL
SAMPLE	232347001		SW846 3050B	29-JUN-2009 15:55	0.519 g	50 mL	96.33911	SOIL
DUP	1201869988	232347001	SW846 3050B	29-JUN-2009 15:55	0.507 g	50 mL	98.61933	SOIL
MS	1201869989	232347001	SW846 3050B	29-JUN-2009 15:55	0.506 g	50 mL	98.81423	SOIL
MSD	1201869991	232347001	SW846 3050B	29-JUN-2009 15:55	0.511 g	50 mL	97.84736	SOIL
SDILT	1201869990	232347001	SW846 3050B	29-JUN-2009 15:55	0.519 g	50 mL	96.33911	SOIL
SAMPLE	232347002		SW846 3050B	29-JUN-2009 15:55	0.504 g	50 mL	99.20635	SOIL
SAMPLE	232347003		SW846 3050B	29-JUN-2009 15:55	0.516 g	50 mL	96.89922	SOIL
SAMPLE	232347004		SW846 3050B	29-JUN-2009 15:55	0.501 g	50 mL	99.8004	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments sample#232347001 is a brown, medium soil.

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 880849

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870336	UI031809A	.201	g
MS	1201870338	WHG090702-14	.3	mL
MSD	1201870340	WHG090702-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870335		SW846 7471A Prep	02-JUL-2009 12:20	0.587 g	30 mL	51.10733	SOIL
LCS	1201870336		SW846 7471A Prep	02-JUL-2009 12:20	0.201 g	30 mL	149.25373	SOIL
SAMPLE	232347001		SW846 7471A Prep	02-JUL-2009 12:20	0.592 g	30 mL	50.67568	SOIL
DUP	1201870337	232347001	SW846 7471A Prep	02-JUL-2009 12:20	0.5 g	30 mL	60	SOIL
MS	1201870338	232347001	SW846 7471A Prep	02-JUL-2009 12:20	0.576 g	30 mL	52.08333	SOIL
MSD	1201870340	232347001	SW846 7471A Prep	02-JUL-2009 12:20	0.523 g	30 mL	57.36138	SOIL
SDILT	1201870339	232347001	SW846 7471A Prep	02-JUL-2009 12:20	0.592 g	30 mL	50.67568	SOIL
SAMPLE	232347002		SW846 7471A Prep	02-JUL-2009 12:20	0.538 g	30 mL	55.76208	SOIL
SAMPLE	232347003		SW846 7471A Prep	02-JUL-2009 12:20	0.518 g	30 mL	57.91506	SOIL
SAMPLE	232347004		SW846 7471A Prep	02-JUL-2009 12:20	0.515 g	30 mL	58.25243	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution
1144356-C	2 mL	Hg reducing agent
WHG090702-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090702-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG090702-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090702-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090702-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090702-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

Comments Sample 232347001 is a rocky light brown soil.
Digestion Start Date: 02-JUL-09 12:20
Digestion End Date: 02-JUL-09 12:50

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
30-JUN-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
880674	See Below		

Potentially affected work order(s)(SDG): 232347(09-2458)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201869989MS 2. Failed RPD for DUP: QC 1201869988DUP 3. Failed Recovery for MSD/PSD: QC 1201869991MSD	1. The matrix spike recovery failed outside of the control limits for calcium and manganese due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The sample and sample duplicate % RPD failed outside the control limits for manganese due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike duplicate recovery failed outside of the control limits for calcium,magnesium and manganese due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Helen Camello 02-JUL-09

Data Validator/Group Leader:

Jerry Wigfall 02-JUL-09

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
03-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3050B/6020	Solid	LANL
Batch ID:	**Sample Numbers:**		
880691	See Below		

Potentially affected work order(s)(SDG): 232347(09-2458)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201870020MS 2. Failed Recovery for MSD/PSD: QC 1201870022MSD	The matrix spike and matrix spike duplicate recovery failed outside of the control limits for Ni due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Elizabeth Janssen 04-JUL-09

Data Validator/Group Leader:

Paul Boyd 05-JUL-09

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
06-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
MERCURY	SW846 7471A	Solid	LANL
Batch ID:	**Sample Numbers:**		
880850	See Below		

Potentially affected work order(s)(SDG): 232347(09-2458)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201870338MS 2. Failed RPD for DUP: QC 1201870337DUP 3. Failed Recovery for MSD/PSD: QC 1201870340MSD	1. The matrix spike recovery failed outside of the control limits for Hg due to possible matrix interferences and/or non-homogeneity. Sample is a rocky, light brown soil. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The sample and sample duplicate % RPD failed outside the control limits for Hg due to possible sample non-homogeneity and/or matrix interference. Sample is a rocky, light brown soil. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike dup recovery failed outside of the control limits for Hg due to possible matrix interferences and/or non-homogeneity. Sample is a rocky, light brown soil. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Jason Loy 06-JUL-09

Data Validator/Group Leader:

Eric Lawson 07-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI080818-09 **Opened:** 18-AUG-08 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 18-AUG-08 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 18-AUG-09 **Lot Number :** 1010290
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI080818-10 **Opened:** 18-AUG-08 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 18-AUG-08 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 18-AUG-09 **Lot Number :** 1010289
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L

Analyte	Concentration	Analyte	Concentration
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L

Analyte	Concentration	Analyte	Concentration
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: O2SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-11 **Opened:** 10-JUN-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 10-JUN-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 10-JUN-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Standard Logbook

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L

Analyte	Concentration	Analyte	Concentration
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI647733-01 **Opened:** 02-APR-07 **Amount :** 80 g
Name: ICPMSSOILSRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis
Supplier: ERA
Description: ICPMS Soil LCS (Reference)
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	8270 mg/kg	Antimony	55.8 mg/kg
Arsenic	255 mg/kg	Barium	469 mg/kg
Beryllium	86.4 mg/kg	Boron	138 mg/kg
Cadmium	119 mg/kg	Calcium	3760 mg/kg
Chromium	71.2 mg/kg	Cobalt	79.6 mg/kg
Copper	96.2 mg/kg	Iron	13200 mg/kg
Lead	169 mg/kg	Lithium	8.01 mg/kg
Magnesium	2990 mg/kg	Manganese	364 mg/kg
Mercury	4.18 mg/kg	Molybdenum	79.6 mg/kg

Analyte	Concentration	Analyte	Concentration
Nickel	101 mg/kg	Phosphorous	752 mg/kg
Potassium	2420 mg/kg	Selenium	171 mg/kg
Silver	116 mg/kg	Sodium	575 mg/kg
Strontium	144 mg/kg	Thallium	203 mg/kg
Thorium	17.2 mg/kg	Titanium	255 mg/kg
Uranium	2.12 mg/kg	Uranium-235	.0153 mg/kg
Uranium-238	2.105 mg/kg	Vanadium	134 mg/kg
Zinc	202 mg/kg	Zirconium	6.83 mg/kg

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L

Analyte	Concentration	Analyte	Concentration
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090702-01 **Opened:** 02-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 02-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 03-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090702-02 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 02-JUL-09
Type: Intermediate **Expires:** 03-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090702-07 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090702-08 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090702-09 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090702-10 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090702-11 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090702-12 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 02-JUL-09
Type: Working **Expires:** 13-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090702-14 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WMS090630-04 **Opened:** 30-JUN-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl-1143705
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Serial ID: WMS090630-04A **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090630-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090630-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090630-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090630-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090630-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Serial ID: WMS090630-05 **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS090630-06
Name: ICPMS CRDL
Type: Working
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Opened: 30-JUN-09
Received: 30-JUN-09
Expires: 01-JUL-09

Solvent : 2%HNO3/1%HCl - 1143705

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI080818-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI080818-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI080818-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI080818-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI080818-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI080818-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI080818-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI080818-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI080818-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI080818-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI080818-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI080818-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI080818-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI080818-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS090630-07 **Opened:** 30-JUN-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090630-08 **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090630-70 **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS LINEAR RANGE ST **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: WMS090701-04 **Opened:** 01-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 01-JUL-09 **Solvent :** 2%HNO3/1%HCl-1143705
Type: Working **Expires:** 02-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090701-04A **Opened:** 01-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 01-JUL-09
Type: Working **Expires:** 02-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090701-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090701-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090701-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090701-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090701-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090701-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090701-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090701-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090701-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090701-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090701-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090701-05 **Opened:** 01-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 01-JUL-09
Type: Working **Expires:** 02-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090701-06 **Opened:** 01-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 01-JUL-09
Type: Working **Expires:** 02-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090701-07 **Opened:** 01-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 01-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 02-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090701-08 **Opened:** 01-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 01-JUL-09
Type: Working **Expires:** 02-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Standard Logbook

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1143705 **Opened:** 29-JUN-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 06-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1143746 **Opened:** 29-JUN-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JUN-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 05-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2458

Method/Analysis Information

Product: pH

Analytical Batch: 880644 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201869922	232367001(CAMO-09-6005) Sample Duplicate (DUP)
1201869923	232347004(CAMO-09-10467) Sample Duplicate (DUP)
1201869924	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHecT LogR pH/ISE.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232347004 (CAMO-09-10467) and 232367001 (CAMO-09-6005).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 1201869922 (CAMO-09-6005), 1201869923 (CAMO-09-10467), 232347001 (CAMO-09-10462), 232347002 (CAMO-09-10460), 232347003 (CAMO-09-10461) and 232347004 (CAMO-09-10467).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881032	**Method:**	SW846 9012A
Prep Batch :	881030	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201870869	Method Blank (MB)
1201870870	232357001(CAMO-09-10480) Sample Duplicate (DUP)
1201870871	232357002(CAMO-09-10479) Sample Duplicate (DUP)
1201870872	232357001(CAMO-09-10480) Matrix Spike (MS)
1201870873	232357002(CAMO-09-10479) Matrix Spike (MS)
1201870874	232357001(CAMO-09-10480) Matrix Spike Duplicate (MSD)
1201870875	232357002(CAMO-09-10479) Matrix Spike Duplicate (MSD)
1201870876	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232357001 (CAMO-09-10480) and 232357002 (CAMO-09-10479).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201870870 (CAMO-09-10480) and 1201870871 (CAMO-09-10479).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Negative Bias
No Chlorinated Cyanide results exceed the Total Cyanide results by more than three times the PQL

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1201870876 (LCS).

Sample Re-analysis
The following samples were re-analyzed due to CCB failure: 1201870871 (CAMO-09-10479), 1201870873 (CAMO-09-10479) and 1201870875 (CAMO-09-10479).

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	880627	**Method:**	EPA 300.0
Prep Batch :	880626	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201869897	Method Blank (MB)
1201869898	232347001(CAMO-09-10462) Sample Duplicate (DUP)
1201869899	232347001(CAMO-09-10462) Matrix Spike (MS)
1201869900	232347001(CAMO-09-10462) Matrix Spike Duplicate (MSD)
1201869901	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch

were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232347001 (CAMO-09-10462).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201869899 (CAMO-09-10462).

Matrix Spike Duplicate (MSD) Recovery Statement
The spike duplicate recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201869900 (CAMO-09-10462).

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232347001 (CAMO-09-10462), 232347002 (CAMO-09-10460), 232347003 (CAMO-09-10461) and 232347004 (CAMO-09-10467).

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 711111 1201869899 (CAMO-09-10462) and

1201869900 (CAMO-09-10462).

Manual Integrations
Manual integrations were not required for the samples in this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 21July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2458 GEL Work Order: 232347

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2458

Client Sample ID:	CAMO-09-10467	Project:	LANL01004
Sample ID:	232347004	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	4.53%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.1C	H	9.07	0.010	0.100	SU	1	EXF1 06/26/09	1219	880644	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	162	62.5	230	ug/kg	1	AXC2 07/06/09	1116	881032	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.314	1.05	mg/kg	1	MAR1 07/10/09	1543	880627	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0845	880626
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2458

Client Sample ID:	CAMO-09-10462	Project:	LANL01004
Sample ID:	232347001	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	6.53%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 23.3C	H	8.92	0.010	0.100	SU	1	EXF1 06/26/09	1211	880644	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	70.0	257	ug/kg	1	AXC2 07/06/09	1114	881032	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.321	1.07	mg/kg	1	MAR1 07/10/09	1250	880627	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0845	880626
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2458

Client Sample ID:	CAMO-09-10460	Project:	LANL01004
Sample ID:	232347002	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	8.31%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 23.1C	H	8.40	0.010	0.100	SU	1	EXF1 06/26/09	1212	880644	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	74.2	273	ug/kg	1	AXC2 07/06/09	1115	881032	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.327	1.09	mg/kg	1	MAR1 07/10/09	1446	880627	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0845	880626
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2458

Client Sample ID:	CAMO-09-10461	Project:	LANL01004
Sample ID:	232347003	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	11.5%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 23.0C	H	8.87	0.010	0.100	SU	1	EXF1 06/26/09	1216	880644	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	76.9	283	ug/kg	1	AXC2 07/06/09	1116	881032	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.66	0.339	1.13	mg/kg	1	MAR1 07/10/09	1515	880627	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0845	880626
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 15, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232347

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis											
Batch 880644											
QC1201869922 232367001 DUP											
pH		H	8.09	H	8.08	SU	0.124		(0%-10%)	EXF1	06/26/09 12:39
QC1201869923 232347004 DUP											
pH		H	9.07	H	8.92	SU	1.67		(0%-10%)		06/26/09 12:25
QC1201869924 LCS											
pH	7.00				7.02	SU		100	(95%-105%)		06/26/09 12:07
Flow Injection Analysis											
Batch 881032											
QC1201870870 232357001 DUP											
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		(+/-247)	AXC2	07/06/09 11:18
QC1201870871 232357002 DUP											
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		(+/-266)		07/06/09 12:49
QC1201870876 LCS											
Cyanide, Total	174000				154000	ug/kg		88.5	(46%-145%)		07/06/09 11:13
QC1201870869 MB											
Cyanide, Total				U	250	ug/kg					07/06/09 11:12
QC1201870872 232357001 MS											
Cyanide, Total	5520	U	ND		5740	ug/kg		104	(50%-130%)		07/06/09 11:19
QC1201870873 232357002 MS											
Cyanide, Total	4760	U	ND		4690	ug/kg		98.6	(50%-130%)		07/06/09 12:50
QC1201870874 232357001 MSD											
Cyanide, Total	4940	U	ND		4940	ug/kg	15.0	100	(0%-30%)		07/06/09 11:20
QC1201870875 232357002 MSD											
Cyanide, Total	5210	U	ND		5260	ug/kg	11.4	101	(0%-30%)		07/06/09 12:51
Ion Chromatography											
Batch 880627											
QC1201869898 232347001 DUP											
Nitrate-N		HUh	ND	HUh	ND	mg/kg	N/A		(+/-1.07)	MAR1	07/10/09 13:19
QC1201869901 LCS											
Nitrate-N	50.0				46.7	mg/kg		93.3	(90%-110%)		07/10/09 12:22
QC1201869897 MB											
Nitrate-N				U	1.00	mg/kg					07/10/09 11:53
QC1201869899 232347001 MS											
Nitrate-N	53.5	HUh	ND	Hh	46.8	mg/kg		87.6*	(90%-110%)		07/10/09 13:48
QC1201869900 232347001 MSD											
Nitrate-N	53.5	HUh	ND	Hh	46.8	mg/kg	0.119	87.5*	(0%-20%)		07/10/09 14:17

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

** Analyte is a surrogate compound

< Result is less than value reported

QC Summary

Workorder: 232347

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 15-JUL-2009 04:20

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2458**

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**06-JUL-2009 11:06:57**	**OM_7-6-2009_10-57-13**	**148**	**150**	**99**	**(90%-110%)**	**Yes**
CCV	06-JUL-2009 11:21:16	OM_7-6-2009_10-57-13	105	100	105	(90%-110%)	Yes
ICV	**06-JUL-2009 12:43:38**	**OM_7-6-2009_12-35-43**	**153**	**150**	**102**	**(90%-110%)**	**Yes**
CCV	06-JUL-2009 12:57:55	OM_7-6-2009_12-35-43	102	100	102	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**06-JUL-2009 11:08:48**	**OM_7-6-2009_10-57-13**	**-2.21**	**5**	**Yes**
CCB	06-JUL-2009 11:23:06	OM_7-6-2009_10-57-13	-3.02	5	Yes
ICB	**06-JUL-2009 12:45:28**	**OM_7-6-2009_12-35-43**	**-1.68**	**5**	**Yes**
CCB	06-JUL-2009 12:59:46	OM_7-6-2009_12-35-43	-1.6	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 15-JUL-2009 04:20

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2458

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**10-JUL-2009 10:55:00**	**090710**	**4.6565**	**5**	**93**	**(90%-110%)**	**Yes**
CCV	10-JUL-2009 16:12:00	090710	7.2904	7.5	97	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**10-JUL-2009 11:24:00**	**090710**	**0**	**0.1**	**Yes**
CCB	10-JUL-2009 16:41:00	090710	0	0.1	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881030

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870876	URF071009-01	.25	g
MS	1201870872	URF1091135-02	.025	mL
MS	1201870873	URF1091135-02	.025	mL
MSD	1201870874	URF1091135-02	.025	mL
MSD	1201870875	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870869		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
LCS	1201870876		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.25 g	25 mL	100	SOIL
SAMPLE	232347001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232347002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232347003		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232347004		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232357001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
DUP	1201870870	232357001	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
MS	1201870872	232357001	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.51 g	25 mL	49.01961	SOIL
MSD	1201870874	232357001	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232357002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
DUP	1201870871	232357002	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
MS	1201870873	232357002	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.58 g	25 mL	43.10345	SOIL
MSD	1201870875	232357002	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232367001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232367002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232367003		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232367004		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232367005		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232367006		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232367007		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232367008		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232367009		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232367010		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232367011		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232424001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232426001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232426002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090702-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/6/2009 10:59:47	OM_7-6-2009_10-57-13
150 ppb		1	axc2	7/6/2009 11:00:39	OM_7-6-2009_10-57-13
100 ppb		1	axc2	7/6/2009 11:01:32	OM_7-6-2009_10-57-13
50 ppb		1	axc2	7/6/2009 11:02:25	OM_7-6-2009_10-57-13
10 ppb		1	axc2	7/6/2009 11:03:18	OM_7-6-2009_10-57-13
CRDL 5.0 ppb		1	axc2	7/6/2009 11:04:12	OM_7-6-2009_10-57-13
ICAL-00		1	axc2	7/6/2009 11:05:06	OM_7-6-2009_10-57-13
ICV		1	axc2	7/6/2009 11:06:57	OM_7-6-2009_10-57-13
ICB		1	axc2	7/6/2009 11:08:48	OM_7-6-2009_10-57-13
CRDL		1	axc2	7/6/2009 11:10:37	OM_7-6-2009_10-57-13
1201870869	881032	1	axc2	7/6/2009 11:12:27	OM_7-6-2009_10-57-13
1201870876	881032	50	axc2	7/6/2009 11:13:21	OM_7-6-2009_10-57-13
232347001	881032	1	axc2	7/6/2009 11:14:14	OM_7-6-2009_10-57-13
232347002	881032	1	axc2	7/6/2009 11:15:07	OM_7-6-2009_10-57-13
232347003	881032	1	axc2	7/6/2009 11:16:00	OM_7-6-2009_10-57-13
232347004	881032	1	axc2	7/6/2009 11:16:53	OM_7-6-2009_10-57-13
232357001	881032	1	axc2	7/6/2009 11:17:46	OM_7-6-2009_10-57-13
1201870870	881032	1	axc2	7/6/2009 11:18:39	OM_7-6-2009_10-57-13
1201870872	881032	1	axc2	7/6/2009 11:19:31	OM_7-6-2009_10-57-13
1201870874	881032	1	axc2	7/6/2009 11:20:23	OM_7-6-2009_10-57-13
CCV		1	axc2	7/6/2009 11:21:16	OM_7-6-2009_10-57-13
CCB		1	axc2	7/6/2009 11:23:06	OM_7-6-2009_10-57-13
232357002*	881032	1	axc2	7/6/2009 11:24:55	OM_7-6-2009_10-57-13
1201870871*	881032	1	axc2	7/6/2009 11:25:46	OM_7-6-2009_10-57-13
1201870873*	881032	1	axc2	7/6/2009 11:26:38	OM_7-6-2009_10-57-13
1201870875*	881032	1	axc2	7/6/2009 11:27:30	OM_7-6-2009_10-57-13
232367001*	881032	1	axc2	7/6/2009 11:28:21	OM_7-6-2009_10-57-13
232367002*	881032	1	axc2	7/6/2009 11:29:15	OM_7-6-2009_10-57-13
232367003*	881032	1	axc2	7/6/2009 11:30:08	OM_7-6-2009_10-57-13
232367004*	881032	1	axc2	7/6/2009 11:31:02	OM_7-6-2009_10-57-13
232367005*	881032	1	axc2	7/6/2009 11:31:55	OM_7-6-2009_10-57-13
232367006*	881032	1	axc2	7/6/2009 11:32:48	OM_7-6-2009_10-57-13
CCV		1	axc2	7/6/2009 11:33:41	OM_7-6-2009_10-57-13

Author: axc2 Date : 7/6/2009

Original Run Filename: OM_7-6-2009_10-57-13.OMN created 7/6/2009 10:57:13
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-6-2009_10-57-13.OMN last modified 7/6/2009 11:34:45
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090706-01	1	S1	200	8.64	7/6/2009@10:59:47			200 ppb
WCN090706-02	1	S2	150	6.60	7/6/2009@11:00:39			150 ppb
WCN090706-03	1	S3	100	4.45	7/6/2009@11:01:32			100 ppb
WCN090706-04	1	S4	50.0	2.29	7/6/2009@11:02:25			50 ppb
WCN090706-05	1	S5	10.0	0.493	7/6/2009@11:03:18			10 ppb
WCN090706-06	1	S6	5.00	0.340	7/6/2009@11:04:12			CRDL 5.0 ppb
WCN090706-08	1	S7	0.00	-0.0232	7/6/2009@11:05:06			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99981 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090706-07	1	S8	148	6.46	7/6/2009@11:06:57			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-1.4 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-1.4 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090706-08	1	S7	-2.21	-0.0172	7/6/2009@11:08:48			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.21 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.21 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090706-06	1	S6	6.12	0.343	7/6/2009@11:10:37			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.12 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.12 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870869|881032|MB	1	1	0.257	0.0894	7/6/2009@11:12:27			
1201870876||LCS	1	2	30.8	1.41	7/6/2009@11:13:21		50.00	
232347001	1	3	0.215	0.0875	7/6/2009@11:14:14			
232347002	1	4	-0.0230	0.0773	7/6/2009@11:15:07			
232347003	1	5	-0.321	0.0644	7/6/2009@11:16:00			
232347004	1	6	3.52	0.230	7/6/2009@11:16:53			
232357001	1	7	-0.298	0.0654	7/6/2009@11:17:46			
1201870870||DUP	1	8	-0.473	0.0578	7/6/2009@11:18:39			
1201870872||MS	1	9	104	4.59	7/6/2009@11:19:31			
1201870874||MSD	1	10	100	4.41	7/6/2009@11:20:23			
WCN090706-03	1	S3	105	4.61	7/6/2009@11:21:16			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	4.9 < 10.0					

		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	4.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090706-08	1	S7	-3.02	-0.0520	7/6/2009@11:23:06			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-3.02 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-3.02 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232357002	1	11	-0.198	0.0697	7/6/2009@11:24:55			
1201870871||DUP	1	12	0.0866	0.0820	7/6/2009@11:25:46			
1201870873||MS	1	13	102	4.46	7/6/2009@11:26:38			
1201870875||MSD	1	14	103	4.51	7/6/2009@11:27:30			
232367001	1	15	0.563	0.103	7/6/2009@11:28:21			
232367002	1	16	0.416	0.0963	7/6/2009@11:29:15			
232367003	1	17	-0.706	0.0478	7/6/2009@11:30:08			
232367004	1	18	0.168	0.0855	7/6/2009@11:31:02			
232367005	1	19	0.462	0.0982	7/6/2009@11:31:55			
232367006	1	20	2.28	0.177	7/6/2009@11:32:48			
WCN090706-03	1	S3	110	4.84	7/6/2009@11:33:41			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	10.2 > 10.0					
		Message	CCV Failed					
		Action	Stop Run					
		DQM Test: < - Percent Relative Difference						
		Result:	10.2 > 10.0					
		Message	CCV Passed					
		Action	Continue					

Analyte Properties Table for OM_7-6-2009_10-57-13.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/6/2009

Channel 1: Current View

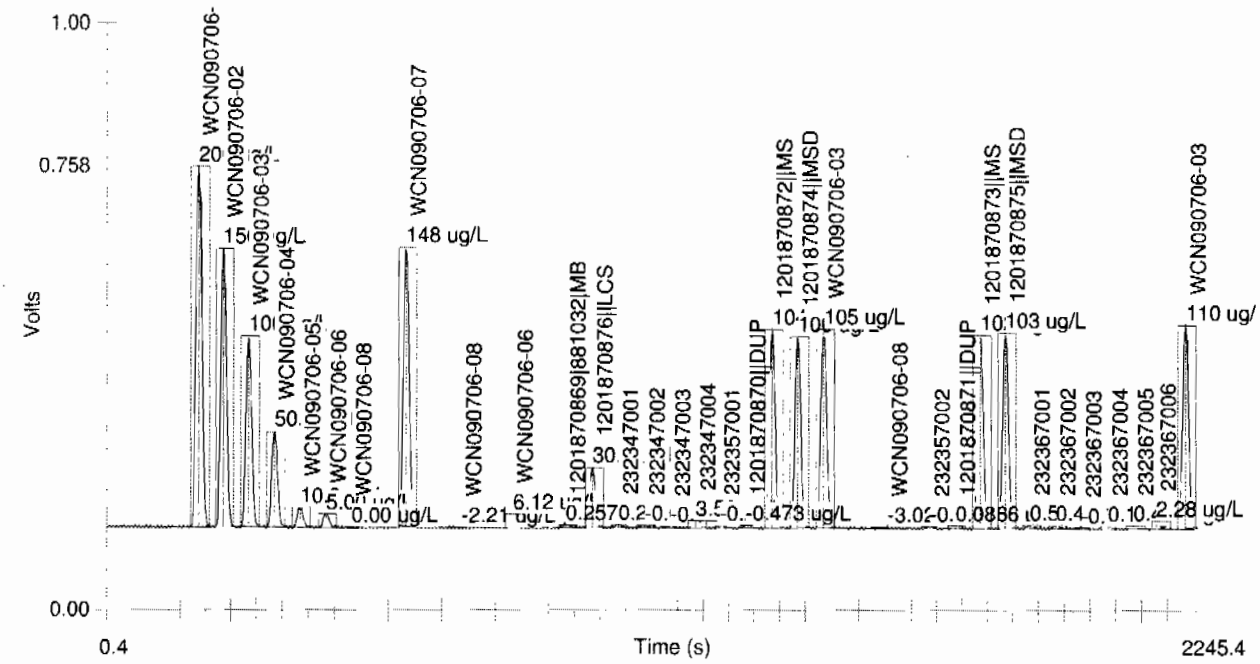

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.64	0.614	0.9	7/6/2009	11:00:51
2	150	1	6.60	0.472	-0.7	7/6/2009	11:01:43
3	100	1	4.45	0.322	-1.3	7/6/2009	11:02:35
4	50.0	1	2.29	0.163	-2.2	7/6/2009	11:03:28
5	10.0	1	0.493	0.0339	3.6	7/6/2009	11:04:21
6	5.00	1	0.340	0.0230	-15.3	7/6/2009	11:05:15
7	0.00	1	-0.0232	-0.00204		7/6/2009	11:06:09

Figure 1: TCYANIDE

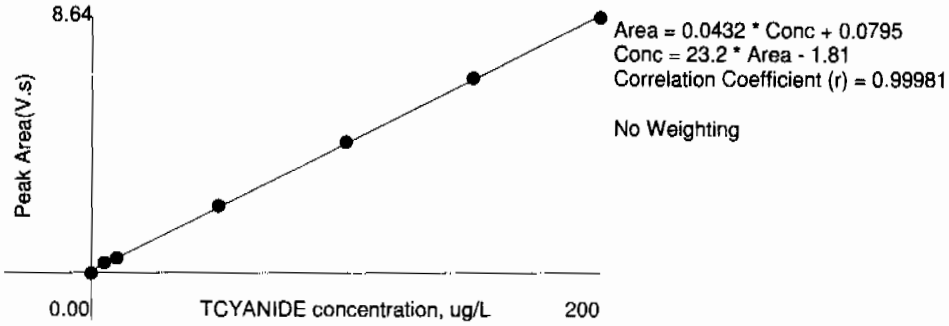

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/6/2009 12:36:28	OM_7-6-2009_12-35-43
150 ppb		1	axc2	7/6/2009 12:37:20	OM_7-6-2009_12-35-43
100 ppb		1	axc2	7/6/2009 12:38:13	OM_7-6-2009_12-35-43
50 ppb		1	axc2	7/6/2009 12:39:06	OM_7-6-2009_12-35-43
10 ppb		1	axc2	7/6/2009 12:39:59	OM_7-6-2009_12-35-43
CRDL 5.0 ppb		1	axc2	7/6/2009 12:40:53	OM_7-6-2009_12-35-43
ICAL-00		1	axc2	7/6/2009 12:41:47	OM_7-6-2009_12-35-43
ICV		1	axc2	7/6/2009 12:43:38	OM_7-6-2009_12-35-43
ICB		1	axc2	7/6/2009 12:45:28	OM_7-6-2009_12-35-43
CRDL		1	axc2	7/6/2009 12:47:19	OM_7-6-2009_12-35-43
232357002	881032	1	axc2	7/6/2009 12:49:08	OM_7-6-2009_12-35-43
1201870871	881032	1	axc2	7/6/2009 12:49:59	OM_7-6-2009_12-35-43
1201870873	881032	1	axc2	7/6/2009 12:50:51	OM_7-6-2009_12-35-43
1201870875	881032	1	axc2	7/6/2009 12:51:43	OM_7-6-2009_12-35-43
232367001	881032	1	axc2	7/6/2009 12:52:35	OM_7-6-2009_12-35-43
232367002	881032	1	axc2	7/6/2009 12:53:29	OM_7-6-2009_12-35-43
232367003	881032	1	axc2	7/6/2009 12:54:23	OM_7-6-2009_12-35-43
232367004	881032	1	axc2	7/6/2009 12:55:16	OM_7-6-2009_12-35-43
232367005	881032	1	axc2	7/6/2009 12:56:10	OM_7-6-2009_12-35-43
232367006	881032	1	axc2	7/6/2009 12:57:03	OM_7-6-2009_12-35-43
CCV		1	axc2	7/6/2009 12:57:55	OM_7-6-2009_12-35-43
CCB		1	axc2	7/6/2009 12:59:46	OM_7-6-2009_12-35-43
232367007	881032	1	axc2	7/6/2009 13:01:35	OM_7-6-2009_12-35-43
232367008	881032	1	axc2	7/6/2009 13:02:27	OM_7-6-2009_12-35-43
232367009	881032	1	axc2	7/6/2009 13:03:20	OM_7-6-2009_12-35-43
232367010	881032	1	axc2	7/6/2009 13:04:13	OM_7-6-2009_12-35-43
232367011	881032	1	axc2	7/6/2009 13:05:06	OM_7-6-2009_12-35-43
232424001	881032	1	axc2	7/6/2009 13:05:59	OM_7-6-2009_12-35-43
232426001	881032	1	axc2	7/6/2009 13:06:51	OM_7-6-2009_12-35-43
232426002	881032	1	axc2	7/6/2009 13:07:43	OM_7-6-2009_12-35-43
CCV		1	axc2	7/6/2009 13:08:36	OM_7-6-2009_12-35-43
CCB		1	axc2	7/6/2009 13:10:27	OM_7-6-2009_12-35-43

Author: axc2 Date : 7/6/2009

Original Run Filename: OM_7-6-2009_12-35-43.OMN created 7/6/2009 12:35:43
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-6-2009_12-35-43.OMN last modified 7/6/2009 13:11:31
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090706-01	1	S1	200	11.2	7/6/2009@12:36:28			200 ppb
WCN090706-02	1	S2	150	8.46	7/6/2009@12:37:20			150 ppb
WCN090706-03	1	S3	100	5.50	7/6/2009@12:38:13			100 ppb
WCN090706-04	1	S4	50.0	2.96	7/6/2009@12:39:06			50 ppb
WCN090706-05	1	S5	10.0	0.632	7/6/2009@12:39:59			10 ppb
WCN090706-06	1	S6	5.00	0.451	7/6/2009@12:40:53			CRDL 5.0 ppb
WCN090706-08	1	S7	0.00	1.43e-4	7/6/2009@12:41:47			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99980 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090706-07	1	S8	153	8.57	7/6/2009@12:43:38			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	2.0 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.0 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090706-08	1	S7	-1.68	-0.00459	7/6/2009@12:45:28			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.68 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.68 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090706-06	1	S6	6.79	0.465	7/6/2009@12:47:19			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.79 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.79 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
232357002|881032|	1	11	-0.166	0.0795	7/6/2009@12:49:08			
1201870871||DUP	1	12	0.0193	0.0898	7/6/2009@12:49:59			
1201870873||MS	1	13	98.6	5.55	7/6/2009@12:50:51			
1201870875||MSD	1	14	101	5.68	7/6/2009@12:51:43			
232367001	1	15	0.648	0.125	7/6/2009@12:52:35			
232367002	1	16	0.126	0.0958	7/6/2009@12:53:29			
232367003	1	17	-1.51	0.00486	7/6/2009@12:54:23			
232367004	1	18	0.173	0.0983	7/6/2009@12:55:16			
232367005	1	19	0.178	0.0986	7/6/2009@12:56:10			
232367006	1	20	-0.739	0.0478	7/6/2009@12:57:03			
WCN090706-03	1	S3	102	5.73	7/6/2009@12:57:55			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	1.8 < 10.0					

		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	1.8 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090706-08	1	S7	-1.60	0.00	7/6/2009@12:59:46			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-1.60 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-1.60 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232367007	1	21	3.20	0.266	7/6/2009@13:01:35			
232367008	1	22	2.56	0.231	7/6/2009@13:02:27			
232367009	1	23	1.63	0.179	7/6/2009@13:03:20			
232367010	1	24	0.232	0.102	7/6/2009@13:04:13			
232367011	1	25	-0.464	0.0630	7/6/2009@13:05:06			
232424001	1	26	0.797	0.133	7/6/2009@13:05:59			
232426001	1	27	0.0603	0.0921	7/6/2009@13:06:51			
232426002	1	28	0.752	0.130	7/6/2009@13:07:43			
WCN090706-03	1	S3	103	5.81	7/6/2009@13:08:36			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	3.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	3.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090706-08	1	S7	-2.53	-0.0517	7/6/2009@13:10:27			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-2.53 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-2.53 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_7-6-2009_12-35-43.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/6/2009

Channel 1: Current View

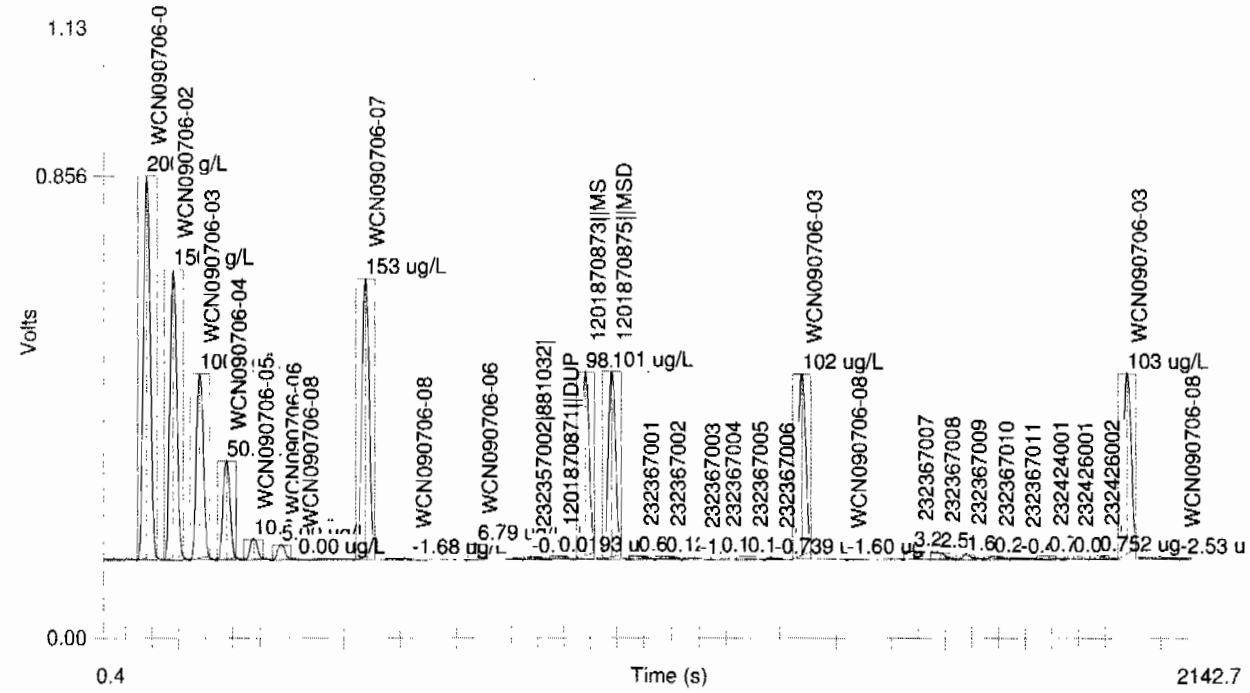

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	11.2	0.709	0.0	7/6/2009	12:37:32
2	150	1	8.46	0.536	-0.7	7/6/2009	12:38:24
3	100	1	5.50	0.344	2.3	7/6/2009	12:39:17
4	50.0	1	2.96	0.183	-3.4	7/6/2009	12:40:09
5	10.0	1	0.632	0.0371	2.0	7/6/2009	12:41:03
6	5.00	1	0.451	0.0264	-22.7	7/6/2009	12:41:56
7	0.00	1	1.43e-4	0.00246		7/6/2009	12:42:51

Figure 1: TCYANIDE

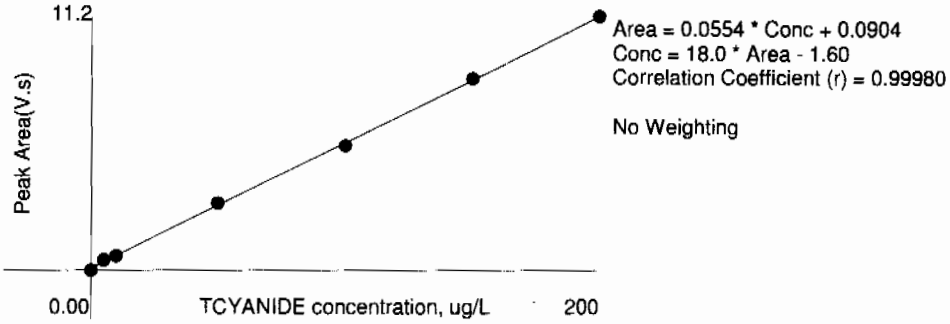

Ion Chromatography

Prep LogBook

Analyst: MAR1 Verified by:_____

Batch: 880626

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201869901	UIC090627SPK	.8	mL
MS	1201869899	UIC090627SPK	.8	mL
MSD	1201869900	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201869897		EPA 300.0 PREP	10-JUL-2009 08:45	4 g	40 mL	10	SOIL
LCS	1201869901		EPA 300.0 PREP	10-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232347001		EPA 300.0 PREP	10-JUL-2009 08:45	4 g	40 mL	10	SOIL
DUP	1201869898	232347001	EPA 300.0 PREP	10-JUL-2009 08:45	4 g	40 mL	10	SOIL
MS	1201869899	232347001	EPA 300.0 PREP	10-JUL-2009 08:45	4 g	40 mL	10	SOIL
MSD	1201869900	232347001	EPA 300.0 PREP	10-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232347002		EPA 300.0 PREP	10-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232347003		EPA 300.0 PREP	10-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232347004		EPA 300.0 PREP	10-JUL-2009 08:45	4 g	40 mL	10	SOIL

Comments

This is runlog for Sequence 090707.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	07/03/09 22:08		1	090707	MAR1
ICAL-06	07/03/09 22:41		1	090707	MAR1
ICAL-05	07/03/09 23:14		1	090707	MAR1
ICAL-04	07/03/09 23:47		1	090707	MAR1

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

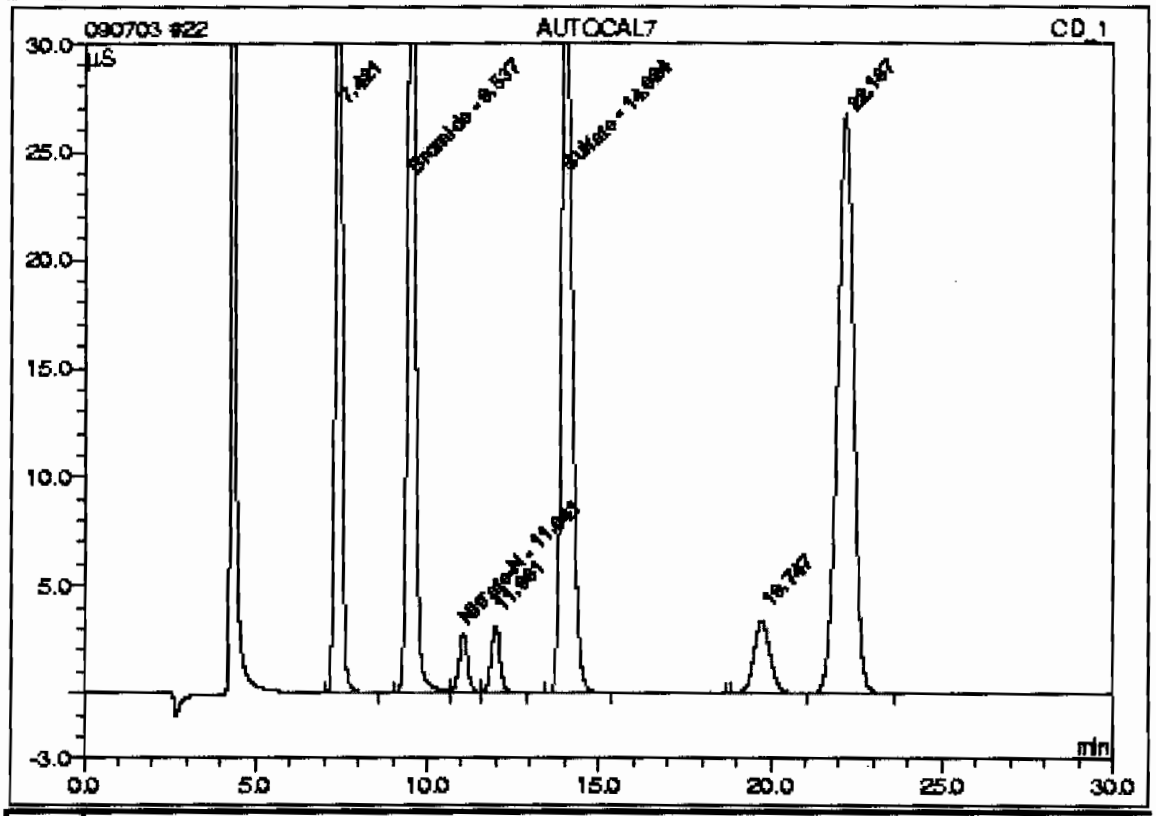

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	20.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	5.0000	n.a.	n.a.	n.a.	n.a.
2	9.54	Bromide	5.0000	5.0000		10.49618	20.17
n.a.	n.a.	Chlorate	5.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	10.0000	10.0000		0.81946	1.59
5	14.02	Sulfate	40.0000	40.0000		12.51803	24.06
Total:				55.0000	0.000	23.834	45.81

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703sn	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9055

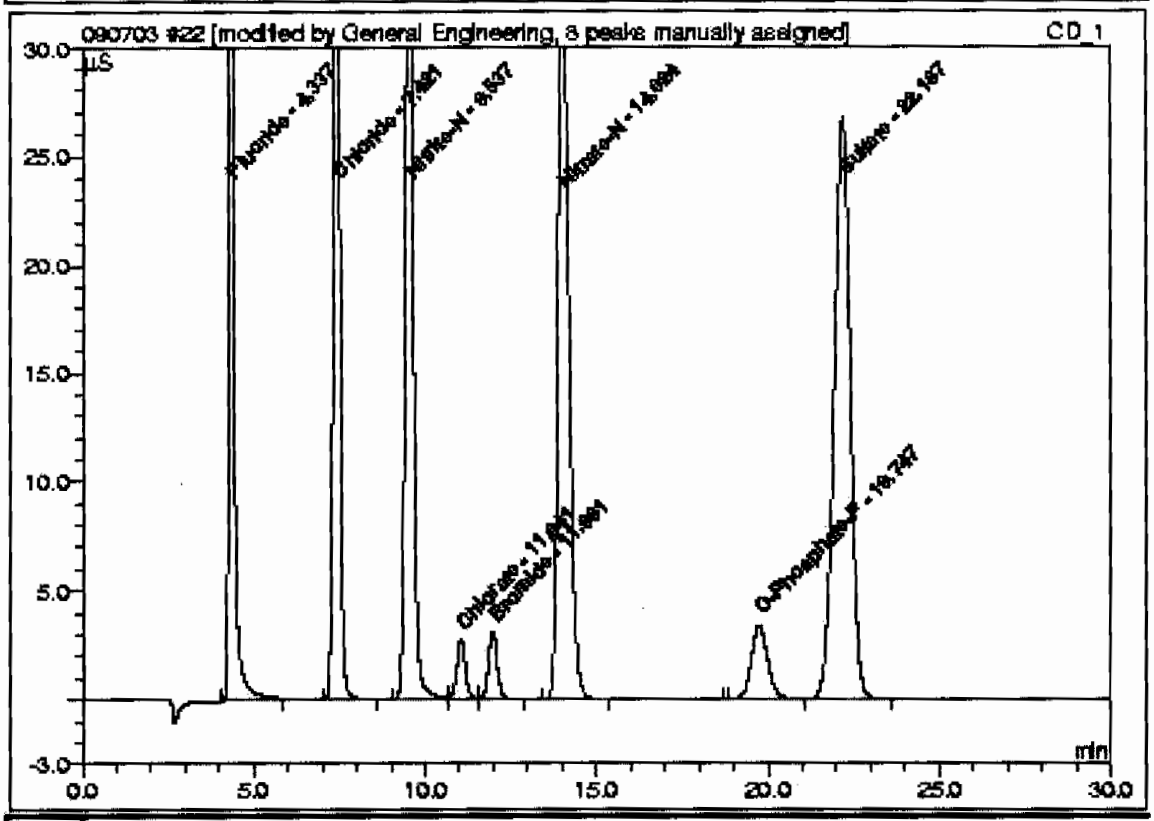

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	10.0000	10.0444	*	6.95356	11.79
2	7.42	Chloride	20.0000	20.3404		10.85875	18.41
3	9.54	Nitrite-N	10.0000	10.0541		10.49618	17.80
4	11.04	Chlorate	5.0000	4.9982		0.81946	1.39
5	11.98	Bromide	5.0000	5.0134		0.92846	1.57
6	14.02	Nitrate-N	10.0000	10.1573		12.51803	21.22
7	19.75	O-Phosphate-P	5.0000	5.0143		1.85201	3.14
8	22.19	Sulfate	40.0000	40.5382		14.55536	24.68
Total:				106.1605	0.000	59.982	100.00

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE085;300;9056

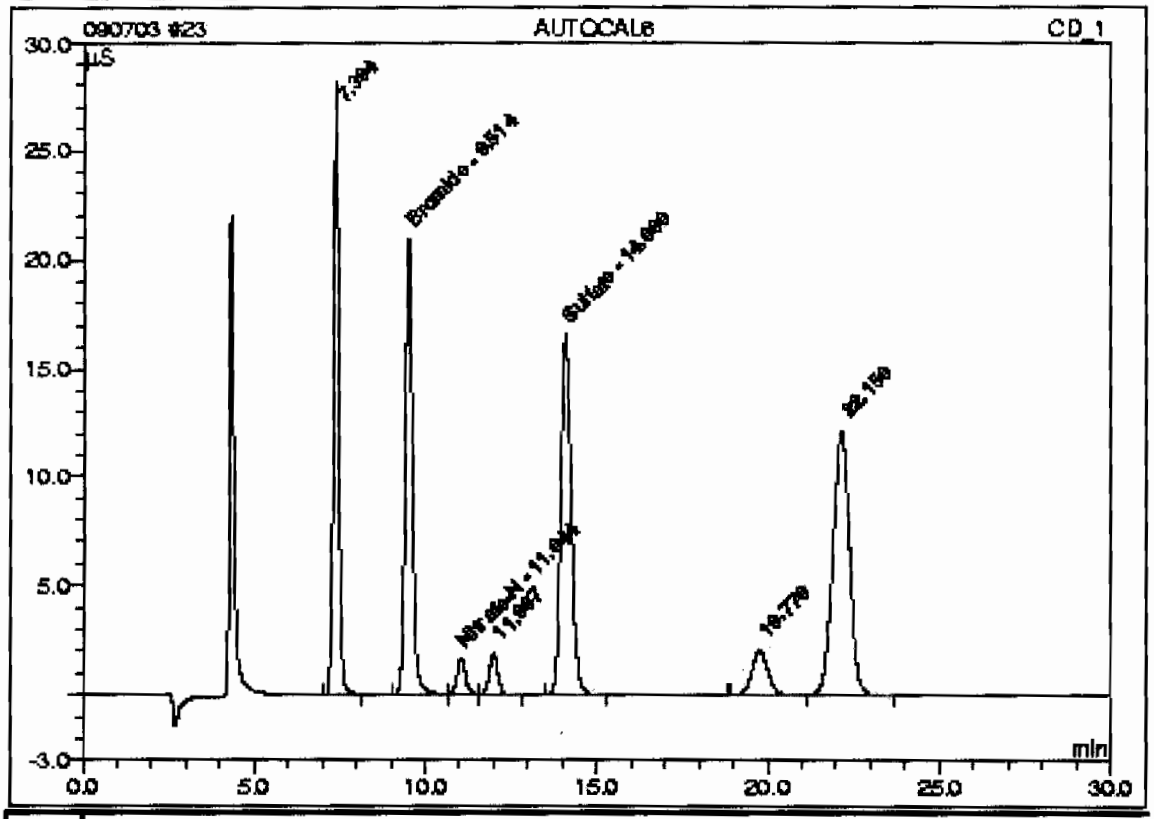

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	3.0000	n.a.	n.a.	n.a.	n.a.
2	9.51	Bromide	3.0000	2.6148		5.08735	20.64
n.a.	n.a.	Chlorate	3.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	5.0000	5.6894		0.49447	2.01
5	14.09	Sulfate	20.0000	18.8591		5.72345	23.22
Total:				27.1634	0.000	11.305	45.87

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9056

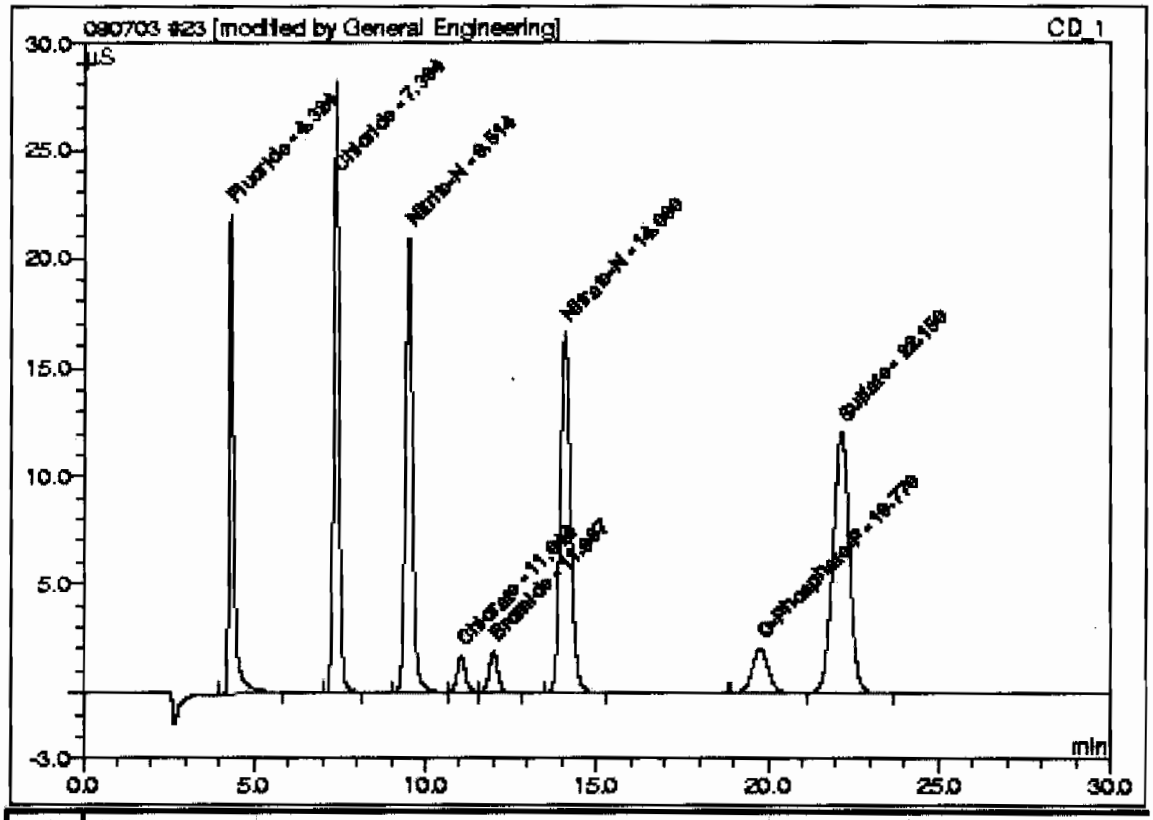

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	5.0000	4.9254 *		3.38643	12.08
2	7.39	Chloride	10.0000	9.3510		4.93051	17.59
3	9.51	Nitrite-N	5.0000	4.9036		5.08735	18.15
4	11.04	Chlorate	3.0000	3.0238		0.49447	1.76
5	11.99	Bromide	3.0000	3.0288		0.55878	1.99
6	14.08	Nitrate-N	5.0000	4.6989		5.72345	20.42
7	19.77	O-Phosphate-P	3.0000	3.0156		1.10727	3.95
8	22.15	Sulfate	20.0000	18.9608		6.74477	24.06
Total:				51.9078	0.000	28.033	100.00

24 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

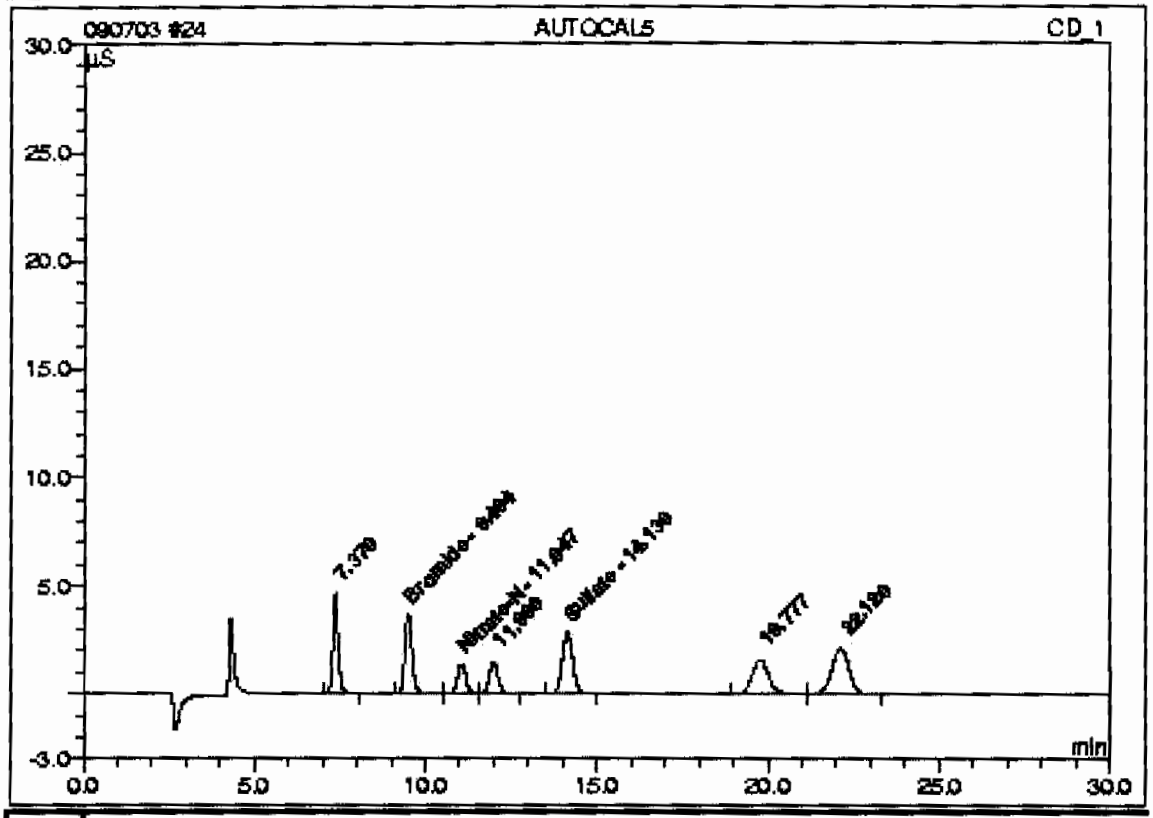

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	2.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	2.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	2.5000	1.1051		0.92663	15.98
n.a.	n.a.	Chlorate	2.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	1.0000	3.6480		0.40624	7.01
5	14.13	Sulfate	4.0000	3.8794		1.01074	17.44
Total:				8.6325	0.000	2.344	40.43

24 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

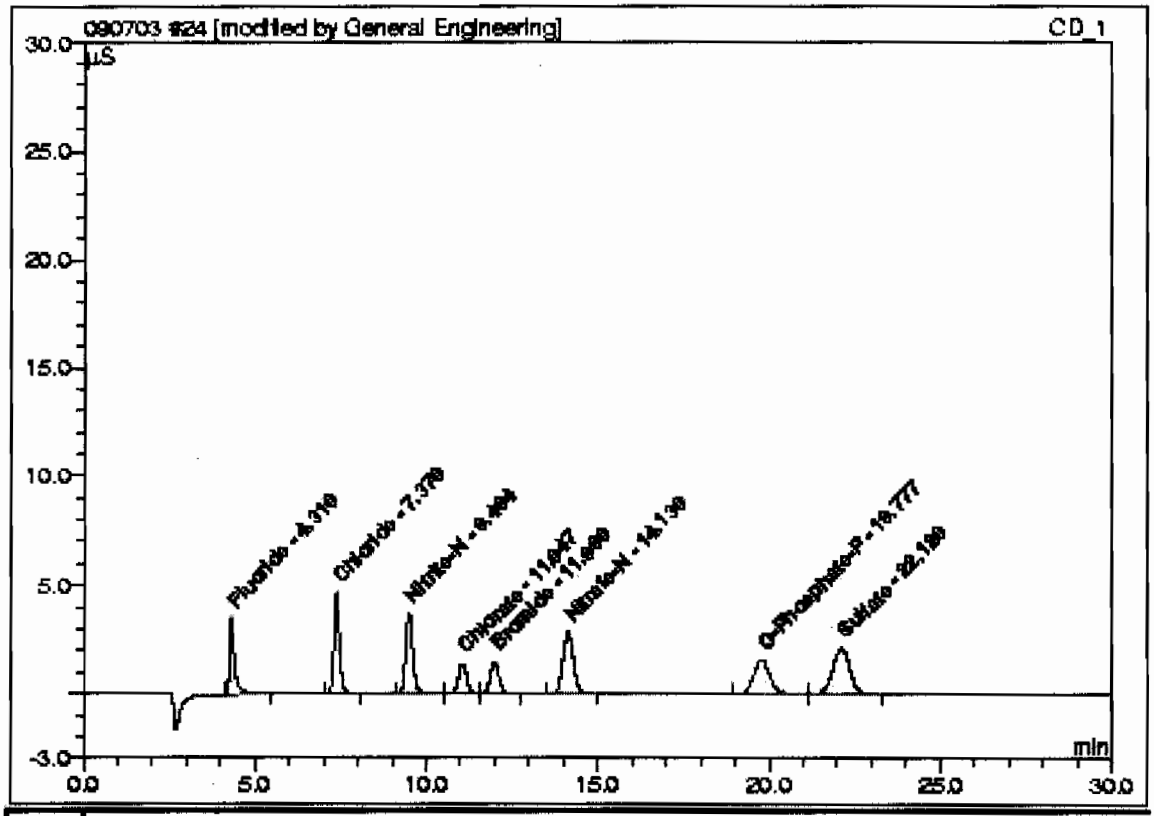

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	1.0000	0.9326	*	0.60409	9.44
2	7.37	Chloride	2.0000	1.7967		0.85540	13.36
3	9.49	Nitrite-N	1.0000	0.9416		0.92663	14.48
4	11.05	Chlorate	2.5000	2.4878		0.40624	6.35
5	11.99	Bromide	2.5000	2.4502		0.45103	7.05
6	14.13	Nitrate-N	1.0000	0.9129		1.01074	15.79
7	19.78	O-Phosphate-P	2.5000	2.4771		0.90660	14.16
8	22.12	Sulfate	4.0000	3.7545		1.24042	19.38
Total:				15.7534	0.000	6.401	100.00

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703sn	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9056

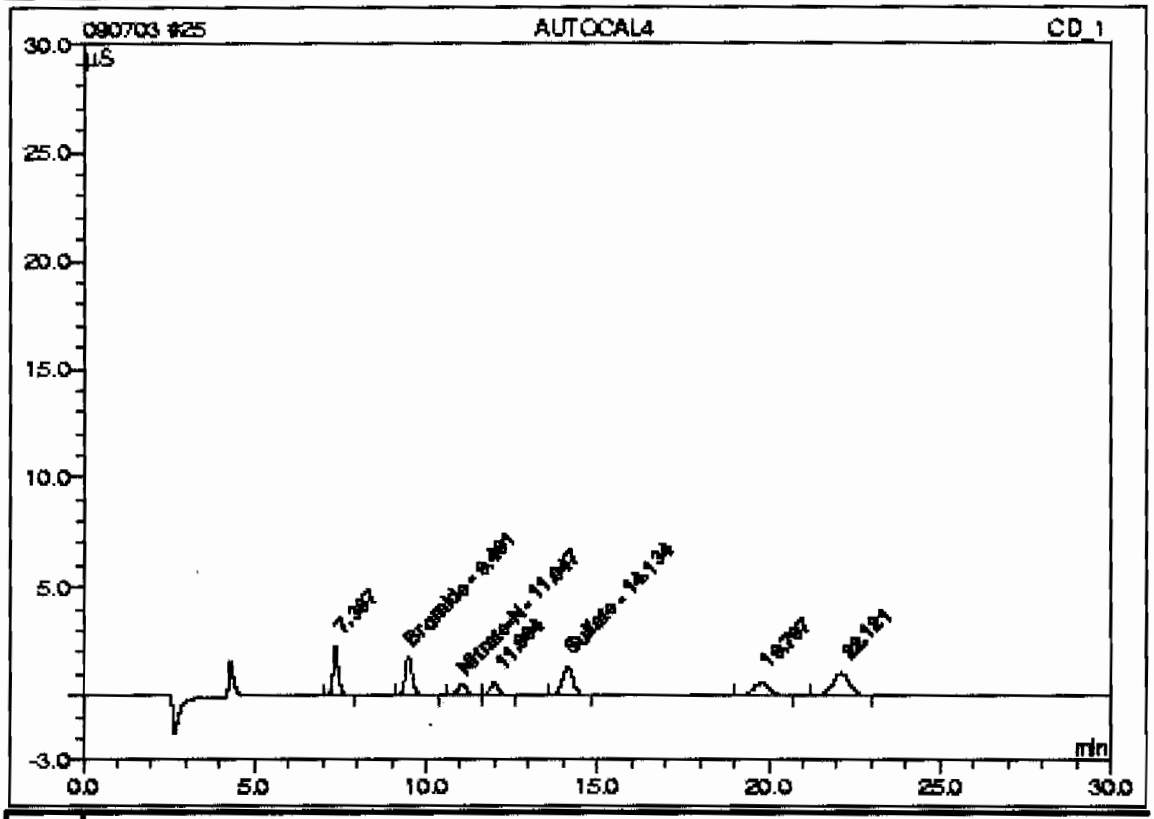

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	1.0000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	1.0000	0.9160		0.44459	16.96
n.a.	n.a.	Chlorate	1.0000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.5000	0.1296		0.15634	5.97
5	14.13	Sulfate	2.0000	2.1573		0.49242	18.79
Total:				3.2029	0.000	1.093	41.72

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9055

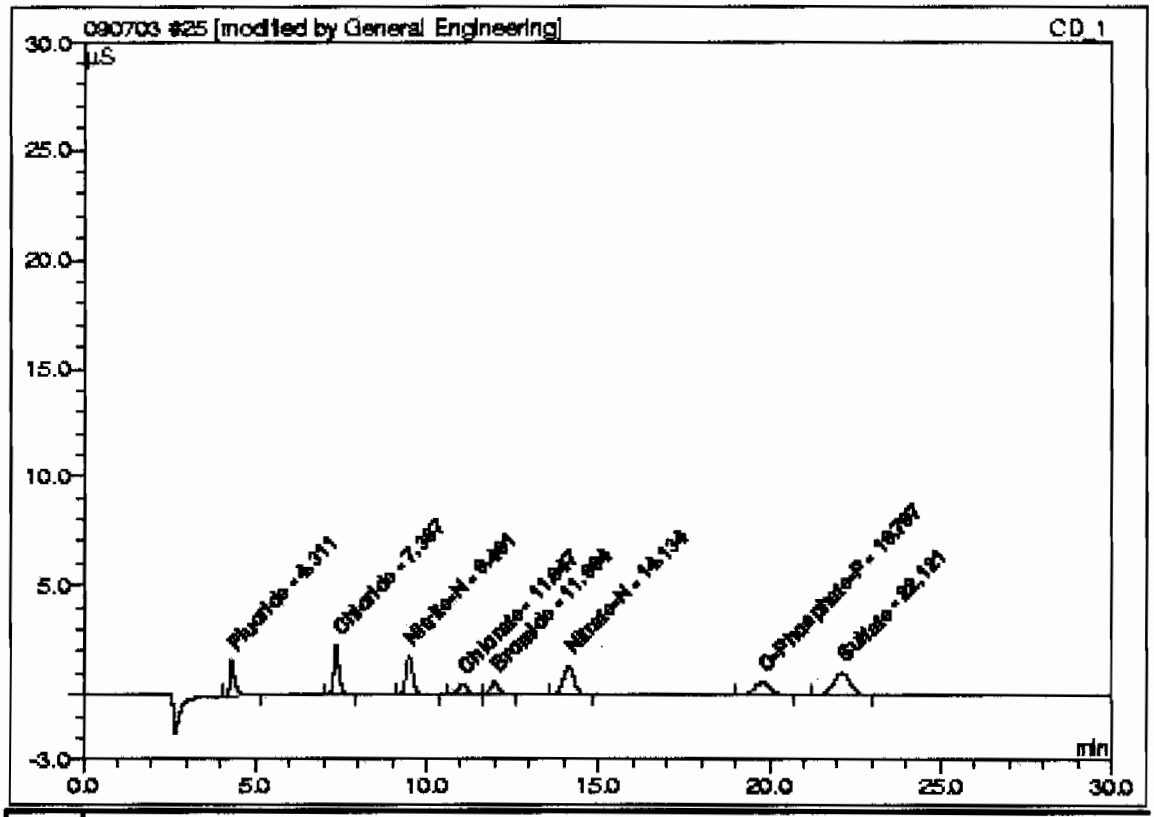

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.5000	0.4772	*	0.28671	9.86
2	7.37	Chloride	1.0000	0.9876		0.41893	14.41
3	9.49	Nitrite-N	0.5000	0.4826		0.44459	15.29
4	11.05	Chlorate	1.0000	0.9695		0.15634	5.38
5	11.99	Bromide	1.0000	0.9693		0.17517	6.02
6	14.13	Nitrate-N	0.5000	0.4966		0.49242	16.94
7	19.80	O-Phosphate-P	1.0000	0.9414		0.33440	11.50
8	22.12	Sulfate	2.0000	1.9824		0.59899	20.60
Total:				7.3065	0.000	2.908	100.00

This is runlog for Sequence 090703.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-03	07/04/09 00:20		1	090703	MAR1
ICAL-02	07/04/09 00:53		1	090703	MAR1
ICAL-01	07/04/09 01:26		1	090703	MAR1
ICV	07/04/09 01:59		1	090703	MAR1
ICB	07/04/09 02:32		1	090703	MAR1

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9056

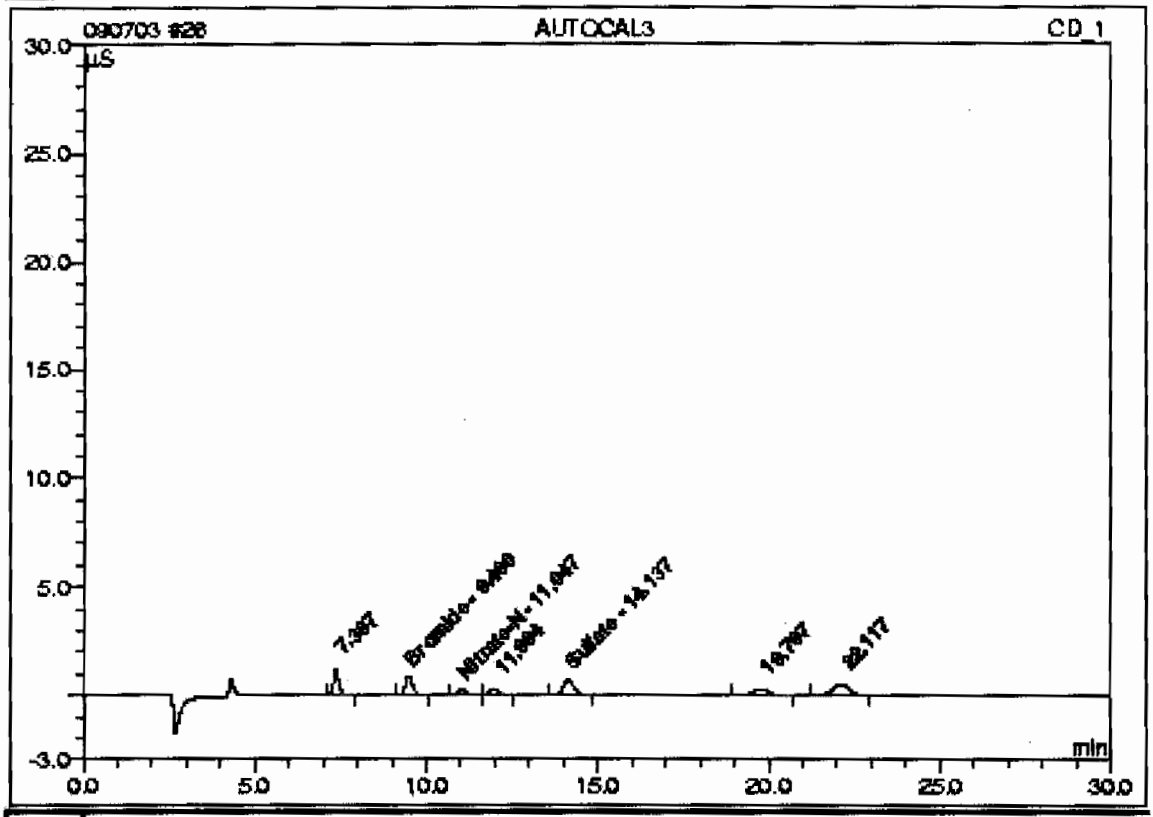

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.5000	0.7242		0.21912	16.45
n.a.	n.a.	Chlorate	0.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.2500	-0.6565		0.07808	5.89
5	14.14	Sulfate	1.0000	1.2880		0.24968	18.83
Total:				1.3557	0.000	0.546	41.17

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

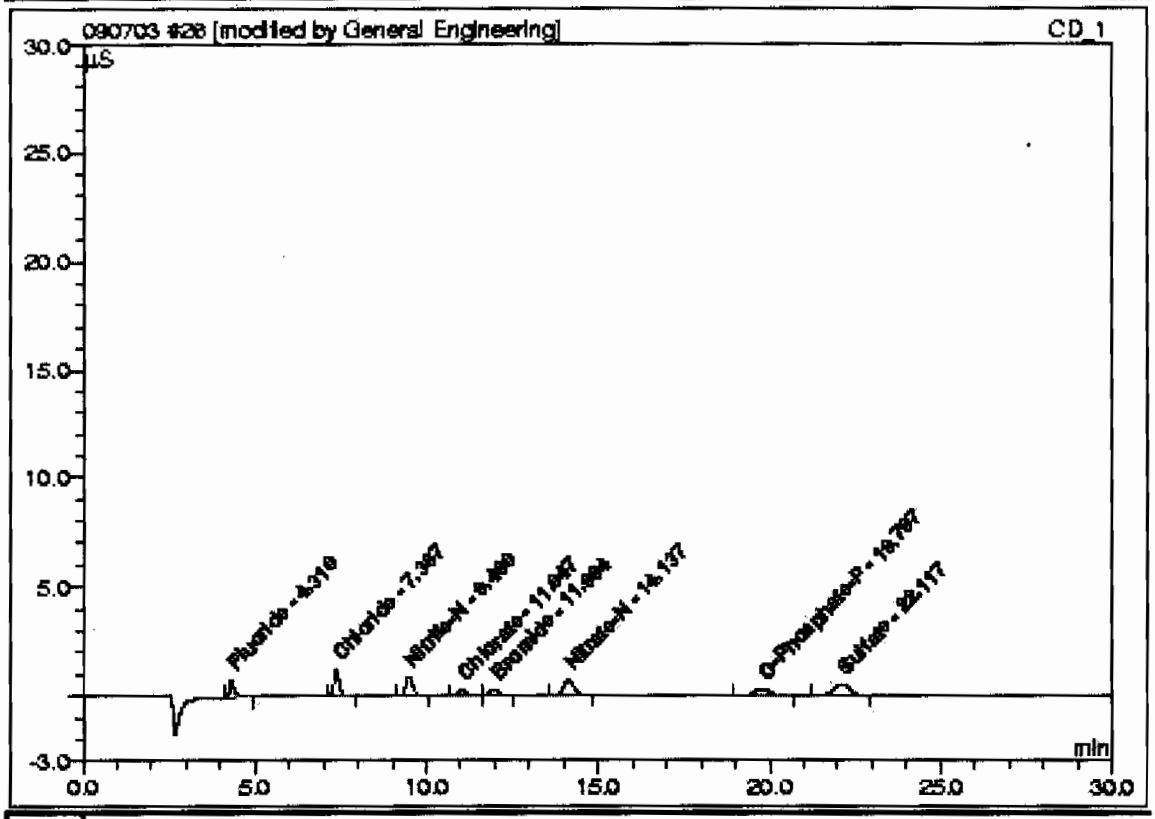

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.2500	0.2638	*	0.13800	9.43
2	7.37	Chloride	0.5000	0.6284		0.22515	15.38
3	9.49	Nitrite-N	0.2500	0.2669		0.21812	14.90
4	11.05	Chlorate	0.5000	0.4940		0.07808	5.33
5	11.99	Bromide	0.5000	0.4991		0.08759	5.98
6	14.14	Nitrate-N	0.2500	0.3016		0.24968	17.05
7	19.80	O-Phosphate-P	0.5000	0.4865		0.16491	11.26
8	22.12	Sulfate	1.0000	1.1634		0.30252	20.66
Total:				4.1037	0.000	1.464	100.00

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

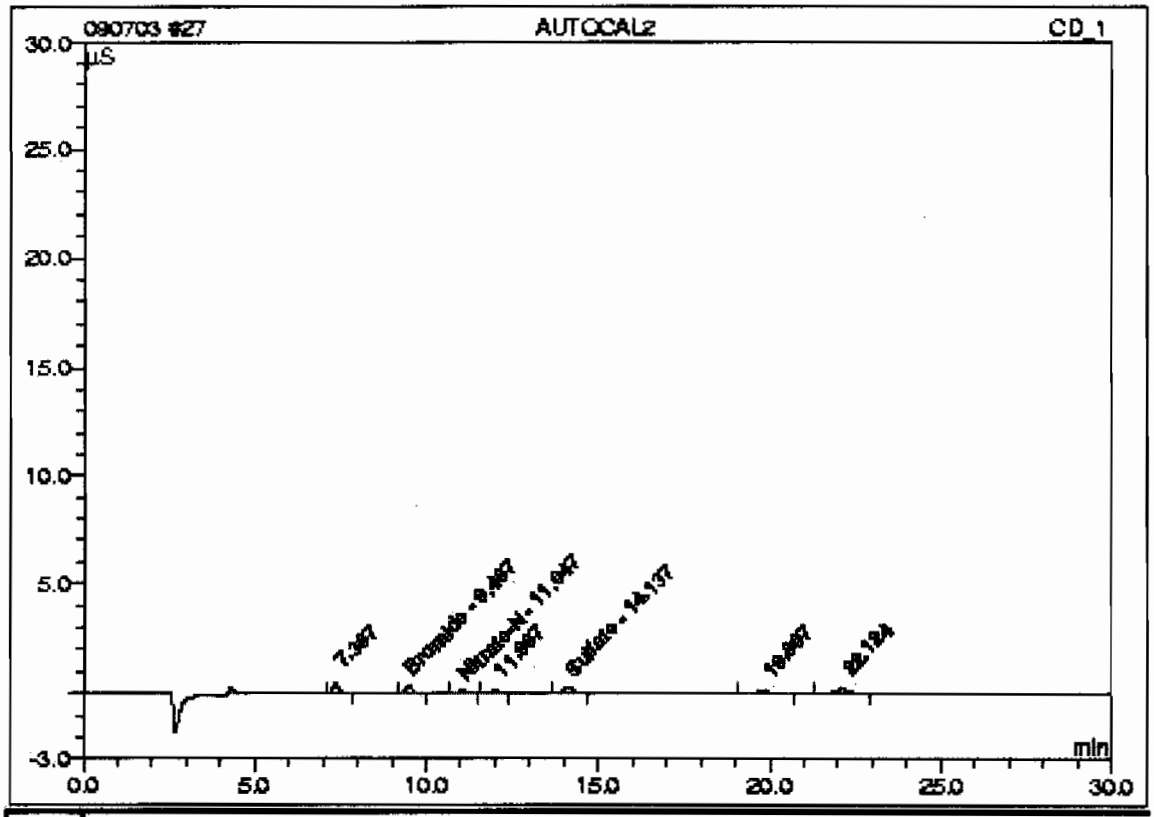

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.2000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.2000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.2000	0.5534		0.08703	16.21
n.a.	n.a.	Chlorate	0.2000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.1000	-0.9832		0.03083	5.74
5	14.14	Sulfate	0.4000	0.7269		0.10053	18.72
Total:				0.2971	0.000	0.218	40.67

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9056

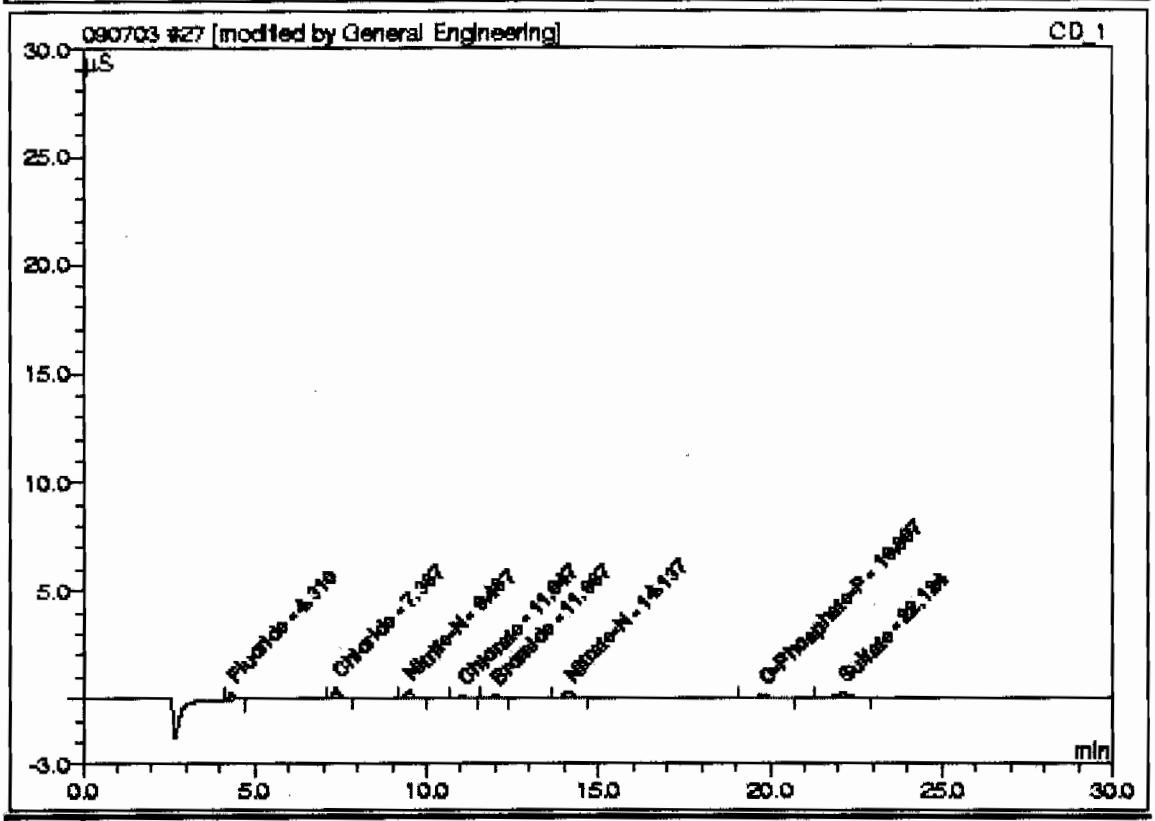

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.1000	0.1408	*	0.05234	8.89
2	7.37	Chloride	0.2000	0.3848		0.09372	15.91
3	9.49	Nitrite-N	0.1000	0.1421		0.08703	14.77
4	11.05	Chlorate	0.2000	0.2070		0.03083	5.23
5	11.99	Bromide	0.2000	0.2104		0.03382	5.74
6	14.14	Nitrate-N	0.1000	0.1817		0.10053	17.06
7	19.81	O-Phosphate-P	0.2000	0.2212		0.06603	11.21
8	22.12	Sulfate	0.4000	0.6729		0.12497	21.21
Total:				2.1609	0.000	0.589	100.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE085;300;9058

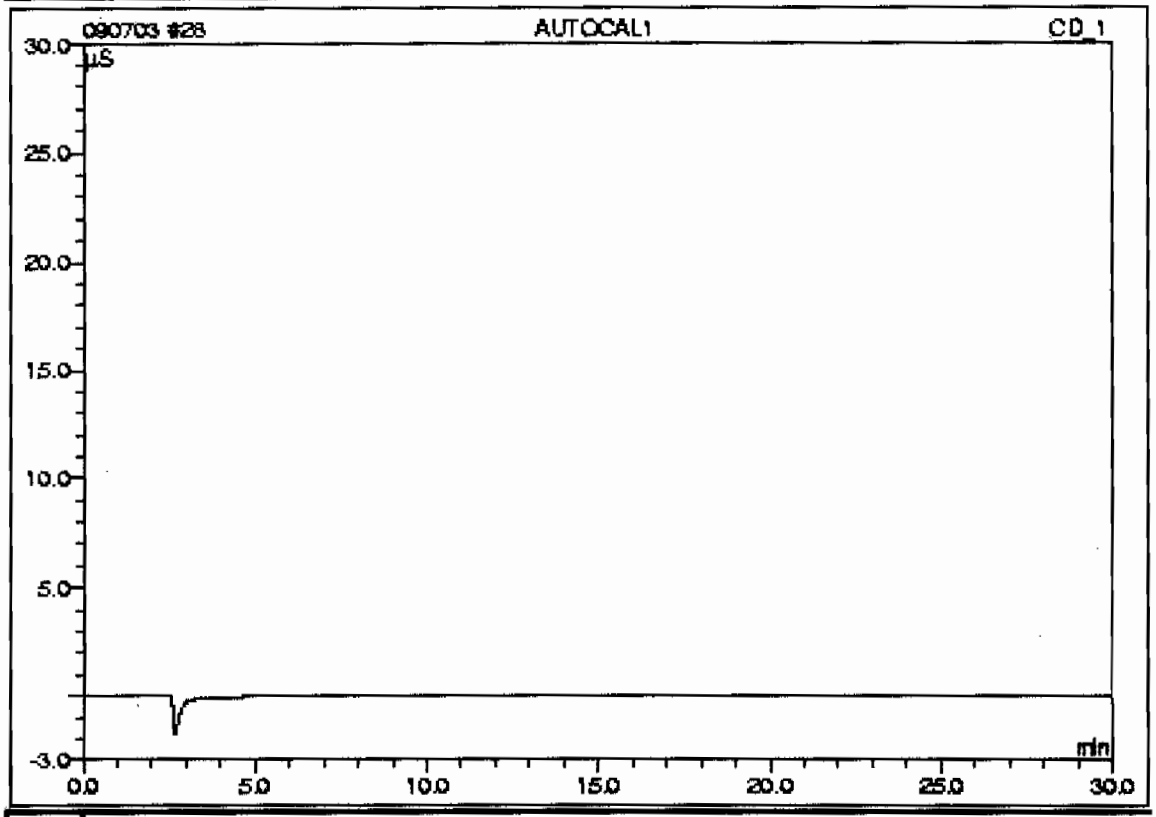

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:25	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-015580;GLGCE085;300;9055

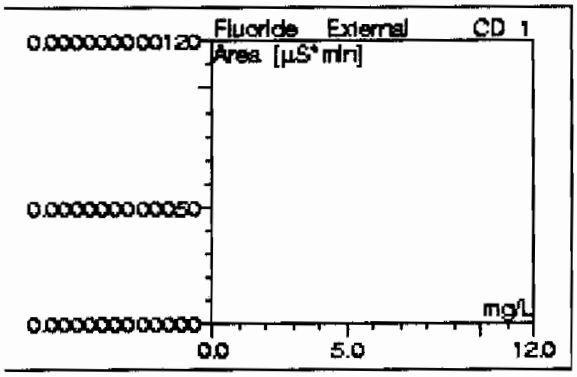

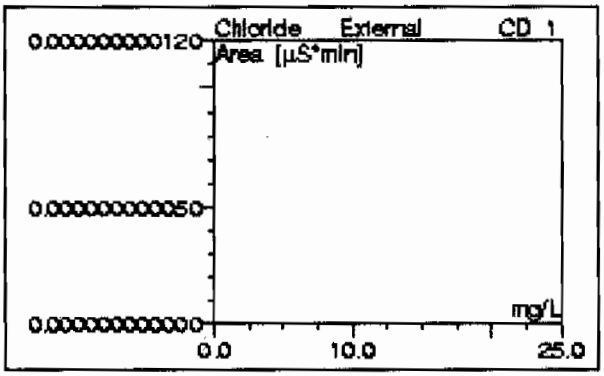

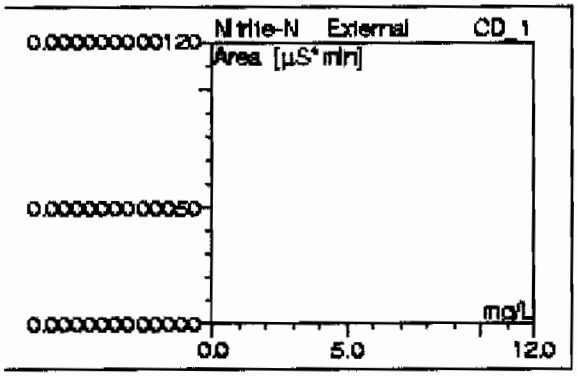

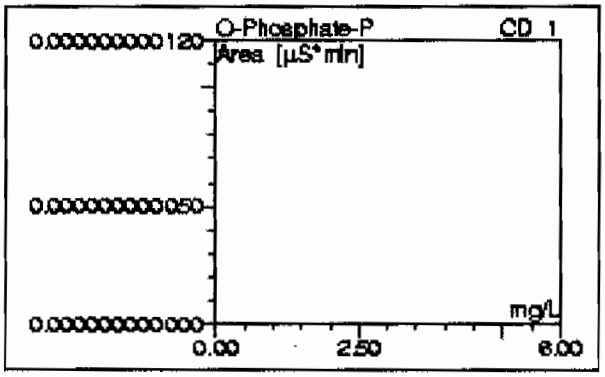

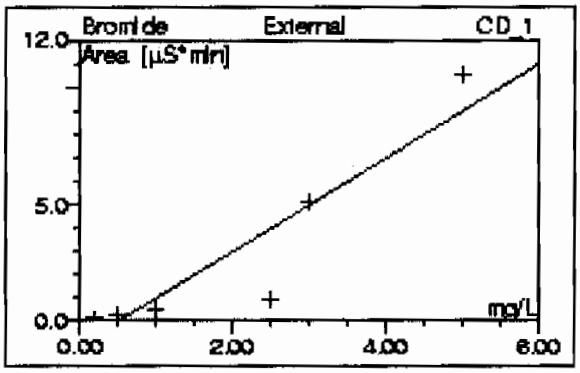

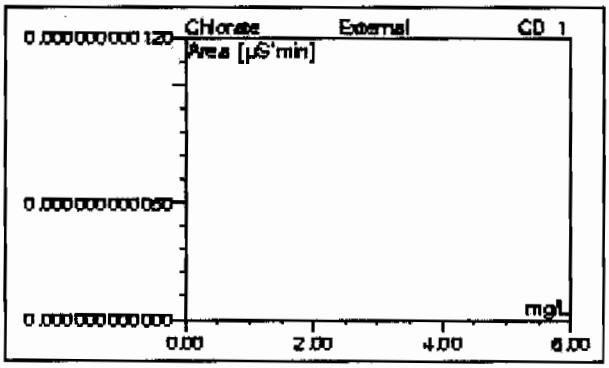

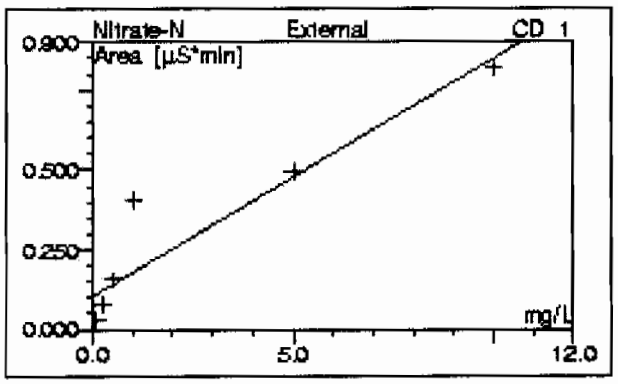

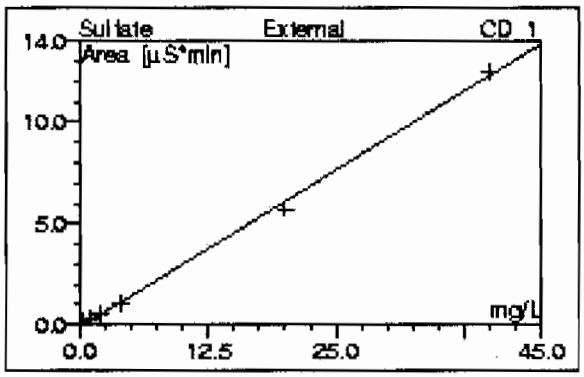

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Chloride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrite-N	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Bromide	0LOff	85.7419	-1.0196	1.9997	0.0000
n.a.	n.a.	Chlorate	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrate-N	0LOff	86.4468	0.1041	0.0746	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8340	-0.1257	0.3112	0.0000
Average:				90.6742	-0.1301	0.2982	0.0000

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

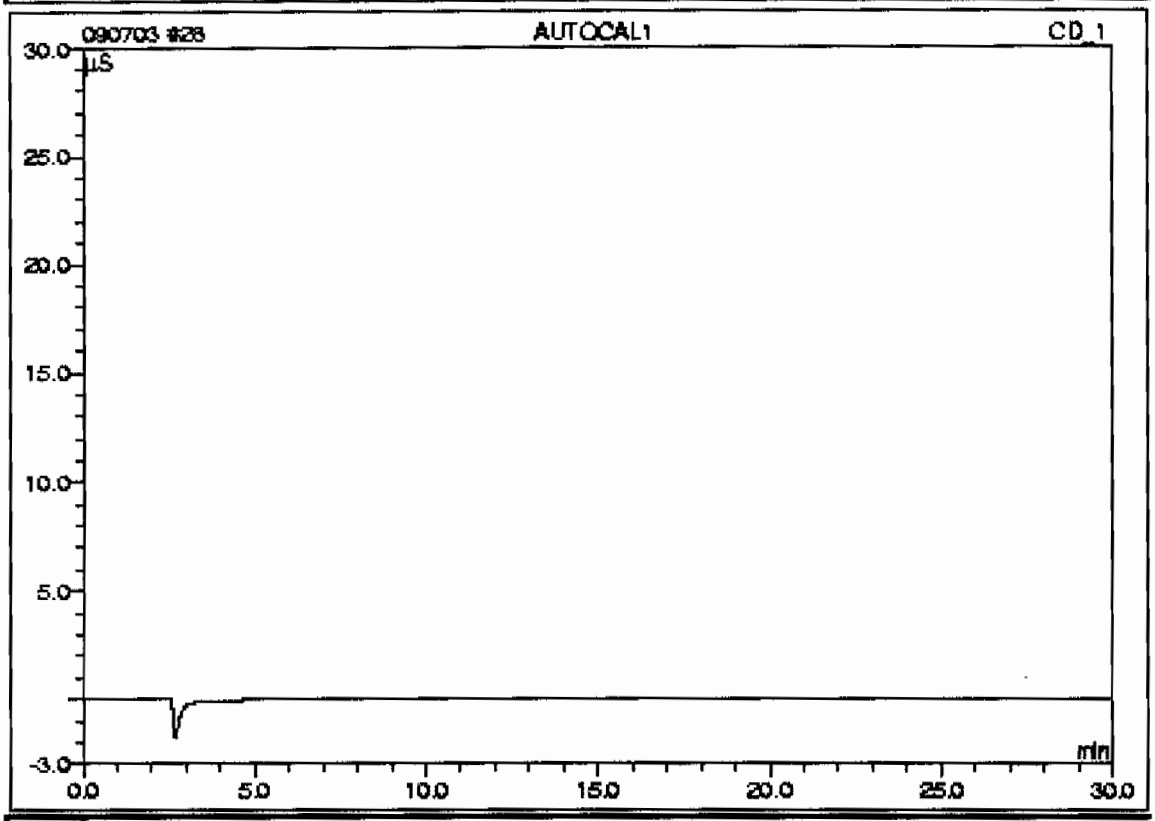

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:25	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9055

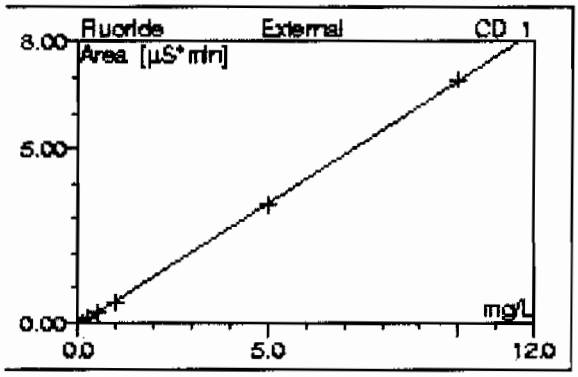

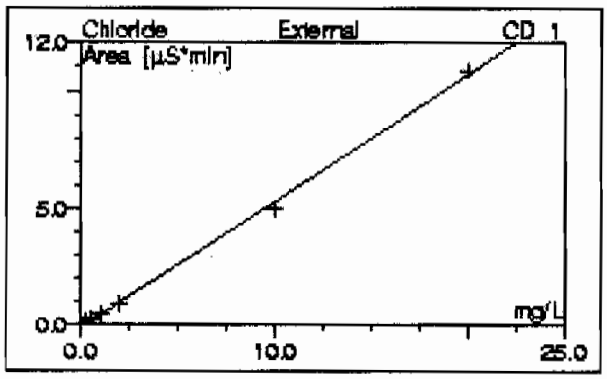

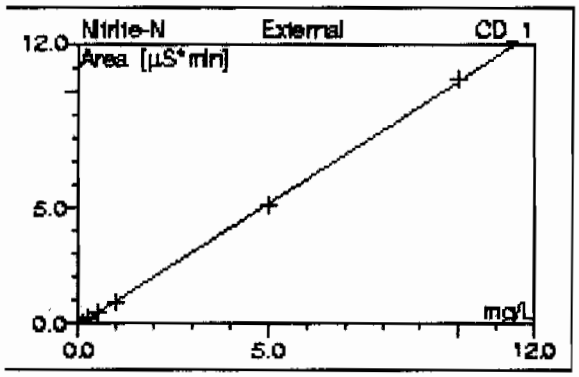

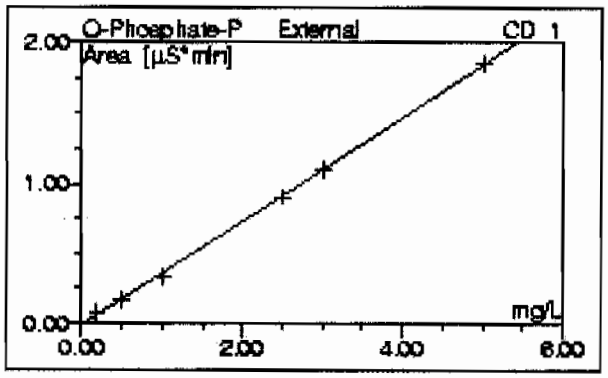

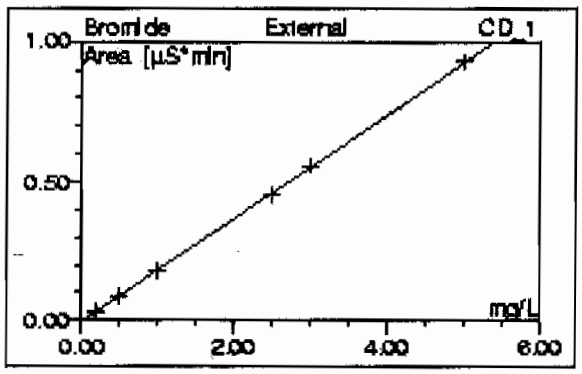

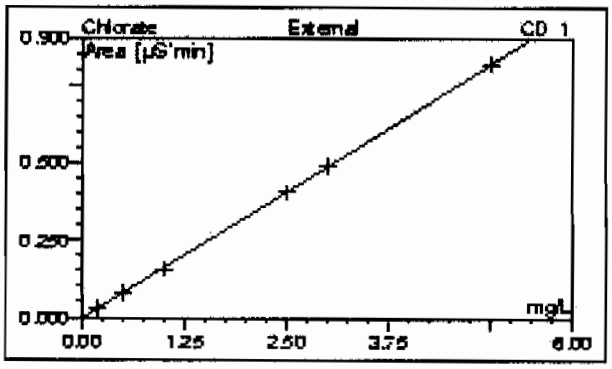

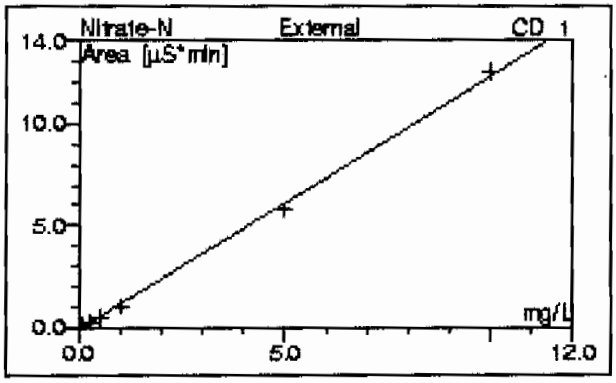

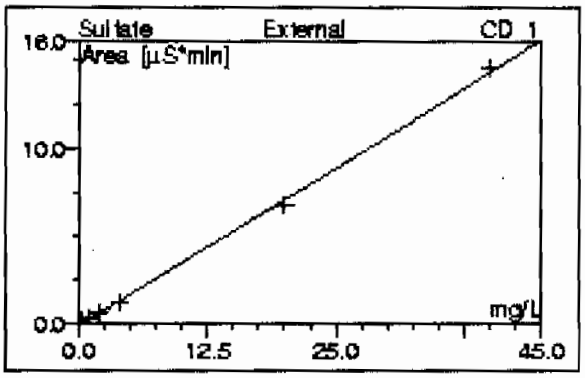

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9818	-0.0458	0.6968	0.0000
n.a.	n.a.	Chloride	0LOff	99.8028	-0.1138	0.5394	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9773	-0.0622	1.0502	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	99.9702	-0.0164	0.3726	0.0000
n.a.	n.a.	Bromide	0LOff	99.9731	-0.0054	0.1863	0.0000
n.a.	n.a.	Chlorate	0LOff	99.9897	-0.0032	0.1646	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.8340	-0.1257	1.2449	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8797	-0.1186	0.3620	0.0000
Average:				99.9261	-0.0614	0.5771	0.0000

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

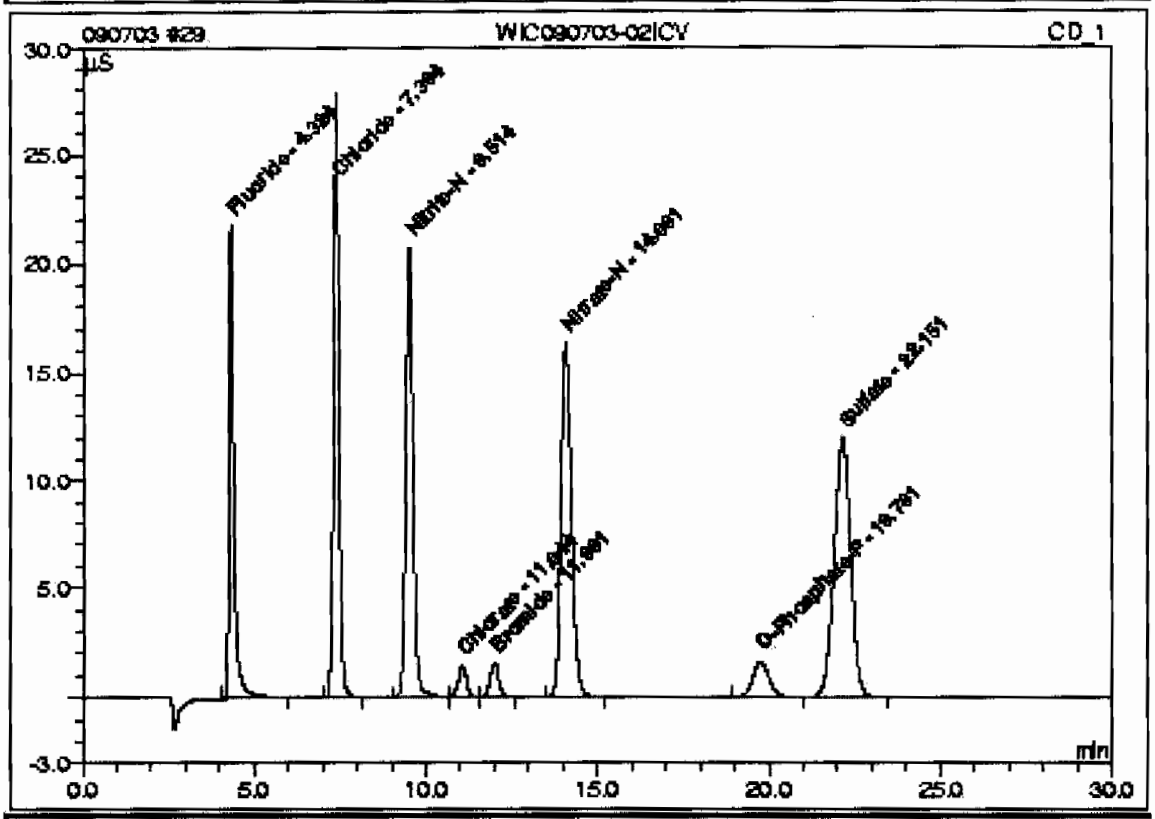

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.09	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65338	24.40
Total:				49.8694	0.000	27.271	100.00

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

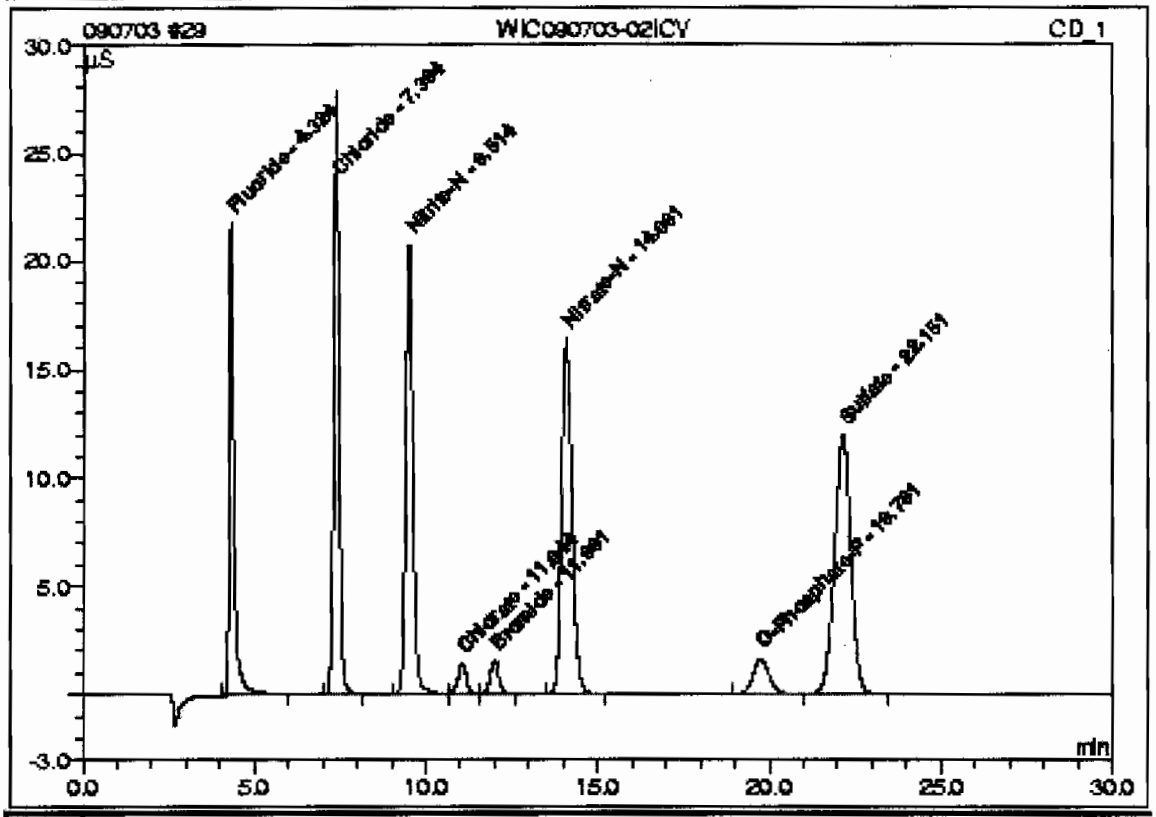

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.08	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65338	24.40
Total:				49.6694	0.000	27.271	100.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE085;300;9056

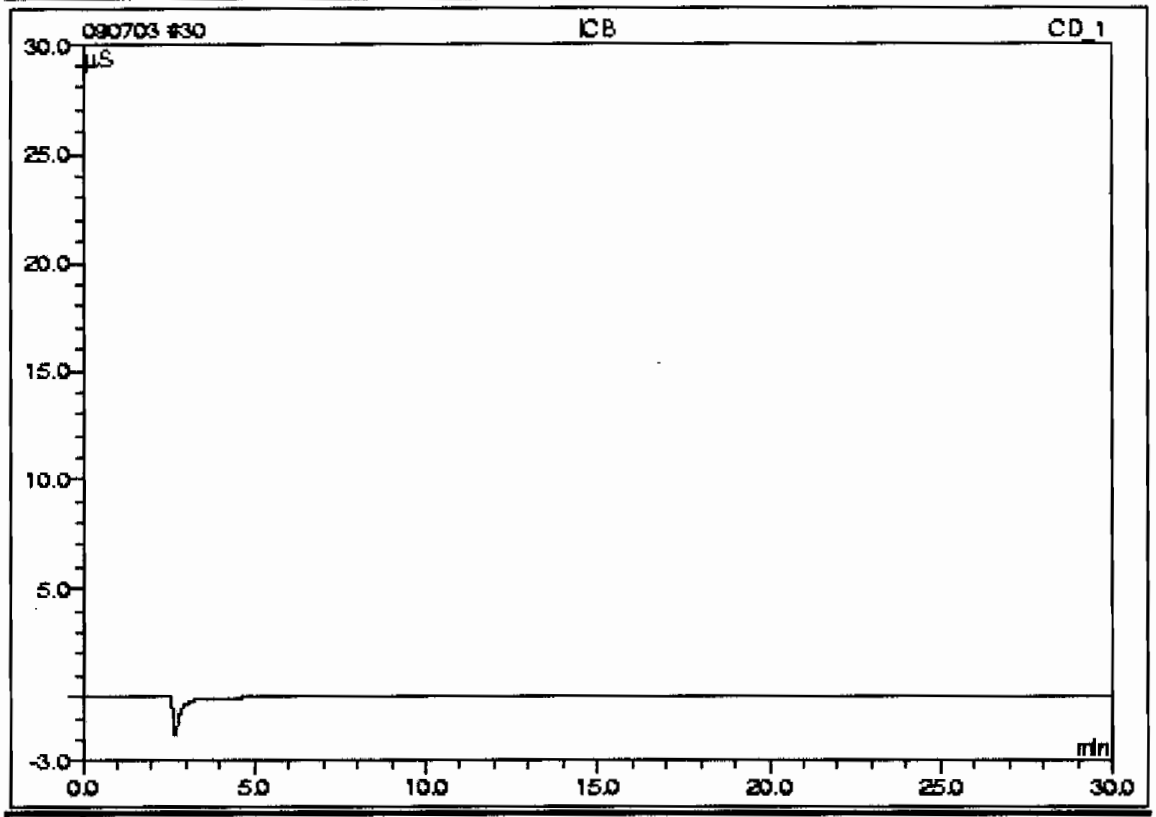

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

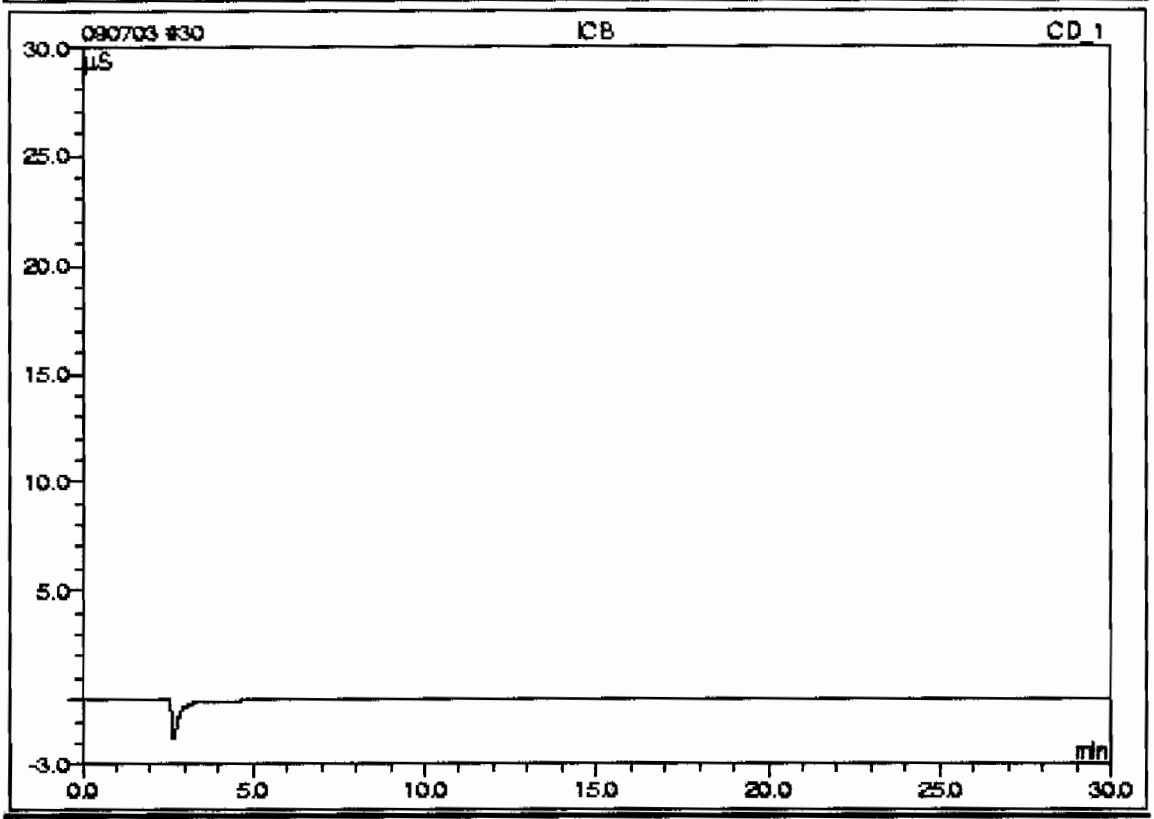

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 090710.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/10/09 10:27		1	090710	MAR1
ICV	07/10/09 10:55		1	090710	MAR1
ICB	07/10/09 11:24		1	090710	MAR1
1201869897	07/10/09 11:53	880627	1	090710	MAR1
1201869901	07/10/09 12:22	880627	1	090710	MAR1
232347001	07/10/09 12:50	880627	1	090710	MAR1
1201869898	07/10/09 13:19	880627	1	090710	MAR1
1201869899	07/10/09 13:48	880627	1	090710	MAR1
1201869900	07/10/09 14:17	880627	1	090710	MAR1
232347002	07/10/09 14:46	880627	1	090710	MAR1
232347003	07/10/09 15:15	880627	1	090710	MAR1
232347004	07/10/09 15:43	880627	1	090710	MAR1
CVH	07/10/09 16:12		1	090710	MAR1
CCB	07/10/09 16:41		1	090710	MAR1
1201872402	07/10/09 17:10	881671	1	090710	MAR1
1201872406	07/10/09 17:39	881671	1	090710	MAR1
232582001	07/10/09 18:08	881671	1	090710	MAR1
232582002	07/10/09 18:37	881671	1	090710	MAR1
232585001	07/10/09 19:06	881671	1	090710	MAR1
1201872403	07/10/09 19:35	881671	1	090710	MAR1
1201872404	07/10/09 20:04	881671	1	090710	MAR1
1201872405	07/10/09 20:33	881671	1	090710	MAR1
CCV	07/10/09 21:01		1	090710	MAR1
CCB	07/10/09 21:30		1	090710	MAR1
232585002	07/10/09 21:59	881671	1	090710	MAR1
232585003	07/10/09 22:28	881671	1	090710	MAR1
232591001	07/10/09 22:57	881671	1	090710	MAR1
CVH	07/10/09 23:26		1	090710	MAR1

9 WIC090710-02ICV

Sample Name:	WIC090710-02ICV	*Injection Volume:*	1.0
Vial Number:	2	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10.09 10:55	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

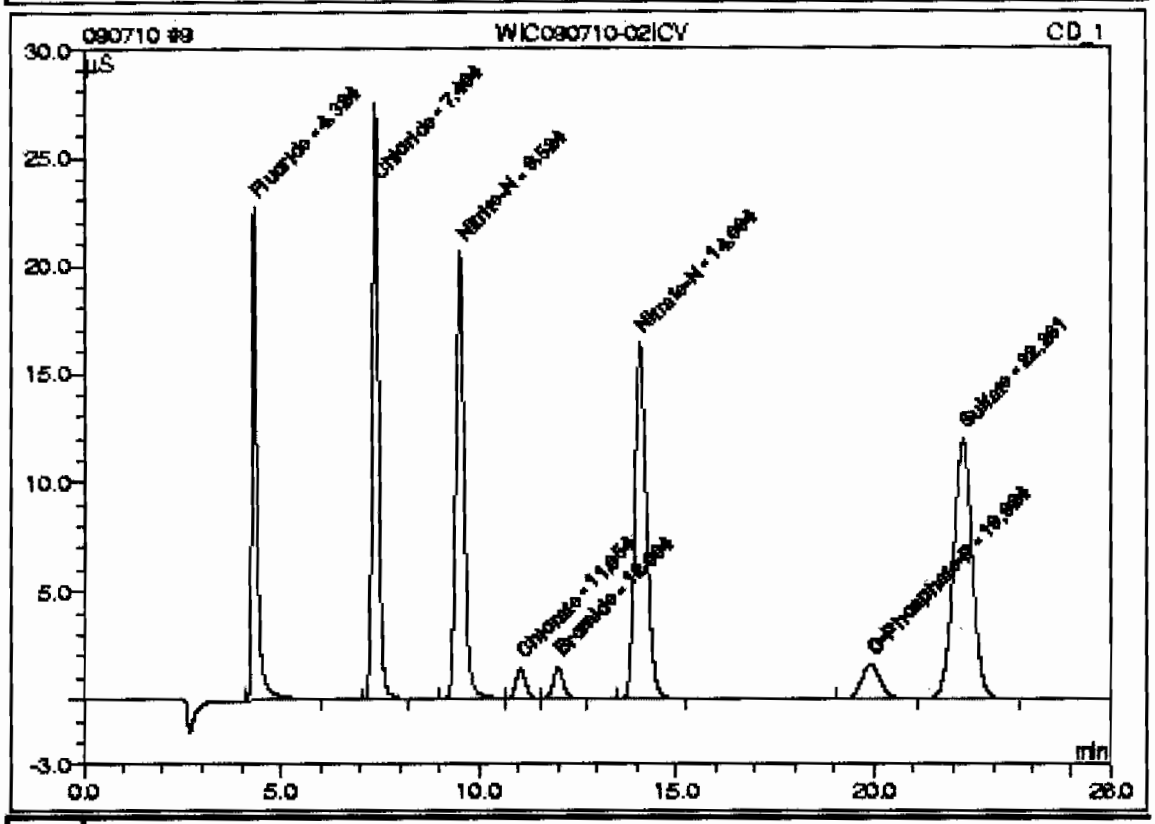

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.9513		3.40445	12.40
2	7.40	Chloride	n.a.	9.2589		4.88087	17.78
3	9.52	Nitrite-N	n.a.	4.8602		5.04179	18.37
4	11.05	Chlorate	n.a.	2.5352		0.41404	1.51
5	12.00	Bromide	n.a.	2.4394		0.44900	1.64
6	14.09	Nitrate-N	n.a.	4.6565		5.67065	20.66
7	19.92	O-Phosphate-P	n.a.	2.4520		0.89726	3.27
8	22.26	Sulfate	n.a.	18.8047		6.68826	24.37
Total:				49.9581	0.000	27.446	100.00

10 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	3	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 11:24	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE088;300;9058

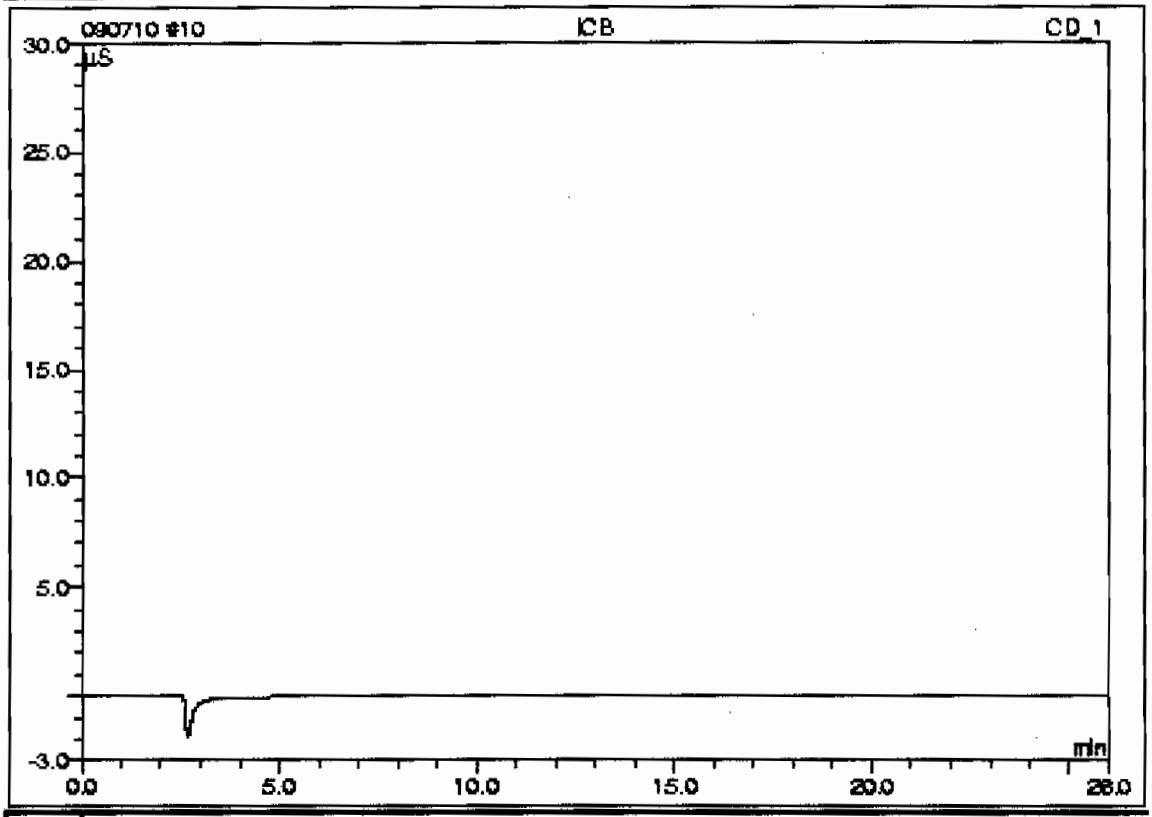

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

11 1201869897/880627/1/1/MB

Sample Name:	1201869897/880627/1/1/MB	*Injection Volume:*	1.0
Vial Number:	4	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 11:53	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

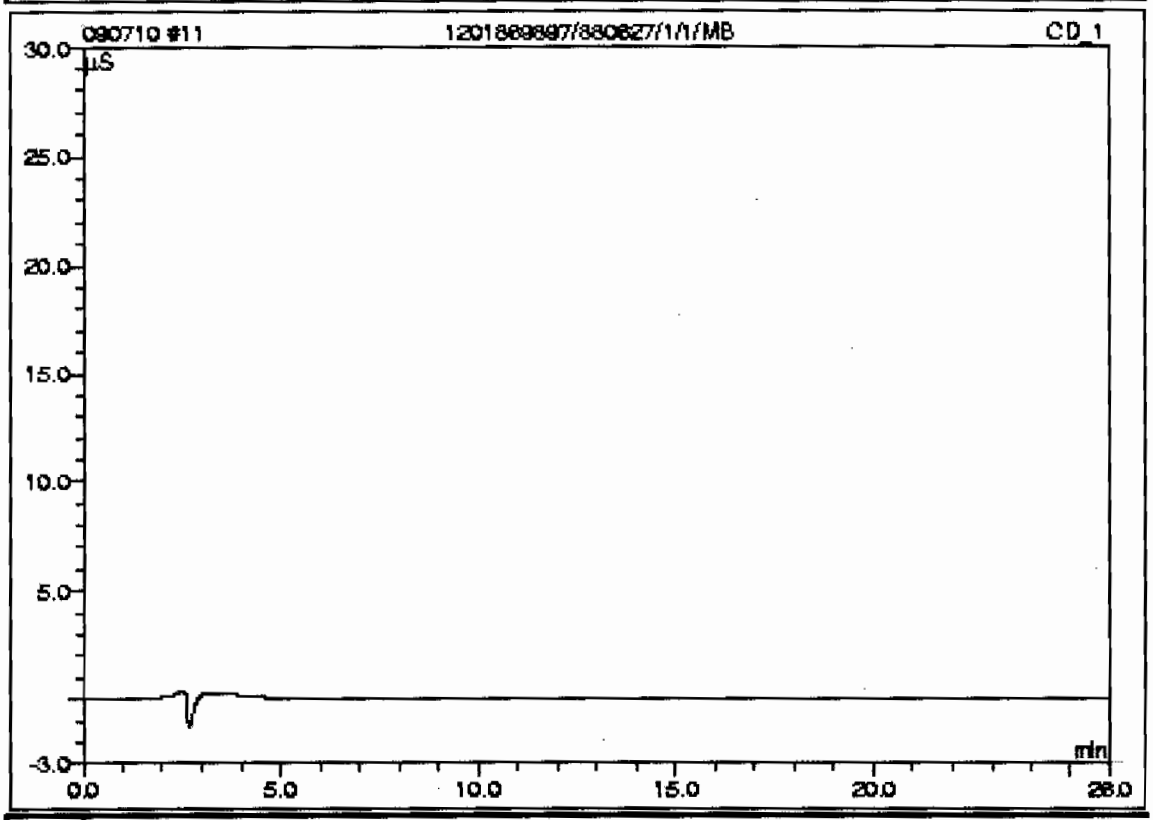

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

12 1201869901/880627/1/1/LCS

Sample Name:	1201869901/880627/1/1/LCS	*Injection Volume:*	1.0
Vial Number:	5	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 12:22	Analyst:	**MAR1**
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

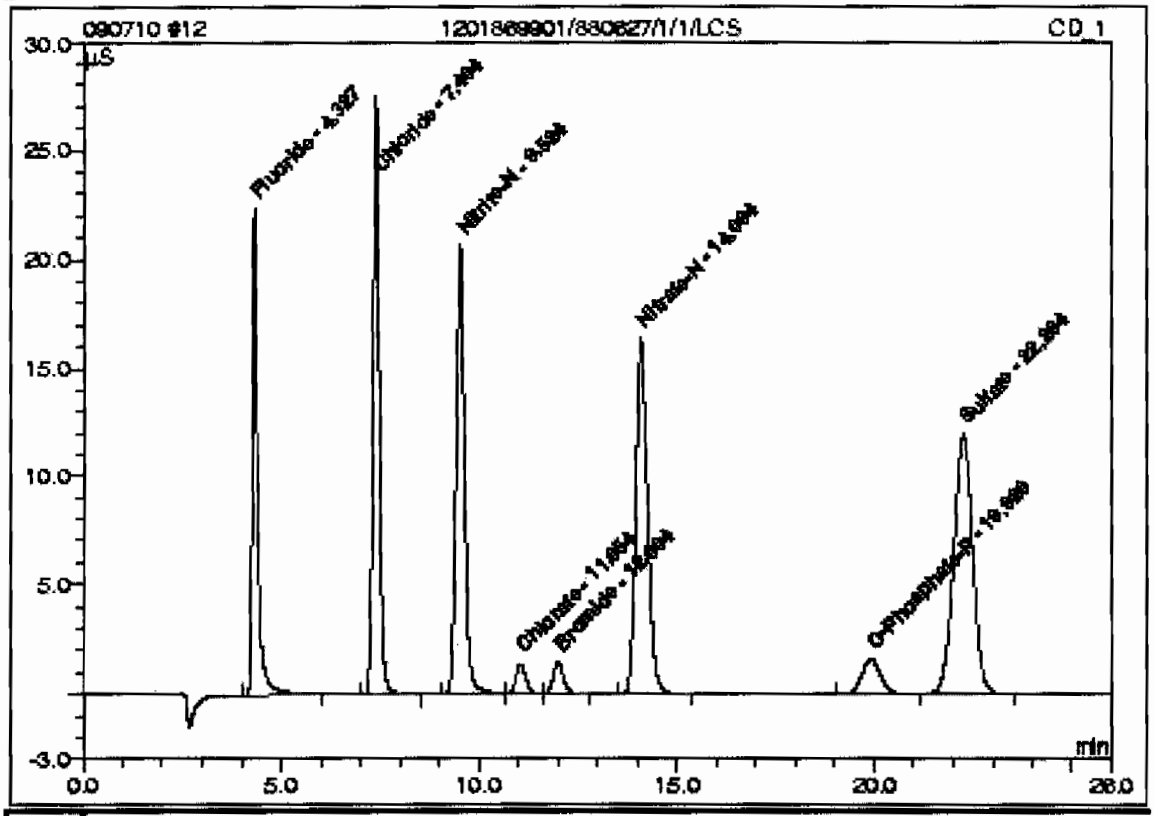

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9485		3.40250	12.38
2	7.40	Chloride	n.a.	9.2914		4.89840	17.82
3	9.52	Nitrite-N	n.a.	4.8664		5.04833	18.37
4	11.05	Chlorate	n.a.	2.5489		0.41631	1.51
5	12.00	Bromide	n.a.	2.4463		0.45028	1.64
6	14.09	Nitrate-N	n.a.	4.6653		5.68158	20.67
7	19.92	O-Phosphate-P	n.a.	2.4480		0.89576	3.26
8	22.26	Sulfate	n.a.	18.8160		6.69239	24.35
Total:				50.0308	0.000	27.486	100.00

13 232347001/880627/1/1/

Sample Name:	232347001/880627/1/1/	*Injection Volume:*	1.0
Vial Number:	6	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 12:50	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

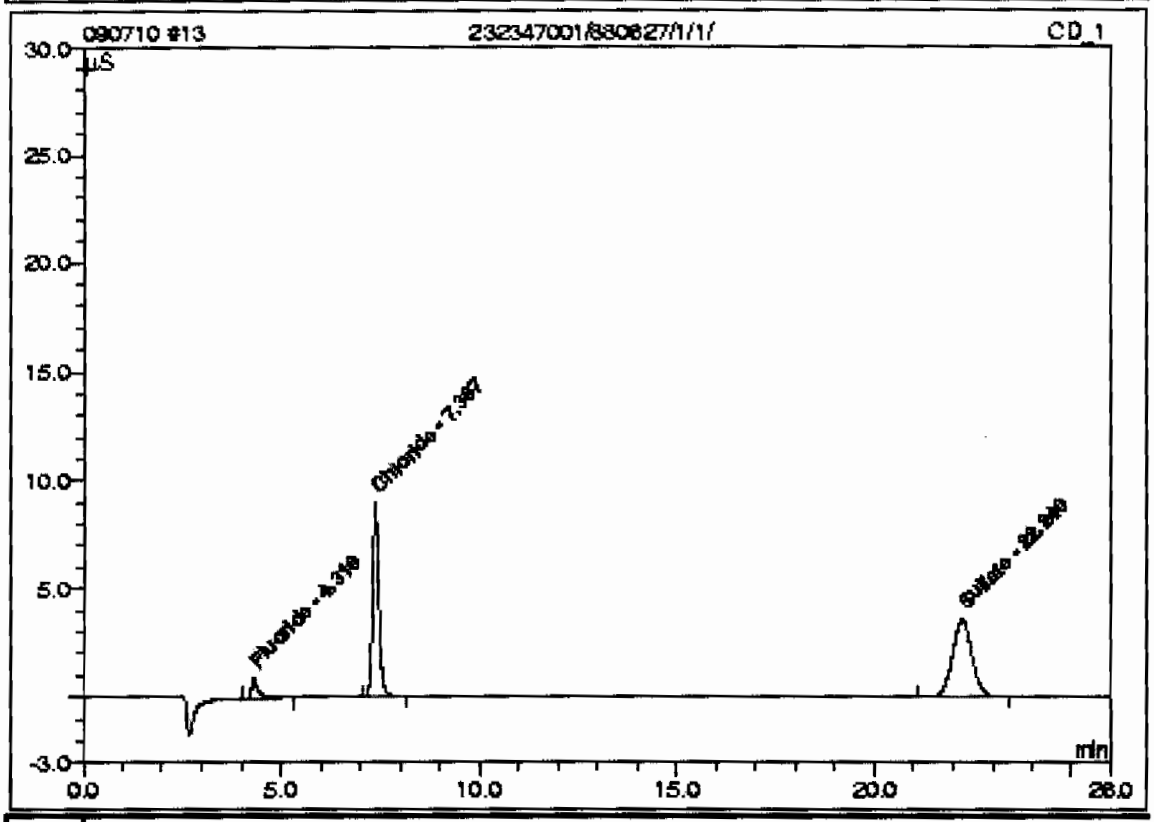

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.3061		0.16748	4.32
2	7.39	Chloride	n.a.	3.2445		1.63640	42.23
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.24	Sulfate	n.a.	6.0486		2.07086	53.45
Total:				9.5992	0.000	3.875	100.00

14 1201869898/880627/1/1/DUP

Sample Name:	1201869898/880627/1/1/DUP	*Injection Volume:*	1.0
Vial Number:	7	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 13:19	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

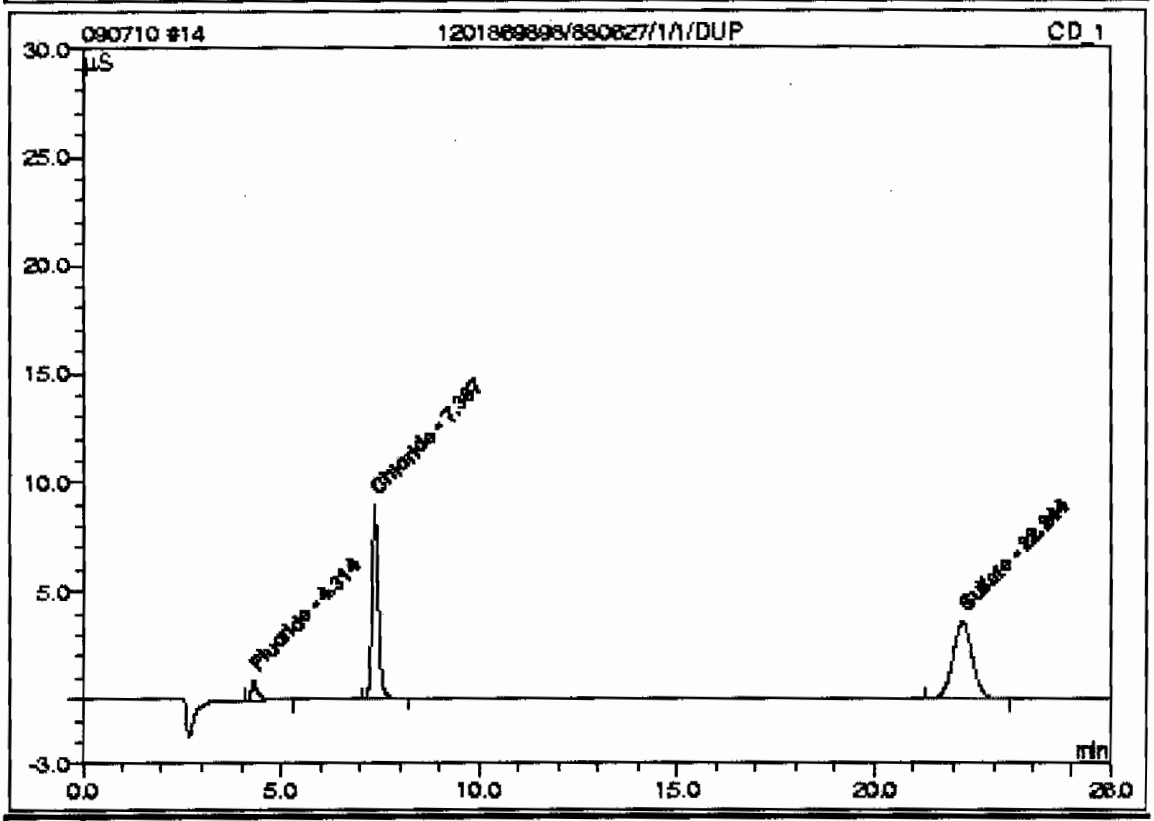

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.3052		0.16690	4.32
2	7.39	Chloride	n.a.	3.2476		1.63808	42.43
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.24	Sulfate	n.a.	6.0060		2.05544	53.24
Total:				9.5589	0.000	3.860	100.00

15 1201869899/880627/1/1/MS

Sample Name:	1201869899/880627/1/1/MS	*Injection Volume:*	1.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 13:48	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

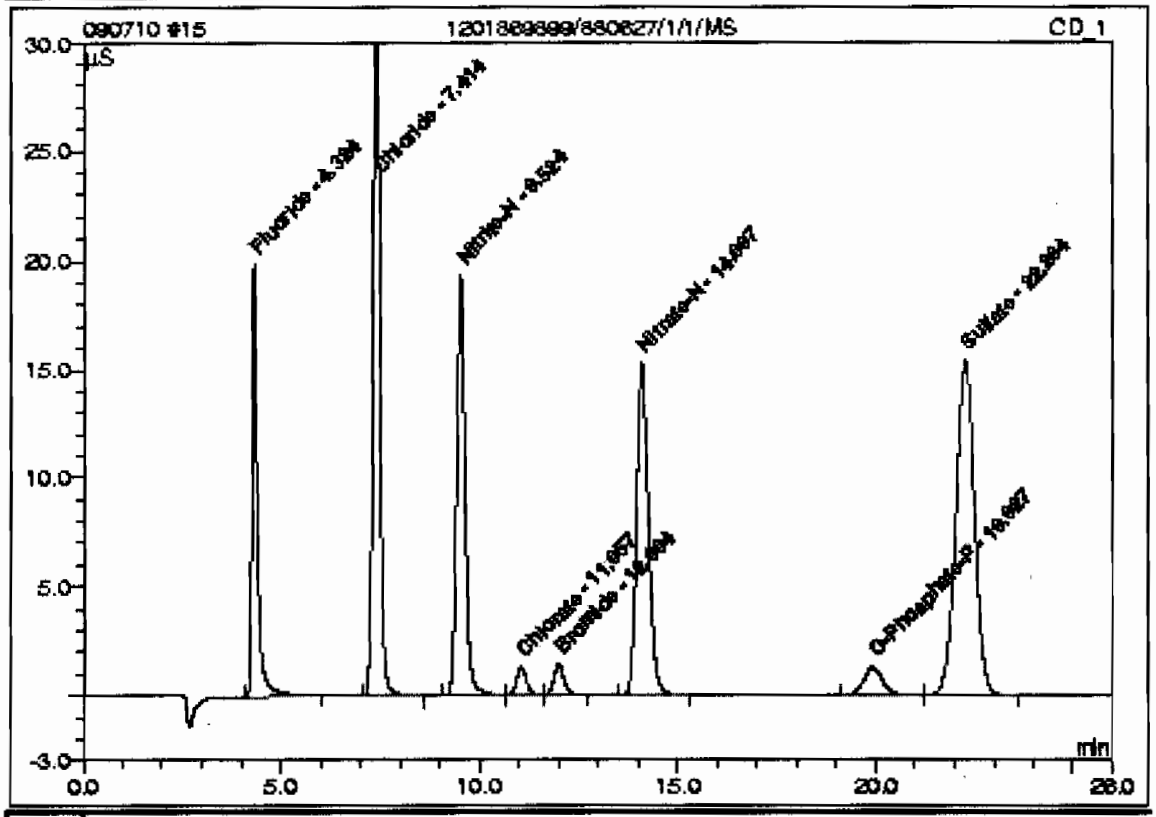

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.4969		3.08779	10.23
2	7.41	Chloride	n.a.	12.9992		6.89855	22.86
3	9.52	Nitrite-N	n.a.	4.5814		4.74899	15.73
4	11.06	Chlorate	n.a.	2.3891		0.38999	1.29
5	12.00	Bromide	n.a.	2.3672		0.43555	1.44
6	14.10	Nitrate-N	n.a.	4.3778		5.32376	17.64
7	19.93	O-Phosphate-P	n.a.	2.0083		0.73195	2.43
8	22.28	Sulfate	n.a.	23.9914		8.56575	28.38
Total:				57.2112	0.000	30.182	100.00

16 1201869900/880627/1/1/MSD

Sample Name:	1201869900/880627/1/1/MSD	*Injection Volume:*	1.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 14:17	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9055

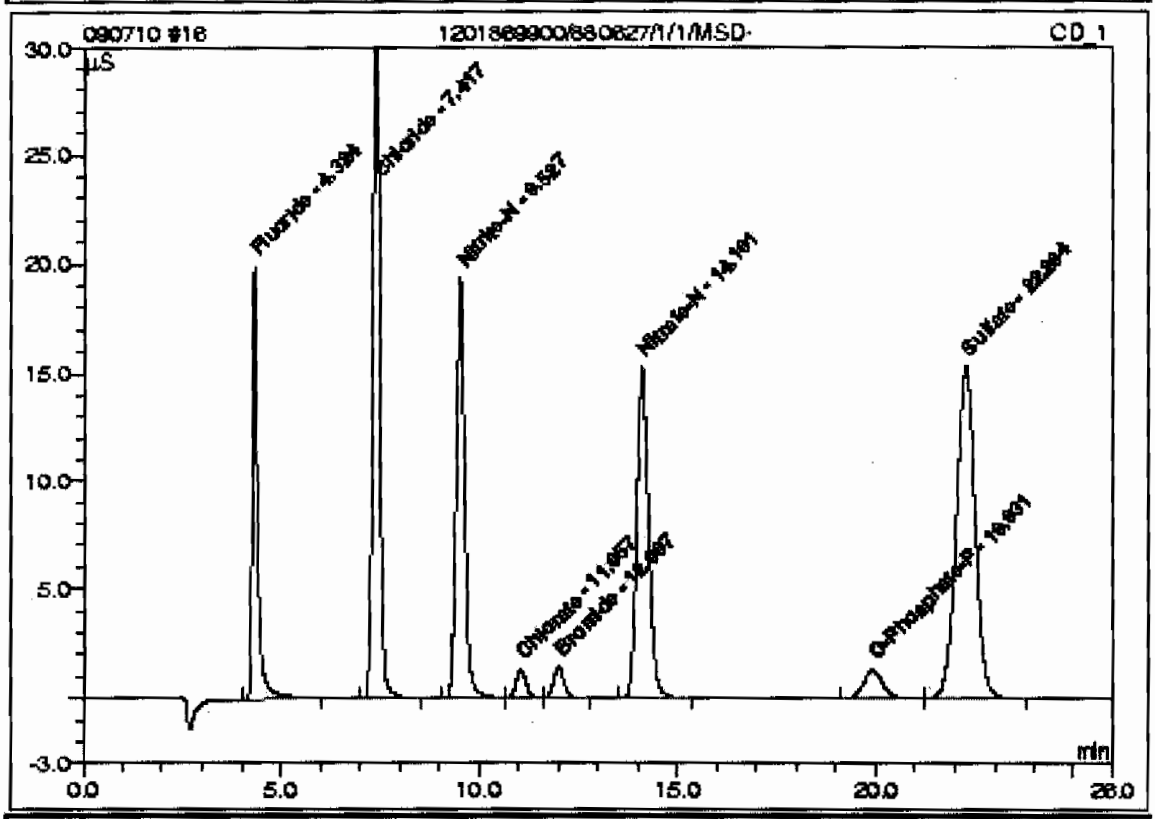

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.4945		3.08614	10.24
2	7.42	Chloride	n.a.	12.9559		6.87519	22.81
3	9.53	Nitrite-N	n.a.	4.5806		4.74812	15.75
4	11.06	Chlorate	n.a.	2.3956		0.38943	1.29
5	12.01	Bromide	n.a.	2.3678		0.43567	1.45
6	14.10	Nitrate-N	n.a.	4.3726		5.31726	17.64
7	19.93	O-Phosphate-P	n.a.	2.0038		0.73025	2.42
8	22.28	Sulfate	n.a.	23.9756		8.56004	28.40
Total:				57.1363	0.000	30.142	100.00

17 232347002/880627/1/1/

Sample Name:	232347002/880627/1/1/	*Injection Volume:*	1.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 14:48	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

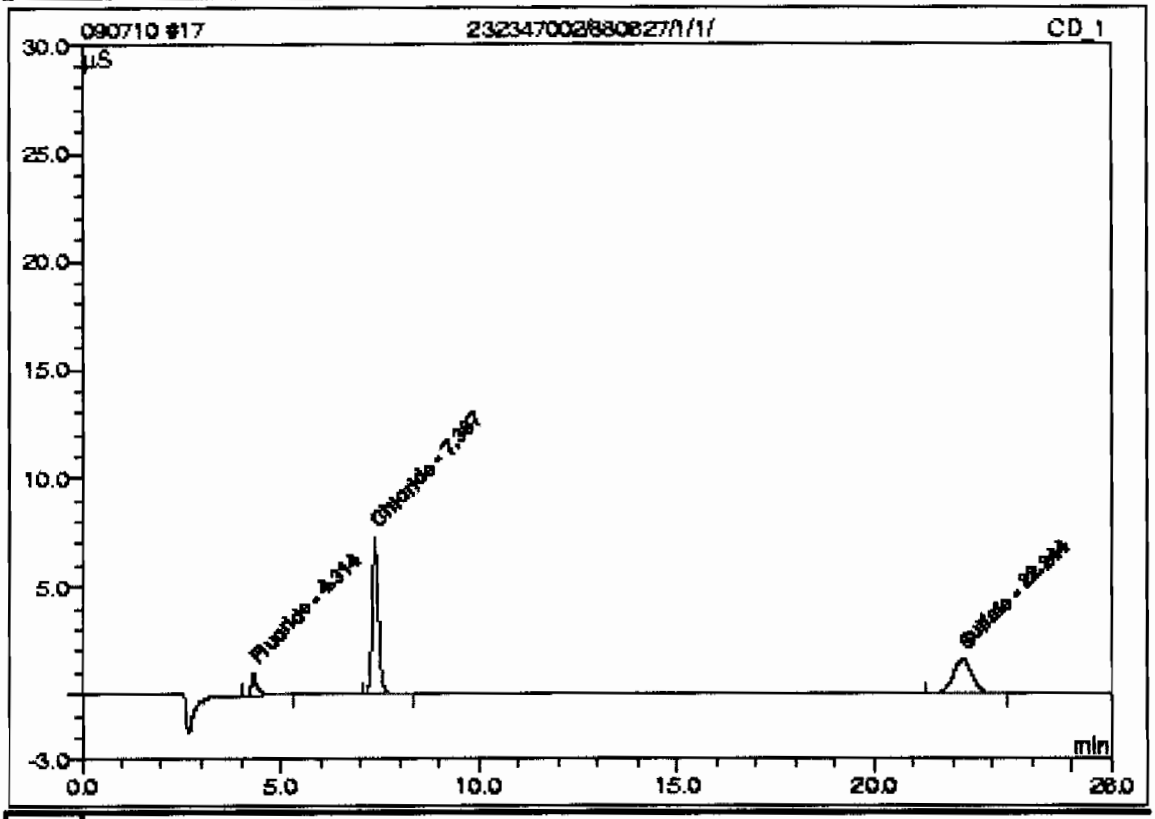

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.3307		0.18462	7.52
2	7.39	Chloride	n.a.	2.7011		1.34328	54.75
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.24	Sulfate	n.a.	2.8852		0.92576	37.73
Total:				5.9170	0.000	2.454	100.00

18 232347003/880627/1/1/

Sample Name:	232347003/880627/1/1/	*Injection Volume:*	1.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 15:15	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE085;300;9058

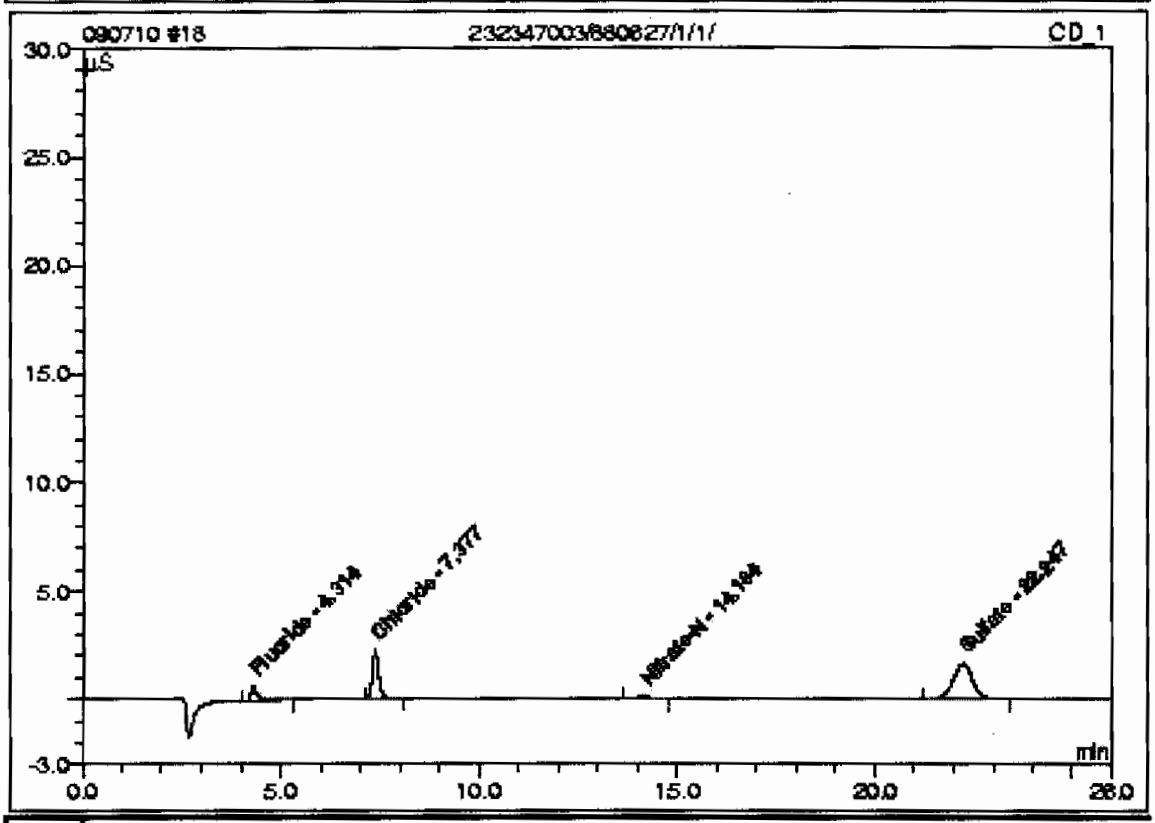

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.2393		0.12098	7.73
2	7.38	Chloride	n.a.	1.0041		0.42782	27.34
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.16	Nitrate-N	n.a.	0.1469		0.05721	3.66
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	22.25	Sulfate	n.a.	2.9760		0.95864	61.27
Total:				4.3664	0.000	1.565	100.00

19 232347004/880627/1/1/

Sample Name:	232347004/880627/1/1/	*Injection Volume:*	1.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 15:43	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

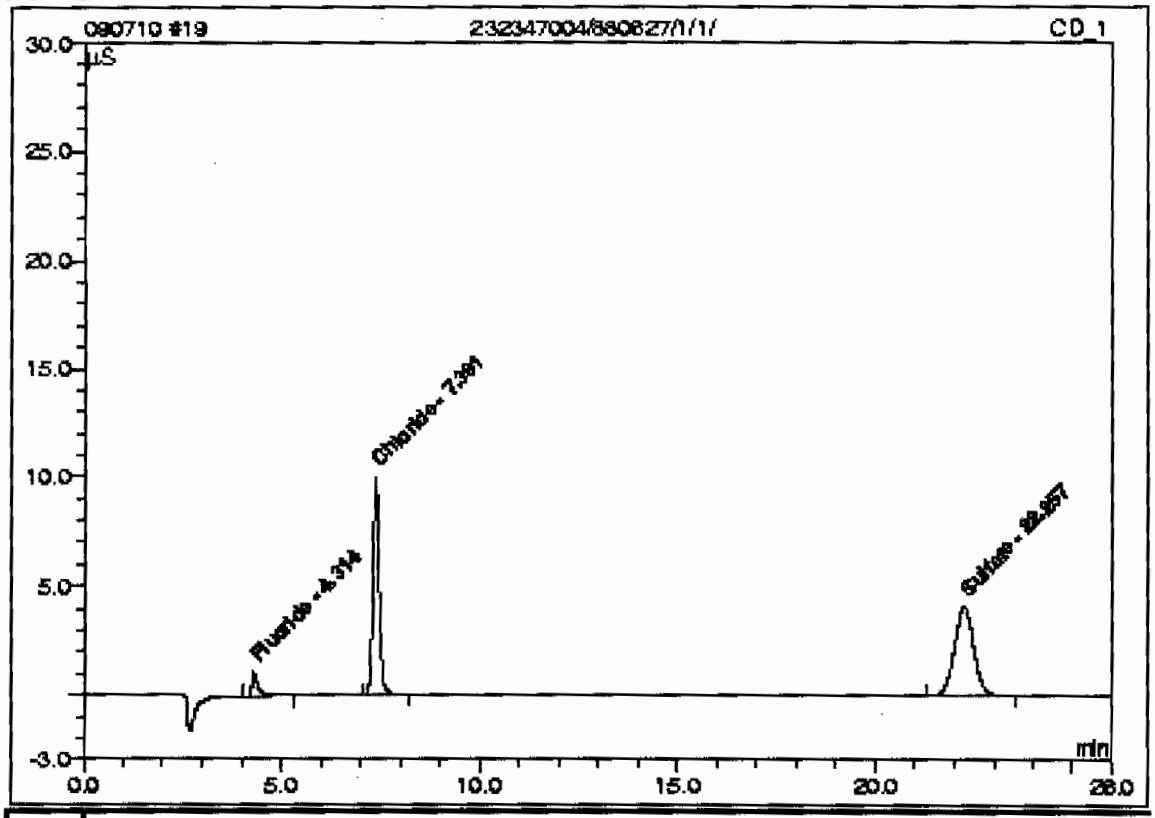

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.3490		0.19738	4.51
2	7.39	Chloride	n.a.	3.5814		1.81813	41.52
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.26	Sulfate	n.a.	6.8562		2.36319	53.97
Total:				10.7866	0.000	4.379	100.00

20 WIC090710-02CVH

Sample Name:	WIC090710-02CVH	*Injection Volume:*	1.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 15:12	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

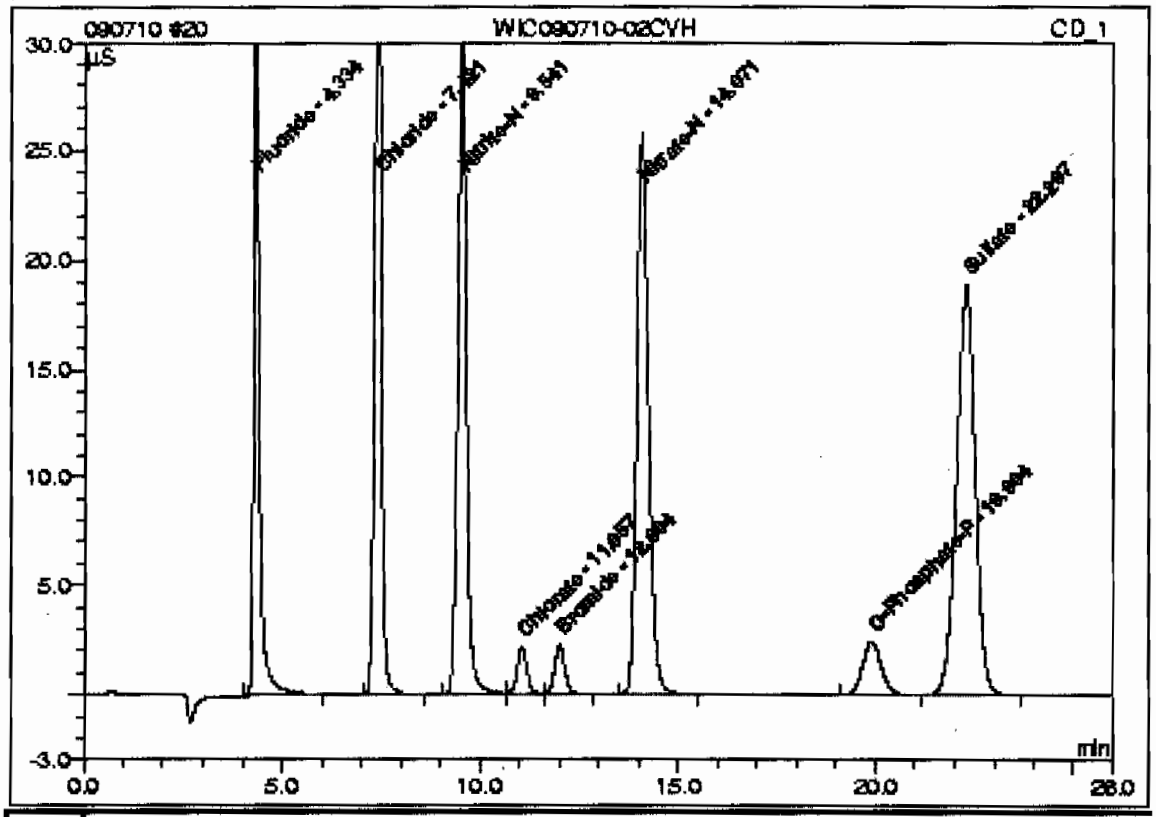

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	7.5118		5.18871	12.15
2	7.42	Chloride	n.a.	14.5867		7.75491	18.16
3	9.54	Nitrite-N	n.a.	7.4133		7.72299	18.08
4	11.06	Chlorate	n.a.	3.8270		0.62667	1.47
5	12.00	Bromide	n.a.	3.6753		0.67921	1.59
6	14.07	Nitrate-N	n.a.	7.2904		8.94931	20.95
7	19.90	O-Phosphate-P	n.a.	3.6723		1.35196	3.17
8	22.30	Sulfate	n.a.	29.1672		10.43929	24.44
Total:				77.1440	0.000	42.713	100.00

21 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	14	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 15:41	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9055

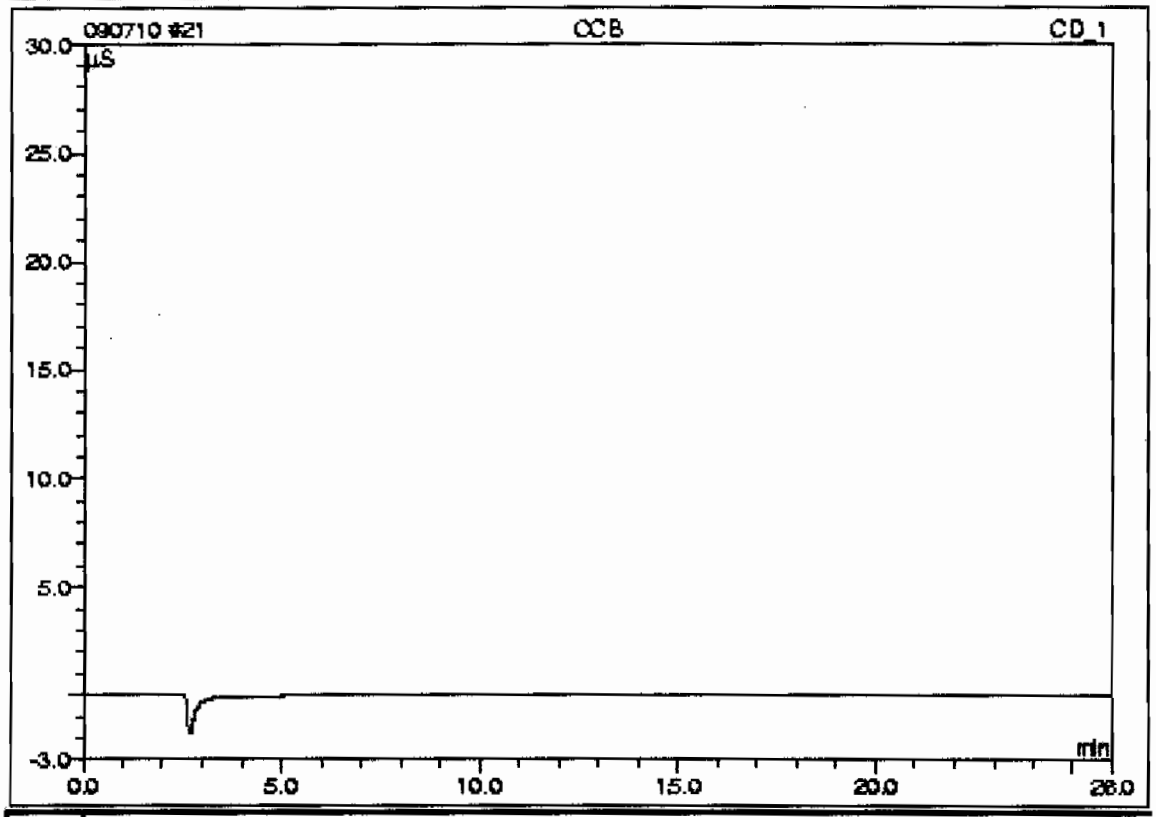

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

pH

pH / Corrosivity LogBook

Analyst: EXF1
Batch: 880644
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201869924	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201869924 LCS		Soil	11:40	11:45	26-JUN-09 12:07	pH	20	20	7.02	21.0'C	7	100.286	
1201869924 LCS		Soil	11:40	11:45	26-JUN-09 12:07	pH 2	20	20	7.03	21.0'C	7	100.429	
232347001		Soil	11:40	11:45	26-JUN-09 12:11	pH	20	20	8.92	23.3'C			
232347001		Soil	11:40	11:45	26-JUN-09 12:11	pH 2	20	20	8.96	23.2'C			
232347002		Soil	11:40	11:45	26-JUN-09 12:12	pH	20	20	8.4	23.1'C			
232347002		Soil	11:40	11:45	26-JUN-09 12:12	pH 2	20	20	8.38	23.0'C			
232347003		Soil	11:40	11:45	26-JUN-09 12:16	pH	20	20	8.87	23.0'C			
232347003		Soil	11:40	11:45	26-JUN-09 12:16	pH 2	20	20	8.84	23.0'C			
232347004		Soil	11:40	11:45	26-JUN-09 12:19	pH	20	20	9.07	22.1'C			
232347004		Soil	11:40	11:45	26-JUN-09 12:19	pH 2	20	20	9.06	22.1'C			
CCV			11:40	11:45	26-JUN-09 12:22	pH	20	20	7.02	21.0'C	7	100.286	
CCV			11:40	11:45	26-JUN-09 12:22	pH 2	20	20	7.01	21.0'C	7	100.143	
1201869923 DUP	232347004	Soil	11:40	11:45	26-JUN-09 12:25	pH	20	20	8.92	22.7'C			1.668
1201869923 DUP	232347004	Soil	11:40	11:45	26-JUN-09 12:25	pH 2	20	20	8.94	22.7'C			1.333
232357001		Soil	11:40	11:45	26-JUN-09 12:28	pH	20	20	8.87	22.9'C			
232357001		Soil	11:40	11:45	26-JUN-09 12:28	pH 2	20	20	8.85	22.9'C			
232357002		Soil	11:40	11:45	26-JUN-09 12:33	pH	20	20	8.65	22.2'C			
232357002		Soil	11:40	11:45	26-JUN-09 12:33	pH 2	20	20	8.64	22.2'C			
232367001		Soil	11:40	11:45	26-JUN-09 12:36	pH	20	20	8.09	22.2'C			
232367001		Soil	11:40	11:45	26-JUN-09 12:36	pH 2	20	20	8.09	22.3'C			
1201869922 DUP	232367001	Soil	11:40	11:45	26-JUN-09 12:39	pH	20	20	8.08	21.9'C			.124
1201869922 DUP	232367001	Soil	11:40	11:45	26-JUN-09 12:39	pH 2	20	20	8.05	21.9'C			.496
CCV			11:40	11:45	26-JUN-09 12:43	pH	20	20	7	21.2'C	7	100	
CCV			11:40	11:45	26-JUN-09 12:43	pH 2	20	20	7	21.2'C	7	100	
232367002		Soil	11:40	11:45	26-JUN-09 12:43	pH	20	20	7.38	22.6'C			
232367002		Soil	11:40	11:45	26-JUN-09 12:43	pH 2	20	20	7.34	22.8'C			
232367003		Soil	11:40	11:45	26-JUN-09 12:48	pH	20	20	8.27	22.6'C			
232367003		Soil	11:40	11:45	26-JUN-09 12:48	pH 2	20	20	8.27	22.6'C			

pH / Corrosivity LogBook

Analyst: EXF1
Batch: 880644
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201869924	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
232367004		Soil	11:40	11:45	26-JUN-09 12:49	pH	20	20	5.23	22.4'C			
232367004		Soil	11:40	11:45	26-JUN-09 12:49	pH 2	20	20	5.24	22.4'C			
232367005		Soil	11:40	11:45	26-JUN-09 12:54	pH	20	20	7.45	22.0'C			
232367005		Soil	11:40	11:45	26-JUN-09 12:54	pH 2	20	20	7.48	22.1'C			
232367006		Soil	11:40	11:45	26-JUN-09 12:57	pH	20	20	7.94	21.9'C			
232367006		Soil	11:40	11:45	26-JUN-09 12:57	pH 2	20	20	7.9	21.9'C			
CCV			11:40	11:45	26-JUN-09 13:00	pH	20	20	6.99	21.4'C	7	99.857	
CCV			11:40	11:45	26-JUN-09 13:00	pH 2	20	20	6.99	21.5'C	7	99.857	
232367007		Soil	11:40	11:45	26-JUN-09 13:05	pH	20	20	6.56	22.4'C			
232367007		Soil	11:40	11:45	26-JUN-09 13:05	pH 2	20	20	6.54	22.4'C			
232367008		Soil	11:40	11:45	26-JUN-09 13:09	pH	20	20	5.89	22.4'C			
232367008		Soil	11:40	11:45	26-JUN-09 13:09	pH 2	20	20	5.92	22.4'C			
232367009		Soil	11:40	11:45	26-JUN-09 13:14	pH	20	20	7.1	22.2'C			
232367009		Soil	11:40	11:45	26-JUN-09 13:14	pH 2	20	20	7.11	22.2'C			
232367010		Soil	11:40	11:45	26-JUN-09 13:15	pH	20	20	7.72	22.0'C			
232367010		Soil	11:40	11:45	26-JUN-09 13:15	pH 2	20	20	7.71	22.0'C			
232367011		Soil	11:40	11:45	26-JUN-09 13:17	pH	20	20	7.64	21.8'C			
232367011		Soil	11:40	11:45	26-JUN-09 13:17	pH 2	20	20	7.6	21.8'C			
CCV			11:40	11:45	26-JUN-09 13:18	pH	20	20	7	21.4'C	7	100	
CCV			11:40	11:45	26-JUN-09 13:18	pH 2	20	20	6.99	21.4'C	7	99.857	

Calibration Information:
Run Date: 26-JUN-09 10:01
Instrument: PHX742
Analyst: RXG2

Standard	Observed	Theoretical		C	%Recovery
IMM090626-PH1	4.01	4	SU	21.5	100.25
IMM090626-PH-	7	7	SU	21.5	100
UPH090626b3-1	10.02	10	SU	21.5	100.2
UPH090626-03e-	2.02	2	SU	21.5	101
090626F30-1	11.99	12	SU	21.5	99.917
IMM090626g3-1	7.02	7	SU	21.5	100.29

Comments:

GEL Laboratories LLC

Page#_____

Miscellaneous

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
14-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
IC	EPA 300.0	Solid	LANL
Batch ID:	**Sample Numbers:**		
880627	See Below		

Potentially affected work order(s)(SDG): 232347(09-2458)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/MSD: QC 1201869899MS, QC 1201869900MSD	1. The MS and MSD recoveries fall outside of the GEL acceptance limits but within the client specified limits

Originator's Name:

Mary Sherwood 14-JUL-09

Data Validator/Group Leader:

Julia Hamilton 14-JUL-09

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2458

Method/Analysis Information

Procedure: **Dry Weight-Percent Moisture**

Analytical Method:

Analytical Batch Number: 880620

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201869872	232347001(CAMO-09-10462) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-020 REV# 9.

Calibration Information:

Quality Control (QC) Information:

Designated QC
The following sample was used for QC: 232347001 (CAMO-09-10462). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU. Not Applicable.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
The data for this batch was transferred from batch 880618.

Blank Decision Level
Not Applicable. The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882703
Prep Batch Number:	880618

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201874791	Method Blank (MB)
1201874792	232754002(CAMO-09-6614) Sample Duplicate (DUP)
1201874793	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in

accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874791 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232754002 (CAMO-09-6614). The QC was from LANL work order 232754.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples were recounted due to high relative percent difference/relative error ratio.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOTH**
Analytical Method:	DOE EML HASL-300, Th-01-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881079
Prep Batch Number:	880618

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201871023	Method Blank (MB)
1201871024	232347001(CAMO-09-10462) Sample Duplicate (DUP)
1201871025	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-038 REV# 12.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201871023 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232347001 (CAMO-09-10462). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881676
Prep Batch Number:	880618

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201872427	Method Blank (MB)
1201872428	232347001(CAMO-09-10462) Sample Duplicate (DUP)
1201872429	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201872427 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232347001 (CAMO-09-10462). The QC was from LANL work order 232347.

QC Information

All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Sample 232347004 (CAMO-09-10467) was recounted due to poor resolution.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	880723
Prep Batch Number:	880618

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201870087	Method Blank (MB)
1201870088	232347001(CAMO-09-10462) Sample Duplicate (DUP)
1201870089	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, January 2009, February 2009, March 2009, April 2009 and June 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232347001 (CAMO-09-10462). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The method blank 1201870087 (MB) result is greater than 1.65 times the CSU but less than the MDC for Hg-203.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232347001	CAMO-09-10462
			232347002	CAMO-09-10460
			232347003	CAMO-09-10461
			232347004	CAMO-09-10467
			1201870088	CAMO-09-10462(232347001DUP)
		Cadmium-109	232347001	CAMO-09-10462
			232347003	CAMO-09-10461
			232347004	CAMO-09-10467
			1201870088	CAMO-09-10462(232347001DUP)
		Radium-224	232347001	CAMO-09-10462
			232347002	CAMO-09-10460
			232347003	CAMO-09-10461
			232347004	CAMO-09-10467
			1201870088	CAMO-09-10462(232347001DUP)
UI	Data rejected due to low abundance.	Cesium-134	232347001	CAMO-09-10462
		Thallium-208	232347001	CAMO-09-10462
UI	Data rejected due to no valid peak.	Thorium-234	232347001	CAMO-09-10462

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883020

Sample ID	Client ID
232347001	CAMO-09-10462
232347002	CAMO-09-10460
232347003	CAMO-09-10461
232347004	CAMO-09-10467
1201875586	Method Blank (MB)
1201875587	232347003(CAMO-09-10461) Sample Duplicate (DUP)
1201875588	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232347003 (CAMO-09-10461). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 7/20/07

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2458 GEL Work Order: 232347

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/20/09

Reviewed by

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10462	Project:	LANL01004
Sample ID:	232347001	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	6.53%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.0025	0.0223	+/-0.00729	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240	U	0.00375	0.0273	+/-0.00545	0.050	pCi/g						
ISOTH "Dry Weight Corrected"												
Thorium-228		1.15	0.422	+/-0.129	0.100	pCi/g		MXA1	07/07/09	2012	881079	4
Thorium-230		0.383	0.381	+/-0.0614	0.100	pCi/g						
Thorium-232		0.884	0.115	+/-0.104	0.100	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.400	0.188	+/-0.0502	0.100	pCi/g		AXD2	07/10/09	2119	881676	5
Uranium-235/236	U	0.0205	0.0863	+/-0.0103	0.100	pCi/g						
Uranium-238		0.389	0.0733	+/-0.049	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0377	0.107	+/-0.0335	0.200	pCi/g		MXR1	07/06/09	1110	880723	6
Bismuth-211	UI	3.40	0.346	+/-0.275		pCi/g						
Bismuth-214		0.809	0.126	+/-0.109	0.200	pCi/g						
Cadmium-109	UI	3.43	0.970	+/-0.391		pCi/g						
Cerium-139	U	0.00322	0.0518	+/-0.0153	0.050	pCi/g						
Cesium-134	UI	0.123	0.106	+/-0.0303	0.100	pCi/g						
Cesium-137	U	-0.0461	0.072	+/-0.024	0.100	pCi/g						
Cobalt-60	U	0.0206	0.0716	+/-0.0208	0.100	pCi/g						
Europium-152	U	0.0854	0.180	+/-0.0714	0.200	pCi/g						
Lanthanum-140	U	0.136	0.168	+/-0.0438		pCi/g						
Lead-212		1.57	0.0962	+/-0.103	0.100	pCi/g						
Lead-214		1.18	0.121	+/-0.101	0.100	pCi/g						
Mercury-203	U	0.0427	0.078	+/-0.0246	0.100	pCi/g						
Potassium-40		34.1	0.372	+/-1.47	1.00	pCi/g						
Radium-223	U	0.686	1.18	+/-0.373		pCi/g						
Radium-224	UI	4.11	1.10	+/-0.855		pCi/g						
Radium-226		0.809	0.126	+/-0.109		pCi/g						
Radium-228		1.54	0.252	+/-0.204	0.500	pCi/g						
Ruthenium-106	U	-0.131	0.636	+/-0.199	0.800	pCi/g						
Sodium-22	U	-0.0127	0.093	+/-0.0293	0.080	pCi/g						
Strontium-85	U	-0.16	0.0755	+/-0.0277		pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10462
Sample ID: 232347001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Thallium-208	UI	0.514	0.143	+/-0.0464	0.080	pCi/g						
Thorium-227	U	0.380	0.714	+/-0.210		pCi/g						
Thorium-231	U	0.686	1.18	+/-0.373		pCi/g						
Thorium-234	UI	1.04	1.04	+/-0.450	2.00	pCi/g						
Tin-113	U	0.0149	0.0852	+/-0.0248	0.100	pCi/g						
Uranium-235	U	0.046	0.374	+/-0.112	0.500	pCi/g						
Yttrium-88	U	-0.00755	0.0521	+/-0.0169	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		320	206	+/-69.3	250	pCi/L		KXK2	07/14/09	1804	883020	7

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EML HASL 300, 4.5.2.3
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	86.4	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	91.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	88.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low

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Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10462
Sample ID: 232347001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10460	Project:	LANL01004
Sample ID:	232347002	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	8.31%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Alpha Spec Analysis											
ISOPU "Dry Weight Corrected"											
Plutonium-238	U	0.0101	0.0258	+/-0.00807	0.050	pCi/g	CXM2	07/16/09	1010	882703	2
Plutonium-239/240	U	0.00	0.0316	+/-0.00457	0.050	pCi/g					
ISOTH "Dry Weight Corrected"											
Thorium-228		1.11	0.392	+/-0.120	0.100	pCi/g	MXA1	07/07/09	2012	881079	4
Thorium-230		0.525	0.353	+/-0.0725	0.100	pCi/g					
Thorium-232		0.949	0.106	+/-0.106	0.100	pCi/g					
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.376	0.167	+/-0.0478	0.100	pCi/g	AXD2	07/10/09	2119	881676	5
Uranium-235/236	U	0.00	0.0765	+/-0.0144	0.100	pCi/g					
Uranium-238		0.353	0.065	+/-0.0445	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.0228	0.300	+/-0.0884	0.200	pCi/g	MXR1	07/06/09	1110	880723	6
Bismuth-211	UI	2.85	0.353	+/-0.245		pCi/g					
Bismuth-214		0.927	0.110	+/-0.0829	0.200	pCi/g					
Cadmium-109	U	1.51	1.57	+/-0.632		pCi/g					
Cerium-139	U	0.00062	0.0471	+/-0.0135	0.050	pCi/g					
Cesium-134	U	0.0761	0.0943	+/-0.0425	0.100	pCi/g					
Cesium-137	U	0.00301	0.0627	+/-0.0185	0.100	pCi/g					
Cobalt-60	U	-0.0312	0.0666	+/-0.0218	0.100	pCi/g					
Europium-152	U	-0.117	0.154	+/-0.0584	0.200	pCi/g					
Lanthanum-140	U	-0.0828	0.110	+/-0.0414		pCi/g					
Lead-212		1.44	0.0884	+/-0.0769	0.100	pCi/g					
Lead-214		0.992	0.123	+/-0.089	0.100	pCi/g					
Mercury-203	U	-0.0201	0.0628	+/-0.0192	0.100	pCi/g					
Potassium-40		31.5	0.461	+/-1.64	1.00	pCi/g					
Radium-223	U	-0.0556	1.08	+/-0.369		pCi/g					
Radium-224	UI	3.51	1.01	+/-0.626		pCi/g					
Radium-226		0.927	0.110	+/-0.0829		pCi/g					
Radium-228		1.32	0.231	+/-0.154	0.500	pCi/g					
Ruthenium-106	U	0.0874	0.558	+/-0.162	0.800	pCi/g					
Sodium-22	U	-0.000633	0.0769	+/-0.0231	0.080	pCi/g					
Strontium-85	U	0.0342	0.0617	+/-0.0199		pCi/g					
Thallium-208		0.378	0.0577	+/-0.0383	0.080	pCi/g					

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10460
Sample ID: 232347002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Thorium-227	U	-0.125	0.586	+/-0.176		pCi/g						
Thorium-231	U	-0.0556	1.08	+/-0.369		pCi/g						
Thorium-234	U	0.0546	2.45	+/-0.732	2.00	pCi/g						
Tin-113	U	0.00391	0.0739	+/-0.0222	0.100	pCi/g						
Uranium-235	U	0.0115	0.348	+/-0.106	0.500	pCi/g						
Yttrium-88	U	0.00965	0.056	+/-0.0162	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		965	211	+/-101	250	pCi/L		KXK2	07/14/09	1943	883020	7

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EML HASL 300, 4.5.2.3
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	80.0	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	96.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10460
Sample ID: 232347002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10461	Project:	LANL01004
Sample ID:	232347003	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	11.5%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Alpha Spec Analysis											
ISOPU "Dry Weight Corrected"											
Plutonium-238	U	-0.00236	0.0211	+/-0.00237	0.050	pCi/g	CXM2	07/16/09	1010	882703	2
Plutonium-239/240	U	-0.00118	0.0258	+/-0.00264	0.050	pCi/g					
ISOTH "Dry Weight Corrected"											
Thorium-228		0.935	0.416	+/-0.110	0.100	pCi/g	MXA1	07/07/09	2012	881079	4
Thorium-230		0.468	0.375	+/-0.0688	0.100	pCi/g					
Thorium-232		0.842	0.113	+/-0.0997	0.100	pCi/g					
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.325	0.161	+/-0.041	0.100	pCi/g	AXD2	07/10/09	2119	881676	5
Uranium-235/236	U	0.00872	0.0735	+/-0.00875	0.100	pCi/g					
Uranium-238		0.300	0.0625	+/-0.039	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.00935	0.105	+/-0.0326	0.200	pCi/g	MXR1	07/06/09	1111	880723	6
Bismuth-211	UI	3.10	0.359	+/-0.232		pCi/g					
Bismuth-214		0.951	0.170	+/-0.096	0.200	pCi/g					
Cadmium-109	UI	2.63	1.31	+/-0.427		pCi/g					
Cerium-139	U	-0.023	0.0534	+/-0.0168	0.050	pCi/g					
Cesium-134	U	0.0656	0.115	+/-0.032	0.100	pCi/g					
Cesium-137	U	-0.0569	0.0745	+/-0.0249	0.100	pCi/g					
Cobalt-60	U	-0.0562	0.0725	+/-0.0258	0.100	pCi/g					
Europium-152	U	0.0476	0.197	+/-0.0709	0.200	pCi/g					
Lanthanum-140	U	-0.0103	0.187	+/-0.0583		pCi/g					
Lead-212		1.40	0.0964	+/-0.085	0.100	pCi/g					
Lead-214		1.08	0.125	+/-0.0855	0.100	pCi/g					
Mercury-203	U	0.0513	0.0817	+/-0.023	0.100	pCi/g					
Potassium-40		32.6	0.756	+/-1.43	1.00	pCi/g					
Radium-223	U	0.266	1.31	+/-0.387		pCi/g					
Radium-224	UI	3.99	1.10	+/-0.599		pCi/g					
Radium-226		0.951	0.170	+/-0.096		pCi/g					
Radium-228		1.75	0.309	+/-0.212	0.500	pCi/g					
Ruthenium-106	U	0.00108	0.704	+/-0.213	0.800	pCi/g					
Sodium-22	U	-0.0273	0.0968	+/-0.0302	0.080	pCi/g					
Strontium-85	U	0.0535	0.0857	+/-0.0272		pCi/g					
Thallium-208		0.418	0.0794	+/-0.0522	0.080	pCi/g					

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10461
Sample ID: 232347003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Thorium-227	U	-0.225	0.722	+/-0.218		pCi/g						
Thorium-231	U	0.266	1.31	+/-0.387		pCi/g						
Thorium-234	U	0.991	1.05	+/-0.616	2.00	pCi/g						
Tin-113	U	0.0108	0.0868	+/-0.0261	0.100	pCi/g						
Uranium-235	U	-0.0184	0.383	+/-0.117	0.500	pCi/g						
Yttrium-88	U	0.0202	0.0715	+/-0.0199	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		1170	210	+/-113	250	pCi/L	KXK2		07/14/09	2121	883020	7

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EML HASL 300, 4.5.2.3
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	96.1	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	92.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	97.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10461
Sample ID: 232347003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10467	Project:	LANL01004
Sample ID:	232347004	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	4.53%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Alpha Spec Analysis											
ISOPU "Dry Weight Corrected"											
Plutonium-238	U	0.00984	0.022	+/-0.00579	0.050	pCi/g	CXM2	07/16/09	1010	882703	2
Plutonium-239/240	U	-0.00737	0.0268	+/-0.00325	0.050	pCi/g					
ISOTH "Dry Weight Corrected"											
Thorium-228		1.04	0.413	+/-0.122	0.100	pCi/g	MXA1	07/07/09	2012	881079	4
Thorium-230		0.629	0.372	+/-0.084	0.100	pCi/g					
Thorium-232		0.819	0.112	+/-0.0983	0.100	pCi/g					
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.425	0.093	+/-0.0414	0.100	pCi/g	AXD2	07/14/09	0906	881676	5
Uranium-235/236	U	0.0354	0.0426	+/-0.011	0.100	pCi/g					
Uranium-238		0.341	0.0362	+/-0.0355	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.132	0.203	+/-0.0713	0.200	pCi/g	MXR1	07/06/09	1112	880723	7
Bismuth-211	UI	3.19	0.314	+/-0.247		pCi/g					
Bismuth-214		0.968	0.111	+/-0.0889	0.200	pCi/g					
Cadmium-109	UI	2.35	1.31	+/-0.371		pCi/g					
Cerium-139	U	-0.0129	0.047	+/-0.0145	0.050	pCi/g					
Cesium-134	U	0.052	0.0988	+/-0.0331	0.100	pCi/g					
Cesium-137	U	0.0167	0.0657	+/-0.0195	0.100	pCi/g					
Cobalt-60	U	0.0491	0.0837	+/-0.0232	0.100	pCi/g					
Europium-152	U	0.043	0.160	+/-0.0776	0.200	pCi/g					
Lanthanum-140	U	0.0164	0.126	+/-0.0378		pCi/g					
Lead-212		1.51	0.0886	+/-0.0781	0.100	pCi/g					
Lead-214		1.11	0.110	+/-0.0908	0.100	pCi/g					
Mercury-203	U	-0.024	0.0678	+/-0.0205	0.100	pCi/g					
Potassium-40		36.9	0.599	+/-1.69	1.00	pCi/g					
Radium-223	U	-0.482	1.08	+/-0.335		pCi/g					
Radium-224	UI	3.89	1.01	+/-0.699		pCi/g					
Radium-226		0.968	0.111	+/-0.0889		pCi/g					
Radium-228		1.31	0.248	+/-0.182	0.500	pCi/g					
Ruthenium-106	U	0.0745	0.552	+/-0.166	0.800	pCi/g					
Sodium-22	U	-0.0329	0.0821	+/-0.0266	0.080	pCi/g					
Strontium-85	U	0.0485	0.0623	+/-0.0194		pCi/g					
Thallium-208		0.498	0.0601	+/-0.0411	0.080	pCi/g					

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10467
Sample ID: 232347004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Thorium-227	U	-0.0136	0.653	+/-0.191		pCi/g						
Thorium-231	U	-0.482	1.08	+/-0.335		pCi/g						
Thorium-234	U	1.53	1.85	+/-0.763	2.00	pCi/g						
Tin-113	U	0.0201	0.0766	+/-0.0222	0.100	pCi/g						
Uranium-235	U	-0.101	0.351	+/-0.110	0.500	pCi/g						
Yttrium-88	U	0.0229	0.0577	+/-0.0151	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	149	207	+/-64.3	250	pCi/L	KXK2		07/14/09	2259	883020	8

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Th-01-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	EML HASL 300, 4.5.2.3
8	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	83.3	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	96.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	103	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10467
Sample ID: 232347004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
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J Value is estimated
M M if above MDC and less than LLD
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N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
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P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
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X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
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^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 20, 2009
Page 1 of 7

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232347

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 881079										
QC1201871024 232347001 DUP										
Thorium-228		1.15		1.00	pCi/g	0.312		(0-1)	MXA1	07/07/0920:12
	TPU:	+/-0.129		+/-0.111						
	Yield:	91.1		103						
Thorium-230		0.383		0.468	pCi/g	0.336		(0-1)		
	TPU:	+/-0.0614		+/-0.066						
	Yield:	91.1		103						
Thorium-232		0.884		0.825	pCi/g	0.151		(0-1)		
	TPU:	+/-0.104		+/-0.0937						
	Yield:	91.1		103						
QC1201871025 LCS										
Thorium-228				1.33	pCi/g			(75%-125%)		07/07/0920:12
	TPU:			+/-0.215						
	Yield:			88.8						
Thorium-230	25.6			25.6	pCi/g		100	(75%-125%)		
	TPU:			+/-1.93						
	Yield:			88.8						
Thorium-232				1.65	pCi/g			(75%-125%)		
	TPU:			+/-0.220						
	Yield:			88.8						
QC1201871023 MB										
Thorium-228			U	-0.00714	pCi/g					07/07/0920:12
	TPU:			+/-0.00852						
	Yield:			92.5						
Thorium-230			U	0.00698	pCi/g					
	TPU:			+/-0.00452						
	Yield:			92.5						
Thorium-232			U	-0.00377	pCi/g					
	TPU:			+/-0.00266						
	Yield:			92.5						
Batch 881676										
QC1201872428 232347001 DUP										
Uranium-233/234		0.400		0.438	pCi/g	0.185		(0-1)	AXD2	07/10/0921:20
	TPU:	+/-0.0502		+/-0.0525						
	Yield:	88.7		96.5						
Uranium-235/236	U	0.0205	U	0.0373	pCi/g	0.354		(0-1)		
	TPU:	+/-0.0103		+/-0.0134						
	Yield:	88.7		96.5						
Uranium-238		0.389		0.426	pCi/g	0.187		(0-1)		
	TPU:	+/-0.049		+/-0.0501						
	Yield:	88.7		96.5						
QC1201872429 LCS										
Uranium-233/234				6.29	pCi/g			(75%-125%)		07/10/0921:20
	TPU:			+/-0.579						

QC Summary

Workorder: 232347

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 881676										
	Yield:			95.1						
Uranium-235/236			U	0.193	pCi/g			(75%-125%)		
	TPU:			+/-0.0659						
	Yield:			95.1						
Uranium-238	5.75			5.46	pCi/g		95	(75%-125%)		
	TPU:			+/-0.515						
	Yield:			95.1						
QC1201872427 MB										
Uranium-233/234			U	0.00117	pCi/g					07/10/0921:20
	TPU:			+/-0.00535						
	Yield:			88.4						
Uranium-235/236			U	0.00258	pCi/g					
	TPU:			+/-0.00448						
	Yield:			88.4						
Uranium-238			U	-0.00418	pCi/g					
	TPU:			+/-0.00362						
	Yield:			88.4						
Batch 882703										
QC1201874792 232754002 DUP										
Plutonium-238	U	0.0153	U	0.00373	pCi/g	0.551		(0-1)	CXM2	07/16/0910:10
	TPU:	+/-0.00719		+/-0.00329						
	Yield:	96.6		95.9						
Plutonium-239/240		0.0376		0.0671	pCi/g	0.776		(0-1)		
	TPU:	+/-0.00882		+/-0.0102						
	Yield:	96.6		95.9						
QC1201874793 LCS										
Plutonium-238				6.26	pCi/g			(75%-125%)		
	TPU:			+/-0.457						
	Yield:			103						
Plutonium-239/240	41.8			38.3	pCi/g		91.6	(75%-125%)		
	TPU:			+/-2.29						
	Yield:			103						
QC1201874791 MB										
Plutonium-238			U	0.00829	pCi/g					
	TPU:			+/-0.00619						
	Yield:			101						
Plutonium-239/240			U	0.00553	pCi/g					
	TPU:			+/-0.00339						
	Yield:			101						
Rad Gamma Spec										
Batch 880723										
QC1201870088 232347001 DUP										
Americium-241	U	0.0377	U	-0.014	pCi/g	0.392		(0-1)	MXR1	07/06/0913:26
	TPU:	+/-0.0335		+/-0.0325						
Bismuth-211	UI	3.40	UI	3.35	pCi/g	0.0451		(0-1)		
	TPU:	+/-0.275		+/-0.235						
Bismuth-214		0.809		1.11	pCi/g	0.688		(0-1)		
	TPU:	+/-0.109		+/-0.106						
Cadmium-109	UI	3.43	UI	1.78	pCi/g	0.953		(0-1)		

QC Summary

Workorder: 232347

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
	TPU:	+/-0.391		+/-0.478						
Cerium-139	U	0.00322	U	0.00273	pCi/g	0.00819		(0-1)		
	TPU:	+/-0.0153		+/-0.0143						
Cesium-134	UI	0.123	U	0.0702	pCi/g	0.414		(0-1)		
	TPU:	+/-0.0303		+/-0.0329						
Cesium-137	U	-0.0461	U	0.00686	pCi/g	0.537		(0-1)		
	TPU:	+/-0.024		+/-0.0253						
Cobalt-60	U	0.0206	U	0.0483	pCi/g	0.268		(0-1)		
	TPU:	+/-0.0208		+/-0.0308						
Europium-152	U	0.0854	U	-0.00341	pCi/g	0.350		(0-1)		
	TPU:	+/-0.0714		+/-0.0553						
Lanthanum-140	U	0.136	U	0.00972	pCi/g	0.602		(0-1)		
	TPU:	+/-0.0438		+/-0.0613						
Lead-212		1.57		1.24	pCi/g	0.894		(0-1)		
	TPU:	+/-0.103		+/-0.0826						
Lead-214		1.18		1.17	pCi/g	0.0426		(0-1)		
	TPU:	+/-0.101		+/-0.0871						
Mercury-203	U	0.0427	U	0.0497	pCi/g	0.0729		(0-1)		
	TPU:	+/-0.0246		+/-0.023						
Potassium-40		34.1		37.0	pCi/g	0.450		(0-1)		
	TPU:	+/-1.47		+/-1.73						
Radium-223	U	0.686	U	-0.935	pCi/g	1.05		(0-1)		
	TPU:	+/-0.373		+/-0.398						
Radium-224	UI	4.11	UI	1.87	pCi/g	0.813		(0-1)		
	TPU:	+/-0.855		+/-0.526						
Radium-226		0.809		1.11	pCi/g	0.688		(0-1)		
	TPU:	+/-0.109		+/-0.106						
Radium-228		1.54		1.85	pCi/g	0.389		(0-1)		
	TPU:	+/-0.204		+/-0.196						
Ruthenium-106	U	-0.131	U	0.249	pCi/g	0.443		(0-1)		
	TPU:	+/-0.199		+/-0.229						
Sodium-22	U	-0.0127	U	0.0656	pCi/g	0.594		(0-1)		
	TPU:	+/-0.0293		+/-0.0366						
Strontium-85	U	-0.16	U	0.0891	pCi/g	2.20		(0-1)		
	TPU:	+/-0.0277		+/-0.0287						
Thallium-208	UI	0.514		0.553	pCi/g	0.195		(0-1)		
	TPU:	+/-0.0464		+/-0.0545						
Thorium-227	U	0.380	U	0.285	pCi/g	0.113		(0-1)		
	TPU:	+/-0.210		+/-0.206						
Thorium-231	U	0.686	U	-0.935	pCi/g	1.05		(0-1)		
	TPU:	+/-0.373		+/-0.398						
Thorium-234	UI	1.04	U	0.234	pCi/g	0.522		(0-1)		
	TPU:	+/-0.450		+/-0.324						
Tin-113	U	0.0149	U	0.0637	pCi/g	0.472		(0-1)		
	TPU:	+/-0.0248		+/-0.0271						
Uranium-235	U	0.046	U	0.144	pCi/g	0.219		(0-1)		
	TPU:	+/-0.112		+/-0.112						
Yttrium-88	U	-0.00755	U	0.0495	pCi/g	0.642		(0-1)		
	TPU:	+/-0.0169		+/-0.0276						
QC1201870089 LCS										
Americium-241	15.9			13.9	pCi/g		87	(75%-125%)		07/06/0913:26

QC Summary

Workorder: 232347

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
		TPU:		+/-0.762						
Bismuth-211				2.35	pCi/g					
		TPU:		+/-0.313						
Bismuth-214				0.749	pCi/g					
		TPU:		+/-0.126						
Cadmium-109				41.7	pCi/g					
		TPU:		+/-2.53						
Cerium-139			U	0.0265	pCi/g					
		TPU:		+/-0.0204						
Cesium-134			U	0.0915	pCi/g					
		TPU:		+/-0.0501						
Cesium-137	5.64			5.69	pCi/g		101	(75%-125%)		
		TPU:		+/-0.206						
Cobalt-60	6.93			7.00	pCi/g		101	(75%-125%)		
		TPU:		+/-0.317						
Europium-152			U	-0.0931	pCi/g					
		TPU:		+/-0.096						
Lanthanum-140			U	-0.00788	pCi/g					
		TPU:		+/-0.0399						
Lead-212				0.791	pCi/g					
		TPU:		+/-0.0858						
Lead-214				0.817	pCi/g					
		TPU:		+/-0.111						
Mercury-203			U	0.0068	pCi/g					
		TPU:		+/-0.0287						
Potassium-40			U	0.882	pCi/g					
		TPU:		+/-0.296						
Radium-223			U	-0.144	pCi/g					
		TPU:		+/-0.563						
Radium-224			U	0.731	pCi/g					
		TPU:		+/-1.21						
Radium-226				0.749	pCi/g					
		TPU:		+/-0.126						
Radium-228				0.901	pCi/g					
		TPU:		+/-0.322						
Ruthenium-106			U	-0.0538	pCi/g					
		TPU:		+/-0.319						
Sodium-22			U	0.00409	pCi/g					
		TPU:		+/-0.0308						
Strontium-85			U	0.0975	pCi/g					
		TPU:		+/-0.0349						
Thallium-208				0.389	pCi/g					
		TPU:		+/-0.0586						
Thorium-227			U	0.562	pCi/g					
		TPU:		+/-0.336						
Thorium-231			U	-0.144	pCi/g					
		TPU:		+/-0.563						
Thorium-234			U	-0.50	pCi/g					
		TPU:		+/-1.05						
Tin-113			U	0.0455	pCi/g					
		TPU:		+/-0.0403						

QC Summary

Workorder: 232347

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
Uranium-235			U	0.115	pCi/g					
	TPU:			+/-0.142						
Yttrium-88			U	0.0327	pCi/g					
	TPU:			+/-0.0281						
QC1201870087 MB										
Americium-241			U	0.0262	pCi/g					07/06/09 13:25
	TPU:			+/-0.0393						
Bismuth-211			U	0.0284	pCi/g					
	TPU:			+/-0.060						
Bismuth-214			U	-0.00377	pCi/g					
	TPU:			+/-0.021						
Cadmium-109			U	0.0317	pCi/g					
	TPU:			+/-0.153						
Cerium-139			U	-0.00888	pCi/g					
	TPU:			+/-0.00557						
Cesium-134			U	0.000343	pCi/g					
	TPU:			+/-0.00823						
Cesium-137			U	0.00112	pCi/g					
	TPU:			+/-0.00737						
Cobalt-60			U	-0.00518	pCi/g					
	TPU:			+/-0.00691						
Europium-152			U	-0.0246	pCi/g					
	TPU:			+/-0.0215						
Lanthanum-140			U	-0.00511	pCi/g					
	TPU:			+/-0.0125						
Lead-212			U	0.012	pCi/g					
	TPU:			+/-0.0134						
Lead-214			U	0.0244	pCi/g					
	TPU:			+/-0.0274						
Mercury-203			U	0.0126	pCi/g					
	TPU:			+/-0.00733						
Potassium-40			U	0.0477	pCi/g					
	TPU:			+/-0.0998						
Radium-223			U	-0.0804	pCi/g					
	TPU:			+/-0.135						
Radium-224			U	-0.0288	pCi/g					
	TPU:			+/-0.142						
Radium-226			U	-0.00377	pCi/g					
	TPU:			+/-0.021						
Radium-228			U	0.0383	pCi/g					
	TPU:			+/-0.0336						
Ruthenium-106			U	-0.00429	pCi/g					
	TPU:			+/-0.0683						
Sodium-22			U	0.00479	pCi/g					
	TPU:			+/-0.00703						
Strontium-85			U	-0.0205	pCi/g					
	TPU:			+/-0.0121						
Thallium-208			U	-0.00328	pCi/g					
	TPU:			+/-0.00912						
Thorium-227			U	-0.00817	pCi/g					
	TPU:			+/-0.0774						

QC Summary

Workorder: 232347

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
Thorium-231			U	-0.0804	pCi/g					
	TPU:			+/-0.135						
Thorium-234			U	-0.424	pCi/g					
	TPU:			+/-0.357						
Tin-113			U	0.0126	pCi/g					
	TPU:			+/-0.00807						
Uranium-235			U	-0.0746	pCi/g					
	TPU:			+/-0.0499						
Yttrium-88			U	-0.00169	pCi/g					
	TPU:			+/-0.00982						
Rad Liquid Scintillation										
Batch 883020										
QC1201875587 232347003 DUP										
Tritium		1170		1050	pCi/L	0.266		(0-1)	KXK2	07/15/0917:03
	TPU:	+/-113		+/-116						
QC1201875588 LCS										
Tritium	5730			6320	pCi/L		110	(75%-125%)		07/15/0918:05
	TPU:			+/-529						
QC1201875586 MB										
Tritium			U	-126	pCi/L					07/15/0916:01
	TPU:			+/-66.4						

Notes:
The Qualifiers in this report are defined as follows:

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

QC Summary

Workorder: 232347

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time

P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 881079 Product: Th Date: 7/10/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/10/09

Secondary Review Performed By: [signature] 7/10/09

LANL
6/30 - 7/

Thorium Que Sheet

29-JUN-09

Batch #: 881079 **Analyst:** MXA1 **First Client Due Date:** 11-JUL-09 **Internal Due Date** 30-JUN-09

Tracer Isotope: Th-229 **Tracer Code:** 0934-G **Expiration Date:** 4/28/10 **Vol:** 0.1ml
LCS Isotope: Th-232 **LCS Code:** SRM 0244d **Expiration Date:** 10/31/20 **Vol:** 0.1g
Spike Isotope: Th-232 **Spike Code:** N/A **Expiration Date:** N/A **Vol:** N/A
Prep Date: 7/2/09 **Initials:** MDA **Pipet ID:** 2971058 **Balance ID:** 50410272 **Witness:** [illegible] 7/2/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g) 1/0	Th Det #
231654001-1	CAMO-09-6105	SAMPLE		.1 pCi/g	SOIL	LANL010	10-JUN-09	1	81	0.255	173
231654002-1	CAMO-09-6104	SAMPLE		.1 pCi/g	SOIL	LANL010	10-JUN-09	2	82	0.254	174
231654003-1	CAMO-09-6103	SAMPLE		.1 pCi/g	SOIL	LANL010	10-JUN-09	3	83	0.247	175
231834001-1	CAMO-09-6101	SAMPLE		.1 pCi/g	SOIL	LANL010	12-JUN-09	4	84	0.248	176
231834002-1	CAMO-09-6095	SAMPLE		.1 pCi/g	SOIL	LANL010	12-JUN-09	5	85	0.254	177
231834003-1	CAMO-09-6097	SAMPLE		.1 pCi/g	SOIL	LANL010	12-JUN-09	6	86	0.255	178
231834004-1	CAMO-09-6098	SAMPLE		.1 pCi/g	SOIL	LANL010	12-JUN-09	7	87	0.250	179
231834005-1	CAMO-09-6102	SAMPLE		.1 pCi/g	SOIL	LANL010	12-JUN-09	8	88	0.255	180
231834006-1	CAMO-09-6134	SAMPLE		.1 pCi/g	SOIL	LANL010	12-JUN-09	9	89	0.255	181
232278001-1	CAMO-09-10458	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	10	90	0.251	~~182~~ 200 Ess 7/10/09
232278002-1	CAMO-09-10459	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	11	91	0.247	183
232347001-1	CAMO-09-10462	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	12	92	0.249	184
232347002-1	CAMO-09-10460	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	13	93	0.255	185
232347003-1	CAMO-09-10461	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	14	94	0.252	186
232347004-1	CAMO-09-10467	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	15	95	0.249	187
1201871023-1	MB for batch 881079	MB		.1 pCi/g	SOIL	QC ACCOUNT		16	96	1.0 ~~0.255~~ 7/10/09	188
1201871024-1	CAMO-09-10462(232347001DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	22-JUN-09	17	97	0.252	189
1201871025-1	LCS for batch 881079	LCS		.1 pCi/g	SOIL	QC ACCOUNT	SRM	18	98	0.098	190

Data Reviewed By: [illegible] 7/10/09
GEL Laboratories LLC, Radiochemistry Division

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Choose SOP Used: GL-RAD-A-038, GL-RAD-A-045, GL-RAD-A-043, GL-RAD-A-032

Blank Correction Report

Batch ID 881079

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201871024	DUP	Thorium-228	2.52E-01 g	1.00E+00	1.11E-01	3.66E-01	-.02833333	pCi/g	NO
		Thorium-230	2.52E-01 g	4.68E-01	6.60E-02	3.30E-01	.027698413	pCi/g	NO
		Thorium-232	2.52E-01 g	8.25E-01	9.37E-02	9.93E-02	-.01496032	pCi/g	NO
1201871025	LCS	Thorium-228	9.80E-02 g	1.33E+00	2.15E-01	1.08E+00	-.07285714	pCi/g	NO
		Thorium-230	9.80E-02 g	2.56E+01	1.93E+00	9.74E-01	.071224490	pCi/g	NO
		Thorium-232	9.80E-02 g	1.65E+00	2.20E-01	2.94E-01	-.03846939	pCi/g	NO
1201871023	MB	Thorium-228	1.00E+00 g	-7.14E-03	8.52E-03	1.03E-01	-.00714	pCi/g	NO
		Thorium-230	1.00E+00 g	6.98E-03	4.52E-03	9.31E-02	.00698	pCi/g	YES
		Thorium-232	1.00E+00 g	-3.77E-03	2.66E-03	2.81E-02	-.00377	pCi/g	NO
231654001	CAMO-09-6105	Thorium-228	2.55E-01 g	1.47E+00	1.50E-01	3.99E-01	-.028	pCi/g	NO
		Thorium-230	2.55E-01 g	7.03E-01	8.77E-02	3.60E-01	.027372549	pCi/g	NO
		Thorium-232	2.55E-01 g	1.29E+00	1.32E-01	1.08E-01	-.01478431	pCi/g	NO
231654002	CAMO-09-6104	Thorium-228	2.54E-01 g	1.68E+00	1.60E-01	3.79E-01	-.02811024	pCi/g	NO
		Thorium-230	2.54E-01 g	9.64E-01	1.08E-01	3.42E-01	.027480315	pCi/g	NO
		Thorium-232	2.54E-01 g	1.67E+00	1.58E-01	1.03E-01	-.01484252	pCi/g	NO
231654003	CAMO-09-6103	Thorium-228	2.47E-01 g	1.39E+00	1.54E-01	4.95E-01	-.02890688	pCi/g	NO
		Thorium-230	2.47E-01 g	1.33E+00	1.45E-01	4.47E-01	.028259109	pCi/g	NO
		Thorium-232	2.47E-01 g	1.54E+00	1.63E-01	1.35E-01	-.01526316	pCi/g	NO
231834001	CAMO-09-6101	Thorium-228	2.48E-01 g	1.42E+00	1.45E-01	3.91E-01	-.02879032	pCi/g	NO
		Thorium-230	2.48E-01 g	1.01E+00	1.11E-01	3.52E-01	.028145161	pCi/g	NO
		Thorium-232	2.48E-01 g	1.31E+00	1.32E-01	1.08E-01	-.01520161	pCi/g	NO
231834002	CAMO-09-6095	Thorium-228	2.54E-01 g	1.35E+00	1.41E-01	4.08E-01	-.02811024	pCi/g	NO
		Thorium-230	2.54E-01 g	1.17E+00	1.24E-01	3.68E-01	.027480315	pCi/g	NO
		Thorium-232	2.54E-01 g	1.22E+00	1.28E-01	1.11E-01	-.01484252	pCi/g	NO
231834003	CAMO-09-6097	Thorium-228	2.55E-01 g	1.52E+00	1.53E-01	4.04E-01	-.028	pCi/g	NO
		Thorium-230	2.55E-01 g	1.10E+00	1.19E-01	3.64E-01	.027372549	pCi/g	NO
		Thorium-232	2.55E-01 g	1.32E+00	1.36E-01	1.10E-01	-.01478431	pCi/g	NO
231834004	CAMO-09-6098	Thorium-228	2.50E-01 g	2.49E+00	2.33E-01	4.59E-01	-.02856	pCi/g	NO
		Thorium-230	2.50E-01 g	1.16E+00	1.30E-01	4.14E-01	.02792	pCi/g	NO
		Thorium-232	2.50E-01 g	1.85E+00	1.82E-01	1.25E-01	-.01508	pCi/g	NO
231834005	CAMO-09-6102	Thorium-228	2.55E-01 g	1.37E+00	1.43E-01	4.24E-01	-.028	pCi/g	NO
		Thorium-230	2.55E-01 g	9.17E-01	1.07E-01	3.82E-01	.027372549	pCi/g	NO
		Thorium-232	2.55E-01 g	1.34E+00	1.39E-01	1.15E-01	-.01478431	pCi/g	NO
231834006	CAMO-09-6134	Thorium-228	2.55E-01 g	1.74E+00	1.72E-01	4.19E-01	-.028	pCi/g	NO
		Thorium-230	2.55E-01 g	1.02E+00	1.14E-01	3.78E-01	.027372549	pCi/g	NO
		Thorium-232	2.55E-01 g	1.62E+00	1.59E-01	1.14E-01	-.01478431	pCi/g	NO
232278001	CAMO-09-10458	Thorium-228	2.51E-01 g	8.91E-01	9.23E-02	2.96E-01	-.02844622	pCi/g	NO
		Thorium-230	2.51E-01 g	4.63E-01	6.07E-02	2.67E-01	.027808765	pCi/g	NO
		Thorium-232	2.51E-01 g	7.81E-01	8.16E-02	7.95E-02	-.01501992	pCi/g	NO
232278002	CAMO-09-10459	Thorium-228	2.47E-01 g	1.03E+00	1.19E-01	4.15E-01	-.02890688	pCi/g	NO
		Thorium-230	2.47E-01 g	5.65E-01	7.70E-02	3.74E-01	.028259109	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232278002	CAMO-09-10459	Thorium-232	2.47E-01 g	8.54E-01	1.01E-01	1.13E-01	-.01526316	pCi/g	NO
232347001	CAMO-09-10462	Thorium-228	2.49E-01 g	1.15E+00	1.29E-01	4.22E-01	-.02867470	pCi/g	NO
		Thorium-230	2.49E-01 g	3.83E-01	6.14E-02	3.81E-01	.028032129	pCi/g	NO
		Thorium-232	2.49E-01 g	8.84E-01	1.04E-01	1.15E-01	-.01514056	pCi/g	NO
232347002	CAMO-09-10460	Thorium-228	2.55E-01 g	1.11E+00	1.20E-01	3.92E-01	-.028	pCi/g	NO
		Thorium-230	2.55E-01 g	5.25E-01	7.25E-02	3.53E-01	.027372549	pCi/g	NO
		Thorium-232	2.55E-01 g	9.49E-01	1.06E-01	1.06E-01	-.01478431	pCi/g	NO
232347003	CAMO-09-10461	Thorium-228	2.52E-01 g	9.35E-01	1.10E-01	4.16E-01	-.02833333	pCi/g	NO
		Thorium-230	2.52E-01 g	4.68E-01	6.88E-02	3.75E-01	.027698413	pCi/g	NO
		Thorium-232	2.52E-01 g	8.42E-01	9.97E-02	1.13E-01	-.01496032	pCi/g	NO
232347004	CAMO-09-10467	Thorium-228	2.49E-01 g	1.04E+00	1.22E-01	4.13E-01	-.02867470	pCi/g	NO
		Thorium-230	2.49E-01 g	6.29E-01	8.40E-02	3.72E-01	.028032129	pCi/g	NO
		Thorium-232	2.49E-01 g	8.19E-01	9.83E-02	1.12E-01	-.01514056	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881079 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S0232347001_TH SAMPLE QTY: 0.249 G
DETECTOR NUMBER :74442 AVERAGE %EFFICIENCY :25.8363 % YIELD : 91.055	COUNT DATE: 7-JUL-2009 20:12:41 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXA1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 4.723E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 4.723E+01	ID : 0934-G ISOTOPE : TH229 NOMINAL : 2.21253 dpm RESULTS : 2.01461 dpm	LIB FILE : ENV_ALPHA_TH.N BKG FILE : B184.CNF;107 BKG DATE : 5-JUL-2009 EFF FILE : W184.CNF;33 CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	4.000	0.000	4.000	1.7077	68.10000	0.00E+00	5.82E-02	4.49E-02	1.20E-01	5.82E-02
TH-228	5363.000	158.000	147.264	9.000	11.2087	99.94000	1.15E+00	1.29E-01	2.01E-01	4.22E-01	1.01E-01
TH229	4900.000	521.000	518.000	3.000	1.7321	99.52000	4.00E+00	3.31E-01	3.11E-02	8.32E-02	1.77E-01
TH-230	4625.000	54.000	49.763	1.000	10.0531	100.0000	3.83E-01	6.14E-02	1.80E-01	3.81E-01	5.53E-02
TH-232	3972.000	117.000	115.016	1.000	2.6227	100.0000	8.84E-01	1.04E-01	4.69E-02	1.15E-01	8.32E-02

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

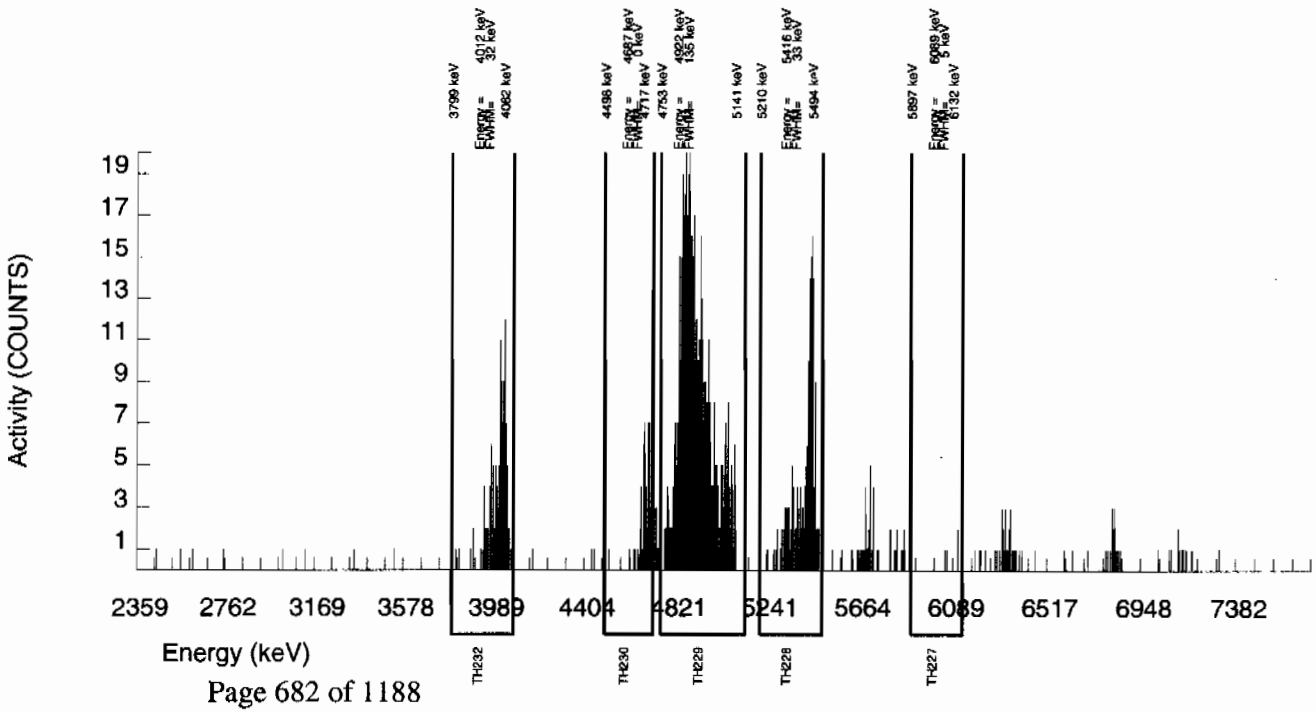

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881079
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232347002_TH
SAMPLE QTY: 0.255 G

DETECTOR NUMBER :68615
AVERAGE %EFFICIENCY :25.7763
% YIELD : 96.024

COUNT DATE: 7-JUL-2009 20:12:43
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :MXA1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B185.CNF;87
PCI/G : 4.612E+01	PCI/G : 4.612E+01	NOMINAL : 2.21253 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.12455 dpm	EFF FILE : W185.CNF;33
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	5.000	3.000	2.000	1.7077	68.10000	5.73E-02	5.06E-02	4.16E-02	1.12E-01	5.05E-02
TH-228	5363.000	159.000	153.174	4.000	11.2087	99.94000	1.11E+00	1.20E-01	1.86E-01	3.92E-01	9.21E-02
TH229	4900.000	545.000	545.000	0.000	0.0000	99.52000	3.91E+00	3.17E-01	0.00E+00	1.94E-02	1.67E-01
TH-230	4625.000	79.000	73.595	2.000	10.0531	100.0000	5.25E-01	7.25E-02	1.67E-01	3.53E-01	6.29E-02
TH-232	3972.000	136.000	132.965	2.000	2.6227	100.0000	9.49E-01	1.06E-01	4.35E-02	1.06E-01	8.35E-02

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

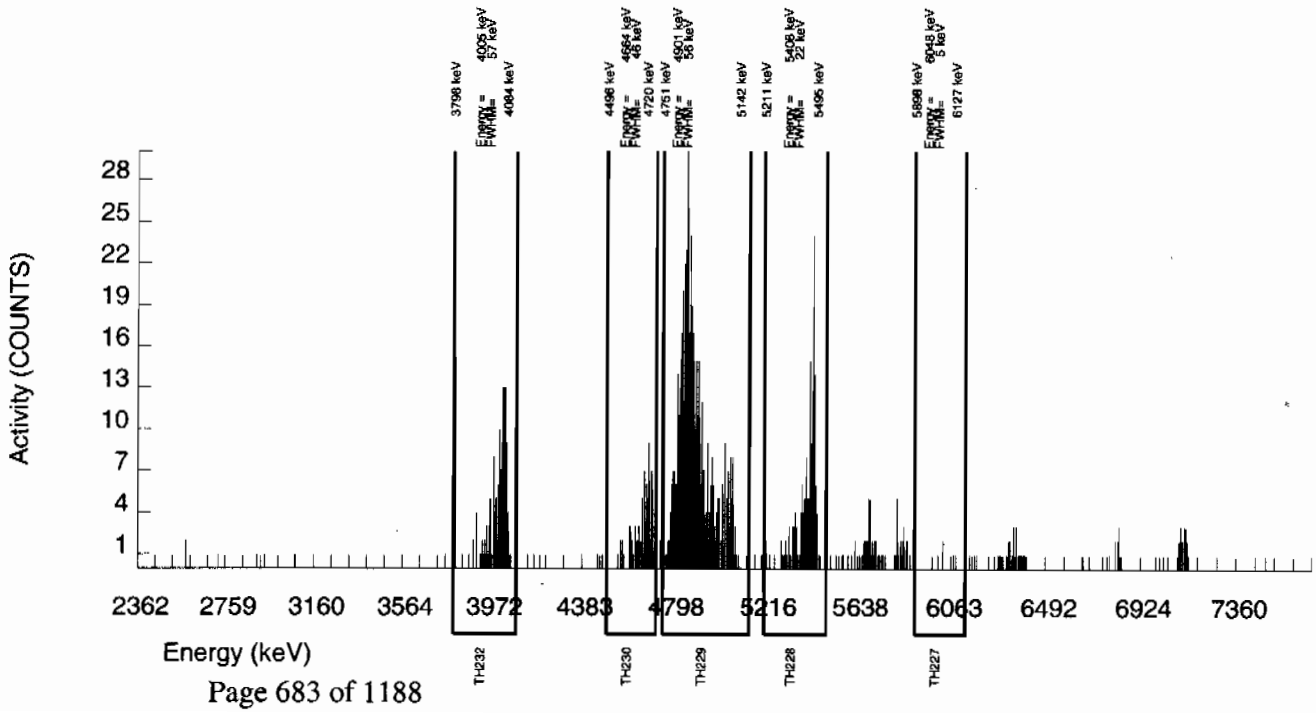

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881079 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S0232347003_TH SAMPLE QTY: 0.252 G
DETECTOR NUMBER :68616 AVERAGE %EFFICIENCY :25.4593 % YIELD : 92.582	COUNT DATE: 7-JUL-2009 20:12:45 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXA1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B186.CNF;87
PCI/G : 4.666E+01	PCI/G : 4.666E+01	NOMINAL : 2.21253 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.04839 dpm	EFF FILE : W186.CNF;34
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	7.000	4.000	3.000	1.7077	68.10000	8.11E-02	6.44E-02	4.42E-02	1.19E-01	6.41E-02
TH-228	5363.000	129.000	121.261	6.000	11.2087	99.94000	9.35E-01	1.10E-01	1.98E-01	4.16E-01	8.90E-02
TH229	4900.000	521.000	519.000	2.000	1.4142	99.52000	3.95E+00	3.26E-01	2.51E-02	7.08E-02	1.74E-01
TH-230	4625.000	66.000	61.757	1.000	10.0531	100.0000	4.68E-01	6.88E-02	1.77E-01	3.75E-01	6.06E-02
TH-232	3972.000	113.000	111.014	1.000	2.6227	100.0000	8.42E-01	9.97E-02	4.63E-02	1.13E-01	8.06E-02

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

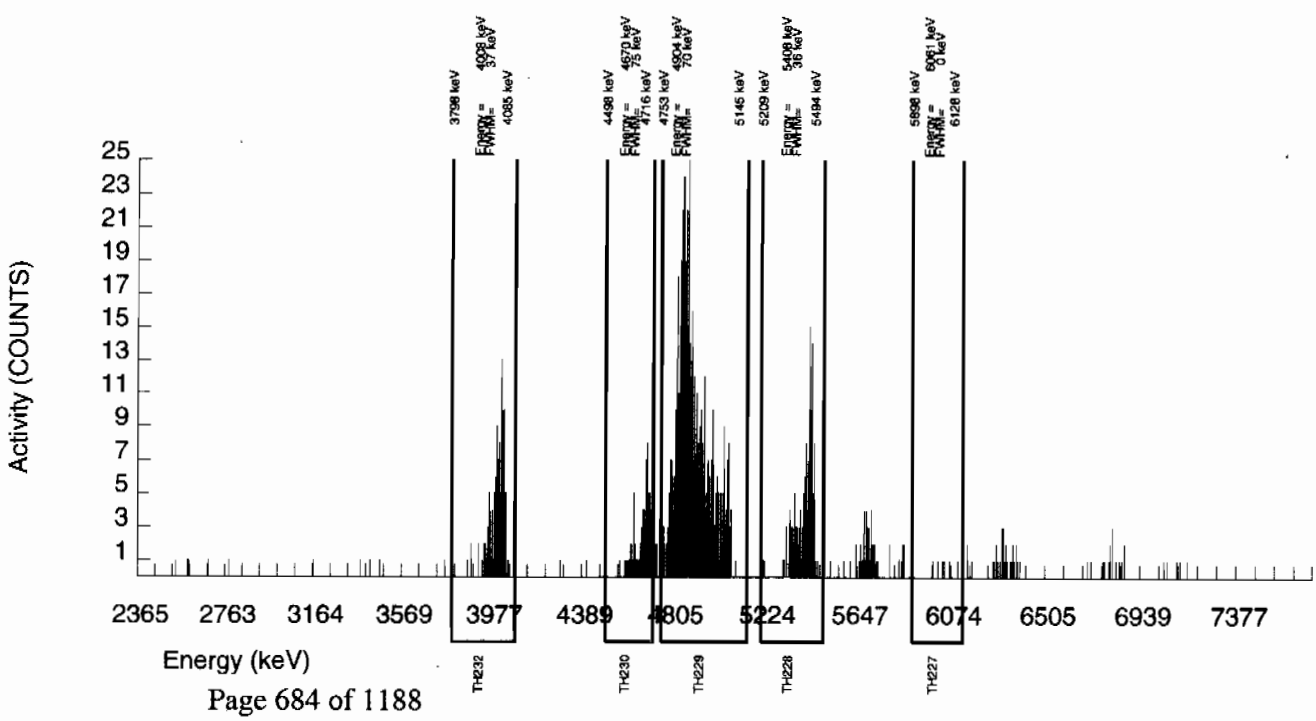

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881079
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232347004_TH
SAMPLE QTY: 0.249 G

DETECTOR NUMBER :68620
AVERAGE %EFFICIENCY :24.8701
% YIELD : 96.784

COUNT DATE: 7-JUL-2009 20:12:48
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :MXA1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B187.CNF;87
PCI/G : 4.723E+01	PCI/G : 4.723E+01	NOMINAL : 2.21253 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.14136 dpm	EFF FILE : W187.CNF;33
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	9.000	6.000	3.000	1.7077	68.10000	1.21E-01	7.01E-02	4.38E-02	1.18E-01	6.96E-02
TH-228	5363.000	150.000	136.224	12.000	11.2087	99.94000	1.04E+00	1.22E-01	1.96E-01	4.13E-01	9.67E-02
TH229	4900.000	536.000	530.000	6.000	2.4495	99.52000	4.00E+00	3.34E-01	4.30E-02	1.07E-01	1.76E-01
TH-230	4625.000	90.000	83.688	3.000	10.0531	100.0000	6.29E-01	8.40E-02	1.76E-01	3.72E-01	7.12E-02
TH-232	3972.000	111.000	108.993	1.000	2.6227	100.0000	8.19E-01	9.83E-02	4.59E-02	1.12E-01	7.92E-02

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

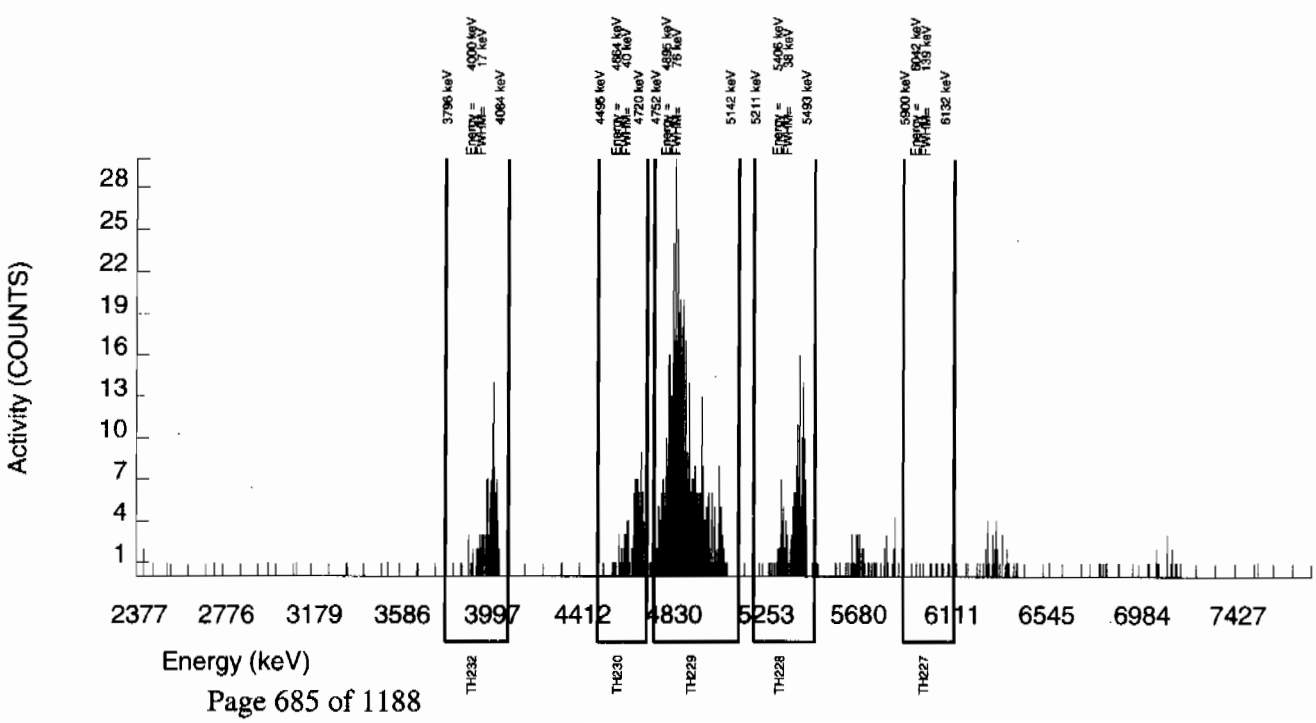

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881079 SAMPLE DATE : 2-JUL-2009 00:00:00.	SAMPLE ID : S1201871023_TH SAMPLE QTY: 1.000 G
DETECTOR NUMBER :68621 AVERAGE %EFFICIENCY :25.8624 % YIELD : 92.543	COUNT DATE: 7-JUL-2009 20:12:50 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXA1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 0934-G ISOTOPE : TH229 NOMINAL : 2.21252 dpm RESULTS : 2.04754 dpm	LIB FILE : ENV_ALPHA_TH.N BKG FILE : B188.CNF;87 BKG DATE : 5-JUL-2009 EFF FILE : W188.CNF;34 CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	0.000	-6.000	6.000	1.7077	68.10000	-2.09E-02	9.20E-03	1.10E-02	2.94E-02	9.20E-03
TH-228	5363.000	10.000	-3.766	12.000	11.2087	99.94000	-7.14E-03	8.52E-03	4.91E-02	1.03E-01	8.52E-03
TH229	4900.000	528.000	527.000	1.000	1.0000	99.52000	9.97E-01	8.08E-02	4.40E-03	1.39E-02	4.35E-02
TH-230	4625.000	8.000	3.707	1.000	10.0531	100.0000	6.98E-03	4.52E-03	4.40E-02	9.31E-02	4.50E-03
TH-232	3972.000	0.000	-2.001	1.000	2.6227	100.0000	-3.77E-03	2.66E-03	1.15E-02	2.81E-02	2.66E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

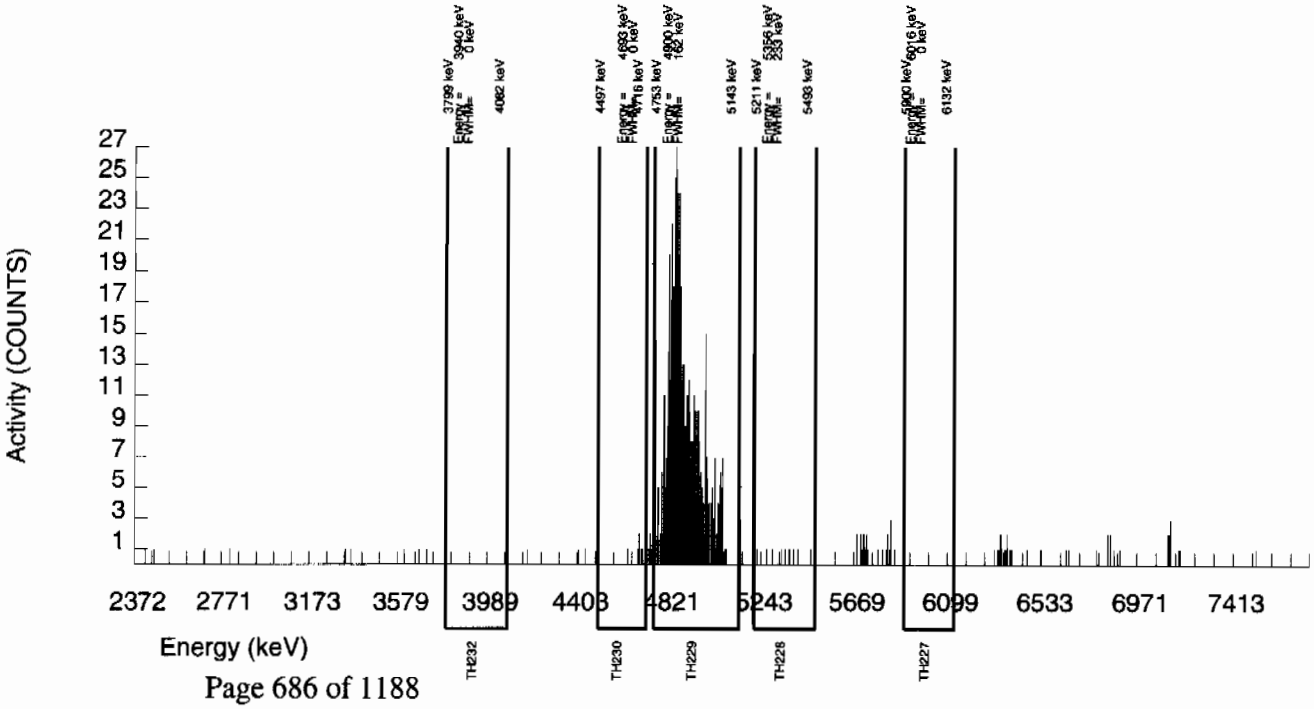

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881079
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S1201871024_TH
SAMPLE QTY: 0.252 G

DETECTOR NUMBER :68622
AVERAGE %EFFICIENCY :26.0510
% YIELD : 103.031

COUNT DATE: 7-JUL-2009 20:12:52
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :MXA1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B189.CNF;87
PCI/G : 4.666E+01	PCI/G : 4.666E+01	NOMINAL : 2.21253 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.27958 dpm	EFF FILE : W189.CNF;33
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	6.000	1.000	5.000	1.7077	68.10000	1.78E-02	5.91E-02	3.89E-02	1.04E-01	5.91E-02
TH-228	5363.000	157.000	148.020	7.000	11.2087	99.94000	1.00E+00	1.11E-01	1.74E-01	3.66E-01	8.62E-02
TH229	4900.000	595.000	591.000	4.000	2.0000	99.52000	3.95E+00	3.20E-01	3.11E-02	8.04E-02	1.64E-01
TH-230	4625.000	76.000	70.307	2.000	10.0531	100.0000	4.68E-01	6.60E-02	1.56E-01	3.30E-01	5.74E-02
TH-232	3972.000	125.000	123.878	0.000	2.6227	100.0000	8.25E-01	9.37E-02	4.06E-02	9.93E-02	7.41E-02

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

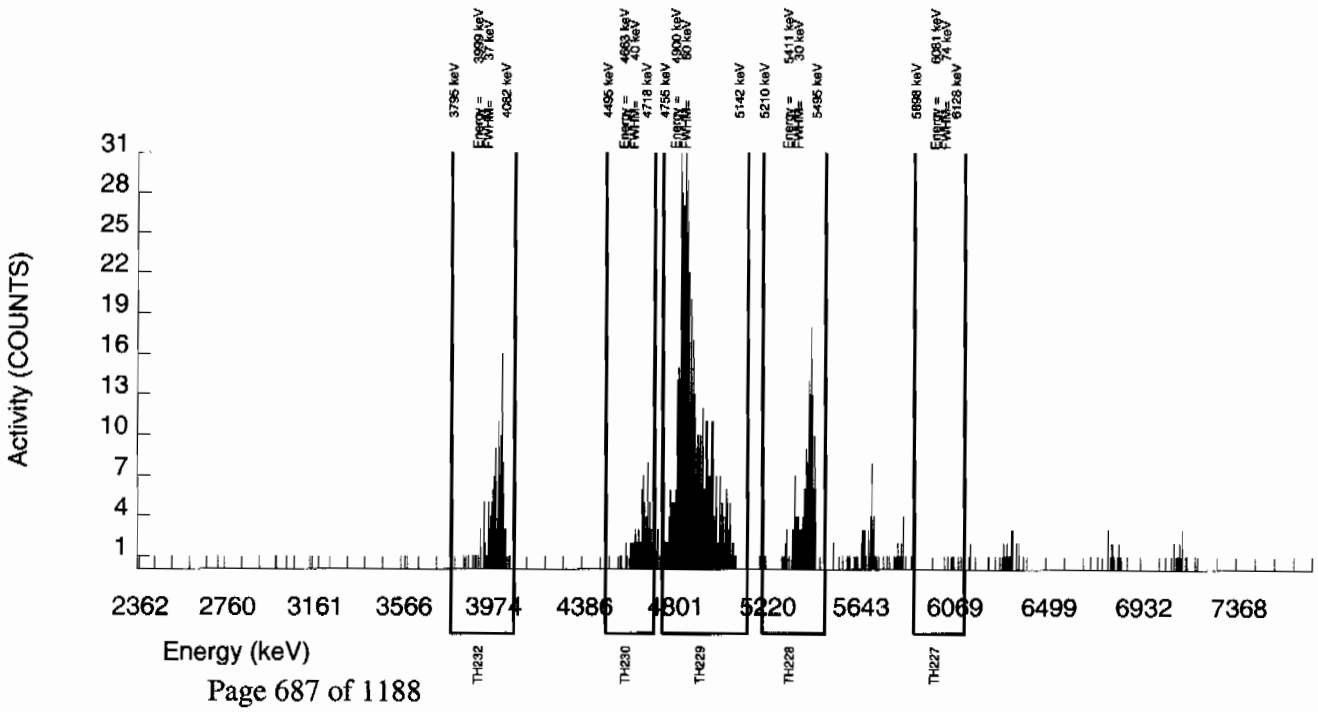

Alpha Spectroscopy Software Version 2 0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881079 SAMPLE DATE : 2-JUL-2009 00:00:00.	SAMPLE ID : S1201871025_TH SAMPLE QTY: 0.098 G
DETECTOR NUMBER :68623 AVERAGE %EFFICIENCY :26.2747 % YIELD : 88.844	COUNT DATE: 7-JUL-2009 20:12:55 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXA1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 1.200E+02	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.200E+02	ID : 0934-G ISOTOPE : TH229 NOMINAL : 2.21252 dpm RESULTS : 1.96569 dpm	LIB FILE : ENV_ALPHA_TH.N BKG FILE : B190.CNF;87 BKG DATE : 5-JUL-2009 EFF FILE : W190.CNF;34 CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	33.000	28.000	5.000	1.7077	68.10000	1.02E+00	2.35E-01	1.15E-01	3.08E-01	2.24E-01
TH-228	5363.000	83.000	67.278	14.000	11.2087	99.94000	1.33E+00	2.15E-01	5.14E-01	1.08E+00	1.93E-01
TH229	4900.000	541.000	514.000	27.000	5.1962	99.52000	1.02E+01	8.55E-01	2.39E-01	5.32E-01	4.72E-01
TH-230	4625.000	1313.000	1301.788	8.000	10.0531	100.0000	2.56E+01	1.93E+00	4.61E-01	9.74E-01	7.15E-01
TH-232	3972.000	88.000	84.024	3.000	2.6227	100.0000	1.65E+00	2.20E-01	1.20E-01	2.94E-01	1.87E-01

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

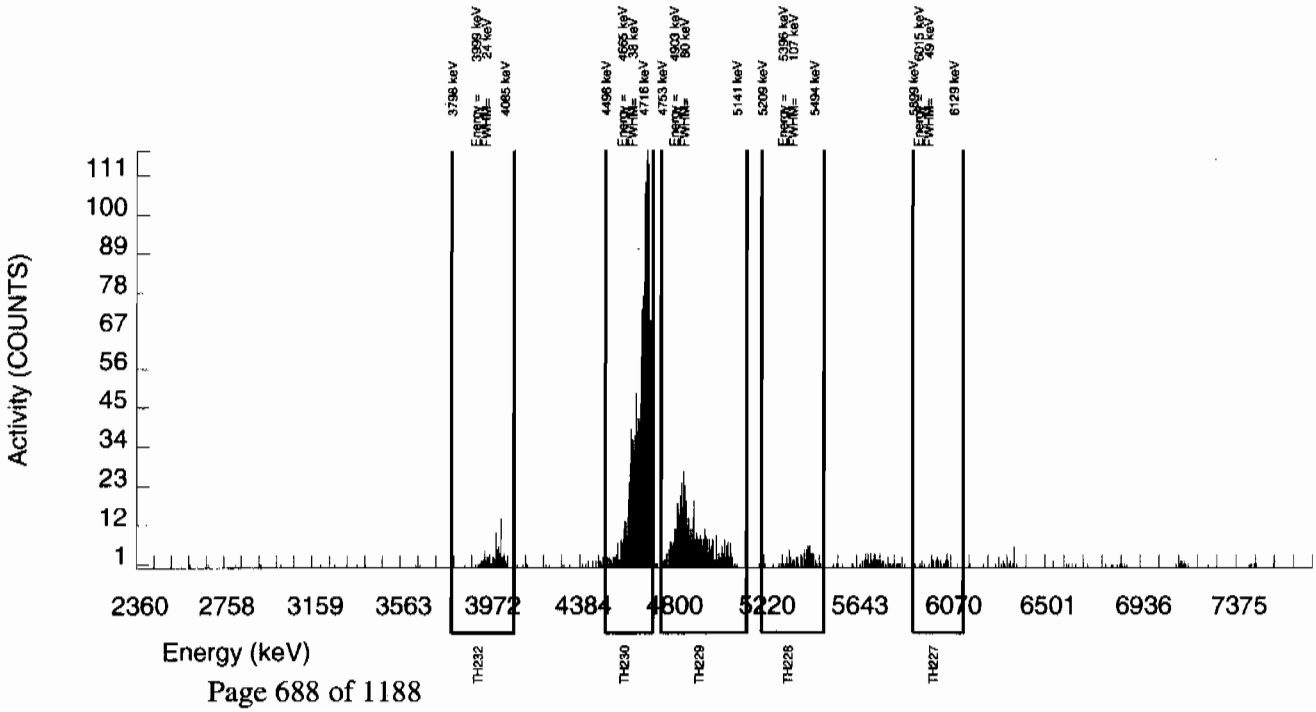

Radiochemistry Batch Checklist, Rev 9

Batch# 881676 Product: U Date: 7/15/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/15/09

Secondary Review Performed By: [signature] 7/15/09

7/6 7/17

LANL

PV

Uranium Que Sheet

01-JUL-09

Batch #: 881676 Analyst: AXD2 First Client Due Date:17-JUL-09 Internal Due Date:06-JUL-09

Tracer Isotope: U-232/U-236 Tracer Code: 1283-B Expiration Date: 12/16/09 Vol: 0.1

LCS Isotope: U-238 LCS Code: ~~1463-G~~ Expiration Date: ~~11/16/10~~ Vol: ~~0.1~~ 7/2/09

Spike Isotope: U-238 Spike Code: Expiration Date: Vol:

Prep Date: 7/02/09 Initials: Pipet ID: 2971058 Balance ID: 5041027 2 Witness: 7/2/09

Page 690 of 1188

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet Dry Aliquot (g) (1/1)	U Det #
232347001-1	CAMO-09-10462	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	1	1	0.500	133
232347002-1	CAMO-09-10460	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	2	2	0.524	134
232347003-1	CAMO-09-10461	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	3	3	0.515	135
232347004-1	CAMO-09-10467	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	4	4	0.565	~~136~~ 165
232357001-1	CAMO-09-10480	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	5	5	0.508	137
232357002-1	CAMO-09-10479	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	6	6	0.522	~~138~~ 166
232358001-1	CAMO-09-6005	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	7	7	0.518	139
232358002-1	CAMO-09-6029	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	8	8	0.527	140
232358003-1	CAMO-09-6037	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	9	9	0.514	141
232358004-1	CAMO-09-6033	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	10	10	0.517	142
232358005-1	CAMO-09-6030	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	11	11	0.503	144
232358006-1	CAMO-09-6031	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	12	12	0.525	145
232358007-1	CAMO-09-6032	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	13	13	0.508	146
232358008-1	CAMO-09-6036	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	14	14	0.513	147
232358009-1	CAMO-09-6028	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	15	15	0.515	148
232358010-1	CAMO-09-6047	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	16	16	0.503	149
232358011-1	CAMO-09-6048	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	17	17	0.507	150
1201872427-1	MB for batch 881676	MB		.1 pCi/g	SOIL	QC ACCOUNT		18	18	~~0.505~~ 1.0	151
1201872428-1	CAMO-09-10462(232347001DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	22-JUN-09	19	19	0.502	152
1201872429-1	LCS for batch 881676	LCS		.1 pCi/g	SOIL	QC ACCOUNT		20	20	0.109	153

*SRM 0244-A exp. 10/31/20

Choose SOP used: GL-RAD-A-011
GL-RAD-A-038
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: 7/15/09

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 881676

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201872428	DUP	Uranium-233/234	0.502 g	0.438	0.0525	0.171	.002330677	pCi/g	NO
		Uranium-235/236	0.502 g	0.0373	0.0134	0.0785	.005139442	pCi/g	NO
		Uranium-238	0.502 g	0.426	0.0501	0.0667	-.00832669	pCi/g	NO
1201872429	LCS	Uranium-233/234	0.109 g	6.29	0.579	0.788	.010733945	pCi/g	NO
		Uranium-235/236	0.109 g	0.193	0.0659	0.361	.023669725	pCi/g	NO
		Uranium-238	0.109 g	5.46	0.515	0.307	-.03834862	pCi/g	NO
1201872427	MB	Uranium-233/234	1.00 g	0.00117	0.00535	0.095	.00117	pCi/g	YES
		Uranium-235/236	1.00 g	0.00258	0.00448	0.0436	.00258	pCi/g	YES
		Uranium-238	1.00 g	-0.00418	0.00362	0.037	-.00418	pCi/g	NO
232347001	CAMO-09-10462	Uranium-233/234	0.500 g	0.400	0.0502	0.188	.00234	pCi/g	NO
		Uranium-235/236	0.500 g	0.0205	0.0103	0.0863	.00516	pCi/g	YES
		Uranium-238	0.500 g	0.389	0.049	0.0733	-.00836	pCi/g	NO
232347002	CAMO-09-10460	Uranium-233/234	0.524 g	0.376	0.0478	0.167	.002232824	pCi/g	NO
		Uranium-235/236	0.524 g	0.00	0.0144	0.0765	.004923664	pCi/g	YES
		Uranium-238	0.524 g	0.353	0.0445	0.065	-.00797710	pCi/g	NO
232347003	CAMO-09-10461	Uranium-233/234	0.515 g	0.325	0.041	0.161	.002271845	pCi/g	NO
		Uranium-235/236	0.515 g	0.00872	0.00875	0.0735	.005009709	pCi/g	YES
		Uranium-238	0.515 g	0.300	0.039	0.0625	-.00811650	pCi/g	NO
232347004	CAMO-09-10467	Uranium-233/234	0.565 g	0.425	0.0414	0.093	.002070796	pCi/g	NO
		Uranium-235/236	0.565 g	0.0354	0.011	0.0426	.004566372	pCi/g	NO
		Uranium-238	0.565 g	0.341	0.0355	0.0362	-.00739823	pCi/g	NO
232357001	CAMO-09-10480	Uranium-233/234	0.508 g	0.457	0.0524	0.165	.002303150	pCi/g	NO
		Uranium-235/236	0.508 g	0.0134	0.0101	0.0755	.005078740	pCi/g	YES
		Uranium-238	0.508 g	0.388	0.0462	0.0641	-.00822835	pCi/g	NO
232357002	CAMO-09-10479	Uranium-233/234	0.522 g	0.327	0.0358	0.101	.002241379	pCi/g	NO
		Uranium-235/236	0.522 g	0.0138	0.00734	0.0464	.004942529	pCi/g	YES
		Uranium-238	0.522 g	0.345	0.0364	0.0394	-.00800766	pCi/g	NO
232358001	CAMO-09-6005	Uranium-233/234	0.518 g	0.834	0.0827	0.171	.002258687	pCi/g	NO
		Uranium-235/236	0.518 g	0.0419	0.0157	0.0785	.004980695	pCi/g	NO
		Uranium-238	0.518 g	0.787	0.0789	0.0667	-.00806950	pCi/g	NO
232358002	CAMO-09-6029	Uranium-233/234	0.527 g	0.751	0.0744	0.161	.002220114	pCi/g	NO
		Uranium-235/236	0.527 g	0.0437	0.0188	0.0737	.004895636	pCi/g	NO
		Uranium-238	0.527 g	0.803	0.0773	0.0626	-.00793169	pCi/g	NO
232358003	CAMO-09-6037	Uranium-233/234	0.514 g	0.818	0.0814	0.171	.002276265	pCi/g	NO
		Uranium-235/236	0.514 g	0.0326	0.0125	0.0785	.005019455	pCi/g	NO
		Uranium-238	0.514 g	0.776	0.0775	0.0666	-.00813230	pCi/g	NO
232358004	CAMO-09-6033	Uranium-233/234	0.517 g	0.772	0.0771	0.166	.002263056	pCi/g	NO
		Uranium-235/236	0.517 g	0.0271	0.0158	0.0762	.004990329	pCi/g	NO
		Uranium-238	0.517 g	0.950	0.089	0.0647	-.00806511	pCi/g	NO
232358005	CAMO-09-6030	Uranium-233/234	0.503 g	1.59	0.153	0.269	.002326044	pCi/g	NO
		Uranium-235/236	0.503 g	0.0585	0.0211	0.123	.005129225	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232358005	CAMO-09-6030	Uranium-238	0.503 g	1.79	0.167	0.105	-.00831014	pCi/g	NO
232358006	CAMO-09-6031	Uranium-233/234	0.525 g	0.839	0.082	0.166	.002228571	pCi/g	NO
		Uranium-235/236	0.525 g	0.0588	0.018	0.0763	.004914286	pCi/g	NO
		Uranium-238	0.525 g	0.820	0.0801	0.0648	-.00796190	pCi/g	NO
232358007	CAMO-09-6032	Uranium-233/234	0.508 g	3.84	0.301	0.197	.002303150	pCi/g	NO
		Uranium-235/236	0.508 g	0.182	0.0354	0.0902	.005078740	pCi/g	NO
		Uranium-238	0.508 g	4.78	0.367	0.0766	-.00822835	pCi/g	NO
232358008	CAMO-09-6036	Uranium-233/234	0.513 g	0.855	0.0648	0.176	.002280702	pCi/g	NO
		Uranium-235/236	0.513 g	0.0525	0.0163	0.0805	.005029240	pCi/g	NO
		Uranium-238	0.513 g	1.02	0.0959	0.0684	-.00814815	pCi/g	NO
232358009	CAMO-09-6028	Uranium-233/234	0.515 g	0.732	0.0785	0.203	.002271845	pCi/g	NO
		Uranium-235/236	0.515 g	0.0442	0.0159	0.093	.005009709	pCi/g	NO
		Uranium-238	0.515 g	0.630	0.0699	0.079	-.00811650	pCi/g	NO
232358010	CAMO-09-6047	Uranium-233/234	0.503 g	0.530	0.0589	0.180	.002326044	pCi/g	NO
		Uranium-235/236	0.503 g	0.0342	0.0131	0.0823	.005129225	pCi/g	NO
		Uranium-238	0.503 g	0.624	0.0663	0.0699	-.00831014	pCi/g	NO
232358011	CAMO-09-6048	Uranium-233/234	0.507 g	0.860	0.0829	0.170	.002307692	pCi/g	NO
		Uranium-235/236	0.507 g	0.0462	0.015	0.0778	.005088757	pCi/g	NO
		Uranium-238	0.507 g	0.889	0.0851	0.0661	-.00824458	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S0232347001_UU SAMPLE QTY: 0.500 G
DETECTOR NUMBER :76229 AVERAGE %EFFICIENCY :24.5240 % YIELD : 88.659	COUNT DATE:10-JUL-2009 21:19:23 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B133.CNF;361
PCI/G : 2.352E+01	PCI/G : 2.352E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.69574 dpm	EFF FILE : W133.CNF;107
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	102.000	96.527	2.000	9.1924	100.0000	4.00E-01	5.02E-02	8.86E-02	1.88E-01	4.15E-02
U232	5302.100	1156.000	1151.000	5.000	2.2361	100.0000	4.77E+00	3.64E-01	2.16E-02	5.43E-02	1.41E-01
U-235	4391.000	4.000	4.000	0.000	3.0409	80.90000	2.05E-02	1.03E-02	3.62E-02	8.63E-02	1.02E-02
U-238	4184.730	95.000	94.000	1.000	3.2215	100.0000	3.89E-01	4.90E-02	3.11E-02	7.33E-02	4.06E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

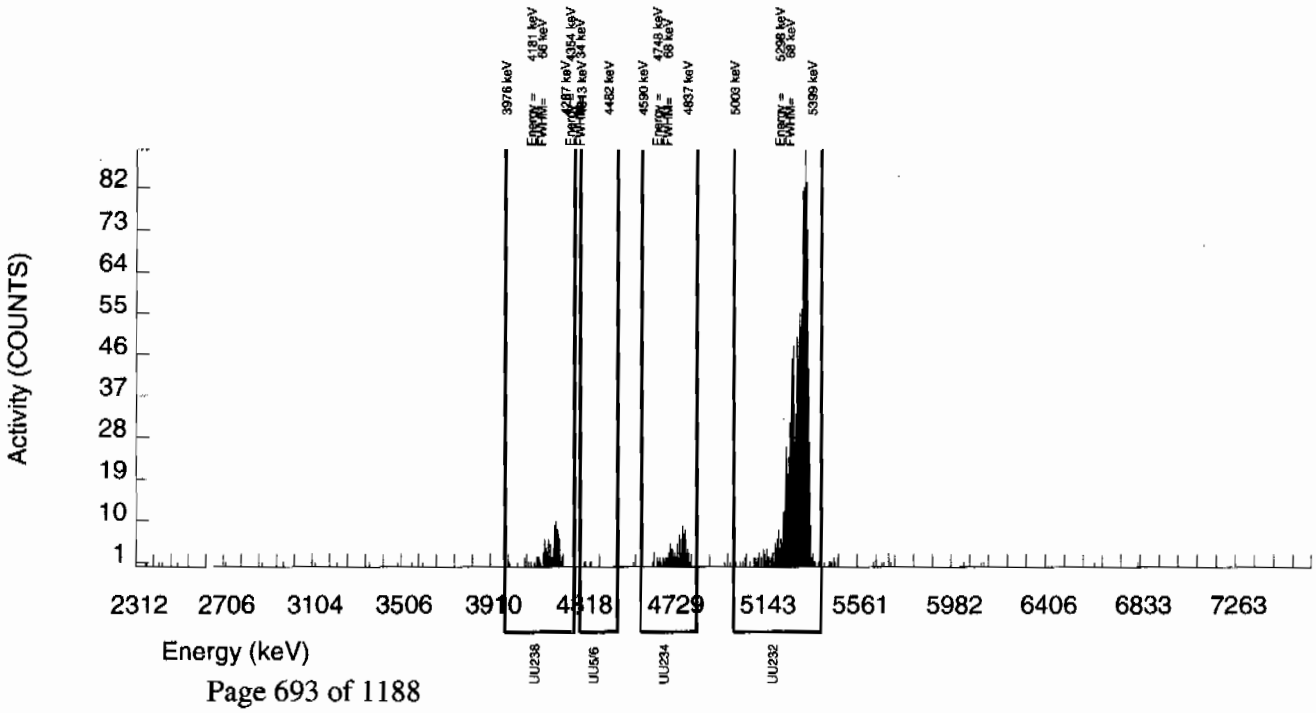

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S0232347002_UU SAMPLE QTY: 0.524 G
DETECTOR NUMBER :76230 AVERAGE %EFFICIENCY :24.4411 % YIELD : 95.761	COUNT DATE:10-JUL-2009 21:19:25 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 2.244E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.244E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29643 dpm RESULTS : 5.07190 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B134.CNF;360 BKG DATE : 5-JUL-2009 EFF FILE : W134.CNF;111 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	114.000	102.262	8.000	9.1924	100.0000	3.76E-01	4.78E-02	7.85E-02	1.67E-01	3.99E-02
U232	5302.100	1245.000	1239.000	6.000	2.4495	100.0000	4.55E+00	3.43E-01	2.09E-02	5.18E-02	1.30E-01
U-235	4391.000	5.000	0.000	5.000	3.0409	80.90000	0.00E+00	1.44E-02	3.21E-02	7.65E-02	1.44E-02
U-238	4184.730	99.000	96.000	3.000	3.2215	100.0000	3.53E-01	4.45E-02	2.75E-02	6.50E-02	3.71E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

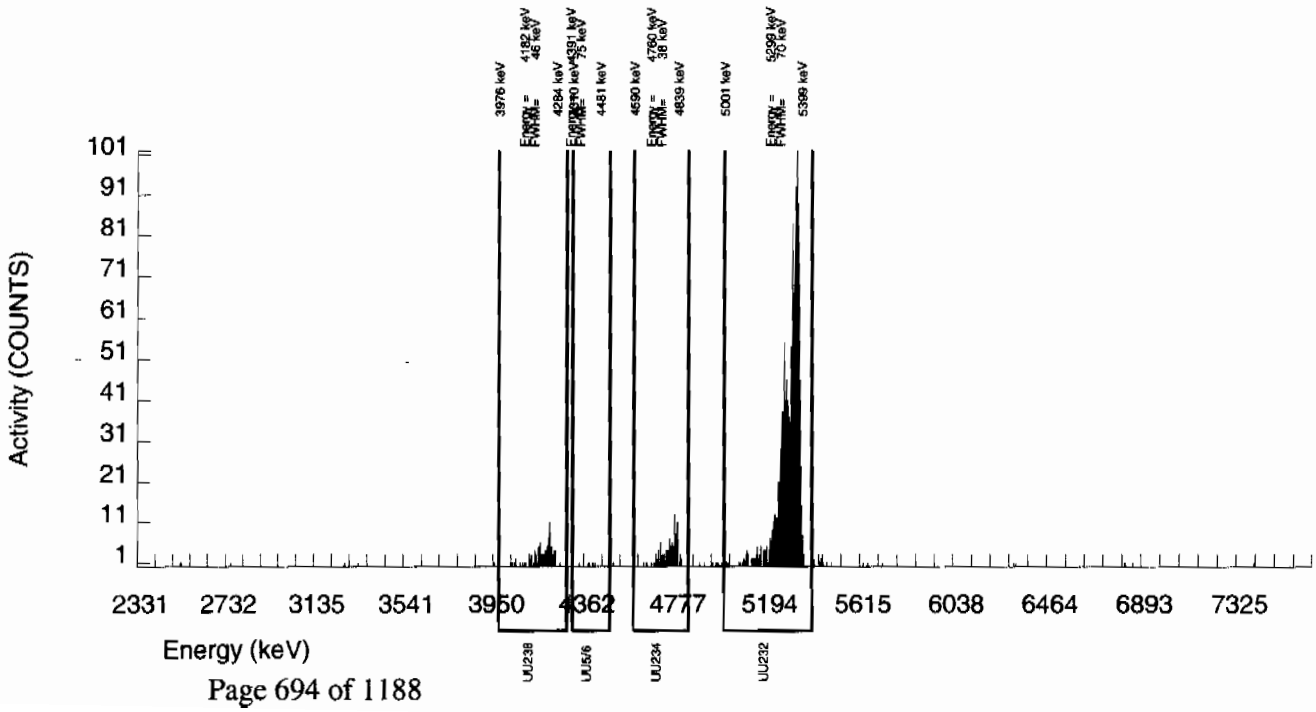

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232347003_UU
SAMPLE QTY: 0.515 G

DETECTOR NUMBER :64270
AVERAGE %EFFICIENCY :25.3758
% YIELD : 97.668

COUNT DATE:10-JUL-2009 21:19:28
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B135.CNF;372
PCI/G : 2.283E+01	PCI/G : 2.283E+01	NOMINAL : 5.29643 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.17291 dpm	EFF FILE : W135.CNF;122
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	97.000	92.042	1.000	9.1924	100.0000	3.25E-01	4.10E-02	7.55E-02	1.61E-01	3.42E-02
U232	5302.100	1315.000	1312.000	3.000	1.7321	100.0000	4.63E+00	3.46E-01	1.42E-02	3.80E-02	1.28E-01
U-235	4391.000	3.000	2.000	1.000	3.0409	80.90000	8.72E-03	8.75E-03	3.09E-02	7.35E-02	8.72E-03
U-238	4184.730	86.000	85.000	1.000	3.2215	100.0000	3.00E-01	3.90E-02	2.64E-02	6.25E-02	3.29E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

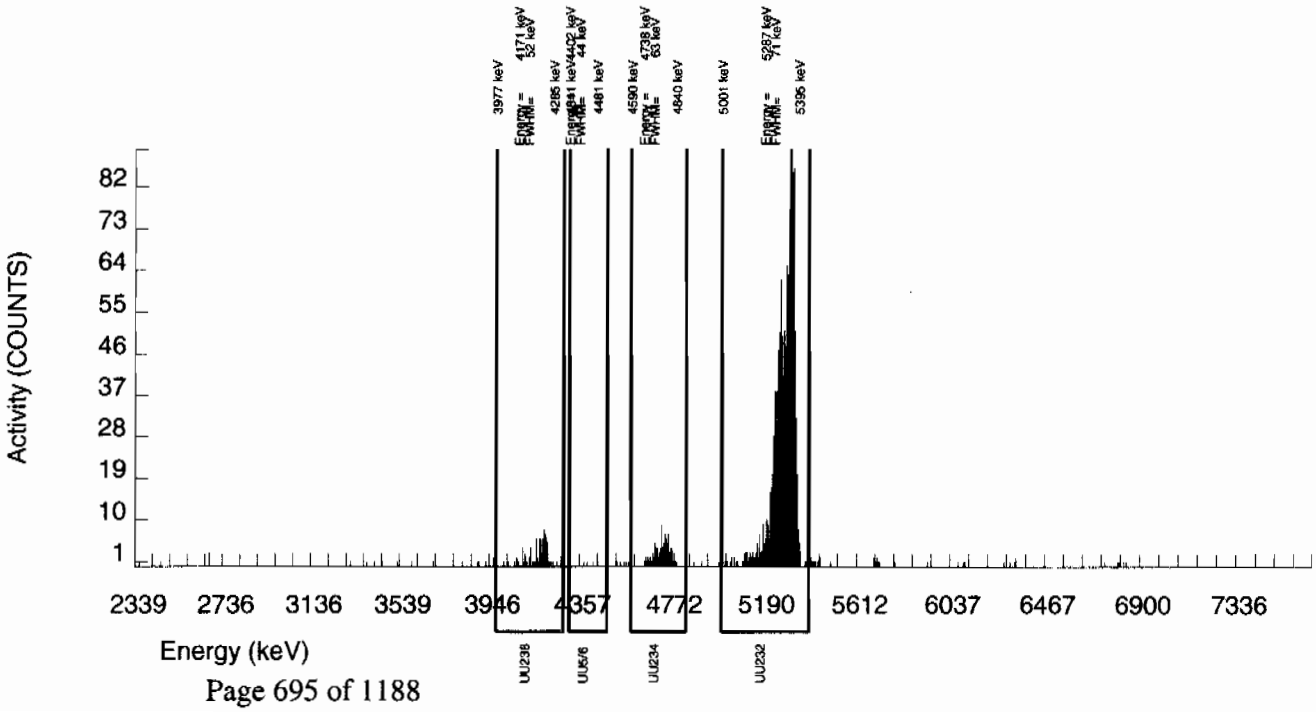

Alpha Spectroscopy Software Version 2 0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232347004_UU
SAMPLE QTY: 0.565 G

DETECTOR NUMBER :72544
AVERAGE %EFFICIENCY :37.9362
% YIELD : 102.786

COUNT DATE:14-JUL-2009 09:06:27
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B165.CNF;105
PCI/G : 2.081E+01	PCI/G : 2.081E+01	NOMINAL : 5.29642 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.44397 dpm	EFF FILE : W165.CNF;34
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	217.000	207.772	3.000	9.1924	100.0000	4.25E-01	4.14E-02	4.37E-02	9.30E-02	2.99E-02
U232	5302.100	2068.000	2064.000	4.000	2.0000	100.0000	4.22E+00	2.99E-01	9.51E-03	2.46E-02	9.31E-02
U-235	4391.000	16.000	14.000	2.000	3.0409	80.90000	3.54E-02	1.10E-02	1.79E-02	4.26E-02	1.07E-02
U-238	4184.730	171.000	167.000	4.000	3.2215	100.0000	3.41E-01	3.55E-02	1.53E-02	3.62E-02	2.70E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

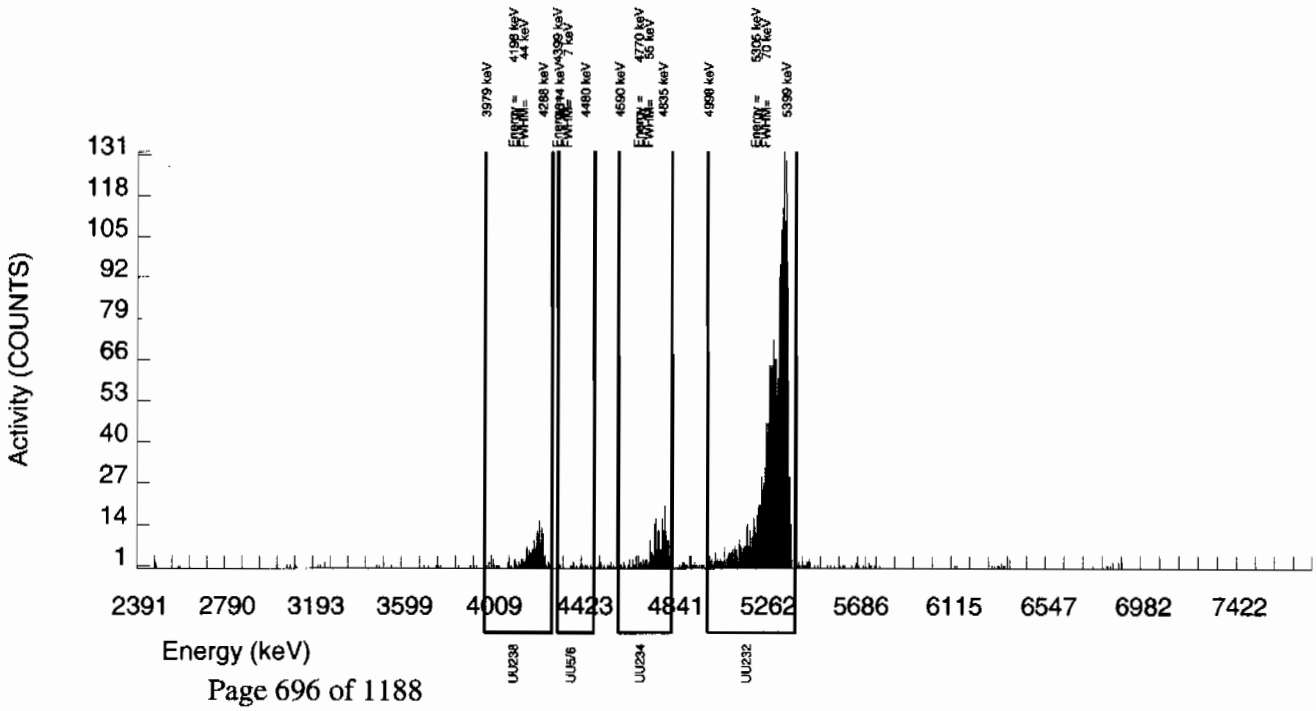

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 2-JUL-2009 00:00:00.	SAMPLE ID : S1201872427_UU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :75556 AVERAGE %EFFICIENCY :24.3854 % YIELD : 88.388	COUNT DATE:10-JUL-2009 21:20:05 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B151.CNF;329
PCI/G : 1.176E+01	PCI/G : 1.176E+01	NOMINAL : 5.29504 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.68017 dpm	EFF FILE : W151.CNF;104
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	7.000	0.558	3.000	9.1924	100.0000	1.17E-03	5.35E-03	4.47E-02	9.50E-02	5.35E-03
U232	5302.100	1143.000	1141.000	2.000	1.4142	100.0000	2.39E+00	1.82E-01	6.88E-03	1.94E-02	7.07E-02
U-235	4391.000	2.000	1.000	1.000	3.0409	80.90000	2.58E-03	4.48E-03	1.83E-02	4.36E-02	4.47E-03
U-238	4184.730	0.000	-2.000	2.000	3.2215	100.0000	-4.18E-03	3.62E-03	1.57E-02	3.70E-02	3.62E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

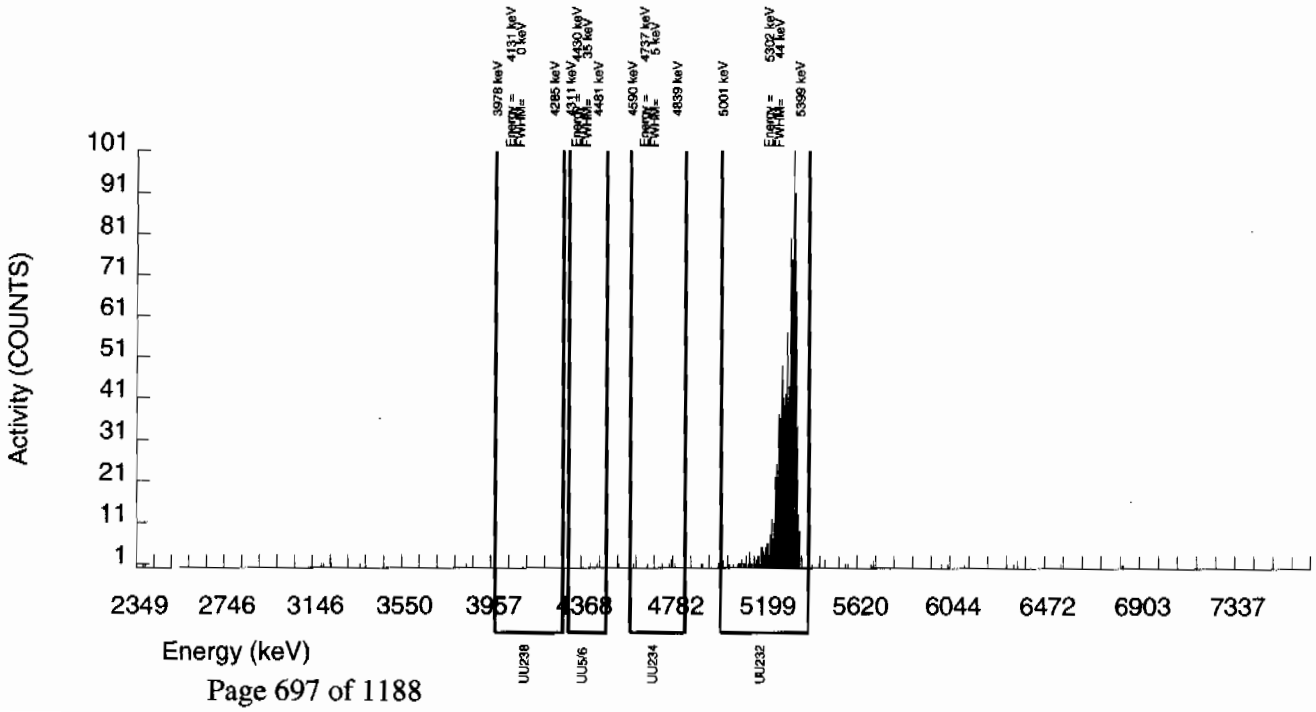

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S1201872428_UU SAMPLE QTY: 0.502 G
DETECTOR NUMBER :76222 AVERAGE %EFFICIENCY :24.6763 % YIELD : 96.532	COUNT DATE:10-JUL-2009 21:20:08 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 2.343E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.343E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29643 dpm RESULTS : 5.11276 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B152.CNF;326 BKG DATE : 5-JUL-2009 EFF FILE : W152.CNF;91 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	126.000	116.196	6.000	9.1924	100.0000	4.38E-01	5.25E-02	8.06E-02	1.71E-01	4.27E-02
U232	5302.100	1263.000	1261.000	2.000	1.4142	100.0000	4.75E+00	3.58E-01	1.24E-02	3.50E-02	1.34E-01
U-235	4391.000	8.000	8.000	0.000	3.0409	80.90000	3.73E-02	1.34E-02	3.29E-02	7.85E-02	1.32E-02
U-23[redacted]	4184.730	114.000	113.000	1.000	3.2215	100.0000	4.26E-01	5.01E-02	2.82E-02	6.67E-02	4.04E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

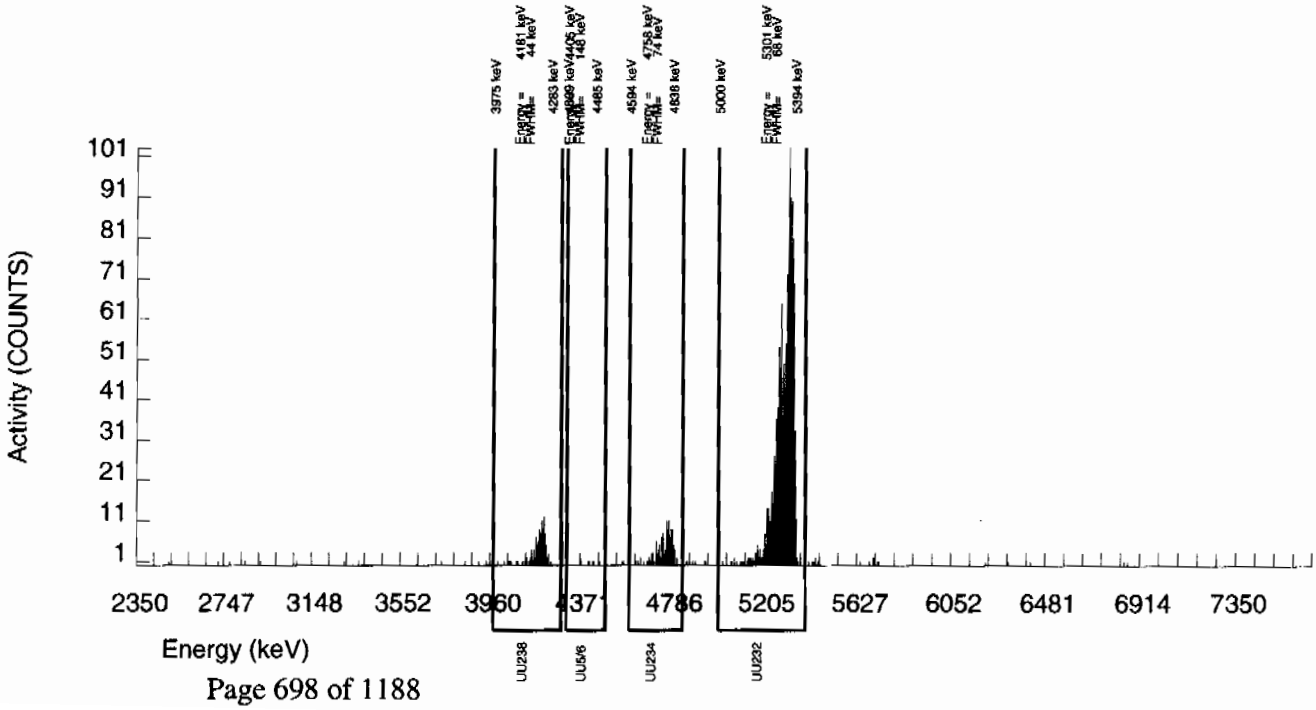

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 2-JUL-2009 00:00:00.	SAMPLE ID : S1201872429_UU SAMPLE QTY: 0.109 G
DETECTOR NUMBER :76223 AVERAGE %EFFICIENCY :25.0846 % YIELD : 95.112	COUNT DATE:10-JUL-2009 21:20:10 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 1.079E+02	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.079E+02	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29504 dpm RESULTS : 5.03620 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B153.CNF;321 BKG DATE : 5-JUL-2009 EFF FILE : W153.CNF;94 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	367.000	363.190	0.000	9.1924	100.0000	6.29E+00	5.79E-01	3.70E-01	7.88E-01	3.30E-01
U232	5302.100	1268.000	1263.000	5.000	2.2361	100.0000	2.19E+01	1.76E+00	9.01E-02	2.27E-01	6.18E-01
U-235	4391.000	9.000	9.000	0.000	3.0409	80.90000	1.93E-01	6.59E-02	1.51E-01	3.61E-01	6.42E-02
U-238	4184.730	317.000	315.000	2.000	3.2215	100.0000	5.46E+00	5.15E-01	1.30E-01	3.07E-01	3.09E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

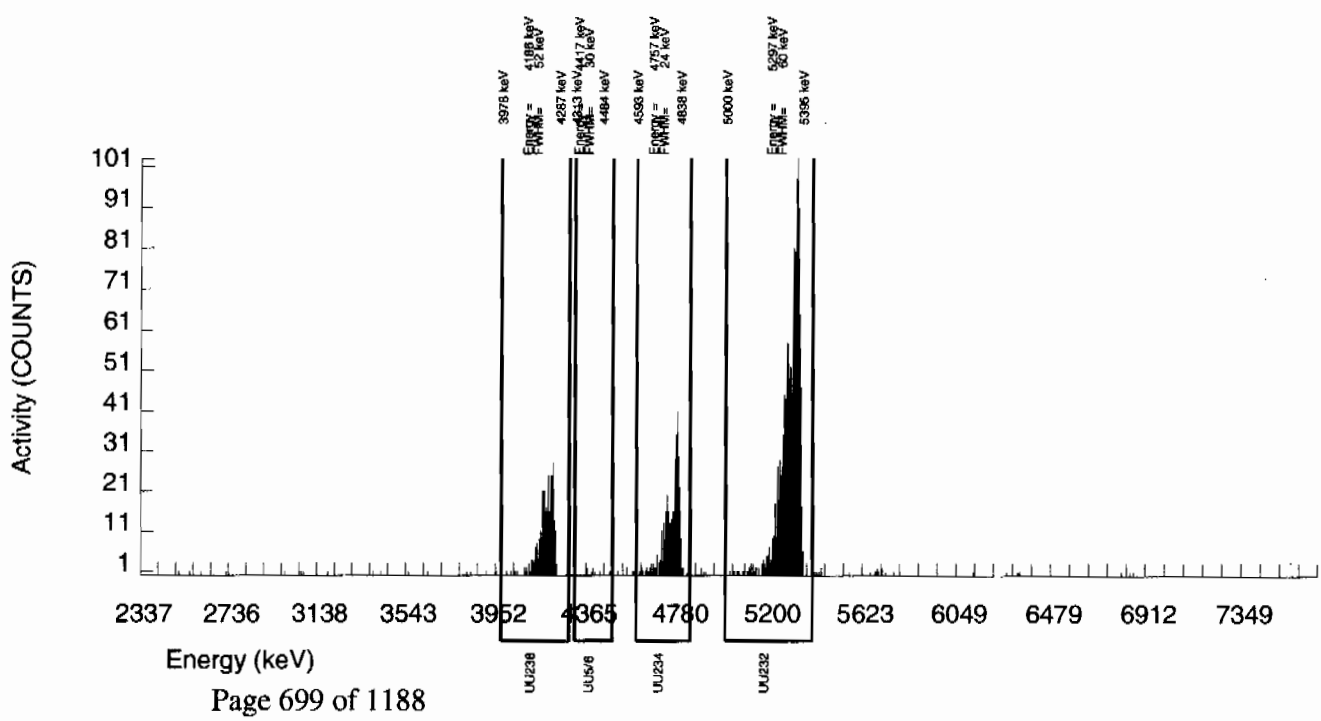

Radiochemistry Batch Checklist, Rev 9

Batch# 882703 Product: Pu Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument blg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: E. [illegible] 7/17/09

Secondary Review Performed By: [illegible] 7/18/09

LANL

7/12 - 7/23

P NEW

Plutonium Que Sheet

06-JUL-09

Batch #: 882703 Analyst: CXM2 First Client Due Date:23-JUL-09 Internal Due Date:12-JUL-09

Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 1262-A Expiration Date: 5/11/10 Vol: 0.1mL

LCS Isotope(s): Pu-239/Pu-238 LCS Code: 0244-B Expiration Date: 4/30/20 Vol: 0.106g

Spike Isotope(s): Pu-239/Pu-238 Spike Code: — Expiration Date: — Vol: —

Prep Date: 7/9/09 Initials: CMM Pipet ID: 2971058 Balance ID: 50410272 Witness: MOL 1/9/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Pu Det #
232347001-1	CAMO-09-10462	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	1	1	1.250	31 ~~17~~
232347002-1	CAMO-09-10460	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	2	2	1.250	32 14
232347003-1	CAMO-09-10461	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	3	3	1.267	33 15
232347004-1	CAMO-09-10467	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	4	4	1.251	34 16
232664001-1	CAMO-09-9942	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	5	5	1.252	35 17
232664002-1	CAMO-09-9941	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	6	6	1.260	36 19
232664003-1	CAMO-09-9943	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	7	7	1.253	37 20
232664004-1	CAMO-09-10030	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	8	8	1.266	38 21
232664005-1	CAMO-09-9989	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	9	9	1.254	39 22
232746001-1	CAMO-09-9956	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	10	10	1.253	40 23
232746002-1	CAMO-09-9950	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	11	11	1.252	41 24
232746003-1	CAMO-09-9952	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	12	12	1.251	42 ~~25~~
232746004-1	CAMO-09-9958	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	13	13	1.256	43 ~~26~~
232746005-1	CAMO-09-9957	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	14	14	1.252	44 ~~27~~
232746006-1	CAMO-09-9951	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	15	15	1.257	45 ~~28~~
232746007-1	CAMO-09-10031	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	16	16	1.253	46 ~~29~~
232746008-1	CAMO-09-9990	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	17	17	1.253	47 ~~30~~
232754001-1	CAMO-09-6615	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	18	18	1.250	48 ~~31~~
232754002-1	CAMO-09-6614	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	19	19	1.255	65 ~~32~~
232754003-1	CAMO-09-6613	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	20	20	1.266	66 ~~33~~
1201874791-1	MB for batch 882703	MB		.05 pCi/g	SOIL	QC ACCOUNT		21	21	~~1.267~~ 1.017	67 ~~34~~
1201874792-1	CAMO-09-6614(232754002DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	30-JUN-09	22	22	1.254	68 ~~35~~
1201874793-1	LCS for batch 882703	LCS		.05 pCi/g	SOIL	QC ACCOUNT		23	23	0.106	69 ~~36~~

trans

dailies

Choose SOP Used: GL-RAD-A-011 GL-RAD-A-045 GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION Circle One

Data Reviewed By: [signature] 7/17/09

Blank Correction Report

Batch ID 882703

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874792	DUP	Plutonium-238	1.25 g	0.00373	0.00329	0.0222	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0671	0.0102	0.0271	.004424	pCi/g	NO
1201874793	LCS	Plutonium-238	0.106 g	6.26	0.457	0.233	.078207547	pCi/g	NO
		Plutonium-239/240	0.106 g	38.3	2.29	0.285	.052169811	pCi/g	NO
1201874791	MB	Plutonium-238	1.00 g	0.00829	0.00619	0.0247	.00829	pCi/g	YES
		Plutonium-239/240	1.00 g	0.00553	0.00339	0.0302	.00553	pCi/g	YES
232347001	CAMO-09-10462	Plutonium-238	1.25 g	0.0025	0.00729	0.0223	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00375	0.00545	0.0273	.004424	pCi/g	YES
232347002	CAMO-09-10460	Plutonium-238	1.25 g	0.0101	0.00807	0.0258	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00	0.00457	0.0316	.004424	pCi/g	YES
232347003	CAMO-09-10461	Plutonium-238	1.27 g	-0.00236	0.00237	0.0211	.006527559	pCi/g	YES
		Plutonium-239/240	1.27 g	-0.00118	0.00264	0.0258	.004354331	pCi/g	YES
232347004	CAMO-09-10467	Plutonium-238	1.25 g	0.00984	0.00579	0.022	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00737	0.00325	0.0268	.004424	pCi/g	YES
232664001	CAMO-09-9942	Plutonium-238	1.25 g	0.130	0.0153	0.0233	.006632	pCi/g	NO
		Plutonium-239/240	1.25 g	0.483	0.0353	0.0284	.004424	pCi/g	NO
232664002	CAMO-09-9941	Plutonium-238	1.26 g	0.0424	0.00809	0.0211	.006579365	pCi/g	NO
		Plutonium-239/240	1.26 g	3.49	0.182	0.0257	.004388889	pCi/g	NO
232664003	CAMO-09-9943	Plutonium-238	1.25 g	0.0283	0.00702	0.0194	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.406	0.0293	0.0238	.004424	pCi/g	NO
232664004	CAMO-09-10030	Plutonium-238	1.27 g	0.0343	0.00808	0.0198	.006527559	pCi/g	NO
		Plutonium-239/240	1.27 g	2.95	0.153	0.0242	.004354331	pCi/g	NO
232664005	CAMO-09-9989	Plutonium-238	1.25 g	7.75	0.374	0.0169	.006632	pCi/g	NO
		Plutonium-239/240	1.25 g	3.13	0.157	0.0206	.004424	pCi/g	NO
232746001	CAMO-09-9956	Plutonium-238	1.25 g	0.00649	0.00432	0.0232	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.026	0.00674	0.0284	.004424	pCi/g	NO
232746002	CAMO-09-9950	Plutonium-238	1.25 g	0.0121	0.00543	0.0216	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.134	0.0149	0.0263	.004424	pCi/g	NO
232746003	CAMO-09-9952	Plutonium-238	1.25 g	0.0107	0.00398	0.0212	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00713	0.00376	0.026	.004424	pCi/g	YES
232746004	CAMO-09-9958	Plutonium-238	1.26 g	0.00691	0.00366	0.0206	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0265	0.0059	0.0251	.004388889	pCi/g	NO
232746005	CAMO-09-9957	Plutonium-238	1.25 g	0.00768	0.00427	0.0196	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00768	0.00454	0.024	.004424	pCi/g	YES
232746006	CAMO-09-9951	Plutonium-238	1.26 g	0.0065	0.00345	0.0232	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0182	0.00693	0.0284	.004388889	pCi/g	YES
232746007	CAMO-09-10031	Plutonium-238	1.25 g	0.011	0.00416	0.0197	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.180	0.0168	0.0241	.004424	pCi/g	NO
232746008	CAMO-09-9990	Plutonium-238	1.25 g	1.58	0.0885	0.0212	.006632	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232746008	CAMO-09-9990	Plutonium-239/240	1.25 g	0.380	0.0283	0.026	.004424	pCi/g	NO
232754001	CAMO-09-6615	Plutonium-238	1.25 g	-0.0064	0.00665	0.0229	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.147	0.0159	0.0279	.004424	pCi/g	NO
232754002	CAMO-09-6614	Plutonium-238	1.26 g	0.0153	0.00719	0.021	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0376	0.00882	0.0256	.004388889	pCi/g	NO
232754003	CAMO-09-6613	Plutonium-238	1.27 g	0.0143	0.00617	0.0233	.006527559	pCi/g	YES
		Plutonium-239/240	1.27 g	0.0912	0.0121	0.0285	.004354331	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S0232347001_PU SAMPLE QTY: 1.250 G
DETECTOR NUMBER :67042 AVERAGE %EFFICIENCY :33.3831 % YIELD : 86.434	COUNT DATE:16-JUL-2009 10:10:38 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.477E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.477E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.63656 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B031.CNF;1042 BKG DATE : 13-JUL-2009 EFF FILE : W031.CNF;325 CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	11.000	3.000	8.000	4.1106	99.90000	3.75E-03	5.45E-03	1.20E-02	2.73E-02	5.45E-03
PU-236	5749.000	14.000	6.000	8.000	2.7154	100.0000	7.62E-03	5.97E-03	7.89E-03	1.92E-02	5.96E-03
PU-238	5499.000	18.000	2.000	16.000	3.2589	99.90000	2.50E-03	7.29E-03	9.48E-03	2.23E-02	7.29E-03
PU242	4890.000	1226.000	1214.000	12.000	3.4641	100.0000	1.52E+00	8.66E-02	1.01E-02	2.35E-02	4.39E-02
PU-244	4589.000	19.000	13.000	6.000	4.8319	99.90000	1.63E-02	6.30E-03	1.41E-02	3.15E-02	6.25E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

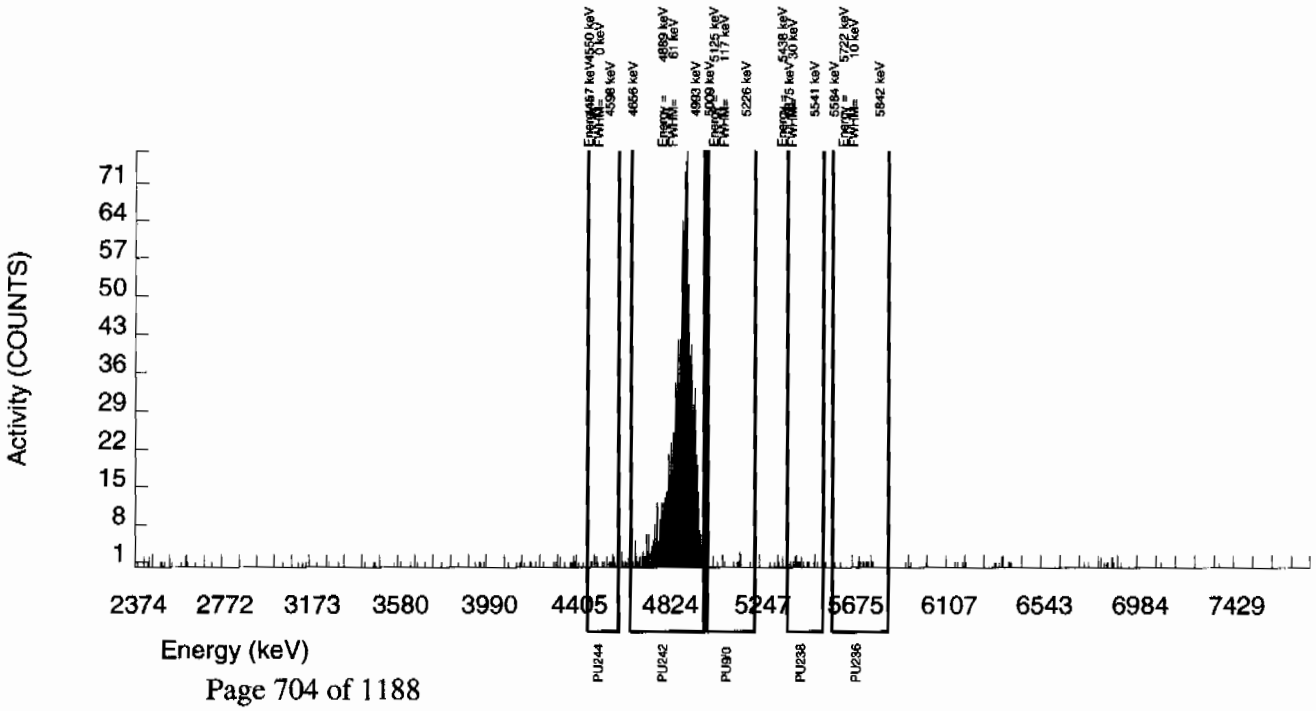

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703
SAMPLE DATE : 22-JUN-2009 00:00:00

SAMPLE ID : S0232347002_PU
SAMPLE QTY: 1.250 G

DETECTOR NUMBER :67041
AVERAGE %EFFICIENCY :31.2049
% YIELD : 79.976

COUNT DATE:16-JUL-2009 10:10:38
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B032.CNF;1058
PCI/G : 1.477E+00	PCI/G : 1.477E+00	NOMINAL : 4.20732 dpm	BKG DATE : 13-JUL-2009
		RESULTS : 3.36485 dpm	EFF FILE : W032.CNF;350
			CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	5.000	0.000	5.000	4.1106	99.90000	0.00E+00	4.57E-03	1.38E-02	3.16E-02	4.57E-03
PU-236	5749.000	7.000	-6.000	13.000	2.7154	100.0000	-8.81E-03	6.57E-03	9.12E-03	2.22E-02	6.56E-03
PU-238	5499.000	19.000	7.000	12.000	3.2589	99.90000	1.01E-02	8.07E-03	1.10E-02	2.58E-02	8.05E-03
PU242	4890.000	1059.000	1050.000	9.000	3.0000	100.0000	1.52E+00	9.00E-02	1.01E-02	2.41E-02	4.72E-02
PU-244	4589.000	5.000	3.000	2.000	4.8319	99.90000	4.34E-03	3.83E-03	1.62E-02	3.64E-02	3.82E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

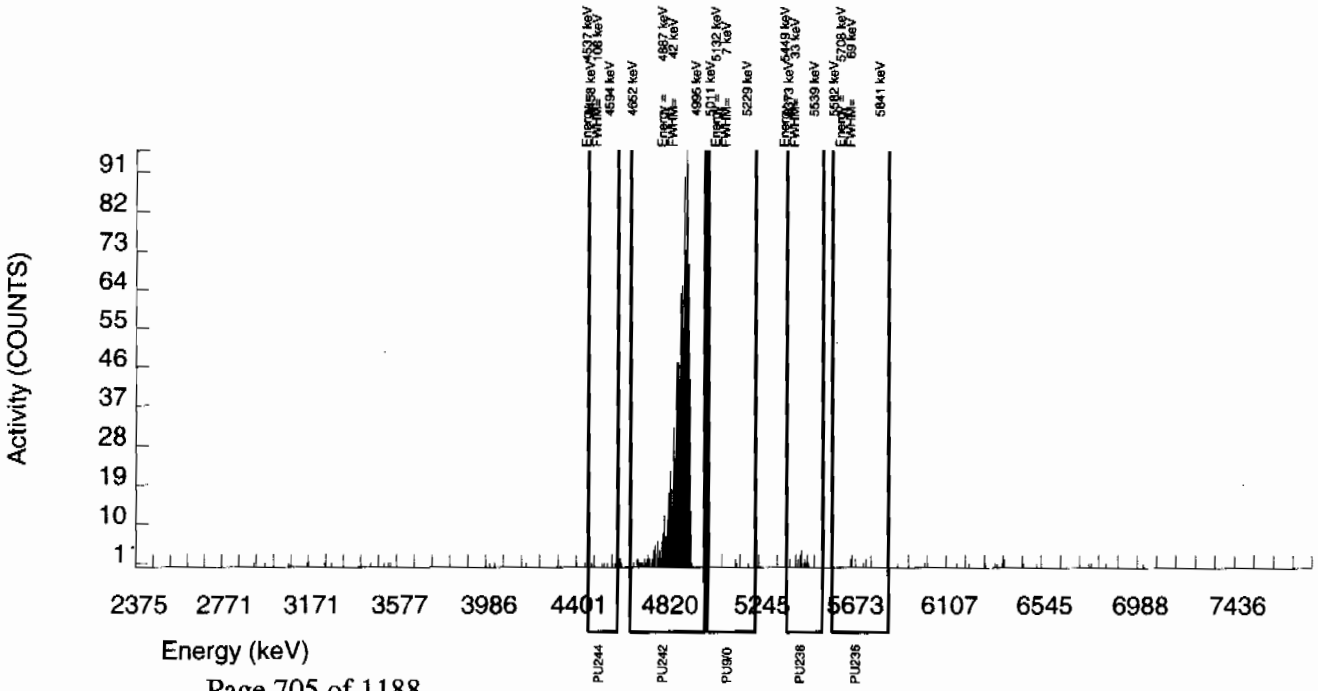

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S0232347003_PU SAMPLE QTY: 1.267 G
DETECTOR NUMBER :78785 AVERAGE %EFFICIENCY :31.3273 % YIELD : 96.128	COUNT DATE:16-JUL-2009 10:10:38 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B033.CNF;1041
PCI/G : 1.457E+00	PCI/G : 1.457E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.04440 dpm	EFF FILE : W033.CNF;315
			CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2.000	-1.000	3.000	4.1106	99.90000	-1.18E-03	2.64E-03	1.13E-02	2.58E-02	2.64E-03
PU-236	5749.000	5.000	4.000	1.000	2.7154	100.0000	4.80E-03	2.95E-03	7.46E-03	1.81E-02	2.94E-03
PU-238	5499.000	1.000	-2.000	3.000	3.2589	99.90000	-2.36E-03	2.37E-03	8.96E-03	2.11E-02	2.36E-03
PU242	4890.000	1268.000	1267.000	1.000	1.0000	100.0000	1.50E+00	8.42E-02	2.75E-03	8.69E-03	4.21E-02
PU-244	4589.000	7.000	6.000	1.000	4.8319	99.90000	7.09E-03	3.36E-03	1.33E-02	2.98E-02	3.34E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

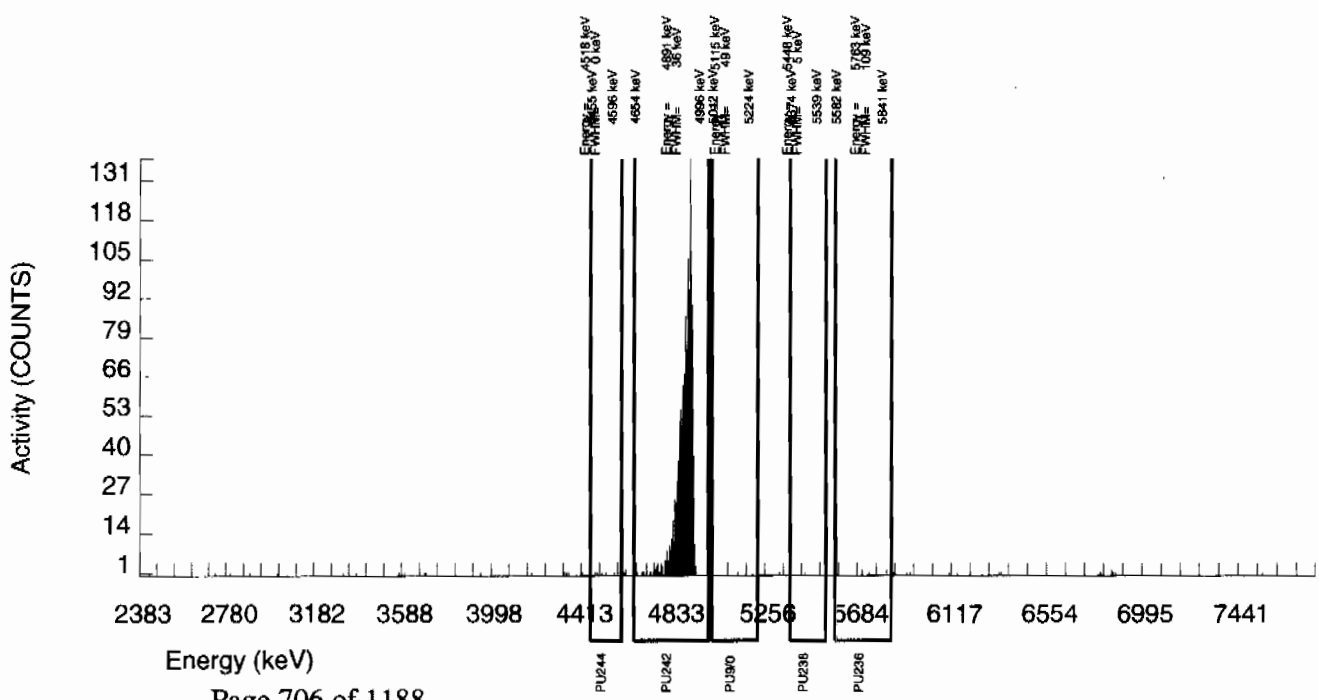

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S0232347004_PU SAMPLE QTY: 1.251 G
DETECTOR NUMBER :46-089B2 AVERAGE %EFFICIENCY :35.2079 % YIELD : 83.305	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B070.CNF;1043
PCI/G : 1.476E+00	PCI/G : 1.476E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 3.50489 dpm	EFF FILE : W070.CNF;278
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	0.000	-6.000	6.000	4.1106	99.90000	-7.37E-03	3.25E-03	1.18E-02	2.68E-02	3.25E-03
PU-236	5749.000	8.000	0.000	8.000	2.7154	100.0000	0.00E+00	4.99E-03	7.76E-03	1.88E-02	4.99E-03
PU-238	5499.000	15.000	8.000	7.000	3.2589	99.90000	9.84E-03	5.79E-03	9.32E-03	2.20E-02	5.77E-03
PU242	4890.000	1247.000	1234.000	13.000	3.6056	100.0000	1.51E+00	8.61E-02	1.03E-02	2.39E-02	4.36E-02
PU-244	4589.000	8.000	6.000	2.000	4.8319	99.90000	7.37E-03	3.90E-03	1.38E-02	3.10E-02	3.89E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

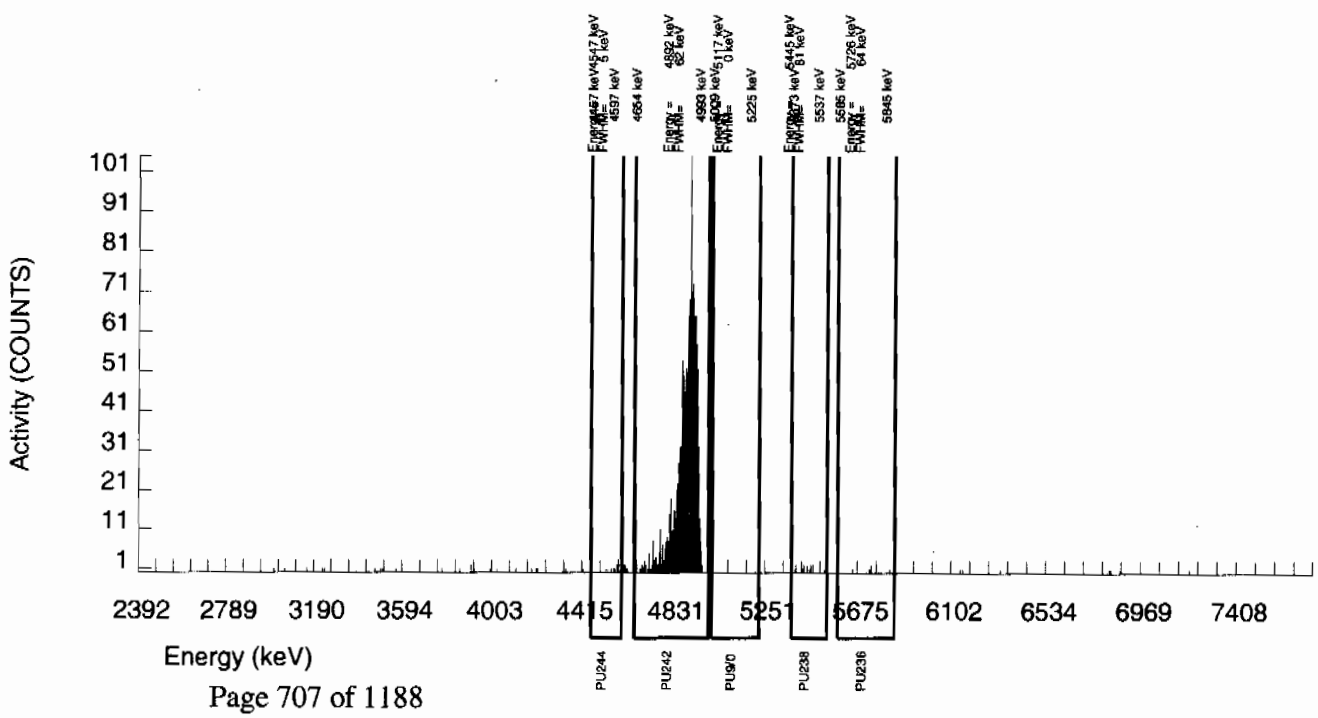

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S0232754002_PU SAMPLE QTY: 1.255 G
DETECTOR NUMBER :68551 AVERAGE %EFFICIENCY :31.6730 % YIELD : 96.579	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B065.CNF;1879
PCI/G : 1.471E+00	PCI/G : 1.471E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.06340 dpm	EFF FILE : W065.CNF;293
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	43.000	32.000	11.000	4.1106	99.90000	3.76E-02	8.82E-03	1.12E-02	2.56E-02	8.63E-03
PU-236	5749.000	29.000	17.000	12.000	2.7154	100.0000	2.02E-02	7.66E-03	7.41E-03	1.80E-02	7.60E-03
PU-238	5499.000	25.000	13.000	12.000	3.2589	99.90000	1.53E-02	7.19E-03	8.90E-03	2.10E-02	7.15E-03
PU242	4890.000	1294.000	1287.000	7.000	2.6458	100.0000	1.51E+00	8.48E-02	7.22E-03	1.76E-02	4.23E-02
PU-244	4589.000	9.000	6.000	3.000	4.8319	99.90000	7.05E-03	4.08E-03	1.32E-02	2.96E-02	4.07E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

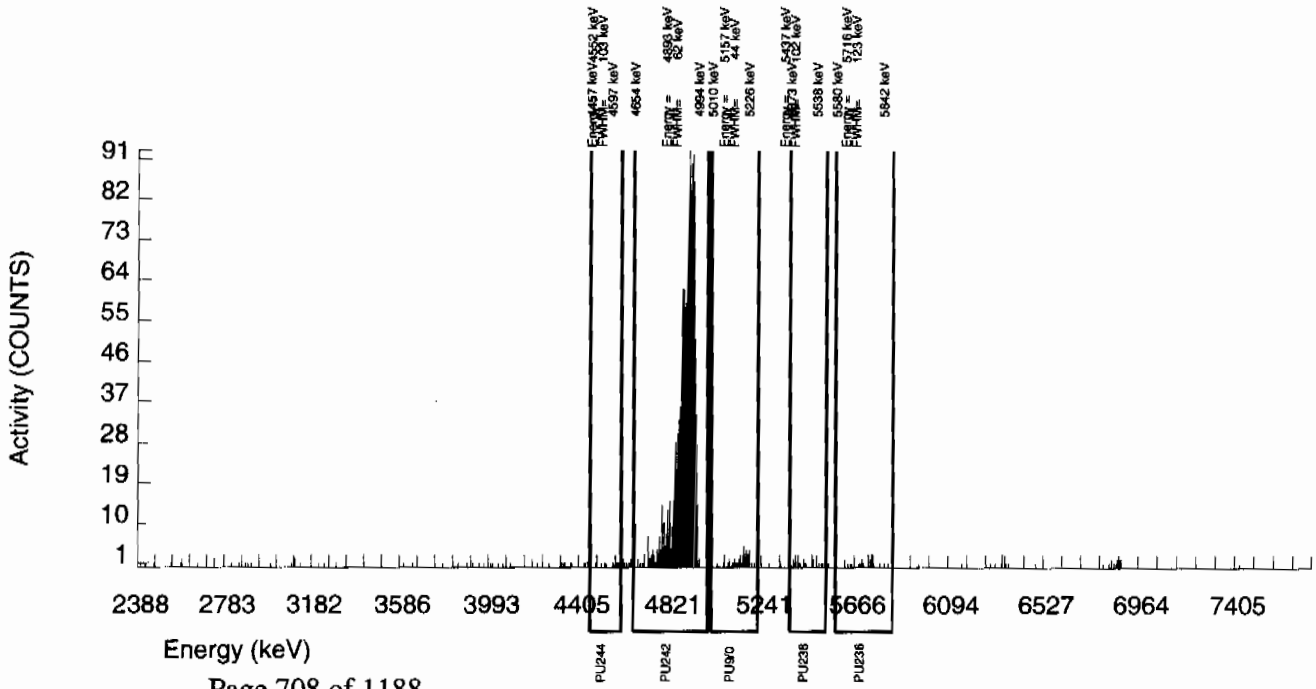

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874791_PU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :46-089B4 AVERAGE %EFFICIENCY :32.2511 % YIELD : 101.186	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B067.CNF;1038
PCI/G : 1.846E+00	PCI/G : 1.846E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.25722 dpm	EFF FILE : W067.CNF;275
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	5.000	4.000	1.000	4.1106	99.90000	5.53E-03	3.39E-03	1.32E-02	3.02E-02	3.38E-03
PU-236	5749.000	7.000	3.000	4.000	2.7154	100.0000	4.16E-03	4.61E-03	8.72E-03	2.12E-02	4.60E-03
PU-238	5499.000	13.000	6.000	7.000	3.2589	99.90000	8.29E-03	6.19E-03	1.05E-02	2.47E-02	6.18E-03
PU242	4890.000	1378.000	1373.000	5.000	2.2361	100.0000	1.90E+00	1.05E-01	7.18E-03	1.81E-02	5.13E-02
PU-244	4589.000	9.000	7.000	2.000	4.8319	99.90000	9.67E-03	4.61E-03	1.55E-02	3.48E-02	4.58E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

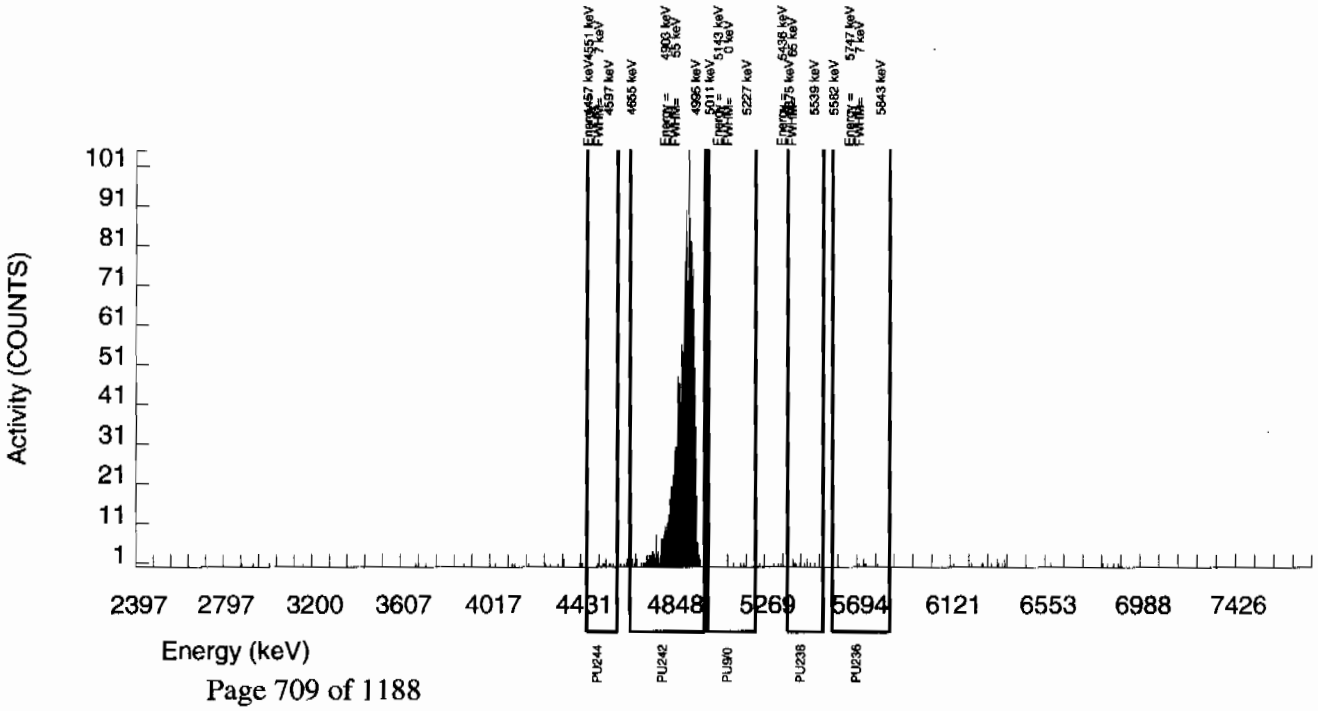

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703
SAMPLE DATE : 30-JUN-2009 00:00:00

SAMPLE ID : S1201874792_PU
SAMPLE QTY: 1.254 G

DETECTOR NUMBER :78794
AVERAGE %EFFICIENCY :30.1861
% YIELD : 95.904

COUNT DATE:16-JUL-2009 10:10:47
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B068.CNF;1031
PCI/G : 1.472E+00	PCI/G : 1.472E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.03497 dpm	EFF FILE : W068.CNF;266
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	57.000	54.000	3.000	4.1106	99.90000	6.71E-02	1.02E-02	1.19E-02	2.71E-02	9.62E-03
PU-236	5749.000	6.000	0.000	6.000	2.7154	100.0000	0.00E+00	4.35E-03	7.84E-03	1.90E-02	4.35E-03
PU-238	5499.000	5.000	3.000	2.000	3.2589	99.90000	3.73E-03	3.29E-03	9.42E-03	2.22E-02	3.29E-03
PU242	4890.000	1226.000	1218.000	8.000	2.8284	100.0000	1.51E+00	8.61E-02	8.16E-03	1.97E-02	4.36E-02
PU-244	4589.000	6.000	4.000	2.000	4.8319	99.90000	4.97E-03	3.52E-03	1.40E-02	3.13E-02	3.51E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

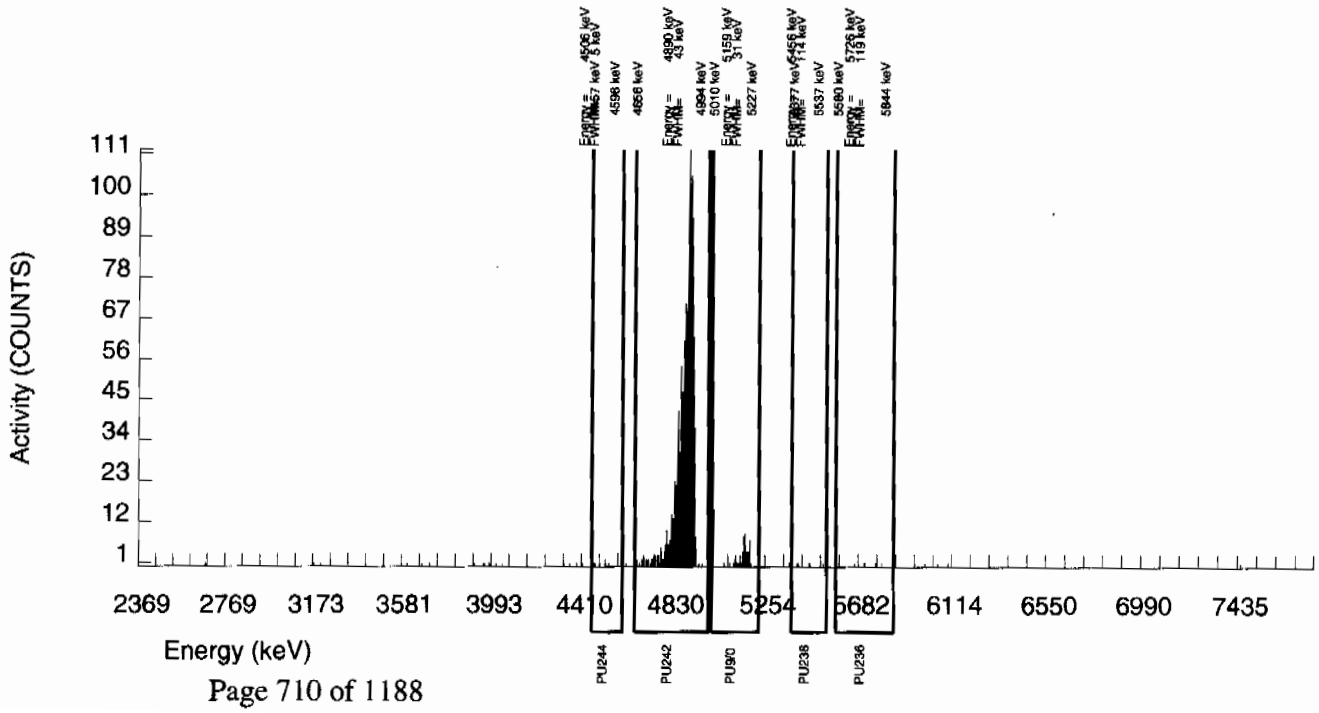

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874793_PU SAMPLE QTY: 0.106 G
DETECTOR NUMBER :78795 AVERAGE %EFFICIENCY :31.5901 % YIELD : 103.077	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.742E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.742E+01	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.33680 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B069.CNF;1033 BKG DATE : 12-JUL-2009 EFF FILE : W069.CNF;273 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2934.000	2933.000	1.000	4.1106	99.90000	3.83E+01	2.29E+00	1.25E-01	2.85E-01	7.08E-01
PU-236	5749.000	1.000	-5.000	6.000	2.7154	100.0000	-6.56E-02	3.47E-02	8.24E-02	2.00E-01	3.47E-02
PU-238	5499.000	480.000	479.000	1.000	3.2589	99.90000	6.26E+00	4.57E-01	9.90E-02	2.33E-01	2.87E-01
PU242	4890.000	1377.000	1370.000	7.000	2.6458	100.0000	1.79E+01	1.13E+00	8.03E-02	1.96E-01	4.86E-01
PU-244	4589.000	5.000	3.000	2.000	4.8319	99.90000	3.92E-02	3.46E-02	1.47E-01	3.29E-01	3.46E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

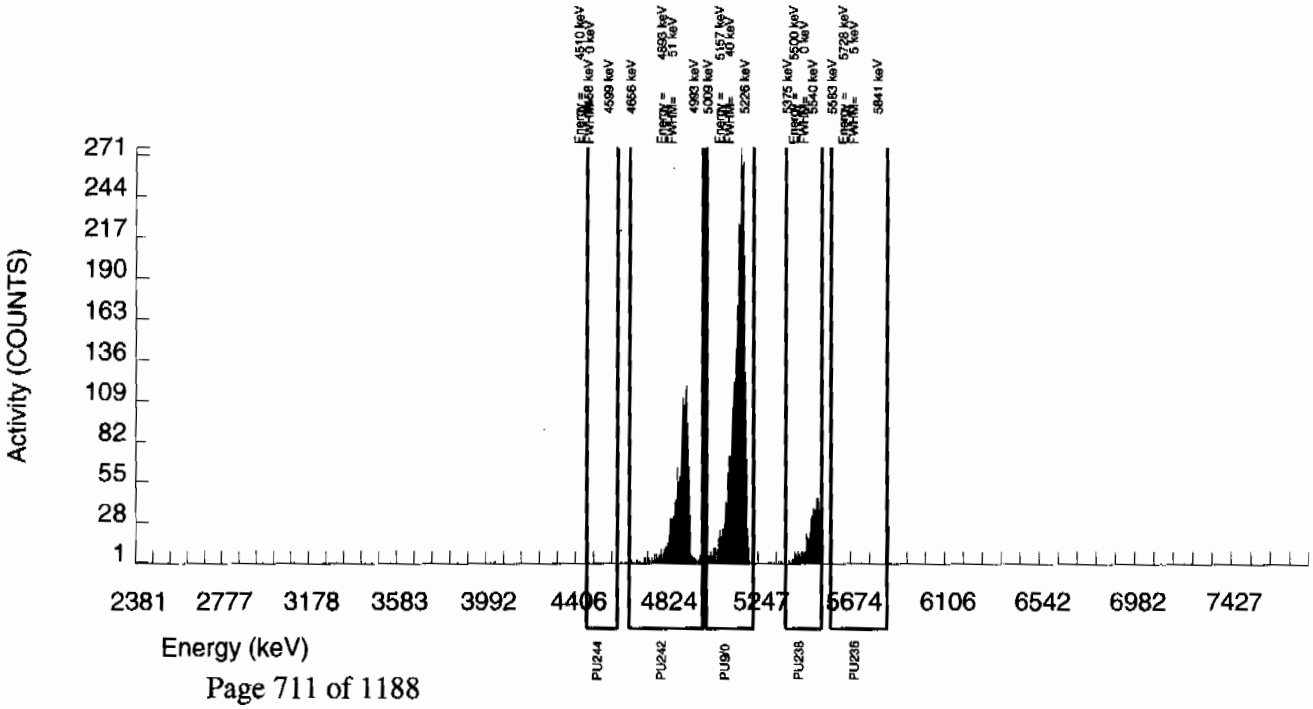

Radiochemistry Batch Checklist, Rev 9

Batch# 880723 Product: 85 Date: 7/14/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			NA
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		
Batch non-conformances second reviewed and disposition verified to be completed.	✓		
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: S. Ersland 7/14/09

Secondary Review Performed By: K Pat 7/14/09

NANL

7/17/09

Gamma Spec Que Sheet

1.G.- 7/6/09

06/26/2009

Batch #:880723 Analyst: MXR1 First Client DueDate07/17/2009 Internal Due Date: 07/06/2009

Gamma Spike Isotope: Mixed Gamma Spike Code: NA Expiration Date: NA Vol: NA Nominal Concentration: NA

Gamma LCS Isotope: Mixed Gamma LCS Code: 1032-A Expiration Date: 12/14/09 Vol: 1.0mL Nominal Concentration: Am241: 18.92 Cs137: 5.639 Co60: 6.934 ✓

Initials: MS Prep Date: 6/29/09 Witness: NA

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
232278001-1	CAMO-09-10458	SAMPLE		.05 pCi/g	LANL010	SOIL	19-JUN-09 12:00:00	114.89	1	6/26/09
232278002-1	CAMO-09-10459	SAMPLE		.05 pCi/g	LANL010	SOIL	19-JUN-09 12:00:00	107.41	4	6/26/09
232347001-1	CAMO-09-10462	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	126.58	5	6/29/09
232347002-1	CAMO-09-10460	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	126.18	8	
232347003-1	CAMO-09-10461	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	126.88	13	
232347004-1	CAMO-09-10467	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	117.04	14	
232357001-1	CAMO-09-10480	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	112.85	15	
232357002-1	CAMO-09-10479	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	123.92	17	
232358001-1	CAMO-09-6005	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	126.60	18	
232358002-1	CAMO-09-6029	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	134.40	6 ~~20~~	
232358003-1	CAMO-09-6037	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	145.04	21	
232358004-1	CAMO-09-6033	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	134.08	22	
232358005-1	CAMO-09-6030	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	124.55	23	
232358006-1	CAMO-09-6031	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	137.44	9	
232358007-1	CAMO-09-6032	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	100.62	10	
232358008-1	CAMO-09-6036	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	121.35	11	
232358009-1	CAMO-09-6028	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	133.79	12	
232358010-1	CAMO-09-6047	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	133.28	16	
232358011-1	CAMO-09-6048	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	140.17	17	
1201870087-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	6/29/09	145.00	18	
1201870088-1	DUP CAMO-09-10462(232347001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	22-JUN-09 12:00:00	126.58	21	
1201870089-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	6/29/09	155.44	23	

GEL Laboratories LLC, Radiochemistry Division

history ✓
✓ dates

Data Reviewed By: 7/14/09 7/14/09 7/14/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
880723	232278001	SAMPLE	06-JUL-09	Americium-241	-0.02865	0.3004	0.200
				Cerium-139	-0.02708	0.05534	0.050
				Cesium-134	0.079	0.1089	0.100
				Sodium-22	-0.00122	0.09266	0.080
				Thorium-234	1.894	2.345	2.00
880723	232278002	SAMPLE	06-JUL-09	Americium-241	0.06485	0.4038	0.200
				Cerium-139	0.02396	0.05051	0.050
				Cesium-134	0.08321	0.1081	0.100
				Thorium-234	0.7778	3.126	2.00
880723	232347001	SAMPLE	06-JUL-09	Cerium-139	0.00322	0.05179	0.050
				Sodium-22	-0.01266	0.09296	0.080
880723	232347002	SAMPLE	06-JUL-09	Americium-241	-0.02283	0.3001	0.200
				Thorium-234	0.05455	2.452	2.00
880723	232347003	SAMPLE	06-JUL-09	Cerium-139	-0.02302	0.0534	0.050
				Cesium-134	0.06555	0.1146	0.100
				Sodium-22	-0.02734	0.09677	0.080
880723	232347004	SAMPLE	06-JUL-09	Americium-241	-0.1319	0.2026	0.200
				Sodium-22	-0.03291	0.08205	0.080
880723	232357001	SAMPLE	06-JUL-09	Americium-241	0.1896	0.5516	0.200
				Cerium-139	0.00793	0.06582	0.050
				Cesium-134	0.1066	0.1145	0.100
				Europium-152	-0.07653	0.2101	0.200
				Sodium-22	-0.03956	0.09005	0.080
				Thorium-234	1.773	3.964	2.00
				Tin-113	0.03416	0.1027	0.100
880723	232357002	SAMPLE	06-JUL-09	Cerium-139	-0.00258	0.05512	0.050
				Cesium-134	0.1012	0.1262	0.100
				Cobalt-60	0.03742	0.1101	0.100
				Sodium-22	0.07822	0.1284	0.080
880723	232358001	SAMPLE	06-JUL-09	Americium-241	-0.09201	0.3101	0.200
				Thorium-234	1.374	2.732	2.00
880723	232358002	SAMPLE	06-JUL-09	Americium-241	-0.00825	0.3532	0.200
				Cerium-139	-0.02578	0.05591	0.050
				Cesium-134	0.1035	0.1101	0.100
				Sodium-22	-0.00959	0.08291	0.080
				Thorium-234	0.04384	2.856	2.00
880723	232358003	SAMPLE	06-JUL-09	Cerium-139	0.02318	0.05644	0.050
				Europium-152	0.04234	0.2023	0.200
				Sodium-22	0.01882	0.1079	0.080
880723	232358004	SAMPLE	06-JUL-09	Americium-241	0.1542	0.2185	0.200
880723	232358005	SAMPLE	06-JUL-09	Americium-241	0.03761	0.2596	0.200
				Cesium-134	0.09445	0.1113	0.100
				Sodium-22	0.0009	0.0846	0.080
880723	232358006	SAMPLE	06-JUL-09	Americium-241	-0.09827	0.2741	0.200
				Thorium-234	1.296	2.522	2.00

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
880723	232358007	SAMPLE	06-JUL-09	Americium-241	-0.2092	0.4481	0.200
				Cerium-139	-0.04366	0.05338	0.050
				Cesium-134	0.06817	0.1004	0.100
				Thorium-234	1.337	3.717	2.00
880723	232358008	SAMPLE	06-JUL-09	Americium-241	0.03138	0.2196	0.200
				Cerium-139	-0.00184	0.05079	0.050
880723	232358009	SAMPLE	06-JUL-09	Americium-241	0.04656	0.2499	0.200
				Thorium-234	0.7319	2.098	2.00
880723	232358010	SAMPLE	06-JUL-09	Americium-241	0.03489	0.2668	0.200
				Thorium-234	0.6745	2.145	2.00
880723	232358011	SAMPLE	06-JUL-09	Cerium-139	0.0218	0.0597	0.050
				Cesium-134	0.08665	0.1167	0.100
				Europium-152	0.02076	0.2073	0.200
				Sodium-22	-0.01757	0.0957	0.080
880723	1201870087	MB	06-JUL-09				
880723	1201870088	DUP	06-JUL-09	Cesium-134	0.07015	0.1197	0.100
				Cobalt-60	0.04829	0.1095	0.100
				Sodium-22	0.06557	0.1294	0.080
				Yttrium-88	0.04953	0.1057	0.100
880723	1201870089	LCS	06-JUL-09	Cerium-139	0.02647	0.07455	0.050
				Cesium-134	0.09152	0.1776	0.100
				Europium-152	-0.09306	0.3002	0.200
				Mercury-203	0.0068	0.1031	0.100
				Potassium-40	0.8824	1.186	1.00
				Ruthenium-106	-0.05382	1.089	0.800
				Sodium-22	0.00409	0.1016	0.080
				Thorium-234	-0.5	3.431	2.00
				Tin-113	0.04546	0.143	0.100
				Uranium-235	0.1149	0.5185	0.500
				Yttrium-88	0.03265	0.104	0.100

Gamma Review Report based on Result > MDA for Batch:880723

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232278001	19-JUN-09 12:00	06-JUL-09 11:09	17	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.619	0.1888	pCi/g	0.2779	N	911.4	3	1.374	IDENTIFIED	10.51	☐	
Americium-243 INT	0.3215	0.0449	pCi/g	0.1076	N	74.72	2	1.186	IDENTIFIED	13.32	☐	
Annihilation Rad. —	0.1565	0.04511	pCi/g	0.05139	N	511.1	2	1.916	IDENTIFIED	28.69	☐	
Pb-214 Bismuth-211 INT	2.902	0.2519	pCi/g	0.3915	Y	352.3	4	1.223	IDENTIFIED	8.085	☑ UI	
Bismuth-212 LA	1.672	0.3372	pCi/g	0.8179	N	727.6	1	1.628	FAIL_ABUND	19.81	☐	
Bismuth-214 ✓	0.9322	0.0967	pCi/g	0.1266	0.200	609.6	4	1.281	IDENTIFIED	9.689	☐	
Pb-214 Cadmium-109 INT	1.853	0.4465	pCi/g	1.44	Y	87.12	4	1.197	IDENTIFIED	23.65	☑ UI	
Cerium-143 —	710.3	240	pCi/g	0	N	87.12	4	1.197	NOT_IDENTI	23.65	☐	
Gross Gamma —	8.454	1.478	pCi/g	2.459	N		0				☐	
Iodine-135 —	4.71E+17	0	pCi/g	0	N	511.1	2	1.916	NOT_IDENTI	28.69	☐	
Krypton-85 HE	20.25	4.521	pCi/g	16.75	N	239	7	1.295	NOT_IDENTI	4.491	☐	
Lead-212 ✓	1.379	0.07975	pCi/g	0.1014	0.100	239	7	1.295	IDENTIFIED	4.491	☐	
Lead-214 ✓	1.009	0.0915	pCi/g	0.1334	0.100	352.3	4	1.223	IDENTIFIED	8.085	☐	
Neptunium-237 HE	0.5335	0.1398	pCi/g	0.4526	N	87.12	4	1.197	IDENTIFIED	23.65	☐	
Polonium-212 NL	1.379	0.07975	pCi/g	0.1014	N	239	7	1.295	IDENTIFIED	4.491	☐	
Polonium-214 NL	1.009	0.0915	pCi/g	0.1334	N	352.3	4	1.223	IDENTIFIED	8.085	☐	
Polonium-216 NL	1.379	0.07975	pCi/g	0.1014	N	239	7	1.295	IDENTIFIED	4.491	☐	
Polonium-218 NL	1.009	0.0915	pCi/g	0.1334	N	352.3	4	1.223	IDENTIFIED	8.085	☐	
Potassium-40 ✓	33.66	1.605	pCi/g	0.6663	1.00	1461	1	1.887	IDENTIFIED	3.182	☐	
Pb-214 Radium-224 INT	3.559	0.7624	pCi/g	1.155	Y	242.1	1	1.879	IDENTIFIED	21.23	☑ UI	
Radium-226 ✓	0.9322	0.0967	pCi/g	0.1266	Y	609.6	4	1.281	IDENTIFIED	9.689	☐	
Radium-228 ✓	1.619	0.1888	pCi/g	0.2779	0.500	911.4	3	1.374	IDENTIFIED	10.51	☐	
Strontium-85 LA	0.1059	0.02363	pCi/g	0.08757	Y	239	7	1.295	NOT_IDENTI	4.491	☑ UI	Data rejected due to low abundance.
Technetium-99m —	1.83E+18	0	pCi/g	0	N	239	7	1.295	NOT_IDENTI	4.491	☐	
Thallium-200 HE	501	853.1	pCi/g	0	N	74.72	2	1.186	NOT_IDENTI	13.32	☐	
Thallium-208 ✓	0.4973	0.04815	pCi/g	0.06629	0.080	583.5	1	1.355	IDENTIFIED	9.15	☐	
Thorium-228 ✓	1.379	0.07975	pCi/g	0.1014	N	239	7	1.295	IDENTIFIED	4.491	☐	
Thorium-230 ✓	0.9322	0.0967	pCi/g	0.1266	N	609.6	4	1.281	IDENTIFIED	9.689	☐	
Thorium-232 ✓	1.619	0.1888	pCi/g	0.2779	N	911.4	3	1.374	IDENTIFIED	10.51	☐	
Tin-126 HE	0.1817	0.04377	pCi/g	0.142	N	87.12	4	1.197	IDENTIFIED	23.65	☐	
Titanium-44 LA	0.3324	0.0322	pCi/g	0.09217	N	77.17	1	1.14	FAIL_ABUND	8.698	☐	
Total Uranium —	5.5704	3.67E-06	ug/g	3.4911	N		0				☐	
Uranium-234 ✓	0.9322	0.0967	pCi/g	0.1266	N	609.6	4	1.281	IDENTIFIED	9.689	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232278002	19-JUN-09 12:00	06-JUL-09 11:09	17	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.295	0.1596	pCi/g	0.2321	N	910.6	3	1.218	IDENTIFIED	11.05	☐	
Americium-243 INT	0.2888	0.04404	pCi/g	0.1042	N	74.89	2	1.009	IDENTIFIED	14.13	☐	
Annihilation Rad. HE	0.1227	0.03743	pCi/g	0.04963	N	510.2	2	1.521	IDENTIFIED	30.38	☐	
Bismuth-211 INT	3.155	0.2446	pCi/g	0.3135	Y	351.8	4	1.336	IDENTIFIED	6.979	☑ UI	
Bismuth-214 ✓	0.9587	0.08326	pCi/g	0.1227	0.200	608.9	4	1.429	IDENTIFIED	7.868	☐	
Cadmium-109 INT	2.038	0.6811	pCi/g	1.606	Y	87.02	4	1.243	IDENTIFIED	32.88	☑ UI	
Cerium-143 —	1428	271.1	pCi/g	0	N	327.4	1	0.7605	FAIL_DECAY	31.85	☐	
Gross Gamma —	8.2	1.262	pCi/g	1.992	N		0				☐	
Iodine-123 HE	2.89E+07	3.05E+07	pCi/g	0	N	87.02	4	1.243	NOT_IDENTI	32.88	☐	
Iodine-135 —	1.85E+17	0	pCi/g	0	N	510.2	2	1.521	NOT_IDENTI	30.38	☐	
Lead-212 ✓	1.496	0.08352	pCi/g	0.08703	0.100	238.5	5	1.145	IDENTIFIED	3.88	☐	
Lead-214 ✓	1.098	0.08977	pCi/g	0.1135	0.100	351.8	4	1.336	IDENTIFIED	6.979	☐	
Neptunium-237 HE	0.5866	0.2052	pCi/g	0.4566	N	87.02	4	1.243	IDENTIFIED	32.88	☐	
Polonium-212 NL	1.496	0.08352	pCi/g	0.08703	N	238.5	5	1.145	IDENTIFIED	3.88	☐	

Polonium-214		1.098	0.08977	pCi/g	0.1135	N	351.8	4	1.336	IDENTIFIED	6.979	☐
Polonium-216		1.496	0.08352	pCi/g	0.08703	N	238.5	5	1.145	IDENTIFIED	3.88	☐
Polonium-218		1.098	0.08977	pCi/g	0.1135	N	351.8	4	1.336	IDENTIFIED	6.979	☐
Potassium-40		33.6	1.587	pCi/g	0.5461	1.00	1460	1	1.898	IDENTIFIED	3.109	☐
Radium-224		4.094	0.7389	pCi/g	0.9906	Y	241.4	1	1.864	IDENTIFIED	17.74	☑ UI
Radium-226		0.9587	0.08326	pCi/g	0.1227	Y	608.9	4	1.429	IDENTIFIED	7.868	☐
Radium-228		1.295	0.1596	pCi/g	0.2321	0.500	910.6	3	1.218	IDENTIFIED	11.05	☐
Thallium-200	HE	866.7	780.3	pCi/g	0	N	74.89	2	1.009	NOT_IDENTI	14.13	☐
Thallium-208		0.4307	0.04533	pCi/g	0.06202	0.080	582.9	1	1.483	IDENTIFIED	10.04	☐
Thorium-228		1.496	0.08352	pCi/g	0.08702	N	238.5	5	1.145	IDENTIFIED	3.88	☐
Thorium-230		0.9587	0.08326	pCi/g	0.1227	N	608.9	4	1.429	IDENTIFIED	7.868	☐
Thorium-232		1.295	0.1596	pCi/g	0.2321	N	910.6	3	1.218	IDENTIFIED	11.05	☐
Tin-126	HE	0.1998	0.06676	pCi/g	0.1627	N	87.02	4	1.243	IDENTIFIED	32.88	☐
Titanium-44		0.3192	0.03395	pCi/g	0.0853	N	76.99	1	1.014	FAIL_ABUND	8.955	☐
Uranium-234		0.9587	0.08326	pCi/g	0.1227	N	608.9	4	1.429	IDENTIFIED	7.868	☐
Zirconium-97		2.70E+07	6.45E+06	pCi/g	0	N	238.5	5	1.145	NOT_IDENTI	3.88	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347001	22-JUN-09 12:00	06-JUL-09 11:10	14	SAMPLE	LOAD	1	LANL	LANL01004,GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228		1.541	0.204	pCi/g	0.2519	N	910.9	3	1.558	IDENTIFIED	11.7	☐	
Americium-243		0.3557	0.03064	pCi/g	0.05889	N	74.72	2	1.313	IDENTIFIED	7.672	☐	
Bismuth-210	HE	1.748	0.4374	pCi/g	0.8962	N	46.01	3	1.237	IDENTIFIED	24.72	☐	
Bismuth-211		3.397	0.275	pCi/g	0.3458	Y	352	4	1.364	IDENTIFIED	7.066	☑ UI	
Bismuth-212	HE	1.242	0.3252	pCi/g	0.7543	N	728.3	1	1.73	FAIL_ABUND	25.78	☐	
Bismuth-214		0.8092	0.1092	pCi/g	0.1264	0.200	609.5	4	1.526	IDENTIFIED	12.82	☐	
Cadmium-109		3.432	0.3906	pCi/g	0.9704	Y	87.26	4	1.235	IDENTIFIED	10.73	☑ UI	
Cerium-143		416.4	68.66	pCi/g	0	N	328.2	1	1.429	FAIL_DECAY	37.24	☐	
Cesium-134		0.1225	0.03032	pCi/g	0.1057	0.100	795.1	1	2.575	FAIL_ABUND	24.38	☑ UI	Data rejected due to low abundance.
Gross Gamma		8.961	1.367	pCi/g	3.346	N		0				☐	
Iodine-123	HE	1.91E+05	6.69E+05	pCi/g	0	N	87.26	4	1.235	NOT_IDENTI	10.73	☐	
Lead-210	HE	1.748	0.4374	pCi/g	0.8962	N	46.01	3	1.237	IDENTIFIED	24.72	☐	
Lead-212		1.573	0.1026	pCi/g	0.09622	0.100	238.7	5	1.387	IDENTIFIED	3.672	☐	
Lead-214		1.182	0.1005	pCi/g	0.1206	0.100	352	4	1.364	IDENTIFIED	7.066	☐	
Lutetium-177	HE	2.001	0.7856	pCi/g	1.914	N	209.4	1	0.8217	FAIL_ABUND	38.94	☐	
Neptunium-237		0.9922	0.1524	pCi/g	0.2793	N	87.26	4	1.235	IDENTIFIED	10.73	☐	
Niobium-95m	HE	0.3344	0.07641	pCi/g	0.244	N	238.7	5	1.387	NOT_IDENTI	3.672	☐	
Polonium-210	HE	1.748	0.4361	pCi/g	0.8962	N	46.01	3	1.237	IDENTIFIED	24.72	☐	
Polonium-212		1.573	0.1026	pCi/g	0.09622	N	238.7	5	1.387	IDENTIFIED	3.672	☐	
Polonium-214		1.182	0.1005	pCi/g	0.1206	N	352	4	1.364	IDENTIFIED	7.066	☐	
Polonium-216		1.573	0.1026	pCi/g	0.09622	N	238.7	5	1.387	IDENTIFIED	3.672	☐	
Polonium-218		1.182	0.1005	pCi/g	0.1206	N	352	4	1.364	IDENTIFIED	7.066	☐	
Potassium-40		34.07	1.474	pCi/g	0.3715	1.00	1460	1	2.124	IDENTIFIED	3.01	☐	
Radium-224		4.114	0.8547	pCi/g	1.095	Y	241.3	1	2.26	IDENTIFIED	20.19	☑ UI	
Radium-226		0.8092	0.1092	pCi/g	0.1264	Y	609.5	4	1.526	IDENTIFIED	12.82	☐	
Radium-228		1.541	0.204	pCi/g	0.2519	0.500	910.9	3	1.558	IDENTIFIED	11.7	☐	
Sodium-24	HE	1.30E+05	1.02E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-200	HE	13.24	123.6	pCi/g	0	N	74.72	2	1.313	NOT_IDENTI	7.672	☐	
Thallium-208		0.5139	0.04639	pCi/g	0.1427	0.080	583	1	1.428	FAIL_ABUND	8.243	☑ UI	Data rejected due to low abundance.
Thorium-228		1.573	0.1026	pCi/g	0.09621	N	238.7	5	1.387	IDENTIFIED	3.672	☐	
Thorium-230		0.8092	0.1092	pCi/g	0.1264	N	609.5	4	1.526	IDENTIFIED	12.82	☐	
Thorium-232		1.541	0.204	pCi/g	0.2519	N	910.9	3	1.558	IDENTIFIED	11.7	☐	
Thorium-234	NVD	1.041	0.4498	pCi/g	1.041	2.00	63.17	2	1.46	IDENTIFIED	42.28	☑ UI	
Tin-126		0.3379	0.03846	pCi/g	0.09541	N	87.26	4	1.235	IDENTIFIED	10.73	☐	
Titanium-44		0.3349	0.02366	pCi/g	0.06286	N	77.06	1	1.348	FAIL_ABUND	5.898	☐	
Total Uranium		3.1186	1.34E-06	ug/g	1.5512	N		0				☐	
Uranium-234		0.8092	0.1092	pCi/g	0.1264	N	609.5	4	1.526	IDENTIFIED	12.82	☐	
Uranium-238	HE	1.041	0.4498	pCi/g	1.041	N	63.17	2	1.46	IDENTIFIED	42.28	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347002	22-JUN-09 12:00	06-JUL-09 11:10	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.324	0.154	pCi/g	0.2311	N	910.7	3	1.608	IDENTIFIED	9.647	☐	
Americium-243	INT	0.3368	0.04565	pCi/g	0.09334	N	74.87	2	1.268	IDENTIFIED	12.46	☐	
Annihilation Rad.	HE	0.1076	0.03777	pCi/g	0.04879	N	510.4	2	1.682	IDENTIFIED	34.99	☐	
Bismuth-211	INT	2.85	0.2449	pCi/g	0.3527	Y	351.7	4	1.332	IDENTIFIED	7.926	☑ UI	
Bismuth-212	HE	1.137	0.2603	pCi/g	0.7149	N	726.9	1	1.595	FAIL_ABUND	22.52	☐	
Bismuth-214	✓	0.927	0.08287	pCi/g	0.1101	0.200	608.9	4	1.623	IDENTIFIED	8.103	☐	
Cerium-143	—	422.6	66.64	pCi/g	0	N	327.6	1	0.9507	FAIL_DECAY	32.76	☐	
Gross Gamma	—	7.897	1.437	pCi/g	2.86	N		0				☐	
Iodine-123	HE	8.85E+05	6.40E+05	pCi/g	0	N	87.26	3	0.7836	NOT_IDENTI	41.61	☐	
Iodine-133	HE	24.38	1226	pCi/g	0	N	510.4	2	1.682	FAIL_DECAY	34.99	☐	
Lead-212	✓	1.438	0.07686	pCi/g	0.08837	0.100	238.5	7	1.282	IDENTIFIED	3.866	☐	
Lead-214	✓	0.9915	0.08902	pCi/g	0.1229	0.100	351.7	4	1.332	IDENTIFIED	7.926	☐	
Lutetium-177	LA	3.602	0.7909	pCi/g	1.843	N	209.1	1	1.259	FAIL_ABUND	21.77	☐	
Neptunium-237	HE	0.4351	0.1882	pCi/g	0.4336	N	87.26	3	0.7836	IDENTIFIED	41.61	☐	
Niobium-95m	HE	0.2944	0.06585	pCi/g	0.2234	N	238.5	7	1.282	NOT_IDENTI	3.866	☐	
Niobium-97	HE	7323	15950	pCi/g	0	N	238.5	7	1.282	NOT_IDENTI	3.866	☐	
Polonium-212	NL	1.438	0.07686	pCi/g	0.08837	N	238.5	7	1.282	IDENTIFIED	3.866	☐	
Polonium-214	NL	0.9915	0.08902	pCi/g	0.1229	N	351.7	4	1.332	IDENTIFIED	7.926	☐	
Polonium-216	NL	1.438	0.07686	pCi/g	0.08837	N	238.5	7	1.282	IDENTIFIED	3.866	☐	
Polonium-218	NL	0.9915	0.08902	pCi/g	0.1229	N	351.7	4	1.332	IDENTIFIED	7.926	☐	
Potassium-40	✓	31.53	1.64	pCi/g	0.4613	1.00	1460	1	1.997	IDENTIFIED	3.016	☐	
Radium-224	INT	3.509	0.6263	pCi/g	1.005	Y	241.4	1	1.698	IDENTIFIED	17.61	☑ UI	
Radium-226	✓	0.927	0.08287	pCi/g	0.1101	Y	608.9	4	1.623	IDENTIFIED	8.103	☐	
Radium-228	✓	1.324	0.154	pCi/g	0.2311	0.500	910.7	3	1.608	IDENTIFIED	9.647	☐	
Thallium-200	—	211.5	105.6	pCi/g	0	N	74.87	2	1.268	NOT_IDENTI	12.46	☐	
Thallium-208	✓	0.378	0.03829	pCi/g	0.05771	0.080	582.9	1	1.424	IDENTIFIED	9.589	☐	
Thorium-228	✓	1.438	0.07686	pCi/g	0.08836	N	238.5	7	1.282	IDENTIFIED	3.866	☐	
Thorium-230	✓	0.927	0.08287	pCi/g	0.1101	N	608.9	4	1.623	IDENTIFIED	8.103	☐	
Thorium-232	✓	1.324	0.154	pCi/g	0.2311	N	910.7	3	1.608	IDENTIFIED	9.647	☐	
Tin-126	HE	0.1482	0.06224	pCi/g	0.1456	N	87.26	3	0.7836	IDENTIFIED	41.61	☐	
Titanium-44	NA	0.3301	0.03334	pCi/g	0.07993	N	77.1	1	1.29	FAIL_ABUND	8.552	☐	
Uranium-234	✓	0.927	0.08287	pCi/g	0.1101	N	608.9	4	1.623	IDENTIFIED	8.103	☐	
Zirconium-97	—	9.12E+05	3.67E+05	pCi/g	0	N	238.5	7	1.282	NOT_IDENTI	3.866	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347003	22-JUN-09 12:00	06-JUL-09 11:11	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.751	0.2124	pCi/g	0.309	N	911.3	3	1.92	IDENTIFIED	10.96	☐	
Americium-243	INT	0.2754	0.02658	pCi/g	0.06656	N	75.18	2	0.8968	IDENTIFIED	8.639	☐	
Annihilation Rad.	HE	0.09375	0.04197	pCi/g	0.06237	N	510.9	3	1.513	IDENTIFIED	44.64	☐	
Bismuth-211	INT	3.095	0.2322	pCi/g	0.3586	Y	352.1	4	1.702	IDENTIFIED	6.561	☑ UI	
Bismuth-212	HE	1.07	0.3135	pCi/g	0.8028	N	727.4	1	2.089	FAIL_ABUND	28.9	☐	
Bismuth-214	✓	0.951	0.09602	pCi/g	0.1703	0.200	609.2	4	1.429	IDENTIFIED	8.949	☐	
Cadmium-109	INT	2.628	0.4265	pCi/g	1.309	Y	87.51	5	1.051	IDENTIFIED	15.74	☑ UI	
Cerium-143	—	117	48.08	pCi/g	0	N	87.51	5	1.051	NOT_IDENTI	15.74	☐	
Gross Gamma	—	8.348	1.641	pCi/g	2.811	N		0				☐	
Iodine-123	HE	3.69E+05	7.53E+05	pCi/g	0	N	87.51	5	1.051	NOT_IDENTI	15.74	☐	
Iodine-133	HE	2172	1483	pCi/g	0	N	510.9	3	1.513	FAIL_DECAY	44.64	☐	
Iodine-135	HE	1.18E+14	2.31E+14	pCi/g	0	N	510.9	3	1.513	NOT_IDENTI	44.64	☐	
Lead-212	✓	1.403	0.08499	pCi/g	0.09638	0.100	238.9	5	1.207	IDENTIFIED	4.008	☐	
Lead-214	✓	1.077	0.0855	pCi/g	0.125	0.100	352.1	4	1.702	IDENTIFIED	6.561	☐	
Lutetium-177	HE	2.955	0.8163	pCi/g	1.878	N	209.4	2	1.509	FAIL_ABUND	27.34	☐	
Neptunium-237	INT	0.7599	0.1461	pCi/g	0.2968	N	87.51	5	1.051	IDENTIFIED	15.74	☐	

Niobium-97	HE	23230	19470	pCi/g	0	N	238.9	5	1.207	NOT_IDENTI	4.008	☐	
Polonium-212	NR	1.403	0.08499	pCi/g	0.09638	N	238.9	5	1.207	IDENTIFIED	4.008	☐	
Polonium-214	NR	1.077	0.0855	pCi/g	0.125	N	352.1	4	1.702	IDENTIFIED	6.561	☐	
Polonium-216	NR	1.403	0.08499	pCi/g	0.09638	N	238.9	5	1.207	IDENTIFIED	4.008	☐	
Polonium-218	NR	1.077	0.0855	pCi/g	0.125	N	352.1	4	1.702	IDENTIFIED	6.561	☐	
Potassium-40	✓	32.64	1.433	pCi/g	0.7562	1.00	1461	1	2.128	IDENTIFIED	3.152	☐	
Radium-224	INT	3.985	0.5993	pCi/g	1.097	Y	241.9	1	1.665	IDENTIFIED	14.51	☑	UI
Radium-226	✓	0.951	0.09602	pCi/g	0.1703	Y	609.2	4	1.429	IDENTIFIED	8.949	☐	
Radium-228	✓	1.751	0.2124	pCi/g	0.309	0.500	911.3	3	1.92	IDENTIFIED	10.96	☐	
Technetium-99m	HE	1.53E+14	8.15E+14	pCi/g	0	N	356.3	2	1.709	NOT_IDENTI	64.48	☐	
Thallium-200	HE	10.34	133	pCi/g	0	N	75.18	2	0.8968	NOT_IDENTI	8.639	☐	
Thallium-208	✓	0.4182	0.05215	pCi/g	0.07944	0.080	583.3	1	1.208	IDENTIFIED	11.76	☐	
Thorium-228	✓	1.403	0.08499	pCi/g	0.09637	N	238.9	5	1.207	IDENTIFIED	4.008	☐	
Thorium-230	✓	0.951	0.09602	pCi/g	0.1703	N	609.2	4	1.429	IDENTIFIED	8.949	☐	
Thorium-232	✓	1.751	0.2124	pCi/g	0.309	N	911.3	3	1.92	IDENTIFIED	10.96	☐	
Tin-126	INT	0.2588	0.04199	pCi/g	0.1287	N	87.51	5	1.051	IDENTIFIED	15.74	☐	
Titanium-44	LA	0.2888	0.02243	pCi/g	0.06484	N	77.46	1	1.023	FAIL_ABUND	6.508	☐	
Total Uranium	—	2.9386	1.83E-06	ug/g	1.5598	N		0				☐	
Tungsten-181	HE	0.3713	0.1099	pCi/g	0.3653	N	209.4	2	1.509	NOT_IDENTI	27.34	☐	
Uranium-234	✓	0.951	0.09602	pCi/g	0.1703	N	609.2	4	1.429	IDENTIFIED	8.949	☐	
Zirconium-97	HE	6.91E+05	4.15E+05	pCi/g	0	N	356.3	2	1.709	FAIL_DECAY	64.48	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347004	22-JUN-09 12:00	06-JUL-09 11:12	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.309	0.1816	pCi/g	0.2483	N	911.4	3	1.639	IDENTIFIED	12.57	☐	
Americium-243	INT	0.3564	0.03834	pCi/g	0.0813	N	74.89	2	1.372	IDENTIFIED	10.08	☐	
Annihilation Rad.	—	0.1317	0.03579	pCi/g	0.04363	N	510.4	1	1.974	IDENTIFIED	27.01	☐	
Bismuth-211	INT	3.193	0.2473	pCi/g	0.3144	Y	351.4	4	1.463	IDENTIFIED	7.07	☑	UI
Bismuth-212	HE	0.8295	0.2575	pCi/g	0.7011	N	727.4	1	1.589	FAIL_ABUND	30.76	☐	
Bismuth-214	✓	0.9676	0.08886	pCi/g	0.1112	0.200	609	4	1.667	IDENTIFIED	8.287	☐	
Cadmium-109	INT	2.347	0.371	pCi/g	1.312	Y	87.14	4	1.158	IDENTIFIED	15.2	☑	UI
Cerium-143	—	570.3	90.07	pCi/g	0	N	294.7	1	1.375	FAIL_DECAY	11.48	☐	
Gold-195	HE	0.417	0.1197	pCi/g	0.3827	N	74.89	2	1.372	FAIL_ABUND	10.08	☐	
Gross Gamma	—	9.114	1.425	pCi/g	2.803	N		0				☐	
Iodine-123	HE	3.05E+05	6.89E+05	pCi/g	0	N	87.14	4	1.158	NOT_IDENTI	15.2	☐	
Iodine-135	HE	2.62E+14	1.84E+14	pCi/g	0	N	795.9	1	1.422	NOT_IDENTI	63.4	☐	
Lead-212	✓	1.513	0.07811	pCi/g	0.08855	0.100	238.4	6	1.377	IDENTIFIED	3.658	☐	
Lead-214	✓	1.111	0.09078	pCi/g	0.1096	0.100	351.4	4	1.463	IDENTIFIED	7.07	☐	
Lutetium-177	HE	2.558	0.6576	pCi/g	1.808	N	209.1	1	1.331	FAIL_ABUND	25.56	☐	
Neptunium-237	INT	0.6786	0.1281	pCi/g	0.394	N	87.14	4	1.158	IDENTIFIED	15.2	☐	
Niobium-95m	LA	0.6992	0.08646	pCi/g	0.2848	N	238.4	6	1.377	NOT_IDENTI	3.658	☐	
Polonium-212	NR	1.513	0.07811	pCi/g	0.08855	N	238.4	6	1.377	IDENTIFIED	3.658	☐	
Polonium-214	NR	1.111	0.09078	pCi/g	0.1096	N	351.4	4	1.463	IDENTIFIED	7.07	☐	
Polonium-216	NR	1.513	0.07811	pCi/g	0.08855	N	238.4	6	1.377	IDENTIFIED	3.658	☐	
Polonium-218	NR	1.111	0.09078	pCi/g	0.1096	N	351.4	4	1.463	IDENTIFIED	7.07	☐	
Potassium-40	✓	36.91	1.686	pCi/g	0.5986	1.00	1461	1	2.081	IDENTIFIED	2.773	☐	
Radium-224	INT	3.89	0.699	pCi/g	1.007	Y	241.3	1	1.983	IDENTIFIED	17.74	☑	UI
Radium-226	✓	0.9676	0.08886	pCi/g	0.1112	Y	609	4	1.667	IDENTIFIED	8.287	☐	
Radium-228	✓	1.309	0.1816	pCi/g	0.2483	0.500	911.4	3	1.639	IDENTIFIED	12.57	☐	
Sodium-24	HE	30130	1.11E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-208	✓	0.4981	0.04106	pCi/g	0.06007	0.080	582.8	1	1.663	IDENTIFIED	7.501	☐	
Thorium-228	✓	1.513	0.07811	pCi/g	0.08854	N	238.4	6	1.377	IDENTIFIED	3.658	☐	
Thorium-230	✓	0.9675	0.08886	pCi/g	0.1112	N	609	4	1.667	IDENTIFIED	8.287	☐	
Thorium-232	✓	1.309	0.1816	pCi/g	0.2483	N	911.4	3	1.639	IDENTIFIED	12.57	☐	
Tin-126	INT	0.2311	0.03653	pCi/g	0.1296	N	87.14	4	1.158	IDENTIFIED	15.2	☐	
Titanium-44	LA	0.325	0.02783	pCi/g	0.07874	N	77.14	1	1.263	FAIL_ABUND	7.65	☐	
Total Uranium	—	4.5006	2.27E-06	ug/g	2.7572	N		0				☐	

Uranium-234	✓	0.9675	0.08886	pCi/g	0.1112	N	609	4	1.667	IDENTIFIED	8.287	☐
Zirconium-97	—	1.94E+06	3.49E+05	pCi/g	0	N	238.4	6	1.377	NOT_IDENTI	3.658	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232357001	22-JUN-09 12:00	06-JUL-09 11:13	14	SAMPLE	REVW	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.509	0.1876	pCi/g	0.2625	N	911.1	3	1.49	IDENTIFIED	11.12	☐	
Americium-243	HE	0.2523	0.05863	pCi/g	0.143	N	74.93	1	1.258	IDENTIFIED	22.56	☐	
Annihilation Rad.	—	0.1937	0.04516	pCi/g	0.05861	N	511	1	2.374	IDENTIFIED	23.14	☐	
Bismuth-211	INT	3.228	0.2896	pCi/g	0.4568	Y	352	4	1.393	IDENTIFIED	8.289	☑ UI	
Bismuth-212	HE	0.9923	0.2564	pCi/g	0.7781	N	727.4	1	1.167	FAIL_ABUND	25.54	☐	
Bismuth-214	✓	1.02	0.09811	pCi/g	0.1433	0.200	609.2	4	1.646	IDENTIFIED	8.871	☐	
Cadmium-109	INT	3.584	0.5935	pCi/g	1.808	Y	87.38	5	1.269	IDENTIFIED	15.53	☑ UI	
Cerium-143	—	345.8	71.84	pCi/g	0	N	87.38	5	1.269	FAIL_DECAY	15.53	☐	
Gross Gamma	—	8.668	1.478	pCi/g	2.728	N		0				☐	
Iodine-123	HE	3.93E+05	8.66E+05	pCi/g	0	N	87.38	5	1.269	NOT_IDENTI	15.53	☐	
Krypton-85	HE	21.41	4.938	pCi/g	18.21	N	238.7	8	1.303	NOT_IDENTI	4.781	☐	
Lead-212	✓	1.433	0.09065	pCi/g	0.1157	0.100	238.7	8	1.303	IDENTIFIED	4.781	☐	
Lead-214	✓	1.123	0.1049	pCi/g	0.1592	0.100	352	4	1.393	IDENTIFIED	8.289	☐	
Neptunium-237	INT	1.036	0.2022	pCi/g	0.527	N	87.38	5	1.269	IDENTIFIED	15.53	☐	
Niobium-97	HE	22290	19090	pCi/g	0	N	238.7	8	1.303	NOT_IDENTI	4.781	☐	
Polonium-212	NR	1.433	0.09065	pCi/g	0.1157	N	238.7	8	1.303	IDENTIFIED	4.781	☐	
Polonium-214	NR	1.123	0.1049	pCi/g	0.1592	N	352	4	1.393	IDENTIFIED	8.289	☐	
Polonium-216	NR	1.433	0.09065	pCi/g	0.1157	N	238.7	8	1.303	IDENTIFIED	4.781	☐	
Polonium-218	NR	1.123	0.1049	pCi/g	0.1592	N	352	4	1.393	IDENTIFIED	8.289	☐	
Potassium-40	✓	35.95	1.773	pCi/g	0.415	1.00	1461	1	2.312	IDENTIFIED	3.119	☐	
Radium-224	INT	4.12	0.9041	pCi/g	1.316	Y	241.5	1	2.002	IDENTIFIED	21.67	☑ UI	
Radium-226	✓	1.02	0.09811	pCi/g	0.1433	Y	609.2	4	1.646	IDENTIFIED	8.871	☐	
Radium-228	✓	1.509	0.1876	pCi/g	0.2625	0.500	911.1	3	1.49	IDENTIFIED	11.12	☐	
Strontium-85	LA	0.1085	0.02501	pCi/g	0.09224	Y	238.7	8	1.303	NOT_IDENTI	4.781	☑ UI	Data rejected due to low abundance.
Thallium-208	✓	0.462	0.0509	pCi/g	0.0749	0.080	583.2	1	1.269	IDENTIFIED	10.55	☐	
Thorium-228	✓	1.433	0.09065	pCi/g	0.1157	N	238.7	8	1.303	IDENTIFIED	4.781	☐	
Thorium-230	✓	1.02	0.09811	pCi/g	0.1433	N	609.2	4	1.646	IDENTIFIED	8.871	☐	
Thorium-232	✓	1.509	0.1876	pCi/g	0.2625	N	911.1	3	1.49	IDENTIFIED	11.12	☐	
Tin-126	INT	0.3529	0.05844	pCi/g	0.1794	N	87.38	5	1.269	IDENTIFIED	15.53	☐	
Titanium-44	LA	0.3599	0.04049	pCi/g	0.1186	N	77.28	1	1.207	FAIL_ABUND	9.786	☐	
Uranium-234	✓	1.02	0.09811	pCi/g	0.1433	N	609.2	4	1.646	IDENTIFIED	8.871	☐	
Zirconium-97	—	2.18E+06	4.16E+05	pCi/g	0	N	238.7	8	1.303	NOT_IDENTI	4.781	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232357002	22-JUN-09 12:00	06-JUL-09 11:13	14	SAMPLE	REVW	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.569	0.2231	pCi/g	0.3156	N	911.3	3	1.34	IDENTIFIED	13.27	☐	
Americium-243	INT	0.3927	0.03641	pCi/g	0.06875	N	75.01	2	1.524	IDENTIFIED	8.249	☐	
Annihilation Rad.	HE	0.1265	0.04118	pCi/g	0.05782	N	510.7	1	1.605	IDENTIFIED	32.38	☐	
Bismuth-211	INT	2.565	0.2481	pCi/g	0.4508	Y	352	4	1.154	IDENTIFIED	8.984	☑ UI	
Bismuth-212	HE	0.9936	0.3913	pCi/g	0.8078	N	727.3	1	2.309	FAIL_ABUND	39.11	☐	
Bismuth-214	✓	0.9603	0.09312	pCi/g	0.1391	0.200	609.2	4	1.476	IDENTIFIED	8.596	☐	
Cadmium-109	INT	3.743	0.4193	pCi/g	1.119	Y	87.48	5	1.037	IDENTIFIED	10.45	☑ UI	
Cerium-143	—	245.1	60.11	pCi/g	0	N	87.48	5	1.037	FAIL_DECAY	10.45	☐	
Gross Gamma	—	8.676	1.471	pCi/g	3.737	N		0				☐	
Iodine-123	HE	9.47E+05	7.11E+05	pCi/g	0	N	87.48	5	1.037	NOT_IDENTI	10.45	☐	
Krypton-85	HE	18.01	5.22	pCi/g	17.54	N	238.8	8	0.9679	NOT_IDENTI	4.246	☐	
Lead-212	✓	1.314	0.08024	pCi/g	0.1013	0.100	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Lead-214	✓	0.8922	0.08938	pCi/g	0.1499	0.100	352	4	1.154	IDENTIFIED	8.984	☐	
Lutetium-177	HE	3.324	0.7019	pCi/g	1.959	N	209.4	1	1.197	FAIL_ABUND	20.78	☐	
Neptunium-237	INT	1.082	0.1648	pCi/g	0.3226	N	87.48	5	1.037	IDENTIFIED	10.45	☐	

Polonium-212	NM	1.314	0.08024	pCi/g	0.1013	N	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Polonium-214	NM	0.8922	0.08938	pCi/g	0.1499	N	352	4	1.154	IDENTIFIED	8.984	☐	
Polonium-216	NM	1.314	0.08024	pCi/g	0.1013	N	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Polonium-218	NM	0.8922	0.08938	pCi/g	0.1499	N	352	4	1.154	IDENTIFIED	8.984	☐	
Potassium-40	✓	32.72	1.527	pCi/g	0.672	1.00	1460	1	2.027	IDENTIFIED	3.51	☐	
Radium-224	INT	3.727	0.6822	pCi/g	1.154	Y	241.8	1	1.749	IDENTIFIED	17.91	☑ UI	
Radium-226	✓	0.9603	0.09312	pCi/g	0.1391	Y	609.2	4	1.476	IDENTIFIED	8.596	☐	
Radium-228	✓	1.569	0.2231	pCi/g	0.3156	0.500	911.3	3	1.34	IDENTIFIED	13.27	☐	
Sodium-24	HE	2.01E+05	1.28E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.09123	0.02644	pCi/g	0.08886	Y	238.8	8	0.9679	NOT_IDENTI	4.246	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	2.10E+14	9.26E+14	pCi/g	0	N	238.8	8	0.9679	NOT_IDENTI	4.246	☐	
Thallium-200	HE	62.85	124.4	pCi/g	0	N	75.01	2	1.524	NOT_IDENTI	8.249	☐	
Thallium-208	✓	0.5023	0.05455	pCi/g	0.07183	0.080	582.9	1	1.366	IDENTIFIED	10.11	☐	
Thorium-228	✓	1.314	0.08024	pCi/g	0.1013	N	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Thorium-230	✓	0.9603	0.09312	pCi/g	0.1391	N	609.2	4	1.476	IDENTIFIED	8.596	☐	
Thorium-232	✓	1.569	0.2231	pCi/g	0.3156	N	911.3	3	1.34	IDENTIFIED	13.27	☐	
Thorium-234	✓	1.338	0.5645	pCi/g	1.18	2.00	63.42	2	0.9014	IDENTIFIED	41.19	☐	
Tin-126	INT	0.3686	0.04129	pCi/g	0.1101	N	87.48	5	1.037	IDENTIFIED	10.45	☐	
Titanium-44	LA	0.3721	0.0241	pCi/g	0.07574	N	77.4	1	1.024	FAIL_ABUND	4.935	☐	
Total Uranium	—	3.8778	1.68E-06	ug/g	1.7586	N		0				☐	
Uranium-234	✓	0.9603	0.09312	pCi/g	0.1391	N	609.2	4	1.476	IDENTIFIED	8.596	☐	
Uranium-238	HE	1.338	0.5645	pCi/g	1.18	N	63.42	2	0.9014	IDENTIFIED	41.19	☐	
Zirconium-97	—	1.26E+06	4.38E+05	pCi/g	0	N	238.8	8	0.9679	NOT_IDENTI	4.246	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358001	22-JUN-09 12:00	06-JUL-09 11:14	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	2.133	0.1918	pCi/g	0.1729	N	911.3	3	1.675	IDENTIFIED	6.082	☐	
Americium-243	INT	0.4382	0.04643	pCi/g	0.1008	N	74.86	2	1.197	IDENTIFIED	9.738	☐	
Annihilation Rad.	—	0.1464	0.0309	pCi/g	0.04104	N	510.9	1	1.751	IDENTIFIED	20.85	☐	
Bismuth-211	INT	4.16	0.2514	pCi/g	0.2621	Y	352	4	1.204	IDENTIFIED	5.12	☑ UI	
Bismuth-212	✓	1.39	0.232	pCi/g	0.4068	N	727.4	1	1.805	IDENTIFIED	15.92	☐	
Bismuth-214	✓	1.267	0.08793	pCi/g	0.09982	0.200	609.4	4	1.486	IDENTIFIED	5.31	☐	
Cadmium-109	INT	3.903	0.5349	pCi/g	1.284	Y	87.24	4	1.085	IDENTIFIED	12.91	☑ UI	
Cerium-143	—	421.4	63.67	pCi/g	0	N	328.6	1	1.152	FAIL_DECAY	41.04	☐	
Gross Gamma	—	11.28	1.295	pCi/g	2.784	N		0				☐	
Iodine-123	HE	8.42E+05	5.98E+05	pCi/g	0	N	87.24	4	1.085	NOT_IDENTI	12.91	☐	
Krypton-85	LA	21.7	3.635	pCi/g	12.4	N	238.7	8	1.251	NOT_IDENTI	2.71	☐	
Lead-212	✓	2.013	0.09026	pCi/g	0.0811	0.100	238.7	8	1.251	IDENTIFIED	2.71	☐	
Lead-214	✓	1.447	0.09524	pCi/g	0.09133	0.100	352	4	1.204	IDENTIFIED	5.12	☐	
Lutetium-177	HE	2.63	0.6064	pCi/g	1.687	N	209.5	1	1.385	FAIL_ABUND	22.89	☐	
Neptunium-237	INT	1.128	0.1936	pCi/g	0.3637	N	87.24	4	1.085	IDENTIFIED	12.91	☐	
Niobium-95	HE	0.08889	0.02175	pCi/g	0.0714	N	238.7	8	1.251	NOT_IDENTI	2.71	☐	
Polonium-212	NM	2.013	0.09026	pCi/g	0.0811	N	238.7	8	1.251	IDENTIFIED	2.71	☐	
Polonium-214	NM	1.447	0.09524	pCi/g	0.09133	N	352	4	1.204	IDENTIFIED	5.12	☐	
Polonium-216	NM	2.013	0.09026	pCi/g	0.0811	N	238.7	8	1.251	IDENTIFIED	2.71	☐	
Polonium-218	NM	1.447	0.09524	pCi/g	0.09133	N	352	4	1.204	IDENTIFIED	5.12	☐	
Potassium-40	✓	35.47	1.557	pCi/g	0.4815	1.00	1461	1	2.329	IDENTIFIED	2.205	☐	
Radium-224	INT	5.385	0.7126	pCi/g	0.9217	Y	241.6	1	1.944	IDENTIFIED	12.94	☑ UI	
Radium-226	✓	1.267	0.08793	pCi/g	0.09982	Y	609.4	4	1.486	IDENTIFIED	5.31	☐	
Radium-228	✓	2.133	0.1918	pCi/g	0.1729	0.500	911.3	3	1.675	IDENTIFIED	6.082	☐	
Strontium-85	LA	0.1099	0.01841	pCi/g	0.06282	Y	238.7	8	1.251	NOT_IDENTI	2.71	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	105.1	94.38	pCi/g	0	N	74.86	2	1.197	NOT_IDENTI	9.738	☐	
Thallium-208	✓	0.5903	0.04077	pCi/g	0.05186	0.080	583.4	1	1.576	IDENTIFIED	5.687	☐	
Thorium-228	✓	2.013	0.09026	pCi/g	0.0811	N	238.7	8	1.251	IDENTIFIED	2.71	☐	
Thorium-230	✓	1.267	0.08793	pCi/g	0.09981	N	609.4	4	1.486	IDENTIFIED	5.31	☐	
Thorium-232	✓	2.133	0.1918	pCi/g	0.1729	N	911.3	3	1.675	IDENTIFIED	6.082	☐	
Tin-126	INT	0.3843	0.05266	pCi/g	0.1272	N	87.24	4	1.085	IDENTIFIED	12.91	☐	

Titanium-44	LA	0.4808	0.03377	pCi/g	0.08842	N	77.16	1	1.072	FAIL_ABUND	5.6	☐
Total Uranium	—	4.1088	2.32E-06	ug/g	4.0676	N		0				☐
Uranium-234	✓	1.267	0.08793	pCi/g	0.09981	N	609.4	4	1.486	IDENTIFIED	5.31	☐
Zirconium-97	—	1.68E+06	2.90E+05	pCi/g	0	N	238.7	8	1.251	NOT_IDENTI	2.71	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358002	22-JUN-09 12:00	06-JUL-09 11:15	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.572	0.1711	pCi/g	0.2552	N	911.1	3	1.807	IDENTIFIED	9.61	☐	
Americium-243	INT	0.4221	0.04618	pCi/g	0.1116	N	74.91	2	1.166	IDENTIFIED	9.964	☐	
Annihilation Rad.	HE	0.1086	0.03742	pCi/g	0.0545	N	510.7	2	1.923	IDENTIFIED	34.33	☐	
Barium-137m	HE	0.08788	0.02299	pCi/g	0.08543	N	87.46	6	1.414	NOT_IDENTI	12.13	☐	
Bismuth-211	INT	3.907	0.2742	pCi/g	0.3685	Y	351.9	4	1.275	IDENTIFIED	6.232	☑ UI	
Bismuth-212	LA	1.89	0.3042	pCi/g	0.8692	N	727.4	1	1.463	FAIL_ABUND	15.65	☐	
Bismuth-214	✓	1.17	0.08972	pCi/g	0.1256	0.200	609.2	4	1.454	IDENTIFIED	6.724	☐	
Cadmium-109	INT	3.865	0.5059	pCi/g	1.535	Y	87.46	6	1.414	IDENTIFIED	12.13	☑ UI	
Cerium-143	—	467.8	74.93	pCi/g	0	N	328.7	1	1.273	FAIL_DECAY	41.9	☐	
Cesium-137	LA	0.0929	0.0243	pCi/g	0.0903	0.100	87.46	6	1.414	NOT_IDENTI	12.13	☑ UI	Data rejected due to low abundance.
Gross Gamma	—	9.98	1.482	pCi/g	3.94	N		0				☐	
Iodine-123	HE	1.43E+06	7.79E+05	pCi/g	0	N	87.46	6	1.414	NOT_IDENTI	12.13	☐	
Iodine-133	HE	1823	1353	pCi/g	0	N	510.7	2	1.923	FAIL_DECAY	34.33	☐	
Krypton-85	HE	18.1	4.908	pCi/g	16.42	N	238.7	8	1.113	NOT_IDENTI	3.901	☐	
Lead-212	✓	1.538	0.08253	pCi/g	0.1098	0.100	238.7	8	1.113	IDENTIFIED	3.901	☐	
Lead-214	✓	1.359	0.1018	pCi/g	0.1318	0.100	351.9	4	1.275	IDENTIFIED	6.232	☐	
Lutetium-177	HE	3.572	0.9073	pCi/g	2.155	N	209.6	1	1.364	FAIL_ABUND	25.24	☐	
Neptunium-237	INT	1.118	0.1862	pCi/g	0.4939	N	87.46	6	1.414	IDENTIFIED	12.13	☐	
Niobium-95	HE	0.09161	0.02629	pCi/g	0.08879	N	238.7	8	1.113	NOT_IDENTI	3.901	☐	
Polonium-212	NL	1.538	0.08253	pCi/g	0.1098	N	238.7	8	1.113	IDENTIFIED	3.901	☐	
Polonium-214	NL	1.359	0.1018	pCi/g	0.1318	N	351.9	4	1.275	IDENTIFIED	6.232	☐	
Polonium-216	NL	1.538	0.08253	pCi/g	0.1098	N	238.7	8	1.113	IDENTIFIED	3.901	☐	
Polonium-218	NL	1.359	0.1018	pCi/g	0.1318	N	351.9	4	1.275	IDENTIFIED	6.232	☐	
Potassium-40	✓	32.51	1.485	pCi/g	0.5252	1.00	1460	1	2.096	IDENTIFIED	3.149	☐	
Radium-224	INT	4.072	0.7147	pCi/g	1.249	Y	241.8	1	1.776	IDENTIFIED	17.3	☑ UI	
Radium-226	✓	1.17	0.08972	pCi/g	0.1256	Y	609.2	4	1.454	IDENTIFIED	6.724	☐	
Radium-228	✓	1.572	0.1711	pCi/g	0.2552	0.500	911.1	3	1.807	IDENTIFIED	9.61	☐	
Strontium-85	LA	0.09168	0.02486	pCi/g	0.08318	Y	238.7	8	1.113	NOT_IDENTI	3.901	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	53.8	128.6	pCi/g	0	N	74.91	2	1.166	NOT_IDENTI	9.964	☐	
Thallium-208	✓	0.5372	0.04644	pCi/g	0.06992	0.080	583.1	1	1.511	IDENTIFIED	8.046	☐	
Thorium-228	✓	1.538	0.08253	pCi/g	0.1098	N	238.7	8	1.113	IDENTIFIED	3.901	☐	
Thorium-230	✓	1.17	0.08972	pCi/g	0.1256	N	609.2	4	1.454	IDENTIFIED	6.724	☐	
Thorium-232	✓	1.572	0.1711	pCi/g	0.2552	N	911.1	3	1.807	IDENTIFIED	9.61	☐	
Tin-126	INT	0.3806	0.04981	pCi/g	0.152	N	87.46	6	1.414	IDENTIFIED	12.13	☐	
Titanium-44	LA	0.4049	0.03378	pCi/g	0.1001	N	77.16	1	1.105	FAIL_ABUND	6.983	☐	
Uranium-234	✓	1.17	0.08972	pCi/g	0.1256	N	609.2	4	1.454	IDENTIFIED	6.724	☐	
Zirconium-97	—	9.77E+05	3.70E+05	pCi/g	0	N	238.7	8	1.113	NOT_IDENTI	3.901	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358003	22-JUN-09 12:00	06-JUL-09 11:15	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	2.261	0.2397	pCi/g	0.2889	N	911.5	3	1.924	IDENTIFIED	9.312	☐	
Americium-243	INT	0.4772	0.03704	pCi/g	0.06462	N	74.75	1	1.691	IDENTIFIED	6.782	☐	
Annihilation Rad.	—	0.1432	0.03547	pCi/g	0.05717	N	511.2	3	2.783	IDENTIFIED	24.56	☐	
Bismuth-210	HE	1.463	0.437	pCi/g	1.038	N	46.34	3	1.458	IDENTIFIED	29.62	☐	
Bismuth-211	INT	4.385	0.3076	pCi/g	0.3927	Y	351.9	4	1.362	IDENTIFIED	6.252	☑ UI	
Bismuth-212	LA	1.695	0.3141	pCi/g	0.9542	N	727.4	1	2.367	FAIL_ABUND	17.99	☐	
Bismuth-214	✓	1.353	0.1141	pCi/g	0.1561	0.200	609.4	4	1.647	IDENTIFIED	7.236	☐	
Cadmium-109	INT	2.925	0.4422	pCi/g	1.103	Y	87.26	4	1.275	IDENTIFIED	14.54	☑ UI	

Cerium-143	—	439.5	73.37	pCi/g	0	N	87.26	4	1.275	FAIL_DECAY	14.54	☐	
Cesium-134	LA	0.1363	0.03353	pCi/g	0.1285	0.100	511.2	3	2.783	NOT_IDENTI	24.56	☑ UI	Data rejected due to low abundance.
Curium-243	HE	0.1703	0.05197	pCi/g	0.1646	N	105.2	2	1.571	FAIL_ABUND	30.13	☐	
Europium-155	HE	0.19	0.05801	pCi/g	0.1754	N	105.2	2	1.571	IDENTIFIED	30.13	☐	
Gross Gamma	—	10.84	1.425	pCi/g	4.949	N		0				☐	
Iodine-135	HE	2.28E+14	2.25E+14	pCi/g	0	N	511.2	3	2.783	NOT_IDENTI	24.56	☐	
Krypton-85	HE	23.68	5.17	pCi/g	17.8	N	238.6	8	1.381	NOT_IDENTI	3.293	☐	
Lead-210	HE	1.463	0.437	pCi/g	1.038	N	46.34	3	1.458	IDENTIFIED	29.62	☐	
Lead-212	✓	1.86	0.09366	pCi/g	0.1022	0.100	238.6	8	1.381	IDENTIFIED	3.293	☐	
Lead-214	✓	1.525	0.1142	pCi/g	0.137	0.100	351.9	4	1.362	IDENTIFIED	6.252	☐	
Lutetium-177	HE	2.694	0.8282	pCi/g	2.018	N	209.8	1	1.019	FAIL_ABUND	30.59	☐	
Neptunium-237	INT	0.8457	0.1548	pCi/g	0.3177	N	87.26	4	1.275	IDENTIFIED	14.54	☐	
Niobium-95m	LA	0.8427	0.08878	pCi/g	0.3082	N	238.6	8	1.381	NOT_IDENTI	3.293	☐	
Polonium-210	HE	1.463	0.436	pCi/g	1.038	N	46.34	3	1.458	IDENTIFIED	29.62	☐	
Polonium-212	MU	1.86	0.09366	pCi/g	0.1022	N	238.6	8	1.381	IDENTIFIED	3.293	☐	
Polonium-214	MU	1.525	0.1142	pCi/g	0.137	N	351.9	4	1.362	IDENTIFIED	6.252	☐	
Polonium-216	MU	1.86	0.09366	pCi/g	0.1022	N	238.6	8	1.381	IDENTIFIED	3.293	☐	
Polonium-218	MU	1.525	0.1142	pCi/g	0.137	N	351.9	4	1.362	IDENTIFIED	6.252	☐	
Potassium-40	✓	36.25	1.666	pCi/g	0.6059	1.00	1461	1	2.33	IDENTIFIED	3.317	☐	
Radium-224	INT	4.81	0.7379	pCi/g	1.165	Y	241.4	1	1.819	IDENTIFIED	15.03	☑ UI	
Radium-226	✓	1.353	0.1141	pCi/g	0.1561	Y	609.4	4	1.647	IDENTIFIED	7.236	☐	
Radium-228	✓	2.261	0.2397	pCi/g	0.2889	0.500	911.5	3	1.924	IDENTIFIED	9.312	☐	
Sodium-24	HE	32470	1.49E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.1199	0.02619	pCi/g	0.09019	Y	238.6	8	1.381	NOT_IDENTI	3.293	☑ UI	Data rejected due to low abundance.
Thallium-208	✓	0.653	0.0603	pCi/g	0.07731	0.080	583.1	1	1.566	IDENTIFIED	8.419	☐	
Thorium-228	✓	1.86	0.09366	pCi/g	0.1022	N	238.6	8	1.381	IDENTIFIED	3.293	☐	
Thorium-230	✓	1.353	0.1141	pCi/g	0.1561	N	609.4	4	1.647	IDENTIFIED	7.236	☐	
Thorium-232	✓	2.261	0.2397	pCi/g	0.2889	N	911.5	3	1.924	IDENTIFIED	9.312	☐	
Thorium-234	✓	1.589	0.4542	pCi/g	1.132	2.00	63.45	2	1.558	IDENTIFIED	27.24	☐	
Tin-126	INT	0.288	0.04353	pCi/g	0.1085	N	87.26	4	1.275	IDENTIFIED	14.54	☐	
Titanium-44	LA	0.4134	0.02545	pCi/g	0.06911	N	77.19	1	1.381	FAIL_ABUND	4.816	☐	
Total Uranium	—	4.7595	1.35E-06	ug/g	1.6872	N		0				☐	
Uranium-234	✓	1.353	0.1141	pCi/g	0.1561	N	609.4	4	1.647	IDENTIFIED	7.236	☐	
Uranium-238	HE	1.589	0.4542	pCi/g	1.132	N	63.45	2	1.558	IDENTIFIED	27.24	☐	
Zirconium-97	—	1.30E+06	3.98E+05	pCi/g	0	N	238.6	8	1.381	NOT_IDENTI	3.293	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358004	22-JUN-09 12:00	06-JUL-09 11:16	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.789	0.1785	pCi/g	0.1869	N	912	3	2.264	IDENTIFIED	7.78	☐	
Americium-243	INT	0.4293	0.03709	pCi/g	0.0825	N	74.96	1	1.184	IDENTIFIED	7.711	☐	
Annihilation Rad.	—	0.1187	0.02972	pCi/g	0.03867	N	511.2	1	1.637	IDENTIFIED	24.84	☐	
Barium-137m	HE	0.06664	0.0265	pCi/g	0.05138	N	662.3	2	4.059	IDENTIFIED	39.59	☐	
Bismuth-211	INT	4.265	0.2276	pCi/g	0.2684	Y	352.2	4	1.452	IDENTIFIED	4.291	☑ UI	
Bismuth-212	LA	1.07	0.2041	pCi/g	0.5496	N	727.7	1	1.946	FAIL_ABUND	18.45	☐	
Bismuth-214	✓	1.218	0.08888	pCi/g	0.09523	0.200	609.8	4	1.849	IDENTIFIED	5.825	☐	
Cadmium-109	INT	2.966	0.4768	pCi/g	1.45	Y	87.27	3	1.44	IDENTIFIED	15.45	☑ UI	
Cerium-143	—	563.4	73.65	pCi/g	0	N	328.6	1	1.227	NOT_IDENTI	25.65	☐	
Cesium-134	LA	0.1239	0.03203	pCi/g	0.0772	0.100	796.4	3	1.789	FAIL_ABUND	25.44	☑ UI	Data rejected due to low abundance.
Cesium-135	HE	0.2766	0.07788	pCi/g	0.2529	N	796.4	3	1.789	NOT_IDENTI	25.44	☐	
Cesium-137	PW	0.07044	0.02801	pCi/g	0.05431	0.100	662.3	2	4.059	IDENTIFIED	39.59	☑ UI	Data rejected due to high peak-width.
Gross Gamma	—	10.65	1.438	pCi/g	2.539	N		0				☐	
Iodine-135	HE	9.01E+13	1.43E+14	pCi/g	0	N	796.4	3	1.789	NOT_IDENTI	25.44	☐	
Krypton-85	LA	36.6	3.979	pCi/g	14.06	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Lead-212	✓	1.927	0.0854	pCi/g	0.08158	0.100	238.9	10	1.276	IDENTIFIED	2.672	☐	
Lead-214	✓	1.484	0.08812	pCi/g	0.09539	0.100	352.2	4	1.452	IDENTIFIED	4.291	☐	
Lutetium-177	LA	3.262	0.6076	pCi/g	1.703	N	209.4	1	1.29	FAIL_ABUND	18.43	☐	
Neptunium-237	INT	0.8577	0.1638	pCi/g	0.306	N	87.27	3	1.44	IDENTIFIED	15.45	☐	

Niobium-95	HE	0.1067	0.02143	pCi/g	0.07036	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Niobium-95m	HE	0.3124	0.06595	pCi/g	0.2082	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Niobium-97	—	30060	14280	pCi/g	0	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Polonium-212	NM	1.927	0.0854	pCi/g	0.08158	N	238.9	10	1.276	IDENTIFIED	2.672	☐	
Polonium-214	NM	1.484	0.08812	pCi/g	0.09539	N	352.2	4	1.452	IDENTIFIED	4.291	☐	
Polonium-216	NM	1.927	0.0854	pCi/g	0.08158	N	238.9	10	1.276	IDENTIFIED	2.672	☐	
Polonium-218	NM	1.484	0.08812	pCi/g	0.09539	N	352.2	4	1.452	IDENTIFIED	4.291	☐	
Potassium-40	V	35.47	1.45	pCi/g	0.4535	1.00	1462	1	3.057	IDENTIFIED	2.145	☑ UI ~~Data rejected due to high peak width.~~	use 7/13/09
Radium-224	INT	4.41	0.5304	pCi/g	0.9269	Y	241.9	1	1.633	IDENTIFIED	11.71	☑ UI	
Radium-226	V	1.218	0.08888	pCi/g	0.09523	Y	609.8	4	1.849	IDENTIFIED	5.825	☐	
Radium-228	V	1.789	0.1785	pCi/g	0.1869	0.500	912	3	2.264	IDENTIFIED	7.78	☐	
Strontium-85	LA	0.1854	0.02016	pCi/g	0.07122	Y	238.9	10	1.276	NOT_IDENTI	2.672	☑ UI Data rejected due to low abundance.	
Thallium-208	V	0.5986	0.03995	pCi/g	0.04788	0.080	583.7	1	1.923	IDENTIFIED	5.451	☐	
Thorium-228	V	1.927	0.0854	pCi/g	0.08157	N	238.9	10	1.276	IDENTIFIED	2.672	☐	
Thorium-230	V	1.218	0.08888	pCi/g	0.09523	N	609.8	4	1.849	IDENTIFIED	5.825	☐	
Thorium-232	V	1.789	0.1785	pCi/g	0.1869	N	912	3	2.264	IDENTIFIED	7.78	☐	
Thorium-234	V	1.871	0.8171	pCi/g	1.822	2.00	63.31	2	1.194	IDENTIFIED	42.81	☐	
Tin-126	INT	0.2921	0.04695	pCi/g	0.1417	N	87.27	3	1.44	IDENTIFIED	15.45	☐	
Titanium-44	LA	0.4238	0.02877	pCi/g	0.07727	N	77.24	1	1.144	FAIL_ABUND	5.496	☐	
Total Uranium	—	5.5493	2.43E-06	ug/g	2.7129	N		0				☐	
Uranium-234	V	1.218	0.08888	pCi/g	0.09523	N	609.8	4	1.849	IDENTIFIED	5.825	☐	
Uranium-238	HE	1.871	0.8171	pCi/g	1.822	N	63.31	2	1.194	IDENTIFIED	42.81	☐	
Zirconium-97	—	1.00E+06	2.71E+05	pCi/g	0	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358005	22-JUN-09 12:00	06-JUL-09 11:17	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	V	1.862	0.2037	pCi/g	0.2234	N	911.4	3	1.857	IDENTIFIED	9.297	☐	
Americium-243	INT	0.3028	0.03678	pCi/g	0.08602	N	74.91	2	0.7915	IDENTIFIED	11.3	☐	
Annihilation Rad.	—	0.1736	0.03482	pCi/g	0.04667	N	511	2	1.615	IDENTIFIED	19.84	☐	
Barium-137m	✓	0.6385	0.05341	pCi/g	0.05779	N	661.8	3	1.501	IDENTIFIED	7.965	☐	
Bismuth-211	INT	3.528	0.2664	pCi/g	0.3119	Y	352	4	1.155	IDENTIFIED	6.813	☑ UI	
Bismuth-212	HE	0.8136	0.3143	pCi/g	0.7194	N	728.2	1	0.8874	FAIL_ABUND	38.43	☐	
Bismuth-214	V	1.015	0.08806	pCi/g	0.1195	0.200	609.5	4	1.468	IDENTIFIED	7.824	☐	
Cadmium-109	INT	2.638	0.4955	pCi/g	1.204	Y	87.27	3	1.112	IDENTIFIED	18.15	☑ UI	
Cerium-143	—	103.7	44.32	pCi/g	0	N	661.8	3	1.501	FAIL_DECAY	7.965	☐	
Cesium-137	V	0.675	0.05649	pCi/g	0.06109	0.100	661.8	3	1.501	IDENTIFIED	7.965	☐	
Gross Gamma	—	9.156	1.342	pCi/g	2.259	N		0				☐	
Iodine-135	HE	8.35E+13	1.95E+14	pCi/g	0	N	511	2	1.615	NOT_IDENTI	19.84	☐	
Krypton-85	HE	19.2	3.959	pCi/g	14.07	N	238.7	7	1.002	NOT_IDENTI	3.623	☐	
Lead-212	V	1.518	0.07746	pCi/g	0.08613	0.100	238.7	7	1.002	IDENTIFIED	3.623	☐	
Lead-214	V	1.227	0.09804	pCi/g	0.1088	0.100	352	4	1.155	IDENTIFIED	6.813	☐	
Lutetium-177	HE	2.132	0.5817	pCi/g	1.655	N	209.1	1	1.09	FAIL_ABUND	27.15	☐	
Neptunium-237	INT	0.7627	0.1635	pCi/g	0.3842	N	87.27	3	1.112	IDENTIFIED	18.15	☐	
Polonium-212	NM	1.518	0.07746	pCi/g	0.08613	N	238.7	7	1.002	IDENTIFIED	3.623	☐	
Polonium-214	NM	1.227	0.09804	pCi/g	0.1088	N	352	4	1.155	IDENTIFIED	6.813	☐	
Polonium-216	NM	1.518	0.07746	pCi/g	0.08613	N	238.7	7	1.002	IDENTIFIED	3.623	☐	
Polonium-218	NM	1.227	0.09804	pCi/g	0.1088	N	352	4	1.155	IDENTIFIED	6.813	☐	
Potassium-40	V	30.7	1.526	pCi/g	0.5374	1.00	1461	1	2.196	IDENTIFIED	3.274	☐	
Radium-224	INT	4.28	0.5881	pCi/g	0.9812	Y	241.6	1	1.626	IDENTIFIED	13.45	☑ UI	
Radium-226	V	1.015	0.08806	pCi/g	0.1195	Y	609.5	4	1.468	IDENTIFIED	7.824	☐	
Radium-228	V	1.862	0.2037	pCi/g	0.2234	0.500	911.4	3	1.857	IDENTIFIED	9.297	☐	
Strontium-85	LA	0.09728	0.02005	pCi/g	0.07128	Y	238.7	7	1.002	NOT_IDENTI	3.623	☑ UI Data rejected due to low abundance.	
Thallium-200	HE	122.5	110.9	pCi/g	0	N	74.91	2	0.7915	NOT_IDENTI	11.3	☐	
Thallium-208	V	0.4916	0.04905	pCi/g	0.05767	0.080	583.6	1	1.534	IDENTIFIED	9.435	☐	
Thorium-228	V	1.518	0.07746	pCi/g	0.08612	N	238.7	7	1.002	IDENTIFIED	3.623	☐	
Thorium-230	V	1.015	0.08806	pCi/g	0.1195	N	609.5	4	1.468	IDENTIFIED	7.824	☐	
Thorium-232	V	1.862	0.2037	pCi/g	0.2234	N	911.4	3	1.857	IDENTIFIED	9.297	☐	

Thorium-234	✓	2.907	1.375	pCi/g	1.961	2.00	63.4	2	0.9269	IDENTIFIED	46.43	☐
Tin-126	INT	0.2597	0.04879	pCi/g	0.1193	N	87.27	3	1.112	IDENTIFIED	18.15	☐
Titanium-44	LA	0.3603	0.02904	pCi/g	0.0714	N	77.16	1	0.8512	FAIL_ABUND	6.686	☐
Total Uranium	—	8.6355	4.09E-06	ug/g	2.9198	N		0				☐
Uranium-234	✓	1.015	0.08806	pCi/g	0.1195	N	609.5	4	1.468	IDENTIFIED	7.824	☐
Uranium-238	HE	2.907	1.375	pCi/g	1.961	N	63.4	2	0.9269	IDENTIFIED	46.43	☐
Zirconium-97	HE	6.14E+05	3.46E+05	pCi/g	0	N	238.7	7	1.002	NOT_IDENTI	3.623	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358006	22-JUN-09 12:00	06-JUL-09 12:13	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.805	0.1767	pCi/g	0.2115	N	911.3	3	1.472	IDENTIFIED	7.848	☐	
Americium-243	INT	0.4268	0.04437	pCi/g	0.09371	N	74.95	1	1.233	IDENTIFIED	9.703	☐	
Annihilation Rad.	—	0.1203	0.03317	pCi/g	0.04589	N	510.9	1	2.171	IDENTIFIED	27.4	☐	
Bismuth-211	INT	3.927	0.2537	pCi/g	0.3131	Y	352	4	1.376	IDENTIFIED	5.626	☑ UI	
Bismuth-212	HE	1.134	0.2732	pCi/g	0.6622	N	727.6	1	1.847	FAIL_ABUND	23.69	☐	
Bismuth-214	✓	1.291	0.1008	pCi/g	0.09379	0.200	609.5	4	1.477	IDENTIFIED	6.661	☐	
Cadmium-109	INT	3.637	0.6003	pCi/g	1.264	Y	87.29	3	1.268	IDENTIFIED	15.99	☑ UI	
Cerium-143	—	151.1	43.53	pCi/g	0	N	328.2	1	1.029	FAIL_DECAY	39.22	☐	
Cesium-134	LA	0.09185	0.03873	pCi/g	0.08808	0.100	795.8	1	1.44	FAIL_ABUND	41.97	☑ UI	Data rejected due to low abundance.
Gross Gamma	—	10.6	1.515	pCi/g	3.444	N		0				☐	
Lead-212	✓	1.816	0.08659	pCi/g	0.08519	0.100	238.8	5	1.155	IDENTIFIED	3.125	☐	
Lead-214	✓	1.366	0.09516	pCi/g	0.1103	0.100	352	4	1.376	IDENTIFIED	5.626	☐	
Lutetium-177	HE	2.316	0.7408	pCi/g	1.711	N	209.6	1	1.195	FAIL_ABUND	31.87	☐	
Neptunium-237	INT	1.051	0.2047	pCi/g	0.4074	N	87.29	3	1.268	IDENTIFIED	15.99	☐	
Polonium-212	NU	1.816	0.08659	pCi/g	0.08519	N	238.8	5	1.155	IDENTIFIED	3.125	☐	
Polonium-214	NU	1.366	0.09516	pCi/g	0.1103	N	352	4	1.376	IDENTIFIED	5.626	☐	
Polonium-216	NU	1.816	0.08659	pCi/g	0.08519	N	238.8	5	1.155	IDENTIFIED	3.125	☐	
Polonium-218	NU	1.366	0.09516	pCi/g	0.1103	N	352	4	1.376	IDENTIFIED	5.626	☐	
Potassium-40	✓	38.09	1.73	pCi/g	0.414	1.00	1461	1	2.131	IDENTIFIED	2.561	☐	
Radium-224	INT	4.148	0.5391	pCi/g	0.9694	Y	241.9	1	1.577	IDENTIFIED	12.69	☑ UI	
Radium-226	✓	1.291	0.1008	pCi/g	0.09379	Y	609.5	4	1.477	IDENTIFIED	6.661	☐	
Radium-228	✓	1.805	0.1767	pCi/g	0.2115	0.500	911.3	3	1.472	IDENTIFIED	7.848	☐	
Thallium-208	✓	0.561	0.04468	pCi/g	0.05521	0.080	583.3	1	1.235	IDENTIFIED	7.136	☐	
Thorium-228	✓	1.816	0.08659	pCi/g	0.08518	N	238.8	5	1.155	IDENTIFIED	3.125	☐	
Thorium-230	✓	1.291	0.1008	pCi/g	0.09378	N	609.5	4	1.477	IDENTIFIED	6.661	☐	
Thorium-232	✓	1.805	0.1767	pCi/g	0.2115	N	911.3	3	1.472	IDENTIFIED	7.848	☐	
Tin-126	INT	0.358	0.0591	pCi/g	0.1251	N	87.29	3	1.268	IDENTIFIED	15.99	☐	
Titanium-44	LA	0.4284	0.03104	pCi/g	0.08068	N	77.22	1	1.004	FAIL_ABUND	6.176	☐	
Total Uranium	—	3.8635	2.20E-06	ug/g	3.7541	N		0				☐	
Uranium-234	✓	1.291	0.1008	pCi/g	0.09378	N	609.5	4	1.477	IDENTIFIED	6.661	☐	
Zirconium-97	HE	5.21E+05	2.95E+05	pCi/g	0	N	238.8	5	1.155	NOT_IDENTI	3.125	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358007	22-JUN-09 12:00	06-JUL-09 12:13	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.63	0.1896	pCi/g	0.2322	N	911.5	3	1.946	IDENTIFIED	9.86	☐	
Americium-243	INT	0.3283	0.05295	pCi/g	0.1306	N	75.02	2	1.075	IDENTIFIED	15.17	☐	
Annihilation Rad.	—	0.1453	0.04229	pCi/g	0.05808	N	511.3	2	1.983	IDENTIFIED	28.92	☐	
Barium-137m	✓	0.8585	0.05648	pCi/g	0.0683	N	661.9	2	1.451	IDENTIFIED	6.098	☐	
Bismuth-211	INT	3.972	0.3049	pCi/g	0.3716	Y	352.2	4	1.364	IDENTIFIED	6.755	☑ UI	
Bismuth-212	HE	1.426	0.368	pCi/g	0.7641	N	728.3	1	2.123	FAIL_ABUND	25.48	☐	
Bismuth-214	✓	1.224	0.105	pCi/g	0.1276	0.200	609.7	4	1.203	IDENTIFIED	7.686	☐	
Cadmium-109	INT	3.421	0.6628	pCi/g	1.489	Y	87.47	3	1.102	IDENTIFIED	18.53	☑ UI	
Cerium-143	—	228.2	57.18	pCi/g	0	N	328.2	1	1.015	NOT_IDENTI	63.67	☐	
Cesium-137	✓	0.9076	0.05975	pCi/g	0.0722	0.100	661.9	2	1.451	IDENTIFIED	6.098	☐	
Gross Gamma	—	10.36	1.53	pCi/g	3.722	N		0				☐	

Iodine-133	HE	1359	1484	pCi/g	0	N	511.3	2	1.983	FAIL_DECAY	28.92	☐		
Krypton-85	HE	16.65	5.203	pCi/g	16.59	N	238.9	8	1.125	NOT_IDENTI	3.85	☐		
Lead-212	V	1.695	0.09163	pCi/g	0.1102	0.100	238.9	8	1.125	IDENTIFIED	3.85	☐		
Lead-214	V	1.382	0.112	pCi/g	0.1336	0.100	352.2	4	1.364	IDENTIFIED	6.755	☐		
Lutetium-177	HE	3.235	0.7765	pCi/g	2.053	N	209.8	1	1.76	FAIL_ABUND	23.82	☐		
Mercury-203	LA	0.094	0.02364	pCi/g	0.08444	0.100	75.02	2	1.075	NOT_IDENTI	15.17	☑	UI	Data rejected due to low abundance.
Neptunium-237	INT	0.9889	0.2171	pCi/g	0.4874	N	87.47	3	1.102	IDENTIFIED	18.53	☐		
Niobium-97	HE	16400	21030	pCi/g	0	N	238.9	8	1.125	NOT_IDENTI	3.85	☐		
Polonium-212	NM	1.695	0.09163	pCi/g	0.1102	N	238.9	8	1.125	IDENTIFIED	3.85	☐		
Polonium-214	NM	1.382	0.112	pCi/g	0.1336	N	352.2	4	1.364	IDENTIFIED	6.755	☐		
Polonium-215	HE	1.406	0.4174	pCi/g	1.331	N	270.3	4	1.996	FAIL_ABUND	20.43	☐		
Polonium-216	NM	1.695	0.09163	pCi/g	0.1102	N	238.9	8	1.125	IDENTIFIED	3.85	☐		
Polonium-218	NM	1.382	0.112	pCi/g	0.1336	N	352.2	4	1.364	IDENTIFIED	6.755	☐		
Potassium-40	V	30.04	1.66	pCi/g	0.5993	1.00	1461	1	2.112	IDENTIFIED	3.464	☐		
Radium-223	LA	1.406	0.4174	pCi/g	1.331	Y	270.3	4	1.996	FAIL_ABUND	20.43	☑	UI	Data rejected due to low abundance.
Radium-224	INT	4.43	0.64	pCi/g	1.254	Y	241.9	1	1.47	IDENTIFIED	14.12	☑	UI	
Radium-226	V	1.224	0.105	pCi/g	0.1276	Y	609.7	4	1.203	IDENTIFIED	7.686	☐		
Radium-228	V	1.63	0.1896	pCi/g	0.2322	0.500	911.5	3	1.946	IDENTIFIED	9.86	☐		
Strontium-85	LA	0.08437	0.02637	pCi/g	0.08409	Y	238.9	8	1.125	NOT_IDENTI	3.85	☑	UI	Data rejected due to low abundance.
Technetium-99m	HE	2.26E+13	1.07E+15	pCi/g	0	N	238.9	8	1.125	NOT_IDENTI	3.85	☐		
Thallium-207	HE	1.406	0.4174	pCi/g	1.331	N	270.3	4	1.996	FAIL_ABUND	20.43	☐		
Thallium-208	V	0.4918	0.05982	pCi/g	0.06676	0.080	583.6	1	1.503	IDENTIFIED	11.69	☐		
Thorium-228	V	1.695	0.09163	pCi/g	0.1102	N	238.9	8	1.125	IDENTIFIED	3.85	☐		
Thorium-230	V	1.224	0.105	pCi/g	0.1276	N	609.7	4	1.203	IDENTIFIED	7.686	☐		
Thorium-231	LA	1.406	0.4174	pCi/g	1.331	Y	270.3	4	1.996	FAIL_ABUND	20.43	☑	UI	Data rejected due to low abundance.
Thorium-232	V	1.63	0.1896	pCi/g	0.2322	N	911.5	3	1.946	IDENTIFIED	9.86	☐		
Tin-126	INT	0.3368	0.06525	pCi/g	0.1476	N	87.47	3	1.102	IDENTIFIED	18.53	☐		
Titanium-44	LA	0.3652	0.03835	pCi/g	0.1042	N	77.33	1	0.9388	FAIL_ABUND	8.967	☐		
Uranium-234	V	1.224	0.105	pCi/g	0.1276	N	609.7	4	1.203	IDENTIFIED	7.686	☐		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358008	22-JUN-09 12:00	06-JUL-09 12:14	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual		Qual Comment
Actinium-228	V	1.632	0.1592	pCi/g	0.2206	N	911.1	3	1.363	IDENTIFIED	8.14	☐		
Americium-243	INT	0.386	0.03376	pCi/g	0.08765	N	74.24	1	0.9841	IDENTIFIED	7.862	☐		
Annihilation Rad.	HE	0.0793	0.03042	pCi/g	0.05476	N	510.5	2	1.622	IDENTIFIED	38.24	☐		
Barium-137m	V	0.2094	0.03184	pCi/g	0.06038	N	661.5	2	1.271	IDENTIFIED	14.79	☐		
Bismuth-211	INT	3.838	0.2754	pCi/g	0.3133	Y	351.4	4	1.264	IDENTIFIED	6.263	☑	UI	
Bismuth-212	HE	1.157	0.2429	pCi/g	0.6978	N	726.8	1	1.322	FAIL_ABUND	20.51	☐		
Bismuth-214	V	1.124	0.09325	pCi/g	0.1134	0.200	609	4	1.292	IDENTIFIED	7.12	☐		
Cadmium-109	INT	3.689	0.4391	pCi/g	1.2	Y	86.65	3	1.043	IDENTIFIED	11.02	☑	UI	
Cerium-143	—	607.3	85.58	pCi/g	0	N	327.7	1	1.28	FAIL_DECAY	20.51	☐		
Cesium-134	LA	0.09583	0.03475	pCi/g	0.09514	0.100	795	1	1.375	FAIL_ABUND	36.06	☑	UI	Data rejected due to low abundance.
Cesium-135	INT	0.5928	0.1361	pCi/g	0.2499	N	269.5	2	1.317	IDENTIFIED	22.51	☐		
Cesium-137	V	0.2213	0.03367	pCi/g	0.06383	0.100	661.5	2	1.271	IDENTIFIED	14.79	☐		
Gross Gamma	—	9.893	1.548	pCi/g	4.038	N		0				☐		
Iodine-133	—	2456	1198	pCi/g	0	N	510.5	2	1.622	FAIL_DECAY	38.24	☐		
Iodine-135	HE	2.20E+14	1.94E+14	pCi/g	0	N	269.5	2	1.317	NOT_IDENTI	22.51	☐		
Lead-212	V	1.631	0.08467	pCi/g	0.09313	0.100	238.1	7	1.018	IDENTIFIED	3.225	☐		
Lead-214	V	1.335	0.1019	pCi/g	0.1092	0.100	351.4	4	1.264	IDENTIFIED	6.263	☐		
Lutetium-177	HE	2.035	0.5974	pCi/g	1.87	N	208.8	1	0.9527	FAIL_ABUND	29.19	☐		
Neptunium-237	INT	1.067	0.168	pCi/g	0.4366	N	86.65	3	1.043	IDENTIFIED	11.02	☐		
Niobium-95m	LA	1.065	0.0988	pCi/g	0.3223	N	238.1	7	1.018	NOT_IDENTI	3.225	☐		
Niobium-97	HE	5947	20640	pCi/g	0	N	238.1	7	1.018	NOT_IDENTI	3.225	☐		
Polonium-212	NM	1.631	0.08467	pCi/g	0.09313	N	238.1	7	1.018	IDENTIFIED	3.225	☐		
Polonium-214	NM	1.335	0.1019	pCi/g	0.1092	N	351.4	4	1.264	IDENTIFIED	6.263	☐		
Polonium-216	NM	1.631	0.08467	pCi/g	0.09313	N	238.1	7	1.018	IDENTIFIED	3.225	☐		
Polonium-218	NM	1.335	0.1019	pCi/g	0.1092	N	351.4	4	1.264	IDENTIFIED	6.263	☐		

Potassium-40	✓	31.95	1.397	pCi/g	0.4832	1.00	1461	2	1.797	IDENTIFIED	2.807	☐
Radium-224	INT	4.368	0.631	pCi/g	1.059	Y	241.1	1	1.841	IDENTIFIED	14.03	☑ UI
Radium-226	✓	1.124	0.09325	pCi/g	0.1134	Y	609	4	1.292	IDENTIFIED	7.12	☐
Radium-228	✓	1.632	0.1592	pCi/g	0.2206	0.500	911.1	3	1.363	IDENTIFIED	8.14	☐
Thallium-208	✓	0.5997	0.04791	pCi/g	0.06153	0.080	582.8	1	1.322	IDENTIFIED	7.077	☐
Thorium-228	✓	1.631	0.08467	pCi/g	0.09312	N	238.1	7	1.018	IDENTIFIED	3.225	☐
Thorium-230	✓	1.123	0.09325	pCi/g	0.1134	N	609	4	1.292	IDENTIFIED	7.12	☐
Thorium-232	✓	1.632	0.1592	pCi/g	0.2206	N	911.1	3	1.363	IDENTIFIED	8.14	☐
Thorium-234	✓	2.199	0.7521	pCi/g	1.846	2.00	62.89	2	1.043	IDENTIFIED	33.12	☐
Tin-126	INT	0.3632	0.04323	pCi/g	0.1242	N	86.65	3	1.043	IDENTIFIED	11.02	☐
Titanium-44	LA	0.2108	0.02417	pCi/g	0.07151	N	1461	2	1.797	NOT_IDENTI	2.807	☐
Total Uranium	—	6.5818	2.24E-06	ug/g	2.7485	N		0				☐
Uranium-234	✓	1.123	0.09325	pCi/g	0.1134	N	609	4	1.292	IDENTIFIED	7.12	☐
Uranium-238	HE	2.199	0.7521	pCi/g	1.846	N	62.89	2	1.043	IDENTIFIED	33.12	☐
Zirconium-97	—	1.58E+06	3.85E+05	pCi/g	0	N	238.1	7	1.018	NOT_IDENTI	3.225	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358009	22-JUN-09 12:00	06-JUL-09 12:15	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.724	0.1812	pCi/g	0.2099	N	911.6	3	1.711	IDENTIFIED	8.966	☐	
Americium-243	INT	0.3617	0.03857	pCi/g	0.09256	N	74.91	2	0.9843	IDENTIFIED	10.11	☐	
Annihilation Rad.	—	0.1462	0.03873	pCi/g	0.04519	N	510.9	2	1.929	IDENTIFIED	26.32	☐	
Bismuth-211	INT	3.51	0.213	pCi/g	0.3157	Y	352	4	1.407	IDENTIFIED	5.193	☑ UI	
Bismuth-212	HE	0.7593	0.2842	pCi/g	0.7016	N	727.2	1	1.384	FAIL_ABUND	37.17	☐	
Bismuth-214	✓	1.189	0.09193	pCi/g	0.1161	0.200	609.6	4	1.499	IDENTIFIED	6.545	☐	
Cadmium-109	INT	2.879	0.5765	pCi/g	0.9974	Y	87.09	3	1.166	IDENTIFIED	19.66	☑ UI	
Cerium-143	—	294.9	53.15	pCi/g	0	N	328.3	1	1.576	FAIL_DECAY	23.93	☐	
Gross Gamma	—	9.62	1.536	pCi/g	3.108	N		0				☐	
Iodine-133	HE	958.7	1230	pCi/g	0	N	510.9	2	1.929	FAIL_DECAY	26.32	☐	
Iodine-135	HE	2.87E+14	1.95E+14	pCi/g	0	N	796	1	1.437	NOT_IDENTI	59.01	☐	
Krypton-85	HE	14.67	3.733	pCi/g	13.69	N	238.7	8	1.105	NOT_IDENTI	3.25	☐	
Lead-212	✓	1.69	0.08134	pCi/g	0.08427	0.100	238.7	8	1.105	IDENTIFIED	3.25	☐	
Lead-214	✓	1.221	0.08067	pCi/g	0.115	0.100	352	4	1.407	IDENTIFIED	5.193	☐	
Lutetium-177	HE	2.166	0.6427	pCi/g	1.723	N	209	1	0.9473	FAIL_ABUND	29.55	☐	
Neptunium-237	INT	0.8325	0.1875	pCi/g	0.4305	N	87.09	3	1.166	IDENTIFIED	19.66	☐	
Niobium-97	HE	14960	17740	pCi/g	0	N	238.7	8	1.105	NOT_IDENTI	3.25	☐	
Polonium-212	NU	1.69	0.08134	pCi/g	0.08427	N	238.7	8	1.105	IDENTIFIED	3.25	☐	
Polonium-214	NU	1.221	0.08067	pCi/g	0.115	N	352	4	1.407	IDENTIFIED	5.193	☐	
Polonium-216	NU	1.69	0.08134	pCi/g	0.08427	N	238.7	8	1.105	IDENTIFIED	3.25	☐	
Polonium-218	NU	1.221	0.08067	pCi/g	0.115	N	352	4	1.407	IDENTIFIED	5.193	☐	
Potassium-40	✓	33.27	1.51	pCi/g	0.4814	1.00	1461	1	2.176	IDENTIFIED	2.81	☐	
Radium-224	INT	4.809	0.5951	pCi/g	0.959	Y	241.7	1	1.701	IDENTIFIED	12.06	☑ UI	
Radium-226	✓	1.189	0.09193	pCi/g	0.1161	Y	609.6	4	1.499	IDENTIFIED	6.545	☐	
Radium-228	✓	1.724	0.1812	pCi/g	0.2099	0.500	911.6	3	1.711	IDENTIFIED	8.966	☐	
Strontium-85	LA	0.07437	0.01892	pCi/g	0.06936	Y	238.7	8	1.105	NOT_IDENTI	3.25	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	71.81	110.8	pCi/g	0	N	74.91	2	0.9843	NOT_IDENTI	10.11	☐	
Thallium-208	✓	0.6004	0.04472	pCi/g	0.05175	0.080	583.4	1	1.537	IDENTIFIED	6.533	☐	
Thorium-228	✓	1.69	0.08134	pCi/g	0.08426	N	238.7	8	1.105	IDENTIFIED	3.25	☐	
Thorium-230	✓	1.189	0.09192	pCi/g	0.1161	N	609.6	4	1.499	IDENTIFIED	6.545	☐	
Thorium-232	✓	1.724	0.1812	pCi/g	0.2099	N	911.6	3	1.711	IDENTIFIED	8.966	☐	
Tin-126	INT	0.2835	0.05676	pCi/g	0.1449	N	87.09	3	1.166	IDENTIFIED	19.66	☐	
Titanium-44	LA	0.3375	0.0268	pCi/g	0.07676	N	77.13	1	0.9425	FAIL_ABUND	7.145	☐	
Uranium-234	✓	1.189	0.09192	pCi/g	0.1161	N	609.6	4	1.499	IDENTIFIED	6.545	☐	
Zirconium-97	HE	5.86E+05	3.41E+05	pCi/g	0	N	238.7	8	1.105	NOT_IDENTI	3.25	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358010	22-JUN-09 12:00	06-JUL-09 12:15	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.268	0.1544	pCi/g	0.214	N	911.2	3	1.407	IDENTIFIED	10.63	☐	
Americium-243	INT	0.3227	0.03039	pCi/g	0.08982	N	74.99	2	0.8266	IDENTIFIED	8.598	☐	
Annihilation Rad.	—	0.1066	0.02966	pCi/g	0.04456	N	510.8	1	1.398	IDENTIFIED	27.66	☐	
Bismuth-211	INT	2.977	0.2078	pCi/g	0.292	Y	352	4	1.187	IDENTIFIED	6.253	☑ UI	
Bismuth-212	HE	0.7208	0.2216	pCi/g	0.432	N	727.8	1	1.505	IDENTIFIED	30.44	☐	
Bismuth-214	✓	0.8354	0.0764	pCi/g	0.1031	0.200	609.4	4	1.325	IDENTIFIED	8.229	☐	
Cadmium-109	INT	3.051	0.4664	pCi/g	1.22	Y	87.42	3	1.153	IDENTIFIED	14.67	☑ UI	
Cerium-143	—	417.8	62.67	pCi/g	0	N	143.9	1	1.255	FAIL_DECAY	60.06	☐	
Cesium-134	LA	0.08507	0.03213	pCi/g	0.08472	0.100	795.6	3	1.458	FAIL_ABUND	37.55	☑ UI	Data rejected due to low abundance.
Cesium-135	HE	0.2794	0.08216	pCi/g	0.263	N	795.6	3	1.458	NOT_IDENTI	37.55	☐	
Gross Gamma	—	8.778	1.53	pCi/g	3.696	N		0				☐	
Iodine-135	HE	9.35E+13	1.75E+14	pCi/g	0	N	795.6	3	1.458	NOT_IDENTI	37.55	☐	
Krypton-85	HE	17.34	3.91	pCi/g	13.32	N	238.7	8	1.007	NOT_IDENTI	3.328	☐	
Lead-212	✓	1.406	0.06818	pCi/g	0.08328	0.100	238.7	8	1.007	IDENTIFIED	3.328	☐	
Lead-214	✓	1.036	0.07718	pCi/g	0.1053	0.100	352	4	1.187	IDENTIFIED	6.253	☐	
Lutetium-177	HE	1.965	0.5225	pCi/g	1.664	N	209.4	1	0.9367	FAIL_ABUND	26.45	☐	
Neptunium-237	INT	0.8821	0.1627	pCi/g	0.359	N	87.42	3	1.153	IDENTIFIED	14.67	☐	
Niobium-95m	HE	0.2212	0.06565	pCi/g	0.2084	N	238.7	8	1.007	NOT_IDENTI	3.328	☐	
Polonium-212	NU	1.406	0.06818	pCi/g	0.08328	N	238.7	8	1.007	IDENTIFIED	3.328	☐	
Polonium-214	NU	1.036	0.07718	pCi/g	0.1053	N	352	4	1.187	IDENTIFIED	6.253	☐	
Polonium-216	NU	1.406	0.06818	pCi/g	0.08328	N	238.7	8	1.007	IDENTIFIED	3.328	☐	
Polonium-218	NU	1.036	0.07718	pCi/g	0.1053	N	352	4	1.187	IDENTIFIED	6.253	☐	
Potassium-40	✓	33.5	1.666	pCi/g	0.4277	1.00	1460	1	1.84	IDENTIFIED	2.649	☐	
Radium-224	INT	3.836	0.5378	pCi/g	0.9471	Y	241.5	1	1.74	IDENTIFIED	13.75	☑ UI	
Radium-226	✓	0.8354	0.0764	pCi/g	0.1031	Y	609.4	4	1.325	IDENTIFIED	8.229	☐	
Radium-228	✓	1.268	0.1544	pCi/g	0.214	0.500	911.2	3	1.407	IDENTIFIED	10.63	☐	
Sodium-24	HE	4349	94310	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.0879	0.01981	pCi/g	0.0675	Y	238.7	8	1.007	NOT_IDENTI	3.328	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	15.85	102.6	pCi/g	0	N	74.99	2	0.8266	NOT_IDENTI	8.598	☐	
Thallium-208	✓	0.3829	0.03727	pCi/g	0.0526	0.080	583.3	1	1.427	IDENTIFIED	9.106	☐	
Thorium-228	✓	1.406	0.06818	pCi/g	0.08327	N	238.7	8	1.007	IDENTIFIED	3.328	☐	
Thorium-230	✓	0.8354	0.07639	pCi/g	0.1031	N	609.4	4	1.325	IDENTIFIED	8.229	☐	
Thorium-232	✓	1.268	0.1544	pCi/g	0.214	N	911.2	3	1.407	IDENTIFIED	10.63	☐	
Tin-126	INT	0.3004	0.04592	pCi/g	0.1207	N	87.42	3	1.153	IDENTIFIED	14.67	☐	
Titanium-44	LA	0.2862	0.02211	pCi/g	0.07942	N	77.31	1	0.9059	FAIL_ABUND	6.665	☐	
Uranium-234	✓	0.8354	0.07639	pCi/g	0.1031	N	609.4	4	1.325	IDENTIFIED	8.229	☐	
Zirconium-97	—	1.10E+06	2.98E+05	pCi/g	0	N	238.7	8	1.007	NOT_IDENTI	3.328	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
2323580011	22-JUN-09 12:00	06-JUL-09 13:25	14.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.881	0.2293	pCi/g	0.3157	N	911.1	3	1.568	IDENTIFIED	11.07	☐	
Americium-243	INT	0.4184	0.03099	pCi/g	0.07569	N	75.07	2	0.8441	IDENTIFIED	6.077	☐	
Annihilation Rad.	—	0.1534	0.03422	pCi/g	0.06489	N	510.7	2	1.528	IDENTIFIED	22.05	☐	
Bismuth-210	HE	1.039	0.4722	pCi/g	1.029	N	47.1	3	0.8966	IDENTIFIED	45.27	☐	
Bismuth-211	INT	4.395	0.3246	pCi/g	0.4175	Y	352.1	4	1.122	IDENTIFIED	6.457	☑ UI	
Bismuth-212	LA	1.641	0.2895	pCi/g	0.9255	N	727	1	1.334	FAIL_ABUND	17.04	☐	
Bismuth-214	✓	1.432	0.1109	pCi/g	0.1507	0.200	609.3	4	1.468	IDENTIFIED	6.308	☐	
Cadmium-109	INT	4.519	0.4886	pCi/g	1.27	Y	87.4	4	1.175	IDENTIFIED	10.03	☑ UI	
Cerium-143	—	537.2	82.33	pCi/g	0	N	328.1	1	0.9133	FAIL_DECAY	30.65	☐	
Gross Gamma	—	11.14	1.652	pCi/g	5.074	N		0				☐	
Iodine-123	HE	1.10E+06	8.81E+05	pCi/g	0	N	87.4	4	1.175	NOT_IDENTI	10.03	☐	
Iodine-135	HE	1.77E+14	2.97E+14	pCi/g	0	N	510.7	2	1.528	NOT_IDENTI	22.05	☐	
Krypton-85	HE	21.6	5.147	pCi/g	17.69	N	238.8	7	0.9479	NOT_IDENTI	3.193	☐	
Lead-210	HE	1.039	0.4722	pCi/g	1.029	N	47.1	3	0.8966	IDENTIFIED	45.27	☐	
Lead-212	✓	1.921	0.1042	pCi/g	0.1035	0.100	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Lead-214	✓	1.529	0.1197	pCi/g	0.1374	0.100	352.1	4	1.122	IDENTIFIED	6.457	☐	

Lutetium-177	HE	2.756	0.6653	pCi/g	2.147	N	209.4	2	0.973	FAIL_ABUND	23.85	☐	
Neptunium-237	INT	1.306	0.1952	pCi/g	0.3661	N	87.4	4	1.175	IDENTIFIED	10.03	☐	
Polonium-210	HE	1.039	0.4718	pCi/g	1.029	N	47.1	3	0.8966	IDENTIFIED	45.27	☐	
Polonium-212	NL	1.921	0.1042	pCi/g	0.1035	N	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Polonium-214	NL	1.529	0.1197	pCi/g	0.1374	N	352.1	4	1.122	IDENTIFIED	6.457	☐	
Polonium-216	NL	1.921	0.1042	pCi/g	0.1035	N	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Polonium-218	NL	1.529	0.1197	pCi/g	0.1374	N	352.1	4	1.122	IDENTIFIED	6.457	☐	
Potassium-40	✓	33.13	1.517	pCi/g	0.645	1.00	1460	1	2.056	IDENTIFIED	3.395	☐	
Radium-224	INT	5.993	0.787	pCi/g	1.178	Y	241.7	1	1.85	IDENTIFIED	12.58	☑ UI	
Radium-226	✓	1.432	0.1109	pCi/g	0.1507	Y	609.3	4	1.468	IDENTIFIED	6.308	☐	
Radium-228	✓	1.881	0.2293	pCi/g	0.3157	0.500	911.1	3	1.568	IDENTIFIED	11.07	☐	
Strontium-85	LA	0.1095	0.0261	pCi/g	0.08971	Y	238.8	7	0.9479	NOT_IDENTI	3.193	☑ UI	Data rejected due to low abundance.
Thallium-200	—	330.9	142.5	pCi/g	0	N	75.07	2	0.8441	NOT_IDENTI	6.077	☐	
Thallium-208	✓	0.6846	0.05723	pCi/g	0.07306	0.080	583.1	1	1.295	IDENTIFIED	7.359	☐	
Thorium-228	✓	1.921	0.1042	pCi/g	0.1035	N	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Thorium-230	✓	1.432	0.1109	pCi/g	0.1507	N	609.3	4	1.468	IDENTIFIED	6.308	☐	
Thorium-232	✓	1.881	0.2293	pCi/g	0.3157	N	911.1	3	1.568	IDENTIFIED	11.07	☐	
Thorium-234	✓	2.03	0.5234	pCi/g	1.339	2.00	63.58	2	0.7811	IDENTIFIED	24.13	☐	
Tin-126	INT	0.4449	0.0481	pCi/g	0.1249	N	87.4	4	1.175	IDENTIFIED	10.03	☐	
Titanium-44	LA	0.4533	0.02695	pCi/g	0.04994	N	77.37	1	0.8709	IDENTIFIED	4.215	☐	
Total Uranium	—	6.1865	1.56E-06	ug/g	1.9959	N		0				☐	
Tungsten-181	LA	0.8397	0.1697	pCi/g	0.4426	N	209.4	2	0.973	NOT_IDENTI	23.85	☐	
Uranium-234	✓	1.432	0.1109	pCi/g	0.1507	N	609.3	4	1.468	IDENTIFIED	6.308	☐	
Uranium-238	HE	2.03	0.5234	pCi/g	1.339	N	63.58	2	0.7811	IDENTIFIED	24.13	☐	
Zirconium-97	—	1.51E+06	4.48E+05	pCi/g	0	N	238.8	7	0.9479	NOT_IDENTI	3.193	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201870087		06-JUL-09 13:25	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Iodine-133	HE	1.945	2.835	pCi/g	0	N	0	3	0	NOT_IDENTI	0	☐	
Sodium-24	HE	11.58	31.11	pCi/g	0	N	0	3	0	NOT_IDENTI	0	☐	
Technetium-99m	HE	2.90E+06	7.86E+06	pCi/g	0	N	0	3	0	NOT_IDENTI	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201870088	22-JUN-09 12:00	06-JUL-09 13:26	14.1	DUP	LOAD	1		LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	✓	1.852	0.1959	pCi/g	0.2983	N	911.3	3	1.872	IDENTIFIED	9.286	☐	
Americium-243	INT	0.3219	0.03457	pCi/g	0.05697	N	74.92	2	1.86	IDENTIFIED	10.05	☐	
Annihilation Rad.		0.1653	0.04065	pCi/g	0.06081	N	510.9	1	1.989	IDENTIFIED	24.38	☐	
Bismuth-211	INT	3.351	0.2347	pCi/g	0.3891	Y	351.9	4	1.735	IDENTIFIED	6.242	☑ UI	
Bismuth-212	HE	1.122	0.3518	pCi/g	0.8301	N	728.4	1	0.9433	FAIL_ABUND	31.03	☐	
Bismuth-214	✓	1.105	0.1059	pCi/g	0.146	0.200	609.5	4	1.548	IDENTIFIED	8.549	☐	
Cadmium-109	INT	1.776	0.4778	pCi/g	1.036	Y	87.37	5	1.182	IDENTIFIED	26.58	☑ UI	
Cerium-143	—	404.8	73.43	pCi/g	0	N	87.37	5	1.182	FAIL_DECAY	26.58	☐	
Gross Gamma	—	9.167	1.494	pCi/g	4.215	N		0				☐	
Iodine-123	HE	1.56E+05	8.05E+05	pCi/g	0	N	87.37	5	1.182	NOT_IDENTI	26.58	☐	
Lead-212	✓	1.242	0.0826	pCi/g	0.1199	0.100	238.7	6	1.298	IDENTIFIED	5.45	☐	
Lead-214	✓	1.166	0.08713	pCi/g	0.1357	0.100	351.9	4	1.735	IDENTIFIED	6.242	☐	
Lutetium-177	HE	2.12	0.7561	pCi/g	1.944	N	209.2	1	1.039	FAIL_ABUND	35.53	☐	
Neptunium-237	HE	0.5135	0.1479	pCi/g	0.3149	N	87.37	5	1.182	IDENTIFIED	26.58	☐	
Niobium-95m	HE	0.3978	0.08466	pCi/g	0.2796	N	238.7	6	1.298	NOT_IDENTI	5.45	☐	
Polonium-212	NL	1.242	0.0826	pCi/g	0.1199	N	238.7	6	1.298	IDENTIFIED	5.45	☐	
Polonium-214	NL	1.166	0.08713	pCi/g	0.1357	N	351.9	4	1.735	IDENTIFIED	6.242	☐	
Polonium-216	NL	1.242	0.0826	pCi/g	0.1199	N	238.7	6	1.298	IDENTIFIED	5.45	☐	
Polonium-218	NL	1.166	0.08713	pCi/g	0.1357	N	351.9	4	1.735	IDENTIFIED	6.242	☐	
Potassium-40	✓	36.95	1.728	pCi/g	0.6903	1.00	1461	1	2.251	IDENTIFIED	3.429	☐	
Radium-224	INT	1.869	0.5258	pCi/g	1.766	Y	241.9	1	1.747	IDENTIFIED	27.97	☑ UI	

Radium-226	✓	**1.105**	0.1059	pCi/g	**0.146**	Y	609.5	4	1.548	IDENTIFIED	8.549	☐
Radium-228	✓	**1.852**	0.1959	pCi/g	**0.2983**	**0.500**	911.3	3	1.872	IDENTIFIED	9.286	☐
Thallium-200	HE	**217.6**	140.7	pCi/g	**0**	N	74.92	2	1.86	NOT_IDENTI	10.05	☐
Thallium-208	✓	**0.5532**	0.05448	pCi/g	**0.07586**	**0.080**	583.5	1	1.49	IDENTIFIED	9.089	☐
Thorium-228	✓	**1.242**	0.0826	pCi/g	**0.1199**	N	238.7	6	1.298	IDENTIFIED	5.45	☐
Thorium-230	✓	**1.105**	0.1059	pCi/g	**0.146**	N	609.5	4	1.548	IDENTIFIED	8.549	☐
Thorium-232	✓	**1.852**	0.1959	pCi/g	**0.2983**	N	911.3	3	1.872	IDENTIFIED	9.286	☐
Tin-126	HE	**0.1749**	0.04704	pCi/g	**0.1018**	N	87.37	5	1.182	IDENTIFIED	26.58	☐
Titanium-44	LA	**0.3206**	0.02248	pCi/g	**0.06434**	N	77.18	1	1.395	FAIL_ABUND	5.87	☐
Uranium-234	✓	**1.105**	0.1059	pCi/g	**0.146**	N	609.5	4	1.548	IDENTIFIED	8.549	☐
Zirconium-97	—	**1.45E+06**	4.84E+05	pCi/g	**0**	N	238.7	6	1.298	NOT_IDENTI	5.45	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201870089		06-JUL-09 13:26	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	HE	**0.9005**	0.3218	pCi/g	**0.7673**	N	911.8	3	1.21	FAIL_ABUND	35.26	☐	
Americium-241		**13.85**	0.7615	pCi/g	**0.5338**	**0.200**	59.58	1	0.9376	IDENTIFIED	2.93	☐	
Barium-137m		**5.378**	0.1939	pCi/g	**0.1264**	N	661.8	2	1.43	IDENTIFIED	2.544	☐	
Bismuth-211		**2.347**	0.3131	pCi/g	**0.6246**	Y	352	4	1.227	IDENTIFIED	12.94	☐	
Bismuth-214		**0.7493**	0.1256	pCi/g	**0.3398**	**0.200**	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Cadmium-109		**41.67**	2.53	pCi/g	**2.129**	Y	88.1	3	0.9674	IDENTIFIED	3.62	☐	
Cesium-137		**5.685**	0.2056	pCi/g	**0.1336**	**0.100**	661.8	2	1.43	IDENTIFIED	2.544	☐	
Cobalt-57		**0.3418**	0.03143	pCi/g	**0.06079**	N	122	1	1.044	IDENTIFIED	8.709	☐	
Cobalt-60		**6.996**	0.3172	pCi/g	**0.09187**	**0.100**	1333	1	2.292	IDENTIFIED	2.66	☐	
Gross Gamma		**27.66**	3.85	pCi/g	**2.868**	N		0				☐	
Iodine-123	HE	**309.5**	254.3	pCi/g	**0**	N	88.1	3	0.9674	NOT_IDENTI	3.62	☐	
Iodine-133	HE	**4.574**	14.36	pCi/g	**0**	N	510.8	1	1.889	FAIL_DECAY	69.59	☐	
Lead-212		**0.7908**	0.0858	pCi/g	**0.191**	**0.100**	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Lead-214		**0.8165**	0.111	pCi/g	**0.2178**	**0.100**	352	4	1.227	IDENTIFIED	12.94	☐	
Neptunium-237		**1.446**	0.2916	pCi/g	**0.861**	N	93.14	1	1.546	NOT_IDENTI	34.98	☐	
Niobium-97		**172.6**	72.02	pCi/g	**0**	N	238.7	6	0.9457	NOT_IDENTI	10.24	☐	
Polonium-212		**0.7908**	0.0858	pCi/g	**0.191**	N	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Polonium-214		**0.8165**	0.111	pCi/g	**0.2178**	N	352	4	1.227	IDENTIFIED	12.94	☐	
Polonium-216		**0.7908**	0.0858	pCi/g	**0.191**	N	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Polonium-218		**0.8165**	0.111	pCi/g	**0.2178**	N	352	4	1.227	IDENTIFIED	12.94	☐	
Radium-226		**0.7493**	0.1256	pCi/g	**0.3398**	Y	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Radium-228		**0.9005**	0.3218	pCi/g	**0.7673**	**0.500**	911.8	3	1.21	FAIL_ABUND	35.26	☐	
Sodium-24	HE	**49.76**	113.4	pCi/g	**0**	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-208		**0.3886**	0.05855	pCi/g	**0.1251**	**0.080**	583.2	1	1.194	IDENTIFIED	14.71	☐	
Thorium-228		**0.7908**	0.0858	pCi/g	**0.191**	N	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Thorium-230		**0.7493**	0.1256	pCi/g	**0.3398**	N	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Thorium-232	HE	**0.9005**	0.3218	pCi/g	**0.7673**	N	911.8	3	1.21	FAIL_ABUND	35.26	☐	
Tin-126		**4.142**	0.2515	pCi/g	**0.2129**	N	88.1	3	0.9674	IDENTIFIED	3.62	☐	
Titanium-44	HE	**0.1874**	0.04985	pCi/g	**0.103**	N	77.2	1	1.001	FAIL_ABUND	26.21	☐	
Uranium-234		**0.7493**	0.1256	pCi/g	**0.3398**	N	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Zirconium-97	HE	**1379**	1103	pCi/g	**0**	N	238.7	6	0.9457	NOT_IDENTI	10.24	☐	

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232278001-1 06-JUL-2009 11:09	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.902			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.853			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.559			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1059			
232278002-1 06-JUL-2009 11:09	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.155			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.038			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.094			
232347001-1 06-JUL-2009 11:10	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.397			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.432			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1225		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.114			
	Thallium-208	UI	UI	UI	Data rejected due to low abundance.		.5139		.08	.08
	Thorium-234	UI	UI	UI	Data rejected due to no valid peak		1.041			
232347002-1 06-JUL-2009 11:10	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.85			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.509			
232347003-1 06-JUL-2009 11:11	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.095			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.628			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.985			
232347004-1 06-JUL-2009 11:12	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.193			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.347			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232347004-1 06-JUL-2009 11:12	Radium-224	UI	UI	UI	Data rejected due to interference.		3.89			
232357001-1 06-JUL-2009 11:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.228			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.584			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.12			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1085			
232357002-1 06-JUL-2009 11:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.565			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.743			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.727			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09123			
232358001-1 06-JUL-2009 11:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.16			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.903			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.385			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1099			
232358002-1 06-JUL-2009 11:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.907			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.865			
	Cesium-137	UI	UI	UI	Data rejected due to low abundance.		.0929		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.072			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09168			
232358003-1 06-JUL-2009 11:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.385			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232358003-1 06-JUL-2009 11:15	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.925			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1363		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.81			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1199			
232358004-1 06-JUL-2009 11:16	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.265			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.966			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1239		.1	.1
	Cesium-137	UI	UI	UI	Data rejected due to high peak-width.		.07044		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.41			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1854			
232358005-1 06-JUL-2009 11:17	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.528			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.638			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.28			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09728			
232358006-1 06-JUL-2009 12:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.927			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.637			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09185		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.148			
232358007-1 06-JUL-2009 12:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.972			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.421			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232358007-1 06-JUL-2009 12:13	Mercury-203	UI	UI	UI	Data rejected due to low abundance.		.094		.1	.1
	Radium-223	UI	UI	UI	Data rejected due to low abundance.		1.406			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.43			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08437			
	Thorium-231	UI	UI	UI	Data rejected due to low abundance.		1.406			
232358008-1 06-JUL-2009 12:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.838			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.689			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09583		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.368			
232358009-1 06-JUL-2009 12:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.51			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.879			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.809			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07437			
232358010-1 06-JUL-2009 12:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.977			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.051			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08507		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.836			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0879			
232358011-1 06-JUL-2009 13:25	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.395			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.519			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232358011-1 06-JUL-2009 13:25	Radium-224	UI	UI	UI	Data rejected due to interference.		5.993			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1095			
1201870088-1 DUP 06-JUL-2009 13:26	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.351			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.776			
	Radium-224	UI	UI	UI	Data rejected due to interference.		1.869			

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertainty	Units	DL	RDL
880723	232358011	SAMPLE	06-JUL-09	Uranium-235	0.3154	0.1286	pCi/g	0.224	0.500
				Zirconium-97	1.51E+06	4.48E+05	pCi/g	0	N
880723	1201870087	MB	06-JUL-09	Sodium-24	11.58	31.11	pCi/g	0	N
				Technetium-99m	2.90E+06	7.86E+06	pCi/g	0	N
880723	1201870088	DUP	06-JUL-09	Bismuth-211	3.351	0.2347	pCi/g	0.1946	Y
				Bismuth-214	1.105	0.1059	pCi/g	0.07306	0.200
				Cadmium-109	1.776	0.4778	pCi/g	0.5182	Y
				Cerium-143	404.8	73.43	pCi/g	0	N
				Cesium-134	0.07015	0.03286	pCi/g	0.05989	0.100
				Gross Gamma	9.167	1.494	pCi/g	2.054	N
				Iodine-123	1.56E+05	8.05E+05	pCi/g	0	N
				Krypton-85	17.58	5.659	pCi/g	9.205	N
				Lead-212	1.242	0.0826	pCi/g	0.05997	0.100
				Lead-214	1.168	0.08713	pCi/g	0.06789	0.100
				Mercury-203	0.04967	0.02295	pCi/g	0.04104	0.100
				Potassium-40	38.95	1.728	pCi/g	0.3454	1.00
				Radium-224	1.869	0.5258	pCi/g	0.8835	Y
				Radium-226	1.105	0.1059	pCi/g	0.07306	Y
				Radium-228	1.852	0.1959	pCi/g	0.1492	0.500
				Sodium-22	0.06557	0.03655	pCi/g	0.06473	0.080
				Strontium-85	0.08913	0.0287	pCi/g	0.04668	Y
				Thallium-200	217.6	140.7	pCi/g	0	N
				Thallium-208	0.5532	0.05448	pCi/g	0.03795	0.080
				Tin-113	0.06374	0.02705	pCi/g	0.04859	0.100
				Zirconium-97	1.45E+06	4.84E+05	pCi/g	0	N
880723	1201870089	LCS	06-JUL-09	Americium-241	13.65	0.7615	pCi/g	0.2671	0.200
				Barium-137m	5.378	0.1939	pCi/g	0.06322	N
				Bismuth-211	2.347	0.3131	pCi/g	0.3125	Y
				Bismuth-214	0.7493	0.1256	pCi/g	0.17	0.200
				Cadmium-109	41.67	2.53	pCi/g	1.065	Y
				Cesium-134	0.09152	0.05014	pCi/g	0.08886	0.100
				Cesium-137	5.685	0.2056	pCi/g	0.06683	0.100
				Cobalt-60	6.996	0.3172	pCi/g	0.04596	0.100
				Gross Gamma	27.66	3.85	pCi/g	1.389	N
				Iodine-123	309.5	254.3	pCi/g	0	N
				Krypton-85	20.59	7.374	pCi/g	12.13	N
				Lead-212	0.7908	0.0858	pCi/g	0.09555	0.100

LSE 7/14/09

LSE 7/14/09

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 13:11:35.81

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:14.
Sample ID         : G232347001           Sample quantity  : 1.26580E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.71  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.01*	181	420	1.24	93.19	88	10	2.52E-02	24.7	
2	0	63.17*	108	562	1.46	127.49	124	9	1.49E-02	42.3	
3	4	74.72*	636	500	1.31	150.59	143	18	8.84E-02	7.7	2.46E+00
4	4	77.06*	883	485	1.35	155.27	143	18	1.23E-01	5.9	
5	2	84.64*	152	445	1.52	170.43	166	27	2.11E-02	26.5	1.67E+00
6	2	87.26	331	335	1.23	175.67	166	27	4.60E-02	10.7	
7	2	89.67	200	324	1.15	180.48	166	27	2.77E-02	17.1	
8	2	92.95*	306	401	1.53	187.04	166	27	4.25E-02	14.1	
9	0	129.07	78	284	1.22	259.25	255	8	1.08E-02	39.3	
10	0	186.04*	205	297	1.48	373.14	368	11	2.84E-02	18.4	
11	0	209.35	91	314	0.82	419.74	413	11	1.27E-02	38.9	
12	6	238.70*	1129	185	1.39	478.40	472	19	1.57E-01	3.7	1.62E+00
13	6	241.30	259	295	2.26	483.60	472	19	3.60E-02	20.2	
14	0	270.50	72	135	1.21	541.97	538	9	1.00E-02	31.6	
15	0	277.56	73	190	1.31	556.07	551	11	1.01E-02	38.6	
16	0	295.35	322	152	1.30	591.63	587	11	4.48E-02	9.3	
17	0	300.26	75	172	1.97	601.45	598	11	1.04E-02	35.4	
18	0	328.19	56	116	1.43	657.29	654	9	7.74E-03	37.2	
19	0	338.31*	208	176	1.33	677.51	671	15	2.89E-02	15.8	
20	0	352.00*	521	157	1.36	704.87	697	16	7.24E-02	7.1	
21	0	463.44	77	81	1.43	927.61	922	13	1.07E-02	26.6	
22	0	583.01*	330	75	1.43	1166.56	1159	16	4.58E-02	8.2	
23	0	609.55*	274	166	1.53	1219.59	1211	18	3.81E-02	12.8	
24	0	728.33	91	84	1.73	1456.95	1448	17	1.27E-02	25.8	
25	0	795.12	53	36	2.58	1590.40	1586	9	7.43E-03	24.4	
26	0	910.95*	217	83	1.56	1821.82	1815	16	3.02E-02	11.7	
27	0	968.79	107	53	1.16	1937.39	1933	9	1.49E-02	14.9	
28	0	1120.86	54	97	1.74	2241.17	2235	15	7.44E-03	43.0	
29	0	1460.43*	1230	26	2.12	2919.38	2909	18	1.71E-01	3.0	
30	0	1592.44	22	4	1.95	3183.01	3179	8	3.10E-03	26.1	
31	0	1764.33*	58	12	1.73	3526.20	3520	13	8.12E-03	19.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 13:11:39

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:14
Sample ID : G232347001 Sample quantity : 126.58 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.71 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.407E+01	2.949E+00	3.717E-01	2.312E-02	91.653
CD-109	+	88.03	*	3.432E+00	7.813E-01	9.319E-01	7.096E-02	3.683
SN-126	+	64.28		4.121E-01	3.538E-01	4.131E-01	6.157E-02	0.998
	+	86.94		1.405E+00	6.520E-01	3.802E-01	1.565E-01	3.695
	+	87.57	*	3.379E-01	7.692E-02	9.162E-02	6.978E-03	3.688
BI-210	+	46.50	*	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PB-210	+	46.50	*	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PO-210	+	46.50	*	1.748E+00	8.722E-01	8.531E-01	5.738E-02	2.049
BI-211		72.87		1.015E+01	2.253E+00	3.897E+00	3.068E-01	2.604
	+	351.07	*	3.397E+00	5.500E-01	3.387E-01	2.684E-02	10.031
PB-212	+	74.81		2.194E+00	4.300E-01	3.481E-01	4.245E-02	6.302
	+	77.11		1.815E+00	2.565E-01	2.079E-01	1.618E-02	8.727
	+	87.30		1.563E+00	3.886E-01	4.234E-01	5.323E-02	3.691
	+	238.63	*	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
	+	300.09		1.634E+00	1.169E+00	1.079E+00	1.147E-01	1.514
PO-212	+	74.81		2.194E+00	4.300E-01	3.481E-01	4.245E-02	6.302
	+	77.11		1.815E+00	2.565E-01	2.079E-01	1.618E-02	8.727
	+	87.30		1.563E+00	3.886E-01	4.234E-01	5.323E-02	3.691
		115.19		1.982E+00	3.405E+00	5.741E+00	7.305E-01	0.345
	+	238.63	*	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
	+	300.09		1.634E+00	1.169E+00	1.079E+00	1.147E-01	1.514
BI-214	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.778E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
PB-214	+	74.81		3.781E+00	7.090E-01	5.999E-01	6.466E-02	6.302
	+	77.11		3.111E+00	4.995E-01	3.565E-01	3.883E-02	8.727
	+	87.30		2.677E+00	6.434E-01	7.253E-01	7.862E-02	3.691
	+	241.98		2.170E+00	9.097E-01	5.645E-01	6.362E-02	3.844
	+	295.21		1.228E+00	2.647E-01	2.288E-01	2.502E-02	5.367
	+	351.92	*	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.781E+00	7.090E-01	5.999E-01	6.466E-02	6.302
	+	77.11		3.111E+00	4.995E-01	3.565E-01	3.883E-02	8.727
	+	87.30		2.677E+00	6.434E-01	7.253E-01	7.862E-02	3.691
	+	241.98		2.170E+00	9.097E-01	5.645E-01	6.362E-02	3.844
	+	295.21		1.228E+00	2.647E-01	2.288E-01	2.502E-02	5.367
	+	351.92	*	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
PO-216	+	74.81		2.194E+00	4.300E-01	3.481E-01	4.245E-02	6.302
	+	77.11		1.815E+00	2.565E-01	2.079E-01	1.618E-02	8.727
	+	87.30		1.563E+00	3.886E-01	4.234E-01	5.323E-02	3.691
	+	238.63	*	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
	+	300.09		1.634E+00	1.169E+00	1.079E+00	1.147E-01	1.514
PO-218	+	74.81		3.781E+00	7.090E-01	5.999E-01	6.466E-02	6.302
	+	77.11		3.111E+00	4.995E-01	3.565E-01	3.883E-02	8.727
	+	87.30		2.677E+00	6.434E-01	7.253E-01	7.862E-02	3.691
	+	241.98		2.170E+00	9.097E-01	5.645E-01	6.362E-02	3.844
	+	295.21		1.228E+00	2.647E-01	2.288E-01	2.502E-02	5.367
	+	351.92	*	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
RA-224	+	240.98	*	4.114E+00	1.709E+00	1.067E+00	1.044E-01	3.857
RA-226	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.778E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
AC-228	+	338.32		1.492E+00	7.731E-01	3.838E-01	1.578E-01	3.888
	+	911.07	*	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
	+	969.11		1.342E+00	5.103E-01	5.903E-01	1.394E-01	2.273
RA-228	+	338.32		1.492E+00	7.731E-01	3.838E-01	1.578E-01	3.888
	+	911.07	*	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
	+	969.11		1.342E+00	5.103E-01	5.903E-01	1.394E-01	2.273
TH-228	+	84.40		4.715E+00	2.572E+00	2.776E+00	3.478E-01	1.699
	+	238.60	*	1.573E+00	2.052E-01	9.371E-02	1.010E-02	16.783
	+	300.10		1.634E+00	1.509E+00	1.079E+00	6.403E-01	1.514
TH-230	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.777E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
TH-232	+	338.32		1.492E+00	4.848E-01	3.838E-01	3.009E-02	3.888
	+	911.07	*	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
	+	969.11		1.342E+00	5.103E-01	5.903E-01	1.394E-01	2.273
TH-234	+	63.29	*	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
	+	92.38		2.165E+00	7.244E-01	6.363E-01	1.143E-01	3.403
U-234	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.777E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
NP-237	+	86.50	*	9.922E-01	3.049E-01	2.682E-01	5.900E-02	3.700
		95.87		-1.776E-01	9.002E-01	1.302E+00	3.224E-01	-0.136
U-238	+	63.29	*	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
	+	92.38		2.165E+00	6.374E-01	6.363E-01	5.323E-02	3.403
AM-243	+	74.67	*	3.557E-01	6.128E-02	5.643E-02	4.420E-03	6.304
	+	86.72		3.721E+01	8.471E+00	1.006E+01	7.676E-01	3.697
		117.66		-4.117E+00	3.679E+00	5.731E+00	7.588E-01	-0.718
		142.18		-1.443E+01	1.857E+01	2.939E+01	3.652E+00	-0.491

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.166E-01	3.652E-01	6.126E-01	4.389E-02	0.190
NA-22		1274.54	*	-1.266E-02	5.865E-02	9.281E-02	5.406E-03	-0.136
NA-24		1368.53	*	1.296E-01	5.865E-02	Half-Life too short		
AL-26		1129.67		1.522E+00	2.382E+00	3.832E+00	2.567E-01	0.397
		1808.65	*	1.366E-02	3.320E-02	5.901E-02	3.386E-03	0.232
TI-44		67.85		2.338E-02	3.792E-02	4.268E-02	3.416E-03	0.548
	+	78.38	*	3.349E-01	4.733E-02	6.027E-02	4.676E-03	5.556
SC-46		889.25	*	-4.500E-03	4.602E-02	7.568E-02	7.601E-03	-0.059
	+	1120.51		1.418E-01	1.224E-01	1.448E-01	9.961E-03	0.980
V-48		944.10		8.416E-01	1.025E+00	1.810E+00	1.751E-01	0.465
		983.50	*	-3.767E-02	8.857E-02	1.402E-01	1.284E-02	-0.269
		1312.09		7.784E-02	1.020E-01	1.774E-01	1.029E-02	0.439
CR-51		320.08	*	-1.964E-01	3.835E-01	6.237E-01	5.516E-02	-0.315
MN-52		744.21		1.451E-01	2.227E-01	3.928E-01	3.050E-02	0.369
		848.13		-1.111E+00	6.911E+00	1.132E+01	1.061E+00	-0.098
		935.52		1.479E-01	2.443E-01	4.258E-01	4.163E-02	0.347
		1246.25		5.166E+00	8.621E+00	1.465E+01	8.520E-01	0.353
		1333.61		-6.294E-01	4.879E+00	7.722E+00	4.469E-01	-0.082
		1434.06	*	-2.205E-01	2.191E-01	3.074E-01	1.800E-02	-0.717
MN-54		834.83	*	-1.537E-02	4.423E-02	7.142E-02	6.543E-03	-0.215
CO-56		846.75	*	3.326E-02	4.446E-02	7.849E-02	7.340E-03	0.424
		977.42		-8.115E-01	3.739E+00	6.036E+00	5.579E-01	-0.134
		1037.82		-1.731E-01	3.966E-01	6.236E-01	5.501E-02	-0.278
		1175.09		-3.591E-01	2.995E+00	4.819E+00	2.796E-01	-0.075
		1238.25		5.116E-02	1.179E-01	1.972E-01	1.219E-02	0.259
		1360.21		-2.827E-01	1.059E+00	1.709E+00	9.930E-02	-0.165
		1771.40		-8.690E-01	4.140E-01	4.663E-01	2.693E-02	-1.864
CO-57		122.06	*	1.160E-02	2.400E-02	4.030E-02	5.718E-03	0.288
		136.48		-3.949E-02	2.196E-01	3.582E-01	4.798E-02	-0.110
CO-58		810.76	*	-2.535E-02	4.128E-02	6.458E-02	5.684E-03	-0.393
FE-59		142.65		-1.086E+00	2.871E+00	4.532E+00	5.612E-01	-0.240
		192.34		7.156E-01	9.900E-01	1.599E+00	2.292E-01	0.448

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1099.22	*	-3.860E-02	1.243E-01	1.976E-01	1.600E-02	-0.195
		1291.56		-3.454E-02	1.664E-01	2.632E-01	1.954E-02	-0.131
CO-60		1173.22		-5.301E-02	6.077E-02	9.108E-02	5.283E-03	-0.582
		1332.49	*	2.061E-02	4.156E-02	7.154E-02	4.140E-03	0.288
ZN-65		1115.52	*	-1.882E-02	1.337E-01	1.829E-01	1.278E-02	-0.103
GE-68		1077.35	*	-2.018E-01	1.534E+00	2.477E+00	1.903E-01	-0.081
AS-73		53.44	*	-6.348E-02	2.244E-01	3.711E-01	2.793E-02	-0.171
AS-74		595.88	*	5.351E-02	1.051E-01	1.770E-01	1.164E-02	0.302
		634.78		1.666E-01	4.150E-01	6.918E-01	4.560E-02	0.241
SE-75		66.05		5.713E-02	2.727E+00	4.046E+00	4.036E-01	0.014
		96.73		-5.441E-01	7.414E-01	1.037E+00	1.448E-01	-0.525
		121.11		5.556E-02	1.285E-01	2.153E-01	3.384E-02	0.258
		136.00		-5.990E-04	4.073E-02	6.691E-02	8.725E-03	-0.009
		198.60		2.418E-01	1.982E+00	3.133E+00	3.387E-01	0.077
		264.65	*	3.660E-04	4.848E-02	7.150E-02	6.826E-03	0.005
		279.53		8.697E-02	1.334E-01	2.041E-01	1.955E-02	0.426
		303.91		3.505E-01	2.515E+00	3.716E+00	4.309E-01	0.094
		400.65		1.648E-02	2.830E-01	4.707E-01	4.307E-02	0.035
BR-77	+	87.88		5.309E+02	1.209E+02	2.104E+02	1.601E+01	2.523
		200.40		-6.693E+01	1.280E+02	2.019E+02	2.016E+01	-0.331
	+	239.00		1.805E+02	2.211E+01	2.828E+01	2.772E+00	6.382
		249.79		-4.866E+01	5.100E+01	7.690E+01	7.457E+00	-0.633
		281.68		1.505E+01	7.591E+01	1.131E+02	1.044E+01	0.133
		297.23		2.639E+02	6.680E+01	9.333E+01	8.332E+00	2.827
		303.76		2.375E+01	1.543E+02	2.282E+02	2.004E+01	0.104
		439.47		-8.551E+00	1.178E+02	1.933E+02	1.178E+01	-0.044
		484.57		-1.259E+02	1.879E+02	2.930E+02	1.847E+01	-0.430
		520.65	*	4.895E+00	8.481E+00	1.445E+01	9.290E-01	0.339
		574.64		-1.565E+02	1.831E+02	2.565E+02	1.681E+01	-0.610
		578.91		5.746E+01	7.323E+01	1.122E+02	7.359E+00	0.512
		585.48		7.986E+02	2.045E+02	3.630E+02	2.384E+01	2.200
		755.35		1.685E+01	1.283E+02	2.170E+02	1.721E+01	0.078
		817.79		-4.075E+00	1.088E+02	1.805E+02	1.605E+01	-0.023
SR-82		698.33		-3.420E+01	4.027E+01	5.983E+01	4.244E+00	-0.572
		776.49	*	-1.139E-01	4.179E-01	6.819E-01	5.626E-02	-0.167
		1395.20		-9.591E+00	1.124E+01	1.640E+01	9.570E-01	-0.585
RB-83		520.41	*	4.089E-02	7.697E-02	1.307E-01	8.407E-03	0.313
		529.64		-3.054E-02	1.203E-01	1.925E-01	1.243E-02	-0.159
		552.65		1.645E-01	2.372E-01	4.055E-01	2.641E-02	0.406
RB-84		881.50	*	1.099E-02	7.781E-02	1.307E-01	1.296E-02	0.084
KR-85		513.99	*	-3.149E+01	1.093E+01	1.468E+01	9.408E-01	-2.145
SR-85		513.99	*	-1.595E-01	5.536E-02	7.435E-02	4.766E-03	-2.145
RB-86		1076.63	*	2.558E-01	9.194E-01	1.544E+00	1.188E-01	0.166
Y-88		898.02		-2.818E-02	5.028E-02	7.888E-02	8.066E-03	-0.357
		1836.01	*	-7.554E-03	3.378E-02	5.229E-02	2.992E-03	-0.144
ZR-88		392.90	*	-4.081E-03	3.419E-02	5.630E-02	3.279E-03	-0.072
Y-91		1204.90	*	5.022E+00	2.293E+01	3.794E+01	2.205E+00	0.132
NB-94		702.63	*	1.758E-02	4.270E-02	7.073E-02	5.061E-03	0.249
		871.10		-7.471E-03	4.055E-02	6.613E-02	6.445E-03	-0.113

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95		765.79	*	3.799E-02	5.188E-02	9.095E-02	7.356E-03	0.418
NB-95M		235.69	*	3.344E-01	1.528E-01	2.376E-01	2.599E-02	1.407
ZR-95		724.18		7.882E-02	1.210E-01	1.872E-01	1.557E-02	0.421
		756.15	*	-2.823E-02	7.706E-02	1.248E-01	1.109E-02	-0.226
NB-97		657.90	*	-8.863E-03	7.706E-02	Half-Life too short		
		1024.50		-4.105E+00	7.706E-02	Half-Life too short		
ZR-97		254.15		-7.037E-01	7.706E-02	Half-Life too short		
		355.39		-6.429E-02	7.706E-02	Half-Life too short		
		507.63	*	-1.043E+00	7.706E-02	Half-Life too short		
		602.52		-1.997E+00	7.706E-02	Half-Life too short		
		1021.30		-5.591E-01	7.706E-02	Half-Life too short		
		1147.95		-4.155E-01	7.706E-02	Half-Life too short		
		1362.66		-2.525E+00	7.706E-02	Half-Life too short		
		1750.46		-8.649E-03	7.706E-02	Half-Life too short		
MO-99		140.51		-6.496E+00	2.045E+01	3.300E+01	9.626E+00	-0.197
		181.06		5.847E+00	1.427E+01	2.077E+01	3.939E+00	0.281
		366.43		-4.658E+01	7.336E+01	1.176E+02	8.066E+00	-0.396
		739.58	*	5.567E-01	9.674E+00	1.628E+01	2.390E+00	0.034
		778.00		1.092E+01	2.865E+01	4.935E+01	4.083E+00	0.221
TC-99M		140.51	*	-5.238E+08	2.865E+01	Half-Life too short		
RH-101		127.23		3.195E-02	3.591E-02	5.406E-02	7.442E-03	0.591
		198.01	*	-2.218E-04	3.652E-02	5.741E-02	5.733E-03	-0.004
		325.23		1.229E-01	2.554E-01	3.861E-01	3.178E-02	0.318
RH-102		418.52		6.526E-02	3.213E-01	5.381E-01	3.218E-02	0.121
		475.06	*	-1.788E-02	3.381E-02	5.345E-02	3.348E-03	-0.335
		631.29		-7.775E-02	6.752E-02	9.812E-02	6.468E-03	-0.792
		697.49		-6.894E-02	9.399E-02	1.413E-01	1.001E-02	-0.488
		766.84		1.453E-01	1.314E-01	2.355E-01	1.909E-02	0.617
		1046.59		-1.813E-01	1.507E-01	2.177E-01	1.787E-02	-0.833
		1112.84		-1.577E-01	3.019E-01	4.277E-01	3.005E-02	-0.369
RU-103		497.08	*	-1.763E-02	4.507E-02	7.159E-02	9.240E-03	-0.246
	+	610.33		8.563E+00	2.577E+00	2.853E+00	4.488E-01	3.002
RH-106		511.85		1.198E-01	2.483E-01	4.584E-01	2.935E-02	0.261
		621.84	*	-1.311E-01	3.991E-01	6.282E-01	7.631E-02	-0.209
		1050.47		3.084E+00	2.849E+00	5.105E+00	4.156E-01	0.604
RU-106		511.85		1.198E-01	2.483E-01	4.584E-01	2.935E-02	0.261
		621.84	*	-1.311E-01	3.988E-01	6.282E-01	4.141E-02	-0.209
		1050.47		3.084E+00	2.849E+00	5.105E+00	4.156E-01	0.604
AG-108M		433.93	*	-3.015E-02	3.851E-02	6.024E-02	3.942E-03	-0.501
		614.37		3.991E-02	4.879E-02	7.451E-02	5.236E-03	0.536
		722.95		-1.029E-02	5.185E-02	7.327E-02	5.743E-03	-0.140
AG-110M		657.75	*	-5.589E-03	4.086E-02	6.509E-02	4.499E-03	-0.086
		677.61		-1.912E-01	3.728E-01	5.724E-01	4.066E-02	-0.334
		706.67		6.406E-02	2.709E-01	4.426E-01	3.318E-02	0.145
		763.93		-8.142E-02	1.964E-01	3.179E-01	2.645E-02	-0.256
		884.67		2.672E-02	5.623E-02	9.716E-02	9.919E-03	0.275
		937.48		-1.835E-01	1.345E-01	1.905E-01	1.911E-02	-0.963
		1384.27		-5.925E-02	1.576E-01	2.485E-01	1.536E-02	-0.238
IN-111		171.28		6.527E-02	7.873E-01	1.287E+00	1.280E-01	0.051

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		245.39	*	6.398E-01	9.370E-01	1.376E+00	1.341E-01	0.465
IN-113M		391.69	*	1.485E-02	4.951E-02	8.361E-02	5.187E-03	0.178
SN-113		391.69	*	1.485E-02	4.951E-02	8.361E-02	5.187E-03	0.178
IN-114M		190.27	*	-4.063E-02	2.100E-01	2.940E-01	2.936E-02	-0.138
CD-115		260.90		-9.056E+01	9.745E+01	1.466E+02	1.402E+01	-0.618
		492.35		-7.692E+00	2.844E+01	4.567E+01	2.893E+00	-0.168
		527.90	*	1.871E-01	8.643E+00	1.414E+01	9.120E-01	0.013
SN-117M		156.02		-3.693E-01	2.211E+00	3.590E+00	3.958E-01	-0.103
		158.56	*	-2.087E-02	5.247E-02	8.414E-02	9.046E-03	-0.248
SB-122		563.90	*	3.036E-01	1.771E+00	2.919E+00	1.908E-01	0.104
		692.80		4.298E+01	3.712E+01	6.533E+01	4.582E+00	0.658
I-123		159.00	*	1.907E-01	3.712E+01	Half-Life too short		
		528.96		-2.939E+01	3.712E+01	Half-Life too short		
TE-123M		159.00	*	4.026E-03	2.822E-02	4.640E-02	4.985E-03	0.087
I-124		602.71	*	-6.136E-01	7.920E-01	1.013E+00	6.666E-02	-0.606
		722.78		1.848E-01	4.295E+00	6.250E+00	4.655E-01	0.030
		1325.50		5.853E+00	3.277E+01	5.405E+01	3.130E+00	0.108
		1376.25		2.005E+01	2.491E+01	4.583E+01	2.669E+00	0.438
		1509.49		1.395E+01	1.308E+01	2.505E+01	1.472E+00	0.557
		1691.02		1.789E+00	3.867E+00	6.857E+00	4.002E-01	0.261
SB-124		602.71		-4.260E-02	5.498E-02	7.030E-02	4.629E-03	-0.606
		645.85		-2.950E-03	5.866E-01	9.462E-01	6.861E-02	-0.003
		709.31		-4.589E-01	3.386E+00	5.632E+00	4.084E-01	-0.081
		713.82		7.439E-01	1.922E+00	3.315E+00	3.694E-01	0.224
		722.78		1.859E-02	4.322E-01	6.290E-01	4.820E-02	0.030
	+	968.20		1.363E+01	4.259E+00	7.973E+00	7.469E-01	1.709
		1045.16		-1.898E+00	3.085E+00	4.755E+00	3.913E-01	-0.399
		1325.50		6.290E-01	3.522E+00	5.809E+00	3.364E-01	0.108
		1368.21		1.004E+00	1.702E+00	3.071E+00	3.648E-01	0.327
		1436.60		1.311E+00	3.498E+00	6.172E+00	3.615E-01	0.212
		1691.02	*	4.247E-02	9.180E-02	1.628E-01	1.030E-02	0.261
SB-125		427.89	*	7.741E-02	1.035E-01	1.788E-01	1.121E-02	0.433
	+	463.38		8.052E-01	4.324E-01	5.794E-01	4.126E-02	1.390
		600.56		2.364E-04	2.321E-01	3.541E-01	2.619E-02	0.001
		635.90		1.800E-01	3.280E-01	5.529E-01	4.135E-02	0.325
TE-125M		109.28	*	-5.255E+00	8.683E+00	1.400E+01	1.800E+00	-0.375
I-126		388.63		7.190E-02	2.131E-01	3.607E-01	2.147E-02	0.199
		666.33	*	1.864E-01	2.057E-01	3.546E-01	2.354E-02	0.526
		753.82		7.180E-01	1.520E+00	2.641E+00	2.088E-01	0.272
SB-126		223.80		-4.365E-01	4.067E+00	6.516E+00	6.457E-01	-0.067
	+	278.60		4.610E+00	3.582E+00	4.498E+00	4.179E-01	1.025
	+	296.50		1.146E+01	2.365E+00	3.475E+00	3.108E-01	3.299
		414.70		-9.483E-03	8.189E-02	1.345E-01	8.015E-03	-0.070
		415.30		8.791E-01	6.653E+00	1.110E+01	6.615E-01	0.079
		555.20		-6.839E-01	4.339E+00	6.977E+00	4.548E-01	-0.098
		573.80		-1.054E+00	1.138E+00	1.707E+00	1.119E-01	-0.617
		593.00		-1.597E-01	1.025E+00	1.641E+00	1.079E-01	-0.097
		656.30		-1.150E+00	3.674E+00	5.760E+00	3.790E-01	-0.200
		666.33		7.770E-02	8.573E-02	1.478E-01	9.813E-03	0.526

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		1.052E+00	2.090E+00	3.514E+00	2.376E-01	0.299
		695.00		-4.019E-02	8.740E-02	1.347E-01	9.493E-03	-0.298
		697.00		-1.667E-01	3.031E-01	4.634E-01	3.278E-02	-0.360
		720.50	*	-5.278E-03	1.706E-01	2.461E-01	1.825E-02	-0.021
		856.80		-4.997E-01	5.569E-01	8.523E-01	8.108E-02	-0.586
		989.30		9.833E-02	1.508E+00	2.495E+00	2.266E-01	0.039
		1034.80		3.593E+00	1.032E+01	1.747E+01	1.467E+00	0.206
		1213.00		-2.253E+00	5.422E+00	8.459E+00	4.917E-01	-0.266
SB-127		61.10		1.175E+01	2.241E+01	3.397E+01	3.574E+00	0.346
		252.40		-1.725E+00	3.798E+00	5.812E+00	2.451E+00	-0.297
		290.80		-1.173E+00	2.017E+01	2.944E+01	3.292E+00	-0.040
		411.60		-3.953E+00	1.150E+01	1.861E+01	2.638E+00	-0.212
		444.90		-8.337E+00	9.148E+00	1.407E+01	1.495E+00	-0.593
		473.00		3.707E-01	1.548E+00	2.585E+00	2.867E-01	0.143
		543.00		9.595E+00	1.510E+01	2.575E+01	3.334E+00	0.373
		603.60		-7.668E+00	1.349E+01	1.768E+01	1.922E+00	-0.434
		685.20	*	2.940E-02	1.312E+00	2.114E+00	2.067E-01	0.014
		698.50		-1.279E+01	1.514E+01	2.236E+01	3.308E+00	-0.572
		722.20		-5.752E+00	2.991E+01	4.229E+01	4.191E+00	-0.136
		783.80		-7.198E-01	3.359E+00	5.507E+00	6.573E-01	-0.131
XE-127		57.60		4.715E-01	2.142E+00	3.524E+00	2.837E-01	0.134
		145.22		1.113E+00	7.272E-01	1.216E+00	1.475E-01	0.915
		172.10		-1.032E-01	1.220E-01	1.903E-01	1.893E-02	-0.542
		202.84	*	1.312E-02	5.682E-02	8.147E-02	8.132E-03	0.161
		374.96		-8.530E-02	2.138E-01	3.468E-01	2.263E-02	-0.246
I-131		80.18		1.894E+00	4.196E+00	4.649E+00	3.617E-01	0.407
		284.30		1.115E-02	1.498E+00	2.386E+00	2.291E-01	0.005
		364.48	*	4.219E-02	1.167E-01	1.982E-01	1.487E-02	0.213
		636.97		1.626E+00	1.686E+00	2.928E+00	2.108E-01	0.555
		722.89		-1.817E+00	7.889E+00	1.110E+01	8.330E-01	-0.164
TE-132		49.72		-9.107E-01	3.436E+00	5.071E+00	4.740E-01	-0.180
		111.76		-1.814E+01	2.246E+01	3.579E+01	4.825E+00	-0.507
		116.30		1.091E+01	2.078E+01	3.495E+01	5.005E+00	0.312
		228.16	*	3.969E-01	5.712E-01	9.457E-01	1.537E-01	0.420
BA-133		53.15		2.422E-01	9.584E-01	1.613E+00	1.209E-01	0.150
		79.62		1.906E+00	1.331E+00	1.552E+00	2.289E-01	1.228
		81.00		2.235E-02	9.819E-02	1.068E-01	1.646E-02	0.209
	+	276.40		7.348E-01	5.773E-01	6.867E-01	1.022E-01	1.070
		302.84		1.863E-01	1.752E-01	2.731E-01	3.661E-02	0.682
		356.01	*	-3.234E-03	4.777E-02	6.877E-02	8.493E-03	-0.047
		383.85		-3.846E-02	3.297E-01	5.436E-01	6.016E-02	-0.071
I-133		510.53		9.306E-02	3.297E-01	Half-Life too short		
		529.87	*	-1.122E-03	3.297E-01	Half-Life too short		
		706.58		4.504E-02	3.297E-01	Half-Life too short		
		856.28		-3.508E-01	3.297E-01	Half-Life too short		
		875.33		1.606E-02	3.297E-01	Half-Life too short		
		1236.41		6.005E-02	3.297E-01	Half-Life too short		
		1298.22		7.860E-03	3.297E-01	Half-Life too short		
CS-134		475.35		-9.485E-01	2.224E+00	3.544E+00	2.221E-01	-0.268

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		563.23		2.002E-01	4.069E-01	6.868E-01	4.562E-02	0.292
		569.32		2.673E-01	2.318E-01	4.075E-01	2.729E-02	0.656
		604.70		-1.454E-02	4.526E-02	6.099E-02	4.034E-03	-0.238
	+	795.84	*	1.225E-01	6.064E-02	1.047E-01	9.020E-03	1.169
		801.93		2.311E-01	4.501E-01	7.350E-01	6.388E-02	0.314
		1038.57		-4.615E-02	4.970E+00	8.144E+00	6.788E-01	-0.006
		1167.94		1.610E+00	3.465E+00	5.777E+00	3.416E-01	0.279
		1365.15		1.813E-01	1.277E+00	2.176E+00	1.389E-01	0.083
CS-135		268.24	*	2.232E-01	1.858E-01	2.809E-01	3.005E-02	0.795
I-135		288.45		-6.154E+08	1.858E-01	Half-Life too short		
		417.63		8.830E+08	1.858E-01	Half-Life too short		
		546.56		-1.204E+09	1.858E-01	Half-Life too short		
		836.80		1.314E+09	1.858E-01	Half-Life too short		
		1038.76		5.303E+07	1.858E-01	Half-Life too short		
		1124.00		1.049E+09	1.858E-01	Half-Life too short		
		1131.51		1.588E+08	1.858E-01	Half-Life too short		
		1260.41	*	-1.841E+08	1.858E-01	Half-Life too short		
		1457.56		6.030E+10	1.858E-01	Half-Life too short		
		1678.03		1.517E+08	1.858E-01	Half-Life too short		
		1706.46		-6.926E+08	1.858E-01	Half-Life too short		
		1791.20		4.795E+08	1.858E-01	Half-Life too short		
CS-136		66.91		-1.077E-01	4.716E-01	6.445E-01	9.741E-02	-0.167
	+	86.29		4.150E+00	1.024E+00	1.623E+00	1.982E-01	2.557
		153.22		1.279E+00	6.627E-01	1.138E+00	1.378E-01	1.124
		163.89		-2.404E-02	1.024E+00	1.669E+00	1.844E-01	-0.014
		176.55		2.610E-01	3.395E-01	5.707E-01	5.931E-02	0.457
		273.65		3.953E-02	6.604E-01	6.612E-01	6.544E-02	0.060
		340.57		2.503E-01	1.568E-01	2.504E-01	2.015E-02	0.999
		818.51		-5.757E-03	8.094E-02	1.339E-01	1.193E-02	-0.043
		1048.07	*	1.656E-02	1.286E-01	2.132E-01	1.826E-02	0.078
		1235.34		2.354E-01	7.461E-01	1.238E+00	1.237E-01	0.190
BA-137M		661.65	*	-4.364E-02	4.544E-02	6.735E-02	4.429E-03	-0.648
CS-137		661.65	*	-4.613E-02	4.803E-02	7.119E-02	4.697E-03	-0.648
CE-139		165.85	*	3.217E-03	3.063E-02	5.018E-02	4.983E-03	0.064
BA-140		162.64		2.633E-01	7.203E-01	1.194E+00	1.280E-01	0.221
		304.84		4.658E-02	1.457E+00	2.135E+00	5.992E-01	0.022
		423.70		-1.296E+00	2.012E+00	3.111E+00	9.900E-01	-0.416
		537.32	*	-2.289E-01	3.012E-01	4.476E-01	1.461E-01	-0.511
LA-140	+	328.77		4.621E-01	3.465E-01	5.142E-01	4.442E-02	0.899
		432.53		-1.322E-01	2.267E+00	3.728E+00	2.476E-01	-0.035
		487.03		2.153E-02	1.417E-01	2.351E-01	1.651E-02	0.092
		751.79		-2.308E-01	1.819E+00	2.920E+00	2.592E-01	-0.079
		815.85		2.991E-01	3.391E-01	6.061E-01	5.958E-02	0.494
		867.82		1.764E-01	1.550E+00	2.597E+00	2.623E-01	0.068
		919.63		-6.083E-01	3.349E+00	4.838E+00	5.688E-01	-0.126
		925.24		1.218E+00	1.158E+00	2.098E+00	2.176E-01	0.581
		1596.49	*	1.362E-01	8.765E-02	1.686E-01	9.907E-03	0.808
CE-141		145.44	*	1.070E-01	6.555E-02	1.097E-01	1.342E-02	0.975
CE-143		57.37		-2.268E-05	6.555E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		231.56		-5.234E-04	6.555E-02	Half-Life too short		
		293.26	*	4.164E-04	6.555E-02	Half-Life too short		
	+	350.59		1.507E-02	6.555E-02	Half-Life too short		
		490.36		-3.408E-04	6.555E-02	Half-Life too short		
		664.57		6.209E-04	6.555E-02	Half-Life too short		
		721.93		-1.061E-04	6.555E-02	Half-Life too short		
CE-144		80.11		1.030E+00	2.127E+00	2.362E+00	1.825E-01	0.436
		133.54	*	1.556E-01	2.383E-01	3.537E-01	6.549E-02	0.440
PM-144		476.78		-4.761E-02	7.958E-02	1.251E-01	9.187E-03	-0.380
		618.01		-3.279E-03	4.047E-02	5.873E-02	4.052E-03	-0.056
		696.49	*	-2.516E-02	4.211E-02	6.413E-02	4.534E-03	-0.392
		778.57		8.863E-01	2.526E+00	4.343E+00	3.598E-01	0.204
PR-144		696.49	*	-1.704E+00	2.852E+00	4.343E+00	3.069E-01	-0.392
		1489.15		-1.311E+00	1.369E+01	2.244E+01	1.318E+00	-0.058
PM-146		453.90	*	1.290E-02	4.516E-02	7.590E-02	6.735E-03	0.170
		633.02		-2.949E-01	1.679E+00	2.668E+00	9.860E-01	-0.111
		735.90		1.982E-01	1.875E-01	3.014E-01	8.538E-02	0.657
		747.13		-6.491E-02	1.035E-01	1.635E-01	2.216E-02	-0.397
ND-147	+	91.11		6.550E-01	2.308E-01	4.169E-01	3.708E-02	1.571
		319.41		-7.412E-01	3.235E+00	5.350E+00	4.490E-01	-0.139
		439.89		-1.598E+00	6.325E+00	1.026E+01	6.258E-01	-0.156
		531.02	*	1.279E-01	6.039E-01	1.001E+00	1.383E-01	0.128
PM-149		285.90	*	4.600E+00	6.543E+01	1.106E+02	1.752E+01	0.042
EU-152		121.78		3.784E-02	7.002E-02	1.177E-01	1.761E-02	0.321
		244.69		3.952E-01	3.981E-01	5.946E-01	5.796E-02	0.665
		344.27	*	8.536E-02	1.428E-01	1.761E-01	1.448E-02	0.485
		443.98		-2.637E-01	1.097E+00	1.779E+00	1.088E-01	-0.148
		778.89		4.474E-02	2.935E-01	4.966E-01	4.115E-02	0.090
		867.32		-2.547E-01	1.005E+00	1.629E+00	1.578E-01	-0.156
		964.01		5.184E-01	4.150E-01	6.645E-01	6.261E-02	0.780
		1085.78		8.819E-02	4.851E-01	8.069E-01	6.076E-02	0.109
		1112.02		-1.777E-01	4.162E-01	6.173E-01	4.348E-02	-0.288
		1407.95		1.745E-01	2.186E-01	3.977E-01	2.324E-02	0.439
GD-153		69.67		-2.915E-01	1.068E+00	1.562E+00	1.242E-01	-0.187
	+	83.37		2.700E+01	1.448E+01	1.859E+01	1.427E+00	1.452
		97.43	*	-8.118E-03	7.631E-02	1.109E-01	1.028E-02	-0.073
		103.18		-1.449E-01	9.662E-02	1.491E-01	1.542E-02	-0.972
EU-154		123.07		8.112E-03	5.118E-02	8.214E-02	1.309E-02	0.099
		247.94		3.738E-01	4.184E-01	6.230E-01	7.676E-02	0.600
		591.81		-3.608E-01	7.427E-01	1.120E+00	1.148E-01	-0.322
		723.30		-3.240E-03	2.197E-01	3.175E-01	2.695E-02	-0.010
		756.87		-2.331E-01	8.372E-01	1.366E+00	1.572E-01	-0.171
		873.19		2.389E-02	3.423E-01	5.713E-01	7.476E-02	0.042
		996.32		-1.625E-01	4.590E-01	7.196E-01	1.291E-01	-0.226
		1004.76		4.566E-01	2.772E-01	5.089E-01	6.013E-02	0.897
		1274.45	*	-2.240E-02	1.636E-01	2.609E-01	2.440E-02	-0.086
EU-155		48.70		3.426E-01	5.056E-01	7.793E-01	5.431E-02	0.440
		60.01		6.222E-01	2.200E+00	3.310E+00	2.741E-01	0.188
	+	86.54		4.068E-01	9.274E-02	1.567E-01	1.211E-02	2.597

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		105.31	*	1.489E-01	1.001E-01	1.728E-01	1.872E-02	0.862
TB-160	+	86.79		1.075E+00	2.447E-01	4.096E-01	3.124E-02	2.625
		197.04		-3.937E-01	6.219E-01	9.476E-01	9.463E-02	-0.416
		215.65		-1.173E-01	7.782E-01	1.246E+00	1.239E-01	-0.094
		298.57		2.710E-01	1.691E-01	2.053E-01	1.827E-02	1.320
		879.36	*	-7.617E-02	1.624E-01	2.501E-01	2.472E-02	-0.305
		962.29		8.289E-01	7.202E-01	1.181E+00	1.116E-01	0.702
		966.15		1.180E+00	3.462E-01	6.104E-01	5.734E-02	1.934
		1177.93		-1.680E-01	4.920E-01	7.767E-01	4.507E-02	-0.216
		1271.85		8.195E-01	9.100E-01	1.598E+00	9.285E-02	0.513
HO-166M		80.57		1.134E-01	2.708E-01	2.994E-01	2.312E-02	0.379
		184.41		1.127E-01	4.468E-02	7.010E-02	6.995E-03	1.608
		280.46		-5.856E-03	1.022E-01	1.496E-01	1.385E-02	-0.039
		410.95		5.395E-02	2.851E-01	4.771E-01	2.832E-02	0.113
		711.68	*	3.307E-02	7.377E-02	1.277E-01	9.306E-03	0.259
		752.31		4.393E-02	3.014E-01	5.106E-01	4.026E-02	0.086
		810.29		-3.268E-02	6.168E-02	9.731E-02	8.537E-03	-0.336
TM-171		51.35		1.363E+00	7.590E+00	1.203E+01	8.750E-01	0.113
		52.39		1.228E+00	3.982E+00	6.718E+00	4.971E-01	0.183
		59.40		1.149E+01	1.126E+01	1.744E+01	1.446E+00	0.658
		66.72	*	3.895E-01	1.667E+01	2.472E+01	1.987E+00	0.016
LU-176	+	88.36		8.014E-01	1.824E-01	3.239E-01	2.484E-02	2.475
		201.83		-1.796E-02	3.282E-02	4.977E-02	4.968E-03	-0.361
		306.84	*	1.648E-02	2.950E-02	4.491E-02	3.911E-03	0.367
		401.10		-1.212E+00	7.569E+00	1.242E+01	7.298E-01	-0.098
LU-177		112.95		4.393E-01	1.368E+00	2.288E+00	2.806E-01	0.192
	+	208.36	*	2.001E+00	1.571E+00	1.861E+00	1.855E-01	1.075
LU-177M		52.97		1.697E-01	4.288E-01	7.252E-01	5.417E-02	0.234
		54.07		-1.334E-01	2.434E-01	3.985E-01	3.030E-02	-0.335
		61.30		6.882E-01	7.248E-01	1.115E+00	9.172E-02	0.617
		121.62		1.541E-01	3.588E-01	6.014E-01	8.471E-02	0.256
		147.16		-3.929E-01	6.730E-01	1.074E+00	1.282E-01	-0.366
		171.86		-3.710E-01	5.019E-01	7.877E-01	7.834E-02	-0.471
		218.09		-2.664E-01	9.219E-01	1.465E+00	1.456E-01	-0.182
		268.79		9.504E-01	9.627E-01	1.435E+00	1.356E-01	0.662
		319.02		-3.892E-02	2.660E-01	4.421E-01	3.714E-02	-0.088
		367.43		3.846E-02	1.026E+00	1.711E+00	1.167E-01	0.022
		413.65	*	-9.151E-02	2.033E-01	3.270E-01	1.946E-02	-0.280
HF-181		56.28		-1.861E-01	2.992E-01	4.941E-01	3.894E-02	-0.377
		57.53		4.053E-02	1.802E-01	2.965E-01	2.385E-02	0.137
		65.20		2.043E-01	5.195E-01	7.823E-01	6.324E-02	0.261
		133.02		4.715E-02	7.391E-02	1.101E-01	1.460E-02	0.428
		136.25		-1.149E-01	4.722E-01	7.682E-01	9.970E-02	-0.150
		345.85		1.195E-01	2.819E-01	3.403E-01	2.585E-02	0.351
		482.03	*	1.024E-02	4.851E-02	8.078E-02	5.084E-03	0.127
W-181		56.28		-7.364E-02	1.186E-01	1.958E-01	1.544E-02	-0.376
		57.53		1.608E-02	7.145E-02	1.176E-01	9.456E-03	0.137
		65.20	*	8.038E-02	2.044E-01	3.078E-01	2.488E-02	0.261
TA-182		67.75		3.195E-02	7.846E-02	1.006E-01	8.055E-03	0.318

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		100.10		1.372E-01	1.542E-01	2.635E-01	2.572E-02	0.521
		152.43		8.287E-01	3.606E-01	6.232E-01	7.108E-02	1.330
		222.10		-1.285E-01	3.734E-01	5.910E-01	5.861E-02	-0.217
		1001.68		1.510E-01	2.590E+00	4.279E+00	3.809E-01	0.035
	+	1121.28		3.927E-01	3.390E-01	4.000E-01	2.746E-02	0.982
		1189.05		-1.982E-01	4.106E-01	6.390E-01	3.710E-02	-0.310
		1221.42	*	-3.087E-02	2.379E-01	3.812E-01	2.216E-02	-0.081
		1230.97		1.410E-01	6.215E-01	1.026E+00	5.965E-02	0.137
RE-183		57.98		2.768E-02	7.484E-02	1.190E-01	9.639E-03	0.233
		59.32		5.610E-02	4.533E-02	7.078E-02	5.859E-03	0.793
		67.20		-2.887E-02	1.280E-01	1.750E-01	1.404E-02	-0.165
		162.32	*	1.926E-02	1.098E-01	1.806E-01	1.866E-02	0.107
	+	208.81		2.003E+00	1.573E+00	1.880E+00	1.874E-01	1.066
		291.72		-1.460E-01	1.058E+00	1.534E+00	1.387E-01	-0.095
RE-184		57.98		1.027E-01	2.776E-01	4.414E-01	3.576E-02	0.233
		59.32		2.079E-01	1.680E-01	2.623E-01	2.172E-02	0.793
		67.20		-1.070E-01	4.747E-01	6.490E-01	5.206E-02	-0.165
		161.27		-1.960E-01	3.632E-01	5.780E-01	6.040E-02	-0.339
		216.55		5.611E-02	2.781E-01	4.529E-01	4.504E-02	0.124
		252.85	*	-4.696E-02	2.434E-01	3.854E-01	3.724E-02	-0.122
		318.01		-2.385E-01	4.680E-01	7.613E-01	6.416E-02	-0.313
		792.07		9.288E-01	1.409E+00	2.167E+00	1.840E-01	0.429
		903.28		-2.651E-01	1.322E+00	1.912E+00	1.938E-01	-0.139
		920.93		2.020E-02	5.336E-01	8.661E-01	8.612E-02	0.023
OS-185		59.72		7.002E-02	1.269E-01	1.931E-01	1.601E-02	0.363
		61.14		4.768E-02	7.807E-02	1.188E-01	9.778E-03	0.401
		69.30		-3.813E-02	2.019E-01	2.762E-01	2.199E-02	-0.138
		592.07		-1.568E+00	2.997E+00	4.504E+00	2.961E-01	-0.348
		646.12	*	-5.625E-03	4.973E-02	7.945E-02	5.234E-03	-0.071
		717.42		-5.016E-01	1.020E+00	1.644E+00	1.211E-01	-0.305
		874.81		2.496E-01	6.575E-01	1.128E+00	1.106E-01	0.221
		880.27		-7.825E-02	9.012E-01	1.444E+00	1.429E-01	-0.054
RE-188		155.03	*	-8.114E-02	1.822E-01	2.922E-01	3.253E-02	-0.278
		477.96		1.552E+00	3.508E+00	5.933E+00	3.724E-01	0.262
		633.10		-5.070E-01	3.356E+00	5.354E+00	3.530E-01	-0.095
W-188	+	63.58		4.137E+01	3.514E+01	4.433E+01	3.608E+00	0.933
		227.08		5.435E+00	1.348E+01	2.212E+01	2.187E+00	0.246
		290.67	*	-5.825E-02	8.516E+00	1.248E+01	1.131E+00	-0.005
IR-192	+	295.96		9.264E-01	1.914E-01	2.837E-01	2.557E-02	3.266
		308.46		1.247E-02	1.044E-01	1.719E-01	1.498E-02	0.073
		316.51	*	1.827E-02	3.609E-02	6.208E-02	5.269E-03	0.294
		468.07		-5.614E-02	8.505E-02	1.126E-01	7.959E-03	-0.498
		604.41		-1.228E-01	5.991E-01	8.180E-01	9.628E-02	-0.150
		612.46		2.219E+00	9.748E-01	1.639E+00	1.343E-01	1.353
AU-195		65.12		4.103E-02	9.476E-02	1.429E-01	1.156E-02	0.287
		66.83		1.455E-03	5.513E-02	8.177E-02	6.568E-03	0.018
	+	75.70		1.146E+00	1.974E-01	3.519E-01	2.749E-02	3.257
		98.88	*	3.245E-01	2.036E-01	3.331E-01	3.176E-02	0.974
	+	129.76		4.343E+00	3.461E+00	5.067E+00	6.867E-01	0.857

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TL-200		367.94	*	1.324E-05	3.461E+00	Half-Life too short		
		579.30		2.705E-03	3.461E+00	Half-Life too short		
		828.27		1.905E-03	3.461E+00	Half-Life too short		
		1205.75		-4.093E-04	3.461E+00	Half-Life too short		
TL-201		68.90		1.182E+00	2.702E+00	3.469E+00	2.765E-01	0.341
		70.82		-1.580E-01	1.414E+00	2.081E+00	1.649E-01	-0.076
		80.30		1.535E+00	3.887E+00	4.288E+00	3.312E-01	0.358
		135.34		2.302E+00	2.038E+01	3.365E+01	4.395E+00	0.068
		167.43	*	6.535E-01	5.542E+00	9.083E+00	9.017E-01	0.072
TL-202		68.90		1.294E-01	2.959E-01	3.799E-01	3.029E-02	0.341
		70.82		-1.725E-02	1.544E-01	2.273E-01	1.801E-02	-0.076
		80.30		1.677E-01	4.246E-01	4.684E-01	3.619E-02	0.358
		439.56	*	-5.862E-03	7.468E-02	1.225E-01	7.470E-03	-0.048
HG-203		70.83		-7.467E-02	7.024E-01	1.034E+00	1.362E-01	-0.072
		72.87		1.984E+00	4.831E-01	7.619E-01	9.697E-02	2.604
		82.60		7.662E-01	9.978E-01	1.295E+00	1.706E-01	0.592
		279.20	*	4.274E-02	4.912E-02	7.612E-02	7.237E-03	0.561
BI-207		72.80		5.398E-01	1.286E-01	2.230E-01	1.756E-02	2.421
	+	74.97		6.385E-01	1.100E-01	1.743E-01	1.364E-02	3.664
	+	84.90		3.503E-01	1.879E-01	2.617E-01	2.003E-02	1.339
		569.67		5.192E-02	3.553E-02	6.374E-02	4.171E-03	0.815
		1063.62	*	4.937E-02	6.961E-02	1.207E-01	9.558E-03	0.409
		1770.23		-1.395E-01	6.471E-01	8.499E-01	4.909E-02	-0.164
TL-207		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
TL-208	+	277.35		7.437E-01	5.816E-01	7.213E-01	9.253E-02	1.031
		510.84		1.098E-01	2.339E-01	4.301E-01	4.519E-02	0.255
	+	583.14	*	5.139E-01	9.278E-02	1.408E-01	1.036E-02	3.650
		860.37		5.904E-01	3.771E-01	6.896E-01	6.998E-02	0.856
PO-209		260.50		-9.244E+00	1.037E+01	1.566E+01	1.498E+00	-0.590
		262.80		-1.256E+01	2.755E+01	4.277E+01	4.079E+00	-0.294
		896.60	*	1.204E+00	9.165E+00	1.535E+01	1.560E+00	0.078
PB-211		404.84	*	-4.830E-01	1.107E+00	1.716E+00	1.070E+00	-0.281
		427.08		1.838E-01	2.314E+00	3.838E+00	2.373E+00	0.048
		831.96		-9.104E-02	1.469E+00	2.429E+00	1.524E+00	-0.037
BI-212	+	727.18	*	1.242E+00	6.504E-01	7.468E-01	6.774E-02	1.663
		785.46		9.706E-01	2.057E+00	3.558E+00	2.985E-01	0.273
		1620.62		6.641E-01	1.419E+00	2.515E+00	1.476E-01	0.264
PO-215		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
RN-219	+	271.23		4.635E-01	2.969E-01	4.345E-01	4.772E-02	1.067
		401.81	*	8.609E-02	4.595E-01	7.698E-01	1.050E-01	0.112
RN-220		549.76	*	1.630E+01	3.238E+01	5.461E+01	3.553E+00	0.298
RA-223		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
AC-227		79.80		1.838E+00	1.688E+00	1.914E+00	4.052E-01	0.960
		236.00		1.216E+00	3.433E-01	5.209E-01	6.835E-02	2.334
		256.20	*	3.798E-01	4.187E-01	6.962E-01	1.109E-01	0.546
		286.10		-1.837E-01	1.574E+00	2.635E+00	3.572E-01	-0.070
	+	299.80		3.028E+00	2.208E+00	2.688E+00	4.735E-01	1.126
		304.40		1.412E-01	2.273E+00	3.339E+00	6.179E-01	0.042
		334.20		-2.957E-01	3.245E+00	3.675E+00	7.029E-01	-0.080
TH-227		79.80		1.838E+00	1.689E+00	1.914E+00	4.105E-01	0.960
	+	94.00		8.366E+00	2.978E+00	3.310E+00	7.213E-01	2.527
		236.00		1.216E+00	3.374E-01	5.209E-01	6.272E-02	2.334
		256.20	*	3.798E-01	4.203E-01	6.962E-01	1.292E-01	0.546
		286.10		-1.837E-01	1.585E+00	2.635E+00	2.646E+00	-0.070
	+	299.80		3.028E+00	2.208E+00	2.688E+00	4.735E-01	1.126
		304.40		1.412E-01	2.273E+00	3.339E+00	6.179E-01	0.042
		334.20		-2.957E-01	3.245E+00	3.675E+00	7.029E-01	-0.080
TH-229	+	85.43		3.458E-01	1.855E-01	2.799E-01	2.140E-02	1.236
	+	88.47		2.795E-01	9.799E-02	1.863E-01	1.432E-02	1.501
		100.00		1.415E-01	1.616E-01	2.761E-01	2.690E-02	0.512
		193.63	*	-3.027E-01	5.410E-01	8.527E-01	8.516E-02	-0.355
		210.97		1.635E+00	9.375E-01	1.444E+00	1.439E-01	1.132
PA-231		283.67	*	1.936E-01	1.734E+00	2.682E+00	4.162E-01	0.072
	+	301.29		1.211E+00	8.703E-01	1.109E+00	1.375E-01	1.092
TH-231		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
U-231	+	84.21		8.225E+00	4.411E+00	5.743E+00	4.401E-01	1.432
	+	92.29		6.832E+00	2.011E+00	2.840E+00	2.372E-01	2.406
		95.87	*	-1.664E-01	8.426E-01	1.220E+00	1.096E-01	-0.136
		108.00		-1.520E+00	1.616E+00	2.567E+00	2.894E-01	-0.592
PA-233	+	75.28		1.863E+01	3.988E+00	5.390E+00	8.037E-01	3.457
	+	86.59		6.615E+00	2.256E+00	2.541E+00	6.738E-01	2.603
	+	300.12		8.442E-01	6.107E-01	7.511E-01	1.128E-01	1.124
		311.98	*	-3.097E-02	6.751E-02	1.103E-01	9.741E-03	-0.281
		340.50		1.455E+00	8.784E-01	1.315E+00	3.097E-01	1.106
		398.62		3.781E-01	2.294E+00	3.839E+00	9.931E-01	0.098
		415.76		1.450E-01	1.887E+00	3.137E+00	6.472E-01	0.046
PA-234	+	63.00		1.214E+00	1.043E+00	1.301E+00	1.985E-01	0.933
		94.67		5.993E-01	1.765E-01	2.718E-01	3.399E-02	2.205
		98.44		1.270E-01	1.112E-01	1.347E-01	7.536E-02	0.942
		99.86		3.826E-01	4.100E-01	7.015E-01	6.816E-02	0.545
		111.00		-1.396E-03	1.754E-01	2.902E-01	4.232E-02	-0.005
		131.20		-4.701E-02	1.250E-01	1.766E-01	2.371E-02	-0.266
		152.70		8.097E-01	3.740E-01	6.120E-01	1.138E-01	1.323
	+	186.00		5.365E+00	2.601E+00	2.625E+00	8.298E-01	2.044
		226.40		6.260E-02	4.379E-01	7.097E-01	9.984E-02	0.088
		227.20		1.933E-01	4.610E-01	7.569E-01	7.485E-02	0.255
		248.90		-2.340E-01	8.986E-01	1.364E+00	3.117E-01	-0.172
		293.70		5.084E+00	1.287E+00	1.751E+00	3.063E-01	2.904
		369.80		-1.571E-02	9.716E-01	1.615E+00	3.409E-01	-0.010
		568.70		1.072E+00	1.180E+00	2.043E+00	1.337E-01	0.525
		569.50		4.199E-01	3.176E-01	5.647E-01	3.695E-02	0.744
		574.00		-1.775E+00	1.806E+00	2.605E+00	1.706E-01	-0.682
		699.00		-6.843E-01	8.843E-01	1.312E+00	2.419E-01	-0.522
		706.10		-2.334E-02	1.364E+00	2.186E+00	9.694E-01	-0.011
		733.00		-3.118E-01	4.964E-01	6.556E-01	1.431E-01	-0.476
		742.81		-6.274E-01	1.578E+00	2.459E+00	1.650E+00	-0.255
	+	796.30		2.383E+00	1.328E+00	2.045E+00	5.529E-01	1.165
		805.60		-3.318E-01	1.078E+00	1.738E+00	5.331E-01	-0.191
		819.60		4.286E-01	1.433E+00	2.432E+00	9.266E-01	0.176
		826.30		-5.309E-01	1.011E+00	1.559E+00	6.986E-01	-0.341
		831.60		-1.637E-01	7.463E-01	1.216E+00	3.646E-01	-0.135
		876.40		5.389E-02	9.613E-01	1.599E+00	1.646E+00	0.034
		880.51		-6.138E-03	3.308E-01	5.337E-01	5.284E-02	-0.011
		883.24		1.513E-01	3.329E-01	5.490E-01	3.700E-01	0.276
		899.00		1.472E-01	9.909E-01	1.659E+00	7.306E-01	0.089
		925.00		8.616E-01	1.306E+00	2.291E+00	2.267E-01	0.376
		926.50		3.323E-02	1.980E-01	3.321E-01	8.547E-02	0.100
		946.00	*	-3.621E-02	3.874E-01	6.339E-01	1.221E-01	-0.057
		949.00		8.393E-02	5.445E-01	9.106E-01	8.753E-02	0.092
		980.50		1.233E-01	9.189E-01	1.531E+00	1.409E-01	0.081
		1394.10		-8.524E-01	1.306E+00	1.758E+00	1.139E+00	-0.485

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234M		766.41		2.380E+01	2.792E+01	3.805E+01	2.915E+01	0.626
		1001.03	*	-6.815E+00	8.578E+00	1.306E+01	1.489E+00	-0.522
U-235	+	89.95		2.805E+00	1.288E+00	1.603E+00	4.918E-01	1.750
	+	93.35		2.603E+00	1.034E+00	1.060E+00	2.968E-01	2.455
		105.00		1.432E+00	1.055E+00	1.680E+00	5.125E-01	0.852
		143.76	*	4.600E-02	2.239E-01	3.617E-01	7.078E-02	0.127
		163.35		2.424E-01	4.786E-01	7.947E-01	1.578E-01	0.305
	+	185.71		1.987E-01	7.568E-02	9.680E-02	9.661E-03	2.053
		205.31		7.530E-04	6.413E-01	9.061E-01	1.788E-01	0.001
NP-236		94.67		4.569E-01	1.277E-01	2.063E-01	1.810E-02	2.214
		98.44		9.597E-02	6.529E-02	1.019E-01	9.630E-03	0.942
		111.00		-1.056E-03	1.327E-01	2.195E-01	2.605E-02	-0.005
		160.31	*	-3.885E-02	8.125E-02	1.297E-01	1.370E-02	-0.299
NP-239		99.55		2.155E-01	1.386E-01	2.342E-01	2.262E-02	0.920
		117.00	*	-1.434E-02	1.800E-01	2.965E-01	3.885E-02	-0.048
	+	209.75		1.599E+00	1.255E+00	1.504E+00	1.499E-01	1.063
		228.18		1.643E-01	2.376E-01	3.950E-01	3.903E-02	0.416
	+	277.60		3.587E-01	2.787E-01	3.501E-01	3.258E-02	1.024
		334.30		-1.596E-01	1.839E+00	2.084E+00	1.660E-01	-0.077
AM-241		59.54	*	3.767E-02	6.697E-02	1.019E-01	9.119E-03	0.370
CM-243		99.55		2.217E-01	1.426E-01	2.410E-01	2.328E-02	0.920
		103.76	*	2.693E-02	8.766E-02	1.470E-01	1.537E-02	0.183
		117.00		-1.476E-02	1.852E-01	3.050E-01	3.996E-02	-0.048
	+	209.75		1.576E+00	1.237E+00	1.482E+00	1.477E-01	1.063
		228.18		1.660E-01	2.401E-01	3.990E-01	3.944E-02	0.416
	+	277.60		3.615E-01	2.809E-01	3.529E-01	3.285E-02	1.024
CM-247	+	278.00		1.487E+00	1.156E+00	1.441E+00	1.340E-01	1.032
		287.40		-4.939E-01	1.287E+00	2.124E+00	1.939E-01	-0.233
		402.60	*	4.753E-03	4.086E-02	6.818E-02	4.012E-03	0.070
CF-249		252.85		-1.770E-01	9.176E-01	1.453E+00	1.404E-01	-0.122
		333.44		7.567E-03	2.731E-01	2.681E-01	2.142E-02	0.028
		387.95	*	7.755E-03	4.413E-02	7.403E-02	4.428E-03	0.105
CF-251		176.60	*	9.421E-02	1.243E-01	2.089E-01	2.081E-02	0.451
		227.00		1.383E-01	4.098E-01	6.704E-01	6.631E-02	0.206
		285.00		1.150E+00	1.880E+00	3.182E+00	2.919E-01	0.361
ANH-511		511.00	*	3.056E-02	5.027E-02	9.305E-02	5.955E-03	0.328

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001      *
* Acquisition date :  6-JUL-2009 11:10:14 Detector SN#     :                *
* Detector ID        : GAM05               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.71      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232347001           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.407E+01	2.890E+00	3.715E-01	0.000E+00
CD-109	3.432E+00	7.656E-01	9.704E-01	0.000E+00
SN-126	3.379E-01	7.538E-02	9.541E-02	0.000E+00
BI-210	1.748E+00	8.574E-01	8.962E-01	0.000E+00
PB-210	1.748E+00	8.574E-01	8.962E-01	0.000E+00
PO-210	1.748E+00	8.547E-01	8.962E-01	0.000E+00
BI-211	3.397E+00	5.390E-01	3.458E-01	0.000E+00
PB-212	1.573E+00	2.011E-01	9.622E-02	0.000E+00
PO-212	1.573E+00	2.011E-01	9.622E-02	0.000E+00
BI-214	8.092E-01	2.140E-01	1.264E-01	0.000E+00
PB-214	1.182E+00	1.970E-01	1.206E-01	0.000E+00
PO-214	1.182E+00	1.970E-01	1.206E-01	0.000E+00
PO-216	1.573E+00	2.011E-01	9.622E-02	0.000E+00
PO-218	1.182E+00	1.970E-01	1.206E-01	0.000E+00
RA-224	4.114E+00	1.675E+00	1.095E+00	0.000E+00
RA-226	8.092E-01	2.140E-01	1.264E-01	0.000E+00
AC-228	1.541E+00	3.999E-01	2.519E-01	0.000E+00
RA-228	1.541E+00	3.999E-01	2.519E-01	0.000E+00
TH-228	1.573E+00	2.011E-01	9.621E-02	0.000E+00
TH-230	8.092E-01	2.140E-01	1.264E-01	0.000E+00
TH-232	1.541E+00	3.999E-01	2.519E-01	0.000E+00
TH-234	1.041E+00	8.815E-01	1.041E+00	0.000E+00
U-234	8.092E-01	2.140E-01	1.264E-01	0.000E+00
NP-237	9.922E-01	2.988E-01	2.793E-01	0.000E+00
U-238	1.041E+00	8.815E-01	1.041E+00	0.000E+00
AM-243	3.557E-01	6.006E-02	5.889E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.166E-01	3.579E-01	6.227E-01	0.000E+00	NOT IDENT.

NA-22	-1.266E-02	5.748E-02	9.296E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.001E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.366E-02	3.254E-02	5.879E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.638E-02	6.286E-02	0.000E+00	FAIL ABUN
SC-46	-4.500E-03	4.510E-02	7.621E-02	0.000E+00	FAIL ABUN
V-48	-3.767E-02	8.680E-02	1.409E-01	0.000E+00	NOT IDENT.
CR-51	-1.964E-01	3.758E-01	6.376E-01	0.000E+00	NOT IDENT.
MN-52	-2.205E-01	2.147E-01	3.074E-01	0.000E+00	NOT IDENT.
MN-54	-1.537E-02	4.335E-02	7.199E-02	0.000E+00	NOT IDENT.
CO-56	3.326E-02	4.357E-02	7.911E-02	0.000E+00	NOT IDENT.
CO-57	1.160E-02	2.352E-02	4.177E-02	0.000E+00	NOT IDENT.
CO-58	-2.535E-02	4.045E-02	6.513E-02	0.000E+00	NOT IDENT.
FE-59	-3.860E-02	1.218E-01	1.983E-01	0.000E+00	NOT IDENT.
CO-60	2.061E-02	4.072E-02	7.161E-02	0.000E+00	NOT IDENT.
ZN-65	-1.882E-02	1.310E-01	1.836E-01	0.000E+00	NOT IDENT.
GE-68	-2.018E-01	1.503E+00	2.488E+00	0.000E+00	NOT IDENT.
AS-73	-6.348E-02	2.200E-01	3.891E-01	0.000E+00	NOT IDENT.
AS-74	5.351E-02	1.030E-01	1.793E-01	0.000E+00	NOT IDENT.
SE-75	3.660E-04	4.751E-02	7.330E-02	0.000E+00	NOT IDENT.
BR-77	4.895E+00	8.312E+00	1.466E+01	0.000E+00	FAIL ABUN
SR-82	-1.139E-01	4.096E-01	6.881E-01	0.000E+00	NOT IDENT.
RB-83	4.089E-02	7.543E-02	1.327E-01	0.000E+00	NOT IDENT.
RB-84	1.099E-02	7.626E-02	1.316E-01	0.000E+00	NOT IDENT.
KR-85	-3.149E+01	1.071E+01	1.490E+01	0.000E+00	NOT IDENT.
SR-85	-1.595E-01	5.425E-02	7.548E-02	0.000E+00	NOT IDENT.
RB-86	2.558E-01	9.010E-01	1.550E+00	0.000E+00	NOT IDENT.
Y-88	-7.554E-03	3.310E-02	5.208E-02	0.000E+00	NOT IDENT.
ZR-88	-4.081E-03	3.350E-02	5.739E-02	0.000E+00	NOT IDENT.
Y-91	5.022E+00	2.247E+01	3.804E+01	0.000E+00	NOT IDENT.
NB-94	1.758E-02	4.185E-02	7.148E-02	0.000E+00	NOT IDENT.
NB-95	3.799E-02	5.084E-02	9.180E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.498E-01	2.440E-01	0.000E+00	NOT IDENT.
ZR-95	-2.823E-02	7.551E-02	1.260E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.652E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.004E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.567E-01	9.480E+00	1.644E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.616E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.218E-04	3.579E-02	5.909E-02	0.000E+00	NOT IDENT.
RH-102	-1.788E-02	3.314E-02	5.433E-02	0.000E+00	NOT IDENT.
RU-103	-1.763E-02	4.417E-02	7.272E-02	0.000E+00	FAIL ABUN
RH-106	-1.311E-01	3.911E-01	6.360E-01	0.000E+00	NOT IDENT.
RU-106	-1.311E-01	3.909E-01	6.360E-01	0.000E+00	NOT IDENT.
AG-108M	-3.015E-02	3.774E-02	6.131E-02	0.000E+00	NOT IDENT.
AG-110M	-5.589E-03	4.005E-02	6.585E-02	0.000E+00	NOT IDENT.
IN-111	6.398E-01	9.182E-01	1.413E+00	0.000E+00	NOT IDENT.
IN-113M	1.485E-02	4.852E-02	8.523E-02	0.000E+00	NOT IDENT.
SN-113	1.485E-02	4.852E-02	8.523E-02	0.000E+00	NOT IDENT.
IN-114M	-4.063E-02	2.058E-01	3.028E-01	0.000E+00	NOT IDENT.
CD-115	1.871E-01	8.470E+00	1.435E+01	0.000E+00	NOT IDENT.
SN-117M	-2.087E-02	5.142E-02	8.689E-02	0.000E+00	NOT IDENT.
SB-122	3.036E-01	1.736E+00	2.960E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.310E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	4.026E-03	2.766E-02	4.791E-02	0.000E+00	NOT IDENT.
I-124	-6.136E-01	7.762E-01	1.026E+00	0.000E+00	NOT IDENT.
SB-124	4.247E-02	8.997E-02	1.623E-01	0.000E+00	FAIL ABUN
SB-125	7.741E-02	1.014E-01	1.821E-01	0.000E+00	FAIL ABUN
TE-125M	-5.255E+00	8.509E+00	1.454E+01	0.000E+00	NOT IDENT.
I-126	1.864E-01	2.016E-01	3.586E-01	0.000E+00	NOT IDENT.
SB-126	-5.278E-03	1.672E-01	2.486E-01	0.000E+00	FAIL ABUN
SB-127	2.940E-02	1.286E+00	2.137E+00	0.000E+00	NOT IDENT.
XE-127	1.312E-02	5.568E-02	8.384E-02	0.000E+00	NOT IDENT.
I-131	4.219E-02	1.143E-01	2.023E-01	0.000E+00	NOT IDENT.
TE-132	3.969E-01	5.598E-01	9.716E-01	0.000E+00	NOT IDENT.
BA-133	-3.234E-03	4.682E-02	7.020E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.747E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.943E-02	1.057E-01	0.000E+00	FAIL ABUN
CS-135	2.232E-01	1.821E-01	2.879E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.769E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.656E-02	1.260E-01	2.142E-01	0.000E+00	FAIL ABUN
BA-137M	-4.364E-02	4.453E-02	6.813E-02	0.000E+00	NOT IDENT.
CS-137	-4.613E-02	4.707E-02	7.202E-02	0.000E+00	NOT IDENT.
CE-139	3.217E-03	3.001E-02	5.179E-02	0.000E+00	NOT IDENT.
BA-140	-2.289E-01	2.951E-01	4.541E-01	0.000E+00	NOT IDENT.
LA-140	1.362E-01	8.590E-02	1.683E-01	0.000E+00	FAIL ABUN
CE-141	1.070E-01	6.423E-02	1.135E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.346E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.556E-01	2.336E-01	3.662E-01	0.000E+00	NOT IDENT.
PM-144	-2.516E-02	4.127E-02	6.482E-02	0.000E+00	NOT IDENT.

PR-144	-1.704E+00	2.795E+00	4.390E+00	0.000E+00	NOT IDENT.
PM-146	1.290E-02	4.426E-02	7.720E-02	0.000E+00	NOT IDENT.
ND-147	1.279E-01	5.918E-01	1.016E+00	0.000E+00	FAIL ABUN
PM-149	4.600E+00	6.412E+01	1.132E+02	0.000E+00	NOT IDENT.
EU-152	8.536E-02	1.399E-01	1.798E-01	0.000E+00	NOT IDENT.
GD-153	-8.118E-03	7.478E-02	1.153E-01	0.000E+00	FAIL ABUN
EU-154	-2.240E-02	1.603E-01	2.614E-01	0.000E+00	NOT IDENT.
EU-155	1.489E-01	9.805E-02	1.795E-01	0.000E+00	FAIL ABUN
TB-160	-7.617E-02	1.591E-01	2.520E-01	0.000E+00	FAIL ABUN
HO-166M	3.307E-02	7.229E-02	1.291E-01	0.000E+00	NOT IDENT.
TM-171	3.895E-01	1.634E+01	2.584E+01	0.000E+00	NOT IDENT.
LU-176	1.648E-02	2.891E-02	4.594E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.540E+00	1.914E+00	0.000E+00	FAIL ABUN
LU-177M	-9.151E-02	1.992E-01	3.331E-01	0.000E+00	NOT IDENT.
HF-181	1.024E-02	4.754E-02	8.209E-02	0.000E+00	NOT IDENT.
W-181	8.038E-02	2.003E-01	3.218E-01	0.000E+00	NOT IDENT.
TA-182	-3.087E-02	2.331E-01	3.820E-01	0.000E+00	FAIL ABUN
RE-183	1.926E-02	1.076E-01	1.864E-01	0.000E+00	FAIL ABUN
RE-184	-4.696E-02	2.385E-01	3.954E-01	0.000E+00	NOT IDENT.
OS-185	-5.625E-03	4.873E-02	8.040E-02	0.000E+00	NOT IDENT.
RE-188	-8.114E-02	1.786E-01	3.019E-01	0.000E+00	NOT IDENT.
W-188	-5.825E-02	8.345E+00	1.278E+01	0.000E+00	FAIL ABUN
IR-192	1.827E-02	3.536E-02	6.348E-02	0.000E+00	FAIL ABUN
AU-195	3.245E-01	1.996E-01	3.463E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.423E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	6.535E-01	5.431E+00	9.373E+00	0.000E+00	NOT IDENT.
TL-202	-5.862E-03	7.319E-02	1.247E-01	0.000E+00	NOT IDENT.
HG-203	4.274E-02	4.814E-02	7.797E-02	0.000E+00	NOT IDENT.
BI-207	4.937E-02	6.822E-02	1.212E-01	0.000E+00	FAIL ABUN
TL-207	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
TL-208	0.000E+00	9.093E-02	1.427E-01	0.000E+00	FAIL ABUN
PO-209	1.204E+00	8.982E+00	1.545E+01	0.000E+00	NOT IDENT.
PB-211	-4.830E-01	1.085E+00	1.749E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.374E-01	7.543E-01	0.000E+00	FAIL ABUN
PO-215	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
RN-219	8.609E-02	4.503E-01	7.844E-01	0.000E+00	FAIL ABUN
RN-220	1.630E+01	3.173E+01	5.540E+01	0.000E+00	NOT IDENT.
RA-223	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
AC-227	3.798E-01	4.104E-01	7.141E-01	0.000E+00	FAIL ABUN
TH-227	3.798E-01	4.119E-01	7.141E-01	0.000E+00	FAIL ABUN
TH-229	-3.027E-01	5.302E-01	8.781E-01	0.000E+00	FAIL ABUN
PA-231	1.936E-01	1.699E+00	2.747E+00	0.000E+00	FAIL ABUN
TH-231	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
U-231	-1.664E-01	8.258E-01	1.269E+00	0.000E+00	FAIL ABUN
PA-233	-3.097E-02	6.616E-02	1.128E-01	0.000E+00	FAIL ABUN
PA-234	-3.621E-02	3.796E-01	6.378E-01	0.000E+00	FAIL ABUN
PA-234M	-6.815E+00	8.406E+00	1.313E+01	0.000E+00	NOT IDENT.
U-235	4.600E-02	2.195E-01	3.741E-01	0.000E+00	FAIL ABUN
NP-236	-3.885E-02	7.962E-02	1.339E-01	0.000E+00	NOT IDENT.
NP-239	-1.434E-02	1.764E-01	3.075E-01	0.000E+00	FAIL ABUN
AM-241	3.767E-02	6.563E-02	1.067E-01	0.000E+00	NOT IDENT.
CM-243	2.693E-02	8.591E-02	1.527E-01	0.000E+00	FAIL ABUN
CM-247	4.753E-03	4.004E-02	6.947E-02	0.000E+00	FAIL ABUN
CF-249	7.755E-03	4.325E-02	7.548E-02	0.000E+00	NOT IDENT.
CF-251	9.421E-02	1.218E-01	2.154E-01	0.000E+00	NOT IDENT.
ANH-511	3.056E-02	4.927E-02	9.448E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 13:11:37.02

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:14.
Sample ID         : G232347001           Sample quantity  : 1.26580E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.71  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1230	10.67*	1.004E+00	3.407E+01	3.407E+01	8.66
CD-109	88.03	331	3.72*	7.858E+00	3.361E+00	3.432E+00	22.76
SN-126	64.28	108	9.60	8.064E+00	4.121E-01	4.121E-01	85.86
	86.94	331	8.90	7.858E+00	1.405E+00	1.405E+00	46.42
	87.57	331	37.00*	7.858E+00	3.379E-01	3.379E-01	22.76
BI-210	46.50	181	4.05*	7.605E+00	1.746E+00	1.748E+00	50.06
PB-210	46.50	181	4.05*	7.605E+00	1.746E+00	1.748E+00	50.06
PO-210	46.50	181	4.05*	7.605E+00	1.746E+00	1.748E+00	49.90
BI-211	72.87	------	1.27	8.052E+00	------ Line Not Found		------
	351.07	521	12.94*	3.515E+00	3.397E+00	3.397E+00	16.19
PB-212	74.81	636	10.70	8.037E+00	2.194E+00	2.194E+00	19.60
	77.11	883	18.00	8.012E+00	1.815E+00	1.815E+00	14.13
	87.30	331	8.00	7.858E+00	1.563E+00	1.563E+00	24.86
	238.63	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.09	75	3.41	4.003E+00	1.634E+00	1.634E+00	71.57
PO-212	74.81	636	10.70	8.037E+00	2.194E+00	2.194E+00	19.60
	77.11	883	18.00	8.012E+00	1.815E+00	1.815E+00	14.13
	87.30	331	8.00	7.858E+00	1.563E+00	1.563E+00	24.86
	115.19	------	0.60	7.241E+00	------ Line Not Found		------
	238.63	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.09	75	3.41	4.003E+00	1.634E+00	1.634E+00	71.57
BI-214	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98
	768.36	------	5.04	1.760E+00	------ Line Not Found		------
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	------	4.11	1.054E+00	------ Line Not Found		------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
PB-214	74.81	636	6.21	8.037E+00	3.781E+00	3.781E+00	18.75
	77.11	883	10.50	8.012E+00	3.111E+00	3.111E+00	16.06
	87.30	331	4.67	7.858E+00	2.677E+00	2.677E+00	24.03
	241.98	259	7.49	4.734E+00	2.170E+00	2.170E+00	41.92

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	322	19.20	4.056E+00	1.228E+00	1.228E+00	21.56
	351.92	521	37.20*	3.515E+00	1.182E+00	1.182E+00	17.01
PO-214	74.81	636	6.21	8.037E+00	3.781E+00	3.781E+00	18.75
	77.11	883	10.50	8.012E+00	3.111E+00	3.111E+00	16.06
	87.30	331	4.67	7.858E+00	2.677E+00	2.677E+00	24.03
	241.98	259	7.49	4.734E+00	2.170E+00	2.170E+00	41.92
	295.21	322	19.20	4.056E+00	1.228E+00	1.228E+00	21.56
	351.92	521	37.20*	3.515E+00	1.182E+00	1.182E+00	17.01
PO-216	74.81	636	10.70	8.037E+00	2.194E+00	2.194E+00	19.60
	77.11	883	18.00	8.012E+00	1.815E+00	1.815E+00	14.13
	87.30	331	8.00	7.858E+00	1.563E+00	1.563E+00	24.86
	238.63	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.09	75	3.41	4.003E+00	1.634E+00	1.634E+00	71.57
PO-218	74.81	636	6.21	8.037E+00	3.781E+00	3.781E+00	18.75
	77.11	883	10.50	8.012E+00	3.111E+00	3.111E+00	16.06
	87.30	331	4.67	7.858E+00	2.677E+00	2.677E+00	24.03
	241.98	259	7.49	4.734E+00	2.170E+00	2.170E+00	41.92
	295.21	322	19.20	4.056E+00	1.228E+00	1.228E+00	21.56
	351.92	521	37.20*	3.515E+00	1.182E+00	1.182E+00	17.01
RA-224	240.98	259	3.95*	4.734E+00	4.114E+00	4.114E+00	41.55
RA-226	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98
	768.36	------	5.04	1.760E+00	------	Line Not Found	------
	934.06	------	3.21	1.477E+00	------	Line Not Found	------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------	Line Not Found	------
	1377.67	------	4.11	1.054E+00	------	Line Not Found	------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
AC-228	338.32	208	11.40	3.633E+00	1.492E+00	1.492E+00	51.81
	911.07	217	27.70*	1.510E+00	1.541E+00	1.541E+00	26.47
	969.11	107	16.60	1.430E+00	1.342E+00	1.342E+00	38.04
RA-228	338.32	208	11.40	3.633E+00	1.492E+00	1.492E+00	51.81
	911.07	217	27.70*	1.510E+00	1.541E+00	1.541E+00	26.47
	969.11	107	16.60	1.430E+00	1.342E+00	1.342E+00	38.04
TH-228	84.40	152	1.21	7.904E+00	4.715E+00	4.715E+00	54.54
	238.60	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.10	75	3.41	4.003E+00	1.634E+00	1.634E+00	92.34
TH-230	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98
	768.36	------	5.04	1.760E+00	------	Line Not Found	------
	934.06	------	3.21	1.477E+00	------	Line Not Found	------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------	Line Not Found	------
	1377.67	------	4.11	1.054E+00	------	Line Not Found	------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
TH-232	338.32	208	11.40	3.633E+00	1.492E+00	1.492E+00	32.49
	911.07	217	27.70*	1.510E+00	1.541E+00	1.541E+00	26.47
	969.11	107	16.60	1.430E+00	1.342E+00	1.342E+00	38.04
TH-234	63.29	108	3.80*	8.064E+00	1.041E+00	1.041E+00	86.40
	92.38	306	5.41	7.748E+00	2.165E+00	2.165E+00	33.46
U-234	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	768.36	------	5.04	1.760E+00	------	Line Not Found	------
	934.06	------	3.21	1.477E+00	------	Line Not Found	------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------	Line Not Found	------
	1377.67	------	4.11	1.054E+00	------	Line Not Found	------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
NP-237	86.50	331	12.60*	7.858E+00	9.922E-01	9.922E-01	30.73
	95.87	------	2.60	7.687E+00	------	Line Not Found	------
U-238	63.29	108	3.80*	8.064E+00	1.041E+00	1.041E+00	86.40
	92.38	306	5.41	7.748E+00	2.165E+00	2.165E+00	29.44
AM-243	74.67	636	66.00*	8.037E+00	3.557E-01	3.557E-01	17.23
	86.72	331	0.34	7.858E+00	3.721E+01	3.721E+01	22.76
	117.66	------	0.55	7.181E+00	------	Line Not Found	------
	142.18	------	0.13	6.593E+00	------	Line Not Found	------

Flag: "*" = Keyline

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

Total number of lines in spectrum 31
Number of unidentified lines 1
Number of lines tentatively identified by NID 30 96.77%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.407E+01	3.407E+01	0.295E+01	8.66	
CD-109	464.00D	1.02	3.361E+00	3.432E+00	0.781E+00	22.76	
SN-126	1.00E+05Y	1.00	3.379E-01	3.379E-01	0.769E-01	22.76	
BI-210	22.26Y	1.00	1.746E+00	1.748E+00	0.875E+00	50.06	
PB-210	22.26Y	1.00	1.746E+00	1.748E+00	0.875E+00	50.06	
PO-210	22.26Y	1.00	1.746E+00	1.748E+00	0.872E+00	49.90	
BI-211	7.04E+08Y	1.00	3.397E+00	3.397E+00	0.550E+00	16.19	
PB-212	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
PO-212	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
BI-214	1600.00Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
PB-214	1600.00Y	1.00	1.182E+00	1.182E+00	0.201E+00	17.01	
PO-214	1600.00Y	1.00	1.182E+00	1.182E+00	0.201E+00	17.01	
PO-216	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
PO-218	1600.00Y	1.00	1.182E+00	1.182E+00	0.201E+00	17.01	
RA-224	1.41E+10Y	1.00	4.114E+00	4.114E+00	1.709E+00	41.55	
RA-226	1600.00Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
AC-228	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.408E+00	26.47	
RA-228	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.408E+00	26.47	
TH-228	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
TH-230	4.47E+09Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
TH-232	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.408E+00	26.47	
TH-234	4.47E+09Y	1.00	1.041E+00	1.041E+00	0.900E+00	86.40	
U-234	4.47E+09Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
NP-237	2.14E+06Y	1.00	9.922E-01	9.922E-01	3.049E-01	30.73	
U-238	4.47E+09Y	1.00	1.041E+00	1.041E+00	0.900E+00	86.40	
AM-243	7380.00Y	1.00	3.557E-01	3.557E-01	0.613E-01	17.23	
	Total Activity :		7.164E+01	7.172E+01			

Grand Total Activity : 7.164E+01 7.172E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.67	200	324	1.15	180.48	166	27	2.77E-02	34.2	7.81E+00	T
0	129.07	78	284	1.22	259.25	255	8	1.08E-02	78.5	6.90E+00	T
0	186.04	205	297	1.48	373.14	368	11	2.84E-02	36.8	5.66E+00	T
0	209.35	91	314	0.82	419.74	413	11	1.27E-02	77.9	5.23E+00	T
0	270.50	72	135	1.21	541.97	538	9	1.00E-02	63.1	4.34E+00	T
0	277.56	73	190	1.31	556.07	551	11	1.01E-02	77.1	4.26E+00	T
0	328.19	56	116	1.43	657.29	654	9	7.74E-03	74.5	3.72E+00	T
0	463.44	77	81	1.43	927.61	922	13	1.07E-02	53.2	2.77E+00	T
0	583.01	330	75	1.43	1166.56	1159	16	4.58E-02	16.5	2.26E+00	T
0	728.33	91	84	1.73	1456.95	1448	17	1.27E-02	51.6	1.85E+00	T
0	795.12	53	36	2.58	1590.40	1586	9	7.43E-03	48.8	1.71E+00	T
0	1592.44	22	4	1.95	3183.01	3179	8	3.10E-03	52.3	9.35E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 13:11:42.52

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1  *
* Acquisition date : 6-JUL-2009 11:10:14.  Detector SN#     :               *
* Detector ID      : GAM05                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:01.71         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 22-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232347001            Analyst initials: MXR1           *
* Batch Number     : 880723                Sample Quantity : 1.26580E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00.5MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.407E+01	2.949E+00	3.717E-01	2.312E-02	91.653
CD-109	3.432E+00	7.813E-01	9.319E-01	7.096E-02	3.683
SN-126	3.379E-01	7.692E-02	9.162E-02	6.978E-03	3.688
BI-210	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PB-210	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PO-210	1.748E+00	8.722E-01	8.531E-01	5.738E-02	2.049
BI-211	3.397E+00	5.500E-01	3.387E-01	2.684E-02	10.031
PB-212	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
PO-212	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
BI-214	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
PB-214	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
PO-214	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
PO-216	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
PO-218	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
RA-224	4.114E+00	1.709E+00	1.067E+00	1.044E-01	3.857
RA-226	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
AC-228	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
RA-228	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.573E+00	2.052E-01	9.371E-02	1.010E-02	16.783
TH-230	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
TH-232	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
TH-234	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
U-234	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
NP-237	9.922E-01	3.049E-01	2.682E-01	5.900E-02	3.700
U-238	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
AM-243	3.557E-01	6.128E-02	5.643E-02	4.420E-03	6.304

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.166E-01		3.652E-01	6.126E-01	4.389E-02	0.190
NA-22	-1.266E-02		5.865E-02	9.281E-02	5.406E-03	-0.136
NA-24	1.296E-01		1.021E-01	Half-Life too short		
AL-26	1.366E-02		3.320E-02	5.901E-02	3.386E-03	0.232
TI-44	3.349E-01	+	4.733E-02	6.027E-02	4.676E-03	5.556
SC-46	-4.500E-03		4.602E-02	7.568E-02	7.601E-03	-0.059
V-48	-3.767E-02		8.857E-02	1.402E-01	1.284E-02	-0.269
CR-51	-1.964E-01		3.835E-01	6.237E-01	5.516E-02	-0.315
MN-52	-2.205E-01		2.191E-01	3.074E-01	1.800E-02	-0.717
MN-54	-1.537E-02		4.423E-02	7.142E-02	6.543E-03	-0.215
CO-56	3.326E-02		4.446E-02	7.849E-02	7.340E-03	0.424
CO-57	1.160E-02		2.400E-02	4.030E-02	5.718E-03	0.288
CO-58	-2.535E-02		4.128E-02	6.458E-02	5.684E-03	-0.393
FE-59	-3.860E-02		1.243E-01	1.976E-01	1.600E-02	-0.195
CO-60	2.061E-02		4.156E-02	7.154E-02	4.140E-03	0.288
ZN-65	-1.882E-02		1.337E-01	1.829E-01	1.278E-02	-0.103
GE-68	-2.018E-01		1.534E+00	2.477E+00	1.903E-01	-0.081
AS-73	-6.348E-02		2.244E-01	3.711E-01	2.793E-02	-0.171
AS-74	5.351E-02		1.051E-01	1.770E-01	1.164E-02	0.302
SE-75	3.660E-04		4.848E-02	7.150E-02	6.826E-03	0.005
BR-77	4.895E+00		8.481E+00	1.445E+01	9.290E-01	0.339
SR-82	-1.139E-01		4.179E-01	6.819E-01	5.626E-02	-0.167
RB-83	4.089E-02		7.697E-02	1.307E-01	8.407E-03	0.313
RB-84	1.099E-02		7.781E-02	1.307E-01	1.296E-02	0.084
KR-85	-3.149E+01		1.093E+01	1.468E+01	9.408E-01	-2.145
SR-85	-1.595E-01		5.536E-02	7.435E-02	4.766E-03	-2.145
RB-86	2.558E-01		9.194E-01	1.544E+00	1.188E-01	0.166
Y-88	-7.554E-03		3.378E-02	5.229E-02	2.992E-03	-0.144
ZR-88	-4.081E-03		3.419E-02	5.630E-02	3.279E-03	-0.072
Y-91	5.022E+00		2.293E+01	3.794E+01	2.205E+00	0.132
NB-94	1.758E-02		4.270E-02	7.073E-02	5.061E-03	0.249
NB-95	3.799E-02		5.188E-02	9.095E-02	7.356E-03	0.418
NB-95M	3.344E-01		1.528E-01	2.376E-01	2.599E-02	1.407
ZR-95	-2.823E-02		7.706E-02	1.248E-01	1.109E-02	-0.226
NB-97	-8.863E-03		1.863E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	-1.043E+00		4.084E-01	Half-Life too short		
MO-99	5.567E-01		9.674E+00	1.628E+01	2.390E+00	0.034
TC-99M	-5.238E+08		8.243E+08	Half-Life too short		
RH-101	-2.218E-04		3.652E-02	5.741E-02	5.733E-03	-0.004
RH-102	-1.788E-02		3.381E-02	5.345E-02	3.348E-03	-0.335
RU-103	-1.763E-02		4.507E-02	7.159E-02	9.240E-03	-0.246
RH-106	-1.311E-01		3.991E-01	6.282E-01	7.631E-02	-0.209
RU-106	-1.311E-01		3.988E-01	6.282E-01	4.141E-02	-0.209
AG-108M	-3.015E-02		3.851E-02	6.024E-02	3.942E-03	-0.501
AG-110M	-5.589E-03		4.086E-02	6.509E-02	4.499E-03	-0.086
IN-111	6.398E-01		9.370E-01	1.376E+00	1.341E-01	0.465
IN-113M	1.485E-02		4.951E-02	8.361E-02	5.187E-03	0.178
SN-113	1.485E-02		4.951E-02	8.361E-02	5.187E-03	0.178
IN-114M	-4.063E-02		2.100E-01	2.940E-01	2.936E-02	-0.138
CD-115	1.871E-01		8.643E+00	1.414E+01	9.120E-01	0.013
SN-117M	-2.087E-02		5.247E-02	8.414E-02	9.046E-03	-0.248
SB-122	3.036E-01		1.771E+00	2.919E+00	1.908E-01	0.104
I-123	1.907E-01		6.685E-01	Half-Life too short		
TE-123M	4.026E-03		2.822E-02	4.640E-02	4.985E-03	0.087
I-124	-6.136E-01		7.920E-01	1.013E+00	6.666E-02	-0.606
SB-124	4.247E-02		9.180E-02	1.628E-01	1.030E-02	0.261
SB-125	7.741E-02		1.035E-01	1.788E-01	1.121E-02	0.433
TE-125M	-5.255E+00		8.683E+00	1.400E+01	1.800E+00	-0.375
I-126	1.864E-01		2.057E-01	3.546E-01	2.354E-02	0.526
SB-126	-5.278E-03		1.706E-01	2.461E-01	1.825E-02	-0.021
SB-127	2.940E-02		1.312E+00	2.114E+00	2.067E-01	0.014
XE-127	1.312E-02		5.682E-02	8.147E-02	8.132E-03	0.161
I-131	4.219E-02		1.167E-01	1.982E-01	1.487E-02	0.213
TE-132	3.969E-01		5.712E-01	9.457E-01	1.537E-01	0.420
BA-133	-3.234E-03		4.777E-02	6.877E-02	8.493E-03	-0.047
I-133	-1.122E-03		1.401E-03	Half-Life too short		
CS-134	1.225E-01	+	6.064E-02	1.047E-01	9.020E-03	1.169
CS-135	2.232E-01		1.858E-01	2.809E-01	3.005E-02	0.795
I-135	-1.841E+08		1.923E+08	Half-Life too short		
CS-136	1.656E-02		1.286E-01	2.132E-01	1.826E-02	0.078
BA-137M	-4.364E-02		4.544E-02	6.735E-02	4.429E-03	-0.648
CS-137	-4.613E-02		4.803E-02	7.119E-02	4.697E-03	-0.648
CE-139	3.217E-03		3.063E-02	5.018E-02	4.983E-03	0.064
BA-140	-2.289E-01		3.012E-01	4.476E-01	1.461E-01	-0.511
LA-140	1.362E-01		8.765E-02	1.686E-01	9.907E-03	0.808
CE-141	1.070E-01		6.555E-02	1.097E-01	1.342E-02	0.975
CE-143	4.164E-04		6.866E-05	Half-Life too short		
CE-144	1.556E-01		2.383E-01	3.537E-01	6.549E-02	0.440
PM-144	-2.516E-02		4.211E-02	6.413E-02	4.534E-03	-0.392
PR-144	-1.704E+00		2.852E+00	4.343E+00	3.069E-01	-0.392
PM-146	1.290E-02		4.516E-02	7.590E-02	6.735E-03	0.170
ND-147	1.279E-01		6.039E-01	1.001E+00	1.383E-01	0.128
PM-149	4.600E+00		6.543E+01	1.106E+02	1.752E+01	0.042

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	8.536E-02		1.428E-01	1.761E-01	1.448E-02	0.485
GD-153	-8.118E-03		7.631E-02	1.109E-01	1.028E-02	-0.073
EU-154	-2.240E-02		1.636E-01	2.609E-01	2.440E-02	-0.086
EU-155	1.489E-01		1.001E-01	1.728E-01	1.872E-02	0.862
TB-160	-7.617E-02		1.624E-01	2.501E-01	2.472E-02	-0.305
HO-166M	3.307E-02		7.377E-02	1.277E-01	9.306E-03	0.259
TM-171	3.895E-01		1.667E+01	2.472E+01	1.987E+00	0.016
LU-176	1.648E-02		2.950E-02	4.491E-02	3.911E-03	0.367
LU-177	2.001E+00	+	1.571E+00	1.861E+00	1.855E-01	1.075
LU-177M	-9.151E-02		2.033E-01	3.270E-01	1.946E-02	-0.280
HF-181	1.024E-02		4.851E-02	8.078E-02	5.084E-03	0.127
W-181	8.038E-02		2.044E-01	3.078E-01	2.488E-02	0.261
TA-182	-3.087E-02		2.379E-01	3.812E-01	2.216E-02	-0.081
RE-183	1.926E-02		1.098E-01	1.806E-01	1.866E-02	0.107
RE-184	-4.696E-02		2.434E-01	3.854E-01	3.724E-02	-0.122
OS-185	-5.625E-03		4.973E-02	7.945E-02	5.234E-03	-0.071
RE-188	-8.114E-02		1.822E-01	2.922E-01	3.253E-02	-0.278
W-188	-5.825E-02		8.516E+00	1.248E+01	1.131E+00	-0.005
IR-192	1.827E-02		3.609E-02	6.208E-02	5.269E-03	0.294
AU-195	3.245E-01		2.036E-01	3.331E-01	3.176E-02	0.974
TL-200	1.324E-05		1.236E-04	Half-Life too short		
TL-201	6.535E-01		5.542E+00	9.083E+00	9.017E-01	0.072
TL-202	-5.862E-03		7.468E-02	1.225E-01	7.470E-03	-0.048
HG-203	4.274E-02		4.912E-02	7.612E-02	7.237E-03	0.561
BI-207	4.937E-02		6.961E-02	1.207E-01	9.558E-03	0.409
TL-207	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
TL-208	5.139E-01	+	9.278E-02	1.408E-01	1.036E-02	3.650
PO-209	1.204E+00		9.165E+00	1.535E+01	1.560E+00	0.078
PB-211	-4.830E-01		1.107E+00	1.716E+00	1.070E+00	-0.281
BI-212	1.242E+00	+	6.504E-01	7.468E-01	6.774E-02	1.663
PO-215	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
RN-219	8.609E-02		4.595E-01	7.698E-01	1.050E-01	0.112
RN-220	1.630E+01		3.238E+01	5.461E+01	3.553E+00	0.298
RA-223	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
AC-227	3.798E-01		4.187E-01	6.962E-01	1.109E-01	0.546
TH-227	3.798E-01		4.203E-01	6.962E-01	1.292E-01	0.546
TH-229	-3.027E-01		5.410E-01	8.527E-01	8.516E-02	-0.355
PA-231	1.936E-01		1.734E+00	2.682E+00	4.162E-01	0.072
TH-231	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
U-231	-1.664E-01		8.426E-01	1.220E+00	1.096E-01	-0.136
PA-233	-3.097E-02		6.751E-02	1.103E-01	9.741E-03	-0.281
PA-234	-3.621E-02		3.874E-01	6.339E-01	1.221E-01	-0.057
PA-234M	-6.815E+00		8.578E+00	1.306E+01	1.489E+00	-0.522
U-235	4.600E-02		2.239E-01	3.617E-01	7.078E-02	0.127
NP-236	-3.885E-02		8.125E-02	1.297E-01	1.370E-02	-0.299
NP-239	-1.434E-02		1.800E-01	2.965E-01	3.885E-02	-0.048
AM-241	3.767E-02		6.697E-02	1.019E-01	9.119E-03	0.370
CM-243	2.693E-02		8.766E-02	1.470E-01	1.537E-02	0.183

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-247	4.753E-03		4.086E-02	6.818E-02	4.012E-03	0.070
CF-249	7.755E-03		4.413E-02	7.403E-02	4.428E-03	0.105
CF-251	9.421E-02		1.243E-01	2.089E-01	2.081E-02	0.451
ANH-511	3.056E-02		5.027E-02	9.305E-02	5.955E-03	0.328

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232347001           *
* Acquisition date  :  6-JUL-2009 11:10:14 Detector SN#     :               *
* Detector ID       : GAM05                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.71      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232347001           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.407E+01	2.890E+00	1.859E-01	1.474E+00
CD-109	3.432E+00	7.656E-01	4.855E-01	3.906E-01
SN-126	3.379E-01	7.538E-02	4.773E-02	3.846E-02
BI-210	1.748E+00	8.574E-01	4.484E-01	4.374E-01
PB-210	1.748E+00	8.574E-01	4.484E-01	4.374E-01
PO-210	1.748E+00	8.547E-01	4.484E-01	4.361E-01
BI-211	3.397E+00	5.390E-01	1.730E-01	2.750E-01
PB-212	1.573E+00	2.011E-01	4.814E-02	1.026E-01
PO-212	1.573E+00	2.011E-01	4.814E-02	1.026E-01
BI-214	8.092E-01	2.140E-01	6.324E-02	1.092E-01
PB-214	1.182E+00	1.970E-01	6.031E-02	1.005E-01
PO-214	1.182E+00	1.970E-01	6.031E-02	1.005E-01
PO-216	1.573E+00	2.011E-01	4.814E-02	1.026E-01
PO-218	1.182E+00	1.970E-01	6.031E-02	1.005E-01
RA-224	4.114E+00	1.675E+00	5.479E-01	8.547E-01
RA-226	8.092E-01	2.140E-01	6.324E-02	1.092E-01
AC-228	1.541E+00	3.999E-01	1.260E-01	2.040E-01
RA-228	1.541E+00	3.999E-01	1.260E-01	2.040E-01
TH-228	1.573E+00	2.011E-01	4.814E-02	1.026E-01
TH-230	8.092E-01	2.140E-01	6.324E-02	1.092E-01
TH-232	1.541E+00	3.999E-01	1.260E-01	2.040E-01
TH-234	1.041E+00	8.815E-01	5.206E-01	4.498E-01
U-234	8.092E-01	2.140E-01	6.324E-02	1.092E-01
NP-237	9.922E-01	2.988E-01	1.397E-01	1.524E-01
U-238	1.041E+00	8.815E-01	5.206E-01	4.498E-01
AM-243	3.557E-01	6.006E-02	2.946E-02	3.064E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.166E-01	3.579E-01	3.115E-01	1.826E-01 NOT IDENT.

NA-22	-1.266E-02	5.748E-02	4.651E-02	2.933E-02	NOT IDENT.
NA-24	1.296E+05	2.001E+05	0.000E+00	1.021E+05	SHORT HLIF
AL-26	1.366E-02	3.254E-02	2.941E-02	1.660E-02	NOT IDENT.
TI-44	3.349E-01	4.638E-02	3.145E-02	2.366E-02	FAIL ABUN
SC-46	-4.500E-03	4.510E-02	3.813E-02	2.301E-02	FAIL ABUN
V-48	-3.767E-02	8.680E-02	7.051E-02	4.428E-02	NOT IDENT.
CR-51	-1.964E-01	3.758E-01	3.190E-01	1.917E-01	NOT IDENT.
MN-52	-2.205E-01	2.147E-01	1.538E-01	1.095E-01	NOT IDENT.
MN-54	-1.537E-02	4.335E-02	3.602E-02	2.212E-02	NOT IDENT.
CO-56	3.326E-02	4.357E-02	3.958E-02	2.223E-02	NOT IDENT.
CO-57	1.160E-02	2.352E-02	2.090E-02	1.200E-02	NOT IDENT.
CO-58	-2.535E-02	4.045E-02	3.259E-02	2.064E-02	NOT IDENT.
FE-59	-3.860E-02	1.218E-01	9.923E-02	6.214E-02	NOT IDENT.
CO-60	2.061E-02	4.072E-02	3.583E-02	2.078E-02	NOT IDENT.
ZN-65	-1.882E-02	1.310E-01	9.185E-02	6.684E-02	NOT IDENT.
GE-68	-2.018E-01	1.503E+00	1.245E+00	7.670E-01	NOT IDENT.
AS-73	-6.348E-02	2.200E-01	1.946E-01	1.122E-01	NOT IDENT.
AS-74	5.351E-02	1.030E-01	8.971E-02	5.257E-02	NOT IDENT.
SE-75	3.660E-04	4.751E-02	3.667E-02	2.424E-02	NOT IDENT.
BR-77	4.895E+00	8.312E+00	7.337E+00	4.241E+00	FAIL ABUN
SR-82	-1.139E-01	4.096E-01	3.442E-01	2.090E-01	NOT IDENT.
RB-83	4.089E-02	7.543E-02	6.640E-02	3.848E-02	NOT IDENT.
RB-84	1.099E-02	7.626E-02	6.584E-02	3.891E-02	NOT IDENT.
KR-85	-3.149E+01	1.071E+01	7.455E+00	5.464E+00	NOT IDENT.
SR-85	-1.595E-01	5.425E-02	3.776E-02	2.768E-02	NOT IDENT.
RB-86	2.558E-01	9.010E-01	7.756E-01	4.597E-01	NOT IDENT.
Y-88	-7.554E-03	3.310E-02	2.606E-02	1.689E-02	NOT IDENT.
ZR-88	-4.081E-03	3.350E-02	2.871E-02	1.709E-02	NOT IDENT.
Y-91	5.022E+00	2.247E+01	1.903E+01	1.146E+01	NOT IDENT.
NB-94	1.758E-02	4.185E-02	3.576E-02	2.135E-02	NOT IDENT.
NB-95	3.799E-02	5.084E-02	4.593E-02	2.594E-02	NOT IDENT.
NB-95M	3.344E-01	1.498E-01	1.221E-01	7.641E-02	NOT IDENT.
ZR-95	-2.823E-02	7.551E-02	6.303E-02	3.853E-02	NOT IDENT.
NB-97	-8.863E+03	3.652E+04	0.000E+00	1.863E+04	SHORT HLIF
ZR-97	-1.043E+06	8.004E+05	0.000E+00	4.084E+05	SHORT HLIF
MO-99	5.567E-01	9.480E+00	8.226E+00	4.837E+00	NOT IDENT.
TC-99M	-5.238E+14	1.616E+15	0.000E+00	8.243E+14	SHORT HLIF
RH-101	-2.218E-04	3.579E-02	2.957E-02	1.826E-02	NOT IDENT.
RH-102	-1.788E-02	3.314E-02	2.718E-02	1.691E-02	NOT IDENT.
RU-103	-1.763E-02	4.417E-02	3.638E-02	2.253E-02	FAIL ABUN
RH-106	-1.311E-01	3.911E-01	3.182E-01	1.995E-01	NOT IDENT.
RU-106	-1.311E-01	3.909E-01	3.182E-01	1.994E-01	NOT IDENT.
AG-108M	-3.015E-02	3.774E-02	3.067E-02	1.925E-02	NOT IDENT.
AG-110M	-5.589E-03	4.005E-02	3.294E-02	2.043E-02	NOT IDENT.
IN-111	6.398E-01	9.182E-01	7.067E-01	4.685E-01	NOT IDENT.
IN-113M	1.485E-02	4.852E-02	4.264E-02	2.476E-02	NOT IDENT.
SN-113	1.485E-02	4.852E-02	4.264E-02	2.476E-02	NOT IDENT.
IN-114M	-4.063E-02	2.058E-01	1.515E-01	1.050E-01	NOT IDENT.
CD-115	1.871E-01	8.470E+00	7.178E+00	4.321E+00	NOT IDENT.
SN-117M	-2.087E-02	5.142E-02	4.347E-02	2.623E-02	NOT IDENT.
SB-122	3.036E-01	1.736E+00	1.481E+00	8.856E-01	NOT IDENT.
I-123	1.907E+05	1.310E+06	0.000E+00	6.685E+05	SHORT HLIF
TE-123M	4.026E-03	2.766E-02	2.397E-02	1.411E-02	NOT IDENT.
I-124	-6.136E-01	7.762E-01	5.132E-01	3.960E-01	NOT IDENT.
SB-124	4.247E-02	8.997E-02	8.122E-02	4.590E-02	FAIL ABUN
SB-125	7.741E-02	1.014E-01	9.109E-02	5.173E-02	FAIL ABUN
TE-125M	-5.255E+00	8.509E+00	7.274E+00	4.342E+00	NOT IDENT.
I-126	1.864E-01	2.016E-01	1.794E-01	1.028E-01	NOT IDENT.
SB-126	-5.278E-03	1.672E-01	1.244E-01	8.529E-02	FAIL ABUN
SB-127	2.940E-02	1.286E+00	1.069E+00	6.562E-01	NOT IDENT.
XE-127	1.312E-02	5.568E-02	4.194E-02	2.841E-02	NOT IDENT.
I-131	4.219E-02	1.143E-01	1.012E-01	5.833E-02	NOT IDENT.
TE-132	3.969E-01	5.598E-01	4.861E-01	2.856E-01	NOT IDENT.
BA-133	-3.234E-03	4.682E-02	3.512E-02	2.389E-02	FAIL ABUN
I-133	-1.122E+03	2.747E+03	0.000E+00	1.401E+03	SHORT HLIF
CS-134	1.225E-01	5.943E-02	5.286E-02	3.032E-02	FAIL ABUN
CS-135	2.232E-01	1.821E-01	1.440E-01	9.289E-02	NOT IDENT.
I-135	-1.841E+14	3.769E+14	0.000E+00	1.923E+14	SHORT HLIF
CS-136	1.656E-02	1.260E-01	1.071E-01	6.428E-02	FAIL ABUN
BA-137M	-4.364E-02	4.453E-02	3.408E-02	2.272E-02	NOT IDENT.
CS-137	-4.613E-02	4.707E-02	3.603E-02	2.402E-02	NOT IDENT.
CE-139	3.217E-03	3.001E-02	2.591E-02	1.531E-02	NOT IDENT.
BA-140	-2.289E-01	2.951E-01	2.272E-01	1.506E-01	NOT IDENT.
LA-140	1.362E-01	8.590E-02	8.418E-02	4.383E-02	FAIL ABUN
CE-141	1.070E-01	6.423E-02	5.677E-02	3.277E-02	NOT IDENT.
CE-143	4.164E+02	1.346E+02	0.000E+00	6.866E+01	SHORT HLIF
CE-144	1.556E-01	2.336E-01	1.832E-01	1.192E-01	NOT IDENT.
PM-144	-2.516E-02	4.127E-02	3.243E-02	2.105E-02	NOT IDENT.

PR-144	-1.704E+00	2.795E+00	2.196E+00	1.426E+00	NOT IDENT.
PM-146	1.290E-02	4.426E-02	3.862E-02	2.258E-02	NOT IDENT.
ND-147	1.279E-01	5.918E-01	5.082E-01	3.019E-01	FAIL ABUN
PM-149	4.600E+00	6.412E+01	5.665E+01	3.272E+01	NOT IDENT.
EU-152	8.536E-02	1.399E-01	8.995E-02	7.138E-02	NOT IDENT.
GD-153	-8.118E-03	7.478E-02	5.770E-02	3.815E-02	FAIL ABUN
EU-154	-2.240E-02	1.603E-01	1.308E-01	8.180E-02	NOT IDENT.
EU-155	1.489E-01	9.805E-02	8.979E-02	5.003E-02	FAIL ABUN
TB-160	-7.617E-02	1.591E-01	1.261E-01	8.118E-02	FAIL ABUN
HO-166M	3.307E-02	7.229E-02	6.457E-02	3.688E-02	NOT IDENT.
TM-171	3.895E-01	1.634E+01	1.293E+01	8.335E+00	NOT IDENT.
LU-176	1.648E-02	2.891E-02	2.298E-02	1.475E-02	FAIL ABUN
LU-177	2.001E+00	1.540E+00	9.576E-01	7.856E-01	FAIL ABUN
LU-177M	-9.151E-02	1.992E-01	1.666E-01	1.016E-01	NOT IDENT.
HF-181	1.024E-02	4.754E-02	4.107E-02	2.426E-02	NOT IDENT.
W-181	8.038E-02	2.003E-01	1.610E-01	1.022E-01	NOT IDENT.
TA-182	-3.087E-02	2.331E-01	1.911E-01	1.189E-01	FAIL ABUN
RE-183	1.926E-02	1.076E-01	9.326E-02	5.488E-02	FAIL ABUN
RE-184	-4.696E-02	2.385E-01	1.978E-01	1.217E-01	NOT IDENT.
OS-185	-5.625E-03	4.873E-02	4.022E-02	2.486E-02	NOT IDENT.
RE-188	-8.114E-02	1.786E-01	1.510E-01	9.111E-02	NOT IDENT.
W-188	-5.825E-02	8.345E+00	6.392E+00	4.258E+00	FAIL ABUN
IR-192	1.827E-02	3.536E-02	3.176E-02	1.804E-02	FAIL ABUN
AU-195	3.245E-01	1.996E-01	1.732E-01	1.018E-01	FAIL ABUN
TL-200	1.324E+01	2.423E+02	0.000E+00	1.236E+02	SHORT HLIF
TL-201	6.535E-01	5.431E+00	4.689E+00	2.771E+00	NOT IDENT.
TL-202	-5.862E-03	7.319E-02	6.239E-02	3.734E-02	NOT IDENT.
HG-203	4.274E-02	4.814E-02	3.901E-02	2.456E-02	NOT IDENT.
BI-207	4.937E-02	6.822E-02	6.065E-02	3.480E-02	FAIL ABUN
TL-207	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
TL-208	5.139E-01	9.093E-02	7.138E-02	4.639E-02	FAIL ABUN
PO-209	1.204E+00	8.982E+00	7.731E+00	4.583E+00	NOT IDENT.
PB-211	-4.830E-01	1.085E+00	8.749E-01	5.536E-01	NOT IDENT.
BI-212	1.242E+00	6.374E-01	3.774E-01	3.252E-01	FAIL ABUN
PO-215	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
RN-219	8.609E-02	4.503E-01	3.924E-01	2.297E-01	FAIL ABUN
RN-220	1.630E+01	3.173E+01	2.771E+01	1.619E+01	NOT IDENT.
RA-223	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
AC-227	3.798E-01	4.104E-01	3.573E-01	2.094E-01	FAIL ABUN
TH-227	3.798E-01	4.119E-01	3.573E-01	2.101E-01	FAIL ABUN
TH-229	-3.027E-01	5.302E-01	4.393E-01	2.705E-01	FAIL ABUN
PA-231	1.936E-01	1.699E+00	1.374E+00	8.670E-01	FAIL ABUN
TH-231	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
U-231	-1.664E-01	8.258E-01	6.347E-01	4.213E-01	FAIL ABUN
PA-233	-3.097E-02	6.616E-02	5.644E-02	3.376E-02	FAIL ABUN
PA-234	-3.621E-02	3.796E-01	3.191E-01	1.937E-01	FAIL ABUN
PA-234M	-6.815E+00	8.406E+00	6.568E+00	4.289E+00	NOT IDENT.
U-235	4.600E-02	2.195E-01	1.871E-01	1.120E-01	FAIL ABUN
NP-236	-3.885E-02	7.962E-02	6.701E-02	4.062E-02	NOT IDENT.
NP-239	-1.434E-02	1.764E-01	1.538E-01	9.002E-02	FAIL ABUN
AM-241	3.767E-02	6.563E-02	5.339E-02	3.348E-02	NOT IDENT.
CM-243	2.693E-02	8.591E-02	7.642E-02	4.383E-02	FAIL ABUN
CM-247	4.753E-03	4.004E-02	3.476E-02	2.043E-02	FAIL ABUN
CF-249	7.755E-03	4.325E-02	3.776E-02	2.207E-02	NOT IDENT.
CF-251	9.421E-02	1.218E-01	1.078E-01	6.214E-02	NOT IDENT.
ANH-511	3.056E-02	4.927E-02	4.727E-02	2.514E-02	NOT IDENT.

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                           CHARLESTON ,SC 29417                        *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                *
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ENERGY	MDA COUNTS
46.50	364.7112
46.50	364.7112
46.50	364.7112
48.70	359.2905
49.72	378.4559
51.35	372.0956
52.39	355.3373
52.97	360.1935
53.15	360.3180
53.44	377.4742
54.07	391.3302
56.28	416.2829
56.28	416.2856
57.37	0.0000
57.53	407.9974
57.53	407.9991
57.60	408.0493
57.98	400.7905
57.98	400.7905
59.32	376.7447
59.32	376.7447
59.40	389.7919
59.54	417.3267
59.72	417.4616
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61.10	474.9614
61.14	474.9954
61.30	475.1295
63.00	488.5307
63.29	488.7759
63.29	488.7759
63.58	489.0201
64.28	538.7521
65.12	498.6966
65.20	498.7639
65.20	498.7639
66.05	495.1006
66.72	507.3520
66.83	507.4473
66.91	526.5286
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67.20	526.7845
67.75	490.6511
67.85	468.7598
68.90	489.1378
68.90	489.1378
69.30	524.9429
69.67	528.9368
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72.80	469.7683
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72.87	469.8208
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74.81	471.2576
74.81	471.2576
74.81	471.2576
74.81	471.2576
74.81	471.2576
74.97	471.3760
75.28	471.6032
75.70	471.9100
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77.11	472.9372
77.11	472.9372

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77.11	472.9372
77.11	472.9372
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79.80	391.8370
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81.07	392.5804
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81.07	392.5804
81.07	392.5804
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83.78	414.4178
83.78	414.4178
83.78	414.4178
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84.90	371.2889
85.43	371.5722
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92.38	375.2126
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94.67	324.7366
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94.90	337.0371
94.90	337.0371
94.90	337.0371
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95.87	368.0178
96.73	373.0278
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98.44	275.8063
98.88	275.9656
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99.55	279.4966
99.86	310.8593
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100.10	308.0789
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111.00	332.7698

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117.00	298.9103
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121.62	273.9193
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122.32	275.1259
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122.32	275.1259
122.32	275.1259
123.07	279.7330
127.23	287.1701
129.76	324.5722
131.20	342.6169
133.02	289.0079
133.54	293.9643
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136.00	319.3724
136.25	328.4705
136.48	328.5505
140.51	328.9485
140.51	0.0000
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142.65	332.7090
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144.24	295.8926
144.24	295.8926
144.24	295.8926
145.22	260.8089
145.44	253.7901
147.16	321.0873
152.43	241.3315
152.70	249.5440
153.22	250.6921
154.21	307.0420
154.21	307.0420
154.21	307.0420
154.21	307.0420
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162.64	260.1959
163.35	251.1112
163.89	266.6847
165.85	268.2103
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171.86	279.0501
172.10	279.1117
176.55	212.5275
176.60	212.5368
181.06	227.6141
184.41	241.7168
185.71	258.3758
186.00	258.4415
190.27	251.3848
192.34	224.5467
193.63	270.7188
197.04	266.1973
198.01	246.2469
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200.40	282.8990
201.83	287.1888
202.84	259.1719
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208.81	264.5067

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209.75	231.4858
210.97	223.1296
215.65	232.5767
216.55	223.0455
218.09	245.9708
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223.80	229.7271
226.40	228.0148
227.00	215.0836
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227.20	212.9439
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228.18	198.9695
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236.00	209.9868
238.60	209.2953
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238.63	209.2997
238.63	209.2997
239.00	209.3580
240.98	209.6626
241.98	209.8163
241.98	209.8163
241.98	209.8163
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245.39	170.9128
247.94	151.8102
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252.85	180.4662
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260.90	192.6241
262.80	170.5795
264.65	159.2613
268.24	150.4043
268.79	166.5804
269.46	157.6975
269.46	157.6975
269.46	157.6975
269.46	157.6975
271.23	134.5624
273.65	152.7531
276.40	171.0394
277.35	159.1359
277.60	159.1639
277.60	159.1639
278.00	159.2049
278.60	184.8128
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279.53	183.4220
280.46	183.5361
281.68	168.6289
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284.30	170.8035
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285.90	162.1510
286.10	165.7968
286.10	165.7968
287.40	176.8163
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291.72	163.6721
293.26	0.0000
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295.21	167.0768
295.96	167.1574

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300.09	114.2700
300.09	114.2700
300.10	114.2708
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304.40	164.9949
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306.84	142.2946
308.46	157.2438
311.98	159.3260
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319.02	145.2135
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323.87	115.9531
323.87	115.9531
323.87	115.9531
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334.30	130.6724
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338.28	132.8477
338.28	132.8477
338.28	132.8477
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351.92	125.4051
351.92	125.4051
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366.43	156.8406
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387.95	125.9740
388.63	124.0948
391.69	125.2583
391.69	125.2583
392.90	132.0866
398.62	119.9085
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411.60	142.1254
413.65	140.3226
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443.98	115.7260
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445.03	123.7015
445.03	123.7015
445.03	123.7015
445.03	123.7015
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513.99	252.2177
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602.71	112.9297
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609.31	82.7874
609.31	82.7874

609.31	82.7874
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621.84	94.9123
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696.49	90.9292
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722.78	63.1655
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768.36	64.5204
768.36	64.5204
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969.11	103.1600
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1077.35	58.1481
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1112.84	67.2341
1115.52	67.0805
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1120.29	65.3901
1120.29	65.3901
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1189.05	80.6814
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1238.11	83.7028
1238.11	83.7028
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1325.50	31.3164
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1368.53	0.0000
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1377.67	24.3297
1377.67	24.3297
1377.67	24.3297
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1457.56	0.0000
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1596.49	6.8342
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1691.02	13.9014
1691.02	13.9014

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1750.46	0.0000
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1764.49	10.0558
1764.49	10.0558
1764.49	10.0558
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1791.20	0.0000
1808.65	9.1174
1836.01	10.1765

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232347001

Total Uranium Activity	3.1186E+00	ug/g
Total Uranium Counting Unc.	2.6245E+00	ug/g
Total Uranium Tpu	1.3390E-06	ug/g
Total Uranium Mda	1.5512E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232347001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM05            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:10:14.06    SAMPLE ALQT:  126.580 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.961E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.367E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.346E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.628E+00
```

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:47:19.50

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347002.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:48.
Sample ID         : G232347002           Sample quantity  : 1.26180E+02 GRAM
Detector name     : GAM08                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.83  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	2	74.87*	325	389	1.27	149.85	144	14	4.52E-02	12.5	2.28E+00
2	2	77.10	498	366	1.29	154.30	144	14	6.92E-02	8.6	
3	0	87.26	102	519	0.78	174.60	170	9	1.41E-02	41.6	
4	0	94.03*	66	543	1.35	188.12	181	10	9.15E-03	69.8	
5	0	185.79*	109	342	1.21	371.42	367	11	1.51E-02	35.5	
6	0	209.07*	161	262	1.26	417.93	413	12	2.24E-02	21.8	
7	3	238.45*	1012	151	1.28	476.63	470	18	1.41E-01	3.9	1.26E+00
8	3	241.38	217	175	1.70	482.48	470	18	3.01E-02	17.6	
9	0	270.09	86	193	2.06	539.85	535	11	1.19E-02	33.2	
10	0	295.05*	241	193	1.04	589.72	585	10	3.35E-02	13.1	
11	0	300.82	139	163	2.01	601.24	595	14	1.93E-02	21.5	
12	0	327.56	63	112	0.95	654.68	651	9	8.77E-03	32.8	
13	0	338.15*	167	158	1.06	675.85	671	11	2.32E-02	16.8	
14	0	351.74*	440	173	1.33	702.99	696	13	6.11E-02	7.9	
15	0	462.27	32	120	0.87	923.88	921	10	4.44E-03	66.4	
16	0	510.44*	97	152	1.68	1020.17	1011	18	1.34E-02	35.0	
17	0	582.89*	257	78	1.42	1164.98	1160	13	3.57E-02	9.6	
18	0	608.90*	334	78	1.62	1216.97	1211	15	4.64E-02	8.1	
19	0	726.93	90	74	1.60	1452.95	1447	13	1.24E-02	22.5	
20	0	767.80	35	44	0.76	1534.66	1530	9	4.84E-03	38.6	
21	0	795.71	36	74	1.67	1590.46	1582	15	4.94E-03	55.7	
22	0	860.98	69	51	1.73	1720.99	1714	16	9.52E-03	26.4	
23	0	910.66*	199	41	1.61	1820.34	1815	13	2.76E-02	9.6	
24	0	969.15*	59	97	1.59	1937.33	1930	11	8.15E-03	36.0	
25	0	1120.22*	88	78	2.14	2239.51	2231	19	1.23E-02	26.2	
26	0	1460.31*	1182	12	2.00	2920.07	2912	17	1.64E-01	3.0	
27	0	1763.82*	35	15	1.47	3527.71	3521	12	4.92E-03	29.9	
28	0	1846.57	7	8	1.30	3693.44	3686	11	9.49E-04	89.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 13-JUL-2009 18:47:22

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:48
Sample ID : G232347002 Sample quantity : 126.18 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA8 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:03.83 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.153E+01	3.281E+00	4.616E-01	3.911E-02	68.319
CD-109	+	88.03	*	1.505E+00	1.264E+00	1.507E+00	1.736E-01	0.998
SN-126		64.28		-7.194E-02	5.581E-01	8.876E-01	1.471E-01	-0.081
	+	86.94		6.160E-01	5.744E-01	5.864E-01	2.465E-01	1.051
	+	87.57	*	1.482E-01	1.245E-01	1.400E-01	1.607E-02	1.059
TL-208		277.35		2.551E-01	3.597E-01	6.160E-01	6.580E-02	0.414
	+	510.84		4.981E-01	3.522E-01	2.225E-01	2.264E-02	2.239
	+	583.14	*	3.780E-01	7.657E-02	5.696E-02	3.715E-03	6.637
	+	860.37		9.622E-01	5.185E-01	4.566E-01	4.776E-02	2.107
BI-211		72.87		3.758E+00	3.613E+00	5.459E+00	5.809E-01	0.688
	+	351.07	*	2.850E+00	4.897E-01	3.456E-01	2.291E-02	8.247
PB-212	+	74.81		2.077E+00	5.957E-01	5.500E-01	7.803E-02	3.777
	+	77.11		1.789E+00	3.614E-01	3.078E-01	3.309E-02	5.812
	+	87.30		6.853E-01	5.798E-01	6.494E-01	9.877E-02	1.055
	+	238.63	*	1.438E+00	1.537E-01	8.611E-02	6.354E-03	16.702
	+	300.09		3.049E+00	1.334E+00	1.084E+00	9.145E-02	2.812
PO-212	+	74.81		2.077E+00	5.957E-01	5.500E-01	7.803E-02	3.777
	+	77.11		1.789E+00	3.614E-01	3.078E-01	3.309E-02	5.812
	+	87.30		6.853E-01	5.798E-01	6.494E-01	9.877E-02	1.055
		115.19		-2.081E+00	3.589E+00	5.558E+00	3.831E-01	-0.374
	+	238.63	*	1.438E+00	1.537E-01	8.611E-02	6.354E-03	16.702
	+	300.09		3.049E+00	1.334E+00	1.084E+00	9.145E-02	2.812
BI-214	+	609.31	*	9.270E-01	1.657E-01	1.087E-01	8.207E-03	8.525
	+	768.36		1.087E+00	8.446E-01	1.238E+00	1.187E-01	0.878
		934.06		1.003E+00	1.235E+00	2.144E+00	2.625E-01	0.468
	+	1120.29		1.318E+00	7.033E-01	5.526E-01	5.467E-02	2.385
		1238.11		9.022E-01	1.069E+00	1.885E+00	1.719E-01	0.479
		1377.67		-1.240E-01	1.105E+00	1.825E+00	1.930E-01	-0.068
	+	1764.49		7.228E-01	4.346E-01	3.596E-01	2.340E-02	2.010
PB-214	+	74.81		3.580E+00	1.006E+00	9.476E-01	1.231E-01	3.777
	+	77.11		3.067E+00	6.622E-01	5.277E-01	6.953E-02	5.812
	+	87.30		1.174E+00	9.904E-01	1.112E+00	1.536E-01	1.055
	+	241.98		1.850E+00	6.687E-01	4.866E-01	3.953E-02	3.803
	+	295.21		9.257E-01	2.557E-01	2.174E-01	1.892E-02	4.258

Sample ID : G232347002 Acquisition date : 6-JUL-2009 11:10:48

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	9.915E-01	1.780E-01	1.205E-01	1.016E-02	8.231
PO-214	+	74.81		3.580E+00	1.006E+00	9.476E-01	1.231E-01	3.777
	+	77.11		3.067E+00	6.622E-01	5.277E-01	6.953E-02	5.812
	+	87.30		1.174E+00	9.904E-01	1.112E+00	1.536E-01	1.055
	+	241.98		1.850E+00	6.687E-01	4.866E-01	3.953E-02	3.803
	+	295.21		9.257E-01	2.557E-01	2.174E-01	1.892E-02	4.258
	+	351.92	*	9.915E-01	1.780E-01	1.205E-01	1.016E-02	8.231
PO-216	+	74.81		2.077E+00	5.957E-01	5.500E-01	7.803E-02	3.777
	+	77.11		1.789E+00	3.614E-01	3.078E-01	3.309E-02	5.812
	+	87.30		6.853E-01	5.798E-01	6.494E-01	9.877E-02	1.055
	+	238.63	*	1.438E+00	1.537E-01	8.611E-02	6.354E-03	16.702
	+	300.09		3.049E+00	1.334E+00	1.084E+00	9.145E-02	2.812
PO-218	+	74.81		3.580E+00	1.006E+00	9.476E-01	1.231E-01	3.777
	+	77.11		3.067E+00	6.622E-01	5.277E-01	6.953E-02	5.812
	+	87.30		1.174E+00	9.904E-01	1.112E+00	1.536E-01	1.055
	+	241.98		1.850E+00	6.687E-01	4.866E-01	3.953E-02	3.803
	+	295.21		9.257E-01	2.557E-01	2.174E-01	1.892E-02	4.258
	+	351.92	*	9.915E-01	1.780E-01	1.205E-01	1.016E-02	8.231
RA-224	+	240.98	*	3.509E+00	1.253E+00	9.799E-01	5.755E-02	3.581
RA-226	+	609.31	*	9.270E-01	1.657E-01	1.087E-01	8.207E-03	8.525
	+	768.36		1.087E+00	8.446E-01	1.238E+00	1.187E-01	0.878
		934.06		1.003E+00	1.235E+00	2.144E+00	2.625E-01	0.468
	+	1120.29		1.318E+00	7.033E-01	5.526E-01	5.467E-02	2.385
		1238.11		9.022E-01	1.069E+00	1.885E+00	1.719E-01	0.479
		1377.67		-1.240E-01	1.105E+00	1.825E+00	1.930E-01	-0.068
	+	1764.49		7.228E-01	4.346E-01	3.596E-01	2.340E-02	2.010
AC-228	+	338.32		1.197E+00	6.319E-01	3.605E-01	1.471E-01	3.319
	+	911.07	*	1.324E+00	3.081E-01	2.296E-01	2.987E-02	5.765
	+	969.11		6.918E-01	5.246E-01	3.634E-01	8.689E-02	1.904
RA-228	+	338.32		1.197E+00	6.319E-01	3.605E-01	1.471E-01	3.319
	+	911.07	*	1.324E+00	3.081E-01	2.296E-01	2.987E-02	5.765
	+	969.11		6.918E-01	5.246E-01	3.634E-01	8.689E-02	1.904
TH-228		84.40		3.373E+00	2.710E+00	4.092E+00	6.122E-01	0.824
	+	238.60	*	1.438E+00	1.537E-01	8.610E-02	6.353E-03	16.704
	+	300.10		3.049E+00	2.224E+00	1.084E+00	6.392E-01	2.812
TH-230	+	609.31	*	9.270E-01	1.657E-01	1.087E-01	8.207E-03	8.525
	+	768.36		1.087E+00	8.446E-01	1.238E+00	1.187E-01	0.878
		934.06		1.003E+00	1.235E+00	2.144E+00	2.625E-01	0.468
	+	1120.29		1.318E+00	7.033E-01	5.526E-01	5.467E-02	2.385
		1238.11		9.022E-01	1.069E+00	1.885E+00	1.719E-01	0.479
		1377.67		-1.240E-01	1.105E+00	1.825E+00	1.930E-01	-0.068
	+	1764.49		7.227E-01	4.346E-01	3.596E-01	2.340E-02	2.010
TH-232	+	338.32		1.197E+00	4.077E-01	3.605E-01	2.179E-02	3.319
	+	911.07	*	1.324E+00	3.081E-01	2.296E-01	2.987E-02	5.765
	+	969.11		6.918E-01	5.246E-01	3.634E-01	8.689E-02	1.904
U-234	+	609.31	*	9.270E-01	1.657E-01	1.087E-01	8.207E-03	8.525
	+	768.36		1.087E+00	8.446E-01	1.238E+00	1.187E-01	0.878
		934.06		1.003E+00	1.235E+00	2.144E+00	2.625E-01	0.468
	+	1120.29		1.318E+00	7.033E-01	5.526E-01	5.467E-02	2.385

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		9.022E-01	1.069E+00	1.885E+00	1.719E-01	0.479
		1377.67		-1.240E-01	1.105E+00	1.825E+00	1.930E-01	-0.068
	+	1764.49		7.227E-01	4.346E-01	3.596E-01	2.340E-02	2.010
NP-237	+	86.50	*	4.351E-01	3.764E-01	4.165E-01	9.816E-02	1.045
		95.87		3.392E-02	1.011E+00	1.449E+00	3.629E-01	0.023
AM-243	+	74.67	*	3.368E-01	9.130E-02	8.949E-02	9.550E-03	3.763
	+	86.72		1.632E+01	1.371E+01	1.558E+01	1.776E+00	1.048
		117.66		-3.342E-01	3.760E+00	5.965E+00	3.941E-01	-0.056
		142.18		5.938E+00	1.742E+01	2.801E+01	1.595E+00	0.212
ANH-511	+	511.00	*	1.076E-01	7.554E-02	4.807E-02	2.809E-03	2.238

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.850E-03	3.137E-01	5.026E-01	3.434E-02	-0.006
NA-22		1274.54	*	-6.331E-04	4.618E-02	7.679E-02	5.888E-03	-0.008
NA-24		1368.53	*	-1.727E-01	4.618E-02	Half-Life too short		
AL-26		1129.67		9.309E-01	2.172E+00	3.532E+00	2.524E-01	0.264
		1808.65	*	3.987E-03	2.818E-02	4.726E-02	2.916E-03	0.084
TI-44		67.85		-5.382E-02	4.846E-02	7.452E-02	7.972E-03	-0.722
	+	78.38	*	3.301E-01	6.669E-02	7.669E-02	8.287E-03	4.305
SC-46		889.25	*	1.635E-03	4.073E-02	6.675E-02	7.153E-03	0.024
	+	1120.51		2.234E-01	1.183E-01	1.343E-01	9.866E-03	1.664
V-48		944.10		2.060E-01	8.381E-01	1.399E+00	1.457E-01	0.147
		983.50	*	1.795E-02	7.164E-02	1.192E-01	1.175E-02	0.151
		1312.09		1.492E-02	8.340E-02	1.413E-01	1.166E-02	0.106
CR-51		320.08	*	2.981E-02	3.650E-01	6.016E-01	4.032E-02	0.050
MN-52		744.21		4.893E-02	2.215E-01	3.725E-01	2.588E-02	0.131
		848.13		1.510E-01	6.222E+00	1.021E+01	9.767E-01	0.015
		935.52		1.320E-01	2.366E-01	4.026E-01	4.237E-02	0.328
		1246.25		2.354E+00	7.417E+00	1.270E+01	9.169E-01	0.185
		1333.61		-1.483E+00	4.620E+00	7.356E+00	6.311E-01	-0.202
		1434.06	*	-7.800E-02	1.751E-01	2.650E-01	2.203E-02	-0.294
MN-54		834.83	*	-7.634E-03	3.809E-02	6.124E-02	5.638E-03	-0.125
CO-56		846.75	*	-1.394E-02	4.234E-02	6.711E-02	6.394E-03	-0.208
		977.42		-1.368E+00	3.033E+00	4.684E+00	4.660E-01	-0.292
		1037.82		-4.493E-01	3.549E-01	4.887E-01	4.600E-02	-0.919
		1175.09		-7.550E-01	2.524E+00	4.116E+00	2.537E-01	-0.183
		1238.25		8.932E-02	1.070E-01	1.888E-01	1.397E-02	0.473
		1360.21		7.950E-02	9.284E-01	1.558E+00	1.328E-01	0.051
		1771.40		3.078E-02	2.310E-01	3.695E-01	2.385E-02	0.083
CO-57		122.06	*	3.464E-03	2.464E-02	3.950E-02	2.422E-03	0.088
		136.48		-8.134E-03	2.083E-01	3.293E-01	2.211E-02	-0.025
CO-58		810.76	*	-5.343E-02	3.899E-02	5.420E-02	4.660E-03	-0.986
FE-59		142.65		2.068E+00	2.659E+00	4.360E+00	2.480E-01	0.474
		192.34		1.526E-01	9.227E-01	1.511E+00	1.766E-01	0.101
		1099.22	*	-2.524E-02	1.036E-01	1.623E-01	1.389E-02	-0.156
		1291.56		-3.450E-02	1.166E-01	1.869E-01	1.715E-02	-0.185

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60		1173.22		4.136E-04	5.012E-02	8.402E-02	5.156E-03	0.005
		1332.49	*	-3.124E-02	4.351E-02	6.651E-02	5.708E-03	-0.470
ZN-65		1115.52	*	3.184E-02	1.051E-01	1.522E-01	1.136E-02	0.209
GE-68		1077.35	*	6.192E-01	1.391E+00	2.342E+00	1.929E-01	0.264
AS-73		53.44	*	4.925E-01	1.096E+00	1.826E+00	2.059E-01	0.270
AS-74		595.88	*	4.360E-05	7.970E-02	1.334E-01	7.409E-03	0.000
		634.78		7.910E-02	3.402E-01	5.782E-01	3.089E-02	0.137
SE-75		66.05		6.582E-01	4.990E+00	8.158E+00	1.002E+00	0.081
		96.73		-1.733E-01	8.322E-01	1.174E+00	1.672E-01	-0.148
		121.11		-7.568E-02	1.343E-01	2.073E-01	1.970E-02	-0.365
		136.00		-4.241E-03	3.885E-02	6.120E-02	3.605E-03	-0.069
		198.60		-4.886E-01	1.633E+00	2.699E+00	1.876E-01	-0.181
		264.65	*	-4.341E-02	4.970E-02	6.711E-02	4.053E-03	-0.647
		279.53		-1.212E-01	1.053E-01	1.615E-01	1.047E-02	-0.751
		303.91		7.173E-01	2.126E+00	3.159E+00	3.066E-01	0.227
		400.65		7.242E-02	2.620E-01	4.326E-01	3.956E-02	0.167
BR-77	+	87.88		2.328E+02	1.956E+02	2.341E+02	2.695E+01	0.995
		200.40		3.162E+01	1.080E+02	1.836E+02	1.028E+01	0.172
	+	239.00		1.651E+02	1.602E+01	2.659E+01	1.559E+00	6.209
		249.79		8.458E+00	4.313E+01	7.240E+01	4.285E+00	0.117
		281.68		-1.046E+01	6.238E+01	1.019E+02	6.150E+00	-0.103
		297.23		1.160E+02	5.591E+01	7.393E+01	4.480E+00	1.570
		303.76		4.966E+01	1.306E+02	1.949E+02	1.182E+01	0.255
		439.47		7.349E+01	1.037E+02	1.761E+02	1.039E+01	0.417
		484.57		4.842E+01	1.648E+02	2.705E+02	1.592E+01	0.179
		520.65	*	-2.009E+00	7.313E+00	1.136E+01	6.616E-01	-0.177
		574.64		-4.827E+01	1.451E+02	2.370E+02	1.338E+01	-0.204
		578.91		-2.545E-01	6.331E+01	9.235E+01	5.200E+00	-0.003
		585.48		4.097E+02	1.416E+02	2.585E+02	1.448E+01	1.585
		755.35		1.542E+02	1.382E+02	2.448E+02	1.765E+01	0.630
		817.79		-7.782E+00	9.789E+01	1.594E+02	1.396E+01	-0.049
SR-82		698.33		1.101E+00	3.240E+01	5.386E+01	3.192E+00	0.020
		776.49	*	-1.667E-01	3.792E-01	5.985E-01	4.619E-02	-0.278
		1395.20		1.043E+01	1.100E+01	2.043E+01	1.723E+00	0.511
RB-83		520.41	*	-1.709E-02	6.711E-02	1.045E-01	6.085E-03	-0.164
		529.64		-2.772E-02	1.088E-01	1.801E-01	1.044E-02	-0.154
		552.65		-3.366E-03	1.811E-01	3.039E-01	1.742E-02	-0.011
RB-84		881.50	*	4.614E-02	6.982E-02	1.214E-01	1.274E-02	0.380
KR-85		513.99	*	6.741E+00	7.872E+00	1.199E+01	6.999E-01	0.562
SR-85		513.99	*	3.415E-02	3.988E-02	6.074E-02	3.546E-03	0.562
RB-86		1076.63	*	-2.580E-01	8.675E-01	1.353E+00	1.116E-01	-0.191
Y-88		898.02		-2.527E-02	4.484E-02	6.881E-02	7.571E-03	-0.367
		1836.01	*	9.652E-03	3.248E-02	5.619E-02	3.352E-03	0.172
ZR-88		392.90	*	-4.613E-03	3.064E-02	4.914E-02	2.874E-03	-0.094
Y-91		1204.90	*	4.893E-01	2.150E+01	3.602E+01	2.377E+00	0.014
NB-94		702.63	*	-1.575E-02	3.218E-02	5.097E-02	3.068E-03	-0.309
		871.10		-4.895E-03	3.589E-02	5.784E-02	5.900E-03	-0.085
NB-95		765.79	*	3.720E-02	5.234E-02	8.055E-02	6.007E-03	0.462
NB-95M		235.69	*	2.944E-01	1.317E-01	2.176E-01	1.646E-02	1.353

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95		724.18		1.350E-01	1.118E-01	1.808E-01	1.348E-02	0.747
		756.15	*	8.012E-02	8.140E-02	1.429E-01	1.179E-02	0.561
NB-97		657.90	*	7.323E-03	8.140E-02	Half-Life too short		
		1024.50		-5.721E-02	8.140E-02	Half-Life too short		
ZR-97		254.15		-1.264E-01	8.140E-02	Half-Life too short		
		355.39		7.981E-01	8.140E-02	Half-Life too short		
		507.63	*	9.120E-01	8.140E-02	Half-Life too short		
		602.52		7.533E-01	8.140E-02	Half-Life too short		
		1021.30		1.214E+00	8.140E-02	Half-Life too short		
		1147.95		2.721E-01	8.140E-02	Half-Life too short		
		1362.66		6.388E-01	8.140E-02	Half-Life too short		
		1750.46		3.763E-01	8.140E-02	Half-Life too short		
MO-99		140.51		-5.556E+00	2.025E+01	3.104E+01	8.359E+00	-0.179
		181.06		-7.534E+00	1.340E+01	1.909E+01	3.250E+00	-0.395
		366.43		1.159E+01	6.158E+01	1.016E+02	6.062E+00	0.114
		739.58	*	-1.045E-02	9.177E+00	1.516E+01	2.160E+00	-0.001
		778.00		-5.319E-01	2.538E+01	4.170E+01	3.234E+00	-0.013
TC-99M		140.51	*	-4.484E+08	2.538E+01	Half-Life too short		
RH-101		127.23		1.085E-02	3.241E-02	5.230E-02	3.130E-03	0.207
		198.01	*	-2.571E-03	3.040E-02	5.079E-02	2.836E-03	-0.051
		325.23		-1.715E-01	2.575E-01	3.479E-01	2.109E-02	-0.493
RH-102		418.52		-1.016E-01	2.950E-01	4.643E-01	2.734E-02	-0.219
		475.06	*	2.936E-03	2.906E-02	4.701E-02	2.771E-03	0.062
		631.29		1.102E-02	5.306E-02	9.005E-02	4.830E-03	0.122
		697.49		1.340E-03	7.702E-02	1.279E-01	7.556E-03	0.010
	+	766.84		1.626E-01	1.260E-01	2.047E-01	1.531E-02	0.795
		1046.59		-1.291E-01	1.312E-01	1.881E-01	1.658E-02	-0.686
		1112.84		1.086E-01	2.630E-01	3.876E-01	2.911E-02	0.280
RU-103		497.08	*	-1.214E-02	4.041E-02	6.290E-02	7.974E-03	-0.193
	+	610.33		9.809E+00	2.186E+00	2.540E+00	3.886E-01	3.862
RH-106	+	511.85		5.362E-01	3.765E-01	4.314E-01	2.520E-02	1.243
		621.84	*	8.744E-02	3.234E-01	5.512E-01	6.368E-02	0.159
		1050.47		2.746E+00	2.497E+00	4.465E+00	3.905E-01	0.615
RU-106	+	511.85		5.362E-01	3.765E-01	4.314E-01	2.520E-02	1.243
		621.84	*	8.744E-02	3.233E-01	5.512E-01	2.987E-02	0.159
		1050.47		2.746E+00	2.497E+00	4.465E+00	3.905E-01	0.615
AG-108M		433.93	*	-1.663E-03	3.231E-02	5.188E-02	3.316E-03	-0.032
		614.37		-1.654E-02	4.108E-02	5.672E-02	3.392E-03	-0.292
		722.95		-1.525E-03	4.792E-02	6.849E-02	4.732E-03	-0.022
AG-110M		657.75	*	1.746E-02	3.452E-02	5.980E-02	3.354E-03	0.292
		677.61		-8.746E-02	2.972E-01	4.806E-01	2.818E-02	-0.182
		706.67		1.785E-01	2.112E-01	3.732E-01	2.403E-02	0.478
		763.93		4.050E-02	1.914E-01	2.806E-01	2.159E-02	0.144
		884.67		-1.035E-02	5.201E-02	8.315E-02	8.990E-03	-0.125
		937.48		-7.780E-02	1.142E-01	1.713E-01	1.842E-02	-0.454
		1384.27		7.445E-02	1.597E-01	2.811E-01	2.448E-02	0.265
IN-111		171.28		7.996E-01	7.127E-01	1.259E+00	6.760E-02	0.635
		245.39	*	-3.828E-01	8.397E-01	1.182E+00	6.969E-02	-0.324
IN-113M		391.69	*	3.911E-03	4.441E-02	7.250E-02	4.518E-03	0.054

---- Non-Identified Nuclides ----

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SN-113		391.69	*	3.911E-03	4.441E-02	7.250E-02	4.518E-03	0.054
IN-114M		190.27	*	4.488E-02	1.953E-01	2.934E-01	1.620E-02	0.153
CD-115		260.90		3.111E+01	9.082E+01	1.532E+02	9.143E+00	0.203
		492.35		-2.558E+00	2.616E+01	4.153E+01	2.440E+00	-0.062
		527.90	*	-2.153E+00	7.711E+00	1.273E+01	7.391E-01	-0.169
SN-117M		156.02		-1.186E+00	2.067E+00	3.417E+00	1.872E-01	-0.347
		158.56	*	3.207E-02	4.930E-02	8.563E-02	4.658E-03	0.375
SB-122		563.90	*	7.455E-01	1.615E+00	2.799E+00	1.593E-01	0.266
		692.80		-1.103E+01	3.383E+01	5.456E+01	3.169E+00	-0.202
I-123		159.00	*	8.846E-01	3.383E+01	Half-Life too short		
		528.96		2.152E+01	3.383E+01	Half-Life too short		
TE-123M		159.00	*	1.866E-02	2.700E-02	4.696E-02	2.590E-03	0.397
I-124		602.71	*	2.280E-01	5.590E-01	8.528E-01	4.708E-02	0.267
		722.78		-3.980E-01	4.115E+00	5.834E+00	3.770E-01	-0.068
		1325.50		1.607E+00	2.990E+01	4.999E+01	4.233E+00	0.032
		1376.25		-6.392E-01	2.888E+01	4.818E+01	4.087E+00	-0.013
		1509.49		9.225E+00	1.312E+01	2.380E+01	1.909E+00	0.388
		1691.02		-3.090E+00	2.835E+00	3.230E+00	2.268E-01	-0.957
SB-124		602.71		1.583E-02	3.880E-02	5.920E-02	3.269E-03	0.267
		645.85		-7.306E-01	4.654E-01	6.540E-01	3.978E-02	-1.117
		709.31		-2.326E-01	2.923E+00	4.810E+00	2.965E-01	-0.048
		713.82		-8.762E-02	1.665E+00	2.745E+00	2.877E-01	-0.032
		722.78		-4.005E-02	4.141E-01	5.871E-01	3.938E-02	-0.068
	+	968.20		7.028E+00	5.107E+00	6.924E+00	6.981E-01	1.015
		1045.16		-2.057E+00	2.791E+00	4.139E+00	3.659E-01	-0.497
		1325.50		1.728E-01	3.214E+00	5.373E+00	4.549E-01	0.032
		1368.21		-1.613E+00	1.803E+00	2.574E+00	3.450E-01	-0.627
		1436.60		-3.079E+00	3.300E+00	4.467E+00	3.710E-01	-0.689
		1691.02	*	-7.335E-02	6.731E-02	7.666E-02	5.700E-03	-0.957
SB-125		427.89	*	2.892E-03	8.608E-02	1.393E-01	8.554E-03	0.021
	+	463.38		3.214E-01	4.277E-01	5.512E-01	3.776E-02	0.583
		600.56		-1.422E-01	1.652E-01	2.560E-01	1.658E-02	-0.555
		635.90		-1.420E-01	2.780E-01	4.438E-01	2.840E-02	-0.320
TE-125M		109.28	*	-8.282E+00	9.665E+00	1.457E+01	1.385E+00	-0.569
I-126		388.63		1.066E-01	1.919E-01	3.236E-01	1.897E-02	0.329
		666.33	*	8.616E-03	1.594E-01	2.663E-01	1.401E-02	0.032
		753.82		1.425E+00	1.585E+00	2.792E+00	2.003E-01	0.511
SB-126		223.80		9.908E-01	3.784E+00	6.390E+00	3.687E-01	0.155
		278.60		-6.470E-02	2.239E+00	3.691E+00	2.224E-01	-0.018
	+	296.50		8.642E+00	2.325E+00	3.121E+00	1.891E-01	2.769
		414.70		1.136E-02	7.100E-02	1.162E-01	6.836E-03	0.098
		415.30		1.558E-02	5.889E+00	9.523E+00	5.604E-01	0.002
		555.20		-1.669E+00	3.663E+00	5.935E+00	3.395E-01	-0.281
		573.80		1.869E-01	9.416E-01	1.604E+00	9.064E-02	0.117
		593.00		1.529E-01	8.045E-01	1.368E+00	7.619E-02	0.112
		656.30		7.251E-01	3.160E+00	5.357E+00	2.788E-01	0.135
		666.33		3.591E-03	6.642E-02	1.110E-01	5.838E-03	0.032
		675.00		6.101E-01	1.759E+00	3.013E+00	1.638E-01	0.203
		695.00		9.348E-02	7.471E-02	1.356E-01	7.939E-03	0.689

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		697.00		1.124E-01	2.536E-01	4.356E-01	2.569E-02	0.258
		720.50	*	4.234E-02	1.590E-01	2.356E-01	1.510E-02	0.180
		856.80		-2.441E-02	5.142E-01	7.228E-01	7.084E-02	-0.034
		989.30		-1.197E+00	1.341E+00	1.956E+00	1.911E-01	-0.612
		1034.80		4.253E+00	9.357E+00	1.580E+01	1.426E+00	0.269
		1213.00		-2.289E+00	5.149E+00	8.287E+00	5.568E-01	-0.276
SB-127		61.10		-2.147E+01	5.222E+01	8.352E+01	1.082E+01	-0.257
		252.40		-1.465E+00	3.166E+00	5.005E+00	2.076E+00	-0.293
		290.80		-2.784E+00	2.009E+01	2.873E+01	2.562E+00	-0.097
		411.60		1.771E+00	1.033E+01	1.690E+01	2.392E+00	0.105
		444.90		-6.247E-01	8.154E+00	1.305E+01	1.370E+00	-0.048
		473.00		-2.450E-01	1.346E+00	2.126E+00	2.315E-01	-0.115
		543.00		8.740E+00	1.280E+01	2.259E+01	2.846E+00	0.387
		603.60		7.368E+00	9.437E+00	1.495E+01	1.534E+00	0.493
		685.20	*	4.137E-01	1.102E+00	1.887E+00	1.686E-01	0.219
		698.50		-1.212E+00	1.197E+01	1.966E+01	2.807E+00	-0.062
		722.20		-1.457E+00	2.790E+01	3.979E+01	3.657E+00	-0.037
		783.80		2.014E+00	2.912E+00	5.076E+00	5.895E-01	0.397
XE-127		57.60		-1.579E+00	7.150E+00	1.156E+01	1.318E+00	-0.137
		145.22		6.426E-01	6.588E-01	1.091E+00	6.156E-02	0.589
		172.10		5.732E-02	1.101E-01	1.899E-01	1.021E-02	0.302
		202.84	*	1.025E-02	4.348E-02	7.134E-02	4.010E-03	0.144
		374.96		2.987E-02	1.810E-01	2.980E-01	1.767E-02	0.100
I-131		80.18		5.209E-01	4.433E+00	6.356E+00	6.953E-01	0.082
		284.30		2.525E-01	1.367E+00	2.280E+00	1.517E-01	0.111
		364.48	*	2.649E-02	9.658E-02	1.605E-01	1.063E-02	0.165
		636.97		-4.398E-02	1.439E+00	2.394E+00	1.452E-01	-0.018
		722.89		-3.986E-01	7.295E+00	1.040E+01	6.786E-01	-0.038
TE-132		49.72		4.370E+00	2.097E+01	3.469E+01	4.165E+00	0.126
		111.76		3.824E+00	2.352E+01	3.784E+01	3.601E+00	0.101
		116.30		5.506E+00	2.116E+01	3.416E+01	3.110E+00	0.161
		228.16	*	3.624E-01	5.209E-01	8.939E-01	1.264E-01	0.405
BA-133		53.15		1.470E+00	4.808E+00	7.967E+00	8.957E-01	0.184
		79.62		9.281E-01	1.400E+00	2.057E+00	3.415E-01	0.451
		81.00		-1.205E-01	1.104E-01	1.448E-01	2.498E-02	-0.833
		276.40		4.222E-01	3.710E-01	6.265E-01	8.184E-02	0.674
		302.84		9.356E-02	1.512E-01	2.293E-01	2.704E-02	0.408
		356.01	*	3.107E-02	4.596E-02	6.946E-02	8.101E-03	0.447
		383.85		-2.085E-01	2.951E-01	4.522E-01	4.937E-02	-0.461
I-133	+	510.53		4.359E-01	2.951E-01	Half-Life too short		
		529.87	*	2.438E-05	2.951E-01	Half-Life too short		
		706.58		1.339E-01	2.951E-01	Half-Life too short		
		856.28		-9.414E-03	2.951E-01	Half-Life too short		
		875.33		1.351E-02	2.951E-01	Half-Life too short		
		1236.41		4.449E-01	2.951E-01	Half-Life too short		
		1298.22		5.822E-02	2.951E-01	Half-Life too short		
CS-134		475.35		8.723E-01	1.861E+00	3.102E+00	1.828E-01	0.281
		563.23		3.326E-01	3.804E-01	6.762E-01	3.933E-02	0.492
		569.32		-1.293E-02	2.122E-01	3.403E-01	1.989E-02	-0.038

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		604.70		3.106E-02	3.503E-02	5.597E-02	3.103E-03	0.555
	+	795.84	*	7.614E-02	8.499E-02	9.352E-02	7.726E-03	0.814
		801.93		-4.026E-01	4.987E-01	6.301E-01	5.293E-02	-0.639
		1038.57		-4.132E+00	4.411E+00	6.367E+00	5.703E-01	-0.649
		1167.94		-1.519E-02	2.675E+00	4.480E+00	2.806E-01	-0.003
		1365.15		8.238E-01	1.160E+00	2.113E+00	1.882E-01	0.390
CS-135		268.24	*	1.502E-01	1.765E-01	2.720E-01	2.123E-02	0.552
I-135		288.45		-5.587E+08	1.765E-01	Half-Life too short		
		417.63		-1.457E+08	1.765E-01	Half-Life too short		
		546.56		-4.218E+08	1.765E-01	Half-Life too short		
		836.80		6.484E+08	1.765E-01	Half-Life too short		
		1038.76		-9.503E+08	1.765E-01	Half-Life too short		
		1124.00		-1.055E+09	1.765E-01	Half-Life too short		
		1131.51		-9.044E+06	1.765E-01	Half-Life too short		
		1260.41	*	-3.477E+08	1.765E-01	Half-Life too short		
		1457.56		4.872E+10	1.765E-01	Half-Life too short		
		1678.03		2.490E+07	1.765E-01	Half-Life too short		
		1706.46		-8.744E+08	1.765E-01	Half-Life too short		
		1791.20		-1.814E+08	1.765E-01	Half-Life too short		
CS-136		66.91		-3.708E-01	7.717E-01	1.225E+00	2.048E-01	-0.303
	+	86.29		1.820E+00	1.539E+00	1.844E+00	2.735E-01	0.987
		153.22		5.374E-01	6.007E-01	1.052E+00	7.362E-02	0.511
		163.89		-8.784E-01	9.124E-01	1.471E+00	1.016E-01	-0.597
		176.55		1.105E-02	3.309E-01	5.459E-01	3.369E-02	0.020
		273.65		-6.307E-01	5.012E-01	6.552E-01	4.454E-02	-0.963
		340.57		1.961E-01	1.382E-01	2.193E-01	1.402E-02	0.894
		818.51		-2.305E-03	7.223E-02	1.182E-01	1.038E-02	-0.020
		1048.07	*	-2.833E-02	1.146E-01	1.800E-01	1.646E-02	-0.157
		1235.34		6.642E-01	6.960E-01	1.232E+00	1.326E-01	0.539
BA-137M		661.65	*	2.848E-03	3.501E-02	5.864E-02	3.030E-03	0.049
CS-137		661.65	*	3.011E-03	3.701E-02	6.199E-02	3.220E-03	0.049
CE-139		165.85	*	6.201E-04	2.697E-02	4.562E-02	2.433E-03	0.014
BA-140		162.64		-6.101E-01	6.553E-01	1.061E+00	6.524E-02	-0.575
		304.84		-5.745E-01	1.287E+00	1.765E+00	4.828E-01	-0.325
		423.70		4.923E-01	1.821E+00	2.990E+00	9.508E-01	0.165
		537.32	*	1.056E-02	2.423E-01	4.093E-01	1.331E-01	0.026
LA-140	+	328.77		5.241E-01	3.452E-01	4.862E-01	3.272E-02	1.078
		432.53		1.442E+00	1.809E+00	3.105E+00	2.018E-01	0.464
		487.03		9.898E-03	1.330E-01	2.144E-01	1.423E-02	0.046
		751.79		-5.245E-01	1.821E+00	2.933E+00	2.409E-01	-0.179
		815.85		3.115E-01	3.090E-01	5.531E-01	5.360E-02	0.563
		867.82		-2.960E-02	1.597E+00	2.251E+00	2.364E-01	-0.013
		919.63		-1.812E-01	2.768E+00	4.476E+00	5.554E-01	-0.040
		925.24		-3.352E-02	1.100E+00	1.784E+00	1.980E-01	-0.019
		1596.49	*	-8.283E-02	8.287E-02	1.104E-01	8.383E-03	-0.751
CE-141		145.44	*	6.050E-02	5.976E-02	9.905E-02	5.823E-03	0.611
CE-143		57.37		-1.940E-04	5.976E-02	Half-Life too short		
		231.56		-8.856E-04	5.976E-02	Half-Life too short		
		293.26	*	4.226E-04	5.976E-02	Half-Life too short		

Sample ID : G232347002 Acquisition date : 6-JUL-2009 11:10:48

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	350.59		1.265E-02	5.976E-02	Half-Life too short		
		490.36		-8.258E-04	5.976E-02	Half-Life too short		
		664.57		1.181E-04	5.976E-02	Half-Life too short		
		721.93		2.442E-04	5.976E-02	Half-Life too short		
CE-144		80.11		1.822E-01	2.245E+00	3.212E+00	3.501E-01	0.057
		133.54	*	3.752E-02	2.012E-01	3.218E-01	4.577E-02	0.117
PM-144		476.78		5.441E-02	6.393E-02	1.098E-01	7.711E-03	0.495
		618.01		-1.026E-02	3.172E-02	5.010E-02	2.910E-03	-0.205
		696.49	*	2.554E-02	3.509E-02	6.150E-02	3.623E-03	0.415
		778.57		-5.446E-01	2.354E+00	3.792E+00	2.946E-01	-0.144
PR-144		696.49	*	1.730E+00	2.376E+00	4.165E+00	2.452E-01	0.415
		1489.15		-7.920E+00	1.159E+01	1.667E+01	1.352E+00	-0.475
PM-146		453.90	*	3.443E-02	4.354E-02	7.426E-02	6.456E-03	0.464
		633.02		-1.457E-01	1.361E+00	2.248E+00	8.262E-01	-0.065
		735.90		-5.438E-02	1.461E-01	2.316E-01	6.508E-02	-0.235
		747.13		-4.047E-02	9.719E-02	1.543E-01	2.024E-02	-0.262
ND-147		91.11		1.041E-01	3.740E-01	4.299E-01	4.865E-02	0.242
		319.41		-2.333E-01	3.098E+00	5.057E+00	3.069E-01	-0.046
		439.89		2.397E+00	5.546E+00	9.231E+00	5.452E-01	0.260
		531.02	*	1.068E-01	5.396E-01	9.217E-01	1.246E-01	0.116
PM-149		285.90	*	1.100E+01	6.439E+01	1.072E+02	1.530E+01	0.103
EU-152		121.78		-3.316E-02	7.365E-02	1.145E-01	9.021E-03	-0.290
		244.69		1.269E-02	3.391E-01	4.968E-01	2.928E-02	0.026
		344.27	*	-1.174E-01	1.168E-01	1.512E-01	1.020E-02	-0.777
		443.98		1.129E-01	9.888E-01	1.607E+00	9.488E-02	0.070
		778.89		2.016E-02	2.637E-01	4.373E-01	3.400E-02	0.046
		867.32		4.689E-01	9.373E-01	1.422E+00	1.435E-01	0.330
		964.01		4.469E-01	3.644E-01	5.831E-01	5.913E-02	0.766
		1085.78		-3.920E-01	4.815E-01	7.079E-01	5.712E-02	-0.554
		1112.02		1.323E-01	3.708E-01	5.422E-01	4.081E-02	0.244
		1407.95		9.370E-02	1.810E-01	3.206E-01	2.691E-02	0.292
GD-153		69.67		6.212E-01	1.853E+00	2.732E+00	2.910E-01	0.227
		83.37		4.837E+00	1.573E+01	2.299E+01	2.557E+00	0.210
		97.43	*	-2.770E-02	8.765E-02	1.227E-01	1.158E-02	-0.226
		103.18		-2.458E-02	1.076E-01	1.704E-01	1.445E-02	-0.144
EU-154		123.07		2.310E-02	5.081E-02	8.260E-02	7.919E-03	0.280
		247.94		2.095E-01	3.335E-01	5.724E-01	5.499E-02	0.366
		591.81		-1.600E-01	5.852E-01	9.573E-01	9.230E-02	-0.167
		723.30		2.239E-02	2.025E-01	2.944E-01	2.250E-02	0.076
		756.87		2.238E-01	8.980E-01	1.497E+00	1.651E-01	0.149
		873.19		5.200E-02	3.107E-01	5.161E-01	6.940E-02	0.101
		996.32		-4.486E-02	4.450E-01	7.135E-01	1.305E-01	-0.063
		1004.76		-6.814E-02	2.317E-01	3.629E-01	4.474E-02	-0.188
		1274.45	*	-6.663E-03	1.300E-01	2.153E-01	2.281E-02	-0.031
EU-155		48.70		-1.806E+00	3.595E+00	5.503E+00	5.367E-01	-0.328
		60.01		-1.147E+00	5.618E+00	9.080E+00	1.026E+00	-0.126
	+	86.54		1.784E-01	1.499E-01	1.821E-01	2.086E-02	0.979
		105.31	*	7.945E-02	1.106E-01	1.824E-01	1.510E-02	0.436
TB-160	+	86.79		4.715E-01	3.961E-01	4.797E-01	5.474E-02	0.983

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		197.04		-1.208E-01	5.150E-01	8.545E-01	4.764E-02	-0.141
		215.65		-6.334E-02	7.470E-01	1.153E+00	6.586E-02	-0.055
		298.57		2.083E-01	1.597E-01	1.970E-01	1.194E-02	1.058
		879.36	*	-8.585E-02	1.438E-01	2.195E-01	2.290E-02	-0.391
		962.29		1.579E-01	6.363E-01	9.210E-01	9.363E-02	0.171
		966.15		7.609E-01	3.134E-01	5.270E-01	5.329E-02	1.444
		1177.93		1.146E-01	4.083E-01	6.998E-01	4.342E-02	0.164
		1271.85		-4.223E-01	7.671E-01	1.202E+00	9.157E-02	-0.351
HO-166M		80.57		1.956E-01	2.804E-01	4.139E-01	4.523E-02	0.473
	+	184.41		8.101E-02	5.767E-02	6.462E-02	3.537E-03	1.254
		280.46		-8.869E-02	8.285E-02	1.278E-01	7.704E-03	-0.694
		410.95		2.519E-01	2.506E-01	4.330E-01	2.546E-02	0.582
		711.68	*	-1.148E-03	6.412E-02	1.060E-01	6.590E-03	-0.011
		752.31		1.597E-01	3.061E-01	5.259E-01	3.754E-02	0.304
		810.29		-6.256E-02	5.930E-02	8.623E-02	7.385E-03	-0.726
TM-171		51.35		-8.490E+00	4.212E+01	6.837E+01	7.468E+00	-0.124
		52.39		-6.242E+00	2.128E+01	3.437E+01	3.829E+00	-0.182
		59.40		-4.287E+00	3.047E+01	4.941E+01	5.617E+00	-0.087
		66.72	*	-1.082E+01	2.975E+01	4.761E+01	5.114E+00	-0.227
LU-176	+	88.36		3.515E-01	2.952E-01	3.518E-01	4.021E-02	0.999
		201.83		-2.721E-03	2.680E-02	4.471E-02	2.509E-03	-0.061
		306.84	*	2.250E-02	2.562E-02	3.984E-02	2.418E-03	0.565
		401.10		1.211E+00	6.878E+00	1.128E+01	6.616E-01	0.107
LU-177		112.95		7.409E-01	1.437E+00	2.348E+00	1.681E-01	0.316
	+	208.36	*	3.602E+00	1.582E+00	1.792E+00	1.015E-01	2.010
LU-177M		52.97		3.272E-01	2.167E+00	3.570E+00	4.005E-01	0.092
		54.07		7.370E-01	1.108E+00	1.858E+00	2.105E-01	0.397
		61.30		-4.489E-01	1.643E+00	2.645E+00	2.950E-01	-0.170
		121.62		-1.929E-01	3.748E-01	5.807E-01	3.580E-02	-0.332
		147.16		-5.408E-01	6.025E-01	9.830E-01	5.518E-02	-0.550
		171.86		4.256E-01	4.488E-01	7.876E-01	4.233E-02	0.540
		218.09		1.725E-01	8.095E-01	1.366E+00	7.829E-02	0.126
	+	268.79		1.851E+00	1.235E+00	1.447E+00	8.678E-02	1.279
		319.02		-5.719E-02	2.561E-01	4.140E-01	2.512E-02	-0.138
		367.43		7.228E-01	8.588E-01	1.481E+00	8.830E-02	0.488
		413.65	*	-1.175E-01	1.870E-01	2.886E-01	1.698E-02	-0.407
HF-181		56.28		-5.196E-01	1.163E+00	1.861E+00	2.122E-01	-0.279
		57.53		-1.421E-01	6.040E-01	9.757E-01	1.112E-01	-0.146
		65.20		1.599E-01	9.820E-01	1.608E+00	1.740E-01	0.099
		133.02		5.661E-03	6.369E-02	1.014E-01	5.945E-03	0.056
		136.25		-3.566E-02	4.483E-01	7.073E-01	4.101E-02	-0.050
		345.85		-2.256E-02	2.231E-01	3.162E-01	1.906E-02	-0.071
		482.03	*	-2.522E-02	4.160E-02	6.307E-02	3.714E-03	-0.400
W-181		56.28		-2.061E-01	4.609E-01	7.375E-01	8.408E-02	-0.279
		57.53		-5.647E-02	2.395E-01	3.869E-01	4.410E-02	-0.146
		65.20	*	6.291E-02	3.863E-01	6.325E-01	6.847E-02	0.099
TA-182		67.75		-1.088E-01	1.135E-01	1.759E-01	1.882E-02	-0.619
		100.10		5.025E-02	1.771E-01	2.839E-01	2.545E-02	0.177
		152.43		3.392E-01	3.232E-01	5.695E-01	3.150E-02	0.596

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		1.353E-01	3.412E-01	5.800E-01	3.340E-02	0.233
		1001.68		-4.629E-01	2.205E+00	3.491E+00	3.344E-01	-0.133
	+	1121.28		6.187E-01	3.277E-01	3.653E-01	2.678E-02	1.694
		1189.05		-1.409E-02	3.445E-01	5.745E-01	3.657E-02	-0.025
		1221.42	*	-4.383E-02	2.264E-01	3.722E-01	2.547E-02	-0.118
		1230.97		-5.613E-02	5.944E-01	9.853E-01	6.885E-02	-0.057
RE-183		57.98		-7.122E-03	2.330E-01	3.799E-01	4.328E-02	-0.019
		59.32		-1.830E-02	1.242E-01	2.013E-01	2.289E-02	-0.091
		67.20		-1.733E-01	2.083E-01	3.256E-01	3.491E-02	-0.532
		162.32	*	-4.162E-02	9.975E-02	1.655E-01	8.911E-03	-0.251
	+	208.81		3.606E+00	1.583E+00	1.825E+00	1.034E-01	1.976
		291.72		-4.519E-02	1.083E+00	1.560E+00	9.443E-02	-0.029
RE-184		57.98		-2.642E-02	8.644E-01	1.409E+00	1.606E-01	-0.019
		59.32		-6.782E-02	4.603E-01	7.461E-01	8.484E-02	-0.091
		67.20		-6.425E-01	7.725E-01	1.207E+00	1.295E-01	-0.532
		161.27		6.045E-02	3.277E-01	5.587E-01	3.016E-02	0.108
		216.55		-5.835E-02	2.504E-01	4.136E-01	2.366E-02	-0.141
		252.85	*	-1.209E-01	2.038E-01	3.255E-01	1.931E-02	-0.371
		318.01		2.267E-01	4.454E-01	7.536E-01	4.573E-02	0.301
		792.07		8.572E-01	1.123E+00	1.754E+00	1.421E-01	0.489
		903.28		-3.608E-01	1.181E+00	1.749E+00	1.908E-01	-0.206
		920.93		-3.196E-01	4.943E-01	7.489E-01	8.017E-02	-0.427
OS-185		59.72		-8.641E-02	3.341E-01	5.386E-01	6.107E-02	-0.160
		61.14		-4.622E-02	1.799E-01	2.899E-01	3.238E-02	-0.159
		69.30		3.495E-02	3.313E-01	4.827E-01	5.145E-02	0.072
		592.07		5.181E-02	2.330E+00	3.909E+00	2.178E-01	0.013
		646.12	*	-3.971E-02	3.753E-02	5.582E-02	2.943E-03	-0.712
		717.42		-3.546E-02	9.300E-01	1.534E+00	9.731E-02	-0.023
		874.81		1.306E-01	5.958E-01	9.950E-01	1.025E-01	0.131
		880.27		-3.057E-02	7.972E-01	1.297E+00	1.356E-01	-0.024
RE-188		155.03	*	8.584E-02	1.640E-01	2.835E-01	1.557E-02	0.303
		477.96		-2.164E-01	3.002E+00	4.784E+00	2.819E-01	-0.045
		633.10		-9.800E-01	2.776E+00	4.492E+00	2.404E-01	-0.218
W-188		63.58		1.519E+00	5.732E+01	9.176E+01	1.004E+01	0.017
		227.08		1.869E+00	1.234E+01	2.073E+01	1.200E+00	0.090
		290.67	*	-1.614E+00	8.438E+00	1.202E+01	7.270E-01	-0.134
IR-192	+	295.96		6.983E-01	1.880E-01	2.691E-01	1.654E-02	2.595
		308.46		-6.969E-05	9.163E-02	1.505E-01	9.230E-03	0.000
		316.51	*	1.093E-03	3.296E-02	5.419E-02	3.304E-03	0.020
		468.07		4.578E-02	7.183E-02	1.080E-01	7.314E-03	0.424
		604.41		3.641E-01	4.609E-01	7.288E-01	8.167E-02	0.500
		612.46		1.418E-01	7.159E-01	1.065E+00	7.798E-02	0.133
AU-195		65.12		-2.995E-03	1.806E-01	2.936E-01	3.180E-02	-0.010
		66.83		-4.474E-02	9.808E-02	1.562E-01	1.678E-02	-0.286
	+	75.70		1.085E+00	2.942E-01	4.613E-01	4.936E-02	2.352
		98.88	*	-8.563E-02	2.284E-01	3.552E-01	3.258E-02	-0.241
		129.76		3.154E+00	2.879E+00	4.793E+00	2.841E-01	0.658
TL-200		367.94	*	2.115E-04	2.879E+00	Half-Life too short		
		579.30		9.507E-05	2.879E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		828.27		1.839E-03	2.879E+00	Half-Life too short		
		1205.75		5.303E-04	2.879E+00	Half-Life too short		
TL-201		68.90		-5.801E-01	3.946E+00	6.060E+00	6.465E-01	-0.096
		70.82		2.494E+00	2.303E+00	3.507E+00	3.730E-01	0.711
		80.30		7.382E-01	4.111E+00	5.914E+00	6.452E-01	0.125
		135.34		-9.002E+00	1.979E+01	3.063E+01	1.781E+00	-0.294
		167.43	*	9.692E-01	5.017E+00	8.544E+00	4.563E-01	0.113
TL-202		68.90		-6.353E-02	4.321E-01	6.636E-01	7.079E-02	-0.096
		70.82		2.723E-01	2.515E-01	3.829E-01	4.074E-02	0.711
		80.30		8.064E-02	4.491E-01	6.460E-01	7.048E-02	0.125
		439.56	*	4.404E-02	6.559E-02	1.111E-01	6.559E-03	0.396
HG-203		70.83		1.240E+00	1.151E+00	1.741E+00	2.606E-01	0.712
		72.87		7.348E-01	7.103E-01	1.067E+00	1.559E-01	0.688
		82.60		-1.054E+00	1.198E+00	1.624E+00	2.499E-01	-0.649
		279.20	*	-2.012E-02	3.837E-02	6.137E-02	3.910E-03	-0.328
BI-207		72.80		1.766E-01	2.093E-01	3.141E-01	3.342E-02	0.562
	+	74.97		6.045E-01	1.639E-01	2.318E-01	2.476E-02	2.608
		84.90		2.657E-01	2.037E-01	3.098E-01	3.483E-02	0.857
		569.67		8.541E-03	3.260E-02	5.347E-02	3.031E-03	0.160
		1063.62	*	-3.875E-02	6.256E-02	9.428E-02	8.014E-03	-0.411
		1770.23		-1.528E-01	5.342E-01	6.716E-01	4.341E-02	-0.228
TL-207		81.07		-2.805E-01	2.406E-01	3.175E-01	3.479E-02	-0.884
		83.78		5.192E-02	1.342E-01	1.968E-01	2.195E-02	0.264
	+	94.90		2.945E-01	4.120E-01	3.831E-01	3.798E-02	0.769
		122.32		2.207E-01	1.708E+00	2.736E+00	1.907E-01	0.081
		144.24		3.063E-02	6.883E-01	1.090E+00	7.763E-02	0.028
		154.21		3.405E-01	3.871E-01	6.773E-01	4.586E-02	0.503
	+	269.46		4.356E-01	2.908E-01	3.497E-01	2.186E-02	1.246
		323.87	*	-5.560E-02	7.376E-01	1.052E+00	1.748E-01	-0.053
	+	338.28		4.997E+00	1.758E+00	2.396E+00	2.556E-01	2.086
		445.03		-3.567E-01	2.324E+00	3.697E+00	3.818E-01	-0.096
PO-209		260.50		6.187E+00	9.530E+00	1.633E+01	9.742E-01	0.379
		262.80		8.032E+00	2.587E+01	4.359E+01	2.604E+00	0.184
		896.60	*	-5.377E+00	7.973E+00	1.206E+01	1.318E+00	-0.446
BI-210		46.50	*	-1.692E+00	5.499E+00	8.526E+00	7.201E-01	-0.198
PB-210		46.50	*	-1.692E+00	5.499E+00	8.526E+00	7.201E-01	-0.198
PO-210		46.50	*	-1.692E+00	5.499E+00	8.526E+00	6.364E-01	-0.198
PB-211		404.84	*	-7.970E-02	9.219E-01	1.481E+00	9.233E-01	-0.054
		427.08		-1.078E+00	2.153E+00	3.165E+00	1.957E+00	-0.341
		831.96		-3.883E-01	1.200E+00	1.862E+00	1.168E+00	-0.209
BI-212	+	727.18	*	1.137E+00	5.206E-01	7.079E-01	5.876E-02	1.606
		785.46		6.179E-01	1.749E+00	2.970E+00	2.358E-01	0.208
		1620.62		5.786E-01	1.480E+00	2.554E+00	1.905E-01	0.226
PO-215		81.07		-2.805E-01	2.406E-01	3.175E-01	3.479E-02	-0.884
		83.78		5.192E-02	1.342E-01	1.968E-01	2.195E-02	0.264
	+	94.90		2.945E-01	4.120E-01	3.831E-01	3.798E-02	0.769
		122.32		2.207E-01	1.708E+00	2.736E+00	1.907E-01	0.081
		144.24		3.063E-02	6.883E-01	1.090E+00	7.763E-02	0.028
		154.21		3.405E-01	3.871E-01	6.773E-01	4.586E-02	0.503

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.356E-01	2.908E-01	3.497E-01	2.186E-02	1.246
		323.87	*	-5.560E-02	7.376E-01	1.052E+00	1.748E-01	-0.053
	+	338.28		4.997E+00	1.758E+00	2.396E+00	2.556E-01	2.086
		445.03		-3.567E-01	2.324E+00	3.697E+00	3.818E-01	-0.096
RN-219	+	271.23		5.589E-01	3.743E-01	4.445E-01	3.667E-02	1.258
		401.81	*	2.386E-02	4.205E-01	6.840E-01	9.325E-02	0.035
RN-220		549.76	*	4.674E+00	2.310E+01	3.951E+01	2.268E+00	0.118
RA-223		81.07		-2.805E-01	2.406E-01	3.175E-01	3.479E-02	-0.884
		83.78		5.192E-02	1.342E-01	1.968E-01	2.195E-02	0.264
	+	94.90		2.945E-01	4.120E-01	3.831E-01	3.798E-02	0.769
		122.32		2.207E-01	1.708E+00	2.736E+00	1.907E-01	0.081
		144.24		3.063E-02	6.883E-01	1.090E+00	7.763E-02	0.028
		154.21		3.405E-01	3.871E-01	6.773E-01	4.586E-02	0.503
	+	269.46		4.356E-01	2.908E-01	3.497E-01	2.186E-02	1.246
		323.87	*	-5.560E-02	7.376E-01	1.052E+00	1.748E-01	-0.053
	+	338.28		4.997E+00	1.758E+00	2.396E+00	2.556E-01	2.086
		445.03		-3.567E-01	2.324E+00	3.697E+00	3.818E-01	-0.096
AC-227		79.80		3.238E-01	1.736E+00	2.497E+00	5.619E-01	0.130
		236.00		8.657E-01	2.829E-01	4.644E-01	4.866E-02	1.864
		256.20	*	-1.250E-01	3.527E-01	5.719E-01	8.019E-02	-0.219
		286.10		3.041E-01	1.561E+00	2.602E+00	3.039E-01	0.117
	+	299.80		5.650E+00	2.597E+00	2.704E+00	4.429E-01	2.090
		304.40		-5.067E-02	1.972E+00	2.837E+00	4.933E-01	-0.018
		334.20		-4.459E-01	2.445E+00	3.443E+00	6.340E-01	-0.130
TH-227		79.80		3.238E-01	1.736E+00	2.497E+00	5.685E-01	0.130
	+	94.00		2.356E+00	3.329E+00	3.572E+00	8.003E-01	0.659
		236.00		8.657E-01	2.793E-01	4.644E-01	4.220E-02	1.864
		256.20	*	-1.250E-01	3.529E-01	5.719E-01	9.693E-02	-0.219
		286.10		3.041E-01	1.590E+00	2.602E+00	2.606E+00	0.117
	+	299.80		5.650E+00	2.597E+00	2.704E+00	4.429E-01	2.090
		304.40		-5.067E-02	1.972E+00	2.837E+00	4.933E-01	-0.018
		334.20		-4.459E-01	2.445E+00	3.443E+00	6.340E-01	-0.130
TH-229		85.43		4.089E-01	2.095E-01	3.232E-01	3.648E-02	1.265
	+	88.47		2.023E-01	1.700E-01	2.005E-01	2.286E-02	1.009
		100.00		5.117E-03	1.872E-01	2.967E-01	2.665E-02	0.017
		193.63	*	-1.091E-01	4.819E-01	8.005E-01	4.441E-02	-0.136
		210.97		1.268E+00	8.205E-01	1.320E+00	7.499E-02	0.960
PA-231		283.67	*	4.842E-01	1.509E+00	2.534E+00	3.518E-01	0.191
	+	301.29		2.260E+00	9.998E-01	1.083E+00	1.148E-01	2.087
TH-231		81.07		-2.805E-01	2.406E-01	3.175E-01	3.479E-02	-0.884
		83.78		5.192E-02	1.342E-01	1.968E-01	2.195E-02	0.264
	+	94.90		2.945E-01	4.120E-01	3.831E-01	3.798E-02	0.769
		122.32		2.207E-01	1.708E+00	2.736E+00	1.907E-01	0.081
		144.24		3.063E-02	6.883E-01	1.090E+00	7.763E-02	0.028
		154.21		3.405E-01	3.871E-01	6.773E-01	4.586E-02	0.503
	+	269.46		4.356E-01	2.908E-01	3.497E-01	2.186E-02	1.246
		323.87	*	-5.560E-02	7.376E-01	1.052E+00	1.748E-01	-0.053
	+	338.28		4.997E+00	1.758E+00	2.396E+00	2.556E-01	2.086
		445.03		-3.567E-01	2.324E+00	3.697E+00	3.818E-01	-0.096

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		3.288E+00	4.771E+00	7.095E+00	7.936E-01	0.463
		92.29		1.953E+00	1.907E+00	3.062E+00	3.205E-01	0.638
		95.87	*	3.178E-02	9.477E-01	1.358E+00	1.320E-01	0.023
		108.00		-1.901E+00	1.788E+00	2.668E+00	2.079E-01	-0.713
PA-233	+	75.28		1.764E+01	5.281E+00	7.092E+00	1.177E+00	2.488
	+	86.59		2.901E+00	2.546E+00	2.966E+00	8.257E-01	0.978
	+	300.12		1.575E+00	7.094E-01	7.578E-01	1.027E-01	2.079
		311.98	*	-3.204E-02	6.694E-02	1.028E-01	6.591E-03	-0.312
		340.50		1.151E+00	7.637E-01	1.154E+00	2.659E-01	0.997
		398.62		8.488E-01	2.217E+00	3.670E+00	9.494E-01	0.231
		415.76		1.954E-01	1.668E+00	2.719E+00	5.605E-01	0.072
PA-234		63.00		-4.592E-01	1.752E+00	2.770E+00	4.690E-01	-0.166
	+	94.67		2.101E-01	2.945E-01	2.844E-01	3.802E-02	0.739
		98.44		-5.127E-02	9.713E-02	1.432E-01	8.001E-02	-0.358
		99.86		-1.221E-01	4.808E-01	7.521E-01	6.774E-02	-0.162
		111.00		1.202E-01	1.843E-01	3.026E-01	3.405E-02	0.397
		131.20		-1.235E-01	1.105E-01	1.654E-01	9.754E-03	-0.747
		152.70		2.864E-01	3.184E-01	5.533E-01	8.693E-02	0.518
	+	186.00		2.916E+00	2.253E+00	2.465E+00	7.519E-01	1.183
		226.40		-7.786E-02	4.056E-01	6.700E-01	7.741E-02	-0.116
		227.20		7.421E-02	4.223E-01	7.100E-01	4.113E-02	0.105
		248.90		4.749E-01	7.520E-01	1.282E+00	2.759E-01	0.370
	+	293.70		4.443E+00	1.369E+00	1.721E+00	2.784E-01	2.581
		369.80		6.043E-01	8.115E-01	1.377E+00	2.873E-01	0.439
		568.70		-3.652E-01	1.097E+00	1.726E+00	9.787E-02	-0.212
		569.50		6.825E-02	2.887E-01	4.726E-01	2.679E-02	0.144
		574.00		8.608E-02	1.453E+00	2.448E+00	1.383E-01	0.035
		699.00		-4.174E-01	7.082E-01	1.107E+00	1.997E-01	-0.377
		706.10		5.118E-01	1.099E+00	1.851E+00	8.174E-01	0.277
		733.00		-6.935E-02	4.024E-01	5.624E-01	1.210E-01	-0.123
		742.81		7.035E-01	1.534E+00	2.509E+00	1.682E+00	0.280
	+	796.30		1.481E+00	1.696E+00	1.777E+00	4.785E-01	0.833
		805.60		9.316E-01	1.025E+00	1.762E+00	5.391E-01	0.529
		819.60		3.164E-01	1.257E+00	2.104E+00	8.010E-01	0.150
		826.30		1.829E-01	8.571E-01	1.428E+00	6.399E-01	0.128
		831.60		-5.128E-01	6.504E-01	9.511E-01	2.853E-01	-0.539
		876.40		-2.726E-01	9.107E-01	1.369E+00	1.409E+00	-0.199
		880.51		-3.045E-03	2.946E-01	4.805E-01	5.029E-02	-0.006
		883.24		9.376E-02	3.084E-01	5.082E-01	3.430E-01	0.184
		899.00		-2.349E-01	8.988E-01	1.417E+00	6.268E-01	-0.166
		925.00		5.501E-01	1.182E+00	2.018E+00	2.151E-01	0.273
		926.50		3.585E-02	1.794E-01	2.978E-01	7.753E-02	0.120
		946.00	*	-5.466E-02	3.249E-01	5.185E-01	1.018E-01	-0.105
		949.00		3.853E-01	4.870E-01	8.498E-01	8.793E-02	0.453
		980.50		-1.068E-01	7.548E-01	1.204E+00	1.192E-01	-0.089
		1394.10		3.921E-01	1.211E+00	2.052E+00	1.335E+00	0.191
PA-234M	+	766.41		2.609E+01	2.835E+01	3.269E+01	2.503E+01	0.798
		1001.03	*	1.469E-01	7.113E+00	1.154E+01	1.378E+00	0.013
TH-234		63.29	*	5.455E-02	1.464E+00	2.346E+00	4.509E-01	0.023

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		92.38		6.247E-01	6.120E-01	9.701E-01	1.845E-01	0.644
U-235		89.95		-2.335E+00	1.868E+00	1.729E+00	5.466E-01	-1.351
	+	93.35		7.329E-01	1.044E+00	1.166E+00	3.331E-01	0.628
		105.00		7.972E-01	1.107E+00	1.789E+00	5.319E-01	0.446
		143.76	*	1.152E-02	2.122E-01	3.362E-01	5.466E-02	0.034
		163.35		-5.405E-01	4.436E-01	6.909E-01	1.233E-01	-0.782
	+	185.71		1.080E-01	7.689E-02	9.108E-02	4.996E-03	1.186
		205.31		5.040E-02	5.216E-01	7.716E-01	1.384E-01	0.065
NP-236	+	94.67		1.593E-01	2.229E-01	2.159E-01	2.150E-02	0.738
		98.44		-3.876E-02	7.025E-02	1.082E-01	1.001E-02	-0.358
		111.00		9.089E-02	1.392E-01	2.289E-01	1.694E-02	0.397
		160.31	*	5.788E-02	7.505E-02	1.310E-01	7.089E-03	0.442
U-238		63.29	*	5.455E-02	1.464E+00	2.346E+00	4.509E-01	0.023
		92.38		6.247E-01	6.039E-01	9.701E-01	1.013E-01	0.644
NP-239		99.55		-2.883E-02	1.604E-01	2.518E-01	2.281E-02	-0.114
		117.00	*	4.351E-02	1.863E-01	3.004E-01	2.007E-02	0.145
	+	209.75		2.877E+00	1.264E+00	1.467E+00	8.322E-02	1.961
		228.18		1.526E-01	2.168E-01	3.737E-01	2.167E-02	0.408
		277.60		8.366E-02	1.754E-01	2.973E-01	1.790E-02	0.281
		334.30		-2.526E-01	1.385E+00	1.951E+00	1.181E-01	-0.129
AM-241		59.54	*	-2.283E-02	1.768E-01	2.868E-01	3.397E-02	-0.080
CM-243		99.55		-2.966E-02	1.650E-01	2.590E-01	2.346E-02	-0.114
		103.76	*	4.477E-02	9.852E-02	1.609E-01	1.350E-02	0.278
		117.00		4.476E-02	1.917E-01	3.090E-01	2.065E-02	0.145
	+	209.75		2.836E+00	1.245E+00	1.446E+00	8.203E-02	1.961
		228.18		1.541E-01	2.191E-01	3.776E-01	2.189E-02	0.408
		277.60		8.434E-02	1.768E-01	2.997E-01	1.805E-02	0.281
CM-247		278.00		4.358E-01	7.173E-01	1.224E+00	7.374E-02	0.356
		287.40		9.778E-01	1.239E+00	2.132E+00	1.289E-01	0.459
		402.60	*	-2.107E-02	3.691E-02	5.719E-02	3.355E-03	-0.368
CF-249		252.85		-4.557E-01	7.684E-01	1.227E+00	7.281E-02	-0.371
		333.44		-2.545E-02	2.207E-01	2.622E-01	1.587E-02	-0.097
		387.95	*	2.999E-02	3.963E-02	6.770E-02	3.971E-03	0.443
CF-251		176.60	*	8.465E-03	1.215E-01	2.007E-01	1.086E-02	0.042
		227.00		5.034E-02	3.743E-01	6.281E-01	3.637E-02	0.080
		285.00		-3.038E-01	1.780E+00	2.908E+00	1.756E-01	-0.104

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347002      *
* Acquisition date :  6-JUL-2009 11:10:48 Detector SN#     :                *
* Detector ID        : GAM08               Sensitivity      : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:03.83     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232347002           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.2618E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.153E+01	3.215E+00	4.613E-01	0.000E+00
CD-109	1.505E+00	1.239E+00	1.569E+00	0.000E+00
SN-126	1.482E-01	1.220E-01	1.456E-01	0.000E+00
TL-208	3.780E-01	7.504E-02	5.771E-02	0.000E+00
BI-211	2.850E+00	4.799E-01	3.527E-01	0.000E+00
PB-212	1.438E+00	1.506E-01	8.837E-02	0.000E+00
PO-212	1.438E+00	1.506E-01	8.837E-02	0.000E+00
BI-214	9.270E-01	1.624E-01	1.101E-01	0.000E+00
PB-214	9.915E-01	1.745E-01	1.229E-01	0.000E+00
PO-214	9.915E-01	1.745E-01	1.229E-01	0.000E+00
PO-216	1.438E+00	1.506E-01	8.837E-02	0.000E+00
PO-218	9.915E-01	1.745E-01	1.229E-01	0.000E+00
RA-224	3.509E+00	1.228E+00	1.005E+00	0.000E+00
RA-226	9.270E-01	1.624E-01	1.101E-01	0.000E+00
AC-228	1.324E+00	3.019E-01	2.311E-01	0.000E+00
RA-228	1.324E+00	3.019E-01	2.311E-01	0.000E+00
TH-228	1.438E+00	1.506E-01	8.836E-02	0.000E+00
TH-230	9.270E-01	1.624E-01	1.101E-01	0.000E+00
TH-232	1.324E+00	3.019E-01	2.311E-01	0.000E+00
U-234	9.270E-01	1.624E-01	1.101E-01	0.000E+00
NP-237	4.351E-01	3.689E-01	4.336E-01	0.000E+00
AM-243	3.368E-01	8.948E-02	9.334E-02	0.000E+00
ANH-511	1.076E-01	7.403E-02	4.879E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-2.850E-03	3.074E-01	5.107E-01	0.000E+00	NOT IDENT.
NA-22	-6.331E-04	4.525E-02	7.691E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.048E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.987E-03	2.762E-02	4.709E-02	0.000E+00	NOT IDENT.

TI-44	0.000E+00	6.536E-02	7.993E-02	0.000E+00	FAIL ABUN
SC-46	1.635E-03	3.992E-02	6.721E-02	0.000E+00	FAIL ABUN
V-48	1.795E-02	7.020E-02	1.198E-01	0.000E+00	NOT IDENT.
CR-51	2.981E-02	3.577E-01	6.148E-01	0.000E+00	NOT IDENT.
MN-52	-7.800E-02	1.716E-01	2.649E-01	0.000E+00	NOT IDENT.
MN-54	-7.634E-03	3.733E-02	6.172E-02	0.000E+00	NOT IDENT.
CO-56	-1.394E-02	4.149E-02	6.763E-02	0.000E+00	NOT IDENT.
CO-57	3.464E-03	2.415E-02	4.092E-02	0.000E+00	NOT IDENT.
CO-58	-5.343E-02	3.821E-02	5.465E-02	0.000E+00	NOT IDENT.
FE-59	-2.524E-02	1.015E-01	1.629E-01	0.000E+00	NOT IDENT.
CO-60	-3.124E-02	4.264E-02	6.657E-02	0.000E+00	NOT IDENT.
ZN-65	3.184E-02	1.030E-01	1.527E-01	0.000E+00	NOT IDENT.
GE-68	6.192E-01	1.364E+00	2.352E+00	0.000E+00	NOT IDENT.
AS-73	4.925E-01	1.074E+00	1.913E+00	0.000E+00	NOT IDENT.
AS-74	4.360E-05	7.810E-02	1.351E-01	0.000E+00	NOT IDENT.
SE-75	-4.341E-02	4.871E-02	6.877E-02	0.000E+00	NOT IDENT.
BR-77	-2.009E+00	7.167E+00	1.153E+01	0.000E+00	FAIL ABUN
SR-82	-1.667E-01	3.716E-01	6.039E-01	0.000E+00	NOT IDENT.
RB-83	-1.709E-02	6.577E-02	1.060E-01	0.000E+00	NOT IDENT.
RB-84	4.614E-02	6.843E-02	1.222E-01	0.000E+00	NOT IDENT.
KR-85	6.741E+00	7.715E+00	1.217E+01	0.000E+00	NOT IDENT.
SR-85	3.415E-02	3.908E-02	6.165E-02	0.000E+00	NOT IDENT.
RB-86	-2.580E-01	8.502E-01	1.358E+00	0.000E+00	NOT IDENT.
Y-88	9.652E-03	3.183E-02	5.597E-02	0.000E+00	NOT IDENT.
ZR-88	-4.613E-03	3.002E-02	5.008E-02	0.000E+00	NOT IDENT.
Y-91	4.893E-01	2.107E+01	3.611E+01	0.000E+00	NOT IDENT.
NB-94	-1.575E-02	3.153E-02	5.150E-02	0.000E+00	NOT IDENT.
NB-95	3.720E-02	5.129E-02	8.129E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.291E-01	2.234E-01	0.000E+00	NOT IDENT.
ZR-95	8.012E-02	7.977E-02	1.442E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.125E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.193E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.045E-02	8.994E+00	1.530E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.602E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.571E-03	2.979E-02	5.226E-02	0.000E+00	NOT IDENT.
RH-102	2.936E-03	2.847E-02	4.776E-02	0.000E+00	FAIL ABUN
RU-103	-1.214E-02	3.960E-02	6.388E-02	0.000E+00	FAIL ABUN
RH-106	8.744E-02	3.169E-01	5.579E-01	0.000E+00	FAIL ABUN
RU-106	8.744E-02	3.168E-01	5.579E-01	0.000E+00	FAIL ABUN
AG-108M	-1.663E-03	3.166E-02	5.279E-02	0.000E+00	NOT IDENT.
AG-110M	1.746E-02	3.383E-02	6.047E-02	0.000E+00	NOT IDENT.
IN-111	-3.828E-01	8.229E-01	1.212E+00	0.000E+00	NOT IDENT.
IN-113M	3.911E-03	4.353E-02	7.388E-02	0.000E+00	NOT IDENT.
SN-113	3.911E-03	4.353E-02	7.388E-02	0.000E+00	NOT IDENT.
IN-114M	4.488E-02	1.914E-01	3.020E-01	0.000E+00	NOT IDENT.
CD-115	-2.153E+00	7.557E+00	1.292E+01	0.000E+00	NOT IDENT.
SN-117M	3.207E-02	4.831E-02	8.838E-02	0.000E+00	NOT IDENT.
SB-122	7.455E-01	1.583E+00	2.837E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.254E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.866E-02	2.646E-02	4.847E-02	0.000E+00	NOT IDENT.
I-124	2.280E-01	5.478E-01	8.636E-01	0.000E+00	NOT IDENT.
SB-124	-7.335E-02	6.596E-02	7.645E-02	0.000E+00	FAIL ABUN
SB-125	2.892E-03	8.436E-02	1.418E-01	0.000E+00	FAIL ABUN
TE-125M	-8.282E+00	9.472E+00	1.511E+01	0.000E+00	NOT IDENT.
I-126	8.616E-03	1.562E-01	2.692E-01	0.000E+00	NOT IDENT.
SB-126	4.234E-02	1.559E-01	2.380E-01	0.000E+00	FAIL ABUN
SB-127	4.137E-01	1.080E+00	1.907E+00	0.000E+00	NOT IDENT.
XE-127	1.025E-02	4.261E-02	7.338E-02	0.000E+00	NOT IDENT.
I-131	2.649E-02	9.464E-02	1.637E-01	0.000E+00	NOT IDENT.
TE-132	3.624E-01	5.105E-01	9.179E-01	0.000E+00	NOT IDENT.
BA-133	3.107E-02	4.504E-02	7.087E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.402E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.614E-02	8.329E-02	9.431E-02	0.000E+00	FAIL ABUN
CS-135	1.502E-01	1.730E-01	2.787E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.443E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-2.833E-02	1.123E-01	1.808E-01	0.000E+00	FAIL ABUN
BA-137M	2.848E-03	3.431E-02	5.930E-02	0.000E+00	NOT IDENT.
CS-137	3.011E-03	3.627E-02	6.269E-02	0.000E+00	NOT IDENT.
CE-139	6.201E-04	2.643E-02	4.706E-02	0.000E+00	NOT IDENT.
BA-140	1.056E-02	2.375E-01	4.152E-01	0.000E+00	NOT IDENT.
LA-140	-8.283E-02	8.121E-02	1.102E-01	0.000E+00	FAIL ABUN
CE-141	6.050E-02	5.856E-02	1.024E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.306E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.752E-02	1.971E-01	3.330E-01	0.000E+00	NOT IDENT.
PM-144	2.554E-02	3.438E-02	6.215E-02	0.000E+00	NOT IDENT.
PR-144	1.730E+00	2.329E+00	4.209E+00	0.000E+00	NOT IDENT.
PM-146	3.443E-02	4.267E-02	7.551E-02	0.000E+00	NOT IDENT.
ND-147	1.068E-01	5.288E-01	9.351E-01	0.000E+00	NOT IDENT.

PM-149	1.100E+01	6.310E+01	1.097E+02	0.000E+00	NOT IDENT.
EU-152	-1.174E-01	1.144E-01	1.543E-01	0.000E+00	NOT IDENT.
GD-153	-2.770E-02	8.589E-02	1.276E-01	0.000E+00	NOT IDENT.
EU-154	-6.663E-03	1.274E-01	2.156E-01	0.000E+00	NOT IDENT.
EU-155	7.945E-02	1.084E-01	1.894E-01	0.000E+00	FAIL ABUN
TB-160	-8.585E-02	1.409E-01	2.211E-01	0.000E+00	FAIL ABUN
HO-166M	-1.148E-03	6.284E-02	1.071E-01	0.000E+00	FAIL ABUN
TM-171	-1.082E+01	2.916E+01	4.973E+01	0.000E+00	NOT IDENT.
LU-176	2.250E-02	2.511E-02	4.074E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.550E+00	1.843E+00	0.000E+00	FAIL ABUN
LU-177M	-1.175E-01	1.832E-01	2.938E-01	0.000E+00	FAIL ABUN
HF-181	-2.522E-02	4.077E-02	6.408E-02	0.000E+00	NOT IDENT.
W-181	6.291E-02	3.786E-01	6.610E-01	0.000E+00	NOT IDENT.
TA-182	-4.383E-02	2.219E-01	3.730E-01	0.000E+00	FAIL ABUN
RE-183	-4.162E-02	9.776E-02	1.708E-01	0.000E+00	FAIL ABUN
RE-184	-1.209E-01	1.997E-01	3.338E-01	0.000E+00	NOT IDENT.
OS-185	-3.971E-02	3.678E-02	5.647E-02	0.000E+00	NOT IDENT.
RE-188	8.584E-02	1.607E-01	2.927E-01	0.000E+00	NOT IDENT.
W-188	-1.614E+00	8.269E+00	1.230E+01	0.000E+00	NOT IDENT.
IR-192	1.093E-03	3.230E-02	5.539E-02	0.000E+00	FAIL ABUN
AU-195	-8.563E-02	2.238E-01	3.690E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.069E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	9.692E-01	4.917E+00	8.812E+00	0.000E+00	NOT IDENT.
TL-202	4.404E-02	6.428E-02	1.130E-01	0.000E+00	NOT IDENT.
HG-203	-2.012E-02	3.760E-02	6.284E-02	0.000E+00	NOT IDENT.
BI-207	-3.875E-02	6.130E-02	9.468E-02	0.000E+00	FAIL ABUN
TL-207	-5.560E-02	7.229E-01	1.075E+00	0.000E+00	FAIL ABUN
PO-209	-5.377E+00	7.814E+00	1.214E+01	0.000E+00	NOT IDENT.
BI-210	-1.692E+00	5.389E+00	8.951E+00	0.000E+00	NOT IDENT.
PB-210	-1.692E+00	5.389E+00	8.951E+00	0.000E+00	NOT IDENT.
PO-210	-1.692E+00	5.389E+00	8.951E+00	0.000E+00	NOT IDENT.
PB-211	-7.970E-02	9.034E-01	1.508E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.102E-01	7.149E-01	0.000E+00	FAIL ABUN
PO-215	-5.560E-02	7.229E-01	1.075E+00	0.000E+00	FAIL ABUN
RN-219	2.386E-02	4.121E-01	6.967E-01	0.000E+00	FAIL ABUN
RN-220	4.674E+00	2.264E+01	4.006E+01	0.000E+00	NOT IDENT.
RA-223	-5.560E-02	7.229E-01	1.075E+00	0.000E+00	FAIL ABUN
AC-227	-1.250E-01	3.456E-01	5.863E-01	0.000E+00	FAIL ABUN
TH-227	-1.250E-01	3.458E-01	5.863E-01	0.000E+00	FAIL ABUN
TH-229	-1.091E-01	4.722E-01	8.239E-01	0.000E+00	FAIL ABUN
PA-231	4.842E-01	1.479E+00	2.594E+00	0.000E+00	FAIL ABUN
TH-231	-5.560E-02	7.229E-01	1.075E+00	0.000E+00	FAIL ABUN
U-231	3.178E-02	9.288E-01	1.411E+00	0.000E+00	NOT IDENT.
PA-233	-3.204E-02	6.560E-02	1.051E-01	0.000E+00	FAIL ABUN
PA-234	-5.466E-02	3.184E-01	5.216E-01	0.000E+00	FAIL ABUN
PA-234M	1.469E-01	6.970E+00	1.160E+01	0.000E+00	FAIL ABUN
TH-234	5.455E-02	1.435E+00	2.452E+00	0.000E+00	NOT IDENT.
U-235	1.152E-02	2.079E-01	3.475E-01	0.000E+00	FAIL ABUN
NP-236	5.788E-02	7.355E-02	1.352E-01	0.000E+00	FAIL ABUN
U-238	5.455E-02	1.435E+00	2.452E+00	0.000E+00	NOT IDENT.
NP-239	4.351E-02	1.826E-01	3.114E-01	0.000E+00	FAIL ABUN
AM-241	-2.283E-02	1.733E-01	3.001E-01	0.000E+00	NOT IDENT.
CM-243	4.477E-02	9.655E-02	1.671E-01	0.000E+00	FAIL ABUN
CM-247	-2.107E-02	3.617E-02	5.826E-02	0.000E+00	NOT IDENT.
CF-249	2.999E-02	3.883E-02	6.899E-02	0.000E+00	NOT IDENT.
CF-251	8.465E-03	1.190E-01	2.069E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:47:20.46

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347002.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:48.
Sample ID         : G232347002           Sample quantity  : 1.26180E+02 GRAM
Detector name     : GAM08                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.83  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1182	10.67*	1.045E+00	3.153E+01	3.153E+01	10.40
CD-109	88.03	102	3.72*	5.526E+00	1.474E+00	1.505E+00	84.00
SN-126	64.28	------	9.60	2.945E+00	------ Line Not Found		------
	86.94	102	8.90	5.526E+00	6.160E-01	6.160E-01	93.24
	87.57	102	37.00*	5.526E+00	1.482E-01	1.482E-01	84.00
TL-208	277.35	------	6.80	4.216E+00	------ Line Not Found		------
	510.84	97	21.60	2.674E+00	4.981E-01	4.981E-01	70.71
	583.14	257	84.20*	2.402E+00	3.780E-01	3.780E-01	20.26
	860.37	69	12.46	1.700E+00	9.622E-01	9.622E-01	53.88
BI-211	72.87	------	1.27	4.110E+00	------ Line Not Found		------
	351.07	440	12.94*	3.546E+00	2.850E+00	2.850E+00	17.18
PB-212	74.81	325	10.70	4.351E+00	2.077E+00	2.077E+00	28.67
	77.11	498	18.00	4.603E+00	1.789E+00	1.789E+00	20.20
	87.30	102	8.00	5.526E+00	6.853E-01	6.853E-01	84.60
	238.63	1012	44.60*	4.695E+00	1.438E+00	1.438E+00	10.69
	300.09	139	3.41	3.975E+00	3.049E+00	3.049E+00	43.77
PO-212	74.81	325	10.70	4.351E+00	2.077E+00	2.077E+00	28.67
	77.11	498	18.00	4.603E+00	1.789E+00	1.789E+00	20.20
	87.30	102	8.00	5.526E+00	6.853E-01	6.853E-01	84.60
	115.19	------	0.60	6.485E+00	------ Line Not Found		------
	238.63	1012	44.60*	4.695E+00	1.438E+00	1.438E+00	10.69
	300.09	139	3.41	3.975E+00	3.049E+00	3.049E+00	43.77
BI-214	609.31	334	46.30*	2.317E+00	9.270E-01	9.270E-01	17.88
	768.36	35	5.04	1.891E+00	1.087E+00	1.087E+00	77.70
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	88	15.10	1.323E+00	1.318E+00	1.318E+00	53.37
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.096E+00	------ Line Not Found		------
	1764.49	35	15.80	9.226E-01	7.227E-01	7.228E-01	60.13
PB-214	74.81	325	6.21	4.351E+00	3.579E+00	3.580E+00	28.10
	77.11	498	10.50	4.603E+00	3.067E+00	3.067E+00	21.59
	87.30	102	4.67	5.526E+00	1.174E+00	1.174E+00	84.36

Sample ID : G232347002 Acquisition date : 6-JUL-2009 11:10:48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	217	7.49	4.655E+00	1.850E+00	1.850E+00	36.14
	295.21	241	19.20	4.031E+00	9.257E-01	9.257E-01	27.62
	351.92	440	37.20*	3.546E+00	9.915E-01	9.915E-01	17.96
PO-214	74.81	325	6.21	4.351E+00	3.579E+00	3.580E+00	28.10
	77.11	498	10.50	4.603E+00	3.067E+00	3.067E+00	21.59
	87.30	102	4.67	5.526E+00	1.174E+00	1.174E+00	84.36
	241.98	217	7.49	4.655E+00	1.850E+00	1.850E+00	36.14
	295.21	241	19.20	4.031E+00	9.257E-01	9.257E-01	27.62
	351.92	440	37.20*	3.546E+00	9.915E-01	9.915E-01	17.96
PO-216	74.81	325	10.70	4.351E+00	2.077E+00	2.077E+00	28.67
	77.11	498	18.00	4.603E+00	1.789E+00	1.789E+00	20.20
	87.30	102	8.00	5.526E+00	6.853E-01	6.853E-01	84.60
	238.63	1012	44.60*	4.695E+00	1.438E+00	1.438E+00	10.69
	300.09	139	3.41	3.975E+00	3.049E+00	3.049E+00	43.77
PO-218	74.81	325	6.21	4.351E+00	3.579E+00	3.580E+00	28.10
	77.11	498	10.50	4.603E+00	3.067E+00	3.067E+00	21.59
	87.30	102	4.67	5.526E+00	1.174E+00	1.174E+00	84.36
	241.98	217	7.49	4.655E+00	1.850E+00	1.850E+00	36.14
	295.21	241	19.20	4.031E+00	9.257E-01	9.257E-01	27.62
	351.92	440	37.20*	3.546E+00	9.915E-01	9.915E-01	17.96
RA-224	240.98	217	3.95*	4.655E+00	3.509E+00	3.509E+00	35.70
RA-226	609.31	334	46.30*	2.317E+00	9.270E-01	9.270E-01	17.88
	768.36	35	5.04	1.891E+00	1.087E+00	1.087E+00	77.70
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	88	15.10	1.323E+00	1.318E+00	1.318E+00	53.37
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.096E+00	------ Line Not Found		------
	1764.49	35	15.80	9.226E-01	7.227E-01	7.228E-01	60.13
AC-228	338.32	167	11.40	3.650E+00	1.197E+00	1.197E+00	52.81
	911.07	199	27.70*	1.613E+00	1.324E+00	1.324E+00	23.27
	969.11	59	16.60	1.520E+00	6.918E-01	6.918E-01	75.83
RA-228	338.32	167	11.40	3.650E+00	1.197E+00	1.197E+00	52.81
	911.07	199	27.70*	1.613E+00	1.324E+00	1.324E+00	23.27
	969.11	59	16.60	1.520E+00	6.918E-01	6.918E-01	75.83
TH-228	84.40	------	1.21	5.304E+00	------ Line Not Found		------
	238.60	1012	44.60*	4.695E+00	1.438E+00	1.438E+00	10.69
	300.10	139	3.41	3.975E+00	3.049E+00	3.049E+00	72.95
TH-230	609.31	334	46.30*	2.317E+00	9.270E-01	9.270E-01	17.88
	768.36	35	5.04	1.891E+00	1.087E+00	1.087E+00	77.70
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	88	15.10	1.323E+00	1.318E+00	1.318E+00	53.37
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.096E+00	------ Line Not Found		------
	1764.49	35	15.80	9.226E-01	7.227E-01	7.227E-01	60.13
TH-232	338.32	167	11.40	3.650E+00	1.197E+00	1.197E+00	34.07
	911.07	199	27.70*	1.613E+00	1.324E+00	1.324E+00	23.27
	969.11	59	16.60	1.520E+00	6.918E-01	6.918E-01	75.83
U-234	609.31	334	46.30*	2.317E+00	9.270E-01	9.270E-01	17.88
	768.36	35	5.04	1.891E+00	1.087E+00	1.087E+00	77.70

Sample ID : G232347002 Acquisition date : 6-JUL-2009 11:10:48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	88	15.10	1.323E+00	1.318E+00	1.318E+00	53.37
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.096E+00	------ Line Not Found		------
	1764.49	35	15.80	9.226E-01	7.227E-01	7.227E-01	60.13
NP-237	86.50	102	12.60*	5.526E+00	4.351E-01	4.351E-01	86.50
	95.87	------	2.60	6.030E+00	------ Line Not Found		------
AM-243	74.67	325	66.00*	4.351E+00	3.368E-01	3.368E-01	27.11
	86.72	102	0.34	5.526E+00	1.632E+01	1.632E+01	84.00
	117.66	------	0.55	6.497E+00	------ Line Not Found		------
	142.18	------	0.13	6.311E+00	------ Line Not Found		------
ANH-511	511.00	97	100.00*	2.674E+00	1.076E-01	1.076E-01	70.22

Flag: "*" = Keyline

Sample ID : G232347002 Acquisition date : 6-JUL-2009 11:10:48

Total number of lines in spectrum 28
Number of unidentified lines 1
Number of lines tentatively identified by NID 27 96.43%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.153E+01	3.153E+01	0.328E+01	10.40	
CD-109	464.00D	1.02	1.474E+00	1.505E+00	1.264E+00	84.00	
SN-126	1.00E+05Y	1.00	1.482E-01	1.482E-01	1.245E-01	84.00	
TL-208	1.41E+10Y	1.00	3.780E-01	3.780E-01	0.766E-01	20.26	
BI-211	7.04E+08Y	1.00	2.850E+00	2.850E+00	0.490E+00	17.18	
PB-212	1.41E+10Y	1.00	1.438E+00	1.438E+00	0.154E+00	10.69	
PO-212	1.41E+10Y	1.00	1.438E+00	1.438E+00	0.154E+00	10.69	
BI-214	1600.00Y	1.00	9.270E-01	9.270E-01	1.657E-01	17.88	
PB-214	1600.00Y	1.00	9.915E-01	9.915E-01	1.780E-01	17.96	
PO-214	1600.00Y	1.00	9.915E-01	9.915E-01	1.780E-01	17.96	
PO-216	1.41E+10Y	1.00	1.438E+00	1.438E+00	0.154E+00	10.69	
PO-218	1600.00Y	1.00	9.915E-01	9.915E-01	1.780E-01	17.96	
RA-224	1.41E+10Y	1.00	3.509E+00	3.509E+00	1.253E+00	35.70	
RA-226	1600.00Y	1.00	9.270E-01	9.270E-01	1.657E-01	17.88	
AC-228	1.41E+10Y	1.00	1.324E+00	1.324E+00	0.308E+00	23.27	
RA-228	1.41E+10Y	1.00	1.324E+00	1.324E+00	0.308E+00	23.27	
TH-228	1.41E+10Y	1.00	1.438E+00	1.438E+00	0.154E+00	10.69	
TH-230	4.47E+09Y	1.00	9.270E-01	9.270E-01	1.657E-01	17.88	
TH-232	1.41E+10Y	1.00	1.324E+00	1.324E+00	0.308E+00	23.27	
U-234	4.47E+09Y	1.00	9.270E-01	9.270E-01	1.657E-01	17.88	
NP-237	2.14E+06Y	1.00	4.351E-01	4.351E-01	3.764E-01	86.50	
AM-243	7380.00Y	1.00	3.368E-01	3.368E-01	0.913E-01	27.11	
ANH-511	1.00E+09Y	1.00	1.076E-01	1.076E-01	0.755E-01	70.22	
			---	---			
	Total Activity :		5.718E+01	5.721E+01			

Grand Total Activity : 5.718E+01 5.721E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232347002 Acquisition date : 6-JUL-2009 11:10:48

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	94.03	66	543	1.35	188.12	181	10	9.15E-03	****	5.94E+00	T
0	185.79	109	342	1.21	371.42	367	11	1.51E-02	71.0	5.54E+00	T
0	209.07	161	262	1.26	417.93	413	12	2.24E-02	43.5	5.14E+00	T
0	270.09	86	193	2.06	539.85	535	11	1.19E-02	66.5	4.30E+00	T
0	327.56	63	112	0.95	654.68	651	9	8.77E-03	65.5	3.74E+00	T
0	462.27	32	120	0.87	923.88	921	10	4.44E-03	****	2.89E+00	T
0	726.93	90	74	1.60	1452.95	1447	13	1.24E-02	45.0	1.99E+00	T
0	795.71	36	74	1.67	1590.46	1582	15	4.94E-03	****	1.83E+00	T
0	1846.57	7	8	1.30	3693.44	3686	11	9.49E-04	****	9.04E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:47:25.37

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                DETECTOR DATA                                *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347002.CNF;1   *
* Acquisition date  : 6-JUL-2009 11:10:48.  Detector SN#     :                *
* Detector ID       : GAM08                 Sensitivity      : 5.00000       *
* Geometry          : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:03.83          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                                SAMPLE DATA                                  *
*                                                                             *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID         : G232347002            Analyst initials: MXR1           *
* Batch Number      : 880723                Sample Quantity : 1.26180E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                  QC DATA                                    *
*                                                                             *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06.7MS Isotope       :                 *
* MSD ID           :                      MSD Isotope      :                 *
* LCS ID           : 1032-A               LCS Isotope      :                 *
*******************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.153E+01	3.281E+00	4.616E-01	3.911E-02	68.319
CD-109	1.505E+00	1.264E+00	1.507E+00	1.736E-01	0.998
SN-126	1.482E-01	1.245E-01	1.400E-01	1.607E-02	1.059
TL-208	3.780E-01	7.657E-02	5.696E-02	3.715E-03	6.637
BI-211	2.850E+00	4.897E-01	3.456E-01	2.291E-02	8.247
PB-212	1.438E+00	1.537E-01	8.611E-02	6.354E-03	16.702
PO-212	1.438E+00	1.537E-01	8.611E-02	6.354E-03	16.702
BI-214	9.270E-01	1.657E-01	1.087E-01	8.207E-03	8.525
PB-214	9.915E-01	1.780E-01	1.205E-01	1.016E-02	8.231
PO-214	9.915E-01	1.780E-01	1.205E-01	1.016E-02	8.231
PO-216	1.438E+00	1.537E-01	8.611E-02	6.354E-03	16.702
PO-218	9.915E-01	1.780E-01	1.205E-01	1.016E-02	8.231
RA-224	3.509E+00	1.253E+00	9.799E-01	5.755E-02	3.581
RA-226	9.270E-01	1.657E-01	1.087E-01	8.207E-03	8.525
AC-228	1.324E+00	3.081E-01	2.296E-01	2.987E-02	5.765
RA-228	1.324E+00	3.081E-01	2.296E-01	2.987E-02	5.765
TH-228	1.438E+00	1.537E-01	8.610E-02	6.353E-03	16.704
TH-230	9.270E-01	1.657E-01	1.087E-01	8.207E-03	8.525

Sample ID : G232347002 Acquisition date : 6-JUL-2009 11:10:48

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.324E+00	3.081E-01	2.296E-01	2.987E-02	5.765
U-234	9.270E-01	1.657E-01	1.087E-01	8.207E-03	8.525
NP-237	4.351E-01	3.764E-01	4.165E-01	9.816E-02	1.045
AM-243	3.368E-01	9.130E-02	8.949E-02	9.550E-03	3.763
ANH-511	1.076E-01	7.554E-02	4.807E-02	2.809E-03	2.238

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.850E-03		3.137E-01	5.026E-01	3.434E-02	-0.006
NA-22	-6.331E-04		4.618E-02	7.679E-02	5.888E-03	-0.008
NA-24	-1.727E-01		1.045E-01	Half-Life too short		
AL-26	3.987E-03		2.818E-02	4.726E-02	2.916E-03	0.084
TI-44	3.301E-01	+	6.669E-02	7.669E-02	8.287E-03	4.305
SC-46	1.635E-03		4.073E-02	6.675E-02	7.153E-03	0.024
V-48	1.795E-02		7.164E-02	1.192E-01	1.175E-02	0.151
CR-51	2.981E-02		3.650E-01	6.016E-01	4.032E-02	0.050
MN-52	-7.800E-02		1.751E-01	2.650E-01	2.203E-02	-0.294
MN-54	-7.634E-03		3.809E-02	6.124E-02	5.638E-03	-0.125
CO-56	-1.394E-02		4.234E-02	6.711E-02	6.394E-03	-0.208
CO-57	3.464E-03		2.464E-02	3.950E-02	2.422E-03	0.088
CO-58	-5.343E-02		3.899E-02	5.420E-02	4.660E-03	-0.986
FE-59	-2.524E-02		1.036E-01	1.623E-01	1.389E-02	-0.156
CO-60	-3.124E-02		4.351E-02	6.651E-02	5.708E-03	-0.470
ZN-65	3.184E-02		1.051E-01	1.522E-01	1.136E-02	0.209
GE-68	6.192E-01		1.391E+00	2.342E+00	1.929E-01	0.264
AS-73	4.925E-01		1.096E+00	1.826E+00	2.059E-01	0.270
AS-74	4.360E-05		7.970E-02	1.334E-01	7.409E-03	0.000
SE-75	-4.341E-02		4.970E-02	6.711E-02	4.053E-03	-0.647
BR-77	-2.009E+00		7.313E+00	1.136E+01	6.616E-01	-0.177
SR-82	-1.667E-01		3.792E-01	5.985E-01	4.619E-02	-0.278
RB-83	-1.709E-02		6.711E-02	1.045E-01	6.085E-03	-0.164
RB-84	4.614E-02		6.982E-02	1.214E-01	1.274E-02	0.380
KR-85	6.741E+00		7.872E+00	1.199E+01	6.999E-01	0.562
SR-85	3.415E-02		3.988E-02	6.074E-02	3.546E-03	0.562
RB-86	-2.580E-01		8.675E-01	1.353E+00	1.116E-01	-0.191
Y-88	9.652E-03		3.248E-02	5.619E-02	3.352E-03	0.172
ZR-88	-4.613E-03		3.064E-02	4.914E-02	2.874E-03	-0.094
Y-91	4.893E-01		2.150E+01	3.602E+01	2.377E+00	0.014
NB-94	-1.575E-02		3.218E-02	5.097E-02	3.068E-03	-0.309
NB-95	3.720E-02		5.234E-02	8.055E-02	6.007E-03	0.462
NB-95M	2.944E-01		1.317E-01	2.176E-01	1.646E-02	1.353
ZR-95	8.012E-02		8.140E-02	1.429E-01	1.179E-02	0.561
NB-97	7.323E-03		1.595E-02	Half-Life too short		
ZR-97	9.120E-01		3.670E-01	Half-Life too short		
MO-99	-1.045E-02		9.177E+00	1.516E+01	2.160E+00	-0.001
TC-99M	-4.484E+08		8.172E+08	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101	-2.571E-03		3.040E-02	5.079E-02	2.836E-03	-0.051
RH-102	2.936E-03		2.906E-02	4.701E-02	2.771E-03	0.062
RU-103	-1.214E-02		4.041E-02	6.290E-02	7.974E-03	-0.193
RH-106	8.744E-02		3.234E-01	5.512E-01	6.368E-02	0.159
RU-106	8.744E-02		3.233E-01	5.512E-01	2.987E-02	0.159
AG-108M	-1.663E-03		3.231E-02	5.188E-02	3.316E-03	-0.032
AG-110M	1.746E-02		3.452E-02	5.980E-02	3.354E-03	0.292
IN-111	-3.828E-01		8.397E-01	1.182E+00	6.969E-02	-0.324
IN-113M	3.911E-03		4.441E-02	7.250E-02	4.518E-03	0.054
SN-113	3.911E-03		4.441E-02	7.250E-02	4.518E-03	0.054
IN-114M	4.488E-02		1.953E-01	2.934E-01	1.620E-02	0.153
CD-115	-2.153E+00		7.711E+00	1.273E+01	7.391E-01	-0.169
SN-117M	3.207E-02		4.930E-02	8.563E-02	4.658E-03	0.375
SB-122	7.455E-01		1.615E+00	2.799E+00	1.593E-01	0.266
I-123	8.846E-01		6.398E-01	Half-Life too short		
TE-123M	1.866E-02		2.700E-02	4.696E-02	2.590E-03	0.397
I-124	2.280E-01		5.590E-01	8.528E-01	4.708E-02	0.267
SB-124	-7.335E-02		6.731E-02	7.666E-02	5.700E-03	-0.957
SB-125	2.892E-03		8.608E-02	1.393E-01	8.554E-03	0.021
TE-125M	-8.282E+00		9.665E+00	1.457E+01	1.385E+00	-0.569
I-126	8.616E-03		1.594E-01	2.663E-01	1.401E-02	0.032
SB-126	4.234E-02		1.590E-01	2.356E-01	1.510E-02	0.180
SB-127	4.137E-01		1.102E+00	1.887E+00	1.686E-01	0.219
XE-127	1.025E-02		4.348E-02	7.134E-02	4.010E-03	0.144
I-131	2.649E-02		9.658E-02	1.605E-01	1.063E-02	0.165
TE-132	3.624E-01		5.209E-01	8.939E-01	1.264E-01	0.405
BA-133	3.107E-02		4.596E-02	6.946E-02	8.101E-03	0.447
I-133	2.438E-05		1.226E-03	Half-Life too short		
CS-134	7.614E-02	+	8.499E-02	9.352E-02	7.726E-03	0.814
CS-135	1.502E-01		1.765E-01	2.720E-01	2.123E-02	0.552
I-135	-3.477E+08		1.757E+08	Half-Life too short		
CS-136	-2.833E-02		1.146E-01	1.800E-01	1.646E-02	-0.157
BA-137M	2.848E-03		3.501E-02	5.864E-02	3.030E-03	0.049
CS-137	3.011E-03		3.701E-02	6.199E-02	3.220E-03	0.049
CE-139	6.201E-04		2.697E-02	4.562E-02	2.433E-03	0.014
BA-140	1.056E-02		2.423E-01	4.093E-01	1.331E-01	0.026
LA-140	-8.283E-02		8.287E-02	1.104E-01	8.383E-03	-0.751
CE-141	6.050E-02		5.976E-02	9.905E-02	5.823E-03	0.611
CE-143	4.226E-04		6.664E-05	Half-Life too short		
CE-144	3.752E-02		2.012E-01	3.218E-01	4.577E-02	0.117
PM-144	2.554E-02		3.509E-02	6.150E-02	3.623E-03	0.415
PR-144	1.730E+00		2.376E+00	4.165E+00	2.452E-01	0.415
PM-146	3.443E-02		4.354E-02	7.426E-02	6.456E-03	0.464
ND-147	1.068E-01		5.396E-01	9.217E-01	1.246E-01	0.116
PM-149	1.100E+01		6.439E+01	1.072E+02	1.530E+01	0.103
EU-152	-1.174E-01		1.168E-01	1.512E-01	1.020E-02	-0.777
GD-153	-2.770E-02		8.765E-02	1.227E-01	1.158E-02	-0.226
EU-154	-6.663E-03		1.300E-01	2.153E-01	2.281E-02	-0.031

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	7.945E-02		1.106E-01	1.824E-01	1.510E-02	0.436
TB-160	-8.585E-02		1.438E-01	2.195E-01	2.290E-02	-0.391
HO-166M	-1.148E-03		6.412E-02	1.060E-01	6.590E-03	-0.011
TM-171	-1.082E+01		2.975E+01	4.761E+01	5.114E+00	-0.227
LU-176	2.250E-02		2.562E-02	3.984E-02	2.418E-03	0.565
LU-177	3.602E+00	+	1.582E+00	1.792E+00	1.015E-01	2.010
LU-177M	-1.175E-01		1.870E-01	2.886E-01	1.698E-02	-0.407
HF-181	-2.522E-02		4.160E-02	6.307E-02	3.714E-03	-0.400
W-181	6.291E-02		3.863E-01	6.325E-01	6.847E-02	0.099
TA-182	-4.383E-02		2.264E-01	3.722E-01	2.547E-02	-0.118
RE-183	-4.162E-02		9.975E-02	1.655E-01	8.911E-03	-0.251
RE-184	-1.209E-01		2.038E-01	3.255E-01	1.931E-02	-0.371
OS-185	-3.971E-02		3.753E-02	5.582E-02	2.943E-03	-0.712
RE-188	8.584E-02		1.640E-01	2.835E-01	1.557E-02	0.303
W-188	-1.614E+00		8.438E+00	1.202E+01	7.270E-01	-0.134
IR-192	1.093E-03		3.296E-02	5.419E-02	3.304E-03	0.020
AU-195	-8.563E-02		2.284E-01	3.552E-01	3.258E-02	-0.241
TL-200	2.115E-04		1.056E-04	Half-Life too short		
TL-201	9.692E-01		5.017E+00	8.544E+00	4.563E-01	0.113
TL-202	4.404E-02		6.559E-02	1.111E-01	6.559E-03	0.396
HG-203	-2.012E-02		3.837E-02	6.137E-02	3.910E-03	-0.328
BI-207	-3.875E-02		6.256E-02	9.428E-02	8.014E-03	-0.411
TL-207	-5.560E-02		7.376E-01	1.052E+00	1.748E-01	-0.053
PO-209	-5.377E+00		7.973E+00	1.206E+01	1.318E+00	-0.446
BI-210	-1.692E+00		5.499E+00	8.526E+00	7.201E-01	-0.198
PB-210	-1.692E+00		5.499E+00	8.526E+00	7.201E-01	-0.198
PO-210	-1.692E+00		5.499E+00	8.526E+00	6.364E-01	-0.198
PB-211	-7.970E-02		9.219E-01	1.481E+00	9.233E-01	-0.054
BI-212	1.137E+00	+	5.206E-01	7.079E-01	5.876E-02	1.606
PO-215	-5.560E-02		7.376E-01	1.052E+00	1.748E-01	-0.053
RN-219	2.386E-02		4.205E-01	6.840E-01	9.325E-02	0.035
RN-220	4.674E+00		2.310E+01	3.951E+01	2.268E+00	0.118
RA-223	-5.560E-02		7.376E-01	1.052E+00	1.748E-01	-0.053
AC-227	-1.250E-01		3.527E-01	5.719E-01	8.019E-02	-0.219
TH-227	-1.250E-01		3.529E-01	5.719E-01	9.693E-02	-0.219
TH-229	-1.091E-01		4.819E-01	8.005E-01	4.441E-02	-0.136
PA-231	4.842E-01		1.509E+00	2.534E+00	3.518E-01	0.191
TH-231	-5.560E-02		7.376E-01	1.052E+00	1.748E-01	-0.053
U-231	3.178E-02		9.477E-01	1.358E+00	1.320E-01	0.023
PA-233	-3.204E-02		6.694E-02	1.028E-01	6.591E-03	-0.312
PA-234	-5.466E-02		3.249E-01	5.185E-01	1.018E-01	-0.105
PA-234M	1.469E-01		7.113E+00	1.154E+01	1.378E+00	0.013
TH-234	5.455E-02		1.464E+00	2.346E+00	4.509E-01	0.023
U-235	1.152E-02		2.122E-01	3.362E-01	5.466E-02	0.034
NP-236	5.788E-02		7.505E-02	1.310E-01	7.089E-03	0.442
U-238	5.455E-02		1.464E+00	2.346E+00	4.509E-01	0.023
NP-239	4.351E-02		1.863E-01	3.004E-01	2.007E-02	0.145
AM-241	-2.283E-02		1.768E-01	2.868E-01	3.397E-02	-0.080

Sample ID : G232347002 Acquisition date : 6-JUL-2009 11:10:48

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.477E-02		9.852E-02	1.609E-01	1.350E-02	0.278
CM-247	-2.107E-02		3.691E-02	5.719E-02	3.355E-03	-0.368
CF-249	2.999E-02		3.963E-02	6.770E-02	3.971E-03	0.443
CF-251	8.465E-03		1.215E-01	2.007E-01	1.086E-02	0.042

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232347002           *
* Acquisition date  :  6-JUL-2009 11:10:48 Detector SN#     :               *
* Detector ID       : GAM08                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:03.83     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232347002           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.2618E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.153E+01	3.215E+00	2.308E-01	1.640E+00
CD-109	1.505E+00	1.239E+00	7.848E-01	6.321E-01
SN-126	1.482E-01	1.220E-01	7.287E-02	6.224E-02
TL-208	3.780E-01	7.504E-02	2.887E-02	3.829E-02
BI-211	2.850E+00	4.799E-01	1.765E-01	2.449E-01
PB-212	1.438E+00	1.506E-01	4.421E-02	7.686E-02
PO-212	1.438E+00	1.506E-01	4.421E-02	7.686E-02
BI-214	9.270E-01	1.624E-01	5.508E-02	8.287E-02
PB-214	9.915E-01	1.745E-01	6.151E-02	8.902E-02
PO-214	9.915E-01	1.745E-01	6.151E-02	8.902E-02
PO-216	1.438E+00	1.506E-01	4.421E-02	7.686E-02
PO-218	9.915E-01	1.745E-01	6.151E-02	8.902E-02
RA-224	3.509E+00	1.228E+00	5.030E-01	6.263E-01
RA-226	9.270E-01	1.624E-01	5.508E-02	8.287E-02
AC-228	1.324E+00	3.019E-01	1.156E-01	1.540E-01
RA-228	1.324E+00	3.019E-01	1.156E-01	1.540E-01
TH-228	1.438E+00	1.506E-01	4.420E-02	7.686E-02
TH-230	9.270E-01	1.624E-01	5.508E-02	8.287E-02
TH-232	1.324E+00	3.019E-01	1.156E-01	1.540E-01
U-234	9.270E-01	1.624E-01	5.508E-02	8.287E-02
NP-237	4.351E-01	3.689E-01	2.169E-01	1.882E-01
AM-243	3.368E-01	8.948E-02	4.670E-02	4.565E-02
ANH-511	1.076E-01	7.403E-02	2.441E-02	3.777E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-2.850E-03	3.074E-01	2.555E-01	1.568E-01	NOT IDENT.
NA-22	-6.331E-04	4.525E-02	3.848E-02	2.309E-02	NOT IDENT.
NA-24	-1.727E+05	2.048E+05	0.000E+00	1.045E+05	SHORT HLIF
AL-26	3.987E-03	2.762E-02	2.356E-02	1.409E-02	NOT IDENT.

TI-44	3.301E-01	6.536E-02	3.999E-02	3.334E-02	FAIL ABUN
SC-46	1.635E-03	3.992E-02	3.362E-02	2.037E-02	FAIL ABUN
V-48	1.795E-02	7.020E-02	5.993E-02	3.582E-02	NOT IDENT.
CR-51	2.981E-02	3.577E-01	3.076E-01	1.825E-01	NOT IDENT.
MN-52	-7.800E-02	1.716E-01	1.325E-01	8.757E-02	NOT IDENT.
MN-54	-7.634E-03	3.733E-02	3.088E-02	1.904E-02	NOT IDENT.
CO-56	-1.394E-02	4.149E-02	3.383E-02	2.117E-02	NOT IDENT.
CO-57	3.464E-03	2.415E-02	2.047E-02	1.232E-02	NOT IDENT.
CO-58	-5.343E-02	3.821E-02	2.734E-02	1.950E-02	NOT IDENT.
FE-59	-2.524E-02	1.015E-01	8.149E-02	5.179E-02	NOT IDENT.
CO-60	-3.124E-02	4.264E-02	3.331E-02	2.176E-02	NOT IDENT.
ZN-65	3.184E-02	1.030E-01	7.640E-02	5.256E-02	NOT IDENT.
GE-68	6.192E-01	1.364E+00	1.177E+00	6.957E-01	NOT IDENT.
AS-73	4.925E-01	1.074E+00	9.572E-01	5.481E-01	NOT IDENT.
AS-74	4.360E-05	7.810E-02	6.760E-02	3.985E-02	NOT IDENT.
SE-75	-4.341E-02	4.871E-02	3.440E-02	2.485E-02	NOT IDENT.
BR-77	-2.009E+00	7.167E+00	5.769E+00	3.656E+00	FAIL ABUN
SR-82	-1.667E-01	3.716E-01	3.021E-01	1.896E-01	NOT IDENT.
RB-83	-1.709E-02	6.577E-02	5.306E-02	3.356E-02	NOT IDENT.
RB-84	4.614E-02	6.843E-02	6.115E-02	3.491E-02	NOT IDENT.
KR-85	6.741E+00	7.715E+00	6.089E+00	3.936E+00	NOT IDENT.
SR-85	3.415E-02	3.908E-02	3.085E-02	1.994E-02	NOT IDENT.
RB-86	-2.580E-01	8.502E-01	6.794E-01	4.338E-01	NOT IDENT.
Y-88	9.652E-03	3.183E-02	2.800E-02	1.624E-02	NOT IDENT.
ZR-88	-4.613E-03	3.002E-02	2.505E-02	1.532E-02	NOT IDENT.
Y-91	4.893E-01	2.107E+01	1.806E+01	1.075E+01	NOT IDENT.
NB-94	-1.575E-02	3.153E-02	2.576E-02	1.609E-02	NOT IDENT.
NB-95	3.720E-02	5.129E-02	4.067E-02	2.617E-02	NOT IDENT.
NB-95M	2.944E-01	1.291E-01	1.117E-01	6.585E-02	NOT IDENT.
ZR-95	8.012E-02	7.977E-02	7.215E-02	4.070E-02	NOT IDENT.
NB-97	7.323E+03	3.125E+04	0.000E+00	1.595E+04	SHORT HLIF
ZR-97	9.120E+05	7.193E+05	0.000E+00	3.670E+05	SHORT HLIF
MO-99	-1.045E-02	8.994E+00	7.657E+00	4.589E+00	NOT IDENT.
TC-99M	-4.484E+14	1.602E+15	0.000E+00	8.172E+14	SHORT HLIF
RH-101	-2.571E-03	2.979E-02	2.615E-02	1.520E-02	NOT IDENT.
RH-102	2.936E-03	2.847E-02	2.390E-02	1.453E-02	FAIL ABUN
RU-103	-1.214E-02	3.960E-02	3.196E-02	2.021E-02	FAIL ABUN
RH-106	8.744E-02	3.169E-01	2.791E-01	1.617E-01	FAIL ABUN
RU-106	8.744E-02	3.168E-01	2.791E-01	1.616E-01	FAIL ABUN
AG-108M	-1.663E-03	3.166E-02	2.641E-02	1.615E-02	NOT IDENT.
AG-110M	1.746E-02	3.383E-02	3.025E-02	1.726E-02	NOT IDENT.
IN-111	-3.828E-01	8.229E-01	6.066E-01	4.199E-01	NOT IDENT.
IN-113M	3.911E-03	4.353E-02	3.696E-02	2.221E-02	NOT IDENT.
SN-113	3.911E-03	4.353E-02	3.696E-02	2.221E-02	NOT IDENT.
IN-114M	4.488E-02	1.914E-01	1.511E-01	9.765E-02	NOT IDENT.
CD-115	-2.153E+00	7.557E+00	6.463E+00	3.856E+00	NOT IDENT.
SN-117M	3.207E-02	4.831E-02	4.422E-02	2.465E-02	NOT IDENT.
SB-122	7.455E-01	1.583E+00	1.419E+00	8.077E-01	NOT IDENT.
I-123	8.846E+05	1.254E+06	0.000E+00	6.398E+05	SHORT HLIF
TE-123M	1.866E-02	2.646E-02	2.425E-02	1.350E-02	NOT IDENT.
I-124	2.280E-01	5.478E-01	4.320E-01	2.795E-01	NOT IDENT.
SB-124	-7.335E-02	6.596E-02	3.825E-02	3.366E-02	FAIL ABUN
SB-125	2.892E-03	8.436E-02	7.094E-02	4.304E-02	FAIL ABUN
TE-125M	-8.282E+00	9.472E+00	7.562E+00	4.833E+00	NOT IDENT.
I-126	8.616E-03	1.562E-01	1.347E-01	7.969E-02	NOT IDENT.
SB-126	4.234E-02	1.559E-01	1.191E-01	7.952E-02	FAIL ABUN
SB-127	4.137E-01	1.080E+00	9.541E-01	5.511E-01	NOT IDENT.
XE-127	1.025E-02	4.261E-02	3.671E-02	2.174E-02	NOT IDENT.
I-131	2.649E-02	9.464E-02	8.192E-02	4.829E-02	NOT IDENT.
TE-132	3.624E-01	5.105E-01	4.592E-01	2.604E-01	NOT IDENT.
BA-133	3.107E-02	4.504E-02	3.546E-02	2.298E-02	NOT IDENT.
I-133	2.438E+01	2.402E+03	0.000E+00	1.226E+03	SHORT HLIF
CS-134	7.614E-02	8.329E-02	4.718E-02	4.249E-02	FAIL ABUN
CS-135	1.502E-01	1.730E-01	1.394E-01	8.825E-02	NOT IDENT.
I-135	-3.477E+14	3.443E+14	0.000E+00	1.757E+14	SHORT HLIF
CS-136	-2.833E-02	1.123E-01	9.046E-02	5.730E-02	FAIL ABUN
BA-137M	2.848E-03	3.431E-02	2.967E-02	1.751E-02	NOT IDENT.
CS-137	3.011E-03	3.627E-02	3.136E-02	1.851E-02	NOT IDENT.
CE-139	6.201E-04	2.643E-02	2.354E-02	1.349E-02	NOT IDENT.
BA-140	1.056E-02	2.375E-01	2.077E-01	1.212E-01	NOT IDENT.
LA-140	-8.283E-02	8.121E-02	5.512E-02	4.144E-02	FAIL ABUN
CE-141	6.050E-02	5.856E-02	5.121E-02	2.988E-02	NOT IDENT.
CE-143	4.226E+02	1.306E+02	0.000E+00	6.664E+01	SHORT HLIF
CE-144	3.752E-02	1.971E-01	1.666E-01	1.006E-01	NOT IDENT.
PM-144	2.554E-02	3.438E-02	3.109E-02	1.754E-02	NOT IDENT.
PR-144	1.730E+00	2.329E+00	2.106E+00	1.188E+00	NOT IDENT.
PM-146	3.443E-02	4.267E-02	3.778E-02	2.177E-02	NOT IDENT.
ND-147	1.068E-01	5.288E-01	4.678E-01	2.698E-01	NOT IDENT.

PM-149	1.100E+01	6.310E+01	5.490E+01	3.219E+01	NOT IDENT.
EU-152	-1.174E-01	1.144E-01	7.721E-02	5.838E-02	NOT IDENT.
GD-153	-2.770E-02	8.589E-02	6.382E-02	4.382E-02	NOT IDENT.
EU-154	-6.663E-03	1.274E-01	1.079E-01	6.499E-02	NOT IDENT.
EU-155	7.945E-02	1.084E-01	9.473E-02	5.530E-02	FAIL ABUN
TB-160	-8.585E-02	1.409E-01	1.106E-01	7.188E-02	FAIL ABUN
HO-166M	-1.148E-03	6.284E-02	5.359E-02	3.206E-02	FAIL ABUN
TM-171	-1.082E+01	2.916E+01	2.488E+01	1.488E+01	NOT IDENT.
LU-176	2.250E-02	2.511E-02	2.038E-02	1.281E-02	FAIL ABUN
LU-177	3.602E+00	1.550E+00	9.220E-01	7.909E-01	FAIL ABUN
LU-177M	-1.175E-01	1.832E-01	1.470E-01	9.349E-02	FAIL ABUN
HF-181	-2.522E-02	4.077E-02	3.206E-02	2.080E-02	NOT IDENT.
W-181	6.291E-02	3.786E-01	3.307E-01	1.932E-01	NOT IDENT.
TA-182	-4.383E-02	2.219E-01	1.866E-01	1.132E-01	FAIL ABUN
RE-183	-4.162E-02	9.776E-02	8.545E-02	4.988E-02	FAIL ABUN
RE-184	-1.209E-01	1.997E-01	1.670E-01	1.019E-01	NOT IDENT.
OS-185	-3.971E-02	3.678E-02	2.825E-02	1.876E-02	NOT IDENT.
RE-188	8.584E-02	1.607E-01	1.464E-01	8.200E-02	NOT IDENT.
W-188	-1.614E+00	8.269E+00	6.152E+00	4.219E+00	NOT IDENT.
IR-192	1.093E-03	3.230E-02	2.771E-02	1.648E-02	FAIL ABUN
AU-195	-8.563E-02	2.238E-01	1.846E-01	1.142E-01	FAIL ABUN
TL-200	2.115E+02	2.069E+02	0.000E+00	1.056E+02	SHORT HLIF
TL-201	9.692E-01	4.917E+00	4.409E+00	2.508E+00	NOT IDENT.
TL-202	4.404E-02	6.428E-02	5.654E-02	3.280E-02	NOT IDENT.
HG-203	-2.012E-02	3.760E-02	3.144E-02	1.918E-02	NOT IDENT.
BI-207	-3.875E-02	6.130E-02	4.737E-02	3.128E-02	FAIL ABUN
TL-207	-5.560E-02	7.229E-01	5.379E-01	3.688E-01	FAIL ABUN
PO-209	-5.377E+00	7.814E+00	6.072E+00	3.986E+00	NOT IDENT.
BI-210	-1.692E+00	5.389E+00	4.478E+00	2.750E+00	NOT IDENT.
PB-210	-1.692E+00	5.389E+00	4.478E+00	2.750E+00	NOT IDENT.
PO-210	-1.692E+00	5.389E+00	4.478E+00	2.750E+00	NOT IDENT.
PB-211	-7.970E-02	9.034E-01	7.546E-01	4.609E-01	NOT IDENT.
BI-212	1.137E+00	5.102E-01	3.577E-01	2.603E-01	FAIL ABUN
PO-215	-5.560E-02	7.229E-01	5.379E-01	3.688E-01	FAIL ABUN
RN-219	2.386E-02	4.121E-01	3.485E-01	2.103E-01	FAIL ABUN
RN-220	4.674E+00	2.264E+01	2.004E+01	1.155E+01	NOT IDENT.
RA-223	-5.560E-02	7.229E-01	5.379E-01	3.688E-01	FAIL ABUN
AC-227	-1.250E-01	3.456E-01	2.933E-01	1.763E-01	FAIL ABUN
TH-227	-1.250E-01	3.458E-01	2.933E-01	1.764E-01	FAIL ABUN
TH-229	-1.091E-01	4.722E-01	4.122E-01	2.409E-01	FAIL ABUN
PA-231	4.842E-01	1.479E+00	1.298E+00	7.547E-01	FAIL ABUN
TH-231	-5.560E-02	7.229E-01	5.379E-01	3.688E-01	FAIL ABUN
U-231	3.178E-02	9.288E-01	7.062E-01	4.739E-01	NOT IDENT.
PA-233	-3.204E-02	6.560E-02	5.256E-02	3.347E-02	FAIL ABUN
PA-234	-5.466E-02	3.184E-01	2.609E-01	1.625E-01	FAIL ABUN
PA-234M	1.469E-01	6.970E+00	5.801E+00	3.556E+00	FAIL ABUN
TH-234	5.455E-02	1.435E+00	1.227E+00	7.322E-01	NOT IDENT.
U-235	1.152E-02	2.079E-01	1.738E-01	1.061E-01	FAIL ABUN
NP-236	5.788E-02	7.355E-02	6.762E-02	3.753E-02	FAIL ABUN
U-238	5.455E-02	1.435E+00	1.227E+00	7.322E-01	NOT IDENT.
NP-239	4.351E-02	1.826E-01	1.558E-01	9.317E-02	FAIL ABUN
AM-241	-2.283E-02	1.733E-01	1.501E-01	8.842E-02	NOT IDENT.
CM-243	4.477E-02	9.655E-02	8.359E-02	4.926E-02	FAIL ABUN
CM-247	-2.107E-02	3.617E-02	2.914E-02	1.846E-02	NOT IDENT.
CF-249	2.999E-02	3.883E-02	3.452E-02	1.981E-02	NOT IDENT.
CF-251	8.465E-03	1.190E-01	1.035E-01	6.073E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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```

ENERGY	MDA COUNTS
46.50	247.9473
46.50	247.9473
46.50	247.9473
48.70	247.1496
49.72	243.6569
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52.97	269.7822
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53.44	264.9518
54.07	255.0939
56.28	292.1182
56.28	292.1196
57.37	0.0000
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57.53	284.6313
57.60	284.6700
57.98	276.6565
57.98	276.6565
59.32	287.6967
59.32	287.6967
59.40	287.7422
59.54	287.8202
59.72	295.1448
60.01	293.2455
61.10	312.4866
61.14	305.2668
61.30	308.4660
63.00	306.3453
63.29	291.9655
63.29	291.9655
63.58	292.1238
64.28	303.9554
65.12	321.1086
65.20	312.8140
65.20	312.8140
66.05	308.0794
66.72	330.4123
66.83	333.6157
66.91	333.6643
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67.20	346.3978
67.75	337.3116
67.85	348.8990
68.90	323.7300
68.90	323.7300
69.30	310.4097
69.67	305.8839
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70.82	287.5409
70.83	287.5464
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72.87	358.3271
72.87	358.3271
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74.81	341.4830
74.81	341.4830
74.81	341.4830
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74.81	341.4830
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75.70	341.9940
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77.11	340.1367
77.11	340.1367

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77.11	340.1367
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79.80	287.1058
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80.30	293.7589
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81.07	350.3764
81.07	350.3764
81.07	350.3764
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83.78	317.9893
83.78	317.9893
83.78	317.9893
83.78	317.9893
84.21	313.3584
84.40	287.6000
84.90	302.3777
85.43	309.0999
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86.54	430.5666
86.59	430.5990
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86.79	430.7307
86.94	430.8300
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87.30	431.0691
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87.30	431.0691
87.30	431.0691
87.30	431.0691
87.57	431.2474
87.88	490.5795
88.03	490.6924
88.36	425.9139
88.47	425.9859
89.95	492.1209
91.11	408.0925
92.29	368.9081
92.38	368.9563
92.38	368.9563
93.35	369.4847
94.00	273.7703
94.67	242.8588
94.67	242.8599
94.90	242.9412
94.90	242.9412
94.90	242.9412
94.90	242.9412
95.87	267.9392
95.87	267.9392
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97.43	281.7197
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98.44	276.0760
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99.55	271.0019
99.86	273.3237
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103.18	284.5538
103.76	262.6193
105.00	260.8442
105.31	262.0646
108.00	294.2218
109.28	289.1421
111.00	246.1617
111.00	246.1617

111.76	267.6873
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115.19	273.3787
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117.00	234.5438
117.00	234.5438
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121.11	250.4921
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121.78	252.9688
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122.32	228.1646
122.32	228.1646
122.32	228.1646
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136.48	243.5845
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144.24	255.0411
144.24	255.0411
144.24	255.0411
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145.44	213.3976
147.16	263.7470
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153.22	237.2508
154.21	240.1499
154.21	240.1499
154.21	240.1499
154.21	240.1499
155.03	243.0084
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159.00	222.7234
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161.27	219.6904
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162.64	244.0459
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163.89	232.7638
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176.55	203.1939
176.60	203.2042
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186.00	229.6324
190.27	218.0998
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193.63	214.7351
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198.60	203.7141
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202.84	189.2823
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209.75	193.6162
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227.20	187.9684
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228.18	169.2109
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238.63	169.6793
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286.10	147.1107
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295.96	115.3079

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298.57	115.5115
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299.80	113.2152
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300.09	113.2377
300.09	113.2377
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300.12	113.2394
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304.40	119.9634
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323.87	126.3539
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334.30	117.4025
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338.28	117.4883
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351.92	131.8613
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388.63	95.7627
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391.69	102.2499
392.90	105.4840
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445.03	92.1763
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445.03	92.1763
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513.99	73.5382
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602.71	59.0085
603.60	54.3699
604.41	57.4948
604.70	59.0565
609.31	70.9995
609.31	70.9995
609.31	70.9995

609.31	70.9995
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621.84	68.5391
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661.65	65.7909
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696.49	61.8188
697.00	63.7619
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722.78	66.6317
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723.30	66.6434
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768.36	72.6440
768.36	72.6440
768.36	72.6440
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810.76	65.2999
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911.07	54.9280
911.07	54.9280
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925.24	46.8325
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934.06	42.7797
934.06	42.7797
934.06	42.7797
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949.00	44.0139
962.29	57.8561
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969.11	43.9158
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1050.47	36.6430
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1077.35	45.5868
1085.78	66.3554
1099.22	56.7607
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1115.52	43.8457
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1120.29	63.6527
1120.29	63.6527
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1147.95	0.0000
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1177.93	58.4447
1189.05	61.3943
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1213.00	74.8438
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1230.97	85.4976
1235.34	77.1219
1236.41	0.0000
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1238.11	73.4075
1238.11	73.4075
1238.11	73.4075
1238.25	73.4075
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1274.54	41.7585
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1325.50	30.7201
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1333.61	33.6599
1360.21	21.2812
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1365.15	16.4625
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1368.53	0.0000
1376.25	30.0918
1377.67	30.1006
1377.67	30.1006
1377.67	30.1006
1377.67	30.1006
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1395.20	17.5437
1407.95	19.5451
1434.06	17.6873
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1457.56	0.0000
1460.81	13.8331
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1596.49	24.3584
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1691.02	14.4620

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1750.46	0.0000
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1764.49	14.3544
1764.49	14.3544
1764.49	14.3544
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1836.01	8.4779

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232347002

Total Uranium Activity	1.6763E-01	ug/g
Total Uranium Counting Unc.	4.2708E+00	ug/g
Total Uranium Tpu	2.1790E-06	ug/g
Total Uranium Mda	3.6505E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232347002       *
*   ANALYST       : MXR1                      DETECTOR   : GAM08            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:10:48.47    SAMPLE ALQT:  126.180 GRAM    *
*                                                                           *
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        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.897E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.437E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.860E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.382E+00
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VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:48:11.62

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347003.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:11:20.
Sample ID         : G232347003           Sample quantity  : 1.26880E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.62  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	47.12*	47	550	1.12	93.99	90	9	6.55E-03	96.2	
2	0	63.65*	94	798	1.08	127.07	123	10	1.31E-02	61.5	
3	2	75.18*	452	463	0.90	150.14	146	14	6.28E-02	8.6	9.53E-01
4	2	77.46*	699	505	1.02	154.69	146	14	9.71E-02	6.5	
5	0	84.35*	43	436	1.00	168.48	167	6	6.02E-03	80.8	
6	2	87.51	234	445	1.05	174.80	172	12	3.26E-02	15.7	8.73E+00
7	2	90.23	106	407	0.88	180.23	172	12	1.48E-02	29.4	
8	0	93.20*	283	469	1.47	186.19	183	9	3.93E-02	17.7	
9	0	186.07*	157	409	1.41	371.98	366	12	2.18E-02	29.0	
10	0	209.41	133	318	1.51	418.65	414	11	1.85E-02	27.3	
11	3	238.90*	996	177	1.21	477.64	470	23	1.38E-01	4.0	1.20E+00
12	3	241.87	248	233	1.66	483.60	470	23	3.45E-02	14.5	
13	0	270.42	108	224	1.88	540.71	536	10	1.50E-02	27.6	
14	0	295.63*	231	230	1.08	591.14	586	10	3.21E-02	14.3	
15	0	300.43	80	253	1.16	600.74	596	11	1.11E-02	40.1	
16	0	338.47*	170	173	1.32	676.84	672	10	2.37E-02	16.9	
17	2	352.11*	473	114	1.70	704.13	696	29	6.57E-02	6.6	3.13E+00
18	2	356.34*	36	102	1.71	712.59	696	29	5.01E-03	64.5	
19	0	463.15	63	150	1.39	926.28	920	13	8.74E-03	42.0	
20	0	510.88*	80	184	1.51	1021.76	1014	15	1.12E-02	44.6	
21	0	583.27*	268	158	1.21	1166.60	1161	13	3.73E-02	11.8	
22	0	609.19*	323	108	1.43	1218.46	1211	12	4.49E-02	8.9	
23	0	727.36*	79	101	2.09	1454.88	1447	13	1.10E-02	28.9	
24	0	911.31*	251	90	1.92	1822.92	1816	17	3.48E-02	11.0	
25	1	964.63	63	39	2.11	1929.60	1925	20	8.81E-03	21.1	6.74E-01
26	1	968.93	150	46	2.04	1938.19	1925	20	2.08E-02	12.5	
27	0	1121.08	42	95	1.29	2242.62	2237	13	5.86E-03	49.9	
28	0	1460.60*	1225	47	2.13	2921.98	2912	18	1.70E-01	3.2	
29	0	1763.84*	48	8	3.14	3528.79	3520	17	6.62E-03	22.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 13-JUL-2009 18:48:14

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:11:20
Sample ID : G232347003 Sample quantity : 126.88 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.62 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.264E+01	2.866E+00	7.564E-01	4.624E-02	43.149
CD-109	+	88.03	*	2.628E+00	8.530E-01	1.256E+00	9.913E-02	2.092
SN-126	+	64.28		3.921E-01	4.862E-01	3.964E-01	6.172E-02	0.989
	+	86.94		1.076E+00	5.579E-01	4.038E-01	1.665E-01	2.664
	+	87.57	*	2.588E-01	8.398E-02	1.235E-01	9.771E-03	2.095
TL-208		277.35		6.968E-01	4.403E-01	7.669E-01	8.983E-02	0.909
	+	510.84		4.340E-01	3.903E-01	2.842E-01	3.089E-02	1.527
	+	583.14	*	4.182E-01	1.043E-01	7.838E-02	6.488E-03	5.335
		860.37		8.481E-01	4.437E-01	8.134E-01	6.858E-02	1.043
BI-210	+	46.50	*	4.720E-01	9.091E-01	8.356E-01	6.811E-02	0.565
PB-210	+	46.50	*	4.720E-01	9.091E-01	8.356E-01	6.811E-02	0.565
PO-210	+	46.50	*	4.720E-01	9.089E-01	8.356E-01	5.957E-02	0.565
BI-211		72.87		8.983E-01	2.161E+00	3.318E+00	2.901E-01	0.271
	+	351.07	*	3.095E+00	4.643E-01	3.512E-01	2.560E-02	8.814
PB-212	+	74.81		1.698E+00	3.643E-01	3.933E-01	5.003E-02	4.318
	+	77.11		1.565E+00	2.431E-01	2.351E-01	1.997E-02	6.656
	+	87.30		1.197E+00	4.064E-01	5.875E-01	7.496E-02	2.037
	+	238.63	*	1.403E+00	1.700E-01	9.385E-02	8.525E-03	14.951
	+	300.09		1.747E+00	1.411E+00	1.342E+00	1.277E-01	1.302
PO-212	+	74.81		1.698E+00	3.643E-01	3.933E-01	5.003E-02	4.318
	+	77.11		1.565E+00	2.431E-01	2.351E-01	1.997E-02	6.656
	+	87.30		1.197E+00	4.064E-01	5.875E-01	7.496E-02	2.037
		115.19		1.374E+00	3.586E+00	5.956E+00	6.907E-01	0.231
	+	238.63	*	1.403E+00	1.700E-01	9.385E-02	8.525E-03	14.951
	+	300.09		1.747E+00	1.411E+00	1.342E+00	1.277E-01	1.302
BI-214	+	609.31	*	9.510E-01	1.920E-01	1.681E-01	1.572E-02	5.656
		768.36		-2.181E-01	9.758E-01	1.613E+00	1.618E-01	-0.135
		934.06		1.138E+00	1.656E+00	2.858E+00	2.754E-01	0.398
	+	1120.29		6.423E-01	6.439E-01	6.111E-01	5.467E-02	1.051
		1238.11		9.155E-01	1.111E+00	1.954E+00	1.563E-01	0.469
		1377.67		1.277E+00	1.335E+00	2.393E+00	2.040E-01	0.534
	+	1764.49		9.922E-01	4.535E-01	4.542E-01	2.579E-02	2.185
PB-214	+	74.81		2.927E+00	6.051E-01	6.777E-01	7.708E-02	4.318
	+	77.11		2.683E+00	4.641E-01	4.031E-01	4.600E-02	6.656

Sample ID : G232347003 Acquisition date : 6-JUL-2009 11:11:20

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.050E+00	6.839E-01	1.006E+00	1.113E-01	2.037
	+	241.98		2.102E+00	6.430E-01	5.655E-01	5.474E-02	3.716
	+	295.21		8.855E-01	2.682E-01	2.203E-01	2.158E-02	4.020
	+	351.92	*	1.077E+00	1.710E-01	1.224E-01	1.096E-02	8.792
PO-214	+	74.81		2.927E+00	6.051E-01	6.777E-01	7.708E-02	4.318
	+	77.11		2.683E+00	4.641E-01	4.031E-01	4.600E-02	6.656
	+	87.30		2.050E+00	6.839E-01	1.006E+00	1.113E-01	2.037
	+	241.98		2.102E+00	6.430E-01	5.655E-01	5.474E-02	3.716
	+	295.21		8.855E-01	2.682E-01	2.203E-01	2.158E-02	4.020
	+	351.92	*	1.077E+00	1.710E-01	1.224E-01	1.096E-02	8.792
PO-216	+	74.81		1.698E+00	3.643E-01	3.933E-01	5.003E-02	4.318
	+	77.11		1.565E+00	2.431E-01	2.351E-01	1.997E-02	6.656
	+	87.30		1.197E+00	4.064E-01	5.875E-01	7.496E-02	2.037
	+	238.63	*	1.403E+00	1.700E-01	9.385E-02	8.525E-03	14.951
	+	300.09		1.747E+00	1.411E+00	1.342E+00	1.277E-01	1.302
PO-218	+	74.81		2.927E+00	6.051E-01	6.777E-01	7.708E-02	4.318
	+	77.11		2.683E+00	4.641E-01	4.031E-01	4.600E-02	6.656
	+	87.30		2.050E+00	6.839E-01	1.006E+00	1.113E-01	2.037
	+	241.98		2.102E+00	6.430E-01	5.655E-01	5.474E-02	3.716
	+	295.21		8.855E-01	2.682E-01	2.203E-01	2.158E-02	4.020
	+	351.92	*	1.077E+00	1.710E-01	1.224E-01	1.096E-02	8.792
RA-224	+	240.98	*	3.985E+00	1.199E+00	1.068E+00	8.435E-02	3.729
RA-226	+	609.31	*	9.510E-01	1.920E-01	1.681E-01	1.572E-02	5.656
		768.36		-2.181E-01	9.758E-01	1.613E+00	1.618E-01	-0.135
		934.06		1.138E+00	1.656E+00	2.858E+00	2.754E-01	0.398
	+	1120.29		6.423E-01	6.439E-01	6.111E-01	5.467E-02	1.051
		1238.11		9.155E-01	1.111E+00	1.954E+00	1.563E-01	0.469
		1377.67		1.277E+00	1.335E+00	2.393E+00	2.040E-01	0.534
	+	1764.49		9.922E-01	4.535E-01	4.542E-01	2.579E-02	2.185
AC-228	+	338.32		1.225E+00	6.498E-01	4.327E-01	1.772E-01	2.830
	+	911.07	*	1.751E+00	4.247E-01	3.068E-01	3.186E-02	5.705
	+	969.11		1.843E+00	6.230E-01	4.796E-01	1.095E-01	3.843
RA-228	+	338.32		1.225E+00	6.498E-01	4.327E-01	1.772E-01	2.830
	+	911.07	*	1.751E+00	4.247E-01	3.068E-01	3.186E-02	5.705
	+	969.11		1.843E+00	6.230E-01	4.796E-01	1.095E-01	3.843
TH-228	+	84.40		1.457E+00	2.362E+00	3.091E+00	3.955E-01	0.471
	+	238.60	*	1.403E+00	1.700E-01	9.384E-02	8.525E-03	14.953
	+	300.10		1.747E+00	1.741E+00	1.342E+00	7.935E-01	1.302
TH-230	+	609.31	*	9.510E-01	1.920E-01	1.681E-01	1.572E-02	5.656
		768.36		-2.181E-01	9.757E-01	1.613E+00	1.618E-01	-0.135
		934.06		1.138E+00	1.656E+00	2.858E+00	2.754E-01	0.398
	+	1120.29		6.423E-01	6.439E-01	6.111E-01	5.467E-02	1.051
		1238.11		9.155E-01	1.111E+00	1.954E+00	1.563E-01	0.469
		1377.67		1.277E+00	1.335E+00	2.392E+00	2.040E-01	0.534
	+	1764.49		9.922E-01	4.535E-01	4.542E-01	2.579E-02	2.185
TH-232	+	338.32		1.225E+00	4.220E-01	4.327E-01	3.013E-02	2.830
	+	911.07	*	1.751E+00	4.247E-01	3.068E-01	3.186E-02	5.705
	+	969.11		1.843E+00	6.230E-01	4.796E-01	1.095E-01	3.843
TH-234	+	63.29	*	9.906E-01	1.232E+00	9.998E-01	1.835E-01	0.991

Sample ID : G232347003 Acquisition date : 6-JUL-2009 11:11:20

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.155E+00	8.554E-01	5.515E-01	9.926E-02	3.908
U-234	+	609.31	*	9.510E-01	1.920E-01	1.681E-01	1.572E-02	5.656
		768.36		-2.181E-01	9.757E-01	1.613E+00	1.618E-01	-0.135
		934.06		1.138E+00	1.656E+00	2.858E+00	2.754E-01	0.398
	+	1120.29		6.423E-01	6.439E-01	6.111E-01	5.467E-02	1.051
		1238.11		9.155E-01	1.111E+00	1.954E+00	1.563E-01	0.469
		1377.67		1.277E+00	1.335E+00	2.392E+00	2.040E-01	0.534
	+	1764.49		9.922E-01	4.535E-01	4.542E-01	2.579E-02	2.185
NP-237	+	86.50	*	7.599E-01	2.923E-01	2.849E-01	6.301E-02	2.668
		95.87		9.382E-02	8.868E-01	1.322E+00	3.270E-01	0.071
U-238	+	63.29	*	9.906E-01	1.232E+00	9.998E-01	1.835E-01	0.991
	+	92.38		2.155E+00	7.838E-01	5.515E-01	4.655E-02	3.908
AM-243	+	74.67	*	2.754E-01	5.315E-02	6.375E-02	5.506E-03	4.320
	+	86.72		2.850E+01	9.248E+00	1.069E+01	8.505E-01	2.666
		117.66		-1.360E+00	3.835E+00	6.168E+00	7.382E-01	-0.220
		142.18		-2.440E+01	1.898E+01	2.862E+01	3.032E+00	-0.853
ANH-511	+	511.00	*	9.375E-02	8.395E-02	6.141E-02	4.286E-03	1.527

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.549E-01	4.056E-01	6.519E-01	4.902E-02	-0.391
NA-22		1274.54	*	-2.734E-02	6.039E-02	9.660E-02	5.452E-03	-0.283
NA-24		1368.53	*	-9.823E-02	6.039E-02	Half-Life too short		
AL-26		1129.67		6.795E-01	2.570E+00	3.944E+00	2.338E-01	0.172
		1808.65	*	2.415E-02	3.307E-02	6.222E-02	3.511E-03	0.388
TI-44		67.85		-1.027E-02	2.843E-02	4.211E-02	3.812E-03	-0.244
	+	78.38	*	2.888E-01	4.485E-02	6.214E-02	5.234E-03	4.647
SC-46		889.25	*	2.605E-03	5.292E-02	8.796E-02	6.660E-03	0.030
	+	1120.51		1.089E-01	1.090E-01	1.427E-01	8.578E-03	0.763
V-48		944.10		4.614E-01	1.218E+00	2.062E+00	1.506E-01	0.224
		983.50	*	-4.424E-03	9.622E-02	1.572E-01	1.112E-02	-0.028
		1312.09		-6.259E-02	1.054E-01	1.650E-01	9.352E-03	-0.379
CR-51		320.08	*	-1.664E-01	4.106E-01	6.553E-01	5.100E-02	-0.254
MN-52		744.21		7.791E-02	2.931E-01	4.805E-01	3.901E-02	0.162
		848.13		-1.228E+00	8.087E+00	1.280E+01	9.970E-01	-0.096
		935.52		6.397E-02	3.301E-01	5.514E-01	4.050E-02	0.116
		1246.25		-4.420E-01	8.478E+00	1.407E+01	7.875E-01	-0.031
		1333.61		-4.123E+00	5.686E+00	8.355E+00	4.753E-01	-0.493
		1434.06	*	1.113E-01	2.900E-01	4.963E-01	2.852E-02	0.224
MN-54		834.83	*	9.441E-03	5.234E-02	8.819E-02	6.921E-03	0.107
CO-56		846.75	*	-4.895E-02	5.171E-02	7.932E-02	6.182E-03	-0.617
		977.42		2.685E+00	4.284E+00	7.073E+00	5.030E-01	0.380
		1037.82		1.154E-01	4.306E-01	7.180E-01	5.230E-02	0.161
		1175.09		1.162E+00	3.285E+00	5.438E+00	2.991E-01	0.214
		1238.25		9.538E-02	1.110E-01	1.959E-01	1.168E-02	0.487
		1360.21		5.788E-01	1.221E+00	2.122E+00	1.211E-01	0.273
		1771.40		1.147E-01	3.260E-01	5.008E-01	2.842E-02	0.229

Sample ID : G232347003 Acquisition date : 6-JUL-2009 11:11:20

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-1.475E-02	2.785E-02	4.336E-02	5.484E-03	-0.340
		136.48		-1.714E-01	2.137E-01	3.316E-01	3.881E-02	-0.517
CO-58		810.76	*	-5.318E-02	5.458E-02	8.443E-02	6.725E-03	-0.630
FE-59		142.65		-2.101E+00	2.928E+00	4.491E+00	4.736E-01	-0.468
		192.34		-4.483E-01	9.732E-01	1.563E+00	2.028E-01	-0.287
		1099.22	*	4.170E-02	1.333E-01	2.215E-01	1.583E-02	0.188
		1291.56		6.886E-02	1.551E-01	2.676E-01	1.955E-02	0.257
CO-60		1173.22		9.559E-03	6.696E-02	1.091E-01	5.999E-03	0.088
		1332.49	*	-5.624E-02	5.168E-02	7.243E-02	4.120E-03	-0.776
ZN-65		1115.52	*	-1.159E-01	1.475E-01	1.847E-01	1.121E-02	-0.627
GE-68		1077.35	*	-9.013E-01	1.748E+00	2.716E+00	1.736E-01	-0.332
AS-73		53.44	*	-1.710E-02	2.366E-01	3.900E-01	3.294E-02	-0.044
AS-74		595.88	*	8.914E-02	1.134E-01	1.955E-01	1.501E-02	0.456
		634.78		2.396E-01	4.734E-01	7.981E-01	6.360E-02	0.300
SE-75		66.05		1.903E-01	2.806E+00	4.243E+00	4.622E-01	0.045
		96.73		-2.438E-01	7.367E-01	1.072E+00	1.487E-01	-0.227
		121.11		-4.884E-02	1.480E-01	2.327E-01	3.353E-02	-0.210
		136.00		-4.068E-02	4.090E-02	6.282E-02	7.097E-03	-0.648
		198.60		-6.597E-01	1.920E+00	3.143E+00	2.808E-01	-0.210
		264.65	*	3.116E-03	5.314E-02	8.082E-02	6.331E-03	0.039
		279.53		1.010E-01	1.210E-01	2.075E-01	1.670E-02	0.487
		303.91		1.609E+00	2.700E+00	4.044E+00	4.296E-01	0.398
		400.65		2.564E-01	2.993E-01	5.051E-01	4.642E-02	0.508
BR-77	+	87.88		4.067E+02	1.320E+02	2.051E+02	1.619E+01	1.982
		200.40		2.092E+01	1.206E+02	2.054E+02	1.627E+01	0.102
	+	239.00		1.611E+02	1.813E+01	2.674E+01	2.112E+00	6.024
		249.79		-4.967E+01	5.155E+01	7.832E+01	6.159E+00	-0.634
		281.68		-1.313E+02	7.198E+01	1.061E+02	8.136E+00	-1.237
		297.23		2.120E+02	7.246E+01	9.629E+01	7.243E+00	2.202
		303.76		6.437E+01	1.673E+02	2.473E+02	1.842E+01	0.260
		439.47		8.375E+01	1.199E+02	2.098E+02	1.326E+01	0.399
		484.57		2.827E+00	2.093E+02	3.497E+02	2.358E+01	0.008
		520.65	*	3.231E+00	9.848E+00	1.667E+01	1.177E+00	0.194
		574.64		-9.220E+01	1.947E+02	3.100E+02	2.329E+01	-0.297
		578.91		3.097E+01	8.589E+01	1.267E+02	9.561E+00	0.244
		585.48		9.765E+02	2.431E+02	4.175E+02	3.173E+01	2.339
		755.35		-1.624E+01	1.677E+02	2.672E+02	2.164E+01	-0.061
		817.79		-9.500E+01	1.280E+02	2.010E+02	1.591E+01	-0.473
SR-82		698.33		3.931E+01	4.695E+01	7.999E+01	6.531E+00	0.491
		776.49	*	-5.341E-01	5.000E-01	7.711E-01	6.207E-02	-0.693
		1395.20		-7.364E+00	1.395E+01	2.157E+01	1.236E+00	-0.341
RB-83		520.41	*	3.793E-02	9.042E-02	1.538E-01	1.086E-02	0.247
		529.64		1.097E-01	1.296E-01	2.261E-01	1.615E-02	0.485
		552.65		-2.446E-01	2.519E-01	3.870E-01	2.839E-02	-0.632
RB-84		881.50	*	2.975E-02	9.357E-02	1.538E-01	1.171E-02	0.194
KR-85		513.99	*	1.056E+01	1.075E+01	1.665E+01	1.166E+00	0.634
SR-85		513.99	*	5.351E-02	5.443E-02	8.434E-02	5.908E-03	0.634
RB-86		1076.63	*	-7.735E-01	1.070E+00	1.629E+00	1.042E-01	-0.475
Y-88		898.02		7.894E-02	5.676E-02	1.030E-01	7.796E-03	0.766

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	2.023E-02	3.976E-02	7.174E-02	4.040E-03	0.282
ZR-88		392.90	*	6.771E-03	3.667E-02	5.960E-02	3.491E-03	0.114
Y-91		1204.90	*	-4.246E+00	2.550E+01	4.211E+01	2.334E+00	-0.101
NB-94		702.63	*	1.723E-02	4.557E-02	7.561E-02	6.171E-03	0.228
		871.10		1.258E-02	4.744E-02	8.023E-02	6.156E-03	0.157
NB-95		765.79	*	1.074E-02	5.566E-02	9.453E-02	7.634E-03	0.114
NB-95M		235.69	*	7.762E-02	1.374E-01	2.093E-01	1.936E-02	0.371
ZR-95		724.18		1.281E-01	1.414E-01	2.141E-01	1.912E-02	0.598
		756.15	*	-1.704E-02	9.819E-02	1.554E-01	1.402E-02	-0.110
NB-97		657.90	*	2.323E-02	9.819E-02	Half-Life too short		
		1024.50		2.442E+00	9.819E-02	Half-Life too short		
ZR-97		254.15		2.222E-01	9.819E-02	Half-Life too short		
	+	355.39		1.323E+00	9.819E-02	Half-Life too short		
		507.63	*	6.908E-01	9.819E-02	Half-Life too short		
		602.52		-1.397E+00	9.819E-02	Half-Life too short		
		1021.30		-2.538E+00	9.819E-02	Half-Life too short		
		1147.95		7.920E-01	9.819E-02	Half-Life too short		
		1362.66		-1.034E+00	9.819E-02	Half-Life too short		
		1750.46		3.870E-02	9.819E-02	Half-Life too short		
MO-99		140.51		1.895E+00	2.017E+01	3.271E+01	9.301E+00	0.058
		181.06		-4.180E+00	1.531E+01	2.116E+01	3.798E+00	-0.198
		366.43		4.247E+01	7.362E+01	1.232E+02	7.923E+00	0.345
		739.58	*	-8.549E+00	1.276E+01	1.937E+01	2.888E+00	-0.441
		778.00		-2.583E+01	3.487E+01	5.530E+01	4.449E+00	-0.467
TC-99M		140.51	*	1.531E+08	3.487E+01	Half-Life too short		
RH-101		127.23		-4.100E-02	3.459E-02	5.289E-02	6.422E-03	-0.775
		198.01	*	-6.556E-03	3.548E-02	5.851E-02	4.633E-03	-0.112
		325.23		-3.088E-01	2.702E-01	4.127E-01	2.959E-02	-0.748
RH-102		418.52		1.356E-01	3.386E-01	5.558E-01	3.397E-02	0.244
		475.06	*	7.415E-03	3.580E-02	6.061E-02	4.033E-03	0.122
		631.29		6.372E-03	7.446E-02	1.222E-01	9.710E-03	0.052
		697.49		4.213E-02	1.105E-01	1.832E-01	1.496E-02	0.230
		766.84		1.871E-02	1.437E-01	2.431E-01	1.963E-02	0.077
		1046.59		1.747E-01	1.676E-01	2.944E-01	1.954E-02	0.594
		1112.84		-9.118E-02	3.434E-01	5.171E-01	3.146E-02	-0.176
RU-103		497.08	*	-1.110E-02	5.040E-02	8.280E-02	1.090E-02	-0.134
	+	610.33		1.006E+01	2.434E+00	3.019E+00	4.912E-01	3.333
RH-106	+	511.85		4.672E-01	4.184E-01	5.056E-01	3.532E-02	0.924
		621.84	*	1.084E-03	4.250E-01	6.947E-01	8.954E-02	0.002
		1050.47		-2.372E+00	3.431E+00	5.275E+00	3.485E-01	-0.450
RU-106	+	511.85		4.672E-01	4.184E-01	5.056E-01	3.532E-02	0.924
		621.84	*	1.084E-03	4.250E-01	6.947E-01	5.471E-02	0.002
		1050.47		-2.372E+00	3.431E+00	5.275E+00	3.485E-01	-0.450
AG-108M		433.93	*	-3.179E-02	3.633E-02	5.770E-02	3.881E-03	-0.551
		614.37		2.849E-02	6.331E-02	9.308E-02	7.624E-03	0.306
		722.95		-5.780E-03	6.632E-02	9.127E-02	7.761E-03	-0.063
AG-110M		657.75	*	1.326E-02	4.403E-02	7.319E-02	6.148E-03	0.181
		677.61		1.474E-01	4.136E-01	6.879E-01	5.793E-02	0.214
		706.67		8.754E-02	2.725E-01	4.506E-01	3.790E-02	0.194

---- Non-Identified Nuclides ----

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		763.93		-6.314E-02	2.214E-01	3.647E-01	3.041E-02	-0.173
		884.67		-1.557E-02	6.807E-02	1.107E-01	8.761E-03	-0.141
		937.48		9.632E-02	1.644E-01	2.819E-01	2.171E-02	0.342
		1384.27		-1.580E-01	2.269E-01	3.465E-01	2.108E-02	-0.456
IN-111		171.28		-5.535E-01	8.338E-01	1.283E+00	1.007E-01	-0.431
		245.39	*	8.245E-01	9.042E-01	1.407E+00	1.108E-01	0.586
IN-113M		391.69	*	1.080E-02	5.229E-02	8.515E-02	5.305E-03	0.127
SN-113		391.69	*	1.080E-02	5.229E-02	8.515E-02	5.305E-03	0.127
IN-114M		190.27	*	-8.268E-02	2.169E-01	2.962E-01	2.341E-02	-0.279
CD-115		260.90		-3.229E+01	1.018E+02	1.664E+02	1.299E+01	-0.194
		492.35		1.353E+01	3.235E+01	5.527E+01	3.765E+00	0.245
		527.90	*	5.193E+00	9.650E+00	1.653E+01	1.178E+00	0.314
SN-117M		156.02		9.874E-01	2.365E+00	3.858E+00	3.486E-01	0.256
		158.56	*	-2.339E-02	5.855E-02	9.205E-02	8.038E-03	-0.254
SB-122		563.90	*	1.549E+00	2.007E+00	3.464E+00	2.573E-01	0.447
		692.80		-1.831E+01	4.360E+01	6.830E+01	5.577E+00	-0.268
I-123		159.00	*	3.686E-01	4.360E+01	Half-Life too short		
		528.96		1.180E+02	4.360E+01	Half-Life too short		
TE-123M		159.00	*	7.774E-03	3.175E-02	5.137E-02	4.486E-03	0.151
I-124		602.71	*	-4.444E-01	8.260E-01	1.108E+00	8.570E-02	-0.401
		722.78		-2.828E+00	5.932E+00	7.826E+00	6.376E-01	-0.361
		1325.50		1.864E+01	3.974E+01	6.864E+01	3.900E+00	0.272
		1376.25		3.891E+01	3.440E+01	6.263E+01	3.581E+00	0.621
		1509.49		2.487E+00	1.560E+01	2.605E+01	1.501E+00	0.095
		1691.02		-1.713E+00	3.779E+00	5.580E+00	3.196E-01	-0.307
SB-124		602.71		-3.085E-02	5.734E-02	7.694E-02	5.950E-03	-0.401
		645.85		3.846E-01	7.057E-01	1.190E+00	1.023E-01	0.323
		709.31		-2.288E+00	3.697E+00	5.677E+00	4.632E-01	-0.403
		713.82		-1.230E+00	2.293E+00	3.545E+00	4.151E-01	-0.347
		722.78		-2.845E-01	5.969E-01	7.874E-01	6.571E-02	-0.361
	+	968.20		1.872E+01	4.855E+00	8.540E+00	6.120E-01	2.192
		1045.16		2.689E+00	3.633E+00	6.250E+00	4.155E-01	0.430
		1325.50		2.003E+00	4.271E+00	7.377E+00	4.191E-01	0.272
		1368.21		-1.220E+00	2.371E+00	3.691E+00	4.367E-01	-0.330
		1436.60		7.135E-01	5.320E+00	8.870E+00	5.098E-01	0.080
		1691.02	*	-4.066E-02	8.969E-02	1.324E-01	8.249E-03	-0.307
SB-125		427.89	*	4.643E-02	1.076E-01	1.858E-01	1.196E-02	0.250
	+	463.38		6.572E-01	5.541E-01	6.319E-01	4.684E-02	1.040
		600.56		-3.555E-02	2.360E-01	3.723E-01	3.135E-02	-0.095
		635.90		2.169E-01	3.720E-01	6.303E-01	5.499E-02	0.344
TE-125M		109.28	*	-4.568E+00	9.148E+00	1.470E+01	1.785E+00	-0.311
I-126		388.63		-1.689E-01	2.393E-01	3.676E-01	2.177E-02	-0.460
		666.33	*	3.029E-01	2.273E-01	4.009E-01	3.271E-02	0.756
		753.82		-5.959E-01	1.936E+00	3.032E+00	2.456E-01	-0.197
SB-126		223.80		1.575E+00	3.923E+00	6.701E+00	5.312E-01	0.235
		278.60		4.129E+00	2.679E+00	4.707E+00	3.621E-01	0.877
	+	296.50		8.266E+00	2.450E+00	3.494E+00	2.631E-01	2.366
		414.70		-1.595E-02	8.525E-02	1.346E-01	8.178E-03	-0.119
		415.30		-1.920E+00	7.048E+00	1.106E+01	6.725E-01	-0.174

---- Non-Identified Nuclides ----

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		555.20		-1.165E+00	4.772E+00	7.746E+00	5.698E-01	-0.150
		573.80		-3.159E-01	1.261E+00	2.040E+00	1.531E-01	-0.155
		593.00		-1.412E+00	1.179E+00	1.765E+00	1.352E-01	-0.800
		656.30		-1.947E-01	3.926E+00	6.360E+00	5.164E-01	-0.031
		666.33		1.263E-01	9.473E-02	1.671E-01	1.363E-02	0.756
		675.00		1.096E+00	2.476E+00	4.145E+00	3.384E-01	0.264
		695.00		4.209E-02	1.017E-01	1.691E-01	1.381E-02	0.249
		697.00		6.758E-02	3.602E-01	5.898E-01	4.816E-02	0.115
		720.50	*	-3.086E-02	2.217E-01	3.035E-01	2.474E-02	-0.102
		856.80		-1.755E-01	6.530E-01	1.065E+00	8.248E-02	-0.165
		989.30		3.724E-01	1.679E+00	2.800E+00	1.971E-01	0.133
		1034.80		-4.959E+00	1.171E+01	1.843E+01	1.239E+00	-0.269
		1213.00		-1.520E+00	6.148E+00	1.009E+01	5.606E-01	-0.151
SB-127		61.10		1.109E+01	2.126E+01	3.317E+01	3.827E+00	0.334
		252.40		1.040E+00	3.776E+00	6.328E+00	2.645E+00	0.164
		290.80		-5.604E+00	2.039E+01	2.881E+01	2.888E+00	-0.195
		411.60		9.062E+00	1.251E+01	2.037E+01	2.896E+00	0.445
		444.90		-1.768E+00	9.542E+00	1.587E+01	1.709E+00	-0.111
		473.00		7.307E-02	1.652E+00	2.772E+00	3.135E-01	0.026
		543.00		-1.265E+01	1.759E+01	2.756E+01	3.679E+00	-0.459
		603.60		-4.654E+00	1.377E+01	1.886E+01	2.188E+00	-0.247
		685.20	*	-3.426E-02	1.418E+00	2.292E+00	2.454E-01	-0.015
		698.50		1.472E+01	1.773E+01	3.003E+01	4.605E+00	0.490
		722.20		-2.876E+01	4.089E+01	5.253E+01	5.492E+00	-0.548
		783.80		3.076E+00	4.019E+00	7.038E+00	8.238E-01	0.437
XE-127		57.60		-8.682E-02	2.077E+00	3.532E+00	3.264E-01	-0.025
		145.22		4.621E-01	7.531E-01	1.224E+00	1.256E-01	0.378
		172.10		-1.159E-01	1.296E-01	1.969E-01	1.546E-02	-0.589
		202.84	*	1.248E-02	4.713E-02	8.052E-02	6.381E-03	0.155
		374.96		-1.878E-01	2.410E-01	3.698E-01	2.309E-02	-0.508
I-131		80.18		1.563E+00	3.418E+00	5.180E+00	4.335E-01	0.302
		284.30		-1.665E-01	1.392E+00	2.281E+00	1.857E-01	-0.073
		364.48	*	6.052E-03	1.384E-01	1.963E-01	1.389E-02	0.031
		636.97		9.858E-03	1.941E+00	3.166E+00	2.689E-01	0.003
		722.89		-1.023E+00	1.011E+01	1.389E+01	1.138E+00	-0.074
TE-132		49.72		7.872E-01	3.265E+00	5.107E+00	5.032E-01	0.154
		111.76		-4.929E+00	2.466E+01	3.908E+01	4.946E+00	-0.126
		116.30		-2.432E+00	2.199E+01	3.581E+01	4.745E+00	-0.068
		228.16	*	-1.217E-01	5.666E-01	9.406E-01	1.424E-01	-0.129
BA-133		53.15		-4.039E-02	1.012E+00	1.671E+00	1.402E-01	-0.024
		79.62		3.338E-01	1.077E+00	1.622E+00	2.445E-01	0.206
		81.00		-1.744E-02	1.040E-01	1.235E-01	1.938E-02	-0.141
		276.40		5.597E-01	4.497E-01	7.521E-01	1.047E-01	0.744
		302.84		-4.562E-02	1.954E-01	2.765E-01	3.474E-02	-0.165
	+	356.01	*	5.157E-02	6.679E-02	9.123E-02	1.095E-02	0.565
		383.85		-1.038E-01	3.836E-01	6.073E-01	6.681E-02	-0.171
I-133	+	510.53		3.800E-01	3.836E-01	Half-Life too short		
		529.87	*	2.172E-03	3.836E-01	Half-Life too short		
		706.58		6.638E-02	3.836E-01	Half-Life too short		

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		856.28		-2.775E-01	3.836E-01	Half-Life too short		
		875.33		-4.315E-02	3.836E-01	Half-Life too short		
		1236.41		4.756E-02	3.836E-01	Half-Life too short		
		1298.22		-2.064E-01	3.836E-01	Half-Life too short		
CS-134		475.35		2.106E-01	2.340E+00	3.934E+00	2.619E-01	0.054
		563.23		3.510E-01	4.782E-01	8.231E-01	6.187E-02	0.426
		569.32		9.841E-02	2.520E-01	4.255E-01	3.236E-02	0.231
		604.70		3.019E-02	4.752E-02	7.144E-02	5.552E-03	0.423
		795.84	*	6.555E-02	6.390E-02	1.135E-01	9.152E-03	0.577
		801.93		-6.794E-01	5.920E-01	8.803E-01	7.065E-02	-0.772
		1038.57		1.840E+00	5.519E+00	9.245E+00	6.192E-01	0.199
		1167.94		-1.481E+00	3.562E+00	5.547E+00	3.079E-01	-0.267
		1365.15		-1.257E-01	1.589E+00	2.602E+00	1.636E-01	-0.048
CS-135		268.24	*	7.243E-02	1.916E-01	2.860E-01	2.641E-02	0.253
I-135		288.45		6.702E+08	1.916E-01	Half-Life too short		
		417.63		-3.252E+08	1.916E-01	Half-Life too short		
		546.56		7.453E+08	1.916E-01	Half-Life too short		
		836.80		5.293E+08	1.916E-01	Half-Life too short		
		1038.76		1.020E+09	1.916E-01	Half-Life too short		
		1124.00		1.217E+09	1.916E-01	Half-Life too short		
		1131.51		1.258E+08	1.916E-01	Half-Life too short		
		1260.41	*	1.177E+08	1.916E-01	Half-Life too short		
		1457.56		5.648E+10	1.916E-01	Half-Life too short		
		1678.03		7.511E+08	1.916E-01	Half-Life too short		
		1706.46		1.857E+08	1.916E-01	Half-Life too short		
		1791.20		-1.304E+08	1.916E-01	Half-Life too short		
CS-136		66.91		-1.018E-02	4.356E-01	6.555E-01	1.030E-01	-0.016
	+	86.29		3.179E+00	1.075E+00	1.519E+00	1.888E-01	2.093
		153.22		-1.209E-01	6.676E-01	1.063E+00	1.095E-01	-0.114
		163.89		-3.837E-01	1.167E+00	1.803E+00	1.655E-01	-0.213
		176.55		3.563E-02	3.718E-01	5.934E-01	4.990E-02	0.060
		273.65		-3.130E-01	5.631E-01	7.880E-01	6.586E-02	-0.397
		340.57		2.351E-01	1.711E-01	2.646E-01	1.914E-02	0.889
		818.51		-9.126E-02	9.563E-02	1.475E-01	1.168E-02	-0.619
		1048.07	*	1.084E-01	1.504E-01	2.583E-01	1.833E-02	0.419
		1235.34		-3.678E-02	7.307E-01	1.214E+00	1.197E-01	-0.030
BA-137M		661.65	*	-5.381E-02	4.714E-02	6.962E-02	5.678E-03	-0.773
CS-137		661.65	*	-5.688E-02	4.983E-02	7.359E-02	6.015E-03	-0.773
CE-139		165.85	*	-2.302E-02	3.350E-02	5.172E-02	4.055E-03	-0.445
BA-140		162.64		-3.225E-01	8.201E-01	1.264E+00	1.107E-01	-0.255
		304.84		1.687E+00	1.542E+00	2.297E+00	6.358E-01	0.735
		423.70		5.284E-01	2.207E+00	3.569E+00	1.137E+00	0.148
		537.32	*	3.409E-01	3.191E-01	5.315E-01	1.744E-01	0.641
LA-140		328.77		1.817E-01	3.389E-01	5.671E-01	4.363E-02	0.320
		432.53		-1.295E+00	2.148E+00	3.479E+00	2.372E-01	-0.372
		487.03		-1.735E-01	1.665E-01	2.593E-01	1.927E-02	-0.669
		751.79		2.797E-01	2.297E+00	3.723E+00	3.380E-01	0.075
		815.85		1.154E-02	3.928E-01	6.569E-01	5.908E-02	0.018
		867.82		9.356E-01	1.830E+00	3.146E+00	2.580E-01	0.297

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		1.898E+00	4.086E+00	6.103E+00	5.922E-01	0.311
		925.24		-1.538E-01	1.458E+00	2.384E+00	1.912E-01	-0.065
		1596.49	*	-1.026E-02	1.166E-01	1.876E-01	1.081E-02	-0.055
CE-141		145.44	*	6.861E-02	6.556E-02	1.097E-01	1.138E-02	0.625
CE-143		57.37		5.239E-05	6.556E-02	Half-Life too short		
		231.56		4.848E-04	6.556E-02	Half-Life too short		
		293.26	*	1.170E-04	6.556E-02	Half-Life too short		
		350.59		1.137E-02	6.556E-02	Half-Life too short		
		490.36		1.273E-03	6.556E-02	Half-Life too short		
		664.57		-2.366E-04	6.556E-02	Half-Life too short		
		721.93		-8.877E-04	6.556E-02	Half-Life too short		
CE-144		80.11		7.766E-01	1.730E+00	2.621E+00	2.182E-01	0.296
		133.54	*	-8.360E-03	2.152E-01	3.370E-01	5.841E-02	-0.025
PM-144		476.78		-2.266E-02	8.425E-02	1.386E-01	1.065E-02	-0.164
		618.01		-7.877E-03	4.629E-02	7.485E-02	6.069E-03	-0.105
		696.49	*	1.696E-02	4.839E-02	8.013E-02	6.544E-03	0.212
		778.57		-1.153E+00	3.062E+00	4.992E+00	4.016E-01	-0.231
PR-144		696.49	*	1.148E+00	3.277E+00	5.427E+00	4.431E-01	0.212
		1489.15		-4.213E+00	1.478E+01	2.324E+01	1.339E+00	-0.181
PM-146		453.90	*	-2.531E-02	5.192E-02	8.449E-02	7.669E-03	-0.300
		633.02		-1.185E+00	2.014E+00	3.073E+00	1.144E+00	-0.386
		735.90		8.341E-03	2.211E-01	3.566E-01	1.015E-01	0.023
		747.13		-8.065E-02	1.324E-01	2.021E-01	2.775E-02	-0.399
ND-147	+	91.11		3.772E-01	2.240E-01	4.183E-01	3.772E-02	0.902
		319.41		-3.708E+00	3.573E+00	5.478E+00	3.974E-01	-0.677
		439.89		4.790E+00	6.449E+00	1.130E+01	7.147E-01	0.424
		531.02	*	-2.865E-01	6.514E-01	1.045E+00	1.479E-01	-0.274
PM-149		285.90	*	1.078E+01	6.631E+01	1.103E+02	1.656E+01	0.098
EU-152		121.78		-7.081E-02	8.178E-02	1.249E-01	1.690E-02	-0.567
		244.69		3.201E-01	3.766E-01	5.831E-01	4.596E-02	0.549
		344.27	*	4.757E-02	1.417E-01	1.929E-01	1.446E-02	0.247
		443.98		1.621E-01	1.143E+00	1.937E+00	1.232E-01	0.084
		778.89		-9.650E-02	3.586E-01	5.895E-01	4.741E-02	-0.164
		867.32		1.071E-01	1.193E+00	1.993E+00	1.533E-01	0.054
	+	964.01		8.963E-01	3.835E-01	7.081E-01	5.092E-02	1.266
		1085.78		3.537E-02	5.609E-01	9.161E-01	5.790E-02	0.039
		1112.02		-1.350E-01	4.757E-01	7.355E-01	4.479E-02	-0.184
		1407.95		5.496E-02	2.581E-01	4.342E-01	2.490E-02	0.127
GD-153		69.67		-9.856E-01	9.873E-01	1.568E+00	1.402E-01	-0.628
	+	83.37		8.343E+00	1.350E+01	1.879E+01	1.530E+00	0.444
		97.43	*	1.722E-02	7.677E-02	1.150E-01	1.047E-02	0.150
		103.18		-4.612E-02	9.849E-02	1.591E-01	1.572E-02	-0.290
EU-154		123.07		-8.837E-03	5.723E-02	9.070E-02	1.322E-02	-0.097
		247.94		-1.921E-01	4.206E-01	5.960E-01	6.510E-02	-0.322
		591.81		-7.832E-01	8.266E-01	1.260E+00	1.382E-01	-0.622
		723.30		-6.854E-03	2.783E-01	3.855E-01	3.509E-02	-0.018
		756.87		-6.912E-02	1.078E+00	1.721E+00	1.997E-01	-0.040
		873.19		-5.679E-02	4.040E-01	6.626E-01	7.679E-02	-0.086
		996.32		-1.639E-01	5.204E-01	8.296E-01	1.413E-01	-0.198

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		3.068E-02	2.888E-01	4.768E-01	4.985E-02	0.064
		1274.45	*	-7.509E-02	1.690E-01	2.704E-01	2.498E-02	-0.278
EU-155		48.70		1.972E-01	4.761E-01	7.513E-01	5.670E-02	0.262
		60.01		3.966E-01	2.143E+00	3.306E+00	3.164E-01	0.120
	+	86.54		3.115E-01	1.012E-01	1.529E-01	1.232E-02	2.038
		105.31	*	7.488E-02	1.038E-01	1.752E-01	1.797E-02	0.428
TB-160	+	86.79		8.234E-01	2.672E-01	4.104E-01	3.264E-02	2.006
		197.04		4.620E-02	5.692E-01	9.674E-01	7.659E-02	0.048
		215.65		1.462E-01	7.911E-01	1.300E+00	1.031E-01	0.112
		298.57		1.726E-01	1.960E-01	2.251E-01	1.690E-02	0.767
		879.36	*	-1.158E-02	1.815E-01	2.993E-01	2.283E-02	-0.039
		962.29		9.090E-01	8.012E-01	1.260E+00	9.076E-02	0.721
		966.15		1.246E+00	3.283E-01	6.316E-01	4.534E-02	1.972
		1177.93		1.693E-01	5.229E-01	8.638E-01	4.754E-02	0.196
		1271.85		-3.442E-01	9.754E-01	1.574E+00	8.859E-02	-0.219
HO-166M		80.57		9.460E-02	2.431E-01	3.397E-01	2.819E-02	0.278
		184.41		1.183E-01	4.383E-02	6.948E-02	5.482E-03	1.702
		280.46		-9.359E-02	9.590E-02	1.501E-01	1.152E-02	-0.624
		410.95		6.387E-02	3.054E-01	4.952E-01	2.990E-02	0.129
		711.68	*	1.815E-02	7.996E-02	1.313E-01	1.071E-02	0.138
		752.31		2.007E-01	3.760E-01	6.282E-01	5.091E-02	0.319
		810.29		-6.854E-02	8.267E-02	1.295E-01	1.028E-02	-0.529
TM-171		51.35		-6.757E+00	7.928E+00	1.173E+01	9.446E-01	-0.576
		52.39		-3.177E+00	4.141E+00	6.642E+00	5.478E-01	-0.478
		59.40		1.434E+00	1.115E+01	1.716E+01	1.646E+00	0.084
		66.72	*	9.846E-01	1.674E+01	2.528E+01	2.307E+00	0.039
LU-176	+	88.36		6.138E-01	1.992E-01	3.072E-01	2.436E-02	1.998
		201.83		-1.834E-02	3.013E-02	4.965E-02	3.934E-03	-0.369
		306.84	*	1.109E-02	2.886E-02	4.674E-02	3.465E-03	0.237
		401.10		5.016E+00	7.917E+00	1.321E+01	7.844E-01	0.380
LU-177		112.95		-5.321E-01	1.549E+00	2.439E+00	2.748E-01	-0.218
	+	208.36	*	2.955E+00	1.633E+00	1.825E+00	1.447E-01	1.619
LU-177M		52.97		1.542E-02	4.470E-01	7.393E-01	6.179E-02	0.021
		54.07		-2.366E-02	2.545E-01	4.188E-01	3.588E-02	-0.057
		61.30		4.135E-01	6.779E-01	1.061E+00	1.006E-01	0.390
		121.62		-3.434E-01	4.172E-01	6.396E-01	8.041E-02	-0.537
		147.16		-2.972E-01	6.996E-01	1.104E+00	1.110E-01	-0.269
		171.86		-5.652E-01	5.403E-01	8.140E-01	6.392E-02	-0.694
		218.09		1.455E-01	8.843E-01	1.498E+00	1.188E-01	0.097
		268.79		8.804E-01	9.881E-01	1.519E+00	1.179E-01	0.580
		319.02		-1.826E-01	2.989E-01	4.714E-01	3.421E-02	-0.387
		367.43		1.678E-01	1.100E+00	1.794E+00	1.150E-01	0.094
		413.65	*	-1.742E-01	2.270E-01	3.367E-01	2.042E-02	-0.517
HF-181		56.28		-1.571E-01	3.059E-01	5.119E-01	4.601E-02	-0.307
		57.53		4.119E-02	1.732E-01	2.972E-01	2.743E-02	0.139
		65.20		9.438E-01	5.586E-01	8.875E-01	8.186E-02	1.063
		133.02		1.288E-02	6.726E-02	1.064E-01	1.230E-02	0.121
		136.25		-5.469E-01	4.694E-01	7.129E-01	8.002E-02	-0.767
		345.85		3.173E-02	2.456E-01	3.526E-01	2.409E-02	0.090

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		482.03	*	5.457E-02	5.396E-02	9.511E-02	6.390E-03	0.574
W-181		56.28		-6.218E-02	1.212E-01	2.029E-01	1.824E-02	-0.306
		57.53		1.635E-02	6.869E-02	1.179E-01	1.088E-02	0.139
		65.20	*	3.713E-01	2.198E-01	3.491E-01	3.220E-02	1.063
TA-182		67.75		-2.345E-02	6.719E-02	9.960E-02	9.024E-03	-0.235
		100.10		-1.253E-02	1.667E-01	2.672E-01	2.527E-02	-0.047
		152.43		-7.716E-02	3.556E-01	5.654E-01	5.344E-02	-0.136
		222.10		6.282E-02	3.556E-01	6.020E-01	4.773E-02	0.104
		1001.68		-7.207E-01	2.999E+00	4.729E+00	3.290E-01	-0.152
	+	1121.28		3.016E-01	3.017E-01	3.878E-01	2.329E-02	0.778
		1189.05		1.330E-01	4.415E-01	7.538E-01	4.161E-02	0.176
		1221.42	*	-2.178E-01	2.844E-01	4.499E-01	2.504E-02	-0.484
		1230.97		-1.409E-01	6.837E-01	1.125E+00	6.275E-02	-0.125
RE-183		57.98		-1.218E-02	7.030E-02	1.189E-01	1.108E-02	-0.102
		59.32		5.433E-03	4.518E-02	6.955E-02	6.658E-03	0.078
		67.20		-4.917E-02	1.192E-01	1.764E-01	1.604E-02	-0.279
		162.32	*	-1.708E-02	1.250E-01	1.950E-01	1.614E-02	-0.088
	+	208.81		2.958E+00	1.634E+00	1.881E+00	1.492E-01	1.572
		291.72		-4.944E-01	1.095E+00	1.525E+00	1.156E-01	-0.324
RE-184		57.98		-4.519E-02	2.608E-01	4.412E-01	4.110E-02	-0.102
		59.32		2.014E-02	1.675E-01	2.578E-01	2.468E-02	0.078
		67.20		-1.823E-01	4.422E-01	6.540E-01	5.948E-02	-0.279
		161.27		7.537E-03	3.931E-01	6.293E-01	5.289E-02	0.012
		216.55		2.455E-02	2.728E-01	4.609E-01	3.656E-02	0.053
		252.85	*	4.494E-02	2.484E-01	4.171E-01	3.274E-02	0.108
		318.01		8.797E-02	5.149E-01	8.498E-01	6.179E-02	0.104
		792.07		1.170E+00	1.393E+00	2.448E+00	1.960E-01	0.478
		903.28		-6.429E-01	1.565E+00	2.219E+00	1.664E-01	-0.290
		920.93		-5.535E-01	6.888E-01	9.672E-01	7.174E-02	-0.572
OS-185		59.72		9.605E-03	1.244E-01	1.911E-01	1.833E-02	0.050
		61.14		3.874E-02	7.386E-02	1.153E-01	1.095E-02	0.336
		69.30		-1.130E-01	1.721E-01	2.771E-01	2.483E-02	-0.408
		592.07		-3.287E+00	3.330E+00	5.072E+00	3.880E-01	-0.648
		646.12	*	2.867E-02	6.086E-02	1.022E-01	8.223E-03	0.281
		717.42		2.923E-01	1.269E+00	2.080E+00	1.696E-01	0.141
		874.81		-4.157E-01	7.778E-01	1.233E+00	9.437E-02	-0.337
		880.27		3.689E-01	1.025E+00	1.745E+00	1.330E-01	0.211
RE-188		155.03	*	2.099E-01	1.858E-01	3.111E-01	2.846E-02	0.675
		477.96		-2.782E+00	3.922E+00	6.272E+00	4.190E-01	-0.444
		633.10		-2.389E+00	3.931E+00	6.137E+00	4.883E-01	-0.389
W-188	+	63.58		3.936E+01	4.855E+01	5.626E+01	5.249E+00	0.700
		227.08		-6.063E+00	1.343E+01	2.208E+01	1.749E+00	-0.275
		290.67	*	-1.371E+00	8.462E+00	1.207E+01	9.158E-01	-0.114
IR-192	+	295.96		6.679E-01	1.981E-01	2.828E-01	2.151E-02	2.362
		308.46		-3.520E-02	1.035E-01	1.663E-01	1.238E-02	-0.212
		316.51	*	2.502E-02	3.863E-02	6.539E-02	4.783E-03	0.383
		468.07		4.428E-03	8.767E-02	1.283E-01	9.472E-03	0.035
		604.41		3.489E-01	6.338E-01	9.447E-01	1.177E-01	0.369
		612.46		1.568E+00	1.226E+00	1.896E+00	1.745E-01	0.827

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195	+	65.12		1.369E-01	1.688E-01	1.657E-01	1.529E-02	0.826
		66.83		6.032E-04	5.528E-02	8.332E-02	7.598E-03	0.007
	+	75.70		8.872E-01	1.713E-01	3.054E-01	2.620E-02	2.905
		98.88	*	5.936E-02	2.100E-01	3.418E-01	3.176E-02	0.174
		129.76		3.651E+00	2.971E+00	5.015E+00	5.963E-01	0.728
TL-200		367.94	*	1.034E-05	2.971E+00	Half-Life too short		
		579.30		1.332E-03	2.971E+00	Half-Life too short		
		828.27		-7.280E-04	2.971E+00	Half-Life too short		
		1205.75		2.646E-04	2.971E+00	Half-Life too short		
TL-201		68.90		-1.094E+00	2.156E+00	3.410E+00	3.065E-01	-0.321
		70.82		-7.230E-01	1.417E+00	2.068E+00	1.834E-01	-0.350
		80.30		1.505E+00	3.173E+00	4.811E+00	4.000E-01	0.313
		135.34		-7.833E+00	1.984E+01	3.153E+01	3.569E+00	-0.248
		167.43	*	2.920E+00	5.917E+00	9.646E+00	7.560E-01	0.303
TL-202		68.90		-1.198E-01	2.361E-01	3.734E-01	3.356E-02	-0.321
		70.82		-7.895E-02	1.547E-01	2.259E-01	2.003E-02	-0.350
		80.30		1.643E-01	3.466E-01	5.255E-01	4.369E-02	0.313
		439.56	*	4.756E-02	7.655E-02	1.333E-01	8.426E-03	0.357
HG-203		70.83		-3.576E-01	7.048E-01	1.027E+00	1.414E-01	-0.348
		72.87		1.756E-01	4.228E-01	6.487E-01	8.617E-02	0.271
		82.60		-5.970E-01	1.001E+00	1.324E+00	1.784E-01	-0.451
		279.20	*	5.129E-02	4.607E-02	7.977E-02	6.351E-03	0.643
BI-207		72.80		5.313E-02	1.260E-01	1.935E-01	1.693E-02	0.275
	+	74.97		4.942E-01	9.541E-02	1.593E-01	1.373E-02	3.104
	+	84.90		1.082E-01	1.752E-01	2.580E-01	2.079E-02	0.420
		569.67		1.352E-02	3.921E-02	6.603E-02	4.935E-03	0.205
		1063.62	*	3.460E-02	7.744E-02	1.304E-01	8.480E-03	0.265
		1770.23		6.594E-02	6.616E-01	9.603E-01	5.449E-02	0.069
TL-207		81.07		-4.088E-02	2.297E-01	2.727E-01	2.255E-02	-0.150
	+	83.78		7.138E-02	1.155E-01	1.654E-01	1.343E-02	0.432
		94.90		7.019E-01	2.376E-01	3.863E-01	3.387E-02	1.817
		122.32		-5.032E-01	1.929E+00	3.042E+00	3.975E-01	-0.165
		144.24		2.248E-01	7.516E-01	1.207E+00	1.357E-01	0.186
		154.21		1.624E-01	4.337E-01	7.069E-01	7.106E-02	0.230
	+	269.46		5.448E-01	3.042E-01	3.787E-01	3.013E-02	1.439
		323.87	*	2.664E-01	7.734E-01	1.284E+00	2.190E-01	0.207
	+	338.28		5.113E+00	1.819E+00	2.553E+00	2.863E-01	2.003
		445.03		-1.012E+00	2.763E+00	4.542E+00	4.815E-01	-0.223
PO-209		260.50		4.538E+00	1.081E+01	1.830E+01	1.430E+00	0.248
		262.80		-3.700E+01	3.069E+01	4.671E+01	3.644E+00	-0.792
		896.60	*	5.514E+00	1.047E+01	1.798E+01	1.354E+00	0.307
PB-211		404.84	*	-3.741E-01	1.153E+00	1.770E+00	1.104E+00	-0.211
		427.08		6.538E-01	2.603E+00	4.171E+00	2.580E+00	0.157
		831.96		-1.366E-01	1.720E+00	2.846E+00	1.781E+00	-0.048
BI-212	+	727.18	*	1.070E+00	6.270E-01	7.946E-01	7.628E-02	1.347
		785.46		1.113E+00	2.397E+00	4.134E+00	3.317E-01	0.269
		1620.62		1.820E-01	1.603E+00	2.646E+00	1.523E-01	0.069
PO-215		81.07		-4.088E-02	2.297E-01	2.727E-01	2.255E-02	-0.150
	+	83.78		7.138E-02	1.155E-01	1.654E-01	1.343E-02	0.432

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		7.019E-01	2.376E-01	3.863E-01	3.387E-02	1.817
		122.32		-5.032E-01	1.929E+00	3.042E+00	3.975E-01	-0.165
		144.24		2.248E-01	7.516E-01	1.207E+00	1.357E-01	0.186
		154.21		1.624E-01	4.337E-01	7.069E-01	7.106E-02	0.230
	+	269.46		5.448E-01	3.042E-01	3.787E-01	3.013E-02	1.439
		323.87	*	2.664E-01	7.734E-01	1.284E+00	2.190E-01	0.207
	+	338.28		5.113E+00	1.819E+00	2.553E+00	2.863E-01	2.003
		445.03		-1.012E+00	2.763E+00	4.542E+00	4.815E-01	-0.223
RN-219	+	271.23		6.990E-01	3.921E-01	5.135E-01	4.927E-02	1.361
		401.81	*	4.622E-02	4.962E-01	8.004E-01	1.094E-01	0.058
RN-220		549.76	*	1.954E+01	3.324E+01	5.698E+01	4.166E+00	0.343
RA-223		81.07		-4.088E-02	2.297E-01	2.727E-01	2.255E-02	-0.150
	+	83.78		7.138E-02	1.155E-01	1.654E-01	1.343E-02	0.432
		94.90		7.019E-01	2.376E-01	3.863E-01	3.387E-02	1.817
		122.32		-5.032E-01	1.929E+00	3.042E+00	3.975E-01	-0.165
		144.24		2.248E-01	7.516E-01	1.207E+00	1.357E-01	0.186
		154.21		1.624E-01	4.337E-01	7.069E-01	7.106E-02	0.230
	+	269.46		5.448E-01	3.042E-01	3.787E-01	3.013E-02	1.439
		323.87	*	2.664E-01	7.734E-01	1.284E+00	2.190E-01	0.207
	+	338.28		5.113E+00	1.819E+00	2.553E+00	2.863E-01	2.003
		445.03		-1.012E+00	2.763E+00	4.542E+00	4.815E-01	-0.223
AC-227		79.80		-8.769E-02	1.353E+00	2.009E+00	4.297E-01	-0.044
		236.00		2.369E-01	2.620E-01	4.049E-01	4.758E-02	0.585
		256.20	*	-2.252E-01	4.352E-01	7.040E-01	1.050E-01	-0.320
		286.10		2.593E-01	1.594E+00	2.652E+00	3.335E-01	0.098
	+	299.80		3.238E+00	2.654E+00	3.009E+00	5.104E-01	1.076
		304.40		2.264E+00	2.397E+00	3.638E+00	6.517E-01	0.623
		334.20		1.905E-01	2.944E+00	4.218E+00	7.912E-01	0.045
TH-227		79.80		-8.769E-02	1.353E+00	2.009E+00	4.353E-01	-0.044
	+	94.00		8.329E+00	3.457E+00	4.173E+00	9.094E-01	1.996
		236.00		2.369E-01	2.617E-01	4.049E-01	4.264E-02	0.585
		256.20	*	-2.252E-01	4.357E-01	7.040E-01	1.246E-01	-0.320
		286.10		2.593E-01	1.615E+00	2.652E+00	2.659E+00	0.098
	+	299.80		3.238E+00	2.654E+00	3.009E+00	5.104E-01	1.076
		304.40		2.264E+00	2.397E+00	3.638E+00	6.517E-01	0.623
		334.20		1.905E-01	2.944E+00	4.218E+00	7.912E-01	0.045
TH-229	+	85.43		1.069E-01	1.729E-01	2.571E-01	2.064E-02	0.416
	+	88.47		3.533E-01	1.147E-01	1.757E-01	1.396E-02	2.011
		100.00		-7.509E-03	1.743E-01	2.799E-01	2.643E-02	-0.027
		193.63	*	4.464E-01	5.099E-01	8.935E-01	7.068E-02	0.500
		210.97		1.091E+00	9.093E-01	1.435E+00	1.138E-01	0.760
PA-231		283.67	*	-6.468E-01	1.586E+00	2.553E+00	3.741E-01	-0.253
	+	301.29		1.295E+00	1.049E+00	1.212E+00	1.390E-01	1.069
TH-231		81.07		-4.088E-02	2.297E-01	2.727E-01	2.255E-02	-0.150
	+	83.78		7.138E-02	1.155E-01	1.654E-01	1.343E-02	0.432
		94.90		7.019E-01	2.376E-01	3.863E-01	3.387E-02	1.817
		122.32		-5.032E-01	1.929E+00	3.042E+00	3.975E-01	-0.165
		144.24		2.248E-01	7.516E-01	1.207E+00	1.357E-01	0.186
		154.21		1.624E-01	4.337E-01	7.069E-01	7.106E-02	0.230

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.448E-01	3.042E-01	3.787E-01	3.013E-02	1.439
		323.87	*	2.664E-01	7.734E-01	1.284E+00	2.190E-01	0.207
	+	338.28		5.113E+00	1.819E+00	2.553E+00	2.863E-01	2.003
		445.03		-1.012E+00	2.763E+00	4.542E+00	4.815E-01	-0.223
U-231	+	84.21		2.542E+00	4.113E+00	6.032E+00	4.883E-01	0.421
	+	92.29		6.803E+00	2.474E+00	3.505E+00	2.954E-01	1.941
		95.87	*	8.792E-02	8.308E-01	1.239E+00	1.102E-01	0.071
		108.00		-4.154E-01	1.666E+00	2.711E+00	2.860E-01	-0.153
PA-233	+	75.28		1.442E+01	3.333E+00	4.698E+00	7.206E-01	3.070
	+	86.59		5.066E+00	2.088E+00	2.494E+00	6.638E-01	2.031
	+	300.12		9.027E-01	7.351E-01	8.429E-01	1.201E-01	1.071
		311.98	*	-3.868E-02	6.866E-02	1.085E-01	8.290E-03	-0.356
		340.50		1.372E+00	9.400E-01	1.386E+00	3.227E-01	0.990
		398.62		-2.394E-01	2.470E+00	3.936E+00	1.019E+00	-0.061
		415.76		-4.102E-01	1.975E+00	3.109E+00	6.426E-01	-0.132
PA-234	+	63.00		1.155E+00	1.432E+00	1.631E+00	2.598E-01	0.708
	+	94.67		7.427E-01	2.781E-01	3.027E-01	3.779E-02	2.454
		98.44		3.123E-02	9.027E-02	1.388E-01	7.757E-02	0.225
		99.86		-9.040E-02	4.453E-01	7.106E-01	6.697E-02	-0.127
		111.00		2.257E-02	1.854E-01	3.056E-01	4.239E-02	0.074
		131.20		-8.918E-02	1.158E-01	1.756E-01	2.063E-02	-0.508
		152.70		-5.461E-02	3.485E-01	5.555E-01	9.702E-02	-0.098
	+	186.00		4.207E+00	2.766E+00	2.961E+00	9.185E-01	1.421
		226.40		-2.499E-01	4.220E-01	6.872E-01	8.768E-02	-0.364
		227.20		-7.246E-02	4.525E-01	7.536E-01	5.971E-02	-0.096
		248.90		-4.172E-01	9.778E-01	1.384E+00	3.064E-01	-0.301
		293.70		2.748E+00	1.038E+00	1.562E+00	2.624E-01	1.759
		369.80		1.444E-01	1.020E+00	1.660E+00	3.484E-01	0.087
		568.70		-1.485E-01	1.318E+00	2.156E+00	1.609E-01	-0.069
		569.50		1.279E-01	3.485E-01	5.876E-01	4.391E-02	0.218
		574.00		-5.875E-01	1.925E+00	3.101E+00	2.328E-01	-0.189
		699.00		6.609E-01	1.044E+00	1.720E+00	3.247E-01	0.384
		706.10		-3.304E-01	1.387E+00	2.186E+00	9.730E-01	-0.151
		733.00		1.719E-02	6.327E-01	8.799E-01	1.937E-01	0.020
		742.81		1.351E+00	2.109E+00	3.224E+00	2.165E+00	0.419
		796.30		7.690E-01	1.271E+00	2.181E+00	5.857E-01	0.353
		805.60		1.491E+00	1.479E+00	2.516E+00	7.665E-01	0.593
		819.60		-1.565E+00	1.791E+00	2.621E+00	9.928E-01	-0.597
		826.30		8.082E-02	1.178E+00	1.973E+00	8.799E-01	0.041
		831.60		-4.764E-01	9.093E-01	1.442E+00	4.272E-01	-0.330
		876.40		-5.784E-01	1.250E+00	1.745E+00	1.793E+00	-0.331
		880.51		1.714E-01	3.767E-01	6.460E-01	4.924E-02	0.265
		883.24		-8.136E-02	4.140E-01	6.488E-01	4.353E-01	-0.125
		899.00		7.909E-01	1.229E+00	2.048E+00	8.910E-01	0.386
		925.00		2.008E-01	1.611E+00	2.683E+00	1.985E-01	0.075
		926.50		-1.088E-01	2.468E-01	3.904E-01	9.715E-02	-0.279
		946.00	*	-4.005E-01	4.577E-01	6.939E-01	1.262E-01	-0.577
		949.00		5.373E-02	6.384E-01	1.057E+00	7.692E-02	0.051
		980.50		-5.070E-01	1.054E+00	1.662E+00	1.179E-01	-0.305

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-1.714E+00	1.940E+00	2.291E+00	1.484E+00	-0.748
PA-234M		766.41		3.713E+00	2.307E+01	3.881E+01	2.974E+01	0.096
		1001.03	*	-1.869E+00	9.736E+00	1.541E+01	1.534E+00	-0.121
U-235	+	89.95		1.615E+00	1.071E+00	1.648E+00	5.062E-01	0.980
	+	93.35		2.591E+00	1.169E+00	1.387E+00	3.885E-01	1.868
		105.00		6.709E-01	1.031E+00	1.708E+00	5.176E-01	0.393
		143.76	*	-1.837E-02	2.338E-01	3.699E-01	6.830E-02	-0.050
		163.35		-1.373E-01	5.434E-01	8.417E-01	1.588E-01	-0.163
	+	185.71		1.558E-01	9.115E-02	1.091E-01	8.611E-03	1.428
		205.31		-2.296E-01	6.126E-01	8.811E-01	1.655E-01	-0.261
NP-236	+	94.67		5.633E-01	2.048E-01	2.301E-01	2.010E-02	2.449
		98.44		2.360E-02	6.699E-02	1.049E-01	9.690E-03	0.225
		111.00		1.707E-02	1.402E-01	2.312E-01	2.539E-02	0.074
		160.31	*	-2.395E-03	9.007E-02	1.440E-01	1.227E-02	-0.017
NP-239		99.55		-6.064E-02	1.493E-01	2.363E-01	2.217E-02	-0.257
		117.00	*	-8.181E-02	1.930E-01	3.096E-01	3.674E-02	-0.264
	+	209.75		2.361E+00	1.304E+00	1.491E+00	1.182E-01	1.583
		228.18		-1.197E-02	2.351E-01	3.933E-01	3.116E-02	-0.030
		277.60		3.509E-01	2.085E-01	3.680E-01	2.834E-02	0.953
		334.30		2.575E-02	1.664E+00	2.375E+00	1.670E-01	0.011
AM-241		59.54	*	9.354E-03	6.528E-02	1.006E-01	1.023E-02	0.093
CM-243		99.55		-6.240E-02	1.536E-01	2.431E-01	2.281E-02	-0.257
		103.76	*	-4.866E-02	9.171E-02	1.477E-01	1.471E-02	-0.329
		117.00		-8.416E-02	1.985E-01	3.185E-01	3.779E-02	-0.264
	+	209.75		2.327E+00	1.285E+00	1.470E+00	1.165E-01	1.583
		228.18		-1.210E-02	2.375E-01	3.974E-01	3.148E-02	-0.030
		277.60		3.537E-01	2.102E-01	3.710E-01	2.857E-02	0.953
CM-247		278.00		1.281E+00	8.693E-01	1.523E+00	1.172E-01	0.841
		287.40		8.170E-01	1.248E+00	2.131E+00	1.623E-01	0.383
		402.60	*	-8.206E-03	4.451E-02	7.050E-02	4.198E-03	-0.116
CF-249		252.85		1.694E-01	9.366E-01	1.572E+00	1.234E-01	0.108
		333.44		2.114E-01	2.135E-01	3.272E-01	2.305E-02	0.646
		387.95	*	-1.703E-02	4.962E-02	7.811E-02	4.638E-03	-0.218
CF-251		176.60	*	-1.136E-02	1.373E-01	2.173E-01	1.710E-02	-0.052
		227.00		-1.855E-01	4.077E-01	6.698E-01	5.307E-02	-0.277
		285.00		-1.432E-01	1.790E+00	2.938E+00	2.245E-01	-0.049

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347003      *
* Acquisition date :  6-JUL-2009 11:11:20 Detector SN#    :                 *
* Detector ID        : GAM13               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.62      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232347003           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.2688E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.264E+01	2.809E+00	7.562E-01	0.000E+00
CD-109	2.628E+00	8.359E-01	1.309E+00	0.000E+00
SN-126	2.588E-01	8.230E-02	1.287E-01	0.000E+00
TL-208	4.182E-01	1.022E-01	7.944E-02	0.000E+00
BI-210	4.720E-01	8.909E-01	8.783E-01	0.000E+00
PB-210	4.720E-01	8.909E-01	8.783E-01	0.000E+00
PO-210	4.720E-01	8.907E-01	8.783E-01	0.000E+00
BI-211	3.095E+00	4.550E-01	3.586E-01	0.000E+00
PB-212	1.403E+00	1.666E-01	9.638E-02	0.000E+00
PO-212	1.403E+00	1.666E-01	9.638E-02	0.000E+00
BI-214	9.510E-01	1.882E-01	1.703E-01	0.000E+00
PB-214	1.077E+00	1.676E-01	1.250E-01	0.000E+00
PO-214	1.077E+00	1.676E-01	1.250E-01	0.000E+00
PO-216	1.403E+00	1.666E-01	9.638E-02	0.000E+00
PO-218	1.077E+00	1.676E-01	1.250E-01	0.000E+00
RA-224	3.985E+00	1.175E+00	1.097E+00	0.000E+00
RA-226	9.510E-01	1.882E-01	1.703E-01	0.000E+00
AC-228	1.751E+00	4.162E-01	3.090E-01	0.000E+00
RA-228	1.751E+00	4.162E-01	3.090E-01	0.000E+00
TH-228	1.403E+00	1.666E-01	9.637E-02	0.000E+00
TH-230	9.510E-01	1.882E-01	1.703E-01	0.000E+00
TH-232	1.751E+00	4.162E-01	3.090E-01	0.000E+00
TH-234	9.906E-01	1.207E+00	1.046E+00	0.000E+00
U-234	9.510E-01	1.882E-01	1.703E-01	0.000E+00
NP-237	7.599E-01	2.864E-01	2.968E-01	0.000E+00
U-238	9.906E-01	1.207E+00	1.046E+00	0.000E+00
AM-243	2.754E-01	5.209E-02	6.656E-02	0.000E+00
ANH-511	9.375E-02	8.227E-02	6.237E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-2.549E-01	3.975E-01	6.628E-01	0.000E+00	NOT IDENT.
NA-22	-2.734E-02	5.919E-02	9.677E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.756E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.415E-02	3.241E-02	6.200E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.396E-02	6.484E-02	0.000E+00	FAIL ABUN
SC-46	2.605E-03	5.186E-02	8.860E-02	0.000E+00	FAIL ABUN
V-48	-4.424E-03	9.429E-02	1.581E-01	0.000E+00	NOT IDENT.
CR-51	-1.664E-01	4.024E-01	6.701E-01	0.000E+00	NOT IDENT.
MN-52	1.113E-01	2.842E-01	4.962E-01	0.000E+00	NOT IDENT.
MN-54	9.441E-03	5.129E-02	8.892E-02	0.000E+00	NOT IDENT.
CO-56	-4.895E-02	5.068E-02	7.996E-02	0.000E+00	NOT IDENT.
CO-57	-1.475E-02	2.729E-02	4.496E-02	0.000E+00	NOT IDENT.
CO-58	-5.318E-02	5.349E-02	8.516E-02	0.000E+00	NOT IDENT.
FE-59	4.170E-02	1.306E-01	2.224E-01	0.000E+00	NOT IDENT.
CO-60	-5.624E-02	5.064E-02	7.252E-02	0.000E+00	NOT IDENT.
ZN-65	-1.159E-01	1.446E-01	1.854E-01	0.000E+00	NOT IDENT.
GE-68	-9.013E-01	1.714E+00	2.728E+00	0.000E+00	NOT IDENT.
AS-73	-1.710E-02	2.319E-01	4.091E-01	0.000E+00	NOT IDENT.
AS-74	8.914E-02	1.111E-01	1.981E-01	0.000E+00	NOT IDENT.
SE-75	3.116E-03	5.207E-02	8.288E-02	0.000E+00	NOT IDENT.
BR-77	3.231E+00	9.651E+00	1.692E+01	0.000E+00	FAIL ABUN
SR-82	-5.341E-01	4.900E-01	7.783E-01	0.000E+00	NOT IDENT.
RB-83	3.793E-02	8.861E-02	1.562E-01	0.000E+00	NOT IDENT.
RB-84	2.975E-02	9.170E-02	1.549E-01	0.000E+00	NOT IDENT.
KR-85	1.056E+01	1.053E+01	1.691E+01	0.000E+00	NOT IDENT.
SR-85	5.351E-02	5.334E-02	8.565E-02	0.000E+00	NOT IDENT.
RB-86	-7.735E-01	1.048E+00	1.636E+00	0.000E+00	NOT IDENT.
Y-88	2.023E-02	3.896E-02	7.147E-02	0.000E+00	NOT IDENT.
ZR-88	6.771E-03	3.593E-02	6.076E-02	0.000E+00	NOT IDENT.
Y-91	-4.246E+00	2.499E+01	4.222E+01	0.000E+00	NOT IDENT.
NB-94	1.723E-02	4.466E-02	7.642E-02	0.000E+00	NOT IDENT.
NB-95	1.074E-02	5.454E-02	9.543E-02	0.000E+00	NOT IDENT.
NB-95M	7.762E-02	1.347E-01	2.150E-01	0.000E+00	NOT IDENT.
ZR-95	-1.704E-02	9.623E-02	1.569E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.817E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.134E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-8.549E+00	1.250E+01	1.957E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.597E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.556E-03	3.477E-02	6.025E-02	0.000E+00	NOT IDENT.
RH-102	7.415E-03	3.508E-02	6.163E-02	0.000E+00	NOT IDENT.
RU-103	-1.110E-02	4.939E-02	8.412E-02	0.000E+00	FAIL ABUN
RH-106	1.084E-03	4.165E-01	7.035E-01	0.000E+00	FAIL ABUN
RU-106	1.084E-03	4.165E-01	7.035E-01	0.000E+00	FAIL ABUN
AG-108M	-3.179E-02	3.561E-02	5.874E-02	0.000E+00	NOT IDENT.
AG-110M	1.326E-02	4.315E-02	7.405E-02	0.000E+00	NOT IDENT.
IN-111	8.245E-01	8.861E-01	1.444E+00	0.000E+00	NOT IDENT.
IN-113M	1.080E-02	5.124E-02	8.682E-02	0.000E+00	NOT IDENT.
SN-113	1.080E-02	5.124E-02	8.682E-02	0.000E+00	NOT IDENT.
IN-114M	-8.268E-02	2.126E-01	3.052E-01	0.000E+00	NOT IDENT.
CD-115	5.193E+00	9.457E+00	1.678E+01	0.000E+00	NOT IDENT.
SN-117M	-2.339E-02	5.738E-02	9.509E-02	0.000E+00	NOT IDENT.
SB-122	1.549E+00	1.966E+00	3.513E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.476E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	7.774E-03	3.112E-02	5.307E-02	0.000E+00	NOT IDENT.
I-124	-4.444E-01	8.095E-01	1.123E+00	0.000E+00	NOT IDENT.
SB-124	-4.066E-02	8.790E-02	1.321E-01	0.000E+00	FAIL ABUN
SB-125	4.643E-02	1.054E-01	1.892E-01	0.000E+00	FAIL ABUN
TE-125M	-4.568E+00	8.965E+00	1.527E+01	0.000E+00	NOT IDENT.
I-126	3.029E-01	2.228E-01	4.056E-01	0.000E+00	NOT IDENT.
SB-126	-3.086E-02	2.172E-01	3.067E-01	0.000E+00	FAIL ABUN
SB-127	-3.426E-02	1.389E+00	2.318E+00	0.000E+00	NOT IDENT.
XE-127	1.248E-02	4.618E-02	8.289E-02	0.000E+00	NOT IDENT.
I-131	6.052E-03	1.356E-01	2.004E-01	0.000E+00	NOT IDENT.
TE-132	-1.217E-01	5.553E-01	9.666E-01	0.000E+00	NOT IDENT.
BA-133	5.157E-02	6.545E-02	9.315E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.908E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.555E-02	6.262E-02	1.146E-01	0.000E+00	NOT IDENT.
CS-135	7.243E-02	1.877E-01	2.932E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.535E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.084E-01	1.473E-01	2.596E-01	0.000E+00	FAIL ABUN
BA-137M	-5.381E-02	4.620E-02	7.043E-02	0.000E+00	NOT IDENT.
CS-137	-5.688E-02	4.883E-02	7.445E-02	0.000E+00	NOT IDENT.
CE-139	-2.302E-02	3.283E-02	5.340E-02	0.000E+00	NOT IDENT.
BA-140	3.409E-01	3.127E-01	5.394E-01	0.000E+00	NOT IDENT.
LA-140	-1.026E-02	1.143E-01	1.873E-01	0.000E+00	NOT IDENT.
CE-141	6.861E-02	6.425E-02	1.135E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.423E+01	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-8.360E-03	2.109E-01	3.490E-01	0.000E+00	NOT IDENT.
PM-144	1.696E-02	4.743E-02	8.101E-02	0.000E+00	NOT IDENT.
PR-144	1.148E+00	3.212E+00	5.486E+00	0.000E+00	NOT IDENT.
PM-146	-2.531E-02	5.088E-02	8.596E-02	0.000E+00	NOT IDENT.
ND-147	-2.865E-01	6.383E-01	1.061E+00	0.000E+00	FAIL ABUN
PM-149	1.078E+01	6.498E+01	1.130E+02	0.000E+00	NOT IDENT.
EU-152	4.757E-02	1.389E-01	1.971E-01	0.000E+00	FAIL ABUN
GD-153	1.722E-02	7.523E-02	1.197E-01	0.000E+00	FAIL ABUN
EU-154	-7.509E-02	1.656E-01	2.708E-01	0.000E+00	NOT IDENT.
EU-155	7.488E-02	1.017E-01	1.820E-01	0.000E+00	FAIL ABUN
TB-160	-1.158E-02	1.779E-01	3.015E-01	0.000E+00	FAIL ABUN
HO-166M	1.815E-02	7.836E-02	1.327E-01	0.000E+00	NOT IDENT.
TM-171	9.846E-01	1.641E+01	2.644E+01	0.000E+00	NOT IDENT.
LU-176	1.109E-02	2.828E-02	4.783E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.600E+00	1.878E+00	0.000E+00	FAIL ABUN
LU-177M	-1.742E-01	2.225E-01	3.430E-01	0.000E+00	NOT IDENT.
HF-181	5.457E-02	5.288E-02	9.668E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	2.154E-01	3.653E-01	0.000E+00	NOT IDENT.
TA-182	-2.178E-01	2.787E-01	4.510E-01	0.000E+00	FAIL ABUN
RE-183	-1.708E-02	1.225E-01	2.014E-01	0.000E+00	FAIL ABUN
RE-184	4.494E-02	2.435E-01	4.280E-01	0.000E+00	NOT IDENT.
OS-185	2.867E-02	5.965E-02	1.034E-01	0.000E+00	NOT IDENT.
RE-188	2.099E-01	1.821E-01	3.214E-01	0.000E+00	NOT IDENT.
W-188	-1.371E+00	8.293E+00	1.236E+01	0.000E+00	FAIL ABUN
IR-192	2.502E-02	3.786E-02	6.688E-02	0.000E+00	FAIL ABUN
AU-195	5.936E-02	2.058E-01	3.554E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.606E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.920E+00	5.799E+00	9.958E+00	0.000E+00	NOT IDENT.
TL-202	4.756E-02	7.502E-02	1.357E-01	0.000E+00	NOT IDENT.
HG-203	5.129E-02	4.515E-02	8.174E-02	0.000E+00	NOT IDENT.
BI-207	3.460E-02	7.589E-02	1.310E-01	0.000E+00	FAIL ABUN
TL-207	2.664E-01	7.579E-01	1.313E+00	0.000E+00	FAIL ABUN
PO-209	5.514E+00	1.026E+01	1.811E+01	0.000E+00	NOT IDENT.
PB-211	-3.741E-01	1.130E+00	1.804E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.144E-01	8.028E-01	0.000E+00	FAIL ABUN
PO-215	2.664E-01	7.579E-01	1.313E+00	0.000E+00	FAIL ABUN
RN-219	4.622E-02	4.863E-01	8.158E-01	0.000E+00	FAIL ABUN
RN-220	1.954E+01	3.258E+01	5.781E+01	0.000E+00	NOT IDENT.
RA-223	2.664E-01	7.579E-01	1.313E+00	0.000E+00	FAIL ABUN
AC-227	-2.252E-01	4.265E-01	7.222E-01	0.000E+00	FAIL ABUN
TH-227	-2.252E-01	4.270E-01	7.222E-01	0.000E+00	FAIL ABUN
TH-229	4.464E-01	4.997E-01	9.204E-01	0.000E+00	FAIL ABUN
PA-231	-6.468E-01	1.554E+00	2.615E+00	0.000E+00	FAIL ABUN
TH-231	2.664E-01	7.579E-01	1.313E+00	0.000E+00	FAIL ABUN
U-231	8.792E-02	8.142E-01	1.289E+00	0.000E+00	FAIL ABUN
PA-233	-3.868E-02	6.728E-02	1.110E-01	0.000E+00	FAIL ABUN
PA-234	-4.005E-01	4.486E-01	6.983E-01	0.000E+00	FAIL ABUN
PA-234M	-1.869E+00	9.541E+00	1.549E+01	0.000E+00	NOT IDENT.
U-235	-1.837E-02	2.291E-01	3.827E-01	0.000E+00	FAIL ABUN
NP-236	-2.395E-03	8.827E-02	1.487E-01	0.000E+00	FAIL ABUN
NP-239	-8.181E-02	1.891E-01	3.212E-01	0.000E+00	FAIL ABUN
AM-241	9.354E-03	6.398E-02	1.053E-01	0.000E+00	NOT IDENT.
CM-243	-4.866E-02	8.988E-02	1.535E-01	0.000E+00	FAIL ABUN
CM-247	-8.206E-03	4.362E-02	7.185E-02	0.000E+00	NOT IDENT.
CF-249	-1.703E-02	4.863E-02	7.965E-02	0.000E+00	NOT IDENT.
CF-251	-1.136E-02	1.346E-01	2.241E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:48:12.51

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347003.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:11:20.
Sample ID         : G232347003           Sample quantity  : 1.26880E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.62  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1225	10.67*	1.041E+00	3.264E+01	3.264E+01	8.78
CD-109	88.03	234	3.72*	7.243E+00	2.574E+00	2.628E+00	32.45
SN-126	64.28	94	9.60	7.391E+00	3.921E-01	3.921E-01	123.98
	86.94	234	8.90	7.243E+00	1.076E+00	1.076E+00	51.86
	87.57	234	37.00*	7.243E+00	2.588E-01	2.588E-01	32.45
TL-208	277.35	------	6.80	4.225E+00	------	Line Not Found	------
	510.84	80	21.60	2.536E+00	4.340E-01	4.340E-01	89.93
	583.14	268	84.20*	2.256E+00	4.182E-01	4.182E-01	24.94
	860.37	------	12.46	1.606E+00	------	Line Not Found	------
BI-210	46.50	47	4.05*	7.303E+00	4.715E-01	4.720E-01	192.59
PB-210	46.50	47	4.05*	7.303E+00	4.715E-01	4.720E-01	192.59
PO-210	46.50	47	4.05*	7.303E+00	4.715E-01	4.720E-01	192.55
BI-211	72.87	------	1.27	7.369E+00	------	Line Not Found	------
	351.07	473	12.94*	3.495E+00	3.095E+00	3.095E+00	15.00
PB-212	74.81	452	10.70	7.356E+00	1.698E+00	1.698E+00	21.45
	77.11	699	18.00	7.340E+00	1.565E+00	1.565E+00	15.53
	87.30	234	8.00	7.243E+00	1.197E+00	1.197E+00	33.96
	238.63	996	44.60*	4.710E+00	1.403E+00	1.403E+00	12.11
	300.09	80	3.41	3.973E+00	1.747E+00	1.747E+00	80.75
PO-212	74.81	452	10.70	7.356E+00	1.698E+00	1.698E+00	21.45
	77.11	699	18.00	7.340E+00	1.565E+00	1.565E+00	15.53
	87.30	234	8.00	7.243E+00	1.197E+00	1.197E+00	33.96
	115.19	------	0.60	6.822E+00	------	Line Not Found	------
	238.63	996	44.60*	4.710E+00	1.403E+00	1.403E+00	12.11
	300.09	80	3.41	3.973E+00	1.747E+00	1.747E+00	80.75
BI-214	609.31	323	46.30*	2.171E+00	9.510E-01	9.510E-01	20.19
	768.36	------	5.04	1.770E+00	------	Line Not Found	------
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	42	15.10	1.286E+00	6.423E-01	6.423E-01	100.25
	1238.11	------	5.94	1.187E+00	------	Line Not Found	------
	1377.67	------	4.11	1.090E+00	------	Line Not Found	------
	1764.49	48	15.80	8.990E-01	9.922E-01	9.922E-01	45.70

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	452	6.21	7.356E+00	2.926E+00	2.927E+00	20.68
	77.11	699	10.50	7.340E+00	2.683E+00	2.683E+00	17.30
	87.30	234	4.67	7.243E+00	2.050E+00	2.050E+00	33.36
	241.98	248	7.49	4.669E+00	2.102E+00	2.102E+00	30.60
	295.21	231	19.20	4.023E+00	8.854E-01	8.855E-01	30.29
	351.92	473	37.20*	3.495E+00	1.077E+00	1.077E+00	15.88
PO-214	74.81	452	6.21	7.356E+00	2.926E+00	2.927E+00	20.68
	77.11	699	10.50	7.340E+00	2.683E+00	2.683E+00	17.30
	87.30	234	4.67	7.243E+00	2.050E+00	2.050E+00	33.36
	241.98	248	7.49	4.669E+00	2.102E+00	2.102E+00	30.60
	295.21	231	19.20	4.023E+00	8.854E-01	8.855E-01	30.29
	351.92	473	37.20*	3.495E+00	1.077E+00	1.077E+00	15.88
PO-216	74.81	452	10.70	7.356E+00	1.698E+00	1.698E+00	21.45
	77.11	699	18.00	7.340E+00	1.565E+00	1.565E+00	15.53
	87.30	234	8.00	7.243E+00	1.197E+00	1.197E+00	33.96
	238.63	996	44.60*	4.710E+00	1.403E+00	1.403E+00	12.11
	300.09	80	3.41	3.973E+00	1.747E+00	1.747E+00	80.75
PO-218	74.81	452	6.21	7.356E+00	2.926E+00	2.927E+00	20.68
	77.11	699	10.50	7.340E+00	2.683E+00	2.683E+00	17.30
	87.30	234	4.67	7.243E+00	2.050E+00	2.050E+00	33.36
	241.98	248	7.49	4.669E+00	2.102E+00	2.102E+00	30.60
	295.21	231	19.20	4.023E+00	8.854E-01	8.855E-01	30.29
	351.92	473	37.20*	3.495E+00	1.077E+00	1.077E+00	15.88
RA-224	240.98	248	3.95*	4.669E+00	3.985E+00	3.985E+00	30.08
RA-226	609.31	323	46.30*	2.171E+00	9.510E-01	9.510E-01	20.19
	768.36	------	5.04	1.770E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	42	15.10	1.286E+00	6.423E-01	6.423E-01	100.25
	1238.11	------	5.94	1.187E+00	------ Line Not Found		------
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	48	15.80	8.990E-01	9.922E-01	9.922E-01	45.70
AC-228	338.32	170	11.40	3.611E+00	1.225E+00	1.225E+00	53.07
	911.07	251	27.70*	1.529E+00	1.751E+00	1.751E+00	24.26
	969.11	150	16.60	1.452E+00	1.843E+00	1.843E+00	33.81
RA-228	338.32	170	11.40	3.611E+00	1.225E+00	1.225E+00	53.07
	911.07	251	27.70*	1.529E+00	1.751E+00	1.751E+00	24.26
	969.11	150	16.60	1.452E+00	1.843E+00	1.843E+00	33.81
TH-228	84.40	43	1.21	7.278E+00	1.457E+00	1.457E+00	162.12
	238.60	996	44.60*	4.710E+00	1.403E+00	1.403E+00	12.11
	300.10	80	3.41	3.973E+00	1.747E+00	1.747E+00	99.63
TH-230	609.31	323	46.30*	2.171E+00	9.510E-01	9.510E-01	20.19
	768.36	------	5.04	1.770E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	42	15.10	1.286E+00	6.423E-01	6.423E-01	100.25
	1238.11	------	5.94	1.187E+00	------ Line Not Found		------
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	48	15.80	8.990E-01	9.922E-01	9.922E-01	45.70
TH-232	338.32	170	11.40	3.611E+00	1.225E+00	1.225E+00	34.47
	911.07	251	27.70*	1.529E+00	1.751E+00	1.751E+00	24.26

Sample ID : G232347003 Acquisition date : 6-JUL-2009 11:11:20

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	150	16.60	1.452E+00	1.843E+00	1.843E+00	33.81
TH-234	63.29	94	3.80*	7.391E+00	9.906E-01	9.906E-01	124.35
	92.38	283	5.41	7.172E+00	2.155E+00	2.155E+00	39.69
U-234	609.31	323	46.30*	2.171E+00	9.510E-01	9.510E-01	20.19
	768.36	------	5.04	1.770E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	42	15.10	1.286E+00	6.423E-01	6.423E-01	100.25
	1238.11	------	5.94	1.187E+00	------ Line Not Found		------
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	48	15.80	8.990E-01	9.922E-01	9.922E-01	45.70
NP-237	86.50	234	12.60*	7.243E+00	7.599E-01	7.599E-01	38.46
	95.87	------	2.60	7.135E+00	------ Line Not Found		------
U-238	63.29	94	3.80*	7.391E+00	9.906E-01	9.906E-01	124.35
	92.38*	283	5.41	7.172E+00	2.155E+00	2.155E+00	36.36
AM-243	74.67	452	66.00*	7.356E+00	2.754E-01	2.754E-01	19.30
	86.72	234	0.34	7.243E+00	2.850E+01	2.850E+01	32.45
	117.66	------	0.55	6.778E+00	------ Line Not Found		------
	142.18	------	0.13	6.323E+00	------ Line Not Found		------
ANH-511	511.00	80	100.00*	2.536E+00	9.375E-02	9.375E-02	89.54

Flag: "*" = Keyline

Sample ID : G232347003 Acquisition date : 6-JUL-2009 11:11:20

Total number of lines in spectrum 29
Number of unidentified lines 0
Number of lines tentatively identified by NID 29 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.264E+01	3.264E+01	0.287E+01	8.78	
CD-109	464.00D	1.02	2.574E+00	2.628E+00	0.853E+00	32.45	
SN-126	1.00E+05Y	1.00	2.588E-01	2.588E-01	0.840E-01	32.45	
TL-208	1.41E+10Y	1.00	4.182E-01	4.182E-01	1.043E-01	24.94	
BI-210	22.26Y	1.00	4.715E-01	4.720E-01	9.091E-01	192.59	
PB-210	22.26Y	1.00	4.715E-01	4.720E-01	9.091E-01	192.59	
PO-210	22.26Y	1.00	4.715E-01	4.720E-01	9.089E-01	192.55	
BI-211	7.04E+08Y	1.00	3.095E+00	3.095E+00	0.464E+00	15.00	
PB-212	1.41E+10Y	1.00	1.403E+00	1.403E+00	0.170E+00	12.11	
PO-212	1.41E+10Y	1.00	1.403E+00	1.403E+00	0.170E+00	12.11	
BI-214	1600.00Y	1.00	9.510E-01	9.510E-01	1.920E-01	20.19	
PB-214	1600.00Y	1.00	1.077E+00	1.077E+00	0.171E+00	15.88	
PO-214	1600.00Y	1.00	1.077E+00	1.077E+00	0.171E+00	15.88	
PO-216	1.41E+10Y	1.00	1.403E+00	1.403E+00	0.170E+00	12.11	
PO-218	1600.00Y	1.00	1.077E+00	1.077E+00	0.171E+00	15.88	
RA-224	1.41E+10Y	1.00	3.985E+00	3.985E+00	1.199E+00	30.08	
RA-226	1600.00Y	1.00	9.510E-01	9.510E-01	1.920E-01	20.19	
AC-228	1.41E+10Y	1.00	1.751E+00	1.751E+00	0.425E+00	24.26	
RA-228	1.41E+10Y	1.00	1.751E+00	1.751E+00	0.425E+00	24.26	
TH-228	1.41E+10Y	1.00	1.403E+00	1.403E+00	0.170E+00	12.11	
TH-230	4.47E+09Y	1.00	9.510E-01	9.510E-01	1.920E-01	20.19	
TH-232	1.41E+10Y	1.00	1.751E+00	1.751E+00	0.425E+00	24.26	
TH-234	4.47E+09Y	1.00	9.906E-01	9.906E-01	12.32E-01	124.35	
U-234	4.47E+09Y	1.00	9.510E-01	9.510E-01	1.920E-01	20.19	
NP-237	2.14E+06Y	1.00	7.599E-01	7.599E-01	2.923E-01	38.46	
U-238	4.47E+09Y	1.00	9.906E-01	9.906E-01	12.32E-01	124.35	
AM-243	7380.00Y	1.00	2.754E-01	2.754E-01	0.532E-01	19.30	
ANH-511	1.00E+09Y	1.00	9.375E-02	9.375E-02	8.395E-02	89.54	
	Total Activity :		6.539E+01	6.545E+01			

Grand Total Activity : 6.539E+01 6.545E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G232347003 Acquisition date : 6-JUL-2009 11:11:20

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	90.23	106	407	0.88	180.23	172	12	1.48E-02	58.7	7.21E+00	T
0	186.07	157	409	1.41	371.98	366	12	2.18E-02	58.0	5.52E+00	T
0	209.41	133	318	1.51	418.65	414	11	1.85E-02	54.7	5.14E+00	T
0	270.42	108	224	1.88	540.71	536	10	1.50E-02	55.3	4.31E+00	T
2	356.34	36	102	1.71	712.59	696	29	5.01E-03	****	3.46E+00	T
0	463.15	63	150	1.39	926.28	920	13	8.74E-03	84.0	2.76E+00	T
0	727.36	79	101	2.09	1454.88	1447	13	1.10E-02	57.8	1.86E+00	T
1	964.63	63	39	2.11	1929.60	1925	20	8.81E-03	42.2	1.46E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:48:17.08

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*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347003.CNF;1 *
* Acquisition date  : 6-JUL-2009 11:11:20.  Detector SN#     :             *
* Detector ID       : GAM13                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.62          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232347003            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.26880E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 2-FEB-2009 10:41:22.03MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.264E+01	2.866E+00	7.564E-01	4.624E-02	43.149
CD-109	2.628E+00	8.530E-01	1.256E+00	9.913E-02	2.092
SN-126	2.588E-01	8.398E-02	1.235E-01	9.771E-03	2.095
TL-208	4.182E-01	1.043E-01	7.838E-02	6.488E-03	5.335
BI-210	4.720E-01	9.091E-01	8.356E-01	6.811E-02	0.565
PB-210	4.720E-01	9.091E-01	8.356E-01	6.811E-02	0.565
PO-210	4.720E-01	9.089E-01	8.356E-01	5.957E-02	0.565
BI-211	3.095E+00	4.643E-01	3.512E-01	2.560E-02	8.814
PB-212	1.403E+00	1.700E-01	9.385E-02	8.525E-03	14.951
PO-212	1.403E+00	1.700E-01	9.385E-02	8.525E-03	14.951
BI-214	9.510E-01	1.920E-01	1.681E-01	1.572E-02	5.656
PB-214	1.077E+00	1.710E-01	1.224E-01	1.096E-02	8.792
PO-214	1.077E+00	1.710E-01	1.224E-01	1.096E-02	8.792
PO-216	1.403E+00	1.700E-01	9.385E-02	8.525E-03	14.951
PO-218	1.077E+00	1.710E-01	1.224E-01	1.096E-02	8.792
RA-224	3.985E+00	1.199E+00	1.068E+00	8.435E-02	3.729
RA-226	9.510E-01	1.920E-01	1.681E-01	1.572E-02	5.656
AC-228	1.751E+00	4.247E-01	3.068E-01	3.186E-02	5.705

Sample ID : G232347003 Acquisition date : 6-JUL-2009 11:11:20

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.751E+00	4.247E-01	3.068E-01	3.186E-02	5.705
TH-228	1.403E+00	1.700E-01	9.384E-02	8.525E-03	14.953
TH-230	9.510E-01	1.920E-01	1.681E-01	1.572E-02	5.656
TH-232	1.751E+00	4.247E-01	3.068E-01	3.186E-02	5.705
TH-234	9.906E-01	1.232E+00	9.998E-01	1.835E-01	0.991
U-234	9.510E-01	1.920E-01	1.681E-01	1.572E-02	5.656
NP-237	7.599E-01	2.923E-01	2.849E-01	6.301E-02	2.668
U-238	9.906E-01	1.232E+00	9.998E-01	1.835E-01	0.991
AM-243	2.754E-01	5.315E-02	6.375E-02	5.506E-03	4.320
ANH-511	9.375E-02	8.395E-02	6.141E-02	4.286E-03	1.527

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.549E-01		4.056E-01	6.519E-01	4.902E-02	-0.391
NA-22	-2.734E-02		6.039E-02	9.660E-02	5.452E-03	-0.283
NA-24	-9.823E-02		1.406E-01	Half-Life too short		
AL-26	2.415E-02		3.307E-02	6.222E-02	3.511E-03	0.388
TI-44	2.888E-01	+	4.485E-02	6.214E-02	5.234E-03	4.647
SC-46	2.605E-03		5.292E-02	8.796E-02	6.660E-03	0.030
V-48	-4.424E-03		9.622E-02	1.572E-01	1.112E-02	-0.028
CR-51	-1.664E-01		4.106E-01	6.553E-01	5.100E-02	-0.254
MN-52	1.113E-01		2.900E-01	4.963E-01	2.852E-02	0.224
MN-54	9.441E-03		5.234E-02	8.819E-02	6.921E-03	0.107
CO-56	-4.895E-02		5.171E-02	7.932E-02	6.182E-03	-0.617
CO-57	-1.475E-02		2.785E-02	4.336E-02	5.484E-03	-0.340
CO-58	-5.318E-02		5.458E-02	8.443E-02	6.725E-03	-0.630
FE-59	4.170E-02		1.333E-01	2.215E-01	1.583E-02	0.188
CO-60	-5.624E-02		5.168E-02	7.243E-02	4.120E-03	-0.776
ZN-65	-1.159E-01		1.475E-01	1.847E-01	1.121E-02	-0.627
GE-68	-9.013E-01		1.748E+00	2.716E+00	1.736E-01	-0.332
AS-73	-1.710E-02		2.366E-01	3.900E-01	3.294E-02	-0.044
AS-74	8.914E-02		1.134E-01	1.955E-01	1.501E-02	0.456
SE-75	3.116E-03		5.314E-02	8.082E-02	6.331E-03	0.039
BR-77	3.231E+00		9.848E+00	1.667E+01	1.177E+00	0.194
SR-82	-5.341E-01		5.000E-01	7.711E-01	6.207E-02	-0.693
RB-83	3.793E-02		9.042E-02	1.538E-01	1.086E-02	0.247
RB-84	2.975E-02		9.357E-02	1.538E-01	1.171E-02	0.194
KR-85	1.056E+01		1.075E+01	1.665E+01	1.166E+00	0.634
SR-85	5.351E-02		5.443E-02	8.434E-02	5.908E-03	0.634
RB-86	-7.735E-01		1.070E+00	1.629E+00	1.042E-01	-0.475
Y-88	2.023E-02		3.976E-02	7.174E-02	4.040E-03	0.282
ZR-88	6.771E-03		3.667E-02	5.960E-02	3.491E-03	0.114
Y-91	-4.246E+00		2.550E+01	4.211E+01	2.334E+00	-0.101
NB-94	1.723E-02		4.557E-02	7.561E-02	6.171E-03	0.228
NB-95	1.074E-02		5.566E-02	9.453E-02	7.634E-03	0.114
NB-95M	7.762E-02		1.374E-01	2.093E-01	1.936E-02	0.371

Sample ID : G232347003 Acquisition date : 6-JUL-2009 11:11:20

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-1.704E-02		9.819E-02	1.554E-01	1.402E-02	-0.110
NB-97	2.323E-02		1.947E-02	Half-Life too short		
ZR-97	6.908E-01		4.150E-01	Half-Life too short		
MO-99	-8.549E+00		1.276E+01	1.937E+01	2.888E+00	-0.441
TC-99M	1.531E+08		8.148E+08	Half-Life too short		
RH-101	-6.556E-03		3.548E-02	5.851E-02	4.633E-03	-0.112
RH-102	7.415E-03		3.580E-02	6.061E-02	4.033E-03	0.122
RU-103	-1.110E-02		5.040E-02	8.280E-02	1.090E-02	-0.134
RH-106	1.084E-03		4.250E-01	6.947E-01	8.954E-02	0.002
RU-106	1.084E-03		4.250E-01	6.947E-01	5.471E-02	0.002
AG-108M	-3.179E-02		3.633E-02	5.770E-02	3.881E-03	-0.551
AG-110M	1.326E-02		4.403E-02	7.319E-02	6.148E-03	0.181
IN-111	8.245E-01		9.042E-01	1.407E+00	1.108E-01	0.586
IN-113M	1.080E-02		5.229E-02	8.515E-02	5.305E-03	0.127
SN-113	1.080E-02		5.229E-02	8.515E-02	5.305E-03	0.127
IN-114M	-8.268E-02		2.169E-01	2.962E-01	2.341E-02	-0.279
CD-115	5.193E+00		9.650E+00	1.653E+01	1.178E+00	0.314
SN-117M	-2.339E-02		5.855E-02	9.205E-02	8.038E-03	-0.254
SB-122	1.549E+00		2.007E+00	3.464E+00	2.573E-01	0.447
I-123	3.686E-01		7.528E-01	Half-Life too short		
TE-123M	7.774E-03		3.175E-02	5.137E-02	4.486E-03	0.151
I-124	-4.444E-01		8.260E-01	1.108E+00	8.570E-02	-0.401
SB-124	-4.066E-02		8.969E-02	1.324E-01	8.249E-03	-0.307
SB-125	4.643E-02		1.076E-01	1.858E-01	1.196E-02	0.250
TE-125M	-4.568E+00		9.148E+00	1.470E+01	1.785E+00	-0.311
I-126	3.029E-01		2.273E-01	4.009E-01	3.271E-02	0.756
SB-126	-3.086E-02		2.217E-01	3.035E-01	2.474E-02	-0.102
SB-127	-3.426E-02		1.418E+00	2.292E+00	2.454E-01	-0.015
XE-127	1.248E-02		4.713E-02	8.052E-02	6.381E-03	0.155
I-131	6.052E-03		1.384E-01	1.963E-01	1.389E-02	0.031
TE-132	-1.217E-01		5.666E-01	9.406E-01	1.424E-01	-0.129
BA-133	5.157E-02	+	6.679E-02	9.123E-02	1.095E-02	0.565
I-133	2.172E-03		1.483E-03	Half-Life too short		
CS-134	6.555E-02		6.390E-02	1.135E-01	9.152E-03	0.577
CS-135	7.243E-02		1.916E-01	2.860E-01	2.641E-02	0.253
I-135	1.177E+08		2.314E+08	Half-Life too short		
CS-136	1.084E-01		1.504E-01	2.583E-01	1.833E-02	0.419
BA-137M	-5.381E-02		4.714E-02	6.962E-02	5.678E-03	-0.773
CS-137	-5.688E-02		4.983E-02	7.359E-02	6.015E-03	-0.773
CE-139	-2.302E-02		3.350E-02	5.172E-02	4.055E-03	-0.445
BA-140	3.409E-01		3.191E-01	5.315E-01	1.744E-01	0.641
LA-140	-1.026E-02		1.166E-01	1.876E-01	1.081E-02	-0.055
CE-141	6.861E-02		6.556E-02	1.097E-01	1.138E-02	0.625
CE-143	1.170E-04		4.808E-05	Half-Life too short		
CE-144	-8.360E-03		2.152E-01	3.370E-01	5.841E-02	-0.025
PM-144	1.696E-02		4.839E-02	8.013E-02	6.544E-03	0.212
PR-144	1.148E+00		3.277E+00	5.427E+00	4.431E-01	0.212
PM-146	-2.531E-02		5.192E-02	8.449E-02	7.669E-03	-0.300

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-2.865E-01		6.514E-01	1.045E+00	1.479E-01	-0.274
PM-149	1.078E+01		6.631E+01	1.103E+02	1.656E+01	0.098
EU-152	4.757E-02		1.417E-01	1.929E-01	1.446E-02	0.247
GD-153	1.722E-02		7.677E-02	1.150E-01	1.047E-02	0.150
EU-154	-7.509E-02		1.690E-01	2.704E-01	2.498E-02	-0.278
EU-155	7.488E-02		1.038E-01	1.752E-01	1.797E-02	0.428
TB-160	-1.158E-02		1.815E-01	2.993E-01	2.283E-02	-0.039
HO-166M	1.815E-02		7.996E-02	1.313E-01	1.071E-02	0.138
TM-171	9.846E-01		1.674E+01	2.528E+01	2.307E+00	0.039
LU-176	1.109E-02		2.886E-02	4.674E-02	3.465E-03	0.237
LU-177	2.955E+00	+	1.633E+00	1.825E+00	1.447E-01	1.619
LU-177M	-1.742E-01		2.270E-01	3.367E-01	2.042E-02	-0.517
HF-181	5.457E-02		5.396E-02	9.511E-02	6.390E-03	0.574
W-181	3.713E-01		2.198E-01	3.491E-01	3.220E-02	1.063
TA-182	-2.178E-01		2.844E-01	4.499E-01	2.504E-02	-0.484
RE-183	-1.708E-02		1.250E-01	1.950E-01	1.614E-02	-0.088
RE-184	4.494E-02		2.484E-01	4.171E-01	3.274E-02	0.108
OS-185	2.867E-02		6.086E-02	1.022E-01	8.223E-03	0.281
RE-188	2.099E-01		1.858E-01	3.111E-01	2.846E-02	0.675
W-188	-1.371E+00		8.462E+00	1.207E+01	9.158E-01	-0.114
IR-192	2.502E-02		3.863E-02	6.539E-02	4.783E-03	0.383
AU-195	5.936E-02		2.100E-01	3.418E-01	3.176E-02	0.174
TL-200	1.034E-05		1.330E-04	Half-Life too short		
TL-201	2.920E+00		5.917E+00	9.646E+00	7.560E-01	0.303
TL-202	4.756E-02		7.655E-02	1.333E-01	8.426E-03	0.357
HG-203	5.129E-02		4.607E-02	7.977E-02	6.351E-03	0.643
BI-207	3.460E-02		7.744E-02	1.304E-01	8.480E-03	0.265
TL-207	2.664E-01		7.734E-01	1.284E+00	2.190E-01	0.207
PO-209	5.514E+00		1.047E+01	1.798E+01	1.354E+00	0.307
PB-211	-3.741E-01		1.153E+00	1.770E+00	1.104E+00	-0.211
BI-212	1.070E+00	+	6.270E-01	7.946E-01	7.628E-02	1.347
PO-215	2.664E-01		7.734E-01	1.284E+00	2.190E-01	0.207
RN-219	4.622E-02		4.962E-01	8.004E-01	1.094E-01	0.058
RN-220	1.954E+01		3.324E+01	5.698E+01	4.166E+00	0.343
RA-223	2.664E-01		7.734E-01	1.284E+00	2.190E-01	0.207
AC-227	-2.252E-01		4.352E-01	7.040E-01	1.050E-01	-0.320
TH-227	-2.252E-01		4.357E-01	7.040E-01	1.246E-01	-0.320
TH-229	4.464E-01		5.099E-01	8.935E-01	7.068E-02	0.500
PA-231	-6.468E-01		1.586E+00	2.553E+00	3.741E-01	-0.253
TH-231	2.664E-01		7.734E-01	1.284E+00	2.190E-01	0.207
U-231	8.792E-02		8.308E-01	1.239E+00	1.102E-01	0.071
PA-233	-3.868E-02		6.866E-02	1.085E-01	8.290E-03	-0.356
PA-234	-4.005E-01		4.577E-01	6.939E-01	1.262E-01	-0.577
PA-234M	-1.869E+00		9.736E+00	1.541E+01	1.534E+00	-0.121
U-235	-1.837E-02		2.338E-01	3.699E-01	6.830E-02	-0.050
NP-236	-2.395E-03		9.007E-02	1.440E-01	1.227E-02	-0.017
NP-239	-8.181E-02		1.930E-01	3.096E-01	3.674E-02	-0.264
AM-241	9.354E-03		6.528E-02	1.006E-01	1.023E-02	0.093

Sample ID : G232347003 Acquisition date : 6-JUL-2009 11:11:20

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-4.866E-02		9.171E-02	1.477E-01	1.471E-02	-0.329
CM-247	-8.206E-03		4.451E-02	7.050E-02	4.198E-03	-0.116
CF-249	-1.703E-02		4.962E-02	7.811E-02	4.638E-03	-0.218
CF-251	-1.136E-02		1.373E-01	2.173E-01	1.710E-02	-0.052

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232347003           *
* Acquisition date  :  6-JUL-2009 11:11:20 Detector SN#     :               *
* Detector ID       : GAM13                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.62     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232347003           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.2688E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.264E+01	2.809E+00	3.783E-01	1.433E+00
CD-109	2.628E+00	8.359E-01	6.548E-01	4.265E-01
SN-126	2.588E-01	8.230E-02	6.438E-02	4.199E-02
TL-208	4.182E-01	1.022E-01	3.975E-02	5.215E-02
BI-210	4.720E-01	8.909E-01	4.394E-01	4.545E-01
PB-210	4.720E-01	8.909E-01	4.394E-01	4.545E-01
PO-210	4.720E-01	8.907E-01	4.394E-01	4.544E-01
BI-211	3.095E+00	4.550E-01	1.794E-01	2.322E-01
PB-212	1.403E+00	1.666E-01	4.822E-02	8.499E-02
PO-212	1.403E+00	1.666E-01	4.822E-02	8.499E-02
BI-214	9.510E-01	1.882E-01	8.521E-02	9.602E-02
PB-214	1.077E+00	1.676E-01	6.256E-02	8.550E-02
PO-214	1.077E+00	1.676E-01	6.256E-02	8.550E-02
PO-216	1.403E+00	1.666E-01	4.822E-02	8.499E-02
PO-218	1.077E+00	1.676E-01	6.256E-02	8.550E-02
RA-224	3.985E+00	1.175E+00	5.489E-01	5.993E-01
RA-226	9.510E-01	1.882E-01	8.521E-02	9.602E-02
AC-228	1.751E+00	4.162E-01	1.546E-01	2.124E-01
RA-228	1.751E+00	4.162E-01	1.546E-01	2.124E-01
TH-228	1.403E+00	1.666E-01	4.821E-02	8.499E-02
TH-230	9.510E-01	1.882E-01	8.521E-02	9.602E-02
TH-232	1.751E+00	4.162E-01	1.546E-01	2.124E-01
TH-234	9.906E-01	1.207E+00	5.235E-01	6.159E-01
U-234	9.510E-01	1.882E-01	8.521E-02	9.602E-02
NP-237	7.599E-01	2.864E-01	1.485E-01	1.461E-01
U-238	9.906E-01	1.207E+00	5.235E-01	6.159E-01
AM-243	2.754E-01	5.209E-02	3.330E-02	2.658E-02
ANH-511	9.375E-02	8.227E-02	3.120E-02	4.197E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-2.549E-01	3.975E-01	3.316E-01	2.028E-01	NOT IDENT.
NA-22	-2.734E-02	5.919E-02	4.842E-02	3.020E-02	NOT IDENT.
NA-24	-9.823E+04	2.756E+05	0.000E+00	1.406E+05	SHORT HLIF
AL-26	2.415E-02	3.241E-02	3.102E-02	1.653E-02	NOT IDENT.
TI-44	2.888E-01	4.396E-02	3.244E-02	2.243E-02	FAIL ABUN
SC-46	2.605E-03	5.186E-02	4.432E-02	2.646E-02	FAIL ABUN
V-48	-4.424E-03	9.429E-02	7.911E-02	4.811E-02	NOT IDENT.
CR-51	-1.664E-01	4.024E-01	3.352E-01	2.053E-01	NOT IDENT.
MN-52	1.113E-01	2.842E-01	2.483E-01	1.450E-01	NOT IDENT.
MN-54	9.441E-03	5.129E-02	4.449E-02	2.617E-02	NOT IDENT.
CO-56	-4.895E-02	5.068E-02	4.000E-02	2.586E-02	NOT IDENT.
CO-57	-1.475E-02	2.729E-02	2.249E-02	1.393E-02	NOT IDENT.
CO-58	-5.318E-02	5.349E-02	4.260E-02	2.729E-02	NOT IDENT.
FE-59	4.170E-02	1.306E-01	1.113E-01	6.665E-02	NOT IDENT.
CO-60	-5.624E-02	5.064E-02	3.628E-02	2.584E-02	NOT IDENT.
ZN-65	-1.159E-01	1.446E-01	9.275E-02	7.376E-02	NOT IDENT.
GE-68	-9.013E-01	1.714E+00	1.365E+00	8.742E-01	NOT IDENT.
AS-73	-1.710E-02	2.319E-01	2.047E-01	1.183E-01	NOT IDENT.
AS-74	8.914E-02	1.111E-01	9.909E-02	5.669E-02	NOT IDENT.
SE-75	3.116E-03	5.207E-02	4.146E-02	2.657E-02	NOT IDENT.
BR-77	3.231E+00	9.651E+00	8.467E+00	4.924E+00	FAIL ABUN
SR-82	-5.341E-01	4.900E-01	3.894E-01	2.500E-01	NOT IDENT.
RB-83	3.793E-02	8.861E-02	7.814E-02	4.521E-02	NOT IDENT.
RB-84	2.975E-02	9.170E-02	7.749E-02	4.678E-02	NOT IDENT.
KR-85	1.056E+01	1.053E+01	8.460E+00	5.373E+00	NOT IDENT.
SR-85	5.351E-02	5.334E-02	4.285E-02	2.722E-02	NOT IDENT.
RB-86	-7.735E-01	1.048E+00	8.185E-01	5.348E-01	NOT IDENT.
Y-88	2.023E-02	3.896E-02	3.575E-02	1.988E-02	NOT IDENT.
ZR-88	6.771E-03	3.593E-02	3.040E-02	1.833E-02	NOT IDENT.
Y-91	-4.246E+00	2.499E+01	2.112E+01	1.275E+01	NOT IDENT.
NB-94	1.723E-02	4.466E-02	3.823E-02	2.279E-02	NOT IDENT.
NB-95	1.074E-02	5.454E-02	4.774E-02	2.783E-02	NOT IDENT.
NB-95M	7.762E-02	1.347E-01	1.075E-01	6.871E-02	NOT IDENT.
ZR-95	-1.704E-02	9.623E-02	7.852E-02	4.910E-02	NOT IDENT.
NB-97	2.323E+04	3.817E+04	0.000E+00	1.947E+04	SHORT HLIF
ZR-97	6.908E+05	8.134E+05	0.000E+00	4.150E+05	SHORT HLIF
MO-99	-8.549E+00	1.250E+01	9.789E+00	6.379E+00	NOT IDENT.
TC-99M	1.531E+14	1.597E+15	0.000E+00	8.148E+14	SHORT HLIF
RH-101	-6.556E-03	3.477E-02	3.014E-02	1.774E-02	NOT IDENT.
RH-102	7.415E-03	3.508E-02	3.083E-02	1.790E-02	NOT IDENT.
RU-103	-1.110E-02	4.939E-02	4.209E-02	2.520E-02	FAIL ABUN
RH-106	1.084E-03	4.165E-01	3.520E-01	2.125E-01	FAIL ABUN
RU-106	1.084E-03	4.165E-01	3.520E-01	2.125E-01	FAIL ABUN
AG-108M	-3.179E-02	3.561E-02	2.939E-02	1.817E-02	NOT IDENT.
AG-110M	1.326E-02	4.315E-02	3.705E-02	2.201E-02	NOT IDENT.
IN-111	8.245E-01	8.861E-01	7.224E-01	4.521E-01	NOT IDENT.
IN-113M	1.080E-02	5.124E-02	4.343E-02	2.614E-02	NOT IDENT.
SN-113	1.080E-02	5.124E-02	4.343E-02	2.614E-02	NOT IDENT.
IN-114M	-8.268E-02	2.126E-01	1.527E-01	1.085E-01	NOT IDENT.
CD-115	5.193E+00	9.457E+00	8.396E+00	4.825E+00	NOT IDENT.
SN-117M	-2.339E-02	5.738E-02	4.757E-02	2.928E-02	NOT IDENT.
SB-122	1.549E+00	1.966E+00	1.757E+00	1.003E+00	NOT IDENT.
I-123	3.686E+05	1.476E+06	0.000E+00	7.528E+05	SHORT HLIF
TE-123M	7.774E-03	3.112E-02	2.655E-02	1.588E-02	NOT IDENT.
I-124	-4.444E-01	8.095E-01	5.618E-01	4.130E-01	NOT IDENT.
SB-124	-4.066E-02	8.790E-02	6.609E-02	4.485E-02	FAIL ABUN
SB-125	4.643E-02	1.054E-01	9.465E-02	5.378E-02	FAIL ABUN
TE-125M	-4.568E+00	8.965E+00	7.638E+00	4.574E+00	NOT IDENT.
I-126	3.029E-01	2.228E-01	2.029E-01	1.137E-01	NOT IDENT.
SB-126	-3.086E-02	2.172E-01	1.534E-01	1.108E-01	FAIL ABUN
SB-127	-3.426E-02	1.389E+00	1.160E+00	7.089E-01	NOT IDENT.
XE-127	1.248E-02	4.618E-02	4.147E-02	2.356E-02	NOT IDENT.
I-131	6.052E-03	1.356E-01	1.002E-01	6.920E-02	NOT IDENT.
TE-132	-1.217E-01	5.553E-01	4.836E-01	2.833E-01	NOT IDENT.
BA-133	5.157E-02	6.545E-02	4.661E-02	3.339E-02	FAIL ABUN
I-133	2.172E+03	2.908E+03	0.000E+00	1.483E+03	SHORT HLIF
CS-134	6.555E-02	6.262E-02	5.731E-02	3.195E-02	NOT IDENT.
CS-135	7.243E-02	1.877E-01	1.467E-01	9.578E-02	NOT IDENT.
I-135	1.177E+14	4.535E+14	0.000E+00	2.314E+14	SHORT HLIF
CS-136	1.084E-01	1.473E-01	1.299E-01	7.518E-02	FAIL ABUN
BA-137M	-5.381E-02	4.620E-02	3.524E-02	2.357E-02	NOT IDENT.
CS-137	-5.688E-02	4.883E-02	3.725E-02	2.492E-02	NOT IDENT.
CE-139	-2.302E-02	3.283E-02	2.671E-02	1.675E-02	NOT IDENT.
BA-140	3.409E-01	3.127E-01	2.699E-01	1.595E-01	NOT IDENT.
LA-140	-1.026E-02	1.143E-01	9.369E-02	5.831E-02	NOT IDENT.
CE-141	6.861E-02	6.425E-02	5.679E-02	3.278E-02	NOT IDENT.
CE-143	1.170E+02	9.423E+01	0.000E+00	4.808E+01	SHORT HLIF

CE-144	-8.360E-03	2.109E-01	1.746E-01	1.076E-01	NOT IDENT.
PM-144	1.696E-02	4.743E-02	4.053E-02	2.420E-02	NOT IDENT.
PR-144	1.148E+00	3.212E+00	2.745E+00	1.639E+00	NOT IDENT.
PM-146	-2.531E-02	5.088E-02	4.301E-02	2.596E-02	NOT IDENT.
ND-147	-2.865E-01	6.383E-01	5.307E-01	3.257E-01	FAIL ABUN
PM-149	1.078E+01	6.498E+01	5.652E+01	3.316E+01	NOT IDENT.
EU-152	4.757E-02	1.389E-01	9.860E-02	7.085E-02	FAIL ABUN
GD-153	1.722E-02	7.523E-02	5.987E-02	3.838E-02	FAIL ABUN
EU-154	-7.509E-02	1.656E-01	1.355E-01	8.450E-02	NOT IDENT.
EU-155	7.488E-02	1.017E-01	9.106E-02	5.188E-02	FAIL ABUN
TB-160	-1.158E-02	1.779E-01	1.509E-01	9.076E-02	FAIL ABUN
HO-166M	1.815E-02	7.836E-02	6.638E-02	3.998E-02	NOT IDENT.
TM-171	9.846E-01	1.641E+01	1.323E+01	8.370E+00	NOT IDENT.
LU-176	1.109E-02	2.828E-02	2.393E-02	1.443E-02	FAIL ABUN
LU-177	2.955E+00	1.600E+00	9.394E-01	8.163E-01	FAIL ABUN
LU-177M	-1.742E-01	2.225E-01	1.716E-01	1.135E-01	NOT IDENT.
HF-181	5.457E-02	5.288E-02	4.837E-02	2.698E-02	NOT IDENT.
W-181	3.713E-01	2.154E-01	1.827E-01	1.099E-01	NOT IDENT.
TA-182	-2.178E-01	2.787E-01	2.256E-01	1.422E-01	FAIL ABUN
RE-183	-1.708E-02	1.225E-01	1.008E-01	6.252E-02	FAIL ABUN
RE-184	4.494E-02	2.435E-01	2.141E-01	1.242E-01	NOT IDENT.
OS-185	2.867E-02	5.965E-02	5.173E-02	3.043E-02	NOT IDENT.
RE-188	2.099E-01	1.821E-01	1.608E-01	9.290E-02	NOT IDENT.
W-188	-1.371E+00	8.293E+00	6.184E+00	4.231E+00	FAIL ABUN
IR-192	2.502E-02	3.786E-02	3.346E-02	1.932E-02	FAIL ABUN
AU-195	5.936E-02	2.058E-01	1.778E-01	1.050E-01	FAIL ABUN
TL-200	1.034E+01	2.606E+02	0.000E+00	1.330E+02	SHORT HLIF
TL-201	2.920E+00	5.799E+00	4.982E+00	2.959E+00	NOT IDENT.
TL-202	4.756E-02	7.502E-02	6.791E-02	3.828E-02	NOT IDENT.
HG-203	5.129E-02	4.515E-02	4.089E-02	2.304E-02	NOT IDENT.
BI-207	3.460E-02	7.589E-02	6.553E-02	3.872E-02	FAIL ABUN
TL-207	2.664E-01	7.579E-01	6.568E-01	3.867E-01	FAIL ABUN
PO-209	5.514E+00	1.026E+01	9.059E+00	5.233E+00	NOT IDENT.
PB-211	-3.741E-01	1.130E+00	9.027E-01	5.765E-01	NOT IDENT.
BI-212	1.070E+00	6.144E-01	4.017E-01	3.135E-01	FAIL ABUN
PO-215	2.664E-01	7.579E-01	6.568E-01	3.867E-01	FAIL ABUN
RN-219	4.622E-02	4.863E-01	4.082E-01	2.481E-01	FAIL ABUN
RN-220	1.954E+01	3.258E+01	2.892E+01	1.662E+01	NOT IDENT.
RA-223	2.664E-01	7.579E-01	6.568E-01	3.867E-01	FAIL ABUN
AC-227	-2.252E-01	4.265E-01	3.613E-01	2.176E-01	FAIL ABUN
TH-227	-2.252E-01	4.270E-01	3.613E-01	2.179E-01	FAIL ABUN
TH-229	4.464E-01	4.997E-01	4.605E-01	2.550E-01	FAIL ABUN
PA-231	-6.468E-01	1.554E+00	1.308E+00	7.930E-01	FAIL ABUN
TH-231	2.664E-01	7.579E-01	6.568E-01	3.867E-01	FAIL ABUN
U-231	8.792E-02	8.142E-01	6.450E-01	4.154E-01	FAIL ABUN
PA-233	-3.868E-02	6.728E-02	5.555E-02	3.433E-02	FAIL ABUN
PA-234	-4.005E-01	4.486E-01	3.494E-01	2.289E-01	FAIL ABUN
PA-234M	-1.869E+00	9.541E+00	7.752E+00	4.868E+00	NOT IDENT.
U-235	-1.837E-02	2.291E-01	1.915E-01	1.169E-01	FAIL ABUN
NP-236	-2.395E-03	8.827E-02	7.439E-02	4.504E-02	FAIL ABUN
NP-239	-8.181E-02	1.891E-01	1.607E-01	9.650E-02	FAIL ABUN
AM-241	9.354E-03	6.398E-02	5.270E-02	3.264E-02	NOT IDENT.
CM-243	-4.866E-02	8.988E-02	7.679E-02	4.586E-02	FAIL ABUN
CM-247	-8.206E-03	4.362E-02	3.595E-02	2.225E-02	NOT IDENT.
CF-249	-1.703E-02	4.863E-02	3.985E-02	2.481E-02	NOT IDENT.
CF-251	-1.136E-02	1.346E-01	1.121E-01	6.867E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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46.50	321.4756
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46.50	321.4756
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49.72	314.5304
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52.39	338.2798
52.97	324.6071
53.15	332.4896
53.44	332.8665
54.07	331.9751
56.28	378.6722
56.28	378.6767
57.37	0.0000
57.53	349.3184
57.53	349.3215
57.60	363.2468
57.98	369.8188
57.98	369.8188
59.32	366.8455
59.32	366.8455
59.40	366.9516
59.54	367.1371
59.72	372.6057
60.01	372.9949
61.10	381.0166
61.14	381.0708
61.30	378.6570
63.00	416.1888
63.29	416.6065
63.29	416.6065
63.58	417.0242
64.28	418.0271
65.12	430.3250
65.20	430.4414
65.20	430.4414
66.05	433.0118
66.72	421.9234
66.83	422.0820
66.91	422.1926
67.20	440.0393
67.20	440.0393
67.75	432.7735
67.85	432.9184
68.90	457.6115
68.90	457.6115
69.30	449.3787
69.67	470.6584
70.82	464.2487
70.82	464.2487
70.83	464.2644
72.80	480.8176
72.87	480.9224
72.87	480.9224
74.67	506.5060
74.81	506.7226
74.81	506.7226
74.81	506.7226
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74.97	506.9729
75.28	507.4511
75.70	508.1008
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77.11	510.2666
77.11	510.2666

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77.11	510.2666
77.11	510.2666
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79.80	428.3085
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80.30	402.3853
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81.07	448.0945
81.07	448.0945
81.07	448.0945
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83.78	448.7499
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83.78	448.7499
83.78	448.7499
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84.40	391.5738
84.90	397.7846
85.43	357.2589
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86.50	358.3183
86.54	358.3567
86.59	358.4067
86.72	358.5336
86.79	358.6009
86.94	358.7509
87.30	612.7579
87.30	612.7579
87.30	612.7579
87.30	612.7579
87.30	612.7579
87.30	612.7579
87.57	578.9849
87.88	579.4743
88.03	579.7097
88.36	580.2301
88.47	580.4036
89.95	582.7174
91.11	241.8704
92.29	242.6241
92.38	242.6818
92.38	242.6818
93.35	351.9117
94.00	352.5050
94.67	315.3298
94.67	315.3347
94.90	315.5202
94.90	315.5202
94.90	315.5202
94.90	315.5202
95.87	311.9320
95.87	311.9320
96.73	322.8436
97.43	307.3144
98.44	294.5972
98.44	294.5972
98.88	299.6219
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99.55	323.6604
99.86	314.0934
100.00	303.4018
100.10	303.4788
103.18	323.5788
103.76	326.0130
105.00	299.1552
105.31	299.3756
108.00	328.3036
109.28	339.3203
111.00	320.5070
111.00	320.5070

111.76	318.0329
112.95	323.9534
115.19	297.0942
116.30	310.0643
117.00	308.4990
117.00	308.4990
117.66	300.7620
121.11	305.0768
121.62	325.0136
121.78	325.1241
122.06	312.9249
122.32	305.8643
122.32	305.8643
122.32	305.8643
122.32	305.8643
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127.23	354.9579
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131.20	319.9509
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136.25	306.1641
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140.51	0.0000
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142.65	290.5801
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144.24	265.5441
144.24	265.5441
144.24	265.5441
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145.44	269.3853
147.16	308.2300
152.43	285.9971
152.70	290.5204
153.22	292.9846
154.21	286.9051
154.21	286.9051
154.21	286.9051
154.21	286.9051
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163.89	290.6512
165.85	308.4378
167.43	262.0231
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171.86	299.0652
172.10	286.7148
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176.60	256.8443
181.06	260.3907
184.41	247.8847
185.71	255.9089
186.00	256.0236
190.27	255.3619
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193.63	221.4940
197.04	255.2982
198.01	256.5444
198.60	258.5365
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205.31	248.8888
208.36	257.1464
208.81	236.2850

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209.75	236.5961
210.97	242.2260
215.65	231.1471
216.55	229.7445
218.09	230.2271
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223.80	215.4896
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227.08	243.1333
227.20	230.2742
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228.18	223.1916
228.18	223.1916
231.56	0.0000
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236.00	214.6465
236.00	214.6465
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238.63	205.6407
238.63	205.6407
238.63	205.6407
239.00	205.7364
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241.98	206.5068
241.98	206.5068
241.98	206.5068
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248.90	196.9154
249.79	207.9593
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252.85	192.1521
254.15	0.0000
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256.20	230.1711
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260.90	211.2854
262.80	223.3057
264.65	191.6338
268.24	190.6200
268.79	192.2938
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269.46	201.7507
269.46	201.7507
269.46	201.7507
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277.60	183.0566
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293.26	0.0000
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295.21	153.2719
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300.09	174.9242
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323.87	170.5695
323.87	170.5695
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338.28	167.7509
338.28	167.7509
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351.92	134.0228
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367.94	0.0000
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387.95	157.9654
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391.69	132.2367
392.90	136.7474
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439.89	115.4085
443.98	123.9722
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445.03	135.9298
445.03	135.9298
445.03	135.9298
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511.85	128.2111
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513.99	135.7411
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546.56	0.0000
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569.50	106.2424
569.67	106.2529
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592.07	124.8113
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602.71	123.2350
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604.70	98.0260
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609.31	150.8249
609.31	150.8249

609.31	150.8249
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621.84	105.4870
631.29	105.0231
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661.65	117.2691
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696.49	107.7169
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722.78	118.8972
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756.15	97.7892
756.87	95.6235
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768.36	116.0460
768.36	116.0460
768.36	116.0460
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778.89	98.1112
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867.82	78.9837
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896.60	77.0231
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911.07	89.2541
911.07	89.2541
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925.24	77.9328
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934.06	81.1792
934.06	81.1792
934.06	81.1792
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962.29	75.5130
964.01	82.4330
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969.11	70.5517
969.11	70.5517
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983.50	80.7503
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1001.68	71.1464
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1050.47	95.2082
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1076.63	85.6569
1077.35	82.5424
1085.78	75.4541
1099.22	83.1789
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1120.29	74.5442
1120.29	74.5442
1120.29	74.5442
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1129.67	76.6055
1131.51	0.0000
1147.95	0.0000
1167.94	90.5249
1173.22	91.7617
1175.09	87.4962
1177.93	86.4974
1189.05	93.0106
1204.90	93.4884
1205.75	0.0000
1213.00	100.2901
1221.42	117.4752
1230.97	112.1768
1235.34	99.1150
1236.41	0.0000
1238.11	78.4146
1238.11	78.4146
1238.11	78.4146
1238.11	78.4146
1238.25	77.4756
1246.25	81.4558
1260.41	0.0000
1271.85	74.4635
1274.45	75.4787
1274.54	75.4815
1291.56	50.9020
1298.22	0.0000
1312.09	64.7427
1325.50	49.4774
1325.50	49.4774
1332.49	52.4971
1333.61	47.6516
1360.21	33.3205
1362.66	0.0000
1365.15	40.2378
1368.21	49.1124
1368.53	0.0000
1376.25	39.3806
1377.67	41.3672
1377.67	41.3672
1377.67	41.3672
1377.67	41.3672
1384.27	54.2730
1394.10	50.4646
1395.20	43.5519
1407.95	44.7018
1434.06	38.0212
1436.60	41.0515
1457.56	0.0000
1460.81	37.2916
1489.15	29.4511
1509.49	27.5678
1596.49	36.5393
1620.62	24.1551
1678.03	0.0000
1691.02	19.2280
1691.02	19.2280

1706.46	0.0000
1750.46	0.0000
1764.49	21.9742
1764.49	21.9742
1764.49	21.9742
1764.49	21.9742
1770.23	16.9249
1771.40	15.2368
1791.20	0.0000
1808.65	8.6427
1836.01	11.5935

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232347003

Total Uranium Activity	2.9386E+00	ug/g
Total Uranium Counting Unc.	3.5931E+00	ug/g
Total Uranium Tpu	1.8332E-06	ug/g
Total Uranium Mda	1.5598E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID   : G232347003      *
*   ANALYST       : MXR1                      DETECTOR    : GAM13           *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:11:20.02    SAMPLE ALQT:  126.880 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.348E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.641E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.811E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.364E+00
```

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:49:03.52

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347004.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:12:27.
Sample ID         : G232347004           Sample quantity  : 1.17040E+02 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.35  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.50*	42	381	1.24	92.77	87	10	5.79E-03	91.4	
2	0	62.93*	83	465	1.41	125.59	122	9	1.15E-02	49.1	
3	3	74.89*	447	508	1.37	149.48	144	18	6.20E-02	10.1	1.52E+00
4	3	77.14	624	472	1.26	153.99	144	18	8.66E-02	7.6	
5	3	87.14*	188	301	1.16	173.97	171	22	2.61E-02	15.2	1.54E+00
6	3	89.87	141	357	1.12	179.41	171	22	1.95E-02	23.6	
7	3	92.88*	216	426	1.73	185.44	171	22	3.00E-02	21.3	
8	0	185.79*	150	344	1.62	371.09	365	11	2.09E-02	25.9	
9	0	209.14	125	259	1.33	417.74	414	10	1.74E-02	25.6	
10	3	238.37*	1172	184	1.38	476.16	468	21	1.63E-01	3.7	9.58E-01
11	3	241.30	265	250	1.98	482.01	468	21	3.68E-02	17.7	
12	0	269.97	94	149	0.96	539.32	536	9	1.31E-02	25.3	
13	0	294.66	306	223	1.37	588.67	584	13	4.25E-02	11.5	
14	0	299.86	99	106	1.55	599.05	596	8	1.38E-02	20.6	
15	0	338.07	243	186	1.46	675.41	670	13	3.38E-02	13.2	
16	0	351.40*	539	184	1.46	702.07	694	15	7.48E-02	7.1	
17	0	510.44*	127	143	1.97	1019.98	1011	19	1.76E-02	27.0	
18	0	567.48*	118	126	2.37	1134.01	1126	14	1.64E-02	22.7	
19	0	582.81*	361	78	1.66	1164.65	1157	14	5.01E-02	7.5	
20	0	608.99*	371	109	1.67	1217.00	1210	16	5.15E-02	8.3	
21	0	727.41	69	96	1.59	1453.77	1447	12	9.61E-03	30.8	
22	0	795.94	26	71	1.42	1590.81	1583	10	3.57E-03	63.4	
23	0	911.38*	208	89	1.64	1821.70	1814	16	2.90E-02	12.6	
24	1	964.53	49	61	2.09	1928.00	1920	24	6.86E-03	34.4	2.03E+00
25	1	968.72*	159	33	2.08	1936.38	1920	24	2.20E-02	11.6	
26	0	1121.00*	63	74	1.35	2241.00	2236	13	8.76E-03	32.3	
27	0	1460.52*	1487	41	2.08	2920.36	2912	16	2.07E-01	2.8	
28	0	1764.02*	68	7	2.52	3527.91	3520	14	9.43E-03	15.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 13-JUL-2009 18:49:06

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347004.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:12:27
Sample ID : G232347004 Sample quantity : 117.04 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA14 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.35 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.691E+01	3.372E+00	6.006E-01	4.361E-02	61.453
CD-109	+	88.03	*	2.347E+00	7.421E-01	1.278E+00	1.118E-01	1.836
SN-126	+	64.28		6.051E-01	6.009E-01	7.189E-01	1.024E-01	0.842
	+	86.94		9.608E-01	4.932E-01	5.693E-01	2.355E-01	1.688
	+	87.57	*	2.311E-01	7.306E-02	1.263E-01	1.099E-02	1.830
TL-208		277.35		1.727E-01	3.822E-01	6.551E-01	6.928E-02	0.264
	+	510.84		6.099E-01	3.353E-01	2.004E-01	2.043E-02	3.044
	+	583.14	*	4.981E-01	8.213E-02	5.969E-02	4.082E-03	8.345
		860.37		3.772E-01	3.258E-01	5.885E-01	5.537E-02	0.641
BI-210	+	46.50	*	1.806E+00	3.303E+00	3.457E+00	2.563E-01	0.522
PB-210	+	46.50	*	1.806E+00	3.303E+00	3.457E+00	2.563E-01	0.522
PO-210	+	46.50	*	1.806E+00	3.302E+00	3.457E+00	2.169E-01	0.522
BI-211		72.87		9.338E+00	3.481E+00	5.442E+00	4.010E-01	1.716
	+	351.07	*	3.193E+00	4.946E-01	3.108E-01	1.969E-02	10.272
PB-212	+	74.81		2.198E+00	5.157E-01	4.868E-01	5.838E-02	4.516
	+	77.11		1.761E+00	3.017E-01	2.795E-01	2.152E-02	6.302
	+	87.30		1.069E+00	3.544E-01	6.316E-01	8.361E-02	1.692
	+	238.63	*	1.513E+00	1.562E-01	8.717E-02	6.349E-03	17.361
	+	300.09		1.980E+00	8.300E-01	1.084E+00	8.961E-02	1.827
PO-212	+	74.81		2.198E+00	5.157E-01	4.868E-01	5.838E-02	4.516
	+	77.11		1.761E+00	3.017E-01	2.795E-01	2.152E-02	6.302
	+	87.30		1.069E+00	3.544E-01	6.316E-01	8.361E-02	1.692
		115.19		4.011E+00	3.569E+00	6.072E+00	4.419E-01	0.660
	+	238.63	*	1.513E+00	1.562E-01	8.717E-02	6.349E-03	17.361
	+	300.09		1.980E+00	8.300E-01	1.084E+00	8.961E-02	1.827
BI-214	+	609.31	*	9.676E-01	1.777E-01	1.105E-01	8.747E-03	8.755
		768.36		5.751E-01	8.601E-01	1.450E+00	1.377E-01	0.397
		934.06		6.067E-01	1.342E+00	2.315E+00	2.541E-01	0.262
	+	1120.29		8.798E-01	5.748E-01	6.285E-01	5.823E-02	1.400
		1238.11		1.906E+00	1.113E+00	2.018E+00	1.695E-01	0.944
		1377.67		1.314E+00	1.186E+00	2.144E+00	2.036E-01	0.613
	+	1764.49		1.302E+00	4.025E-01	2.794E-01	1.676E-02	4.658
PB-214	+	74.81		3.788E+00	8.620E-01	8.388E-01	8.851E-02	4.516
	+	77.11		3.019E+00	5.660E-01	4.791E-01	5.190E-02	6.302

Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		1.831E+00	5.958E-01	1.082E+00	1.255E-01	1.692
	+	241.98		2.052E+00	7.462E-01	5.246E-01	4.214E-02	3.911
	+	295.21		1.070E+00	2.621E-01	2.286E-01	1.954E-02	4.679
	+	351.92	*	1.111E+00	1.816E-01	1.083E-01	8.890E-03	10.251
PO-214	+	74.81		3.788E+00	8.620E-01	8.388E-01	8.851E-02	4.516
	+	77.11		3.019E+00	5.660E-01	4.791E-01	5.190E-02	6.302
	+	87.30		1.831E+00	5.958E-01	1.082E+00	1.255E-01	1.692
	+	241.98		2.052E+00	7.462E-01	5.246E-01	4.214E-02	3.911
	+	295.21		1.070E+00	2.621E-01	2.286E-01	1.954E-02	4.679
	+	351.92	*	1.111E+00	1.816E-01	1.083E-01	8.890E-03	10.251
PO-216	+	74.81		2.198E+00	5.157E-01	4.868E-01	5.838E-02	4.516
	+	77.11		1.761E+00	3.017E-01	2.795E-01	2.152E-02	6.302
	+	87.30		1.069E+00	3.544E-01	6.316E-01	8.361E-02	1.692
	+	238.63	*	1.513E+00	1.562E-01	8.717E-02	6.349E-03	17.361
	+	300.09		1.980E+00	8.300E-01	1.084E+00	8.961E-02	1.827
PO-218	+	74.81		3.788E+00	8.620E-01	8.388E-01	8.851E-02	4.516
	+	77.11		3.019E+00	5.660E-01	4.791E-01	5.190E-02	6.302
	+	87.30		1.831E+00	5.958E-01	1.082E+00	1.255E-01	1.692
	+	241.98		2.052E+00	7.462E-01	5.246E-01	4.214E-02	3.911
	+	295.21		1.070E+00	2.621E-01	2.286E-01	1.954E-02	4.679
	+	351.92	*	1.111E+00	1.816E-01	1.083E-01	8.890E-03	10.251
RA-224	+	240.98	*	3.890E+00	1.398E+00	9.916E-01	5.700E-02	3.923
RA-226	+	609.31	*	9.676E-01	1.777E-01	1.105E-01	8.747E-03	8.755
		768.36		5.751E-01	8.601E-01	1.450E+00	1.377E-01	0.397
		934.06		6.067E-01	1.342E+00	2.315E+00	2.541E-01	0.262
	+	1120.29		8.798E-01	5.748E-01	6.285E-01	5.823E-02	1.400
		1238.11		1.906E+00	1.113E+00	2.018E+00	1.695E-01	0.944
		1377.67		1.314E+00	1.186E+00	2.144E+00	2.036E-01	0.613
	+	1764.49		1.302E+00	4.025E-01	2.794E-01	1.676E-02	4.658
AC-228	+	338.32		1.589E+00	7.715E-01	3.567E-01	1.454E-01	4.454
	+	911.07	*	1.309E+00	3.632E-01	2.479E-01	2.912E-02	5.281
	+	969.11		1.759E+00	5.781E-01	3.658E-01	8.543E-02	4.809
RA-228	+	338.32		1.589E+00	7.715E-01	3.567E-01	1.454E-01	4.454
	+	911.07	*	1.309E+00	3.632E-01	2.479E-01	2.912E-02	5.281
	+	969.11		1.759E+00	5.781E-01	3.658E-01	8.543E-02	4.809
TH-228		84.40		3.544E+00	2.905E+00	4.117E+00	5.343E-01	0.861
	+	238.60	*	1.513E+00	1.562E-01	8.716E-02	6.349E-03	17.362
	+	300.10		1.980E+00	1.423E+00	1.084E+00	6.387E-01	1.827
TH-230	+	609.31	*	9.675E-01	1.777E-01	1.105E-01	8.747E-03	8.755
		768.36		5.750E-01	8.601E-01	1.450E+00	1.377E-01	0.397
		934.06		6.067E-01	1.342E+00	2.315E+00	2.541E-01	0.262
	+	1120.29		8.798E-01	5.748E-01	6.285E-01	5.823E-02	1.400
		1238.11		1.906E+00	1.112E+00	2.018E+00	1.695E-01	0.944
		1377.67		1.314E+00	1.186E+00	2.144E+00	2.036E-01	0.613
	+	1764.49		1.302E+00	4.024E-01	2.794E-01	1.676E-02	4.658
TH-232	+	338.32		1.589E+00	4.291E-01	3.567E-01	2.049E-02	4.454
	+	911.07	*	1.309E+00	3.632E-01	2.479E-01	2.912E-02	5.281
	+	969.11		1.759E+00	5.781E-01	3.658E-01	8.543E-02	4.809
TH-234	+	63.29	*	1.529E+00	1.525E+00	1.799E+00	3.091E-01	0.850

Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		1.751E+00	8.092E-01	8.385E-01	1.506E-01	2.088
U-234	+	609.31	*	9.675E-01	1.777E-01	1.105E-01	8.747E-03	8.755
		768.36		5.750E-01	8.601E-01	1.450E+00	1.377E-01	0.397
		934.06		6.067E-01	1.342E+00	2.315E+00	2.541E-01	0.262
	+	1120.29		8.798E-01	5.748E-01	6.285E-01	5.823E-02	1.400
		1238.11		1.906E+00	1.112E+00	2.018E+00	1.695E-01	0.944
		1377.67		1.314E+00	1.186E+00	2.144E+00	2.036E-01	0.613
	+	1764.49		1.302E+00	4.024E-01	2.794E-01	1.676E-02	4.658
NP-237	+	86.50	*	6.786E-01	2.562E-01	3.839E-01	8.580E-02	1.768
		95.87		-5.761E-01	1.061E+00	1.473E+00	3.603E-01	-0.391
U-238	+	63.29	*	1.529E+00	1.525E+00	1.799E+00	3.091E-01	0.850
	+	92.38		1.751E+00	7.599E-01	8.385E-01	7.015E-02	2.088
AM-243	+	74.67	*	3.564E-01	7.669E-02	7.910E-02	5.936E-03	4.506
	+	86.72		2.545E+01	8.046E+00	1.437E+01	1.237E+00	1.771
		117.66		-1.006E+00	3.736E+00	6.036E+00	4.352E-01	-0.167
		142.18		5.818E+00	1.744E+01	2.874E+01	1.807E+00	0.202
ANH-511	+	511.00	*	1.317E-01	7.158E-02	4.329E-02	2.543E-03	3.043

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.238E-01	3.117E-01	5.387E-01	3.631E-02	0.415
NA-22		1274.54	*	-3.291E-02	5.322E-02	8.220E-02	5.370E-03	-0.400
NA-24		1368.53	*	3.013E-02	5.322E-02	Half-Life too short		
AL-26		1129.67		-6.879E-01	2.113E+00	3.120E+00	1.970E-01	-0.221
		1808.65	*	1.178E-02	2.648E-02	4.828E-02	2.799E-03	0.244
TI-44		67.85		-3.290E-02	4.781E-02	6.735E-02	4.740E-03	-0.488
	+	78.38	*	3.250E-01	5.567E-02	7.664E-02	5.984E-03	4.241
SC-46		889.25	*	-6.985E-03	4.066E-02	6.698E-02	6.189E-03	-0.104
	+	1120.51		1.492E-01	9.697E-02	1.286E-01	8.325E-03	1.160
V-48		944.10		-1.122E+00	9.388E-01	1.386E+00	1.239E-01	-0.809
		983.50	*	-4.074E-03	7.382E-02	1.223E-01	1.038E-02	-0.033
		1312.09		-8.712E-02	8.037E-02	1.136E-01	7.848E-03	-0.767
CR-51		320.08	*	-2.908E-01	3.567E-01	5.694E-01	3.679E-02	-0.511
MN-52		744.21		1.102E-01	2.273E-01	3.815E-01	2.692E-02	0.289
		848.13		-1.903E+00	6.123E+00	9.993E+00	8.586E-01	-0.190
		935.52		2.849E-01	2.660E-01	4.766E-01	4.302E-02	0.598
		1246.25		4.592E-01	7.398E+00	1.222E+01	7.612E-01	0.038
		1333.61		4.842E+00	5.039E+00	9.066E+00	6.460E-01	0.534
		1434.06	*	-8.609E-04	1.826E-01	2.972E-01	2.083E-02	-0.003
MN-54		834.83	*	-2.698E-03	4.127E-02	6.893E-02	5.782E-03	-0.039
CO-56		846.75	*	9.275E-03	4.005E-02	6.845E-02	5.867E-03	0.136
		977.42		3.327E+00	3.016E+00	5.333E+00	4.567E-01	0.624
		1037.82		-2.020E-01	3.267E-01	5.092E-01	4.218E-02	-0.397
		1175.09		1.105E+00	2.528E+00	4.318E+00	2.386E-01	0.256
		1238.25		1.817E-01	1.115E-01	2.021E-01	1.312E-02	0.899
		1360.21		-5.326E-01	9.697E-01	1.457E+00	1.035E-01	-0.365
		1771.40		-5.680E-01	2.871E-01	3.089E-01	1.844E-02	-1.839

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	8.361E-04	2.455E-02	4.014E-02	2.856E-03	0.021
		136.48		-1.665E-01	2.071E-01	3.248E-01	2.385E-02	-0.512
CO-58		810.76	*	-6.198E-03	4.180E-02	6.617E-02	5.324E-03	-0.094
FE-59		142.65		-7.084E-01	2.764E+00	4.352E+00	2.729E-01	-0.163
		192.34		-1.239E-01	9.231E-01	1.477E+00	1.725E-01	-0.084
		1099.22	*	5.837E-02	1.001E-01	1.738E-01	1.338E-02	0.336
		1291.56		-5.187E-02	1.406E-01	2.218E-01	1.805E-02	-0.234
CO-60		1173.22		4.855E-02	5.303E-02	9.366E-02	5.159E-03	0.518
		1332.49	*	4.910E-02	4.637E-02	8.393E-02	5.982E-03	0.585
ZN-65		1115.52	*	1.283E-02	1.218E-01	1.752E-01	1.151E-02	0.073
GE-68		1077.35	*	-8.204E-01	1.350E+00	2.105E+00	1.513E-01	-0.390
AS-73		53.44	*	4.184E-01	6.318E-01	1.074E+00	7.002E-02	0.390
AS-74		595.88	*	-5.141E-02	8.511E-02	1.316E-01	7.869E-03	-0.391
		634.78		-8.894E-02	3.853E-01	6.153E-01	3.675E-02	-0.145
SE-75		66.05		-1.208E+00	4.769E+00	6.860E+00	6.239E-01	-0.176
		96.73		-2.613E-01	8.343E-01	1.180E+00	1.568E-01	-0.221
		121.11		-3.402E-02	1.307E-01	2.110E-01	2.135E-02	-0.161
		136.00		-1.029E-02	3.804E-02	6.119E-02	4.041E-03	-0.168
		198.60		6.815E-01	1.828E+00	2.990E+00	2.070E-01	0.228
		264.65	*	2.535E-03	4.622E-02	7.123E-02	4.182E-03	0.036
		279.53		-1.054E-01	1.106E-01	1.774E-01	1.117E-02	-0.594
		303.91		-4.553E-01	2.183E+00	3.131E+00	2.993E-01	-0.145
		400.65		5.818E-02	2.670E-01	4.485E-01	3.994E-02	0.130
BR-77	+	87.88		3.633E+02	1.148E+02	2.376E+02	2.075E+01	1.529
		200.40		3.452E+01	1.212E+02	1.974E+02	1.098E+01	0.175
	+	239.00		1.738E+02	1.616E+01	2.708E+01	1.554E+00	6.418
		249.79		2.104E+01	4.754E+01	7.772E+01	4.489E+00	0.271
		281.68		-2.682E+01	6.602E+01	1.088E+02	6.347E+00	-0.246
		297.23		2.196E+02	5.413E+01	8.021E+01	4.678E+00	2.738
		303.76		-2.843E+01	1.338E+02	1.919E+02	1.118E+01	-0.148
		439.47		-1.267E+01	1.043E+02	1.711E+02	9.673E+00	-0.074
		484.57		1.139E+02	1.552E+02	2.690E+02	1.562E+01	0.423
		520.65	*	6.334E-03	7.434E+00	1.220E+01	7.192E-01	0.001
		574.64		4.026E+01	1.824E+02	2.636E+02	1.574E+01	0.153
		578.91		-1.991E+01	7.631E+01	1.047E+02	6.257E+00	-0.190
		585.48		6.338E+02	1.746E+02	3.100E+02	1.853E+01	2.045
		755.35		2.746E+01	1.312E+02	2.151E+02	1.552E+01	0.128
		817.79		3.955E+01	1.022E+02	1.699E+02	1.381E+01	0.233
SR-82		698.33		-2.079E+01	3.577E+01	5.510E+01	3.541E+00	-0.377
		776.49	*	-2.053E-01	4.149E-01	6.383E-01	4.799E-02	-0.322
		1395.20		1.382E+00	1.127E+01	1.869E+01	1.321E+00	0.074
RB-83		520.41	*	1.292E-03	6.819E-02	1.121E-01	6.605E-03	0.012
		529.64		-3.099E-02	1.123E-01	1.804E-01	1.067E-02	-0.172
		552.65		1.059E-02	1.952E-01	3.207E-01	1.908E-02	0.033
RB-84		881.50	*	6.072E-02	7.089E-02	1.269E-01	1.157E-02	0.478
KR-85		513.99	*	9.573E+00	7.651E+00	1.220E+01	7.177E-01	0.785
SR-85		513.99	*	4.849E-02	3.876E-02	6.181E-02	3.635E-03	0.785
RB-86		1076.63	*	-6.221E-01	8.111E-01	1.241E+00	8.938E-02	-0.501
Y-88		898.02		2.633E-02	4.571E-02	7.986E-02	7.523E-03	0.330

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	2.292E-02	3.026E-02	5.800E-02	3.294E-03	0.395
ZR-88		392.90	*	9.228E-04	3.100E-02	5.157E-02	2.808E-03	0.018
Y-91		1204.90	*	3.587E+00	2.160E+01	3.603E+01	2.096E+00	0.100
NB-94		702.63	*	-4.874E-03	3.555E-02	5.686E-02	3.688E-03	-0.086
		871.10		2.196E-02	3.774E-02	6.607E-02	5.914E-03	0.332
NB-95		765.79	*	4.130E-02	4.899E-02	8.368E-02	6.163E-03	0.494
NB-95M		235.69	*	6.992E-01	1.729E-01	2.803E-01	2.095E-02	2.494
ZR-95		724.18		1.389E-01	1.170E-01	1.832E-01	1.411E-02	0.758
		756.15	*	1.157E-03	7.468E-02	1.205E-01	9.941E-03	0.010
NB-97		657.90	*	-1.753E-02	7.468E-02	Half-Life too short		
		1024.50		-9.230E-01	7.468E-02	Half-Life too short		
ZR-97		254.15		-8.634E-01	7.468E-02	Half-Life too short		
		355.39		-6.612E-01	7.468E-02	Half-Life too short		
		507.63	*	1.939E+00	7.468E-02	Half-Life too short		
		602.52		4.314E-01	7.468E-02	Half-Life too short		
		1021.30		-5.490E-01	7.468E-02	Half-Life too short		
		1147.95		7.066E-02	7.468E-02	Half-Life too short		
		1362.66		-6.907E-01	7.468E-02	Half-Life too short		
		1750.46		-1.059E+00	7.468E-02	Half-Life too short		
MO-99		140.51		-6.983E-01	1.946E+01	3.159E+01	8.553E+00	-0.022
		181.06		-1.323E+01	1.481E+01	1.943E+01	3.308E+00	-0.681
		366.43		4.922E+01	6.349E+01	1.104E+02	6.194E+00	0.446
		739.58	*	-5.301E+00	9.454E+00	1.444E+01	2.068E+00	-0.367
		778.00		-3.671E+00	2.718E+01	4.319E+01	3.257E+00	-0.085
TC-99M		140.51	*	-5.652E+07	2.718E+01	Half-Life too short		
RH-101		127.23		5.279E-02	3.312E-02	5.696E-02	3.919E-03	0.927
		198.01	*	-1.125E-02	3.362E-02	5.326E-02	2.955E-03	-0.211
		325.23		1.315E-01	2.278E-01	3.918E-01	2.267E-02	0.336
RH-102		418.52		-8.887E-02	2.855E-01	4.633E-01	2.579E-02	-0.192
		475.06	*	1.002E-02	2.843E-02	4.801E-02	2.774E-03	0.209
		631.29		-2.381E-02	6.016E-02	9.475E-02	5.661E-03	-0.251
		697.49		-4.128E-02	8.388E-02	1.303E-01	8.358E-03	-0.317
		766.84		8.129E-02	1.280E-01	2.154E-01	1.590E-02	0.377
		1046.59		2.098E-02	1.351E-01	2.270E-01	1.737E-02	0.092
		1112.84		-2.762E-01	3.002E-01	4.330E-01	2.861E-02	-0.638
RU-103		497.08	*	1.494E-02	3.789E-02	6.409E-02	8.116E-03	0.233
	+	610.33		1.024E+01	2.323E+00	2.707E+00	4.192E-01	3.783
RH-106	+	511.85		6.566E-01	3.568E-01	4.267E-01	2.507E-02	1.539
		621.84	*	7.448E-02	3.313E-01	5.486E-01	6.489E-02	0.136
		1050.47		-2.225E-01	2.791E+00	4.599E+00	3.494E-01	-0.048
RU-106	+	511.85		6.566E-01	3.568E-01	4.267E-01	2.507E-02	1.539
		621.84	*	7.448E-02	3.312E-01	5.486E-01	3.281E-02	0.136
		1050.47		-2.225E-01	2.791E+00	4.599E+00	3.494E-01	-0.048
AG-108M		433.93	*	-1.190E-02	3.265E-02	5.265E-02	3.234E-03	-0.226
		614.37		1.442E-02	4.334E-02	6.332E-02	4.090E-03	0.228
		722.95		-1.384E-02	5.038E-02	6.777E-02	4.871E-03	-0.204
AG-110M		657.75	*	-1.619E-02	3.569E-02	5.564E-02	3.515E-03	-0.291
		677.61		-1.061E-01	3.416E-01	5.395E-01	3.501E-02	-0.197
		706.67		-1.559E-01	2.237E-01	3.401E-01	2.330E-02	-0.458

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		-1.558E-01	1.960E-01	2.953E-01	2.251E-02	-0.528
		884.67		-7.515E-04	5.271E-02	8.810E-02	8.306E-03	-0.009
		937.48		3.318E-02	1.308E-01	2.225E-01	2.070E-02	0.149
		1384.27		2.497E-03	1.810E-01	3.003E-01	2.214E-02	0.008
IN-111		171.28		3.962E-01	7.675E-01	1.269E+00	6.843E-02	0.312
		245.39	*	-3.950E-01	9.053E-01	1.217E+00	7.013E-02	-0.325
IN-113M		391.69	*	2.011E-02	4.443E-02	7.576E-02	4.433E-03	0.266
SN-113		391.69	*	2.011E-02	4.443E-02	7.576E-02	4.433E-03	0.266
IN-114M		190.27	*	1.350E-01	1.986E-01	2.915E-01	1.605E-02	0.463
CD-115		260.90		-1.615E+01	8.907E+01	1.488E+02	8.638E+00	-0.109
		492.35		-1.204E+00	2.329E+01	3.816E+01	2.224E+00	-0.032
		527.90	*	2.956E-01	8.073E+00	1.327E+01	7.844E-01	0.022
SN-117M		156.02		8.658E-02	2.182E+00	3.544E+00	2.040E-01	0.024
		158.56	*	-1.634E-02	5.432E-02	8.690E-02	4.916E-03	-0.188
SB-122		563.90	*	2.586E+00	1.806E+00	2.920E+00	1.741E-01	0.886
		692.80		2.764E+01	3.481E+01	5.982E+01	3.800E+00	0.462
I-123		159.00	*	3.045E-01	3.481E+01	Half-Life too short		
		528.96		1.756E+01	3.481E+01	Half-Life too short		
TE-123M		159.00	*	6.415E-03	2.902E-02	4.746E-02	2.715E-03	0.135
I-124		602.71	*	-1.985E-01	6.470E-01	8.798E-01	5.263E-02	-0.226
		722.78		-2.945E+00	4.578E+00	5.878E+00	3.973E-01	-0.501
		1325.50		-1.449E+01	3.233E+01	5.015E+01	3.537E+00	-0.289
		1376.25		3.845E+01	3.006E+01	5.531E+01	3.920E+00	0.695
		1509.49		7.928E+00	1.150E+01	2.077E+01	1.425E+00	0.382
		1691.02		-1.847E+00	3.126E+00	4.381E+00	2.760E-01	-0.422
SB-124		602.71		-1.378E-02	4.491E-02	6.106E-02	3.654E-03	-0.226
		645.85		-4.196E-01	5.001E-01	7.498E-01	5.016E-02	-0.560
		709.31		-2.491E-01	3.079E+00	4.946E+00	3.252E-01	-0.050
		713.82		8.356E-01	1.890E+00	3.155E+00	3.379E-01	0.265
		722.78		-2.963E-01	4.606E-01	5.913E-01	4.137E-02	-0.501
	+	968.20		1.787E+01	4.412E+00	7.427E+00	6.440E-01	2.406
		1045.16		2.579E+00	2.710E+00	4.849E+00	3.721E-01	0.532
		1325.50		-1.557E+00	3.474E+00	5.389E+00	3.801E-01	-0.289
		1368.21		8.653E-01	1.875E+00	3.235E+00	4.062E-01	0.267
		1436.60		-3.094E+00	3.471E+00	4.760E+00	3.334E-01	-0.650
		1691.02	*	-4.382E-02	7.420E-02	1.040E-01	7.028E-03	-0.422
SB-125		427.89	*	-1.651E-02	8.867E-02	1.449E-01	8.489E-03	-0.114
		463.38		4.913E-01	3.100E-01	5.547E-01	3.724E-02	0.886
		600.56		6.950E-02	1.795E-01	2.939E-01	2.018E-02	0.236
		635.90		-4.188E-02	3.091E-01	4.973E-01	3.451E-02	-0.084
TE-125M		109.28	*	-1.812E-01	9.280E+00	1.518E+01	1.425E+00	-0.012
I-126		388.63		-1.138E-01	1.975E-01	3.167E-01	1.730E-02	-0.359
		666.33	*	6.820E-02	1.810E-01	3.023E-01	1.816E-02	0.226
		753.82		1.320E+00	1.565E+00	2.691E+00	1.936E-01	0.491
SB-126		223.80		-7.072E-01	3.950E+00	6.275E+00	3.564E-01	-0.113
		278.60		-5.622E-02	2.386E+00	4.008E+00	2.337E-01	-0.014
		296.50		1.101E+01	2.016E+00	3.152E+00	1.839E-01	3.494
		414.70		1.562E-02	6.763E-02	1.137E-01	6.312E-03	0.137
		415.30		2.978E+00	5.608E+00	9.609E+00	5.335E-01	0.310

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		-1.426E+00	3.778E+00	5.995E+00	3.568E-01	-0.238
		573.80		2.614E-01	1.190E+00	1.720E+00	1.027E-01	0.152
		593.00		-4.736E-01	8.662E-01	1.347E+00	8.057E-02	-0.352
		656.30		7.901E-01	3.187E+00	5.280E+00	3.143E-01	0.150
		666.33		2.843E-02	7.545E-02	1.260E-01	7.567E-03	0.226
		675.00		1.097E+00	2.058E+00	3.473E+00	2.125E-01	0.316
		695.00		-1.031E-02	7.973E-02	1.277E-01	8.152E-03	-0.081
		697.00		2.754E-02	2.692E-01	4.393E-01	2.815E-02	0.063
		720.50	*	-1.567E-01	1.737E-01	2.144E-01	1.442E-02	-0.731
		856.80		-4.250E-01	4.987E-01	7.776E-01	6.786E-02	-0.547
		989.30		-9.166E-01	1.267E+00	1.960E+00	1.650E-01	-0.468
		1034.80		6.305E+00	8.805E+00	1.554E+01	1.216E+00	0.406
		1213.00		6.211E+00	5.042E+00	9.074E+00	5.351E-01	0.684
SB-127		61.10		6.677E+01	4.104E+01	6.381E+01	5.977E+00	1.046
		252.40		-1.110E+00	3.640E+00	5.662E+00	2.347E+00	-0.196
		290.80		1.034E+00	1.920E+01	2.819E+01	2.473E+00	0.037
		411.60		-3.784E-01	9.478E+00	1.567E+01	2.195E+00	-0.024
		444.90		2.102E+00	7.635E+00	1.285E+01	1.333E+00	0.164
		473.00		-1.387E+00	1.394E+00	2.120E+00	2.295E-01	-0.654
		543.00		8.672E+00	1.367E+01	2.338E+01	2.965E+00	0.371
		603.60		-6.928E+00	1.109E+01	1.448E+01	1.522E+00	-0.479
		685.20	*	-3.452E-01	1.195E+00	1.887E+00	1.761E-01	-0.183
		698.50		-7.551E+00	1.342E+01	2.065E+01	2.992E+00	-0.366
		722.20		-2.221E+01	3.115E+01	3.958E+01	3.723E+00	-0.561
		783.80		-1.019E+00	3.086E+00	4.809E+00	5.498E-01	-0.212
XE-127		57.60		-4.380E+00	5.243E+00	7.693E+00	5.067E-01	-0.569
		145.22		3.539E-01	6.714E-01	1.114E+00	6.876E-02	0.318
		172.10		1.081E-01	1.176E-01	1.975E-01	1.066E-02	0.547
		202.84	*	-9.384E-03	4.911E-02	7.544E-02	4.205E-03	-0.124
		374.96		1.092E-01	1.947E-01	3.344E-01	1.859E-02	0.327
I-131		80.18		-1.105E+00	4.369E+00	6.253E+00	5.013E-01	-0.177
		284.30		2.693E-01	1.375E+00	2.333E+00	1.509E-01	0.115
		364.48	*	6.742E-02	1.048E-01	1.809E-01	1.141E-02	0.373
		636.97		4.640E-01	1.596E+00	2.650E+00	1.759E-01	0.175
		722.89		-5.318E+00	8.082E+00	1.035E+01	7.062E-01	-0.514
TE-132		49.72		-1.942E+01	1.231E+01	1.610E+01	1.429E+00	-1.206
		111.76		-2.333E+01	2.405E+01	3.772E+01	3.612E+00	-0.618
		116.30		2.335E+01	2.158E+01	3.660E+01	3.466E+00	0.638
		228.16	*	-2.507E-01	5.864E-01	8.921E-01	1.258E-01	-0.281
BA-133		53.15		1.065E+00	2.731E+00	4.603E+00	2.999E-01	0.231
		79.62		2.710E+00	1.416E+00	2.135E+00	3.168E-01	1.269
		81.00		-2.265E-01	1.126E-01	1.398E-01	2.177E-02	-1.620
		276.40		5.782E-01	4.019E-01	6.754E-01	8.764E-02	0.856
		302.84		-4.678E-02	1.476E-01	2.098E-01	2.449E-02	-0.223
		356.01	*	-1.598E-02	4.609E-02	6.464E-02	7.430E-03	-0.247
		383.85		1.908E-01	3.083E-01	5.296E-01	5.674E-02	0.360
I-133	+	510.53		5.343E-01	3.083E-01	Half-Life too short		
		529.87	*	-1.192E-03	3.083E-01	Half-Life too short		
		706.58		-1.209E-01	3.083E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		856.28		-2.389E-01	3.083E-01	Half-Life too short		
		875.33		7.204E-03	3.083E-01	Half-Life too short		
		1236.41		3.426E-01	3.083E-01	Half-Life too short		
		1298.22		-4.676E-02	3.083E-01	Half-Life too short		
CS-134		475.35		9.947E-01	1.863E+00	3.185E+00	1.841E-01	0.312
		563.23		7.963E-02	4.233E-01	6.107E-01	3.712E-02	0.130
		569.32		6.095E-01	2.895E-01	4.743E-01	2.909E-02	1.285
		604.70		-1.290E-02	3.814E-02	5.161E-02	3.103E-03	-0.250
	+	795.84	*	5.203E-02	6.610E-02	9.851E-02	7.753E-03	0.528
		801.93		2.068E-01	4.575E-01	7.443E-01	5.913E-02	0.278
		1038.57		-3.125E+00	4.053E+00	6.202E+00	4.818E-01	-0.504
		1167.94		3.412E-01	3.035E+00	5.049E+00	2.832E-01	0.068
		1365.15		3.860E-01	1.301E+00	2.206E+00	1.670E-01	0.175
CS-135		268.24	*	2.805E-01	1.776E-01	2.849E-01	2.186E-02	0.984
I-135		288.45		-3.618E+08	1.776E-01	Half-Life too short		
		417.63		-3.396E+07	1.776E-01	Half-Life too short		
		546.56		-2.941E+08	1.776E-01	Half-Life too short		
		836.80		9.059E+08	1.776E-01	Half-Life too short		
		1038.76		-9.056E+08	1.776E-01	Half-Life too short		
		1124.00		3.868E+09	1.776E-01	Half-Life too short		
		1131.51		-4.432E+08	1.776E-01	Half-Life too short		
		1260.41	*	2.621E+08	1.776E-01	Half-Life too short		
		1457.56		5.488E+10	1.776E-01	Half-Life too short		
		1678.03		-4.545E+07	1.776E-01	Half-Life too short		
		1706.46		7.867E+08	1.776E-01	Half-Life too short		
		1791.20		3.253E+08	1.776E-01	Half-Life too short		
CS-136		66.91		-3.151E-01	7.409E-01	1.055E+00	1.539E-01	-0.299
	+	86.29		2.839E+00	9.373E-01	1.867E+00	2.392E-01	1.521
		153.22		2.471E-01	6.300E-01	1.038E+00	7.552E-02	0.238
		163.89		-4.688E-01	1.021E+00	1.590E+00	1.108E-01	-0.295
		176.55		1.884E-02	3.456E-01	5.597E-01	3.460E-02	0.034
		273.65		-4.725E-01	5.044E-01	6.930E-01	4.598E-02	-0.682
		340.57		2.510E-01	1.392E-01	2.259E-01	1.379E-02	1.111
		818.51		2.306E-02	7.379E-02	1.220E-01	9.938E-03	0.189
		1048.07	*	-8.258E-02	1.223E-01	1.909E-01	1.536E-02	-0.432
		1235.34		2.510E-01	6.918E-01	1.165E+00	1.185E-01	0.215
BA-137M		661.65	*	1.583E-02	3.684E-02	6.184E-02	3.677E-03	0.256
CS-137		661.65	*	1.674E-02	3.894E-02	6.537E-02	3.903E-03	0.256
CE-139		165.85	*	-1.288E-02	2.907E-02	4.609E-02	2.474E-03	-0.279
BA-140		162.64		-5.873E-01	7.279E-01	1.116E+00	6.979E-02	-0.526
		304.84		-4.568E-01	1.325E+00	1.874E+00	5.114E-01	-0.244
		423.70		9.012E-01	1.810E+00	3.053E+00	9.692E-01	0.295
		537.32	*	-1.246E-01	2.629E-01	4.107E-01	1.337E-01	-0.303
LA-140		328.77		3.569E-01	2.793E-01	4.948E-01	3.205E-02	0.721
		432.53		-8.760E-01	1.899E+00	3.041E+00	1.900E-01	-0.288
		487.03		3.907E-02	1.205E-01	2.032E-01	1.337E-02	0.192
		751.79		1.568E+00	1.752E+00	3.030E+00	2.500E-01	0.518
		815.85		1.994E-01	3.251E-01	5.510E-01	5.041E-02	0.362
		867.82		-4.526E-01	1.451E+00	2.368E+00	2.212E-01	-0.191

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		-9.725E-01	2.878E+00	4.282E+00	4.757E-01	-0.227
		925.24		-7.415E-02	1.067E+00	1.769E+00	1.706E-01	-0.042
		1596.49	*	1.636E-02	7.560E-02	1.270E-01	8.415E-03	0.129
CE-141		145.44	*	3.026E-02	6.017E-02	9.978E-02	6.367E-03	0.303
CE-143		57.37		-4.186E-04	6.017E-02	Half-Life too short		
		231.56		3.864E-04	6.017E-02	Half-Life too short		
	+	293.26	*	5.703E-04	6.017E-02	Half-Life too short		
	+	350.59		1.417E-02	6.017E-02	Half-Life too short		
		490.36		-1.226E-03	6.017E-02	Half-Life too short		
		664.57		1.600E-04	6.017E-02	Half-Life too short		
		721.93		-5.646E-04	6.017E-02	Half-Life too short		
CE-144		80.11		-3.922E-01	2.219E+00	3.187E+00	2.537E-01	-0.123
		133.54	*	1.682E-02	1.970E-01	3.220E-01	4.688E-02	0.052
PM-144		476.78		7.587E-02	6.591E-02	1.169E-01	8.101E-03	0.649
		618.01		1.846E-02	3.314E-02	5.498E-02	3.474E-03	0.336
		696.49	*	-7.524E-03	3.689E-02	5.870E-02	3.760E-03	-0.128
		778.57		4.554E-01	2.369E+00	3.879E+00	2.929E-01	0.117
PR-144		696.49	*	-5.095E-01	2.498E+00	3.975E+00	2.545E-01	-0.128
		1489.15		2.686E+00	8.735E+00	1.513E+01	1.045E+00	0.178
PM-146		453.90	*	-3.688E-02	4.559E-02	7.099E-02	6.077E-03	-0.520
		633.02		-9.764E-01	1.605E+00	2.419E+00	8.916E-01	-0.404
		735.90		3.182E-02	1.577E-01	2.587E-01	7.281E-02	0.123
		747.13		-6.418E-02	1.042E-01	1.586E-01	2.086E-02	-0.405
ND-147	+	91.11		5.428E-01	2.610E-01	4.664E-01	4.287E-02	1.164
		319.41		-5.824E-01	3.042E+00	5.038E+00	2.924E-01	-0.116
		439.89		-1.209E+00	5.467E+00	8.903E+00	5.037E-01	-0.136
		531.02	*	2.301E-01	5.514E-01	9.296E-01	1.262E-01	0.248
PM-149		285.90	*	-1.472E+01	6.470E+01	1.075E+02	1.524E+01	-0.137
EU-152		121.78		2.640E-02	7.041E-02	1.167E-01	1.010E-02	0.226
		244.69		1.161E-01	3.624E-01	5.168E-01	2.977E-02	0.225
		344.27	*	4.296E-02	1.552E-01	1.582E-01	1.023E-02	0.272
		443.98		-1.582E-01	9.161E-01	1.495E+00	8.479E-02	-0.106
		778.89		7.541E-02	2.760E-01	4.552E-01	3.438E-02	0.166
		867.32		-5.200E-01	9.380E-01	1.499E+00	1.333E-01	-0.347
	+	964.01		6.297E-01	4.364E-01	6.576E-01	5.734E-02	0.958
		1085.78		-4.294E-02	4.914E-01	8.077E-01	5.698E-02	-0.053
		1112.02		-3.189E-01	3.863E-01	5.941E-01	3.934E-02	-0.537
		1407.95		2.095E-01	1.809E-01	3.393E-01	2.391E-02	0.617
GD-153		69.67		-9.477E-02	1.693E+00	2.455E+00	1.755E-01	-0.039
		83.37		4.805E+00	2.129E+01	2.282E+01	1.887E+00	0.211
		97.43	*	9.363E-02	8.252E-02	1.256E-01	1.008E-02	0.745
		103.18		-3.331E-02	1.014E-01	1.640E-01	1.265E-02	-0.203
EU-154		123.07		1.687E-02	5.142E-02	8.502E-02	8.699E-03	0.198
		247.94		-5.011E-02	3.935E-01	5.742E-01	5.468E-02	-0.087
		591.81		-1.947E-01	6.224E-01	9.887E-01	9.771E-02	-0.197
		723.30		-1.983E-02	2.131E-01	2.935E-01	2.316E-02	-0.068
		756.87		-3.842E-01	8.597E-01	1.330E+00	1.466E-01	-0.289
		873.19		1.491E-01	3.286E-01	5.696E-01	7.122E-02	0.262
		996.32		-1.646E-01	3.975E-01	6.346E-01	1.119E-01	-0.259

---- Non-Identified Nuclides ----

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		1004.76		-2.935E-03	2.457E-01	4.080E-01	4.631E-02	-0.007
		1274.45	*	-9.438E-02	1.487E-01	2.290E-01	2.245E-02	-0.412
EU-155		48.70		-1.095E+00	1.866E+00	2.611E+00	1.673E-01	-0.419
		60.01		-3.863E-01	4.496E+00	6.488E+00	4.314E-01	-0.060
	+	86.54		2.782E-01	8.802E-02	1.809E-01	1.570E-02	1.538
		105.31	*	-3.693E-02	1.064E-01	1.719E-01	1.331E-02	-0.215
TB-160	+	86.79		7.353E-01	2.325E-01	4.719E-01	4.067E-02	1.558
		197.04		-8.039E-02	5.769E-01	9.029E-01	5.004E-02	-0.089
		215.65		5.990E-01	8.012E-01	1.238E+00	6.983E-02	0.484
	+	298.57		2.849E-01	1.183E-01	2.019E-01	1.177E-02	1.411
		879.36	*	-4.173E-02	1.420E-01	2.313E-01	2.101E-02	-0.180
		962.29		9.219E-01	7.120E-01	1.148E+00	1.003E-01	0.803
		966.15		1.272E+00	2.931E-01	5.662E-01	4.923E-02	2.246
		1177.93		-2.652E-01	4.060E-01	6.246E-01	3.469E-02	-0.425
		1271.85		2.613E-02	8.156E-01	1.342E+00	8.714E-02	0.019
HO-166M		80.57		-3.904E-01	2.931E-01	3.962E-01	3.171E-02	-0.985
	+	184.41		1.025E-01	5.346E-02	6.703E-02	3.666E-03	1.529
		280.46		-1.348E-01	8.776E-02	1.362E-01	7.940E-03	-0.990
		410.95		1.404E-01	2.310E-01	3.975E-01	2.199E-02	0.353
		711.68	*	6.840E-02	6.877E-02	1.194E-01	7.892E-03	0.573
		752.31		3.180E-01	3.026E-01	5.288E-01	3.792E-02	0.601
		810.29		-1.517E-02	6.368E-02	9.991E-02	8.009E-03	-0.152
TM-171		51.35		-1.036E+01	2.385E+01	3.607E+01	2.339E+00	-0.287
		52.39		-1.441E+00	1.172E+01	1.941E+01	1.262E+00	-0.074
		59.40		-2.456E+01	2.443E+01	3.356E+01	2.223E+00	-0.732
		66.72	*	-1.267E+01	2.850E+01	4.063E+01	2.833E+00	-0.312
LU-176	+	88.36		5.481E-01	1.733E-01	3.639E-01	3.170E-02	1.506
		201.83		-1.566E-03	2.956E-02	4.742E-02	2.641E-03	-0.033
		306.84	*	7.509E-03	2.437E-02	4.050E-02	2.358E-03	0.185
		401.10		8.853E-01	7.032E+00	1.175E+01	6.447E-01	0.075
LU-177		112.95		-5.360E-01	1.492E+00	2.406E+00	1.767E-01	-0.223
	+	208.36	*	2.558E+00	1.315E+00	1.777E+00	9.958E-02	1.439
LU-177M		52.97		3.309E-01	1.221E+00	2.051E+00	1.335E-01	0.161
		54.07		1.191E+00	6.474E-01	1.138E+00	7.428E-02	1.047
		61.30		2.479E+00	1.306E+00	2.060E+00	1.381E-01	1.203
		121.62		1.347E-01	3.593E-01	5.958E-01	4.237E-02	0.226
		147.16		-5.048E-01	6.605E-01	1.037E+00	6.325E-02	-0.487
		171.86		4.038E-01	4.800E-01	8.044E-01	4.341E-02	0.502
		218.09		-2.425E-01	8.754E-01	1.385E+00	7.830E-02	-0.175
	+	268.79		1.856E+00	9.461E-01	1.428E+00	8.308E-02	1.300
		319.02		-2.810E-02	2.503E-01	4.163E-01	2.416E-02	-0.067
		367.43		-3.918E-01	9.144E-01	1.483E+00	8.314E-02	-0.264
		413.65	*	-6.625E-02	1.724E-01	2.786E-01	1.545E-02	-0.238
HF-181		56.28		-3.158E-01	7.495E-01	1.227E+00	8.050E-02	-0.257
		57.53		-3.675E-01	4.423E-01	6.492E-01	4.275E-02	-0.566
		65.20		3.933E-01	9.211E-01	1.365E+00	9.405E-02	0.288
		133.02		-5.903E-02	6.406E-02	1.001E-01	6.649E-03	-0.590
		136.25		-2.241E-01	4.413E-01	7.022E-01	4.576E-02	-0.319
		345.85		1.878E-02	2.398E-01	3.071E-01	1.755E-02	0.061

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		482.03	*	-3.109E-02	4.182E-02	6.502E-02	3.771E-03	-0.478
W-181		56.28		-1.257E-01	2.970E-01	4.860E-01	3.189E-02	-0.259
		57.53		-1.457E-01	1.754E-01	2.574E-01	1.695E-02	-0.566
		65.20	*	1.547E-01	3.624E-01	5.371E-01	3.700E-02	0.288
TA-182		67.75		-4.981E-02	1.121E-01	1.597E-01	1.123E-02	-0.312
		100.10		5.025E-02	1.773E-01	2.843E-01	2.237E-02	0.177
		152.43		3.029E-01	3.321E-01	5.587E-01	3.294E-02	0.542
		222.10		1.835E-02	3.520E-01	5.656E-01	3.208E-02	0.032
		1001.68		5.587E-01	2.310E+00	3.890E+00	3.215E-01	0.144
	+	1121.28		4.131E-01	2.685E-01	3.555E-01	2.297E-02	1.162
		1189.05		-6.619E-02	3.655E-01	5.931E-01	3.358E-02	-0.112
		1221.42	*	5.481E-02	2.450E-01	4.095E-01	2.450E-02	0.134
		1230.97		-3.380E-01	6.053E-01	9.537E-01	5.796E-02	-0.354
RE-183		57.98		-1.405E-01	1.822E-01	2.538E-01	1.673E-02	-0.553
		59.32		-1.009E-01	9.936E-02	1.364E-01	9.036E-03	-0.740
		67.20		-1.179E-01	2.019E-01	2.859E-01	2.002E-02	-0.412
		162.32	*	-4.254E-02	1.112E-01	1.740E-01	9.583E-03	-0.244
	+	208.81		2.560E+00	1.316E+00	1.782E+00	9.993E-02	1.436
		291.72		1.329E-01	1.058E+00	1.560E+00	9.104E-02	0.085
RE-184		57.98		-5.210E-01	6.758E-01	9.415E-01	6.208E-02	-0.553
		59.32		-3.740E-01	3.683E-01	5.057E-01	3.349E-02	-0.740
		67.20		-4.371E-01	7.488E-01	1.060E+00	7.423E-02	-0.412
		161.27		1.252E-01	3.580E-01	5.885E-01	3.266E-02	0.213
		216.55		1.254E-01	2.710E-01	4.443E-01	2.508E-02	0.282
		252.85	*	-9.442E-02	2.404E-01	3.752E-01	2.170E-02	-0.252
		318.01		-2.361E-01	4.409E-01	7.162E-01	4.157E-02	-0.330
		792.07		4.089E-01	1.332E+00	1.909E+00	1.479E-01	0.214
		903.28		-7.941E-01	1.257E+00	1.750E+00	1.634E-01	-0.454
		920.93		-3.541E-01	4.682E-01	7.041E-01	6.457E-02	-0.503
OS-185		59.72		-2.080E-01	2.694E-01	3.752E-01	2.490E-02	-0.554
		61.14		2.397E-01	1.419E-01	2.223E-01	1.488E-02	1.078
		69.30		2.036E-02	3.207E-01	4.357E-01	3.105E-02	0.047
		592.07		-4.827E-01	2.477E+00	3.975E+00	2.377E-01	-0.121
		646.12	*	-2.763E-02	4.215E-02	6.437E-02	3.839E-03	-0.429
		717.42		1.064E-02	9.864E-01	1.595E+00	1.067E-01	0.007
		874.81		3.155E-01	6.051E-01	1.057E+00	9.525E-02	0.298
		880.27		6.160E-01	7.924E-01	1.412E+00	1.284E-01	0.436
RE-188		155.03	*	-9.920E-03	1.728E-01	2.796E-01	1.620E-02	-0.035
		477.96		2.003E+00	2.938E+00	5.072E+00	2.935E-01	0.395
		633.10		-1.842E+00	3.137E+00	4.864E+00	2.906E-01	-0.379
W-188	+	63.58		6.073E+01	5.984E+01	7.669E+01	5.221E+00	0.792
		227.08		-5.722E-01	1.317E+01	2.104E+01	1.198E+00	-0.027
		290.67	*	6.301E-01	8.096E+00	1.191E+01	6.946E-01	0.053
IR-192	+	295.96		8.068E-01	1.914E-01	2.639E-01	1.563E-02	3.058
		308.46		4.228E-02	9.331E-02	1.600E-01	9.421E-03	0.264
		316.51	*	-1.992E-03	3.387E-02	5.653E-02	3.299E-03	-0.035
		468.07		-1.954E-02	6.934E-02	1.122E-01	7.458E-03	-0.174
		604.41		-1.846E-01	5.102E-01	6.879E-01	7.873E-02	-0.268
		612.46		1.035E+00	8.273E-01	1.308E+00	1.009E-01	0.791

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		8.169E-02	1.685E-01	2.503E-01	1.723E-02	0.326
		66.83		-4.089E-02	9.399E-02	1.340E-01	9.354E-03	-0.305
	+	75.70		1.148E+00	2.471E-01	4.481E-01	3.399E-02	2.563
		98.88	*	4.170E-01	2.394E-01	3.734E-01	2.963E-02	1.117
		129.76		1.292E+00	2.877E+00	4.769E+00	3.231E-01	0.271
TL-200		367.94	*	-1.954E-04	2.877E+00	Half-Life too short		
		579.30		1.275E-03	2.877E+00	Half-Life too short		
		828.27		5.914E-04	2.877E+00	Half-Life too short		
		1205.75		-4.542E-04	2.877E+00	Half-Life too short		
TL-201		68.90		-1.069E+00	3.768E+00	5.408E+00	3.841E-01	-0.198
		70.82		9.018E-01	2.131E+00	3.151E+00	2.277E-01	0.286
		80.30		-1.550E+00	4.033E+00	5.734E+00	4.575E-01	-0.270
		135.34		-3.074E+00	1.870E+01	3.022E+01	1.980E+00	-0.102
		167.43	*	4.035E-01	5.305E+00	8.612E+00	4.626E-01	0.047
TL-202		68.90		-1.170E-01	4.125E-01	5.921E-01	4.205E-02	-0.198
		70.82		9.847E-02	2.327E-01	3.440E-01	2.486E-02	0.286
		80.30		-1.692E-01	4.405E-01	6.263E-01	4.997E-02	-0.270
		439.56	*	-8.835E-03	6.612E-02	1.083E-01	6.126E-03	-0.082
HG-203		70.83		4.504E-01	1.059E+00	1.564E+00	1.998E-01	0.288
		72.87		1.826E+00	7.046E-01	1.064E+00	1.322E-01	1.716
		82.60		-8.494E-01	1.631E+00	1.627E+00	2.193E-01	-0.522
		279.20	*	-2.402E-02	4.091E-02	6.688E-02	4.138E-03	-0.359
BI-207		72.80		5.219E-01	2.003E-01	3.130E-01	2.305E-02	1.668
	+	74.97		6.397E-01	1.376E-01	2.265E-01	1.705E-02	2.824
		84.90		4.690E-01	2.067E-01	3.222E-01	2.713E-02	1.456
		569.67		9.128E-02	4.290E-02	7.119E-02	4.247E-03	1.282
		1063.62	*	-4.495E-02	5.802E-02	8.907E-02	6.592E-03	-0.505
		1770.23		-1.811E+00	6.903E-01	6.759E-01	4.037E-02	-2.679
TL-207		81.07		-5.122E-01	2.393E-01	3.073E-01	2.473E-02	-1.667
		83.78		-4.126E-02	1.905E-01	1.969E-01	1.636E-02	-0.210
		94.90		3.767E-01	2.563E-01	3.922E-01	3.209E-02	0.960
		122.32		1.489E-01	1.706E+00	2.796E+00	2.194E-01	0.053
		144.24		-2.363E-02	7.042E-01	1.118E+00	8.461E-02	-0.021
		154.21		3.274E-02	4.051E-01	6.592E-01	4.637E-02	0.050
	+	269.46		4.367E-01	2.227E-01	3.375E-01	2.053E-02	1.294
		323.87	*	-4.823E-01	6.702E-01	1.071E+00	1.768E-01	-0.451
	+	338.28		6.635E+00	1.884E+00	2.439E+00	2.562E-01	2.720
		445.03		6.227E-01	2.189E+00	3.687E+00	3.760E-01	0.169
PO-209		260.50		-5.375E-01	9.459E+00	1.590E+01	9.228E-01	-0.034
		262.80		-1.894E+01	2.674E+01	4.352E+01	2.528E+00	-0.435
		896.60	*	5.604E+00	8.126E+00	1.432E+01	1.341E+00	0.391
PB-211		404.84	*	-8.350E-01	1.084E+00	1.491E+00	9.290E-01	-0.560
		427.08		-1.476E+00	2.225E+00	3.192E+00	1.973E+00	-0.462
		831.96		-2.511E-01	1.378E+00	2.266E+00	1.419E+00	-0.111
BI-212	+	727.18	*	8.295E-01	5.151E-01	6.982E-01	5.940E-02	1.188
		785.46		1.404E+00	1.711E+00	2.960E+00	2.264E-01	0.474
		1620.62		1.362E+00	1.116E+00	2.196E+00	1.438E-01	0.620
PO-215		81.07		-5.122E-01	2.393E-01	3.073E-01	2.473E-02	-1.667
		83.78		-4.126E-02	1.905E-01	1.969E-01	1.636E-02	-0.210

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		3.767E-01	2.563E-01	3.922E-01	3.209E-02	0.960
		122.32		1.489E-01	1.706E+00	2.796E+00	2.194E-01	0.053
		144.24		-2.363E-02	7.042E-01	1.118E+00	8.461E-02	-0.021
		154.21		3.274E-02	4.051E-01	6.592E-01	4.637E-02	0.050
	+	269.46		4.367E-01	2.227E-01	3.375E-01	2.053E-02	1.294
		323.87	*	-4.823E-01	6.702E-01	1.071E+00	1.768E-01	-0.451
	+	338.28		6.635E+00	1.884E+00	2.439E+00	2.562E-01	2.720
		445.03		6.227E-01	2.189E+00	3.687E+00	3.760E-01	0.169
RN-219	+	271.23		5.603E-01	2.874E-01	4.299E-01	3.490E-02	1.303
		401.81	*	2.328E-01	4.211E-01	7.196E-01	9.698E-02	0.324
RN-220		549.76	*	1.110E+01	2.614E+01	4.417E+01	2.626E+00	0.251
RA-223		81.07		-5.122E-01	2.393E-01	3.073E-01	2.473E-02	-1.667
		83.78		-4.126E-02	1.905E-01	1.969E-01	1.636E-02	-0.210
		94.90		3.767E-01	2.563E-01	3.922E-01	3.209E-02	0.960
		122.32		1.489E-01	1.706E+00	2.796E+00	2.194E-01	0.053
		144.24		-2.363E-02	7.042E-01	1.118E+00	8.461E-02	-0.021
		154.21		3.274E-02	4.051E-01	6.592E-01	4.637E-02	0.050
	+	269.46		4.367E-01	2.227E-01	3.375E-01	2.053E-02	1.294
		323.87	*	-4.823E-01	6.702E-01	1.071E+00	1.768E-01	-0.451
	+	338.28		6.635E+00	1.884E+00	2.439E+00	2.562E-01	2.720
		445.03		6.227E-01	2.189E+00	3.687E+00	3.760E-01	0.169
AC-227		79.80		2.101E+00	1.743E+00	2.575E+00	5.469E-01	0.816
		236.00		2.430E+00	4.213E-01	6.227E-01	6.485E-02	3.903
		256.20	*	-1.356E-02	3.823E-01	6.438E-01	8.985E-02	-0.021
		286.10		-3.373E-01	1.555E+00	2.585E+00	2.993E-01	-0.130
	+	299.80		3.669E+00	1.622E+00	2.576E+00	4.198E-01	1.424
		304.40		-3.572E-01	1.974E+00	2.838E+00	4.911E-01	-0.126
		334.20		-4.292E-01	2.505E+00	3.588E+00	6.573E-01	-0.120
TH-227		79.80		2.101E+00	1.744E+00	2.575E+00	5.541E-01	0.816
	+	94.00		6.765E+00	3.233E+00	3.522E+00	7.620E-01	1.921
		236.00		2.430E+00	4.017E-01	6.227E-01	5.612E-02	3.903
		256.20	*	-1.356E-02	3.823E-01	6.438E-01	1.088E-01	-0.021
		286.10		-3.373E-01	1.591E+00	2.585E+00	2.590E+00	-0.130
	+	299.80		3.669E+00	1.622E+00	2.576E+00	4.198E-01	1.424
		304.40		-3.572E-01	1.974E+00	2.838E+00	4.911E-01	-0.126
		334.20		-4.292E-01	2.505E+00	3.588E+00	6.573E-01	-0.120
TH-229		85.43		7.319E-01	2.148E-01	3.399E-01	2.881E-02	2.153
	+	88.47		3.155E-01	9.976E-02	2.089E-01	1.818E-02	1.511
		100.00		5.181E-02	1.852E-01	2.971E-01	2.339E-02	0.174
		193.63	*	8.438E-02	5.056E-01	8.206E-01	4.532E-02	0.103
		210.97		7.819E-01	9.077E-01	1.337E+00	7.512E-02	0.585
PA-231		283.67	*	8.647E-01	1.540E+00	2.651E+00	3.656E-01	0.326
	+	301.29		1.468E+00	6.225E-01	1.015E+00	1.062E-01	1.446
TH-231		81.07		-5.122E-01	2.393E-01	3.073E-01	2.473E-02	-1.667
		83.78		-4.126E-02	1.905E-01	1.969E-01	1.636E-02	-0.210
		94.90		3.767E-01	2.563E-01	3.922E-01	3.209E-02	0.960
		122.32		1.489E-01	1.706E+00	2.796E+00	2.194E-01	0.053
		144.24		-2.363E-02	7.042E-01	1.118E+00	8.461E-02	-0.021
		154.21		3.274E-02	4.051E-01	6.592E-01	4.637E-02	0.050

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.367E-01	2.227E-01	3.375E-01	2.053E-02	1.294
		323.87	*	-4.823E-01	6.702E-01	1.071E+00	1.768E-01	-0.451
	+	338.28		6.635E+00	1.884E+00	2.439E+00	2.562E-01	2.720
		445.03		6.227E-01	2.189E+00	3.687E+00	3.760E-01	0.169
U-231		84.21		3.353E+00	5.619E+00	7.123E+00	5.949E-01	0.471
	+	92.29		5.526E+00	2.398E+00	3.096E+00	2.592E-01	1.785
		95.87	*	-5.399E-01	9.869E-01	1.380E+00	1.121E-01	-0.391
		108.00		-1.402E-01	1.698E+00	2.773E+00	2.083E-01	-0.051
PA-233	+	75.28		1.867E+01	4.664E+00	6.995E+00	1.033E+00	2.669
	+	86.59		4.524E+00	1.835E+00	2.935E+00	7.868E-01	1.542
	+	300.12		1.023E+00	4.424E-01	7.118E-01	9.574E-02	1.437
		311.98	*	4.358E-02	6.387E-02	1.107E-01	6.834E-03	0.394
		340.50		1.440E+00	7.918E-01	1.186E+00	2.722E-01	1.214
		398.62		-7.671E-02	2.173E+00	3.599E+00	9.279E-01	-0.021
		415.76		5.962E-01	1.592E+00	2.694E+00	5.529E-01	0.221
PA-234	+	63.00		1.782E+00	1.770E+00	2.274E+00	3.310E-01	0.784
		94.67		3.477E-01	1.888E-01	2.883E-01	3.493E-02	1.206
		98.44		1.907E-01	1.440E-01	1.546E-01	8.611E-02	1.233
		99.86		2.590E-01	4.842E-01	7.536E-01	5.940E-02	0.344
		111.00		-9.407E-03	1.872E-01	3.058E-01	3.442E-02	-0.031
		131.20		-8.426E-02	1.075E-01	1.694E-01	1.138E-02	-0.497
		152.70		2.584E-01	3.278E-01	5.452E-01	8.636E-02	0.474
	+	186.00		3.689E+00	2.220E+00	2.490E+00	7.592E-01	1.482
		226.40		2.701E-01	4.202E-01	6.922E-01	7.964E-02	0.390
		227.20		-5.943E-02	4.481E-01	7.131E-01	4.061E-02	-0.083
		248.90		7.142E-02	8.238E-01	1.321E+00	2.838E-01	0.054
	+	293.70		5.134E+00	1.440E+00	1.680E+00	2.705E-01	3.055
		369.80		-7.003E-01	8.603E-01	1.340E+00	2.783E-01	-0.523
	+	568.70		4.474E+00	2.047E+00	2.557E+00	1.525E-01	1.750
		569.50		8.804E-01	3.850E-01	6.441E-01	3.843E-02	1.367
		574.00		4.233E-01	1.824E+00	2.640E+00	1.576E-01	0.160
		699.00		-5.005E-02	7.565E-01	1.217E+00	2.215E-01	-0.041
		706.10		-6.886E-01	1.167E+00	1.729E+00	7.648E-01	-0.398
		733.00		8.696E-02	4.585E-01	6.527E-01	1.409E-01	0.133
		742.81		3.749E-02	1.463E+00	2.366E+00	1.586E+00	0.016
	+	796.30		1.012E+00	1.312E+00	1.877E+00	5.032E-01	0.539
		805.60		3.209E-02	1.118E+00	1.800E+00	5.485E-01	0.018
		819.60		5.349E-02	1.345E+00	2.166E+00	8.213E-01	0.025
		826.30		2.228E-01	8.856E-01	1.508E+00	6.734E-01	0.148
		831.60		-2.738E-01	7.017E-01	1.135E+00	3.377E-01	-0.241
		876.40		-9.027E-01	1.284E+00	1.351E+00	1.389E+00	-0.668
		880.51		2.635E-01	2.906E-01	5.222E-01	4.753E-02	0.505
		883.24		4.851E-02	3.082E-01	5.197E-01	3.497E-01	0.093
		899.00		7.896E-02	9.656E-01	1.624E+00	7.123E-01	0.049
		925.00		-1.776E-01	1.148E+00	1.888E+00	1.724E-01	-0.094
		926.50		4.966E-02	1.726E-01	2.951E-01	7.510E-02	0.168
		946.00	*	-4.067E-01	3.397E-01	4.902E-01	9.267E-02	-0.830
		949.00		4.714E-01	4.803E-01	8.637E-01	7.673E-02	0.546
		980.50		-6.408E-02	7.928E-01	1.310E+00	1.117E-01	-0.049

Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		3.548E-01	1.189E+00	1.986E+00	1.289E+00	0.179
PA-234M		766.41		2.056E+01	2.520E+01	3.417E+01	2.616E+01	0.602
		1001.03	*	1.458E+00	7.430E+00	1.247E+01	1.361E+00	0.117
U-235	+	89.95		2.325E+00	1.310E+00	1.841E+00	5.677E-01	1.263
	+	93.35		2.105E+00	1.072E+00	1.147E+00	3.203E-01	1.835
		105.00		-2.872E-01	1.049E+00	1.696E+00	5.015E-01	-0.169
		143.76	*	-1.013E-01	2.208E-01	3.437E-01	5.658E-02	-0.295
		163.35		-2.106E-01	4.847E-01	7.545E-01	1.349E-01	-0.279
	+	185.71		1.366E-01	7.128E-02	9.181E-02	5.028E-03	1.488
		205.31		2.993E-01	5.853E-01	8.449E-01	1.514E-01	0.354
NP-236		94.67		2.650E-01	1.413E-01	2.188E-01	1.794E-02	1.211
		98.44		1.442E-01	7.447E-02	1.169E-01	9.305E-03	1.233
		111.00		-7.116E-03	1.416E-01	2.313E-01	1.713E-02	-0.031
		160.31	*	4.224E-02	7.984E-02	1.322E-01	7.390E-03	0.319
NP-239		99.55		1.097E-01	1.625E-01	2.543E-01	2.009E-02	0.431
		117.00	*	7.380E-02	1.870E-01	3.104E-01	2.243E-02	0.238
	+	209.75		2.043E+00	1.050E+00	1.430E+00	8.024E-02	1.429
		228.18		-1.062E-01	2.445E-01	3.725E-01	2.123E-02	-0.285
		277.60		7.879E-02	1.841E-01	3.155E-01	1.839E-02	0.250
		334.30		-2.207E-01	1.420E+00	2.037E+00	1.173E-01	-0.108
AM-241		59.54	*	-1.319E-01	1.425E-01	1.966E-01	1.460E-02	-0.671
CM-243		99.55		1.129E-01	1.672E-01	2.617E-01	2.067E-02	0.431
		103.76	*	2.024E-02	9.364E-02	1.548E-01	1.190E-02	0.131
		117.00		7.592E-02	1.923E-01	3.193E-01	2.308E-02	0.238
	+	209.75		2.014E+00	1.035E+00	1.410E+00	7.909E-02	1.429
		228.18		-1.073E-01	2.471E-01	3.763E-01	2.145E-02	-0.285
		277.60		7.942E-02	1.856E-01	3.180E-01	1.854E-02	0.250
CM-247		278.00		4.093E-01	7.620E-01	1.312E+00	7.647E-02	0.312
		287.40		-1.754E-02	1.278E+00	2.091E+00	1.220E-01	-0.008
		402.60	*	2.186E-02	3.816E-02	6.540E-02	3.592E-03	0.334
CF-249		252.85		-3.560E-01	9.064E-01	1.415E+00	8.183E-02	-0.252
		333.44		8.277E-03	1.845E-01	2.691E-01	1.551E-02	0.031
		387.95	*	-2.985E-03	4.069E-02	6.731E-02	3.680E-03	-0.044
CF-251		176.60	*	6.094E-03	1.266E-01	2.049E-01	1.112E-02	0.030
		227.00		7.249E-03	4.007E-01	6.424E-01	3.658E-02	0.011
		285.00		-5.233E-01	1.790E+00	2.966E+00	1.730E-01	-0.176

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347004      *
* Acquisition date :  6-JUL-2009 11:12:27 Detector SN#     :                *
* Detector ID        : GAM14               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.35      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232347004           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.1704E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  6-MAR-2009 11:43:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.691E+01	3.305E+00	5.986E-01	0.000E+00
CD-109	2.347E+00	7.272E-01	1.312E+00	0.000E+00
SN-126	2.311E-01	7.160E-02	1.296E-01	0.000E+00
TL-208	4.981E-01	8.049E-02	6.007E-02	0.000E+00
BI-210	1.806E+00	3.237E+00	3.570E+00	0.000E+00
PB-210	1.806E+00	3.237E+00	3.570E+00	0.000E+00
PO-210	1.806E+00	3.236E+00	3.570E+00	0.000E+00
BI-211	3.193E+00	4.847E-01	3.144E-01	0.000E+00
PB-212	1.513E+00	1.531E-01	8.855E-02	0.000E+00
PO-212	1.513E+00	1.531E-01	8.855E-02	0.000E+00
BI-214	9.676E-01	1.742E-01	1.112E-01	0.000E+00
PB-214	1.111E+00	1.779E-01	1.096E-01	0.000E+00
PO-214	1.111E+00	1.779E-01	1.096E-01	0.000E+00
PO-216	1.513E+00	1.531E-01	8.855E-02	0.000E+00
PO-218	1.111E+00	1.779E-01	1.096E-01	0.000E+00
RA-224	3.890E+00	1.370E+00	1.007E+00	0.000E+00
RA-226	9.676E-01	1.742E-01	1.112E-01	0.000E+00
AC-228	1.309E+00	3.560E-01	2.483E-01	0.000E+00
RA-228	1.309E+00	3.560E-01	2.483E-01	0.000E+00
TH-228	1.513E+00	1.531E-01	8.854E-02	0.000E+00
TH-230	9.675E-01	1.742E-01	1.112E-01	0.000E+00
TH-232	1.309E+00	3.560E-01	2.483E-01	0.000E+00
TH-234	1.529E+00	1.495E+00	1.852E+00	0.000E+00
U-234	9.675E-01	1.742E-01	1.112E-01	0.000E+00
NP-237	6.786E-01	2.511E-01	3.940E-01	0.000E+00
U-238	1.529E+00	1.495E+00	1.852E+00	0.000E+00
AM-243	3.564E-01	7.516E-02	8.130E-02	0.000E+00
ANH-511	1.317E-01	7.015E-02	4.363E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	2.238E-01	3.055E-01	5.433E-01	0.000E+00	NOT IDENT.
NA-22	-3.291E-02	5.216E-02	8.205E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.171E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.178E-02	2.595E-02	4.801E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.456E-02	7.874E-02	0.000E+00	FAIL ABUN
SC-46	-6.985E-03	3.985E-02	6.711E-02	0.000E+00	FAIL ABUN
V-48	-4.074E-03	7.235E-02	1.224E-01	0.000E+00	NOT IDENT.
CR-51	-2.908E-01	3.496E-01	5.766E-01	0.000E+00	NOT IDENT.
MN-52	-8.609E-04	1.790E-01	2.963E-01	0.000E+00	NOT IDENT.
MN-54	-2.698E-03	4.045E-02	6.911E-02	0.000E+00	NOT IDENT.
CO-56	9.275E-03	3.925E-02	6.862E-02	0.000E+00	NOT IDENT.
CO-57	8.361E-04	2.406E-02	4.105E-02	0.000E+00	NOT IDENT.
CO-58	-6.198E-03	4.097E-02	6.636E-02	0.000E+00	NOT IDENT.
FE-59	5.837E-02	9.811E-02	1.737E-01	0.000E+00	NOT IDENT.
CO-60	4.910E-02	4.544E-02	8.373E-02	0.000E+00	NOT IDENT.
ZN-65	1.283E-02	1.193E-01	1.751E-01	0.000E+00	NOT IDENT.
GE-68	-8.204E-01	1.323E+00	2.105E+00	0.000E+00	NOT IDENT.
AS-73	4.184E-01	6.192E-01	1.108E+00	0.000E+00	NOT IDENT.
AS-74	-5.141E-02	8.341E-02	1.324E-01	0.000E+00	NOT IDENT.
SE-75	2.535E-03	4.530E-02	7.227E-02	0.000E+00	NOT IDENT.
BR-77	6.334E-03	7.285E+00	1.229E+01	0.000E+00	FAIL ABUN
SR-82	-2.053E-01	4.066E-01	6.404E-01	0.000E+00	NOT IDENT.
RB-83	1.292E-03	6.682E-02	1.129E-01	0.000E+00	NOT IDENT.
RB-84	6.072E-02	6.947E-02	1.272E-01	0.000E+00	NOT IDENT.
KR-85	9.573E+00	7.498E+00	1.230E+01	0.000E+00	NOT IDENT.
SR-85	4.849E-02	3.798E-02	6.229E-02	0.000E+00	NOT IDENT.
RB-86	-6.221E-01	7.949E-01	1.241E+00	0.000E+00	NOT IDENT.
Y-88	2.292E-02	2.966E-02	5.766E-02	0.000E+00	NOT IDENT.
ZR-88	9.228E-04	3.038E-02	5.211E-02	0.000E+00	NOT IDENT.
Y-91	3.587E+00	2.117E+01	3.599E+01	0.000E+00	NOT IDENT.
NB-94	-4.874E-03	3.484E-02	5.711E-02	0.000E+00	NOT IDENT.
NB-95	4.130E-02	4.801E-02	8.398E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.695E-01	2.848E-01	0.000E+00	NOT IDENT.
ZR-95	1.157E-03	7.318E-02	1.210E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.153E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.849E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-5.301E+00	9.265E+00	1.449E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.543E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.125E-02	3.295E-02	5.420E-02	0.000E+00	NOT IDENT.
RH-102	1.002E-02	2.786E-02	4.842E-02	0.000E+00	NOT IDENT.
RU-103	1.494E-02	3.713E-02	6.461E-02	0.000E+00	FAIL ABUN
RH-106	7.448E-02	3.246E-01	5.518E-01	0.000E+00	FAIL ABUN
RU-106	7.448E-02	3.245E-01	5.518E-01	0.000E+00	FAIL ABUN
AG-108M	-1.190E-02	3.199E-02	5.315E-02	0.000E+00	NOT IDENT.
AG-110M	-1.619E-02	3.497E-02	5.593E-02	0.000E+00	NOT IDENT.
IN-111	-3.950E-01	8.872E-01	1.236E+00	0.000E+00	NOT IDENT.
IN-113M	2.011E-02	4.354E-02	7.656E-02	0.000E+00	NOT IDENT.
SN-113	2.011E-02	4.354E-02	7.656E-02	0.000E+00	NOT IDENT.
IN-114M	1.350E-01	1.946E-01	2.968E-01	0.000E+00	NOT IDENT.
CD-115	2.956E-01	7.911E+00	1.337E+01	0.000E+00	NOT IDENT.
SN-117M	-1.634E-02	5.323E-02	8.864E-02	0.000E+00	NOT IDENT.
SB-122	2.586E+00	1.770E+00	2.940E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.350E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	6.415E-03	2.844E-02	4.841E-02	0.000E+00	NOT IDENT.
I-124	-1.985E-01	6.341E-01	8.851E-01	0.000E+00	NOT IDENT.
SB-124	-4.382E-02	7.271E-02	1.034E-01	0.000E+00	FAIL ABUN
SB-125	-1.651E-02	8.690E-02	1.463E-01	0.000E+00	NOT IDENT.
TE-125M	-1.812E-01	9.095E+00	1.555E+01	0.000E+00	NOT IDENT.
I-126	6.820E-02	1.774E-01	3.038E-01	0.000E+00	NOT IDENT.
SB-126	-1.567E-01	1.702E-01	2.153E-01	0.000E+00	NOT IDENT.
SB-127	-3.452E-01	1.171E+00	1.896E+00	0.000E+00	NOT IDENT.
XE-127	-9.384E-03	4.813E-02	7.675E-02	0.000E+00	NOT IDENT.
I-131	6.742E-02	1.027E-01	1.830E-01	0.000E+00	NOT IDENT.
TE-132	-2.507E-01	5.747E-01	9.066E-01	0.000E+00	NOT IDENT.
BA-133	-1.598E-02	4.517E-02	6.539E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.544E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.203E-02	6.478E-02	9.881E-02	0.000E+00	FAIL ABUN
CS-135	2.805E-01	1.740E-01	2.891E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.615E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-8.258E-02	1.199E-01	1.910E-01	0.000E+00	FAIL ABUN
BA-137M	1.583E-02	3.610E-02	6.215E-02	0.000E+00	NOT IDENT.
CS-137	1.674E-02	3.816E-02	6.570E-02	0.000E+00	NOT IDENT.
CE-139	-1.288E-02	2.849E-02	4.699E-02	0.000E+00	NOT IDENT.
BA-140	-1.246E-01	2.577E-01	4.137E-01	0.000E+00	NOT IDENT.
LA-140	1.636E-02	7.409E-02	1.264E-01	0.000E+00	NOT IDENT.
CE-141	3.026E-02	5.897E-02	1.019E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.765E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	1.682E-02	1.931E-01	3.291E-01	0.000E+00	NOT IDENT.
PM-144	-7.524E-03	3.615E-02	5.896E-02	0.000E+00	NOT IDENT.
PR-144	-5.095E-01	2.448E+00	3.993E+00	0.000E+00	NOT IDENT.
PM-146	-3.688E-02	4.468E-02	7.163E-02	0.000E+00	NOT IDENT.
ND-147	2.301E-01	5.403E-01	9.364E-01	0.000E+00	FAIL ABUN
PM-149	-1.472E+01	6.341E+01	1.090E+02	0.000E+00	NOT IDENT.
EU-152	4.296E-02	1.521E-01	1.600E-01	0.000E+00	FAIL ABUN
GD-153	9.363E-02	8.087E-02	1.288E-01	0.000E+00	NOT IDENT.
EU-154	-9.438E-02	1.457E-01	2.286E-01	0.000E+00	NOT IDENT.
EU-155	-3.693E-02	1.043E-01	1.761E-01	0.000E+00	FAIL ABUN
TB-160	-4.173E-02	1.391E-01	2.318E-01	0.000E+00	FAIL ABUN
HO-166M	6.840E-02	6.740E-02	1.199E-01	0.000E+00	FAIL ABUN
TM-171	-1.267E+01	2.793E+01	4.181E+01	0.000E+00	NOT IDENT.
LU-176	7.509E-03	2.388E-02	4.103E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.289E+00	1.808E+00	0.000E+00	FAIL ABUN
LU-177M	-6.625E-02	1.690E-01	2.814E-01	0.000E+00	FAIL ABUN
HF-181	-3.109E-02	4.098E-02	6.557E-02	0.000E+00	NOT IDENT.
W-181	1.547E-01	3.551E-01	5.528E-01	0.000E+00	NOT IDENT.
TA-182	5.481E-02	2.401E-01	4.089E-01	0.000E+00	FAIL ABUN
RE-183	-4.254E-02	1.089E-01	1.774E-01	0.000E+00	FAIL ABUN
RE-184	-9.442E-02	2.356E-01	3.809E-01	0.000E+00	NOT IDENT.
OS-185	-2.763E-02	4.131E-02	6.471E-02	0.000E+00	NOT IDENT.
RE-188	-9.920E-03	1.694E-01	2.853E-01	0.000E+00	NOT IDENT.
W-188	6.301E-01	7.934E+00	1.207E+01	0.000E+00	FAIL ABUN
IR-192	-1.992E-03	3.319E-02	5.725E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	2.346E-01	3.827E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.200E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	4.035E-01	5.199E+00	8.780E+00	0.000E+00	NOT IDENT.
TL-202	-8.835E-03	6.480E-02	1.093E-01	0.000E+00	NOT IDENT.
HG-203	-2.402E-02	4.010E-02	6.783E-02	0.000E+00	NOT IDENT.
BI-207	-4.495E-02	5.686E-02	8.907E-02	0.000E+00	FAIL ABUN
TL-207	-4.823E-01	6.568E-01	1.084E+00	0.000E+00	FAIL ABUN
PO-209	5.604E+00	7.963E+00	1.435E+01	0.000E+00	NOT IDENT.
PB-211	-8.350E-01	1.062E+00	1.506E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.048E-01	7.011E-01	0.000E+00	FAIL ABUN
PO-215	-4.823E-01	6.568E-01	1.084E+00	0.000E+00	FAIL ABUN
RN-219	2.328E-01	4.127E-01	7.271E-01	0.000E+00	FAIL ABUN
RN-220	1.110E+01	2.562E+01	4.448E+01	0.000E+00	NOT IDENT.
RA-223	-4.823E-01	6.568E-01	1.084E+00	0.000E+00	FAIL ABUN
AC-227	-1.356E-02	3.747E-01	6.534E-01	0.000E+00	FAIL ABUN
TH-227	-1.356E-02	3.747E-01	6.534E-01	0.000E+00	FAIL ABUN
TH-229	8.438E-02	4.955E-01	8.353E-01	0.000E+00	FAIL ABUN
PA-231	8.647E-01	1.510E+00	2.688E+00	0.000E+00	FAIL ABUN
TH-231	-4.823E-01	6.568E-01	1.084E+00	0.000E+00	FAIL ABUN
U-231	-5.399E-01	9.672E-01	1.415E+00	0.000E+00	FAIL ABUN
PA-233	4.358E-02	6.260E-02	1.121E-01	0.000E+00	FAIL ABUN
PA-234	-4.067E-01	3.329E-01	4.909E-01	0.000E+00	FAIL ABUN
PA-234M	1.458E+00	7.281E+00	1.248E+01	0.000E+00	NOT IDENT.
U-235	-1.013E-01	2.164E-01	3.509E-01	0.000E+00	FAIL ABUN
NP-236	4.224E-02	7.824E-02	1.349E-01	0.000E+00	NOT IDENT.
NP-239	7.380E-02	1.832E-01	3.176E-01	0.000E+00	FAIL ABUN
AM-241	-1.319E-01	1.397E-01	2.026E-01	0.000E+00	NOT IDENT.
CM-243	2.024E-02	9.176E-02	1.586E-01	0.000E+00	FAIL ABUN
CM-247	2.186E-02	3.740E-02	6.607E-02	0.000E+00	NOT IDENT.
CF-249	-2.985E-03	3.988E-02	6.803E-02	0.000E+00	NOT IDENT.
CF-251	6.094E-03	1.241E-01	2.088E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:49:04.46

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347004.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:12:27.
Sample ID         : G232347004           Sample quantity  : 1.17040E+02 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.35  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1487	10.67*	1.211E+00	3.691E+01	3.691E+01	9.14
CD-109	88.03	188	3.72*	7.045E+00	2.299E+00	2.347E+00	31.62
SN-126	64.28	83	9.60	4.573E+00	6.051E-01	6.051E-01	99.31
	86.94	188	8.90	7.045E+00	9.608E-01	9.608E-01	51.34
	87.57	188	37.00*	7.045E+00	2.311E-01	2.311E-01	31.62
TL-208	277.35	------	6.80	5.002E+00	------	Line Not Found	------
	510.84	127	21.60	3.091E+00	6.099E-01	6.099E-01	54.97
	583.14	361	84.20*	2.760E+00	4.981E-01	4.981E-01	16.49
	860.37	------	12.46	1.944E+00	------	Line Not Found	------
BI-210	46.50	42	4.05*	1.831E+00	1.804E+00	1.806E+00	182.90
PB-210	46.50	42	4.05*	1.831E+00	1.804E+00	1.806E+00	182.90
PO-210	46.50	42	4.05*	1.831E+00	1.804E+00	1.806E+00	182.86
BI-211	72.87	------	1.27	5.875E+00	------	Line Not Found	------
	351.07	539	12.94*	4.182E+00	3.193E+00	3.193E+00	15.49
PB-212	74.81	447	10.70	6.089E+00	2.198E+00	2.198E+00	23.46
	77.11	624	18.00	6.308E+00	1.761E+00	1.761E+00	17.13
	87.30	188	8.00	7.045E+00	1.069E+00	1.069E+00	33.16
	238.63	1172	44.60*	5.572E+00	1.513E+00	1.513E+00	10.32
	300.09	99	3.41	4.721E+00	1.980E+00	1.980E+00	41.93
PO-212	74.81	447	10.70	6.089E+00	2.198E+00	2.198E+00	23.46
	77.11	624	18.00	6.308E+00	1.761E+00	1.761E+00	17.13
	87.30	188	8.00	7.045E+00	1.069E+00	1.069E+00	33.16
	115.19	------	0.60	7.689E+00	------	Line Not Found	------
	238.63	1172	44.60*	5.572E+00	1.513E+00	1.513E+00	10.32
	300.09	99	3.41	4.721E+00	1.980E+00	1.980E+00	41.93
BI-214	609.31	371	46.30*	2.656E+00	9.675E-01	9.676E-01	18.37
	768.36	------	5.04	2.157E+00	------	Line Not Found	------
	934.06	------	3.21	1.802E+00	------	Line Not Found	------
	1120.29	63	15.10	1.523E+00	8.798E-01	8.798E-01	65.33
	1238.11	------	5.94	1.393E+00	------	Line Not Found	------
	1377.67	------	4.11	1.270E+00	------	Line Not Found	------
	1764.49	68	15.80	1.059E+00	1.302E+00	1.302E+00	30.92

Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	447	6.21	6.089E+00	3.788E+00	3.788E+00	22.76
	77.11	624	10.50	6.308E+00	3.019E+00	3.019E+00	18.75
	87.30	188	4.67	7.045E+00	1.831E+00	1.831E+00	32.54
	241.98	265	7.49	5.525E+00	2.052E+00	2.052E+00	36.37
	295.21	306	19.20	4.783E+00	1.069E+00	1.070E+00	24.51
	351.92	539	37.20*	4.182E+00	1.111E+00	1.111E+00	16.35
PO-214	74.81	447	6.21	6.089E+00	3.788E+00	3.788E+00	22.76
	77.11	624	10.50	6.308E+00	3.019E+00	3.019E+00	18.75
	87.30	188	4.67	7.045E+00	1.831E+00	1.831E+00	32.54
	241.98	265	7.49	5.525E+00	2.052E+00	2.052E+00	36.37
	295.21	306	19.20	4.783E+00	1.069E+00	1.070E+00	24.51
	351.92	539	37.20*	4.182E+00	1.111E+00	1.111E+00	16.35
PO-216	74.81	447	10.70	6.089E+00	2.198E+00	2.198E+00	23.46
	77.11	624	18.00	6.308E+00	1.761E+00	1.761E+00	17.13
	87.30	188	8.00	7.045E+00	1.069E+00	1.069E+00	33.16
	238.63	1172	44.60*	5.572E+00	1.513E+00	1.513E+00	10.32
	300.09	99	3.41	4.721E+00	1.980E+00	1.980E+00	41.93
PO-218	74.81	447	6.21	6.089E+00	3.788E+00	3.788E+00	22.76
	77.11	624	10.50	6.308E+00	3.019E+00	3.019E+00	18.75
	87.30	188	4.67	7.045E+00	1.831E+00	1.831E+00	32.54
	241.98	265	7.49	5.525E+00	2.052E+00	2.052E+00	36.37
	295.21	306	19.20	4.783E+00	1.069E+00	1.070E+00	24.51
	351.92	539	37.20*	4.182E+00	1.111E+00	1.111E+00	16.35
RA-224	240.98	265	3.95*	5.525E+00	3.890E+00	3.890E+00	35.93
RA-226	609.31	371	46.30*	2.656E+00	9.675E-01	9.676E-01	18.37
	768.36	------	5.04	2.157E+00	------ Line Not Found		------
	934.06	------	3.21	1.802E+00	------ Line Not Found		------
	1120.29	63	15.10	1.523E+00	8.798E-01	8.798E-01	65.33
	1238.11	------	5.94	1.393E+00	------ Line Not Found		------
	1377.67	------	4.11	1.270E+00	------ Line Not Found		------
	1764.49	68	15.80	1.059E+00	1.302E+00	1.302E+00	30.92
AC-228	338.32	243	11.40	4.309E+00	1.589E+00	1.589E+00	48.56
	911.07	208	27.70*	1.844E+00	1.309E+00	1.309E+00	27.74
	969.11	159	16.60	1.742E+00	1.759E+00	1.759E+00	32.86
RA-228	338.32	243	11.40	4.309E+00	1.589E+00	1.589E+00	48.56
	911.07	208	27.70*	1.844E+00	1.309E+00	1.309E+00	27.74
	969.11	159	16.60	1.742E+00	1.759E+00	1.759E+00	32.86
TH-228	84.40	------	1.21	6.878E+00	------ Line Not Found		------
	238.60	1172	44.60*	5.572E+00	1.513E+00	1.513E+00	10.32
	300.10	99	3.41	4.721E+00	1.980E+00	1.980E+00	71.86
TH-230	609.31	371	46.30*	2.656E+00	9.675E-01	9.675E-01	18.37
	768.36	------	5.04	2.157E+00	------ Line Not Found		------
	934.06	------	3.21	1.802E+00	------ Line Not Found		------
	1120.29	63	15.10	1.523E+00	8.798E-01	8.798E-01	65.33
	1238.11	------	5.94	1.393E+00	------ Line Not Found		------
	1377.67	------	4.11	1.270E+00	------ Line Not Found		------
	1764.49	68	15.80	1.059E+00	1.302E+00	1.302E+00	30.92
TH-232	338.32	243	11.40	4.309E+00	1.589E+00	1.589E+00	27.01
	911.07	208	27.70*	1.844E+00	1.309E+00	1.309E+00	27.74

Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	159	16.60	1.742E+00	1.759E+00	1.759E+00	32.86
TH-234	63.29	83	3.80*	4.573E+00	1.529E+00	1.529E+00	99.78
	92.38	216	5.41	7.318E+00	1.751E+00	1.751E+00	46.23
U-234	609.31	371	46.30*	2.656E+00	9.675E-01	9.675E-01	18.37
	768.36	------	5.04	2.157E+00	------	Line Not Found	------
	934.06	------	3.21	1.802E+00	------	Line Not Found	------
	1120.29	63	15.10	1.523E+00	8.798E-01	8.798E-01	65.33
	1238.11	------	5.94	1.393E+00	------	Line Not Found	------
	1377.67	------	4.11	1.270E+00	------	Line Not Found	------
	1764.49	68	15.80	1.059E+00	1.302E+00	1.302E+00	30.92
NP-237	86.50	188	12.60*	7.045E+00	6.786E-01	6.786E-01	37.75
	95.87	------	2.60	7.425E+00	------	Line Not Found	------
U-238	63.29	83	3.80*	4.573E+00	1.529E+00	1.529E+00	99.78
	92.38	216	5.41	7.318E+00	1.751E+00	1.751E+00	43.41
AM-243	74.67	447	66.00*	6.089E+00	3.564E-01	3.564E-01	21.52
	86.72	188	0.34	7.045E+00	2.545E+01	2.545E+01	31.62
	117.66	------	0.55	7.685E+00	------	Line Not Found	------
	142.18	------	0.13	7.399E+00	------	Line Not Found	------
ANH-511	511.00	127	100.00*	3.091E+00	1.317E-01	1.317E-01	54.33

Flag: "*" = Keyline

Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

Total number of lines in spectrum 28
Number of unidentified lines 0
Number of lines tentatively identified by NID 28 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.691E+01	3.691E+01	0.337E+01	9.14	
CD-109	464.00D	1.02	2.299E+00	2.347E+00	0.742E+00	31.62	
SN-126	1.00E+05Y	1.00	2.311E-01	2.311E-01	0.731E-01	31.62	
TL-208	1.41E+10Y	1.00	4.981E-01	4.981E-01	0.821E-01	16.49	
BI-210	22.26Y	1.00	1.804E+00	1.806E+00	3.303E+00	182.90	
PB-210	22.26Y	1.00	1.804E+00	1.806E+00	3.303E+00	182.90	
PO-210	22.26Y	1.00	1.804E+00	1.806E+00	3.302E+00	182.86	
BI-211	7.04E+08Y	1.00	3.193E+00	3.193E+00	0.495E+00	15.49	
PB-212	1.41E+10Y	1.00	1.513E+00	1.513E+00	0.156E+00	10.32	
PO-212	1.41E+10Y	1.00	1.513E+00	1.513E+00	0.156E+00	10.32	
BI-214	1600.00Y	1.00	9.675E-01	9.676E-01	1.777E-01	18.37	
PB-214	1600.00Y	1.00	1.111E+00	1.111E+00	0.182E+00	16.35	
PO-214	1600.00Y	1.00	1.111E+00	1.111E+00	0.182E+00	16.35	
PO-216	1.41E+10Y	1.00	1.513E+00	1.513E+00	0.156E+00	10.32	
PO-218	1600.00Y	1.00	1.111E+00	1.111E+00	0.182E+00	16.35	
RA-224	1.41E+10Y	1.00	3.890E+00	3.890E+00	1.398E+00	35.93	
RA-226	1600.00Y	1.00	9.675E-01	9.676E-01	1.777E-01	18.37	
AC-228	1.41E+10Y	1.00	1.309E+00	1.309E+00	0.363E+00	27.74	
RA-228	1.41E+10Y	1.00	1.309E+00	1.309E+00	0.363E+00	27.74	
TH-228	1.41E+10Y	1.00	1.513E+00	1.513E+00	0.156E+00	10.32	
TH-230	4.47E+09Y	1.00	9.675E-01	9.675E-01	1.777E-01	18.37	
TH-232	1.41E+10Y	1.00	1.309E+00	1.309E+00	0.363E+00	27.74	
TH-234	4.47E+09Y	1.00	1.529E+00	1.529E+00	1.525E+00	99.78	
U-234	4.47E+09Y	1.00	9.675E-01	9.675E-01	1.777E-01	18.37	
NP-237	2.14E+06Y	1.00	6.786E-01	6.786E-01	2.562E-01	37.75	
U-238	4.47E+09Y	1.00	1.529E+00	1.529E+00	1.525E+00	99.78	
AM-243	7380.00Y	1.00	3.564E-01	3.564E-01	0.767E-01	21.52	
ANH-511	1.00E+09Y	1.00	1.317E-01	1.317E-01	0.716E-01	54.33	
	Total Activity :		7.384E+01	7.389E+01			

Grand Total Activity : 7.384E+01 7.389E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	89.87	141	357	1.12	179.41	171	22	1.95E-02	47.2	7.19E+00	T
0	185.79	150	344	1.62	371.09	365	11	2.09E-02	51.9	6.53E+00	T
0	209.14	125	259	1.33	417.74	414	10	1.74E-02	51.1	6.08E+00	T
0	269.97	94	149	0.96	539.32	536	9	1.31E-02	50.6	5.10E+00	T
0	567.48	118	126	2.37	1134.01	1126	14	1.64E-02	45.4	2.82E+00	T
0	727.41	69	96	1.59	1453.77	1447	12	9.61E-03	61.5	2.27E+00	T
0	795.94	26	71	1.42	1590.81	1583	10	3.57E-03	****	2.09E+00	T
1	964.53	49	61	2.09	1928.00	1920	24	6.86E-03	68.8	1.75E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:49:08.90

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347004.CNF;1 *
* Acquisition date  : 6-JUL-2009 11:12:27.  Detector SN#     :             *
* Detector ID       : GAM14                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.35          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232347004            Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.17040E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 6-MAR-2009 11:43:06.61MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.691E+01	3.372E+00	6.006E-01	4.361E-02	61.453
CD-109	2.347E+00	7.421E-01	1.278E+00	1.118E-01	1.836
SN-126	2.311E-01	7.306E-02	1.263E-01	1.099E-02	1.830
TL-208	4.981E-01	8.213E-02	5.969E-02	4.082E-03	8.345
BI-210	1.806E+00	3.303E+00	3.457E+00	2.563E-01	0.522
PB-210	1.806E+00	3.303E+00	3.457E+00	2.563E-01	0.522
PO-210	1.806E+00	3.302E+00	3.457E+00	2.169E-01	0.522
BI-211	3.193E+00	4.946E-01	3.108E-01	1.969E-02	10.272
PB-212	1.513E+00	1.562E-01	8.717E-02	6.349E-03	17.361
PO-212	1.513E+00	1.562E-01	8.717E-02	6.349E-03	17.361
BI-214	9.676E-01	1.777E-01	1.105E-01	8.747E-03	8.755
PB-214	1.111E+00	1.816E-01	1.083E-01	8.890E-03	10.251
PO-214	1.111E+00	1.816E-01	1.083E-01	8.890E-03	10.251
PO-216	1.513E+00	1.562E-01	8.717E-02	6.349E-03	17.361
PO-218	1.111E+00	1.816E-01	1.083E-01	8.890E-03	10.251
RA-224	3.890E+00	1.398E+00	9.916E-01	5.700E-02	3.923
RA-226	9.676E-01	1.777E-01	1.105E-01	8.747E-03	8.755
AC-228	1.309E+00	3.632E-01	2.479E-01	2.912E-02	5.281

Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.309E+00	3.632E-01	2.479E-01	2.912E-02	5.281
TH-228	1.513E+00	1.562E-01	8.716E-02	6.349E-03	17.362
TH-230	9.675E-01	1.777E-01	1.105E-01	8.747E-03	8.755
TH-232	1.309E+00	3.632E-01	2.479E-01	2.912E-02	5.281
TH-234	1.529E+00	1.525E+00	1.799E+00	3.091E-01	0.850
U-234	9.675E-01	1.777E-01	1.105E-01	8.747E-03	8.755
NP-237	6.786E-01	2.562E-01	3.839E-01	8.580E-02	1.768
U-238	1.529E+00	1.525E+00	1.799E+00	3.091E-01	0.850
AM-243	3.564E-01	7.669E-02	7.910E-02	5.936E-03	4.506
ANH-511	1.317E-01	7.158E-02	4.329E-02	2.543E-03	3.043

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.238E-01		3.117E-01	5.387E-01	3.631E-02	0.415
NA-22	-3.291E-02		5.322E-02	8.220E-02	5.370E-03	-0.400
NA-24	3.013E-02		1.108E-01	Half-Life too short		
AL-26	1.178E-02		2.648E-02	4.828E-02	2.799E-03	0.244
TI-44	3.250E-01	+	5.567E-02	7.664E-02	5.984E-03	4.241
SC-46	-6.985E-03		4.066E-02	6.698E-02	6.189E-03	-0.104
V-48	-4.074E-03		7.382E-02	1.223E-01	1.038E-02	-0.033
CR-51	-2.908E-01		3.567E-01	5.694E-01	3.679E-02	-0.511
MN-52	-8.609E-04		1.826E-01	2.972E-01	2.083E-02	-0.003
MN-54	-2.698E-03		4.127E-02	6.893E-02	5.782E-03	-0.039
CO-56	9.275E-03		4.005E-02	6.845E-02	5.867E-03	0.136
CO-57	8.361E-04		2.455E-02	4.014E-02	2.856E-03	0.021
CO-58	-6.198E-03		4.180E-02	6.617E-02	5.324E-03	-0.094
FE-59	5.837E-02		1.001E-01	1.738E-01	1.338E-02	0.336
CO-60	4.910E-02		4.637E-02	8.393E-02	5.982E-03	0.585
ZN-65	1.283E-02		1.218E-01	1.752E-01	1.151E-02	0.073
GE-68	-8.204E-01		1.350E+00	2.105E+00	1.513E-01	-0.390
AS-73	4.184E-01		6.318E-01	1.074E+00	7.002E-02	0.390
AS-74	-5.141E-02		8.511E-02	1.316E-01	7.869E-03	-0.391
SE-75	2.535E-03		4.622E-02	7.123E-02	4.182E-03	0.036
BR-77	6.334E-03		7.434E+00	1.220E+01	7.192E-01	0.001
SR-82	-2.053E-01		4.149E-01	6.383E-01	4.799E-02	-0.322
RB-83	1.292E-03		6.819E-02	1.121E-01	6.605E-03	0.012
RB-84	6.072E-02		7.089E-02	1.269E-01	1.157E-02	0.478
KR-85	9.573E+00		7.651E+00	1.220E+01	7.177E-01	0.785
SR-85	4.849E-02		3.876E-02	6.181E-02	3.635E-03	0.785
RB-86	-6.221E-01		8.111E-01	1.241E+00	8.938E-02	-0.501
Y-88	2.292E-02		3.026E-02	5.800E-02	3.294E-03	0.395
ZR-88	9.228E-04		3.100E-02	5.157E-02	2.808E-03	0.018
Y-91	3.587E+00		2.160E+01	3.603E+01	2.096E+00	0.100
NB-94	-4.874E-03		3.555E-02	5.686E-02	3.688E-03	-0.086
NB-95	4.130E-02		4.899E-02	8.368E-02	6.163E-03	0.494
NB-95M	6.992E-01		1.729E-01	2.803E-01	2.095E-02	2.494

Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	1.157E-03		7.468E-02	1.205E-01	9.941E-03	0.010
NB-97	-1.753E-02		1.609E-02	Half-Life too short		
ZR-97	1.939E+00		3.494E-01	Half-Life too short		
MO-99	-5.301E+00		9.454E+00	1.444E+01	2.068E+00	-0.367
TC-99M	-5.652E+07		7.874E+08	Half-Life too short		
RH-101	-1.125E-02		3.362E-02	5.326E-02	2.955E-03	-0.211
RH-102	1.002E-02		2.843E-02	4.801E-02	2.774E-03	0.209
RU-103	1.494E-02		3.789E-02	6.409E-02	8.116E-03	0.233
RH-106	7.448E-02		3.313E-01	5.486E-01	6.489E-02	0.136
RU-106	7.448E-02		3.312E-01	5.486E-01	3.281E-02	0.136
AG-108M	-1.190E-02		3.265E-02	5.265E-02	3.234E-03	-0.226
AG-110M	-1.619E-02		3.569E-02	5.564E-02	3.515E-03	-0.291
IN-111	-3.950E-01		9.053E-01	1.217E+00	7.013E-02	-0.325
IN-113M	2.011E-02		4.443E-02	7.576E-02	4.433E-03	0.266
SN-113	2.011E-02		4.443E-02	7.576E-02	4.433E-03	0.266
IN-114M	1.350E-01		1.986E-01	2.915E-01	1.605E-02	0.463
CD-115	2.956E-01		8.073E+00	1.327E+01	7.844E-01	0.022
SN-117M	-1.634E-02		5.432E-02	8.690E-02	4.916E-03	-0.188
SB-122	2.586E+00		1.806E+00	2.920E+00	1.741E-01	0.886
I-123	3.045E-01		6.888E-01	Half-Life too short		
TE-123M	6.415E-03		2.902E-02	4.746E-02	2.715E-03	0.135
I-124	-1.985E-01		6.470E-01	8.798E-01	5.263E-02	-0.226
SB-124	-4.382E-02		7.420E-02	1.040E-01	7.028E-03	-0.422
SB-125	-1.651E-02		8.867E-02	1.449E-01	8.489E-03	-0.114
TE-125M	-1.812E-01		9.280E+00	1.518E+01	1.425E+00	-0.012
I-126	6.820E-02		1.810E-01	3.023E-01	1.816E-02	0.226
SB-126	-1.567E-01		1.737E-01	2.144E-01	1.442E-02	-0.731
SB-127	-3.452E-01		1.195E+00	1.887E+00	1.761E-01	-0.183
XE-127	-9.384E-03		4.911E-02	7.544E-02	4.205E-03	-0.124
I-131	6.742E-02		1.048E-01	1.809E-01	1.141E-02	0.373
TE-132	-2.507E-01		5.864E-01	8.921E-01	1.258E-01	-0.281
BA-133	-1.598E-02		4.609E-02	6.464E-02	7.430E-03	-0.247
I-133	-1.192E-03		1.298E-03	Half-Life too short		
CS-134	5.203E-02	+	6.610E-02	9.851E-02	7.753E-03	0.528
CS-135	2.805E-01		1.776E-01	2.849E-01	2.186E-02	0.984
I-135	2.621E+08		1.844E+08	Half-Life too short		
CS-136	-8.258E-02		1.223E-01	1.909E-01	1.536E-02	-0.432
BA-137M	1.583E-02		3.684E-02	6.184E-02	3.677E-03	0.256
CS-137	1.674E-02		3.894E-02	6.537E-02	3.903E-03	0.256
CE-139	-1.288E-02		2.907E-02	4.609E-02	2.474E-03	-0.279
BA-140	-1.246E-01		2.629E-01	4.107E-01	1.337E-01	-0.303
LA-140	1.636E-02		7.560E-02	1.270E-01	8.415E-03	0.129
CE-141	3.026E-02		6.017E-02	9.978E-02	6.367E-03	0.303
CE-143	5.703E-04	+	9.007E-05	Half-Life too short		
CE-144	1.682E-02		1.970E-01	3.220E-01	4.688E-02	0.052
PM-144	-7.524E-03		3.689E-02	5.870E-02	3.760E-03	-0.128
PR-144	-5.095E-01		2.498E+00	3.975E+00	2.545E-01	-0.128
PM-146	-3.688E-02		4.559E-02	7.099E-02	6.077E-03	-0.520

Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	2.301E-01		5.514E-01	9.296E-01	1.262E-01	0.248
PM-149	-1.472E+01		6.470E+01	1.075E+02	1.524E+01	-0.137
EU-152	4.296E-02		1.552E-01	1.582E-01	1.023E-02	0.272
GD-153	9.363E-02		8.252E-02	1.256E-01	1.008E-02	0.745
EU-154	-9.438E-02		1.487E-01	2.290E-01	2.245E-02	-0.412
EU-155	-3.693E-02		1.064E-01	1.719E-01	1.331E-02	-0.215
TB-160	-4.173E-02		1.420E-01	2.313E-01	2.101E-02	-0.180
HO-166M	6.840E-02		6.877E-02	1.194E-01	7.892E-03	0.573
TM-171	-1.267E+01		2.850E+01	4.063E+01	2.833E+00	-0.312
LU-176	7.509E-03		2.437E-02	4.050E-02	2.358E-03	0.185
LU-177	2.558E+00	+	1.315E+00	1.777E+00	9.958E-02	1.439
LU-177M	-6.625E-02		1.724E-01	2.786E-01	1.545E-02	-0.238
HF-181	-3.109E-02		4.182E-02	6.502E-02	3.771E-03	-0.478
W-181	1.547E-01		3.624E-01	5.371E-01	3.700E-02	0.288
TA-182	5.481E-02		2.450E-01	4.095E-01	2.450E-02	0.134
RE-183	-4.254E-02		1.112E-01	1.740E-01	9.583E-03	-0.244
RE-184	-9.442E-02		2.404E-01	3.752E-01	2.170E-02	-0.252
OS-185	-2.763E-02		4.215E-02	6.437E-02	3.839E-03	-0.429
RE-188	-9.920E-03		1.728E-01	2.796E-01	1.620E-02	-0.035
W-188	6.301E-01		8.096E+00	1.191E+01	6.946E-01	0.053
IR-192	-1.992E-03		3.387E-02	5.653E-02	3.299E-03	-0.035
AU-195	4.170E-01		2.394E-01	3.734E-01	2.963E-02	1.117
TL-200	-1.954E-04		1.123E-04	Half-Life too short		
TL-201	4.035E-01		5.305E+00	8.612E+00	4.626E-01	0.047
TL-202	-8.835E-03		6.612E-02	1.083E-01	6.126E-03	-0.082
HG-203	-2.402E-02		4.091E-02	6.688E-02	4.138E-03	-0.359
BI-207	-4.495E-02		5.802E-02	8.907E-02	6.592E-03	-0.505
TL-207	-4.823E-01		6.702E-01	1.071E+00	1.768E-01	-0.451
PO-209	5.604E+00		8.126E+00	1.432E+01	1.341E+00	0.391
PB-211	-8.350E-01		1.084E+00	1.491E+00	9.290E-01	-0.560
BI-212	8.295E-01	+	5.151E-01	6.982E-01	5.940E-02	1.188
PO-215	-4.823E-01		6.702E-01	1.071E+00	1.768E-01	-0.451
RN-219	2.328E-01		4.211E-01	7.196E-01	9.698E-02	0.324
RN-220	1.110E+01		2.614E+01	4.417E+01	2.626E+00	0.251
RA-223	-4.823E-01		6.702E-01	1.071E+00	1.768E-01	-0.451
AC-227	-1.356E-02		3.823E-01	6.438E-01	8.985E-02	-0.021
TH-227	-1.356E-02		3.823E-01	6.438E-01	1.088E-01	-0.021
TH-229	8.438E-02		5.056E-01	8.206E-01	4.532E-02	0.103
PA-231	8.647E-01		1.540E+00	2.651E+00	3.656E-01	0.326
TH-231	-4.823E-01		6.702E-01	1.071E+00	1.768E-01	-0.451
U-231	-5.399E-01		9.869E-01	1.380E+00	1.121E-01	-0.391
PA-233	4.358E-02		6.387E-02	1.107E-01	6.834E-03	0.394
PA-234	-4.067E-01		3.397E-01	4.902E-01	9.267E-02	-0.830
PA-234M	1.458E+00		7.430E+00	1.247E+01	1.361E+00	0.117
U-235	-1.013E-01		2.208E-01	3.437E-01	5.658E-02	-0.295
NP-236	4.224E-02		7.984E-02	1.322E-01	7.390E-03	0.319
NP-239	7.380E-02		1.870E-01	3.104E-01	2.243E-02	0.238
AM-241	-1.319E-01		1.425E-01	1.966E-01	1.460E-02	-0.671

Sample ID : G232347004 Acquisition date : 6-JUL-2009 11:12:27

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.024E-02		9.364E-02	1.548E-01	1.190E-02	0.131
CM-247	2.186E-02		3.816E-02	6.540E-02	3.592E-03	0.334
CF-249	-2.985E-03		4.069E-02	6.731E-02	3.680E-03	-0.044
CF-251	6.094E-03		1.266E-01	2.049E-01	1.112E-02	0.030

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232347004           *
* Acquisition date  :  6-JUL-2009 11:12:27 Detector SN#     :               *
* Detector ID       : GAM14                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.35      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232347004           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.1704E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  6-MAR-2009 11:43:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.691E+01	3.305E+00	2.995E-01	1.686E+00
CD-109	2.347E+00	7.272E-01	6.563E-01	3.710E-01
SN-126	2.311E-01	7.160E-02	6.483E-02	3.653E-02
TL-208	4.981E-01	8.049E-02	3.005E-02	4.106E-02
BI-210	1.806E+00	3.237E+00	1.786E+00	1.651E+00
PB-210	1.806E+00	3.237E+00	1.786E+00	1.651E+00
PO-210	1.806E+00	3.236E+00	1.786E+00	1.651E+00
BI-211	3.193E+00	4.847E-01	1.573E-01	2.473E-01
PB-212	1.513E+00	1.531E-01	4.430E-02	7.811E-02
PO-212	1.513E+00	1.531E-01	4.430E-02	7.811E-02
BI-214	9.676E-01	1.742E-01	5.562E-02	8.886E-02
PB-214	1.111E+00	1.779E-01	5.483E-02	9.078E-02
PO-214	1.111E+00	1.779E-01	5.483E-02	9.078E-02
PO-216	1.513E+00	1.531E-01	4.430E-02	7.811E-02
PO-218	1.111E+00	1.779E-01	5.483E-02	9.078E-02
RA-224	3.890E+00	1.370E+00	5.039E-01	6.990E-01
RA-226	9.676E-01	1.742E-01	5.562E-02	8.886E-02
AC-228	1.309E+00	3.560E-01	1.242E-01	1.816E-01
RA-228	1.309E+00	3.560E-01	1.242E-01	1.816E-01
TH-228	1.513E+00	1.531E-01	4.429E-02	7.811E-02
TH-230	9.675E-01	1.742E-01	5.561E-02	8.886E-02
TH-232	1.309E+00	3.560E-01	1.242E-01	1.816E-01
TH-234	1.529E+00	1.495E+00	9.264E-01	7.626E-01
U-234	9.675E-01	1.742E-01	5.561E-02	8.886E-02
NP-237	6.786E-01	2.511E-01	1.971E-01	1.281E-01
U-238	1.529E+00	1.495E+00	9.264E-01	7.626E-01
AM-243	3.564E-01	7.516E-02	4.068E-02	3.834E-02
ANH-511	1.317E-01	7.015E-02	2.183E-02	3.579E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	2.238E-01	3.055E-01	2.718E-01	1.558E-01	NOT IDENT.
NA-22	-3.291E-02	5.216E-02	4.105E-02	2.661E-02	NOT IDENT.
NA-24	3.013E+04	2.171E+05	0.000E+00	1.108E+05	SHORT HLIF
AL-26	1.178E-02	2.595E-02	2.402E-02	1.324E-02	NOT IDENT.
TI-44	3.250E-01	5.456E-02	3.939E-02	2.783E-02	FAIL ABUN
SC-46	-6.985E-03	3.985E-02	3.357E-02	2.033E-02	FAIL ABUN
V-48	-4.074E-03	7.235E-02	6.121E-02	3.691E-02	NOT IDENT.
CR-51	-2.908E-01	3.496E-01	2.885E-01	1.784E-01	NOT IDENT.
MN-52	-8.609E-04	1.790E-01	1.482E-01	9.130E-02	NOT IDENT.
MN-54	-2.698E-03	4.045E-02	3.457E-02	2.064E-02	NOT IDENT.
CO-56	9.275E-03	3.925E-02	3.433E-02	2.002E-02	NOT IDENT.
CO-57	8.361E-04	2.406E-02	2.054E-02	1.228E-02	NOT IDENT.
CO-58	-6.198E-03	4.097E-02	3.320E-02	2.090E-02	NOT IDENT.
FE-59	5.837E-02	9.811E-02	8.692E-02	5.005E-02	NOT IDENT.
CO-60	4.910E-02	4.544E-02	4.189E-02	2.318E-02	NOT IDENT.
ZN-65	1.283E-02	1.193E-01	8.760E-02	6.089E-02	NOT IDENT.
GE-68	-8.204E-01	1.323E+00	1.053E+00	6.750E-01	NOT IDENT.
AS-73	4.184E-01	6.192E-01	5.542E-01	3.159E-01	NOT IDENT.
AS-74	-5.141E-02	8.341E-02	6.623E-02	4.255E-02	NOT IDENT.
SE-75	2.535E-03	4.530E-02	3.616E-02	2.311E-02	NOT IDENT.
BR-77	6.334E-03	7.285E+00	6.150E+00	3.717E+00	FAIL ABUN
SR-82	-2.053E-01	4.066E-01	3.204E-01	2.075E-01	NOT IDENT.
RB-83	1.292E-03	6.682E-02	5.648E-02	3.409E-02	NOT IDENT.
RB-84	6.072E-02	6.947E-02	6.362E-02	3.544E-02	NOT IDENT.
KR-85	9.573E+00	7.498E+00	6.152E+00	3.826E+00	NOT IDENT.
SR-85	4.849E-02	3.798E-02	3.116E-02	1.938E-02	NOT IDENT.
RB-86	-6.221E-01	7.949E-01	6.210E-01	4.056E-01	NOT IDENT.
Y-88	2.292E-02	2.966E-02	2.885E-02	1.513E-02	NOT IDENT.
ZR-88	9.228E-04	3.038E-02	2.607E-02	1.550E-02	NOT IDENT.
Y-91	3.587E+00	2.117E+01	1.800E+01	1.080E+01	NOT IDENT.
NB-94	-4.874E-03	3.484E-02	2.857E-02	1.778E-02	NOT IDENT.
NB-95	4.130E-02	4.801E-02	4.201E-02	2.449E-02	NOT IDENT.
NB-95M	6.992E-01	1.695E-01	1.425E-01	8.646E-02	NOT IDENT.
ZR-95	1.157E-03	7.318E-02	6.051E-02	3.734E-02	NOT IDENT.
NB-97	-1.753E+04	3.153E+04	0.000E+00	1.609E+04	SHORT HLIF
ZR-97	1.939E+06	6.849E+05	0.000E+00	3.494E+05	SHORT HLIF
MO-99	-5.301E+00	9.265E+00	7.251E+00	4.727E+00	NOT IDENT.
TC-99M	-5.652E+13	1.543E+15	0.000E+00	7.874E+14	SHORT HLIF
RH-101	-1.125E-02	3.295E-02	2.712E-02	1.681E-02	NOT IDENT.
RH-102	1.002E-02	2.786E-02	2.422E-02	1.421E-02	NOT IDENT.
RU-103	1.494E-02	3.713E-02	3.232E-02	1.895E-02	FAIL ABUN
RH-106	7.448E-02	3.246E-01	2.760E-01	1.656E-01	FAIL ABUN
RU-106	7.448E-02	3.245E-01	2.760E-01	1.656E-01	FAIL ABUN
AG-108M	-1.190E-02	3.199E-02	2.659E-02	1.632E-02	NOT IDENT.
AG-110M	-1.619E-02	3.497E-02	2.798E-02	1.784E-02	NOT IDENT.
IN-111	-3.950E-01	8.872E-01	6.183E-01	4.527E-01	NOT IDENT.
IN-113M	2.011E-02	4.354E-02	3.830E-02	2.222E-02	NOT IDENT.
SN-113	2.011E-02	4.354E-02	3.830E-02	2.222E-02	NOT IDENT.
IN-114M	1.350E-01	1.946E-01	1.485E-01	9.929E-02	NOT IDENT.
CD-115	2.956E-01	7.911E+00	6.690E+00	4.036E+00	NOT IDENT.
SN-117M	-1.634E-02	5.323E-02	4.435E-02	2.716E-02	NOT IDENT.
SB-122	2.586E+00	1.770E+00	1.471E+00	9.029E-01	NOT IDENT.
I-123	3.045E+05	1.350E+06	0.000E+00	6.888E+05	SHORT HLIF
TE-123M	6.415E-03	2.844E-02	2.422E-02	1.451E-02	NOT IDENT.
I-124	-1.985E-01	6.341E-01	4.428E-01	3.235E-01	NOT IDENT.
SB-124	-4.382E-02	7.271E-02	5.175E-02	3.710E-02	FAIL ABUN
SB-125	-1.651E-02	8.690E-02	7.317E-02	4.433E-02	NOT IDENT.
TE-125M	-1.812E-01	9.095E+00	7.778E+00	4.640E+00	NOT IDENT.
I-126	6.820E-02	1.774E-01	1.520E-01	9.052E-02	NOT IDENT.
SB-126	-1.567E-01	1.702E-01	1.077E-01	8.685E-02	NOT IDENT.
SB-127	-3.452E-01	1.171E+00	9.486E-01	5.973E-01	NOT IDENT.
XE-127	-9.384E-03	4.813E-02	3.840E-02	2.455E-02	NOT IDENT.
I-131	6.742E-02	1.027E-01	9.154E-02	5.241E-02	NOT IDENT.
TE-132	-2.507E-01	5.747E-01	4.536E-01	2.932E-01	NOT IDENT.
BA-133	-1.598E-02	4.517E-02	3.271E-02	2.305E-02	NOT IDENT.
I-133	-1.192E+03	2.544E+03	0.000E+00	1.298E+03	SHORT HLIF
CS-134	5.203E-02	6.478E-02	4.944E-02	3.305E-02	FAIL ABUN
CS-135	2.805E-01	1.740E-01	1.446E-01	8.879E-02	NOT IDENT.
I-135	2.621E+14	3.615E+14	0.000E+00	1.844E+14	SHORT HLIF
CS-136	-8.258E-02	1.199E-01	9.555E-02	6.115E-02	FAIL ABUN
BA-137M	1.583E-02	3.610E-02	3.109E-02	1.842E-02	NOT IDENT.
CS-137	1.674E-02	3.816E-02	3.287E-02	1.947E-02	NOT IDENT.
CE-139	-1.288E-02	2.849E-02	2.351E-02	1.454E-02	NOT IDENT.
BA-140	-1.246E-01	2.577E-01	2.070E-01	1.315E-01	NOT IDENT.
LA-140	1.636E-02	7.409E-02	6.324E-02	3.780E-02	NOT IDENT.
CE-141	3.026E-02	5.897E-02	5.096E-02	3.009E-02	NOT IDENT.
CE-143	5.703E+02	1.765E+02	0.000E+00	9.007E+01	SHORT HLIF

CE-144	1.682E-02	1.931E-01	1.646E-01	9.851E-02	NOT IDENT.
PM-144	-7.524E-03	3.615E-02	2.950E-02	1.844E-02	NOT IDENT.
PR-144	-5.095E-01	2.448E+00	1.998E+00	1.249E+00	NOT IDENT.
PM-146	-3.688E-02	4.468E-02	3.584E-02	2.280E-02	NOT IDENT.
ND-147	2.301E-01	5.403E-01	4.685E-01	2.757E-01	FAIL ABUN
PM-149	-1.472E+01	6.341E+01	5.451E+01	3.235E+01	NOT IDENT.
EU-152	4.296E-02	1.521E-01	8.007E-02	7.760E-02	FAIL ABUN
GD-153	9.363E-02	8.087E-02	6.443E-02	4.126E-02	NOT IDENT.
EU-154	-9.438E-02	1.457E-01	1.143E-01	7.435E-02	NOT IDENT.
EU-155	-3.693E-02	1.043E-01	8.810E-02	5.319E-02	FAIL ABUN
TB-160	-4.173E-02	1.391E-01	1.159E-01	7.099E-02	FAIL ABUN
HO-166M	6.840E-02	6.740E-02	6.001E-02	3.439E-02	FAIL ABUN
TM-171	-1.267E+01	2.793E+01	2.092E+01	1.425E+01	NOT IDENT.
LU-176	7.509E-03	2.388E-02	2.053E-02	1.218E-02	FAIL ABUN
LU-177	2.558E+00	1.289E+00	9.043E-01	6.576E-01	FAIL ABUN
LU-177M	-6.625E-02	1.690E-01	1.408E-01	8.620E-02	FAIL ABUN
HF-181	-3.109E-02	4.098E-02	3.280E-02	2.091E-02	NOT IDENT.
W-181	1.547E-01	3.551E-01	2.766E-01	1.812E-01	NOT IDENT.
TA-182	5.481E-02	2.401E-01	2.046E-01	1.225E-01	FAIL ABUN
RE-183	-4.254E-02	1.089E-01	8.877E-02	5.558E-02	FAIL ABUN
RE-184	-9.442E-02	2.356E-01	1.906E-01	1.202E-01	NOT IDENT.
OS-185	-2.763E-02	4.131E-02	3.237E-02	2.108E-02	NOT IDENT.
RE-188	-9.920E-03	1.694E-01	1.427E-01	8.642E-02	NOT IDENT.
W-188	6.301E-01	7.934E+00	6.038E+00	4.048E+00	FAIL ABUN
IR-192	-1.992E-03	3.319E-02	2.864E-02	1.693E-02	FAIL ABUN
AU-195	4.170E-01	2.346E-01	1.915E-01	1.197E-01	FAIL ABUN
TL-200	-1.954E+02	2.200E+02	0.000E+00	1.123E+02	SHORT HLIF
TL-201	4.035E-01	5.199E+00	4.392E+00	2.652E+00	NOT IDENT.
TL-202	-8.835E-03	6.480E-02	5.471E-02	3.306E-02	NOT IDENT.
HG-203	-2.402E-02	4.010E-02	3.393E-02	2.046E-02	NOT IDENT.
BI-207	-4.495E-02	5.686E-02	4.456E-02	2.901E-02	FAIL ABUN
TL-207	-4.823E-01	6.568E-01	5.423E-01	3.351E-01	FAIL ABUN
PO-209	5.604E+00	7.963E+00	7.180E+00	4.063E+00	NOT IDENT.
PB-211	-8.350E-01	1.062E+00	7.535E-01	5.418E-01	NOT IDENT.
BI-212	8.295E-01	5.048E-01	3.507E-01	2.575E-01	FAIL ABUN
PO-215	-4.823E-01	6.568E-01	5.423E-01	3.351E-01	FAIL ABUN
RN-219	2.328E-01	4.127E-01	3.637E-01	2.106E-01	FAIL ABUN
RN-220	1.110E+01	2.562E+01	2.225E+01	1.307E+01	NOT IDENT.
RA-223	-4.823E-01	6.568E-01	5.423E-01	3.351E-01	FAIL ABUN
AC-227	-1.356E-02	3.747E-01	3.269E-01	1.912E-01	FAIL ABUN
TH-227	-1.356E-02	3.747E-01	3.269E-01	1.912E-01	FAIL ABUN
TH-229	8.438E-02	4.955E-01	4.179E-01	2.528E-01	FAIL ABUN
PA-231	8.647E-01	1.510E+00	1.345E+00	7.702E-01	FAIL ABUN
TH-231	-4.823E-01	6.568E-01	5.423E-01	3.351E-01	FAIL ABUN
U-231	-5.399E-01	9.672E-01	7.080E-01	4.935E-01	FAIL ABUN
PA-233	4.358E-02	6.260E-02	5.609E-02	3.194E-02	FAIL ABUN
PA-234	-4.067E-01	3.329E-01	2.456E-01	1.698E-01	FAIL ABUN
PA-234M	1.458E+00	7.281E+00	6.242E+00	3.715E+00	NOT IDENT.
U-235	-1.013E-01	2.164E-01	1.756E-01	1.104E-01	FAIL ABUN
NP-236	4.224E-02	7.824E-02	6.748E-02	3.992E-02	NOT IDENT.
NP-239	7.380E-02	1.832E-01	1.589E-01	9.349E-02	FAIL ABUN
AM-241	-1.319E-01	1.397E-01	1.014E-01	7.126E-02	NOT IDENT.
CM-243	2.024E-02	9.176E-02	7.934E-02	4.682E-02	FAIL ABUN
CM-247	2.186E-02	3.740E-02	3.306E-02	1.908E-02	NOT IDENT.
CF-249	-2.985E-03	3.988E-02	3.403E-02	2.035E-02	NOT IDENT.
CF-251	6.094E-03	1.241E-01	1.045E-01	6.330E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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46.50	294.7256
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52.97	359.5323
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54.07	308.5124
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56.28	411.0140
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57.53	404.3559
57.53	404.3575
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57.98	399.4802
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59.32	407.8928
59.40	407.9357
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59.72	408.1087
60.01	378.9937
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61.14	336.3545
61.30	336.4244
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63.29	449.6555
63.29	449.6555
63.58	490.6448
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65.20	476.1428
65.20	476.1428
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66.83	503.5329
66.91	503.5823
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67.20	520.8663
67.75	510.3279
67.85	527.5088
68.90	509.4885
68.90	509.4885
69.30	491.0301
69.67	503.7284
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74.81	451.1016
74.81	451.1016
74.97	451.1859
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77.11	452.2966

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77.11	452.2966
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79.80	424.4778
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81.07	573.6193
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83.78	503.2115
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89.95	491.5651
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94.90	376.8104
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100.10	331.5598
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103.76	318.4355
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105.31	346.2401
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111.00	348.0822

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117.00	295.7382
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172.10	247.9213
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176.60	264.7780
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227.20	243.5606
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238.63	210.6337
238.63	210.6337
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241.98	211.0360
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295.21	197.5575
295.96	197.6310

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323.87	179.8184
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391.69	120.9551
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445.03	94.1285
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609.31	82.9609
609.31	82.9609

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618.01	71.6286
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621.84	78.0743
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696.49	86.1752
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722.78	92.8768
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742.81	71.1127
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752.31	62.6530
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755.35	73.5134
756.15	70.2860
756.87	82.1954
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766.41	79.1505
766.84	92.1719
768.36	92.2072
768.36	92.2072
768.36	92.2072
768.36	92.2072
776.49	82.6203
778.00	69.6016
778.57	61.9986
778.89	62.0028
783.80	72.9737

785.46	50.1227
792.07	81.8610
795.84	56.4473
796.30	61.9169
801.93	68.0859
805.60	71.1906
810.29	66.8900
810.76	65.8008
815.85	54.9036
817.79	57.1276
818.51	56.0390
819.60	62.6499
826.30	64.2222
828.27	0.0000
831.60	82.6794
831.96	82.6868
834.83	81.8260
836.80	0.0000
846.75	59.0143
848.13	66.4131
856.28	0.0000
856.80	87.8139
860.37	62.9102
867.32	77.8442
867.82	72.2919
871.10	59.3633
873.19	60.3212
874.81	52.9168
875.33	0.0000
876.40	72.4410
879.36	60.4099
880.27	48.3385
880.51	47.4109
881.50	48.3522
883.24	59.5352
884.67	61.4171
889.25	60.5513
896.60	55.9912
898.02	59.7435
899.00	70.9609
903.28	78.5090
911.07	72.0982
911.07	72.0982
911.07	72.0982
919.63	57.5424
920.93	61.4276
925.00	50.7250
925.24	52.6071
926.50	46.9838
934.06	69.6565
934.06	69.6565
934.06	69.6565
934.06	69.6565
935.52	64.9711
937.48	71.5948
944.10	75.4761
946.00	76.4517
949.00	49.1139
962.29	73.0795
964.01	50.2266
966.15	50.2514
968.20	50.2741
969.11	50.2838
969.11	50.2838
969.11	50.2838
977.42	37.6398
980.50	58.9714
983.50	59.9623
989.30	63.8498
996.32	63.9480
1001.03	58.2809
1001.68	59.2451
1004.76	67.8900
1021.30	0.0000
1024.50	0.0000
1034.80	46.1934
1037.82	60.6672
1038.57	60.6775

1038.76	0.0000
1045.16	49.1884
1046.59	65.6038
1048.07	78.1721
1050.47	72.4182
1050.47	72.4182
1063.62	67.7755
1076.63	63.1036
1077.35	63.1116
1085.78	73.9219
1099.22	54.6169
1112.02	86.0485
1112.84	95.0603
1115.52	73.8080
1120.29	94.0273
1120.29	94.0273
1120.29	94.0273
1120.29	94.0273
1120.51	94.0313
1121.28	88.1689
1124.00	0.0000
1129.67	70.6523
1131.51	0.0000
1147.95	0.0000
1167.94	75.1403
1173.22	61.3617
1175.09	62.3745
1177.93	71.3232
1189.05	78.4278
1204.90	72.6881
1205.75	0.0000
1213.00	58.8391
1221.42	86.9009
1230.97	105.0684
1235.34	95.1392
1236.41	0.0000
1238.11	76.1515
1238.11	76.1515
1238.11	76.1515
1238.11	76.1515
1238.25	78.1555
1246.25	69.2415
1260.41	0.0000
1271.85	55.4521
1274.45	68.5921
1274.54	68.5921
1291.56	55.6512
1298.22	0.0000
1312.09	47.7325
1325.50	44.7913
1325.50	44.7913
1332.49	33.6351
1333.61	32.6224
1360.21	30.7263
1362.66	0.0000
1365.15	27.6779
1368.21	27.6921
1368.53	0.0000
1376.25	31.8388
1377.67	34.9283
1377.67	34.9283
1377.67	34.9283
1377.67	34.9283
1384.27	26.7406
1394.10	22.6642
1395.20	27.8207
1407.95	17.5548
1434.06	18.6694
1436.60	25.9399
1457.56	0.0000
1460.81	27.0865
1489.15	9.4197
1509.49	13.6512
1596.49	15.9686
1620.62	7.4797
1678.03	0.0000
1691.02	16.1981
1691.02	16.1981

1706.46	0.0000
1750.46	0.0000
1764.49	9.8232
1764.49	9.8232
1764.49	9.8232
1764.49	9.8232
1770.23	51.4973
1771.40	34.6488
1791.20	0.0000
1808.65	7.5313
1836.01	6.6150

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232347004

Total Uranium Activity	4.5006E+00	ug/g
Total Uranium Counting Unc.	4.4479E+00	ug/g
Total Uranium Tpu	2.2693E-06	ug/g
Total Uranium Mda	2.7572E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232347004       *
*   ANALYST       : MXR1                      DETECTOR   : GAM14            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:12:27.16    SAMPLE ALQT:  117.040 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.114E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.425E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.803E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.360E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:26:52.49

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:25:36.
Sample ID         : G1201870087          Sample quantity  : 1.45000E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.74  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	185.67*	10	132	1.22	370.37	364	12	1.39E-03	258.2	
2	0	353.37*	19	87	1.68	705.66	698	13	2.65E-03	112.1	
3	0	912.73*	23	31	3.43	1824.11	1812	21	3.14E-03	71.0	
4	0	1463.28	12	21	1.16	2925.04	2913	14	1.67E-03	86.0	
5	0	1765.60	15	5	1.02	3529.65	3524	10	2.10E-03	37.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 15:26:55

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:25:36
Sample ID : G1201870087 Sample quantity : 145.00 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.74 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	5.849E-03	1.175E-01	1.947E-01	1.411E-02	0.030
NA-22		1274.54	*	4.793E-03	1.406E-02	2.444E-02	1.663E-03	0.196
NA-24		1368.53	*	1.158E-05	1.406E-02	Half-Life too short		
AL-26		1129.67		-2.289E-01	6.162E-01	9.688E-01	6.469E-02	-0.236
		1808.65	*	7.324E-03	1.548E-02	2.770E-02	1.617E-03	0.264
K-40		1460.81	*	4.765E-02	1.996E-01	3.567E-01	2.707E-02	0.134
TI-44		67.85		1.245E-03	2.167E-02	3.614E-02	2.906E-03	0.034
		78.38	*	-9.543E-03	1.567E-02	2.431E-02	2.079E-03	-0.393
SC-46		889.25	*	1.634E-02	1.596E-02	2.908E-02	3.243E-03	0.562
		1120.51		1.695E-02	1.879E-02	3.440E-02	2.377E-03	0.493
V-48		944.10		-7.753E-03	2.748E-01	4.450E-01	4.710E-02	-0.017
		983.50	*	-1.186E-02	2.093E-02	3.101E-02	3.067E-03	-0.383
		1312.09		-5.485E-03	2.552E-02	4.048E-02	2.949E-03	-0.136
CR-51		320.08	*	3.410E-02	1.206E-01	1.996E-01	1.285E-02	0.171
MN-52		744.21		1.422E-02	3.777E-02	6.535E-02	5.763E-03	0.218
		848.13		-9.007E-01	1.214E+00	1.812E+00	1.896E-01	-0.497
		935.52		3.763E-02	4.074E-02	7.364E-02	7.898E-03	0.511
		1246.25		1.126E-01	9.937E-01	1.662E+00	1.069E-01	0.068
		1333.61		-2.617E-01	6.976E-01	1.056E+00	7.976E-02	-0.248
		1434.06	*	2.970E-02	4.073E-02	7.415E-02	5.464E-03	0.401
MN-54		834.83	*	-1.559E-04	1.595E-02	2.619E-02	2.683E-03	-0.006
CO-56		846.75	*	-9.019E-03	1.691E-02	2.602E-02	2.716E-03	-0.347
		977.42		-5.071E-02	1.070E+00	1.722E+00	1.722E-01	-0.029
		1037.82		-5.117E-02	1.070E-01	1.668E-01	1.545E-02	-0.307
		1175.09		7.870E-03	7.812E-01	1.294E+00	7.183E-02	0.006
		1238.25		-4.571E-03	2.409E-02	3.846E-02	2.563E-03	-0.119
		1360.21		-4.343E-01	3.588E-01	4.310E-01	3.239E-02	-1.008
		1771.40		-7.089E-02	1.209E-01	1.344E-01	8.122E-03	-0.527
CO-57		122.06	*	3.359E-03	9.650E-03	1.594E-02	9.440E-04	0.211
		136.48		-1.000E-02	8.721E-02	1.376E-01	9.008E-03	-0.073
CO-58		810.76	*	2.264E-03	1.550E-02	2.597E-02	2.564E-03	0.087
FE-59		142.65		-8.678E-01	1.160E+00	1.687E+00	9.279E-02	-0.515
		192.34		-1.595E-01	2.889E-01	4.604E-01	5.340E-02	-0.346
		1099.22	*	-2.510E-02	3.288E-02	4.910E-02	4.042E-03	-0.511

Sample ID : G1201870087 Acquisition date : 6-JUL-2009 13:25:36

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1291.56		-4.716E-02	4.536E-02	6.187E-02	5.199E-03	-0.762
CO-60		1173.22		-9.742E-03	1.774E-02	2.722E-02	1.504E-03	-0.358
		1332.49	*	-5.181E-03	1.381E-02	2.090E-02	1.579E-03	-0.248
ZN-65		1115.52	*	7.632E-03	3.377E-02	5.773E-02	4.066E-03	0.132
GE-68		1077.35	*	-3.328E-01	5.075E-01	7.143E-01	5.675E-02	-0.466
AS-73		53.44	*	-5.026E-01	5.357E-01	7.856E-01	6.228E-02	-0.640
AS-74		595.88	*	2.658E-04	3.333E-02	5.397E-02	3.878E-03	0.005
		634.78		-4.546E-02	1.233E-01	1.902E-01	1.416E-02	-0.239
SE-75		66.05		-2.332E+00	2.504E+00	3.768E+00	3.731E-01	-0.619
		96.73		1.082E-01	2.971E-01	4.966E-01	6.549E-02	0.218
		121.11		1.538E-02	5.119E-02	8.422E-02	7.862E-03	0.183
		136.00		-1.204E-03	1.594E-02	2.524E-02	1.437E-03	-0.048
		198.60		4.340E-01	7.905E-01	1.337E+00	9.073E-02	0.325
		264.65	*	1.434E-03	1.682E-02	2.770E-02	1.584E-03	0.052
		279.53		3.911E-02	4.105E-02	7.206E-02	4.452E-03	0.543
		303.91		-3.048E-02	8.168E-01	1.317E+00	1.252E-01	-0.023
		400.65		-4.454E-02	9.610E-02	1.537E-01	1.400E-02	-0.290
BR-77		87.88		1.001E+00	7.421E+00	1.227E+01	1.134E+00	0.082
		200.40		2.991E+00	7.567E+00	1.295E+01	6.973E-01	0.231
		239.00		2.247E-01	4.796E-01	8.061E-01	4.484E-02	0.279
		249.79		-2.301E-01	3.130E+00	5.110E+00	2.864E-01	-0.045
		281.68		-1.637E+00	4.094E+00	6.429E+00	3.669E-01	-0.255
		297.23		2.187E+00	2.408E+00	4.182E+00	2.401E-01	0.523
		303.76		-2.706E+00	8.135E+00	1.276E+01	7.340E-01	-0.212
		439.47		2.875E+00	6.683E+00	1.152E+01	7.025E-01	0.249
		484.57		-6.580E+00	1.002E+01	1.530E+01	9.823E-01	-0.430
		520.65	*	-1.810E-01	4.970E-01	7.827E-01	5.222E-02	-0.231
		574.64		4.712E+00	9.831E+00	1.675E+01	1.180E+00	0.281
		578.91		-4.789E+00	4.114E+00	5.784E+00	4.090E-01	-0.828
		585.48		1.796E+00	8.224E+00	1.361E+01	9.684E-01	0.132
		755.35		-3.588E+00	7.131E+00	1.109E+01	9.963E-01	-0.324
		817.79		2.434E-01	5.426E+00	8.992E+00	8.962E-01	0.027
SR-82		698.33		7.431E+00	1.332E+01	2.206E+01	1.796E+00	0.337
		776.49	*	-2.623E-02	1.281E-01	2.069E-01	1.927E-02	-0.127
		1395.20		-1.989E+00	4.079E+00	6.083E+00	4.533E-01	-0.327
RB-83		520.41	*	-6.830E-03	2.835E-02	4.527E-02	3.020E-03	-0.151
		529.64		6.479E-03	3.998E-02	6.653E-02	4.480E-03	0.097
		552.65		3.005E-02	7.215E-02	1.231E-01	8.485E-03	0.244
RB-84		881.50	*	-1.078E-03	2.971E-02	4.173E-02	4.600E-03	-0.026
KR-85		513.99	*	-4.327E+00	5.120E+00	7.980E+00	5.287E-01	-0.542
SR-85		513.99	*	-2.049E-02	2.425E-02	3.779E-02	2.504E-03	-0.542
RB-86		1076.63	*	-1.104E-01	2.502E-01	3.663E-01	2.916E-02	-0.301
Y-88		898.02		6.938E-03	1.473E-02	2.560E-02	2.902E-03	0.271
		1836.01	*	-1.689E-03	1.963E-02	3.168E-02	1.805E-03	-0.053
ZR-88		392.90	*	6.353E-03	1.105E-02	1.947E-02	1.120E-03	0.326
Y-91		1204.90	*	3.738E+00	5.820E+00	1.046E+01	6.184E-01	0.357
NB-94		702.63	*	3.242E-03	1.448E-02	2.469E-02	2.026E-03	0.131
		871.10		8.961E-03	1.685E-02	2.909E-02	3.154E-03	0.308
NB-95		765.79	*	-8.236E-03	1.400E-02	2.142E-02	1.960E-03	-0.384

Sample ID : G1201870087 Acquisition date : 6-JUL-2009 13:25:36

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M		235.69	*	-7.354E-02	4.598E-02	6.612E-02	4.851E-03	-1.112
ZR-95		724.18		-2.867E-02	3.317E-02	4.949E-02	4.589E-03	-0.579
		756.15	*	-5.545E-03	2.601E-02	4.205E-02	4.137E-03	-0.132
NB-97		657.90	*	-1.029E-06	2.601E-02	Half-Life too short		
		1024.50		2.976E-03	2.601E-02	Half-Life too short		
ZR-97		254.15		-5.904E-04	2.601E-02	Half-Life too short		
		355.39		1.552E-04	2.601E-02	Half-Life too short		
		507.63	*	-2.713E-03	2.601E-02	Half-Life too short		
		602.52		-1.600E-03	2.601E-02	Half-Life too short		
		1021.30		-4.666E-04	2.601E-02	Half-Life too short		
		1147.95		4.666E-04	2.601E-02	Half-Life too short		
		1362.66		2.980E-04	2.601E-02	Half-Life too short		
		1750.46		7.791E-04	2.601E-02	Half-Life too short		
MO-99		140.51		3.485E-01	1.894E+00	2.946E+00	7.922E-01	0.118
		181.06		-2.284E-01	1.127E+00	1.635E+00	2.776E-01	-0.140
		366.43		-3.660E-01	5.264E+00	8.816E+00	5.092E-01	-0.042
		739.58	*	2.998E-01	6.557E-01	1.146E+00	1.749E-01	0.262
		778.00		1.318E+00	2.131E+00	3.758E+00	3.508E-01	0.351
TC-99M		140.51	*	2.895E+00	2.131E+00	Half-Life too short		
RH-101		127.23		-2.542E-03	1.179E-02	1.850E-02	1.069E-03	-0.137
		198.01	*	7.049E-03	1.493E-02	2.515E-02	1.352E-03	0.280
		325.23		-4.264E-03	8.828E-02	1.413E-01	8.167E-03	-0.030
RH-102		418.52		-1.121E-02	1.204E-01	1.991E-01	1.183E-02	-0.056
		475.06	*	-7.315E-03	1.232E-02	1.911E-02	1.214E-03	-0.383
		631.29		1.091E-02	2.495E-02	4.201E-02	3.118E-03	0.260
		697.49		1.782E-02	3.723E-02	6.129E-02	4.983E-03	0.291
		766.84		-5.395E-03	3.729E-02	6.065E-02	5.557E-03	-0.089
		1046.59		-1.905E-02	4.522E-02	7.140E-02	6.161E-03	-0.267
		1112.84		-8.093E-02	8.681E-02	1.256E-01	8.916E-03	-0.644
RU-103		497.08	*	1.062E-02	1.567E-02	2.730E-02	3.544E-03	0.389
		610.33		-1.263E-01	4.105E-01	6.261E-01	1.004E-01	-0.202
RH-106		511.85		-1.314E-01	1.286E-01	2.304E-01	1.523E-02	-0.570
		621.84	*	-4.287E-03	1.366E-01	2.193E-01	2.759E-02	-0.020
		1050.47		4.398E-01	9.364E-01	1.652E+00	1.412E-01	0.266
RU-106		511.85		-1.314E-01	1.286E-01	2.304E-01	1.523E-02	-0.570
		621.84	*	-4.287E-03	1.366E-01	2.193E-01	1.614E-02	-0.020
		1050.47		4.398E-01	9.364E-01	1.652E+00	1.412E-01	0.266
AG-108M		433.93	*	-5.067E-03	1.391E-02	2.234E-02	1.460E-03	-0.227
		614.37		-3.525E-03	2.101E-02	3.341E-02	2.574E-03	-0.106
		722.95		-2.560E-03	1.650E-02	2.701E-02	2.389E-03	-0.095
CD-109		88.03	*	3.169E-02	3.065E-01	5.056E-01	4.674E-02	0.063
AG-110M		657.75	*	-3.820E-04	1.380E-02	2.310E-02	1.822E-03	-0.017
		677.61		1.700E-02	1.194E-01	2.030E-01	1.647E-02	0.084
		706.67		-5.221E-02	8.614E-02	1.344E-01	1.143E-02	-0.389
		763.93		-1.027E-02	5.914E-02	9.590E-02	8.966E-03	-0.107
		884.67		-2.819E-02	2.114E-02	2.781E-02	3.141E-03	-1.014
		937.48		2.966E-02	4.711E-02	8.231E-02	9.010E-03	0.360
		1384.27		-7.019E-03	6.906E-02	1.106E-01	8.572E-03	-0.063
IN-111		171.28		1.772E-02	6.299E-02	1.082E-01	5.691E-03	0.164

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		245.39	*	-2.479E-02	7.775E-02	1.111E-01	6.211E-03	-0.223
IN-113M		391.69	*	1.257E-02	1.614E-02	2.892E-02	1.774E-03	0.435
SN-113		391.69	*	1.257E-02	1.614E-02	2.892E-02	1.774E-03	0.435
IN-114M		190.27	*	4.414E-02	5.960E-02	9.526E-02	5.086E-03	0.463
CD-115		260.90		-1.247E+00	5.133E+00	8.231E+00	4.646E-01	-0.152
		492.35		5.163E-01	1.502E+00	2.552E+00	1.652E-01	0.202
		527.90	*	-2.113E-01	4.307E-01	6.661E-01	4.477E-02	-0.317
SN-117M		156.02		-3.436E-01	5.787E-01	9.406E-01	5.024E-02	-0.365
		158.56	*	7.000E-03	1.488E-02	2.435E-02	1.294E-03	0.287
SB-122		563.90	*	2.531E-03	1.172E-01	1.911E-01	1.332E-02	0.013
		692.80		-1.931E+00	2.668E+00	4.117E+00	3.319E-01	-0.469
I-123		159.00	*	-1.512E-05	2.668E+00	Half-Life too short		
		528.96		5.673E-04	2.668E+00	Half-Life too short		
TE-123M		159.00	*	-1.030E-03	1.113E-02	1.756E-02	9.474E-04	-0.059
I-124		602.71	*	-8.954E-02	9.298E-02	1.358E-01	9.822E-03	-0.659
		722.78		-4.773E-02	4.956E-01	8.166E-01	6.940E-02	-0.058
		1325.50		-1.283E-01	4.096E+00	6.666E+00	4.974E-01	-0.019
		1376.25		-8.131E-01	3.274E+00	5.090E+00	3.812E-01	-0.160
		1509.49		5.573E-02	2.055E+00	3.446E+00	2.469E-01	0.016
		1691.02		3.726E-01	4.768E-01	9.095E-01	5.866E-02	0.410
SB-124		602.71		-1.670E-02	1.735E-02	2.534E-02	1.833E-03	-0.659
		645.85		8.261E-02	2.077E-01	3.481E-01	2.822E-02	0.237
		709.31		-3.443E-01	1.048E+00	1.686E+00	1.400E-01	-0.204
		713.82		8.928E-02	6.548E-01	1.106E+00	1.312E-01	0.081
		722.78		-1.291E-02	1.340E-01	2.208E-01	1.919E-02	-0.058
		968.20		-9.412E-01	1.116E+00	1.539E+00	1.565E-01	-0.612
		1045.16		-5.969E-02	8.940E-01	1.483E+00	1.284E-01	-0.040
		1325.50		-3.707E-02	1.183E+00	1.925E+00	1.437E-01	-0.019
		1368.21		2.410E-01	5.937E-01	1.042E+00	1.332E-01	0.231
		1436.60		1.158E-01	1.541E+00	2.534E+00	1.866E-01	0.046
		1691.02	*	2.377E-02	3.042E-02	5.802E-02	4.003E-03	0.410
SB-125		427.89	*	-3.940E-02	3.698E-02	5.486E-02	3.428E-03	-0.718
		463.38		-1.126E-01	1.145E-01	1.704E-01	1.222E-02	-0.661
		600.56		6.395E-02	8.724E-02	1.501E-01	1.196E-02	0.426
		635.90		-9.405E-02	1.308E-01	1.936E-01	1.597E-02	-0.486
TE-125M		109.28	*	-1.166E-01	3.498E+00	5.639E+00	4.948E-01	-0.021
I-126		388.63		-5.564E-02	5.425E-02	8.212E-02	4.720E-03	-0.678
		666.33	*	-3.616E-03	4.806E-02	7.996E-02	6.147E-03	-0.045
		753.82		-1.066E-01	3.808E-01	6.102E-01	5.470E-02	-0.175
SB-126		223.80		-4.617E-01	1.108E+00	1.778E+00	9.770E-02	-0.260
		278.60		4.958E-01	6.387E-01	1.106E+00	6.305E-02	0.448
		296.50		-1.580E-01	4.278E-01	6.410E-01	3.679E-02	-0.247
		414.70		-1.871E-03	2.019E-02	3.339E-02	1.975E-03	-0.056
		415.30		4.625E-03	1.699E+00	2.835E+00	1.678E-01	0.002
		555.20		-1.128E-01	1.034E+00	1.661E+00	1.148E-01	-0.068
		573.80		1.217E-01	2.952E-01	4.996E-01	3.515E-02	0.244
		593.00		-4.436E-01	3.056E-01	4.183E-01	2.997E-02	-1.061
		656.30		9.526E-02	8.924E-01	1.515E+00	1.149E-01	0.063
		666.33		-1.485E-03	1.974E-02	3.284E-02	2.525E-03	-0.045

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		-1.896E-01	5.278E-01	8.493E-01	6.632E-02	-0.223
		695.00		2.976E-03	2.200E-02	3.724E-02	3.014E-03	0.080
		697.00		3.113E-02	8.427E-02	1.372E-01	1.115E-02	0.227
		720.50	*	7.886E-04	3.913E-02	6.531E-02	5.528E-03	0.012
		856.80		-5.382E-02	1.464E-01	2.303E-01	2.443E-02	-0.234
		989.30		3.798E-01	3.330E-01	6.179E-01	6.045E-02	0.615
		1034.80		1.356E-01	2.203E+00	3.583E+00	3.181E-01	0.038
		1213.00		4.541E-01	9.971E-01	1.753E+00	1.054E-01	0.259
SN-126		64.28		-2.722E-02	2.681E-01	4.290E-01	6.342E-02	-0.063
		86.94		-7.483E-02	1.375E-01	2.109E-01	8.748E-02	-0.355
		87.57	*	-1.707E-02	3.218E-02	5.072E-02	4.673E-03	-0.337
SB-127		61.10		-9.811E+00	7.510E+00	1.133E+01	9.626E-01	-0.866
		252.40		-6.260E-02	4.696E-01	7.613E-01	3.126E-01	-0.082
		290.80		-1.338E-01	2.340E+00	3.779E+00	2.548E-01	-0.035
		411.60		1.641E-01	1.236E+00	2.089E+00	2.724E-01	0.079
		444.90		-2.704E-01	9.891E-01	1.595E+00	1.451E-01	-0.170
		473.00		7.859E-02	1.765E-01	3.038E-01	2.942E-02	0.259
		543.00		-5.903E-01	1.770E+00	2.778E+00	3.309E-01	-0.213
		603.60		-1.932E+00	1.462E+00	2.035E+00	2.003E-01	-0.950
		685.20	*	1.158E-02	1.481E-01	2.497E-01	2.246E-02	0.046
		698.50		1.364E+00	1.748E+00	3.108E+00	4.446E-01	0.439
		722.20		8.369E-01	3.042E+00	5.212E+00	4.797E-01	0.161
		783.80		-7.033E-02	3.427E-01	5.516E-01	6.316E-02	-0.127
XE-127		57.60		6.358E-01	2.899E+00	4.929E+00	3.799E-01	0.129
		145.22		-1.112E-02	2.787E-01	4.268E-01	2.333E-02	-0.026
		172.10		1.521E-02	4.129E-02	7.129E-02	3.753E-03	0.213
		202.84	*	-1.718E-02	1.664E-02	2.567E-02	1.386E-03	-0.669
		374.96		4.929E-02	6.799E-02	1.213E-01	6.996E-03	0.406
I-131		80.18		-9.429E-01	1.026E+00	1.579E+00	1.370E-01	-0.597
		284.30		6.389E-02	3.177E-01	5.255E-01	3.318E-02	0.122
		364.48	*	-2.756E-02	2.495E-02	3.787E-02	2.424E-03	-0.728
		636.97		-7.507E-02	3.693E-01	5.805E-01	4.625E-02	-0.129
		722.89		-1.950E-01	1.452E+00	2.383E+00	2.029E-01	-0.082
TE-132		49.72		5.768E-02	2.690E+00	4.547E+00	3.845E-01	0.013
		111.76		-3.323E-02	2.393E+00	3.857E+00	2.821E-01	-0.009
		116.30		-1.265E+00	2.273E+00	3.490E+00	2.462E-01	-0.363
		228.16	*	3.152E-02	5.503E-02	9.459E-02	1.235E-02	0.333
BA-133		53.15		-2.274E+00	2.487E+00	3.656E+00	2.901E-01	-0.622
		79.62		-5.490E-01	5.493E-01	8.317E-01	1.267E-01	-0.660
		81.00		-1.030E-02	4.073E-02	6.582E-02	1.048E-02	-0.156
		276.40		-5.617E-02	1.443E-01	2.268E-01	2.929E-02	-0.248
		302.84		-1.425E-02	5.824E-02	9.210E-02	1.071E-02	-0.155
		356.01	*	-8.799E-03	2.170E-02	2.849E-02	3.291E-03	-0.309
		383.85		8.930E-02	1.157E-01	2.068E-01	2.243E-02	0.432
I-133		510.53		-5.960E-04	1.157E-01	Half-Life too short		
		529.87	*	1.945E-06	1.157E-01	Half-Life too short		
		706.58		-2.458E-04	1.157E-01	Half-Life too short		
		856.28		-3.233E-04	1.157E-01	Half-Life too short		
		875.33		-6.268E-05	1.157E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		1236.41		7.128E-05	1.157E-01	Half-Life too short		
		1298.22		3.614E-05	1.157E-01	Half-Life too short		
CS-134		475.35		-2.491E-01	7.877E-01	1.258E+00	7.994E-02	-0.198
		563.23		-3.036E-03	1.441E-01	2.337E-01	1.651E-02	-0.013
		569.32		-4.406E-02	9.345E-02	1.411E-01	1.009E-02	-0.312
		604.70		-2.754E-02	1.724E-02	2.348E-02	1.707E-03	-1.173
		795.84	*	3.434E-04	1.647E-02	2.726E-02	2.636E-03	0.013
		801.93		7.199E-02	1.938E-01	3.288E-01	3.208E-02	0.219
		1038.57		-3.995E-01	1.400E+00	2.248E+00	1.978E-01	-0.178
		1167.94		4.595E-01	9.372E-01	1.649E+00	9.353E-02	0.279
		1365.15		3.363E-01	4.283E-01	8.033E-01	6.390E-02	0.419
CS-135		268.24	*	-2.412E-02	6.014E-02	9.469E-02	7.158E-03	-0.255
I-135		288.45		-3.085E+01	6.014E-02	Half-Life too short		
		417.63		2.533E+01	6.014E-02	Half-Life too short		
		546.56		-3.047E+00	6.014E-02	Half-Life too short		
		836.80		2.025E+01	6.014E-02	Half-Life too short		
		1038.76		-1.153E+01	6.014E-02	Half-Life too short		
		1124.00		-3.000E+01	6.014E-02	Half-Life too short		
		1131.51		1.090E-02	6.014E-02	Half-Life too short		
		1260.41	*	-1.341E+00	6.014E-02	Half-Life too short		
		1457.56		2.214E+00	6.014E-02	Half-Life too short		
		1678.03		-9.541E+00	6.014E-02	Half-Life too short		
		1706.46		5.545E+00	6.014E-02	Half-Life too short		
		1791.20		-2.458E+01	6.014E-02	Half-Life too short		
CS-136		66.91		-1.773E-01	2.729E-01	4.167E-01	6.291E-02	-0.426
		86.29		-2.012E-01	2.900E-01	4.506E-01	5.938E-02	-0.447
		153.22		7.114E-03	1.677E-01	2.855E-01	1.963E-02	0.025
		163.89		6.118E-02	3.005E-01	4.864E-01	3.319E-02	0.126
		176.55		-3.306E-02	9.759E-02	1.603E-01	9.703E-03	-0.206
		273.65		-7.379E-03	1.176E-01	1.907E-01	1.241E-02	-0.039
		340.57		4.550E-03	3.667E-02	5.939E-02	3.649E-03	0.077
		818.51		-3.558E-03	1.954E-02	3.140E-02	3.134E-03	-0.113
		1048.07	*	5.109E-03	2.960E-02	5.055E-02	4.528E-03	0.101
		1235.34		4.347E-03	1.033E-01	1.714E-01	1.761E-02	0.025
BA-137M		661.65	*	1.064E-03	1.395E-02	2.359E-02	1.798E-03	0.045
CS-137		661.65	*	1.124E-03	1.475E-02	2.494E-02	1.906E-03	0.045
CE-139		165.85	*	-8.876E-03	1.113E-02	1.775E-02	9.319E-04	-0.500
BA-140		162.64		7.511E-02	2.056E-01	3.361E-01	2.037E-02	0.224
		304.84		9.827E-02	3.546E-01	5.857E-01	1.598E-01	0.168
		423.70		4.436E-01	5.236E-01	9.069E-01	2.885E-01	0.489
		537.32	*	4.370E-02	7.132E-02	1.217E-01	3.982E-02	0.359
LA-140		328.77		2.866E-02	8.178E-02	1.355E-01	8.777E-03	0.212
		432.53		1.270E-01	5.532E-01	9.397E-01	6.229E-02	0.135
		487.03		-4.992E-03	3.593E-02	5.828E-02	4.157E-03	-0.086
		751.79		-1.693E-02	4.424E-01	7.308E-01	7.181E-02	-0.023
		815.85		-3.291E-02	8.412E-02	1.313E-01	1.419E-02	-0.251
		867.82		-3.121E-01	4.646E-01	7.032E-01	7.847E-02	-0.444
		919.63		3.099E-01	7.976E-01	1.203E+00	1.519E-01	0.258
		925.24		-5.248E-02	2.911E-01	4.615E-01	5.226E-02	-0.114

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		1596.49	*	-5.106E-03	2.500E-02	4.000E-02	2.744E-03	-0.128
CE-141		145.44	*	1.119E-02	2.337E-02	3.835E-02	2.189E-03	0.292
CE-143		57.37		5.440E+00	1.295E+01	2.230E+01	2.009E+00	0.244
		231.56		-4.191E+00	2.145E+01	3.479E+01	1.074E+01	-0.120
		293.26	*	3.604E-01	1.226E+00	2.032E+00	4.150E-01	0.177
		350.59		2.245E+01	2.000E+01	2.978E+01	9.032E+00	0.754
		490.36		-1.580E+01	2.709E+01	4.115E+01	1.277E+01	-0.384
		664.57		-1.072E+01	1.180E+01	1.694E+01	5.430E+00	-0.633
		721.93		5.583E+00	1.217E+01	2.107E+01	6.134E+00	0.265
CE-144		80.11		-8.383E-01	8.888E-01	1.365E+00	1.182E-01	-0.614
		133.54	*	-1.194E-02	8.547E-02	1.348E-01	1.906E-02	-0.089
PM-144		476.78		-1.218E-02	2.787E-02	4.394E-02	3.259E-03	-0.277
		618.01		-1.057E-02	1.603E-02	2.315E-02	1.762E-03	-0.456
		696.49	*	2.451E-03	1.607E-02	2.561E-02	2.079E-03	0.096
		778.57		6.457E-01	9.321E-01	1.657E+00	1.549E-01	0.390
PR-144		696.49	*	1.655E-01	1.085E+00	1.729E+00	1.403E-01	0.096
		1489.15		4.925E-01	5.845E+00	9.587E+00	6.927E-01	0.051
PM-146		453.90	*	1.586E-03	1.822E-02	3.043E-02	2.707E-03	0.052
		633.02		-7.905E-02	6.504E-01	1.032E+00	3.830E-01	-0.077
		735.90		-1.588E-02	5.148E-02	8.167E-02	2.338E-02	-0.194
		747.13		8.803E-03	3.733E-02	6.357E-02	9.020E-03	0.138
ND-147		91.11		4.691E-03	7.207E-02	1.183E-01	1.112E-02	0.040
		319.41		3.865E-01	7.829E-01	1.323E+00	7.638E-02	0.292
		439.89		5.699E-01	1.509E+00	2.591E+00	1.581E-01	0.220
		531.02	*	4.044E-02	1.378E-01	2.324E-01	3.242E-02	0.174
PM-149		285.90	*	7.595E-01	3.481E+00	5.763E+00	8.138E-01	0.132
EU-152		121.78		5.025E-03	2.894E-02	4.712E-02	3.631E-03	0.107
		244.69		-1.174E-01	1.573E-01	2.187E-01	1.222E-02	-0.537
		344.27	*	-2.461E-02	4.304E-02	6.516E-02	4.252E-03	-0.378
		443.98		-2.004E-01	3.821E-01	6.000E-01	3.677E-02	-0.334
		778.89		2.358E-02	1.100E-01	1.864E-01	1.742E-02	0.127
		867.32		-1.556E-01	4.105E-01	6.442E-01	6.945E-02	-0.242
		964.01		5.673E-02	1.147E-01	1.970E-01	2.018E-02	0.288
		1085.78		3.497E-02	1.600E-01	2.741E-01	2.124E-02	0.128
		1112.02		-1.213E-01	1.205E-01	1.713E-01	1.220E-02	-0.708
		1407.95		3.353E-02	8.513E-02	1.467E-01	1.090E-02	0.228
GD-153		69.67		-1.143E+00	8.282E-01	1.199E+00	9.729E-02	-0.954
		83.37		2.714E+00	6.550E+00	1.050E+01	9.327E-01	0.259
		97.43	*	-7.752E-03	3.168E-02	5.059E-02	3.955E-03	-0.153
		103.18		1.653E-02	4.218E-02	7.045E-02	5.081E-03	0.235
EU-154		123.07		-9.019E-03	2.088E-02	3.224E-02	3.049E-03	-0.280
		247.94		4.551E-02	1.505E-01	2.529E-01	2.382E-02	0.180
		591.81		-2.030E-01	2.931E-01	4.391E-01	4.671E-02	-0.462
		723.30		-1.825E-02	6.721E-02	1.084E-01	1.022E-02	-0.168
		756.87		-8.322E-03	3.008E-01	4.972E-01	6.096E-02	-0.017
		873.19		5.821E-02	1.414E-01	2.417E-01	3.366E-02	0.241
		996.32		-2.293E-01	1.704E-01	2.152E-01	3.935E-02	-1.066
		1004.76		-4.639E-02	1.018E-01	1.549E-01	1.905E-02	-0.299
		1274.45	*	1.756E-02	3.894E-02	6.887E-02	6.879E-03	0.255

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		48.70		-1.173E+00	1.741E+00	2.808E+00	2.130E-01	-0.418
		60.01		-3.436E-01	2.524E+00	4.181E+00	3.191E-01	-0.082
		86.54		-2.616E-02	3.959E-02	6.181E-02	5.693E-03	-0.423
		105.31	*	-1.426E-02	4.477E-02	7.071E-02	5.055E-03	-0.202
TB-160		86.79		-4.901E-02	9.705E-02	1.533E-01	1.403E-02	-0.320
		197.04		-1.990E-02	2.315E-01	3.767E-01	2.023E-02	-0.053
		215.65		6.290E-02	2.614E-01	4.419E-01	2.412E-02	0.142
		298.57		4.919E-03	4.334E-02	7.086E-02	4.070E-03	0.069
		879.36	*	6.929E-03	5.540E-02	9.204E-02	1.011E-02	0.075
		962.29		2.146E-02	1.874E-01	3.086E-01	3.170E-02	0.070
		966.15		2.646E-02	7.232E-02	1.225E-01	1.250E-02	0.216
		1177.93		9.834E-02	1.198E-01	2.197E-01	1.227E-02	0.448
		1271.85		-9.499E-02	2.182E-01	3.299E-01	2.229E-02	-0.288
HO-166M		80.57		-3.991E-02	1.133E-01	1.820E-01	1.581E-02	-0.219
	+	184.41		4.711E-03	2.433E-02	2.688E-02	1.428E-03	0.175
		280.46		7.589E-03	3.470E-02	5.751E-02	3.280E-03	0.132
		410.95		-1.558E-02	9.676E-02	1.592E-01	9.370E-03	-0.098
		711.68	*	-1.284E-03	2.550E-02	4.229E-02	3.525E-03	-0.030
		752.31		-1.744E-02	1.050E-01	1.707E-01	1.526E-02	-0.102
		810.29		3.606E-04	2.541E-02	4.195E-02	4.130E-03	0.009
TM-171		51.35		1.172E+01	2.023E+01	3.556E+01	2.818E+00	0.330
		52.39		-6.615E-01	1.023E+01	1.727E+01	1.372E+00	-0.038
		59.40		4.912E+00	1.350E+01	2.315E+01	1.758E+00	0.212
		66.72	*	-9.000E+00	1.468E+01	2.256E+01	1.804E+00	-0.399
LU-176		88.36		1.793E-02	7.124E-02	1.187E-01	1.090E-02	0.151
		201.83		-1.647E-02	1.214E-02	1.830E-02	9.871E-04	-0.900
		306.84	*	4.282E-03	1.039E-02	1.739E-02	1.001E-03	0.246
		401.10		-1.027E+00	2.595E+00	4.178E+00	2.428E-01	-0.246
LU-177		112.95		1.861E-01	2.999E-01	5.067E-01	3.265E-02	0.367
		208.36	*	-7.215E-02	1.883E-01	3.044E-01	1.651E-02	-0.237
LU-177M		52.97		-9.091E-01	1.097E+00	1.625E+00	1.290E-01	-0.560
		54.07		-2.883E-01	5.410E-01	8.144E-01	6.438E-02	-0.354
		61.30		-7.570E-01	7.217E-01	1.114E+00	8.608E-02	-0.679
		121.62		2.499E-02	1.438E-01	2.342E-01	1.389E-02	0.107
		147.16		2.055E-02	2.801E-01	4.461E-01	2.427E-02	0.046
		171.86		3.529E-02	1.879E-01	3.207E-01	1.688E-02	0.110
		218.09		-7.721E-02	3.365E-01	5.262E-01	2.878E-02	-0.147
		268.79		-8.021E-02	3.023E-01	4.825E-01	2.736E-02	-0.166
		319.02		1.401E-02	9.681E-02	1.582E-01	9.134E-03	0.089
		367.43		8.000E-02	3.551E-01	6.094E-01	3.519E-02	0.131
		413.65	*	-2.536E-02	7.021E-02	1.133E-01	6.693E-03	-0.224
HF-181		56.28		-3.050E-02	4.694E-01	7.839E-01	6.107E-02	-0.039
		57.53		9.791E-02	2.465E-01	4.240E-01	3.270E-02	0.231
		65.20		-3.131E-01	4.499E-01	6.892E-01	5.467E-02	-0.454
		133.02		6.166E-03	2.369E-02	3.857E-02	2.182E-03	0.160
		136.25		-4.668E-02	1.743E-01	2.718E-01	1.522E-02	-0.172
		345.85		-6.622E-02	8.326E-02	1.115E-01	6.450E-03	-0.594
		482.03	*	3.258E-03	1.490E-02	2.512E-02	1.608E-03	0.130
W-181		56.28		-1.276E-02	1.991E-01	3.325E-01	2.590E-02	-0.038

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		57.53		4.159E-02	1.046E-01	1.800E-01	1.388E-02	0.231
		65.20	*	-1.319E-01	1.894E-01	2.902E-01	2.302E-02	-0.454
TA-182		67.75		-3.358E-02	5.398E-02	8.276E-02	6.652E-03	-0.406
		100.10		-1.599E-02	6.587E-02	1.049E-01	7.885E-03	-0.152
		152.43		-2.978E-02	1.290E-01	1.998E-01	1.075E-02	-0.149
		222.10		8.062E-02	1.286E-01	2.228E-01	1.223E-02	0.362
		1001.68		2.941E-01	9.864E-01	1.606E+00	1.533E-01	0.183
		1121.28		1.434E-02	5.085E-02	8.744E-02	6.024E-03	0.164
		1189.05		1.072E-01	9.880E-02	1.875E-01	1.072E-02	0.572
		1221.42	*	-1.774E-02	5.923E-02	9.304E-02	5.692E-03	-0.191
		1230.97		-2.247E-02	1.226E-01	1.953E-01	1.218E-02	-0.115
RE-183		57.98		4.197E-02	1.009E-01	1.736E-01	1.334E-02	0.242
		59.32		1.983E-02	5.207E-02	8.936E-02	6.789E-03	0.222
		67.20		-6.669E-02	9.566E-02	1.460E-01	1.170E-02	-0.457
		162.32	*	8.563E-03	4.204E-02	6.800E-02	3.589E-03	0.126
		208.81		-1.473E-01	3.386E-01	5.449E-01	2.957E-02	-0.270
		291.72		-1.148E-02	3.727E-01	6.032E-01	3.456E-02	-0.019
RE-184		57.98		1.616E-01	3.884E-01	6.685E-01	5.136E-02	0.242
		59.32		7.629E-02	2.003E-01	3.437E-01	2.612E-02	0.222
		67.20		-2.567E-01	3.682E-01	5.619E-01	4.504E-02	-0.457
		161.27		-8.452E-02	1.330E-01	2.151E-01	1.138E-02	-0.393
		216.55		-3.418E-02	1.008E-01	1.629E-01	8.901E-03	-0.210
		252.85	*	-1.427E-02	9.478E-02	1.536E-01	8.628E-03	-0.093
		318.01		-5.987E-02	1.703E-01	2.646E-01	1.527E-02	-0.226
		792.07		6.723E-03	3.362E-01	5.567E-01	5.320E-02	0.012
		903.28		-1.278E-01	3.974E-01	5.141E-01	5.771E-02	-0.249
		920.93		5.584E-02	1.942E-01	2.869E-01	3.144E-02	0.195
OS-185		59.72		1.489E-02	1.424E-01	2.398E-01	1.824E-02	0.062
		61.14		-1.017E-01	7.868E-02	1.190E-01	9.185E-03	-0.854
		69.30		-2.112E-01	1.450E-01	2.087E-01	1.690E-02	-1.012
		592.07		-1.089E+00	1.137E+00	1.652E+00	1.182E-01	-0.659
		646.12	*	6.745E-03	1.818E-02	3.039E-02	2.285E-03	0.222
		717.42		8.870E-02	3.723E-01	6.350E-01	5.347E-02	0.140
		874.81		6.899E-03	2.680E-01	4.400E-01	4.799E-02	0.016
		880.27		-5.520E-02	3.656E-01	5.047E-01	5.552E-02	-0.109
RE-188		155.03	*	-2.745E-03	5.842E-02	9.880E-02	5.287E-03	-0.028
		477.96		1.338E-01	1.147E+00	1.914E+00	1.220E-01	0.070
		633.10		-9.871E-02	1.212E+00	1.934E+00	1.438E-01	-0.051
W-188		63.58		-1.134E+01	2.636E+01	4.132E+01	3.247E+00	-0.274
		227.08		2.068E+00	4.693E+00	8.012E+00	4.416E-01	0.258
		290.67	*	-1.670E-01	2.929E+00	4.732E+00	2.710E-01	-0.035
IR-192		295.96		-1.636E-02	4.633E-02	6.948E-02	4.052E-03	-0.235
		308.46		2.165E-02	3.706E-02	6.298E-02	3.669E-03	0.344
		316.51	*	-2.837E-03	1.296E-02	1.930E-02	1.119E-03	-0.147
		468.07		2.603E-03	2.594E-02	4.326E-02	3.083E-03	0.060
		604.41		-2.939E-01	2.183E-01	3.035E-01	3.688E-02	-0.968
		612.46		1.808E-01	3.427E-01	5.771E-01	5.062E-02	0.313
AU-195		65.12		-6.165E-02	8.918E-02	1.367E-01	1.084E-02	-0.451
		66.83		-3.017E-02	4.738E-02	7.268E-02	5.815E-03	-0.415

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		75.70		-8.813E-02	9.688E-02	1.310E-01	1.100E-02	-0.673
		98.88	*	-5.052E-02	8.761E-02	1.357E-01	1.038E-02	-0.372
		129.76		-4.767E-02	1.107E+00	1.763E+00	1.009E-01	-0.027
TL-200		367.94	*	4.063E-01	1.508E+00	2.597E+00	1.500E-01	0.156
		579.30		-1.674E+01	1.264E+01	1.745E+01	1.234E+00	-0.959
		828.27		-3.189E+00	1.551E+01	2.482E+01	2.515E+00	-0.129
		1205.75		1.866E+00	6.837E+00	1.172E+01	6.942E-01	0.159
TL-201		68.90		-1.794E-01	4.040E-01	6.513E-01	5.265E-02	-0.275
		70.82		-3.909E-01	2.522E-01	3.621E-01	2.956E-02	-1.080
		80.30		-1.732E-01	3.728E-01	5.938E-01	5.148E-02	-0.292
		135.34		-4.419E-02	1.895E+00	3.014E+00	1.692E-01	-0.015
		167.43	*	-2.991E-01	4.997E-01	8.092E-01	4.248E-02	-0.370
TL-202		68.90		-5.876E-02	1.323E-01	2.133E-01	1.725E-02	-0.275
		70.82		-1.277E-01	8.239E-02	1.183E-01	9.656E-03	-1.080
		80.30		-5.659E-02	1.218E-01	1.940E-01	1.682E-02	-0.292
		439.56	*	7.722E-03	1.905E-02	3.279E-02	1.999E-03	0.235
HG-203		70.83		-7.594E-01	4.961E-01	7.027E-01	9.362E-02	-1.081
		72.87		1.313E-01	2.470E-01	4.212E-01	5.462E-02	0.312
		82.60		1.626E-01	4.198E-01	7.063E-01	9.800E-02	0.230
		279.20	*	1.255E-02	1.465E-02	2.551E-02	1.547E-03	0.492
BI-207		72.80		4.567E-02	8.122E-02	1.389E-01	1.146E-02	0.329
		74.97		-3.821E-02	5.642E-02	7.777E-02	6.502E-03	-0.491
		84.90		-8.778E-03	8.415E-02	1.303E-01	1.172E-02	-0.067
		569.67		-5.057E-03	1.483E-02	2.274E-02	1.594E-03	-0.222
		1063.62	*	1.256E-03	2.111E-02	3.552E-02	2.932E-03	0.035
		1770.23		-4.798E-01	4.463E-01	3.049E-01	1.845E-02	-1.574
TL-207		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
TL-208		277.35		1.527E-02	1.460E-01	2.400E-01	2.520E-02	0.064
		510.84		-8.136E-02	1.212E-01	2.198E-01	2.337E-02	-0.370
		583.14	*	-3.275E-03	1.825E-02	2.891E-02	2.266E-03	-0.113
		860.37		4.862E-02	1.441E-01	2.342E-01	2.620E-02	0.208
PO-209		260.50		-8.814E-01	4.001E+00	6.430E+00	3.629E-01	-0.137
		262.80		5.182E+00	1.077E+01	1.831E+01	1.035E+00	0.283
		896.60	*	-9.936E-01	3.070E+00	4.793E+00	5.406E-01	-0.207
BI-210		46.50	*	-1.172E+01	3.494E+00	4.627E+00	3.580E-01	-2.534
PB-210		46.50	*	-1.172E+01	3.494E+00	4.627E+00	3.580E-01	-2.534
PO-210		46.50	*	-1.172E+01	3.464E+00	4.627E+00	3.078E-01	-2.534
BI-211		72.87		7.389E-01	1.388E+00	2.369E+00	1.956E-01	0.312
		351.07	*	2.839E-02	1.199E-01	1.791E-01	1.149E-02	0.159
PB-211		404.84	*	5.489E-02	3.752E-01	6.327E-01	3.945E-01	0.087

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		427.08		-5.250E-01	8.931E-01	1.300E+00	8.039E-01	-0.404
		831.96		-2.146E-02	4.886E-01	7.988E-01	5.024E-01	-0.027
BI-212		727.18	*	1.833E-02	9.898E-02	1.685E-01	1.678E-02	0.109
		785.46		-2.205E-01	6.621E-01	1.048E+00	9.904E-02	-0.210
		1620.62		2.942E-02	5.914E-01	9.892E-01	6.689E-02	0.030
PB-212		74.81		-1.209E-01	1.957E-01	2.707E-01	3.393E-02	-0.447
		77.11		-4.447E-03	8.876E-02	1.434E-01	1.215E-02	-0.031
		87.30		-9.547E-02	1.487E-01	2.317E-01	3.147E-02	-0.412
		238.63	*	1.196E-02	2.678E-02	4.495E-02	3.212E-03	0.266
		300.09		-5.351E-02	3.121E-01	4.978E-01	4.087E-02	-0.107
PO-212		74.81		-1.209E-01	1.957E-01	2.707E-01	3.393E-02	-0.447
		77.11		-4.447E-03	8.876E-02	1.434E-01	1.215E-02	-0.031
		87.30		-9.547E-02	1.487E-01	2.317E-01	3.147E-02	-0.412
		115.19		2.597E-01	1.409E+00	2.303E+00	1.451E-01	0.113
		238.63	*	1.196E-02	2.678E-02	4.495E-02	3.212E-03	0.266
		300.09		-5.351E-02	3.121E-01	4.978E-01	4.087E-02	-0.107
BI-214		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.213E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
PB-214		74.81		-2.084E-01	3.369E-01	4.665E-01	5.208E-02	-0.447
		77.11		-7.624E-03	1.522E-01	2.458E-01	2.801E-02	-0.031
		87.30		-1.636E-01	2.545E-01	3.969E-01	4.761E-02	-0.412
		241.98		-1.417E-01	1.527E-01	2.345E-01	1.854E-02	-0.604
		295.21		-3.297E-02	6.611E-02	9.808E-02	8.321E-03	-0.336
	+	351.92	*	2.440E-02	5.476E-02	6.300E-02	5.211E-03	0.387
PO-214		74.81		-2.084E-01	3.369E-01	4.665E-01	5.208E-02	-0.447
		77.11		-7.624E-03	1.522E-01	2.458E-01	2.801E-02	-0.031
		87.30		-1.636E-01	2.545E-01	3.969E-01	4.761E-02	-0.412
		241.98		-1.417E-01	1.527E-01	2.345E-01	1.854E-02	-0.604
		295.21		-3.297E-02	6.611E-02	9.808E-02	8.321E-03	-0.336
	+	351.92	*	2.440E-02	5.476E-02	6.300E-02	5.211E-03	0.387
PO-215		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
PO-216		74.81		-1.209E-01	1.957E-01	2.707E-01	3.393E-02	-0.447
		77.11		-4.447E-03	8.876E-02	1.434E-01	1.215E-02	-0.031
		87.30		-9.547E-02	1.487E-01	2.317E-01	3.147E-02	-0.412
		238.63	*	1.196E-02	2.678E-02	4.495E-02	3.212E-03	0.266

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		300.09		-5.351E-02	3.121E-01	4.978E-01	4.087E-02	-0.107
PO-218		74.81		-2.084E-01	3.369E-01	4.665E-01	5.208E-02	-0.447
		77.11		-7.624E-03	1.522E-01	2.458E-01	2.801E-02	-0.031
		87.30		-1.636E-01	2.545E-01	3.969E-01	4.761E-02	-0.412
		241.98		-1.417E-01	1.527E-01	2.345E-01	1.854E-02	-0.604
		295.21		-3.297E-02	6.611E-02	9.808E-02	8.321E-03	-0.336
	+	351.92	*	2.440E-02	5.476E-02	6.300E-02	5.211E-03	0.387
RN-219		271.23		5.414E-02	9.316E-02	1.592E-01	1.277E-02	0.340
		401.81	*	-2.799E-02	1.634E-01	2.689E-01	3.661E-02	-0.104
RN-220		549.76	*	-4.851E+00	1.041E+01	1.603E+01	1.102E+00	-0.303
RA-223		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
RA-224		240.98	*	-2.880E-02	2.845E-01	4.651E-01	2.591E-02	-0.062
RA-226		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.213E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
AC-227		79.80		-7.341E-01	7.130E-01	1.062E+00	2.285E-01	-0.691
		236.00		-1.079E-01	8.990E-02	1.335E-01	1.377E-02	-0.808
		256.20	*	-8.167E-03	1.547E-01	2.524E-01	3.506E-02	-0.032
		286.10		1.045E-01	6.204E-01	1.023E+00	1.178E-01	0.102
		299.80		-8.357E-02	5.836E-01	9.329E-01	1.518E-01	-0.090
		304.40		2.355E-01	7.706E-01	1.278E+00	2.209E-01	0.184
		334.20		-4.592E-01	1.064E+00	1.640E+00	3.005E-01	-0.280
TH-227		79.80		-7.341E-01	7.135E-01	1.062E+00	2.314E-01	-0.691
		94.00		-8.578E-01	9.602E-01	1.479E+00	3.201E-01	-0.580
		236.00		-1.079E-01	8.973E-02	1.335E-01	1.188E-02	-0.808
		256.20	*	-8.167E-03	1.547E-01	2.524E-01	4.251E-02	-0.032
		286.10		1.045E-01	6.291E-01	1.023E+00	1.025E+00	0.102
		299.80		-8.357E-02	5.836E-01	9.329E-01	1.518E-01	-0.090
		304.40		2.355E-01	7.706E-01	1.278E+00	2.209E-01	0.184
		334.20		-4.592E-01	1.064E+00	1.640E+00	3.005E-01	-0.280
AC-228		338.32		-6.784E-02	1.184E-01	1.700E-01	6.930E-02	-0.399
		911.07	*	3.833E-02	6.724E-02	1.194E-01	1.581E-02	0.321
		969.11		-7.795E-02	1.151E-01	1.595E-01	3.820E-02	-0.489
RA-228		338.32		-6.784E-02	1.184E-01	1.700E-01	6.930E-02	-0.399
		911.07	*	3.833E-02	6.724E-02	1.194E-01	1.581E-02	0.321
		969.11		-7.795E-02	1.151E-01	1.595E-01	3.820E-02	-0.489

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228		84.40		2.319E-01	1.151E+00	1.821E+00	2.433E-01	0.127
		238.60	*	1.134E-02	2.674E-02	4.482E-02	3.202E-03	0.253
		300.10		-5.402E-02	3.137E-01	4.976E-01	2.933E-01	-0.109
TH-229		85.43		-2.728E-02	8.161E-02	1.241E-01	1.122E-02	-0.220
		88.47		1.127E-02	4.102E-02	6.846E-02	6.272E-03	0.165
		100.00		-1.740E-02	7.159E-02	1.140E-01	8.581E-03	-0.153
		193.63	*	-5.297E-02	1.781E-01	2.907E-01	1.557E-02	-0.182
		210.97		-4.687E-02	2.730E-01	4.477E-01	2.434E-02	-0.105
TH-230		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.212E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
PA-231		283.67	*	2.127E-02	6.326E-01	1.032E+00	1.418E-01	0.021
		301.29		-7.533E-03	2.245E-01	3.623E-01	3.777E-02	-0.021
TH-231		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
U-231		84.21		2.055E-01	7.037E-01	1.120E+00	1.002E-01	0.183
		92.29		-2.009E-01	2.829E-01	4.494E-01	3.826E-02	-0.447
		95.87	*	-8.062E-02	1.368E-01	2.134E-01	1.710E-02	-0.378
		108.00		1.748E-01	2.380E-01	4.062E-01	2.762E-02	0.430
TH-232		338.32		-6.784E-02	1.152E-01	1.700E-01	9.835E-03	-0.399
		911.07	*	3.833E-02	6.724E-02	1.194E-01	1.581E-02	0.321
		969.11		-7.795E-02	1.151E-01	1.595E-01	3.820E-02	-0.489
PA-233		75.28		-9.569E-01	1.612E+00	2.216E+00	3.371E-01	-0.432
		86.59		-4.218E-01	6.539E-01	1.008E+00	2.720E-01	-0.419
		300.12		-2.844E-02	1.613E-01	2.570E-01	3.447E-02	-0.111
		311.98	*	-1.502E-02	2.497E-02	3.781E-02	2.316E-03	-0.397
		340.50		4.010E-02	2.655E-01	4.308E-01	9.891E-02	0.093
		398.62		1.118E-01	7.839E-01	1.329E+00	3.435E-01	0.084
		415.76		-7.390E-02	6.736E-01	1.112E+00	2.293E-01	-0.066
PA-234		63.00		-4.662E-01	8.370E-01	1.295E+00	1.952E-01	-0.360
		94.67		-3.033E-02	7.291E-02	1.154E-01	1.396E-02	-0.263
		98.44		-3.407E-02	4.174E-02	5.601E-02	3.117E-02	-0.608
		99.86		-4.412E-02	1.813E-01	2.887E-01	2.178E-02	-0.153
		111.00		-6.155E-02	7.762E-02	1.170E-01	1.255E-02	-0.526
		131.20		2.572E-02	4.135E-02	6.932E-02	3.946E-03	0.371
		152.70		1.676E-02	1.299E-01	2.075E-01	3.249E-02	0.081
	+	186.00		1.696E-01	8.772E-01	1.010E+00	3.077E-01	0.168

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		226.40		8.680E-02	1.625E-01	2.788E-01	3.182E-02	0.311
		227.20		6.108E-02	1.708E-01	2.899E-01	1.598E-02	0.211
		248.90		6.156E-02	3.563E-01	5.925E-01	1.270E-01	0.104
		293.70		-4.231E-02	3.047E-01	4.641E-01	7.453E-02	-0.091
		369.80		9.575E-02	3.555E-01	6.108E-01	1.271E-01	0.157
		568.70		-2.133E-01	4.652E-01	7.017E-01	4.913E-02	-0.304
		569.50		-5.291E-02	1.310E-01	1.994E-01	1.397E-02	-0.265
		574.00		4.918E-01	6.276E-01	1.101E+00	7.748E-02	0.447
		699.00		1.982E-01	3.189E-01	5.594E-01	1.056E-01	0.354
		706.10		-7.831E-02	4.226E-01	6.887E-01	3.066E-01	-0.114
		733.00		-1.232E-01	1.323E-01	1.866E-01	4.144E-02	-0.660
		742.81		6.725E-03	5.488E-01	9.130E-01	6.139E-01	0.007
		796.30		5.860E-02	3.186E-01	5.380E-01	1.473E-01	0.109
		805.60		5.405E-01	4.951E-01	8.568E-01	2.655E-01	0.631
		819.60		-9.402E-02	4.594E-01	7.327E-01	2.811E-01	-0.128
		826.30		-3.796E-03	3.233E-01	5.312E-01	2.393E-01	-0.007
		831.60		-3.451E-02	2.501E-01	4.039E-01	1.225E-01	-0.085
		876.40		-2.721E-02	3.763E-01	6.087E-01	6.271E-01	-0.045
		880.51		-3.579E-02	1.415E-01	1.931E-01	2.125E-02	-0.185
		883.24		-7.757E-02	1.283E-01	1.740E-01	1.176E-01	-0.446
		899.00		1.037E-03	3.039E-01	4.963E-01	2.200E-01	0.002
		925.00		-1.684E-02	4.460E-01	7.222E-01	7.868E-02	-0.023
		926.50		-3.256E-02	7.089E-02	1.070E-01	2.796E-02	-0.304
		946.00	*	-3.346E-02	1.266E-01	1.982E-01	3.909E-02	-0.169
		949.00		5.238E-02	1.868E-01	3.143E-01	3.301E-02	0.167
		980.50		5.873E-02	2.710E-01	4.533E-01	4.508E-02	0.130
		1394.10		-3.585E-01	5.769E-01	7.547E-01	4.902E-01	-0.475
PA-234M		766.41		-2.869E+00	6.507E+00	9.546E+00	7.326E+00	-0.301
		1001.03	*	2.319E+00	3.207E+00	5.445E+00	6.489E-01	0.426
TH-234		63.29	*	-4.240E-01	7.143E-01	1.101E+00	1.941E-01	-0.385
		92.38		-1.769E-01	2.596E-01	4.106E-01	7.402E-02	-0.431
U-234		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.212E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
U-235		89.95		-1.017E+00	5.638E-01	6.528E-01	2.020E-01	-1.558
		93.35		-9.441E-02	3.038E-01	4.926E-01	1.377E-01	-0.192
		105.00		-5.537E-02	4.393E-01	7.044E-01	2.073E-01	-0.079
		143.76	*	-7.464E-02	9.983E-02	1.437E-01	2.328E-02	-0.519
		163.35		8.933E-02	1.964E-01	3.221E-01	5.740E-02	0.277
	+	185.71		6.281E-03	3.243E-02	3.777E-02	2.009E-03	0.166
		205.31		9.044E-02	2.037E-01	3.486E-01	6.225E-02	0.259
NP-236		94.67		-2.271E-02	5.528E-02	8.762E-02	7.159E-03	-0.259
		98.44		-2.576E-02	2.818E-02	4.234E-02	3.261E-03	-0.608
		111.00		-4.656E-02	5.858E-02	8.850E-02	5.821E-03	-0.526
		160.31	*	-3.406E-02	3.371E-02	4.980E-02	2.638E-03	-0.684

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237		86.50	*	-6.451E-02	9.773E-02	1.511E-01	3.409E-02	-0.427
		95.87		-2.477E-01	4.240E-01	6.556E-01	1.601E-01	-0.378
U-238		63.29	*	-4.240E-01	7.143E-01	1.101E+00	1.941E-01	-0.385
		92.38		-1.769E-01	2.581E-01	4.106E-01	3.490E-02	-0.431
NP-239		99.55		-3.971E-02	6.260E-02	9.639E-02	7.304E-03	-0.412
		117.00	*	-3.486E-04	7.464E-02	1.201E-01	7.431E-03	-0.003
		209.75		-1.438E-01	2.826E-01	4.516E-01	2.453E-02	-0.318
		228.18		5.173E-02	8.966E-02	1.545E-01	8.522E-03	0.335
		277.60		1.472E-02	7.108E-02	1.178E-01	6.710E-03	0.125
		334.30		-2.602E-01	6.011E-01	9.291E-01	5.373E-02	-0.280
AM-241		59.54	*	2.624E-02	7.863E-02	1.345E-01	1.116E-02	0.195
AM-243		74.67	*	-1.768E-02	3.181E-02	4.431E-02	3.697E-03	-0.399
		86.72		-1.724E+00	3.580E+00	5.666E+00	5.181E-01	-0.304
		117.66		-3.464E-01	1.509E+00	2.380E+00	1.464E-01	-0.146
		142.18		-4.187E+00	7.969E+00	1.216E+01	6.697E-01	-0.344
CM-243		99.55		-4.084E-02	6.438E-02	9.914E-02	7.512E-03	-0.412
		103.76	*	-2.085E-03	3.984E-02	6.433E-02	4.605E-03	-0.032
		117.00		-3.584E-04	7.675E-02	1.235E-01	7.641E-03	-0.003
		209.75		-1.417E-01	2.785E-01	4.450E-01	2.417E-02	-0.318
		228.18		5.225E-02	9.055E-02	1.560E-01	8.607E-03	0.335
		277.60		1.483E-02	7.162E-02	1.187E-01	6.762E-03	0.125
CM-247		278.00		1.289E-01	2.944E-01	4.970E-01	2.832E-02	0.259
		287.40		-3.303E-01	5.240E-01	8.042E-01	4.600E-02	-0.411
		402.60	*	3.112E-03	1.470E-02	2.504E-02	1.459E-03	0.124
CF-249		252.85		-5.522E-02	3.668E-01	5.945E-01	3.339E-02	-0.093
		333.44		1.197E-02	7.359E-02	1.198E-01	6.929E-03	0.100
		387.95	*	-7.719E-03	1.591E-02	2.551E-02	1.466E-03	-0.303
CF-251		176.60	*	-1.604E-02	5.017E-02	8.255E-02	4.360E-03	-0.194
		227.00		7.175E-02	1.522E-01	2.605E-01	1.435E-02	0.275
		285.00		4.240E-01	7.113E-01	1.215E+00	6.943E-02	0.349
ANH-511		511.00	*	-1.871E-02	2.620E-02	4.750E-02	3.137E-03	-0.394

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087    *
* Acquisition date :  6-JUL-2009 13:25:36 Detector SN#     :               *
* Detector ID        : GAM18               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:00.74      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 29-JUN-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201870087          Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.4500E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)	
BE-7	5.849E-03	1.151E-01	2.008E-01	0.000E+00 NOT IDENT.
NA-22	4.793E-03	1.378E-02	2.465E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	6.098E+01	0.000E+00	0.000E+00 SHORT HLIF
AL-26	7.324E-03	1.517E-02	2.770E-02	0.000E+00 NOT IDENT.
K-40	4.765E-02	1.956E-01	3.586E-01	0.000E+00 NOT IDENT.
TI-44	-9.543E-03	1.536E-02	2.607E-02	0.000E+00 NOT IDENT.
SC-46	1.634E-02	1.564E-02	2.958E-02	0.000E+00 NOT IDENT.
V-48	-1.186E-02	2.051E-02	3.146E-02	0.000E+00 NOT IDENT.
CR-51	3.410E-02	1.182E-01	2.077E-01	0.000E+00 NOT IDENT.
MN-52	2.970E-02	3.992E-02	7.458E-02	0.000E+00 NOT IDENT.
MN-54	-1.559E-04	1.563E-02	2.667E-02	0.000E+00 NOT IDENT.
CO-56	-9.019E-03	1.658E-02	2.649E-02	0.000E+00 NOT IDENT.
CO-57	3.359E-03	9.457E-03	1.693E-02	0.000E+00 NOT IDENT.
CO-58	2.264E-03	1.519E-02	2.647E-02	0.000E+00 NOT IDENT.
FE-59	-2.510E-02	3.222E-02	4.969E-02	0.000E+00 NOT IDENT.
CO-60	-5.181E-03	1.353E-02	2.106E-02	0.000E+00 NOT IDENT.
ZN-65	7.632E-03	3.310E-02	5.840E-02	0.000E+00 NOT IDENT.
GE-68	-3.328E-01	4.973E-01	7.233E-01	0.000E+00 NOT IDENT.
AS-73	-5.026E-01	5.249E-01	8.492E-01	0.000E+00 NOT IDENT.
AS-74	2.658E-04	3.266E-02	5.539E-02	0.000E+00 NOT IDENT.
SE-75	1.434E-03	1.648E-02	2.895E-02	0.000E+00 NOT IDENT.
BR-77	-1.810E-01	4.871E-01	8.058E-01	0.000E+00 NOT IDENT.
SR-82	-2.623E-02	1.255E-01	2.111E-01	0.000E+00 NOT IDENT.
RB-83	-6.830E-03	2.778E-02	4.661E-02	0.000E+00 NOT IDENT.
RB-84	-1.078E-03	2.912E-02	4.245E-02	0.000E+00 NOT IDENT.
KR-85	-4.327E+00	5.018E+00	8.218E+00	0.000E+00 NOT IDENT.

SR-85	-2.049E-02	2.376E-02	3.892E-02	0.000E+00	NOT IDENT.
RB-86	-1.104E-01	2.452E-01	3.709E-01	0.000E+00	NOT IDENT.
Y-88	-1.689E-03	1.924E-02	3.168E-02	0.000E+00	NOT IDENT.
ZR-88	6.353E-03	1.083E-02	2.017E-02	0.000E+00	NOT IDENT.
Y-91	3.738E+00	5.703E+00	1.056E+01	0.000E+00	NOT IDENT.
NB-94	3.242E-03	1.419E-02	2.525E-02	0.000E+00	NOT IDENT.
NB-95	-8.236E-03	1.372E-02	2.186E-02	0.000E+00	NOT IDENT.
NB-95M	-7.354E-02	4.506E-02	6.927E-02	0.000E+00	NOT IDENT.
ZR-95	-5.545E-03	2.549E-02	4.292E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.259E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.388E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.998E-01	6.426E-01	1.171E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.541E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	7.049E-03	1.463E-02	2.644E-02	0.000E+00	NOT IDENT.
RH-102	-7.315E-03	1.208E-02	1.972E-02	0.000E+00	NOT IDENT.
RU-103	1.062E-02	1.536E-02	2.813E-02	0.000E+00	NOT IDENT.
RH-106	-4.287E-03	1.338E-01	2.249E-01	0.000E+00	NOT IDENT.
RU-106	-4.287E-03	1.338E-01	2.249E-01	0.000E+00	NOT IDENT.
AG-108M	-5.067E-03	1.363E-02	2.309E-02	0.000E+00	NOT IDENT.
CD-109	3.169E-02	3.004E-01	5.409E-01	0.000E+00	NOT IDENT.
AG-110M	-3.820E-04	1.352E-02	2.365E-02	0.000E+00	NOT IDENT.
IN-111	-2.479E-02	7.620E-02	1.163E-01	0.000E+00	NOT IDENT.
IN-113M	1.257E-02	1.582E-02	2.997E-02	0.000E+00	NOT IDENT.
SN-113	1.257E-02	1.582E-02	2.997E-02	0.000E+00	NOT IDENT.
IN-114M	4.414E-02	5.840E-02	1.003E-01	0.000E+00	NOT IDENT.
CD-115	-2.113E-01	4.220E-01	6.855E-01	0.000E+00	NOT IDENT.
SN-117M	7.000E-03	1.458E-02	2.573E-02	0.000E+00	NOT IDENT.
SB-122	2.531E-03	1.149E-01	1.964E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.601E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.030E-03	1.091E-02	1.855E-02	0.000E+00	NOT IDENT.
I-124	-8.954E-02	9.112E-02	1.394E-01	0.000E+00	NOT IDENT.
SB-124	2.377E-02	2.981E-02	5.812E-02	0.000E+00	NOT IDENT.
SB-125	-3.940E-02	3.624E-02	5.672E-02	0.000E+00	NOT IDENT.
TE-125M	-1.166E-01	3.428E+00	6.006E+00	0.000E+00	NOT IDENT.
I-126	-3.616E-03	4.710E-02	8.186E-02	0.000E+00	NOT IDENT.
SB-126	7.886E-04	3.834E-02	6.674E-02	0.000E+00	NOT IDENT.
SN-126	-1.707E-02	3.154E-02	5.427E-02	0.000E+00	NOT IDENT.
SB-127	1.158E-02	1.451E-01	2.555E-01	0.000E+00	NOT IDENT.
XE-127	-1.718E-02	1.630E-02	2.698E-02	0.000E+00	NOT IDENT.
I-131	-2.756E-02	2.445E-02	3.930E-02	0.000E+00	NOT IDENT.
TE-132	3.152E-02	5.393E-02	9.917E-02	0.000E+00	NOT IDENT.
BA-133	-8.799E-03	2.126E-02	2.958E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.557E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.434E-04	1.614E-02	2.779E-02	0.000E+00	NOT IDENT.
CS-135	-2.412E-02	5.893E-02	9.893E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.027E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.109E-03	2.901E-02	5.121E-02	0.000E+00	NOT IDENT.
BA-137M	1.064E-03	1.367E-02	2.416E-02	0.000E+00	NOT IDENT.
CS-137	1.124E-03	1.445E-02	2.554E-02	0.000E+00	NOT IDENT.
CE-139	-8.876E-03	1.091E-02	1.874E-02	0.000E+00	NOT IDENT.
BA-140	4.370E-02	6.990E-02	1.252E-01	0.000E+00	NOT IDENT.
LA-140	-5.106E-03	2.450E-02	4.013E-02	0.000E+00	NOT IDENT.
CE-141	1.119E-02	2.290E-02	4.060E-02	0.000E+00	NOT IDENT.
CE-143	3.604E-01	1.202E+00	2.119E+00	0.000E+00	NOT IDENT.
CE-144	-1.194E-02	8.376E-02	1.430E-01	0.000E+00	NOT IDENT.
PM-144	2.451E-03	1.575E-02	2.620E-02	0.000E+00	NOT IDENT.
PR-144	1.655E-01	1.063E+00	1.768E+00	0.000E+00	NOT IDENT.
PM-146	1.586E-03	1.786E-02	3.142E-02	0.000E+00	NOT IDENT.
ND-147	4.044E-02	1.350E-01	2.391E-01	0.000E+00	NOT IDENT.
PM-149	7.595E-01	3.412E+00	6.013E+00	0.000E+00	NOT IDENT.
EU-152	-2.461E-02	4.218E-02	6.770E-02	0.000E+00	NOT IDENT.
GD-153	-7.752E-03	3.105E-02	5.401E-02	0.000E+00	NOT IDENT.
EU-154	1.756E-02	3.816E-02	6.946E-02	0.000E+00	NOT IDENT.
EU-155	-1.426E-02	4.388E-02	7.537E-02	0.000E+00	NOT IDENT.
TB-160	6.929E-03	5.429E-02	9.363E-02	0.000E+00	NOT IDENT.
HO-166M	-1.284E-03	2.499E-02	4.323E-02	0.000E+00	FAIL ABUN
TM-171	-9.000E+00	1.439E+01	2.428E+01	0.000E+00	NOT IDENT.
LU-176	4.282E-03	1.018E-02	1.812E-02	0.000E+00	NOT IDENT.
LU-177	-7.215E-02	1.845E-01	3.198E-01	0.000E+00	NOT IDENT.
LU-177M	-2.536E-02	6.880E-02	1.173E-01	0.000E+00	NOT IDENT.
HF-181	3.258E-03	1.461E-02	2.590E-02	0.000E+00	NOT IDENT.
W-181	-1.319E-01	1.857E-01	3.125E-01	0.000E+00	NOT IDENT.
TA-182	-1.774E-02	5.805E-02	9.393E-02	0.000E+00	NOT IDENT.
RE-183	8.563E-03	4.120E-02	7.182E-02	0.000E+00	NOT IDENT.
RE-184	-1.427E-02	9.288E-02	1.607E-01	0.000E+00	NOT IDENT.
OS-185	6.745E-03	1.782E-02	3.113E-02	0.000E+00	NOT IDENT.
RE-188	-2.745E-03	5.725E-02	1.044E-01	0.000E+00	NOT IDENT.
W-188	-1.670E-01	2.870E+00	4.935E+00	0.000E+00	NOT IDENT.

IR-192	-2.837E-03	1.271E-02	2.009E-02	0.000E+00	NOT IDENT.
AU-195	-5.052E-02	8.586E-02	1.448E-01	0.000E+00	NOT IDENT.
TL-200	4.063E-01	1.478E+00	2.695E+00	0.000E+00	NOT IDENT.
TL-201	-2.991E-01	4.897E-01	8.540E-01	0.000E+00	NOT IDENT.
TL-202	7.722E-03	1.867E-02	3.389E-02	0.000E+00	NOT IDENT.
HG-203	1.255E-02	1.436E-02	2.663E-02	0.000E+00	NOT IDENT.
BI-207	1.256E-03	2.069E-02	3.598E-02	0.000E+00	NOT IDENT.
TL-207	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
TL-208	-3.275E-03	1.788E-02	2.969E-02	0.000E+00	NOT IDENT.
PO-209	-9.936E-01	3.009E+00	4.874E+00	0.000E+00	NOT IDENT.
BI-210	-1.172E+01	3.425E+00	5.016E+00	0.000E+00	NOT IDENT.
PB-210	-1.172E+01	3.425E+00	5.016E+00	0.000E+00	NOT IDENT.
PO-210	-1.172E+01	3.394E+00	5.016E+00	0.000E+00	NOT IDENT.
BI-211	2.839E-02	1.175E-01	1.860E-01	0.000E+00	NOT IDENT.
PB-211	5.489E-02	3.677E-01	6.551E-01	0.000E+00	NOT IDENT.
BI-212	1.833E-02	9.700E-02	1.722E-01	0.000E+00	NOT IDENT.
PB-212	1.196E-02	2.625E-02	4.709E-02	0.000E+00	NOT IDENT.
PO-212	1.196E-02	2.625E-02	4.709E-02	0.000E+00	NOT IDENT.
BI-214	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
PB-214	2.440E-02	5.367E-02	6.542E-02	0.000E+00	FAIL ABUN
PO-214	2.440E-02	5.367E-02	6.542E-02	0.000E+00	FAIL ABUN
PO-215	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
PO-216	1.196E-02	2.625E-02	4.709E-02	0.000E+00	NOT IDENT.
PO-218	2.440E-02	5.367E-02	6.542E-02	0.000E+00	FAIL ABUN
RN-219	-2.799E-02	1.601E-01	2.785E-01	0.000E+00	NOT IDENT.
RN-220	-4.851E+00	1.021E+01	1.649E+01	0.000E+00	NOT IDENT.
RA-223	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
RA-224	-2.880E-02	2.788E-01	4.871E-01	0.000E+00	NOT IDENT.
RA-226	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
AC-227	-8.167E-03	1.516E-01	2.640E-01	0.000E+00	NOT IDENT.
TH-227	-8.167E-03	1.516E-01	2.640E-01	0.000E+00	NOT IDENT.
AC-228	3.833E-02	6.589E-02	1.213E-01	0.000E+00	NOT IDENT.
RA-228	3.833E-02	6.589E-02	1.213E-01	0.000E+00	NOT IDENT.
TH-228	1.134E-02	2.620E-02	4.695E-02	0.000E+00	NOT IDENT.
TH-229	-5.297E-02	1.745E-01	3.059E-01	0.000E+00	NOT IDENT.
TH-230	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
PA-231	2.127E-02	6.200E-01	1.077E+00	0.000E+00	NOT IDENT.
TH-231	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
U-231	-8.062E-02	1.340E-01	2.279E-01	0.000E+00	NOT IDENT.
TH-232	3.833E-02	6.589E-02	1.213E-01	0.000E+00	NOT IDENT.
PA-233	-1.502E-02	2.447E-02	3.937E-02	0.000E+00	NOT IDENT.
PA-234	-3.346E-02	1.241E-01	2.012E-01	0.000E+00	FAIL ABUN
PA-234M	2.319E+00	3.143E+00	5.522E+00	0.000E+00	NOT IDENT.
TH-234	-4.240E-01	7.001E-01	1.186E+00	0.000E+00	NOT IDENT.
U-234	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
U-235	-7.464E-02	9.783E-02	1.522E-01	0.000E+00	FAIL ABUN
NP-236	-3.406E-02	3.304E-02	5.261E-02	0.000E+00	NOT IDENT.
NP-237	-6.451E-02	9.577E-02	1.617E-01	0.000E+00	NOT IDENT.
U-238	-4.240E-01	7.001E-01	1.186E+00	0.000E+00	NOT IDENT.
NP-239	-3.486E-04	7.315E-02	1.277E-01	0.000E+00	NOT IDENT.
AM-241	2.624E-02	7.706E-02	1.451E-01	0.000E+00	NOT IDENT.
AM-243	-1.768E-02	3.117E-02	4.757E-02	0.000E+00	NOT IDENT.
CM-243	-2.085E-03	3.904E-02	6.859E-02	0.000E+00	NOT IDENT.
CM-247	3.112E-03	1.441E-02	2.593E-02	0.000E+00	NOT IDENT.
CF-249	-7.719E-03	1.559E-02	2.643E-02	0.000E+00	NOT IDENT.
CF-251	-1.604E-02	4.917E-02	8.703E-02	0.000E+00	NOT IDENT.
ANH-511	-1.871E-02	2.568E-02	4.892E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:26:53.54

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:25:36.
Sample ID         : G1201870087          Sample quantity  : 1.45000E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.74  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Flag: "*" = Keyline

Sample ID : G1201870087 Acquisition date : 6-JUL-2009 13:25:36

Total number of lines in spectrum	5	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	3	60.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201870087 Acquisition date : 6-JUL-2009 13:25:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.67	10	132	1.22	370.37	364	12	1.39E-03	****	7.65E+00	T
0	353.37	19	87	1.68	705.66	698	13	2.65E-03	****	5.44E+00	T
0	912.73	23	31	3.43	1824.11	1812	21	3.14E-03	****	2.78E+00	
0	1463.28	12	21	1.16	2925.04	2913	14	1.67E-03	****	1.89E+00	
0	1765.60	15	5	1.02	3529.65	3524	10	2.10E-03	75.3	1.69E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:26:58.57

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087.CNF;1  *
* Acquisition date  : 6-JUL-2009 13:25:36.  Detector SN#     :            *
* Detector ID       : GAM18                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:00.74          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00  Nuclide Library : SOLID       *
* Sample ID         : G1201870087           Analyst initials: MXR1        *
* Batch Number      : 880723                Sample Quantity : 1.45000E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	5.849E-03		1.175E-01	1.947E-01	1.411E-02	0.030
NA-22	4.793E-03		1.406E-02	2.444E-02	1.663E-03	0.196
NA-24	1.158E-05		3.111E-05	Half-Life too short		
AL-26	7.324E-03		1.548E-02	2.770E-02	1.617E-03	0.264
K-40	4.765E-02		1.996E-01	3.567E-01	2.707E-02	0.134
TI-44	-9.543E-03		1.567E-02	2.431E-02	2.079E-03	-0.393
SC-46	1.634E-02		1.596E-02	2.908E-02	3.243E-03	0.562
V-48	-1.186E-02		2.093E-02	3.101E-02	3.067E-03	-0.383
CR-51	3.410E-02		1.206E-01	1.996E-01	1.285E-02	0.171
MN-52	2.970E-02		4.073E-02	7.415E-02	5.464E-03	0.401
MN-54	-1.559E-04		1.595E-02	2.619E-02	2.683E-03	-0.006
CO-56	-9.019E-03		1.691E-02	2.602E-02	2.716E-03	-0.347
CO-57	3.359E-03		9.650E-03	1.594E-02	9.440E-04	0.211
CO-58	2.264E-03		1.550E-02	2.597E-02	2.564E-03	0.087
FE-59	-2.510E-02		3.288E-02	4.910E-02	4.042E-03	-0.511
CO-60	-5.181E-03		1.381E-02	2.090E-02	1.579E-03	-0.248
ZN-65	7.632E-03		3.377E-02	5.773E-02	4.066E-03	0.132

Sample ID : G1201870087 Acquisition date : 6-JUL-2009 13:25:36

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	-3.328E-01		5.075E-01	7.143E-01	5.675E-02	-0.466
AS-73	-5.026E-01		5.357E-01	7.856E-01	6.228E-02	-0.640
AS-74	2.658E-04		3.333E-02	5.397E-02	3.878E-03	0.005
SE-75	1.434E-03		1.682E-02	2.770E-02	1.584E-03	0.052
BR-77	-1.810E-01		4.970E-01	7.827E-01	5.222E-02	-0.231
SR-82	-2.623E-02		1.281E-01	2.069E-01	1.927E-02	-0.127
RB-83	-6.830E-03		2.835E-02	4.527E-02	3.020E-03	-0.151
RB-84	-1.078E-03		2.971E-02	4.173E-02	4.600E-03	-0.026
KR-85	-4.327E+00		5.120E+00	7.980E+00	5.287E-01	-0.542
SR-85	-2.049E-02		2.425E-02	3.779E-02	2.504E-03	-0.542
RB-86	-1.104E-01		2.502E-01	3.663E-01	2.916E-02	-0.301
Y-88	-1.689E-03		1.963E-02	3.168E-02	1.805E-03	-0.053
ZR-88	6.353E-03		1.105E-02	1.947E-02	1.120E-03	0.326
Y-91	3.738E+00		5.820E+00	1.046E+01	6.184E-01	0.357
NB-94	3.242E-03		1.448E-02	2.469E-02	2.026E-03	0.131
NB-95	-8.236E-03		1.400E-02	2.142E-02	1.960E-03	-0.384
NB-95M	-7.354E-02		4.598E-02	6.612E-02	4.851E-03	-1.112
ZR-95	-5.545E-03		2.601E-02	4.205E-02	4.137E-03	-0.132
NB-97	-1.029E-06		1.153E-05	Half-Life too short		
ZR-97	-2.713E-03		3.769E-04	Half-Life too short		
MO-99	2.998E-01		6.557E-01	1.146E+00	1.749E-01	0.262
TC-99M	2.895E+00		7.860E+00	Half-Life too short		
RH-101	7.049E-03		1.493E-02	2.515E-02	1.352E-03	0.280
RH-102	-7.315E-03		1.232E-02	1.911E-02	1.214E-03	-0.383
RU-103	1.062E-02		1.567E-02	2.730E-02	3.544E-03	0.389
RH-106	-4.287E-03		1.366E-01	2.193E-01	2.759E-02	-0.020
RU-106	-4.287E-03		1.366E-01	2.193E-01	1.614E-02	-0.020
AG-108M	-5.067E-03		1.391E-02	2.234E-02	1.460E-03	-0.227
CD-109	3.169E-02		3.065E-01	5.056E-01	4.674E-02	0.063
AG-110M	-3.820E-04		1.380E-02	2.310E-02	1.822E-03	-0.017
IN-111	-2.479E-02		7.775E-02	1.111E-01	6.211E-03	-0.223
IN-113M	1.257E-02		1.614E-02	2.892E-02	1.774E-03	0.435
SN-113	1.257E-02		1.614E-02	2.892E-02	1.774E-03	0.435
IN-114M	4.414E-02		5.960E-02	9.526E-02	5.086E-03	0.463
CD-115	-2.113E-01		4.307E-01	6.661E-01	4.477E-02	-0.317
SN-117M	7.000E-03		1.488E-02	2.435E-02	1.294E-03	0.287
SB-122	2.531E-03		1.172E-01	1.911E-01	1.332E-02	0.013
I-123	-1.512E-05		8.169E-05	Half-Life too short		
TE-123M	-1.030E-03		1.113E-02	1.756E-02	9.474E-04	-0.059
I-124	-8.954E-02		9.298E-02	1.358E-01	9.822E-03	-0.659
SB-124	2.377E-02		3.042E-02	5.802E-02	4.003E-03	0.410
SB-125	-3.940E-02		3.698E-02	5.486E-02	3.428E-03	-0.718
TE-125M	-1.166E-01		3.498E+00	5.639E+00	4.948E-01	-0.021
I-126	-3.616E-03		4.806E-02	7.996E-02	6.147E-03	-0.045
SB-126	7.886E-04		3.913E-02	6.531E-02	5.528E-03	0.012
SN-126	-1.707E-02		3.218E-02	5.072E-02	4.673E-03	-0.337
SB-127	1.158E-02		1.481E-01	2.497E-01	2.246E-02	0.046
XE-127	-1.718E-02		1.664E-02	2.567E-02	1.386E-03	-0.669

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	-2.756E-02		2.495E-02	3.787E-02	2.424E-03	-0.728
TE-132	3.152E-02		5.503E-02	9.459E-02	1.235E-02	0.333
BA-133	-8.799E-03		2.170E-02	2.849E-02	3.291E-03	-0.309
I-133	1.945E-06		2.835E-06	Half-Life too short		
CS-134	3.434E-04		1.647E-02	2.726E-02	2.636E-03	0.013
CS-135	-2.412E-02		6.014E-02	9.469E-02	7.158E-03	-0.255
I-135	-1.341E+00		5.238E+00	Half-Life too short		
CS-136	5.109E-03		2.960E-02	5.055E-02	4.528E-03	0.101
BA-137M	1.064E-03		1.395E-02	2.359E-02	1.798E-03	0.045
CS-137	1.124E-03		1.475E-02	2.494E-02	1.906E-03	0.045
CE-139	-8.876E-03		1.113E-02	1.775E-02	9.319E-04	-0.500
BA-140	4.370E-02		7.132E-02	1.217E-01	3.982E-02	0.359
LA-140	-5.106E-03		2.500E-02	4.000E-02	2.744E-03	-0.128
CE-141	1.119E-02		2.337E-02	3.835E-02	2.189E-03	0.292
CE-143	3.604E-01		1.226E+00	2.032E+00	4.150E-01	0.177
CE-144	-1.194E-02		8.547E-02	1.348E-01	1.906E-02	-0.089
PM-144	2.451E-03		1.607E-02	2.561E-02	2.079E-03	0.096
PR-144	1.655E-01		1.085E+00	1.729E+00	1.403E-01	0.096
PM-146	1.586E-03		1.822E-02	3.043E-02	2.707E-03	0.052
ND-147	4.044E-02		1.378E-01	2.324E-01	3.242E-02	0.174
PM-149	7.595E-01		3.481E+00	5.763E+00	8.138E-01	0.132
EU-152	-2.461E-02		4.304E-02	6.516E-02	4.252E-03	-0.378
GD-153	-7.752E-03		3.168E-02	5.059E-02	3.955E-03	-0.153
EU-154	1.756E-02		3.894E-02	6.887E-02	6.879E-03	0.255
EU-155	-1.426E-02		4.477E-02	7.071E-02	5.055E-03	-0.202
TB-160	6.929E-03		5.540E-02	9.204E-02	1.011E-02	0.075
HO-166M	-1.284E-03		2.550E-02	4.229E-02	3.525E-03	-0.030
TM-171	-9.000E+00		1.468E+01	2.256E+01	1.804E+00	-0.399
LU-176	4.282E-03		1.039E-02	1.739E-02	1.001E-03	0.246
LU-177	-7.215E-02		1.883E-01	3.044E-01	1.651E-02	-0.237
LU-177M	-2.536E-02		7.021E-02	1.133E-01	6.693E-03	-0.224
HF-181	3.258E-03		1.490E-02	2.512E-02	1.608E-03	0.130
W-181	-1.319E-01		1.894E-01	2.902E-01	2.302E-02	-0.454
TA-182	-1.774E-02		5.923E-02	9.304E-02	5.692E-03	-0.191
RE-183	8.563E-03		4.204E-02	6.800E-02	3.589E-03	0.126
RE-184	-1.427E-02		9.478E-02	1.536E-01	8.628E-03	-0.093
OS-185	6.745E-03		1.818E-02	3.039E-02	2.285E-03	0.222
RE-188	-2.745E-03		5.842E-02	9.880E-02	5.287E-03	-0.028
W-188	-1.670E-01		2.929E+00	4.732E+00	2.710E-01	-0.035
IR-192	-2.837E-03		1.296E-02	1.930E-02	1.119E-03	-0.147
AU-195	-5.052E-02		8.761E-02	1.357E-01	1.038E-02	-0.372
TL-200	4.063E-01		1.508E+00	2.597E+00	1.500E-01	0.156
TL-201	-2.991E-01		4.997E-01	8.092E-01	4.248E-02	-0.370
TL-202	7.722E-03		1.905E-02	3.279E-02	1.999E-03	0.235
HG-203	1.255E-02		1.465E-02	2.551E-02	1.547E-03	0.492
BI-207	1.256E-03		2.111E-02	3.552E-02	2.932E-03	0.035
TL-207	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
TL-208	-3.275E-03		1.825E-02	2.891E-02	2.266E-03	-0.113

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	-9.936E-01		3.070E+00	4.793E+00	5.406E-01	-0.207
BI-210	-1.172E+01		3.494E+00	4.627E+00	3.580E-01	-2.534
PB-210	-1.172E+01		3.494E+00	4.627E+00	3.580E-01	-2.534
PO-210	-1.172E+01		3.464E+00	4.627E+00	3.078E-01	-2.534
BI-211	2.839E-02		1.199E-01	1.791E-01	1.149E-02	0.159
PB-211	5.489E-02		3.752E-01	6.327E-01	3.945E-01	0.087
BI-212	1.833E-02		9.898E-02	1.685E-01	1.678E-02	0.109
PB-212	1.196E-02		2.678E-02	4.495E-02	3.212E-03	0.266
PO-212	1.196E-02		2.678E-02	4.495E-02	3.212E-03	0.266
BI-214	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
PB-214	2.440E-02	+	5.476E-02	6.300E-02	5.211E-03	0.387
PO-214	2.440E-02	+	5.476E-02	6.300E-02	5.211E-03	0.387
PO-215	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
PO-216	1.196E-02		2.678E-02	4.495E-02	3.212E-03	0.266
PO-218	2.440E-02	+	5.476E-02	6.300E-02	5.211E-03	0.387
RN-219	-2.799E-02		1.634E-01	2.689E-01	3.661E-02	-0.104
RN-220	-4.851E+00		1.041E+01	1.603E+01	1.102E+00	-0.303
RA-223	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
RA-224	-2.880E-02		2.845E-01	4.651E-01	2.591E-02	-0.062
RA-226	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
AC-227	-8.167E-03		1.547E-01	2.524E-01	3.506E-02	-0.032
TH-227	-8.167E-03		1.547E-01	2.524E-01	4.251E-02	-0.032
AC-228	3.833E-02		6.724E-02	1.194E-01	1.581E-02	0.321
RA-228	3.833E-02		6.724E-02	1.194E-01	1.581E-02	0.321
TH-228	1.134E-02		2.674E-02	4.482E-02	3.202E-03	0.253
TH-229	-5.297E-02		1.781E-01	2.907E-01	1.557E-02	-0.182
TH-230	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
PA-231	2.127E-02		6.326E-01	1.032E+00	1.418E-01	0.021
TH-231	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
U-231	-8.062E-02		1.368E-01	2.134E-01	1.710E-02	-0.378
TH-232	3.833E-02		6.724E-02	1.194E-01	1.581E-02	0.321
PA-233	-1.502E-02		2.497E-02	3.781E-02	2.316E-03	-0.397
PA-234	-3.346E-02		1.266E-01	1.982E-01	3.909E-02	-0.169
PA-234M	2.319E+00		3.207E+00	5.445E+00	6.489E-01	0.426
TH-234	-4.240E-01		7.143E-01	1.101E+00	1.941E-01	-0.385
U-234	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
U-235	-7.464E-02		9.983E-02	1.437E-01	2.328E-02	-0.519
NP-236	-3.406E-02		3.371E-02	4.980E-02	2.638E-03	-0.684
NP-237	-6.451E-02		9.773E-02	1.511E-01	3.409E-02	-0.427
U-238	-4.240E-01		7.143E-01	1.101E+00	1.941E-01	-0.385
NP-239	-3.486E-04		7.464E-02	1.201E-01	7.431E-03	-0.003
AM-241	2.624E-02		7.863E-02	1.345E-01	1.116E-02	0.195
AM-243	-1.768E-02		3.181E-02	4.431E-02	3.697E-03	-0.399
CM-243	-2.085E-03		3.984E-02	6.433E-02	4.605E-03	-0.032
CM-247	3.112E-03		1.470E-02	2.504E-02	1.459E-03	0.124
CF-249	-7.719E-03		1.591E-02	2.551E-02	1.466E-03	-0.303
CF-251	-1.604E-02		5.017E-02	8.255E-02	4.360E-03	-0.194
ANH-511	-1.871E-02		2.620E-02	4.750E-02	3.137E-03	-0.394

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201870087          *
* Acquisition date  :  6-JUL-2009 13:25:36 Detector SN#     :               *
* Detector ID       : GAM18                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:00.74      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201870087          Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.4500E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	5.849E-03	1.151E-01	1.005E-01	5.873E-02 NOT IDENT.
NA-22	4.793E-03	1.378E-02	1.233E-02	7.030E-03 NOT IDENT.
NA-24	1.158E+01	6.098E+01	0.000E+00	3.111E+01 SHORT HLIF
AL-26	7.324E-03	1.517E-02	1.386E-02	7.738E-03 NOT IDENT.
K-40	4.765E-02	1.956E-01	1.794E-01	9.980E-02 NOT IDENT.
TI-44	-9.543E-03	1.536E-02	1.304E-02	7.835E-03 NOT IDENT.
SC-46	1.634E-02	1.564E-02	1.480E-02	7.982E-03 NOT IDENT.
V-48	-1.186E-02	2.051E-02	1.574E-02	1.046E-02 NOT IDENT.
CR-51	3.410E-02	1.182E-01	1.039E-01	6.031E-02 NOT IDENT.
MN-52	2.970E-02	3.992E-02	3.731E-02	2.036E-02 NOT IDENT.
MN-54	-1.559E-04	1.563E-02	1.334E-02	7.974E-03 NOT IDENT.
CO-56	-9.019E-03	1.658E-02	1.326E-02	8.457E-03 NOT IDENT.
CO-57	3.359E-03	9.457E-03	8.472E-03	4.825E-03 NOT IDENT.
CO-58	2.264E-03	1.519E-02	1.324E-02	7.748E-03 NOT IDENT.
FE-59	-2.510E-02	3.222E-02	2.486E-02	1.644E-02 NOT IDENT.
CO-60	-5.181E-03	1.353E-02	1.054E-02	6.905E-03 NOT IDENT.
ZN-65	7.632E-03	3.310E-02	2.922E-02	1.689E-02 NOT IDENT.
GE-68	-3.328E-01	4.973E-01	3.618E-01	2.537E-01 NOT IDENT.
AS-73	-5.026E-01	5.249E-01	4.249E-01	2.678E-01 NOT IDENT.
AS-74	2.658E-04	3.266E-02	2.771E-02	1.666E-02 NOT IDENT.
SE-75	1.434E-03	1.648E-02	1.448E-02	8.410E-03 NOT IDENT.
BR-77	-1.810E-01	4.871E-01	4.031E-01	2.485E-01 NOT IDENT.
SR-82	-2.623E-02	1.255E-01	1.056E-01	6.404E-02 NOT IDENT.
RB-83	-6.830E-03	2.778E-02	2.332E-02	1.418E-02 NOT IDENT.
RB-84	-1.078E-03	2.912E-02	2.124E-02	1.485E-02 NOT IDENT.
KR-85	-4.327E+00	5.018E+00	4.111E+00	2.560E+00 NOT IDENT.

SR-85	-2.049E-02	2.376E-02	1.947E-02	1.212E-02	NOT IDENT.
RB-86	-1.104E-01	2.452E-01	1.855E-01	1.251E-01	NOT IDENT.
Y-88	-1.689E-03	1.924E-02	1.585E-02	9.815E-03	NOT IDENT.
ZR-88	6.353E-03	1.083E-02	1.009E-02	5.525E-03	NOT IDENT.
Y-91	3.738E+00	5.703E+00	5.285E+00	2.910E+00	NOT IDENT.
NB-94	3.242E-03	1.419E-02	1.263E-02	7.240E-03	NOT IDENT.
NB-95	-8.236E-03	1.372E-02	1.094E-02	6.998E-03	NOT IDENT.
NB-95M	-7.354E-02	4.506E-02	3.466E-02	2.299E-02	NOT IDENT.
ZR-95	-5.545E-03	2.549E-02	2.147E-02	1.301E-02	NOT IDENT.
NB-97	-1.029E+00	2.259E+01	0.000E+00	1.153E+01	SHORT HLIF
ZR-97	-2.713E+03	7.388E+02	0.000E+00	3.769E+02	SHORT HLIF
MO-99	2.998E-01	6.426E-01	5.857E-01	3.279E-01	NOT IDENT.
TC-99M	2.895E+06	1.541E+07	0.000E+00	7.860E+06	SHORT HLIF
RH-101	7.049E-03	1.463E-02	1.323E-02	7.463E-03	NOT IDENT.
RH-102	-7.315E-03	1.208E-02	9.864E-03	6.161E-03	NOT IDENT.
RU-103	1.062E-02	1.536E-02	1.407E-02	7.834E-03	NOT IDENT.
RH-106	-4.287E-03	1.338E-01	1.125E-01	6.828E-02	NOT IDENT.
RU-106	-4.287E-03	1.338E-01	1.125E-01	6.828E-02	NOT IDENT.
AG-108M	-5.067E-03	1.363E-02	1.155E-02	6.956E-03	NOT IDENT.
CD-109	3.169E-02	3.004E-01	2.706E-01	1.532E-01	NOT IDENT.
AG-110M	-3.820E-04	1.352E-02	1.183E-02	6.900E-03	NOT IDENT.
IN-111	-2.479E-02	7.620E-02	5.820E-02	3.888E-02	NOT IDENT.
IN-113M	1.257E-02	1.582E-02	1.499E-02	8.069E-03	NOT IDENT.
SN-113	1.257E-02	1.582E-02	1.499E-02	8.069E-03	NOT IDENT.
IN-114M	4.414E-02	5.840E-02	5.016E-02	2.980E-02	NOT IDENT.
CD-115	-2.113E-01	4.220E-01	3.429E-01	2.153E-01	NOT IDENT.
SN-117M	7.000E-03	1.458E-02	1.288E-02	7.438E-03	NOT IDENT.
SB-122	2.531E-03	1.149E-01	9.824E-02	5.861E-02	NOT IDENT.
I-123	-1.512E+01	1.601E+02	0.000E+00	8.169E+01	SHORT HLIF
TE-123M	-1.030E-03	1.091E-02	9.282E-03	5.564E-03	NOT IDENT.
I-124	-8.954E-02	9.112E-02	6.973E-02	4.649E-02	NOT IDENT.
SB-124	2.377E-02	2.981E-02	2.908E-02	1.521E-02	NOT IDENT.
SB-125	-3.940E-02	3.624E-02	2.838E-02	1.849E-02	NOT IDENT.
TE-125M	-1.166E-01	3.428E+00	3.005E+00	1.749E+00	NOT IDENT.
I-126	-3.616E-03	4.710E-02	4.095E-02	2.403E-02	NOT IDENT.
SB-126	7.886E-04	3.834E-02	3.339E-02	1.956E-02	NOT IDENT.
SN-126	-1.707E-02	3.154E-02	2.715E-02	1.609E-02	NOT IDENT.
SB-127	1.158E-02	1.451E-01	1.278E-01	7.404E-02	NOT IDENT.
XE-127	-1.718E-02	1.630E-02	1.350E-02	8.318E-03	NOT IDENT.
I-131	-2.756E-02	2.445E-02	1.966E-02	1.248E-02	NOT IDENT.
TE-132	3.152E-02	5.393E-02	4.961E-02	2.752E-02	NOT IDENT.
BA-133	-8.799E-03	2.126E-02	1.480E-02	1.085E-02	NOT IDENT.
I-133	1.945E+00	5.557E+00	0.000E+00	2.835E+00	SHORT HLIF
CS-134	3.434E-04	1.614E-02	1.390E-02	8.233E-03	NOT IDENT.
CS-135	-2.412E-02	5.893E-02	4.949E-02	3.007E-02	NOT IDENT.
I-135	-1.341E+06	1.027E+07	0.000E+00	5.238E+06	SHORT HLIF
CS-136	5.109E-03	2.901E-02	2.562E-02	1.480E-02	NOT IDENT.
BA-137M	1.064E-03	1.367E-02	1.209E-02	6.975E-03	NOT IDENT.
CS-137	1.124E-03	1.445E-02	1.278E-02	7.373E-03	NOT IDENT.
CE-139	-8.876E-03	1.091E-02	9.376E-03	5.567E-03	NOT IDENT.
BA-140	4.370E-02	6.990E-02	6.265E-02	3.566E-02	NOT IDENT.
LA-140	-5.106E-03	2.450E-02	2.008E-02	1.250E-02	NOT IDENT.
CE-141	1.119E-02	2.290E-02	2.031E-02	1.168E-02	NOT IDENT.
CE-143	3.604E-01	1.202E+00	1.060E+00	6.131E-01	NOT IDENT.
CE-144	-1.194E-02	8.376E-02	7.152E-02	4.274E-02	NOT IDENT.
PM-144	2.451E-03	1.575E-02	1.311E-02	8.036E-03	NOT IDENT.
PR-144	1.655E-01	1.063E+00	8.846E-01	5.424E-01	NOT IDENT.
PM-146	1.586E-03	1.786E-02	1.572E-02	9.110E-03	NOT IDENT.
ND-147	4.044E-02	1.350E-01	1.196E-01	6.889E-02	NOT IDENT.
PM-149	7.595E-01	3.412E+00	3.008E+00	1.741E+00	NOT IDENT.
EU-152	-2.461E-02	4.218E-02	3.387E-02	2.152E-02	NOT IDENT.
GD-153	-7.752E-03	3.105E-02	2.702E-02	1.584E-02	NOT IDENT.
EU-154	1.756E-02	3.816E-02	3.475E-02	1.947E-02	NOT IDENT.
EU-155	-1.426E-02	4.388E-02	3.771E-02	2.239E-02	NOT IDENT.
TB-160	6.929E-03	5.429E-02	4.684E-02	2.770E-02	NOT IDENT.
HO-166M	-1.284E-03	2.499E-02	2.163E-02	1.275E-02	FAIL ABUN
TM-171	-9.000E+00	1.439E+01	1.215E+01	7.340E+00	NOT IDENT.
LU-176	4.282E-03	1.018E-02	9.065E-03	5.193E-03	NOT IDENT.
LU-177	-7.215E-02	1.845E-01	1.600E-01	9.414E-02	NOT IDENT.
LU-177M	-2.536E-02	6.880E-02	5.867E-02	3.510E-02	NOT IDENT.
HF-181	3.258E-03	1.461E-02	1.296E-02	7.452E-03	NOT IDENT.
W-181	-1.319E-01	1.857E-01	1.563E-01	9.472E-02	NOT IDENT.
TA-182	-1.774E-02	5.805E-02	4.699E-02	2.962E-02	NOT IDENT.
RE-183	8.563E-03	4.120E-02	3.593E-02	2.102E-02	NOT IDENT.
RE-184	-1.427E-02	9.288E-02	8.039E-02	4.739E-02	NOT IDENT.
OS-185	6.745E-03	1.782E-02	1.558E-02	9.090E-03	NOT IDENT.
RE-188	-2.745E-03	5.725E-02	5.225E-02	2.921E-02	NOT IDENT.
W-188	-1.670E-01	2.870E+00	2.469E+00	1.465E+00	NOT IDENT.

IR-192	-2.837E-03	1.271E-02	1.005E-02	6.482E-03	NOT IDENT.
AU-195	-5.052E-02	8.586E-02	7.246E-02	4.381E-02	NOT IDENT.
TL-200	4.063E-01	1.478E+00	1.348E+00	7.542E-01	NOT IDENT.
TL-201	-2.991E-01	4.897E-01	4.273E-01	2.498E-01	NOT IDENT.
TL-202	7.722E-03	1.867E-02	1.695E-02	9.527E-03	NOT IDENT.
HG-203	1.255E-02	1.436E-02	1.332E-02	7.326E-03	NOT IDENT.
BI-207	1.256E-03	2.069E-02	1.800E-02	1.056E-02	NOT IDENT.
TL-207	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
TL-208	-3.275E-03	1.788E-02	1.485E-02	9.124E-03	NOT IDENT.
PO-209	-9.936E-01	3.009E+00	2.438E+00	1.535E+00	NOT IDENT.
BI-210	-1.172E+01	3.425E+00	2.509E+00	1.747E+00	NOT IDENT.
PB-210	-1.172E+01	3.425E+00	2.509E+00	1.747E+00	NOT IDENT.
PO-210	-1.172E+01	3.394E+00	2.509E+00	1.732E+00	NOT IDENT.
BI-211	2.839E-02	1.175E-01	9.304E-02	5.996E-02	NOT IDENT.
PB-211	5.489E-02	3.677E-01	3.277E-01	1.876E-01	NOT IDENT.
BI-212	1.833E-02	9.700E-02	8.614E-02	4.949E-02	NOT IDENT.
PB-212	1.196E-02	2.625E-02	2.356E-02	1.339E-02	NOT IDENT.
PO-212	1.196E-02	2.625E-02	2.356E-02	1.339E-02	NOT IDENT.
BI-214	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
PB-214	2.440E-02	5.367E-02	3.273E-02	2.738E-02	FAIL ABUN
PO-214	2.440E-02	5.367E-02	3.273E-02	2.738E-02	FAIL ABUN
PO-215	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
PO-216	1.196E-02	2.625E-02	2.356E-02	1.339E-02	NOT IDENT.
PO-218	2.440E-02	5.367E-02	3.273E-02	2.738E-02	FAIL ABUN
RN-219	-2.799E-02	1.601E-01	1.393E-01	8.170E-02	NOT IDENT.
RN-220	-4.851E+00	1.021E+01	8.248E+00	5.207E+00	NOT IDENT.
RA-223	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
RA-224	-2.880E-02	2.788E-01	2.437E-01	1.422E-01	NOT IDENT.
RA-226	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
AC-227	-8.167E-03	1.516E-01	1.321E-01	7.735E-02	NOT IDENT.
TH-227	-8.167E-03	1.516E-01	1.321E-01	7.735E-02	NOT IDENT.
AC-228	3.833E-02	6.589E-02	6.070E-02	3.362E-02	NOT IDENT.
RA-228	3.833E-02	6.589E-02	6.070E-02	3.362E-02	NOT IDENT.
TH-228	1.134E-02	2.620E-02	2.349E-02	1.337E-02	NOT IDENT.
TH-229	-5.297E-02	1.745E-01	1.530E-01	8.904E-02	NOT IDENT.
TH-230	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
PA-231	2.127E-02	6.200E-01	5.386E-01	3.163E-01	NOT IDENT.
TH-231	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
U-231	-8.062E-02	1.340E-01	1.140E-01	6.839E-02	NOT IDENT.
TH-232	3.833E-02	6.589E-02	6.070E-02	3.362E-02	NOT IDENT.
PA-233	-1.502E-02	2.447E-02	1.970E-02	1.249E-02	NOT IDENT.
PA-234	-3.346E-02	1.241E-01	1.007E-01	6.332E-02	FAIL ABUN
PA-234M	2.319E+00	3.143E+00	2.763E+00	1.603E+00	NOT IDENT.
TH-234	-4.240E-01	7.001E-01	5.933E-01	3.572E-01	NOT IDENT.
U-234	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
U-235	-7.464E-02	9.783E-02	7.614E-02	4.991E-02	FAIL ABUN
NP-236	-3.406E-02	3.304E-02	2.632E-02	1.686E-02	NOT IDENT.
NP-237	-6.451E-02	9.577E-02	8.091E-02	4.886E-02	NOT IDENT.
U-238	-4.240E-01	7.001E-01	5.933E-01	3.572E-01	NOT IDENT.
NP-239	-3.486E-04	7.315E-02	6.388E-02	3.732E-02	NOT IDENT.
AM-241	2.624E-02	7.706E-02	7.258E-02	3.932E-02	NOT IDENT.
AM-243	-1.768E-02	3.117E-02	2.380E-02	1.590E-02	NOT IDENT.
CM-243	-2.085E-03	3.904E-02	3.432E-02	1.992E-02	NOT IDENT.
CM-247	3.112E-03	1.441E-02	1.297E-02	7.350E-03	NOT IDENT.
CF-249	-7.719E-03	1.559E-02	1.322E-02	7.956E-03	NOT IDENT.
CF-251	-1.604E-02	4.917E-02	4.354E-02	2.509E-02	NOT IDENT.
ANH-511	-1.871E-02	2.568E-02	2.448E-02	1.310E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	235.6872
46.50	235.6872
46.50	235.6872
48.70	113.5499
49.72	101.4476
51.35	84.0305
52.39	95.2561
52.97	107.2877
53.15	108.2711
53.44	108.3906
54.07	94.0405
56.28	93.8927
56.28	93.8938
57.37	88.7209
57.53	88.7722
57.53	88.7727
57.60	93.4191
57.98	90.7682
57.98	90.7682
59.32	88.4092
59.32	88.4092
59.40	88.4341
59.54	88.4776
59.72	94.1250
60.01	98.8849
61.10	122.6702
61.14	122.6872
61.30	117.1325
63.00	103.6755
63.29	106.6071
63.29	106.6071
63.58	106.7108
64.28	99.3884
65.12	117.6998
65.20	117.7309
65.20	117.7309
66.05	125.6762
66.72	112.5912
66.83	112.6320
66.91	112.6608
67.20	112.7664
67.20	112.7664
67.75	110.0937
67.85	110.1294
68.90	123.9498
68.90	123.9498
69.30	118.3342
69.67	115.5835
70.82	130.4977
70.82	130.4977
70.83	130.5018
72.80	116.7059
72.87	116.7310
72.87	116.7310
74.67	125.1901
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.97	126.2810
75.28	118.5592
75.70	130.4795
77.11	115.2588
77.11	115.2588
77.11	115.2588

77.11	115.2588
77.11	115.2588
77.11	115.2588
78.38	120.6280
79.62	126.0194
79.80	129.0624
79.80	129.0624
80.11	129.1761
80.18	129.2019
80.30	116.3210
80.30	116.3210
80.57	116.4103
81.00	114.5590
81.07	114.5818
81.07	114.5818
81.07	114.5818
81.07	114.5818
82.60	110.0694
83.37	101.2784
83.78	107.4174
83.78	107.4174
83.78	107.4174
83.78	107.4174
84.21	106.5391
84.40	106.5941
84.90	109.7606
85.43	110.9271
86.29	121.2927
86.50	121.3611
86.54	121.3739
86.59	121.3904
86.72	116.3728
86.79	116.3939
86.94	116.4412
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.57	117.6514
87.88	98.4618
88.03	98.5013
88.36	94.5217
88.47	94.5491
89.95	167.3808
91.11	132.0562
92.29	111.9217
92.38	111.9478
92.38	111.9478
93.35	100.8990
94.00	103.1280
94.67	127.0596
94.67	127.0615
94.90	154.0087
94.90	154.0087
94.90	154.0087
94.90	154.0087
95.87	121.2263
95.87	121.2263
96.73	85.1443
97.43	94.6519
98.44	100.0996
98.44	100.0996
98.88	92.9003
99.55	93.0515
99.55	93.0515
99.86	82.6581
100.00	82.6862
100.10	82.7067
103.18	83.3155
103.76	89.7656
105.00	93.2032
105.31	96.4505
108.00	77.8521
109.28	91.9830
111.00	105.2236
111.00	105.2236

111.76	88.1931
112.95	79.7986
115.19	81.2740
116.30	96.6772
117.00	80.5043
117.00	80.5043
117.66	84.9761
121.11	75.7211
121.62	77.9990
121.78	78.0250
122.06	73.6721
122.32	73.7117
122.32	73.7117
122.32	73.7117
122.32	73.7117
123.07	90.3548
127.23	78.9005
129.76	91.5866
131.20	77.2867
133.02	87.6794
133.54	100.1449
135.34	94.8486
136.00	98.3600
136.25	104.0625
136.48	99.5819
140.51	100.3428
140.51	0.0000
142.18	124.6752
142.65	122.4942
143.76	117.0089
144.24	120.5560
144.24	120.5560
144.24	120.5560
144.24	120.5560
145.22	101.2183
145.44	101.2594
147.16	109.6543
152.43	92.0453
152.70	87.4260
153.22	91.8814
154.21	81.5212
154.21	81.5212
154.21	81.5212
154.21	81.5212
155.03	86.9045
156.02	97.6052
158.56	70.6531
159.00	0.0000
159.00	83.9629
160.31	105.4079
161.27	101.1425
162.32	82.6564
162.64	80.0327
163.35	80.1274
163.89	85.5461
165.85	103.7037
167.43	105.7654
171.28	91.0936
171.86	93.8866
172.10	89.4068
176.55	98.2244
176.60	98.2318
181.06	98.1813
184.41	87.4535
185.71	87.6252
186.00	87.6637
190.27	54.9774
192.34	76.3833
193.63	76.5278
197.04	81.5957
198.01	78.8916
198.60	79.8983
200.40	98.9518
201.83	126.5369
202.84	114.4234
205.31	87.3008
208.36	95.2942
208.81	93.4459

209.75	90.7020
209.75	90.7020
210.97	81.2899
215.65	76.0310
216.55	89.6127
218.09	78.2104
222.10	73.7717
223.80	100.2017
226.40	80.0412
227.00	78.1494
227.08	78.1573
227.20	79.1467
228.16	76.3093
228.18	76.3111
228.18	76.3111
231.56	79.5879
235.69	119.5100
236.00	108.6874
236.00	108.6874
238.60	73.3536
238.63	73.3564
238.63	73.3564
238.63	73.3564
239.00	75.3732
240.98	109.3588
241.98	124.4240
241.98	124.4240
241.98	124.4240
244.69	99.8680
245.39	84.9598
247.94	77.2003
248.90	85.3191
249.79	85.4099
252.40	82.6513
252.85	82.6951
252.85	82.6951
254.15	0.0000
256.20	75.9341
256.20	75.9341
260.50	80.3839
260.90	79.4032
262.80	66.3142
264.65	69.5211
268.24	73.9105
268.79	77.0382
269.46	69.8998
269.46	69.8998
269.46	69.8998
269.46	69.8998
271.23	64.8890
273.65	73.3260
276.40	75.6210
277.35	69.4781
277.60	69.4966
277.60	69.4966
278.00	66.4141
278.60	62.3044
279.20	62.3447
279.53	58.2089
280.46	70.7548
281.68	78.1414
283.67	71.0007
284.30	66.8691
285.00	61.6918
285.90	65.9377
286.10	65.9512
286.10	65.9512
287.40	82.8164
288.45	0.0000
290.67	79.9475
290.80	79.9591
291.72	81.0899
293.26	79.1113
293.70	72.8156
295.21	85.6151
295.21	85.6151
295.21	85.6151
295.96	80.3928

296.50	81.4964
297.23	66.7289
298.57	76.3682
299.80	76.4648
299.80	76.4648
300.09	75.4256
300.09	75.4256
300.09	75.4256
300.10	75.4256
300.12	75.4277
301.29	69.1359
302.84	71.3766
303.76	73.5768
303.91	68.2549
304.40	65.0880
304.40	65.0880
304.84	67.2528
306.84	63.1097
308.46	58.9276
311.98	63.4365
316.51	48.6015
318.01	60.5715
319.02	54.1351
319.41	48.7402
320.08	54.1908
323.87	67.4454
323.87	67.4454
323.87	67.4454
323.87	67.4454
325.23	63.1764
328.77	66.6703
333.44	71.3586
334.20	88.9868
334.20	88.9868
334.30	88.9954
338.28	79.4026
338.28	79.4026
338.28	79.4026
338.28	79.4026
338.32	79.4059
338.32	79.4059
338.32	79.4059
340.50	76.2521
340.57	76.2573
344.27	76.5184
345.85	81.4415
350.59	64.2463
351.07	69.6297
351.92	60.3034
351.92	60.3034
351.92	60.3034
355.39	0.0000
356.01	69.9401
364.48	74.0813
366.43	63.3486
367.43	56.1580
367.94	56.1830
369.80	58.9967
374.96	48.3198
383.85	44.0930
387.95	61.7583
388.63	67.3272
391.69	42.5332
391.69	42.5332
392.90	45.3525
398.62	47.4259
400.65	58.6811
401.10	56.8398
401.81	56.8722
402.60	53.1766
404.84	55.1425
410.95	57.2910
411.60	53.5620
413.65	62.1199
414.70	57.4615
415.30	57.4891
415.76	56.5671
417.63	0.0000

418.52	59.5239
423.70	42.6896
427.08	58.9704
427.89	62.8144
432.53	48.7108
433.93	60.2368
439.47	50.8883
439.56	50.8915
439.89	49.9440
443.98	53.9506
444.90	50.1312
445.03	50.1363
445.03	50.1363
445.03	50.1363
445.03	50.1363
453.90	52.4068
463.38	65.4722
468.07	51.9661
473.00	44.2771
475.06	58.1365
475.35	53.2209
476.78	55.2474
477.59	46.3947
477.96	45.4194
482.03	42.5785
484.57	50.5891
487.03	44.7138
490.36	54.7758
492.35	48.8666
497.08	46.0230
507.63	0.0000
510.53	0.0000
510.84	63.6168
511.00	65.6431
511.85	69.7223
511.85	69.7223
513.99	183.1520
513.99	183.1520
520.41	52.8404
520.65	52.8493
527.90	50.0348
528.96	0.0000
529.64	40.8906
529.87	0.0000
531.02	37.8573
537.32	36.9835
543.00	47.4263
546.56	0.0000
549.76	44.5222
552.65	34.2294
555.20	40.5168
563.23	42.8058
563.90	40.7339
568.70	46.0915
569.32	49.2525
569.50	49.2571
569.67	49.2628
573.80	44.1318
574.00	37.8316
574.64	42.0518
578.91	61.1308
579.30	66.4161
583.14	41.2090
585.48	52.9053
591.81	61.5995
592.07	64.7961
593.00	76.5211
595.88	59.6176
600.56	55.5090
602.52	0.0000
602.71	74.8176
602.71	74.8176
603.60	80.2020
604.41	87.7296
604.70	92.0238
609.31	55.7895
609.31	55.7895
609.31	55.7895

609.31	55.7895
610.33	65.4842
612.46	68.7875
614.37	78.5463
618.01	60.3791
621.84	44.3012
621.84	44.3012
631.29	43.4502
633.02	51.1022
633.10	50.0171
634.78	52.2410
635.90	59.8958
636.97	49.0353
645.85	41.6089
646.12	41.6154
656.30	40.3763
657.75	41.3260
657.90	0.0000
661.65	38.6521
661.65	38.6521
664.57	48.8507
666.33	41.5155
666.33	41.5155
675.00	42.6327
677.61	36.1943
685.20	41.9284
692.80	52.3815
695.00	45.8857
696.49	44.9834
696.49	44.9834
697.00	44.0577
697.49	45.0068
698.33	43.1493
698.50	43.1531
699.00	44.1027
702.63	45.1240
706.10	42.3779
706.58	0.0000
706.67	49.9269
709.31	44.3331
711.68	42.4969
713.82	43.4881
717.42	42.6196
720.50	40.7875
721.93	34.1719
722.20	37.0243
722.78	40.8339
722.78	40.8339
722.89	40.8357
722.95	40.8365
723.30	39.8945
724.18	45.6133
727.18	27.5987
733.00	34.3586
735.90	28.6725
739.58	27.7663
742.81	35.4817
744.21	32.6262
747.13	34.5945
751.79	33.7083
752.31	33.7168
753.82	35.6691
755.35	37.6249
756.15	36.6741
756.87	33.7902
763.93	33.9034
765.79	36.8419
766.41	35.8829
766.84	32.0097
768.36	26.2084
768.36	26.2084
768.36	26.2084
768.36	26.2084
776.49	38.9754
778.00	32.1769
778.57	30.2350
778.89	35.1167
783.80	32.2635

785.46	34.2452
792.07	27.4793
795.84	28.5097
796.30	26.5490
801.93	28.5888
805.60	33.5732
810.29	36.6123
810.76	34.6411
815.85	32.7355
817.79	25.8143
818.51	30.7881
819.60	27.8223
826.30	29.8981
828.27	30.9212
831.60	33.9633
831.96	33.9689
834.83	41.0133
836.80	0.0000
846.75	45.2481
848.13	46.2817
856.28	0.0000
856.80	48.4736
860.37	36.4109
867.32	48.6904
867.82	52.7596
871.10	38.6084
873.19	36.6086
874.81	41.7215
875.33	0.0000
876.40	36.6577
879.36	31.6055
880.27	27.5378
880.51	29.5806
881.50	26.5316
883.24	34.7201
884.67	43.9370
889.25	24.5698
896.60	32.8587
898.02	21.5764
899.00	23.6406
903.28	24.7114
911.07	24.7900
911.07	24.7900
911.07	24.7900
919.63	21.3218
920.93	23.1109
925.00	24.9292
925.24	27.0093
926.50	31.1804
934.06	29.1889
934.06	29.1889
934.06	29.1889
934.06	29.1889
935.52	22.9476
937.48	28.1849
944.10	31.3983
946.00	32.4689
949.00	28.3129
962.29	30.5671
964.01	30.5877
966.15	30.6131
968.20	34.8624
969.11	29.5911
969.11	29.5911
969.11	29.5911
977.42	25.4443
980.50	21.2284
983.50	31.8787
989.30	18.1043
996.32	45.9141
1001.03	21.3932
1001.68	28.8875
1004.76	42.8459
1021.30	0.0000
1024.50	0.0000
1034.80	22.7432
1037.82	26.9498
1038.57	25.0978

1038.76	0.0000
1045.16	27.9534
1046.59	30.7649
1048.07	27.9827
1050.47	26.1396
1050.47	26.1396
1063.62	28.1376
1076.63	26.3828
1077.35	27.3311
1085.78	26.4668
1099.22	35.1366
1112.02	34.3364
1112.84	35.3005
1115.52	27.6932
1120.29	21.9989
1120.29	21.9989
1120.29	21.9989
1120.29	21.9989
1120.51	24.8701
1121.28	27.7468
1124.00	0.0000
1129.67	26.8662
1131.51	0.0000
1147.95	0.0000
1167.94	23.3211
1173.22	34.0686
1175.09	26.2975
1177.93	18.5229
1189.05	14.6756
1204.90	18.6832
1205.75	21.6394
1213.00	18.7316
1221.42	22.7345
1230.97	16.8541
1235.34	15.8845
1236.41	0.0000
1238.11	20.8660
1238.11	20.8660
1238.11	20.8660
1238.11	20.8660
1238.25	20.8667
1246.25	21.9148
1260.41	0.0000
1271.85	19.0749
1274.45	13.0612
1274.54	14.0664
1291.56	31.3060
1298.22	0.0000
1312.09	26.4171
1325.50	20.4004
1325.50	20.4004
1332.49	16.3538
1333.61	16.3588
1360.21	21.6357
1362.66	0.0000
1365.15	8.2539
1368.21	11.3587
1368.53	0.0000
1376.25	17.5947
1377.67	17.6018
1377.67	17.6018
1377.67	17.6018
1377.67	17.6018
1384.27	19.7091
1394.10	22.8839
1395.20	22.8908
1407.95	18.7948
1434.06	12.6198
1436.60	16.8382
1457.56	0.0000
1460.81	13.7703
1489.15	18.1431
1509.49	18.7762
1596.49	16.3152
1620.62	15.4468
1678.03	0.0000
1691.02	6.8727
1691.02	6.8727

1706.46	0.0000
1750.46	0.0000
1764.49	12.9810
1764.49	12.9810
1764.49	12.9810
1764.49	12.9810
1770.23	15.9971
1771.40	14.2235
1791.20	0.0000
1808.65	10.0842
1836.01	18.2609

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201870087

Total Uranium Activity	-1.2958E+00	ug/g
Total Uranium Counting Unc.	2.0832E+00	ug/g
Total Uranium Tpu	1.0628E-06	ug/g
Total Uranium Mda	1.7653E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G1201870087      *
*   ANALYST       : MXR1                      DETECTOR   : GAM18            *
*   SAMPLE DATE   : 29-JUN-2009 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 13:25:36.18    SAMPLE ALQT:  145.000 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.313E-02
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 8.763E-02
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.767E-01
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.322E-01
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:27:50.13

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:26:00.
Sample ID         : G1201870088          Sample quantity  : 1.26580E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.58  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.38	81	457	1.63	91.94	87	10	1.12E-02	50.8	
2	3	74.92*	606	672	1.86	148.92	140	21	8.41E-02	10.1	2.85E+00
3	3	77.18*	890	471	1.40	153.42	140	21	1.24E-01	5.9	
4	0	87.37*	181	643	1.18	173.78	168	9	2.52E-02	26.6	
5	0	90.14	91	374	0.97	179.31	176	6	1.26E-02	35.6	
6	0	92.80*	245	561	1.54	184.63	182	12	3.40E-02	20.8	
7	0	186.06*	222	323	1.18	370.87	365	13	3.09E-02	18.3	
8	0	209.21	93	266	1.04	417.10	412	11	1.29E-02	35.5	
9	0	238.67*	844	372	1.30	475.95	471	9	1.17E-01	5.4	
10	0	241.94	111	261	1.75	482.48	480	8	1.54E-02	28.0	
11	0	270.02	81	181	1.43	538.60	534	11	1.13E-02	33.8	
12	0	295.45*	261	195	1.43	589.39	582	13	3.63E-02	12.8	
13	0	299.99	66	140	1.32	598.47	595	10	9.19E-03	35.5	
14	1	338.23	227	91	1.82	674.87	668	44	3.15E-02	11.1	1.72E+00
15	1	351.94*	451	94	1.73	702.28	668	44	6.27E-02	6.2	
16	0	408.77	24	68	1.41	815.86	814	7	3.39E-03	58.8	
17	0	510.91*	116	101	1.99	1020.04	1012	17	1.62E-02	24.4	
18	0	562.03	44	51	3.79	1122.24	1116	12	6.10E-03	35.9	
19	0	583.47*	285	75	1.49	1165.11	1157	15	3.96E-02	9.1	
20	0	609.47*	299	72	1.55	1217.10	1208	15	4.16E-02	8.5	
21	0	728.43	64	65	0.94	1455.06	1448	17	8.95E-03	31.0	
22	0	768.27	25	39	0.64	1534.77	1530	9	3.53E-03	48.2	
23	0	861.58	44	49	1.91	1721.49	1716	13	6.07E-03	37.8	
24	0	911.26	199	30	1.87	1820.93	1813	15	2.76E-02	9.3	
25	0	969.10	113	36	1.73	1936.71	1932	11	1.58E-02	14.1	
26	0	1120.81	44	49	2.31	2240.52	2234	13	6.05E-03	37.2	
27	0	1460.72	968	26	2.25	2921.67	2913	17	1.35E-01	3.4	
28	0	1763.87*	45	7	1.94	3529.77	3523	14	6.27E-03	20.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 15:27:53

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:26:00
Sample ID : G1201870088 Sample quantity : 126.58 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:09.58 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.695E+01	3.457E+00	6.906E-01	4.395E-02	53.508
CD-109	+	88.03	*	1.776E+00	9.556E-01	9.947E-01	8.243E-02	1.786
SN-126		64.28		6.646E-02	2.592E-01	4.254E-01	6.128E-02	0.156
	+	86.94		7.270E-01	4.893E-01	4.942E-01	2.040E-01	1.471
	+	87.57	*	1.749E-01	9.407E-02	9.780E-02	8.076E-03	1.788
TL-208		277.35		2.235E-01	4.555E-01	7.330E-01	7.764E-02	0.305
	+	510.84		7.652E-01	3.817E-01	2.771E-01	2.908E-02	2.761
	+	583.14	*	5.532E-01	1.090E-01	7.485E-02	5.678E-03	7.390
	+	860.37		8.542E-01	6.494E-01	6.612E-01	5.287E-02	1.292
BI-210	+	46.50	*	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PB-210	+	46.50	*	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PO-210	+	46.50	*	7.869E-01	8.012E-01	8.779E-01	5.674E-02	0.896
BI-211		72.87		1.221E+01	2.284E+00	3.913E+00	2.924E-01	3.119
	+	351.07	*	3.351E+00	4.695E-01	3.811E-01	2.425E-02	8.794
PB-212	+	74.81		1.986E+00	4.651E-01	3.367E-01	4.047E-02	5.897
	+	77.11		1.737E+00	2.436E-01	2.007E-01	1.539E-02	8.657
	+	87.30		8.088E-01	4.425E-01	5.825E-01	7.548E-02	1.388
	+	238.63	*	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
	+	300.09		1.586E+00	1.132E+00	1.384E+00	1.148E-01	1.146
PO-212	+	74.81		1.986E+00	4.651E-01	3.367E-01	4.047E-02	5.897
	+	77.11		1.737E+00	2.436E-01	2.007E-01	1.539E-02	8.657
	+	87.30		8.088E-01	4.425E-01	5.825E-01	7.548E-02	1.388
		115.19		9.035E-01	3.464E+00	5.632E+00	6.058E-01	0.160
	+	238.63	*	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
	+	300.09		1.586E+00	1.132E+00	1.384E+00	1.148E-01	1.146
BI-214	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.656E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
PB-214	+	74.81		3.421E+00	7.773E-01	5.802E-01	6.140E-02	5.897
	+	77.11		2.978E+00	4.753E-01	3.440E-01	3.719E-02	8.657

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		1.386E+00	7.529E-01	9.979E-01	1.126E-01	1.388
	+	241.98		9.855E-01	5.574E-01	9.667E-01	8.042E-02	1.019
	+	295.21		1.096E+00	2.962E-01	2.600E-01	2.228E-02	4.216
	+	351.92	*	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-214	+	74.81		3.421E+00	7.773E-01	5.802E-01	6.140E-02	5.897
	+	77.11		2.978E+00	4.753E-01	3.440E-01	3.719E-02	8.657
	+	87.30		1.386E+00	7.529E-01	9.979E-01	1.126E-01	1.388
	+	241.98		9.855E-01	5.574E-01	9.667E-01	8.042E-02	1.019
	+	295.21		1.096E+00	2.962E-01	2.600E-01	2.228E-02	4.216
	+	351.92	*	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-216	+	74.81		1.986E+00	4.651E-01	3.367E-01	4.047E-02	5.897
	+	77.11		1.737E+00	2.436E-01	2.007E-01	1.539E-02	8.657
	+	87.30		8.088E-01	4.425E-01	5.825E-01	7.548E-02	1.388
	+	238.63	*	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
	+	300.09		1.586E+00	1.132E+00	1.384E+00	1.148E-01	1.146
PO-218	+	74.81		3.421E+00	7.773E-01	5.802E-01	6.140E-02	5.897
	+	77.11		2.978E+00	4.753E-01	3.440E-01	3.719E-02	8.657
	+	87.30		1.386E+00	7.529E-01	9.979E-01	1.126E-01	1.388
	+	241.98		9.855E-01	5.574E-01	9.667E-01	8.042E-02	1.019
	+	295.21		1.096E+00	2.962E-01	2.600E-01	2.228E-02	4.216
	+	351.92	*	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
RA-224	+	240.98	*	1.869E+00	1.052E+00	1.720E+00	1.058E-01	1.086
RA-226	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.656E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
AC-228	+	338.32		1.838E+00	8.524E-01	4.153E-01	1.693E-01	4.425
	+	911.07	*	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
	+	969.11		1.872E+00	6.778E-01	6.388E-01	1.455E-01	2.931
RA-228	+	338.32		1.838E+00	8.524E-01	4.153E-01	1.693E-01	4.425
	+	911.07	*	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
	+	969.11		1.872E+00	6.778E-01	6.388E-01	1.455E-01	2.931
TH-228		84.40		2.878E+00	2.340E+00	3.242E+00	4.144E-01	0.888
	+	238.60	*	1.242E+00	1.652E-01	1.167E-01	8.895E-03	10.641
	+	300.10		1.586E+00	1.462E+00	1.384E+00	8.159E-01	1.146
TH-230	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.655E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
TH-232	+	338.32		1.838E+00	4.201E-01	4.153E-01	2.404E-02	4.425
	+	911.07	*	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
	+	969.11		1.872E+00	6.778E-01	6.388E-01	1.455E-01	2.931
U-234	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.655E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
NP-237	+	86.50	*	5.135E-01	2.959E-01	3.023E-01	6.712E-02	1.699
		95.87		-5.696E-01	9.699E-01	1.314E+00	3.252E-01	-0.433
AM-243	+	74.67	*	3.219E-01	6.914E-02	5.458E-02	4.122E-03	5.898
	+	86.72		1.926E+01	1.036E+01	1.163E+01	9.542E-01	1.656
		117.66		7.535E-01	3.724E+00	6.039E+00	6.654E-01	0.125
		142.18		-2.529E+00	1.827E+01	2.907E+01	2.699E+00	-0.087
ANH-511	+	511.00	*	1.653E-01	8.129E-02	5.988E-02	3.820E-03	2.760

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.641E-01	4.302E-01	6.562E-01	4.619E-02	-0.403
NA-22		1274.54	*	6.557E-02	7.311E-02	1.292E-01	7.638E-03	0.508
NA-24		1368.53	*	-3.166E-01	7.311E-02	Half-Life too short		
AL-26		1129.67		-6.877E-01	2.495E+00	3.862E+00	2.324E-01	-0.178
		1808.65	*	-1.051E-02	3.649E-02	5.552E-02	3.091E-03	-0.189
TI-44		67.85		1.219E-02	3.007E-02	4.355E-02	3.169E-03	0.280
	+	78.38	*	3.206E-01	4.496E-02	6.169E-02	4.771E-03	5.196
SC-46		889.25	*	-1.588E-02	5.375E-02	8.622E-02	6.190E-03	-0.184
	+	1120.51		1.547E-01	1.153E-01	1.564E-01	9.521E-03	0.989
V-48		944.10		-2.187E-01	1.206E+00	1.953E+00	1.372E-01	-0.112
		983.50	*	5.992E-02	9.991E-02	1.742E-01	1.198E-02	0.344
		1312.09		-1.081E-01	1.262E-01	1.828E-01	1.092E-02	-0.591
CR-51		320.08	*	-4.038E-02	3.992E-01	6.552E-01	4.261E-02	-0.062
MN-52		744.21		4.735E-02	2.872E-01	4.863E-01	3.557E-02	0.097
		848.13		4.625E+00	8.389E+00	1.462E+01	1.063E+00	0.316
		935.52		-1.984E-01	3.239E-01	4.971E-01	3.507E-02	-0.399
		1246.25		-1.209E+01	1.038E+01	1.483E+01	8.660E-01	-0.815
		1333.61		3.150E-01	7.218E+00	1.176E+01	7.072E-01	0.027
		1434.06	*	-3.840E-02	2.686E-01	4.216E-01	2.541E-02	-0.091
MN-54		834.83	*	-1.488E-02	5.587E-02	9.065E-02	6.613E-03	-0.164
CO-56		846.75	*	3.235E-02	5.503E-02	9.619E-02	6.999E-03	0.336
		977.42		-2.161E+00	4.513E+00	6.681E+00	4.614E-01	-0.324
		1037.82		-7.076E-02	4.476E-01	7.227E-01	5.207E-02	-0.098
		1175.09		-7.305E-01	3.583E+00	5.732E+00	3.251E-01	-0.127
		1238.25		9.062E-02	1.518E-01	2.584E-01	1.598E-02	0.351
		1360.21		4.502E-01	1.398E+00	2.370E+00	1.428E-01	0.190
		1771.40		-5.249E-01	3.998E-01	4.864E-01	2.747E-02	-1.079
CO-57		122.06	*	-6.008E-03	2.436E-02	3.871E-02	4.455E-03	-0.155
		136.48		6.559E-02	2.184E-01	3.541E-01	3.725E-02	0.185
CO-58		810.76	*	-3.180E-02	5.495E-02	8.627E-02	6.337E-03	-0.369
FE-59		142.65		1.353E+00	2.787E+00	4.503E+00	4.156E-01	0.300

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		192.34		-4.383E-01	1.119E+00	1.595E+00	1.914E-01	-0.275
		1099.22	*	-8.393E-02	1.356E-01	2.072E-01	1.486E-02	-0.405
		1291.56		1.329E-01	1.814E-01	3.191E-01	2.402E-02	0.417
CO-60		1173.22		1.193E-02	7.294E-02	1.208E-01	6.846E-03	0.099
		1332.49	*	4.829E-02	6.165E-02	1.094E-01	6.580E-03	0.441
ZN-65		1115.52	*	1.213E-02	1.657E-01	2.348E-01	1.440E-02	0.052
GE-68		1077.35	*	-1.613E+00	1.887E+00	2.804E+00	1.789E-01	-0.575
AS-73		53.44	*	1.299E-01	2.351E-01	3.917E-01	2.632E-02	0.332
AS-74		595.88	*	4.065E-02	1.220E-01	2.020E-01	1.390E-02	0.201
		634.78		1.891E-01	4.714E-01	7.847E-01	5.532E-02	0.241
SE-75		66.05		-1.125E+00	2.664E+00	4.243E+00	3.950E-01	-0.265
		96.73		-2.737E-01	7.630E-01	1.056E+00	1.464E-01	-0.259
		121.11		-3.874E-02	1.293E-01	2.049E-01	2.760E-02	-0.189
		136.00		1.976E-02	4.058E-02	6.628E-02	6.671E-03	0.298
		198.60		-4.780E-01	1.862E+00	3.089E+00	2.300E-01	-0.155
		264.65	*	4.877E-02	5.346E-02	8.239E-02	4.984E-03	0.592
		279.53		6.237E-02	1.252E-01	2.129E-01	1.343E-02	0.293
		303.91		1.354E+00	2.544E+00	3.812E+00	3.652E-01	0.355
		400.65		3.381E-01	2.989E-01	5.252E-01	4.672E-02	0.644
BR-77	+	87.88		2.824E+02	1.519E+02	2.123E+02	1.757E+01	1.330
		200.40		-1.093E+02	1.264E+02	2.038E+02	1.262E+01	-0.536
	+	239.00		1.466E+02	1.835E+01	2.915E+01	1.795E+00	5.028
		249.79		1.275E+01	5.153E+01	8.691E+01	5.304E+00	0.147
		281.68		-5.589E+01	7.860E+01	1.255E+02	7.338E+00	-0.445
		297.23		2.896E+02	7.440E+01	1.050E+02	6.159E+00	2.758
		303.76		8.525E+01	1.600E+02	2.400E+02	1.408E+01	0.355
		439.47		1.220E+02	1.254E+02	2.193E+02	1.276E+01	0.556
		484.57		-1.725E+02	2.204E+02	3.353E+02	2.074E+01	-0.514
		520.65	*	3.035E+00	9.724E+00	1.617E+01	1.042E+00	0.188
		574.64		-5.127E+02	2.583E+02	3.139E+02	2.126E+01	-1.633
		578.91		4.588E+01	8.958E+01	1.328E+02	9.022E+00	0.346
		585.48		1.335E+03	2.710E+02	4.940E+02	3.374E+01	2.701
		755.35		3.379E+01	1.600E+02	2.719E+02	1.991E+01	0.124
		817.79		-6.687E+01	1.325E+02	2.089E+02	1.528E+01	-0.320
SR-82		698.33		-3.284E+01	4.636E+01	7.310E+01	5.293E+00	-0.449
		776.49	*	-1.496E-01	5.124E-01	8.311E-01	6.093E-02	-0.180
		1395.20		-1.254E+01	1.543E+01	2.149E+01	1.296E+00	-0.583
RB-83		520.41	*	4.499E-02	8.573E-02	1.451E-01	9.348E-03	0.310
		529.64		-8.516E-02	1.349E-01	2.060E-01	1.340E-02	-0.413
		552.65		3.275E-02	2.533E-01	4.141E-01	2.753E-02	0.079
RB-84		881.50	*	-3.621E-03	1.014E-01	1.673E-01	1.205E-02	-0.022
KR-85		513.99	*	1.758E+01	1.132E+01	1.812E+01	1.160E+00	0.970
SR-85		513.99	*	8.913E-02	5.739E-02	9.189E-02	5.881E-03	0.970
RB-86		1076.63	*	-9.767E-01	1.154E+00	1.717E+00	1.096E-01	-0.569
Y-88		898.02		3.973E-02	5.489E-02	9.741E-02	7.019E-03	0.408
		1836.01	*	4.953E-02	5.518E-02	1.061E-01	5.854E-03	0.467
ZR-88		392.90	*	3.692E-02	3.619E-02	6.331E-02	3.415E-03	0.583
Y-91		1204.90	*	7.631E+00	3.021E+01	5.035E+01	2.892E+00	0.152
NB-94		702.63	*	2.511E-02	4.630E-02	8.070E-02	5.851E-03	0.311

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		871.10		-3.763E-02	4.366E-02	6.501E-02	4.698E-03	-0.579
NB-95		765.79	*	7.909E-02	6.715E-02	1.091E-01	7.996E-03	0.725
NB-95M		235.69	*	3.978E-01	1.693E-01	2.723E-01	2.129E-02	1.461
ZR-95		724.18		9.015E-02	1.390E-01	2.158E-01	1.760E-02	0.418
		756.15	*	2.710E-02	9.296E-02	1.591E-01	1.326E-02	0.170
NB-97		657.90	*	-3.414E-02	9.296E-02	Half-Life too short		
		1024.50		1.468E+00	9.296E-02	Half-Life too short		
ZR-97		254.15		-2.325E+00	9.296E-02	Half-Life too short		
		355.39		1.203E+00	9.296E-02	Half-Life too short		
		507.63	*	1.450E+00	9.296E-02	Half-Life too short		
		602.52		-3.840E+00	9.296E-02	Half-Life too short		
		1021.30		1.151E-01	9.296E-02	Half-Life too short		
		1147.95		6.764E-01	9.296E-02	Half-Life too short		
		1362.66		1.565E+00	9.296E-02	Half-Life too short		
		1750.46		2.543E+00	9.296E-02	Half-Life too short		
MO-99		140.51		-1.404E+01	2.126E+01	3.248E+01	9.086E+00	-0.432
		181.06		1.600E+01	1.527E+01	2.333E+01	4.026E+00	0.686
		366.43		3.043E+01	7.787E+01	1.312E+02	7.373E+00	0.232
		739.58	*	6.249E+00	1.174E+01	2.047E+01	2.965E+00	0.305
		778.00		-2.414E+01	3.605E+01	5.625E+01	4.125E+00	-0.429
TC-99M		140.51	*	-1.435E+09	3.605E+01	Half-Life too short		
RH-101		127.23		3.104E-02	3.210E-02	5.328E-02	5.847E-03	0.583
		198.01	*	1.570E-02	3.341E-02	5.712E-02	3.534E-03	0.275
		325.23		-1.339E-01	2.619E-01	4.193E-01	2.447E-02	-0.319
RH-102		418.52		-1.837E-01	3.549E-01	5.583E-01	3.145E-02	-0.329
		475.06	*	-1.124E-02	3.807E-02	6.051E-02	3.699E-03	-0.186
		631.29		1.230E-02	7.896E-02	1.286E-01	9.048E-03	0.096
		697.49		-2.079E-02	1.075E-01	1.773E-01	1.283E-02	-0.117
	+	766.84		1.638E-01	1.583E-01	2.639E-01	1.934E-02	0.621
		1046.59		-2.026E-03	1.632E-01	2.675E-01	1.757E-02	-0.008
		1112.84		2.049E-01	3.718E-01	5.830E-01	3.581E-02	0.351
RU-103		497.08	*	-2.277E-02	5.178E-02	8.092E-02	1.042E-02	-0.281
	+	610.33		1.171E+01	2.733E+00	3.418E+00	5.431E-01	3.425
RH-106	+	511.85		8.239E-01	4.052E-01	5.381E-01	3.436E-02	1.531
		621.84	*	2.491E-01	4.594E-01	7.489E-01	9.266E-02	0.333
		1050.47		-1.151E+00	3.311E+00	5.227E+00	3.421E-01	-0.220
RU-106	+	511.85		8.239E-01	4.052E-01	5.381E-01	3.436E-02	1.531
		621.84	*	2.491E-01	4.587E-01	7.489E-01	5.241E-02	0.333
		1050.47		-1.151E+00	3.311E+00	5.227E+00	3.421E-01	-0.220
AG-108M		433.93	*	-2.350E-02	3.795E-02	5.879E-02	3.687E-03	-0.400
		614.37		4.115E-02	5.614E-02	8.510E-02	6.281E-03	0.484
		722.95		2.742E-02	6.062E-02	9.237E-02	7.097E-03	0.297
AG-110M		657.75	*	-3.334E-02	4.682E-02	7.386E-02	5.495E-03	-0.451
		677.61		-2.414E-01	4.077E-01	6.477E-01	4.845E-02	-0.373
		706.67		-1.019E-01	2.987E-01	4.862E-01	3.665E-02	-0.210
		763.93		1.472E-01	2.540E-01	3.908E-01	2.975E-02	0.377
		884.67		7.074E-02	7.264E-02	1.307E-01	9.834E-03	0.541
		937.48		-1.040E-01	1.535E-01	2.347E-01	1.743E-02	-0.443
		1384.27		-2.837E-01	2.444E-01	3.226E-01	2.055E-02	-0.880

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-111		171.28		-1.453E-02	7.618E-01	1.282E+00	7.792E-02	-0.011
		245.39	*	4.262E-01	9.961E-01	1.486E+00	9.104E-02	0.287
IN-113M		391.69	*	6.374E-02	5.410E-02	9.528E-02	5.524E-03	0.669
SN-113		391.69	*	6.374E-02	5.410E-02	9.528E-02	5.524E-03	0.669
IN-114M		190.27	*	6.853E-02	2.027E-01	3.024E-01	1.864E-02	0.227
CD-115		260.90		-9.402E+01	1.048E+02	1.660E+02	9.997E+00	-0.566
		492.35		-2.128E+01	3.269E+01	5.011E+01	3.130E+00	-0.425
		527.90	*	6.255E+00	9.846E+00	1.680E+01	1.091E+00	0.372
SN-117M		156.02		1.699E+00	2.272E+00	3.741E+00	2.802E-01	0.454
		158.56	*	-1.392E-03	5.565E-02	8.869E-02	6.325E-03	-0.016
SB-122		563.90	*	-3.890E+00	3.114E+00	3.766E+00	2.528E-01	-1.033
		692.80		2.494E+01	4.505E+01	7.871E+01	5.690E+00	0.317
I-123		159.00	*	1.559E-01	4.505E+01	Half-Life too short		
		528.96		-6.317E+00	4.505E+01	Half-Life too short		
TE-123M		159.00	*	2.922E-03	3.016E-02	4.832E-02	3.447E-03	0.060
I-124		602.71	*	-9.016E-01	8.791E-01	1.052E+00	7.276E-02	-0.857
		722.78		2.581E+00	5.329E+00	8.148E+00	5.937E-01	0.317
		1325.50		1.446E+00	4.815E+01	7.832E+01	4.701E+00	0.018
		1376.25		4.338E+01	3.808E+01	7.046E+01	4.247E+00	0.616
		1509.49		9.829E+00	1.737E+01	3.156E+01	1.893E+00	0.311
		1691.02		1.744E-01	3.993E+00	6.698E+00	3.881E-01	0.026
SB-124		602.71		-6.169E-02	6.015E-02	7.200E-02	4.980E-03	-0.857
		645.85		-1.568E-01	6.604E-01	1.035E+00	7.979E-02	-0.152
		709.31		1.180E+00	3.847E+00	6.591E+00	4.788E-01	0.179
		713.82		-9.601E-01	2.145E+00	3.438E+00	3.821E-01	-0.279
		722.78		2.560E-01	5.285E-01	8.081E-01	6.066E-02	0.317
	+	968.20		1.904E+01	5.520E+00	9.965E+00	6.917E-01	1.911
		1045.16		9.851E-02	3.566E+00	5.871E+00	3.861E-01	0.017
		1325.50		1.532E-01	5.101E+00	8.296E+00	4.979E-01	0.018
		1368.21		-2.281E+00	2.633E+00	3.658E+00	4.384E-01	-0.623
		1436.60		5.798E+00	4.520E+00	8.929E+00	5.382E-01	0.649
		1691.02	*	4.079E-03	9.340E-02	1.567E-01	9.858E-03	0.026
SB-125		427.89	*	-9.888E-02	1.165E-01	1.783E-01	1.064E-02	-0.555
		463.38		5.514E-01	3.777E-01	6.711E-01	4.666E-02	0.822
		600.56		-1.336E-01	2.669E-01	3.662E-01	2.813E-02	-0.365
		635.90		-4.112E-02	3.608E-01	5.730E-01	4.521E-02	-0.072
TE-125M		109.28	*	-1.305E+01	8.998E+00	1.345E+01	1.565E+00	-0.970
I-126		388.63		-4.061E-02	2.437E-01	3.954E-01	2.141E-02	-0.103
		666.33	*	1.801E-01	2.369E-01	4.196E-01	3.004E-02	0.429
		753.82		1.594E+00	1.816E+00	3.260E+00	2.387E-01	0.489
SB-126		223.80		2.978E+00	4.039E+00	6.965E+00	4.319E-01	0.428
		278.60		2.619E+00	2.672E+00	4.640E+00	2.713E-01	0.564
	+	296.50		1.029E+01	2.704E+00	3.689E+00	2.164E-01	2.788
		414.70		9.066E-03	9.787E-02	1.464E-01	8.194E-03	0.062
		415.30		2.095E-01	7.759E+00	1.199E+01	6.717E-01	0.017
		555.20		-3.515E+00	5.860E+00	7.535E+00	5.021E-01	-0.467
		573.80		-2.870E+00	1.535E+00	2.084E+00	1.411E-01	-1.377
		593.00		-3.392E-01	1.248E+00	1.964E+00	1.349E-01	-0.173
		656.30		-1.573E+00	4.209E+00	6.847E+00	4.879E-01	-0.230

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		666.33		7.509E-02	9.878E-02	1.749E-01	1.252E-02	0.429
		675.00		1.253E+00	2.505E+00	4.369E+00	3.138E-01	0.287
		695.00		7.136E-02	1.011E-01	1.783E-01	1.290E-02	0.400
		697.00		-1.182E-02	3.555E-01	5.936E-01	4.297E-02	-0.020
		720.50	*	6.013E-02	1.979E-01	3.073E-01	2.238E-02	0.196
		856.80		2.761E-01	6.731E-01	1.017E+00	7.381E-02	0.271
		989.30		-1.727E-01	1.801E+00	2.937E+00	2.014E-01	-0.059
		1034.80		-1.164E+00	1.210E+01	1.968E+01	1.305E+00	-0.059
		1213.00		6.938E-01	7.361E+00	1.209E+01	6.967E-01	0.057
SB-127		61.10		7.656E+00	2.134E+01	3.518E+01	3.405E+00	0.218
		252.40		-2.717E+00	4.007E+00	6.164E+00	2.558E+00	-0.441
		290.80		1.467E+01	2.205E+01	3.331E+01	2.939E+00	0.440
		411.60		1.962E+00	1.528E+01	2.188E+01	3.072E+00	0.090
		444.90		-5.481E-01	9.868E+00	1.603E+01	1.684E+00	-0.034
		473.00		-2.059E-01	1.840E+00	2.968E+00	3.274E-01	-0.069
		543.00		-1.128E+00	1.891E+01	3.038E+01	3.956E+00	-0.037
		603.60		-2.457E+00	1.383E+01	1.873E+01	2.079E+00	-0.131
		685.20	*	-4.788E-01	1.429E+00	2.320E+00	2.326E-01	-0.206
		698.50		-1.541E+01	1.789E+01	2.765E+01	4.116E+00	-0.557
		722.20		1.204E+01	3.661E+01	5.493E+01	5.398E+00	0.219
		783.80		1.802E+00	4.062E+00	7.019E+00	7.905E-01	0.257
XE-127		57.60		-1.594E+00	2.220E+00	3.533E+00	2.452E-01	-0.451
		145.22		5.596E-01	7.126E-01	1.175E+00	1.047E-01	0.476
		172.10		4.363E-02	1.160E-01	1.982E-01	1.206E-02	0.220
		202.84	*	1.058E-02	5.262E-02	8.118E-02	5.032E-03	0.130
		374.96		-2.907E-01	2.416E-01	3.639E-01	2.019E-02	-0.799
I-131		80.18		-1.790E-02	3.660E+00	4.828E+00	3.805E-01	-0.004
		284.30		8.648E-02	1.516E+00	2.522E+00	1.636E-01	0.034
		364.48	*	-6.412E-02	1.224E-01	1.939E-01	1.225E-02	-0.331
		636.97		-7.261E-01	1.889E+00	2.918E+00	2.226E-01	-0.249
		722.89		4.400E+00	9.335E+00	1.425E+01	1.047E+00	0.309
TE-132		49.72		-3.503E+00	3.898E+00	5.324E+00	4.784E-01	-0.658
		111.76		-7.485E+00	2.272E+01	3.608E+01	4.357E+00	-0.207
		116.30		8.062E+00	2.191E+01	3.573E+01	4.461E+00	0.226
		228.16	*	-3.365E-01	5.814E-01	9.411E-01	1.348E-01	-0.358
BA-133		53.15		5.117E-01	1.008E+00	1.677E+00	1.125E-01	0.305
		79.62		3.010E+00	1.177E+00	1.720E+00	2.542E-01	1.749
		81.00		-1.227E-01	9.928E-02	1.062E-01	1.645E-02	-1.155
		276.40		3.398E-01	4.630E-01	7.283E-01	9.465E-02	0.467
		302.84		2.436E-01	1.753E-01	2.772E-01	3.241E-02	0.879
		356.01	*	-1.100E-02	5.778E-02	8.086E-02	9.304E-03	-0.136
		383.85		-8.380E-02	3.723E-01	6.016E-01	6.435E-02	-0.139
I-133	+	510.53		7.219E-01	3.723E-01	Half-Life too short		
		529.87	*	-3.176E-03	3.723E-01	Half-Life too short		
		706.58		-7.914E-02	3.723E-01	Half-Life too short		
		856.28		2.350E-01	3.723E-01	Half-Life too short		
		875.33		6.783E-02	3.723E-01	Half-Life too short		
		1236.41		7.037E-02	3.723E-01	Half-Life too short		
		1298.22		-2.446E-02	3.723E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		475.35		3.777E-01	2.441E+00	4.018E+00	2.457E-01	0.094
	+	563.23		8.327E-01	6.002E-01	8.245E-01	5.619E-02	1.010
		569.32		9.463E-01	3.291E-01	6.021E-01	4.151E-02	1.572
		604.70		3.563E-03	4.719E-02	6.611E-02	4.595E-03	0.054
		795.84	*	7.015E-02	6.573E-02	1.187E-01	8.785E-03	0.591
		801.93		-4.385E-01	5.479E-01	8.402E-01	6.204E-02	-0.522
		1038.57		-3.781E+00	5.640E+00	8.571E+00	5.667E-01	-0.441
		1167.94		1.668E-01	3.873E+00	6.347E+00	3.625E-01	0.026
		1365.15		-6.143E-01	1.680E+00	2.552E+00	1.678E-01	-0.241
CS-135		268.24	*	2.359E-01	2.021E-01	3.142E-01	2.444E-02	0.751
I-135		288.45		9.895E+08	2.021E-01	Half-Life too short		
		417.63		-2.908E+08	2.021E-01	Half-Life too short		
		546.56		-1.462E+09	2.021E-01	Half-Life too short		
		836.80		3.321E+08	2.021E-01	Half-Life too short		
		1038.76		-1.184E+09	2.021E-01	Half-Life too short		
		1124.00		7.294E+09	2.021E-01	Half-Life too short		
		1131.51		-2.839E+08	2.021E-01	Half-Life too short		
		1260.41	*	-9.902E+07	2.021E-01	Half-Life too short		
		1457.56		6.462E+10	2.021E-01	Half-Life too short		
		1678.03		1.112E+08	2.021E-01	Half-Life too short		
		1706.46		-4.992E+08	2.021E-01	Half-Life too short		
		1791.20		1.665E+09	2.021E-01	Half-Life too short		
CS-136		66.91		-2.036E-01	4.572E-01	6.713E-01	9.876E-02	-0.303
	+	86.29		2.158E+00	1.179E+00	1.574E+00	1.977E-01	1.371
		153.22		-1.148E-02	6.578E-01	1.050E+00	9.418E-02	-0.011
		163.89		2.852E-01	9.883E-01	1.685E+00	1.297E-01	0.169
		176.55		-2.927E-01	3.638E-01	5.914E-01	4.016E-02	-0.495
		273.65		-9.046E-01	5.879E-01	7.493E-01	5.023E-02	-1.207
		340.57		6.387E-01	1.660E-01	3.136E-01	1.927E-02	2.037
		818.51		-1.770E-02	9.542E-02	1.557E-01	1.140E-02	-0.114
		1048.07	*	7.705E-03	1.481E-01	2.444E-01	1.719E-02	0.032
		1235.34		3.363E-01	9.621E-01	1.608E+00	1.607E-01	0.209
BA-137M		661.65	*	6.488E-03	4.788E-02	8.120E-02	5.800E-03	0.080
CS-137		661.65	*	6.859E-03	5.061E-02	8.584E-02	6.149E-03	0.080
CE-139		165.85	*	2.732E-03	2.858E-02	4.835E-02	2.930E-03	0.057
BA-140		162.64		1.116E-01	6.935E-01	1.177E+00	8.459E-02	0.095
		304.84		-2.757E-01	1.506E+00	2.124E+00	5.800E-01	-0.130
		423.70		1.528E+00	2.308E+00	3.861E+00	1.226E+00	0.396
		537.32	*	-1.941E-02	3.457E-01	5.569E-01	1.819E-01	-0.035
LA-140		328.77		5.420E-01	3.377E-01	6.015E-01	3.921E-02	0.901
		432.53		8.823E-01	2.258E+00	3.799E+00	2.420E-01	0.232
		487.03		3.207E-02	1.618E-01	2.673E-01	1.851E-02	0.120
		751.79		-4.885E-01	2.141E+00	3.497E+00	2.933E-01	-0.140
		815.85		-1.926E-01	4.205E-01	6.671E-01	5.646E-02	-0.289
		867.82		-1.108E+00	2.020E+00	2.622E+00	2.038E-01	-0.423
		919.63		-2.022E+00	3.617E+00	5.276E+00	4.991E-01	-0.383
		925.24		1.019E+00	1.478E+00	2.609E+00	2.018E-01	0.391
		1596.49	*	9.722E-03	1.225E-01	2.067E-01	1.225E-02	0.047
CE-141		145.44	*	5.502E-02	6.474E-02	1.069E-01	9.664E-03	0.515

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-143		57.37		-1.880E-04	6.474E-02	Half-Life too short		
		231.56		-4.067E-04	6.474E-02	Half-Life too short		
		293.26	*	4.048E-04	6.474E-02	Half-Life too short		
	+	350.59		1.559E-02	6.474E-02	Half-Life too short		
		490.36		5.722E-04	6.474E-02	Half-Life too short		
		664.57		4.569E-04	6.474E-02	Half-Life too short		
		721.93		3.782E-04	6.474E-02	Half-Life too short		
CE-144		80.11		9.476E-01	1.692E+00	2.459E+00	1.924E-01	0.385
		133.54	*	-1.026E-01	2.179E-01	3.415E-01	5.652E-02	-0.300
PM-144		476.78		-7.000E-02	9.067E-02	1.363E-01	9.837E-03	-0.514
		618.01		-1.493E-04	4.494E-02	7.225E-02	5.256E-03	-0.002
		696.49	*	2.872E-02	4.759E-02	8.333E-02	6.033E-03	0.345
		778.57		-1.330E+00	3.077E+00	4.914E+00	3.604E-01	-0.271
PR-144		696.49	*	1.945E+00	3.223E+00	5.643E+00	4.084E-01	0.345
		1489.15		-3.899E+00	1.558E+01	2.492E+01	1.498E+00	-0.156
PM-146		453.90	*	2.317E-02	5.392E-02	9.069E-02	7.907E-03	0.255
		633.02		7.861E-01	1.961E+00	3.229E+00	1.196E+00	0.243
		735.90		-2.602E-01	2.548E-01	3.008E-01	8.493E-02	-0.865
		747.13		6.989E-03	1.194E-01	2.003E-01	2.660E-02	0.035
ND-147	+	91.11		2.832E-01	2.033E-01	4.016E-01	3.713E-02	0.705
		319.41		-2.159E+00	3.439E+00	5.452E+00	3.190E-01	-0.396
		439.89		7.107E+00	6.527E+00	1.150E+01	6.698E-01	0.618
		531.02	*	-4.697E-01	7.083E-01	1.077E+00	1.491E-01	-0.436
PM-149		285.90	*	-1.116E+02	7.627E+01	1.132E+02	1.607E+01	-0.986
EU-152		121.78		-3.555E-02	7.174E-02	1.126E-01	1.405E-02	-0.316
		244.69		5.291E-01	4.216E-01	6.585E-01	4.038E-02	0.804
		344.27	*	-3.407E-03	1.105E-01	1.818E-01	1.182E-02	-0.019
		443.98		-4.443E-01	1.220E+00	1.935E+00	1.134E-01	-0.230
		778.89		-1.085E-01	3.601E-01	5.831E-01	4.275E-02	-0.186
		867.32		-4.481E-01	1.224E+00	1.638E+00	1.185E-01	-0.274
		964.01		6.849E-01	4.948E-01	8.143E-01	5.666E-02	0.841
		1085.78		-6.019E-01	6.418E-01	9.492E-01	6.006E-02	-0.634
		1112.02		2.092E-02	5.065E-01	7.936E-01	4.879E-02	0.026
		1407.95		2.550E-01	2.668E-01	4.892E-01	2.950E-02	0.521
GD-153		69.67		9.291E-02	1.109E+00	1.585E+00	1.164E-01	0.059
		83.37		-7.838E+00	1.789E+01	1.754E+01	1.404E+00	-0.447
		97.43	*	1.592E-02	7.918E-02	1.129E-01	1.022E-02	0.141
		103.18		-1.104E-01	9.988E-02	1.533E-01	1.467E-02	-0.720
EU-154		123.07		-3.178E-02	4.976E-02	7.736E-02	1.052E-02	-0.411
		247.94		-6.253E-02	4.276E-01	6.417E-01	6.247E-02	-0.097
		591.81		3.479E-01	8.808E-01	1.429E+00	1.492E-01	0.243
		723.30		2.376E-02	2.634E-01	3.839E-01	3.203E-02	0.062
		756.87		-9.209E-02	1.055E+00	1.746E+00	1.935E-01	-0.053
		873.19		9.637E-02	3.782E-01	6.438E-01	7.277E-02	0.150
		996.32		-1.228E-01	5.723E-01	9.217E-01	1.564E-01	-0.133
		1004.76		4.374E-02	3.219E-01	5.366E-01	5.556E-02	0.082
		1274.45	*	1.814E-01	2.046E-01	3.604E-01	3.390E-02	0.503
EU-155		48.70		-1.001E-01	5.599E-01	7.968E-01	5.201E-02	-0.126
		60.01		-1.867E-01	2.133E+00	3.472E+00	2.452E-01	-0.054

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.54		2.105E-01	1.133E-01	1.525E-01	1.263E-02	1.381
		105.31	*	1.413E-01	9.937E-02	1.676E-01	1.652E-02	0.843
TB-160	+	86.79		5.569E-01	2.996E-01	4.019E-01	3.299E-02	1.386
		197.04		3.260E-01	5.646E-01	9.692E-01	5.995E-02	0.336
		215.65		3.593E-01	8.201E-01	1.281E+00	7.952E-02	0.281
	+	298.57		2.285E-01	1.625E-01	2.402E-01	1.409E-02	0.951
		879.36	*	-7.121E-02	2.036E-01	3.258E-01	2.348E-02	-0.219
		962.29		9.747E-01	8.597E-01	1.426E+00	9.934E-02	0.683
		966.15		9.756E-01	4.245E-01	7.236E-01	5.029E-02	1.348
		1177.93		-2.487E-01	5.785E-01	9.045E-01	5.137E-02	-0.275
		1271.85		-4.907E-01	1.162E+00	1.800E+00	1.061E-01	-0.273
HO-166M		80.57		-1.766E-01	2.383E-01	2.991E-01	2.348E-02	-0.590
		184.41		6.549E-02	4.478E-02	6.941E-02	4.264E-03	0.943
		280.46		1.188E-02	9.895E-02	1.652E-01	9.651E-03	0.072
		410.95		1.767E-01	3.683E-01	5.439E-01	3.026E-02	0.325
		711.68	*	3.563E-02	8.049E-02	1.396E-01	1.015E-02	0.255
		752.31		7.761E-02	3.470E-01	5.911E-01	4.327E-02	0.131
		810.29		-3.099E-02	8.079E-02	1.293E-01	9.465E-03	-0.240
TM-171		51.35		3.463E+00	8.610E+00	1.259E+01	8.341E-01	0.275
		52.39		3.694E+00	4.313E+00	7.030E+00	4.690E-01	0.525
		59.40		-2.722E+00	1.109E+01	1.796E+01	1.266E+00	-0.152
		66.72	*	-1.118E+01	1.754E+01	2.560E+01	1.853E+00	-0.437
LU-176	+	88.36		4.148E-01	2.231E-01	3.172E-01	2.637E-02	1.307
		201.83		5.912E-03	3.047E-02	5.020E-02	3.110E-03	0.118
		306.84	*	-1.033E-02	2.983E-02	4.359E-02	2.557E-03	-0.237
		401.10		6.970E+00	7.894E+00	1.370E+01	7.496E-01	0.509
LU-177		112.95		2.878E-01	1.399E+00	2.271E+00	2.389E-01	0.127
	+	208.36	*	2.120E+00	1.512E+00	1.890E+00	1.173E-01	1.122
LU-177M		52.97		2.461E-01	4.475E-01	7.456E-01	4.994E-02	0.330
		54.07		-6.653E-02	2.550E-01	4.131E-01	2.789E-02	-0.161
		61.30		6.084E-01	6.667E-01	1.116E+00	7.908E-02	0.545
		121.62		-1.837E-01	3.659E-01	5.741E-01	6.574E-02	-0.320
		147.16		-3.585E-01	6.937E-01	1.083E+00	9.390E-02	-0.331
		171.86		-1.070E-02	4.778E-01	8.037E-01	4.888E-02	-0.013
		218.09		-2.848E-01	8.902E-01	1.467E+00	9.105E-02	-0.194
	+	268.79		1.876E+00	1.271E+00	1.598E+00	9.514E-02	1.173
		319.02		-1.099E-01	2.850E-01	4.594E-01	2.687E-02	-0.239
		367.43		9.572E-01	1.089E+00	1.888E+00	1.059E-01	0.507
		413.65	*	2.090E-01	2.368E-01	3.647E-01	2.038E-02	0.573
HF-181		56.28		-4.989E-01	3.258E-01	5.012E-01	3.441E-02	-0.995
		57.53		-1.395E-01	1.865E-01	2.966E-01	2.057E-02	-0.470
		65.20		1.236E-01	4.958E-01	8.064E-01	5.797E-02	0.153
		133.02		-7.285E-02	6.991E-02	1.066E-01	1.103E-02	-0.683
		136.25		1.457E-01	4.714E-01	7.647E-01	7.635E-02	0.190
		345.85		-8.924E-02	2.099E-01	3.358E-01	1.932E-02	-0.266
		482.03	*	1.406E-02	5.384E-02	8.931E-02	5.508E-03	0.157
W-181		56.28		-1.973E-01	1.290E-01	1.985E-01	1.362E-02	-0.994
		57.53		-5.531E-02	7.389E-02	1.175E-01	8.147E-03	-0.471
		65.20	*	4.856E-02	1.949E-01	3.169E-01	2.278E-02	0.153

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		67.75		-7.823E-03	7.277E-02	1.032E-01	7.507E-03	-0.076
		100.10		2.207E-01	1.776E-01	2.655E-01	2.466E-02	0.831
		152.43		3.638E-02	3.510E-01	5.632E-01	4.494E-02	0.065
		222.10		1.238E-01	3.580E-01	6.077E-01	3.770E-02	0.204
		1001.68		1.475E+00	3.031E+00	5.215E+00	3.546E-01	0.283
	+	1121.28		4.282E-01	3.192E-01	4.234E-01	2.574E-02	1.011
		1189.05		-4.274E-01	4.935E-01	7.355E-01	4.197E-02	-0.581
		1221.42	*	1.225E-01	3.574E-01	5.976E-01	3.456E-02	0.205
		1230.97		-1.275E-01	8.387E-01	1.348E+00	7.824E-02	-0.095
RE-183		57.98		-3.688E-02	7.522E-02	1.208E-01	8.406E-03	-0.305
		59.32		-1.182E-02	4.501E-02	7.286E-02	5.130E-03	-0.162
		67.20		-5.281E-02	1.305E-01	1.818E-01	1.319E-02	-0.290
		162.32	*	-1.156E-02	1.081E-01	1.815E-01	1.195E-02	-0.064
	+	208.81		2.104E+00	1.500E+00	1.880E+00	1.167E-01	1.119
		291.72		1.062E+00	1.162E+00	1.786E+00	1.047E-01	0.595
RE-184		57.98		-1.367E-01	2.789E-01	4.477E-01	3.117E-02	-0.305
		59.32		-4.380E-02	1.667E-01	2.699E-01	1.901E-02	-0.162
		67.20		-1.957E-01	4.835E-01	6.738E-01	4.887E-02	-0.290
		161.27		-6.276E-02	3.536E-01	5.922E-01	3.992E-02	-0.106
		216.55		-3.732E-02	2.790E-01	4.517E-01	2.804E-02	-0.083
		252.85	*	-2.406E-01	2.517E-01	3.974E-01	2.418E-02	-0.605
		318.01		-9.380E-02	4.983E-01	8.137E-01	4.761E-02	-0.115
		792.07		-5.158E-01	1.461E+00	2.359E+00	1.729E-01	-0.219
		903.28		-4.895E-01	1.512E+00	2.038E+00	1.456E-01	-0.240
		920.93		-7.494E-01	6.052E-01	8.519E-01	6.047E-02	-0.880
OS-185		59.72		-2.504E-02	1.237E-01	2.006E-01	1.415E-02	-0.125
		61.14		5.752E-02	7.221E-02	1.205E-01	8.538E-03	0.477
		69.30		3.752E-02	1.966E-01	2.823E-01	2.069E-02	0.133
		592.07		9.538E-02	3.581E+00	5.784E+00	3.970E-01	0.016
		646.12	*	5.061E-03	5.549E-02	8.986E-02	6.373E-03	0.056
		717.42		-3.119E-01	1.173E+00	1.914E+00	1.393E-01	-0.163
		874.81		5.289E-01	7.586E-01	1.346E+00	9.715E-02	0.393
		880.27		2.005E-01	1.123E+00	1.892E+00	1.363E-01	0.106
RE-188		155.03	*	5.642E-02	1.796E-01	2.906E-01	2.216E-02	0.194
		477.96		-1.577E+00	4.113E+00	6.397E+00	3.925E-01	-0.247
		633.10		1.651E+00	3.888E+00	6.481E+00	4.565E-01	0.255
W-188		63.58		1.121E+01	2.579E+01	4.256E+01	3.040E+00	0.263
		227.08		2.726E-01	1.335E+01	2.232E+01	1.383E+00	0.012
		290.67	*	6.439E+00	9.148E+00	1.387E+01	8.130E-01	0.464
IR-192	+	295.96		8.276E-01	2.177E-01	2.991E-01	1.781E-02	2.767
		308.46		-6.701E-02	1.026E-01	1.625E-01	9.638E-03	-0.412
		316.51	*	9.225E-03	3.775E-02	6.330E-02	3.724E-03	0.146
		468.07		-8.653E-02	9.085E-02	1.373E-01	9.488E-03	-0.630
		604.41		6.138E-02	6.334E-01	8.899E-01	1.064E-01	0.069
		612.46		4.017E+00	1.354E+00	2.313E+00	1.965E-01	1.736
AU-195		65.12		1.417E-02	9.045E-02	1.467E-01	1.054E-02	0.097
		66.83		-2.606E-02	5.761E-02	8.472E-02	6.134E-03	-0.308
	+	75.70		1.038E+00	2.229E-01	3.463E-01	2.632E-02	2.996
		98.88	*	1.931E-01	2.281E-01	3.352E-01	3.077E-02	0.576

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		129.76		3.464E+00	2.958E+00	4.927E+00	5.275E-01	0.703
TL-200		367.94	*	2.176E-04	2.958E+00	Half-Life too short		
		579.30		1.998E-03	2.958E+00	Half-Life too short		
		828.27		1.364E-03	2.958E+00	Half-Life too short		
		1205.75		4.168E-04	2.958E+00	Half-Life too short		
TL-201		68.90		9.584E-01	2.476E+00	3.584E+00	2.621E-01	0.267
		70.82		8.955E-02	1.500E+00	2.140E+00	1.581E-01	0.042
		80.30		-1.088E+00	3.415E+00	4.428E+00	3.469E-01	-0.246
		135.34		1.085E+01	2.072E+01	3.390E+01	3.419E+00	0.320
		167.43	*	-1.682E+00	5.313E+00	8.833E+00	5.350E-01	-0.190
TL-202		68.90		1.033E-01	2.669E-01	3.862E-01	2.824E-02	0.267
		70.82		9.623E-03	1.612E-01	2.300E-01	1.699E-02	0.042
		80.30		-1.170E-01	3.671E-01	4.760E-01	3.729E-02	-0.246
		439.56	*	8.995E-02	7.708E-02	1.366E-01	7.950E-03	0.659
HG-203		70.83		4.578E-02	7.303E-01	1.042E+00	1.340E-01	0.044
		72.87		2.390E+00	5.070E-01	7.662E-01	9.565E-02	3.119
		82.60		-9.077E-01	1.323E+00	1.267E+00	1.690E-01	-0.717
		279.20	*	4.967E-02	4.589E-02	8.009E-02	4.962E-03	0.620
BI-207		72.80		6.677E-01	1.308E-01	2.248E-01	1.679E-02	2.970
	+	74.97		5.778E-01	1.241E-01	1.736E-01	1.313E-02	3.329
		84.90		4.004E-01	1.689E-01	2.586E-01	2.093E-02	1.548
		569.67		1.221E-01	5.090E-02	9.251E-02	6.241E-03	1.320
		1063.62	*	1.401E-02	8.373E-02	1.395E-01	9.025E-03	0.100
		1770.23		-2.064E-01	7.727E-01	9.976E-01	5.637E-02	-0.207
TL-207		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022
PO-209		260.50		-8.929E+00	1.067E+01	1.695E+01	1.021E+00	-0.527
		262.80		-1.546E+01	3.029E+01	4.761E+01	2.860E+00	-0.325
		896.60	*	6.425E+00	9.736E+00	1.720E+01	1.231E+00	0.373
PB-211		404.84	*	2.169E-01	1.339E+00	1.917E+00	1.195E+00	0.113
		427.08		-1.796E+00	2.884E+00	4.140E+00	2.559E+00	-0.434
		831.96		-6.086E-01	1.752E+00	2.746E+00	1.716E+00	-0.222
BI-212	+	727.18	*	1.122E+00	7.036E-01	8.218E-01	7.307E-02	1.366
		785.46		6.702E-01	2.418E+00	4.124E+00	3.023E-01	0.163
		1620.62		1.096E+00	1.971E+00	3.556E+00	2.097E-01	0.308
PO-215		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022
RN-219	+	271.23		5.660E-01	3.849E-01	5.100E-01	4.180E-02	1.110
		401.81	*	4.753E-01	5.006E-01	8.656E-01	1.166E-01	0.549
RN-220		549.76	*	1.556E+01	3.317E+01	5.582E+01	3.702E+00	0.279
RA-223		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022
AC-227		79.80		1.971E+00	1.402E+00	2.020E+00	4.281E-01	0.976
		236.00		1.652E+00	3.804E-01	6.020E-01	6.419E-02	2.744
		256.20	*	2.854E-01	4.113E-01	7.054E-01	9.925E-02	0.405
		286.10		-2.704E+00	1.780E+00	2.653E+00	3.074E-01	-1.019
	+	299.80		2.939E+00	2.138E+00	2.929E+00	4.777E-01	1.004
		304.40		5.228E-01	2.300E+00	3.363E+00	5.824E-01	0.155
		334.20		-1.609E+00	3.193E+00	4.351E+00	7.978E-01	-0.370
TH-227		79.80		1.971E+00	1.404E+00	2.020E+00	4.338E-01	0.976
	+	94.00		6.319E+00	2.965E+00	3.071E+00	6.705E-01	2.058
		236.00		1.652E+00	3.705E-01	6.020E-01	5.598E-02	2.744
		256.20	*	2.854E-01	4.122E-01	7.054E-01	1.199E-01	0.405
		286.10		-2.704E+00	3.226E+00	2.653E+00	2.657E+00	-1.019
	+	299.80		2.939E+00	2.138E+00	2.929E+00	4.777E-01	1.004
		304.40		5.228E-01	2.300E+00	3.363E+00	5.824E-01	0.155
		334.20		-1.609E+00	3.193E+00	4.351E+00	7.978E-01	-0.370
TH-229		85.43		6.579E-01	1.771E-01	2.763E-01	2.246E-02	2.381
	+	88.47		2.388E-01	1.284E-01	1.819E-01	1.514E-02	1.312
		100.00		2.366E-01	1.856E-01	2.779E-01	2.578E-02	0.851
		193.63	*	-8.417E-02	5.510E-01	8.672E-01	5.356E-02	-0.097
		210.97		1.321E+00	9.138E-01	1.439E+00	8.930E-02	0.918
PA-231		283.67	*	7.009E-01	1.681E+00	2.847E+00	3.929E-01	0.246
	+	301.29		1.176E+00	8.427E-01	1.192E+00	1.250E-01	0.987
TH-231		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		3.421E+00	4.517E+00	5.622E+00	4.528E-01	0.608
	+	92.29		5.242E+00	2.225E+00	2.677E+00	2.308E-01	1.958
		95.87	*	-5.421E-01	9.145E-01	1.251E+00	1.116E-01	-0.433
		108.00		-8.187E-01	1.633E+00	2.576E+00	2.583E-01	-0.318
PA-233	+	75.28		1.686E+01	4.207E+00	5.337E+00	7.894E-01	3.159
	+	86.59		3.423E+00	2.037E+00	2.476E+00	6.606E-01	1.383
	+	300.12		8.195E-01	5.914E-01	8.182E-01	1.102E-01	1.001
		311.98	*	-1.614E-02	7.073E-02	1.153E-01	7.166E-03	-0.140
		340.50		3.419E+00	1.145E+00	1.628E+00	3.737E-01	2.101
		398.62		-2.653E+00	2.600E+00	3.795E+00	9.783E-01	-0.699
		415.76		-2.750E-01	2.099E+00	3.306E+00	6.787E-01	-0.083
PA-234		63.00		4.015E-01	7.507E-01	1.240E+00	1.826E-01	0.324
		94.67		3.309E-01	1.732E-01	2.586E-01	3.243E-02	1.279
		98.44		1.208E-01	1.132E-01	1.373E-01	7.671E-02	0.880
		99.86		8.146E-01	4.622E-01	7.054E-01	6.536E-02	1.155
		111.00		8.226E-02	1.735E-01	2.842E-01	3.796E-02	0.289
		131.20		3.468E-02	1.117E-01	1.813E-01	1.913E-02	0.191
		152.70		2.137E-02	3.404E-01	5.452E-01	9.113E-02	0.039
	+	186.00		5.891E+00	2.809E+00	2.599E+00	7.960E-01	2.267
		226.40		9.539E-03	4.277E-01	7.153E-01	8.415E-02	0.013
		227.20		-1.117E-01	4.580E-01	7.563E-01	4.685E-02	-0.148
		248.90		6.481E-01	8.973E-01	1.496E+00	3.227E-01	0.433
		293.70		4.227E+00	1.249E+00	1.843E+00	2.969E-01	2.293
		369.80		7.289E-02	1.077E+00	1.777E+00	3.690E-01	0.041
		568.70		4.898E+00	1.764E+00	3.130E+00	2.110E-01	1.565
		569.50		1.118E+00	4.542E-01	8.274E-01	5.581E-02	1.351
		574.00		-4.461E+00	2.427E+00	3.172E+00	2.147E-01	-1.406
		699.00		-1.082E+00	1.045E+00	1.574E+00	2.911E-01	-0.687
		706.10		-1.965E-01	1.468E+00	2.426E+00	1.076E+00	-0.081
		733.00		-1.756E-01	5.472E-01	7.503E-01	1.630E-01	-0.234
		742.81		5.519E-01	1.900E+00	3.192E+00	2.141E+00	0.173
		796.30		1.262E+00	1.320E+00	2.297E+00	6.126E-01	0.550
		805.60		1.177E+00	1.419E+00	2.461E+00	7.458E-01	0.478
		819.60		2.814E-01	1.644E+00	2.773E+00	1.047E+00	0.101
		826.30		-1.196E+00	1.244E+00	1.664E+00	7.404E-01	-0.719
		831.60		-4.253E-01	8.909E-01	1.399E+00	4.125E-01	-0.304
		876.40		1.256E-01	1.142E+00	1.901E+00	1.952E+00	0.066
		880.51		5.680E-02	4.077E-01	6.843E-01	4.929E-02	0.083
		883.24		1.761E-01	4.486E-01	7.434E-01	4.985E-01	0.237
		899.00		2.967E-01	1.116E+00	1.886E+00	8.194E-01	0.157
		925.00		1.038E+00	1.616E+00	2.843E+00	2.015E-01	0.365
		926.50		1.465E-01	2.527E-01	4.370E-01	1.084E-01	0.335
		946.00	*	5.747E-02	4.379E-01	7.319E-01	1.324E-01	0.079
		949.00		2.292E-02	6.594E-01	1.092E+00	7.654E-02	0.021
		980.50		-4.979E-02	1.086E+00	1.781E+00	1.227E-01	-0.028
		1394.10		-7.066E-01	1.713E+00	2.473E+00	1.603E+00	-0.286
PA-234M		766.41		1.860E+01	3.135E+01	4.320E+01	3.306E+01	0.431
		1001.03	*	5.272E+00	9.816E+00	1.695E+01	1.669E+00	0.311
TH-234		63.29	*	2.337E-01	6.483E-01	1.066E+00	1.848E-01	0.219

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		1.635E+00	7.411E-01	8.305E-01	1.502E-01	1.969
U-235	+	89.95		1.206E+00	9.353E-01	1.585E+00	4.882E-01	0.761
	+	93.35		1.966E+00	9.854E-01	9.723E-01	2.728E-01	2.022
		105.00		1.194E+00	1.037E+00	1.643E+00	4.961E-01	0.726
		143.76	*	1.439E-01	2.238E-01	3.619E-01	6.422E-02	0.398
		163.35		1.196E-01	4.637E-01	7.889E-01	1.435E-01	0.152
	+	185.71		2.182E-01	8.085E-02	9.583E-02	5.892E-03	2.277
		205.31		3.097E-01	6.105E-01	9.139E-01	1.656E-01	0.339
NP-236		94.67		2.522E-01	1.295E-01	1.963E-01	1.730E-02	1.285
		98.44		9.135E-02	6.924E-02	1.038E-01	9.487E-03	0.880
		111.00		6.222E-02	1.311E-01	2.150E-01	2.220E-02	0.289
		160.31	*	-2.803E-02	8.495E-02	1.334E-01	9.179E-03	-0.210
U-238		63.29	*	2.337E-01	6.483E-01	1.066E+00	1.848E-01	0.219
	+	92.38		1.635E+00	6.940E-01	8.305E-01	7.167E-02	1.969
NP-239		99.55		2.491E-01	1.562E-01	2.368E-01	2.188E-02	1.052
		117.00	*	5.651E-02	1.891E-01	3.078E-01	3.370E-02	0.184
	+	209.75		1.677E+00	1.196E+00	1.492E+00	9.262E-02	1.124
		228.18		-1.369E-01	2.375E-01	3.856E-01	2.388E-02	-0.355
		277.60		5.914E-02	2.157E-01	3.536E-01	2.072E-02	0.167
		334.30		-9.298E-01	1.802E+00	2.462E+00	1.429E-01	-0.378
AM-241		59.54	*	-1.397E-02	6.493E-02	1.053E-01	8.216E-03	-0.133
CM-243		99.55		2.563E-01	1.608E-01	2.436E-01	2.251E-02	1.052
		103.76	*	1.010E-02	9.030E-02	1.463E-01	1.408E-02	0.069
		117.00		5.814E-02	1.946E-01	3.166E-01	3.466E-02	0.184
	+	209.75		1.653E+00	1.179E+00	1.471E+00	9.130E-02	1.124
		228.18		-1.383E-01	2.400E-01	3.896E-01	2.413E-02	-0.355
		277.60		5.962E-02	2.174E-01	3.565E-01	2.088E-02	0.167
CM-247		278.00		3.099E-01	8.662E-01	1.463E+00	8.563E-02	0.212
		287.40		-9.128E-01	1.496E+00	2.246E+00	1.315E-01	-0.406
		402.60	*	3.260E-02	4.501E-02	7.554E-02	4.144E-03	0.432
CF-249		252.85		-9.067E-01	9.486E-01	1.498E+00	9.111E-02	-0.605
		333.44		-2.440E-01	2.396E-01	3.125E-01	1.815E-02	-0.781
		387.95	*	-1.479E-02	4.996E-02	8.033E-02	4.355E-03	-0.184
CF-251		176.60	*	-1.370E-01	1.340E-01	2.158E-01	1.318E-02	-0.635
		227.00		2.783E-02	4.058E-01	6.800E-01	4.213E-02	0.041
		285.00		-7.496E-01	1.959E+00	3.180E+00	1.861E-01	-0.236

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088    *
* Acquisition date :  6-JUL-2009 13:26:00 Detector SN#     :               *
* Detector ID        : GAM21               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:09.58      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201870088          Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope      :               *
* LCS DPM          :    0.000             LCS Isotope      :               *
* LCSD DPM         :    0.000             LCSD Isotope     :               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.695E+01	3.388E+00	6.903E-01	0.000E+00
CD-109	1.776E+00	9.365E-01	1.036E+00	0.000E+00
SN-126	1.749E-01	9.219E-02	1.018E-01	0.000E+00
TL-208	5.532E-01	1.068E-01	7.586E-02	0.000E+00
BI-210	7.869E-01	7.857E-01	9.223E-01	0.000E+00
PB-210	7.869E-01	7.857E-01	9.223E-01	0.000E+00
PO-210	7.869E-01	7.851E-01	9.223E-01	0.000E+00
BI-211	3.351E+00	4.601E-01	3.891E-01	0.000E+00
PB-212	1.242E+00	1.619E-01	1.199E-01	0.000E+00
PO-212	1.242E+00	1.619E-01	1.199E-01	0.000E+00
BI-214	1.105E+00	2.075E-01	1.460E-01	0.000E+00
PB-214	1.166E+00	1.708E-01	1.357E-01	0.000E+00
PO-214	1.166E+00	1.708E-01	1.357E-01	0.000E+00
PO-216	1.242E+00	1.619E-01	1.199E-01	0.000E+00
PO-218	1.166E+00	1.708E-01	1.357E-01	0.000E+00
RA-224	1.869E+00	1.031E+00	1.766E+00	0.000E+00
RA-226	1.105E+00	2.075E-01	1.460E-01	0.000E+00
AC-228	1.852E+00	3.840E-01	2.983E-01	0.000E+00
RA-228	1.852E+00	3.840E-01	2.983E-01	0.000E+00
TH-228	1.242E+00	1.619E-01	1.199E-01	0.000E+00
TH-230	1.105E+00	2.075E-01	1.460E-01	0.000E+00
TH-232	1.852E+00	3.840E-01	2.983E-01	0.000E+00
U-234	1.105E+00	2.075E-01	1.460E-01	0.000E+00
NP-237	5.135E-01	2.899E-01	3.149E-01	0.000E+00
AM-243	3.219E-01	6.776E-02	5.697E-02	0.000E+00
ANH-511	1.653E-01	7.966E-02	6.081E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-2.641E-01	4.215E-01	6.669E-01	0.000E+00	NOT IDENT.

NA-22	6.557E-02	7.164E-02	1.294E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	3.386E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.051E-02	3.576E-02	5.532E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.406E-02	6.434E-02	0.000E+00	FAIL ABUN
SC-46	-1.588E-02	5.267E-02	8.683E-02	0.000E+00	FAIL ABUN
V-48	5.992E-02	9.791E-02	1.752E-01	0.000E+00	NOT IDENT.
CR-51	-4.038E-02	3.912E-01	6.698E-01	0.000E+00	NOT IDENT.
MN-52	-3.840E-02	2.632E-01	4.216E-01	0.000E+00	NOT IDENT.
MN-54	-1.488E-02	5.475E-02	9.138E-02	0.000E+00	NOT IDENT.
CO-56	3.235E-02	5.393E-02	9.694E-02	0.000E+00	NOT IDENT.
CO-57	-6.008E-03	2.388E-02	4.012E-02	0.000E+00	NOT IDENT.
CO-58	-3.180E-02	5.385E-02	8.700E-02	0.000E+00	NOT IDENT.
FE-59	-8.393E-02	1.329E-01	2.080E-01	0.000E+00	NOT IDENT.
CO-60	4.829E-02	6.042E-02	1.095E-01	0.000E+00	NOT IDENT.
ZN-65	1.213E-02	1.624E-01	2.356E-01	0.000E+00	NOT IDENT.
GE-68	-1.613E+00	1.849E+00	2.815E+00	0.000E+00	NOT IDENT.
AS-73	1.299E-01	2.304E-01	4.107E-01	0.000E+00	NOT IDENT.
AS-74	4.065E-02	1.196E-01	2.047E-01	0.000E+00	NOT IDENT.
SE-75	4.877E-02	5.239E-02	8.447E-02	0.000E+00	NOT IDENT.
BR-77	3.035E+00	9.529E+00	1.642E+01	0.000E+00	FAIL ABUN
SR-82	-1.496E-01	5.021E-01	8.387E-01	0.000E+00	NOT IDENT.
RB-83	4.499E-02	8.402E-02	1.473E-01	0.000E+00	NOT IDENT.
RB-84	-3.621E-03	9.934E-02	1.685E-01	0.000E+00	NOT IDENT.
KR-85	1.758E+01	1.109E+01	1.840E+01	0.000E+00	NOT IDENT.
SR-85	8.913E-02	5.625E-02	9.330E-02	0.000E+00	NOT IDENT.
RB-86	-9.767E-01	1.131E+00	1.724E+00	0.000E+00	NOT IDENT.
Y-88	4.953E-02	5.407E-02	1.057E-01	0.000E+00	NOT IDENT.
ZR-88	3.692E-02	3.547E-02	6.454E-02	0.000E+00	NOT IDENT.
Y-91	7.631E+00	2.961E+01	5.047E+01	0.000E+00	NOT IDENT.
NB-94	2.511E-02	4.537E-02	8.156E-02	0.000E+00	NOT IDENT.
NB-95	7.909E-02	6.581E-02	1.101E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.659E-01	2.796E-01	0.000E+00	NOT IDENT.
ZR-95	2.710E-02	9.110E-02	1.606E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.522E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	9.490E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	6.249E+00	1.150E+01	2.068E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.128E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.570E-02	3.274E-02	5.880E-02	0.000E+00	NOT IDENT.
RH-102	-1.124E-02	3.731E-02	6.151E-02	0.000E+00	FAIL ABUN
RU-103	-2.277E-02	5.075E-02	8.219E-02	0.000E+00	FAIL ABUN
RH-106	2.491E-01	4.503E-01	7.582E-01	0.000E+00	FAIL ABUN
RU-106	2.491E-01	4.496E-01	7.582E-01	0.000E+00	FAIL ABUN
AG-108M	-2.350E-02	3.719E-02	5.984E-02	0.000E+00	NOT IDENT.
AG-110M	-3.334E-02	4.588E-02	7.472E-02	0.000E+00	NOT IDENT.
IN-111	4.262E-01	9.761E-01	1.525E+00	0.000E+00	NOT IDENT.
IN-113M	6.374E-02	5.302E-02	9.712E-02	0.000E+00	NOT IDENT.
SN-113	6.374E-02	5.302E-02	9.712E-02	0.000E+00	NOT IDENT.
IN-114M	6.853E-02	1.986E-01	3.115E-01	0.000E+00	NOT IDENT.
CD-115	6.255E+00	9.649E+00	1.705E+01	0.000E+00	NOT IDENT.
SN-117M	-1.392E-03	5.454E-02	9.159E-02	0.000E+00	NOT IDENT.
SB-122	-3.890E+00	3.052E+00	3.818E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.577E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.922E-03	2.955E-02	4.990E-02	0.000E+00	NOT IDENT.
I-124	-9.016E-01	8.615E-01	1.066E+00	0.000E+00	NOT IDENT.
SB-124	4.079E-03	9.153E-02	1.563E-01	0.000E+00	FAIL ABUN
SB-125	-9.888E-02	1.142E-01	1.815E-01	0.000E+00	NOT IDENT.
TE-125M	-1.305E+01	8.818E+00	1.396E+01	0.000E+00	NOT IDENT.
I-126	1.801E-01	2.322E-01	4.244E-01	0.000E+00	NOT IDENT.
SB-126	6.013E-02	1.939E-01	3.104E-01	0.000E+00	FAIL ABUN
SB-127	-4.788E-01	1.400E+00	2.346E+00	0.000E+00	NOT IDENT.
XE-127	1.058E-02	5.157E-02	8.354E-02	0.000E+00	NOT IDENT.
I-131	-6.412E-02	1.200E-01	1.979E-01	0.000E+00	NOT IDENT.
TE-132	-3.365E-01	5.698E-01	9.669E-01	0.000E+00	NOT IDENT.
BA-133	-1.100E-02	5.663E-02	8.254E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.353E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.015E-02	6.441E-02	1.197E-01	0.000E+00	FAIL ABUN
CS-135	2.359E-01	1.981E-01	3.220E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	6.048E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.705E-03	1.451E-01	2.455E-01	0.000E+00	FAIL ABUN
BA-137M	6.488E-03	4.692E-02	8.214E-02	0.000E+00	NOT IDENT.
CS-137	6.859E-03	4.960E-02	8.683E-02	0.000E+00	NOT IDENT.
CE-139	2.732E-03	2.801E-02	4.990E-02	0.000E+00	NOT IDENT.
BA-140	-1.941E-02	3.388E-01	5.651E-01	0.000E+00	NOT IDENT.
LA-140	9.722E-03	1.201E-01	2.063E-01	0.000E+00	NOT IDENT.
CE-141	5.502E-02	6.345E-02	1.106E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.439E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.026E-01	2.136E-01	3.535E-01	0.000E+00	NOT IDENT.
PM-144	2.872E-02	4.664E-02	8.422E-02	0.000E+00	NOT IDENT.

PR-144	1.945E+00	3.159E+00	5.704E+00	0.000E+00	NOT IDENT.
PM-146	2.317E-02	5.284E-02	9.225E-02	0.000E+00	NOT IDENT.
ND-147	-4.697E-01	6.941E-01	1.093E+00	0.000E+00	FAIL ABUN
PM-149	-1.116E+02	7.474E+01	1.160E+02	0.000E+00	NOT IDENT.
EU-152	-3.407E-03	1.083E-01	1.856E-01	0.000E+00	NOT IDENT.
GD-153	1.592E-02	7.760E-02	1.174E-01	0.000E+00	NOT IDENT.
EU-154	1.814E-01	2.005E-01	3.610E-01	0.000E+00	NOT IDENT.
EU-155	1.413E-01	9.739E-02	1.740E-01	0.000E+00	FAIL ABUN
TB-160	-7.121E-02	1.996E-01	3.281E-01	0.000E+00	FAIL ABUN
HO-166M	3.563E-02	7.888E-02	1.410E-01	0.000E+00	NOT IDENT.
TM-171	-1.118E+01	1.719E+01	2.676E+01	0.000E+00	NOT IDENT.
LU-176	-1.033E-02	2.923E-02	4.459E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.482E+00	1.944E+00	0.000E+00	FAIL ABUN
LU-177M	2.090E-01	2.321E-01	3.715E-01	0.000E+00	FAIL ABUN
HF-181	1.406E-02	5.276E-02	9.076E-02	0.000E+00	NOT IDENT.
W-181	4.856E-02	1.910E-01	3.314E-01	0.000E+00	NOT IDENT.
TA-182	1.225E-01	3.503E-01	5.990E-01	0.000E+00	FAIL ABUN
RE-183	-1.156E-02	1.059E-01	1.873E-01	0.000E+00	FAIL ABUN
RE-184	-2.406E-01	2.467E-01	4.077E-01	0.000E+00	NOT IDENT.
OS-185	5.061E-03	5.438E-02	9.093E-02	0.000E+00	NOT IDENT.
RE-188	5.642E-02	1.760E-01	3.001E-01	0.000E+00	NOT IDENT.
W-188	6.439E+00	8.965E+00	1.420E+01	0.000E+00	NOT IDENT.
IR-192	9.225E-03	3.699E-02	6.473E-02	0.000E+00	FAIL ABUN
AU-195	1.931E-01	2.235E-01	3.484E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.758E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.682E+00	5.207E+00	9.114E+00	0.000E+00	NOT IDENT.
TL-202	8.995E-02	7.553E-02	1.390E-01	0.000E+00	NOT IDENT.
HG-203	4.967E-02	4.497E-02	8.204E-02	0.000E+00	NOT IDENT.
BI-207	1.401E-02	8.205E-02	1.402E-01	0.000E+00	FAIL ABUN
TL-207	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
PO-209	6.425E+00	9.541E+00	1.732E+01	0.000E+00	NOT IDENT.
PB-211	2.169E-01	1.313E+00	1.953E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.895E-01	8.301E-01	0.000E+00	FAIL ABUN
PO-215	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
RN-219	4.753E-01	4.906E-01	8.820E-01	0.000E+00	FAIL ABUN
RN-220	1.556E+01	3.251E+01	5.662E+01	0.000E+00	NOT IDENT.
RA-223	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
AC-227	2.854E-01	4.031E-01	7.235E-01	0.000E+00	FAIL ABUN
TH-227	2.854E-01	4.040E-01	7.235E-01	0.000E+00	FAIL ABUN
TH-229	-8.417E-02	5.400E-01	8.930E-01	0.000E+00	FAIL ABUN
PA-231	7.009E-01	1.647E+00	2.915E+00	0.000E+00	FAIL ABUN
TH-231	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
U-231	-5.421E-01	8.963E-01	1.301E+00	0.000E+00	FAIL ABUN
PA-233	-1.614E-02	6.932E-02	1.179E-01	0.000E+00	FAIL ABUN
PA-234	5.747E-02	4.292E-01	7.364E-01	0.000E+00	FAIL ABUN
PA-234M	5.272E+00	9.619E+00	1.704E+01	0.000E+00	NOT IDENT.
TH-234	2.337E-01	6.353E-01	1.115E+00	0.000E+00	FAIL ABUN
U-235	1.439E-01	2.193E-01	3.743E-01	0.000E+00	FAIL ABUN
NP-236	-2.803E-02	8.325E-02	1.378E-01	0.000E+00	NOT IDENT.
U-238	2.337E-01	6.353E-01	1.115E+00	0.000E+00	FAIL ABUN
NP-239	5.651E-02	1.854E-01	3.192E-01	0.000E+00	FAIL ABUN
AM-241	-1.397E-02	6.363E-02	1.102E-01	0.000E+00	NOT IDENT.
CM-243	1.010E-02	8.849E-02	1.520E-01	0.000E+00	FAIL ABUN
CM-247	3.260E-02	4.411E-02	7.697E-02	0.000E+00	NOT IDENT.
CF-249	-1.479E-02	4.896E-02	8.189E-02	0.000E+00	NOT IDENT.
CF-251	-1.370E-01	1.313E-01	2.225E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:27:51.37

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:26:00.
Sample ID         : G1201870088          Sample quantity  : 1.26580E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.58  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	968	10.67*	7.284E-01	3.695E+01	3.695E+01	9.36
CD-109	88.03	181	3.72*	8.310E+00	1.739E+00	1.776E+00	53.79
SN-126	64.28	------	9.60	8.381E+00	------ Line Not Found		------
	86.94	181	8.90	8.310E+00	7.270E-01	7.270E-01	67.31
	87.57	181	37.00*	8.310E+00	1.749E-01	1.749E-01	53.79
TL-208	277.35	------	6.80	3.917E+00	------ Line Not Found		------
	510.84	116	21.60	2.089E+00	7.652E-01	7.652E-01	49.88
	583.14	285	84.20*	1.817E+00	5.532E-01	5.532E-01	19.70
	860.37	44	12.46	1.217E+00	8.542E-01	8.542E-01	76.02
BI-210	46.50	81	4.05*	7.520E+00	7.859E-01	7.869E-01	101.89
PB-210	46.50	81	4.05*	7.520E+00	7.859E-01	7.869E-01	101.89
PO-210	46.50	81	4.05*	7.520E+00	7.859E-01	7.869E-01	101.81
BI-211	72.87	------	1.27	8.456E+00	------ Line Not Found		------
	351.07	451	12.94*	3.085E+00	3.351E+00	3.351E+00	14.01
PB-212	74.81	606	10.70	8.452E+00	1.986E+00	1.986E+00	23.42
	77.11	890	18.00	8.441E+00	1.737E+00	1.737E+00	14.02
	87.30	181	8.00	8.310E+00	8.088E-01	8.088E-01	54.72
	238.63	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.09	66	3.41	3.626E+00	1.586E+00	1.586E+00	71.39
PO-212	74.81	606	10.70	8.452E+00	1.986E+00	1.986E+00	23.42
	77.11	890	18.00	8.441E+00	1.737E+00	1.737E+00	14.02
	87.30	181	8.00	8.310E+00	8.088E-01	8.088E-01	54.72
	115.19	------	0.60	7.596E+00	------ Line Not Found		------
	238.63	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.09	66	3.41	3.626E+00	1.586E+00	1.586E+00	71.39
BI-214	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	606	6.21	8.452E+00	3.421E+00	3.421E+00	22.72
	77.11	890	10.50	8.441E+00	2.978E+00	2.978E+00	15.96
	87.30	181	4.67	8.310E+00	1.385E+00	1.386E+00	54.34
	241.98	111	7.49	4.459E+00	9.855E-01	9.855E-01	56.56
	295.21	261	19.20	3.682E+00	1.096E+00	1.096E+00	27.02
	351.92	451	37.20*	3.085E+00	1.166E+00	1.166E+00	14.95
PO-214	74.81	606	6.21	8.452E+00	3.421E+00	3.421E+00	22.72
	77.11	890	10.50	8.441E+00	2.978E+00	2.978E+00	15.96
	87.30	181	4.67	8.310E+00	1.385E+00	1.386E+00	54.34
	241.98	111	7.49	4.459E+00	9.855E-01	9.855E-01	56.56
	295.21	261	19.20	3.682E+00	1.096E+00	1.096E+00	27.02
	351.92	451	37.20*	3.085E+00	1.166E+00	1.166E+00	14.95
PO-216	74.81	606	10.70	8.452E+00	1.986E+00	1.986E+00	23.42
	77.11	890	18.00	8.441E+00	1.737E+00	1.737E+00	14.02
	87.30	181	8.00	8.310E+00	8.088E-01	8.088E-01	54.72
	238.63	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.09	66	3.41	3.626E+00	1.586E+00	1.586E+00	71.39
PO-218	74.81	606	6.21	8.452E+00	3.421E+00	3.421E+00	22.72
	77.11	890	10.50	8.441E+00	2.978E+00	2.978E+00	15.96
	87.30	181	4.67	8.310E+00	1.385E+00	1.386E+00	54.34
	241.98	111	7.49	4.459E+00	9.855E-01	9.855E-01	56.56
	295.21	261	19.20	3.682E+00	1.096E+00	1.096E+00	27.02
	351.92	451	37.20*	3.085E+00	1.166E+00	1.166E+00	14.95
RA-224	240.98	111	3.95*	4.459E+00	1.869E+00	1.869E+00	56.28
RA-226	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47
AC-228	338.32	227	11.40	3.213E+00	1.838E+00	1.838E+00	46.38
	911.07	199	27.70*	1.151E+00	1.852E+00	1.852E+00	21.16
	969.11	113	16.60	1.082E+00	1.872E+00	1.872E+00	36.21
RA-228	338.32	227	11.40	3.213E+00	1.838E+00	1.838E+00	46.38
	911.07	199	27.70*	1.151E+00	1.852E+00	1.852E+00	21.16
	969.11	113	16.60	1.082E+00	1.872E+00	1.872E+00	36.21
TH-228	84.40	------	1.21	8.360E+00	------ Line Not Found		------
	238.60	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.10	66	3.41	3.626E+00	1.586E+00	1.586E+00	92.20
TH-230	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47
TH-232	338.32	227	11.40	3.213E+00	1.838E+00	1.838E+00	22.86
	911.07	199	27.70*	1.151E+00	1.852E+00	1.852E+00	21.16

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	113	16.60	1.082E+00	1.872E+00	1.872E+00	36.21
U-234	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47
NP-237	86.50	181	12.60*	8.310E+00	5.135E-01	5.135E-01	57.62
	95.87	------	2.60	8.129E+00	------ Line Not Found		------
AM-243	74.67	606	66.00*	8.452E+00	3.219E-01	3.219E-01	21.48
	86.72	181	0.34	8.310E+00	1.926E+01	1.926E+01	53.79
	117.66	------	0.55	7.522E+00	------ Line Not Found		------
	142.18	------	0.13	6.781E+00	------ Line Not Found		------
ANH-511	511.00	116	100.00*	2.089E+00	1.653E-01	1.653E-01	49.18

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

Total number of lines in spectrum 28
Number of unidentified lines 1
Number of lines tentatively identified by NID 27 96.43%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.695E+01	3.695E+01	0.346E+01	9.36	
CD-109	464.00D	1.02	1.739E+00	1.776E+00	0.956E+00	53.79	
SN-126	1.00E+05Y	1.00	1.749E-01	1.749E-01	0.941E-01	53.79	
TL-208	1.41E+10Y	1.00	5.532E-01	5.532E-01	1.090E-01	19.70	
BI-210	22.26Y	1.00	7.859E-01	7.869E-01	8.018E-01	101.89	
PB-210	22.26Y	1.00	7.859E-01	7.869E-01	8.018E-01	101.89	
PO-210	22.26Y	1.00	7.859E-01	7.869E-01	8.012E-01	101.81	
BI-211	7.04E+08Y	1.00	3.351E+00	3.351E+00	0.469E+00	14.01	
PB-212	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
PO-212	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
BI-214	1600.00Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
PB-214	1600.00Y	1.00	1.166E+00	1.166E+00	0.174E+00	14.95	
PO-214	1600.00Y	1.00	1.166E+00	1.166E+00	0.174E+00	14.95	
PO-216	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
PO-218	1600.00Y	1.00	1.166E+00	1.166E+00	0.174E+00	14.95	
RA-224	1.41E+10Y	1.00	1.869E+00	1.869E+00	1.052E+00	56.28	
RA-226	1600.00Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
AC-228	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.392E+00	21.16	
RA-228	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.392E+00	21.16	
TH-228	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
TH-230	4.47E+09Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
TH-232	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.392E+00	21.16	
U-234	4.47E+09Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
NP-237	2.14E+06Y	1.00	5.135E-01	5.135E-01	2.959E-01	57.62	
AM-243	7380.00Y	1.00	3.219E-01	3.219E-01	0.691E-01	21.48	
ANH-511	1.00E+09Y	1.00	1.653E-01	1.653E-01	0.813E-01	49.18	
	Total Activity :		6.644E+01	6.648E+01			

Grand Total Activity : 6.644E+01 6.648E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	90.14	91	374	0.97	179.31	176	6	1.26E-02	71.2	8.26E+00	T
0	92.80	245	561	1.54	184.63	182	12	3.40E-02	41.5	8.20E+00	T
0	186.06	222	323	1.18	370.87	365	13	3.09E-02	36.5	5.60E+00	T
0	209.21	93	266	1.04	417.10	412	11	1.29E-02	71.1	5.08E+00	T
0	270.02	81	181	1.43	538.60	534	11	1.13E-02	67.5	4.02E+00	T
0	408.77	24	68	1.41	815.86	814	7	3.39E-03	****	2.64E+00	
0	562.03	44	51	3.79	1122.24	1116	12	6.10E-03	71.8	1.89E+00	T
0	728.43	64	65	0.94	1455.06	1448	17	8.95E-03	62.1	1.44E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:27:56.67

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1 *
* Acquisition date : 6-JUL-2009 13:26:00.  Detector SN#     :              *
* Detector ID      : GAM21                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:09.58         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 22-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G1201870088           Analyst initials: MXR1           *
* Batch Number     : 880723                Sample Quantity : 1.26580E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.695E+01	3.457E+00	6.906E-01	4.395E-02	53.508
CD-109	1.776E+00	9.556E-01	9.947E-01	8.243E-02	1.786
SN-126	1.749E-01	9.407E-02	9.780E-02	8.076E-03	1.788
TL-208	5.532E-01	1.090E-01	7.485E-02	5.678E-03	7.390
BI-210	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PB-210	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PO-210	7.869E-01	8.012E-01	8.779E-01	5.674E-02	0.896
BI-211	3.351E+00	4.695E-01	3.811E-01	2.425E-02	8.794
PB-212	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
PO-212	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
BI-214	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
PB-214	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-214	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-216	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
PO-218	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
RA-224	1.869E+00	1.052E+00	1.720E+00	1.058E-01	1.086
RA-226	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
AC-228	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
TH-228	1.242E+00	1.652E-01	1.167E-01	8.895E-03	10.641
TH-230	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
TH-232	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
U-234	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
NP-237	5.135E-01	2.959E-01	3.023E-01	6.712E-02	1.699
AM-243	3.219E-01	6.914E-02	5.458E-02	4.122E-03	5.898
ANH-511	1.653E-01	8.129E-02	5.988E-02	3.820E-03	2.760

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.641E-01		4.302E-01	6.562E-01	4.619E-02	-0.403
NA-22	6.557E-02		7.311E-02	1.292E-01	7.638E-03	0.508
NA-24	-3.166E-01		1.728E-01	Half-Life too short		
AL-26	-1.051E-02		3.649E-02	5.552E-02	3.091E-03	-0.189
TI-44	3.206E-01	+	4.496E-02	6.169E-02	4.771E-03	5.196
SC-46	-1.588E-02		5.375E-02	8.622E-02	6.190E-03	-0.184
V-48	5.992E-02		9.991E-02	1.742E-01	1.198E-02	0.344
CR-51	-4.038E-02		3.992E-01	6.552E-01	4.261E-02	-0.062
MN-52	-3.840E-02		2.686E-01	4.216E-01	2.541E-02	-0.091
MN-54	-1.488E-02		5.587E-02	9.065E-02	6.613E-03	-0.164
CO-56	3.235E-02		5.503E-02	9.619E-02	6.999E-03	0.336
CO-57	-6.008E-03		2.436E-02	3.871E-02	4.455E-03	-0.155
CO-58	-3.180E-02		5.495E-02	8.627E-02	6.337E-03	-0.369
FE-59	-8.393E-02		1.356E-01	2.072E-01	1.486E-02	-0.405
CO-60	4.829E-02		6.165E-02	1.094E-01	6.580E-03	0.441
ZN-65	1.213E-02		1.657E-01	2.348E-01	1.440E-02	0.052
GE-68	-1.613E+00		1.887E+00	2.804E+00	1.789E-01	-0.575
AS-73	1.299E-01		2.351E-01	3.917E-01	2.632E-02	0.332
AS-74	4.065E-02		1.220E-01	2.020E-01	1.390E-02	0.201
SE-75	4.877E-02		5.346E-02	8.239E-02	4.984E-03	0.592
BR-77	3.035E+00		9.724E+00	1.617E+01	1.042E+00	0.188
SR-82	-1.496E-01		5.124E-01	8.311E-01	6.093E-02	-0.180
RB-83	4.499E-02		8.573E-02	1.451E-01	9.348E-03	0.310
RB-84	-3.621E-03		1.014E-01	1.673E-01	1.205E-02	-0.022
KR-85	1.758E+01		1.132E+01	1.812E+01	1.160E+00	0.970
SR-85	8.913E-02		5.739E-02	9.189E-02	5.881E-03	0.970
RB-86	-9.767E-01		1.154E+00	1.717E+00	1.096E-01	-0.569
Y-88	4.953E-02		5.518E-02	1.061E-01	5.854E-03	0.467
ZR-88	3.692E-02		3.619E-02	6.331E-02	3.415E-03	0.583
Y-91	7.631E+00		3.021E+01	5.035E+01	2.892E+00	0.152
NB-94	2.511E-02		4.630E-02	8.070E-02	5.851E-03	0.311
NB-95	7.909E-02		6.715E-02	1.091E-01	7.996E-03	0.725
NB-95M	3.978E-01		1.693E-01	2.723E-01	2.129E-02	1.461
ZR-95	2.710E-02		9.296E-02	1.591E-01	1.326E-02	0.170
NB-97	-3.414E-02		2.307E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1.450E+00		4.842E-01	Half-Life too short		
MO-99	6.249E+00		1.174E+01	2.047E+01	2.965E+00	0.305
TC-99M	-1.435E+09		1.086E+09	Half-Life too short		
RH-101	1.570E-02		3.341E-02	5.712E-02	3.534E-03	0.275
RH-102	-1.124E-02		3.807E-02	6.051E-02	3.699E-03	-0.186
RU-103	-2.277E-02		5.178E-02	8.092E-02	1.042E-02	-0.281
RH-106	2.491E-01		4.594E-01	7.489E-01	9.266E-02	0.333
RU-106	2.491E-01		4.587E-01	7.489E-01	5.241E-02	0.333
AG-108M	-2.350E-02		3.795E-02	5.879E-02	3.687E-03	-0.400
AG-110M	-3.334E-02		4.682E-02	7.386E-02	5.495E-03	-0.451
IN-111	4.262E-01		9.961E-01	1.486E+00	9.104E-02	0.287
IN-113M	6.374E-02		5.410E-02	9.528E-02	5.524E-03	0.669
SN-113	6.374E-02		5.410E-02	9.528E-02	5.524E-03	0.669
IN-114M	6.853E-02		2.027E-01	3.024E-01	1.864E-02	0.227
CD-115	6.255E+00		9.846E+00	1.680E+01	1.091E+00	0.372
SN-117M	-1.392E-03		5.565E-02	8.869E-02	6.325E-03	-0.016
SB-122	-3.890E+00		3.114E+00	3.766E+00	2.528E-01	-1.033
I-123	1.559E-01		8.046E-01	Half-Life too short		
TE-123M	2.922E-03		3.016E-02	4.832E-02	3.447E-03	0.060
I-124	-9.016E-01		8.791E-01	1.052E+00	7.276E-02	-0.857
SB-124	4.079E-03		9.340E-02	1.567E-01	9.858E-03	0.026
SB-125	-9.888E-02		1.165E-01	1.783E-01	1.064E-02	-0.555
TE-125M	-1.305E+01		8.998E+00	1.345E+01	1.565E+00	-0.970
I-126	1.801E-01		2.369E-01	4.196E-01	3.004E-02	0.429
SB-126	6.013E-02		1.979E-01	3.073E-01	2.238E-02	0.196
SB-127	-4.788E-01		1.429E+00	2.320E+00	2.326E-01	-0.206
XE-127	1.058E-02		5.262E-02	8.118E-02	5.032E-03	0.130
I-131	-6.412E-02		1.224E-01	1.939E-01	1.225E-02	-0.331
TE-132	-3.365E-01		5.814E-01	9.411E-01	1.348E-01	-0.358
BA-133	-1.100E-02		5.778E-02	8.086E-02	9.304E-03	-0.136
I-133	-3.176E-03		1.711E-03	Half-Life too short		
CS-134	7.015E-02		6.573E-02	1.187E-01	8.785E-03	0.591
CS-135	2.359E-01		2.021E-01	3.142E-01	2.444E-02	0.751
I-135	-9.902E+07		3.086E+08	Half-Life too short		
CS-136	7.705E-03		1.481E-01	2.444E-01	1.719E-02	0.032
BA-137M	6.488E-03		4.788E-02	8.120E-02	5.800E-03	0.080
CS-137	6.859E-03		5.061E-02	8.584E-02	6.149E-03	0.080
CE-139	2.732E-03		2.858E-02	4.835E-02	2.930E-03	0.057
BA-140	-1.941E-02		3.457E-01	5.569E-01	1.819E-01	-0.035
LA-140	9.722E-03		1.225E-01	2.067E-01	1.225E-02	0.047
CE-141	5.502E-02		6.474E-02	1.069E-01	9.664E-03	0.515
CE-143	4.048E-04		7.343E-05	Half-Life too short		
CE-144	-1.026E-01		2.179E-01	3.415E-01	5.652E-02	-0.300
PM-144	2.872E-02		4.759E-02	8.333E-02	6.033E-03	0.345
PR-144	1.945E+00		3.223E+00	5.643E+00	4.084E-01	0.345
PM-146	2.317E-02		5.392E-02	9.069E-02	7.907E-03	0.255
ND-147	-4.697E-01		7.083E-01	1.077E+00	1.491E-01	-0.436
PM-149	-1.116E+02		7.627E+01	1.132E+02	1.607E+01	-0.986

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-3.407E-03		1.105E-01	1.818E-01	1.182E-02	-0.019
GD-153	1.592E-02		7.918E-02	1.129E-01	1.022E-02	0.141
EU-154	1.814E-01		2.046E-01	3.604E-01	3.390E-02	0.503
EU-155	1.413E-01		9.937E-02	1.676E-01	1.652E-02	0.843
TB-160	-7.121E-02		2.036E-01	3.258E-01	2.348E-02	-0.219
HO-166M	3.563E-02		8.049E-02	1.396E-01	1.015E-02	0.255
TM-171	-1.118E+01		1.754E+01	2.560E+01	1.853E+00	-0.437
LU-176	-1.033E-02		2.983E-02	4.359E-02	2.557E-03	-0.237
LU-177	2.120E+00	+	1.512E+00	1.890E+00	1.173E-01	1.122
LU-177M	2.090E-01		2.368E-01	3.647E-01	2.038E-02	0.573
HF-181	1.406E-02		5.384E-02	8.931E-02	5.508E-03	0.157
W-181	4.856E-02		1.949E-01	3.169E-01	2.278E-02	0.153
TA-182	1.225E-01		3.574E-01	5.976E-01	3.456E-02	0.205
RE-183	-1.156E-02		1.081E-01	1.815E-01	1.195E-02	-0.064
RE-184	-2.406E-01		2.517E-01	3.974E-01	2.418E-02	-0.605
OS-185	5.061E-03		5.549E-02	8.986E-02	6.373E-03	0.056
RE-188	5.642E-02		1.796E-01	2.906E-01	2.216E-02	0.194
W-188	6.439E+00		9.148E+00	1.387E+01	8.130E-01	0.464
IR-192	9.225E-03		3.775E-02	6.330E-02	3.724E-03	0.146
AU-195	1.931E-01		2.281E-01	3.352E-01	3.077E-02	0.576
TL-200	2.176E-04		1.407E-04	Half-Life too short		
TL-201	-1.682E+00		5.313E+00	8.833E+00	5.350E-01	-0.190
TL-202	8.995E-02		7.708E-02	1.366E-01	7.950E-03	0.659
HG-203	4.967E-02		4.589E-02	8.009E-02	4.962E-03	0.620
BI-207	1.401E-02		8.373E-02	1.395E-01	9.025E-03	0.100
TL-207	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
PO-209	6.425E+00		9.736E+00	1.720E+01	1.231E+00	0.373
PB-211	2.169E-01		1.339E+00	1.917E+00	1.195E+00	0.113
BI-212	1.122E+00	+	7.036E-01	8.218E-01	7.307E-02	1.366
PO-215	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
RN-219	4.753E-01		5.006E-01	8.656E-01	1.166E-01	0.549
RN-220	1.556E+01		3.317E+01	5.582E+01	3.702E+00	0.279
RA-223	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
AC-227	2.854E-01		4.113E-01	7.054E-01	9.925E-02	0.405
TH-227	2.854E-01		4.122E-01	7.054E-01	1.199E-01	0.405
TH-229	-8.417E-02		5.510E-01	8.672E-01	5.356E-02	-0.097
PA-231	7.009E-01		1.681E+00	2.847E+00	3.929E-01	0.246
TH-231	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
U-231	-5.421E-01		9.145E-01	1.251E+00	1.116E-01	-0.433
PA-233	-1.614E-02		7.073E-02	1.153E-01	7.166E-03	-0.140
PA-234	5.747E-02		4.379E-01	7.319E-01	1.324E-01	0.079
PA-234M	5.272E+00		9.816E+00	1.695E+01	1.669E+00	0.311
TH-234	2.337E-01		6.483E-01	1.066E+00	1.848E-01	0.219
U-235	1.439E-01		2.238E-01	3.619E-01	6.422E-02	0.398
NP-236	-2.803E-02		8.495E-02	1.334E-01	9.179E-03	-0.210
U-238	2.337E-01		6.483E-01	1.066E+00	1.848E-01	0.219
NP-239	5.651E-02		1.891E-01	3.078E-01	3.370E-02	0.184
AM-241	-1.397E-02		6.493E-02	1.053E-01	8.216E-03	-0.133

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.010E-02		9.030E-02	1.463E-01	1.408E-02	0.069
CM-247	3.260E-02		4.501E-02	7.554E-02	4.144E-03	0.432
CF-249	-1.479E-02		4.996E-02	8.033E-02	4.355E-03	-0.184
CF-251	-1.370E-01		1.340E-01	2.158E-01	1.318E-02	-0.635

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201870088          *
* Acquisition date  :  6-JUL-2009 13:26:00 Detector SN#     :               *
* Detector ID       : GAM21                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:09.58     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201870088          Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.695E+01	3.388E+00	3.454E-01	1.728E+00
CD-109	1.776E+00	9.365E-01	5.182E-01	4.778E-01
SN-126	1.749E-01	9.219E-02	5.095E-02	4.704E-02
TL-208	5.532E-01	1.068E-01	3.795E-02	5.448E-02
BI-210	7.869E-01	7.857E-01	4.614E-01	4.009E-01
PB-210	7.869E-01	7.857E-01	4.614E-01	4.009E-01
PO-210	7.869E-01	7.851E-01	4.614E-01	4.006E-01
BI-211	3.351E+00	4.601E-01	1.946E-01	2.347E-01
PB-212	1.242E+00	1.619E-01	5.997E-02	8.260E-02
PO-212	1.242E+00	1.619E-01	5.997E-02	8.260E-02
BI-214	1.105E+00	2.075E-01	7.306E-02	1.059E-01
PB-214	1.166E+00	1.708E-01	6.789E-02	8.713E-02
PO-214	1.166E+00	1.708E-01	6.789E-02	8.713E-02
PO-216	1.242E+00	1.619E-01	5.997E-02	8.260E-02
PO-218	1.166E+00	1.708E-01	6.789E-02	8.713E-02
RA-224	1.869E+00	1.031E+00	8.835E-01	5.258E-01
RA-226	1.105E+00	2.075E-01	7.306E-02	1.059E-01
AC-228	1.852E+00	3.840E-01	1.492E-01	1.959E-01
RA-228	1.852E+00	3.840E-01	1.492E-01	1.959E-01
TH-228	1.242E+00	1.619E-01	5.996E-02	8.260E-02
TH-230	1.105E+00	2.075E-01	7.306E-02	1.059E-01
TH-232	1.852E+00	3.840E-01	1.492E-01	1.959E-01
U-234	1.105E+00	2.075E-01	7.306E-02	1.059E-01
NP-237	5.135E-01	2.899E-01	1.575E-01	1.479E-01
AM-243	3.219E-01	6.776E-02	2.850E-02	3.457E-02
ANH-511	1.653E-01	7.966E-02	3.042E-02	4.065E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-2.641E-01	4.215E-01	3.337E-01	2.151E-01 NOT IDENT.

NA-22	6.557E-02	7.164E-02	6.473E-02	3.655E-02	NOT IDENT.
NA-24	-3.166E+05	3.386E+05	0.000E+00	1.728E+05	SHORT HLIF
AL-26	-1.051E-02	3.576E-02	2.768E-02	1.825E-02	NOT IDENT.
TI-44	3.206E-01	4.406E-02	3.219E-02	2.248E-02	FAIL ABUN
SC-46	-1.588E-02	5.267E-02	4.344E-02	2.687E-02	FAIL ABUN
V-48	5.992E-02	9.791E-02	8.763E-02	4.996E-02	NOT IDENT.
CR-51	-4.038E-02	3.912E-01	3.351E-01	1.996E-01	NOT IDENT.
MN-52	-3.840E-02	2.632E-01	2.109E-01	1.343E-01	NOT IDENT.
MN-54	-1.488E-02	5.475E-02	4.572E-02	2.793E-02	NOT IDENT.
CO-56	3.235E-02	5.393E-02	4.850E-02	2.751E-02	NOT IDENT.
CO-57	-6.008E-03	2.388E-02	2.007E-02	1.218E-02	NOT IDENT.
CO-58	-3.180E-02	5.385E-02	4.353E-02	2.747E-02	NOT IDENT.
FE-59	-8.393E-02	1.329E-01	1.041E-01	6.779E-02	NOT IDENT.
CO-60	4.829E-02	6.042E-02	5.478E-02	3.082E-02	NOT IDENT.
ZN-65	1.213E-02	1.624E-01	1.179E-01	8.286E-02	NOT IDENT.
GE-68	-1.613E+00	1.849E+00	1.409E+00	9.434E-01	NOT IDENT.
AS-73	1.299E-01	2.304E-01	2.055E-01	1.175E-01	NOT IDENT.
AS-74	4.065E-02	1.196E-01	1.024E-01	6.100E-02	NOT IDENT.
SE-75	4.877E-02	5.239E-02	4.226E-02	2.673E-02	NOT IDENT.
BR-77	3.035E+00	9.529E+00	8.213E+00	4.862E+00	FAIL ABUN
SR-82	-1.496E-01	5.021E-01	4.196E-01	2.562E-01	NOT IDENT.
RB-83	4.499E-02	8.402E-02	7.367E-02	4.287E-02	NOT IDENT.
RB-84	-3.621E-03	9.934E-02	8.430E-02	5.068E-02	NOT IDENT.
KR-85	1.758E+01	1.109E+01	9.205E+00	5.659E+00	NOT IDENT.
SR-85	8.913E-02	5.625E-02	4.668E-02	2.870E-02	NOT IDENT.
RB-86	-9.767E-01	1.131E+00	8.625E-01	5.769E-01	NOT IDENT.
Y-88	4.953E-02	5.407E-02	5.287E-02	2.759E-02	NOT IDENT.
ZR-88	3.692E-02	3.547E-02	3.229E-02	1.809E-02	NOT IDENT.
Y-91	7.631E+00	2.961E+01	2.525E+01	1.511E+01	NOT IDENT.
NB-94	2.511E-02	4.537E-02	4.080E-02	2.315E-02	NOT IDENT.
NB-95	7.909E-02	6.581E-02	5.510E-02	3.358E-02	NOT IDENT.
NB-95M	3.978E-01	1.659E-01	1.399E-01	8.466E-02	NOT IDENT.
ZR-95	2.710E-02	9.110E-02	8.035E-02	4.648E-02	NOT IDENT.
NB-97	-3.414E+04	4.522E+04	0.000E+00	2.307E+04	SHORT HLIF
ZR-97	1.450E+06	9.490E+05	0.000E+00	4.842E+05	SHORT HLIF
MO-99	6.249E+00	1.150E+01	1.034E+01	5.870E+00	NOT IDENT.
TC-99M	-1.435E+15	2.128E+15	0.000E+00	1.086E+15	SHORT HLIF
RH-101	1.570E-02	3.274E-02	2.942E-02	1.670E-02	NOT IDENT.
RH-102	-1.124E-02	3.731E-02	3.077E-02	1.904E-02	FAIL ABUN
RU-103	-2.277E-02	5.075E-02	4.112E-02	2.589E-02	FAIL ABUN
RH-106	2.491E-01	4.503E-01	3.793E-01	2.297E-01	FAIL ABUN
RU-106	2.491E-01	4.496E-01	3.793E-01	2.294E-01	FAIL ABUN
AG-108M	-2.350E-02	3.719E-02	2.994E-02	1.897E-02	NOT IDENT.
AG-110M	-3.334E-02	4.588E-02	3.738E-02	2.341E-02	NOT IDENT.
IN-111	4.262E-01	9.761E-01	7.627E-01	4.980E-01	NOT IDENT.
IN-113M	6.374E-02	5.302E-02	4.859E-02	2.705E-02	NOT IDENT.
SN-113	6.374E-02	5.302E-02	4.859E-02	2.705E-02	NOT IDENT.
IN-114M	6.853E-02	1.986E-01	1.558E-01	1.013E-01	NOT IDENT.
CD-115	6.255E+00	9.649E+00	8.529E+00	4.923E+00	NOT IDENT.
SN-117M	-1.392E-03	5.454E-02	4.582E-02	2.782E-02	NOT IDENT.
SB-122	-3.890E+00	3.052E+00	1.910E+00	1.557E+00	NOT IDENT.
I-123	1.559E+05	1.577E+06	0.000E+00	8.046E+05	SHORT HLIF
TE-123M	2.922E-03	2.955E-02	2.496E-02	1.508E-02	NOT IDENT.
I-124	-9.016E-01	8.615E-01	5.333E-01	4.395E-01	NOT IDENT.
SB-124	4.079E-03	9.153E-02	7.818E-02	4.670E-02	FAIL ABUN
SB-125	-9.888E-02	1.142E-01	9.079E-02	5.827E-02	NOT IDENT.
TE-125M	-1.305E+01	8.818E+00	6.985E+00	4.499E+00	NOT IDENT.
I-126	1.801E-01	2.322E-01	2.123E-01	1.185E-01	NOT IDENT.
SB-126	6.013E-02	1.939E-01	1.553E-01	9.895E-02	FAIL ABUN
SB-127	-4.788E-01	1.400E+00	1.174E+00	7.144E-01	NOT IDENT.
XE-127	1.058E-02	5.157E-02	4.180E-02	2.631E-02	NOT IDENT.
I-131	-6.412E-02	1.200E-01	9.900E-02	6.122E-02	NOT IDENT.
TE-132	-3.365E-01	5.698E-01	4.837E-01	2.907E-01	NOT IDENT.
BA-133	-1.100E-02	5.663E-02	4.129E-02	2.889E-02	NOT IDENT.
I-133	-3.176E+03	3.353E+03	0.000E+00	1.711E+03	SHORT HLIF
CS-134	7.015E-02	6.441E-02	5.989E-02	3.286E-02	FAIL ABUN
CS-135	2.359E-01	1.981E-01	1.611E-01	1.011E-01	NOT IDENT.
I-135	-9.902E+13	6.048E+14	0.000E+00	3.086E+14	SHORT HLIF
CS-136	7.705E-03	1.451E-01	1.228E-01	7.403E-02	FAIL ABUN
BA-137M	6.488E-03	4.692E-02	4.109E-02	2.394E-02	NOT IDENT.
CS-137	6.859E-03	4.960E-02	4.344E-02	2.531E-02	NOT IDENT.
CE-139	2.732E-03	2.801E-02	2.497E-02	1.429E-02	NOT IDENT.
BA-140	-1.941E-02	3.388E-01	2.827E-01	1.729E-01	NOT IDENT.
LA-140	9.722E-03	1.201E-01	1.032E-01	6.127E-02	NOT IDENT.
CE-141	5.502E-02	6.345E-02	5.532E-02	3.237E-02	NOT IDENT.
CE-143	4.048E+02	1.439E+02	0.000E+00	7.343E+01	SHORT HLIF
CE-144	-1.026E-01	2.136E-01	1.769E-01	1.090E-01	NOT IDENT.
PM-144	2.872E-02	4.664E-02	4.214E-02	2.380E-02	NOT IDENT.

PR-144	1.945E+00	3.159E+00	2.854E+00	1.612E+00	NOT IDENT.
PM-146	2.317E-02	5.284E-02	4.615E-02	2.696E-02	NOT IDENT.
ND-147	-4.697E-01	6.941E-01	5.469E-01	3.541E-01	FAIL ABUN
PM-149	-1.116E+02	7.474E+01	5.802E+01	3.813E+01	NOT IDENT.
EU-152	-3.407E-03	1.083E-01	9.287E-02	5.527E-02	NOT IDENT.
GD-153	1.592E-02	7.760E-02	5.875E-02	3.959E-02	NOT IDENT.
EU-154	1.814E-01	2.005E-01	1.806E-01	1.023E-01	NOT IDENT.
EU-155	1.413E-01	9.739E-02	8.707E-02	4.969E-02	FAIL ABUN
TB-160	-7.121E-02	1.996E-01	1.642E-01	1.018E-01	FAIL ABUN
HO-166M	3.563E-02	7.888E-02	7.057E-02	4.024E-02	NOT IDENT.
TM-171	-1.118E+01	1.719E+01	1.339E+01	8.770E+00	NOT IDENT.
LU-176	-1.033E-02	2.923E-02	2.231E-02	1.492E-02	FAIL ABUN
LU-177	2.120E+00	1.482E+00	9.725E-01	7.561E-01	FAIL ABUN
LU-177M	2.090E-01	2.321E-01	1.858E-01	1.184E-01	FAIL ABUN
HF-181	1.406E-02	5.276E-02	4.541E-02	2.692E-02	NOT IDENT.
W-181	4.856E-02	1.910E-01	1.658E-01	9.744E-02	NOT IDENT.
TA-182	1.225E-01	3.503E-01	2.997E-01	1.787E-01	FAIL ABUN
RE-183	-1.156E-02	1.059E-01	9.373E-02	5.404E-02	FAIL ABUN
RE-184	-2.406E-01	2.467E-01	2.040E-01	1.259E-01	NOT IDENT.
OS-185	5.061E-03	5.438E-02	4.549E-02	2.775E-02	NOT IDENT.
RE-188	5.642E-02	1.760E-01	1.502E-01	8.978E-02	NOT IDENT.
W-188	6.439E+00	8.965E+00	7.105E+00	4.574E+00	NOT IDENT.
IR-192	9.225E-03	3.699E-02	3.238E-02	1.887E-02	FAIL ABUN
AU-195	1.931E-01	2.235E-01	1.743E-01	1.140E-01	FAIL ABUN
TL-200	2.176E+02	2.758E+02	0.000E+00	1.407E+02	SHORT HLIF
TL-201	-1.682E+00	5.207E+00	4.560E+00	2.657E+00	NOT IDENT.
TL-202	8.995E-02	7.553E-02	6.954E-02	3.854E-02	NOT IDENT.
HG-203	4.967E-02	4.497E-02	4.104E-02	2.295E-02	NOT IDENT.
BI-207	1.401E-02	8.205E-02	7.012E-02	4.186E-02	FAIL ABUN
TL-207	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
PO-209	6.425E+00	9.541E+00	8.666E+00	4.868E+00	NOT IDENT.
PB-211	2.169E-01	1.313E+00	9.773E-01	6.697E-01	NOT IDENT.
BI-212	1.122E+00	6.895E-01	4.153E-01	3.518E-01	FAIL ABUN
PO-215	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
RN-219	4.753E-01	4.906E-01	4.413E-01	2.503E-01	FAIL ABUN
RN-220	1.556E+01	3.251E+01	2.833E+01	1.659E+01	NOT IDENT.
RA-223	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
AC-227	2.854E-01	4.031E-01	3.620E-01	2.057E-01	FAIL ABUN
TH-227	2.854E-01	4.040E-01	3.620E-01	2.061E-01	FAIL ABUN
TH-229	-8.417E-02	5.400E-01	4.467E-01	2.755E-01	FAIL ABUN
PA-231	7.009E-01	1.647E+00	1.459E+00	8.403E-01	FAIL ABUN
TH-231	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
U-231	-5.421E-01	8.963E-01	6.509E-01	4.573E-01	FAIL ABUN
PA-233	-1.614E-02	6.932E-02	5.899E-02	3.536E-02	FAIL ABUN
PA-234	5.747E-02	4.292E-01	3.684E-01	2.190E-01	FAIL ABUN
PA-234M	5.272E+00	9.619E+00	8.527E+00	4.908E+00	NOT IDENT.
TH-234	2.337E-01	6.353E-01	5.580E-01	3.241E-01	FAIL ABUN
U-235	1.439E-01	2.193E-01	1.872E-01	1.119E-01	FAIL ABUN
NP-236	-2.803E-02	8.325E-02	6.892E-02	4.248E-02	NOT IDENT.
U-238	2.337E-01	6.353E-01	5.580E-01	3.241E-01	FAIL ABUN
NP-239	5.651E-02	1.854E-01	1.597E-01	9.457E-02	FAIL ABUN
AM-241	-1.397E-02	6.363E-02	5.513E-02	3.247E-02	NOT IDENT.
CM-243	1.010E-02	8.849E-02	7.604E-02	4.515E-02	FAIL ABUN
CM-247	3.260E-02	4.411E-02	3.851E-02	2.251E-02	NOT IDENT.
CF-249	-1.479E-02	4.896E-02	4.097E-02	2.498E-02	NOT IDENT.
CF-251	-1.370E-01	1.313E-01	1.113E-01	6.699E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	376.0986
46.50	376.0986
46.50	376.0986
48.70	426.7433
49.72	443.5883
51.35	397.3392
52.39	380.8830
52.97	396.7646
53.15	400.9389
53.44	398.0293
54.07	431.0414
56.28	501.9162
56.28	501.9185
57.37	0.0000
57.53	486.2946
57.53	486.2955
57.60	486.3371
57.98	487.5942
57.98	487.5942
59.32	526.4482
59.32	526.4482
59.40	526.5000
59.54	526.5908
59.72	530.8220
60.01	535.1263
61.10	540.9887
61.14	514.2216
61.30	517.4127
63.00	562.8784
63.29	578.5692
63.29	578.5692
63.58	578.7684
64.28	597.8644
65.12	582.9218
65.20	576.7626
65.20	576.7626
66.05	612.5732
66.72	633.4446
66.83	619.6937
66.91	619.7506
67.20	621.0651
67.20	621.0651
67.75	609.8239
67.85	566.6856
68.90	557.3771
68.90	557.3771
69.30	567.6160
69.67	567.8532
70.82	600.2622
70.82	600.2622
70.83	600.2688
72.80	486.6901
72.87	486.7265
72.87	486.7265
74.67	487.6784
74.81	487.7513
74.81	487.7513
74.81	487.7513
74.81	487.7513
74.81	487.7513
74.81	487.7513
74.97	487.8349
75.28	487.9984
75.70	488.2171
77.11	488.9495
77.11	488.9495
77.11	488.9495

77.11	488.9495
77.11	488.9495
77.11	488.9495
78.38	489.6036
79.62	496.5485
79.80	496.6422
79.80	496.6422
80.11	496.8006
80.18	524.2047
80.30	524.2693
80.30	524.2693
80.57	524.4156
81.00	556.2526
81.07	556.2929
81.07	556.2929
81.07	556.2929
81.07	556.2929
82.60	552.9421
83.37	553.3719
83.78	553.6038
83.78	553.6038
83.78	553.6038
83.78	553.6038
84.21	476.3319
84.40	467.2611
84.90	451.8418
85.43	440.2290
86.29	493.1388
86.50	528.8347
86.54	528.8557
86.59	528.8823
86.72	556.0765
86.79	556.1125
86.94	703.7244
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.57	475.0959
87.88	475.2412
88.03	475.3113
88.36	475.4634
88.47	475.5146
89.95	782.3257
91.11	459.7053
92.29	460.2236
92.38	460.2623
92.38	460.2623
93.35	563.0615
94.00	433.6526
94.67	433.9239
94.67	433.9254
94.90	434.0192
94.90	434.0192
94.90	434.0192
94.90	434.0192
95.87	446.3842
95.87	446.3842
96.73	403.9512
97.43	383.6574
98.44	332.5838
98.44	332.5838
98.88	355.0131
99.55	312.3282
99.55	312.3282
99.86	296.9668
100.00	322.7567
100.10	322.7870
103.18	417.5132
103.76	367.1281
105.00	323.3414
105.31	311.5710
108.00	374.9817
109.28	410.0147
111.00	327.1962
111.00	327.1962

111.76	362.1005
112.95	342.9308
115.19	334.8788
116.30	338.4538
117.00	333.2050
117.00	333.2050
117.66	322.4921
121.11	302.6433
121.62	318.0703
121.78	318.1114
122.06	305.0626
122.32	300.7519
122.32	300.7519
122.32	300.7519
122.32	300.7519
123.07	309.6878
127.23	304.1253
129.76	321.2291
131.20	346.9177
133.02	383.8004
133.54	356.3690
135.34	309.3497
136.00	308.4002
136.25	317.3024
136.48	317.3571
140.51	341.6053
140.51	0.0000
142.18	326.4815
142.65	303.2655
143.76	304.6241
144.24	302.5074
144.24	302.5074
144.24	302.5074
144.24	302.5074
145.22	300.4974
145.44	300.5447
147.16	338.8109
152.43	298.6944
152.70	299.8704
153.22	305.5775
154.21	315.8709
154.21	315.8709
154.21	315.8709
154.21	315.8709
155.03	293.6366
156.02	279.2587
158.56	293.2327
159.00	0.0000
159.00	287.7031
160.31	295.8349
161.27	286.3495
162.32	281.1466
162.64	264.9840
163.35	264.2097
163.89	259.7959
165.85	252.9126
167.43	259.5087
171.28	251.1057
171.86	256.6432
172.10	243.9848
176.55	297.4495
176.60	308.3754
181.06	240.2290
184.41	318.4431
185.71	273.5656
186.00	273.6168
190.27	230.9115
192.34	267.9527
193.63	251.6916
197.04	233.0938
198.01	234.1516
198.60	263.7453
200.40	276.0312
201.83	243.3101
202.84	245.6576
205.31	233.0098
208.36	265.8893
208.81	232.8675

209.75	216.5953
209.75	216.5953
210.97	221.3937
215.65	202.2514
216.55	219.5135
218.09	229.4479
222.10	205.6605
223.80	203.0481
226.40	216.4596
227.00	212.7820
227.08	212.7917
227.20	220.3053
228.16	221.3595
228.18	221.3624
228.18	221.3624
231.56	0.0000
235.69	243.3038
236.00	232.3551
236.00	232.3551
238.60	290.8484
238.63	290.8541
238.63	290.8541
238.63	290.8541
239.00	485.8992
240.98	486.4116
241.98	548.0972
241.98	548.0972
241.98	548.0972
244.69	189.2688
245.39	179.8715
247.94	184.1754
248.90	159.1267
249.79	167.9512
252.40	187.1813
252.85	196.7283
252.85	196.7283
254.15	0.0000
256.20	159.9384
256.20	159.9384
260.50	194.6367
260.90	197.5395
262.80	183.6130
264.65	145.0072
268.24	166.0208
268.79	178.8395
269.46	182.0934
269.46	182.0934
269.46	182.0934
269.46	182.0934
271.23	164.6676
273.65	241.6946
276.40	173.1006
277.35	180.3955
277.60	189.2388
277.60	189.2388
278.00	184.7836
278.60	167.5090
279.20	159.8540
279.53	175.2883
280.46	181.1497
281.68	200.5377
283.67	145.7227
284.30	155.4204
285.00	165.1281
285.90	189.3510
286.10	192.2687
286.10	192.2687
287.40	175.2275
288.45	0.0000
290.67	142.0135
290.80	142.0207
291.72	140.4688
293.26	0.0000
293.70	181.0020
295.21	177.8951
295.21	177.8951
295.21	177.8951
295.96	116.4814

296.50	116.5107
297.23	116.5503
298.57	116.6235
299.80	116.6895
299.80	116.6895
300.09	153.9865
300.09	153.9865
300.09	153.9865
300.10	153.9865
300.12	153.9884
301.29	136.2317
302.84	111.9846
303.76	125.0200
303.91	125.0294
304.40	129.9300
304.40	129.9300
304.84	139.7028
306.84	137.9723
308.46	137.6557
311.98	133.9638
316.51	123.4591
318.01	132.3649
319.02	133.4068
319.41	137.3528
320.08	127.5800
323.87	169.0815
323.87	169.0815
323.87	169.0815
323.87	169.0815
325.23	159.3461
328.77	132.0093
333.44	172.7505
334.20	159.6419
334.20	159.6419
334.30	159.6478
338.28	121.6727
338.28	121.6727
338.28	121.6727
338.28	121.6727
338.32	121.6742
338.32	121.6742
338.32	121.6742
340.50	121.7883
340.57	121.7913
344.27	121.9835
345.85	122.0646
350.59	0.0000
351.07	122.3334
351.92	122.3769
351.92	122.3769
351.92	122.3769
355.39	0.0000
356.01	121.2560
364.48	117.0114
366.43	110.0994
367.43	103.1345
367.94	0.0000
369.80	126.2861
374.96	140.6084
383.85	120.9492
387.95	124.1726
388.63	124.2057
391.69	94.0240
391.69	94.0240
392.90	90.0223
398.62	120.6342
400.65	84.2047
401.10	89.2934
401.81	92.3619
402.60	92.5036
404.84	110.0829
410.95	117.1282
411.60	122.2500
413.65	84.9620
414.70	106.3658
415.30	104.5670
415.76	105.4361
417.63	0.0000

418.52	109.2897
423.70	93.1262
427.08	116.8096
427.89	113.7696
432.53	78.0290
433.93	90.3955
439.47	73.0792
439.56	68.9645
439.89	72.0610
443.98	101.0338
444.90	88.6917
445.03	88.6959
445.03	88.6959
445.03	88.6959
445.03	88.6959
453.90	82.7686
463.38	89.2733
468.07	120.6105
473.00	95.8195
475.06	94.8457
475.35	85.4734
476.78	101.1585
477.59	100.1438
477.96	95.9834
482.03	82.5344
484.57	98.2904
487.03	76.3951
490.36	0.0000
492.35	85.9679
497.08	88.2031
507.63	0.0000
510.53	0.0000
510.84	82.2756
511.00	82.2799
511.85	82.3028
511.85	82.3028
513.99	86.2325
513.99	86.2325
520.41	65.6025
520.65	69.8398
527.90	63.6387
528.96	0.0000
529.64	81.7166
529.87	0.0000
531.02	88.1227
537.32	88.2990
543.00	74.6023
546.56	0.0000
549.76	63.0116
552.65	68.4125
555.20	82.0180
563.23	139.4167
563.90	141.2331
568.70	69.0585
569.32	63.1233
569.50	74.0202
569.67	74.0253
573.80	126.9566
574.00	127.9188
574.64	129.1406
578.91	59.2660
579.30	0.0000
583.14	69.0516
585.48	68.3802
591.81	69.7104
592.07	78.9705
593.00	82.2399
595.88	72.5615
600.56	82.1119
602.52	0.0000
602.71	88.6231
602.71	88.6231
603.60	68.7467
604.41	63.3335
604.70	63.3392
609.31	70.6732
609.31	70.6732
609.31	70.6732

609.31	70.6732
610.33	74.3192
612.46	74.3659
614.37	56.2581
618.01	74.1210
621.84	57.8342
621.84	57.8342
631.29	71.1207
633.02	63.4927
633.10	63.4941
634.78	61.3334
635.90	62.4481
636.97	65.7554
645.85	62.6235
646.12	57.1340
656.30	71.6190
657.75	77.1589
657.90	0.0000
661.65	68.0471
661.65	68.0471
664.57	0.0000
666.33	64.4515
666.33	64.4515
675.00	52.6060
677.61	69.2673
685.20	60.1546
692.80	61.2036
695.00	62.1677
696.49	64.0488
696.49	64.0488
697.00	74.2692
697.49	76.1359
698.33	82.6535
698.50	86.3720
699.00	91.0276
702.63	64.1526
706.10	73.5176
706.58	0.0000
706.67	79.1116
709.31	66.1277
711.68	55.9167
713.82	62.4758
717.42	61.6011
720.50	56.0461
721.93	0.0000
722.20	56.0706
722.78	52.8746
722.78	52.8746
722.89	52.8757
722.95	52.8769
723.30	60.8938
724.18	56.0986
727.18	68.9752
733.00	54.6203
735.90	73.9526
739.58	48.8114
742.81	55.4277
744.21	57.3265
747.13	52.6663
751.79	57.4370
752.31	48.0273
753.82	44.2767
755.35	51.8333
756.15	51.8445
756.87	59.3958
763.93	55.0484
765.79	55.0733
766.41	63.1819
766.84	74.6652
768.36	72.8032
768.36	72.8032
768.36	72.8032
768.36	72.8032
776.49	61.5802
778.00	64.4459
778.57	58.7683
778.89	58.7734
783.80	53.1494

785.46	56.0195
792.07	73.2277
795.84	50.4488
796.30	51.4072
801.93	63.8689
805.60	44.8428
810.29	55.4004
810.76	61.1380
815.85	55.4736
817.79	53.5858
818.51	50.7237
819.60	44.9929
826.30	60.4058
828.27	0.0000
831.60	61.4414
831.96	60.4865
834.83	70.1336
836.80	0.0000
846.75	46.2441
848.13	46.2588
856.28	0.0000
856.80	43.0398
860.37	53.0156
867.32	43.1441
867.82	48.1273
871.10	47.4717
873.19	36.8318
874.81	34.9065
875.33	0.0000
876.40	43.6487
879.36	56.2961
880.27	49.5121
880.51	49.5142
881.50	53.4099
883.24	50.5168
884.67	41.7866
889.25	48.6389
896.60	35.0779
898.02	36.0636
899.00	39.9707
903.28	45.1670
911.07	46.9199
911.07	46.9199
911.07	46.9199
919.63	44.6583
920.93	52.8992
925.00	37.2586
925.24	37.2605
926.50	41.1942
934.06	45.1914
934.06	45.1914
934.06	45.1914
934.06	45.1914
935.52	51.1018
937.48	52.1072
944.10	47.2578
946.00	47.2773
949.00	50.2643
962.29	50.4075
964.01	49.1539
966.15	69.5250
968.20	93.3055
969.11	69.2865
969.11	69.2865
969.11	69.2865
977.42	52.3531
980.50	48.6162
983.50	41.6975
989.30	50.6939
996.32	56.7402
1001.03	46.8307
1001.68	47.8340
1004.76	49.8586
1021.30	0.0000
1024.50	0.0000
1034.80	45.1483
1037.82	46.1797
1038.57	51.2054

1038.76	0.0000
1045.16	45.2417
1046.59	43.2432
1048.07	44.2614
1050.47	47.3022
1050.47	47.3022
1063.62	52.4718
1076.63	56.6517
1077.35	56.6608
1085.78	63.8459
1099.22	54.8679
1112.02	51.3372
1112.84	44.3160
1115.52	59.4099
1120.29	58.1504
1120.29	58.1504
1120.29	58.1504
1120.29	58.1504
1120.51	60.1932
1121.28	52.4770
1124.00	0.0000
1129.67	47.9417
1131.51	0.0000
1147.95	0.0000
1167.94	53.5256
1173.22	57.6999
1175.09	60.8125
1177.93	63.9375
1189.05	69.2328
1204.90	60.1051
1205.75	0.0000
1213.00	66.4219
1221.42	77.9541
1230.97	82.2531
1235.34	78.1494
1236.41	0.0000
1238.11	75.0586
1238.11	75.0586
1238.11	75.0586
1238.11	75.0586
1238.25	74.0190
1246.25	69.9471
1260.41	0.0000
1271.85	52.4333
1274.45	40.9170
1274.54	40.9170
1291.56	30.5151
1298.22	0.0000
1312.09	47.5177
1325.50	37.0422
1325.50	37.0422
1332.49	26.4893
1333.61	34.9725
1360.21	21.2899
1362.66	0.0000
1365.15	23.4377
1368.21	31.9775
1368.53	0.0000
1376.25	20.2787
1377.67	26.6886
1377.67	26.6886
1377.67	26.6886
1377.67	26.6886
1384.27	28.8556
1394.10	23.5496
1395.20	27.8355
1407.95	17.1654
1434.06	17.2370
1436.60	7.5443
1457.56	0.0000
1460.81	15.1467
1489.15	16.7658
1509.49	14.0154
1596.49	18.9335
1620.62	15.2003
1678.03	0.0000
1691.02	8.6368
1691.02	8.6368

1706.46	0.0000
1750.46	0.0000
1764.49	10.1796
1764.49	10.1796
1764.49	10.1796
1764.49	10.1796
1770.23	11.8856
1771.40	23.2893
1791.20	0.0000
1808.65	7.8025
1836.01	7.8309

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201870088

Total Uranium Activity	7.6191E-01	ug/g
Total Uranium Counting Unc.	1.8928E+00	ug/g
Total Uranium Tpu	9.6570E-07	ug/g
Total Uranium Mda	1.6624E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G1201870088      *
*   ANALYST       : MXR1                      DETECTOR   : GAM21            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 13:26:00.29    SAMPLE ALQT:  126.580 GRAM    *
*                                                                           *
*****************************************************************************
```

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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.167E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.494E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 4.215E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 2.054E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:27:06.99

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:26:36.
Sample ID         : G1201870089          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:03.12  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.58	2148	499	0.94	119.33	115	10	5.97E-01	2.9	
2	0	77.20*	164	505	1.00	154.57	152	9	4.54E-02	26.2	
3	0	88.10	1679	557	0.97	176.38	172	10	4.66E-01	3.6	
4	0	93.14*	96	296	1.55	186.45	183	9	2.66E-02	35.0	
5	0	122.01	376	232	1.04	244.21	240	8	1.04E-01	8.7	
6	0	135.61	46	395	0.90	271.43	269	11	1.26E-02	85.5	
7	0	185.73*	139	314	1.70	371.70	366	13	3.85E-02	28.0	
8	0	238.69*	338	340	0.95	477.63	473	8	9.40E-02	10.2	
9	0	241.27	27	439	4.91	482.80	482	14	7.64E-03	166.0	
10	0	295.50*	90	229	0.78	591.29	587	9	2.50E-02	32.1	
11	0	338.30	92	180	1.22	676.92	673	10	2.56E-02	29.1	
12	0	352.03*	216	159	1.23	704.38	699	10	6.00E-02	12.9	
13	0	510.79*	42	161	1.89	1022.03	1015	14	1.17E-02	69.6	
14	0	583.23*	154	93	1.19	1166.97	1161	11	4.28E-02	14.7	
15	0	609.65	157	112	1.15	1219.84	1213	14	4.37E-02	16.3	
16	0	661.82	2043	138	1.43	1324.22	1317	15	5.67E-01	2.5	
17	0	911.76	79	153	1.21	1824.36	1817	14	2.19E-02	35.3	
18	0	1173.52	1675	66	1.88	2348.22	2339	16	4.65E-01	2.7	
19	0	1332.81	1554	23	2.29	2667.05	2656	23	4.32E-01	2.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 14:27:10

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:26:36
Sample ID : G1201870089 Sample quantity : 155.44 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA23 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:03.12 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	3.418E-01	6.286E-02	5.645E-02	3.328E-03	6.056
	+	136.48		3.367E-01	5.764E-01	4.411E-01	2.869E-02	0.763
CO-60	+	1173.22		6.730E+00	5.228E-01	1.537E-01	8.668E-03	43.801
	+	1332.49	*	6.996E+00	6.343E-01	9.085E-02	6.670E-03	77.006
CD-109	+	88.03	*	4.167E+01	5.059E+00	1.961E+00	1.915E-01	21.247
SN-126		64.28		-4.689E-02	7.440E-01	1.214E+00	1.847E-01	-0.039
	+	86.94		1.722E+01	7.273E+00	8.214E-01	3.416E-01	20.965
	+	87.57	*	4.142E+00	5.029E-01	1.960E-01	1.908E-02	21.130
BA-137M	+	661.65	*	5.378E+00	3.878E-01	1.226E-01	6.262E-03	43.871
CS-137	+	661.65	*	5.685E+00	4.111E-01	1.296E-01	6.656E-03	43.871
TL-208		277.35		-2.829E-01	5.879E-01	9.716E-01	1.027E-01	-0.291
	+	510.84		3.690E-01	5.149E-01	4.323E-01	4.392E-02	0.853
	+	583.14	*	3.886E-01	1.171E-01	1.210E-01	7.853E-03	3.212
		860.37		4.732E-01	7.113E-01	1.195E+00	1.081E-01	0.396
BI-211		72.87		-3.848E+00	5.053E+00	7.771E+00	6.855E-01	-0.495
	+	351.07	*	2.347E+00	6.263E-01	5.957E-01	3.882E-02	3.940
PB-212		74.81		4.137E-01	6.314E-01	9.568E-01	1.234E-01	0.432
	+	77.11		1.016E+00	5.404E-01	5.053E-01	4.546E-02	2.011
	+	87.30		1.916E+01	3.013E+00	9.097E-01	1.268E-01	21.060
	+	238.63	*	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
		300.09		2.711E+00	1.470E+00	2.435E+00	2.022E-01	1.113
PO-212		74.81		4.137E-01	6.314E-01	9.568E-01	1.234E-01	0.432
	+	77.11		1.016E+00	5.404E-01	5.053E-01	4.546E-02	2.011
	+	87.30		1.916E+01	3.013E+00	9.097E-01	1.268E-01	21.060
		115.19		-2.401E+00	4.663E+00	7.746E+00	4.942E-01	-0.310
	+	238.63	*	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
		300.09		2.711E+00	1.470E+00	2.435E+00	2.022E-01	1.113
PB-214		74.81		7.128E-01	1.087E+00	1.649E+00	1.908E-01	0.432
	+	77.11		1.742E+00	9.359E-01	8.662E-01	1.021E-01	2.011
	+	87.30		3.282E+01	4.720E+00	1.558E+00	1.932E-01	21.060
	+	241.98		3.857E-01	1.281E+00	9.401E-01	7.477E-02	0.410
	+	295.21		5.737E-01	3.718E-01	4.175E-01	3.579E-02	1.374
	+	351.92	*	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-214		74.81		7.128E-01	1.087E+00	1.649E+00	1.908E-01	0.432

Sample ID : G1201870089 Acquisition date : 6-JUL-2009 13:26:36

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		1.742E+00	9.359E-01	8.662E-01	1.021E-01	2.011
	+	87.30		3.282E+01	4.720E+00	1.558E+00	1.932E-01	21.060
	+	241.98		3.857E-01	1.281E+00	9.401E-01	7.477E-02	0.410
	+	295.21		5.737E-01	3.718E-01	4.175E-01	3.579E-02	1.374
	+	351.92	*	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-216		74.81		4.137E-01	6.314E-01	9.568E-01	1.234E-01	0.432
	+	77.11		1.016E+00	5.404E-01	5.053E-01	4.546E-02	2.011
	+	87.30		1.916E+01	3.013E+00	9.097E-01	1.268E-01	21.060
	+	238.63	*	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
		300.09		2.711E+00	1.470E+00	2.435E+00	2.022E-01	1.113
PO-218		74.81		7.128E-01	1.087E+00	1.649E+00	1.908E-01	0.432
	+	77.11		1.742E+00	9.359E-01	8.662E-01	1.021E-01	2.011
	+	87.30		3.282E+01	4.720E+00	1.558E+00	1.932E-01	21.060
	+	241.98		3.857E-01	1.281E+00	9.401E-01	7.477E-02	0.410
	+	295.21		5.737E-01	3.718E-01	4.175E-01	3.579E-02	1.374
	+	351.92	*	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
RA-224	+	240.98	*	7.313E-01	2.428E+00	1.887E+00	1.063E-01	0.388
TH-228		84.40		1.291E+00	4.406E+00	6.505E+00	8.919E-01	0.198
	+	238.60	*	7.908E-01	1.716E-01	1.803E-01	1.297E-02	4.385
		300.10		2.700E+00	2.155E+00	2.433E+00	1.434E+00	1.110
AM-241	+	59.54	*	1.385E+01	1.523E+00	4.871E-01	4.532E-02	28.436
ANH-511	+	511.00	*	7.970E-02	1.110E-01	9.341E-02	5.426E-03	0.853

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.667E-01	6.477E-01	1.071E+00	7.279E-02	0.249
NA-22		1274.54	*	4.085E-03	6.159E-02	1.003E-01	6.737E-03	0.041
NA-24		1368.53	*	4.976E-05	6.159E-02	Half-Life too short		
AL-26		1129.67		-3.055E+00	3.800E+00	5.769E+00	3.675E-01	-0.530
		1808.65	*	2.016E-02	5.029E-02	9.069E-02	5.451E-03	0.222
K-40		1460.81	*	8.824E-01	5.928E-01	1.176E+00	8.796E-02	0.750
TI-44		67.85		-6.432E-02	7.118E-02	1.091E-01	9.504E-03	-0.589
	+	78.38	*	1.874E-01	9.970E-02	9.457E-02	8.572E-03	1.982
SC-46		889.25	*	6.992E-02	9.817E-02	1.713E-01	1.530E-02	0.408
		1120.51		1.486E-01	1.170E-01	2.074E-01	1.352E-02	0.716
V-48		944.10		-6.626E-01	1.914E+00	3.120E+00	2.719E-01	-0.212
		983.50	*	7.630E-02	1.345E-01	2.313E-01	1.924E-02	0.330
		1312.09		-7.490E-03	8.033E-02	1.324E-01	9.418E-03	-0.057
CR-51		320.08	*	6.613E-02	5.314E-01	8.968E-01	5.880E-02	0.074
MN-52		744.21		-9.996E-03	2.047E-01	3.326E-01	2.117E-02	-0.030
		848.13		-2.775E+00	5.958E+00	9.196E+00	7.504E-01	-0.302
		935.52		1.703E-01	2.831E-01	4.876E-01	4.286E-02	0.349
		1246.25		-3.975E+00	4.055E+00	5.603E+00	3.586E-01	-0.709
	+	1333.61		3.522E+02	3.194E+01	4.133E+01	3.034E+00	8.522
		1434.06	*	-2.425E-02	1.219E-01	1.938E-01	1.402E-02	-0.125
MN-54		834.83	*	-2.482E-02	8.379E-02	1.319E-01	1.044E-02	-0.188
CO-56		846.75	*	1.970E-02	8.411E-02	1.379E-01	1.122E-02	0.143

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		977.42		-4.857E+00	7.412E+00	1.175E+01	9.851E-01	-0.413
		1037.82		-2.579E-02	7.711E-01	1.271E+00	1.042E-01	-0.020
		1175.09		2.957E+02	2.286E+01	3.523E+01	1.994E+00	8.394
		1238.25		1.205E-01	1.233E-01	2.205E-01	1.467E-02	0.546
		1360.21		6.114E-02	9.945E-01	1.678E+00	1.228E-01	0.036
		1771.40		-7.557E-01	4.697E-01	4.997E-01	3.091E-02	-1.512
CO-58		810.76	*	4.627E-02	7.822E-02	1.325E-01	9.951E-03	0.349
FE-59		142.65		-4.835E-01	3.226E+00	5.381E+00	2.926E-01	-0.090
		192.34		3.343E-01	1.214E+00	2.013E+00	2.329E-01	0.166
		1099.22	*	4.258E-02	2.121E-01	3.525E-01	2.715E-02	0.121
		1291.56		3.531E-02	1.283E-01	2.243E-01	1.862E-02	0.157
ZN-65		1115.52	*	-2.400E-01	2.278E-01	3.436E-01	2.269E-02	-0.699
GE-68		1077.35	*	6.311E-01	3.247E+00	5.406E+00	3.869E-01	0.117
AS-73		53.44	*	-1.904E+00	1.890E+00	2.941E+00	2.597E-01	-0.647
AS-74		595.88	*	7.119E-02	1.333E-01	2.303E-01	1.270E-02	0.309
		634.78		-7.722E-02	5.711E-01	9.381E-01	4.966E-02	-0.082
SE-75		66.05		1.748E+00	6.768E+00	1.110E+01	1.164E+00	0.158
		96.73		-7.403E-02	1.090E+00	1.554E+00	2.084E-01	-0.048
	+	121.11		1.794E+00	3.541E-01	4.674E-01	4.359E-02	3.837
	+	136.00		6.179E-02	1.057E-01	9.956E-02	5.622E-03	0.621
		198.60		-4.488E-01	2.646E+00	4.293E+00	2.898E-01	-0.105
		264.65	*	3.823E-02	6.883E-02	1.130E-01	6.579E-03	0.338
		279.53		1.746E-02	1.642E-01	2.800E-01	1.761E-02	0.062
		303.91		-4.015E+00	3.406E+00	5.327E+00	5.111E-01	-0.754
		400.65		1.215E-01	4.927E-01	8.199E-01	7.460E-02	0.148
BR-77	+	87.88		9.989E+02	1.213E+02	1.221E+02	1.191E+01	8.182
		200.40		7.703E+00	2.711E+01	4.488E+01	2.401E+00	0.172
	+	239.00		1.393E+01	2.958E+00	4.911E+00	2.761E-01	2.837
		249.79		-2.114E+01	1.424E+01	1.761E+01	1.001E+00	-1.201
		281.68		-4.765E+00	1.621E+01	2.706E+01	1.577E+00	-0.176
		297.23		6.166E+00	1.254E+01	1.922E+01	1.128E+00	0.321
		303.76		-4.337E+01	3.339E+01	5.206E+01	3.064E+00	-0.833
		439.47		6.003E+00	3.523E+01	5.785E+01	3.385E+00	0.104
		484.57		4.368E+01	5.109E+01	8.698E+01	5.085E+00	0.502
		520.65	*	1.047E+00	2.350E+00	3.878E+00	2.245E-01	0.270
		574.64		-6.555E+01	4.323E+01	6.405E+01	3.595E+00	-1.024
		578.91		1.801E+01	1.957E+01	3.103E+01	1.736E+00	0.580
		585.48		1.204E+02	4.498E+01	7.892E+01	4.392E+00	1.525
		755.35		-2.522E+01	3.904E+01	6.025E+01	3.945E+00	-0.419
		817.79		-2.929E-01	3.493E+01	5.638E+01	4.292E+00	-0.005
SR-82		698.33		-1.619E+01	4.959E+01	7.917E+01	4.472E+00	-0.205
		776.49	*	-5.600E-01	6.424E-01	9.639E-01	6.650E-02	-0.581
		1395.20		-1.553E+00	1.212E+01	1.965E+01	1.432E+00	-0.079
RB-83		520.41	*	4.442E-02	1.322E-01	2.166E-01	1.254E-02	0.205
		529.64		-2.313E-02	2.052E-01	3.245E-01	1.871E-02	-0.071
		552.65		8.442E-02	3.659E-01	6.240E-01	3.555E-02	0.135
RB-84		881.50	*	4.110E-02	1.489E-01	2.541E-01	2.232E-02	0.162
KR-85		513.99	*	2.059E+01	1.475E+01	2.337E+01	1.356E+00	0.881
SR-85		513.99	*	9.748E-02	6.983E-02	1.106E-01	6.420E-03	0.881

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86		1076.63	*	-6.610E-01	1.609E+00	2.565E+00	1.838E-01	-0.258
Y-88		898.02		4.217E-02	1.060E-01	1.816E-01	1.660E-02	0.232
		1836.01	*	3.265E-02	5.612E-02	1.038E-01	6.113E-03	0.314
ZR-88		392.90	*	1.777E-02	5.602E-02	9.382E-02	5.416E-03	0.189
Y-91		1204.90	*	-5.611E+00	2.539E+01	4.005E+01	2.389E+00	-0.140
NB-94		702.63	*	-1.939E-02	6.400E-02	1.025E-01	5.855E-03	-0.189
		871.10		-1.240E-02	8.704E-02	1.448E-01	1.243E-02	-0.086
NB-95		765.79	*	-1.190E-02	7.527E-02	1.208E-01	8.118E-03	-0.099
NB-95M		235.69	*	1.358E-01	1.926E-01	2.891E-01	2.133E-02	0.470
ZR-95		724.18		-1.698E-01	1.825E-01	2.773E-01	1.961E-02	-0.612
		756.15	*	-5.953E-03	1.341E-01	2.176E-01	1.669E-02	-0.027
NB-97		657.90	*	1.726E-04	1.341E-01	Half-Life too short		
		1024.50		-9.646E-03	1.341E-01	Half-Life too short		
ZR-97		254.15		-1.059E-03	1.341E-01	Half-Life too short		
		355.39		-1.757E-03	1.341E-01	Half-Life too short		
		507.63	*	1.379E-03	1.341E-01	Half-Life too short		
		602.52		-7.745E-03	1.341E-01	Half-Life too short		
		1021.30		3.640E-03	1.341E-01	Half-Life too short		
		1147.95		7.271E-04	1.341E-01	Half-Life too short		
		1362.66		-1.770E-03	1.341E-01	Half-Life too short		
		1750.46		1.873E-03	1.341E-01	Half-Life too short		
MO-99		140.51		-3.796E+00	5.970E+00	8.511E+00	2.288E+00	-0.446
		181.06		1.067E+00	3.813E+00	5.712E+00	9.680E-01	0.187
		366.43		-2.774E-01	2.498E+01	4.132E+01	2.421E+00	-0.007
		739.58	*	-1.830E+00	3.762E+00	5.896E+00	8.251E-01	-0.310
		778.00		-5.709E+00	1.021E+01	1.576E+01	1.091E+00	-0.362
TC-99M		140.51	*	-3.004E+01	1.021E+01	Half-Life too short		
RH-101		127.23		-2.922E-02	4.215E-02	6.883E-02	3.953E-03	-0.425
		198.01	*	-2.894E-03	4.974E-02	8.119E-02	4.328E-03	-0.036
		325.23		-3.711E-01	3.751E-01	5.909E-01	3.492E-02	-0.628
RH-102		418.52		-4.286E-01	5.925E-01	9.246E-01	5.387E-02	-0.464
		475.06	*	1.541E-02	6.850E-02	1.120E-01	6.555E-03	0.138
		631.29		9.285E-02	1.107E-01	1.941E-01	1.032E-02	0.478
		697.49		3.260E-02	1.391E-01	2.328E-01	1.312E-02	0.140
		766.84		-7.393E-02	2.109E-01	3.332E-01	2.245E-02	-0.222
		1046.59		1.199E-01	3.021E-01	5.111E-01	3.870E-02	0.235
		1112.84		8.624E-02	5.670E-01	9.383E-01	6.225E-02	0.092
RU-103		497.08	*	-2.505E-02	7.564E-02	1.185E-01	1.501E-02	-0.211
	+	610.33		7.081E+00	2.554E+00	3.133E+00	4.789E-01	2.260
RH-106	+	511.85		3.924E-01	5.467E-01	6.114E-01	3.550E-02	0.642
		621.84	*	-5.382E-02	6.388E-01	1.055E+00	1.216E-01	-0.051
		1050.47		1.294E-02	5.755E+00	9.479E+00	7.131E-01	0.001
RU-106	+	511.85		3.924E-01	5.467E-01	6.114E-01	3.550E-02	0.642
		621.84	*	-5.382E-02	6.388E-01	1.055E+00	5.668E-02	-0.051
		1050.47		1.294E-02	5.755E+00	9.479E+00	7.131E-01	0.001
AG-108M		433.93	*	-8.553E-02	6.992E-02	1.047E-01	6.638E-03	-0.817
		614.37		-1.736E-02	8.035E-02	1.133E-01	6.733E-03	-0.153
		722.95		-2.668E-02	8.770E-02	1.402E-01	9.119E-03	-0.190
AG-110M		657.75	*	8.299E-02	8.642E-02	1.346E-01	7.478E-03	0.617

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		677.61		-1.452E-01	6.061E-01	9.799E-01	5.608E-02	-0.148
		706.67		7.677E-02	4.048E-01	6.734E-01	4.124E-02	0.114
		763.93		-1.548E-01	3.226E-01	5.039E-01	3.527E-02	-0.307
		884.67		-1.036E-01	1.245E-01	1.967E-01	1.793E-02	-0.527
		937.48		2.294E-02	3.111E-01	5.206E-01	4.727E-02	0.044
		1384.27		-3.392E-01	2.505E-01	3.185E-01	2.416E-02	-1.065
IN-111		171.28		8.539E-02	2.144E-01	3.614E-01	1.854E-02	0.236
		245.39	*	4.994E-02	3.198E-01	4.599E-01	2.603E-02	0.109
IN-113M		391.69	*	4.546E-02	8.050E-02	1.368E-01	8.429E-03	0.332
SN-113		391.69	*	4.546E-02	8.050E-02	1.368E-01	8.429E-03	0.332
IN-114M		190.27	*	-2.205E-01	2.637E-01	3.609E-01	1.902E-02	-0.611
CD-115		260.90		6.139E+00	2.060E+01	3.333E+01	1.914E+00	0.184
		492.35		6.618E+00	7.064E+00	1.207E+01	7.046E-01	0.548
		527.90	*	-8.663E-01	2.088E+00	3.224E+00	1.861E-01	-0.269
SN-117M		156.02		-7.933E-01	2.026E+00	3.300E+00	1.727E-01	-0.240
		158.56	*	7.476E-03	4.879E-02	8.173E-02	4.247E-03	0.091
SB-122		563.90	*	-1.427E-01	5.727E-01	9.456E-01	5.349E-02	-0.151
		692.80		5.223E+00	1.187E+01	2.016E+01	1.122E+00	0.259
I-123		159.00	*	3.095E-04	1.187E+01	Half-Life too short		
		528.96		-2.784E-02	1.187E+01	Half-Life too short		
TE-123M		159.00	*	2.161E-02	3.552E-02	6.089E-02	3.213E-03	0.355
I-124		602.71	*	-4.403E-01	4.292E-01	5.560E-01	3.047E-02	-0.792
		722.78		1.455E-02	2.555E+00	4.182E+00	2.520E-01	0.003
		1325.50		7.394E+00	1.784E+01	2.759E+01	2.004E+00	0.268
		1376.25		1.566E+01	1.462E+01	2.745E+01	2.006E+00	0.571
		1509.49		5.850E+00	6.545E+00	1.239E+01	8.787E-01	0.472
		1691.02		3.246E-01	1.430E+00	2.466E+00	1.610E-01	0.132
SB-124		602.71		-8.239E-02	8.031E-02	1.040E-01	5.705E-03	-0.792
		645.85		2.704E-01	9.218E-01	1.558E+00	9.403E-02	0.174
		709.31		-2.368E-01	5.191E+00	8.479E+00	4.932E-01	-0.028
		713.82		1.369E+00	3.059E+00	5.176E+00	5.310E-01	0.264
		722.78		3.948E-03	6.932E-01	1.135E+00	7.135E-02	0.003
		968.20		1.202E+01	6.613E+00	1.192E+01	1.010E+00	1.008
		1045.16		1.910E+00	6.097E+00	1.026E+01	7.787E-01	0.186
		1325.50		2.142E+00	5.169E+00	7.995E+00	5.807E-01	0.268
		1368.21		1.648E-01	2.209E+00	3.721E+00	4.719E-01	0.044
		1436.60		7.013E-01	4.538E+00	7.735E+00	5.593E-01	0.091
		1691.02	*	2.077E-02	9.152E-02	1.578E-01	1.100E-02	0.132
SB-125		427.89	*	-4.843E-02	1.895E-01	3.041E-01	1.850E-02	-0.159
		463.38		5.491E-01	6.128E-01	1.041E+00	7.090E-02	0.528
		600.56		1.670E-01	3.375E-01	5.812E-01	3.745E-02	0.287
		635.90		-2.070E-01	5.842E-01	9.447E-01	6.007E-02	-0.219
TE-125M		109.28	*	-7.287E+00	1.034E+01	1.702E+01	1.516E+00	-0.428
I-126		388.63		-1.058E-01	2.674E-01	4.297E-01	2.485E-02	-0.246
		666.33	*	-3.556E-02	2.875E-01	4.059E-01	2.101E-02	-0.088
		753.82		-1.128E+00	2.127E+00	3.318E+00	2.164E-01	-0.340
SB-126		223.80		-2.297E+00	4.288E+00	6.701E+00	3.700E-01	-0.343
		278.60		6.534E-01	2.535E+00	4.356E+00	2.534E-01	0.150
	+	296.50		3.739E+00	2.412E+00	3.269E+00	1.919E-01	1.144

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		414.70		4.601E-02	1.008E-01	1.692E-01	9.846E-03	0.272
		415.30		4.232E+00	8.372E+00	1.409E+01	8.204E-01	0.300
		555.20		3.729E-01	5.233E+00	8.829E+00	5.022E-01	0.042
		573.80		-1.955E+00	1.257E+00	1.850E+00	1.039E-01	-1.057
		593.00		-6.106E-02	1.163E+00	1.933E+00	1.069E-01	-0.032
		656.30		1.528E+00	5.144E+00	7.593E+00	3.908E-01	0.201
		666.33		-1.460E-02	1.181E-01	1.667E-01	8.627E-03	-0.088
		675.00		1.387E-01	2.648E+00	4.379E+00	2.322E-01	0.032
		695.00		-6.268E-02	9.731E-02	1.515E-01	8.479E-03	-0.414
		697.00		1.395E-01	3.217E-01	5.465E-01	3.076E-02	0.255
		720.50	*	-1.172E-02	1.896E-01	3.088E-01	1.850E-02	-0.038
		856.80		-8.235E-02	7.997E-01	1.275E+00	1.061E-01	-0.065
		989.30		-1.621E-01	2.130E+00	3.512E+00	2.899E-01	-0.046
		1034.80		-1.015E+01	1.524E+01	2.389E+01	1.845E+00	-0.425
		1213.00		-1.614E+00	4.203E+00	6.458E+00	3.907E-01	-0.250
SB-127		61.10		1.301E+02	3.334E+01	5.576E+01	5.231E+00	2.334
		252.40		1.855E+00	1.999E+00	3.123E+00	1.283E+00	0.594
		290.80		-3.137E+00	1.068E+01	1.561E+01	1.069E+00	-0.201
		411.60		-1.677E+00	6.456E+00	1.040E+01	1.353E+00	-0.161
		444.90		9.348E-01	5.347E+00	8.776E+00	7.817E-01	0.107
		473.00		4.250E-01	1.007E+00	1.665E+00	1.560E-01	0.255
		543.00		-1.217E-01	8.022E+00	1.349E+01	1.526E+00	-0.009
		603.60		-3.612E+00	6.386E+00	8.697E+00	7.504E-01	-0.415
		685.20	*	4.151E-01	7.287E-01	1.247E+00	8.576E-02	0.333
		698.50		-6.816E+00	7.304E+00	1.098E+01	1.432E+00	-0.621
		722.20		-1.768E-01	1.548E+01	2.531E+01	1.767E+00	-0.007
		783.80		1.068E-01	1.964E+00	3.199E+00	3.060E-01	0.033
XE-127		57.60		-7.139E-01	1.340E+01	2.006E+01	1.758E+00	-0.036
		145.22		-1.621E-02	8.241E-01	1.381E+00	7.452E-02	-0.012
		172.10		1.722E-02	1.434E-01	2.382E-01	1.223E-02	0.072
		202.84	*	-4.111E-02	6.185E-02	9.689E-02	5.201E-03	-0.424
		374.96		7.952E-02	3.170E-01	5.314E-01	3.100E-02	0.150
I-131		80.18		-1.183E+00	3.836E+00	5.487E+00	5.039E-01	-0.216
		284.30		2.171E-02	1.343E+00	2.276E+00	1.463E-01	0.010
		364.48	*	-7.063E-02	1.161E-01	1.853E-01	1.200E-02	-0.381
		636.97		1.089E-01	1.723E+00	2.868E+00	1.714E-01	0.038
		722.89		-2.207E+00	7.695E+00	1.232E+01	7.452E-01	-0.179
TE-132		49.72		-1.563E+00	9.207E+00	1.499E+01	1.352E+00	-0.104
		111.76		3.887E+00	7.343E+00	1.285E+01	9.546E-01	0.302
		116.30		-1.391E+00	7.301E+00	1.232E+01	8.755E-01	-0.113
		228.16	*	7.997E-02	2.251E-01	3.689E-01	4.822E-02	0.217
BA-133		53.15		-1.063E+01	8.757E+00	1.347E+01	1.189E+00	-0.789
		79.62		1.077E-01	2.084E+00	3.052E+00	4.737E-01	0.035
		81.00		-1.079E-01	1.583E-01	2.195E-01	3.559E-02	-0.492
		276.40		-2.018E-01	5.694E-01	9.477E-01	1.229E-01	-0.213
		302.84		-3.877E-01	2.490E-01	3.770E-01	4.410E-02	-1.028
		356.01	*	1.849E-02	9.041E-02	1.338E-01	1.552E-02	0.138
		383.85		4.292E-01	5.829E-01	9.983E-01	1.085E-01	0.430
I-133	+	510.53		1.892E-03	5.829E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		529.87	*	4.574E-06	5.829E-01	Half-Life too short		
		706.58		3.355E-04	5.829E-01	Half-Life too short		
		856.28		9.404E-04	5.829E-01	Half-Life too short		
		875.33		2.397E-04	5.829E-01	Half-Life too short		
		1236.41		1.149E-03	5.829E-01	Half-Life too short		
		1298.22		-6.616E-04	5.829E-01	Half-Life too short		
CS-134		475.35		2.306E+00	4.405E+00	7.325E+00	4.288E-01	0.315
		563.23		-8.726E-02	7.052E-01	1.175E+00	6.793E-02	-0.074
		569.32		2.458E-01	3.746E-01	6.481E-01	3.767E-02	0.379
		604.70		-3.364E-02	6.911E-02	9.482E-02	5.219E-03	-0.355
		795.84	*	9.152E-02	1.003E-01	1.732E-01	1.265E-02	0.528
		801.93		2.109E-01	8.495E-01	1.402E+00	1.036E-01	0.150
		1038.57		1.608E+00	1.024E+01	1.710E+01	1.313E+00	0.094
		1167.94		5.838E+00	6.620E+00	1.015E+01	5.818E-01	0.575
		1365.15		-1.278E+00	1.522E+00	2.084E+00	1.621E-01	-0.613
CS-135		268.24	*	-4.274E-01	2.709E-01	3.824E-01	2.922E-02	-1.118
I-135		288.45		-1.455E+02	2.709E-01	Half-Life too short		
		417.63		-5.456E+01	2.709E-01	Half-Life too short		
		546.56		-6.805E+01	2.709E-01	Half-Life too short		
		836.80		-8.333E+01	2.709E-01	Half-Life too short		
		1038.76		5.566E+01	2.709E-01	Half-Life too short		
		1124.00		-2.235E+02	2.709E-01	Half-Life too short		
		1131.51		-7.818E+00	2.709E-01	Half-Life too short		
		1260.41	*	-1.126E+00	2.709E-01	Half-Life too short		
		1457.56		-6.068E+01	2.709E-01	Half-Life too short		
		1678.03		8.986E+01	2.709E-01	Half-Life too short		
		1706.46		9.017E+00	2.709E-01	Half-Life too short		
		1791.20		4.717E+01	2.709E-01	Half-Life too short		
CS-136		66.91		3.044E-01	7.735E-01	1.273E+00	1.970E-01	0.239
		86.29		2.462E+00	1.409E+00	2.158E+00	2.922E-01	1.141
		153.22		-5.053E-03	5.839E-01	9.725E-01	6.613E-02	-0.005
		163.89		-6.872E-01	9.982E-01	1.592E+00	1.069E-01	-0.432
		176.55		9.530E-02	3.284E-01	5.494E-01	3.271E-02	0.173
		273.65		-2.524E-01	5.279E-01	8.099E-01	5.350E-02	-0.312
		340.57		1.521E-01	1.673E-01	2.614E-01	1.636E-02	0.582
		818.51		8.486E-02	1.180E-01	2.007E-01	1.531E-02	0.423
		1048.07	*	8.966E-02	1.889E-01	3.213E-01	2.559E-02	0.279
		1235.34		-1.425E-01	5.955E-01	9.368E-01	9.622E-02	-0.152
CE-139		165.85	*	2.647E-02	4.083E-02	6.975E-02	3.556E-03	0.380
BA-140		162.64		-4.790E-01	6.716E-01	1.069E+00	6.356E-02	-0.448
		304.84		-6.113E-03	1.382E+00	2.326E+00	6.353E-01	-0.003
		423.70		4.367E-01	2.580E+00	4.248E+00	1.350E+00	0.103
		537.32	*	1.568E-02	3.403E-01	5.749E-01	1.869E-01	0.027
LA-140		328.77		8.750E-02	3.351E-01	5.681E-01	3.746E-02	0.154
		432.53		-3.013E+00	2.912E+00	4.425E+00	2.853E-01	-0.681
		487.03		-1.690E-01	1.955E-01	2.952E-01	1.949E-02	-0.573
		751.79		4.085E-01	2.437E+00	4.022E+00	3.085E-01	0.102
		815.85		-2.203E-01	4.911E-01	7.636E-01	6.637E-02	-0.288
		867.82		9.131E-01	2.350E+00	3.877E+00	3.485E-01	0.235

---- Non-Identified Nuclides ----

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		919.63		2.022E+00	5.656E+00	8.985E+00	9.794E-01	0.225
		925.24		8.988E-02	2.222E+00	3.716E+00	3.496E-01	0.024
		1596.49	*	-7.876E-03	7.972E-02	1.277E-01	8.763E-03	-0.062
CE-141		145.44	*	4.834E-03	7.331E-02	1.234E-01	6.958E-03	0.039
CE-143		57.37		-7.613E+00	5.959E+01	8.894E+01	8.820E+00	-0.086
		231.56		-2.923E+01	8.924E+01	1.399E+02	4.318E+01	-0.209
		293.26	*	3.456E+00	5.498E+00	8.471E+00	1.733E+00	0.408
	+	350.59		4.081E+02	1.627E+02	1.509E+02	4.581E+01	2.704
		490.36		2.572E+01	1.309E+02	2.131E+02	6.586E+01	0.121
		664.57		1.487E+03	4.866E+02	2.756E+02	8.692E+01	5.397
		721.93		6.649E+00	6.041E+01	9.964E+01	2.838E+01	0.067
CE-144		80.11		-9.807E-01	3.334E+00	4.775E+00	4.377E-01	-0.205
		133.54	*	1.766E-01	2.840E-01	4.480E-01	6.326E-02	0.394
PM-144		476.78		4.942E-02	1.513E-01	2.489E-01	1.738E-02	0.199
		618.01		2.488E-02	6.052E-02	1.035E-01	5.968E-03	0.240
		696.49	*	5.962E-02	6.205E-02	1.095E-01	6.155E-03	0.545
		778.57		-1.837E+00	4.503E+00	7.045E+00	4.886E-01	-0.261
PR-144		696.49	*	4.024E+00	4.188E+00	7.389E+00	4.153E-01	0.545
		1489.15		-1.235E+01	1.770E+01	2.505E+01	1.788E+00	-0.493
PM-146		453.90	*	3.483E-03	9.392E-02	1.526E-01	1.322E-02	0.023
		633.02		1.997E+00	3.010E+00	5.063E+00	1.861E+00	0.394
		735.90		1.120E-01	3.162E-01	5.278E-01	1.477E-01	0.212
		747.13		-4.812E-02	2.092E-01	3.352E-01	4.291E-02	-0.144
ND-147		91.11		1.311E-01	2.580E-01	3.401E-01	3.344E-02	0.385
		319.41		-7.748E-01	3.603E+00	5.967E+00	3.524E-01	-0.130
		439.89		-1.088E+00	7.996E+00	1.290E+01	7.547E-01	-0.084
		531.02	*	4.929E-01	6.687E-01	1.175E+00	1.587E-01	0.419
PM-149		285.90	*	2.004E+01	1.512E+01	2.677E+01	3.794E+00	0.749
EU-152	+	121.78		1.010E+00	1.923E-01	2.874E-01	2.210E-02	3.515
		244.69		4.794E-02	6.234E-01	8.915E-01	5.043E-02	0.054
		344.27	*	-9.306E-02	1.920E-01	2.862E-01	1.897E-02	-0.325
		443.98		-1.000E+00	2.115E+00	3.337E+00	1.953E-01	-0.300
		778.89		-2.588E-01	5.271E-01	8.183E-01	5.678E-02	-0.316
		867.32		5.970E-01	2.116E+00	3.467E+00	2.953E-01	0.172
		964.01		-8.160E-01	7.997E-01	1.246E+00	1.062E-01	-0.655
		1085.78		-3.418E-01	1.005E+00	1.606E+00	1.130E-01	-0.213
		1112.02		4.787E-01	8.069E-01	1.375E+00	9.143E-02	0.348
		1407.95		1.532E-01	2.472E-01	4.526E-01	3.291E-02	0.339
GD-153		69.67		1.772E-01	2.448E+00	3.935E+00	3.438E-01	0.045
		83.37		-7.607E+00	2.271E+01	3.526E+01	3.310E+00	-0.216
		97.43	*	-5.600E-02	1.210E-01	1.673E-01	1.367E-02	-0.335
		103.18		4.165E-02	1.377E-01	2.177E-01	1.627E-02	0.191
EU-154	+	123.07		7.090E-01	1.405E-01	1.877E-01	1.772E-02	3.776
		247.94		2.992E-01	6.531E-01	9.612E-01	9.098E-02	0.311
		591.81		-8.541E-01	1.173E+00	1.848E+00	1.778E-01	-0.462
		723.30		-1.711E-01	3.678E-01	5.807E-01	4.224E-02	-0.295
		756.87		1.074E+00	1.563E+00	2.678E+00	2.838E-01	0.401
		873.19		3.617E-01	7.420E-01	1.282E+00	1.571E-01	0.282
		996.32		6.163E-01	9.534E-01	1.637E+00	2.874E-01	0.376

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		1.727E-01	5.298E-01	8.961E-01	1.008E-01	0.193
		1274.45	*	1.804E-02	1.736E-01	2.844E-01	2.823E-02	0.063
EU-155		48.70		2.024E+00	5.684E+00	9.495E+00	7.659E-01	0.213
	+	60.01		4.492E+02	4.706E+01	4.415E+01	3.835E+00	10.175
		86.54		7.876E-01	2.167E-01	3.433E-01	3.336E-02	2.294
		105.31	*	-9.864E-02	1.346E-01	2.223E-01	1.639E-02	-0.444
TB-160	+	86.79		1.239E+01	1.505E+00	1.104E+00	1.067E-01	11.226
		197.04		-1.478E-01	7.847E-01	1.273E+00	6.775E-02	-0.116
		215.65		2.021E-01	1.169E+00	1.908E+00	1.042E-01	0.106
		298.57		3.146E-01	2.058E-01	3.357E-01	1.972E-02	0.937
		879.36	*	-7.479E-02	3.232E-01	5.336E-01	4.666E-02	-0.140
		962.29		5.513E-02	1.269E+00	2.115E+00	1.806E-01	0.026
		966.15		-1.442E-01	5.118E-01	8.365E-01	7.110E-02	-0.172
		1177.93		3.322E+00	9.685E-01	1.770E+00	1.007E-01	1.877
		1271.85		-1.268E+00	1.078E+00	1.437E+00	9.593E-02	-0.882
HO-166M		80.57		-2.937E-01	4.375E-01	6.101E-01	5.610E-02	-0.481
	+	184.41		1.696E-01	9.526E-02	8.676E-02	4.534E-03	1.954
		280.46		-2.224E-02	1.371E-01	2.304E-01	1.342E-02	-0.097
		410.95		2.011E-01	4.913E-01	8.232E-01	4.785E-02	0.244
		711.68	*	-1.491E-02	1.247E-01	2.024E-01	1.185E-02	-0.074
		752.31		-3.121E-01	6.060E-01	9.477E-01	6.158E-02	-0.329
		810.29		1.094E-01	1.262E-01	2.180E-01	1.630E-02	0.502
TM-171		51.35		1.452E+01	7.226E+01	1.194E+02	1.038E+01	0.122
		52.39		-1.042E+00	3.671E+01	5.996E+01	5.268E+00	-0.017
	+	59.40		2.352E+03	2.464E+02	2.475E+02	2.150E+01	9.504
		66.72	*	1.228E+01	4.186E+01	6.866E+01	5.971E+00	0.179
LU-176	+	88.36		9.824E+00	1.193E+00	1.185E+00	1.149E-01	8.288
		201.83		-1.394E-02	4.358E-02	6.968E-02	3.735E-03	-0.200
		306.84	*	1.864E-02	4.055E-02	6.995E-02	4.121E-03	0.266
		401.10		6.609E+00	1.314E+01	2.219E+01	1.286E+00	0.298
LU-177		112.95		3.060E-01	9.524E-01	1.649E+00	1.082E-01	0.186
		208.36	*	3.360E-01	7.708E-01	1.278E+00	6.914E-02	0.263
LU-177M		52.97		-2.751E+00	3.750E+00	5.919E+00	5.217E-01	-0.465
		54.07		-5.228E-01	1.974E+00	3.184E+00	2.814E-01	-0.164
		61.30		3.598E-01	2.522E+00	3.802E+00	3.302E-01	0.095
	+	121.62		5.021E+00	9.231E-01	1.423E+00	8.414E-02	3.527
		147.16		-1.709E-01	8.555E-01	1.416E+00	7.596E-02	-0.121
		171.86		8.629E-02	6.464E-01	1.074E+00	5.515E-02	0.080
		218.09		4.673E-01	1.416E+00	2.325E+00	1.274E-01	0.201
		268.79		-6.673E-01	1.285E+00	1.968E+00	1.137E-01	-0.339
		319.02		-2.040E-01	4.362E-01	7.118E-01	4.204E-02	-0.287
		367.43		1.360E+00	1.698E+00	2.933E+00	1.718E-01	0.464
		413.65	*	-5.401E-02	3.449E-01	5.589E-01	3.252E-02	-0.097
HF-181		56.28		1.420E+00	2.164E+00	3.355E+00	2.954E-01	0.423
		57.53		-8.660E-02	1.151E+00	1.722E+00	1.509E-01	-0.050
		65.20		-1.230E+00	1.289E+00	1.965E+00	1.707E-01	-0.626
		133.02		5.127E-02	8.070E-02	1.279E-01	7.179E-03	0.401
	+	136.25		6.649E-01	1.138E+00	1.074E+00	5.962E-02	0.619
		345.85		-2.998E-01	3.376E-01	4.875E-01	2.876E-02	-0.615

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	-1.529E-02	7.838E-02	1.246E-01	7.285E-03	-0.123
W-181		56.28		5.992E-01	9.180E-01	1.423E+00	1.253E-01	0.421
		57.53		-3.709E-02	4.886E-01	7.310E-01	6.406E-02	-0.051
		65.20	*	-5.180E-01	5.429E-01	8.279E-01	7.192E-02	-0.626
TA-182		67.75		-9.993E-02	1.600E-01	2.495E-01	2.172E-02	-0.401
		100.10		-1.352E-01	2.355E-01	3.516E-01	2.752E-02	-0.385
		152.43		5.664E-02	4.308E-01	7.229E-01	3.820E-02	0.078
		222.10		-2.203E-01	5.489E-01	8.659E-01	4.771E-02	-0.254
		1001.68		-4.209E-01	4.796E+00	7.889E+00	6.405E-01	-0.053
		1121.28		5.696E-01	3.257E-01	5.929E-01	3.856E-02	0.961
		1189.05		2.724E-01	5.201E-01	8.907E-01	5.168E-02	0.306
		1221.42	*	1.030E-01	2.638E-01	4.483E-01	2.752E-02	0.230
		1230.97		-2.254E-02	6.354E-01	1.024E+00	6.388E-02	-0.022
RE-183		57.98		7.848E-01	5.024E-01	7.989E-01	6.987E-02	0.982
	+	59.32		9.008E+00	9.437E-01	9.539E-01	8.290E-02	9.443
		67.20		-2.842E-02	2.778E-01	4.463E-01	3.883E-02	-0.064
		162.32	*	-5.242E-02	1.345E-01	2.182E-01	1.123E-02	-0.240
		208.81		7.130E-01	1.410E+00	2.346E+00	1.270E-01	0.304
		291.72		4.827E-01	1.665E+00	2.534E+00	1.485E-01	0.190
RE-184		57.98		3.022E+00	1.934E+00	3.076E+00	2.690E-01	0.982
	+	59.32		3.466E+01	3.631E+00	3.670E+00	3.189E-01	9.443
		67.20		-1.094E-01	1.069E+00	1.718E+00	1.495E-01	-0.064
		161.27		1.129E-01	4.569E-01	7.680E-01	3.962E-02	0.147
		216.55		-2.598E-01	4.480E-01	7.026E-01	3.844E-02	-0.370
		252.85	*	4.596E-01	3.823E-01	6.507E-01	3.710E-02	0.706
		318.01		-2.832E-01	7.472E-01	1.226E+00	7.238E-02	-0.231
		792.07		-9.272E-01	2.173E+00	3.406E+00	2.440E-01	-0.272
		903.28		-7.128E-01	2.746E+00	4.176E+00	3.784E-01	-0.171
		920.93		1.321E-01	1.278E+00	2.146E+00	1.914E-01	0.062
OS-185	+	59.72		2.504E+01	2.624E+00	2.565E+00	2.228E-01	9.762
		61.14		9.745E-01	3.224E-01	5.401E-01	4.691E-02	1.804
		69.30		3.074E-02	4.202E-01	6.759E-01	5.900E-02	0.045
		592.07		-2.586E+00	4.580E+00	7.329E+00	4.056E-01	-0.353
		646.12	*	3.382E-02	8.036E-02	1.370E-01	7.151E-03	0.247
		717.42		-3.155E-01	1.737E+00	2.804E+00	1.666E-01	-0.113
		874.81		4.496E-01	1.394E+00	2.387E+00	2.067E-01	0.188
		880.27		-1.936E-01	1.832E+00	3.051E+00	2.673E-01	-0.063
RE-188		155.03	*	-5.458E-02	2.083E-01	3.418E-01	1.794E-02	-0.160
		477.96		3.160E+00	6.309E+00	1.049E+01	6.137E-01	0.301
		633.10		3.044E+00	5.541E+00	9.522E+00	5.051E-01	0.320
W-188		63.58		-2.746E+00	7.775E+01	1.178E+02	1.023E+01	-0.023
		227.08		2.944E+00	1.928E+01	3.130E+01	1.735E+00	0.094
		290.67	*	-3.511E+00	1.344E+01	1.969E+01	1.153E+00	-0.178
IR-192	+	295.96		4.075E-01	2.629E-01	3.582E-01	2.135E-02	1.137
		308.46		-8.754E-02	1.468E-01	2.382E-01	1.419E-02	-0.368
		316.51	*	1.745E-02	5.418E-02	9.252E-02	5.488E-03	0.189
		468.07		-1.445E-01	1.414E-01	2.135E-01	1.438E-02	-0.677
		604.41		-4.552E-01	8.757E-01	1.195E+00	1.337E-01	-0.381
		612.46		6.555E-01	1.394E+00	2.107E+00	1.536E-01	0.311

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AU-195		65.12		-2.611E-01	2.548E-01	3.867E-01	3.359E-02	-0.675
		66.83		5.457E-02	1.346E-01	2.220E-01	1.931E-02	0.246
	+	75.70		8.714E-01	4.635E-01	4.872E-01	4.351E-02	1.788
		98.88	*	2.264E-01	3.021E-01	4.905E-01	3.914E-02	0.462
		129.76		3.087E+00	3.669E+00	6.431E+00	3.655E-01	0.480
TL-200		367.94	*	6.258E+00	7.082E+00	1.228E+01	7.193E-01	0.509
		579.30		5.818E+01	5.814E+01	9.275E+01	5.188E+00	0.627
		828.27		6.908E+00	9.612E+01	1.558E+02	1.216E+01	0.044
		1205.75		-2.979E+01	3.000E+01	4.233E+01	2.529E+00	-0.704
TL-201		68.90		-4.997E-04	1.276E+00	2.046E+00	1.785E-01	0.000
		70.82		-5.141E-01	7.522E-01	1.161E+00	1.017E-01	-0.443
		80.30		-4.752E-01	1.429E+00	2.040E+00	1.872E-01	-0.233
	+	135.34		7.423E+00	1.270E+01	1.130E+01	6.291E-01	0.657
		167.43	*	1.786E+00	1.731E+00	3.011E+00	1.537E-01	0.593
TL-202		68.90		-1.642E-04	4.194E-01	6.724E-01	5.865E-02	0.000
		70.82		-1.685E-01	2.465E-01	3.804E-01	3.333E-02	-0.443
		80.30		-1.558E-01	4.684E-01	6.688E-01	6.139E-02	-0.233
		439.56	*	1.216E-02	1.009E-01	1.652E-01	9.666E-03	0.074
HG-203		70.83		-9.998E-01	1.470E+00	2.263E+00	3.100E-01	-0.442
		72.87		-6.837E-01	9.005E-01	1.381E+00	1.841E-01	-0.495
		82.60		-4.359E-01	1.502E+00	2.338E+00	3.321E-01	-0.186
		279.20	*	6.799E-03	5.730E-02	9.780E-02	6.041E-03	0.070
BI-207		72.80		-2.271E-01	2.950E-01	4.535E-01	3.999E-02	-0.501
		74.97		1.177E-01	1.825E-01	2.769E-01	2.464E-02	0.425
		84.90		6.815E-02	3.348E-01	4.917E-01	4.674E-02	0.139
		569.67		2.963E-02	5.814E-02	9.968E-02	5.615E-03	0.297
		1063.62	*	3.057E-02	1.368E-01	2.285E-01	1.679E-02	0.134
		1770.23		-1.590E+00	1.076E+00	1.244E+00	7.700E-02	-1.278
TL-207		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
PO-209		260.50		3.998E+00	1.634E+01	2.634E+01	1.512E+00	0.152
		262.80		-1.328E+01	4.546E+01	7.082E+01	4.073E+00	-0.187
		896.60	*	7.944E+00	1.977E+01	3.390E+01	3.077E+00	0.234
BI-210		46.50	*	-7.392E+00	8.147E+00	1.277E+01	9.945E-01	-0.579
PB-210		46.50	*	-7.392E+00	8.147E+00	1.277E+01	9.945E-01	-0.579
PO-210		46.50	*	-7.392E+00	8.142E+00	1.277E+01	8.570E-01	-0.579
PB-211		404.84	*	-2.315E-02	1.865E+00	3.056E+00	1.905E+00	-0.008
		427.08		-1.867E+00	4.384E+00	6.707E+00	4.146E+00	-0.278
		831.96		-6.446E-01	2.822E+00	4.420E+00	2.766E+00	-0.146
BI-212		727.18	*	4.611E-01	6.068E-01	1.044E+00	8.289E-02	0.442
		785.46		1.568E+00	3.854E+00	6.441E+00	4.541E-01	0.244

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1620.62		3.857E-01	2.052E+00	3.470E+00	2.353E-01	0.111
BI-214	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
PO-215		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
RN-219		271.23		2.656E-01	4.224E-01	6.920E-01	5.603E-02	0.384
		401.81	*	3.941E-01	8.252E-01	1.388E+00	1.889E-01	0.284
RN-220		549.76	*	-1.059E+00	4.889E+01	8.208E+01	4.684E+00	-0.013
RA-223		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
RA-226	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
AC-227		79.80		-1.866E-01	2.631E+00	3.824E+00	8.306E-01	-0.049
		236.00		3.966E-01	3.826E-01	5.855E-01	6.057E-02	0.677
		256.20	*	5.621E-01	6.703E-01	1.111E+00	1.547E-01	0.506
		286.10		3.402E+00	2.694E+00	4.788E+00	5.545E-01	0.711
		299.80		4.010E+00	2.879E+00	4.565E+00	7.447E-01	0.878
		304.40		-2.672E+00	3.176E+00	5.043E+00	8.738E-01	-0.530
		334.20		-1.864E-01	4.473E+00	6.550E+00	1.203E+00	-0.028
TH-227		79.80		-1.866E-01	2.631E+00	3.824E+00	8.410E-01	-0.049
	+	94.00		5.894E+00	4.320E+00	4.359E+00	9.503E-01	1.352
		236.00		3.966E-01	3.820E-01	5.855E-01	5.230E-02	0.677
		256.20	*	5.621E-01	6.724E-01	1.111E+00	1.875E-01	0.506

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		286.10		3.402E+00	4.326E+00	4.788E+00	4.796E+00	0.711
		299.80		4.010E+00	2.879E+00	4.565E+00	7.447E-01	0.878
		304.40		-2.672E+00	3.176E+00	5.043E+00	8.738E-01	-0.530
		334.20		-1.864E-01	4.473E+00	6.550E+00	1.203E+00	-0.028
AC-228	+	338.32		1.100E+00	7.808E-01	8.345E-01	3.403E-01	1.318
	+	911.07	*	9.005E-01	6.436E-01	7.509E-01	8.664E-02	1.199
		969.11		1.446E+00	7.658E-01	1.271E+00	2.958E-01	1.138
RA-228	+	338.32		1.100E+00	7.808E-01	8.345E-01	3.403E-01	1.318
	+	911.07	*	9.005E-01	6.436E-01	7.509E-01	8.664E-02	1.199
		969.11		1.446E+00	7.658E-01	1.271E+00	2.958E-01	1.138
TH-229		85.43		9.966E-02	3.295E-01	4.861E-01	4.642E-02	0.205
	+	88.47		5.655E+00	6.867E-01	6.746E-01	6.524E-02	8.383
		100.00		-1.334E-01	2.565E-01	3.846E-01	3.015E-02	-0.347
		193.63	*	1.865E-01	7.561E-01	1.251E+00	6.626E-02	0.149
		210.97		-1.467E-01	1.193E+00	1.921E+00	1.043E-01	-0.076
TH-230	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
PA-231		283.67	*	-8.965E-01	2.654E+00	4.416E+00	6.091E-01	-0.203
		301.29		1.813E-01	1.010E+00	1.664E+00	1.746E-01	0.109
TH-231		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
U-231		84.21		9.459E-01	2.624E+00	3.892E+00	3.679E-01	0.243
	+	92.29		1.667E+00	1.175E+00	1.333E+00	1.193E-01	1.250
		95.87	*	8.139E-02	4.366E-01	6.354E-01	5.330E-02	0.128
		108.00		1.869E-01	7.281E-01	1.262E+00	8.817E-02	0.148
TH-232	+	338.32		1.100E+00	6.424E-01	8.345E-01	4.929E-02	1.318
	+	911.07	*	9.005E-01	6.436E-01	7.509E-01	8.664E-02	1.199
		969.11		1.446E+00	7.658E-01	1.271E+00	2.958E-01	1.138
PA-233		75.28		3.663E+00	5.318E+00	8.051E+00	1.249E+00	0.455
		86.59		1.683E+01	5.711E+00	5.962E+00	1.620E+00	2.824
		300.12		1.384E+00	7.728E-01	1.255E+00	1.691E-01	1.102
		311.98	*	-2.314E-02	1.038E-01	1.720E-01	1.076E-02	-0.135
		340.50		1.151E+00	1.239E+00	1.898E+00	4.365E-01	0.606
		398.62		2.357E+00	4.070E+00	6.838E+00	1.768E+00	0.345
		415.76		1.328E+00	3.374E+00	5.628E+00	1.159E+00	0.236
PA-234		63.00		4.643E-01	2.414E+00	3.718E+00	5.777E-01	0.125

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.67		1.656E-02	2.351E-01	3.395E-01	4.199E-02	0.049
		98.44		1.033E-01	1.389E-01	2.065E-01	1.150E-01	0.500
		99.86		-1.551E-02	6.348E-01	9.842E-01	7.732E-02	-0.016
		111.00		-7.467E-02	2.296E-01	3.858E-01	4.172E-02	-0.194
		131.20		-1.333E-01	1.395E-01	2.240E-01	1.266E-02	-0.595
		152.70		-2.329E-02	4.382E-01	7.284E-01	1.138E-01	-0.032
	+	186.00		6.104E+00	3.888E+00	3.429E+00	1.044E+00	1.780
		226.40		-4.506E-01	6.660E-01	1.029E+00	1.176E-01	-0.438
		227.20		1.666E-01	7.057E-01	1.150E+00	6.380E-02	0.145
		248.90		-5.513E-01	1.473E+00	2.016E+00	4.326E-01	-0.273
		293.70		1.711E+00	1.381E+00	2.173E+00	3.500E-01	0.788
		369.80		-1.317E-01	1.645E+00	2.707E+00	5.640E-01	-0.049
		568.70		1.673E+00	1.925E+00	3.372E+00	1.901E-01	0.496
		569.50		3.016E-01	5.190E-01	8.937E-01	5.036E-02	0.337
		574.00		-4.009E+00	2.777E+00	4.136E+00	2.323E-01	-0.969
		699.00		-1.030E+00	1.359E+00	2.072E+00	3.717E-01	-0.497
		706.10		6.974E-01	2.086E+00	3.470E+00	1.531E+00	0.201
		733.00		-3.798E-01	7.999E-01	1.252E+00	2.676E-01	-0.303
		742.81		-3.673E-01	2.969E+00	4.781E+00	3.201E+00	-0.077
		796.30		1.550E+00	2.008E+00	3.370E+00	8.980E-01	0.460
		805.60		-6.927E-01	2.318E+00	3.681E+00	1.116E+00	-0.188
		819.60		2.818E+00	3.144E+00	5.114E+00	1.934E+00	0.551
		826.30		3.445E-01	2.054E+00	3.347E+00	1.492E+00	0.103
		831.60		-2.624E-01	1.461E+00	2.319E+00	6.872E-01	-0.113
		876.40		-9.872E-01	2.332E+00	3.414E+00	3.510E+00	-0.289
		880.51		-1.103E-01	6.982E-01	1.158E+00	1.016E-01	-0.095
		883.24		-1.610E-01	7.292E-01	1.191E+00	8.010E-01	-0.135
		899.00		-7.266E-02	2.234E+00	3.732E+00	1.635E+00	-0.019
		925.00		-1.899E-01	3.508E+00	5.836E+00	5.185E-01	-0.033
		926.50		1.486E-01	5.165E-01	8.737E-01	2.216E-01	0.170
		946.00	*	-2.227E-01	8.955E-01	1.468E+00	2.759E-01	-0.152
		949.00		5.319E-01	1.301E+00	2.215E+00	1.920E-01	0.240
		980.50		1.059E+00	1.935E+00	3.324E+00	2.776E-01	0.319
		1394.10		2.061E-01	1.479E+00	2.513E+00	1.631E+00	0.082
PA-234M		766.41		-1.051E+01	3.417E+01	5.261E+01	4.024E+01	-0.200
		1001.03	*	2.964E+00	1.621E+01	2.717E+01	2.935E+00	0.109
TH-234		63.29	*	-5.000E-01	2.098E+00	3.135E+00	5.649E-01	-0.159
	+	92.38		1.525E+00	1.102E+00	1.230E+00	2.242E-01	1.240
U-234	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
U-235		89.95		1.636E+00	1.817E+00	2.383E+00	7.405E-01	0.687
	+	93.35		1.834E+00	1.382E+00	1.470E+00	4.128E-01	1.247
		105.00		-1.063E+00	1.353E+00	2.169E+00	6.396E-01	-0.490
		143.76	*	1.149E-01	2.830E-01	4.834E-01	7.818E-02	0.238

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		163.35		-5.968E-01	6.762E-01	1.056E+00	1.877E-01	-0.565
	+	185.71		2.261E-01	1.270E-01	1.279E-01	6.697E-03	1.767
		205.31		3.452E-01	7.782E-01	1.290E+00	2.303E-01	0.268
NP-236		94.67		1.391E-02	1.784E-01	2.578E-01	2.208E-02	0.054
		98.44		7.808E-02	9.581E-02	1.561E-01	1.255E-02	0.500
		111.00		-5.648E-02	1.736E-01	2.918E-01	1.961E-02	-0.194
		160.31	*	-1.329E-02	1.061E-01	1.749E-01	9.044E-03	-0.076
NP-237		86.50	*	1.446E+00	5.833E-01	7.927E-01	1.805E-01	1.824
		95.87		2.508E-01	1.347E+00	1.958E+00	4.808E-01	0.128
U-238		63.29	*	-5.000E-01	2.098E+00	3.135E+00	5.649E-01	-0.159
	+	92.38		1.525E+00	1.075E+00	1.230E+00	1.099E-01	1.240
NP-239		99.55		3.278E-02	2.139E-01	3.355E-01	2.648E-02	0.098
		117.00	*	1.726E-01	2.596E-01	4.375E-01	2.731E-02	0.395
		209.75		1.064E+00	1.181E+00	2.001E+00	1.084E-01	0.532
		228.18		1.281E-01	3.686E-01	6.043E-01	3.355E-02	0.212
		277.60		-9.816E-02	2.849E-01	4.749E-01	2.761E-02	-0.207
		334.30		2.927E-01	2.490E+00	3.692E+00	2.181E-01	0.079
AM-243		74.67	*	6.889E-02	1.024E-01	1.555E-01	1.382E-02	0.443
	+	86.72		4.561E+02	5.538E+01	3.835E+01	3.704E+00	11.893
		117.66		3.645E+00	5.553E+00	8.858E+00	5.486E-01	0.411
		142.18		-8.541E+00	2.445E+01	3.837E+01	2.089E+00	-0.223
CM-243		99.55		3.371E-02	2.200E-01	3.450E-01	2.724E-02	0.098
		103.76	*	-3.592E-02	1.162E-01	1.964E-01	1.455E-02	-0.183
		117.00		1.775E-01	2.669E-01	4.499E-01	2.808E-02	0.395
		209.75		1.048E+00	1.163E+00	1.971E+00	1.069E-01	0.532
		228.18		1.294E-01	3.723E-01	6.103E-01	3.389E-02	0.212
		277.60		-9.891E-02	2.871E-01	4.785E-01	2.782E-02	-0.207
CM-247		278.00		4.907E-01	1.156E+00	2.005E+00	1.166E-01	0.245
		287.40		2.205E-01	2.197E+00	3.736E+00	2.184E-01	0.059
		402.60	*	4.620E-03	7.464E-02	1.229E-01	7.122E-03	0.038
CF-249		252.85		1.779E+00	1.480E+00	2.519E+00	1.436E-01	0.706
		333.44		1.365E-01	3.287E-01	4.987E-01	2.946E-02	0.274
		387.95	*	1.321E-02	7.693E-02	1.279E-01	7.401E-03	0.103
CF-251		176.60	*	5.093E-02	1.689E-01	2.828E-01	1.461E-02	0.180
		227.00		5.863E-02	6.221E-01	1.007E+00	5.581E-02	0.058
		285.00		1.391E+00	3.055E+00	5.285E+00	3.086E-01	0.263

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089    *
* Acquisition date :  6-JUL-2009 13:26:36 Detector SN#     :               *
* Detector ID        : GAM23               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 01:00:03.12      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 29-JUN-2009 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201870089          Analyst initials: MXR1         *
* Batch Number       : 880723               Sample Quantity : 1.5544E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	3.418E-01	6.161E-02	6.079E-02	0.000E+00
CO-60	6.996E+00	6.216E-01	9.187E-02	0.000E+00
CD-109	4.167E+01	4.958E+00	2.129E+00	0.000E+00
SN-126	4.142E+00	4.929E-01	2.129E-01	0.000E+00
BA-137M	5.378E+00	3.801E-01	1.264E-01	0.000E+00
CS-137	5.685E+00	4.029E-01	1.336E-01	0.000E+00
TL-208	3.886E-01	1.148E-01	1.251E-01	0.000E+00
BI-211	2.347E+00	6.137E-01	6.246E-01	0.000E+00
PB-212	7.908E-01	1.682E-01	1.910E-01	0.000E+00
PO-212	7.908E-01	1.682E-01	1.910E-01	0.000E+00
PB-214	8.165E-01	2.175E-01	2.178E-01	0.000E+00
PO-214	8.165E-01	2.175E-01	2.178E-01	0.000E+00
PO-216	7.908E-01	1.682E-01	1.910E-01	0.000E+00
PO-218	8.165E-01	2.175E-01	2.178E-01	0.000E+00
RA-224	7.313E-01	2.380E+00	1.998E+00	0.000E+00
TH-228	7.908E-01	1.682E-01	1.910E-01	0.000E+00
AM-241	1.385E+01	1.493E+00	5.338E-01	0.000E+00
ANH-511	7.970E-02	1.088E-01	9.697E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	2.667E-01	6.348E-01	1.114E+00	0.000E+00	NOT IDENT.
NA-22	4.085E-03	6.035E-02	1.016E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.222E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.016E-02	4.929E-02	9.091E-02	0.000E+00	NOT IDENT.
K-40	8.824E-01	5.809E-01	1.186E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	9.771E-02	1.030E-01	0.000E+00	FAIL ABUN
SC-46	6.992E-02	9.621E-02	1.752E-01	0.000E+00	NOT IDENT.
V-48	7.630E-02	1.318E-01	2.359E-01	0.000E+00	NOT IDENT.
CR-51	6.613E-02	5.208E-01	9.425E-01	0.000E+00	NOT IDENT.

MN-52	-2.425E-02	1.195E-01	1.955E-01	0.000E+00	FAIL ABUN
MN-54	-2.482E-02	8.211E-02	1.351E-01	0.000E+00	NOT IDENT.
CO-56	1.970E-02	8.243E-02	1.412E-01	0.000E+00	NOT IDENT.
CO-58	4.627E-02	7.665E-02	1.358E-01	0.000E+00	NOT IDENT.
FE-59	4.258E-02	2.078E-01	3.584E-01	0.000E+00	NOT IDENT.
ZN-65	-2.400E-01	2.232E-01	3.492E-01	0.000E+00	NOT IDENT.
GE-68	6.311E-01	3.182E+00	5.499E+00	0.000E+00	NOT IDENT.
AS-73	-1.904E+00	1.852E+00	3.232E+00	0.000E+00	NOT IDENT.
AS-74	7.119E-02	1.306E-01	2.381E-01	0.000E+00	NOT IDENT.
SE-75	3.823E-02	6.745E-02	1.194E-01	0.000E+00	FAIL ABUN
BR-77	1.047E+00	2.303E+00	4.024E+00	0.000E+00	FAIL ABUN
SR-82	-5.600E-01	6.295E-01	9.894E-01	0.000E+00	NOT IDENT.
RB-83	4.442E-02	1.296E-01	2.247E-01	0.000E+00	NOT IDENT.
RB-84	4.110E-02	1.459E-01	2.599E-01	0.000E+00	NOT IDENT.
KR-85	2.059E+01	1.445E+01	2.425E+01	0.000E+00	NOT IDENT.
SR-85	9.748E-02	6.843E-02	1.148E-01	0.000E+00	NOT IDENT.
RB-86	-6.610E-01	1.577E+00	2.609E+00	0.000E+00	NOT IDENT.
Y-88	3.265E-02	5.500E-02	1.040E-01	0.000E+00	NOT IDENT.
ZR-88	1.777E-02	5.490E-02	9.807E-02	0.000E+00	NOT IDENT.
Y-91	-5.611E+00	2.488E+01	4.061E+01	0.000E+00	NOT IDENT.
NB-94	-1.939E-02	6.272E-02	1.055E-01	0.000E+00	NOT IDENT.
NB-95	-1.190E-02	7.377E-02	1.241E-01	0.000E+00	NOT IDENT.
NB-95M	1.358E-01	1.887E-01	3.062E-01	0.000E+00	NOT IDENT.
ZR-95	-5.953E-03	1.314E-01	2.235E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.412E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.163E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.830E+00	3.687E+00	6.060E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.582E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.894E-03	4.874E-02	8.638E-02	0.000E+00	NOT IDENT.
RH-102	1.541E-02	6.713E-02	1.165E-01	0.000E+00	NOT IDENT.
RU-103	-2.505E-02	7.413E-02	1.232E-01	0.000E+00	FAIL ABUN
RH-106	-5.382E-02	6.260E-01	1.089E+00	0.000E+00	FAIL ABUN
RU-106	-5.382E-02	6.260E-01	1.089E+00	0.000E+00	FAIL ABUN
AG-108M	-8.553E-02	6.852E-02	1.092E-01	0.000E+00	NOT IDENT.
AG-110M	8.299E-02	8.469E-02	1.388E-01	0.000E+00	NOT IDENT.
IN-111	4.994E-02	3.134E-01	4.867E-01	0.000E+00	NOT IDENT.
IN-113M	4.546E-02	7.889E-02	1.430E-01	0.000E+00	NOT IDENT.
SN-113	4.546E-02	7.889E-02	1.430E-01	0.000E+00	NOT IDENT.
IN-114M	-2.205E-01	2.584E-01	3.844E-01	0.000E+00	NOT IDENT.
CD-115	-8.663E-01	2.046E+00	3.344E+00	0.000E+00	NOT IDENT.
SN-117M	7.476E-03	4.781E-02	8.746E-02	0.000E+00	NOT IDENT.
SB-122	-1.427E-01	5.613E-01	9.790E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.984E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.161E-02	3.481E-02	6.515E-02	0.000E+00	NOT IDENT.
I-124	-4.403E-01	4.206E-01	5.746E-01	0.000E+00	NOT IDENT.
SB-124	2.077E-02	8.969E-02	1.585E-01	0.000E+00	NOT IDENT.
SB-125	-4.843E-02	1.857E-01	3.172E-01	0.000E+00	NOT IDENT.
TE-125M	-7.287E+00	1.013E+01	1.838E+01	0.000E+00	NOT IDENT.
I-126	-3.556E-02	2.818E-01	4.184E-01	0.000E+00	NOT IDENT.
SB-126	-1.172E-02	1.858E-01	3.176E-01	0.000E+00	FAIL ABUN
SB-127	4.151E-01	7.141E-01	1.284E+00	0.000E+00	NOT IDENT.
XE-127	-4.111E-02	6.061E-02	1.030E-01	0.000E+00	NOT IDENT.
I-131	-7.063E-02	1.138E-01	1.940E-01	0.000E+00	NOT IDENT.
TE-132	7.997E-02	2.206E-01	3.911E-01	0.000E+00	NOT IDENT.
BA-133	1.849E-02	8.861E-02	1.402E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.815E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	9.152E-02	9.827E-02	1.776E-01	0.000E+00	NOT IDENT.
CS-135	-4.274E-01	2.655E-01	4.037E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.685E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.966E-02	1.852E-01	3.271E-01	0.000E+00	NOT IDENT.
CE-139	2.647E-02	4.002E-02	7.455E-02	0.000E+00	NOT IDENT.
BA-140	1.568E-02	3.335E-01	5.960E-01	0.000E+00	NOT IDENT.
LA-140	-7.876E-03	7.813E-02	1.285E-01	0.000E+00	NOT IDENT.
CE-141	4.834E-03	7.185E-02	1.323E-01	0.000E+00	NOT IDENT.
CE-143	3.456E+00	5.388E+00	8.923E+00	0.000E+00	FAIL ABUN
CE-144	1.766E-01	2.784E-01	4.814E-01	0.000E+00	NOT IDENT.
PM-144	5.962E-02	6.081E-02	1.127E-01	0.000E+00	NOT IDENT.
PR-144	4.024E+00	4.104E+00	7.607E+00	0.000E+00	NOT IDENT.
PM-146	3.483E-03	9.204E-02	1.589E-01	0.000E+00	NOT IDENT.
ND-147	4.929E-01	6.553E-01	1.219E+00	0.000E+00	NOT IDENT.
PM-149	2.004E+01	1.482E+01	2.822E+01	0.000E+00	NOT IDENT.
EU-152	-9.306E-02	1.882E-01	3.002E-01	0.000E+00	FAIL ABUN
GD-153	-5.600E-02	1.186E-01	1.812E-01	0.000E+00	NOT IDENT.
EU-154	1.804E-02	1.701E-01	2.879E-01	0.000E+00	FAIL ABUN
EU-155	-9.864E-02	1.319E-01	2.403E-01	0.000E+00	FAIL ABUN
TB-160	-7.479E-02	3.167E-01	5.458E-01	0.000E+00	FAIL ABUN
HO-166M	-1.491E-02	1.222E-01	2.083E-01	0.000E+00	FAIL ABUN
TM-171	1.228E+01	4.102E+01	7.505E+01	0.000E+00	FAIL ABUN

LU-176	1.864E-02	3.974E-02	7.359E-02	0.000E+00	FAIL ABUN
LU-177	3.360E-01	7.554E-01	1.358E+00	0.000E+00	NOT IDENT.
LU-177M	-5.401E-02	3.380E-01	5.835E-01	0.000E+00	FAIL ABUN
HF-181	-1.529E-02	7.681E-02	1.295E-01	0.000E+00	FAIL ABUN
W-181	-5.180E-01	5.321E-01	9.054E-01	0.000E+00	NOT IDENT.
TA-182	1.030E-01	2.585E-01	4.544E-01	0.000E+00	NOT IDENT.
RE-183	-5.242E-02	1.318E-01	2.334E-01	0.000E+00	FAIL ABUN
RE-184	4.596E-01	3.746E-01	6.880E-01	0.000E+00	FAIL ABUN
OS-185	3.382E-02	7.875E-02	1.414E-01	0.000E+00	FAIL ABUN
RE-188	-5.458E-02	2.041E-01	3.660E-01	0.000E+00	NOT IDENT.
W-188	-3.511E+00	1.317E+01	2.074E+01	0.000E+00	NOT IDENT.
IR-192	1.745E-02	5.309E-02	9.727E-02	0.000E+00	FAIL ABUN
AU-195	2.264E-01	2.961E-01	5.311E-01	0.000E+00	FAIL ABUN
TL-200	6.258E+00	6.941E+00	1.286E+01	0.000E+00	NOT IDENT.
TL-201	1.786E+00	1.696E+00	3.217E+00	0.000E+00	FAIL ABUN
TL-202	1.216E-02	9.887E-02	1.722E-01	0.000E+00	NOT IDENT.
HG-203	6.799E-03	5.616E-02	1.031E-01	0.000E+00	NOT IDENT.
BI-207	3.057E-02	1.340E-01	2.325E-01	0.000E+00	NOT IDENT.
TL-207	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
PO-209	7.944E+00	1.938E+01	3.466E+01	0.000E+00	NOT IDENT.
BI-210	-7.392E+00	7.984E+00	1.408E+01	0.000E+00	NOT IDENT.
PB-210	-7.392E+00	7.984E+00	1.408E+01	0.000E+00	NOT IDENT.
PO-210	-7.392E+00	7.979E+00	1.408E+01	0.000E+00	NOT IDENT.
PB-211	-2.315E-02	1.828E+00	3.192E+00	0.000E+00	NOT IDENT.
BI-212	4.611E-01	5.947E-01	1.074E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
PO-215	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
RN-219	3.941E-01	8.087E-01	1.451E+00	0.000E+00	NOT IDENT.
RN-220	-1.059E+00	4.792E+01	8.503E+01	0.000E+00	NOT IDENT.
RA-223	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
AC-227	5.621E-01	6.569E-01	1.175E+00	0.000E+00	NOT IDENT.
TH-227	5.621E-01	6.590E-01	1.175E+00	0.000E+00	FAIL ABUN
AC-228	0.000E+00	6.307E-01	7.673E-01	0.000E+00	FAIL ABUN
RA-228	0.000E+00	6.307E-01	7.673E-01	0.000E+00	FAIL ABUN
TH-229	1.865E-01	7.410E-01	1.332E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
PA-231	-8.965E-01	2.601E+00	4.655E+00	0.000E+00	NOT IDENT.
TH-231	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
U-231	8.139E-02	4.279E-01	6.884E-01	0.000E+00	FAIL ABUN
TH-232	0.000E+00	6.307E-01	7.673E-01	0.000E+00	FAIL ABUN
PA-233	-2.314E-02	1.017E-01	1.809E-01	0.000E+00	NOT IDENT.
PA-234	-2.227E-01	8.776E-01	1.498E+00	0.000E+00	FAIL ABUN
PA-234M	2.964E+00	1.589E+01	2.769E+01	0.000E+00	NOT IDENT.
TH-234	-5.000E-01	2.056E+00	3.431E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
U-235	1.149E-01	2.773E-01	5.185E-01	0.000E+00	FAIL ABUN
NP-236	-1.329E-02	1.039E-01	1.871E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	5.716E-01	8.610E-01	0.000E+00	NOT IDENT.
U-238	-5.000E-01	2.056E+00	3.431E+00	0.000E+00	FAIL ABUN
NP-239	1.726E-01	2.544E-01	4.717E-01	0.000E+00	NOT IDENT.
AM-243	6.889E-02	1.003E-01	1.696E-01	0.000E+00	FAIL ABUN
CM-243	-3.592E-02	1.139E-01	2.124E-01	0.000E+00	NOT IDENT.
CM-247	4.620E-03	7.314E-02	1.283E-01	0.000E+00	NOT IDENT.
CF-249	1.321E-02	7.539E-02	1.338E-01	0.000E+00	NOT IDENT.
CF-251	5.093E-02	1.655E-01	3.018E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:27:08.17

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:26:36.
Sample ID         : G1201870089          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:03.12  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	376	85.51*	6.334E+00	3.352E-01	3.418E-01	18.39
	136.48	46	10.60	6.279E+00	3.303E-01	3.367E-01	171.17
CO-60	1173.22	1675	100.00	1.205E+00	6.712E+00	6.730E+00	7.77
	1332.49	1554	100.00*	1.076E+00	6.977E+00	6.996E+00	9.07
CD-109	88.03	1679	3.72*	5.290E+00	4.120E+01	4.167E+01	12.14
SN-126	64.28	------	9.60	2.723E+00	------ Line Not Found		------
	86.94	1679	8.90	5.290E+00	1.722E+01	1.722E+01	42.23
	87.57	1679	37.00*	5.290E+00	4.142E+00	4.142E+00	12.14
BA-137M	661.65	2043	89.98*	2.040E+00	5.375E+00	5.378E+00	7.21
CS-137	661.65	2043	85.12*	2.040E+00	5.682E+00	5.685E+00	7.23
TL-208	277.35	------	6.80	4.140E+00	------ Line Not Found		------
	510.84	42	21.60	2.544E+00	3.690E-01	3.690E-01	139.55
	583.14	154	84.20*	2.276E+00	3.886E-01	3.886E-01	30.14
	860.37	------	12.46	1.609E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.829E+00	------ Line Not Found		------
	351.07	216	12.94*	3.437E+00	2.347E+00	2.347E+00	26.68
PB-212	74.81	------	10.70	4.056E+00	------ Line Not Found		------
	77.11	164	18.00	4.319E+00	1.016E+00	1.016E+00	53.19
	87.30	1679	8.00	5.290E+00	1.916E+01	1.916E+01	15.73
	238.63	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PO-212	74.81	------	10.70	4.056E+00	------ Line Not Found		------
	77.11	164	18.00	4.319E+00	1.016E+00	1.016E+00	53.19
	87.30	1679	8.00	5.290E+00	1.916E+01	1.916E+01	15.73
	115.19	------	0.60	6.293E+00	------ Line Not Found		------
	238.63	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PB-214	74.81	------	6.21	4.056E+00	------ Line Not Found		------
	77.11	164	10.50	4.319E+00	1.742E+00	1.742E+00	53.73
	87.30	1679	4.67	5.290E+00	3.282E+01	3.282E+01	14.38
	241.98	27	7.49	4.597E+00	3.857E-01	3.857E-01	332.10
	295.21	90	19.20	3.942E+00	5.737E-01	5.737E-01	64.81

Sample ID : G1201870089 Acquisition date : 6-JUL-2009 13:26:36

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	216	37.20*	3.437E+00	8.165E-01	8.165E-01	27.19
PO-214	74.81	------	6.21	4.056E+00	------ Line Not Found		------
	77.11	164	10.50	4.319E+00	1.742E+00	1.742E+00	53.73
	87.30	1679	4.67	5.290E+00	3.282E+01	3.282E+01	14.38
	241.98	27	7.49	4.597E+00	3.857E-01	3.857E-01	332.10
	295.21	90	19.20	3.942E+00	5.737E-01	5.737E-01	64.81
	351.92	216	37.20*	3.437E+00	8.165E-01	8.165E-01	27.19
PO-216	74.81	------	10.70	4.056E+00	------ Line Not Found		------
	77.11	164	18.00	4.319E+00	1.016E+00	1.016E+00	53.19
	87.30	1679	8.00	5.290E+00	1.916E+01	1.916E+01	15.73
	238.63	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PO-218	74.81	------	6.21	4.056E+00	------ Line Not Found		------
	77.11	164	10.50	4.319E+00	1.742E+00	1.742E+00	53.73
	87.30	1679	4.67	5.290E+00	3.282E+01	3.282E+01	14.38
	241.98	27	7.49	4.597E+00	3.857E-01	3.857E-01	332.10
	295.21	90	19.20	3.942E+00	5.737E-01	5.737E-01	64.81
	351.92	216	37.20*	3.437E+00	8.165E-01	8.165E-01	27.19
RA-224	240.98	27	3.95*	4.597E+00	7.313E-01	7.313E-01	332.05
TH-228	84.40	------	1.21	5.004E+00	------ Line Not Found		------
	238.60	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.10	------	3.41	3.895E+00	------ Line Not Found		------
AM-241	59.54	2148	35.90*	2.086E+00	1.385E+01	1.385E+01	11.00
ANH-511	511.00	42	100.00*	2.544E+00	7.970E-02	7.970E-02	139.30

Flag: "*" = Keyline

Sample ID : G1201870089 Acquisition date : 6-JUL-2009 13:26:36

Total number of lines in spectrum 19
Number of unidentified lines 0
Number of lines tentatively identified by NID 19 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	3.352E-01	3.418E-01	0.629E-01	18.39	
CO-60	5.27Y	1.00	6.977E+00	6.996E+00	0.634E+00	9.07	
CD-109	464.00D	1.01	4.120E+01	4.167E+01	0.506E+01	12.14	
SN-126	1.00E+05Y	1.00	4.142E+00	4.142E+00	0.503E+00	12.14	
BA-137M	30.17Y	1.00	5.375E+00	5.378E+00	0.388E+00	7.21	
CS-137	30.17Y	1.00	5.682E+00	5.685E+00	0.411E+00	7.23	
TL-208	1.41E+10Y	1.00	3.886E-01	3.886E-01	1.171E-01	30.14	
BI-211	7.04E+08Y	1.00	2.347E+00	2.347E+00	0.626E+00	26.68	
PB-212	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
PO-212	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
PB-214	1600.00Y	1.00	8.165E-01	8.165E-01	2.220E-01	27.19	
PO-214	1600.00Y	1.00	8.165E-01	8.165E-01	2.220E-01	27.19	
PO-216	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
PO-218	1600.00Y	1.00	8.165E-01	8.165E-01	2.220E-01	27.19	
RA-224	1.41E+10Y	1.00	7.313E-01	7.313E-01	24.28E-01	332.05	
TH-228	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
AM-241	432.20Y	1.00	1.385E+01	1.385E+01	0.152E+01	11.00	
ANH-511	1.00E+09Y	1.00	7.970E-02	7.970E-02	11.10E-02	139.30	
	Total Activity :		8.672E+01	8.722E+01			

Grand Total Activity : 8.672E+01 8.722E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1201870089 Acquisition date : 6-JUL-2009 13:26:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	93.14	96	296	1.55	186.45	183	9	2.66E-02	70.0	5.61E+00	T
0	185.73	139	314	1.70	371.70	366	13	3.85E-02	55.9	5.49E+00	T
0	338.30	92	180	1.22	676.92	673	10	2.56E-02	58.1	3.55E+00	T
0	609.65	157	112	1.15	1219.84	1213	14	4.37E-02	32.7	2.19E+00	T
0	911.76	79	153	1.21	1824.36	1817	14	2.19E-02	70.5	1.52E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:27:13.59

```
*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1  *
* Acquisition date  : 6-JUL-2009 13:26:36.  Detector SN#     :             *
* Detector ID       : GAM23                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 01:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 01:00:03.12          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201870089           Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.55440E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 2-JUN-2009 11:17:00.62MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	3.418E-01	6.286E-02	5.645E-02	3.328E-03	6.056
CO-60	6.996E+00	6.343E-01	9.085E-02	6.670E-03	77.006
CD-109	4.167E+01	5.059E+00	1.961E+00	1.915E-01	21.247
SN-126	4.142E+00	5.029E-01	1.960E-01	1.908E-02	21.130
BA-137M	5.378E+00	3.878E-01	1.226E-01	6.262E-03	43.871
CS-137	5.685E+00	4.111E-01	1.296E-01	6.656E-03	43.871
TL-208	3.886E-01	1.171E-01	1.210E-01	7.853E-03	3.212
BI-211	2.347E+00	6.263E-01	5.957E-01	3.882E-02	3.940
PB-212	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
PO-212	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
PB-214	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-214	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-216	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
PO-218	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
RA-224	7.313E-01	2.428E+00	1.887E+00	1.063E-01	0.388
TH-228	7.908E-01	1.716E-01	1.803E-01	1.297E-02	4.385
AM-241	1.385E+01	1.523E+00	4.871E-01	4.532E-02	28.436
ANH-511	7.970E-02	1.110E-01	9.341E-02	5.426E-03	0.853

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.667E-01		6.477E-01	1.071E+00	7.279E-02	0.249
NA-22	4.085E-03		6.159E-02	1.003E-01	6.737E-03	0.041
NA-24	4.976E-05		1.134E-04	Half-Life too short		
AL-26	2.016E-02		5.029E-02	9.069E-02	5.451E-03	0.222
K-40	8.824E-01		5.928E-01	1.176E+00	8.796E-02	0.750
TI-44	1.874E-01	+	9.970E-02	9.457E-02	8.572E-03	1.982
SC-46	6.992E-02		9.817E-02	1.713E-01	1.530E-02	0.408
V-48	7.630E-02		1.345E-01	2.313E-01	1.924E-02	0.330
CR-51	6.613E-02		5.314E-01	8.968E-01	5.880E-02	0.074
MN-52	-2.425E-02		1.219E-01	1.938E-01	1.402E-02	-0.125
MN-54	-2.482E-02		8.379E-02	1.319E-01	1.044E-02	-0.188
CO-56	1.970E-02		8.411E-02	1.379E-01	1.122E-02	0.143
CO-58	4.627E-02		7.822E-02	1.325E-01	9.951E-03	0.349
FE-59	4.258E-02		2.121E-01	3.525E-01	2.715E-02	0.121
ZN-65	-2.400E-01		2.278E-01	3.436E-01	2.269E-02	-0.699
GE-68	6.311E-01		3.247E+00	5.406E+00	3.869E-01	0.117
AS-73	-1.904E+00		1.890E+00	2.941E+00	2.597E-01	-0.647
AS-74	7.119E-02		1.333E-01	2.303E-01	1.270E-02	0.309
SE-75	3.823E-02		6.883E-02	1.130E-01	6.579E-03	0.338
BR-77	1.047E+00		2.350E+00	3.878E+00	2.245E-01	0.270
SR-82	-5.600E-01		6.424E-01	9.639E-01	6.650E-02	-0.581
RB-83	4.442E-02		1.322E-01	2.166E-01	1.254E-02	0.205
RB-84	4.110E-02		1.489E-01	2.541E-01	2.232E-02	0.162
KR-85	2.059E+01		1.475E+01	2.337E+01	1.356E+00	0.881
SR-85	9.748E-02		6.983E-02	1.106E-01	6.420E-03	0.881
RB-86	-6.610E-01		1.609E+00	2.565E+00	1.838E-01	-0.258
Y-88	3.265E-02		5.612E-02	1.038E-01	6.113E-03	0.314
ZR-88	1.777E-02		5.602E-02	9.382E-02	5.416E-03	0.189
Y-91	-5.611E+00		2.539E+01	4.005E+01	2.389E+00	-0.140
NB-94	-1.939E-02		6.400E-02	1.025E-01	5.855E-03	-0.189
NB-95	-1.190E-02		7.527E-02	1.208E-01	8.118E-03	-0.099
NB-95M	1.358E-01		1.926E-01	2.891E-01	2.133E-02	0.470
ZR-95	-5.953E-03		1.341E-01	2.176E-01	1.669E-02	-0.027
NB-97	1.726E-04		7.202E-05	Half-Life too short		
ZR-97	1.379E-03		1.103E-03	Half-Life too short		
MO-99	-1.830E+00		3.762E+00	5.896E+00	8.251E-01	-0.310
TC-99M	-3.004E+01		2.338E+01	Half-Life too short		
RH-101	-2.894E-03		4.974E-02	8.119E-02	4.328E-03	-0.036
RH-102	1.541E-02		6.850E-02	1.120E-01	6.555E-03	0.138
RU-103	-2.505E-02		7.564E-02	1.185E-01	1.501E-02	-0.211
RH-106	-5.382E-02		6.388E-01	1.055E+00	1.216E-01	-0.051
RU-106	-5.382E-02		6.388E-01	1.055E+00	5.668E-02	-0.051
AG-108M	-8.553E-02		6.992E-02	1.047E-01	6.638E-03	-0.817
AG-110M	8.299E-02		8.642E-02	1.346E-01	7.478E-03	0.617
IN-111	4.994E-02		3.198E-01	4.599E-01	2.603E-02	0.109
IN-113M	4.546E-02		8.050E-02	1.368E-01	8.429E-03	0.332
SN-113	4.546E-02		8.050E-02	1.368E-01	8.429E-03	0.332
IN-114M	-2.205E-01		2.637E-01	3.609E-01	1.902E-02	-0.611

Sample ID : G1201870089 Acquisition date : 6-JUL-2009 13:26:36

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CD-115	-8.663E-01		2.088E+00	3.224E+00	1.861E-01	-0.269
SN-117M	7.476E-03		4.879E-02	8.173E-02	4.247E-03	0.091
SB-122	-1.427E-01		5.727E-01	9.456E-01	5.349E-02	-0.151
I-123	3.095E-04		2.543E-04	Half-Life too short		
TE-123M	2.161E-02		3.552E-02	6.089E-02	3.213E-03	0.355
I-124	-4.403E-01		4.292E-01	5.560E-01	3.047E-02	-0.792
SB-124	2.077E-02		9.152E-02	1.578E-01	1.100E-02	0.132
SB-125	-4.843E-02		1.895E-01	3.041E-01	1.850E-02	-0.159
TE-125M	-7.287E+00		1.034E+01	1.702E+01	1.516E+00	-0.428
I-126	-3.556E-02		2.875E-01	4.059E-01	2.101E-02	-0.088
SB-126	-1.172E-02		1.896E-01	3.088E-01	1.850E-02	-0.038
SB-127	4.151E-01		7.287E-01	1.247E+00	8.576E-02	0.333
XE-127	-4.111E-02		6.185E-02	9.689E-02	5.201E-03	-0.424
I-131	-7.063E-02		1.161E-01	1.853E-01	1.200E-02	-0.381
TE-132	7.997E-02		2.251E-01	3.689E-01	4.822E-02	0.217
BA-133	1.849E-02		9.041E-02	1.338E-01	1.552E-02	0.138
I-133	4.574E-06		1.436E-05	Half-Life too short		
CS-134	9.152E-02		1.003E-01	1.732E-01	1.265E-02	0.528
CS-135	-4.274E-01		2.709E-01	3.824E-01	2.922E-02	-1.118
I-135	-1.126E+00		2.391E+01	Half-Life too short		
CS-136	8.966E-02		1.889E-01	3.213E-01	2.559E-02	0.279
CE-139	2.647E-02		4.083E-02	6.975E-02	3.556E-03	0.380
BA-140	1.568E-02		3.403E-01	5.749E-01	1.869E-01	0.027
LA-140	-7.876E-03		7.972E-02	1.277E-01	8.763E-03	-0.062
CE-141	4.834E-03		7.331E-02	1.234E-01	6.958E-03	0.039
CE-143	3.456E+00		5.498E+00	8.471E+00	1.733E+00	0.408
CE-144	1.766E-01		2.840E-01	4.480E-01	6.326E-02	0.394
PM-144	5.962E-02		6.205E-02	1.095E-01	6.155E-03	0.545
PR-144	4.024E+00		4.188E+00	7.389E+00	4.153E-01	0.545
PM-146	3.483E-03		9.392E-02	1.526E-01	1.322E-02	0.023
ND-147	4.929E-01		6.687E-01	1.175E+00	1.587E-01	0.419
PM-149	2.004E+01		1.512E+01	2.677E+01	3.794E+00	0.749
EU-152	-9.306E-02		1.920E-01	2.862E-01	1.897E-02	-0.325
GD-153	-5.600E-02		1.210E-01	1.673E-01	1.367E-02	-0.335
EU-154	1.804E-02		1.736E-01	2.844E-01	2.823E-02	0.063
EU-155	-9.864E-02		1.346E-01	2.223E-01	1.639E-02	-0.444
TB-160	-7.479E-02		3.232E-01	5.336E-01	4.666E-02	-0.140
HO-166M	-1.491E-02		1.247E-01	2.024E-01	1.185E-02	-0.074
TM-171	1.228E+01		4.186E+01	6.866E+01	5.971E+00	0.179
LU-176	1.864E-02		4.055E-02	6.995E-02	4.121E-03	0.266
LU-177	3.360E-01		7.708E-01	1.278E+00	6.914E-02	0.263
LU-177M	-5.401E-02		3.449E-01	5.589E-01	3.252E-02	-0.097
HF-181	-1.529E-02		7.838E-02	1.246E-01	7.285E-03	-0.123
W-181	-5.180E-01		5.429E-01	8.279E-01	7.192E-02	-0.626
TA-182	1.030E-01		2.638E-01	4.483E-01	2.752E-02	0.230
RE-183	-5.242E-02		1.345E-01	2.182E-01	1.123E-02	-0.240
RE-184	4.596E-01		3.823E-01	6.507E-01	3.710E-02	0.706
OS-185	3.382E-02		8.036E-02	1.370E-01	7.151E-03	0.247

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188	-5.458E-02		2.083E-01	3.418E-01	1.794E-02	-0.160
W-188	-3.511E+00		1.344E+01	1.969E+01	1.153E+00	-0.178
IR-192	1.745E-02		5.418E-02	9.252E-02	5.488E-03	0.189
AU-195	2.264E-01		3.021E-01	4.905E-01	3.914E-02	0.462
TL-200	6.258E+00		7.082E+00	1.228E+01	7.193E-01	0.509
TL-201	1.786E+00		1.731E+00	3.011E+00	1.537E-01	0.593
TL-202	1.216E-02		1.009E-01	1.652E-01	9.666E-03	0.074
HG-203	6.799E-03		5.730E-02	9.780E-02	6.041E-03	0.070
BI-207	3.057E-02		1.368E-01	2.285E-01	1.679E-02	0.134
TL-207	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
PO-209	7.944E+00		1.977E+01	3.390E+01	3.077E+00	0.234
BI-210	-7.392E+00		8.147E+00	1.277E+01	9.945E-01	-0.579
PB-210	-7.392E+00		8.147E+00	1.277E+01	9.945E-01	-0.579
PO-210	-7.392E+00		8.142E+00	1.277E+01	8.570E-01	-0.579
PB-211	-2.315E-02		1.865E+00	3.056E+00	1.905E+00	-0.008
BI-212	4.611E-01		6.068E-01	1.044E+00	8.289E-02	0.442
BI-214	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
PO-215	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
RN-219	3.941E-01		8.252E-01	1.388E+00	1.889E-01	0.284
RN-220	-1.059E+00		4.889E+01	8.208E+01	4.684E+00	-0.013
RA-223	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
RA-226	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
AC-227	5.621E-01		6.703E-01	1.111E+00	1.547E-01	0.506
TH-227	5.621E-01		6.724E-01	1.111E+00	1.875E-01	0.506
AC-228	9.005E-01	+	6.436E-01	7.509E-01	8.664E-02	1.199
RA-228	9.005E-01	+	6.436E-01	7.509E-01	8.664E-02	1.199
TH-229	1.865E-01		7.561E-01	1.251E+00	6.626E-02	0.149
TH-230	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
PA-231	-8.965E-01		2.654E+00	4.416E+00	6.091E-01	-0.203
TH-231	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
U-231	8.139E-02		4.366E-01	6.354E-01	5.330E-02	0.128
TH-232	9.005E-01	+	6.436E-01	7.509E-01	8.664E-02	1.199
PA-233	-2.314E-02		1.038E-01	1.720E-01	1.076E-02	-0.135
PA-234	-2.227E-01		8.955E-01	1.468E+00	2.759E-01	-0.152
PA-234M	2.964E+00		1.621E+01	2.717E+01	2.935E+00	0.109
TH-234	-5.000E-01		2.098E+00	3.135E+00	5.649E-01	-0.159
U-234	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
U-235	1.149E-01		2.830E-01	4.834E-01	7.818E-02	0.238
NP-236	-1.329E-02		1.061E-01	1.749E-01	9.044E-03	-0.076
NP-237	1.446E+00		5.833E-01	7.927E-01	1.805E-01	1.824
U-238	-5.000E-01		2.098E+00	3.135E+00	5.649E-01	-0.159
NP-239	1.726E-01		2.596E-01	4.375E-01	2.731E-02	0.395
AM-243	6.889E-02		1.024E-01	1.555E-01	1.382E-02	0.443
CM-243	-3.592E-02		1.162E-01	1.964E-01	1.455E-02	-0.183
CM-247	4.620E-03		7.464E-02	1.229E-01	7.122E-03	0.038
CF-249	1.321E-02		7.693E-02	1.279E-01	7.401E-03	0.103
CF-251	5.093E-02		1.689E-01	2.828E-01	1.461E-02	0.180

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201870089          *
* Acquisition date  :  6-JUL-2009 13:26:36 Detector SN#     :               *
* Detector ID       : GAM23                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 01:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 01:00:03.12     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201870089          Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.5544E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	3.418E-01	6.161E-02	3.042E-02	3.143E-02
CO-60	6.996E+00	6.216E-01	4.596E-02	3.172E-01
CD-109	4.167E+01	4.958E+00	1.065E+00	2.530E+00
SN-126	4.142E+00	4.929E-01	1.065E-01	2.515E-01
BA-137M	5.378E+00	3.801E-01	6.322E-02	1.939E-01
CS-137	5.685E+00	4.029E-01	6.683E-02	2.056E-01
TL-208	3.886E-01	1.148E-01	6.260E-02	5.855E-02
BI-211	2.347E+00	6.137E-01	3.125E-01	3.131E-01
PB-212	7.908E-01	1.682E-01	9.555E-02	8.580E-02
PO-212	7.908E-01	1.682E-01	9.555E-02	8.580E-02
PB-214	8.165E-01	2.175E-01	1.089E-01	1.110E-01
PO-214	8.165E-01	2.175E-01	1.089E-01	1.110E-01
PO-216	7.908E-01	1.682E-01	9.555E-02	8.580E-02
PO-218	8.165E-01	2.175E-01	1.089E-01	1.110E-01
RA-224	7.313E-01	2.380E+00	9.995E-01	1.214E+00
TH-228	7.908E-01	1.682E-01	9.554E-02	8.580E-02
AM-241	1.385E+01	1.493E+00	2.671E-01	7.615E-01
ANH-511	7.970E-02	1.088E-01	4.851E-02	5.551E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	2.667E-01	6.348E-01	5.572E-01	3.239E-01	NOT IDENT.
NA-22	4.085E-03	6.035E-02	5.081E-02	3.079E-02	NOT IDENT.
NA-24	4.976E+01	2.222E+02	0.000E+00	1.134E+02	SHORT HLIF
AL-26	2.016E-02	4.929E-02	4.548E-02	2.515E-02	NOT IDENT.
K-40	8.824E-01	5.809E-01	5.933E-01	2.964E-01	NOT IDENT.
TI-44	1.874E-01	9.771E-02	5.151E-02	4.985E-02	FAIL ABUN
SC-46	6.992E-02	9.621E-02	8.763E-02	4.908E-02	NOT IDENT.
V-48	7.630E-02	1.318E-01	1.180E-01	6.727E-02	NOT IDENT.
CR-51	6.613E-02	5.208E-01	4.715E-01	2.657E-01	NOT IDENT.

MN-52	-2.425E-02	1.195E-01	9.783E-02	6.095E-02	FAIL ABUN
MN-54	-2.482E-02	8.211E-02	6.758E-02	4.189E-02	NOT IDENT.
CO-56	1.970E-02	8.243E-02	7.063E-02	4.206E-02	NOT IDENT.
CO-58	4.627E-02	7.665E-02	6.794E-02	3.911E-02	NOT IDENT.
FE-59	4.258E-02	2.078E-01	1.793E-01	1.060E-01	NOT IDENT.
ZN-65	-2.400E-01	2.232E-01	1.747E-01	1.139E-01	NOT IDENT.
GE-68	6.311E-01	3.182E+00	2.751E+00	1.624E+00	NOT IDENT.
AS-73	-1.904E+00	1.852E+00	1.617E+00	9.450E-01	NOT IDENT.
AS-74	7.119E-02	1.306E-01	1.191E-01	6.665E-02	NOT IDENT.
SE-75	3.823E-02	6.745E-02	5.972E-02	3.442E-02	FAIL ABUN
BR-77	1.047E+00	2.303E+00	2.013E+00	1.175E+00	FAIL ABUN
SR-82	-5.600E-01	6.295E-01	4.950E-01	3.212E-01	NOT IDENT.
RB-83	4.442E-02	1.296E-01	1.124E-01	6.611E-02	NOT IDENT.
RB-84	4.110E-02	1.459E-01	1.300E-01	7.444E-02	NOT IDENT.
KR-85	2.059E+01	1.445E+01	1.213E+01	7.374E+00	NOT IDENT.
SR-85	9.748E-02	6.843E-02	5.745E-02	3.491E-02	NOT IDENT.
RB-86	-6.610E-01	1.577E+00	1.305E+00	8.045E-01	NOT IDENT.
Y-88	3.265E-02	5.500E-02	5.205E-02	2.806E-02	NOT IDENT.
ZR-88	1.777E-02	5.490E-02	4.906E-02	2.801E-02	NOT IDENT.
Y-91	-5.611E+00	2.488E+01	2.032E+01	1.269E+01	NOT IDENT.
NB-94	-1.939E-02	6.272E-02	5.276E-02	3.200E-02	NOT IDENT.
NB-95	-1.190E-02	7.377E-02	6.206E-02	3.764E-02	NOT IDENT.
NB-95M	1.358E-01	1.887E-01	1.532E-01	9.628E-02	NOT IDENT.
ZR-95	-5.953E-03	1.314E-01	1.118E-01	6.704E-02	NOT IDENT.
NB-97	1.726E+02	1.412E+02	0.000E+00	7.202E+01	SHORT HLIF
ZR-97	1.379E+03	2.163E+03	0.000E+00	1.103E+03	SHORT HLIF
MO-99	-1.830E+00	3.687E+00	3.032E+00	1.881E+00	NOT IDENT.
TC-99M	-3.004E+07	4.582E+07	0.000E+00	2.338E+07	SHORT HLIF
RH-101	-2.894E-03	4.874E-02	4.322E-02	2.487E-02	NOT IDENT.
RH-102	1.541E-02	6.713E-02	5.827E-02	3.425E-02	NOT IDENT.
RU-103	-2.505E-02	7.413E-02	6.161E-02	3.782E-02	FAIL ABUN
RH-106	-5.382E-02	6.260E-01	5.449E-01	3.194E-01	FAIL ABUN
RU-106	-5.382E-02	6.260E-01	5.449E-01	3.194E-01	FAIL ABUN
AG-108M	-8.553E-02	6.852E-02	5.461E-02	3.496E-02	NOT IDENT.
AG-110M	8.299E-02	8.469E-02	6.942E-02	4.321E-02	NOT IDENT.
IN-111	4.994E-02	3.134E-01	2.435E-01	1.599E-01	NOT IDENT.
IN-113M	4.546E-02	7.889E-02	7.156E-02	4.025E-02	NOT IDENT.
SN-113	4.546E-02	7.889E-02	7.156E-02	4.025E-02	NOT IDENT.
IN-114M	-2.205E-01	2.584E-01	1.923E-01	1.319E-01	NOT IDENT.
CD-115	-8.663E-01	2.046E+00	1.673E+00	1.044E+00	NOT IDENT.
SN-117M	7.476E-03	4.781E-02	4.375E-02	2.440E-02	NOT IDENT.
SB-122	-1.427E-01	5.613E-01	4.898E-01	2.864E-01	NOT IDENT.
I-123	3.095E+02	4.984E+02	0.000E+00	2.543E+02	SHORT HLIF
TE-123M	2.161E-02	3.481E-02	3.259E-02	1.776E-02	NOT IDENT.
I-124	-4.403E-01	4.206E-01	2.875E-01	2.146E-01	NOT IDENT.
SB-124	2.077E-02	8.969E-02	7.927E-02	4.576E-02	NOT IDENT.
SB-125	-4.843E-02	1.857E-01	1.587E-01	9.477E-02	NOT IDENT.
TE-125M	-7.287E+00	1.013E+01	9.197E+00	5.169E+00	NOT IDENT.
I-126	-3.556E-02	2.818E-01	2.093E-01	1.438E-01	NOT IDENT.
SB-126	-1.172E-02	1.858E-01	1.589E-01	9.481E-02	FAIL ABUN
SB-127	4.151E-01	7.141E-01	6.425E-01	3.643E-01	NOT IDENT.
XE-127	-4.111E-02	6.061E-02	5.155E-02	3.092E-02	NOT IDENT.
I-131	-7.063E-02	1.138E-01	9.707E-02	5.804E-02	NOT IDENT.
TE-132	7.997E-02	2.206E-01	1.957E-01	1.126E-01	NOT IDENT.
BA-133	1.849E-02	8.861E-02	7.014E-02	4.521E-02	NOT IDENT.
I-133	4.574E+00	2.815E+01	0.000E+00	1.436E+01	SHORT HLIF
CS-134	9.152E-02	9.827E-02	8.886E-02	5.014E-02	NOT IDENT.
CS-135	-4.274E-01	2.655E-01	2.020E-01	1.354E-01	NOT IDENT.
I-135	-1.126E+06	4.685E+07	0.000E+00	2.391E+07	SHORT HLIF
CS-136	8.966E-02	1.852E-01	1.637E-01	9.447E-02	NOT IDENT.
CE-139	2.647E-02	4.002E-02	3.730E-02	2.042E-02	NOT IDENT.
BA-140	1.568E-02	3.335E-01	2.982E-01	1.701E-01	NOT IDENT.
LA-140	-7.876E-03	7.813E-02	6.428E-02	3.986E-02	NOT IDENT.
CE-141	4.834E-03	7.185E-02	6.619E-02	3.666E-02	NOT IDENT.
CE-143	3.456E+00	5.388E+00	4.464E+00	2.749E+00	FAIL ABUN
CE-144	1.766E-01	2.784E-01	2.408E-01	1.420E-01	NOT IDENT.
PM-144	5.962E-02	6.081E-02	5.639E-02	3.103E-02	NOT IDENT.
PR-144	4.024E+00	4.104E+00	3.806E+00	2.094E+00	NOT IDENT.
PM-146	3.483E-03	9.204E-02	7.950E-02	4.696E-02	NOT IDENT.
ND-147	4.929E-01	6.553E-01	6.098E-01	3.344E-01	NOT IDENT.
PM-149	2.004E+01	1.482E+01	1.412E+01	7.561E+00	NOT IDENT.
EU-152	-9.306E-02	1.882E-01	1.502E-01	9.600E-02	FAIL ABUN
GD-153	-5.600E-02	1.186E-01	9.066E-02	6.052E-02	NOT IDENT.
EU-154	1.804E-02	1.701E-01	1.440E-01	8.681E-02	FAIL ABUN
EU-155	-9.864E-02	1.319E-01	1.202E-01	6.729E-02	FAIL ABUN
TB-160	-7.479E-02	3.167E-01	2.731E-01	1.616E-01	FAIL ABUN
HO-166M	-1.491E-02	1.222E-01	1.042E-01	6.233E-02	FAIL ABUN
TM-171	1.228E+01	4.102E+01	3.755E+01	2.093E+01	FAIL ABUN

LU-176	1.864E-02	3.974E-02	3.682E-02	2.028E-02	FAIL ABUN
LU-177	3.360E-01	7.554E-01	6.794E-01	3.854E-01	NOT IDENT.
LU-177M	-5.401E-02	3.380E-01	2.919E-01	1.725E-01	FAIL ABUN
HF-181	-1.529E-02	7.681E-02	6.479E-02	3.919E-02	FAIL ABUN
W-181	-5.180E-01	5.321E-01	4.530E-01	2.715E-01	NOT IDENT.
TA-182	1.030E-01	2.585E-01	2.274E-01	1.319E-01	NOT IDENT.
RE-183	-5.242E-02	1.318E-01	1.168E-01	6.725E-02	FAIL ABUN
RE-184	4.596E-01	3.746E-01	3.442E-01	1.911E-01	FAIL ABUN
OS-185	3.382E-02	7.875E-02	7.072E-02	4.018E-02	FAIL ABUN
RE-188	-5.458E-02	2.041E-01	1.831E-01	1.041E-01	NOT IDENT.
W-188	-3.511E+00	1.317E+01	1.038E+01	6.720E+00	NOT IDENT.
IR-192	1.745E-02	5.309E-02	4.866E-02	2.709E-02	FAIL ABUN
AU-195	2.264E-01	2.961E-01	2.657E-01	1.511E-01	FAIL ABUN
TL-200	6.258E+00	6.941E+00	6.435E+00	3.541E+00	NOT IDENT.
TL-201	1.786E+00	1.696E+00	1.610E+00	8.656E-01	FAIL ABUN
TL-202	1.216E-02	9.887E-02	8.614E-02	5.045E-02	NOT IDENT.
HG-203	6.799E-03	5.616E-02	5.160E-02	2.865E-02	NOT IDENT.
BI-207	3.057E-02	1.340E-01	1.163E-01	6.839E-02	NOT IDENT.
TL-207	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
PO-209	7.944E+00	1.938E+01	1.734E+01	9.887E+00	NOT IDENT.
BI-210	-7.392E+00	7.984E+00	7.045E+00	4.074E+00	NOT IDENT.
PB-210	-7.392E+00	7.984E+00	7.045E+00	4.074E+00	NOT IDENT.
PO-210	-7.392E+00	7.979E+00	7.045E+00	4.071E+00	NOT IDENT.
PB-211	-2.315E-02	1.828E+00	1.597E+00	9.327E-01	NOT IDENT.
BI-212	4.611E-01	5.947E-01	5.372E-01	3.034E-01	NOT IDENT.
BI-214	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
PO-215	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
RN-219	3.941E-01	8.087E-01	7.257E-01	4.126E-01	NOT IDENT.
RN-220	-1.059E+00	4.792E+01	4.254E+01	2.445E+01	NOT IDENT.
RA-223	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
RA-226	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
AC-227	5.621E-01	6.569E-01	5.876E-01	3.351E-01	NOT IDENT.
TH-227	5.621E-01	6.590E-01	5.876E-01	3.362E-01	FAIL ABUN
AC-228	9.005E-01	6.307E-01	3.839E-01	3.218E-01	FAIL ABUN
RA-228	9.005E-01	6.307E-01	3.839E-01	3.218E-01	FAIL ABUN
TH-229	1.865E-01	7.410E-01	6.663E-01	3.781E-01	FAIL ABUN
TH-230	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
PA-231	-8.965E-01	2.601E+00	2.329E+00	1.327E+00	NOT IDENT.
TH-231	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
U-231	8.139E-02	4.279E-01	3.444E-01	2.183E-01	FAIL ABUN
TH-232	9.005E-01	6.307E-01	3.839E-01	3.218E-01	FAIL ABUN
PA-233	-2.314E-02	1.017E-01	9.052E-02	5.190E-02	NOT IDENT.
PA-234	-2.227E-01	8.776E-01	7.495E-01	4.477E-01	FAIL ABUN
PA-234M	2.964E+00	1.589E+01	1.386E+01	8.105E+00	NOT IDENT.
TH-234	-5.000E-01	2.056E+00	1.717E+00	1.049E+00	FAIL ABUN
U-234	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
U-235	1.149E-01	2.773E-01	2.594E-01	1.415E-01	FAIL ABUN
NP-236	-1.329E-02	1.039E-01	9.358E-02	5.303E-02	NOT IDENT.
NP-237	1.446E+00	5.716E-01	4.307E-01	2.916E-01	NOT IDENT.
U-238	-5.000E-01	2.056E+00	1.717E+00	1.049E+00	FAIL ABUN
NP-239	1.726E-01	2.544E-01	2.360E-01	1.298E-01	NOT IDENT.
AM-243	6.889E-02	1.003E-01	8.483E-02	5.118E-02	FAIL ABUN
CM-243	-3.592E-02	1.139E-01	1.062E-01	5.810E-02	NOT IDENT.
CM-247	4.620E-03	7.314E-02	6.421E-02	3.732E-02	NOT IDENT.
CF-249	1.321E-02	7.539E-02	6.691E-02	3.846E-02	NOT IDENT.
CF-251	5.093E-02	1.655E-01	1.510E-01	8.445E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	212.4345
46.50	212.4345
46.50	212.4345
48.70	216.1013
49.72	245.4948
51.35	252.7462
52.39	263.3304
52.97	295.8694
53.15	321.7654
53.44	318.1454
54.07	300.6483
56.28	313.7410
56.28	313.7456
57.37	343.3562
57.53	343.6252
57.53	343.6290
57.60	343.7429
57.98	349.9807
57.98	349.9807
59.32	262.0734
59.32	262.0734
59.40	262.1736
59.54	262.3487
59.72	262.5738
60.01	262.9352
61.10	201.7668
61.14	201.8044
61.30	201.9554
63.00	166.2745
63.29	183.7181
63.29	183.7181
63.58	183.9593
64.28	187.0637
65.12	229.0105
65.20	229.0910
65.20	229.0910
66.05	185.2695
66.72	193.4628
66.83	189.1831
66.91	189.2491
67.20	207.0115
67.20	207.0115
67.75	222.8738
67.85	235.0535
68.90	219.5601
68.90	219.5601
69.30	219.9321
69.67	225.8129
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70.83	265.8390
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72.87	321.9160
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74.81	299.9434
74.81	299.9434
74.97	300.1357
75.28	300.5041
75.70	279.8279
77.11	304.5693
77.11	304.5693
77.11	304.5693

77.11	304.5693
77.11	304.5693
77.11	304.5693
78.38	306.0645
79.62	247.2404
79.80	247.4075
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83.78	282.2730
83.78	282.2730
84.21	274.9033
84.40	286.0343
84.90	306.9060
85.43	307.4902
86.29	327.3169
86.50	333.8594
86.54	333.9069
86.59	333.9651
86.72	334.1204
86.79	334.2002
86.94	287.0614
87.30	287.4261
87.30	287.4261
87.30	287.4261
87.30	287.4261
87.30	287.4261
87.30	287.4261
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87.88	288.0112
88.03	288.1611
88.36	288.4925
88.47	288.6036
89.95	191.2634
91.11	182.4204
92.29	200.0189
92.38	178.3832
92.38	178.3832
93.35	178.9636
94.00	179.3497
94.67	179.7438
94.67	179.7472
94.90	179.8827
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95.87	162.5712
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98.44	152.4495
98.88	152.6633
99.55	159.1566
99.55	159.1566
99.86	159.3121
100.00	175.4438
100.10	175.5012
103.18	150.9823
103.76	159.1676
105.00	181.5176
105.31	181.6876
108.00	160.3647
109.28	171.9834
111.00	171.1436
111.00	171.1436

111.76	155.3056
112.95	169.5359
115.19	189.5694
116.30	185.8362
117.00	161.0821
117.00	161.0821
117.66	163.9792
121.11	177.7881
121.62	178.0318
121.78	178.1082
122.06	178.2414
122.32	178.3643
122.32	178.3643
122.32	178.3643
122.32	178.3643
123.07	178.2813
127.23	198.4801
129.76	171.1042
131.20	196.9026
133.02	146.3198
133.54	149.2224
135.34	170.3262
136.00	163.7769
136.25	163.8776
136.48	163.9691
140.51	197.3014
140.51	0.0000
142.18	189.4944
142.65	183.9714
143.76	173.3284
144.24	181.8738
144.24	181.8738
144.24	181.8738
144.24	181.8738
145.22	187.8667
145.44	185.1718
147.16	189.6414
152.43	173.9469
152.70	180.6732
153.22	172.3579
154.21	156.5993
154.21	156.5993
154.21	156.5993
154.21	156.5993
155.03	172.0958
156.02	174.3735
158.56	157.1316
159.00	0.0000
159.00	147.6883
160.31	167.3359
161.27	159.0045
162.32	169.0168
162.64	181.6947
163.35	203.2602
163.89	191.8608
165.85	172.2124
167.43	154.2278
171.28	155.4413
171.86	164.4858
172.10	164.5656
176.55	148.1300
176.60	148.1451
181.06	157.9582
184.41	162.5035
185.71	162.9015
186.00	162.9915
190.27	189.8012
192.34	166.9646
193.63	177.6231
197.04	185.9491
198.01	186.2714
198.60	193.7169
200.40	177.7093
201.83	193.7841
202.84	200.3887
205.31	176.0938
208.36	194.9290
208.81	194.0251

209.75	178.4915
209.75	178.4915
210.97	204.2615
215.65	205.8655
216.55	233.9462
218.09	206.6940
222.10	202.6588
223.80	194.5642
226.40	201.8860
227.00	180.3501
227.08	180.3737
227.20	180.4075
228.16	176.3273
228.18	176.3322
228.18	176.3322
231.56	179.4568
235.69	161.8848
236.00	152.0465
236.00	152.0465
238.60	275.4340
238.63	275.4466
238.63	275.4466
238.63	275.4466
239.00	232.4347
240.98	233.1311
241.98	206.7979
241.98	206.7979
241.98	206.7979
244.69	179.1698
245.39	179.3559
247.94	143.0147
248.90	151.6415
249.79	195.7022
252.40	138.8667
252.85	140.0865
252.85	140.0865
254.15	0.0000
256.20	155.5193
256.20	155.5193
260.50	153.0428
260.90	146.2734
262.80	160.4138
264.65	133.2565
268.24	193.9492
268.79	168.6788
269.46	139.9235
269.46	139.9235
269.46	139.9235
269.46	139.9235
271.23	164.6035
273.65	182.5885
276.40	157.5824
277.35	164.7955
277.60	163.9731
277.60	163.9731
278.00	143.0055
278.60	149.2662
279.20	149.3829
279.53	149.4478
280.46	158.4338
281.68	163.0973
283.67	175.8983
284.30	167.1976
285.00	162.0378
285.90	144.4978
286.10	144.5352
286.10	144.5352
287.40	175.8634
288.45	0.0000
290.67	178.3905
290.80	178.4180
291.72	162.9092
293.26	161.7975
293.70	177.6476
295.21	198.2613
295.21	198.2613
295.21	198.2613
295.96	208.3242

296.50	212.7789
297.23	211.5350
298.57	152.7917
299.80	153.0272
299.80	153.0272
300.09	132.8632
300.09	132.8632
300.09	132.8632
300.10	132.8654
300.12	132.8677
301.29	168.3922
302.84	188.3826
303.76	178.6214
303.91	174.1201
304.40	165.1513
304.40	165.1513
304.84	141.6345
306.84	127.4197
308.46	144.0868
311.98	131.8799
316.51	130.7524
318.01	147.5903
319.02	153.3073
319.41	150.6064
320.08	140.5518
323.87	144.8932
323.87	144.8932
323.87	144.8932
323.87	144.8932
325.23	160.9362
328.77	146.6485
333.44	136.7266
334.20	145.8671
334.20	145.8671
334.30	138.3639
338.28	143.5182
338.28	143.5182
338.28	143.5182
338.28	143.5182
338.32	143.5251
338.32	143.5251
338.32	143.5251
340.50	142.3609
340.57	142.3701
344.27	157.1494
345.85	165.0417
350.59	142.4153
351.07	139.8090
351.92	139.9382
351.92	139.9382
351.92	139.9382
355.39	0.0000
356.01	138.6299
364.48	156.3938
366.43	154.7664
367.43	131.5414
367.94	129.6616
369.80	145.5419
374.96	127.6573
383.85	128.8118
387.95	137.2988
388.63	152.3253
391.69	123.8278
391.69	123.8278
392.90	133.9734
398.62	125.6733
400.65	144.0517
401.10	133.0292
401.81	138.1623
402.60	148.3593
404.84	147.6686
410.95	141.4052
411.60	160.8328
413.65	147.8851
414.70	137.8201
415.30	135.8554
415.76	135.9142
417.63	0.0000

418.52	157.7786
423.70	135.8873
427.08	145.5999
427.89	143.6407
432.53	160.8513
433.93	164.1695
439.47	154.5423
439.56	154.5558
439.89	155.6456
443.98	158.3062
444.90	137.4485
445.03	142.7112
445.03	142.7112
445.03	142.7112
445.03	142.7112
453.90	140.6448
463.38	140.7253
468.07	172.3228
473.00	149.3885
475.06	153.9515
475.35	144.2970
476.78	141.2324
477.59	132.6976
477.96	129.4995
482.03	123.4368
484.57	100.9070
487.03	138.0749
490.36	113.3739
492.35	99.3605
497.08	124.9449
507.63	0.0000
510.53	0.0000
510.84	111.9005
511.00	111.9143
511.85	111.7666
511.85	111.7666
513.99	83.5197
513.99	83.5197
520.41	99.3346
520.65	99.3536
527.90	107.7598
528.96	0.0000
529.64	106.7764
529.87	0.0000
531.02	89.1097
537.32	105.8084
543.00	96.2644
546.56	0.0000
549.76	93.0899
552.65	97.8569
555.20	104.4508
563.23	105.0548
563.90	103.2609
568.70	84.1839
569.32	86.0727
569.50	86.0840
569.67	86.0931
573.80	110.4817
574.00	110.4992
574.64	114.2645
578.91	77.6449
579.30	77.6652
583.14	106.5299
585.48	84.2366
591.81	98.7041
592.07	98.7220
593.00	91.2572
595.88	89.5496
600.56	89.8325
602.52	0.0000
602.71	118.3716
602.71	118.3716
603.60	104.2288
604.41	96.3848
604.70	96.4046
609.31	67.5315
609.31	67.5315
609.31	67.5315

609.31	67.5315
610.33	67.5765
612.46	88.9583
614.37	87.4795
618.01	83.2256
621.84	97.8189
621.84	97.8189
631.29	82.0138
633.02	90.7986
633.10	94.6671
634.78	106.3745
635.90	110.3206
636.97	101.6803
645.85	84.7241
646.12	81.8159
656.30	89.8528
657.75	96.4752
657.90	0.0000
661.65	100.3116
661.65	100.3116
664.57	93.5968
666.33	100.2717
666.33	100.2717
675.00	88.2417
677.61	89.3738
685.20	84.7946
692.80	75.1556
695.00	90.3032
696.49	63.2676
696.49	63.2676
697.00	70.3196
697.49	72.3498
698.33	77.4117
698.50	91.4954
699.00	90.5164
702.63	85.6682
706.10	81.8029
706.58	0.0000
706.67	83.8491
709.31	90.0495
711.68	90.1712
713.82	80.1379
717.42	88.4358
720.50	85.5360
721.93	84.5866
722.20	90.7165
722.78	93.8036
722.78	93.8036
722.89	101.9678
722.95	101.9702
723.30	105.0520
724.18	114.2887
727.18	84.8399
733.00	96.3982
735.90	82.1738
739.58	97.7809
742.81	91.7704
744.21	92.8740
747.13	103.3594
751.79	86.0071
752.31	100.5428
753.82	97.5135
755.35	96.5579
756.15	81.0183
756.87	69.6205
763.93	89.7058
765.79	82.4871
766.41	85.6476
766.84	89.8465
768.36	89.9200
768.36	89.9200
768.36	89.9200
768.36	89.9200
776.49	91.3627
778.00	81.9762
778.57	77.7958
778.89	78.8617
783.80	86.4463

785.46	86.5204
792.07	104.8201
795.84	78.5058
796.30	80.6461
801.93	79.8175
805.60	92.7625
810.29	66.2670
810.76	70.5584
815.85	92.1792
817.79	93.3423
818.51	81.5701
819.60	80.5408
826.30	98.0538
828.27	97.0730
831.60	97.2356
831.96	96.1704
834.83	99.5559
836.80	0.0000
846.75	81.6394
848.13	87.1406
856.28	0.0000
856.80	114.8566
860.37	94.2368
867.32	96.7527
867.82	94.5748
871.10	109.2262
873.19	94.6346
874.81	99.3054
875.33	0.0000
876.40	110.4248
879.36	105.0497
880.27	103.2523
880.51	103.2637
881.50	97.7770
883.24	106.1677
884.67	119.1712
889.25	103.6898
896.60	108.6925
898.02	111.5527
899.00	117.1842
903.28	120.5238
911.07	122.5167
911.07	122.5167
911.07	122.5167
919.63	121.4316
920.93	131.5234
925.00	139.2980
925.24	135.5479
926.50	129.9730
934.06	131.3617
934.06	131.3617
934.06	131.3617
934.06	131.3617
935.52	122.9356
937.48	130.6160
944.10	142.3950
946.00	141.5639
949.00	126.5302
962.29	129.1855
964.01	168.5485
966.15	156.2448
968.20	118.0076
969.11	111.3342
969.11	111.3342
969.11	111.3342
977.42	116.5516
980.50	95.4873
983.50	94.6444
989.30	98.7502
996.32	92.2477
1001.03	94.3773
1001.68	98.2958
1004.76	89.6528
1021.30	0.0000
1024.50	0.0000
1034.80	107.5497
1037.82	98.7915
1038.57	96.8436

1038.76	0.0000
1045.16	100.0753
1046.59	95.1758
1048.07	91.2663
1050.47	92.3491
1050.47	92.3491
1063.62	94.8299
1076.63	109.3681
1077.35	97.3552
1085.78	94.6579
1099.22	96.1635
1112.02	89.5182
1112.84	95.6523
1115.52	123.2550
1120.29	82.6578
1120.29	82.6578
1120.29	82.6578
1120.29	82.6578
1120.51	82.6644
1121.28	73.5000
1124.00	0.0000
1129.67	83.9753
1131.51	0.0000
1147.95	0.0000
1167.94	69.4470
1173.22	67.6475
1175.09	49.9883
1177.93	50.0410
1189.05	42.9152
1204.90	36.8429
1205.75	45.2781
1213.00	33.7813
1221.42	29.6463
1230.97	33.9948
1235.34	44.6848
1236.41	0.0000
1238.11	31.9495
1238.11	31.9495
1238.11	31.9495
1238.11	31.9495
1238.25	31.9507
1246.25	37.3783
1260.41	0.0000
1271.85	40.9378
1274.45	23.7214
1274.54	23.7223
1291.56	14.8725
1298.22	0.0000
1312.09	21.5248
1325.50	21.3837
1325.50	21.3837
1332.49	18.8421
1333.61	18.8484
1360.21	9.5047
1362.66	0.0000
1365.15	17.1355
1368.21	15.2461
1368.53	0.0000
1376.25	19.1057
1377.67	19.1148
1377.67	19.1148
1377.67	19.1148
1377.67	19.1148
1384.27	29.6885
1394.10	11.5275
1395.20	15.3756
1407.95	11.5769
1434.06	13.6143
1436.60	11.6782
1457.56	0.0000
1460.81	9.8026
1489.15	17.7922
1509.49	9.9428
1596.49	12.2260
1620.62	13.3319
1678.03	0.0000
1691.02	6.2685
1691.02	6.2685

1706.46	0.0000
1750.46	0.0000
1764.49	10.6438
1764.49	10.6438
1764.49	10.6438
1764.49	10.6438
1770.23	27.7139
1771.40	27.7220
1791.20	0.0000
1808.65	8.4735
1836.01	8.5295

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201870089

Total Uranium Activity	-1.4343E+00	ug/g
Total Uranium Counting Unc.	6.1187E+00	ug/g
Total Uranium Tpu	3.1218E-06	ug/g
Total Uranium Mda	5.1083E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID   : G1201870089     *
*   ANALYST       : MXR1                      DETECTOR    : GAM23           *
*   SAMPLE DATE   : 29-JUN-2009 00:00:00.00   COUNT TIME :    0 01:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 13:26:36.56    SAMPLE ALQT:  155.440 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 2.766E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.850E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.868E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.389E+00
```

Radiochemistry Batch Checklist, Rev 9

Batch# 883020 Product: H3 Date: 7/16/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature]

Secondary Review Performed By: [signature]

LANL 7-22-09

LANL 7/22/09

Tritium Que Sheet

13-JUL-09

Batch #: 883020 **Analyst:** KXK2 **First Client Due Date** 22-JUL-09 **Internal Due Date:** 11-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** ~~0~~ KKG 7/13/09 **Expiration Date:** ——— **Vol:** ——

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.2

Prep Date: 7/10/09 **Initials:** KXK2 **Pipet ID:** 2970968 **Witness:** MSP 7/13/09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Total MOISTURE KKG 7/13/09 Dist Vol (mL)
232347001-1	CAMO-09-10462	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-2	1		382.65	357.78	24.87
232347002-1	CAMO-09-10460	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-3	2		451.25	413.80	37.45
232347003-1	CAMO-09-10461	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-4	3		524.03	463.77	60.26
232347004-1	CAMO-09-10467	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-5	4		293.05	279.86	13.19
232582001-1	CAMO-09-10464	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	6-6	5		480.42	448.23	32.19
232582002-1	CAMO-09-10465	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	6-7	6	KKG 7/14/09	492.56	408.94	20.62
232585001-1	CAMO-09-6605	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-1	7		445.56	416.15	29.41
232585002-1	CAMO-09-6603	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-2	8		401.80	372.87	28.93
232585003-1	CAMO-09-6604	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-3	9		475.14	425.73	49.41
232591001-1	CAMO-09-9946	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-4	10		665.38	541.44	124.54
232664001-1	CAMO-09-9942	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-5	11		416.90	367.71	49.19
232664002-1	CAMO-09-9941	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-6	12		502.20	447.96	54.24
232664003-1	CAMO-09-9943	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-7	13		521.28	449.34	71.94
232664004-1	CAMO-09-10830	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-8	14		480.98	432.88	48.10
232664005-1	CAMO-09-9989	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-9	15		573.89	478.62	95.27
1201875586-1	MB for batch 883020	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	41-10	16		40.00	0	40.00
1201875587-1	~~CAMO-09-10462(232347001DUP)~~ CAMO-09-10462(232347003DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	22-JUN-09	10	41-11	8		524.03	463.77	60.26
1201875588-1	LCS for batch 883020	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	27-1	17		40.00	0	40.00

Bkg Rack #: 6-1

daitier

Comments:

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069128, Silver 7060656*

Bkg prepared with dead water? Yes/No

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Econscint Ultra)*

Data Reviewed By: Nana Manetta

GEL Laboratories LLC, Radiochemistry Division

DATE	7/10/2008	INITIALS	KXK2		BATCH NUMBER	883020

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232347001	382.65	0.065	24.87	357.78	10	602
232347002	451.25	0.083	37.45	413.80	10	18
232347003	524.03	0.115	60.26	463.77	10	11
232347004	293.05	0.045	13.19	279.86	10	722
232582001	480.42	0.067	32.19	448.23	10	521
232582002	429.56	0.048	20.62	408.94	10	908
232585001	445.56	0.066	29.41	416.15	10	200
232585002	401.80	0.072	28.93	372.87	10	55
232585003	475.14	0.104	49.41	425.73	10	40
232591001	665.98	0.187	124.54	541.44	10	50
232664001	416.90	0.118	49.19	367.71	10	85
232664002	502.20	0.108	54.24	447.96	10	812
232664003	521.28	0.138	71.94	449.34	10	62
232664004	480.98	0.100	48.10	432.88	10	49
232664005	573.89	0.166	95.27	478.62	10	614
MB			0.00	0.00	10	74
LCS			0.00	0.00	10	10

Tritium Solid

Filename :	H3VAC.XLS	Spike S/N :	N/A	LCS S/N :	0134-K
File type :	Excel	Spike Exp Date :	N/A	LCS Exp Date :	3/27/2010
Version # :	1.2.5	Spike Activity (dpm/ml):	N/A	LCS Activity (dpm/ml):	2545.47
		Spike Volume Added:	N/A	LCS Volume Added:	0.20
Batch :	883020				
Analyst :	KXK2				
Prep Date :	7/10/2009				
				Procedure Code :	LSC_VH3S
H-3 Abundance :	1	Pipet, 0.1 ml Stdev : +/-	0.000701 ml	Parmname :	Tritium
Method Uncertainty :	0.0691	Pipet, 0.5 ml Stdev : +/-	0.002564 ml	Required MDC :	250 pCi/L
Geometry:	10mL DW/13mL Ecoscint Ultra	Pipet, 1.0 ml Stdev : +/-	0.005480 ml	Halflife of Tritium :	12.28 years
		Pipet, 5.0 ml Stdev : +/-	0.025729 ml		

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232347001.1	382.65	0.0249	0.0100	2.5729E-05	357.78	6.50%	1	6/22/2009 12:00
2	232347002.1	451.25	0.0375	0.0100	2.5729E-05	413.80	8.30%	2	6/22/2009 12:00
3	232347003.1	524.03	0.0603	0.0100	2.5729E-05	463.77	11.50%	3	6/22/2009 12:00
4	232347004.1	293.05	0.0132	0.0100	2.5729E-05	279.86	4.50%	4	6/22/2009 12:00
5	232582001.1	480.42	0.0322	0.0100	2.5729E-05	448.23	6.70%	5	6/25/2009 12:00
6	232582002.1	429.56	0.0206	0.0100	2.5729E-05	408.94	4.80%	6	6/25/2009 12:00
7	232585001.1	445.58	0.0294	0.0100	2.5729E-05	416.15	6.60%	7	6/25/2009 12:00
8	232585002.1	401.80	0.0289	0.0100	2.5729E-05	372.87	7.20%	8	6/25/2009 12:00
9	232585003.1	475.14	0.0494	0.0100	2.5729E-05	425.73	10.40%	9	6/25/2009 12:00
10	232591001.1	665.38	0.1245	0.0100	2.5729E-05	541.44	18.63%	10	6/25/2009 12:00
11	232664001.1	416.90	0.0492	0.0100	2.5729E-05	367.71	11.80%	11	6/26/2009 12:00
12	232664002.1	502.20	0.0542	0.0100	2.5729E-05	447.96	10.80%	12	6/26/2009 12:00
13	232664003.1	521.28	0.0719	0.0100	2.5729E-05	449.34	13.80%	13	6/26/2009 12:00
14	232664004.1	480.98	0.0481	0.0100	2.5729E-05	432.88	10.00%	14	6/26/2009 12:00
15	232664005.1	573.89	0.0953	0.0100	2.5729E-05	478.62	16.60%	15	6/26/2009 12:00
16	1201875586.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	16	7/10/2009 0:00
17	1201875587.1	524.03	0.0603	0.0100	2.5729E-05	463.77	11.50%	3	6/22/2009 12:00
18	1201875588.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	17	7/10/2009 0:00

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	6-2	95	129.2	7.93	6.06	95	7/14/2009 18:04	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2644	0.00792	6-1	7/14/2009 16:25
2	6-3	95	132.5	11.58	6.06	95	7/14/2009 19:43	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2585	0.00792	6-1	7/14/2009 16:25
3	6-4	95	132	12.78	6.06	95	7/14/2009 21:21	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2594	0.00792	6-1	7/14/2009 16:25
4	6-5	95	129.8	6.93	6.06	95	7/14/2009 22:59	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2633	0.00792	6-1	7/14/2009 16:25
5	6-6	95	133.6	9.14	6.06	95	7/15/2009 0:38	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2565	0.00792	6-1	7/14/2009 16:25
6	6-7	95	136.8	8.04	6.06	95	7/15/2009 2:16	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2508	0.00792	6-1	7/14/2009 16:25
7	41-1	95	138.1	6.61	6.06	95	7/15/2009 5:08	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2484	0.00792	6-1	7/14/2009 16:25
8	41-2	60	133.7	5.72	6.06	95	7/15/2009 7:41	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2564	0.00792	6-1	7/14/2009 16:25
9	41-3	60	128.9	7.18	6.06	95	7/15/2009 8:43	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2649	0.00792	6-1	7/14/2009 16:25
10	41-4	60	128.5	6.6	6.06	95	7/15/2009 9:46	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2656	0.00792	6-1	7/14/2009 16:25
11	41-5	60	129.1	6.02	6.06	95	7/15/2009 10:48	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2645	0.00792	6-1	7/14/2009 16:25
12	41-6	60	130.5	7.48	6.06	95	7/15/2009 11:51	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2621	0.00792	6-1	7/14/2009 16:25
13	41-7	60	128.4	6.85	6.06	95	7/15/2009 12:53	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2658	0.00792	6-1	7/14/2009 16:25
14	41-8	60	128.7	7.33	6.06	95	7/15/2009 13:56	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2652	0.00792	6-1	7/14/2009 16:25
15	41-9	60	129.3	6.7	6.06	95	7/15/2009 14:58	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2642	0.00792	6-1	7/14/2009 16:25
16	41-10	60	128.8	5.32	6.06	95	7/15/2009 16:01	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2651	0.00792	6-1	7/14/2009 16:25
17	41-11	60	132.3	12.07	6.06	95	7/15/2009 17:03	0.996	LSCSILVER	8/6/2008	8/31/2009	0.2589	0.00792	6-1	7/14/2009 16:25
18	29-1	15	130.3	42.87	6.06	95	7/15/2009 18:05	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2624	0.00792	6-1	7/14/2009 16:25

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	142.2958	100.4620	250	206.3234	**319.7335**	0.205	1.870	0.384	65.6136	69.2895		SAMPLE				
2	145.5156	102.7353	250	210.9921	**965.1886**	0.079	5.520	0.431	75.3445	100.9729		SAMPLE				
3	145.0171	102.3833	250	210.2692	**1170.9623**	0.067	6.720	0.445	77.5983	112.5729		SAMPLE				
4	142.8712	100.8683	250	207.1578	**149.3645**	0.425	0.870	0.370	63.4807	64.3274		SAMPLE				
5	146.5684	103.4785	250	212.5185	**542.4323**	0.130	3.080	0.400	70.4457	79.9366		SAMPLE				
6	149.9428	105.8609	250	217.4113	**386.7346**	0.195	1.980	0.385	69.4109	73.7237		SAMPLE				
7	151.3714	106.8695	250	219.4827	**100.0371**	0.664	0.550	0.365	66.4240	66.7884		SAMPLE				
8	166.7009	117.6823	250	244.1968	**-59.9234**	1.173	-0.340	0.399	70.3046	70.3049		SAMPLE				
9	161.3397	113.9072	250	236.3432	**191.0462**	0.383	1.120	0.426	73.0612	74.2629		SAMPLE				
10	160.9146	113.6071	250	235.7206	**91.8689**	0.772	0.540	0.417	70.9229	71.2110		SAMPLE				
11	161.5311	114.0423	250	236.6236	**-6.8312**	10.128	-0.040	0.405	69.1863	69.1866		SAMPLE				
12	163.0536	115.1173	250	238.8540	**244.7925**	0.306	1.420	0.434	74.8368	76.7543		SAMPLE				
13	160.7870	113.5170	250	235.5336	**134.2942**	0.534	0.790	0.422	71.7112	72.3186		SAMPLE				
14	161.1067	113.7427	250	236.0020	**216.3200**	0.340	1.270	0.431	73.4511	74.9803		SAMPLE				
15	161.7504	114.1972	250	236.9449	**109.4472**	0.655	0.640	0.419	71.6323	72.0368		SAMPLE				
16	160.8795	113.5823	250	235.6691	**-125.8670**	0.528	-0.740	0.390	66.4129	66.4132		MB				
17	165.1751	116.6150	250	241.9617	**1049.5386**	0.086	6.010	0.515	89.8899	115.8597	232347003.1	DUP	10.9%	0.2658		
18	273.7688	193.2972	250	420.9553	**6324.1227**	0.047	36.810	1.709	293.6696	529.3829		LCS			5733.0311	110.3%

ID:TRITIUM 14 JUL 2009 16:15

USER: 2 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	6-1	95.00	129.3	6.06	9.08	43.93	3.14	2.66	98.03
2	6-2	95.00	129.2	7.93	7.72	45.81	3.06	2.19	196.53
3	6-3	95.00	132.5	11.58	6.35	52.07	2.88	2.49	295.12
4	6-4	95.00	132.0	12.78	5.99	51.79	2.88	2.21	393.67
5	6-5	95.00	129.8	6.93	8.06	44.73	3.08	1.15	491.96
6	6-6	95.00	133.6	9.14	7.09	47.08	3.02	1.87	590.42
7	6-7	95.00	136.8	8.04	7.53	46.39	3.03	1.48	688.79

QP

INSTRUMENT CALIBRATION: Maxi 15 JUL 2009 03:46
Calibration successful

QP

Calibrating Auto DPM
Counting Standard for 14C
Calibration Complete: 14C
Counting Standard for 3H
Calibration Complete: 3H
Calibration Successful

QPQP

ID:TRITIUM 15 JUL 2009 04:50

USER: 2 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	41-1	95.00	138.1	6.61	8.35	46.37	3.03	1.43	97.83
2	41-2	38.80	133.6	6.34	13.51	44.48	4.86	1.82	138.62
3	41-3	0.05	128.1	0.00	0.00	0.00	0.00	0.00	139.45
4	41-4	0.05	128.4	20.00	200.00	80.00	100.00	3.13	140.35
5	41-5	0.05	129.2	40.00	141.42	60.00	115.47	4.18	141.23
6	41-6	0.05	130.8	0.00	0.00	20.00	200.00	17.61	142.13
7	41-7	0.05	128.6	20.00	200.00	80.00	100.00	2.99	143.03
8	41-8	0.05	129.7	0.00	0.00	20.00	200.00	10.08	143.95
9	41-9	0.05	129.4	0.00	0.00	20.00	200.00	9.09	144.83
10	41-10	0.05	128.7	40.00	141.42	100.00	89.44	1.77	145.72
11	41-11	0.05	132.5	40.00	141.42	80.00	100.00	2.87	146.62
12	41-12	0.05	130.0	60.00	115.47	160.00	70.71	0.90	147.52

7-16-09

ID:TRITIUM 15 JUL 2009 07:32

USER: 2 COMMENT:SILVER

PRESET TIME : 60.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
2	41-2	60.00	133.7	5.72	11.55	42.37	4.00	2.01	62.01
3	41-3	60.00	128.9	7.18	10.14	46.35	3.82	1.77	124.55
4	41-4	60.00	128.5	6.60	10.50	45.68	3.85	1.43	187.03
5	41-5	60.00	129.1	6.02	11.11	45.95	3.84	1.59	249.54
6	41-6	60.00	130.5	7.48	9.90	46.02	3.84	1.72	312.05
7	41-7	60.00	128.4	6.85	10.25	45.47	3.85	1.29	374.51
8	41-8	60.00	128.7	7.33	9.88	45.47	3.85	1.25	436.97
9	41-9	60.00	129.3	6.70	10.23	45.85	3.83	0.85	499.36
10	41-10	60.00	128.8	5.32	11.48	43.70	3.92	0.72	561.73
11	41-11	60.00	132.3	12.07	7.58	50.98	3.63	1.03	624.18

QPQP

ID:TRITIUM 15 JUL 2009 17:57

USER: 3 COMMENT:SILVER

PRESET TIME : 15.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	29-1	15.00	130.3	42.87	7.90	81.20	5.74	0.33	15.80
MISSING SAMPLE									
13	30-1	15.00	127.5	6.60	21.29	44.13	7.84	2.02	32.40
14	30-2	15.00	127.6	9.60	17.46	44.27	7.84	2.26	48.76
15	30-3	15.00	127.7	13.13	14.68	51.80	7.23	1.67	65.11
16	30-4	15.00	128.5	7.53	19.79	46.33	7.65	1.96	81.47
17	30-5	15.00	128.4	5.53	23.36	42.47	7.99	2.00	97.83
18	30-6	15.00	124.2	6.20	21.93	43.67	7.88	1.86	114.20
19	30-7	15.00	128.0	7.67	19.52	43.73	7.97	1.96	130.56
20	30-8	15.00	128.5	22.07	11.17	60.87	6.66	1.31	146.93
21	30-9	15.00	121.9	19.60	11.88	58.07	6.82	1.43	163.30

QPQ`

SCB
7.15.09

Sample Count Start Time:	14 Jul 2009 16:25:55		
Data Capture Date	14 Jul 2009 18:01:14		
User Filename	S02071406-1A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	6-1	95.00
H#, Total Counts:	129.3	3859	
Start, End, X-Axis:	0	990	Channel Number

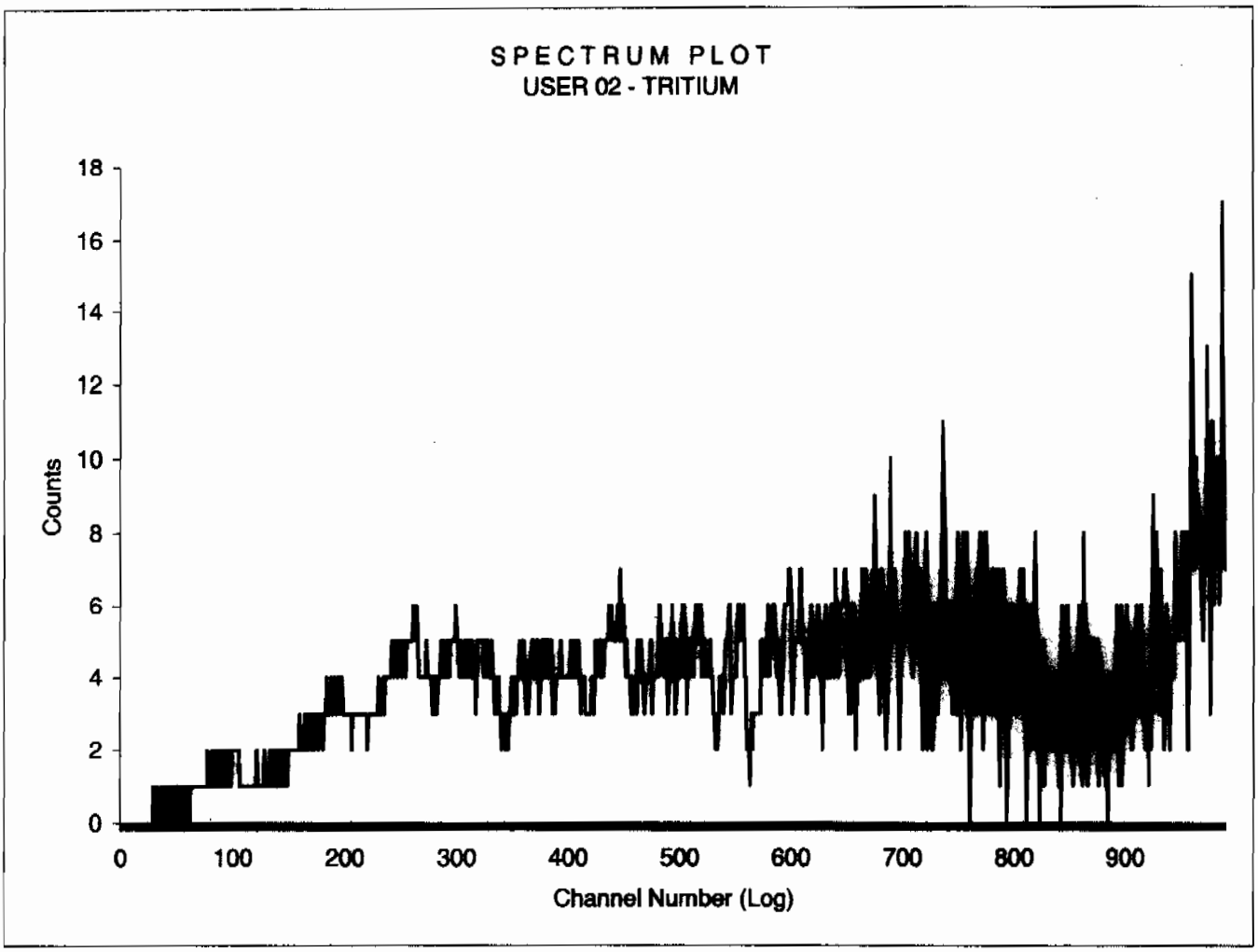

Sample Count Start Time:	14 Jul 2009 18:04:25		
Data Capture Date	14 Jul 2009 19:39:44		
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	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	6-2	95.00
H#, Total Counts:	129.2	4087	
Start, End, X-Axis:	0	990	Channel Number

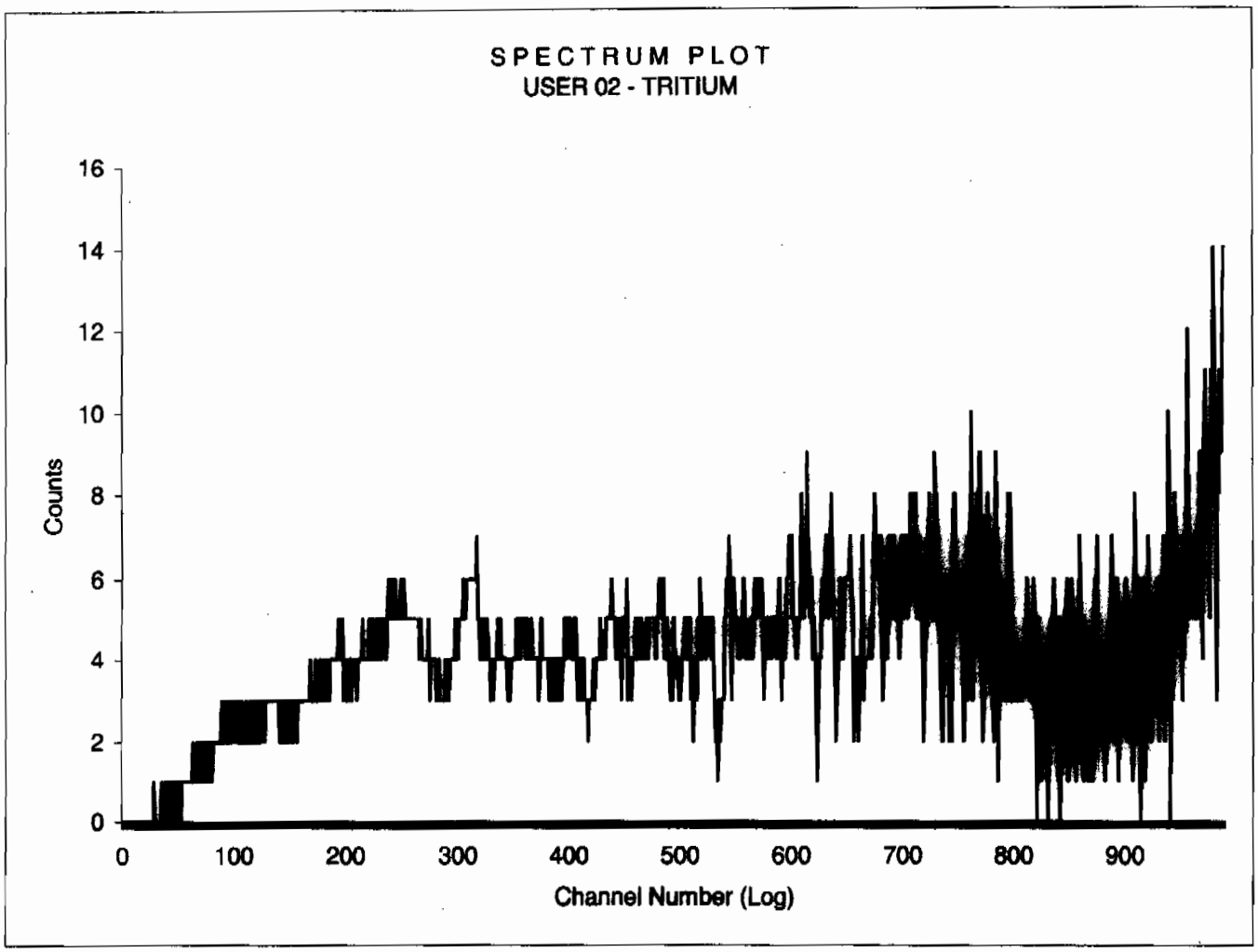

Sample Count Start Time:	14 Jul 2009 19:43:00		
Data Capture Date	14 Jul 2009 21:18:20		
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	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	6-3	95.00
H#, Total Counts:	132.5	4672	
Start, End, X-Axis:	0	990	Channel Number

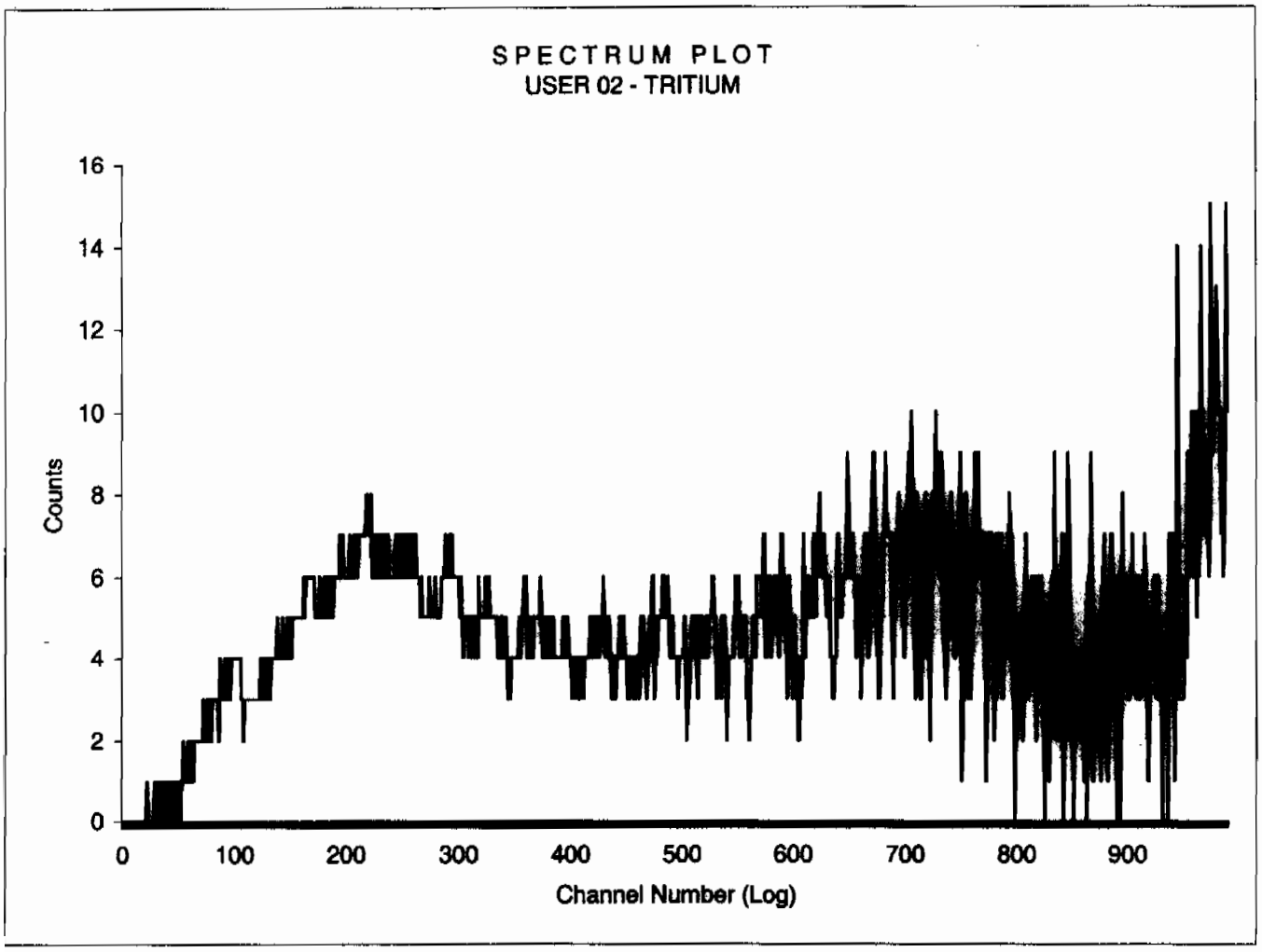

Sample Count Start Time:	14 Jul 2009 21:21:33		
Data Capture Date	14 Jul 2009 22:56:53		
User Filename	S02071406-4A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	6-4	95.00
H#, Total Counts:	132.0	4609	
Start, End, X-Axis:	0	990	Channel Number

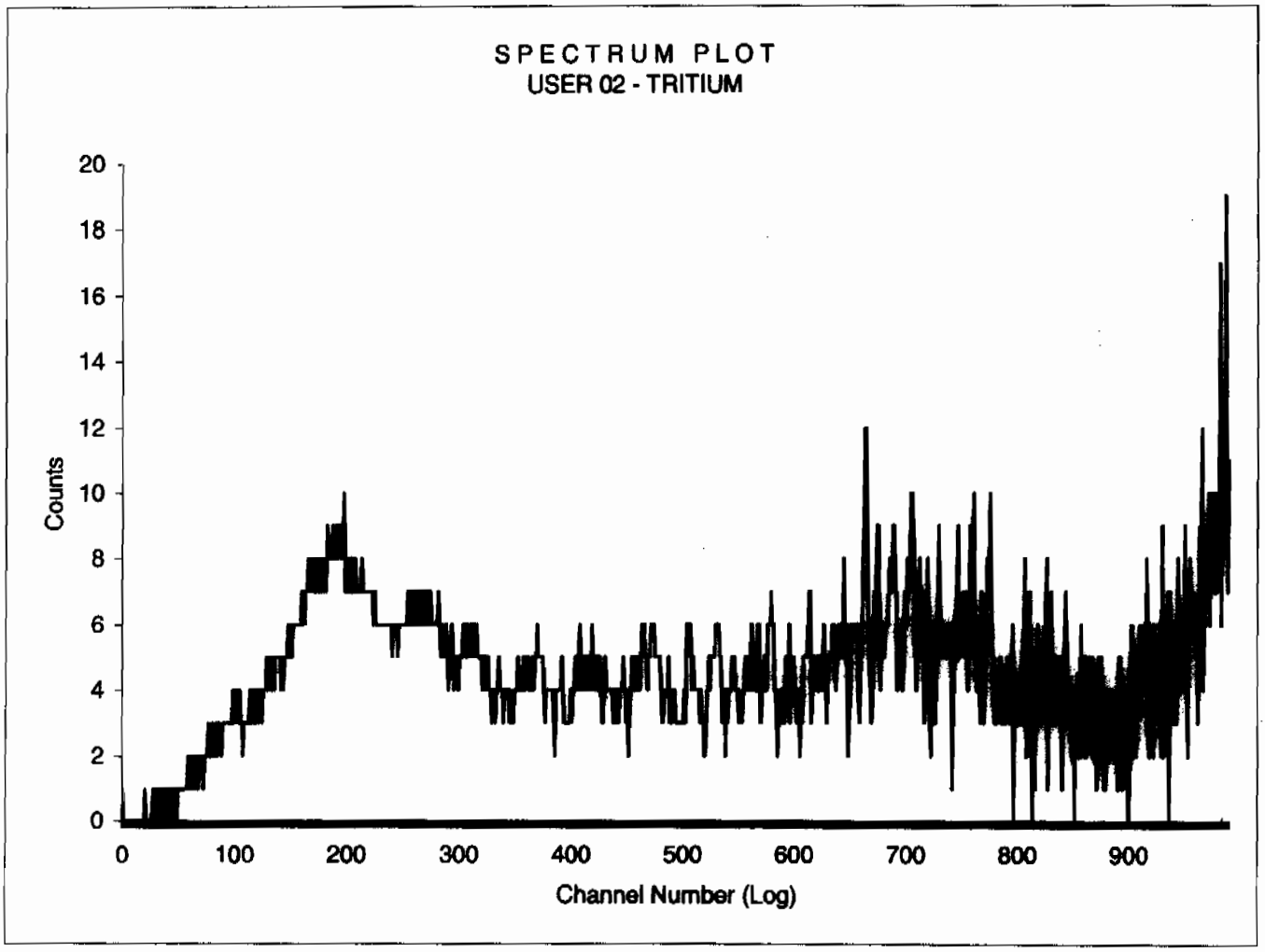

Sample Count Start Time:	14 Jul 2009 22:59:51		
Data Capture Date	15 Jul 2009 00:35:10		
User Filename	S02071506-5A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	6-5	95.00
H#, Total Counts:	129.8	3966	
Start, End, X-Axis:	0	990	Channel Number

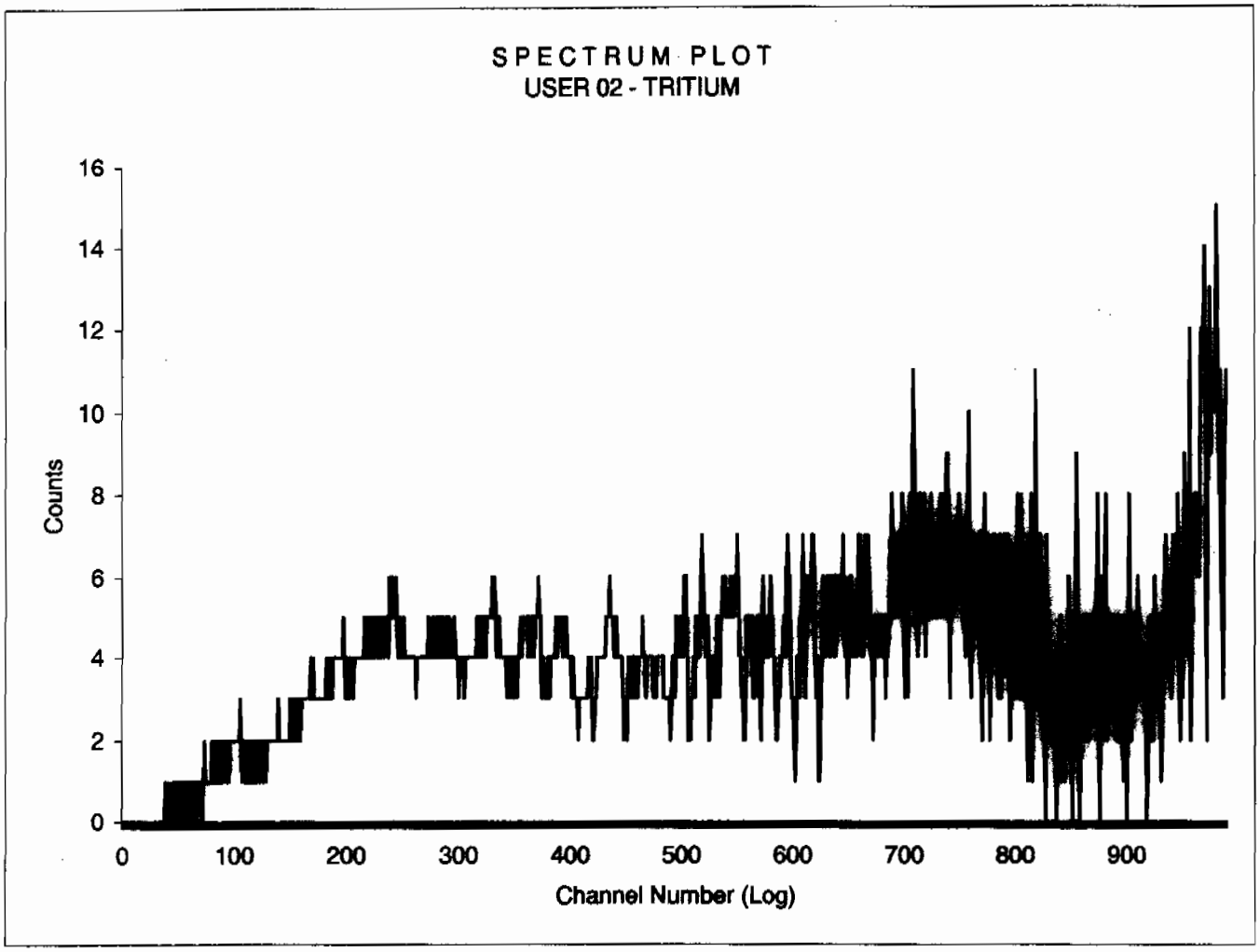

Sample Count Start Time:	15 Jul 2009 00:38:18		
Data Capture Date	15 Jul 2009 02:13:38		
User Filename	S02071506-6A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	6-6	95.00
H#, Total Counts:	133.6	4213	
Start, End, X-Axis:	0	990	Channel Number

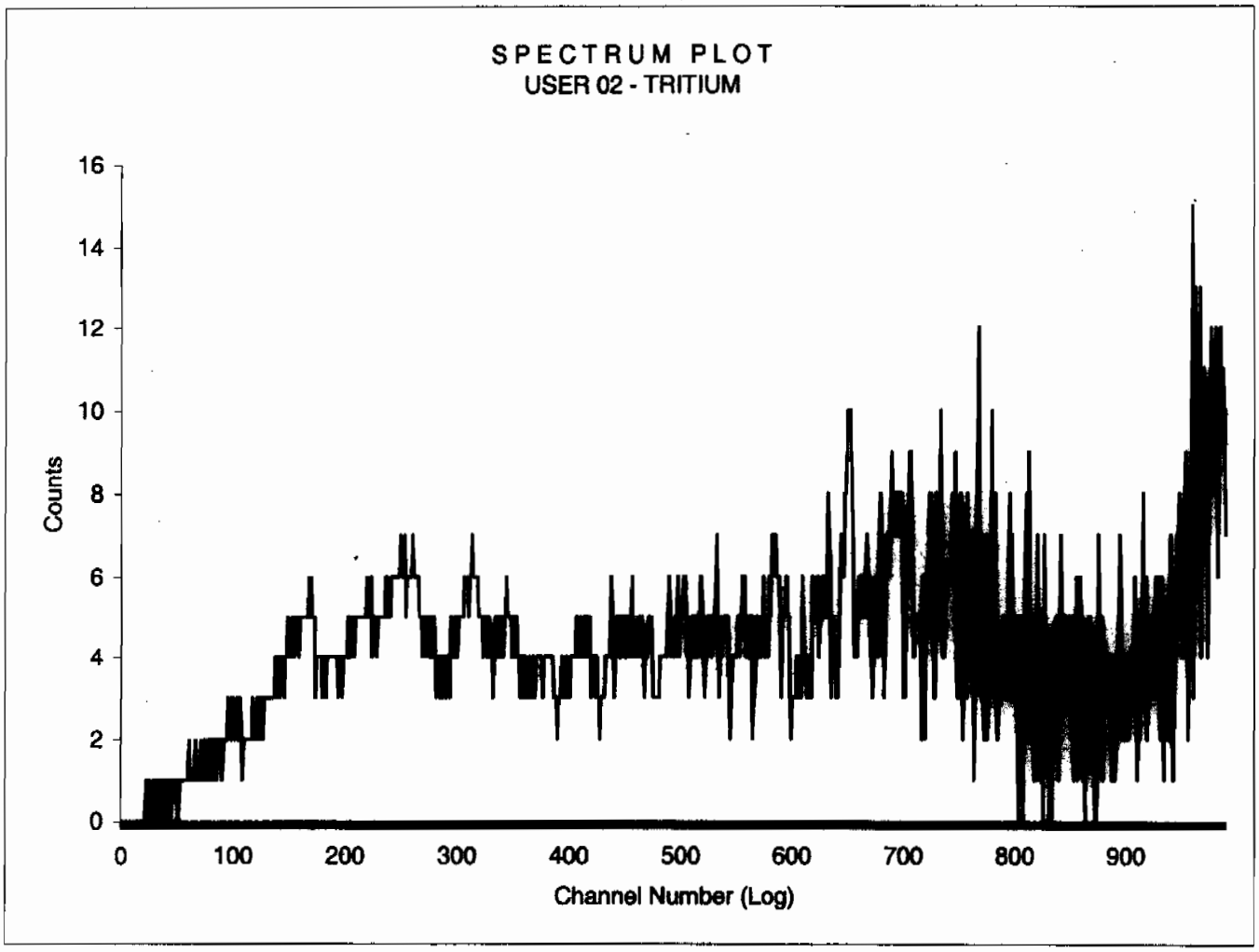

Sample Count Start Time:	15 Jul 2009 02:16:40		
Data Capture Date	15 Jul 2009 03:52:00		
User Filename	S02071506-7A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	6-7	95.00
H#, Total Counts:	136.8	4152	
Start, End, X-Axis:	0	990	Channel Number

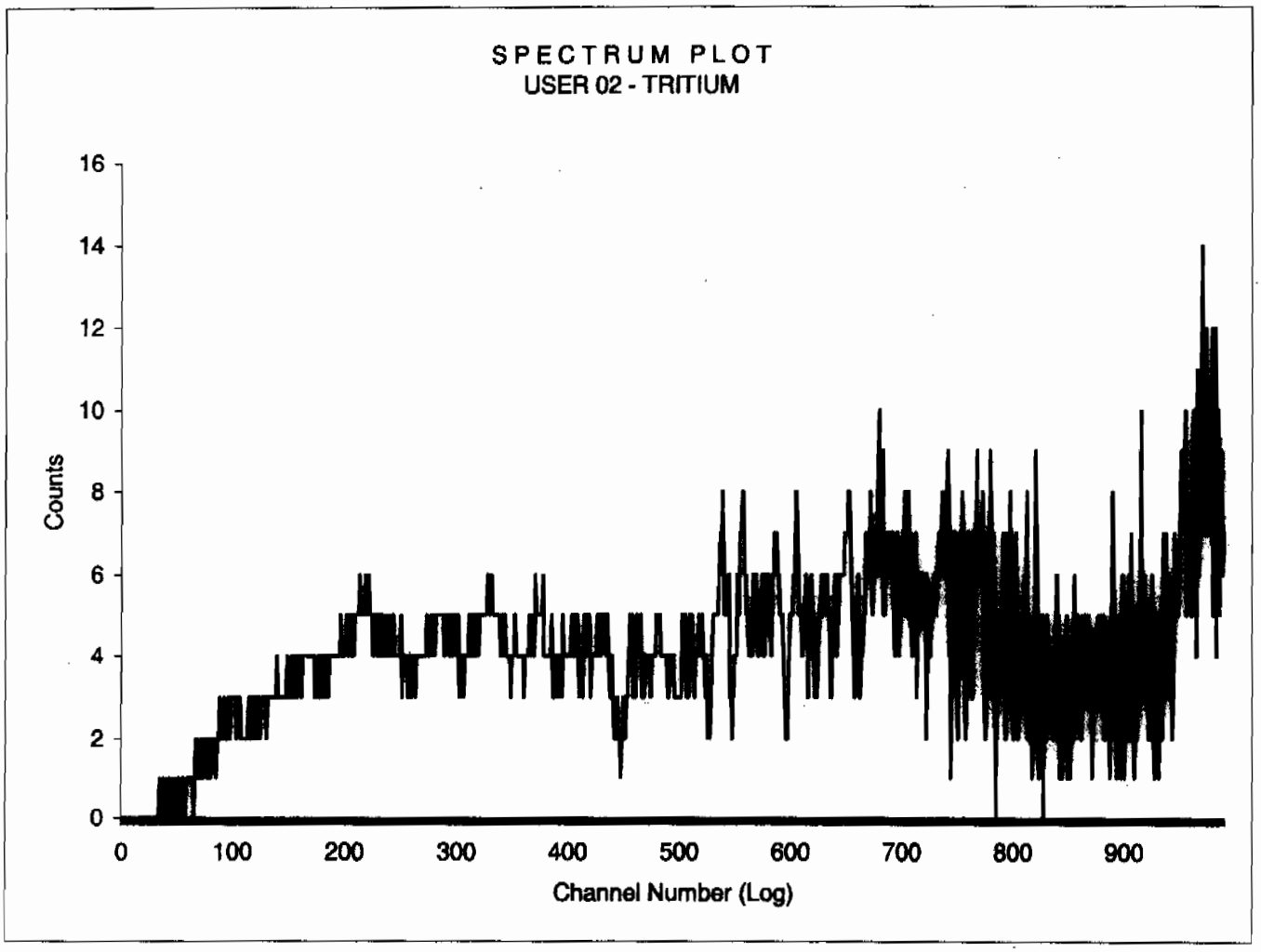

Sample Count Start Time:	15 Jul 2009 05:08:32		
Data Capture Date	15 Jul 2009 06:43:58		
User Filename	S02071541-1A.XLS		
	U02071541-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	41-1	95.00
H#, Total Counts:	138.1	4171	
Start, End, X-Axis:	0	990	Channel Number

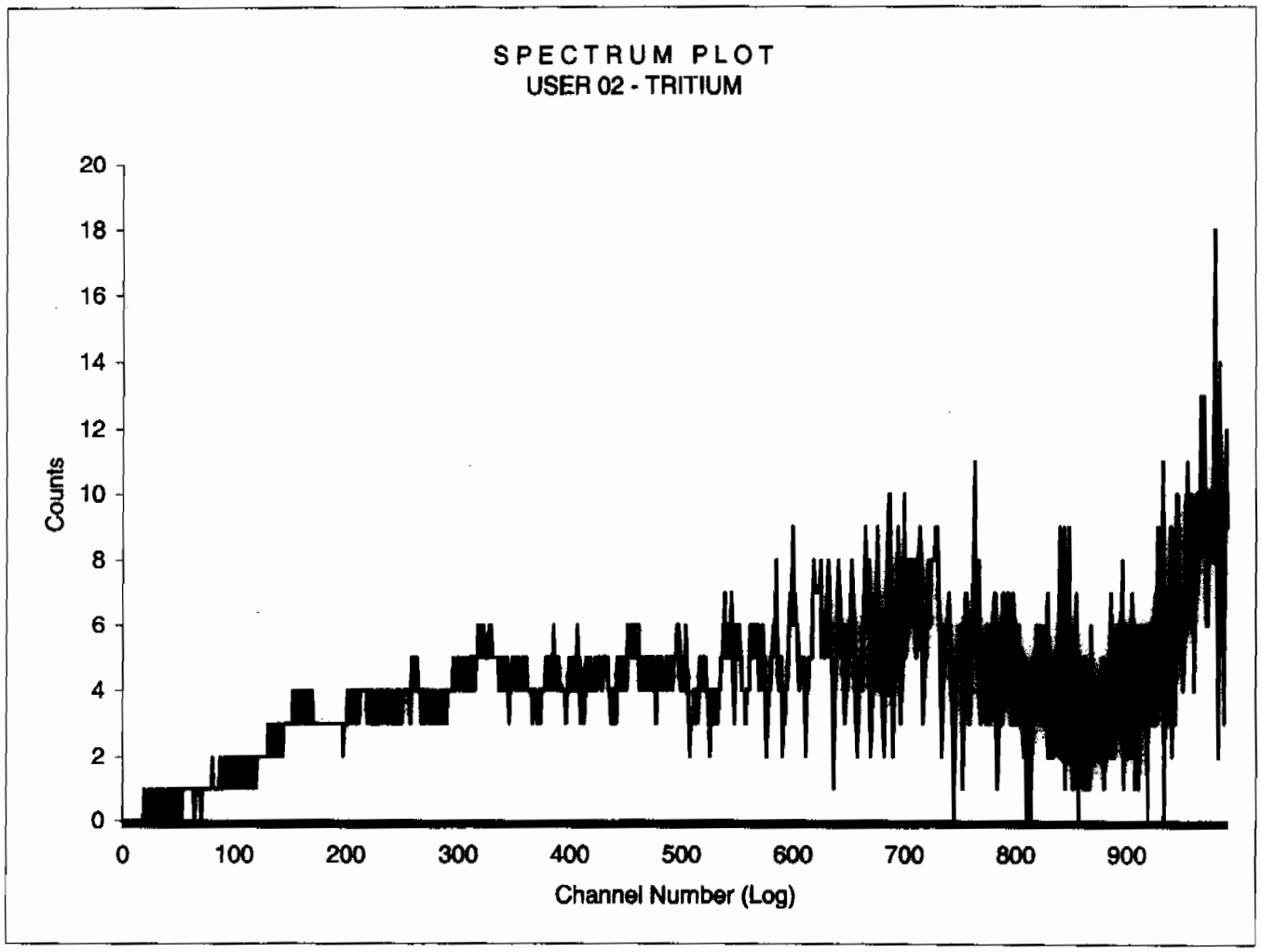

Sample Count Start Time:	15 Jul 2009 07:41:21		
Data Capture Date	15 Jul 2009 08:41:47		
User Filename	S02071541-2B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	41-2	60.00
H#, Total Counts:	133.7	2407	
Start, End, X-Axis:	0	990	Channel Number

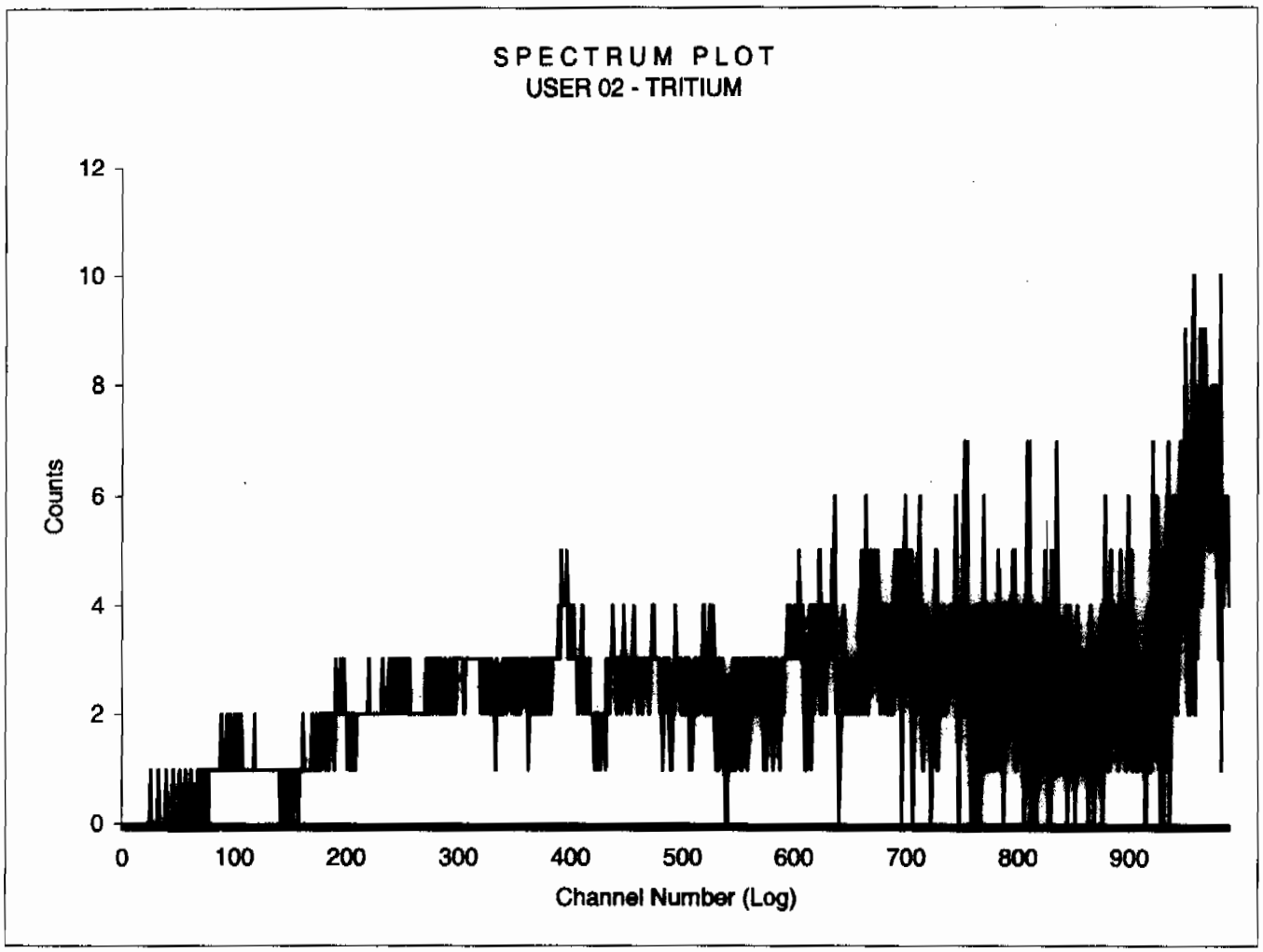

Sample Count Start Time:	15 Jul 2009 08:43:53		
Data Capture Date	15 Jul 2009 09:44:21		
User Filename	S02071541-3B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	41-3	60.00
H#, Total Counts:	128.9	2594	
Start, End, X-Axis:	0	990	Channel Number

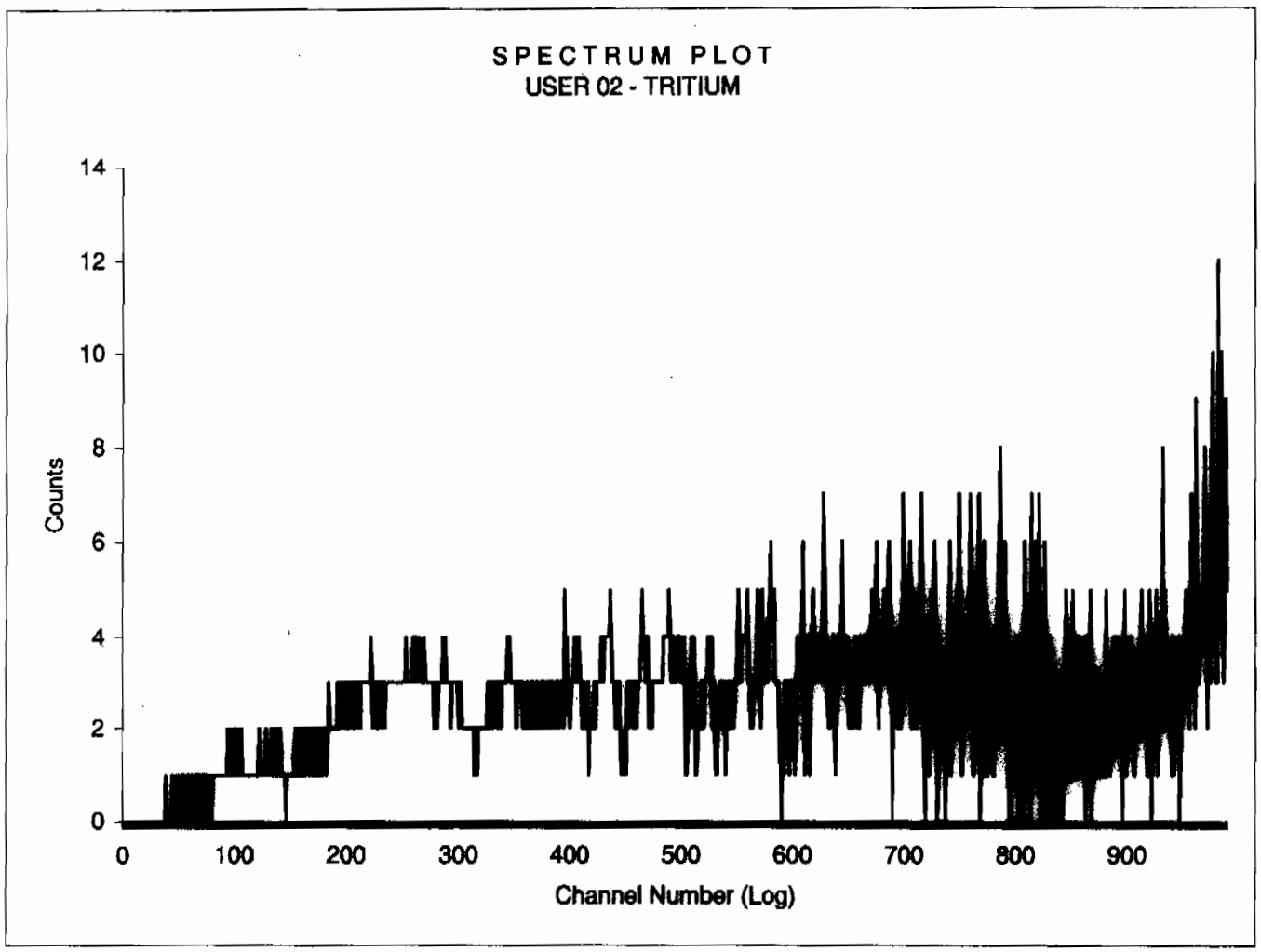

Sample Count Start Time:	15 Jul 2009 09:46:22		
Data Capture Date	15 Jul 2009 10:46:48		
User Filename	S02071541-4B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	41-4	60.00
H#, Total Counts:	128.5	2530	
Start, End, X-Axis:	0	990	Channel Number

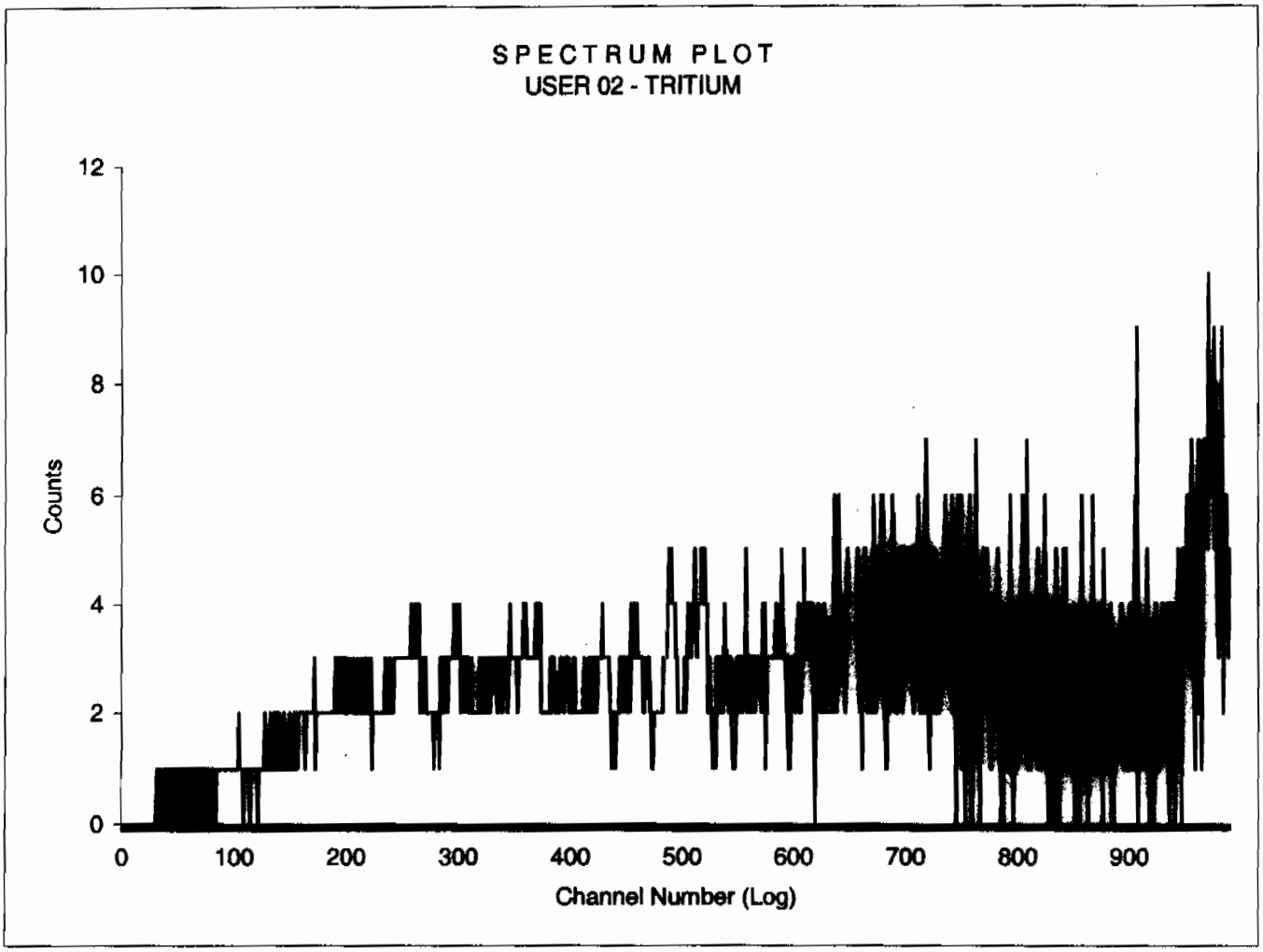

Sample Count Start Time:	15 Jul 2009 10:48:52		
Data Capture Date	15 Jul 2009 11:49:19		
User Filename	S02071541-5B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	41-5	60.00
H#, Total Counts:	129.1	2559	
Start, End, X-Axis:	0	990	Channel Number

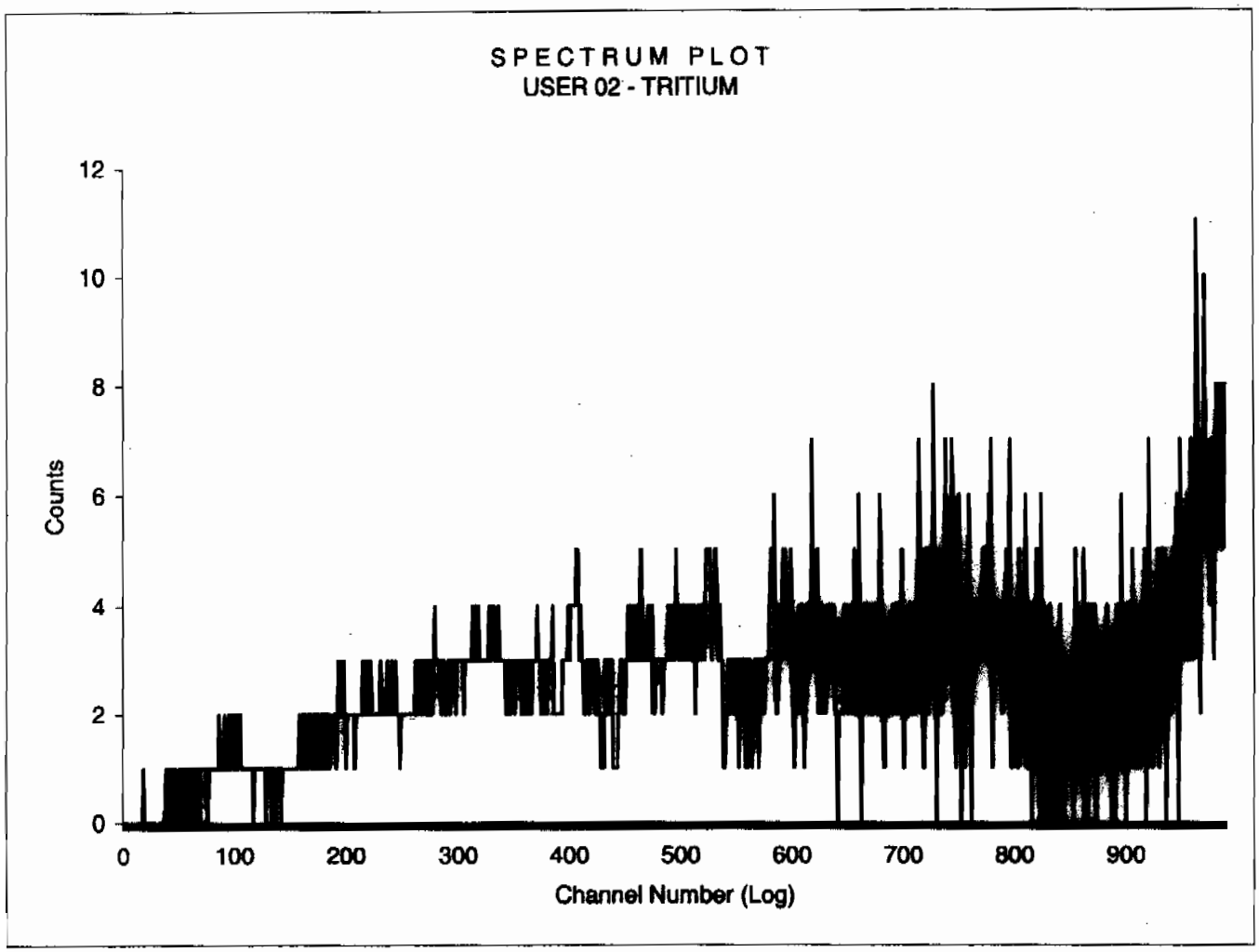

Sample Count Start Time:	15 Jul 2009 11:51:23		
Data Capture Date	15 Jul 2009 12:51:49		
User Filename	S02071541-6B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	41-6	60.00
H#, Total Counts:	130.5	2579	
Start, End, X-Axis:	0	990	Channel Number

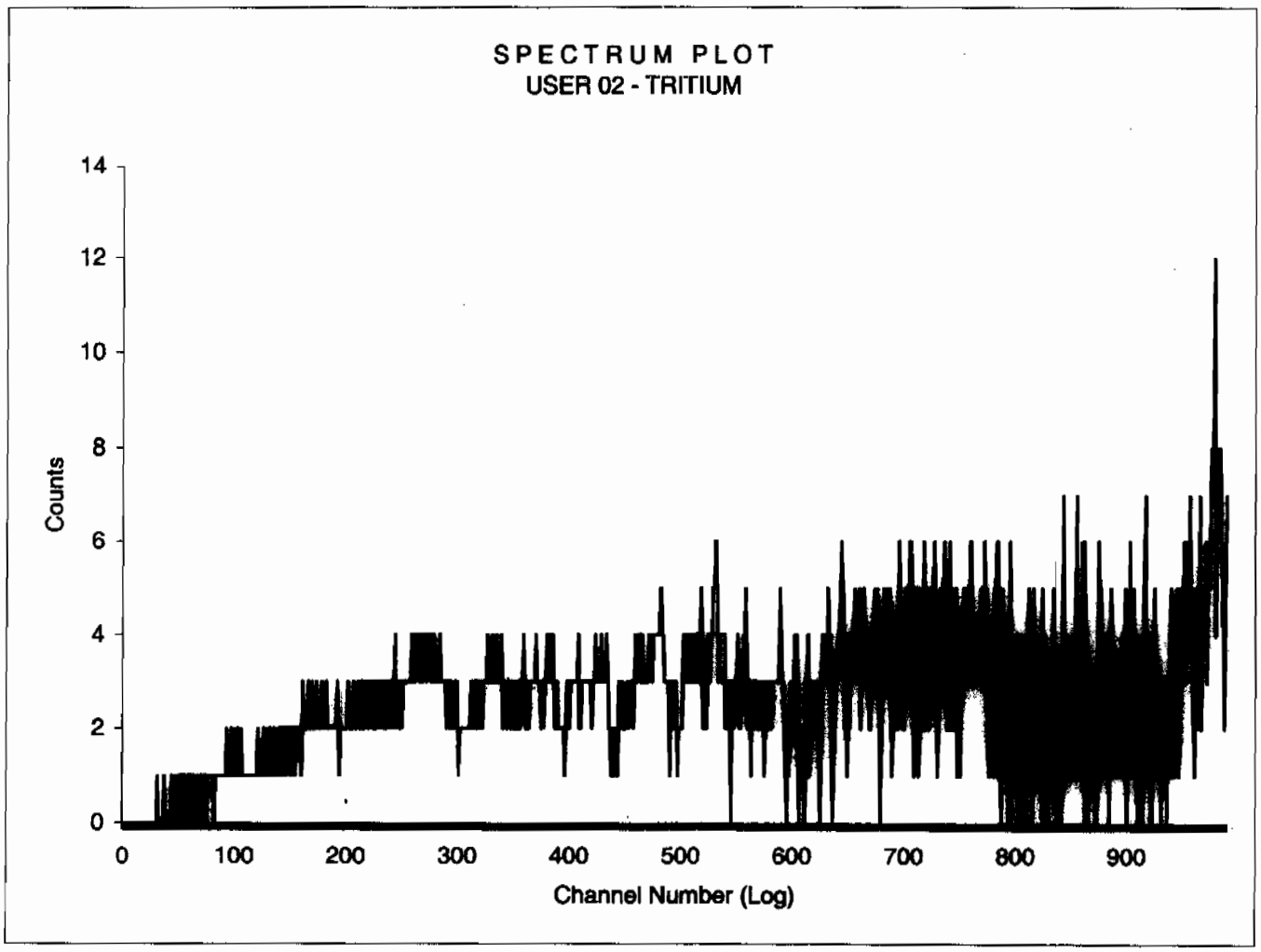

Sample Count Start Time:	15 Jul 2009 12:53:51		
Data Capture Date	15 Jul 2009 13:54:17		
User Filename	S02071541-7B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	41-7	60.00
H#, Total Counts:	128.4	2542	
Start, End, X-Axis:	0	990	Channel Number

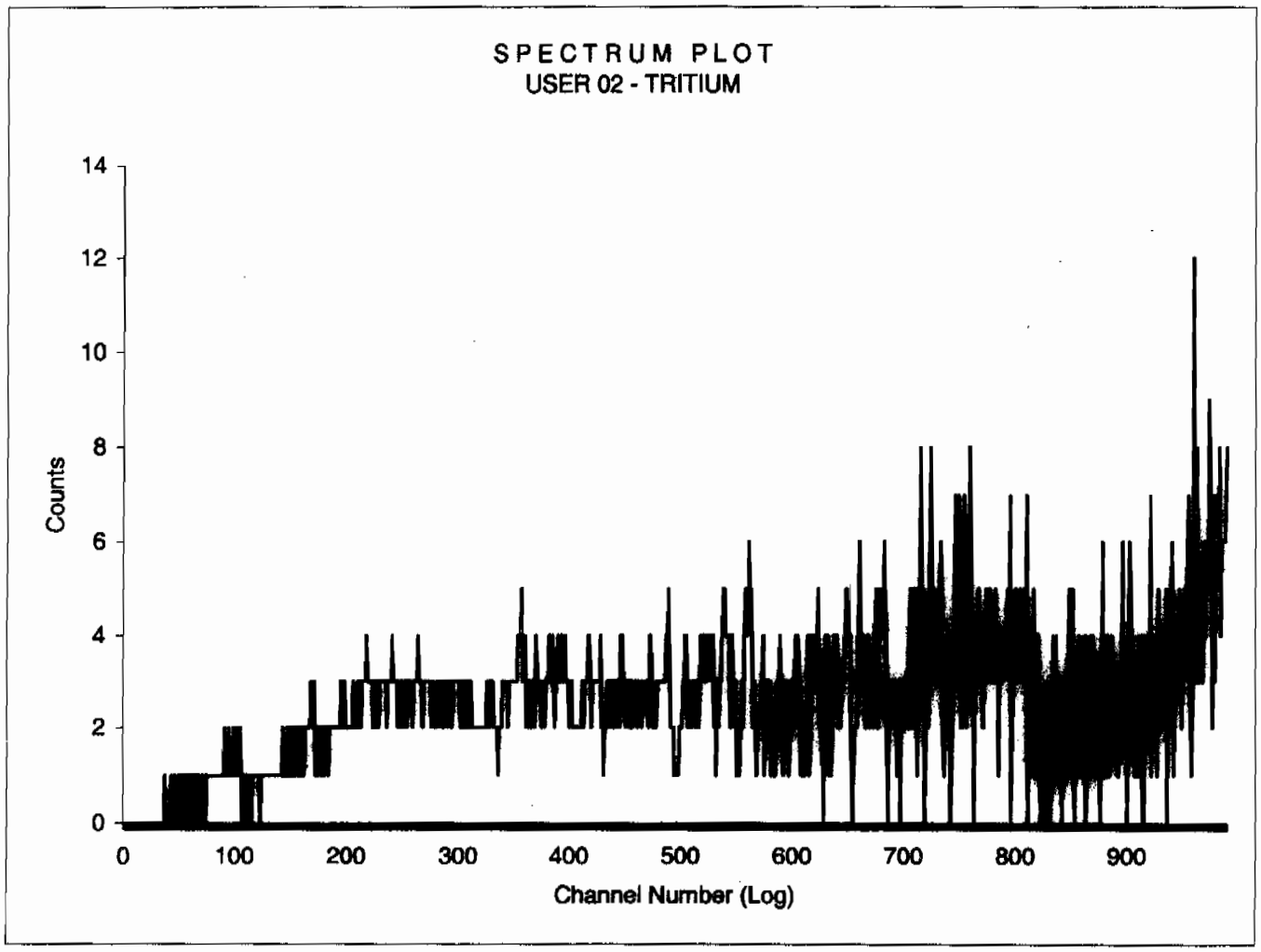

Sample Count Start Time:	15 Jul 2009 13:56:18		
Data Capture Date	15 Jul 2009 14:56:44		
User Filename	S02071541-8B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	41-8	60.00
H#, Total Counts:	128.7	2548	
Start, End, X-Axis:	0	990	Channel Number

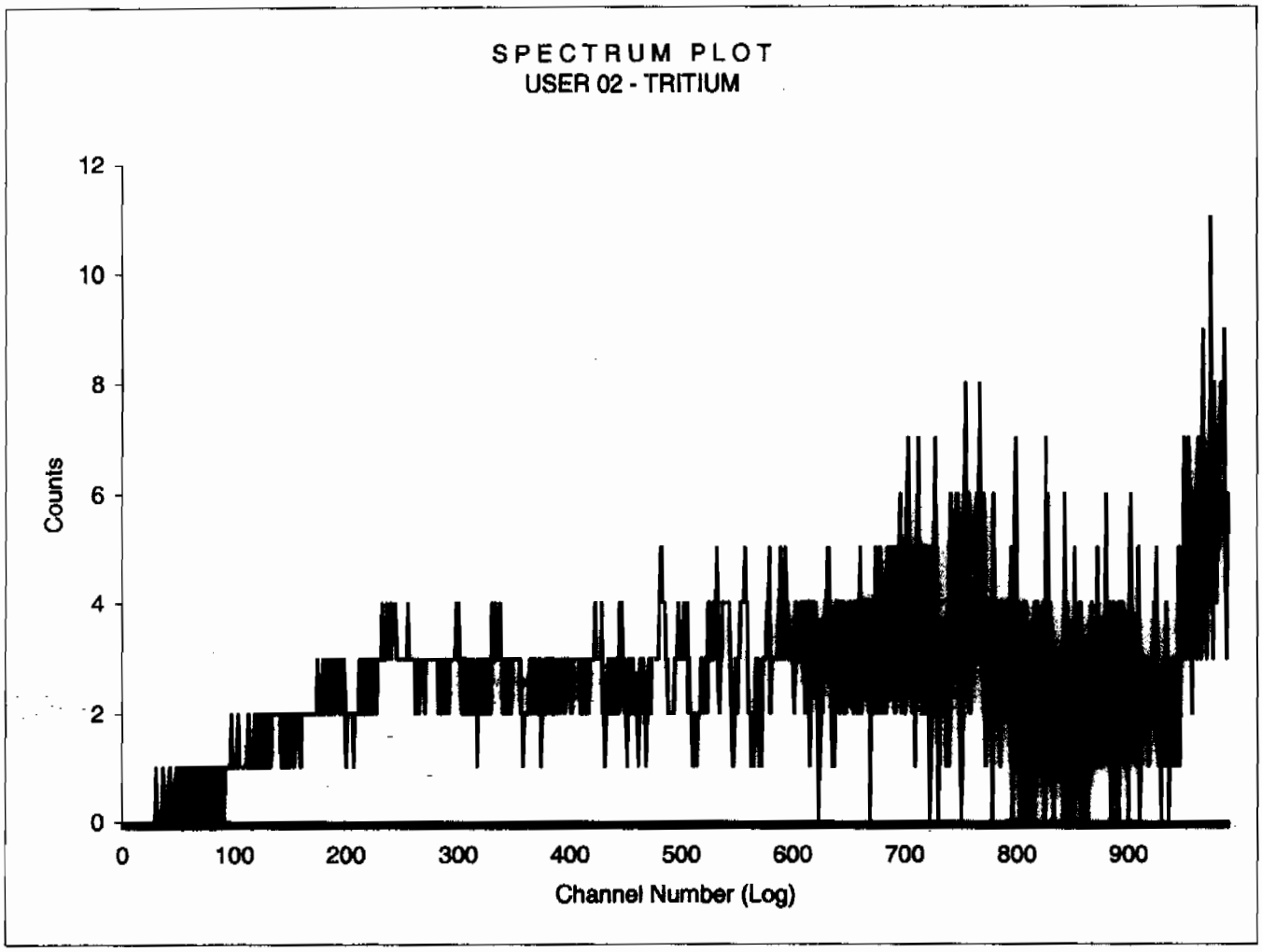

Sample Count Start Time:	15 Jul 2009 14:58:42		
Data Capture Date	15 Jul 2009 15:59:08		
User Filename	S02071541-9B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	41-9	60.00
H#, Total Counts:	129.3	2573	
Start, End, X-Axis:	0	990	Channel Number

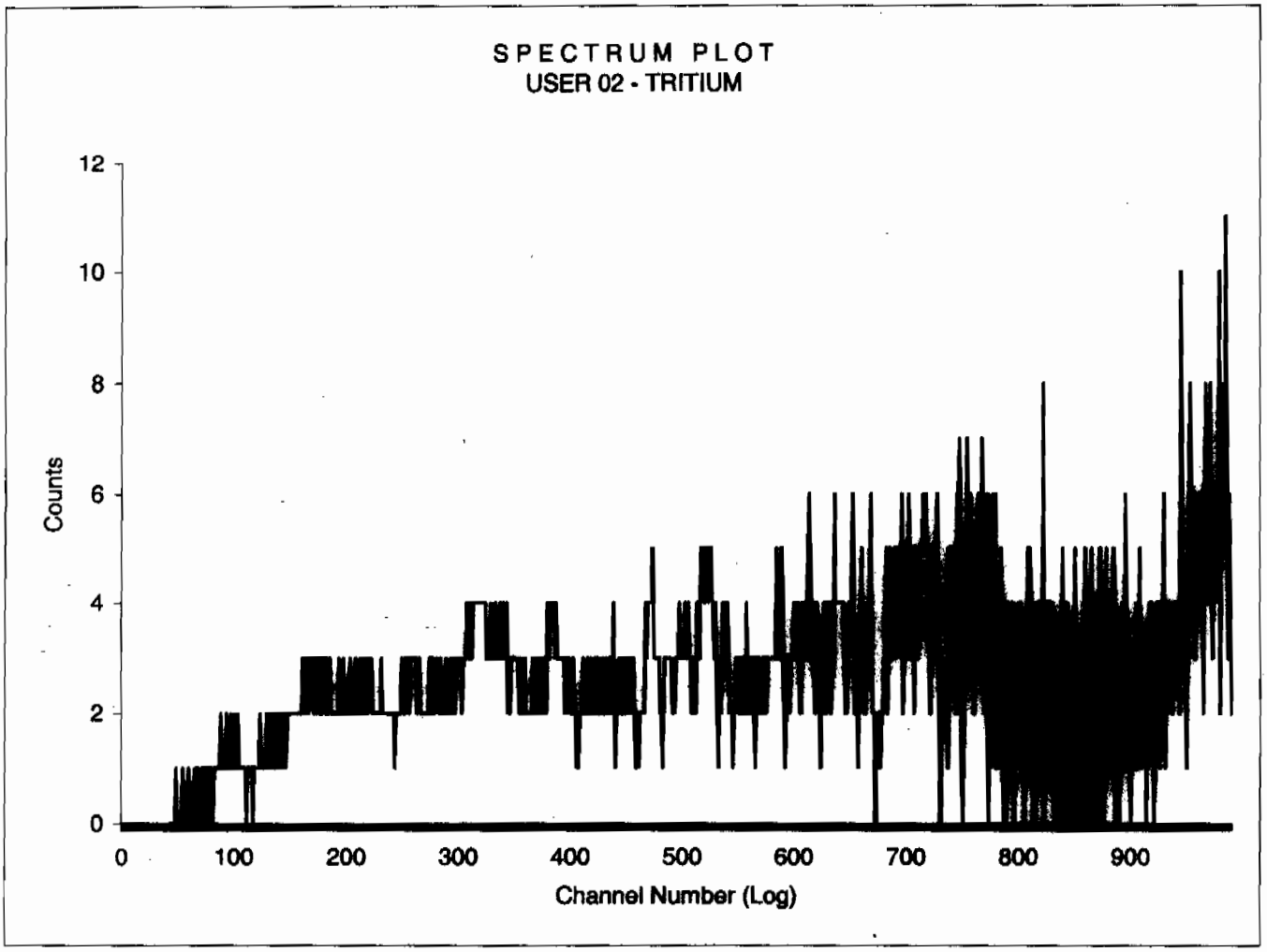

Sample Count Start Time:	15 Jul 2009 16:01:04		
Data Capture Date	15 Jul 2009 17:01:30		
User Filename	S02071541-10B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	41-10	60.00
H#, Total Counts:	128.8	2395	
Start, End, X-Axis:	0	990	Channel Number

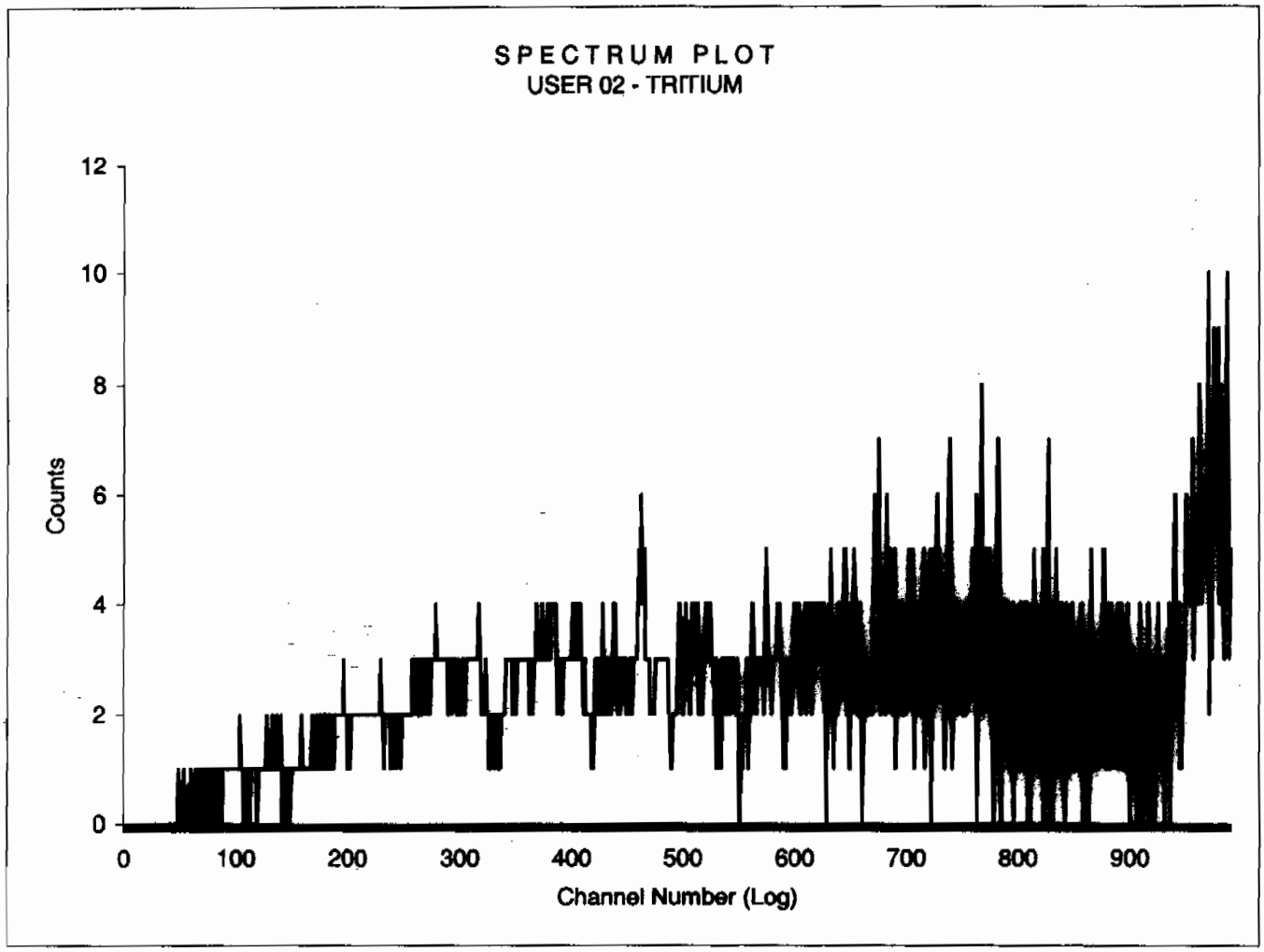

Sample Count Start Time:	15 Jul 2009 17:03:31		
Data Capture Date	15 Jul 2009 18:03:57		
User Filename	S02071541-11B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	41-11	60.00
H#, Total Counts:	132.3	2870	
Start, End, X-Axis:	0	990	Channel Number

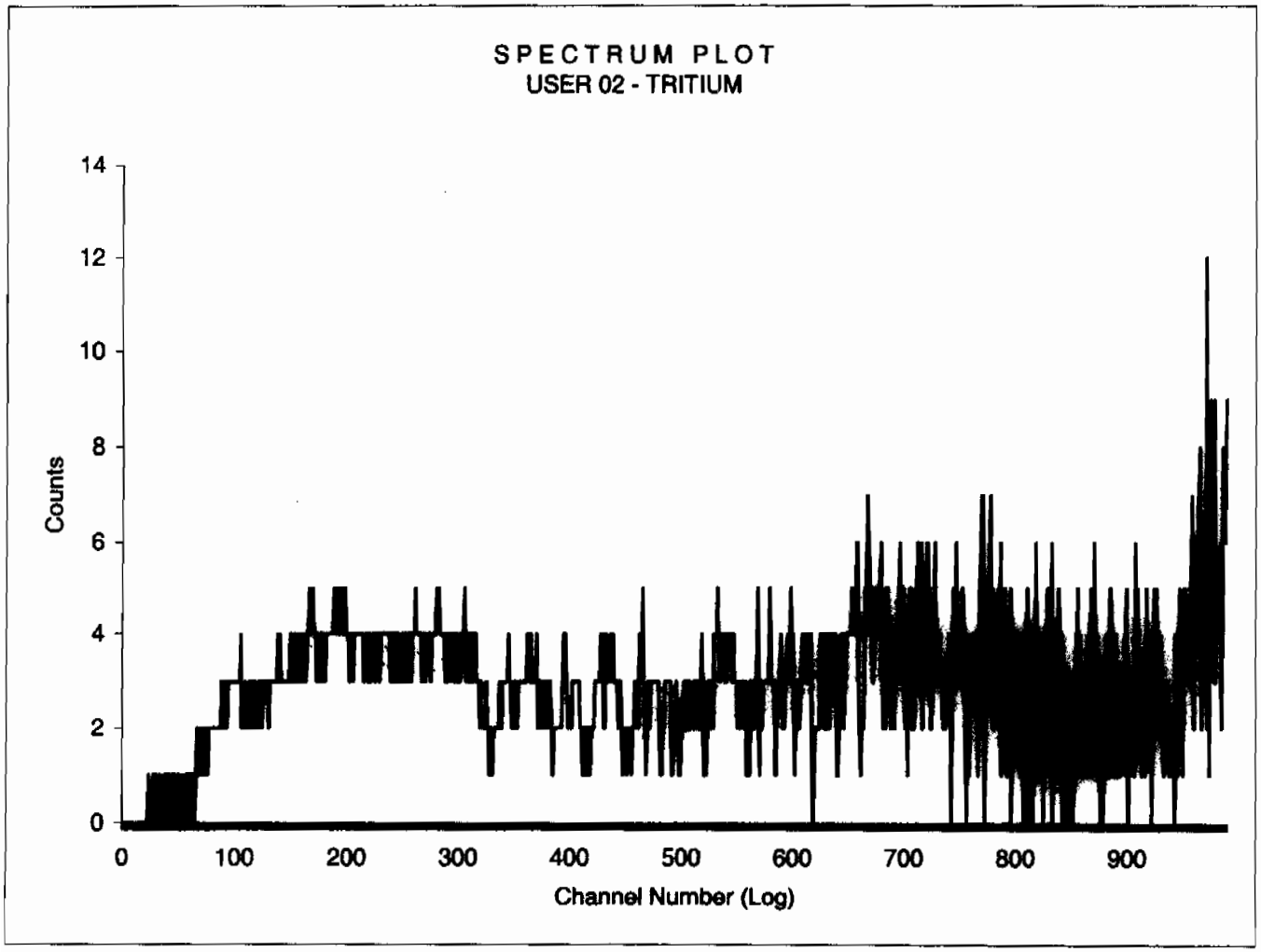

Sample Count Start Time:	15 Jul 2009 18:05:02		
Data Capture Date	15 Jul 2009 18:20:26		
User Filename	S03071529-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	29-1	15.00
H#, Total Counts:	130.3	1167	
Start, End, X-Axis:	0	990	Channel Number

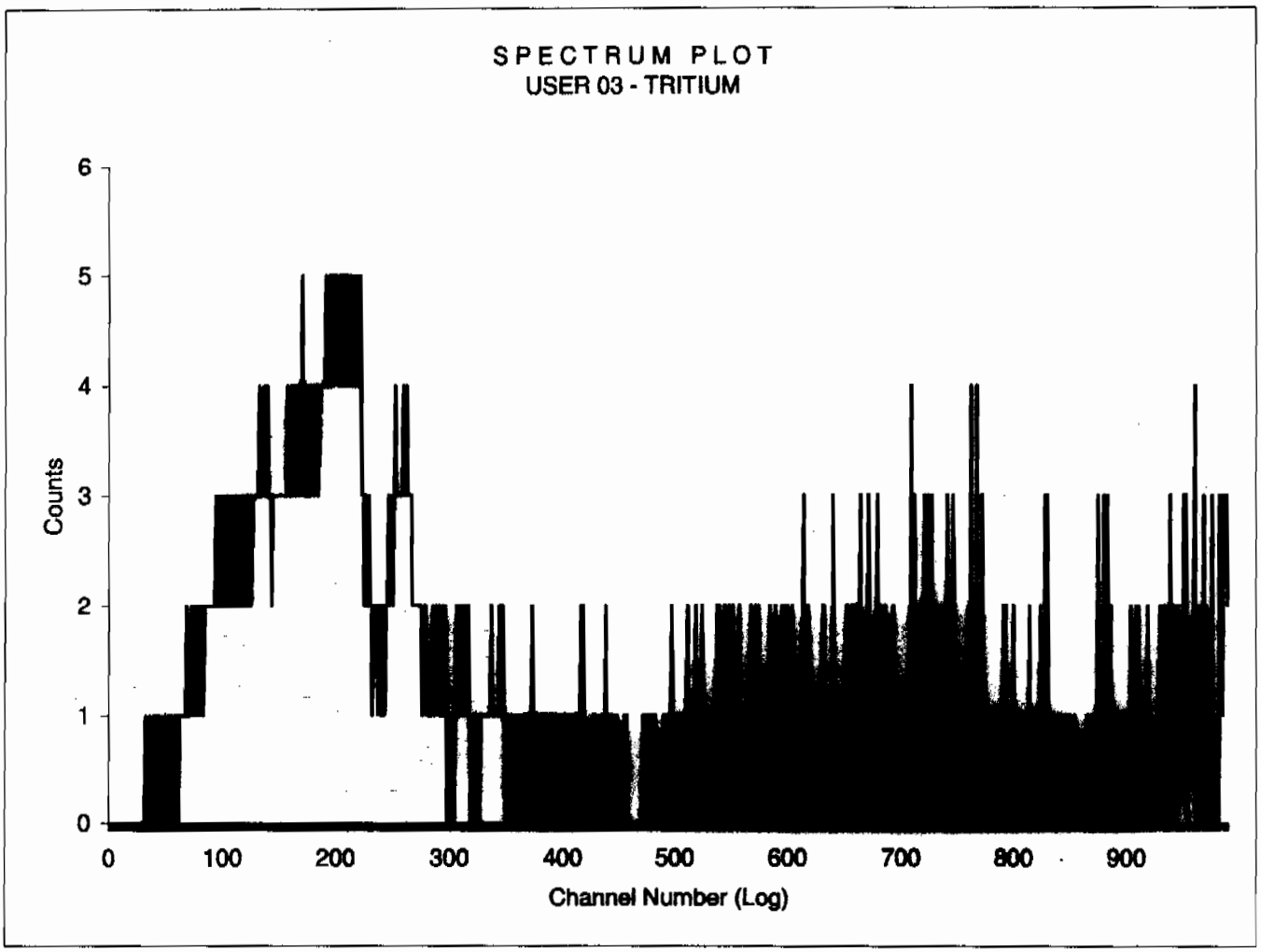

BACKGROUND AND EFFICIENCY DATA

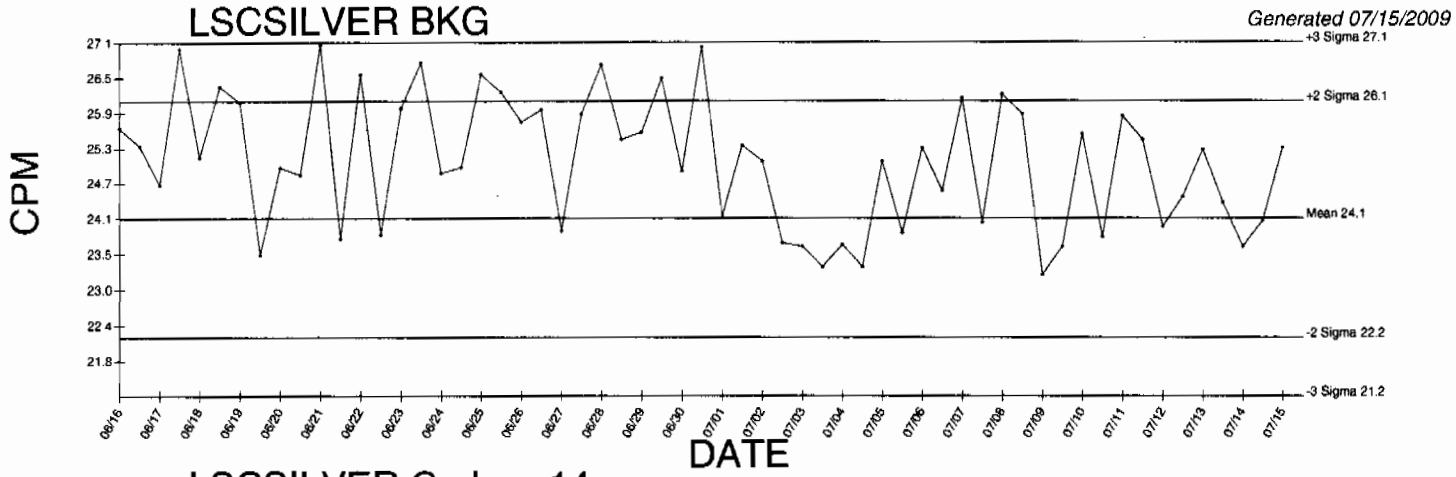

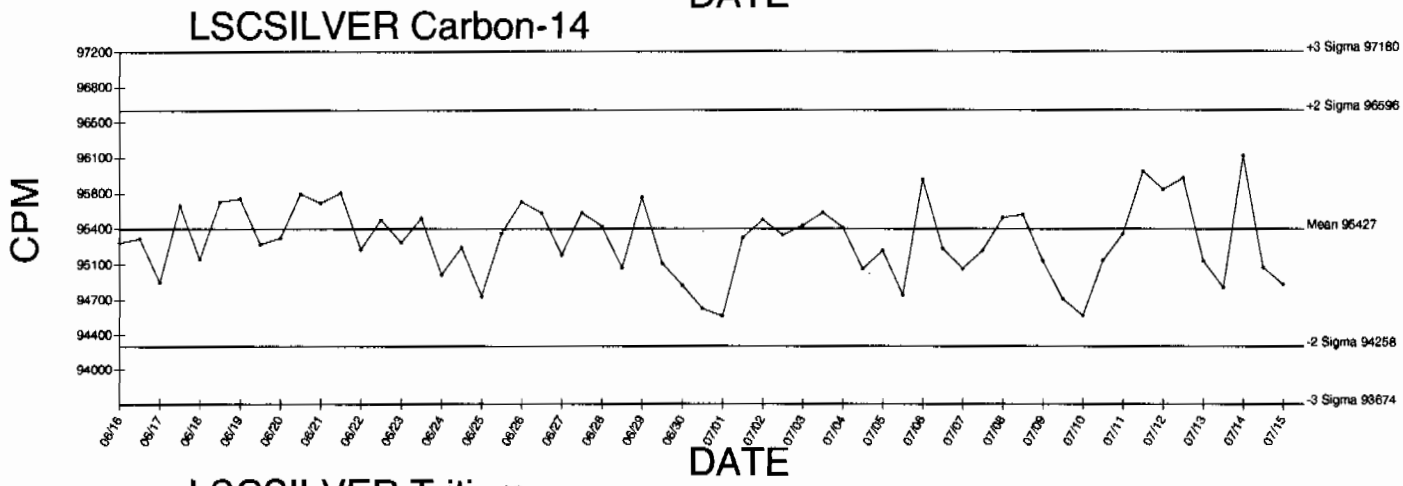

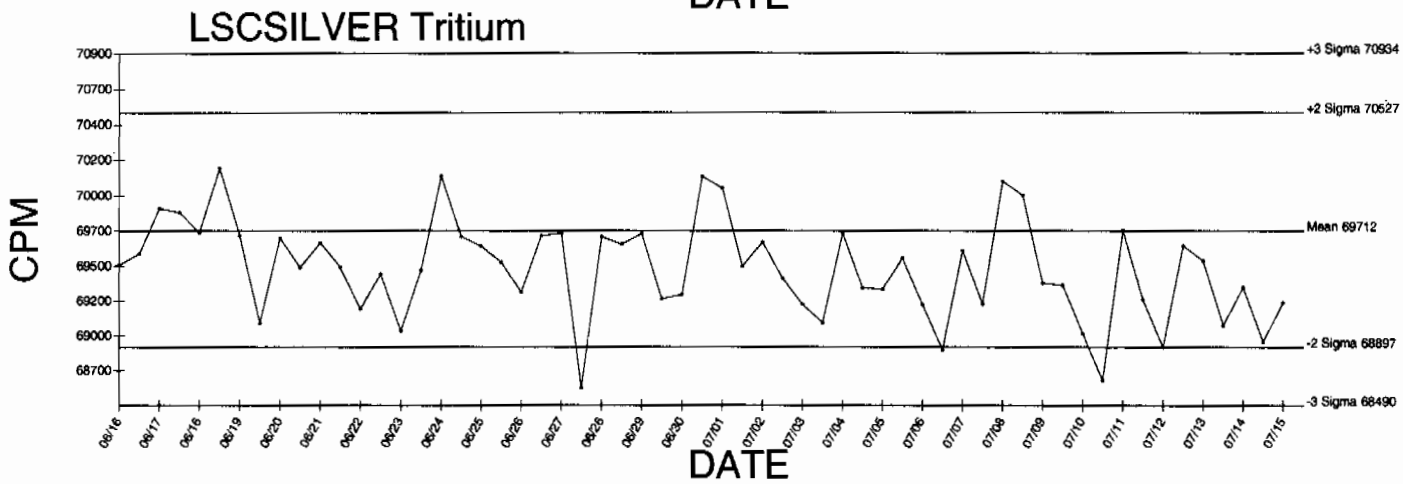

● Denotes Outlier

QA filename : DKA100:[ENV_ALPHA.QA.W]W031.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 4-FEB-2009 07:05:57 through 16-JUL-2009 12:00:00
Lower/Upper Lmts: 0.323399 through 0.337447

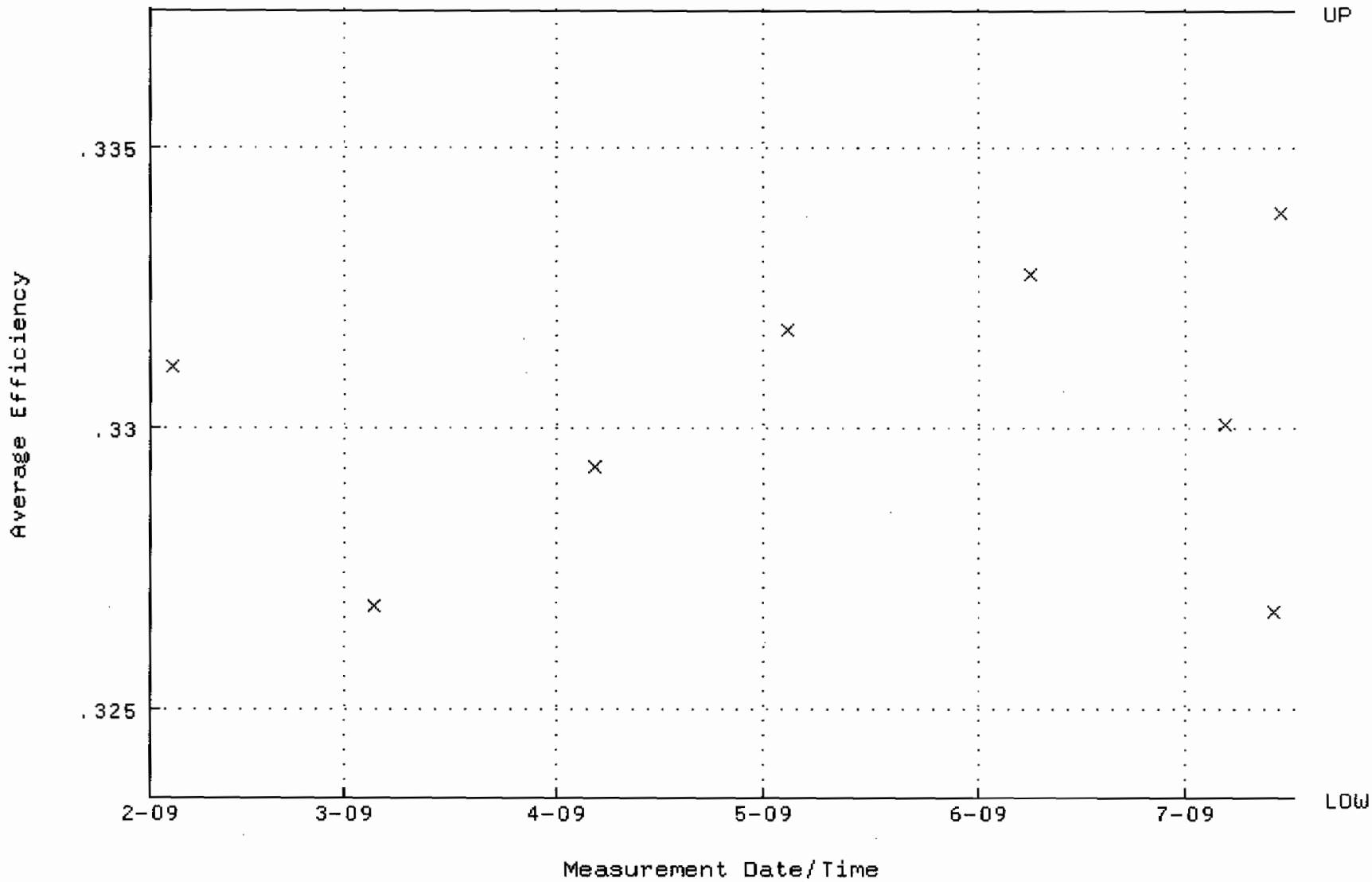

QA filename : DKA100:[ENV_ALPHA.QA.W]W031.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 4-FEB-2009 07:05:57 through 16-JUL-2009 12:00:00
Lower/Upper Lmts: 83.1638 through 87.4767

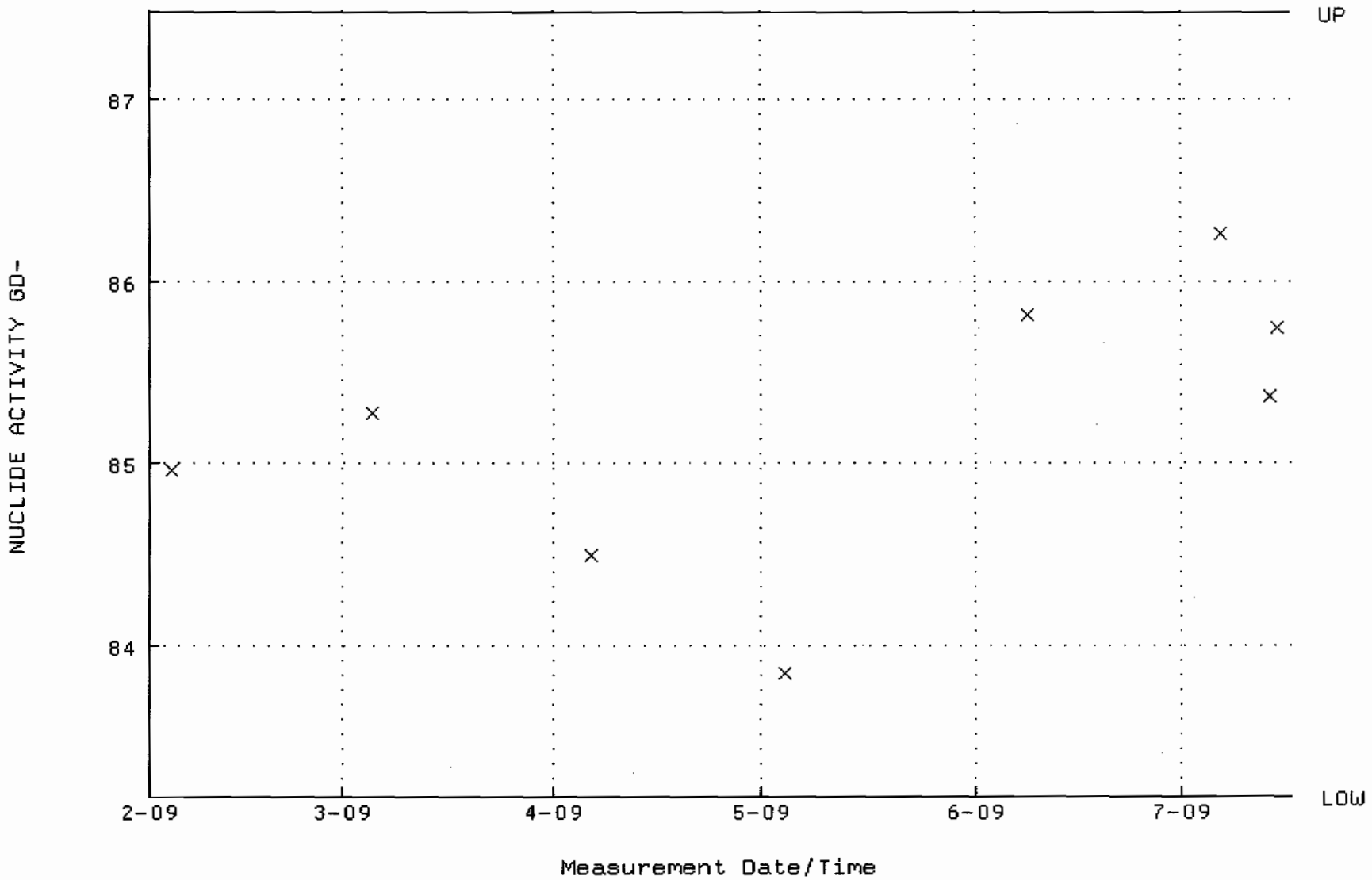

QA filename : DKA100:[ENV_ALPHA.QA.B]B031.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-FEB-2009 20:05:00 through 16-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

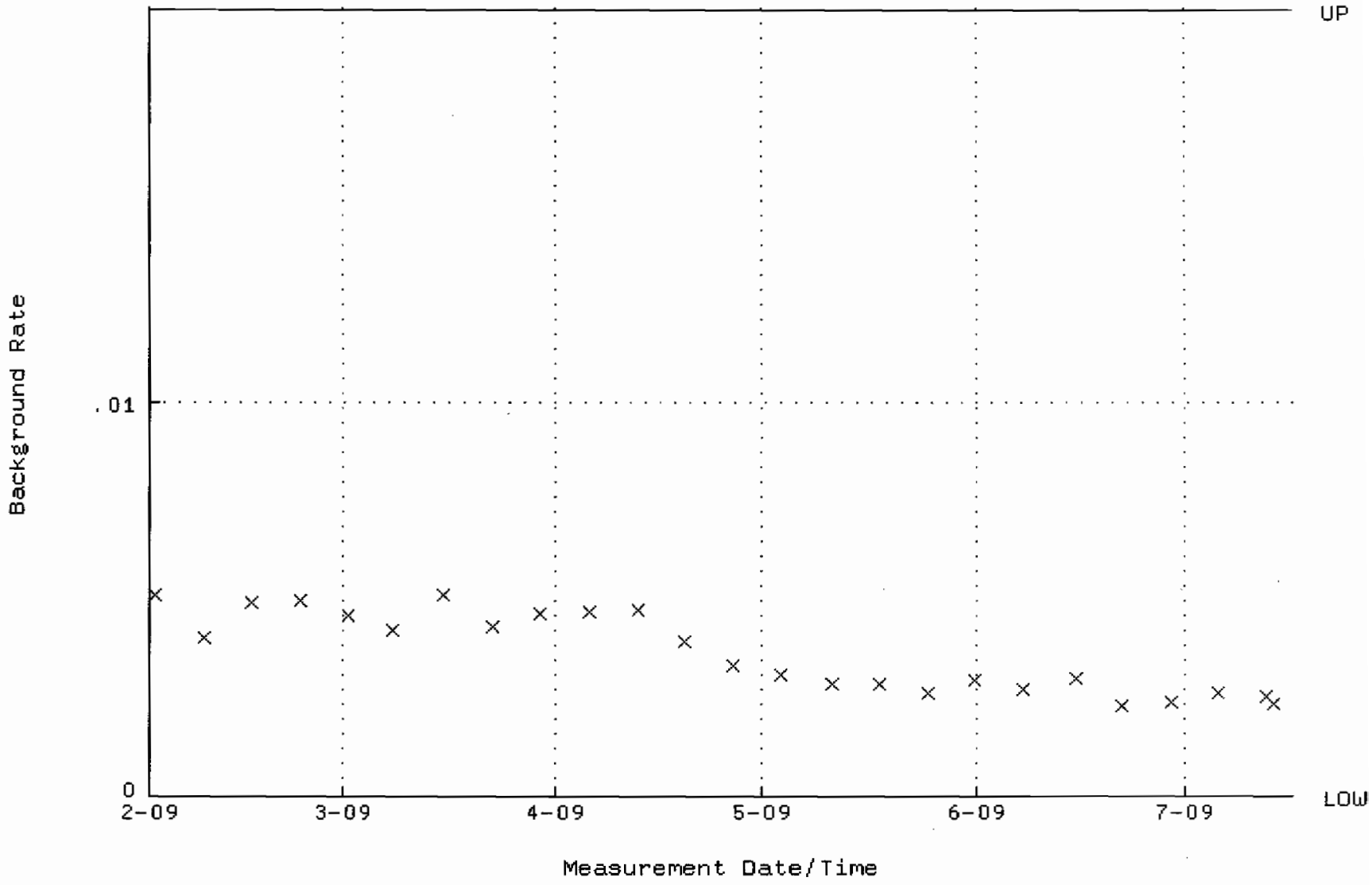

QA filename : DKA100:[ENV_ALPHA.QA.W]W032.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 4-FEB-2009 07:05:57 through 16-JUL-2009 12:00:00
Lower/Upper Lmts: 0.297871 through 0.317871

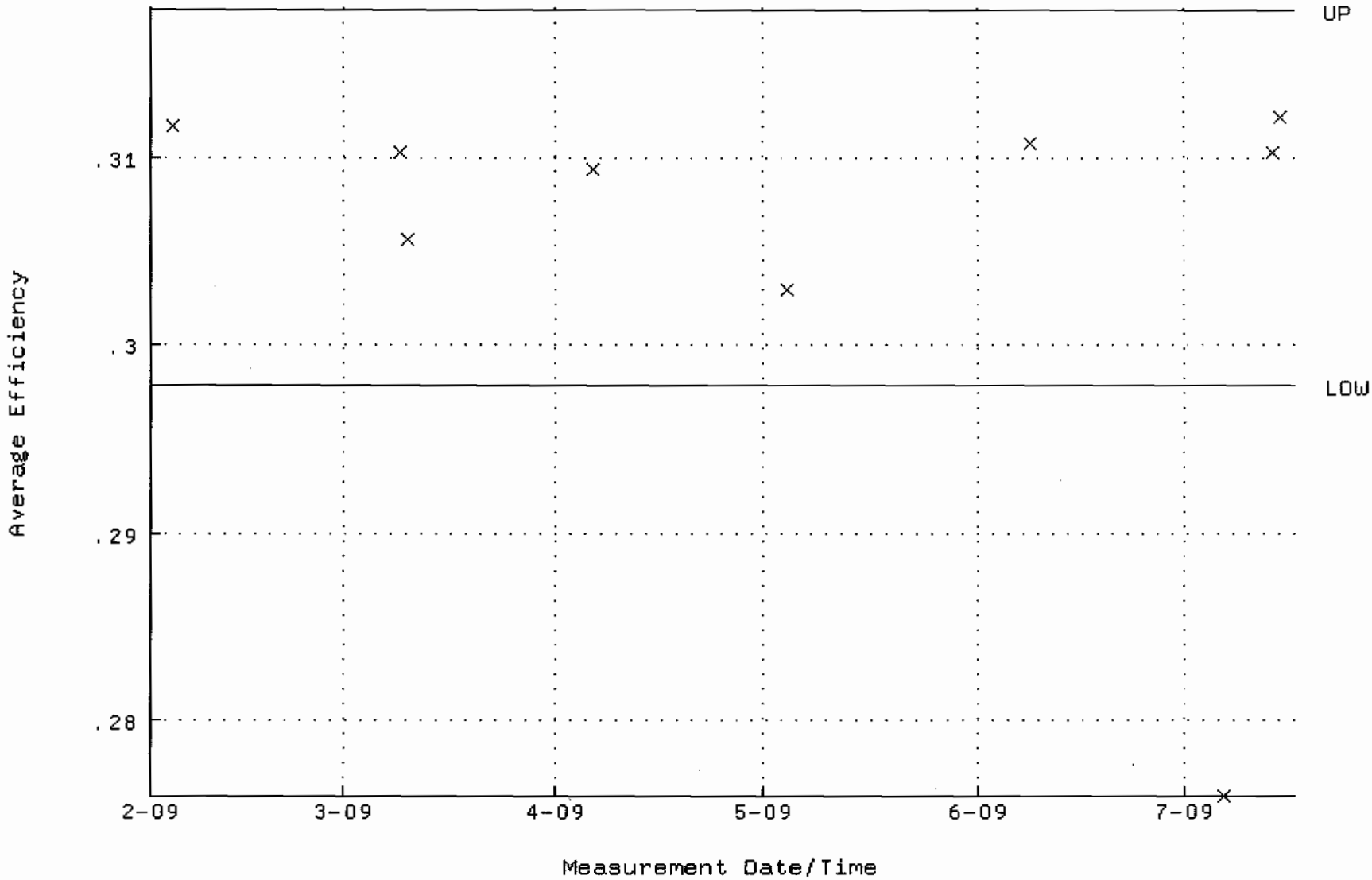

QA filename : DKA100:[ENV_ALPHA.QA.W]W032.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 4-FEB-2009 07:05:57 through 16-JUL-2009 12:00:00
Lower/Upper Lmts: 83.2867 through 92.0537

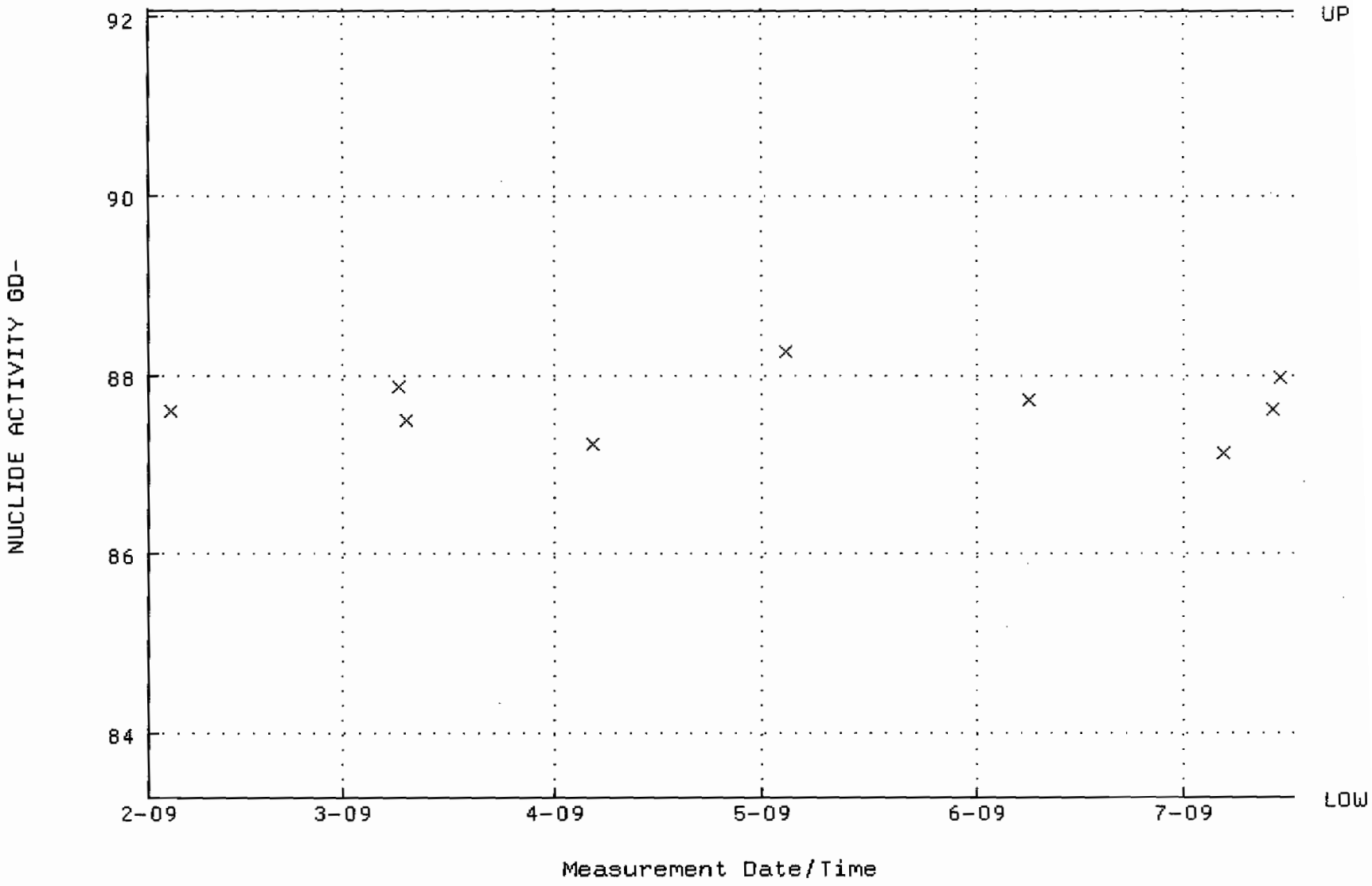

QA filename : DKA100:[ENV_ALPHA.QA.B]B032.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-FEB-2009 20:05:00 through 16-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

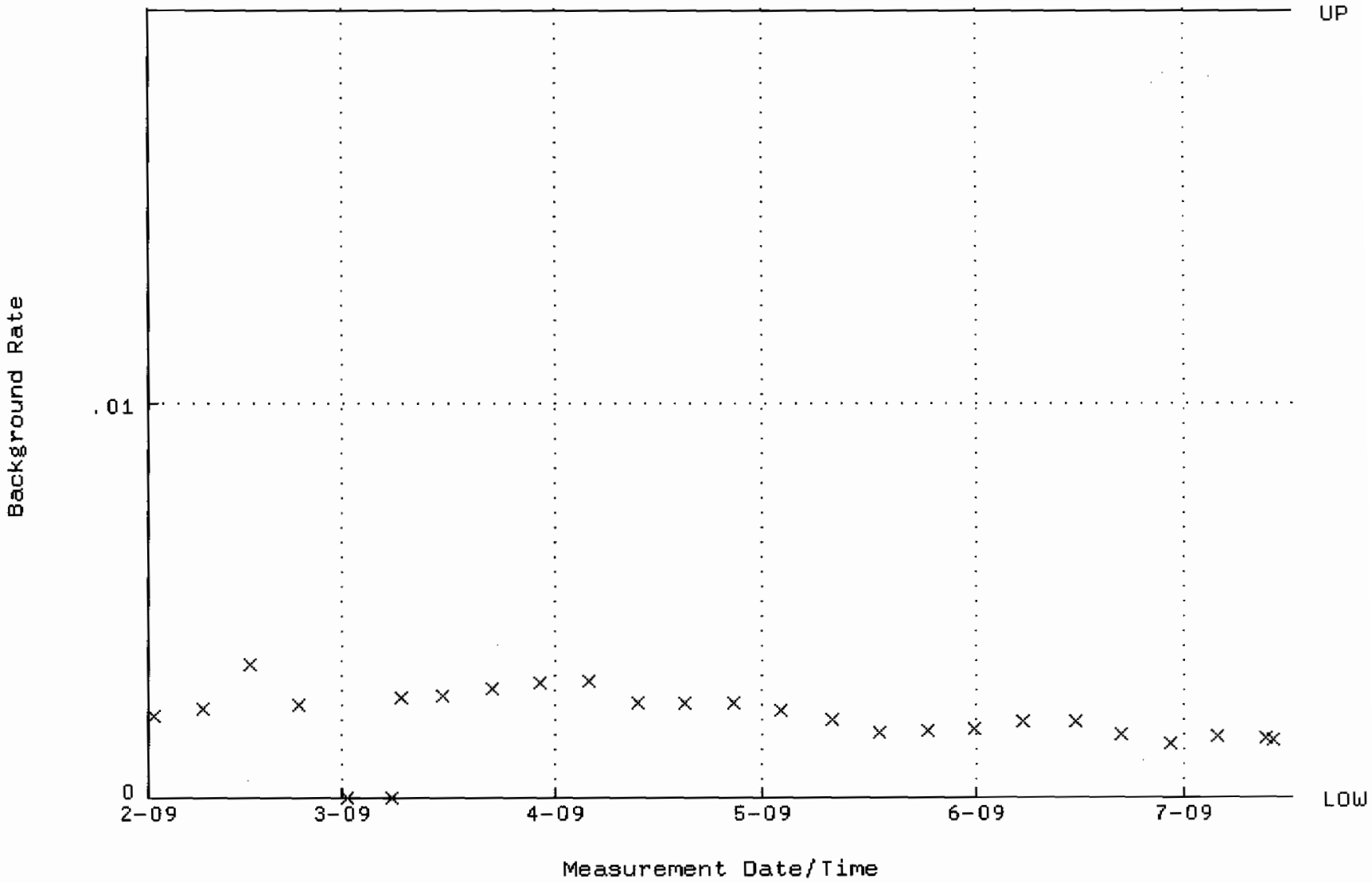

QA filename : DKA100:[ENV_ALPHA.QA.W]W033.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-JAN-2009 12:56:58 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.310023 through 0.330023

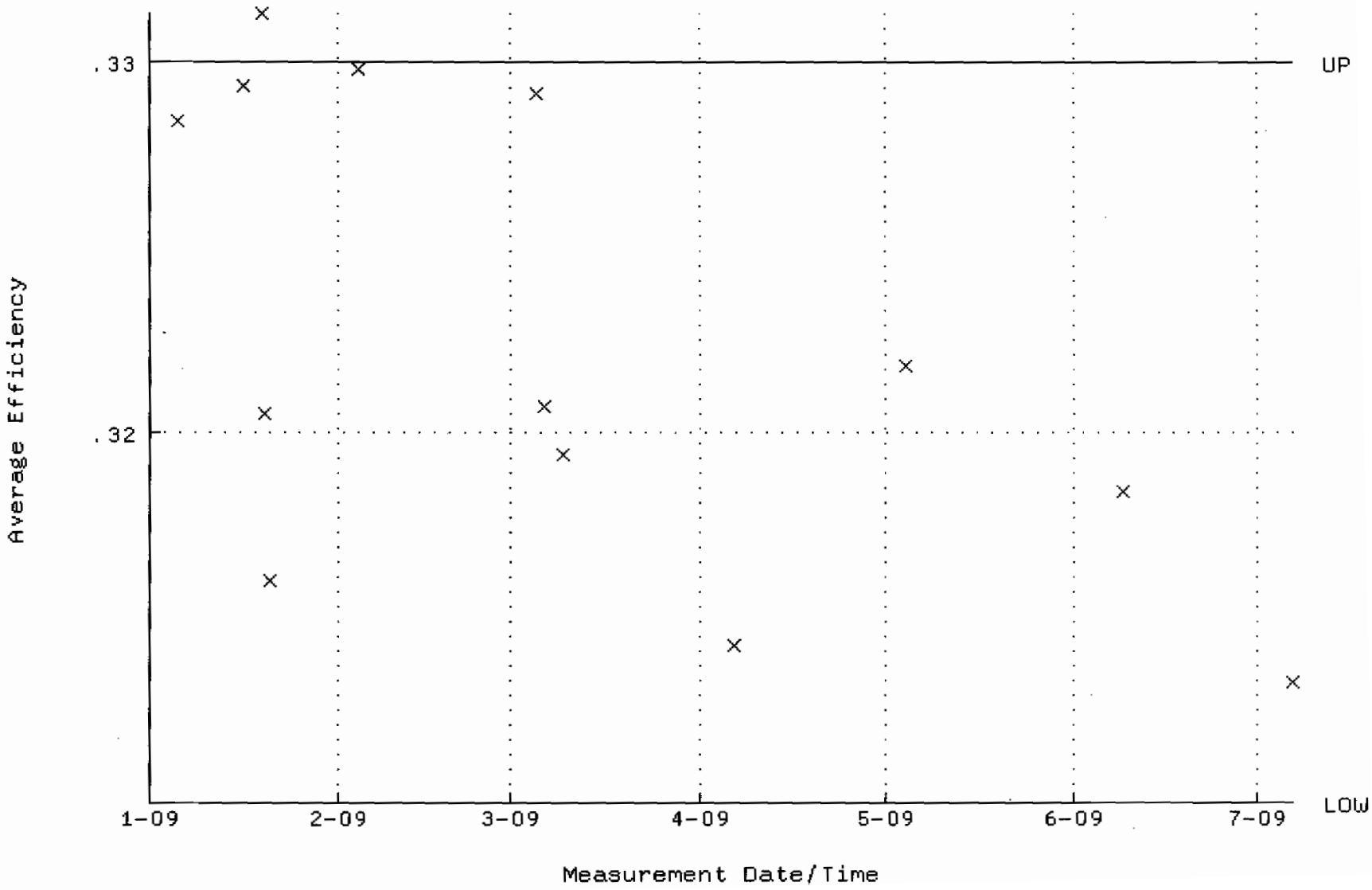

QA filename : DKA100:[ENV_ALPHA.QA.W]W033.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-JAN-2009 12:56:58 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 81.6649 through 90.2613

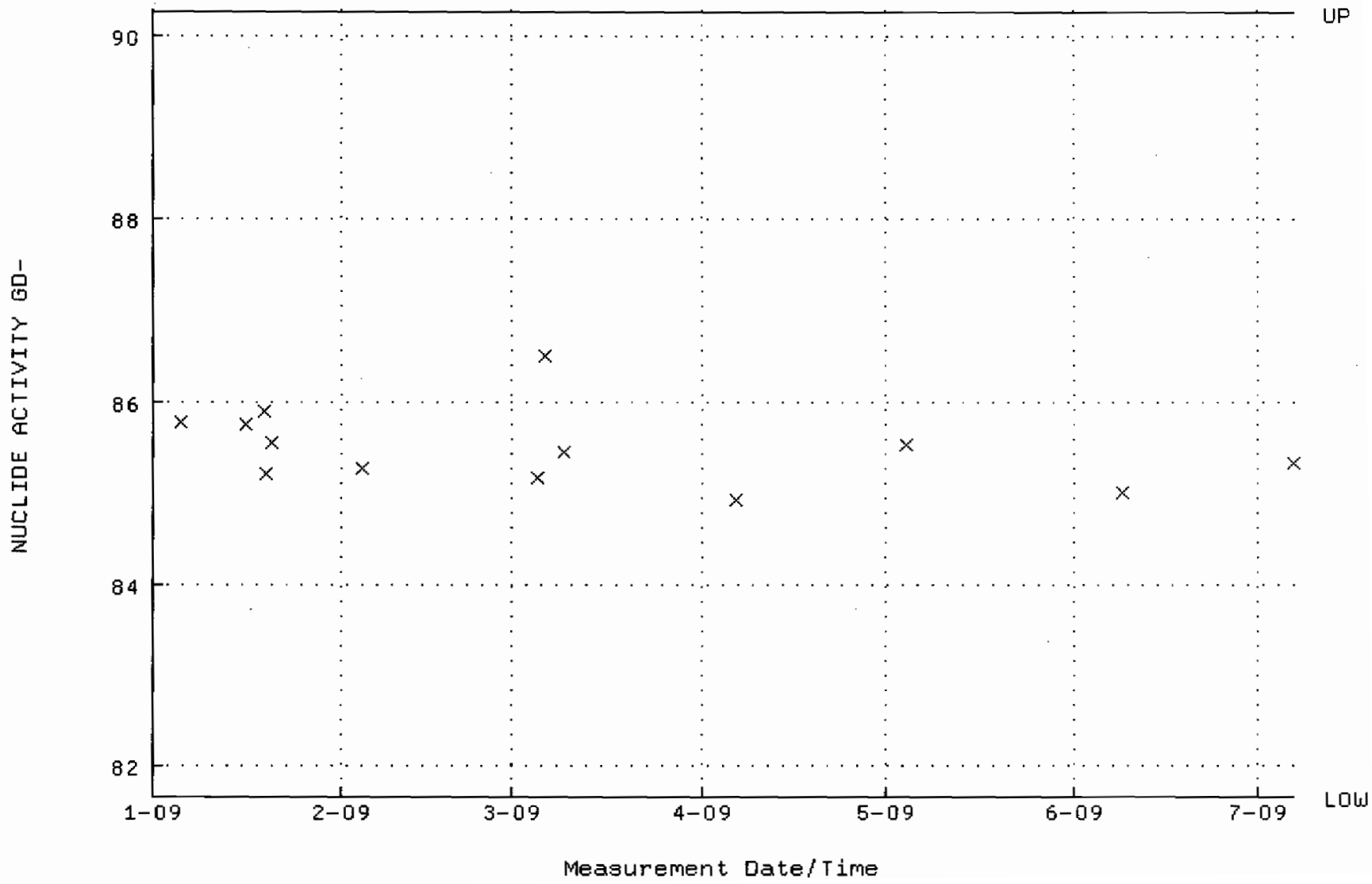

QA filename : DKA100:[ENV_ALPHA.QA.B]B033.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:28 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

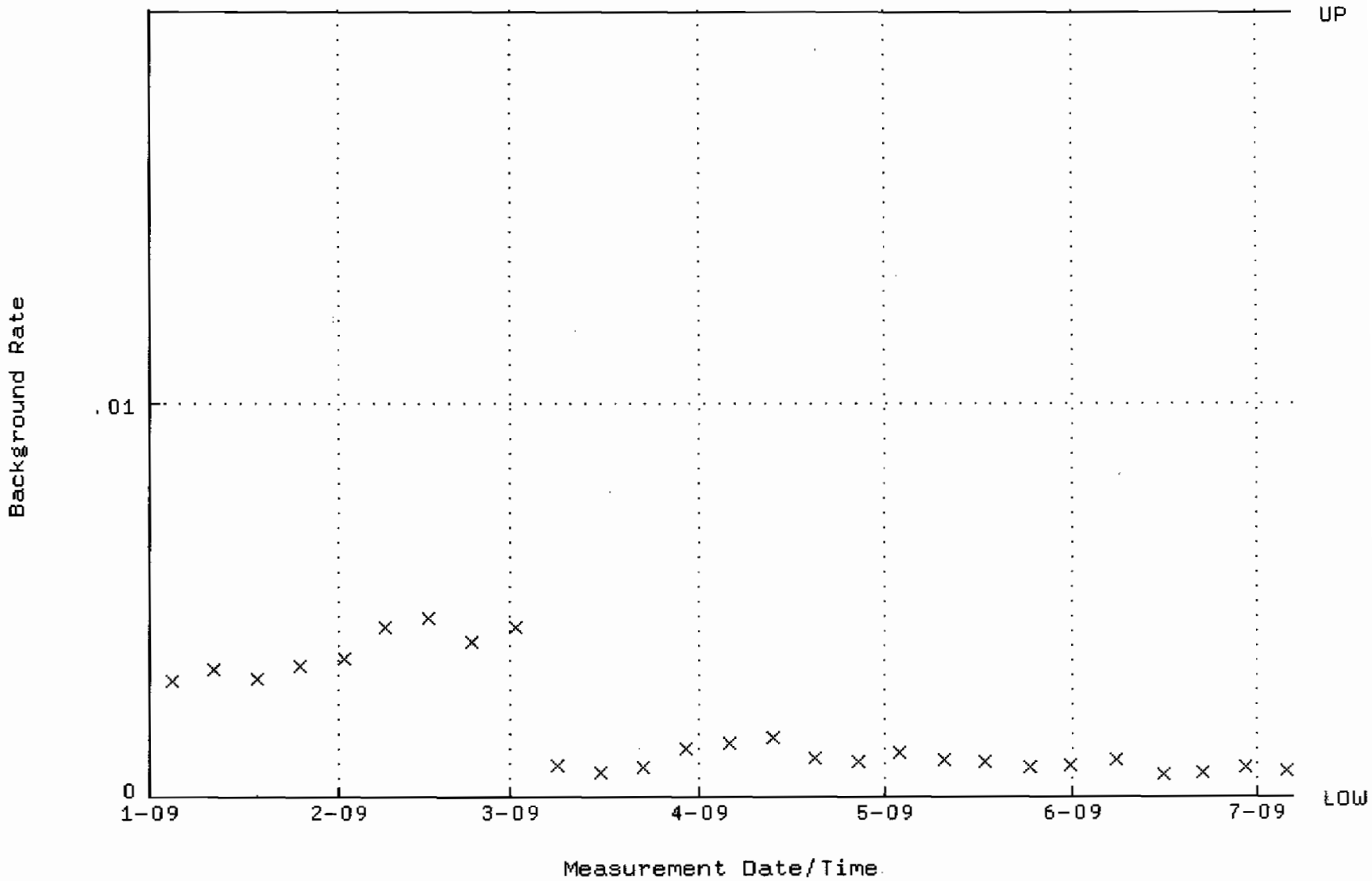

QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.302750 through 0.322750

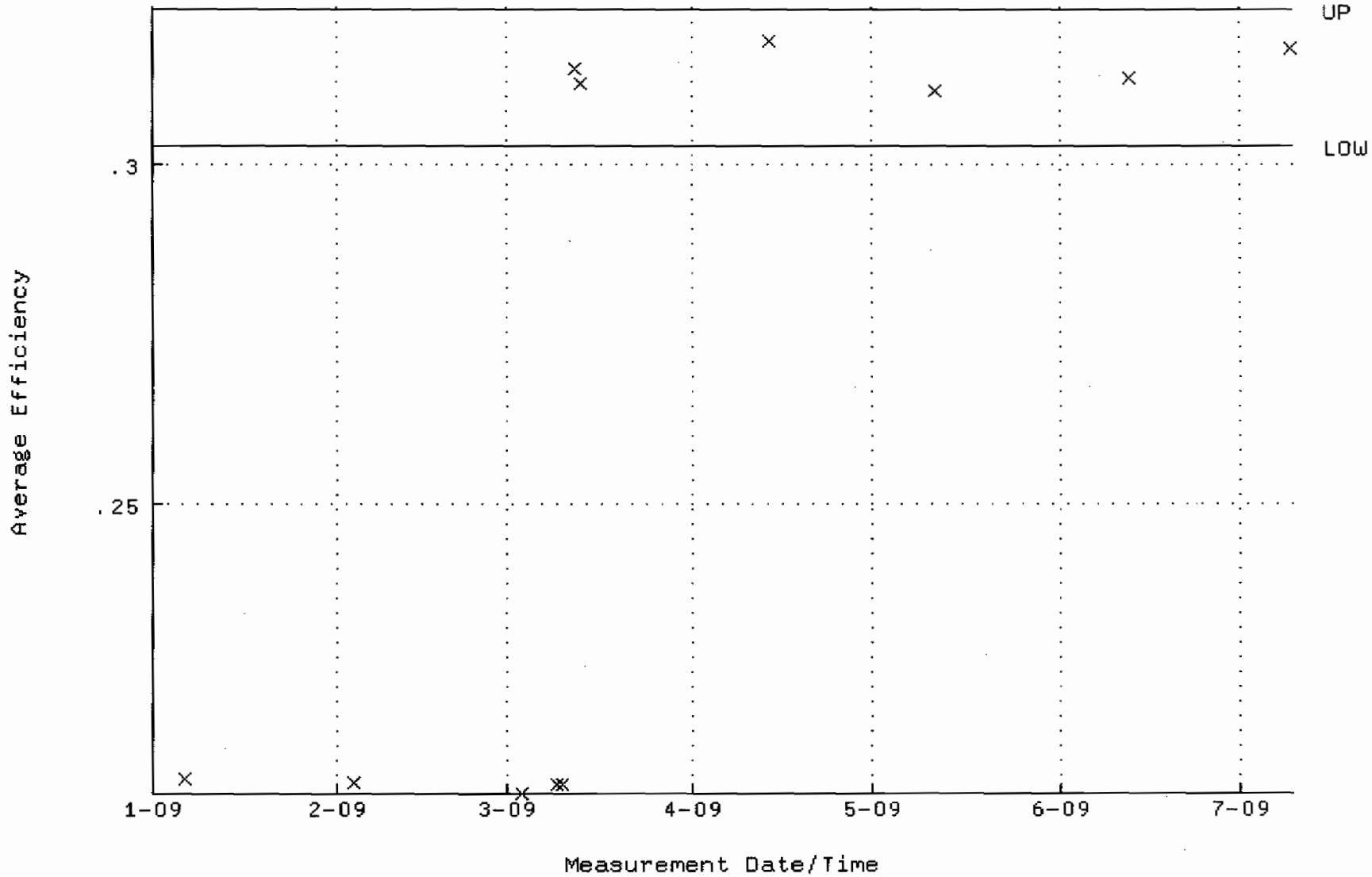

QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 86.8638 through 96.0074

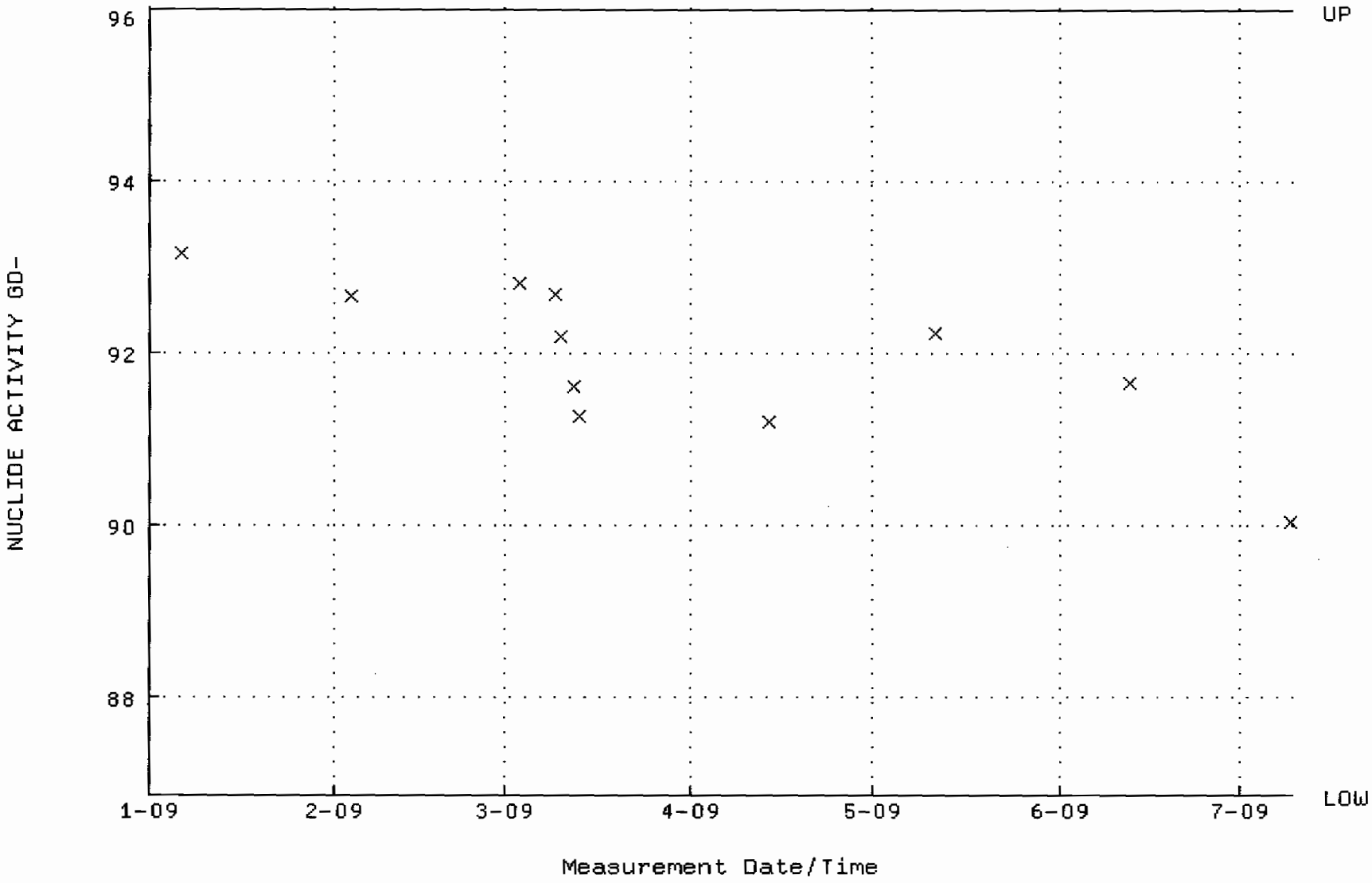

QA filename : DKA100:[ENV_ALPHA.QA.B]B065.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

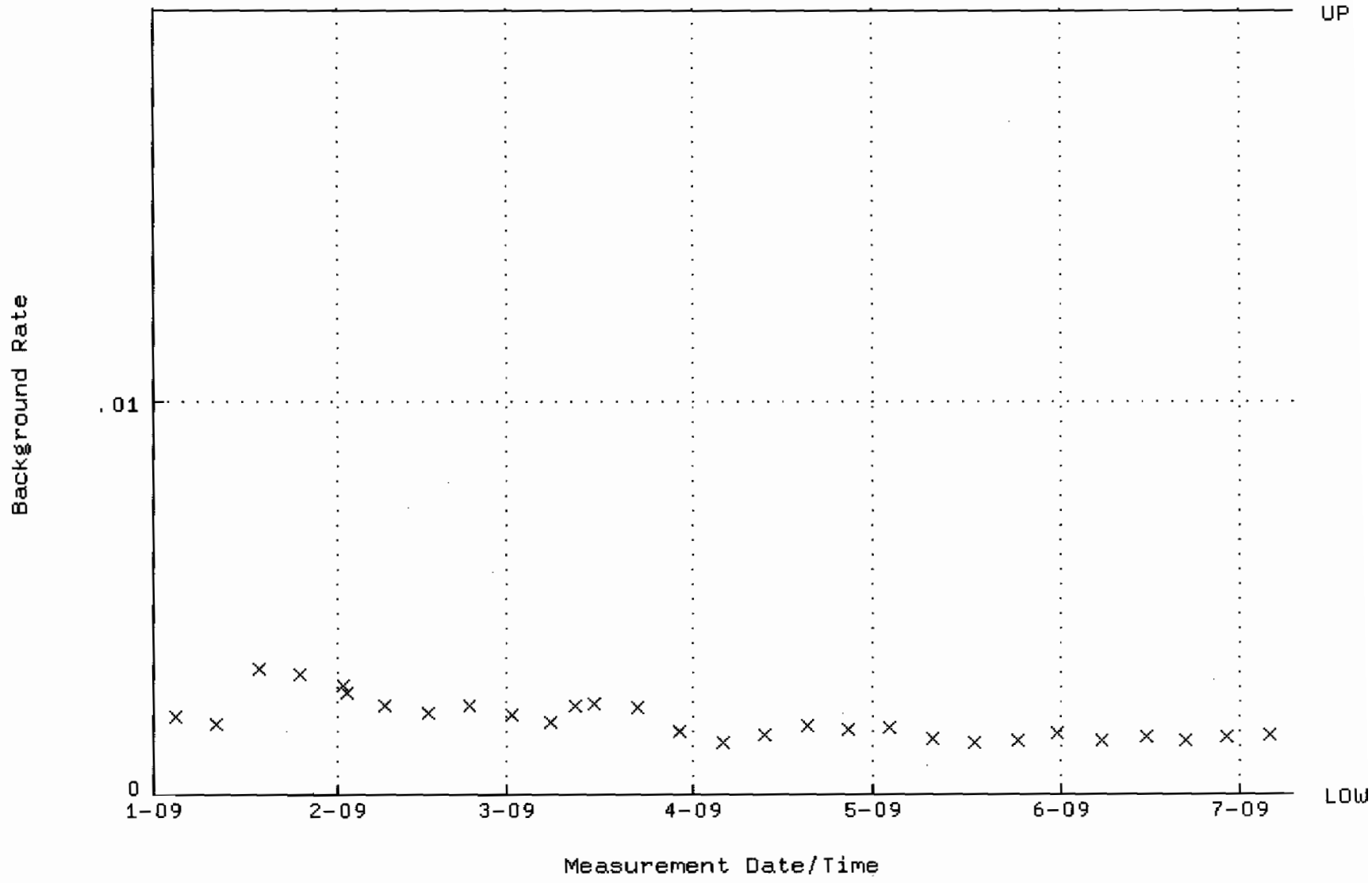

QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.316597 through 0.336597

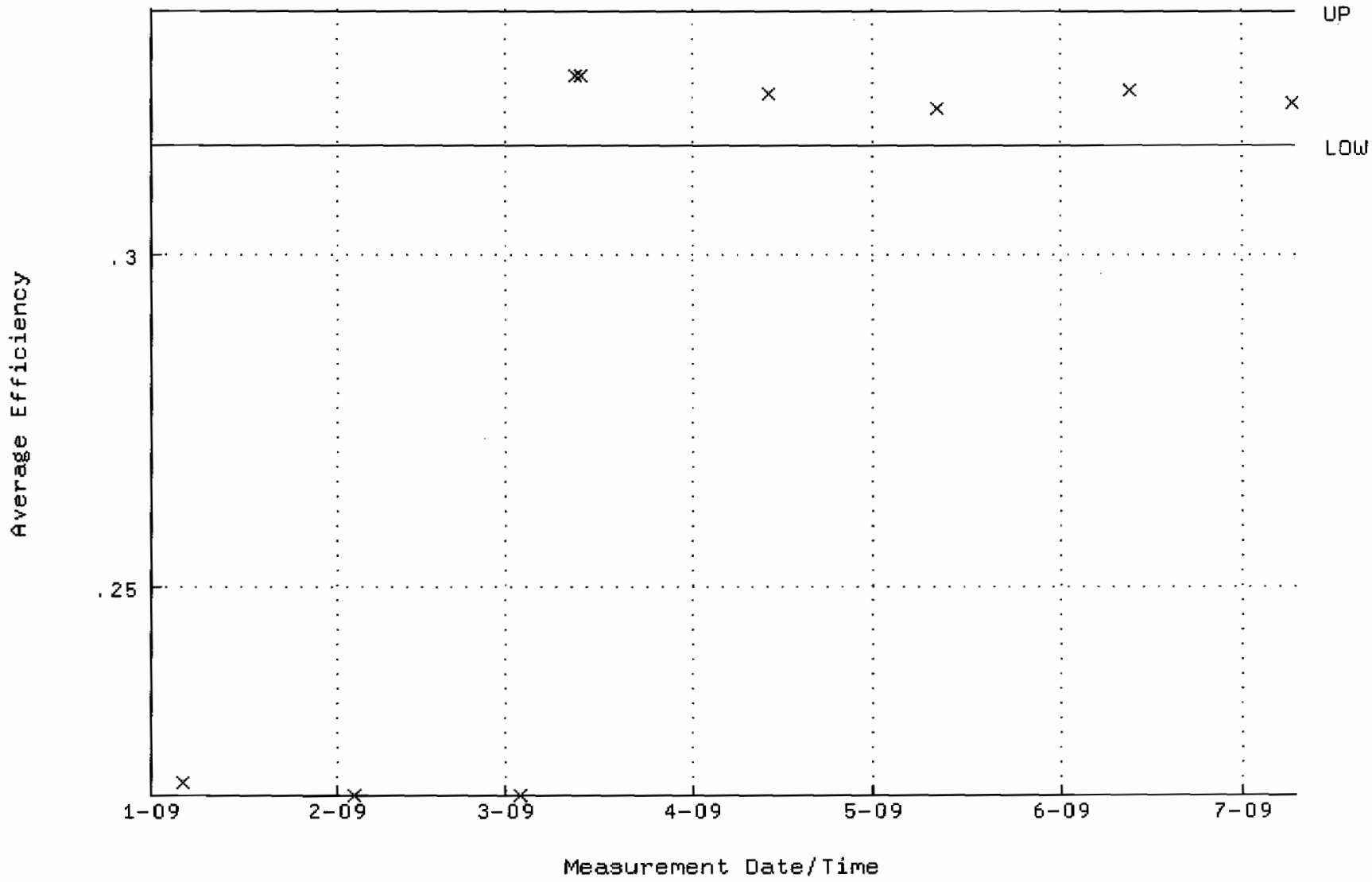

QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 86.2683 through 95.3491

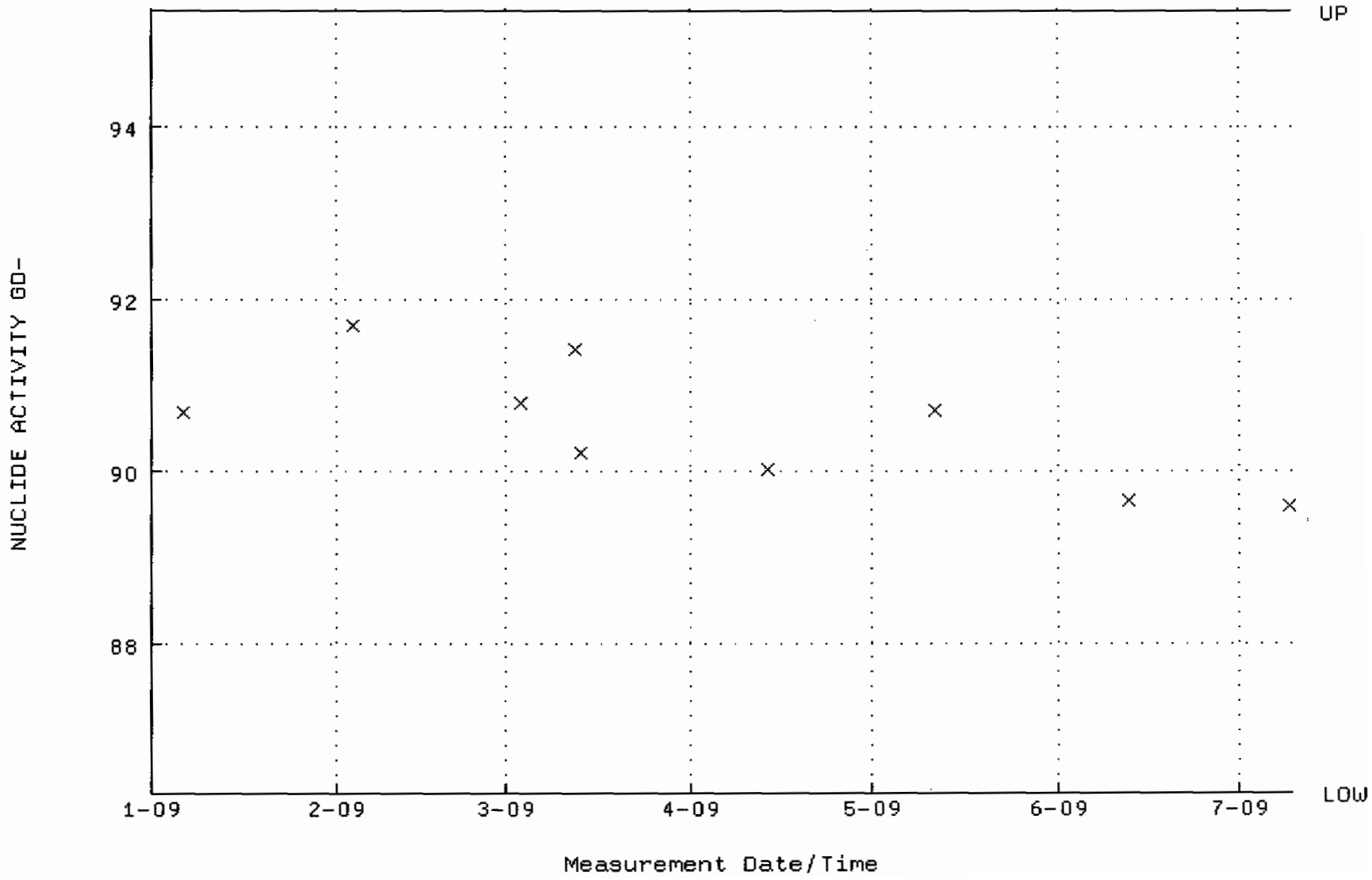

QA filename : DKA100:[ENV_ALPHA.QA.B]B067.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

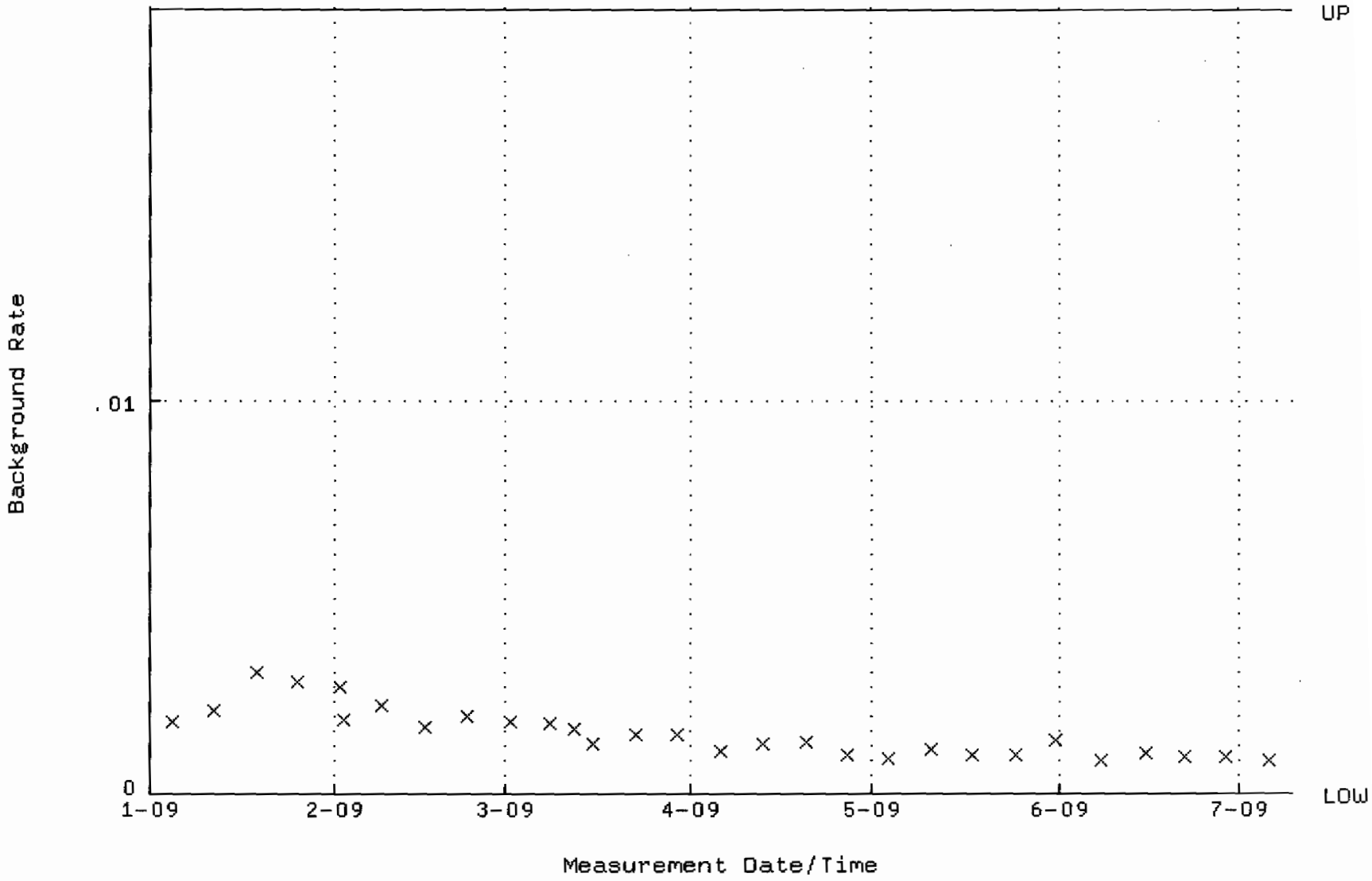

QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-FEB-2009 12:12:09 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.289178 through 0.309178

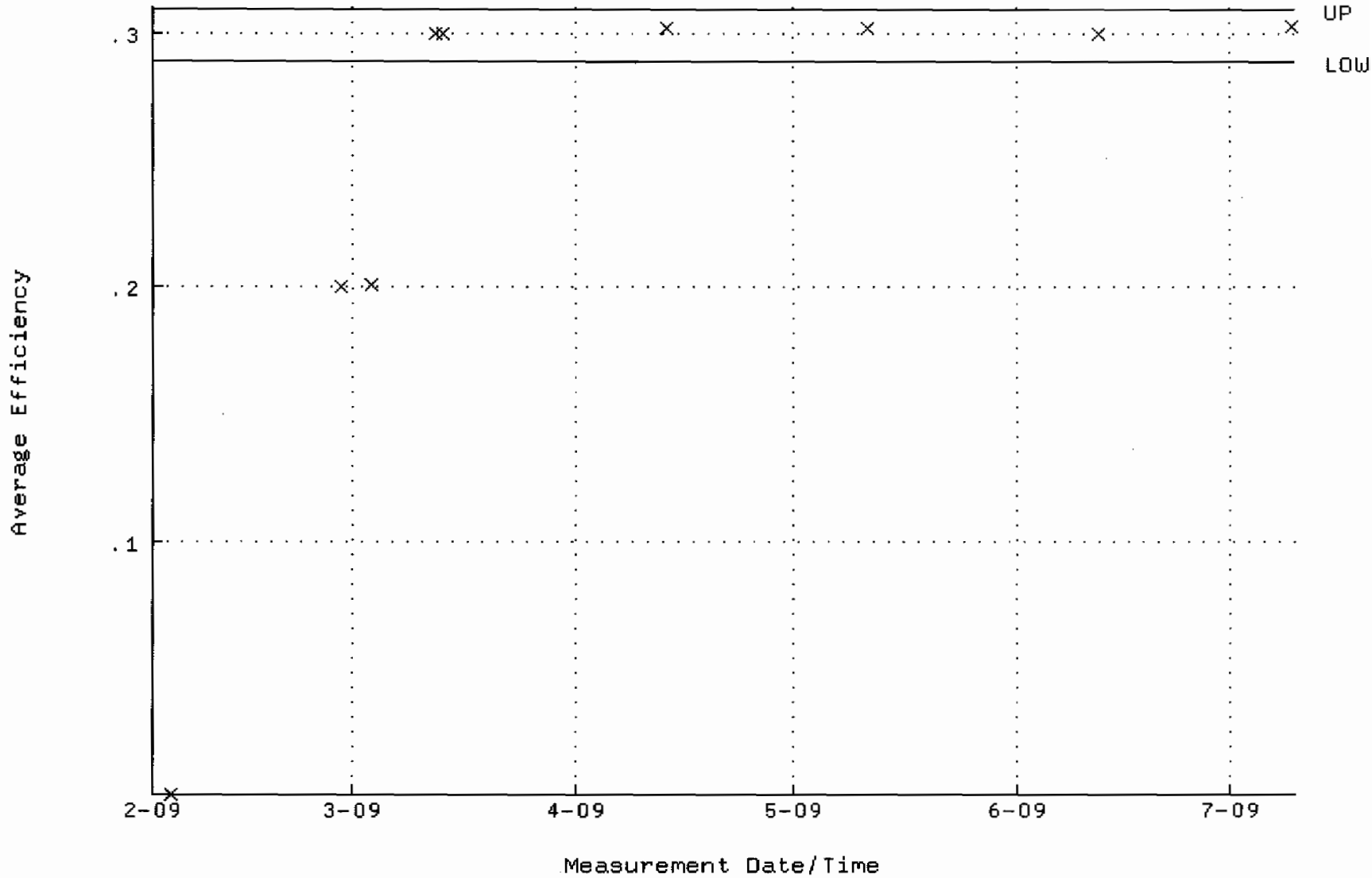

QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-FEB-2009 12:12:09 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 87.4419 through 96.6463

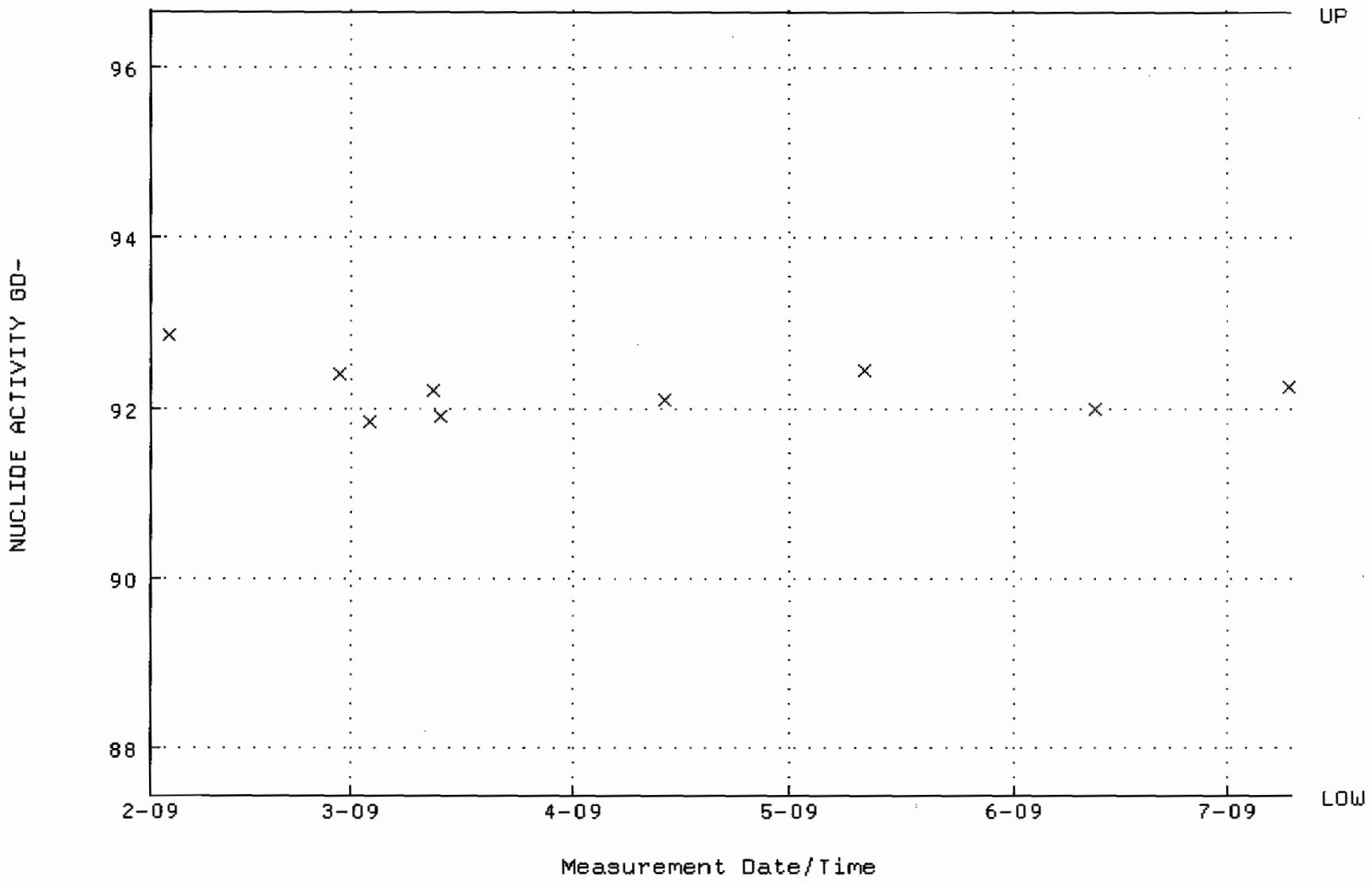

QA filename : DKA100:[ENV_ALPHA.QA.B]B068.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

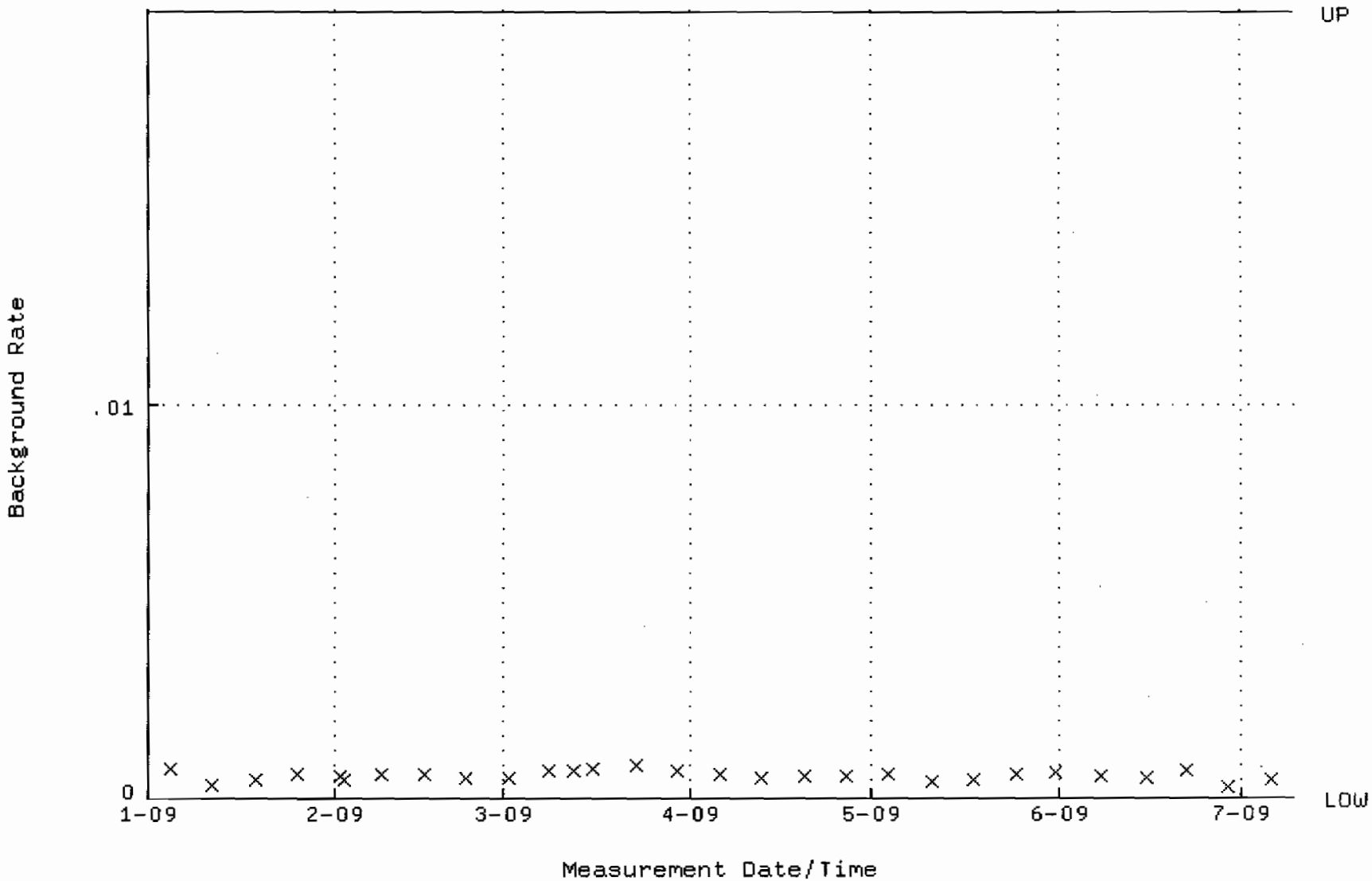

QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.306636 through 0.326636

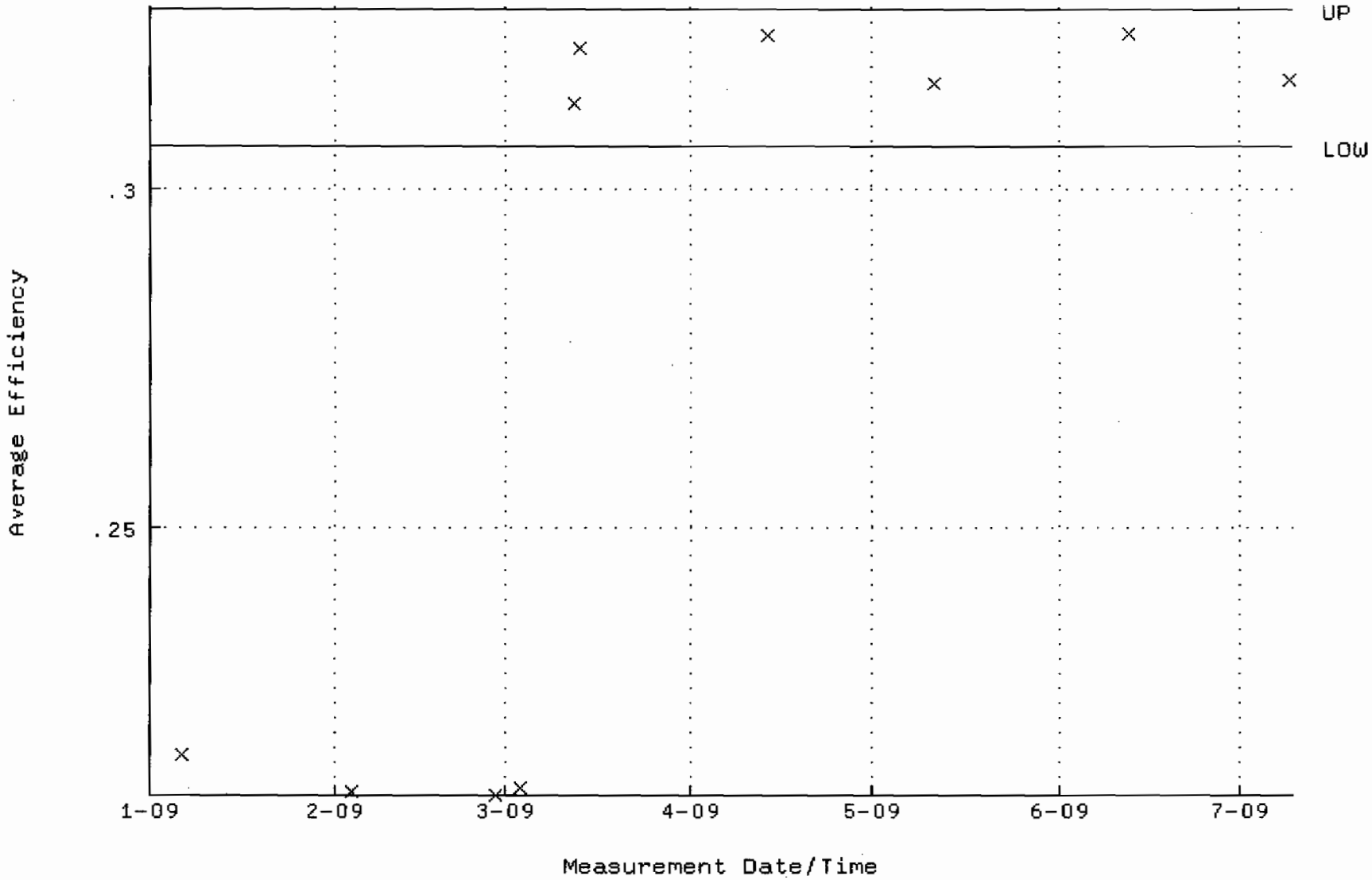

QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 89.6479 through 99.0845

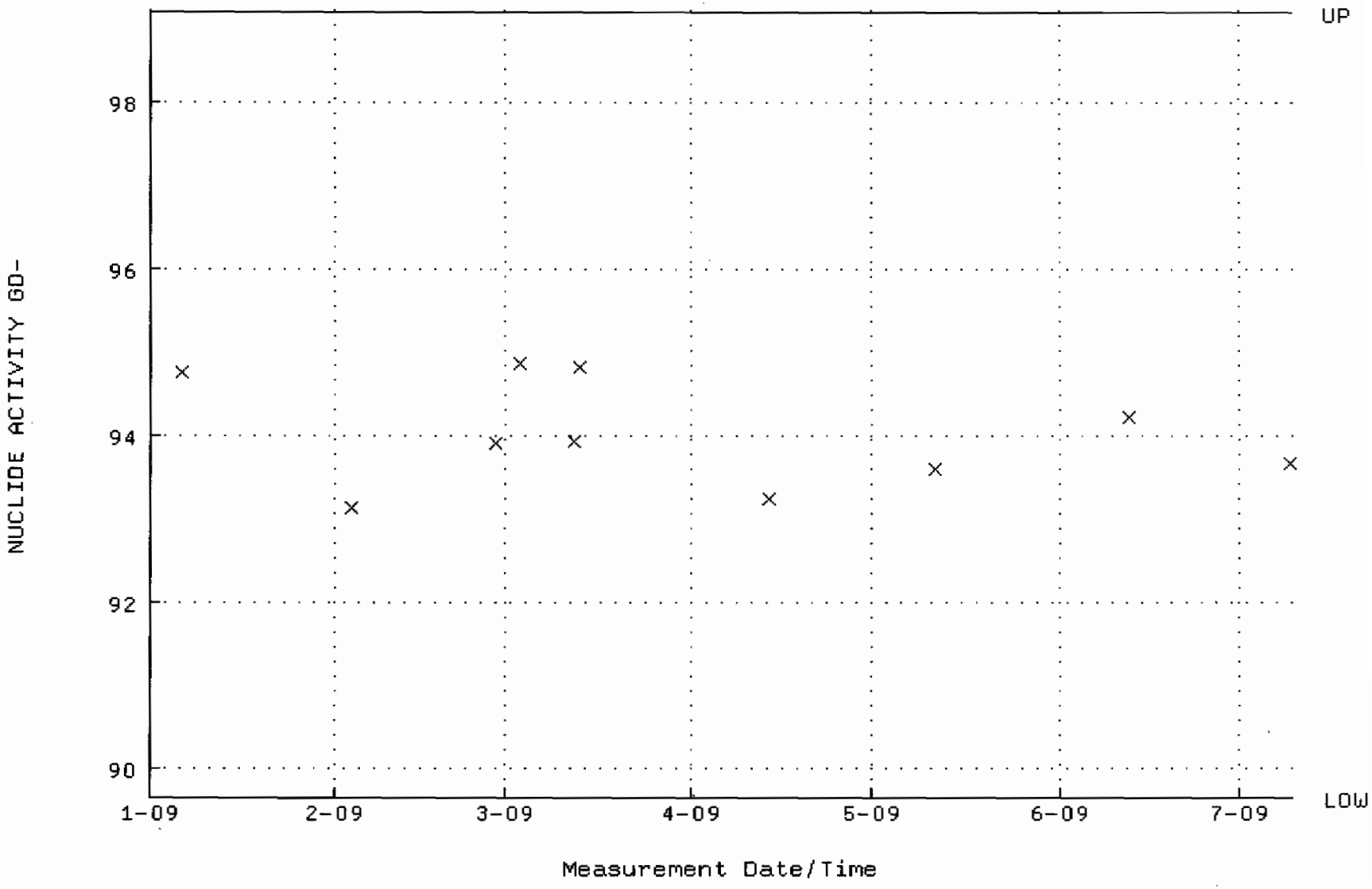

QA filename : DKA100:[ENV_ALPHA.QA.B]B069.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

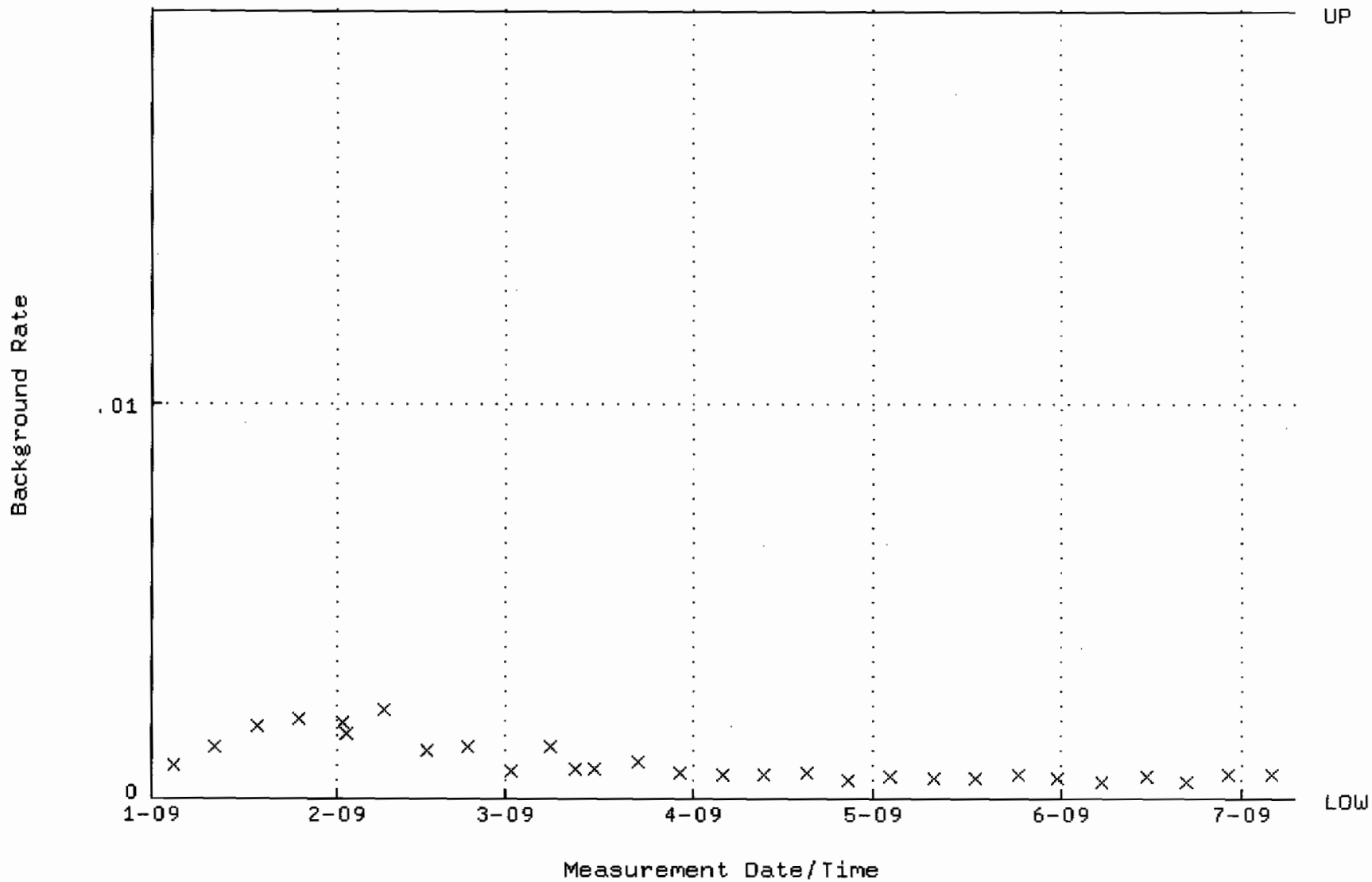

QA filename : DKA100:[ENV_ALPHA.QA.W]W070.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.342785 through 0.362785

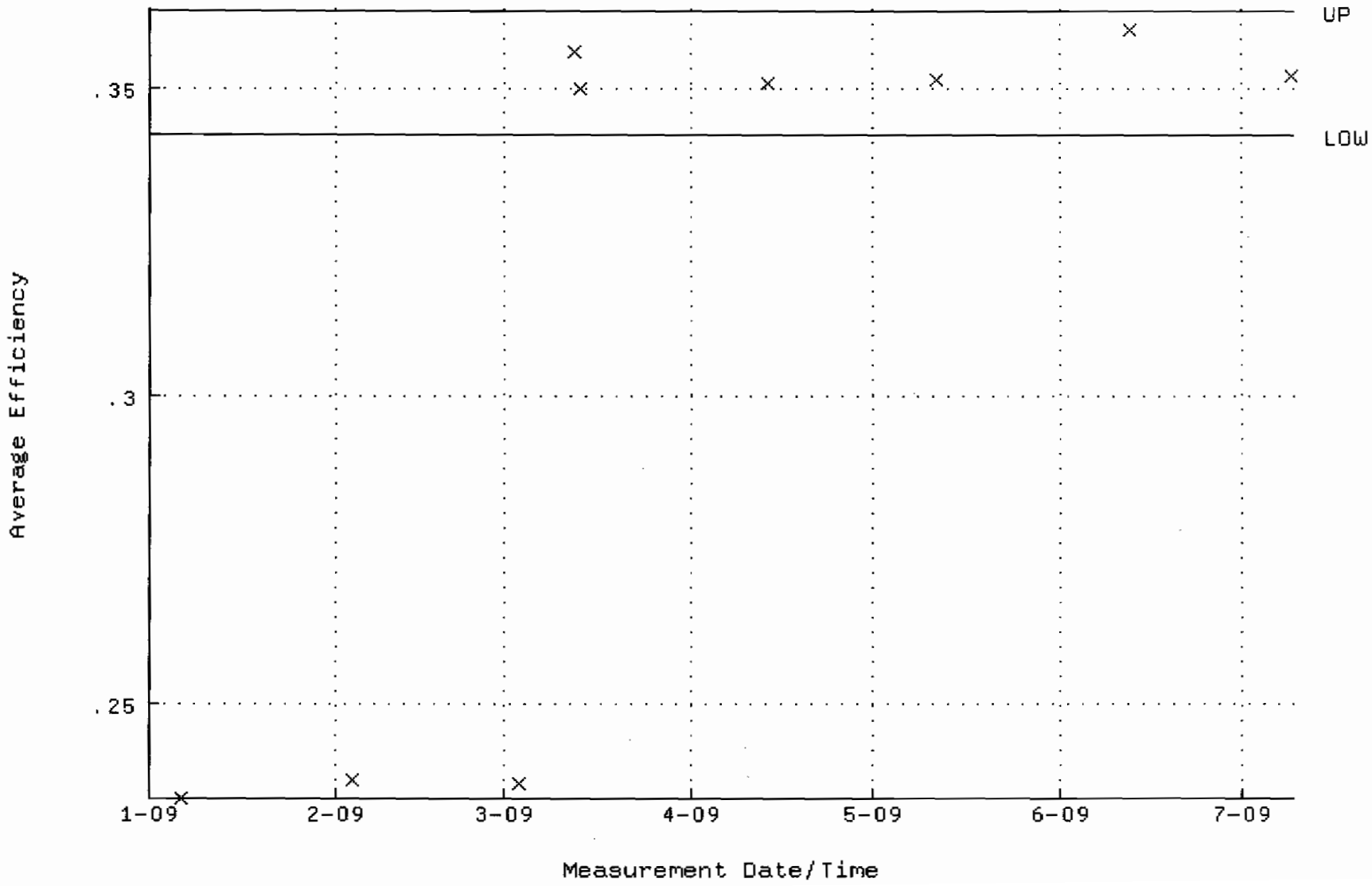

QA filename : DKA100:[ENV_ALPHA.QA.W]W070.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 85.5293 through 94.5323

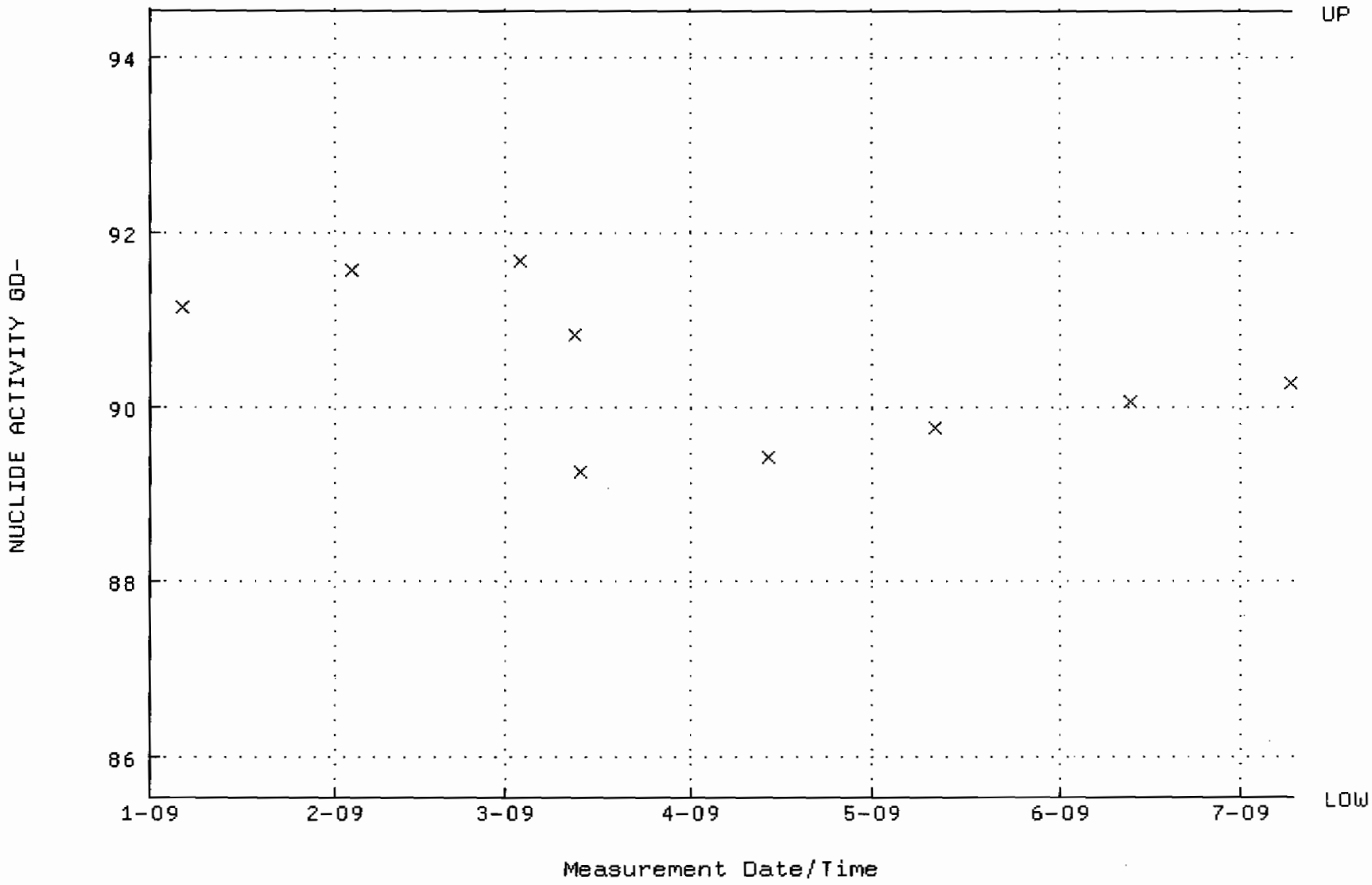

QA filename : DKA100:[ENV_ALPHA.QA.B]B070.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

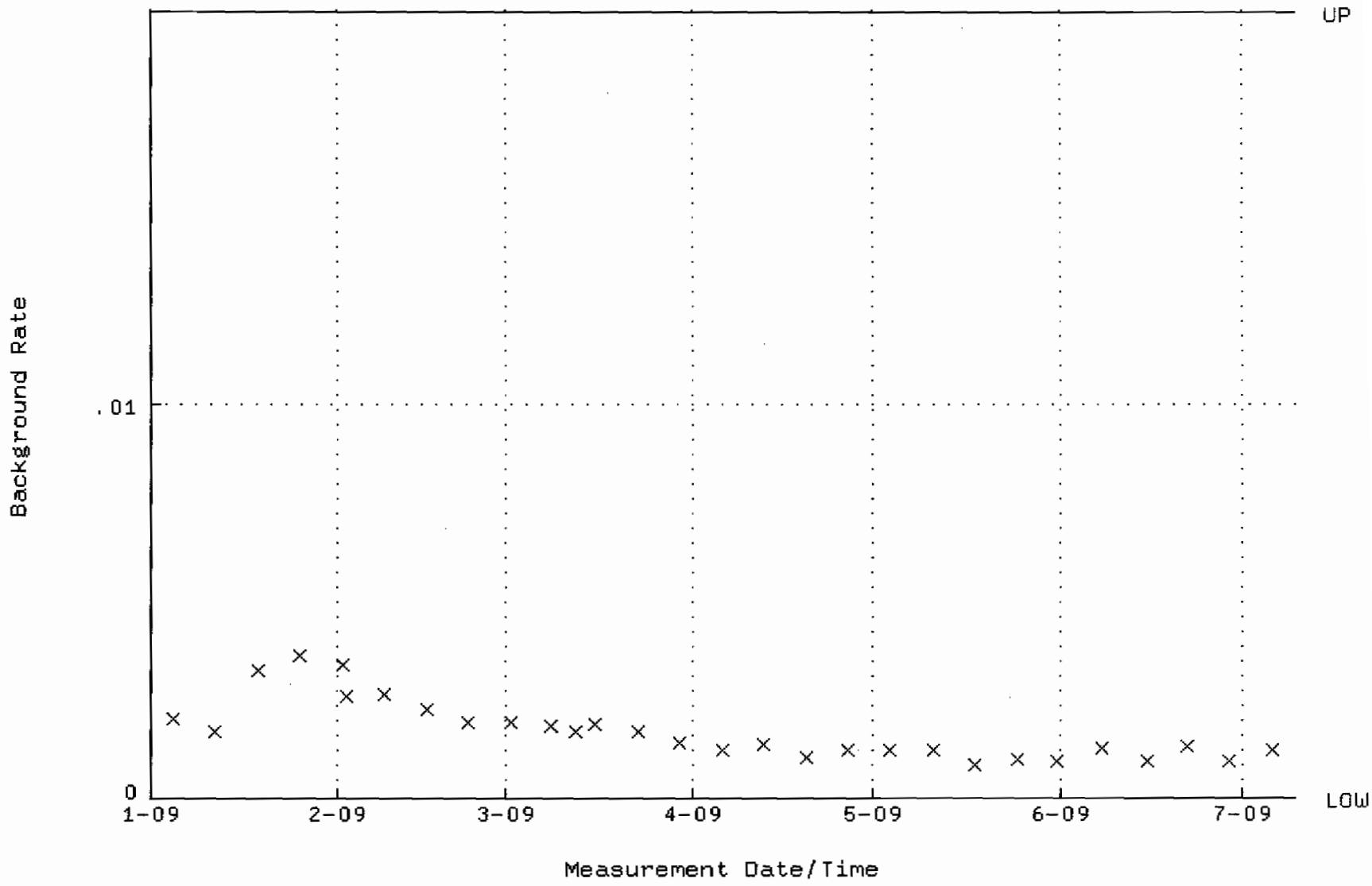

QA filename : DKA100:[ENV_ALPHA.QA.W]W133.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:19 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.235007 through 0.255007

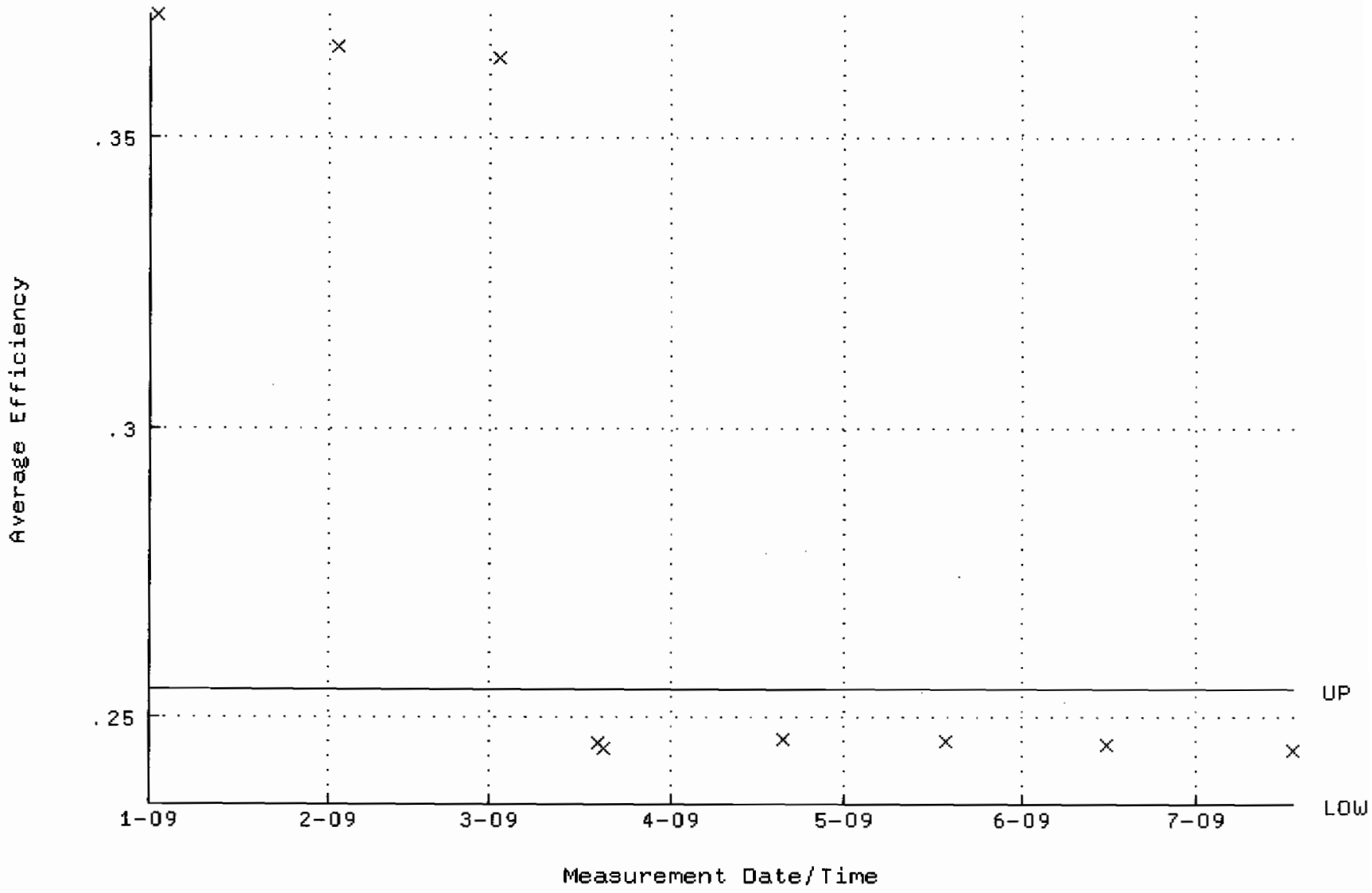

QA filename : DKA100:[ENV_ALPHA.QA.W]W133.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:19 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 90.1899 through 99.6835

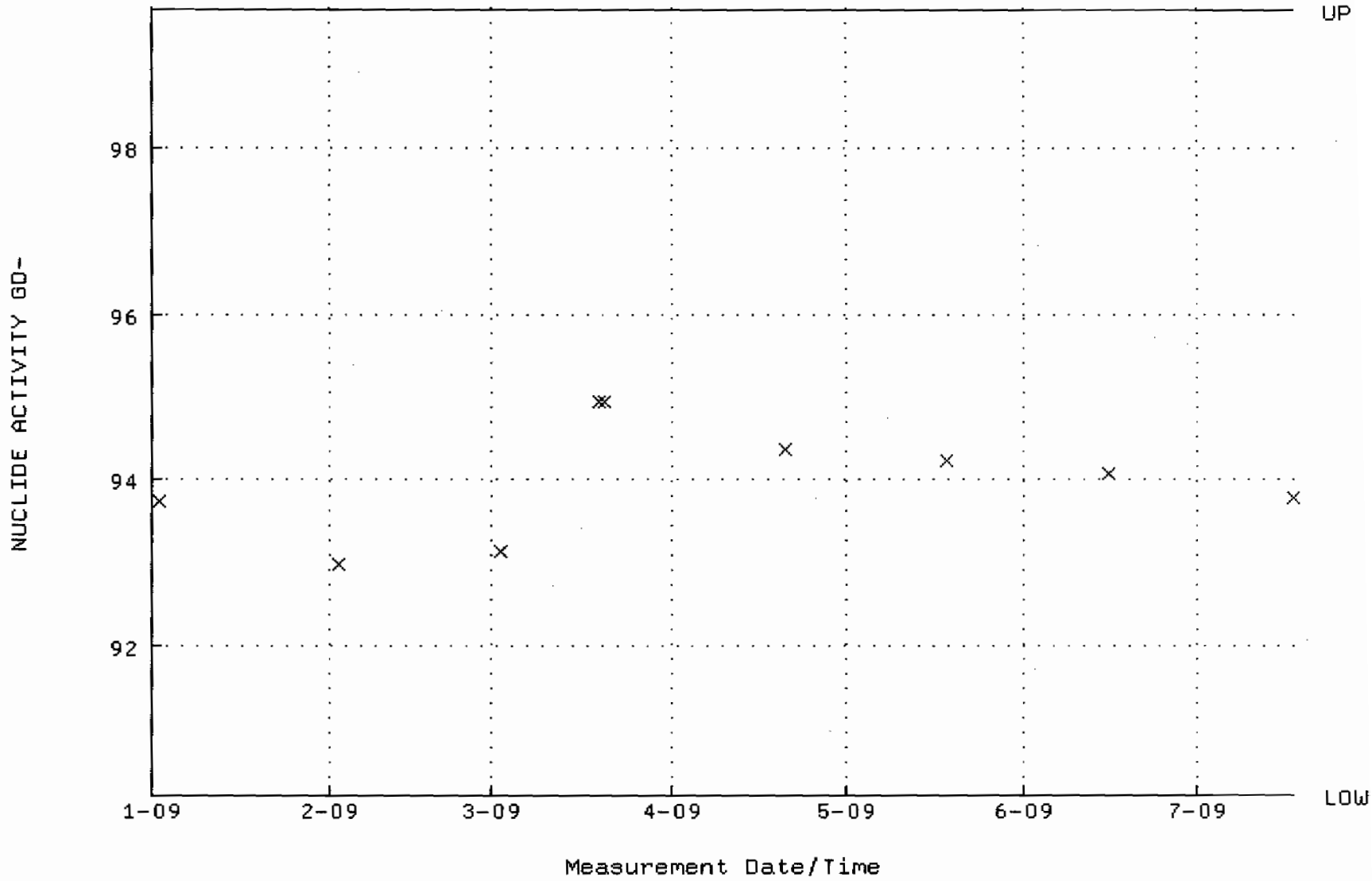

QA filename : DKA100:[ENV_ALPHA.QA.B]B133.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:14 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

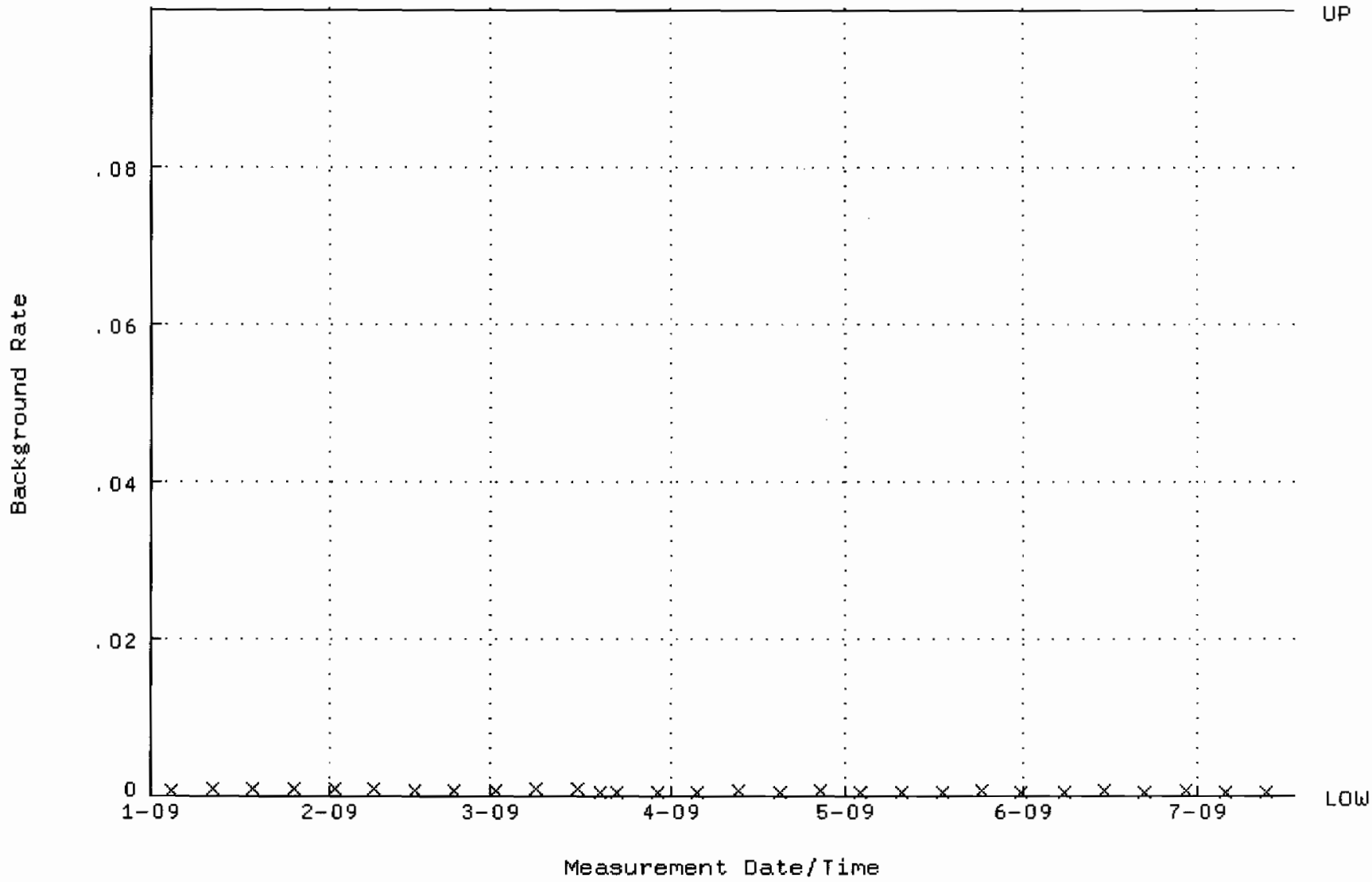

QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:23 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.236455 through 0.256455

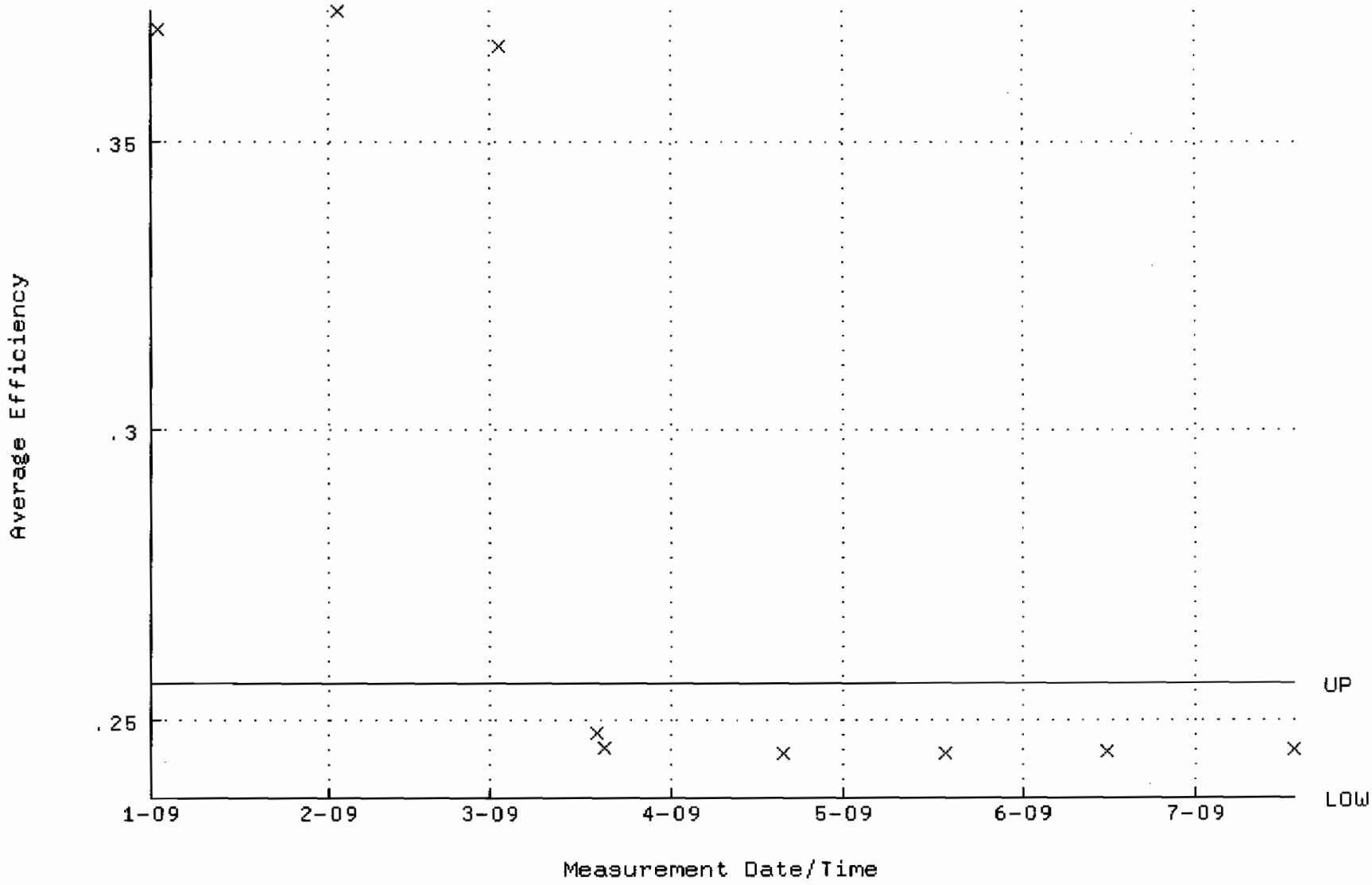

QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:23 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 87.6576 through 96.8848

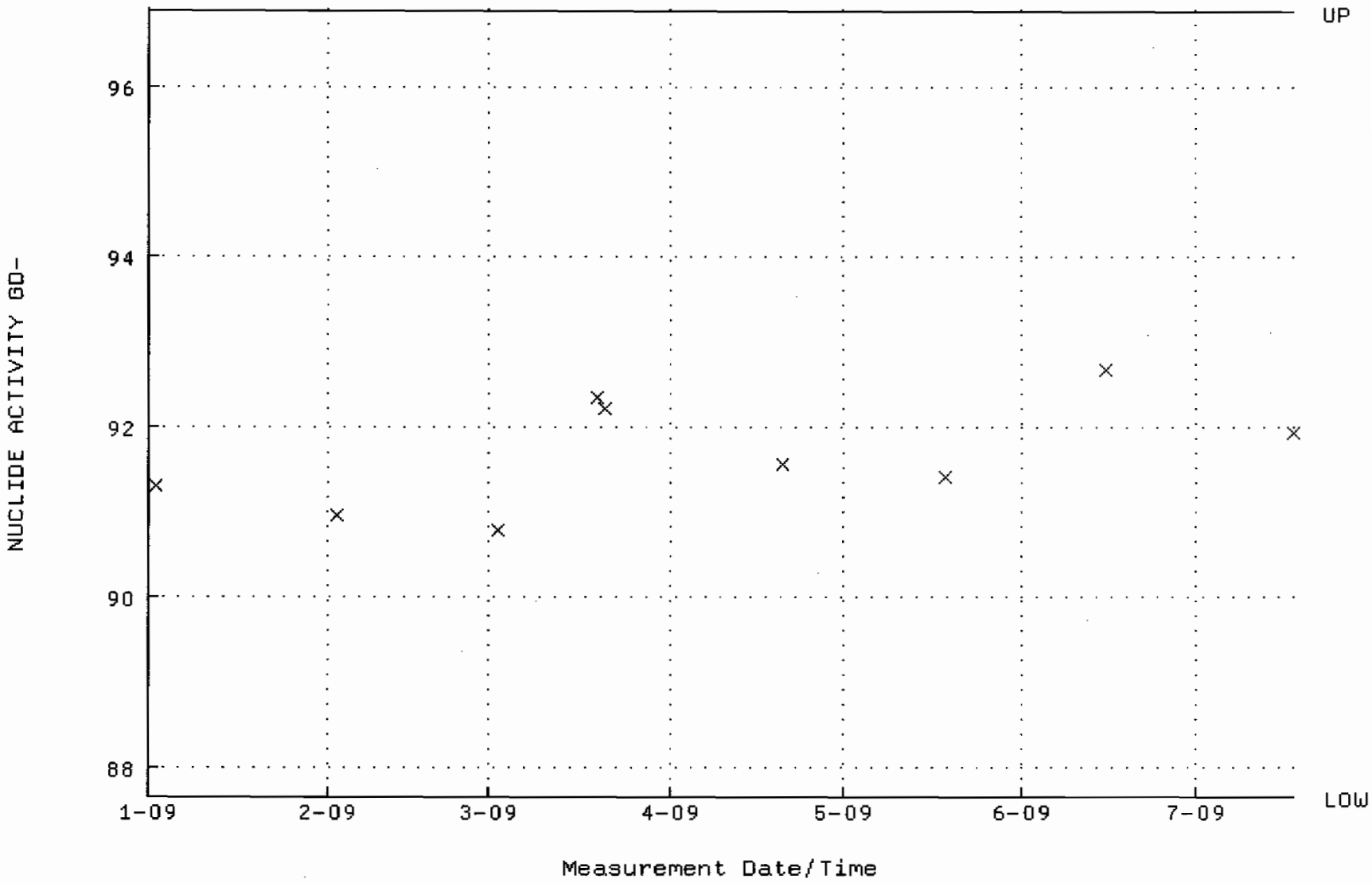

QA filename : DKA100:[ENV_ALPHA.QA.B]B134.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:18 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

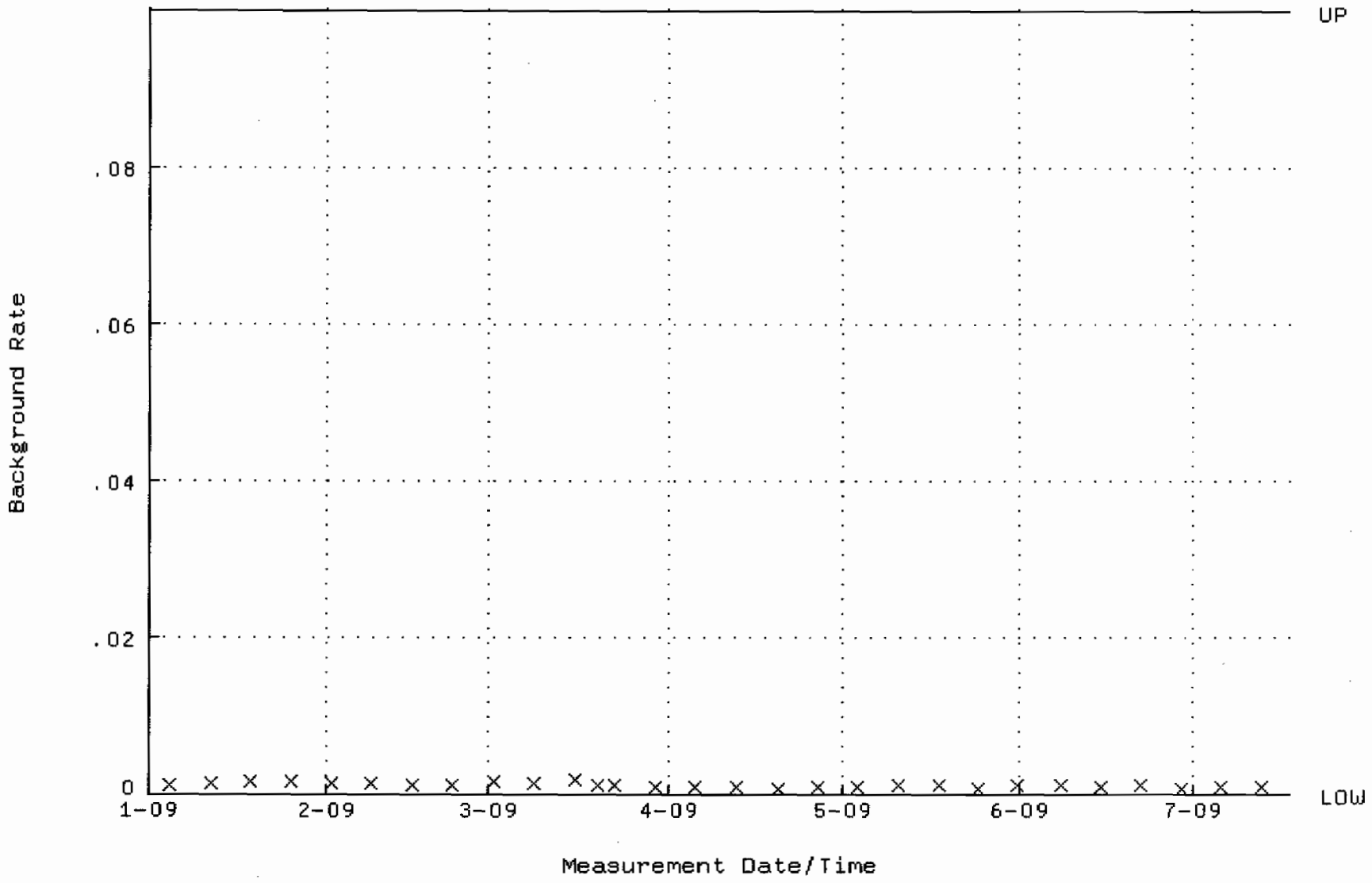

QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:28 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.244305 through 0.264305

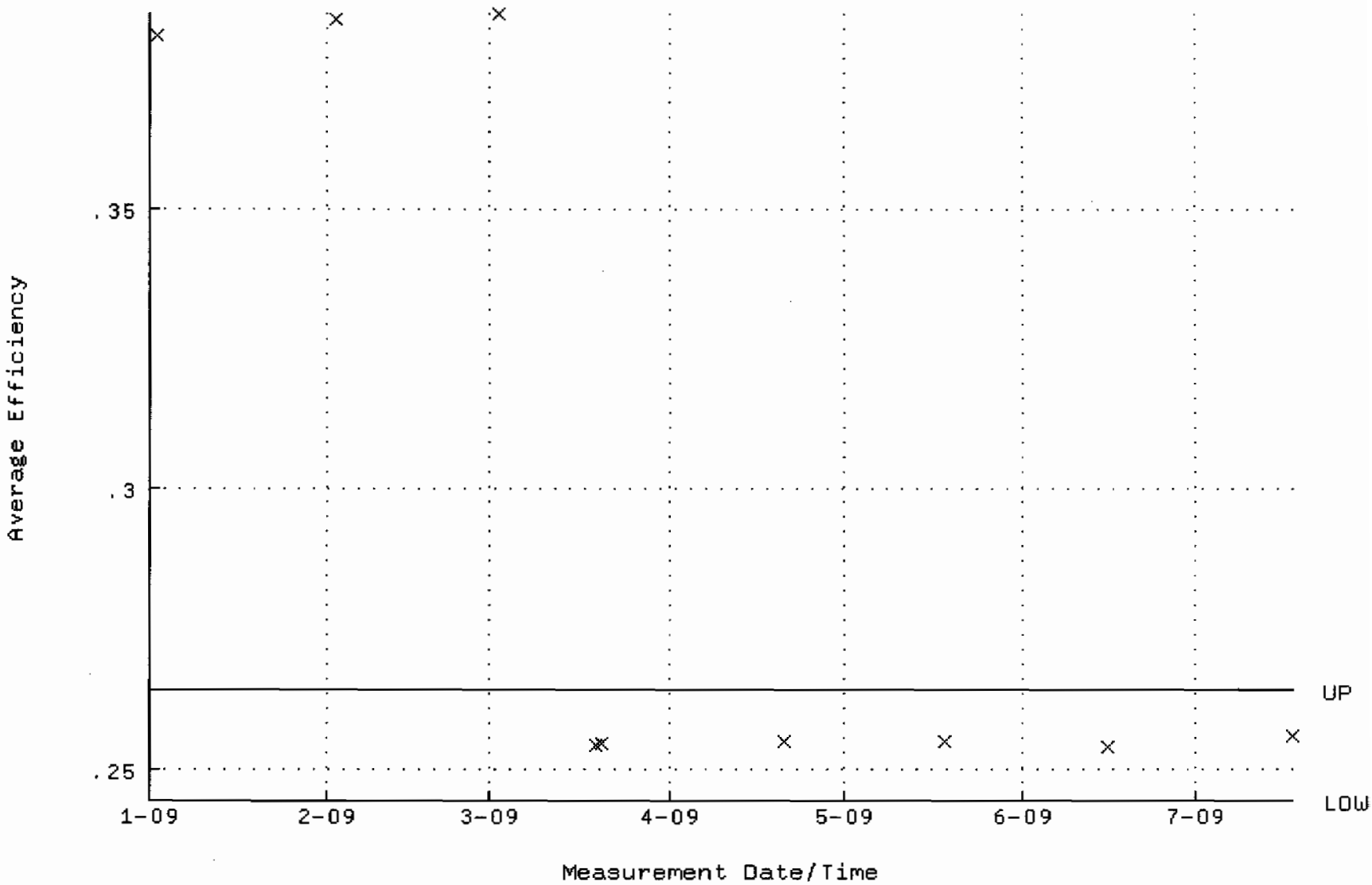

QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:28 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 87.1482 through 96.3217

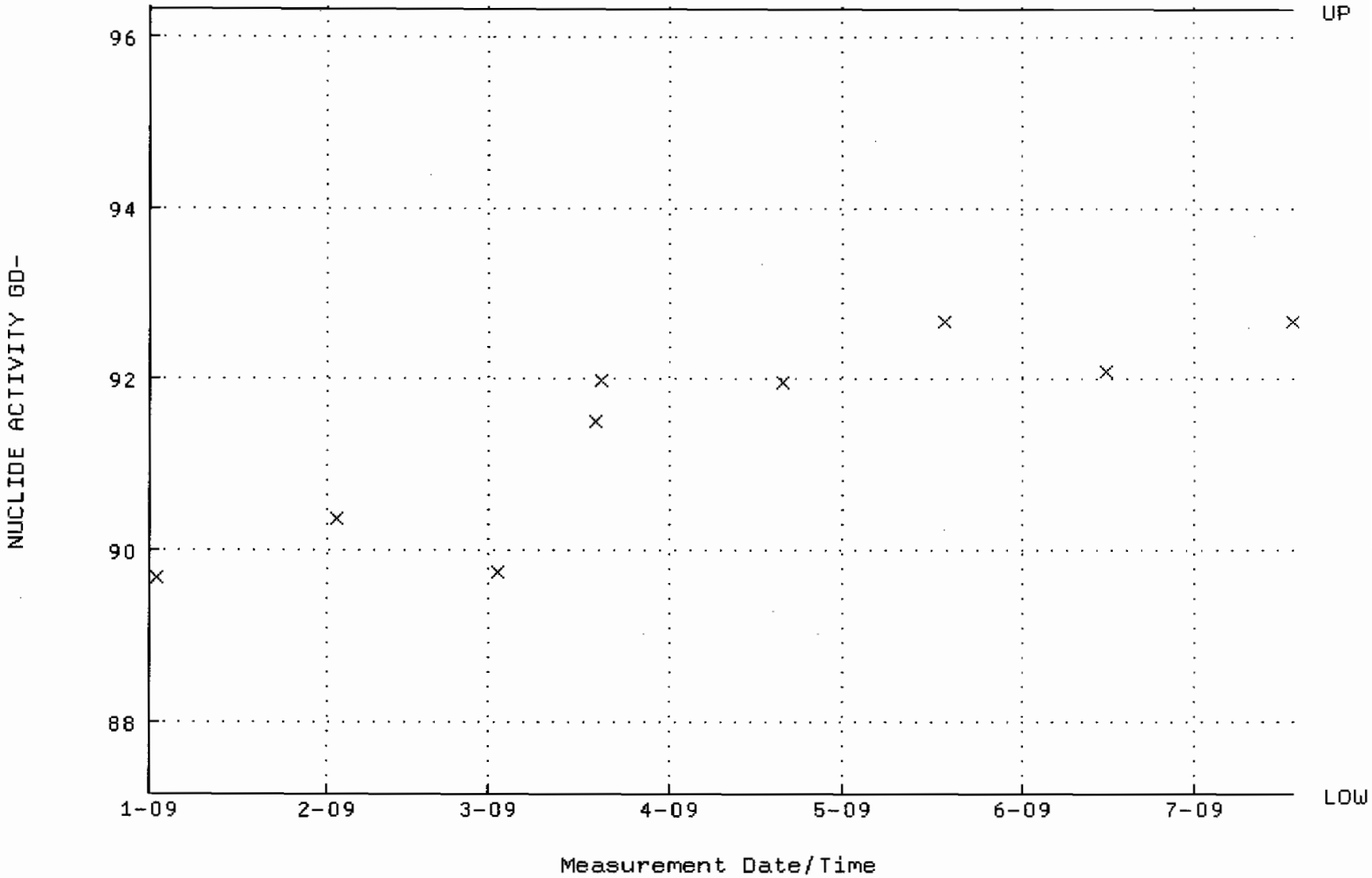

QA filename : DKA100:[ENV_ALPHA.QA.B]B135.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:22 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

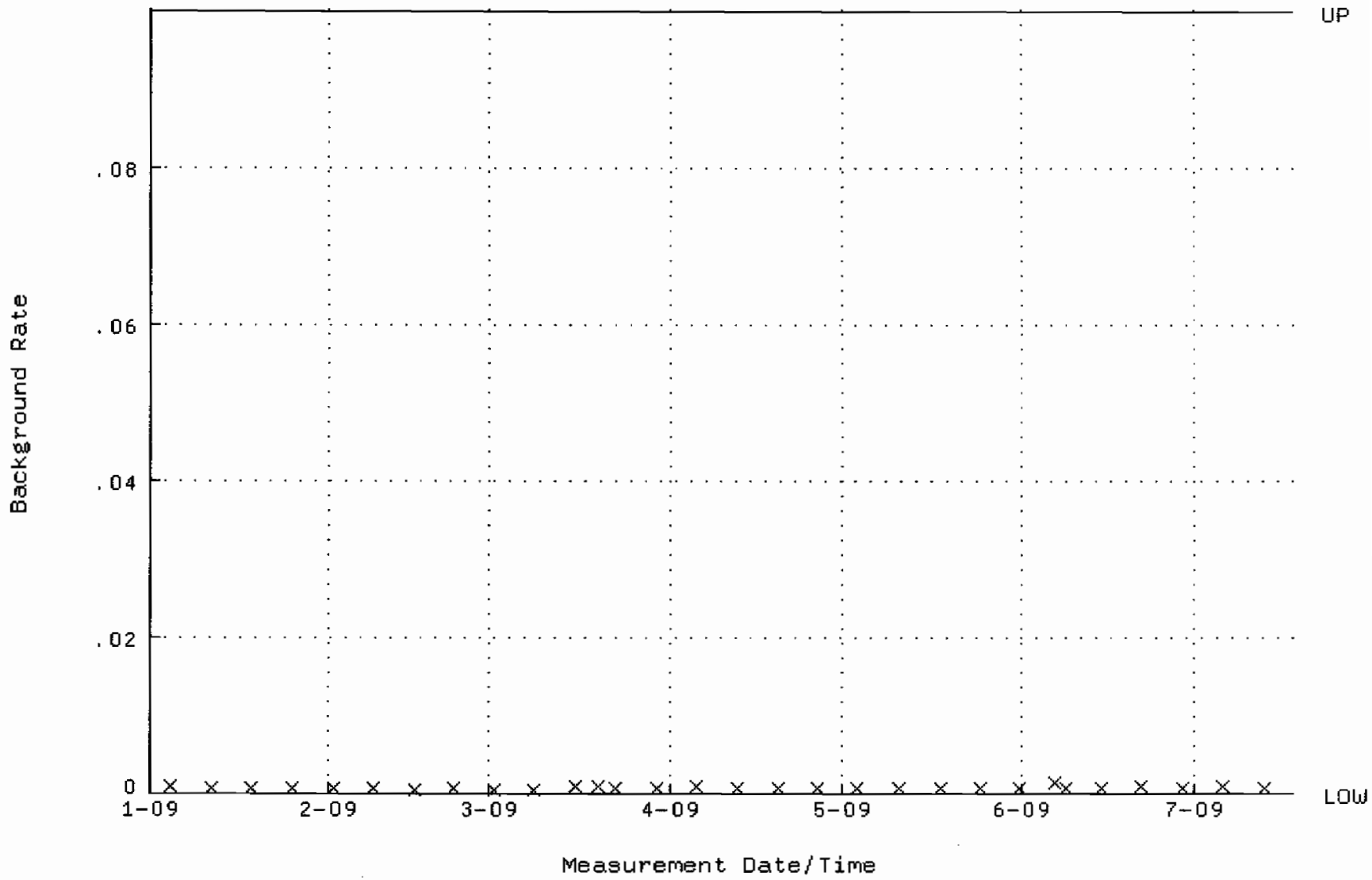

QA filename : DKA100:[ENV_ALPHA.QA.W]W151.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:42 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.233693 through 0.253693

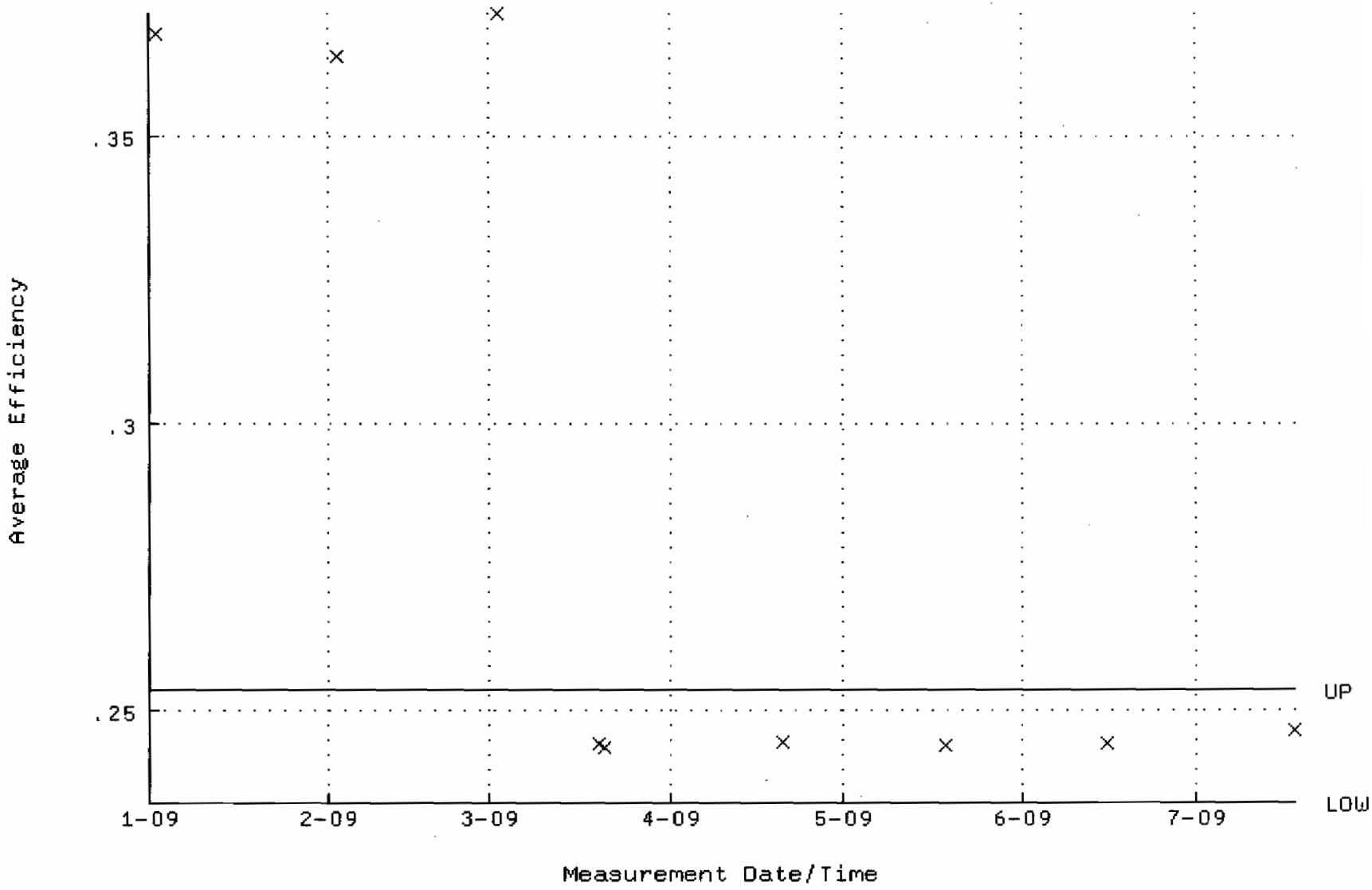

QA filename : DKA100:[ENV_ALPHA.QA.W]W151.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:42 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 86.5749 through 95.6881

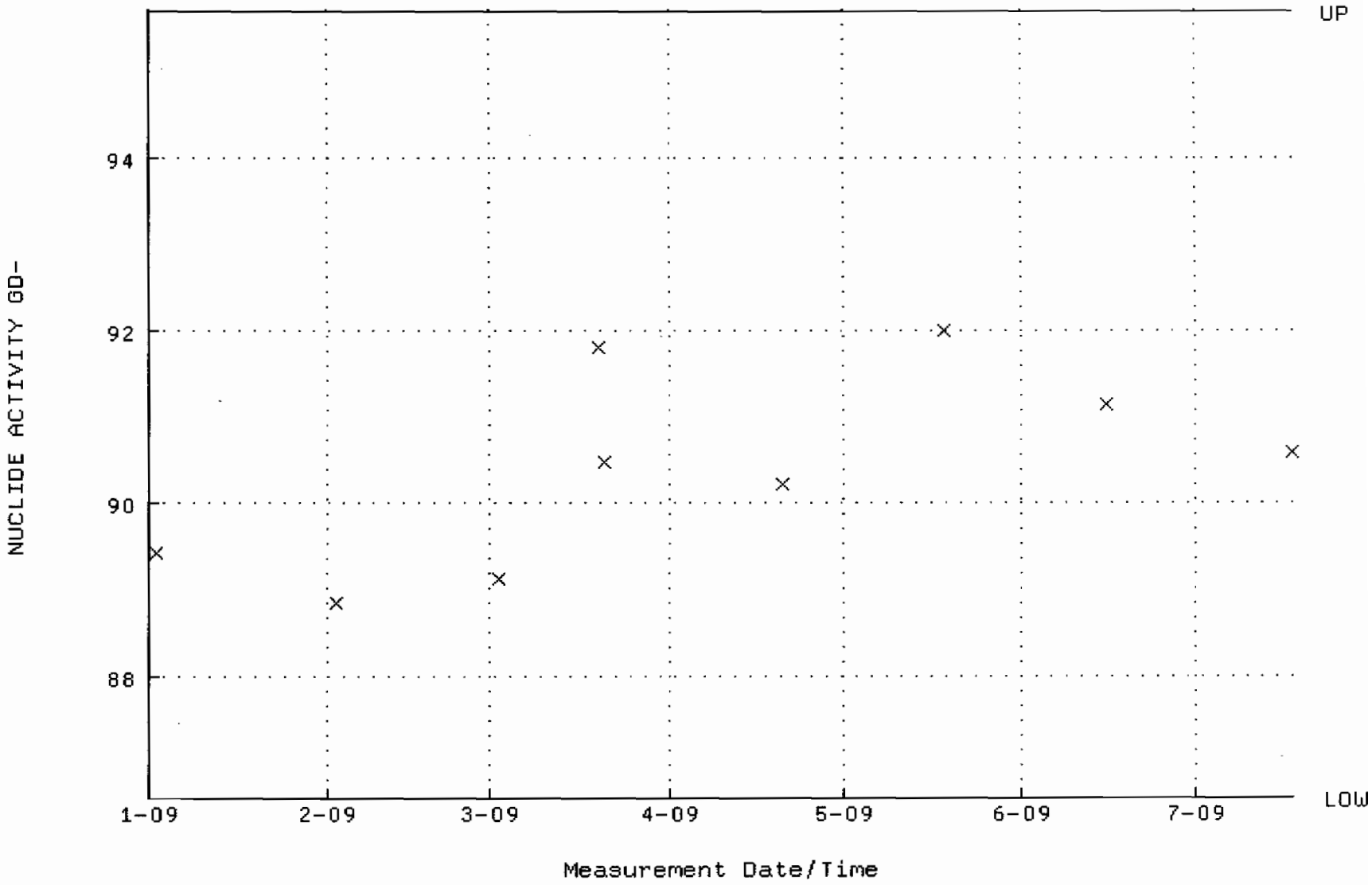

QA filename : DKA100:[ENV_ALPHA.QA.B]B151.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:28 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

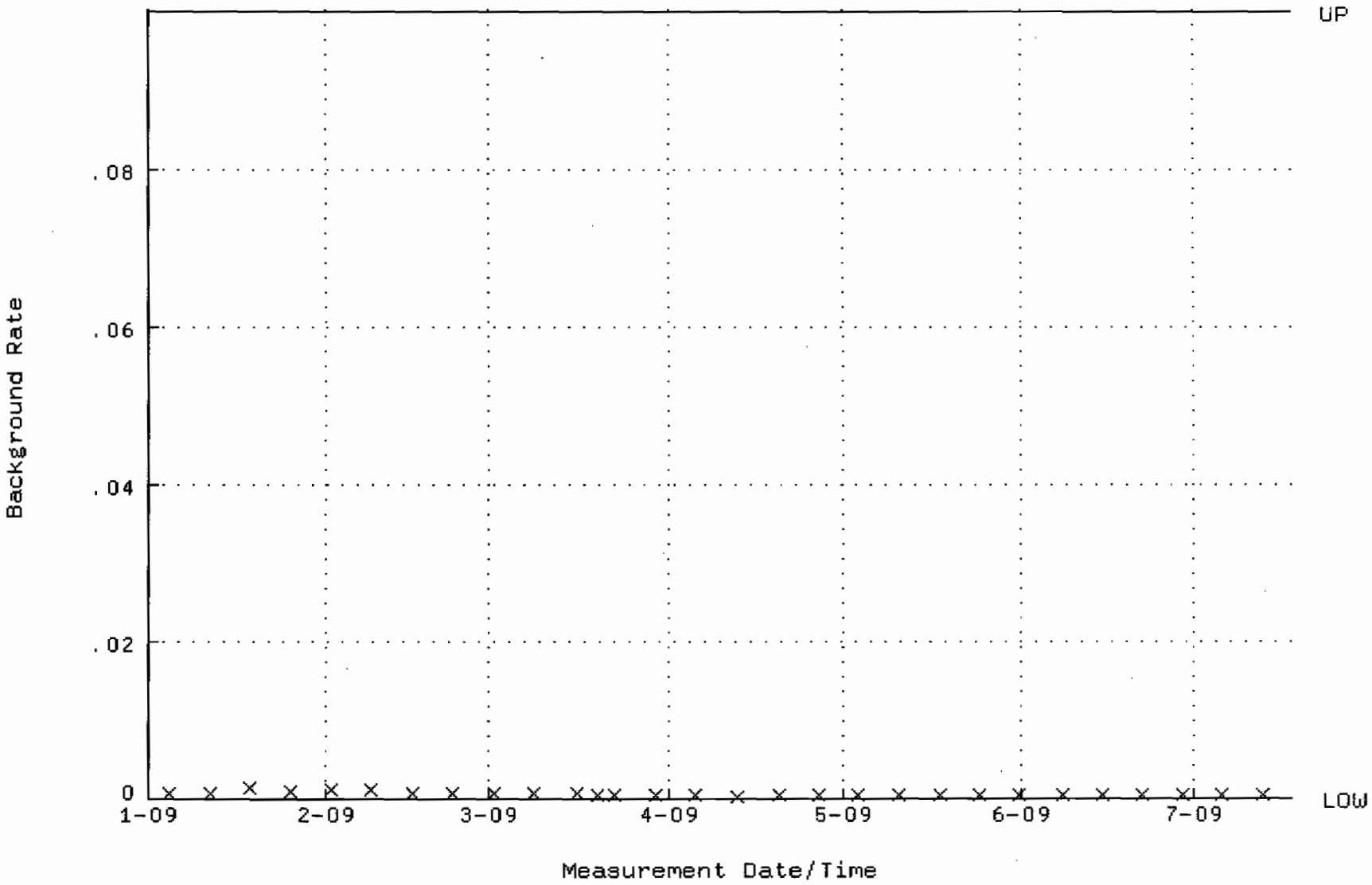

QA filename : DKA100:[ENV_ALPHA.QA.W]W152.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:46 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.238479 through 0.258479

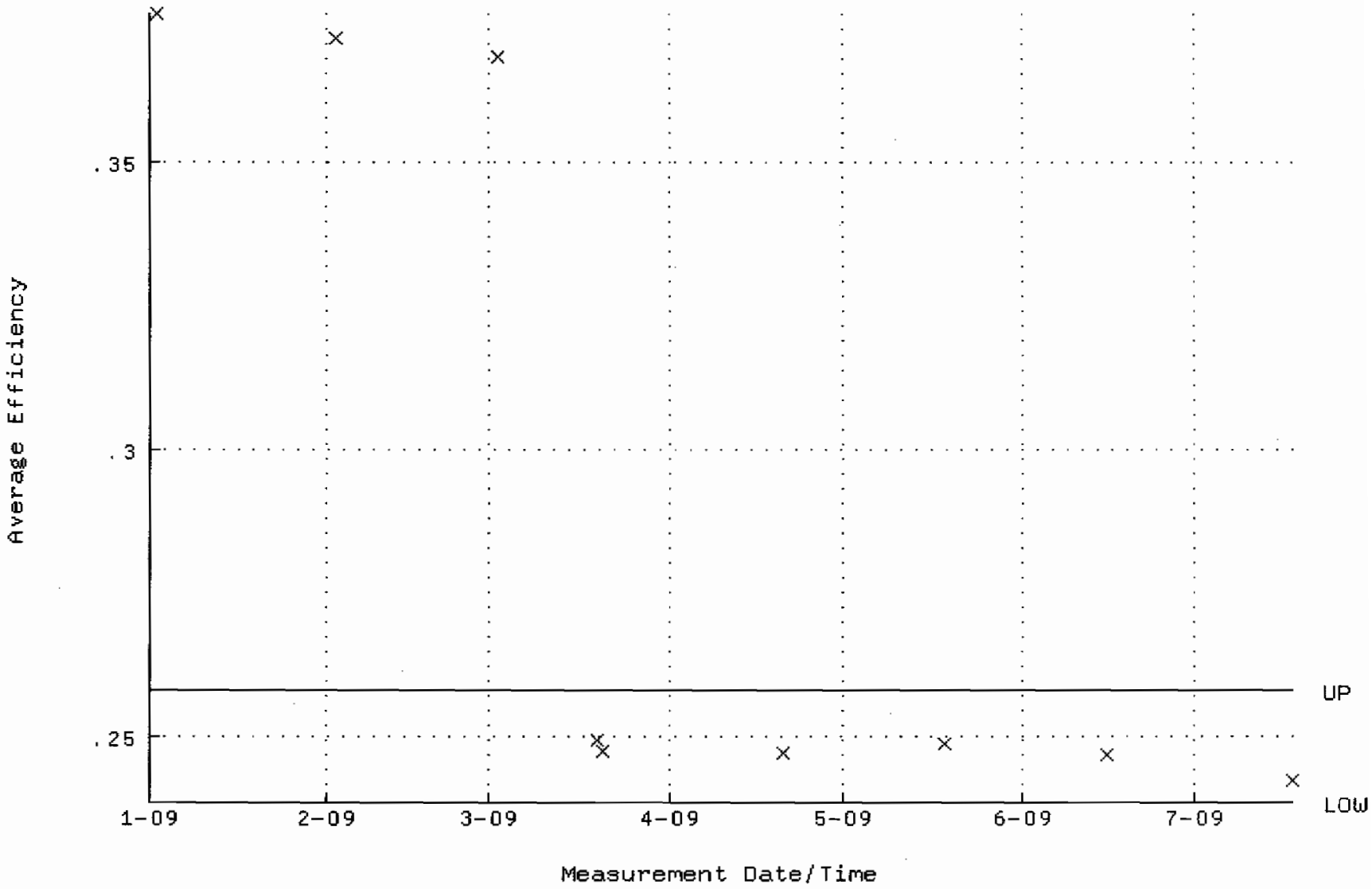

QA filename : DKA100:[ENV_ALPHA.QA.W]W152.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:46 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 83.7180 through 92.5304

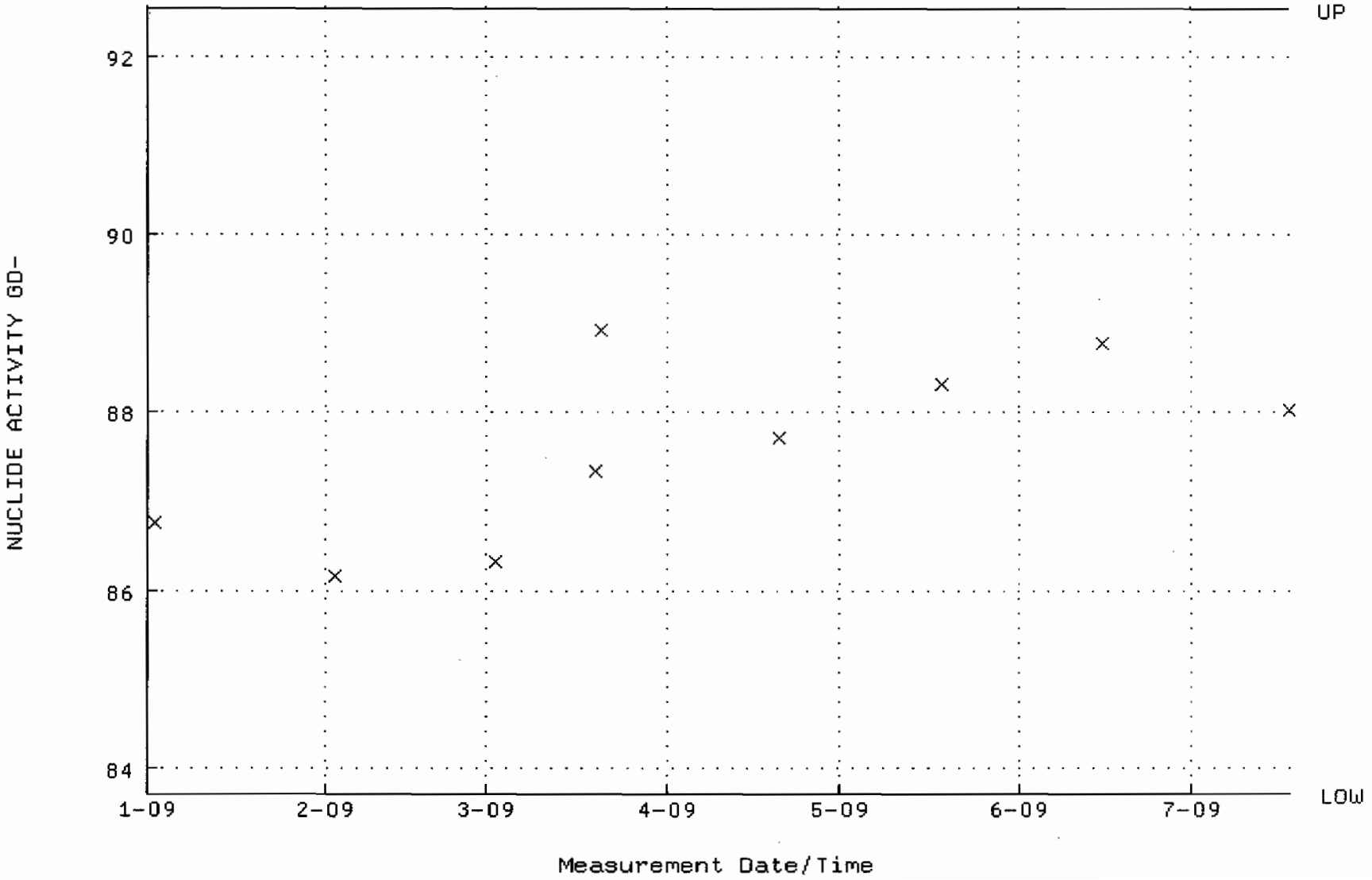

QA filename : DKA100:[ENV_ALPHA.QA.B]B152.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:32 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

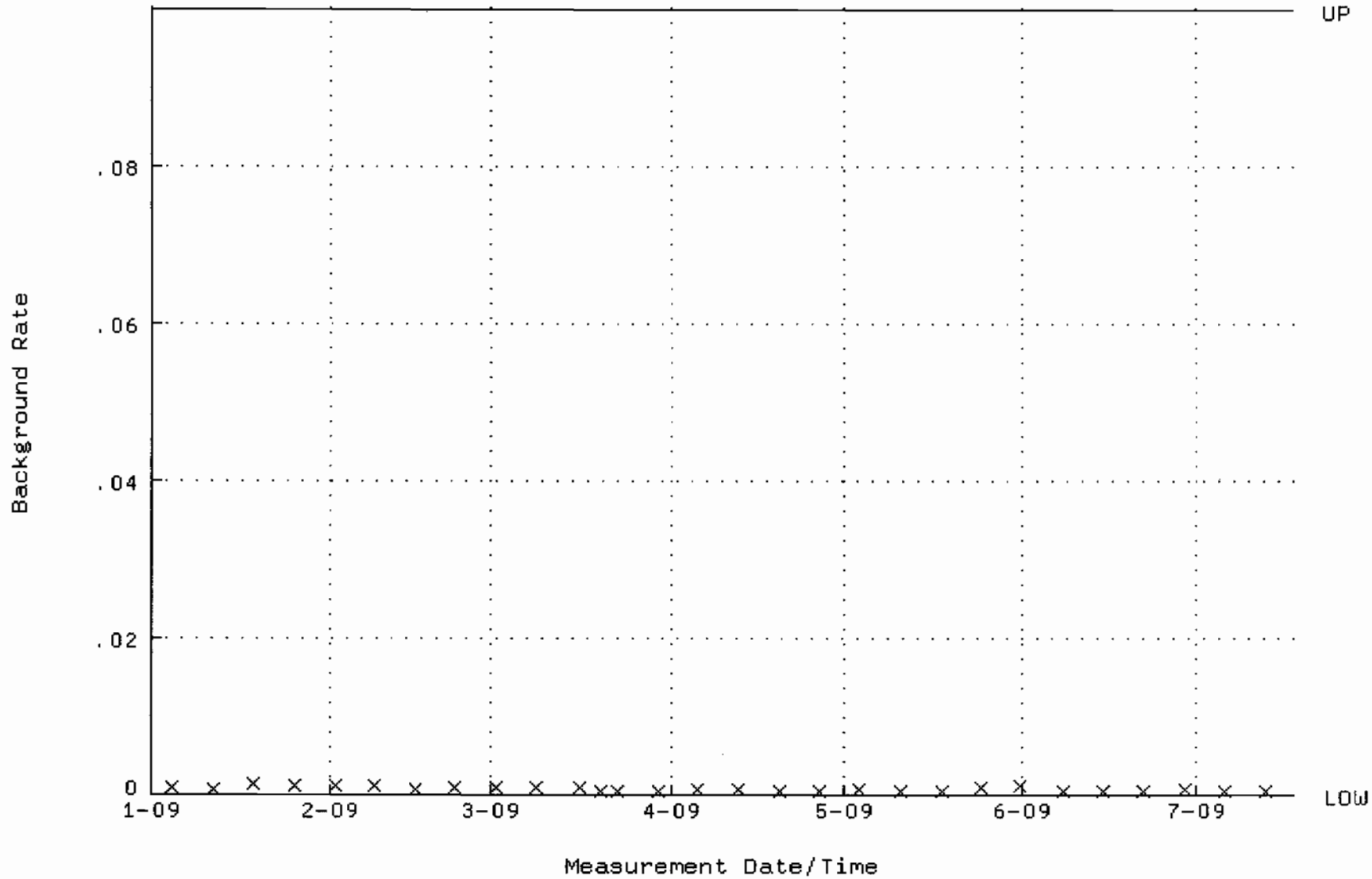

QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:51 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.244738 through 0.264738

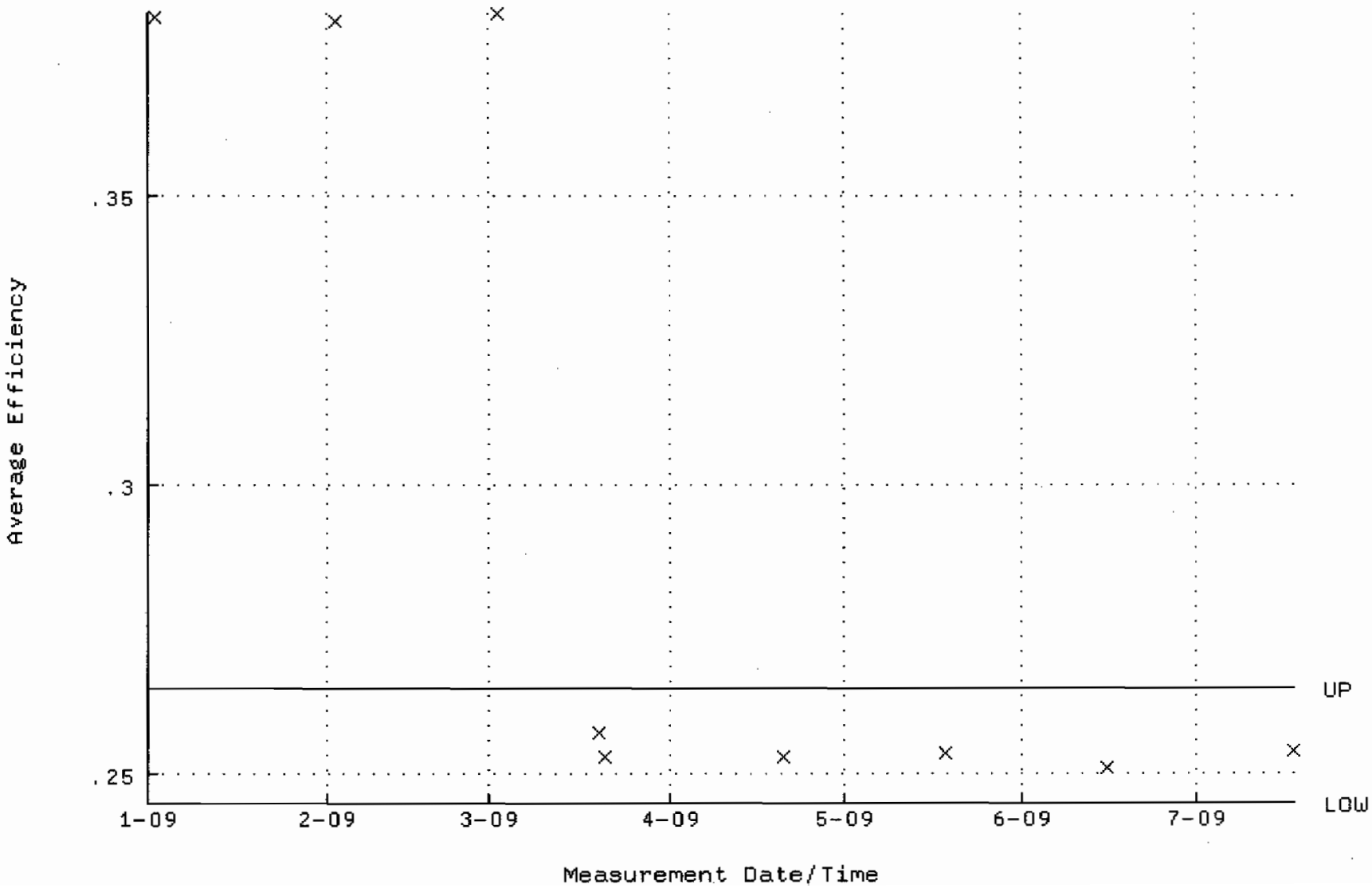

QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:51 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 81.3634 through 89.9280

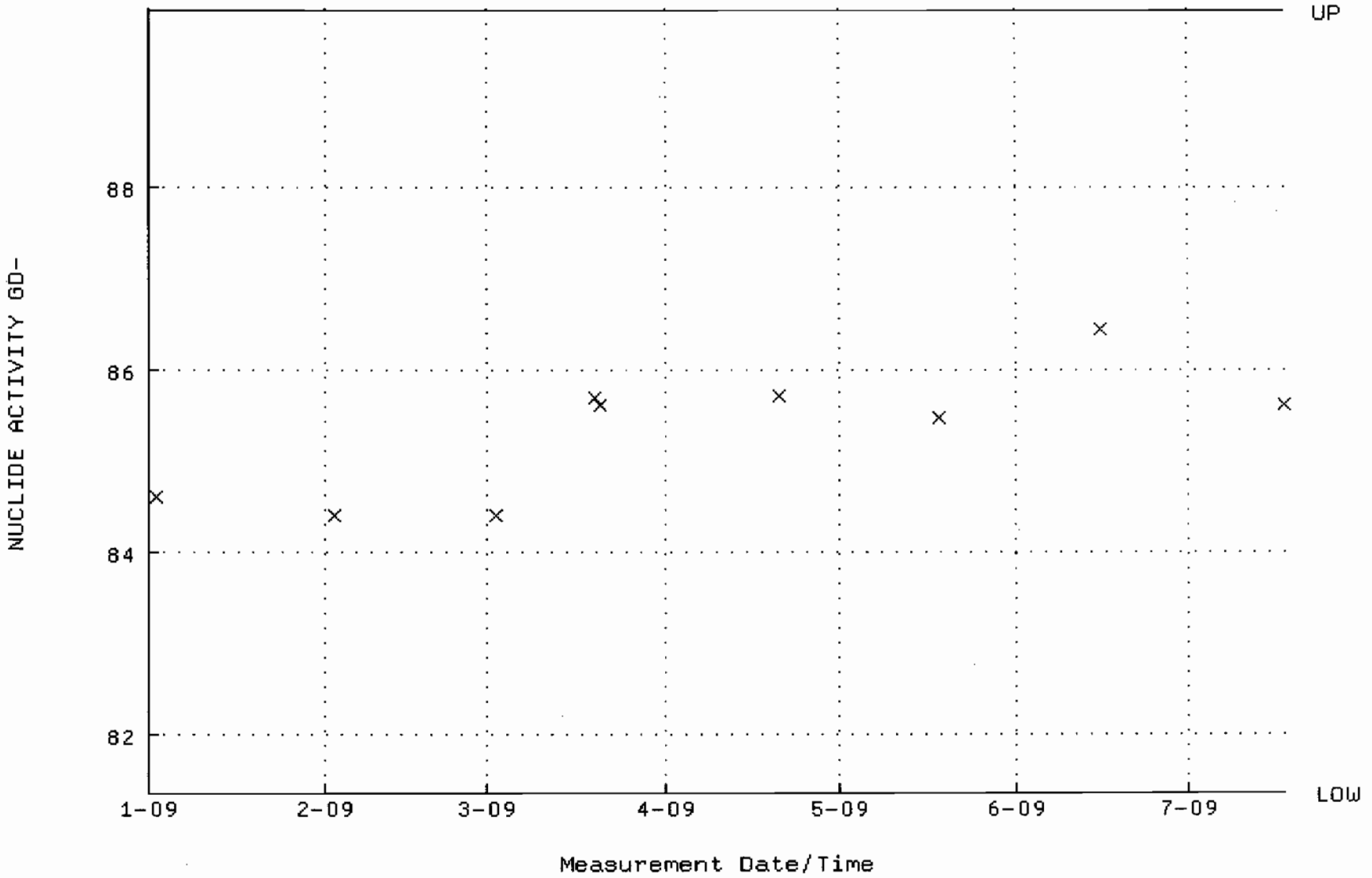

QA filename : DKA100:[ENV_ALPHA.QA.B]B153.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:36 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

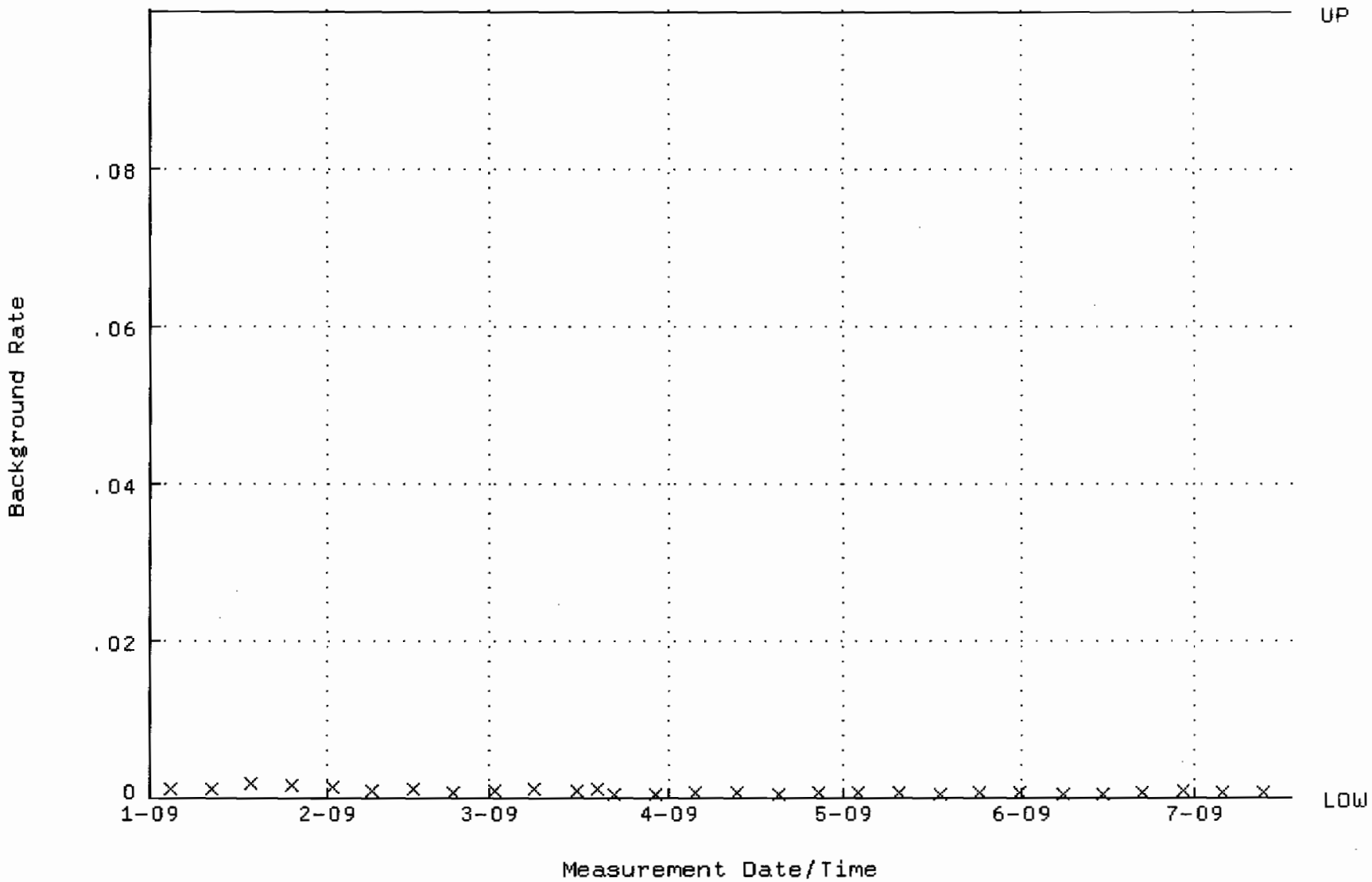

QA filename : DKA100:[ENV_ALPHA.QA.W]W165.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:09:06 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.374689 through 0.399127

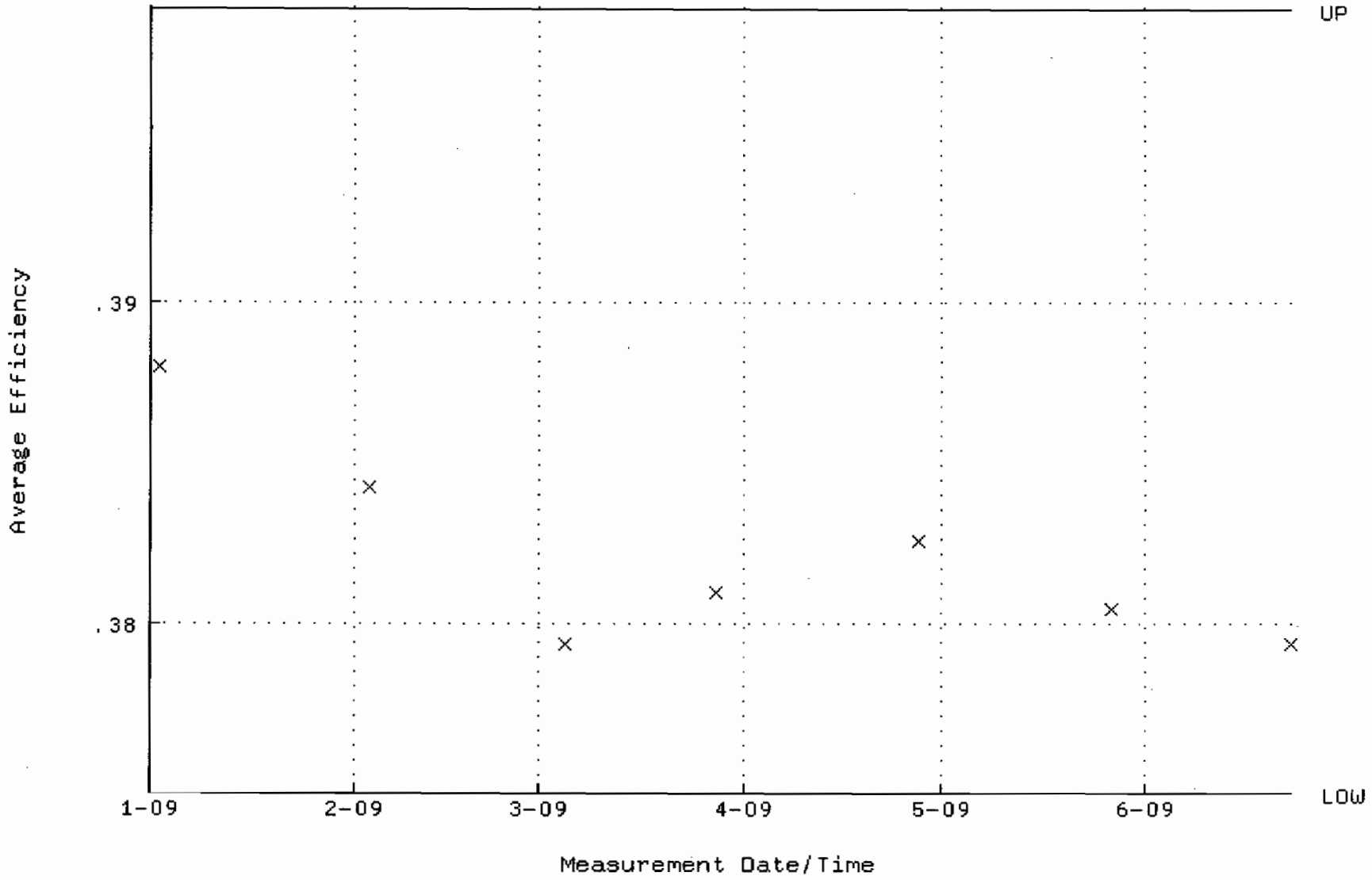

QA filename : DKA100:[ENV_ALPHA.QA.W]W165.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:09:06 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 87.9613 through 90.1269

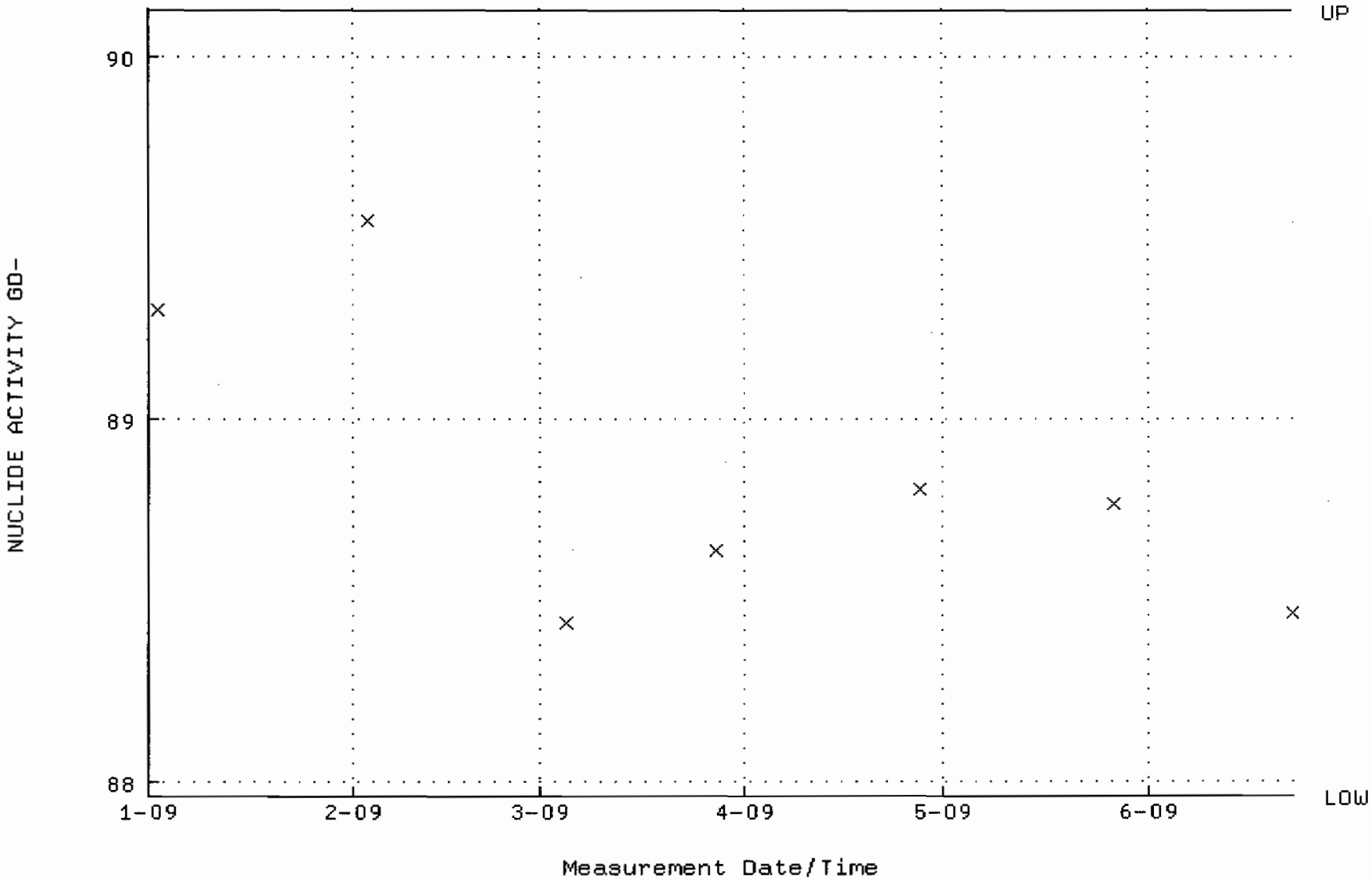

QA filename : DKA100:[ENV_ALPHA.QA.B]B165.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:25:20 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

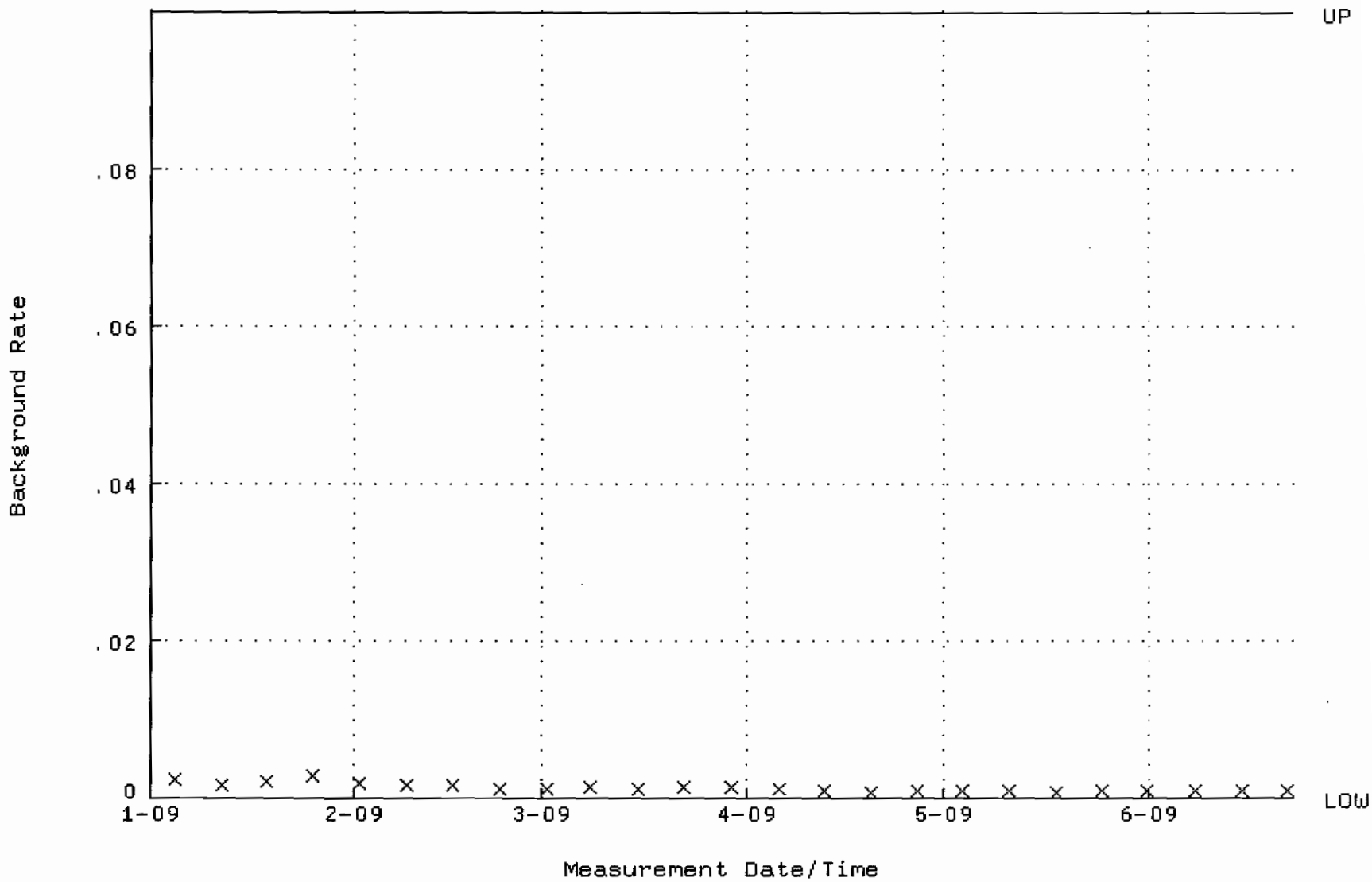

QA filename : DKA100:[ENV_ALPHA.QA.W]W184.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-JAN-2009 12:57:51 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.251367 through 0.271367

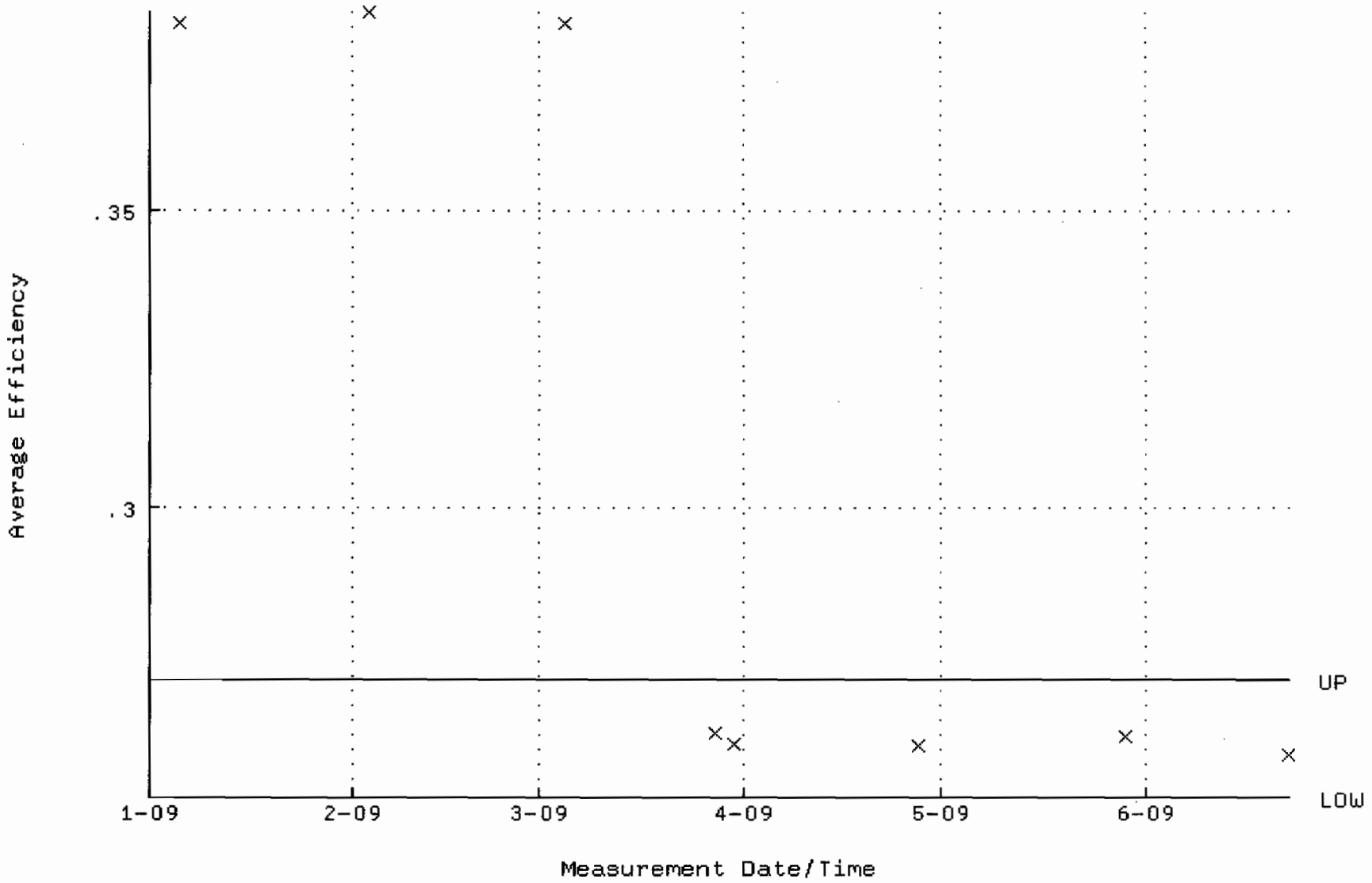

QA filename : DKA100:[ENV_ALPHA.QA.W]W184.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-JAN-2009 12:57:51 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 85.4139 through 94.4049

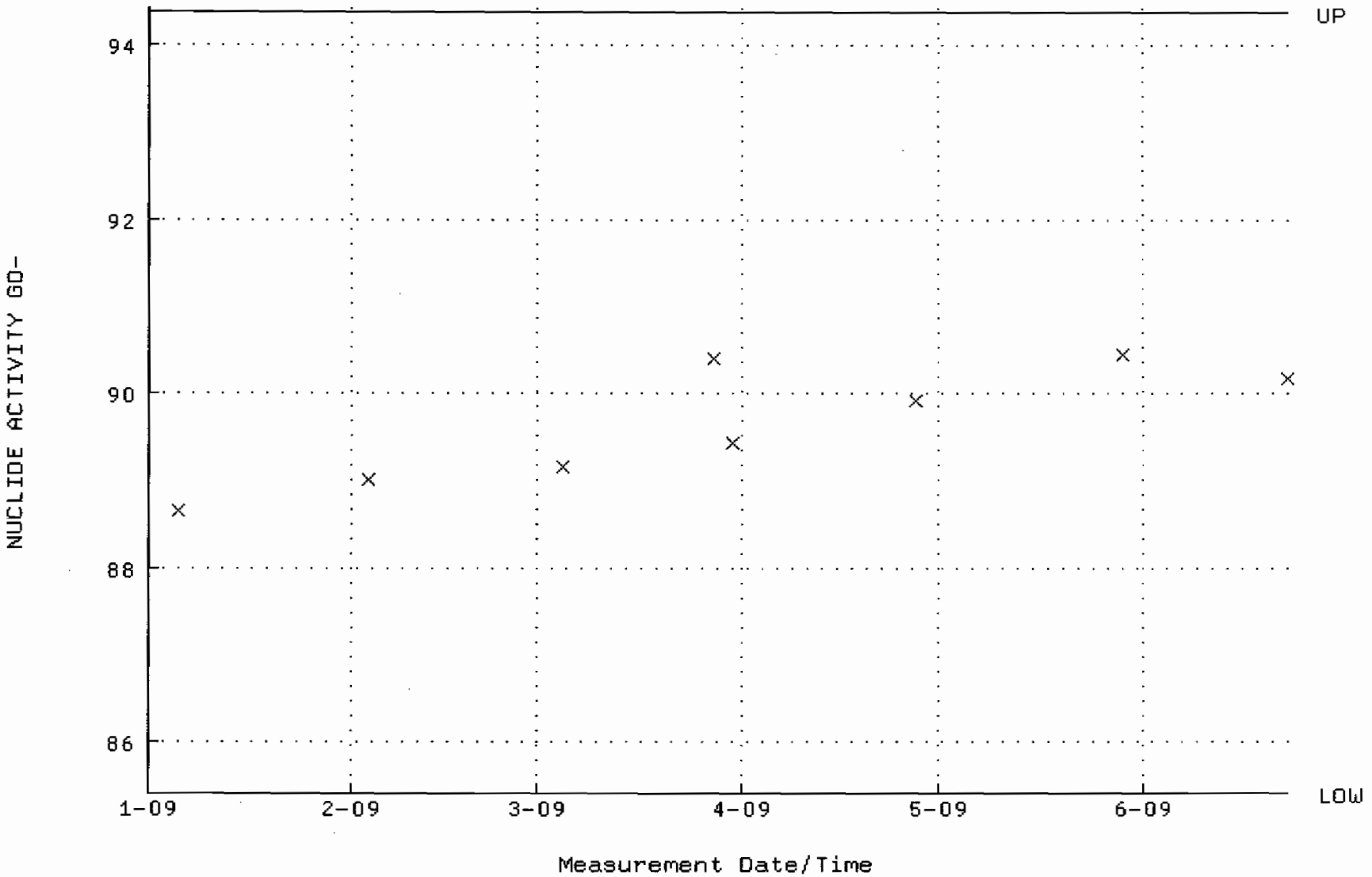

QA filename : DKA100:[ENV_ALPHA.QA.B]B184.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:32 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

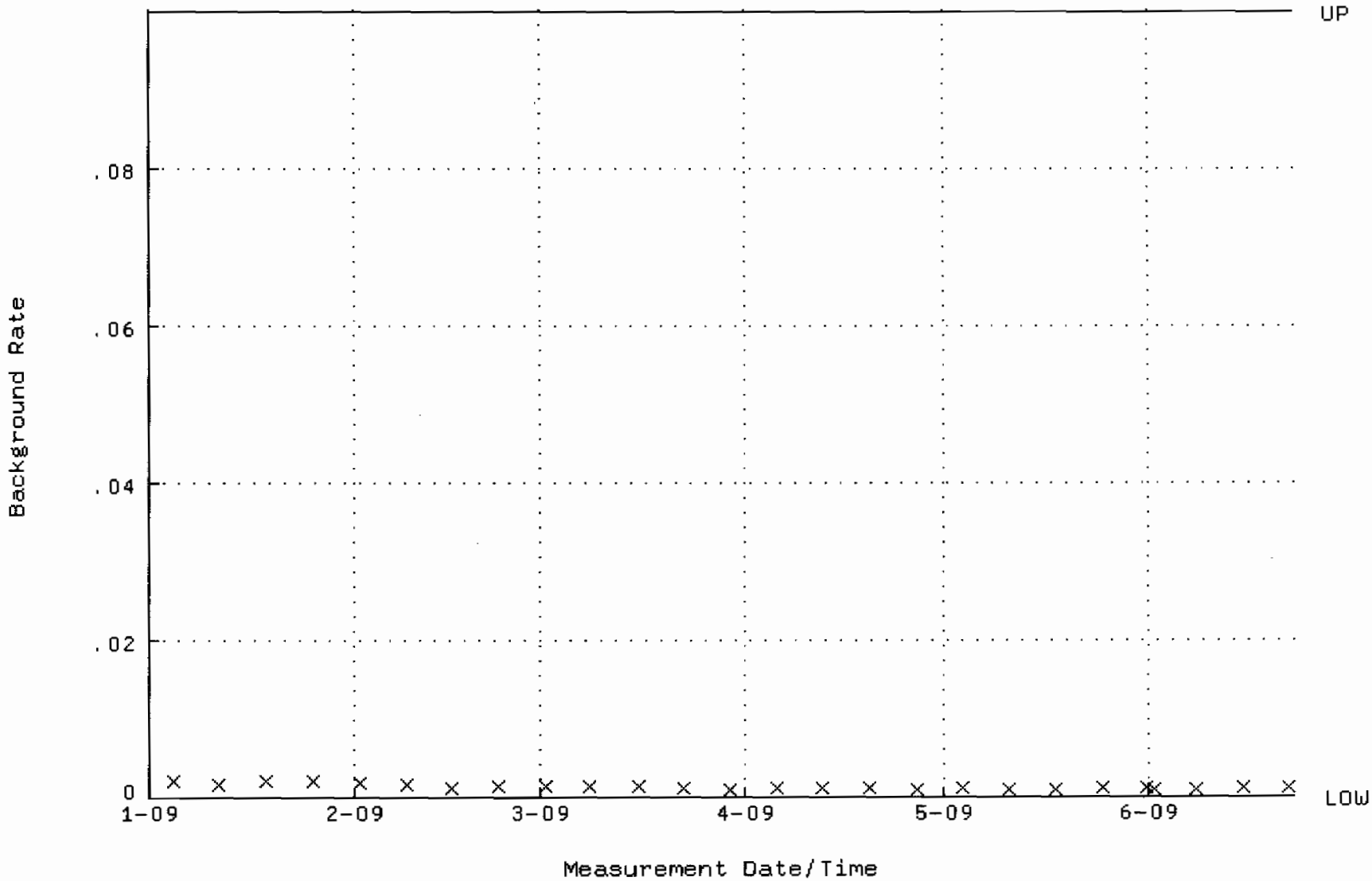

QA filename : DKA100:[ENV_ALPHA.QA.W]W185.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:29 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.249628 through 0.269628

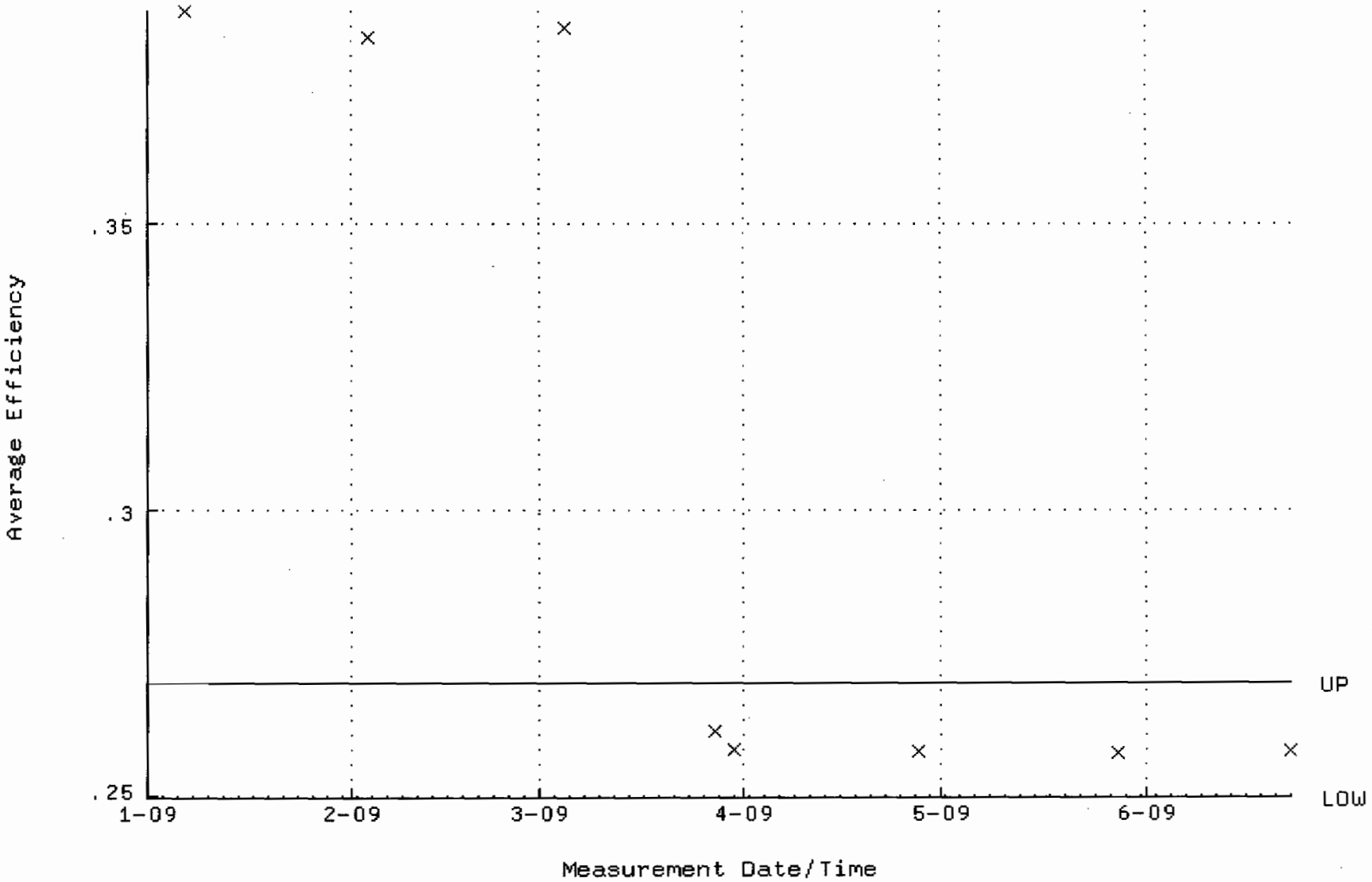

QA filename : DKA100:[ENV_ALPHA.QA.W]W185.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:29 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 84.3502 through 93.2292

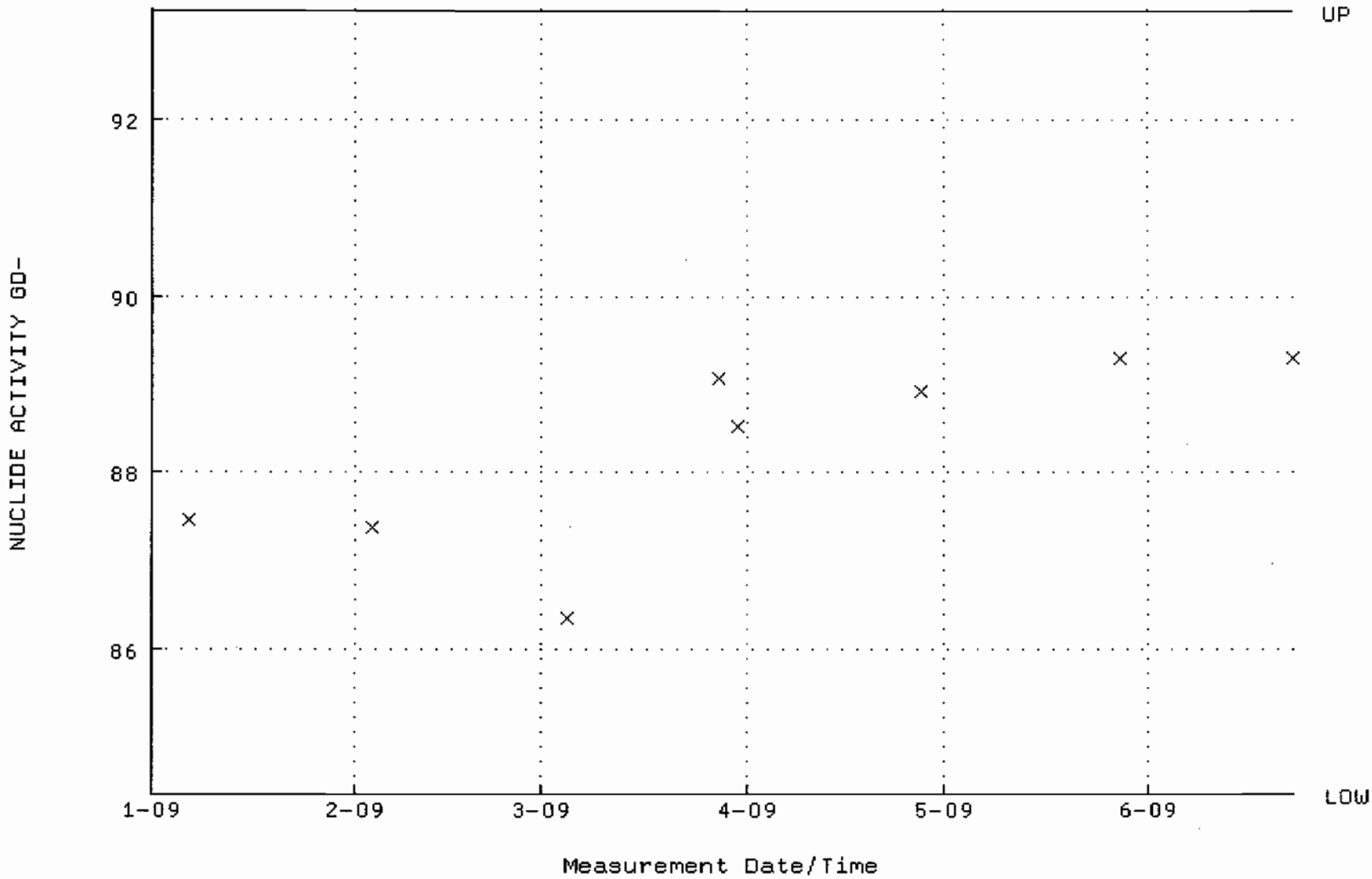

QA filename : DKA100:[ENV_ALPHA.QA.B]B185.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:36 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

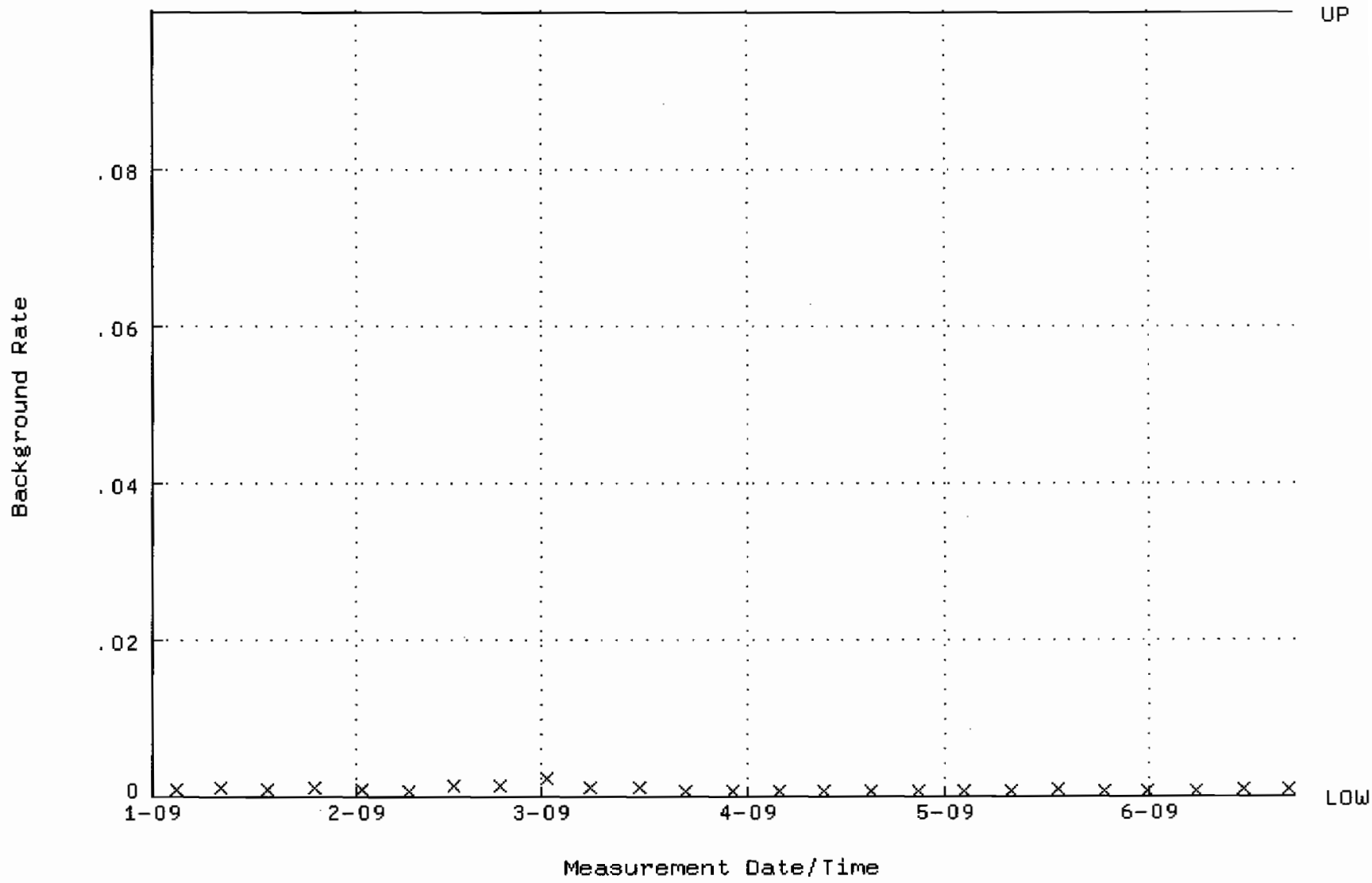

QA filename : DKA100:[ENV_ALPHA.QA.W]W186.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:33 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.242649 through 0.262649

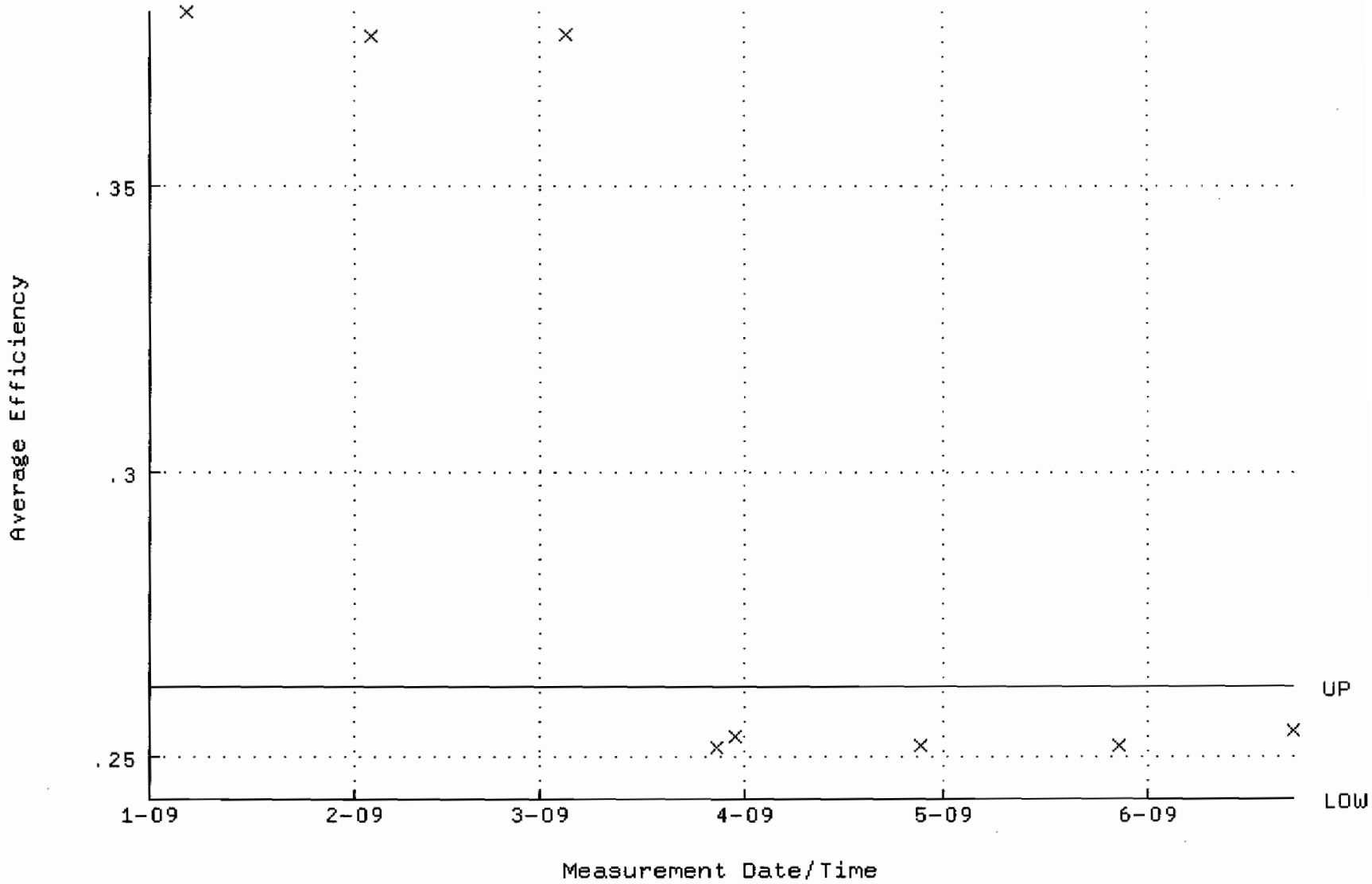

QA filename : DKA100:[ENV_ALPHA.QA.W]W186.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:33 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 82.6495 through 91.3495

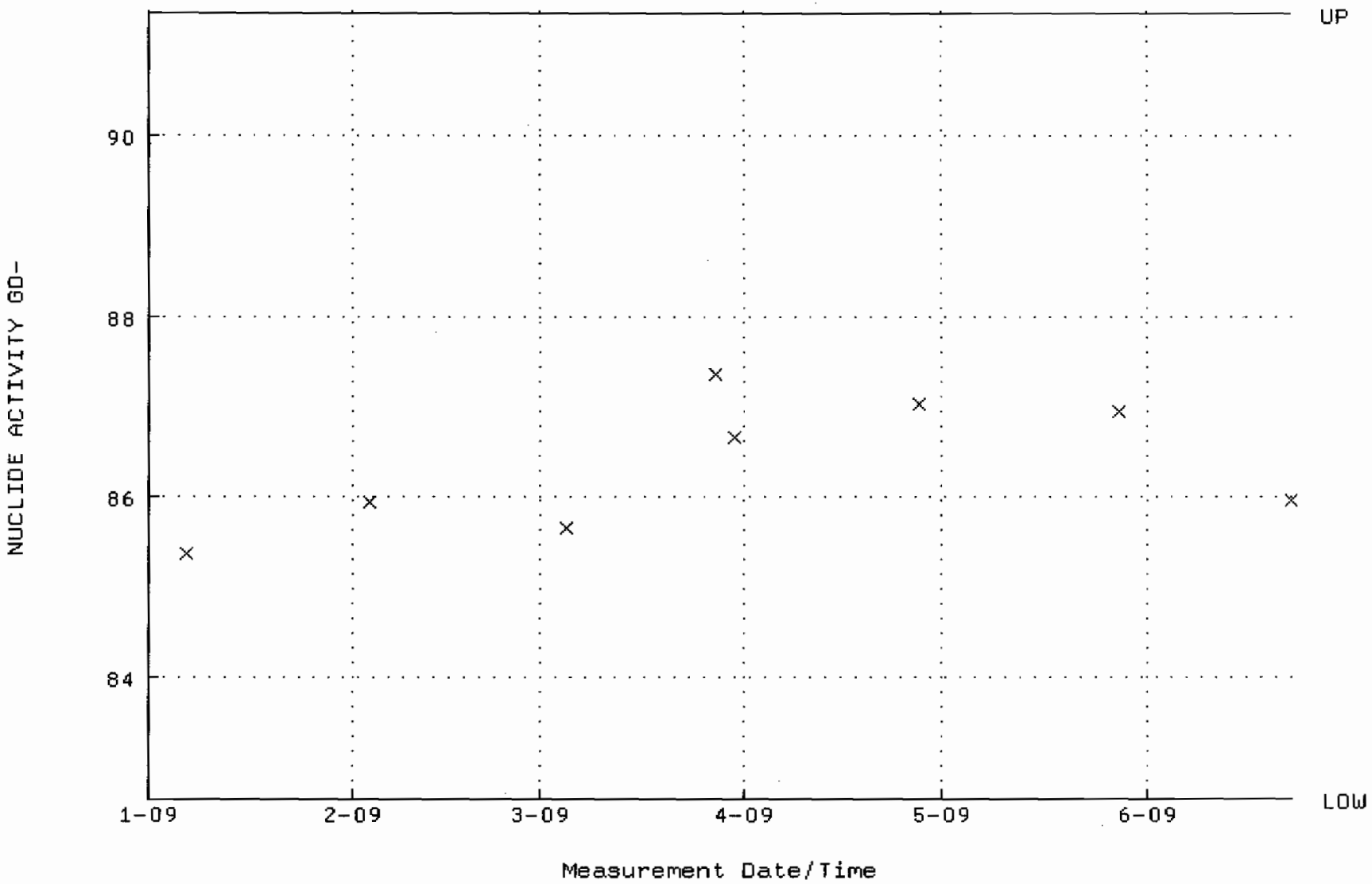

QA filename : DKA100:[ENV_ALPHA.QA.B]B186.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:40 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

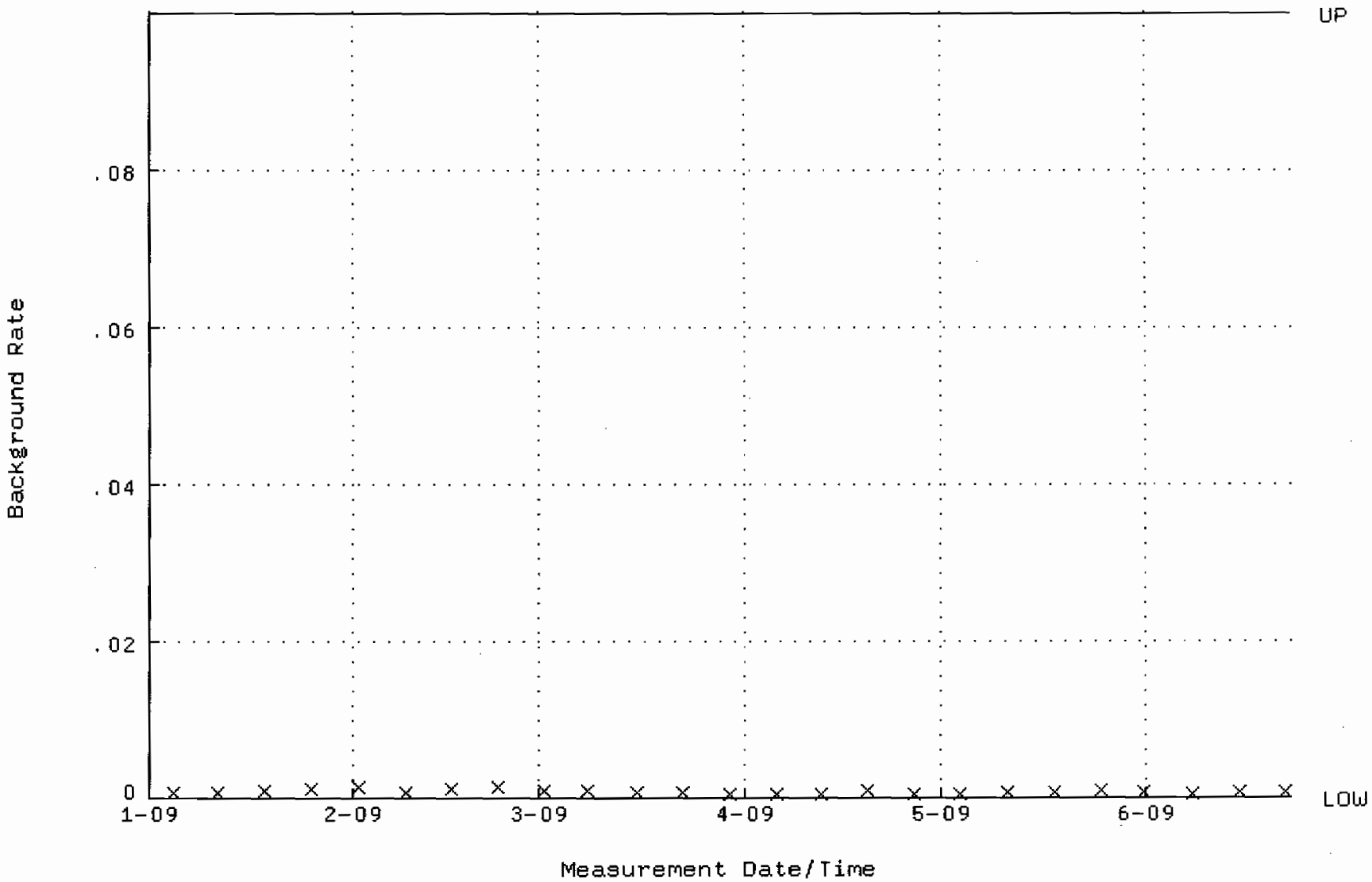

QA filename : DKA100:[ENV_ALPHA.QA.W]W187.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:37 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.241464 through 0.261464

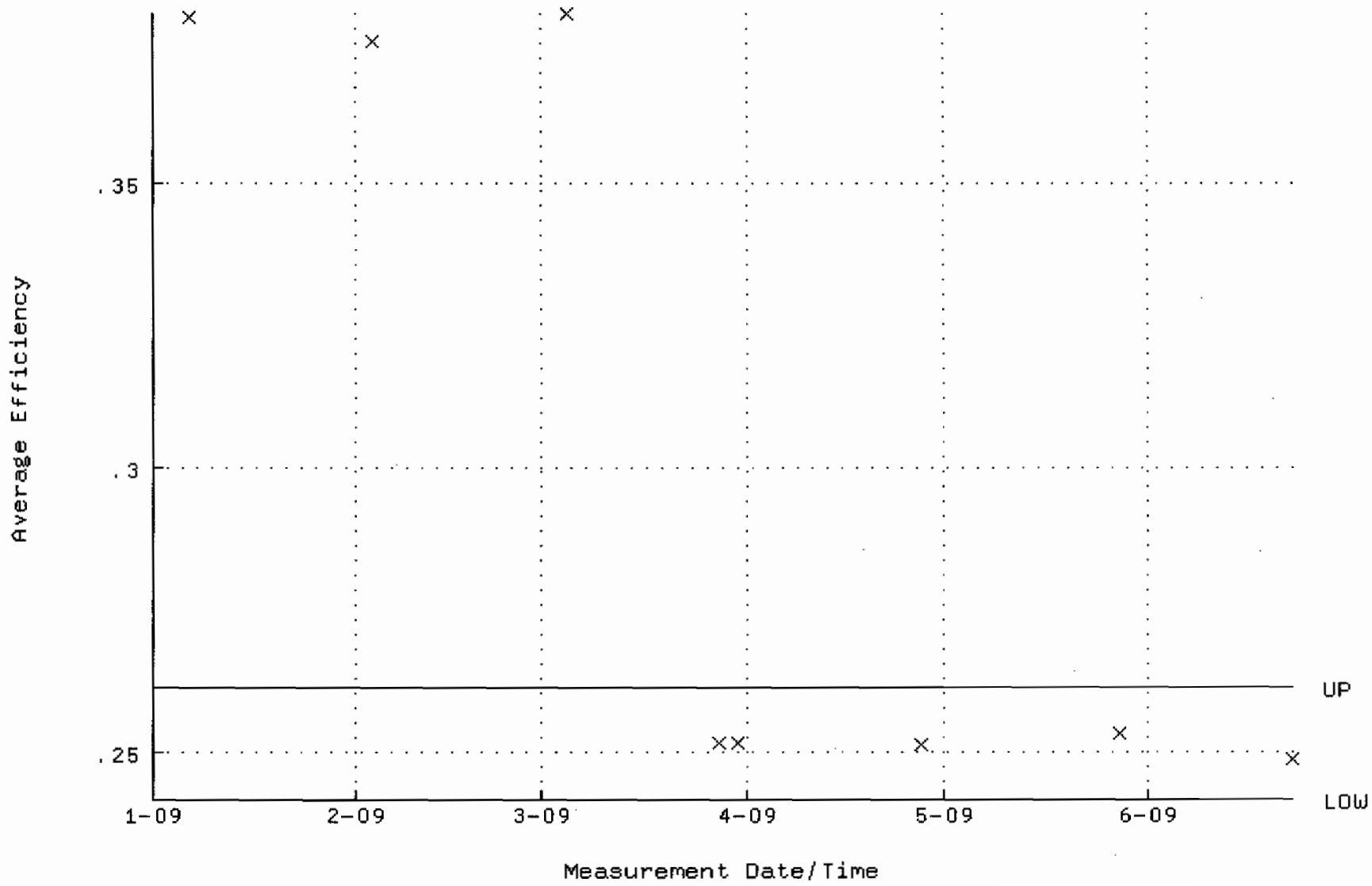

QA filename : DKA100:[ENV_ALPHA.QA.W]W187.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:37 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 85.5888 through 94.5982

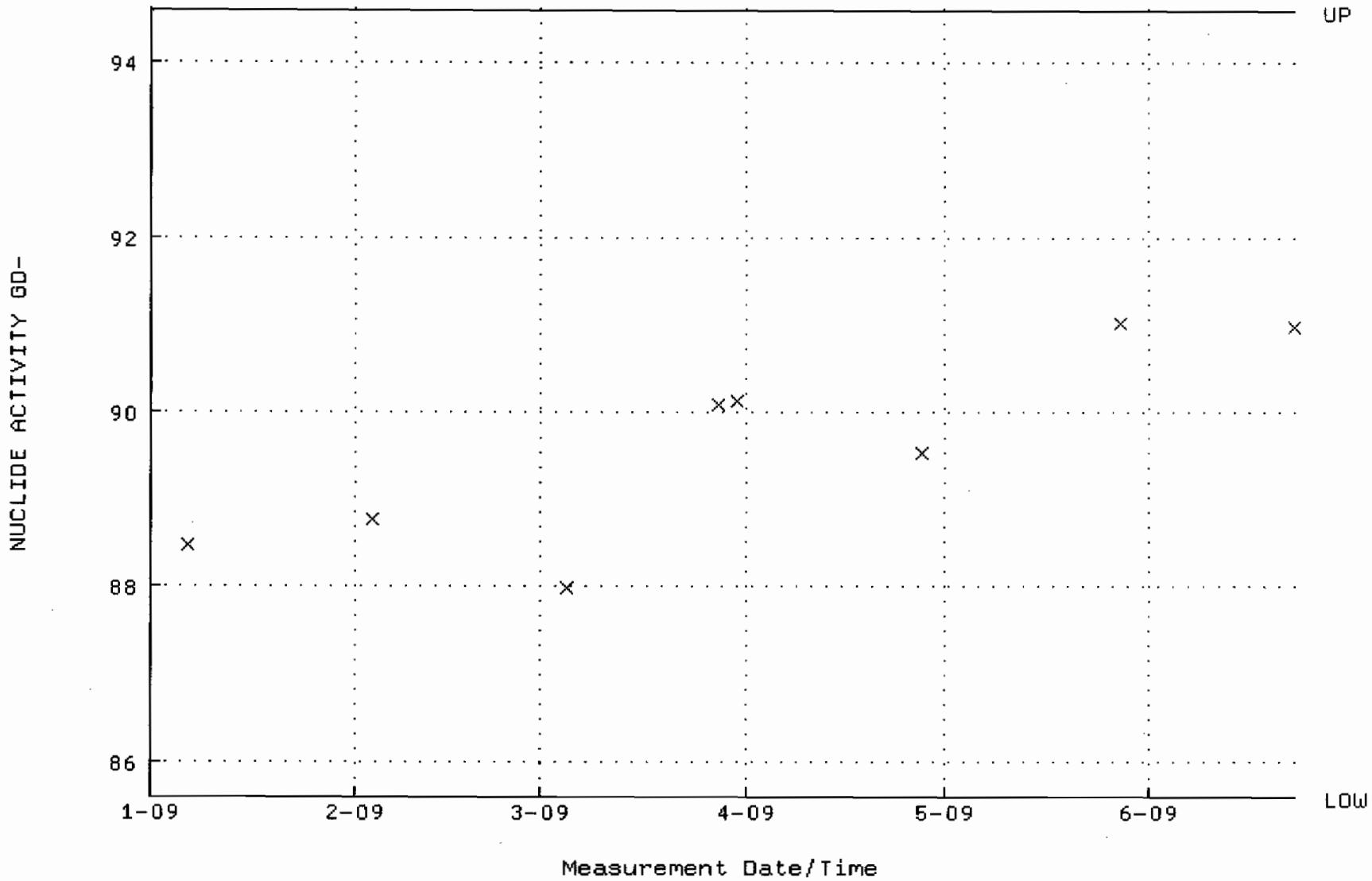

QA filename : DKA100:[ENV_ALPHA.QA.B]B187.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:44 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

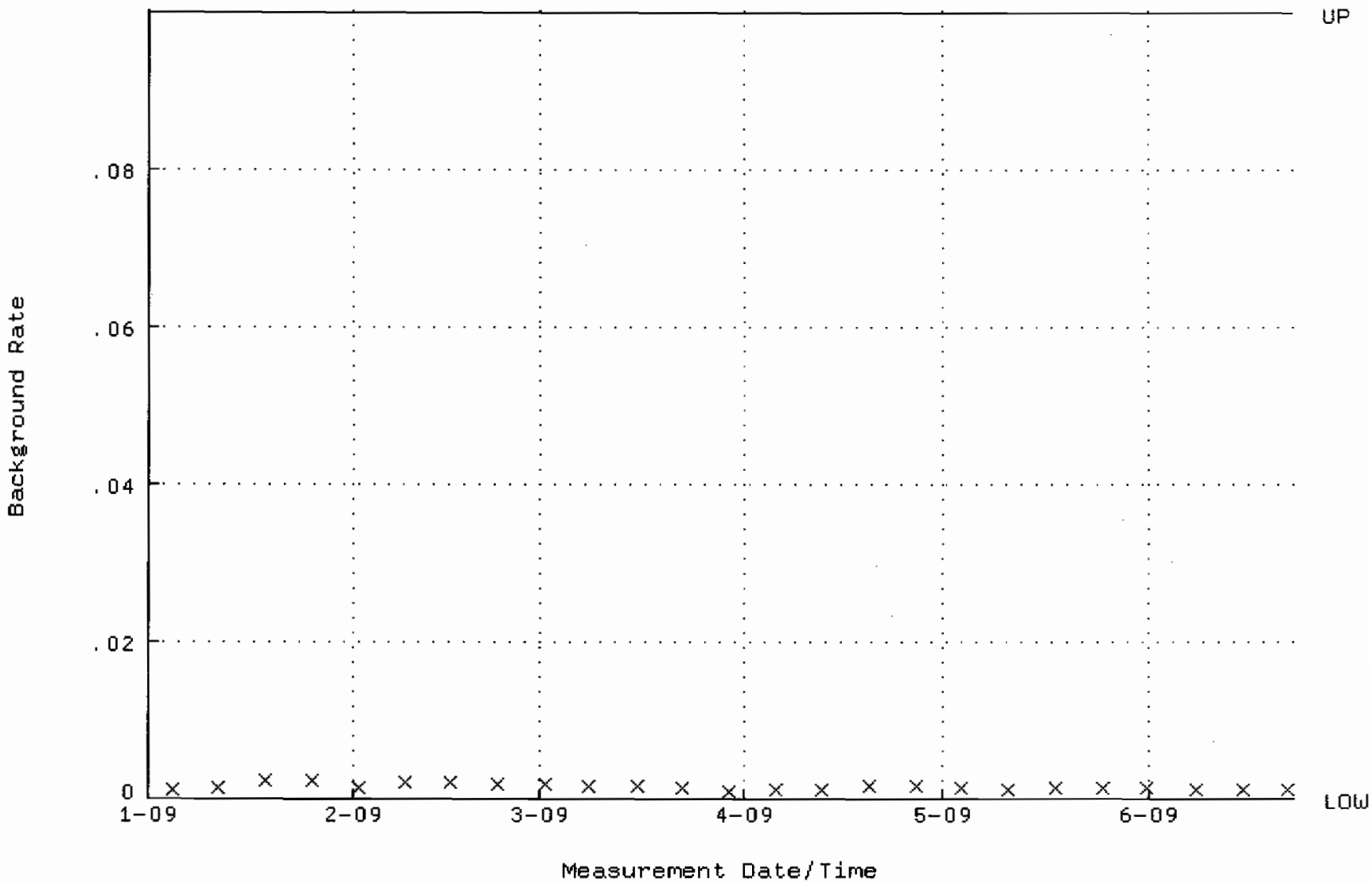

QA filename : DKA100:[ENV_ALPHA.QA.W]W188.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:41 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.249341 through 0.269341

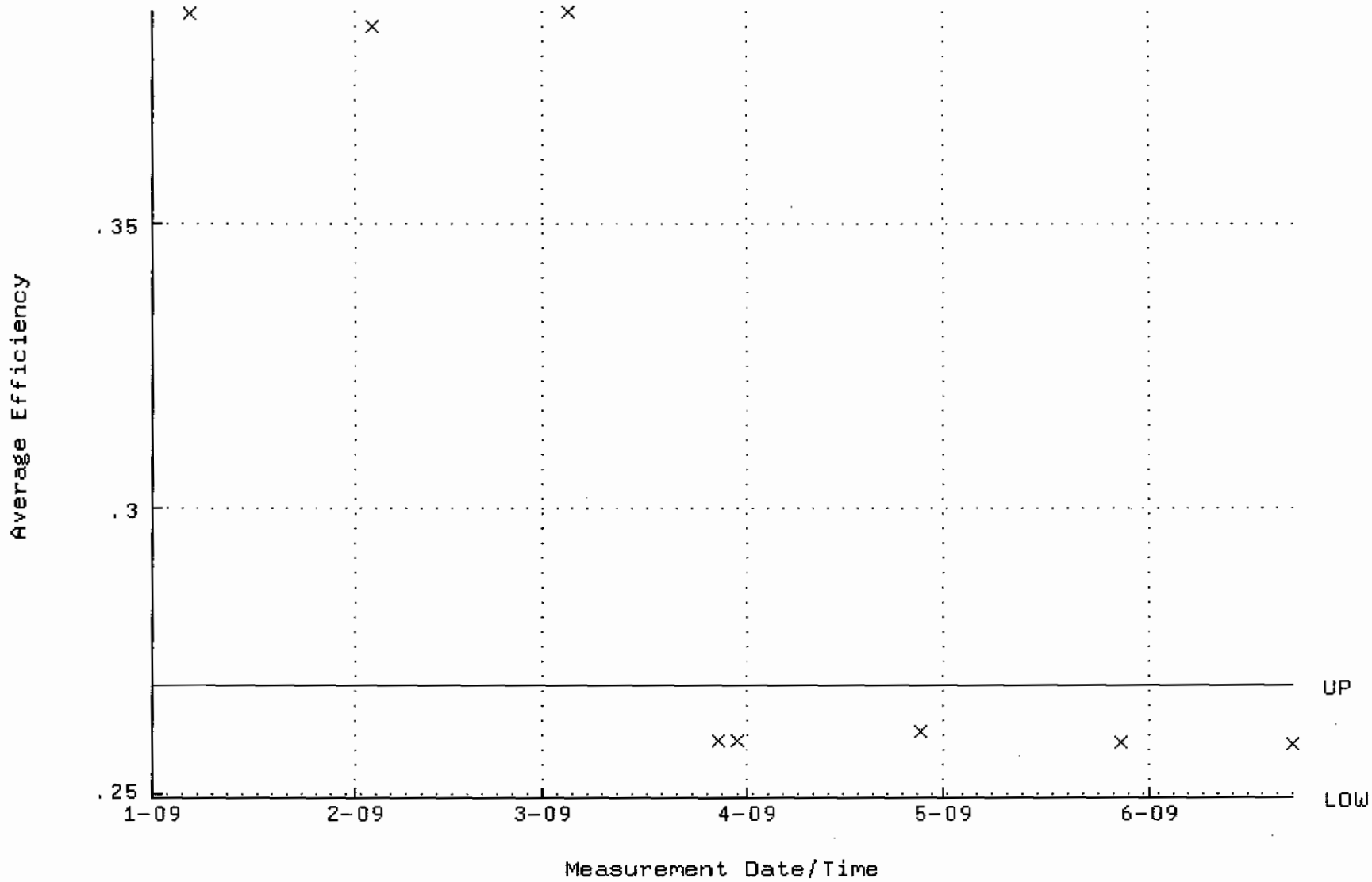

QA filename : DKA100:[ENV_ALPHA.QA.W]W188.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:41 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 83.6747 through 92.4825

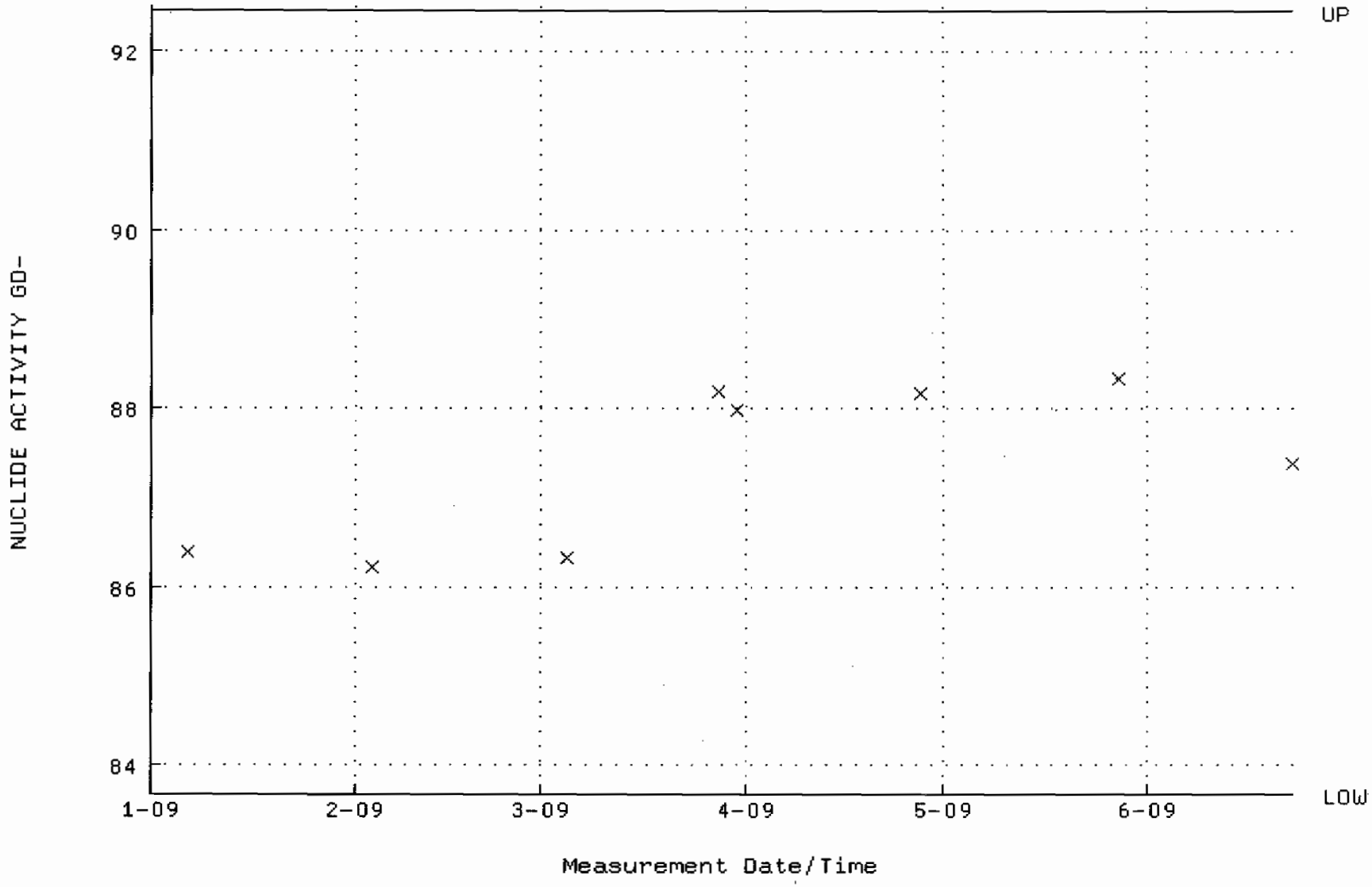

QA filename : DKA100:[ENV_ALPHA.QA.B]B188.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:47 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

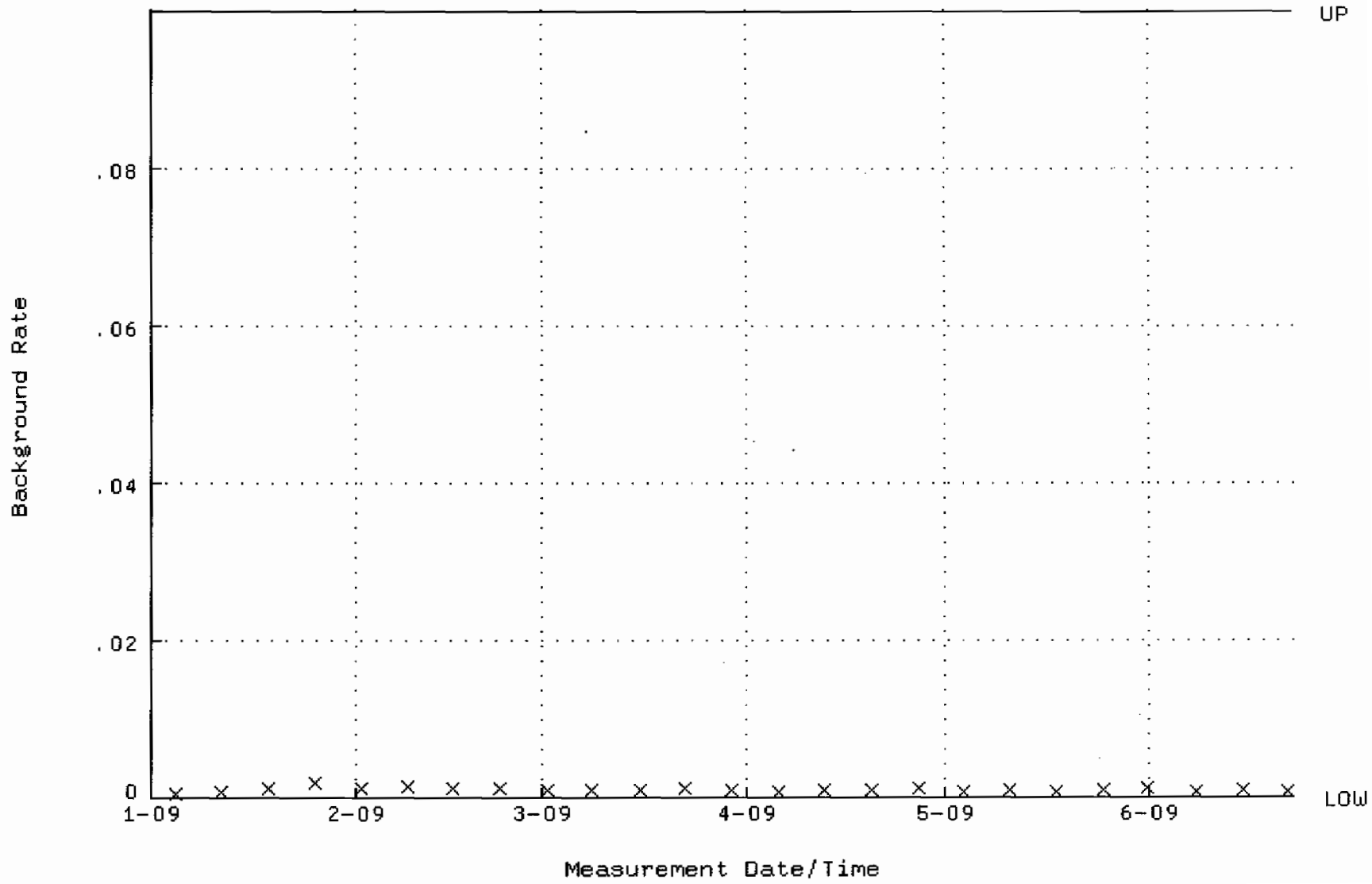

QA filename : DKA100:[ENV_ALPHA.QA.W]W189.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:46 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.251590 through 0.271590

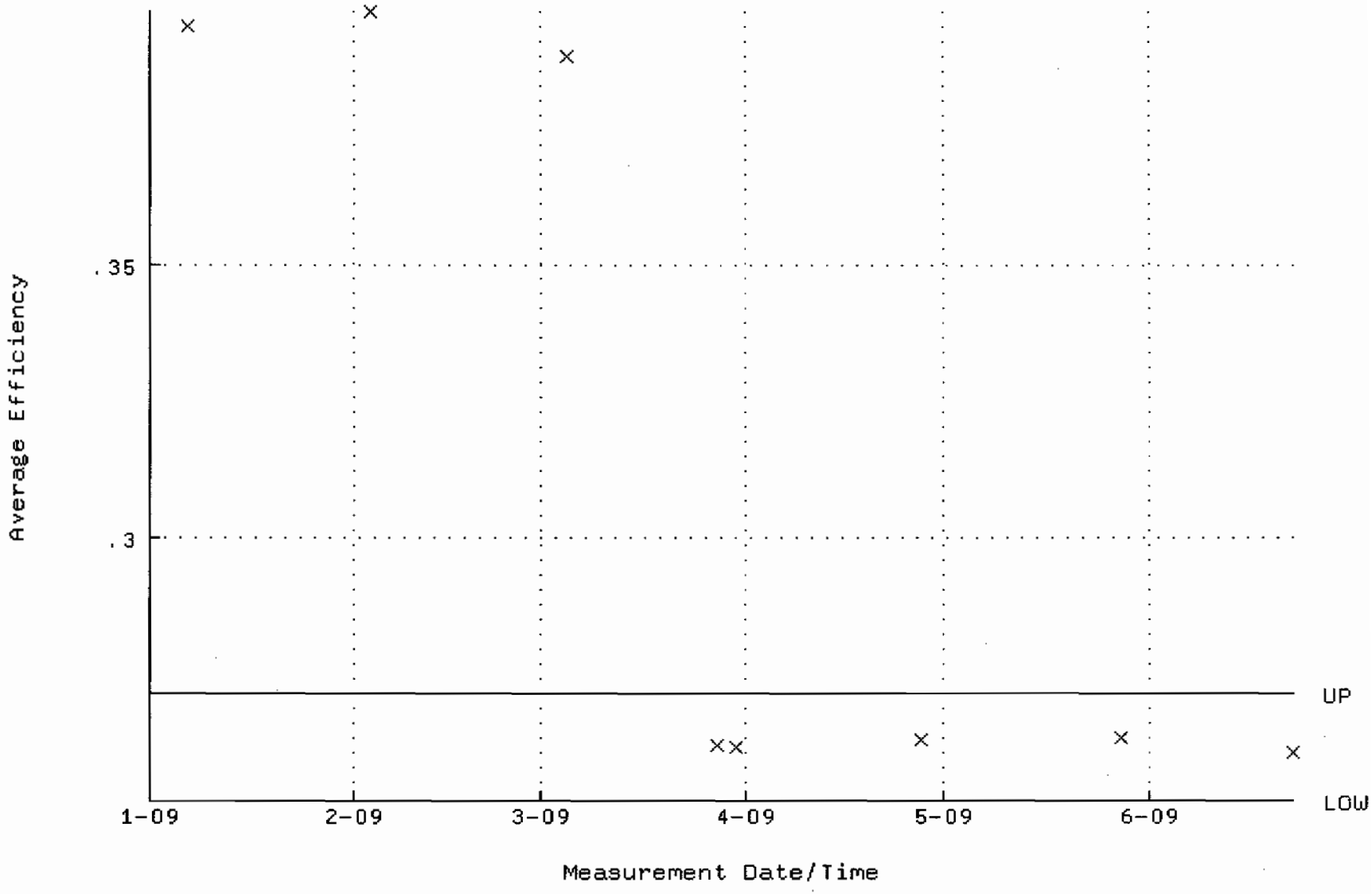

QA filename : DKA100:[ENV_ALPHA.QA.W]W189.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:46 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 81.7473 through 90.3523

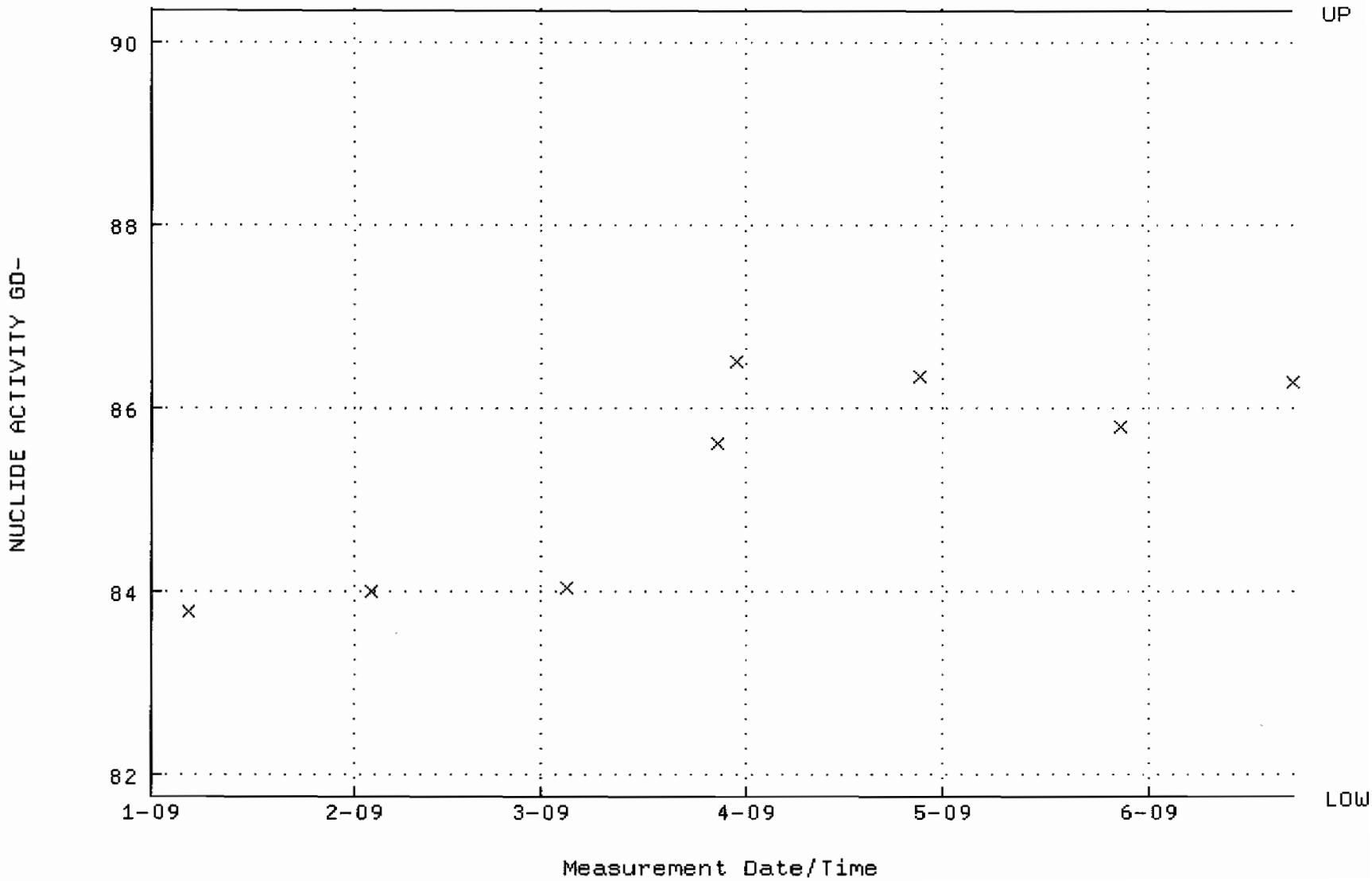

QA filename : DKA100:[ENV_ALPHA.QA.B]B189.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:51 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

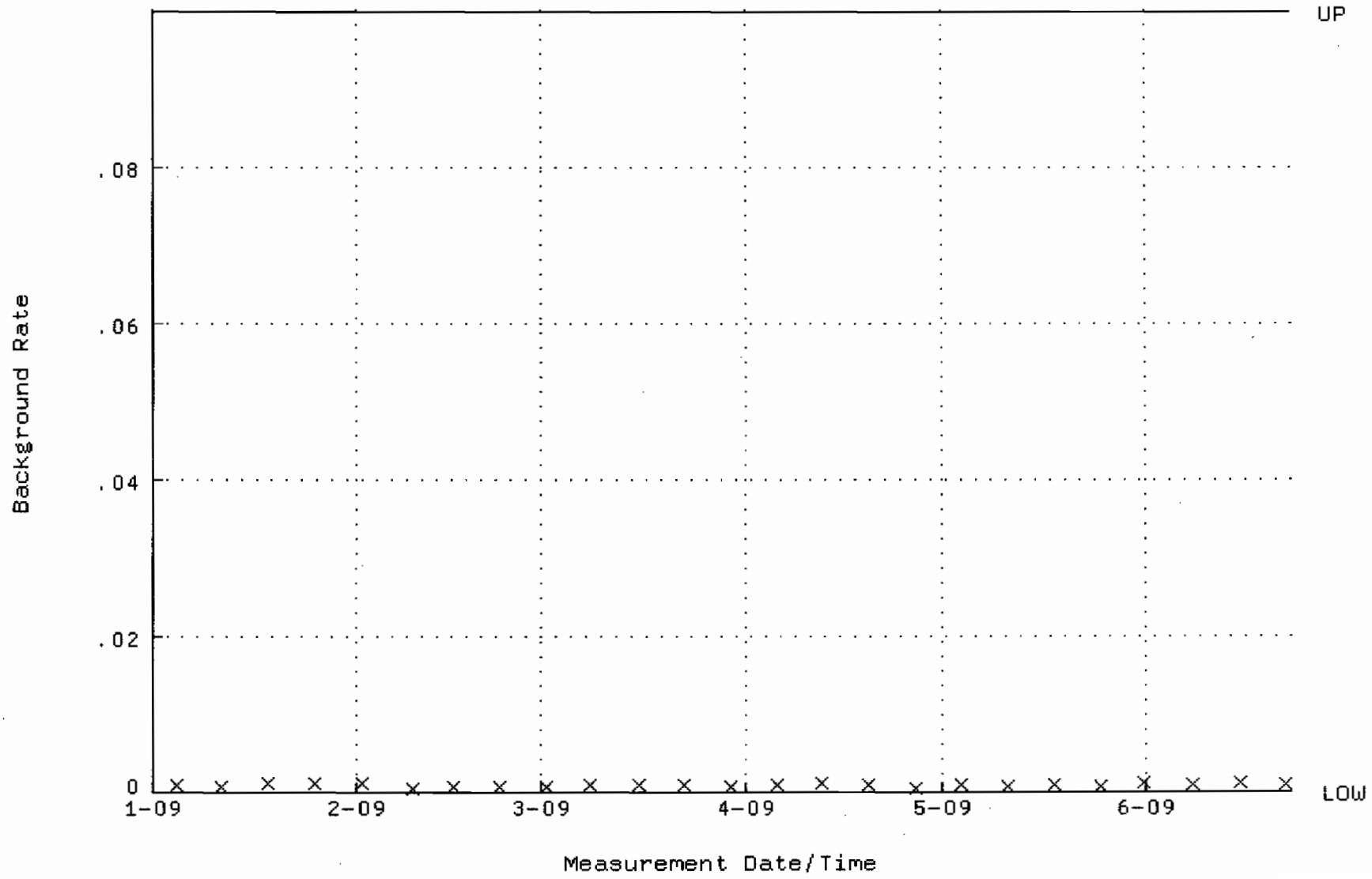

QA filename : DKA100:[ENV_ALPHA.QA.W]W190.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:49 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.253504 through 0.273504

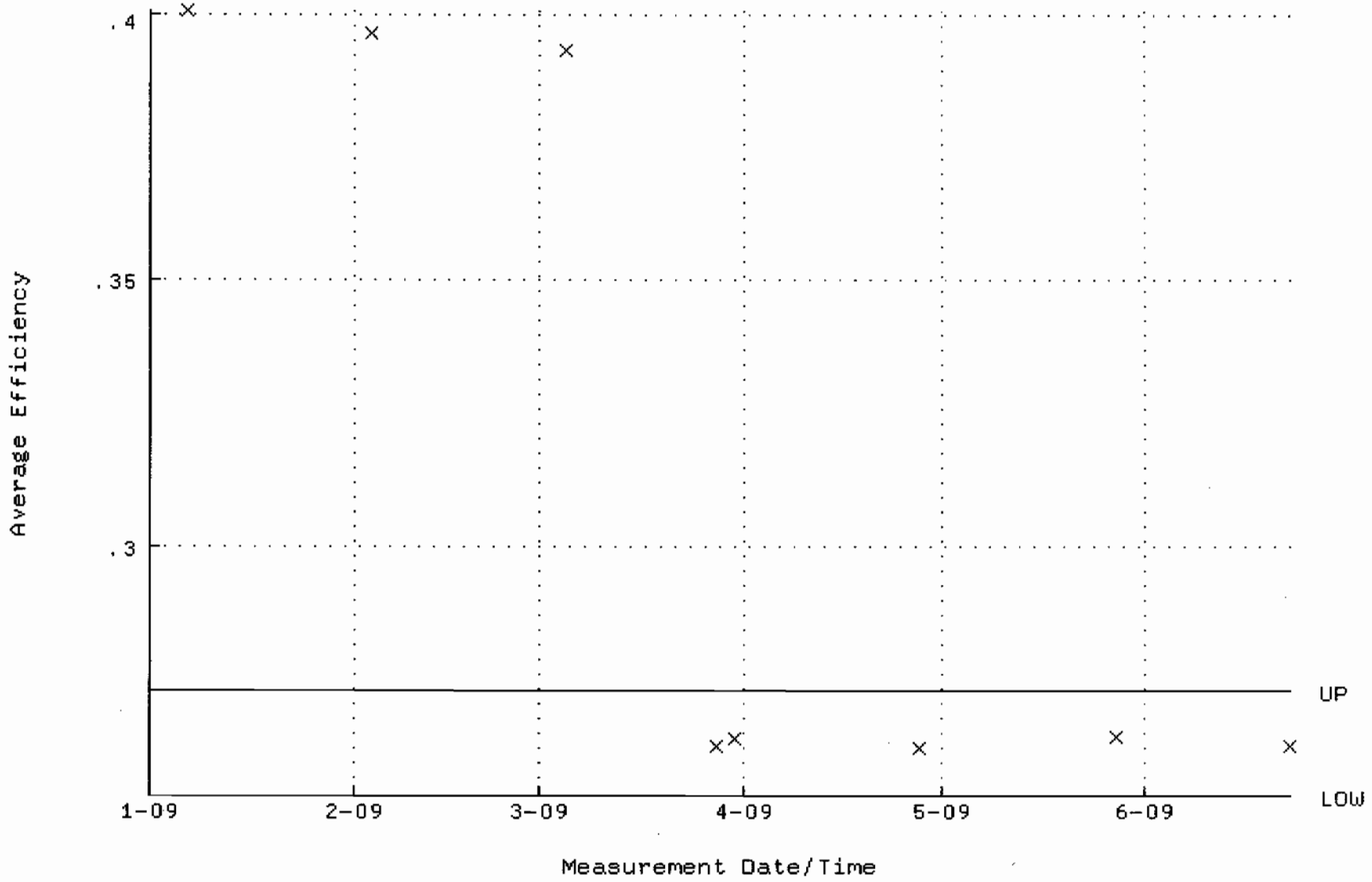

QA filename : DKA100:[ENV_ALPHA.QA.W]W190.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:49 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 81.1176 through 89.6562

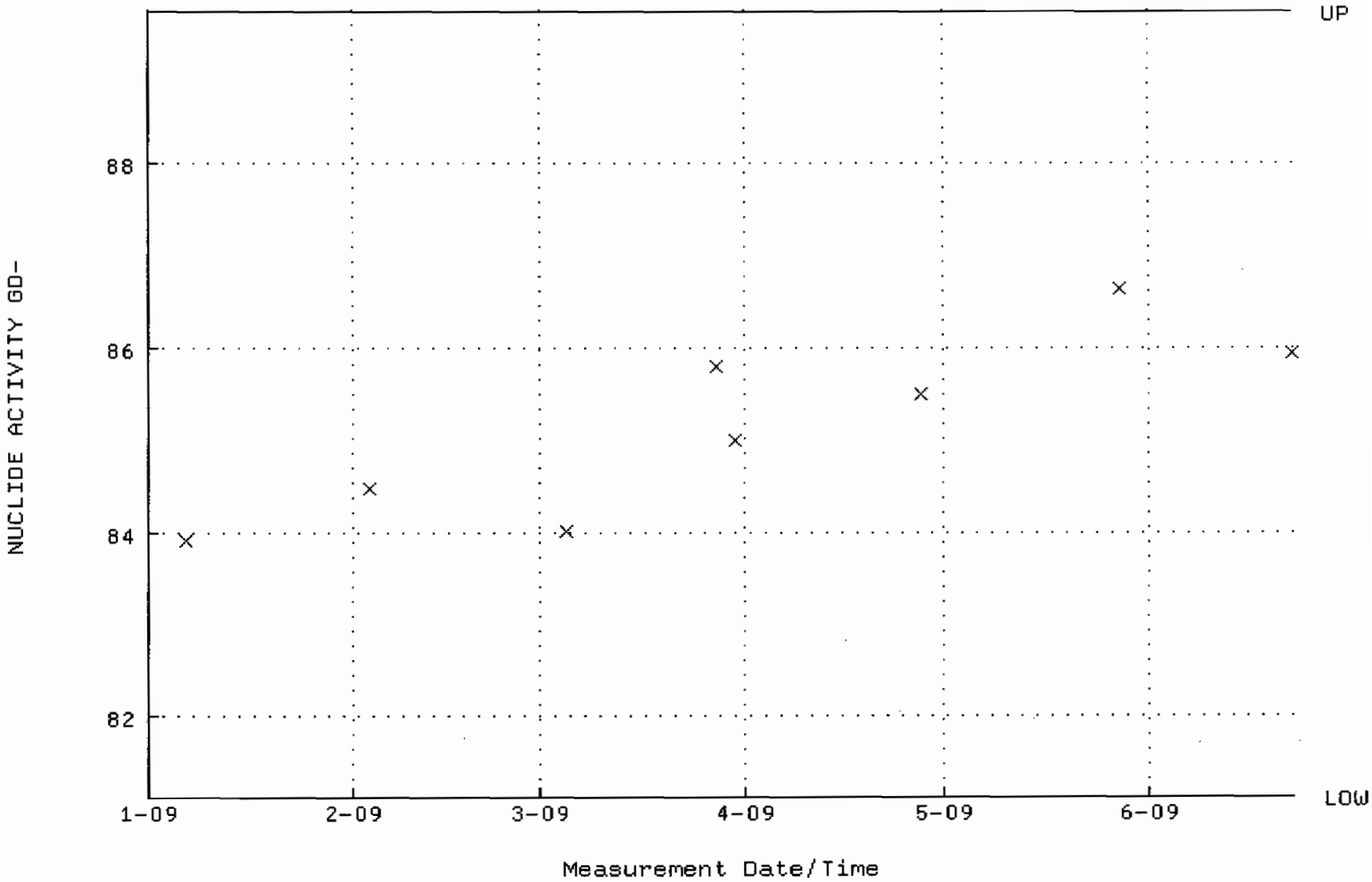

QA filename : DKA100:[ENV_ALPHA.QA.B]B190.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:55 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

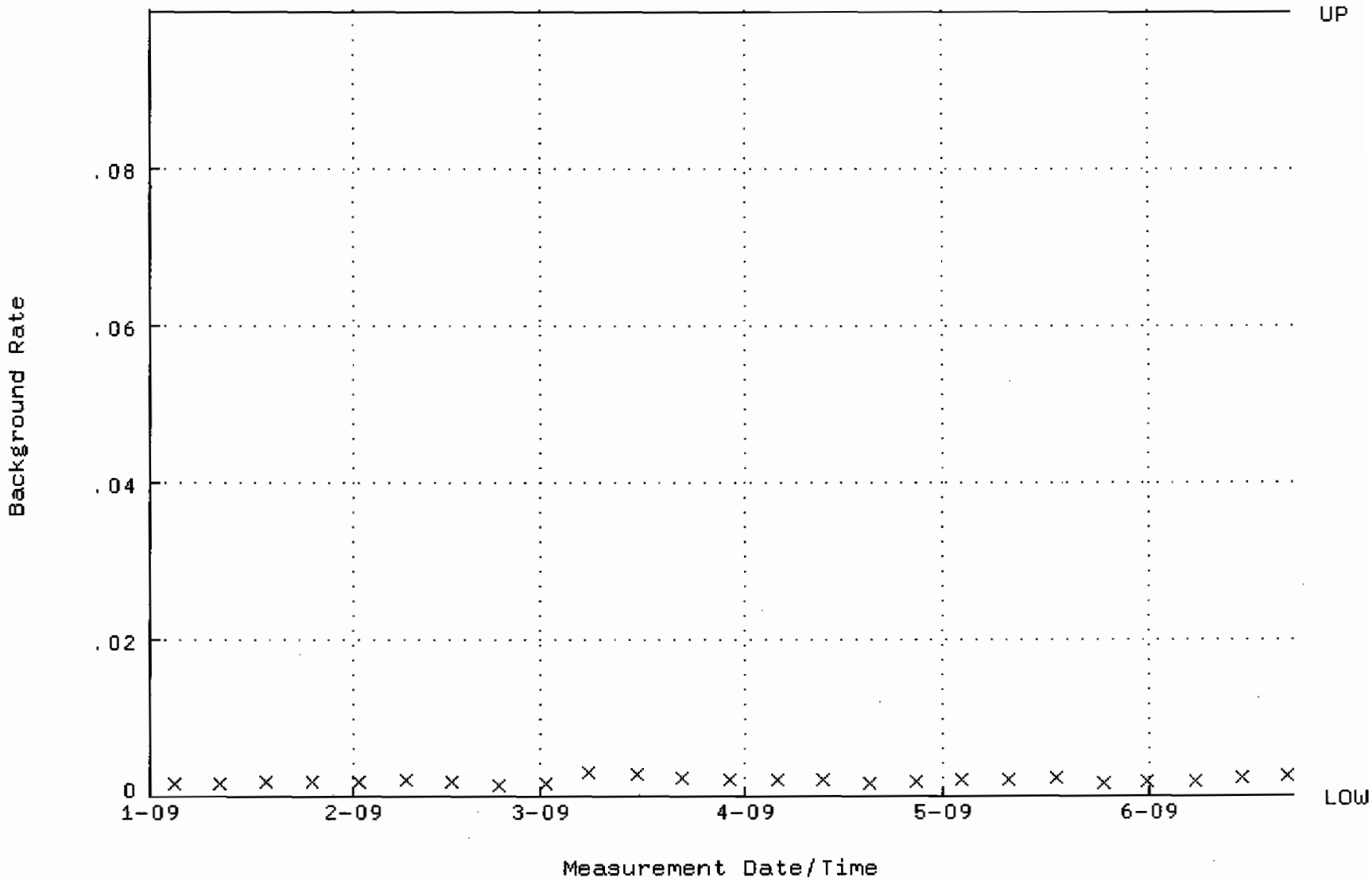

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:01 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

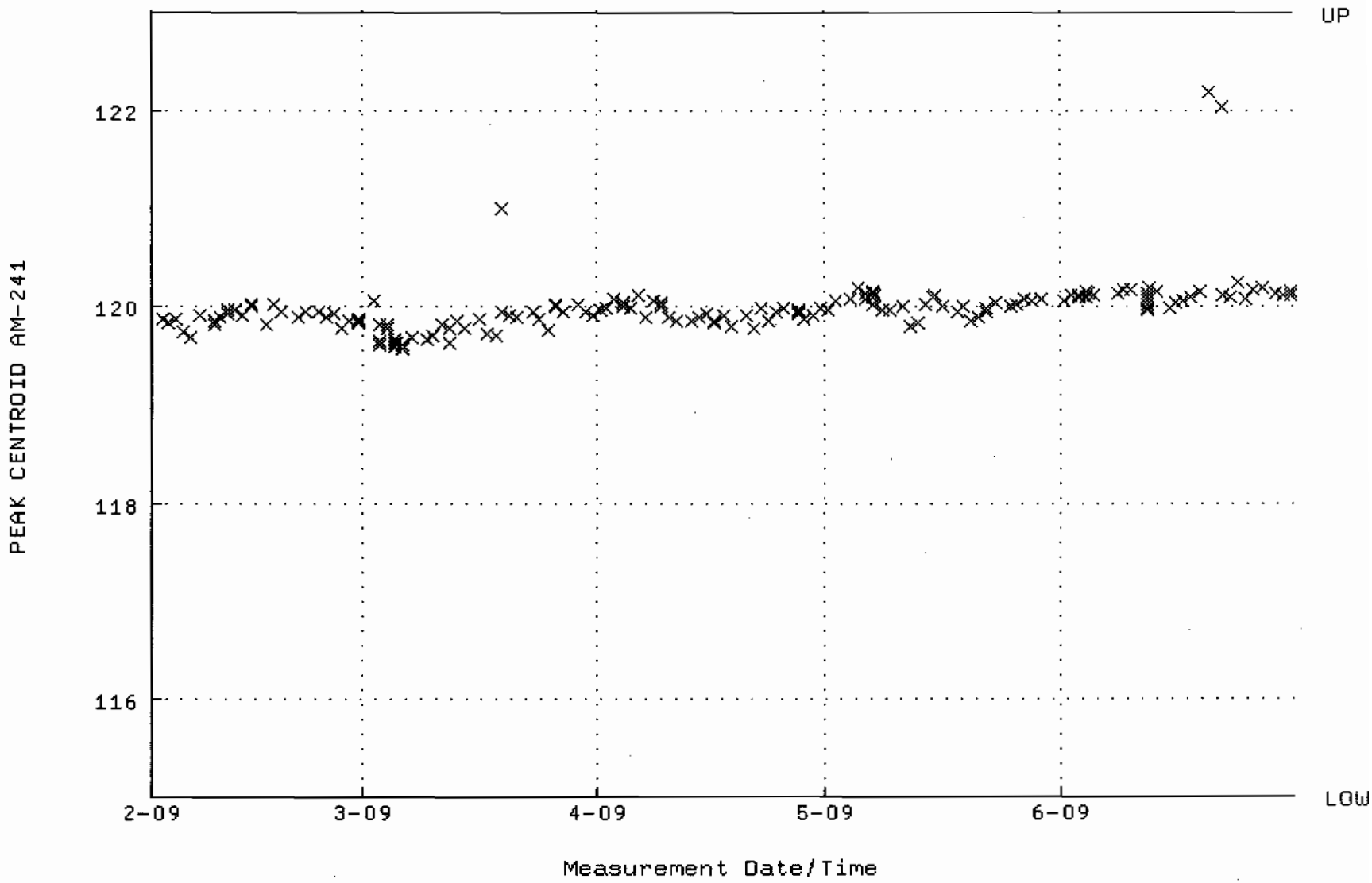

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM05.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.60580 through 1.72440

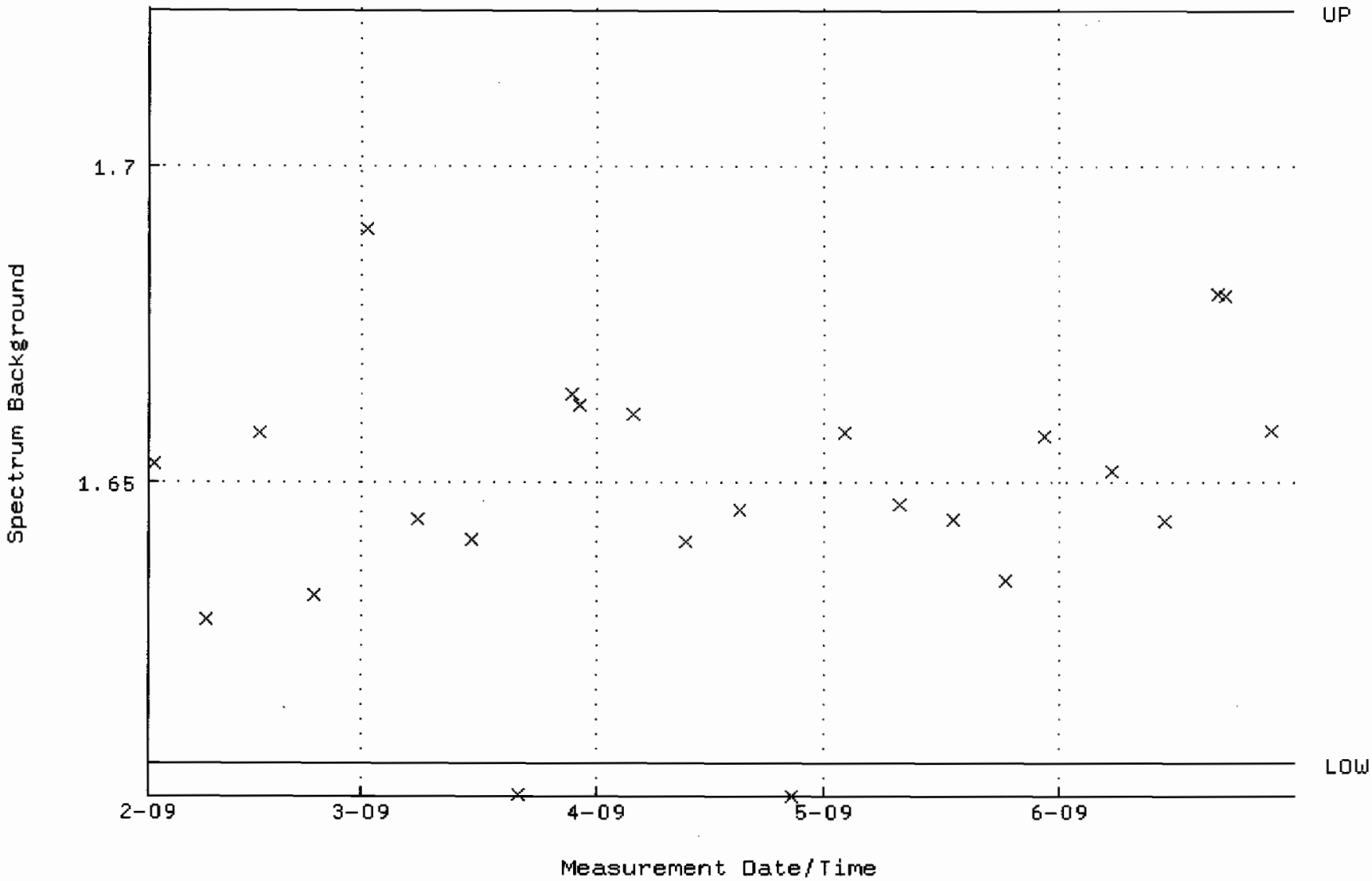

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM08_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-FEB-2009 12:14:25 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

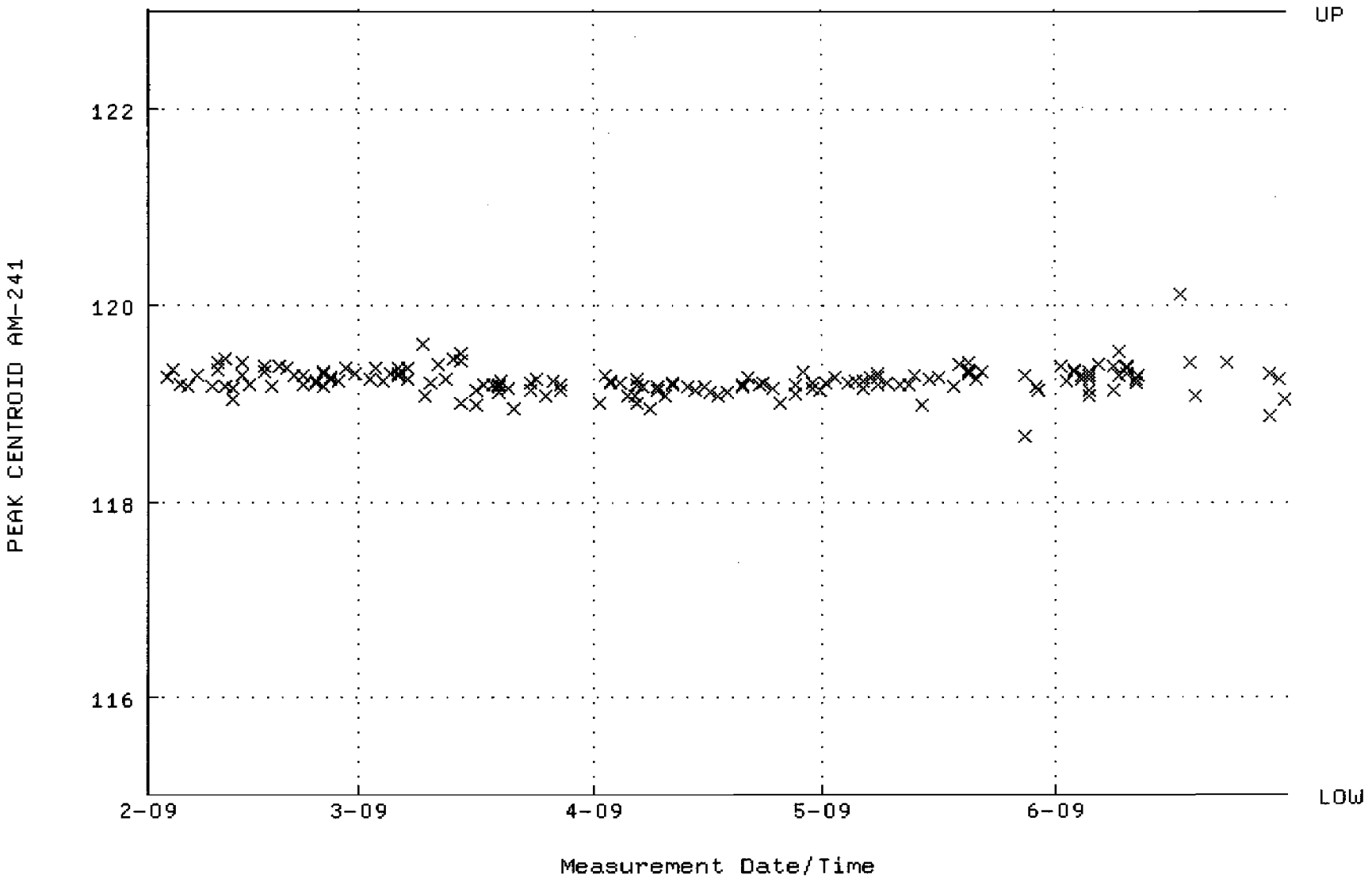

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM08.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.31400 through 1.60600

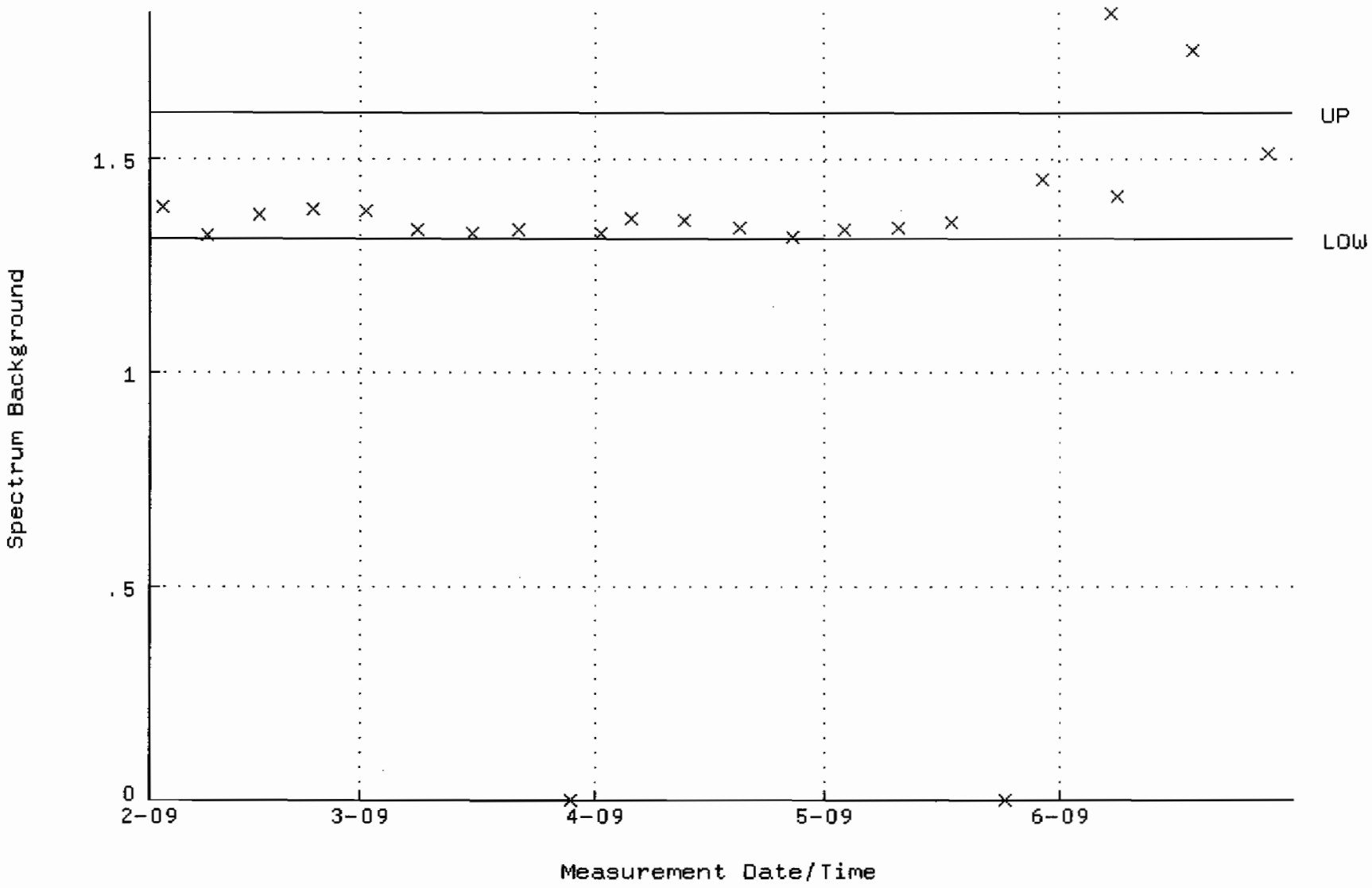

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-FEB-2009 16:33:12 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

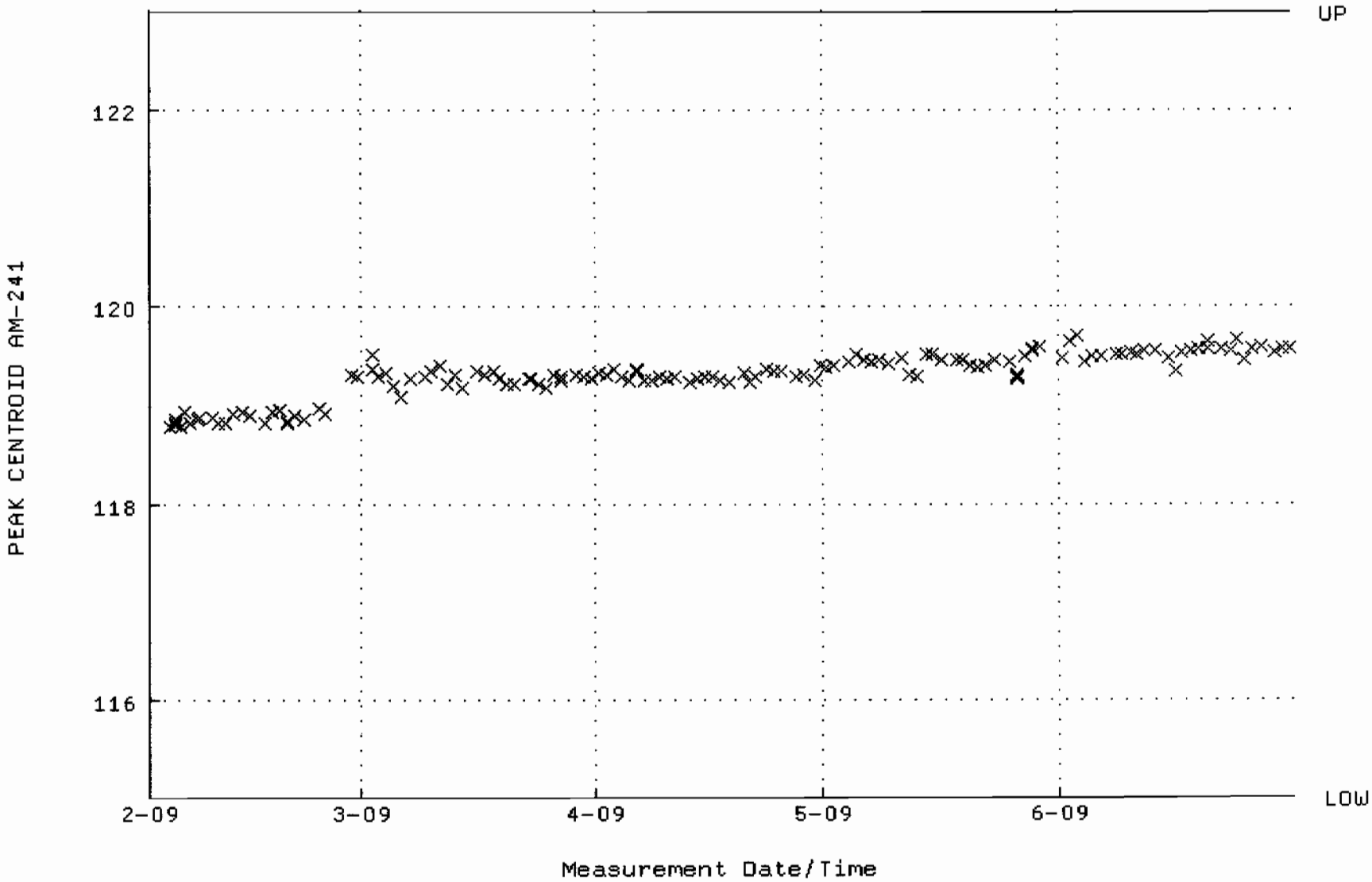

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM13.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:24 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.98827 through 3.65233

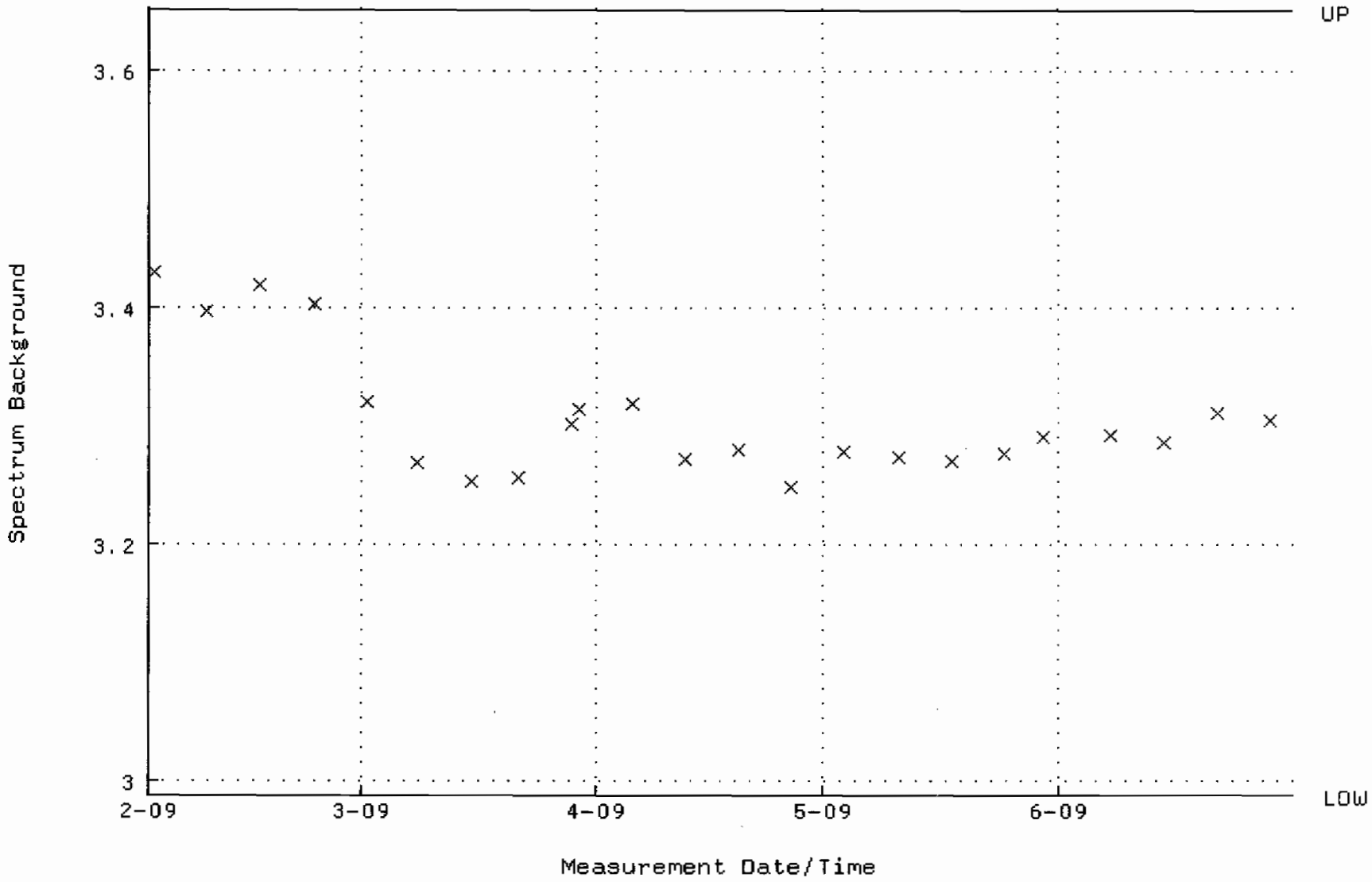

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM14_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:24 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

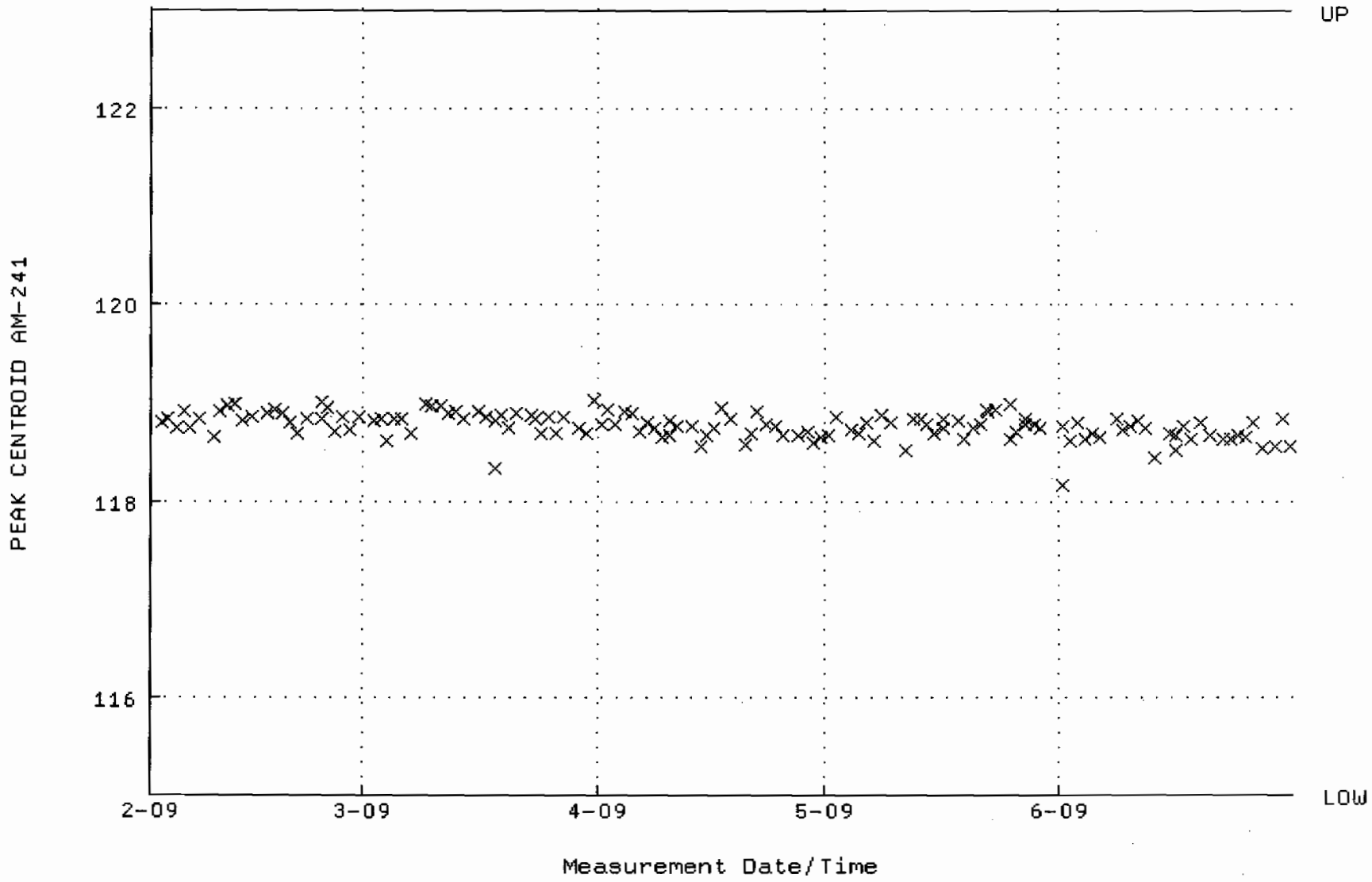

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM14.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:40 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.34064 through 1.63856

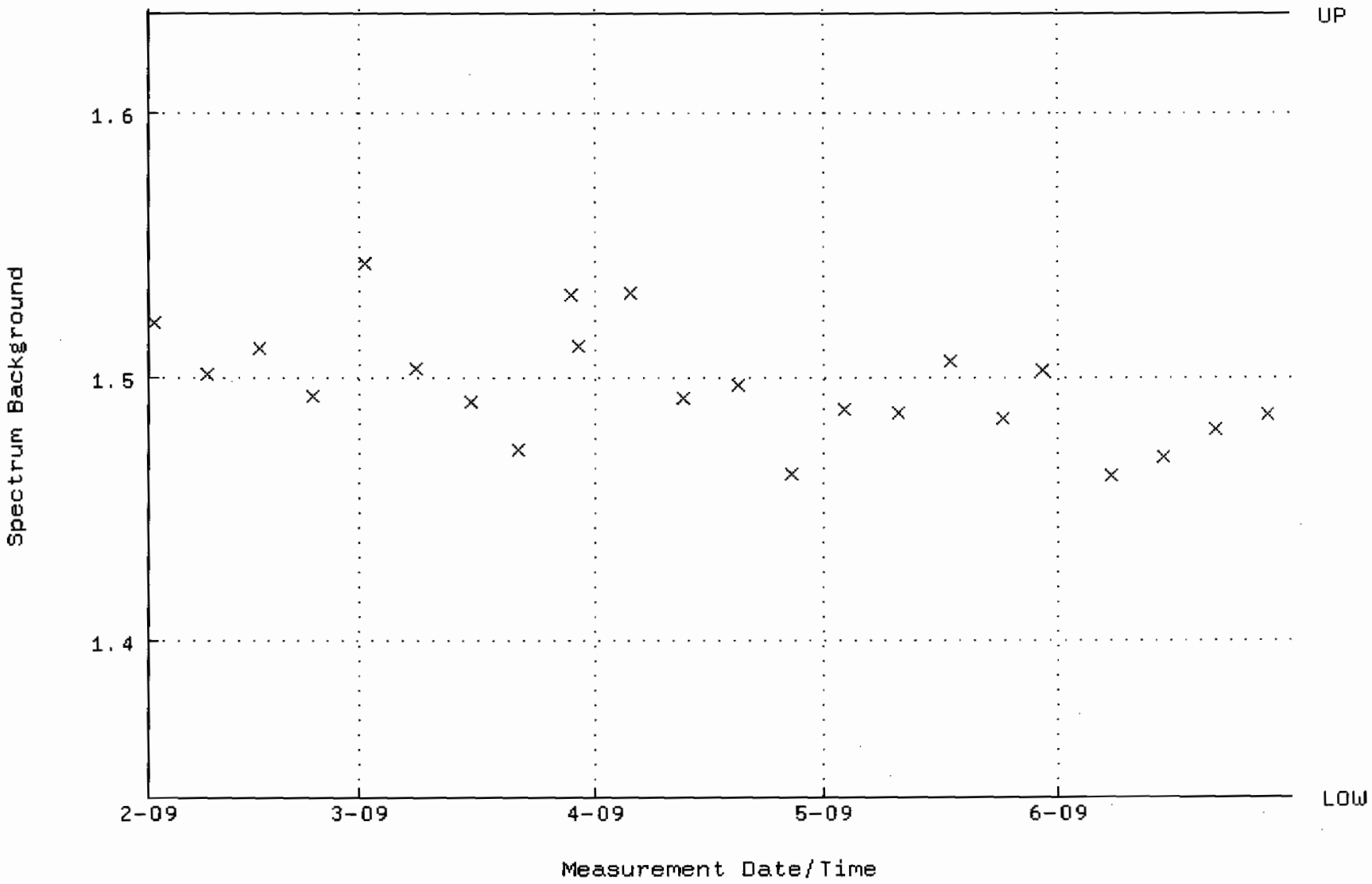

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:24:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

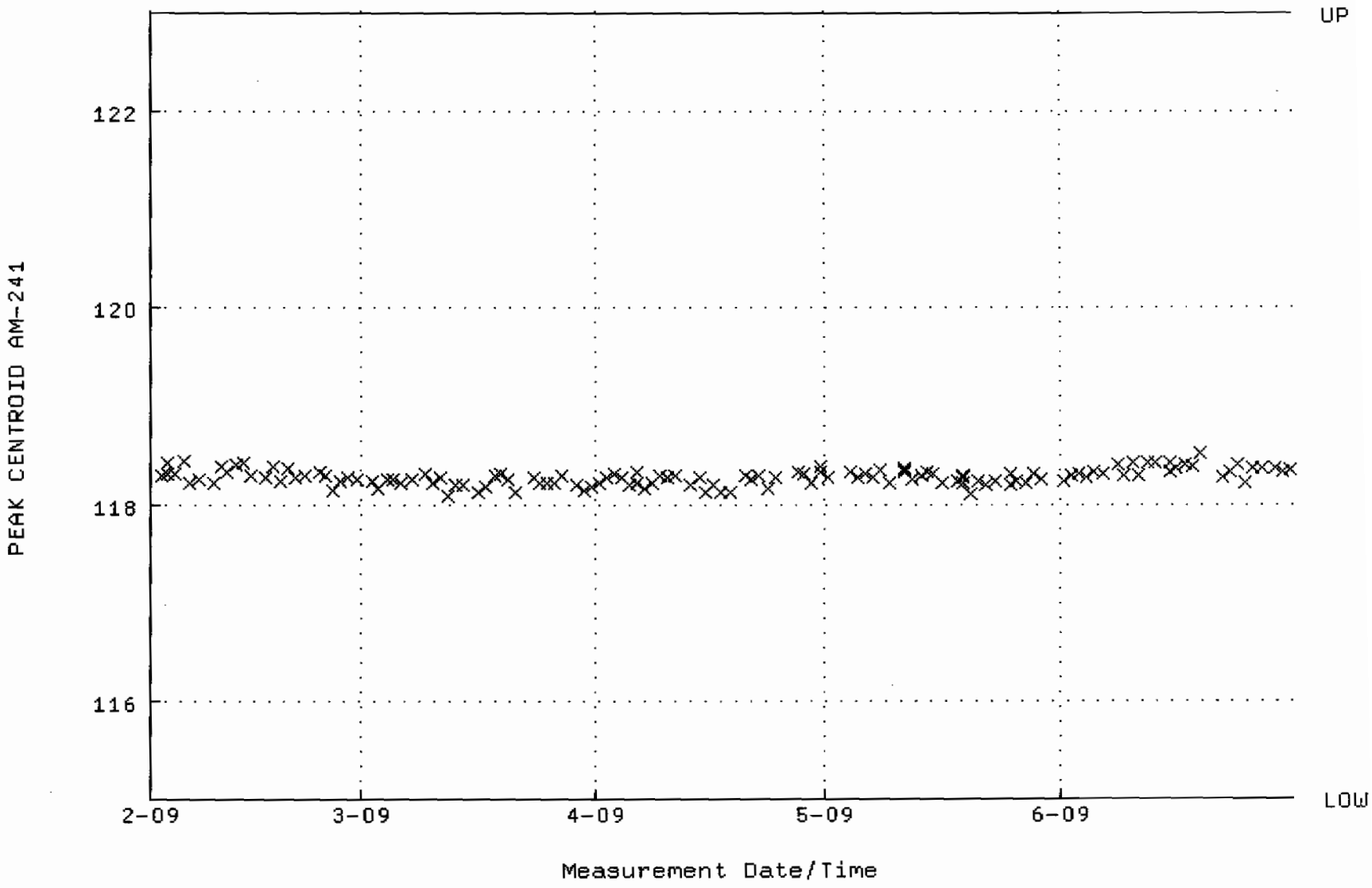

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.22710 through 2.72210

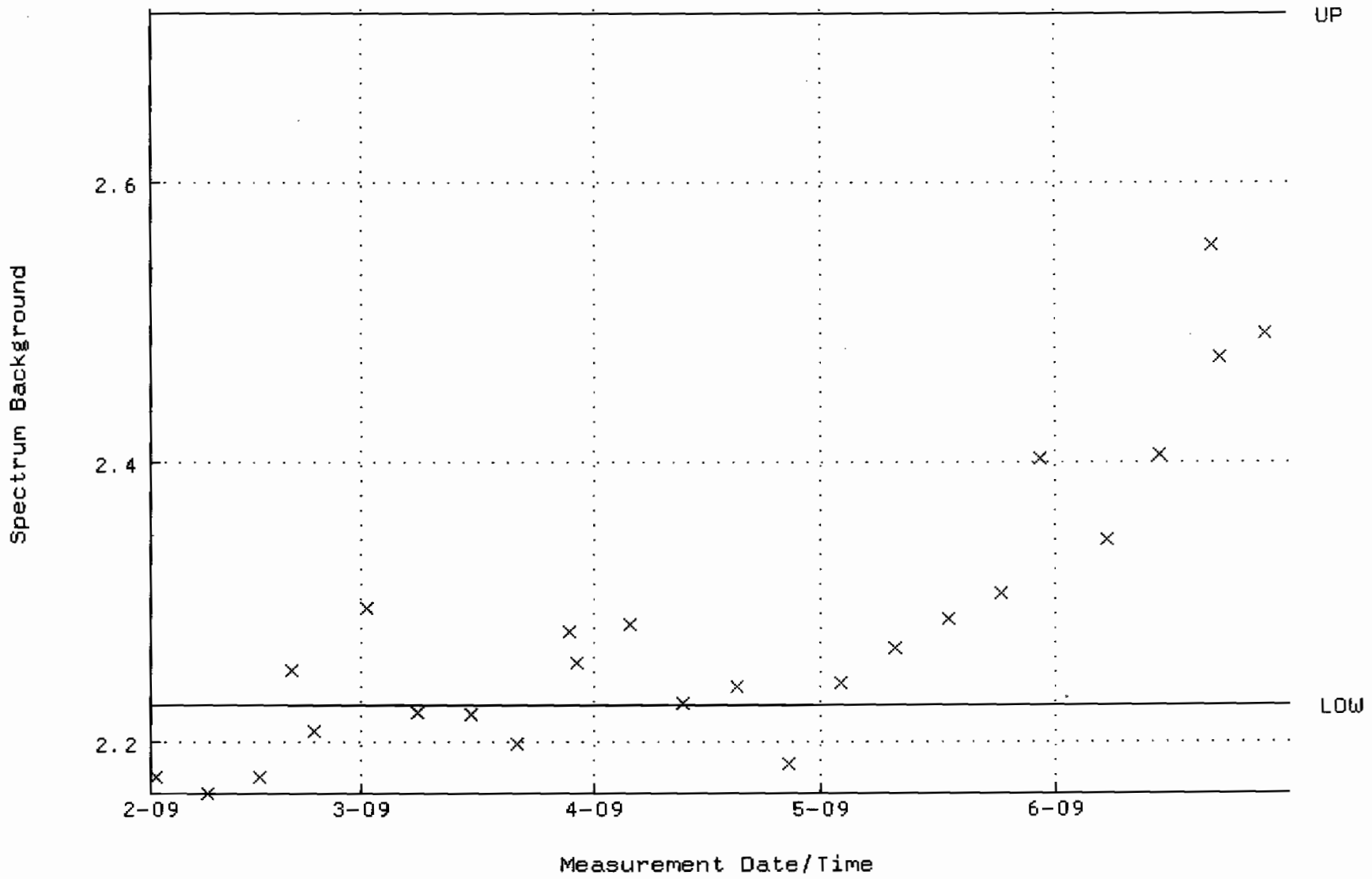

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:33:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

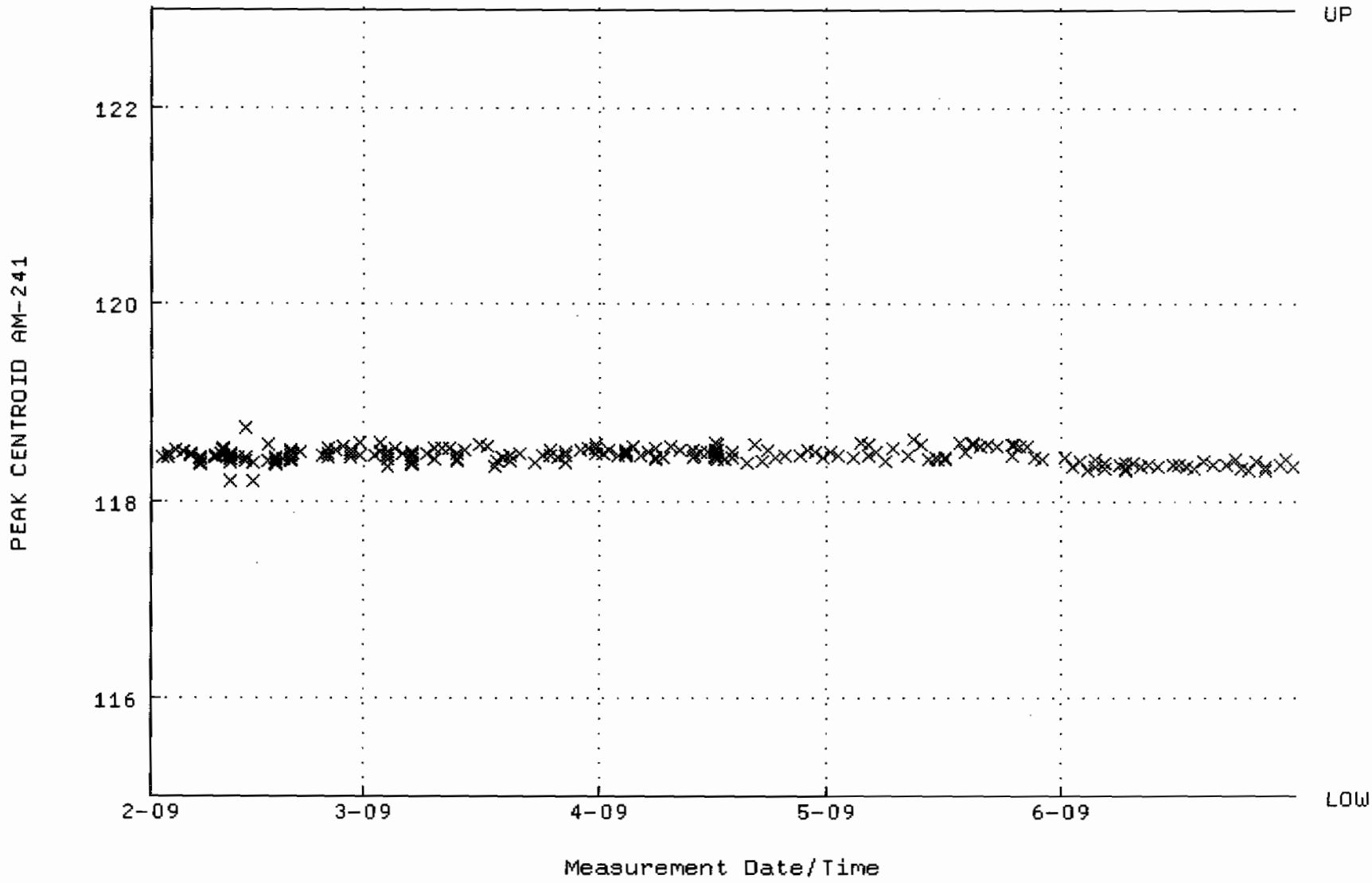

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM21.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:00 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.71450 through 2.09550

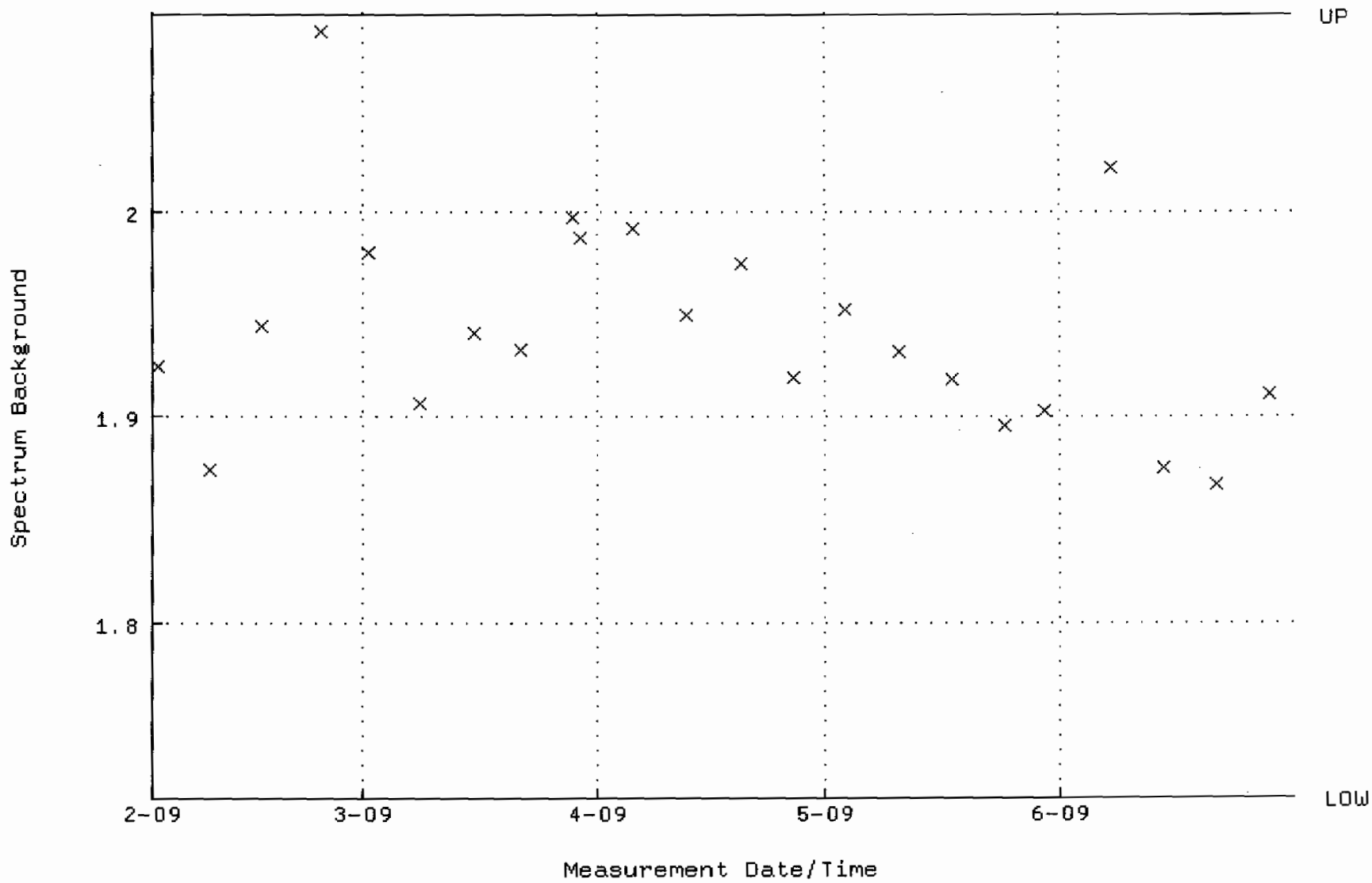

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:29:05 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

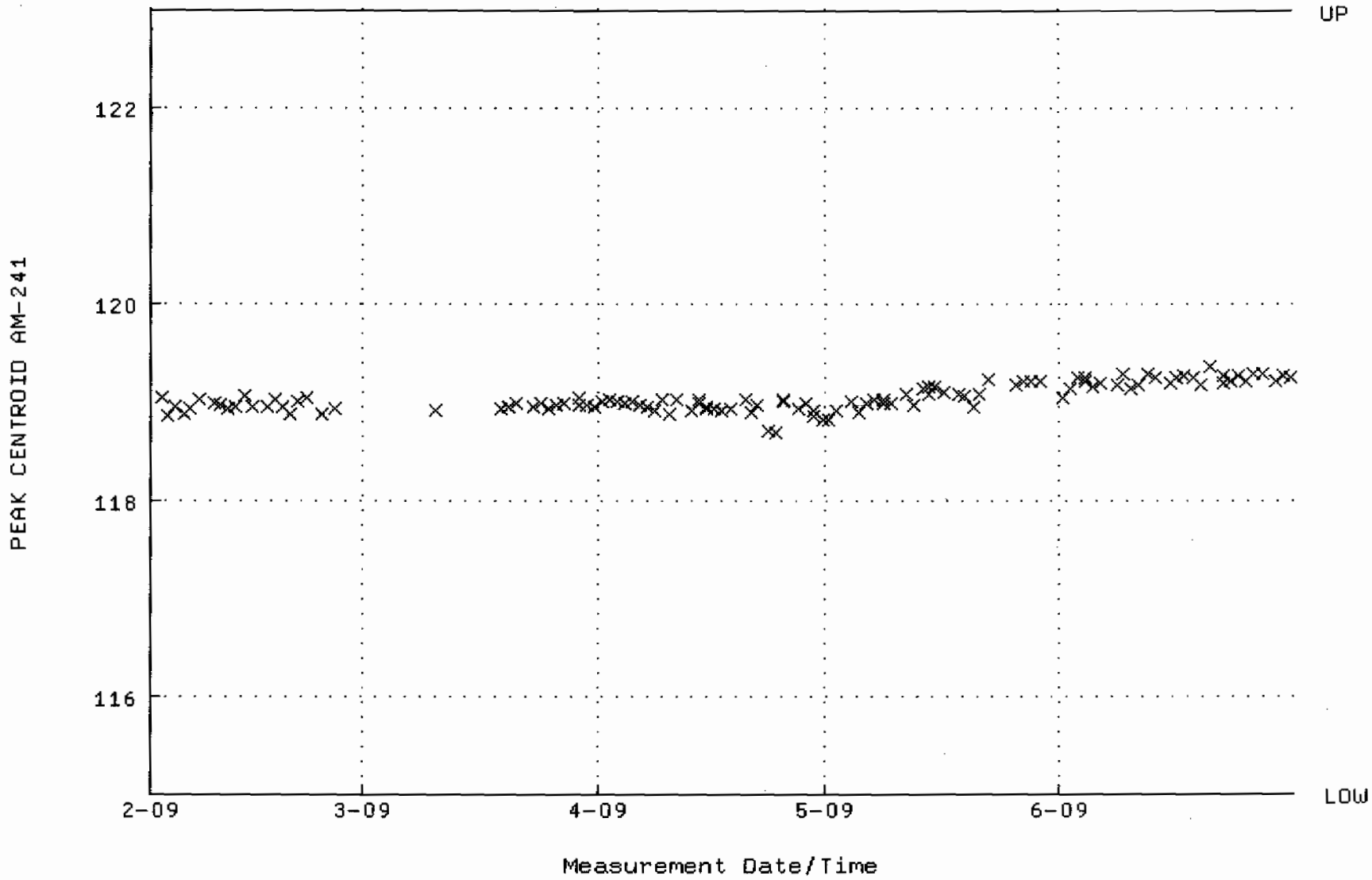

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM23.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.26405 through 1.54495

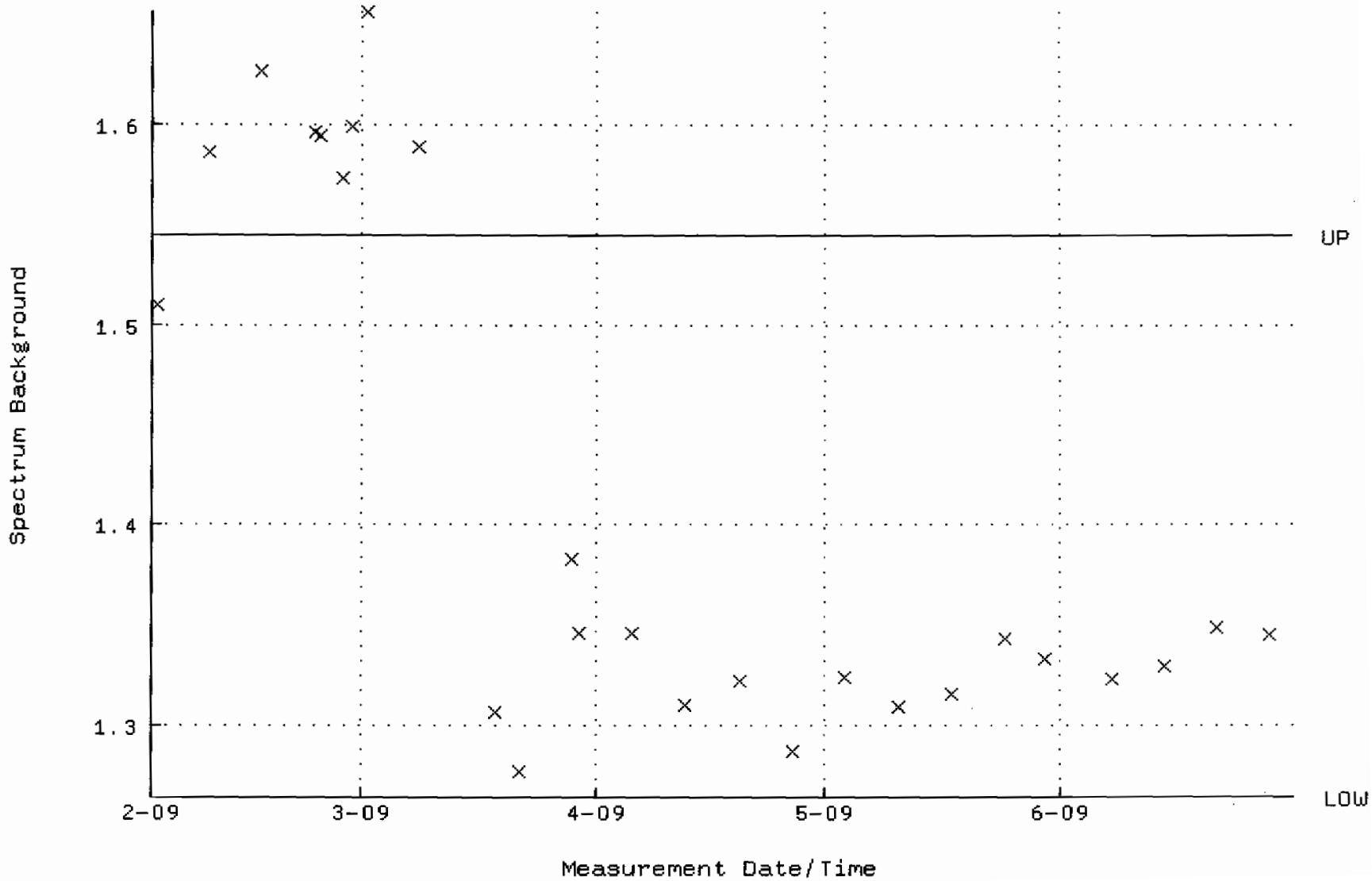

STANDARDS DATA

Amersham International plc
Amersham Laboratories

0134

[redacted]

NAMAS
CALIBRATION
No. 0146

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (µCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

RC-5-024-061

W.F. Case

Amersham
The Health Science Group

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

M. Aders 4/9/09
Amanda L. Tebo 4/9/09

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATE 4/14/2000 Scott C Neff 12/1/04

Angela L. Johnson 12/3/04

TRM

Invoice:

5 bottles of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM-1	TRM-2	TRM-3	TRM-4
U-238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U-234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th-230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra-225	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb-210	[illegible] ± [illegible]	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for Instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Sample Shipped: [redacted] SMO USE
Carrier/Waybill No.: [redacted]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Saimi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Saimi
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

Sample Tracking [redacted]
LOG IN [redacted]

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized mud materials being sent to GEL on behalf of Hank Mistaer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE [redacted]

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	Douglas E. Perry	DEP	Weston / 7577 / 845-0867

1. Relinquished by	Douglas E. Perry	Org. WESTON	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATE 4/14/2000

Amanda L. Fehr 4/30/04
[illegible] 5/1/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

[redacted]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special Instructions Below	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab

[redacted]

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized and materials being sent to GEL on behalf of Hack Minter
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Turnaround Time ☒Normal ☐Rush Required Report Date

[redacted]

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DP	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. BTT	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by	Org.	Date	Time		4. Received by	Org.	Date
2. Relinquished by	Org.	Date	Time		5. Relinquished by	Org.	Date
2. Received by	Org.	Date	Time		5. Received by	Org.	Date
3. Relinquished by	Org.	Date	Time		6. Relinquished by	Org.	Date
3. Received by	Org.	Date	Time		6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

0934

ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 - U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

72858-278

Th-229 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:	Th-229
ACTIVITY (dps):	3.842 E3
HALF-LIFE:	7340 years
CALIBRATION DATE:	May 2, 2006 12:00 EST
RELATIVE EXPANDED UNCERTAINTY (k=2):	3.5%

Impurities: Th-228 5.7 dps
Th-230 24 dps
Th-232 1.5 dps

5.05657 grams 0.5M HNO_3 solution.

P O NUMBER 2724RD, Item 1

SOURCE PREPARED BY: M Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 05-02-2006

RECEIVED 5/5/06 MLK

RCS-041-110

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0934
Prepared By:	Daniel Roy
Carrier Conc:	0.05M HNO3
Reference Date:	05/02/2006
Ampoule Mass (g):	5.05657 g
Uncertainty:	+/- 3.5 %
LogBook No:	RC-S-041-110

A Solution Material Info	
Isotope:	Thorium-229
Prepared By:	Daniel Roy
Prep Date:	04/23/2008
Verification Date:	04/23/2008
Expiration Date:	04/29/2010
Primary Code:	0934-A
Dilution(mL):	100 mL
Mass of Parent(g):	4.8973 g
Density(g/mL):	1.0143
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(4.8973 g) * (3842 dps) * (60 dpm/dps) / (5.05657 g * 100 mL) = 2232.5917 dpm/mL
(4.8973 g) * (3842 dps) * (60 dpm/dps) / (1.0143 g/mL)/ (5.05657 g * 100 mL) = 2201.0332 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
04/23/2008	Daniel Roy	2.5898	250	0934-B	22.8009 dpm/ml	04/23/2008	04/23/2009
09/25/2008	Daniel Roy	2.6237	250	0934-C	23.0994 dpm/ml	09/25/2008	09/25/2009
12/16/2008	Daniel Roy	2.6547	250	0934-D	23.3723 dpm/ml	12/16/2008	12/16/2009
01/09/2009	Daniel Roy	2.5399	250	0934-E	22.3616 dpm/ml	01/09/2009	01/09/2010
04/03/2009	Mary Aders	2.5434	250	0934-F	22.3924 dpm/ml	04/03/2009	04/03/2010
04/22/2009	Mary Aders	2.5138	250	0934-G	22.1318 dpm/ml	04/28/2009	04/28/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Th-229 Standard 0934-G

M. Aders	Isotope	Value	Uncertainty
4/28/2009	0934-G	0.976	0.1700
	0934-G	0.995	0.1750
	0934-G	0.951	0.1680

Mean Value (Counting) =	0.974	97.73	**Pass**
Stdev =	0.022068076		**Rule 3 (Pass/Fail)**

Target =	0.997
Lower Limit =	0.929863847
Upper Limit =	1.018136153
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.044136153
10 % of Mean =	0.0974
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard 0934-G using 0.1 mL for each source. Each standard was combined with 0.1 mL of Th-232 standard 0163-A-1 and 100 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 2 mL of DI water. Two mL of 49% HF was added to precipitate neodymium(and Thorium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Th-229 were calculated by comparison to Th-232 certified values.

4/29/09

4/27/09

ANALYTICS
Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-0

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318

Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info

Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info

Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David Dry 12/4/08
Amanda Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

	Isotope	Result	
	Mixed Gamma N1	440.7	pCi/L
	Mixed Gamma N2	461.1	pCi/L
	Mixed Gamma N3	467.4	pCi/L
Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**
Certificate Value =	444.3738739	pCi/L	
Lower Limit =	428.4865624	pCi/L	
Upper Limit =	484.3134376	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	27.91343762		
10 % of Mean =	45.64000000		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David D[illegible] 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr 12/4/2008	**Isotope**	**Result** **pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L		**Rule 3 (Pass/Fail)**
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David [illegible] 12/4/08
Amanda L. Fehr 12/4/08

1262

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

aithersburg, Maryland 20899
anuary 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

RECEIVED

*Notes and refer...

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994** [b]*
Massic activity of the solution [c]	**26.31 Bq·g^{-1}**
Relative expanded uncertainty (k=2)	**0.72%** [d] [e]
Solution density	**(1.105 ± 0.002) g·mL^{-1} at 20 °C** [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L^{-1})	Mass Fraction (g·g^{-1})
	H_2O	50	0.81
	HNO_3	3.2	0.19
	$^{242}Pu^{+6}$	8×10^{-7}	2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) Bq·g^{-1} [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three 4πα liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	^{239}Pu + ^{240}Pu <0.000 001 [u]	^{239}Pu + ^{240}Pu 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	^{238}Pu + ^{241}Am <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One µSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (µSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 $s^{-1} \cdot g^{-1}$ for energies less than 3.1 MeV,
0.03 $s^{-1} \cdot g^{-1}$ for energies between 3.1 and 4.4 MeV, and
0.003 $s^{-1} \cdot g^{-1}$ for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 19 and 39 keV,
7×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 49 and 92 keV,
2×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 106 and 507 keV,
1×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 515 and 1456 keV, and
5×10^{-6} $s^{-1} \cdot g^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i| \cdot (x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i| \cdot (x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i| \cdot u(x_i)/y = |\partial y/\partial x_i| \cdot (x_i/y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i| \cdot (x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}·{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1262
Prepared By:	Daniel Roy
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-048-143

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Mary Aders
Prep Date:	05/08/2009
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	1262-A
Dilution(mL):	200 mL
Mass of Parent(g):	5.3306 g
Density(g/mL):	1.0000
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (200 mL) = 42.0744 dpm/mL
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0000 g/mL) / (200 mL) = 42.0744 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1262-*A*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	1262-A	1.830	0.2560
	1262-A	1.890	0.2630
	1262-A	1.810	0.2520
Mean Value (Counting) =	1.843	97.26	**Pass**
Stdev =	0.04163332		**Rule 3 (Pass/Fail)**

Target =	1.90
Lower Limit =	1.760066693
Upper Limit =	1.926599973
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.08326664
10 % of Mean =	0.184333333
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1262-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-Y and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Five drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 48% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

Mary Jo. Aders 5/15/09
05/15/09

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

End of Certificate

RECEIVED 12/15/08
RC-S-OE

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

Analyst: D. Roy	**Serial #**	**Value**		**Uncertainty**	
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L
Mean Value (Counting) =	2.407	pCi/L		**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L			**Rule 3 (Pass/Fail)**
Target =	2.397	pCi/L			
Lower Limit =	2.259244371	pCi/L			
Upper Limit =	2.554088963	pCi/L			
Rule 1 Pass/Fail	**Pass**				
Two sigma =	0.147422296				
10 % of Mean =	0.240666667				
Rule 2 (Pass/Fail)	**Pass**				

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09
1/5/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 880723**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232278001	SAMPLE	MXR1	GAM01	06-JUL-09 11:09	DONE CAN		30-JAN-09 00:00
232278002	SAMPLE	MXR1	GAM04	06-JUL-09 11:09	DONE CAN		05-MAY-09 00:00
232347001	SAMPLE	MXR1	GAM05	06-JUL-09 11:10	DONE CAN		11-JUN-09 00:00
232347002	SAMPLE	MXR1	GAM08	06-JUL-09 11:10	DONE CAN		30-JAN-09 00:00
232347003	SAMPLE	MXR1	GAM13	06-JUL-09 11:11	DONE CAN		02-FEB-09 00:00
232347004	SAMPLE	MXR1	GAM14	06-JUL-09 11:12	DONE CAN		06-MAR-09 00:00
232357001	SAMPLE	MXR1	GAM15	06-JUL-09 11:13	DONE CAN		16-FEB-09 00:00
232357002	SAMPLE	MXR1	GAM17	06-JUL-09 11:13	DONE CAN		27-JAN-09 00:00
232358001	SAMPLE	MXR1	GAM18	06-JUL-09 11:14	DONE CAN		23-APR-09 00:00
232358002	SAMPLE	MXR1	GAM06	06-JUL-09 11:15	DONE CAN		04-FEB-09 00:00
232358003	SAMPLE	MXR1	GAM21	06-JUL-09 11:15	DONE CAN		25-JUL-08 00:00
232358004	SAMPLE	MXR1	GAM22	06-JUL-09 11:16	DONE CAN		18-FEB-09 00:00
232358005	SAMPLE	MXR1	GAM23	06-JUL-09 11:17	DONE CAN		02-JUN-09 00:00
232358006	SAMPLE	MXR1	GAM09	06-JUL-09 12:13	DONE CAN		16-MAR-09 00:00
232358007	SAMPLE	MXR1	GAM10	06-JUL-09 12:13	DONE CAN		16-MAR-09 00:00
232358008	SAMPLE	MXR1	GAM11	06-JUL-09 12:14	DONE CAN		01-NOV-08 00:00
232358009	SAMPLE	MXR1	GAM12	06-JUL-09 12:15	DONE CAN		10-FEB-09 00:00
232358010	SAMPLE	MXR1	GAM16	06-JUL-09 12:15	DONE CAN		13-NOV-08 00:00
232358011	SAMPLE	MXR1	GAM17	06-JUL-09 13:25	DONE CAN		27-JAN-09 00:00
1201870087	MB	MXR1	GAM18	06-JUL-09 13:25	DONE CAN		23-APR-09 00:00
1201870088	DUP	MXR1	GAM21	06-JUL-09 13:26	DONE CAN		25-JUL-08 00:00
1201870089	LCS	MXR1	GAM23	06-JUL-09 13:26	DONE CAN		02-JUN-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 881079**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
231654001	SAMPLE	MXA1	1173	07-JUL-09 20:12	DONE		
231654002	SAMPLE	MXA1	1174	07-JUL-09 20:12	DONE		
231654003	SAMPLE	MXA1	1175	07-JUL-09 20:12	DONE		
231834001	SAMPLE	MXA1	1176	07-JUL-09 20:12	DONE		
231834002	SAMPLE	MXA1	1177	07-JUL-09 20:12	DONE		
231834003	SAMPLE	MXA1	1178	07-JUL-09 20:12	DONE		
231834004	SAMPLE	MXA1	1179	07-JUL-09 20:12	DONE		
231834005	SAMPLE	MXA1	1180	07-JUL-09 20:12	DONE		
231834006	SAMPLE	MXA1	1181	07-JUL-09 20:12	DONE		
232278001	SAMPLE	MXA1	1182	07-JUL-09 20:12	DUSE		
232278002	SAMPLE	MXA1	1183	07-JUL-09 20:12	DONE		
232347001	SAMPLE	MXA1	1184	07-JUL-09 20:12	DONE		
232347002	SAMPLE	MXA1	1185	07-JUL-09 20:12	DONE		
232347003	SAMPLE	MXA1	1186	07-JUL-09 20:12	DONE		
232347004	SAMPLE	MXA1	1187	07-JUL-09 20:12	DONE		
1201871023	MB	MXA1	1188	07-JUL-09 20:12	DONE		
1201871024	DUP	MXA1	1189	07-JUL-09 20:12	DONE		
1201871025	LCS	MXA1	1190	07-JUL-09 20:12	DONE		
232278001	SAMPLE	MXA1	1200	09-JUL-09 07:50	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 881676**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	AXD2	1133	10-JUL-09 21:19	DONE		
232347002	SAMPLE	AXD2	1134	10-JUL-09 21:19	DONE		
232347003	SAMPLE	AXD2	1135	10-JUL-09 21:19	DONE		
232347004	SAMPLE	AXD2	1136	10-JUL-09 21:19	DUSE		
232357001	SAMPLE	AXD2	1137	10-JUL-09 21:19	DONE		
232357002	SAMPLE	AXD2	1138	10-JUL-09 21:19	DUSE		
232358001	SAMPLE	AXD2	1139	10-JUL-09 21:19	DONE		
232358002	SAMPLE	AXD2	1140	10-JUL-09 21:19	DONE		
232358003	SAMPLE	AXD2	1141	10-JUL-09 21:19	DONE		
232358004	SAMPLE	AXD2	1142	10-JUL-09 21:19	DONE		
232358005	SAMPLE	AXD2	1144	10-JUL-09 21:19	DONE		
232358006	SAMPLE	AXD2	1145	10-JUL-09 21:19	DONE		
232358007	SAMPLE	AXD2	1146	10-JUL-09 21:19	DONE		
232358008	SAMPLE	AXD2	1147	10-JUL-09 21:19	DONE		
232358009	SAMPLE	AXD2	1148	10-JUL-09 21:19	DONE		
232358010	SAMPLE	AXD2	1149	10-JUL-09 21:20	DONE		
232358011	SAMPLE	AXD2	1150	10-JUL-09 21:20	DONE		
1201872427	MB	AXD2	1151	10-JUL-09 21:20	DONE		
1201872428	DUP	AXD2	1152	10-JUL-09 21:20	DONE		
1201872429	LCS	AXD2	1153	10-JUL-09 21:20	DONE		
232347004	SAMPLE	AXD2	1165	14-JUL-09 09:06	DONE		
232357002	SAMPLE	AXD2	1166	14-JUL-09 09:06	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882703**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	CXM2	1013	11-JUL-09 15:57	DUSE		
232347002	SAMPLE	CXM2	1014	11-JUL-09 15:57	DUSE		
232347003	SAMPLE	CXM2	1015	11-JUL-09 15:57	DUSE		
232347004	SAMPLE	CXM2	1016	11-JUL-09 15:57	DUSE		
232664001	SAMPLE	CXM2	1017	11-JUL-09 15:57	DUSE		
232664002	SAMPLE	CXM2	1019	11-JUL-09 15:57	DUSE		
232664003	SAMPLE	CXM2	1020	11-JUL-09 15:57	DUSE		
232664004	SAMPLE	CXM2	1021	11-JUL-09 15:57	DUSE		
232664005	SAMPLE	CXM2	1022	11-JUL-09 15:57	DUSE		
232746001	SAMPLE	CXM2	1023	11-JUL-09 15:57	DUSE		
232746002	SAMPLE	CXM2	1024	11-JUL-09 15:57	DUSE		
232746003	SAMPLE	CXM2	1037	11-JUL-09 15:57	DUSE		
232746004	SAMPLE	CXM2	1038	11-JUL-09 15:57	DUSE		
232746005	SAMPLE	CXM2	1039	11-JUL-09 15:57	DUSE		
232746006	SAMPLE	CXM2	1040	11-JUL-09 15:57	DUSE		
232746007	SAMPLE	CXM2	1041	11-JUL-09 15:57	DUSE		
232746008	SAMPLE	CXM2	1042	11-JUL-09 15:57	DUSE		
232754001	SAMPLE	CXM2	1065	11-JUL-09 15:57	DUSE		
232754002	SAMPLE	CXM2	1066	11-JUL-09 15:57	DUSE		
232754003	SAMPLE	CXM2	1067	11-JUL-09 15:57	DUSE		
1201874791	MB	CXM2	1068	11-JUL-09 15:57	DUSE		
1201874792	DUP	CXM2	1069	11-JUL-09 15:57	DUSE		
1201874793	LCS	CXM2	1070	11-JUL-09 15:57	DUSE		
232347001	SAMPLE	CXM2	1031	16-JUL-09 10:10	DONE		
232347002	SAMPLE	CXM2	1032	16-JUL-09 10:10	DONE		
232347003	SAMPLE	CXM2	1033	16-JUL-09 10:10	DONE		
232664001	SAMPLE	CXM2	1035	16-JUL-09 10:10	DONE		
232664002	SAMPLE	CXM2	1036	16-JUL-09 10:10	DONE		
232664003	SAMPLE	CXM2	1037	16-JUL-09 10:10	DONE		
232664004	SAMPLE	CXM2	1038	16-JUL-09 10:10	DONE		
232664005	SAMPLE	CXM2	1039	16-JUL-09 10:10	DONE		
232746001	SAMPLE	CXM2	1040	16-JUL-09 10:10	DONE		
232746002	SAMPLE	CXM2	1041	16-JUL-09 10:10	DONE		
232746003	SAMPLE	CXM2	1042	16-JUL-09 10:10	DONE		
232746004	SAMPLE	CXM2	1043	16-JUL-09 10:10	DONE		
232746005	SAMPLE	CXM2	1044	16-JUL-09 10:10	DONE		
232746006	SAMPLE	CXM2	1045	16-JUL-09 10:10	DONE		
232746007	SAMPLE	CXM2	1046	16-JUL-09 10:10	DONE		
232746008	SAMPLE	CXM2	1047	16-JUL-09 10:10	DONE		
232754001	SAMPLE	CXM2	1048	16-JUL-09 10:10	DONE		
232754002	SAMPLE	CXM2	1065	16-JUL-09 10:10	DONE		
232754003	SAMPLE	CXM2	1066	16-JUL-09 10:10	DONE		
1201874791	MB	CXM2	1067	16-JUL-09 10:10	DONE		
1201874792	DUP	CXM2	1068	16-JUL-09 10:10	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1201874793	LCS	CXM2	1069	16-JUL-09 10:10	DONE		
232347004	SAMPLE	CXM2	1070	16-JUL-09 10:10	DONE		

Instrument Run Log

Instrument Type: LSC **Batch ID: 883020**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	KXK2	LSCSILVER	14-JUL-09 18:04	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347002	SAMPLE	KXK2	LSCSILVER	14-JUL-09 19:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347003	SAMPLE	KXK2	LSCSILVER	14-JUL-09 21:21	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347004	SAMPLE	KXK2	LSCSILVER	14-JUL-09 22:59	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232582001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 00:38	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232582002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 02:16	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 05:08	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 07:41	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585003	SAMPLE	KXK2	LSCSILVER	15-JUL-09 08:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232591001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 09:46	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 10:48	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 11:51	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664003	SAMPLE	KXK2	LSCSILVER	15-JUL-09 12:53	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664004	SAMPLE	KXK2	LSCSILVER	15-JUL-09 13:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664005	SAMPLE	KXK2	LSCSILVER	15-JUL-09 14:58	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875586	MB	KXK2	LSCSILVER	15-JUL-09 16:01	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875587	DUP	KXK2	LSCSILVER	15-JUL-09 17:03	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875588	LCS	KXK2	LSCSILVER	15-JUL-09 18:05	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2457

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2457

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-10467	R	6/22/2009	
	SW-846:8260B	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
		1	CAMO-09-10470	S	6/22/2009	
	SW-846:8270C	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2457

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10467	R	6/22/2009	
	SW-846:8321A_MOD	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2457

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2457

REQUEST NUMBER: 09-2457

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
~~CAMO-09-10462~~	~~1~~	~~SEPTUM AMBER GLASS~~	~~8260B~~	~~Ice~~	~~R~~
CAMO-09-10462	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10460	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10460	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10461	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10461	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10462	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10460	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10461	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10467	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10467	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-10467	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10470	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/24/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10460

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		1145	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	MO-604995	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	7.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	8.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	15 day					
1	~~Regular~~ NSQ 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Brown / Tan, indurated, dry tuff w/ Brown rootlike intrusion containing minor clay.

FTB: CAMO-09-10470

SAMPLE COMMENTS: Sample collected 5.0' below Tuff interface.

LOCATION DESC: 03-00702 (E) of bldg. 3159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq$ 37 dpm

$\beta/\gamma \leq$ 927 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 4:20

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10461

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06 / 22 /2009	MEDIA:	QBT4	OK
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	mo-604996	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	8.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	J.B 6/22/09 ~~9.0~~ 9.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 day ~~Regular~~ NSG 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
		GS+TAL Metals	1 LITER POLY	Ice		
		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Tan / Grey, indurated, dry, tuff, w/ clay like intrusion.

SAMPLE COMMENTS: Sample collected 5.0' below tuff interface.

LOCATION DESC: 03-007-03 (N) of bldg. 3159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 20$ dpm

$\beta/\gamma \leq 624$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 4:20

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10462

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	OBT4	OK
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	MO-604999	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	6.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	7.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 DAY Regular	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	16-23-09 NSG	8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Brown / Tan, indurated, dry tuff

FD: CAMO-09-10467

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 03-007-07 (S) of sigma fence (E) of bldg. 3-159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 8$ dpm

$\beta/\gamma \leq 110$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Nickolas Gallegos

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 1620

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10467

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	OK
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	UNK	MO-604999	FIELD QC TYPE:	FD	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	6.0	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	7.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	15 day					
1	~~Regular~~ NSG	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	6-23-09	8270C+~~8082~~ J. 8/24/09	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
		H3	500 ML POLY	Ice		
		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-10462

Brown/Tan, indurated, dry tuff.

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 03-007-07 (S) of sigma fence (E) of bldg. 3-159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 8$ dpm

$\beta/\gamma \leq 110$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Nicholas Gallegos

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 1620

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10470

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	NA	O.K
TIME COLLECTED (HH:MM)		1145	SUB-MEDIA:	OTHER	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604995	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	OK	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	J.B. 6/22/09 ~~2~~ Regular 15 day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-10460 6-23-09

SAMPLE COMMENTS: None

LOCATION DESC: 03-007-02

FIELD SCREENING/MEASUREMENT RESULTS: None

COLLECTED BY (PRINT) J. Branch REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) Sherri Sherwood	4:20
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10460	ARS Sample ID:	ARS2-09-00073-012
Sample Collection Date:	06/22/09 11:45	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	76.82	67.89	133.72	88.39	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	49.32	17.65	20.15	18.65		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.30	0.27	0.10	0.27	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	17.11	6.87	1.55	6.89		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.06	10.19	0.10	10.15	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.11	0.13	0.07	0.13	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	13.25	0.06	13.25	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.33	0.36	0.12	0.36	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.18	0.46	0.15	0.46		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	2.34	1.27	0.27	1.27		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	0.70	0.54	0.16	0.54		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	2.14	2.66	1.23	2.70		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.58	0.39	0.12	0.39		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.04

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10461	ARS Sample ID:	ARS2-09-00073-013
Sample Collection Date:	06/22/09 12:45	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analyte Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	18.47	62.34	133.66	62.39	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	28.74	16.01	19.98	16.73		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.09	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	32.61	10.09	1.81	10.14		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.14	0.21	0.12	0.21		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.22	0.16	0.09	0.16	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	15.46	0.07	15.46	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.50	0.38	0.14	0.38	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.49	0.54	0.16	0.55		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	1.15	0.69	0.82	0.60		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	2.07	1.51	0.48	1.51		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	7.19	3.47	1.15	3.84		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.03	0.11	0.06	0.11	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.26

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10462	ARS Sample ID:	ARS2-09-00073-014
Sample Collection Date:	06/22/09 15:00	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	75.71	86.11	127.53	86.60	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	32.27	15.90	20.61	16.38		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.04	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	25.56	8.93	1.78	8.96		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	11.66	0.13	11.66	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	15.25	0.07	15.25	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	1.07	0.89	0.14	0.59	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.63	0.56	0.16	0.56		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-228	3.64	1.17	0.31	1.18		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	1.45	0.88	0.18	0.88		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	2.96	2.69	1.23	2.77		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.17	0.34	0.14	0.34		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 0.84

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00073
Client Sample ID: CAMO-09-10467
Sample Collection Date: 06/22/09 15:00
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00073-015
Date Received: 06/23/09 00:00
Report Date: 06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.84	86.53	128.32	86.99	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	35.47	16.90	21.30	17.45		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.06	0.13	0.11	0.13	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	27.35	6.90	1.67	8.94		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	10.91	0.11	10.91	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.11	0.10	0.08	0.10	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	14.27	0.07	14.27	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	11.34	0.13	11.34	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	0.99	0.44	0.15	0.44		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	2.18	1.14	0.29	1.14		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	-0.07	97.26	0.22	97.26	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	4.92	3.06	1.16	3.26		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.07	0.19	0.09	0.19	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 0.57

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Section I.

REQUEST NUMBER: 09-2457 VALIDATION DATE: 07/23/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eyda Hergenreder ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): GC/MS VOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the FTB, sample CAMO-09-10470, which was associated with sample -10460, acetone was detected. The associated sample result was ND and, thus, data was not qualified.
2. The ICV and/or CCVs %Ds for 1,2-dibromo-3-chloropropane and dichlorodifluoromethane associated with all samples and for dibromochloromethane associated with sample -10462 were >20%. All associated sample results were ND and, thus were qualified UJ,V7c.
3. All IS area counts for sample -10462 were <50% but ≥10% of the daily CCV IS area counts. All associated sample results were ND and, thus, were qualified UJ,V1b.
4. The LCS %Rs for dichlorodifluoromethane, 2-butanone and 1,2-dibromo-3-chloropropane associated with all samples <u>except</u> sample -10462 were > the laboratory UAL. All associated sample results were ND and, thus, data were not qualified.

DATA VALIDATION COVER SHEET

5114-1

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Data Validation Cover Sheet

5. It should be noted that the MS/MSD analyzed with sample -10462 was performed on a parent sample from another LANL RN. In addition an MS/MSD was not included with the batch for all other samples. Since MS/MSD analyses are not required for this method, no sample data were qualified.

6. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/24/09

VALIDATOR'S SIGNATURE: Evda Hergenreder (Evda Hergenreder) DATE: 07/23/09

Form 5114-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☐	☒	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☒	☐	☐	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☒	☐	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☐	☒	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☒	☐	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☒	☐	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☒	☐	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☒	☐	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:05	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:52	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r321.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.09	ug/kg	0.371	1.09	UJ,V7c
74-87-3	Chloromethane	U	1.09	ug/kg	0.327	1.09	
75-01-4	Vinyl chloride	U	1.09	ug/kg	0.327	1.09	
74-83-9	Bromomethane	U	1.09	ug/kg	0.327	1.09	
75-00-3	Chloroethane	U	1.09	ug/kg	0.327	1.09	
75-69-4	Trichlorofluoromethane	U	1.09	ug/kg	0.622	1.09	
67-64-1	Acetone	U	5.45	ug/kg	1.81	5.45	
75-35-4	1,1-Dichloroethylene	U	1.09	ug/kg	0.327	1.09	
74-88-4	Iodomethane	U	5.45	ug/kg	1.74	5.45	
75-09-2	Methylene chloride	U	5.45	ug/kg	2.18	5.45	
75-15-0	Carbon disulfide	U	5.45	ug/kg	1.36	5.45	
156-60-5	trans-1,2-Dichloroethylene	U	1.09	ug/kg	0.327	1.09	
75-34-3	1,1-Dichloroethane	U	1.09	ug/kg	0.327	1.09	
78-93-3	2-Butanone	U	5.45	ug/kg	1.64	5.45	
156-59-2	cis-1,2-Dichloroethylene	U	1.09	ug/kg	0.327	1.09	
594-20-7	2,2-Dichloropropane	U	1.09	ug/kg	0.327	1.09	
67-66-3	Chloroform	U	1.09	ug/kg	0.327	1.09	
74-97-5	Bromochloromethane	U	1.09	ug/kg	0.360	1.09	
71-55-6	1,1,1-Trichloroethane	U	1.09	ug/kg	0.327	1.09	
563-58-6	1,1-Dichloropropene	U	1.09	ug/kg	0.327	1.09	
56-23-5	Carbon tetrachloride	U	1.09	ug/kg	0.327	1.09	
107-06-2	1,2-Dichloroethane	U	1.09	ug/kg	0.327	1.09	
71-43-2	Benzene	U	1.09	ug/kg	0.327	1.09	
79-01-6	Trichloroethylene	U	1.09	ug/kg	0.360	1.09	
78-87-5	1,2-Dichloropropane	U	1.09	ug/kg	0.327	1.09	
75-27-4	Bromodichloromethane	U	1.09	ug/kg	0.327	1.09	
74-95-3	Dibromomethane	U	1.09	ug/kg	0.327	1.09	
108-10-1	4-Methyl-2-pentanone	U	5.45	ug/kg	1.36	5.45	
10061-01-5	cis-1,3-Dichloropropylene	U	1.09	ug/kg	0.327	1.09	
108-88-3	Toluene	U	1.09	ug/kg	0.327	1.09	
10061-02-6	trans-1,3-Dichloropropylene	U	1.09	ug/kg	0.327	1.09	
79-00-5	1,1,2-Trichloroethane	U	1.09	ug/kg	0.327	1.09	
591-78-6	2-Hexanone	U	5.45	ug/kg	1.64	5.45	
142-28-9	1,3-Dichloropropane	U	1.09	ug/kg	0.327	1.09	
127-18-4	Tetrachloroethylene	U	1.09	ug/kg	0.327	1.09	
124-48-1	Dibromochloromethane	U	1.09	ug/kg	0.327	1.09	
106-93-4	1,2-Dibromoethane	U	1.09	ug/kg	0.327	1.09	
108-90-7	Chlorobenzene	U	1.09	ug/kg	0.327	1.09	

EH
07/23/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:05	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:52	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r321.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.09	ug/kg	0.327	1.09	
179601-23-1	m,p-Xylenes	U	2.18	ug/kg	0.327	2.18	
95-47-6	o-Xylene	U	1.09	ug/kg	0.327	1.09	
100-42-5	Styrene	U	1.09	ug/kg	0.327	1.09	
75-25-2	Bromoform	U	1.09	ug/kg	0.327	1.09	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.09	ug/kg	0.327	1.09	
96-18-4	1,2,3-Trichloropropane	U	1.09	ug/kg	0.327	1.09	
108-86-1	Bromobenzene	U	1.09	ug/kg	0.327	1.09	
103-65-1	n-Propylbenzene	U	1.09	ug/kg	0.327	1.09	
95-49-8	2-Chlorotoluene	U	1.09	ug/kg	0.327	1.09	
98-82-8	Isopropylbenzene	U	1.09	ug/kg	0.327	1.09	
108-67-8	1,3,5-Trimethylbenzene	U	1.09	ug/kg	0.327	1.09	
106-43-4	4-Chlorotoluene	U	1.09	ug/kg	0.327	1.09	
98-06-6	tert-Butylbenzene	U	1.09	ug/kg	0.327	1.09	
95-63-6	1,2,4-Trimethylbenzene	U	1.09	ug/kg	0.327	1.09	
135-98-8	sec-Butylbenzene	U	1.09	ug/kg	0.327	1.09	
99-87-6	4-Isopropyltoluene	U	1.09	ug/kg	0.327	1.09	
541-73-1	1,3-Dichlorobenzene	U	1.09	ug/kg	0.327	1.09	
106-46-7	1,4-Dichlorobenzene	U	1.09	ug/kg	0.327	1.09	
104-51-8	n-Butylbenzene	U	1.09	ug/kg	0.327	1.09	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.09	ug/kg	0.327	1.09	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.45	ug/kg	1.74	5.45	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.09	ug/kg	0.327	1.09	
95-50-1	1,2-Dichlorobenzene	U	1.09	ug/kg	0.327	1.09	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	505	ug/kg		J
	Unknown Siloxane	16.17	62.5	ug/kg		J

EH
07/23/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348003	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10461	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:33	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:53	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r322.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.384	1.13	UJ,V7c
74-87-3	Chloromethane	U	1.13	ug/kg	0.339	1.13	
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.339	1.13	
74-83-9	Bromomethane	U	1.13	ug/kg	0.339	1.13	
75-00-3	Chloroethane	U	1.13	ug/kg	0.339	1.13	
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.644	1.13	
67-64-1	Acetone	U	5.65	ug/kg	1.88	5.65	
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.339	1.13	
74-88-4	Iodomethane	U	5.65	ug/kg	1.81	5.65	
75-09-2	Methylene chloride	U	5.65	ug/kg	2.26	5.65	
75-15-0	Carbon disulfide	U	5.65	ug/kg	1.41	5.65	
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.339	1.13	
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.339	1.13	
78-93-3	2-Butanone	U	5.65	ug/kg	1.70	5.65	
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.339	1.13	
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.339	1.13	
67-66-3	Chloroform	U	1.13	ug/kg	0.339	1.13	
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.373	1.13	
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.339	1.13	
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.339	1.13	
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.339	1.13	
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.339	1.13	
71-43-2	Benzene	U	1.13	ug/kg	0.339	1.13	
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.373	1.13	
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.339	1.13	
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.339	1.13	
74-95-3	Dibromomethane	U	1.13	ug/kg	0.339	1.13	
108-10-1	4-Methyl-2-pentanone	U	5.65	ug/kg	1.41	5.65	
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.339	1.13	
108-88-3	Toluene	U	1.13	ug/kg	0.339	1.13	
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.339	1.13	
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.339	1.13	
591-78-6	2-Hexanone	U	5.65	ug/kg	1.70	5.65	
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.339	1.13	
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.339	1.13	
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.339	1.13	
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.339	1.13	
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.339	1.13	

EH
07/23/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2457**	**Date Collected:**	**06/22/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232348003**	**Date Received:**	**06/25/2009 08:45**	**%Moisture:**	**11.5**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10461**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**881794**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/01/2009 19:33**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/01/2009 12:53**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6r322.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.339	1.13	
179601-23-1	m,p-Xylenes	U	2.26	ug/kg	0.339	2.26	
95-47-6	o-Xylene	U	1.13	ug/kg	0.339	1.13	
100-42-5	Styrene	U	1.13	ug/kg	0.339	1.13	
75-25-2	Bromoform	U	1.13	ug/kg	0.339	1.13	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.339	1.13	
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.339	1.13	
108-86-1	Bromobenzene	U	1.13	ug/kg	0.339	1.13	
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.339	1.13	
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.339	1.13	
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.339	1.13	
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.339	1.13	
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.339	1.13	
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.339	1.13	
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.339	1.13	
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.339	1.13	
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.339	1.13	
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.339	1.13	
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.339	1.13	
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.339	1.13	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.339	1.13	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.65	ug/kg	1.81	5.65	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.339	1.13	
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.339	1.13	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	394	ug/kg		J
	Unknown Siloxane	16.17	135	ug/kg		J

EH
07/23/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:03	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 11:51	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r411.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.07	ug/kg	0.364	1.07	UJ,V7c
74-87-3	Chloromethane	U	1.07	ug/kg	0.321	1.07	UJ,V1b
75-01-4	Vinyl chloride	U	1.07	ug/kg	0.321	1.07	
74-83-9	Bromomethane	U	1.07	ug/kg	0.321	1.07	
75-00-3	Chloroethane	U	1.07	ug/kg	0.321	1.07	
75-69-4	Trichlorofluoromethane	U	1.07	ug/kg	0.610	1.07	
67-64-1	Acetone	U	5.35	ug/kg	1.78	5.35	
75-35-4	1,1-Dichloroethylene	U	1.07	ug/kg	0.321	1.07	
74-88-4	Iodomethane	U	5.35	ug/kg	1.71	5.35	
75-09-2	Methylene chloride	U	5.35	ug/kg	2.14	5.35	
75-15-0	Carbon disulfide	U	5.35	ug/kg	1.34	5.35	
156-60-5	trans-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07	
75-34-3	1,1-Dichloroethane	U	1.07	ug/kg	0.321	1.07	
78-93-3	2-Butanone	U	5.35	ug/kg	1.60	5.35	
156-59-2	cis-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07	
594-20-7	2,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07	
67-66-3	Chloroform	U	1.07	ug/kg	0.321	1.07	
74-97-5	Bromochloromethane	U	1.07	ug/kg	0.353	1.07	
71-55-6	1,1,1-Trichloroethane	U	1.07	ug/kg	0.321	1.07	
563-58-6	1,1-Dichloropropene	U	1.07	ug/kg	0.321	1.07	
56-23-5	Carbon tetrachloride	U	1.07	ug/kg	0.321	1.07	
107-06-2	1,2-Dichloroethane	U	1.07	ug/kg	0.321	1.07	
71-43-2	Benzene	U	1.07	ug/kg	0.321	1.07	
79-01-6	Trichloroethylene	U	1.07	ug/kg	0.353	1.07	
78-87-5	1,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07	
75-27-4	Bromodichloromethane	U	1.07	ug/kg	0.321	1.07	
74-95-3	Dibromomethane	U	1.07	ug/kg	0.321	1.07	
108-10-1	4-Methyl-2-pentanone	U	5.35	ug/kg	1.34	5.35	
10061-01-5	cis-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07	
108-88-3	Toluene	U	1.07	ug/kg	0.321	1.07	
10061-02-6	trans-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07	
79-00-5	1,1,2-Trichloroethane	U	1.07	ug/kg	0.321	1.07	
591-78-6	2-Hexanone	U	5.35	ug/kg	1.60	5.35	
142-28-9	1,3-Dichloropropane	U	1.07	ug/kg	0.321	1.07	
127-18-4	Tetrachloroethylene	U	1.07	ug/kg	0.321	1.07	
124-48-1	Dibromochloromethane	U	1.07	ug/kg	0.321	1.07	UJ,V7c
106-93-4	1,2-Dibromoethane	U	1.07	ug/kg	0.321	1.07	UJ,V1b
108-90-7	Chlorobenzene	U	1.07	ug/kg	0.321	1.07	UJ,V1b

EH
07/23/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:03	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 11:51	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r411.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.07	ug/kg	0.321	1.07	UJ,V1b
179601-23-1	m,p-Xylenes	U	2.14	ug/kg	0.321	2.14	
95-47-6	o-Xylene	U	1.07	ug/kg	0.321	1.07	
100-42-5	Styrene	U	1.07	ug/kg	0.321	1.07	
75-25-2	Bromoform	U	1.07	ug/kg	0.321	1.07	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07	
96-18-4	1,2,3-Trichloropropane	U	1.07	ug/kg	0.321	1.07	
108-86-1	Bromobenzene	U	1.07	ug/kg	0.321	1.07	
103-65-1	n-Propylbenzene	U	1.07	ug/kg	0.321	1.07	
95-49-8	2-Chlorotoluene	U	1.07	ug/kg	0.321	1.07	
98-82-8	Isopropylbenzene	U	1.07	ug/kg	0.321	1.07	
108-67-8	1,3,5-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07	
106-43-4	4-Chlorotoluene	U	1.07	ug/kg	0.321	1.07	
98-06-6	tert-Butylbenzene	U	1.07	ug/kg	0.321	1.07	
95-63-6	1,2,4-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07	
135-98-8	sec-Butylbenzene	U	1.07	ug/kg	0.321	1.07	
99-87-6	4-Isopropyltoluene	U	1.07	ug/kg	0.321	1.07	
541-73-1	1,3-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07	
106-46-7	1,4-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07	
104-51-8	n-Butylbenzene	U	1.07	ug/kg	0.321	1.07	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.07	ug/kg	0.321	1.07	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.35	ug/kg	1.71	5.35	UJ,V1b
630-20-6	1,1,1,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07	
95-50-1	1,2-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	641	ug/kg		J
	Unknown Siloxane	16.17	99.1	ug/kg		J

EH
07/23/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232348004	Date Received:	06/25/2009 08:45	%Moisture:	4.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10467	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	881794	Inst:	VOA6.I	Dilution:	1
Run Date:	07/01/2009 20:00	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/01/2009 12:54	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6r323.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.356	1.05	UJ,V7c
74-87-3	Chloromethane	U	1.05	ug/kg	0.314	1.05	
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.314	1.05	
74-83-9	Bromomethane	U	1.05	ug/kg	0.314	1.05	
75-00-3	Chloroethane	U	1.05	ug/kg	0.314	1.05	
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.597	1.05	
67-64-1	Acetone	U	5.24	ug/kg	1.74	5.24	
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.314	1.05	
74-88-4	Iodomethane	U	5.24	ug/kg	1.68	5.24	
75-09-2	Methylene chloride	U	5.24	ug/kg	2.09	5.24	
75-15-0	Carbon disulfide	U	5.24	ug/kg	1.31	5.24	
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.314	1.05	
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.314	1.05	
78-93-3	2-Butanone	U	5.24	ug/kg	1.57	5.24	
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.314	1.05	
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.314	1.05	
67-66-3	Chloroform	U	1.05	ug/kg	0.314	1.05	
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.346	1.05	
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.314	1.05	
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.314	1.05	
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.314	1.05	
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.314	1.05	
71-43-2	Benzene	U	1.05	ug/kg	0.314	1.05	
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.346	1.05	
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.314	1.05	
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.314	1.05	
74-95-3	Dibromomethane	U	1.05	ug/kg	0.314	1.05	
108-10-1	4-Methyl-2-pentanone	U	5.24	ug/kg	1.31	5.24	
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.314	1.05	
108-88-3	Toluene	U	1.05	ug/kg	0.314	1.05	
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.314	1.05	
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.314	1.05	
591-78-6	2-Hexanone	U	5.24	ug/kg	1.57	5.24	
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.314	1.05	
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.314	1.05	
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.314	1.05	
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.314	1.05	
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.314	1.05	

EH
07/23/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2457**	**Date Collected:**	**06/22/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232348004**	**Date Received:**	**06/25/2009 08:45**	**%Moisture:**	**4.5**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10467**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**881794**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/01/2009 20:00**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/01/2009 12:54**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6r323.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.314	1.05	
179601-23-1	m,p-Xylenes	U	2.09	ug/kg	0.314	2.09	
95-47-6	o-Xylene	U	1.05	ug/kg	0.314	1.05	
100-42-5	Styrene	U	1.05	ug/kg	0.314	1.05	
75-25-2	Bromoform	U	1.05	ug/kg	0.314	1.05	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.314	1.05	
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.314	1.05	
108-86-1	Bromobenzene	U	1.05	ug/kg	0.314	1.05	
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.314	1.05	
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.314	1.05	
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.314	1.05	
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.314	1.05	
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.314	1.05	
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.314	1.05	
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.314	1.05	
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.314	1.05	
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.314	1.05	
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.314	1.05	
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.314	1.05	
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.314	1.05	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.314	1.05	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.24	ug/kg	1.68	5.24	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.314	1.05	
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.314	1.05	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Siloxane	14.24	354	ug/kg		J
	Unknown Siloxane	16.17	83.8	ug/kg		J

EH
07/23/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	S
Lab Sample ID:	232348005	**Date Received:**	06/25/2009 08:45		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10470	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 13:59	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:39	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r310.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00	UJ,V7c
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00	
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00	
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00	
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00	
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00	
67-64-1	Acetone		6.60	ug/kg	1.66	5.00	
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00	
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00	
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00	
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00	
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00	
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00	
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00	
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00	
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00	
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00	
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00	
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00	
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00	
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00	
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00	
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00	
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00	
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00	
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00	
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00	
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00	
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00	
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00	
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00	
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00	

EH
07/23/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2457**	**Date Collected:**	**06/22/2009 12:00**	**Matrix:**	**S**
Lab Sample ID:	**232348005**	**Date Received:**	**06/25/2009 08:45**		
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10470**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**881794**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/01/2009 13:59**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/01/2009 12:39**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6r310.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00	
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00	
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00	
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00	
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00	
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00	
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00	
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00	
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00	
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

EH
07/23/09

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Section I.

REQUEST NUMBER: 09-2457 VALIDATION DATE: 07/23/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eyda Hergenreder ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): GC/MS SVOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The ICV and/or CCV %Ds were >20% for benzoic acid, 2-methyl-4,6-dinitrophenol, n-methyl-n-nitrosomethylamine and 4-nitrophenol. All associated sample results were ND and, thus, were qualified UJ,SV7c.
2. The LCS %R for benzoic acid was < laboratory LAL but ≥10%. All associated sample results were ND and, thus, were qualified UJ,SV12a.
3. The MS/MSD RPDs for 4-nitrophenol and benzyl alcohol were >laboratory acceptance limits. Since an MS/MSD analyses are not required for this method, no sample data were qualified.
4. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/24/09

DATA VALIDATION COVER SHEET	
5115-1 **Data Validation Cover Sheet**	Records Use only Los Alamos NATIONAL LABORATORY EST 1943
VALIDATOR'S SIGNATURE: Eyda Hergenreder Eyda Hergenreder	DATE: 07/23/09
Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

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Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

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Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☒	☐	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☐	☒	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☐	☒	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☐	☒	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 **Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 18:37	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2811.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	364	ug/kg	72.7	364	UJ,SV7c
108-95-2	Phenol	U	364	ug/kg	72.7	364	
95-57-8	2-Chlorophenol	U	364	ug/kg	72.7	364	
106-46-7	1,4-Dichlorobenzene	U	364	ug/kg	72.7	364	
621-64-7	N-Nitrosodipropylamine	U	364	ug/kg	72.7	364	
59-50-7	4-Chloro-3-methylphenol	U	364	ug/kg	36.4	364	
83-32-9	Acenaphthene	U	36.4	ug/kg	12.1	36.4	
121-14-2	2,4-Dinitrotoluene	U	364	ug/kg	36.4	364	
100-02-7	4-Nitrophenol	U	364	ug/kg	72.7	364	UJ,SV7c
87-86-5	Pentachlorophenol	U	364	ug/kg	72.7	364	
129-00-0	Pyrene	U	36.4	ug/kg	11.4	36.4	
110-86-1	Pyridine	U	364	ug/kg	72.7	364	
62-53-3	Aniline	U	364	ug/kg	127	364	
111-44-4	bis(2-Chloroethyl) ether	U	364	ug/kg	72.7	364	
541-73-1	1,3-Dichlorobenzene	U	364	ug/kg	72.7	364	
100-51-6	Benzyl alcohol	U	364	ug/kg	109	364	
95-50-1	1,2-Dichlorobenzene	U	364	ug/kg	72.7	364	
108-60-1	bis(2-Chloroisopropyl)ether	U	364	ug/kg	72.7	364	
95-48-7	o-Cresol	U	364	ug/kg	72.7	364	
65794-96-9	m,p-Cresols	U	364	ug/kg	145	364	
67-72-1	Hexachloroethane	U	364	ug/kg	72.7	364	
98-95-3	Nitrobenzene	U	364	ug/kg	72.7	364	
78-59-1	Isophorone	U	364	ug/kg	72.7	364	
88-75-5	2-Nitrophenol	U	364	ug/kg	36.4	364	
105-67-9	2,4-Dimethylphenol	U	364	ug/kg	72.7	364	
111-91-1	bis(2-Chloroethoxy)methane	U	364	ug/kg	72.7	364	
120-83-2	2,4-Dichlorophenol	U	364	ug/kg	72.7	364	
65-85-0	Benzoic acid	U	727	ug/kg	182	727	UJ,SV7c
91-20-3	Naphthalene	U	36.4	ug/kg	10.9	36.4	
106-47-8	4-Chloroaniline	U	364	ug/kg	72.7	364	
87-68-3	Hexachlorobutadiene	U	364	ug/kg	72.7	364	
91-57-6	2-Methylnaphthalene	U	36.4	ug/kg	7.27	36.4	
77-47-4	Hexachlorocyclopentadiene	U	364	ug/kg	72.7	364	
88-06-2	2,4,6-Trichlorophenol	U	364	ug/kg	72.7	364	
95-95-4	2,4,5-Trichlorophenol	U	364	ug/kg	72.7	364	
91-58-7	2-Chloronaphthalene	U	36.4	ug/kg	12.7	36.4	
88-74-4	2-Nitroaniline	U	364	ug/kg	72.7	364	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	364	ug/kg	72.7	364	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 18:37	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2811.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	364	ug/kg	72.7	364	
606-20-2	2,6-Dinitrotoluene	U	364	ug/kg	36.4	364	
208-96-8	Acenaphthylene	U	36.4	ug/kg	10.9	36.4	
51-28-5	2,4-Dinitrophenol	U	727	ug/kg	138	727	
132-64-9	Dibenzofuran	U	364	ug/kg	72.7	364	
84-66-2	Diethylphthalate	U	364	ug/kg	72.7	364	
86-73-7	Fluorene	U	36.4	ug/kg	10.9	36.4	
7005-72-3	4-Chlorophenylphenylether	U	364	ug/kg	36.4	364	
534-52-1	2-Methyl-4,6-dinitrophenol	U	364	ug/kg	72.7	364	UJ,SV7c
100-01-6	4-Nitroaniline	U	364	ug/kg	72.7	364	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	364	ug/kg	72.7	364	
122-66-7	Azobenzene	U	364	ug/kg	72.7	364	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	364	ug/kg	36.4	364	
118-74-1	Hexachlorobenzene	U	364	ug/kg	72.7	364	
85-01-8	Phenanthrene	U	36.4	ug/kg	10.9	36.4	
120-12-7	Anthracene	U	36.4	ug/kg	7.27	36.4	
84-74-2	Di-n-butylphthalate	U	364	ug/kg	36.4	364	
206-44-0	Fluoranthene	U	36.4	ug/kg	10.9	36.4	
85-68-7	Butylbenzylphthalate	U	364	ug/kg	72.7	364	
56-55-3	Benzo(a)anthracene	U	36.4	ug/kg	10.9	36.4	
91-94-1	3,3'-Dichlorobenzidine	U	364	ug/kg	109	364	
218-01-9	Chrysene	U	36.4	ug/kg	10.9	36.4	
117-81-7	bis(2-Ethylhexyl)phthalate	U	364	ug/kg	72.7	364	
117-84-0	Di-n-octylphthalate	U	364	ug/kg	72.7	364	
205-99-2	Benzo(b)fluoranthene	U	36.4	ug/kg	10.9	36.4	
207-08-9	Benzo(k)fluoranthene	U	36.4	ug/kg	10.9	36.4	
50-32-8	Benzo(a)pyrene	U	36.4	ug/kg	10.9	36.4	
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.4	ug/kg	10.9	36.4	
53-70-3	Dibenzo(a,h)anthracene	U	36.4	ug/kg	10.9	36.4	
191-24-2	Benzo(ghi)perylene	U	36.4	ug/kg	10.9	36.4	
120-82-1	1,2,4-Trichlorobenzene	U	364	ug/kg	72.7	364	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	344	ug/kg		JA

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232348003	Date Received:	06/25/2009 08:45	%Moisture:	11.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10461	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	880638	Inst:	MSD1.I	Dilution:	1
Run Date:	06/28/2009 19:01	Analyst:	NAG1	Inj. Vol:	.5 uL
Prep Date:	06/26/2009 21:26	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s1f2812.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.2	376	UJ,SV7c
108-95-2	Phenol	U	376	ug/kg	75.2	376	
95-57-8	2-Chlorophenol	U	376	ug/kg	75.2	376	
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.2	376	
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.2	376	
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	37.6	376	
83-32-9	Acenaphthene	U	37.6	ug/kg	12.6	37.6	
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376	
100-02-7	4-Nitrophenol	U	376	ug/kg	75.2	376	UJ,SV7c
87-86-5	Pentachlorophenol	U	376	ug/kg	75.2	376	
129-00-0	Pyrene	U	37.6	ug/kg	11.8	37.6	
110-86-1	Pyridine	U	376	ug/kg	75.2	376	
62-53-3	Aniline	U	376	ug/kg	132	376	
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.2	376	
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.2	376	
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376	
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.2	376	
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.2	376	
95-48-7	o-Cresol	U	376	ug/kg	75.2	376	
65794-96-9	m,p-Cresols	U	376	ug/kg	150	376	
67-72-1	Hexachloroethane	U	376	ug/kg	75.2	376	
98-95-3	Nitrobenzene	U	376	ug/kg	75.2	376	
78-59-1	Isophorone	U	376	ug/kg	75.2	376	
88-75-5	2-Nitrophenol	U	376	ug/kg	37.6	376	
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	75.2	376	
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.2	376	
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.2	376	
65-85-0	Benzoic acid	U	752	ug/kg	188	752	UJ,SV7c
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6	
106-47-8	4-Chloroaniline	U	376	ug/kg	75.2	376	
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.2	376	
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.52	37.6	
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.2	376	
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.2	376	
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.2	376	
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	13.2	37.6	
88-74-4	2-Nitroaniline	U	376	ug/kg	75.2	376	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	376	ug/kg	75.2	376	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2457**	**Date Collected:**	**06/22/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232348003**	**Date Received:**	**06/25/2009 08:45**	**%Moisture:**	**11.5**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10461**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**880638**	**Inst:**	**MSD1.I**	**Dilution:**	**1**
Run Date:	**06/28/2009 19:01**	**Analyst:**	**NAG1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/26/2009 21:26**	**Aliquot:**	**30.05 g**	**Final Volume:**	**1 mL**
Data File:	**s1f2812.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	376	ug/kg	75.2	376	
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376	
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6	
51-28-5	2,4-Dinitrophenol	U	752	ug/kg	143	752	
132-64-9	Dibenzofuran	U	376	ug/kg	75.2	376	
84-66-2	Diethylphthalate	U	376	ug/kg	75.2	376	
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6	
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	37.6	376	
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.2	376	UJ,SV7c
100-01-6	4-Nitroaniline	U	376	ug/kg	75.2	376	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	376	ug/kg	75.2	376	
122-66-7	Azobenzene	U	376	ug/kg	75.2	376	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	37.6	376	
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.2	376	
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6	
120-12-7	Anthracene	U	37.6	ug/kg	7.52	37.6	
84-74-2	Di-n-butylphthalate	U	376	ug/kg	37.6	376	
206-44-0	Fluoranthene	U	37.6	ug/kg	11.3	37.6	
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.2	376	
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6	
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376	
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6	
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.2	376	
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.2	376	
205-99-2	Benzo(b)fluoranthene	U	37.6	ug/kg	11.3	37.6	
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6	
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6	
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6	
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6	
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.2	376	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Aldol Condensate	2.92	261	ug/kg		JA

EH
07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 17:23	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2808.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	357	ug/kg	71.3	357	UJ,SV7c
108-95-2	Phenol	U	357	ug/kg	71.3	357	
95-57-8	2-Chlorophenol	U	357	ug/kg	71.3	357	
106-46-7	1,4-Dichlorobenzene	U	357	ug/kg	71.3	357	
621-64-7	N-Nitrosodipropylamine	U	357	ug/kg	71.3	357	
59-50-7	4-Chloro-3-methylphenol	U	357	ug/kg	35.7	357	
83-32-9	Acenaphthene	U	35.7	ug/kg	11.9	35.7	
121-14-2	2,4-Dinitrotoluene	U	357	ug/kg	35.7	357	
100-02-7	4-Nitrophenol	U	357	ug/kg	71.3	357	UJ,SV7c
87-86-5	Pentachlorophenol	U	357	ug/kg	71.3	357	
129-00-0	Pyrene	U	35.7	ug/kg	11.2	35.7	
110-86-1	Pyridine	U	357	ug/kg	71.3	357	
62-53-3	Aniline	U	357	ug/kg	125	357	
111-44-4	bis(2-Chloroethyl) ether	U	357	ug/kg	71.3	357	
541-73-1	1,3-Dichlorobenzene	U	357	ug/kg	71.3	357	
100-51-6	Benzyl alcohol	U	357	ug/kg	107	357	
95-50-1	1,2-Dichlorobenzene	U	357	ug/kg	71.3	357	
108-60-1	bis(2-Chloroisopropyl)ether	U	357	ug/kg	71.3	357	
95-48-7	o-Cresol	U	357	ug/kg	71.3	357	
65794-96-9	m,p-Cresols	U	357	ug/kg	143	357	
67-72-1	Hexachloroethane	U	357	ug/kg	71.3	357	
98-95-3	Nitrobenzene	U	357	ug/kg	71.3	357	
78-59-1	Isophorone	U	357	ug/kg	71.3	357	
88-75-5	2-Nitrophenol	U	357	ug/kg	35.7	357	
105-67-9	2,4-Dimethylphenol	U	357	ug/kg	71.3	357	
111-91-1	bis(2-Chloroethoxy)methane	U	357	ug/kg	71.3	357	
120-83-2	2,4-Dichlorophenol	U	357	ug/kg	71.3	357	
65-85-0	Benzoic acid	U	713	ug/kg	178	713	UJ,SV7c
91-20-3	Naphthalene	U	35.7	ug/kg	10.7	35.7	
106-47-8	4-Chloroaniline	U	357	ug/kg	71.3	357	
87-68-3	Hexachlorobutadiene	U	357	ug/kg	71.3	357	
91-57-6	2-Methylnaphthalene	U	35.7	ug/kg	7.13	35.7	
77-47-4	Hexachlorocyclopentadiene	U	357	ug/kg	71.3	357	
88-06-2	2,4,6-Trichlorophenol	U	357	ug/kg	71.3	357	
95-95-4	2,4,5-Trichlorophenol	U	357	ug/kg	71.3	357	
91-58-7	2-Chloronaphthalene	U	35.7	ug/kg	12.5	35.7	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	357	ug/kg	71.3	357	
99-09-2	3-Nitroaniline	U	357	ug/kg	71.3	357	

EH
07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 17:23	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2808.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	357	ug/kg	71.3	357	
606-20-2	2,6-Dinitrotoluene	U	357	ug/kg	35.7	357	
208-96-8	Acenaphthylene	U	35.7	ug/kg	10.7	35.7	
51-28-5	2,4-Dinitrophenol	U	713	ug/kg	136	713	
132-64-9	Dibenzofuran	U	357	ug/kg	71.3	357	
84-66-2	Diethylphthalate	U	357	ug/kg	71.3	357	
86-73-7	Fluorene	U	35.7	ug/kg	10.7	35.7	
7005-72-3	4-Chlorophenylphenylether	U	357	ug/kg	35.7	357	
534-52-1	2-Methyl-4,6-dinitrophenol	U	357	ug/kg	71.3	357	UJ,SV7c
100-01-6	4-Nitroaniline	U	357	ug/kg	71.3	357	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	357	ug/kg	71.3	357	
122-66-7	Azobenzene	U	357	ug/kg	71.3	357	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	357	ug/kg	35.7	357	
118-74-1	Hexachlorobenzene	U	357	ug/kg	71.3	357	
85-01-8	Phenanthrene	U	35.7	ug/kg	10.7	35.7	
120-12-7	Anthracene	U	35.7	ug/kg	7.13	35.7	
84-74-2	Di-n-butylphthalate	U	357	ug/kg	35.7	357	
206-44-0	Fluoranthene	U	35.7	ug/kg	10.7	35.7	
85-68-7	Butylbenzylphthalate	U	357	ug/kg	71.3	357	
56-55-3	Benzo(a)anthracene	U	35.7	ug/kg	10.7	35.7	
91-94-1	3,3'-Dichlorobenzidine	U	357	ug/kg	107	357	
218-01-9	Chrysene	U	35.7	ug/kg	10.7	35.7	
117-81-7	bis(2-Ethylhexyl)phthalate	U	357	ug/kg	71.3	357	
117-84-0	Di-n-octylphthalate	U	357	ug/kg	71.3	357	
205-99-2	Benzo(b)fluoranthene	U	35.7	ug/kg	10.7	35.7	
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7	
50-32-8	Benzo(a)pyrene	U	35.7	ug/kg	10.7	35.7	
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.7	ug/kg	10.7	35.7	
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7	
191-24-2	Benzo(ghi)perylene	U	35.7	ug/kg	10.7	35.7	
120-82-1	1,2,4-Trichlorobenzene	U	357	ug/kg	71.3	357	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	296	ug/kg		JA

EH
07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232348004	Date Received:	06/25/2009 08:45	%Moisture:	4.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10467	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	880638	Inst:	MSD1.I	Dilution:	1
Run Date:	06/28/2009 19:25	Analyst:	NAG1	Inj. Vol:	.5 uL
Prep Date:	06/26/2009 21:26	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s1f2813.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	349	ug/kg	69.8	349	UJ,SV7c
108-95-2	Phenol	U	349	ug/kg	69.8	349	
95-57-8	2-Chlorophenol	U	349	ug/kg	69.8	349	
106-46-7	1,4-Dichlorobenzene	U	349	ug/kg	69.8	349	
621-64-7	N-Nitrosodipropylamine	U	349	ug/kg	69.8	349	
59-50-7	4-Chloro-3-methylphenol	U	349	ug/kg	34.9	349	
83-32-9	Acenaphthene	U	34.9	ug/kg	11.7	34.9	
121-14-2	2,4-Dinitrotoluene	U	349	ug/kg	34.9	349	
100-02-7	4-Nitrophenol	U	349	ug/kg	69.8	349	UJ,SV7c
87-86-5	Pentachlorophenol	U	349	ug/kg	69.8	349	
129-00-0	Pyrene	U	34.9	ug/kg	11.0	34.9	
110-86-1	Pyridine	U	349	ug/kg	69.8	349	
62-53-3	Aniline	U	349	ug/kg	122	349	
111-44-4	bis(2-Chloroethyl) ether	U	349	ug/kg	69.8	349	
541-73-1	1,3-Dichlorobenzene	U	349	ug/kg	69.8	349	
100-51-6	Benzyl alcohol	U	349	ug/kg	105	349	
95-50-1	1,2-Dichlorobenzene	U	349	ug/kg	69.8	349	
108-60-1	bis(2-Chloroisopropyl)ether	U	349	ug/kg	69.8	349	
95-48-7	o-Cresol	U	349	ug/kg	69.8	349	
65794-96-9	m,p-Cresols	U	349	ug/kg	140	349	
67-72-1	Hexachloroethane	U	349	ug/kg	69.8	349	
98-95-3	Nitrobenzene	U	349	ug/kg	69.8	349	
78-59-1	Isophorone	U	349	ug/kg	69.8	349	
88-75-5	2-Nitrophenol	U	349	ug/kg	34.9	349	
105-67-9	2,4-Dimethylphenol	U	349	ug/kg	69.8	349	
111-91-1	bis(2-Chloroethoxy)methane	U	349	ug/kg	69.8	349	
120-83-2	2,4-Dichlorophenol	U	349	ug/kg	69.8	349	
65-85-0	Benzoic acid	U	698	ug/kg	175	698	UJ,SV7c
91-20-3	Naphthalene	U	34.9	ug/kg	10.5	34.9	
106-47-8	4-Chloroaniline	U	349	ug/kg	69.8	349	
87-68-3	Hexachlorobutadiene	U	349	ug/kg	69.8	349	
91-57-6	2-Methylnaphthalene	U	34.9	ug/kg	6.98	34.9	
77-47-4	Hexachlorocyclopentadiene	U	349	ug/kg	69.8	349	
88-06-2	2,4,6-Trichlorophenol	U	349	ug/kg	69.8	349	
95-95-4	2,4,5-Trichlorophenol	U	349	ug/kg	69.8	349	
91-58-7	2-Chloronaphthalene	U	34.9	ug/kg	12.2	34.9	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	349	ug/kg	69.8	349	
99-09-2	3-Nitroaniline	U	349	ug/kg	69.8	349	

EH
07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 19:25	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2813.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	349	ug/kg	69.8	349	
606-20-2	2,6-Dinitrotoluene	U	349	ug/kg	34.9	349	
208-96-8	Acenaphthylene	U	34.9	ug/kg	10.5	34.9	
51-28-5	2,4-Dinitrophenol	U	698	ug/kg	133	698	
132-64-9	Dibenzofuran	U	349	ug/kg	69.8	349	
84-66-2	Diethylphthalate	U	349	ug/kg	69.8	349	
86-73-7	Fluorene	U	34.9	ug/kg	10.5	34.9	
7005-72-3	4-Chlorophenylphenylether	U	349	ug/kg	34.9	349	
534-52-1	2-Methyl-4,6-dinitrophenol	U	349	ug/kg	69.8	349	UJ,SV7c
100-01-6	4-Nitroaniline	U	349	ug/kg	69.8	349	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	349	ug/kg	69.8	349	
122-66-7	Azobenzene	U	349	ug/kg	69.8	349	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	349	ug/kg	34.9	349	
118-74-1	Hexachlorobenzene	U	349	ug/kg	69.8	349	
85-01-8	Phenanthrene	U	34.9	ug/kg	10.5	34.9	
120-12-7	Anthracene	U	34.9	ug/kg	6.98	34.9	
84-74-2	Di-n-butylphthalate	U	349	ug/kg	34.9	349	
206-44-0	Fluoranthene	U	34.9	ug/kg	10.5	34.9	
85-68-7	Butylbenzylphthalate	U	349	ug/kg	69.8	349	
56-55-3	Benzo(a)anthracene	U	34.9	ug/kg	10.5	34.9	
91-94-1	3,3'-Dichlorobenzidine	U	349	ug/kg	105	349	
218-01-9	Chrysene	U	34.9	ug/kg	10.5	34.9	
117-81-7	bis(2-Ethylhexyl)phthalate	U	349	ug/kg	69.8	349	
117-84-0	Di-n-octylphthalate	U	349	ug/kg	69.8	349	
205-99-2	Benzo(b)fluoranthene	U	34.9	ug/kg	10.5	34.9	
207-08-9	Benzo(k)fluoranthene	U	34.9	ug/kg	10.5	34.9	
50-32-8	Benzo(a)pyrene	U	34.9	ug/kg	10.5	34.9	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.9	ug/kg	10.5	34.9	
53-70-3	Dibenzo(a,h)anthracene	U	34.9	ug/kg	10.5	34.9	
191-24-2	Benzo(ghi)perylene	U	34.9	ug/kg	10.5	34.9	
120-82-1	1,2,4-Trichlorobenzene	U	349	ug/kg	69.8	349	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	322	ug/kg		JA

EH
07/23/09

DATA VALIDATION COVER SHEET

5122-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2457 VALIDATION DATE: 07/23/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eyda Hergenreder ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☒ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The CCV %Ds for HMX and 2-amino-4,6-dinitrotoluene were >20% with a positive bias. All associated sample results were ND and, thus, data were not qualified.
2. The MS/MSD RPD for TATB was >30%. All associated sample results were ND and, thus, were qualified UJ,HE12g. It should be noted that the MS %R calculation were performed incorrectly. The parent sample result for numerous analytes were < the MDLs and, thus a 0 µg/kg should have been used to calculate the %R. The laboratory subtracted the parent sample concentration. The %Rs were within the acceptance limits when calculated correctly. No sample results were qualified.
3. It should be noted that the raw ICAL data from the instrument used for the secondary HE analysis were not reported in the data package. Thus, the surrogate retention time criteria could not be evaluated. In addition, the raw ICAL data from the instrument used for the primary HE analysis were also not reported. No sample data were qualified as

DATA VALIDATION COVER SHEET

5122-1

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Los Alamos NATIONAL LABORATORY

Data Validation Cover Sheet

a result.

Reviewed by: Mary Donivan Level: I Date: 07/24/09

VALIDATOR'S SIGNATURE: Eyda Hergenreder DATE: 07/23/09

Form 5122-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time has shifted by more than 30 seconds.	R, UJ, HE0	J, HE0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE0b	R, HE0b
☐	☒	☐	3. The quantitating IS area count is <25% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow the method-specific windows.	R, HE1a	J, HE1a
☐	☒	☐	4. The IS area count for the quantitating IS is <70% but >25% of the average of that obtained from the calibration standards.	UJ, HE1b	J+, HE1b
☐	☒	☐	5. The IS area count for the quantitating IS is >130% of the average of that obtained from the calibration standards.	UJ, HE1c	J-, HE1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE1d	R, HE1d
☐	☒	☐	7. The surrogate is <10%R. Follow the external laboratory limits.	R, HE3	J-, HE3
☐	☒	☐	8. The surrogate is < the Lower Acceptance Limit but ≥10% recovery. Follow the external laboratory limits.	UJ, HE3a	J-, HE3a
☐	☒	☐	9. The surrogate %R value is > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE3b
☐	☐	☒	10. At least one surrogate is > the Upper Acceptance Limit and one surrogate is < the Lower Acceptance Limit. Follow the external laboratory limits.	UJ, HE3c	J, HE3c

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist

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Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	11. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE3d	R, HE3d
☐	☒	☐	12. The sample result is ≤5 times the concentration of the related analyte in the method blank.	U, HE4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, HE4a
☐	☐	☒	14. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, HE4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE4e	R, HE4e
☐	☒	☐	16. The absence of sample carry-over must be determined and verified.	N/A	R, N, HE4f
☐	☒	☐	17. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, HE7	J, HE7
☐	☒	☐	18. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is less < 0.99.	UJ, R, HE7a	J, HE7a
☐	☒	☐	19. The affected analytes were analyzed with a RRF of <0.05 in the initial calibration and/or CCV.	UJ, R, HE7b	J, HE7b
☒	☐	☐	20. The ICV and/or CCV were recovered outside the method limits.	UJ, R, HE7c	J, HE7c
☐	☒	☐	21. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, HE7d	J, HE7d
☐	☒	☐	22. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, HE7f	R, HE7f

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	23. The mass spectral documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE8a	R, HE8a
☐	☒	☐	24. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, HE9	J-, HE9
☐	☒	☐	25. The holding time was >2 times the applicable holding time requirement.	R, HE9a	J-, HE9a
☐	☒	☐	26. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, HE12	J-, HE12
☐	☒	☐	27. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, HE12a	J-, HE12a
☐	☒	☐	28. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE12b
☐	☒	☐	29. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE12c	R, HE12c
☐	☒	☐	30. The MS/MSD percent recovery was <10%.	R, HE12d	R, HE12d
☐	☒	☐	31. The MS/MSD percent recovery was >10% but <70%.	UJ, HE12e	J, HE12e
☐	☒	☐	32. The MS/MSD percent recover was >70%.	N/A	J+, HE12f
☒	☐	☐	33. The MS/MSD relative percent difference was >30%.	UJ, HE12g	J, HE12g
☐	☒	☐	34. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. (Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.)	UJ, R, HE15	R, HE15
☐	☒	☐	35. The sample was diluted because target analytes were > the initial verification calibration.	UJ, HE15a	J, HE15a

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST	
5122-2 LC/MS/MS High Explosive Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The Contract Required Detection Limit Check Standard (CRI) sample did not pass method acceptance criteria.	UJ, R, HE16	J, HE16
☐	☒	☐	37. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, HE16c	R, HE16c
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, HE19	J, R, HE19
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, HE88	J, HE88

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10462

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348001

Sample Amount 2

Moisture: 6.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713013a

Date Analyzed: 13-JUL-09 20:50

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

EH
07/23/09

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10462

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348001

Sample Amount 2

Moisture: 6.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630026.wiff

Date Analyzed: 30-JUN-09 17:58

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB UJ,HE12g	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10460

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348002

Sample Amount 2

Moisture: 8.3

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630043a

Date Analyzed: 01-JUL-09 11:16

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10460

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348002

Sample Amount 2

Moisture: 8.3

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630029.wiff

Date Analyzed: 30-JUN-09 18:47

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB UJ,HE12g	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10461

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348003

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630044a

Date Analyzed: 01-JUL-09 11:45

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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07/23/09

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10461

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348003

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0701014.wiff

Date Analyzed: 01-JUL-09 14:10

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB UJ,HE12g	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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07/23/09

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10467

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348004

Sample Amount 2

Moisture: 4.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630045a

Date Analyzed: 01-JUL-09 12:15

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

EH
07/23/09

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10467

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348004

Sample Amount 2

Moisture: 4.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630031.wiff

Date Analyzed: 30-JUN-09 19:19

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB UJ,HE12g	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

EH
07/23/09

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Section I.

REQUEST NUMBER: 09-2457 VALIDATION DATE: 07/23/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eyda Hergenreder ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☒ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE): PCBs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/24/09

VALIDATOR'S SIGNATURE: Eyda Hergenreder DATE: 07/23/09

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, P9	J-, P9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, P9b	R, P9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, P7	J, P7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, P7a	J, P7a
☐	☒	☐	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, P7d	J, P7d
☐	☐	☒	8. The multicomponent standard was not analyzed within 72 hours of the initial analysis.	R, P7e	J, P7e
☐	☒	☐	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
☐	☐	☒	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	11. The breakdown criteria have been exceeded. This can cause high bias in the reported results and potential false positive results for the breakdown products Endrin ketone, Endrin aldehyde, DDD, and DDE.	UJ, P13a	J+, P13a
☐	☐	☒	12. The breakdown documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P13b	R, P13b
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, P4	N/A
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X.	N/A	J, P4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	UJ, P4b	N/A
☐	☐	☒	16. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, P4d	N/A
☐	☒	☐	17. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P4e	R, P4e
☐	☒	☐	18. The analyte RT shifted by more than 0.05 minutes from the mid-level standard of the initial calibration.	R, P0	J, P0
☐	☒	☐	19. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P0b	R, P0b
☐	☒	☐	20. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, P3	J-, P3

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, P3a	J-, P3a
☐	☒	☐	22. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P3b
☐	☒	☐	23. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, P3c	J, P3c
☐	☒	☐	24. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P3d	R, P3d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, P12	J-, P12
☐	☒	☐	26. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, P12a	J-, P12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P12c	R, P12c
☐	☐	☒	29. The analyte was not confirmed on a second dissimilar column.	N/A	R, P8
☐	☐	☒	30. The second dissimilar column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P8a	R, P8a
☐	☒	☐	31. Duplicate, Dilution, or reanalysis.	UJ, P88	J, P88

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, P15	R, P15
☒	☐	☐	33. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, P19	J, R, P19

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 19:24	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	037f3701.d	**Column:**	1 CLP1	**Level:**	LOW
	037b3701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.49	ug/kg	1.16	3.49	1
11104-28-2	Aroclor-1221	U	3.49	ug/kg	1.16	3.49	1
11141-16-5	Aroclor-1232	U	3.49	ug/kg	1.16	3.49	1
53469-21-9	Aroclor-1242	U	3.49	ug/kg	1.16	3.49	1
12672-29-6	Aroclor-1248	U	3.49	ug/kg	1.16	3.49	1
11097-69-1	Aroclor-1254	U	3.49	ug/kg	1.16	3.49	1
11096-82-5	Aroclor-1260	U	3.49	ug/kg	1.16	3.49	1

EH
07/23/09

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2457

REQUEST NUMBER: 09-2457

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232348%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10462	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10462	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10460	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10460	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10461	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10461	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10462	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10460	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10461	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10467	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10467	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-10467	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10470	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/24/09	1400	Patricia Dent	P. Dent	6/25/09	08:45
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2457

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2457
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009
TURNAROUND/REPORT DUE: 7/9/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-10467	R	6/22/2009	
	SW-846:8260B	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
		1	CAMO-09-10470	S	6/22/2009	
	SW-846:8270C	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2457

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10467	R	6/22/2009	
	SW-846:8321A_MOD	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2457

GEL Laboratories LLC
member of The GEL Group

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178
www.gel.com

June 26, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232348
SDG: 09-2457

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 25, 2009, and analyzed for Explosives by LCMSMS, GC Semivolatile PCB, GC/MS Semivolatile and GC/MS Volatile. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for
Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2457
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232348
SDG: 09-2457

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232348
SDG # : 09-2457

June 26, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 25, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232348001	CAMO-09-10462
232348002	CAMO-09-10460
232348003	CAMO-09-10461
232348004	CAMO-09-10467
232348005	CAMO-09-10470

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Explosives by LCMSMS, GC Semivolatile PCB, GC/MS Semivolatile and GC/MS Volatile.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

Valerie Davis

Project Manager

List of current GEL Certifications as of 26 June 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California - NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida - NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois - NELAP	200029
Indiana	C-SC-01
Kansas - NELAP	E-10332
Kentucky	90129
Louisiana - NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey - NELAP	SC002
New Mexico	FL NELAP E87156
New York - NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania - NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas - NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah - NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2457

REQUEST NUMBER: 09-2457

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/9/2009
TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232348%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10462	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10462	1	AMBER GLASS	8270C	Ice	R
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CAMO-09-10460	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10461	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10461	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10462	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10460	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10461	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10467	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10467	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-10467	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10470	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/24/09	1400	Patricia Dent	P. Dent	6/25/09	08:45
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2457

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2457

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-10467	R	6/22/2009	
	SW-846:8260B	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
		1	CAMO-09-10470	S	6/22/2009	
	SW-846:8270C	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2457

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10467	R	6/22/2009	
	SW-846:8321A_MOD	1	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2457

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2457**
Received By: Patricia Dent	**Date Received: JUNE 25, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2-5,23**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5528 4C
7209 7847 5491 2C
7209 7847 5469 3C
7209 7847 5470 4C
7209 7847 5506 5C
7209 7847 5458 23C

PM (or PMA) review: Initials JOL Date 6-26-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 51.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

4°C

Ref: 6b010amr1a01202xae

Delivery Address Barcode

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5528 Form 0201

THU
Deliver By:
25JUN09

:29407 -SC-US

CHS A1

XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 53.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr1a015aguke

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5491 Form 0201

THU
Deliver By:
25JUN09

:29407 -SC-US

CHS A1

XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 52.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5469 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 51.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5478 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 52.0 LB MAN
System#: 9814176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr1a015aguko

Delivery Address Barcode

5°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5506 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRH1 V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 63.0 LB MAN
System#: 9814176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5458 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRH1 V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

GC/MS Volatile Organics
Los Alamos National Laboratory (LANL)
SDG 09-2457

Method/Analysis Information

Procedure:	Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
Analytical Method:	SW846 8260B
Prep Method:	SW846 5030
Analytical Batch Number:	881794
Prep Batch Number:	881793

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232348001	CAMO-09-10462
232348002	CAMO-09-10460
232348003	CAMO-09-10461
232348004	CAMO-09-10467
232348005	CAMO-09-10470
1201872762	Method Blank (MB)
1201872765	Laboratory Control Sample (LCS)
1201872766	Laboratory Control Sample (LCS)
1201876338	Method Blank (MB)
1201876339	Laboratory Control Sample (LCS)
1201876340	Laboratory Control Sample (LCS)
1201872763	232264001(CAMO-09-10473) Post Spike (PS)
1201872764	232264001(CAMO-09-10473) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

Samples 232348 001, 002, 003 and 004 in this SDG were analyzed on an "dry weight" basis. Samples 232348 005 in this SDG were analyzed on a "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 19.1.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the

'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery
The LCS (1201872765) spike recoveries were not all within the acceptance limits. The unacceptable recoveries were less than 5% of the requested analyte list. This satisfies the client criteria. The results are reported. See NCR 709563.

QC Sample Designation
Sample 232264001 (CAMO-09-10473) was designated for spike analysis.

Matrix Spike (PS) Recovery Statement
The spike recoveries were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate recoveries were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
In sample 232348001 (CAMO-09-10462), internal standard responses were outside the required acceptance criteria. Sample re-analysis confirmed matrix interference. See NCR 709563.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Sample 232348001 (CAMO-09-10462) was re-analyzed due to unacceptable recoveries in the initial analysis.

Miscellaneous Information

Electronic Package Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
NCR # 709563 was generated for this SDG.

Manual Integrations
Data files associated with the initial calibration, continuing calibration check, and samples did not require manual integrations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA6.I	Gas Chromatograph/Mass Spectrometer	HP6890N/HP5975	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Erin Haubert Date: 07/16/09

Roadmap for LANL 09-2457 VOA

This roadmap was analyzed by ale01592 on 07-08-2009, 15:26.
This roadmap was reviewed by ale01592 on 07-08-2009, 16:38.
This roadmap was reviewed by kel00587 on 07-14-2009, 10:12.

Sample

exclude	manual	datafile	smpid	clientid	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA6.i/070109v6/6r310.d	232348005	CAMO-09-10470	01-JUL-2009	13:59	09-2457.sub	1	881794	
■	N	/chem/VOA6.i/070109v6/6r320.d	232348001	CAMO-09-10462	01-JUL-2009	18:37	09-2457.sub	1	881794	
☐	N	/chem/VOA6.i/070109v6/6r321.d	232348002	CAMO-09-10460	01-JUL-2009	19:05	09-2457.sub	1	881794	
☐	N	/chem/VOA6.i/070109v6/6r322.d	232348003	CAMO-09-10461	01-JUL-2009	19:33	09-2457.sub	1	881794	
☐	N	/chem/VOA6.i/070109v6/6r323.d	232348004	CAMO-09-10467	01-JUL-2009	20:00	09-2457.sub	1	881794	
☐	N	/chem/VOA6.i/070209v6/6r411.d	232348001	CAMO-09-10462	02-JUL-2009	14:03	09-2457.sub	1	881794	

QC Sample

exclude	manual	datafile	smpid	clientid	sampletype	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA6.i/070109v6/6r304L1.d	1201872765	LCS	lcs	01-JUL-2009	11:11	all.sub	1	881794	
☐	N	/chem/VOA6.i/070109v6/6r306L1.d	1201872766	LCS	lcs	01-JUL-2009	12:07	all.sub	1	881794	
☐	N	/chem/VOA6.i/070109v6/6r307B1.d	1201872762	BLANK	mb	01-JUL-2009	12:35	all.sub	1	881794	
■	N	/chem/VOA6.i/070109v6/6r326.d	1201872763	CAMO-09-10473MS	ms	01-JUL-2009	21:24	CALsubL+.sub	1		
■	N	/chem/VOA6.i/070109v6/6r327.d	1201872764	CAMO-09-10473MSD	msd	01-JUL-2009	21:52	CALsubL+.sub	1		
☐	N	/chem/VOA6.i/070209v6/6r404L1.d	1201876339	LCS	lcs	02-JUL-2009	10:20	all.sub	1	881794	
☐	N	/chem/VOA6.i/070209v6/6r407L1.d	1201876340	SLCS	lcs	02-JUL-2009	11:46	all.sub	1	881794	
☐	N	/chem/VOA6.i/070209v6/6r409B1.d	1201876338	BLANK	mb	02-JUL-2009	13:07	all.sub	1	881794	
☐	N	/chem/VOA6.i/070209v6/6r420.d	1201872763	CAMO-09-10473MS	ms	02-JUL-2009	18:50	09-2434.sub	1	881794	
☐	N	/chem/VOA6.i/070209v6/6r421.d	1201872764	CAMO-09-10473MSD	msd	02-JUL-2009	19:18	09-2434.sub	1	881794	

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:05	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:52	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r321.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.09	ug/kg	0.371	1.09
74-87-3	Chloromethane	U	1.09	ug/kg	0.327	1.09
75-01-4	Vinyl chloride	U	1.09	ug/kg	0.327	1.09
74-83-9	Bromomethane	U	1.09	ug/kg	0.327	1.09
75-00-3	Chloroethane	U	1.09	ug/kg	0.327	1.09
75-69-4	Trichlorofluoromethane	U	1.09	ug/kg	0.622	1.09
67-64-1	Acetone	U	5.45	ug/kg	1.81	5.45
75-35-4	1,1-Dichloroethylene	U	1.09	ug/kg	0.327	1.09
74-88-4	Iodomethane	U	5.45	ug/kg	1.74	5.45
75-09-2	Methylene chloride	U	5.45	ug/kg	2.18	5.45
75-15-0	Carbon disulfide	U	5.45	ug/kg	1.36	5.45
156-60-5	trans-1,2-Dichloroethylene	U	1.09	ug/kg	0.327	1.09
75-34-3	1,1-Dichloroethane	U	1.09	ug/kg	0.327	1.09
78-93-3	2-Butanone	U	5.45	ug/kg	1.64	5.45
156-59-2	cis-1,2-Dichloroethylene	U	1.09	ug/kg	0.327	1.09
594-20-7	2,2-Dichloropropane	U	1.09	ug/kg	0.327	1.09
67-66-3	Chloroform	U	1.09	ug/kg	0.327	1.09
74-97-5	Bromochloromethane	U	1.09	ug/kg	0.360	1.09
71-55-6	1,1,1-Trichloroethane	U	1.09	ug/kg	0.327	1.09
563-58-6	1,1-Dichloropropene	U	1.09	ug/kg	0.327	1.09
56-23-5	Carbon tetrachloride	U	1.09	ug/kg	0.327	1.09
107-06-2	1,2-Dichloroethane	U	1.09	ug/kg	0.327	1.09
71-43-2	Benzene	U	1.09	ug/kg	0.327	1.09
79-01-6	Trichloroethylene	U	1.09	ug/kg	0.360	1.09
78-87-5	1,2-Dichloropropane	U	1.09	ug/kg	0.327	1.09
75-27-4	Bromodichloromethane	U	1.09	ug/kg	0.327	1.09
74-95-3	Dibromomethane	U	1.09	ug/kg	0.327	1.09
108-10-1	4-Methyl-2-pentanone	U	5.45	ug/kg	1.36	5.45
10061-01-5	cis-1,3-Dichloropropylene	U	1.09	ug/kg	0.327	1.09
108-88-3	Toluene	U	1.09	ug/kg	0.327	1.09
10061-02-6	trans-1,3-Dichloropropylene	U	1.09	ug/kg	0.327	1.09
79-00-5	1,1,2-Trichloroethane	U	1.09	ug/kg	0.327	1.09
591-78-6	2-Hexanone	U	5.45	ug/kg	1.64	5.45
142-28-9	1,3-Dichloropropane	U	1.09	ug/kg	0.327	1.09
127-18-4	Tetrachloroethylene	U	1.09	ug/kg	0.327	1.09
124-48-1	Dibromochloromethane	U	1.09	ug/kg	0.327	1.09
106-93-4	1,2-Dibromoethane	U	1.09	ug/kg	0.327	1.09
108-90-7	Chlorobenzene	U	1.09	ug/kg	0.327	1.09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:05	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:52	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r321.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.09	ug/kg	0.327	1.09
179601-23-1	m,p-Xylenes	U	2.18	ug/kg	0.327	2.18
95-47-6	o-Xylene	U	1.09	ug/kg	0.327	1.09
100-42-5	Styrene	U	1.09	ug/kg	0.327	1.09
75-25-2	Bromoform	U	1.09	ug/kg	0.327	1.09
79-34-5	1,1,2,2-Tetrachloroethane	U	1.09	ug/kg	0.327	1.09
96-18-4	1,2,3-Trichloropropane	U	1.09	ug/kg	0.327	1.09
108-86-1	Bromobenzene	U	1.09	ug/kg	0.327	1.09
103-65-1	n-Propylbenzene	U	1.09	ug/kg	0.327	1.09
95-49-8	2-Chlorotoluene	U	1.09	ug/kg	0.327	1.09
98-82-8	Isopropylbenzene	U	1.09	ug/kg	0.327	1.09
108-67-8	1,3,5-Trimethylbenzene	U	1.09	ug/kg	0.327	1.09
106-43-4	4-Chlorotoluene	U	1.09	ug/kg	0.327	1.09
98-06-6	tert-Butylbenzene	U	1.09	ug/kg	0.327	1.09
95-63-6	1,2,4-Trimethylbenzene	U	1.09	ug/kg	0.327	1.09
135-98-8	sec-Butylbenzene	U	1.09	ug/kg	0.327	1.09
99-87-6	4-Isopropyltoluene	U	1.09	ug/kg	0.327	1.09
541-73-1	1,3-Dichlorobenzene	U	1.09	ug/kg	0.327	1.09
106-46-7	1,4-Dichlorobenzene	U	1.09	ug/kg	0.327	1.09
104-51-8	n-Butylbenzene	U	1.09	ug/kg	0.327	1.09
96-12-8	1,2-Dibromo-3-chloropropane	U	1.09	ug/kg	0.327	1.09
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.45	ug/kg	1.74	5.45
630-20-6	1,1,1,2-Tetrachloroethane	U	1.09	ug/kg	0.327	1.09
95-50-1	1,2-Dichlorobenzene	U	1.09	ug/kg	0.327	1.09

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	505	ug/kg		J
	Unknown Siloxane	16.17	62.5	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348003	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10461	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:33	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:53	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r322.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.384	1.13
74-87-3	Chloromethane	U	1.13	ug/kg	0.339	1.13
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.339	1.13
74-83-9	Bromomethane	U	1.13	ug/kg	0.339	1.13
75-00-3	Chloroethane	U	1.13	ug/kg	0.339	1.13
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.644	1.13
67-64-1	Acetone	U	5.65	ug/kg	1.88	5.65
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.339	1.13
74-88-4	Iodomethane	U	5.65	ug/kg	1.81	5.65
75-09-2	Methylene chloride	U	5.65	ug/kg	2.26	5.65
75-15-0	Carbon disulfide	U	5.65	ug/kg	1.41	5.65
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.339	1.13
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.339	1.13
78-93-3	2-Butanone	U	5.65	ug/kg	1.70	5.65
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.339	1.13
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.339	1.13
67-66-3	Chloroform	U	1.13	ug/kg	0.339	1.13
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.373	1.13
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.339	1.13
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.339	1.13
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.339	1.13
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.339	1.13
71-43-2	Benzene	U	1.13	ug/kg	0.339	1.13
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.373	1.13
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.339	1.13
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.339	1.13
74-95-3	Dibromomethane	U	1.13	ug/kg	0.339	1.13
108-10-1	4-Methyl-2-pentanone	U	5.65	ug/kg	1.41	5.65
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.339	1.13
108-88-3	Toluene	U	1.13	ug/kg	0.339	1.13
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.339	1.13
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.339	1.13
591-78-6	2-Hexanone	U	5.65	ug/kg	1.70	5.65
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.339	1.13
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.339	1.13
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.339	1.13
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.339	1.13
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.339	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348003	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10461	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:33	**Analyst:**	RXDI	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:53	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r322.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.339	1.13
179601-23-1	m,p-Xylenes	U	2.26	ug/kg	0.339	2.26
95-47-6	o-Xylene	U	1.13	ug/kg	0.339	1.13
100-42-5	Styrene	U	1.13	ug/kg	0.339	1.13
75-25-2	Bromoform	U	1.13	ug/kg	0.339	1.13
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.339	1.13
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.339	1.13
108-86-1	Bromobenzene	U	1.13	ug/kg	0.339	1.13
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.339	1.13
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.339	1.13
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.339	1.13
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.339	1.13
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.339	1.13
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.339	1.13
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.339	1.13
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.339	1.13
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.339	1.13
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.339	1.13
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.339	1.13
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.339	1.13
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.339	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.65	ug/kg	1.81	5.65
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.339	1.13
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.339	1.13

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	394	ug/kg		J
	Unknown Siloxane	16.17	135	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:03	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 11:51	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r411.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.07	ug/kg	0.364	1.07
74-87-3	Chloromethane	U	1.07	ug/kg	0.321	1.07
75-01-4	Vinyl chloride	U	1.07	ug/kg	0.321	1.07
74-83-9	Bromomethane	U	1.07	ug/kg	0.321	1.07
75-00-3	Chloroethane	U	1.07	ug/kg	0.321	1.07
75-69-4	Trichlorofluoromethane	U	1.07	ug/kg	0.610	1.07
67-64-1	Acetone	U	5.35	ug/kg	1.78	5.35
75-35-4	1,1-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
74-88-4	Iodomethane	U	5.35	ug/kg	1.71	5.35
75-09-2	Methylene chloride	U	5.35	ug/kg	2.14	5.35
75-15-0	Carbon disulfide	U	5.35	ug/kg	1.34	5.35
156-60-5	trans-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
75-34-3	1,1-Dichloroethane	U	1.07	ug/kg	0.321	1.07
78-93-3	2-Butanone	U	5.35	ug/kg	1.60	5.35
156-59-2	cis-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
594-20-7	2,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07
67-66-3	Chloroform	U	1.07	ug/kg	0.321	1.07
74-97-5	Bromochloromethane	U	1.07	ug/kg	0.353	1.07
71-55-6	1,1,1-Trichloroethane	U	1.07	ug/kg	0.321	1.07
563-58-6	1,1-Dichloropropene	U	1.07	ug/kg	0.321	1.07
56-23-5	Carbon tetrachloride	U	1.07	ug/kg	0.321	1.07
107-06-2	1,2-Dichloroethane	U	1.07	ug/kg	0.321	1.07
71-43-2	Benzene	U	1.07	ug/kg	0.321	1.07
79-01-6	Trichloroethylene	U	1.07	ug/kg	0.353	1.07
78-87-5	1,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07
75-27-4	Bromodichloromethane	U	1.07	ug/kg	0.321	1.07
74-95-3	Dibromomethane	U	1.07	ug/kg	0.321	1.07
108-10-1	4-Methyl-2-pentanone	U	5.35	ug/kg	1.34	5.35
10061-01-5	cis-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07
108-88-3	Toluene	U	1.07	ug/kg	0.321	1.07
10061-02-6	trans-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07
79-00-5	1,1,2-Trichloroethane	U	1.07	ug/kg	0.321	1.07
591-78-6	2-Hexanone	U	5.35	ug/kg	1.60	5.35
142-28-9	1,3-Dichloropropane	U	1.07	ug/kg	0.321	1.07
127-18-4	Tetrachloroethylene	U	1.07	ug/kg	0.321	1.07
124-48-1	Dibromochloromethane	U	1.07	ug/kg	0.321	1.07
106-93-4	1,2-Dibromoethane	U	1.07	ug/kg	0.321	1.07
108-90-7	Chlorobenzene	U	1.07	ug/kg	0.321	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:03	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 11:51	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r411.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.07	ug/kg	0.321	1.07
179601-23-1	m,p-Xylenes	U	2.14	ug/kg	0.321	2.14
95-47-6	o-Xylene	U	1.07	ug/kg	0.321	1.07
100-42-5	Styrene	U	1.07	ug/kg	0.321	1.07
75-25-2	Bromoform	U	1.07	ug/kg	0.321	1.07
79-34-5	1,1,2,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07
96-18-4	1,2,3-Trichloropropane	U	1.07	ug/kg	0.321	1.07
108-86-1	Bromobenzene	U	1.07	ug/kg	0.321	1.07
103-65-1	n-Propylbenzene	U	1.07	ug/kg	0.321	1.07
95-49-8	2-Chlorotoluene	U	1.07	ug/kg	0.321	1.07
98-82-8	Isopropylbenzene	U	1.07	ug/kg	0.321	1.07
108-67-8	1,3,5-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07
106-43-4	4-Chlorotoluene	U	1.07	ug/kg	0.321	1.07
98-06-6	tert-Butylbenzene	U	1.07	ug/kg	0.321	1.07
95-63-6	1,2,4-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07
135-98-8	sec-Butylbenzene	U	1.07	ug/kg	0.321	1.07
99-87-6	4-Isopropyltoluene	U	1.07	ug/kg	0.321	1.07
541-73-1	1,3-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07
106-46-7	1,4-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07
104-51-8	n-Butylbenzene	U	1.07	ug/kg	0.321	1.07
96-12-8	1,2-Dibromo-3-chloropropane	U	1.07	ug/kg	0.321	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.35	ug/kg	1.71	5.35
630-20-6	1,1,1,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07
95-50-1	1,2-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	641	ug/kg		J
	Unknown Siloxane	16.17	99.1	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 20:00	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:54	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r323.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.356	1.05
74-87-3	Chloromethane	U	1.05	ug/kg	0.314	1.05
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.314	1.05
74-83-9	Bromomethane	U	1.05	ug/kg	0.314	1.05
75-00-3	Chloroethane	U	1.05	ug/kg	0.314	1.05
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.597	1.05
67-64-1	Acetone	U	5.24	ug/kg	1.74	5.24
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.314	1.05
74-88-4	Iodomethane	U	5.24	ug/kg	1.68	5.24
75-09-2	Methylene chloride	U	5.24	ug/kg	2.09	5.24
75-15-0	Carbon disulfide	U	5.24	ug/kg	1.31	5.24
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.314	1.05
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.314	1.05
78-93-3	2-Butanone	U	5.24	ug/kg	1.57	5.24
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.314	1.05
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.314	1.05
67-66-3	Chloroform	U	1.05	ug/kg	0.314	1.05
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.346	1.05
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.314	1.05
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.314	1.05
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.314	1.05
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.314	1.05
71-43-2	Benzene	U	1.05	ug/kg	0.314	1.05
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.346	1.05
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.314	1.05
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.314	1.05
74-95-3	Dibromomethane	U	1.05	ug/kg	0.314	1.05
108-10-1	4-Methyl-2-pentanone	U	5.24	ug/kg	1.31	5.24
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.314	1.05
108-88-3	Toluene	U	1.05	ug/kg	0.314	1.05
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.314	1.05
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.314	1.05
591-78-6	2-Hexanone	U	5.24	ug/kg	1.57	5.24
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.314	1.05
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.314	1.05
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.314	1.05
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.314	1.05
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.314	1.05

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 20:00	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:54	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r323.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.314	1.05
179601-23-1	m,p-Xylenes	U	2.09	ug/kg	0.314	2.09
95-47-6	o-Xylene	U	1.05	ug/kg	0.314	1.05
100-42-5	Styrene	U	1.05	ug/kg	0.314	1.05
75-25-2	Bromoform	U	1.05	ug/kg	0.314	1.05
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.314	1.05
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.314	1.05
108-86-1	Bromobenzene	U	1.05	ug/kg	0.314	1.05
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.314	1.05
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.314	1.05
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.314	1.05
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.314	1.05
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.314	1.05
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.314	1.05
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.314	1.05
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.314	1.05
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.314	1.05
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.314	1.05
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.314	1.05
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.314	1.05
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.314	1.05
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.24	ug/kg	1.68	5.24
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.314	1.05
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.314	1.05

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	354	ug/kg		J
	Unknown Siloxane	16.17	83.8	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	S
Lab Sample ID:	232348005	**Date Received:**	06/25/2009 08:45		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10470	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 13:59	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:39	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r310.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone		6.60	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	S
Lab Sample ID:	232348005	**Date Received:**	06/25/2009 08:45		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10470	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 13:59	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:39	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r310.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

QC Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2457

Matrix Type: SOLID

CAP Column (1) : DB-624

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201872765	LCS for batch 881793	102	98	101
1201872766	LCS for batch 881793	97	95	100
1201872762	MB for batch 881793	96	96	99
232348005	CAMO-09-10470	100	97	100
232348002	CAMO-09-10460	107	97	98
232348003	CAMO-09-10461	101	98	98
232348004	CAMO-09-10467	103	97	98
1201876339	LCS for batch 881793	98	99	98
1201876340	LCS for batch 881793	98	97	98
1201876338	MB for batch 881793	97	99	96
232348001	CAMO-09-10462	102	97	100

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10473PS
Lab Sample ID: 1201872763
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 13.2
Analysis Date: 07/02/2009 18:50
Prep Batch ID: 881793
Batch ID: 881794
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	68.6	137	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	50.8	102	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	51.4	103	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	49.3	99	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	48.9	98	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	52.3	105	51-151
67-64-1	PS	Acetone	250	0.00	U	260	104	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	47.8	96	61-125
74-88-4	PS	Iodomethane	250	0.00	U	240	96	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	41.9	84	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	258	103	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	44.2	88	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	45.6	91	62-125
78-93-3	PS	2-Butanone	250	0.00	U	318	127	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	46.8	94	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	46.8	94	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	45.6	91	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	46.7	93	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	48.2	96	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	46.9	94	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	49.6	99	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	41.9	84	58-126

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10473PS
Lab Sample ID: 1201872763
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 13.2
Analysis Date: 07/02/2009 18:50
Dilution: 1
Prep Batch ID: 881793
Batch ID: 881794

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	44.6	89	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	46.3	93	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	46.3	93	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	49.6	99	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	44.8	90	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	233	93	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	49.0	98	54-133
108-88-3	PS	Toluene	50.0	0.00	U	43.3	87	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	48.7	97	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	46.6	93	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	270	108	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	45.5	91	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	46.3	93	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	49.9	100	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	46.9	94	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	46.0	92	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	45.1	90	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	91.3	91	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	47.0	94	52-127
100-42-5	PS	Styrene	50.0	0.00	U	48.1	96	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	42.9	86	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	44.6	89	63-127

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10473PS
Lab Sample ID: 1201872763
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 13.2
Analysis Date: 07/02/2009 18:50
Prep Batch ID: 881793
Batch ID: 881794
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	48.1	96	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	45.0	90	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	42.8	86	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	44.0	88	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	37.6	75	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	43.7	87	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	43.8	88	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	45.2	90	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	43.7	87	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	44.1	88	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	45.4	91	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	44.7	89	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	43.6	87	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	43.4	87	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	55.2	110	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	49.6	99	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	44.6	89	43-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10473PSD
Lab Sample ID: 1201872764
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 13.2
Analysis Date: 07/02/2009 19:18
Dilution: 1
Prep Batch ID: 881793
Batch ID: 881794

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	62.7	125	25-149	9	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	47.4	95	39-140	7	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	48.0	96	47-129	7	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	45.7	91	31-135	8	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	46.0	92	53-128	6	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	48.7	97	51-151	7	0-25
67-64-1	PSD	Acetone	250	0.00	U	272	109	21-153	4	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	44.6	89	61-125	7	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	229	92	53-142	5	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	40.2	80	59-136	4	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	239	96	46-129	8	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	41.8	84	56-126	6	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	43.2	86	62-125	5	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	332	133	26-152	5	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	44.6	89	60-130	5	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	45.1	90	55-135	4	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	43.5	87	60-127	5	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	45.9	92	61-131	2	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	46.4	93	59-131	4	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	43.8	88	57-128	7	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	46.6	93	58-136	6	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	40.8	82	58-126	3	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10473PSD
Lab Sample ID: 1201872764
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 13.2
Analysis Date: 07/02/2009 19:18
Dilution: 1
Prep Batch ID: 881793
Batch ID: 881794

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	42.0	84	56-123	6	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	44.0	88	51-137	5	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	44.4	89	60-126	4	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	47.7	95	55-138	4	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	44.2	88	60-132	1	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	240	96	58-136	3	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	47.2	94	54-133	4	0-25
108-88-3	PSD	Toluene	50.0	0.00	U	41.7	83	52-128	4	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	47.4	95	53-137	3	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	46.0	92	59-130	1	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	279	111	31-148	3	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	44.9	90	57-127	1	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	44.1	88	51-128	5	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	49.2	98	59-139	2	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	47.0	94	57-133	0	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	44.3	89	53-122	4	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	43.1	86	51-125	4	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	87.6	88	50-126	4	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	45.3	91	52-127	4	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	46.2	92	49-135	4	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	42.8	86	57-149	0	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	45.6	91	63-127	2	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10473PSD
Lab Sample ID: 1201872764
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 13.2
Analysis Date: 07/02/2009 19:18
Dilution: 1
Prep Batch ID: 881793
Batch ID: 881794

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	49.1	98	57-149	2	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	43.9	88	49-131	2	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	41.5	83	40-136	3	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	42.8	86	44-135	3	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	36.7	73	44-140	2	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	42.7	85	42-140	2	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	42.4	85	44-132	3	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	44.6	89	42-142	1	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	42.7	85	43-137	2	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	43.3	87	39-139	2	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	44.3	89	38-145	2	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	43.8	88	43-129	2	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	42.3	85	44-125	3	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	42.3	85	36-141	3	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	56.0	112	47-151	2	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	48.6	97	59-131	2	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	44.0	88	43-129	1	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: LCS for batch 881793
Lab Sample ID: 1201872765
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/01/2009 11:11
Dilution: 1
Prep Batch ID: 881793
Batch ID: 881794

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	80.4	161 *	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	56.3	113	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	57.5	115	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	52.4	105	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	54.0	108	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	59.0	118	67-151
67-64-1	LCS	Acetone	250	0.0	358	143	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	54.4	109	70-125
74-88-4	LCS	Iodomethane	250	0.0	264	106	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	47.6	95	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	288	115	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	49.9	100	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	50.8	102	75-120
78-93-3	LCS	2-Butanone	250	0.0	455	182 *	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	53.3	107	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	55.3	111	74-135
67-66-3	LCS	Chloroform	50.0	0.0	51.1	102	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	54.3	109	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	54.6	109	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	54.3	109	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	56.0	112	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	48.6	97	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: LCS for batch 881793
Lab Sample ID: 1201872765
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/01/2009 11:11
Dilution: 1
Prep Batch ID: 881793
Batch ID: 881794

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	49.9	100	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	53.8	108	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	52.5	105	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	57.1	114	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	52.6	105	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	306	123	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	57.9	116	80-125
108-88-3	LCS	Toluene	50.0	0.0	48.0	96	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	56.6	113	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	53.4	107	76-120
591-78-6	LCS	2-Hexanone	250	0.0	362	145	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	51.2	102	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	52.1	104	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	57.4	115	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	55.0	110	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	50.8	102	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	49.8	100	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	101	101	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	51.5	103	74-120
100-42-5	LCS	Styrene	50.0	0.0	54.1	108	76-125
75-25-2	LCS	Bromoform	50.0	0.0	51.3	103	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	53.0	106	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 881793 **Matrix:** SOIL

Lab Sample ID: 1201872765

Instrument: VOA6.I **Analysis Date:** 07/01/2009 11:11 **Dilution:** 1

Analyst: RXD1 **Prep Batch ID:** 881793

Purge Vol: 5 mL **Batch ID:** 881794

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	58.6	117	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	49.8	100	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	47.7	95	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	48.4	97	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	41.7	83	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	48.5	97	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	49.4	99	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	49.6	99	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	49.0	98	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	49.1	98	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	51.1	102	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	50.6	101	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	49.0	98	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	50.5	101	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	75.0	150 *	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	55.1	110	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	50.1	100	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **09-2457**
Client ID: **LCS for batch 881793**
Lab Sample ID: **1201872766**
Instrument: **VOA6.I**
Analyst: **RXD1**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **SOIL**
Analysis Date: **07/01/2009 12:07**
Dilution: 1
Prep Batch ID **881793**
Batch ID: **881794**

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	255	102	52-139

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 881793 **Matrix:** SOIL

Lab Sample ID: 1201876339

Instrument: VOA6.I **Analysis Date:** 07/02/2009 10:20 **Dilution:** 1

Analyst: RXD1 **Prep Batch ID:** 881793

Purge Vol: 5 mL **Batch ID:** 881794

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	65.6	131	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	51.7	103	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	53.5	107	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	49.5	99	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	51.4	103	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	56.0	112	67-151
67-64-1	LCS	Acetone	250	0.0	320	128	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	51.3	103	70-125
74-88-4	LCS	Iodomethane	250	0.0	252	101	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	43.8	88	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	272	109	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	47.8	96	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	49.0	98	75-120
78-93-3	LCS	2-Butanone	250	0.0	401	160	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	51.1	102	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	53.5	107	74-135
67-66-3	LCS	Chloroform	50.0	0.0	49.0	98	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	51.8	104	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	52.8	106	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	52.1	104	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	53.9	108	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	45.7	91	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: LCS for batch 881793
Lab Sample ID: 1201876339
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 10:20
Dilution: 1
Prep Batch ID: 881793
Batch ID: 881794

CAS No	Parmname		Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	48.0	96	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	52.1	104	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	50.4	101	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	54.5	109	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	49.9	100	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	287	115	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	55.1	110	80-125
108-88-3	LCS	Toluene	50.0	0.0	47.7	95	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	55.5	111	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	52.0	104	76-120
591-78-6	LCS	2-Hexanone	250	0.0	335	134	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	50.4	101	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	52.3	105	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	56.4	113	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	53.4	107	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	50.8	102	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	49.9	100	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	102	102	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	51.6	103	74-120
100-42-5	LCS	Styrene	50.0	0.0	53.5	107	76-125
75-25-2	LCS	Bromoform	50.0	0.0	49.4	99	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	51.3	103	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 881793 **Matrix:** SOIL

Lab Sample ID: 1201876339

Instrument: VOA6.I **Analysis Date:** 07/02/2009 10:20 **Dilution:** 1

Analyst: RXD1 **Prep Batch ID:** 881793

Purge Vol: 5 mL **Batch ID:** 881794

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	56.4	113	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	50.2	100	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	48.6	97	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	49.2	98	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	42.3	85	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	49.1	98	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	49.9	100	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	50.4	101	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	49.5	99	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	50.0	100	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	51.9	104	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	50.9	102	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	49.7	99	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	51.3	103	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	70.1	140	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	55.0	110	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	50.6	101	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: LCS for batch 881793
Lab Sample ID: 1201876340
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 11:46
Dilution: 1
Prep Batch ID: 881793
Batch ID: 881794

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	250	100	52-139

Method Blank Summary

SDG Number:	09-2457	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881793	Instrument ID:	VOA6.I	Data File:	6r307B1.d
Lab Sample ID:	1201872762	Prep Date:	07/01/2009 09:30	Analyzed:	07/01/09 12:35
Column:	DB-624	Heated Purge:	Yes		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 881793	1201872765	6r304L1.d	07/01/09	1111
02	LCS for batch 881793	1201872766	6r306L1.d	07/01/09	1207
03	CAMO-09-10470	232348005	6r310.d	07/01/09	1359
04	CAMO-09-10460	232348002	6r321.d	07/01/09	1905
05	CAMO-09-10461	232348003	6r322.d	07/01/09	1933
06	CAMO-09-10467	232348004	6r323.d	07/01/09	2000

Method Blank Summary

SDG Number:	09-2457	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881793	Instrument ID:	VOA6.I	Data File:	6r409B1.d
Lab Sample ID:	1201876338	Prep Date:	07/02/2009 09:30	Analyzed:	07/02/09 13:07
Column:	DB-624	Heated Purge:	Yes		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 881793	1201876339	6r404L1.d	07/02/09	1020
02 LCS for batch 881793	1201876340	6r407L1.d	07/02/09	1146
03 CAMO-09-10462	232348001	6r411.d	07/02/09	1403

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2457

Instrument ID: VOA6.I **Injection Date/Time:** 01-JUL-09 09:44

Column Description: DB-624 **Lab File ID** /070109v6/6r302BFB.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	15
75	30.0 - 60.0% of mass 95	44.4
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	91.7
175	5.0 -9.0% of mass 174	7.1
176	95.0 - 101.0% of mass 174	97.5
177	5.0 - 9.0% of mass 176	6.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD050	W6VM090701-01	/070109v6/6r302.d	01-JUL-09 09:44
LCS	1201872765	/070109v6/6r304L1.d	01-JUL-09 11:11
VSTD250S	W6VM090701-04	/070109v6/6r305.d	01-JUL-09 11:39
LCS	1201872766	/070109v6/6r306L1.d	01-JUL-09 12:07
BLANK	1201872762	/070109v6/6r307B1.d	01-JUL-09 12:35
CAMO-09-10470	232348005	/070109v6/6r310.d	01-JUL-09 13:59
CAMO-09-10460	232348002	/070109v6/6r321.d	01-JUL-09 19:05
CAMO-09-10461	232348003	/070109v6/6r322.d	01-JUL-09 19:33
CAMO-09-10467	232348004	/070109v6/6r323.d	01-JUL-09 20:00

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2457

Instrument ID: VOA6.I **Injection Date/Time:** 02-JUL-09 09:24

Column Description: DB-624 **Lab File ID** /070209v6/6r402BFB.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	15
75	30.0 - 60.0% of mass 95	44.6
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	92.3
175	5.0 -9.0% of mass 174	7
176	95.0 - 101.0% of mass 174	97.5
177	5.0 - 9.0% of mass 176	6.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD050	W6VM090702-01	/070209v6/6r402.d	02-JUL-09 09:24
LCS	1201876339	/070209v6/6r404L1.d	02-JUL-09 10:20
VSTD250S	W6VM090702-04	/070209v6/6r406.d	02-JUL-09 11:18
SLCS	1201876340	/070209v6/6r407L1.d	02-JUL-09 11:46
BLANK	1201876338	/070209v6/6r409B1.d	02-JUL-09 13:07
CAMO-09-10462	232348001	/070209v6/6r411.d	02-JUL-09 14:03

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2457

Instrument ID: VOA6.I **Injection Date/Time:** 15-JUN-09 16:10

Column Description: DB-624 **Lab File ID** /061509v6/6p111.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	16
75	30.0 - 60.0% of mass 95	46.2
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.5
174	50.0 - 100.0% of mass 95	89.7
175	5.0 -9.0% of mass 174	6.9
176	95.0 - 101.0% of mass 174	97.8
177	5.0 - 9.0% of mass 176	6.4

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD001	W6VM090615-08	/061509v6/6p112.d	15-JUN-09 16:38
VSTD002	W6VM090615-09	/061509v6/6p113.d	15-JUN-09 17:06
VSTD005	W6VM090615-10	/061509v6/6p114.d	15-JUN-09 17:34
VSTD010	W6VM090615-11	/061509v6/6p115.d	15-JUN-09 18:02
VSTD050	W6VM090615-13	/061509v6/6p117.d	15-JUN-09 18:58
VSTD100	W6VM090615-14	/061509v6/6p118.d	15-JUN-09 19:25
VSTD0005	W6VM090615-15	/061509v6/6p120.d	15-JUN-09 20:21
SECONDSOURCE	W6VM090615-17	/061509v6/6p122.d	15-JUN-09 21:17
VSTD005S	W6VM090615-18	/061509v6/6p123.d	15-JUN-09 21:45
VSTD010S	W6VM090615-19	/061509v6/6p124.d	15-JUN-09 22:12
VSTD025S	W6VM090615-20	/061509v6/6p125.d	15-JUN-09 22:40
VSTD050S	W6VM090615-21	/061509v6/6p126.d	15-JUN-09 23:07
VSTD100S	W6VM090615-22	/061509v6/6p127.d	15-JUN-09 23:35
VSTD250S	W6VM090615-23	/061509v6/6p128.d	16-JUN-09 00:03
SECONDSOURCE	W6VM090615-25	/061509v6/6p131.d	16-JUN-09 01:27

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA6.I

GC Column: DB-624

Client SDG: 09-2457

STD Analysis Time: 01-JUL-09 09:44

Data File: 6r302.d

	Fluorobenzene				Chlorobenzene-d5				1,4-Dichlorobenzene-d4			
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 Hour STD	1683314		9.98		1308380		13.2		746698		15.6	
Upper Limit	3366628		10.5		2616760		13.7		1493396		16.1	
Lower Limit	841657		9.48		654190		12.7		373349		15.1	
Sample ID												
BLK01LCS	1707345		9.98		1323269		13.2		759973		15.6	
BLK01SLCS	1660939		9.98		1292608		13.2		735706		15.6	
BLK01	1657067		9.98		1269803		13.2		708261		15.6	
CAMO-09-10470	1614484		9.98		1243833		13.2		698494		15.6	
CAMO-09-10460	1245748		9.98		967041		13.2		546381		15.6	
CAMO-09-10461	1156826		9.98		885257		13.2		489949		15.6	
CAMO-09-10467	1328131		9.98		1027837		13.2		565918		15.6	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA6.1

GC Column: DB-624

Client SDG: 09-2457

STD Analysis Time: 02-JUL-09 09:24

Data File: 6r402.d

	Fluorobenzene				Chlorobenzene-d5				1,4-Dichlorobenzene-d4			
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 Hour STD	1616503		9.98		1215029		13.2		695315		15.6	
Upper Limit	3233006		10.5		2430058		13.7		1390630		16.1	
Lower Limit	808252		9.48		607515		12.7		347658		15.1	
Sample ID												
BLK02LCS	1617446		9.98		1201116		13.2		680779		15.6	
BLK02SLCS	1620650		9.98		1218765		13.2		688153		15.6	
BLK02	1525938		9.98		1138668		13.2		644405		15.6	
CAMO-09-10462	793194	*	9.97		594007	*	13.2		330430	*	15.6	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:05	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:52	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r321.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.09	ug/kg	0.371	1.09
74-87-3	Chloromethane	U	1.09	ug/kg	0.327	1.09
75-01-4	Vinyl chloride	U	1.09	ug/kg	0.327	1.09
74-83-9	Bromomethane	U	1.09	ug/kg	0.327	1.09
75-00-3	Chloroethane	U	1.09	ug/kg	0.327	1.09
75-69-4	Trichlorofluoromethane	U	1.09	ug/kg	0.622	1.09
67-64-1	Acetone	U	5.45	ug/kg	1.81	5.45
75-35-4	1,1-Dichloroethylene	U	1.09	ug/kg	0.327	1.09
74-88-4	Iodomethane	U	5.45	ug/kg	1.74	5.45
75-09-2	Methylene chloride	U	5.45	ug/kg	2.18	5.45
75-15-0	Carbon disulfide	U	5.45	ug/kg	1.36	5.45
156-60-5	trans-1,2-Dichloroethylene	U	1.09	ug/kg	0.327	1.09
75-34-3	1,1-Dichloroethane	U	1.09	ug/kg	0.327	1.09
78-93-3	2-Butanone	U	5.45	ug/kg	1.64	5.45
156-59-2	cis-1,2-Dichloroethylene	U	1.09	ug/kg	0.327	1.09
594-20-7	2,2-Dichloropropane	U	1.09	ug/kg	0.327	1.09
67-66-3	Chloroform	U	1.09	ug/kg	0.327	1.09
74-97-5	Bromochloromethane	U	1.09	ug/kg	0.360	1.09
71-55-6	1,1,1-Trichloroethane	U	1.09	ug/kg	0.327	1.09
563-58-6	1,1-Dichloropropene	U	1.09	ug/kg	0.327	1.09
56-23-5	Carbon tetrachloride	U	1.09	ug/kg	0.327	1.09
107-06-2	1,2-Dichloroethane	U	1.09	ug/kg	0.327	1.09
71-43-2	Benzene	U	1.09	ug/kg	0.327	1.09
79-01-6	Trichloroethylene	U	1.09	ug/kg	0.360	1.09
78-87-5	1,2-Dichloropropane	U	1.09	ug/kg	0.327	1.09
75-27-4	Bromodichloromethane	U	1.09	ug/kg	0.327	1.09
74-95-3	Dibromomethane	U	1.09	ug/kg	0.327	1.09
108-10-1	4-Methyl-2-pentanone	U	5.45	ug/kg	1.36	5.45
10061-01-5	cis-1,3-Dichloropropylene	U	1.09	ug/kg	0.327	1.09
108-88-3	Toluene	U	1.09	ug/kg	0.327	1.09
10061-02-6	trans-1,3-Dichloropropylene	U	1.09	ug/kg	0.327	1.09
79-00-5	1,1,2-Trichloroethane	U	1.09	ug/kg	0.327	1.09
591-78-6	2-Hexanone	U	5.45	ug/kg	1.64	5.45
142-28-9	1,3-Dichloropropane	U	1.09	ug/kg	0.327	1.09
127-18-4	Tetrachloroethylene	U	1.09	ug/kg	0.327	1.09
124-48-1	Dibromochloromethane	U	1.09	ug/kg	0.327	1.09
106-93-4	1,2-Dibromoethane	U	1.09	ug/kg	0.327	1.09
108-90-7	Chlorobenzene	U	1.09	ug/kg	0.327	1.09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:05	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:52	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r321.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.09	ug/kg	0.327	1.09
179601-23-1	m,p-Xylenes	U	2.18	ug/kg	0.327	2.18
95-47-6	o-Xylene	U	1.09	ug/kg	0.327	1.09
100-42-5	Styrene	U	1.09	ug/kg	0.327	1.09
75-25-2	Bromoform	U	1.09	ug/kg	0.327	1.09
79-34-5	1,1,2,2-Tetrachloroethane	U	1.09	ug/kg	0.327	1.09
96-18-4	1,2,3-Trichloropropane	U	1.09	ug/kg	0.327	1.09
108-86-1	Bromobenzene	U	1.09	ug/kg	0.327	1.09
103-65-1	n-Propylbenzene	U	1.09	ug/kg	0.327	1.09
95-49-8	2-Chlorotoluene	U	1.09	ug/kg	0.327	1.09
98-82-8	Isopropylbenzene	U	1.09	ug/kg	0.327	1.09
108-67-8	1,3,5-Trimethylbenzene	U	1.09	ug/kg	0.327	1.09
106-43-4	4-Chlorotoluene	U	1.09	ug/kg	0.327	1.09
98-06-6	tert-Butylbenzene	U	1.09	ug/kg	0.327	1.09
95-63-6	1,2,4-Trimethylbenzene	U	1.09	ug/kg	0.327	1.09
135-98-8	sec-Butylbenzene	U	1.09	ug/kg	0.327	1.09
99-87-6	4-Isopropyltoluene	U	1.09	ug/kg	0.327	1.09
541-73-1	1,3-Dichlorobenzene	U	1.09	ug/kg	0.327	1.09
106-46-7	1,4-Dichlorobenzene	U	1.09	ug/kg	0.327	1.09
104-51-8	n-Butylbenzene	U	1.09	ug/kg	0.327	1.09
96-12-8	1,2-Dibromo-3-chloropropane	U	1.09	ug/kg	0.327	1.09
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.45	ug/kg	1.74	5.45
630-20-6	1,1,1,2-Tetrachloroethane	U	1.09	ug/kg	0.327	1.09
95-50-1	1,2-Dichlorobenzene	U	1.09	ug/kg	0.327	1.09

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	505	ug/kg		J
	Unknown Siloxane	16.17	62.5	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r321.d
Lab Smp Id: 232348002 Client Smp ID: CAMO-09-10460
Inj Date : 01-JUL-2009 19:05
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232348002|881794|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	8.30530	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1245748	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	967041	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	546381	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	334693	53.6184	58.5
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1238465	48.3427	52.7
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	492182	48.7732	53.2

ION RATIO REPORT

VOA REPORT

Data file: 6r321.d
Report Date: 07/02/2009 09:46
Lab. ID: 232348002 SampleType: SAMPLE
Injection Date: 01-JUL-2009 19:05
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232348002|881794|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2457
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	13908	9.97	9.71	80-120	100	(T)
64	2149	9.98	9.71	2- 62	15	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	8903	11.62	11.41	80-120	100	(T)
43	4217	11.62	11.41	198-258	47	(QT)
100	829312	11.63	11.41	11- 71	9315	(QT)
82 Bromoform				CAS#: 75-25-2		
173	1852	14.23	14.06	80-120	100	(T)
175	17878	14.24	14.06	19- 79	965	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	24915	14.23	14.16	80-120	100	(T)
120	12225	14.23	14.16	0- 58	49	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	32382	14.23	14.53	80-120	100	(T)
75	65470	14.23	14.53	254-314	202	(QT)
77	3641	14.24	14.56	727-787	11	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r321.d
Lab Smp Id: 232348002 Client Smp ID: CAMO-09-10460
Inj Date : 01-JUL-2009 19:05
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232348002|881794|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	8.30530	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	2681533	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	2962554	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	24833282	463.042558	505	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown Siloxane				CAS #:			
16.168	3392927	57.2635443	62.4	0		0	101

Data File: /chem/VOA6.i/070109v6/6r321.d
Date : 01-JUL-2009 19:05
Client ID: CAMO-09-10460
Sample Info: |2323480021881794|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

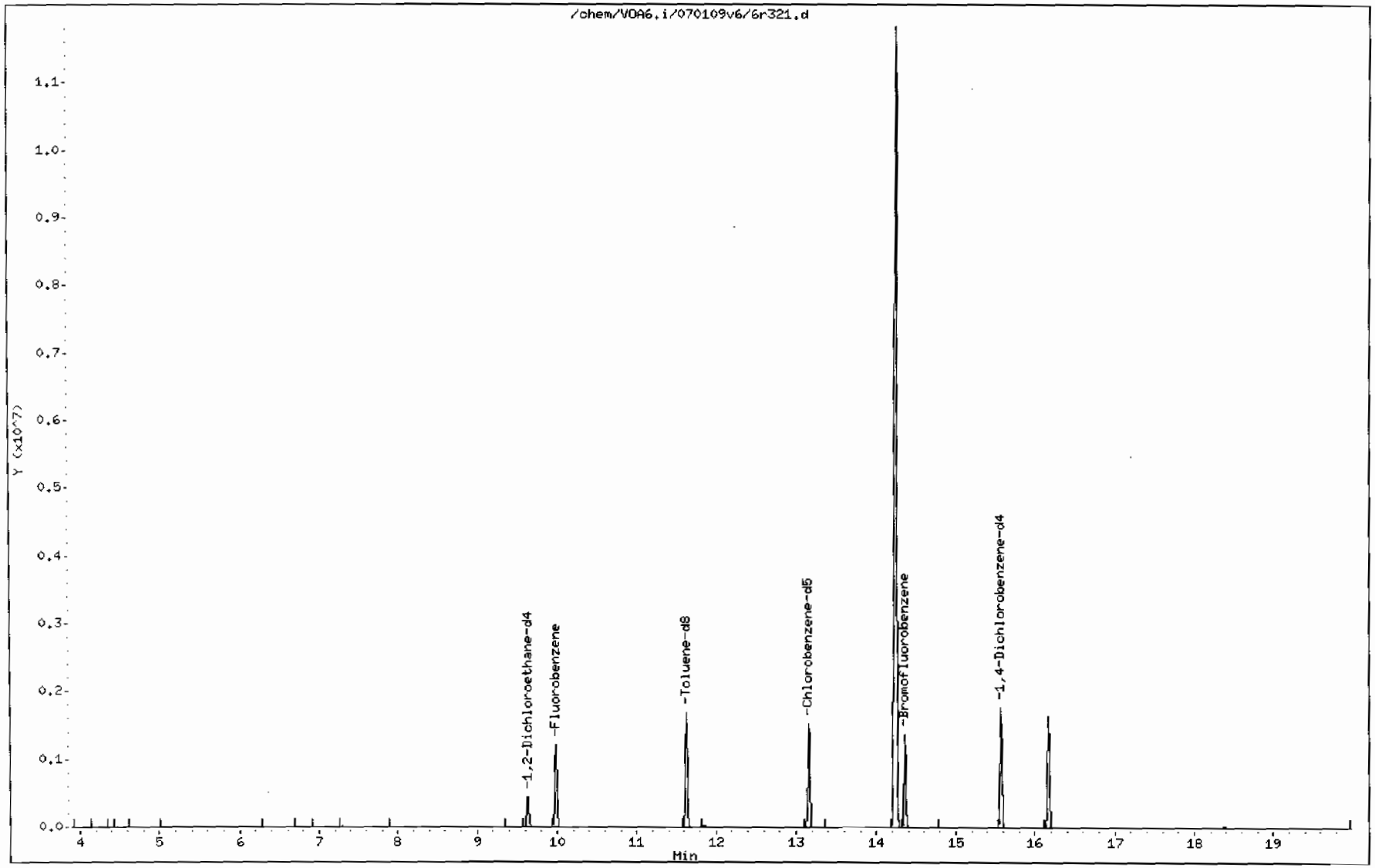

Data File: /chem/VOA6.i/070109v6/6r321.d

Date : 01-JUL-2009 19:05

Client ID: CAMO-09-10460

Instrument: VOA6.i

Sample Info: |2323480021881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	90	C8H24O4Si4	296
2-(4-Chlorophenyl)-5,7-dimethylimidazo[1	1000305-50-9	NIST05.L	112528	59	C16H12ClN3	281

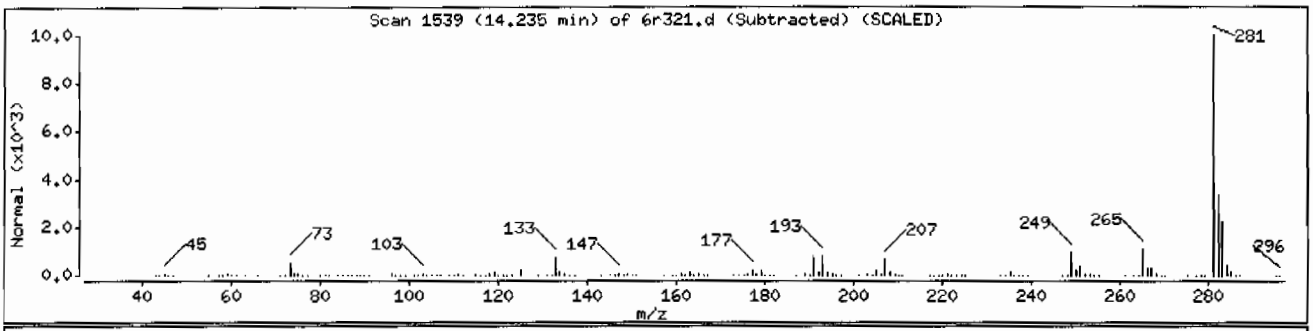

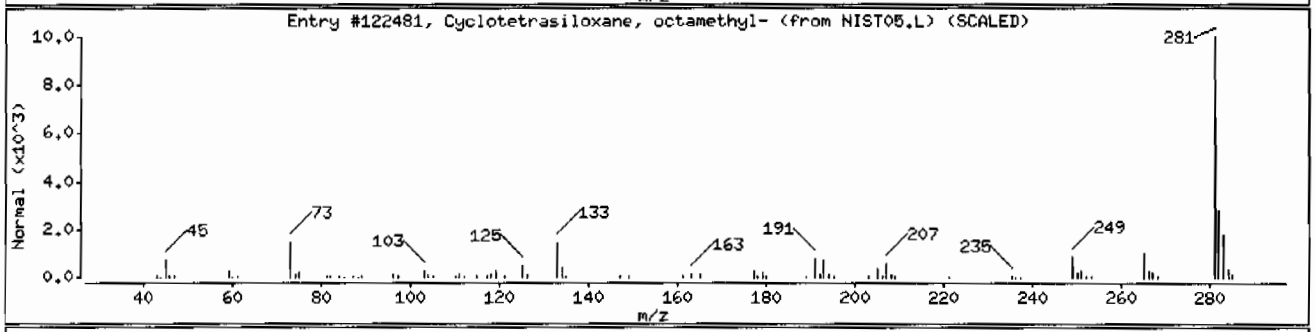

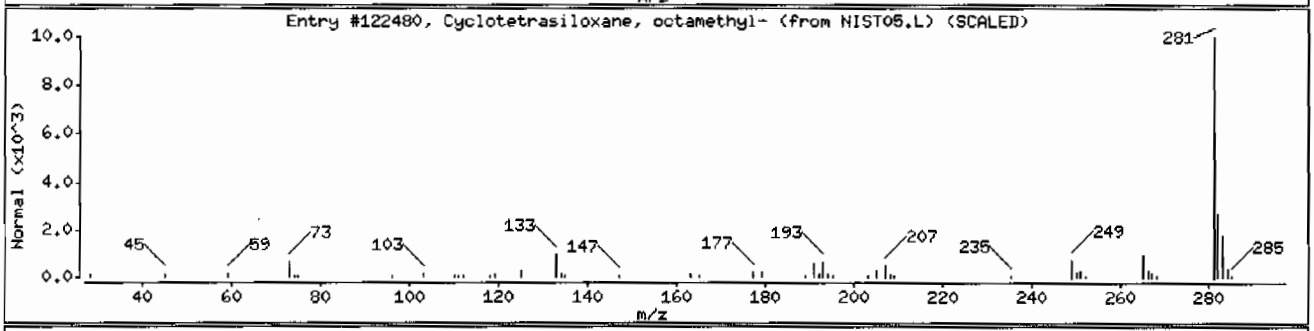

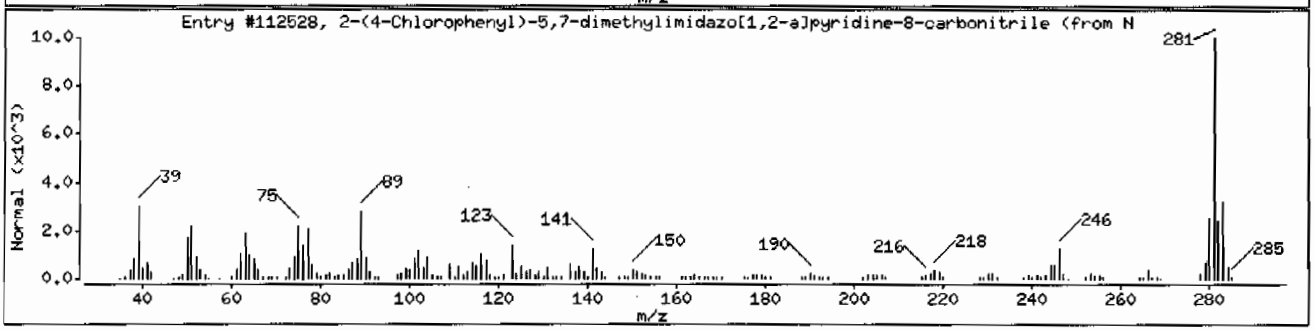

Data File: /chem/VOA6.i/070109v6/6r321.d

Date : 01-JUL-2009 19:05

Client ID: CAMO-09-10460

Instrument: VOA6.i

Sample Info: |2323480021881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Butanamide, 2,2,3,3,4,4,4-heptafluoro-N-	55471-01-7	NIST05.L	184036	78	C18H26F7N03Si3	493
p-Trimethylsilyloxyphenyl-bis(trimethyls	1000079-08-1	NIST05.L	161171	72	C17H3403Si3	370
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	72	C18H3404Si3	398

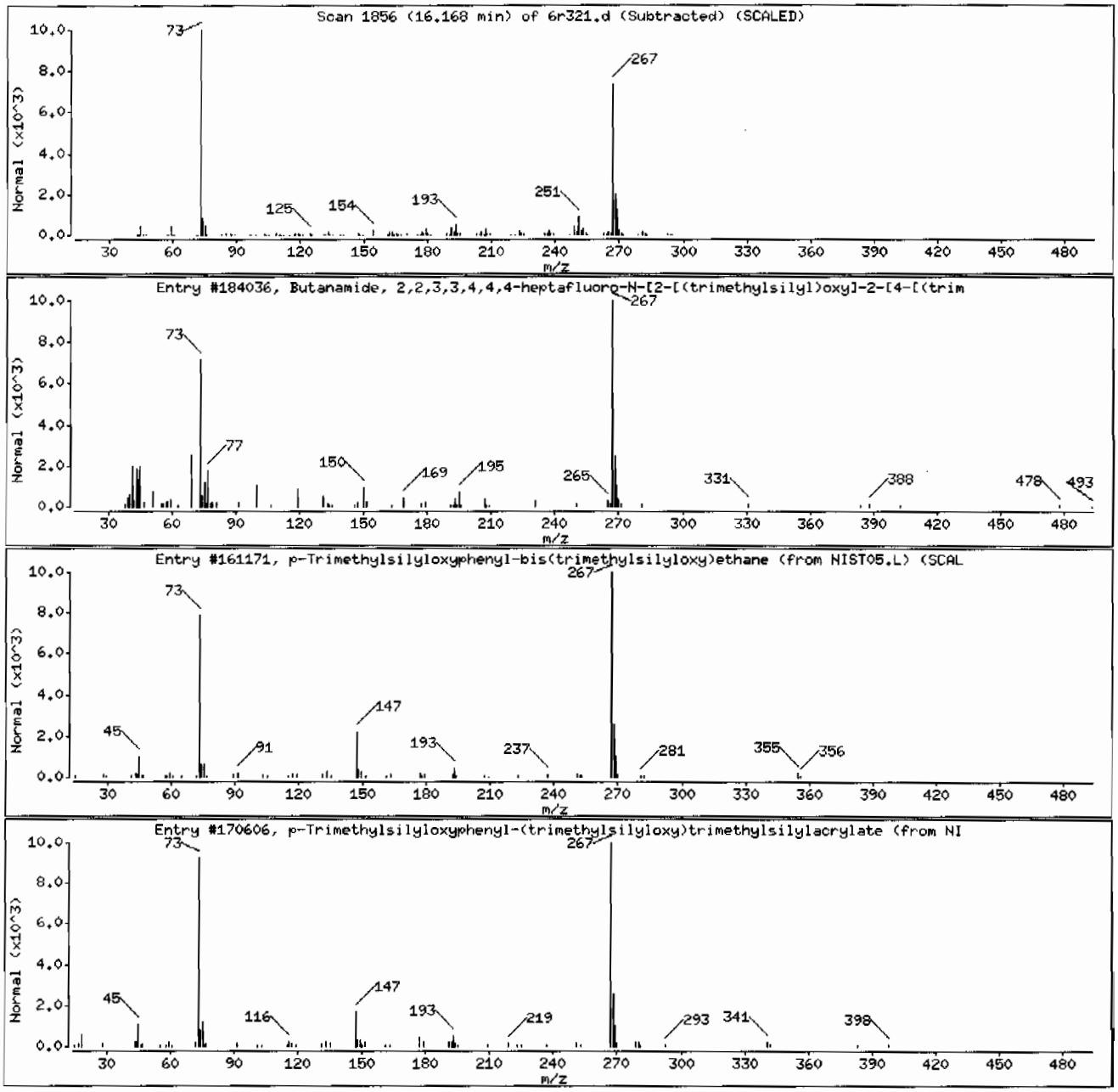

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348003	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10461	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:33	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:53	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r322.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.384	1.13
74-87-3	Chloromethane	U	1.13	ug/kg	0.339	1.13
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.339	1.13
74-83-9	Bromomethane	U	1.13	ug/kg	0.339	1.13
75-00-3	Chloroethane	U	1.13	ug/kg	0.339	1.13
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.644	1.13
67-64-1	Acetone	U	5.65	ug/kg	1.88	5.65
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.339	1.13
74-88-4	Iodomethane	U	5.65	ug/kg	1.81	5.65
75-09-2	Methylene chloride	U	5.65	ug/kg	2.26	5.65
75-15-0	Carbon disulfide	U	5.65	ug/kg	1.41	5.65
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.339	1.13
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.339	1.13
78-93-3	2-Butanone	U	5.65	ug/kg	1.70	5.65
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.339	1.13
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.339	1.13
67-66-3	Chloroform	U	1.13	ug/kg	0.339	1.13
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.373	1.13
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.339	1.13
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.339	1.13
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.339	1.13
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.339	1.13
71-43-2	Benzene	U	1.13	ug/kg	0.339	1.13
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.373	1.13
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.339	1.13
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.339	1.13
74-95-3	Dibromomethane	U	1.13	ug/kg	0.339	1.13
108-10-1	4-Methyl-2-pentanone	U	5.65	ug/kg	1.41	5.65
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.339	1.13
108-88-3	Toluene	U	1.13	ug/kg	0.339	1.13
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.339	1.13
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.339	1.13
591-78-6	2-Hexanone	U	5.65	ug/kg	1.70	5.65
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.339	1.13
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.339	1.13
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.339	1.13
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.339	1.13
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.339	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348003	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10461	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 19:33	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:53	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r322.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.339	1.13
179601-23-1	m,p-Xylenes	U	2.26	ug/kg	0.339	2.26
95-47-6	o-Xylene	U	1.13	ug/kg	0.339	1.13
100-42-5	Styrene	U	1.13	ug/kg	0.339	1.13
75-25-2	Bromoform	U	1.13	ug/kg	0.339	1.13
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.339	1.13
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.339	1.13
108-86-1	Bromobenzene	U	1.13	ug/kg	0.339	1.13
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.339	1.13
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.339	1.13
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.339	1.13
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.339	1.13
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.339	1.13
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.339	1.13
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.339	1.13
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.339	1.13
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.339	1.13
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.339	1.13
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.339	1.13
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.339	1.13
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.339	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.65	ug/kg	1.81	5.65
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.339	1.13
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.339	1.13

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	394	ug/kg		J
	Unknown Siloxane	16.17	135	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r322.d
Lab Smp Id: 232348003 Client Smp ID: CAMO-09-10461
Inj Date : 01-JUL-2009 19:33
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232348003|881794|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.52820	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1156826	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	885257	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	489949	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	292845	50.5205	57.1
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1151252	49.0900	55.5
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	443429	49.0032	55.4

ION RATIO REPORT

VOA REPORT

Data file: 6r322.d
Report Date: 07/02/2009 09:46
Lab. ID: 232348003 SampleType: SAMPLE
Injection Date: 01-JUL-2009 19:33
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232348003|881794|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2457
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	13338	9.97	9.71	80-120	100	(T)
64	2039	9.97	9.71	2- 62	15	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	8081	11.63	11.41	80-120	100	(T)
43	3770	11.63	11.41	198-258	47	(QT)
100	772485	11.63	11.41	11- 71	9559	(QT)
82 Bromoform				CAS#: 75-25-2		
173	691	14.23	14.06	80-120	100	(T)
175	11438	14.23	14.06	19- 79	1655	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	16765	14.23	14.16	80-120	100	(T)
120	8303	14.23	14.16	0- 58	50	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	21954	14.24	14.53	80-120	100	(T)
75	44396	14.23	14.53	254-314	202	(QT)
77	2242	14.23	14.56	727-787	10	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r322.d
Lab Smp Id: 232348003 Client Smp ID: CAMO-09-10461
Inj Date : 01-JUL-2009 19:33
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232348003|881794|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.52820	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	2462286	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	2659844	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
14.235	17172287	348.706144	394	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
16.168	6359596	119.548242	135	0		0	101

Data File: /chem/VOA6.i/070109v6/6r322.d
Date : 01-JUL-2009 19:33
Client ID: CAMO-09-10461
Sample Info: |2323480031881794|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

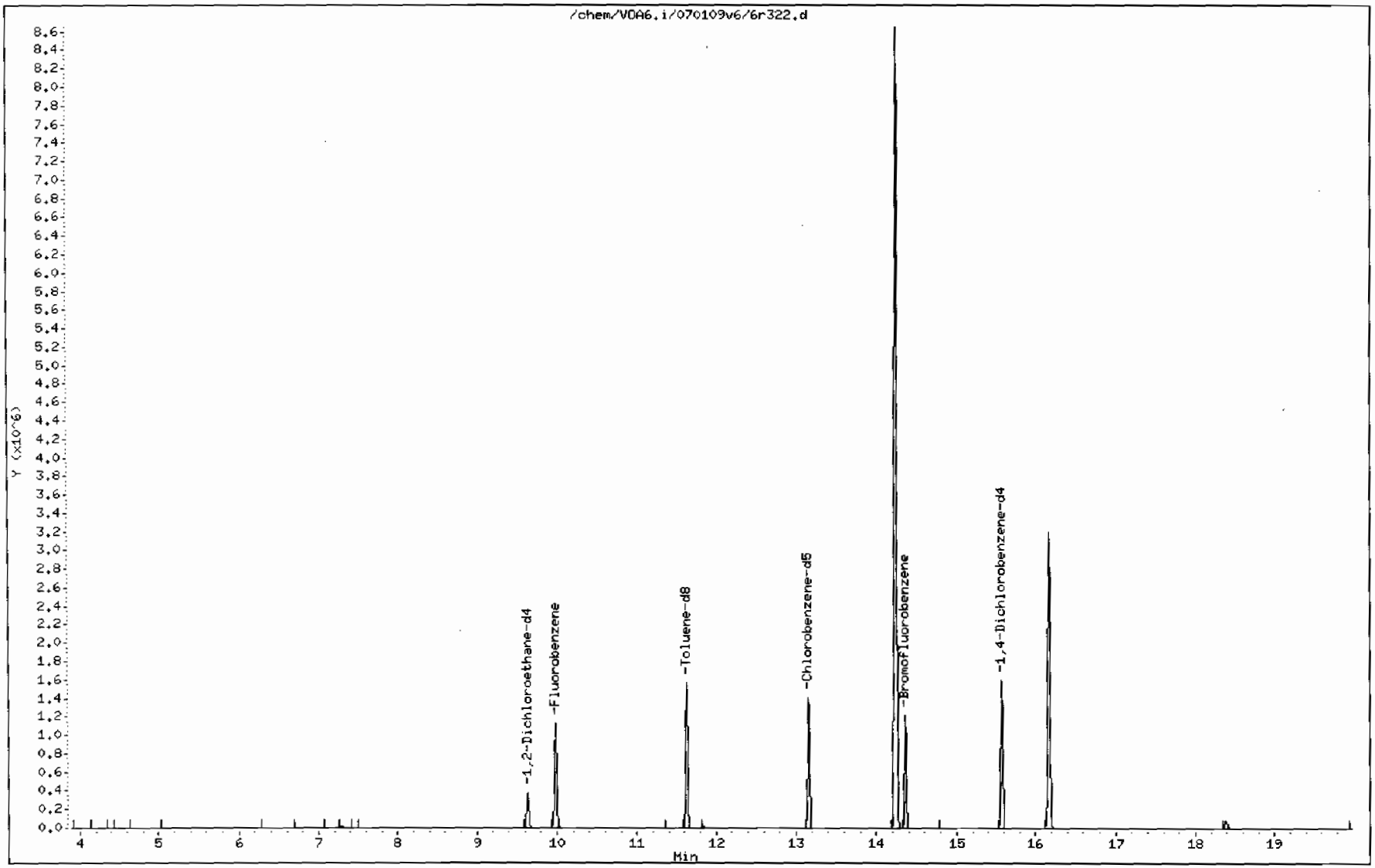

Data File: /chem/VOA6.i/070109v6/6r322.d

Date : 01-JUL-2009 19:33

Client ID: CAHO-09-10461

Instrument: VOA6.i

Sample Info: |2323480031881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	81	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122479	78	C8H24O4Si4	296

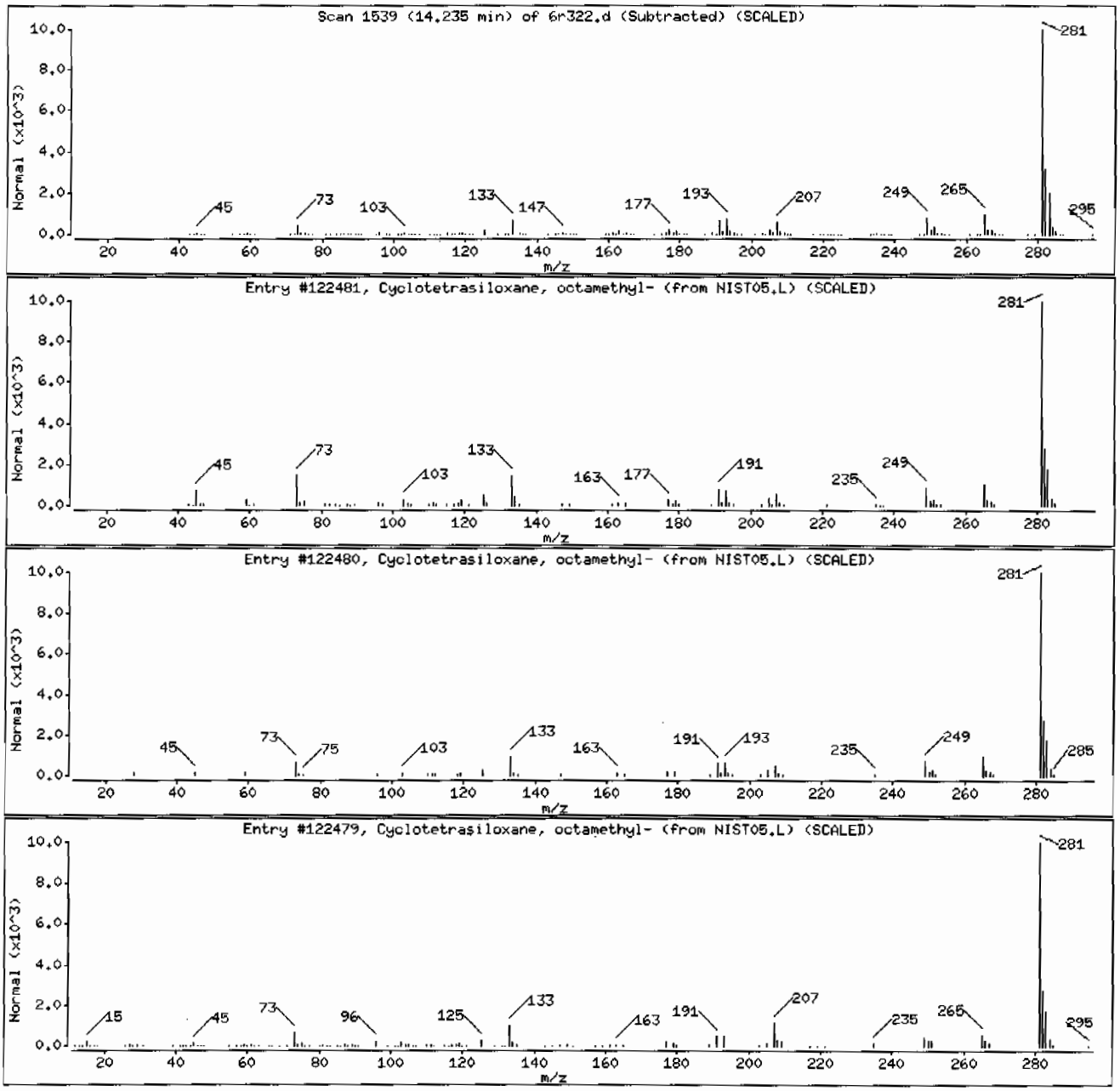

Data File: /chem/VOA6.i/070109v6/6r322.d

Date : 01-JUL-2009 19:33

Client ID: CAHO-09-10461

Instrument: VOA6.i

Sample Info: |2323480031881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Benzaldehyde, 2,4-bis(trimethylsiloxy)-	33617-38-8	NIST05.L	112902	72	C13H2203Si2	282
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	72	C18H3404Si3	398
p-Trimethylsilyloxyphenyl-bis(trimethyls	1000079-08-1	NIST05.L	161171	72	C17H3403Si3	370

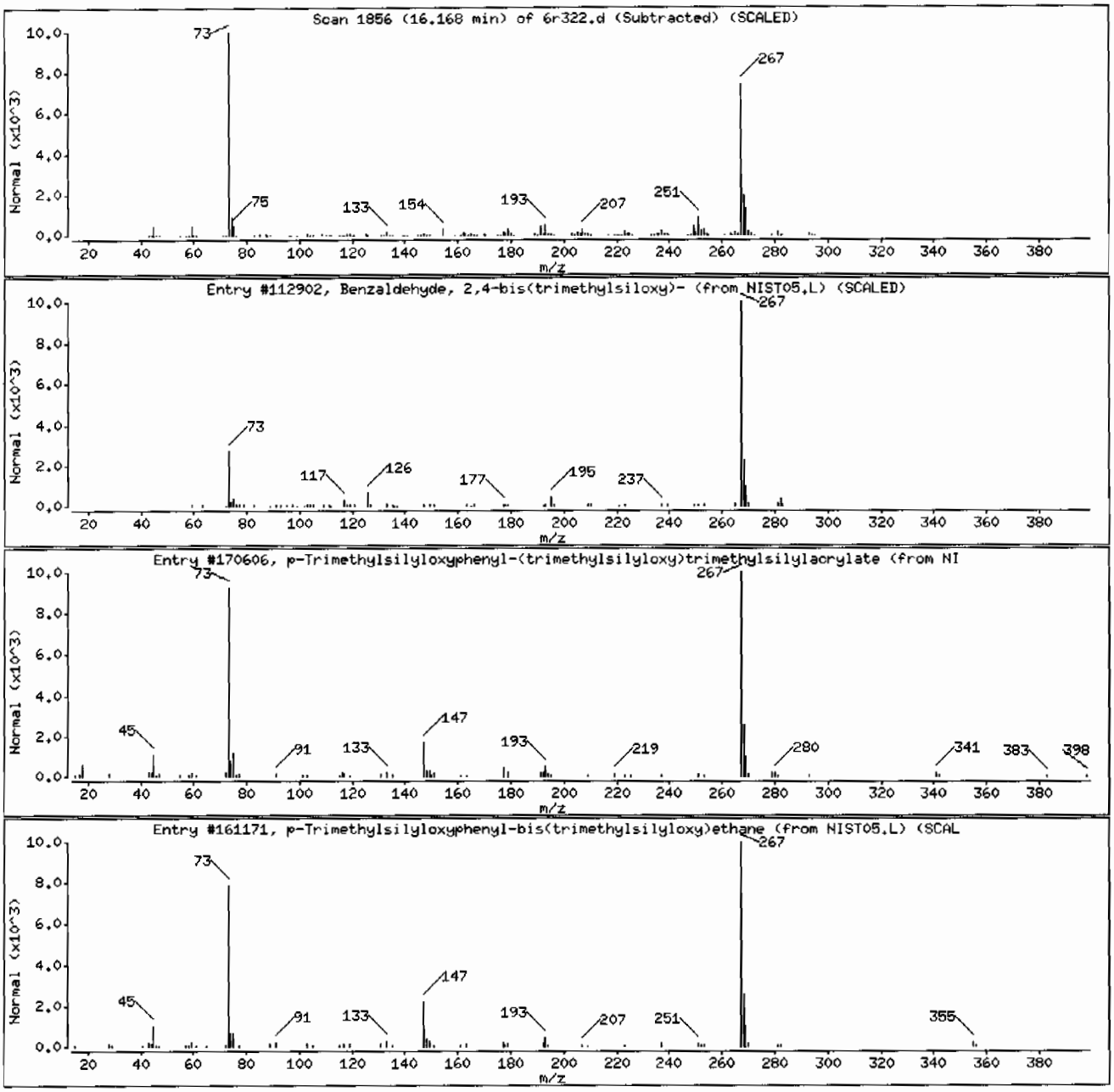

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:03	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 11:51	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r411.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.07	ug/kg	0.364	1.07
74-87-3	Chloromethane	U	1.07	ug/kg	0.321	1.07
75-01-4	Vinyl chloride	U	1.07	ug/kg	0.321	1.07
74-83-9	Bromomethane	U	1.07	ug/kg	0.321	1.07
75-00-3	Chloroethane	U	1.07	ug/kg	0.321	1.07
75-69-4	Trichlorofluoromethane	U	1.07	ug/kg	0.610	1.07
67-64-1	Acetone	U	5.35	ug/kg	1.78	5.35
75-35-4	1,1-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
74-88-4	Iodomethane	U	5.35	ug/kg	1.71	5.35
75-09-2	Methylene chloride	U	5.35	ug/kg	2.14	5.35
75-15-0	Carbon disulfide	U	5.35	ug/kg	1.34	5.35
156-60-5	trans-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
75-34-3	1,1-Dichloroethane	U	1.07	ug/kg	0.321	1.07
78-93-3	2-Butanone	U	5.35	ug/kg	1.60	5.35
156-59-2	cis-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
594-20-7	2,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07
67-66-3	Chloroform	U	1.07	ug/kg	0.321	1.07
74-97-5	Bromochloromethane	U	1.07	ug/kg	0.353	1.07
71-55-6	1,1,1-Trichloroethane	U	1.07	ug/kg	0.321	1.07
563-58-6	1,1-Dichloropropene	U	1.07	ug/kg	0.321	1.07
56-23-5	Carbon tetrachloride	U	1.07	ug/kg	0.321	1.07
107-06-2	1,2-Dichloroethane	U	1.07	ug/kg	0.321	1.07
71-43-2	Benzene	U	1.07	ug/kg	0.321	1.07
79-01-6	Trichloroethylene	U	1.07	ug/kg	0.353	1.07
78-87-5	1,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07
75-27-4	Bromodichloromethane	U	1.07	ug/kg	0.321	1.07
74-95-3	Dibromomethane	U	1.07	ug/kg	0.321	1.07
108-10-1	4-Methyl-2-pentanone	U	5.35	ug/kg	1.34	5.35
10061-01-5	cis-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07
108-88-3	Toluene	U	1.07	ug/kg	0.321	1.07
10061-02-6	trans-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07
79-00-5	1,1,2-Trichloroethane	U	1.07	ug/kg	0.321	1.07
591-78-6	2-Hexanone	U	5.35	ug/kg	1.60	5.35
142-28-9	1,3-Dichloropropane	U	1.07	ug/kg	0.321	1.07
127-18-4	Tetrachloroethylene	U	1.07	ug/kg	0.321	1.07
124-48-1	Dibromochloromethane	U	1.07	ug/kg	0.321	1.07
106-93-4	1,2-Dibromoethane	U	1.07	ug/kg	0.321	1.07
108-90-7	Chlorobenzene	U	1.07	ug/kg	0.321	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:03	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 11:51	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r411.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.07	ug/kg	0.321	1.07
179601-23-1	m,p-Xylenes	U	2.14	ug/kg	0.321	2.14
95-47-6	o-Xylene	U	1.07	ug/kg	0.321	1.07
100-42-5	Styrene	U	1.07	ug/kg	0.321	1.07
75-25-2	Bromoform	U	1.07	ug/kg	0.321	1.07
79-34-5	1,1,2,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07
96-18-4	1,2,3-Trichloropropane	U	1.07	ug/kg	0.321	1.07
108-86-1	Bromobenzene	U	1.07	ug/kg	0.321	1.07
103-65-1	n-Propylbenzene	U	1.07	ug/kg	0.321	1.07
95-49-8	2-Chlorotoluene	U	1.07	ug/kg	0.321	1.07
98-82-8	Isopropylbenzene	U	1.07	ug/kg	0.321	1.07
108-67-8	1,3,5-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07
106-43-4	4-Chlorotoluene	U	1.07	ug/kg	0.321	1.07
98-06-6	tert-Butylbenzene	U	1.07	ug/kg	0.321	1.07
95-63-6	1,2,4-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07
135-98-8	sec-Butylbenzene	U	1.07	ug/kg	0.321	1.07
99-87-6	4-Isopropyltoluene	U	1.07	ug/kg	0.321	1.07
541-73-1	1,3-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07
106-46-7	1,4-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07
104-51-8	n-Butylbenzene	U	1.07	ug/kg	0.321	1.07
96-12-8	1,2-Dibromo-3-chloropropane	U	1.07	ug/kg	0.321	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.35	ug/kg	1.71	5.35
630-20-6	1,1,1,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07
95-50-1	1,2-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	641	ug/kg		J
	Unknown Siloxane	16.17	99.1	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r411.d
Lab Smp Id: 232348001 Client Smp ID: CAMO-09-10462
Inj Date : 02-JUL-2009 14:03
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232348001|881794|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	6.53160	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.974	9.980	(1.000)	793194	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	594007	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	330430	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.626	9.632	(0.965)	202824	51.0314	54.6
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	767137	48.7499	52.2
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	305313	50.0284	53.5

ION RATIO REPORT

VOA REPORT

Data file: 6r411.d
Report Date: 07/02/2009 15:04
Lab. ID: 232348001 SampleType: SAMPLE
Injection Date: 25-JUN-2009 14:03
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232348001|881794|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2457
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	9013	9.97	9.71	80-120	100	(T)
64	978	9.98	9.71	2- 62	11	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	5289	11.63	11.41	80-120	100	(T)
43	2354	11.63	11.41	199-259	45	(QT)
100	514135	11.63	11.41	11- 71	9720	(QT)
80 o-Xylene				CAS#: 95-47-6		
106	2110	14.23	13.80	80-120	100	(T)
91	1174	14.24	13.80	174-234	56	(QT)
82 Bromoform				CAS#: 75-25-2		
173	1135	14.24	14.06	80-120	100	(T)
175	13289	14.24	14.06	19- 79	1170	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	19059	14.24	14.16	80-120	100	(T)
120	9200	14.24	14.16	0- 58	48	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	24762	14.24	14.53	80-120	100	(T)
75	51680	14.23	14.53	251-311	209	(QT)
77	2749	14.24	14.56	714-774	11	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r411.d
Lab Smp Id: 232348001 Client Smp ID: CAMO-09-10462
Inj Date : 02-JUL-2009 14:03
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232348001|881794|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	6.53160	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	1637848	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	1770127	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	19612443	598.725862	640	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown Siloxane					CAS #:		
16.168	3278930	92.6184918	99.1	0		0	101

Data File: /chem/VOA6.i/070209v6/6r411.d
Date : 02-JUL-2009 14:03
Client ID: CAMO-09-10462
Sample Info: |2323480011881794|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

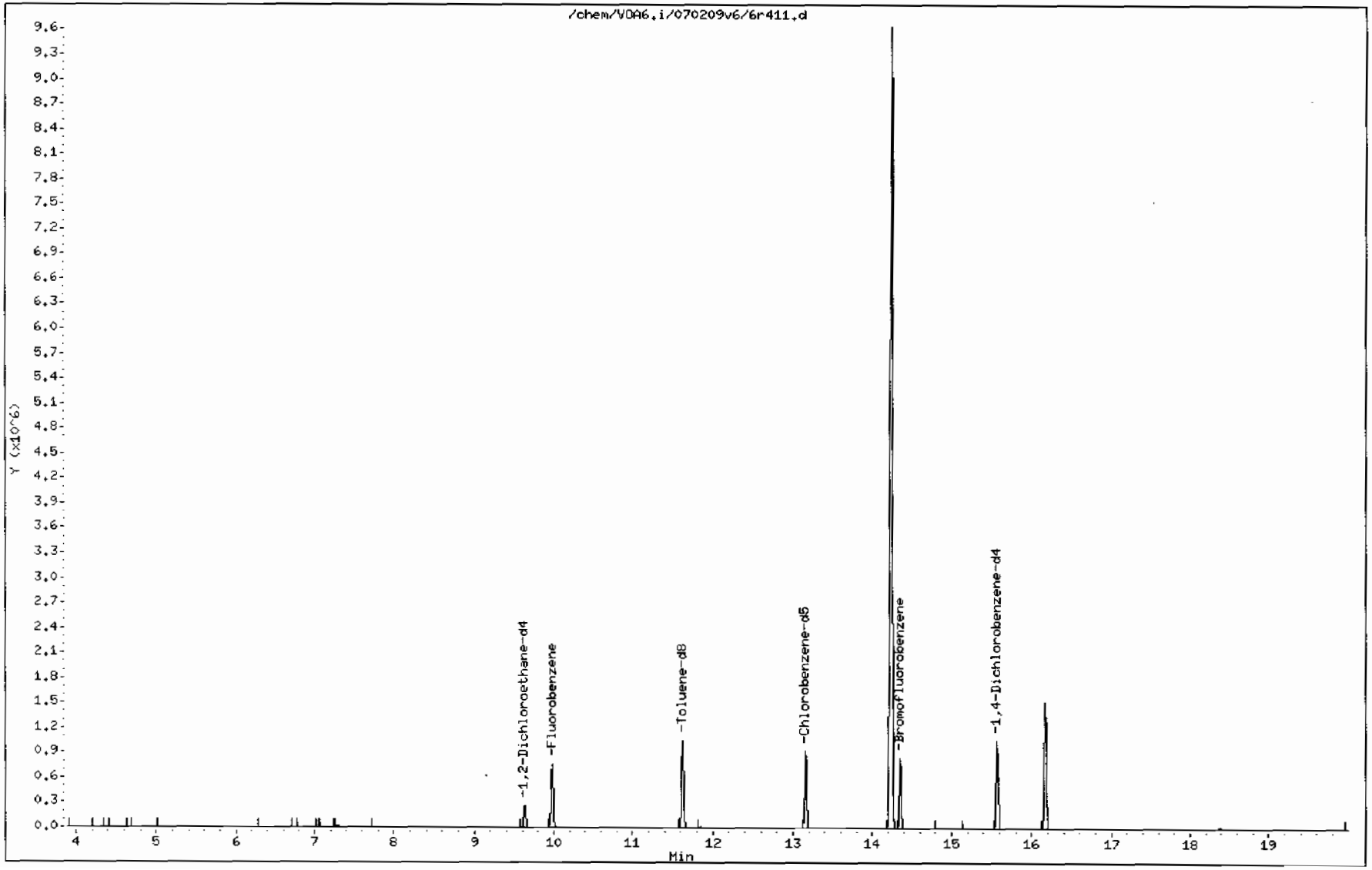

Data File: /chem/VOA6.i/070209v6/6r411.d

Date : 02-JUL-2009 14:03

Client ID: CAMO-09-10462

Instrument: VOA6.i

Sample Info: |2323480001|881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	90	C8H24O4Si4	296
7H-Dibenzo[b,g]carbazole, 7-methyl-	3557-49-1	NIST05.L	112705	59	C21H15N	281

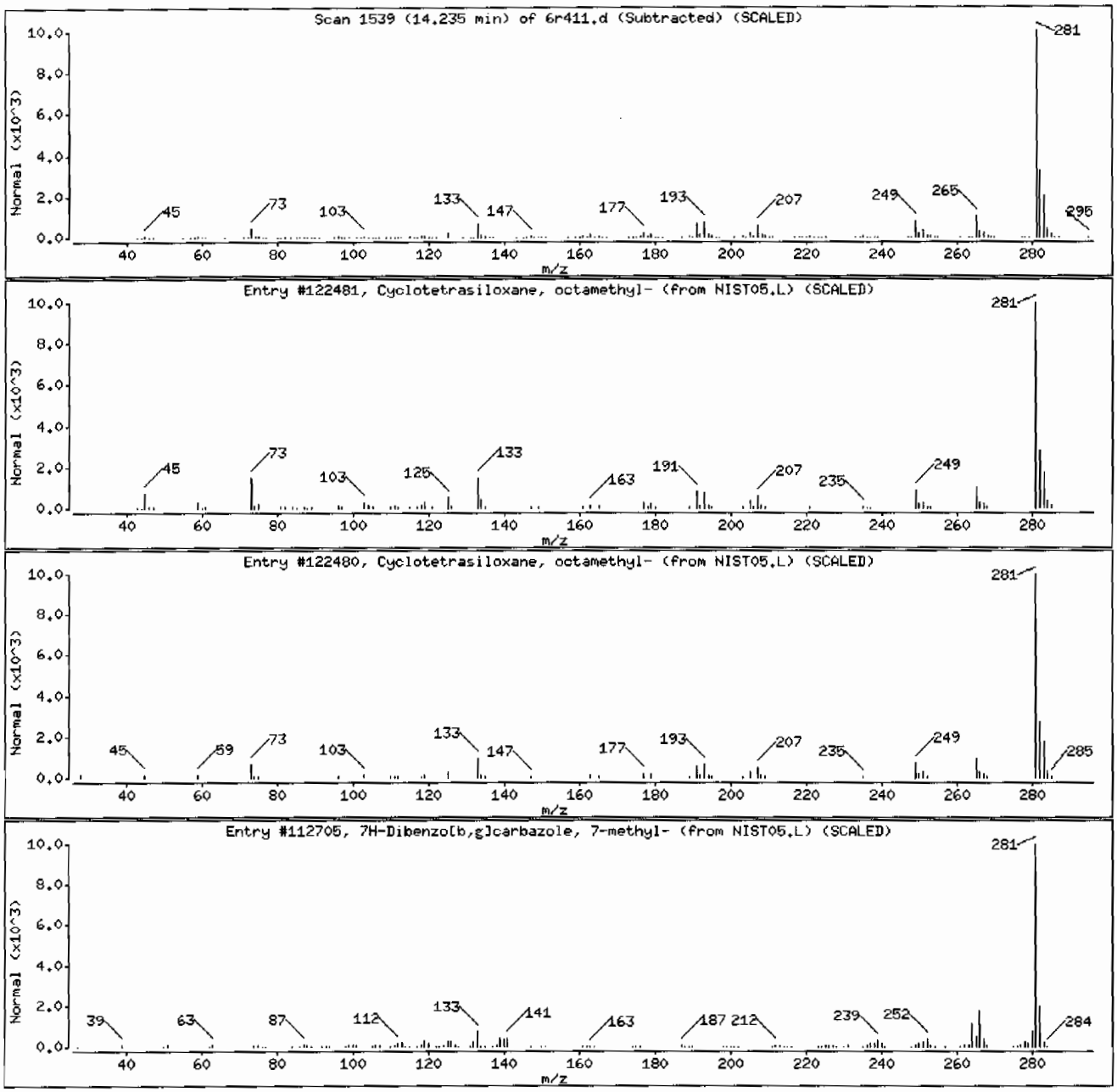

Data File: /chem/VOA6.i/070209v6/6r411.d

Date : 02-JUL-2009 14:03

Client ID: CAHO-09-10462 Instrument: VOA6.i

Sample Info: |2323480011881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Butanamide, 2,2,3,3,4,4,4-heptafluoro-N-	55471-01-7	NIST05.L	184036	72	C18H26F7N03Si2	493
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	64	C18H3404Si3	398
p-Trimethylsilyloxyphenyl-bis(trimethyls	1000079-08-1	NIST05.L	161171	64	C17H3403Si3	370

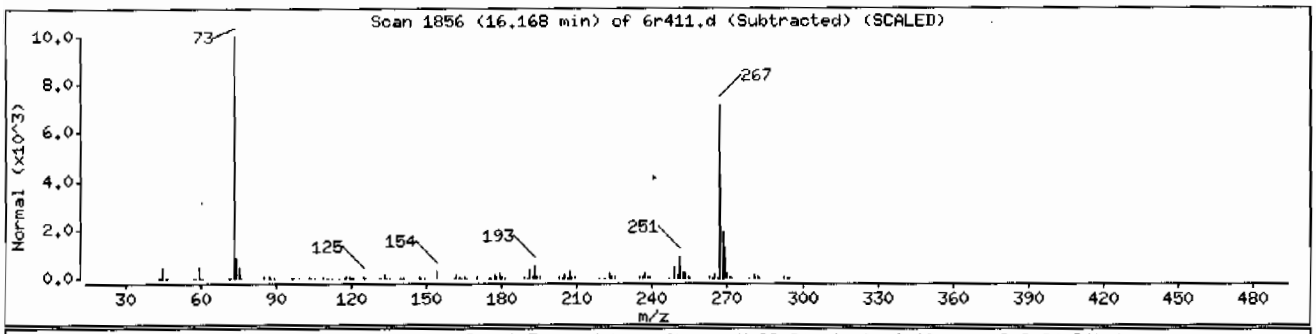

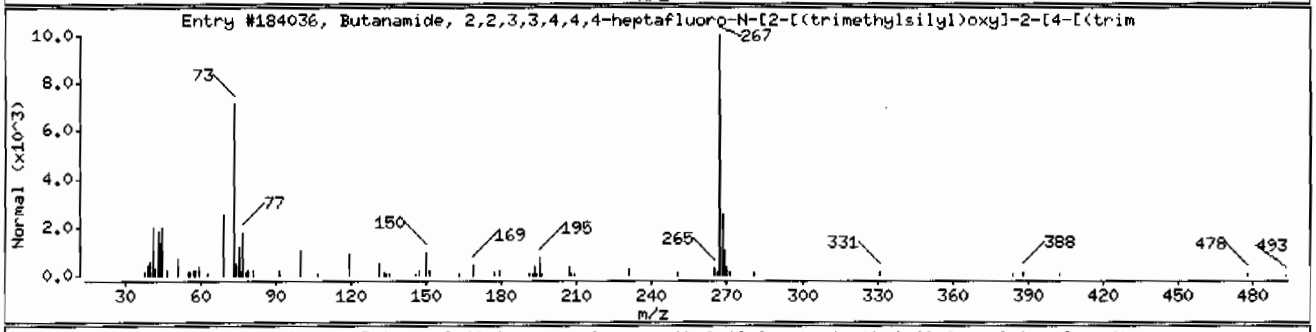

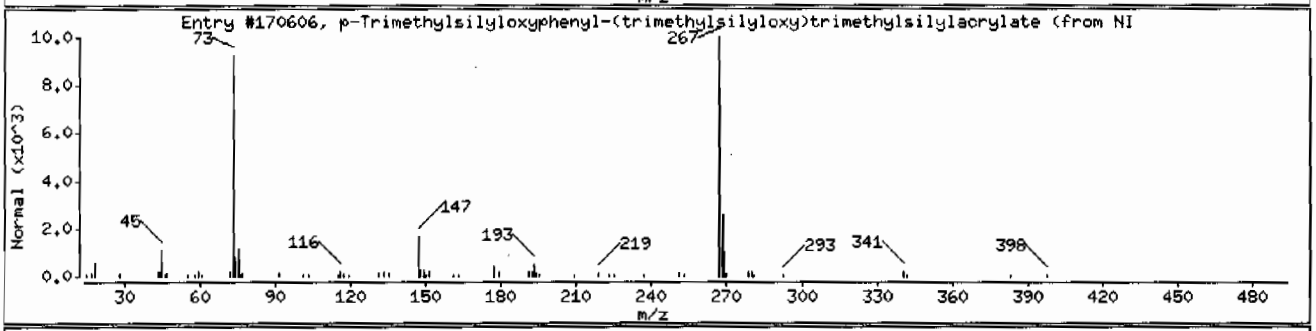

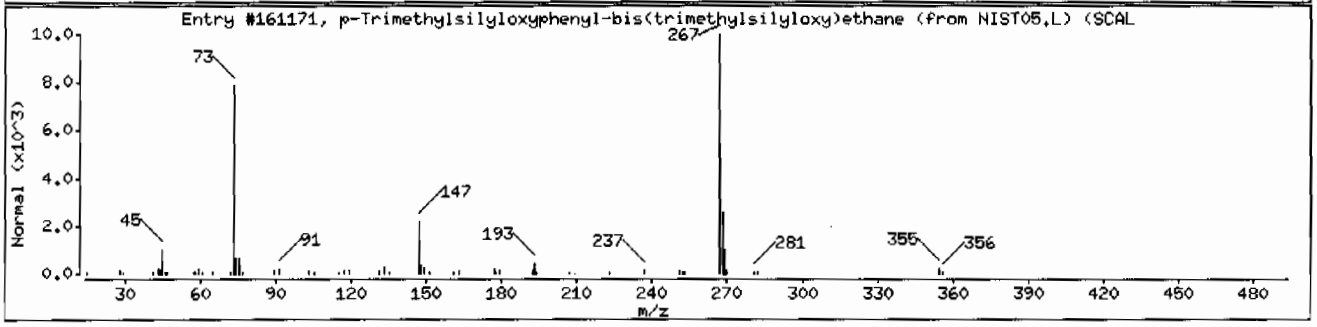

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 20:00	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:54	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r323.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.356	1.05
74-87-3	Chloromethane	U	1.05	ug/kg	0.314	1.05
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.314	1.05
74-83-9	Bromomethane	U	1.05	ug/kg	0.314	1.05
75-00-3	Chloroethane	U	1.05	ug/kg	0.314	1.05
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.597	1.05
67-64-1	Acetone	U	5.24	ug/kg	1.74	5.24
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.314	1.05
74-88-4	Iodomethane	U	5.24	ug/kg	1.68	5.24
75-09-2	Methylene chloride	U	5.24	ug/kg	2.09	5.24
75-15-0	Carbon disulfide	U	5.24	ug/kg	1.31	5.24
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.314	1.05
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.314	1.05
78-93-3	2-Butanone	U	5.24	ug/kg	1.57	5.24
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.314	1.05
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.314	1.05
67-66-3	Chloroform	U	1.05	ug/kg	0.314	1.05
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.346	1.05
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.314	1.05
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.314	1.05
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.314	1.05
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.314	1.05
71-43-2	Benzene	U	1.05	ug/kg	0.314	1.05
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.346	1.05
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.314	1.05
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.314	1.05
74-95-3	Dibromomethane	U	1.05	ug/kg	0.314	1.05
108-10-1	4-Methyl-2-pentanone	U	5.24	ug/kg	1.31	5.24
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.314	1.05
108-88-3	Toluene	U	1.05	ug/kg	0.314	1.05
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.314	1.05
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.314	1.05
591-78-6	2-Hexanone	U	5.24	ug/kg	1.57	5.24
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.314	1.05
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.314	1.05
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.314	1.05
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.314	1.05
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.314	1.05

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 20:00	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:54	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r323.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.314	1.05
179601-23-1	m,p-Xylenes	U	2.09	ug/kg	0.314	2.09
95-47-6	o-Xylene	U	1.05	ug/kg	0.314	1.05
100-42-5	Styrene	U	1.05	ug/kg	0.314	1.05
75-25-2	Bromoform	U	1.05	ug/kg	0.314	1.05
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.314	1.05
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.314	1.05
108-86-1	Bromobenzene	U	1.05	ug/kg	0.314	1.05
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.314	1.05
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.314	1.05
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.314	1.05
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.314	1.05
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.314	1.05
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.314	1.05
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.314	1.05
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.314	1.05
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.314	1.05
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.314	1.05
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.314	1.05
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.314	1.05
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.314	1.05
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.24	ug/kg	1.68	5.24
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.314	1.05
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.314	1.05

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	354	ug/kg		J
	Unknown Siloxane	16.17	83.8	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r323.d
Lab Smp Id: 232348004 Client Smp ID: CAMO-09-10467
Inj Date : 01-JUL-2009 20:00
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232348004|881794|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.53430	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1328131	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1027837	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	565918	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	342233	51.4255	53.9
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1324689	48.6499	51.0
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	512875	49.0692	51.4

ION RATIO REPORT

VOA REPORT

Data file: 6r323.d
Report Date: 07/02/2009 09:46
Lab. ID: 232348004 SampleType: SAMPLE
Injection Date: 01-JUL-2009 20:00
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232348004|881794|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2457
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	15057	9.98	9.71	80-120	100	(T)
64	2552	9.98	9.71	2- 62	17	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	9505	11.63	11.41	80-120	100	(T)
43	4347	11.62	11.41	198-258	46	(QT)
100	892524	11.63	11.41	11- 71	9389	(QT)
82 Bromoform				CAS#: 75-25-2		
173	1170	14.24	14.06	80-120	100	(T)
175	13230	14.23	14.06	19- 79	1130	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	18471	14.23	14.16	80-120	100	(T)
120	8793	14.24	14.16	0- 58	48	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	24456	14.23	14.53	80-120	100	(T)
75	50892	14.23	14.53	254-314	208	(QT)
77	2837	14.23	14.56	727-787	12	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r323.d
Lab Smp Id: 232348004 Client Smp ID: CAMO-09-10467
Inj Date : 01-JUL-2009 20:00
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232348004|881794|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host:.prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	4.53430	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	2843068	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3075758	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	19241385	338.391180	354	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
16.168	4923793	80.0419400	83.8	0		0	101

Data File: /chem/VOA6.i/070109v6/6r323.d
Date : 01-JUL-2009 20:00
Client ID: CAMO-09-10467
Sample Info: |2323480041881794|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

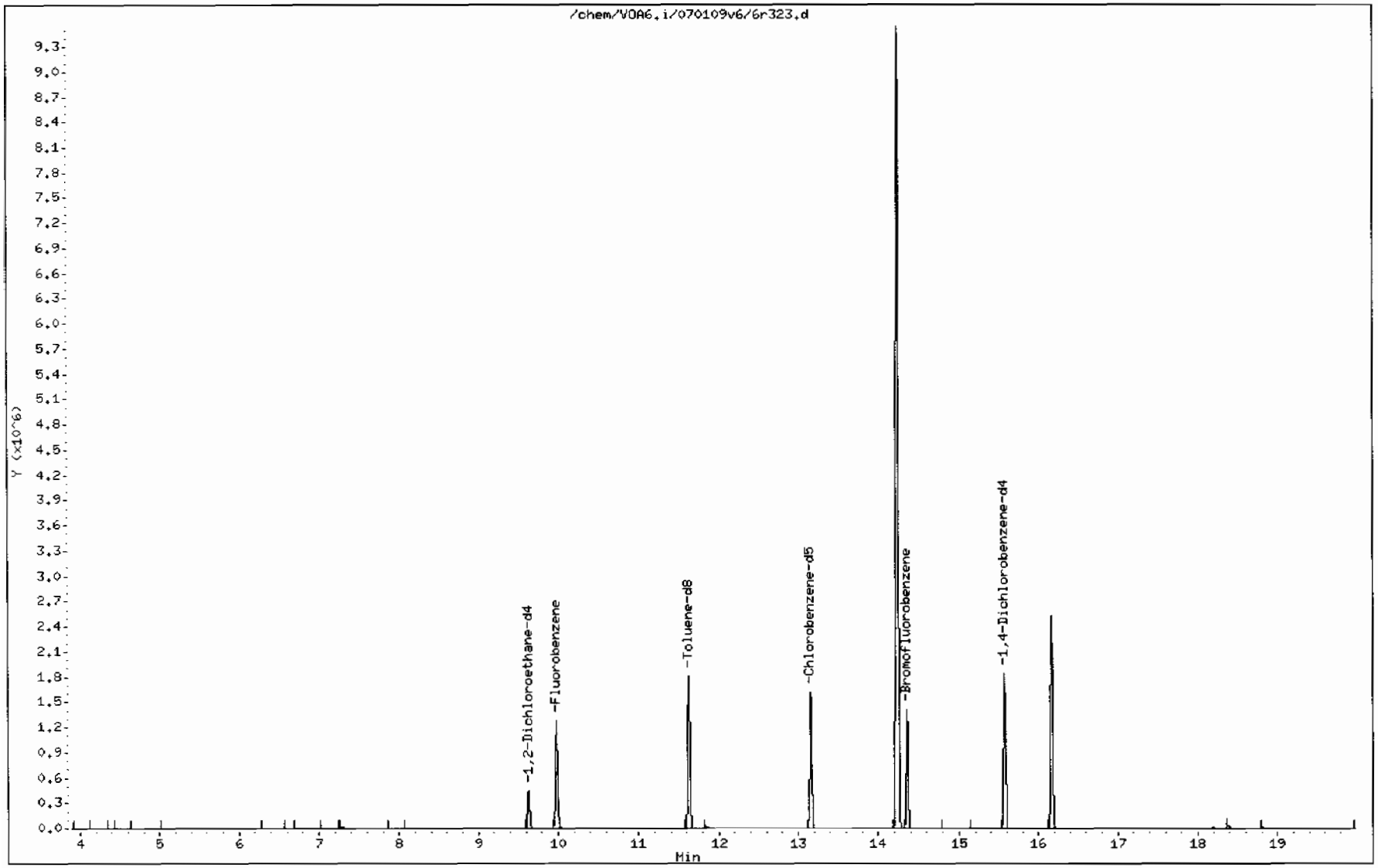

Data File: /chem/VOA6.i/070109v6/6r323.d

Date : 01-JUL-2009 20:00

Client ID: CAMO-09-10467

Instrument: VOA6.i

Sample Info: |2323480041881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	81	C8H24O4Si4	296
7H-Dibenzo[b,g]carbazole, 7-methyl-	3557-49-1	NIST05.L	112705	59	C21H15N	281

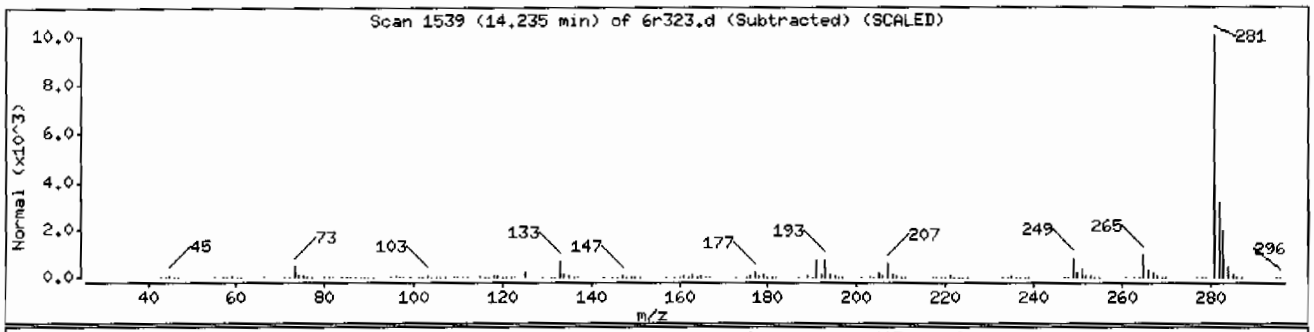

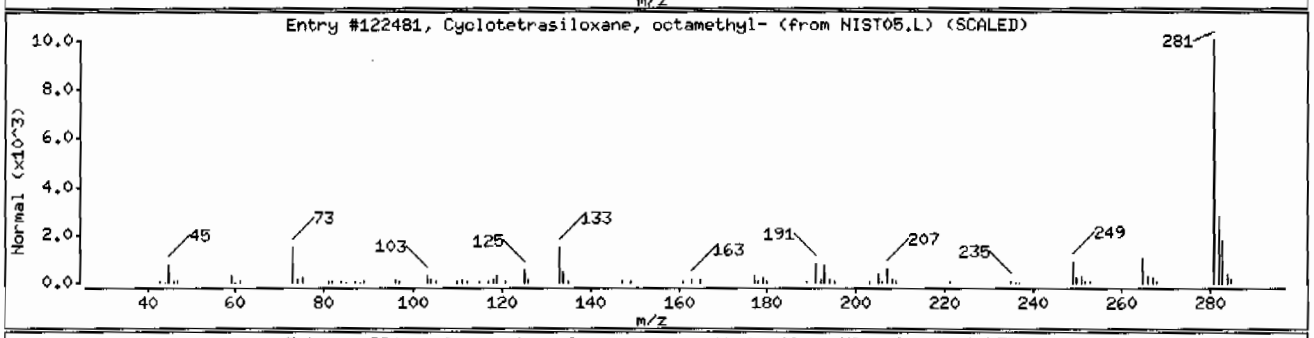

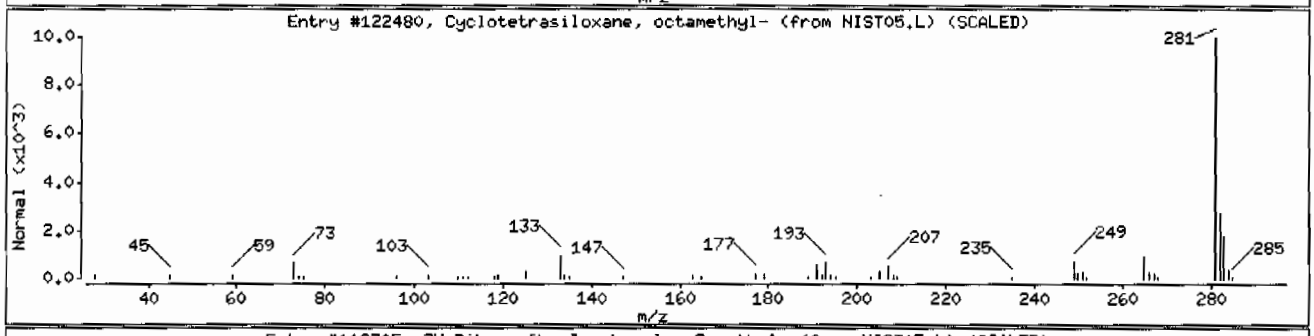

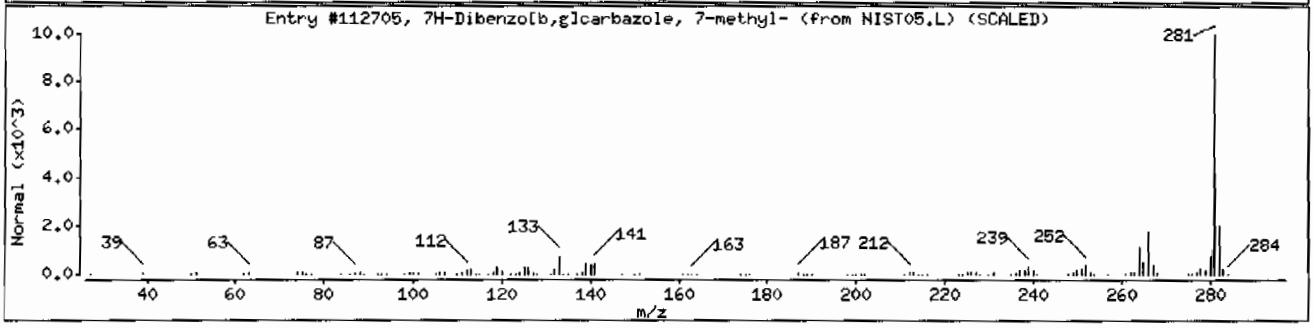

Data File: /chem/VOA6.i/070109v6/6r323.d

Date : 01-JUL-2009 20:00

Client ID: CAMO-09-10467 Instrument: VOA6.i

Sample Info: |2323480041881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Benzaldehyde, 2,4-bis(trimethylsiloxy)-	33617-38-8	NIST05.L	112902	59	C13H22O3Si2	282
Benzaldehyde, 2,5-bis[(trimethylsilyl)ox	56114-69-3	NIST05.L	112904	59	C13H22O3Si2	282
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	59	C18H34O4Si3	398

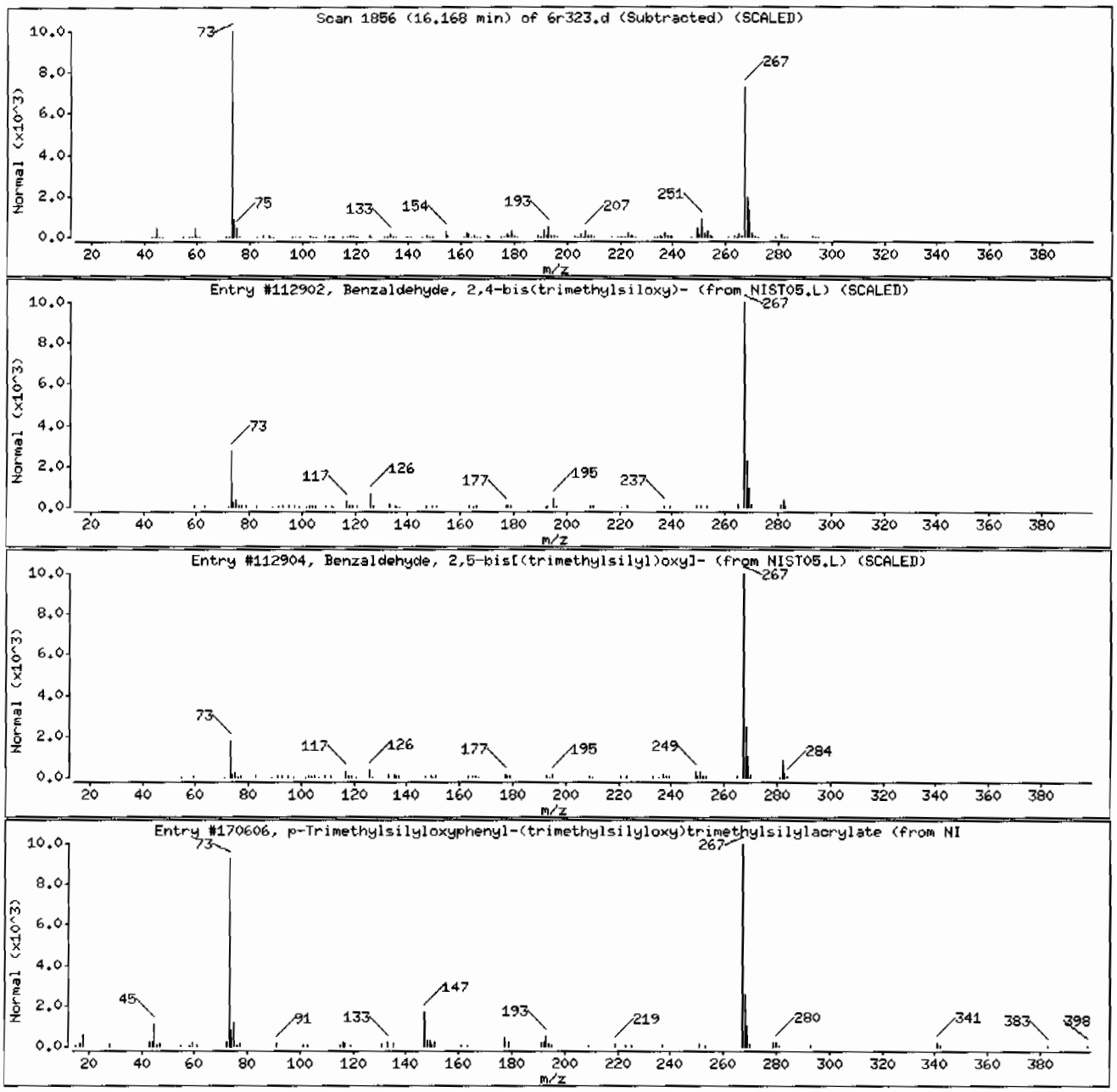

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	S
Lab Sample ID:	232348005	**Date Received:**	06/25/2009 08:45		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10470	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 13:59	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:39	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r310.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone		6.60	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	S
Lab Sample ID:	232348005	**Date Received:**	06/25/2009 08:45		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10470	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 13:59	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 12:39	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r310.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r310.d
Lab Smp Id: 232348005 Client Smp ID: CAMO-09-10470
Inj Date : 01-JUL-2009 13:59
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232348005|881794|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1614484	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1243833	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	698494	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	404469	49.9976	50.0
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1596801	48.4597	48.4
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	641876	49.7553	49.8
13 Acetone	43	6.724	6.718	(0.674)	6202	6.60261	6.6

ION RATIO REPORT

VOA REPORT

Data file: 6r310.d
Report Date: 07/02/2009 09:44
Lab. ID: 232348005 SampleType: SAMPLE
Injection Date: 01-JUL-2009 13:59
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232348005|881794|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2457
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
13 Acetone			CAS#: 67-64-1			
43	6202	6.72	6.72	80-120	100	( )
58	1586	6.72	6.72	5- 65	26	( )
48 1,2-Dichloroethane			CAS#: 107-06-2			
62	18579	9.98	9.71	80-120	100	(T)
64	2950	9.97	9.71	2- 62	16	(T)
63 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	11400	11.63	11.41	80-120	100	(T)
43	5522	11.63	11.41	198-258	48	(QT)
100	1076137	11.63	11.41	11- 71	9440	(QT)
82 Bromoform			CAS#: 75-25-2			
173	3296	14.36	14.06	80-120	100	(T)
175	40616	14.36	14.06	19- 79	1232	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r310.d
Lab Smp Id: 232348005 Client Smp ID: CAMO-09-10470
Inj Date : 01-JUL-2009 13:59
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232348005|881794|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA6.i/070109v6/6r310.d
Date : 01-JUL-2009 13:59
Client ID: CAMO-09-10470
Sample Info: 1232348005|88179411|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

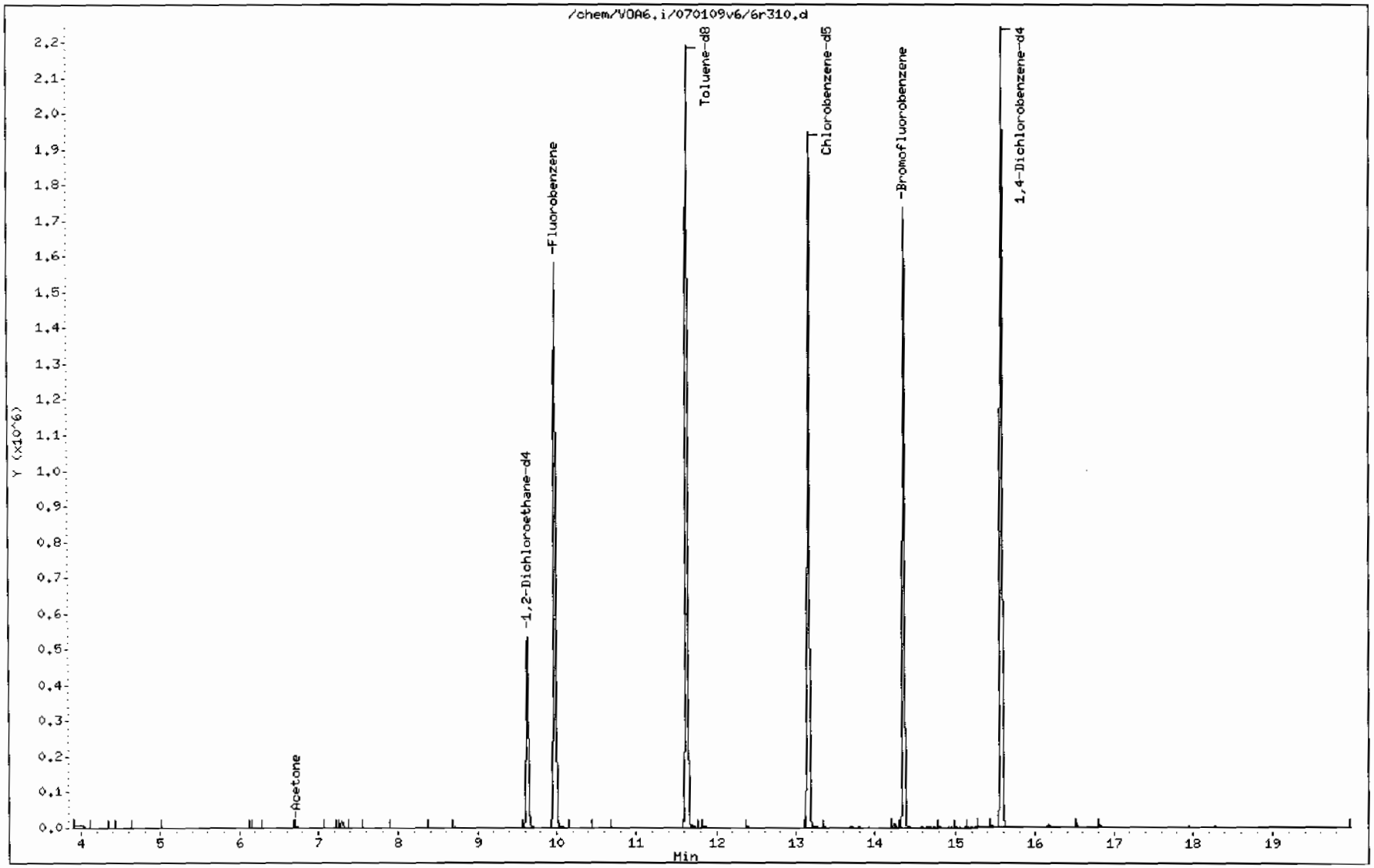

Data File: /chem/VOA6.i/070109v6/6r310.d

Date : 01-JUL-2009 13:59

Client ID: CAMO-09-10470

Instrument: VOA6.i

Sample Info: |2323480051881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

13 Acetone

Concentration: 6.6 ug/Kg

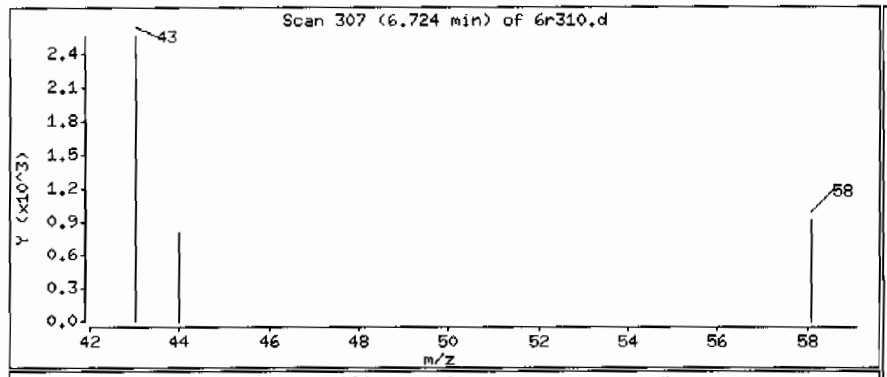

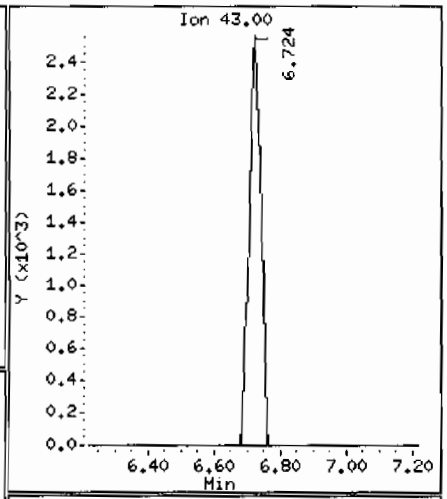

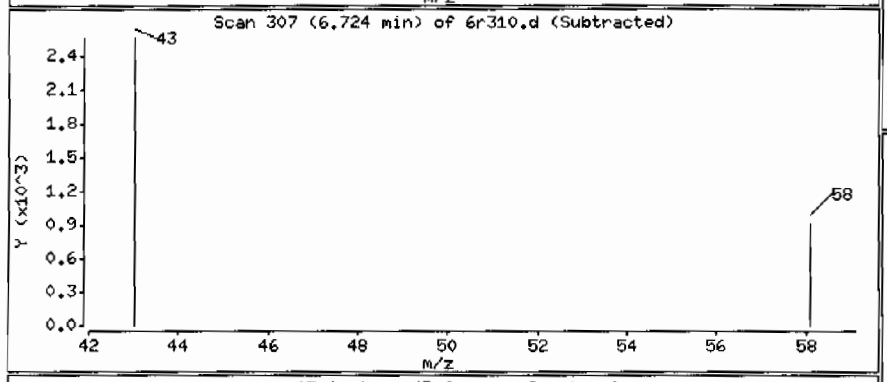

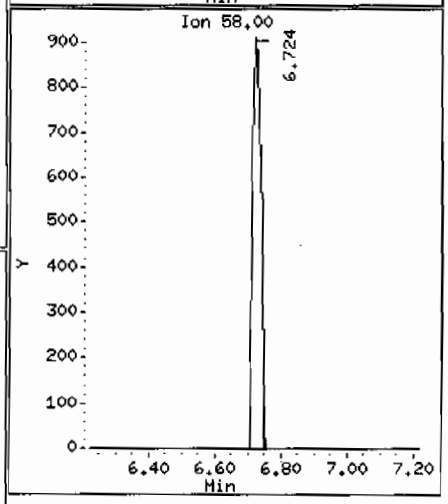

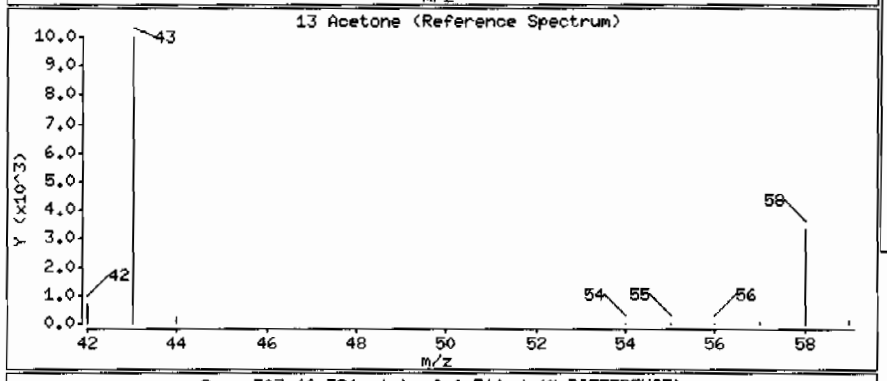

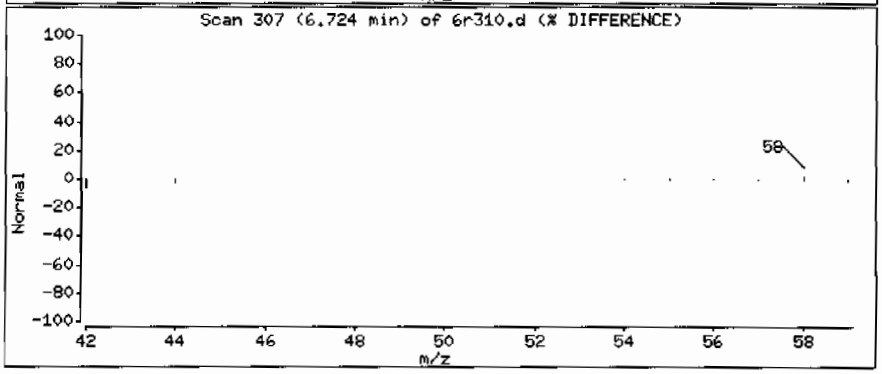

Standard Data

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
Fluorobenzene (IS)									
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
[illegible]									
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
[illegible]									
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Report Date: 02-Jul-2009 10:05

Calibration History

Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Start Cal Date: 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
15-JUN-2009 21:45	ICALsubS	/chem/VOA6.i/061509v6/6p123.d
15-JUN-2009 16:38	ICALsubL+	/chem/VOA6.i/061509v6/6p112.d
Cal Level: 2 , Cal Amount: 2.00000		
15-JUN-2009 22:12	ICALsubS	/chem/VOA6.i/061509v6/6p124.d
15-JUN-2009 17:06	ICALsubL+	/chem/VOA6.i/061509v6/6p113.d
Cal Level: 3 , Cal Amount: 5.00000		
15-JUN-2009 22:40	ICALsubS	/chem/VOA6.i/061509v6/6p125.d
15-JUN-2009 17:34	ICALsubL+	/chem/VOA6.i/061509v6/6p114.d
Cal Level: 4 , Cal Amount: 10.00000		
15-JUN-2009 23:07	ICALsubS	/chem/VOA6.i/061509v6/6p126.d
15-JUN-2009 18:02	ICALsubL+	/chem/VOA6.i/061509v6/6p115.d
Cal Level: 5 , Cal Amount: 20.00000		
15-JUN-2009 23:35	ICALsubS	/chem/VOA6.i/061509v6/6p127.d
Cal Level: 6 , Cal Amount: 50.00000		
16-JUN-2009 00:03	ICALsubS	/chem/VOA6.i/061509v6/6p128.d
15-JUN-2009 18:58	ICALsubL+	/chem/VOA6.i/061509v6/6p117.d
Cal Level: 7 , Cal Amount: 100.00000		
16-JUN-2009 00:31	ICALsubS	/chem/VOA6.i/061509v6/6p129.d
15-JUN-2009 19:25	ICALsubL+	/chem/VOA6.i/061509v6/6p118.d
Cal Level: 8 , Cal Amount: 200.00000		
15-JUN-2009 20:21	BENZENE+	/chem/VOA6.i/061509v6/6p120.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

Ccal Level: 6 , Ccal Amount: 50.0

01-JUL-2009 09:44	CALsubL+	/chem/VOA6.i/070109v6/6r302.d
Ccal Level: 6 , Ccal Amount: 50.0		
01-JUL-2009 11:39	CALsubS+SS	/chem/VOA6.i/070109v6/6r305.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Cal Date : 02-Jul-2009 09:40 ale01592

Calibration File Names:
Level 1: /chem/VOA6.i/061509v6/6p123.d
Level 2: /chem/VOA6.i/061509v6/6p124.d
Level 3: /chem/VOA6.i/061509v6/6p125.d
Level 4: /chem/VOA6.i/061509v6/6p126.d
Level 5: /chem/VOA6.i/061509v6/6p127.d
Level 6: /chem/VOA6.i/061509v6/6p128.d
Level 7: /chem/VOA6.i/061509v6/6p129.d
Level 8: /chem/VOA6.i/061509v6/6p120.d

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
M 1 1,3-Dichloropropylene	0.27544	0.29033	0.30650	0.32107	++++	0.34011						
	0.35889	++++					AVRG		0.31539		9.86340	<-
M 2 Xylenes (total)	0.59566	0.59657	0.59601	0.58227	+++++	0.58411						
	0.59134	+++++					AVRG		0.59099		1.07471	<-
M 3 1,2-Dichloroethylene (total)	0.32414	0.32656	0.33087	0.32600	+++++	0.32023						
	0.34084	+++++					AVRG		0.32811		2.17323	<-
149 2-Chloro-1,1,1-trifluoroethan	+++++	0.29734	0.28267	0.29451	0.29820	0.30590						
	0.30582	+++++					AVRG		0.29741		2.88857	
150 Chlorotrifluoroethylene	+++++	43935	101652	246383	646724	1109403						
	1509962	+++++					LINR	0.24340	0.20463		0.99518	

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INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Cal Date : 02-Jul-2009 09:40 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
4 Dichlorodifluoromethane	0.13161	0.14094	0.11922	0.13531	+++++	0.17053						
	+++++	++-++					AVRG		0.13952		13.67384	<-
5 Chloromethane	0.23779	0.24450	0.21508	0.21165	+++++	0.23513						
	0.24826	+++++					AVRG		0.23207		6.57592	<-
6 Vinyl chloride	0.24395	0.23708	0.22059	0.22101	-+-+++	0.23679						
	0.25049	+++++					AVRG		0.23499		5.14524	<-
7 Bromomethane	0.18105	0.18725	0.18116	0.17766	-++++	0.18863						
	0.19753	+-+++					AVRG		0.18554		3.86954	<-
8 Chloroethane	0.16454	0.16546	0.16079	0.15800	+++++	0.16887						
	0.17831	+++++					AVRG		0.16599		4.28991	<-
9 Trichlorofluoromethane	0.30693	0.30576	0.29943	0.29506	+++++	0.32090						
	0.33843	+++++					AVRG		0.31108		5.14818	<-
10 Ethyl Ether	0.22129	0.22569	0.20788	0.20815	+++++	0.19747						
	0.20146	+++++					AVRG		0.21032		5.25454	<-
11 Acrolein	0.01031	0.01206	0.01277	0.01270	0.01290	0.01304						
	-++++	+++++					AVRG		0.01230		8.36598	
12 Trichlorotrifluoroethane	0.08392	0.08432	0.08499	0.08626	0.08832	0.08660						
	+++++	+++++					AVRG		0.08574		1.92299	

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Method file : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Cal Date : 02-Jul-2009 09:40 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
13 Acetone	12618	16737	37799	72872	+-++++	356585						
	775871	-+++++					LINR	0.03377	0.03909		0.99837	<-
14 1,1-Dichloroethylene	0.30080	0.31032	0.30296	0.30718	++-++	0.30016						
	0.32939	+-++					AVRG		0.30847		3.55406	<-
15 Iodomethane	0.35239	0.37137	0.37392	0.37331	+++++	0.35631						
	0.37445	-+++++					AVRG		0.36696		2.69739	<-
16 Acetonitrile	0.02590	0.02605	0.02566	0.02490	+++++	0.02959						
	0.02427	+++++					AVRG		0.02606		7.11268	<-
17 Methyl acetate	0.16580	0.16150	0.15871	0.15195	-+++++	0.13909						
	0.13727	+-++++					AVRG		0.15239		7.81037	<-
18 Carbon disulfide	0.58961	0.67421	0.69354	0.68468	+++++	0.64591						
	0.68305	+++++					AVRG		0.66184		5.89088	<-
19 Allyl chloride	0.28034	0.27716	0.28272	0.28775	0.29694	0.28814						
	-+++-+	+++++					AVRG		0.28551		2.46062	
20 Methylene chloride	++++++	74487	98882	133235	+++++	482869						
	985874	+++++					LINR	-0.09825	0.23638		0.99835	
21 Acrylonitrile	0.06301	0.06531	0.06785	0.07037	0.07088	0.07138						
	++++-	+-++++					AVRG		0.06813		4.97324	

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Method file : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Cal Date : 02-Jul-2009 09:40 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
22 tert-Butyl methyl ether	0.58721	0.70504	0.60204	0.59953	+++++	0.57924						
	0.61984	+++++					AVRG		0.61548		7.47666	<-
23 trans-1,2-Dichloroethylene	0.30317	0.31236	0.31106	0.30953	+++++	0.30215						
	0.32350	+++++					AVRG		0.31030		2.48329	<-
24 Vinyl acetate	0.29540	0.31030	0.36823	0.36492	+++++	0.36861						
	0.37071	+++++					AVRG		0.34636		9.84000	<-
25 1,1-Dichloroethane	0.39871	0.39339	0.39239	0.38898	+++++	0.37872						
	0.39998	+++++					AVRG		0.39203		1.96321	<-
26 Isopropyl Alcohol	0.01177	0.01177	0.01204	0.01258	0.01281	0.01381						
	0.01310	+++++					AVRG		0.01255		6.01789	
27 2-Chloro-1,3-butadiene	0.22911	0.24432	0.24771	0.26154	0.27530	0.28081						
	++++	+++++					AVRG		0.25646		7.69184	
28 tert-butyl Alcohol	0.01975	0.01978	0.02037	0.02092	0.02147	0.02321						
	0.02205	+++++					AVRG		0.02108		6.00892	
29 Ethyl acetate	0.21882	0.19255	0.18745	0.18595	0.18581	0.18189						
	+++++	+++++					AVRG		0.19208		7.05201	
30 2-Butanone	0.05539	0.05429	0.05391	0.05513	+++++	0.05255						
	0.05006	+++++					AVRG		0.05356		3.70852	<-

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
31 cis-1,2-Dichloroethylene	0.34510	0.34077	0.35068	0.34247	+++++	0.33832						
	0.35817	+++++					AVRG		0.34592		2.12285	<-
32 Propionitrile	0.02501	0.02566	0.02758	0.02803	0.02842	0.02858						
	+++++	+++++					AVRG		0.02721		5.54678	
33 2,2-Dichloropropane	0.28560	0.27796	0.28689	0.29051	+++++	0.30049						
	0.32415	+++++					AVRG		0.29427		5.56597	<-
34 Isopropyl ether	+++++	0.69275	0.68132	0.69967	0.71415	0.73228						
	0.72086	+++++					AVRG		0.70684		2.68289	
35 Bromochloromethane	0.10578	0.11321	0.11574	0.11774	+++++	0.11580						
	0.12389	+++++					AVRG		0.11536		5.13085	<-
36 Chloroform	0.38994	0.37237	0.37763	0.37588	+++++	0.36743						
	0.38772	+++++					AVRG		0.37849		2.31445	<-
37 Methacrylonitrile	0.10026	0.10191	0.10789	0.11008	0.11174	0.11065						
	+++++	+++++					AVRG		0.10709		4.52446	
38 Tetrahydrofuran	0.13539	0.13746	0.13935	0.13956	0.14219	0.13620						
	+++++	+++++					AVRG		0.13836		1.81013	
40 1,1,1-Trichloroethane	0.28710	0.29716	0.30179	0.30737	+++++	0.31269						
	0.33548	+++++					AVRG		0.30693		5.37992	<-

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
41 Ethyl tert-butyl ether	+++++	0.64322	0.64224	0.66405	0.68271	0.71454						
	0.70716	+++++					AVRG		0.67565		4.61349	
42 Isobutyl alcohol	0.00517	0.00549	0.00646	0.00666	0.00674	0.00714						
	+++++	+++++					AVRG		0.00627		12.31212	
43 Cyclohexane	0.38774	0.39266	0.39439	0.38663	+++++	0.37663						
	0.40197	+++++					AVRG		0.39000		2.19048	<-
44 1,1-Dichloropropene	0.30021	0.30299	0.30288	0.29906	+++++	0.29567						
	0.31351	+++++					AVRG		0.30239		2.01290	<-
45 Methyl tert-amyl ether	+++++	0.22564	0.22058	0.22053	0.22550	0.22978						
	-++++	+++++					AVRG		0.22440		1.74568	
46 Carbon tetrachloride	0.25744	0.26327	0.27164	0.27724	+++++	0.28867						
	0.31202	+++++					AVRG		0.27838		7.09602	<-
48 1,2-Dichloroethane	0.30458	0.28647	0.28717	0.27935	+++++	0.27221						
	0.28159	+++++					AVRG		0.28523		3.83066	<-
49 Benzene	0.94902	0.94585	0.93468	0.91611	+++++	0.87809						
	0.90863	1.00168					AVRG		0.93344		4.15708	<-
50 Cyclohexene	0.46008	0.46538	0.45929	0.44925	+++++	0.44053						
	0.46736	+++++					AVRG		0.45698		2.23954	<-

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Cal Date : 02-Jul-2009 09:40 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
52 n-Butyl alcohol	0.00464	0.00511	0.00573	0.00608	+++++	0.00637						
	0.00665	0.00471					AVRG		0.00561		14.33859	<-
53 Trichloroethylene	0.23971	0.23898	0.23297	0.22707	+++++	0.22648						
	0.23867	+++++					AVRG		0.23398		2.59771	<-
54 Methyl methacrylate	0.12364	0.12892	0.14080	0.14739	0.15260	0.15458						
	+++++	+++++					AVRG		0.14132		8.98754	
55 1,2-Dichloropropane	0.22783	0.22324	0.22920	0.22835	+++++	0.22693						
	0.23499	+++++					AVRG		0.22842		1.67529	<-
56 Methylcyclohexane	0.42477	0.42266	0.42289	0.42194	+++++	0.41506						
	0.43822	+++++					AVRG		0.42426		1.79331	<-
57 1,4-Dioxane	0.00262	0.00248	0.00220	0.00221	0.00222	0.00220						
	+++++	+++++					AVRG		0.00232		7.70555	
58 Dibromomethane	0.12754	0.12546	0.12824	0.12867	+++++	0.12934						
	0.13533	+++++					AVRG		0.12910		2.58075	<-
59 Bromodichloromethane	0.22808	0.23977	0.24709	0.25744	+++++	0.27278						
	0.28977	+++++					AVRG		0.25582		8.82140	<-
60 2-Nitropropane	7384	14872	43071	93438	205860	564432						
	+++++	+++++					LINR	0.10732	0.05907		0.99899	

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Cal Date : 02-Jul-2009 09:40 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
61 2-Chloroethylvinyl ether	727	38503	140819	281361	+++++	1407499						
	2845999	+++++					LINR	0.04757	0.14555		0.99992	<-
62 cis-1,3-Dichloropropylene	0.29610	0.30995	0.32631	0.34009	+++++	0.35815						
	0.37687	+++++					AVRG		0.33458		8.99690	<-
63 4-Methyl-2-pentanone	0.09341	0.09495	0.10248	0.10385	+++++	0.10341						
	0.10313	+++++					AVRG		0.10020		4.70281	<-
65 Toluene	0.91141	0.84023	0.82843	0.78906	+++++	0.76864						
	0.78836	+++++					AVRG		0.82102		6.31180	<-
66 Ethyl methacrylate	0.29682	0.32657	0.36240	0.38265	0.39208	0.39346						
	+++++	+++++					AVRG		0.35900		10.98089	
67 trans-1,3-Dichloropropylene	0.34306	0.36562	0.38776	0.40296	+++++	0.43261						
	0.45413	+++++					AVRG		0.39769		10.39506	<-
68 1,1,2-Trichloroethane	0.21171	0.20945	0.21496	0.21094	+++++	0.21279						
	0.21762	+++++					AVRG		0.21291		1.38840	<-
69 2-Hexanone	0.13006	0.13152	0.14213	0.14432	+++++	0.14625						
	0.13455	+++++					AVRG		0.13814		5.03470	<-
70 1,3-Dichloropropane	0.44162	0.45818	0.46027	0.45022	+++++	0.44737						
	0.45495	+++++					AVRG		0.45210		1.55643	<-

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
71 Tetrachloroethylene	0.30112	0.29098	0.28869	0.27504	+++++	0.27688						
	0.28831	+++++					AVRG		0.28684		3.36264	<-
72 Dibromochloromethane	0.21794	0.22938	0.24750	0.26041	+++++	0.29497						
	0.31636	+++++					AVRG		0.26109		14.59011	<-
73 1,2-Dibromoethane	0.23390	0.23870	0.25246	0.24801	+++++	0.25726						
	0.26624	+++++					AVRG		0.24943		4.78240	<-
74 1-Chlorohexane	0.27211	0.28382	0.28170	0.29483	0.29776	0.30314						
	0.30570	+++++					AVRG		0.29129		4.24604	
76 Chlorobenzene	0.93302	0.90631	0.89655	0.86163	+++++	0.84895						
	0.86484	+++++					AVRG		0.88521		3.62382	<-
77 1,1,1,2-Tetrachloroethane	0.25774	0.27070	0.28261	0.28601	+++++	0.31034						
	0.32535	+++++					AVRG		0.28879		8.67474	<-
78 Ethylbenzene	1.50952	1.50823	1.50550	1.46571	+++++	1.44903						
	1.45710	+++++					AVRG		1.48252		1.90027	<-
79 m,p-Xylenes	0.60558	0.60238	0.60019	0.58619	+++++	0.58691						
	0.59058	+++++					AVRG		0.59530		1.41623	<-
80 o-Xylene	0.57582	0.58496	0.58765	0.57442	+++++	0.57852						
	0.59287	+++++					AVRG		0.58237		1.25186	<-

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Cal Date : 02-Jul-2009 09:40 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
81 Styrene	0.83211	0.84335	0.89085	0.90791	+++++	0.96971						
	0.99167	+++++					AVRG		0.90594		7.15648	<-
82 Bromoform	3930	8536	22967	49700	+++++	300303						
	666165	+++++					LINR	0.03001	0.39998		0.99857	<-
83 Isopropylbenzene	2.82803	2.81708	2.83379	2.74979	+++++	2.63965						
	2.62290	+++++					AVRG		2.74854		3.48702	<-
84 cis-1,4-Dichloro-2-butene	0.14199	0.14772	0.16651	0.17591	0.18262	0.19117						
	+++++	+++++					AVRG		0.16765		11.63406	
86 Cyclohexanone	0.00869	0.00872	0.00979	0.00999	0.00983	0.01089						
	+++++	+++++					AVRG		0.00965		8.68313	<-
87 1,1,2,2-Tetrachloroethane	0.56987	0.59990	0.59690	0.60070	+++++	0.59304						
	0.60455	+++++					AVRG		0.59416		2.10532	<-
88 1,2,3-Trichloropropane	0.14867	0.17230	0.16934	0.16685	+++++	0.16003						
	0.16602	+++++					AVRG		0.16387		5.18064	<-
89 trans-1,4-Dichloro-2-butene	0.13729	0.14472	0.16105	0.17234	0.17490	0.17969						
	+++++	+++++					AVRG		0.16166		10.69889	
90 Bromobenzene	0.72430	0.71936	0.70991	0.68619	+++++	0.68341						
	0.70677	+++++					AVRG		0.70499		2.39534	<-

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
91 n-Propylbenzene	3.38011	3.26003	3.25004	3.15198	+++++	3.05541						
	3.00928	+++++					AVRG		3.18448		4.36680	<-
92 1,3,5-Trimethylbenzene	2.37062	2.30275	2.34618	2.28625	+++++	2.27945						
	2.26106	+++++					AVRG		2.30772		1.82802	<-
93 2-Chlorotoluene	2.24392	2.20790	2.22098	2.13610	+++++	2.08581						
	2.07594	+++++					AVRG		2.16177		3.34713	<-
94 4-Chlorotoluene	2.02892	1.97483	1.94704	1.89262	+++++	1.85123						
	1.86981	+++++					AVRG		1.92741		3.53942	<-
95 tert-Butylbenzene	2.29265	2.21171	2.11549	2.15275	+++++	2.11883						
	2.13761	+++++					AVRG		2.17151		3.17087	<-
96 1,2,4-Trimethylbenzene	2.39024	2.33362	2.38151	2.31035	+++++	2.28740						
	2.28977	+++++					AVRG		2.33215		1.92598	<-
97 Pentachloroethane	0.25931	0.27148	0.29993	0.31670	0.34331	0.35584						
	+++++	+++++					AVRG		0.30776		12.48378	
98 sec-Butylbenzene	3.25024	3.15460	3.11345	3.04554	+++++	2.98216						
	2.92964	+++++					AVRG		3.07927		3.81587	<-
99 4-Isopropyltoluene	2.61296	2.54519	2.56829	2.50275	+++++	2.49418						
	2.46863	+++++					AVRG		2.53200		2.11564	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Cal Date : 02-Jul-2009 09:40 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
100 1,3-Dichlorobenzene	1.48980	1.37353	1.35950	1.31086	+++++	1.29451						
	1.32022	+++++					AVRG		1.35807		5.23744	<-
102 1,4-Dichlorobenzene	1.54639	1.45608	1.39583	1.35328	+++++	1.31084						
	1.34330	+++++					AVRG		1.40095		6.21728	<-
103 Benzyl chloride	56588	120138	377253	804087	1690242	4513803						
	+++++	+++++					LINR	0.06055	1.12590		0.99993	
104 n-Butylbenzene	1.33898	1.28517	1.29407	1.25362	+++++	1.26482						
	1.27441	+++++					AVRG		1.28518		2.33440	<-
105 bis(2-Chloroisopropyl)ether	0.06271	0.06955	0.07355	0.07817	0.07996	0.08395						
	+++++	+++++					AVRG		0.07465		10.32263	
106 1,2-Dichlorobenzene	1.38639	1.32225	1.29005	1.26309	+++++	1.22901						
	1.26443	+++++					AVRG		1.29254		4.29218	<-
107 1,2-Dibromo-3-chloropropane	0.08418	0.09329	0.10160	0.10732	+++++	0.12304						
	+++++	+++++					AVRG		0.10188		14.43017	<-
108 1,2,4-Trichlorobenzene	1.10291	1.04218	0.97103	0.94356	+++++	0.92339						
	0.92509	+++++					AVRG		0.98469		7.38894	<-
109 Hexachlorobutadiene	0.69601	0.68171	0.65202	0.62129	+++++	0.63636						
	0.64498	+++++					AVRG		0.65540		4.30874	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Cal Date : 02-Jul-2009 09:40 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
110 Naphthalene	1.98961	1.87703	1.89516	1.85127	+++++	1.87045						
	1.88443	+++++					AVRG		1.89466		2.57499	<-
111 1,2,3-Trichlorobenzene	0.91962	0.87421	0.83927	0.80898	+++++	0.79143						
	0.79782	+++++					AVRG		0.83855		5.98571	<-
$ 47 1,2-Dichloroethane-d4	0.25044	0.25093	0.25260	0.25463	+++++	0.24546						
	0.24916	+++++					AVRG		0.25054		1.24761	<-
$ 64 Toluene-d8	1.31559	1.33322	1.32829	1.31898	+++++	1.32742						
	1.32397	+++++					AVRG		1.32458		0.48818	<-
$ 85 Bromofluorobenzene	0.92807	0.92580	0.93226	0.92712	+++++	0.91268						
	0.91485	+++++					AVRG		0.92346		0.84952	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Cal Date : 02-Jul-2009 09:40 ale01592

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 15-JUN-2009 21:17
Lab File ID: 6p122.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-17 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	2 Xylenes (total)	0.59099	0.59137	0.59137	0.050	0.06414	60.00000	Averaged	
M	3 1,2-Dichloroethylene (total	0.32811	0.32999	0.32999	0.050	0.57430	60.00000	Averaged	
M	1 1,3-Dichloropropylene	0.31539	0.34893	0.34893	0.050	10.63563	60.00000	Averaged	
	4 Dichlorodifluoromethane	0.13952	0.13683	0.13683	0.050	-1.92704	60.00000	Averaged	
	5 Chloromethane	0.23207	0.20931	0.20931	0.100	-9.80892	60.00000	Averaged	spcc
	6 Vinyl chloride	0.23499	0.21065	0.21065	0.050	-10.35677	20.00000	Averaged	ccc
	7 Bromomethane	0.18554	0.17499	0.17499	0.050	-5.68766	60.00000	Averaged	
	8 Chloroethane	0.16599	0.15689	0.15689	0.050	-5.48267	60.00000	Averaged	
	9 Trichlorofluoromethane	0.31108	0.30390	0.30390	0.050	-2.31006	60.00000	Averaged	
	10 Ethyl Ether	0.21032	0.19242	0.19242	0.001	-8.51391	60.00000	Averaged	
	13 Acetone	257	250	0.03987	0.050	2.68916	60.00000	Linear	<-
	16 Acetonitrile	0.02606	0.02962	0.02962	0.010	13.65231	60.00000	Averaged	
	14 1,1-Dichloroethylene	0.30847	0.30569	0.30569	0.050	-0.90003	20.00000	Averaged	ccc
	17 Methyl acetate	0.15239	0.19141	0.19141	0.010	25.60532	60.00000	Averaged	
	15 Iodomethane	0.36696	0.39025	0.39025	0.050	6.34848	60.00000	Averaged	
	20 Methylene chloride	47.66806	50.00000	0.24858	0.050	-4.66388	60.00000	Linear	
	18 Carbon disulfide	0.66184	0.71375	0.71375	0.050	7.84456	60.00000	Averaged	
	22 tert-Butyl methyl ether	0.61548	0.59095	0.59095	0.050	-3.98627	60.00000	Averaged	
	23 trans-1,2-Dichloroethylene	0.31030	0.30642	0.30642	0.050	-1.24902	60.00000	Averaged	
	24 Vinyl acetate	0.34636	0.18977	0.18977	0.010	-45.20998	60.00000	Averaged	
	25 1,1-Dichloroethane	0.39203	0.38761	0.38761	0.100	-1.12735	60.00000	Averaged	spcc
	30 2-Butanone	0.05356	0.06090	0.06090	0.030	13.71574	60.00000	Averaged	
	31 cis-1,2-Dichloroethylene	0.34592	0.35356	0.35356	0.050	2.20986	60.00000	Averaged	
	33 2,2-Dichloropropane	0.29427	0.30847	0.30847	0.050	4.82609	60.00000	Averaged	
	36 Chloroform	0.37849	0.37956	0.37956	0.010	0.28266	20.00000	Averaged	ccc
	35 Bromochloromethane	0.11536	0.12034	0.12034	0.010	4.31878	60.00000	Averaged	
	40 1,1,1-Trichloroethane	0.30693	0.32094	0.32094	0.010	4.56461	60.00000	Averaged	
	43 Cyclohexane	0.39000	0.38799	0.38799	0.010	-0.51659	60.00000	Averaged	
	44 1,1-Dichloropropene	0.30239	0.30591	0.30591	0.010	1.16514	60.00000	Averaged	
	52 n-Butyl alcohol	0.00561	0.00636	0.00636	0.001	13.37079	60.00000	Averaged	
	46 Carbon tetrachloride	0.27838	0.29450	0.29450	0.010	5.79087	60.00000	Averaged	
$	47 1,2-Dichloroethane-d4	0.25054	0.24537	0.24537	0.001	-2.06059	60.00000	Averaged	
	48 1,2-Dichloroethane	0.28523	0.27846	0.27846	0.010	-2.37525	60.00000	Averaged	
	49 Benzene	0.93344	0.89669	0.89669	0.010	-3.93695	60.00000	Averaged	
	50 Cyclohexene	0.45698	0.43774	0.43774	0.001	-4.21100	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 15-JUN-2009 21:17
Lab File ID: 6p122.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-17 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	53 Trichloroethylene	0.23398	0.23348	0.23348	0.010	-0.21210	60.00000	Averaged	
	55 1,2-Dichloropropane	0.22842	0.23301	0.23301	0.010	2.00615	20.00000	Averaged	ccc
	56 Methylcyclohexane	0.42426	0.42715	0.42715	0.010	0.68171	60.00000	Averaged	
	59 Bromodichloromethane	0.25582	0.27654	0.27654	0.010	8.09629	60.00000	Averaged	
	58 Dibromomethane	0.12910	0.13156	0.13156	0.010	1.90860	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	203	250	0.11674	0.010	-18.83979	60.00000	Linear	
	63 4-Methyl-2-pentanone	0.10020	0.11086	0.11086	0.010	10.63751	60.00000	Averaged	
	62 cis-1,3-Dichloropropylene	0.33458	0.37060	0.37060	0.010	10.76660	60.00000	Averaged	
$	64 Toluene-d8	1.32458	1.32091	1.32091	0.010	-0.27688	60.00000	Averaged	
	65 Toluene	0.82102	0.77893	0.77893	0.010	-5.12616	20.00000	Averaged	ccc
	67 trans-1,3-Dichloropropylene	0.39769	0.43972	0.43972	0.010	10.56820	60.00000	Averaged	
	68 1,1,2-Trichloroethane	0.21291	0.21809	0.21809	0.010	2.43311	60.00000	Averaged	
	69 2-Hexanone	0.13814	0.16199	0.16199	0.010	17.26788	60.00000	Averaged	
	70 1,3-Dichloropropane	0.45210	0.45865	0.45865	0.010	1.44875	60.00000	Averaged	
	71 Tetrachloroethylene	0.28684	0.28699	0.28699	0.010	0.05439	60.00000	Averaged	
	72 Dibromochloromethane	0.26109	0.30154	0.30154	0.010	15.49125	60.00000	Averaged	
	73 1,2-Dibromoethane	0.24943	0.26313	0.26313	0.010	5.49468	60.00000	Averaged	
	76 Chlorobenzene	0.88521	0.88707	0.88707	0.300	0.21000	60.00000	Averaged	spcc
	77 1,1,1,2-Tetrachloroethane	0.28879	0.31792	0.31792	0.010	10.08760	60.00000	Averaged	
	78 Ethylbenzene	1.48252	1.45927	1.45927	0.010	-1.56790	20.00000	Averaged	ccc
	79 m,p-Xylenes	0.59530	0.59207	0.59207	0.010	-0.54358	60.00000	Averaged	
	80 o-Xylene	0.58237	0.58998	0.58998	0.010	1.30655	60.00000	Averaged	
	81 Styrene	0.90594	0.97253	0.97253	0.010	7.35079	60.00000	Averaged	
	82 Bromoform	48.27471	50.00000	0.37417	0.100	-3.45058	60.00000	Linear	spcc
	83 Isopropylbenzene	2.74854	2.68539	2.68539	0.010	-2.29746	60.00000	Averaged	
	87 1,1,2,2-Tetrachloroethane	0.59416	0.60116	0.60116	0.300	1.17786	60.00000	Averaged	spcc
$	85 Bromofluorobenzene	0.92346	0.91176	0.91176	0.010	-1.26671	60.00000	Averaged	
	88 1,2,3-Trichloropropane	0.16387	0.16327	0.16327	0.010	-0.36663	60.00000	Averaged	
	90 Bromobenzene	0.70499	0.71427	0.71427	0.010	1.31641	60.00000	Averaged	
	91 n-Propylbenzene	3.18448	3.08790	3.08790	0.010	-3.03263	60.00000	Averaged	
	93 2-Chlorotoluene	2.16177	2.15596	2.15596	0.010	-0.26908	60.00000	Averaged	
	92 1,3,5-Trimethylbenzene	2.30772	2.30229	2.30229	0.010	-0.23512	60.00000	Averaged	
	94 4-Chlorotoluene	1.92741	1.92043	1.92043	0.010	-0.36226	60.00000	Averaged	
	95 tert-Butylbenzene	2.17151	2.17106	2.17106	0.010	-0.02069	60.00000	Averaged	
	96 1,2,4-Trimethylbenzene	2.33215	2.32054	2.32054	0.010	-0.49755	60.00000	Averaged	
	98 sec-Butylbenzene	3.07927	3.03817	3.03817	0.010	-1.33484	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6p122.d
Analysis Type: WATER
Lab Sample ID: W6VM090615-17
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Injection Date: 15-JUN-2009 21:17
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
99 4-Isopropyltoluene	2.53200	2.51684	2.51684	0.010	-0.59887	60.00000	Averaged
100 1,3-Dichlorobenzene	1.35807	1.33772	1.33772	0.010	-1.49857	60.00000	Averaged
102 1,4-Dichlorobenzene	1.40095	1.36268	1.36268	0.010	-2.73177	60.00000	Averaged
104 n-Butylbenzene	1.28518	1.26881	1.26881	0.010	-1.27351	60.00000	Averaged
106 1,2-Dichlorobenzene	1.29254	1.29006	1.29006	0.010	-0.19132	60.00000	Averaged
107 1,2-Dibromo-3-chloropropane	0.10188	0.12483	0.12483	0.010	22.52469	60.00000	Averaged
108 1,2,4-Trichlorobenzene	0.98469	0.95045	0.95045	0.010	-3.47769	60.00000	Averaged
109 Hexachlorobutadiene	0.65540	0.66095	0.66095	0.010	0.84703	60.00000	Averaged
110 Naphthalene	1.89466	1.90575	1.90575	0.010	0.58575	60.00000	Averaged
111 1,2,3-Trichlorobenzene	0.83855	0.85498	0.85498	0.010	1.95828	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.13178
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/061509v6/6p122.d
Lab Smp Id: W6VM090615-17 Client Smp ID: SECONDSOURCE
Inj Date : 15-JUN-2009 21:17
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090615-17|L-ICV|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090527-01C+IVM090611-01
Comment :
Method : /chem/VOA6.i/061509v6/VOA6-8260B-061509.m
Meth Date : 02-Jul-2009 18:45 dav01267 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
M 2 Xylenes (total)	106				2594405	150.000	150
M 3 1,2-Dichloroethylene (total)	96				1296763	100.000	100
M 1 1,3-Dichloropropylene	75				1371197	100.000	111
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	268854	50.0000	49.0
5 Chloromethane	50	4.713	4.713	(0.472)	411251	50.0000	45.1
6 Vinyl chloride	62	4.934	4.934	(0.494)	413890	50.0000	44.8
7 Bromomethane	94	5.498	5.498	(0.551)	343829	50.0000	47.2
8 Chloroethane	64	5.619	5.619	(0.563)	308271	50.0000	47.2
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	597111	50.0000	48.8
10 Ethyl Ether	59	6.334	6.334	(0.635)	378067	50.0000	45.7
13 Acetone	43	6.718	6.718	(0.673)	391734	250.000	257
16 Acetonitrile	41	7.078	7.078	(0.709)	1163904	1000.00	1140
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	600635	50.0000	49.5
17 Methyl acetate	43	7.102	7.102	(0.712)	1880412	250.000	314
15 Iodomethane	142	6.968	6.968	(0.698)	3833936	250.000	266

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
20 Methylene chloride	84	7.291	7.291	(0.731)	488418	50.0000	47.7
18 Carbon disulfide	76	7.096	7.096	(0.711)	7012062	250.000	270
22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	1161117	50.0000	48.0
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	602067	50.0000	49.4
24 Vinyl acetate	43	8.066	8.066	(0.808)	1864356	250.000	137
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	761592	50.0000	49.4
30 2-Butanone	43	8.694	8.694	(0.871)	598302	250.000	284
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	694696	50.0000	51.1
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	606092	50.0000	52.4
36 Chloroform	83	9.053	9.053	(0.907)	745784	50.0000	50.1
35 Bromochloromethane	128	9.023	9.023	(0.904)	236448	50.0000	52.2
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	630600	50.0000	52.3
43 Cyclohexane	56	9.413	9.413	(0.943)	762333	50.0000	49.7
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	601062	50.0000	50.6
52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1250337	5000.00	5670
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	578645	50.0000	52.9
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	482122	50.0000	49.0
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	547120	50.0000	48.8
49 Benzene	78	9.724	9.724	(0.974)	1761848	50.0000	48.0
50 Cyclohexene	67	9.834	9.834	(0.985)	860085	50.0000	47.9
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1964840	50.0000	
53 Trichloroethylene	95	10.364	10.364	(1.038)	458759	50.0000	49.9
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	457819	50.0000	51.0
56 Methylcyclohexane	83	10.608	10.608	(1.063)	839279	50.0000	50.3
59 Bromodichloromethane	83	10.864	10.864	(1.089)	543350	50.0000	54.0
58 Dibromomethane	93	10.754	10.754	(1.078)	258499	50.0000	51.0
61 2-Chloroethylvinyl ether	63	11.089	11.089	(1.111)	1146913	250.000	203
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	810617	250.000	276
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	728169	50.0000	55.4
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1931653	50.0000	49.9
65 Toluene	92	11.699	11.699	(0.889)	1139085	50.0000	47.4
67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	643028	50.0000	55.3
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	318929	50.0000	51.2
69 2-Hexanone	43	12.260	12.260	(0.932)	1184446	250.000	293
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	670714	50.0000	50.7
71 Tetrachloroethylene	164	12.290	12.290	(0.934)	419688	50.0000	50.0
72 Dibromochloromethane	129	12.540	12.540	(0.953)	440961	50.0000	57.7
73 1,2-Dibromoethane	107	12.705	12.705	(0.966)	384796	50.0000	52.7
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1462363	50.0000	
76 Chlorobenzene	112	13.193	13.193	(1.003)	1297224	50.0000	50.1
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	464920	50.0000	55.0
78 Ethylbenzene	91	13.254	13.254	(1.007)	2133985	50.0000	49.2
79 m,p-Xylenes	106	13.363	13.363	(1.016)	1731637	100.000	99.4
80 o-Xylene	106	13.796	13.796	(1.049)	862768	50.0000	50.6
81 Styrene	104	13.802	13.802	(1.049)	1422191	50.0000	53.7
82 Bromoform	173	14.058	14.058	(0.903)	306428	50.0000	48.3
83 Isopropylbenzene	105	14.156	14.156	(0.909)	2199194	50.0000	48.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
87 1,1,2,2-Tetrachloroethane	83	14.436	14.436	(0.927)	492318	50.0000	50.6
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	746687	50.0000	49.4
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	133708	50.0000	49.8
90 Bromobenzene	156	14.564	14.564	(0.935)	584949	50.0000	50.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2528829	50.0000	48.5
93 2-Chlorotoluene	91	14.729	14.729	(0.946)	1765614	50.0000	49.9
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1885454	50.0000	49.9
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1572728	50.0000	49.8
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1777982	50.0000	50.0
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1900403	50.0000	49.8
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	2488099	50.0000	49.3
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	2061156	50.0000	49.7
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	1095522	50.0000	49.2
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	818947	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	1115963	50.0000	48.6
104 n-Butylbenzene	92	15.887	15.887	(1.020)	1039089	50.0000	49.4
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	1056493	50.0000	49.9
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	102232	50.0000	61.3
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	778368	50.0000	48.3
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	541281	50.0000	50.4
110 Naphthalene	128	18.289	18.289	(1.174)	1560712	50.0000	50.3
111 1,2,3-Trichlorobenzene	180	18.619	18.619	(1.195)	700180	50.0000	51.0

Data File: /chem/VOA6.i/061509v6/6p122.d
Date : 15-JUN-2009 21:17
Client ID: SECONDSOURCE
Sample Info: IW6VH090615-171L-ICV11\VOAF11\
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

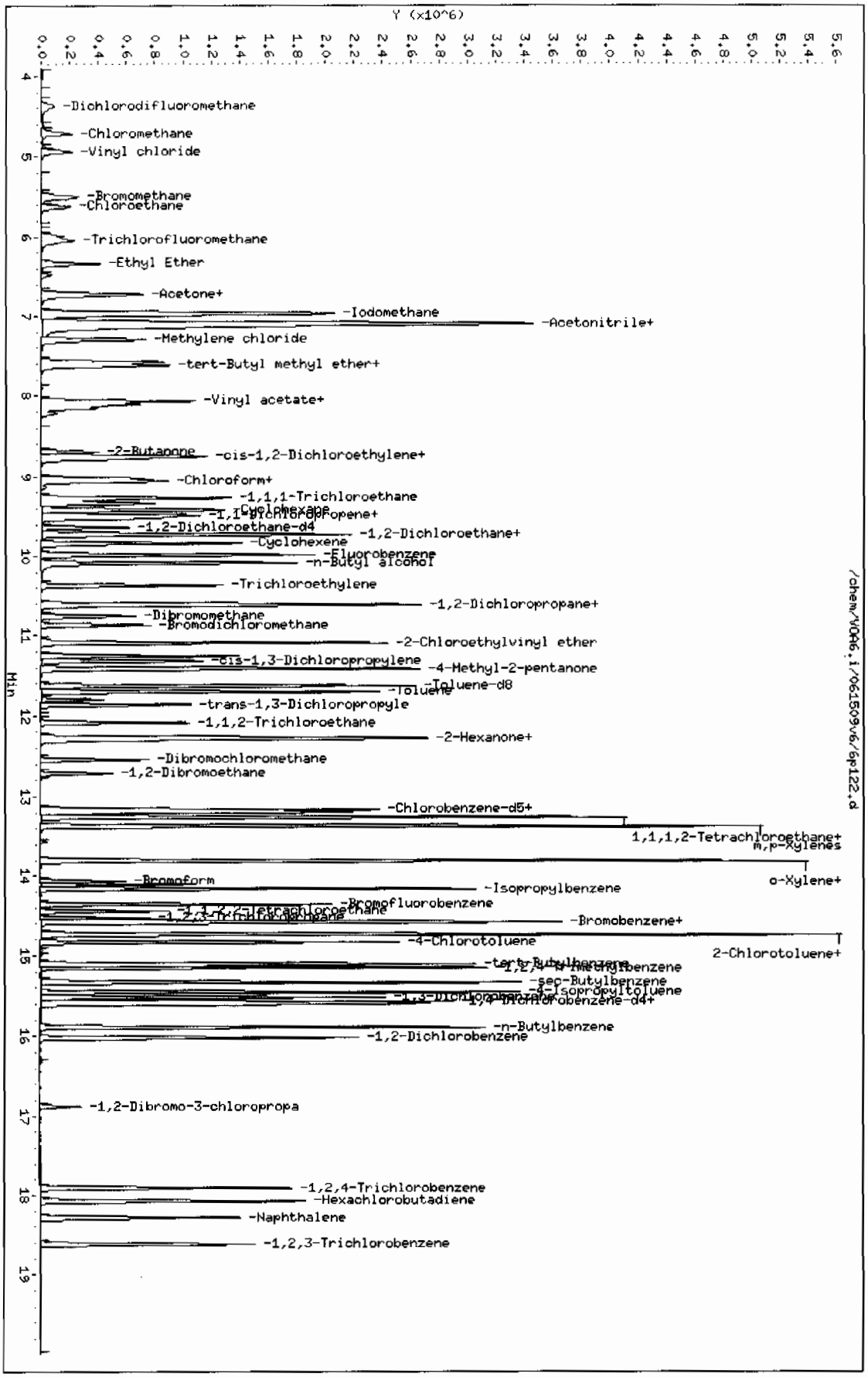

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 16-JUN-2009 01:27
Lab File ID: 6p131.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-25 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
150 Chlorotrifluoroethylene	132	150	0.16345	0.010	-12.01248	60.00000	Linear
149 2-Chloro-1,1,1-trifluoroeth	0.29741	0.30007	0.30007	0.010	0.89348	60.00000	Averaged
11 Acrolein	0.01230	0.01826	0.01826	0.001	48.47787	60.00000	Averaged
12 Trichlorotrifluoroethane	0.08574	0.08796	0.08796	0.050	2.59338	60.00000	Averaged
26 Isopropyl Alcohol	0.01255	0.01416	0.01416	0.001	12.77310	60.00000	Averaged
19 Allyl chloride	0.28551	0.25781	0.25781	0.010	-9.70101	60.00000	Averaged
28 tert-butyl Alcohol	0.02108	0.02335	0.02335	0.001	10.78685	60.00000	Averaged
21 Acrylonitrile	0.06813	0.06670	0.06670	0.010	-2.10050	60.00000	Averaged
34 Isopropyl ether	0.70684	0.71757	0.71757	0.001	1.51850	60.00000	Averaged
27 2-Chloro-1,3-butadiene	0.25646	0.27873	0.27873	0.010	8.68301	60.00000	Averaged
41 Ethyl tert-butyl ether	0.67565	0.69616	0.69616	0.001	3.03559	60.00000	Averaged
32 Propionitrile	0.02721	0.02683	0.02683	0.010	-1.42290	60.00000	Averaged
29 Ethyl acetate	0.19208	0.16826	0.16826	0.010	-12.40188	60.00000	Averaged
37 Methacrylonitrile	0.10709	0.10354	0.10354	0.010	-3.31123	60.00000	Averaged
38 Tetrahydrofuran	0.13836	0.13346	0.13346	0.010	-3.54546	60.00000	Averaged
42 Isobutyl alcohol	0.00627	0.00655	0.00655	0.005	4.39065	60.00000	Averaged
45 Methyl tert-amyl ether	0.22440	0.18558	0.18558	0.001	-17.30149	60.00000	Averaged
54 Methyl methacrylate	0.14132	0.14393	0.14393	0.010	1.84815	60.00000	Averaged
57 1,4-Dioxane	0.00232	0.00205	0.00205	0.001	-11.52266	60.00000	Averaged
60 2-Nitropropane	230	250	0.05311	0.010	-7.93335	60.00000	Linear
66 Ethyl methacrylate	0.35900	0.34939	0.34939	0.010	-2.67735	60.00000	Averaged
74 1-Chlorohexane	0.29129	0.30067	0.30067	0.001	3.21786	60.00000	Averaged
84 cis-1,4-Dichloro-2-butene	0.16765	0.16758	0.16758	0.010	-0.04286	60.00000	Averaged
86 Cyclohexanone	0.00965	0.00953	0.00953	0.010	-1.25952	60.00000	Averaged <-
89 trans-1,4-Dichloro-2-butene	0.16166	0.16037	0.16037	0.010	-0.80088	60.00000	Averaged
97 Pentachloroethane	0.30776	0.31329	0.31329	0.010	1.79668	60.00000	Averaged
103 Benzyl chloride	204	250	0.90663	0.010	-18.26389	60.00000	Linear
105 bis(2-Chloroisopropyl)ether	0.07465	0.07123	0.07123	0.010	-4.58560	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 16-JUN-2009 01:27
Lab File ID: 6p131.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-25 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Average %D / Drift Results.	
Calculated Average %D/Drift =	7.46065
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/061509v6/6p131.d
Lab Smp Id: W6VM090615-25 Client Smp ID: SECONDSOURCE
Inj Date : 16-JUN-2009 01:27
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090615-25|S-1CV|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090601-08A+UVM090528-01C
Comment :
Method : /chem/VOA6.i/061509v6/VOA6-8260B-061509.m
Meth Date : 02-Jul-2009 18:45 dav01267 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALsubS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
150 Chlorotrifluoroethylene	116	4.290	4.290	(0.430)	924962	150.000	132
149 2-Chloro-1,1,1-trifluoroethane	118	5.065	5.065	(0.508)	1698102	150.000	151
11 Acrolein	56	6.542	6.542	(0.655)	172193	250.000	371
12 Trichlorotrifluoroethane	85	6.700	6.700	(0.671)	829627	250.000	256
26 Isopropyl Alcohol	45	6.791	6.791	(0.680)	1335415	2500.00	2820
19 Allyl chloride	41	7.145	7.145	(0.716)	2431624	250.000	226
28 tert-butyl alcohol	59	7.291	7.291	(0.731)	2202614	2500.00	2770
21 Acrylonitrile	53	7.547	7.547	(0.756)	629130	250.000	245
34 Isopropyl ether	45	8.078	8.078	(0.809)	1353604	50.0000	50.8
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	525791	50.0000	54.3
41 Ethyl tert-butyl ether	59	8.486	8.486	(0.850)	1313221	50.0000	51.5
32 Propionitrile	54	8.779	8.779	(0.880)	253020	250.000	246
29 Ethyl acetate	43	8.706	8.706	(0.872)	1586974	250.000	219
37 Methacrylonitrile	41	8.950	8.950	(0.897)	976596	250.000	242
38 Tetrahydrofuran	42	9.065	9.065	(0.582)	519500	250.000	241

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42 Isobutyl alcohol	41	9.389	9.389	(0.941)	617828	2500.00	2610
45 Methyl tert-amyl ether	55	9.742	9.742	(0.976)	350066	50.0000	41.3
54 Methyl methacrylate	69	10.589	10.589	(1.061)	1357561	250.000	255
57 1,4-Dioxane	88	10.699	10.699	(1.072)	193767	2500.00	2210
60 2-Nitropropane	43	11.071	11.071	(1.109)	500944	250.000	230
66 Ethyl methacrylate	69	11.858	11.858	(0.901)	2460727	250.000	243
74 1-Chlorohexane	55	13.052	13.052	(0.992)	423520	50.0000	51.6
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	652342	250.000	250
86 Cyclohexanone	55	14.320	14.320	(1.089)	335574	1250.00	1230
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	624266	250.000	248
97 Pentachloroethane	167	15.180	15.180	(0.975)	1219540	250.000	254
103 Benzyl chloride	91	15.717	15.717	(1.009)	3529240	250.000	204
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	277260	250.000	238
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1886367	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1408600	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	778539	50.0000	

Data File: /chem/VOA6.i/061509v6/6p131.d
Date : 16-JUN-2009 01:27
Client ID: SECONDSOURCE
Sample Info: IW6VM090615-2SIS-ICV1!VOAF11!
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

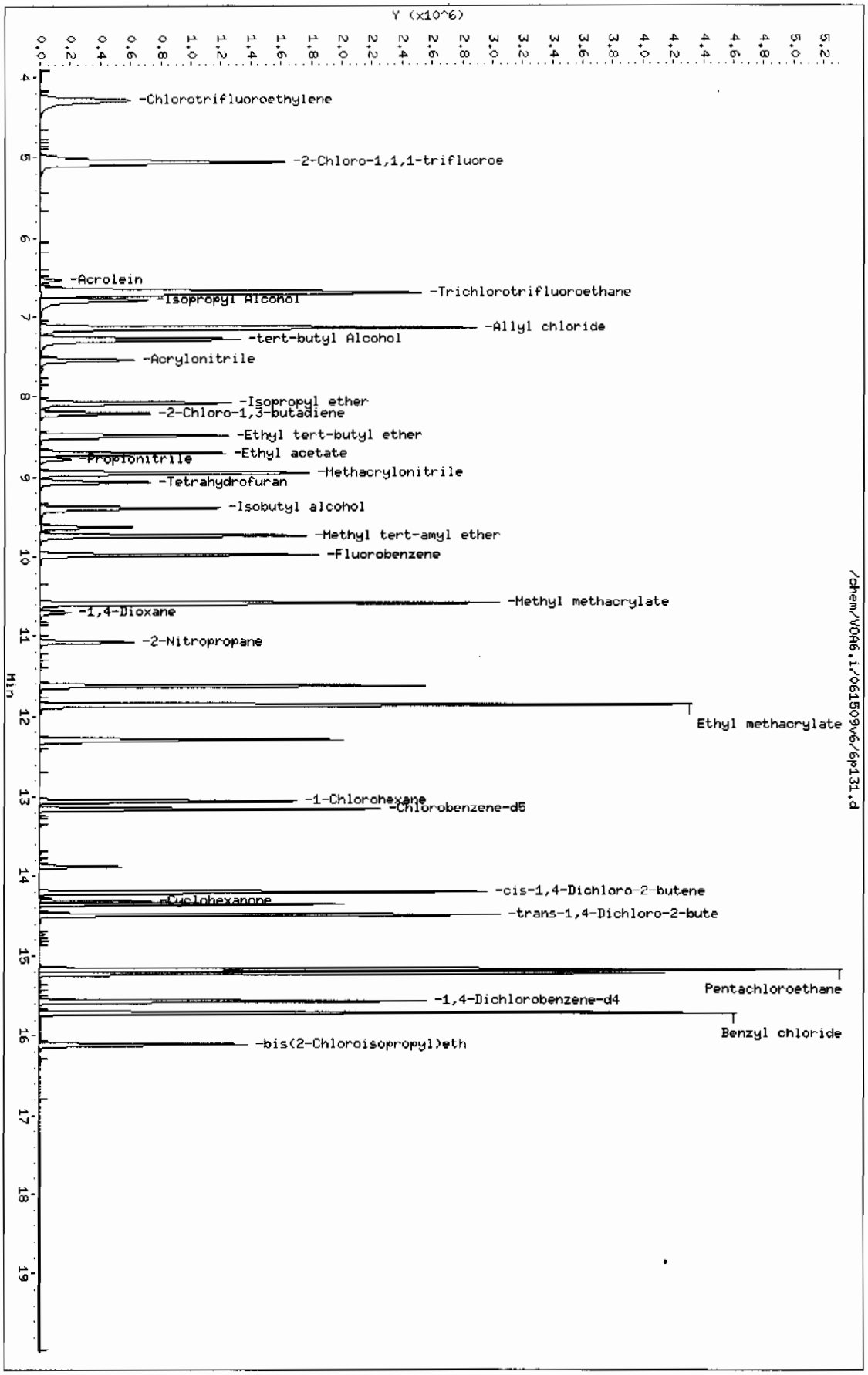

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 01-JUL-2009 09:44
Lab File ID: 6r302.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090701-01 Quant Type: ISTD
Method: /chem/VOA6.i/070109v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
M	2 Xylenes (total)	0.59099	0.58578	0.58578	0.050	-0.88162	60.00000	Averaged
M	3 1,2-Dichloroethylene (total	0.32811	0.32573	0.32573	0.050	-0.72410	60.00000	Averaged
M	1 1,3-Dichloropropylene	0.31539	0.35457	0.35457	0.050	12.42172	60.00000	Averaged
	4 Dichlorodifluoromethane	0.13952	0.19932	0.19932	0.050	42.86086	60.00000	Averaged
	5 Chloromethane	0.23207	0.26449	0.26449	0.100	13.97098	60.00000	Averaged spcc
	6 Vinyl chloride	0.23499	0.27281	0.27281	0.050	16.09525	20.00000	Averaged ccc
	7 Bromomethane	0.18554	0.20200	0.20200	0.050	8.86927	60.00000	Averaged
	8 Chloroethane	0.16599	0.18517	0.18517	0.050	11.55457	60.00000	Averaged
	9 Trichlorofluoromethane	0.31108	0.34963	0.34963	0.050	12.39018	60.00000	Averaged
	10 Ethyl Ether	0.21032	0.21136	0.21136	0.001	0.49078	60.00000	Averaged
	13 Acetone	250	250	0.03887	0.050	0.11071	60.00000	Linear <-
	16 Acetonitrile	0.02606	0.03081	0.03081	0.010	18.24090	60.00000	Averaged
	14 1,1-Dichloroethylene	0.30847	0.30569	0.30569	0.050	-0.90059	20.00000	Averaged ccc
	17 Methyl acetate	0.15239	0.14482	0.14482	0.010	-4.96879	60.00000	Averaged
	15 Todomethane	0.36696	0.36844	0.36844	0.050	0.40509	60.00000	Averaged
	20 Methylene chloride	46.71964	50.00000	0.24410	0.050	-6.56072	60.00000	Linear
	18 Carbon disulfide	0.66184	0.66281	0.66281	0.050	0.14726	60.00000	Averaged
	22 tert-Butyl methyl ether	0.61548	0.61002	0.61002	0.050	-0.88709	60.00000	Averaged
	23 trans-1,2-Dichloroethylene	0.31030	0.30839	0.30839	0.050	-0.61468	60.00000	Averaged
	24 Vinyl acetate	0.34636	0.39246	0.39246	0.010	13.30810	60.00000	Averaged
	25 1,1-Dichloroethane	0.39203	0.38499	0.38499	0.100	-1.79481	60.00000	Averaged spcc
	30 2-Butanone	0.05356	0.05259	0.05259	0.030	-1.79903	60.00000	Averaged
	31 cis-1,2-Dichloroethylene	0.34592	0.34308	0.34308	0.050	-0.82224	60.00000	Averaged
	33 2,2-Dichloropropane	0.29427	0.31054	0.31054	0.050	5.52864	60.00000	Averaged
	36 Chloroform	0.37849	0.37574	0.37574	0.010	-0.72729	20.00000	Averaged ccc
	35 Bromochloromethane	0.11536	0.12195	0.12195	0.010	5.71268	60.00000	Averaged
	40 1,1,1-Trichloroethane	0.30693	0.32198	0.32198	0.010	4.90227	60.00000	Averaged
	43 Cyclohexane	0.39000	0.39055	0.39055	0.010	0.14076	60.00000	Averaged
	44 1,1-Dichloropropene	0.30239	0.30864	0.30864	0.010	2.06676	60.00000	Averaged
	52 n-Butyl alcohol	0.00561	0.00700	0.00700	0.001	24.77169	60.00000	Averaged
	46 Carbon tetrachloride	0.27838	0.29978	0.29978	0.010	7.68723	60.00000	Averaged
$	47 1,2-Dichloroethane-d4	0.25054	0.27000	0.27000	0.001	7.76941	60.00000	Averaged
	48 1,2-Dichloroethane	0.28523	0.27170	0.27170	0.010	-4.74285	60.00000	Averaged
	49 Benzene	0.93344	0.92122	0.92122	0.010	-1.30908	60.00000	Averaged
	50 Cyclohexene	0.45698	0.46289	0.46289	0.001	1.29228	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 01-JUL-2009 09:44
Lab File ID: 6r302.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090701-01 Quant Type: ISTD
Method: /chem/VOA6.i/070109v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	53 Trichloroethylene	0.23398	0.23711	0.23711	0.010	1.33638	60.00000	Averaged	
	55 1,2-Dichloropropane	0.22842	0.23251	0.23251	0.010	1.78903	20.00000	Averaged	ccc
	56 Methylcyclohexane	0.42426	0.43608	0.43608	0.010	2.78622	60.00000	Averaged	
	59 Bromodichloromethane	0.25582	0.27976	0.27976	0.010	9.35728	60.00000	Averaged	
	58 Dibromomethane	0.12910	0.13460	0.13460	0.010	4.26153	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	268	250	0.15467	0.010	7.21828	60.00000	Linear	
	63 4-Methyl-2-pentanone	0.10020	0.10181	0.10181	0.010	1.60204	60.00000	Averaged	
	62 cis-1,3-Dichloropropylene	0.33458	0.37397	0.37397	0.010	11.77307	60.00000	Averaged	
$	64 Toluene-d8	1.32458	1.34797	1.34797	0.010	1.76588	60.00000	Averaged	
	65 Toluene	0.82102	0.77166	0.77166	0.010	-6.01242	20.00000	Averaged	ccc
	67 trans-1,3-Dichloropropylene	0.39769	0.43121	0.43121	0.010	8.42940	60.00000	Averaged	
	68 1,1,2-Trichloroethane	0.21291	0.21528	0.21528	0.010	1.11114	60.00000	Averaged	
	69 2-Hexanone	0.13814	0.13278	0.13278	0.010	-3.87886	60.00000	Averaged	
	70 1,3-Dichloropropane	0.45210	0.44260	0.44260	0.010	-2.10170	60.00000	Averaged	
	71 Tetrachloroethylene	0.28684	0.28744	0.28744	0.010	0.21162	60.00000	Averaged	
	72 Dibromochloromethane	0.26109	0.30464	0.30464	0.010	16.68034	60.00000	Averaged	
	73 1,2-Dibromoethane	0.24943	0.26292	0.26292	0.010	5.40888	60.00000	Averaged	
	76 Chlorobenzene	0.88521	0.86126	0.86126	0.300	-2.70588	60.00000	Averaged	spcc
	77 1,1,1,2-Tetrachloroethane	0.28879	0.30713	0.30713	0.010	6.34850	60.00000	Averaged	
	78 Ethylbenzene	1.48252	1.45623	1.45623	0.010	-1.77293	20.00000	Averaged	ccc
	79 m,p-Xylenes	0.59530	0.58931	0.58931	0.010	-1.00662	60.00000	Averaged	
	80 o-Xylene	0.58237	0.57873	0.57873	0.010	-0.62605	60.00000	Averaged	
	81 Styrene	0.90594	0.97411	0.97411	0.010	7.52509	60.00000	Averaged	
	82 Bromoform	49.14653	50.00000	0.38115	0.100	-1.70693	60.00000	Linear	spcc
	83 Isopropylbenzene	2.74854	2.62728	2.62728	0.010	-4.41180	60.00000	Averaged	
	87 1,1,2,2-Tetrachloroethane	0.59416	0.60683	0.60683	0.300	2.13201	60.00000	Averaged	spcc
$	85 Bromofluorobenzene	0.92346	0.94472	0.94472	0.010	2.30173	60.00000	Averaged	
	88 1,2,3-Trichloropropane	0.16387	0.16325	0.16325	0.010	-0.37728	60.00000	Averaged	
	90 Bromobenzene	0.70499	0.68725	0.68725	0.010	-2.51569	60.00000	Averaged	
	91 n-Propylbenzene	3.18448	3.04823	3.04823	0.010	-4.27851	60.00000	Averaged	
	93 2-Chlorotoluene	2.16177	2.03590	2.03590	0.010	-5.82265	60.00000	Averaged	
	92 1,3,5-Trimethylbenzene	2.30772	2.24210	2.24210	0.010	-2.84350	60.00000	Averaged	
	94 4-Chlorotoluene	1.92741	1.83734	1.83734	0.010	-4.67287	60.00000	Averaged	
	95 tert-Butylbenzene	2.17151	2.11741	2.11741	0.010	-2.49106	60.00000	Averaged	
	96 1,2,4-Trimethylbenzene	2.33215	2.27418	2.27418	0.010	-2.48576	60.00000	Averaged	
	98 sec-Butylbenzene	3.07927	2.97637	2.97637	0.010	-3.34169	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 01-JUL-2009 09:44
Lab File ID: 6r302.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090701-01 Quant Type: ISTD
Method: /chem/VOA6.i/070109v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
99	4-Isopropyltoluene	2.53200	2.49780	2.49780	0.010	-1.35074	60.00000	Averaged
100	1,3-Dichlorobenzene	1.35807	1.31512	1.31512	0.010	-3.16266	60.00000	Averaged
102	1,4-Dichlorobenzene	1.40095	1.33648	1.33648	0.010	-4.60166	60.00000	Averaged
104	n-Butylbenzene	1.28518	1.27964	1.27964	0.010	-0.43056	60.00000	Averaged
106	1,2-Dichlorobenzene	1.29254	1.26004	1.26004	0.010	-2.51444	60.00000	Averaged
107	1,2-Dibromo-3-chloropropane	0.10188	0.13329	0.13329	0.010	30.82826	60.00000	Averaged
108	1,2,4-Trichlorobenzene	0.98469	0.98831	0.98831	0.010	0.36676	60.00000	Averaged
109	Hexachlorobutadiene	0.65540	0.66914	0.66914	0.010	2.09714	60.00000	Averaged
110	Naphthalene	1.89466	1.99177	1.99177	0.010	5.12545	60.00000	Averaged
111	1,2,3-Trichlorobenzene	0.83855	0.84610	0.84610	0.010	0.89945	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.35726
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r302.d
Lab Smp Id: W6VM090701-01 Client Smp ID: VSTD050
Inj Date : 01-JUL-2009 09:44
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090701-01|CCV|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090603-07A+UVM090617-07B
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIC MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
M 2 Xylenes (total)	106				2299282	150.000	149
M 3 1,2-Dichloroethylene (total)	96				1096618	100.000	99.3
M 1 1,3-Dichloropropylene	75				1193694	100.000	110
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	335520	50.0000	71.4
5 Chloromethane	50	4.713	4.713	(0.472)	445221	50.0000	57.0
6 Vinyl chloride	62	4.934	4.934	(0.494)	459219	50.0000	58.0
7 Bromomethane	94	5.508	5.508	(0.552)	340030	50.0000	54.4
8 Chloroethane	64	5.629	5.629	(0.564)	311707	50.0000	55.8
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	588534	50.0000	56.2
10 Ethyl Ether	59	6.334	6.334	(0.635)	355777	50.0000	50.2
13 Acetone	43	6.718	6.718	(0.673)	327123	250.000	250
16 Acetonitrile	41	7.078	7.078	(0.709)	1037396	1000.00	1180
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	514572	50.0000	49.5
17 Methyl acetate	43	7.103	7.103	(0.712)	1218847	250.000	238
15 Iodomethane	142	6.968	6.968	(0.698)	3101039	250.000	251

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
20 Methylene chloride	84	7.292	7.292	(0.731)	410889	50.0000	46.7
18 Carbon disulfide	76	7.090	7.090	(0.710)	5578591	250.000	250
22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	1026859	50.0000	49.6
23 trans-1,2-Dichloroethylene	61	7.621	7.621	(0.764)	519135	50.0000	49.7
24 Vinyl acetate	43	8.066	8.066	(0.808)	3303135	250.000	283
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	648065	50.0000	49.1
30 2-Butanone	43	8.694	8.694	(0.871)	442643	250.000	246
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	577503	50.0000	49.6
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	522730	50.0000	52.8
36 Chloroform	83	9.053	9.053	(0.907)	632492	50.0000	49.6
35 Bromochloromethane	128	9.023	9.023	(0.904)	205276	50.0000	52.8
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	541991	50.0000	52.4
43 Cyclohexane	56	9.413	9.413	(0.943)	657420	50.0000	50.1
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	519530	50.0000	51.0
52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1178908	5000.00	6240
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	504622	50.0000	53.8
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	454499	50.0000	53.9
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	457360	50.0000	47.6
49 Benzene	78	9.724	9.724	(0.974)	1550698	50.0000	49.3
50 Cyclohexene	67	9.834	9.834	(0.985)	779184	50.0000	50.6
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1683314	50.0000	
53 Trichloroethylene	95	10.364	10.364	(1.038)	399126	50.0000	50.7
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	391387	50.0000	50.9
56 Methylcyclohexane	83	10.608	10.608	(1.063)	734055	50.0000	51.4
59 Bromodichloromethane	83	10.864	10.864	(1.089)	470928	50.0000	54.7
58 Dibromomethane	93	10.754	10.754	(1.078)	226574	50.0000	52.1
61 2-Chloroethylvinyl ether	63	11.090	11.090	(1.111)	1301800	250.000	268
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	666031	250.000	254
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	629504	50.0000	55.9
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1763657	50.0000	50.9
65 Toluene	92	11.699	11.699	(0.889)	1009622	50.0000	47.0
67 trans-1,3-Dichloropropylene	75	11.858	11.858	(0.901)	564190	50.0000	54.2
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	281664	50.0000	50.6
69 2-Hexanone	43	12.260	12.260	(0.932)	868628	250.000	240
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	579088	50.0000	48.9
71 Tetrachloroethylene	164	12.291	12.291	(0.934)	376086	50.0000	50.1
72 Dibromochloromethane	129	12.541	12.541	(0.953)	398591	50.0000	58.3
73 1,2-Dibromoethane	107	12.705	12.705	(0.966)	343998	50.0000	52.7
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1308380	50.0000	
76 Chlorobenzene	112	13.193	13.193	(1.003)	1126858	50.0000	48.6
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	401837	50.0000	53.2
78 Ethylbenzene	91	13.254	13.254	(1.007)	1905305	50.0000	49.1
79 m,p-Xylenes	106	13.364	13.364	(1.016)	1542087	100.000	99.0
80 o-Xylene	106	13.796	13.796	(1.049)	757195	50.0000	49.7
81 Styrene	104	13.802	13.802	(1.049)	1274504	50.0000	53.8
87 Bromoform	173	14.065	14.065	(0.903)	284602	50.0000	49.1
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1961784	50.0000	47.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
87 1,1,2,2-Tetrachloroethane	83	14.436	14.436	(0.927)	453118	50.0000	51.1
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	705419	50.0000	51.2
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	121899	50.0000	49.8
90 Bromobenzene	156	14.565	14.565	(0.935)	513171	50.0000	48.7
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2276106	50.0000	47.9
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1520203	50.0000	47.1
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1674169	50.0000	48.6
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1371941	50.0000	47.7
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1581069	50.0000	48.8
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1698123	50.0000	48.8
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	2222451	50.0000	48.3
99 4-Isopropyltoluene	119	15.455	15.455	(0.992)	1865102	50.0000	49.3
100 1,3-Dichlorobenzene	146	15.516	15.516	(0.996)	981998	50.0000	48.4
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	746698	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	997950	50.0000	47.7
104 n-Butylbenzene	92	15.887	15.887	(1.020)	955508	50.0000	49.8
106 1,2-Dichlorobenzene	146	16.022	16.022	(1.029)	940866	50.0000	48.7
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	99530	50.0000	65.4
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	737966	50.0000	50.2
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	499646	50.0000	51.0
110 Naphthalene	128	18.289	18.289	(1.174)	1487248	50.0000	52.6
111 1,2,3-Trichlorobenzene	180	18.625	18.625	(1.196)	631779	50.0000	50.4

Data File: /chem/VOA6.i/070109v6/6r302.d
Date : 01-JUL-2009 09:44
Client ID: VSTD050
Sample Info: IW6VH090701-01ICV|1|VOAF1|
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

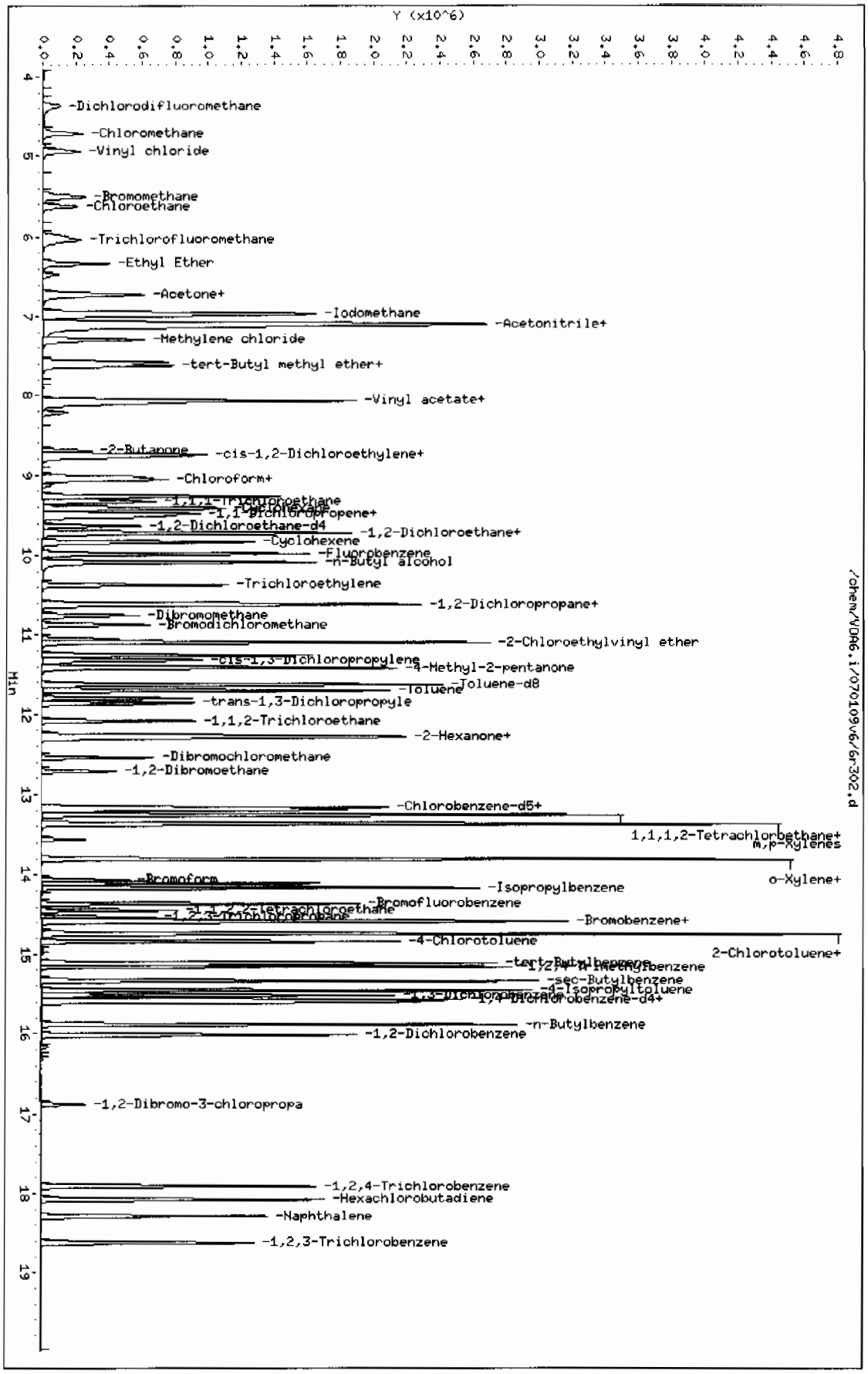

Page 1

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 01-JUL-2009 11:39
Lab File ID: 6r305.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090701-04 Quant Type: ISTD
Method: /chem/VOA6.i/070109v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	150 Chlorotrifluoroethylene	137	150	0.17006	0.010	-8.78048	60.00000	Linear	
	149 2-Chloro-1,1,1-trifluoroeth	0.29741	0.31076	0.31076	0.010	4.48819	60.00000	Averaged	
	11 Acrolein	0.01230	0.02229	0.02229	0.001	81.27743	60.00000	Averaged	<-
	12 Trichlorotrifluoroethane	0.08574	0.08760	0.08760	0.050	2.17498	60.00000	Averaged	
	26 Isopropyl Alcohol	0.01255	0.01489	0.01489	0.001	18.59484	60.00000	Averaged	
	19 Allyl chloride	0.28551	0.24879	0.24879	0.010	-12.86175	60.00000	Averaged	
	28 tert-butyl Alcohol	0.02108	0.02491	0.02491	0.001	18.16575	60.00000	Averaged	
	21 Acrylonitrile	0.06813	0.06724	0.06724	0.010	-1.31215	60.00000	Averaged	
	34 Isopropyl ether	0.70684	0.70460	0.70460	0.001	-0.31688	60.00000	Averaged	
	27 2-Chloro-1,3-butadiene	0.25646	0.27125	0.27125	0.010	5.76603	60.00000	Averaged	
	41 Ethyl tert-butyl ether	0.67565	0.70270	0.70270	0.001	4.00249	60.00000	Averaged	
	32 Propionitrile	0.02721	0.02680	0.02680	0.010	-1.50928	60.00000	Averaged	
	29 Ethyl acetate	0.19208	0.16439	0.16439	0.010	-14.41537	60.00000	Averaged	
	37 Methacrylonitrile	0.10709	0.09944	0.09944	0.010	-7.14430	60.00000	Averaged	
	38 Tetrahydrofuran	0.13836	0.12215	0.12215	0.010	-11.71968	60.00000	Averaged	
	42 Isobutyl alcohol	0.00627	0.00658	0.00658	0.005	4.90506	60.00000	Averaged	
	45 Methyl tert-amyl ether	0.22440	0.18715	0.18715	0.001	-16.59986	60.00000	Averaged	
	54 Methyl methacrylate	0.14132	0.14251	0.14251	0.010	0.84234	60.00000	Averaged	
	66 Ethyl methacrylate	0.35900	0.33151	0.33151	0.010	-7.65747	60.00000	Averaged	
	74 1-Chlorohexane	0.29129	0.29121	0.29121	0.001	-0.02766	60.00000	Averaged	
	57 1,4-Dioxane	0.00232	0.00218	0.00218	0.001	-6.16028	60.00000	Averaged	
	60 2-Nitropropane	223	250	0.05132	0.010	-10.97048	60.00000	Linear	
	84 cis-1,4-Dichloro-2-butene	0.16765	0.16346	0.16346	0.010	-2.50133	60.00000	Averaged	
	86 Cyclohexanone	0.00965	0.00920	0.00920	0.010	-4.71611	60.00000	Averaged	<-
	89 trans-1,4-Dichloro-2-butene	0.16166	0.15543	0.15543	0.010	-3.85552	60.00000	Averaged	
	97 Pentachloroethane	0.30776	0.28232	0.28232	0.010	-8.26460	60.00000	Averaged	
	103 Benzyl chloride	242	250	1.07804	0.010	-3.03938	60.00000	Linear	
	105 bis(2-Chloroisopropyl)ether	0.07465	0.07388	0.07388	0.010	-1.02988	60.00000	Averaged	
$	47 1,2-Dichloroethane-d4	0.25054	0.24169	0.24169	0.001	-3.53225	60.00000	Averaged	
$	64 Toluene-d8	1.32458	1.27379	1.27379	0.010	-3.83474	60.00000	Averaged	
$	85 Bromofluorobenzene	0.92346	0.92330	0.92330	0.010	-0.01797	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 01-JUL-2009 11:39
Lab File ID: 6r305.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090701-04 Quant Type: ISTD
Method: /chem/VOA6.i/070109v6/VOA6-8260B-061509.m

Average %D / Drift Results.	
Calculated Average %D/Drift =	5.35726
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r305.d
Lab Smp Id: W6VM090701-04 Client Smp ID: VSTD250S
Inj Date : 01-JUL-2009 11:39
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090701-04|short/LCS|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090601-08B/UVM090624-02A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 02-Jul-2009 09:40 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
150 Chlorotrifluoroethylene	116	4.290	4.290	(0.430)	840754	150.000	137
149 2-Chloro-1,1,1-trifluoroethane	118	5.075	5.075	(0.509)	1536336	150.000	157
11 Acrolein	56	6.542	6.542	(0.655)	183660	250.000	453
12 Trichlorotrifluoroethane	85	6.706	6.706	(0.672)	721816	250.000	255
26 Isopropyl Alcohol	45	6.798	6.798	(0.681)	1226860	2500.00	2960
19 Allyl chloride	41	7.145	7.145	(0.716)	2049939	250.000	218
28 tert-Butyl Alcohol	59	7.291	7.291	(0.731)	2052392	2500.00	2950
21 Acrylonitrile	53	7.547	7.547	(0.756)	554041	250.000	247
34 Isopropyl ether	45	8.078	8.078	(0.809)	1161145	50.0000	49.8
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	447008	50.0000	52.9
41 Ethyl tert-butyl ether	59	8.492	8.492	(0.851)	1158011	50.0000	52.0
32 Propionitrile	54	8.779	8.779	(0.880)	220847	250.000	246
29 Ethyl acetate	43	8.706	8.706	(0.872)	1354532	250.000	214
37 Methacrylonitrile	41	8.950	8.950	(0.897)	819343	250.000	232
38 Tetrahydrofuran	42	9.065	9.065	(0.582)	442470	250.000	221
42 Isobutyl alcohol	41	9.389	9.389	(0.941)	542401	2500.00	2620

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
45 Methyl tert-amyl ether	55	9.736	9.736	(0.976)	308416	50.0000	41.7
54 Methyl methacrylate	69	10.590	10.590	(1.061)	1174269	250.000	252
66 Ethyl methacrylate	69	11.858	11.858	(0.901)	2117212	250.000	231
74 1-Chlorohexane	55	13.053	13.053	(0.992)	371973	50.0000	50.0
57 1,4-Dioxane	88	10.699	10.699	(1.072)	179536	2500.00	2340
60 2-Nitropropane	43	11.071	11.071	(1.109)	422849	250.000	222
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	592130	250.000	244
86 Cyclohexanone	55	14.321	14.321	(1.089)	293647	1250.00	1190
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	563045	250.000	240
97 Pentachloroethane	167	15.180	15.180	(0.975)	1022719	250.000	229
103 Benzyl chloride	91	15.717	15.717	(1.009)	3905208	250.000	242
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	267629	250.000	247
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1647952	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1277323	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	724498	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	398289	50.0000	48.2
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1627035	50.0000	48.1
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	668926	50.0000	50.0

Data File: /chem/VOA6.i/070109v6/6r305.d
Date : 01-JUL-2009 11:39
Client ID: VSTD250S
Sample Info: IW6VM090701-04lshort/LCS11lVOAF11l
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

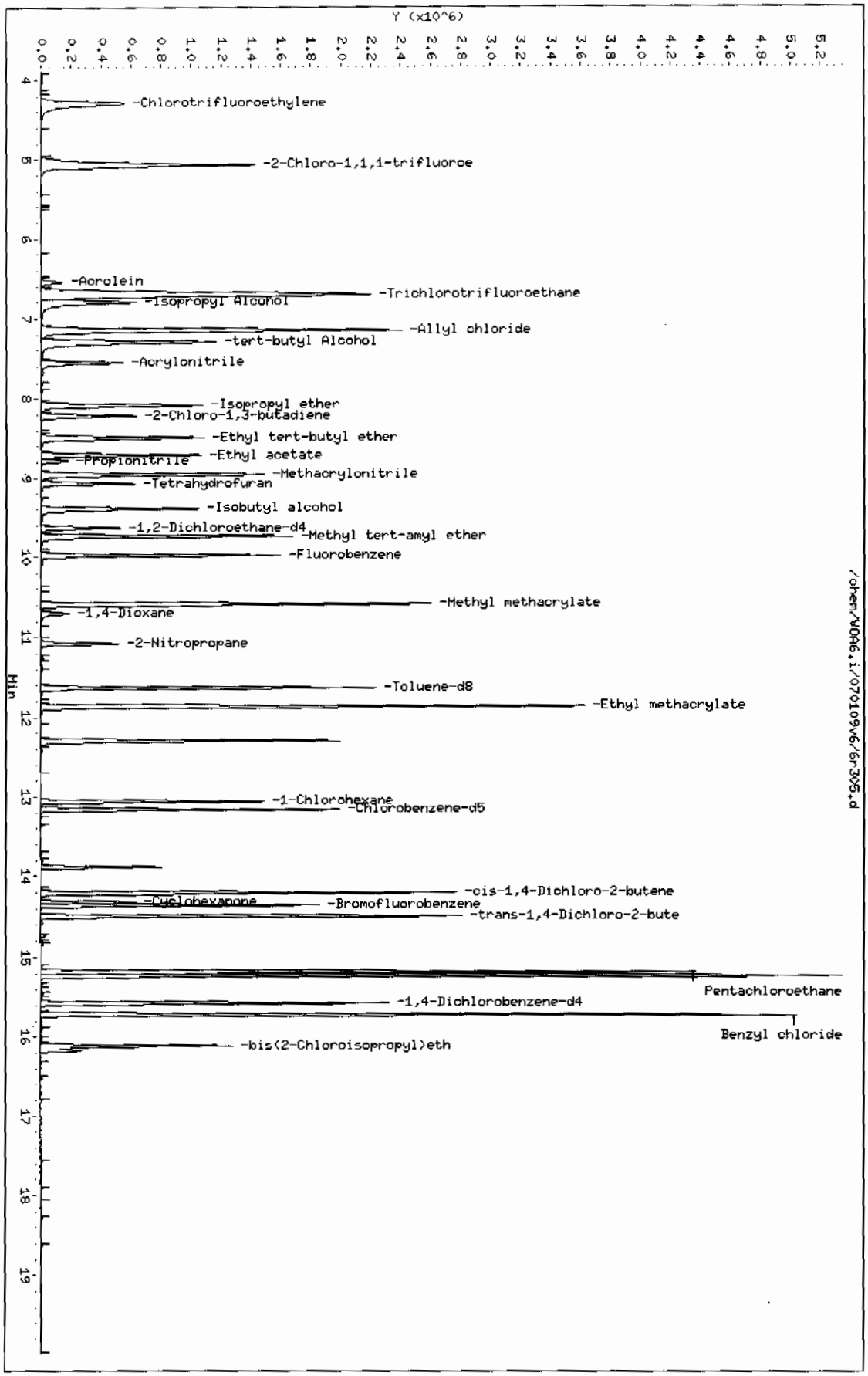

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 02-JUL-2009 09:24
Lab File ID: 6r402.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090702-01 Quant Type: ISTD
Method: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	2 Xylenes (total)	0.59099	0.62251	0.62251	0.050	5.33280	60.00000	Averaged	
M	3 1,2-Dichloroethylene (total	0.32811	0.34079	0.34079	0.050	3.86509	60.00000	Averaged	
M	1 1,3-Dichloropropylene	0.31539	0.36373	0.36373	0.050	15.32779	60.00000	Averaged	
	4 Dichlorodifluoromethane	0.13952	0.18740	0.18740	0.050	34.31760	60.00000	Averaged	
	5 Chloromethane	0.23207	0.24704	0.24704	0.100	6.44948	60.00000	Averaged	spcc
	6 Vinyl chloride	0.23499	0.25808	0.25808	0.050	9.82955	20.00000	Averaged	ccc
	7 Bromomethane	0.18554	0.19679	0.19679	0.050	6.06326	60.00000	Averaged	
	8 Chloroethane	0.16599	0.18195	0.18195	0.050	9.61022	60.00000	Averaged	
	9 Trichlorofluoromethane	0.31108	0.33984	0.33984	0.050	9.24284	60.00000	Averaged	
	10 Ethyl Ether	0.21032	0.20989	0.20989	0.001	-0.20399	60.00000	Averaged	
	13 Acetone	274	250	0.04264	0.050	9.77209	60.00000	Linear	<-
	16 Acetonitrile	0.02606	0.03340	0.03340	0.010	28.15994	60.00000	Averaged	
	14 1,1-Dichloroethylene	0.30847	0.33191	0.33191	0.050	7.60004	20.00000	Averaged	ccc
	17 Methyl acetate	0.15239	0.15558	0.15558	0.010	2.09473	60.00000	Averaged	
	15 Iodomethane	0.36696	0.39787	0.39787	0.050	8.42496	60.00000	Averaged	
	20 Methylene chloride	48.32472	50.00000	0.25168	0.050	-3.35056	60.00000	Linear	
	18 Carbon disulfide	0.66184	0.74430	0.74430	0.050	12.46065	60.00000	Averaged	
	22 tert-Butyl methyl ether	0.61548	0.63613	0.63613	0.050	3.35404	60.00000	Averaged	
	23 trans-1,2-Dichloroethylene	0.31030	0.32515	0.32515	0.050	4.78724	60.00000	Averaged	
	24 Vinyl acetate	0.34636	0.37832	0.37832	0.010	9.22548	60.00000	Averaged	
	25 1,1-Dichloroethane	0.39203	0.40198	0.40198	0.100	2.53816	60.00000	Averaged	spcc
	30 2-Butanone	0.05356	0.05263	0.05263	0.030	-1.73260	60.00000	Averaged	
	31 cis-1,2-Dichloroethylene	0.34592	0.35643	0.35643	0.050	3.03791	60.00000	Averaged	
	33 2,2-Dichloropropane	0.29427	0.32310	0.32310	0.050	9.79980	60.00000	Averaged	
	36 Chloroform	0.37849	0.38987	0.38987	0.010	3.00633	20.00000	Averaged	ccc
	35 Bromochloromethane	0.11536	0.12692	0.12692	0.010	10.02286	60.00000	Averaged	
	40 1,1,1-Trichloroethane	0.30693	0.33672	0.33672	0.010	9.70433	60.00000	Averaged	
	43 Cyclohexane	0.39000	0.41689	0.41689	0.010	6.89527	60.00000	Averaged	
	44 1,1-Dichloropropene	0.30239	0.32254	0.32254	0.010	6.66514	60.00000	Averaged	
	52 n-Butyl alcohol	0.00561	0.00775	0.00775	0.001	37.98841	60.00000	Averaged	
	46 Carbon tetrachloride	0.27838	0.31563	0.31563	0.010	13.38067	60.00000	Averaged	
$	47 1,2-Dichloroethane-d4	0.25054	0.25389	0.25389	0.001	1.33800	60.00000	Averaged	
	48 1,2-Dichloroethane	0.28523	0.28021	0.28021	0.010	-1.75924	60.00000	Averaged	
	49 Benzene	0.93344	0.95559	0.95559	0.010	2.37383	60.00000	Averaged	
	50 Cyclohexene	0.45698	0.48383	0.48383	0.001	5.87444	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 02-JUL-2009 09:24
Lab File ID: 6r402.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090702-01 Quant Type: ISTD
Method: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	53 Trichloroethylene	0.23398	0.24736	0.24736	0.010	5.71714	60.00000	Averaged	
	55 1,2-Dichloropropane	0.22842	0.23842	0.23842	0.010	4.37679	20.00000	Averaged	ccc
	56 Methylcyclohexane	0.42426	0.45773	0.45773	0.010	7.88875	60.00000	Averaged	
	59 Bromodichloromethane	0.25582	0.28938	0.28938	0.010	13.11681	60.00000	Averaged	
	58 Dibromomethane	0.12910	0.13981	0.13981	0.010	8.30046	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	264	250	0.15216	0.010	5.49478	60.00000	Linear	
	63 4-Methyl-2-pentanone	0.10020	0.10904	0.10904	0.010	8.82072	60.00000	Averaged	
	62 cis-1,3-Dichloropropylene	0.33458	0.38319	0.38319	0.010	14.52915	60.00000	Averaged	
$	64 Toluene-d8	1.32458	1.31291	1.31291	0.010	-0.88136	60.00000	Averaged	
	65 Toluene	0.82102	0.82142	0.82142	0.010	0.04844	20.00000	Averaged	ccc
	67 trans-1,3-Dichloropropylene	0.39769	0.45803	0.45803	0.010	15.17336	60.00000	Averaged	
	68 1,1,2-Trichloroethane	0.21291	0.22972	0.22972	0.010	7.89613	60.00000	Averaged	
	69 2-Hexanone	0.13814	0.14252	0.14252	0.010	3.17227	60.00000	Averaged	
	70 1,3-Dichloropropane	0.45210	0.47376	0.47376	0.010	4.78980	60.00000	Averaged	
	71 Tetrachloroethylene	0.28684	0.30776	0.30776	0.010	7.29458	60.00000	Averaged	
	72 Dibromochloromethane	0.26109	0.32103	0.32103	0.010	22.95764	60.00000	Averaged	
	73 1,2-Dibromoethane	0.24943	0.28147	0.28147	0.010	12.84754	60.00000	Averaged	
	76 Chlorobenzene	0.88521	0.90903	0.90903	0.300	2.69052	60.00000	Averaged	spcc
	77 1,1,1,2-Tetrachloroethane	0.28879	0.32871	0.32871	0.010	13.82249	60.00000	Averaged	
	78 Ethylbenzene	1.48252	1.54836	1.54836	0.010	4.44112	20.00000	Averaged	ccc
	79 m,p-Xylenes	0.59530	0.62876	0.62876	0.010	5.62051	60.00000	Averaged	
	80 o-Xylene	0.58237	0.61000	0.61000	0.010	4.74460	60.00000	Averaged	
	81 Styrene	0.90594	1.02888	1.02888	0.010	13.57094	60.00000	Averaged	
	82 Bromoform	52.66194	50.00000	0.40927	0.100	5.32387	60.00000	Linear	spcc
	83 Isopropylbenzene	2.74854	2.77802	2.77802	0.010	1.07266	60.00000	Averaged	
	87 1,1,2,2-Tetrachloroethane	0.59416	0.65572	0.65572	0.300	10.36108	60.00000	Averaged	spcc
$	85 Bromofluorobenzene	0.92346	0.90632	0.90632	0.010	-1.85598	60.00000	Averaged	
	88 1,2,3-Trichloropropane	0.16387	0.17727	0.17727	0.010	8.17833	60.00000	Averaged	
	90 Bromobenzene	0.70499	0.72789	0.72789	0.010	3.24823	60.00000	Averaged	
	91 n-Propylbenzene	3.18448	3.23683	3.23683	0.010	1.64400	60.00000	Averaged	
	93 2-Chlorotoluene	2.16177	2.16221	2.16221	0.010	0.02040	60.00000	Averaged	
	92 1,3,5-Trimethylbenzene	2.30772	2.37795	2.37795	0.010	3.04353	60.00000	Averaged	
	94 4-Chlorotoluene	1.92741	1.94048	1.94048	0.010	0.67824	60.00000	Averaged	
	95 tert-Butylbenzene	2.17151	2.23584	2.23584	0.010	2.96248	60.00000	Averaged	
	96 1,2,4-Trimethylbenzene	2.33215	2.40777	2.40777	0.010	3.24267	60.00000	Averaged	
	98 sec-Butylbenzene	3.07927	3.14253	3.14253	0.010	2.05422	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 02-JUL-2009 09:24
Lab File ID: 6r402.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090702-01 Quant Type: ISTD
Method: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
99	4-Isopropyltoluene	2.53200	2.63545	2.63545	0.010	4.08586	60.00000	Averaged
100	1,3-Dichlorobenzene	1.35807	1.39855	1.39855	0.010	2.98058	60.00000	Averaged
102	1,4-Dichlorobenzene	1.40095	1.42905	1.42905	0.010	2.00550	60.00000	Averaged
104	n-Butylbenzene	1.28518	1.35525	1.35525	0.010	5.45247	60.00000	Averaged
106	1,2-Dichlorobenzene	1.29254	1.33849	1.33849	0.010	3.55568	60.00000	Averaged
107	1,2-Dibromo-3-chloropropane	0.10188	0.14734	0.14734	0.010	44.61536	60.00000	Averaged
108	1,2,4-Trichlorobenzene	0.98469	1.05344	1.05344	0.010	6.98191	60.00000	Averaged
109	Hexachlorobutadiene	0.65540	0.70668	0.70668	0.010	7.82482	60.00000	Averaged
110	Naphthalene	1.89466	2.14522	2.14522	0.010	13.22499	60.00000	Averaged
111	1,2,3-Trichlorobenzene	0.83855	0.91476	0.91476	0.010	9.08712	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 7.86772
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r402.d
Lab Smp Id: W6VM090702-01 Client Smp ID: VSTD050
Inj Date : 02-JUL-2009 09:24
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090702-01|change|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090603-07B+UVM090617-07C
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
M 2 Xylenes (total)	106				2269104	150.000	158
M 3 1,2-Dichloroethylene (total)	96				1101774	100.000	104
M 1 1,3-Dichloropropylene	75				1175948	100.000	115
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	302935	50.0000	67.2
5 Chloromethane	50	4.713	4.713	(0.472)	399334	50.0000	53.2
6 Vinyl chloride	62	4.934	4.934	(0.494)	417192	50.0000	54.9
7 Bromomethane	94	5.508	5.508	(0.552)	318118	50.0000	53.0
8 Chloroethane	64	5.629	5.629	(0.564)	294118	50.0000	54.8
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	549348	50.0000	54.6
10 Ethyl Ether	59	6.334	6.334	(0.635)	339294	50.0000	49.9
13 Acetone	43	6.718	6.718	(0.673)	344662	250.000	274
16 Acetonitrile	41	7.078	7.078	(0.709)	1079793	1000.00	1280
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	536536	50.0000	53.8
17 Methyl acetate	43	7.102	7.102	(0.712)	1257470	250.000	255
15 Iodomethane	142	6.968	6.968	(0.698)	3215823	250.000	271

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	20 Methylene chloride	84	7.297	7.297	(0.731)	406847	50.0000	48.3
	18 Carbon disulfide	76	7.108	7.108	(0.712)	6015856	250.000	281
	22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	1028299	50.0000	51.7
	23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	525607	50.0000	52.4
	24 Vinyl acetate	43	8.066	8.066	(0.808)	3057741	250.000	273
	25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	649802	50.0000	51.3
	30 2-Butanone	43	8.694	8.694	(0.871)	425362	250.000	246
	31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	576167	50.0000	51.5
	33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	522300	50.0000	54.9
	36 Chloroform	83	9.053	9.053	(0.907)	630232	50.0000	51.5
	35 Bromochloromethane	128	9.023	9.023	(0.904)	205166	50.0000	55.0
	40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	544305	50.0000	54.8
	43 Cyclohexane	56	9.413	9.413	(0.943)	673910	50.0000	53.4
	44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	521387	50.0000	53.3
	52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1252039	5000.00	6900
	46 Carbon tetrachloride	117	9.517	9.517	(0.954)	510214	50.0000	56.7
$	47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	410413	50.0000	50.7
	48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	452964	50.0000	49.1
	49 Benzene	78	9.724	9.724	(0.974)	1544722	50.0000	51.2
	50 Cyclohexene	67	9.834	9.834	(0.985)	782107	50.0000	52.9
*	51 Fluorobenzene	96	9.980	9.980	(1.000)	1616503	50.0000	
	53 Trichloroethylene	95	10.364	10.364	(1.038)	399854	50.0000	52.8
	55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	385408	50.0000	52.2
	56 Methylcyclohexane	83	10.608	10.608	(1.063)	739914	50.0000	53.9
	59 Bromodichloromethane	83	10.864	10.864	(1.089)	467784	50.0000	56.6
	58 Dibromomethane	93	10.748	10.748	(1.077)	226010	50.0000	54.2
	61 2-Chloroethylvinyl ether	63	11.089	11.089	(1.111)	1229856	250.000	264
	63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	662455	250.000	272
	62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	619425	50.0000	57.3
$	64 Toluene-d8	98	11.626	11.626	(0.884)	1595218	50.0000	49.6
	65 Toluene	92	11.699	11.699	(0.889)	998048	50.0000	50.0
	67 trans-1,3-Dichloropropylene	75	11.858	11.858	(0.901)	556523	50.0000	57.6
	68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	279120	50.0000	53.9
	69 2-Hexanone	43	12.260	12.260	(0.932)	865826	250.000	258
	70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	575627	50.0000	52.4
	71 Tetrachloroethylene	164	12.290	12.290	(0.934)	373938	50.0000	53.6
	72 Dibromochloromethane	129	12.540	12.540	(0.953)	390066	50.0000	61.5
	73 1,2-Dibromoethane	107	12.705	12.705	(0.966)	341998	50.0000	56.4
*	75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1215029	50.0000	
	76 Chlorobenzene	112	13.193	13.193	(1.003)	1104500	50.0000	51.3
	77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	399392	50.0000	56.9
	78 Ethylbenzene	91	13.254	13.254	(1.007)	1881298	50.0000	52.2
	79 m,p-Xylenes	106	13.363	13.363	(1.016)	1527931	100.000	106
	80 o-Xylene	106	13.796	13.796	(1.049)	741173	50.0000	52.4
	81 Styrene	104	13.802	13.802	(1.049)	1250119	50.0000	56.8
	82 Bromoform	173	14.064	14.064	(0.903)	284571	50.0000	52.7
	83 Isopropylbenzene	105	14.156	14.156	(0.909)	1931600	50.0000	50.5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
87 1,1,2,2-Tetrachloroethane	83	14.442	14.442	(0.927)	455934	50.0000	55.2
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	630180	50.0000	49.1
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	123259	50.0000	54.1
90 Bromobenzene	156	14.564	14.564	(0.935)	506112	50.0000	51.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2250616	50.0000	50.8
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1503420	50.0000	50.0
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1653426	50.0000	51.5
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1349246	50.0000	50.3
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1554612	50.0000	51.5
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1674160	50.0000	51.6
98 sec-Butylbenzene	105	15.332	15.332	(0.984)	2185046	50.0000	51.0
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	1832471	50.0000	52.0
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	972433	50.0000	51.5
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	695315	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	993638	50.0000	51.0
104 n-Butylbenzene	92	15.887	15.887	(1.020)	942327	50.0000	52.7
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	930675	50.0000	51.8
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	102448	50.0000	72.3
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	732476	50.0000	53.5
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	491365	50.0000	53.9
110 Naphthalene	128	18.289	18.289	(1.174)	1491607	50.0000	56.6
111 1,2,3-Trichlorobenzene	180	18.618	18.618	(1.195)	636043	50.0000	54.5

Data File: /chem/VOA6.i/070209v6/6r402.d
Date : 02-JUL-2009 09:24
Client ID: VSTD050
Sample Info: IW6VM090702-01lchange11VOAF11
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

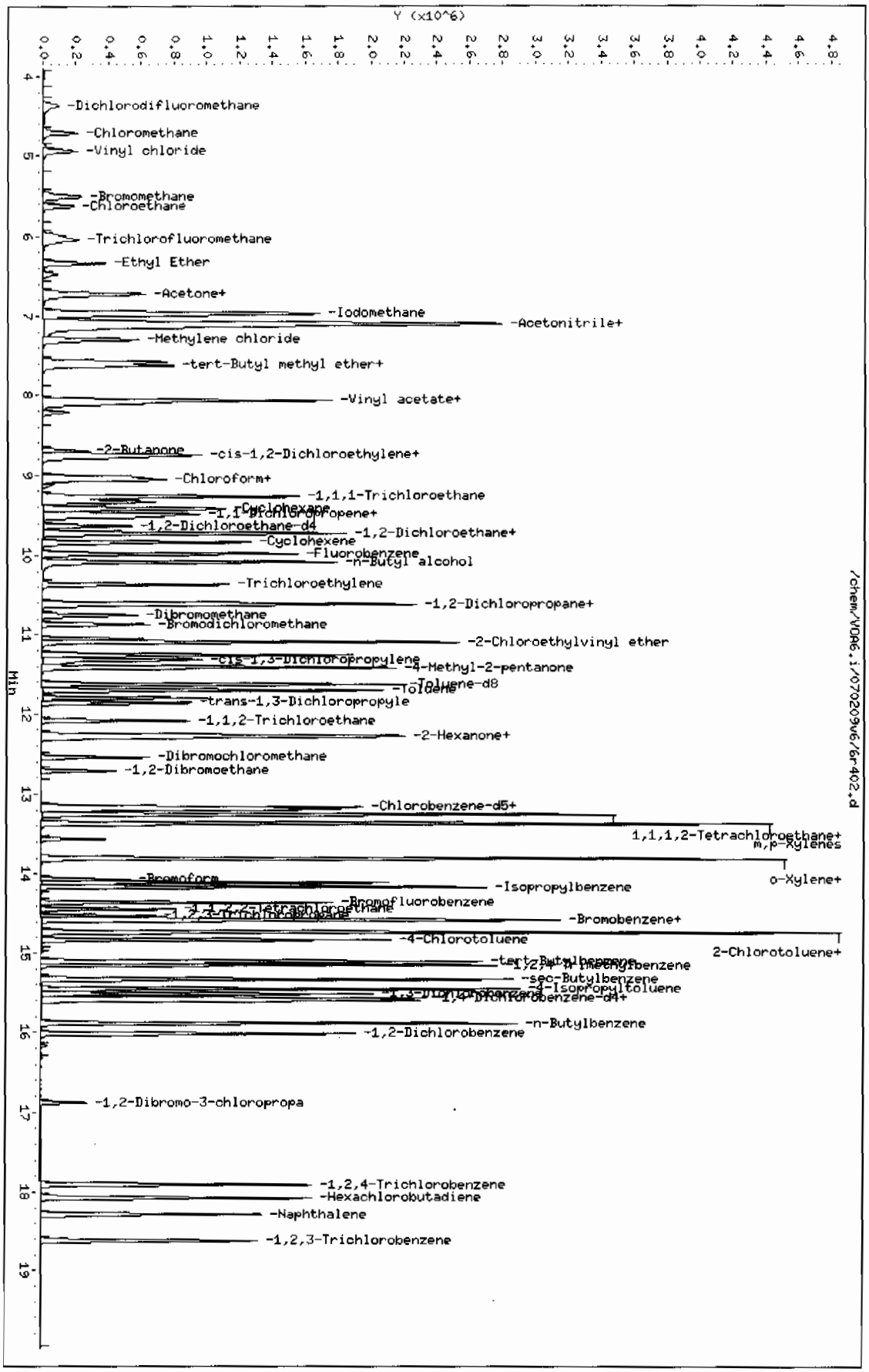

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 02-JUL-2009 11:18
Lab File ID: 6r406.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090702-04 Quant Type: ISTD
Method: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
150	Chlorotrifluoroethylene	137	150	0.17077	0.010	-8.43502	60.00000	Linear	
149	2-Chloro-1,1,1-trifluoroeth	0.29741	0.31770	0.31770	0.010	6.82442	60.00000	Averaged	
11	Acrolein	0.01230	0.02191	0.02191	0.001	78.18246	60.00000	Averaged	<-
12	Trichlorotrifluoroethane	0.08574	0.08257	0.08257	0.050	-3.69870	60.00000	Averaged	
26	Isopropyl Alcohol	0.01255	0.01557	0.01557	0.001	23.99064	60.00000	Averaged	
19	Allyl chloride	0.28551	0.23777	0.23777	0.010	-16.72052	60.00000	Averaged	
28	tert-butyl Alcohol	0.02108	0.02586	0.02586	0.001	22.65985	60.00000	Averaged	
21	Acrylonitrile	0.06813	0.06722	0.06722	0.010	-1.33597	60.00000	Averaged	
34	Isopropyl ether	0.70684	0.71050	0.71050	0.001	0.51842	60.00000	Averaged	
27	2-Chloro-1,3-butadiene	0.25646	0.26028	0.26028	0.010	1.48647	60.00000	Averaged	
41	Ethyl tert-butyl ether	0.67565	0.70366	0.70366	0.001	4.14463	60.00000	Averaged	
32	Propionitrile	0.02721	0.02721	0.02721	0.010	-0.01589	60.00000	Averaged	
29	Ethyl acetate	0.19208	0.16403	0.16403	0.010	-14.60479	60.00000	Averaged	
37	Methacrylonitrile	0.10709	0.09850	0.09850	0.010	-8.02261	60.00000	Averaged	
38	Tetrahydrofuran	0.13836	0.12875	0.12875	0.010	-6.94869	60.00000	Averaged	
42	Isobutyl alcohol	0.00627	0.00657	0.00657	0.005	4.74715	60.00000	Averaged	
45	Methyl tert-amyl ether	0.22440	0.18972	0.18972	0.001	-15.45680	60.00000	Averaged	
54	Methyl methacrylate	0.14132	0.14127	0.14127	0.010	-0.03819	60.00000	Averaged	
66	Ethyl methacrylate	0.35900	0.33982	0.33982	0.010	-5.34331	60.00000	Averaged	
74	1-Chlorohexane	0.29129	0.30532	0.30532	0.001	4.81582	60.00000	Averaged	
57	1,4-Dioxane	0.00232	0.00219	0.00219	0.001	-5.48904	60.00000	Averaged	
60	2-Nitropropane	218	250	0.05034	0.010	-12.62132	60.00000	Linear	
84	cis-1,4-Dichloro-2-butene	0.16765	0.16994	0.16994	0.010	1.36476	60.00000	Averaged	
86	Cyclohexanone	0.00965	0.01029	0.01029	0.010	6.59974	60.00000	Averaged	<-
89	trans-1,4-Dichloro-2-butene	0.16166	0.16229	0.16229	0.010	0.38695	60.00000	Averaged	
97	Pentachloroethane	0.30776	0.26535	0.26535	0.010	-13.77861	60.00000	Averaged	
103	Benzyl chloride	250	250	1.11405	0.010	0.15888	60.00000	Linear	
105	bis(2-Chloroisopropyl)ether	0.07465	0.07747	0.07747	0.010	3.78300	60.00000	Averaged	
$ 47	1,2-Dichloroethane-d4	0.25054	0.23876	0.23876	0.001	-4.70095	60.00000	Averaged	
$ 64	Toluene-d8	1.32458	1.29462	1.29462	0.010	-2.26156	60.00000	Averaged	
$ 85	Bromofluorobenzene	0.92346	0.90752	0.90752	0.010	-1.72583	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 02-JUL-2009 11:18
Lab File ID: 6r406.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090702-04 Quant Type: ISTD
Method: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m

```
|Average %D / Drift Results.                          |
|*****************************************************|
|Calculated Average %D/Drift =    7.86772             |
|Maximun Average %D/Drift    =   20.00000             |
|* Passed Average %D/Drift Test.                      |
|_____________________________________________________|
```

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r406.d
Lab Smp Id: W6VM090702-04 Client Smp ID: VSTD250S
Inj Date : 02-JUL-2009 11:18
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090702-04|short/LCS|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090601-08B/UVM090624-02A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 06-Jul-2009 11:53 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
150 Chlorotrifluoroethylene	116	4.290	4.290	(0.430)	824622	150.000	137
149 2-Chloro-1,1,1-trifluoroethane	118	5.075	5.075	(0.509)	1534171	150.000	160
11 Acrolein	56	6.542	6.542	(0.655)	176328	250.000	445
12 Trichlorotrifluoroethane	85	6.706	6.706	(0.672)	664505	250.000	241
26 Isopropyl Alcohol	45	6.798	6.798	(0.681)	1252859	2500.00	3100
19 Allyl chloride	41	7.145	7.145	(0.716)	1913613	250.000	208
28 tert-Butyl Alcohol	59	7.291	7.291	(0.731)	2080919	2500.00	3070(H)
21 Acrylonitrile	53	7.554	7.554	(0.757)	541030	250.000	247
34 Isopropyl ether	45	8.084	8.084	(0.810)	1143654	50.0000	50.2
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	418950	50.0000	50.7
41 Ethyl tert-butyl ether	59	8.492	8.492	(0.851)	1132635	50.0000	52.1
32 Propionitrile	54	8.779	8.779	(0.880)	218984	250.000	250
29 Ethyl acetate	43	8.706	8.706	(0.872)	1320113	250.000	213
37 Methacrylonitrile	41	8.956	8.956	(0.897)	792725	250.000	230(H)
38 Tetrahydrofuran	42	9.066	9.066	(0.582)	432788	250.000	233(H)
42 Isobutyl alcohol	41	9.395	9.395	(0.941)	528994	2500.00	2620

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
45 Methyl tert-amyl ether	55	9.742	9.742	(0.976)	305375	50.0000	42.3
54 Methyl methacrylate	69	10.590	10.590	(1.061)	1136954	250.000	250
66 Ethyl methacrylate	69	11.858	11.858	(0.901)	2037226	250.000	237(H)
74 1-Chlorohexane	55	13.059	13.059	(0.993)	366087	50.0000	52.4(H)
57 1,4-Dioxane	88	10.699	10.699	(1.072)	176617	2500.00	2360
60 2-Nitropropane	43	11.077	11.077	(1.110)	405171	250.000	218
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	571266	250.000	253
86 Cyclohexanone	55	14.321	14.321	(1.089)	308381	1250.00	1330
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	545543	250.000	251
97 Pentachloroethane	167	15.180	15.180	(0.975)	892005	250.000	216
103 Benzyl chloride	91	15.717	15.717	(1.009)	3744952	250.000	250
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	260429	250.000	259
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1609640	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1199019	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	672311	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	384317	50.0000	47.6
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1552278	50.0000	48.9
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	610139	50.0000	49.1

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /chem/VOA6.i/070209v6/6r406.d
Date : 02-JUL-2009 11:18
Client ID: VSTD250S
Sample Info: IW6VH090702-041short/LCS1I1VOAFI1I
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

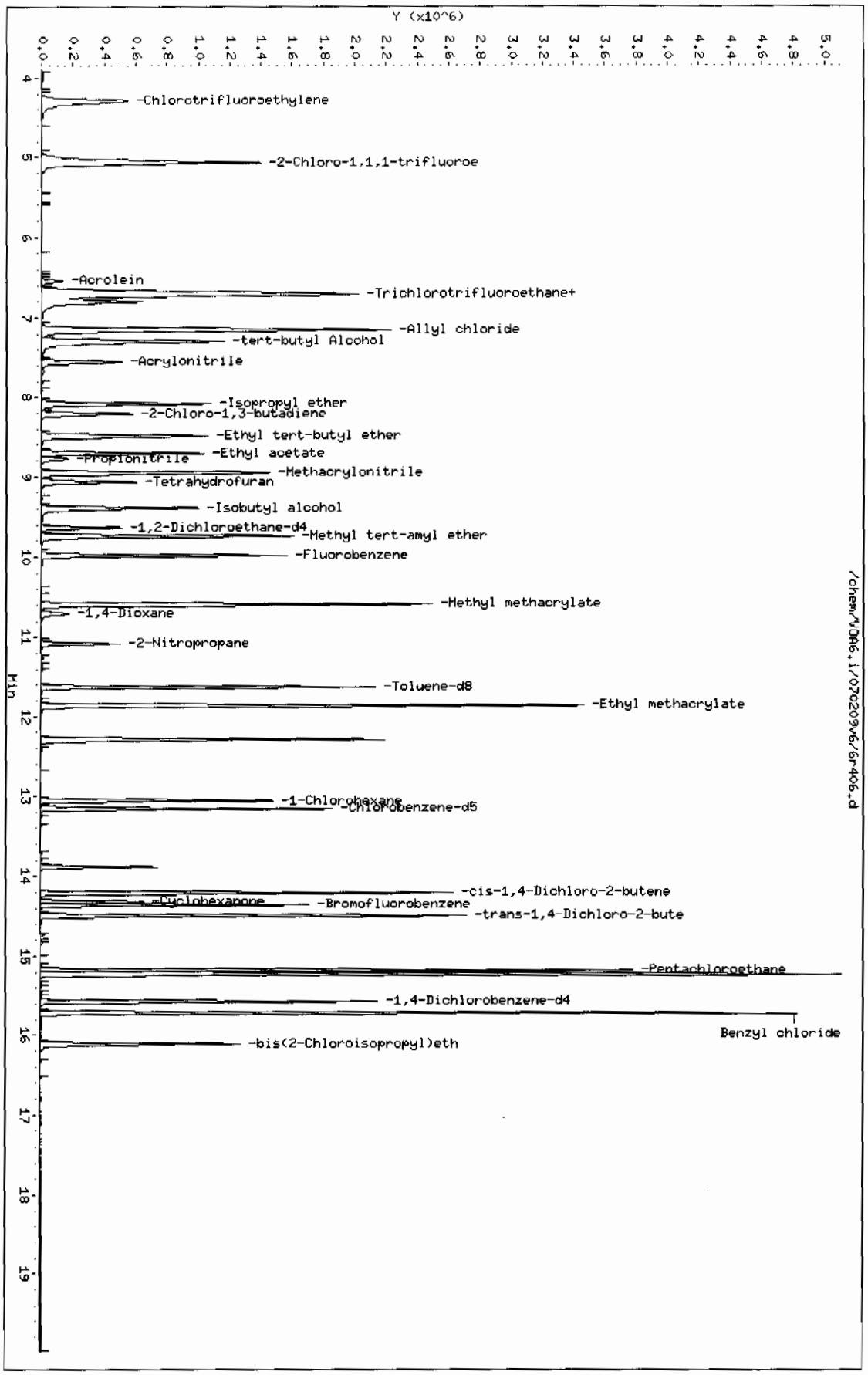

Page 1

QC Data

Data File: /chem/VOA6.i/061509v6/6p111.d

Page 1

Date : 15-JUN-2009 16:10

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

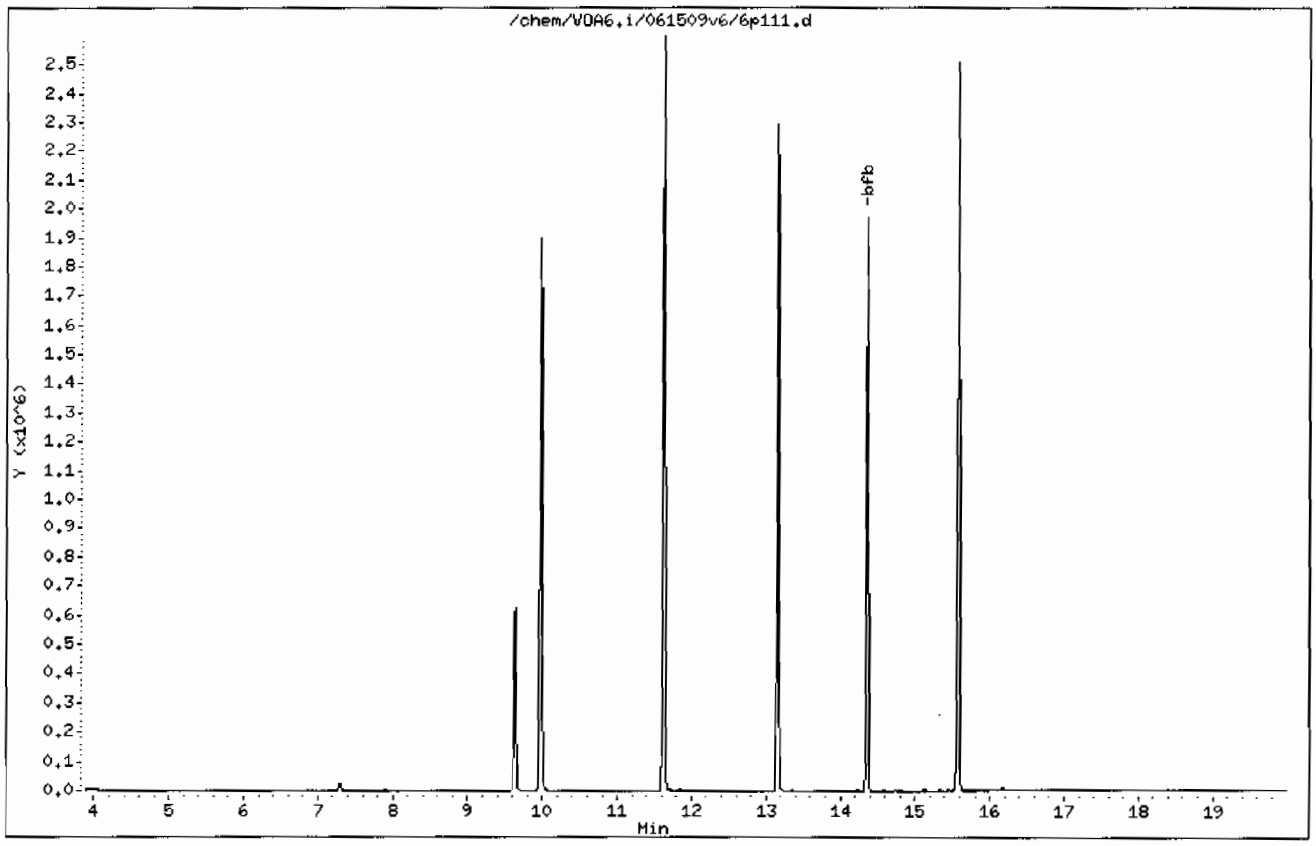

Data File: /chem/VOA6.i/061509v6/6p111.d

Date : 15-JUN-2009 16:10

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

1 bfb

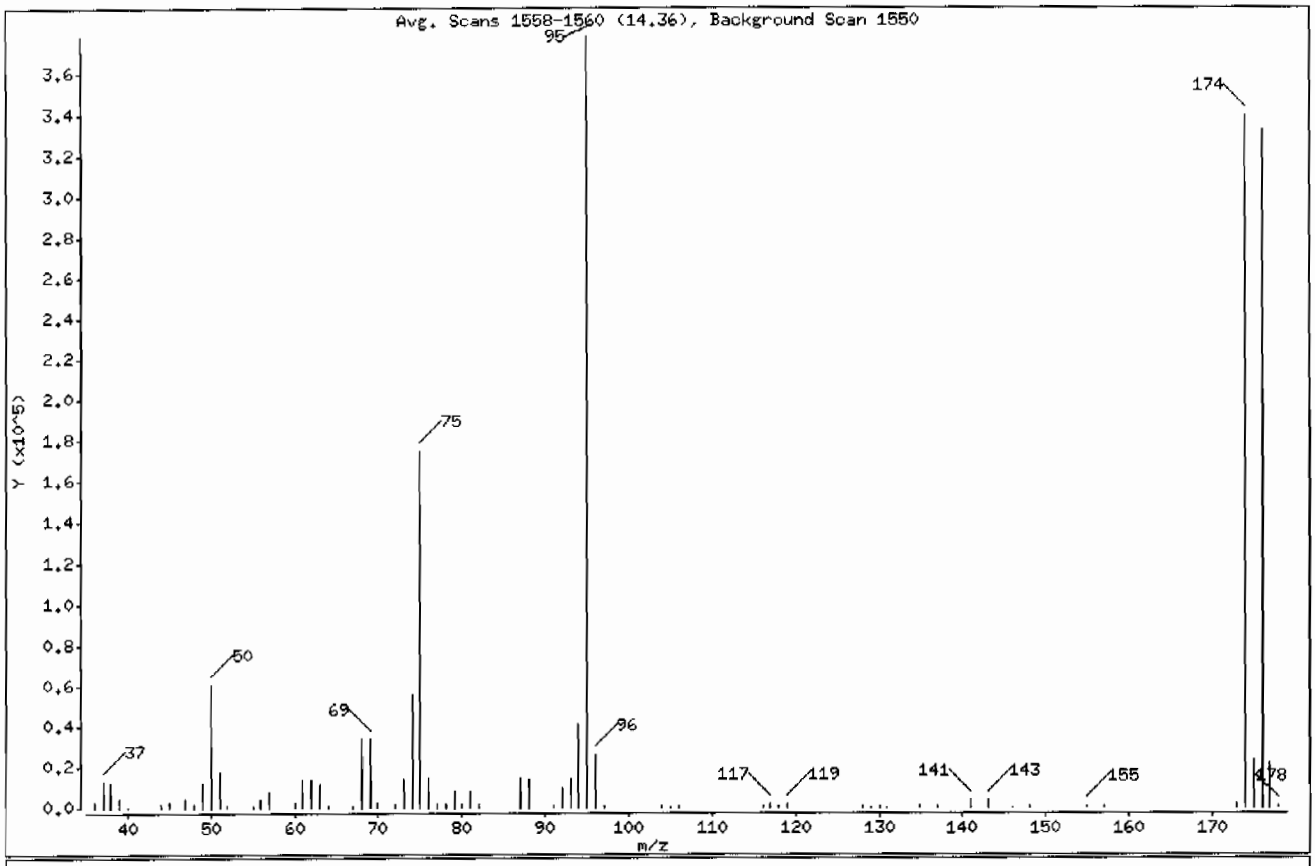

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.99
75	30.00 - 60.00% of mass 95	46.24
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.49 (0.54)
174	50.00 - 100.00% of mass 95	89.71
175	5.00 - 9.00% of mass 174	6.23 (6.94)
176	95.00 - 101.00% of mass 174	87.72 (97.77)
177	5.00 - 9.00% of mass 176	5.64 (6.43)

Data File: /chem/VOA6.i/061509v6/6p111.d

Date : 15-JUN-2009 16:10

Client ID: BFB01 Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Data File: 6p111.d
Spectrum: Avg. Scans 1558-1560 (14,36), Background Scan 1550
Location of Maximum: 95.00
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2269	62.00	13935	87.00	15033	130.00	1206
37.00	13180	63.00	10916	88.00	14161	131.00	168
38.00	12293	64.00	960	91.00	1067	135.00	629
39.00	4779	67.00	849	92.00	9277	137.00	637
40.00	185	68.00	33536	93.00	13940	141.00	3085
44.00	1434	69.00	34232	94.00	40720	143.00	3197
45.00	2465	70.00	2699	95.00	378240	146.00	201
47.00	4159	72.00	1532	96.00	25712	148.00	871
48.00	1584	73.00	13567	97.00	790	155.00	942
49.00	12246	74.00	55256	104.00	1142	157.00	649
50.00	60496	75.00	174912	105.00	187	173.00	1835
51.00	17576	76.00	15006	106.00	1232	174.00	339328
52.00	838	77.00	1958	116.00	1147	175.00	23552
55.00	715	78.00	1408	117.00	1930	176.00	331776
56.00	4247	79.00	7489	118.00	1112	177.00	21320
57.00	8192	80.00	2165	119.00	1755	178.00	704
60.00	2578	81.00	7460	128.00	1279		
61.00	13830	82.00	1674	129.00	402		

Data File: /chem/VOA6.i/070109v6/6r302BFB.d

Date : 01-JUL-2009 09:44

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |W6VM090701-01|CCV/BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

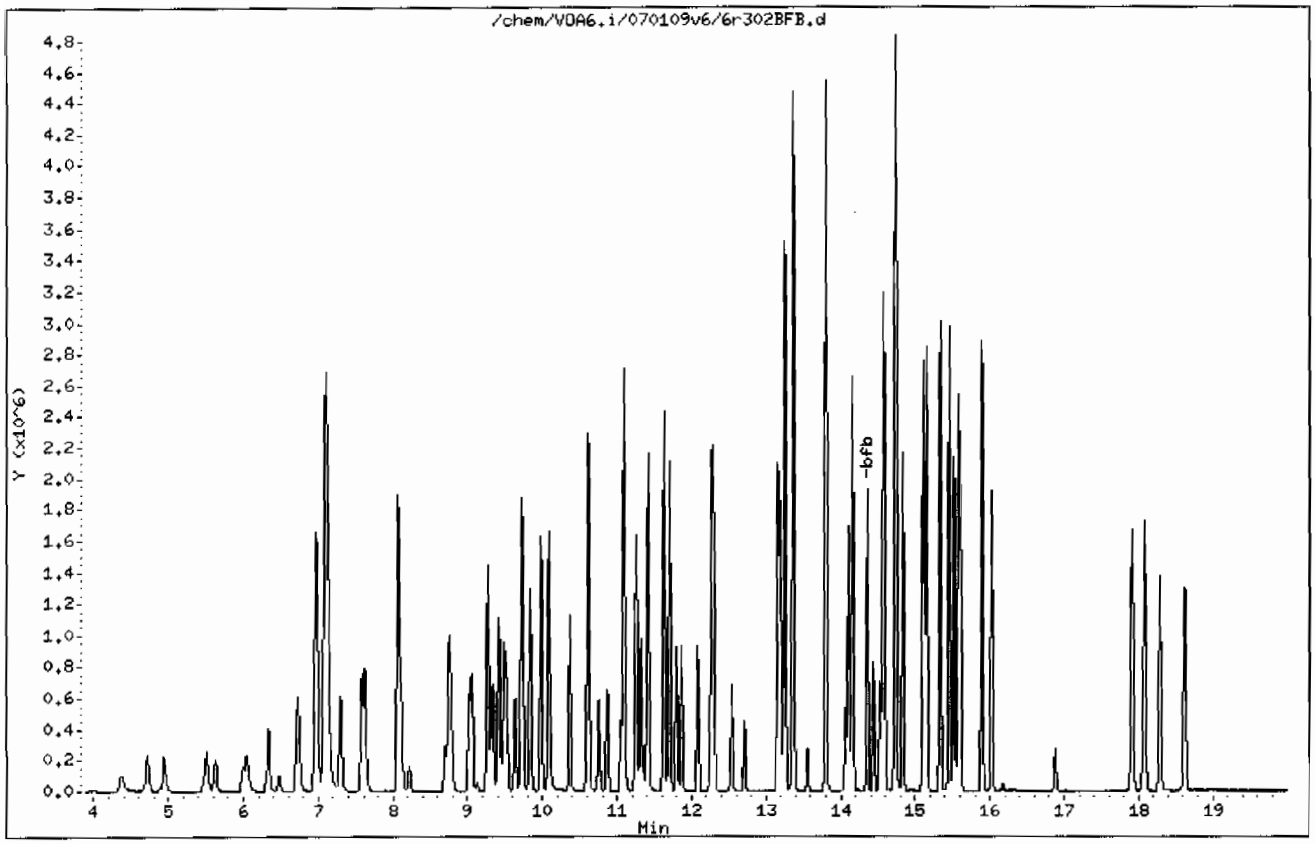

Data File: /chem/VOA6.i/070109v6/6r302BFB.d

Date : 01-JUL-2009 09:44

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |W6VM090701-01|CCV/BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

1 bfb

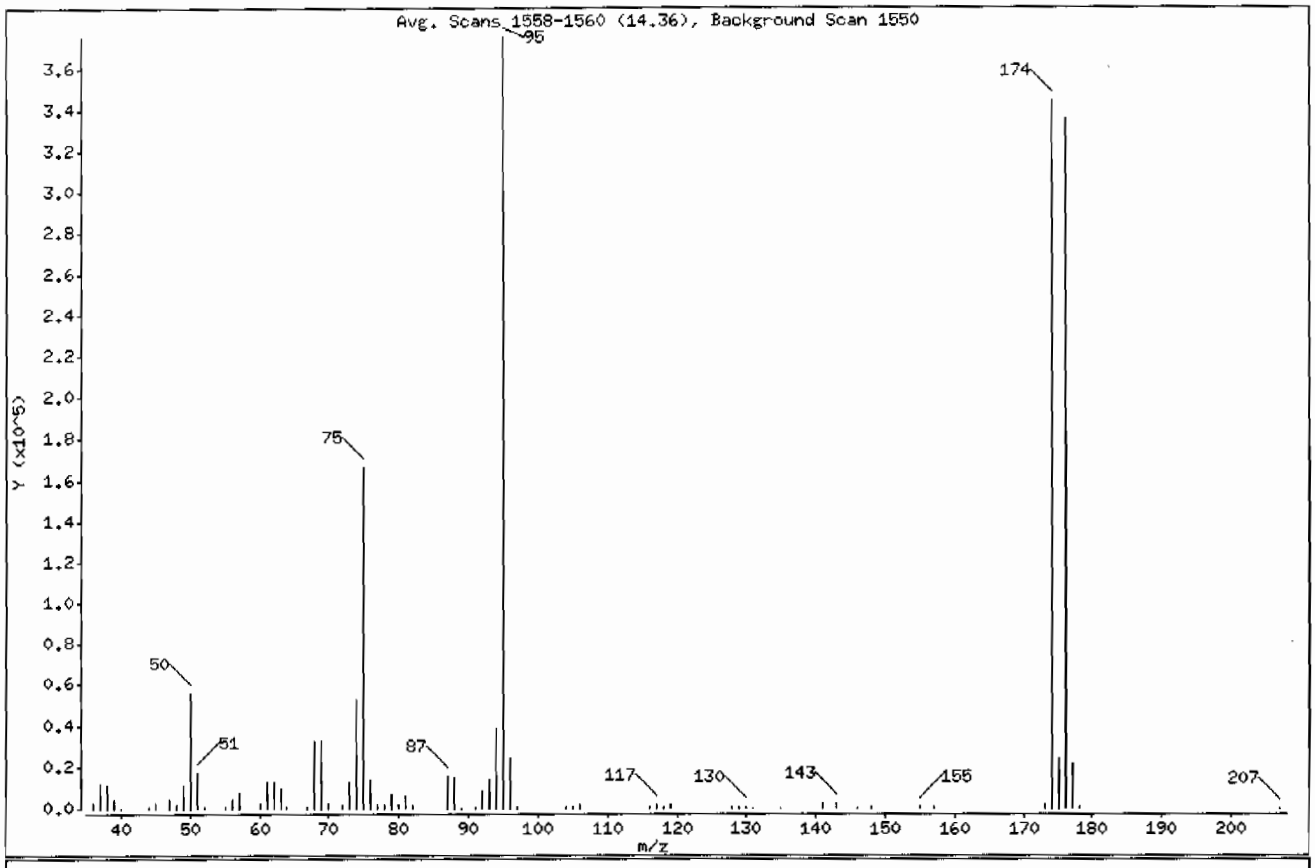

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.02
75	30.00 - 60.00% of mass 95	44.36
96	5.00 - 9.00% of mass 95	6.55
173	Less than 2.00% of mass 174	0.56 (0.61)
174	50.00 - 100.00% of mass 95	91.69
175	5.00 - 9.00% of mass 174	6.51 (7.10)
176	95.00 - 101.00% of mass 174	89.43 (97.53)
177	5.00 - 9.00% of mass 176	5.79 (6.48)

Data File: /chem/VOA6.i/070109v6/6r302BFB.d

Date : 01-JUL-2009 09:44

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |W6VH090701-01|CCV/BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Data File: 6r302BFB.d
Spectrum: Avg. Scans 1558-1560 (14.36), Background Scan 1550
Location of Maximum: 95.00
Number of points: 71

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2391	62.00	12739	87.00	15406	129.00	616
37.00	11983	63.00	9916	88.00	14475	130.00	1208
38.00	10960	64.00	926	89.00	241	131.00	356
39.00	4490	67.00	809	91.00	1055	135.00	345
40.00	170	68.00	31800	92.00	8690	141.00	2719
44.00	1165	69.00	32464	93.00	13416	143.00	2917
45.00	2466	70.00	2303	94.00	39088	146.00	345
47.00	3912	72.00	1524	95.00	375232	148.00	833
48.00	1653	73.00	13069	96.00	24584	155.00	859
49.00	11123	74.00	52920	97.00	737	157.00	771
50.00	56344	75.00	166464	104.00	1202	173.00	2111
51.00	16976	76.00	13886	105.00	704	174.00	344064
52.00	711	77.00	2030	106.00	1327	175.00	24424
55.00	808	78.00	1418	116.00	1018	176.00	335552
56.00	3919	79.00	6498	117.00	1696	177.00	21744
57.00	7500	80.00	2104	118.00	982	178.00	559
60.00	2457	81.00	6430	119.00	1482	207.00	170
61.00	12898	82.00	1501	128.00	1188		

Data File: /chem/VOA6.i/070209v6/6r402BFB.d

Page 1

Date : 02-JUL-2009 09:24

Client ID: BFB01

Instrument: VOA6.i

Sample Info: IW6VM090702-01|CCV/BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

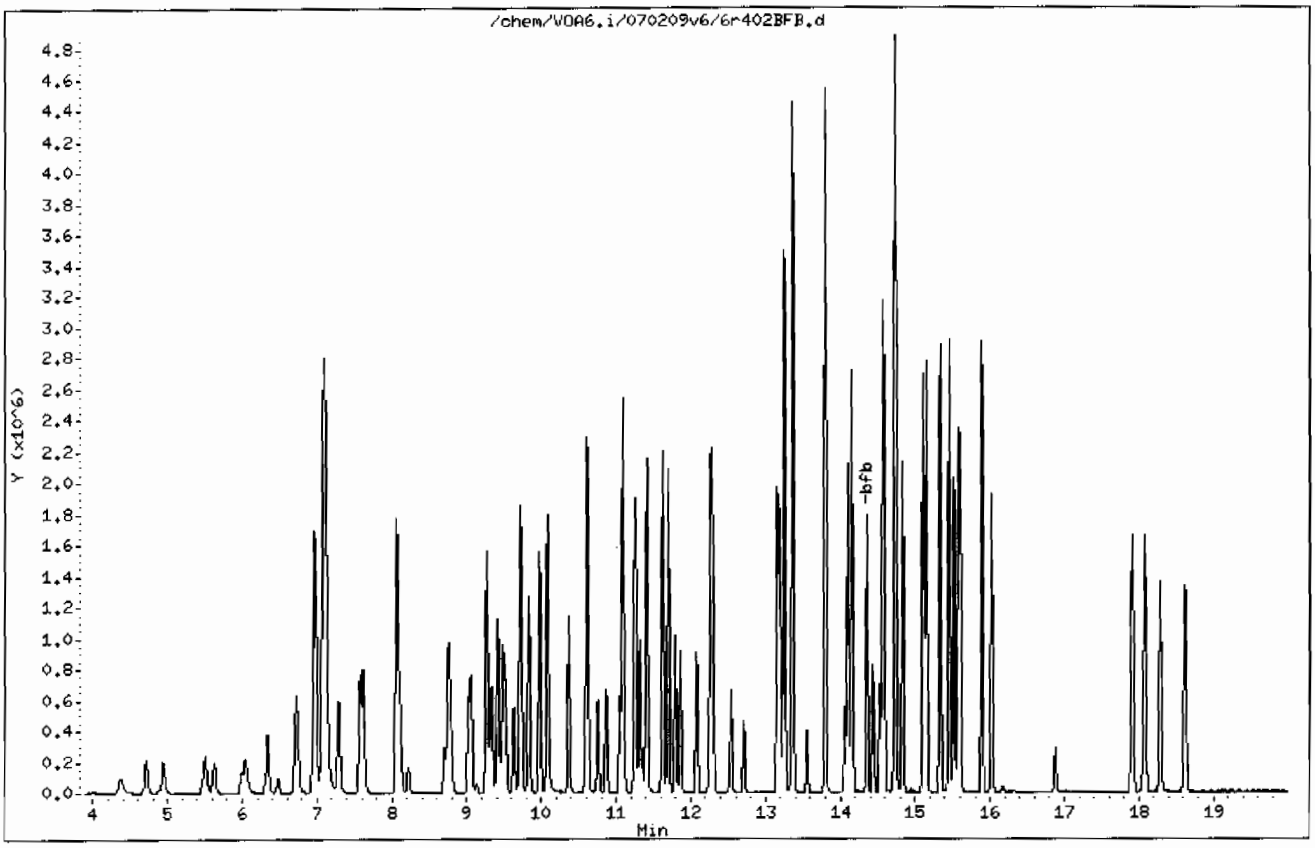

Data File: /chem/VOA6.i/070209v6/6r402BFB.d

Date : 02-JUL-2009 09:24

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |W6VM090702-01|CCV/BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

1 bfb

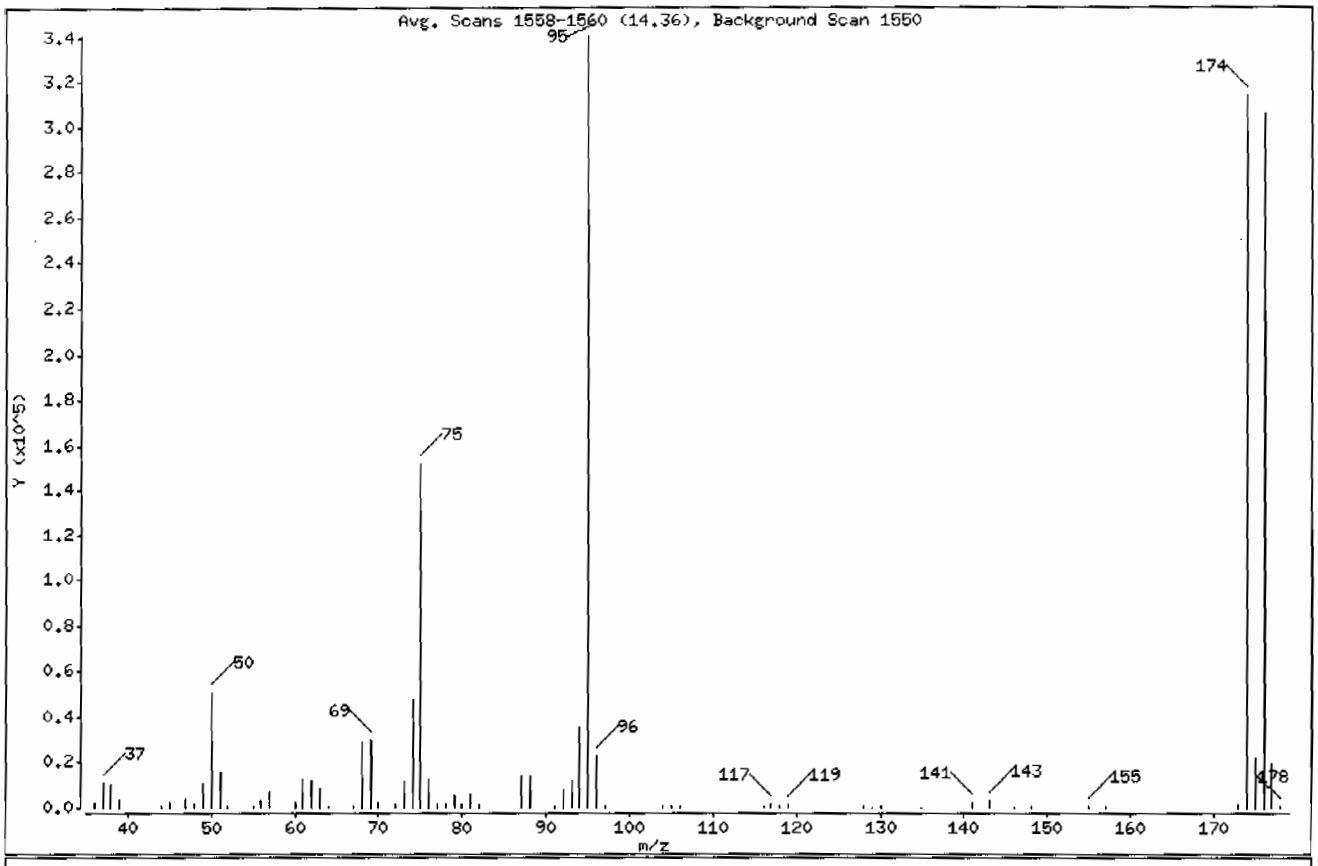

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.03
75	30.00 - 60.00% of mass 95	44.56
96	5.00 - 9.00% of mass 95	6.57
173	Less than 2.00% of mass 174	0.54 (0.58)
174	50.00 - 100.00% of mass 95	92.26
175	5.00 - 9.00% of mass 174	6.49 (7.03)
176	95.00 - 101.00% of mass 174	89.91 (97.45)
177	5.00 - 9.00% of mass 176	5.86 (6.51)

Data File: /chem/VOA6.i/070209v6/6r402BFB.d

Date : 02-JUL-2009 09:24

Client ID: BFB01 Instrument: VOA6.i

Sample Info: IW6VM090702-01|CCV/BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Data File: 6r402BFB.d
Spectrum: Avg. Scans 1558-1560 (14.36), Background Scan 1550
Location of Maximum: 95.00
Number of points: 67

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2206	62.00	11843	82.00	1620	128.00	1071
37.00	11120	63.00	8943	87.00	14074	129.00	173
38.00	10005	64.00	887	88.00	14027	130.00	1058
39.00	3963	67.00	701	91.00	1049	135.00	172
44.00	1048	68.00	28728	92.00	8208	141.00	2540
45.00	2057	69.00	29384	93.00	11907	143.00	2769
47.00	4080	70.00	2225	94.00	35384	146.00	171
48.00	1480	72.00	1482	95.00	340544	148.00	824
49.00	10598	73.00	11685	96.00	22384	155.00	782
50.00	51168	74.00	47568	97.00	681	157.00	570
51.00	15990	75.00	151744	104.00	1094	173.00	1827
52.00	611	76.00	12565	105.00	402	174.00	314176
55.00	637	77.00	1820	106.00	1092	175.00	22088
56.00	3481	78.00	1262	116.00	960	176.00	306176
57.00	6782	79.00	5849	117.00	1707	177.00	19944
60.00	2248	80.00	1896	118.00	1039	178.00	581
61.00	12174	81.00	6004	119.00	1436		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201872762				
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881793	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 12:35	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r307B1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201872762				
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881793	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 12:35	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r307B1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r307B1.d
Lab Smp Id: 1201872762 Client Smp ID: BLANK
Inj Date : 01-JUL-2009 12:35
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201872762|881794|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
$ 47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	398720	48.0204	48.0
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1657067	50.0000	
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1620023	48.1589	48.2
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1269803	50.0000	
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	646221	49.4013	49.4
* 101 1,4-Dichlorobenzene-d4	152	15.577	15.576	(1.000)	708261	50.0000	
103 Benzyl chloride	91	15.717	15.717	(1.009)	6409	3.42939	3.4(aQ)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

QC Flag Legend

Q - Qualifier signal failed the ratio test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r307B1.d
Lab Smp Id: 1201872762 Client Smp ID: BLANK
Inj Date : 01-JUL-2009 12:35
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201872762|881794|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA6.i/070109v6/6r307B1.d
Date : 01-JUL-2009 12:35
Client ID: BLANK
Sample Info: |1201872762|881794|1|VOAF11|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

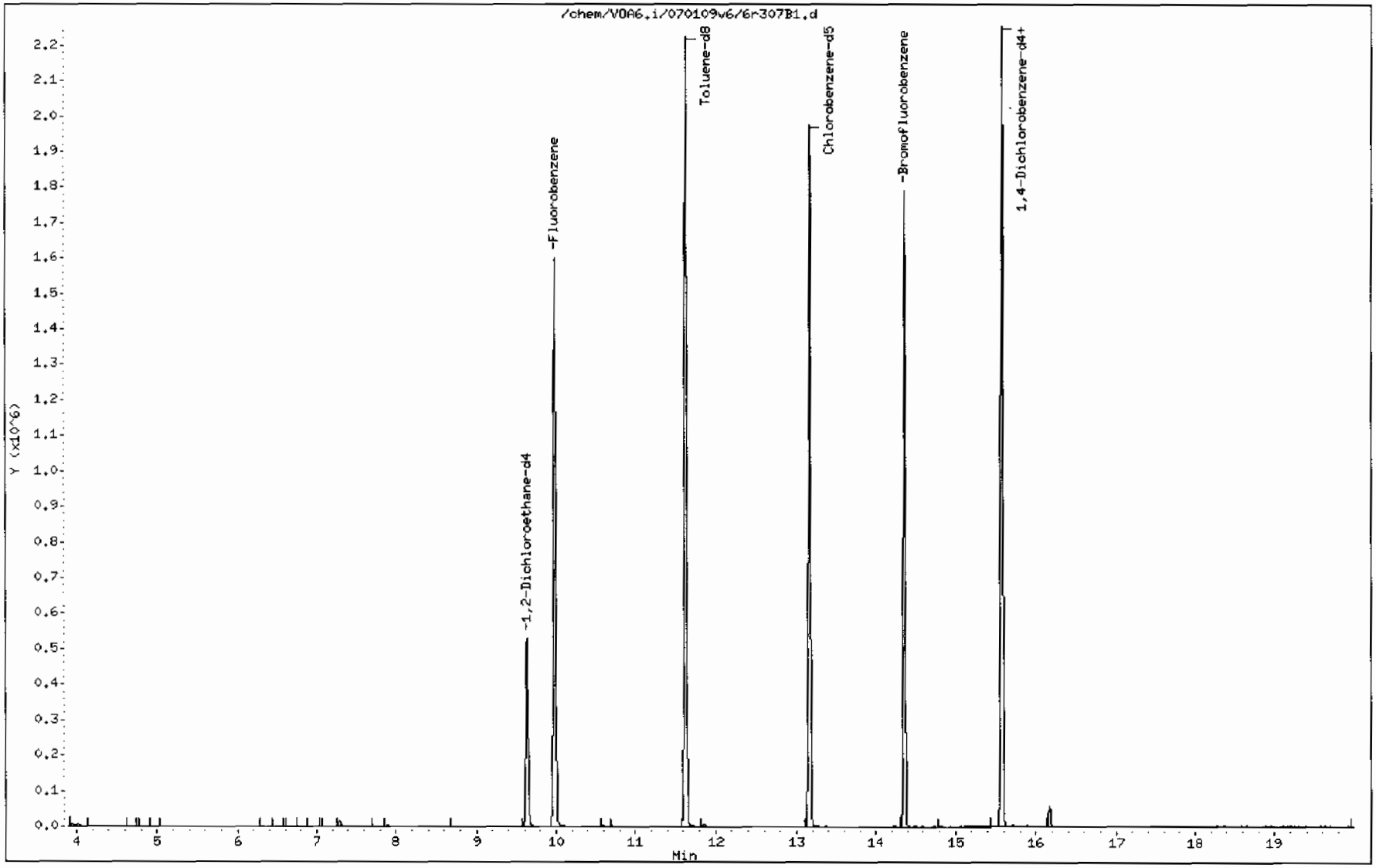

Data File: /chem/VOA6.i/070109v6/6r307B1.d

Date : 01-JUL-2009 12:35

Client ID: BLANK

Instrument: VOA6.i

Sample Info: |120187276218817941|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

103 Benzyl chloride

Concentration: 3.4 ug/Kg

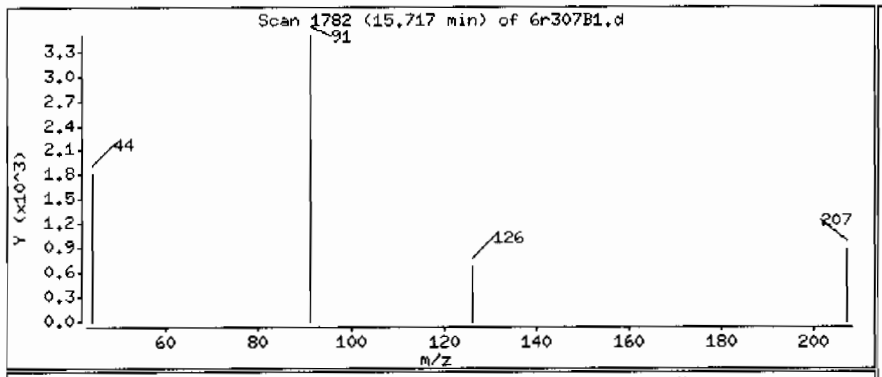

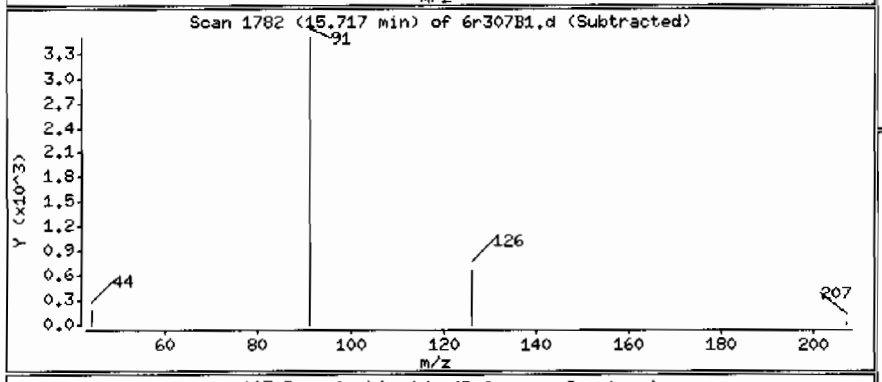

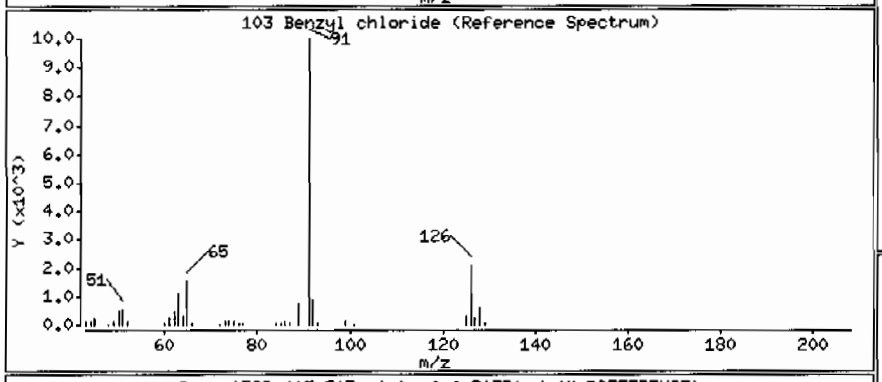

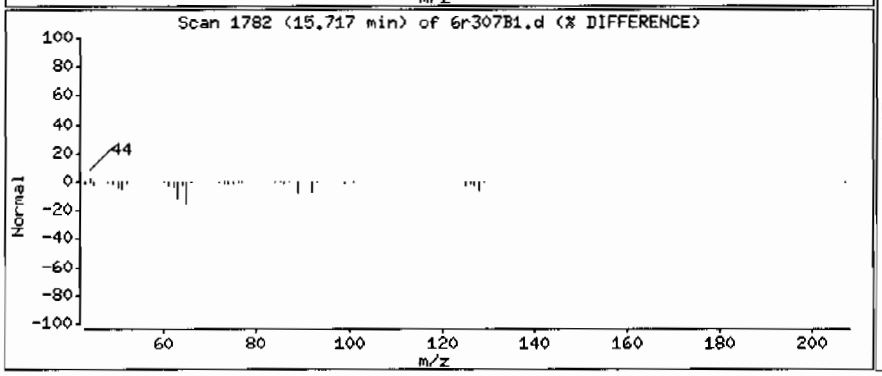

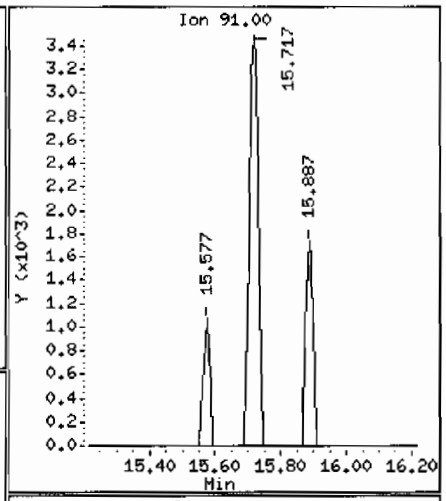

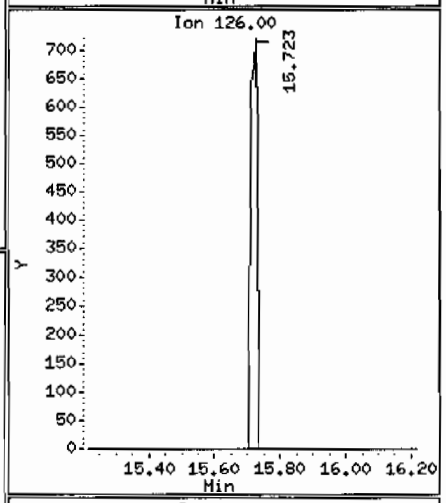

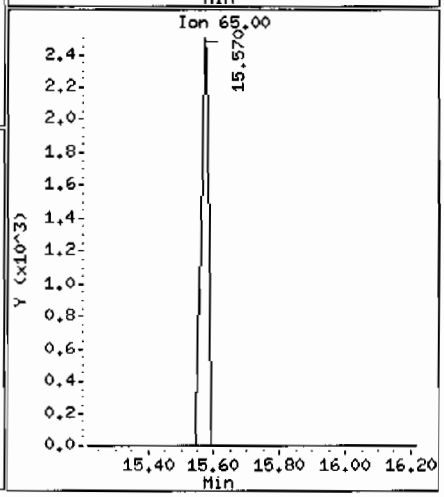

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201876338				
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881793	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 13:07	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r409B1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2457**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201876338**				
Client Sample:	**QC for batch 881793**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 881793**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**881794**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/02/2009 13:07**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/02/2009 09:30**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6r409B1.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r409B1.d
Lab Smp Id: 1201876338 Client Smp ID: BLANK
Inj Date : 02-JUL-2009 13:07
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201876338|881794|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 09:23 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
$ 47 1,2-Dichloroethane-d4	65	9.633	9.632	(0.965)	372457	48.7121	48.7
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1525938	50.0000	
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1488151	49.3335	49.3
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1138668	50.0000	
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	570500	47.9344	47.9
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	644405	50.0000	

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r409B1.d
Lab Smp Id: 1201876338 Client Smp ID: BLANK
Inj Date : 02-JUL-2009 13:07
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201876338|881794|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 09:23 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA6.i/070209v6/6r409B1.d

Date : 02-JUL-2009 13:07

Client ID: BLANK

Sample Info: |120187633818817941|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1

Column diameter: 0.25

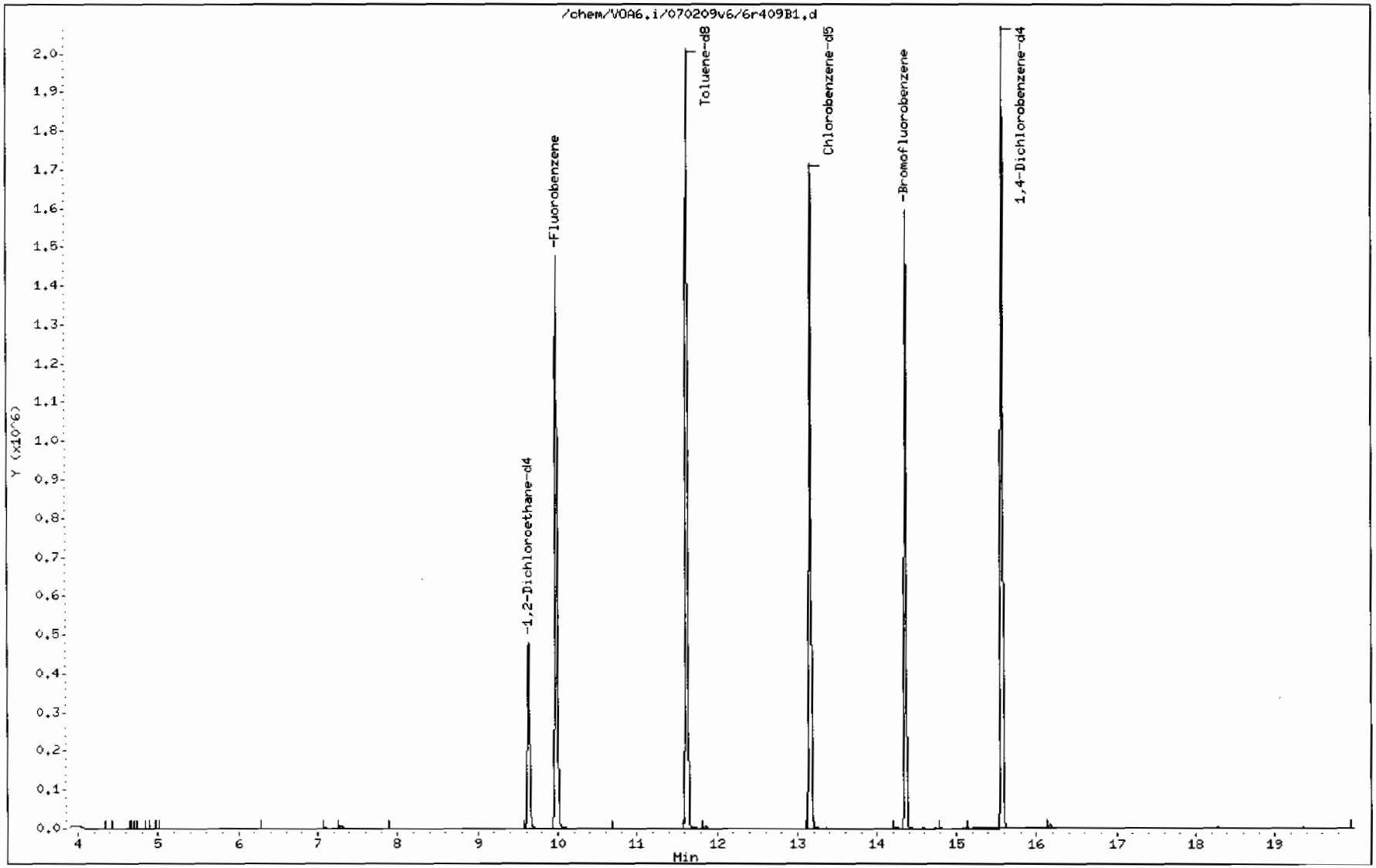

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201872765				
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881793	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 11:11	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r304L1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		80.4	ug/kg	0.340	1.00
74-87-3	Chloromethane		56.3	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		57.5	ug/kg	0.300	1.00
74-83-9	Bromomethane		52.4	ug/kg	0.300	1.00
75-00-3	Chloroethane		54.0	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		59.0	ug/kg	0.570	1.00
67-64-1	Acetone		358	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		54.4	ug/kg	0.300	1.00
74-88-4	Iodomethane		264	ug/kg	1.60	5.00
75-09-2	Methylene chloride		47.6	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		288	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		49.9	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		50.8	ug/kg	0.300	1.00
78-93-3	2-Butanone		455	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		53.3	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		55.3	ug/kg	0.300	1.00
67-66-3	Chloroform		51.1	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		54.3	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		54.6	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		54.3	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		56.0	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		48.6	ug/kg	0.300	1.00
71-43-2	Benzene		49.9	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		53.8	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		52.5	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		57.1	ug/kg	0.300	1.00
74-95-3	Dibromomethane		52.6	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		306	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		57.9	ug/kg	0.300	1.00
108-88-3	Toluene		48.0	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		56.6	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		53.4	ug/kg	0.300	1.00
591-78-6	2-Hexanone		362	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		51.2	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		52.1	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		57.4	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		55.0	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		50.8	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201872765				
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881793	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 11:11	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r304L1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		49.8	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		101	ug/kg	0.300	2.00
95-47-6	o-Xylene		51.5	ug/kg	0.300	1.00
100-42-5	Styrene		54.1	ug/kg	0.300	1.00
75-25-2	Bromoform		51.3	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		53.0	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		58.6	ug/kg	0.300	1.00
108-86-1	Bromobenzene		49.8	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		47.7	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		48.4	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		41.7	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		48.5	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		49.4	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		49.6	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		49.0	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		49.1	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		51.1	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		50.6	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		49.0	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		50.5	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		75.0	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		55.1	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		50.1	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r304L1.d
Lab Smp Id: 1201872765 Client Smp ID: LCS
Inj Date : 01-JUL-2009 11:11
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201872765|881794|1|VOAF|1|
Misc Info : GEL 5g N/A UVM090605-01D+IVM090630-01
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1 1,3-Dichloropropylene	75				1257162	114.498	114
M 2 Xylenes (total)	106				2383007	152.372	152
M 3 1,2-Dichloroethylene (total)	96				1158321	103.203	103
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	382826	80.3545	80.4(R)
5 Chloromethane	50	4.713	4.713	(0.472)	445831	56.2604	56.3
6 Vinyl chloride	62	4.934	4.934	(0.494)	461664	57.5353	57.5
7 Bromomethane	94	5.508	5.508	(0.552)	331853	52.3779	52.4
8 Chloroethane	64	5.629	5.629	(0.564)	306311	54.0402	54.0
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	626755	59.0022	59.0
10 Ethyl Ether	59	6.340	6.334	(0.635)	368610	51.3250	51.3
13 Acetone	43	6.718	6.718	(0.673)	475725	358.114	358
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	573282	54.4261	54.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
	15 Iodomethane	142	6.968	6.968	(0.698)	3307562	263.961	264
	16 Acetonitrile	41	7.078	7.078	(0.709)	1164977	1309.13	1310
	17 Methyl acetate	43	7.103	7.103	(0.712)	1374189	264.087	264
	18 Carbon disulfide	76	7.109	7.090	(0.712)	6508323	287.983	288
	20 Methylene chloride	84	7.292	7.292	(0.731)	423730	47.5838	47.6
	22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	1097056	52.1990	52.2
	23 trans-1,2-Dichloroethylene	61	7.627	7.621	(0.764)	528861	49.9130	49.9
	24 Vinyl acetate	43	8.066	8.066	(0.808)	2874140	243.011	243
	25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	680070	50.8023	50.8
	30 2-Butanone	43	8.694	8.694	(0.871)	831654	454.767	455(R)
	31 cis-1,2-Dichloroethylene	61	8.749	8.742	(0.877)	629460	53.2895	53.3
	33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	555876	55.3203	55.3
	35 Bromochloromethane	128	9.023	9.023	(0.904)	213920	54.3068	54.3
	36 Chloroform	83	9.053	9.053	(0.907)	660695	51.1199	51.1
	40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	572670	54.6401	54.6
	43 Cyclohexane	56	9.413	9.413	(0.943)	721570	54.1827	54.2
	44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	560595	54.2921	54.3
	46 Carbon tetrachloride	117	9.517	9.517	(0.954)	531911	55.9565	56.0
$	47 1,2-Dichloroethane-d4	65	9.633	9.633	(0.965)	436227	50.9905	51.0
	48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	473801	48.6462	48.6
	49 Benzene	78	9.724	9.724	(0.974)	1592060	49.9486	49.9
	50 Cyclohexene	67	9.834	9.834	(0.985)	856078	54.8610	54.9
*	51 Fluorobenzene	96	9.980	9.980	(1.000)	1707345	50.0000	
	52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1429476	7458.08	7460
	53 Trichloroethylene	95	10.364	10.364	(1.038)	430157	53.8389	53.8
	55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	409253	52.4687	52.5
	56 Methylcyclohexane	83	10.608	10.608	(1.063)	799979	55.2203	55.2
	58 Dibromomethane	93	10.754	10.754	(1.078)	232096	52.6497	52.6
	59 Bromodichloromethane	83	10.864	10.864	(1.089)	498614	57.0784	57.1
	61 2-Chloroethylvinyl ether	63	11.090	11.090	(1.111)	1213596	246.559	246
	62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	661103	57.8658	57.9
	63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	812679	306.445	306
$	64 Toluene-d8	98	11.626	11.626	(0.884)	1716876	48.9759	49.0
	65 Toluene	92	11.699	11.699	(0.889)	1042067	47.9582	48.0
	67 trans-1,3-Dichloropropylene	75	11.864	11.858	(0.902)	596059	56.6326	56.6
	68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	300877	53.3965	53.4
	69 2-Hexanone	43	12.260	12.260	(0.932)	1324896	362.404	362
	70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	612422	51.1843	51.2
	71 Tetrachloroethylene	164	12.291	12.291	(0.934)	395501	52.0996	52.1
	72 Dibromochloromethane	129	12.540	12.541	(0.953)	396321	57.3552	57.4
	73 1,2-Dibromoethane	107	12.711	12.705	(0.966)	363205	55.0210	55.0
*	75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1323269	50.0000	
	76 Chlorobenzene	112	13.193	13.193	(1.003)	1189071	50.7552	50.8
	77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	421010	55.0845	55.1
	78 Ethylbenzene	91	13.254	13.254	(1.007)	1954025	49.8027	49.8
	79 m,p-Xylenes	106	13.363	13.364	(1.016)	1589907	100.915	101
	80 o-Xylene	106	13.796	13.796	(1.049)	793100	51.4575	51.4

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
81 Styrene	104	13.802	13.802	(1.049)	1296228	54.0637	54.1
82 Bromoform	173	14.065	14.065	(0.903)	302898	51.3237	51.3
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1743092	41.7244	41.7
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	706315	50.3212	50.3
87 1,1,2,2-Tetrachloroethane	83	14.443	14.436	(0.927)	478397	52.9732	53.0
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	146016	58.6240	58.6(Q)
90 Bromobenzene	156	14.564	14.565	(0.935)	533534	49.7911	49.8
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2309596	47.7166	47.7
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1701898	48.5202	48.5
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1590813	48.4151	48.4
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1446737	49.3841	49.4
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1636720	49.5889	49.6
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1736744	48.9950	49.0
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	2297936	49.0978	49.1
99 4-Isopropyltoluene	119	15.455	15.455	(0.992)	1966632	51.1012	51.1
100 1,3-Dichlorobenzene	146	15.515	15.516	(0.996)	1045146	50.6321	50.6
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	759973	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	1042385	48.9527	49.0
104 n-Butylbenzene	92	15.887	15.887	(1.020)	986495	50.5014	50.5
106 1,2-Dichlorobenzene	146	16.021	16.022	(1.029)	984008	50.0873	50.1
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	116069	74.9516	75.0(R)
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	746709	49.8909	49.9
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	491318	49.3209	49.3
110 Naphthalene	128	18.289	18.289	(1.174)	1575611	54.7130	54.7
111 1,2,3-Trichlorobenzene	180	18.625	18.625	(1.196)	678440	53.2294	53.2

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA6.i/070109v6/6r304L1.d
Date : 01-JUL-2009 11:11
Client ID: LCS
Sample Info: 1120187276518817941|1|VOAF1|1|
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

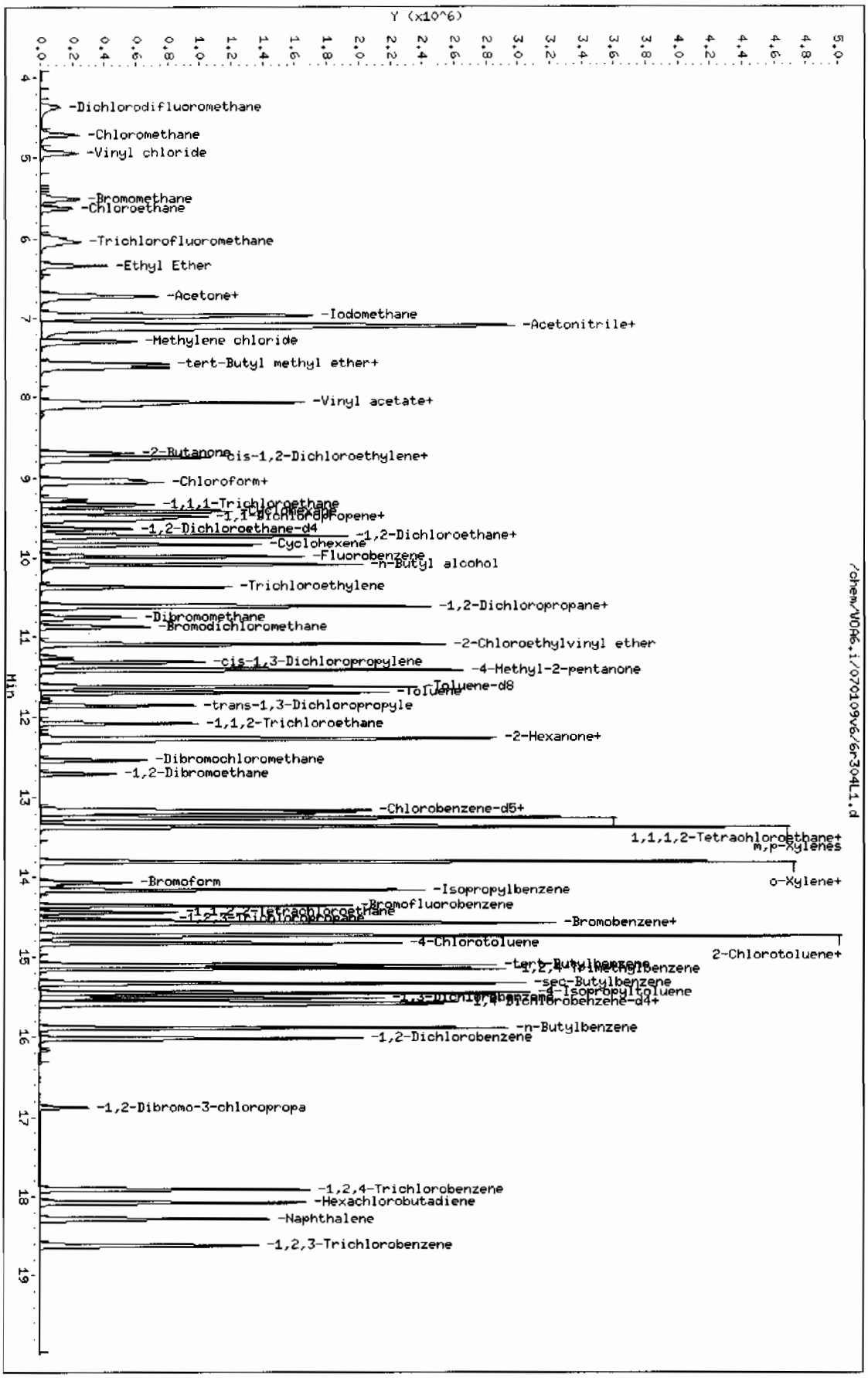

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2457**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201872766**				
Client Sample:	**QC for batch 881793**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 881793**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**881794**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/01/2009 12:07**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/01/2009 09:30**	**Aliquot:**	**5 g'**	**Final Volume:**	**5 mL**
Data File:	**6r306L1.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201872766				
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881793	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/01/2009 12:07	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/01/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r306L1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		255	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r306L1.d
Lab Smp Id: 1201872766 Client Smp ID: LCS
Inj Date : 01-JUL-2009 12:07
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201872766|881794|1|VOAF|1|
Misc Info : GEL 5g N/A UVM090601-08B/UVM090624-02A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
149 2-Chloro-1,1,1-trifluoroethane	118	5.065	5.075	(0.508)	1571306	159.046	159
150 Chlorotrifluoroethylene	116	4.290	4.290	(0.430)	856910	138.231	138
11 Acrolein	56	6.541	6.542	(0.655)	183992	450.462	450(R)
12 Trichlorotrifluoroethane	85	6.700	6.706	(0.671)	725191	254.625	255
19 Allyl chloride	41	7.145	7.145	(0.716)	2086739	220.023	220
21 Acrylonitrile	53	7.547	7.547	(0.756)	561264	247.982	248
26 Isopropyl Alcohol	45	6.791	6.798	(0.680)	1291632	3097.00	3100
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	459251	53.9065	53.9
28 tert-butyl Alcohol	59	7.291	7.291	(0.731)	2180632	3114.19	3110
29 Ethyl acetate	43	8.706	8.706	(0.872)	1392393	218.222	218
32 Propionitrile	54	8.779	8.779	(0.880)	226449	250.498	250
34 Isopropyl ether	45	8.078	8.078	(0.809)	1172258	49.9251	49.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
37 Methacrylonitrile	41	8.949	8.950	(0.897)	837234	235.353	235
38 Tetrahydrofuran	42	9.065	9.065	(0.582)	457619	224.780	225
41 Ethyl tert-butyl ether	59	8.486	8.492	(0.850)	1176350	52.4117	52.4
42 Isobutyl alcohol	41	9.388	9.389	(0.941)	556480	2669.66	2670
45 Methyl tert-amyl ether	55	9.742	9.736	(0.976)	313974	42.1196	42.1
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	404141	48.5598	48.6
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1660939	50.0000	
54 Methyl methacrylate	69	10.589	10.590	(1.061)	1201067	255.843	256
57 1,4-Dioxane	88	10.699	10.699	(1.072)	179502	2327.20	2330
60 2-Nitropropane	43	11.071	11.071	(1.109)	429686	224.360	224
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1630519	47.6158	47.6
66 Ethyl methacrylate	69	11.857	11.858	(0.901)	2165042	233.280	233
74 1-Chlorohexane	55	13.058	13.053	(0.993)	379985	50.4590	50.4
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1292608	50.0000	
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	602563	244.263	244
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	676177	49.7630	49.8
86 Cyclohexanone	55	14.320	14.321	(1.089)	319739	1281.54	1280
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	578667	243.267	243
97 Pentachloroethane	167	15.180	15.180	(0.975)	805773	177.937	178
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	735706	50.0000	
103 Benzyl chloride	91	15.716	15.717	(1.009)	3902437	238.588	238
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	277944	253.046	253

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA6.i/070109v6/6r306L1.d
Date : 01-JUL-2009 12:07
Client ID: LCS
Sample Info: 1120187276618817941 1 1VOAF1 1 1

Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

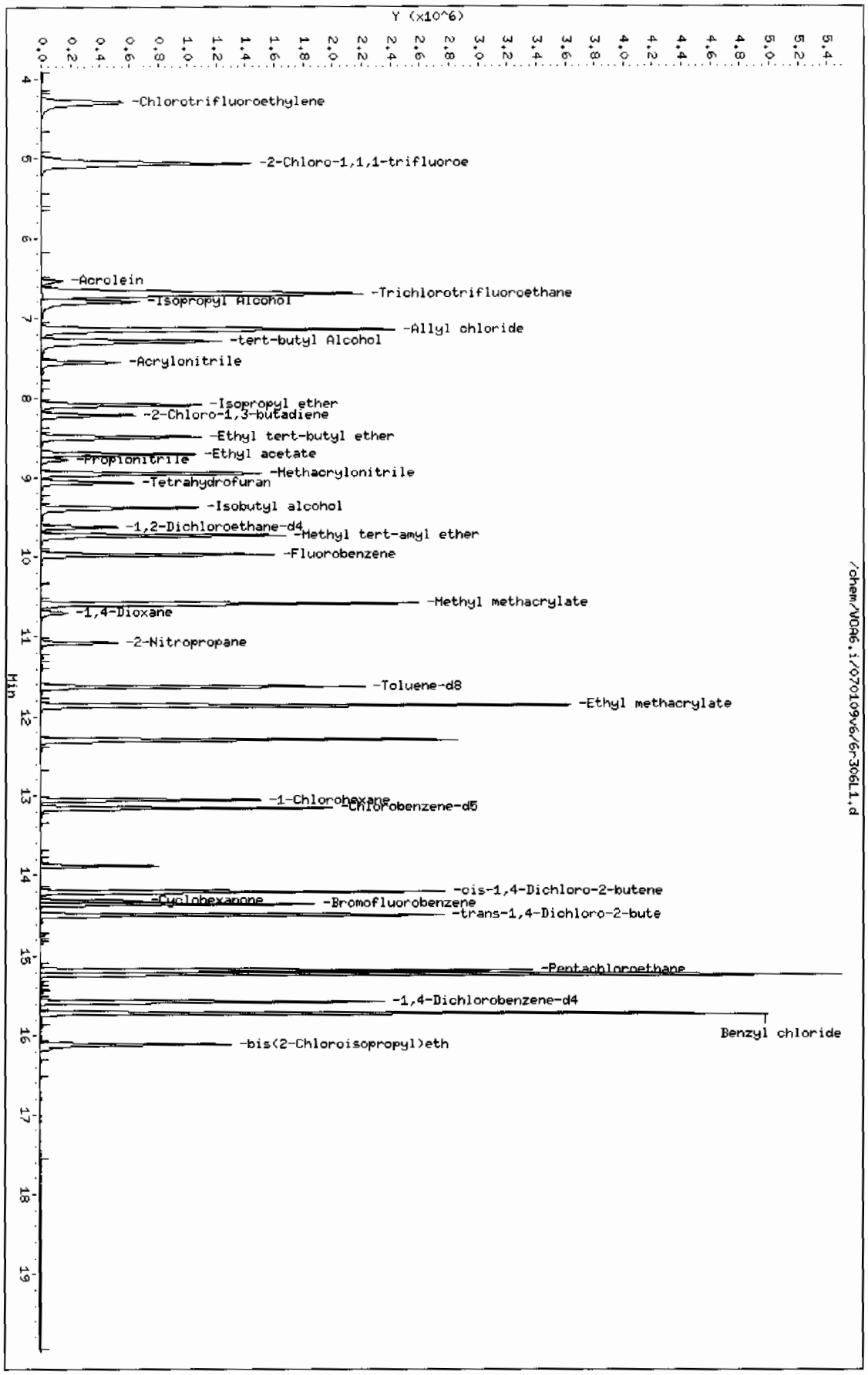

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201876339				
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881793	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 10:20	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r404L1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		65.6	ug/kg	0.340	1.00
74-87-3	Chloromethane		51.7	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		53.5	ug/kg	0.300	1.00
74-83-9	Bromomethane		49.5	ug/kg	0.300	1.00
75-00-3	Chloroethane		51.4	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		56.0	ug/kg	0.570	1.00
67-64-1	Acetone		320	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		51.3	ug/kg	0.300	1.00
74-88-4	Iodomethane		252	ug/kg	1.60	5.00
75-09-2	Methylene chloride		43.8	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		272	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		47.8	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		49.0	ug/kg	0.300	1.00
78-93-3	2-Butanone		401	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		51.1	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		53.5	ug/kg	0.300	1.00
67-66-3	Chloroform		49.0	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		51.8	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		52.8	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		52.1	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		53.9	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		45.7	ug/kg	0.300	1.00
71-43-2	Benzene		48.0	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		52.1	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		50.4	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		54.5	ug/kg	0.300	1.00
74-95-3	Dibromomethane		49.9	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		287	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		55.1	ug/kg	0.300	1.00
108-88-3	Toluene		47.7	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		55.5	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		52.0	ug/kg	0.300	1.00
591-78-6	2-Hexanone		335	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		50.4	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		52.3	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		56.4	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		53.4	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		50.8	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201876339				
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881793	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 10:20	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r404L1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		49.9	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		102	ug/kg	0.300	2.00
95-47-6	o-Xylene		51.6	ug/kg	0.300	1.00
100-42-5	Styrene		53.5	ug/kg	0.300	1.00
75-25-2	Bromoform		49.4	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		51.3	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		56.4	ug/kg	0.300	1.00
108-86-1	Bromobenzene		50.2	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		48.6	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		49.2	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		42.3	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		49.1	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		49.9	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		50.4	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		49.5	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		50.0	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		51.9	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		50.9	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		49.7	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		51.3	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		70.1	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		55.0	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		50.6	ug/kg	0.300	1.00

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r404L1.d
Lab Smp Id: 1201876339 Client Smp ID: LCS
Inj Date : 02-JUL-2009 10:20
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201876339|881794|1|VOAF|1|
Misc Info : GEL 5g N/A UVM090605-01C+IVM090630-01
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 09:23 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1 1,3-Dichloropropylene	75				1126418	110.584	110
M 2 Xylenes (total)	106				2174020	153.144	153
M 3 1,2-Dichloroethylene (total)	96				1051204	98.8601	98.9
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	296014	65.5862	65.6
5 Chloromethane	50	4.713	4.713	(0.472)	388278	51.7210	51.7
6 Vinyl chloride	62	4.934	4.934	(0.494)	406617	53.4916	53.5
7 Bromomethane	94	5.498	5.508	(0.551)	296889	49.4638	49.5
8 Chloroethane	64	5.629	5.629	(0.564)	276248	51.4453	51.4
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	563887	56.0343	56.0
10 Ethyl Ether	59	6.340	6.334	(0.635)	324398	47.6795	47.7
13 Acetone	43	6.712	6.718	(0.673)	402925	320.350	320
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	511739	51.2836	51.3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
	15 Iodomethane	142	6.968	6.968	(0.698)	2989248	251.817	252
	16 Acetonitrile	41	7.078	7.078	(0.709)	995153	1180.45	1180
	17 Methyl acetate	43	7.102	7.102	(0.712)	1194504	242.315	242
	18 Carbon disulfide	76	7.090	7.108	(0.710)	5814545	271.585	272
	20 Methylene chloride	84	7.291	7.297	(0.731)	372234	43.7671	43.8
	22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	969746	48.7060	48.7
	23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	479534	47.7731	47.8
	24 Vinyl acetate	43	8.066	8.066	(0.808)	2417398	215.754	216
	25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	621226	48.9859	49.0
	30 2-Butanone	43	8.694	8.694	(0.871)	694625	400.948	401
	31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	571670	51.0870	51.1
	33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	508844	53.4543	53.4
	35 Bromochloromethane	128	9.023	9.023	(0.904)	193333	51.8084	51.8
	36 Chloroform	83	9.053	9.053	(0.907)	599814	48.9888	49.0
	40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	523795	52.7545	52.8
	43 Cyclohexane	56	9.413	9.413	(0.943)	658040	52.1586	52.2
	44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	510011	52.1385	52.1
	46 Carbon tetrachloride	117	9.517	9.517	(0.954)	485153	53.8744	53.9
$	47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	398430	49.1609	49.2
	48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	421646	45.6975	45.7
	49 Benzene	78	9.724	9.724	(0.974)	1448058	47.9558	48.0
	50 Cyclohexene	67	9.834	9.834	(0.985)	776959	52.5581	52.6
*	51 Fluorobenzene	96	9.980	9.980	(1.000)	1617446	50.0000	
	52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1177532	6485.06	6480
	53 Trichloroethylene	95	10.364	10.364	(1.038)	394330	52.0979	52.1
	55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	372467	50.4066	50.4
	56 Methylcyclohexane	83	10.608	10.608	(1.063)	727504	53.0087	53.0
	58 Dibromomethane	93	10.754	10.748	(1.078)	208470	49.9187	49.9
	59 Bromodichloromethane	83	10.864	10.864	(1.089)	450717	54.4631	54.5
	61 2-Chloroethylvinyl ether	63	11.089	11.089	(1.111)	1084316	232.674	233
	62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	596321	55.0965	55.1
	63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	691150	287.124	287
$	64 Toluene-d8	98	11.626	11.626	(0.884)	1573879	49.4628	49.5
	65 Toluene	92	11.699	11.699	(0.889)	940996	47.7110	47.7
	67 trans-1,3-Dichloropropylene	75	11.858	11.858	(0.901)	530097	55.4876	55.5
	68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	265739	51.9567	52.0
	69 2-Hexanone	43	12.260	12.260	(0.932)	1110728	334.720	335
	70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	546984	50.3645	50.4
	71 Tetrachloroethylene	164	12.290	12.290	(0.934)	360218	52.2776	52.3
	72 Dibromochloromethane	129	12.540	12.540	(0.953)	353749	56.4007	56.4
	73 1,2-Dibromoethane	107	12.711	12.705	(0.966)	320196	53.4387	53.4
*	75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1201116	50.0000	
	76 Chlorobenzene	112	13.193	13.193	(1.003)	1079750	50.7761	50.8
	77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	381285	54.9604	55.0
	78 Ethylbenzene	91	13.254	13.254	(1.007)	1776145	49.8728	49.9
	79 m,p-Xylenes	106	13.363	13.363	(1.016)	1451926	101.529	102
	80 o-Xylene	106	13.796	13.796	(1.049)	722094	51.6152	51.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
81 Styrene	104	13.802	13.802	(1.049)	1164533	53.5105	53.5
82 Bromoform	173	14.065	14.064	(0.903)	261098	49.4442	49.4
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1581744	42.2667	42.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	615258	48.9330	48.9
87 1,1,2,2-Tetrachloroethane	83	14.442	14.442	(0.927)	415373	51.3449	51.3
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	125877	56.4175	56.4(Q)
90 Bromobenzene	156	14.564	14.564	(0.935)	481532	50.1657	50.2
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2106426	48.5816	48.6
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1541289	49.0530	49.0
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1449426	49.2436	49.2
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1309464	49.8980	49.9
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1491230	50.4367	50.4
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1572557	49.5238	49.5
98 sec-Butylbenzene	105	15.333	15.332	(0.984)	2095653	49.9845	50.0
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	1788606	51.8818	51.9
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	941762	50.9310	50.9
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	680779	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	948807	49.7415	49.7
104 n-Butylbenzene	92	15.887	15.887	(1.020)	897741	51.3040	51.3
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	890283	50.5882	50.6
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	97278	70.1247	70.1
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	675269	50.3662	50.4
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	447410	50.1378	50.1
110 Naphthalene	128	18.289	18.289	(1.174)	1371981	53.1841	53.2
111 1,2,3-Trichlorobenzene	180	18.625	18.618	(1.196)	612604	53.6553	53.6

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070209v6/6r404L1.d
Date : 02-JUL-2009 10:20
Client ID: LCS
Sample Info: 1120187633918817941|1|VOAF|1|
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

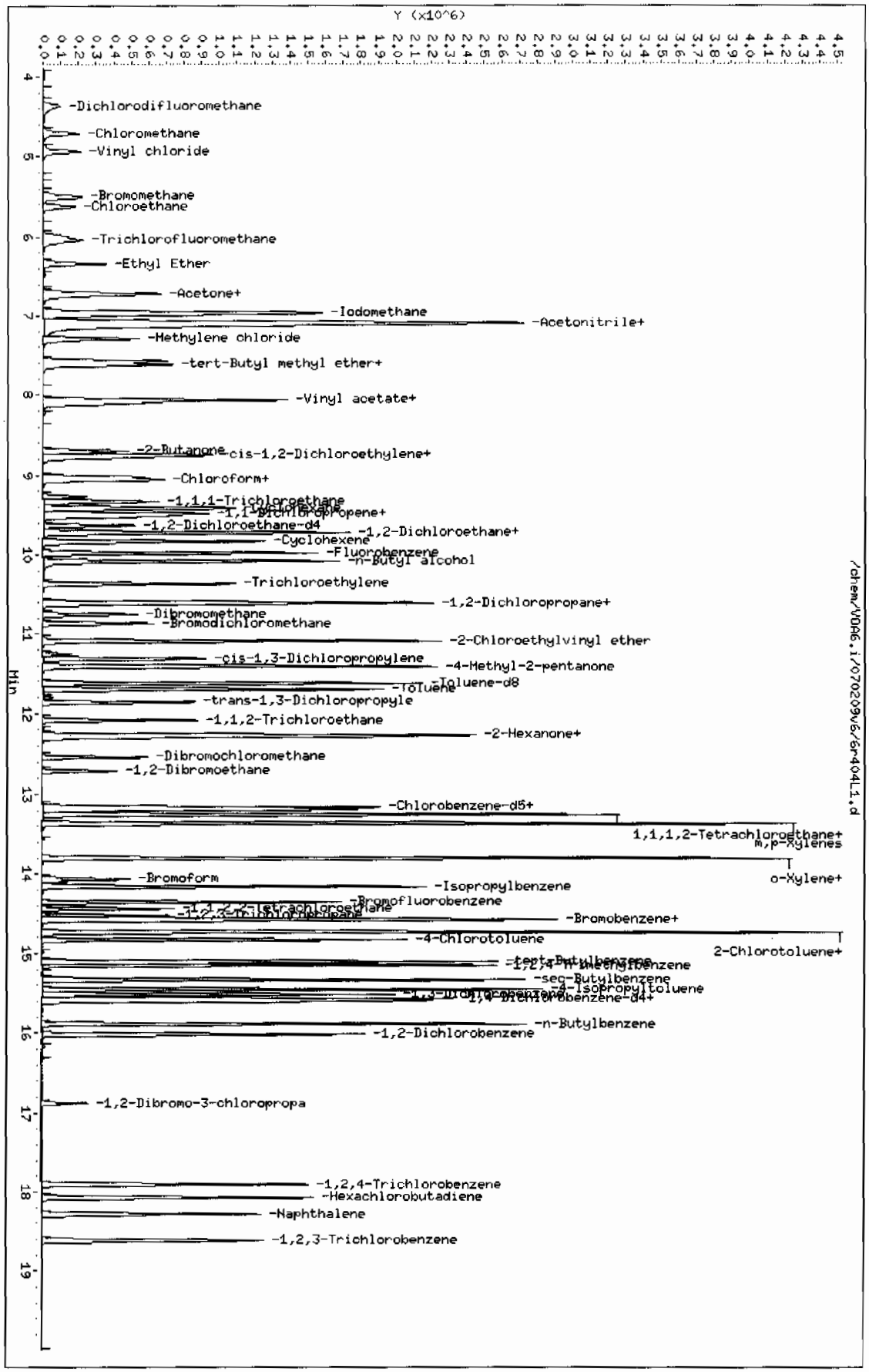

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201876340				
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881793	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 11:46	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r407L1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201876340				
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881793	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 11:46	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r407L1.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		250	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r407L1.d
Lab Smp Id: 1201876340 Client Smp ID: SLCS
Inj Date : 02-JUL-2009 11:46
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201876340|881794|1|VOAF|1|
Misc Info : GEL 5g N/A UVM090601-08B/UVM090624-02A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 09:23 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 7 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
149 2-Chloro-1,1,1-trifluoroethane	118	5.065	5.075	(0.508)	1481893	153.725	154
150 Chlorotrifluoroethylene	116	4.290	4.290	(0.430)	797937	132.474	132
11 Acrolein	56	6.542	6.542	(0.655)	176834	443.700	444(R)
12 Trichlorotrifluoroethane	85	6.706	6.706	(0.672)	694514	249.916	250
19 Allyl chloride	41	7.145	7.145	(0.716)	1947192	210.413	210
21 Acrylonitrile	53	7.547	7.554	(0.756)	551733	249.831	250
26 Isopropyl Alcohol	45	6.791	6.798	(0.680)	1312985	3226.46	3230
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	432675	52.0496	52.0
28 tert-butyl Alcohol	59	7.291	7.291	(0.731)	2225767	3257.67	3260
29 Ethyl acetate	43	8.706	8.706	(0.872)	1362230	218.803	219
32 Propionitrile	54	8.779	8.779	(0.880)	224491	254.505	254
34 Isopropyl ether	45	8.084	8.084	(0.810)	1099997	48.0122	48.0

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
37 Methacrylonitrile	41	8.956	8.956	(0.897)	807457	232.626	233
38 Tetrahydrofuran	42	9.065	9.066	(0.582)	449841	236.228	236
41 Ethyl tert-butyl ether	59	8.486	8.492	(0.850)	1098825	50.1747	50.2
42 Isobutyl alcohol	41	9.395	9.395	(0.941)	569687	2800.96	2800
45 Methyl tert-amyl ether	55	9.736	9.742	(0.976)	296641	40.7836	40.8
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	396975	48.8846	48.9
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1620650	50.0000	
54 Methyl methacrylate	69	10.589	10.590	(1.061)	1161418	253.547	254
57 1,4-Dioxane	88	10.699	10.699	(1.072)	178597	2373.03	2370
60 2-Nitropropane	43	11.071	11.077	(1.109)	417322	223.346	223
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1564139	48.4448	48.4
66 Ethyl methacrylate	69	11.858	11.858	(0.901)	2075582	237.191	237
74 1-Chlorohexane	55	13.052	13.059	(0.992)	355994	50.1373	50.1
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1218765	50.0000	
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	582967	252.649	253
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	625543	49.2179	49.2
86 Cyclohexanone	55	14.320	14.321	(1.089)	339429	1442.89	1440
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	560095	251.730	252
97 Pentachloroethane	167	15.180	15.180	(0.975)	671067	158.431	158(R)
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	688153	50.0000	
103 Benzyl chloride	91	15.717	15.717	(1.009)	3754506	245.319	245
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	281663	274.152	274

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA6.i/070209v6/6r407L1.d
Date : 02-JUL-2009 11:46
Client ID: SLCS
Sample Info: I120187634O|88179411|VOAFI1I
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

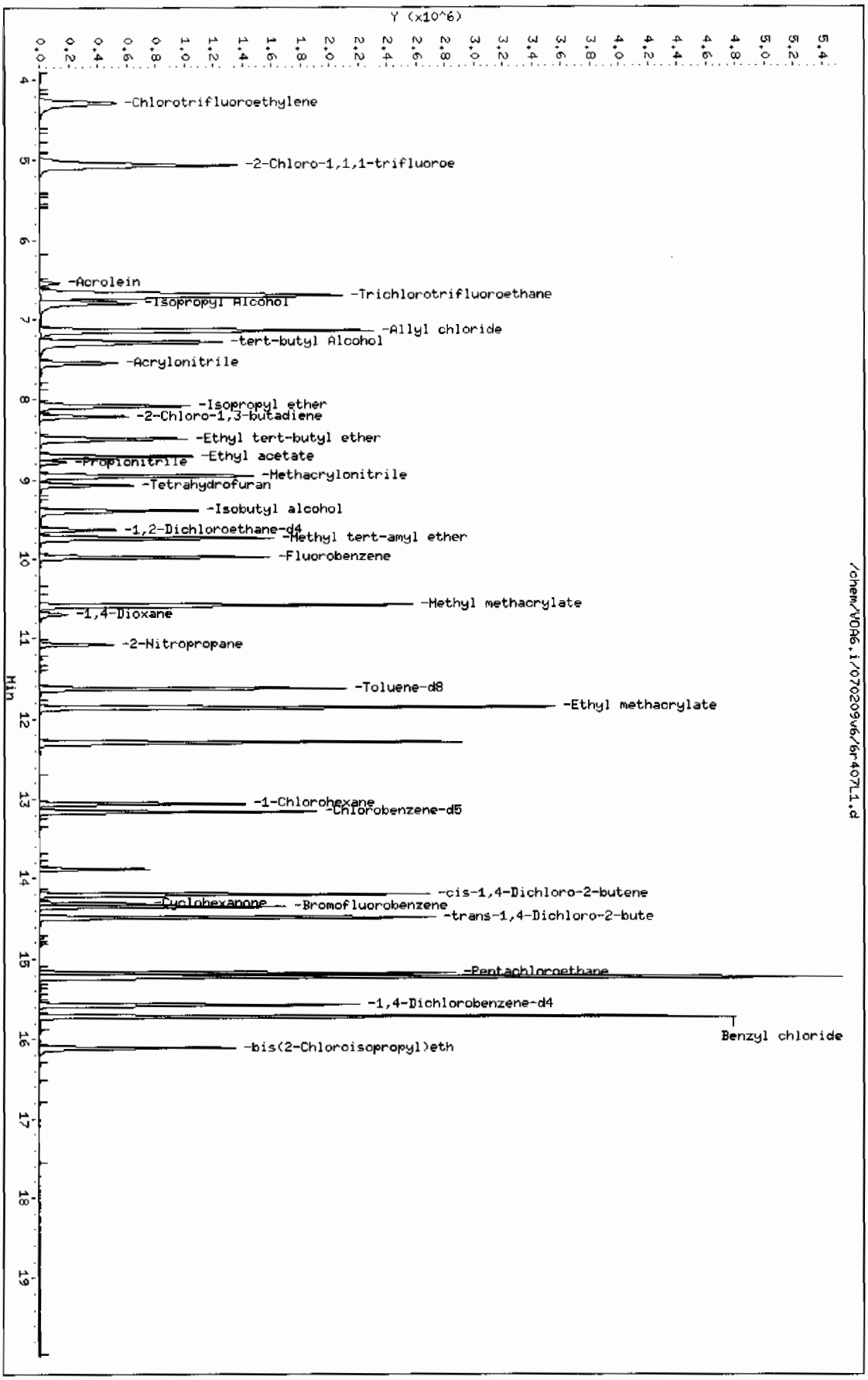

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/19/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201872763	**Date Received:**	06/24/2009 09:45	**%Moisture:**	13.2
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10473PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 18:50	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 11:52	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r420.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		79.1	ug/kg	0.392	1.15
74-87-3	Chloromethane		58.6	ug/kg	0.346	1.15
75-01-4	Vinyl chloride		59.2	ug/kg	0.346	1.15
74-83-9	Bromomethane		56.8	ug/kg	0.346	1.15
75-00-3	Chloroethane		56.4	ug/kg	0.346	1.15
75-69-4	Trichlorofluoromethane		60.3	ug/kg	0.657	1.15
67-64-1	Acetone		300	ug/kg	1.91	5.76
75-35-4	1,1-Dichloroethylene		55.0	ug/kg	0.346	1.15
74-88-4	Iodomethane		276	ug/kg	1.84	5.76
75-09-2	Methylene chloride		48.3	ug/kg	2.30	5.76
75-15-0	Carbon disulfide		297	ug/kg	1.44	5.76
156-60-5	trans-1,2-Dichloroethylene		50.9	ug/kg	0.346	1.15
75-34-3	1,1-Dichloroethane		52.5	ug/kg	0.346	1.15
78-93-3	2-Butanone		366	ug/kg	1.73	5.76
156-59-2	cis-1,2-Dichloroethylene		53.9	ug/kg	0.346	1.15
594-20-7	2,2-Dichloropropane		54.0	ug/kg	0.346	1.15
67-66-3	Chloroform		52.5	ug/kg	0.346	1.15
74-97-5	Bromochloromethane		53.8	ug/kg	0.380	1.15
71-55-6	1,1,1-Trichloroethane		55.6	ug/kg	0.346	1.15
563-58-6	1,1-Dichloropropene		54.1	ug/kg	0.346	1.15
56-23-5	Carbon tetrachloride		57.2	ug/kg	0.346	1.15
107-06-2	1,2-Dichloroethane		48.3	ug/kg	0.346	1.15
71-43-2	Benzene		51.4	ug/kg	0.346	1.15
79-01-6	Trichloroethylene		53.3	ug/kg	0.380	1.15
78-87-5	1,2-Dichloropropane		53.3	ug/kg	0.346	1.15
75-27-4	Bromodichloromethane		57.2	ug/kg	0.346	1.15
74-95-3	Dibromomethane		51.6	ug/kg	0.346	1.15
108-10-1	4-Methyl-2-pentanone		268	ug/kg	1.44	5.76
10061-01-5	cis-1,3-Dichloropropylene		56.4	ug/kg	0.346	1.15
108-88-3	Toluene		49.9	ug/kg	0.346	1.15
10061-02-6	trans-1,3-Dichloropropylene		56.1	ug/kg	0.346	1.15
79-00-5	1,1,2-Trichloroethane		53.7	ug/kg	0.346	1.15
591-78-6	2-Hexanone		311	ug/kg	1.73	5.76
142-28-9	1,3-Dichloropropane		52.4	ug/kg	0.346	1.15
127-18-4	Tetrachloroethylene		53.3	ug/kg	0.346	1.15
124-48-1	Dibromochloromethane		57.5	ug/kg	0.346	1.15
106-93-4	1,2-Dibromoethane		54.1	ug/kg	0.346	1.15
108-90-7	Chlorobenzene		53.0	ug/kg	0.346	1.15

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/19/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201872763	**Date Received:**	06/24/2009 09:45	**%Moisture:**	13.2
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10473PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 18:50	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 11:52	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r420.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		51.9	ug/kg	0.346	1.15
179601-23-1	m,p-Xylenes		105	ug/kg	0.346	2.30
95-47-6	o-Xylene		54.1	ug/kg	0.346	1.15
100-42-5	Styrene		55.4	ug/kg	0.346	1.15
75-25-2	Bromoform		49.4	ug/kg	0.346	1.15
79-34-5	1,1,2,2-Tetrachloroethane		51.4	ug/kg	0.346	1.15
96-18-4	1,2,3-Trichloropropane		55.5	ug/kg	0.346	1.15
108-86-1	Bromobenzene		51.8	ug/kg	0.346	1.15
103-65-1	n-Propylbenzene		49.3	ug/kg	0.346	1.15
95-49-8	2-Chlorotoluene		50.7	ug/kg	0.346	1.15
98-82-8	Isopropylbenzene		43.4	ug/kg	0.346	1.15
108-67-8	1,3,5-Trimethylbenzene		50.4	ug/kg	0.346	1.15
106-43-4	4-Chlorotoluene		50.5	ug/kg	0.346	1.15
98-06-6	tert-Butylbenzene		52.1	ug/kg	0.346	1.15
95-63-6	1,2,4-Trimethylbenzene		50.4	ug/kg	0.346	1.15
135-98-8	sec-Butylbenzene		50.9	ug/kg	0.346	1.15
99-87-6	4-Isopropyltoluene		52.3	ug/kg	0.346	1.15
541-73-1	1,3-Dichlorobenzene		51.5	ug/kg	0.346	1.15
106-46-7	1,4-Dichlorobenzene		50.2	ug/kg	0.346	1.15
104-51-8	n-Butylbenzene		50.0	ug/kg	0.346	1.15
96-12-8	1,2-Dibromo-3-chloropropane		63.6	ug/kg	0.346	1.15
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.76	ug/kg	1.84	5.76
630-20-6	1,1,1,2-Tetrachloroethane		57.1	ug/kg	0.346	1.15
95-50-1	1,2-Dichlorobenzene		51.4	ug/kg	0.346	1.15

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r420.d
Lab Smp Id: 1201872763 Client Smp ID: CAMO-09-10473MS
Inj Date : 02-JUL-2009 18:50
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201872763|881794|1|VOAF|1|
Misc Info : LANL 5g N/A 232264001MS
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 19 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2434.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	13.20880	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1469887	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1098793	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	629971	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.626	9.632	(0.965)	354262	48.0993	55.4
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1438090	49.4040	56.9
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	557282	47.8967	55.2
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	281408	68.6092	79.0
5 Chloromethane	50	4.713	4.713	(0.472)	346791	50.8321	58.6
6 Vinyl chloride	62	4.934	4.934	(0.494)	354758	51.3544	59.2
7 Bromomethane	94	5.498	5.508	(0.551)	268680	49.2578	56.8
8 Chloroethane	64	5.629	5.629	(0.564)	238785	48.9327	56.4
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	478483	52.3208	60.3

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.712	6.718	(0.673)	297257	260.380	300
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	433232	47.7746	55.0
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	768983	43.5655	50.2
15 Iodomethane	142	6.968	6.968	(0.698)	2587667	239.871	276
20 Methylene chloride	84	7.291	7.297	(0.731)	325535	41.9337	48.3
18 Carbon disulfide	76	7.102	7.108	(0.712)	5020051	258.014	297
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	403257	44.2071	50.9
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	525316	45.5814	52.5
30 2-Butanone	43	8.694	8.694	(0.871)	500017	317.591	366
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	475939	46.8018	53.9
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	764493	44.6787	51.5
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	405173	46.8365	54.0
36 Chloroform	83	9.053	9.053	(0.907)	507010	45.5662	52.5
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	725974	44.5788	51.4
35 Bromochloromethane	128	9.023	9.023	(0.904)	158447	46.7223	53.8
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	435115	48.2223	55.6
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	417302	46.9435	54.1
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	405977	49.6079	57.2
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	351709	41.9444	48.3
49 Benzene	78	9.724	9.724	(0.974)	1225058	44.6435	51.4
53 Trichloroethylene	95	10.364	10.364	(1.038)	318203	46.2606	53.3
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	310594	46.2529	53.3
59 Bromodichloromethane	83	10.864	10.864	(1.089)	373140	49.6154	57.2
58 Dibromomethane	93	10.748	10.748	(1.077)	170032	44.8018	51.6
63 4-Methyl-2-pentanone	58	11.412	11.413	(0.867)	512321	232.653	268
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	481746	48.9788	56.4
65 Toluene	92	11.699	11.699	(0.889)	781314	43.3037	49.9
67 trans-1,3-Dichloropropylene	75	11.858	11.858	(0.901)	425822	48.7234	56.1
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	218047	46.6021	53.7
69 2-Hexanone	43	12.260	12.260	(0.932)	818422	269.600	311
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	451874	45.4816	52.4
71 Tetrachloroethylene	164	12.290	12.290	(0.934)	291797	46.2913	53.3
72 Dibromochloromethane	129	12.540	12.540	(0.953)	286467	49.9267	57.5
73 1,2-Dibromoethane	107	12.705	12.705	(0.966)	257202	46.9228	54.1
76 Chlorobenzene	112	13.193	13.193	(1.003)	894622	45.9880	53.0
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	314523	49.5589	57.1
78 Ethylbenzene	91	13.254	13.254	(1.007)	1468607	45.0775	51.9
79 m,p-Xylenes	106	13.363	13.363	(1.016)	1195045	91.3481	105
80 o-Xylene	106	13.796	13.796	(1.049)	600959	46.9567	54.1
81 Styrene	104	13.802	13.802	(1.049)	956644	48.0515	55.4
82 Bromoform	173	14.064	14.064	(0.903)	208402	42.8543	49.4
87 1,1,2,2-Tetrachloroethane	83	14.442	14.442	(0.927)	334227	44.6464	51.4
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	99402	48.1446	55.5(Q)
90 Bromobenzene	156	14.564	14.564	(0.935)	399490	44.9752	51.8
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1717983	42.8184	49.3
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1198046	43.9858	50.7
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1303570	37.6428	43.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1270840	43.7077	50.4
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1064053	43.8166	50.5
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1236977	45.2116	52.1
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1284939	43.7296	50.4
98 sec-Butylbenzene	105	15.332	15.332	(0.984)	1712800	44.1477	50.9
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	1447013	45.3584	52.3
104 n-Butylbenzene	92	15.887	15.887	(1.020)	703317	43.4347	50.0
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	70837	55.1826	63.6

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070209v6/6r420.d
Date : 02-JUL-2009 18:50
Client ID: CAMO-09-10473HS
Sample Info: 1120187276318817941 1 1VOAF11
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

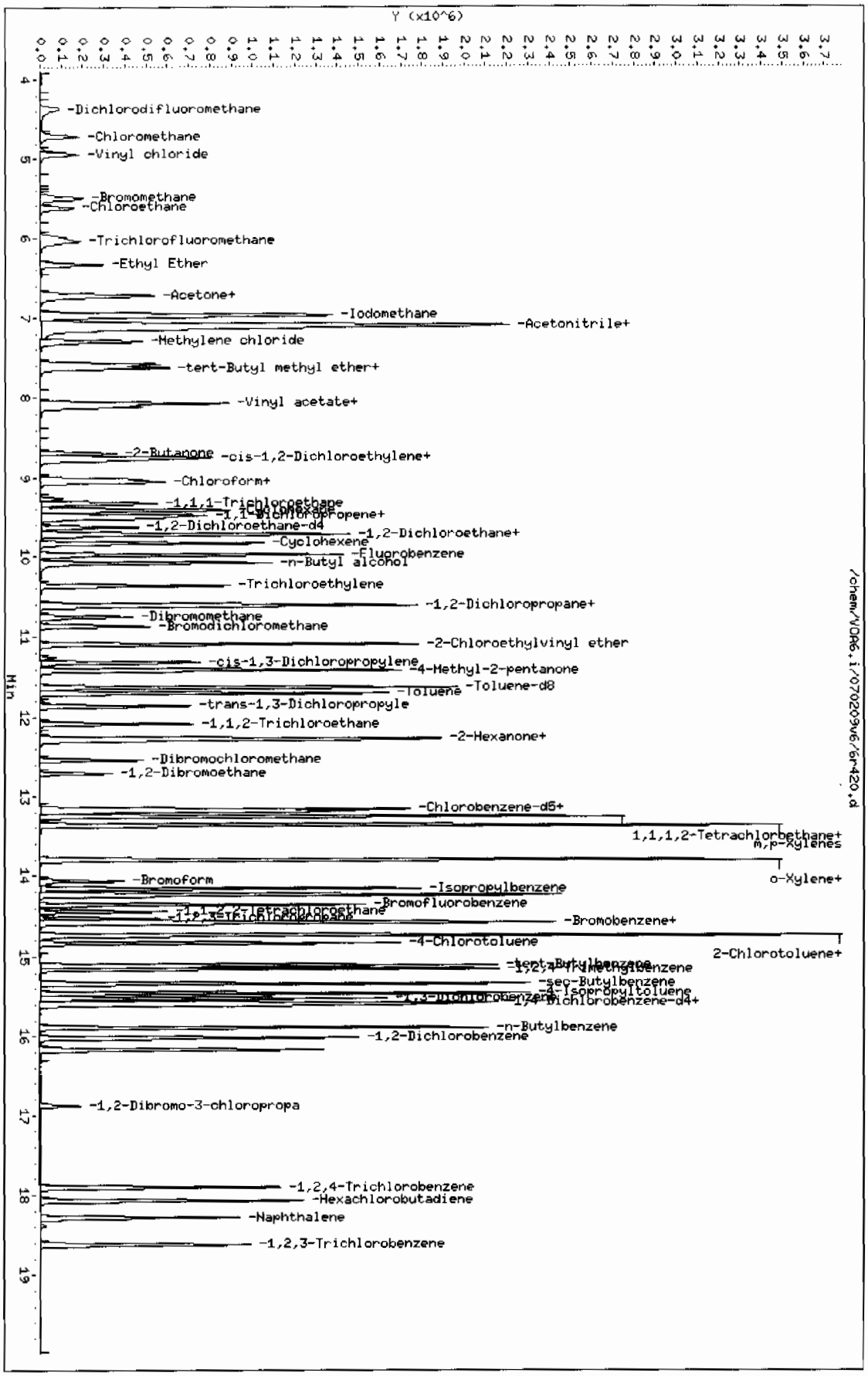

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/19/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201872764	**Date Received:**	06/24/2009 09:45	**%Moisture:**	13.2
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10473PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 19:18	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 11:53	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r421.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		72.3	ug/kg	0.392	1.15
74-87-3	Chloromethane		54.6	ug/kg	0.346	1.15
75-01-4	Vinyl chloride		55.3	ug/kg	0.346	1.15
74-83-9	Bromomethane		52.6	ug/kg	0.346	1.15
75-00-3	Chloroethane		53.0	ug/kg	0.346	1.15
75-69-4	Trichlorofluoromethane		56.1	ug/kg	0.657	1.15
67-64-1	Acetone		314	ug/kg	1.91	5.76
75-35-4	1,1-Dichloroethylene		51.4	ug/kg	0.346	1.15
74-88-4	Iodomethane		264	ug/kg	1.84	5.76
75-09-2	Methylene chloride		46.3	ug/kg	2.30	5.76
75-15-0	Carbon disulfide		275	ug/kg	1.44	5.76
156-60-5	trans-1,2-Dichloroethylene		48.2	ug/kg	0.346	1.15
75-34-3	1,1-Dichloroethane		49.7	ug/kg	0.346	1.15
78-93-3	2-Butanone		383	ug/kg	1.73	5.76
156-59-2	cis-1,2-Dichloroethylene		51.4	ug/kg	0.346	1.15
594-20-7	2,2-Dichloropropane		52.0	ug/kg	0.346	1.15
67-66-3	Chloroform		50.1	ug/kg	0.346	1.15
74-97-5	Bromochloromethane		52.8	ug/kg	0.380	1.15
71-55-6	1,1,1-Trichloroethane		53.4	ug/kg	0.346	1.15
563-58-6	1,1-Dichloropropene		50.4	ug/kg	0.346	1.15
56-23-5	Carbon tetrachloride		53.7	ug/kg	0.346	1.15
107-06-2	1,2-Dichloroethane		47.1	ug/kg	0.346	1.15
71-43-2	Benzene		48.4	ug/kg	0.346	1.15
79-01-6	Trichloroethylene		50.7	ug/kg	0.380	1.15
78-87-5	1,2-Dichloropropane		51.2	ug/kg	0.346	1.15
75-27-4	Bromodichloromethane		55.0	ug/kg	0.346	1.15
74-95-3	Dibromomethane		50.9	ug/kg	0.346	1.15
108-10-1	4-Methyl-2-pentanone		277	ug/kg	1.44	5.76
10061-01-5	cis-1,3-Dichloropropylene		54.4	ug/kg	0.346	1.15
108-88-3	Toluene		48.0	ug/kg	0.346	1.15
10061-02-6	trans-1,3-Dichloropropylene		54.6	ug/kg	0.346	1.15
79-00-5	1,1,2-Trichloroethane		53.0	ug/kg	0.346	1.15
591-78-6	2-Hexanone		321	ug/kg	1.73	5.76
142-28-9	1,3-Dichloropropane		51.8	ug/kg	0.346	1.15
127-18-4	Tetrachloroethylene		50.8	ug/kg	0.346	1.15
124-48-1	Dibromochloromethane		56.7	ug/kg	0.346	1.15
106-93-4	1,2-Dibromoethane		54.2	ug/kg	0.346	1.15
108-90-7	Chlorobenzene		51.0	ug/kg	0.346	1.15

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/19/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201872764	**Date Received:**	06/24/2009 09:45	**%Moisture:**	13.2
Client Sample:	QC for batch 881793	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10473PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	881794	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 19:18	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 11:53	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r421.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		49.7	ug/kg	0.346	1.15
179601-23-1	m,p-Xylenes		101	ug/kg	0.346	2.30
95-47-6	o-Xylene		52.2	ug/kg	0.346	1.15
100-42-5	Styrene		53.2	ug/kg	0.346	1.15
75-25-2	Bromoform		49.3	ug/kg	0.346	1.15
79-34-5	1,1,2,2-Tetrachloroethane		52.5	ug/kg	0.346	1.15
96-18-4	1,2,3-Trichloropropane		56.6	ug/kg	0.346	1.15
108-86-1	Bromobenzene		50.6	ug/kg	0.346	1.15
103-65-1	n-Propylbenzene		47.8	ug/kg	0.346	1.15
95-49-8	2-Chlorotoluene		49.3	ug/kg	0.346	1.15
98-82-8	Isopropylbenzene		42.3	ug/kg	0.346	1.15
108-67-8	1,3,5-Trimethylbenzene		49.2	ug/kg	0.346	1.15
106-43-4	4-Chlorotoluene		48.9	ug/kg	0.346	1.15
98-06-6	tert-Butylbenzene		51.4	ug/kg	0.346	1.15
95-63-6	1,2,4-Trimethylbenzene		49.2	ug/kg	0.346	1.15
135-98-8	sec-Butylbenzene		49.9	ug/kg	0.346	1.15
99-87-6	4-Isopropyltoluene		51.0	ug/kg	0.346	1.15
541-73-1	1,3-Dichlorobenzene		50.5	ug/kg	0.346	1.15
106-46-7	1,4-Dichlorobenzene		48.8	ug/kg	0.346	1.15
104-51-8	n-Butylbenzene		48.7	ug/kg	0.346	1.15
96-12-8	1,2-Dibromo-3-chloropropane		64.5	ug/kg	0.346	1.15
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.76	ug/kg	1.84	5.76
630-20-6	1,1,1,2-Tetrachloroethane		56.0	ug/kg	0.346	1.15
95-50-1	1,2-Dichlorobenzene		50.7	ug/kg	0.346	1.15

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r421.d
Lab Smp Id: 1201872764 Client Smp ID: CAMO-09-10473MSD
Inj Date : 02-JUL-2009 19:18
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201872764|881794|1|VOAF|1|
Misc Info : LANL 5g N/A 232264001MSD
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 20 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2434.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	13.20880	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1219396	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	905359	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	513257	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	293337	48.0087	55.3
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1195319	49.8374	57.4
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	455120	48.0111	55.3
4 Dichlorodifluoromethane	85	4.360	4.370	(0.437)	213429	62.7247	72.3
5 Chloromethane	50	4.712	4.713	(0.472)	268167	47.3821	54.6
6 Vinyl chloride	62	4.934	4.934	(0.494)	275226	48.0258	55.3
7 Bromomethane	94	5.488	5.508	(0.550)	206623	45.6622	52.6
8 Chloroethane	64	5.619	5.629	(0.563)	186272	46.0128	53.0
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	369580	48.7142	56.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.712	6.718	(0.673)	257969	272.307	314
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	335393	44.5830	51.4
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	608885	42.3397	48.8
15 Iodomethane	142	6.962	6.968	(0.698)	2050974	229.176	264
20 Methylene chloride	84	7.291	7.297	(0.731)	259988	40.1867	46.3
18 Carbon disulfide	76	7.090	7.108	(0.710)	3856304	238.917	275
23 trans-1,2-Dichloroethylene	61	7.620	7.627	(0.764)	316278	41.7944	48.2
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	412603	43.1557	49.7
30 2-Butanone	43	8.693	8.694	(0.871)	434249	332.477	383
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	376347	44.6107	51.4
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	610732	43.8090	50.5
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	323939	45.1384	52.0
36 Chloroform	83	9.053	9.053	(0.907)	401421	43.4876	50.1
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	584152	44.0269	50.7
35 Bromochloromethane	128	9.023	9.023	(0.904)	129004	45.8546	52.8
40 1,1,1-Trichloroethane	97	9.327	9.328	(0.935)	347037	46.3617	53.4
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	322740	43.7640	50.4
46 Carbon tetrachloride	117	9.516	9.517	(0.954)	316185	46.5725	53.7
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	284080	40.8386	47.0
49 Benzene	78	9.724	9.724	(0.974)	955624	41.9785	48.4
53 Trichloroethylene	95	10.364	10.364	(1.038)	251113	44.0063	50.7
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	247521	44.4321	51.2
59 Bromodichloromethane	83	10.864	10.864	(1.089)	297596	47.6991	55.0
58 Dibromomethane	93	10.754	10.748	(1.078)	139044	44.1628	50.9
63 4-Methyl-2-pentanone	58	11.412	11.413	(0.867)	436144	240.376	277
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	385016	47.1854	54.4
65 Toluene	92	11.699	11.699	(0.889)	619410	41.6651	48.0
67 trans-1,3-Dichloropropylene	75	11.857	11.858	(0.901)	341309	47.3972	54.6
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	177234	45.9725	53.0
69 2-Hexanone	43	12.260	12.260	(0.932)	696690	278.534	321
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	367758	44.9237	51.8
71 Tetrachloroethylene	164	12.290	12.290	(0.934)	228811	44.0546	50.8
72 Dibromochloromethane	129	12.540	12.540	(0.953)	232461	49.1704	56.6
73 1,2-Dibromoethane	107	12.711	12.705	(0.966)	212354	47.0181	54.2
76 Chlorobenzene	112	13.193	13.193	(1.003)	709490	44.2636	51.0
77 1,1,1,2-Tetrachloroethane	131	13.247	13.248	(1.007)	253930	48.5600	56.0
78 Ethylbenzene	91	13.254	13.254	(1.007)	1157503	43.1193	49.7
79 m,p-Xylenes	106	13.363	13.363	(1.016)	944480	87.6200	101
80 o-Xylene	106	13.796	13.796	(1.049)	477379	45.2701	52.2
81 Styrene	104	13.802	13.802	(1.049)	757929	46.2041	53.2
82 Bromoform	173	14.064	14.064	(0.903)	169499	42.7830	49.3
87 1,1,2,2-Tetrachloroethane	83	14.436	14.442	(0.927)	278166	45.6073	52.5
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	82614	49.1125	56.6(Q)
90 Bromobenzene	156	14.564	14.564	(0.935)	317583	43.8844	50.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1355707	41.4728	47.8
93 2-Chlorotoluene	91	14.729	14.735	(0.946)	949514	42.7884	49.3
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1036103	36.7228	42.3

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1010593	42.6608	49.2
94 4-Chlorotoluene	91	14.832	14.833	(0.952)	839121	42.4117	48.9
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	993656	44.5769	51.4
96 1,2,4-Trimethylbenzene	105	15.149	15.150	(0.973)	1022796	42.7236	49.2
98 sec-Butylbenzene	105	15.332	15.332	(0.984)	1369885	43.3382	49.9
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	1150268	44.2558	51.0
104 n-Butylbenzene	92	15.887	15.887	(1.020)	557966	42.2941	48.7
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	58588	56.0191	64.5

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070209v6/6r421.d
Date : 02-JUL-2009 19:18
Client ID: CAMO-09-104734SD
Sample Info: 1120187276418817941IVOAF11
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

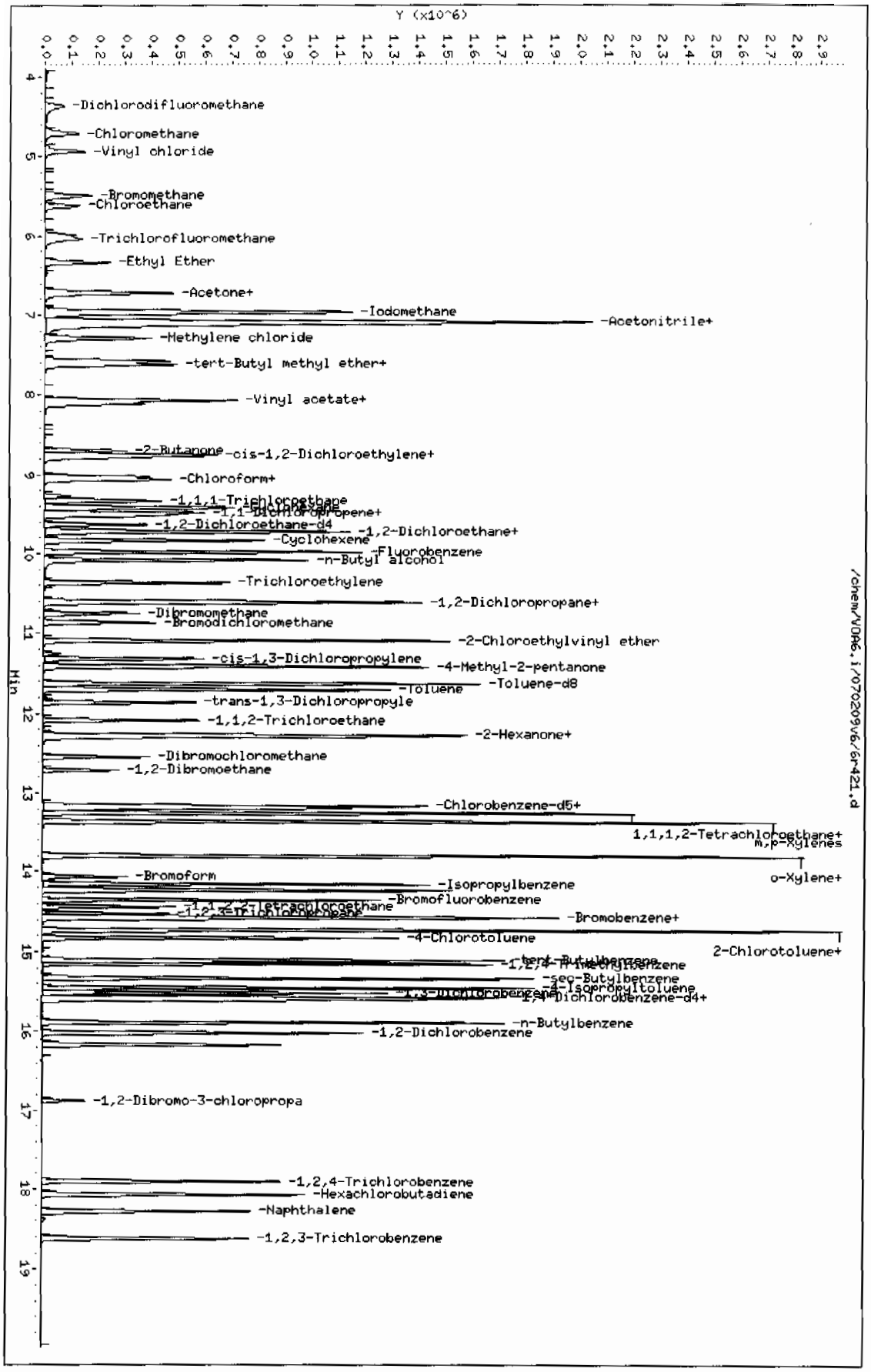

Page 1

Miscellaneous Data

Prep LogBook

Analyst: AXO1 Verified by:_____

Batch: 881793

Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872762		SW846 5030	01-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
MB	1201876338		SW846 5030	02-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
LCS	1201872765		SW846 5030	01-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
LCS	1201872766		SW846 5030	01-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
LCS	1201876339		SW846 5030	02-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
LCS	1201876340		SW846 5030	02-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
SAMPLE	232264001		SW846 5030	01-JUL-2009 12:40	N/A	5 g	5 mL	1	SOIL
PS	1201872763	232264001	SW846 5030	02-JUL-2009 11:52	N/A	5 g	5 mL	1	SOIL
PSD	1201872764	232264001	SW846 5030	02-JUL-2009 11:53	N/A	5 g	5 mL	1	SOIL
SAMPLE	232264002		SW846 5030	01-JUL-2009 12:43	N/A	5 g	5 mL	1	SOIL
SAMPLE	232264003		SW846 5030	01-JUL-2009 12:44	N/A	5 g	5 mL	1	SOIL
SAMPLE	232264004		SW846 5030	01-JUL-2009 12:45	N/A	5 g	5 mL	1	SOIL
SAMPLE	232264005		SW846 5030	01-JUL-2009 12:46	N/A	5 g	5 mL	1	SOIL
SAMPLE	232264006		SW846 5030	01-JUL-2009 12:47	N/A	5 g	5 mL	1	SOIL
SAMPLE	232264007		SW846 5030	01-JUL-2009 12:48	N/A	5 g	5 mL	1	SOIL
SAMPLE	232264008		SW846 5030	01-JUL-2009 12:49	N/A	5 g	5 mL	1	SOIL
SAMPLE	232264009		SW846 5030	02-JUL-2009 11:50	N/A	5 g	5 mL	1	SOIL
SAMPLE	232264010		SW846 5030	01-JUL-2009 12:38	N/A	5 g	5 mL	1	SOIL
SAMPLE	232348001		SW846 5030	02-JUL-2009 11:51	N/A	5 g	5 mL	1	SOIL
SAMPLE	232348002		SW846 5030	01-JUL-2009 12:52	N/A	5 g	5 mL	1	SOIL
SAMPLE	232348003		SW846 5030	01-JUL-2009 12:53	N/A	5 g	5 mL	1	SOIL
SAMPLE	232348004		SW846 5030	01-JUL-2009 12:54	N/A	5 g	5 mL	1	SOIL
SAMPLE	232348005		SW846 5030	01-JUL-2009 12:39	N/A	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 6/15/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1306

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 061509V6

Daily Standard — Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	ICV	MS/ LCS	BFB
L-ICV	W6VM090615-17		5+5		
IS	UVM090518-01	1	1		
SS	UVM090305-02	1	1		
S-ICV	W6VM090615-25		5+5		
BFB	UVM090305-02				1

Purge Amount

5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6/15/2009	9:58	6P101.D	RINSE	GEL	BLANK	5mL	1	N/A	1	w	RXD1	N/A	X	RINSE
6/15/2009	10:26	6P102.D	RINSE	GEL	BLANK	5mL	1	N/A	2	w	RXD1	N/A	X	RINSE
6/15/2009	11:16	6P103.D	W6VM090615-01	GEL	CCV	5uL	1	N/A	3	w	RXD1	N/A	X	UVM090603-07A+UVM090520-07D
6/15/2009	11:44	6P104.D	W6VM090615-02	GEL	CCV/LCS	5uL	1	N/A	4	w	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	12:36	6P105.D	W6VM090615-03	GEL	CCV	5uL	1	N/A	5	w	RXD1	N/A	X	UVM090603-07A+UVM090520-07D
6/15/2009	13:04	6P106.D	W6VM090615-04	GEL	CCV/LCS	5uL	1	N/A	6	w	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	13:32	6P107.D	W6VM090615-05	GEL	LCS	5g	1	N/A	7	s	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	14:23	6P108.D	W6VM090615-06	GEL	CCV/LCS	5uL	1	N/A	8	w	RXD1	N/A	X	UVM090519-01E+IVM090611-01
6/15/2009	15:14	6P109.D	RINSE	GEL	BLANK	5mL	1	N/A	9	w	RXD1	N/A	X	RINSE
6/15/2009	15:42	6P110.D	W6VM090615-07	GEL	L-1	5uL	1	N/A	10	w	RXD1	N/A	X	TEST
6/15/2009	16:10	6P111.D	UVM090305-02	GEL	BFB	5mL	1	N/A	11	w	RXD1	N/A	O	
6/15/2009	16:38	6P112.D	W6VM090615-08	GEL	L-1	5uL	1	N/A	12	w	RXD1	N/A	O	UVM090603-02A+UVM090520-02D
6/15/2009	17:06	6P113.D	W6VM090615-09	GEL	L-2	5uL	1	N/A	13	w	RXD1	N/A	O	UVM090603-03A+UVM090520-03D
6/15/2009	17:34	6P114.D	W6VM090615-10	GEL	L-5	5uL	1	N/A	14	w	RXD1	N/A	O	UVM090603-04A+UVM090520-04D
6/15/2009	18:02	6P115.D	W6VM090615-11	GEL	L-10	5uL	1	N/A	15	w	RXD1	N/A	O	UVM090603-05A+UVM090520-05D
6/15/2009	18:30	6P116.D	W6VM090615-12	GEL	L-20	5uL	1	N/A	16	w	RXD1	N/A	X	Methyline Chloride would not pass
6/15/2009	18:58	6P117.D	W6VM090615-13	GEL	L-50	5uL	1	N/A	17	w	RXD1	N/A	O	UVM090603-07A+UVM090520-07D
6/15/2009	19:25	6P118.D	W6VM090615-14	GEL	L-100	5uL	1	N/A	18	w	RXD1	N/A	O	UVM090603-08A+UVM090520-08D
6/15/2009	19:53	6P119.D	RINSE	GEL	BLANK	5mL	1	N/A	19	w	RXD1	N/A	x	RINSE
6/15/2009	20:21	6P120.D	W6VM090615-15	GEL	L-0.5	5uL	1	N/A	20	w	RXD1	N/A	O	UVM090603-01A+UVM090520-01D
6/15/2009	20:49	6P121.D	W6VM090615-16	GEL	L-ICV	5uL	1	N/A	21	w	RXD1	N/A	x	UVM090605-01A+IVM090611-01
6/15/2009	21:17	6P122.D	W6VM090615-17	GEL	L-ICV	5uL	1	N/A	22	w	RXD1	N/A	O	UVM090527-01C+IVM090611-01
6/15/2009	21:45	6P123.D	W6VM090615-18	GEL	S-5	5uL	1	N/A	23	w	RXD1	N/A	O	UVM090601-01+UVM090522-01C
6/15/2009	22:12	6P124.D	W6VM090615-19	GEL	S-10	5uL	1	N/A	24	w	RXD1	N/A	O	UVM090601-02+UVM090522-02C
6/15/2009	22:40	6P125.D	W6VM090615-20	GEL	S-25	5uL	1	N/A	25	w	RXD1	N/A	O	UVM090601-03+UVM090522-03C
6/15/2009	23:07	6P126.D	W6VM090615-21	GEL	S-50	5uL	1	N/A	26	w	RXD1	N/A	O	UVM090601-04+UVM090522-04C
6/15/2009	23:35	6P127.D	W6VM090615-22	GEL	S-100	5uL	1	N/A	27	w	RXD1	N/A	O	UVM090601-05+UVM090522-05C
6/16/2009	0:03	6P128.D	W6VM090615-23	GEL	S-250	5uL	1	N/A	28	w	RXD1	N/A	O	UVM090601-06+UVM090522-06C

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 6/15/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY:
DATE:

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1306

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 061509V6

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	ICV	MS/ LCS	BFB
L-ICV	W6VM090615-17		5+5		
IS	UVM090518-01	1	1		
SS	UVM090305-02	1	1		
S-ICV	W6VM090615-25		5+5		
BFB	UVM090305-02				1

Purge Amount	
5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6/16/2009	0:31	6P129.D	W6VM090615-24	GEL	S-500	5uL	1	N/A	29	w	RXD1	N/A	O	UVM090601-07+UVM090522-07C
6/16/2009	0:59	6P130.D	RINSE	GEL	BLANK	5mL	1	N/A	30	w	RXD1	N/A	x	RINSE
6/16/2009	1:27	6P131.D	W6VM090615-25	GEL	S-ICV	5uL	1	N/A	31	w	RXD1	N/A	O	UVM090601-08A+UVM090528-01C
6/16/2009	1:55	6P132.D	RINSE	GEL	BLANK	5mL	1	N/A	32	w	RXD1	N/A	x	RINSE

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 7/1/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY:
DATE:

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1341

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. 123 for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 070109V6

Daily Standard — Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W6VM090701-01		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W6VM090701-02/03			5+5	
BFB	W6VM090701-01				1
SHORT	W6VM090701-04/05		5+5	5+5	
DHEC	N/A				

Purge Amount

5	Water Purge Vol:ML
5	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
1 Jul 2009 09:16	6R301.D	RINSE	GEL	BFB	5uL	1	N/A	1	w	AXO1	N/A	X	RINSE
1 Jul 2009 09:44	6R302.D	W6VM090701-01	GEL	BFB/CCV	5uL	1	N/A	2	w	AXO1	N/A	O	UVM090603-07A+UVM090617-07B
1 Jul 2009 10:12	6R303.D	W6VM090701-02	GEL	LCS	5uL	1	N/A	3	w	AXO1	N/A	O	UVM090605-01D+IVM090630-01
1 Jul 2009 11:11	6R304.D	W6VM090701-03	GEL	LCS	5g	1	N/A	4	s	AXO1	N/A	O	UVM090605-01D+IVM090630-01
1 Jul 2009 11:39	6R305.D	W6VM090701-04	GEL	short	5uL	1	N/A	5	w	AXO1	N/A	O	UVM090601-08B/UVM090624-02A
1 Jul 2009 12:07	6R306.D	W6VM090701-05	GEL	SLCS	5g	1	N/A	6	s	AXO1	N/A	O	UVM090601-08B/UVM090624-02A
1 Jul 2009 12:35	6R307.D	12018--	GEL	MB	5g	1	N/A	7	s	AXO1	N/A	O	
1 Jul 2009 13:03	6R308.D	12018--	GEL	MB	5mL	1	N/A	8	w	AXO1	N/A	O	
1 Jul 2009 13:31	6R309.D	232236010	LANL	881794	5G	1	N/A	9	s	AXO1	N/A	O	
1 Jul 2009 13:59	6R310.D	232348005	LANL	881794	5G	1	N/A	10	s	AXO1	N/A	O	
1 Jul 2009 14:27	6R311.D	232264001	LANL	881794	5G	1	N/A	11	s	AXO1	N/A	O	
1 Jul 2009 14:54	6R312.D	232264002	LANL	881794	5G	1	N/A	12	s	AXO1	N/A	O	
1 Jul 2009 15:22	6R313.D	232264003	LANL	881794	5G	1	N/A	13	s	AXO1	N/A	O	
1 Jul 2009 15:50	6R314.D	232264004	LANL	881794	5G	1	N/A	14	s	AXO1	N/A	O	
1 Jul 2009 16:18	6R315.D	232264005	LANL	881794	5G	1	N/A	15	s	AXO1	N/A	O	
1 Jul 2009 16:45	6R316.D	232264006	LANL	881794	5G	1	N/A	16	s	AXO1	N/A	O	
1 Jul 2009 17:13	6R317.D	232264007	LANL	881794	5G	1	N/A	17	s	AXO1	N/A	O	
1 Jul 2009 17:41	6R318.D	232264008	LANL	881794	5G	1	N/A	18	s	AXO1	N/A	O	
1 Jul 2009 18:09	6R319.D	232264009	LANL	881794	5G	1	N/A	19	s	AXO1	N/A	X	IS low re-run see file 6R40?
1 Jul 2009 18:37	6R320.D	232348001	LANL	881794	5G	1	N/A	20	s	AXO1	N/A	X	IS low re-run see file 6R40?
1 Jul 2009 19:05	6R321.D	232348002	LANL	881794	5G	1	N/A	21	s	AXO1	N/A	O	
1 Jul 2009 19:33	6R322.D	232348003	LANL	881794	5G	1	N/A	22	s	AXO1	N/A	O	
1 Jul 2009 20:00	6R323.D	232348004	LANL	881794	5G	1	N/A	23	s	AXO1	N/A	O	

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 7/1/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1341

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. 123 for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
CI test lot # 72612
Sequence Number: 070109V6

Daily Standard	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W6VM090701-01		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W6VM090701-02/03			5+5	
BFB	W6VM090701-01				1
SHORT	W6VM090701-04/05		5+5	5+5	
DHEC	N/A				

Purge Amount	
5	Water Purge Vol:ML
5	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable (O/X)	Comments
1 Jul 2009	20:28	6R324.D	232531001	BRKL	881792	5G	1	N/A	24	s	AXO1	N/A	O	
1 Jul 2009	20:56	6R325.D	232531003	BRKL	881792	5G	1	N/A	25	s	AXO1	N/A	O	
1 Jul 2009	21:24	6R326.D	1201872763	LANL	881794	5G	1	N/A	26	s	AXO1	N/A	X	232264001MS Re-Run MSD out of Tune
1 Jul 2009	21:52	6R327.D	1201872764	LANL	881794	5G	1	N/A	27	s	AXO1	N/A	X	232264001MSD AFTER TUNE WINDOW
1 Jul 2009	22:19	6R328.D	1201872759	BRKL	881792	5G	1	N/A	28	s	AXO1	N/A	X	232351001MS Out of tune
1 Jul 2009	22:47	6R329.D	1201872760	BRKL	881792	5G	1	N/A	29	s	AXO1	N/A	X	232351001MSD Out of tune

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 7/2/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1341

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. 123 for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 070209V6

Daily Standard	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W6VM090702-01		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W6VM090702-02/03			5+5	
BFB	W6VM090702-01				1
SHORT	W6VM090702-04/05		5+5	5+5	
DHEC	N/A				

Purge Amount	
5	Water Purge Vol:ML
5	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
2 Jul 2009	08:57	6R401.D	RINSE	GEL	RINSE	5uL	1	N/A	1	w	AXO1	N/A	X	RINSE
2 Jul 2009	09:24	6R402.D	W6VM090702-01	GEL	BFB/CCV	5uL	1	N/A	2	w	AXO1	N/A	O	UVM090603-07B+UVM090617-07C
2 Jul 2009	09:52	6R403.D	W6VM090702-02	GEL	LCS	5uL	1	N/A	3	w	AXO1	N/A	O	UVM090605-01C+IVM090630-01
2 Jul 2009	10:20	6R404.D	W6VM090702-03	GEL	LCS	5g	1	N/A	4	s	AXO1	N/A	O	UVM090605-01C+IVM090630-01
2 Jul 2009	10:50	6R405.D	W6VM090702-03	GEL	short/LCS	5uL	1	N/A	4	s	AXO1	N/A	x	AUTOSAMPLER ERROR RE INJECTED VIAL 4
2 Jul 2009	11:18	6R406.D	W6VM090702-04	GEL	short/LCS	5uL	1	N/A	5	w	AXO1	N/A	O	UVM090601-08B/UVM090624-02A
2 Jul 2009	11:46	6R407.D	W6VM090702-05	GEL	SLCS	5g	1	N/A	6	s	AXO1	N/A	O	UVM090601-08B/UVM090624-02A
2 Jul 2009	12:14	6R408.D	12018--	GEL	MB	5uL	1	N/A	7	s	AXO1	N/A	O	
2 Jul 2009	13:07	6R409.D	12018--	GEL	MB	5g	1	N/A	8	s	AXO1	N/A	O	
2 Jul 2009	13:35	6R410.D	232264009	LANL	881794	5g	1	N/A	9	s	AXO1	N/A	O	
2 Jul 2009	14:03	6R411.D	232348001	LANL	881794	5g	1	N/A	10	s	AXO1	N/A	O	Confirm IS failure, Report this file
2 Jul 2009	14:31	6R412.D	232357001	LANL	882208	5g	1	N/A	11	s	AXO1	N/A	O	
2 Jul 2009	14:59	6R413.D	232357002	LANL	882208	5g	1	N/A	12	s	AXO1	N/A	O	
2 Jul 2009	15:26	6R414.D	232363001	LANL	882208	5g	1	N/A	13	s	AXO1	N/A	O	
2 Jul 2009	15:54	6R415.D	232363002	LANL	882208	5g	1	N/A	14	s	AXO1	N/A	O	
2 Jul 2009	16:59	6R416.D	232363003	LANL	882208	5g	1	N/A	15	s	AXO1	N/A	X	RR IS failure see file 6S109
2 Jul 2009	17:27	6R417.D	232363004	LANL	882208	5g	1	N/A	16	s	AXO1	N/A	X	RR IS failure see file 6S110
2 Jul 2009	17:55	6R418.D	232363006	LANL	882208	5g	1	N/A	17	s	AXO1	N/A	O	
2 Jul 2009	18:22	6R419.D	232363011	LANL	882208	5g	1	N/A	18	s	AXO1	N/A	O	
2 Jul 2009	18:50	6R420.D	1201872763	LANL	881794	5g	1	N/A	19	s	AXO1	N/A	O	232264001MS
2 Jul 2009	19:18	6R421.D	1201872764	LANL	881794	5g	1	N/A	20	s	AXO1	N/A	O	232264001MSD
2 Jul 2009	19:45	6R422.D	1201872759	BRKL	881792	5g	1	N/A	21	s	AXO1	N/A	O	232531001MS
2 Jul 2009	20:13	6R423.D	1201872760	BRKL	881792	5g	1	N/A	22	s	AXO1	N/A	O	232531001MSD

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 7/2/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1341

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. 123 for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 070209V6

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W6VM090702-01		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W6VM090702-02/03			5+5	
BFB	W6VM090702-01				1
SHORT	W6VM090702-04/05		5+5	5+5	
DHEC	N/A				

Purge Amount	
5	Water Purge Vol:ML
5	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
2 Jul 2009	20:41	6R424.D	1201873672	LANL	882208	5g	1	N/A	23	s	AXO1	N/A	O	232357001MS
2 Jul 2009	21:08	6R425.D	1201873673	LANL	882208	5g	1	N/A	24	s	AXO1	N/A	O	232357001MSD

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
08-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
VOA GC/MS	SW846 8260B	Solid	LANL
Batch ID:	**Sample Numbers:**		
881794	See Below		

Potentially affected work order(s)(SDG): 232264(09-2434),232348(09-2457)

Application Issues:

Failed Recovery for LCS/LCSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The LCS(1201872765) did not meet acceptance criteria for the following: Dichlorodifluorormethane recovered at 160.7%. The limits are 68.%-145% 2-Butanone recovered at 181.9% The limits are 35%-162% 1,2-Dibromo-3-chloropropane recovered at 150%. The limits are 68%-145%. 2. Sample 232348001did not meet acceptance criteria for internal standard recoveries. The recoveries were as follows: Flourobenzene recovered at -50.93% Chlorobenzene-d5 recovered at -51.11% 1,4-Dichlorobenzene-d4 recovered at -52.48% The limits are +/-50%.	1. Narrate and report data. The total number of failures was within the client's acceptance limit. 2. Narrate and report data. The sample was re-analyzed with similar results therefore it is possible that matrix interference was demonstrated.

Originator's Name:

Alex Olson 08-JUL-09

Data Validator/Group Leader:

Kelle Bellamy 14-JUL-09

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r311.d
Lab Smp Id: 232264001 Client Smp ID: CAMO-09-10473
Inj Date : 01-JUL-2009 14:27
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232264001|881794|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2434.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	13.20880	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1625376	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1254170	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	698845	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.633	(0.965)	401772	49.3314	56.8
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1592745	47.9382	55.2
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	643767	49.8768	57.5

ION RATIO REPORT

VOA REPORT

Data file: 6r311.d
Report Date: 07/02/2009 09:45
Lab. ID: 232264001 SampleType: SAMPLE
Injection Date: 01-JUL-2009 14:27
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232264001|881794|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2434
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	18579	9.98	9.71	80-120	100	(T)
64	3181	9.97	9.71	2- 62	17	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	11494	11.63	11.41	80-120	100	(T)
43	5061	11.62	11.41	198-258	44	(QT)
100	1070440	11.63	11.41	11- 71	9313	(QT)
82 Bromoform				CAS#: 75-25-2		
173	2997	14.36	14.06	80-120	100	(T)
175	41155	14.36	14.06	19- 79	1373	(QT)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	5552	14.24	14.53	80-120	100	(T)
75	11539	14.23	14.53	254-314	208	(QT)
77	3229	14.35	14.56	727-787	58	(QT)

Q qualifier indicates ion failed ratio requirement
T qualifier indicates RT outside 0.06 minute window of expected RT

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070109v6/6r311.d
Lab Smp Id: 232264001 Client Smp ID: CAMO-09-10473
Inj Date : 01-JUL-2009 14:27
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232264001|881794|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA6.i/070109v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 08:18 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2434.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	13.20880	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3471438	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3780631	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
14.235	4575669	65.9045058	75.9	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	========	======
Unknown Siloxane					CAS #:		
16.174	2388363	31.5868350	36.4	0		0	101

Data File: /chem/VOA6.i/070109v6/6r311.d
Date : 01-JUL-2009 14:27
Client ID: CAMO-09-10473
Sample Info: |2322640011881794|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

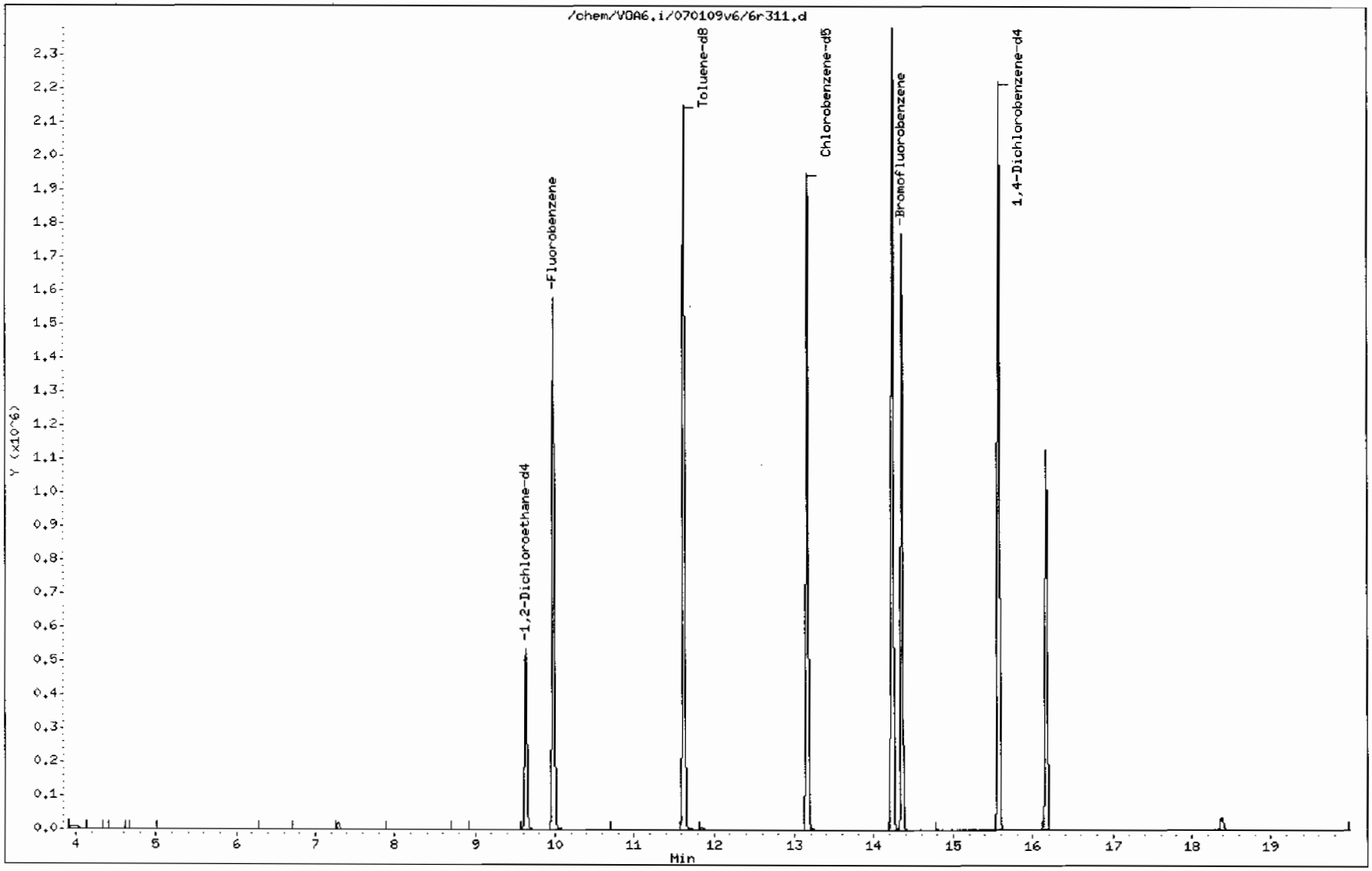

Data File: /chem/VOA6.i/070109v6/6r311.d

Date : 01-JUL-2009 14:27

Client ID: CAMO-09-10473

Instrument: VOA6.i

Sample Info: |2322640001|881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122479	78	C8H24O4Si4	296
7H-Dibenzo[b,g]carbazole, 7-methyl-	3557-49-1	NIST05.L	112705	59	C21H15N	281

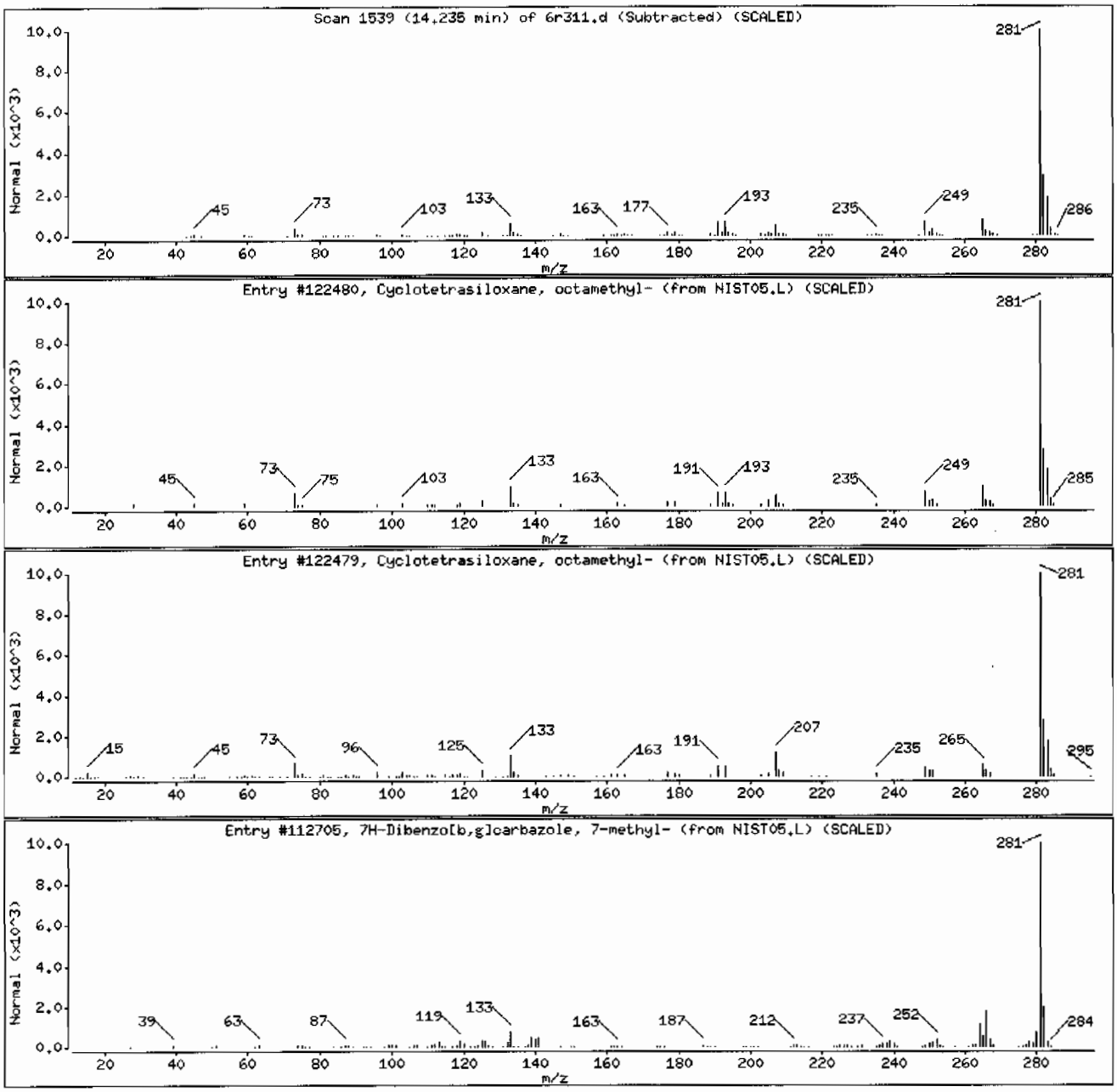

Data File: /chem/VOA6.i/070109v6/6r311.d

Date : 01-JUL-2009 14:27

Client ID: CAMO-09-10473 Instrument: VOA6.i

Sample Info: |2322640001|881794|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
p-Trimethylsilyloxyphenyl-(trimethylsily	1000079-05-1	NIST05.L	170606	72	C18H3404Si3	398
Benzaldehyde, 2,5-bis[(trimethylsilyl)ox	56114-69-3	NIST05.L	112903	64	C13H2203Si2	282
p-Trimethylsilyloxyphenyl-bis(trimethyls	1000079-08-1	NIST05.L	161171	64	C17H3403Si3	370

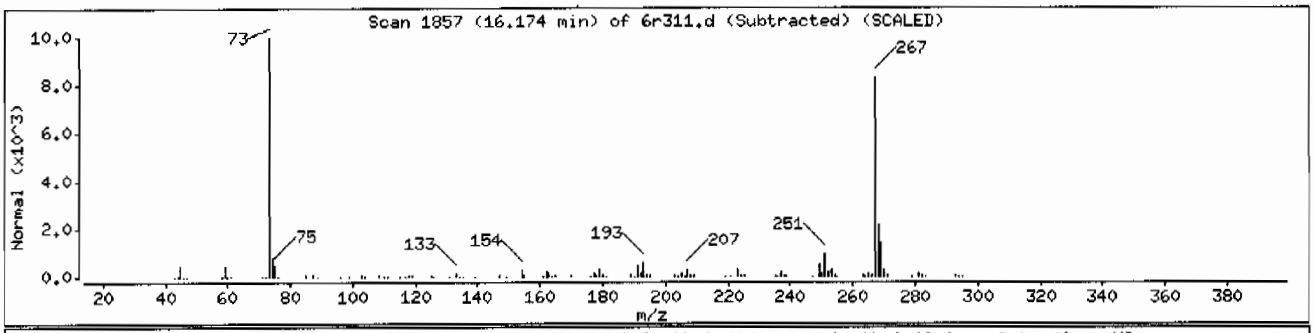

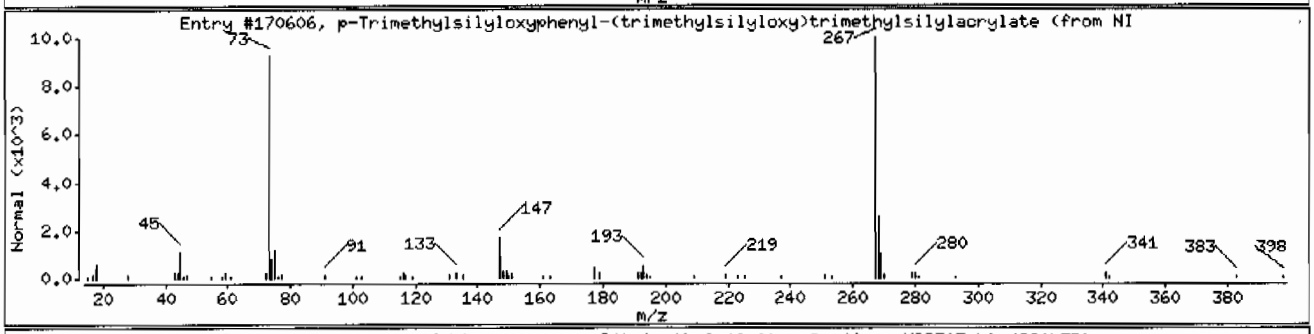

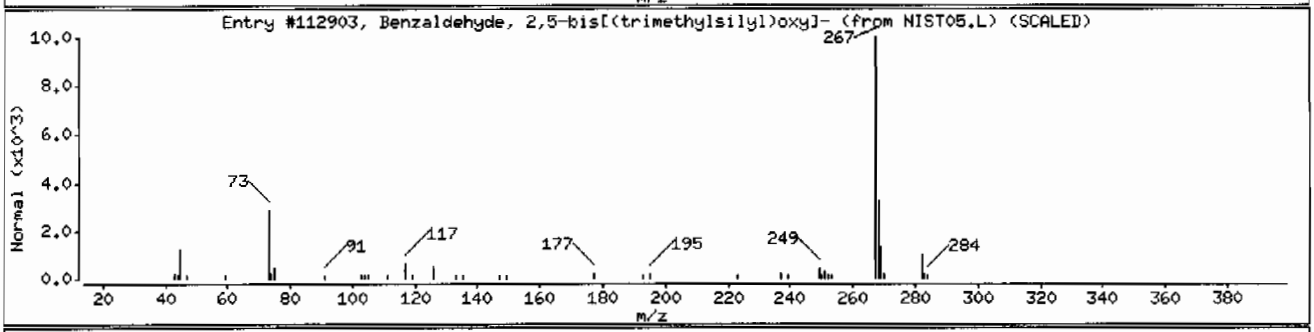

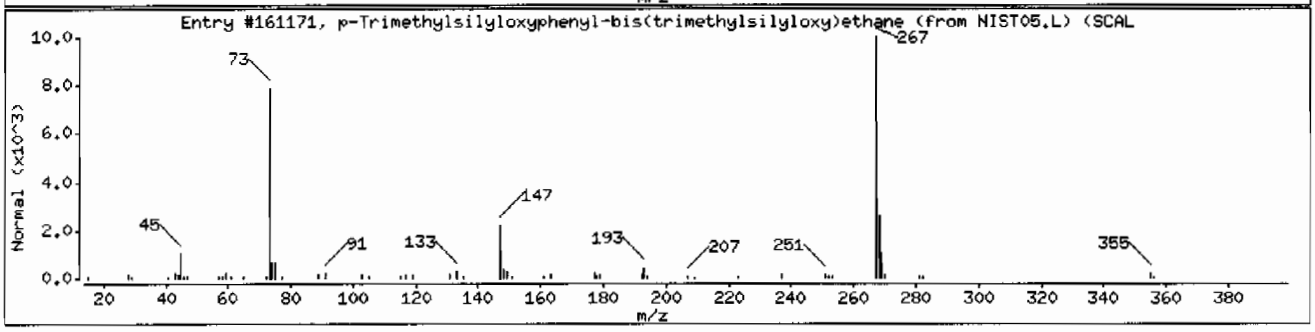

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r420.d
Lab Smp Id: 1201872763 Client Smp ID: CAMO-09-10473MS
Inj Date : 02-JUL-2009 18:50
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201872763|881794|1|VOAF|1|
Misc Info : LANL 5g N/A 232264001MS
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 19 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2434.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	13.20880	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1469887	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1098793	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	629971	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.626	9.632	(0.965)	354262	48.0993	55.4
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1438090	49.4040	56.9
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	557282	47.8967	55.2
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	281408	68.6092	79.0
5 Chloromethane	50	4.713	4.713	(0.472)	346791	50.8321	58.6
6 Vinyl chloride	62	4.934	4.934	(0.494)	354758	51.3544	59.2
7 Bromomethane	94	5.498	5.508	(0.551)	268680	49.2578	56.8
8 Chloroethane	64	5.629	5.629	(0.564)	238785	48.9327	56.4
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	478483	52.3208	60.3

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/Kg)
13 Acetone	43	6.712	6.718	(0.673)	297257	260.380	300
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	433232	47.7746	55.0
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	768983	43.5655	50.2
15 Iodomethane	142	6.968	6.968	(0.698)	2587667	239.871	276
20 Methylene chloride	84	7.291	7.297	(0.731)	325535	41.9337	48.3
18 Carbon disulfide	76	7.102	7.108	(0.712)	5020051	258.014	297
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	403257	44.2071	50.9
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	525316	45.5814	52.5
30 2-Butanone	43	8.694	8.694	(0.871)	500017	317.591	366
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	475939	46.8018	53.9
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	764493	44.6787	51.5
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	405173	46.8365	54.0
36 Chloroform	83	9.053	9.053	(0.907)	507010	45.5662	52.5
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	725974	44.5788	51.4
35 Bromochloromethane	128	9.023	9.023	(0.904)	158447	46.7223	53.8
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	435115	48.2223	55.6
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	417302	46.9435	54.1
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	405977	49.6079	57.2
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	351709	41.9444	48.3
49 Benzene	78	9.724	9.724	(0.974)	1225058	44.6435	51.4
53 Trichloroethylene	95	10.364	10.364	(1.038)	318203	46.2606	53.3
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	310594	46.2529	53.3
59 Bromodichloromethane	83	10.864	10.864	(1.089)	373140	49.6154	57.2
58 Dibromomethane	93	10.748	10.748	(1.077)	170032	44.8018	51.6
63 4-Methyl-2-pentanone	58	11.412	11.413	(0.867)	512321	232.653	268
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	481746	48.9788	56.4
65 Toluene	92	11.699	11.699	(0.889)	781314	43.3037	49.9
67 trans-1,3-Dichloropropylene	75	11.858	11.858	(0.901)	425822	48.7234	56.1
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	218047	46.6021	53.7
69 2-Hexanone	43	12.260	12.260	(0.932)	818422	269.600	311
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	451874	45.4816	52.4
71 Tetrachloroethylene	164	12.290	12.290	(0.934)	291797	46.2913	53.3
72 Dibromochloromethane	129	12.540	12.540	(0.953)	286467	49.9267	57.5
73 1,2-Dibromoethane	107	12.705	12.705	(0.966)	257202	46.9228	54.1
76 Chlorobenzene	112	13.193	13.193	(1.003)	894622	45.9880	53.0
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	314523	49.5589	57.1
78 Ethylbenzene	91	13.254	13.254	(1.007)	1468607	45.0775	51.9
79 m,p-Xylenes	106	13.363	13.363	(1.016)	1195045	91.3481	105
80 o-Xylene	106	13.796	13.796	(1.049)	600959	46.9567	54.1
81 Styrene	104	13.802	13.802	(1.049)	956644	48.0515	55.4
82 Bromoform	173	14.064	14.064	(0.903)	208402	42.8543	49.4
87 1,1,2,2-Tetrachloroethane	83	14.442	14.442	(0.927)	334227	44.6464	51.4
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	99402	48.1446	55.5(Q)
90 Bromobenzene	156	14.564	14.564	(0.935)	399490	44.9752	51.8
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1717983	42.8184	49.3
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1198046	43.9858	50.7
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1303570	37.6428	43.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1270840	43.7077	50.4
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1064053	43.8166	50.5
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1236977	45.2116	52.1
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1284939	43.7296	50.4
98 sec-Butylbenzene	105	15.332	15.332	(0.984)	1712800	44.1477	50.9
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	1447013	45.3584	52.3
104 n-Butylbenzene	92	15.887	15.887	(1.020)	703317	43.4347	50.0
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	70837	55.1826	63.6

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070209v6/6r420.d
Date : 02-JUL-2009 18:50
Client ID: CAMO-09-10473HS
Sample Info: 1120187276318817941|VOAF|1|

Instrument: VOA6.i

Column phase: DB-624

Operator: RXD1
Column diameter: 0.25

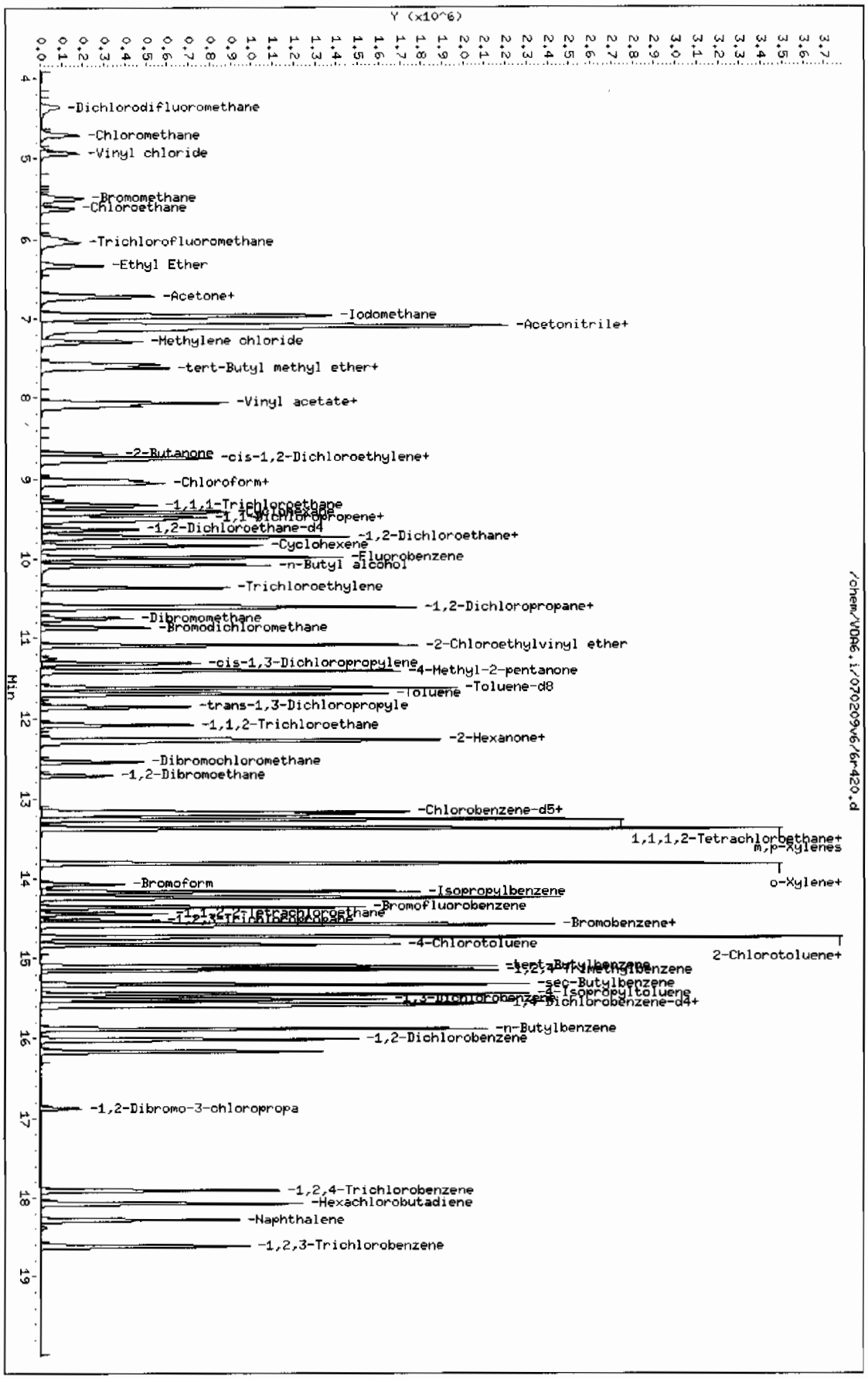

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r421.d
Lab Smp Id: 1201872764 Client Smp ID: CAMO-09-10473MSD
Inj Date : 02-JUL-2009 19:18
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201872764|881794|1|VOAF|1|
Misc Info : LANL 5g N/A 232264001MSD
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: 1STD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 20 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2434.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	13.20880	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1219396	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	905359	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	513257	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	293337	48.0087	55.3
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1195319	49.8374	57.4
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	455120	48.0111	55.3
4 Dichlorodifluoromethane	85	4.360	4.370	(0.437)	213429	62.7247	72.3
5 Chloromethane	50	4.712	4.713	(0.472)	268167	47.3821	54.6
6 Vinyl chloride	62	4.934	4.934	(0.494)	275226	48.0258	55.3
7 Bromomethane	94	5.488	5.508	(0.550)	206623	45.6622	52.6
8 Chloroethane	64	5.619	5.629	(0.563)	186272	46.0128	53.0
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	369580	48.7142	56.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.712	6.718	(0.673)	257969	272.307	314
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	335393	44.5830	51.4
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	608885	42.3397	48.8
15 Iodomethane	142	6.962	6.968	(0.698)	2050974	229.176	264
20 Methylene chloride	84	7.291	7.297	(0.731)	259988	40.1867	46.3
18 Carbon disulfide	76	7.090	7.108	(0.710)	3856304	238.917	275
23 trans-1,2-Dichloroethylene	61	7.620	7.627	(0.764)	316278	41.7944	48.2
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	412603	43.1557	49.7
30 2-Butanone	43	8.693	8.694	(0.871)	434249	332.477	383
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	376347	44.6107	51.4
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	610732	43.8090	50.5
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	323939	45.1384	52.0
36 Chloroform	83	9.053	9.053	(0.907)	401421	43.4876	50.1
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	584152	44.0269	50.7
35 Bromochloromethane	128	9.023	9.023	(0.904)	129004	45.8546	52.8
40 1,1,1-Trichloroethane	97	9.327	9.328	(0.935)	347037	46.3617	53.4
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	322740	43.7640	50.4
46 Carbon tetrachloride	117	9.516	9.517	(0.954)	316185	46.5725	53.7
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	284080	40.8386	47.0
49 Benzene	78	9.724	9.724	(0.974)	955624	41.9785	48.4
53 Trichloroethylene	95	10.364	10.364	(1.038)	251113	44.0063	50.7
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	247521	44.4321	51.2
59 Bromodichloromethane	83	10.864	10.864	(1.089)	297596	47.6991	55.0
58 Dibromomethane	93	10.754	10.748	(1.078)	139044	44.1628	50.9
63 4-Methyl-2-pentanone	58	11.412	11.413	(0.867)	436144	240.376	277
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	385016	47.1854	54.4
65 Toluene	92	11.699	11.699	(0.889)	619410	41.6651	48.0
67 trans-1,3-Dichloropropylene	75	11.857	11.858	(0.901)	341309	47.3972	54.6
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	177234	45.9725	53.0
69 2-Hexanone	43	12.260	12.260	(0.932)	696690	278.534	321
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	367758	44.9237	51.8
71 Tetrachloroethylene	164	12.290	12.290	(0.934)	228811	44.0546	50.8
72 Dibromochloromethane	129	12.540	12.540	(0.953)	232461	49.1704	56.6
73 1,2-Dibromoethane	107	12.711	12.705	(0.966)	212354	47.0181	54.2
76 Chlorobenzene	112	13.193	13.193	(1.003)	709490	44.2636	51.0
77 1,1,1,2-Tetrachloroethane	131	13.247	13.248	(1.007)	253930	48.5600	56.0
78 Ethylbenzene	91	13.254	13.254	(1.007)	1157503	43.1193	49.7
79 m,p-Xylenes	106	13.363	13.363	(1.016)	944480	87.6200	101
80 o-Xylene	106	13.796	13.796	(1.049)	477379	45.2701	52.2
81 Styrene	104	13.802	13.802	(1.049)	757929	46.2041	53.2
82 Bromoform	173	14.064	14.064	(0.903)	169499	42.7830	49.3
87 1,1,2,2-Tetrachloroethane	83	14.436	14.442	(0.927)	278166	45.6073	52.5
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	82614	49.1125	56.6(Q)
90 Bromobenzene	156	14.564	14.564	(0.935)	317583	43.8844	50.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1355707	41.4728	47.8
93 2-Chlorotoluene	91	14.729	14.735	(0.946)	949514	42.7884	49.3
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1036103	36.7228	42.3

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1010593	42.6608	49.2
94 4-Chlorotoluene	91	14.832	14.833	(0.952)	839121	42.4117	48.9
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	993656	44.5769	51.4
96 1,2,4-Trimethylbenzene	105	15.149	15.150	(0.973)	1022796	42.7236	49.2
98 sec-Butylbenzene	105	15.332	15.332	(0.984)	1369885	43.3382	49.9
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	1150268	44.2558	51.0
104 n-Butylbenzene	92	15.887	15.887	(1.020)	557966	42.2941	48.7
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	58588	56.0191	64.5

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070209v6/6r421.d
Date : 02-JUL-2009 19:18
Client ID: CAMD-09-10473HSD
Sample Info: 1120187276|881794|1|VOAF1|1
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

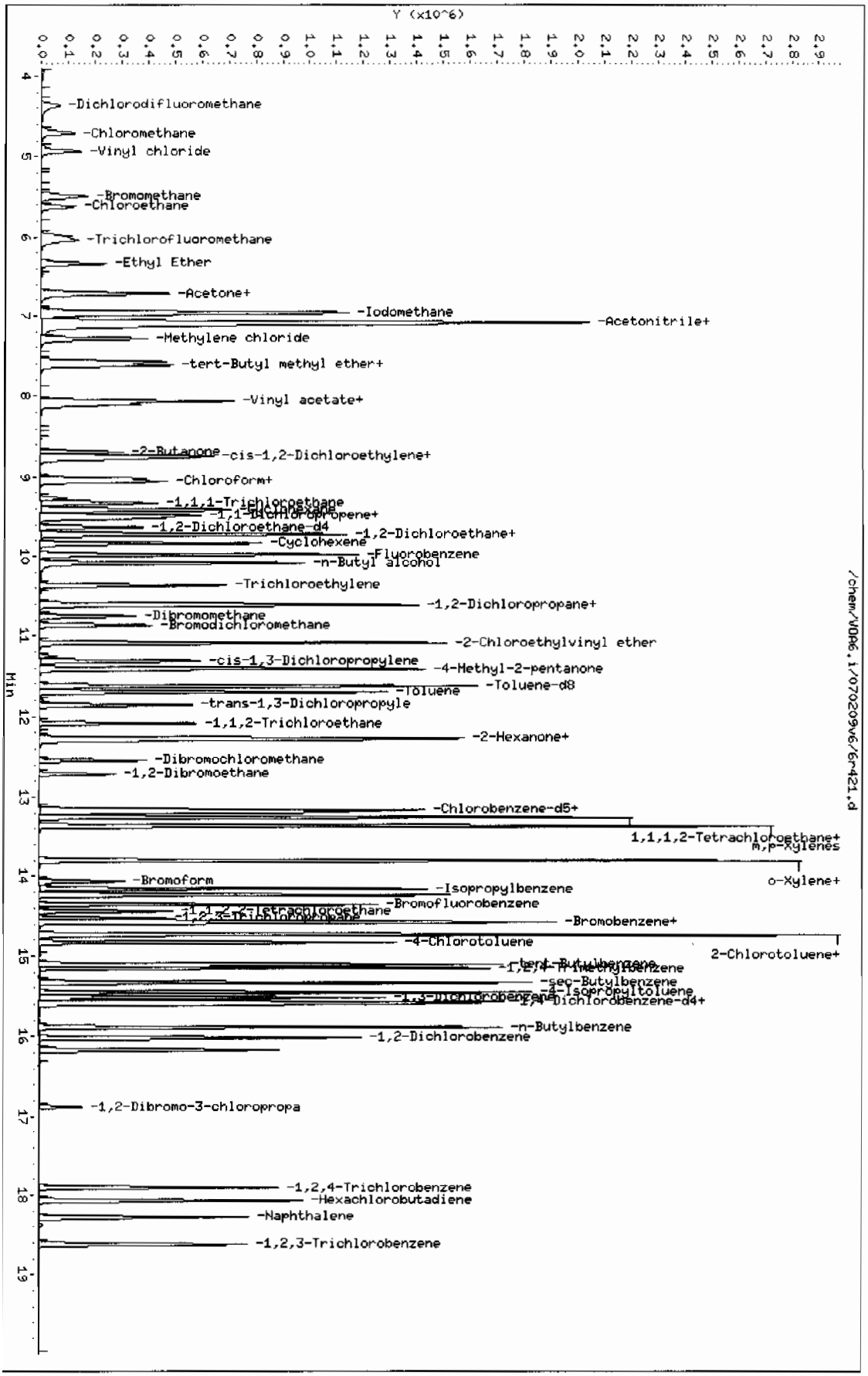

Page 1

GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2457

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	880638
Prep Batch Number:	880635

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232348001	CAMO-09-10462
232348002	CAMO-09-10460
232348003	CAMO-09-10461
232348004	CAMO-09-10467
1201869908	Method Blank (MB)
1201869909	Laboratory Control Sample (LCS)
1201869910	232348001(CAMO-09-10462) Matrix Spike (MS)
1201869911	232348001(CAMO-09-10462) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS(1201869909) recovered Benzoic acid at 24%. The limits are 27%-137%. The LCS failure represented less than 5% of the total requested spike analyte list. That satisfied the acceptance criteria for the client and the data results have been reported.

QC Sample Designation
Sample 232348001 (CAMO-09-10462) was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The MS(1201869910)/MSD(1201869911) RPD value for 4-Nitrophenol was 48% (limit is 30%) and for Benzyl alcohol was 52% (limit is 30%).Since 4-Nitrophenol and Benzyl alcohol were individually within the acceptance limits for the MS and MSD, the data results have been reported.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for confirmations and/or dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 706403. It is located in the Miscellaneous Section of the data report.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Additional Comments
Additional comments were not required for this SDG.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration
The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD1.I	HP 5973 Mass Spectrometer	HP6890/HP5973	ZB-5ms	25m x 0.2mm, 0.33um (5% Polysilarylene-95% Polydimethylsiloxane)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: [signature] **Date:** 7-16-09

Roadmap for LANL 09-2457 SVOA

This roadmap was analyzed by rmb on 06-30-2009, 09:20.
This roadmap was reviewed by bar00895 on 07-02-2009, 08:34.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD1.i/s062809.b/s1f2808.d	232348001	28-JUN-2009	17:23	09-2457.sub	CAMO-09-10462	1	880638	
☐	N	/chem/MSD1.i/s062809.b/s1f2811.d	232348002	28-JUN-2009	18:37	09-2457.sub	CAMO-09-10460	1	880638	
☐	N	/chem/MSD1.i/s062809.b/s1f2812.d	232348003	28-JUN-2009	19:01	09-2457.sub	CAMO-09-10461	1	880638	
☐	N	/chem/MSD1.i/s062809.b/s1f2813.d	232348004	28-JUN-2009	19:25	09-2457.sub	CAMO-09-10467	1	880638	

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD1.i/s062809.b/s1f2805-2.d	1201869908	mb	28-JUN-2009	16:10	09-2457.sub	SBLK01	1	880638	
☐	N	/chem/MSD1.i/s062809.b/s1f2806-2.d	1201869909	lcs	28-JUN-2009	16:34	09-2457.sub	SBLK01LCS	1	880638	
☐	N	/chem/MSD1.i/s062809.b/s1f2809.d	1201869910	ms	28-JUN-2009	17:48	09-2457.sub	CAMO-09-10462MS	1	880638	
☐	N	/chem/MSD1.i/s062809.b/s1f2810.d	1201869911	msd	28-JUN-2009	18:13	09-2457.sub	CAMO-09-10462MSD	1	880638	

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 18:37	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2811.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	364	ug/kg	72.7	364
108-95-2	Phenol	U	364	ug/kg	72.7	364
95-57-8	2-Chlorophenol	U	364	ug/kg	72.7	364
106-46-7	1,4-Dichlorobenzene	U	364	ug/kg	72.7	364
621-64-7	N-Nitrosodipropylamine	U	364	ug/kg	72.7	364
59-50-7	4-Chloro-3-methylphenol	U	364	ug/kg	36.4	364
83-32-9	Acenaphthene	U	36.4	ug/kg	12.1	36.4
121-14-2	2,4-Dinitrotoluene	U	364	ug/kg	36.4	364
100-02-7	4-Nitrophenol	U	364	ug/kg	72.7	364
87-86-5	Pentachlorophenol	U	364	ug/kg	72.7	364
129-00-0	Pyrene	U	36.4	ug/kg	11.4	36.4
110-86-1	Pyridine	U	364	ug/kg	72.7	364
62-53-3	Aniline	U	364	ug/kg	127	364
111-44-4	bis(2-Chloroethyl) ether	U	364	ug/kg	72.7	364
541-73-1	1,3-Dichlorobenzene	U	364	ug/kg	72.7	364
100-51-6	Benzyl alcohol	U	364	ug/kg	109	364
95-50-1	1,2-Dichlorobenzene	U	364	ug/kg	72.7	364
108-60-1	bis(2-Chloroisopropyl)ether	U	364	ug/kg	72.7	364
95-48-7	o-Cresol	U	364	ug/kg	72.7	364
65794-96-9	m,p-Cresols	U	364	ug/kg	145	364
67-72-1	Hexachloroethane	U	364	ug/kg	72.7	364
98-95-3	Nitrobenzene	U	364	ug/kg	72.7	364
78-59-1	Isophorone	U	364	ug/kg	72.7	364
88-75-5	2-Nitrophenol	U	364	ug/kg	36.4	364
105-67-9	2,4-Dimethylphenol	U	364	ug/kg	72.7	364
111-91-1	bis(2-Chloroethoxy)methane	U	364	ug/kg	72.7	364
120-83-2	2,4-Dichlorophenol	U	364	ug/kg	72.7	364
65-85-0	Benzoic acid	U	727	ug/kg	182	727
91-20-3	Naphthalene	U	36.4	ug/kg	10.9	36.4
106-47-8	4-Chloroaniline	U	364	ug/kg	72.7	364
87-68-3	Hexachlorobutadiene	U	364	ug/kg	72.7	364
91-57-6	2-Methylnaphthalene	U	36.4	ug/kg	7.27	36.4
77-47-4	Hexachlorocyclopentadiene	U	364	ug/kg	72.7	364
88-06-2	2,4,6-Trichlorophenol	U	364	ug/kg	72.7	364
95-95-4	2,4,5-Trichlorophenol	U	364	ug/kg	72.7	364
91-58-7	2-Chloronaphthalene	U	36.4	ug/kg	12.7	36.4
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	364	ug/kg	72.7	364
99-09-2	3-Nitroaniline	U	364	ug/kg	72.7	364

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 18:37	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2811.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	364	ug/kg	72.7	364
606-20-2	2,6-Dinitrotoluene	U	364	ug/kg	36.4	364
208-96-8	Acenaphthylene	U	36.4	ug/kg	10.9	36.4
51-28-5	2,4-Dinitrophenol	U	727	ug/kg	138	727
132-64-9	Dibenzofuran	U	364	ug/kg	72.7	364
84-66-2	Diethylphthalate	U	364	ug/kg	72.7	364
86-73-7	Fluorene	U	36.4	ug/kg	10.9	36.4
7005-72-3	4-Chlorophenylphenylether	U	364	ug/kg	36.4	364
534-52-1	2-Methyl-4,6-dinitrophenol	U	364	ug/kg	72.7	364
100-01-6	4-Nitroaniline	U	364	ug/kg	72.7	364
	p-Nitroaniline					
122-39-4	Diphenylamine	U	364	ug/kg	72.7	364
122-66-7	Azobenzene	U	364	ug/kg	72.7	364
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	364	ug/kg	36.4	364
118-74-1	Hexachlorobenzene	U	364	ug/kg	72.7	364
85-01-8	Phenanthrene	U	36.4	ug/kg	10.9	36.4
120-12-7	Anthracene	U	36.4	ug/kg	7.27	36.4
84-74-2	Di-n-butylphthalate	U	364	ug/kg	36.4	364
206-44-0	Fluoranthene	U	36.4	ug/kg	10.9	36.4
85-68-7	Butylbenzylphthalate	U	364	ug/kg	72.7	364
56-55-3	Benzo(a)anthracene	U	36.4	ug/kg	10.9	36.4
91-94-1	3,3'-Dichlorobenzidine	U	364	ug/kg	109	364
218-01-9	Chrysene	U	36.4	ug/kg	10.9	36.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	364	ug/kg	72.7	364
117-84-0	Di-n-octylphthalate	U	364	ug/kg	72.7	364
205-99-2	Benzo(b)fluoranthene	U	36.4	ug/kg	10.9	36.4
207-08-9	Benzo(k)fluoranthene	U	36.4	ug/kg	10.9	36.4
50-32-8	Benzo(a)pyrene	U	36.4	ug/kg	10.9	36.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.4	ug/kg	10.9	36.4
53-70-3	Dibenzo(a,h)anthracene	U	36.4	ug/kg	10.9	36.4
191-24-2	Benzo(ghi)perylene	U	36.4	ug/kg	10.9	36.4
120-82-1	1,2,4-Trichlorobenzene	U	364	ug/kg	72.7	364

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	344	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348003	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10461	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 19:01	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s1f2812.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.2	376
108-95-2	Phenol	U	376	ug/kg	75.2	376
95-57-8	2-Chlorophenol	U	376	ug/kg	75.2	376
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.2	376
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.2	376
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	37.6	376
83-32-9	Acenaphthene	U	37.6	ug/kg	12.6	37.6
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376
100-02-7	4-Nitrophenol	U	376	ug/kg	75.2	376
87-86-5	Pentachlorophenol	U	376	ug/kg	75.2	376
129-00-0	Pyrene	U	37.6	ug/kg	11.8	37.6
110-86-1	Pyridine	U	376	ug/kg	75.2	376
62-53-3	Aniline	U	376	ug/kg	132	376
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.2	376
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.2	376
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.2	376
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.2	376
95-48-7	o-Cresol	U	376	ug/kg	75.2	376
65794-96-9	m,p-Cresols	U	376	ug/kg	150	376
67-72-1	Hexachloroethane	U	376	ug/kg	75.2	376
98-95-3	Nitrobenzene	U	376	ug/kg	75.2	376
78-59-1	Isophorone	U	376	ug/kg	75.2	376
88-75-5	2-Nitrophenol	U	376	ug/kg	37.6	376
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	75.2	376
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.2	376
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.2	376
65-85-0	Benzoic acid	U	752	ug/kg	188	752
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6
106-47-8	4-Chloroaniline	U	376	ug/kg	75.2	376
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.2	376
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.52	37.6
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.2	376
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.2	376
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.2	376
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	13.2	37.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	376	ug/kg	75.2	376
99-09-2	3-Nitroaniline	U	376	ug/kg	75.2	376

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348003	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10461	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 19:01	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s1f2812.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	376	ug/kg	75.2	376
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
51-28-5	2,4-Dinitrophenol	U	752	ug/kg	143	752
132-64-9	Dibenzofuran	U	376	ug/kg	75.2	376
84-66-2	Diethylphthalate	U	376	ug/kg	75.2	376
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	37.6	376
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.2	376
100-01-6	4-Nitroaniline	U	376	ug/kg	75.2	376
	p-Nitroaniline					
122-39-4	Diphenylamine	U	376	ug/kg	75.2	376
122-66-7	Azobenzene	U	376	ug/kg	75.2	376
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	37.6	376
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.2	376
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6
120-12-7	Anthracene	U	37.6	ug/kg	7.52	37.6
84-74-2	Di-n-butylphthalate	U	376	ug/kg	37.6	376
206-44-0	Fluoranthene	U	37.6	ug/kg	11.3	37.6
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.2	376
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.2	376
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.2	376
205-99-2	Benzo(b)fluoranthene	U	37.6	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.2	376

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.92	261	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 17:23	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2808.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	357	ug/kg	71.3	357
108-95-2	Phenol	U	357	ug/kg	71.3	357
95-57-8	2-Chlorophenol	U	357	ug/kg	71.3	357
106-46-7	1,4-Dichlorobenzene	U	357	ug/kg	71.3	357
621-64-7	N-Nitrosodipropylamine	U	357	ug/kg	71.3	357
59-50-7	4-Chloro-3-methylphenol	U	357	ug/kg	35.7	357
83-32-9	Acenaphthene	U	35.7	ug/kg	11.9	35.7
121-14-2	2,4-Dinitrotoluene	U	357	ug/kg	35.7	357
100-02-7	4-Nitrophenol	U	357	ug/kg	71.3	357
87-86-5	Pentachlorophenol	U	357	ug/kg	71.3	357
129-00-0	Pyrene	U	35.7	ug/kg	11.2	35.7
110-86-1	Pyridine	U	357	ug/kg	71.3	357
62-53-3	Aniline	U	357	ug/kg	125	357
111-44-4	bis(2-Chloroethyl) ether	U	357	ug/kg	71.3	357
541-73-1	1,3-Dichlorobenzene	U	357	ug/kg	71.3	357
100-51-6	Benzyl alcohol	U	357	ug/kg	107	357
95-50-1	1,2-Dichlorobenzene	U	357	ug/kg	71.3	357
108-60-1	bis(2-Chloroisopropyl)ether	U	357	ug/kg	71.3	357
95-48-7	o-Cresol	U	357	ug/kg	71.3	357
65794-96-9	m,p-Cresols	U	357	ug/kg	143	357
67-72-1	Hexachloroethane	U	357	ug/kg	71.3	357
98-95-3	Nitrobenzene	U	357	ug/kg	71.3	357
78-59-1	Isophorone	U	357	ug/kg	71.3	357
88-75-5	2-Nitrophenol	U	357	ug/kg	35.7	357
105-67-9	2,4-Dimethylphenol	U	357	ug/kg	71.3	357
111-91-1	bis(2-Chloroethoxy)methane	U	357	ug/kg	71.3	357
120-83-2	2,4-Dichlorophenol	U	357	ug/kg	71.3	357
65-85-0	Benzoic acid	U	713	ug/kg	178	713
91-20-3	Naphthalene	U	35.7	ug/kg	10.7	35.7
106-47-8	4-Chloroaniline	U	357	ug/kg	71.3	357
87-68-3	Hexachlorobutadiene	U	357	ug/kg	71.3	357
91-57-6	2-Methylnaphthalene	U	35.7	ug/kg	7.13	35.7
77-47-4	Hexachlorocyclopentadiene	U	357	ug/kg	71.3	357
88-06-2	2,4,6-Trichlorophenol	U	357	ug/kg	71.3	357
95-95-4	2,4,5-Trichlorophenol	U	357	ug/kg	71.3	357
91-58-7	2-Chloronaphthalene	U	35.7	ug/kg	12.5	35.7
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	357	ug/kg	71.3	357
99-09-2	3-Nitroaniline	U	357	ug/kg	71.3	357

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 17:23	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2808.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	357	ug/kg	71.3	357
606-20-2	2,6-Dinitrotoluene	U	357	ug/kg	35.7	357
208-96-8	Acenaphthylene	U	35.7	ug/kg	10.7	35.7
51-28-5	2,4-Dinitrophenol	U	713	ug/kg	136	713
132-64-9	Dibenzofuran	U	357	ug/kg	71.3	357
84-66-2	Diethylphthalate	U	357	ug/kg	71.3	357
86-73-7	Fluorene	U	35.7	ug/kg	10.7	35.7
7005-72-3	4-Chlorophenylphenylether	U	357	ug/kg	35.7	357
534-52-1	2-Methyl-4,6-dinitrophenol	U	357	ug/kg	71.3	357
100-01-6	4-Nitroaniline	U	357	ug/kg	71.3	357
	p-Nitroaniline					
122-39-4	Diphenylamine	U	357	ug/kg	71.3	357
122-66-7	Azobenzene	U	357	ug/kg	71.3	357
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	357	ug/kg	35.7	357
118-74-1	Hexachlorobenzene	U	357	ug/kg	71.3	357
85-01-8	Phenanthrene	U	35.7	ug/kg	10.7	35.7
120-12-7	Anthracene	U	35.7	ug/kg	7.13	35.7
84-74-2	Di-n-butylphthalate	U	357	ug/kg	35.7	357
206-44-0	Fluoranthene	U	35.7	ug/kg	10.7	35.7
85-68-7	Butylbenzylphthalate	U	357	ug/kg	71.3	357
56-55-3	Benzo(a)anthracene	U	35.7	ug/kg	10.7	35.7
91-94-1	3,3'-Dichlorobenzidine	U	357	ug/kg	107	357
218-01-9	Chrysene	U	35.7	ug/kg	10.7	35.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	357	ug/kg	71.3	357
117-84-0	Di-n-octylphthalate	U	357	ug/kg	71.3	357
205-99-2	Benzo(b)fluoranthene	U	35.7	ug/kg	10.7	35.7
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7
50-32-8	Benzo(a)pyrene	U	35.7	ug/kg	10.7	35.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.7	ug/kg	10.7	35.7
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7
191-24-2	Benzo(ghi)perylene	U	35.7	ug/kg	10.7	35.7
120-82-1	1,2,4-Trichlorobenzene	U	357	ug/kg	71.3	357

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	296	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.1	**Dilution:**	1
Run Date:	06/28/2009 19:25	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2813.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	349	ug/kg	69.8	349
108-95-2	Phenol	U	349	ug/kg	69.8	349
95-57-8	2-Chlorophenol	U	349	ug/kg	69.8	349
106-46-7	1,4-Dichlorobenzene	U	349	ug/kg	69.8	349
621-64-7	N-Nitrosodipropylamine	U	349	ug/kg	69.8	349
59-50-7	4-Chloro-3-methylphenol	U	349	ug/kg	34.9	349
83-32-9	Acenaphthene	U	34.9	ug/kg	11.7	34.9
121-14-2	2,4-Dinitrotoluene	U	349	ug/kg	34.9	349
100-02-7	4-Nitrophenol	U	349	ug/kg	69.8	349
87-86-5	Pentachlorophenol	U	349	ug/kg	69.8	349
129-00-0	Pyrene	U	34.9	ug/kg	11.0	34.9
110-86-1	Pyridine	U	349	ug/kg	69.8	349
62-53-3	Aniline	U	349	ug/kg	122	349
111-44-4	bis(2-Chloroethyl) ether	U	349	ug/kg	69.8	349
541-73-1	1,3-Dichlorobenzene	U	349	ug/kg	69.8	349
100-51-6	Benzyl alcohol	U	349	ug/kg	105	349
95-50-1	1,2-Dichlorobenzene	U	349	ug/kg	69.8	349
108-60-1	bis(2-Chloroisopropyl)ether	U	349	ug/kg	69.8	349
95-48-7	o-Cresol	U	349	ug/kg	69.8	349
65794-96-9	m,p-Cresols	U	349	ug/kg	140	349
67-72-1	Hexachloroethane	U	349	ug/kg	69.8	349
98-95-3	Nitrobenzene	U	349	ug/kg	69.8	349
78-59-1	Isophorone	U	349	ug/kg	69.8	349
88-75-5	2-Nitrophenol	U	349	ug/kg	34.9	349
105-67-9	2,4-Dimethylphenol	U	349	ug/kg	69.8	349
111-91-1	bis(2-Chloroethoxy)methane	U	349	ug/kg	69.8	349
120-83-2	2,4-Dichlorophenol	U	349	ug/kg	69.8	349
65-85-0	Benzoic acid	U	698	ug/kg	175	698
91-20-3	Naphthalene	U	34.9	ug/kg	10.5	34.9
106-47-8	4-Chloroaniline	U	349	ug/kg	69.8	349
87-68-3	Hexachlorobutadiene	U	349	ug/kg	69.8	349
91-57-6	2-Methylnaphthalene	U	34.9	ug/kg	6.98	34.9
77-47-4	Hexachlorocyclopentadiene	U	349	ug/kg	69.8	349
88-06-2	2,4,6-Trichlorophenol	U	349	ug/kg	69.8	349
95-95-4	2,4,5-Trichlorophenol	U	349	ug/kg	69.8	349
91-58-7	2-Chloronaphthalene	U	34.9	ug/kg	12.2	34.9
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	349	ug/kg	69.8	349
99-09-2	3-Nitroaniline	U	349	ug/kg	69.8	349

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 19:25	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2813.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	349	ug/kg	69.8	349
606-20-2	2,6-Dinitrotoluene	U	349	ug/kg	34.9	349
208-96-8	Acenaphthylene	U	34.9	ug/kg	10.5	34.9
51-28-5	2,4-Dinitrophenol	U	698	ug/kg	133	698
132-64-9	Dibenzofuran	U	349	ug/kg	69.8	349
84-66-2	Diethylphthalate	U	349	ug/kg	69.8	349
86-73-7	Fluorene	U	34.9	ug/kg	10.5	34.9
7005-72-3	4-Chlorophenylphenylether	U	349	ug/kg	34.9	349
534-52-1	2-Methyl-4,6-dinitrophenol	U	349	ug/kg	69.8	349
100-01-6	4-Nitroaniline	U	349	ug/kg	69.8	349
	p-Nitroaniline					
122-39-4	Diphenylamine	U	349	ug/kg	69.8	349
122-66-7	Azobenzene	U	349	ug/kg	69.8	349
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	349	ug/kg	34.9	349
118-74-1	Hexachlorobenzene	U	349	ug/kg	69.8	349
85-01-8	Phenanthrene	U	34.9	ug/kg	10.5	34.9
120-12-7	Anthracene	U	34.9	ug/kg	6.98	34.9
84-74-2	Di-n-butylphthalate	U	349	ug/kg	34.9	349
206-44-0	Fluoranthene	U	34.9	ug/kg	10.5	34.9
85-68-7	Butylbenzylphthalate	U	349	ug/kg	69.8	349
56-55-3	Benzo(a)anthracene	U	34.9	ug/kg	10.5	34.9
91-94-1	3,3'-Dichlorobenzidine	U	349	ug/kg	105	349
218-01-9	Chrysene	U	34.9	ug/kg	10.5	34.9
117-81-7	bis(2-Ethylhexyl)phthalate	U	349	ug/kg	69.8	349
117-84-0	Di-n-octylphthalate	U	349	ug/kg	69.8	349
205-99-2	Benzo(b)fluoranthene	U	34.9	ug/kg	10.5	34.9
207-08-9	Benzo(k)fluoranthene	U	34.9	ug/kg	10.5	34.9
50-32-8	Benzo(a)pyrene	U	34.9	ug/kg	10.5	34.9
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.9	ug/kg	10.5	34.9
53-70-3	Dibenzo(a,h)anthracene	U	34.9	ug/kg	10.5	34.9
191-24-2	Benzo(ghi)perylene	U	34.9	ug/kg	10.5	34.9
120-82-1	1,2,4-Trichlorobenzene	U	349	ug/kg	69.8	349

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	322	ug/kg		JA

QC Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 09-2457

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201869908	MB for batch 880635	63	59	62	73	52	88
1201869909	LCS for batch 880635	64	59	62	75	67	84
232348001	CAMO-09-10462	53	49	52	60	47	63
1201869910	CAMO-09-10462MS	58	52	59	67	57	76
1201869911	CAMO-09-10462MSD	49	43	49	59	48	61
232348002	CAMO-09-10460	47	44	49	58	40	66
232348003	CAMO-09-10461	44	40	43	51	39	58
232348004	CAMO-09-10467	59	57	60	72	56	82

Surrogate		Acceptance Limits
2FP	= 2-Fluorophenol	(35%-96%)
PHL	= Phenol-d5	(36%-96%)
NBZ	= Nitrobenzene-d5	(34%-104%)
FBP	= 2-Fluorobiphenyl	(36%-100%)
TBP	= 2,4,6-Tribromophenol	(37%-106%)
TPH	= p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 880635
Matrix: SOIL
Lab Sample ID: 1201869909
Instrument: MSD1.I
Analysis Date: 06/28/2009 16:34
Dilution: 1
Analyst: NAG1
Prep Batch ID: 880635
Inj. Vol: .5 uL
Batch ID: 880638

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1310	78	31-95
108-95-2	LCS	Phenol	1670	0.0	1040	62	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1110	67	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	941	56	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1070	64	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1200	72	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1210	73	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1290	77	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1490	90	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	1120	67	38-116
129-00-0	LCS	Pyrene	1670	0.0	1460	88	43-108
110-86-1	LCS	Pyridine	1670	0.0	1080	65	13-129
62-53-3	LCS	Aniline	1670	0.0	1080	65	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1010	61	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	979	59	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	982	59	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	968	58	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1020	61	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1010	60	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1160	69	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	933	56	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1070	64	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: LCS for batch 880635
Lab Sample ID: 1201869909
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/28/2009 16:34
Dilution: 1
Prep Batch ID: 880635
Batch ID: 880638

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1150	69	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1140	69	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1170	70	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1200	72	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1140	69	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	392	24 *	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1090	65	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1210	73	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	925	55	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1160	69	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1480	89	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1240	74	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1410	85	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1330	80	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1350	81	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1780	107	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1300	78	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1280	77	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1400	84	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	701	42	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1330	80	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1350	81	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: LCS for batch 880635
Lab Sample ID: 1201869909
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/28/2009 16:34
Dilution: 1
Prep Batch ID: 880635
Batch ID: 880638

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1160	70	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1210	73	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	920	55	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	1630	98	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1430	86	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1380	83	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1160	70	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1220	73	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1230	74	45-107
120-12-7	LCS	Anthracene	1670	0.0	1270	76	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1360	82	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1260	76	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1620	97	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1270	76	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1340	81	45-98
218-01-9	LCS	Chrysene	1670	0.0	1360	82	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1460	88	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1400	84	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1240	75	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1340	81	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1300	78	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1190	72	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 880635 **Matrix:** SOIL

Lab Sample ID: 1201869909

Instrument: MSD1.I **Analysis Date:** 06/28/2009 16:34 **Dilution:** 1

Analyst: NAG1 **Prep Batch ID:** 880635

Inj. Vol: .5 uL **Batch ID:** 880638

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1240	75	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1250	75	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1040	63	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10462MS
Lab Sample ID: 1201869910
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 17:48
Prep Batch ID: 880635
Batch ID: 880638
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	1780	0.00	U	1200	68	32-90
108-95-2	MS	Phenol	1780	0.00	U	1070	60	32-105
95-57-8	MS	2-Chlorophenol	1780	0.00	U	1130	64	33-106
106-46-7	MS	1,4-Dichlorobenzene	1780	0.00	U	963	54	33-95
621-64-7	MS	N-Nitrosodipropylamine	1780	0.00	U	1020	57	31-109
59-50-7	MS	4-Chloro-3-methylphenol	1780	0.00	U	1210	68	38-119
83-32-9	MS	Acenaphthene	1780	0.00	U	1200	67	39-100
121-14-2	MS	2,4-Dinitrotoluene	1780	0.00	U	1290	73	42-107
100-02-7	MS	4-Nitrophenol	1780	0.00	U	1490	84	24-120
87-86-5	MS	Pentachlorophenol	1780	0.00	U	1230	69	26-121
129-00-0	MS	Pyrene	1780	0.00	U	1510	85	34-120
110-86-1	MS	Pyridine	1780	0.00	U	918	52	30-95
62-53-3	MS	Aniline	1780	0.00	U	1160	65	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	1780	0.00	U	1040	59	34-101
541-73-1	MS	1,3-Dichlorobenzene	1780	0.00	U	1020	57	31-97
100-51-6	MS	Benzyl alcohol	1780	0.00	U	875	49	17-120
95-50-1	MS	1,2-Dichlorobenzene	1780	0.00	U	1020	57	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	1780	0.00	U	1070	60	32-113
95-48-7	MS	o-Cresol	1780	0.00	U	1000	56	31-119
65794-96-9	MS	m,p-Cresols	1780	0.00	U	1240	69	35-125
67-72-1	MS	Hexachloroethane	1780	0.00	U	970	55	30-100
98-95-3	MS	Nitrobenzene	1780	0.00	U	1130	64	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10462MS
Lab Sample ID: 1201869910
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 17:48
Prep Batch ID: 880635
Batch ID: 880638
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	1780	0.00	U	1190	67	34-110
88-75-5	MS	2-Nitrophenol	1780	0.00	U	1180	66	32-108
105-67-9	MS	2,4-Dimethylphenol	1780	0.00	U	1360	77	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	1780	0.00	U	1250	70	35-108
120-83-2	MS	2,4-Dichlorophenol	1780	0.00	U	1190	67	38-110
65-85-0	MS	Benzoic acid	1780	0.00	U	571	32	18-134
91-20-3	MS	Naphthalene	1780	0.00	U	1120	63	31-105
106-47-8	MS	4-Chloroaniline	1780	0.00	U	1240	70	29-123
87-68-3	MS	Hexachlorobutadiene	1780	0.00	U	939	53	31-109
91-57-6	MS	2-Methylnaphthalene	1780	0.00	U	1200	68	32-110
77-47-4	MS	Hexachlorocyclopentadiene	1780	0.00	U	1480	83	21-122
88-06-2	MS	2,4,6-Trichlorophenol	1780	0.00	U	1120	63	37-108
95-95-4	MS	2,4,5-Trichlorophenol	1780	0.00	U	1430	81	37-116
91-58-7	MS	2-Chloronaphthalene	1780	0.00	U	1330	75	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	1780	0.00	U	1330	75	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	1780	0.00	U	1830	103	39-117
131-11-3	MS	Dimethylphthalate	1780	0.00	U	1300	73	41-105
606-20-2	MS	2,6-Dinitrotoluene	1780	0.00	U	1280	72	41-103
208-96-8	MS	Acenaphthylene	1780	0.00	U	1420	80	41-103
51-28-5	MS	2,4-Dinitrophenol	1780	0.00	U	552	31	25-104
132-64-9	MS	Dibenzofuran	1780	0.00	U	1310	74	40-114
84-66-2	MS	Diethylphthalate	1780	0.00	U	1350	76	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10462MS
Lab Sample ID: 1201869910
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 17:48
Prep Batch ID: 880635
Batch ID: 880638
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	1780	0.00	U	1170	66	48-99
7005-72-3	MS	4-Chlorophenylphenylether	1780	0.00	U	1210	68	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	1780	0.00	U	852	48	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	1780	0.00	U	1810	102	35-139
122-39-4	MS	Diphenylamine	1780	0.00	U	1470	83	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	1780	0.00	U	1390	78	37-118
101-55-3	MS	4-Bromophenylphenylether	1780	0.00	U	1190	67	39-112
118-74-1	MS	Hexachlorobenzene	1780	0.00	U	1220	69	38-113
85-01-8	MS	Phenanthrene	1780	0.00	U	1250	70	38-110
120-12-7	MS	Anthracene	1780	0.00	U	1300	73	38-112
84-74-2	MS	Di-n-butylphthalate	1780	0.00	U	1370	77	42-119
206-44-0	MS	Fluoranthene	1780	0.00	U	1300	73	38-119
85-68-7	MS	Butylbenzylphthalate	1780	0.00	U	1650	93	39-126
56-55-3	MS	Benzo(a)anthracene	1780	0.00	U	1340	75	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	1780	0.00	U	1380	78	35-106
218-01-9	MS	Chrysene	1780	0.00	U	1370	77	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	1780	0.00	U	1500	85	40-125
117-84-0	MS	Di-n-octylphthalate	1780	0.00	U	1490	84	30-147
205-99-2	MS	Benzo(b)fluoranthene	1780	0.00	U	1390	78	38-117
207-08-9	MS	Benzo(k)fluoranthene	1780	0.00	U	1300	73	39-120
50-32-8	MS	Benzo(a)pyrene	1780	0.00	U	1330	75	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	1780	0.00	U	1160	65	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	09-2457	**Sample Type:**	Matrix Spike
Client ID:	CAMO-09-10462MS	**Matrix:**	R
Lab Sample ID:	1201869910	**%Moisture:**	6.5
Instrument:	MSD1.I	**Analysis Date:**	06/28/2009 17:48
Analyst:	NAG1	**Prep Batch ID:**	880635
Inj. Vol:	.5 uL	**Batch ID:**	880638

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	1780	0.00	U	1170	66	32-124
191-24-2	MS	Benzo(ghi)perylene	1780	0.00	U	1210	68	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	1780	0.00	U	1090	61	31-105

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10462MSD
Lab Sample ID: 1201869911
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 18:13
Prep Batch ID: 880635
Batch ID: 880638
Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD N-Methyl-N-nitrosomethylam	1780	0.00	U	1080	60	32-90	11	0-30
108-95-2	MSD Phenol	1780	0.00	U	1010	57	32-105	6	0-30
95-57-8	MSD 2-Chlorophenol	1780	0.00	U	1050	59	33-106	7	0-30
106-46-7	MSD 1,4-Dichlorobenzene	1780	0.00	U	912	51	33-95	5	0-30
621-64-7	MSD N-Nitrosodipropylamine	1780	0.00	U	1080	60	31-109	5	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	1780	0.00	U	1140	64	38-119	6	0-30
83-32-9	MSD Acenaphthene	1780	0.00	U	1170	66	39-100	2	0-30
121-14-2	MSD 2,4-Dinitrotoluene	1780	0.00	U	1240	70	42-107	4	0-30
100-02-7	MSD 4-Nitrophenol	1780	0.00	U	913	51	24-120	48 *	0-30
87-86-5	MSD Pentachlorophenol	1780	0.00	U	1020	57	26-121	19	0-30
129-00-0	MSD Pyrene	1780	0.00	U	1350	76	34-120	11	0-30
110-86-1	MSD Pyridine	1780	0.00	U	738	41	30-95	22	0-30
62-53-3	MSD Aniline	1780	0.00	U	1040	58	34-111	11	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	1780	0.00	U	969	54	34-101	7	0-30
541-73-1	MSD 1,3-Dichlorobenzene	1780	0.00	U	963	54	31-97	5	0-30
100-51-6	MSD Benzyl alcohol	1780	0.00	U	514	29	17-120	52 *	0-30
95-50-1	MSD 1,2-Dichlorobenzene	1780	0.00	U	951	53	32-102	7	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	1780	0.00	U	1010	57	32-113	5	0-30
95-48-7	MSD o-Cresol	1780	0.00	U	988	55	31-119	2	0-30
65794-96-9	MSD m,p-Cresols	1780	0.00	U	1210	68	35-125	2	0-30
67-72-1	MSD Hexachloroethane	1780	0.00	U	918	51	30-100	6	0-30
98-95-3	MSD Nitrobenzene	1780	0.00	U	1090	61	33-108	4	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10462MSD
Lab Sample ID: 1201869911
Instrument: MSD1.1
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 18:13
Dilution: 1
Prep Batch ID: 880635
Batch ID: 880638

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD	Isophorone	1780	0.00	U	1130	63	34-110	5	0-30
88-75-5	MSD	2-Nitrophenol	1780	0.00	U	1150	64	32-108	2	0-30
105-67-9	MSD	2,4-Dimethylphenol	1780	0.00	U	1410	79	32-115	3	0-30
111-91-1	MSD	bis(2-Chloroethoxy)methane	1780	0.00	U	1200	67	35-108	4	0-30
120-83-2	MSD	2,4-Dichlorophenol	1780	0.00	U	1140	64	38-110	5	0-30
65-85-0	MSD	Benzoic acid	1780	0.00	U	448	25	18-134	24	0-30
91-20-3	MSD	Naphthalene	1780	0.00	U	1080	61	31-105	4	0-30
106-47-8	MSD	4-Chloroaniline	1780	0.00	U	1170	65	29-123	6	0-30
87-68-3	MSD	Hexachlorobutadiene	1780	0.00	U	902	51	31-109	4	0-30
91-57-6	MSD	2-Methylnaphthalene	1780	0.00	U	1160	65	32-110	4	0-30
77-47-4	MSD	Hexachlorocyclopentadiene	1780	0.00	U	1450	81	21-122	2	0-30
88-06-2	MSD	2,4,6-Trichlorophenol	1780	0.00	U	1120	63	37-108	0	0-30
95-95-4	MSD	2,4,5-Trichlorophenol	1780	0.00	U	1480	83	37-116	3	0-30
91-58-7	MSD	2-Chloronaphthalene	1780	0.00	U	1300	73	37-103	3	0-30
88-74-4	MSD	2-Nitroaniline *o-Nitroaniline*	1780	0.00	U	1320	74	36-115	0	0-30
99-09-2	MSD	3-Nitroaniline *m-Nitroaniline*	1780	0.00	U	1800	101	39-117	1	0-30
131-11-3	MSD	Dimethylphthalate	1780	0.00	U	1250	70	41-105	4	0-30
606-20-2	MSD	2,6-Dinitrotoluene	1780	0.00	U	1230	69	41-103	4	0-30
208-96-8	MSD	Acenaphthylene	1780	0.00	U	1380	78	41-103	2	0-30
51-28-5	MSD	2,4-Dinitrophenol	1780	0.00	U	451	25	25-104	20	0-30
132-64-9	MSD	Dibenzofuran	1780	0.00	U	1290	72	40-114	2	0-30
84-66-2	MSD	Diethylphthalate	1780	0.00	U	1310	74	43-110	3	0-30

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number:	09-2457	Sample Type:	Matrix Spike Duplicate
Client ID:	CAMO-09-10462MSD	Matrix:	R
Lab Sample ID:	1201869911	%Moisture:	6.5
Instrument:	MSD1.I	Analysis Date:	06/28/2009 18:13
Analyst:	NAG1	Prep Batch ID:	880635
Inj. Vol:	.5 uL	Batch ID:	880638

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	1780	0.00	U	1130	63	48-99	3	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	1780	0.00	U	1180	66	42-111	3	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	1780	0.00	U	727	41	19-118	16	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	1780	0.00	U	1740	97	35-139	4	0-30
122-39-4	MSD	Diphenylamine	1780	0.00	U	1360	76	41-112	8	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	1780	0.00	U	1300	73	37-118	7	0-30
101-55-3	MSD	4-Bromophenylphenylether	1780	0.00	U	1110	62	39-112	7	0-30
118-74-1	MSD	Hexachlorobenzene	1780	0.00	U	1160	65	38-113	5	0-30
85-01-8	MSD	Phenanthrene	1780	0.00	U	1190	67	38-110	4	0-30
120-12-7	MSD	Anthracene	1780	0.00	U	1230	69	38-112	6	0-30
84-74-2	MSD	Di-n-butylphthalate	1780	0.00	U	1320	74	42-119	4	0-30
206-44-0	MSD	Fluoranthene	1780	0.00	U	1250	70	38-119	4	0-30
85-68-7	MSD	Butylbenzylphthalate	1780	0.00	U	1500	84	39-126	10	0-30
56-55-3	MSD	Benzo(a)anthracene	1780	0.00	U	1220	69	39-110	9	0-30
91-94-1	MSD	3,3'-Dichlorobenzidine	1780	0.00	U	1290	72	35-106	7	0-30
218-01-9	MSD	Chrysene	1780	0.00	U	1290	72	39-109	6	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	1780	0.00	U	1430	80	40-125	5	0-30
117-84-0	MSD	Di-n-octylphthalate	1780	0.00	U	1330	75	30-147	11	0-30
205-99-2	MSD	Benzo(b)fluoranthene	1780	0.00	U	1200	67	38-117	15	0-30
207-08-9	MSD	Benzo(k)fluoranthene	1780	0.00	U	1240	70	39-120	5	0-30
50-32-8	MSD	Benzo(a)pyrene	1780	0.00	U	1280	72	40-115	4	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	1780	0.00	U	1200	67	32-120	3	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10462MSD
Lab Sample ID: 1201869911
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 18:13
Dilution: 1
Prep Batch ID: 880635
Batch ID: 880638

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD Dibenzo(a,h)anthracene	1780	0.00	U	1240	69	32-124	6	0-30
191-24-2	MSD Benzo(ghi)perylene	1780	0.00	U	1250	70	28-119	4	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	1780	0.00	U	1040	58	31-105	4	0-30

Method Blank Summary

SDG Number:	09-2457	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 880635	Instrument ID:	MSD1.I	Data File:	s1f2805-2.d
Lab Sample ID:	1201869908	Prep Date:	06/26/2009 21:26	Analyzed:	06/28/09 16:10
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 880635	1201869909	s1f2806-2.d	06/28/09	1634
02	CAMO-09-10462	232348001	s1f2808.d	06/28/09	1723
03	CAMO-09-10462MS	1201869910	s1f2809.d	06/28/09	1748
04	CAMO-09-10462MSD	1201869911	s1f2810.d	06/28/09	1813
05	CAMO-09-10460	232348002	s1f2811.d	06/28/09	1837
06	CAMO-09-10461	232348003	s1f2812.d	06/28/09	1901
07	CAMO-09-10467	232348004	s1f2813.d	06/28/09	1925

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2457

Instrument ID: MSD1.I **Injection Date/Time:** 19-JUN-09 09:41

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD1.i/s061909.b/s1f1901.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	52.8
68	Less than 2% of mass 69	1.9
69	Mass 69 Relative Abundance	41.4
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	44.6
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.5
275	10 - 30% of mass 198	26.1
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	74.2
442	Greater than 40% of mass 198	87.2
443	17 - 23% of mass 442	19.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICAL01	WBN090602-08	/chem/MSD1.i/s061909.b/s1f1903	19-JUN-09 10:25
MEGAICAL10	WBN090602-07	/chem/MSD1.i/s061909.b/s1f1904	19-JUN-09 10:57
MEGAICAL020	WBN090602-06	/chem/MSD1.i/s061909.b/s1f1905	19-JUN-09 11:27
MEGAICAL040	WBN090602-05.1	/chem/MSD1.i/s061909.b/s1f1906	19-JUN-09 11:55
MEGAICAL050	WBN090602-04	/chem/MSD1.i/s061909.b/s1f1907	19-JUN-09 12:25
MEGAICAL080	WBN090602-03	/chem/MSD1.i/s061909.b/s1f1908	19-JUN-09 12:54
MEGAICAL100	WBN090602-02	/chem/MSD1.i/s061909.b/s1f1909	19-JUN-09 13:23
MEGAICAL120	WBN090602-01	/chem/MSD1.i/s061909.b/s1f1910	19-JUN-09 13:54
MEGAICV	WBN090602-09.1	/chem/MSD1.i/s061909.b/s1f1911	19-JUN-09 14:24
AP12ICAL10	WBN090528-07	/chem/MSD1.i/s061909.b/s1f1913	19-JUN-09 15:17
AP12ICAL20	WBN090528-06	/chem/MSD1.i/s061909.b/s1f1914	19-JUN-09 15:42
AP12ICAL40	WBN090528-05.1	/chem/MSD1.i/s061909.b/s1f1915	19-JUN-09 16:07
AP12ICAL50	WBN090528-04	/chem/MSD1.i/s061909.b/s1f1916	19-JUN-09 16:33
AP12ICAL80	WBN090528-03	/chem/MSD1.i/s061909.b/s1f1917	19-JUN-09 16:58
AP12ICAL100	WBN090528-02	/chem/MSD1.i/s061909.b/s1f1918	19-JUN-09 17:23
AP12ICAL120	WBN090528-01	/chem/MSD1.i/s061909.b/s1f1919	19-JUN-09 17:48

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2457

Instrument ID: MSD1.I **Injection Date/Time:** 19-JUN-09 09:41

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD1.i/s061909.b/s1f1901.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	52.8
68	Less than 2% of mass 69	1.9
69	Mass 69 Relative Abundance	41.4
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	44.6
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.5
275	10 - 30% of mass 198	26.1
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	74.2
442	Greater than 40% of mass 198	87.2
443	17 - 23% of mass 442	19.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ap12ICV	WBN090528-08.1	/chem/MSD1.i/s061909.b/s1f1920	19-JUN-09 18:13

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2457

Instrument ID: MSD1.I **Injection Date/Time:** 28-JUN-09 14:38

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD1.i/s062809.b/s1f2801.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	58.2
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	43.4
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	50
197	0 - 1% of mass 198	0.5
199	5 - 9% of mass 198	6.6
275	10 - 30% of mass 198	23.8
365	Greater than 1% of mass 198	2.9
441	Present, but less than mass 443	74.2
442	Greater than 40% of mass 198	74.1
443	17 - 23% of mass 442	19.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090510-01.3	/chem/MSD1.i/s062809.b/s1f2802	28-JUN-09 14:55
AP12CVS	WBN090619-01.1	/chem/MSD1.i/s062809.b/s1f2803	28-JUN-09 15:23
SBLK01	1201869908	/chem/MSD1.i/s062809.b/s1f2805	28-JUN-09 16:10
SBLK01LCS	1201869909	/chem/MSD1.i/s062809.b/s1f2806	28-JUN-09 16:34
CAMO-09-10462	232348001	/chem/MSD1.i/s062809.b/s1f2808	28-JUN-09 17:23
CAMO-09-10462MS	1201869910	/chem/MSD1.i/s062809.b/s1f2809	28-JUN-09 17:48
CAMO-09-10462MSD	1201869911	/chem/MSD1.i/s062809.b/s1f2810	28-JUN-09 18:13
CAMO-09-10460	232348002	/chem/MSD1.i/s062809.b/s1f2811	28-JUN-09 18:37
CAMO-09-10461	232348003	/chem/MSD1.i/s062809.b/s1f2812	28-JUN-09 19:01
CAMO-09-10467	232348004	/chem/MSD1.i/s062809.b/s1f2813	28-JUN-09 19:25

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 09-2457

Instrument: MSD1.I

STD Analysis Time: 28-JUN-09 14:55

GC Column: J&W DB-5MS

Data File: s1f2802.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	280573		3.89	1152834		4.76	543050		6	1028030		6.98	841587		8.65	723932		10.1
Upper Limit	561146		4.39	2305668		5.26	1086100		6.5	2056060		7.48	1683174		9.15	1447864		10.6
Lower Limit	140287		3.39	576417		4.26	271525		5.5	514015		6.48	420794		8.15	361966		9.59
Sample ID																		
BLK01	337511		3.89	1322068		4.75	642823		6	1216791		6.98	1018105		8.64	799623		10.1
BLK01LCS	295004		3.89	1189285		4.76	583548		6	1095915		6.98	884459		8.64	756719		10.1
CAMO-09-10462	302727		3.89	1171442		4.75	581219		6	1107336		6.98	883995		8.64	660664		10.1
CAMO-09-10462MS	335766		3.89	1344134		4.76	667488		6	1254705		6.99	997134		8.65	816850		10.1
CAMO-09-10462MSD	313882		3.89	1230116		4.76	600843		6	1159888		6.98	994188		8.65	897057		10.1
CAMO-09-10460	302231		3.89	1180555		4.75	569061		6	1082122		6.98	845598		8.64	646942		10.1
CAMO-09-10461	326026		3.89	1259782		4.75	607266		6	1153879		6.98	923211		8.64	694591		10.1
CAMO-09-10467	310276		3.89	1207327		4.75	594973		6	1131579		6.98	924603		8.64	716644		10.1

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 18:37	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2811.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	364	ug/kg	72.7	364
108-95-2	Phenol	U	364	ug/kg	72.7	364
95-57-8	2-Chlorophenol	U	364	ug/kg	72.7	364
106-46-7	1,4-Dichlorobenzene	U	364	ug/kg	72.7	364
621-64-7	N-Nitrosodipropylamine	U	364	ug/kg	72.7	364
59-50-7	4-Chloro-3-methylphenol	U	364	ug/kg	36.4	364
83-32-9	Acenaphthene	U	36.4	ug/kg	12.1	36.4
121-14-2	2,4-Dinitrotoluene	U	364	ug/kg	36.4	364
100-02-7	4-Nitrophenol	U	364	ug/kg	72.7	364
87-86-5	Pentachlorophenol	U	364	ug/kg	72.7	364
129-00-0	Pyrene	U	36.4	ug/kg	11.4	36.4
110-86-1	Pyridine	U	364	ug/kg	72.7	364
62-53-3	Aniline	U	364	ug/kg	127	364
111-44-4	bis(2-Chloroethyl) ether	U	364	ug/kg	72.7	364
541-73-1	1,3-Dichlorobenzene	U	364	ug/kg	72.7	364
100-51-6	Benzyl alcohol	U	364	ug/kg	109	364
95-50-1	1,2-Dichlorobenzene	U	364	ug/kg	72.7	364
108-60-1	bis(2-Chloroisopropyl)ether	U	364	ug/kg	72.7	364
95-48-7	o-Cresol	U	364	ug/kg	72.7	364
65794-96-9	m,p-Cresols	U	364	ug/kg	145	364
67-72-1	Hexachloroethane	U	364	ug/kg	72.7	364
98-95-3	Nitrobenzene	U	364	ug/kg	72.7	364
78-59-1	Isophorone	U	364	ug/kg	72.7	364
88-75-5	2-Nitrophenol	U	364	ug/kg	36.4	364
105-67-9	2,4-Dimethylphenol	U	364	ug/kg	72.7	364
111-91-1	bis(2-Chloroethoxy)methane	U	364	ug/kg	72.7	364
120-83-2	2,4-Dichlorophenol	U	364	ug/kg	72.7	364
65-85-0	Benzoic acid	U	727	ug/kg	182	727
91-20-3	Naphthalene	U	36.4	ug/kg	10.9	36.4
106-47-8	4-Chloroaniline	U	364	ug/kg	72.7	364
87-68-3	Hexachlorobutadiene	U	364	ug/kg	72.7	364
91-57-6	2-Methylnaphthalene	U	36.4	ug/kg	7.27	36.4
77-47-4	Hexachlorocyclopentadiene	U	364	ug/kg	72.7	364
88-06-2	2,4,6-Trichlorophenol	U	364	ug/kg	72.7	364
95-95-4	2,4,5-Trichlorophenol	U	364	ug/kg	72.7	364
91-58-7	2-Chloronaphthalene	U	36.4	ug/kg	12.7	36.4
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	364	ug/kg	72.7	364
99-09-2	3-Nitroaniline	U	364	ug/kg	72.7	364

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	8.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10460	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 18:37	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2811.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	364	ug/kg	72.7	364
606-20-2	2,6-Dinitrotoluene	U	364	ug/kg	36.4	364
208-96-8	Acenaphthylene	U	36.4	ug/kg	10.9	36.4
51-28-5	2,4-Dinitrophenol	U	727	ug/kg	138	727
132-64-9	Dibenzofuran	U	364	ug/kg	72.7	364
84-66-2	Diethylphthalate	U	364	ug/kg	72.7	364
86-73-7	Fluorene	U	36.4	ug/kg	10.9	36.4
7005-72-3	4-Chlorophenylphenylether	U	364	ug/kg	36.4	364
534-52-1	2-Methyl-4,6-dinitrophenol	U	364	ug/kg	72.7	364
100-01-6	4-Nitroaniline	U	364	ug/kg	72.7	364
	p-Nitroaniline					
122-39-4	Diphenylamine	U	364	ug/kg	72.7	364
122-66-7	Azobenzene	U	364	ug/kg	72.7	364
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	364	ug/kg	36.4	364
118-74-1	Hexachlorobenzene	U	364	ug/kg	72.7	364
85-01-8	Phenanthrene	U	36.4	ug/kg	10.9	36.4
120-12-7	Anthracene	U	36.4	ug/kg	7.27	36.4
84-74-2	Di-n-butylphthalate	U	364	ug/kg	36.4	364
206-44-0	Fluoranthene	U	36.4	ug/kg	10.9	36.4
85-68-7	Butylbenzylphthalate	U	364	ug/kg	72.7	364
56-55-3	Benzo(a)anthracene	U	36.4	ug/kg	10.9	36.4
91-94-1	3,3'-Dichlorobenzidine	U	364	ug/kg	109	364
218-01-9	Chrysene	U	36.4	ug/kg	10.9	36.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	364	ug/kg	72.7	364
117-84-0	Di-n-octylphthalate	U	364	ug/kg	72.7	364
205-99-2	Benzo(b)fluoranthene	U	36.4	ug/kg	10.9	36.4
207-08-9	Benzo(k)fluoranthene	U	36.4	ug/kg	10.9	36.4
50-32-8	Benzo(a)pyrene	U	36.4	ug/kg	10.9	36.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.4	ug/kg	10.9	36.4
53-70-3	Dibenzo(a,h)anthracene	U	36.4	ug/kg	10.9	36.4
191-24-2	Benzo(ghi)perylene	U	36.4	ug/kg	10.9	36.4
120-82-1	1,2,4-Trichlorobenzene	U	364	ug/kg	72.7	364

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	344	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2811.d
Lab Smp Id: 232348002 Client Smp ID: CAMO-09-10460
Inj Date : 28-JUN-2009 18:37
Operator : nagl Inst ID: MSD1.i
Smp Info : |232348002|880638|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	8.30530	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	302231	40.0000	
* 29 Naphthalene-d8	136	4.751	4.757	(1.000)	1180555	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	569061	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1082122	40.0000	
* 91 Chrysene-d12	240	8.639	8.645	(1.000)	845598	40.0000	
* 98 Perylene-d12	264	10.080	10.086	(1.000)	646942	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	379919	47.4182	1720
$ 5 Phenol-d5	99	3.598	3.598	(0.926)	442001	44.3706	1610
$ 20 Nitrobenzene-d5	82	4.245	4.251	(0.894)	243714	24.2513	882
$ 39 2-Fluorobiphenyl	172	5.492	5.492	(0.916)	453377	29.2458	1060
$ 60 2,4,6-Tribromophenol	329	6.528	6.533	(1.088)	79584	39.7560	1440
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	466626	32.8845	1200

ION RATIO REPORT

SV REPORT

Data file: s1f2811.d
Report Date: 06/29/2009 10:14
Lab. ID: 232348002 SampleType: SAMPLE
Injection Date: 28-JUN-2009 18:37
Operator: nag1 Instrument: MSD1.i
Sample Info: |232348002|880638|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01
Comment:
Method used: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2457
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	22058	3.60	3.67	80-120	100	(T)
93	621	3.67	3.67	194-254	3	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	33793	4.25	4.13	80-120	100	(T)
42	23406	4.25	4.13	52-112	69	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	123840	6.00	5.77	80-120	100	(T)
164	575801	6.00	5.77	0- 40	465	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	73974	6.00	5.82	80-120	100	(T)
63	1252	6.00	5.82	69-129	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	73974	6.00	6.11	80-120	100	(T)
89	1233	6.00	6.10	45-105	2	(QT)
63	1252	6.00	6.10	29- 89	2	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	4883	6.53	6.67	80-120	100	(T)
141	39887	6.53	6.67	54-114	817	(QT)
250	10238	6.53	6.67	66-126	210	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	2194	10.08	10.02	80-120	100	(T)
253	584	10.08	10.02	0- 51	27	(T)
125	537	10.08	10.02	0- 30	25	(T)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2811.d
Lab Smp Id: 232348002 Client Smp ID: CAMO-09-10460
Inj Date : 28-JUN-2009 18:37
Operator : nag1 Inst ID: MSD1.i
Smp Info : |232348002|880638|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	8.30530	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.887	1989665	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
2.910	470277	9.45438563	344	0		0	10

Data File: /chem/MSD1.i/s062809.b/s1f2811.d
Date : 28-JUN-2009 18:37
Client ID: CAMD-09-10460
Sample Info: 1232348002188063811SVMF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD1.i

Operator: nag1
Column diameter: 0.20

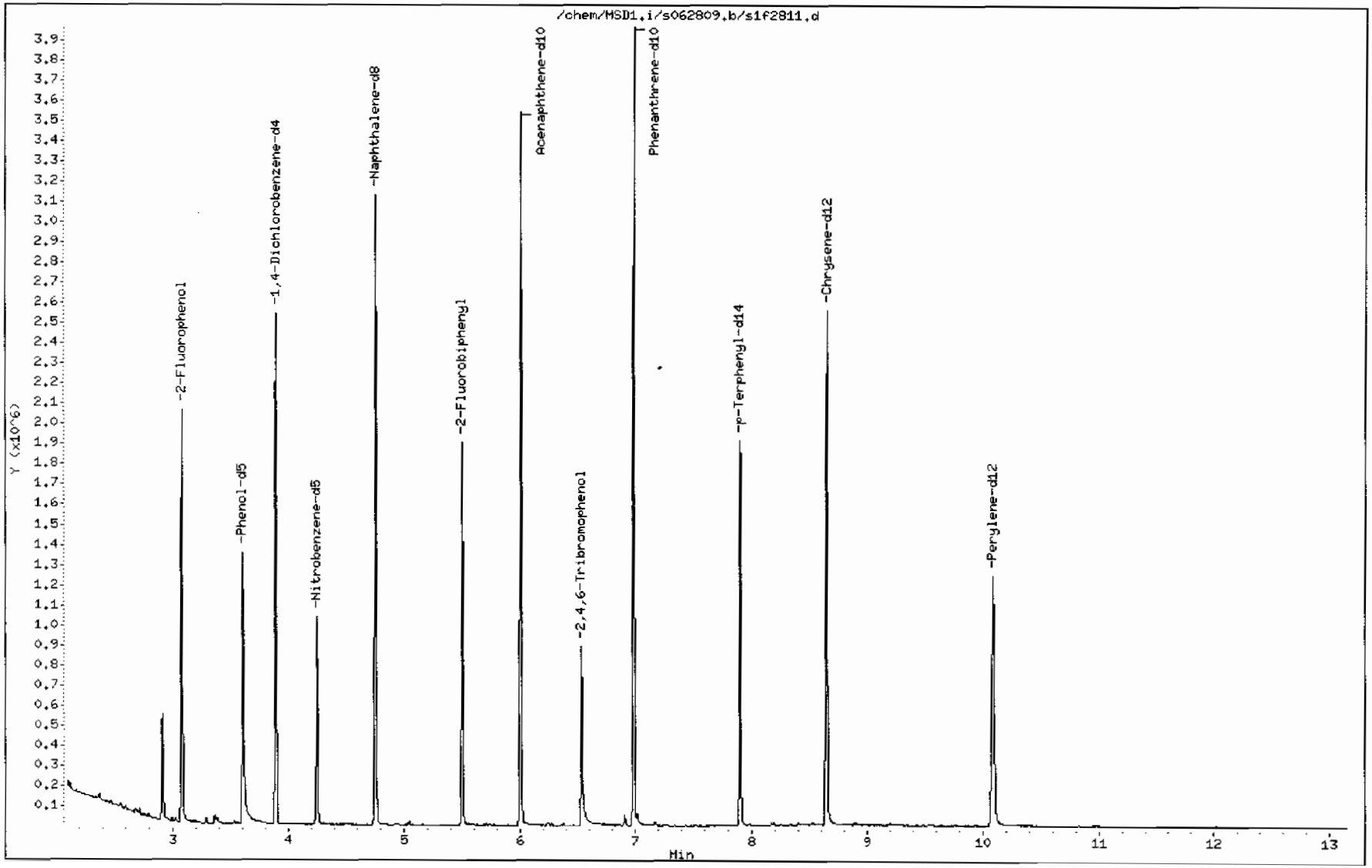

Data File: /chem/MSD1.i/s062809.b/s1f2811.d

Date : 28-JUN-2009 18:37

Client ID: CAMO-09-10460

Instrument: MSD1.i

Sample Info: 1232348002188063811|SVMF11|LANL

Volume Injected (uL): 0.5

Operator: nag1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	39	C6H12O2	116

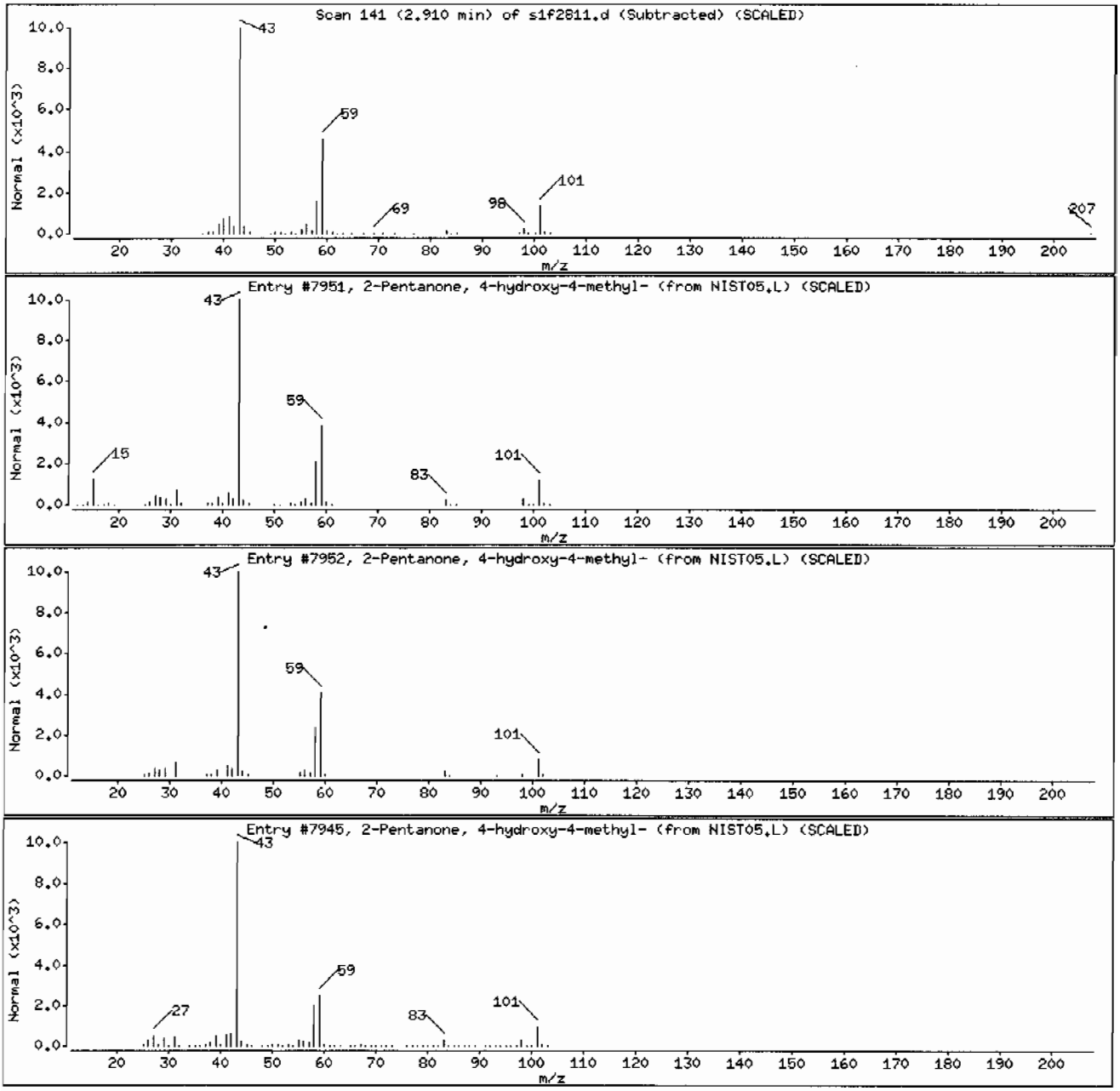

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348003	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10461	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 19:01	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s1f2812.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.2	376
108-95-2	Phenol	U	376	ug/kg	75.2	376
95-57-8	2-Chlorophenol	U	376	ug/kg	75.2	376
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.2	376
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.2	376
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	37.6	376
83-32-9	Acenaphthene	U	37.6	ug/kg	12.6	37.6
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376
100-02-7	4-Nitrophenol	U	376	ug/kg	75.2	376
87-86-5	Pentachlorophenol	U	376	ug/kg	75.2	376
129-00-0	Pyrene	U	37.6	ug/kg	11.8	37.6
110-86-1	Pyridine	U	376	ug/kg	75.2	376
62-53-3	Aniline	U	376	ug/kg	132	376
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.2	376
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.2	376
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.2	376
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.2	376
95-48-7	o-Cresol	U	376	ug/kg	75.2	376
65794-96-9	m,p-Cresols	U	376	ug/kg	150	376
67-72-1	Hexachloroethane	U	376	ug/kg	75.2	376
98-95-3	Nitrobenzene	U	376	ug/kg	75.2	376
78-59-1	Isophorone	U	376	ug/kg	75.2	376
88-75-5	2-Nitrophenol	U	376	ug/kg	37.6	376
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	75.2	376
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.2	376
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.2	376
65-85-0	Benzoic acid	U	752	ug/kg	188	752
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6
106-47-8	4-Chloroaniline	U	376	ug/kg	75.2	376
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.2	376
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.52	37.6
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.2	376
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.2	376
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.2	376
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	13.2	37.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	376	ug/kg	75.2	376
99-09-2	3-Nitroaniline	U	376	ug/kg	75.2	376

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232348003	Date Received:	06/25/2009 08:45	%Moisture:	11.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10461	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	880638	Inst:	MSD1.I	Dilution:	1
Run Date:	06/28/2009 19:01	Analyst:	NAG1	Inj. Vol:	.5 uL
Prep Date:	06/26/2009 21:26	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s1f2812.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	376	ug/kg	75.2	376
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
51-28-5	2,4-Dinitrophenol	U	752	ug/kg	143	752
132-64-9	Dibenzofuran	U	376	ug/kg	75.2	376
84-66-2	Diethylphthalate	U	376	ug/kg	75.2	376
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	37.6	376
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.2	376
100-01-6	4-Nitroaniline	U	376	ug/kg	75.2	376
	p-Nitroaniline					
122-39-4	Diphenylamine	U	376	ug/kg	75.2	376
122-66-7	Azobenzene	U	376	ug/kg	75.2	376
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	37.6	376
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.2	376
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6
120-12-7	Anthracene	U	37.6	ug/kg	7.52	37.6
84-74-2	Di-n-butylphthalate	U	376	ug/kg	37.6	376
206-44-0	Fluoranthene	U	37.6	ug/kg	11.3	37.6
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.2	376
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.2	376
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.2	376
205-99-2	Benzo(b)fluoranthene	U	37.6	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.2	376

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.92	261	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2812.d
Lab Smp Id: 232348003 Client Smp ID: CAMO-09-10461
Inj Date : 28-JUN-2009 19:01
Operator : nagl Inst ID: MSD1.i
Smp Info : |232348003|880638|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.05000	weight of sample
M	11.52820	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	326026	40.0000	
* 29 Naphthalene-d8	136	4.751	4.757	(1.000)	1259782	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	607266	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1153879	40.0000	
* 91 Chrysene-d12	240	8.639	8.645	(1.000)	923211	40.0000	
* 98 Perylene-d12	264	10.080	10.086	(1.000)	694591	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	380784	44.0575	1660
$ 5 Phenol-d5	99	3.599	3.598	(0.926)	425358	39.5835	1490
$ 20 Nitrobenzene-d5	82	4.246	4.251	(0.894)	228663	21.3227	802
$ 39 2-Fluorobiphenyl	172	5.493	5.492	(0.916)	425265	25.7066	967
$ 60 2,4,6-Tribromophenol	329	6.534	6.533	(1.089)	83760	39.2097	1470
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	452004	29.1761	1100

ION RATIO REPORT

SV REPORT

Data file: s1f2812.d
Report Date: 06/29/2009 10:15
Lab. ID: 232348003 SampleType: SAMPLE
Injection Date: 28-JUN-2009 19:01
Operator: nag1 Instrument: MSD1.i
Sample Info: |232348003|880638|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01
Comment:
Method used: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2457
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	21197	3.60	3.67	80-120	100	(T)
93	113	3.67	3.67	194-254	1	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	31283	4.25	4.13	80-120	100	(T)
42	22234	4.25	4.13	52-112	71	(T)
43 Dimethylphthalate			CAS#: 131-11-3			
163	134035	6.00	5.77	80-120	100	(T)
164	616616	6.00	5.77	0- 40	460	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	78494	6.00	5.82	80-120	100	(T)
63	1380	6.00	5.82	69-129	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	78494	6.00	6.11	80-120	100	(T)
89	1289	6.00	6.10	45-105	2	(QT)
63	1380	6.00	6.10	29- 89	2	(QT)
53 Fluorene		CAS#: 86-73-7				
166	5489	6.53	6.37	80-120	100	(T)
165	5430	6.53	6.37	56-116	99	(T)
167	1643	6.53	6.37	0- 43	30	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	5679	6.53	6.67	80-120	100	(T)
141	39705	6.53	6.67	54-114	699	(QT)
250	11255	6.53	6.67	66-126	198	(QT)
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	2232	10.09	10.02	80-120	100	(T)
253	515	10.08	10.02	0- 51	23	(T)
125	411	10.08	10.02	0- 30	18	(T)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2812.d
Lab Smp Id: 232348003 Client Smp ID: CAMO-09-10461
Inj Date : 28-JUN-2009 19:01
Operator : nag1 Inst ID: MSD1.i
Smp Info : |232348003|880638|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.05000	weight of sample
M	11.52820	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.887	2125560	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
2.916	369384	6.95127554	261	0		0	10

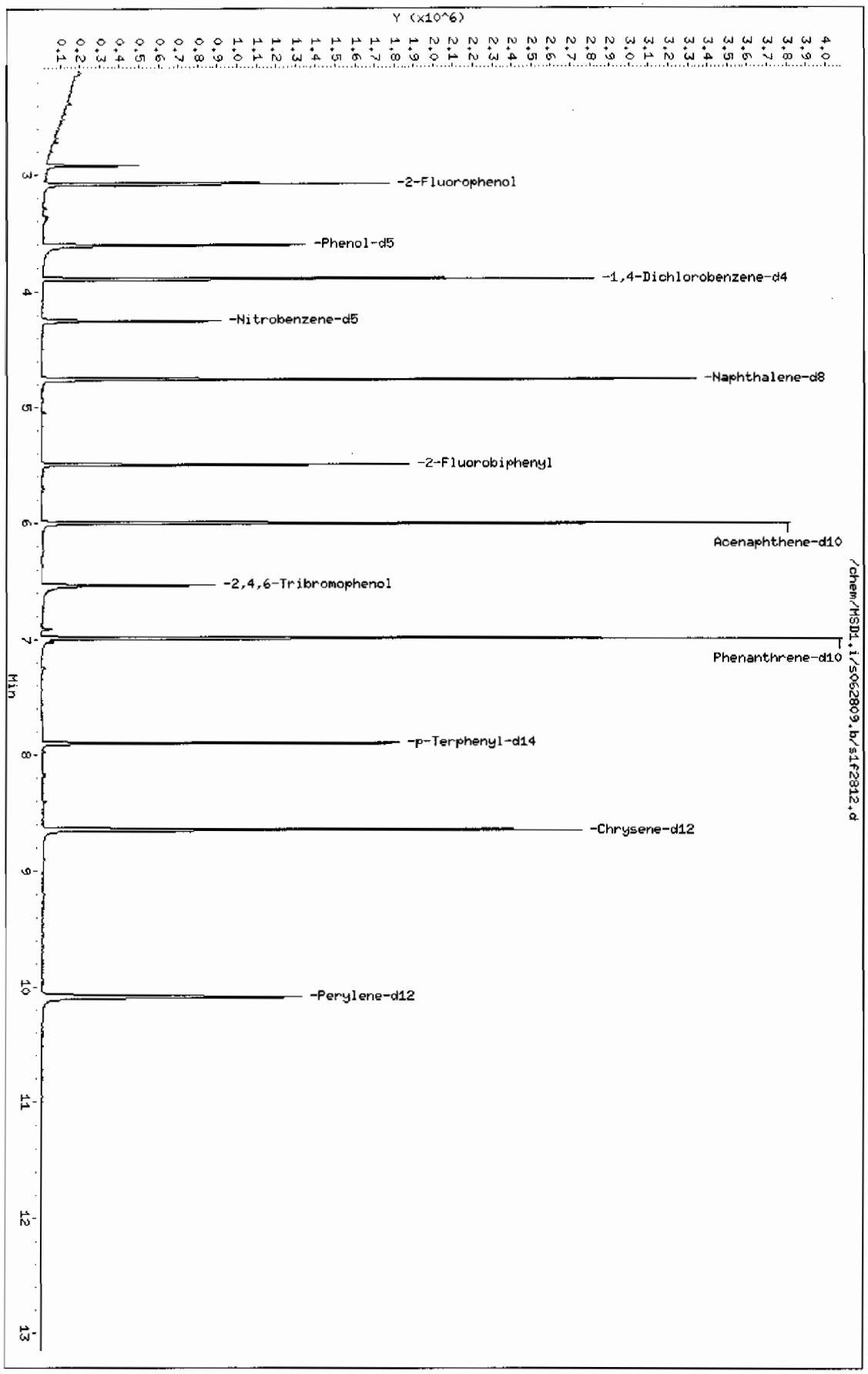
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Date : 28-JUN-2009 19:01
Client ID: CAMD-09-10461
Sample Info: 1232348003|8806381|1|SVHF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5HS
Instrument: MSD1.i
Operator: nag1
Column diameter: 0.20
Page 1
Y (x10^6)
-2-Fluorophenol
-Phenol-d5
-1,4-Dichlorobenzene-d4
-Nitrobenzene-d5
-Naphthalene-d8
-2-Fluorobiphenyl
Acenaphthene-d10
-2,4,6-Tribromophenol
Phenanthrene-d10
-p-Terphenyl-d14
-Chrysene-d12
-Perylene-d12
/chem/MSD1.i/s062809.b/s1f2812.d
Min

Data File: /chem/MSD1.i/s062809.b/s1f2812.d

Date : 28-JUN-2009 19:01

Client ID: CAMO-09-10461

Instrument: MSD1.i

Sample Info: 1232348003188063811|SVMF11|LANL

Volume Injected (uL): 0.5

Operator: nag1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	50	C6H12O2	116

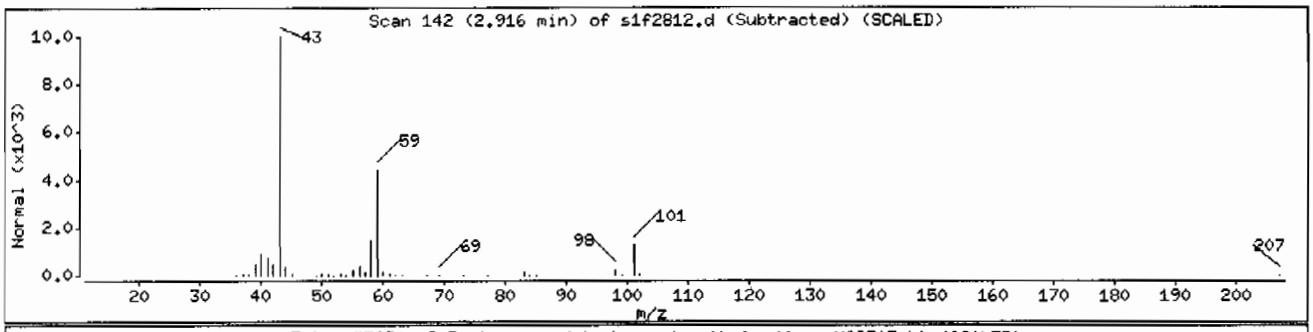

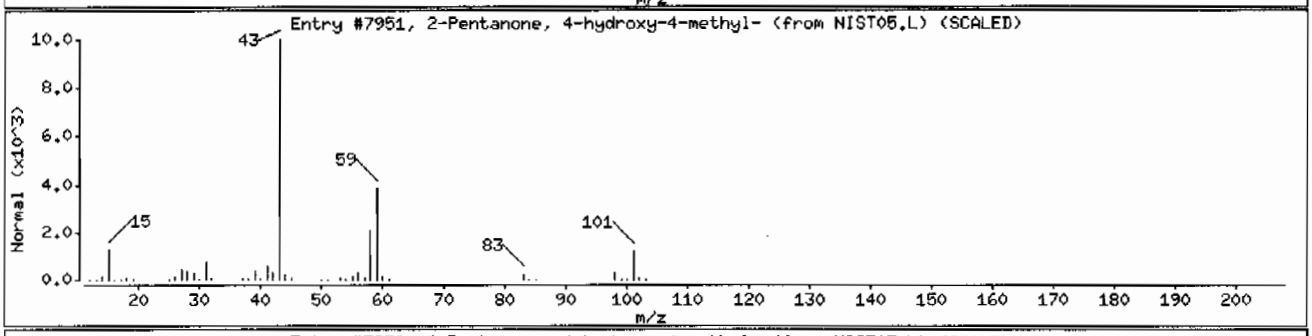

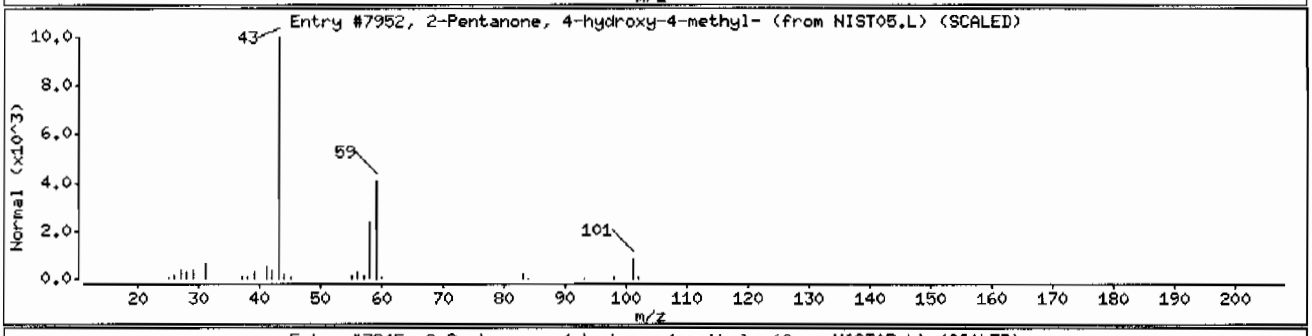

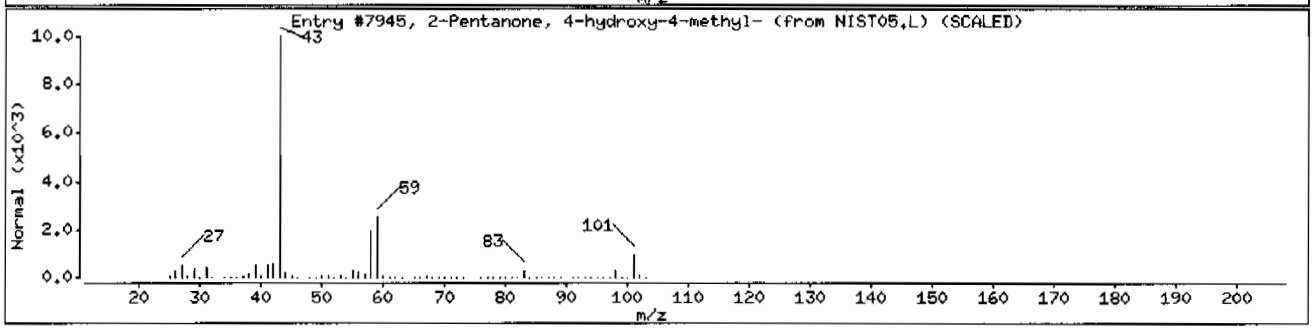

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 17:23	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2808.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	357	ug/kg	71.3	357
108-95-2	Phenol	U	357	ug/kg	71.3	357
95-57-8	2-Chlorophenol	U	357	ug/kg	71.3	357
106-46-7	1,4-Dichlorobenzene	U	357	ug/kg	71.3	357
621-64-7	N-Nitrosodipropylamine	U	357	ug/kg	71.3	357
59-50-7	4-Chloro-3-methylphenol	U	357	ug/kg	35.7	357
83-32-9	Acenaphthene	U	35.7	ug/kg	11.9	35.7
121-14-2	2,4-Dinitrotoluene	U	357	ug/kg	35.7	357
100-02-7	4-Nitrophenol	U	357	ug/kg	71.3	357
87-86-5	Pentachlorophenol	U	357	ug/kg	71.3	357
129-00-0	Pyrene	U	35.7	ug/kg	11.2	35.7
110-86-1	Pyridine	U	357	ug/kg	71.3	357
62-53-3	Aniline	U	357	ug/kg	125	357
111-44-4	bis(2-Chloroethyl) ether	U	357	ug/kg	71.3	357
541-73-1	1,3-Dichlorobenzene	U	357	ug/kg	71.3	357
100-51-6	Benzyl alcohol	U	357	ug/kg	107	357
95-50-1	1,2-Dichlorobenzene	U	357	ug/kg	71.3	357
108-60-1	bis(2-Chloroisopropyl)ether	U	357	ug/kg	71.3	357
95-48-7	o-Cresol	U	357	ug/kg	71.3	357
65794-96-9	m,p-Cresols	U	357	ug/kg	143	357
67-72-1	Hexachloroethane	U	357	ug/kg	71.3	357
98-95-3	Nitrobenzene	U	357	ug/kg	71.3	357
78-59-1	Isophorone	U	357	ug/kg	71.3	357
88-75-5	2-Nitrophenol	U	357	ug/kg	35.7	357
105-67-9	2,4-Dimethylphenol	U	357	ug/kg	71.3	357
111-91-1	bis(2-Chloroethoxy)methane	U	357	ug/kg	71.3	357
120-83-2	2,4-Dichlorophenol	U	357	ug/kg	71.3	357
65-85-0	Benzoic acid	U	713	ug/kg	178	713
91-20-3	Naphthalene	U	35.7	ug/kg	10.7	35.7
106-47-8	4-Chloroaniline	U	357	ug/kg	71.3	357
87-68-3	Hexachlorobutadiene	U	357	ug/kg	71.3	357
91-57-6	2-Methylnaphthalene	U	35.7	ug/kg	7.13	35.7
77-47-4	Hexachlorocyclopentadiene	U	357	ug/kg	71.3	357
88-06-2	2,4,6-Trichlorophenol	U	357	ug/kg	71.3	357
95-95-4	2,4,5-Trichlorophenol	U	357	ug/kg	71.3	357
91-58-7	2-Chloronaphthalene	U	35.7	ug/kg	12.5	35.7
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	357	ug/kg	71.3	357
99-09-2	3-Nitroaniline	U	357	ug/kg	71.3	357

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10462	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.1	**Dilution:**	1
Run Date:	06/28/2009 17:23	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2808.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	357	ug/kg	71.3	357
606-20-2	2,6-Dinitrotoluene	U	357	ug/kg	35.7	357
208-96-8	Acenaphthylene	U	35.7	ug/kg	10.7	35.7
51-28-5	2,4-Dinitrophenol	U	713	ug/kg	136	713
132-64-9	Dibenzofuran	U	357	ug/kg	71.3	357
84-66-2	Diethylphthalate	U	357	ug/kg	71.3	357
86-73-7	Fluorene	U	35.7	ug/kg	10.7	35.7
7005-72-3	4-Chlorophenylphenylether	U	357	ug/kg	35.7	357
534-52-1	2-Methyl-4,6-dinitrophenol	U	357	ug/kg	71.3	357
100-01-6	4-Nitroaniline	U	357	ug/kg	71.3	357
	p-Nitroaniline					
122-39-4	Diphenylamine	U	357	ug/kg	71.3	357
122-66-7	Azobenzene	U	357	ug/kg	71.3	357
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	357	ug/kg	35.7	357
118-74-1	Hexachlorobenzene	U	357	ug/kg	71.3	357
85-01-8	Phenanthrene	U	35.7	ug/kg	10.7	35.7
120-12-7	Anthracene	U	35.7	ug/kg	7.13	35.7
84-74-2	Di-n-butylphthalate	U	357	ug/kg	35.7	357
206-44-0	Fluoranthene	U	35.7	ug/kg	10.7	35.7
85-68-7	Butylbenzylphthalate	U	357	ug/kg	71.3	357
56-55-3	Benzo(a)anthracene	U	35.7	ug/kg	10.7	35.7
91-94-1	3,3'-Dichlorobenzidine	U	357	ug/kg	107	357
218-01-9	Chrysene	U	35.7	ug/kg	10.7	35.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	357	ug/kg	71.3	357
117-84-0	Di-n-octylphthalate	U	357	ug/kg	71.3	357
205-99-2	Benzo(b)fluoranthene	U	35.7	ug/kg	10.7	35.7
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7
50-32-8	Benzo(a)pyrene	U	35.7	ug/kg	10.7	35.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.7	ug/kg	10.7	35.7
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7
191-24-2	Benzo(ghi)perylene	U	35.7	ug/kg	10.7	35.7
120-82-1	1,2,4-Trichlorobenzene	U	357	ug/kg	71.3	357

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	296	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2808.d
Lab Smp Id: 232348001 Client Smp ID: CAMO-09-10462
Inj Date : 28-JUN-2009 17:23
Operator : nagl Inst ID: MSD1.i
Smp Info : |232348001|880638|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	6.53160	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	302727	40.0000	
* 29 Naphthalene-d8	136	4.751	4.757	(1.000)	1171442	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	581219	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1107336	40.0000	
* 91 Chrysene-d12	240	8.639	8.645	(1.000)	883995	40.0000	
* 98 Perylene-d12	264	10.081	10.086	(1.000)	660664	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	429135	53.4732	1910
$ 5 Phenol-d5	99	3.599	3.598	(0.926)	491343	49.2431	1760
$ 20 Nitrobenzene-d5	82	4.246	4.251	(0.894)	259860	26.0591	929
$ 39 2-Fluorobiphenyl	172	5.493	5.492	(0.916)	478774	30.2381	1080
$ 60 2,4,6-Tribromophenol	329	6.528	6.533	(1.088)	96048	46.9769	1680
$ 81 p-Terphenyl-d14	244	7.892	7.898	(0.914)	464411	31.3068	1120

ION RATIO REPORT

SV REPORT

Data file: s1f2808.d
Report Date: 06/29/2009 10:13
Lab. ID: 232348001 SampleType: SAMPLE
Injection Date: 28-JUN-2009 17:23
Operator: nagl Instrument: MSD1.i
Sample Info: |232348001|880638|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01
Comment:
Method used: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2457
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	25096	3.60	3.67	80-120	100	(T)
93	157	3.66	3.67	194-254	1	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	35637	4.25	4.13	80-120	100	(T)
42	24304	4.25	4.13	52-112	68	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	128321	6.00	5.77	80-120	100	(T)
164	588085	6.00	5.77	0- 40	458	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	74518	6.00	5.82	80-120	100	(T)
63	1272	6.00	5.82	69-129	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	74518	6.00	6.11	80-120	100	(T)
89	1198	6.00	6.10	45-105	2	(QT)
63	1272	6.00	6.10	29- 89	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	6019	6.53	6.37	80-120	100	(T)
165	5599	6.53	6.37	56-116	93	(T)
167	2219	6.53	6.37	0- 43	37	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	6507	6.53	6.67	80-120	100	(T)
141	45353	6.53	6.67	54-114	697	(QT)
250	12601	6.53	6.67	66-126	194	(QT)
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	1978	10.08	10.02	80-120	100	(T)
253	487	10.08	10.02	0- 51	25	(T)
125	392	10.08	10.02	0- 30	20	(T)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2808.d
Lab Smp Id: 232348001 Client Smp ID: CAMO-09-10462
Inj Date : 28-JUN-2009 17:23
Operator : nagl Inst ID: MSD1.i
Smp Info : |232348001|880638|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	6.53160	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.887	1999917	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
2.910	415027	8.30087292	296	0		0	10

Data File: /chem/MSD1.i/s062809.b/s1f2808.d
Date : 28-JUN-2009 17:23
Client ID: CAMO-09-10462
Sample Info: |2323480011880638|1|SVMFI1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nag1
Column diameter: 0.20

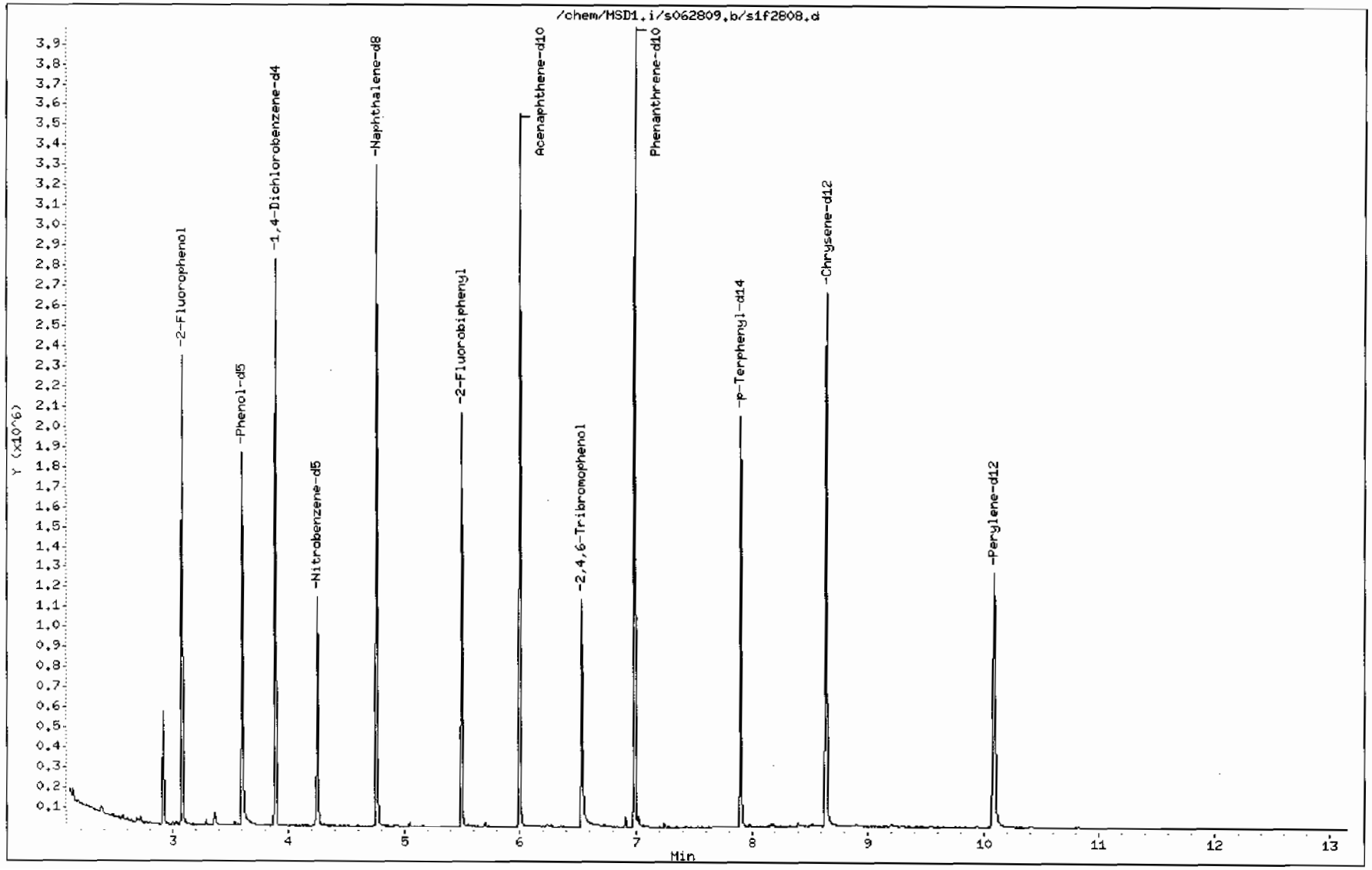

Data File: /chem/MSD1.i/s062809.b/s1f2808.d

Date : 28-JUN-2009 17:23

Client ID: CAMO-09-10462

Instrument: MSD1.i

Sample Info: |2323480011880638|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: nag1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	45	C6H12O2	116

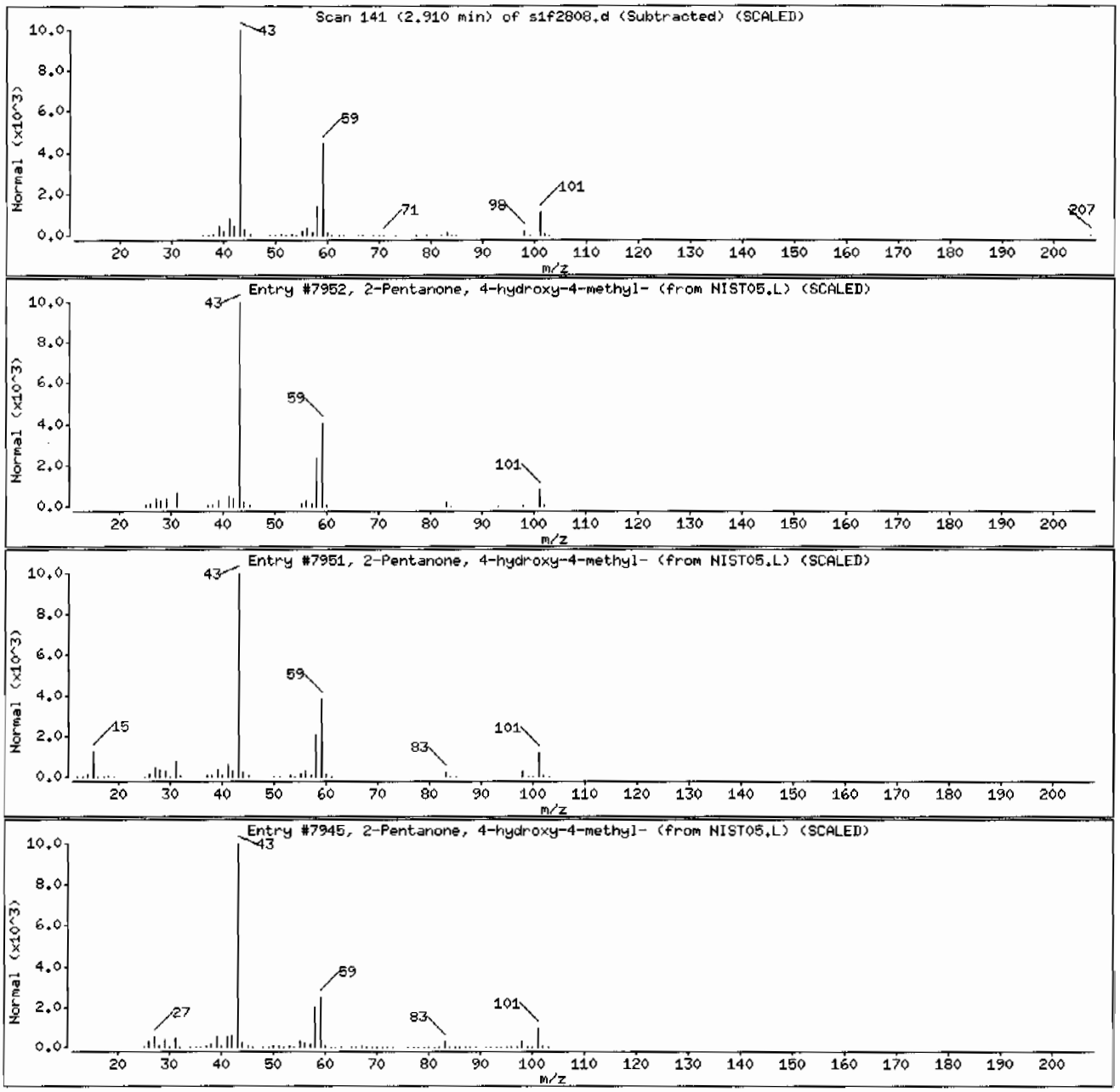

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 19:25	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2813.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	349	ug/kg	69.8	349
108-95-2	Phenol	U	349	ug/kg	69.8	349
95-57-8	2-Chlorophenol	U	349	ug/kg	69.8	349
106-46-7	1,4-Dichlorobenzene	U	349	ug/kg	69.8	349
621-64-7	N-Nitrosodipropylamine	U	349	ug/kg	69.8	349
59-50-7	4-Chloro-3-methylphenol	U	349	ug/kg	34.9	349
83-32-9	Acenaphthene	U	34.9	ug/kg	11.7	34.9
121-14-2	2,4-Dinitrotoluene	U	349	ug/kg	34.9	349
100-02-7	4-Nitrophenol	U	349	ug/kg	69.8	349
87-86-5	Pentachlorophenol	U	349	ug/kg	69.8	349
129-00-0	Pyrene	U	34.9	ug/kg	11.0	34.9
110-86-1	Pyridine	U	349	ug/kg	69.8	349
62-53-3	Aniline	U	349	ug/kg	122	349
111-44-4	bis(2-Chloroethyl) ether	U	349	ug/kg	69.8	349
541-73-1	1,3-Dichlorobenzene	U	349	ug/kg	69.8	349
100-51-6	Benzyl alcohol	U	349	ug/kg	105	349
95-50-1	1,2-Dichlorobenzene	U	349	ug/kg	69.8	349
108-60-1	bis(2-Chloroisopropyl)ether	U	349	ug/kg	69.8	349
95-48-7	o-Cresol	U	349	ug/kg	69.8	349
65794-96-9	m,p-Cresols	U	349	ug/kg	140	349
67-72-1	Hexachloroethane	U	349	ug/kg	69.8	349
98-95-3	Nitrohenzene	U	349	ug/kg	69.8	349
78-59-1	Isophorone	U	349	ug/kg	69.8	349
88-75-5	2-Nitrophenol	U	349	ug/kg	34.9	349
105-67-9	2,4-Dimethylphenol	U	349	ug/kg	69.8	349
111-91-1	bis(2-Chloroethoxy)methane	U	349	ug/kg	69.8	349
120-83-2	2,4-Dichlorophenol	U	349	ug/kg	69.8	349
65-85-0	Benzoic acid	U	698	ug/kg	175	698
91-20-3	Naphthalene	U	34.9	ug/kg	10.5	34.9
106-47-8	4-Chloroaniline	U	349	ug/kg	69.8	349
87-68-3	Hexachlorobutadiene	U	349	ug/kg	69.8	349
91-57-6	2-Methylnaphthalene	U	34.9	ug/kg	6.98	34.9
77-47-4	Hexachlorocyclopentadiene	U	349	ug/kg	69.8	349
88-06-2	2,4,6-Trichlorophenol	U	349	ug/kg	69.8	349
95-95-4	2,4,5-Trichlorophenol	U	349	ug/kg	69.8	349
91-58-7	2-Chloronaphthalene	U	34.9	ug/kg	12.2	34.9
88-74-4	2-Nitroaniline	U	349	ug/kg	69.8	349
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	349	ug/kg	69.8	349

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 19:25	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2813.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	349	ug/kg	69.8	349
606-20-2	2,6-Dinitrotoluene	U	349	ug/kg	34.9	349
208-96-8	Acenaphthylene	U	34.9	ug/kg	10.5	34.9
51-28-5	2,4-Dinitrophenol	U	698	ug/kg	133	698
132-64-9	Dibenzofuran	U	349	ug/kg	69.8	349
84-66-2	Diethylphthalate	U	349	ug/kg	69.8	349
86-73-7	Fluorene	U	34.9	ug/kg	10.5	34.9
7005-72-3	4-Chlorophenylphenylether	U	349	ug/kg	34.9	349
534-52-1	2-Methyl-4,6-dinitrophenol	U	349	ug/kg	69.8	349
100-01-6	4-Nitroaniline	U	349	ug/kg	69.8	349
	p-Nitroaniline					
122-39-4	Diphenylamine	U	349	ug/kg	69.8	349
122-66-7	Azobenzene	U	349	ug/kg	69.8	349
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	349	ug/kg	34.9	349
118-74-1	Hexachlorobenzene	U	349	ug/kg	69.8	349
85-01-8	Phenanthrene	U	34.9	ug/kg	10.5	34.9
120-12-7	Anthracene	U	34.9	ug/kg	6.98	34.9
84-74-2	Di-n-butylphthalate	U	349	ug/kg	34.9	349
206-44-0	Fluoranthene	U	34.9	ug/kg	10.5	34.9
85-68-7	Butylbenzylphthalate	U	349	ug/kg	69.8	349
56-55-3	Benzo(a)anthracene	U	34.9	ug/kg	10.5	34.9
91-94-1	3,3'-Dichlorobenzidine	U	349	ug/kg	105	349
218-01-9	Chrysene	U	34.9	ug/kg	10.5	34.9
117-81-7	bis(2-Ethylhexyl)phthalate	U	349	ug/kg	69.8	349
117-84-0	Di-n-octylphthalate	U	349	ug/kg	69.8	349
205-99-2	Benzo(b)fluoranthene	U	34.9	ug/kg	10.5	34.9
207-08-9	Benzo(k)fluoranthene	U	34.9	ug/kg	10.5	34.9
50-32-8	Benzo(a)pyrene	U	34.9	ug/kg	10.5	34.9
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.9	ug/kg	10.5	34.9
53-70-3	Dibenzo(a,h)anthracene	U	34.9	ug/kg	10.5	34.9
191-24-2	Benzo(ghi)perylene	U	34.9	ug/kg	10.5	34.9
120-82-1	1,2,4-Trichlorobenzene	U	349	ug/kg	69.8	349

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	322	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2813.d
Lab Smp Id: 232348004 Client Smp ID: CAMO-09-10467
Inj Date : 28-JUN-2009 19:25
Operator : nagl Inst ID: MSD1.i
Smp Info : |232348004|880638|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	4.53430	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	310276	40.0000	
* 29 Naphthalene-d8	136	4.751	4.757	(1.000)	1707327	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	594973	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1131579	40.0000	
* 91 Chrysene-d12	240	8.639	8.645	(1.000)	924603	40.0000	
* 98 Perylene-d12	264	10.080	10.086	(1.000)	716644	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	485256	58.9951	2060
$ 5 Phenol-d5	99	3.598	3.598	(0.926)	586091	57.3097	2000
$ 20 Nitrobenzene-d5	82	4.246	4.251	(0.894)	307519	29.9219	1040
$ 39 2-Fluorobiphenyl	172	5.492	5.492	(0.916)	579669	35.7640	1250
$ 60 2,4,6-Tribromophenol	329	6.534	6.533	(1.089)	116330	55.5816	1940
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	635332	40.9479	1430

ION RATIO REPORT

SV REPORT

Data file: s1f2813.d
Report Date: 06/29/2009 10:15
Lab. ID: 232348004 SampleType: SAMPLE
Injection Date: 28-JUN-2009 19:25
Operator: nag1 Instrument: MSD1.i
Sample Info: |232348004|880638|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01
Comment:
Method used: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2457
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	27778	3.60	3.67	80-120	100	(T)
93	125	3.66	3.67	194-254	0	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	42875	4.25	4.13	80-120	100	(T)
42	30639	4.25	4.13	52-112	71	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	130827	6.00	5.77	80-120	100	(T)
164	602712	6.00	5.77	0- 40	461	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	75870	6.00	5.82	80-120	100	(T)
63	1242	6.00	5.82	69-129	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	75870	6.00	6.11	80-120	100	(T)
89	1207	6.00	6.10	45-105	2	(QT)
63	1242	6.00	6.10	29- 89	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	7809	6.53	6.37	80-120	100	(T)
165	7558	6.53	6.37	56-116	97	(T)
167	2618	6.53	6.37	0- 43	34	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	7919	6.53	6.67	80-120	100	(T)
141	57751	6.53	6.67	54-114	729	(QT)
250	15845	6.53	6.67	66-126	200	(QT)
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	2162	10.08	10.02	80-120	100	(T)
253	507	10.09	10.02	0- 51	23	(T)
125	534	10.08	10.02	0- 30	25	(T)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2813.d
Lab Smp Id: 232348004 Client Smp ID: CAMO-09-10467
Inj Date : 28-JUN-2009 19:25
Operator : nag1 Inst ID: MSD1.i
Smp Info : |232348004|880638|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	4.53430	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.887	2044754	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
2.910	472008	9.23353329	322	0		0	10

Data File: /chem/MSD1.i/s062809.b/s1f2813.d
Date : 28-JUN-2009 19:25
Client ID: CAMO-09-10467
Sample Info: 1232348004188063811ISVMF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD1.i

Operator: nagl
Column diameter: 0.20

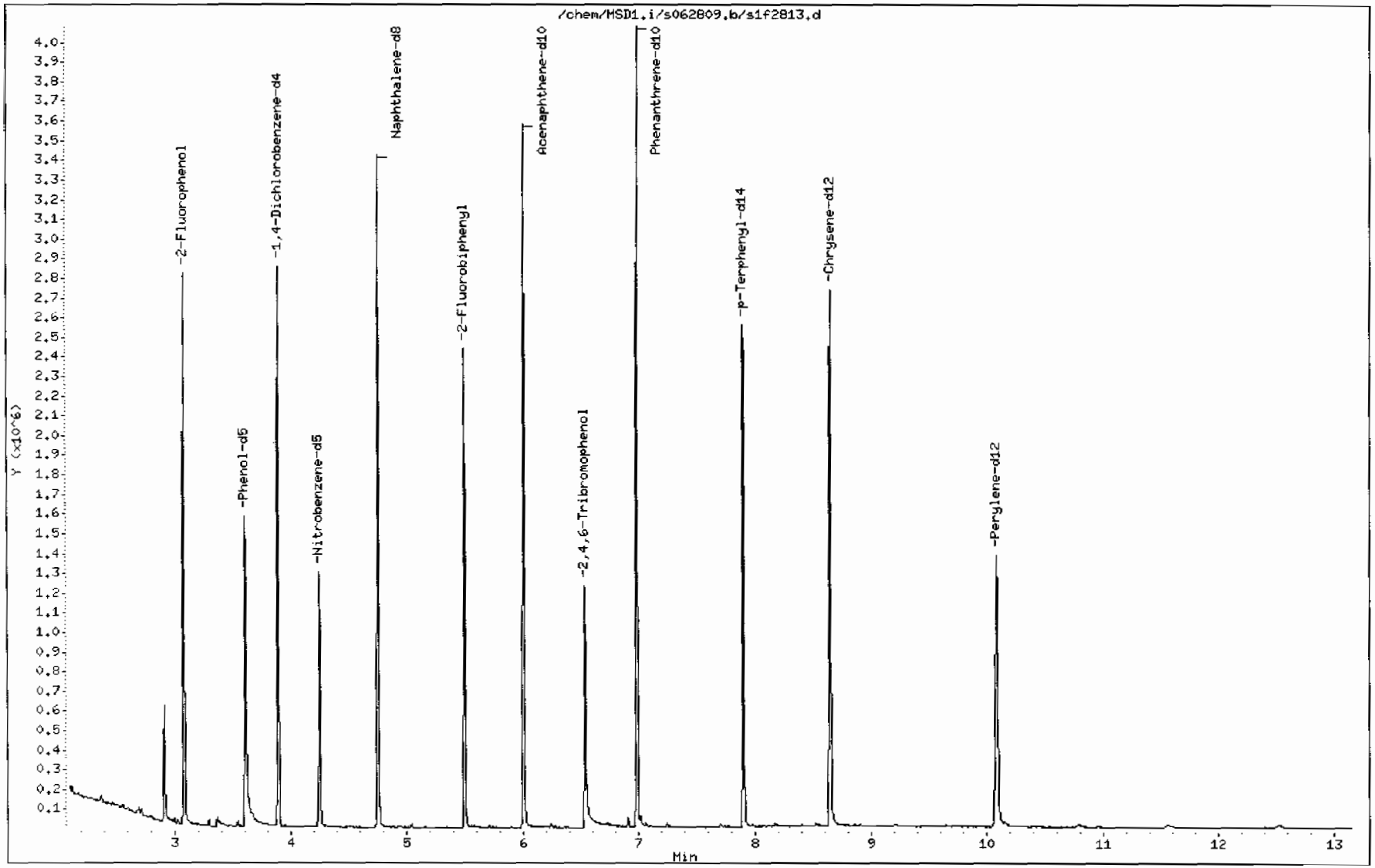

Data File: /chem/MSD1.i/s062809.b/s1f2813.d

Date : 28-JUN-2009 19:25

Client ID: CAMO-09-10467 Instrument: MSD1.i

Sample Info: 1232348004188063811ISVMF11LANL

Volume Injected (uL): 0.5 Operator: nag1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	39	C6H12O2	116

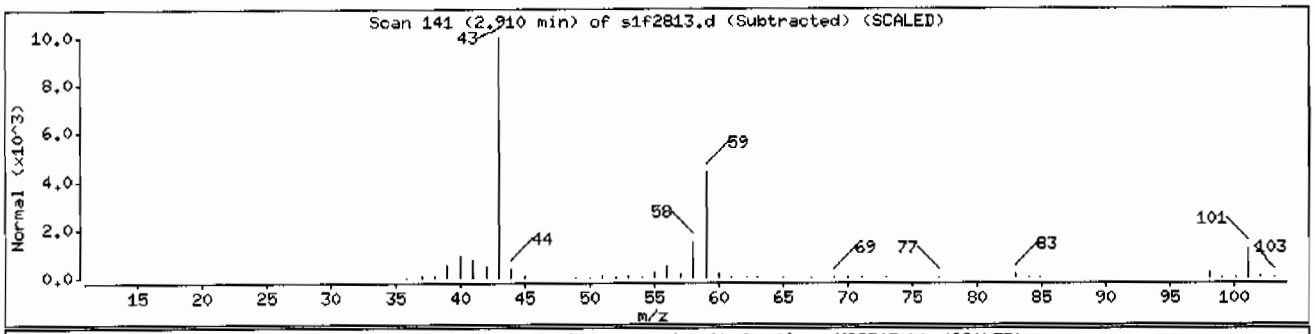

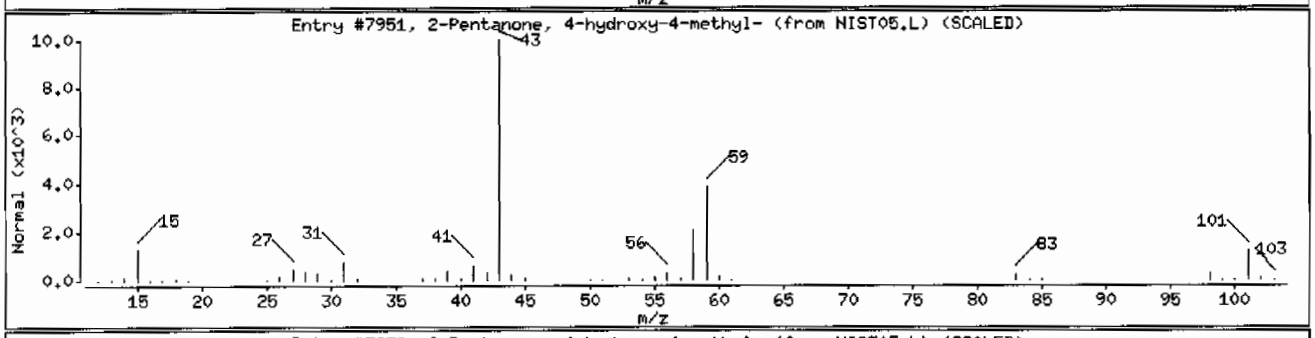

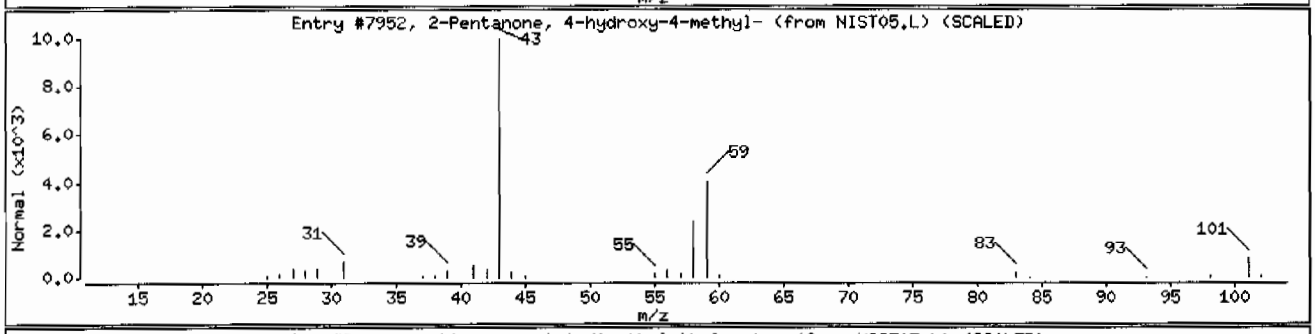

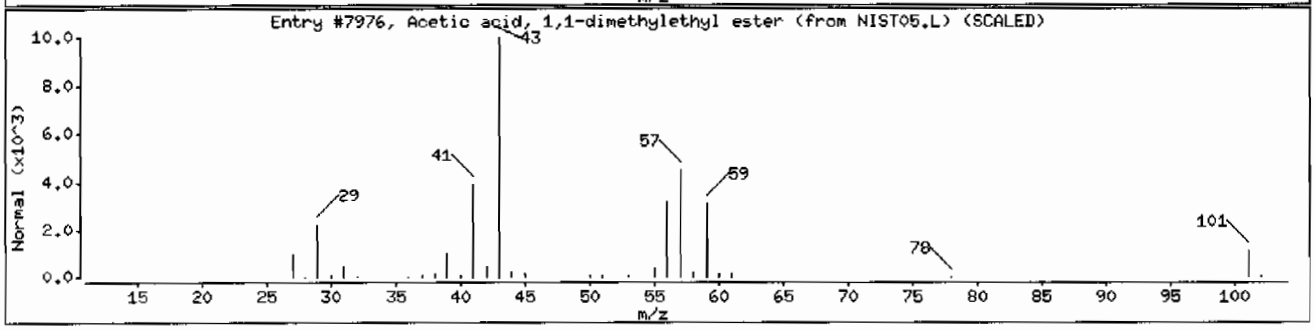

Standard Data

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 29-Jun-2009 11:37

Calibration History

Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Start Cal Date: 19-JUN-2009 10:25
End Cal Date : 20-JUN-2009 04:39

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
19-JUN-2009 10:25	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1903.d
Cal Level: 2 , Cal Amount: 10.00000		
20-JUN-2009 02:17	nev	/chem/MSD1.i/s061909.b/s1f1940.d
19-JUN-2009 23:06	hex	/chem/MSD1.i/s061909.b/s1f1932.d
19-JUN-2009 19:21	pest	/chem/MSD1.i/s061909.b/s1f1923.d
19-JUN-2009 15:17	ap12	/chem/MSD1.i/s061909.b/s1f1913.d
19-JUN-2009 10:57	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1904.d
Cal Level: 3 , Cal Amount: 20.00000		
20-JUN-2009 02:41	nev	/chem/MSD1.i/s061909.b/s1f1941.d
19-JUN-2009 23:30	hex	/chem/MSD1.i/s061909.b/s1f1933.d
19-JUN-2009 19:46	pest	/chem/MSD1.i/s061909.b/s1f1924.d
19-JUN-2009 15:42	ap12	/chem/MSD1.i/s061909.b/s1f1914.d
19-JUN-2009 11:27	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1905.d
Cal Level: 4 , Cal Amount: 40.00000		
20-JUN-2009 03:05	nev	/chem/MSD1.i/s061909.b/s1f1942.d
19-JUN-2009 23:55	hex	/chem/MSD1.i/s061909.b/s1f1934.d
19-JUN-2009 20:10	pest	/chem/MSD1.i/s061909.b/s1f1925.d
19-JUN-2009 16:07	ap12	/chem/MSD1.i/s061909.b/s1f1915.d
19-JUN-2009 11:55	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1906.d
Cal Level: 5 , Cal Amount: 50.00000		
20-JUN-2009 03:28	nev	/chem/MSD1.i/s061909.b/s1f1943.d
20-JUN-2009 00:19	hex	/chem/MSD1.i/s061909.b/s1f1935.d
19-JUN-2009 20:35	pest	/chem/MSD1.i/s061909.b/s1f1926.d
19-JUN-2009 16:33	ap12	/chem/MSD1.i/s061909.b/s1f1916.d
19-JUN-2009 12:25	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1907.d
Cal Level: 6 , Cal Amount: 80.00000		
20-JUN-2009 03:52	nev	/chem/MSD1.i/s061909.b/s1f1944.d
20-JUN-2009 00:43	hex	/chem/MSD1.i/s061909.b/s1f1936.d
19-JUN-2009 20:59	pest	/chem/MSD1.i/s061909.b/s1f1927.d
19-JUN-2009 16:58	ap12	/chem/MSD1.i/s061909.b/s1f1917.d
19-JUN-2009 12:54	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1908.d
Cal Level: 7 , Cal Amount: 100.00000		

20-JUN-2009 04:15	nev	/chem/MSD1.i/s061909.b/s1f1945.d
20-JUN-2009 01:07	hex	/chem/MSD1.i/s061909.b/s1f1937.d
19-JUN-2009 21:24	pest	/chem/MSD1.i/s061909.b/s1f1928.d
19-JUN-2009 17:23	ap12	/chem/MSD1.i/s061909.b/s1f1918.d
19-JUN-2009 13:23	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1909.d

Cal Level: 8 , Cal Amount: 120.00000		
20-JUN-2009 04:39	nev	/chem/MSD1.i/s061909.b/s1f1946.d
19-JUN-2009 21:50	pest	/chem/MSD1.i/s061909.b/s1f1929.d
19-JUN-2009 17:48	ap12	/chem/MSD1.i/s061909.b/s1f1919.d
19-JUN-2009 13:54	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1910.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
28-JUN-2009 14:55	MEGAIICARE	/chem/MSD1.i/s062809.b/s1f2802.d

Ccal Level: 4 , Ccal Amount: 40.0		
28-JUN-2009 15:47	pest	/chem/MSD1.i/s062809.b/s1f2804.d

Ccal Level: 4 , Ccal Amount: 40.0		
28-JUN-2009 15:23	ap12	/chem/MSD1.i/s062809.b/s1f2803.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2009 10:25
End Cal Date : 20-JUN-2009 04:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Cal Date : 29-Jun-2009 09:53 rmb

Calibration File Names:
Level 1: /chem/MSD1.i/s061909.b/s1f1903.d
Level 2: /chem/MSD1.i/s061909.b/s1f1940.d
Level 3: /chem/MSD1.i/s061909.b/s1f1941.d
Level 4: /chem/MSD1.i/s061909.b/s1f1942.d
Level 5: /chem/MSD1.i/s061909.b/s1f1943.d
Level 6: /chem/MSD1.i/s061909.b/s1f1944.d
Level 7: /chem/MSD1.i/s061909.b/s1f1945.d
Level 8: /chem/MSD1.i/s061909.b/s1f1946.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+-++++	0.48200	0.49919	0.52282	0.48768	0.52174					
	0.51579	0.50948					AVRG		0.50553		3.22517
2 Pyridine	+++++	0.86853	0.87557	0.91246	0.82351	0.87772					
	0.91401	0.88809					AVRG		0.87998		3.47901
4 Aniline	+++++	0.71536	0.72947	0.71185	0.67913	0.71234					
	0.71585	0.70156					AVRG		0.70937		2.20861
209 Benzaldehyde	+++-+	1.21708	1.16856	1.09301	1.08102	1.06567					
	1.01021	0.96981					AVRG		1.08648		7.85756
6 Phenol	+++++	1.37663	1.41906	1.41106	1.32092	1.38909					
	1.37851	1.32741					AVRG		1.37467		2.76112

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INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2009 10:25
End Cal Date : 20-JUN-2009 04:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	1.25617	1.22540	1.40152	1.27182	1.19779	1.26644					
	1.29278	1.25180					AVRG		1.27047		4.75606
8 2-Chlorophenol	++++	1.11161	1.18177	1.12825	1.04761	1.10740					
	1.08307	1.04311					AVRG		1.10040		4.38042
203 n-Decane	+++++	2.60620	2.68274	2.50510	2.30966	2.37689					
	2.26207	2.14946					AVRG		2.41316		7.98512
9 1,3-Dichlorobenzene	+++++	1.39810	1.42855	1.36839	1.25661	1.31441					
	1.27650	1.24012					AVRG		1.32610		5.53173
11 1,4-Dichlorobenzene	+++++	1.39213	1.45913	1.37002	1.27539	1.32655					
	1.30878	1.26419					AVRG		1.34231		5.16588
12 Benzyl alcohol	+++++	0.75661	0.81546	0.80340	0.74742	0.77760					
	0.77958	0.74796					AVRG		0.77543		3.45245
13 1,2-Dichlorobenzene	++++	1.30212	1.33650	1.25020	1.16766	1.21938					
	1.19891	1.14932					AVRG		1.23201		5.58410
14 bis(2-Chloroisopropyl)ether	++++	3.38185	3.53138	3.38082	3.15058	3.23692					
	3.20077	2.98621					AVRG		3.26693		5.50026
15 o-Cresol	+++++	0.94714	1.00173	0.97233	0.90285	0.94300					
	0.93685	0.91134					AVRG		0.94503		3.60124

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
16 Acetophenone	+++++	1.59463	1.53547	1.46966	1.43608	1.48712					
	1.43208	1.42822					AVRG		1.48332		4.19240
17 N-Nitrosodipropylamine	0.78889	0.75755	0.79360	0.80341	0.77280	0.76694					
	0.75519	0.76421					AVRG		0.77532		2.30108
18 m,p-Cresols	+++++	1.21957	1.32685	1.28069	1.18296	1.25286					
	1.24985	1.22762					AVRG		1.24863		3.69385
19 Hexachloroethane	+++++	0.55610	0.58907	0.56307	0.53008	0.54701					
	0.53570	0.53062					AVRG		0.55024		3.86959
21 Nitrobenzene	+++++	0.35096	0.37387	0.34993	0.32357	0.31962					
	0.30370	0.28947					AVRG		0.33016		8.95477
22 Isophorone	+++++	0.65379	0.68043	0.64042	0.59370	0.59162					
	0.55972	0.53757					AVRG		0.60818		8.53279
23 2-Nitrophenol	+++++	0.14487	0.15070	0.14310	0.13065	0.12701					
	0.12056	0.11622					AVRG		0.13330		9.84456
24 2,4-Dimethylphenol	+++++	0.26668	0.28431	0.25174	0.23020	0.22534					
	0.21075	0.20193					AVRG		0.23871		12.58797
25 bis(2-Chloroethoxy)methane	+++++	0.34493	0.35836	0.33600	0.31018	0.30501					
	0.29060	0.27727					AVRG		0.31748		9.37530

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Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
26 2,4-Dichlorophenol	+++++	0.22642	0.24100	0.22460	0.20600	0.20413					
	0.19300	0.18553					AVRG		0.21152		9.38724
27 Benzoic acid	+++++	+++++	0.16158	0.18642	0.18012	0.18106					
	0.17904	0.18348					AVRG		0.17862		4.90232
28 1,2,4-Trichlorobenzene	++++	0.30156	0.30289	0.28181	0.25947	0.25957					
	0.24458	0.23246					AVRG		0.26891		10.16563
30 Naphthalene	0.89862	0.87579	0.89953	0.82767	0.76064	0.74570					
	0.70410	0.66360					AVRG		0.79696		11.45783
204 alpha-Terpineol	+++++	0.38802	0.40564	0.37786	0.34411	0.34387					
	0.32397	0.30550					AVRG		0.35557		10.16020
31 4-Chloroaniline	+++++	0.36855	0.27844	0.25552	0.33535	0.24754					
	0.31094	0.30142					AVRG		0.29968		14.45914
189 Caprolactam	++++	0.08664	0.08597	0.08609	0.08346	0.08669					
	0.08433	0.08505					AVRG		0.08546		1.43469
32 Hexachlorobutadiene	+++++	0.19313	0.19688	0.18560	0.16954	0.16880					
	0.15751	0.15100					AVRG		0.17464		10.10600
33 4-Chloro-3-methylphenol	++++	0.24998	0.27357	0.26312	0.24248	0.24087					
	0.22917	0.22053					AVRG		0.24567		7.50395

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.60371	0.58029	0.58493	0.55030	0.50320	0.49211					
	0.46431	0.44878					AVRG		0.52845		11.18089
35 1-Methylnaphthalene	0.62005	0.59925	0.62060	0.57739	0.51995	0.51211					
	0.48503	0.46507					AVRG		0.54993		11.26027
36 Hexachlorocyclopentadiene	+++++	0.17894	0.20477	0.20729	0.20374	0.20216					
	0.19186	0.18926					AVRG		0.19686		5.29042
208 1,1'-Biphenyl	+++++	1.31209	1.30596	1.23060	1.24289	1.22963					
	1.21237	1.18798					AVRG		1.24593		3.73248
205 2,3-Dichloroaniline	+++++	0.47461	0.50656	0.48755	0.46828	0.47080					
	0.46128	0.45392					AVRG		0.47471		3.69792
37 2,4,6-Trichlorophenol	+++++	0.29294	0.31130	0.30235	0.29065	0.29315					
	0.29280	0.29587					AVRG		0.29701		2.47244
38 2,4,5-Trichlorophenol	+++++	0.29960	0.31273	0.31482	0.30241	0.31026					
	0.31338	0.30425					AVRG		0.30821		1.95855
40 2-Chloronaphthalene	0.93946	0.91774	0.96060	0.92155	0.88023	0.89539					
	0.87112	0.87525					AVRG		0.90767		3.58147
42 o-Nitroaniline	+++++	0.32774	0.37555	0.37465	0.36453	0.37522					
	0.36529	0.37316					AVRG		0.36516		4.69499

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
41 m-Nitroaniline	+++++	0.17687	0.15861	0.19986	0.20433	0.20897					
	0.20166	0.20799					AVRG		0.19404		9.79102
43 Dimethylphthalate	+++++	1.11549	1.16724	1.12824	1.07421	1.08202					
	1.07630	1.06654					AVRG		1.10143		3.35917
44 2,6-Dinitrotoluene	+++++	0.26652	0.28215	0.27476	0.26000	0.26510					
	0.25606	0.25595					AVRG		0.26579		3.68067
45 Acenaphthylene	1.49255	1.46360	1.56521	1.49154	1.41952	1.42825					
	1.37588	1.37177					AVRG		1.45104		4.51169
47 Acenaphthene	1.00056	0.97314	1.01854	0.97375	0.93113	0.94480					
	0.92988	0.92626					AVRG		0.96226		3.62182
48 2,4-Dinitrophenol	++++-	++-++	0.10105	0.11320	0.12015	0.12651					
	0.12568	0.13260					AVRG		0.11987		9.42845
49 Dibenzofuran	-++++	1.37255	1.44852	1.38085	1.29975	1.32843					
	1.30187	1.29467					AVRG		1.34666		4.22869
50 2,4-Dinitrotoluene	+++++	0.33254	0.37307	0.35859	0.34767	0.35285					
	0.34563	0.34575					AVRG		0.35087		3.59826
51 Diethylphthalate	+++++	1.20198	1.23851	1.19610	1.13612	1.16001					
	1.13000	1.11005					AVRG		1.16754		3.95546

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
52 4-Nitrophenol	-++-++	0.11759	0.15173	0.16979	0.17137	0.17947					
	0.17562	0.18234					AVRG		0.16399		13.86759
53 Fluorene	1.22408	1.11991	1.16092	1.14811	1.07713	1.09577					
	1.08246	1.08204					AVRG		1.12380		4.56915
54 4-Chlorophenylphenylether	+++++-	0.57442	0.61308	0.58283	0.55778	0.56983					
	0.56258	0.56682					AVRG		0.57534		3.21697
55 2-Methyl-4,6-dinitrophenol	+-++++	0.07604	0.09086	0.09929	0.10120	0.10284					
	0.10400	0.10452					AVRG		0.09697		10.64820
56 p-Nitroaniline	+++++	0.17121	0.13124	0.16579	0.17305	0.16283					
	0.17543	0.19183					AVRG		0.16734		11.01623
133 Diphenylamine	+++++	0.48129	0.48960	0.46390	0.44743	0.44519					
	0.44733	0.44123					AVRG		0.45942		4.19863
58 1,2-Diphenylhydrazine	+++++	0.67320	0.70454	0.69293	0.67013	0.66742					
	0.66912	0.65306					AVRG		0.67577		2.55639
59 Tributylphosphate	+++++	1.28244	1.32267	1.32822	1.19066	1.23471					
	1.30706	1.26273					AVRG		1.27550		3.92980
61 4-Bromophenylphenylether	-++++	0.16611	0.17386	0.17183	0.16529	0.16807					
	0.17112	0.17143					AVRG		0.16967		1.89265

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
63 Hexachlorobenzene	+++++	0.17513	0.18522	0.18298	0.17831	0.18168						
	0.18918	0.18399					AVRG		0.18236		2.52089	
207 Atrazine	+++++	0.04497	0.04063	0.03582	0.03022	0.02375						
	0.01921	0.00751					AVRG		0.02887		45.23977	<-
65 Pentachlorophenol	+++++	0.07606	0.09309	0.09899	0.09962	0.10215						
	0.10549	0.10660					AVRG		0.09743		10.71771	
206 n-Octadecane	+++++	0.67279	0.70089	0.66992	0.64040	0.63128						
	0.61172	0.57734					AVRG		0.64348		6.46852	
68 Phenanthrene	0.90540	0.85677	0.88250	0.84650	0.82028	0.81608						
	0.82849	0.81940					AVRG		0.84693		3.87550	
69 Anthracene	0.89265	0.83824	0.87223	0.84619	0.83403	0.81854						
	0.82910	0.83336					AVRG		0.84554		2.91938	
72 Di-n-butylphthalate	+++++	1.05953	1.12835	1.07997	1.04909	1.02663						
	1.01611	0.99866					AVRG		1.05119		4.15555	
76 Fluoranthene	0.98795	0.91244	0.98295	0.93584	0.92204	0.95423						
	0.94556	0.94430					AVRG		0.94816		2.80821	
77 Benzidine	+++++	0.15541	0.13191	0.14558	0.14806	0.18602						
	0.18997	+++++					AVRG		0.15949		14.66150	

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
79 Pyrene	1.05814	1.12715	1.13110	1.09947	1.02415	0.99412					
	1.04549	0.99718					AVRG		1.05960		5.15773
85 Butylbenzylphthalate	++++	0.47502	0.49795	0.47523	0.43801	0.42995					
	0.43196	0.40331					AVRG		0.45020		7.37418
89 Benzo(a)anthracene	0.94192	0.88516	0.91095	0.93020	0.93737	0.93740					
	0.93774	0.93541					AVRG		0.92702		2.09594
90 3,3'-Dichlorobenzidine	+++++	0.22851	0.27061	0.27882	0.28049	0.30500					
	0.30674	0.29618					AVRG		0.28091		9.57059
92 Chrysene	0.88117	0.84012	0.92653	0.91478	0.86143	0.82303					
	0.89903	0.87206					AVRG		0.87727		4.06968
93 bis(2-Ethylhexyl)phthalate	0.53950	0.64519	0.70350	0.68810	0.64243	0.64191					
	0.64987	0.60899					AVRG		0.63994		7.82231
94 Di-n-octylphthalate	+++++	1.10082	1.20152	1.29792	1.19339	1.20092					
	1.26030	1.22577					AVRG		1.21152		5.09284
95 Benzo(b)fluoranthene	9128	104797	232933	635811	824004	1324673					
	1659087	2174712					LINR	0.08318	1.04555		0.99724
96 Benzo(k)fluoranthene	0.98443	1.03464	1.17272	1.05245	1.05440	1.00312					
	1.01025	1.04981					AVRG		1.04523		5.50968

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	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	9342	90108	231220	572464	775776	1201747					
	1424624	1900990					LINR	0.04728	0.90514		0.99953
99 Indeno(1,2,3-cd)pyrene	4120	82442	235938	573724	795528	1209808					
	1404232	1769105					LINR	0.01800	0.86627		0.99837
100 Dibenzo(a,h)anthracene	3337	54062	178458	442612	644949	979897					
	1140573	1448888					LINR	0.04864	0.71354		0.99842
101 Benzo(ghi)perylene	5611	69442	204237	486052	660896	993425					
	1147215	1420533					LINR	-0.00684	0.69826		0.99663
102 1,4-Dioxane	+++++	0.38596	0.36544	0.34027	0.33565	0.34066					
	0.33258	0.33411					AVRG		0.34781		5.80000
103 Methyl methacrylate	+++++	0.20448	0.20715	0.19233	0.19367	0.19179					
	0.18849	0.18873					AVRG		0.19523		3.84394
104 Ethyl methacrylate	+++++	0.97834	0.94772	0.91075	0.89747	0.91953					
	0.88615	0.88662					AVRG		0.91808		3.72016
105 2-Picoline	+++++	1.36882	1.35125	1.31492	1.28859	1.31988					
	1.26566	1.27156					AVRG		1.31153		2.98057
106 N-Nitrosomethylethylamine	+++++	0.45269	0.45693	0.45506	0.45555	0.48642					
	0.47447	0.47506					AVRG		0.46517		2.84966

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
107 Methyl methanesulfonate	+++++-	0.65978	0.65242	0.63613	0.62725	0.63869					
	0.60769	0.59830					AVRG		0.63147		3.53998
108 N-Nitrosodiethylamine	+++++	0.45237	0.47181	0.46900	0.46410	0.50118					
	0.48351	0.48207					AVRG		0.47486		3.31266
109 Ethyl Methanesulfonate	++++-	0.78305	0.76259	0.74163	0.72538	0.75853					
	0.73017	0.73681					AVRG		0.74831		2.75343
110 Pentachloroethane	+++++	0.41686	0.40471	0.39663	0.37757	0.38459					
	0.37003	0.36716					AVRG		0.38822		4.77681
111 N-Nitrosopyrrolidine	+++++	0.41392	0.46565	0.48213	0.48507	0.53097					
	0.52132	0.52764					AVRG		0.48953		8.56286
113 N-Nitrosomorpholine	+++++	0.87464	0.95854	0.95612	0.95125	1.02666					
	0.98659	1.00626					AVRG		0.96572		5.08000
114 o-Toluidine	+++++	2.10291	1.98140	1.98641	1.91400	1.97626					
	1.92341	1.91393					AVRG		1.97119		3.37435
115 N-Nitrosopiperidine	+++++	0.14057	0.14426	0.13730	0.13672	0.14036					
	0.13598	0.13664					AVRG		0.13883		2.17171
116 a,a-Dimethylphenethylamine	+++++	0.76262	0.94344	1.04747	1.05725	1.16130					
	1.12771	1.13703					AVRG		1.03383		13.57497

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2009 10:25
End Cal Date : 20-JUN-2009 04:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
117 Triethylphosphorothioate	++++-+	0.17431	0.16995	0.17461	0.15334	0.16483						
	0.17584	0.17224					AVRG		0.16930		4.69879	
118 2,6-Dichlorophenol	+++++	0.21015	0.20699	0.20720	0.20976	0.21897						
	0.21409	0.21895					AVRG		0.21230		2.41106	
119 Hexachloropropene	+++++	0.13437	0.15442	0.15037	0.15156	0.15463						
	0.14860	0.15601					AVRG		0.14999		4.91264	
120 p-Phenylenediamine	+++++	0.13075	0.16810	0.19345	0.12569	0.13707						
	0.12620	0.10178					AVRG		0.14043		21.74685	<-
121 N-Nitrosodi-n-butylamine	+++++	0.19231	0.20597	0.18860	0.18371	0.18919						
	0.18385	0.18843					AVRG		0.19030		3.96933	
122 Safrole	+-+++	0.22768	0.22415	0.21084	0.20613	0.20211						
	0.19903	0.19905					AVRG		0.20985		5.60785	
123 1,2,4,5-Tetrachlorobenzene	+++++	0.50254	0.50731	0.47841	0.49138	0.48743						
	0.48835	0.48232					AVRG		0.49111		2.12418	
124 Isosafrole	-++++	0.34793	0.35747	0.33779	0.33823	0.33347						
	0.32697	0.32249					AVRG		0.33776		3.54517	
125 1,4-Naphthoquinone	+++++	0.41902	0.43074	0.35934	0.31896	0.22943						
	0.20916	0.17939					AVRG		0.30658		33.32086	<-

GEL Laboratories LLC

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Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
126 m-Dinitrobenzene	++++-	0.16649	0.18171	0.18067	0.17572	0.18068					
	0.17483	0.17819					AVRG		0.17690		2.98481
127 Pentachlorobenzene	+++++	0.44472	0.45485	0.43193	0.44082	0.44743					
	0.44775	0.44725					AVRG		0.44497		1.59961
128 1-Naphthylamine	+++++	0.89010	0.89479	0.87519	0.88015	0.87220					
	0.86643	0.84705					AVRG		0.87513		1.81168
129 2-Naphthylamine	+++++	0.83542	0.89847	0.81435	0.76980	0.84734					
	0.85932	0.85427					AVRG		0.83985		4.77649
130 2,3,4,6-Tetrachlorophenol	++++-	0.24119	0.27975	0.27049	0.26349	0.27787					
	0.27928	0.28092					AVRG		0.27043		5.30267
131 5-Nitro-o-toluidine	+++++	0.25292	0.27490	0.27873	0.28254	0.28809					
	0.28190	0.28295					AVRG		0.27743		4.15958
132 Thionazin	+++++	0.19505	0.19364	0.19577	0.17396	0.18750					
	0.19052	0.18166					AVRG		0.18830		4.25413
134 Sulfotepp	+++++	0.08702	0.08633	0.09145	0.08602	0.09629					
	0.10000	0.10046					AVRG		0.09251		6.90974
135 Phorate	+++++	0.36474	0.36970	0.37029	0.33678	0.35575					
	0.37507	0.37046					AVRG		0.36326		3.62750

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Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1 / 100 Level 7	10 Level 2 / 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
136 1,3,5-Trinitrobenzene	+++++	0.14223	0.16559	0.17262	0.16567	0.16029					
	0.16066	0.16341					AVRG		0.16150		5.84553
137 Phenacetin	-+++-	0.25919	0.28354	0.27522	0.27502	0.27966					
	0.28060	0.27334					AVRG		0.27523		2.88544
138 Diallate	+++++	0.25773	0.25658	0.24634	0.24671	0.24185					
	0.23996	0.22337					AVRG		0.24465		4.72857
139 Dimethoate	+-+++	0.19704	0.20290	0.21439	0.19335	0.21191					
	0.21633	0.21639					AVRG		0.20747		4.63505
140 4-Aminobiphenyl	++++-	0.44568	0.43297	0.41319	0.41739	0.39791					
	0.37243	0.30856					AVRG		0.39830		11.57600
141 Pentachloronitrobenzene	+++++	0.08371	0.08538	0.08021	0.07752	0.07394					
	0.07021	0.06462					AVRG		0.07651		9.73648
142 Pronamide	+++++	0.27578	0.28241	0.27168	0.26994	0.26199					
	0.25462	0.24201					AVRG		0.26549		5.17422
143 Dinoseb	+-+++	0.12030	0.14456	0.16068	0.15820	0.16690					
	0.16919	0.16617					AVRG		0.15514		11.23565
144 Disulfoton	+++++	0.30312	0.30303	0.30991	0.27625	0.29268					
	0.30592	0.30456					AVRG		0.29935		3.82768

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Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
145 Methyl parathion	+++++	0.19747	0.20048	0.20736	0.18895	0.20335						
	0.20936	0.20720					AVRG		0.20202		3.52894	
146 4-Nitroquinoline-1-oxide	+++++	0.02064	0.02473	0.02173	0.01915	0.01522						
	0.01367	0.01234					AVRG		0.01821		25.12780	<-
147 Methapyrilene	+++++	32711	102965	248355	439608	811059						
	1038154	1205301					LINR	0.24644	0.48572		0.99292	
148 Isodrin	++-++	0.10436	0.10876	0.10365	0.10056	0.10170						
	0.10205	0.09531					AVRG		0.10234		3.99128	
149 Aramite	+++++	0.04378	0.04924	0.04806	0.04694	0.04496						
	0.04403	0.04112					AVRG		0.04545		6.16845	
150 Kepone	+++++	0.08320	0.09207	0.08856	0.08247	0.07946						
	0.08454	0.07851					AVRG		0.08412		5.73745	
151 p-(Dimethylamino)azobenzene	+++++	0.28449	0.29131	0.28460	0.28643	0.28330						
	0.27077	0.26191					AVRG		0.28040		3.66242	
152 Chlorobenzilate	+++++	0.20185	0.22348	0.24448	0.25905	0.28393						
	0.28551	0.27028					AVRG		0.25265		12.42000	
153 3,3'-Dimethylbenzidine	+++++	0.34879	0.36498	0.39422	0.41306	0.42943						
	0.44632	0.43214					AVRG		0.40413		9.02325	

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Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	r2	%RSD or R^2	
	100 Level 7	120 Level 8										
154 Famphur	+++++	0.36151	0.38750	0.40237	0.36474	0.38504						
	0.40311	0.40110					AVRG		0.38648		4.53384	
155 2-Acetylaminofluorene	+++++	0.21190	0.28140	0.29163	0.30925	0.33204						
	0.33318	0.32370					AVRG		0.29758		14.33077	
157 7,12Dimethylbenz(a)anthracene	+++++	0.44809	0.47557	0.48042	0.51270	0.52722						
	0.51428	0.50337					AVRG		0.49452		5.58811	
158 3-Methylcholanthrene	+++++	34538	121383	261560	350926	583770						
	812862	950134					LINR	0.10901	0.46319		0.99889	
26 Phthalic anhydride	+++++	0.11209	0.08415	0.07227	0.07606	0.08283						
	0.05888	0.07871					AVRG		0.08071		20.07071	<-
173 Carbazole	0.77448	0.70318	0.71078	0.67015	0.62603	0.57769						
	0.58756	0.61323					AVRG		0.65789		10.43305	
174 Hexachlorophene	+++++	481570	1111269	1692239	2049941	2557918						
	+++++	+++++					LINR	6.11720	0.08914		0.99602	
179 Dibenzo(a,e)pyrene	+++++	9366	65841	222828	313083	504724						
	651551	+++++					LINR	0.23510	0.43458		0.99684	
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

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Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
184 p-Benzoquinone	+++++	0.23321	0.27521	0.34417	0.29559	0.32183					
	0.36502	0.34771					AVRG		0.31182		14.95563
191 Parathion	+++++	0.06723	0.06899	0.07296	0.06847	0.07388					
	0.08012	0.08062					AVRG		0.07318		7.46828
192 Methoxychlor	+-+++	0.57700	0.65005	0.64584	0.61633	0.62111					
	0.61611	0.60131					AVRG		0.61825		4.05843
210 m-Toluidine	+++++	1.39101	1.49037	1.21269	1.16268	1.36516					
	1.29292	1.37738					AVRG		1.32746		8.47883
211 p-Toluidine	+++++	1.19012	1.10280	1.20730	1.15648	1.18316					
	1.15473	1.07886					AVRG		1.15335		4.07696
212 Cis Diallate	+++++	0.24920	0.26404	0.25152	0.25272	0.24930					
	0.24794	0.23339					AVRG		0.24973		3.60952
213 Trans Diallate	+++++	0.30321	0.30186	0.28981	0.29025	0.28453					
	0.28231	0.26279					AVRG		0.28782		4.72857
214 1,4-Dinitrobenzene	+++++	0.15118	0.16466	0.16871	0.16337	0.16462					
	0.15970	0.16192					AVRG		0.16202		3.41022
215 2-Ethoxyethanol	+++++	0.79663	0.84948	0.86358	0.80922	0.87947					
	0.86284	0.85219					AVRG		0.84477		3.59803

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
216 Methylenebis(2-chloroaniline)	+++++	0.09307	0.09165	0.10482	0.10671	0.11800					
	0.12333	0.12763					AVRG		0.10932		12.99207
229 2,2'-Dichlorobenzil	+++++	0.60595	0.62508	0.59634	0.57542	0.57897					
	0.56734	0.54800					AVRG		0.58530		4.40199
230 4-Chlorothioanisole	+-+++-	0.24396	0.25213	0.25424	0.25879	0.27375					
	0.28517	0.25673					AVRG		0.26068		5.38888
231 4-Chlorothiophenol	+-+++-	13384	45494	113478	145753	321264					
	406861	+++++					LINR	0.25144	0.22973		0.99222
232 bis(p-Chlorophenyl)sulfone	+++++	0.36628	0.36171	0.34971	0.33521	0.33547					
	0.33408	0.32320					AVRG		0.34367		4.63632
233 bis(p-Chlorophenyl)disulfide	+++++	0.14997	0.13243	0.13177	0.12500	0.12277					
	0.11813	0.11062					AVRG		0.12724		9.88005
234 Diphenyl disulfide	-+++-	0.23977	0.22329	0.21928	0.21333	0.21900					
	0.22032	0.20255					AVRG		0.21965		5.09486
235 Diphenyl sulfide	+++++	0.80669	0.83850	0.82228	0.81867	0.89493					
	0.90351	0.82573					AVRG		0.84433		4.58799
236 Phenyl sulfone	+++++	0.39374	0.39091	0.38045	0.36966	0.38376					
	0.39426	0.37147					AVRG		0.38347		2.65415

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
237 Hydroxymethyl phthalimide	+++++	0.20097	0.20654	0.22212	0.22843	0.21226						
	0.20814	0.19992					AVRG		0.21120		5.04176	
238 Phthalic acid	+++++	15612	31950	95649	120918	255230						
	321476	362929					LINR	0.19218	0.17041		0.99076	
239 Thiophenol	+++++	28073	75689	179152	229481	483900						
	588159	668617					LINR	0.15652	1.24866		0.99164	
240 bis(Chloromethyl)ether	+++++	0.81589	0.90398	0.81636	0.87542	0.89758						
	0.94279	0.78702					AVRG		0.86272		6.61854	
241 Octachlorostyrene	+++++	0.08570	0.08815	0.09015	0.09163	0.09732						
	0.09571	0.09306					AVRG		0.09167		4.46596	
M 225 Trichlorophenols	+++++	0.29627	0.31201	0.30858	0.29653	0.30170						
	0.30309	0.30006					AVRG		0.30261		1.94991	
M 226 Tetrachlorophenols	+++++	0.24119	0.27975	0.27049	0.26349	0.27787						
	0.27928	0.28092					AVRG		0.27043		5.30267	
M 227 Benzo(b,k)fluoranthene	0.73483	0.91582	0.99695	1.00773	0.98116	0.98180						
	1.02043	1.04013					AVRG		0.95986		10.21470	
M 228 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
$ 3 2-Fluorophenol	+++++	1.03738	1.10328	1.08556	1.01262	1.08631						
	1.06974	1.02785					AVRG		1.06039		3.24467	
$ 5 Phenol-d5	+++++	1.31808	1.38688	1.34836	1.26140	1.33197						
	1.31657	1.26556					AVRG		1.31840		3.36603	
$ 187 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 20 Nitrobenzene-d5	+++++	0.38842	0.39849	0.35248	0.32356	0.31856						
	0.30617	0.29583					AVRG		0.34050		11.83615	
$ 39 2-Fluorobiphenyl	+++++	1.10794	1.16579	1.11428	1.06399	1.07752						
	1.05856	1.03964					AVRG		1.08967		3.93158	
$ 60 2,4,6-Tribromophenol	+++++	0.12257	0.13896	0.14092	0.13922	0.14610						
	0.14652	0.15067					AVRG		0.14071		6.46486	
$ 81 p-Terphenyl-d14	+++++	0.67223	0.67968	0.68597	0.65300	0.65158						
	0.68407	0.67210					AVRG		0.67123		2.08348	

GEL Laboratories LLC

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Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 19-JUN-2009 14:24
Lab File ID: s1f1911-AQA.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$	3 2-Fluorophenol	1.06039	1.16161	1.16161	0.000	9.54482	60.00000	Averaged	
$	5 Phenol-d5	1.31840	1.39564	1.39564	0.000	5.85855	60.00000	Averaged	
$	20 Nitrobenzene-d5	0.34050	0.35134	0.35134	0.000	3.18397	60.00000	Averaged	
$	39 2-Fluorobiphenyl	1.08967	1.14407	1.14407	0.000	4.99220	60.00000	Averaged	
$	60 2,4,6-Tribromophenol	0.14071	0.14252	0.14252	0.000	1.28989	60.00000	Averaged	
$	81 p-Terphenyl-d14	0.67123	0.72139	0.72139	0.000	7.47158	60.00000	Averaged	
	1 N-Methyl-N-nitrosomethylami	0.50553	0.60596	0.60596	0.000	19.86694	60.00000	Averaged	
	2 Pyridine	0.87998	0.84075	0.84075	0.000	-4.45858	60.00000	Averaged	
	4 Aniline	0.70937	0.75413	0.75413	0.000	6.31053	60.00000	Averaged	
	6 Phenol	1.37467	1.47050	1.47050	0.001	6.97076	20.00000	Averaged	ccc
	7 bis(2-Chloroethyl) ether	1.27047	1.27610	1.27610	0.000	0.44366	60.00000	Averaged	
	8 2-Chlorophenol	1.10040	1.20486	1.20486	0.000	9.49261	60.00000	Averaged	
	203 n-Decane	2.41316	2.61568	2.61568	0.000	8.39223	60.00000	Averaged	
	9 1,3-Dichlorobenzene	1.32610	1.45445	1.45445	0.000	9.67907	60.00000	Averaged	
	11 1,4-Dichlorobenzene	1.34231	1.43863	1.43863	0.001	7.17532	20.00000	Averaged	ccc
	13 1,2-Dichlorobenzene	1.23201	1.29877	1.29877	0.000	5.41894	60.00000	Averaged	
	14 bis(2-Chloroisopropyl)ether	3.26693	3.55426	3.55426	0.000	8.79510	60.00000	Averaged	
	12 Benzyl alcohol	0.77543	0.83423	0.83423	0.000	7.58282	60.00000	Averaged	
	15 o-Cresol	0.94503	0.99543	0.99543	0.000	5.33274	60.00000	Averaged	
	18 m,p-Cresols	1.24863	1.33847	1.33847	0.000	7.19476	60.00000	Averaged	
	17 N-Nitrosodipropylamine	0.77532	0.82373	0.82373	0.050	6.24299	60.00000	Averaged	spcc
	19 Hexachloroethane	0.55024	0.59169	0.59169	0.000	7.53395	60.00000	Averaged	
	21 Nitrobenzene	0.33016	0.38861	0.38861	0.000	17.70492	60.00000	Averaged	
	22 Isophorone	0.60818	0.68588	0.68588	0.000	12.77597	60.00000	Averaged	
	23 2-Nitrophenol	0.13330	0.14439	0.14439	0.001	8.31394	20.00000	Averaged	ccc
	24 2,4-Dimethylphenol	0.23871	0.25387	0.25387	0.000	6.35029	60.00000	Averaged	
	25 bis(2-Chloroethoxy)methane	0.31748	0.33365	0.33365	0.000	5.09263	60.00000	Averaged	
	26 2,4-Dichlorophenol	0.21152	0.22211	0.22211	0.001	5.00208	20.00000	Averaged	ccc
	27 Benzoic acid	0.17862	0.21712	0.21712	0.000	21.55726	60.00000	Averaged	
	28 1,2,4-Trichlorobenzene	0.26891	0.27244	0.27244	0.000	1.31411	60.00000	Averaged	
	30 Naphthalene	0.79696	0.82939	0.82939	0.000	4.07012	60.00000	Averaged	
	204 alpha-Terpineol	0.35557	0.35897	0.35897	0.000	0.95850	60.00000	Averaged	
	31 4-Chloroaniline	0.29968	0.29895	0.29895	0.000	-0.24435	60.00000	Averaged	
	32 Hexachlorobutadiene	0.17464	0.17591	0.17591	0.001	0.72828	20.00000	Averaged	ccc
	33 4-Chloro-3-methylphenol	0.24567	0.26117	0.26117	0.001	6.30610	20.00000	Averaged	ccc
	34 2-Methylnaphthalene	0.52845	0.59292	0.59292	0.000	12.19822	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 19-JUN-2009 14:24
Lab File ID: s1f1911-AQA.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35	1-Methylnaphthalene	0.54993	0.56417	0.56417	0.000	2.58922	60.00000	Averaged	
36	Hexachlorocyclopentadiene	0.19686	0.18605	0.18605	0.050	-5.49010	60.00000	Averaged	spcc
205	2,3-Dichloroaniline	0.47471	0.48134	0.48134	0.000	1.39536	60.00000	Averaged	
37	2,4,6-Trichlorophenol	0.29701	0.29841	0.29841	0.001	0.47402	20.00000	Averaged	ccc
38	2,4,5-Trichlorophenol	0.30821	0.31160	0.31160	0.000	1.10127	60.00000	Averaged	
40	2-Chloronaphthalene	0.90767	0.91840	0.91840	0.000	1.18267	60.00000	Averaged	
42	o-Nitroaniline	0.36516	0.37009	0.37009	0.000	1.34973	60.00000	Averaged	
41	m-Nitroaniline	0.19404	0.20337	0.20337	0.000	4.80650	60.00000	Averaged	
43	Dimethylphthalate	1.10143	1.12531	1.12531	0.000	2.16741	60.00000	Averaged	
44	2,6-Dinitrotoluene	0.26579	0.29894	0.29894	0.000	12.47254	60.00000	Averaged	
50	2,4-Dinitrotoluene	0.35087	0.38900	0.38900	0.000	10.86592	60.00000	Averaged	
45	Acenaphthylene	1.45104	1.49249	1.49249	0.000	2.85667	60.00000	Averaged	
47	Acenaphthene	0.96226	0.95041	0.95041	0.001	-1.23145	20.00000	Averaged	ccc
48	2,4-Dinitrophenol	0.11987	0.12003	0.12003	0.050	0.13865	60.00000	Averaged	spcc
49	Dibenzofuran	1.34666	1.37978	1.37978	0.000	2.45944	60.00000	Averaged	
51	Diethylphthalate	1.16754	1.17534	1.17534	0.000	0.66858	60.00000	Averaged	
52	4-Nitrophenol	0.16399	0.17179	0.17179	0.050	4.75580	60.00000	Averaged	spcc
53	Fluorene	1.12380	1.11861	1.11861	0.000	-0.46194	60.00000	Averaged	
54	4-Chlorophenylphenylether	0.57534	0.58638	0.58638	0.000	1.91945	60.00000	Averaged	
55	2-Methyl-4,6-dinitrophenol	0.09697	0.12707	0.12707	0.000	31.05108	60.00000	Averaged	
56	p-Nitroaniline	0.16734	0.17164	0.17164	0.000	2.57246	60.00000	Averaged	
133	Diphenylamine	0.45942	0.46646	0.46646	0.001	1.53176	20.00000	Averaged	ccc
58	1,2-Diphenylhydrazine	0.67577	0.70508	0.70508	0.000	4.33731	60.00000	Averaged	
61	4-Bromophenylphenylether	0.16967	0.17146	0.17146	0.000	1.05641	60.00000	Averaged	
63	Hexachlorobenzene	0.18236	0.17975	0.17975	0.000	-1.42664	60.00000	Averaged	
65	Pentachlorophenol	0.09743	0.10608	0.10608	0.001	8.87953	20.00000	Averaged	ccc
206	n-Octadecane	0.64348	0.66183	0.66183	0.000	2.85269	60.00000	Averaged	
68	Phenanthrene	0.84693	0.83807	0.83807	0.000	-1.04525	60.00000	Averaged	
69	Anthracene	0.84554	0.85352	0.85352	0.000	0.94384	60.00000	Averaged	
72	Di-n-butylphthalate	1.05119	1.08239	1.08239	0.000	2.96812	60.00000	Averaged	
76	Fluoranthene	0.94816	0.97995	0.97995	0.001	3.35209	20.00000	Averaged	ccc
79	Pyrene	1.05960	1.03723	1.03723	0.000	-2.11090	60.00000	Averaged	
85	Butylbenzylphthalate	0.45020	0.47887	0.47887	0.000	6.36874	60.00000	Averaged	
89	Benzo(a)anthracene	0.92702	0.92865	0.92865	0.000	0.17578	60.00000	Averaged	
92	Chrysene	0.87727	0.88419	0.88419	0.000	0.78929	60.00000	Averaged	
93	bis(2-Ethylhexyl)phthalate	0.63994	0.68143	0.68143	0.000	6.48450	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 19-JUN-2009 14:24
Lab File ID: s1f1911-AQA.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	1.21152	1.23847	1.23847	0.001	2.22461	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	39.15729	40.00000	0.93656	0.000	-2.10678	60.00000	Linear	
	96 Benzo(k)fluoranthene	1.04523	1.06604	1.06604	0.000	1.99111	60.00000	Averaged	
	97 Benzo(a)pyrene	40.04325	40.00000	0.86332	0.001	0.10811	20.00000	Linear	ccc
	99 Indeno(1,2,3-cd)pyrene	39.73904	40.00000	0.84502	0.000	-0.65240	60.00000	Linear	
	100 Dibenzo(a,h)anthracene	39.99753	40.00000	0.67879	0.000	-0.00617	60.00000	Linear	
	101 Benzo(ghi)perylene	41.11100	40.00000	0.72243	0.000	2.77751	60.00000	Linear	
	126 m-Dinitrobenzene	0.17690	0.18181	0.18181	0.000	2.77342	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.27043	0.27485	0.27485	0.000	1.63510	60.00000	Averaged	
	143 Dinoseb	0.15514	0.15560	0.15560	0.000	0.29523	60.00000	Averaged	
	173 Carbazole	0.65789	0.67204	0.67204	0.000	2.15038	60.00000	Averaged	
	184 p-Benzoquinone	0.31182	0.22799	0.22799	0.000	-26.88360	60.00000	Averaged	
	192 Methoxychlor	0.61825	0.65001	0.65001	0.000	5.13624	60.00000	Averaged	
	211 p-Toluidine	1.15335	1.05178	1.05178	0.000	-8.80675	60.00000	Averaged	
	210 m-Toluidine	1.32746	1.32880	1.32880	0.000	0.10116	60.00000	Averaged	
	26 Phthalic anhydride	0.08071	0.07644	0.07644	0.000	-5.29087	60.00000	Averaged	
	179 Dibenzo(a,e)pyrene	27.12811	40.00000	0.19256	0.000	-32.17972	60.00000	Linear	
	214 1,4-Dinitrobenzene	0.16202	0.16829	0.16829	0.000	3.86504	60.00000	Averaged	
	215 2-Ethoxyethanol	0.84477	0.96707	0.96707	0.000	14.47711	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.10932	0.12526	0.12526	0.000	14.58882	60.00000	Averaged	
M	225 Trichlorophenols	0.30261	0.30501	0.30501	0.000	0.79345	60.00000	Averaged	
M	226 Tetrachlorophenols	0.27043	0.27485	0.27485	0.000	1.63510	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.95986	1.00130	1.00130	0.000	4.31763	60.00000	Averaged	

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Data file : /chem/MSD1.i/s061909.b/s1f1911-AQA.d
Lab Smp Id: WBN090602-09.1 Client Smp ID: MEGAICV
Inj Date : 19-JUN-2009 14:24
Operator : nagl Inst ID: MSD1.i
Smp Info : |WBN090602-09.1|40 PPM|1|SVMF|1|MEGAICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m
Meth Date : 26-Jun-2009 09:37 hnm Quant Type: ISTD
Cal Date : 20-JUN-2009 04:39 Cal File: s1f1946.d
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.904	3.904	(1.000)	153330	40.0000	
* 29 Naphthalene-d8	136	4.775	4.775	(1.000)	689834	40.0000	
* 46 Acenaphthene-d10	164	6.016	6.022	(1.000)	395209	40.0000	
* 67 Phenanthrene-d10	188	7.004	7.004	(1.000)	755757	40.0000	
* 91 Chrysene-d12	240	8.675	8.675	(1.000)	730995	40.0000	
* 98 Perylene-d12	264	10.133	10.133	(1.000)	640582	40.0000	
$ 3 2-Fluorophenol	112	3.087	3.087	(0.791)	178109	40.0000	43.8
$ 5 Phenol-d5	99	3.616	3.616	(0.926)	213994	40.0000	42.3
$ 20 Nitrobenzene-d5	82	4.269	4.269	(0.894)	242368	40.0000	41.3
$ 39 2-Fluorobiphenyl	172	5.516	5.516	(0.917)	452148	40.0000	42.0
$ 60 2,4,6-Tribromophenol	329	6.551	6.551	(1.089)	56327	40.0000	40.5
$ 81 p-Terphenyl-d14	244	7.922	7.916	(0.913)	527329	40.0000	43.0
1 N-Methyl-N-nitrosomethylamine	74	2.387	2.387	(0.611)	92912	40.0000	47.9
2 Pyridine	79	2.416	2.416	(0.619)	128912	40.0000	38.2
4 Aniline	66	3.687	3.693	(0.944)	115631	40.0000	42.5
6 Phenol	94	3.628	3.628	(0.929)	225471	40.0000	42.8(Q)
7 bis(2-Chloroethyl) ether	63	3.704	3.710	(0.949)	195665	40.0000	40.2
8 2-Chlorophenol	128	3.769	3.769	(0.965)	184741	40.0000	43.8
203 n-Decane	43	3.757	3.757	(0.962)	401062	40.0000	43.4
9 1,3-Dichlorobenzene	146	3.875	3.875	(0.992)	223011	40.0000	43.9
11 1,4-Dichlorobenzene	146	3.916	3.916	(1.003)	220585	40.0000	42.9
13 1,2-Dichlorobenzene	146	4.022	4.022	(1.030)	199141	40.0000	42.2
14 bis(2-Chloroisopropyl)ether	45	4.051	4.051	(1.038)	544975	40.0000	43.5
12 Benzyl alcohol	108	3.969	3.975	(1.017)	127913	40.0000	43.0
15 o-Cresol	107	4.022	4.022	(1.030)	152629	40.0000	42.1
18 m,p-Cresols	107	4.122	4.128	(1.056)	205227	40.0000	42.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.145	4.146	(1.062)	126302	40.0000	42.5
19 Hexachloroethane	117	4.251	4.251	(1.089)	90724	40.0000	43.0
21 Nitrobenzene	77	4.287	4.287	(0.898)	268079	40.0000	47.1
22 Isophorone	82	4.434	4.440	(0.929)	473142	40.0000	45.1
23 2-Nitrophenol	139	4.498	4.498	(0.942)	99602	40.0000	43.3
24 2,4-Dimethylphenol	122	4.487	4.487	(0.940)	175125	40.0000	42.5
25 bis(2-Chloroethoxy)methane	93	4.557	4.557	(0.954)	230160	40.0000	42.0
26 2,4-Dichlorophenol	162	4.657	4.657	(0.975)	153216	40.0000	42.0
27 Benzoic acid	105	4.545	4.551	(0.952)	149778	40.0000	48.6
28 1,2,4-Trichlorobenzene	180	4.722	4.722	(0.989)	187938	40.0000	40.5
30 Naphthalene	128	4.787	4.793	(1.002)	572143	40.0000	41.6
204 alpha-Terpineol	59	4.763	4.763	(0.998)	247633	40.0000	40.4
31 4-Chloroaniline	127	4.804	4.804	(1.006)	206224	40.0000	39.9
32 Hexachlorobutadiene	225	4.851	4.857	(1.016)	121347	40.0000	40.3
33 4-Chloro-3-methylphenol	107	5.110	5.116	(1.070)	180161	40.0000	42.5
34 2-Methylnaphthalene	142	5.269	5.269	(1.103)	409014	40.0000	44.9
35 1-Methylnaphthalene	142	5.339	5.345	(1.118)	389184	40.0000	41.0
36 Hexachlorocyclopentadiene	237	5.369	5.369	(0.892)	73529	40.0000	37.8
205 2,3-Dichloroaniline	161	5.463	5.463	(0.908)	190229	40.0000	40.6
37 2,4,6-Trichlorophenol	196	5.457	5.457	(0.907)	117936	40.0000	40.2
38 2,4,5-Trichlorophenol	196	5.481	5.481	(0.911)	123147	40.0000	40.4
40 2-Chloronaphthalene	162	5.622	5.622	(0.934)	362961	40.0000	40.5
42 o-Nitroaniline	65	5.681	5.681	(0.944)	146263	40.0000	40.5
41 m-Nitroaniline	138	5.969	5.969	(0.992)	80373	40.0000	41.9
43 Dimethylphthalate	163	5.786	5.792	(0.962)	444731	40.0000	40.9
44 2,6-Dinitrotoluene	165	5.839	5.845	(0.971)	118145	40.0000	45.0
50 2,4-Dinitrotoluene	165	6.128	6.128	(1.019)	153735	40.0000	44.3
45 Acenaphthylene	152	5.922	5.928	(0.984)	589846	40.0000	41.1
47 Acenaphthene	154	6.039	6.045	(1.004)	375610	40.0000	39.5
48 2,4-Dinitrophenol	184	6.034	6.040	(1.003)	47438	40.0000	40.0(Q)
49 Dibenzofuran	168	6.157	6.157	(1.023)	545303	40.0000	41.0
51 Diethylphthalate	149	6.269	6.269	(1.042)	464506	40.0000	40.3
52 4-Nitrophenol	139	6.057	6.057	(1.007)	67891	40.0000	41.9
53 Fluorene	166	6.392	6.392	(1.063)	442085	40.0000	39.8
54 4-Chlorophenylphenylether	204	6.369	6.375	(1.059)	231742	40.0000	40.8
55 2-Methyl-4,6-dinitrophenol	198	6.404	6.404	(0.914)	96037	40.0000	52.4
56 p-Nitroaniline	138	6.386	6.392	(1.062)	67835	40.0000	41.0
133 Diphenylamine	169	6.445	6.451	(0.920)	352530	40.0000	40.6
58 1,2-Diphenylhydrazine	77	6.481	6.481	(0.925)	532870	40.0000	41.7
61 4-Bromophenylphenylether	248	6.698	6.698	(0.956)	129585	40.0000	40.4
63 Hexachlorobenzene	284	6.751	6.751	(0.964)	135850	40.0000	39.4
65 Pentachlorophenol	266	6.869	6.869	(0.981)	80170	40.0000	43.6
206 n-Octadecane	57	6.851	6.857	(0.978)	500185	40.0000	41.1
68 Phenanthrene	178	7.016	7.016	(1.002)	633381	40.0000	39.6
69 Anthracene	178	7.045	7.051	(1.006)	645055	40.0000	40.4
72 Di-n-butylphthalate	149	7.292	7.292	(1.041)	818025	40.0000	41.2
76 Fluoranthene	202	7.728	7.728	(1.103)	740602	40.0000	41.3

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	7.869	7.869	(0.907)	758212	40.0000	39.2
85 Butylbenzylphthalate	149	8.186	8.186	(0.944)	350055	40.0000	42.5
89 Benzo(a)anthracene	228	8.663	8.663	(0.999)	678838	40.0000	40.1
92 Chrysene	228	8.692	8.692	(1.002)	646341	40.0000	40.3
93 bis(2-Ethylhexyl)phthalate	149	8.545	8.545	(0.985)	498124	40.0000	42.6
94 Di-n-octylphthalate	149	9.080	9.081	(0.896)	793343	40.0000	40.9
95 Benzo(b)fluoranthene	252	9.663	9.663	(0.954)	599943	40.0000	39.2
96 Benzo(k)fluoranthene	252	9.698	9.698	(0.957)	682885	40.0000	40.8
97 Benzo(a)pyrene	252	10.063	10.063	(0.993)	553028	40.0000	40.0
99 Indeno(1,2,3-cd)pyrene	276	11.768	11.774	(1.161)	541303	40.0000	39.7
100 Dibenzo(a,h)anthracene	278	11.774	11.780	(1.162)	434819	40.0000	40.0
101 Benzo(ghi)perylene	276	12.274	12.280	(1.211)	462777	40.0000	41.1
126 m-Dinitrobenzene	168	5.828	5.828	(0.969)	71851	40.0000	41.1
130 2,3,4,6-Tetrachlorophenol	232	6.228	6.234	(1.035)	108623	40.0000	40.6
143 Dinoseb	211	6.957	6.957	(0.993)	117597	40.0000	40.1
173 Carbazole	167	7.133	7.134	(1.018)	507896	40.0000	40.9
184 p-Benzoquinone	54	3.393	3.393	(0.869)	34958	40.0000	29.2
192 Methoxychlor	227	8.533	8.533	(0.984)	475151	40.0000	42.0(H)
211 p-Toluidine	106	4.181	4.187	(1.071)	161269	40.0000	36.5
210 m-Toluidine	106	4.204	4.210	(1.077)	203745	40.0000	40.0
26 Phthalic anhydride	104	5.298	5.298	(1.110)	52732	40.0000	37.9(M)
179 Dibenzo(a,e)pyrene	302	16.162	16.186	(1.595)	123353	40.0000	27.1
214 1,4-Dinitrobenzene	168	5.769	5.769	(0.959)	66508	40.0000	41.5
215 2-Ethoxyethanol	59	2.222	2.222	(0.569)	148281	40.0000	45.8
216 Methylenebis(2-chloroaniline)	231	8.592	8.592	(0.990)	91568	40.0000	45.8(Q)
M 225 Trichlorophenols	196				241083	80.0000	80.6
M 226 Tetrachlorophenols	232				108623	40.0000	40.6
M 227 Benzo(b,k)fluoranthene	252				1282828	80.0000	83.4

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD1.i/s061909.b/s1f1911-AQA.d
Date : 19-JUN-2009 14:24
Client ID: MEGAICV
Sample Info: IWBN090602-09,1|40 PPM|1|SVHF|1|MEGAICV
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nagl
Column diameter: 0.20

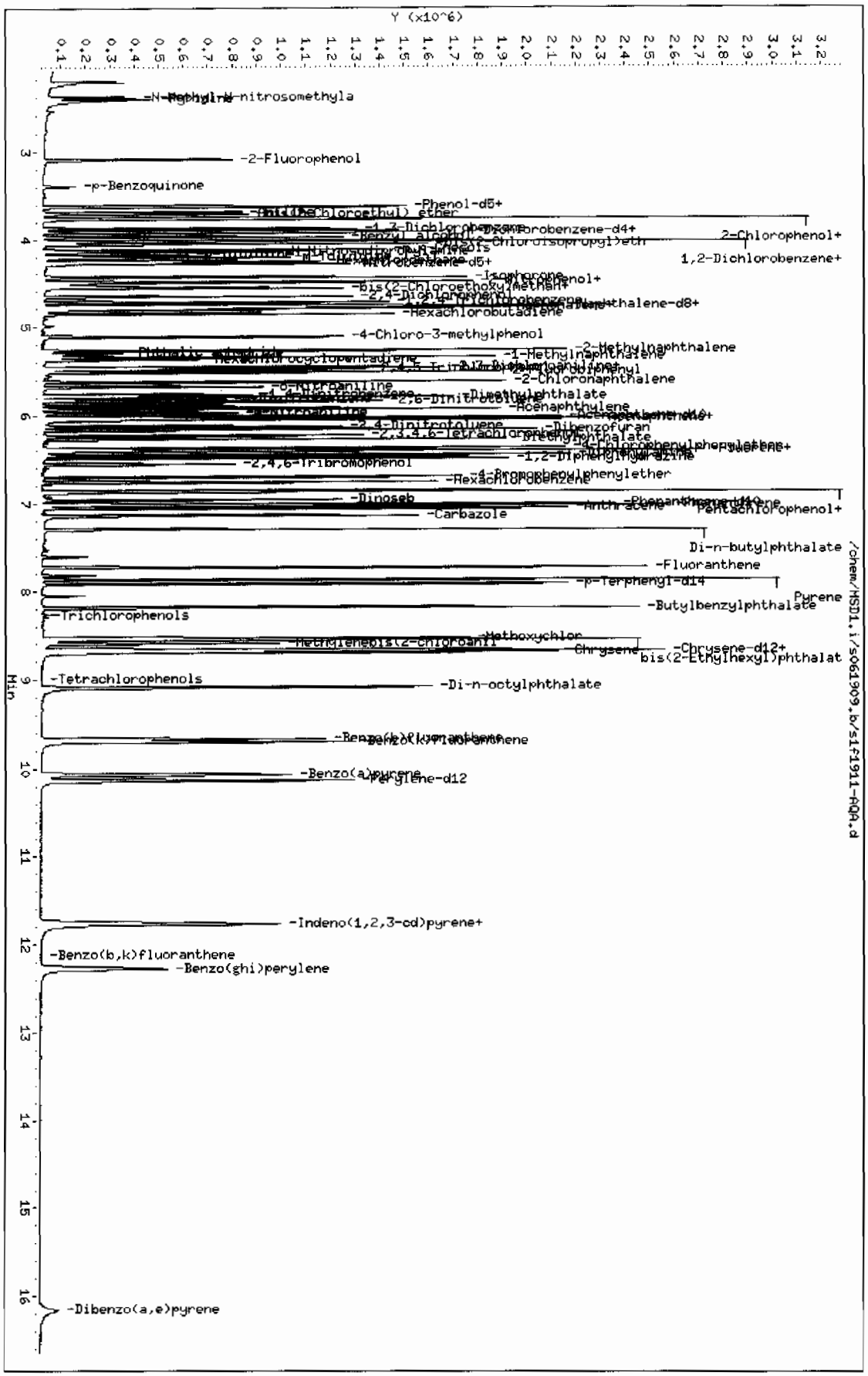

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 19-JUN-2009 18:13
Lab File ID: s1f1920-AQA.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090528-08.1 Quant Type: ISTD
Method: /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	1.08648	0.98923	0.98923	0.000	-8.95109	60.00000	Averaged
16 Acetophenone	1.48332	1.55702	1.55702	0.000	4.96811	60.00000	Averaged
189 Caprolactam	0.08546	0.09444	0.09444	0.000	10.50612	60.00000	Averaged
208 1,1'-Biphenyl	1.24593	1.31427	1.31427	0.000	5.48448	60.00000	Averaged
207 Atrazine	0.02887	0.03204	0.03204	0.000	10.98690	60.00000	Averaged
77 Benzidine	0.15949	0.15125	0.15125	0.000	-5.16420	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28091	0.30301	0.30301	0.000	7.87025	60.00000	Averaged
102 1,4-Dioxane	0.34781	0.45327	0.45327	0.000	30.32148	60.00000	Averaged
103 Methyl methacrylate	0.19523	0.26061	0.26061	0.000	33.48656	60.00000	Averaged
104 Ethyl methacrylate	0.91808	1.17837	1.17837	0.000	28.35166	60.00000	Averaged
105 2-Picoline	1.31153	1.38784	1.38784	0.000	5.81889	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.46517	0.49851	0.49851	0.000	7.16704	60.00000	Averaged
107 Methyl methanesulfonate	0.63147	0.72132	0.72132	0.000	14.22913	60.00000	Averaged
108 N-Nitrosodiethylamine	0.47486	0.51586	0.51586	0.000	8.63398	60.00000	Averaged
109 Ethyl Methanesulfonate	0.74831	0.95506	0.95506	0.000	27.62942	60.00000	Averaged
110 Pentachloroethane	0.38822	0.55796	0.55796	0.000	43.72254	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.48953	-0.52718	0.52718	0.000	7.69061	60.00000	Averaged
113 N-Nitrosomorpholine	0.96572	1.02456	1.02456	0.000	6.09256	60.00000	Averaged
114 o-Toluidine	1.97119	2.08945	2.08945	0.000	5.99968	60.00000	Averaged
115 N-Nitrosopiperidine	0.13883	0.14467	0.14467	0.000	4.20142	60.00000	Averaged
116 a,a-Dimethylphenethylamine	1.03383	1.09797	1.09797	0.000	6.20367	60.00000	Averaged
118 2,6-Dichlorophenol	0.21230	0.23526	0.23526	0.000	10.81243	60.00000	Averaged
119 Hexachloropropene	0.14999	0.23680	0.23680	0.000	57.87235	60.00000	Averaged
120 p-Phenylenediamine	0.14043	0.15933	0.15933	0.000	13.45879	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.19030	0.20004	0.20004	0.000	5.12294	60.00000	Averaged
122 Safrole	0.20985	0.25643	0.25643	0.000	22.19512	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.49111	0.54799	0.54799	0.000	11.58274	60.00000	Averaged
124 Isosafrole	0.33776	0.47072	0.47072	0.000	39.36391	60.00000	Averaged
125 1,4-Naphthoquinone	0.30658	0.35779	0.35779	0.000	16.70490	60.00000	Averaged
127 Pentachlorobenzene	0.44497	0.46989	0.46989	0.000	5.60059	60.00000	Averaged
128 1-Naphthylamine	0.87513	0.94862	0.94862	0.000	8.39728	60.00000	Averaged
129 2-Naphthylamine	0.83985	0.82524	0.82524	0.000	-1.74014	60.00000	Averaged
131 5-Nitro-o-toluidine	0.27743	0.30479	0.30479	0.000	9.86190	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.16150	0.21062	0.21062	0.000	30.41818	60.00000	Averaged
137 Phenacetin	0.27523	0.30054	0.30054	0.000	9.19681	60.00000	Averaged
138 Diallate	0.24465	0.25246	0.25246	0.000	3.19399	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 19-JUN-2009 18:13
Lab File ID: s1f1920-AQA.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090528-08.1 Quant Type: ISTD
Method: /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.24973	0.28023	0.28023	0.000	12.21162	60.00000	Averaged
213 Trans Diallate	0.28782	0.29702	0.29702	0.000	3.19399	60.00000	Averaged
140 4-Aminobiphenyl	0.39830	0.45050	0.45050	0.000	13.10385	60.00000	Averaged
141 Pentachloronitrobenzene	0.07651	0.08512	0.08512	0.000	11.25609	60.00000	Averaged
142 Pronamide	0.26549	0.28324	0.28324	0.000	6.68397	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01821	0.02192	0.02192	0.000	20.35913	60.00000	Averaged
147 Methapyrilene	42.43377	40.00000	0.39558	0.000	6.08443	60.00000	Linear
148 Isodrin	0.10234	0.10090	0.10090	0.000	-1.40974	60.00000	Averaged
149 Aramite	0.04545	0.04294	0.04294	0.000	-5.50587	60.00000	Averaged
150 Kepone	0.08412	0.09244	0.09244	0.000	9.89227	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28040	0.29202	0.29202	0.000	4.14510	60.00000	Averaged
152 Chlorobenzilate	0.25265	0.25597	0.25597	0.000	1.31074	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.40413	0.41326	0.41326	0.000	2.25804	60.00000	Averaged
155 2-Acetylaminofluorene	0.29758	0.31743	0.31743	0.000	6.66947	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.49452	0.46389	0.46389	0.000	-6.19413	60.00000	Averaged
158 3-Methylcholanthrene	40.51908	40.00000	0.41871	0.000	1.29770	60.00000	Linear

GEL Laboratories LLC

Data file : /chem/MSD1.i/s061909.b/s1f1920-AQA.d
Lab Smp Id: WBN090528-08.1 Client Smp ID: ap12ICV
Inj Date : 19-JUN-2009 18:13
Operator : nag1 Inst ID: MSD1.i
Smp Info : |WBN090528-08.1|40 PPM|1|SVMF|1|AP12ICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m
Meth Date : 24-Jun-2009 08:26 hnm Quant Type: ISTD
Cal Date : 20-JUN-2009 03:05 Cal File: s1f1942.d
Als bottle: 20 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.904	3.904	(1.000)	154563	40.0000	
* 29 Naphthalene-d8	136	4.775	4.775	(1.000)	626388	40.0000	
* 46 Acenaphthene-d10	164	6.016	6.016	(1.000)	389616	40.0000	
* 67 Phenanthrene-d10	188	7.004	7.004	(1.000)	775254	40.0000	
* 91 Chrysene-d12	240	8.669	8.669	(1.000)	772722	40.0000	
* 98 Perylene-d12	264	10.127	10.127	(1.000)	670331	40.0000	
209 Benzaldehyde	77	3.634	3.634	(0.931)	152898	40.0000	36.4
16 Acetophenone	105	4.157	4.157	(1.065)	240657	40.0000	42.0
189 Caprolactam	113	5.045	5.045	(1.057)	59157	40.0000	44.2
208 1,1'-Biphenyl	154	5.592	5.592	(0.930)	512059	40.0000	42.2
207 Atrazine	173	6.769	6.769	(0.966)	24841	40.0000	44.4
77 Benzidine	184	7.781	7.781	(0.898)	116878	40.0000	37.9
90 3,3'-Dichlorobenzidine	252	8.598	8.598	(0.992)	234146	40.0000	43.1
102 1,4-Dioxane	88	2.222	2.222	(0.569)	70059	40.0000	52.1
103 Methyl methacrylate	100	2.216	2.216	(0.568)	40281	40.0000	53.4
104 Ethyl methacrylate	69	2.599	2.599	(0.666)	182133	40.0000	51.3
105 2-Picoline	93	2.799	2.799	(0.717)	214509	40.0000	42.3
106 N-Nitrosomethylethylamine	88	2.846	2.846	(0.729)	77051	40.0000	42.9
107 Methyl methanesulfonate	80	2.999	2.999	(0.768)	111489	40.0000	45.7
108 N-Nitrosodiethylamine	102	3.234	3.234	(0.828)	79733	40.0000	43.4
109 Ethyl Methanesulfonate	79	3.393	3.393	(0.869)	147617	40.0000	51.0
110 Pentachloroethane	167	3.734	3.734	(0.956)	86240	40.0000	57.5
111 N-Nitrosopyrrolidine	100	4.146	4.146	(1.062)	81482	40.0000	43.1(Q)
113 N-Nitrosomorpholine	56	4.169	4.169	(1.068)	158359	40.0000	42.4
114 o-Toluidine	106	4.181	4.181	(1.071)	322952	40.0000	42.4
115 N-Nitrosopiperidine	114	4.387	4.387	(0.919)	90617	40.0000	41.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.675	4.675	(0.979)	687753	40.0000	42.5
118 2,6-Dichlorophenol	162	4.816	4.816	(1.009)	147361	40.0000	44.3
119 Hexachloropropene	213	4.845	4.845	(1.015)	148328	40.0000	63.1
120 p-Phenylenediamine	108	5.051	5.051	(1.058)	99805	40.0000	45.4
121 N-Nitrosodi-n-butylamine	84	5.016	5.016	(1.050)	125305	40.0000	42.0(T)
122 Safrole	162	5.187	5.187	(1.086)	160626	40.0000	48.9
123 1,2,4,5-Tetrachlorobenzene	216	5.387	5.387	(0.895)	213506	40.0000	44.6
124 Isosafrole	162	5.551	5.551	(0.923)	183400	40.0000	55.7
125 1,4-Naphthoquinone	158	5.740	5.740	(0.954)	139401	40.0000	46.7
127 Pentachlorobenzene	250	6.128	6.128	(1.019)	183075	40.0000	42.2
128 1-Naphthylamine	143	6.210	6.210	(1.032)	369596	40.0000	43.4
129 2-Naphthylamine	143	6.263	6.263	(1.041)	321526	40.0000	39.3
131 5-Nitro-o-toluidine	152	6.381	6.381	(1.061)	118753	40.0000	43.9
136 1,3,5-Trinitrobenzene	75	6.592	6.592	(0.941)	163285	40.0000	52.2
137 Phenacetin	108	6.634	6.634	(0.947)	232993	40.0000	43.7(Q)
138 Diallate	86	6.622	6.622	(0.945)	195724	40.0000	41.3
212 Cis Diallate	86	6.681	6.681	(0.954)	32587	6.00000	6.7
213 Trans Diallate	86	6.622	6.622	(0.945)	195724	34.0000	35.1
140 4-Aminobiphenyl	169	6.863	6.863	(0.980)	349250	40.0000	45.2
141 Pentachloronitrobenzene	237	6.875	6.875	(0.982)	65993	40.0000	44.5(Q)
142 Pronamide	173	6.869	6.869	(0.981)	219580	40.0000	42.7
146 4-Nitroquinoline-1-oxide	101	7.469	7.469	(1.066)	16994	40.0000	48.1
147 Methapyrilene	58	7.486	7.486	(1.069)	306673	40.0000	42.4
148 Isodrin	193	7.639	7.639	(1.091)	78224	40.0000	39.4
149 Aramite	185	7.869	7.869	(1.123)	33293	40.0000	37.8
150 Kepone	272	8.292	8.292	(1.184)	71662	40.0000	44.0
151 p-(Dimethylamino)azobenzene	120	7.992	7.992	(0.922)	225654	40.0000	41.6
152 Chlorobenzilate	251	8.010	8.010	(0.924)	197791	40.0000	40.5
153 3,3'-Dimethylbenzidine	212	8.204	8.204	(0.946)	319335	40.0000	40.9
155 2-Acetylaminofluorene	181	8.386	8.386	(0.967)	245286	40.0000	42.7
157 7,12Dimethylbenz(a)anthracene	256	9.633	9.633	(0.951)	310959	40.0000	37.5
158 3-Methylcholanthrene	268	10.486	10.486	(1.035)	280674	40.0000	40.5(Q)

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD1.i/s061909.b/s1f1920-AQA.d
Date : 19-JUN-2009 18:13
Client ID: ap121CV
Sample Info: IWBN090528-08,1140 PPM11ISVMF11AP121CV
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nag1
Column diameter: 0.20

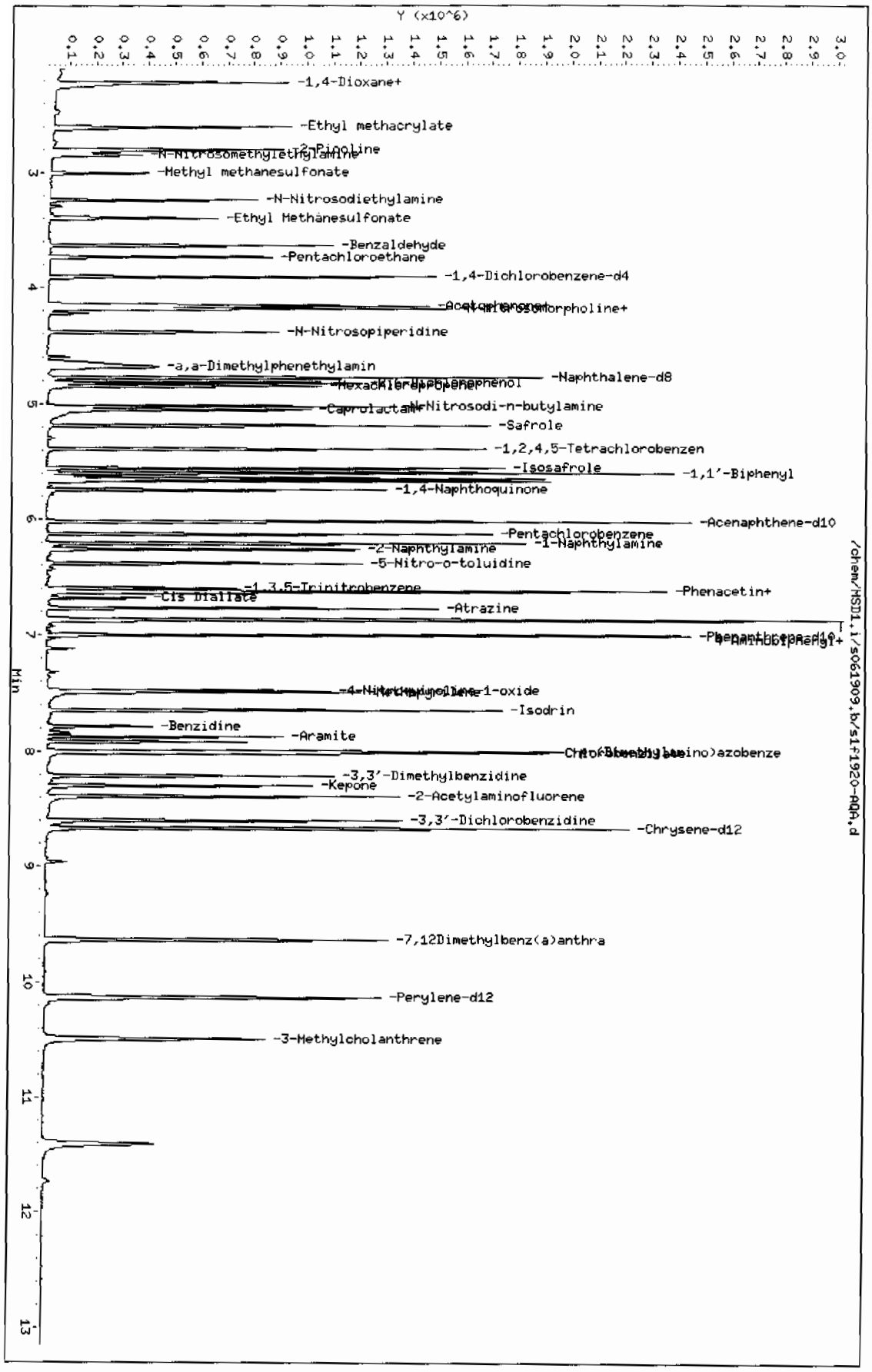

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 28-JUN-2009 14:55
Lab File ID: s1f2802.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090510-01.3 Quant Type: ISTD
Method: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$	3 2-Fluorophenol	1.06039	1.09477	1.09477	0.000	3.24194	60.00000	Averaged	
$	5 Phenol-d5	1.31840	1.23926	1.23926	0.000	-6.00326	60.00000	Averaged	
$	20 Nitrobenzene-d5	0.34050	0.30480	0.30480	0.000	-10.48379	60.00000	Averaged	
$	39 2-Fluorobiphenyl	1.08967	1.20142	1.20142	0.000	10.25493	60.00000	Averaged	
$	60 2,4,6-Tribromophenol	0.14071	0.14368	0.14368	0.000	2.10785	60.00000	Averaged	
$	81 p-Terphenyl-d14	0.67123	0.68973	0.68973	0.000	2.75617	60.00000	Averaged	
	1 N-Methyl-N-nitrosomethylami	0.50553	0.62248	0.62248	0.000	23.13456	60.00000	Averaged	
	2 Pyridine	0.87998	0.96092	0.96092	0.000	9.19701	60.00000	Averaged	
	4 Aniline	0.70937	0.61601	0.61601	0.000	-13.15997	60.00000	Averaged	
	6 Phenol	1.37467	1.29495	1.29495	0.001	-5.79947	20.00000	Averaged	ccc
	7 bis(2-Chloroethyl) ether	1.27047	1.15727	1.15727	0.000	-8.91009	60.00000	Averaged	
	8 2-Chlorophenol	1.10040	1.06765	1.06765	0.000	-2.97628	60.00000	Averaged	
	203 n-Decane	2.41316	2.10707	2.10707	0.000	-12.68436	60.00000	Averaged	
	9 1,3-Dichlorobenzene	1.32610	1.20175	1.20175	0.000	-9.37709	60.00000	Averaged	
	11 1,4-Dichlorobenzene	1.34231	1.17780	1.17780	0.001	-12.25595	20.00000	Averaged	ccc
	13 1,2-Dichlorobenzene	1.23201	1.06200	1.06200	0.000	-13.79940	60.00000	Averaged	
	14 bis(2-Chloroisopropyl)ether	3.26693	3.07900	3.07900	0.000	-5.75259	60.00000	Averaged	
	12 Benzyl alcohol	0.77543	0.73546	0.73546	0.000	-5.15465	60.00000	Averaged	
	15 o-Cresol	0.94503	0.82773	0.82773	0.000	-12.41238	60.00000	Averaged	
	18 m,p-Cresols	1.24863	1.14610	1.14610	0.000	-8.21104	60.00000	Averaged	
	17 N-Nitrosodipropylamine	0.77532	0.73625	0.73625	0.050	-5.03954	60.00000	Averaged	spcc
	19 Hexachloroethane	0.55024	0.49282	0.49282	0.000	-10.43423	60.00000	Averaged	
	21 Nitrobenzene	0.33016	0.31592	0.31592	0.000	-4.31243	60.00000	Averaged	
	22 Isophorone	0.60818	0.58356	0.58356	0.000	-4.04786	60.00000	Averaged	
	23 2-Nitrophenol	0.13330	0.13555	0.13555	0.001	1.68280	20.00000	Averaged	ccc
	24 2,4-Dimethylphenol	0.23871	0.23725	0.23725	0.000	-0.61207	60.00000	Averaged	
	25 bis(2-Chloroethoxy)methane	0.31748	0.33089	0.33089	0.000	4.22545	60.00000	Averaged	
	26 2,4-Dichlorophenol	0.21152	0.19582	0.19582	0.001	-7.42462	20.00000	Averaged	ccc
	27 Benzoic acid	0.17862	0.17572	0.17572	0.000	-1.62233	60.00000	Averaged	
	28 1,2,4-Trichlorobenzene	0.26891	0.24297	0.24297	0.000	-9.64656	60.00000	Averaged	
	30 Naphthalene	0.79696	0.76945	0.76945	0.000	-3.45142	60.00000	Averaged	
	204 alpha-Terpineol	0.35557	0.30108	0.30108	0.000	-15.32250	60.00000	Averaged	
	31 4-Chloroaniline	0.29968	0.28248	0.28248	0.000	-5.74063	60.00000	Averaged	
	32 Hexachlorobutadiene	0.17464	0.14096	0.14096	0.001	-19.28215	20.00000	Averaged	ccc
	33 4-Chloro-3-methylphenol	0.24567	0.23441	0.23441	0.001	-4.58390	20.00000	Averaged	ccc
	34 2-Methylnaphthalene	0.52845	0.48442	0.48442	0.000	-8.33267	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i
Lab File ID: s1f2802.d
Analysis Type:
Lab Sample ID: WBN090510-01.3
Method: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m

Injection Date: 28-JUN-2009 14:55
Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Init. Cal. Times: 10:25 04:39
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35	1-Methylnaphthalene	0.54993	0.50580	0.50580	0.000	-8.02499	60.00000	Averaged
36	Hexachlorocyclopentadiene	0.19686	0.22578	0.22578	0.050	14.69252	60.00000	Averaged spcc
205	2,3-Dichloroaniline	0.47471	0.54903	0.54903	0.000	15.65544	60.00000	Averaged
37	2,4,6-Trichlorophenol	0.29701	0.31806	0.31806	0.001	7.08707	20.00000	Averaged ccc
38	2,4,5-Trichlorophenol	0.30821	0.31842	0.31842	0.000	3.31420	60.00000	Averaged
40	2-Chloronaphthalene	0.90767	1.00644	1.00644	0.000	10.88170	60.00000	Averaged
42	o-Nitroaniline	0.36516	0.40398	0.40398	0.000	10.62930	60.00000	Averaged
41	m-Nitroaniline	0.19404	0.22267	0.22267	0.000	14.75182	60.00000	Averaged
43	Dimethylphthalate	1.10143	1.17225	1.17225	0.000	6.42994	60.00000	Averaged
44	2,6-Dinitrotoluene	0.26579	0.27924	0.27924	0.000	5.05868	60.00000	Averaged
50	2,4-Dinitrotoluene	0.35087	0.36438	0.36438	0.000	3.85027	60.00000	Averaged
45	Acenaphthylene	1.45104	1.69589	1.69589	0.000	16.87398	60.00000	Averaged
47	Acenaphthene	0.96226	1.01791	1.01791	0.001	5.78307	20.00000	Averaged ccc
48	2,4-Dinitrophenol	0.11987	0.13095	0.13095	0.050	9.24286	60.00000	Averaged spcc
49	Dibenzofuran	1.34666	1.46141	1.46141	0.000	8.52111	60.00000	Averaged
51	Diethylphthalate	1.16754	1.28566	1.28566	0.000	10.11751	60.00000	Averaged
52	4-Nitrophenol	0.16399	0.21088	0.21088	0.050	28.59576	60.00000	Averaged spcc
53	Fluorene	1.12380	1.18186	1.18186	0.000	5.16588	60.00000	Averaged
54	4-Chlorophenylphenylether	0.57534	0.57389	0.57389	0.000	-0.25084	60.00000	Averaged
55	2-Methyl-4,6-dinitrophenol	0.09697	0.10045	0.10045	0.000	3.59026	60.00000	Averaged
56	p-Nitroaniline	0.16734	0.16918	0.16918	0.000	1.10016	60.00000	Averaged
133	Diphenylamine	0.45942	0.49802	0.49802	0.001	8.40085	20.00000	Averaged ccc
58	1,2-Diphenylhydrazine	0.67577	0.71734	0.71734	0.000	6.15165	60.00000	Averaged
61	4-Bromophenylphenylether	0.16967	0.16273	0.16273	0.000	-4.09300	60.00000	Averaged
63	Hexachlorobenzene	0.18236	0.16974	0.16974	0.000	-6.92044	60.00000	Averaged
65	Pentachlorophenol	0.09743	0.10498	0.10498	0.001	7.74686	20.00000	Averaged ccc
206	n-Octadecane	0.64348	0.65025	0.65025	0.000	1.05283	60.00000	Averaged
68	Phenanthrene	0.84693	0.85245	0.85245	0.000	0.65263	60.00000	Averaged
69	Anthracene	0.84554	0.85681	0.85681	0.000	1.33316	60.00000	Averaged
72	Di-n-butylphthalate	1.05119	1.13238	1.13238	0.000	7.72385	60.00000	Averaged
76	Fluoranthene	0.94816	0.96013	0.96013	0.001	1.26187	20.00000	Averaged ccc
79	Pyrene	1.05960	1.21521	1.21521	0.000	14.68609	60.00000	Averaged
85	Butylbenzylphthalate	0.45020	0.52099	0.52099	0.000	15.72417	60.00000	Averaged
89	Benzo(a)anthracene	0.92702	0.93185	0.93185	0.000	0.52145	60.00000	Averaged
92	Chrysene	0.87727	0.95277	0.95277	0.000	8.60622	60.00000	Averaged
93	bis(2-Ethylhexyl)phthalate	0.63994	0.73991	0.73991	0.000	15.62272	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 28-JUN-2009 14:55
Lab File ID: s1f2802.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090510-01.3 Quant Type: ISTD
Method: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	1.21152	1.33077	1.33077	0.001	9.84284	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	38.52486	40.00000	0.92003	0.000	-3.68784	60.00000	Linear	
	96 Benzo(k)fluoranthene	1.04523	1.11232	1.11232	0.000	6.41901	60.00000	Averaged	
	97 Benzo(a)pyrene	41.40248	40.00000	0.89408	0.001	3.50619	20.00000	Linear	ccc
	99 Indeno(1,2,3-cd)pyrene	36.98656	40.00000	0.78541	0.000	-7.53360	60.00000	Linear	
	100 Dibenzo(a,h)anthracene	36.62014	40.00000	0.61854	0.000	-8.44965	60.00000	Linear	
	101 Benzo(ghi)perylene	38.40746	40.00000	0.67524	0.000	-3.98134	60.00000	Linear	
	126 m-Dinitrobenzene	0.17690	0.20759	0.20759	0.000	17.35184	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.27043	0.26706	0.26706	0.000	-1.24529	60.00000	Averaged	
	143 Dinoseb	0.15514	0.15818	0.15818	0.000	1.95542	60.00000	Averaged	
	173 Carbazole	0.65789	0.73517	0.73517	0.000	11.74640	60.00000	Averaged	
	184 p-Benzoquinone	0.31182	0.15910	0.15910	0.000	-48.97838	60.00000	Averaged	
	192 Methoxychlor	0.61825	0.61183	0.61183	0.000	-1.03822	60.00000	Averaged	
	211 p-Toluidine	1.15335	0.94698	0.94698	0.000	-17.89278	60.00000	Averaged	
	210 m-Toluidine	1.32746	1.32158	1.32158	0.000	-0.44297	60.00000	Averaged	
	26 Phthalic anhydride	0.08071	0.08983	0.08983	0.000	11.29802	60.00000	Averaged	
	179 Dibenzo(a,e)pyrene	41.94141	40.00000	0.35350	0.000	4.85353	60.00000	Linear	
	214 1,4-Dinitrobenzene	0.16202	0.18564	0.18564	0.000	14.57629	60.00000	Averaged	
	215 2-Ethoxyethanol	0.84477	0.90072	0.90072	0.000	6.62334	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.10932	0.07348	0.07348	0.000	-32.78451	60.00000	Averaged	
M	225 Trichlorophenols	0.30261	0.31824	0.31824	0.000	5.16573	60.00000	Averaged	
M	226 Tetrachlorophenols	0.27043	0.26706	0.26706	0.000	-1.24529	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.95986	1.01617	1.01617	0.000	5.86737	60.00000	Averaged	

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Data file : /chem/MSD1.i/s062809.b/s1f2802.d
Lab Smp Id: WBN090510-01.3 Client Smp ID: MEGACVS
Inj Date : 28-JUN-2009 14:55
Operator : nag1 Inst ID: MSD1.i
Smp Info : |WBN090510-01.3|40 PPM|1|SVMF|1|MEGACVS
Misc Info : |MSD8270|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	280573	40.0000	
* 29 Naphthalene-d8	136	4.757	4.757	(1.000)	1152834	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	543050	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1028030	40.0000	
* 91 Chrysene-d12	240	8.645	8.645	(1.000)	841587	40.0000	
* 98 Perylene-d12	264	10.086	10.086	(1.000)	723932	40.0000	
$ 3 2-Fluorophenol	112	3.069	3.069	(0.790)	307163	40.0000	41.3
$ 5 Phenol-d5	99	3.598	3.598	(0.926)	347702	40.0000	37.6
$ 20 Nitrobenzene-d5	82	4.251	4.251	(0.894)	351388	40.0000	35.8
$ 39 2-Fluorobiphenyl	172	5.492	5.492	(0.916)	652431	40.0000	44.1
$ 60 2,4,6-Tribromophenol	329	6.533	6.533	(1.089)	78023	40.0000	40.8
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	580471	40.0000	41.1
1 N-Methyl-N-nitrosomethylamine	74	2.369	2.369	(0.610)	174651	40.0000	49.2
2 Pyridine	79	2.398	2.398	(0.617)	269607	40.0000	43.7
4 Aniline	66	3.675	3.675	(0.946)	172837	40.0000	34.7
6 Phenol	94	3.610	3.610	(0.929)	363327	40.0000	37.7(Q)
7 bis(2-Chloroethyl) ether	63	3.692	3.692	(0.950)	324698	40.0000	36.4
8 2-Chlorophenol	128	3.751	3.751	(0.965)	299554	40.0000	38.8
203 n-Decane	43	3.740	3.740	(0.962)	591186	40.0000	34.9
9 1,3-Dichlorobenzene	146	3.857	3.857	(0.992)	337178	40.0000	36.2
11 1,4-Dichlorobenzene	146	3.898	3.898	(1.003)	330459	40.0000	35.1
13 1,2-Dichlorobenzene	146	4.004	4.004	(1.030)	297969	40.0000	34.5
14 bis(2-Chloroisopropyl)ether	45	4.034	4.034	(1.038)	863884	40.0000	37.7
12 Benzyl alcohol	108	3.957	3.957	(1.018)	206351	40.0000	37.9(H)
15 o-Cresol	107	4.004	4.004	(1.030)	232239	40.0000	35.0
18 m,p-Cresols	107	4.104	4.104	(1.056)	321566	40.0000	36.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.128	4.128	(1.067)	206572	40.0000	38.0
19 Hexachloroethane	117	4.234	4.234	(1.089)	138273	40.0000	35.8
21 Nitrobenzene	77	4.269	4.269	(0.897)	364205	40.0000	38.3
22 Isophorone	82	4.416	4.416	(0.928)	672747	40.0000	38.4
23 2-Nitrophenol	139	4.481	4.481	(0.942)	156262	40.0000	40.7
24 2,4-Dimethylphenol	122	4.469	4.469	(0.939)	273505	40.0000	39.8
25 bis(2-Chloroethoxy)methane	93	4.540	4.540	(0.954)	381464	40.0000	41.7
26 2,4-Dichlorophenol	162	4.640	4.640	(0.975)	225748	40.0000	37.0(H)
27 Benzoic acid	105	4.522	4.522	(0.951)	202575	40.0000	39.4
28 1,2,4-Trichlorobenzene	180	4.704	4.704	(0.989)	280099	40.0000	36.1
30 Naphthalene	128	4.769	4.769	(1.002)	887047	40.0000	38.6
204 alpha-Terpineol	59	4.745	4.745	(0.998)	347101	40.0000	33.9
31 4-Chloroaniline	127	4.787	4.787	(1.006)	325648	40.0000	37.7
32 Hexachlorobutadiene	225	4.834	4.834	(1.016)	162506	40.0000	32.3
33 4-Chloro-3-methylphenol	107	5.098	5.098	(1.072)	270238	40.0000	38.2
34 2-Methylnaphthalene	142	5.251	5.251	(1.104)	558456	40.0000	36.7
35 1-Methylnaphthalene	142	5.322	5.322	(1.119)	583103	40.0000	36.8
36 Hexachlorocyclopentadiene	237	5.351	5.351	(0.892)	122611	40.0000	45.9
205 2,3-Dichloroaniline	161	5.445	5.445	(0.908)	298152	40.0000	46.3
37 2,4,6-Trichlorophenol	196	5.434	5.434	(0.906)	172720	40.0000	42.8
38 2,4,5-Trichlorophenol	196	5.463	5.463	(0.911)	172918	40.0000	41.3
40 2-Chloronaphthalene	162	5.604	5.604	(0.934)	546546	40.0000	44.4
42 o-Nitroaniline	65	5.657	5.657	(0.943)	219379	40.0000	44.2
41 m-Nitroaniline	138	5.951	5.951	(0.992)	120919	40.0000	45.9(H)
43 Dimethylphthalate	163	5.769	5.769	(0.962)	636593	40.0000	42.6
44 2,6-Dinitrotoluene	165	5.822	5.822	(0.971)	151640	40.0000	42.0(H)
50 2,4-Dinitrotoluene	165	6.110	6.110	(1.019)	197877	40.0000	41.5
45 Acenaphthylene	152	5.904	5.904	(0.984)	920952	40.0000	46.7
47 Acenaphthene	154	6.022	6.022	(1.004)	552774	40.0000	42.3
48 2,4-Dinitrophenol	184	6.016	6.016	(1.003)	71110	40.0000	43.7(QH)
49 Dibenzofuran	168	6.139	6.139	(1.024)	793621	40.0000	43.4
51 Diethylphthalate	149	6.251	6.251	(1.042)	698179	40.0000	44.0
52 4-Nitrophenol	139	6.034	6.034	(1.006)	114518	40.0000	51.4(H)
53 Fluorene	166	6.375	6.375	(1.063)	641807	40.0000	42.1
54 4-Chlorophenylphenylether	204	6.351	6.351	(1.059)	311652	40.0000	39.9
55 2-Methyl-4,6-dinitrophenol	198	6.386	6.386	(0.915)	103262	40.0000	41.4(H)
56 p-Nitroaniline	138	6.369	6.369	(1.062)	91873	40.0000	40.4
133 Diphenylamine	169	6.428	6.428	(0.921)	511977	40.0000	43.4
58 1,2-Diphenylhydrazine	77	6.457	6.457	(0.925)	737449	40.0000	42.5(H)
61 4-Bromophenylphenylether	248	6.675	6.675	(0.956)	167288	40.0000	38.4(H)
63 Hexachlorobenzene	284	6.733	6.733	(0.965)	174493	40.0000	37.2
65 Pentachlorophenol	266	6.851	6.851	(0.981)	107918	40.0000	43.1
206 n-Octadecane	57	6.833	6.833	(0.979)	668478	40.0000	40.4
68 Phenanthrene	178	6.998	6.998	(1.003)	876349	40.0000	40.3
69 Anthracene	178	7.028	7.028	(1.007)	880830	40.0000	40.5
72 Di-n-butylphthalate	149	7.275	7.275	(1.042)	1164124	40.0000	43.1
76 Fluoranthene	202	7.710	7.710	(1.104)	987041	40.0000	40.5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	7.845	7.845	(0.907)	1022708	40.0000	45.9
85 Butylbenzylphthalate	149	8.163	8.163	(0.944)	438461	40.0000	46.3
89 Benzo(a)anthracene	228	8.633	8.633	(0.999)	784236	40.0000	40.2
92 Chrysene	228	8.663	8.663	(1.002)	801838	40.0000	43.4(H)
93 bis(2-Ethylhexyl)phthalate	149	8.516	8.516	(0.985)	622700	40.0000	46.2
94 Di-n-octylphthalate	149	9.045	9.045	(0.897)	963386	40.0000	43.9
95 Benzo(b)fluoranthene	252	9.622	9.622	(0.954)	666038	40.0000	38.5
96 Benzo(k)fluoranthene	252	9.651	9.651	(0.957)	805244	40.0000	42.6
97 Benzo(a)pyrene	252	10.016	10.016	(0.993)	647252	40.0000	41.4
99 Indeno(1,2,3-cd)pyrene	276	11.692	11.692	(1.159)	568582	40.0000	37.0
100 Dibenzo(a,h)anthracene	278	11.698	11.698	(1.160)	447781	40.0000	36.6
101 Benzo(ghi)perylene	276	12.198	12.198	(1.209)	488826	40.0000	38.4(Q)
126 m-Dinitrobenzene	168	5.810	5.810	(0.969)	112734	40.0000	46.9
130 2,3,4,6-Tetrachlorophenol	232	6.210	6.210	(1.035)	145027	40.0000	39.5
143 Dinoseb	211	6.939	6.939	(0.994)	162611	40.0000	40.8(H)
173 Carbazole	167	7.116	7.116	(1.019)	755774	40.0000	44.7
184 p-Benzoquinone	54	3.375	3.375	(0.868)	44638	40.0000	20.4
192 Methoxychlor	227	8.504	8.504	(0.984)	514910	40.0000	39.6
211 p-Toluidine	106	4.163	4.163	(1.071)	265698	40.0000	32.8
210 m-Toluidine	106	4.187	4.187	(1.077)	370799	40.0000	39.8(H)
26 Phthalic anhydride	104	5.281	5.281	(1.110)	103560	40.0000	44.5
179 Dibenzo(a,e)pyrene	302	16.033	16.033	(1.590)	255912	40.0000	41.9
214 1,4-Dinitrobenzene	168	5.751	5.751	(0.959)	100812	40.0000	45.8(H)
215 2-Ethoxyethanol	59	2.204	2.204	(0.567)	252719	40.0000	42.6
216 Methylenebis(2-chloroaniline)	231	8.563	8.563	(0.990)	61838	40.0000	26.9(Q)
M 225 Trichlorophenols	196				345638	80.0000	84.1
M 226 Tetrachlorophenols	232				145027	40.0000	39.5
M 227 Benzo(b,k)fluoranthene	252				1471282	80.0000	84.7

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD1.i/s062809.b/s1f2802.d
Date : 28-JUN-2009 14:55
Client ID: MEGACVS
Sample Info: IWBN090510-01,3ll40 PPMI1|SVMF|1MEGACVS
Column phase: J&W DB-5HS

Instrument: MSD1.i
Operator: nagi
Column diameter: 0.20

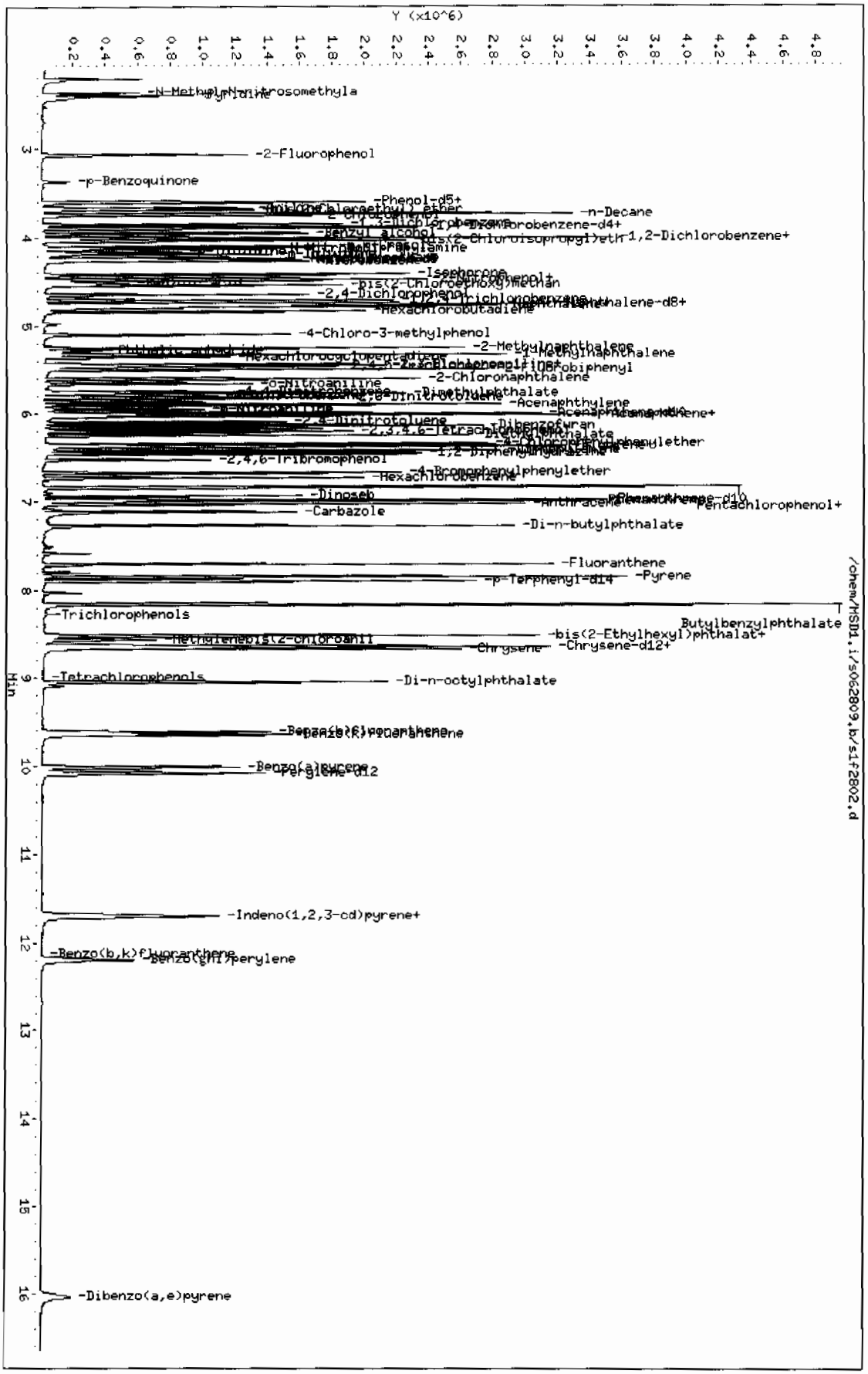

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 28-JUN-2009 15:23
Lab File ID: s1f2803.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090619-01.1 Quant Type: ISTD
Method: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	1.08648	0.99410	0.99410	0.000	-8.50220	60.00000	Averaged
16 Acetophenone	1.48332	1.28179	1.28179	0.000	-13.58677	60.00000	Averaged
189 Caprolactam	0.08546	0.08141	0.08141	0.000	-4.73703	60.00000	Averaged
208 1,1'-Biphenyl	1.24593	1.31725	1.31725	0.000	5.72422	60.00000	Averaged
207 Atrazine	0.02887	0.04399	0.04399	0.000	52.37694	60.00000	Averaged
77 Benzidine	0.15949	0.25012	0.25012	0.000	56.82639	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28091	0.28992	0.28992	0.000	3.20896	60.00000	Averaged
102 1,4-Dioxane	0.34781	0.37913	0.37913	0.000	9.00366	60.00000	Averaged
103 Methyl methacrylate	0.19523	0.18074	0.18074	0.000	-7.42562	60.00000	Averaged
104 Ethyl methacrylate	0.91808	0.91853	0.91853	0.000	0.04850	60.00000	Averaged
105 2-Picoline	1.31153	1.29425	1.29425	0.000	-1.31707	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.46517	0.48176	0.48176	0.000	3.56727	60.00000	Averaged
107 Methyl methanesulfonate	0.63147	0.54519	0.54519	0.000	-13.66235	60.00000	Averaged
108 N-Nitrosodiethylamine	0.47486	0.48496	0.48496	0.000	2.12637	60.00000	Averaged
109 Ethyl Methanesulfonate	0.74831	0.70800	0.70800	0.000	-5.38631	60.00000	Averaged
110 Pentachloroethane	0.38822	0.33469	0.33469	0.000	-13.78748	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.48953	0.48753	0.48753	0.000	-0.40750	60.00000	Averaged
113 N-Nitrosomorpholine	0.96572	0.75745	0.75745	0.000	-21.56597	60.00000	Averaged
114 o-Toluidine	1.97119	1.71187	1.71187	0.000	-13.15520	60.00000	Averaged
115 N-Nitrosopiperidine	0.13883	0.13939	0.13939	0.000	0.40131	60.00000	Averaged
116 a,a-Dimethylphenethylamine	1.03383	1.04956	1.04956	0.000	1.52140	60.00000	Averaged
118 2,6-Dichlorophenol	0.21230	0.19289	0.19289	0.000	-9.14377	60.00000	Averaged
119 Hexachloropropene	0.14999	0.11390	0.11390	0.000	-24.06425	60.00000	Averaged
120 p-Phenylenediamine	0.14043	0.20738	0.20738	0.000	47.66780	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.19030	0.17387	0.17387	0.000	-8.63351	60.00000	Averaged
122 Safrole	0.20985	0.18270	0.18270	0.000	-12.93954	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.49111	0.46173	0.46173	0.000	-5.98234	60.00000	Averaged
124 Isosafrole	0.33776	0.37855	0.37855	0.000	12.07563	60.00000	Averaged
125 1,4-Naphthoquinone	0.30658	0.39887	0.39887	0.000	30.10540	60.00000	Averaged
127 Pentachlorobenzene	0.44497	0.39588	0.39588	0.000	-11.03134	60.00000	Averaged
128 1-Naphthylamine	0.87513	0.92291	0.92291	0.000	5.45945	60.00000	Averaged
129 2-Naphthylamine	0.83985	0.94471	0.94471	0.000	12.48529	60.00000	Averaged
131 5-Nitro-o-toluidine	0.27743	0.31089	0.31089	0.000	12.05728	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.16150	0.15321	0.15321	0.000	-5.13202	60.00000	Averaged
137 Phenacetin	0.27523	0.27923	0.27923	0.000	1.45322	60.00000	Averaged
138 Diallate	0.24465	0.26388	0.26388	0.000	7.86039	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 28-JUN-2009 15:23
Lab File ID: s1f2803.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090619-01.1 Quant Type: ISTD
Method: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.24973	0.28999	0.28999	0.000	16.12148	60.00000	Averaged
213 Trans Diallate	0.28782	0.31045	0.31045	0.000	7.86039	60.00000	Averaged
140 4-Aminobiphenyl	0.39830	0.47031	0.47031	0.000	18.07841	60.00000	Averaged
141 Pentachloronitrobenzene	0.07651	0.06723	0.06723	0.000	-12.13009	60.00000	Averaged
142 Pronamide	0.26549	0.25219	0.25219	0.000	-5.00946	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01821	0.02635	0.02635	0.000	44.69630	60.00000	Averaged
147 Methapyrilene	64.64949	40.00000	0.66535	0.000	61.62374	60.00000	Linear <-
148 Isodrin	0.10234	0.09499	0.09499	0.000	-7.18075	60.00000	Averaged
149 Aramite	0.04545	0.04970	0.04970	0.000	9.35321	60.00000	Averaged
150 Kepone	0.08412	0.07174	0.07174	0.000	-14.71865	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28040	0.31935	0.31935	0.000	13.89116	60.00000	Averaged
152 Chlorobenzilate	0.25265	0.27495	0.27495	0.000	8.82331	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.40413	0.47955	0.47955	0.000	18.66209	60.00000	Averaged
155 2-Acetylaminofluorene	0.29758	0.32534	0.32534	0.000	9.32727	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.49452	0.47236	0.47236	0.000	-4.48049	60.00000	Averaged
158 3-Methylcholanthrene	38.34131	40.00000	0.39349	0.000	-4.14672	60.00000	Linear

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2803.d
Lab Smp Id: WBN090619-01.1 Client Smp ID: AP12CVS
Inj Date : 28-JUN-2009 15:23
Operator : nag1 Inst ID: MSD1.i
Smp Info : |WBN090619-01.1|40 PPM|1|SVMF|1|AP12CVS
Misc Info : |MSD8270|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 28-Jun-2009 15:49 llo00884 Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.893	3.893	(1.000)	310710	40.0000	
* 29 Naphthalene-d8	136	4.757	4.757	(1.000)	1202345	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	591181	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1124362	40.0000	
* 91 Chrysene-d12	240	8.639	8.639	(1.000)	950199	40.0000	
* 98 Perylene-d12	264	10.080	10.080	(1.000)	740617	40.0000	
209 Benzaldehyde	77	3.616	3.616	(0.929)	308878	40.0000	36.6
16 Acetophenone	105	4.140	4.140	(1.063)	398264	40.0000	34.6
189 Caprolactam	113	5.028	5.028	(1.057)	97888	40.0000	38.1
208 1,1'-Biphenyl	154	5.575	5.575	(0.929)	778735	40.0000	42.3
207 Atrazine	173	6.751	6.751	(0.967)	49462	40.0000	61.0
77 Benzidine	184	7.757	7.757	(0.898)	237668	40.0000	62.7
90 3,3'-Dichlorobenzidine	252	8.569	8.569	(0.992)	275482	40.0000	41.3
102 1,4-Dioxane	88	2.216	2.216	(0.569)	117798	40.0000	43.6
103 Methyl methacrylate	100	2.204	2.204	(0.566)	56156	40.0000	37.0
104 Ethyl methacrylate	69	2.587	2.587	(0.665)	285395	40.0000	40.0
105 2-Picoline	93	2.781	2.781	(0.714)	402137	40.0000	39.5
106 N-Nitrosomethylethylamine	88	2.828	2.828	(0.726)	149688	40.0000	41.4
107 Methyl methanesulfonate	80	2.987	2.987	(0.767)	169396	40.0000	34.5
108 N-Nitrosodiethylamine	102	3.222	3.222	(0.828)	150681	40.0000	40.8
109 Ethyl Methanesulfonate	79	3.375	3.375	(0.867)	219983	40.0000	37.8
110 Pentachloroethane	167	3.716	3.716	(0.955)	103993	40.0000	34.5
111 N-Nitrosopyrrolidine	100	4.128	4.128	(1.060)	151481	40.0000	39.8(Q)
113 N-Nitrosomorpholine	56	4.151	4.151	(1.066)	235349	40.0000	31.4
114 o-Toluidine	106	4.169	4.169	(1.071)	531896	40.0000	34.7
115 N-Nitrosopiperidine	114	4.369	4.369	(0.918)	167595	40.0000	40.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.651	4.651	(0.978)	1261933	40.0000	40.6
118 2,6-Dichlorophenol	162	4.798	4.798	(1.009)	231918	40.0000	36.3
119 Hexachloropropene	213	4.828	4.828	(1.015)	136945	40.0000	30.4
120 p-Phenylenediamine	108	5.034	5.034	(1.058)	249336	40.0000	59.1
121 N-Nitrosodi-n-butylamine	84	4.998	4.998	(1.051)	209046	40.0000	36.5(T)
122 Safrole	162	5.163	5.163	(1.085)	219669	40.0000	34.8
123 1,2,4,5-Tetrachlorobenzene	216	5.369	5.369	(0.895)	272964	40.0000	37.6
124 Isosafrole	162	5.534	5.534	(0.923)	223791	40.0000	44.8
125 1,4-Naphthoquinone	158	5.722	5.722	(0.954)	235806	40.0000	52.0
127 Pentachlorobenzene	250	6.110	6.110	(1.019)	234036	40.0000	35.6
128 1-Naphthylamine	143	6.192	6.192	(1.032)	545604	40.0000	42.2
129 2-Naphthylamine	143	6.245	6.245	(1.041)	558495	40.0000	45.0
131 5-Nitro-o-toluidine	152	6.363	6.363	(1.061)	183789	40.0000	44.8
136 1,3,5-Trinitrobenzene	75	6.575	6.575	(0.942)	172262	40.0000	37.9
137 Phenacetin	108	6.610	6.610	(0.947)	313950	40.0000	40.6(Q)
138 Diallate	86	6.604	6.604	(0.946)	296697	40.0000	43.1
212 Cis Diallate	86	6.663	6.663	(0.954)	48908	6.00000	7.0
213 Trans Diallate	86	6.604	6.604	(0.946)	296697	34.0000	36.7
140 4-Aminobiphenyl	169	6.845	6.845	(0.981)	528800	40.0000	47.2
141 Pentachloronitrobenzene	237	6.857	6.857	(0.982)	75592	40.0000	35.1(Q)
142 Pronamide	173	6.851	6.851	(0.981)	283554	40.0000	38.0
146 4-Nitroquinoline-1-oxide	101	7.451	7.451	(1.067)	29630	40.0000	57.9
147 Methapyrilene	58	7.463	7.463	(1.069)	748089	40.0000	64.6
148 Isodrin	193	7.622	7.622	(1.092)	106808	40.0000	37.1
149 Aramite	185	7.851	7.851	(1.125)	55878	40.0000	43.7
150 Kepone	272	8.269	8.269	(1.185)	80656	40.0000	34.1
151 p-(Dimethylamino)azobenzene	120	7.975	7.975	(0.923)	303449	40.0000	45.6
152 Chlorobenzilate	251	7.986	7.986	(0.924)	261254	40.0000	43.5
153 3,3'-Dimethylbenzidine	212	8.180	8.180	(0.947)	455672	40.0000	47.5
155 2-Acetylaminofluorene	181	8.357	8.357	(0.967)	309138	40.0000	43.7
157 7,12Dimethylbenz(a)anthracene	256	9.592	9.592	(0.952)	349840	40.0000	38.2
158 3-Methylcholanthrene	268	10.433	10.433	(1.035)	291426	40.0000	38.3(Q)

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD1.i/s062809.b/s1f2803.d
Date : 28-JUN-2009 15:23
Client ID: AP12CVS
Sample Info: IWBN090619-01,1:40 PPM:1:SWHF:1:AP12CVS
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nagl
Column diameter: 0.20

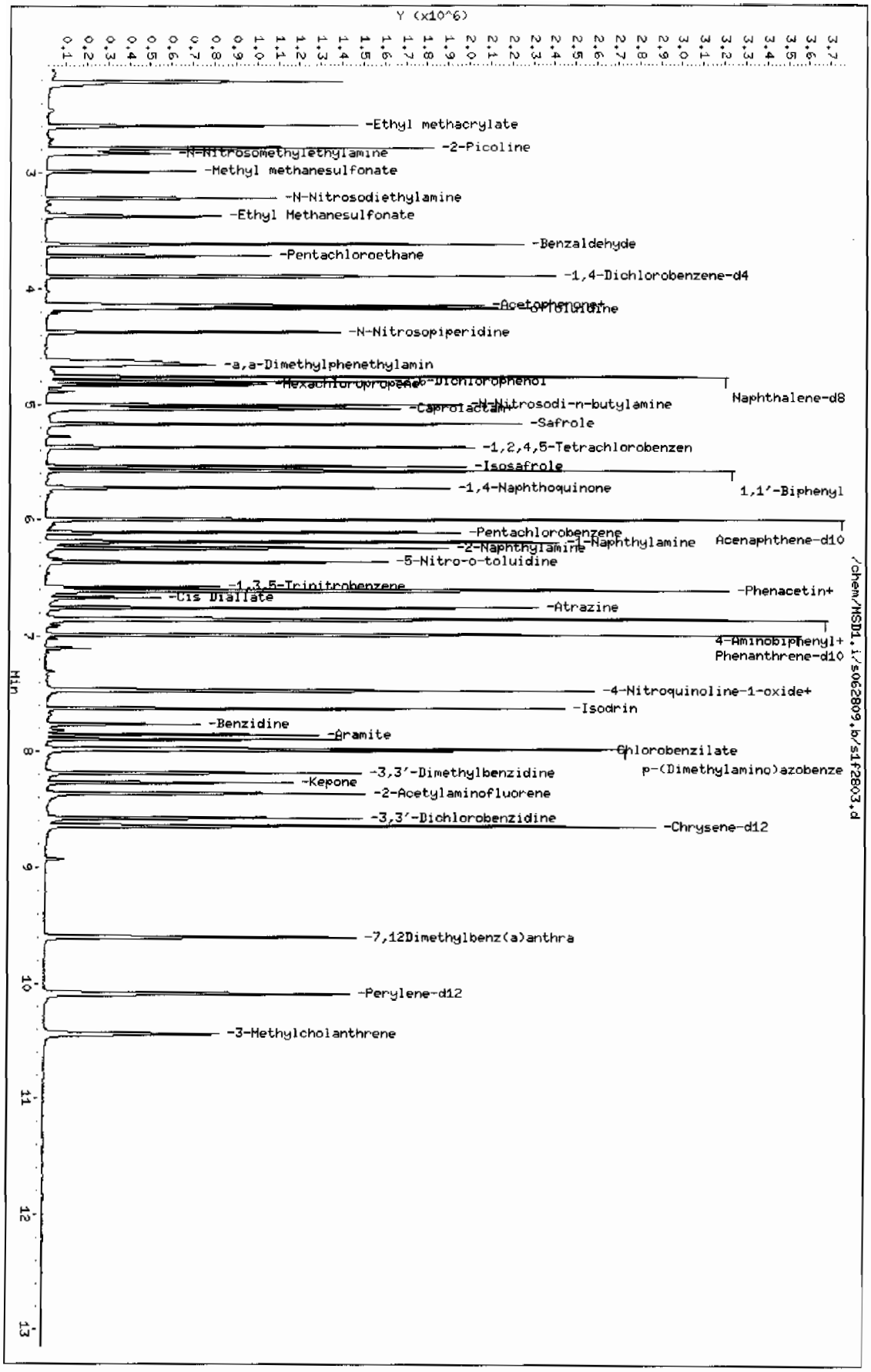

Page 1

QC Data

Data File: /chem/MSD1.i/s061909.b/s1f1901.d

Date : 19-JUN-2009 09:41

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

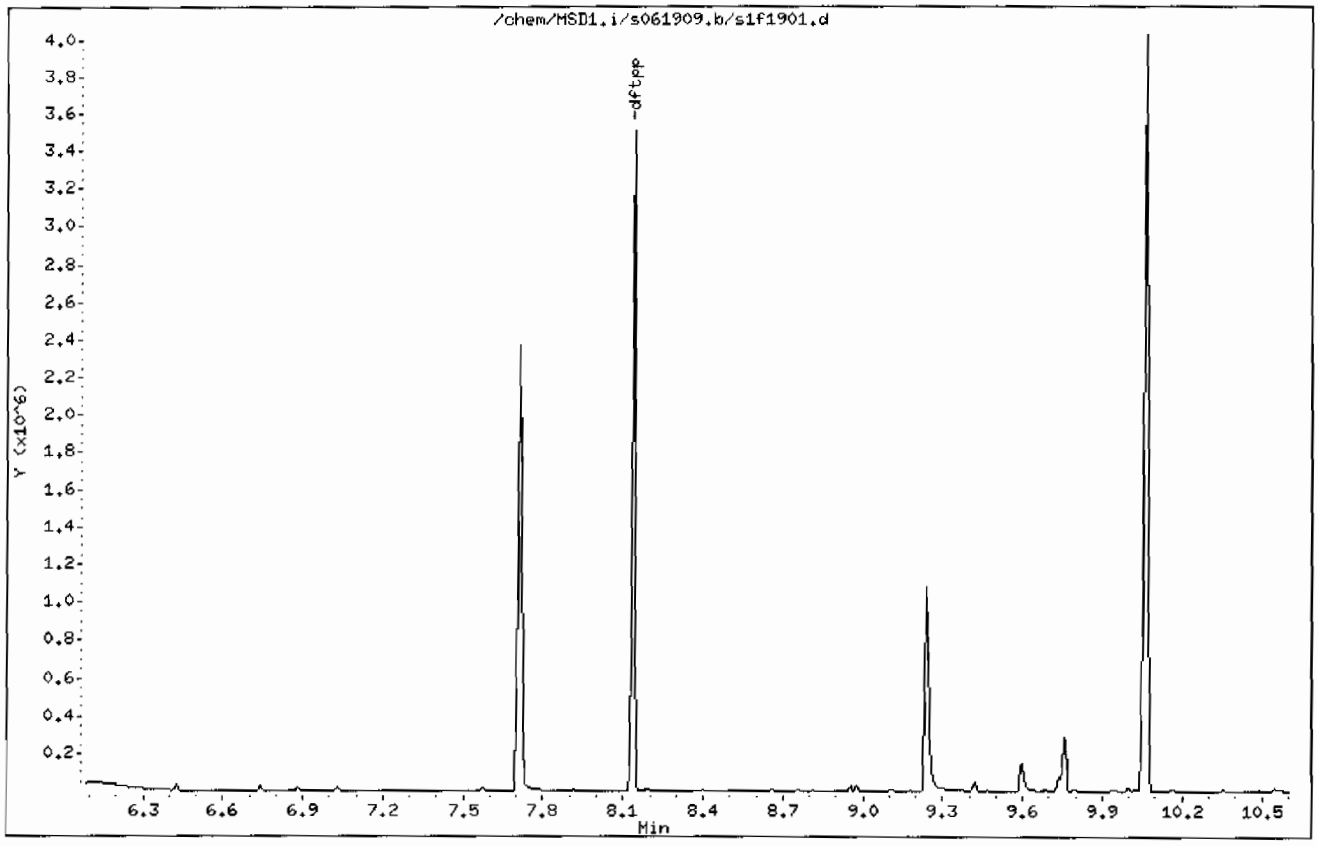

Data File: /chem/MSD1.i/s061909.b/s1f1901.d

Date : 19-JUN-2009 09:41

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

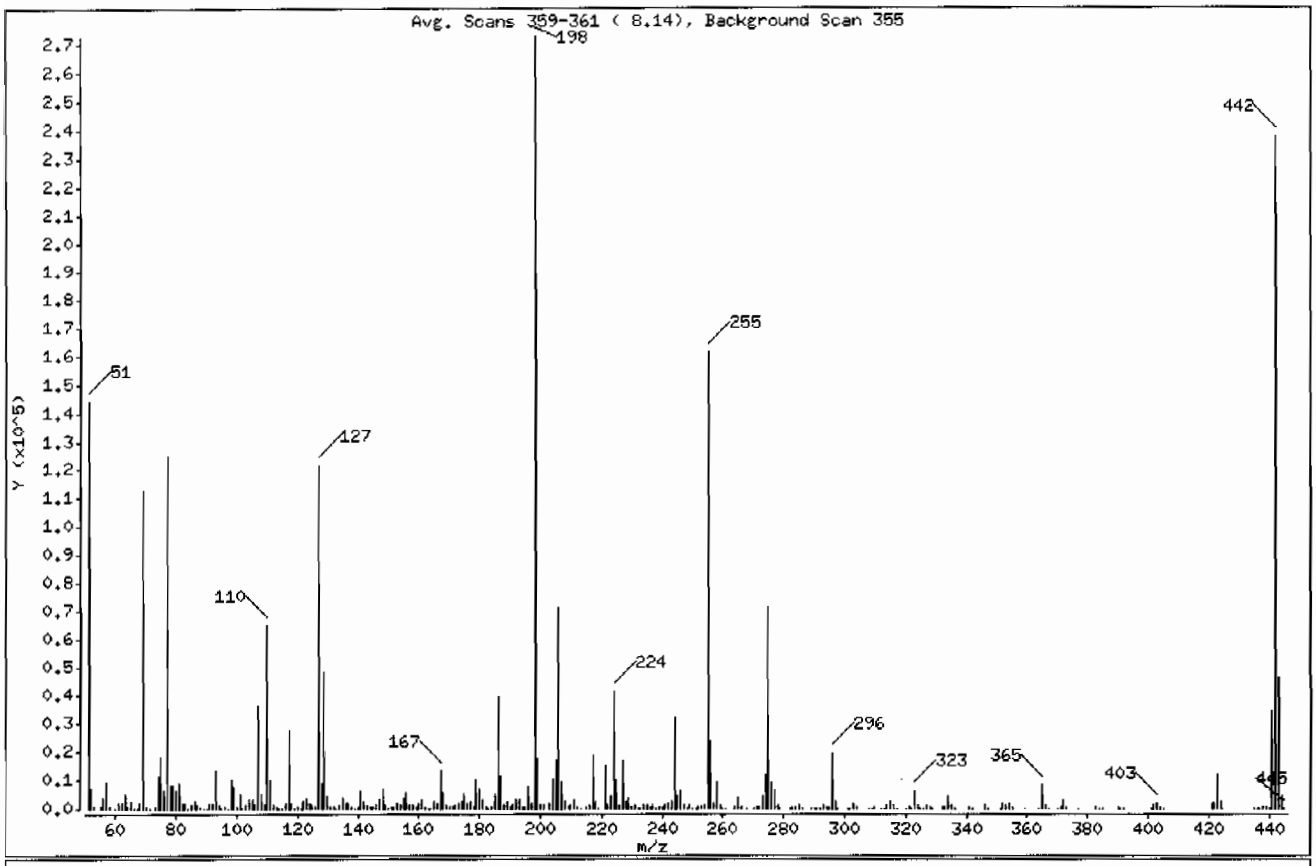

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	52.84
68	Less than 2.00% of mass 69	0.77 (1.86)
69	Mass 69 relative abundance	41.45
70	Less than 2.00% of mass 69	0.21 (0.50)
127	40.00 - 60.00% of mass 198	44.56
197	Less than 1.00% of mass 198	0.60
199	5.00 - 9.00% of mass 198	6.50
275	10.00 - 30.00% of mass 198	26.13
365	Greater than 1.00% of mass 198	3.08
441	Present, but less than mass 443	12.69
442	Greater than 40.00% of mass 198	87.22
443	17.00 - 23.00% of mass 442	17.10 (19.61)

Data File: /chem/MSD1.i/s061909.b/s1f1901.d

Date : 19-JUN-2009 09:41

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: |WBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1f1901.d
Spectrum: Avg. Scans 359-361 (8.14), Background Scan 355
Location of Maximum: 198.00
Number of points: 308

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	144000	132.00	510	211.00	3026	301.00	246
52.00	6834	133.00	177	212.00	360	302.00	305
53.00	343	134.00	1394	213.00	164	303.00	2173
55.00	787	135.00	3774	215.00	914	304.00	627
56.00	4068	136.00	1615	216.00	1449	308.00	231
57.00	9114	137.00	2008	217.00	18736	309.00	171
58.00	421	138.00	401	218.00	2313	310.00	328
60.00	119	139.00	297	219.00	178	312.00	62
61.00	1606	140.00	703	221.00	14863	313.00	151
62.00	1831	141.00	6162	222.00	1184	314.00	955
63.00	5200	142.00	2336	223.00	4234	315.00	2255
64.00	657	143.00	1525	224.00	41120	316.00	1155
65.00	2387	144.00	370	225.00	10245	317.00	184
66.00	151	145.00	319	226.00	995	320.00	57
67.00	195	146.00	1235	227.00	17224	321.00	689
68.00	2096	147.00	3283	228.00	2306	322.00	248
69.00	112984	148.00	7044	229.00	3506	323.00	6039
70.00	568	149.00	1438	230.00	433	324.00	1107
71.00	150	150.00	300	231.00	1431	325.00	61
73.00	885	151.00	885	232.00	204	326.00	130
74.00	11286	152.00	458	233.00	296	327.00	1289
75.00	17976	153.00	2154	234.00	980	328.00	570
76.00	6004	154.00	1527	235.00	1237	329.00	51
77.00	124472	155.00	3545	236.00	693	332.00	534
78.00	8043	156.00	5340	237.00	1249	333.00	600
79.00	8188	157.00	1091	238.00	184	334.00	4082
80.00	6006	158.00	1300	239.00	626	335.00	964
81.00	8490	159.00	879	240.00	531	336.00	66
82.00	2171	160.00	2049	241.00	999	341.00	669
83.00	2012	161.00	2826	242.00	2145	342.00	135
84.00	205	162.00	774	243.00	2201	346.00	1351
85.00	1514	163.00	241	244.00	31816	347.00	261
86.00	2442	164.00	305	245.00	4092	351.00	114
87.00	1097	165.00	2661	246.00	6209	352.00	1916
88.00	436	166.00	1984	247.00	1254	353.00	1208

Data File: /chem/MSD1.i/s061909.b/s1f1901.d

Date : 19-JUN-2009 09:41

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1f1901.d
Spectrum: Avg. Scans 359-361 (8.14), Background Scan 355
Location of Maximum: 198.00
Number of points: 308

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	189	167.00	13309	248.00	299	354.00	2035
90.00	50	168.00	5470	249.00	989	355.00	343
91.00	1919	169.00	1021	250.00	141	359.00	144
92.00	2096	170.00	445	251.00	235	364.00	55
93.00	13128	171.00	584	252.00	333	365.00	8409
94.00	1018	172.00	1192	253.00	683	366.00	1284
95.00	212	173.00	1716	254.00	1139	367.00	64
96.00	577	174.00	2698	255.00	161152	370.00	191
97.00	296	175.00	5260	256.00	23520	371.00	414
98.00	10043	176.00	1668	257.00	1826	372.00	3203
99.00	7527	177.00	2251	258.00	9113	373.00	824
100.00	749	178.00	848	259.00	1456	377.00	110
101.00	4743	179.00	9845	260.00	264	383.00	853
102.00	198	180.00	6646	261.00	272	384.00	236
103.00	1467	181.00	3041	264.00	320	385.00	51
104.00	2893	182.00	409	265.00	3669	390.00	507
105.00	2821	183.00	239	266.00	471	391.00	292
106.00	1011	184.00	847	268.00	126	392.00	286
107.00	36656	185.00	4785	270.00	166	401.00	174
108.00	5319	186.00	39312	271.00	332	402.00	1406
109.00	1152	187.00	11209	272.00	418	403.00	1940
110.00	65224	188.00	1055	273.00	4699	404.00	655
111.00	9931	189.00	2225	274.00	12077	405.00	61
112.00	1095	190.00	375	275.00	71216	421.00	1756
113.00	391	191.00	1173	276.00	9331	422.00	1652
114.00	107	192.00	3247	277.00	6268	423.00	12003
115.00	133	193.00	3444	278.00	960	424.00	2274
116.00	1973	194.00	706	279.00	104	425.00	133
117.00	27840	195.00	452	282.00	99	435.00	69
118.00	2068	196.00	7824	283.00	568	436.00	53
119.00	230	197.00	1623	284.00	552	437.00	119
120.00	371	198.00	272576	285.00	1001	438.00	391
121.00	157	199.00	17728	286.00	187	439.00	580
122.00	2556	200.00	1409	289.00	207	440.00	288
123.00	3627	201.00	1364	290.00	191	441.00	34584

Data File: /chem/MSD1.i/s061909.b/s1f1901.d

Date : 19-JUN-2009 09:41

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: |WBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1f1901.d
Spectrum: Avg. Scans 359-361 (8.14), Background Scan 355
Location of Maximum: 198.00
Number of points: 308

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1608	203.00	1870	291.00	111	442.00	237760
125.00	1454	204.00	10311	292.00	264	443.00	46616
126.00	815	205.00	16952	293.00	1292	444.00	4457
127.00	121464	206.00	71176	294.00	328	445.00	279
128.00	8908	207.00	9189	295.00	382		
129.00	48768	208.00	2437	296.00	19720		
130.00	4107	209.00	866	297.00	2809		
131.00	823	210.00	1342	298.00	165		

Data File: /chem/MSD1.i/s062809.b/s1f2801.d

Date : 28-JUN-2009 14:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: 1WBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

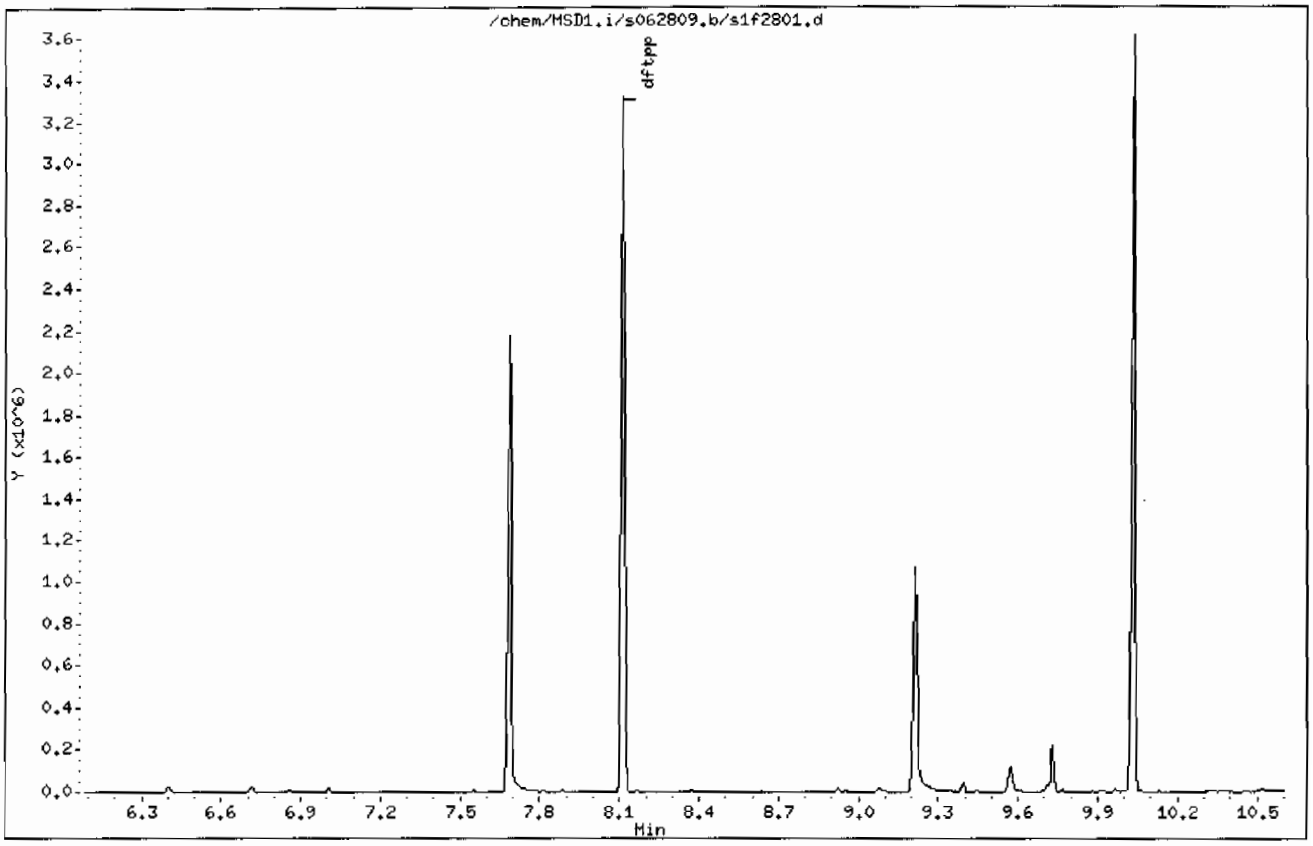

Data File: /chem/MSD1.i/s062809.b/s1f2801.d

Date : 28-JUN-2009 14:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

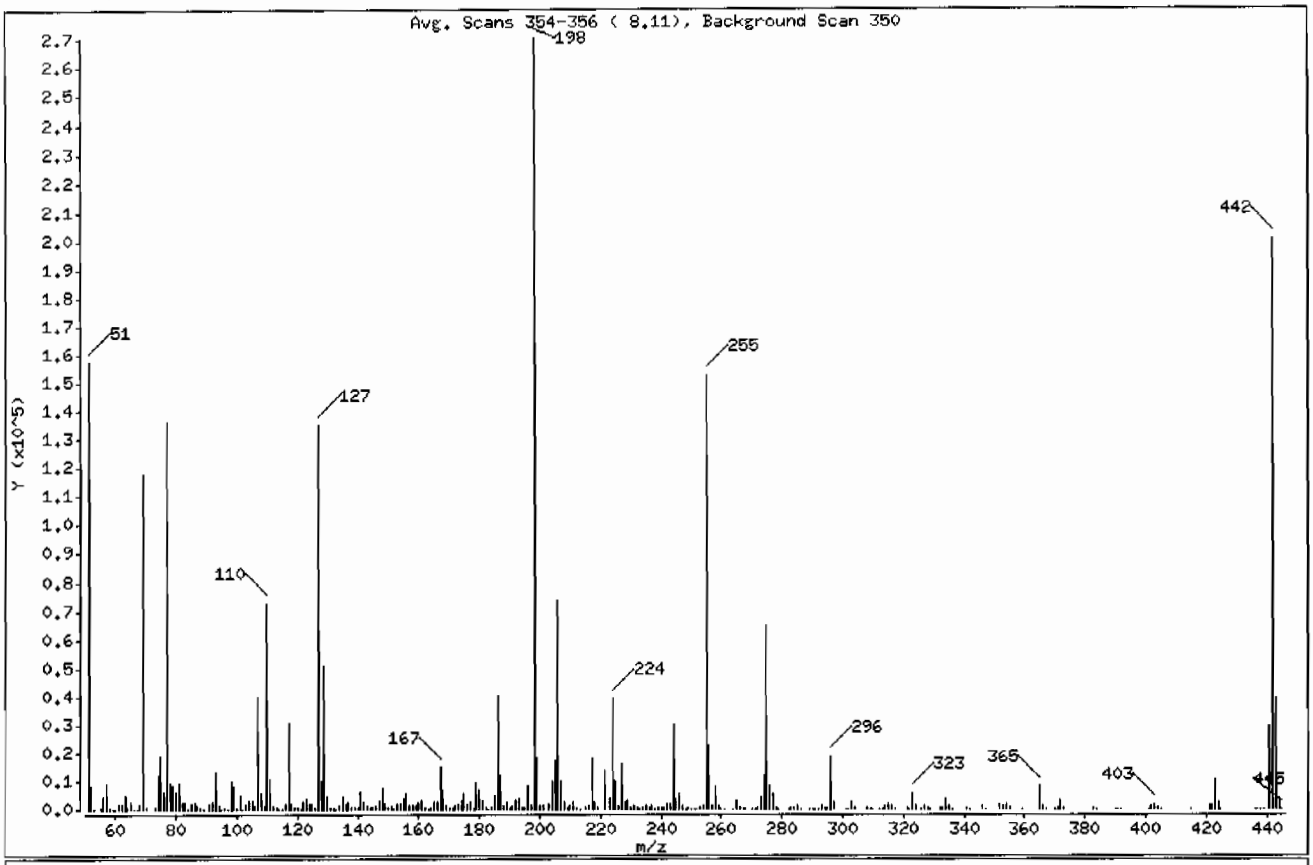

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	58.22
68	Less than 2.00% of mass 69	0.64 (1.48)
69	Mass 69 relative abundance	43.38
70	Less than 2.00% of mass 69	0.25 (0.57)
127	40.00 - 60.00% of mass 198	49.95
197	Less than 1.00% of mass 198	0.54
199	5.00 - 9.00% of mass 198	6.57
275	10.00 - 30.00% of mass 198	23.82
365	Greater than 1.00% of mass 198	2.93
441	Present, but less than mass 443	10.80
442	Greater than 40.00% of mass 198	74.10
443	17.00 - 23.00% of mass 442	14.55 (19.63)

Data File: /chem/MSD1.i/s062809.b/s1f2801.d

Date : 28-JUN-2009 14:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: |WBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1f2801.d
Spectrum: Avg. Scans 354-356 (8.11), Background Scan 350
Location of Maximum: 198.00
Number of points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	157696	130.00	4482	206.00	73248	291.00	142
52.00	8058	131.00	895	207.00	9728	292.00	267
53.00	257	132.00	483	208.00	2403	293.00	1093
55.00	714	133.00	127	209.00	867	294.00	349
56.00	4065	134.00	1456	210.00	940	295.00	330
57.00	9619	135.00	4358	211.00	2657	296.00	18592
58.00	458	136.00	1648	212.00	422	297.00	2582
59.00	54	137.00	2211	213.00	212	301.00	216
60.00	58	138.00	547	215.00	805	302.00	241
61.00	1693	139.00	427	216.00	1536	303.00	2296
62.00	1850	140.00	724	217.00	18072	304.00	594
63.00	5082	141.00	6453	218.00	2418	308.00	341
64.00	657	142.00	2252	219.00	322	309.00	182
65.00	2551	143.00	1481	221.00	13674	310.00	269
66.00	139	144.00	346	223.00	4012	312.00	51
67.00	189	145.00	352	224.00	39312	313.00	144
68.00	1736	146.00	1087	225.00	9721	314.00	1019
69.00	117488	147.00	3379	226.00	1120	315.00	2090
70.00	666	148.00	7460	227.00	15893	316.00	1262
73.00	792	149.00	1611	228.00	2346	317.00	267
74.00	11695	150.00	518	229.00	3210	321.00	558
75.00	18464	151.00	1163	230.00	539	322.00	230
76.00	6275	152.00	146	231.00	1371	323.00	5586
77.00	136384	153.00	2113	232.00	349	324.00	1130
78.00	9068	154.00	1661	233.00	297	326.00	87
79.00	7807	155.00	3734	234.00	928	327.00	1096
80.00	6128	156.00	5722	235.00	1157	328.00	650
81.00	9136	157.00	1219	236.00	733	329.00	58
82.00	2246	158.00	1275	237.00	1284	332.00	403
83.00	2239	159.00	976	238.00	121	333.00	497
84.00	301	160.00	2250	239.00	622	334.00	3849
85.00	1564	161.00	3089	240.00	498	335.00	979
86.00	2499	162.00	820	241.00	836	336.00	93
87.00	1194	163.00	284	242.00	2090	341.00	727
88.00	510	164.00	361	243.00	2129	342.00	143

Data File: /chem/MSD1.i/s062809.b/s1f2801.d

Date : 28-JUN-2009 14:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: |WBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1f2801.d
Spectrum: Avg. Scans 354-356 (8.11), Background Scan 350
Location of Maximum: 198.00
Number of points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	261	165.00	2390	244.00	30176	346.00	1192
91.00	2031	166.00	2287	245.00	3818	347.00	246
92.00	2213	167.00	15212	246.00	5674	352.00	1766
93.00	13090	168.00	7036	247.00	1156	353.00	1101
94.00	1046	169.00	1270	248.00	267	354.00	1752
95.00	217	170.00	783	249.00	887	355.00	333
96.00	607	171.00	504	250.00	97	359.00	170
97.00	282	172.00	1264	251.00	292	365.00	7926
98.00	10261	173.00	1656	252.00	303	366.00	1138
99.00	8255	174.00	2956	253.00	590	367.00	60
100.00	857	175.00	5589	254.00	964	370.00	74
101.00	5015	176.00	1616	255.00	152640	371.00	482
102.00	303	177.00	2348	256.00	22544	372.00	3208
103.00	1740	178.00	716	257.00	1546	373.00	714
104.00	3142	179.00	9496	258.00	8391	383.00	762
105.00	3060	180.00	6653	259.00	1310	384.00	255
106.00	988	181.00	3099	260.00	228	390.00	308
107.00	39768	182.00	575	261.00	241	391.00	235
108.00	5833	183.00	274	264.00	282	392.00	181
109.00	1157	184.00	897	265.00	3263	401.00	152
110.00	72976	185.00	4790	266.00	389	402.00	1390
111.00	10594	186.00	40744	267.00	60	403.00	1774
112.00	1486	187.00	11527	268.00	71	404.00	736
113.00	498	188.00	1147	270.00	160	405.00	60
114.00	54	189.00	2478	271.00	281	415.00	51
115.00	162	190.00	366	272.00	350	421.00	1545
116.00	2011	191.00	1176	273.00	4162	422.00	1515
117.00	30632	192.00	3308	274.00	11904	423.00	10644
118.00	2160	193.00	3613	275.00	64520	424.00	2206
119.00	360	194.00	703	276.00	8379	425.00	210
120.00	423	195.00	464	277.00	5477	436.00	167
121.00	117	196.00	8008	278.00	892	437.00	238
122.00	2314	197.00	1455	279.00	174	438.00	168
123.00	3827	198.00	270848	282.00	116	439.00	191
124.00	1671	199.00	17800	283.00	607	441.00	29240

Data File: /chem/MSD1.i/s062809.b/s1f2801.d

Date : 28-JUN-2009 14:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1f2801.d

Spectrum: Avg. Scans 354-356 (8.11), Background Scan 350

Location of Maximum: 198.00

Number of points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	1672	200.00	1385	284.00	493	442.00	200704
126.00	722	201.00	1524	285.00	985	443.00	39408
127.00	135296	203.00	1796	286.00	147	444.00	3498
128.00	10214	204.00	10208	289.00	218	445.00	161
129.00	50968	205.00	17720	290.00	199		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201869908				
Client Sample:	QC for batch 880635	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 880635	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 16:10	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2805-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	33.3	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	66.7	333
87-86-5	Pentachlorophenol	U	333	ug/kg	66.7	333
129-00-0	Pyrene	U	33.3	ug/kg	10.5	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	133	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	333	ug/kg	66.7	333
99-09-2	3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201869908				
Client Sample:	QC for batch 880635	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 880635	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 16:10	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2805-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	33.3	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	33.3	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.12	157	ug/kg		J
	Unknown Aldol Condensate	2.91	482	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2805-2.d
Lab Smp Id: 1201869908 Client Smp ID: SBLK01
Inj Date : 28-JUN-2009 16:10
Operator : nag1 Inst ID: MSD1.i
Smp Info : |1201869908|880638|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	337511	40.0000	
* 29 Naphthalene-d8	136	4.751	4.757	(1.000)	1322068	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	642823	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1216791	40.0000	
* 91 Chrysene-d12	240	8.639	8.645	(1.000)	1018105	40.0000	
* 98 Perylene-d12	264	10.081	10.086	(1.000)	799623	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	566209	63.2823	2110
$ 5 Phenol-d5	99	3.599	3.598	(0.926)	659532	59.2870	1980
$ 20 Nitrobenzene-d5	82	4.246	4.251	(0.894)	346865	30.8211	1030
$ 39 2-Fluorobiphenyl	172	5.493	5.492	(0.916)	640873	36.5969	1220
$ 60 2,4,6-Tribromophenol	329	6.528	6.533	(1.088)	117157	51.8099	1730
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	748604	43.8173	1460

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2805-2.d
Lab Smp Id: 1201869908 Client Smp ID: SBLK01
Inj Date : 28-JUN-2009 16:10
Operator : nagl Inst ID: MSD1.i
Smp Info : |1201869908|880638|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.887	2220230	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.122	261062	4.70332552	157	0		0	10
Unknown Aldol Condensate				CAS #:			
2.910	801786	14.4450878	482	0		0	10

Data File: /chem/MSD1.i/s062809.b/s1f2805-2.d
Date : 28-JUN-2009 16:10
Client ID: SBLK01
Sample Info: |1201869908|880638|1|SVMF|1|SBLK01
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nag1
Column diameter: 0.20

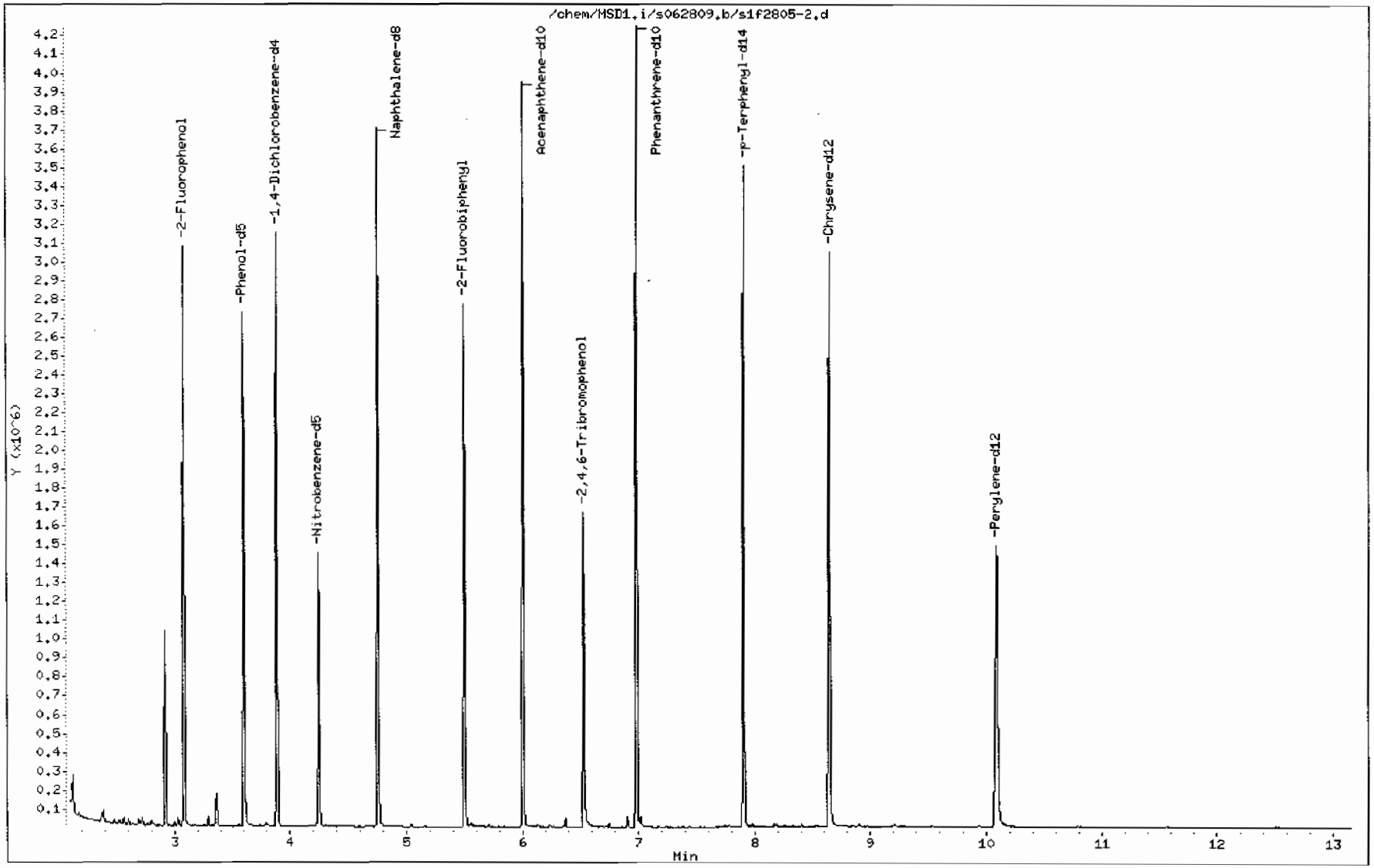

Data File: /chem/MSD1.i/s062809.b/s1f2805-2.d

Date : 28-JUN-2009 16:10

Client ID: SBLK01

Instrument: MSD1.i

Sample Info: |1201869908188063811|SVMF|1|SBLK01

Volume Injected (uL): 0.5

Operator: nag1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2355	25	C3H5ClO	92
Ethanol, 2-nitro-, propionate (ester)	5390-28-3	NIST05.L	21507	17	C5H9NO4	147
Acetic acid, hydrazide	1068-57-1	NIST05.L	761	16	C2H6N2O	74

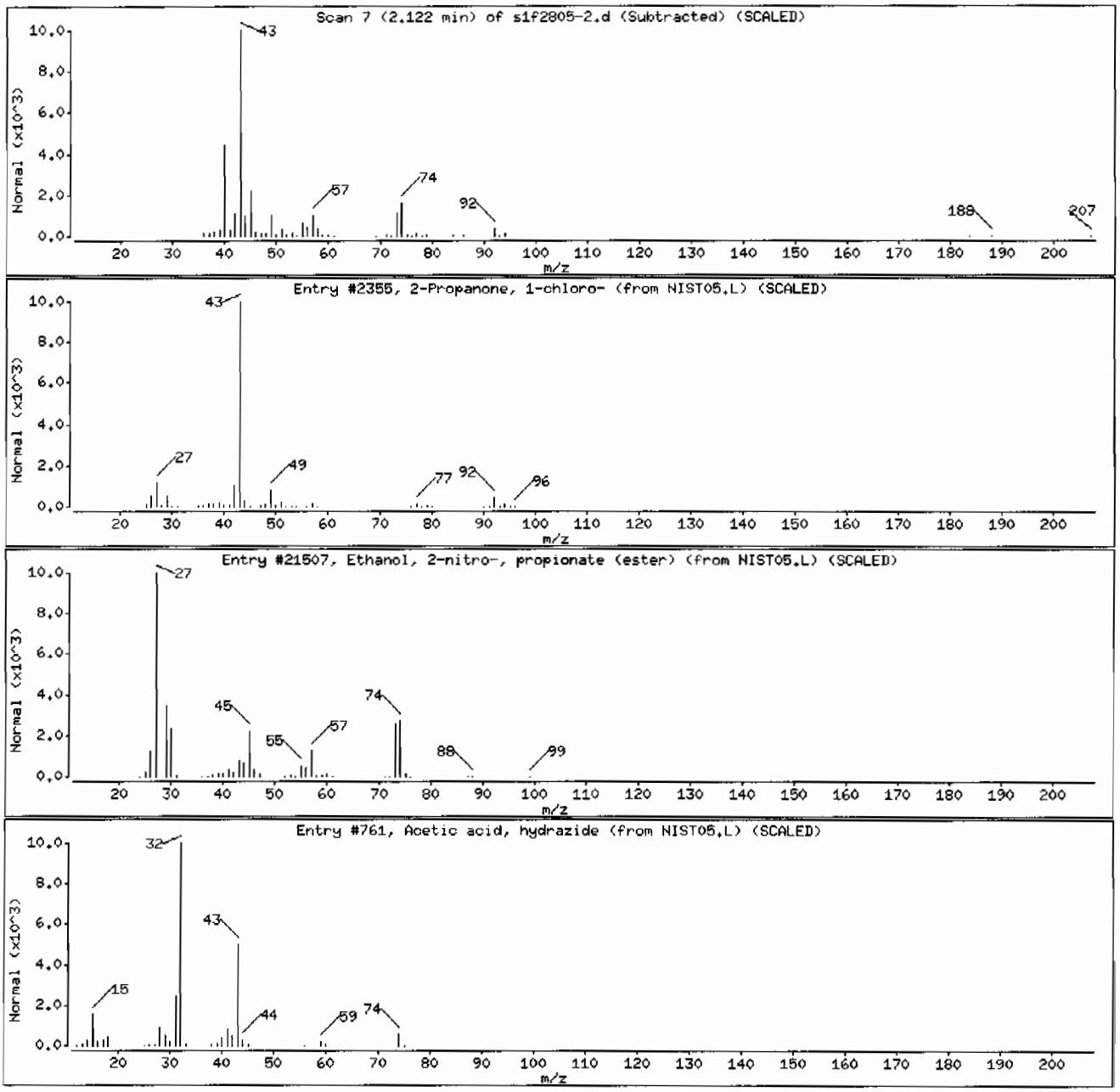

Data File: /chem/MSD1.i/s062809.b/s1f2805-2.d

Date : 28-JUN-2009 16:10

Client ID: SBLK01

Instrument: MSD1.i

Sample Info: 1|120186990818806381|1|SVMF|1|SBLK01

Volume Injected (uL): 0.5

Operator: nag1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Diacetamide	625-77-4	NIST05.L	3936	9	C4H7NO2	101

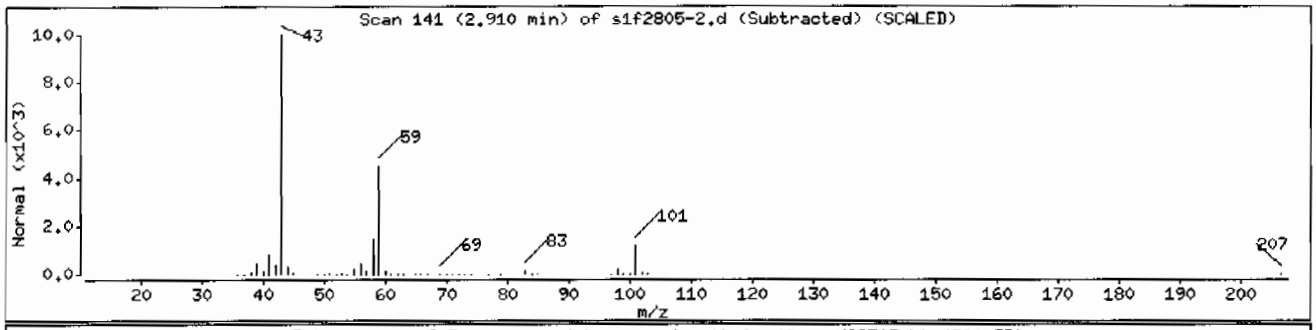

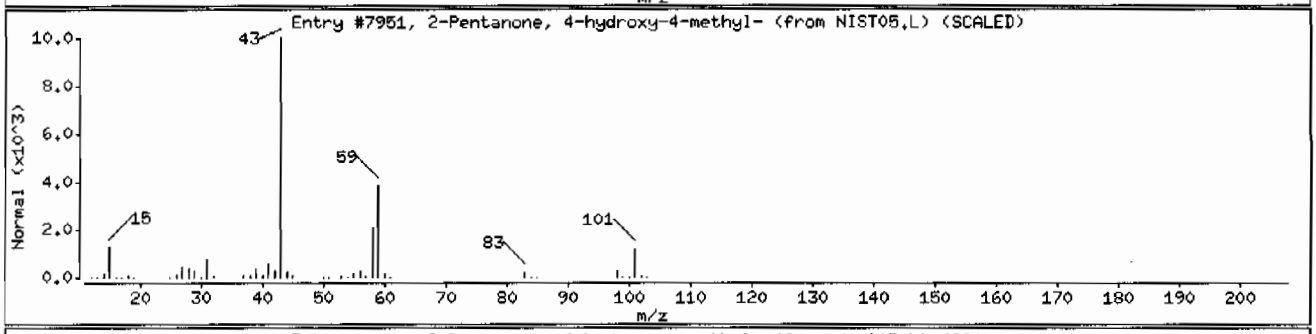

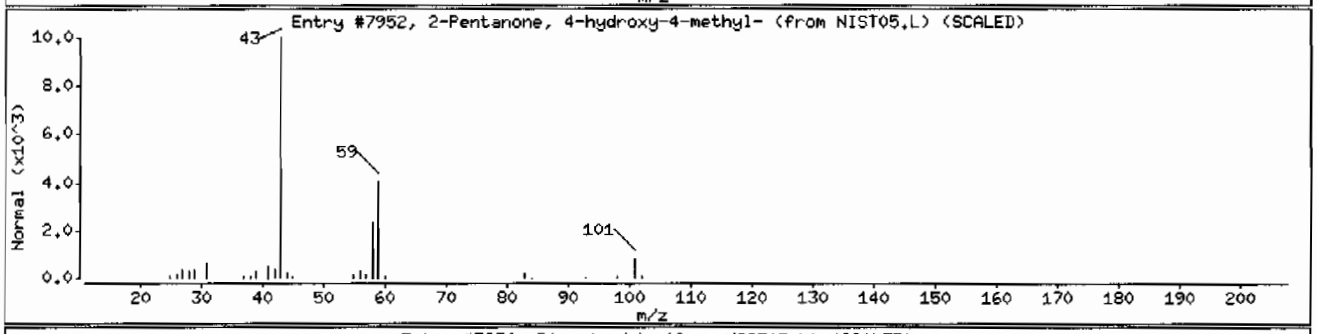

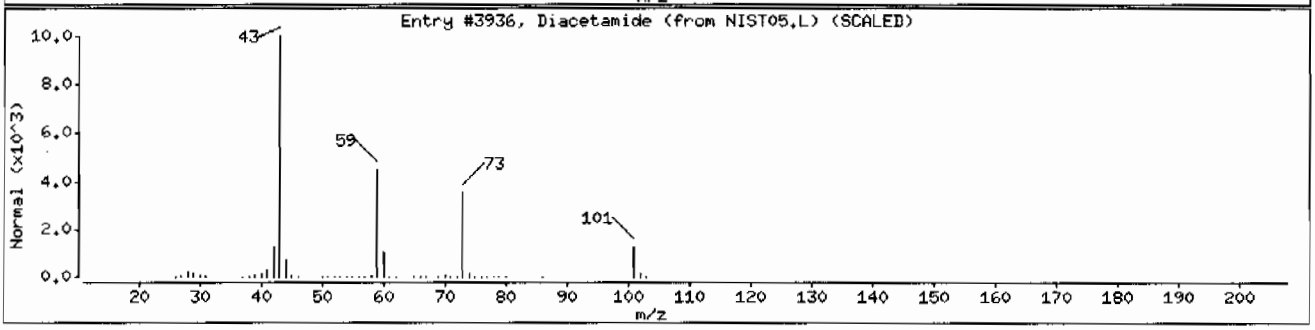

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201869909				
Client Sample:	QC for batch 880635	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 880635	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 16:34	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2806-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1310	ug/kg	66.7	333
108-95-2	Phenol		1040	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1110	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		941	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1070	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1200	ug/kg	33.3	333
83-32-9	Acenaphthene		1210	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene		1290	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1490	ug/kg	66.7	333
87-86-5	Pentachlorophenol		1120	ug/kg	66.7	333
129-00-0	Pyrene		1460	ug/kg	10.5	33.3
110-86-1	Pyridine		1080	ug/kg	66.7	333
62-53-3	Aniline		1080	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether		1010	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		979	ug/kg	66.7	333
100-51-6	Benzyl alcohol		982	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		968	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1020	ug/kg	66.7	333
95-48-7	o-Cresol		1010	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1160	ug/kg	133	333
67-72-1	Hexachloroethane		933	ug/kg	66.7	333
98-95-3	Nitrobenzene		1070	ug/kg	66.7	333
78-59-1	Isophorone		1150	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1140	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol		1170	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane		1200	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1140	ug/kg	66.7	333
65-85-0	Benzoic acid	J	392	ug/kg	167	667
91-20-3	Naphthalene		1090	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1210	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		925	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1160	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1480	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1240	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1410	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1330	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline		1350	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline		1780	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201869909				
Client Sample:	QC for batch 880635	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 880635	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 16:34	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2806-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1300	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1280	ug/kg	33.3	333
208-96-8	Acenaphthylene		1400	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		701	ug/kg	127	667
132-64-9	Dibenzofuran		1330	ug/kg	66.7	333
84-66-2	Diethylphthalate		1350	ug/kg	66.7	333
86-73-7	Fluorene		1160	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1210	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol		920	ug/kg	66.7	333
100-01-6	4-Nitroaniline		1630	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1430	ug/kg	66.7	333
122-66-7	Azobenzene		1380	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1160	ug/kg	33.3	333
118-74-1	Hexachlorobenzene		1220	ug/kg	66.7	333
85-01-8	Phenanthrene		1230	ug/kg	10.0	33.3
120-12-7	Anthracene		1270	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1360	ug/kg	33.3	333
206-44-0	Fluoranthene		1260	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1620	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1270	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1340	ug/kg	100	333
218-01-9	Chrysene		1360	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1460	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1400	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1240	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1340	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1300	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1190	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1240	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1250	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1040	ug/kg	66.7	333

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2806-2.d
Lab Smp Id: 1201869909 Client Smp ID: SBLK01LCS
Inj Date : 28-JUN-2009 16:34
Operator : nagl Inst ID: MSD1.i
Smp Info : |1201869909|880638|1|SVMF|1|SBLK01LCS
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	295004	40.0000	
* 29 Naphthalene-d8	136	4.757	4.757	(1.000)	1189285	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	583548	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1095915	40.0000	
* 91 Chrysene-d12	240	8.639	8.645	(1.000)	884459	40.0000	
* 98 Perylene-d12	264	10.086	10.086	(1.000)	756719	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	503328	64.3600	2140
$ 5 Phenol-d5	99	3.604	3.598	(0.927)	572195	58.8474	1960
$ 20 Nitrobenzene-d5	82	4.251	4.251	(0.894)	313734	30.9897	1030
$ 39 2-Fluorobiphenyl	172	5.498	5.492	(0.917)	597543	37.5886	1250
$ 60 2,4,6-Tribromophenol	329	6.534	6.533	(1.089)	137218	66.8453	2230
$ 81 p-Terphenyl-d14	244	7.892	7.898	(0.914)	622303	41.9286	1400

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.616	3.610	(0.930)	315831	31.1522	1040(Q)
8 2-Chlorophenol	128	3.751	3.751	(0.965)	271029	33.3962	1110
11 1,4-Dichlorobenzene	146	3.898	3.898	(1.003)	279370	28.2201	941
17 N-Nitrosodipropylamine	70	4.122	4.128	(1.061)	182699	31.9511	1060(Q)
28 1,2,4-Trichlorobenzene	180	4.704	4.704	(0.989)	249977	31.2661	1040
33 4-Chloro-3-methylphenol	107	5.104	5.098	(1.073)	262871	35.9881	1200
47 Acenaphthene	154	6.022	6.022	(1.004)	509818	36.3167	1210
50 2,4-Dinitrotoluene	165	6.104	6.110	(1.018)	197461	38.5760	1280
52 4-Nitrophenol	139	6.040	6.034	(1.007)	107084	44.7611	1490
65 Pentachlorophenol	266	6.851	6.851	(0.981)	89854	33.6618	1120
79 Pyrene	202	7.845	7.845	(0.908)	1026550	43.8148	1460
2 Pyridine	79	2.428	2.398	(0.625)	209992	32.3564	1080
4 Aniline	66	3.669	3.675	(0.944)	170016	32.4976	1080
7 bis(2-Chloroethyl) ether	63	3.687	3.692	(0.949)	283507	30.2575	1010
9 1,3-Dichlorobenzene	146	3.857	3.857	(0.992)	287235	29.3693	979
12 Benzyl alcohol	108	3.957	3.957	(1.018)	168503	29.4642	982
13 1,2-Dichlorobenzene	146	4.004	4.004	(1.030)	263811	29.0342	968
14 bis(2-Chloroisopropyl)ether	45	4.034	4.034	(1.038)	740487	30.7333	1020
15 o-Cresol	107	4.010	4.004	(1.032)	210681	30.2281	1010
18 m,p-Cresols	107	4.104	4.104	(1.056)	319212	34.6639	1160
19 Hexachloroethane	117	4.234	4.234	(1.089)	113582	27.9893	933
21 Nitrobenzene	77	4.263	4.269	(0.896)	315550	32.1454	1070
22 Isophorone	82	4.416	4.416	(0.928)	621433	34.3667	1140
23 2-Nitrophenol	139	4.481	4.481	(0.942)	136137	34.3488	1140
24 2,4-Dimethylphenol	122	4.469	4.469	(0.939)	248240	34.9769	1160
25 bis(2-Chloroethoxy)methane	93	4.540	4.540	(0.954)	339428	35.9591	1200
26 2,4-Dichlorophenol	162	4.640	4.640	(0.975)	215478	34.2622	1140
27 Benzoic acid	105	4.504	4.522	(0.947)	62402	11.7503	392(aQR)
30 Naphthalene	128	4.769	4.769	(1.002)	773621	32.6489	1090
31 4-Chloroaniline	127	4.787	4.787	(1.006)	323062	36.2579	1210
32 Hexachlorobutadiene	225	4.834	4.834	(1.016)	144057	27.7444	925
34 2-Methylnaphthalene	142	5.251	5.251	(1.104)	545167	34.6973	1160
36 Hexachlorocyclopentadiene	237	5.351	5.351	(0.892)	127833	44.5115	1480
37 2,4,6-Trichlorophenol	196	5.440	5.434	(0.907)	161388	37.2468	1240
38 2,4,5-Trichlorophenol	196	5.469	5.463	(0.912)	190650	42.4014	1410
40 2-Chloronaphthalene	162	5.604	5.604	(0.934)	529138	39.9600	1330
42 o-Nitroaniline	65	5.657	5.657	(0.943)	214967	40.3525	1340
41 m-Nitroaniline	138	5.951	5.951	(0.992)	151219	53.4189	1780
43 Dimethylphthalate	163	5.769	5.769	(0.962)	625774	38.9442	1300
44 2,6-Dinitrotoluene	165	5.822	5.822	(0.971)	149049	38.4389	1280
45 Acenaphthylene	152	5.904	5.904	(0.984)	886520	41.8786	1400
48 2,4-Dinitrophenol	184	6.016	6.016	(1.003)	36750	21.0157	700(Q)
49 Dibenzofuran	168	6.139	6.139	(1.024)	782139	39.8115	1330
51 Diethylphthalate	149	6.251	6.251	(1.042)	688726	40.4352	1350
53 Fluorene	166	6.375	6.375	(1.063)	570007	34.7675	1160
54 4-Chlorophenylphenylether	204	6.351	6.351	(1.059)	304642	36.2955	1210
55 2-Methyl-4,6-dinitrophenol	198	6.387	6.386	(0.915)	73323	27.5999	920

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.375	6.369	(1.063)	119715	49.0383	1630
133 Diphenylamine	169	6.428	6.428	(0.921)	540328	42.9268	1430
58 1,2-Diphenylhydrazine	77	6.463	6.457	(0.926)	765817	41.3627	1380
61 4-Bromophenylphenylether	248	6.681	6.675	(0.957)	162131	34.8771	1160
63 Hexachlorobenzene	284	6.734	6.733	(0.965)	182417	36.5116	1220
68 Phenanthrene	178	6.998	6.998	(1.003)	853410	36.7786	1220
69 Anthracene	178	7.028	7.028	(1.007)	886097	38.2498	1270
72 Di-n-butylphthalate	149	7.275	7.275	(1.042)	1178731	40.9276	1360
76 Fluoranthene	202	7.710	7.710	(1.104)	982386	37.8165	1260
85 Butylbenzylphthalate	149	8.157	8.163	(0.944)	484326	48.6533	1620
89 Benzo(a)anthracene	228	8.628	8.633	(0.999)	779638	38.0352	1270
90 3,3'-Dichlorobenzidine	252	8.569	8.569	(0.992)	250314	40.3001	1340
92 Chrysene	228	8.663	8.663	(1.003)	791110	40.7837	1360
93 bis(2-Ethylhexyl)phthalate	149	8.516	8.516	(0.986)	620837	43.8756	1460
94 Di-n-octylphthalate	149	9.045	9.045	(0.897)	963278	42.0287	1400
95 Benzo(b)fluoranthene	252	9.622	9.622	(0.954)	671882	37.2953	1240
96 Benzo(k)fluoranthene	252	9.651	9.651	(0.957)	795985	40.2550	1340
97 Benzo(a)pyrene	252	10.016	10.016	(0.993)	635110	38.9815	1300
99 Indeno(1,2,3-cd)pyrene	276	11.692	11.692	(1.159)	574443	35.7729	1190
100 Dibenzo(a,h)anthracene	278	11.704	11.698	(1.160)	477617	37.3281	1240
101 Benzo(ghi)perylene	276	12.198	12.198	(1.209)	499273	37.5224	1250(Q)
1 N-Methyl-N-nitrosomethylamine	74	2.381	2.369	(0.613)	146323	39.2464	1310

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD1.i/s062809.b/s1f2806-2.d
Date : 28-JUN-2009 16:34
Client ID: SBLK01LCS
Sample Info: 1|2018699091880638|1|SVMF|1|SBLK01LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nagl
Column diameter: 0.20

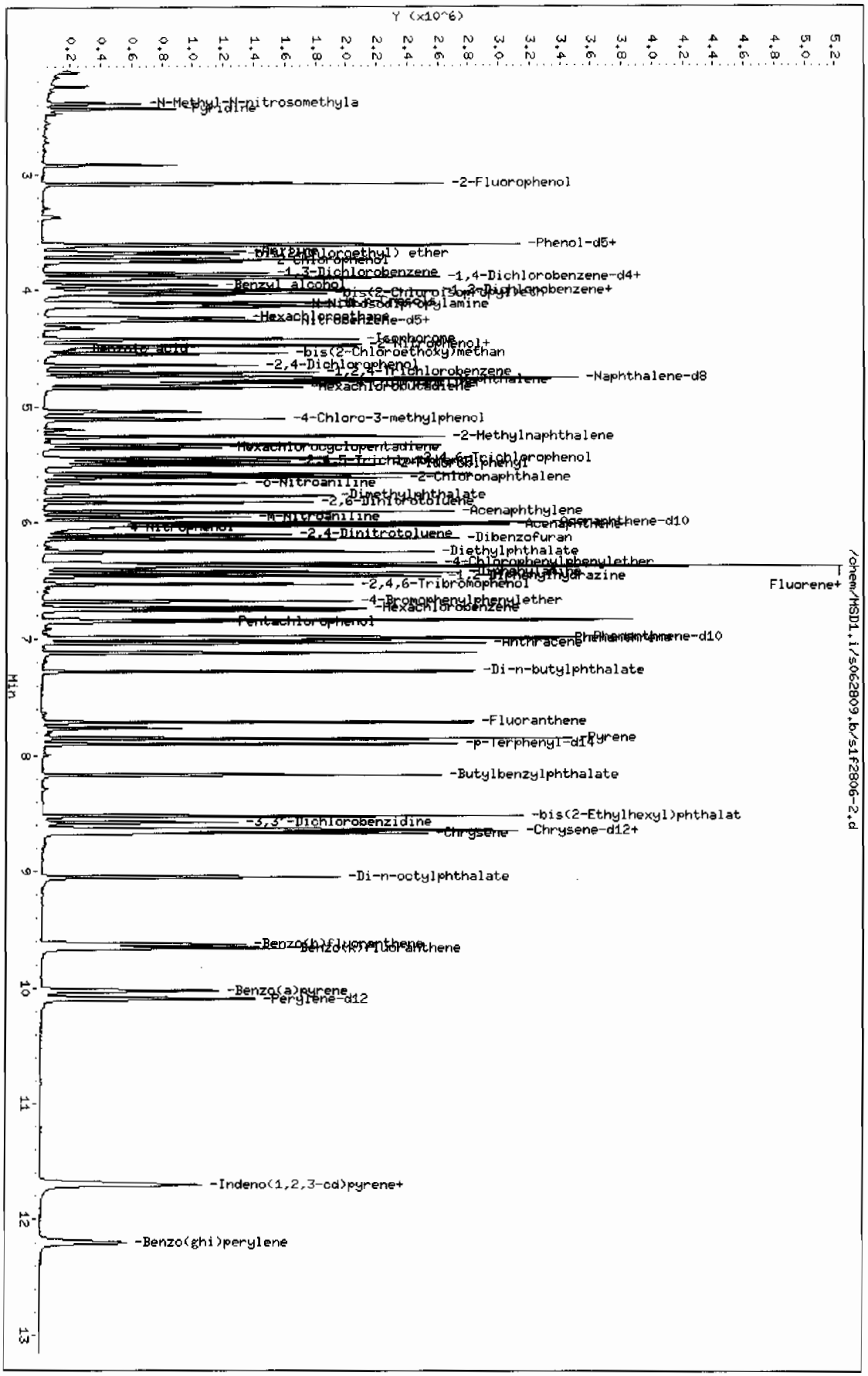

Page 1

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201869910	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
Client Sample:	QC for batch 880635	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10462MS	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 17:48	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	s1f2809.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1200	ug/kg	71.1	356
108-95-2	Phenol		1070	ug/kg	71.1	356
95-57-8	2-Chlorophenol		1130	ug/kg	71.1	356
106-46-7	1,4-Dichlorobenzene		963	ug/kg	71.1	356
621-64-7	N-Nitrosodipropylamine		1020	ug/kg	71.1	356
59-50-7	4-Chloro-3-methylphenol		1210	ug/kg	35.6	356
83-32-9	Acenaphthene		1200	ug/kg	11.9	35.6
121-14-2	2,4-Dinitrotoluene		1290	ug/kg	35.6	356
100-02-7	4-Nitrophenol		1490	ug/kg	71.1	356
87-86-5	Pentachlorophenol		1230	ug/kg	71.1	356
129-00-0	Pyrene		1510	ug/kg	11.2	35.6
110-86-1	Pyridine		918	ug/kg	71.1	356
62-53-3	Aniline		1160	ug/kg	124	356
111-44-4	bis(2-Chloroethyl) ether		1040	ug/kg	71.1	356
541-73-1	1,3-Dichlorobenzene		1020	ug/kg	71.1	356
100-51-6	Benzyl alcohol		875	ug/kg	107	356
95-50-1	1,2-Dichlorobenzene		1020	ug/kg	71.1	356
108-60-1	bis(2-Chloroisopropyl)ether		1070	ug/kg	71.1	356
95-48-7	o-Cresol		1000	ug/kg	71.1	356
65794-96-9	m,p-Cresols		1240	ug/kg	142	356
67-72-1	Hexachloroethane		970	ug/kg	71.1	356
98-95-3	Nitrobenzene		1130	ug/kg	71.1	356
78-59-1	Isophorone		1190	ug/kg	71.1	356
88-75-5	2-Nitrophenol		1180	ug/kg	35.6	356
105-67-9	2,4-Dimethylphenol		1360	ug/kg	71.1	356
111-91-1	bis(2-Chloroethoxy)methane		1250	ug/kg	71.1	356
120-83-2	2,4-Dichlorophenol		1190	ug/kg	71.1	356
65-85-0	Benzoic acid	J	571	ug/kg	178	711
91-20-3	Naphthalene		1120	ug/kg	10.7	35.6
106-47-8	4-Chloroaniline		1240	ug/kg	71.1	356
87-68-3	Hexachlorobutadiene		939	ug/kg	71.1	356
91-57-6	2-Methylnaphthalene		1200	ug/kg	7.11	35.6
77-47-4	Hexachlorocyclopentadiene		1480	ug/kg	71.1	356
88-06-2	2,4,6-Trichlorophenol		1120	ug/kg	71.1	356
95-95-4	2,4,5-Trichlorophenol		1430	ug/kg	71.1	356
91-58-7	2-Chloronaphthalene		1330	ug/kg	12.4	35.6
88-74-4	2-Nitroaniline		1330	ug/kg	71.1	356
99-09-2	*o-Nitroaniline* 3-Nitroaniline		1830	ug/kg	71.1	356

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201869910	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
Client Sample:	QC for batch 880635	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10462MS	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 17:48	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	s1f2809.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1300	ug/kg	71.1	356
606-20-2	2,6-Dinitrotoluene		1280	ug/kg	35.6	356
208-96-8	Acenaphthylene		1420	ug/kg	10.7	35.6
51-28-5	2,4-Dinitrophenol	J	552	ug/kg	135	711
132-64-9	Dibenzofuran		1310	ug/kg	71.1	356
84-66-2	Diethylphthalate		1350	ug/kg	71.1	356
86-73-7	Fluorene		1170	ug/kg	10.7	35.6
7005-72-3	4-Chlorophenylphenylether		1210	ug/kg	35.6	356
534-52-1	2-Methyl-4,6-dinitrophenol		852	ug/kg	71.1	356
100-01-6	4-Nitroaniline		1810	ug/kg	71.1	356
	p-Nitroaniline					
122-39-4	Diphenylamine		1470	ug/kg	71.1	356
122-66-7	Azobenzene		1390	ug/kg	71.1	356
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1190	ug/kg	35.6	356
118-74-1	Hexachlorobenzene		1220	ug/kg	71.1	356
85-01-8	Phenanthrene		1250	ug/kg	10.7	35.6
120-12-7	Anthracene		1300	ug/kg	7.11	35.6
84-74-2	Di-n-butylphthalate		1370	ug/kg	35.6	356
206-44-0	Fluoranthene		1300	ug/kg	10.7	35.6
85-68-7	Butylbenzylphthalate		1650	ug/kg	71.1	356
56-55-3	Benzo(a)anthracene		1340	ug/kg	10.7	35.6
91-94-1	3,3'-Dichlorobenzidine		1380	ug/kg	107	356
218-01-9	Chrysene		1370	ug/kg	10.7	35.6
117-81-7	bis(2-Ethylhexyl)phthalate		1500	ug/kg	71.1	356
117-84-0	Di-n-octylphthalate		1490	ug/kg	71.1	356
205-99-2	Benzo(b)fluoranthene		1390	ug/kg	10.7	35.6
207-08-9	Benzo(k)fluoranthene		1300	ug/kg	10.7	35.6
50-32-8	Benzo(a)pyrene		1330	ug/kg	10.7	35.6
193-39-5	Indeno(1,2,3-cd)pyrene		1160	ug/kg	10.7	35.6
53-70-3	Dibenzo(a,h)anthracene		1170	ug/kg	10.7	35.6
191-24-2	Benzo(ghi)perylene		1210	ug/kg	10.7	35.6
120-82-1	1,2,4-Trichlorobenzene		1090	ug/kg	71.1	356

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2809.d
Lab Smp Id: 1201869910 Client Smp ID: CAMO-09-10462MS
Inj Date : 28-JUN-2009 17:48
Operator : nagl Inst ID: MSD1.i
Smp Info : |1201869910|880638|1|SVMF|1|MS
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 9 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.08000	weight of sample
M	6.53160	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	335766	40.0000	
* 29 Naphthalene-d8	136	4.757	4.757	(1.000)	1344134	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	667488	40.0000	
* 67 Phenanthrene-d10	188	6.987	6.981	(1.000)	1254705	40.0000	
* 91 Chrysene-d12	240	8.645	8.645	(1.000)	997134	40.0000	
* 98 Perylene-d12	264	10.086	10.086	(1.000)	816850	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	514730	57.8276	2060
$ 5 Phenol-d5	99	3.604	3.598	(0.927)	575203	51.9751	1850
$ 20 Nitrobenzene-d5	82	4.251	4.251	(0.894)	339065	29.6335	1050
$ 39 2-Fluorobiphenyl	172	5.498	5.492	(0.917)	605971	33.3251	1180
$ 60 2,4,6-Tribromophenol	329	6.534	6.533	(1.089)	134255	57.1776	2030
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	634013	37.8906	1350

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.616	3.610	(0.930)	348241	30.1790	1070(Q)
8 2-Chlorophenol	128	3.751	3.751	(0.965)	293624	31.7880	1130
11 1,4-Dichlorobenzene	146	3.898	3.898	(1.003)	304955	27.0648	963
17 N-Nitrosodipropylamine	70	4.122	4.128	(1.061)	186892	28.7165	1020(Q)
28 1,2,4-Trichlorobenzene	180	4.704	4.704	(0.989)	275712	30.5122	1080
33 4-Chloro-3-methylphenol	107	5.104	5.098	(1.073)	280385	33.9637	1210
47 Acenaphthene	154	6.022	6.022	(1.004)	540432	33.6563	1200
50 2,4-Dinitrotoluene	165	6.104	6.110	(1.018)	212530	36.2986	1290
52 4-Nitrophenol	139	6.045	6.034	(1.008)	114591	41.8755	1490
65 Pentachlorophenol	266	6.851	6.851	(0.981)	105856	34.6379	1230
79 Pyrene	202	7.845	7.845	(0.907)	1120098	42.4053	1510
2 Pyridine	79	2.428	2.398	(0.625)	190751	25.8235	918
4 Aniline	66	3.669	3.675	(0.944)	194655	32.6902	1160(Q)
7 bis(2-Chloroethyl) ether	63	3.687	3.692	(0.949)	312313	29.2854	1040
9 1,3-Dichlorobenzene	146	3.851	3.857	(0.991)	318414	28.6049	1020
12 Benzyl alcohol	108	3.957	3.957	(1.018)	160163	24.6061	875
13 1,2-Dichlorobenzene	146	4.004	4.004	(1.030)	297067	28.7252	1020
14 bis(2-Chloroisopropyl)ether	45	4.034	4.034	(1.038)	821800	29.9674	1060
15 o-Cresol	107	4.010	4.004	(1.032)	223796	28.2117	1000
18 m,p-Cresols	107	4.104	4.104	(1.056)	364195	34.7475	1240
19 Hexachloroethane	117	4.234	4.234	(1.089)	125962	27.2718	970
21 Nitrobenzene	77	4.263	4.269	(0.896)	352863	31.8054	1130
22 Isophorone	82	4.416	4.416	(0.928)	681486	33.3461	1190
23 2-Nitrophenol	139	4.481	4.481	(0.942)	148442	33.1388	1180
24 2,4-Dimethylphenol	122	4.475	4.469	(0.941)	307202	38.2981	1360
25 bis(2-Chloroethoxy)methane	93	4.540	4.540	(0.954)	373468	35.0073	1240
26 2,4-Dichlorophenol	162	4.640	4.640	(0.975)	237492	33.4123	1190
27 Benzoic acid	105	4.510	4.522	(0.948)	96422	16.0647	571(aQ)
30 Naphthalene	128	4.769	4.769	(1.002)	846907	31.6242	1120
31 4-Chloroaniline	127	4.787	4.787	(1.006)	350297	34.7855	1240
32 Hexachlorobutadiene	225	4.834	4.834	(1.016)	154865	26.3900	939
34 2-Methylnaphthalene	142	5.251	5.251	(1.104)	599740	33.7733	1200
36 Hexachlorocyclopentadiene	237	5.351	5.351	(0.892)	136776	41.6366	1480
37 2,4,6-Trichlorophenol	196	5.440	5.434	(0.907)	156032	31.4823	1120
38 2,4,5-Trichlorophenol	196	5.469	5.463	(0.912)	207184	40.2840	1430
40 2-Chloronaphthalene	162	5.604	5.604	(0.934)	566690	37.4141	1330
42 o-Nitroaniline	65	5.657	5.657	(0.943)	227144	37.2764	1320
41 m-Nitroaniline	138	5.951	5.951	(0.992)	166178	51.3213	1820
43 Dimethylphthalate	163	5.769	5.769	(0.962)	672923	36.6121	1300
44 2,6-Dinitrotoluene	165	5.822	5.822	(0.971)	160167	36.1118	1280
45 Acenaphthylene	152	5.904	5.904	(0.984)	965482	39.8732	1420
48 2,4-Dinitrophenol	184	6.022	6.016	(1.004)	31048	15.5223	552(aQ)
49 Dibenzofuran	168	6.139	6.139	(1.024)	826012	36.7573	1310
51 Diethylphthalate	149	6.251	6.251	(1.042)	738978	37.9296	1350
53 Fluorene	166	6.375	6.375	(1.063)	617088	32.9059	1170
54 4-Chlorophenylphenylether	204	6.351	6.351	(1.059)	327160	34.0766	1210
55 2-Methyl-4,6-dinitrophenol	198	6.387	6.386	(0.914)	72893	23.9657	852

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.375	6.369	(1.063)	141896	50.8150	1810
133 Diphenylamine	169	6.434	6.428	(0.921)	597495	41.4611	1470
58 1,2-Diphenylhydrazine	77	6.463	6.457	(0.925)	827644	39.0448	1390
61 4-Bromophenylphenylether	248	6.681	6.675	(0.956)	177857	33.4181	1190
63 Hexachlorobenzene	284	6.734	6.733	(0.964)	196280	34.3144	1220
68 Phenanthrene	178	6.998	6.998	(1.002)	930604	35.0297	1240
69 Anthracene	178	7.034	7.028	(1.007)	971084	36.6134	1300
72 Di-n-butylphthalate	149	7.275	7.275	(1.041)	1271566	38.5634	1370
76 Fluoranthene	202	7.710	7.710	(1.104)	1090083	36.6517	1300
85 Butylbenzylphthalate	149	8.163	8.163	(0.944)	521588	46.4758	1650
89 Benzo(a)anthracene	228	8.633	8.633	(0.999)	872112	37.7389	1340
90 3,3'-Dichlorobenzidine	252	8.575	8.569	(0.992)	272305	38.8867	1380
92 Chrysene	228	8.663	8.663	(1.002)	844625	38.6222	1370
93 bis(2-Ethylhexyl)phthalate	149	8.516	8.516	(0.985)	674667	42.2921	1500
94 Di-n-octylphthalate	149	9.045	9.045	(0.897)	1034618	41.8183	1490
95 Benzo(b)fluoranthene	252	9.622	9.622	(0.954)	762309	39.0299	1390
96 Benzo(k)fluoranthene	252	9.651	9.651	(0.957)	782113	36.6418	1300
97 Benzo(a)pyrene	252	10.016	10.016	(0.993)	658464	37.5146	1330
99 Indeno(1,2,3-cd)pyrene	276	11.698	11.692	(1.160)	565402	32.6814	1160
100 Dibenzo(a,h)anthracene	278	11.704	11.698	(1.160)	449446	32.7901	1170
101 Benzo(ghi)perylene	276	12.198	12.198	(1.209)	487432	33.9097	1210(Q)
1 N-Methyl-N-nitrosomethylamine	74	2.399	2.369	(0.617)	143398	33.7926	1200

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD1.i/s062809.b/s1f2809.d
Date : 28-JUN-2009 17:48
Client ID: CAMD-09-10462MS
Sample Info: |1201869910188063 8|1|SWMF11|MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nagl
Column diameter: 0.20

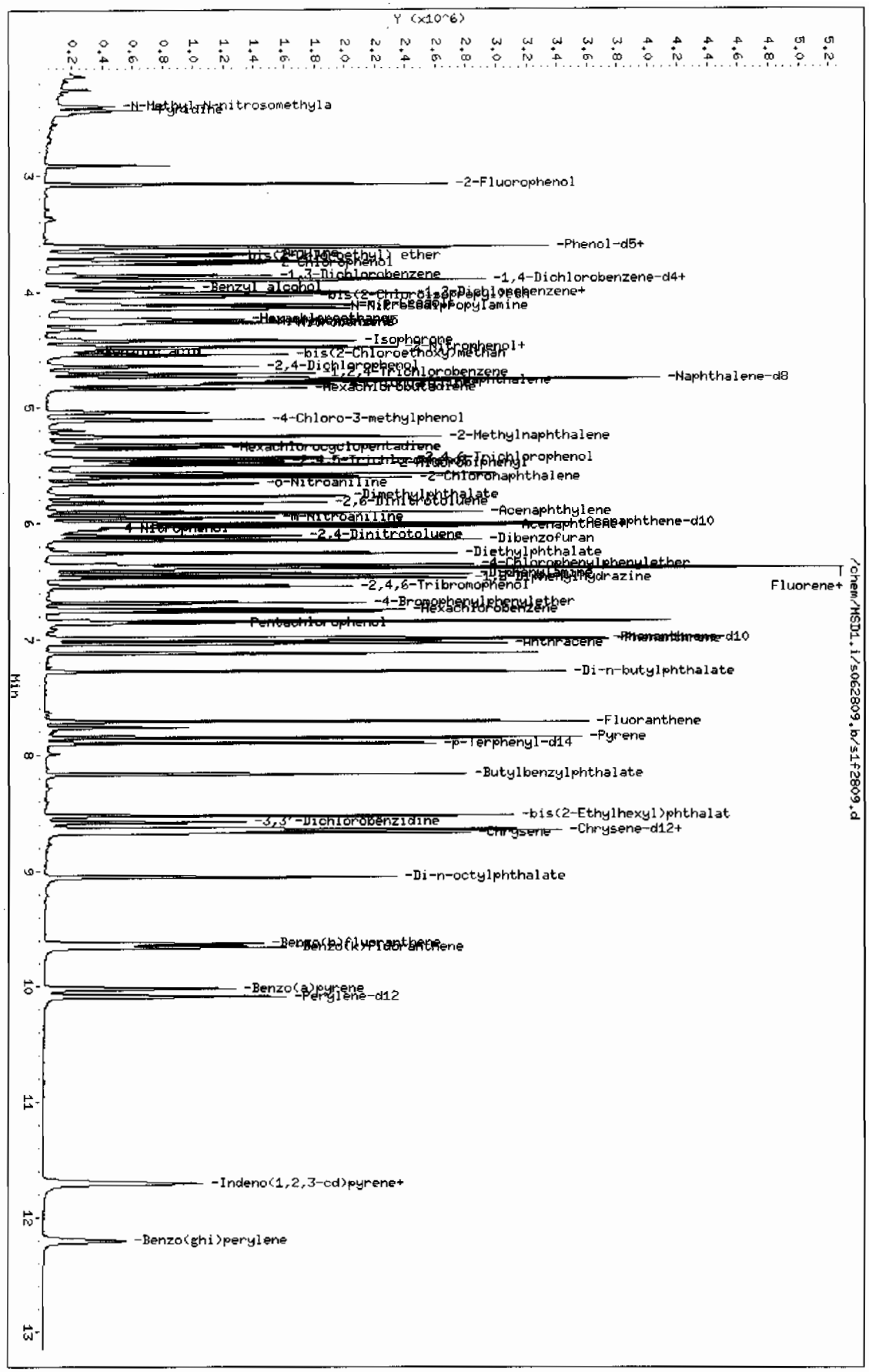

Page 1

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201869911	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
Client Sample:	QC for batch 880635	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10462MSD	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 18:13	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2810.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1080	ug/kg	71.3	357
108-95-2	Phenol		1010	ug/kg	71.3	357
95-57-8	2-Chlorophenol		1050	ug/kg	71.3	357
106-46-7	1,4-Dichlorobenzene		912	ug/kg	71.3	357
621-64-7	N-Nitrosodipropylamine		1080	ug/kg	71.3	357
59-50-7	4-Chloro-3-methylphenol		1140	ug/kg	35.7	357
83-32-9	Acenaphthene		1170	ug/kg	11.9	35.7
121-14-2	2,4-Dinitrotoluene		1240	ug/kg	35.7	357
100-02-7	4-Nitrophenol		913	ug/kg	71.3	357
87-86-5	Pentachlorophenol		1020	ug/kg	71.3	357
129-00-0	Pyrene		1350	ug/kg	11.2	35.7
110-86-1	Pyridine		738	ug/kg	71.3	357
62-53-3	Aniline		1040	ug/kg	125	357
111-44-4	bis(2-Chloroethyl) ether		969	ug/kg	71.3	357
541-73-1	1,3-Dichlorobenzene		963	ug/kg	71.3	357
100-51-6	Benzyl alcohol		514	ug/kg	107	357
95-50-1	1,2-Dichlorobenzene		951	ug/kg	71.3	357
108-60-1	bis(2-Chloroisopropyl)ether		1010	ug/kg	71.3	357
95-48-7	o-Cresol		988	ug/kg	71.3	357
65794-96-9	m,p-Cresols		1210	ug/kg	143	357
67-72-1	Hexachloroethane		918	ug/kg	71.3	357
98-95-3	Nitrobenzene		1090	ug/kg	71.3	357
78-59-1	Isophorone		1130	ug/kg	71.3	357
88-75-5	2-Nitrophenol		1150	ug/kg	35.7	357
105-67-9	2,4-Dimethylphenol		1410	ug/kg	71.3	357
111-91-1	bis(2-Chloroethoxy)methane		1200	ug/kg	71.3	357
120-83-2	2,4-Dichlorophenol		1140	ug/kg	71.3	357
65-85-0	Benzoic acid	J	448	ug/kg	178	713
91-20-3	Naphthalene		1080	ug/kg	10.7	35.7
106-47-8	4-Chloroaniline		1170	ug/kg	71.3	357
87-68-3	Hexachlorobutadiene		902	ug/kg	71.3	357
91-57-6	2-Methylnaphthalene		1160	ug/kg	7.13	35.7
77-47-4	Hexachlorocyclopentadiene		1450	ug/kg	71.3	357
88-06-2	2,4,6-Trichlorophenol		1120	ug/kg	71.3	357
95-95-4	2,4,5-Trichlorophenol		1480	ug/kg	71.3	357
91-58-7	2-Chloronaphthalene		1300	ug/kg	12.5	35.7
88-74-4	2-Nitroaniline		1320	ug/kg	71.3	357
99-09-2	*o-Nitroaniline* 3-Nitroaniline		1800	ug/kg	71.3	357

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201869911	**Date Received:**	06/25/2009 08:45	**%Moisture:**	6.5
Client Sample:	QC for batch 880635	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10462MSD	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 18:13	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2810.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1250	ug/kg	71.3	357
606-20-2	2,6-Dinitrotoluene		1230	ug/kg	35.7	357
208-96-8	Acenaphthylene		1380	ug/kg	10.7	35.7
51-28-5	2,4-Dinitrophenol	J	451	ug/kg	136	713
132-64-9	Dibenzofuran		1290	ug/kg	71.3	357
84-66-2	Diethylphthalate		1310	ug/kg	71.3	357
86-73-7	Fluorene		1130	ug/kg	10.7	35.7
7005-72-3	4-Chlorophenylphenylether		1180	ug/kg	35.7	357
534-52-1	2-Methyl-4,6-dinitrophenol		727	ug/kg	71.3	357
100-01-6	4-Nitroaniline		1740	ug/kg	71.3	357
	p-Nitroaniline					
122-39-4	Diphenylamine		1360	ug/kg	71.3	357
122-66-7	Azobenzene		1300	ug/kg	71.3	357
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1110	ug/kg	35.7	357
118-74-1	Hexachlorobenzene		1160	ug/kg	71.3	357
85-01-8	Phenanthrene		1190	ug/kg	10.7	35.7
120-12-7	Anthracene		1230	ug/kg	7.13	35.7
84-74-2	Di-n-butylphthalate		1320	ug/kg	35.7	357
206-44-0	Fluoranthene		1250	ug/kg	10.7	35.7
85-68-7	Butylbenzylphthalate		1500	ug/kg	71.3	357
56-55-3	Benzo(a)anthracene		1220	ug/kg	10.7	35.7
91-94-1	3,3'-Dichlorobenzidine		1290	ug/kg	107	357
218-01-9	Chrysene		1290	ug/kg	10.7	35.7
117-81-7	bis(2-Ethylhexyl)phthalate		1430	ug/kg	71.3	357
117-84-0	Di-n-octylphthalate		1330	ug/kg	71.3	357
205-99-2	Benzo(b)fluoranthene		1200	ug/kg	10.7	35.7
207-08-9	Benzo(k)fluoranthene		1240	ug/kg	10.7	35.7
50-32-8	Benzo(a)pyrene		1280	ug/kg	10.7	35.7
193-39-5	Indeno(1,2,3-cd)pyrene		1200	ug/kg	10.7	35.7
53-70-3	Dibenzo(a,h)anthracene		1240	ug/kg	10.7	35.7
191-24-2	Benzo(ghi)perylene		1250	ug/kg	10.7	35.7
120-82-1	1,2,4-Trichlorobenzene		1040	ug/kg	71.3	357

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2810.d
Lab Smp Id: 1201869911 Client Smp ID: CAMO-09-10462MSD
Inj Date : 28-JUN-2009 18:13
Operator : nagl Inst ID: MSD1.i
Smp Info : |1201869911|880638|1|SVMF|1|MSD
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 10 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	6.53160	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	313882	40.0000	
* 29 Naphthalene-d8	136	4.757	4.757	(1.000)	1230116	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	600843	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1159888	40.0000	
* 91 Chrysene-d12	240	8.645	8.645	(1.000)	994188	40.0000	
* 98 Perylene-d12	264	10.086	10.086	(1.000)	897057	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	404865	48.6560	1740
$ 5 Phenol-d5	99	3.604	3.598	(0.927)	448621	43.3635	1550
$ 20 Nitrobenzene-d5	82	4.252	4.251	(0.894)	254006	24.2572	865
$ 39 2-Fluorobiphenyl	172	5.493	5.492	(0.916)	478981	29.2631	1040
$ 60 2,4,6-Tribromophenol	329	6.534	6.533	(1.089)	101891	48.2074	1720
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	507752	30.4348	1080

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.610	3.610	(0.929)	305010	28.2754	1010(Q)
8 2-Chlorophenol	128	3.752	3.751	(0.965)	255418	29.5798	1050
11 1,4-Dichlorobenzene	146	3.899	3.898	(1.003)	269400	25.5763	912
17 N-Nitrosodipropylamine	70	4.122	4.128	(1.061)	184030	30.2482	1080(Q)
28 1,2,4-Trichlorobenzene	180	4.704	4.704	(0.989)	241060	29.1501	1040
33 4-Chloro-3-methylphenol	107	5.104	5.098	(1.073)	240545	31.8385	1140
47 Acenaphthene	154	6.022	6.022	(1.004)	476181	32.9442	1170
50 2,4-Dinitrotoluene	165	6.104	6.110	(1.018)	183323	34.7831	1240
52 4-Nitrophenol	139	6.045	6.034	(1.008)	63072	25.6055	913
65 Pentachlorophenol	266	6.851	6.851	(0.981)	80761	28.5866	1020
79 Pyrene	202	7.851	7.845	(0.908)	995545	37.8016	1350
2 Pyridine	79	2.422	2.398	(0.623)	142857	20.6881	738
4 Aniline	66	3.669	3.675	(0.944)	162460	29.1857	1040
7 bis(2-Chloroethyl) ether	63	3.687	3.692	(0.949)	270900	27.1731	969
9 1,3-Dichlorobenzene	146	3.852	3.857	(0.991)	281081	27.0116	963
12 Benzyl alcohol	108	3.957	3.957	(1.018)	87624	14.4003	514
13 1,2-Dichlorobenzene	146	4.004	4.004	(1.030)	257691	26.6550	950
14 bis(2-Chloroisopropyl)ether	45	4.034	4.034	(1.038)	726672	28.3460	1010
15 o-Cresol	107	4.010	4.004	(1.032)	205460	27.7061	988
18 m,p-Cresols	107	4.104	4.104	(1.056)	331534	33.8367	1210
19 Hexachloroethane	117	4.234	4.234	(1.089)	111151	25.7429	918
21 Nitrobenzene	77	4.263	4.269	(0.896)	309507	30.4833	1090
22 Isophorone	82	4.416	4.416	(0.928)	593163	31.7145	1130
23 2-Nitrophenol	139	4.481	4.481	(0.942)	132206	32.2498	1150
24 2,4-Dimethylphenol	122	4.475	4.469	(0.941)	290259	39.5399	1410
25 bis(2-Chloroethoxy)methane	93	4.540	4.540	(0.954)	328015	33.5965	1200
26 2,4-Dichlorophenol	162	4.640	4.640	(0.975)	207085	31.8348	1140
27 Benzoic acid	105	4.504	4.522	(0.947)	69036	12.5681	448(aQ)
30 Naphthalene	128	4.769	4.769	(1.002)	742741	30.3052	1080
31 4-Chloroaniline	127	4.787	4.787	(1.006)	301386	32.7025	1170
32 Hexachlorobutadiene	225	4.834	4.834	(1.016)	135821	25.2900	902
34 2-Methylnaphthalene	142	5.251	5.251	(1.104)	526886	32.4208	1160
36 Hexachlorocyclopentadiene	237	5.351	5.351	(0.892)	119922	40.5549	1450
37 2,4,6-Trichlorophenol	196	5.440	5.434	(0.907)	140069	31.3962	1120
38 2,4,5-Trichlorophenol	196	5.469	5.463	(0.912)	191869	41.4442	1480
40 2-Chloronaphthalene	162	5.604	5.604	(0.934)	495566	36.3474	1300
42 o-Nitroaniline	65	5.657	5.657	(0.943)	203765	37.1487	1320
41 m-Nitroaniline	138	5.951	5.951	(0.992)	147337	50.5495	1800
43 Dimethylphthalate	163	5.763	5.769	(0.961)	579076	35.0006	1250
44 2,6-Dinitrotoluene	165	5.822	5.822	(0.971)	137909	34.5422	1230
45 Acenaphthylene	152	5.904	5.904	(0.984)	845538	38.7929	1380
48 2,4-Dinitrophenol	184	6.016	6.016	(1.003)	22744	12.6323	450(aQ)
49 Dibenzofuran	168	6.140	6.139	(1.024)	729166	36.0467	1280
51 Diethylphthalate	149	6.251	6.251	(1.042)	645518	36.8075	1310
53 Fluorene	166	6.375	6.375	(1.063)	535817	31.7413	1130
54 4-Chlorophenylphenylether	204	6.351	6.351	(1.059)	285097	32.9891	1180
55 2-Methyl-4,6-dinitrophenol	198	6.387	6.386	(0.915)	57311	20.3831	727

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.369	6.369	(1.062)	122358	48.6784	1740
133 Diphenylamine	169	6.428	6.428	(0.921)	507297	38.0798	1360
58 1,2-Diphenylhydrazine	77	6.457	6.457	(0.925)	712890	36.3804	1300
61 4-Bromophenylphenylether	248	6.675	6.675	(0.956)	152839	31.0649	1110
63 Hexachlorobenzene	284	6.734	6.733	(0.965)	171635	32.4589	1160
68 Phenanthrene	178	6.998	6.998	(1.003)	822091	33.4748	1190
69 Anthracene	178	7.028	7.028	(1.007)	846850	34.5395	1230
72 Di-n-butylphthalate	149	7.275	7.275	(1.042)	1130985	37.1038	1320
76 Fluoranthene	202	7.710	7.710	(1.104)	961008	34.9532	1250
85 Butylbenzylphthalate	149	8.163	8.163	(0.944)	470421	42.0407	1500
89 Benzo(a)anthracene	228	8.634	8.633	(0.999)	789396	34.2608	1220
90 3,3'-Dichlorobenzidine	252	8.575	8.569	(0.992)	252457	36.1591	1290
92 Chrysene	228	8.663	8.663	(1.002)	789675	36.2166	1290
93 bis(2-Ethylhexyl)phthalate	149	8.522	8.516	(0.986)	638893	40.1683	1430
94 Di-n-octylphthalate	149	9.045	9.045	(0.897)	1016246	37.4031	1330
95 Benzo(b)fluoranthene	252	9.628	9.622	(0.954)	710719	33.6375	1200
96 Benzo(k)fluoranthene	252	9.657	9.651	(0.957)	817966	34.8951	1240
97 Benzo(a)pyrene	252	10.022	10.016	(0.994)	688119	35.7904	1280
99 Indeno(1,2,3-cd)pyrene	276	11.698	11.692	(1.160)	637166	33.5177	1200
100 Dibenzo(a,h)anthracene	278	11.704	11.698	(1.160)	523247	34.6443	1240
101 Benzo(ghi)perylene	276	12.204	12.198	(1.210)	553392	35.0655	1250(Q)
1 N-Methyl-N-nitrosomethylamine	74	2.393	2.369	(0.616)	119978	30.2449	1080

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD1.i/s062809.b/s1f2810.d
Date : 28-JUN-2009 18:13
Client ID: CAMD-09-10462MSD
Sample Info: 1120186991118806381|1|SVMF1|1MSD
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nagl
Column diameter: 0.20

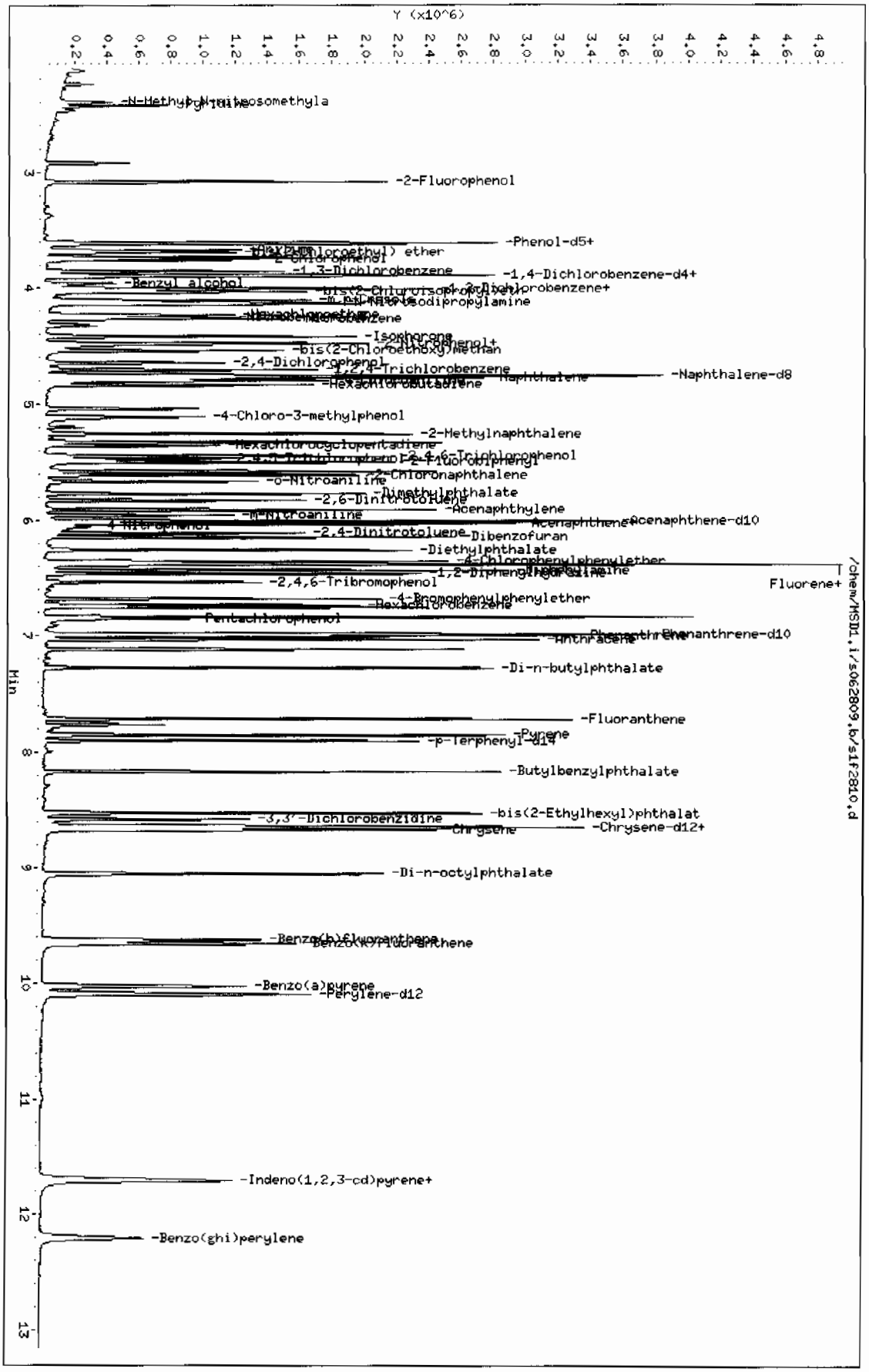

Page 1

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 880635 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201869908 MB	26-JUN-2009 21:26:44	30	1	0.03333
1201869909 LCS	26-JUN-2009 21:26:44	30	1	0.03333
231671005 - 2	26-JUN-2009 21:26:44	30.04	1	0.03329
232348001	26-JUN-2009 21:26:44	30	1	0.03333
1201869910 MS (232348001)	26-JUN-2009 21:26:44	30.08	1	0.03324
1201869911 MSD (232348001)	26-JUN-2009 21:26:44	30	1	0.03333
232348002	26-JUN-2009 21:26:44	30	1	0.03333
232348003	26-JUN-2009 21:26:44	30.05	1	0.03328
232348004	26-JUN-2009 21:26:44	30	1	0.03333
232357001	26-JUN-2009 21:26:44	30.02	1	0.03331
232357002	26-JUN-2009 21:26:44	30.07	1	0.03326
232363001	26-JUN-2009 21:26:44	30	1	0.03333
232363002	26-JUN-2009 21:26:44	30	1	0.03333
232363003	26-JUN-2009 21:26:44	30	1	0.03333
232363004	26-JUN-2009 21:26:44	30.08	1	0.03324
232363005	26-JUN-2009 21:26:44	30.04	1	0.03329
232363006	26-JUN-2009 21:26:44	30.03	1	0.0333
232363007	26-JUN-2009 21:26:44	30	1	0.03333
232363008	26-JUN-2009 21:26:44	30	1	0.03333
232363009	26-JUN-2009 21:26:44	30.02	1	0.03331
232363010	26-JUN-2009 21:26:44	30	1	0.03333
232363011	26-JUN-2009 21:26:44	30.01	1	0.03332

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201869909	BENZIDINE LCS	UE090608-18	1	mL
LCS	1201869909	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
MS	1201869910	BENZIDINE LCS	UE090608-18	1	mL
MS	1201869910	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
MSD	1201869911	BENZIDINE LCS	UE090608-18	1	mL
MSD	1201869911	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1140603-D	150	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: JAM

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD1

DATE: 06/19/2009 METHOD: See raw data OPERATOR: JMB3 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:116462-D-D
Multiplier Voltage: 1094 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090526-01 Internal Std ID: WBN090607-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD1.i/s061909.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
slb2208.d	WBN090206-05.1	JMB3	22-FEB-2009 19:22	40PPM	s022209	1.0	MEGAICAL	Used for peak location.
slb2313.d	WBN090126-06.1	JMB3	23-FEB-2009 21:55	40PPM	s022309	1.0	APICAL	Used for peak location.
slb2324.d	WBN090106-09	JMB3	24-FEB-2009 02:13	120PPM	s022309	1.0	PESTICAL	Used for peak location.
slb2332.d	WBN090129-14	JMB3	24-FEB-2009 05:16	1250 PPM	s022309	1.0	HEXICAL	Used for peak location.
slb2342.d	WBN090126-07	JMB3	24-FEB-2009 09:11	120 PPM	s022309	1.0	NEVICAL	Used for peak location.
slf1901-D.d	WBN090526-01	JMB3	19-JUN-2009 09:41	50 PPM	s061909	1.0	DFTPP	Use; 8270D MEGA/AP ICAL & ICV
slf1901.d	WBN090526-01	JMB3	19-JUN-2009 09:41	50 PPM	s061909	1.0	DFTPP	Use; 8270C MEGA/AP ICAL & ICV
slf1902.d	instr blk	nagl	19-JUN-2009 09:57	-------	s061909	1.0	INSTR BLK	IB
slf1903.d	WBN090602-08	nagl	19-JUN-2009 10:25	1 PPM	s061909	1.0	MEGAICAL	USE; LEV 1
slf1904.d	WBN090602-07	nagl	19-JUN-2009 10:57	10 PPM	s061909	1.0	MEGAICAL	USE; LEV 2
slf1905.d	WBN090602-06	nagl	19-JUN-2009 11:27	20 PPM	s061909	1.0	MEGAICAL	USE; LEV 3
slf1906.d	WBN090602-05.1	nagl	19-JUN-2009 11:55	40 PPM	s061909	1.0	MEGAICAL	USE; LEV 4
slf1907.d	WBN090602-04	nagl	19-JUN-2009 12:25	50 PPM	s061909	1.0	MEGAICAL	USE; LEV 5
slf1908.d	WBN090602-03	nagl	19-JUN-2009 12:54	80 PPM	s061909	1.0	MEGAICAL	USE; LEV 6
slf1909.d	WBN090602-02	nagl	19-JUN-2009 13:23	100 PPM	s061909	1.0	MEGAICAL	USE; LEV 7
slf1910.d	WBN090602-01	nagl	19-JUN-2009 13:54	120 PPM	s061909	1.0	MEGAICAL	USE; LEV 8
slf1911-AQA.d	WBN090602-09.1	nagl	19-JUN-2009 14:24	40 PPM	s061909	1.0	MEGAICV	USE; AQA ICV ***207/120/125/146/26 >15% RSD
slf1911-BOE.d	WBN090602-09.1	nagl	19-JUN-2009 14:24	40 PPM	s061909	1.0	MEGAICV	USE; BOE ICV ***207/120/125/146/26 >15% RSD ***
slf1911-D.d	WBN090602-09.1	nagl	19-JUN-2009 14:24	40 PPM	s061909	1.0	MEGAICV	USE; 8270D ICV ***207/125 >20% RSD*** <20% OUTLIERS

s1f1911.d	WBN090602-09.1	nag1	19-JUN-2009 14:24	40 PPM	s061909	1.0	MEGAICV	PASSED USE AQA ICV
s1f1912.d	instr blk	nag1	19-JUN-2009 14:53	-------	s061909	1.0	INSTR BLK	IB
s1f1913.d	WBN090528-07	nag1	19-JUN-2009 15:17	10 PPM	s061909	1.0	AP12ICAL	USE; LEV 2
s1f1914.d	WBN090528-06	nag1	19-JUN-2009 15:42	20 PPM	s061909	1.0	AP12ICAL	USE; LEV 3
s1f1915.d	WBN090528-05.1	nag1	19-JUN-2009 16:07	40 PPM	s061909	1.0	AP12ICAL	USE; LEV 4
s1f1916.d	WBN090528-04	nag1	19-JUN-2009 16:33	50 PPM	s061909	1.0	AP12ICAL	USE; LEV 5
s1f1917.d	WBN090528-03	nag1	19-JUN-2009 16:58	80 PPM	s061909	1.0	AP12ICAL	USE; LEV 6
s1f1918.d	WBN090528-02	nag1	19-JUN-2009 17:23	100 PPM	s061909	1.0	AP12ICAL	USE; LEV 7
s1f1919.d	WBN090528-01	nag1	19-JUN-2009 17:48	120 PPM	s061909	1.0	AP12ICAL	USE; LEV 8
s1f1920-AQA.d	WBN090528-08.1	nag1	19-JUN-2009 18:13	40 PPM	s061909	1.0	AP12ICV	USE; ICV
s1f1920-D.d	WBN090528-08.1	nag1	19-JUN-2009 18:13	40 PPM	s061909	1.0	AP12ICV	USE; ICV <20% OUTLIERS
s1f1920.d	WBN090528-08.1	nag1	19-JUN-2009 18:13	40 PPM	s061909	1.0	AP12ICV	USE; ICV
s1f1921-D.d	WBN090526-01	nag1	19-JUN-2009 18:39	50 PPM	s061909	1.0	DFTPP	Use; 8270D PEST/HEX/NEV ICAL & ICV
s1f1921.d	WBN090526-01	nag1	19-JUN-2009 18:39	50 PPM	s061909	1.0	DFTPP	Use; 8270D PEST/HEX/NEV ICAL & ICV
s1f1922.d	instr blk	nag1	19-JUN-2009 18:56	-------	s061909	1.0	INSTR BLK	IB
s1f1923.d	WBN090609-24	nag1	19-JUN-2009 19:21	10 PPM	s061909	1.0	PESTICAL	USE; LEV 2
s1f1924.d	WBN090609-23	nag1	19-JUN-2009 19:46	20 PPM	s061909	1.0	PESTICAL	USE; LEV 3
s1f1925.d	WBN090609-22.1	nag1	19-JUN-2009 20:10	40 PPM	s061909	1.0	PESTICAL	USE; LEV 4
s1f1926.d	WBN090609-21	nag1	19-JUN-2009 20:35	50 PPM	s061909	1.0	PESTICAL	USE; LEV 5
s1f1927.d	WBN090609-20	nag1	19-JUN-2009 20:59	80 PPM	s061909	1.0	PESTICAL	USE; LEV 6
s1f1928.d	WBN090609-19	nag1	19-JUN-2009 21:24	100 PPM	s061909	1.0	PESTICAL	USE; LEV 7
s1f1929.d	WBN090609-18	nag1	19-JUN-2009 21:50	120 PPM	s061909	1.0	PESTICAL	USE; LEV 8
s1f1930-AQA.d	WBN090609-25.1	nag1	19-JUN-2009 22:16	40 PPM	s061909	1.0	PESTICV	USE; AQA ICV
s1f1930-D.d	WBN090609-25.1	nag1	19-JUN-2009 22:16	40 PPM	s061909	1.0	PESTICV	USE; 8270D ICV <20% OUTLIERS
s1f1930.d	WBN090609-25.1	nag1	19-JUN-2009 22:16	40 PPM	s061909	1.0	PESTICV	PASSED USE AQA ICV
s1f1931.d	instr blk	nag1	19-JUN-2009 22:41	-------	s061909	1.0	INSTR BLK	IB
s1f1932.d	WBN090422-16	nag1	19-JUN-2009 23:06	500 PPM	s061909	1.0	HEXICAL	USE; LEV 2

slf1933.d	WBN090422-15	nagl	19-JUN-2009 23:30	1000 PPM	s061909	1.0	HEXICAL USE; LEV 3
slf1934.d	WBN090422-14	nagl	19-JUN-2009 23:55	1250 PPM	s061909	1.0	HEXICAL USE; LEV 4
slf1935.d	WBN090422-13	nagl	20-JUN-2009 00:19	1500 PPM	s061909	1.0	HEXICAL USE; LEV 5
slf1936.d	WBN090422-12	nagl	20-JUN-2009 00:43	1750 PPM	s061909	1.0	HEXICAL USE; LEV 6
slf1937.d	UBN090317-02.3	nagl	20-JUN-2009 01:07	2000 PPM	s061909	1.0	HEXICAL USE; LEV 7
slf1938-AQA.d	WBN090422-10.2	nagl	20-JUN-2009 01:30	1250PPM	s061909	1.0	HEXICV USE; AQA ICV
slf1938-D.d	WBN090422-10.2	nagl	20-JUN-2009 01:30	1250PPM	s061909	1.0	HEXICV USE; 8270D ICV <20% OUTLIERS
slf1938.d	WBN090422-10.2	nagl	20-JUN-2009 01:30	1250PPM	s061909	1.0	HEXICV PASSED USE AQA ICV
slf1939.d	instr blk	nagl	20-JUN-2009 01:54	-------	s061909	1.0	INSTR BLK IB
slf1940.d	UBN090428-01	nagl	20-JUN-2009 02:17	10 PPM	s061909	1.0	NEVICAL USE; LEV 2
slf1941.d	UBN090428-02	nagl	20-JUN-2009 02:41	20 PPM	s061909	1.0	NEVICAL USE; LEV 3
slf1942.d	UBN090428-03	nagl	20-JUN-2009 03:05	40 PPM	s061909	1.0	NEVICAL USE; LEV 4
slf1943.d	UBN090428-04	nagl	20-JUN-2009 03:28	50 PPM	s061909	1.0	NEVICAL USE; LEV 5
slf1944.d	UBN090428-05	nagl	20-JUN-2009 03:52	80 PPM	s061909	1.0	NEVICAL USE; LEV 6
slf1945.d	UBN090428-06	nagl	20-JUN-2009 04:15	100 PPM	s061909	1.0	NEVICAL USE; LEV 7
slf1946.d	UBN090428-07	nagl	20-JUN-2009 04:39	120 PPM	s061909	1.0	NEVICV USE; LEV 8

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD1

DATE: 06/30/2009 METHOD: See raw data OPERATOR: lof/rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1212 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD1.i/s062809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s1f2801.d	WBN090526-01	JKB3	28-JUN-2009 14:38	50 PPM	s062809	1.0	DFTPP	
s1f2802.d	WBN090510-01.3	nagl	28-JUN-2009 14:55	40 PPM	s062809	1.0	MEGACVS	280573
s1f2803.d	WBN090619-01.1	nagl	28-JUN-2009 15:23	40 PPM	s062809	1.0	AP12CVS	
s1f2804.d	WBN090609-22.2	nagl	28-JUN-2009 15:47	40 PPM	s062809	1.0	PESTCVS	
s1f2805-2.d	1201869908	nagl	28-JUN-2009 16:10	880638	09-2457	1.0	SBLK01	
s1f2805-3.d	1201869908	nagl	28-JUN-2009 16:10	880638	09-2455	1.0	SBLK01	
s1f2805-4.d	1201869908	nagl	28-JUN-2009 16:10	880638	09-2451	1.0	SBLK01	
s1f2805.d	1201869908	nagl	28-JUN-2009 16:10	880638	09-2287	1.0	SBLK01	
s1f2806-2.d	1201869909	nagl	28-JUN-2009 16:34	880638	09-2457	1.0	SBLK01LCS	
s1f2806-3.d	1201869909	nagl	28-JUN-2009 16:34	880638	09-2455	1.0	SBLK01LCS	
s1f2806-4.d	1201869909	nagl	28-JUN-2009 16:34	880638	09-2451	1.0	SBLK01LCS	
s1f2806.d	1201869909	nagl	28-JUN-2009 16:34	880638	09-2287	1.0	SBLK01LCS	
s1f2807.d	231671005	nagl	28-JUN-2009 16:58	880638	09-2287	1.0	LANL	Rx of s2f1730 - passes SS out of holding - report both
s1f2808.d	232348001	nagl	28-JUN-2009 17:23	880638	09-2457	1.0	LANL	
s1f2809.d	1201869910	nagl	28-JUN-2009 17:48	880638	09-2457	1.0	MS	
s1f2810.d	1201869911	nagl	28-JUN-2009 18:13	880638	09-2457	1.0	MSD	
s1f2811.d	232348002	nagl	28-JUN-2009 18:37	880638	09-2457	1.0	LANL	
s1f2812.d	232348003	nagl	28-JUN-2009 19:01	880638	09-2457	1.0	LANL	
s1f2813.d	232348004	nagl	28-JUN-2009 19:25	880638	09-2457	1.0	LANL	

s1f2814.d	232357001	nag1	28-JUN-2009 19:50	880638	09-2455	1.0	LANL	
s1f2815.d	232357002	nag1	28-JUN-2009 20:14	880638	09-2455	1.0	LANL	DUSE - Fail SS - Rx(s5f3013) passes w/in hold
s1f2816.d	232363001	nag1	28-JUN-2009 20:38	880638	09-2451	1.0	LANL	
s1f2817.d	232363002	nag1	28-JUN-2009 21:03	880638	09-2451	1.0	LANL	
s1f2818.d	232363003	nag1	28-JUN-2009 21:26	880638	09-2451	1.0	LANL	
s1f2819.d	232363004	nag1	28-JUN-2009 21:51	880638	09-2451	1.0	LANL	
s1f2820.d	232363005	nag1	28-JUN-2009 22:15	880638	09-2451	1.0	LANL	
s1f2821.d	232363006	nag1	28-JUN-2009 22:39	880638	09-2451	1.0	LANL	
s1f2822.d	232363007	nag1	28-JUN-2009 23:03	880638	09-2451	1.0	LANL	
s1f2823.d	232363008	nag1	28-JUN-2009 23:27	880638	09-2451	1.0	LANL	
s1f2824.d	232363009	nag1	28-JUN-2009 23:51	880638	09-2451	1.0	LANL	
s1f2825.d	232363010	nag1	29-JUN-2009 00:15	880638	09-2451	1.0	LANL	
s1f2826.d	232363011	nag1	29-JUN-2009 00:40	880638	09-2451	1.0	LANL	

Instrument Batch: /chem/MSD1.i/s062809.b

Page: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
30-JUN-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
SEMIVOA GC/MS	SW846 8270C	Solid	LANL
Batch ID:	**Sample Numbers:**		
880638	See Below		

Potentially affected work order(s)(SDG): 231671(09-2287),232348(09-2457),232357(09-2455),232363(09-2451)

Application Issues:

Failed RPD for MS/MSD, or PS/PSD

Failed Recovery for LCS/LCSD

Failed Yield for Surrogates

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Sample 232357002 recovered 2,4,6-Tribromophenol at 26%. The limits are 37%-106%.	1. Sample 232357002 was re-extracted within holding in batch 881291. Since the re-extract was within the acceptance limits for all surrogates, the re-extracted data results have been reported.
2. The LCS(1201869909) recovered Benzoic acid at 24%. The limits are 27%-137%.	2. The LCS failure represented less than 5% of the total requested spike analyte list. That satisfied the acceptance criteria for the client and the data results have been reported.
3. The MS(1201869910)/MSD(1201869911) RPD value for 4-Nitrophenol was 48% (limit is 30%) and for Benzyl alcohol was 52% (limit is 30%).	3. Since 4-Nitrophenol and Benzyl alcohol were individually within the acceptance limits for the MS and MSD, the data results have been reported.
4. Sample 231671005 was re-extracted out of holding from batch 877239 for surrogate failures.	4. Since the re-extract was out of holding and was within the acceptance limits for all surrogates, the both sets of data results have been reported.

Originator's Name:

Richard Bomar 30-JUN-09

Data Validator/Group Leader:

Barbara Bailey 01-JUL-09

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LC/MS/MS EXPLOSIVES ANALYSIS

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LC/MS/MS Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2457

Method/Analysis Information

Procedure:	**Definitive Low Level Analysis of Nitroaromatic Explosives Utilizing Liquid Chromatography / Mass Spectrometry / Mass Spectrometry (LC/MS/MS) by SW-846 Method 8321 Modified (8321M)**
Analytical Method:	SW846 8321A Modified
Prep Method:	SW846 8330 PREP
Analytical Batch Number:	880642
Prep Batch Number:	880641

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8321A Modified:

Sample ID	Client ID
232348001	CAMO-09-10462
232348002	CAMO-09-10460
232348003	CAMO-09-10461
232348004	CAMO-09-10467
1201869916	Method Blank (MB)
1201869917	Laboratory Control Sample (LCS)
1201869918	232348001(CAMO-09-10462) Matrix Spike (MS)
1201869919	232348001(CAMO-09-10462) Matrix Spike Duplicate (MSD)

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-056 REV# 11.

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Primary Analyte Analysis

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG.

Calibration Verification Standard Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Calibration Blank Requirements
All initial or continuing calibration blanks (ICB or CCB) bracketing the analyses associated with this batch were within acceptance criteria. Due to software limitations, the CCBs and/or the ICBs may have a concentration for target analytes in the Found column. These values should be zero.

CRI Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards and may be based off the grand mean average percent recovery of all target analytes.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria in this SDG in this analytical batch for this analysis.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation
Sample 232348001 (CAMO-09-10462) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS spike recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD spike recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

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Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
According to the GEL SOP for Method 8321A, all sample and QC extracts are diluted 1:1 v/v with acidified HPLC grade water. The samples in this SDG in this analytical batch for this analysis did not require any additional dilutions.

Sample Re-extraction/Re-analysis
Sample 232348001 (CAMO-09-10462) was re-analyzed to confirm the presence of target analytes at concentrations below the method detection limit. The re-analysis was reported.

Secondary Analyte Analysis

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG.

Calibration Verification Standard Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Calibration Blank Requirements
All initial or continuing calibration blanks (ICB or CCB) bracketing the analyses associated with this batch were within acceptance criteria. Due to software limitations, the CCBs and/or the ICBs may have a concentration for target analytes in the Found column. These values should be zero.

CRI Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards and may be based off the grand mean average percent recovery of all target analytes.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria in this SDG in this analytical batch for this analysis.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries were within the established acceptance limits.

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QC Sample Designation
Sample 232348001 (CAMO-09-10462) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS spike recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD spike recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The MS/MSD RPD for TATB was 48.0%. The acceptance limits are 0-30%. Please see nonconformance report 711126.

Internal Standard (ISTD) Acceptance
The internal standards were not added to the secondary analyte extracts.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
According to the GEL SOP for Method 8321A, all sample and QC extracts are diluted 1:1 v/v with acidified HPLC grade water. The samples in this SDG in this analytical batch for this analysis did not require any additional dilutions.

Sample Re-extraction/Re-analysis
Sample 232348003 (CAMO-09-10461) failed acceptance criteria. It was re-analyzed and passed acceptance criteria. The re-analysis is reported.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance report 711126 was generated for this SDG.

The MS/MSD RPD for TATB was 48.0%. The acceptance limits are 0-30%.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples required manual integrations due to software limitations.

Flagging Convention
The samples were not originally analyzed using SW-846 Method 8330.

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Additional Comments
Due to software limitations, all initial calibration blanks must be designated as XIB001 in order for the forms to be correct.

Due to software limitations in the secondary analyte analysis, false positives and analytes detected below the MDL cannot be deleted from the raw data.

Due to software limitations, file extensions such as DL, RE, etc. may not appear on the generated forms and/or raw data.

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for primary analyte analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for the primary analyte analysis. The laboratory also utilizes an Agilent 1100 liquid chromatography instrument for either primary or secondary analyte analysis. It is coupled with a Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as either LCMSMS #3 or LCMSMS #4. It is fitted with a APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for both the primary and secondary analyte analysis.

Chromatographic Columns

The detection of the primary analyte nitroaromatic and nitramines is accomplished through analysis on the following reversed phase column:

Phenomenex: Ultracarb 5u ODS (20), 250 x 4.60 mm ID.

The detection of the secondary analytes is accomplished through analysis on the following reversed phase column:

YMC: J'sphere ODS-H80, 150 x 4.6mm I.D.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert N Maier **Date:** 07/14/09

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SAMPLE DATA SUMMARY

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10462

Lab Code: GEI

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348001

Sample Amount 2

Moisture: 6.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713013a

Date Analyzed: 13-JUL-09 20:50

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10462

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348001

Sample Amount 2

Moisture: 6.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630026.wiff

Date Analyzed: 30-JUN-09 17:58

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10460

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348002

Sample Amount 2

Moisture: 8.3

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630043a

Date Analyzed: 01-JUL-09 11:16

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10460

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348002

Sample Amount 2

Moisture: 8.3

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630029.wiff

Date Analyzed: 30-JUN-09 18:47

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10461

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348003

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630044a

Date Analyzed: 01-JUL-09 11:45

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10461

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348003

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0701014.wiff

Date Analyzed: 01-JUL-09 14:10

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10467

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348004

Sample Amount 2

Moisture: 4.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630045a

Date Analyzed: 01-JUL-09 12:15

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10467

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348004

Sample Amount 2

Moisture: 4.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630031.wiff

Date Analyzed: 30-JUN-09 19:19

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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QUALITY CONTROL SUMMARY

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High Explosives Surrogate Recovery Summary

Lab Name: GEL Laboratories LLC **GEL Job No (SDG):** 09-2457

Lab Code: GEL **HPLC Column:** Phenomenex Ultracarb 5u ODS(20)

Lab Sample ID	Client Sample ID	DNT	QC Limits	Flg
232348001	CAMO-09-10462	101	73.7 – 133.3	
232348001	CAMO-09-10462	82	73.7 – 133.3	
232348002	CAMO-09-10460	114	73.7 – 133.3	
232348002	CAMO-09-10460	102	73.7 – 133.3	
232348003	CAMO-09-10461	112	73.7 – 133.3	
232348003	CAMO-09-10461	106	73.7 – 133.3	
232348004	CAMO-09-10467	112	73.7 – 133.3	
232348004	CAMO-09-10467	106	73.7 – 133.3	
1201869916	MB for batch 880641	106	73.7 – 133.3	
1201869916	MB for batch 880641	103	73.7 – 133.3	
1201869917	LCS for batch 880641	110	73.7 – 133.3	
1201869917	LCS for batch 880641	92.4	73.7 – 133.3	
1201869918	CAMO-09-10462(232348001MS)	115	73.7 – 133.3	
1201869918	CAMO-09-10462(232348001MS)	96.8	73.7 – 133.3	
1201869919	CAMO-09-10462(232348001MSD)	117	73.7 – 133.3	
1201869919	CAMO-09-10462(232348001MSD)	102	73.7 – 133.3	

DNT = 3,4-Dinitrotoluene

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3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 09-2457

Extract Batch Code: 880641

Date Extracted: 29-JUN-09

GEL LCS ID: 1201869917

GEL LCSDUP ID:

Analysis Date/Time: 01-JUL-09 09:18

DUP Analysis Date/Time:

Reporting Units: ug/kg

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
1,3,5-Trinitrobenzene	5000	4650	93					62.1 – 124
2,4,6-Trinitrotoluene	5000	5440	109					78.3 – 132
2,4-Dinitrotoluene	5000	5130	103					82.7 – 132
2,6-Dinitrotoluene	5000	4800	96					86.9 – 122
2-Amino-4,6-dinitrotoluene	5000	5680	114					84.2 – 149
4-Amino-2,6-dinitrotoluene	5000	5160	103					85.6 – 133
HMX	5000	5170	103					66.5 – 142
Nitrobenzene	5000	4390	87.8					71.8 – 126
PETN	5000	4850	97					64.6 – 147
RDX	5000	5130	103					78.7 – 144
Tetryl	5000	4280	85.6					31.2 – 119
m-Dinitrobenzene	5000	4980	99.6					80.9 – 127
m-Nitrotoluene	5000	4120	82.4					71.9 – 126
o-Nitrotoluene	5000	3980	79.6					75 – 123
p-Nitrotoluene	5000	4060	81.2					73.7 – 124

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

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3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 09-2457

Extract Batch Code: 880641

Date Extracted: 29-JUN-09

GEL LCS ID: 1201869917

GEL LCSDUP ID:

Analysis Date/Time: 30-JUN-09 17:42

DUP Analysis Date/Time:

Reporting Units: ug/kg

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
2,4-Diamino-6-nitrotoluene	5000	3480	69.6					64.8 – 128
2,6-Diamino-4-nitrotoluene	5000	4150	83					69.6 – 133
3,5-Dinitroaniline	5000	4440	88.8					77.3 – 123
tris(o-cresyl) phosphate	5000	4520	90.4					84.3 – 120
TATB	5000	5170	103					46.8 – 166

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

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High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: CAMO-09-10462

Lab Code: GEL

GEL Job No (SDG) 09-2457

Extract Batch Code: 880641

Date Extracted: 29-JUN-09

GEL Spike ID: 1201869918

GEL SpikeDup ID: 1201869919

Analysis Date/Time: 01-JUL-09 10:17

MSD Analysis Date/Time:

Reporting Units: ug/kg

QC Type: MS/MSD

Compound	Spike Added	Sample Conc	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Rec Limits
1,3,5-Trinitrobenzene	5000	41.2	4870	96.7	4930	98	1.29	30	70.7 – 130
2,4,6-Trinitrotoluene	5000	29.9	5890	117	5950	118	1.13	30	83.4 – 138
2,4-Dinitrotoluene	5000	0	5270	105	5690	114	7.54	30	79.1 – 137
2,6-Dinitrotoluene	5000	0	5140	102	5090	101	.916	30	85.4 – 125
2-Amino-4,6-dinitrotoluene	5000	60.1	5940	118	5870	116	1.28	30	77.4 – 154
4-Amino-2,6-dinitrotoluene	5000	34.9	5340	107	5550	111	3.89	30	77.3 – 140
HMX	5000	33.9	5120	102	5300	105	3.51	30	66.7 – 144
Nitrobenzene	5000	0	4430	88.6	4670	93.3	5.17	30	70.4 – 129
PETN	5000	29	4770	95.3	4890	97.8	2.55	30	61.9 – 153
RDX	5000	29.3	5030	100	5280	105	4.75	30	73 – 140
Tetryl	5000	0	4770	94.7	4710	93.4	1.38	30	46.8 – 138
m-Dinitrobenzene	5000	0	5190	104	5250	105	1.13	30	83.5 – 126
m-Nitrotoluene	5000	0	4220	84.4	4320	86.3	2.28	30	68.6 – 135
o-Nitrotoluene	5000	0	4190	83.9	4210	84.2	.343	30	71.2 – 131
p-Nitrotoluene	5000	0	4130	82.5	4020	80.4	2.58	30	69.3 – 133

#Column to be used to flag recovery and RPD values with an asterisk

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High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: CAMO-09-10462

Lab Code: GEL

GEL Job No (SDG) 09-2457

Extract Batch Code: 880641

Date Extracted: 29-JUN-09

GEL Spike ID: 1201869918

GEL SpikeDup ID: 1201869919

Analysis Date/Time: 30-JUN-09 18:14

MSD Analysis Date/Time:

Reporting Units: ug/kg

QC Type: MS/MSD

Compound	Spike Added	Sample Conc	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Rec Limits
2,4-Diamino-6-nitrotoluene	5000	0	4290	85.8	4340	86.8	1.16	30	51.6 - 127
2,6-Diamino-4-nitrotoluene	5000	0	4510	90.2	4660	93.2	3.27	30	58.9 - 135
3,5-Dinitroaniline	5000	0	4350	87	4970	99.4	13.3	30	72.8 - 125
tris(o-cresyl) phosphate	5000	16.9	4800	95.7	5080	101	5.67	30	79.1 - 124
TATB	5000	0	4090	81.8	6670	133	48 *	30	43.9 - 166

#Column to be used to flag recovery and RPD values with an asterisk

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 30-JUN-09 14:38

GEL Data File: EXP0630001a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	523.179
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	525.671
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\063009expa.mdb, Time: Wed Jul 01 09:15:14 2009
Calibration: Untitled, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630001a
Date: 30-Jun-2009
Time: 14:38:24
ID: XIBLK01
Vial: 1:1,A

MMT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.893e+003

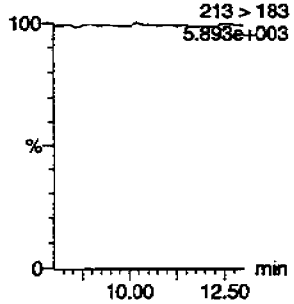

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.784e+003

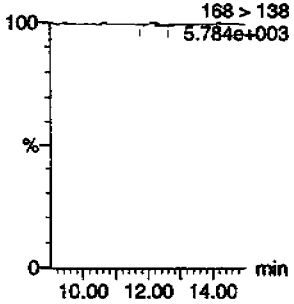

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.794e+004

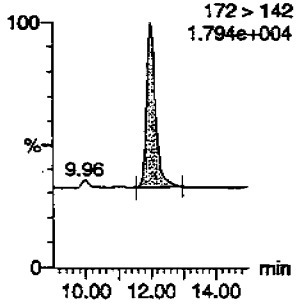

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.863e+003

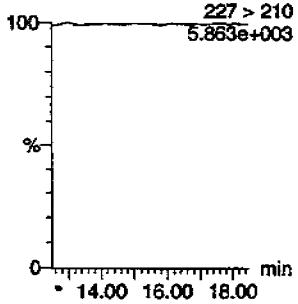

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.799e+003

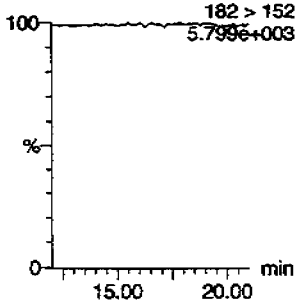

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.799e+003

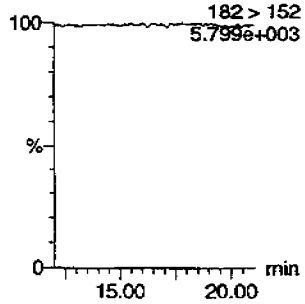

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.271e+004

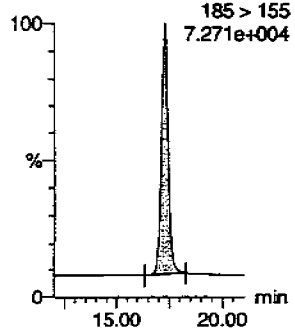

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.952e+003

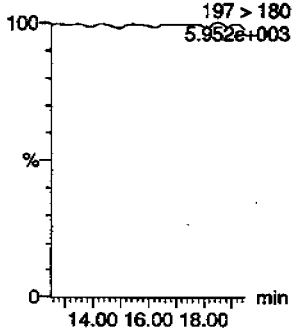

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.784e+003

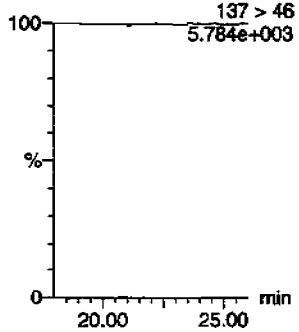

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.799e+003

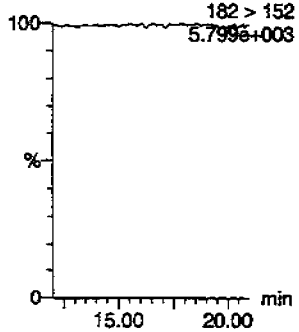

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.784e+003

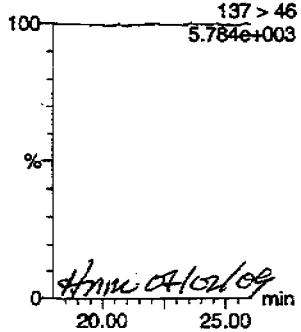

MMC 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.909e+003

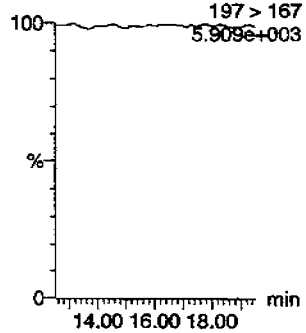

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

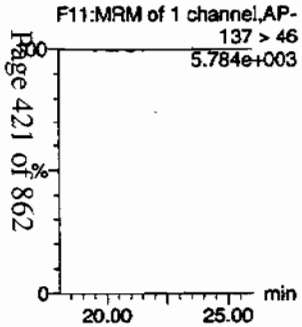

HMX

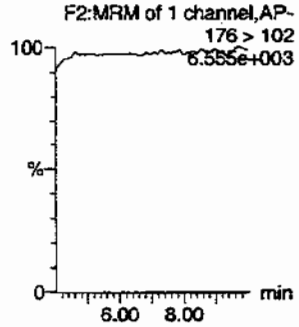

Nitrobenzene

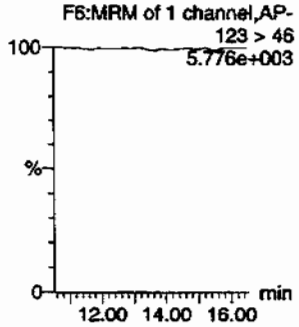

PETN

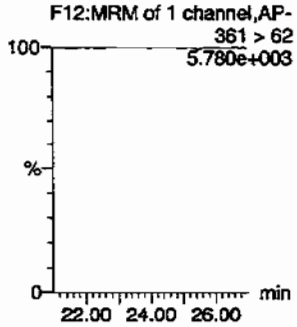

RDX

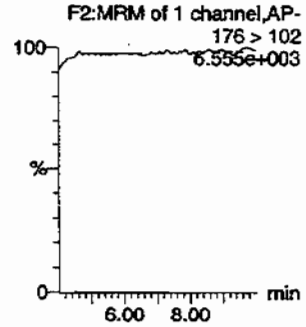

Tetryl

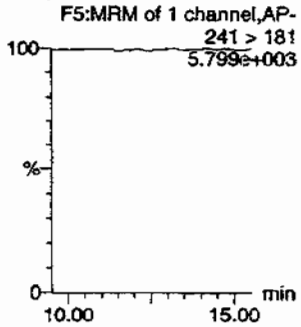

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flag	Modified	Modified	Height	RRT	Rel	S/N
XIBLK01	HMX	176 > 102			4009.323									
XIBLK01	RDX	176 > 102			4009.323									
XIBLK01	135-Trinitrobenzene	213 > 183			4009.323									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	12.00	4009.323		4009.323	4009.323	bb			523.1791	104.6	4.6	168.3
XIBLK01	13-Dinitrobenzene	168 > 138			4009.323			MM-	01-Jul-09	09:21:09				
XIBLK01	Tetryl	241 > 181			4009.323									
XIBLK01	Nitrobenzene	123 > 46			4009.323									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			25197.955									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			25197.955									
XIBLK01	246-Trinitrotoluene	227 > 210			25197.955									
XIBLK01	34-dinitrotoluene	182 > 152			25197.955									
XIBLK01	26-dinitrotoluene	182 > 152			25197.955									
XIBLK01	24-dinitrotoluene	182 > 152			25197.955									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.27	25197.955		25197.955	25197.955	bb			525.6707	105.1	5.1	1647.7
XIBLK01	2-Nitrotoluene	137 > 46			25197.955									
XIBLK01	4-Nitrotoluene	137 > 46			25197.955									
XIBLK01	3-Nitrotoluene	137 > 46			25197.955									
XIBLK01	PETN	361 > 62			25197.955									

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 30-JUN-09 15:07

GEL Data File: EXP0630002a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	501.95
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	510.817
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630002a
Date: 30-Jun-2009
Time: 15:07:52
ID: XIBLK01
Vial: 1:1,A

MAM 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.838e+003

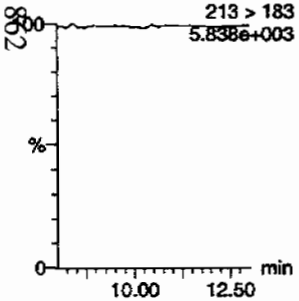

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.775e+003

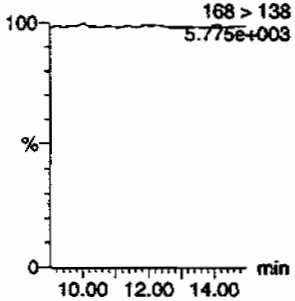

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.740e+004

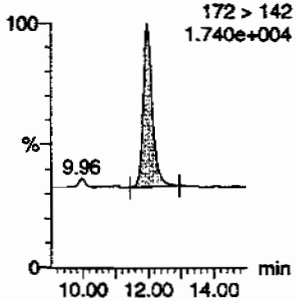

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.849e+003

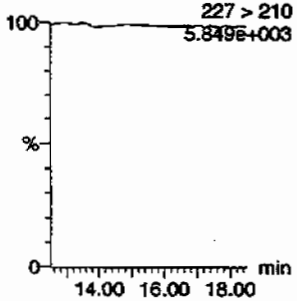

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.792e+003

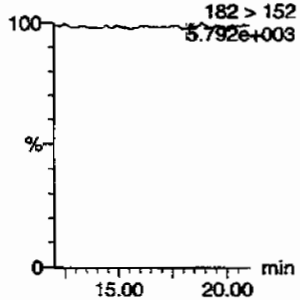

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.792e+003

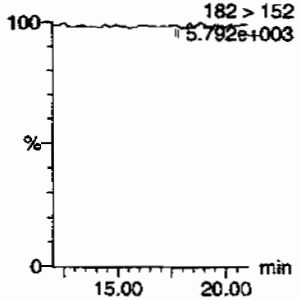

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.849e+004

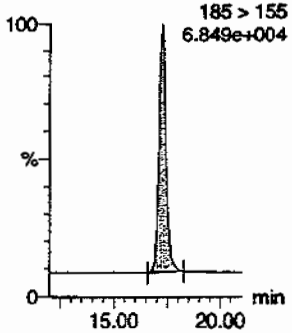

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.858e+003

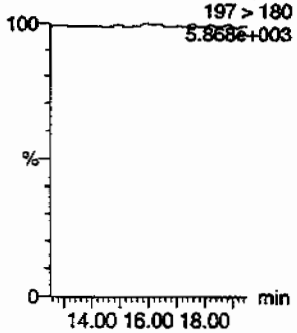

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.770e+003

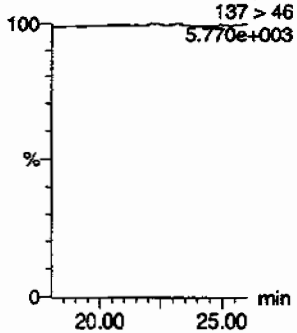

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.792e+003

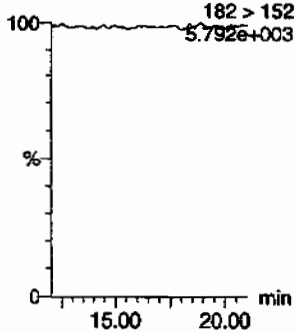

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.770e+003

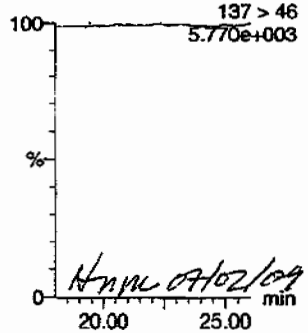

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.842e+003

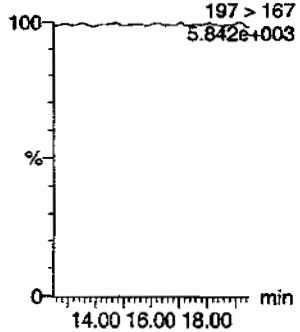

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

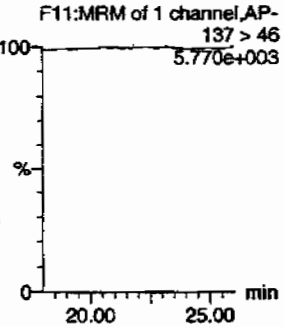

HMX

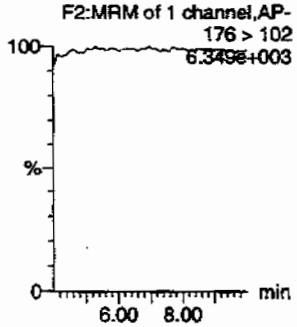

Nitrobenzene

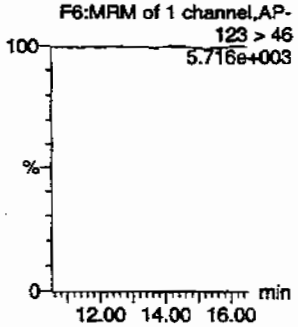

PETN

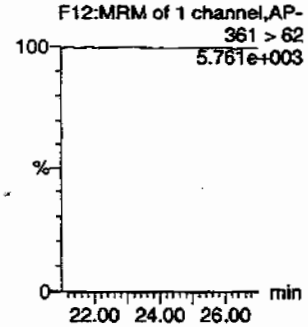

RDX

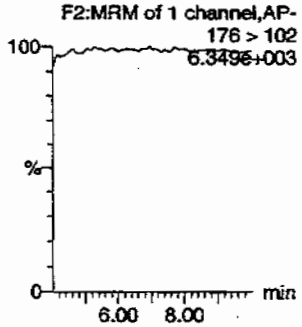

Tetryl

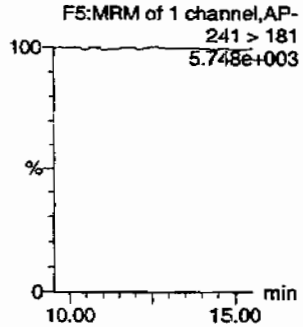

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modified	Modified	Amount	%Rec	%RD	LOQ
XIBLK01	HMX	176 > 102			3846.638									
XIBLK01	RDX	176 > 102			3846.638									
XIBLK01	135-Trinitrobenzene	213 > 183			3846.638									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	11.97	3846.638		3846.638	3846.638	bb			501.9502	100.4	0.4	373.7
XIBLK01	13-Dinitrobenzene	168 > 138			3846.638									
XIBLK01	Tetryl	241 > 181			3846.638									
XIBLK01	Nitrobenzene	123 > 46			3846.638									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			24485.924									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			24485.924									
XIBLK01	246-Trinitrotoluene	227 > 210			24485.924									
XIBLK01	34-dinitrotoluene	182 > 152			24485.924									
XIBLK01	26-dinitrotoluene	182 > 152			24485.924			MM-	01-Jul-09	09:29:02				
XIBLK01	24-dinitrotoluene	182 > 152			24485.924			MM-	01-Jul-09	09:32:28				
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.27	24485.924		24485.924	24485.924	bb			510.8165	102.2	2.2	1461.6
XIBLK01	2-Nitrotoluene	137 > 46			24485.924									
XIBLK01	4-Nitrotoluene	137 > 46			24485.924									
XIBLK01	3-Nitrotoluene	137 > 46			24485.924									
XIBLK01	PETN	361 > 62			24485.924									

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 13-JUL-09 14:54

GEL Data File: EXP0713001a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	381.015
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	386.045
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\071309expa.mdb, Time: Tue Jul 14 10:07:51 2009
Calibration: Untitled, Time: Tue Jul 14 10:21:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713001a
Date: 13-Jul-2009
Time: 14:54:51
ID: XIBLK01
Vial: 1:1,A

MMT 7/14/09

135-Trinitrobenzene

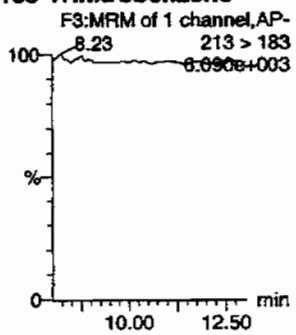

13-Dinitrobenzene

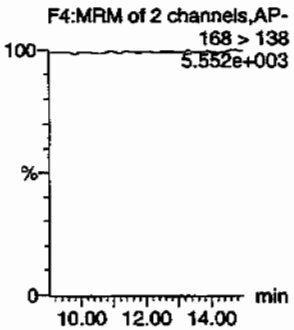

13-Dinitrobenzene-d4

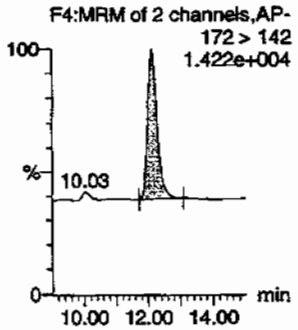

246-Trinitrotoluene

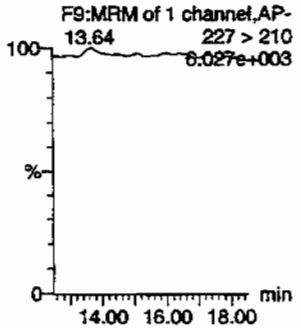

24-dinitrotoluene

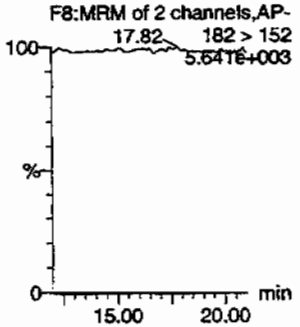

26-dinitrotoluene

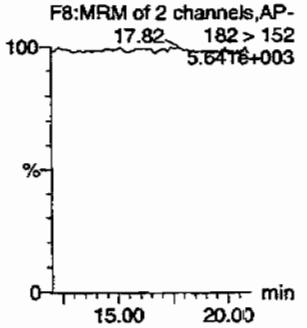

26-dinitrotoluene-d3

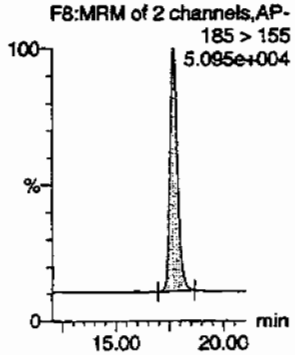

2-Amino-46-dinitrotoluene

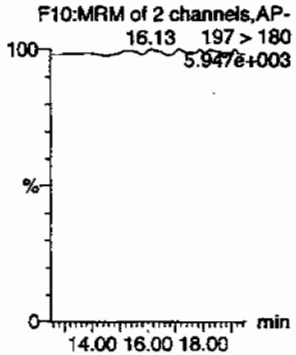

2-Nitrotoluene

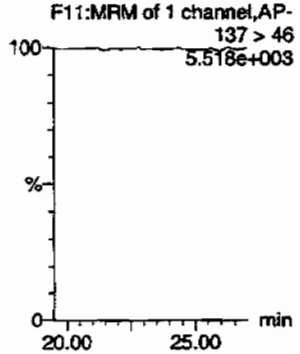

34-dinitrotoluene

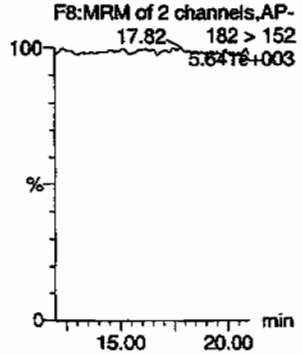

3-Nitrotoluene

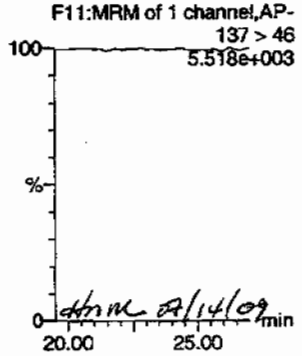

dmm 07/14/09

4-Amino-26-dinitrotoluene

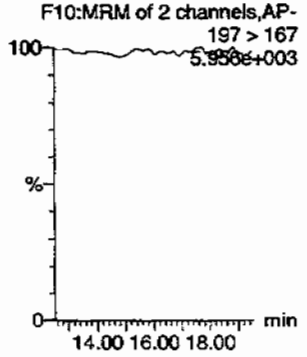

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Page 427 of 862

4-Nitrotoluene

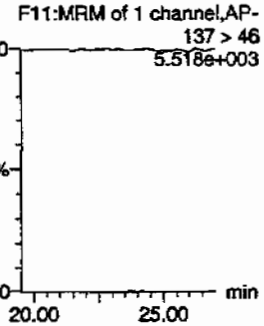

HMX

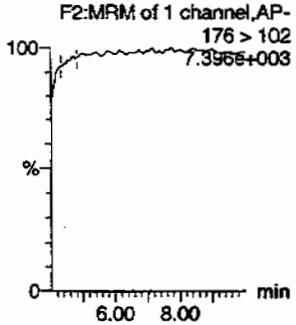

Nitrobenzene

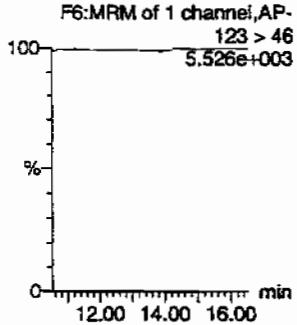

PETN

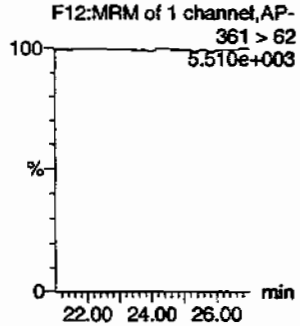

RDX

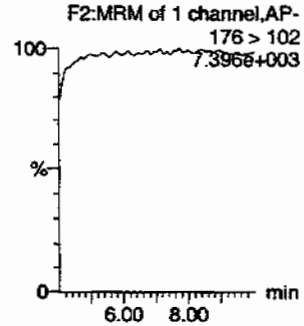

Tetryl

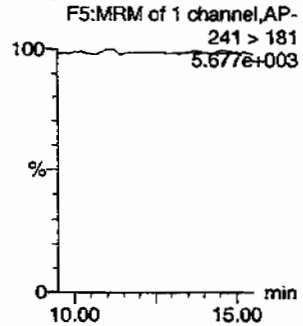

ID	Name	Trace	RT	Area	ISArea	RespRatio	PRespRatio	Flag	Modified	Modtime	Height	%Dev	%Dev	S/N
XIBLK01	HMX	176 > 102			3003.309			MM-	14-Jul-09	10:22:19				
XIBLK01	RDX	176 > 102			3003.309									
XIBLK01	135-Trinitrobenzene	213 > 183			3003.309									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	12.14	3003.309		3003.309	3003.309	bb			381.0148	76.2	-23.8	216.9
XIBLK01	13-Dinitrobenzene	168 > 138			3003.309									
XIBLK01	Tetryl	241 > 181			3003.309									
XIBLK01	Nitrobenzene	123 > 46			3003.309									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			18462.215									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			18462.215									
XIBLK01	246-Trinitrotoluene	227 > 210			18462.215									
XIBLK01	34-dinitrotoluene	182 > 152			18462.215									
XIBLK01	26-dinitrotoluene	182 > 152			18462.215									
XIBLK01	24-dinitrotoluene	182 > 152			18462.215									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.71	18462.215		18462.215	18462.215	bb			386.0448	77.2	-22.8	1327.3
XIBLK01	2-Nitrotoluene	137 > 46			18462.215									
XIBLK01	4-Nitrotoluene	137 > 46			18462.215									
XIBLK01	3-Nitrotoluene	137 > 46			18462.215									
XIBLK01	PETN	361 > 62			18462.215									

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 13-JUL-09 15:25

GEL Data File: EXP0713002a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	425.613
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	430.859
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713002a
Date: 13-Jul-2009
Time: 15:25:20
ID: XIBLK01
Vial: 1:1,A

MMT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.876e+003

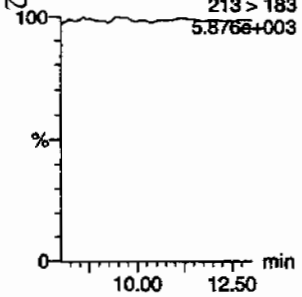

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.591e+003

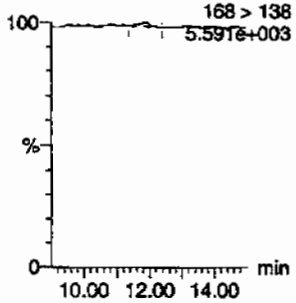

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.524e+004

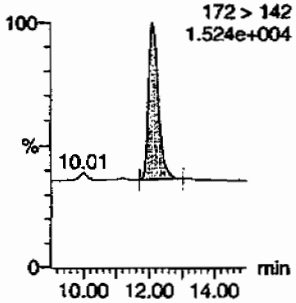

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.809e+003

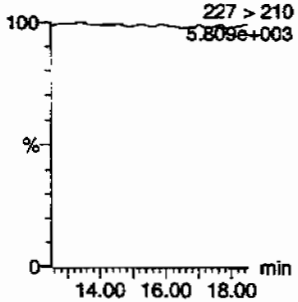

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.627e+003

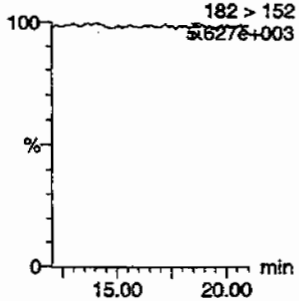

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.627e+003

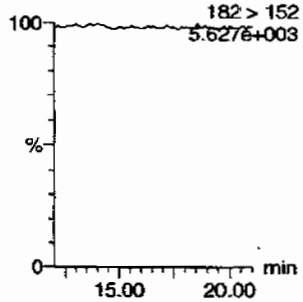

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
5.679e+004

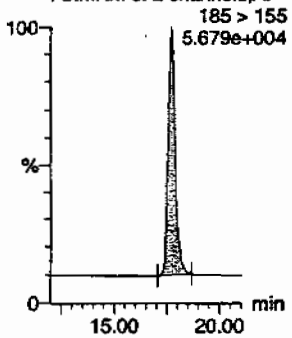

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.952e+003

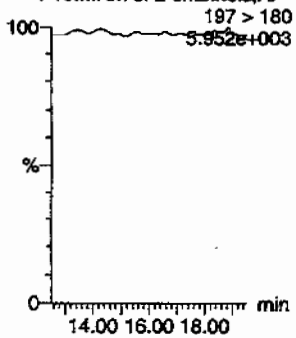

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.518e+003

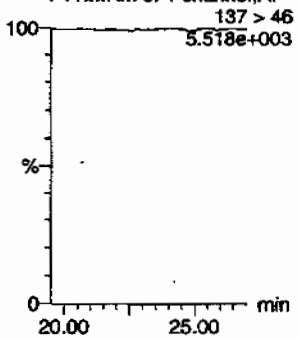

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.627e+003

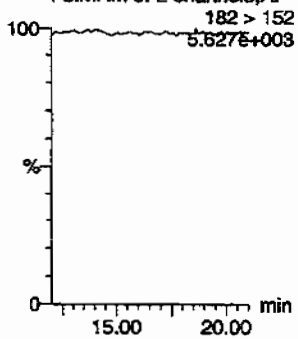

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.518e+003

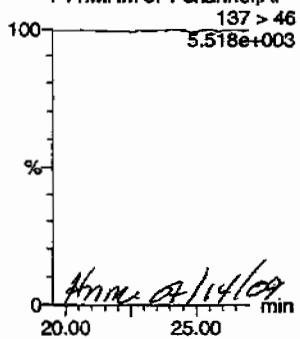

Hmm 7/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.892e+003

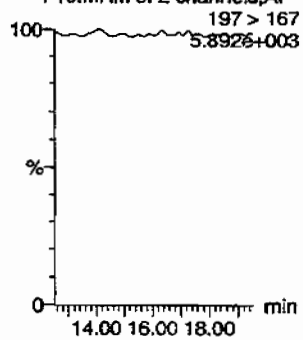

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

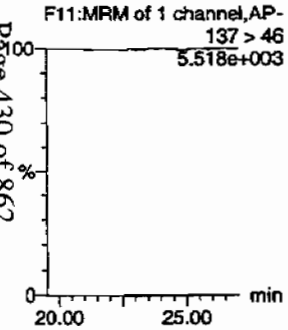

HMX

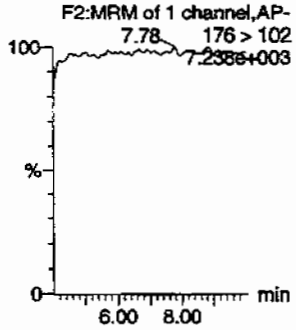

Nitrobenzene

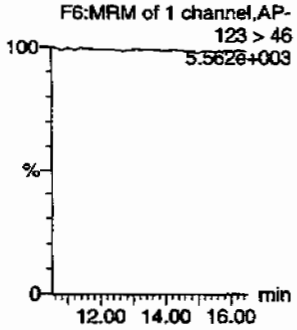

PETN

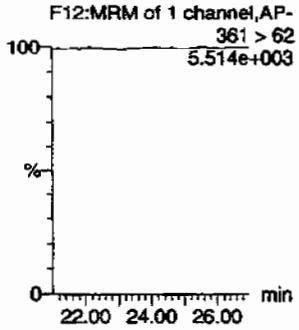

RDX

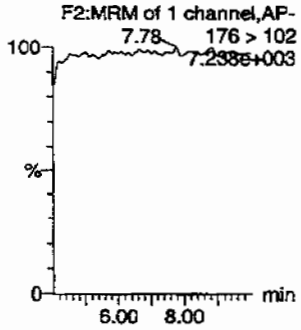

Tetryl

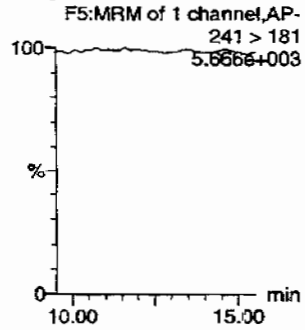

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modifier	Modtime	Amount	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			3354.853									
XIBLK01	RDX	176 > 102			3354.853									
XIBLK01	135-Trinitrobenzene	213 > 183			3354.853									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	12.14	3354.853		3354.853	3354.853	bb			425.6134	85.1	-14.9	186.6
XIBLK01	13-Dinitrobenzene	168 > 138			3354.853			MM-	14-Jul-09	10:21:25				
XIBLK01	Tetryl	241 > 181			3354.853									
XIBLK01	Nitrobenzene	123 > 46			3354.853									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			20605.398									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			20605.398									
XIBLK01	246-Trinitrotoluene	227 > 210			20605.398									
XIBLK01	34-dinitrotoluene	182 > 152			20605.398									
XIBLK01	26-dinitrotoluene	182 > 152			20605.398									
XIBLK01	24-dinitrotoluene	182 > 152			20605.398			MM-	14-Jul-09	10:10:31				
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.68	20605.398		20605.398	20605.398	bb			430.8588	86.2	-13.8	1070.1
XIBLK01	2-Nitrotoluene	137 > 46			20605.398									
XIBLK01	4-Nitrotoluene	137 > 46			20605.398									
XIBLK01	3-Nitrotoluene	137 > 46			20605.398									
XIBLK01	PETN	361 > 62			20605.398									

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 30-JUN-09 11:13

GEL Data File: EXS0630001.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	0
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Ran 7/1/09

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0630001.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:13:33 AM

Modified: No

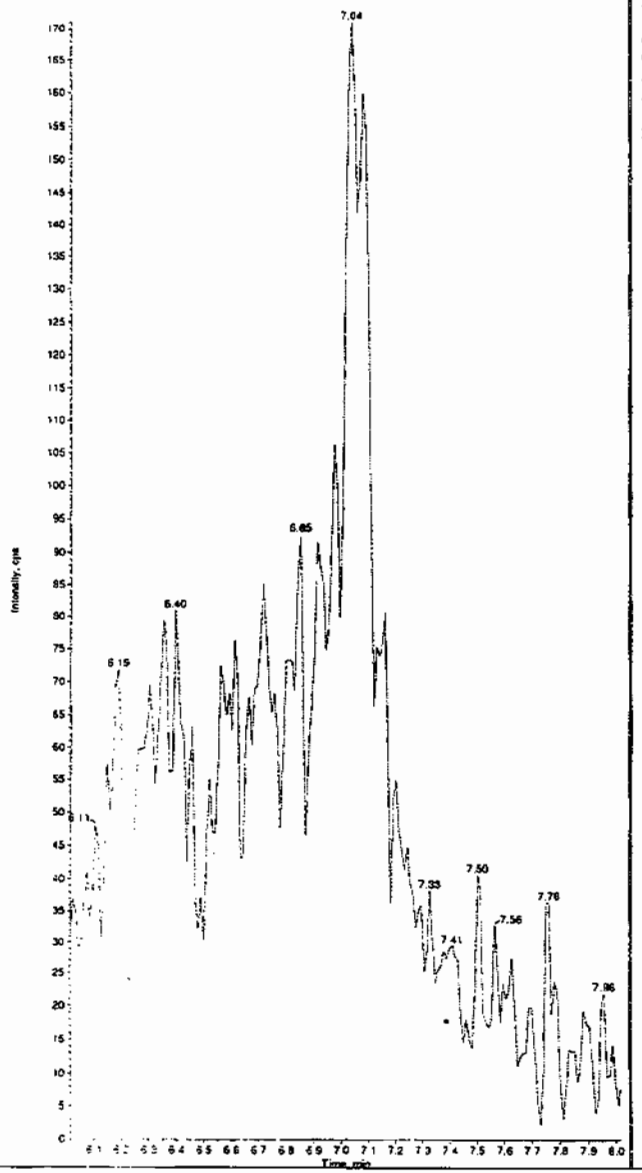

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0630001.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:13:33 AM

Modified: No

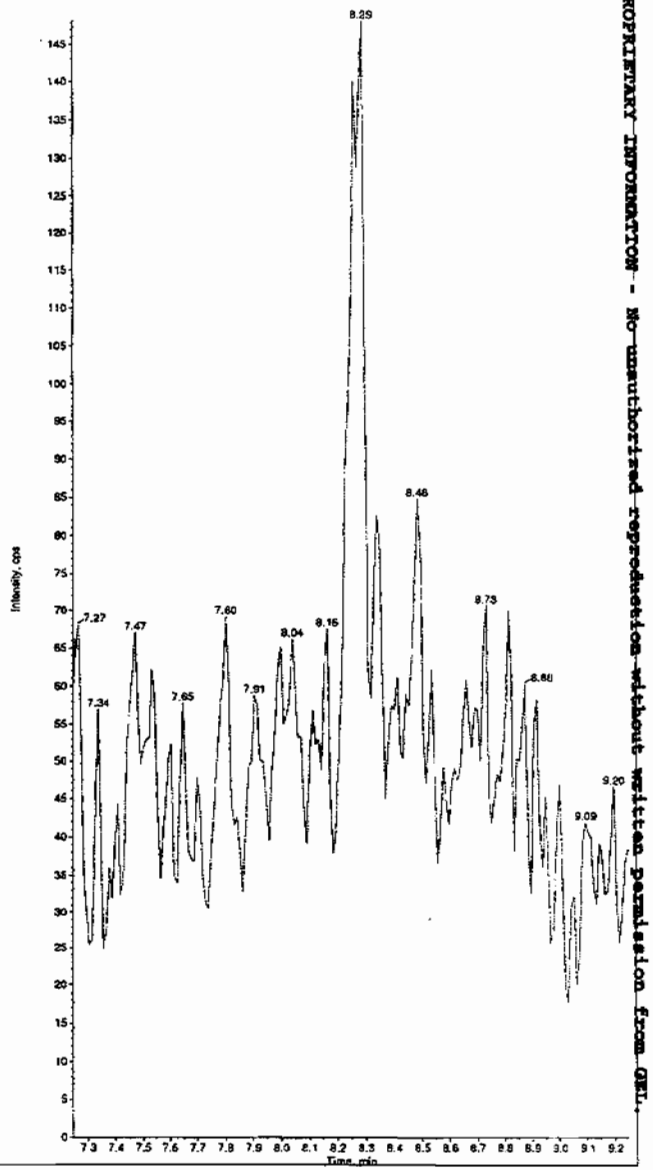

Hmc 07/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0630001.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:13:33 AM

Modified: No

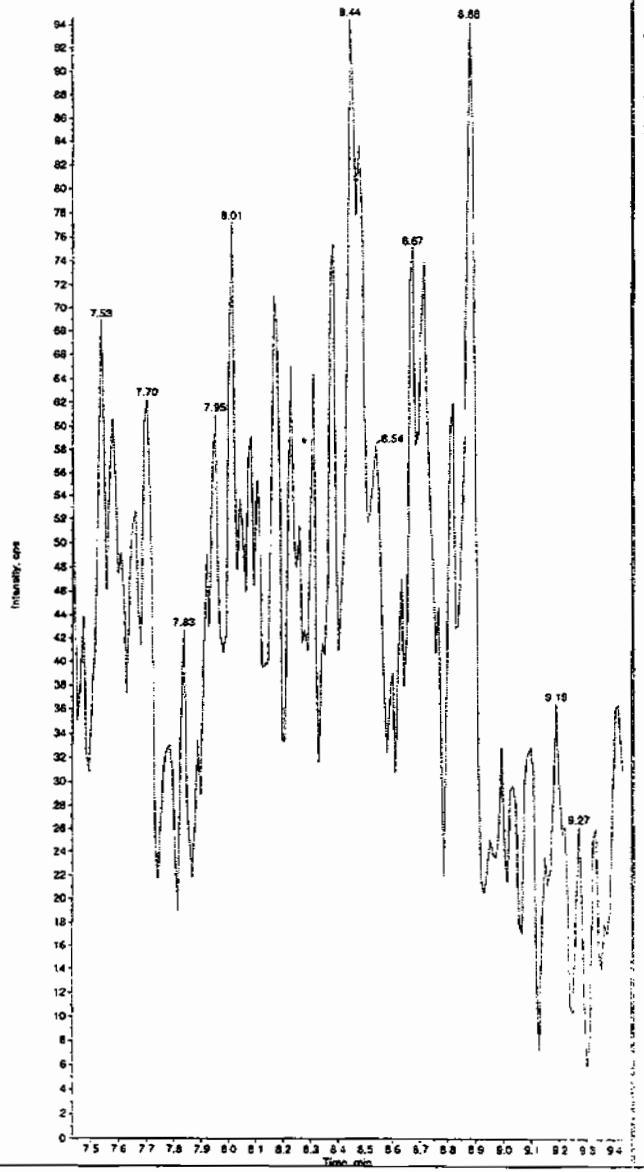

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0630001.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:13:33 AM

Modified: No

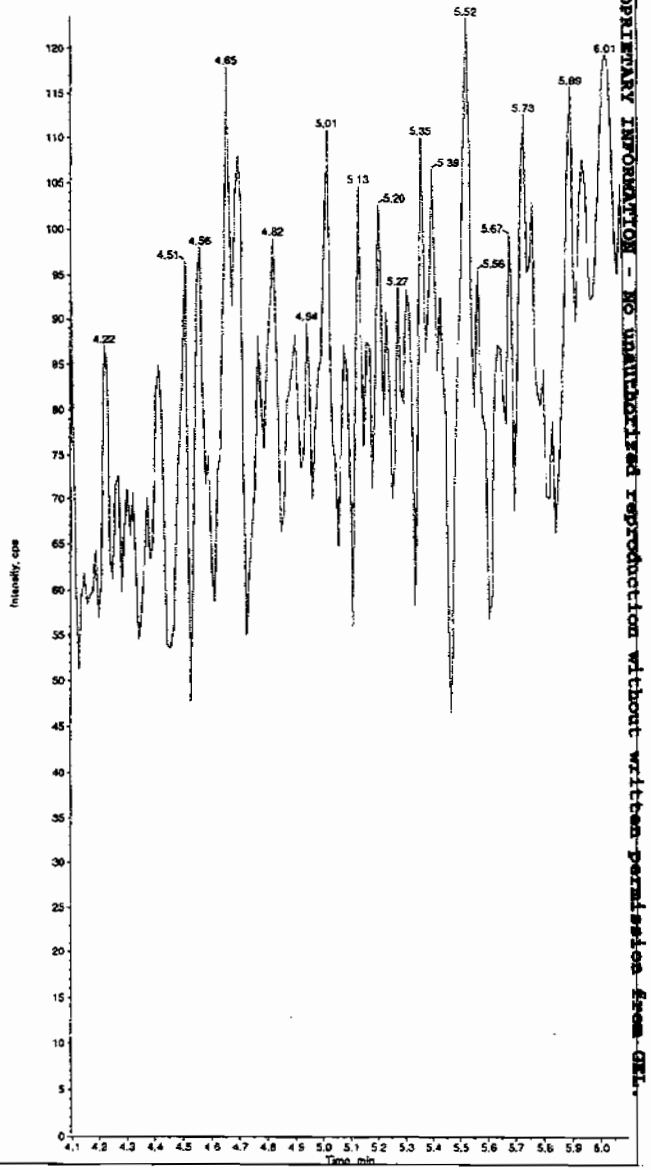

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "1ILER" File: "EXS0630001.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:13:33 AM

Modified: No

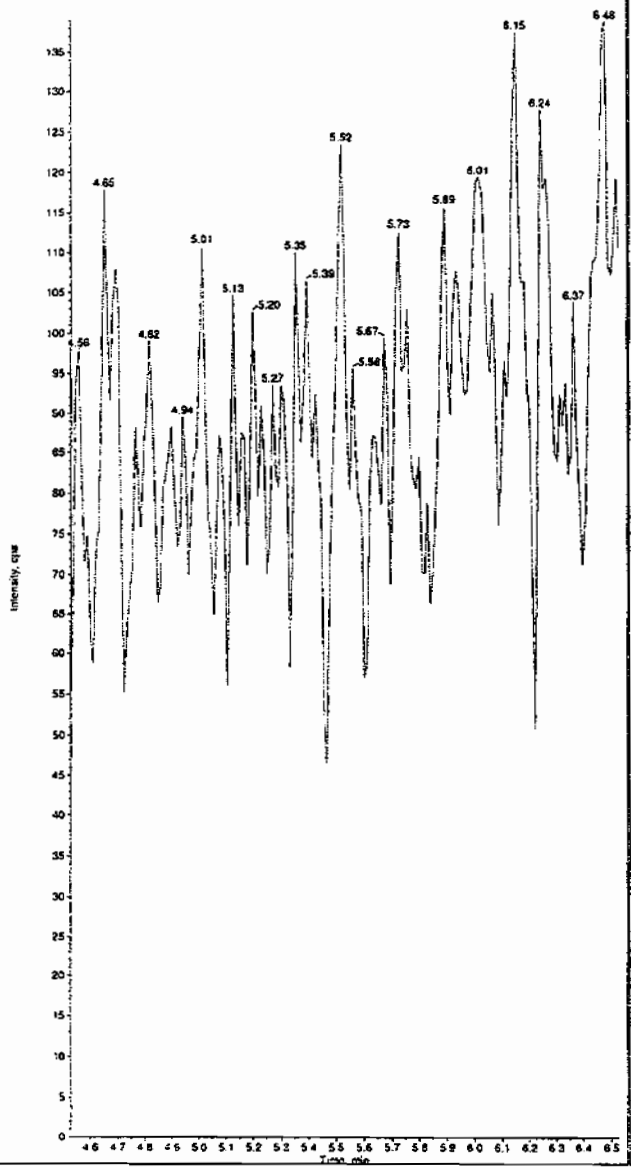

Sample Name: "XIBLK01" Sample ID: "1ILER" File: "EXS0630001.wiff"
Peak Name: "Iris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:13:33 AM

Modified: No

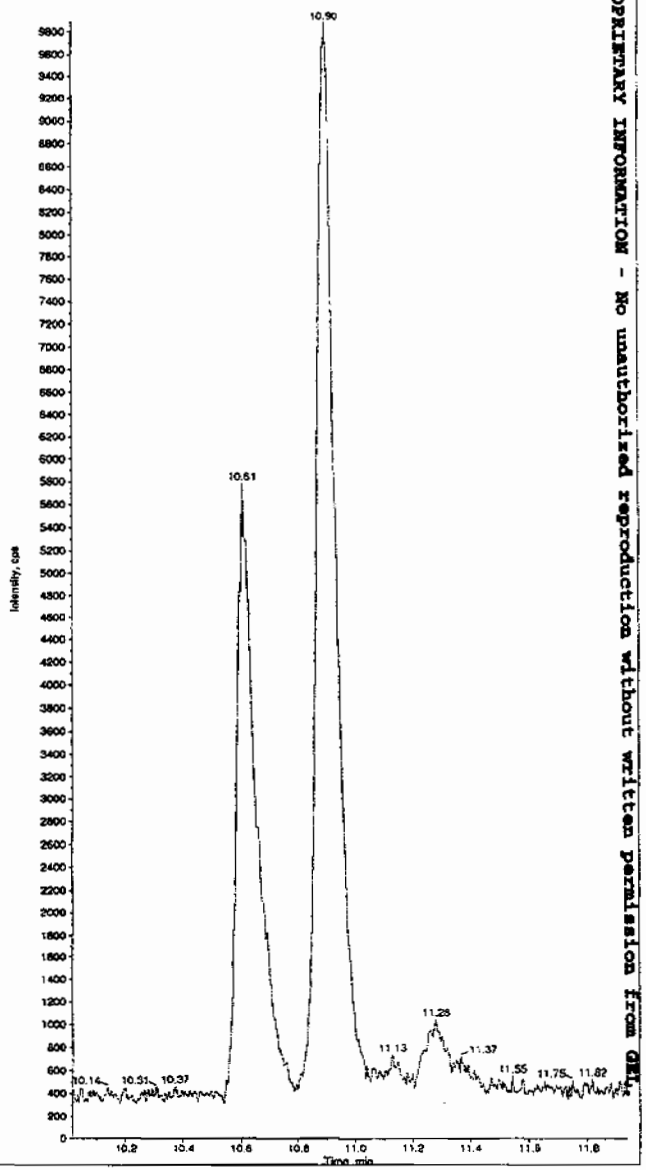

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 30-JUN-09 11:29

GEL Data File: EXS0630002.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	0
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Ran 7/1/09

Sample Name: "XIBLK01" Sample ID: "]1]LER" File: "EXS0630002.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:29:50 AM

Modified: No

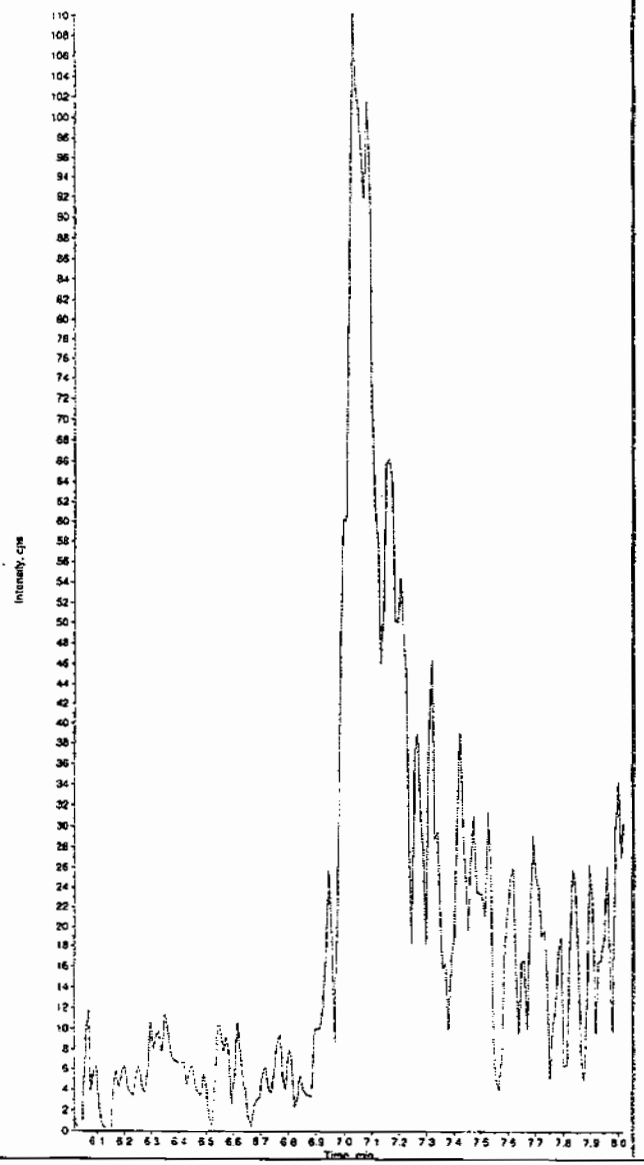

Sample Name: "XIBLK01" Sample ID: "]1]LER" File: "EXS0630002.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:29:50 AM

Modified: No

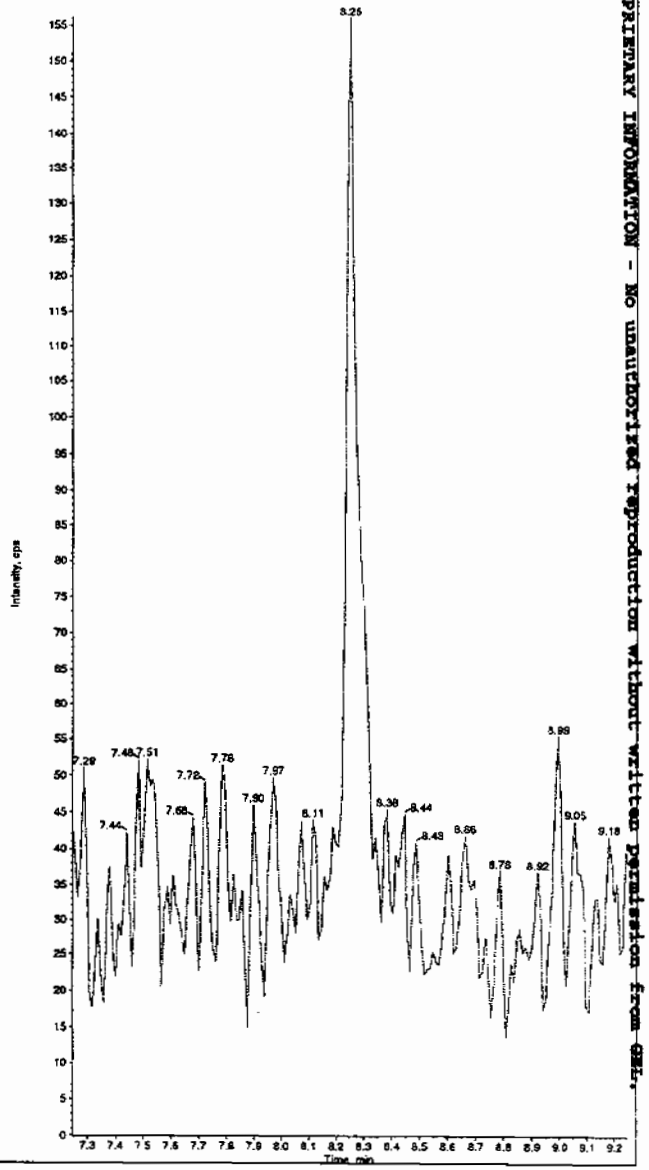

Hmm 04/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0630002.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:29:50 AM

Modified: No

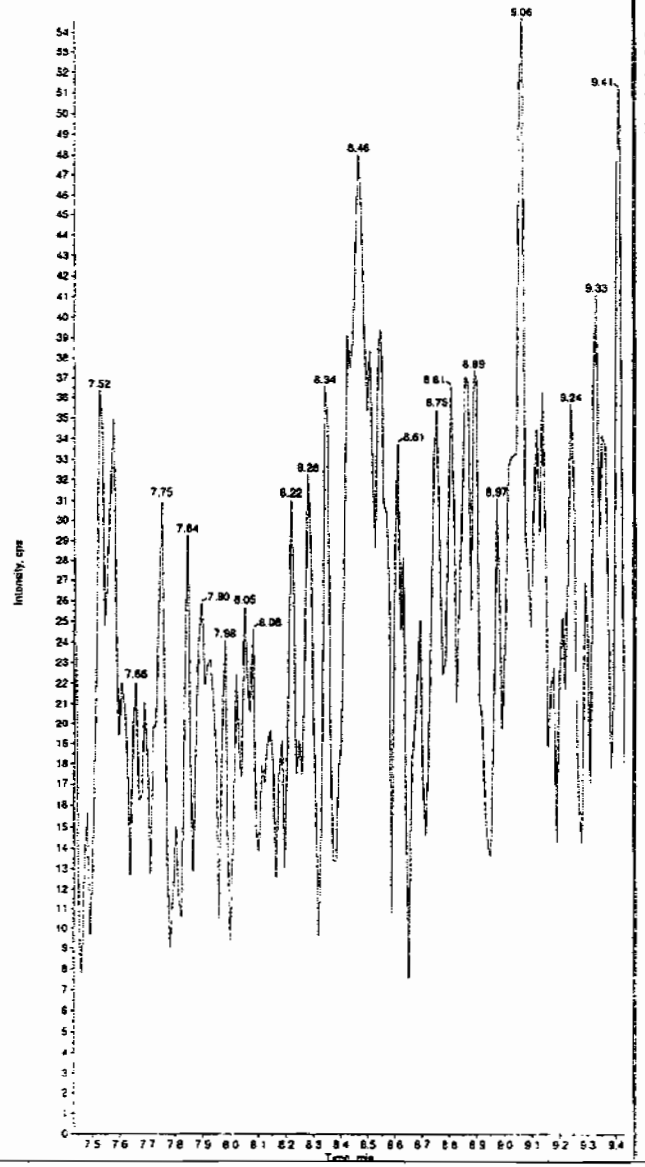

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0630002.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:29:50 AM

Modified: No

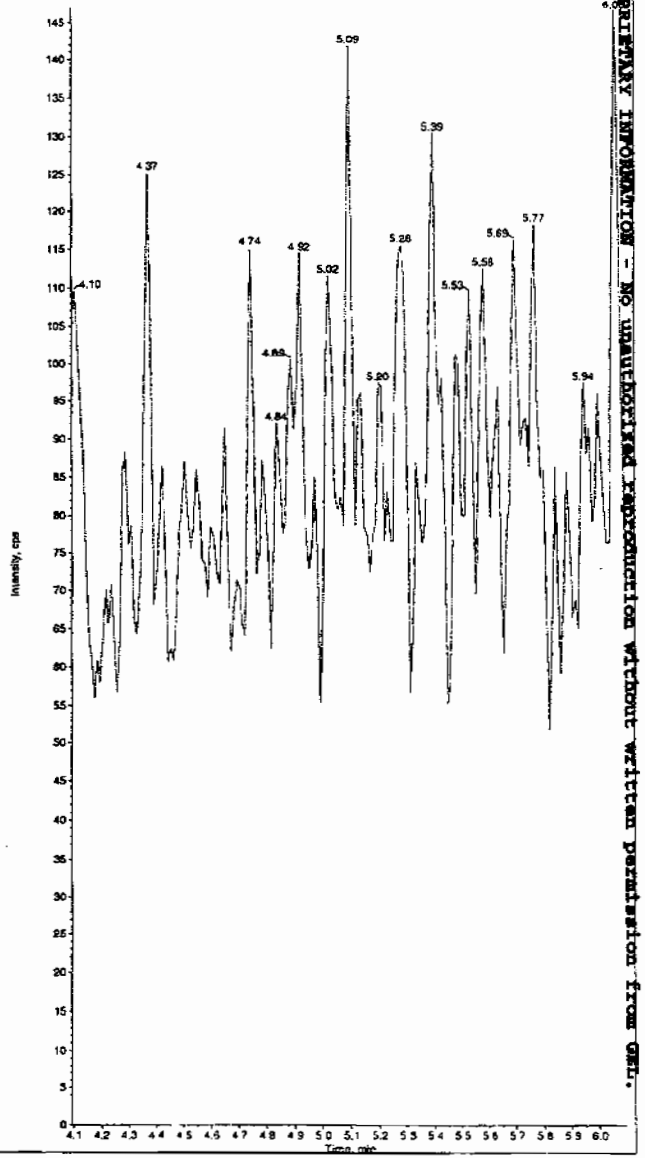

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0630002.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:29:50 AM

Modified: No

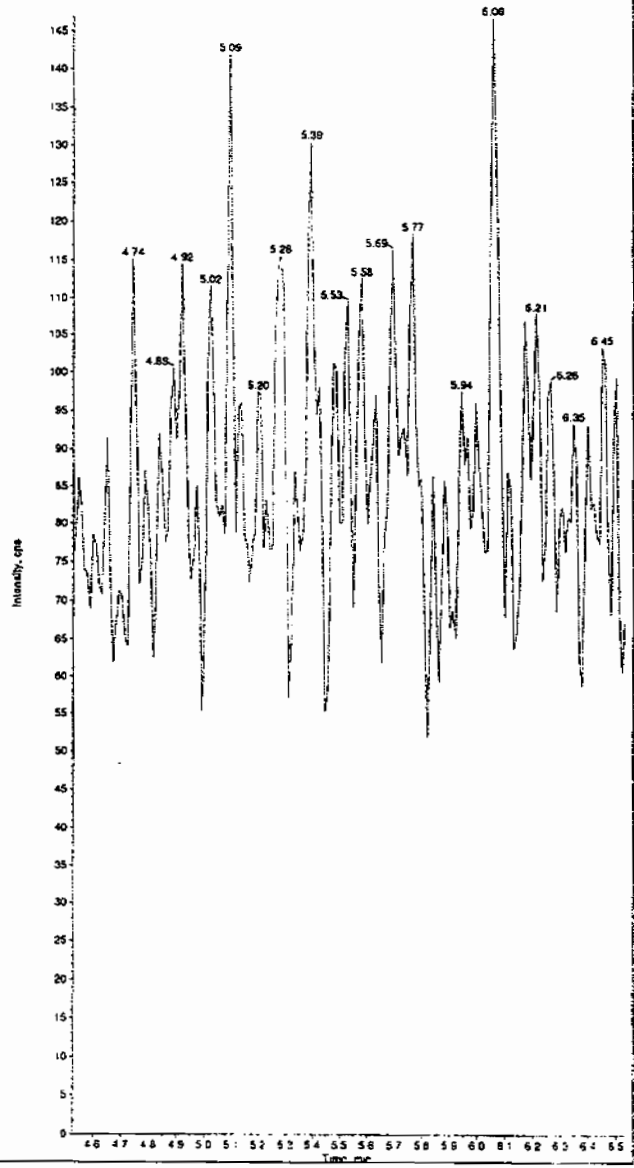

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0630002.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 11:29:50 AM

Modified: No

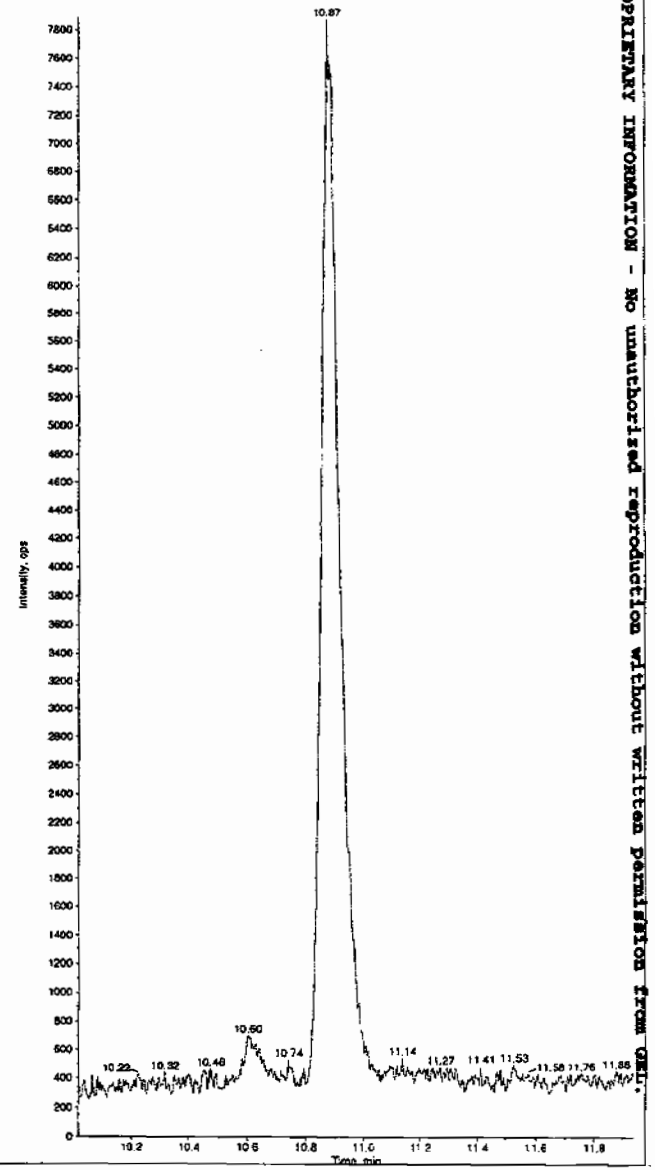

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 01-JUL-09 10:39

GEL Data File: EXS0701001.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	3.89
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0701001.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_8" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No

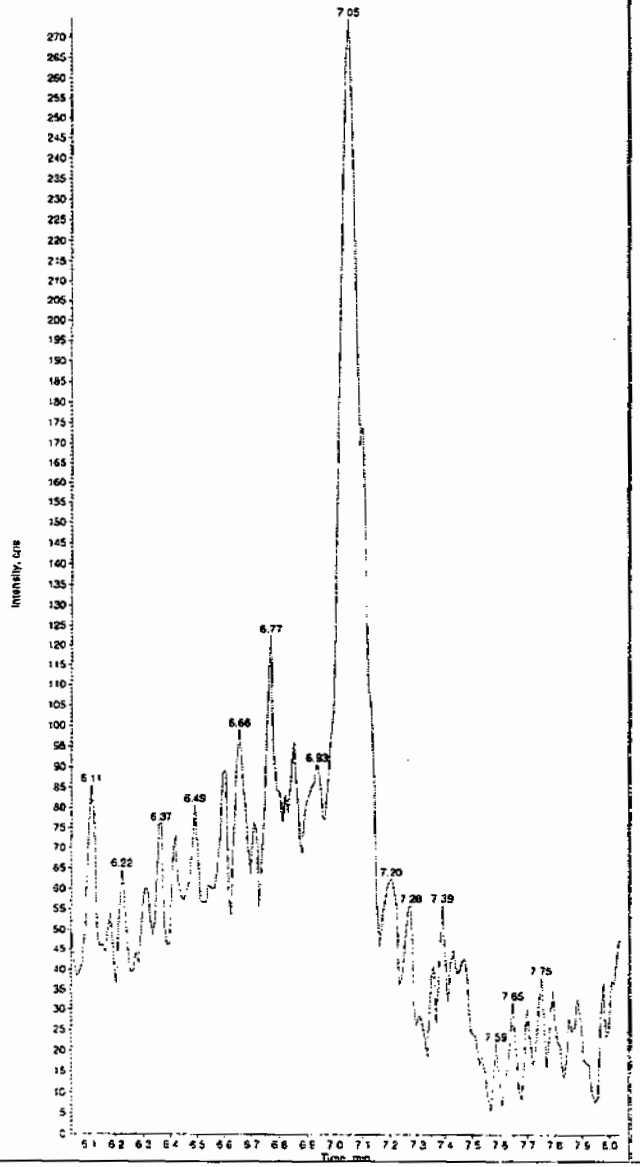

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0701001.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_8" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No

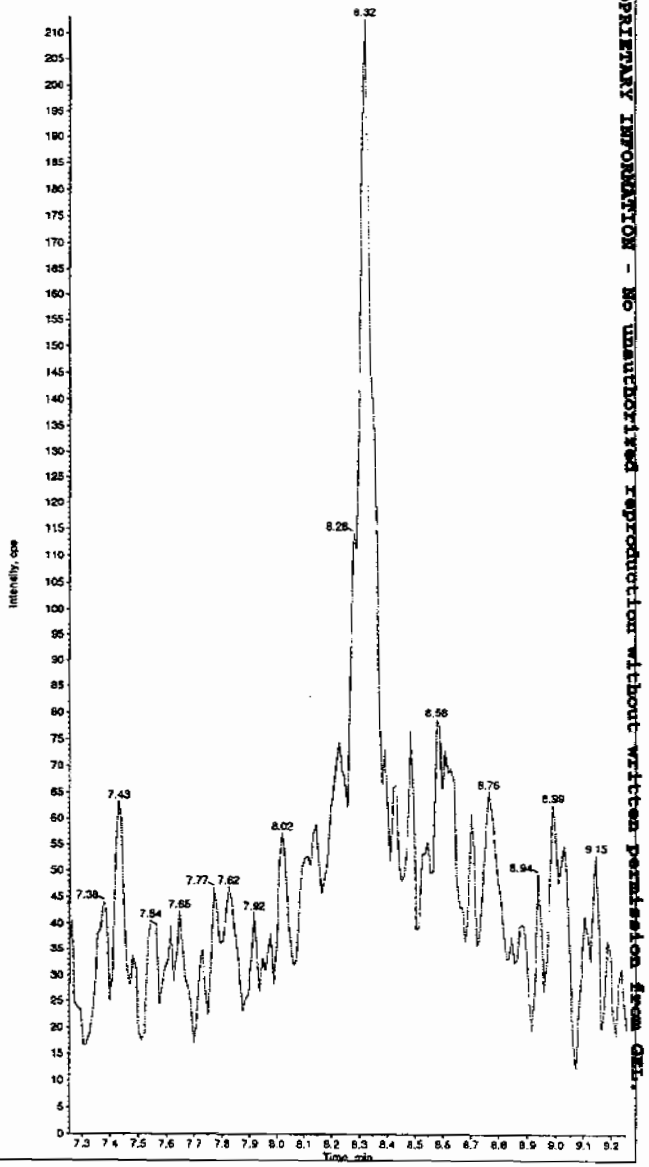

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0701001.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No

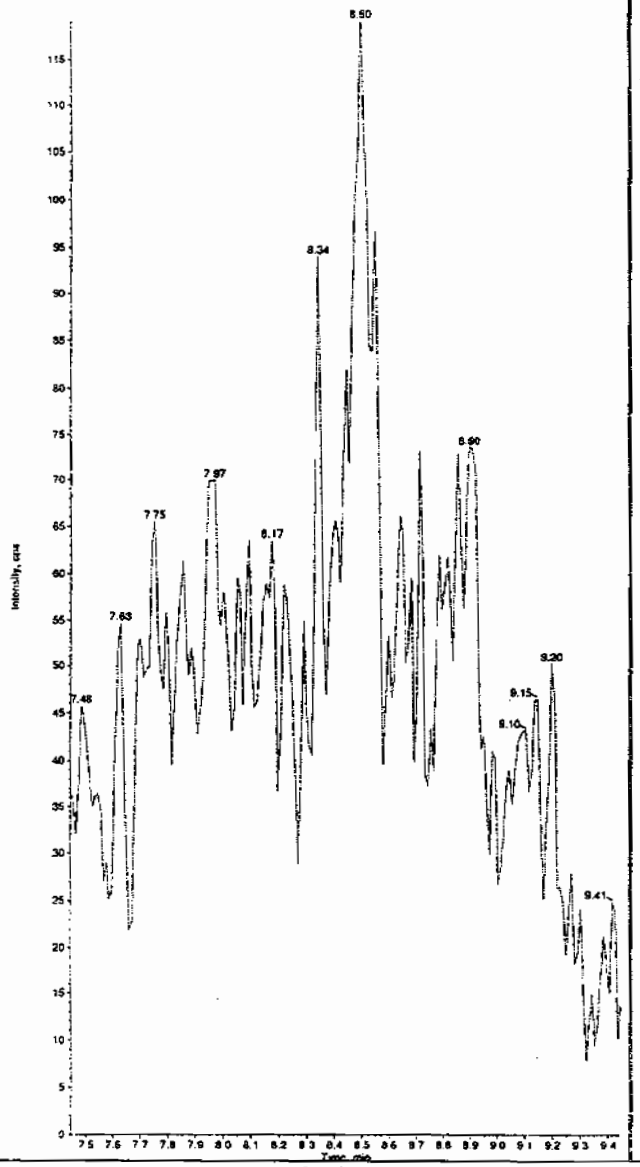

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0701001.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No

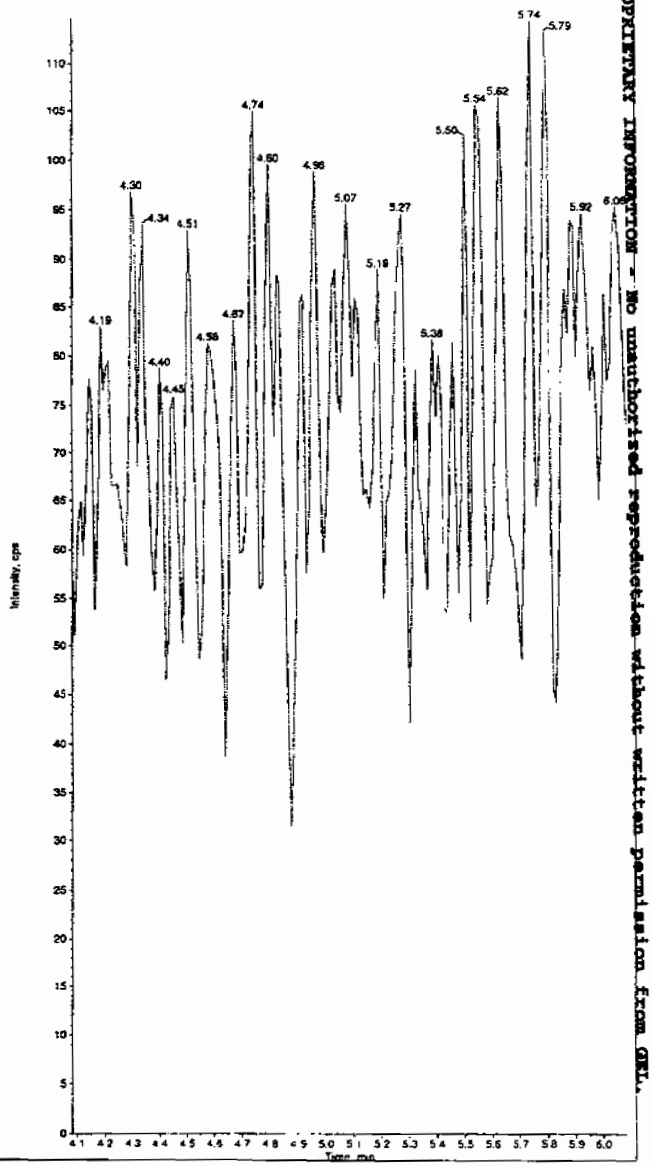

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701001.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No

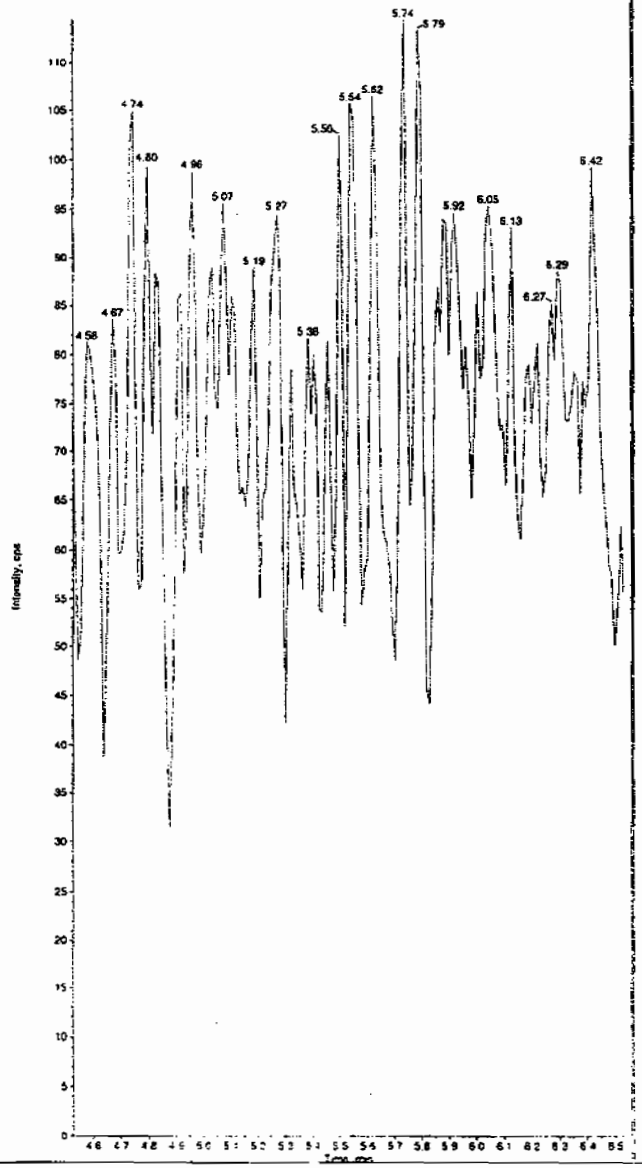

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701001.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 3.69 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:39:20 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.59e+004 counts
Height: 14369.535 cps
Start Time: 10.8 min
End Time: 11.1 min

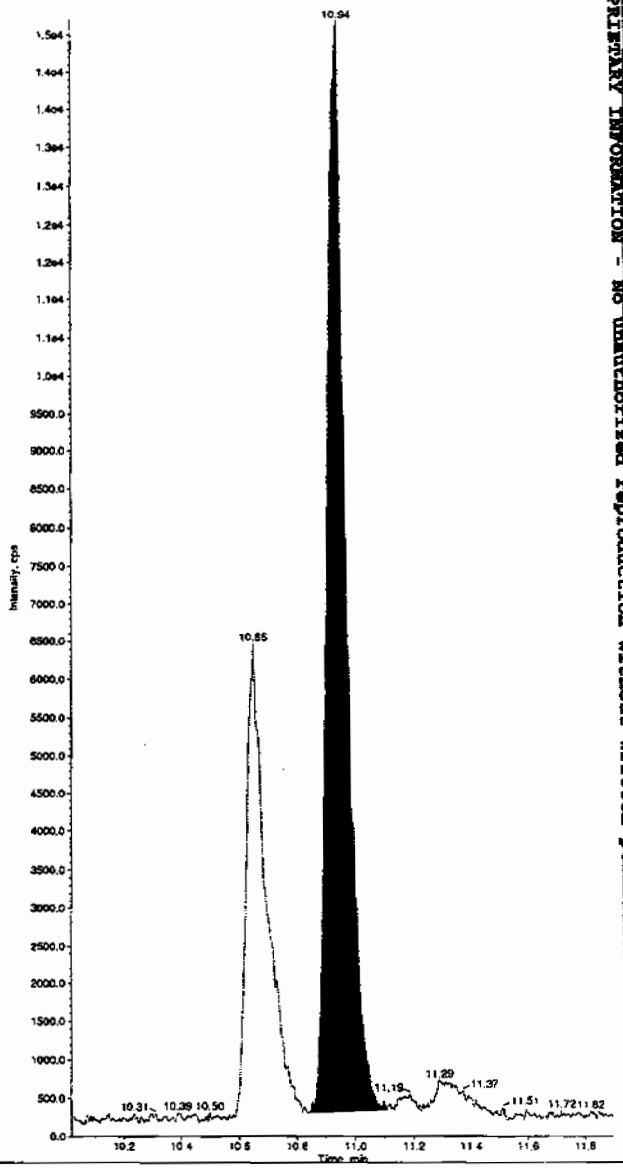

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 01-JUL-09 10:55

GEL Data File: EXS0701002.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	2.9
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0701002.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:55:37 AM

Modified: No

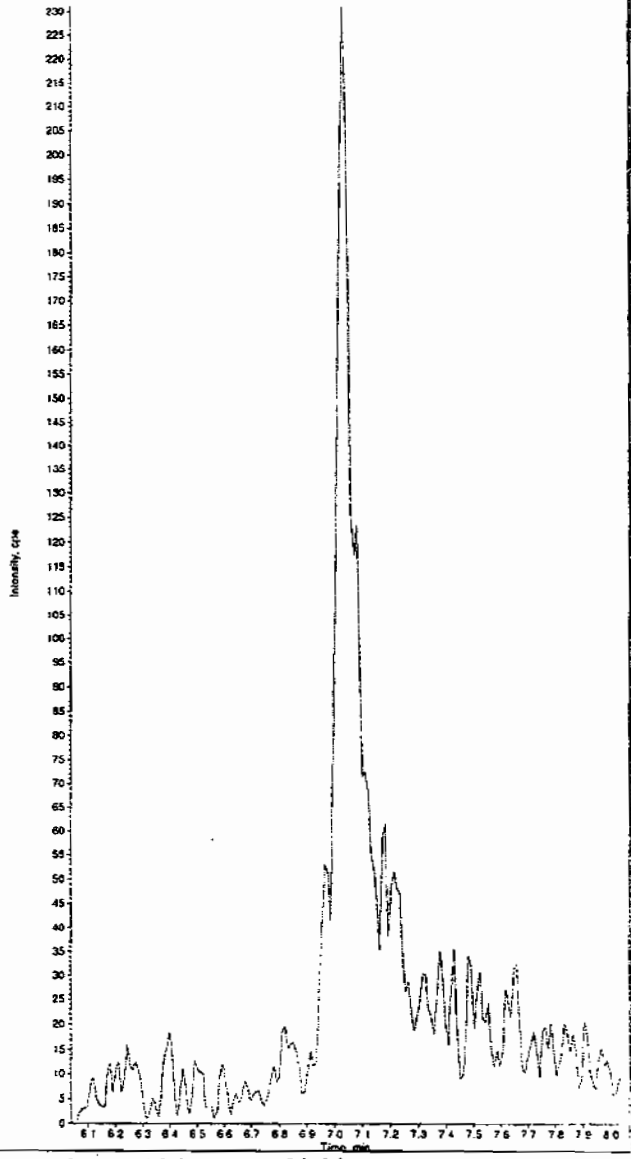

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0701002.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:55:37 AM

Modified: No

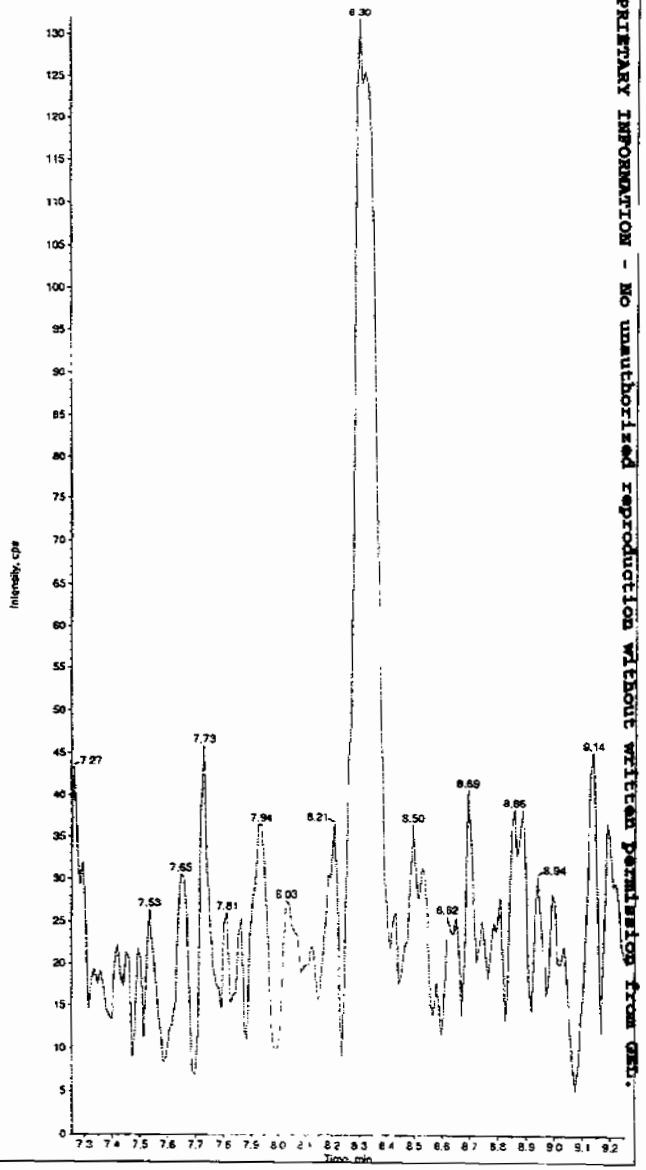

Hmm 07/06/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701002.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:55:37 AM

Modified: No

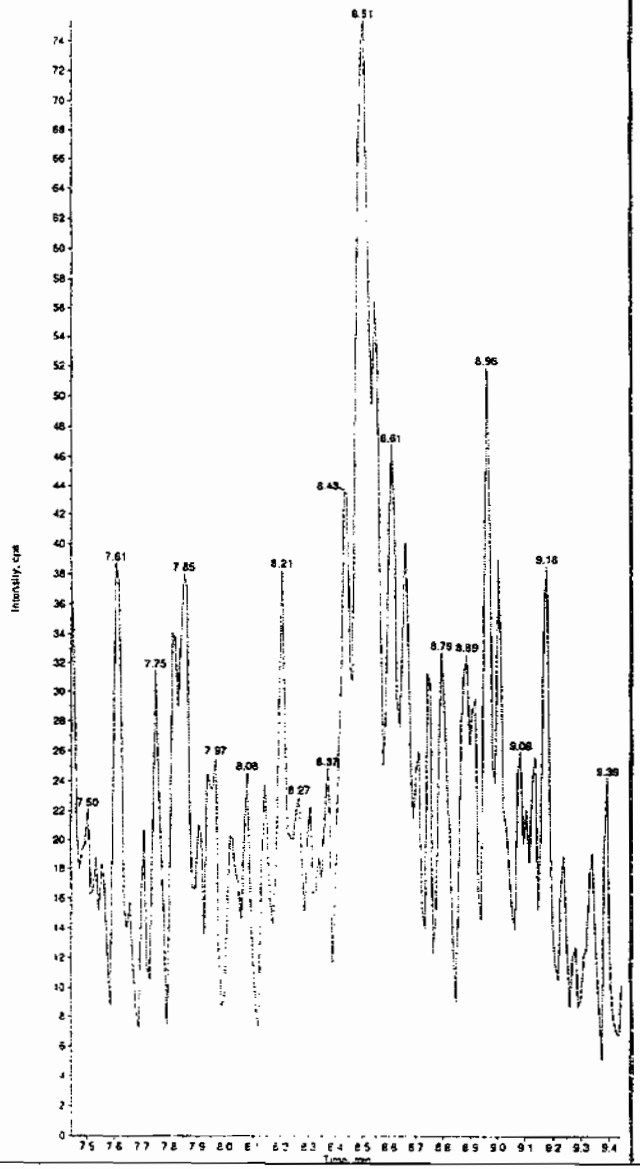

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701002.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:55:37 AM

Modified: No

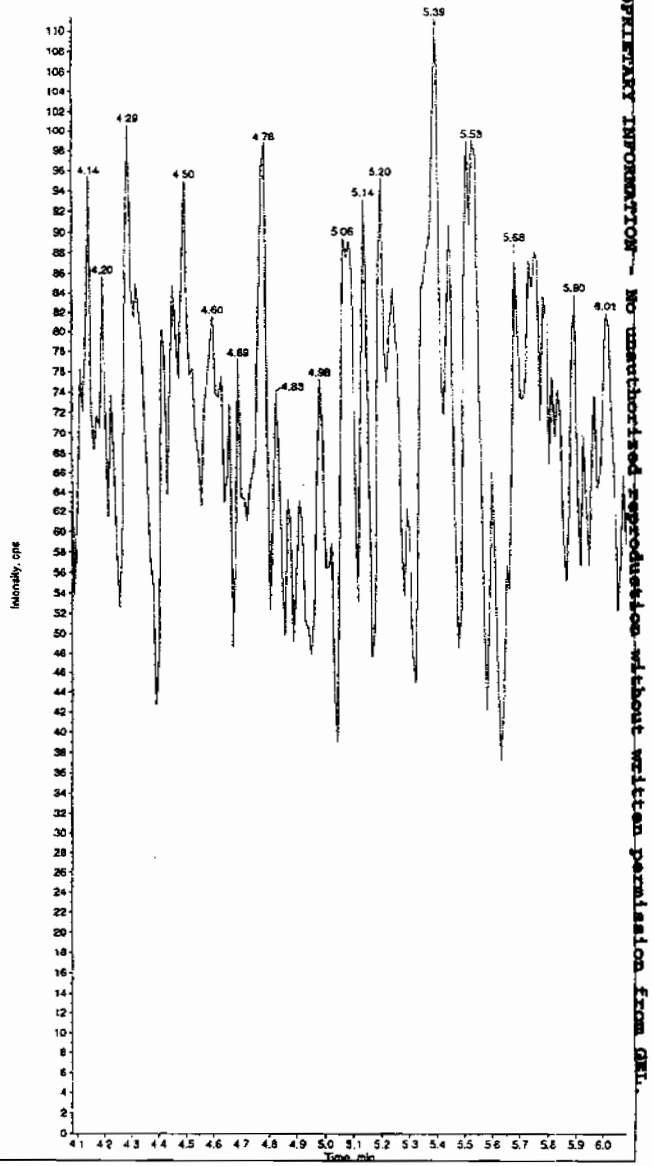

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701002.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:55:37 AM

Modified: No

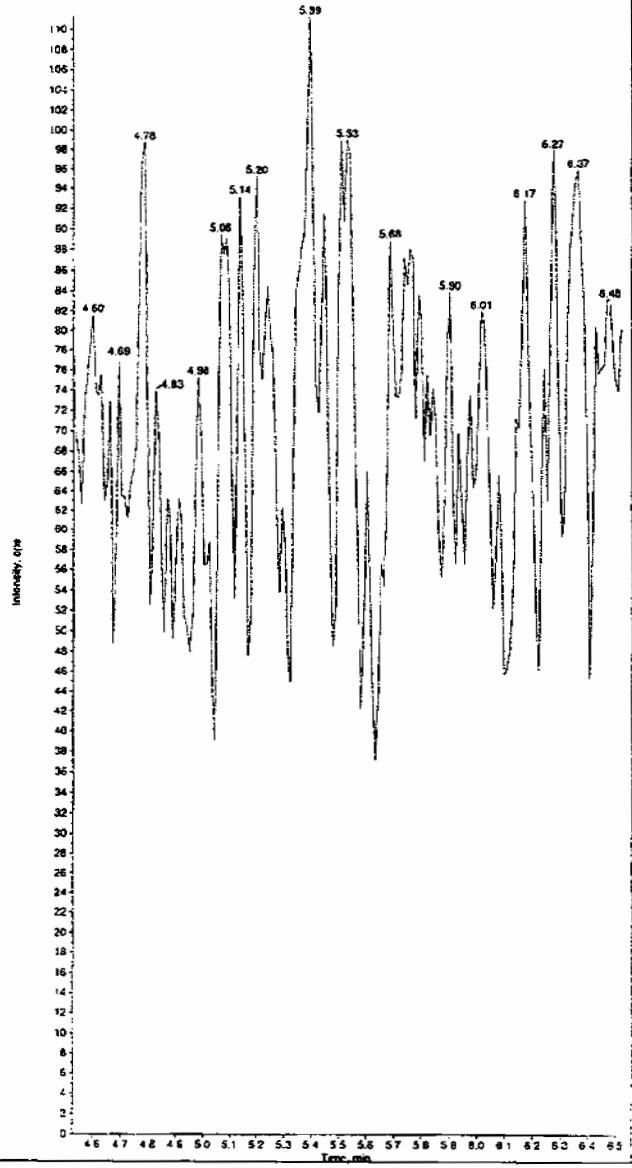

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0701002.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 2.90 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 10:55:37 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 5.27e+004 counts
Height: 12139.582 cps
Start Time: 10.9 min
End Time: 11.1 min

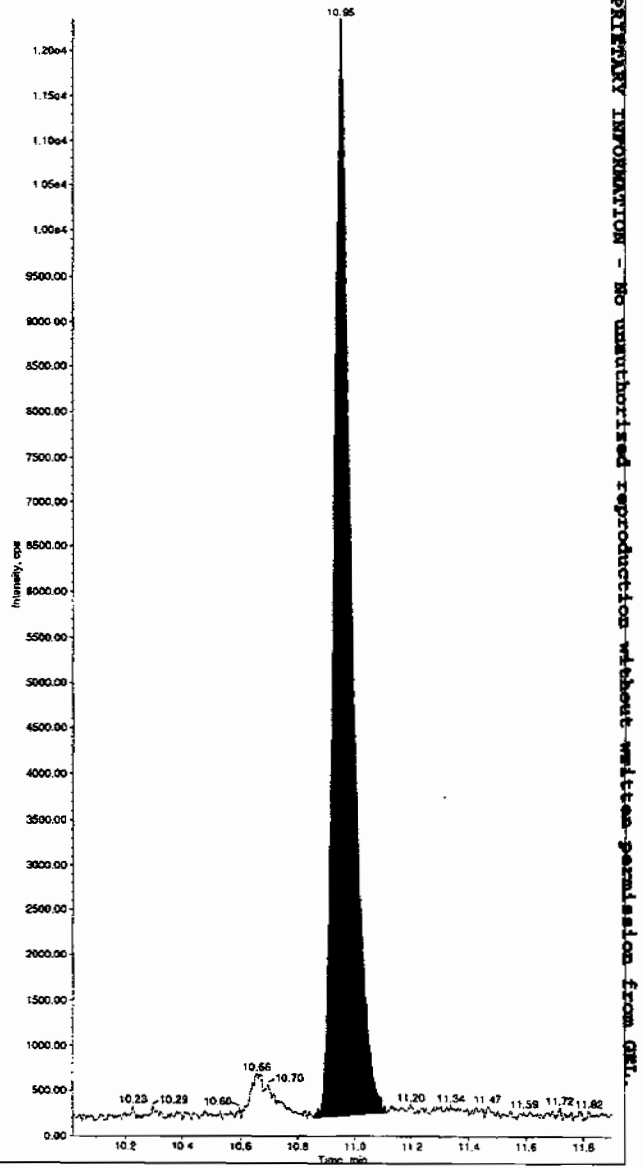

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09–2457

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 30–JUN–09 18:34

GEL Data File: EXP0630009a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	494.808
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	524.395
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630009a
Date: 30-Jun-2009
Time: 18:34:07
ID: XIBLK02
Vial: 1:1,A

MMT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.833e+003

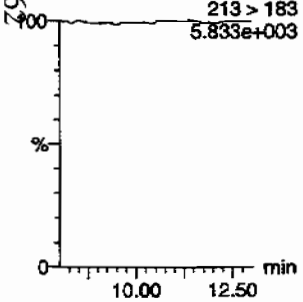

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.756e+003

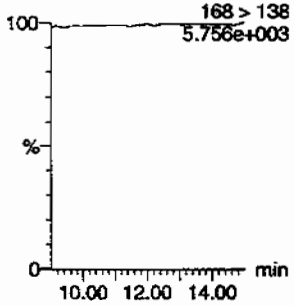

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.696e+004

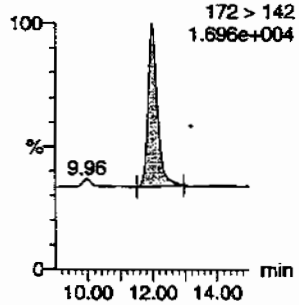

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.891e+003

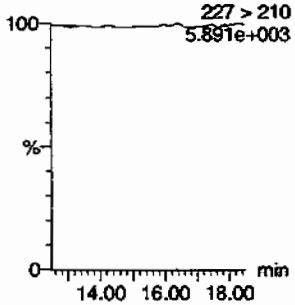

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.847e+003

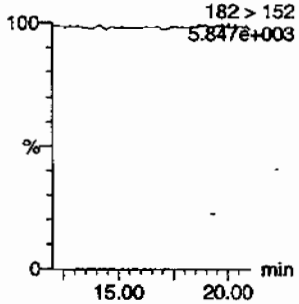

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.847e+003

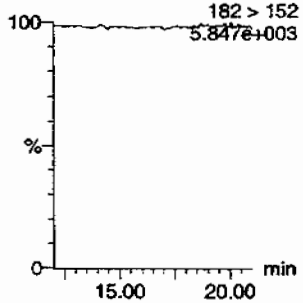

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.260e+004

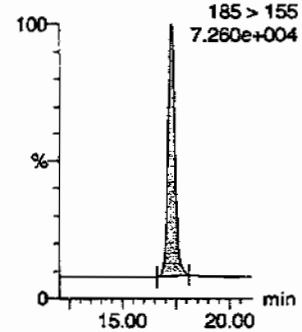

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
6.009e+003

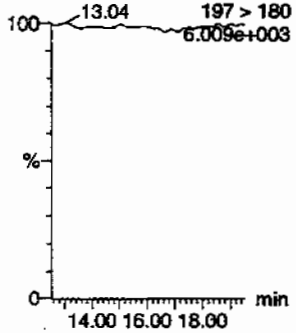

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.778e+003

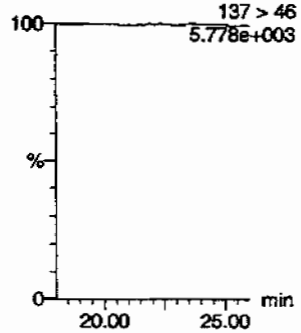

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.847e+003

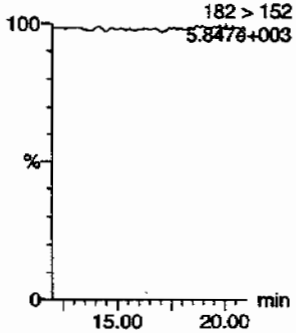

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.778e+003

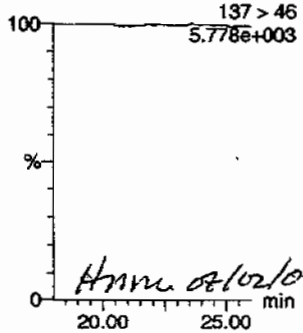

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.980e+003

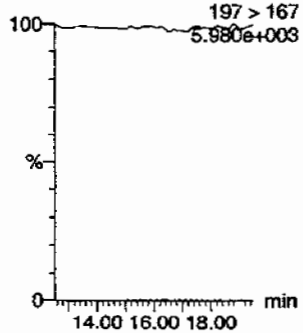

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

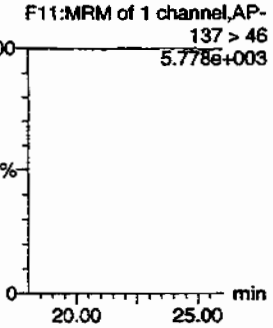

HMX

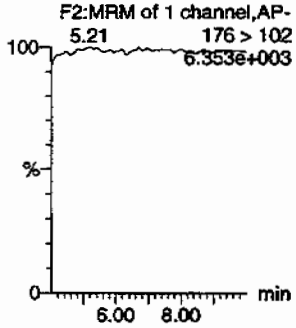

Nitrobenzene

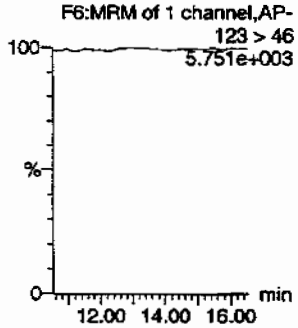

PETN

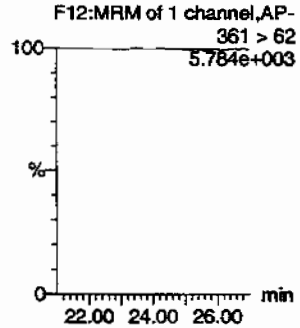

RDX

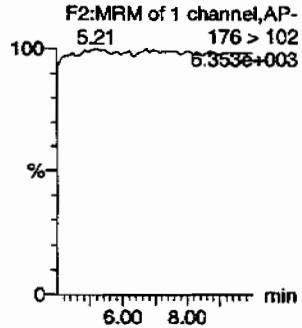

Tetryl

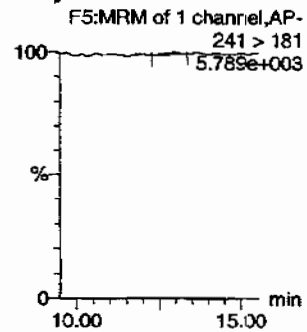

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flag	Mod Date	Modifications	Amount	Recov	%Dev	S/N
XIBLK02	HMX	176 > 102			3791.902									
XIBLK02	RDX	176 > 102			3791.902									
XIBLK02	135-Trinitrobenzene	213 > 183			3791.902									
XIBLK02	13-Dinitrobenzene-d4	172 > 142	11.97	3791.902		3791.902	3791.902	bb			494.8077	99.0	-1.0	321.7
XIBLK02	13-Dinitrobenzene	168 > 138			3791.902									
XIBLK02	Tetryl	241 > 181	12.96	32.835	3791.902	32.835	4.330	bb			2.1508			1.4
XIBLK02	Nitrobenzene	123 > 46			3791.902									
XIBLK02	4-Amino-26-dinitrotoluene	197 > 167			25136.822									
XIBLK02	2-Amino-46-dinitrotoluene	197 > 180			25136.822									
XIBLK02	246-Trinitrotoluene	227 > 210			25136.822									
XIBLK02	34-dinitrotoluene	182 > 152			25136.822									
XIBLK02	26-dinitrotoluene	182 > 152			25136.822									
XIBLK02	24-dinitrotoluene	182 > 152			25136.822									
XIBLK02	26-dinitrotoluene-d3	185 > 155	17.27	25136.822		25136.822	25136.822	bb			524.3953	104.9	4.9	1331.8
XIBLK02	2-Nitrotoluene	137 > 46			25136.822									
XIBLK02	4-Nitrotoluene	137 > 46			25136.822									
XIBLK02	3-Nitrotoluene	137 > 46			25136.822									
XIBLK02	PETN	361 > 62			25136.822									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 30-JUN-09 19:33

GEL Data File: EXP0630011a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	520.965
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	533.653
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630011a
Date: 30-Jun-2009
Time: 19:33:02
ID: XIBLK03
Vial: 1:1,A

MEH 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.558e+003

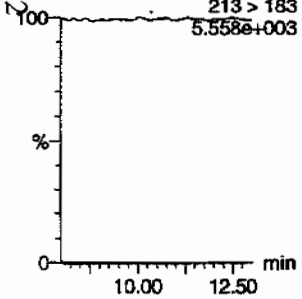

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.518e+003

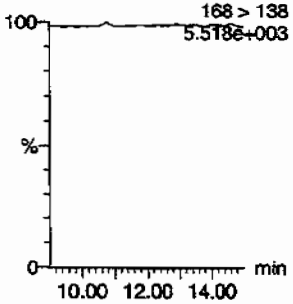

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.776e+004

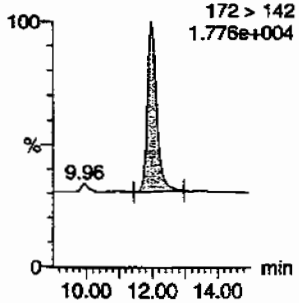

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.569e+003

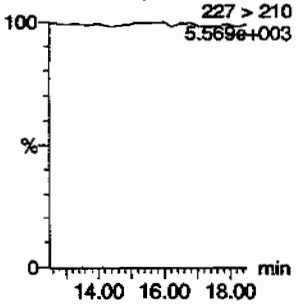

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.492e+003

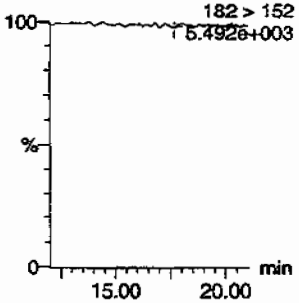

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.492e+003

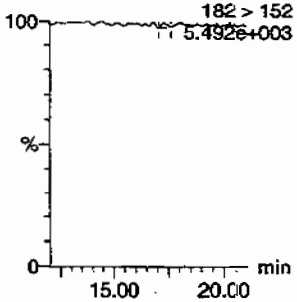

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.376e+004

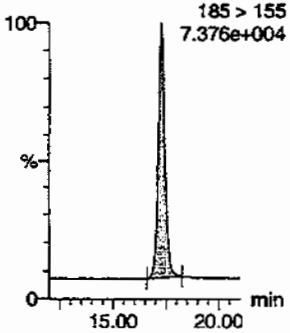

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
13.44
197 > 180
5.657e+003

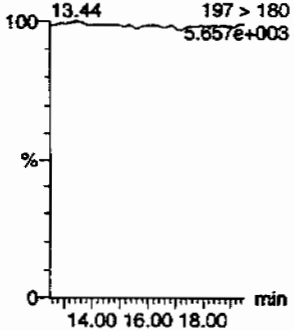

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.458e+003

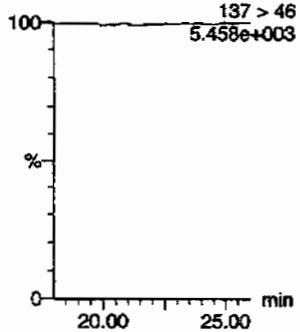

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.492e+003

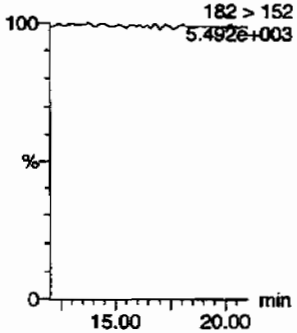

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.458e+003

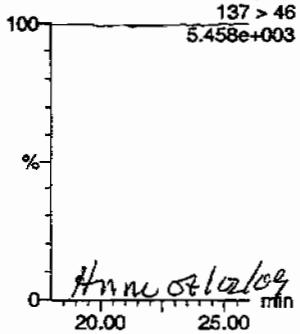

Hmnotolalog

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.640e+003

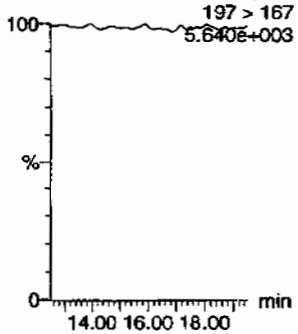

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

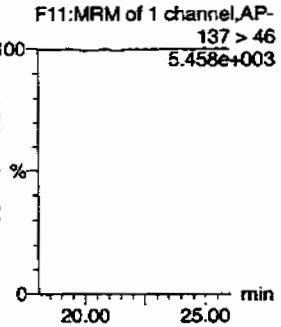

HMX

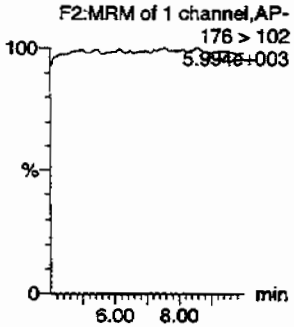

Nitrobenzene

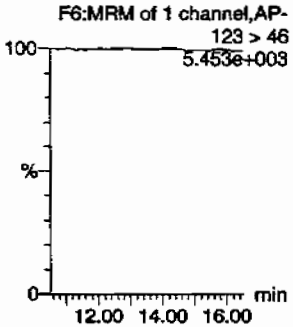

PETN

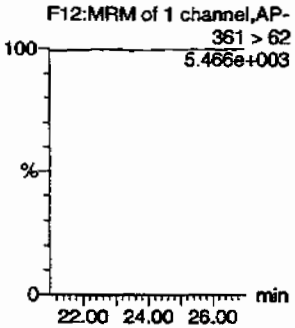

RDX

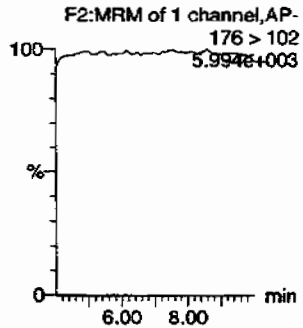

Tetryl

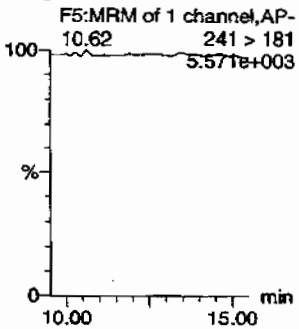

ID	Name	Trace	RT	Area	SArea	Abs.Resp	%Response	Flags	Modi.Date	Modi.time	Amount	%Rec	%Dev	S/N
XIBLK03	HMX	176 > 102			3992.352									
XIBLK03	RDX	176 > 102			3992.352									
XIBLK03	135-Trinitrobenzene	213 > 183			3992.352									
XIBLK03	13-Dinitrobenzene-d4	172 > 142	11.97	3992.352		3992.352	3992.352	bb			520.9646	104.2	4.2	339.7
XIBLK03	13-Dinitrobenzene	168 > 138			3992.352									
XIBLK03	Tetryl	241 > 181			3992.352									
XIBLK03	Nitrobenzene	123 > 46			3992.352									
XIBLK03	4-Amino-26-dinitrotoluene	197 > 167			25580.592									
XIBLK03	2-Amino-46-dinitrotoluene	197 > 180			25580.592									
XIBLK03	246-Trinitrotoluene	227 > 210			25580.592									
XIBLK03	34-dinitrotoluene	182 > 152			25580.592									
XIBLK03	26-dinitrotoluene	182 > 152			25580.592			MM-	01-Jul-09	09:29:57				
XIBLK03	24-dinitrotoluene	182 > 152			25580.592			MM-	01-Jul-09	09:33:43				
XIBLK03	26-dinitrotoluene-d3	185 > 155	17.27	25580.592		25580.592	25580.592	bb			533.6531	106.7	6.7	1367.4
XIBLK03	2-Nitrotoluene	137 > 46			25580.592									
XIBLK03	4-Nitrotoluene	137 > 46			25580.592									
XIBLK03	3-Nitrotoluene	137 > 46			25580.592									
XIBLK03	PETN	361 > 62			25580.592									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 30-JUN-09 23:58

GEL Data File: EXP0630020a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	519.307
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	519.338
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630020a
Date: 30-Jun-2009
Time: 23:58:17
ID: XIBLK04
Vial: 1:1,A

MATT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.773e+003

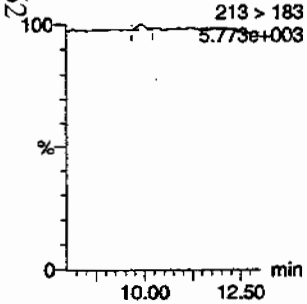

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.628e+003

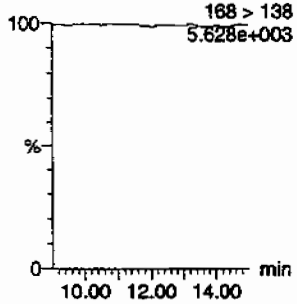

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.800e+004

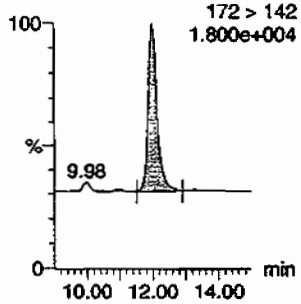

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.713e+003

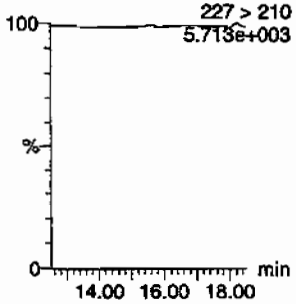

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.671e+003

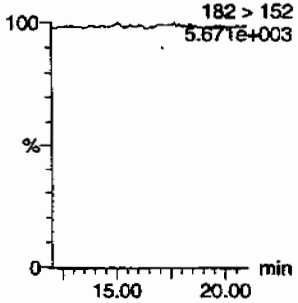

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.671e+003

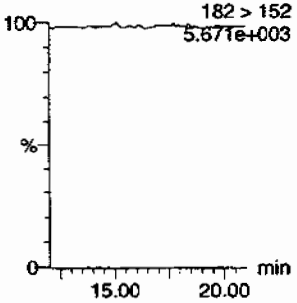

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.198e+004

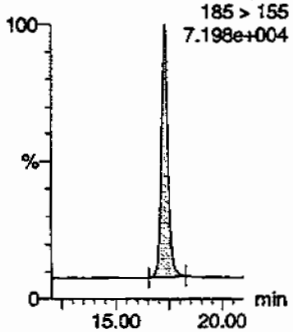

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.767e+003

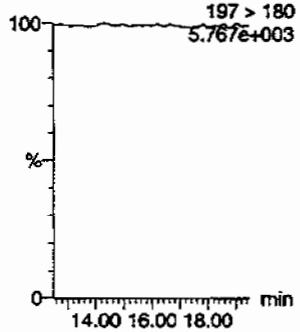

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.648e+003

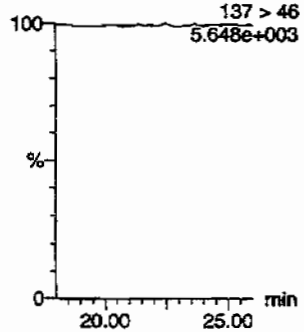

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.671e+003

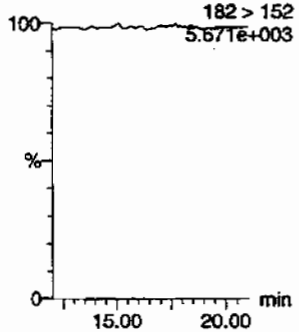

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.648e+003

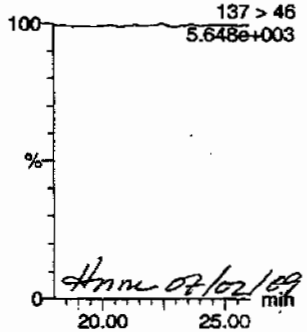

Hmm 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.756e+003

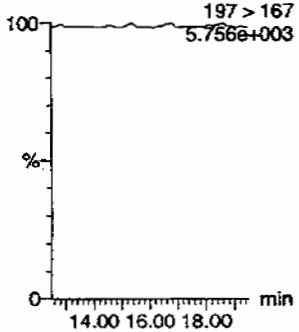

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Page 34 of 862

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

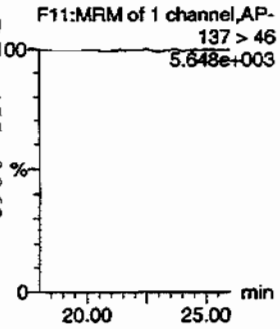

HMX

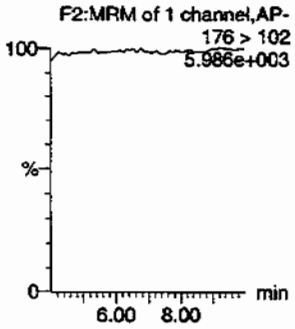

Nitrobenzene

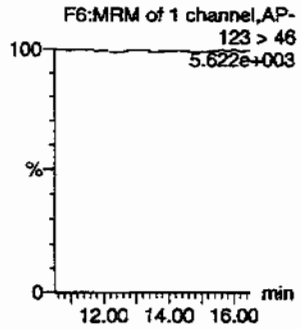

PETN

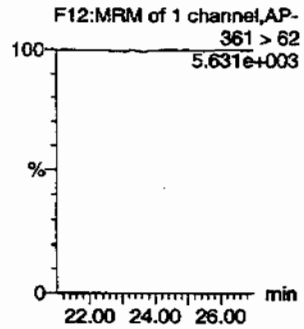

RDX

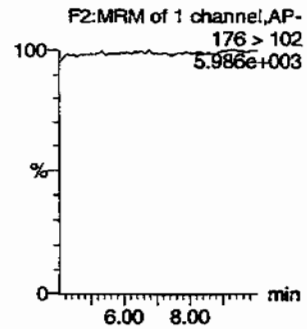

Tetryl

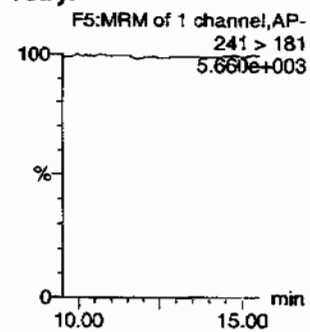

ID	Name	Trace	RT	Area	IS Area	Area Resp	Response	Flags	Modifiedat	Modifiedby	Amount	%Rec	%Dev	S/N
XIBLK04	HMX	176 > 102			3979.651									
XIBLK04	RDX	176 > 102			3979.651									
XIBLK04	135-Trinitrobenzene	213 > 183			3979.651			MM-	01-Jul-09	09:20:52				
XIBLK04	13-Dinitrobenzene-d4	172 > 142	12.00	3979.651		3979.651	3979.651	bb			519.3072	103.9	3.9	116.6
XIBLK04	13-Dinitrobenzene	168 > 138			3979.651									
XIBLK04	Tetryl	241 > 181			3979.651									
XIBLK04	Nitrobenzene	123 > 46			3979.651									
XIBLK04	4-Amino-26-dinitrotoluene	197 > 167			24894.395									
XIBLK04	2-Amino-46-dinitrotoluene	197 > 180			24894.395									
XIBLK04	246-Trinitrotoluene	227 > 210			24894.395									
XIBLK04	34-dinitrotoluene	182 > 152			24894.395									
XIBLK04	26-dinitrotoluene	182 > 152			24894.395									
XIBLK04	24-dinitrotoluene	182 > 152			24894.395									
XIBLK04	26-dinitrotoluene-d3	185 > 155	17.29	24894.395		24894.395	24894.395	bb			519.3379	103.9	3.9	1019.2
XIBLK04	2-Nitrotoluene	137 > 46			24894.395									
XIBLK04	4-Nitrotoluene	137 > 46			24894.395									
XIBLK04	3-Nitrotoluene	137 > 46			24894.395									
XIBLK04	PETN	361 > 62			24894.395									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 01-JUL-09 03:54

GEL Data File: EXP0630028a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	505.116
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	535.624
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630028a
Date: 01-Jul-2009
Time: 03:54:08
ID: XIBLK05
Vial: 1:1,A

MM 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.723e+003

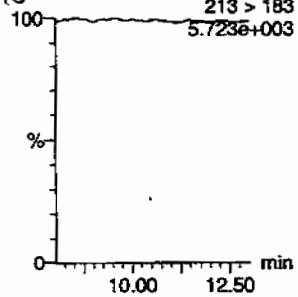

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.651e+003

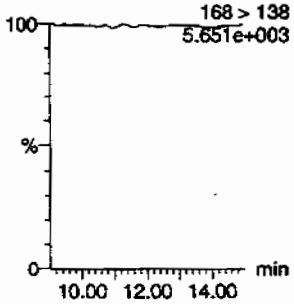

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.764e+004

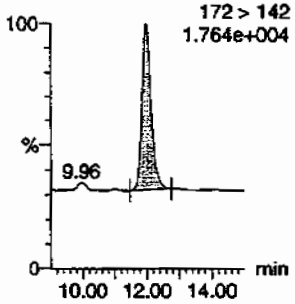

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.733e+003

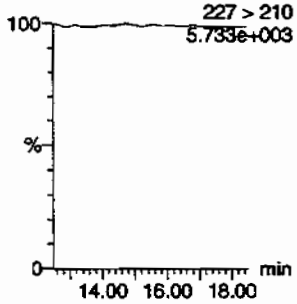

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.688e+003

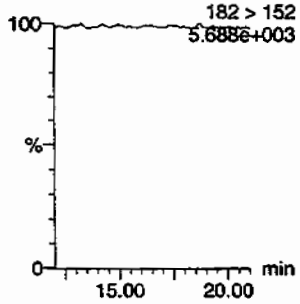

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.688e+003

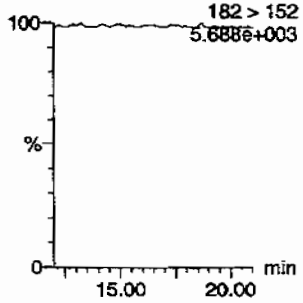

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.363e+004

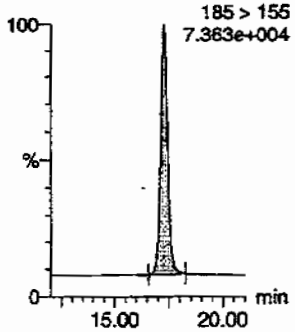

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.830e+003

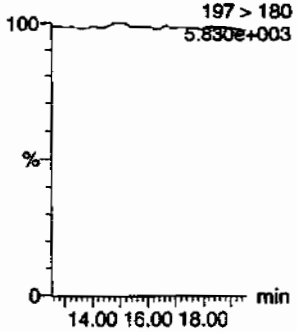

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.641e+003

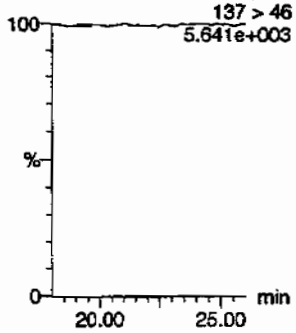

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.688e+003

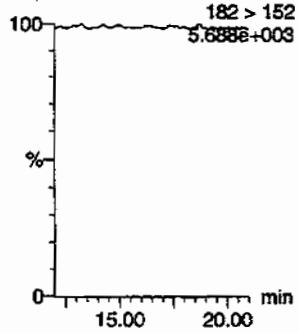

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.641e+003

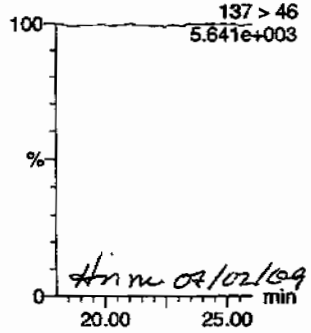

Hm m 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.783e+003

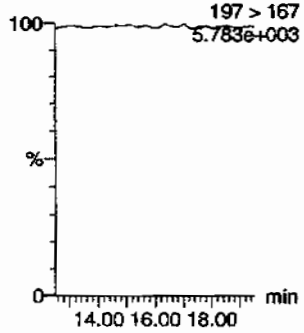

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

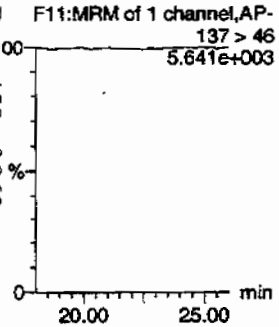

HMX

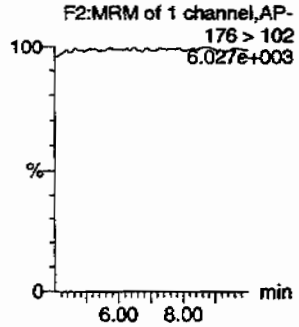

Nitrobenzene

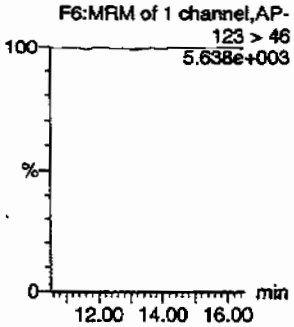

PETN

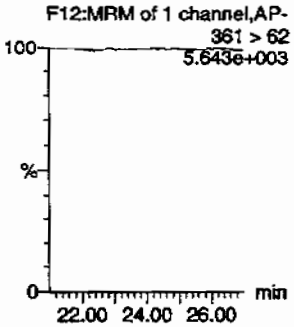

RDX

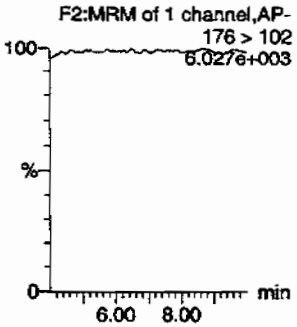

Tetryl

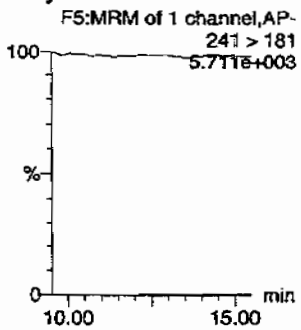

ID	Name	Trace	RT	IS Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Email	Amount	%Rec	%Dev	S/N
XIBLK05	HMX	176 > 102			3870.898									
XIBLK05	RDX	176 > 102			3870.898									
XIBLK05	135-Trinitrobenzene	213 > 183			3870.898									
XIBLK05	13-Dinitrobenzene-d4	172 > 142	12.00	3870.898		3870.898	3870.898	bb			505.1160	101.0	1.0	258.6
XIBLK05	13-Dinitrobenzene	168 > 138			3870.898									
XIBLK05	Tetryl	241 > 181			3870.898									
XIBLK05	Nitrobenzene	123 > 46			3870.898									
XIBLK05	4-Amino-26-dinitrotoluene	197 > 167			25675.066									
XIBLK05	2-Amino-46-dinitrotoluene	197 > 180			25675.066									
XIBLK05	246-Trinitrotoluene	227 > 210			25675.066									
XIBLK05	34-dinitrotoluene	182 > 152			25675.066									
XIBLK05	26-dinitrotoluene	182 > 152			25675.066									
XIBLK05	24-dinitrotoluene	182 > 152			25675.066									
XIBLK05	26-dinitrotoluene-d3	185 > 155	17.27	25675.066		25675.066	25675.066	bb			535.6240	107.1	7.1	1575.7
XIBLK05	2-Nitrotoluene	137 > 46			25675.066									
XIBLK05	4-Nitrotoluene	137 > 46			25675.066									
XIBLK05	3-Nitrotoluene	137 > 46			25675.066									
XIBLK05	PETN	361 > 62			25675.066									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK06

Analysis Date: 01-JUL-09 07:49

GEL Data File: EXP0630036a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	508.032
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	524.477
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630036a
Date: 01-Jul-2009
Time: 07:49:59
ID: XIBLK06
Dil: 1:1,A

MAT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.857e+003

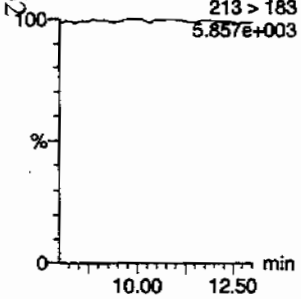

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.796e+003

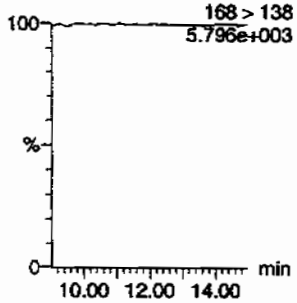

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.799e+004

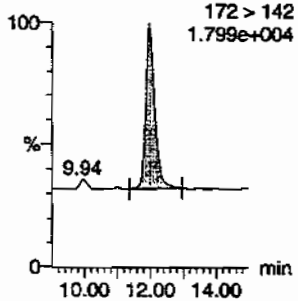

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.879e+003

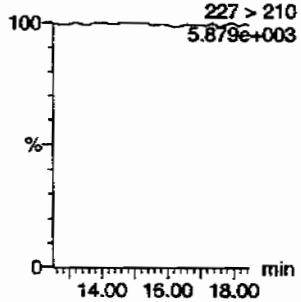

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.852e+003

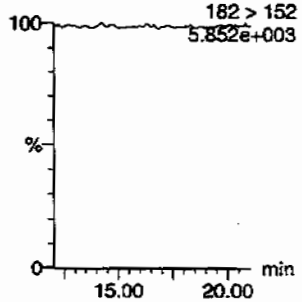

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.852e+003

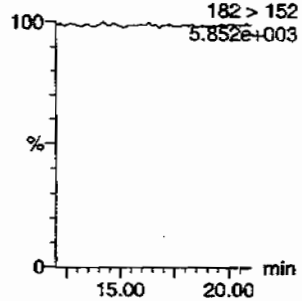

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.351e+004

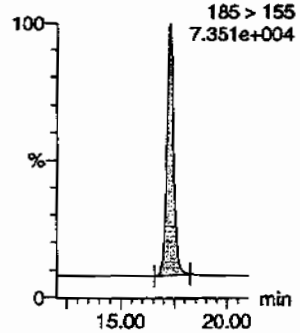

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.952e+003

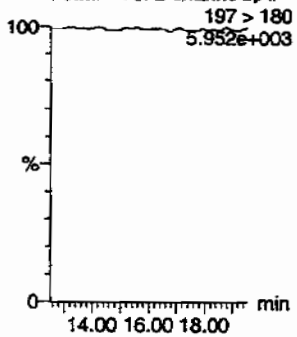

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.818e+003

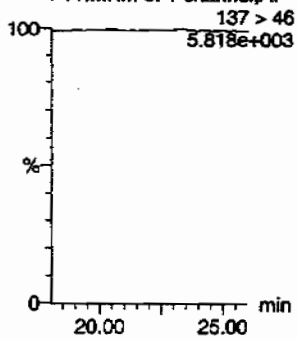

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.852e+003

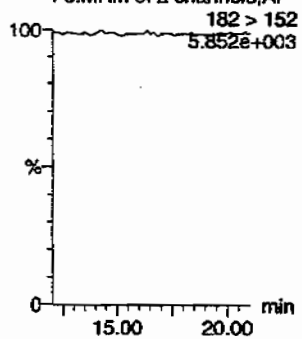

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.818e+003

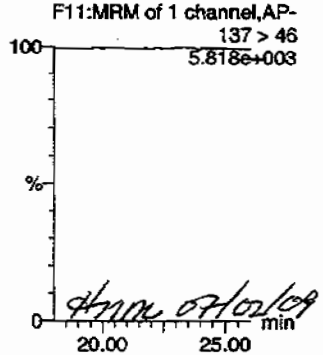

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.976e+003

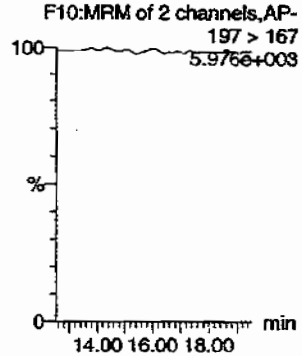

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

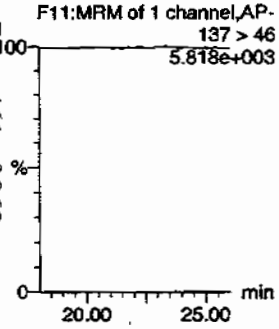

HMX

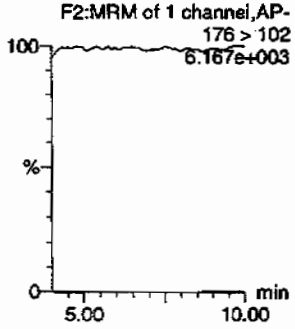

Nitrobenzene

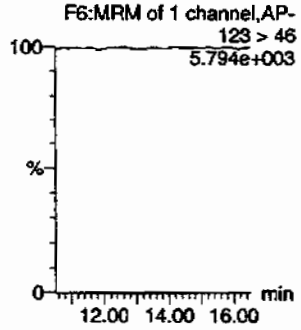

PETN

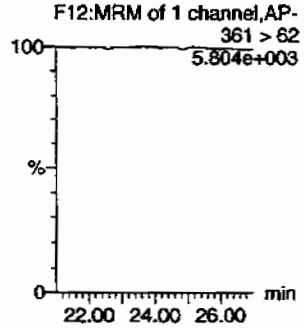

RDX

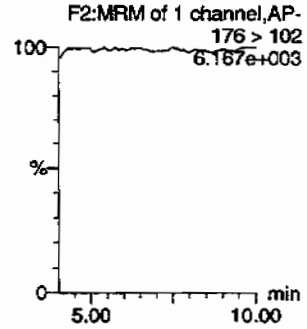

Tetryl

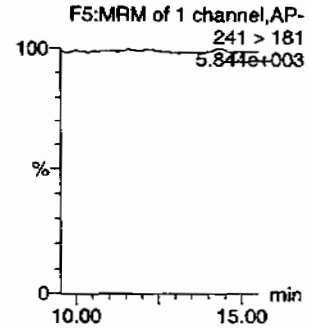

ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Modifiers	Mod.Time	Timing	% Rec	%Dev	S/N
XIBLK06	HMX	176 > 102			3893.246									
XIBLK06	RDX	176 > 102			3893.246									
XIBLK06	135-Trinitrobenzene	213 > 183			3893.246									
XIBLK06	13-Dinitrobenzene-d4	172 > 142	11.97	3893.246		3893.246	3893.246	bb			508.0322	101.6	1.6	83.7
XIBLK06	13-Dinitrobenzene	168 > 138			3893.246									
XIBLK06	Tetryl	241 > 181			3893.246									
XIBLK06	Nitrobenzene	123 > 46			3893.246									
XIBLK06	4-Amino-26-dinitrotoluene	197 > 167			25140.730									
XIBLK06	2-Amino-46-dinitrotoluene	197 > 180			25140.730									
XIBLK06	246-Trinitrotoluene	227 > 210			25140.730									
XIBLK06	34-dinitrotoluene	182 > 152			25140.730									
XIBLK06	26-dinitrotoluene	182 > 152			25140.730									
XIBLK06	24-dinitrotoluene	182 > 152			25140.730									
XIBLK06	26-dinitrotoluene-d3	185 > 155	17.28	25140.730		25140.730	25140.730	bb			524.4769	104.9	4.9	1499.3
XIBLK06	2-Nitrotoluene	137 > 46			25140.730									
XIBLK06	4-Nitrotoluene	137 > 46			25140.730									
XIBLK06	3-Nitrotoluene	137 > 46			25140.730									
XIBLK06	PETN	361 > 62			25140.730									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK07

Analysis Date: 01-JUL-09 13:14

GEL Data File: EXP0630047a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	544.68
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	530.455
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630047a
Date: 01-Jul-2009
Time: 13:14:25
ID: XIBLK07
Vial: 1:1,A

MMT 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.575e+003

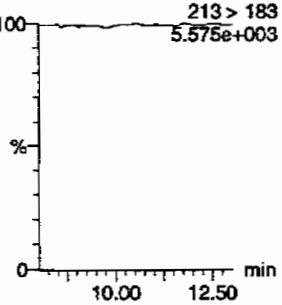

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.524e+003

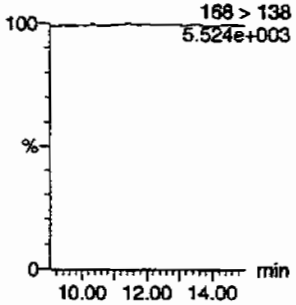

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.854e+004

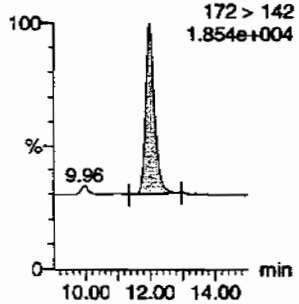

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.579e+003

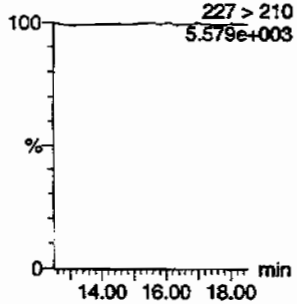

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.619e+003

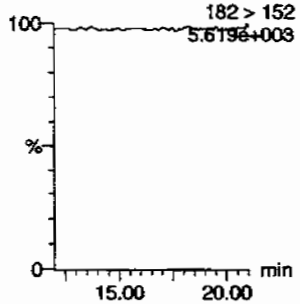

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.619e+003

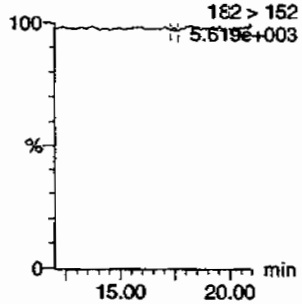

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.342e+004

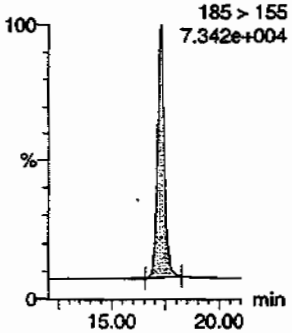

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.654e+003

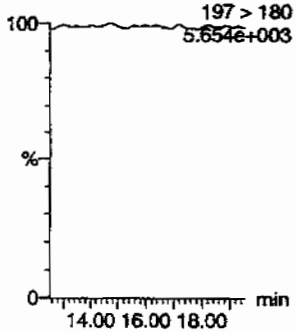

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.531e+003

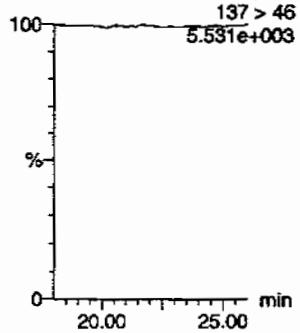

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.619e+003

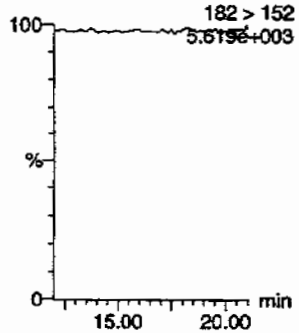

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.531e+003

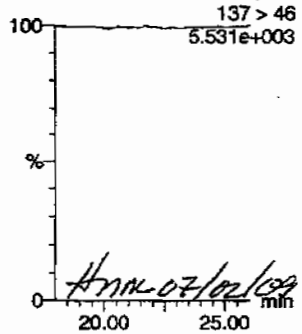

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.677e+003

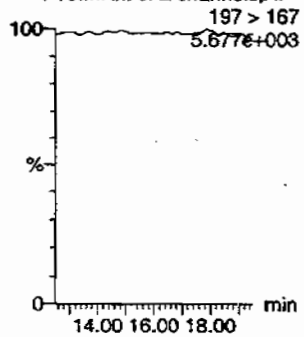

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

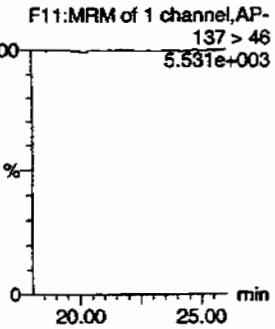

HMX

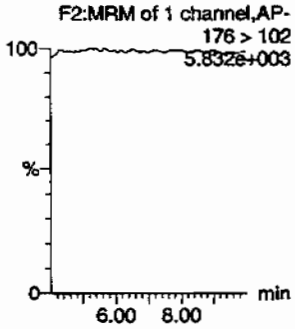

Nitrobenzene

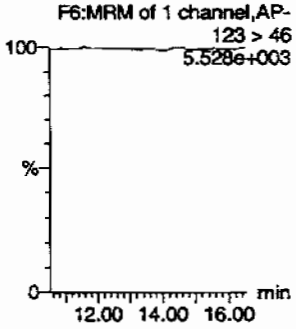

PETN

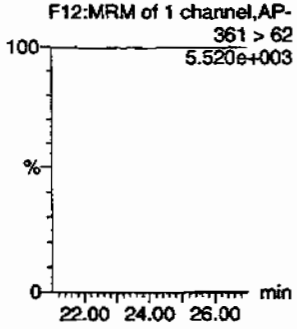

RDX

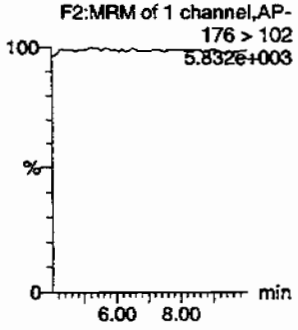

Tetryl

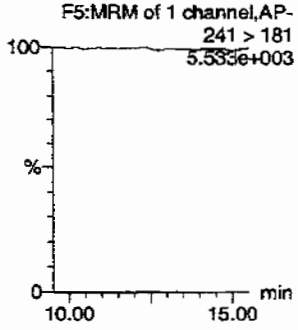

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Rel Response	Flags	Mod Date	Mod Time	[ng/ml]	%Rec	%Dev	%RSD
XIBLK07	HMX	176 > 102			4174.093									
XIBLK07	RDX	176 > 102			4174.093									
XIBLK07	135-Trinitrobenzene	213 > 183			4174.093									
XIBLK07	13-Dinitrobenzene-d4	172 > 142	11.97	4174.093		4174.093	4174.093	bb			544.6801	108.9	8.9	608.0
XIBLK07	13-Dinitrobenzene	168 > 138			4174.093									
XIBLK07	Tetryl	241 > 181			4174.093									
XIBLK07	Nitrobenzene	123 > 46			4174.093									
XIBLK07	4-Amino-26-dinitrotoluene	197 > 167			25427.313									
XIBLK07	2-Amino-46-dinitrotoluene	197 > 180			25427.313									
XIBLK07	246-Trinitrotoluene	227 > 210			25427.313									
XIBLK07	34-dinitrotoluene	182 > 152			25427.313									
XIBLK07	26-dinitrotoluene	182 > 152			25427.313			MM-	02-Jul-09	07:57:39				
XIBLK07	24-dinitrotoluene	182 > 152			25427.313									
XIBLK07	26-dinitrotoluene-d3	185 > 155	17.27	25427.313		25427.313	25427.313	bb			530.4555	106.1	6.1	2059.9
XIBLK07	2-Nitrotoluene	137 > 46			25427.313									
XIBLK07	4-Nitrotoluene	137 > 46			25427.313									
XIBLK07	3-Nitrotoluene	137 > 46			25427.313									
XIBLK07	PETN	361 > 62			25427.313									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 13-JUL-09 18:52

GEL Data File: EXP0713009a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	521.619
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	534.002
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713009a
Date: 13-Jul-2009
Time: 18:52:18
ID: XIBLK02
Vial: 1:1,A

LMP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.710e+003

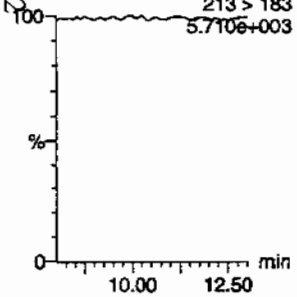

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.575e+003

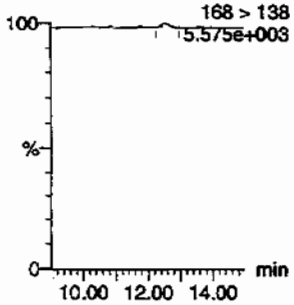

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.699e+004

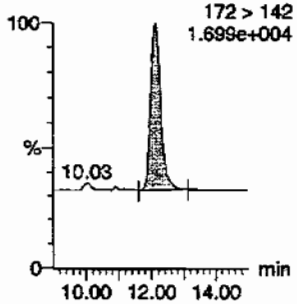

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.733e+003

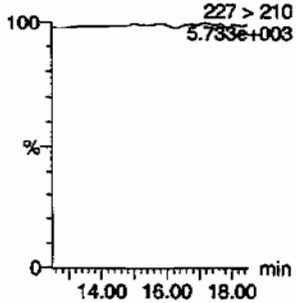

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.611e+003

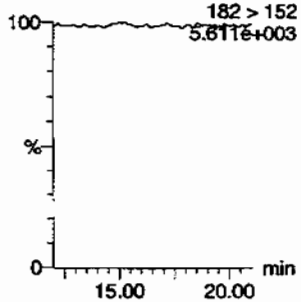

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.611e+003

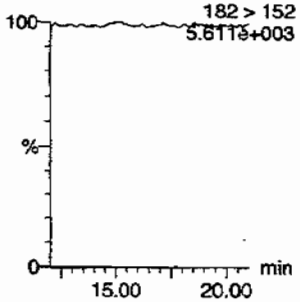

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.981e+004

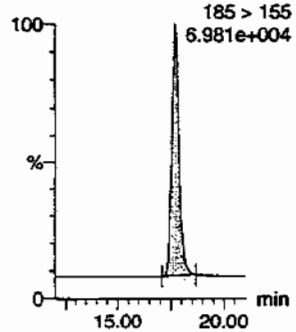

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.843e+003

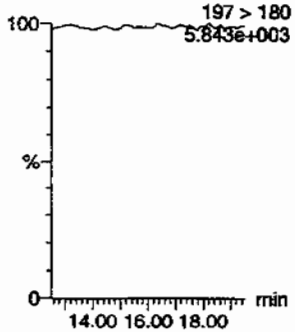

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.554e+003

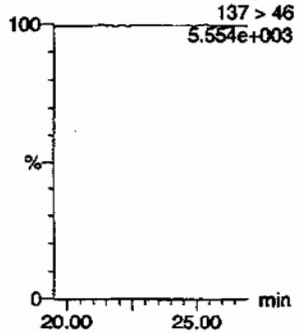

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.611e+003

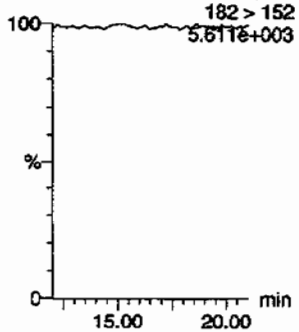

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.554e+003

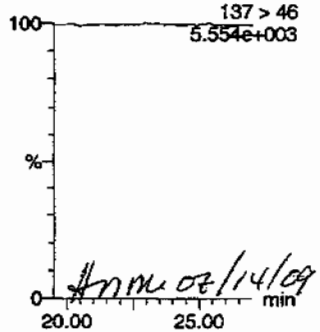

Hnm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.835e+003

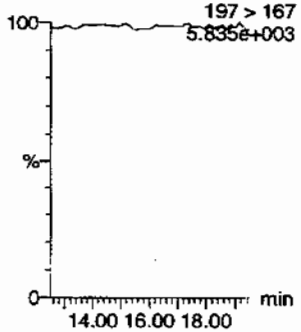

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

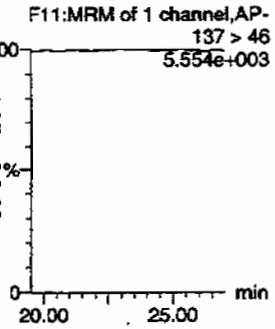

HMX

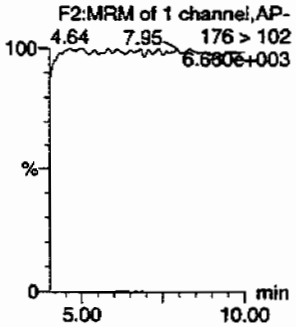

Nitrobenzene

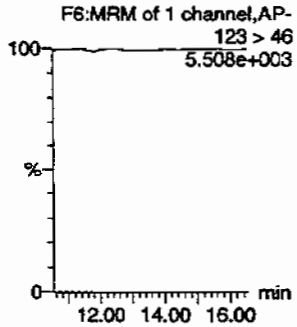

PETN

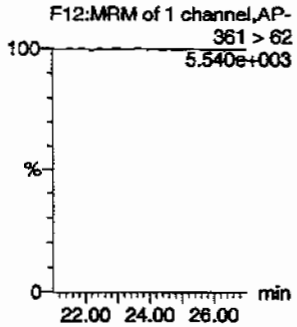

RDX

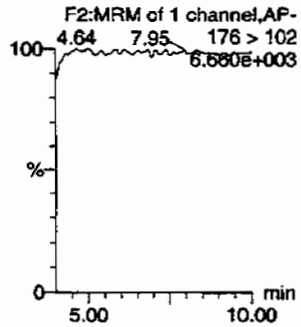

Tetryl

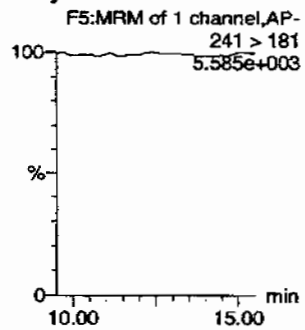

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modification	Modifying	Amount	%Rec	%Dev	S/N
XIBLK02	HMX	176 > 102			4111.610									
XIBLK02	RDX	176 > 102			4111.610									
XIBLK02	135-Trinitrobenzene	213 > 183			4111.610									
XIBLK02	13-Dinitrobenzene-d4	172 > 142	12.14	4111.610		4111.610	4111.610	bb			521.6194	104.3	4.3	408.3
XIBLK02	13-Dinitrobenzene	168 > 138			4111.610			MM-	14-Jul-09	10:21:28				
XIBLK02	Tetryl	241 > 181			4111.610									
XIBLK02	Nitrobenzene	123 > 46			4111.610									
XIBLK02	4-Amino-26-dinitrotoluene	197 > 167			25538.109									
XIBLK02	2-Amino-46-dinitrotoluene	197 > 180			25538.109									
XIBLK02	246-Trinitrotoluene	227 > 210			25538.109									
XIBLK02	34-dinitrotoluene	182 > 152			25538.109									
XIBLK02	26-dinitrotoluene	182 > 152			25538.109									
XIBLK02	24-dinitrotoluene	182 > 152			25538.109									
XIBLK02	26-dinitrotoluene-d3	185 > 155	17.68	25538.109		25538.109	25538.109	bb			534.0018	106.8	6.8	1104.7
XIBLK02	2-Nitrotoluene	137 > 46			25538.109									
XIBLK02	4-Nitrotoluene	137 > 46			25538.109									
XIBLK02	3-Nitrotoluene	137 > 46			25538.109									
XIBLK02	PETN	361 > 62			25538.109									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 13-JUL-09 19:51

GEL Data File: EXP0713011a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	572.542
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	574.682
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713011a
Date: 13-Jul-2009
Time: 19:51:17
ID: XIBLK03
Vial: 1:1,A

LMT 7/14/09

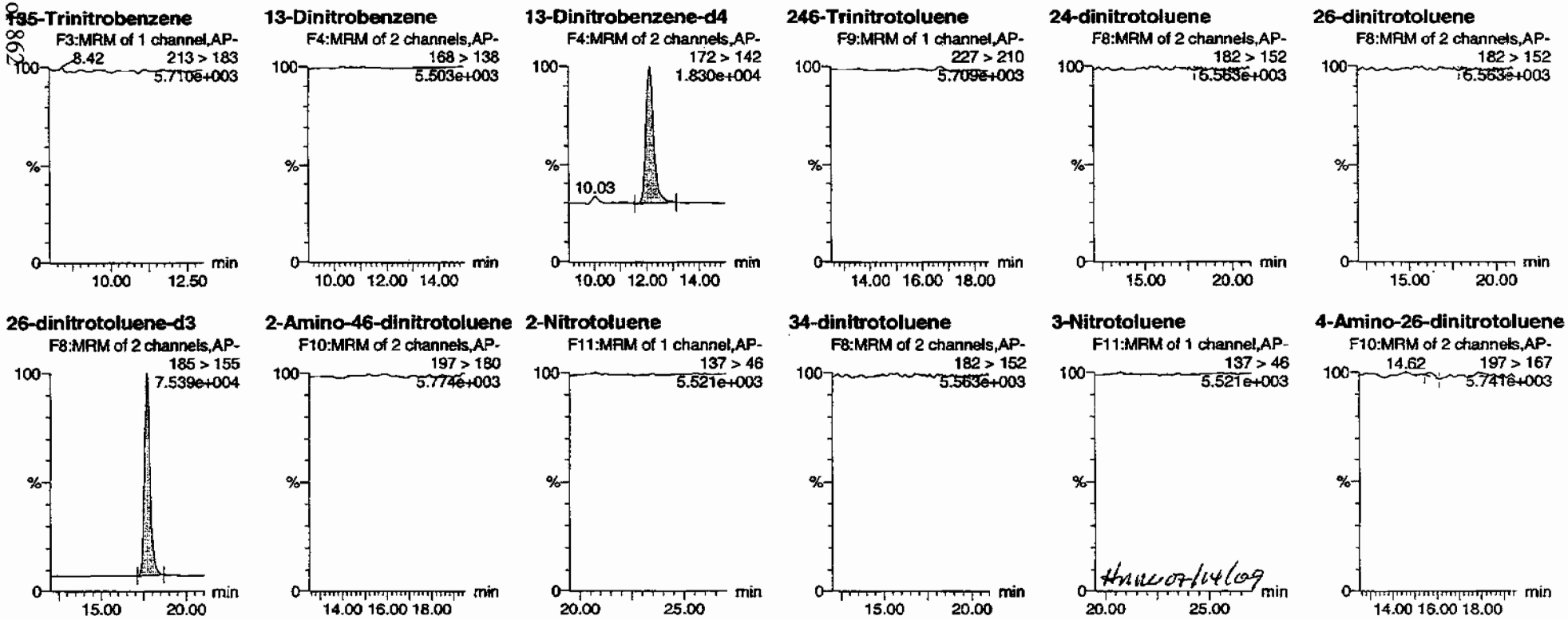

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

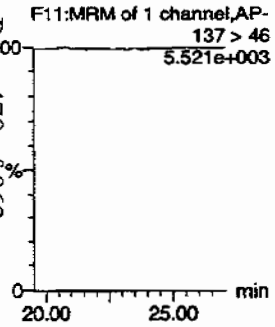

HMX

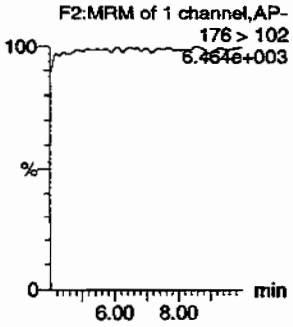

Nitrobenzene

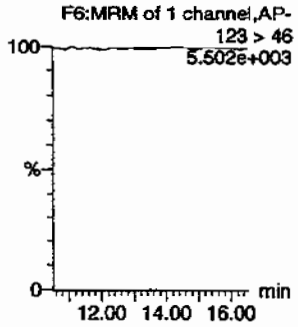

PETN

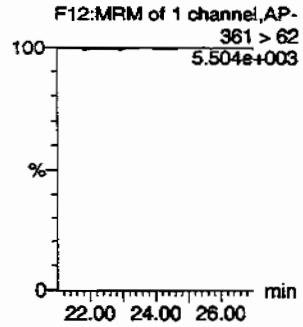

RDX

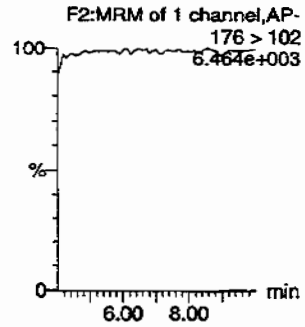

Tetryl

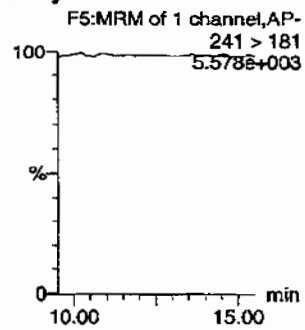

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK03	HMX	176 > 102			4513.001									
XIBLK03	RDX	176 > 102			4513.001									
XIBLK03	135-Trinitrobenzene	213 > 183			4513.001									
XIBLK03	13-Dinitrobenzene-d4	172 > 142	12.14	4513.001		4513.001	4513.001	bb			572.5419	114.5	14.5	297.7
XIBLK03	13-Dinitrobenzene	168 > 138			4513.001									
XIBLK03	Tetryl	241 > 181			4513.001									
XIBLK03	Nitrobenzene	123 > 46			4513.001									
XIBLK03	4-Amino-26-dinitrotoluene	197 > 167			27483.588			MM-	14-Jul-09	10:18:35				
XIBLK03	2-Amino-46-dinitrotoluene	197 > 180			27483.588									
XIBLK03	246-Trinitrotoluene	227 > 210			27483.588									
XIBLK03	34-dinitrotoluene	182 > 152			27483.588									
XIBLK03	26-dinitrotoluene	182 > 152			27483.588			MM-	14-Jul-09	10:15:08				
XIBLK03	24-dinitrotoluene	182 > 152			27483.588			MM-	14-Jul-09	10:11:39				
XIBLK03	26-dinitrotoluene-d3	185 > 155	17.68	27483.588		27483.588	27483.588	bb			574.6817	114.9	14.9	603.4
XIBLK03	2-Nitrotoluene	137 > 46			27483.588									
XIBLK03	4-Nitrotoluene	137 > 46			27483.588									
XIBLK03	3-Nitrotoluene	137 > 46			27483.588									
XIBLK03	PETN	361 > 62			27483.588									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 13-JUL-09 21:49

GEL Data File: EXP0713015a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	630.06
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	594.608
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713015a
Date: 13-Jul-2009
Time: 21:49:18
ID: XIBLK04
Vial: 1:1,A

MMT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.776e+003

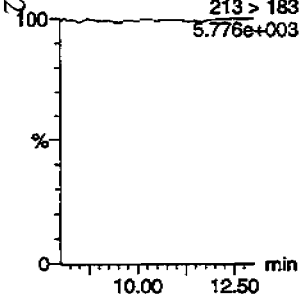

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.705e+003

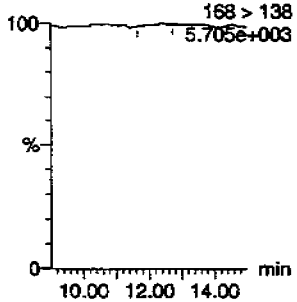

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
2.037e+004

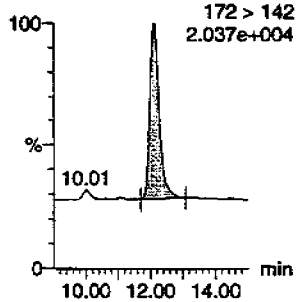

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.795e+003

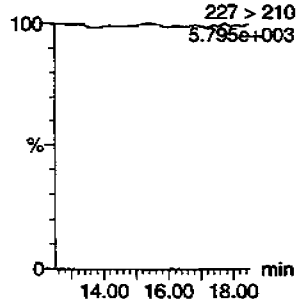

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.757e+003

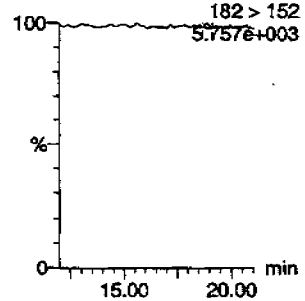

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.757e+003

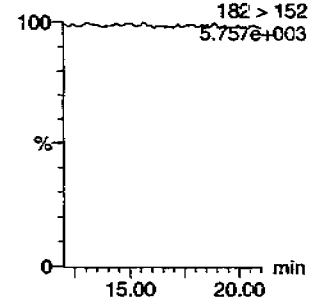

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.949e+004

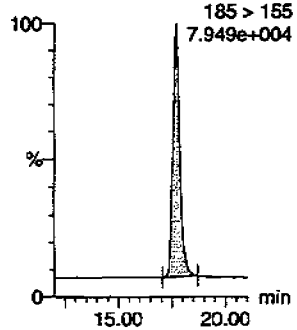

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.825e+003

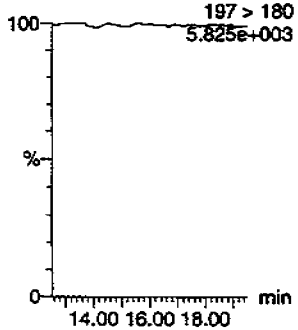

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.694e+003

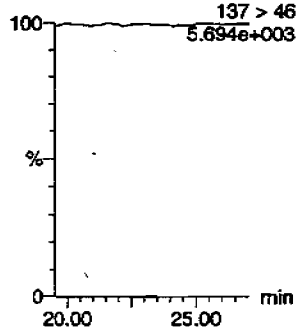

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.757e+003

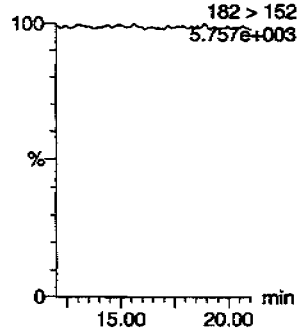

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.694e+003

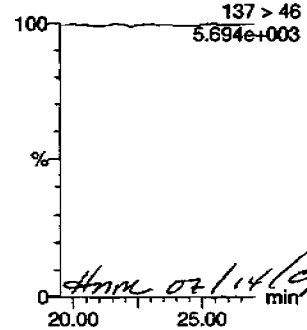

Hmm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.819e+003

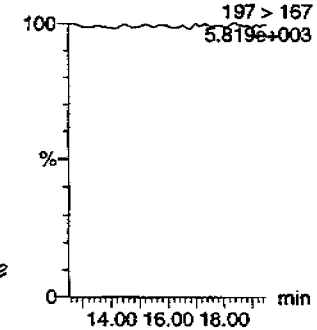

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GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

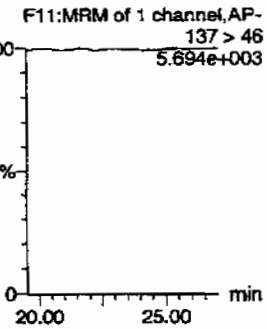

HMX

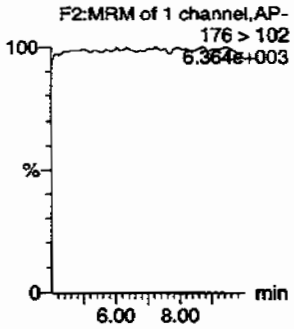

Nitrobenzene

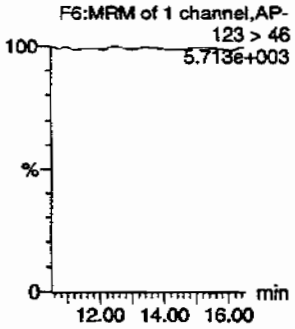

PETN

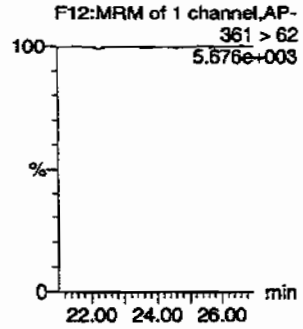

RDX

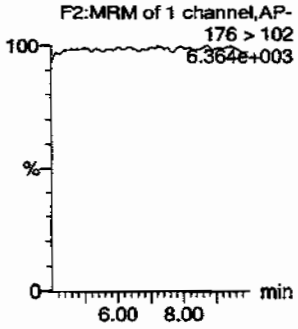

Tetryl

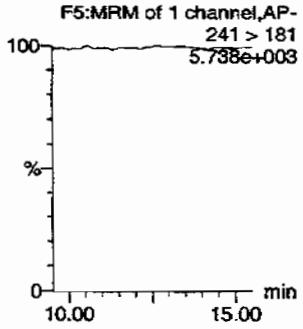

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modifier	Modified	Amount	Spike	%Dev	S/N
XIBLK04	HMX	176 > 102			4966.385									
XIBLK04	RDX	176 > 102			4966.385									
XIBLK04	135-Trinitrobenzene	213 > 183			4966.385									
XIBLK04	13-Dinitrobenzene-d4	172 > 142	12.14	4966.385		4966.385	4966.385	bb			630.0605	126.0	26.0	439.2
XIBLK04	13-Dinitrobenzene	168 > 138			4966.385			MM-	14-Jul-09	10:21:36				
XIBLK04	Tetryl	241 > 181			4966.385									
XIBLK04	Nitrobenzene	123 > 46			4966.385									
XIBLK04	4-Amino-26-dinitrotoluene	197 > 167			28436.547									
XIBLK04	2-Amino-46-dinitrotoluene	197 > 180			28436.547									
XIBLK04	246-Trinitrotoluene	227 > 210			28436.547									
XIBLK04	34-dinitrotoluene	182 > 152			28436.547									
XIBLK04	26-dinitrotoluene	182 > 152			28436.547									
XIBLK04	24-dinitrotoluene	182 > 152			28436.547			MM-	14-Jul-09	10:11:55				
XIBLK04	26-dinitrotoluene-d3	185 > 155	17.68	28436.547		28436.547	28436.547	bb			594.6081	118.9	18.9	1170.6
XIBLK04	2-Nitrotoluene	137 > 46			28436.547									
XIBLK04	4-Nitrotoluene	137 > 46			28436.547									
XIBLK04	3-Nitrotoluene	137 > 46			28436.547									
XIBLK04	PETN	361 > 62			28436.547									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 14-JUL-09 01:45

GEL Data File: EXP0713023a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	525.527
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	534.353
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713023a
Date: 14-Jul-2009
Time: 01:45:16
ID: XIBLK05
Vial: 1:1,A

MAT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.937e+003

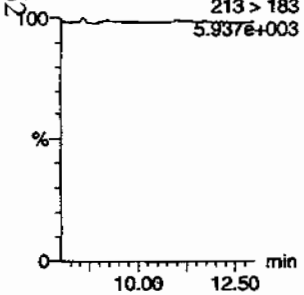

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.813e+003

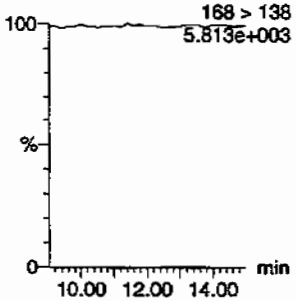

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.792e+004

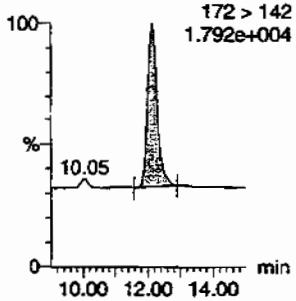

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.900e+003

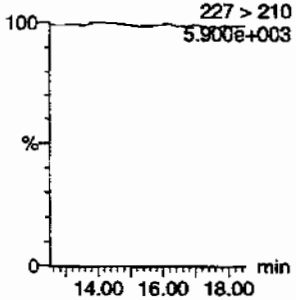

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.873e+003

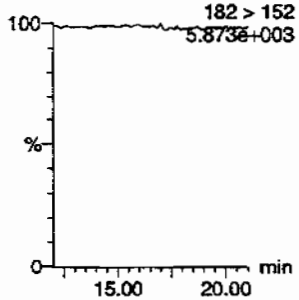

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.873e+003

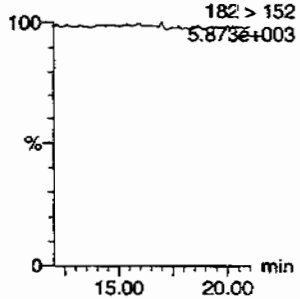

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.974e+004

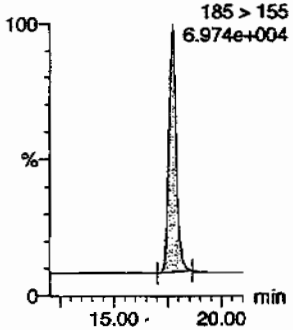

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.934e+003

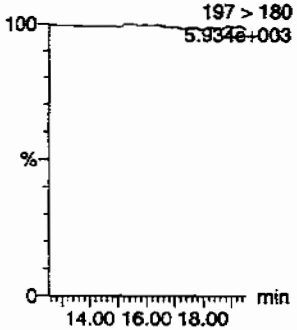

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.787e+003

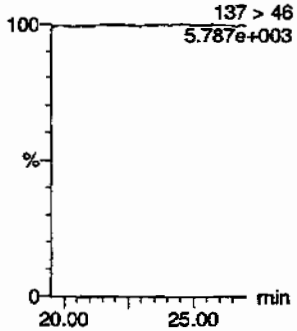

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.873e+003

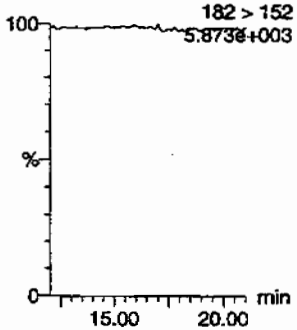

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.787e+003

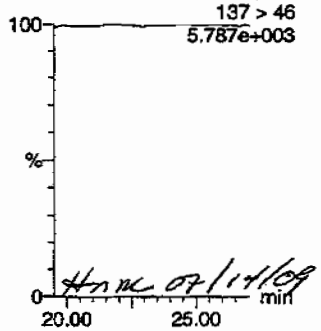

HMK 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.951e+003

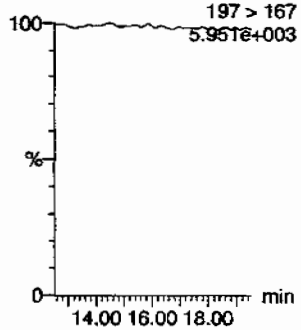

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GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

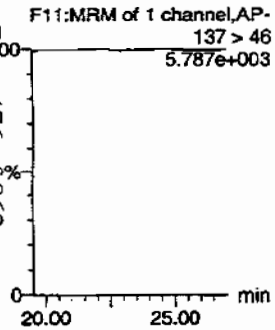

HMX

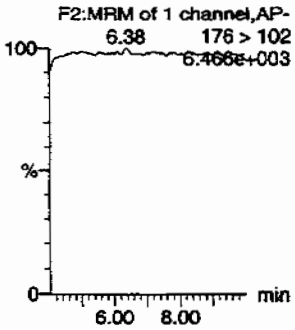

Nitrobenzene

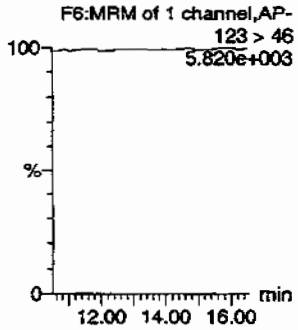

PETN

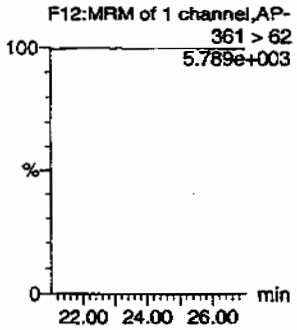

RDX

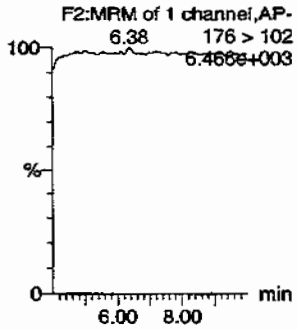

Tetryl

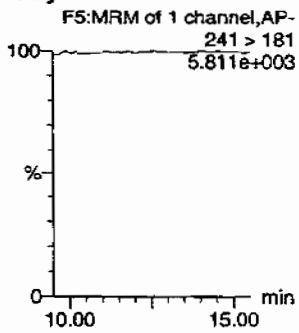

ID	Name	Trace	RT	Area	%Area	Abs Reso	Response	Flags	Modifier	Mod time	ug/mL	%Rec	%Dev	S/N
XIBLK05	HMX	176 > 102			4142.414									
XIBLK05	RDX	176 > 102			4142.414									
XIBLK05	135-Trinitrobenzene	213 > 183			4142.414									
XIBLK05	13-Dinitrobenzene-d4	172 > 142	12.14	4142.414		4142.414	4142.414	bb			525.5274	105.1	5.1	466.8
XIBLK05	13-Dinitrobenzene	168 > 138			4142.414									
XIBLK05	Tetryl	241 > 181			4142.414									
XIBLK05	Nitrobenzene	123 > 46			4142.414									
XIBLK05	4-Amino-26-dinitrotoluene	197 > 167			25554.914									
XIBLK05	2-Amino-46-dinitrotoluene	197 > 180			25554.914									
XIBLK05	246-Trinitrotoluene	227 > 210			25554.914									
XIBLK05	34-dinitrotoluene	182 > 152			25554.914									
XIBLK05	26-dinitrotoluene	182 > 152			25554.914									
XIBLK05	24-dinitrotoluene	182 > 152			25554.914									
XIBLK05	26-dinitrotoluene-d3	185 > 155	17.68	25554.914		25554.914	25554.914	bb			534.3531	106.9	6.9	1416.5
XIBLK05	2-Nitrotoluene	137 > 46			25554.914									
XIBLK05	4-Nitrotoluene	137 > 46			25554.914									
XIBLK05	3-Nitrotoluene	137 > 46			25554.914									
XIBLK05	PETN	361 > 62			25554.914									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 30-JUN-09 13:39

GEL Data File: EXS0630010.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	7.49
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Ran 7/1/09

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS0630010.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:39:25 PM

Modified: No

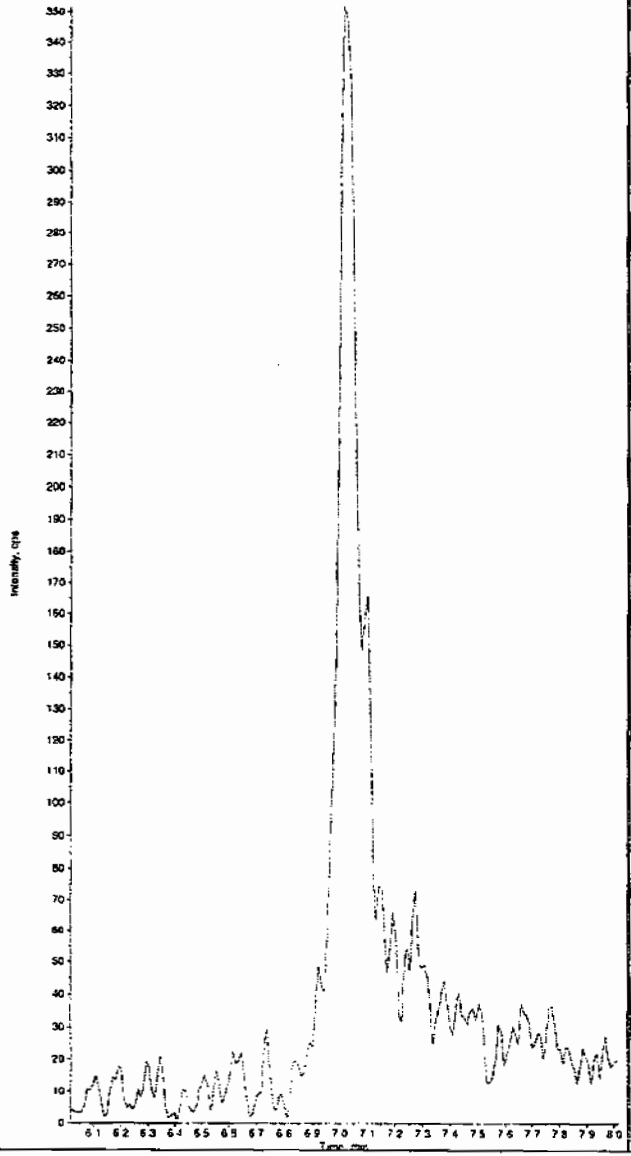

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS0630010.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:39:25 PM

Modified: No

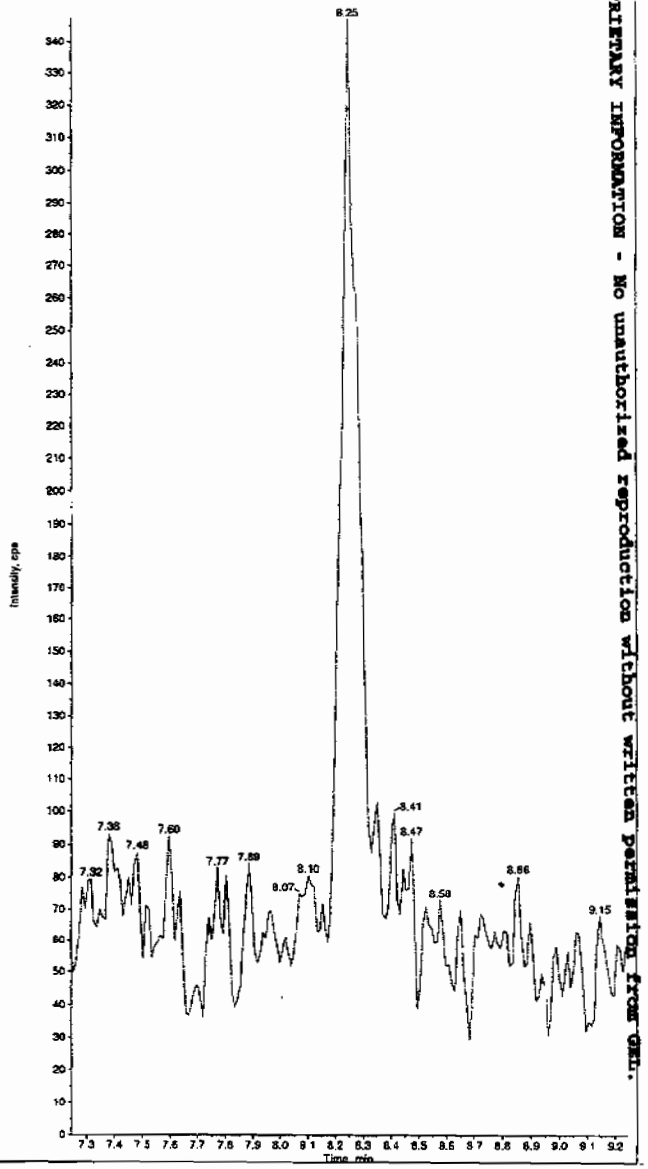

Hmm 8/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0630010.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:39:25 PM

Modified: No

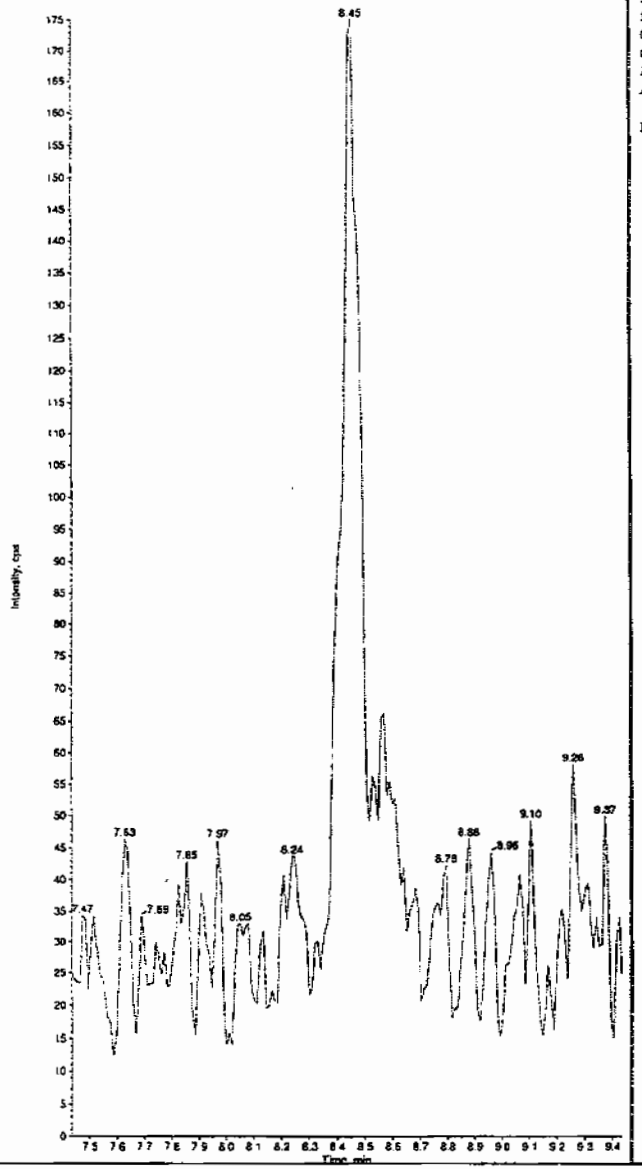

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0630010.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:39:25 PM

Modified: No

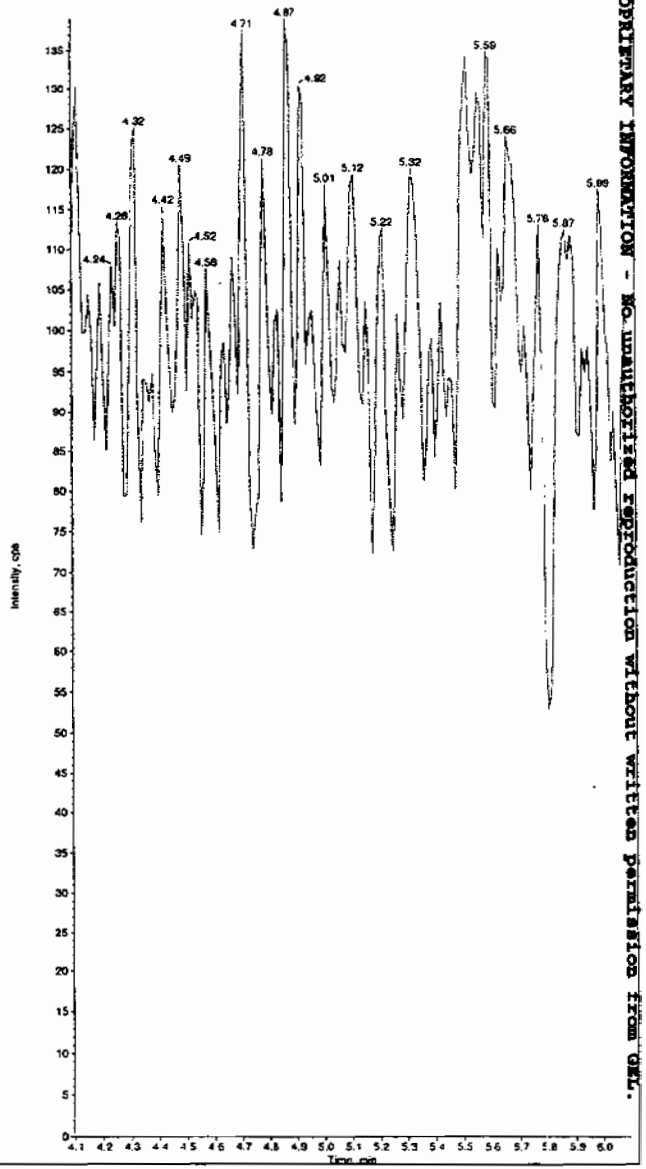

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS0630010.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:39:25 PM

Modified: No

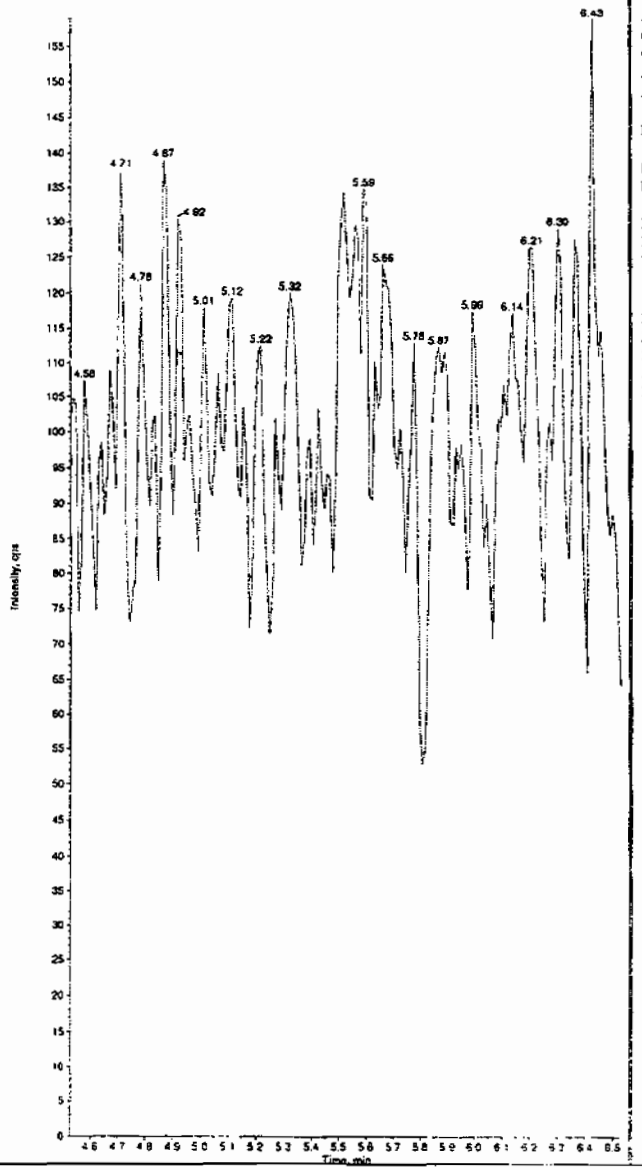

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS0630010.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 7.49 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:39:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.0 min
Area: 1.38e+005 counts
Height: 30176.348 cps
Start Time: 10.9 min
End Time: 11.2 min

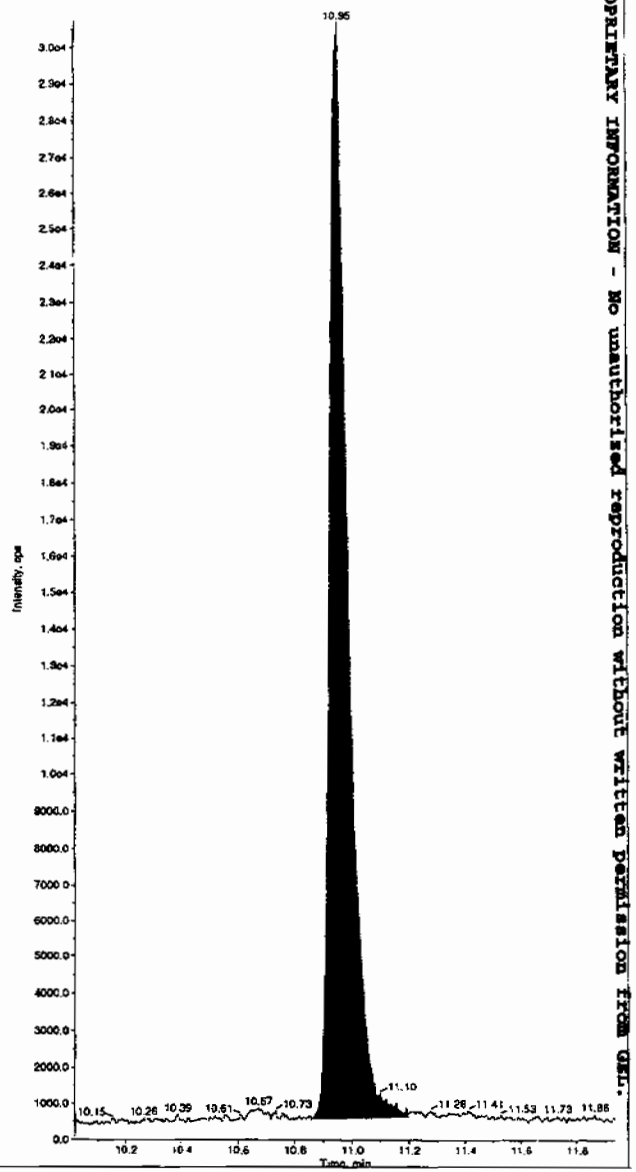

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 30-JUN-09 14:11

GEL Data File: EXS0630012.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	3.42
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Ler 7/1/09

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0630012.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:11:50 PM

Modified: No

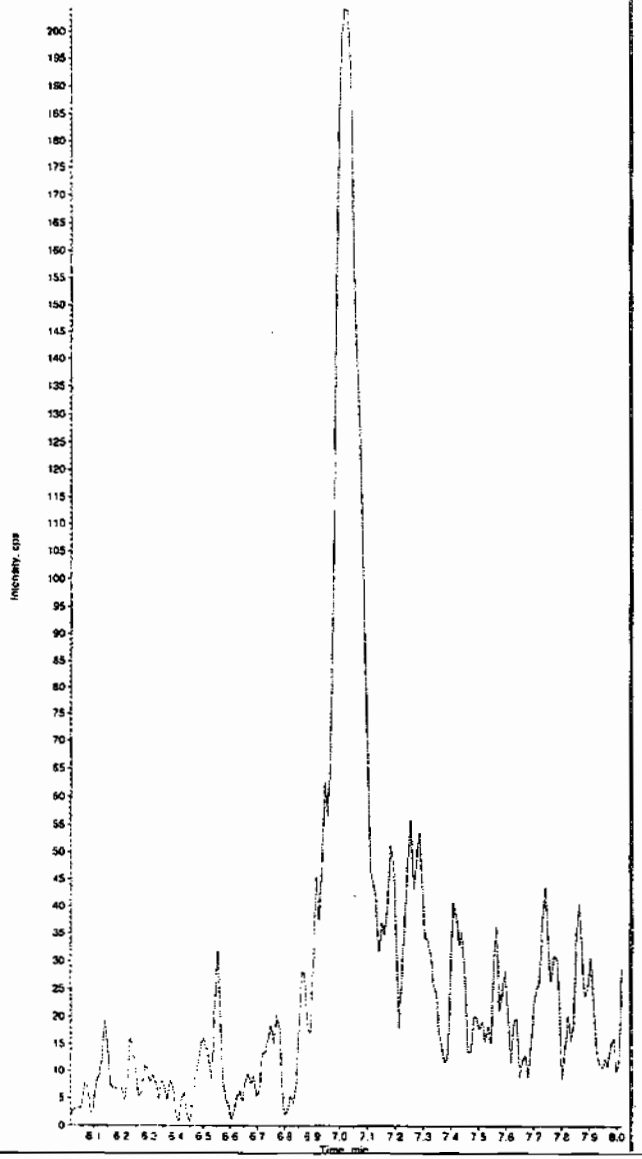

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0630012.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:11:50 PM

Modified: No

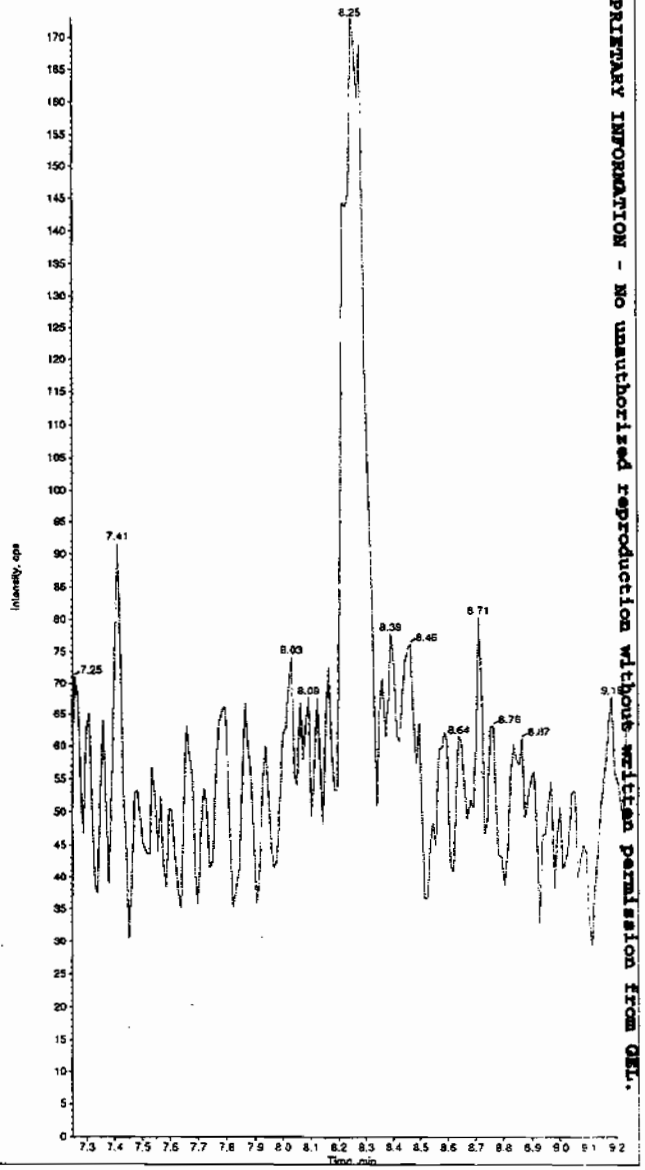

Hum 07/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0630012.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:11:50 PM

Modified: No

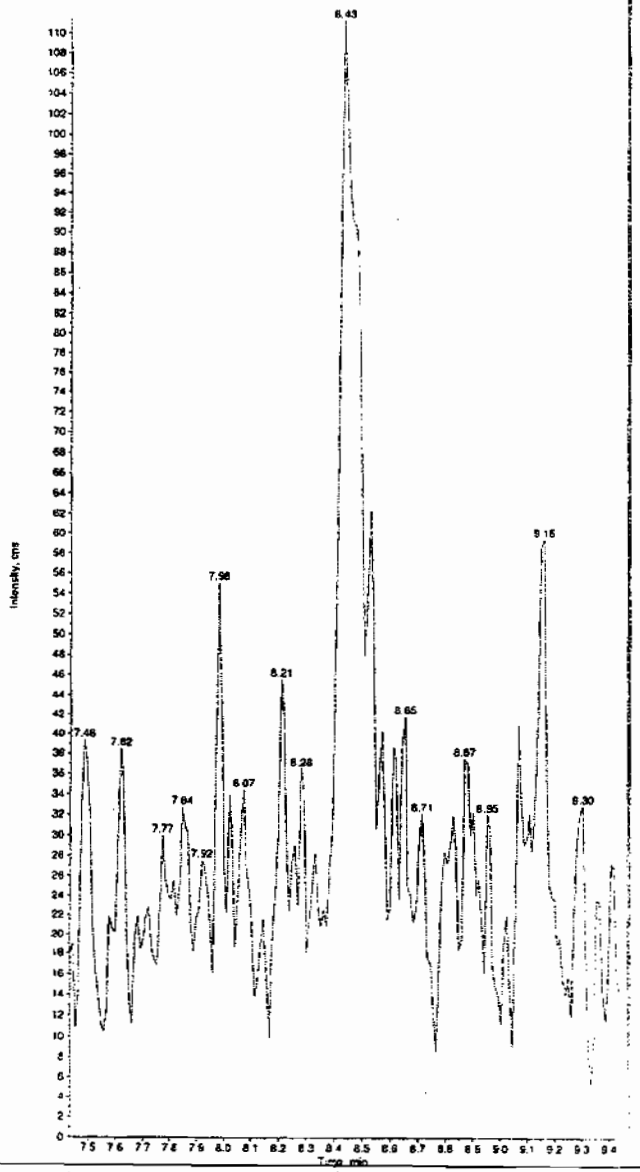

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0630012.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:11:50 PM

Modified: No

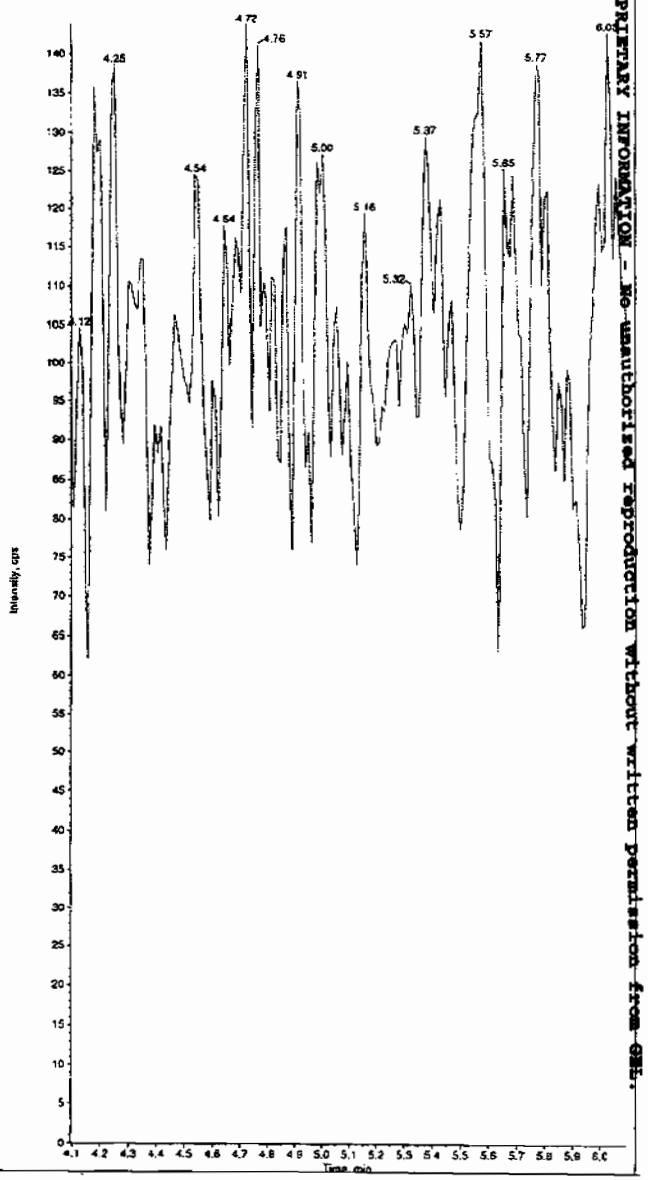

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0630012.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 3:11:50 PM

Modified: No

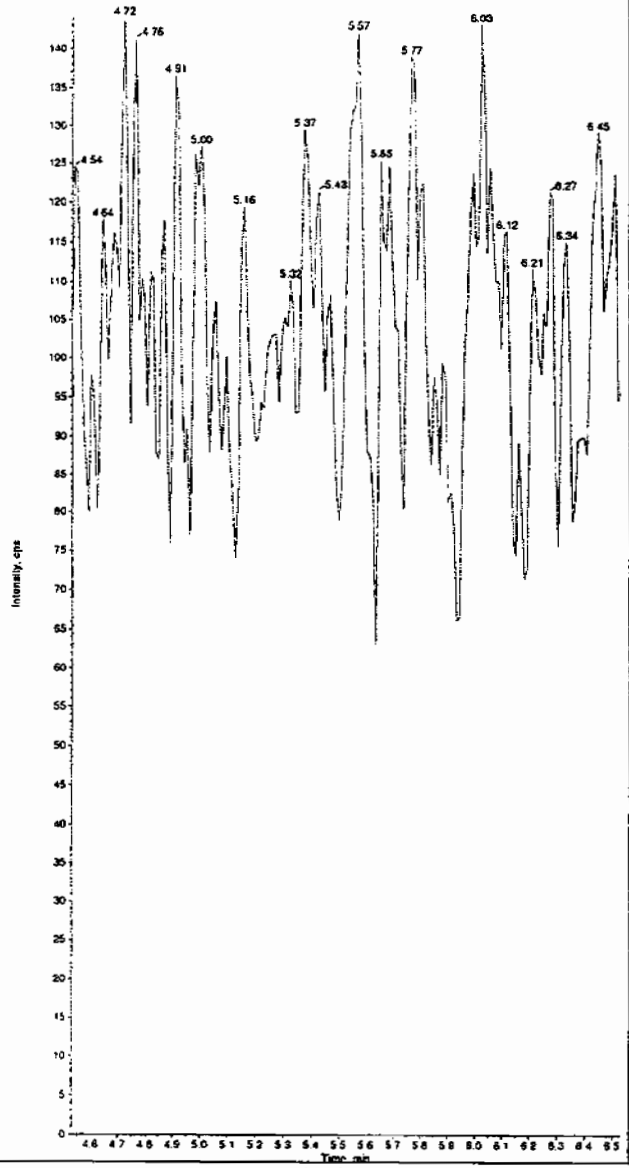

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0630012.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 3.42 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:11:50 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.0 min
Area: 8.55e+004 counts
Height: 16447.657 cps
Start Time: 10.8 min
End Time: 11.3 min

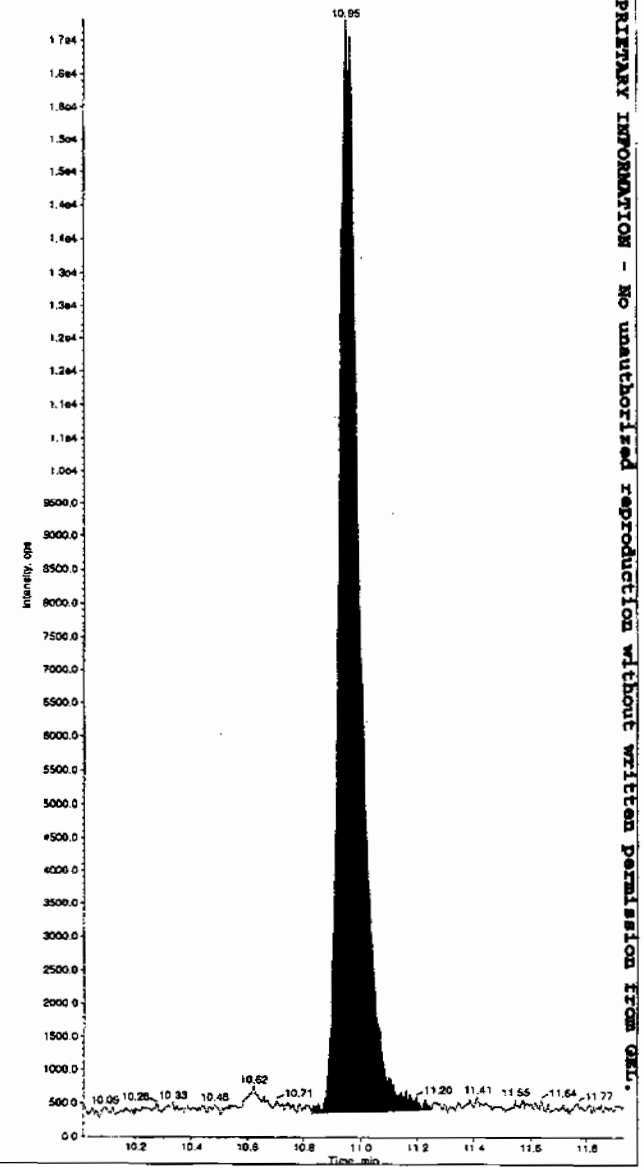

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 30-JUN-09 15:00

GEL Data File: EXS0630015.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	2.03
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

LER 7/1/09

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS0630015.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 3:00:27 PM

Modified: No

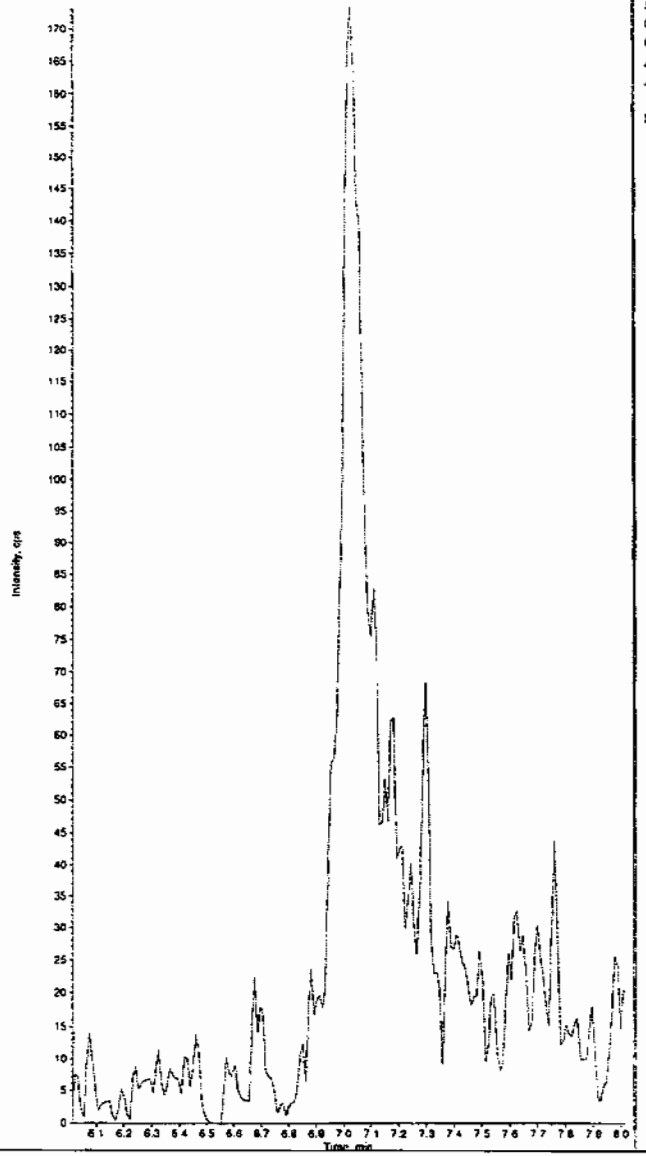

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS0630015.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 3:00:27 PM

Modified: No

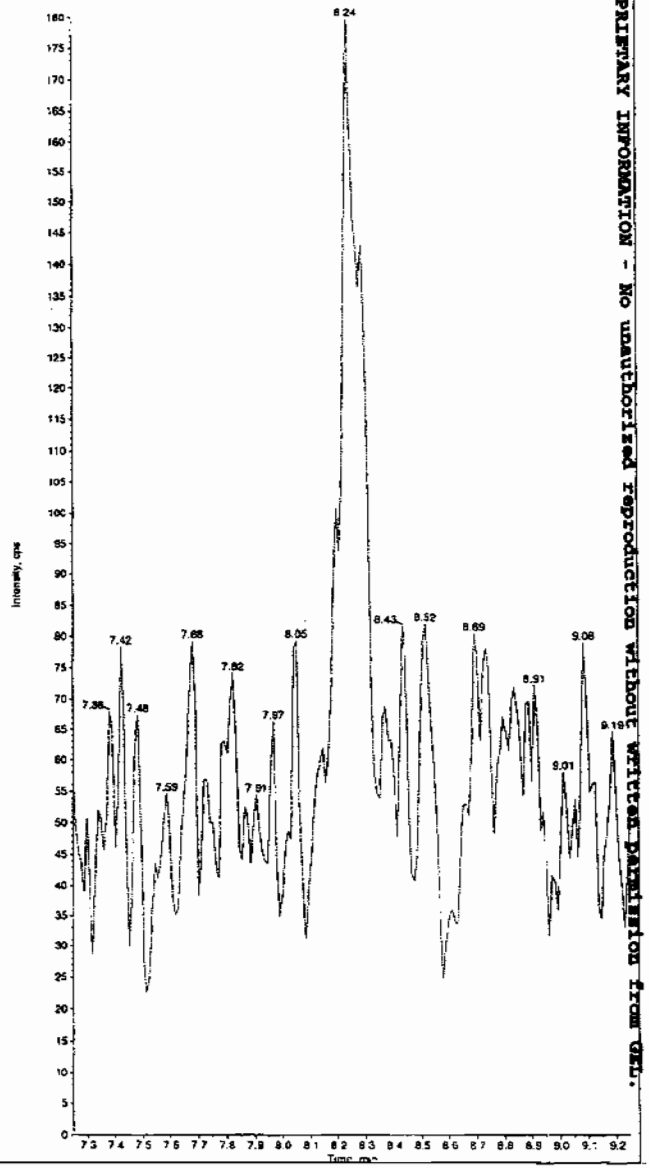

Hmm 07/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS0630015.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 3:00:27 PM

Modified: No

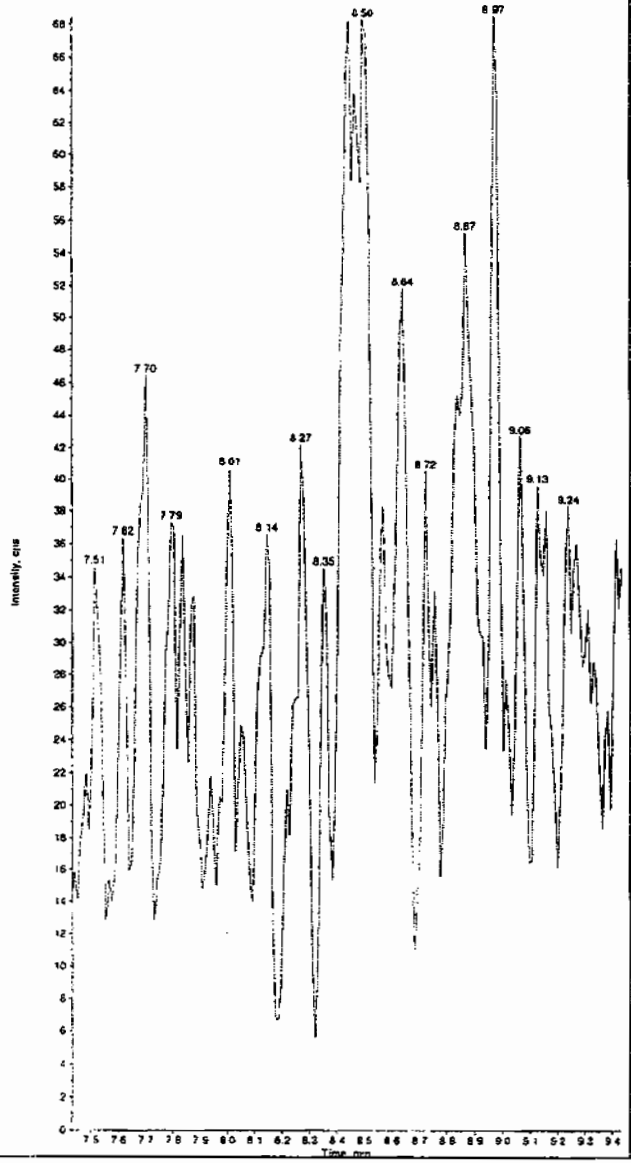

Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS0630015.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 3:00:27 PM

Modified: No

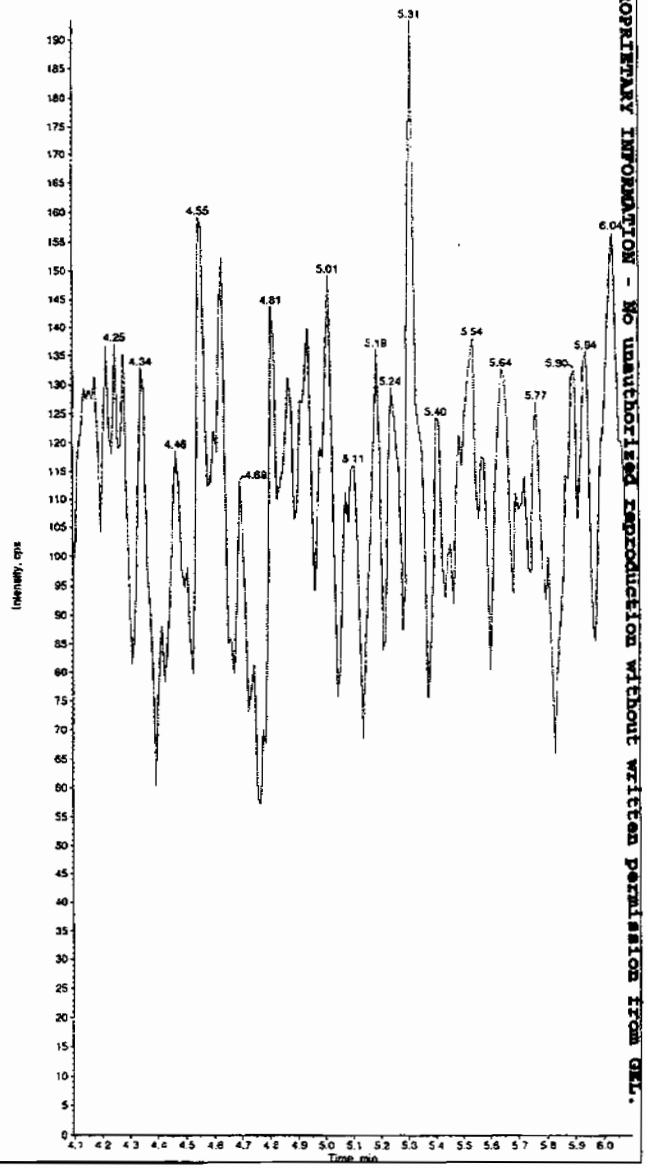

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK04" Sample ID: "]1[LER" File: "EXS0630015.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 3:00:27 PM

Modified: No

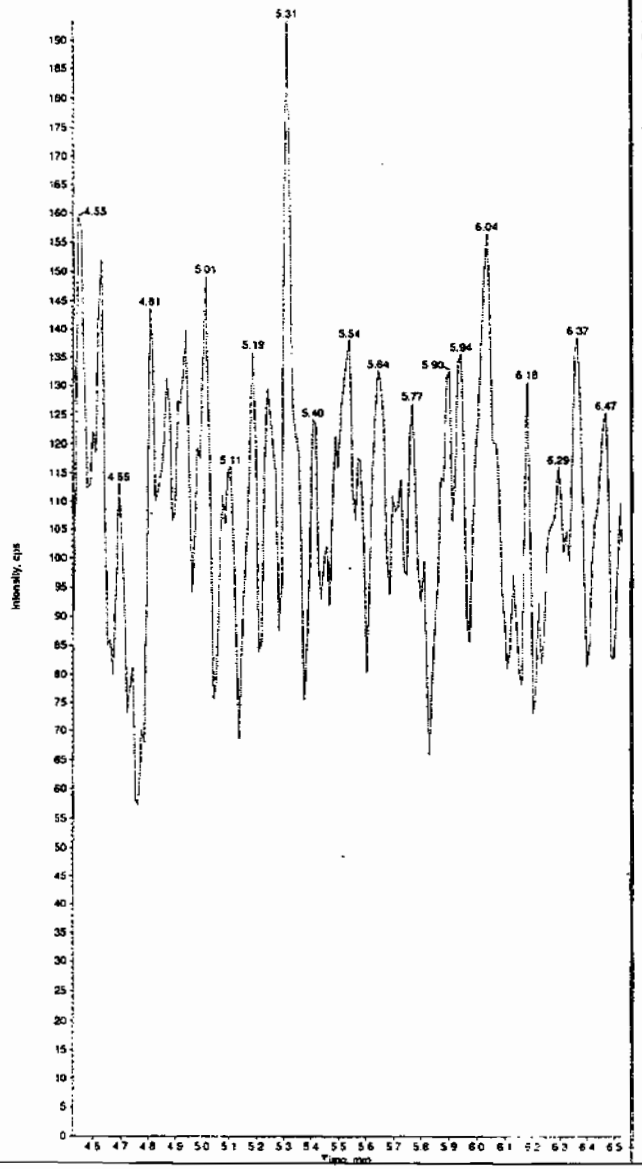

Sample Name: "XIBLK04" Sample ID: "]1[LER" File: "EXS0630015.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 2.03 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 3:00:27 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.76e+004 counts
Height: 14765.054 cps
Start Time: 10.8 min
End Time: 11.0 min

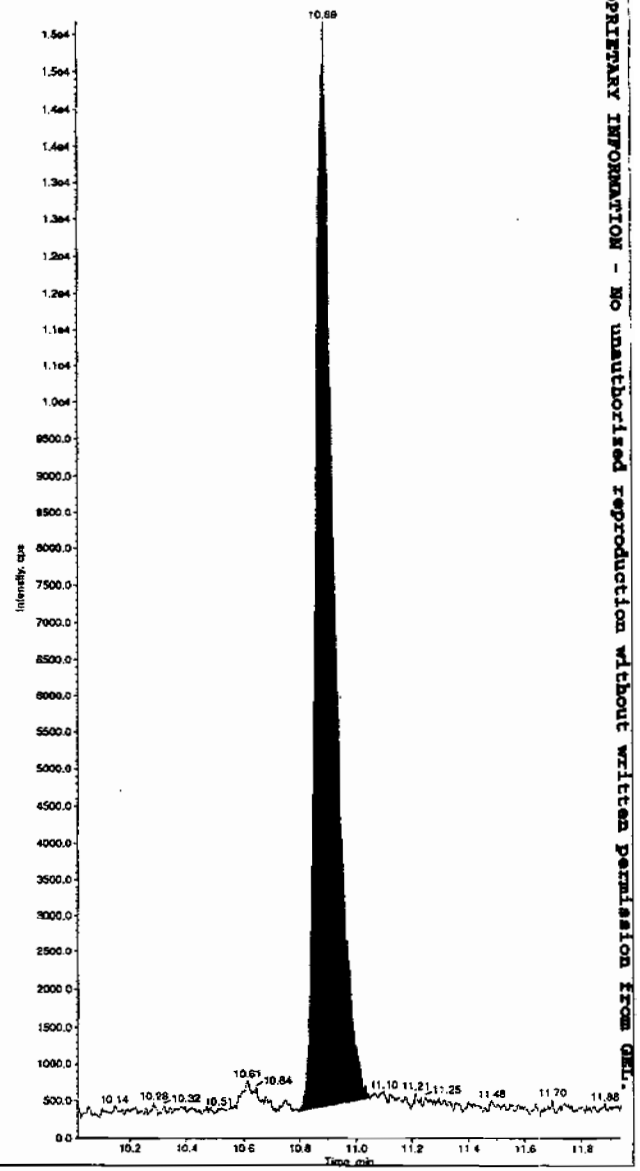

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 30-JUN-09 16:53

GEL Data File: EXS0630022.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	2.97
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Rev 7/1/09

Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS0630022.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 4:53:57 PM

Modified: No

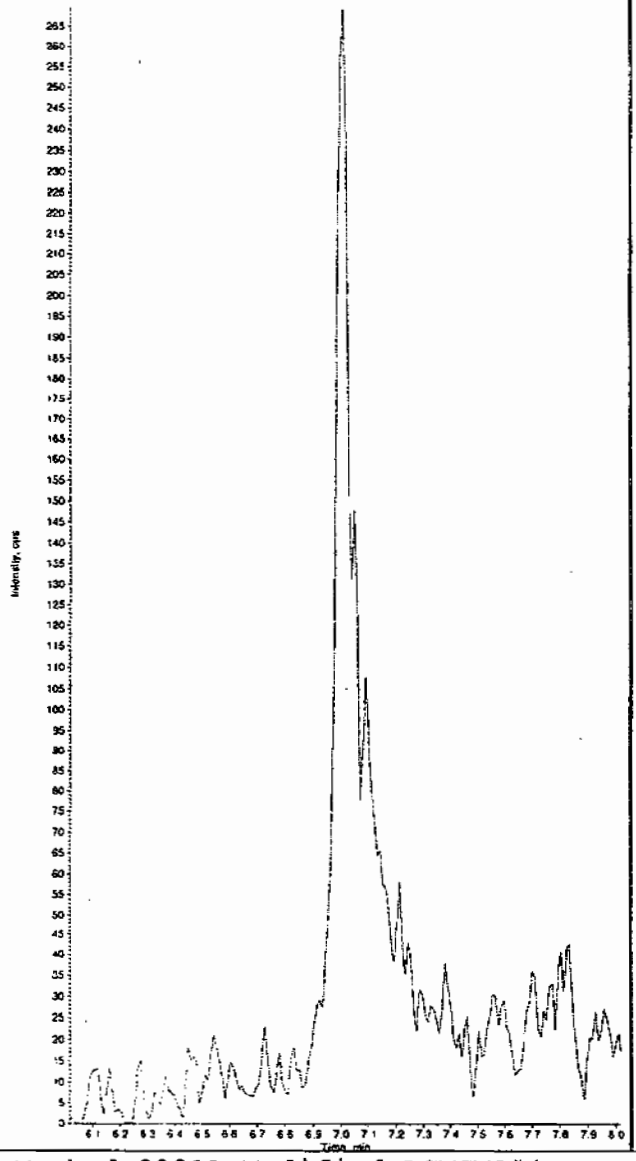

Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS0630022.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 4:53:57 PM

Modified: No

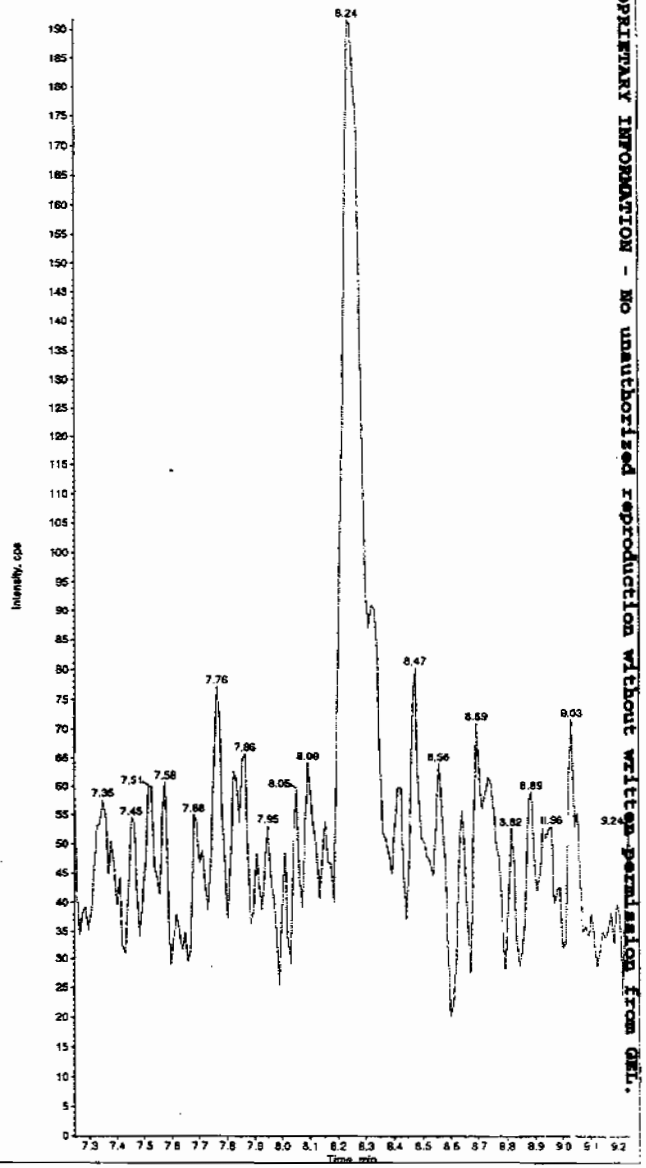

Hume 07/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS0630022.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 4:53:57 PM

Modified: No

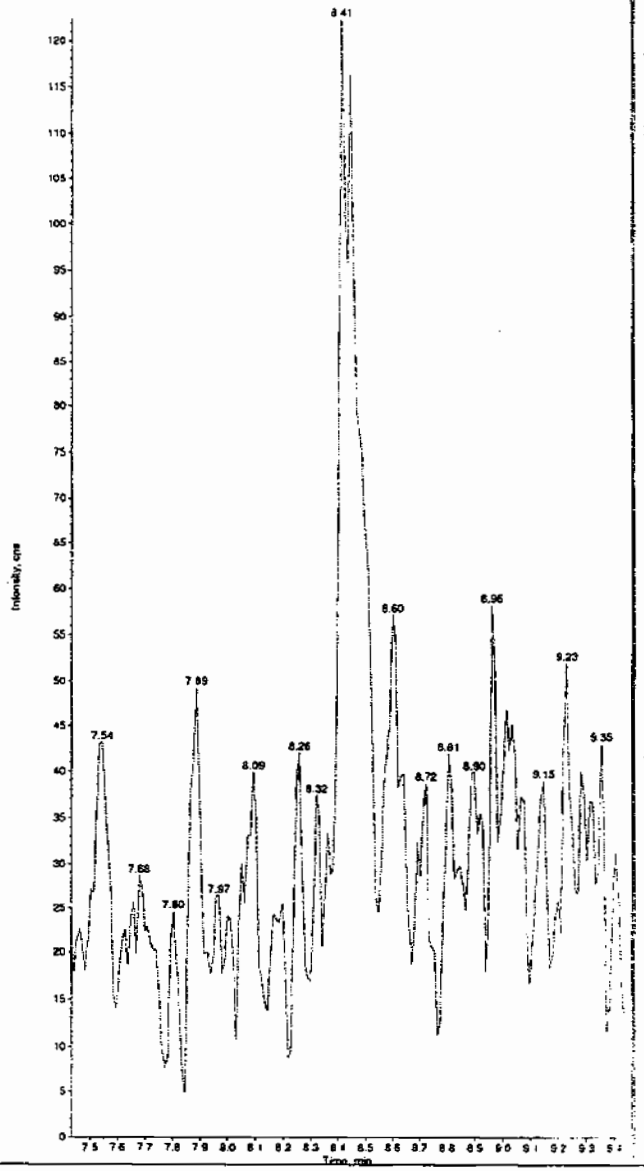

Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS0630022.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 4:53:57 PM

Modified: No

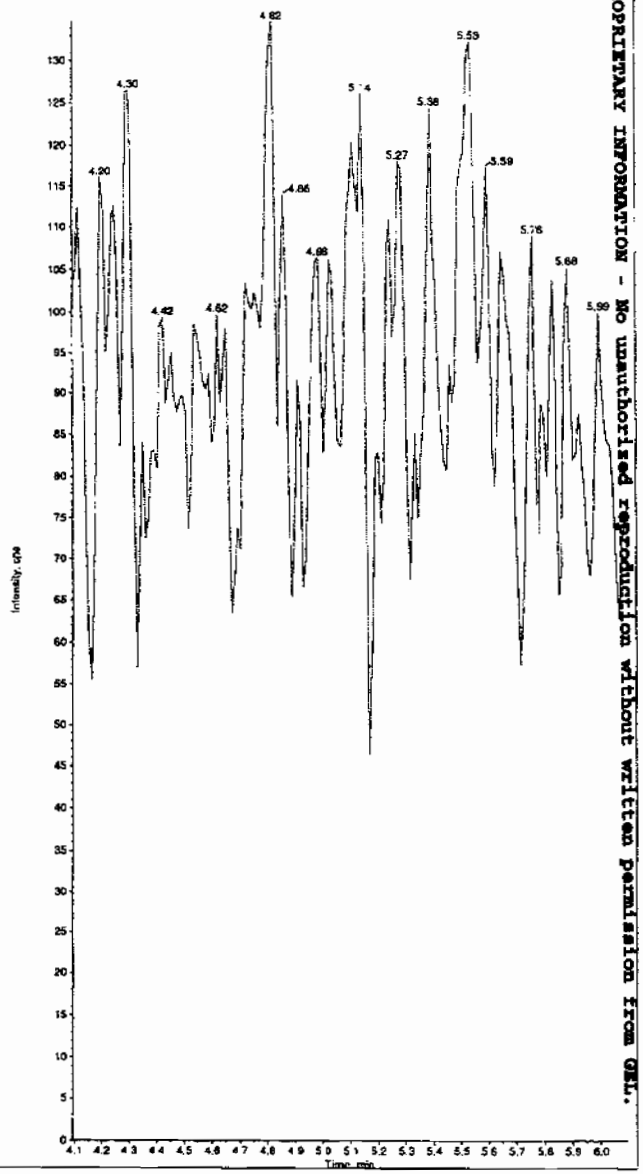

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS0630022.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 4:53:57 PM

Modified: No

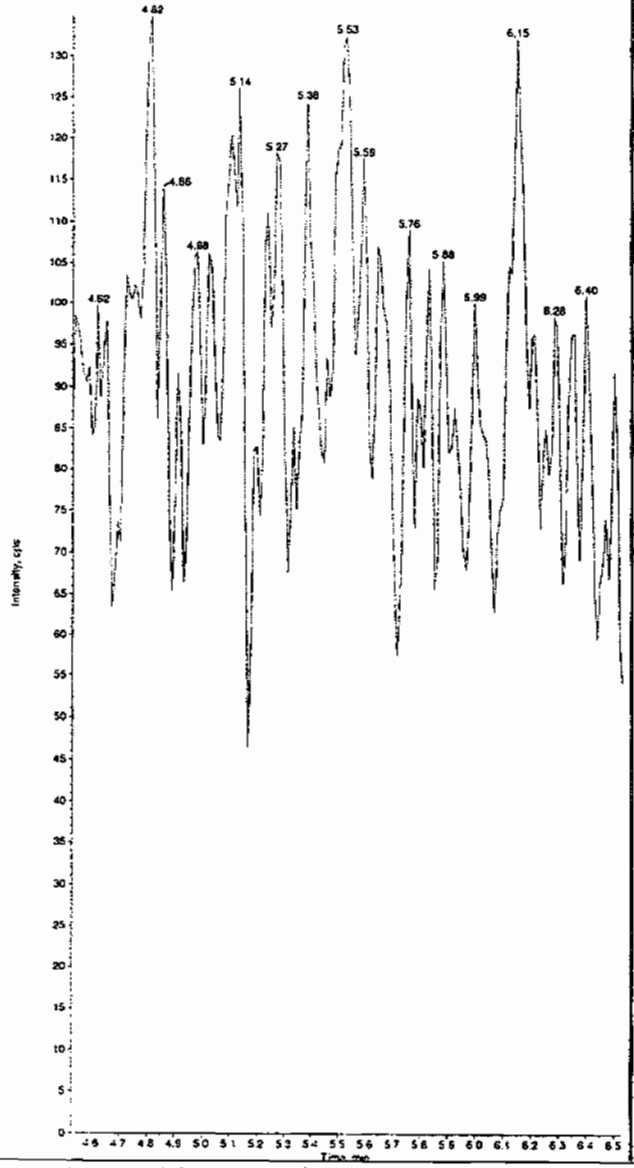

Sample Name: "XIBLK05" Sample ID: "|1|LER" File: "EXS0630022.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 2.97 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 4:53:57 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 7.97e+004 counts
Height: 17323.860 cps
Start Time: 10.8 min
End Time: 11.1 min

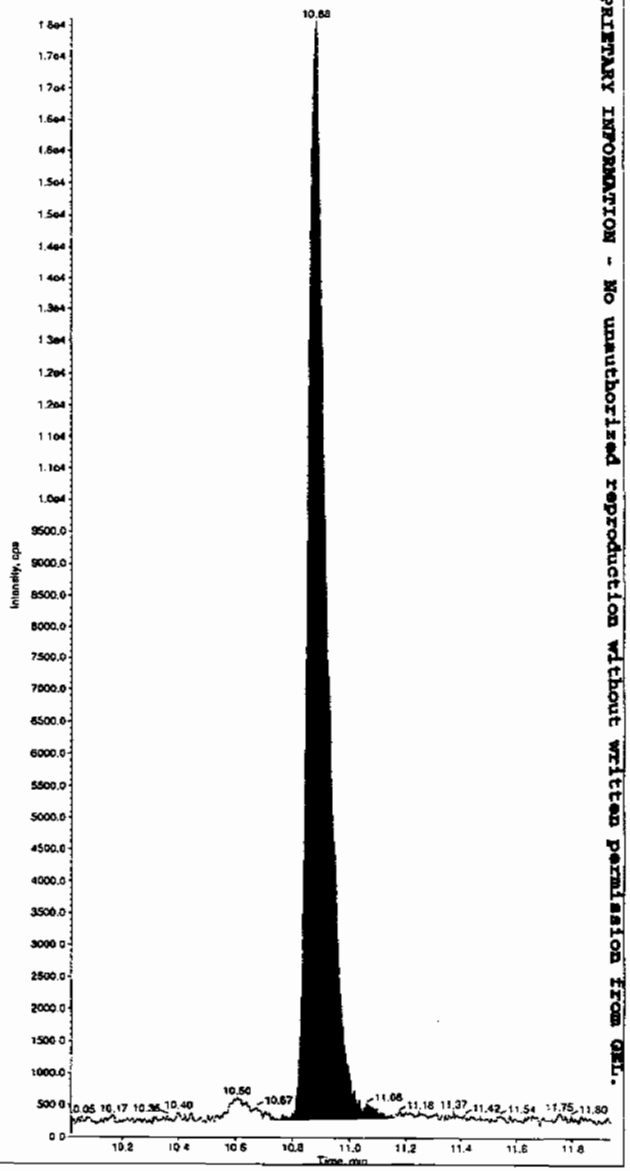

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK06

Analysis Date: 30-JUN-09 19:52

GEL Data File: EXS0630033.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	2.78
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sam 7/1/09

Sample Name: "XIBLK06" Sample ID: "[1]LER" File: "EXS0630033.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:52:12 PM

Modified: No

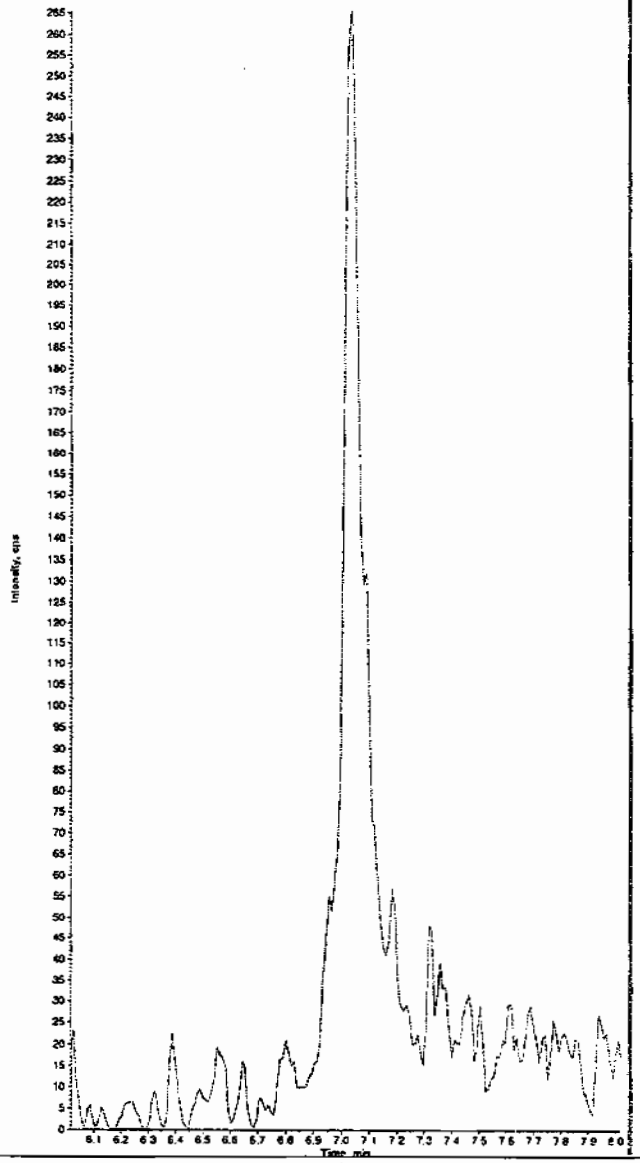

Sample Name: "XIBLK06" Sample ID: "[1]LER" File: "EXS0630033.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:52:12 PM

Modified: No

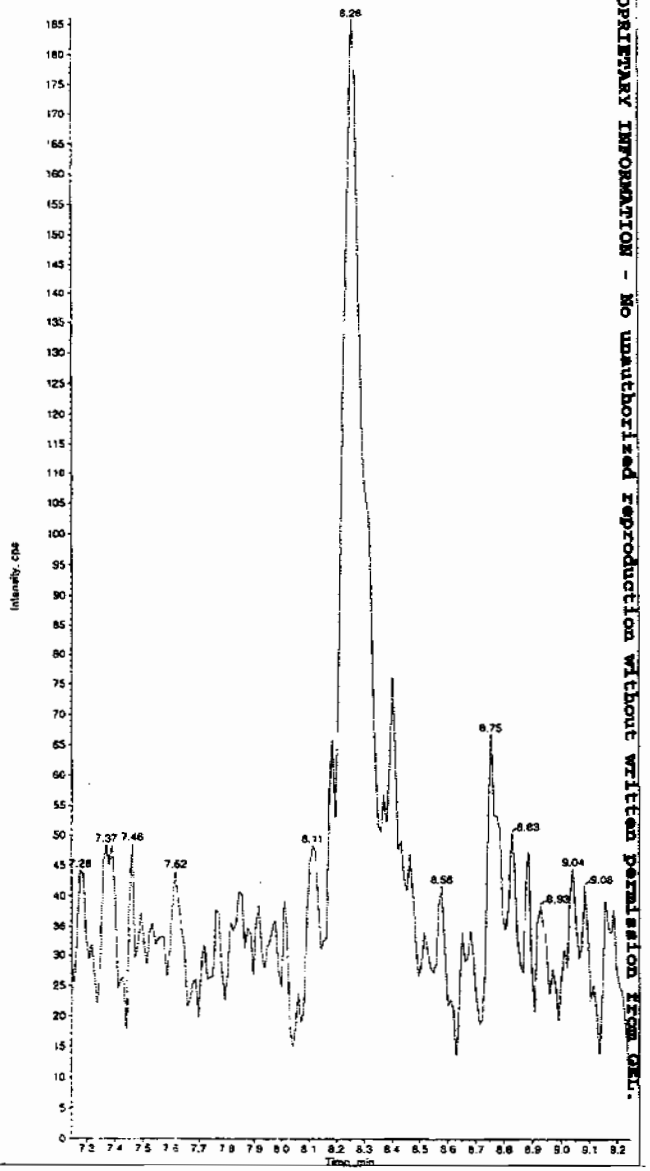

HMC 07/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK06" Sample ID: "|1|LER" File: "EXS0630033.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:52:12 PM

Modified: No

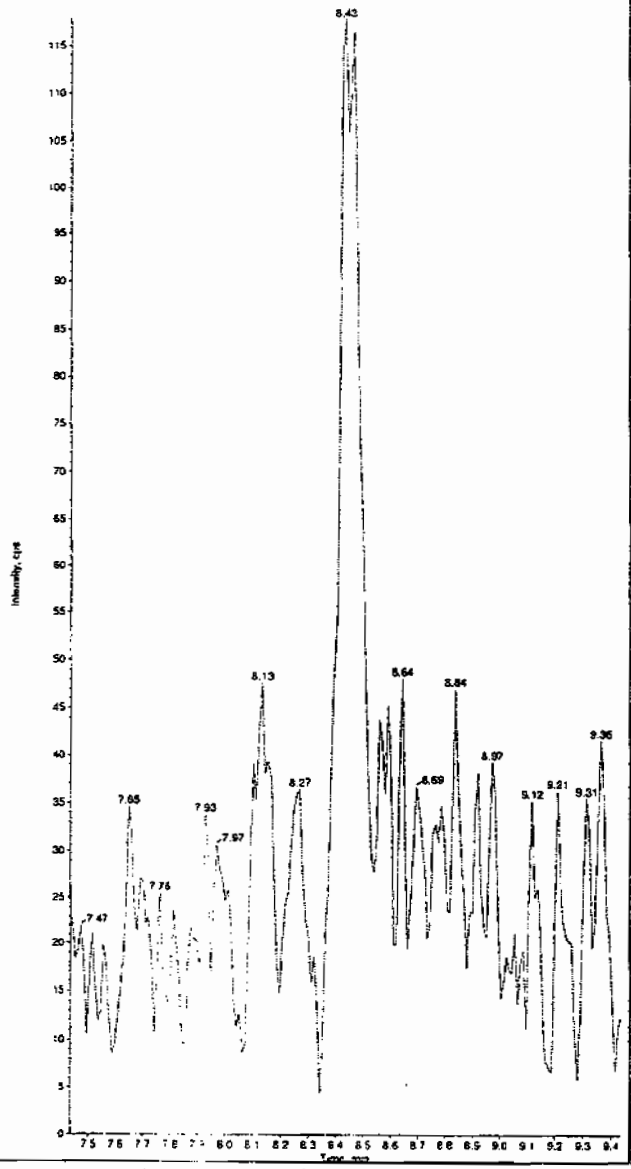

Sample Name: "XIBLK06" Sample ID: "|1|LER" File: "EXS0630033.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "156.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:52:12 PM

Modified: No

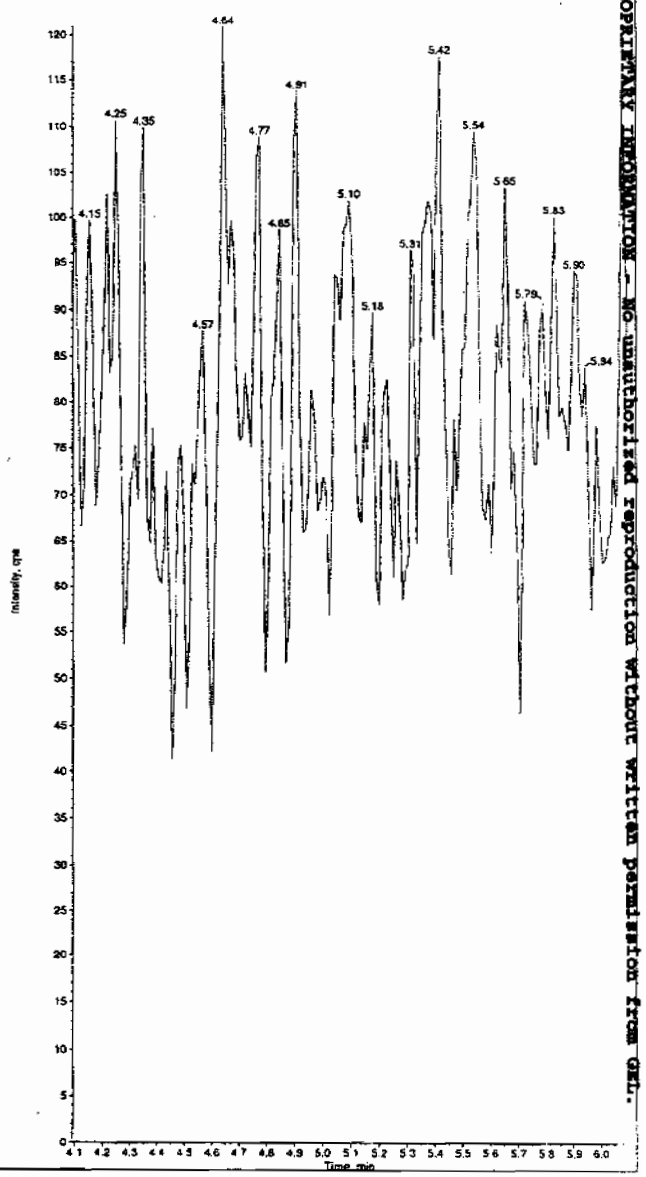

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK06" Sample ID: "|1|LER" File: "EXS0630033.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:52:12 PM

Modified: No

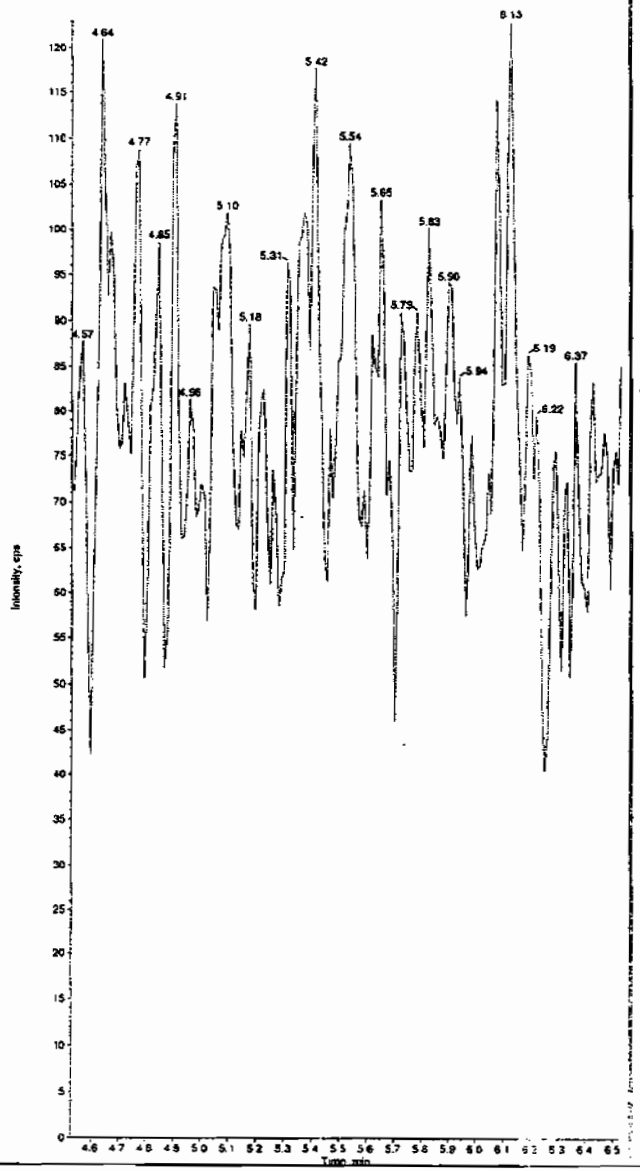

Sample Name: "XIBLK06" Sample ID: "|1|LER" File: "EXS0630033.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 2.78 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:52:12 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 7.72e+004 counts
Height: 16380.447 cps
Start Time: 10.8 min
End Time: 11.1 min

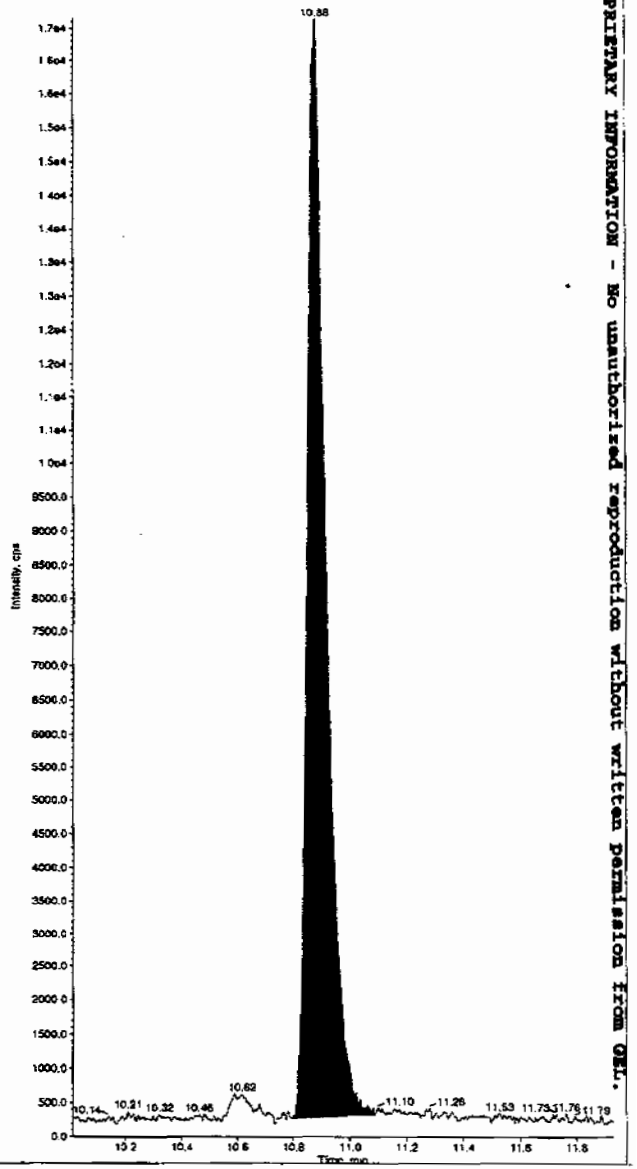

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 01-JUL-09 13:05

GEL Data File: EXS0701010.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	12
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0701010.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No

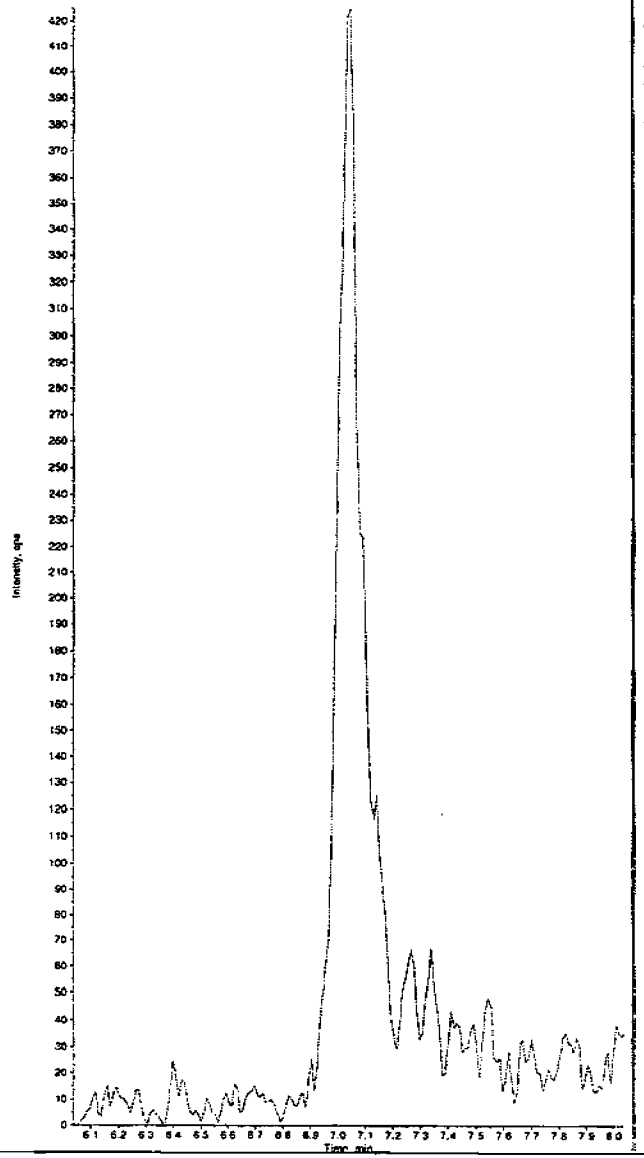

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0701010.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No

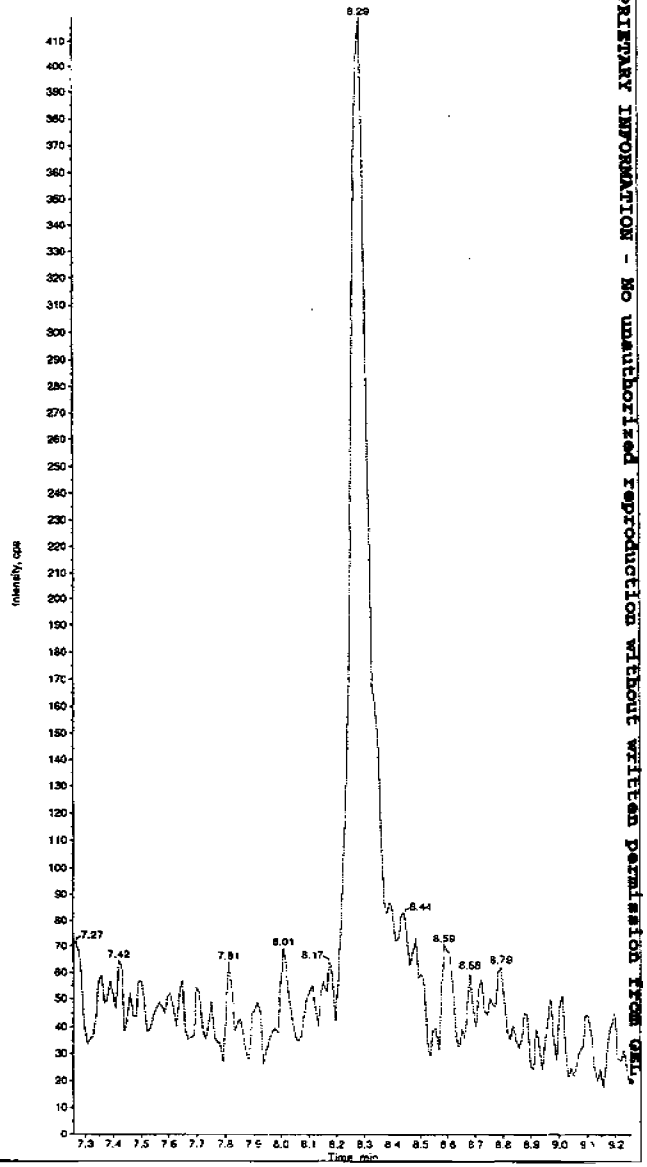

Hmc 07/06/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0701010.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No

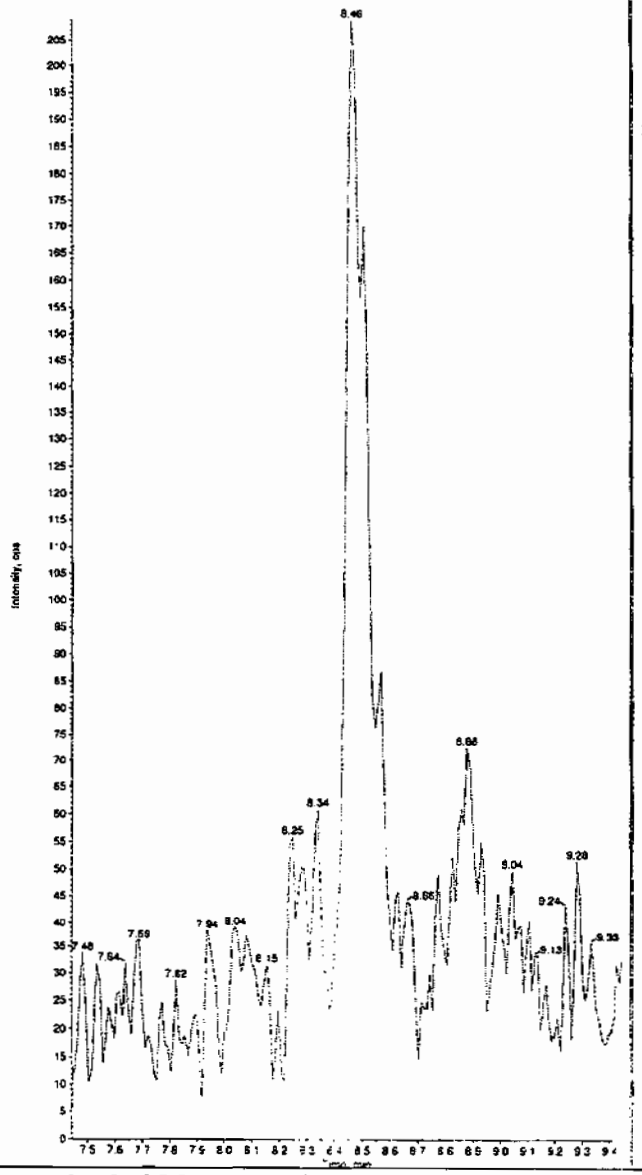

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0701010.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No

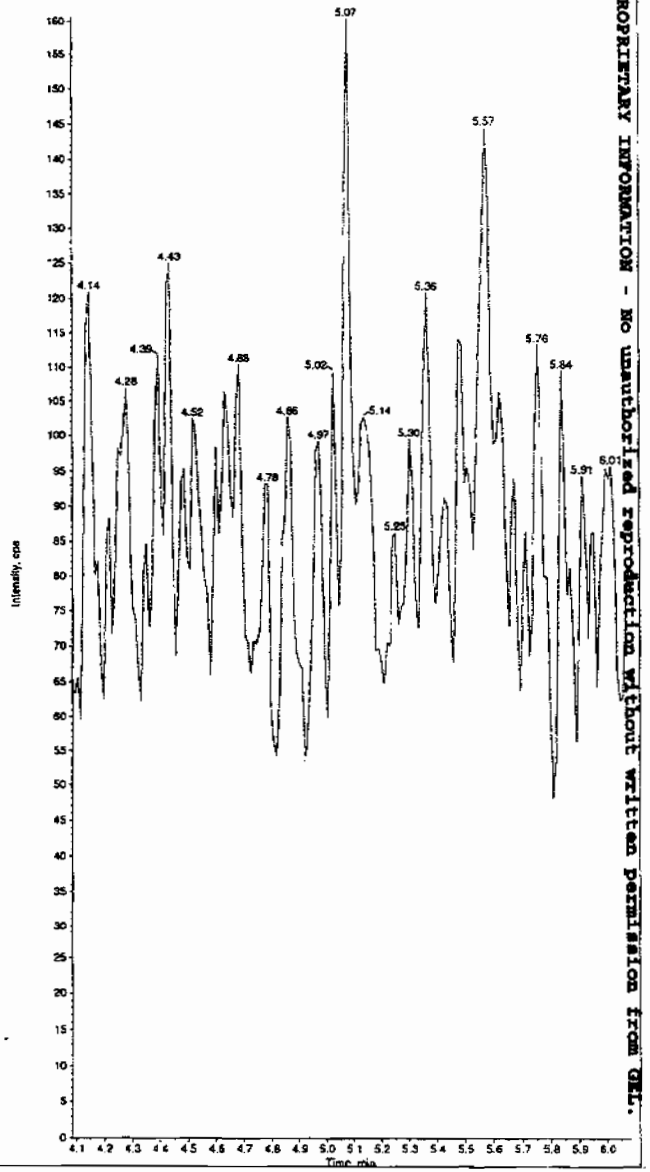

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS0701010.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No

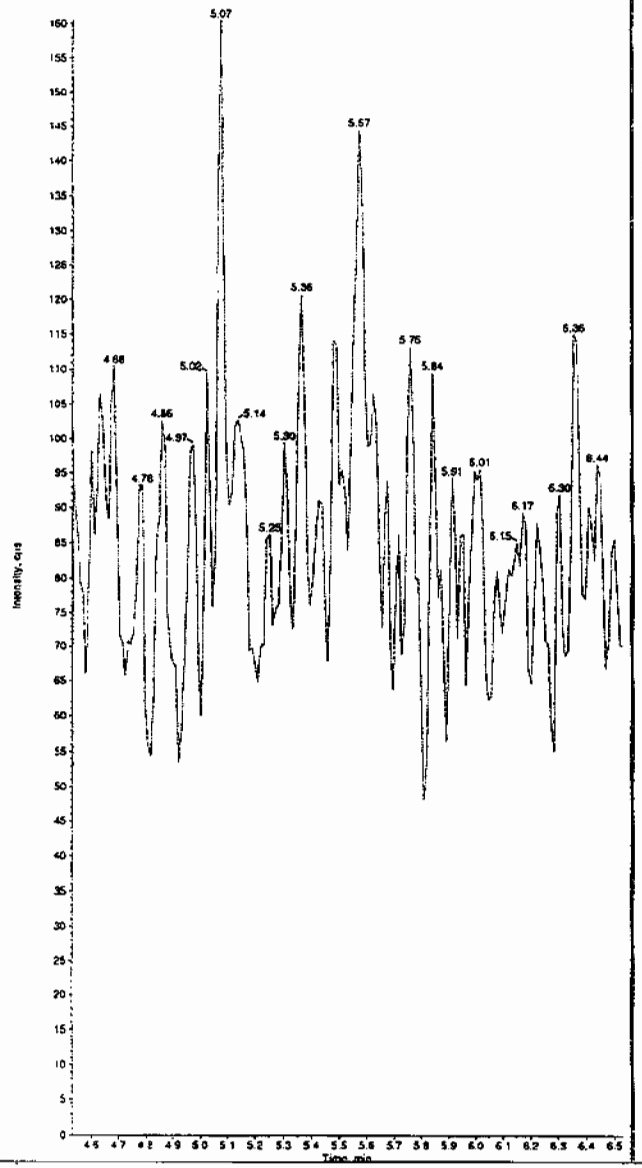

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS0701010.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 12.0 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:05:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.74e+005 counts
Height: 36705.116 cps
Start Time: 10.8 min
End Time: 11.2 min

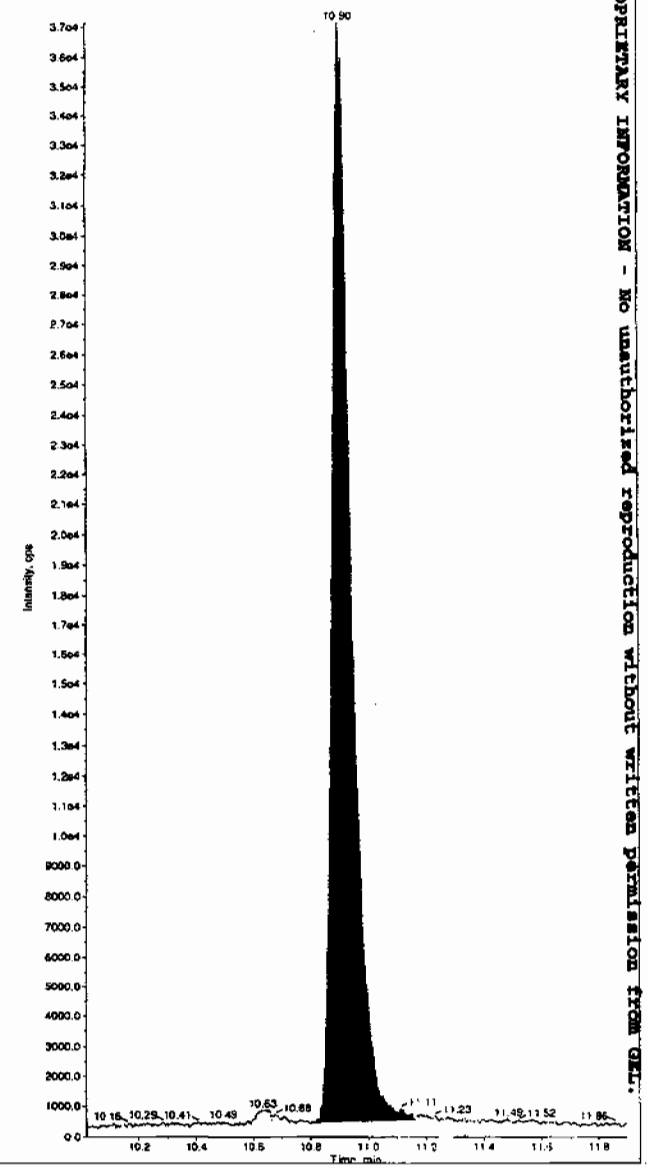

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 01-JUL-09 13:37

GEL Data File: EXS0701012.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	7.3
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS0701012.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:37:43 PM

Modified: No

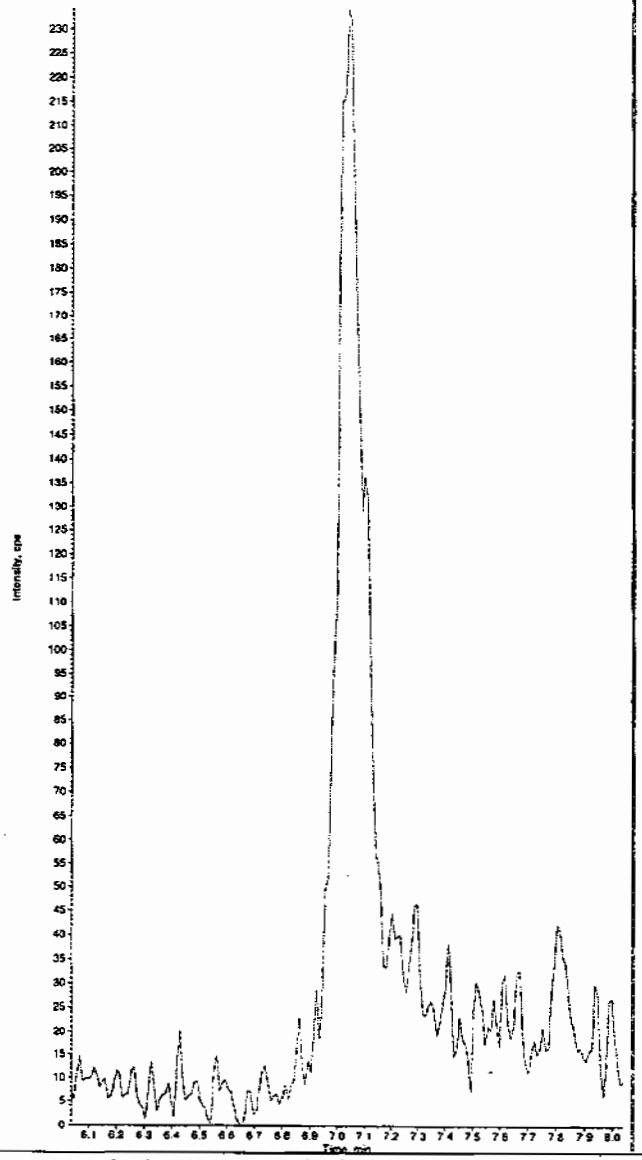

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS0701012.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:37:43 PM

Modified: No

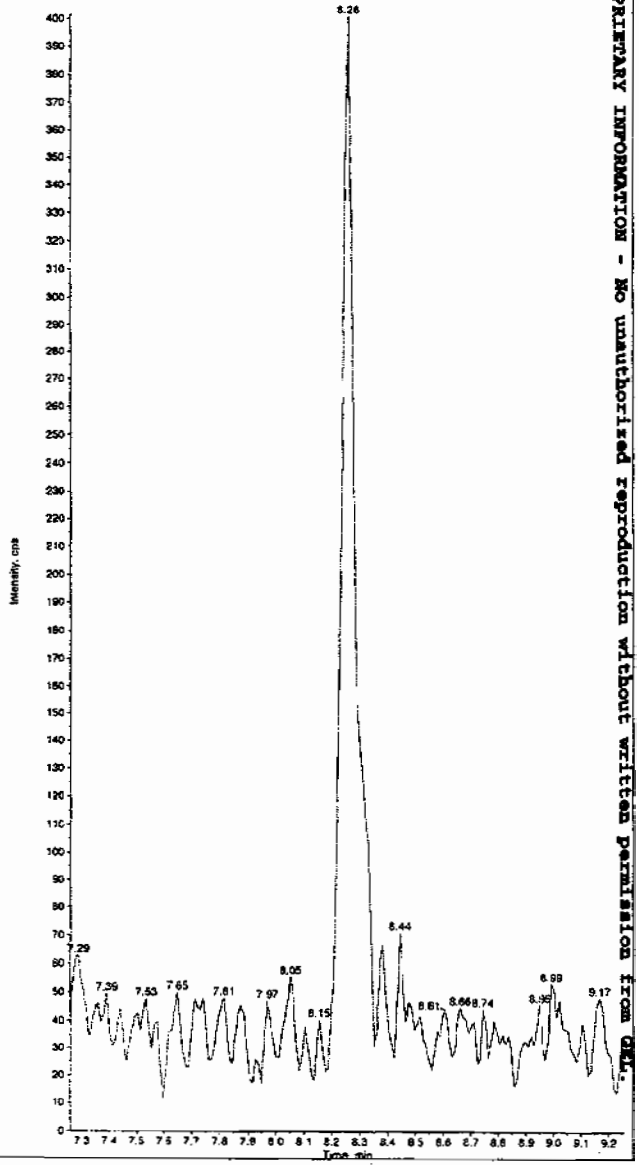

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS0701012.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:37:43 PM

Modified: No

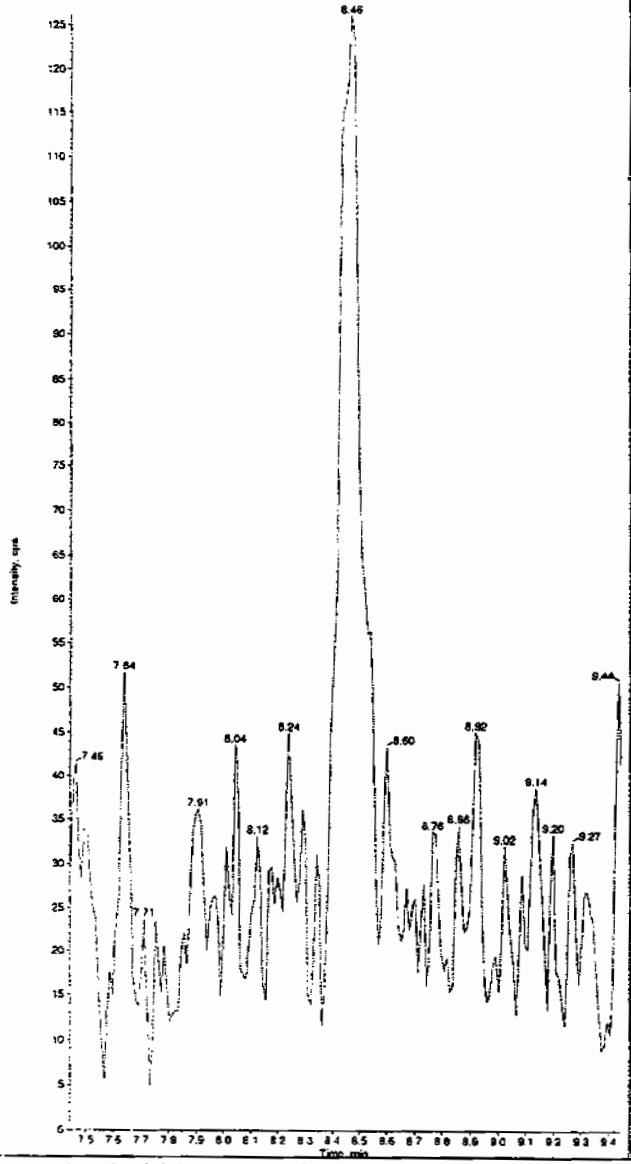

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS0701012.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:37:43 PM

Modified: No

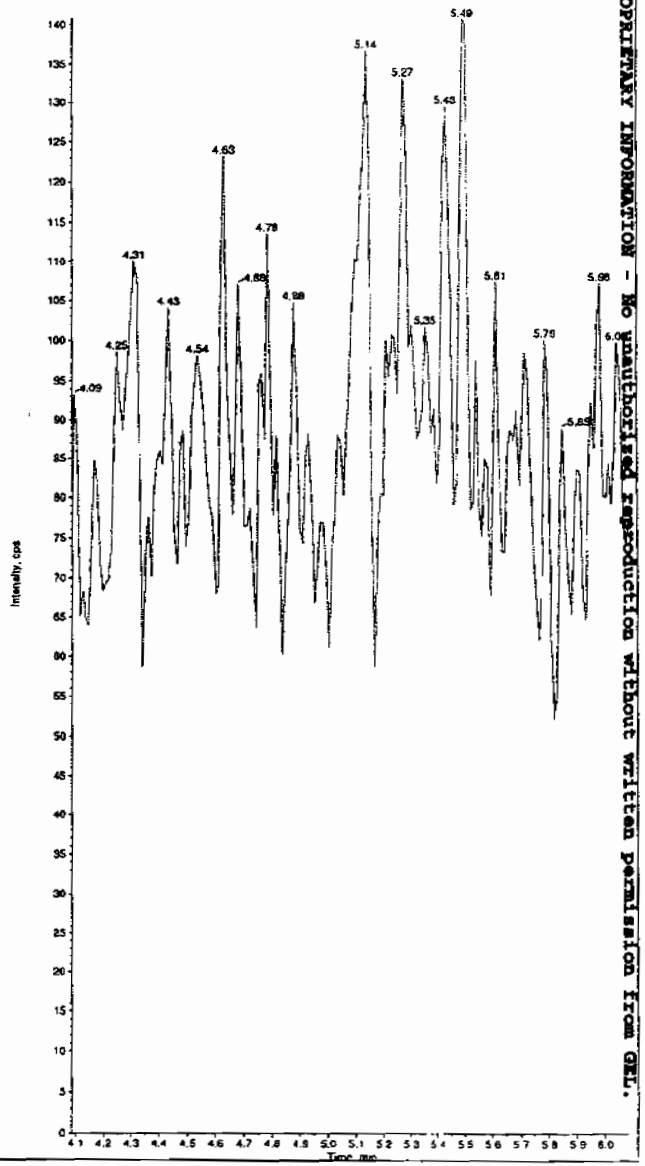

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0701012.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:37:43 PM

Modified: No

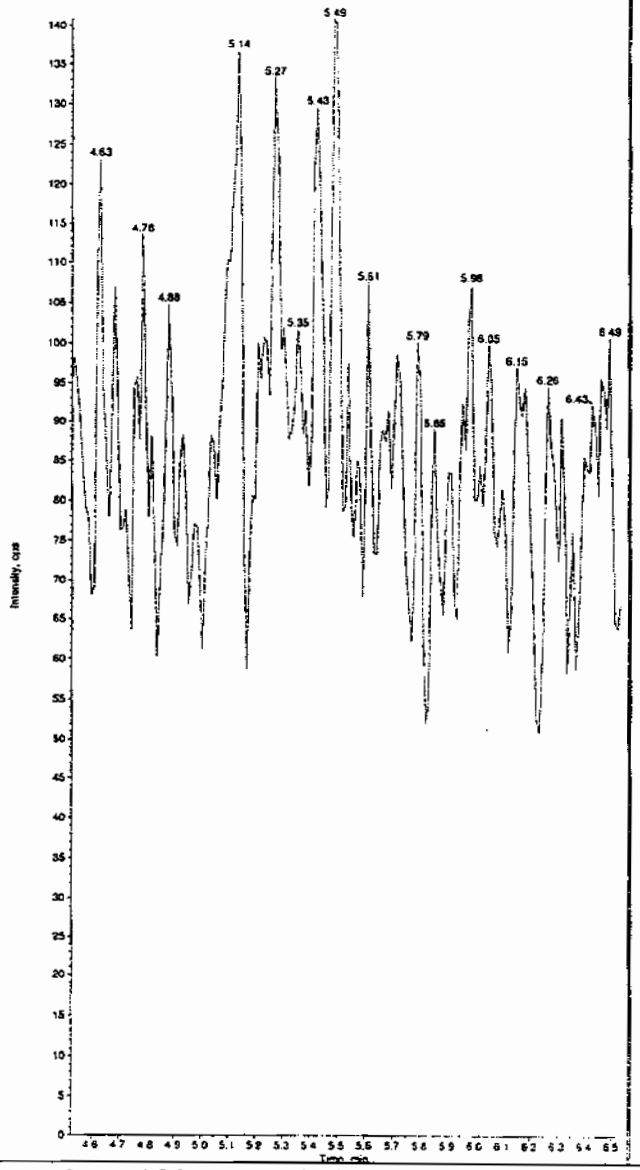

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0701012.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 7.30 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:37:43 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.12e+005 counts
Height: 23997.810 cps
Start Time: 10.8 min
End Time: 11.1 min

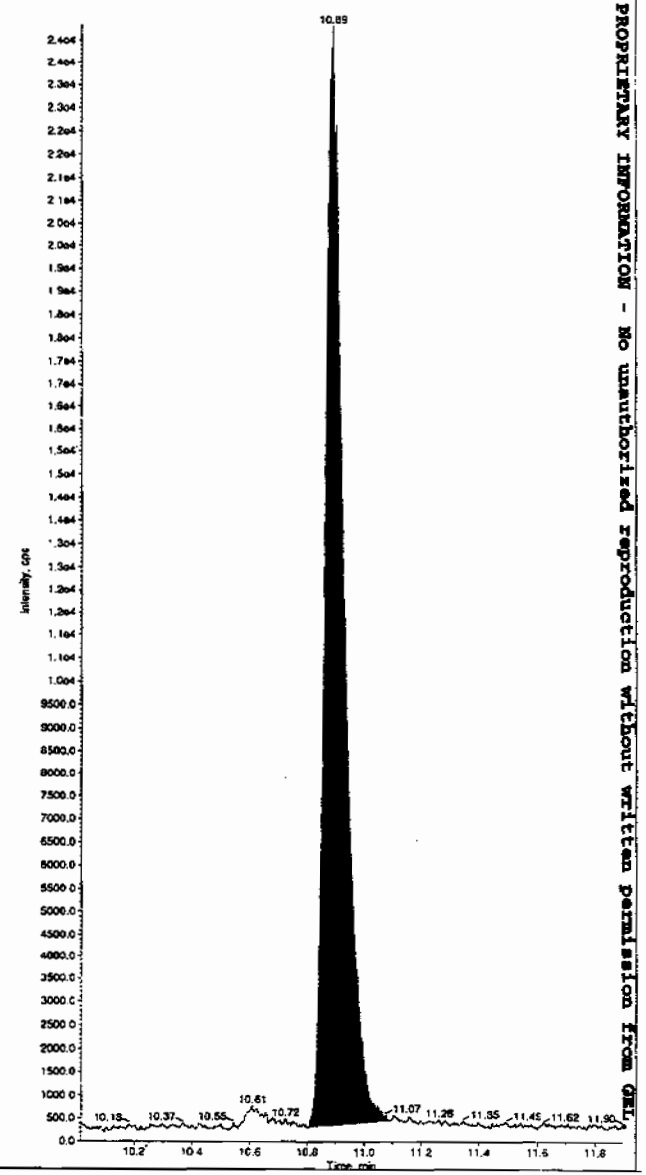

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 01-JUL-09 14:26

GEL Data File: EXS0701015.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	4.12
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS0701015.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No

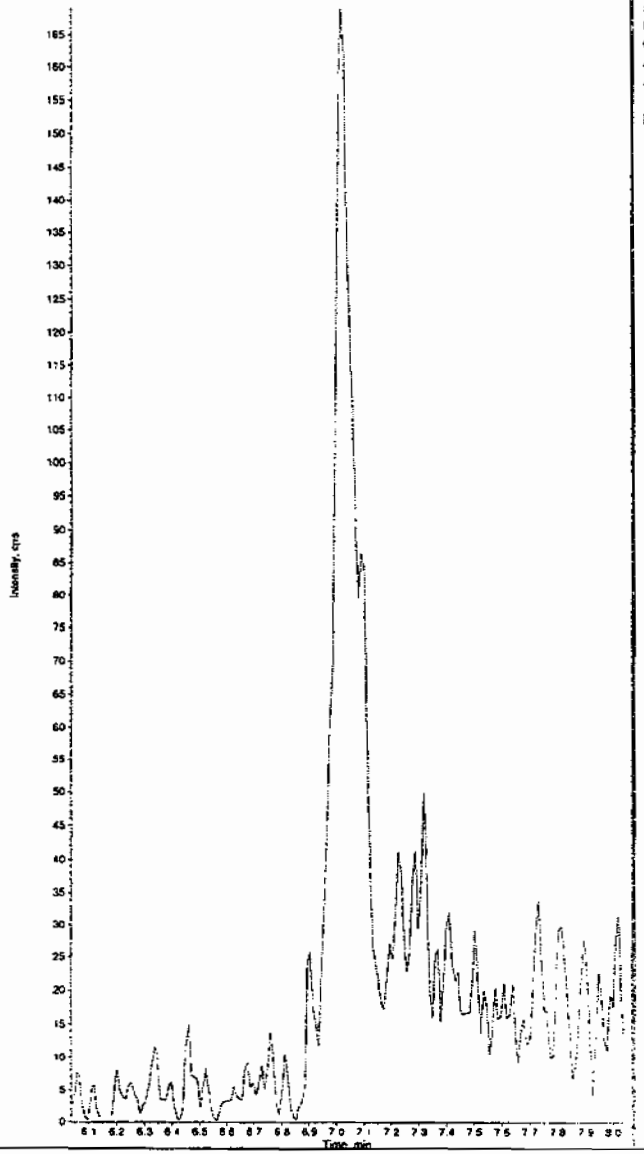

Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS0701015.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No

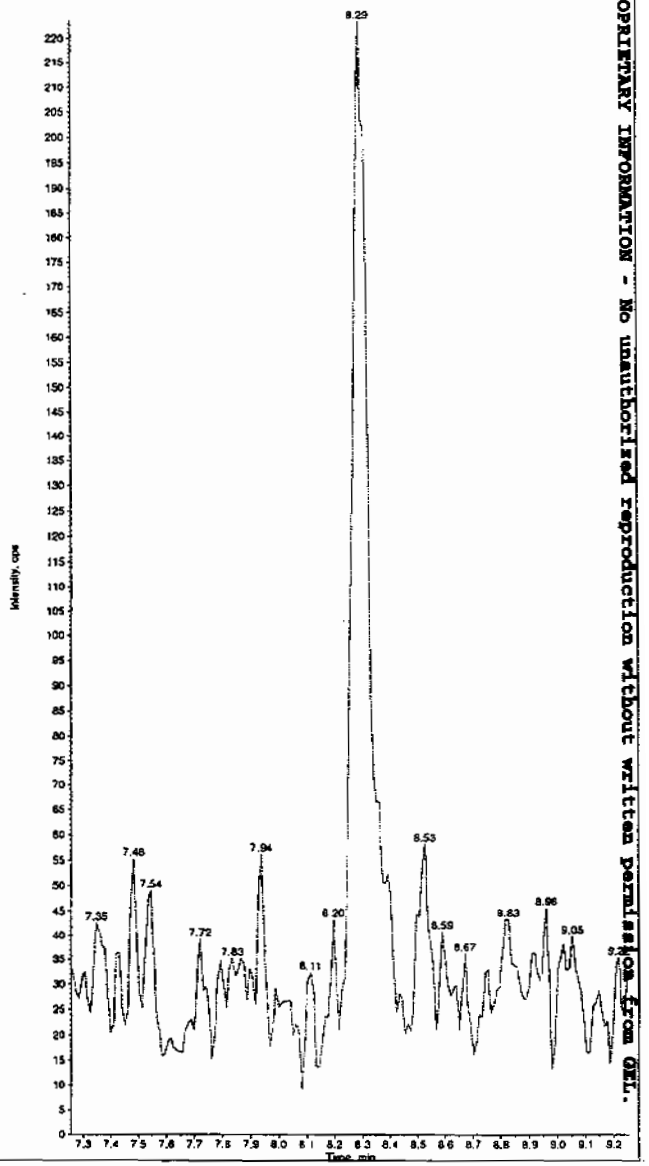

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS0701015.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No

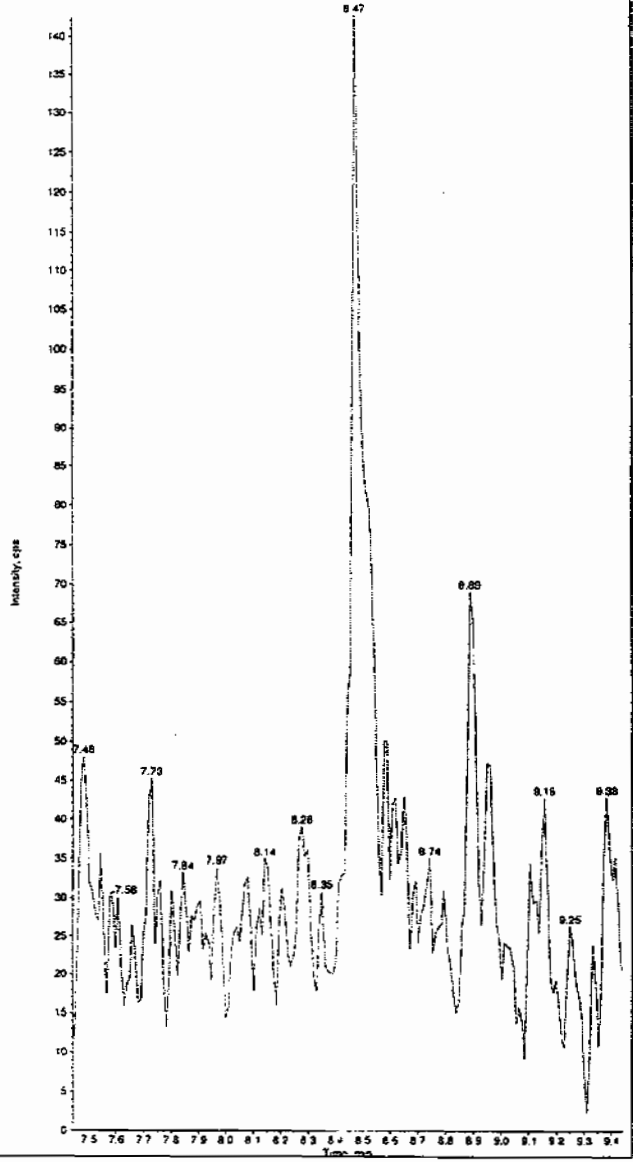

Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS0701015.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No

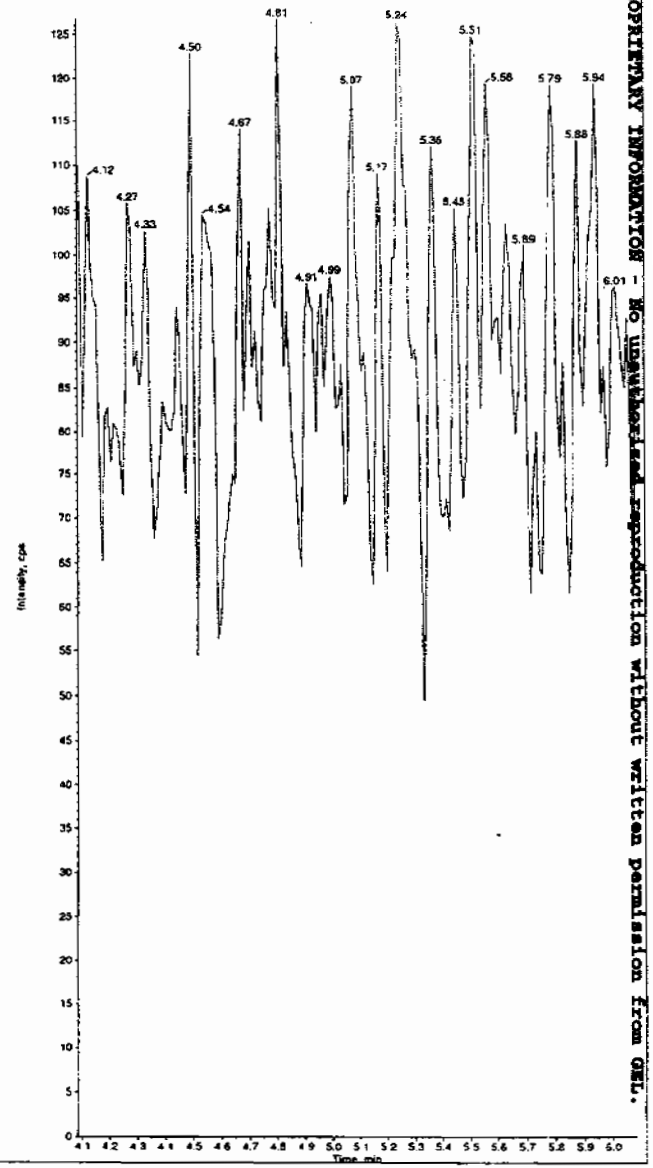

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS0701015.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No

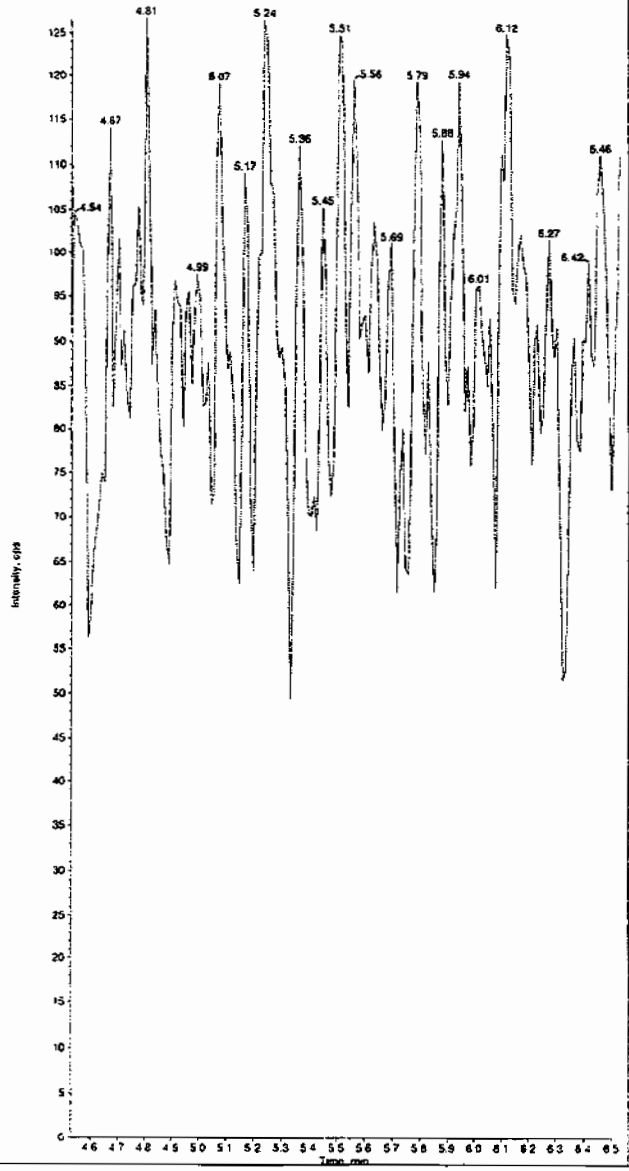

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS0701015.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 4.12 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:26:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.90e+004 counts
Height: 16368.376 cps
Start Time: 10.8 min
End Time: 11.1 min

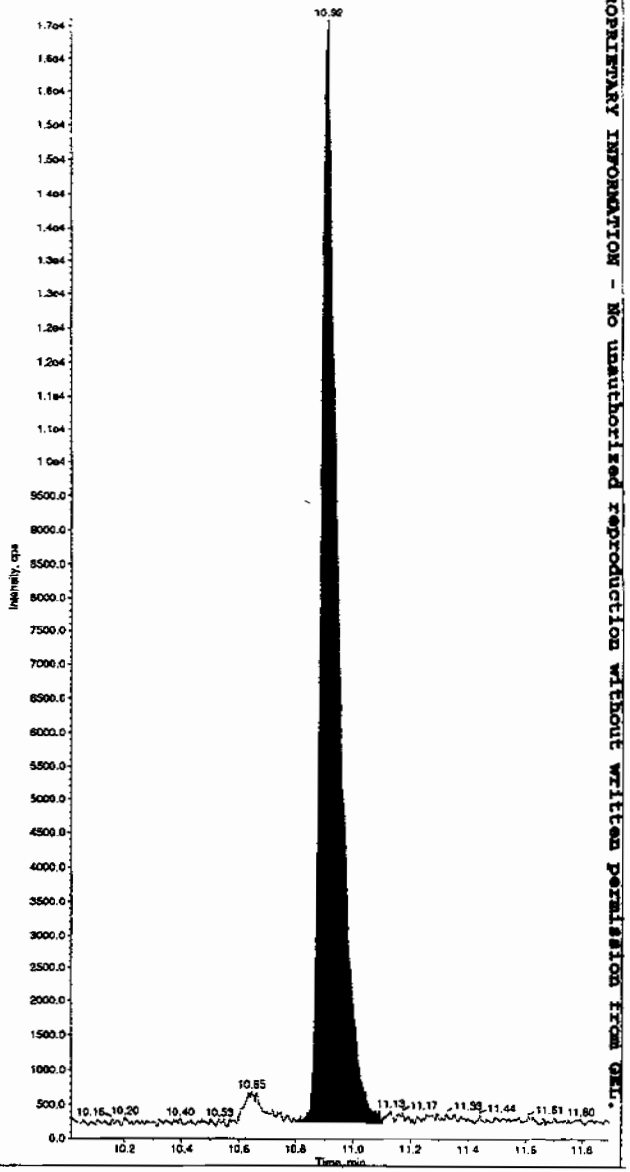

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2457

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 01-JUL-09 16:19

GEL Data File: EXS0701022.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	6.24
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK05" Sample ID: "]1[LER" File: "EXS0701022.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No

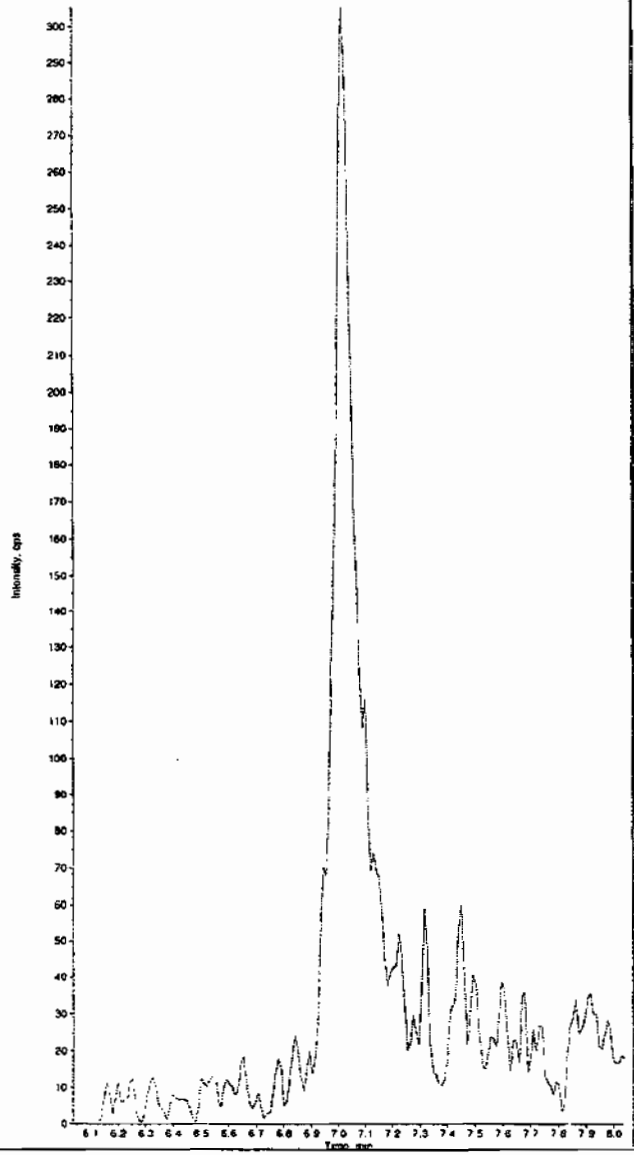

Sample Name: "XIBLK05" Sample ID: "]1[LER" File: "EXS0701022.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No

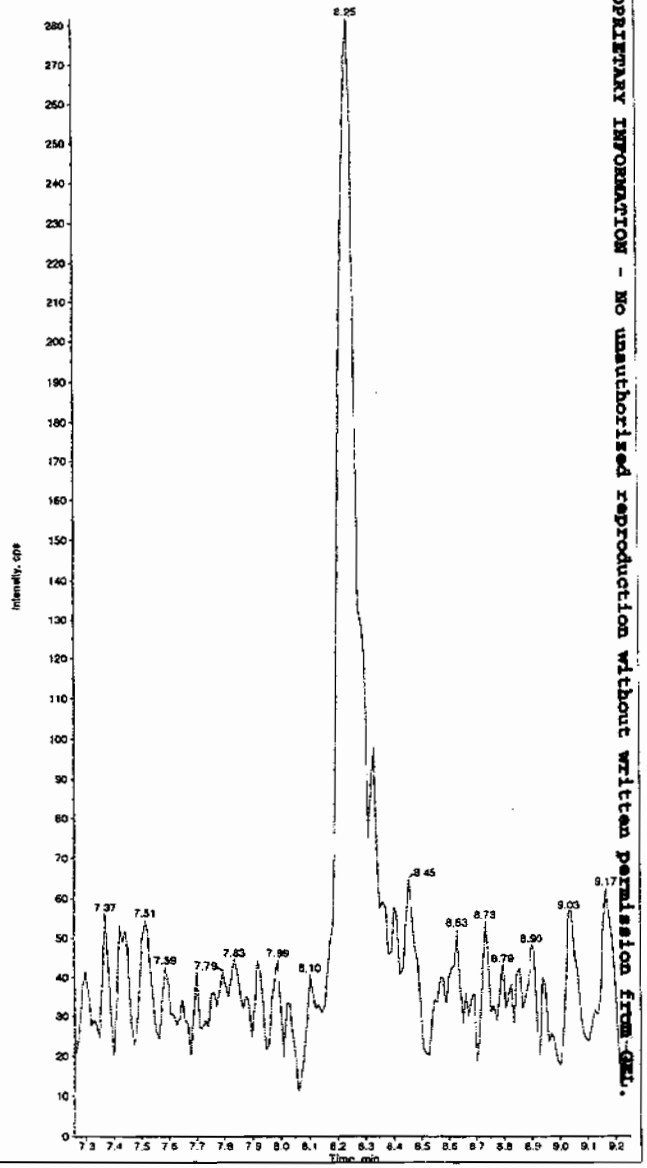

Hmw 07/06/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS0701022.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No

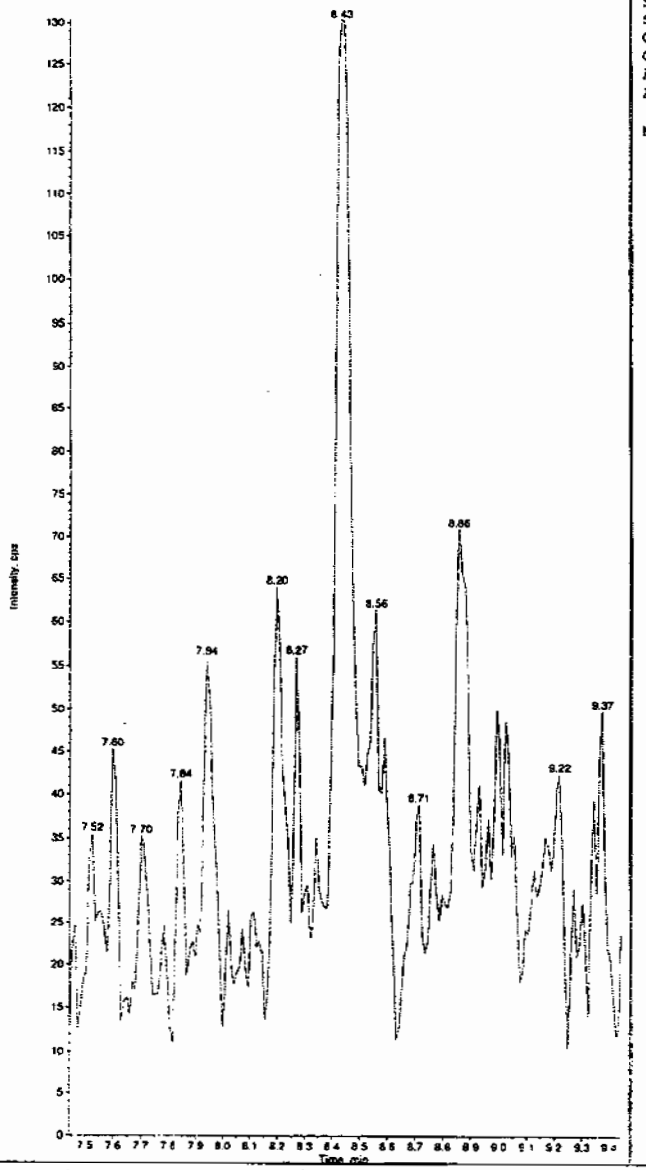

Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS0701022.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No

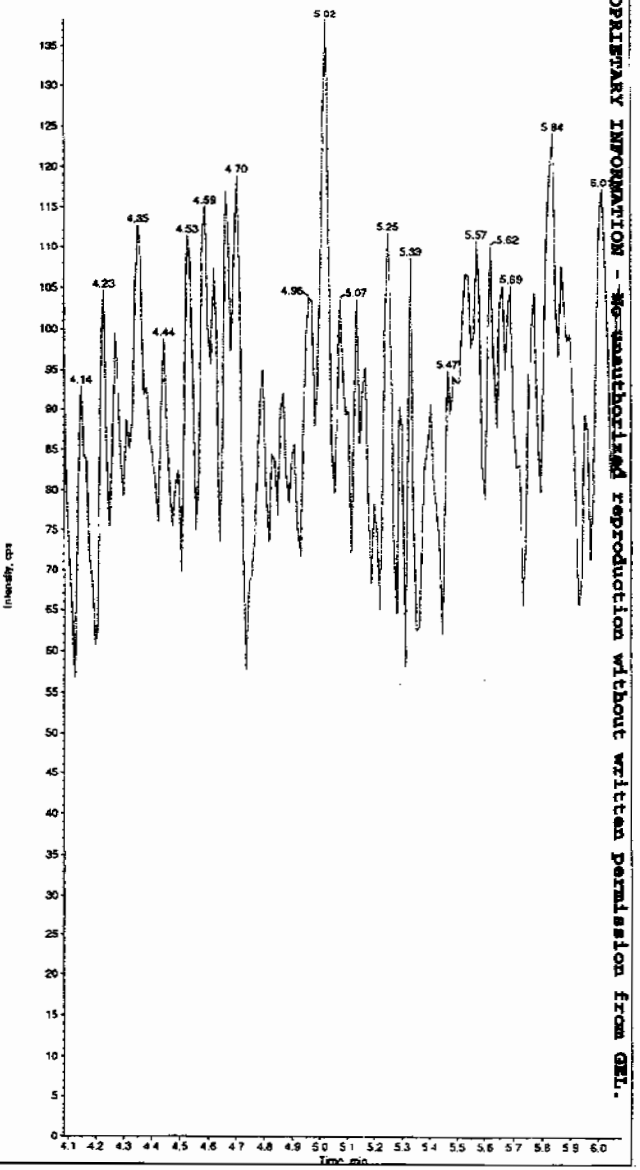

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS0701022.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No

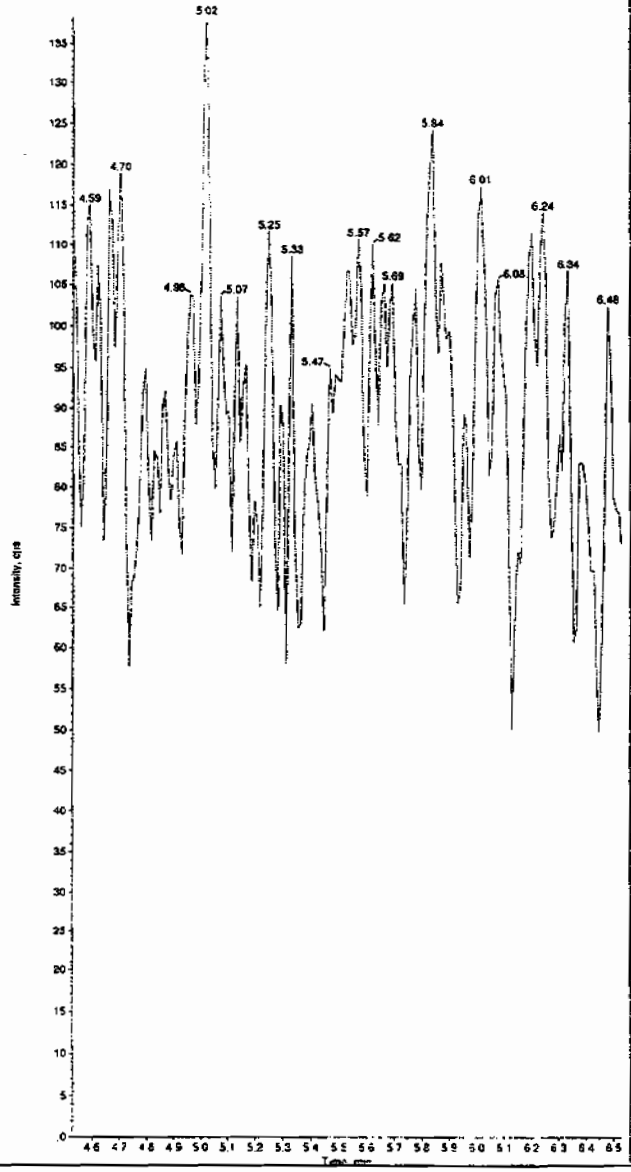

Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS0701022.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 6.24 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:19:50 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 9.74e+004 counts
Height: 21766.491 cps
Start Time: 10.8 min
End Time: 11.1 min

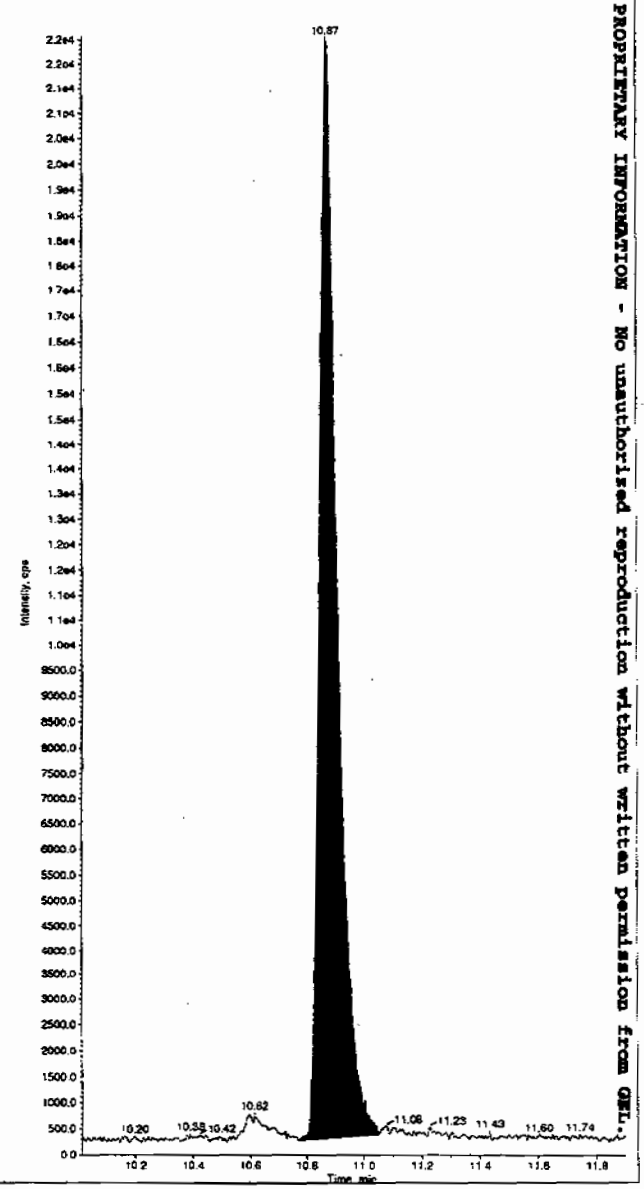

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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Calibration Report - MS1 Static

Printed: Fri Aug 25 10:50:01 2006

Data file: STATMS1 - Calibrated

15 matches of 15 tested references

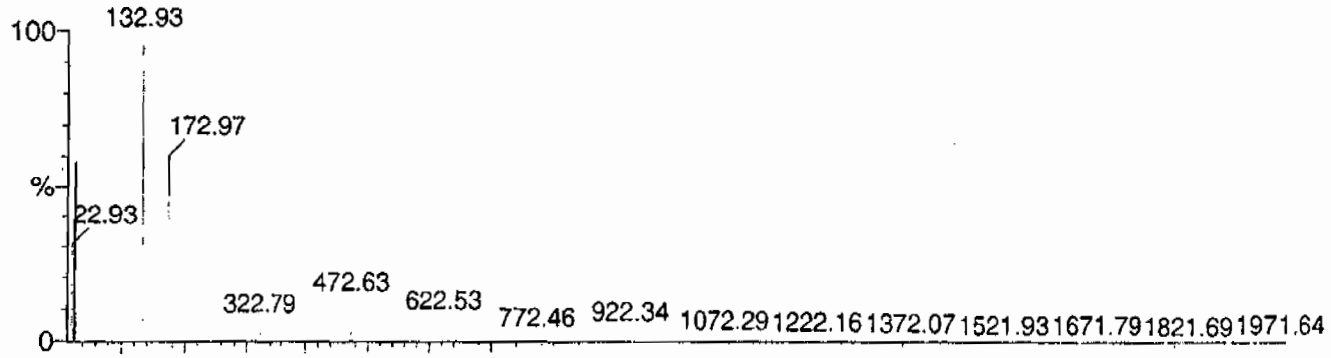

Reference file: Naics2

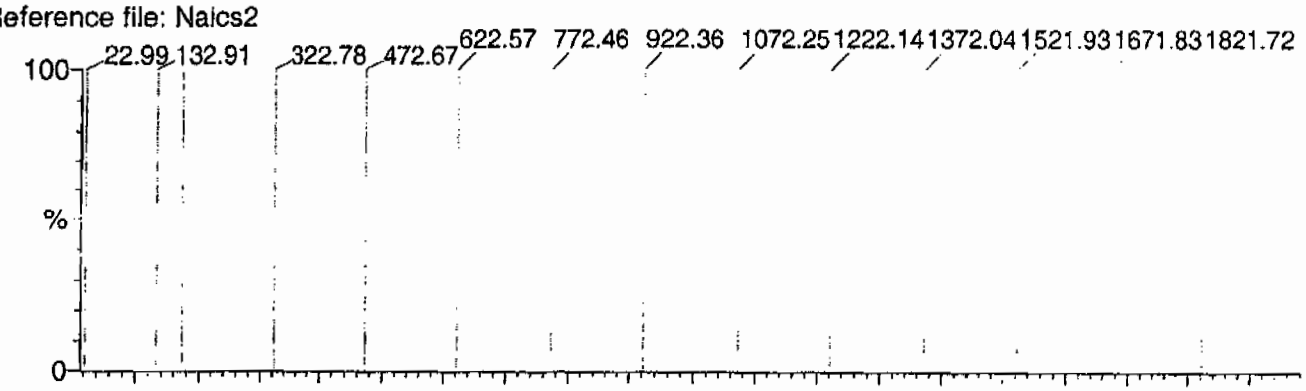

Mass difference (Raw - Ref mass)

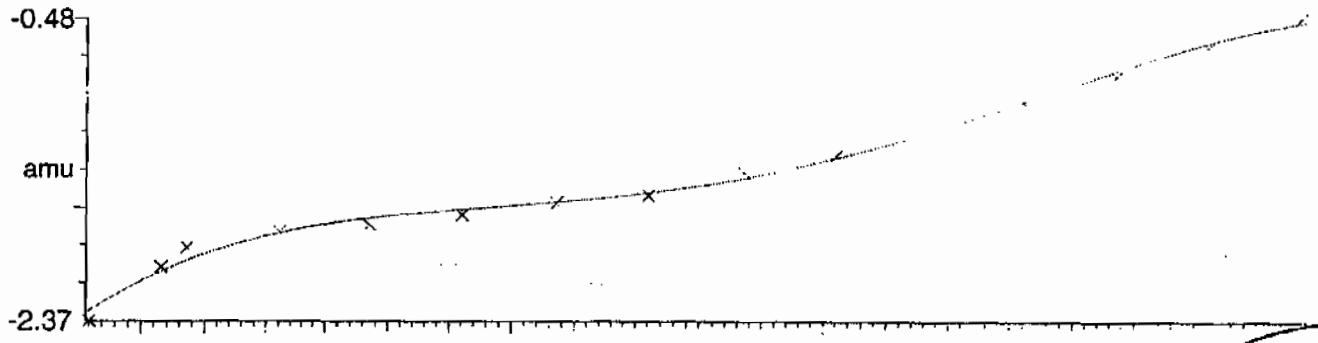

Residuals

Mean residual = -1.673470e-9 ± 0.036953

ok
hm

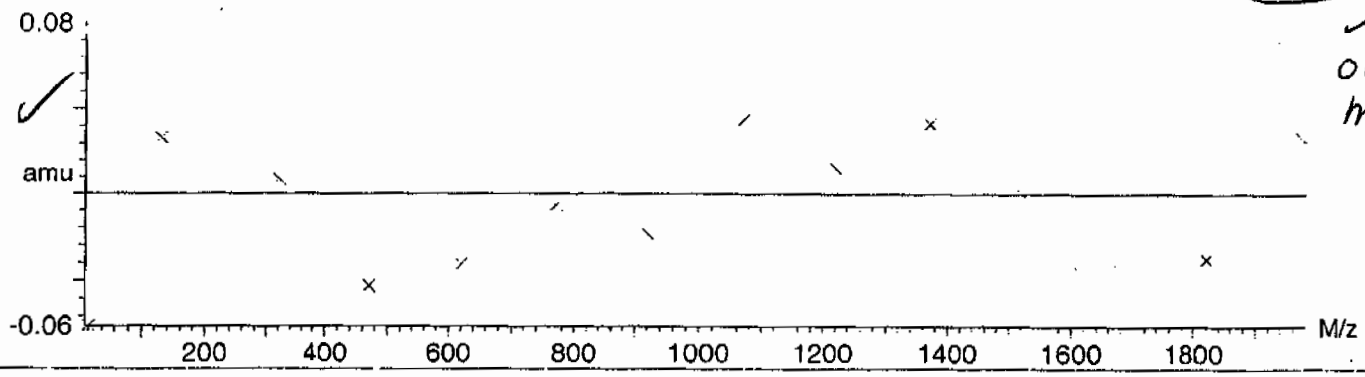

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Calibration Report - MS1 Scanning

Printed: Fri Aug 25 10:51:06 2006

Data file: SCNMS1 - Calibrated

15 matches of 15 tested references

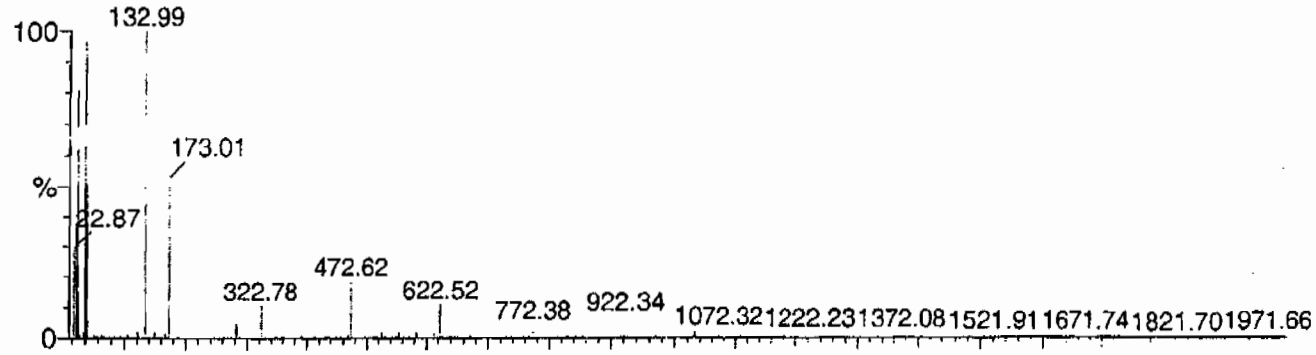

Reference file: Naics2

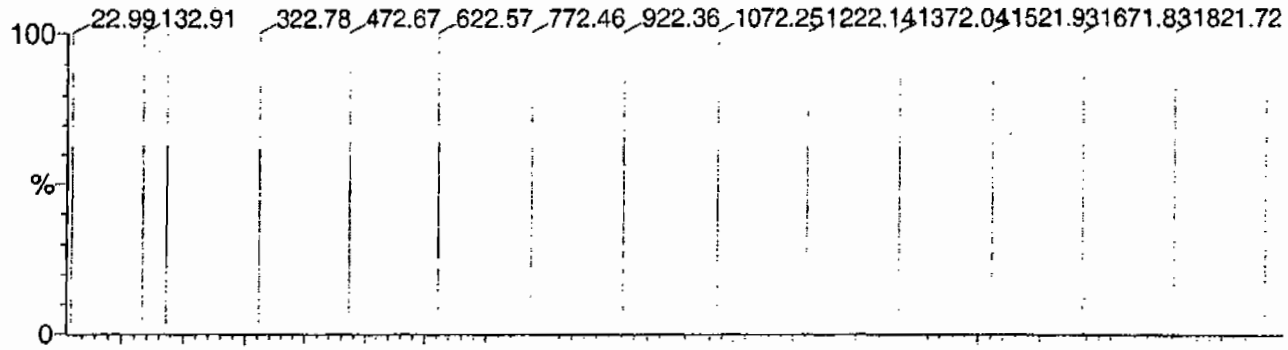

Mass difference (Raw - Ref mass)

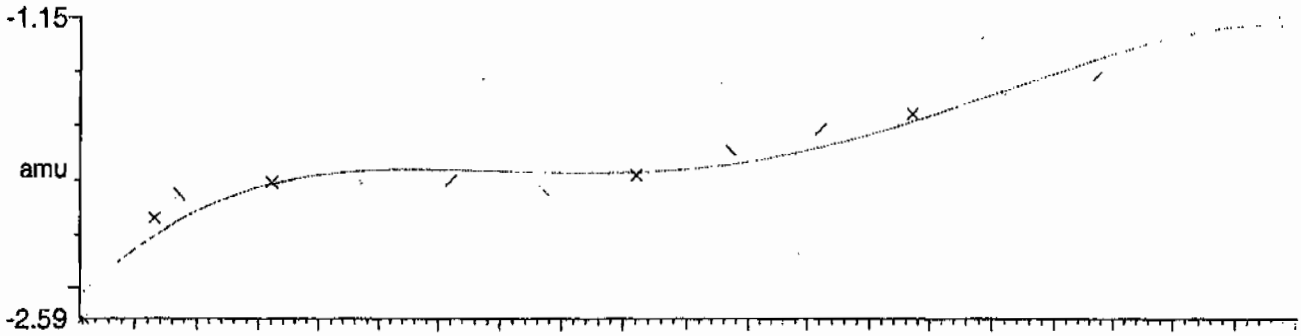

Residuals

Mean residual = -5.432715e-9 ± 0.069858

ok
m

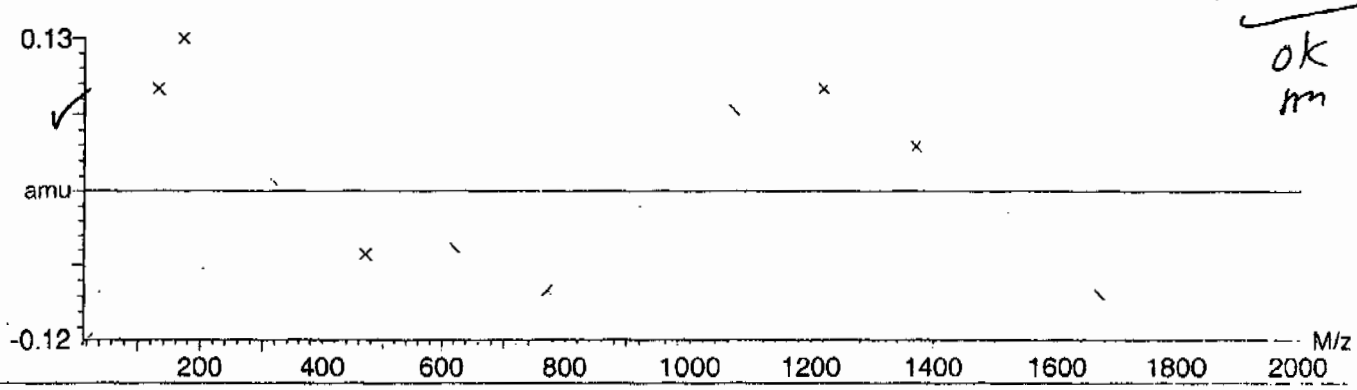

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Calibration Report - MS1 Scan Speed Compensation

Printed: Fri Aug 25 10:52:01 2006

Data file: FASTMS1 - Calibrated

15 matches of 15 tested references

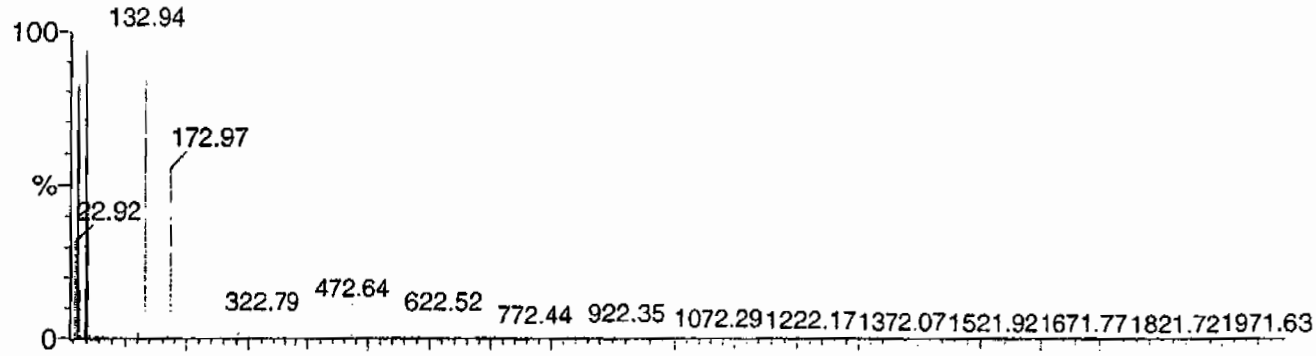

Reference file: Naics2

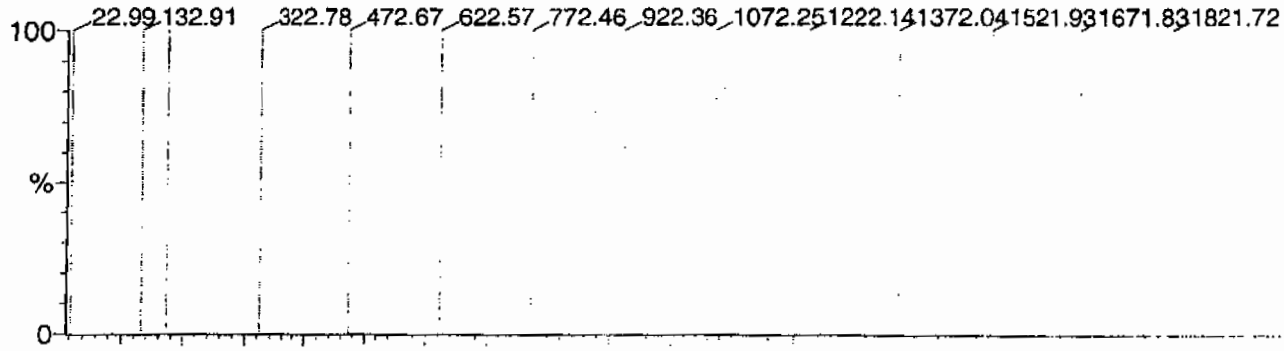

Mass difference (Raw - Ref mass)

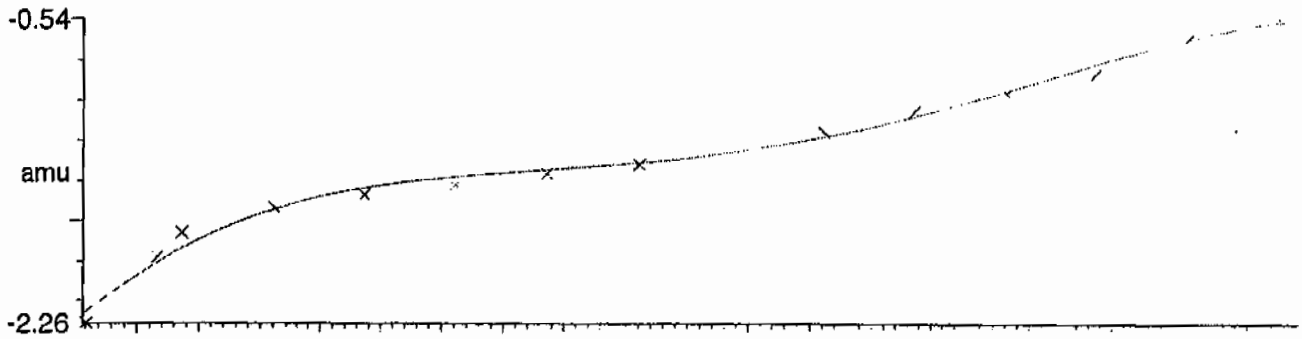

Residuals

Mean residual = 3.486639e-9 ± 0.040487

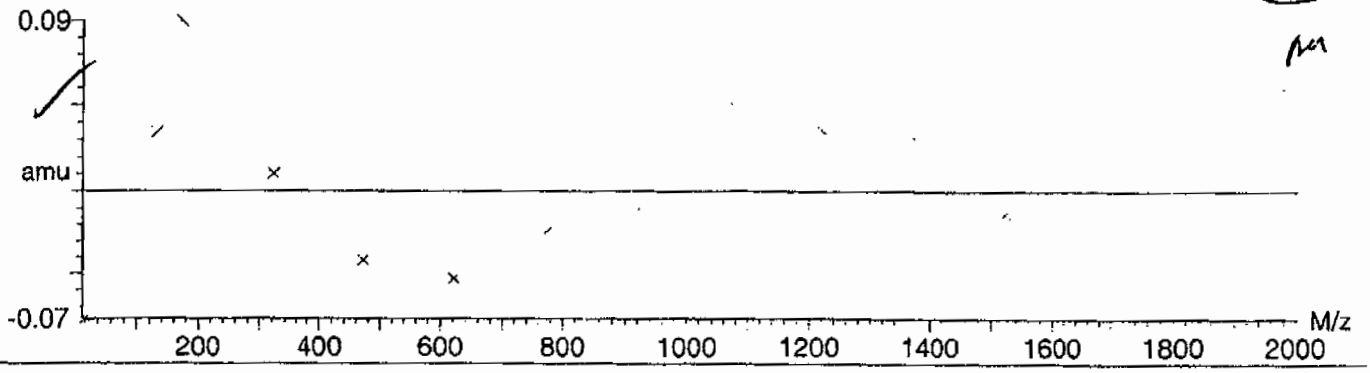

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Calibration Report - MS2 Static

Printed: Fri Aug 25 10:52:54 2006

Data file: STATMS2 - Calibrated

15 matches of 15 tested references

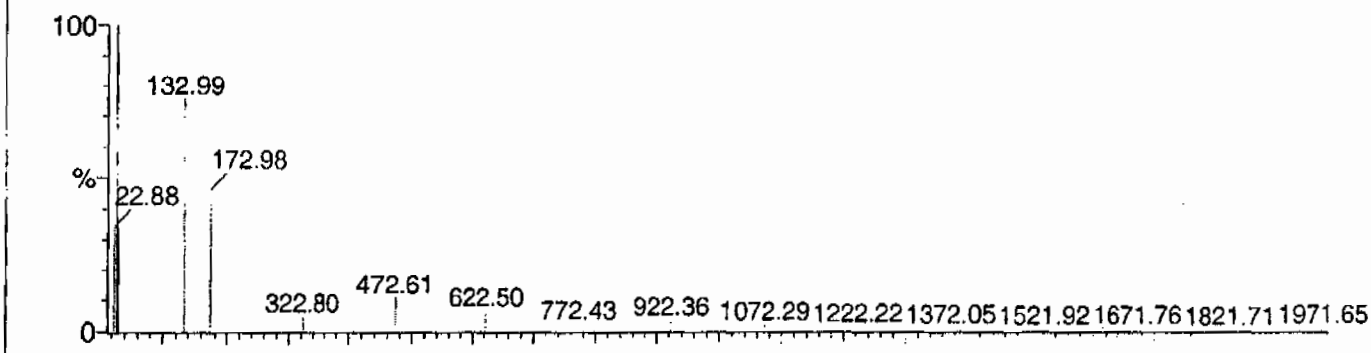

Reference file: Naics2

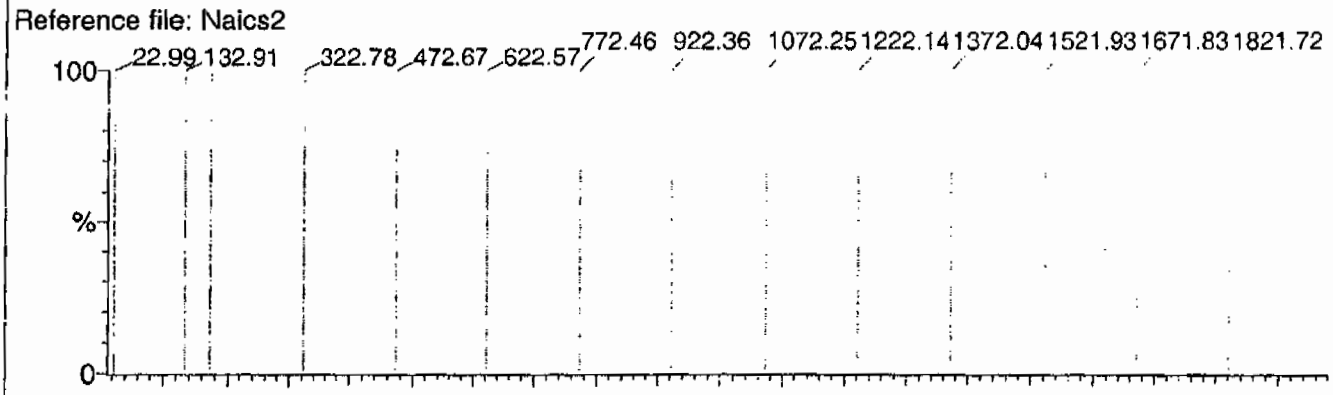

Mass difference (Raw - Ref mass)

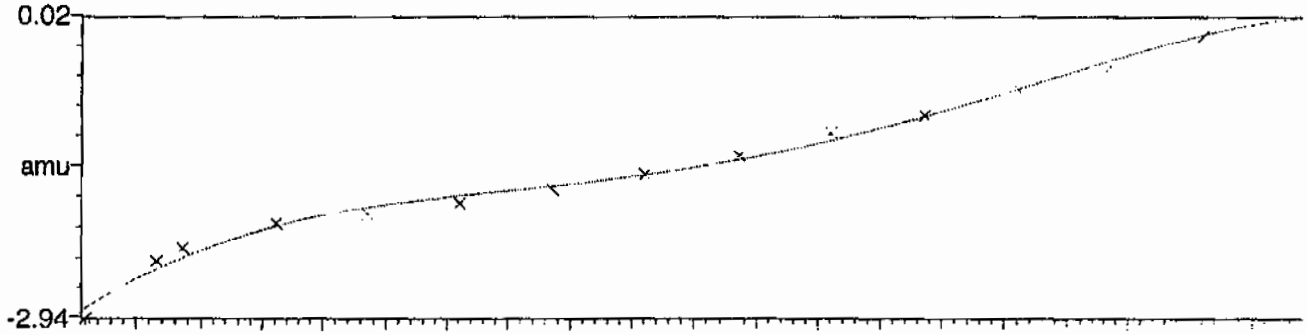

Residuals

Mean residual = 2.048910e-9 ± 0.057803

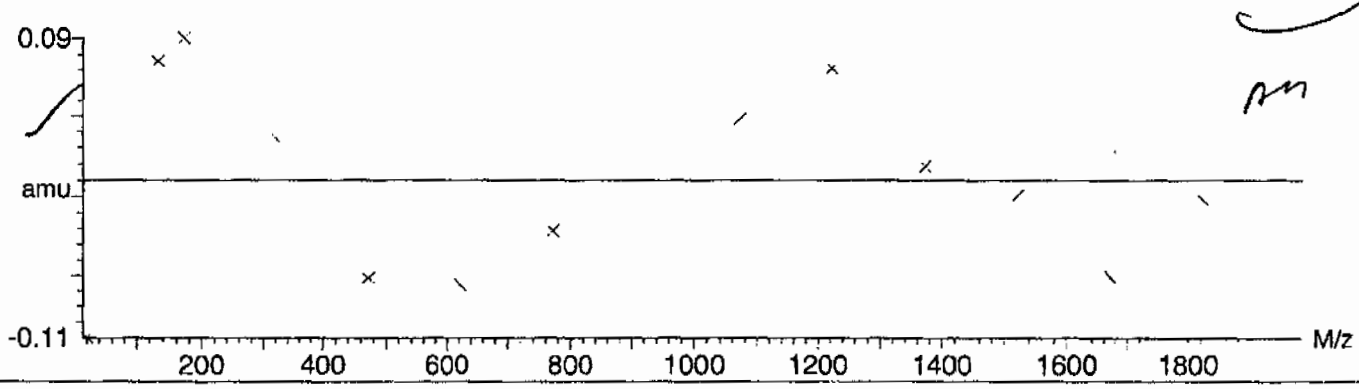

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Calibration Report - MS2 Scanning

Printed: Fri Aug 25 10:54:00 2006

Data file: SCNMS2 - Calibrated — 14 matches of 15 tested references

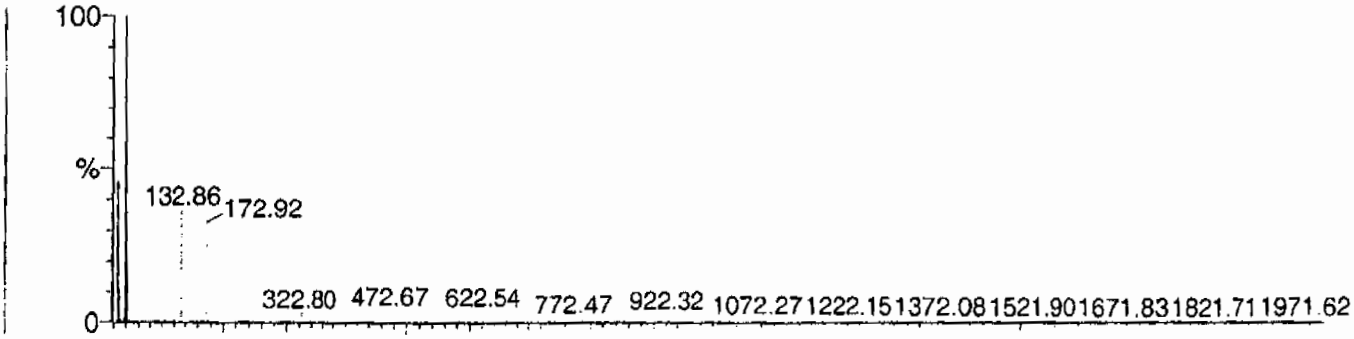

Reference file: Naics2

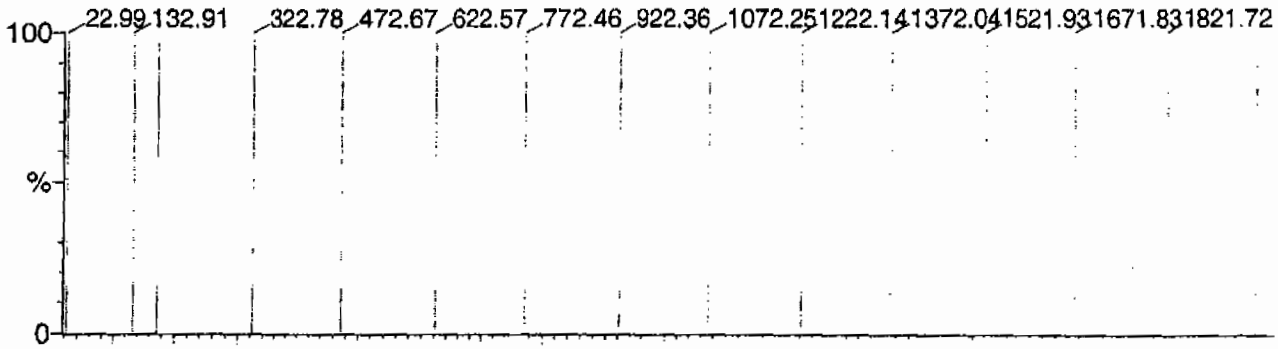

Mass difference (Raw - Ref mass)

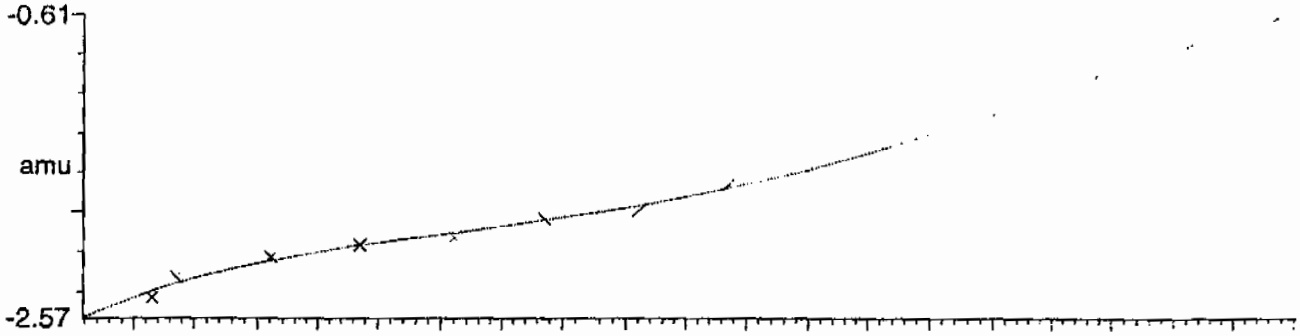

Residuals — Mean residual = -2.623502e-9 ± 0.025622

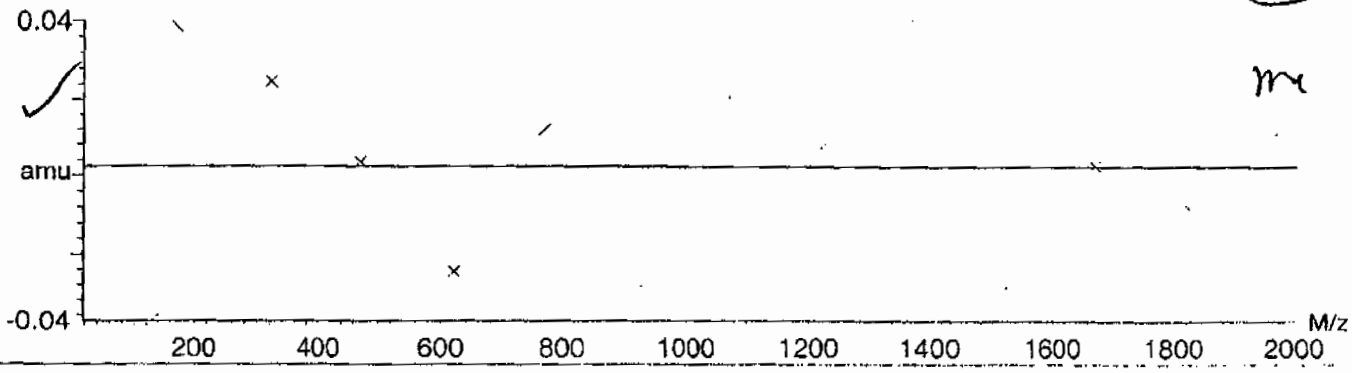

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Calibration Report - MS2 Scan Speed Compensation

Printed: Fri Aug 25 10:54:54 2006

Data file: FASTMS2 - Calibrated

14 matches of 15 tested references

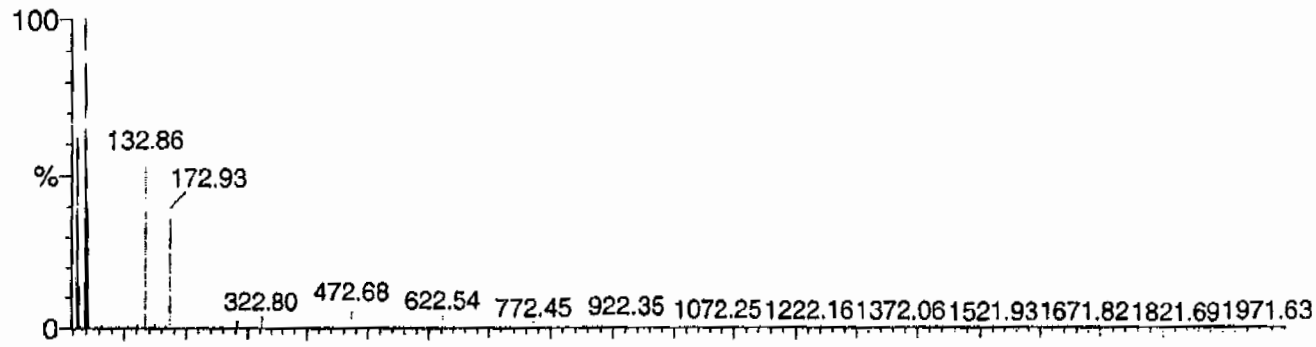

Reference file: Naics2

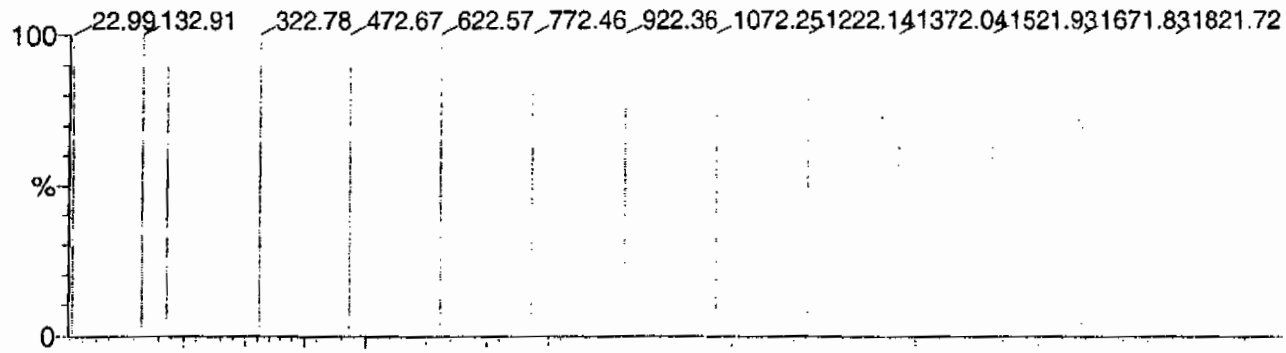

Mass difference (Raw - Ref mass)

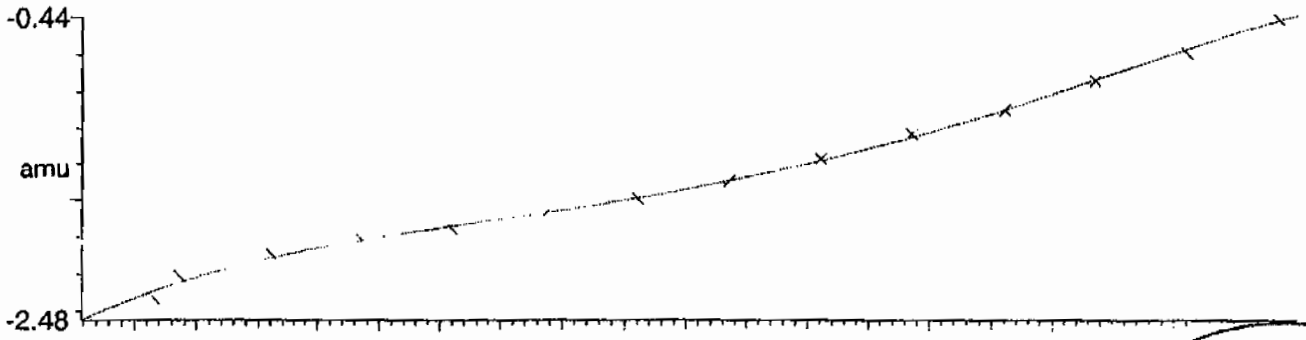

Residuals

Mean residual = -6.785350e-9 ± 0.023134

m

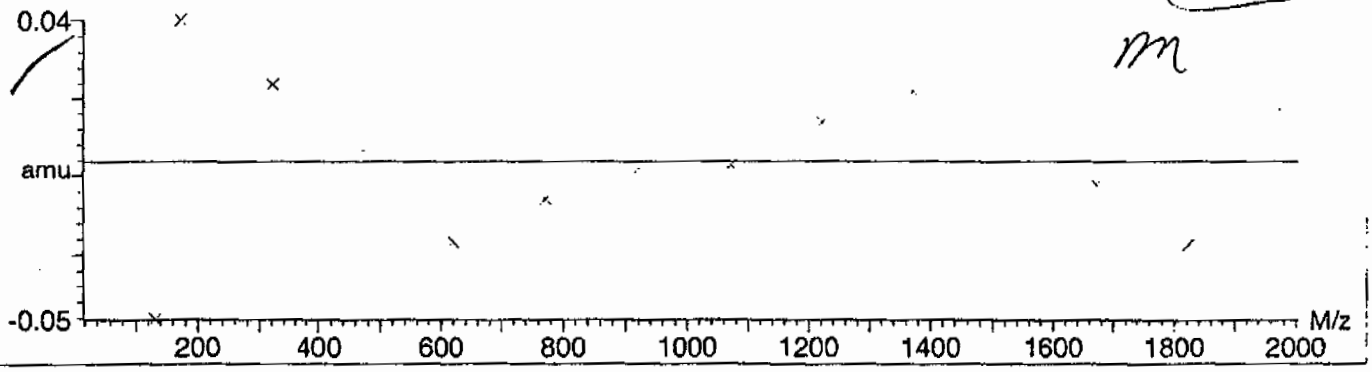

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Quattro Micro Tune Parameters

Parameter File: C:\MASSLYNX\NEW_EXP.PRO\ACQUDB\explosives04.lpr

Printed : Tue Jun 30 08:42:49 2009

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Quattro Micro Tune Parameters

Parameter File: C:\MASSLYNX\NEW_EXP.PRO\ACQUDB\explosives04.ipr

Printed : Mon Jul 13 10:31:58 2009

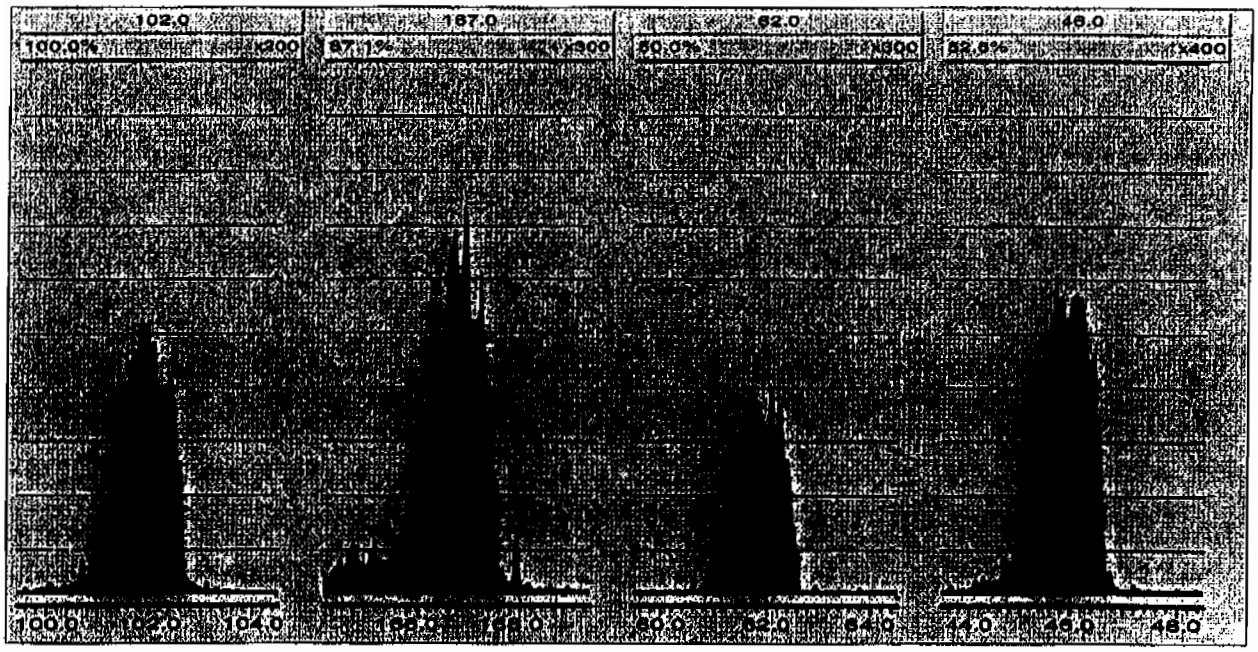

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8

High Explosives Internal Standard Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

HPLC Column: Phenomenex Ultracarb 5u ODS(20)

Instrument ID: LCMSMS

	Analysis Date/Time	GEL Data File	IS1 (DNB) (Area) #	RT (min) #	IS2 (DNT) (Area) #	RT2 (min) #
			3831.693	11.977	23967.433	17.272
Upper Limit			4981.2009	12.477	31157.6629	17.772
Lower Limit			2682.1851	11.477	16777.2031	16.772
MB for batch 880641	01-jul-09 08:48	EXP0630038a	4072.77	11.998	26228.9	17.291
LCS for batch 880641	01-jul-09 09:18	EXP0630039a	4113.96	11.998	26744.9	17.291
CAMO-09-10462(232348001MS	01-jul-09 10:17	EXP0630041a	4168.96	11.998	26364.5	17.291
CAMO-09-10462(232348001MS	01-jul-09 10:46	EXP0630042a	4124.34	11.998	26183.8	17.291
CAMO-09-10460	01-jul-09 11:16	EXP0630043a	4256.31	11.998	26452.3	17.291
CAMO-09-10461	01-jul-09 11:45	EXP0630044a	4247.86	11.998	26668.9	17.292
CAMO-09-10467	01-jul-09 12:15	EXP0630045a	3976.8	11.998	24823.5	17.291

	Analysis Date/Time	GEL Data File	IS1 (DNB) (Area) #	RT (min) #	IS2 (DNT) (Area) #	RT2 (min) #
			3941.197	12.13	23911.983	17.684
Upper Limit			5123.5561	12.63	31085.5779	18.184
Lower Limit			2758.8379	11.63	16738.3881	17.184
CAMO-09-10462	13-jul-09 20:50	EXP0713013a	4434.53	12.138	27999.6	17.677

IS1 (DNB) = 1,3-Dinitrobenzene-d4
IS2 (DNT) = 2,6-Dinitrotoluene-d3

Area Upper Limit = + 30% of average IS area from multipoint calibration
Area Lower Limit = - 30% of average IS area from multipoint calibratio

RT Upper Limit = +0.5 of average multipoint RT
RT Lower Limit = -0.5 of average multipoint RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits

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SAMPLE DATA

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10462

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348001

Sample Amount 2

Moisture: 6.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713013a

Date Analyzed: 13-JUL-09 20:50

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713013a
Date: 13-Jul-2009
Time: 20:50:17
ID: 232348001
Vial: 1:4,A

| LANCL | 880642 | Soil | 2 |

MAP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
6.315e+003

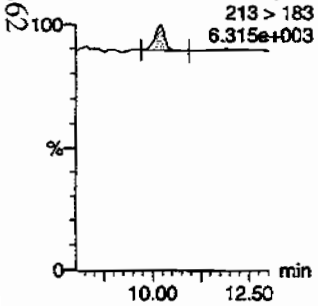

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.614e+003

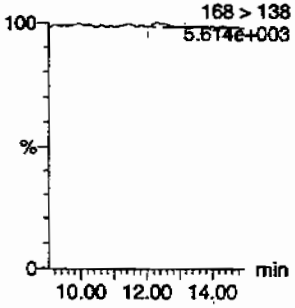

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.792e+004

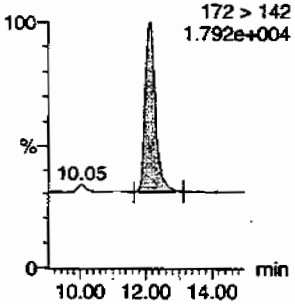

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
6.083e+003

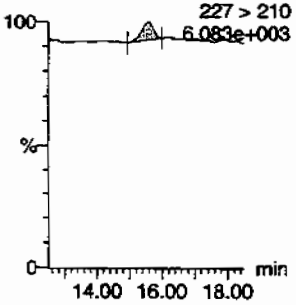

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
3.689e+004

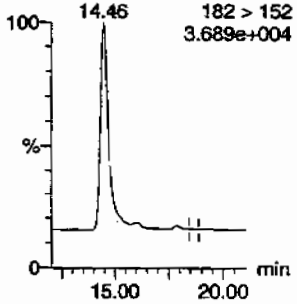

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
3.689e+004

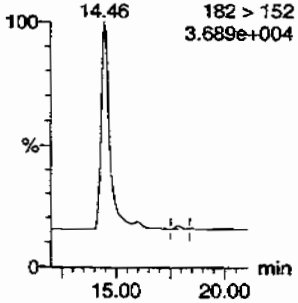

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.503e+004

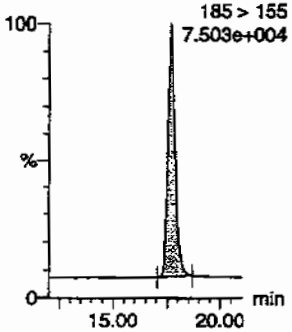

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.844e+003

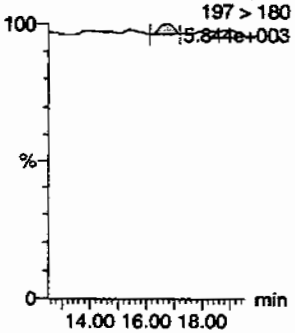

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.575e+003

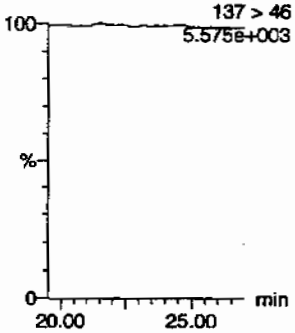

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
3.689e+004

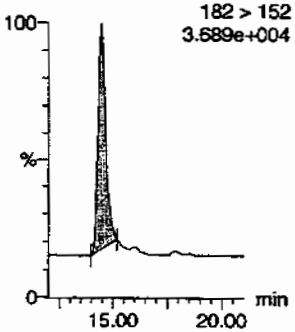

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.575e+003

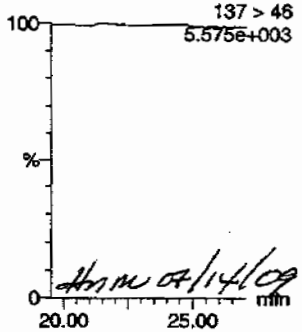

AMM 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.781e+003

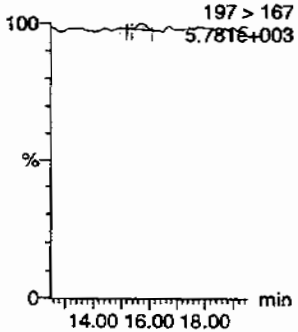

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

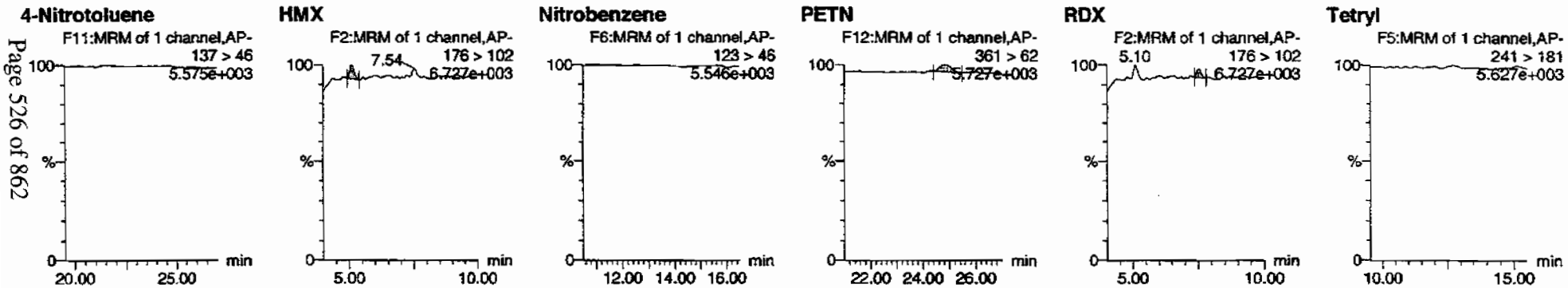

ID	Name	Trace	RT	Total Area	IS Area	Acc Resp	Response	Flags	Modified	Modifier	Conc	Error	S/N
232348001	HMX	176 > 102	5.10	91.296	4434.534	91.296	10.294	bb			3.3930		16.7
232348001	RDX	176 > 102	7.54	54.387	4434.534	54.387	6.132	bb			2.9280		10.1
232348001	135-Trinitrobenzene	213 > 183	10.20	202.309	4434.534	202.309	22.811	bb			4.1206		22.9
232348001	13-Dinitrobenzene-d4	172 > 142	12.14	4434.534		4434.534	4434.534	bb			562.5872	112.5	12.5	127.0
232348001	13-Dinitrobenzene	168 > 138			4434.534			MM-	14-Jul-09	10:21:32			
232348001	Tetryl	241 > 181			4434.534								
232348001	Nitrobenzene	123 > 46			4434.534								
232348001	4-Amino-26-dinitrotoluene	197 > 167	15.70	58.968	27999.561	58.968	1.053	MM	14-Jul-09	10:18:55	3.4900		3.6
232348001	2-Amino-46-dinitrotoluene	197 > 180	16.75	123.683	27999.561	123.683	2.209	bb			6.0082		11.3
232348001	246-Trinitrotoluene	227 > 210	15.60	187.180	27999.561	187.180	3.343	bb			2.9909		18.1
232348001	34-dinitrotoluene	182 > 152	14.46	12369.389	27999.561	12369.389	220.885	bb			253.5856	101.4	1.4	462.5
232348001	26-dinitrotoluene	182 > 152			27999.561			MM-	14-Jul-09	10:15:19			
232348001	24-dinitrotoluene	182 > 152			27999.561			MM-	14-Jul-09	10:11:51			
232348001	26-dinitrotoluene-d3	185 > 155	17.68	27999.561		27999.561	27999.561	bb			585.4707	117.1	17.1	1746.6
232348001	2-Nitrotoluene	137 > 46			27999.561								
232348001	4-Nitrotoluene	137 > 46			27999.561								
232348001	3-Nitrotoluene	137 > 46			27999.561								
232348001	PETN	361 > 62	24.84	106.641	27999.561	106.641	1.904	bb			2.9023		27.3

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10462

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348001

Sample Amount 2

Moisture: 6.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630026.wiff

Date Analyzed: 30-JUN-09 17:58

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sample Name: "232348001" Sample ID: "880642|2|LER" File: "EXS0630026.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:58:46 PM

Modified: No

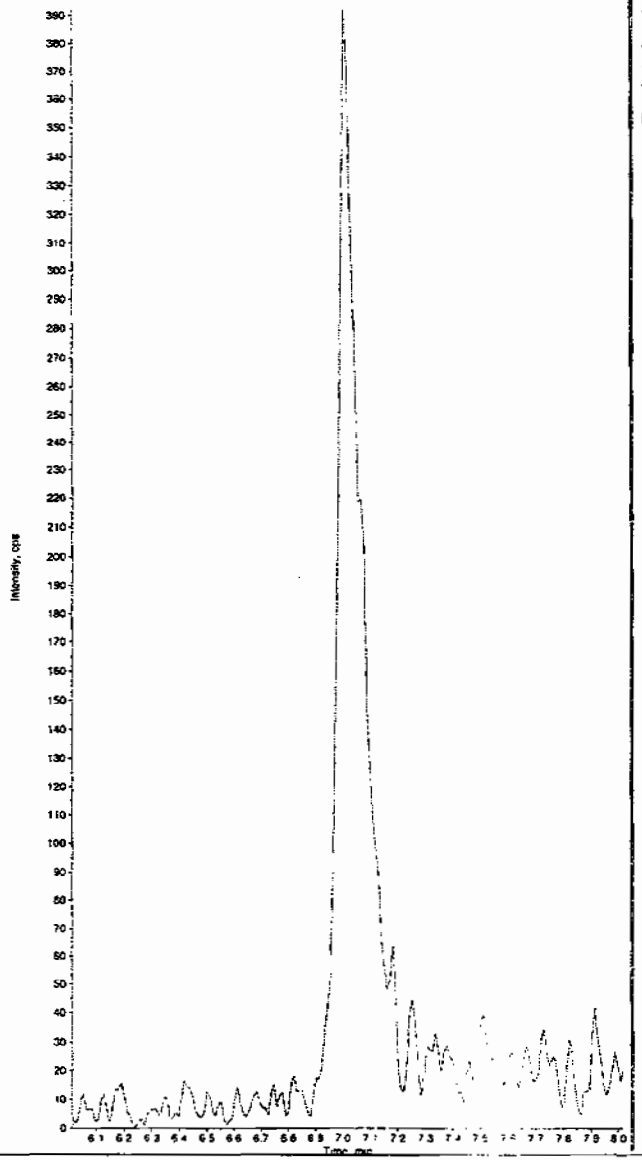

Sample Name: "232348001" Sample ID: "880642|2|LER" File: "EXS0630026.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:58:46 PM

Modified: No

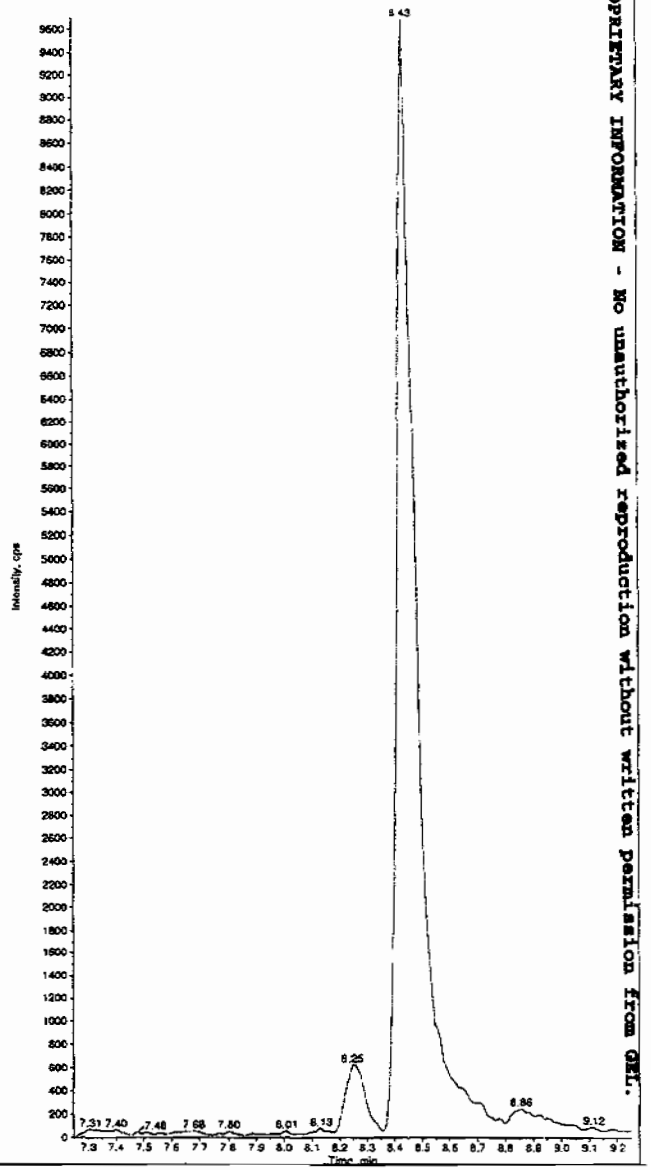

Hmc 07/02/09

Fan 7/1/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232348001" Sample ID: "880642|2|LER" File: "EXS0630026.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 205. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:58:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.43 min
Area: 4.34e+005 counts
Height: 79515.686 cps
Start Time: 8.35 min
End Time: 8.78 min

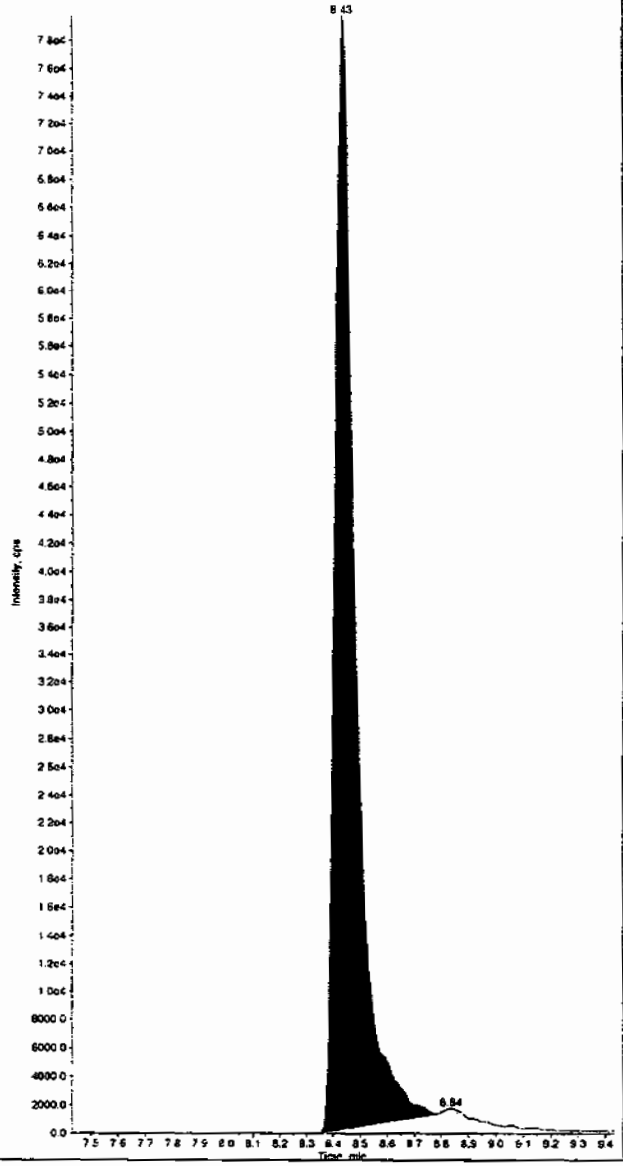

Sample Name: "232348001" Sample ID: "880642|2|LER" File: "EXS0630026.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:58:46 PM

Modified: No

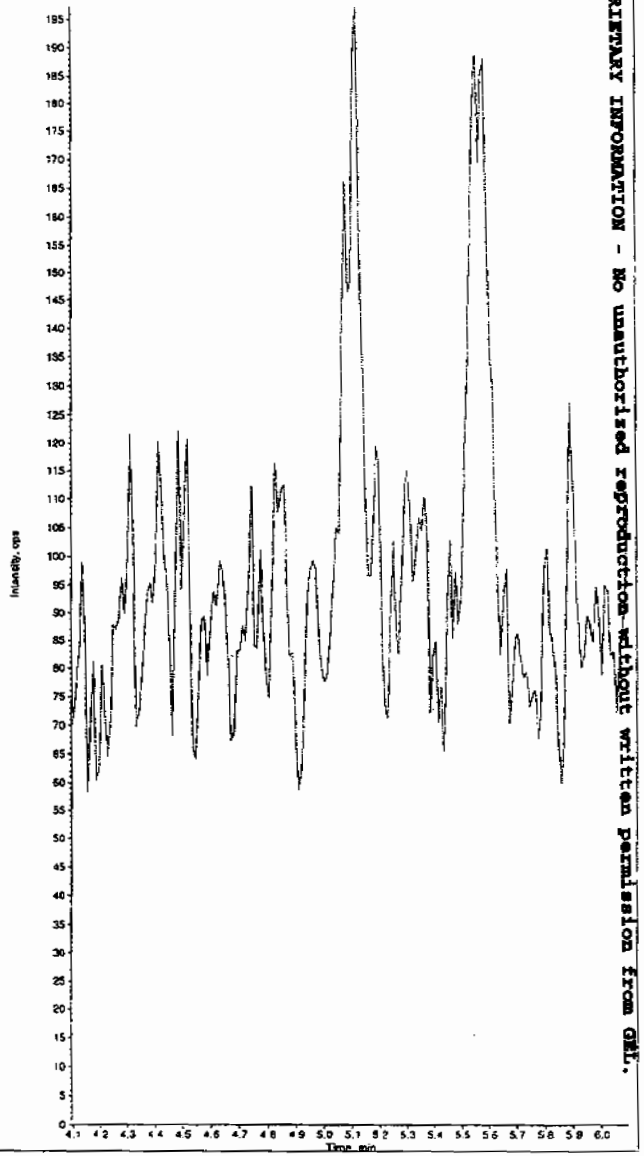

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232348001" Sample ID: "880642|2|LER" File: "EXS0630025.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:58:46 PM

Modified: No

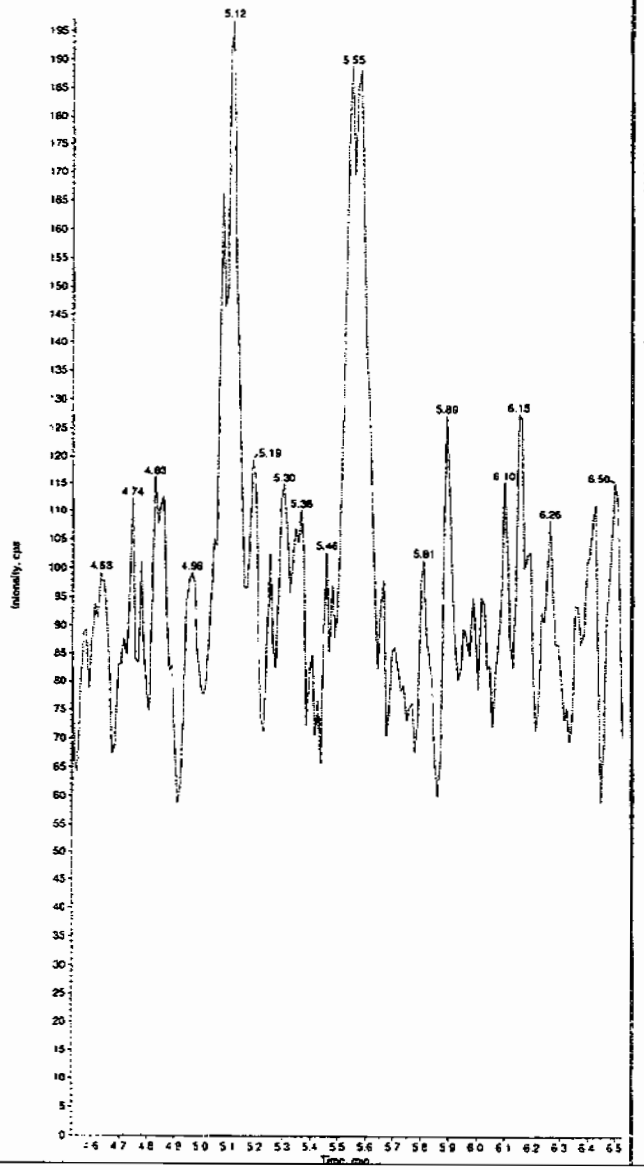

Sample Name: "232348001" Sample ID: "880642|2|LER" File: "EXS0630026.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 1.69 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:58:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.32e+004 counts
Height: 13897.262 cps
Start Time: 10.8 min
End Time: 11.1 min

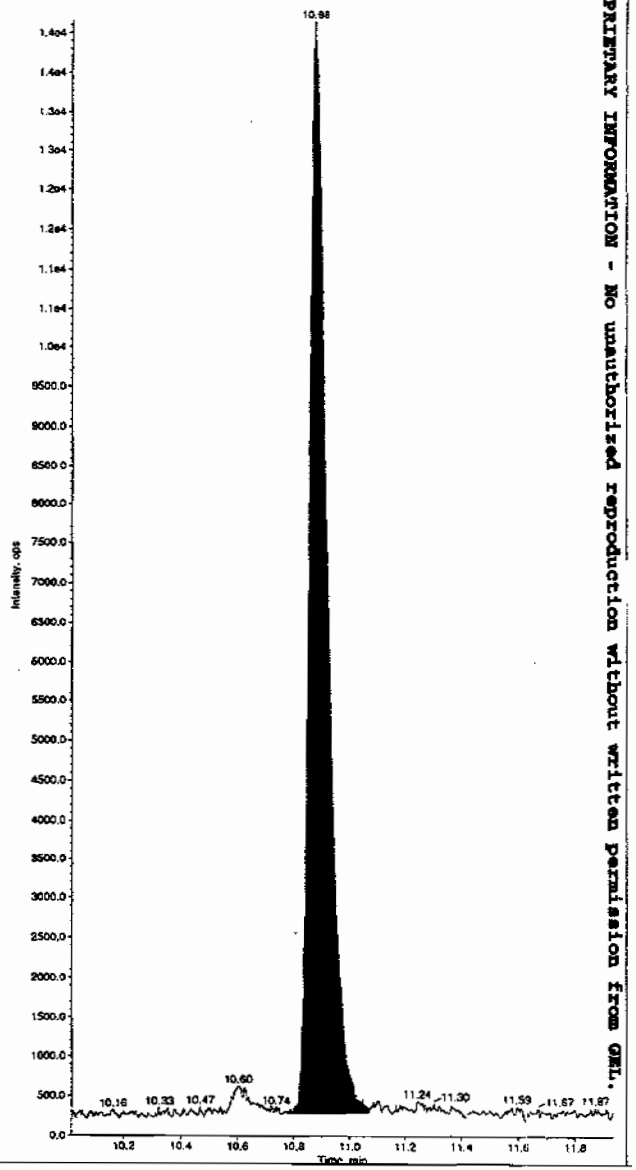

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10460

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348002

Sample Amount 2

Moisture: 8.3

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630043a

Date Analyzed: 01-JUL-09 11:16

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630043a
Date: 01-Jul-2009
Time: 11:16:27
ID: 232348002
Vial: 1:7,F

| LANW | 880642 | Solids | 21 |

MAP 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.718e+003

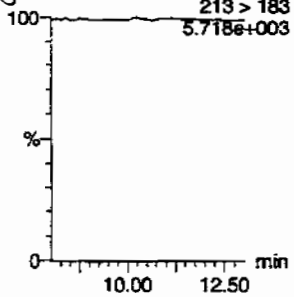

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.641e+003

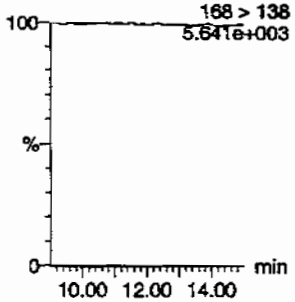

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.901e+004

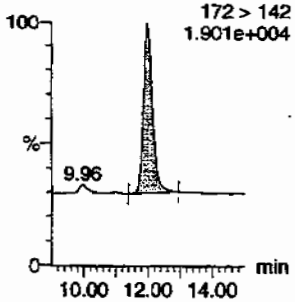

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.722e+003

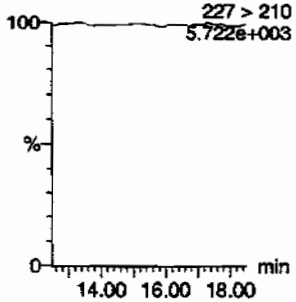

24-dinitrotoluene
F8:MRM of 2 channels,AP-
14.25
182 > 152
4.127e+004

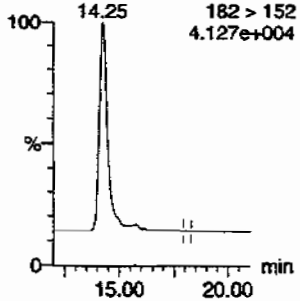

26-dinitrotoluene
F8:MRM of 2 channels,AP-
14.25
182 > 152
4.127e+004

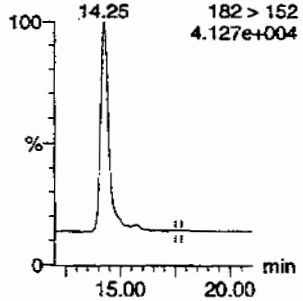

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.684e+004

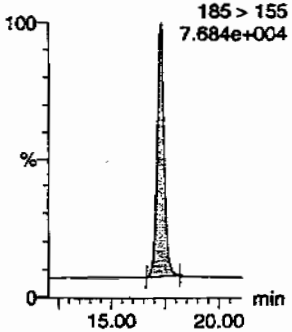

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.812e+003

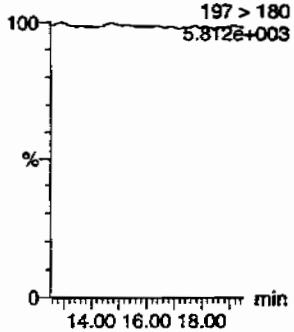

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.658e+003

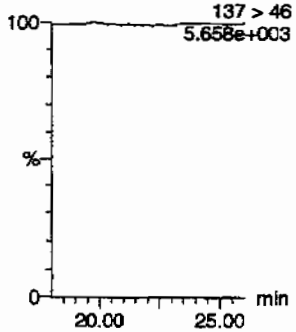

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
4.127e+004

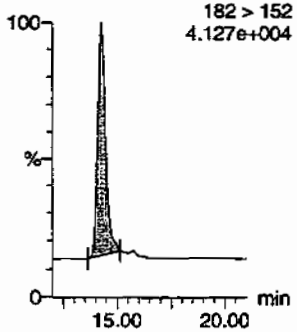

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.658e+003

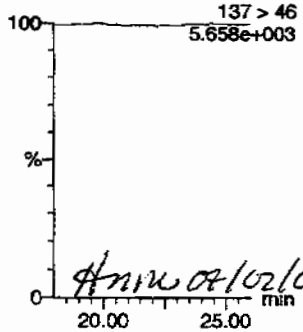

Hnw 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.794e+003

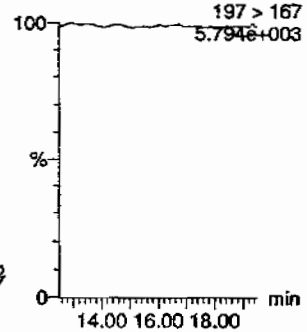

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

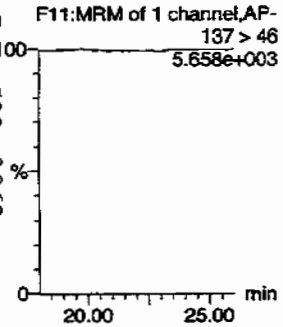

HMX

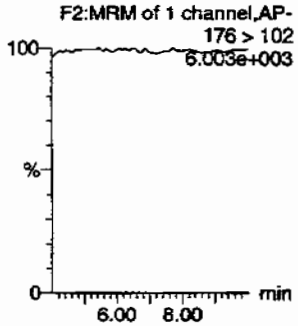

Nitrobenzene

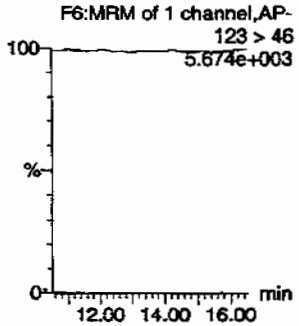

PETN

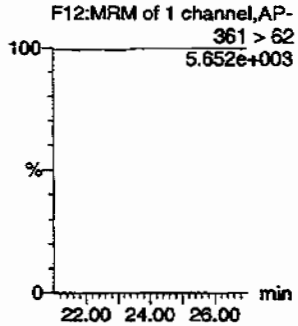

RDX

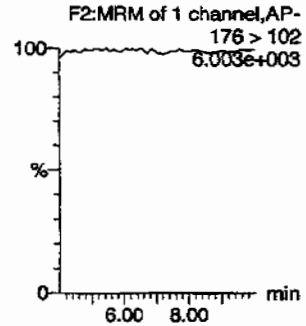

Tetryl

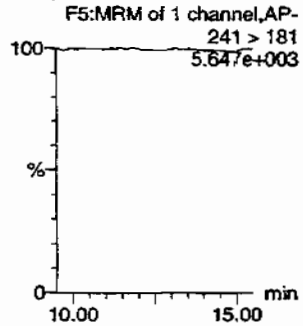

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modified	Modtime	Amount	Recov	Qualy	S/N
232348002	HMX	176 > 102			4256.308									
232348002	RDX	176 > 102			4256.308									
232348002	135-Trinitrobenzene	213 > 183			4256.308									
232348002	13-Dinitrobenzene-d4	172 > 142	12.00	4256.308		4256.308	4256.308	bb			555.4083	111.1	11.1	253.9
232348002	13-Dinitrobenzene	168 > 138			4256.308									
232348002	Tetryl	241 > 181			4256.308									
232348002	Nitrobenzene	123 > 46			4256.308									
232348002	4-Amino-26-dinitrotoluene	197 > 167			26452.285									
232348002	2-Amino-46-dinitrotoluene	197 > 180			26452.285									
232348002	246-Trinitrotoluene	227 > 210			26452.285									
232348002	34-dinitrotoluene	182 > 152	14.25	14641.736	26452.285	14641.736	276.757	bb			284.2069	113.7	13.7	673.4
232348002	26-dinitrotoluene	182 > 152			26452.285			MM-	02-Jul-09	07:57:23				
232348002	24-dinitrotoluene	182 > 152			26452.285			MM-	02-Jul-09	08:00:15				
232348002	26-dinitrotoluene-d3	185 > 155	17.29	26452.285		26452.285	26452.285	bb			551.8381	110.4	10.4	1756.0
232348002	2-Nitrotoluene	137 > 46			26452.285									
232348002	4-Nitrotoluene	137 > 46			26452.285									
232348002	3-Nitrotoluene	137 > 46			26452.285									
232348002	PETN	361 > 62			26452.285									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10460

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348002

Sample Amount 2

Moisture: 8.3

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630029.wiff

Date Analyzed: 30-JUN-09 18:47

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Ler 7/1/09

Sample Name: "232348002" Sample ID: "880642|2|LER" File: "EXS0630029.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:47:22 PM

Modified: No

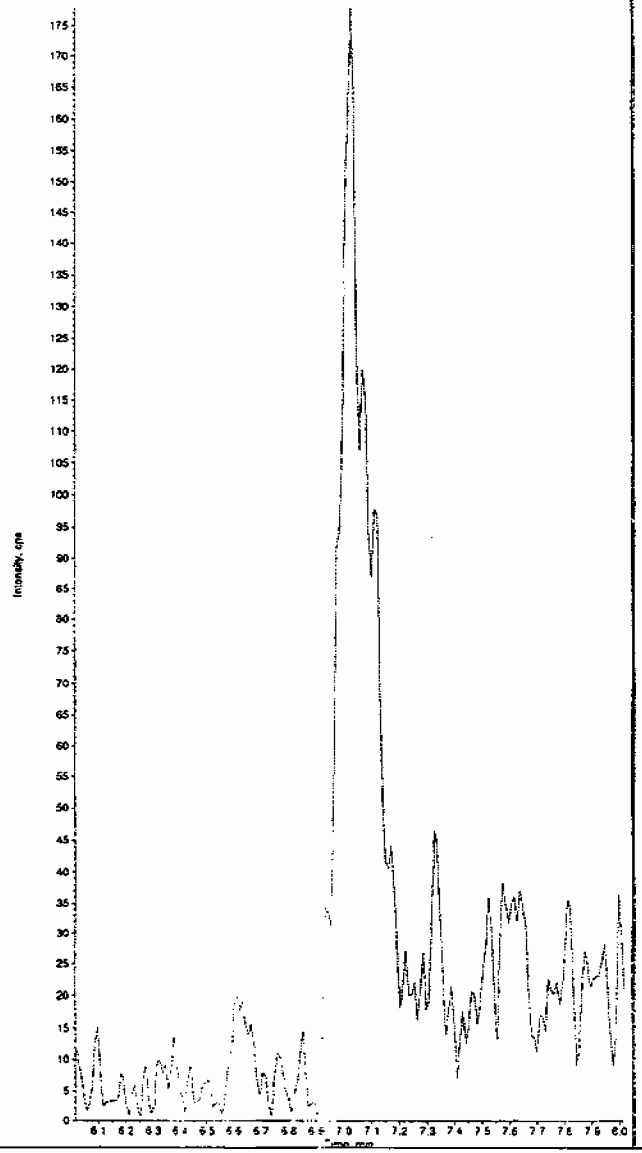

Sample Name: "232348002" Sample ID: "880642|2|LER" File: "EXS0630029.wiff"
Peak Name: "3S-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:47:22 PM

Modified: No

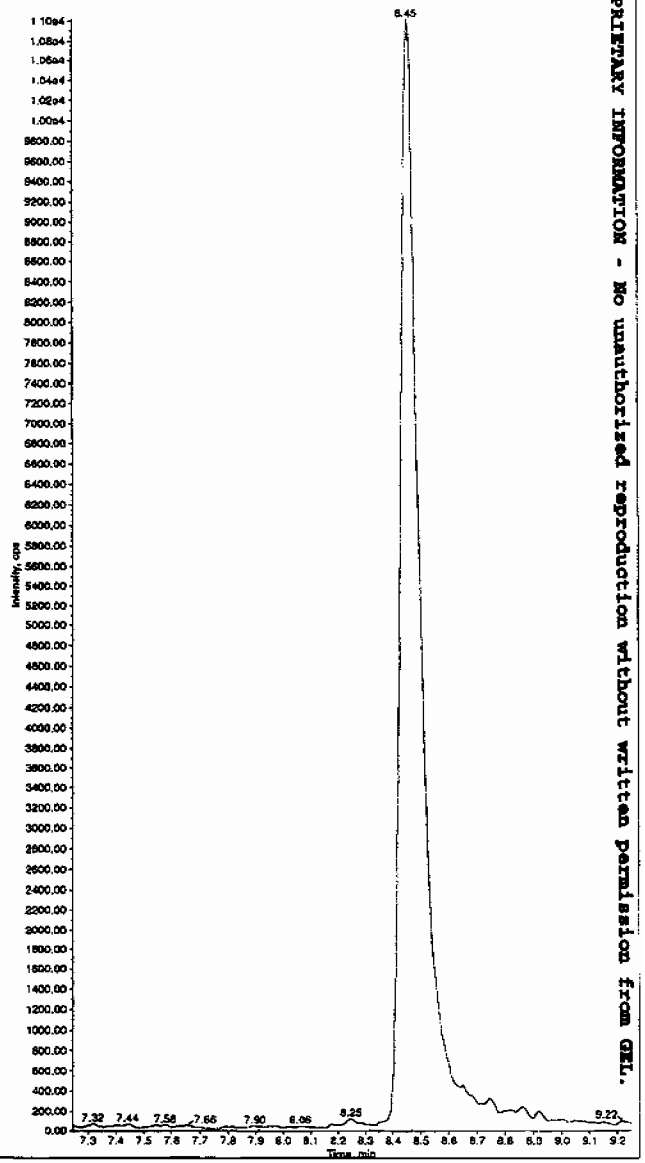

Hmm 07/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232348002" Sample ID: "880642|2|LER" File: "EXS0630029.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 256. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:47:22 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.44 min
Area: 5.42e+005 counts
Height: 89925.743 cps
Start Time: 8.29 min
End Time: 9.47 min

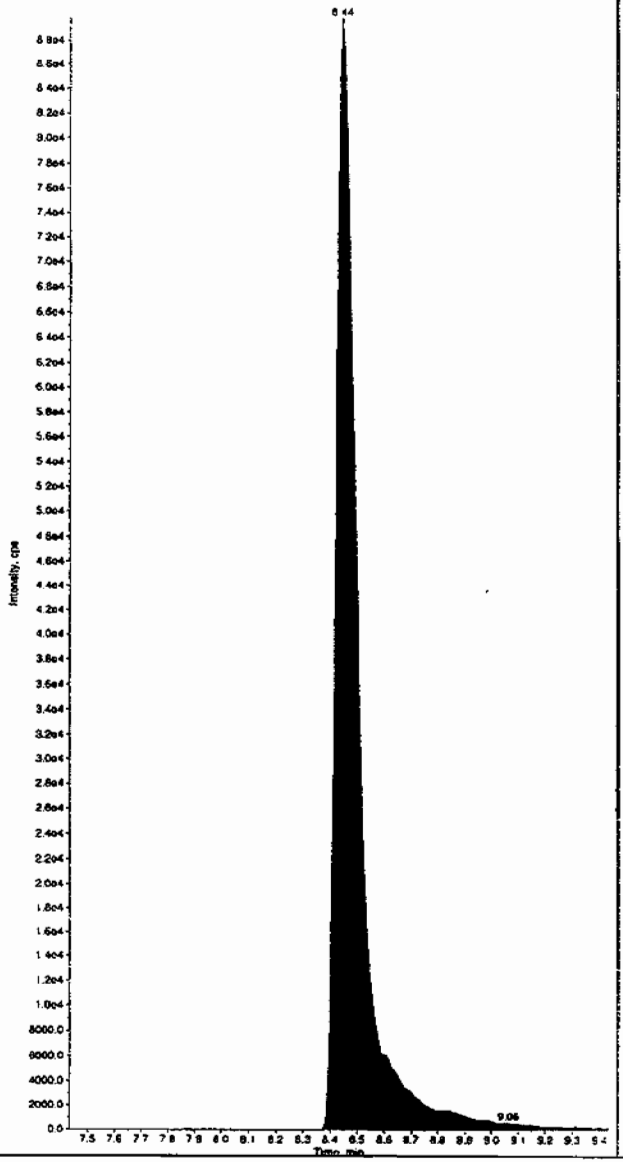

Sample Name: "232348002" Sample ID: "880642|2|LER" File: "EXS0630029.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:47:22 PM

Modified: No

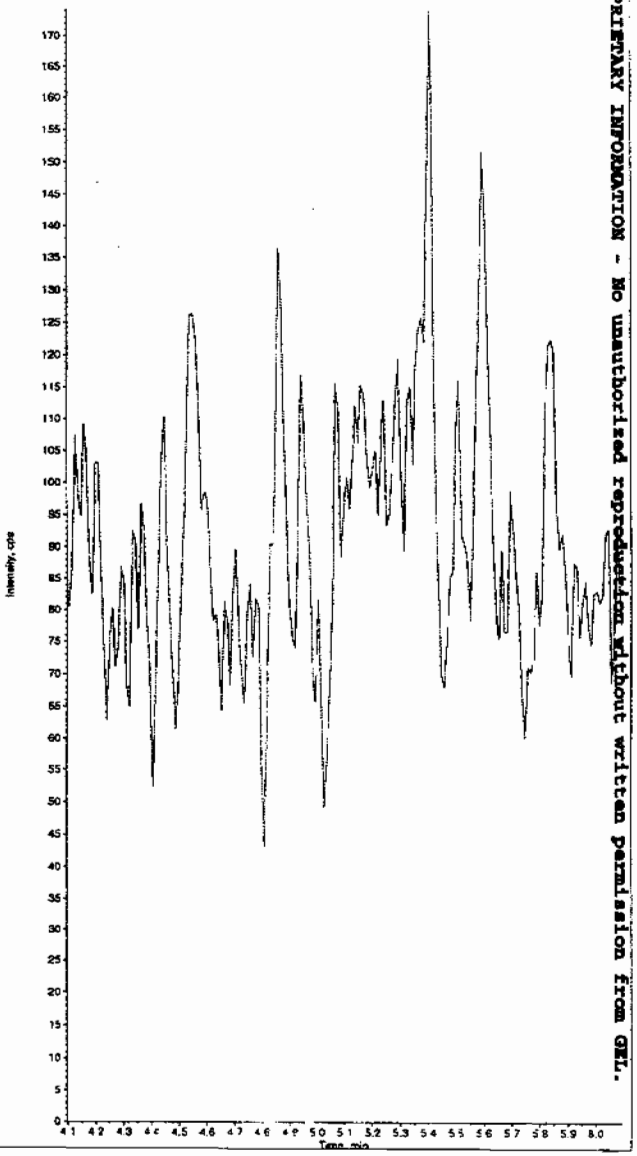

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232348002" Sample ID: "880642|2|LER" File: "EXS0630029.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:47:22 PM

Modified: No

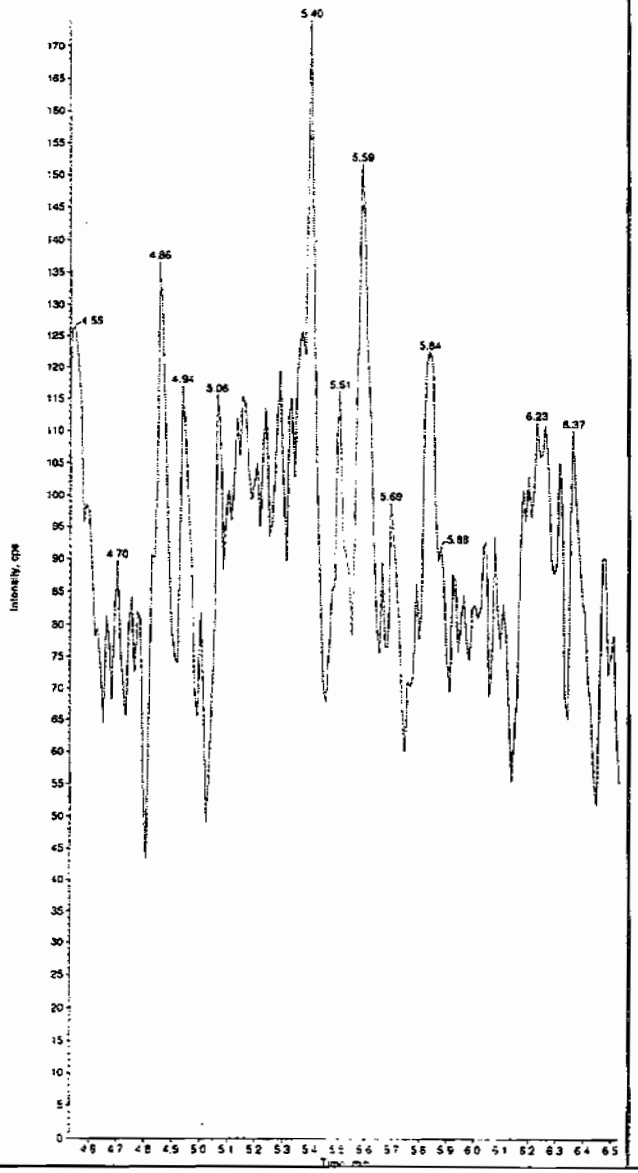

Sample Name: "232348002" Sample ID: "880642|2|LER" File: "EXS0630029.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.802 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:47:22 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 5.16e+004 counts
Height: 11095.345 cps
Start Time: 10.8 min
End Time: 11.1 min

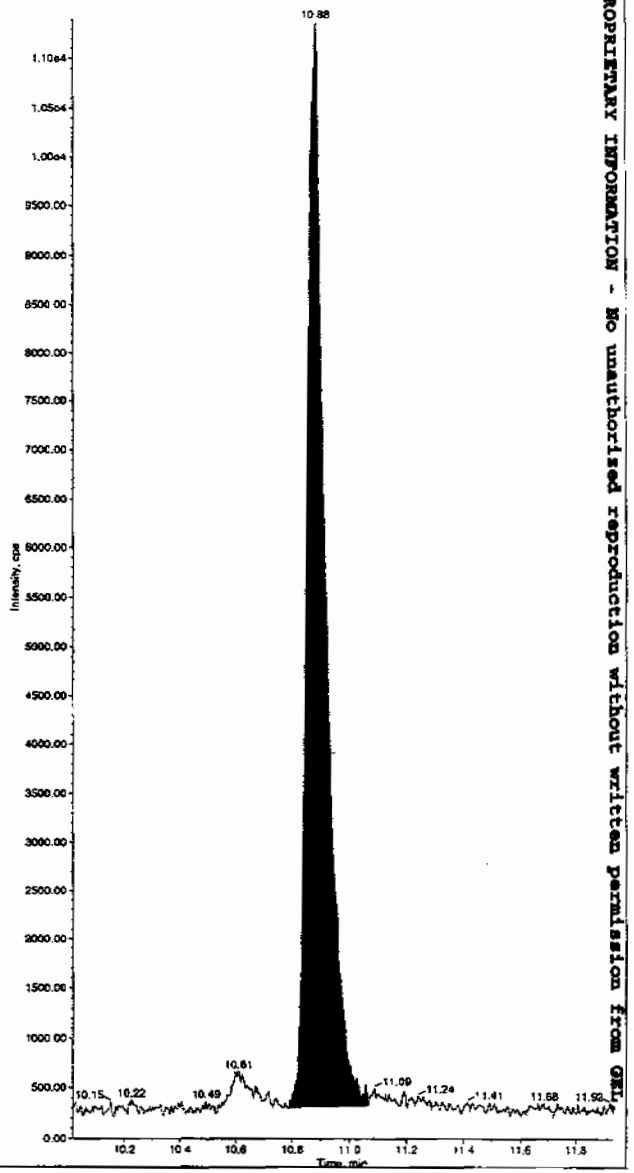

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10461

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348003

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630044a

Date Analyzed: 01-JUL-09 11:45

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630044a
Date: 01-Jul-2009
Time: 11:45:56
ID: 232348003 | LANL | 880642 | Solid | 2 |
Vial: 1:8,A

MM 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.679e+003

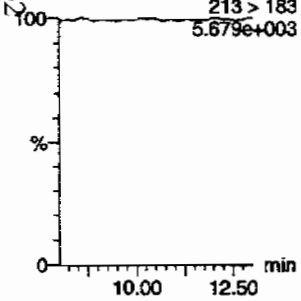

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.641e+003

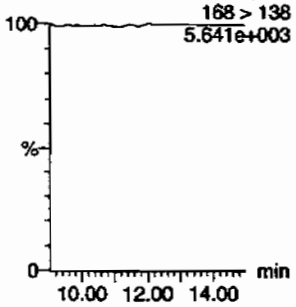

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.868e+004

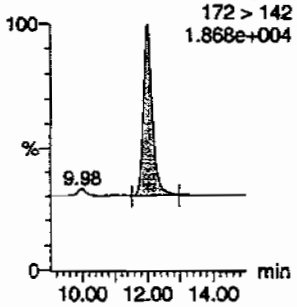

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.694e+003

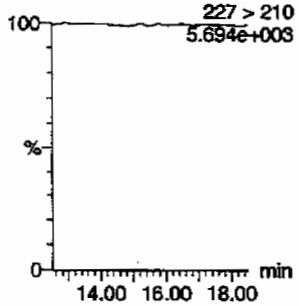

24-dinitrotoluene
F8:MRM of 2 channels,AP-
14.25
182 > 152
4.135e+004

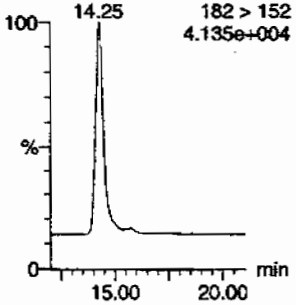

26-dinitrotoluene
F8:MRM of 2 channels,AP-
14.25
182 > 152
4.135e+004

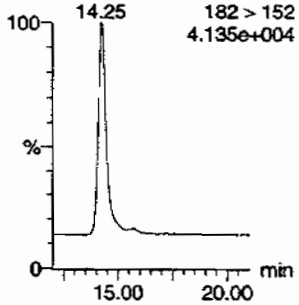

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.645e+004

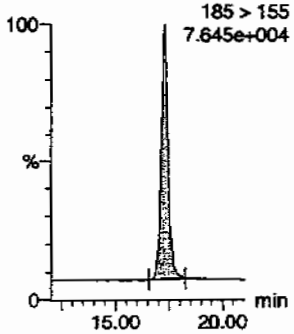

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.791e+003

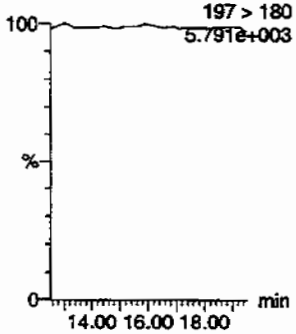

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.644e+003

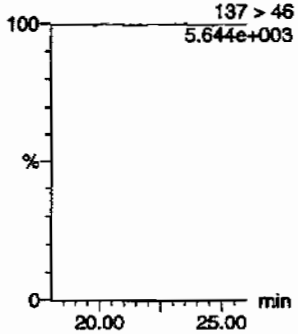

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
4.135e+004

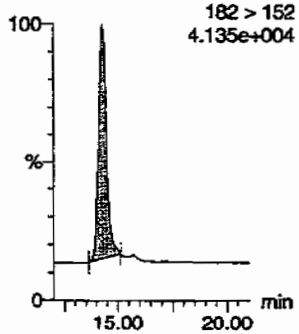

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.644e+003

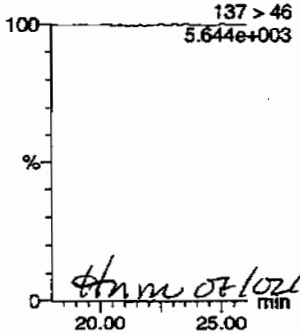

tmm 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.767e+003

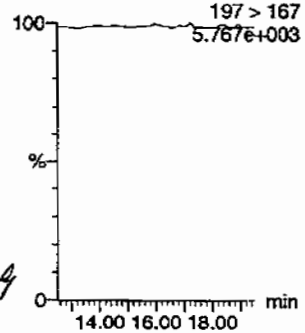

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

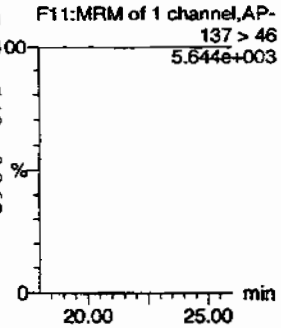

HMX

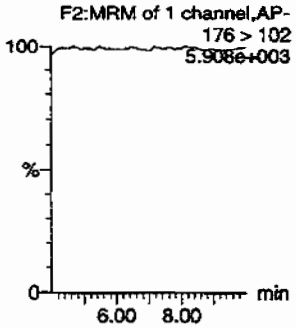

Nitrobenzene

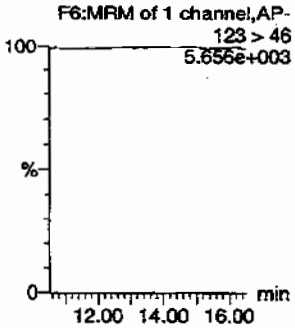

PETN

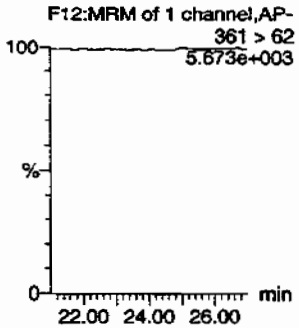

RDX

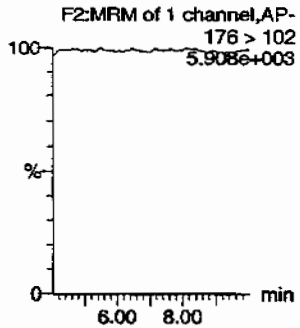

Tetryl

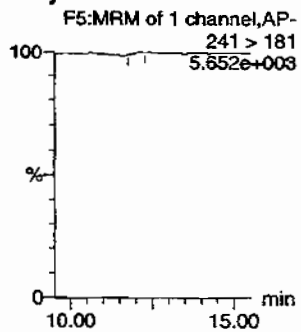

ID	Name	Trace	RT	Area	IS Area	% Abs Resp	% Response	Flags	MOD Date	MOD Time	Amount	%Rec	%Dev	S/N
232348003	HMX	176 > 102			4247.862									
232348003	RDX	176 > 102			4247.862									
232348003	135-Trinitrobenzene	213 > 183			4247.862									
232348003	13-Dinitrobenzene-d4	172 > 142	12.00	4247.862		4247.862	4247.862	bb			554.3062	110.9	10.9	343.9
232348003	13-Dinitrobenzene	168 > 138			4247.862									
232348003	Tetryl	241 > 181			4247.862			MM-	02-Jul-09	07:53:03				
232348003	Nitrobenzene	123 > 46			4247.862									
232348003	4-Amino-26-dinitrotoluene	197 > 167			26668.906									
232348003	2-Amino-46-dinitrotoluene	197 > 180			26668.906									
232348003	246-Trinitrotoluene	227 > 210			26668.906									
232348003	34-dinitrotoluene	182 > 152	14.25	14586.222	26668.906	14586.222	273.469	bb			280.8296	112.3	12.3	638.0
232348003	26-dinitrotoluene	182 > 152			26668.906									
232348003	24-dinitrotoluene	182 > 152			26668.906									
232348003	26-dinitrotoluene-d3	185 > 155	17.29	26668.906		26668.906	26668.906	bb			556.3571	111.3	11.3	2211.8
232348003	2-Nitrotoluene	137 > 46			26668.906									
232348003	4-Nitrotoluene	137 > 46			26668.906									
232348003	3-Nitrotoluene	137 > 46			26668.906									
232348003	PETN	361 > 62			26668.906									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10461

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348003

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0701014.wiff

Date Analyzed: 01-JUL-09 14:10

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Ler 7/16/09

Sample Name: "232348003" Sample ID: "880642|2|LER" File: "EXS0701014.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:10:07 PM

Modified: No

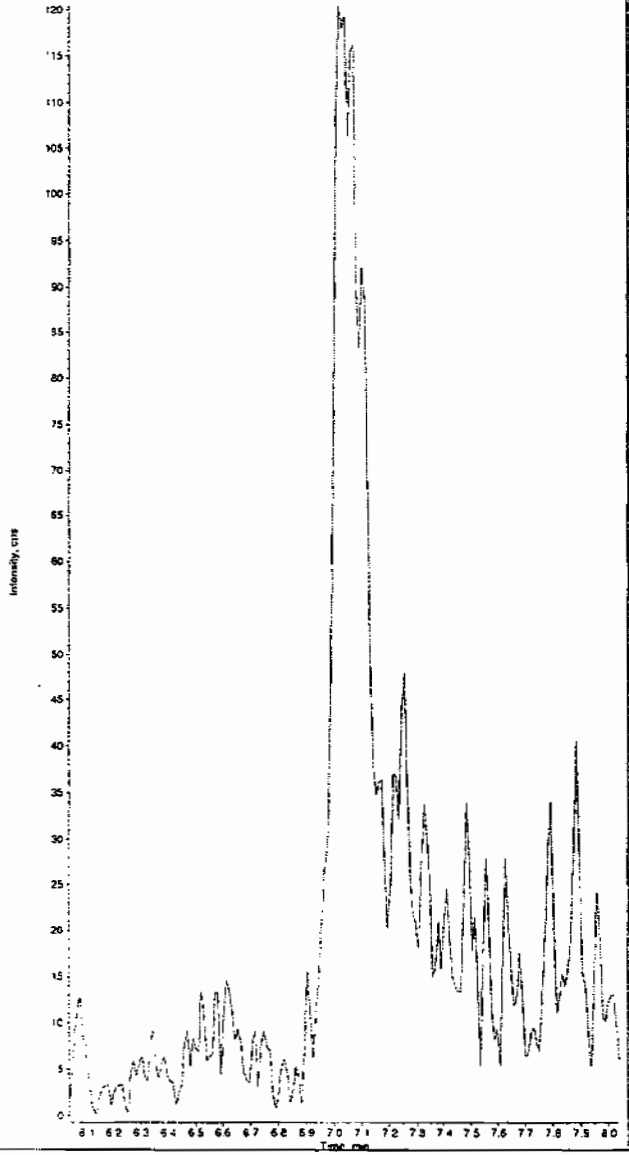

Sample Name: "232348003" Sample ID: "880642|2|LER" File: "EXS0701014.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:10:07 PM

Modified: No

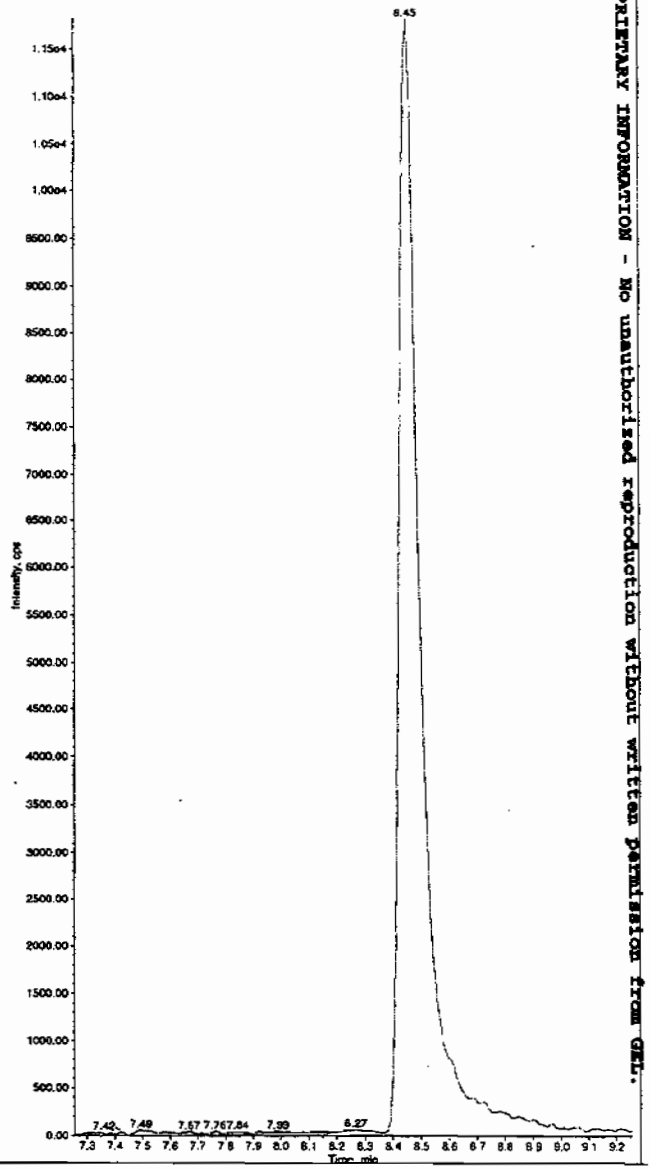

Hmc 07/14/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232348003" Sample ID: "880642|2|LER" File: "EXS0701014.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 264. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:10:07 PM

Modified: No
Peak Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.44 min
Area: 5.80e+005 counts
Height: 96661.072 cps
Start Time: 8.29 min
End Time: 9.39 min

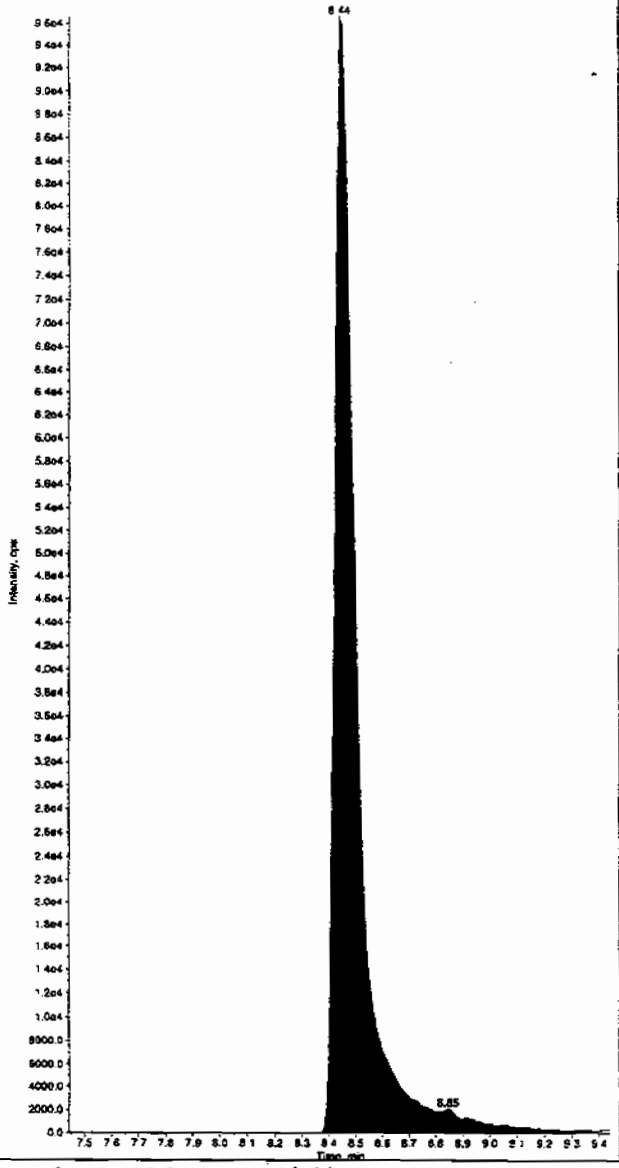

Sample Name: "232348003" Sample ID: "880642|2|LER" File: "EXS0701014.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:10:07 PM

Modified: No

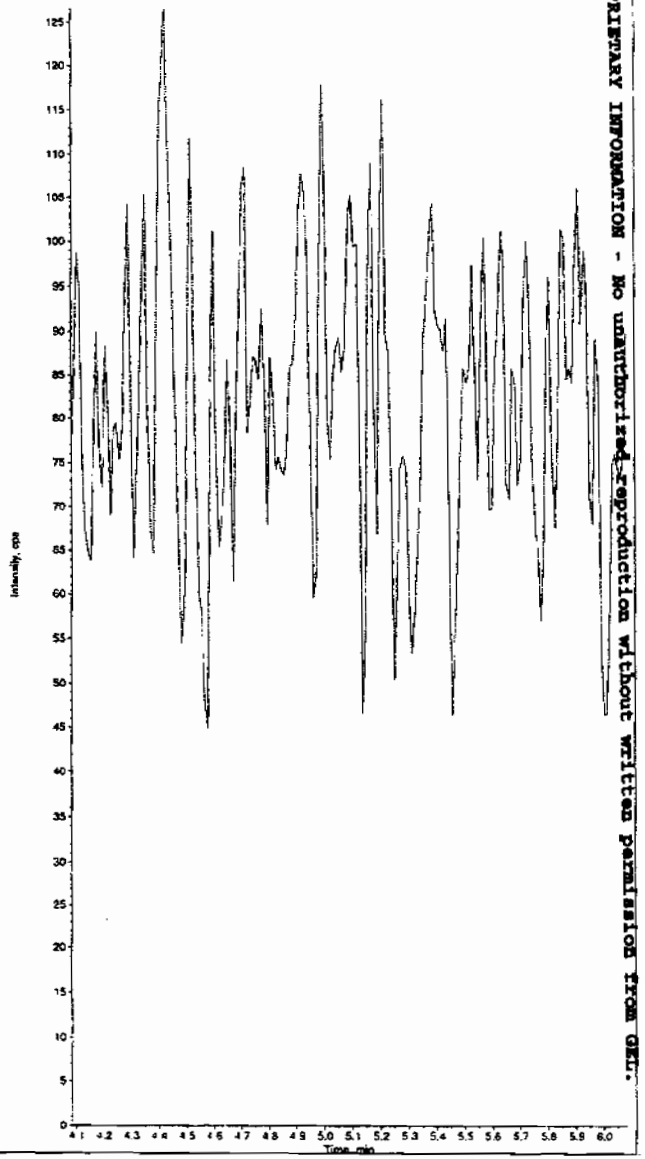

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232348003" Sample ID: "880642|2|LER" File: "EXS0701014.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:10:07 PM

Modified: No

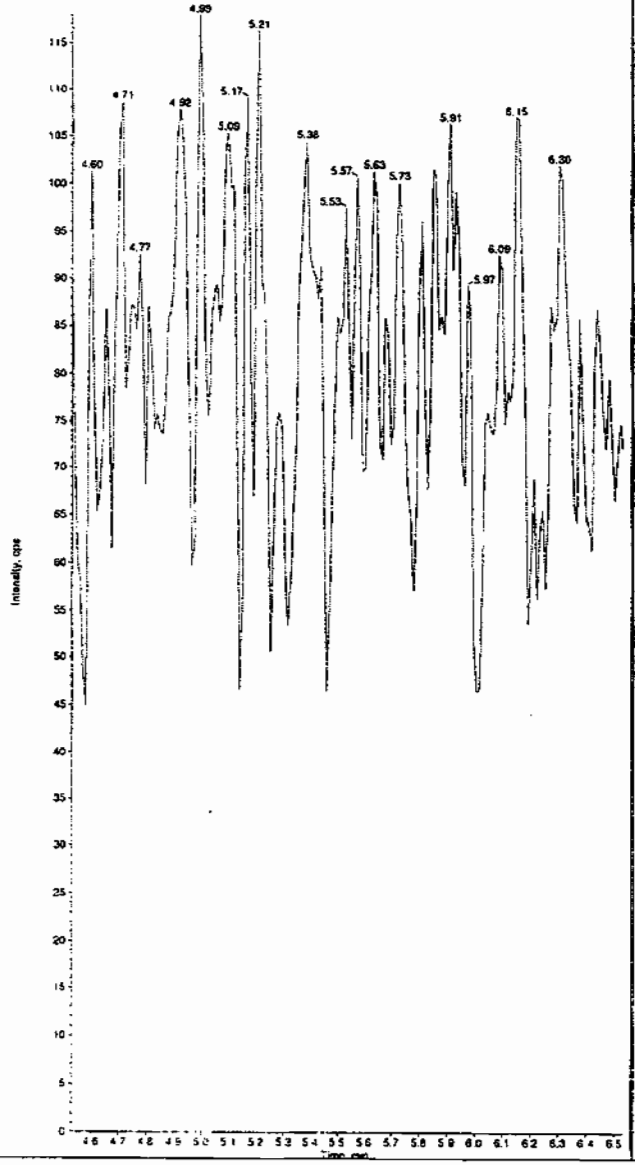

Sample Name: "232348003" Sample ID: "880642|2|LER" File: "EXS0701014.wiff"
Peak Name: "Iris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 2:10:07 PM

Modified: No

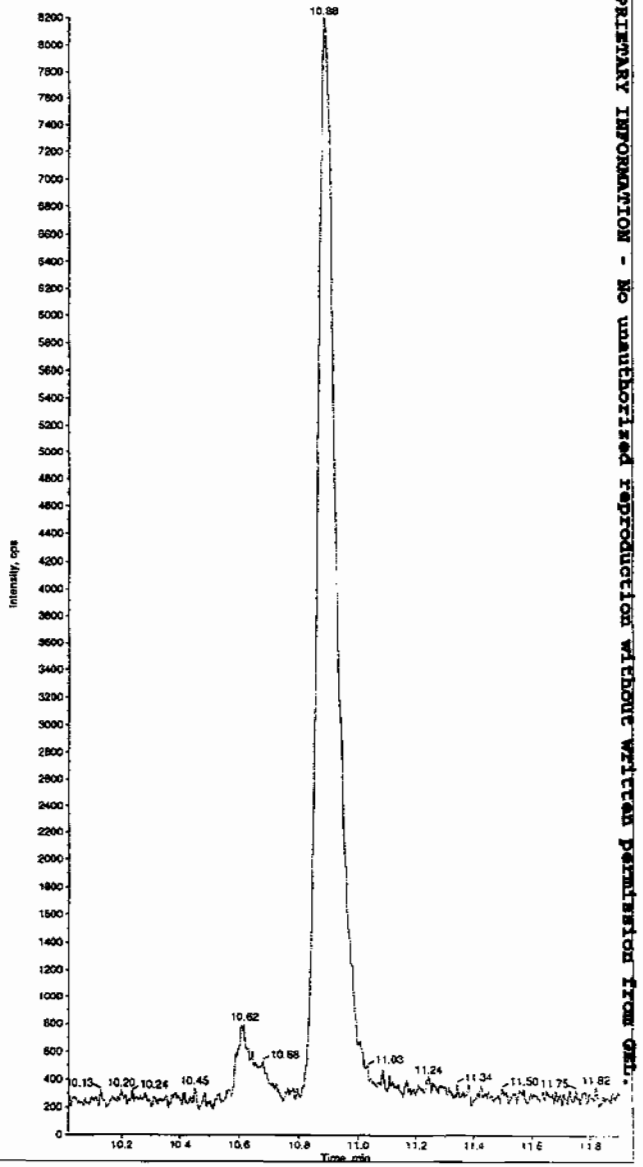

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10467

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348004

Sample Amount 2

Moisture: 4.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630045a

Date Analyzed: 01-JUL-09 12:15

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630045a
Date: 01-Jul-2009
Time: 12:15:26
ID: 232348004
Vial: 1:8,B

LANC / 830642 / Soil / 21

7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.515e+003

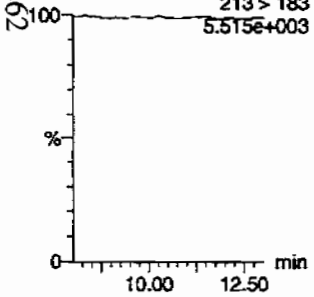

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.456e+003

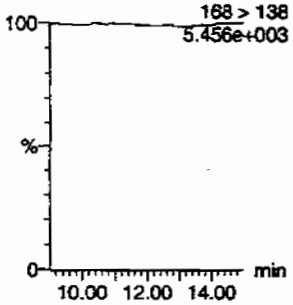

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.739e+004

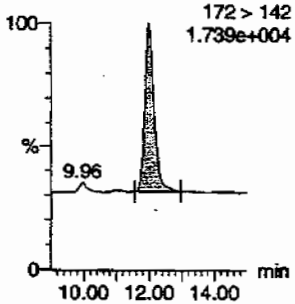

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.482e+003

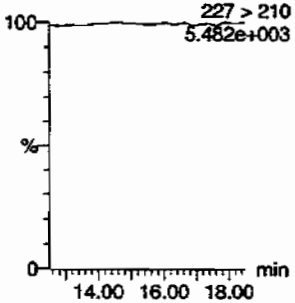

24-dinitrotoluene
F8:MRM of 2 channels,AP-
14.25
182 > 152
3.806e+004

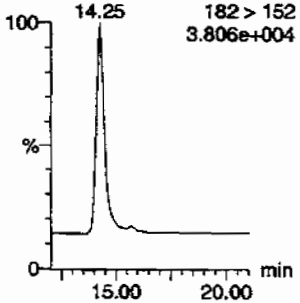

26-dinitrotoluene
F8:MRM of 2 channels,AP-
14.25
182 > 152
3.806e+004

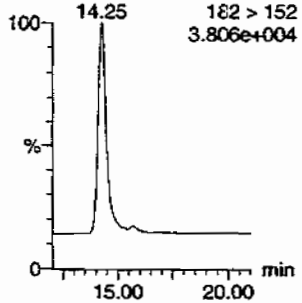

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.197e+004

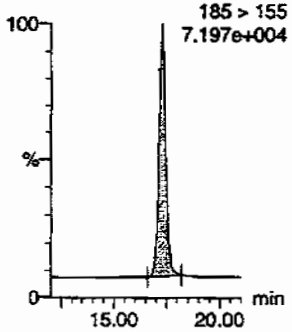

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.533e+003

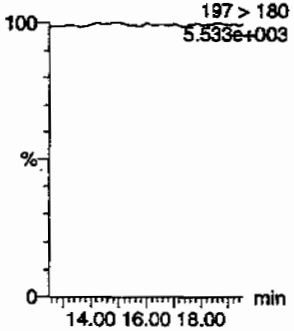

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.476e+003

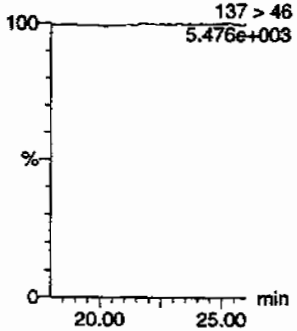

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
3.806e+004

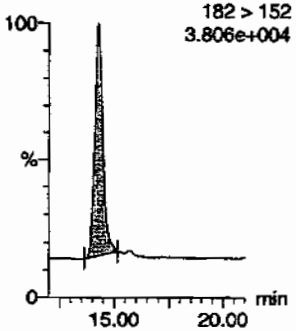

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.476e+003

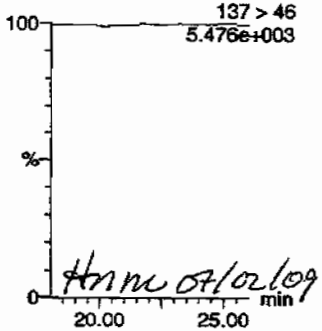

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.548e+003

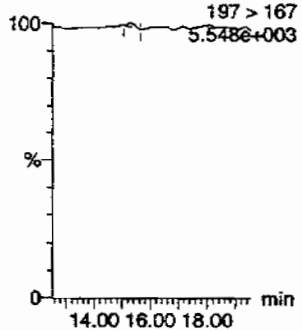

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

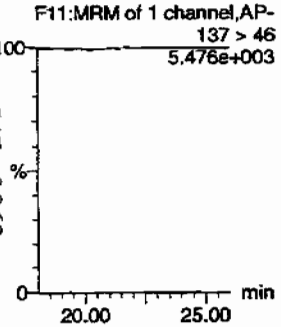

HMX

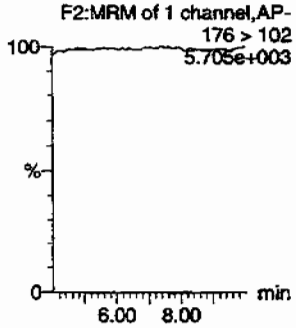

Nitrobenzene

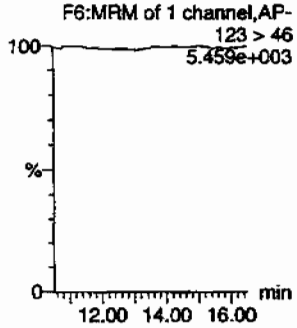

PETN

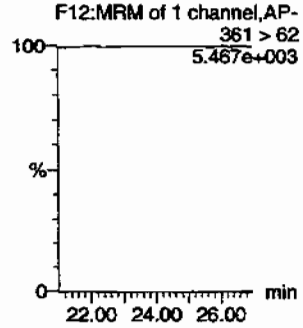

RDX

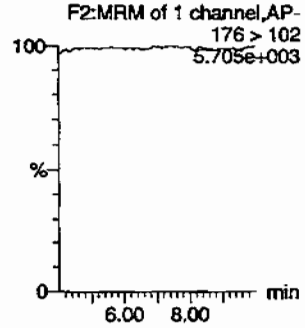

Tetryl

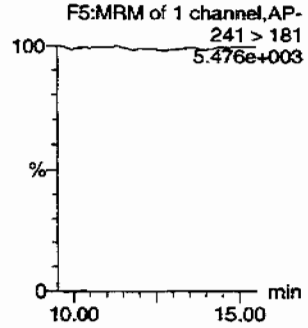

ID	Name	Trace Pass	RT	Area	IS Area	Abs Resp	Rel Response	Flag	Modified	Mod Time	Amount	%Rec	%Diff	S/N
232348004	HMX	176 > 102			3976.799									
232348004	RDX	176 > 102			3976.799									
232348004	135-Trinitrobenzene	213 > 183			3976.799									
232348004	13-Dinitrobenzene-d4	172 > 142	12.00	3976.799		3976.799	3976.799	bb			518.9350	103.8	3.8	285.8
232348004	13-Dinitrobenzene	168 > 138			3976.799									
232348004	Tetryl	241 > 181			3976.799									
232348004	Nitrobenzene	123 > 46			3976.799									
232348004	4-Amino-26-dinitrotoluene	197 > 167			24823.494			MM-	02-Jul-09	07:54:23				
232348004	2-Amino-46-dinitrotoluene	197 > 180			24823.494									
232348004	246-Trinitrotoluene	227 > 210			24823.494									
232348004	34-dinitrotoluene	182 > 152	14.25	13485.163	24823.494	13485.163	271.621	bb			278.9321	111.6	11.6	778.1
232348004	26-dinitrotoluene	182 > 152			24823.494									
232348004	24-dinitrotoluene	182 > 152			24823.494									
232348004	26-dinitrotoluene-d3	185 > 155	17.29	24823.494		24823.494	24823.494	bb			517.8588	103.6	3.6	722.2
232348004	2-Nitrotoluene	137 > 46			24823.494									
232348004	4-Nitrotoluene	137 > 46			24823.494									
232348004	3-Nitrotoluene	137 > 46			24823.494									
232348004	PETN	361 > 62			24823.494									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10467

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 232348004

Sample Amount 2

Moisture: 4.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630031.wiff

Date Analyzed: 30-JUN-09 19:19

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Lar 7/1/09

Sample Name: "232348004" Sample ID: "880642|2|LER" File: "EXS0630031.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:19:48 PM

Modified: No

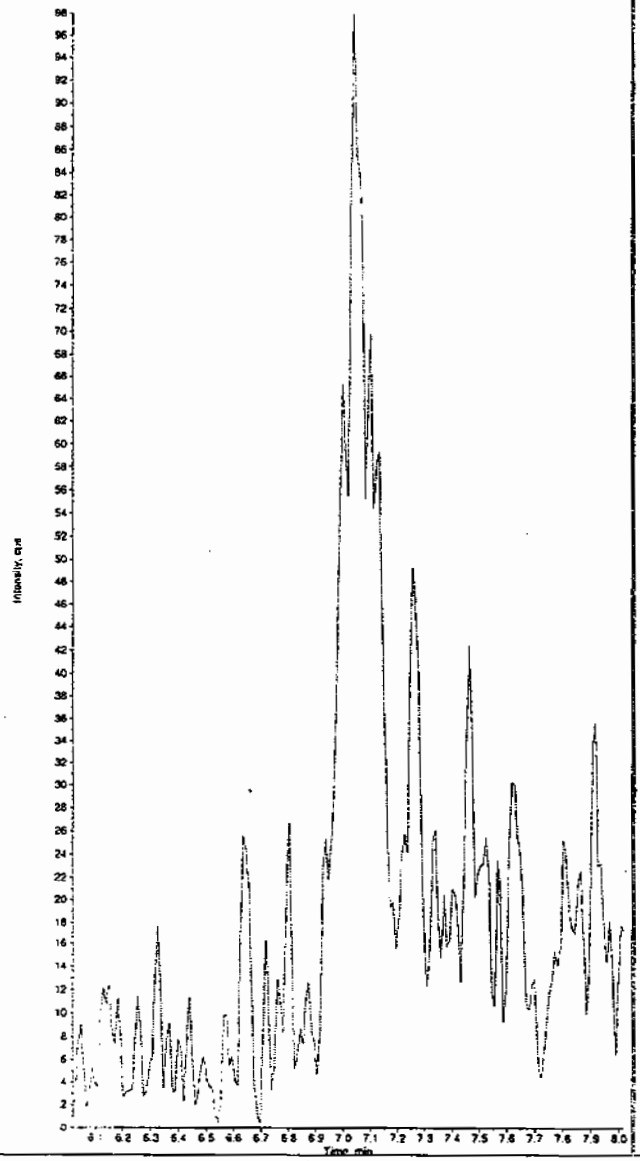

Sample Name: "232348004" Sample ID: "880642|2|LER" File: "EXS0630031.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:19:48 PM

Modified: No

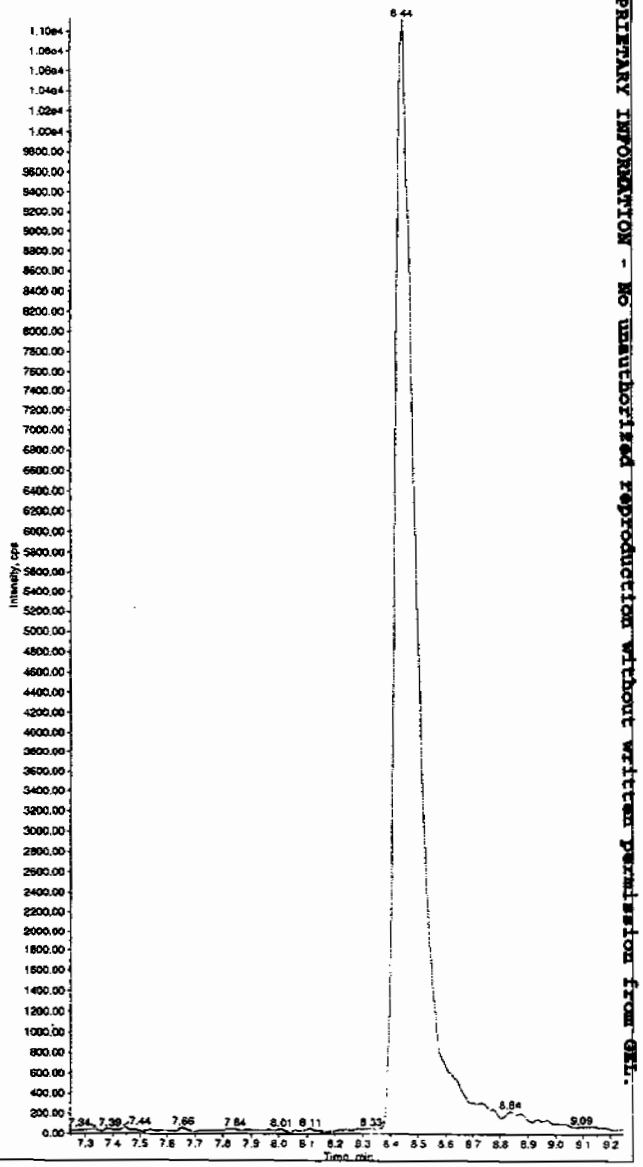

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232348004" Sample ID: "880642|2|LER" File: "EXS0630031.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 266. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:19:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.43 min
Area: 5.62e+005 counts
Height: 93842.293 cps
Start Time: 8.29 min
End Time: 9.33 min

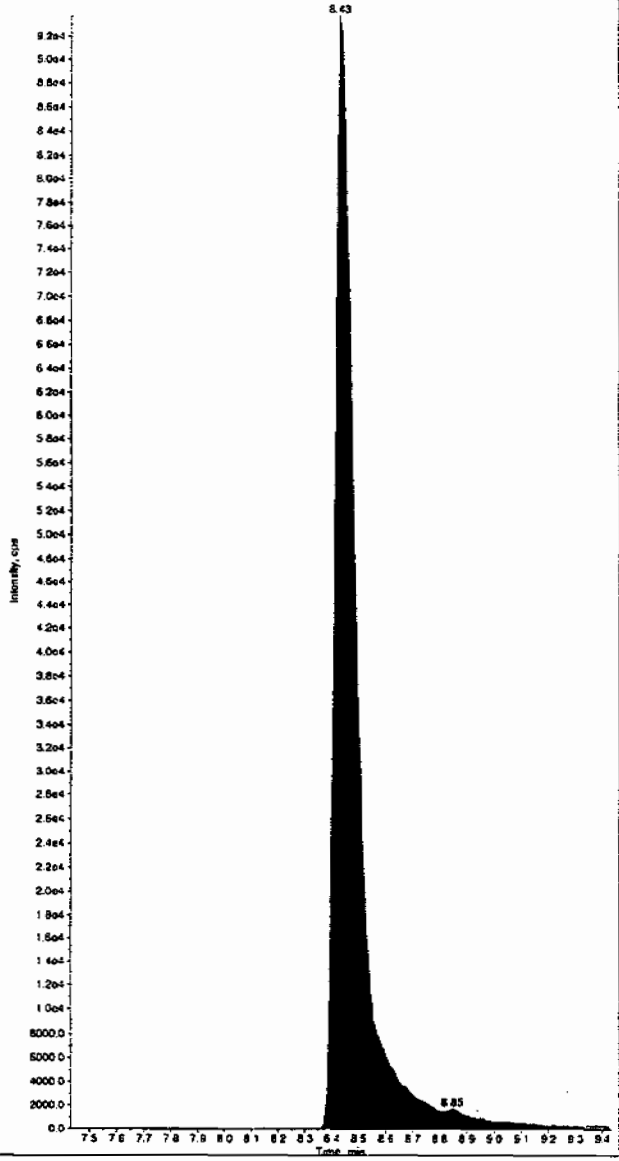

Sample Name: "232348004" Sample ID: "880642|2|LER" File: "EXS0630031.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:19:48 PM

Modified: No

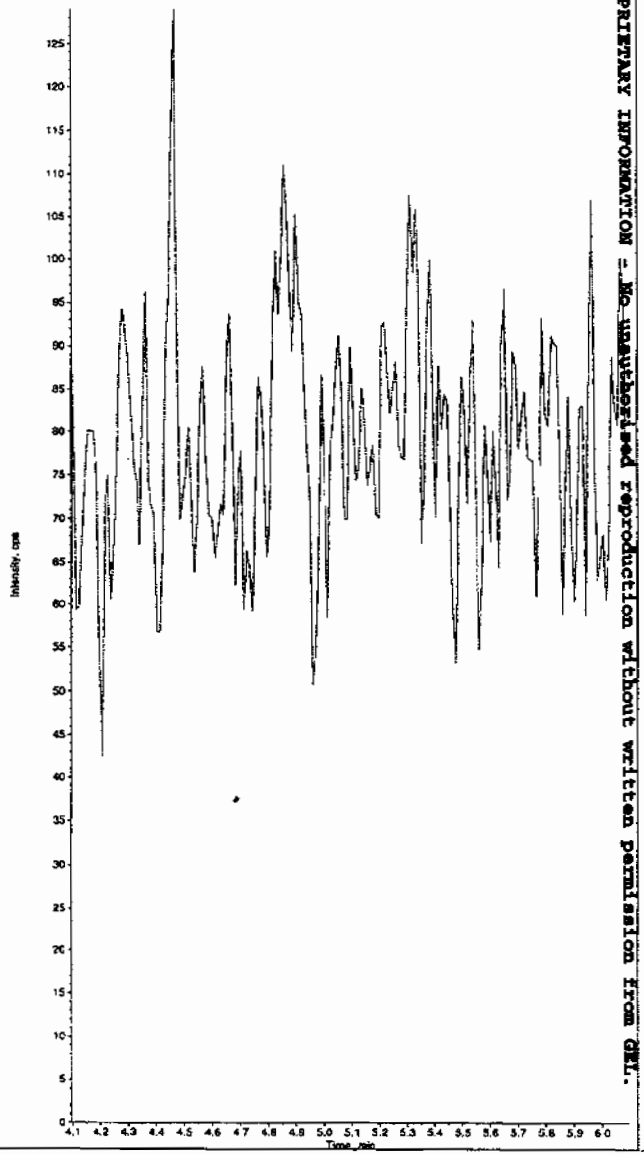

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232348004" Sample ID: "880642|2|LER" File: "EXS0630031.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:19:48 PM

Modified: No

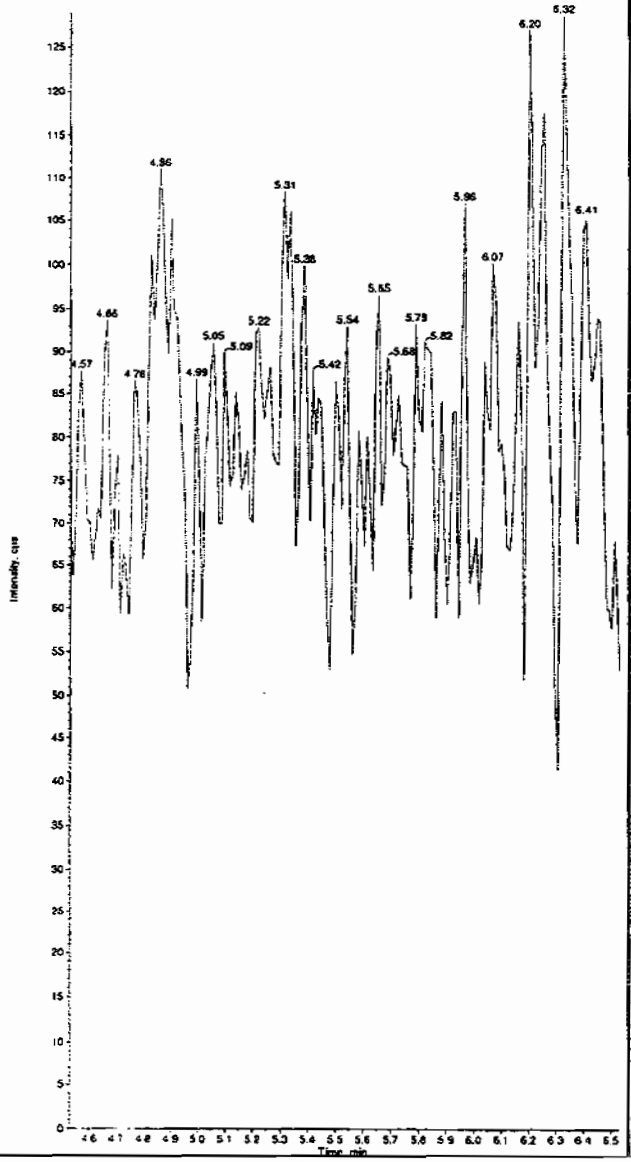

Sample Name: "232348004" Sample ID: "880642|2|LER" File: "EXS0630031.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:19:48 PM

Modified: No

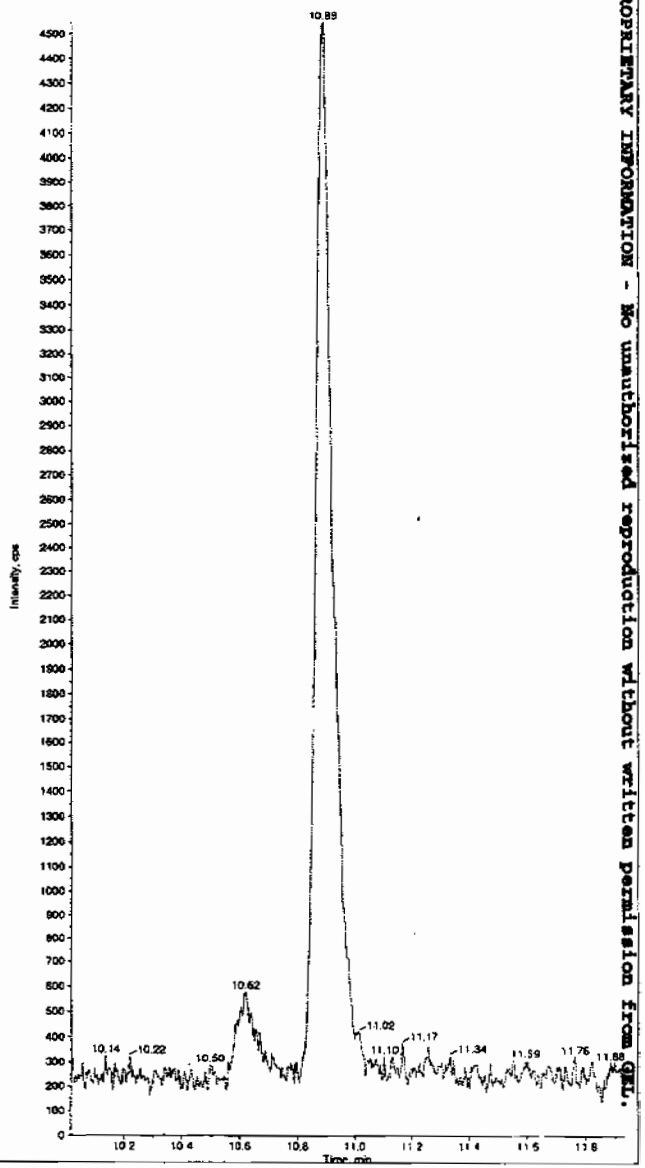

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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STANDARDS DATA

SW846 8321A Modified-Explosives
Calibration Standard Concentration Levels

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	CCV
3,4-Dinitrotoluene (Surrogate)	12.5	25	100	200	400	500	[illegible]	300
Primary Analytes								
HMX	25	50	200	400	800	1000	na	600
RDX	25	50	200	400	800	1000	na	600
1,3,5-Trinitrobenzene	25	50	200	400	800	1000	na	600
1,3-Dinitrobenzene	25	50	200	400	800	1000	na	600
Nitrobenzene	25	50	200	400	800	1000	na	600
Tetryl	25	50	200	400	800	1000	na	600
Nitroglycerin	50	100	200	400	800	1000	na	600
2,4,6-Trinitrotoluene	25	50	200	400	800	1000	na	600
2-Amino-4,6-dinitrotoluene	25	50	200	400	800	1000	na	600
4-Amino-2,6-dinitrotoluene	25	50	200	400	800	1000	na	600
2,4-Dinitrotoluene	25	50	200	400	800	1000	na	600
2,6-Dinitrotoluene	25	50	200	400	800	1000	na	600
2-Nitrotoluene	25	50	200	400	800	1000	na	600
4-Nitrotoluene	25	50	200	400	800	1000	an	600
3-Nitrotoluene	25	50	200	400	800	1000	na	600
PETN	25	50	200	400	800	1000	na	600
Picric Acid	200	400	1600	3200	6400	8000	na	4800
3,4-Dinitrotoluene (Surrogate)	25	50	125	250	475	500	[illegible]	250
Secondary Analytes								
2,4-Diamino-6-nitrotoluene	50	100	250	500	750	1000	2000	500
2,6-Diamino-4-nitrotoluene	50	100	250	500	750	1000	2000	500
3,5-Dinitroaniline	50	100	250	500	750	1000	2000	500
TATB	50	100	250	500	750	1000	2000	500
tris(o-Cresyl)phosphate	50	100	250	500	750	1000	2000	500

All values are ug/L without the prep factor

Calibration Levels 8321A-Modified-EXPL.xls (01/09)

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Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2457

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	Ave RF	RSD	Q
Data File:	EXP0630003a	EXP0630004a	EXP0630005a	EXP0630006a	EXP0630007a	EXP0630008a			
Parmname									
1,3,5-Trinitrobenzene	8.002	7.343	6.402	6.101	6.395	6.125	6.728	11.464	
1,3-Dinitrobenzene-d4	8.063	7.821	7.562	7.666	7.295	7.573	7.663	3.396	
2,4,6-Trinitrotoluene	1.642	1.578	1.615	1.662	1.733	1.689	1.653	3.301	
2,4-Dinitrotoluene	.264	.255	.257	.267	.266	.263	0.262	1.886	
2,6-Dinitrotoluene	1.153	1.199	1.172	1.153	1.169	1.187	1.172	1.559	
2,6-Dinitrotoluene-d3	51.035	48.616	48.415	46.46	45.806	47.276	47.935	3.897	
2-Amino-4,6-dinitrotoluene	.345	.4	.406	.4	.418	.405	0.396	6.466	
3,4-Dinitrotoluene	1.076	.927	.929	.961	1.002	.947	0.974	5.871	
4-Amino-2,6-dinitrotoluene	.38	.323	.329	.315	.349	.333	0.338	6.865	
HMX	3.347	3.12	3.365	3.257	3.337	3.241	3.278	2.813	
Nitrobenzene	.622	.631	.658	.576	.631	.615	0.622	4.33	
RDX	2.594	2.691	2.822	2.708	2.723	2.549	2.681	3.628	
Tetryl	2.307	2.114	2.008	1.896	1.92	1.834	2.013	8.619	
m-Dinitrobenzene	1.429	1.349	1.329	1.302	1.372	1.299	1.347	3.634	
m-Nitrotoluene	.072	.054	.055	.058	.057	.055	0.059	11.874	
o-Nitrotoluene	.102	.097	.089	.087	.088	.087	0.092	6.819	
p-Nitrotoluene	.066	.048	.045	.044	.043	.044	0.048	18.173	

Q column used to flag RSD values outside of Limit (>20%)
* Values outside of QC Limit

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Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2457

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: 2nd Order

Calibration Level:	1	2	3	4	5	6	X	X^2	Intercept	COD	Q
Data File:	EXP0630003a	EXP0630004a	EXP0630005a	EXP0630006a	EXP0630007a	EXP0630008a					
Parmname:											
PETN	1926.77	3578.37	12683.7	21791.2	37615.7	43944.1	1.343	-.0004157	6.024	.9998	

Quadradic Fit: y = Ax^2 + Bx + C
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\063009expa.mdb, Time: Wed Jul 01 09:15:14 2009
Calibration: Untitled, Time: Wed Jul 01 09:37:04 2009

Compound name: HMX
Response Factor: 3.27809
RRF SD: 0.092212, % Relative SD: 2.81298
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

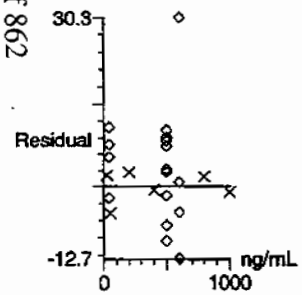

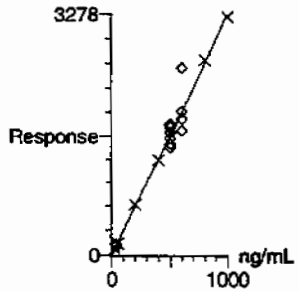

MM 7/1/09

Compound name: RDX
Response Factor: 2.68098
RRF SD: 0.0972628, % Relative SD: 3.62788
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

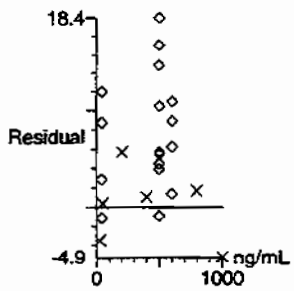

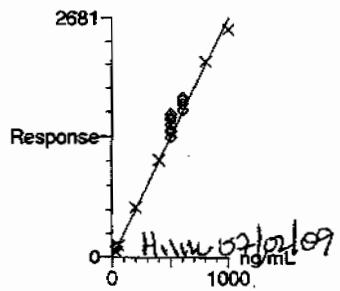

HMW 07/02/09

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aset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

mpound name: 135-Trinitrobenzene
sponse Factor: 6.72772
F SD: 0.771292, % Relative SD: 11.4644
sponse type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
rve type: RF

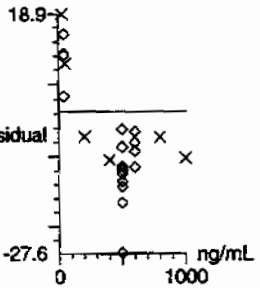

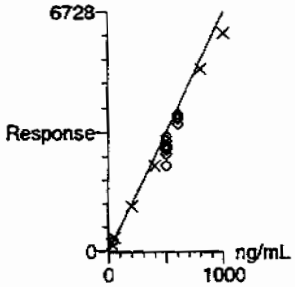

mpound name: 13-Dinitrobenzene-d4
sponse Factor: 7.66338
F SD: 0.260276, % Relative SD: 3.39636
sponse type: External Std, Area
rve type: RF

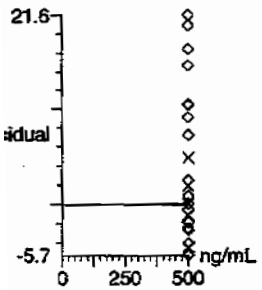

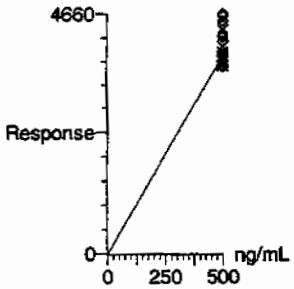

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 13-Dinitrobenzene
Response Factor: 1.34644
RRF SD: 0.048925, % Relative SD: 3.63366
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

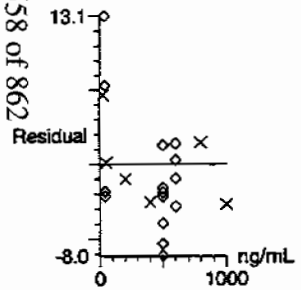

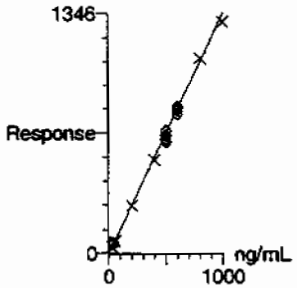

Compound name: Tetryl
Response Factor: 2.01305
RRF SD: 0.173501, % Relative SD: 8.61882
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

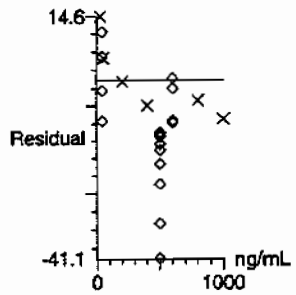

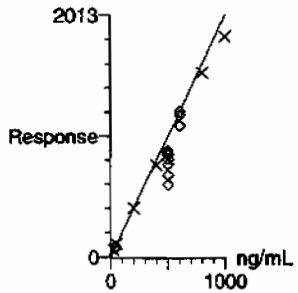

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: Nitrobenzene
Response Factor: 0.622131
RRF SD: 0.0269399, % Relative SD: 4.33025
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

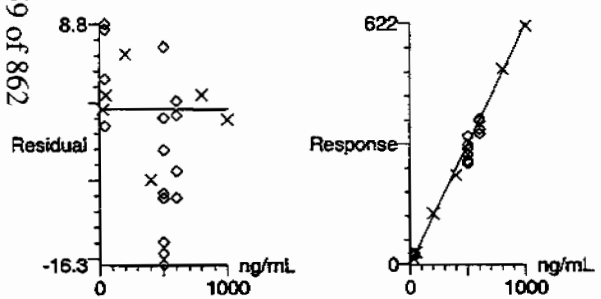

Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.338217
RRF SD: 0.0232178, % Relative SD: 6.86477
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

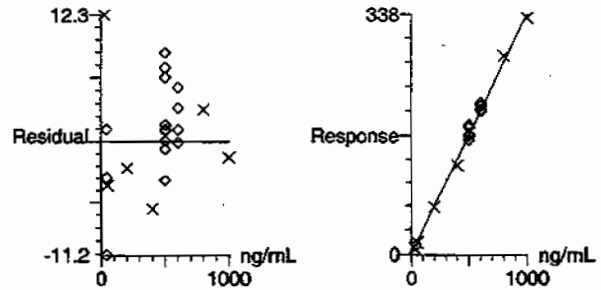

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 2-Amino-46-dinitrotoluene
Response Factor: 0.395782
RRF SD: 0.0255904, % Relative SD: 6.46579
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

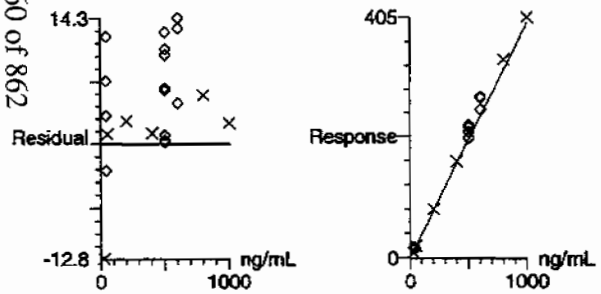

Compound name: 246-Trinitrotoluene
Response Factor: 1.6531
RRF SD: 0.0545759, % Relative SD: 3.30143
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

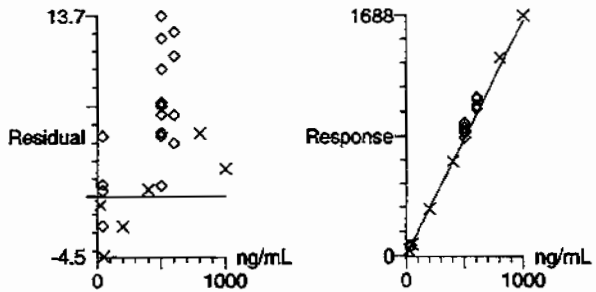

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 34-dinitrotoluene
Response Factor: 0.973789
RRF SD: 0.057167, % Relative SD: 5.87058
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

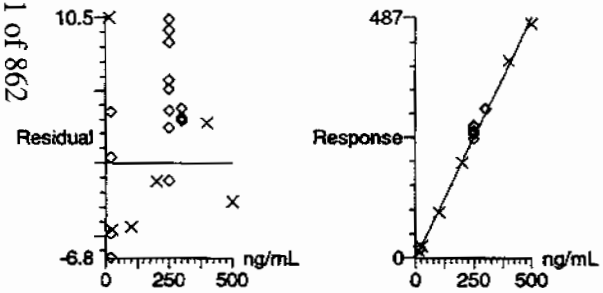

Compound name: 26-dinitrotoluene
Response Factor: 1.17216
RRF SD: 0.0182749, % Relative SD: 1.55908
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

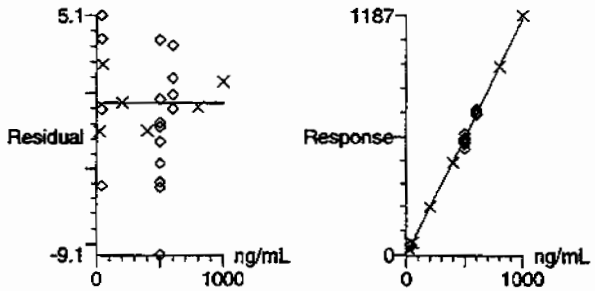

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 24-dinitrotoluene
Response Factor: 0.262117
RRF SD: 0.00494389, % Relative SD: 1.88614
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

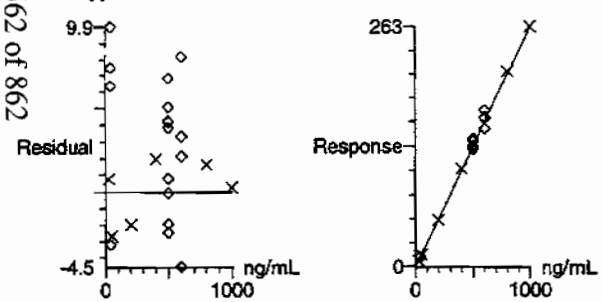

Compound name: 26-dinitrotoluene-d3
Response Factor: 47.9349
RRF SD: 1.86803, % Relative SD: 3.89702
Response type: External Std, Area
Curve type: RF

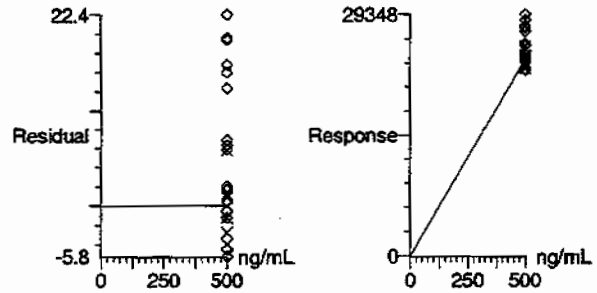

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 2-Nitrotoluene
Response Factor: 0.0917175
RRF SD: 0.00625455, % Relative SD: 6.81937
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

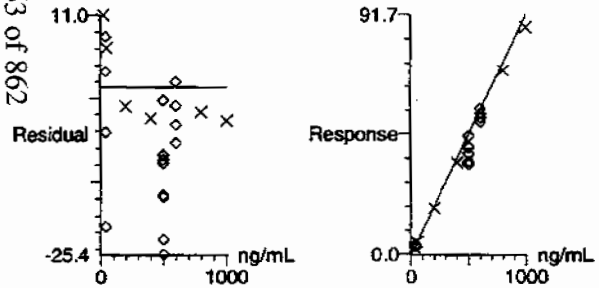

Compound name: 4-Nitrotoluene
Response Factor: 0.0483095
RRF SD: 0.00877921, % Relative SD: 18.1728
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

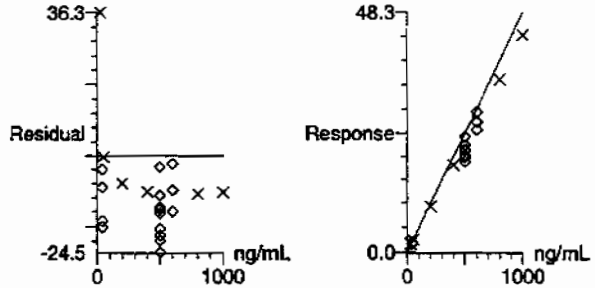

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Compound name: 3-Nitrotoluene
Response Factor: 0.0584638
RRF SD: 0.00694204, % Relative SD: 11.8741
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

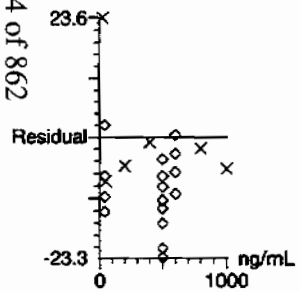

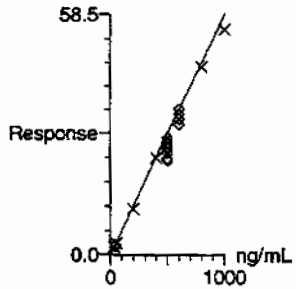

Compound name: PETN
Coefficient of Determination: 0.999803
Calibration curve: -0.000415666 * x^2 + 1.34265 * x + 6.02372
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: Null, Axis trans: None

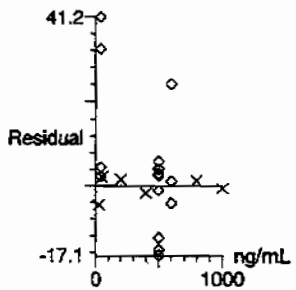

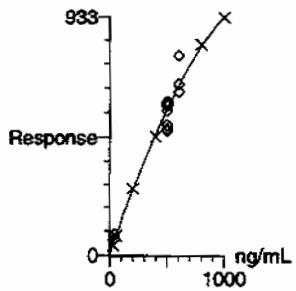

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Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXP0630010a

Analysis Date: 30-JUN-09 19:03

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	564.231	94	
1,3-Dinitrobenzene-d4	500	489.765	98	
2,4,6-Trinitrotoluene	600	624.784	104	
2,4-Dinitrotoluene	600	619.633	103	
2,6-Dinitrotoluene	600	608.657	101	
2,6-Dinitrotoluene-d3	500	475.349	95	
2-Amino-4,6-dinitrotoluene	600	627.782	105	
3,4-Dinitrotoluene	300	309.83	103	
4-Amino-2,6-dinitrotoluene	600	607.008	101	
HMX	600	523.889	87	
Nitrobenzene	600	605.054	101	
PETN	600	748.77	125	*
RDX	600	607.542	101	
Tetryl	600	541.301	90	
m-Dinitrobenzene	600	592.419	99	
m-Nitrotoluene	600	580.01	97	
o-Nitrotoluene	600	582.842	97	
p-Nitrotoluene	600	547.152	91	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630010a
Date: 30-Jun-2009
Time: 19:03:35
ID: WXX090630-07ICV
Vial: 1:1,B

MMT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.453e+004

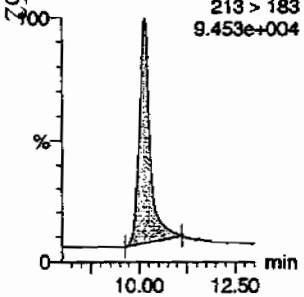

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.104e+004

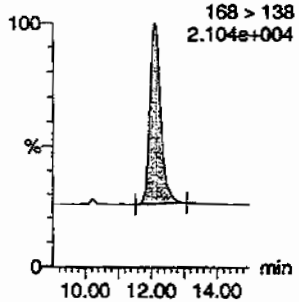

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.739e+004

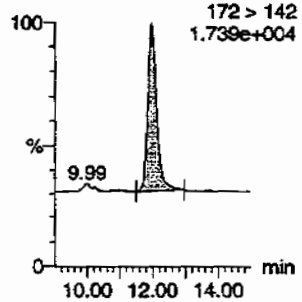

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.055e+005

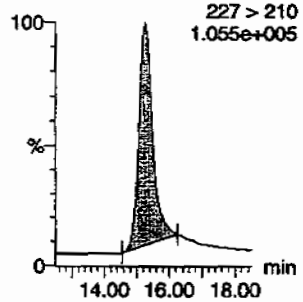

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.251e+004

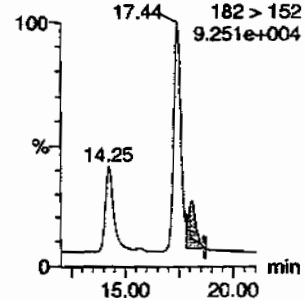

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.251e+004

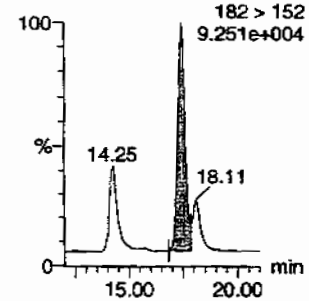

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.582e+004

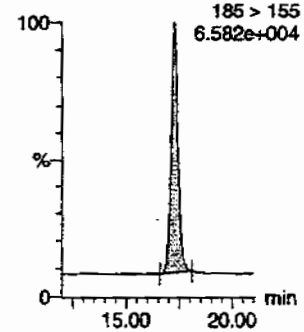

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.254e+004

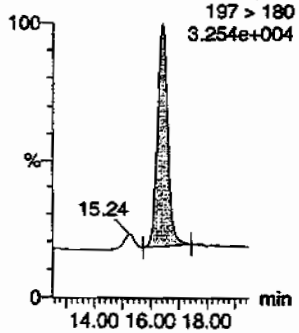

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.047e+004

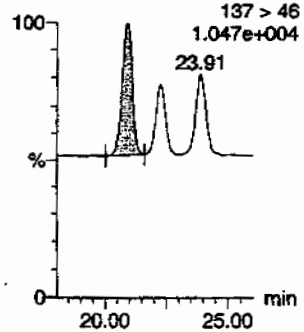

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.251e+004

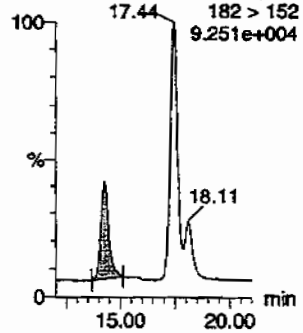

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.047e+004

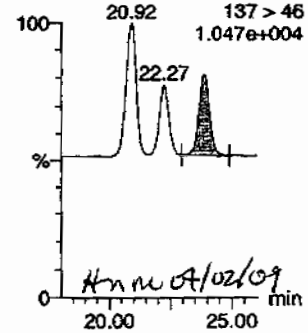

HMM 7/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.612e+004

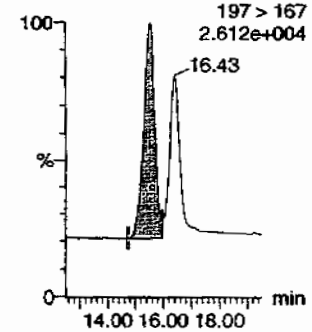

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

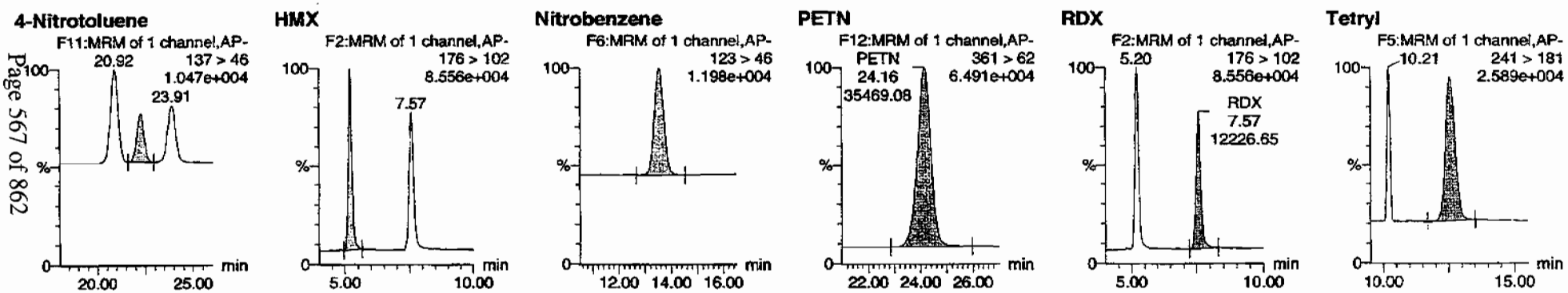

ID	Name	Trace	RT	Area	IS Area	TAbs Resp	TResponse	Flags	MOD Date	MOD Time	µg/mL	%Rec	%Dev	S/N
WXX090630-07ICV	HMX	176 > 102	5.20	12891.344	3753.256	12891.344	1717.355	bb			523.8889	87.3	-12.7	2370.8
WXX090630-07ICV	RDX	176 > 102	7.57	12226.653	3753.256	12226.653	1628.806	bb			607.5416	101.3	1.3	1794.3
WXX090630-07ICV	135-Trinitrobenzene	213 > 183	10.14	28494.656	3753.256	28494.656	3795.992	bb			564.2312	94.0	-6.0	2556.4
WXX090630-07ICV	13-Dinitrobenzene-d4	172 > 142	11.97	3753.256		3753.256	3753.256	bb			489.7648	98.0	-2.0	163.3
WXX090630-07ICV	13-Dinitrobenzene	168 > 138	12.10	5987.602	3753.256	5987.602	797.654	bb			592.4187	98.7	-1.3	583.1
WXX090630-07ICV	Tetryl	241 > 181	12.53	8179.593	3753.256	8179.593	1089.666	bb			541.3009	90.2	-9.8	27.9
WXX090630-07ICV	Nitrobenzene	123 > 46	13.53	2825.623	3753.256	2825.623	376.423	bb			605.0537	100.8	0.8	367.7
WXX090630-07ICV	4-Amino-26-dinitrotoluene	197 > 167	15.55	9355.866	22785.805	9355.866	205.300	MM	01-Jul-09	09:23:10	607.0083	101.2	1.2	391.2
WXX090630-07ICV	2-Amino-46-dinitrotoluene	197 > 180	16.43	11322.955	22785.805	11322.955	248.465	bb			627.7822	104.6	4.6	364.2
WXX090630-07ICV	246-Trinitrotoluene	227 > 210	15.27	47067.680	22785.805	47067.680	1032.829	bb			624.7840	104.1	4.1	1071.1
WXX090630-07ICV	34-dinitrotoluene	182 > 152	14.25	13749.344	22785.805	13749.344	301.709	bb			309.8296	103.3	3.3	320.7
WXX090630-07ICV	26-dinitrotoluene	182 > 152	17.44	32512.719	22785.805	32512.719	713.442	MM	01-Jul-09	09:29:53	608.6567	101.4	1.4	847.2
WXX090630-07ICV	24-dinitrotoluene	182 > 152	18.11	7401.558	22785.805	7401.558	162.416	MM	01-Jul-09	09:33:38	619.6328	103.3	3.3	180.8
WXX090630-07ICV	26-dinitrotoluene-d3	185 > 155	17.28	22785.805		22785.805	22785.805	bb			475.3493	95.1	-4.9	1352.4
WXX090630-07ICV	2-Nitrotoluene	137 > 46	20.92	2436.114	22785.805	2436.114	53.457	bb			582.8424	97.1	-2.9	405.5
WXX090630-07ICV	4-Nitrotoluene	137 > 46	22.27	1204.578	22785.805	1204.578	26.433	bb			547.1516	91.2	-8.8	214.0
WXX090630-07ICV	3-Nitrotoluene	137 > 46	23.91	1545.316	22785.805	1545.316	33.910	bb			580.0102	96.7	-3.3	247.7
WXX090630-07ICV	PETN	361 > 62	24.16	35469.082	22785.805	35469.082	778.315	bb			748.7696	124.8	24.8	4636.4

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 06/30/09
Time of Injection 1903
Standard Number WXX090630-07ICV
Data File EXP0630010a

HMX	87.3
RDX	101.3
135-TNB	94.0
13-DNB	98.7
Tetryl	90.2
Nitrobenzene	100.8
4A-26-DNT	101.2
2A-46-DNT	104.6
246-TNT	104.1
34-DNT(surr)	103.3
26-DNT	101.4
24-DNT	103.3
2-NT	97.1
4-NT	91.2
3-NT	96.7
PETN	124.8
Total	1600.0
Average	100.0

MTP 7/1/09

dmm 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2457

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	Ave RF	RSD	Q
Data File:	EXP0713003a	EXP0713004a	EXP0713005a	EXP0713006a	EXP0713007a	EXP0713008a			
Parmname									
1,3,5-Trinitrobenzene	5.388	5.525	5.545	5.361	5.653	5.743	5.536	2.668	
1,3-Dinitrobenzene-d4	7.755	8.052	8.123	8.26	7.821	7.282	7.882	4.43	
2,4,6-Trinitrotoluene	.954	1.117	1.091	1.133	1.166	1.243	1.117	8.563	
2,4-Dinitrotoluene	.238	.25	.242	.256	.268	.255	0.252	4.234	
2,6-Dinitrotoluene	1.114	1.153	1.126	1.154	1.132	1.157	1.139	1.562	
2,6-Dinitrotoluene-d3	47.356	49.612	49.742	48.578	47.932	43.724	47.824	4.627	
2-Amino-4,6-dinitrotoluene	.329	.344	.364	.384	.384	.4	0.368	7.293	
3,4-Dinitrotoluene	.884	.887	.809	.852	.893	.901	0.871	3.978	
4-Amino-2,6-dinitrotoluene	.304	.258	.3	.302	.317	.329	0.302	8.007	
HMX	2.801	2.852	2.975	3.109	3.155	3.311	3.034	6.39	
Nitrobenzene	1.095	1.017	.931	.945	.972	.913	0.979	6.892	
PETN	.734	.766	.697	.656	.547	.537	0.656	14.599	
RDX	1.821	2.06	2.093	2.11	2.232	2.25	2.094	7.38	
m-Dinitrobenzene	1.266	1.344	1.304	1.285	1.368	1.358	1.321	3.158	
m-Nitrotoluene	.083	.095	.087	.089	.086	.089	0.088	4.339	
o-Nitrotoluene	.141	.141	.144	.142	.137	.139	0.141	1.633	
p-Nitrotoluene	.069	.067	.071	.072	.066	.067	0.069	3.787	

Q column used to flag RSD values outside of Limit (>20%)
* Values outside of QC Limit

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Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2457

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: 2nd Order

Calibration Level:	1	2	3	4	5	6	X	X^2	Intercept	COD	Q
Data File:	EXP0713003a	EXP0713004a	EXP0713005a	EXP0713006a	EXP0713007a	EXP0713008a					
Parmname:											
Tetryl	544.229	1174.83	3758.71	6459.02	11333.2	13210.4	1.92	-.0001692	47.345	.9988	

Quadradic Fit: y = Ax^2 + Bx + C
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\071309expa.mdb, Time: Tue Jul 14 10:07:51 2009
Calibration: Untitled, Time: Tue Jul 14 10:21:04 2009

Page 862

Compound name: HMX
Response Factor: 3.03385
RRF SD: 0.193849, % Relative SD: 6.38953
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

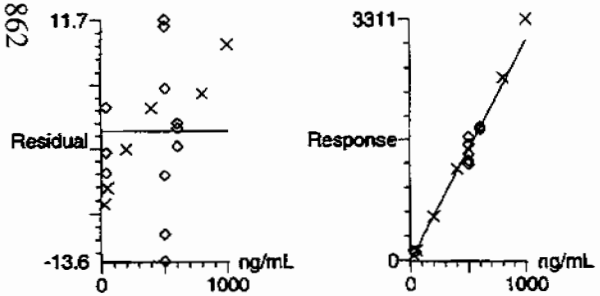

MMP 7/14/09

Compound name: RDX
Response Factor: 2.09431
RRF SD: 0.154559, % Relative SD: 7.37996
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

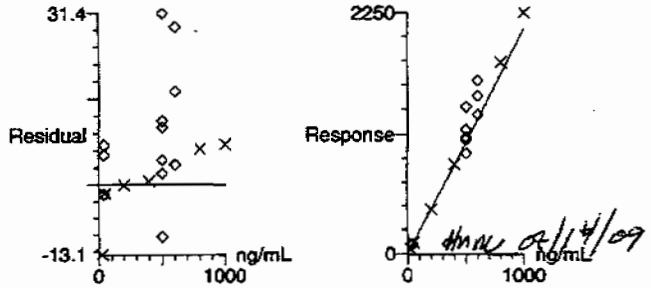

HMN 07/14/09

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 135-Trinitrobenzene
Response Factor: 5.53571
RRF SD: 0.147719, % Relative SD: 2.66848
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

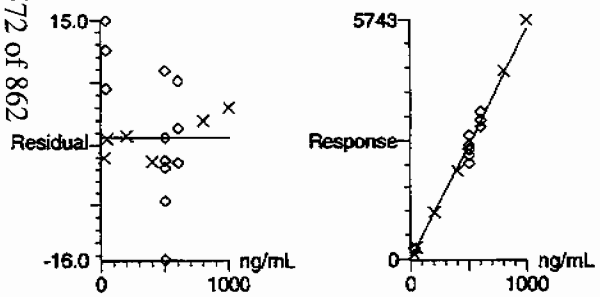

Compound name: 13-Dinitrobenzene-d4
Response Factor: 7.88239
RRF SD: 0.349213, % Relative SD: 4.43029
Response type: External Std, Area
Curve type: RF

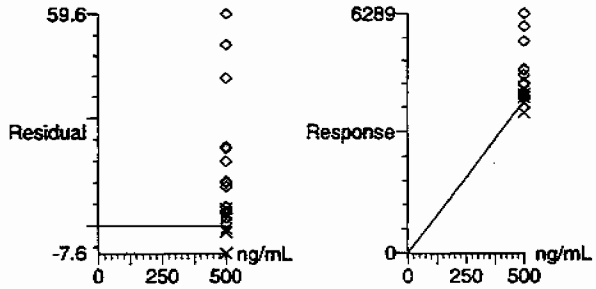

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 13-Dinitrobenzene
Response Factor: 1.32093
RRF SD: 0.0417136, % Relative SD: 3.15789
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

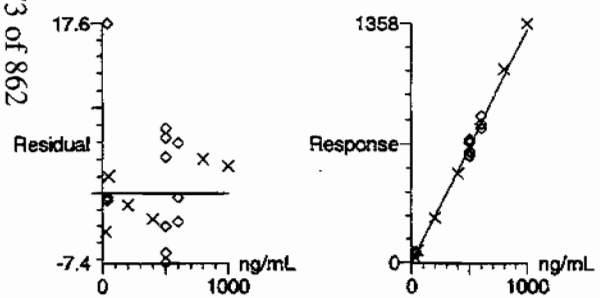

Compound name: Tetryl
Coefficient of Determination: 0.998789
Calibration curve: -0.000169195 * x^2 + 1.91984 * x + 47.345
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: Null, Axis trans: None

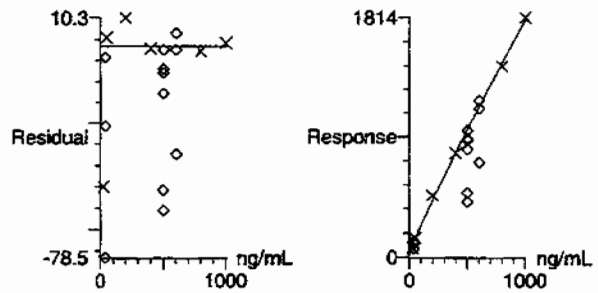

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: Nitrobenzene
Response Factor: 0.97865
RRF SD: 0.0674452, % Relative SD: 6.89166
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

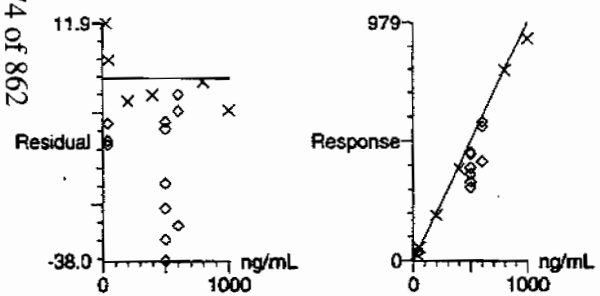

Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.301728
RRF SD: 0.0241594, % Relative SD: 8.00703
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

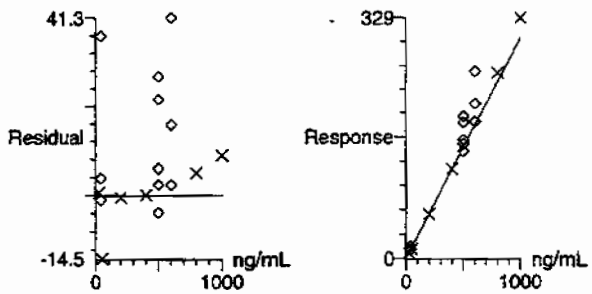

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 2-Amino-46-dinitrotoluene
Response Factor: 0.367608
RRF SD: 0.0268111, % Relative SD: 7.29338
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

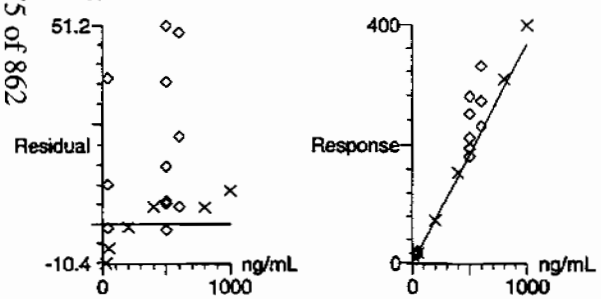

Compound name: 246-Trinitrotoluene
Response Factor: 1.11757
RRF SD: 0.0956942, % Relative SD: 8.5627
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

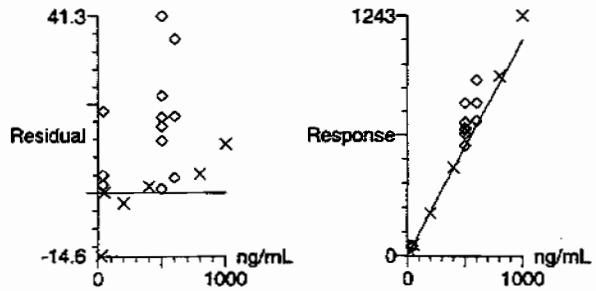

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 34-dinitrotoluene
Response Factor: 0.871049
RRF SD: 0.0346537, % Relative SD: 3.97839
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

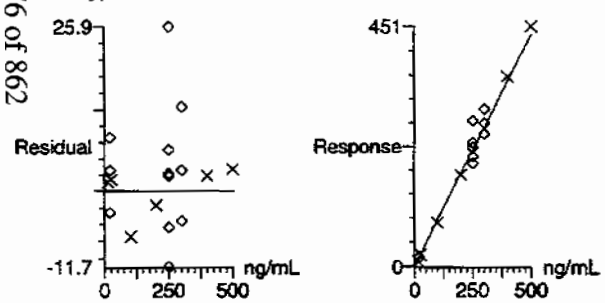

Compound name: 26-dinitrotoluene
Response Factor: 1.13947
RRF SD: 0.0178005, % Relative SD: 1.56218
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

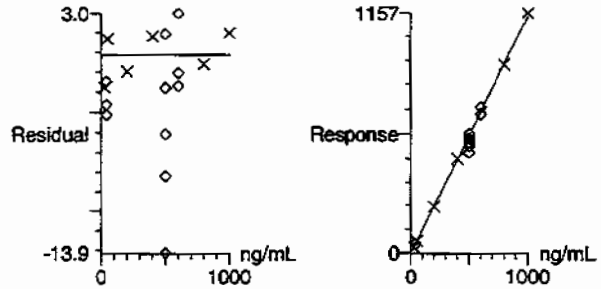

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 24-dinitrotoluene
Response Factor: 0.251398
RRF SD: 0.0106446, % Relative SD: 4.23418
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

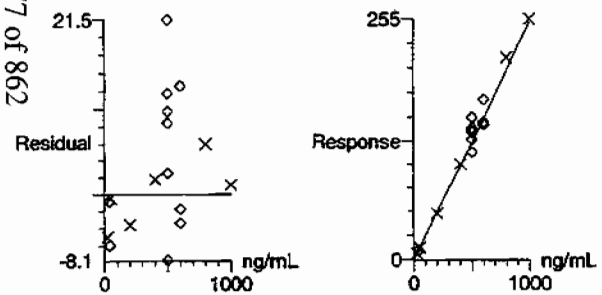

Compound name: 26-dinitrotoluene-d3
Response Factor: 47.824
RRF SD: 2.21281, % Relative SD: 4.62699
Response type: External Std, Area
Curve type: RF

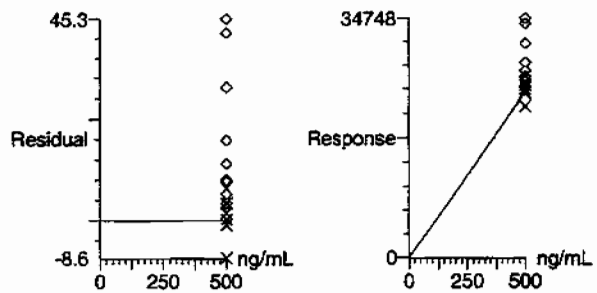

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 2-Nitrotoluene
Response Factor: 0.140666
RRF SD: 0.00229699, % Relative SD: 1.63293
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

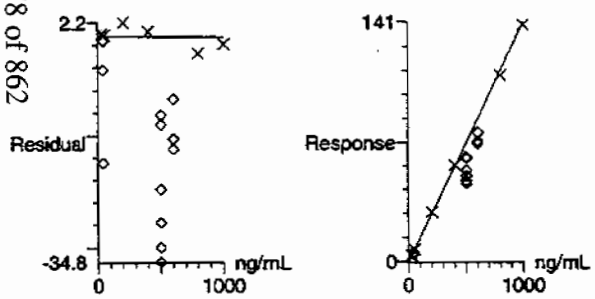

Compound name: 4-Nitrotoluene
Response Factor: 0.0684833
RRF SD: 0.00259338, % Relative SD: 3.78688
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

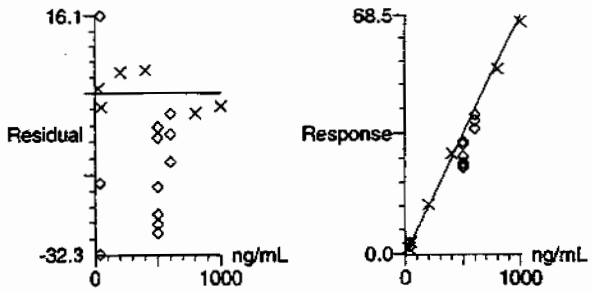

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 3-Nitrotoluene
Response Factor: 0.0882614
RRF SD: 0.00382945, % Relative SD: 4.33876
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

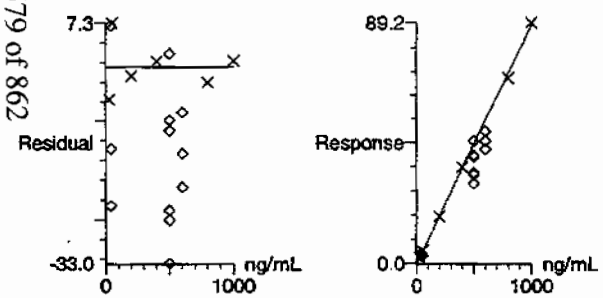

Compound name: PETN
Response Factor: 0.65614
RRF SD: 0.0957864, % Relative SD: 14.5985
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

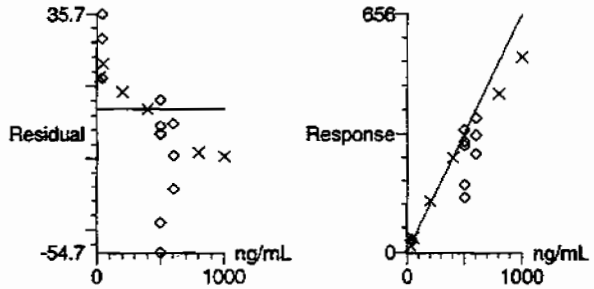

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Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXP0713010a

Analysis Date: 13-JUL-09 19:21

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	580.032	97	
1,3-Dinitrobenzene-d4	500	511.821	102	
2,4,6-Trinitrotoluene	600	621.358	104	
2,4-Dinitrotoluene	600	589.208	98	
2,6-Dinitrotoluene	600	587.044	98	
2,6-Dinitrotoluene-d3	500	542.957	109	
2-Amino-4,6-dinitrotoluene	600	627.163	105	
3,4-Dinitrotoluene	300	286.144	95	
4-Amino-2,6-dinitrotoluene	600	614.782	102	
HMX	600	605.231	101	
Nitrobenzene	600	579.57	97	
PETN	600	493.649	82	
RDX	600	622.42	104	
Tetryl	600	591.608	99	
m-Dinitrobenzene	600	597.156	100	
m-Nitrotoluene	600	553.922	92	
o-Nitrotoluene	600	542.932	90	
p-Nitrotoluene	600	575.156	96	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713010a
Date: 13-Jul-2009
Time: 19:21:47
ID: WXX090713-07ICV
Vial: 1:1,B

MMP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
8.937e+004

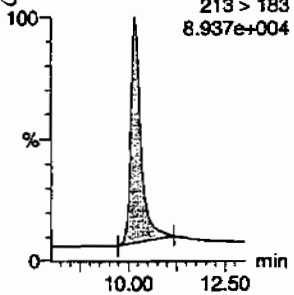

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.112e+004

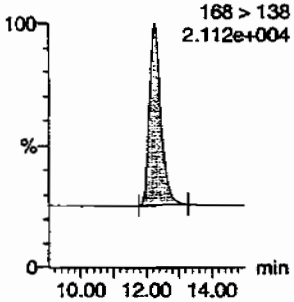

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.670e+004

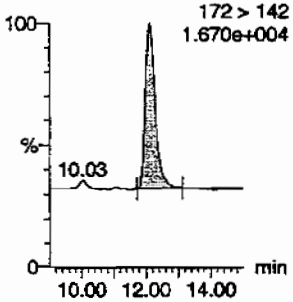

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
8.426e+004

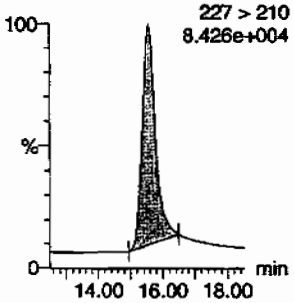

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.367e+004

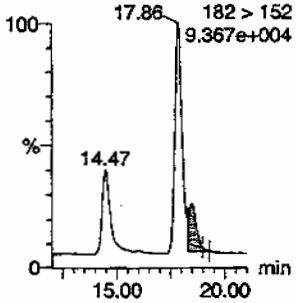

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.367e+004

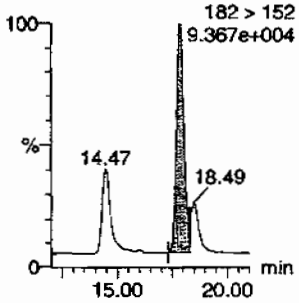

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.086e+004

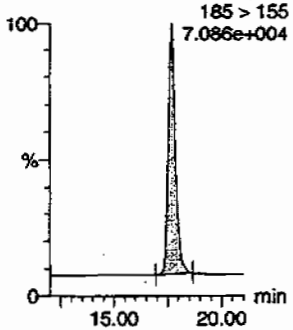

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.450e+004

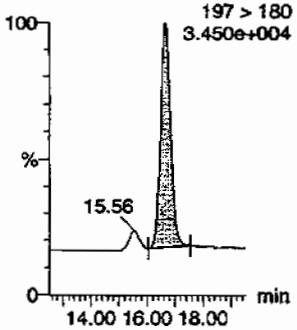

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.399e+004

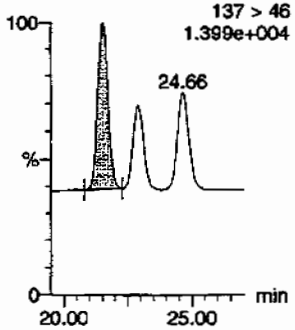

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.367e+004

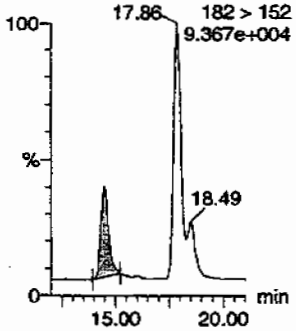

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.399e+004

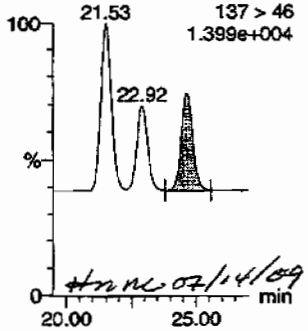

HMM 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.724e+004

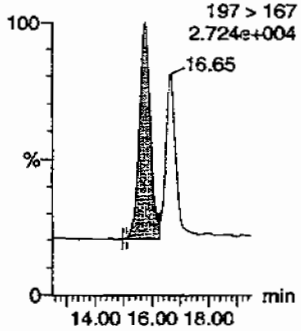

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

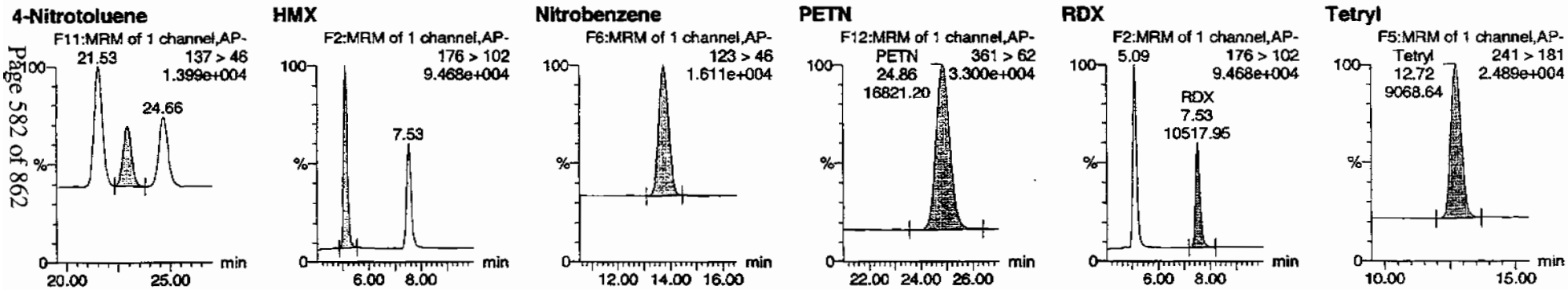

ID	Name	Trace	RT	Area	ISArea	Amt/Resp	RespRatio	Flag	Modified	Modtime	Amount	%Rec	%Dev	S/N
WXX090713-07ICV	HMX	176 > 102	5.09	14815.656	4034.376	14815.656	1836.177	bb			605.2308	100.9	0.9	1474.7
WXX090713-07ICV	RDX	176 > 102	7.53	10517.949	4034.376	10517.949	1303.541	bb			622.4196	103.7	3.7	843.1
WXX090713-07ICV	135-Trinitrobenzene	213 > 183	10.20	25907.861	4034.376	25907.861	3210.888	bb			580.0323	96.7	-3.3	1645.7
WXX090713-07ICV	13-Dinitrobenzene-d4	172 > 142	12.14	4034.376		4034.376	4034.376	bb			511.8211	102.4	2.4	243.4
WXX090713-07ICV	13-Dinitrobenzene	168 > 138	12.27	6364.646	4034.376	6364.646	788.802	bb			597.1561	99.5	-0.5	513.3
WXX090713-07ICV	Tetryl	241 > 181	12.72	9068.635	4034.376	9068.635	1123.920	bb			591.6085	98.6	-1.4	655.9
WXX090713-07ICV	Nitrobenzene	123 > 46	13.76	4576.560	4034.376	4576.560	567.196	bb			579.5696	96.6	-3.4	764.5
WXX090713-07ICV	4-Amino-26-dinitrotoluene	197 > 167	15.77	9633.361	25966.389	9633.361	185.497	MM	14-Jul-09	10:18:30	614.7818	102.5	2.5	272.4
WXX090713-07ICV	2-Amino-46-dinitrotoluene	197 > 180	16.65	11973.124	25966.389	11973.124	230.550	bb			627.1631	104.5	4.5	403.6
WXX090713-07ICV	246-Trinitrotoluene	227 > 210	15.55	36062.738	25966.389	36062.738	694.412	bb			621.3583	103.6	3.6	1352.1
WXX090713-07ICV	34-dinitrotoluene	182 > 152	14.47	12944.023	25966.389	12944.023	249.246	bb			286.1444	95.4	-4.6	266.8
WXX090713-07ICV	26-dinitrotoluene	182 > 152	17.86	34738.852	25966.389	34738.852	668.920	MM	14-Jul-09	10:15:04	587.0440	97.8	-2.2	747.1
WXX090713-07ICV	24-dinitrotoluene	182 > 152	18.49	7692.565	25966.389	7692.565	148.125	MM	14-Jul-09	10:11:35	589.2076	98.2	-1.8	159.2
WXX090713-07ICV	26-dinitrotoluene-d3	185 > 155	17.68	25966.389		25966.389	25966.389	bb			542.9571	108.6	8.6	1092.5
WXX090713-07ICV	2-Nitrotoluene	137 > 46	21.53	3966.221	25966.389	3966.221	76.372	bb			542.9317	90.5	-9.5	520.0
WXX090713-07ICV	4-Nitrotoluene	137 > 46	22.92	2045.559	25966.389	2045.559	39.389	bb			575.1561	95.9	-4.1	258.2
WXX090713-07ICV	3-Nitrotoluene	137 > 46	24.66	2538.991	25966.389	2538.991	48.890	bb			553.9223	92.3	-7.7	299.6
WXX090713-07ICV	PETN	361 > 62	24.86	16821.195	25966.389	16821.195	323.903	bb			493.6494	82.3	-17.7	4055.4

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/13/09
Time of Injection 1921
Standard Number WXX090713-07ICV
Data File EXP0713010a

HMX		100.9
RDX		103.7
135-TNB		96.7
13-DNB		99.5
Tetryl		98.6
Nitrobenzene		96.6
4A-26-DNT		102.5
2A-46-DNT		104.5
246-TNT		103.6
34-DNT(surr)		95.4
26-DNT		97.8
24-DNT		98.2
2-NT		90.5
4-NT		95.9
3-NT		92.3
PETN		82.3
Total		1559.0
Average		97.4

MTP 7/14/09

dmm 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2457

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS4

Method: 8321A Modified

HPLC Column: YMC J-Sphere ODS-H8Q

Calibration Type: 2nd Order

Calibration Level:	19	20	21	22	23	24	25	X	X^2	Intercept	COD	Q
Data File:	EXS0630003.wiff	EXS0630004.wiff	EXS0630005.wiff	EXS0630006.wiff	EXS0630007.wiff	EXS0630008.wiff	EXS0630009.wiff					
Parmname:												
2,4-Diamino-6-nitrotoluene	15400	32000	76600	149000	231000	296000	586000	780	305	-.006	.9999	
2,6-Diamino-4-nitrotoluene	10500	21200	52000	100000	146000	203000	383000	195	205	-.007	.9998	
3,4-Dinitrotoluene	54700	104000	250000	513000	734000	1020000	2020000	-4090	2170	-.145	.9994	
3,5-Dinitroaniline	67100	141000	334000	629000	937000	1220000	2410000	15300	1240	-.02	1	
TATB	29100	59800	154000	312000	458000	612000	1220000	-783	617	-.003	1	
tris(o-cresyl) phosphate	677000	1350000	3230000	6150000	8870000	11900000	20700000	41200	13000	-1.3	.9999	

Quadradic Fit: $y = Ax^2 + Bx + C$
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-783			
a1	617			
a2	-0.00342			

Correlation coefficient 1.0000
Use Area

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	1.53e+004			
a1	1.24e+003			
a2	-0.0202			

Correlation coefficient 1.0000
Use Area

Peak Name: 34-Dinitrotoluene
No Internal Standard
Q1/Q3 Masses: 182.08/151.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-4.09e+003			
a1	2.17e+003			
a2	-0.145			

Correlation coefficient 0.9994
Use Area

Peak Name: 26-Diamino-4-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	195			
a1	205			
a2	-0.00665			

Correlation coefficient 0.9998
Use Area

Lan 7/1/09

Hm 07/02/09

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Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	780			
a1	305			
a2	-0.00609			

Correlation coefficient 0.9999
Use Area

Peak Name: tris(o-cresyl) phosphate
No Internal Standard
Q1/Q3 Masses: 369.15/91.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	4.12e+004			
a1	1.3e+004			
a2	-1.3			

Correlation coefficient 0.9999
Use Area

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063009.rdb (TATB): "Quadratic" Regression ("No" weighting): y = -0.00342 x^2 + 617 x + -783 (r = 1.0000)

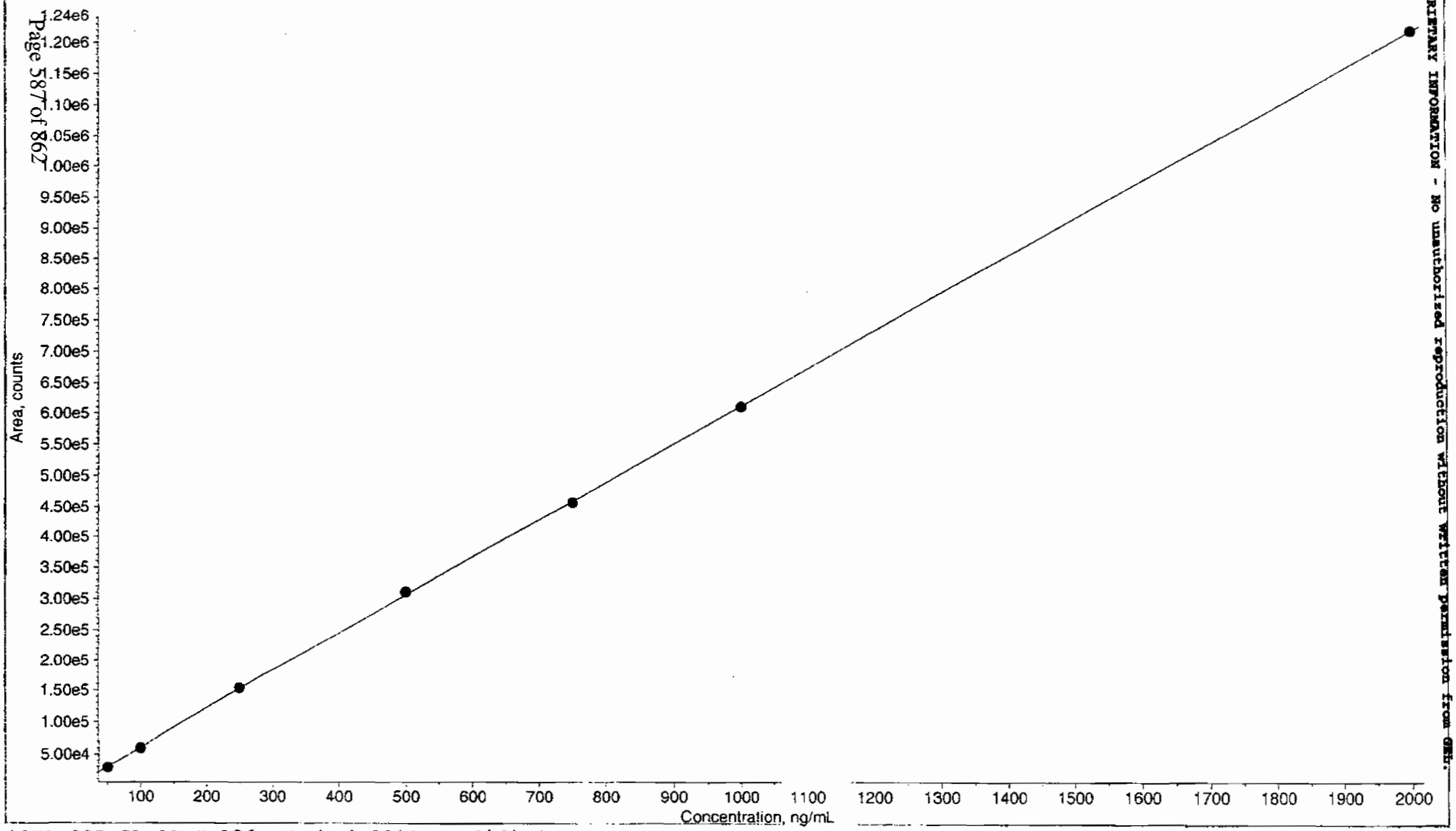

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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063009.rdb (35-Dinitroaniline): "Quadratic" Regression ("No" weighting): y = -0.0202 x^2 + 1.24e+003 x + 1.53e+004 (r = 1.0000...

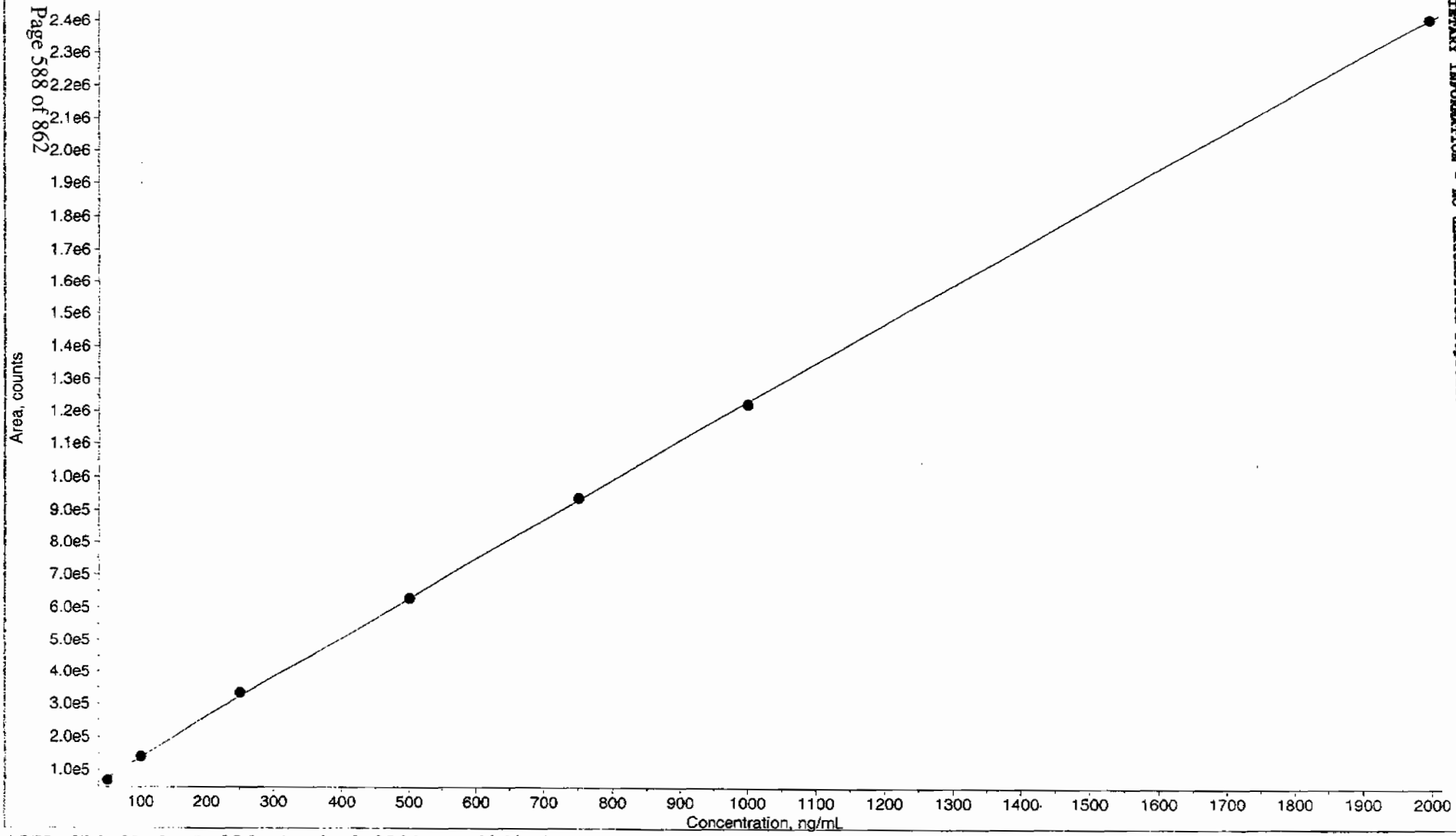

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

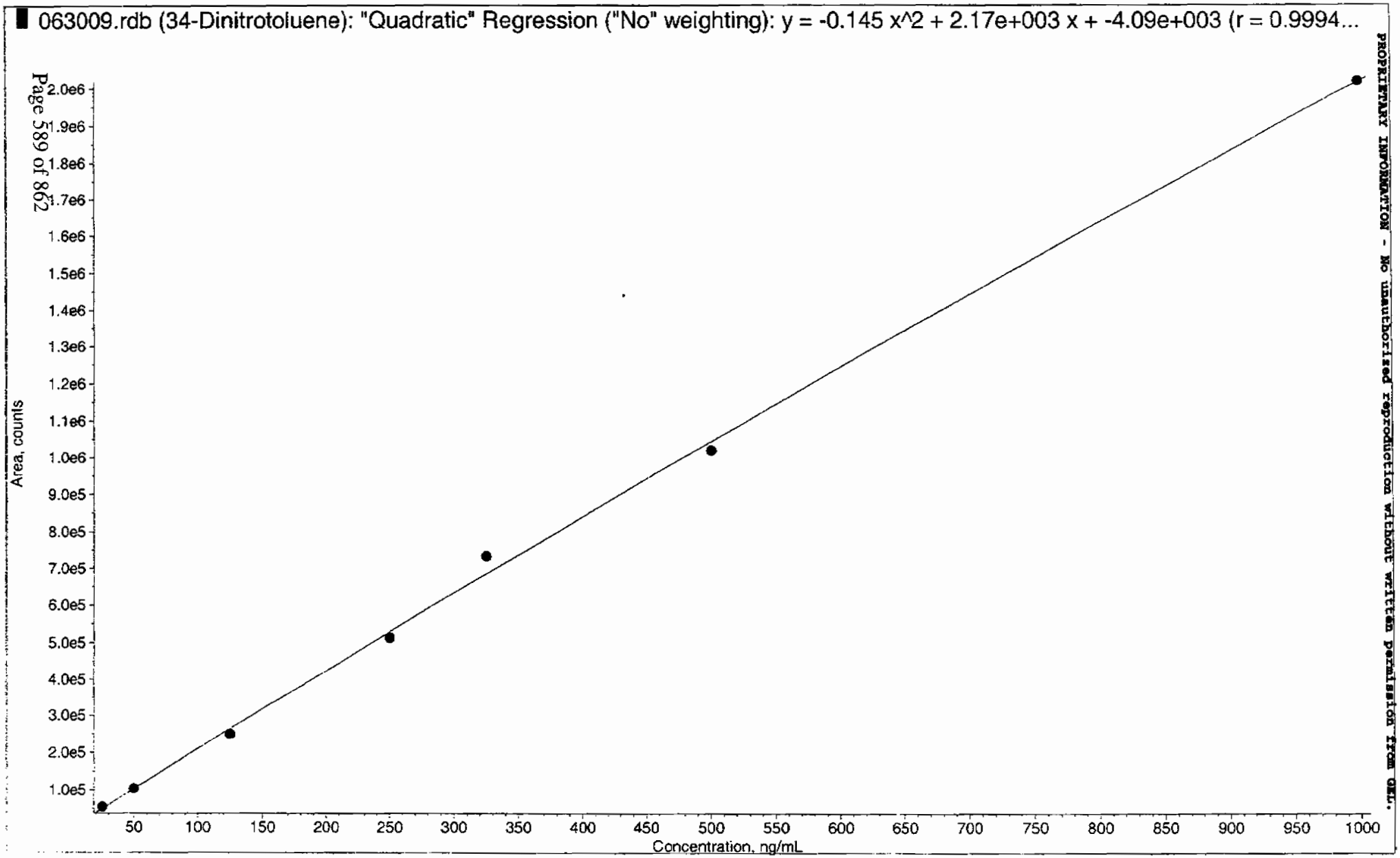

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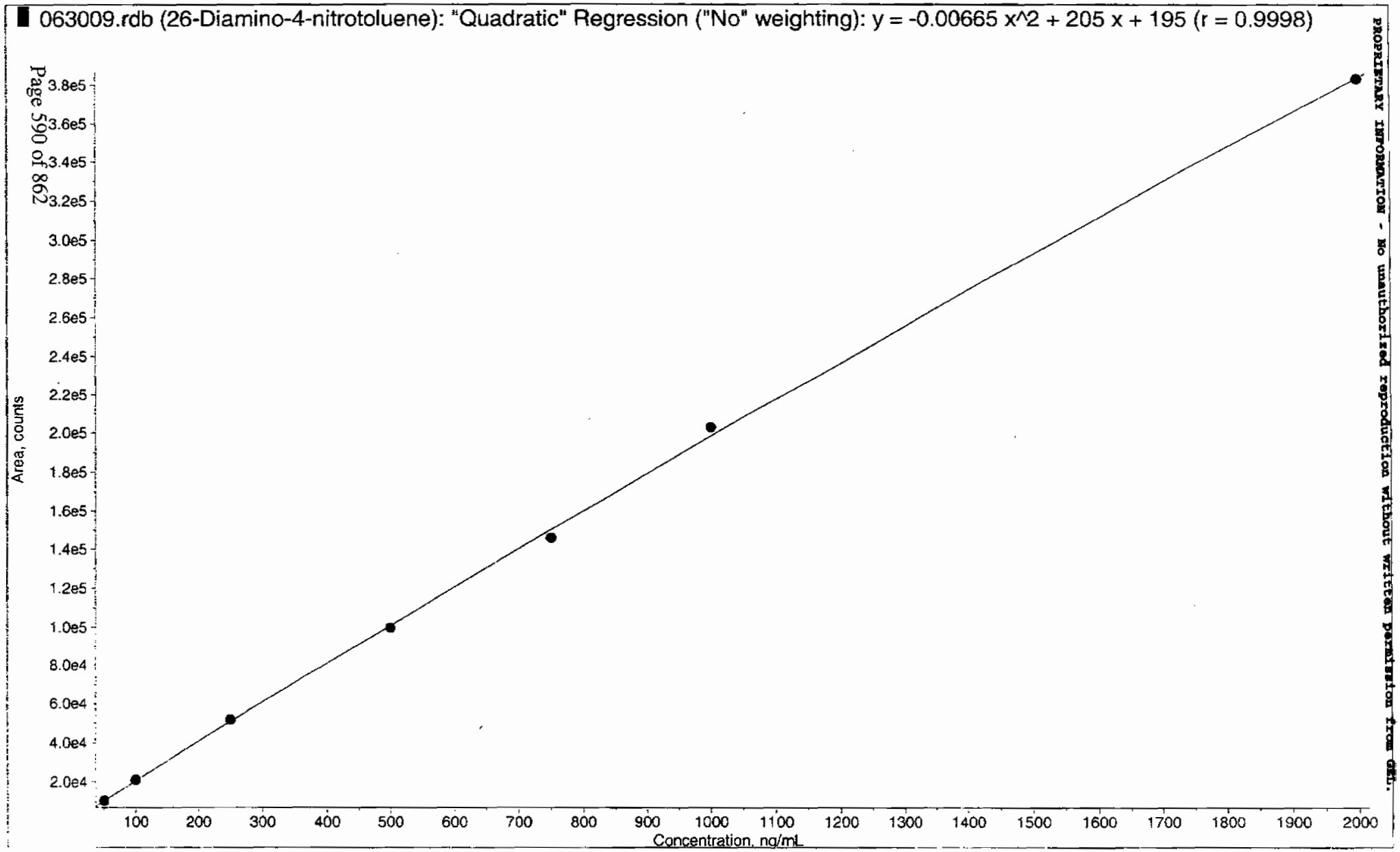

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

063009.rdb (24-Diamino-6-nitrotoluene): "Quadratic" Regression ("No" weighting): y = -0.00609 x^2 + 305 x + 780 (r = 0.9999)

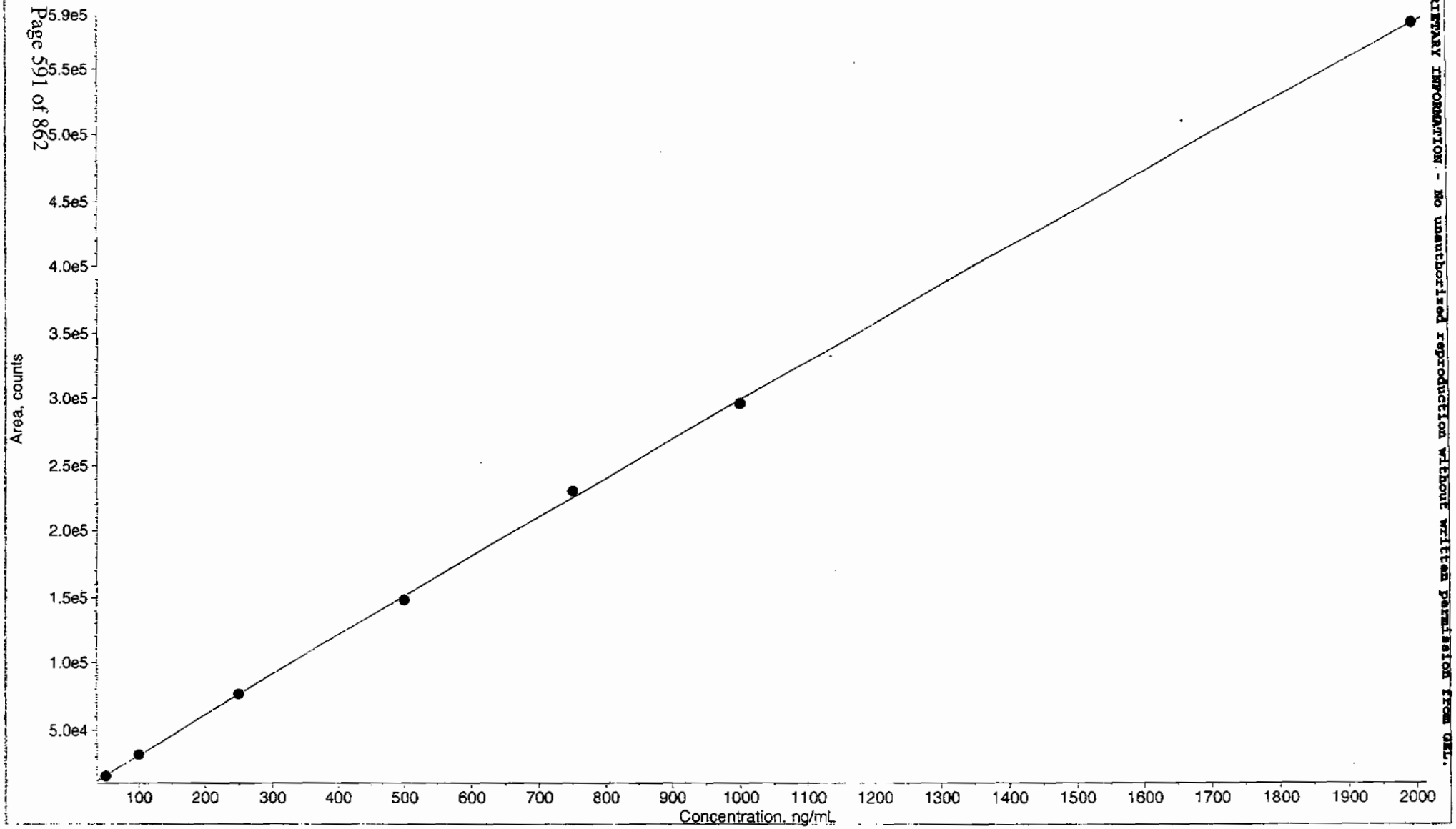

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

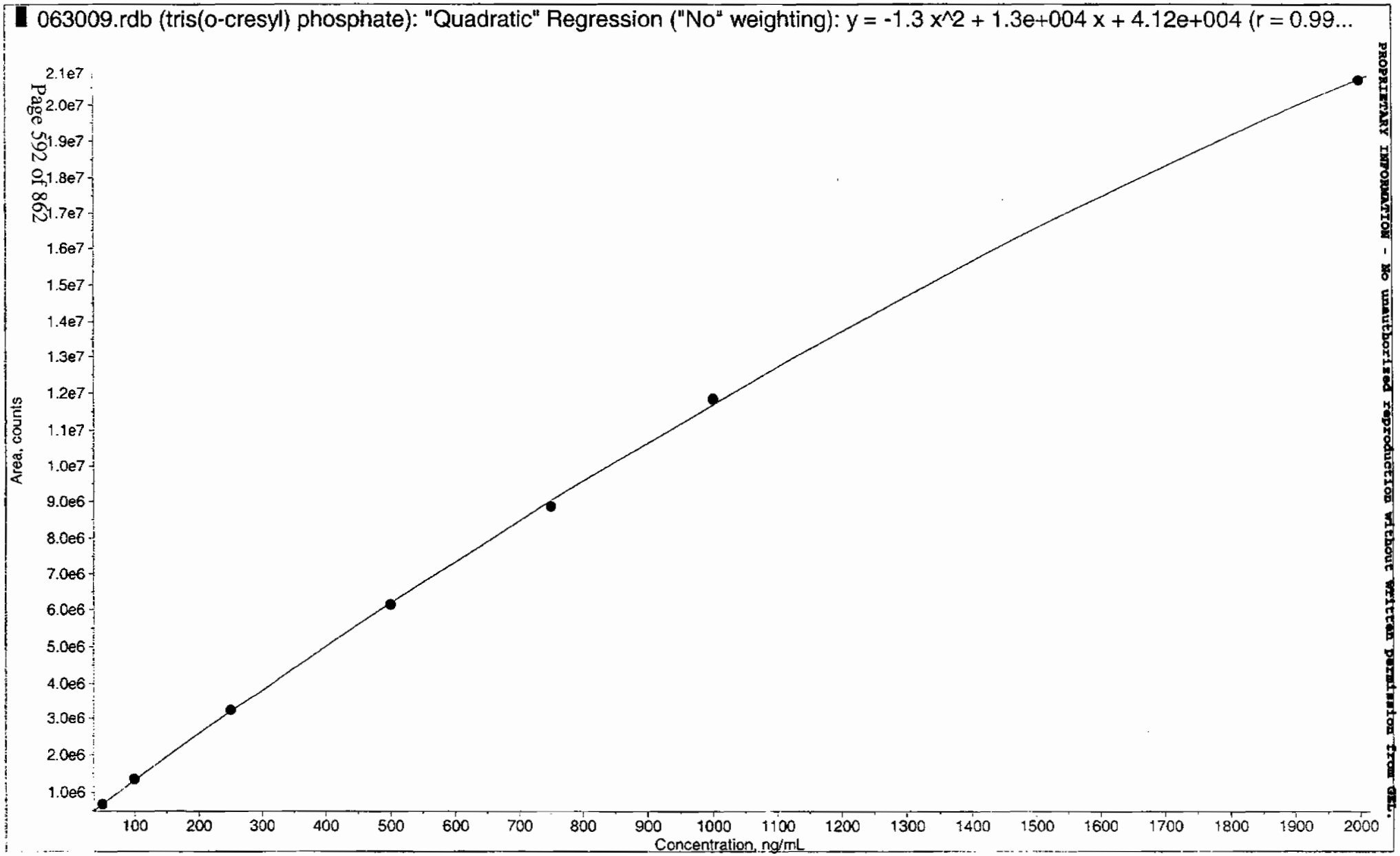

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7

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXS0630011.wiff

Analysis Date: 30-JUN-09 13:55

LCMSMS ID: 1358

Column ID JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	486	97	
2,6-Diamino-4-nitrotoluene	500	477	96	
3,4-Dinitrotoluene	250	246	99	
3,5-Dinitroaniline	500	490	98	
TATB	500	504	101	
tris(o-cresyl) phosphate	500	488	98	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090630-26ICV" Sample ID: "[1]LER" File: "EXS0630011.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 504. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:55:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 3.09e+005 counts
Height: 64704.208 cps
Start Time: 6.84 min
End Time: 7.52 min

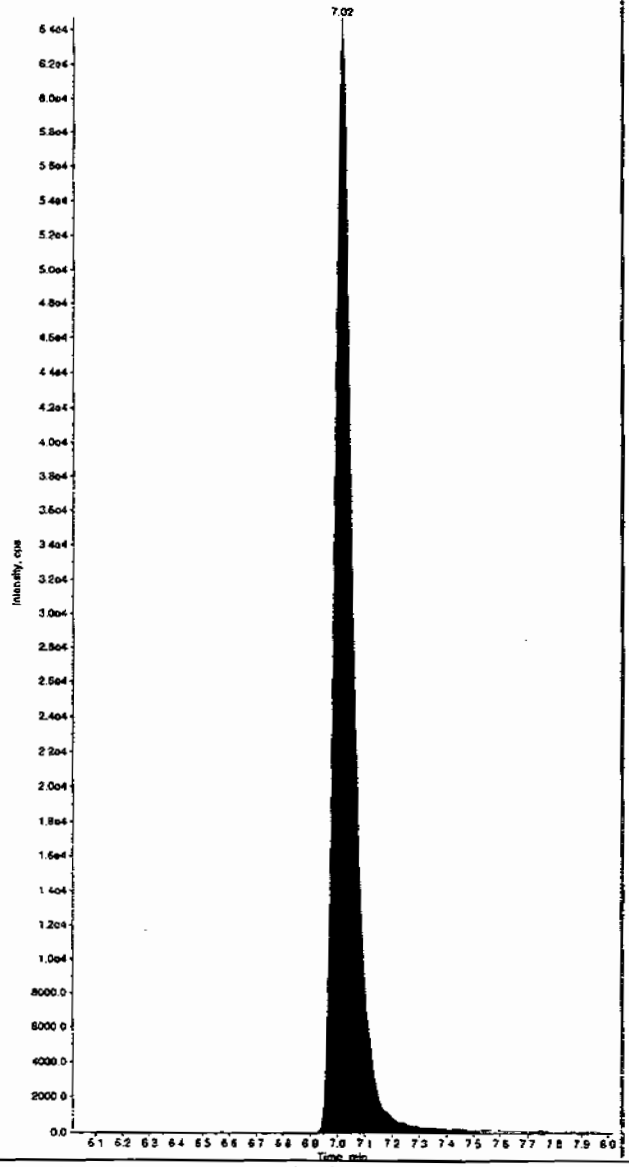

Sample Name: "WXX090630-26ICV" Sample ID: "[1]LER" File: "EXS0630011.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 490. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:55:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.25 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.25 min
Area: 6.17e+005 counts
Height: 143027.481 cps
Start Time: 8.15 min
End Time: 8.38 min

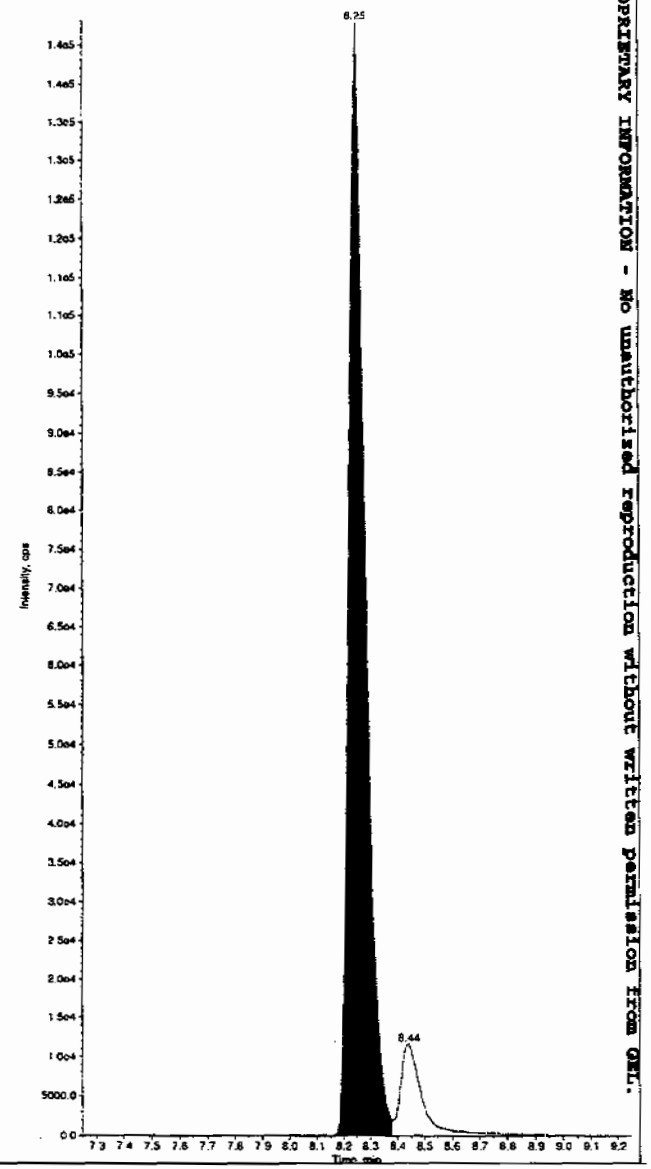

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-26ICV" Sample ID: "[1]LER" File: "EXS0630011.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 246. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:55:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.43 min
Area: 5.21e+005 counts
Height: 103200.233 cps
Start Time: 8.36 min
End Time: 9.13 min

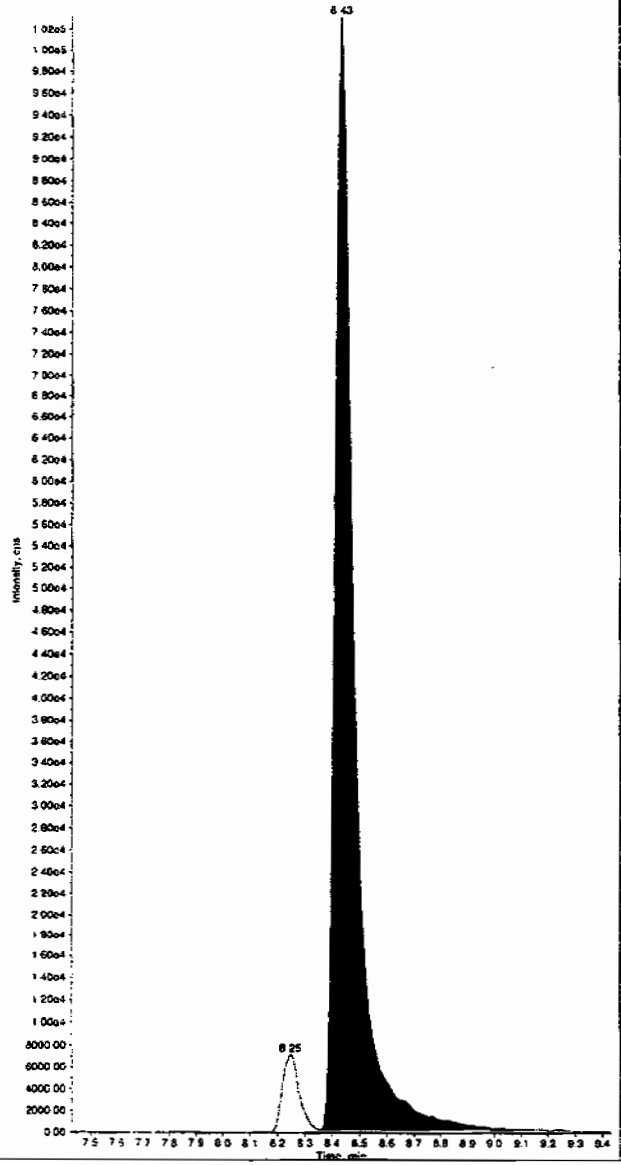

Sample Name: "WXX090630-26ICV" Sample ID: "[1]LER" File: "EXS0630011.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 477. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:55:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.09 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.09 min
Area: 9.66e+004 counts
Height: 20391.323 cps
Start Time: 5.00 min
End Time: 5.32 min

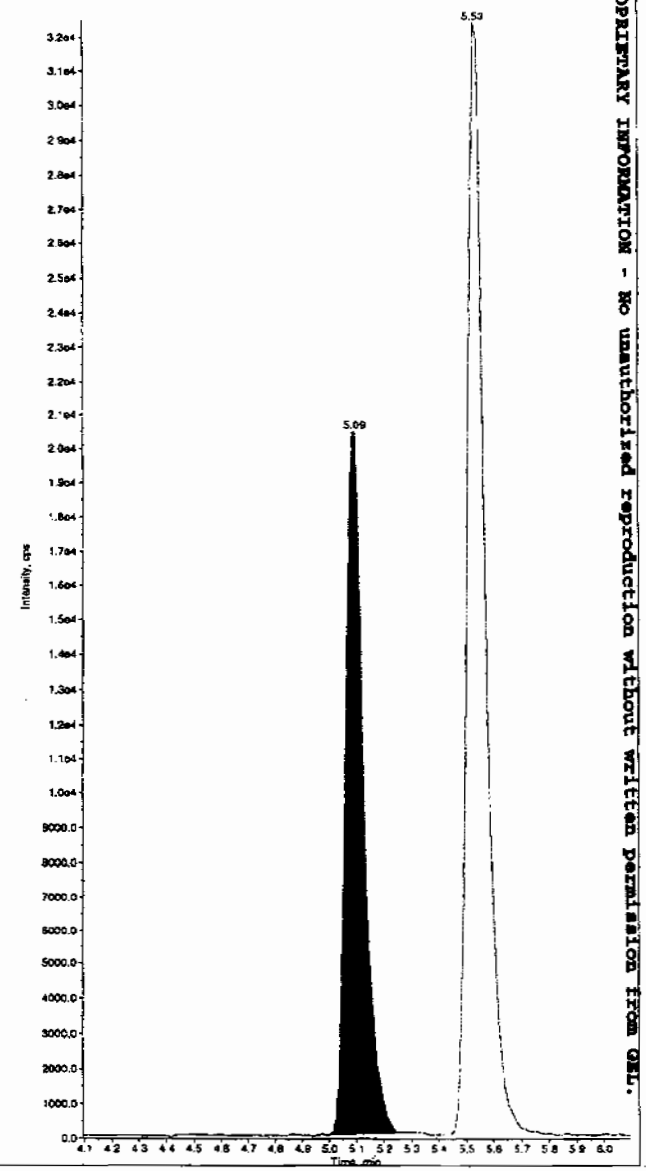

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-26ICV" Sample ID: "|1|LER" File: "EXS0630011.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 486. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:55:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 1.47e+005 counts
Height: 32381.222 cps
Start Time: 5.45 min
End Time: 5.82 min

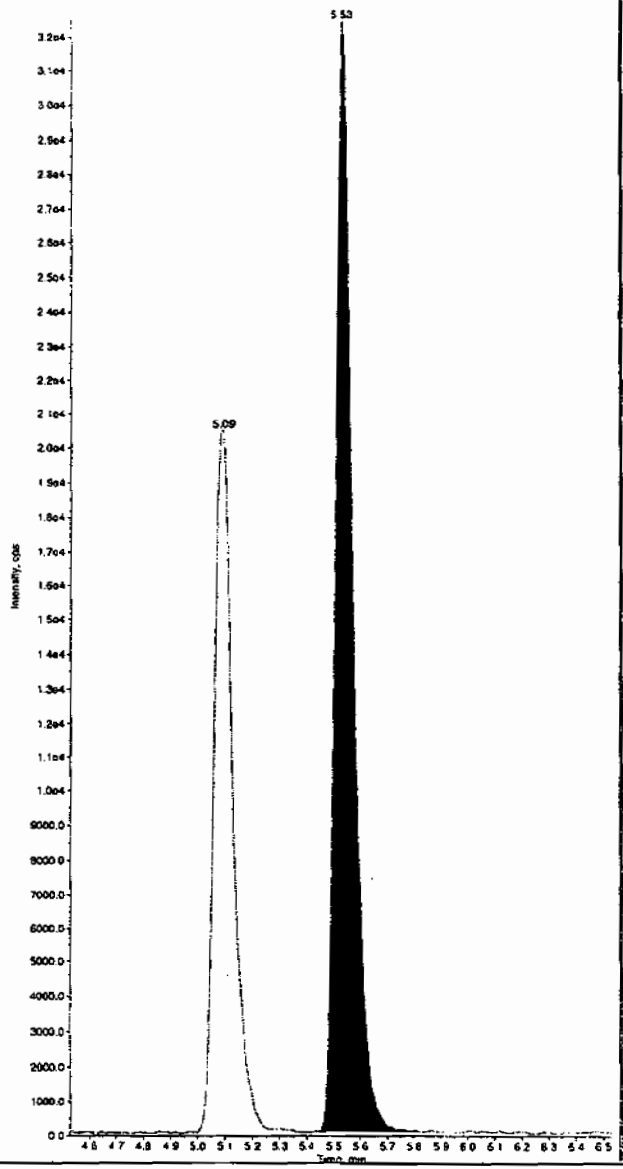

Sample Name: "WXX090630-26ICV" Sample ID: "|1|LER" File: "EXS0630011.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 488. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 1:55:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.06e+006 counts
Height: 1282150.635 cps
Start Time: 10.8 min
End Time: 11.2 min

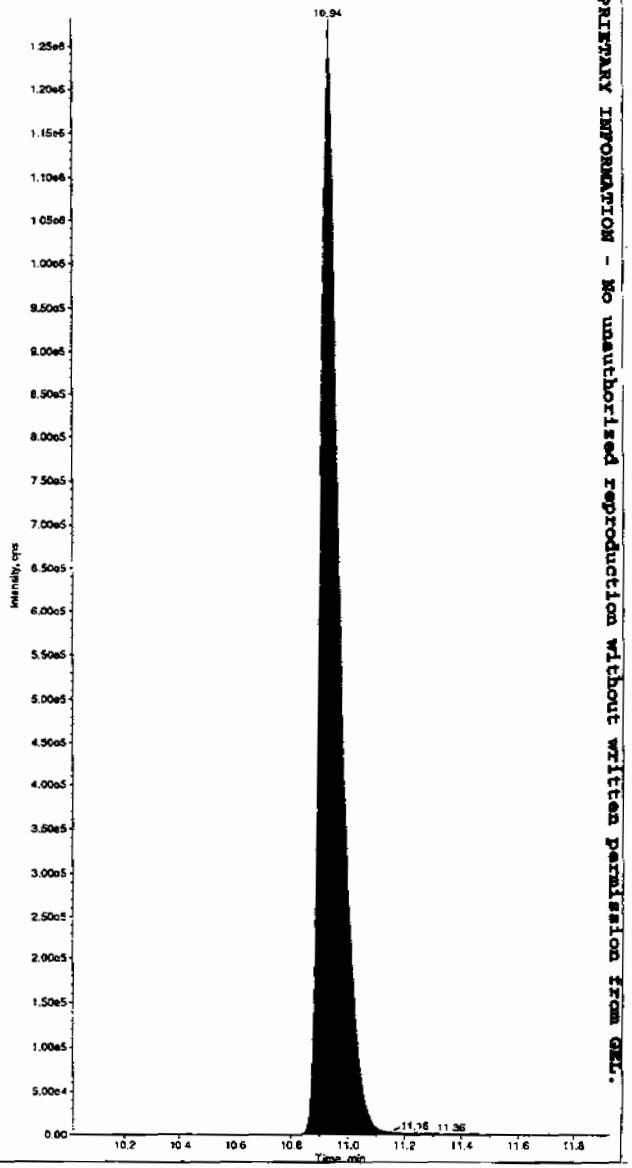

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2457

Lab Code: GEL

Run Date: 01-JUL-09,13-JUL-09,30-JUN-09

LCMSMS Instrument ID: LCMSMS4

Method: 8321A Modified

HPLC Column: YMC J-Sphere ODS-H80

Calibration Type: 2nd Order

Calibration Level:	19	20	21	22	23	24	25	X	X^2	Intercept	COD	Q
Data File:	EXS0701003.wiff	EXS0701004.wiff	EXS0701005.wiff	EXS0701006.wiff	EXS0701007.wiff	EXS0701008.wiff	EXS0701009.wiff					
Parmname:												
2,4-Diamino-6-nitrotoluene	15000	29200	71400	146000	222000	292000	563000	-1790	304	-.011	1	
2,6-Diamino-4-nitrotoluene	10100	21100	51400	102000	151000	210000	405000	-688	209	-.003	.9998	
3,4-Dinitrotoluene	49800	104000	265000	510000	767000	1080000	2130000	-11800	2280	-.14	.9993	
3,5-Dinitroaniline	75200	157000	380000	732000	1040000	1340000	2750000	28800	1340	.01	.9997	
TATB	32500	69200	176000	339000	497000	674000	1280000	-482	696	-.029	.9999	
tris(o-cresyl) phosphate	678000	1370000	3320000	6260000	9220000	12200000	21300000	13800	13400	-1.37	.9999	

Quadradic Fit: y = Ax^2 + Bx + C
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-482			
a1	696			
a2	-0.0288			

Correlation coefficient 0.9999
Use Area

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	2.88e+004			
a1	1.34e+003			
a2	0.00963			

Correlation coefficient 0.9997
Use Area

Peak Name: 34-Dinitrotoluene
No Internal Standard
Q1/Q3 Masses: 182.08/151.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-1.18e+004			
a1	2.28e+003			
a2	-0.14			

Correlation coefficient 0.9993
Use Area

Peak Name: 26-Diamino-4-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-688			
a1	209			
a2	-0.00284			

Correlation coefficient 0.9998
Use Area

Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

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Fit	Quadratic	Weighting	None	Iterate No
a0	-1.79e+003			
a1	304			
a2	-0.0109			

Correlation coefficient 1.0000
Use Area

Peak Name: tris(o-cresyl) phosphate
No Internal Standard
Q1/Q3 Masses: 369.15/91.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	1.38e+004			
a1	1.34e+004			
a2	-1.37			

Correlation coefficient 0.9999
Use Area

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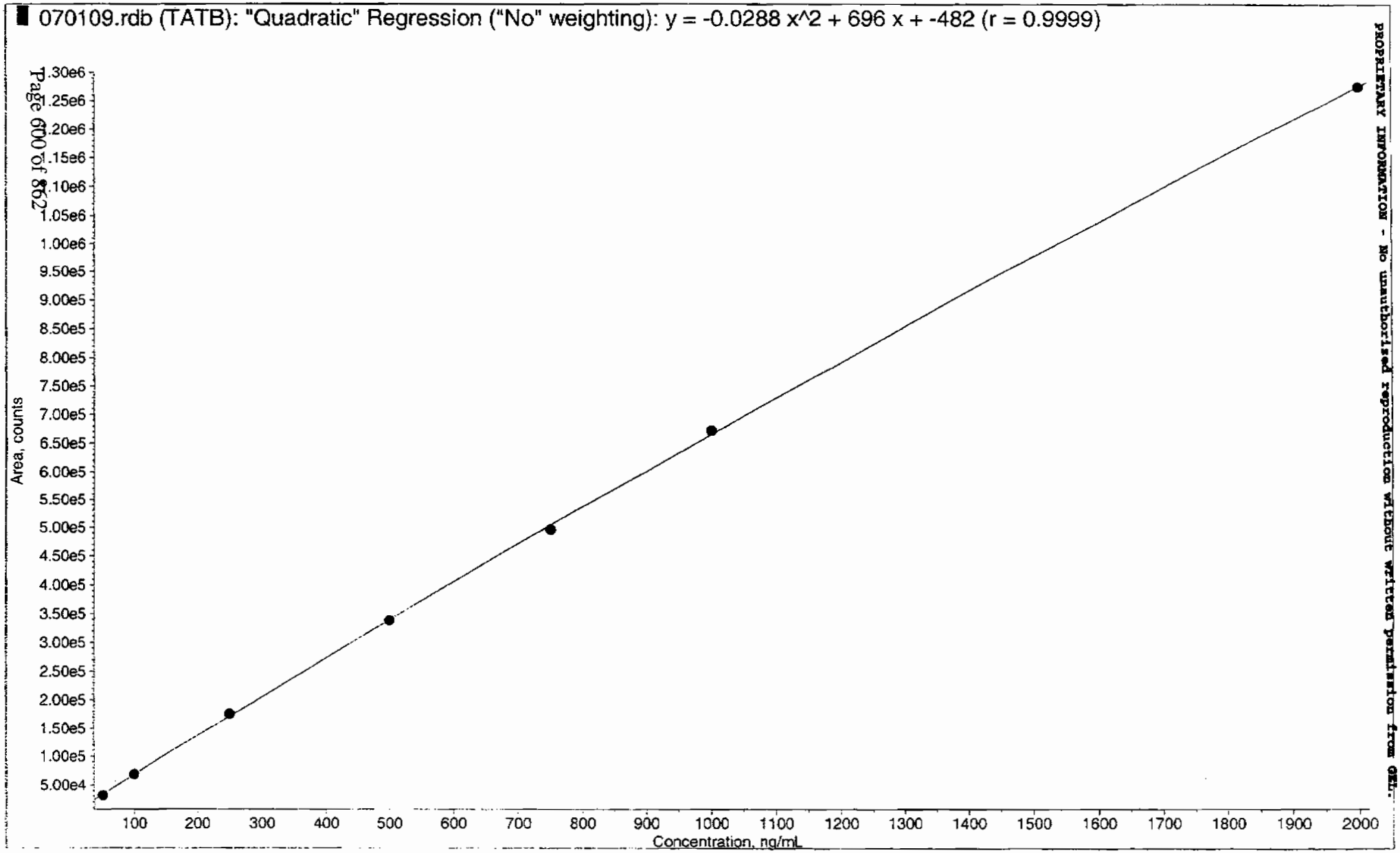

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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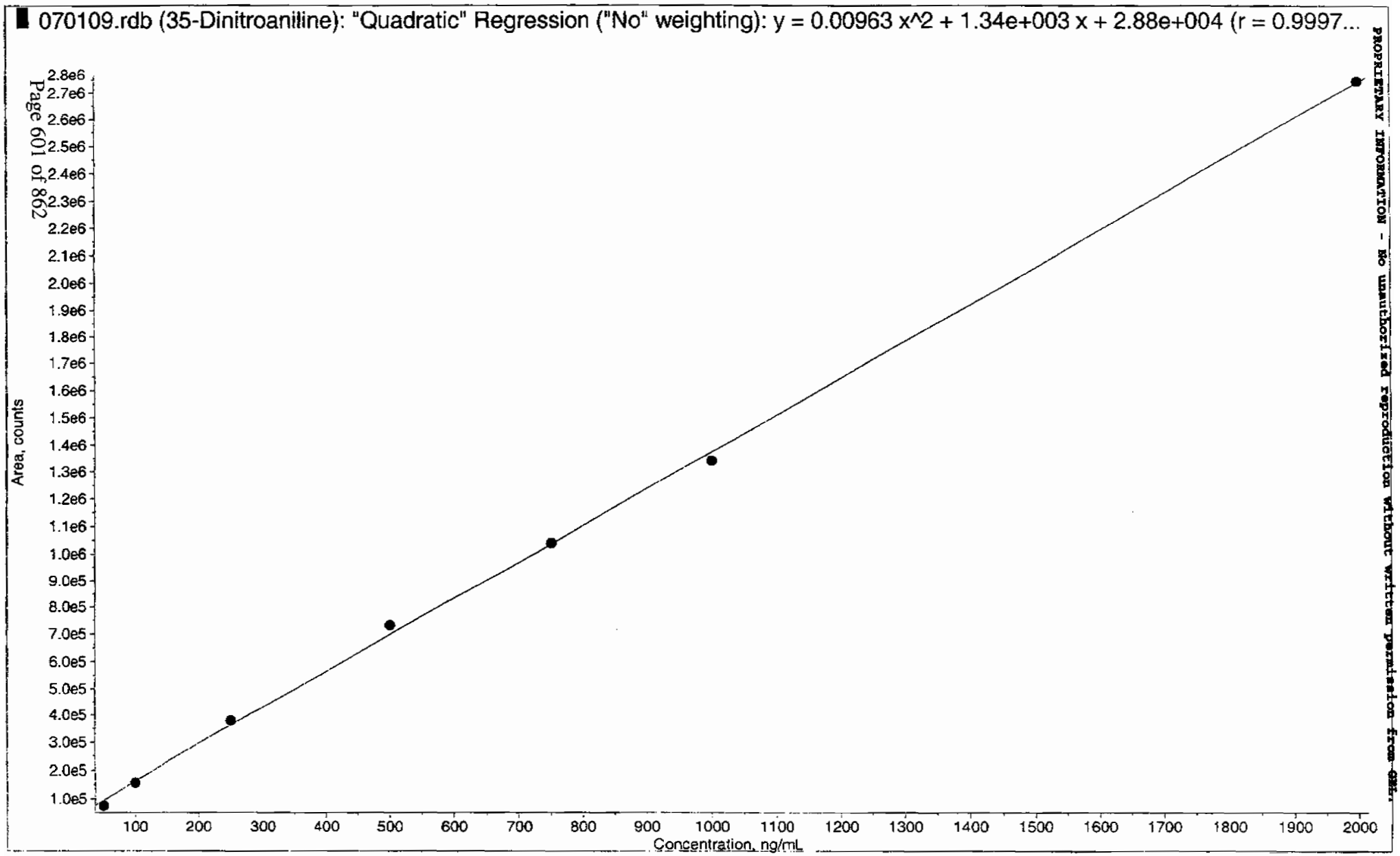

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070109.rdb (34-Dinitrotoluene): "Quadratic" Regression ("No" weighting): y = -0.14 x^2 + 2.28e+003 x + -1.18e+004 (r = 0.9993)

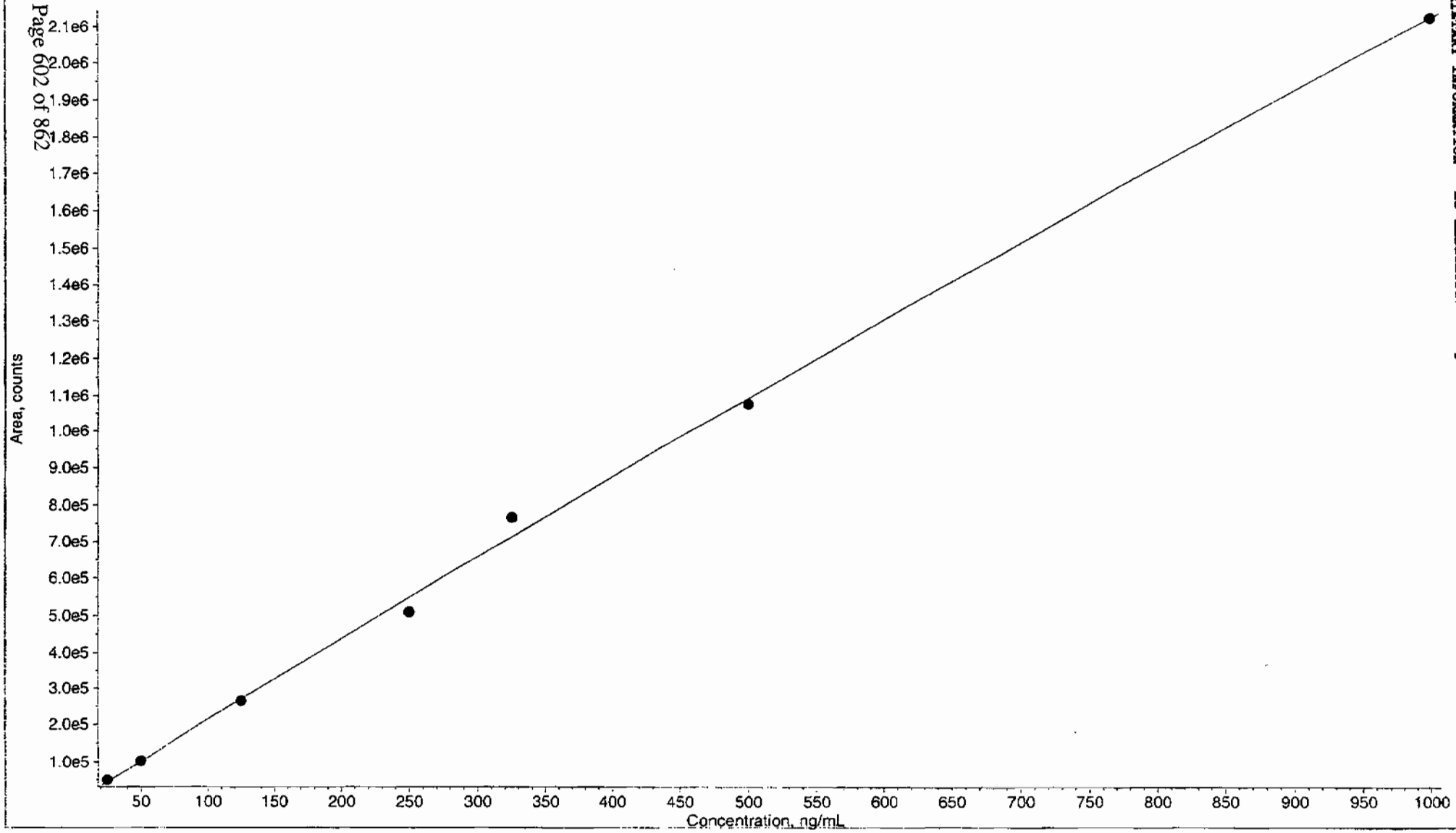

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

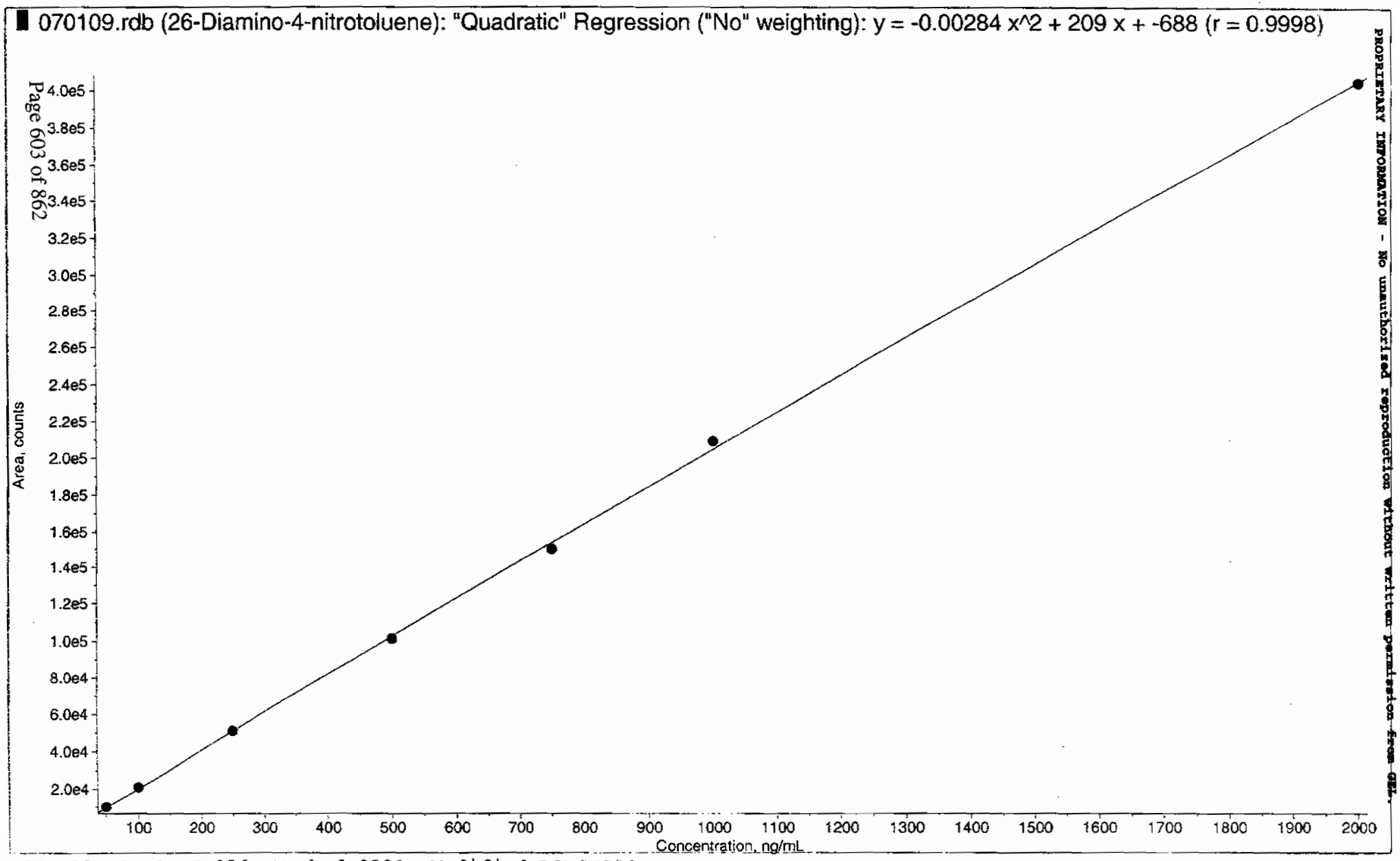

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

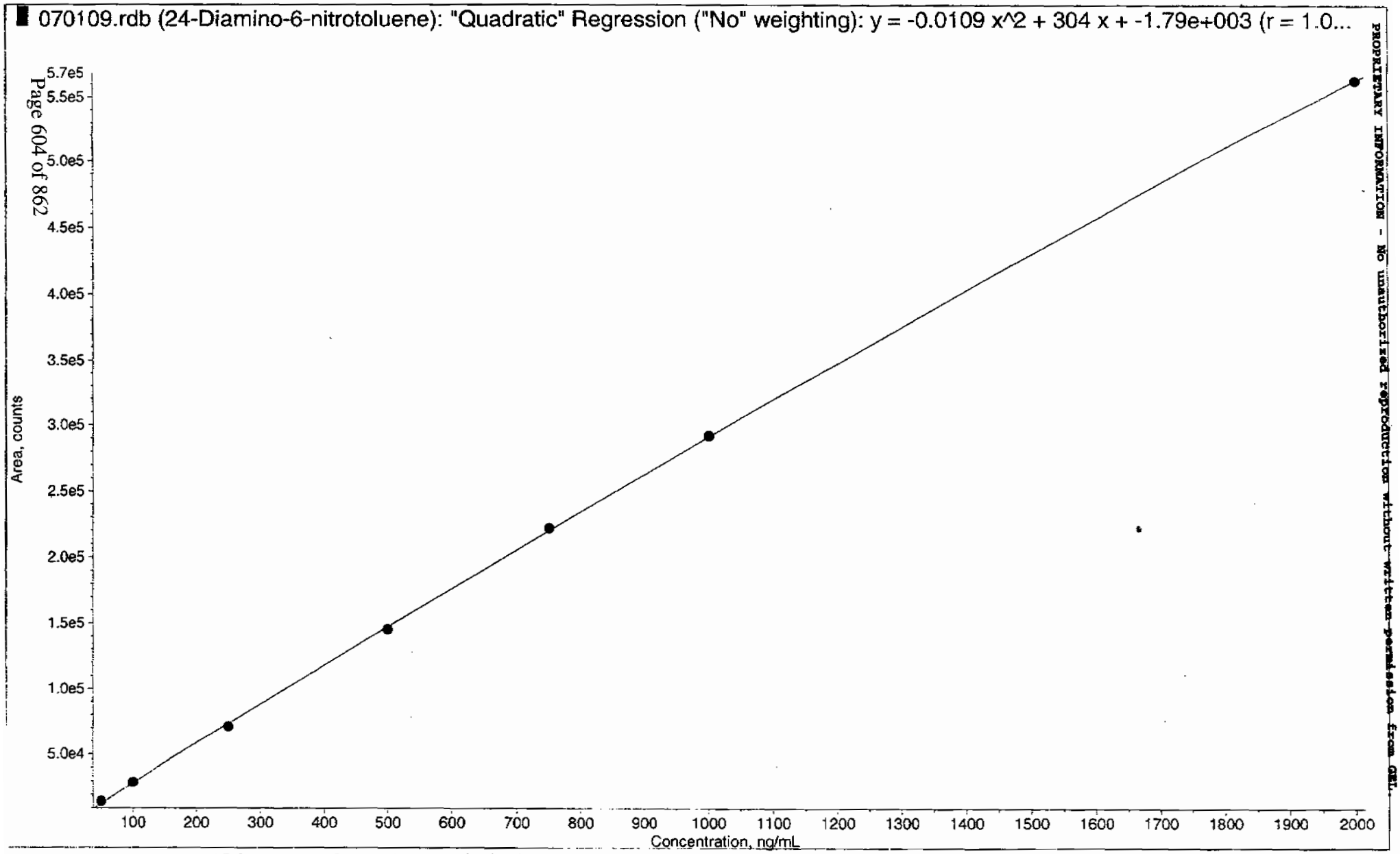

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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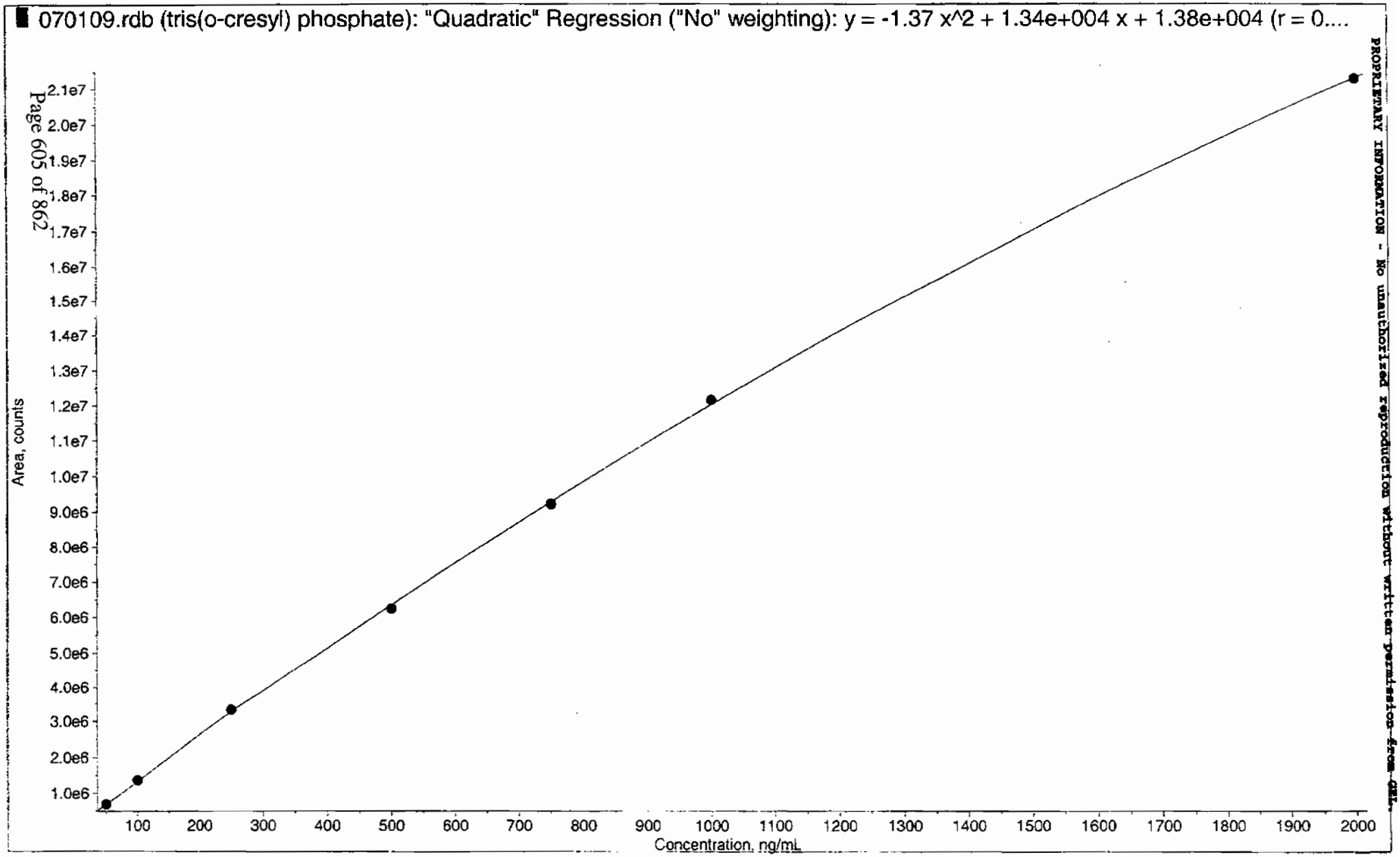

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXS0701011.wiff

Analysis Date: 01-JUL-09 13:21

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	473	95	
2,6-Diamino-4-nitrotoluene	500	495	99	
3,4-Dinitrotoluene	250	239	96	
3,5-Dinitroaniline	500	456	91	
TATB	500	478	96	
tris(o-cresyl) phosphate	500	497	99	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090701-26ICV" Sample ID: "|1|LER" File: "EXS0701011.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 478. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:21:31 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.04 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.04 min
Area: 3.26e+005 counts
Height: 62333.988 cps
Start Time: 6.91 min
End Time: 7.51 min

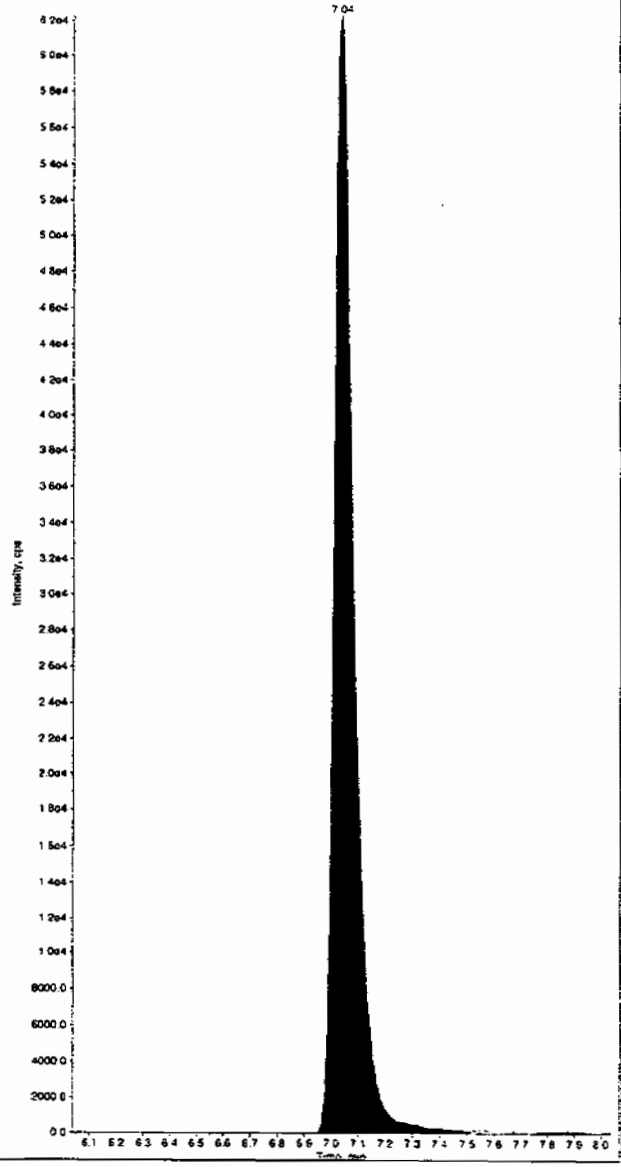

Sample Name: "WXX090701-26ICV" Sample ID: "|1|LER" File: "EXS0701011.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 456. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:21:31 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.26 min
Area: 6.40e+005 counts
Height: 143974.014 cps
Start Time: 8.16 min
End Time: 8.40 min

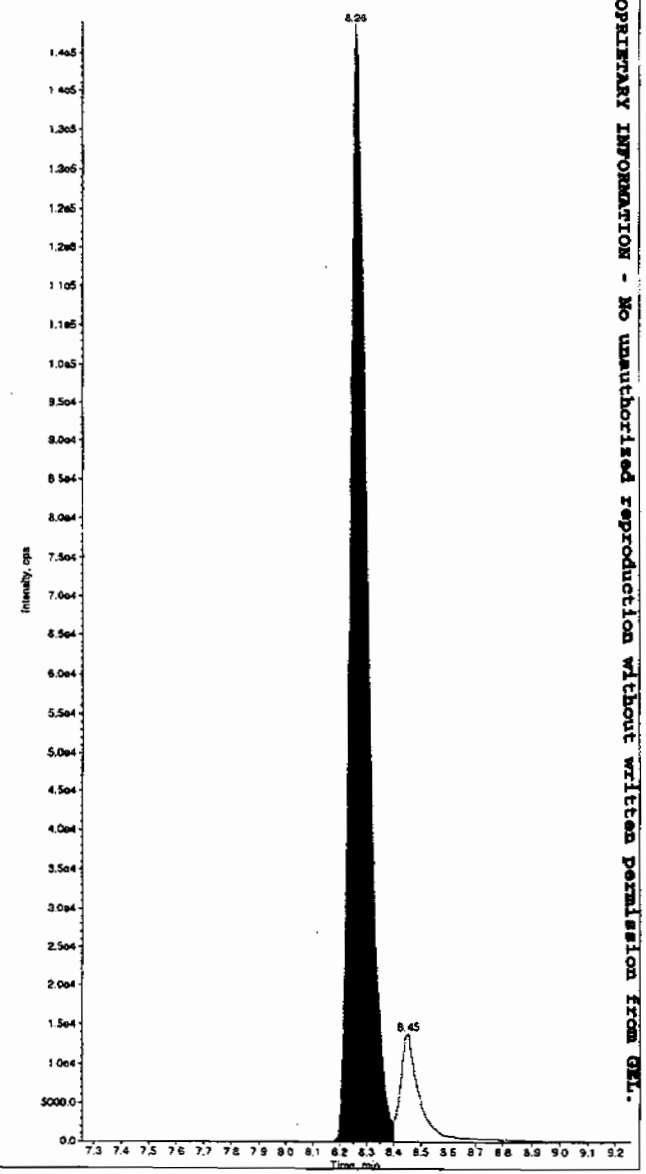

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-26ICV" Sample ID: "|1|LER" File: "EXS0701011.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 239. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:21:31 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.44 min
Area: 5.25e+005 counts
Height: 99715.485 cps
Start Time: 8.37 min
End Time: 9.51 min

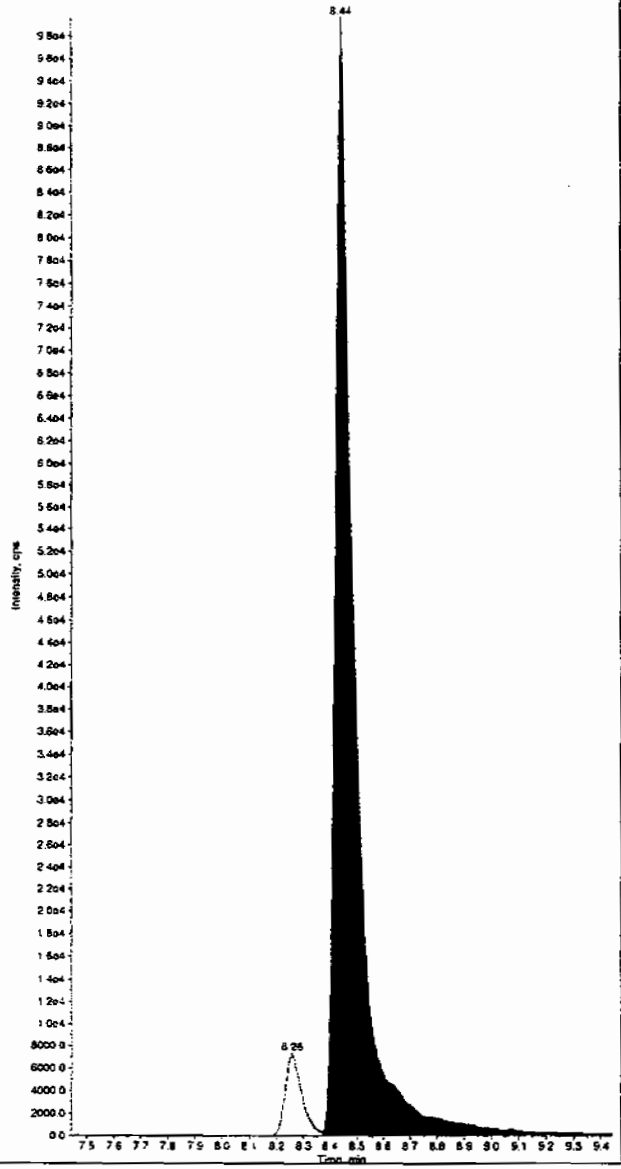

Sample Name: "WXX090701-26ICV" Sample ID: "|1|LER" File: "EXS0701011.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 495. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:21:31 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.08 min
Area: 1.02e+005 counts
Height: 21050.850 cps
Start Time: 5.00 min
End Time: 5.36 min

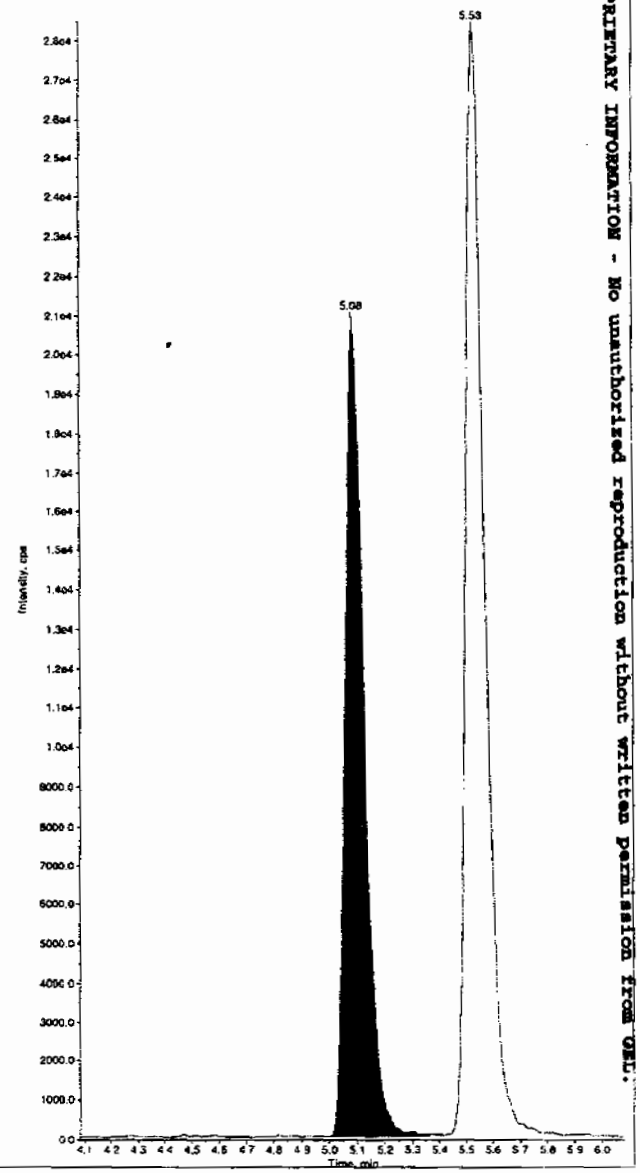

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-26ICV" Sample ID: "[1]LER" File: "EXS0701011.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 473. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:21:31 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 1.40e+005 counts
Height: 28374.369 cps
Start Time: 5.45 min
End Time: 5.84 min

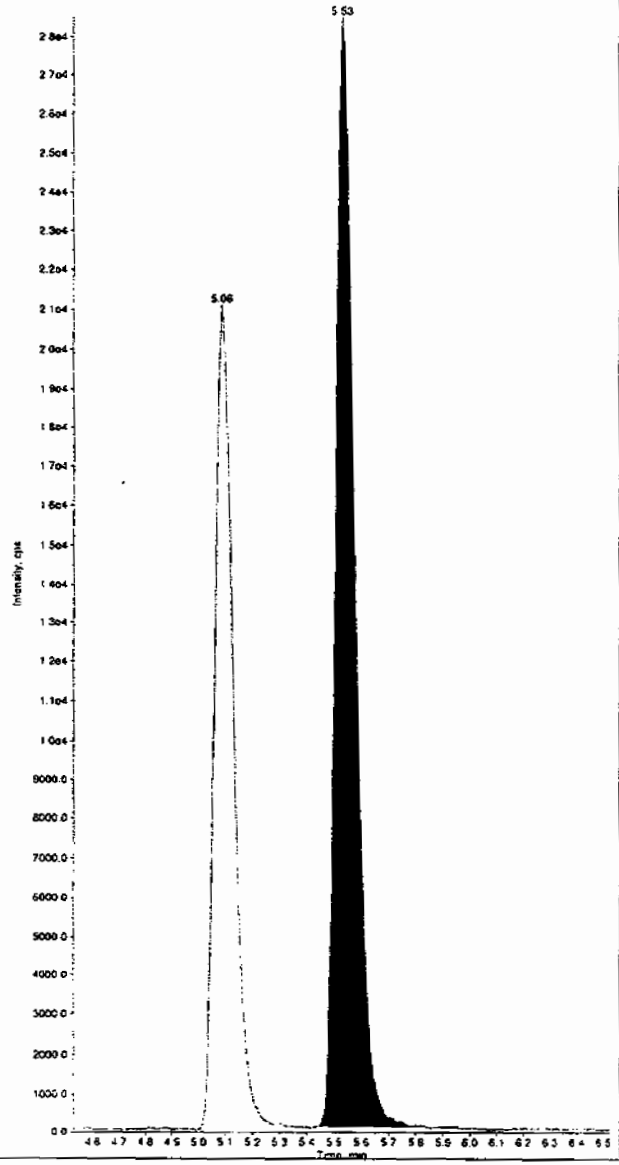

Sample Name: "WXX090701-26ICV" Sample ID: "[1]LER" File: "EXS0701011.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 497. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:21:31 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.33e+006 counts
Height: 1395938.477 cps
Start Time: 10.8 min
End Time: 11.2 min

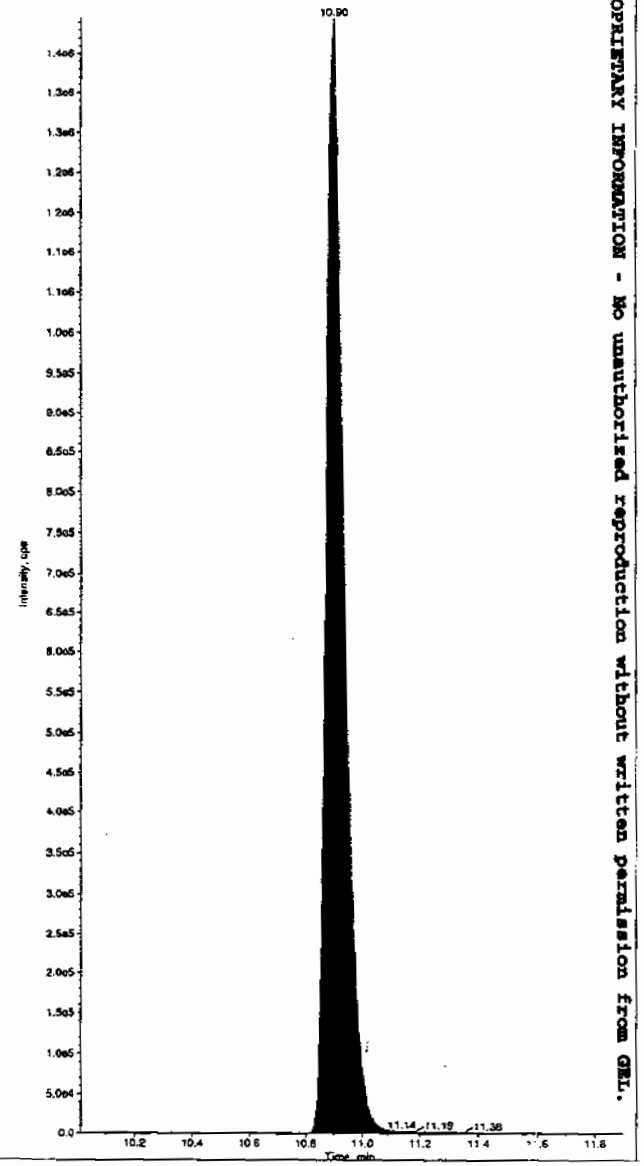

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630012a

Analysis Date: 30-JUN-09 20:02

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	45.95	115	
1,3-Dinitrobenzene-d4	500	485.668	97	
2,4,6-Trinitrotoluene	40	40.177	100	
2,4-Dinitrotoluene	40	38.742	97	
2,6-Dinitrotoluene	40	39.857	100	
2,6-Dinitrotoluene-d3	500	497.017	99	
2-Amino-4,6-dinitrotoluene	40	41.294	103	
3,4-Dinitrotoluene	20	20.083	100	
4-Amino-2,6-dinitrotoluene	40	38.576	96	
HMX	40	39.157	98	
Nitrobenzene	40	43.302	108	
PETN	40	56.487	141	*
RDX	40	39.591	99	
Tetryl	40	39.027	98	
m-Dinitrobenzene	40	39.032	98	
m-Nitrotoluene	40	35.432	89	
o-Nitrotoluene	40	37.23	93	
p-Nitrotoluene	40	38.586	96	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630012a
Date: 30-Jun-2009
Time: 20:02:31
ID: WXX090630-08CRI
Vial: 1:1,C

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.303e+004

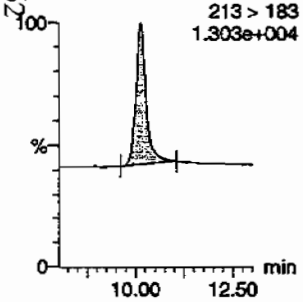

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.441e+003

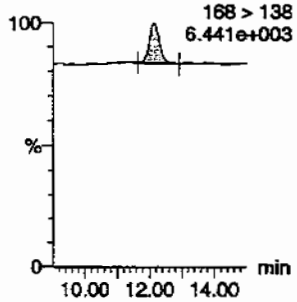

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.690e+004

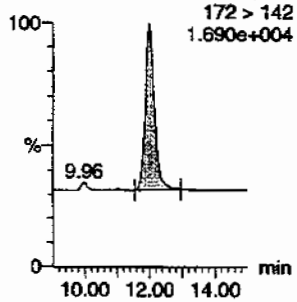

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.217e+004

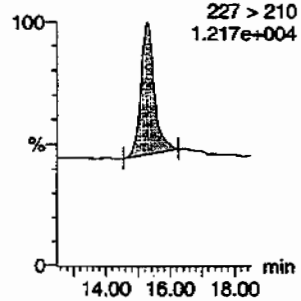

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.127e+004

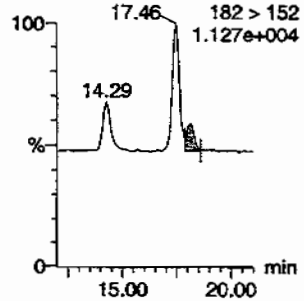

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.127e+004

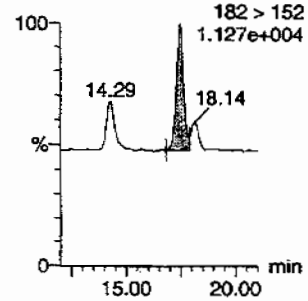

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.941e+004

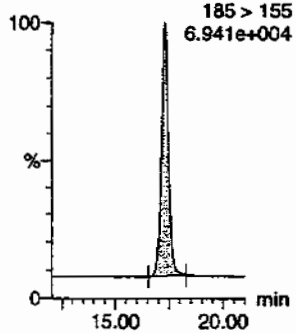

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.170e+003

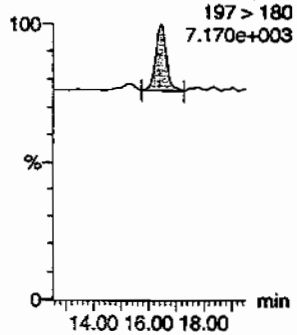

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.752e+003

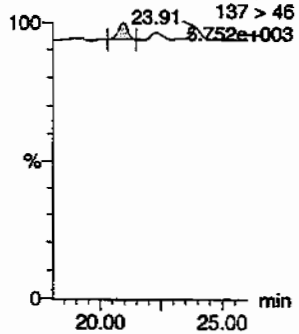

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.127e+004

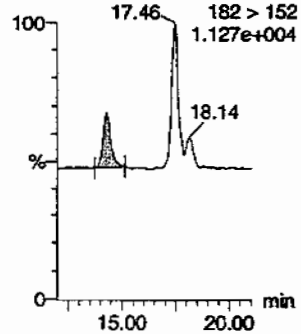

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.752e+003

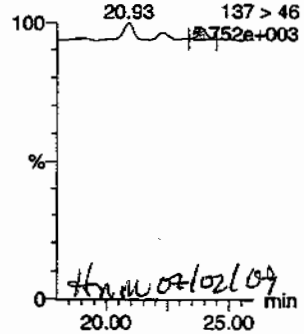

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
6.791e+003

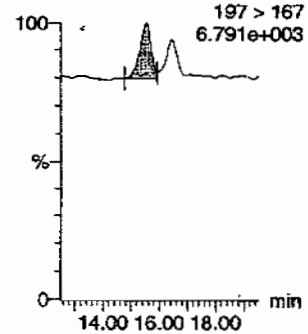

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

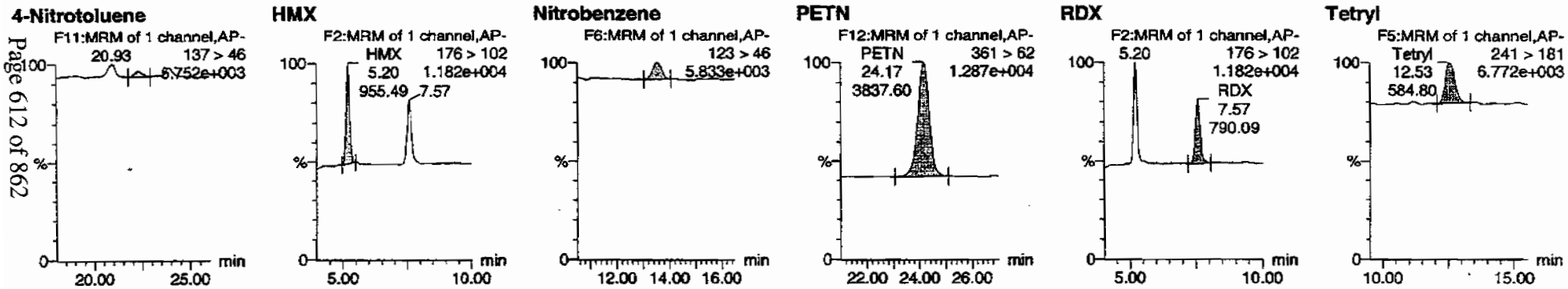

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc	%Rec	%Dev	S/N
WXX090630-08CRI	HMX	176 > 102	5.20	955.486	3721.859	955.486	128.361	bb			39.1574	97.9	-2.1	175.6
WXX090630-08CRI	RDX	176 > 102	7.57	790.090	3721.859	790.090	106.142	bb			39.5907	99.0	-1.0	111.8
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2301.161	3721.859	2301.161	309.141	bb			45.9504	114.9	14.9	332.7
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3721.859		3721.859	3721.859	bb			485.6678	97.1	-2.9	146.0
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	391.202	3721.859	391.202	52.555	bb			39.0324	97.6	-2.4	46.8
WXX090630-08CRI	Tetryl	241 > 181	12.53	584.797	3721.859	584.797	78.562	bb			39.0266	97.6	-2.4	51.8
WXX090630-08CRI	Nitrobenzene	123 > 46	13.58	200.531	3721.859	200.531	26.940	bb			43.3022	108.3	8.3	39.3
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.55	621.683	23824.459	621.683	13.047	MM	01-Jul-09	09:23:17	38.5763	96.4	-3.6	54.9
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.43	778.742	23824.459	778.742	16.343	bb			41.2937	103.2	3.2	36.8
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.27	3164.651	23824.459	3164.651	66.416	bb			40.1767	100.4	0.4	155.1
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.29	931.868	23824.459	931.868	19.557	bb			20.0834	100.4	0.4	36.8
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.46	2226.119	23824.459	2226.119	46.719	MM	01-Jul-09	09:30:04	39.8574	99.6	-0.4	97.9
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.14	483.876	23824.459	483.876	10.155	MM	01-Jul-09	09:33:51	38.7424	96.9	-3.1	20.6
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.28	23824.459		23824.459	23824.459	bb			497.0173	99.4	-0.6	1550.2
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.93	162.702	23824.459	162.702	3.415	bb			37.2295	93.1	-6.9	37.2
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.28	88.821	23824.459	88.821	1.864	bb			38.5860	96.5	-3.5	17.4
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.91	98.704	23824.459	98.704	2.071	bb			35.4319	88.6	-11.4	25.4
WXX090630-08CRI	PETN	361 > 62	24.17	3837.604	23824.459	3837.604	80.539	bb			56.4865	141.2	41.2	1045.2

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 06/30/09
Time of Injection 2002
Standard Number WXX090630-08CRI
Data File EXP0630012a

HMX		97.9
RDX		99.0
135-TNB		114.9
13-DNB		97.6
Tetryl		97.6
Nitrobenzene		108.3
4A-26-DNT		96.4
2A-46-DNT		103.2
246-TNT		100.4
34-DNT(surr)		100.4
26-DNT		99.6
24-DNT		96.9
2-NT		93.1
4-NT		96.5
3-NT		88.6
PETN		141.2
Total		1631.6
Average		102.0

HMM 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0630019a

Analysis Date: 30-JUN-09 23:28

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	535.523	89	
1,3-Dinitrobenzene-d4	500	471.441	94	
2,4,6-Trinitrotoluene	600	637.323	106	
2,4-Dinitrotoluene	600	612.726	102	
2,6-Dinitrotoluene	600	598.012	100	
2,6-Dinitrotoluene-d3	500	470.842	94	
2-Amino-4,6-dinitrotoluene	600	628.093	105	
3,4-Dinitrotoluene	300	309.784	103	
4-Amino-2,6-dinitrotoluene	600	599.37	100	
HMX	600	572.104	95	
Nitrobenzene	600	560.784	93	
PETN	600	574.387	96	
RDX	600	634.358	106	
Tetryl	600	544.656	91	
m-Dinitrobenzene	600	577.787	96	
m-Nitrotoluene	600	559.139	93	
o-Nitrotoluene	600	565.054	94	
p-Nitrotoluene	600	545.606	91	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630019a
Date: 30-Jun-2009
Time: 23:28:50
ID: WXX090630-07CCV
Vial: 1:1,B

MAT 7/1/09

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135-Trinitrobenzene

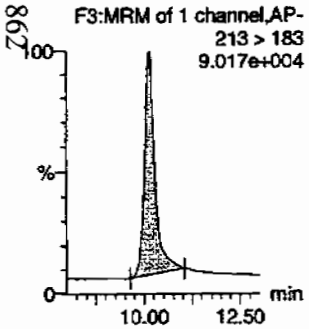

13-Dinitrobenzene

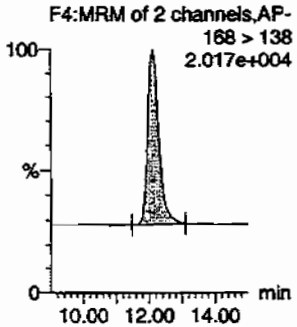

13-Dinitrobenzene-d4

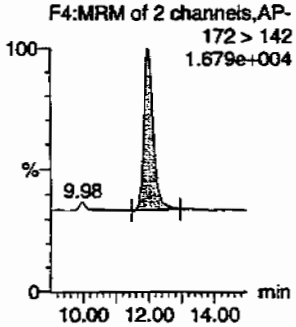

246-Trinitrotoluene

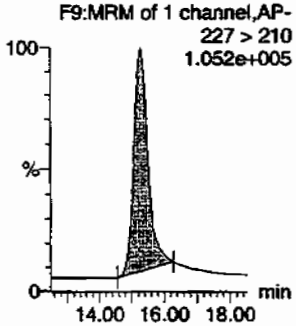

24-dinitrotoluene

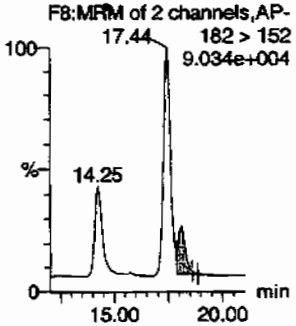

26-dinitrotoluene

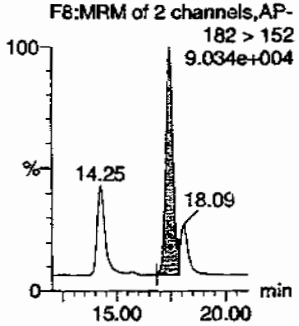

26-dinitrotoluene-d3

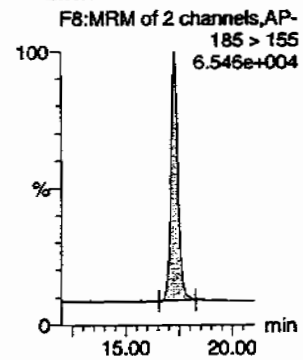

2-Amino-46-dinitrotoluene

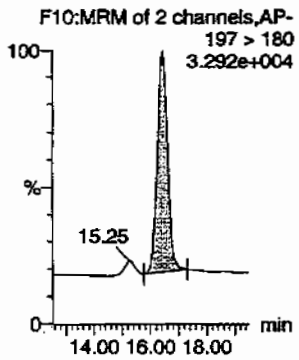

2-Nitrotoluene

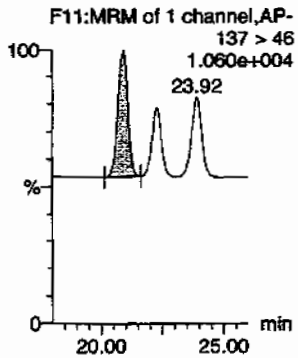

34-dinitrotoluene

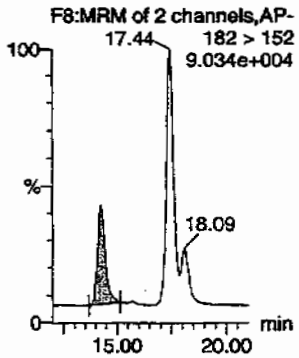

3-Nitrotoluene

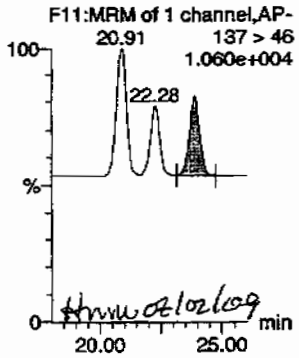

hmw 07/02/09

4-Amino-26-dinitrotoluene

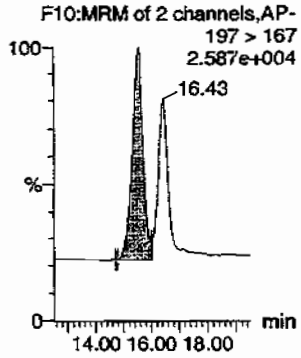

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

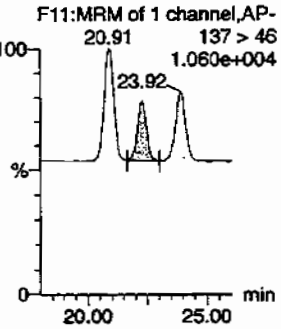

HMX

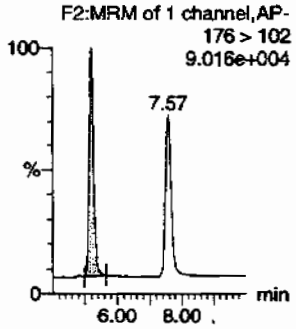

Nitrobenzene

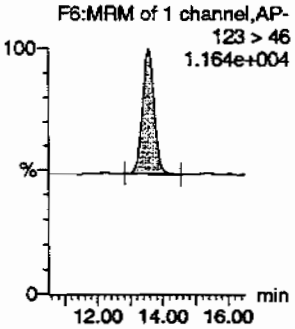

PETN

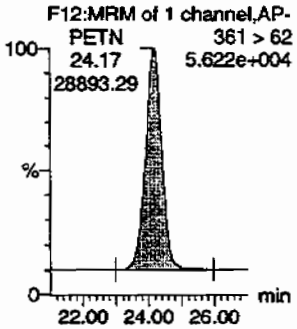

RDX

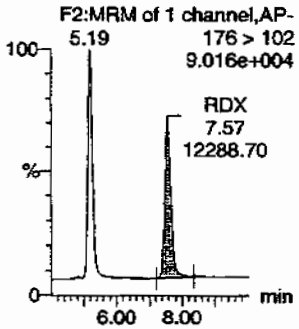

Tetryl

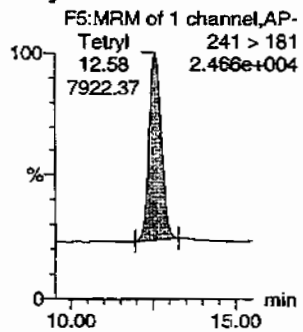

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modified	Modtime	Conc	%Rec	%Dev	S/N
WXX090630-07CCV	HMX	176 > 102	5.19	13551.079	3612.833	13551.079	1875.409	bb			572.1043	95.4	-4.6	2247.5
WXX090630-07CCV	RDX	176 > 102	7.57	12288.702	3612.833	12288.702	1700.702	bb			634.3585	105.7	5.7	1593.9
WXX090630-07CCV	135-Trinitrobenzene	213 > 183	10.14	26032.984	3612.833	26032.984	3602.849	bb			535.5228	89.3	-10.7	1248.5
WXX090630-07CCV	13-Dinitrobenzene-d4	172 > 142	12.00	3612.833		3612.833	3612.833	bb			471.4409	94.3	-5.7	273.6
WXX090630-07CCV	13-Dinitrobenzene	168 > 138	12.14	5621.237	3612.833	5621.237	777.954	bb			577.7874	96.3	-3.7	443.5
WXX090630-07CCV	Tetryl	241 > 181	12.58	7922.374	3612.833	7922.374	1096.421	bb			544.6565	90.8	-9.2	797.5
WXX090630-07CCV	Nitrobenzene	123 > 46	13.54	2520.901	3612.833	2520.901	348.881	bb			560.7842	93.5	-6.5	201.8
WXX090630-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.56	9150.542	22569.742	9150.542	202.717	MM	01-Jul-09	09:24:02	599.3704	99.9	-0.1	372.6
WXX090630-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.43	11221.137	22569.742	11221.137	248.588	bb			628.0929	104.7	4.7	404.3
WXX090630-07CCV	246-Trinitrotoluene	227 > 210	15.28	47557.051	22569.742	47557.051	1053.558	bb			637.3233	106.2	6.2	1156.7
WXX090630-07CCV	34-dinitrotoluene	182 > 152	14.25	13616.949	22569.742	13616.949	301.664	bb			309.7836	103.3	3.3	621.2
WXX090630-07CCV	26-dinitrotoluene	182 > 152	17.44	31641.225	22569.742	31641.225	700.966	MM	01-Jul-09	09:30:43	598.0124	99.7	-0.3	1589.2
WXX090630-07CCV	24-dinitrotoluene	182 > 152	18.09	7249.658	22569.742	7249.658	160.606	MM	01-Jul-09	09:34:38	612.7263	102.1	2.1	339.5
WXX090630-07CCV	26-dinitrotoluene-d3	185 > 155	17.27	22569.742		22569.742	22569.742	bb			470.8418	94.2	-5.8	1231.8
WXX090630-07CCV	2-Nitrotoluene	137 > 46	20.91	2339.370	22569.742	2339.370	51.825	bb			565.0543	94.2	-5.8	172.8
WXX090630-07CCV	4-Nitrotoluene	137 > 46	22.28	1189.785	22569.742	1189.785	26.358	bb			545.6058	90.9	-9.1	92.5
WXX090630-07CCV	3-Nitrotoluene	137 > 46	23.92	1475.583	22569.742	1475.583	32.689	bb			559.1389	93.2	-6.8	107.0
WXX090630-07CCV	PETN	361 > 62	24.17	28893.295	22569.742	28893.295	640.089	bb			574.3872	95.7	-4.3	5373.2

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 06/30/09
Time of Injection 2328
Standard Number WXX090630-07CCV
Data File EXP0630019a

HMX		95.4
RDX		105.7
135-TNB		89.3
13-DNB		96.3
Tetryl		90.8
Nitrobenzene		93.5
4A-26-DNT		99.9
2A-46-DNT		104.7
246-TNT		106.2
34-DNT(surr)		103.3
26-DNT		99.7
24-DNT		102.1
2-NT		94.2
4-NT		90.9
3-NT		93.2
PETN		95.7
Total		1560.9
Average		97.6

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ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630021a

Analysis Date: 01-JUL-09 00:27

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	44.305	111	
1,3-Dinitrobenzene-d4	500	478.13	96	
2,4,6-Trinitrotoluene	40	41.853	105	
2,4-Dinitrotoluene	40	43.963	110	
2,6-Dinitrotoluene	40	42.052	105	
2,6-Dinitrotoluene-d3	500	493.141	99	
2-Amino-4,6-dinitrotoluene	40	38.801	97	
3,4-Dinitrotoluene	20	18.989	95	
4-Amino-2,6-dinitrotoluene	40	40.488	101	
HMX	40	42.219	106	
Nitrobenzene	40	43.523	109	
PETN	40	53.296	133	*
RDX	40	44.401	111	
Tetryl	40	36.234	91	
m-Dinitrobenzene	40	45.237	113	
m-Nitrotoluene	40	40.958	102	
o-Nitrotoluene	40	40.977	102	
p-Nitrotoluene	40	32.697	82	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630021a
Date: 01-Jul-2009
Time: 00:27:45
ID: WXX090630-08CRI
Vial: 1:1,C

MM 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.277e+004

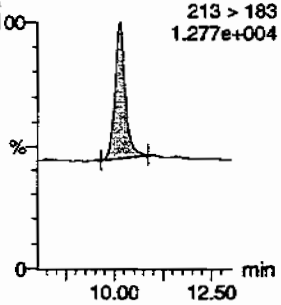

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.649e+003

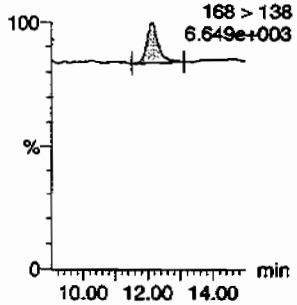

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.691e+004

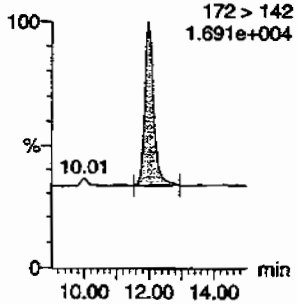

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.264e+004

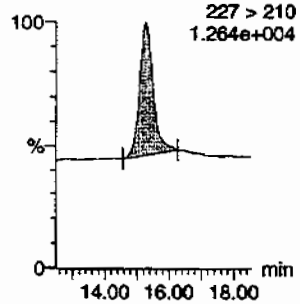

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.193e+004

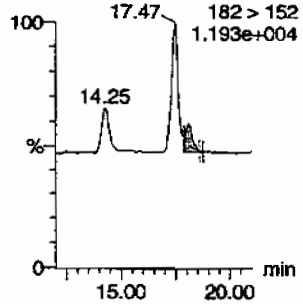

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.193e+004

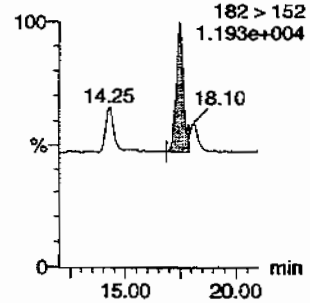

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.840e+004

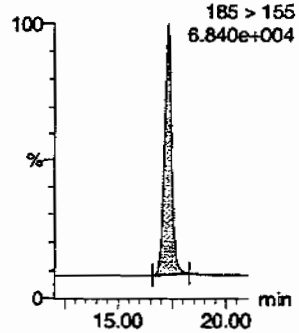

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.489e+003

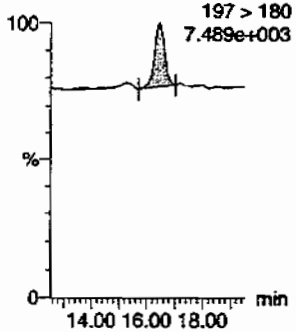

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
8.997e+003

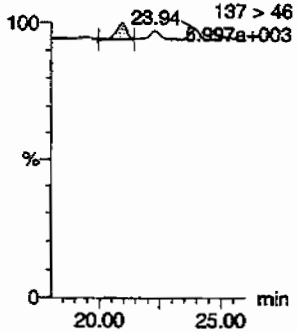

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.193e+004

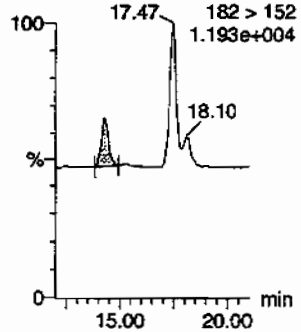

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
8.997e+003

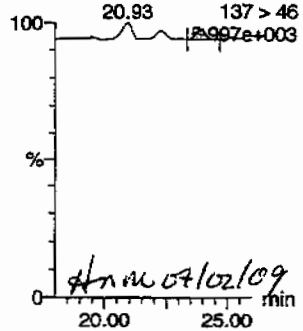

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.107e+003

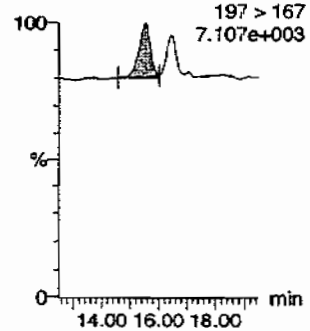

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

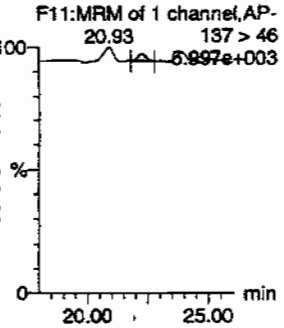

HMX

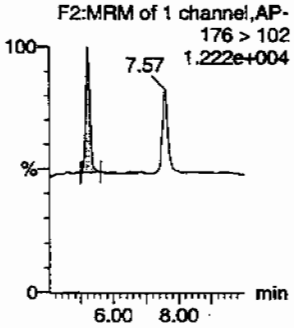

Nitrobenzene

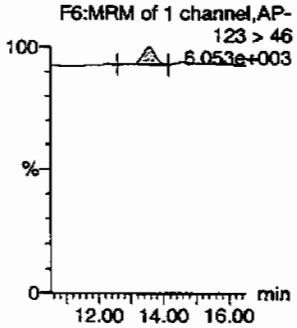

PETN

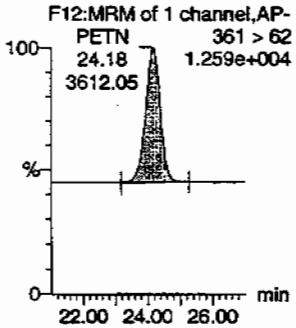

RDX

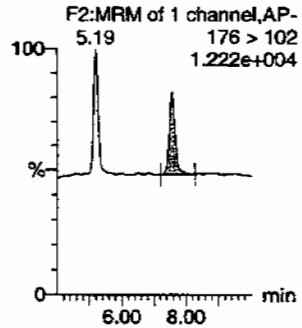

Tetryl

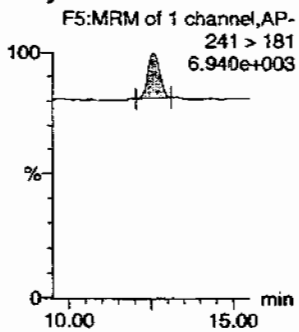

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modified	Mod Time	Amount	%Rec	%Dev	S/N
WXX090630-08CRI	HMX	176 > 102	5.19	1014.208	3664.093	1014.208	138.398	bb			42.2192	105.5	5.5	198.7
WXX090630-08CRI	RDX	176 > 102	7.57	872.324	3664.093	872.324	119.037	bb			44.4005	111.0	11.0	132.1
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2184.347	3664.093	2184.347	298.075	bb			44.3054	110.8	10.8	235.0
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3664.093		3664.093	3664.093	bb			478.1298	95.6	-4.4	164.9
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	446.349	3664.093	446.349	60.909	bb			45.2368	113.1	13.1	37.7
WXX090630-08CRI	Tetryl	241 > 181	12.58	534.524	3664.093	534.524	72.941	bb			36.2340	90.6	-9.4	44.7
WXX090630-08CRI	Nitrobenzene	123 > 46	13.58	198.424	3664.093	198.424	27.077	bb			43.5227	108.8	8.8	31.3
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.56	647.408	23638.666	647.408	13.694	MM	01-Jul-09	09:24:09	40.4884	101.2	1.2	59.6
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.47	726.021	23638.666	726.021	15.357	bb			38.8007	97.0	-3.0	64.6
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.28	3271.013	23638.666	3271.013	69.188	bb			41.8534	104.6	4.6	135.3
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.25	874.227	23638.666	874.227	18.491	bb			18.9892	94.9	-5.1	50.5
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.47	2330.370	23638.666	2330.370	49.291	MM	01-Jul-09	09:30:49	42.0519	105.1	5.1	146.8
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.10	544.791	23638.666	544.791	11.523	MM	01-Jul-09	09:34:46	43.9625	109.9	9.9	32.1
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.29	23638.666		23638.666	23638.666	bb			493.1414	98.6	-1.4	2004.0
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.93	177.684	23638.666	177.684	3.758	bb			40.9773	102.4	2.4	53.1
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.27	74.679	23638.666	74.679	1.580	bb			32.6974	81.7	-18.3	26.0
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.94	113.207	23638.666	113.207	2.395	bb			40.9575	102.4	2.4	34.6
WXX090630-08CRI	PETN	361 > 62	24.18	3612.045	23638.666	3612.045	76.401	bb			53.2961	133.2	33.2	429.2

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/01/09
Time of Injection 0027
Standard Number WXX090630-08CRI
Data File EXP0630021a

HMX		105.5
RDX		111.0
135-TNB		110.8
13-DNB		113.1
Tetryl		90.6
Nitrobenzene		108.8
4A-26-DNT		101.2
2A-46-DNT		97.0
246-TNT		104.6
34-DNT(surr)		94.9
26-DNT		105.1
24-DNT		109.9
2-NT		102.4
4-NT		81.7
3-NT		102.4
PETN		133.2
Total		1672.2
Average		104.5

MJP 7/1/09

HMM 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0630027a

Analysis Date: 01-JUL-09 03:24

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	576.56	96	
1,3-Dinitrobenzene-d4	500	485.599	97	
2,4,6-Trinitrotoluene	600	663.72	111	
2,4-Dinitrotoluene	600	572.863	95	
2,6-Dinitrotoluene	600	620.213	103	
2,6-Dinitrotoluene-d3	500	474.634	95	
2-Amino-4,6-dinitrotoluene	600	678.892	113	
3,4-Dinitrotoluene	300	309.187	103	
4-Amino-2,6-dinitrotoluene	600	631.31	105	
HMX	600	604.491	101	
Nitrobenzene	600	595.999	99	
PETN	600	607.151	101	
RDX	600	660.509	110	
Tetryl	600	602.394	100	
m-Dinitrobenzene	600	602.268	100	
m-Nitrotoluene	600	602.318	100	
o-Nitrotoluene	600	604.942	101	
p-Nitrotoluene	600	587.351	98	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630027a
Date: 01-Jul-2009
Time: 03:24:41
ID: WXX090630-07CCV
Vial: 1:1,B

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.786e+004

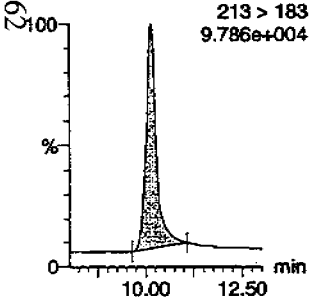

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.217e+004

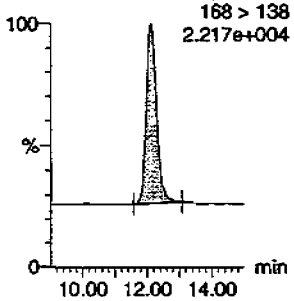

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.745e+004

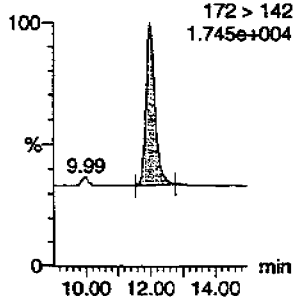

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.111e+005

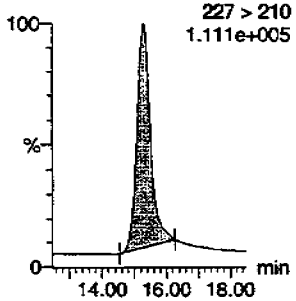

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.442e+004

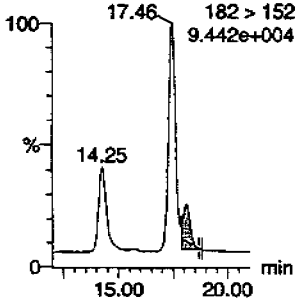

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.442e+004

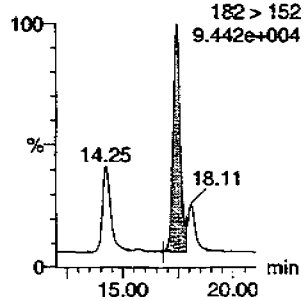

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.704e+004

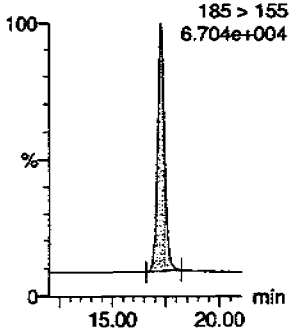

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.485e+004

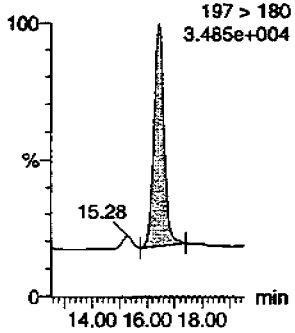

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.117e+004

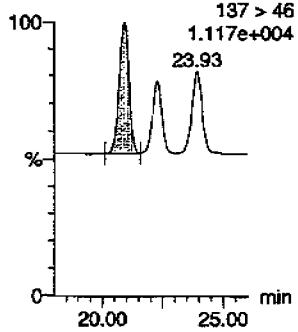

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.442e+004

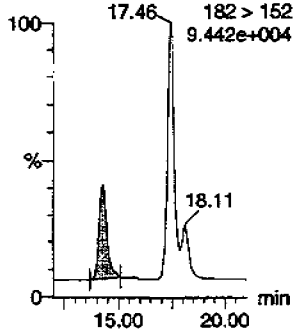

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.117e+004

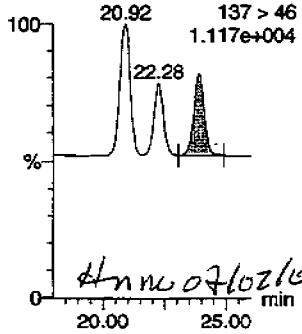

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.775e+004

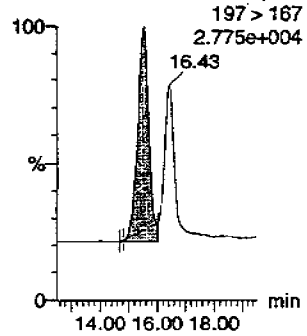

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

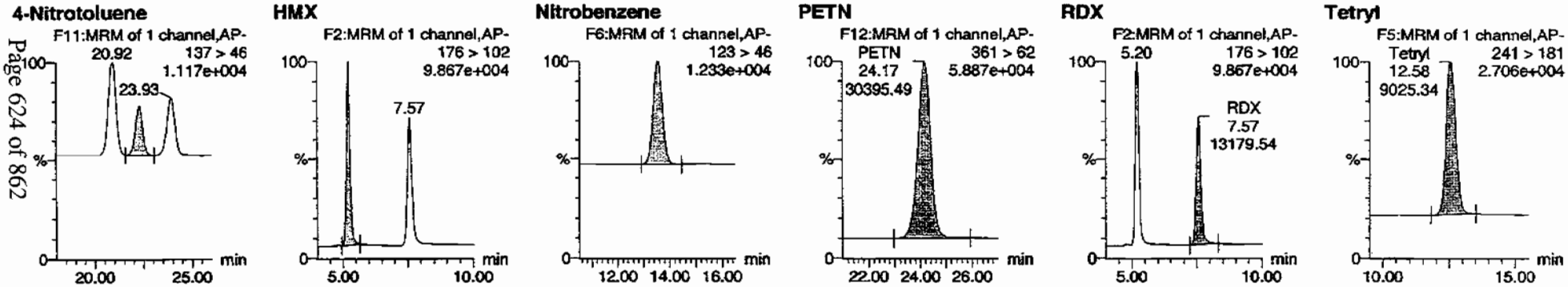

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modifiedate	Modtime	Amount	%Rec	%Dev	S/N
WXX090630-07CCV	HMX	176 > 102	5.20	14748.188	3721.330	14748.188	1981.575	bb			604.4908	100.7	0.7	4048.0
WXX090630-07CCV	RDX	176 > 102	7.57	13179.540	3721.330	13179.540	1770.810	bb			660.5089	110.1	10.1	2832.1
WXX090630-07CCV	135-Trinitrobenzene	213 > 183	10.14	28869.617	3721.330	28869.617	3878.938	bb			576.5603	96.1	-3.9	1196.4
WXX090630-07CCV	13-Dinitrobenzene-d4	172 > 142	12.00	3721.330		3721.330	3721.330	bb			485.5987	97.1	-2.9	254.8
WXX090630-07CCV	13-Dinitrobenzene	168 > 138	12.14	6035.366	3721.330	6035.366	810.915	bb			602.2676	100.4	0.4	595.4
WXX090630-07CCV	Tetryl	241 > 181	12.58	9025.336	3721.330	9025.336	1212.649	bb			602.3937	100.4	0.4	921.4
WXX090630-07CCV	Nitrobenzene	123 > 46	13.53	2759.660	3721.330	2759.660	370.789	bb			595.9987	99.3	-0.7	257.0
WXX090630-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.55	9715.774	22751.500	9715.774	213.519	MM	01-Jul-09	09:24:56	631.3096	105.2	5.2	487.7
WXX090630-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.43	12226.354	22751.500	12226.354	268.693	bb			678.8918	113.1	13.1	612.0
WXX090630-07CCV	246-Trinitrotoluene	227 > 210	15.27	49925.645	22751.500	49925.645	1097.195	bb			663.7204	110.6	10.6	2053.6
WXX090630-07CCV	34-dinitrotoluene	182 > 152	14.25	13700.187	22751.500	13700.187	301.083	bb			309.1874	103.1	3.1	500.4
WXX090630-07CCV	26-dinitrotoluene	182 > 152	17.46	33080.164	22751.500	33080.164	726.989	MM	01-Jul-09	09:31:28	620.2133	103.4	3.4	1347.3
WXX090630-07CCV	24-dinitrotoluene	182 > 152	18.11	6832.589	22751.500	6832.589	150.157	MM	01-Jul-09	09:35:32	572.8632	95.5	-4.5	273.3
WXX090630-07CCV	26-dinitrotoluene-d3	185 > 155	17.28	22751.500		22751.500	22751.500	bb			474.6336	94.9	-5.1	1137.4
WXX090630-07CCV	2-Nitrotoluene	137 > 46	20.92	2524.676	22751.500	2524.676	55.484	bb			604.9417	100.8	0.8	152.4
WXX090630-07CCV	4-Nitrotoluene	137 > 46	22.28	1291.132	22751.500	1291.132	28.375	bb			587.3510	97.9	-2.1	82.0
WXX090630-07CCV	3-Nitrotoluene	137 > 46	23.93	1602.335	22751.500	1602.335	35.214	bb			602.3182	100.4	0.4	93.8
WXX090630-07CCV	PETN	361 > 62	24.17	30395.494	22751.500	30395.494	667.989	bb			607.1514	101.2	1.2	3801.3

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/01/09
Time of Injection 0324
Standard Number WXX090630-07CCV
Data File EXP0630027a

HMX		100.7
RDX		110.1
135-TNB		96.1
13-DNB		100.4
Tetryl		100.4
Nitrobenzene		99.3
4A-26-DNT		105.2
2A-46-DNT		113.1
246-TNT		110.6
34-DNT(surr)		103.1
26-DNT		103.4
24-DNT		95.5
2-NT		100.8
4-NT		97.9
3-NT		100.4
PETN		101.2
Total		1638.2
Average		102.4

MHT 7/1/09

Hm 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630029a

Analysis Date: 01-JUL-09 04:23

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	44.414	111	
1,3-Dinitrobenzene-d4	500	500.306	100	
2,4,6-Trinitrotoluene	40	40.366	101	
2,4-Dinitrotoluene	40	42.969	107	
2,6-Dinitrotoluene	40	41.502	104	
2,6-Dinitrotoluene-d3	500	502.875	101	
2-Amino-4,6-dinitrotoluene	40	42.885	107	
3,4-Dinitrotoluene	20	20.746	104	
4-Amino-2,6-dinitrotoluene	40	38.543	96	
HMX	40	44.41	111	
Nitrobenzene	40	41.246	103	
PETN	40	40.983	102	
RDX	40	41.062	103	
Tetryl	40	44.403	111	
m-Dinitrobenzene	40	42.788	107	
m-Nitrotoluene	40	34.27	86	
o-Nitrotoluene	40	43.077	108	
p-Nitrotoluene	40	33.3	83	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630029a
Date: 01-Jul-2009
Time: 04:23:36
ID: WXX090630-08CRI
Vial: 1:1,C

MAT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.320e+004

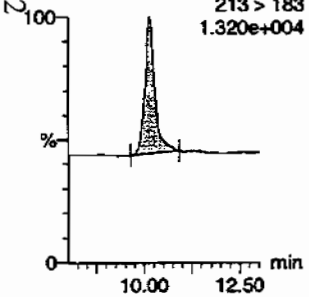

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.863e+003

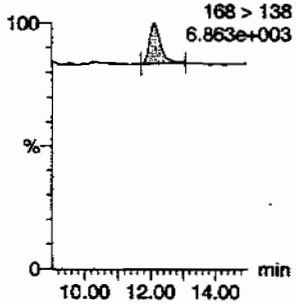

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.747e+004

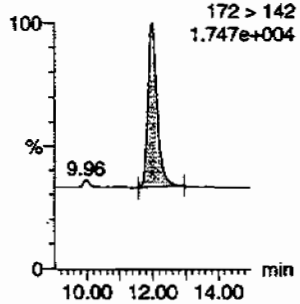

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.245e+004

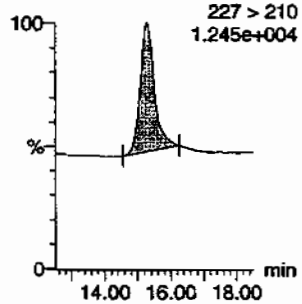

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.227e+004

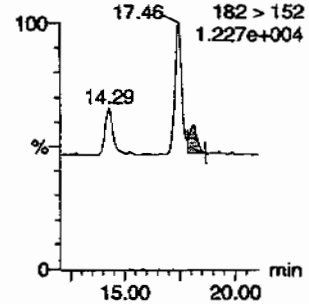

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.227e+004

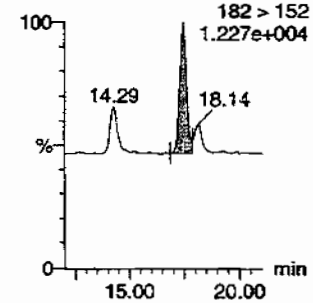

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.036e+004

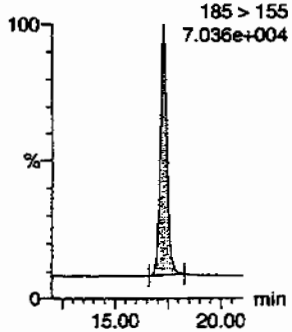

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.802e+003

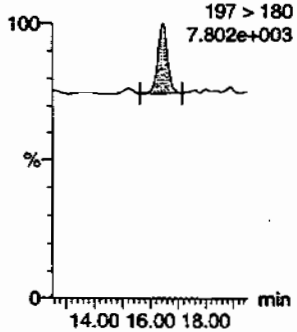

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.084e+003

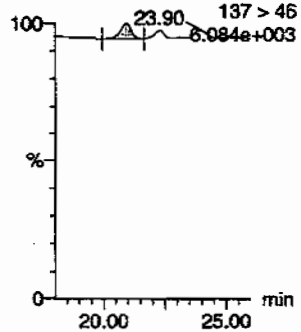

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.227e+004

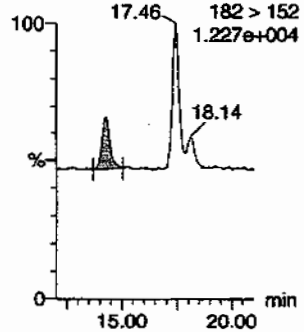

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.084e+003

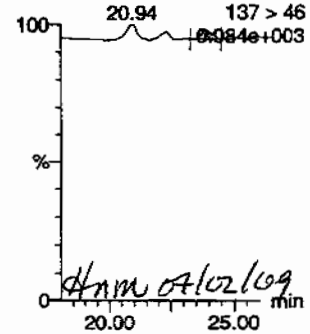

HNM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.119e+003

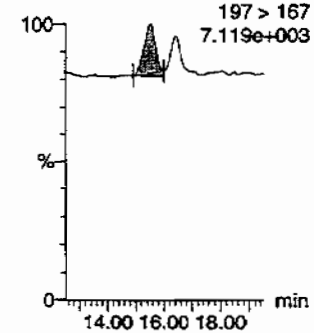

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

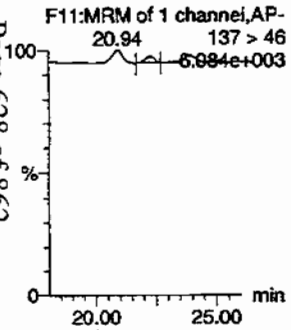

HMX

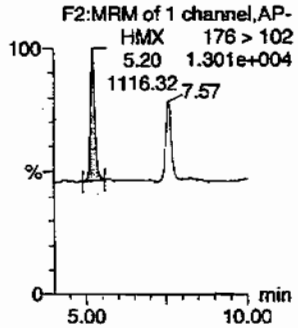

Nitrobenzene

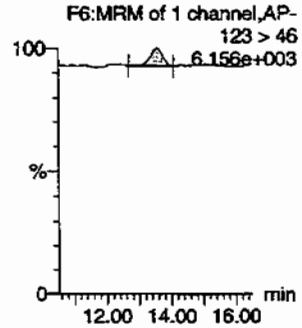

PETN

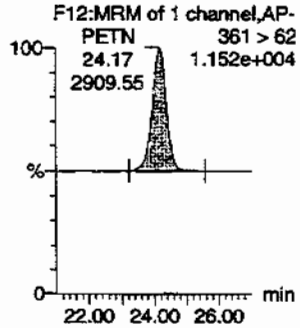

RDX

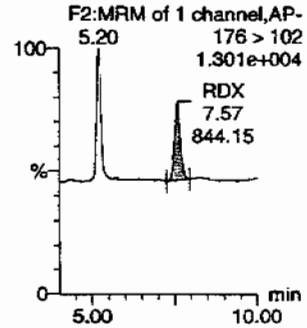

Tetryl

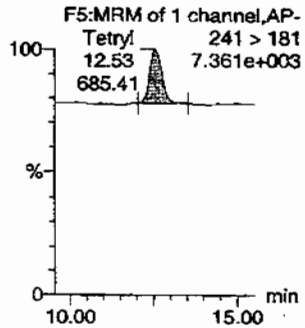

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modified	Mod Time	Conc	%Rec	%Dev	S/N
WXX090630-08CRI	HMX	176 > 102	5.20	1116.320	3834.034	1116.320	145.580	bb			44.4101	111.0	11.0	334.8
WXX090630-08CRI	RDX	176 > 102	7.57	844.151	3834.034	844.151	110.087	bb			41.0621	102.7	2.7	199.1
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2291.268	3834.034	2291.268	298.806	bb			44.4142	111.0	11.0	123.8
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3834.034		3834.034	3834.034	bb			500.3055	100.1	0.1	124.9
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	441.767	3834.034	441.767	57.611	bb			42.7879	107.0	7.0	41.6
WXX090630-08CRI	Tetryl	241 > 181	12.53	685.409	3834.034	685.409	89.385	bb			44.4027	111.0	11.0	90.3
WXX090630-08CRI	Nitrobenzene	123 > 46	13.53	196.767	3834.034	196.767	25.661	bb			41.2462	103.1	3.1	14.5
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.55	628.458	24105.223	628.458	13.036	MM	01-Jul-09	09:25:03	38.5425	96.4	-3.6	24.4
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.43	818.285	24105.223	818.285	16.973	bb			42.8852	107.2	7.2	43.5
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.27	3217.027	24105.223	3217.027	66.729	bb			40.3659	100.9	0.9	166.8
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.29	973.953	24105.223	973.953	20.202	bb			20.7459	103.7	3.7	41.2
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.46	2345.290	24105.223	2345.290	48.647	MM	01-Jul-09	09:31:39	41.5020	103.8	3.8	114.9
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.14	542.990	24105.223	542.990	11.263	MM	01-Jul-09	09:35:54	42.9691	107.4	7.4	24.6
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.28	24105.223		24105.223	24105.223	bb			502.8745	100.6	0.6	1923.1
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.94	190.473	24105.223	190.473	3.951	bb			43.0765	107.7	7.7	49.4
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.31	77.557	24105.223	77.557	1.609	bb			33.3002	83.3	-16.7	24.9
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.90	96.593	24105.223	96.593	2.004	bb			34.2702	85.7	-14.3	26.6
WXX090630-08CRI	PETN	361 > 62	24.17	2909.549	24105.223	2909.549	60.351	bb			40.9826	102.5	2.5	251.3

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/01/09
Time of Injection 0423
Standard Number WXX090630-08CRI
Data File EXP0630029a

HMX	111.0
RDX	102.7
135-TNB	111.0
13-DNB	107.0
Tetryl	111.0
Nitrobenzene	103.1
4A-26-DNT	96.4
2A-46-DNT	107.2
246-TNT	100.9
34-DNT(surr)	103.7
26-DNT	103.8
24-DNT	107.4
2-NT	107.7
4-NT	83.3
3-NT	85.7
PETN	102.5
Total	1644.4
Average	102.8

MJP 7/1/09

HMK 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0630035a

Analysis Date: 01-JUL-09 07:20

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	553.998	92	
1,3-Dinitrobenzene-d4	500	504.73	101	
2,4,6-Trinitrotoluene	600	674.765	112	
2,4-Dinitrotoluene	600	648.658	108	
2,6-Dinitrotoluene	600	602.879	100	
2,6-Dinitrotoluene-d3	500	509.386	102	
2-Amino-4,6-dinitrotoluene	600	685.89	114	
3,4-Dinitrotoluene	300	311.969	104	
4-Amino-2,6-dinitrotoluene	600	619.491	103	
HMX	600	781.623	130	*
Nitrobenzene	600	543.962	91	
PETN	600	572.8	95	
RDX	600	649.241	108	
Tetryl	600	588.802	98	
m-Dinitrobenzene	600	610.702	102	
m-Nitrotoluene	600	534.881	89	
o-Nitrotoluene	600	548.434	91	
p-Nitrotoluene	600	513.331	86	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630035a
Date: 01-Jul-2009
Time: 07:20:31
ID: WXX090630-07CCV
Vial: 1:1,B

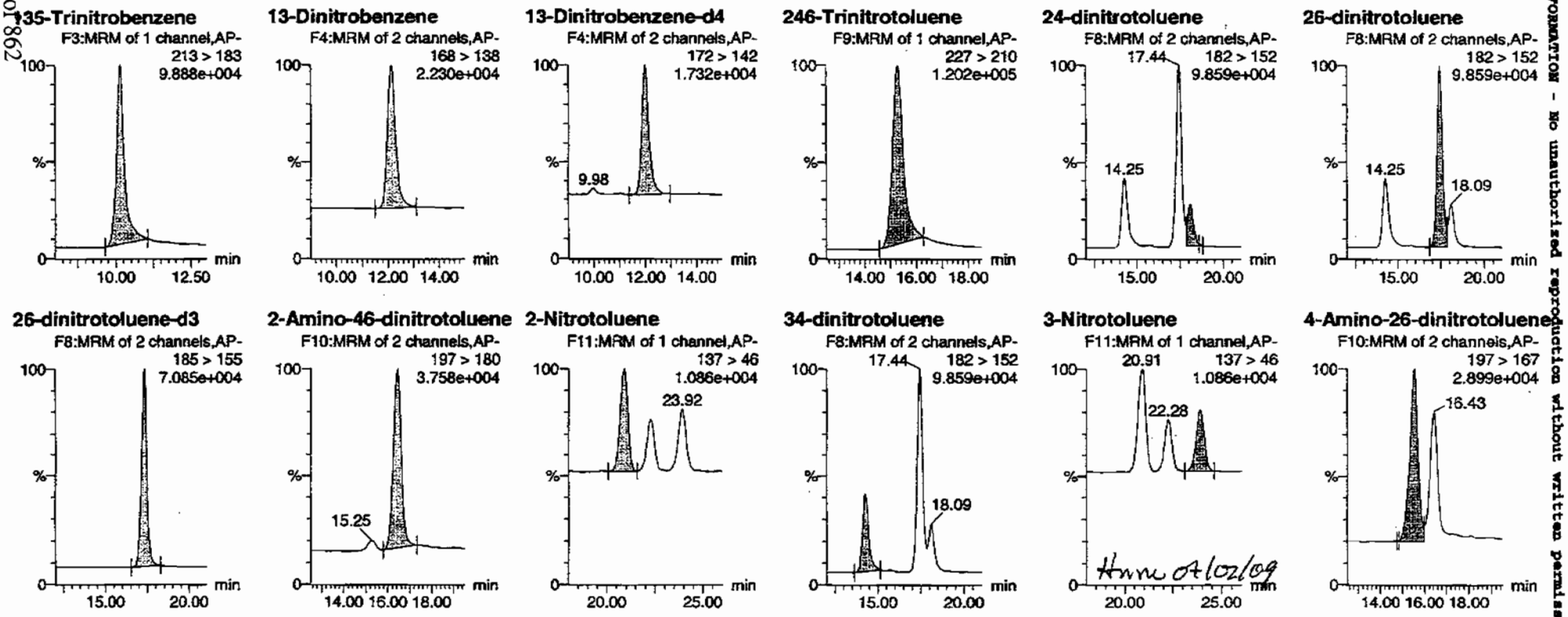

Hmm 07/02/09

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

4-Nitrotoluene

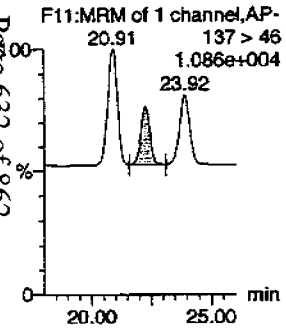

HMX

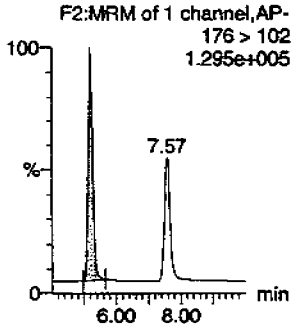

Nitrobenzene

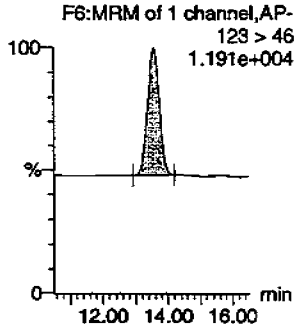

PETN

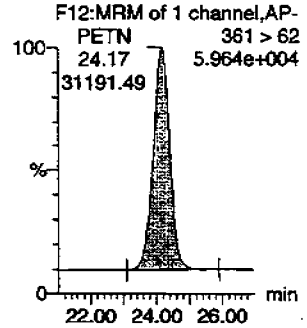

RDX

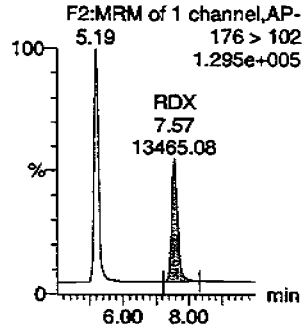

Tetryl

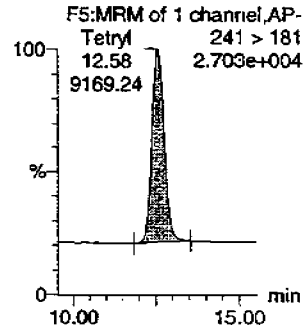

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modified	Modified	Amount	Rec	%Dev	S/N
WXX090630-07CCV	HMX	176 > 102	5.19	19821.096	3867.938	19821.096	2562.230	bb			781.6231	130.3	30.3	2530.8
WXX090630-07CCV	RDX	176 > 102	7.57	13465.083	3867.938	13465.083	1740.602	bb			649.2413	108.2	8.2	1338.5
WXX090630-07CCV	135-Trinitrobenzene	213 > 183	10.14	28832.730	3867.938	28832.730	3727.145	bb			553.9979	92.3	-7.7	3949.6
WXX090630-07CCV	13-Dinitrobenzene-d4	172 > 142	12.00	3867.938		3867.938	3867.938	bb			504.7297	100.9	0.9	393.0
WXX090630-07CCV	13-Dinitrobenzene	168 > 138	12.14	6360.988	3867.938	6360.988	822.271	bb			610.7017	101.8	1.8	718.1
WXX090630-07CCV	Tetryl	241 > 181	12.58	9169.244	3867.938	9169.244	1185.288	bb			588.8019	98.1	-1.9	596.0
WXX090630-07CCV	Nitrobenzene	123 > 46	13.54	2617.941	3867.938	2617.941	338.416	bb			543.9616	90.7	-9.3	504.3
WXX090630-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.56	10231.951	24417.363	10231.951	209.522	MM	01-Jul-09	09:25:48	619.4906	103.2	3.2	479.7
WXX090630-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.43	13256.829	24417.363	13256.829	271.463	bb			685.8901	114.3	14.3	975.6
WXX090630-07CCV	246-Trinitrotoluene	227 > 210	15.28	54472.840	24417.363	54472.840	1115.453	bb			674.7653	112.5	12.5	1395.7
WXX090630-07CCV	34-dinitrotoluene	182 > 152	14.25	14835.599	24417.363	14835.599	303.792	bb			311.9691	104.0	4.0	498.0
WXX090630-07CCV	26-dinitrotoluene	182 > 152	17.44	34510.031	24417.363	34510.031	706.670	MM	01-Jul-09	09:32:11	602.8789	100.5	0.5	1312.4
WXX090630-07CCV	24-dinitrotoluene	182 > 152	18.09	8303.074	24417.363	8303.074	170.024	MM	01-Jul-09	09:36:38	648.6580	108.1	8.1	296.3
WXX090630-07CCV	26-dinitrotoluene-d3	185 > 155	17.29	24417.363		24417.363	24417.363	bb			509.3863	101.9	1.9	2202.6
WXX090630-07CCV	2-Nitrotoluene	137 > 46	20.91	2456.433	24417.363	2456.433	50.301	bb			548.4336	91.4	-8.6	635.3
WXX090630-07CCV	4-Nitrotoluene	137 > 46	22.28	1211.042	24417.363	1211.042	24.799	bb			513.3310	85.6	-14.4	324.5
WXX090630-07CCV	3-Nitrotoluene	137 > 46	23.92	1527.119	24417.363	1527.119	31.271	bb			534.8806	89.1	-10.9	384.3
WXX090630-07CCV	PETN	361 > 62	24.17	31191.492	24417.363	31191.492	638.715	bb			572.8005	95.5	-4.5	6365.6

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/01/09
Time of Injection 0720
Standard Number WXX090630-07CCV
Data File EXP0630035a

HMX	130.3
RDX	108.2
135-TNB	92.3
13-DNB	101.8
Tetryl	98.1
Nitrobenzene	90.7
4A-26-DNT	103.2
2A-46-DNT	114.3
246-TNT	112.5
34-DNT(surr)	104.0
26-DNT	100.5
24-DNT	108.1
2-NT	91.4
4-NT	85.6
3-NT	89.1
PETN	95.5
Total	1625.6
Average	101.6

WMT 7/1/09

Hmm 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630037a

Analysis Date: 01-JUL-09 08:19

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	41.164	103	
1,3-Dinitrobenzene-d4	500	513.519	103	
2,4,6-Trinitrotoluene	40	39.108	98	
2,4-Dinitrotoluene	40	42.525	106	
2,6-Dinitrotoluene	40	38.006	95	
2,6-Dinitrotoluene-d3	500	532.927	107	
2-Amino-4,6-dinitrotoluene	40	44.908	112	
3,4-Dinitrotoluene	20	18.635	93	
4-Amino-2,6-dinitrotoluene	40	35.533	89	
HMX	40	43.159	108	
Nitrobenzene	40	39.293	98	
PETN	40	41.9	105	
RDX	40	43.212	108	
Tetryl	40	42.139	105	
m-Dinitrobenzene	40	38.873	97	
m-Nitrotoluene	40	36.972	92	
o-Nitrotoluene	40	31.541	79	
p-Nitrotoluene	40	36.713	92	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630037a
Date: 01-Jul-2009
Time: 08:19:27
ID: WXX090630-08CRI
Vial: 1:1,C

MMT 7/1/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.324e+004

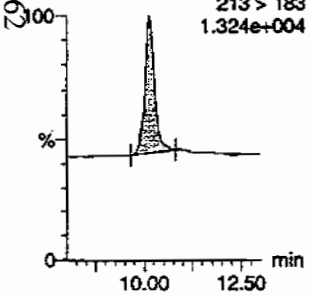

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.742e+003

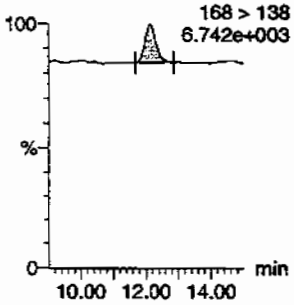

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.792e+004

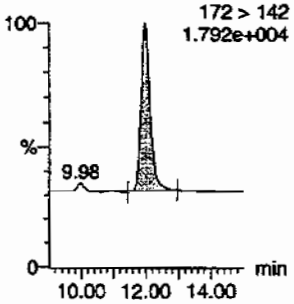

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.282e+004

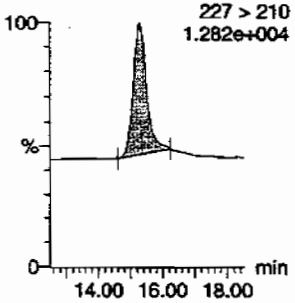

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.176e+004

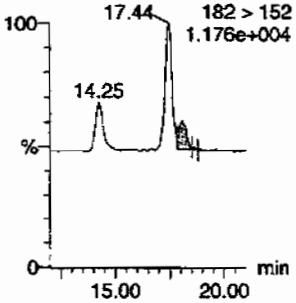

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.176e+004

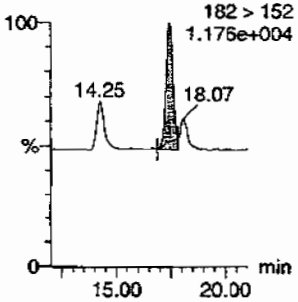

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.444e+004

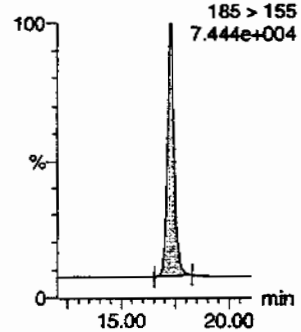

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.925e+003

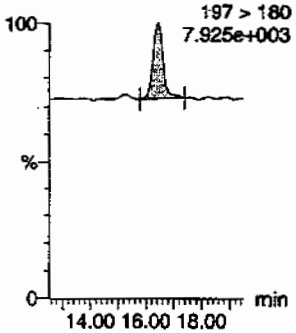

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.038e+003

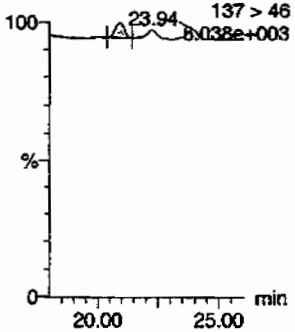

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.176e+004

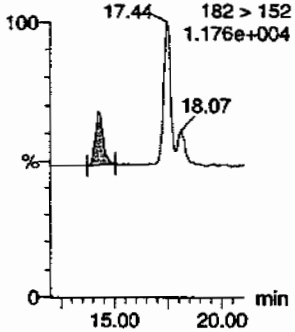

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.038e+003

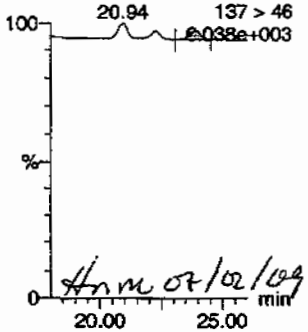

Hnm 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.137e+003

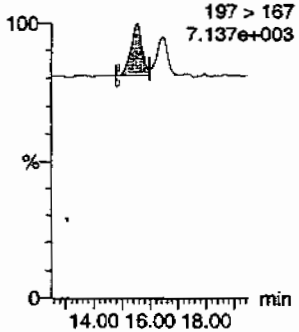

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA.qld, Time: Wed Jul 01 09:37:04 2009

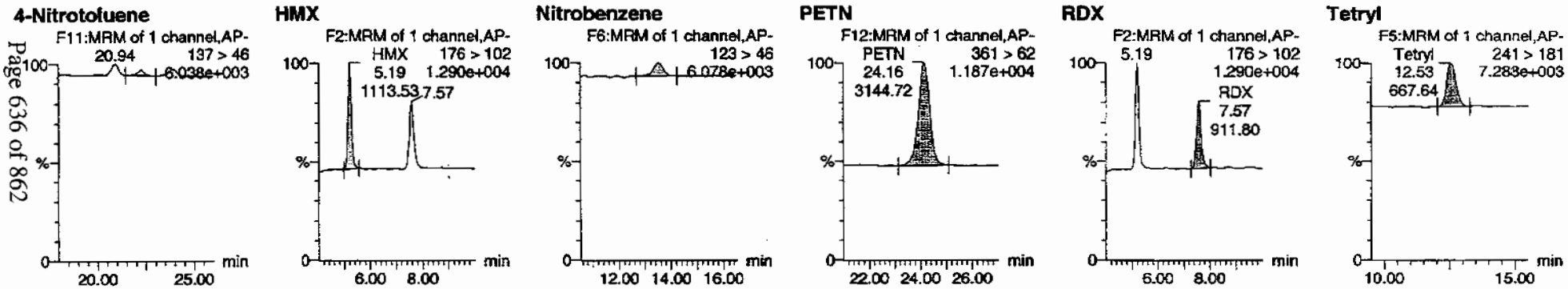

ID	Name	Trace	RT	Area	S/Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX090630-08CRI	HMX	176 > 102	5.19	1113.526	3935.291	1113.526	141.479	bb			43.1591	107.9	7.9	180.1
WXX090630-08CRI	RDX	176 > 102	7.57	911.802	3935.291	911.802	115.849	bb			43.2116	108.0	8.0	114.4
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2179.697	3935.291	2179.697	276.942	bb			41.1643	102.9	2.9	391.7
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	3935.291		3935.291	3935.291	bb			513.5186	102.7	2.7	271.4
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	411.941	3935.291	411.941	52.339	bb			38.8725	97.2	-2.8	36.2
WXX090630-08CRI	Tetryl	241 > 181	12.53	667.638	3935.291	667.638	84.827	bb			42.1385	105.3	5.3	57.7
WXX090630-08CRI	Nitrobenzene	123 > 46	13.54	192.401	3935.291	192.401	24.446	bb			39.2933	98.2	-1.8	25.8
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.53	614.003	25545.764	614.003	12.018	MM	01-Jul-09	09:25:59	35.5326	88.8	-11.2	45.7
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.43	908.092	25545.764	908.092	17.774	bb			44.9081	112.3	12.3	66.6
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.28	3303.006	25545.764	3303.006	64.649	bb			39.1077	97.8	-2.2	248.3
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.25	927.131	25545.764	927.131	18.146	bb			18.6349	93.2	-6.8	82.3
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.44	2276.048	25545.764	2276.048	44.548	MM	01-Jul-09	09:32:19	38.0055	95.0	-5.0	216.4
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.07	569.485	25545.764	569.485	11.146	MM	01-Jul-09	09:36:53	42.5245	106.3	6.3	50.6
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.27	25545.764		25545.764	25545.764	bb			532.9265	106.6	6.6	1212.8
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.94	147.799	25545.764	147.799	2.893	bb			31.5406	78.9	-21.1	42.7
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.27	90.615	25545.764	90.615	1.774	bb			36.7129	91.8	-8.2	23.8
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.94	110.436	25545.764	110.436	2.162	bb			36.9721	92.4	-7.6	26.5
WXX090630-08CRI	PETN	361 > 62	24.16	3144.715	25545.764	3144.715	61.551	bb			41.8996	104.7	4.7	829.5

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/01/09
Time of Injection 0819
Standard Number WXX090630-08CRI
Data File EXP0630037a

HMX		107.9
RDX		108.0
135-TNB		102.9
13-DNB		97.2
Tetryl		105.3
Nitrobenzene		98.2
4A-26-DNT		88.8
2A-46-DNT		112.3
246-TNT		97.8
34-DNT(surr)		93.2
26-DNT		95.0
24-DNT		106.3
2-NT		78.9
4-NT		91.8
3-NT		92.4
PETN		104.7
Total		1580.7
Average		98.8

MATT 7/1/09

Hmm 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0630046a

Analysis Date: 01-JUL-09 12:44

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	524.305	87	
1,3-Dinitrobenzene-d4	500	530.162	106	
2,4,6-Trinitrotoluene	600	688.172	115	
2,4-Dinitrotoluene	600	617.412	103	
2,6-Dinitrotoluene	600	608.515	101	
2,6-Dinitrotoluene-d3	500	499.686	100	
2-Amino-4,6-dinitrotoluene	600	727.316	121	*
3,4-Dinitrotoluene	300	314.876	105	
4-Amino-2,6-dinitrotoluene	600	633.371	106	
HMX	600	588.557	98	
Nitrobenzene	600	514.103	86	
PETN	600	538.281	90	
RDX	600	608.839	101	
Tetryl	600	560.406	93	
m-Dinitrobenzene	600	562.907	94	
m-Nitrotoluene	600	508.81	85	
o-Nitrotoluene	600	482.05	80	
p-Nitrotoluene	600	481.796	80	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630046a
Date: 01-Jul-2009
Time: 12:44:56
ID: WXX090630-07CCV
Vial: 1:1,B

MMT 7/2/09

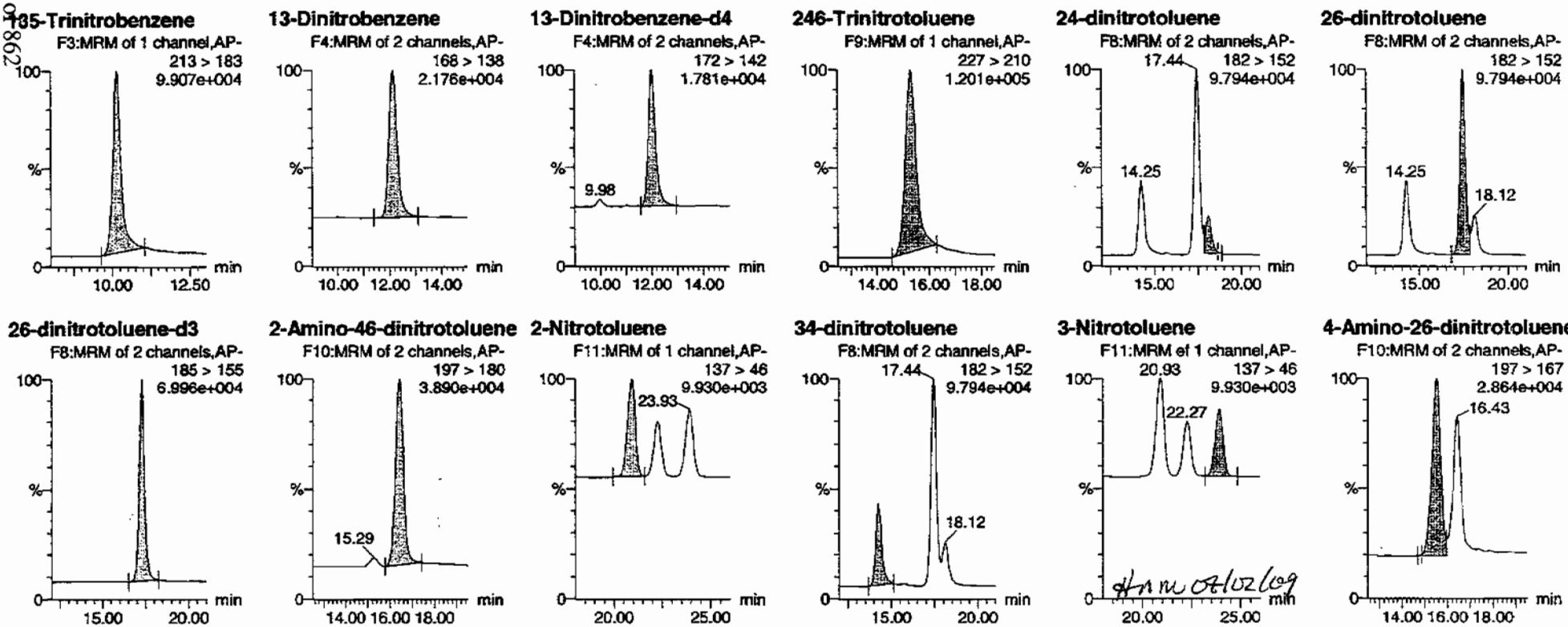

HMM 07/02/09

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

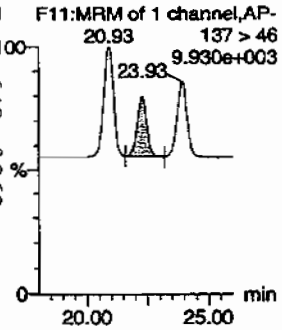

HMX

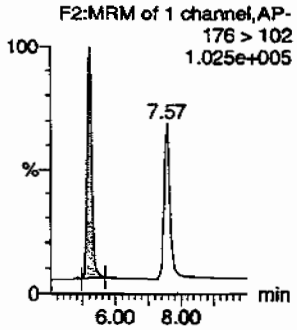

Nitrobenzene

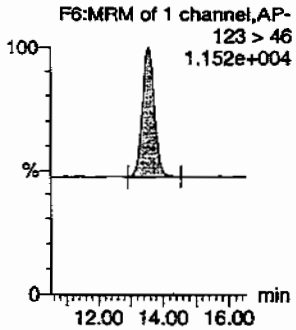

PETN

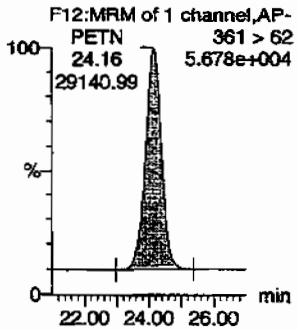

RDX

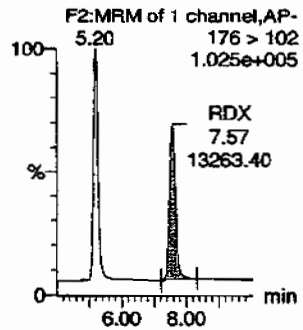

Tetryl

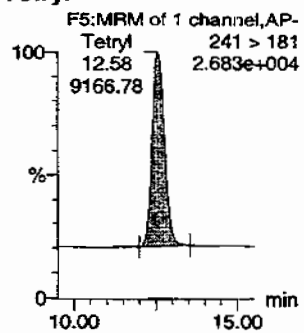

ID	Name	Trace	RT	Area	IS Area	Abs Resp	RF Response	Flags	Modifier	Mod Time	Amount	%Rec	%Dev	S/N
WXX090630-07CCV	HMX	176 > 102	5.20	15677.212	4062.835	15677.212	1929.344	bb			588.5574	98.1	-1.9	3973.4
WXX090630-07CCV	RDX	176 > 102	7.57	13263.402	4062.835	13263.402	1632.284	bb			608.8389	101.5	1.5	2661.5
WXX090630-07CCV	135-Trinitrobenzene	213 > 183	10.14	28662.311	4062.835	28662.311	3527.378	bb			524.3049	87.4	-12.6	2071.8
WXX090630-07CCV	13-Dinitrobenzene-d4	172 > 142	12.00	4062.835		4062.835	4062.835	bb			530.1619	106.0	6.0	353.0
WXX090630-07CCV	13-Dinitrobenzene	168 > 138	12.14	6158.592	4062.835	6158.592	757.918	bb			562.9065	93.8	-6.2	353.0
WXX090630-07CCV	Tetryl	241 > 181	12.58	9166.784	4062.835	9166.784	1128.127	bb			560.4063	93.4	-6.6	1142.3
WXX090630-07CCV	Nitrobenzene	123 > 46	13.54	2598.911	4062.835	2598.911	319.840	bb			514.1030	85.7	-14.3	252.5
WXX090630-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.56	10262.002	23952.402	10262.002	214.217	MM	02-Jul-09	07:54:33	633.3708	105.6	5.6	232.2
WXX090630-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.43	13789.820	23952.402	13789.820	287.859	bb			727.3160	121.2	21.2	558.9
WXX090630-07CCV	246-Trinitrotoluene	227 > 210	15.28	54497.262	23952.402	54497.262	1137.616	bb			688.1722	114.7	14.7	3208.9
WXX090630-07CCV	34-dinitrotoluene	182 > 152	14.25	14688.677	23952.402	14688.677	306.622	bb			314.8755	105.0	5.0	751.7
WXX090630-07CCV	26-dinitrotoluene	182 > 152	17.44	34169.359	23952.402	34169.359	713.276	MM	02-Jul-09	07:57:35	608.5149	101.4	1.4	1897.7
WXX090630-07CCV	24-dinitrotoluene	182 > 152	18.12	7752.625	23952.402	7752.625	161.834	MM	02-Jul-09	08:00:47	617.4124	102.9	2.9	388.6
WXX090630-07CCV	26-dinitrotoluene-d3	185 > 155	17.29	23952.402		23952.402	23952.402	bb			499.6864	99.9	-0.1	916.5
WXX090630-07CCV	2-Nitrotoluene	137 > 46	20.93	2117.987	23952.402	2117.987	44.212	bb			482.0500	80.3	-19.7	114.8
WXX090630-07CCV	4-Nitrotoluene	137 > 46	22.27	1115.000	23952.402	1115.000	23.275	bb			481.7957	80.3	-19.7	63.0
WXX090630-07CCV	3-Nitrotoluene	137 > 46	23.93	1425.023	23952.402	1425.023	29.747	bb			508.8098	84.8	-15.2	77.9
WXX090630-07CCV	PETN	361 > 62	24.16	29140.992	23952.402	29140.992	608.310	bb			538.2813	89.7	-10.3	287.4

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/01/09
Time of Injection 1244
Standard Number WXX090630-07CCV
Data File EXP0630046a

HMX		98.1
RDX		101.5
135-TNB		87.4
13-DNB		93.8
Tetryl		93.4
Nitrobenzene		85.7
4A-26-DNT		105.6
2A-46-DNT		121.2
246-TNT		114.7
34-DNT(surr)		105.0
26-DNT		101.4
24-DNT		102.9
2-NT		80.3
4-NT		80.3
3-NT		84.8
PETN		89.7
Total		1545.8
Average		96.6

MTP 7/2/09

Hmm 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0630048a

Analysis Date: 01-JUL-09 13:43

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	43.499	109	
1,3-Dinitrobenzene-d4	500	629.686	126	
2,4,6-Trinitrotoluene	40	37.821	95	
2,4-Dinitrotoluene	40	43.71	109	
2,6-Dinitrotoluene	40	40.92	102	
2,6-Dinitrotoluene-d3	500	642.602	129	
2-Amino-4,6-dinitrotoluene	40	42.27	106	
3,4-Dinitrotoluene	20	20.889	104	
4-Amino-2,6-dinitrotoluene	40	33.616	84	
HMX	40	49.289	123	
Nitrobenzene	40	42.61	107	
PETN	40	32.919	82	
RDX	40	46.84	117	
Tetryl	40	40.65	102	
m-Dinitrobenzene	40	43.707	109	
m-Nitrotoluene	40	39.066	98	
o-Nitrotoluene	40	33.14	83	
p-Nitrotoluene	40	32.107	80	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630048a
Date: 01-Jul-2009
Time: 13:43:53
ID: WXX090630-08CRI
Vial: 1:1,C

MAP 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.508e+004

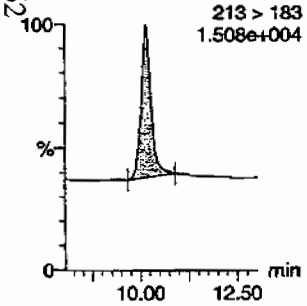

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.945e+003

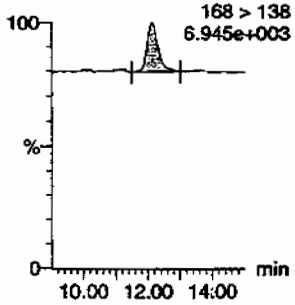

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
2.057e+004

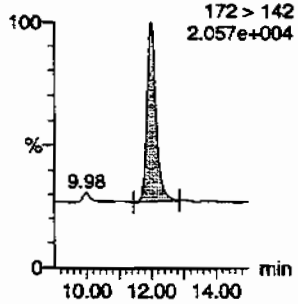

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.365e+004

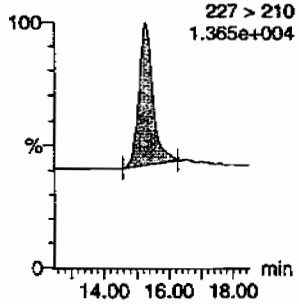

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.331e+004

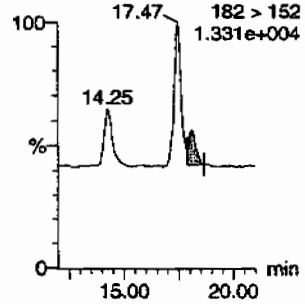

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.331e+004

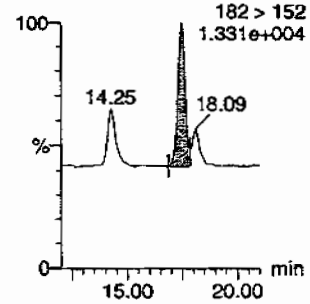

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
8.826e+004

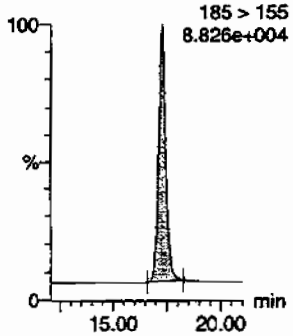

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
8.156e+003

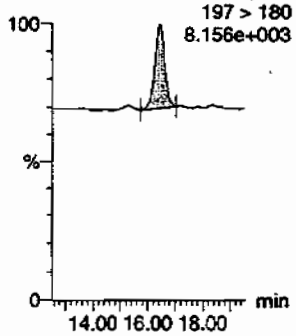

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.918e+003

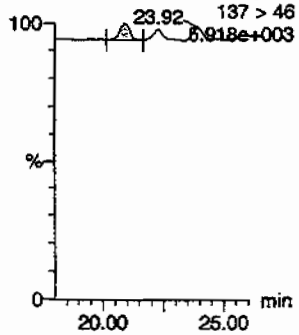

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.331e+004

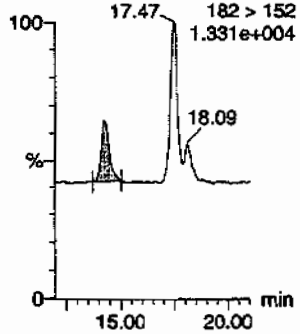

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.918e+003

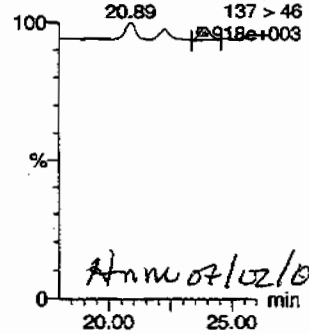

Hmm 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.108e+003

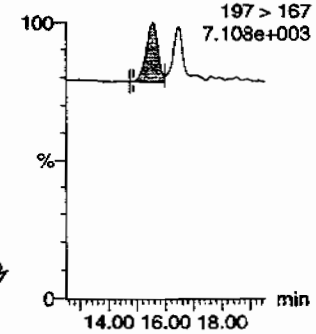

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

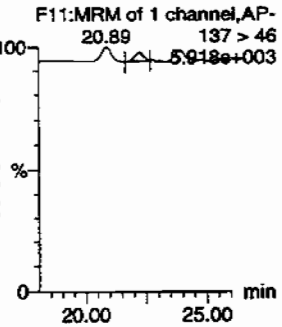

HMX

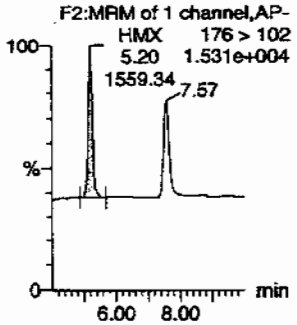

Nitrobenzene

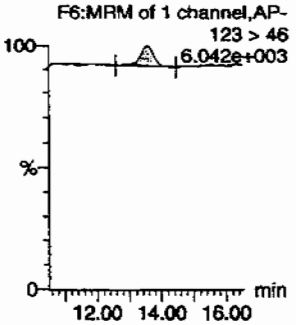

PETN

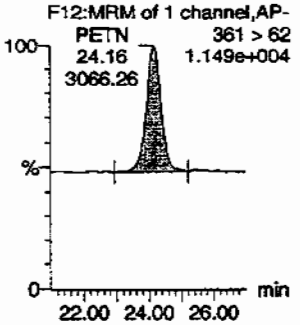

RDX

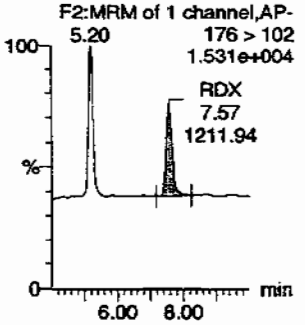

Tetryl

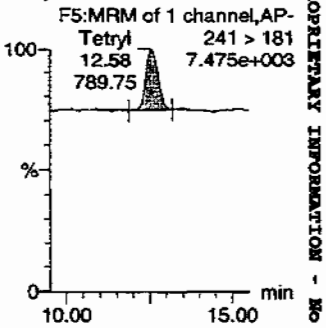

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flag	Modifier	Modified	Rcvd	%Rec	%Dev	S/N
WXX090630-08CRI	HMX	176 > 102	5.20	1559.343	4825.526	1559.343	161.572	bb			49.2886	123.2	23.2	220.8
WXX090630-08CRI	RDX	176 > 102	7.57	1211.945	4825.526	1211.945	125.576	bb			46.8398	117.1	17.1	137.4
WXX090630-08CRI	135-Trinitrobenzene	213 > 183	10.14	2824.352	4825.526	2824.352	292.647	bb			43.4987	108.7	8.7	197.4
WXX090630-08CRI	13-Dinitrobenzene-d4	172 > 142	12.00	4825.526		4825.526	4825.526	bb			629.6860	125.9	25.9	317.9
WXX090630-08CRI	13-Dinitrobenzene	168 > 138	12.14	567.957	4825.526	567.957	58.849	bb			43.7074	109.3	9.3	61.4
WXX090630-08CRI	Tetryl	241 > 181	12.58	789.750	4825.526	789.750	81.830	bb			40.6500	101.6	1.6	66.3
WXX090630-08CRI	Nitrobenzene	123 > 46	13.58	255.841	4825.526	255.841	26.509	bb			42.6102	106.5	6.5	21.5
WXX090630-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.56	700.433	30803.021	700.433	11.370	MM	02-Jul-09	07:54:50	33.6162	84.0	-16.0	52.5
WXX090630-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.43	1030.660	30803.021	1030.660	16.730	bb			42.2703	105.7	5.7	54.2
WXX090630-08CRI	246-Trinitrotoluene	227 > 210	15.28	3851.718	30803.021	3851.718	62.522	bb			37.8210	94.6	-5.4	347.8
WXX090630-08CRI	34-dinitrotoluene	182 > 152	14.25	1253.143	30803.021	1253.143	20.341	bb			20.8888	104.4	4.4	38.5
WXX090630-08CRI	26-dinitrotoluene	182 > 152	17.47	2954.912	30803.021	2954.912	47.965	MM	02-Jul-09	07:57:50	40.9199	102.3	2.3	99.8
WXX090630-08CRI	24-dinitrotoluene	182 > 152	18.09	705.829	30803.021	705.829	11.457	MM	02-Jul-09	08:01:11	43.7101	109.3	9.3	24.2
WXX090630-08CRI	26-dinitrotoluene-d3	185 > 155	17.29	30803.021		30803.021	30803.021	bb			642.6016	128.5	28.5	1636.0
WXX090630-08CRI	2-Nitrotoluene	137 > 46	20.89	187.250	30803.021	187.250	3.039	bb			33.1395	82.8	-17.2	25.6
WXX090630-08CRI	4-Nitrotoluene	137 > 46	22.27	95.554	30803.021	95.554	1.551	bb			32.1065	80.3	-19.7	15.1
WXX090630-08CRI	3-Nitrotoluene	137 > 46	23.92	140.705	30803.021	140.705	2.284	bb			39.0660	97.7	-2.3	19.3
WXX090630-08CRI	PETN	361 > 62	24.16	3066.264	30803.021	3066.264	49.772	bb			32.9191	82.3	-17.7	532.5

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/01/09
Time of Injection 1343
Standard Number WXX090630-08CRI
Data File EXP0630048a

HMX		123.2
RDX		117.1
135-TNB		108.7
13-DNB		109.3
Tetryl		101.6
Nitrobenzene		106.5
4A-26-DNT		84.0
2A-46-DNT		105.7
246-TNT		94.6
34-DNT(surr)		104.4
26-DNT		102.3
24-DNT		109.3
2-NT		82.8
4-NT		80.3
3-NT		97.7
PETN		82.3
Total		1609.8
Average		100.6

MAP 7/2/09

HMK 07/02/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0713012a

Analysis Date: 13-JUL-09 20:20

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	42.474	106	
1,3-Dinitrobenzene-d4	500	520.066	104	
2,4,6-Trinitrotoluene	40	40.709	102	
2,4-Dinitrotoluene	40	37.457	94	
2,6-Dinitrotoluene	40	39.261	98	
2,6-Dinitrotoluene-d3	500	519.262	104	
2-Amino-4,6-dinitrotoluene	40	39.55	99	
3,4-Dinitrotoluene	20	21.709	109	
4-Amino-2,6-dinitrotoluene	40	41.587	104	
HMX	40	38.223	96	
Nitrobenzene	40	36.232	91	
PETN	40	44.624	112	
RDX	40	42.183	105	
Tetryl	40	38.347	96	
m-Dinitrobenzene	40	47.028	118	
m-Nitrotoluene	40	34.455	86	
o-Nitrotoluene	40	39.765	99	
p-Nitrotoluene	40	46.423	116	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713012a
Date: 13-Jul-2009
Time: 20:20:46
ID: WXX090713-08CRI
Vial: 1:1,C

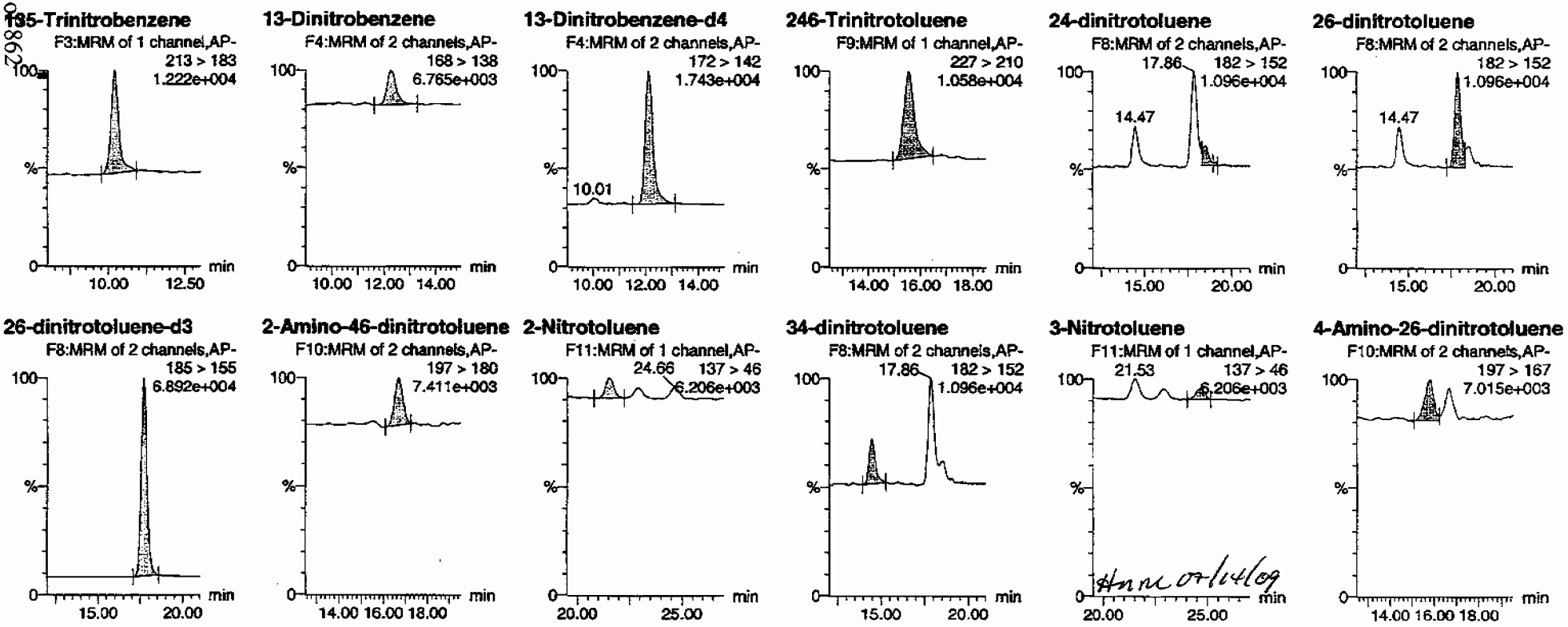

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

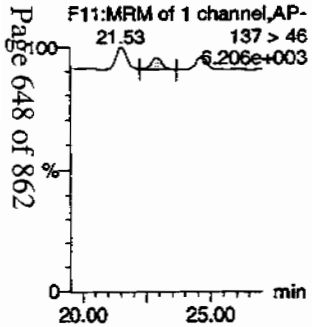

HMX

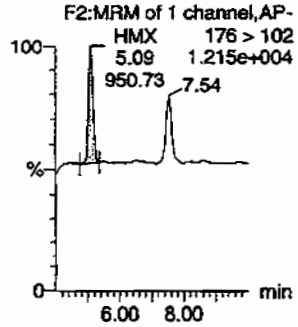

Nitrobenzene

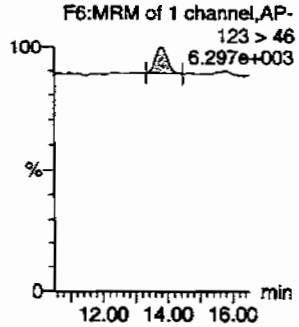

PETN

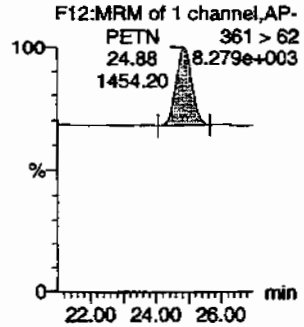

RDX

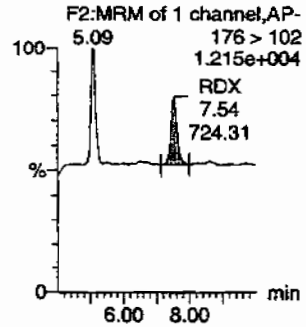

Tetryl

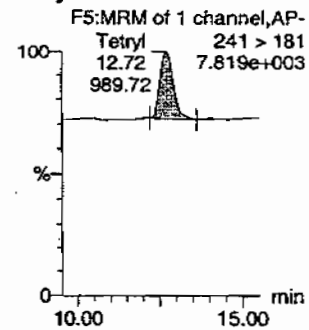

ID	Name	Trace	RT	Area	IS Area	Response	Response	Flag	Modified	Modified	Amount	%Rec	%Dev	Height/S/N
WXX090713-08CRI	HMX	176 > 102	5.09	950.734	4099.368	950.734	115.961	bb			38.2225	95.6	-4.4	111.6
WXX090713-08CRI	RDX	176 > 102	7.54	724.314	4099.368	724.314	88.345	bb			42.1831	105.5	5.5	63.5
WXX090713-08CRI	135-Trinitrobenzene	213 > 183	10.20	1927.722	4099.368	1927.722	235.124	bb			42.4741	106.2	6.2	272.2
WXX090713-08CRI	13-Dinitrobenzene-d4	172 > 142	12.14	4099.368		4099.368	4099.368	bb			520.0663	104.0	4.0	408.9
WXX090713-08CRI	13-Dinitrobenzene	168 > 138	12.27	509.316	4099.368	509.316	62.121	bb			47.0284	117.6	17.6	38.3
WXX090713-08CRI	Tetryl	241 > 181	12.72	989.718	4099.368	989.718	120.716	bb			38.3468	95.9	-4.1	64.5
WXX090713-08CRI	Nitrobenzene	123 > 46	13.80	290.713	4099.368	290.713	35.458	bb			36.2318	90.6	-9.4	24.4
WXX090713-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.80	623.213	24833.205	623.213	12.548	MM	14-Jul-09	10:18:40	41.5871	104.0	4.0	26.3
WXX090713-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.68	722.091	24833.205	722.091	14.539	bb			39.5497	98.9	-1.1	50.5
WXX090713-08CRI	246-Trinitrotoluene	227 > 210	15.55	2259.581	24833.205	2259.581	45.495	bb			40.7090	101.8	1.8	83.0
WXX090713-08CRI	34-dinitrotoluene	182 > 152	14.47	939.169	24833.205	939.169	18.910	bb			21.7089	108.5	8.5	57.6
WXX090713-08CRI	26-dinitrotoluene	182 > 152	17.86	2221.925	24833.205	2221.925	44.737	MM	14-Jul-09	10:15:16	39.2612	98.2	-1.8	135.7
WXX090713-08CRI	24-dinitrotoluene	182 > 152	18.53	467.683	24833.205	467.683	9.416	MM	14-Jul-09	10:11:47	37.4565	93.6	-6.4	28.0
WXX090713-08CRI	26-dinitrotoluene-d3	185 > 155	17.68	24833.205		24833.205	24833.205	bb			519.2622	103.9	3.9	1092.6
WXX090713-08CRI	2-Nitrotoluene	137 > 46	21.53	277.811	24833.205	277.811	5.594	bb			39.7646	99.4	-0.6	32.2
WXX090713-08CRI	4-Nitrotoluene	137 > 46	22.91	157.901	24833.205	157.901	3.179	bb			46.4234	116.1	16.1	16.6
WXX090713-08CRI	3-Nitrotoluene	137 > 46	24.66	151.039	24833.205	151.039	3.041	bb			34.4553	86.1	-13.9	17.2
WXX090713-08CRI	PETN	361 > 62	24.88	1454.199	24833.205	1454.199	29.279	bb			44.6236	111.6	11.6	296.6

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/13/09
Time of Injection 2020
Standard Number WXX090713-08CRI
Data File EXP0713012a

HMX		95.6
RDX		105.5
135-TNB		106.2
13-DNB		117.6
Tetryl		95.9
Nitrobenzene		90.6
4A-26-DNT		104.0
2A-46-DNT		98.9
246-TNT		101.8
34-DNT(surr)		108.5
26-DNT		98.2
24-DNT		93.6
2-NT		99.4
4-NT		116.1
3-NT		86.1
PETN		111.6
Total		1629.6
Average		101.9

HMM 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0713022a

Analysis Date: 14-JUL-09 01:15

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	642.794	107	
1,3-Dinitrobenzene-d4	500	526.454	105	
2,4,6-Trinitrotoluene	600	706.609	118	
2,4-Dinitrotoluene	600	578.41	96	
2,6-Dinitrotoluene	600	592.39	99	
2,6-Dinitrotoluene-d3	500	515.313	103	
2-Amino-4,6-dinitrotoluene	600	735.592	123	*
3,4-Dinitrotoluene	300	310.133	103	
4-Amino-2,6-dinitrotoluene	600	697.626	116	
HMX	600	602.051	100	
Nitrobenzene	600	559.141	93	
PETN	600	565.352	94	
RDX	600	702.253	117	
Tetryl	600	627.983	105	
m-Dinitrobenzene	600	631.063	105	
m-Nitrotoluene	600	478.601	80	*
o-Nitrotoluene	600	506.419	84	
p-Nitrotoluene	600	551.079	92	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713022a
Date: 14-Jul-2009
Time: 01:15:47
ID: WXX090713-07CCV
Vial: 1:1,B

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.010e+005

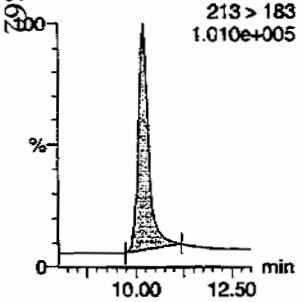

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.329e+004

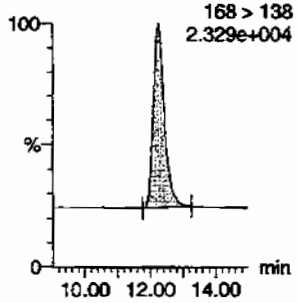

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.803e+004

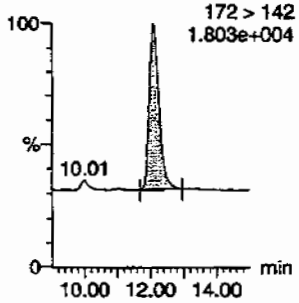

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
9.053e+004

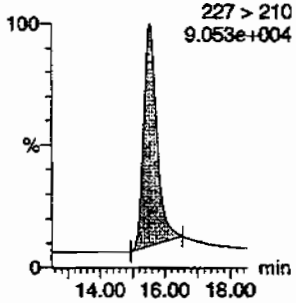

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.071e+004

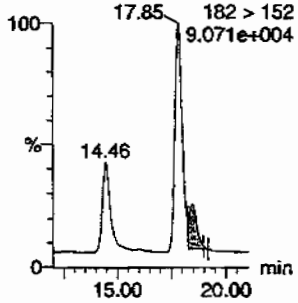

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.071e+004

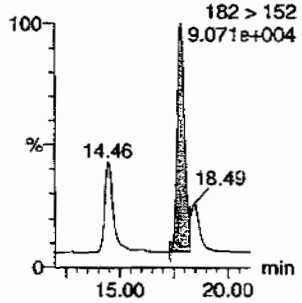

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.748e+004

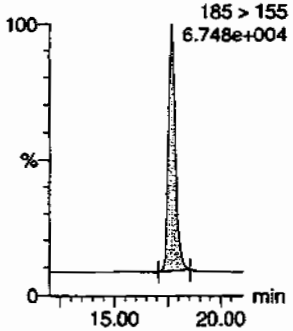

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.780e+004

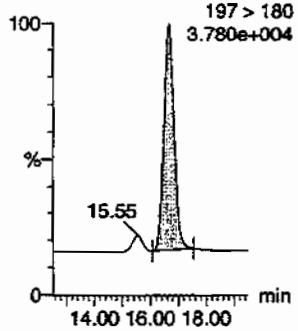

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.333e+004

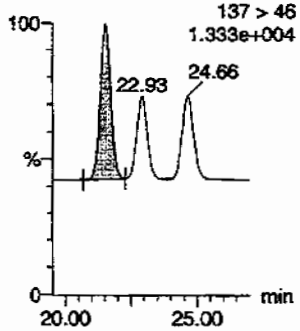

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.071e+004

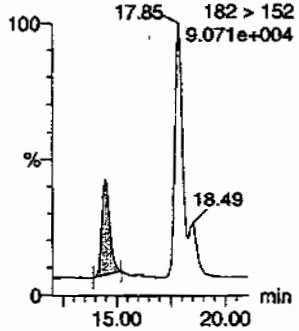

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.333e+004

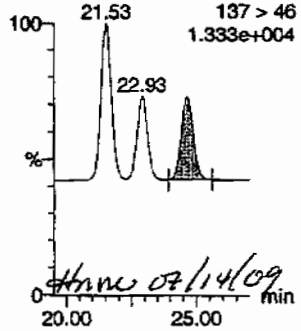

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.954e+004

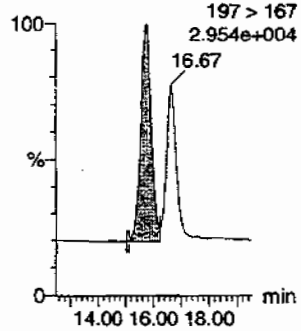

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

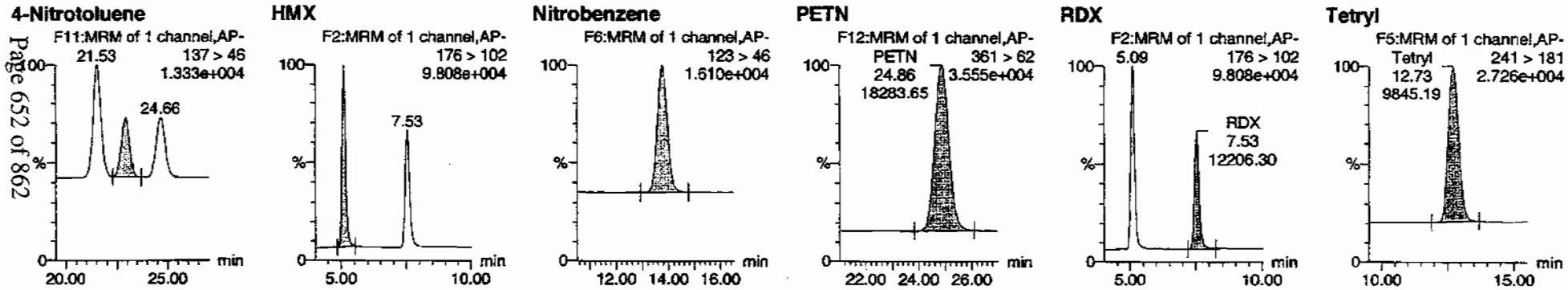

ID	Name	Trace	RT	Area	IS Area	Abs Resp	RF Response	Class	MM Date	MM Time	Amount	%Rec	%Dev	S/N
WXX090713-07CCV	HMX	176 > 102	5.09	15159.184	4149.721	15159.184	1826.531	bb			602.0512	100.3	0.3	1792.1
WXX090713-07CCV	RDX	176 > 102	7.53	12206.297	4149.721	12206.297	1470.737	bb			702.2530	117.0	17.0	1144.0
WXX090713-07CCV	135-Trinitrobenzene	213 > 183	10.18	29532.057	4149.721	29532.057	3558.318	bb			642.7939	107.1	7.1	4631.2
WXX090713-07CCV	13-Dinitrobenzene-d4	172 > 142	12.10	4149.721		4149.721	4149.721	bb			526.4544	105.3	5.3	466.1
WXX090713-07CCV	13-Dinitrobenzene	168 > 138	12.24	6918.331	4149.721	6918.331	833.590	bb			631.0626	105.2	5.2	590.5
WXX090713-07CCV	Tetryl	241 > 181	12.73	9845.190	4149.721	9845.190	1186.247	bb			627.9826	104.7	4.7	853.9
WXX090713-07CCV	Nitrobenzene	123 > 46	13.75	4541.480	4149.721	4541.480	547.203	bb			559.1410	93.2	-6.8	322.9
WXX090713-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.76	10374.928	24644.340	10374.928	210.493	MM	14-Jul-09	10:19:30	697.6259	116.3	16.3	277.9
WXX090713-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.67	13328.149	24644.340	13328.149	270.410	bb			735.5924	122.6	22.6	519.4
WXX090713-07CCV	246-Trinitrotoluene	227 > 210	15.57	38922.586	24644.340	38922.586	789.686	bb			706.6094	117.8	17.8	1815.3
WXX090713-07CCV	34-dinitrotoluene	182 > 152	14.46	13314.886	24644.340	13314.886	270.141	bb			310.1329	103.4	3.4	271.9
WXX090713-07CCV	26-dinitrotoluene	182 > 152	17.85	33270.398	24644.340	33270.398	675.011	MM	14-Jul-09	10:15:56	592.3897	98.7	-1.3	712.7
WXX090713-07CCV	24-dinitrotoluene	182 > 152	18.49	7167.119	24644.340	7167.119	145.411	MM	14-Jul-09	10:12:37	578.4104	96.4	-3.6	142.3
WXX090713-07CCV	26-dinitrotoluene-d3	185 > 155	17.68	24644.340		24644.340	24644.340	bb			515.3130	103.1	3.1	1142.5
WXX090713-07CCV	2-Nitrotoluene	137 > 46	21.53	3511.135	24644.340	3511.135	71.236	bb			506.4193	84.4	-15.6	161.7
WXX090713-07CCV	4-Nitrotoluene	137 > 46	22.93	1860.142	24644.340	1860.142	37.740	bb			551.0794	91.8	-8.2	84.9
WXX090713-07CCV	3-Nitrotoluene	137 > 46	24.66	2082.052	24644.340	2082.052	42.242	bb			478.6010	79.8	-20.2	84.9
WXX090713-07CCV	PETN	361 > 62	24.86	18283.646	24644.340	18283.646	370.950	bb			565.3520	94.2	-5.8	3442.6

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/14/09
Time of Injection 0115
Standard Number WXX090713-07CCV
Data File EXP0713022a

HMX	100.3
RDX	117.0
135-TNB	107.1
13-DNB	105.2
Tetryl	104.7
Nitrobenzene	93.2
4A-26-DNT	116.3
2A-46-DNT	122.6
246-TNT	117.8
34-DNT(surr)	103.4
26-DNT	98.7
24-DNT	96.4
2-NT	84.4
4-NT	91.8
3-NT	79.8
PETN	94.2
Total	1632.9
Average	102.1

HMT 7/14/09

Hmm 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0713024a

Analysis Date: 14-JUL-09 02:14

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	45.982	115	
1,3-Dinitrobenzene-d4	500	555.109	111	
2,4,6-Trinitrotoluene	40	41.657	104	
2,4-Dinitrotoluene	40	39.648	99	
2,6-Dinitrotoluene	40	38.348	96	
2,6-Dinitrotoluene-d3	500	529.624	106	
2-Amino-4,6-dinitrotoluene	40	44.149	110	
3,4-Dinitrotoluene	20	19.341	97	
4-Amino-2,6-dinitrotoluene	40	39.608	99	
HMX	40	39.085	98	
Nitrobenzene	40	34.813	87	
PETN	40	50.517	126	
RDX	40	39.257	98	
Tetryl	40	27.953	70	*
m-Dinitrobenzene	40	39.703	99	
m-Nitrotoluene	40	42.769	107	
o-Nitrotoluene	40	37.963	95	
p-Nitrotoluene	40	32.873	82	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713024a
Date: 14-Jul-2009
Time: 02:14:45
ID: WXX090713-08CRI
Vial: 1:1,C

MAT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.331e+004

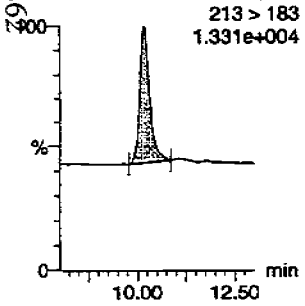

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.663e+003

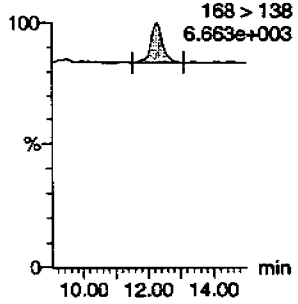

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.821e+004

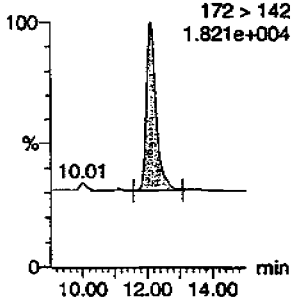

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.081e+004

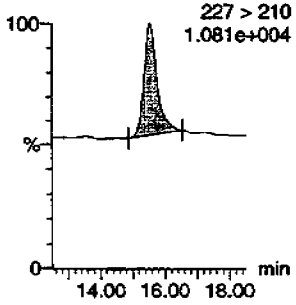

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.104e+004

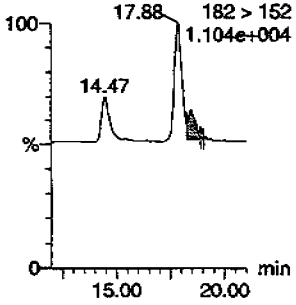

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.104e+004

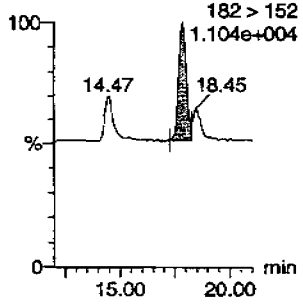

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.917e+004

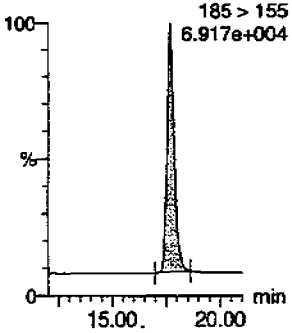

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.493e+003

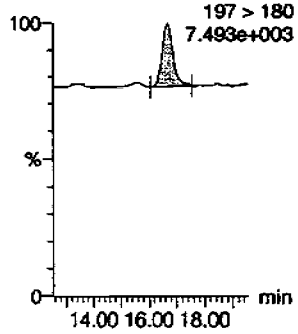

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.219e+003

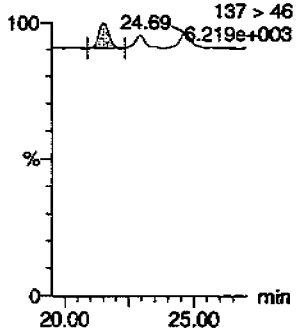

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.104e+004

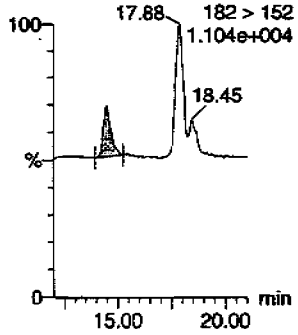

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.219e+003

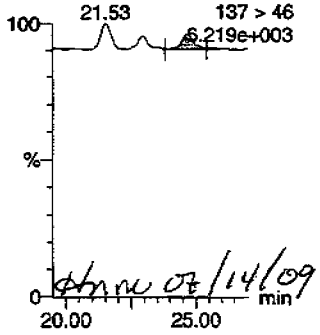

dhm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.088e+003

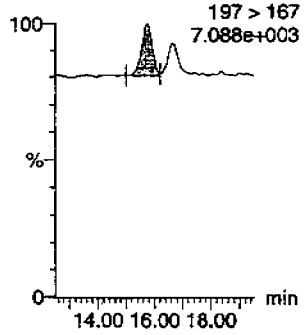

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

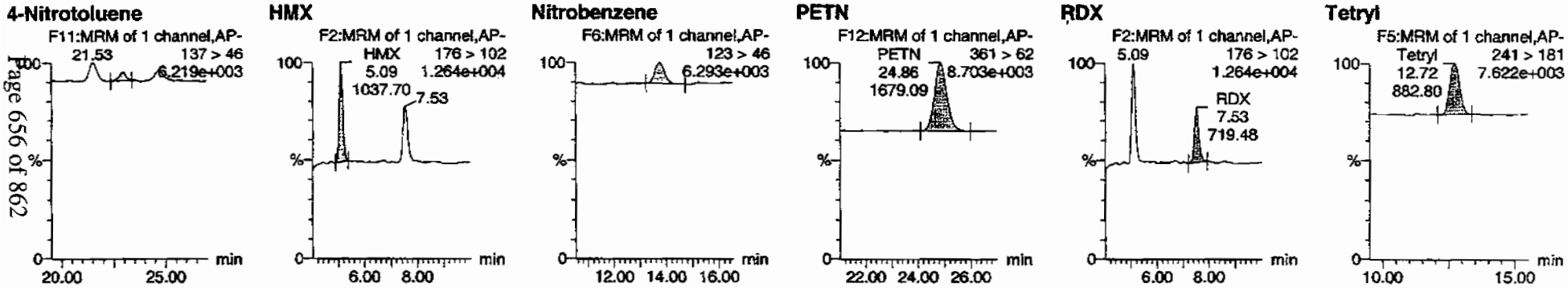

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modification	Mod Time	Height	%Rec	%Dev	S/N
WXX090713-08CRI	HMX	176 > 102	5.09	1037.703	4375.591	1037.703	118.579	bb			39.0852	97.7	-2.3	96.5
WXX090713-08CRI	RDX	176 > 102	7.53	719.484	4375.591	719.484	82.216	bb			39.2566	98.1	-1.9	53.1
WXX090713-08CRI	135-Trinitrobenzene	213 > 183	10.20	2227.525	4375.591	2227.525	254.540	bb			45.9815	115.0	15.0	235.9
WXX090713-08CRI	13-Dinitrobenzene-d4	172 > 142	12.14	4375.591		4375.591	4375.591	bb			555.1094	111.0	11.0	454.2
WXX090713-08CRI	13-Dinitrobenzene	168 > 138	12.27	458.950	4375.591	458.950	52.444	bb			39.7026	99.3	-0.7	50.5
WXX090713-08CRI	Tetryl	241 > 181	12.72	882.804	4375.591	882.804	100.878	bb			27.9531	69.9	-30.1	63.3
WXX090713-08CRI	Nitrobenzene	123 > 46	13.76	298.146	4375.591	298.146	34.069	bb			34.8125	87.0	-13.0	18.8
WXX090713-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.77	605.406	25328.754	605.406	11.951	MM	14-Jul-09	10:19:37	39.6084	99.0	-1.0	45.8
WXX090713-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.65	822.149	25328.754	822.149	16.230	bb			44.1490	110.4	10.4	29.5
WXX090713-08CRI	246-Trinitrotoluene	227 > 210	15.55	2358.355	25328.754	2358.355	46.555	bb			41.6572	104.1	4.1	103.7
WXX090713-08CRI	34-dinitrotoluene	182 > 152	14.47	853.434	25328.754	853.434	16.847	bb			19.3412	96.7	-3.3	63.5
WXX090713-08CRI	26-dinitrotoluene	182 > 152	17.88	2213.560	25328.754	2213.560	43.697	MM	14-Jul-09	10:16:04	38.3481	95.9	-4.1	166.2
WXX090713-08CRI	24-dinitrotoluene	182 > 152	18.45	504.918	25328.754	504.918	9.967	MM	14-Jul-09	10:12:52	39.6475	99.1	-0.9	41.5
WXX090713-08CRI	26-dinitrotoluene-d3	185 > 155	17.68	25328.754		25328.754	25328.754	bb			529.6241	105.9	5.9	1137.3
WXX090713-08CRI	2-Nitrotoluene	137 > 46	21.53	270.514	25328.754	270.514	5.340	bb			37.9626	94.9	-5.1	33.7
WXX090713-08CRI	4-Nitrotoluene	137 > 46	22.95	114.041	25328.754	114.041	2.251	bb			32.8725	82.2	-17.8	16.3
WXX090713-08CRI	3-Nitrotoluene	137 > 46	24.69	191.225	25328.754	191.225	3.775	bb			42.7691	106.9	6.9	20.0
WXX090713-08CRI	PETN	361 > 62	24.86	1679.089	25328.754	1679.089	33.146	bb			50.5165	126.3	26.3	618.5

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/14/09
Time of Injection 0214
Standard Number WXX090713-08CRI
Data File EXP0713024a

HMX		97.7
RDX		98.1
135-TNB		115.0
13-DNB		99.3
Tetryl		69.9
Nitrobenzene		87.0
4A-26-DNT		99.0
2A-46-DNT		110.4
246-TNT		104.1
34-DNT(surr)		96.7
26-DNT		95.9
24-DNT		99.1
2-NT		94.9
4-NT		82.2
3-NT		106.9
PETN		126.3
Total		1582.5
Average		98.9

HMM 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS0630013.wiff

Analysis Date: 30-JUN-09 14:28

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	96.7	97	
2,6-Diamino-4-nitrotoluene	100	105	105	
3,4-Dinitrotoluene	50	49.1	98	
3,5-Dinitroaniline	100	96	96	
TATB	100	104	104	
tris(o-cresyl) phosphate	100	99.7	100	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630013.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 104. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:28:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 6.36e+004 counts
Height: 12455.819 cps
Start Time: 6.88 min
End Time: 7.34 min

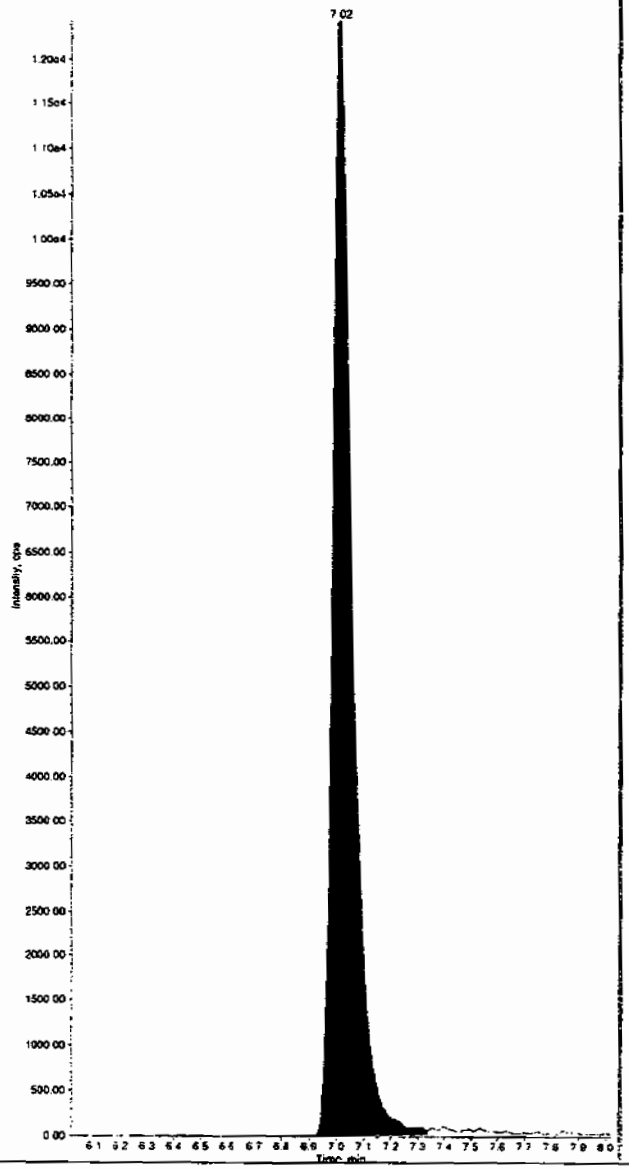

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630013.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 96.0 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:28:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.25 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.24 min
Area: 1.34e+005 counts
Height: 32246.429 cps
Start Time: 8.14 min
End Time: 8.37 min

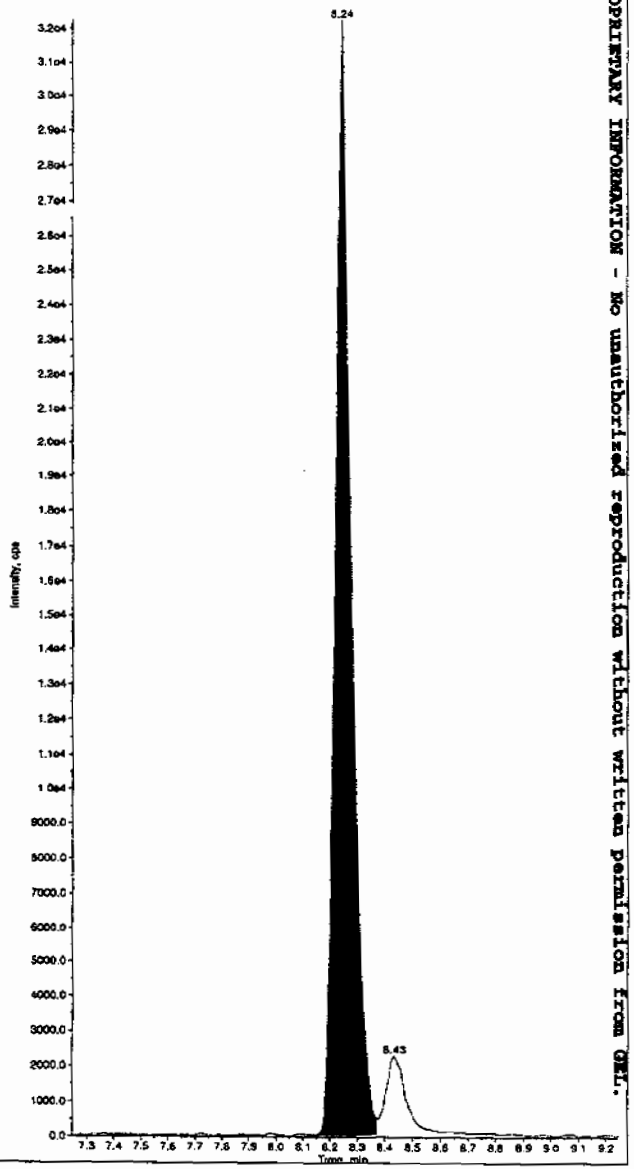

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630013.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 49.1 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:28:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.42 min
Area: 1.02e+005 counts
Height: 19203.070 cps
Start Time: 8.35 min
End Time: 8.95 min

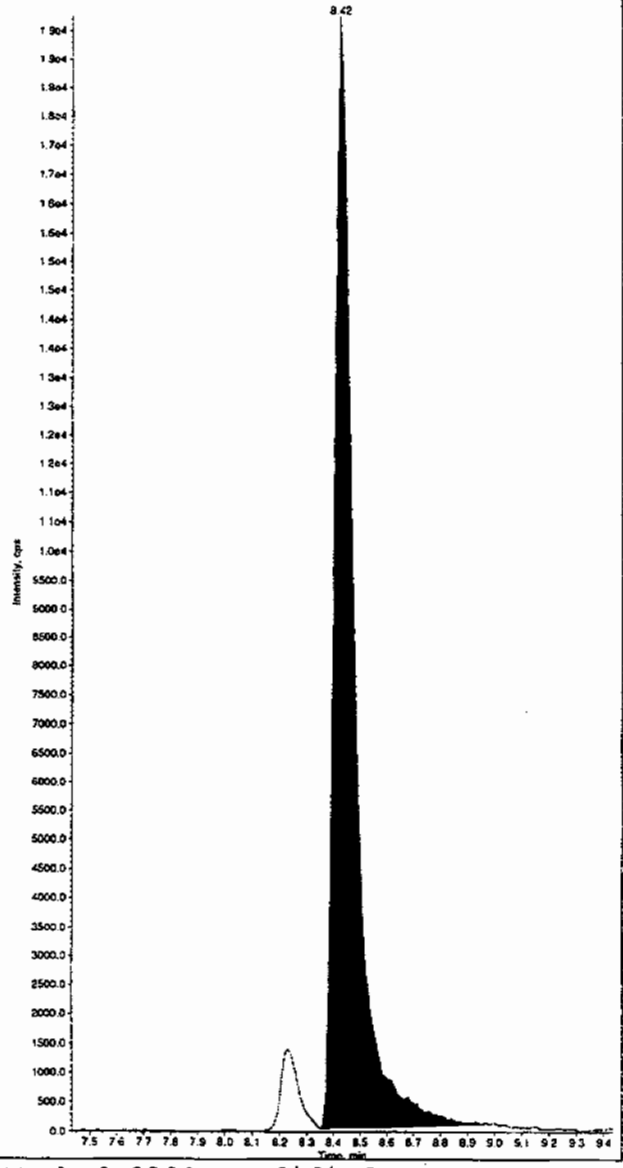

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630013.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 105. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:28:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.09 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.08 min
Area: 2.17e+004 counts
Height: 4365.983 cps
Start Time: 4.94 min
End Time: 5.32 min

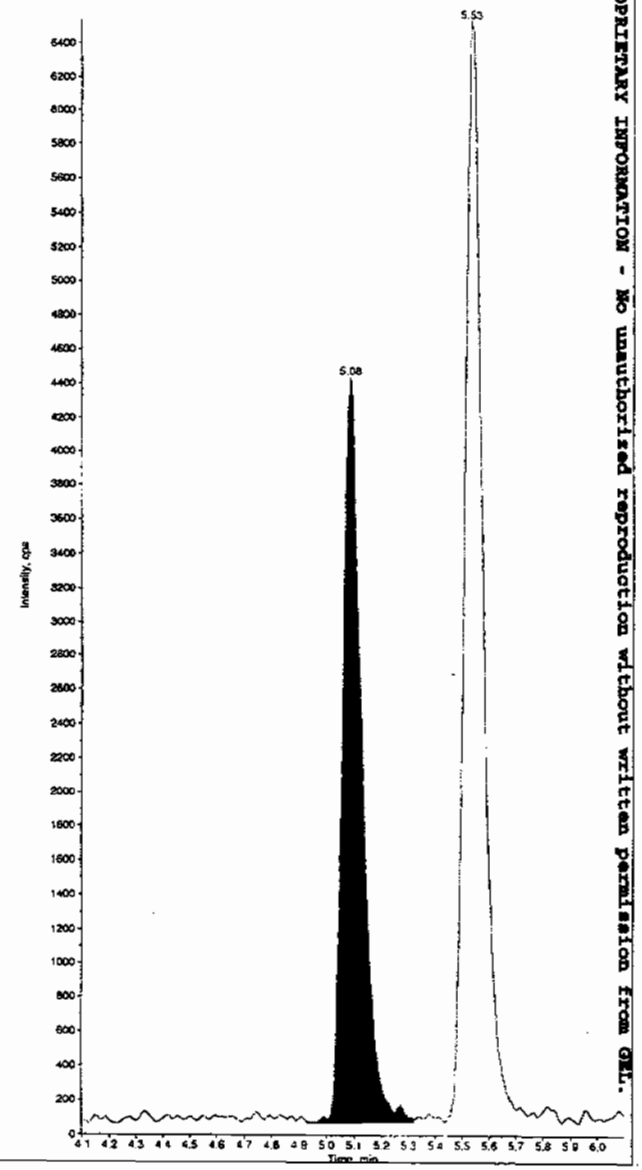

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-27CRI" Sample ID: "[1]LER" File: "EXS0630013.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 96.7 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:28:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 3.02e+004 counts
Height: 6445.036 cps
Start Time: 5.44 min
End Time: 5.78 min

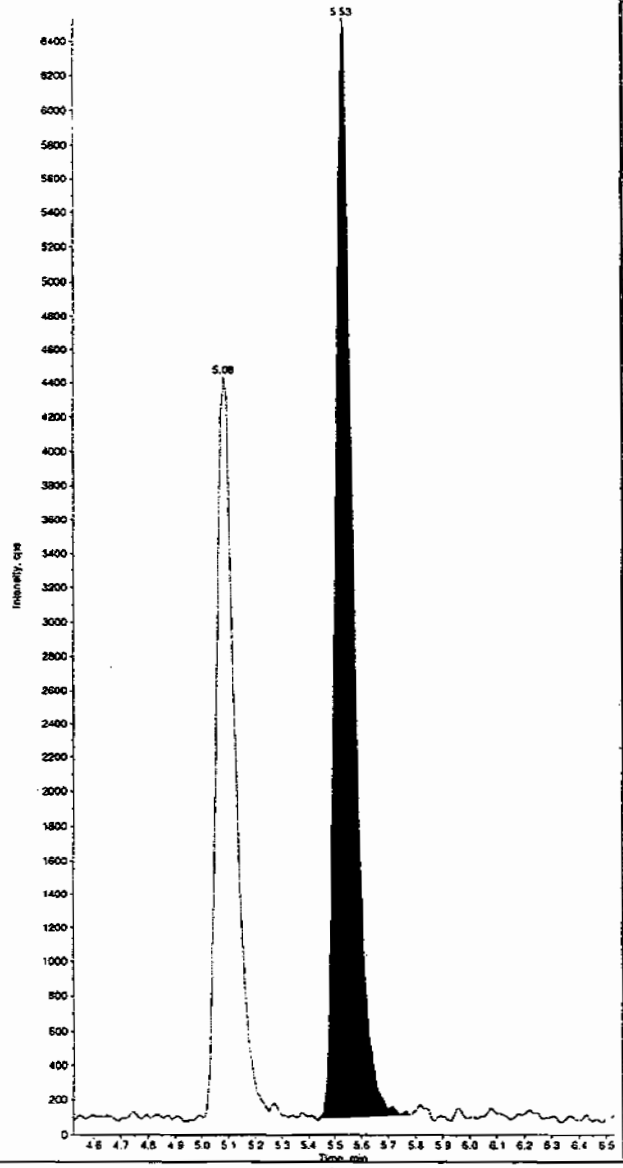

Sample Name: "WXX090630-27CRI" Sample ID: "[1]LER" File: "EXS0630013.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 99.7 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 2:28:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.0 min
Area: 1.32e+006 counts
Height: 289432.281 cps
Start Time: 10.9 min
End Time: 11.3 min

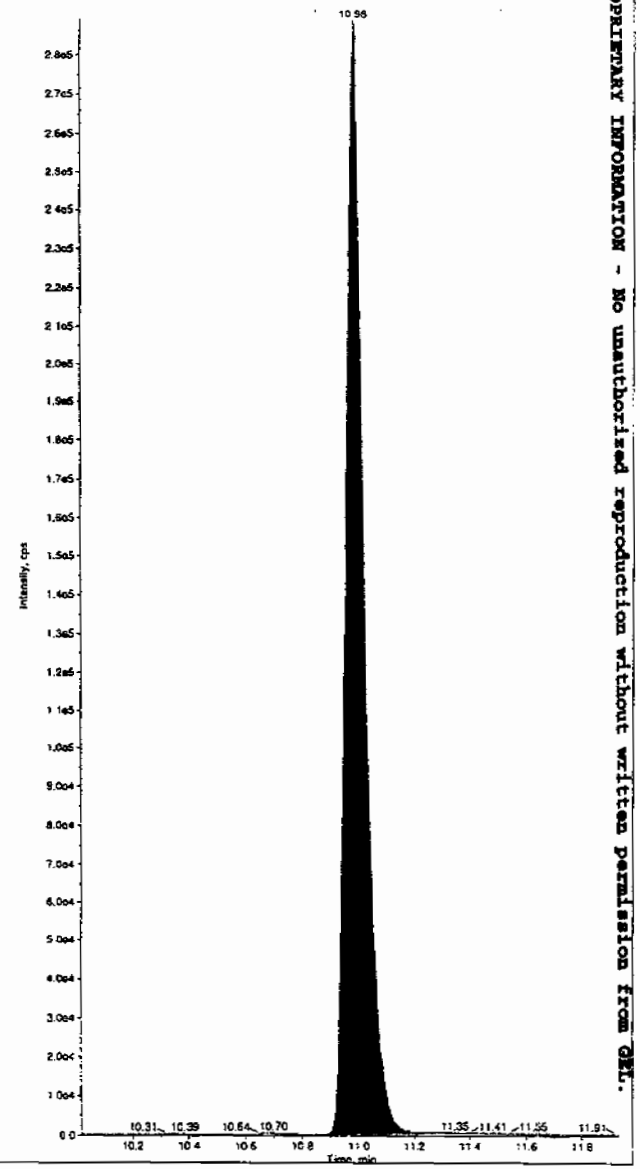

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS0630021.wiff

Analysis Date: 30-JUN-09 16:37

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	449	90	
2,6-Diamino-4-nitrotoluene	500	476	95	
3,4-Dinitrotoluene	250	233	93	
3,5-Dinitroaniline	500	474	95	
TATB	500	528	106	
tris(o-cresyl) phosphate	500	515	103	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Ran 7/1/09

Sample Name: "WXX090630-26CCV" Sample ID: "[1]LER" File: "EXS0630021.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 528. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 4:37:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 3.24e+005 counts
Height: 62438.267 cps
Start Time: 6.88 min
End Time: 7.60 min

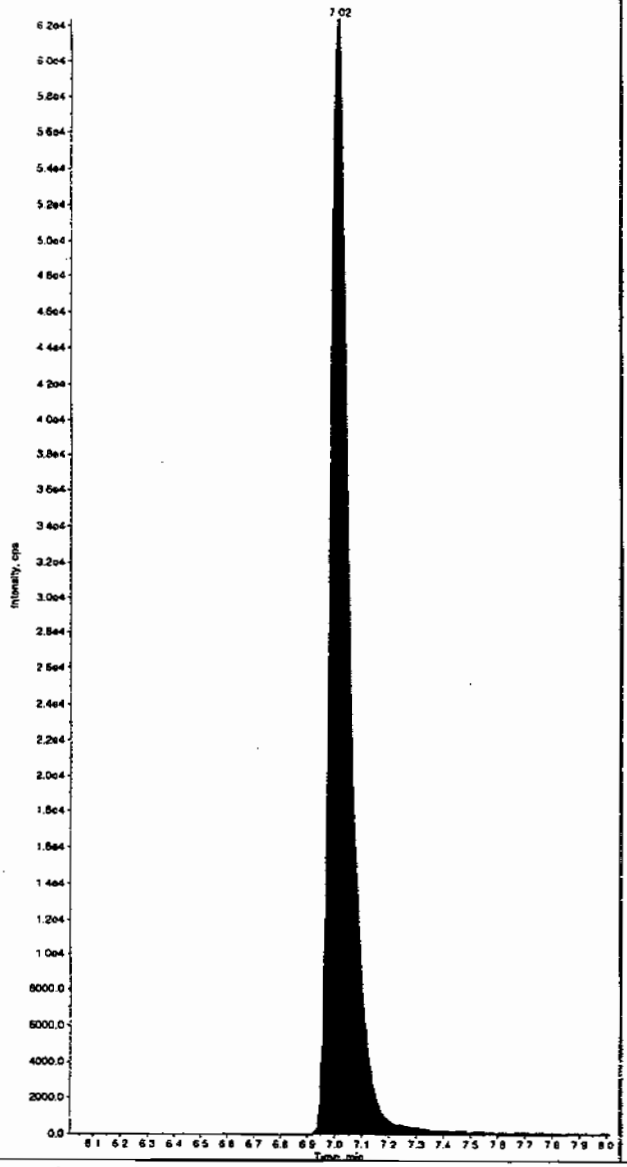

Sample Name: "WXX090630-26CCV" Sample ID: "[1]LER" File: "EXS0630021.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 474. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 4:37:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.25 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.24 min
Area: 5.97e+005 counts
Height: 122401.581 cps
Start Time: 8.14 min
End Time: 8.38 min

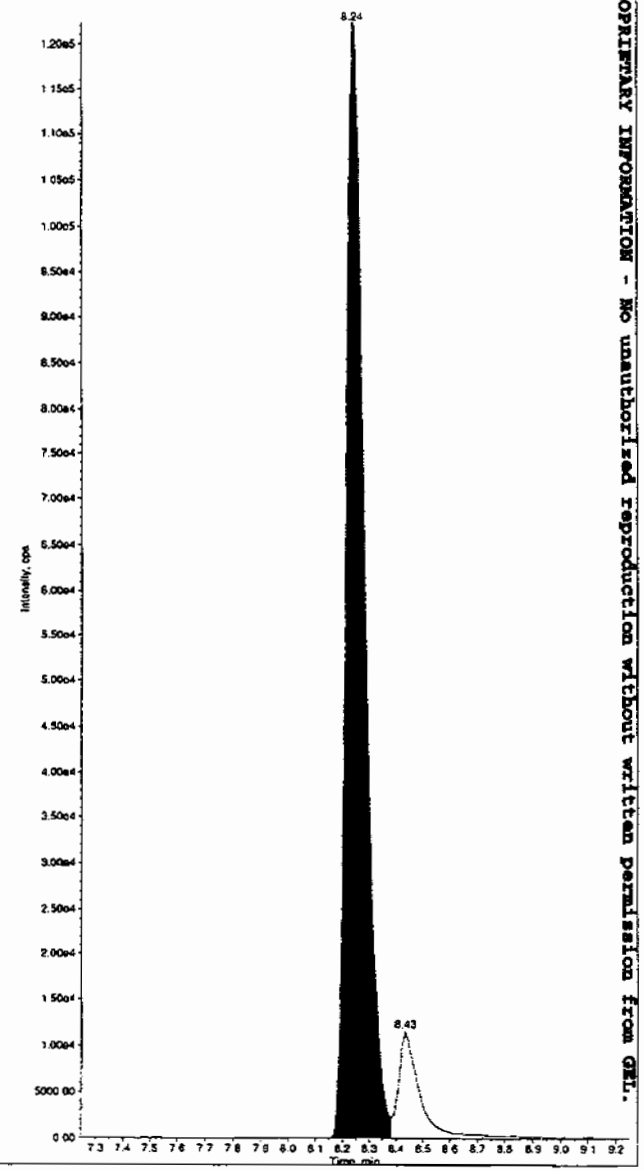

Hmm 07/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-26CCV" Sample ID: "|1|LER" File: "EXS0630021.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

```
Sample Index:        1
Sample Type:         QC
Concentration:       250.     ng/mL
Calculated Conc:     233.     ng/mL
Acq. Date:        6/30/2009
Acq. Time:        4:37:46 PM

Modified:            No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height:1460.00    cps
Min. Peak Width:     0.00    sec
Smoothing Width:  3        points
RT Window:          30.0     sec
Expected RT:         8.43    min
Use Relative RT:     No

Int. Type:         Valley
Retention Time:      8.43    min
Area:          4.94e+005   counts
Height:          91227.905  cps
Start Time:          8.35    min
End Time:            9.23    min
```

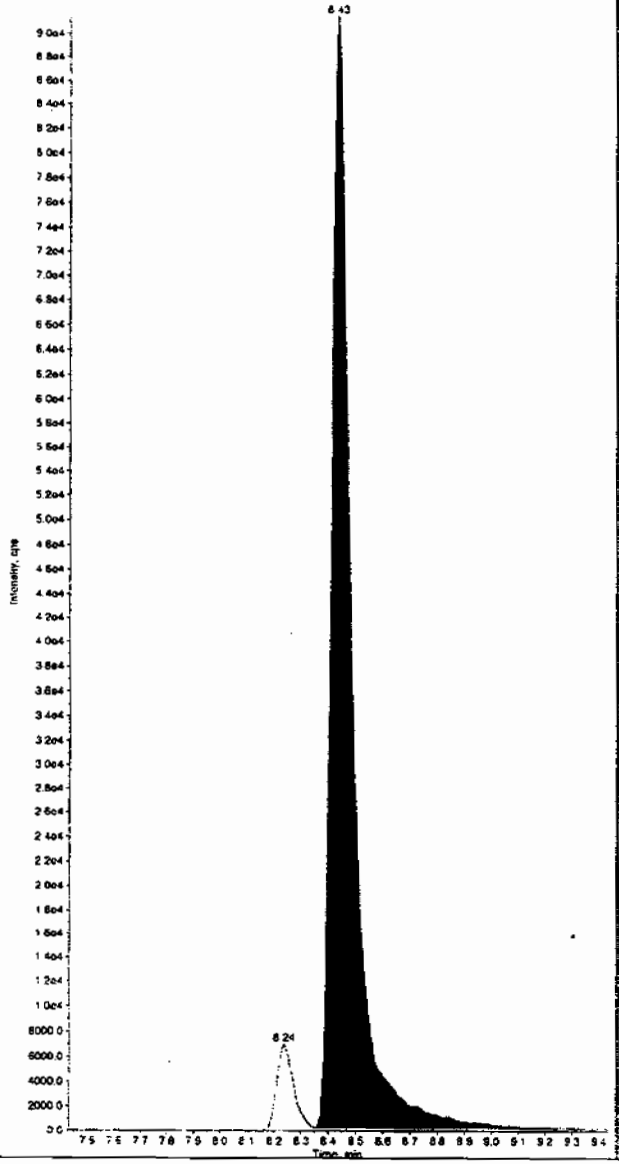

Sample Name: "WXX090630-26CCV" Sample ID: "|1|LER" File: "EXS0630021.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/48.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

```
Sample Index:        1
Sample Type:         QC
Concentration:       500.     ng/mL
Calculated Conc:     476.     ng/mL
Acq. Date:        6/30/2009
Acq. Time:        4:37:46 PM

Modified:            No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00    cps
Min. Peak Width:     0.00    sec
Smoothing Width:  3        points
RT Window:          30.0     sec
Expected RT:         5.09    min
Use Relative RT:     No

Int. Type:         Valley
Retention Time:      5.08    min
Area:          9.64e+004   counts
Height:          19492.819  cps
Start Time:          4.99    min
End Time:            5.34    min
```

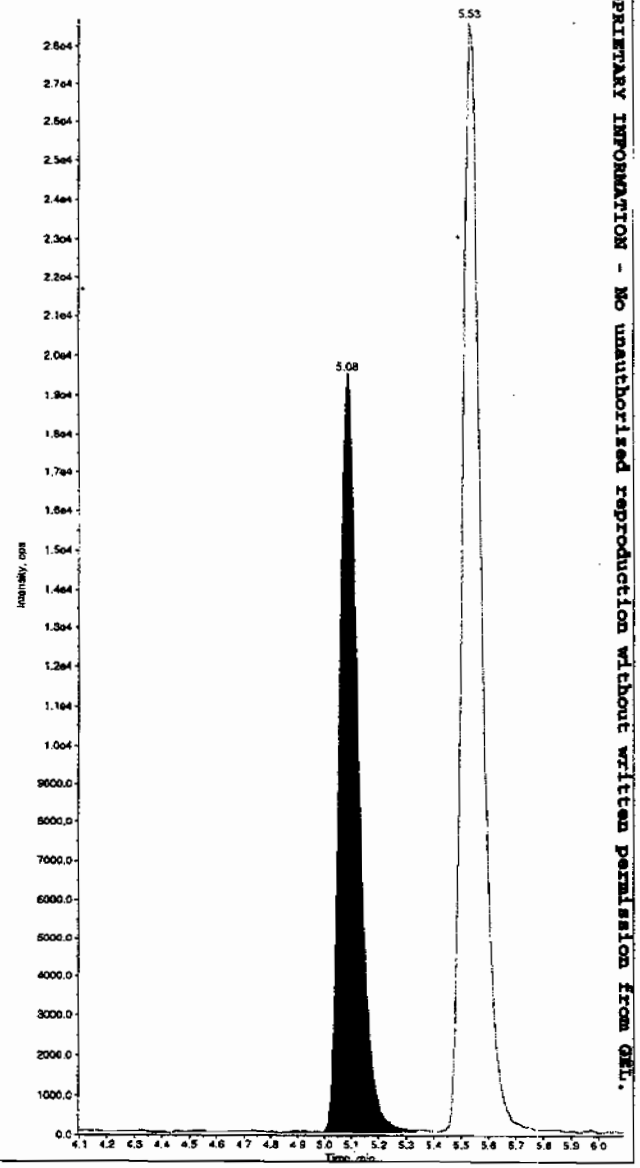

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-26CCV" Sample ID: "|1|LER" File: "EXS0630021.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 449. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 4:37:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 1.36e+005 counts
Height: 28562.990 cps
Start Time: 5.44 min
End Time: 5.79 min

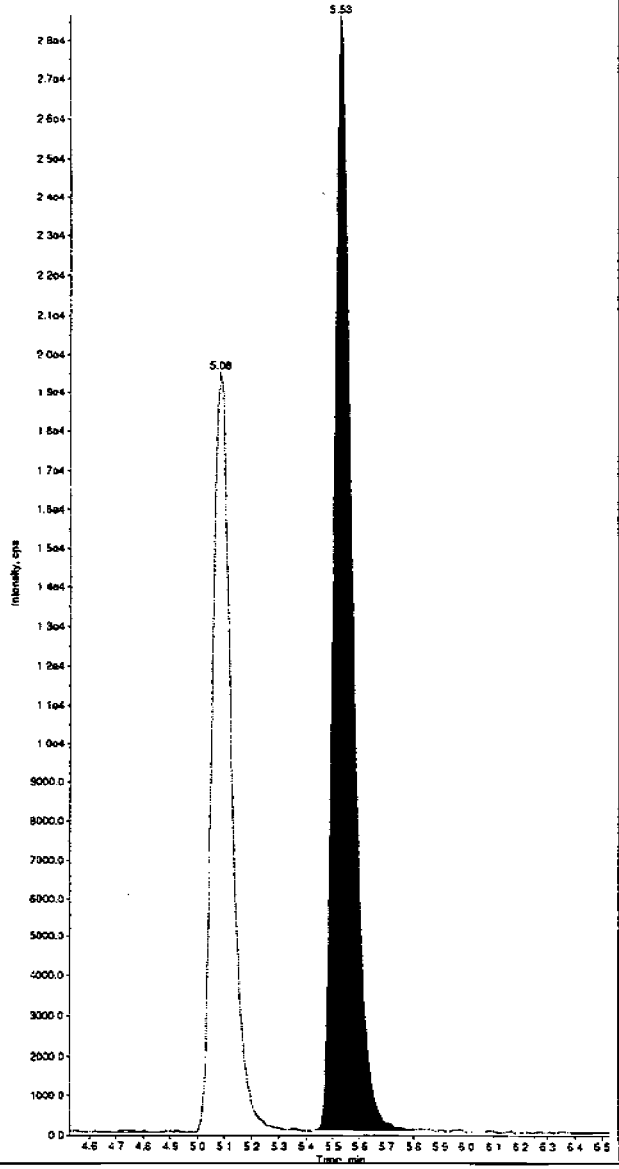

Sample Name: "WXX090630-26CCV" Sample ID: "|1|LER" File: "EXS0630021.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 515. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 4:37:46 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.37e+006 counts
Height: 1371975.586 cps
Start Time: 10.8 min
End Time: 11.2 min

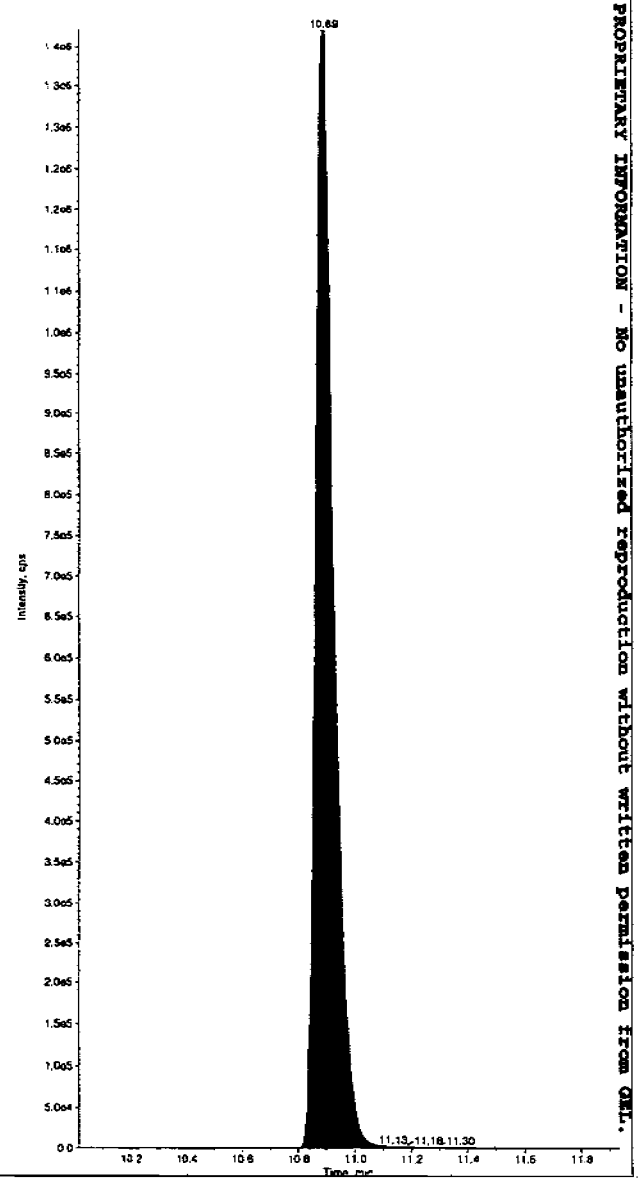

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS0630023.wiff

Analysis Date: 30-JUN-09 17:10

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	94.4	94	
2,6-Diamino-4-nitrotoluene	100	97	97	
3,4-Dinitrotoluene	50	51.1	102	
3,5-Dinitroaniline	100	95	95	
TATB	100	105	105	
tris(o-cresyl) phosphate	100	105	105	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630023.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 105. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:10:10 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 6.42e+004 counts
Height: 13992.797 cps
Start Time: 6.91 min
End Time: 7.32 min

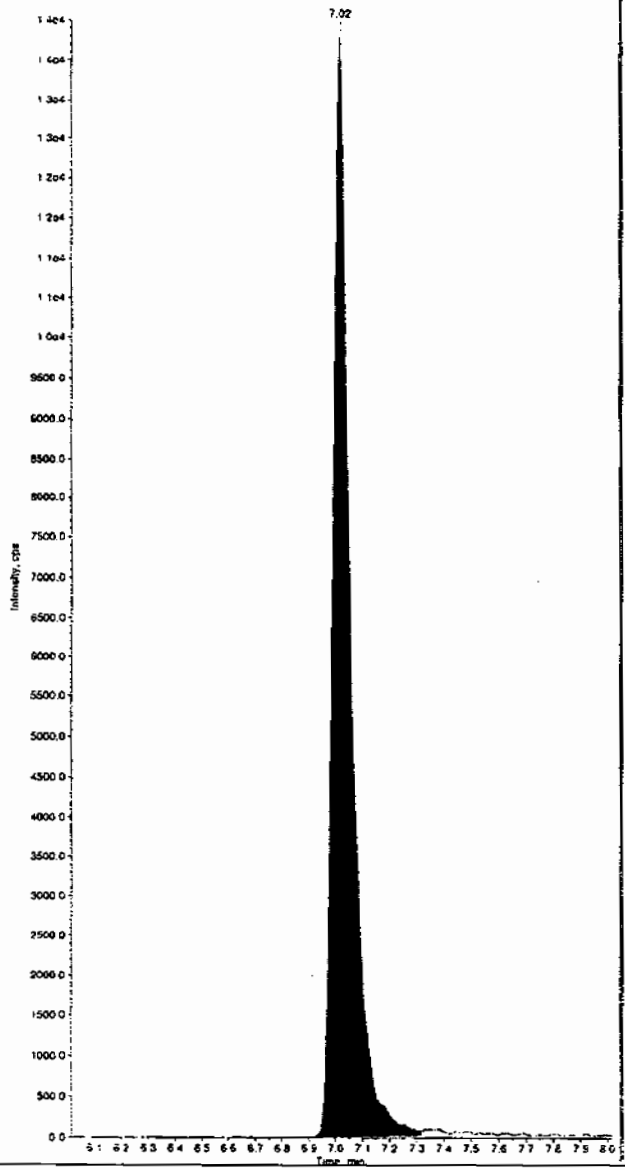

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630023.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 95.0 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:10:10 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.25 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.25 min
Area: 1.33e+005 counts
Height: 28705.933 cps
Start Time: 8.14 min
End Time: 8.38 min

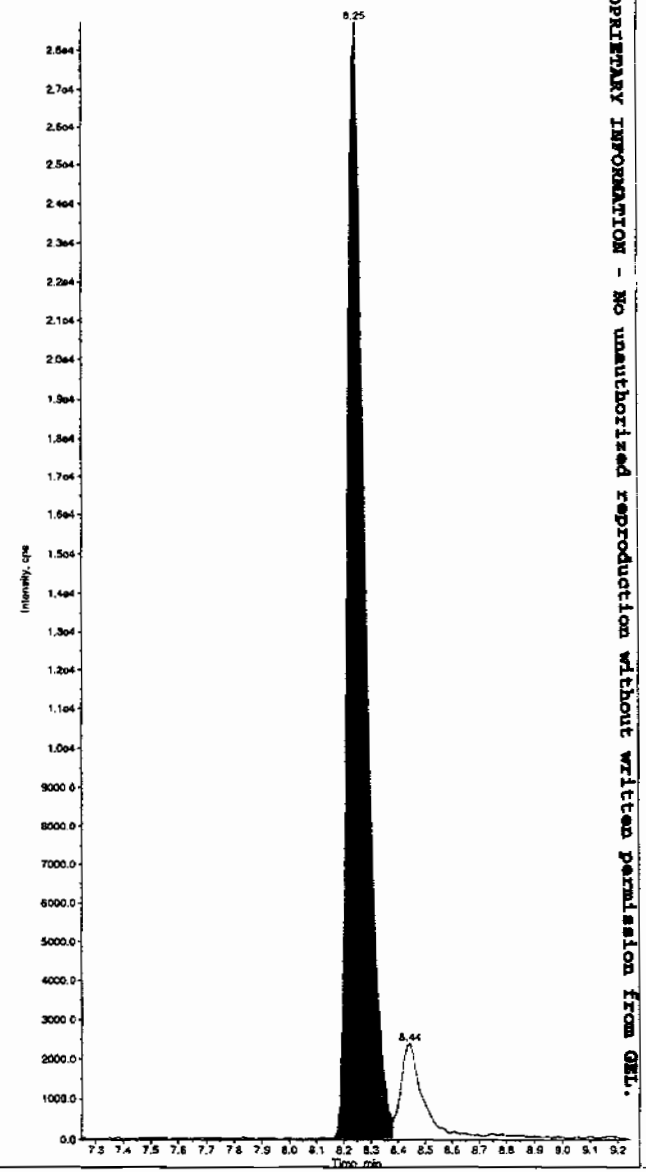

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630023.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 51.1 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:10:10 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.43 min
Area: 1.06e+005 counts
Height: 19934.631 cps
Start Time: 8.35 min
End Time: 9.14 min

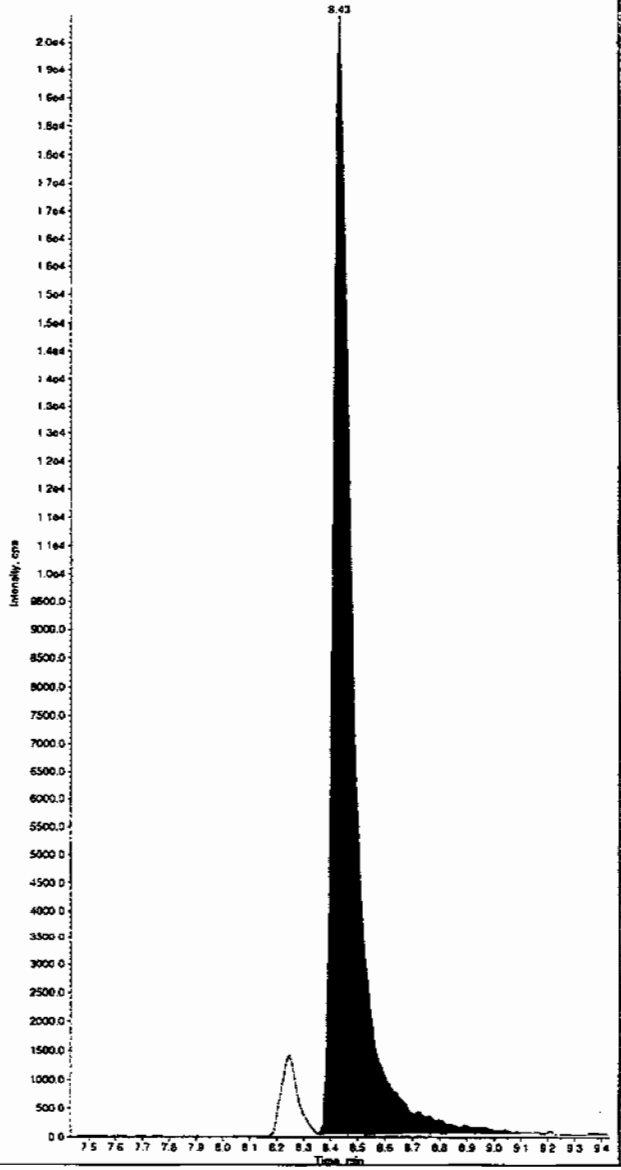

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630023.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/45.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 97.0 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:10:10 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.09 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.09 min
Area: 2.00e+004 counts
Height: 4375.936 cps
Start Time: 4.94 min
End Time: 5.27 min

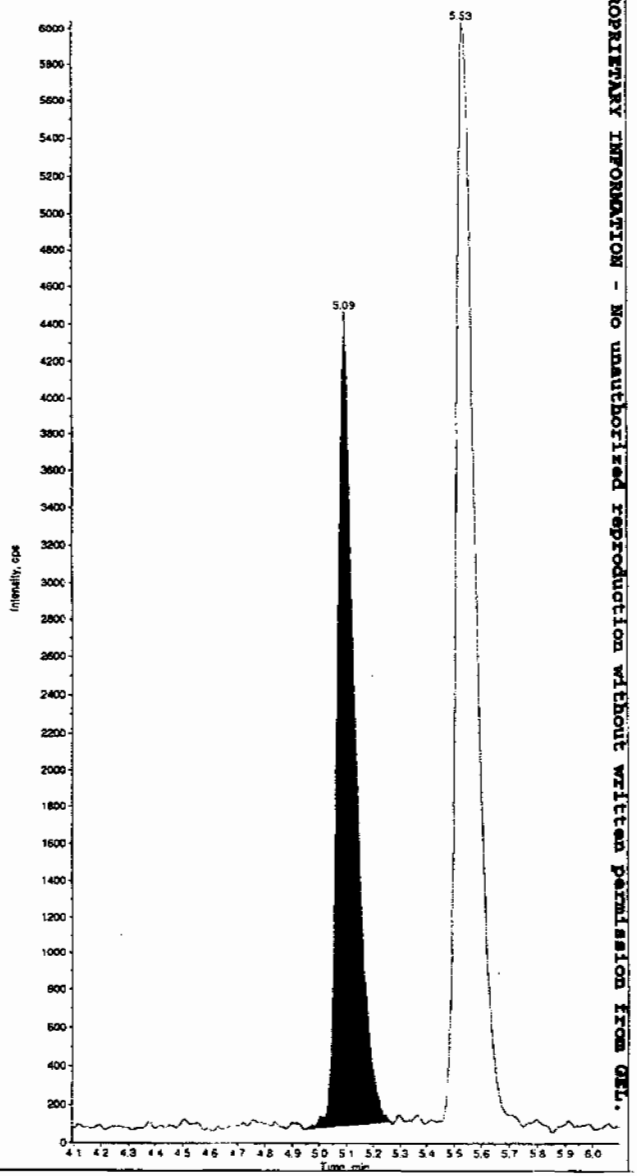

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-27CRI" Sample ID: "[1]LER" File: "EXS0630023.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 94.4 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:10:10 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 2.95e+004 counts
Height: 5961.330 cps
Start Time: 5.44 min
End Time: 5.75 min

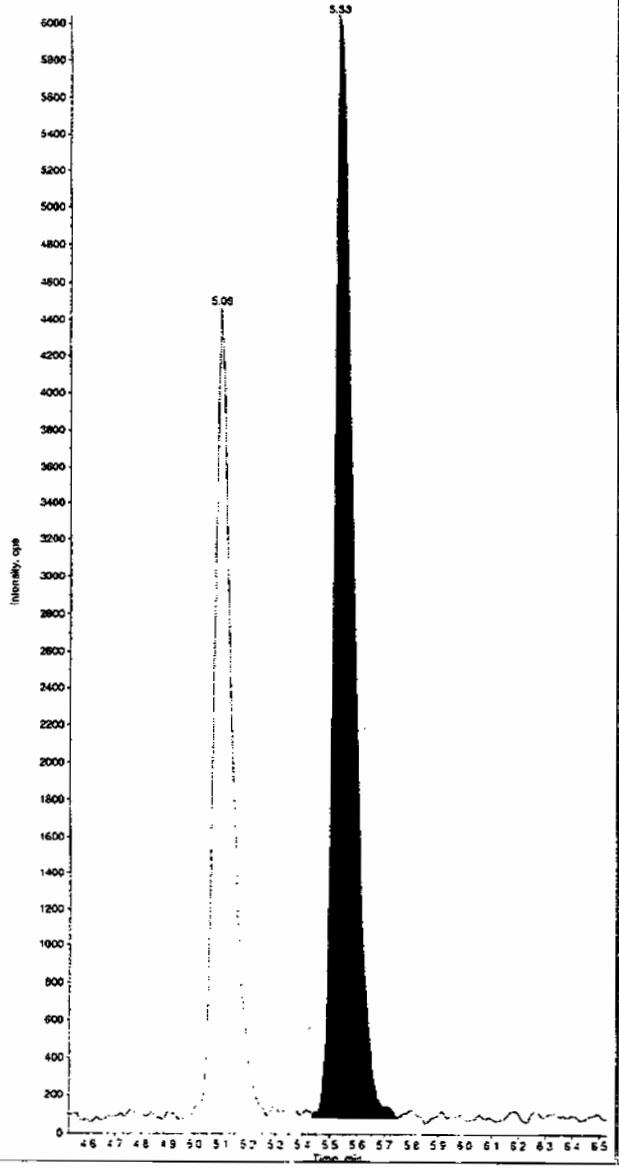

Sample Name: "WXX090630-27CRI" Sample ID: "[1]LER" File: "EXS0630023.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 105. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:10:10 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.39e+006 counts
Height: 300527.008 cps
Start Time: 10.8 min
End Time: 11.1 min

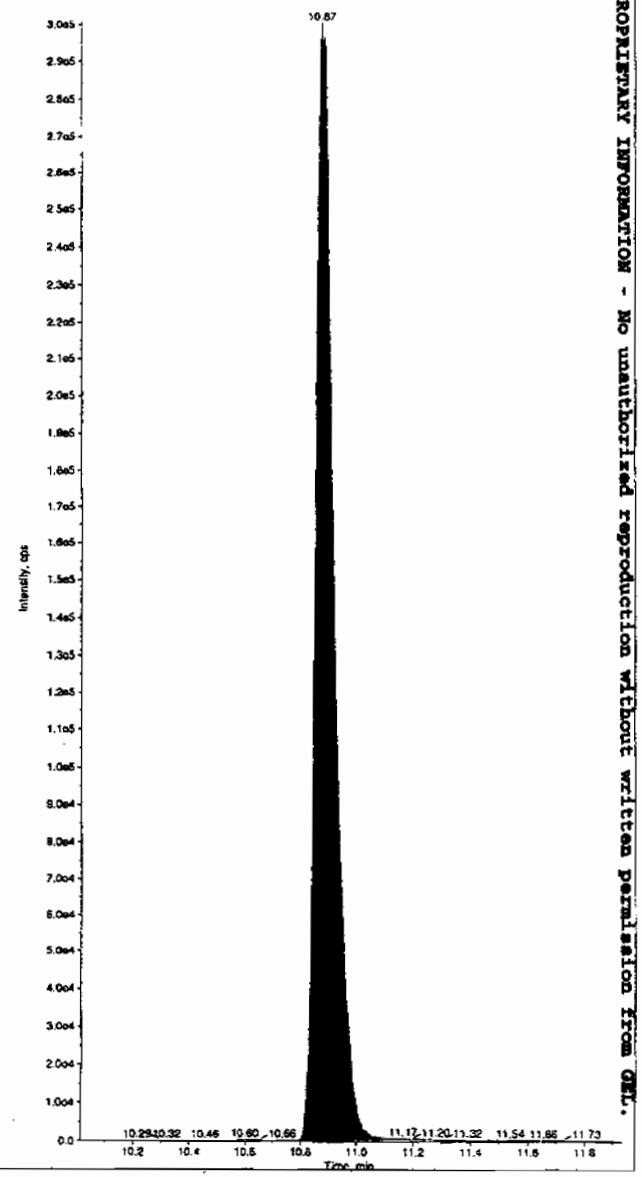

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS0630032.wiff

Analysis Date: 30-JUN-09 19:36

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	436	87	
2,6-Diamino-4-nitrotoluene	500	478	96	
3,4-Dinitrotoluene	250	239	96	
3,5-Dinitroaniline	500	537	107	
TATB	500	551	110	
tris(o-cresyl) phosphate	500	525	105	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090630-26CCV" Sample ID: "|1|LER" File: "EXS0630032.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 551. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:36:00 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.03 min
Area: 3.38e+005 counts
Height: 69978.928 cps
Start Time: 6.92 min
End Time: 7.61 min

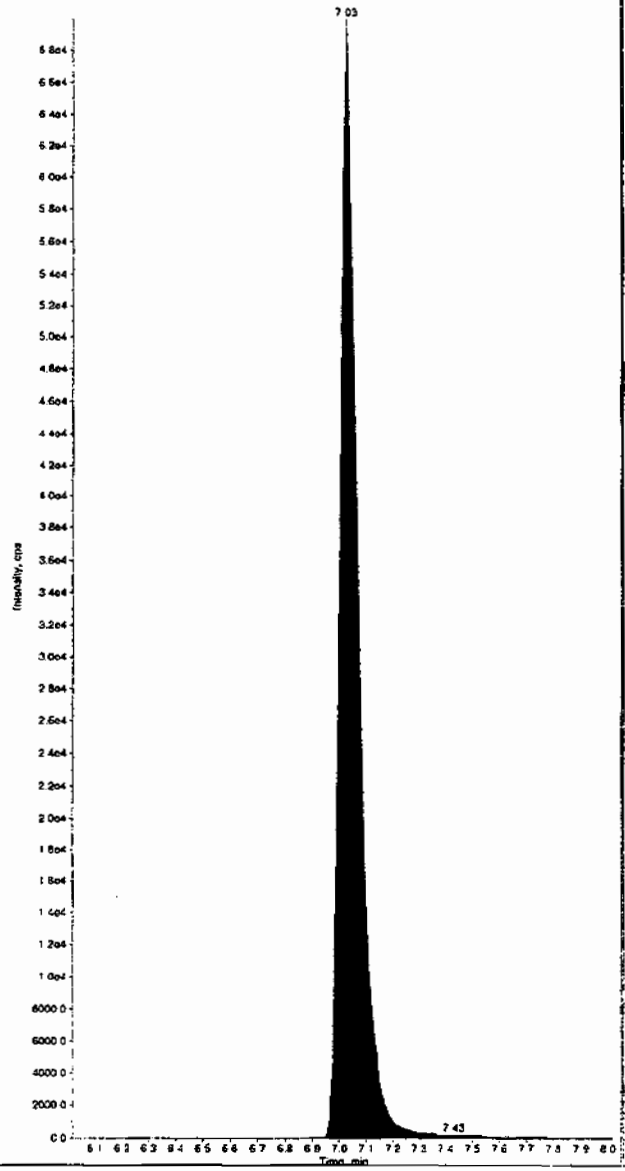

Sample Name: "WXX090630-26CCV" Sample ID: "|1|LER" File: "EXS0630032.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 537. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:36:00 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.25 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.26 min
Area: 6.74e+005 counts
Height: 157358.109 cps
Start Time: 8.15 min
End Time: 8.39 min

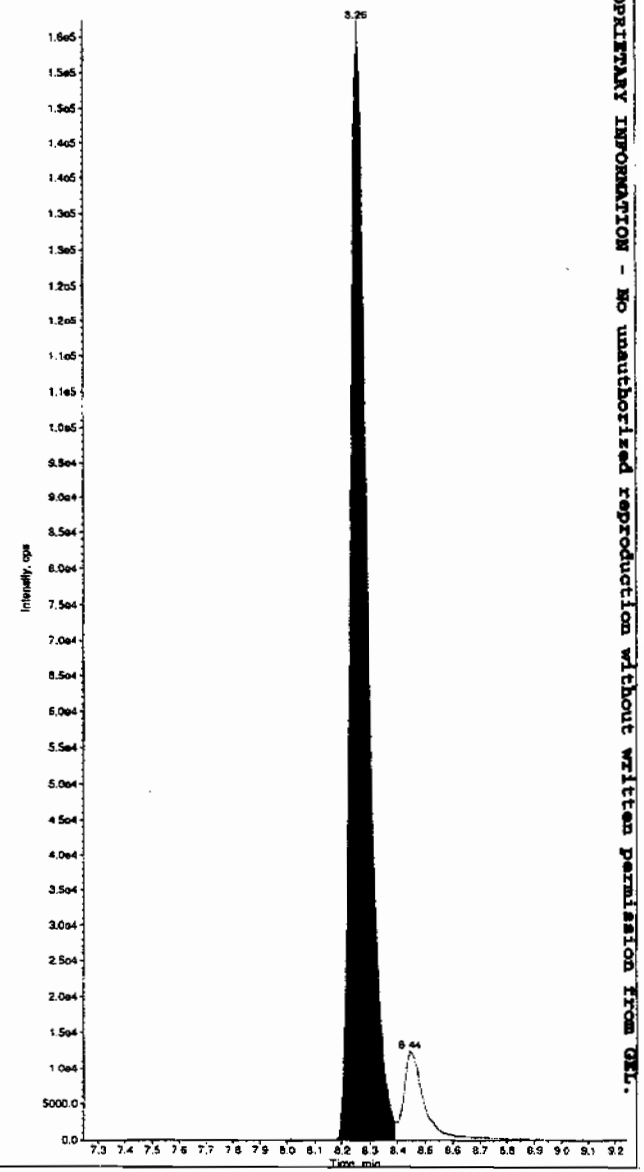

Hnm 07/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-26CCV" Sample ID: "|1|LER" File: "EXS0630032.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 239. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:36:00 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.44 min
Area: 5.06e+005 counts
Height: 99899.429 cps
Start Time: 8.37 min
End Time: 9.04 min

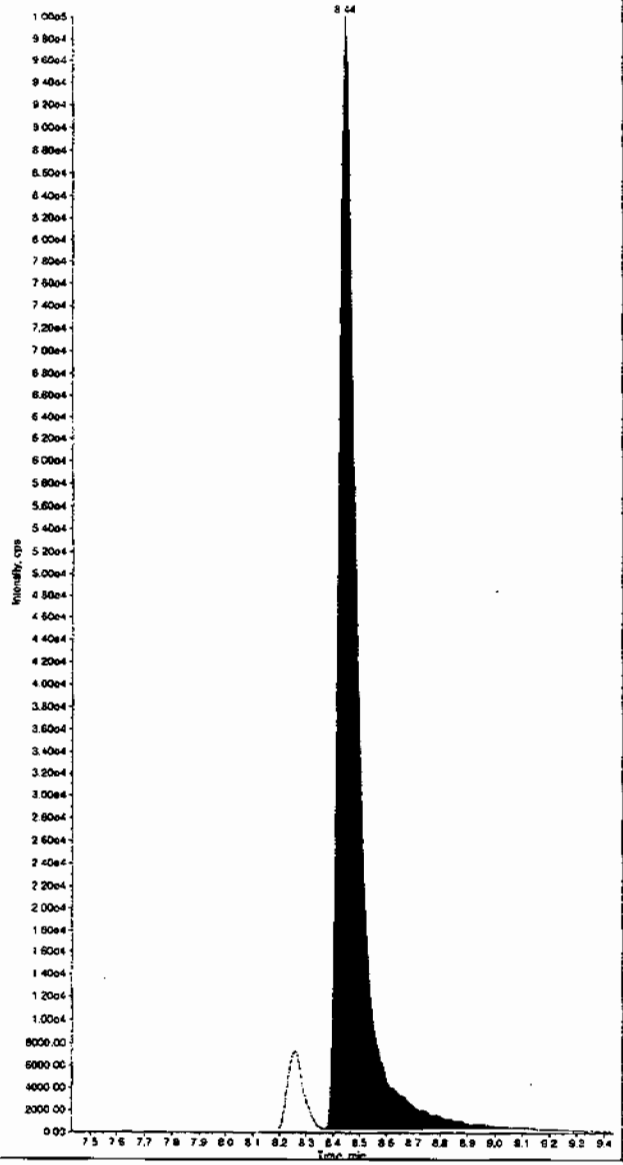

Sample Name: "WXX090630-26CCV" Sample ID: "|1|LER" File: "EXS0630032.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 478. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:36:00 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.09 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.09 min
Area: 9.68e+004 counts
Height: 20701.643 cps
Start Time: 4.93 min
End Time: 5.34 min

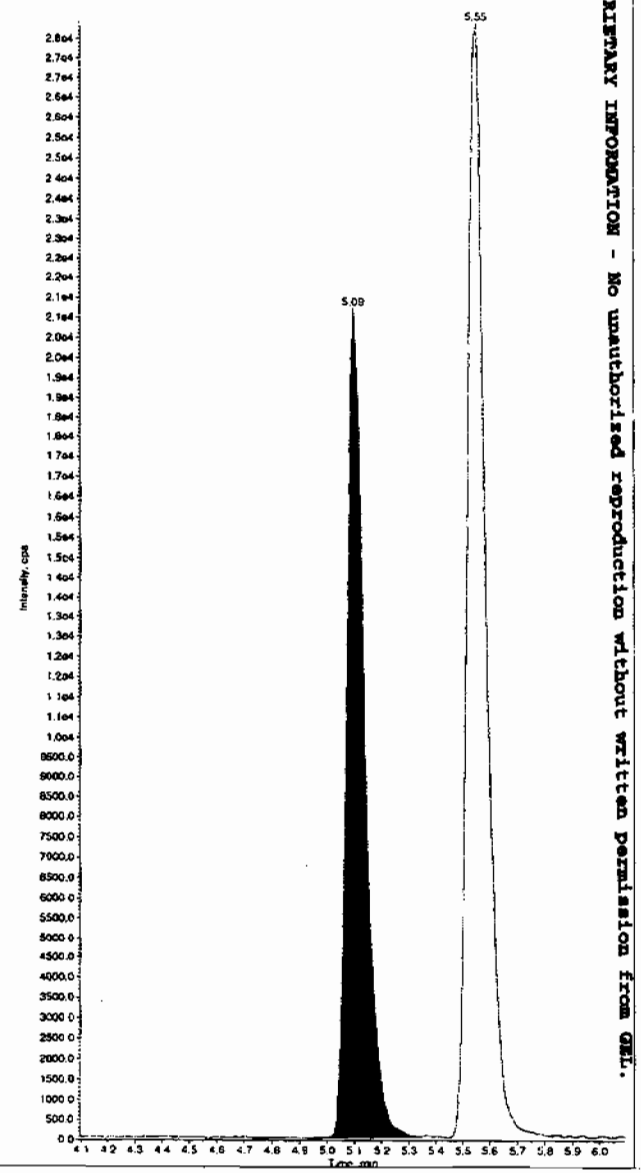

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-26CCV" Sample ID: "|1|LER" File: "EXS0630032.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 436. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:36:00 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.55 min
Area: 1.32e+005 counts
Height: 27854.082 cps
Start Time: 5.46 min
End Time: 5.87 min

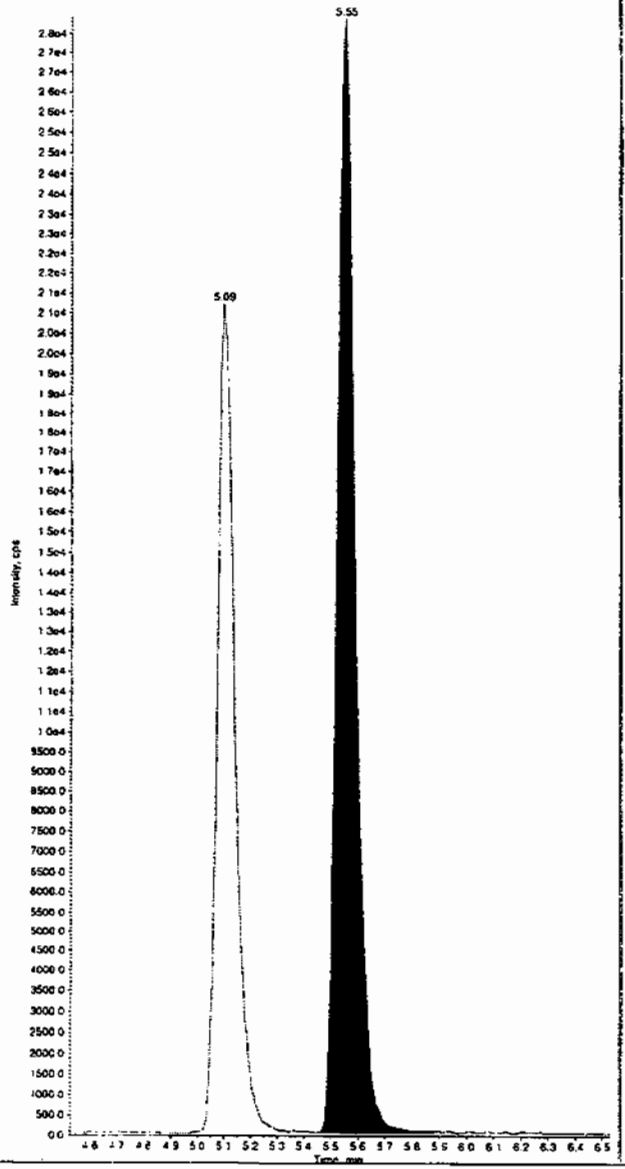

Sample Name: "WXX090630-26CCV" Sample ID: "|1|LER" File: "EXS0630032.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 525. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 7:36:00 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.49e+006 counts
Height: 1429489.258 cps
Start Time: 10.8 min
End Time: 11.2 min

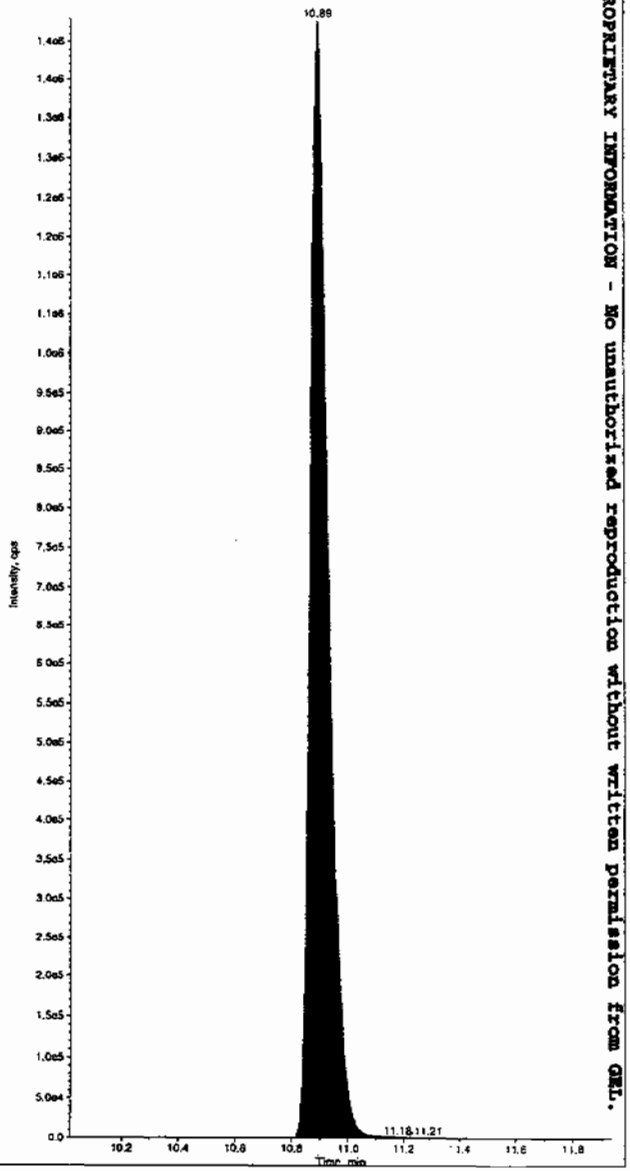

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS0630034.wiff

Analysis Date: 30-JUN-09 20:08

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	83	83	
2,6-Diamino-4-nitrotoluene	100	89.2	89	
3,4-Dinitrotoluene	50	46.3	93	
3,5-Dinitroaniline	100	100	100	
TATB	100	113	113	
tris(o-cresyl) phosphate	100	111	111	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

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Sample Name: "WXX090630-27CRI" Sample ID: "[1]LER" File: "EXS0630034.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 113. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 8:08:23 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.03 min
Area: 6.87e+004 counts
Height: 12819.082 cps
Start Time: 6.91 min
End Time: 7.54 min

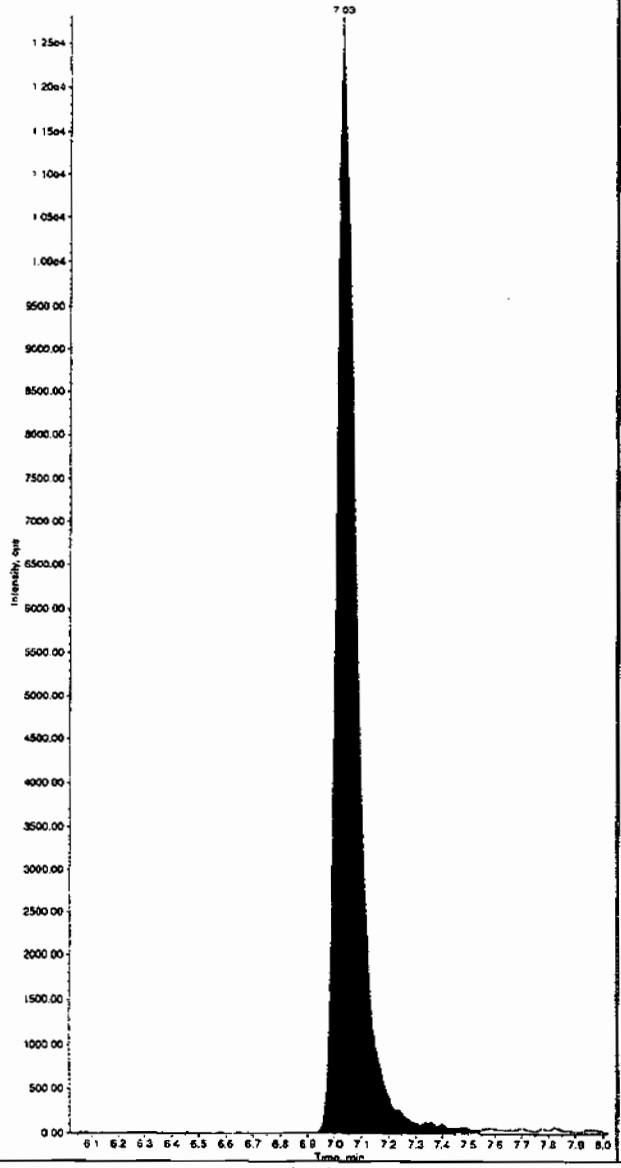

Sample Name: "WXX090630-27CRI" Sample ID: "[1]LER" File: "EXS0630034.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 100. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 8:08:23 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.25 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.26 min
Area: 1.39e+005 counts
Height: 29725.803 cps
Start Time: 8.16 min
End Time: 8.40 min

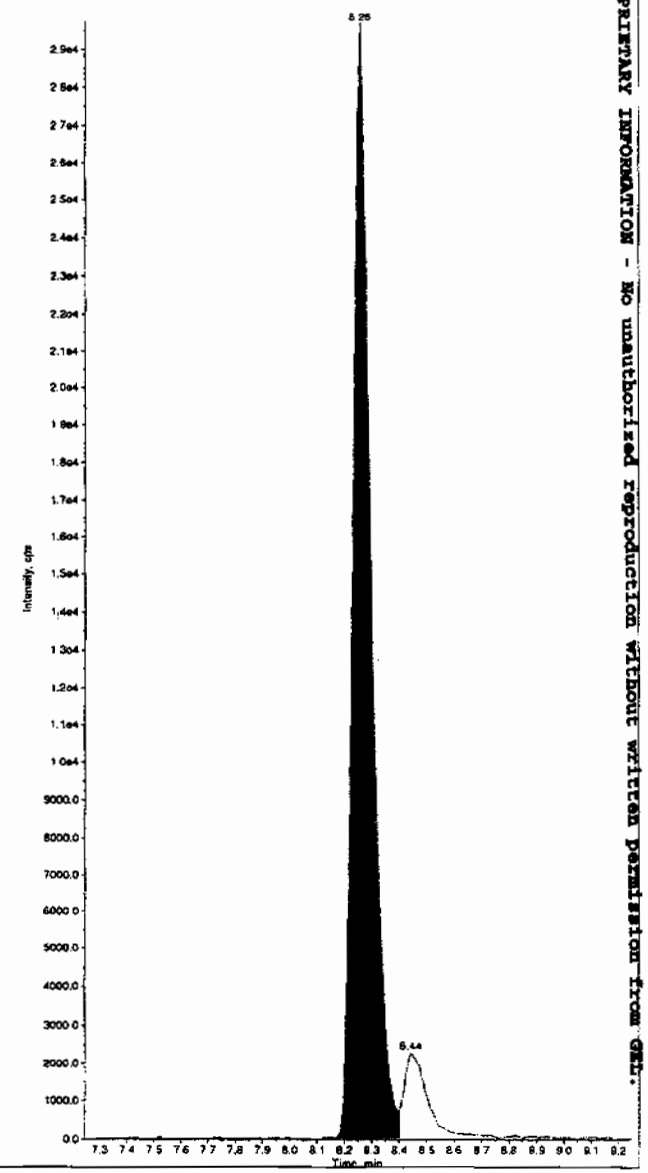

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630034.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index:	1	
Sample Type:	QC	
Concentration:	50.0	ng/mL
Calculated Conc:	46.3	ng/mL
Acq. Date:	6/30/2009	
Acq. Time:	8:09:23 PM	
Modified:	No	
Proc. Algorithm:	IntelliQuan - IQA	
Min. Peak Height:	1460.00	cps
Min. Peak Width:	0.00	sec
Smoothing Width:	3	points
RT Window:	30.0	sec
Expected RT:	8.43	min
Use Relative RT:	No	
Int. Type:	Valley	
Retention Time:	8.44	min
Area:	9.61e+004	counts
Height:	18447.001	cps
Start Time:	8.36	min
End Time:	8.82	min

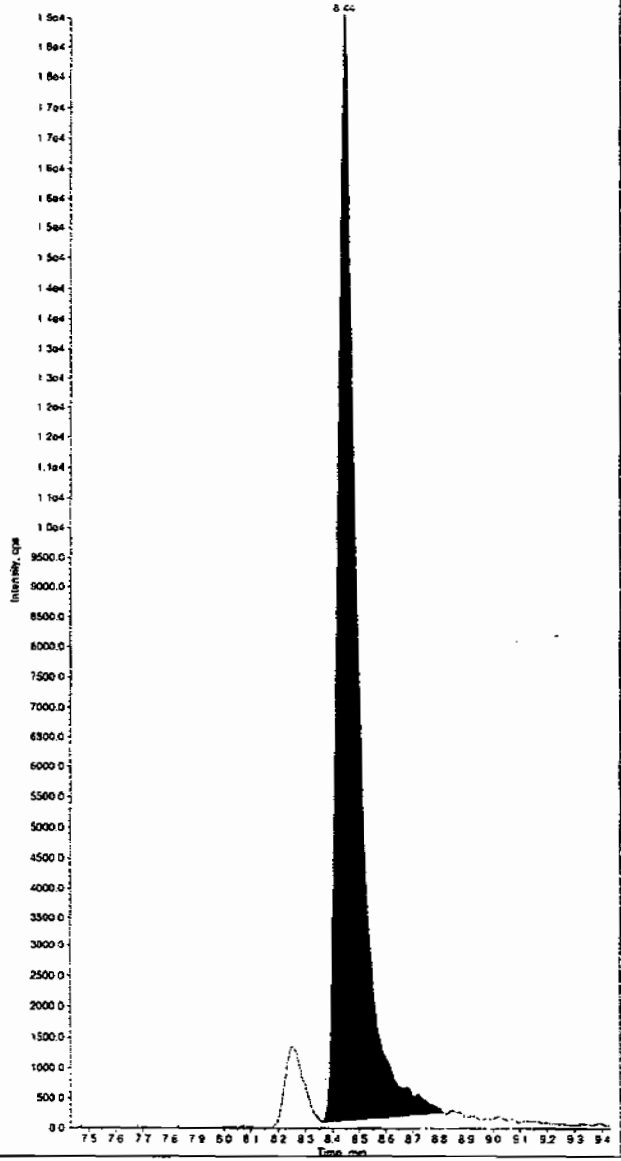

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630034.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index:	1	
Sample Type:	QC	
Concentration:	100.	ng/mL
Calculated Conc:	89.2	ng/mL
Acq. Date:	6/30/2009	
Acq. Time:	8:08:23 PM	
Modified:	No	
Proc. Algorithm:	IntelliQuan - IQA	
Min. Peak Height:	450.00	cps
Min. Peak Width:	0.00	sec
Smoothing Width:	3	points
RT Window:	30.0	sec
Expected RT:	5.09	min
Use Relative RT:	No	
Int. Type:	Valley	
Retention Time:	5.11	min
Area:	1.84e+004	counts
Height:	3815.286	cps
Start Time:	5.00	min
End Time:	5.29	min

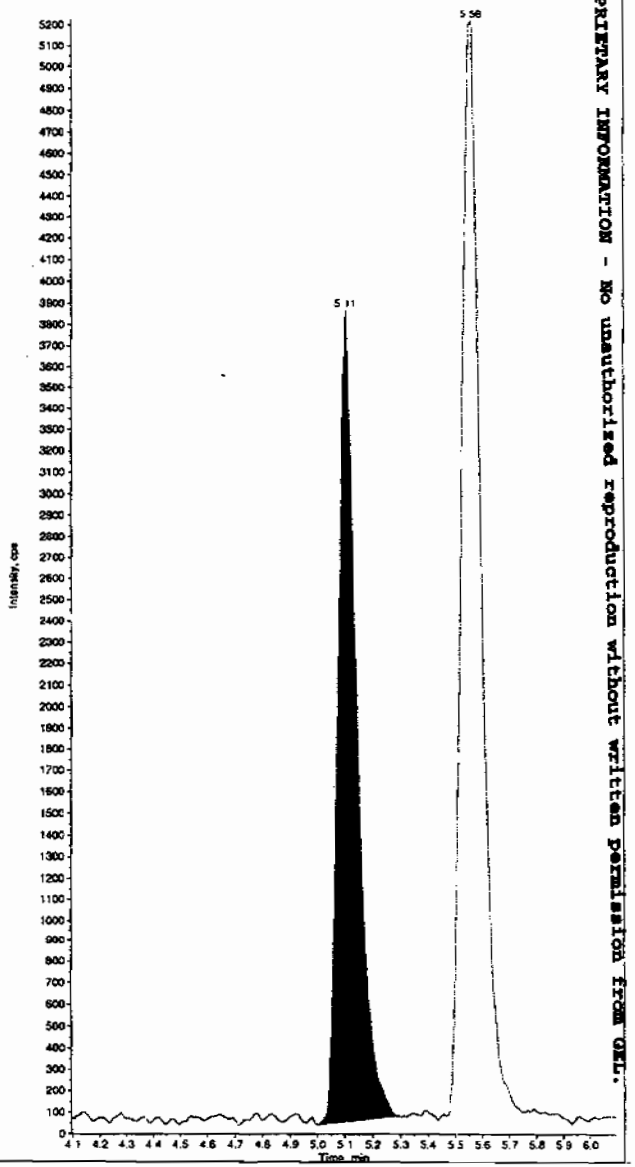

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630034.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index:	1	
Sample Type:	QC	
Concentration:	100.	ng/mL
Calculated Conc:	83.0	ng/mL
Acq. Date:	6/30/2009	
Acq. Time:	8:08:23 PM	
Modified:	No	
Proc. Algorithm:	IntelliQuan - IQA	
Min. Peak Height:	350.00	cps
Min. Peak Width:	0.00	sec
Smoothing Width:	3	points
RT Window:	30.0	sec
Expected RT:	5.53	min
Use Relative RT:	No	
Int. Type:	Valley	
Retention Time:	5.56	min
Area:	2.60e+004	counts
Height:	5143.777	cps
Start Time:	5.44	min
End Time:	5.75	min

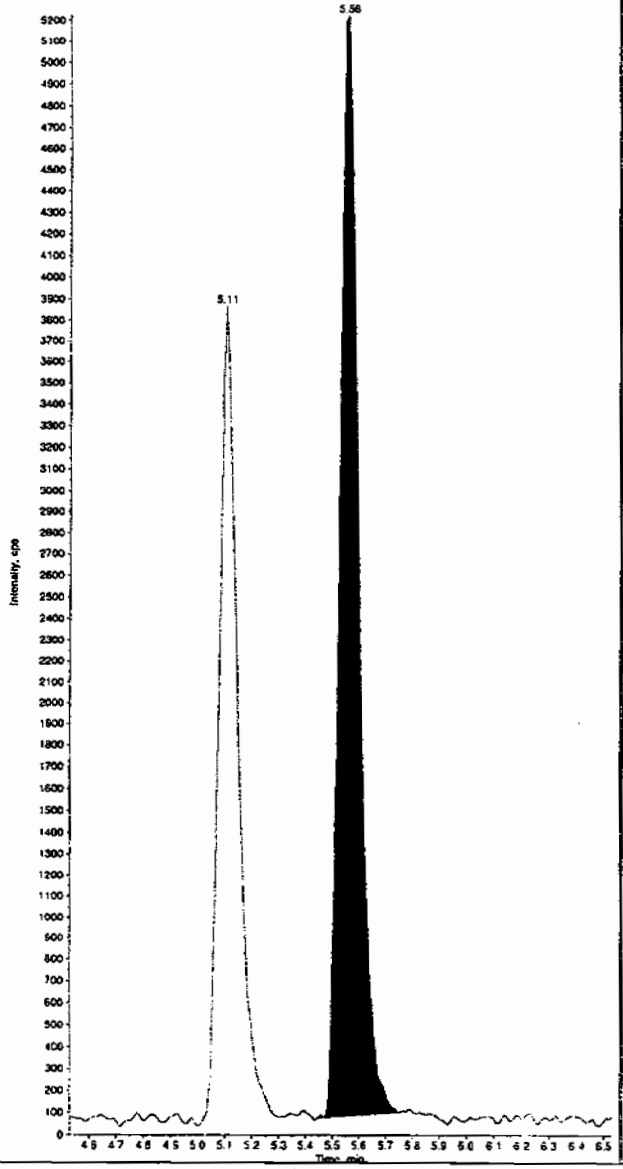

Sample Name: "WXX090630-27CRI" Sample ID: "|1|LER" File: "EXS0630034.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index:	1	
Sample Type:	QC	
Concentration:	100.	ng/mL
Calculated Conc:	111.	ng/mL
Acq. Date:	6/30/2009	
Acq. Time:	8:08:23 PM	
Modified:	No	
Proc. Algorithm:	IntelliQuan - IQA	
Min. Peak Height:	1.00e4	cps
Min. Peak Width:	0.00	sec
Smoothing Width:	3	points
RT Window:	30.0	sec
Expected RT:	10.9	min
Use Relative RT:	No	
Int. Type:	Valley	
Retention Time:	10.9	min
Area:	1.46e+006	counts
Height:	310295.898	cps
Start Time:	10.8	min
End Time:	11.2	min

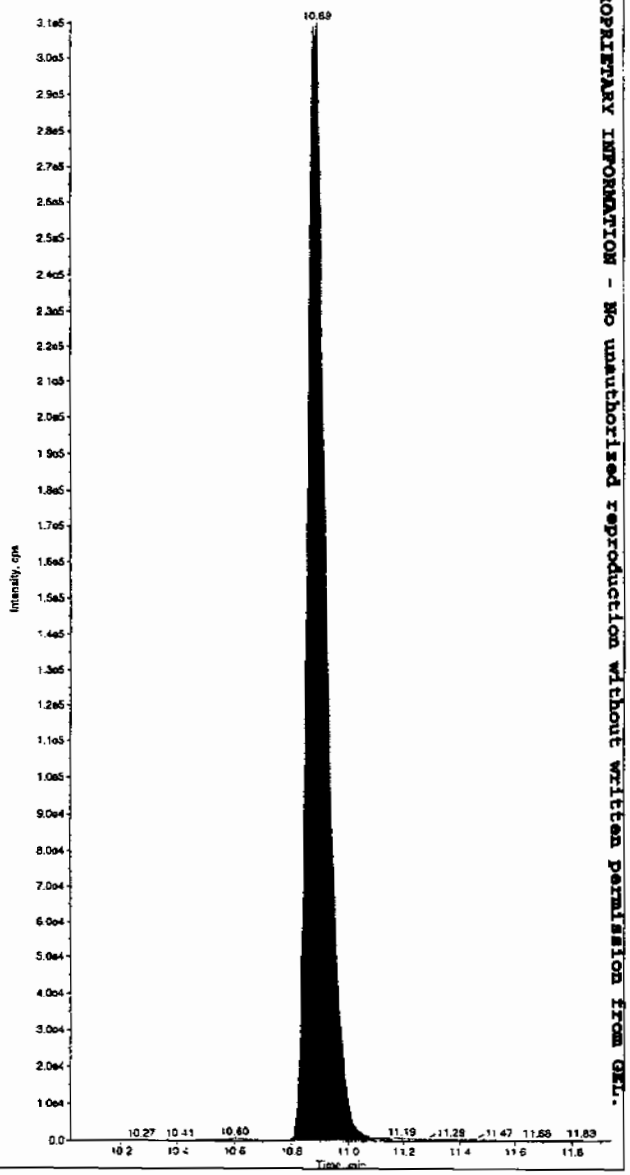

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS0701013.wiff

Analysis Date: 01-JUL-09 13:53

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	98.7	99	
2,6-Diamino-4-nitrotoluene	100	101	101	
3,4-Dinitrotoluene	50	52.2	104	
3,5-Dinitroaniline	100	78.9	79	
TATB	100	92.5	93	
tris(o-cresyl) phosphate	100	103	103	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701013.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 92.5 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:53:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.04 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.03 min
Area: 6.36e+004 counts
Height: 13476.406 cps
Start Time: 6.93 min
End Time: 7.27 min

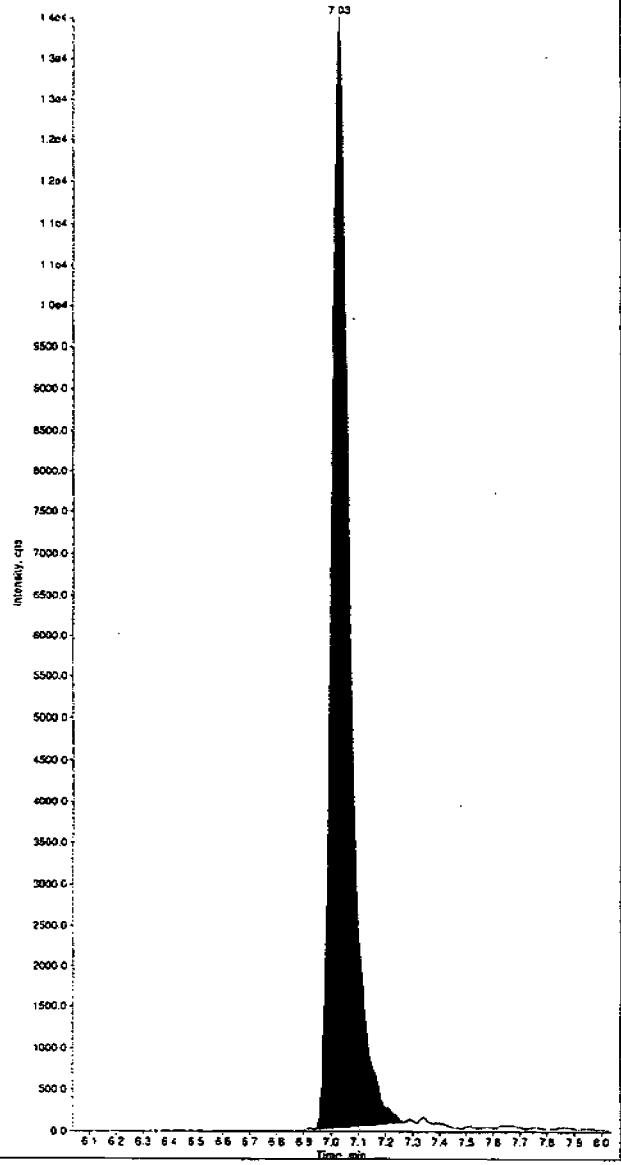

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701013.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 78.9 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:53:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.28 min
Area: 1.34e+005 counts
Height: 29213.385 cps
Start Time: 8.16 min
End Time: 8.41 min

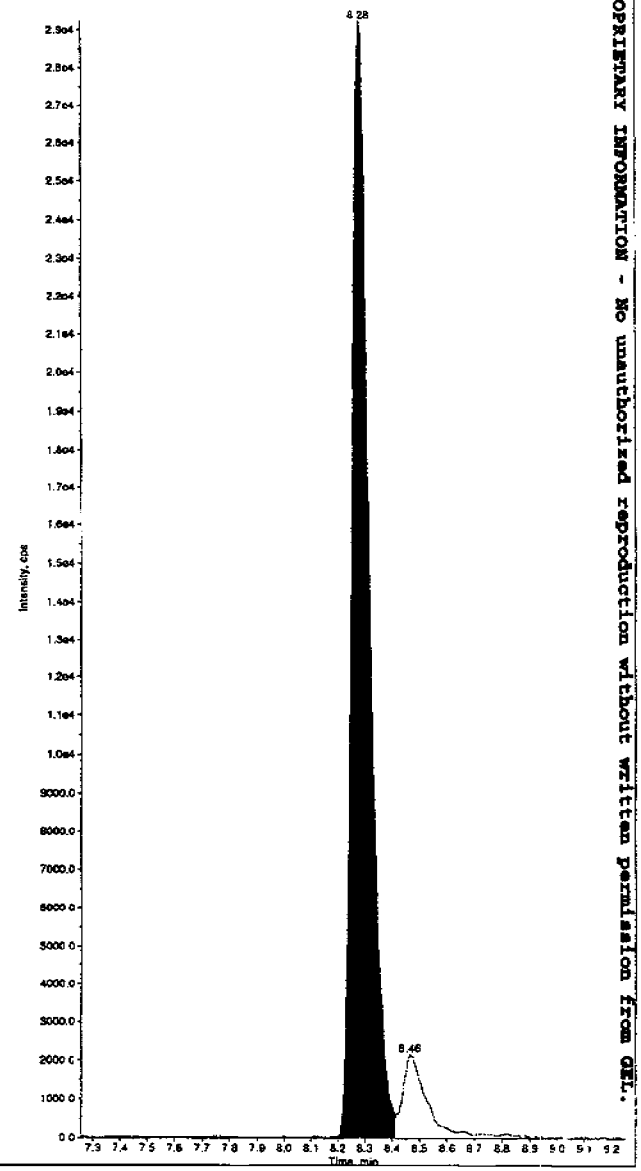

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-27CRI" Sample ID: "[1]LER" File: "EXS0701013.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 52.2 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:53:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.46 min
Area: 1.07e+005 counts
Height: 20992.949 cps
Start Time: 8.39 min
End Time: 9.00 min

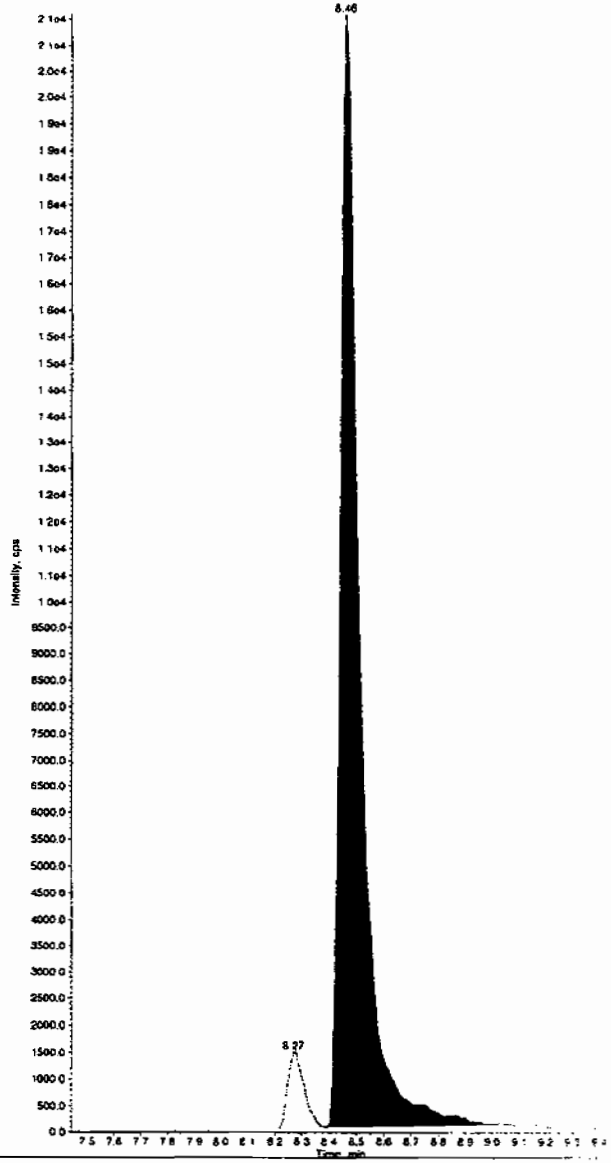

Sample Name: "WXX090701-27CRI" Sample ID: "[1]LER" File: "EXS0701013.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 101. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:53:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.10 min
Area: 2.04e+004 counts
Height: 4198.899 cps
Start Time: 4.99 min
End Time: 5.29 min

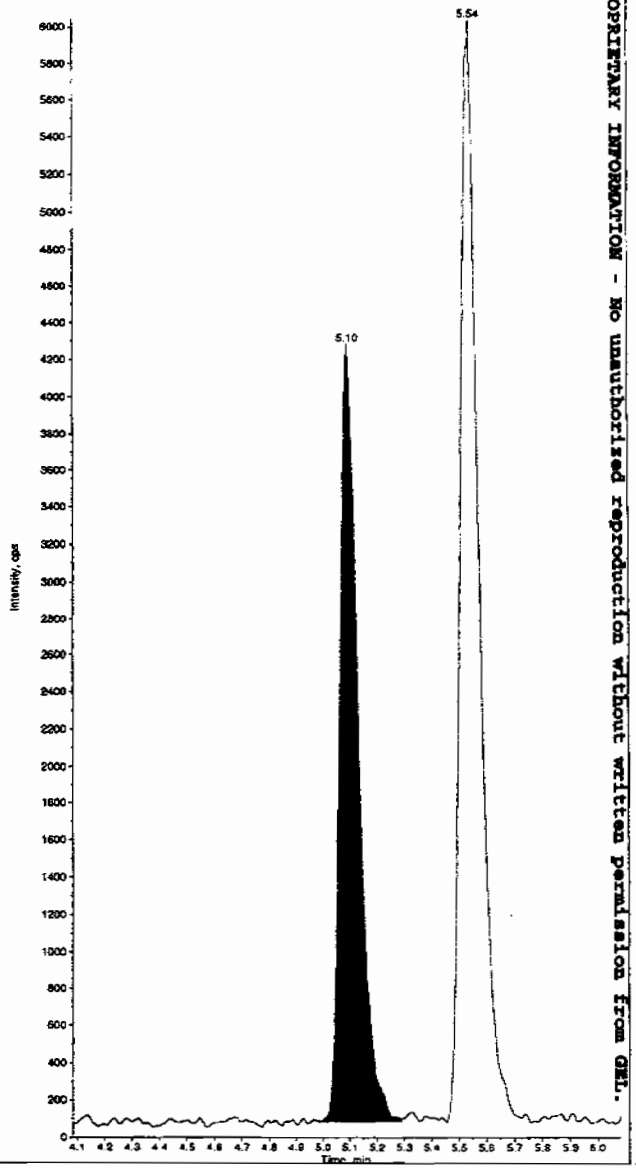

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701013.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 98.7 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:53:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.54 min
Area: 2.82e+004 counts
Height: 5962.781 cps
Start Time: 5.46 min
End Time: 5.76 min

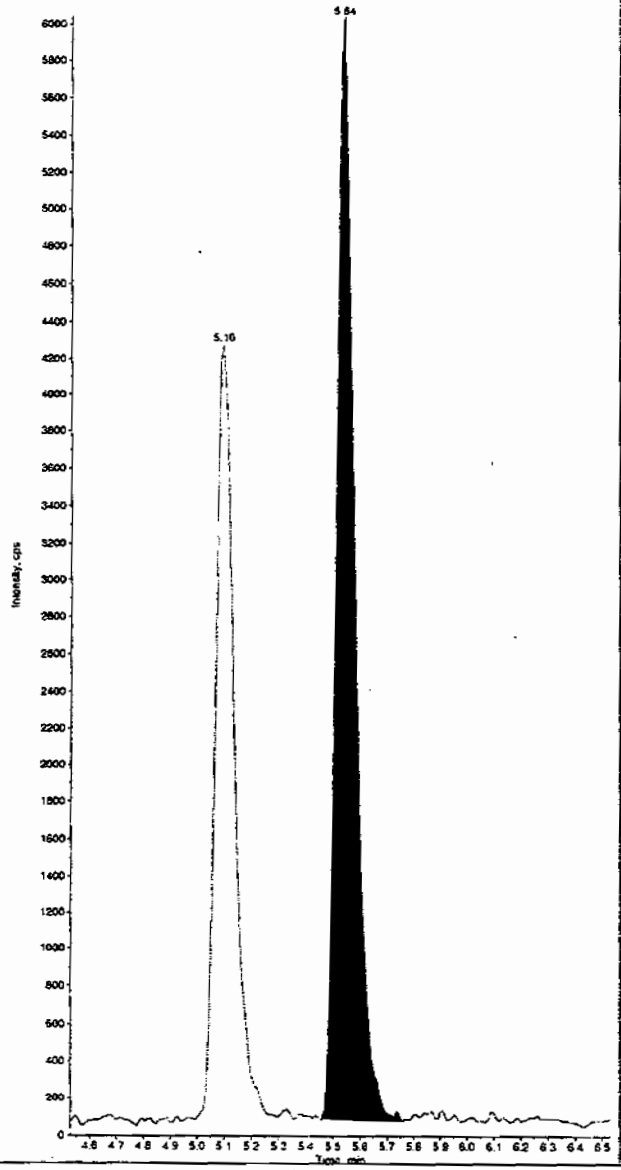

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701013.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 103. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 1:53:55 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.37e+006 counts
Height: 304357.666 cps
Start Time: 10.8 min
End Time: 11.2 min

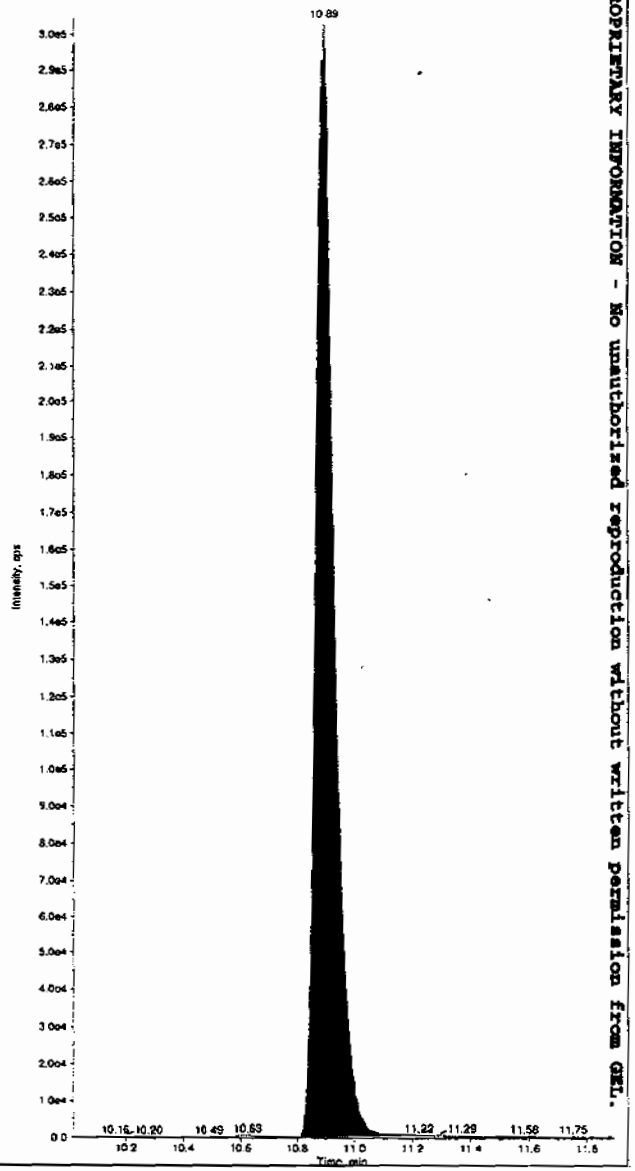

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS0701021.wiff

Analysis Date: 01-JUL-09 16:03

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	451	90	
2,6-Diamino-4-nitrotoluene	500	498	100	
3,4-Dinitrotoluene	250	230	92	
3,5-Dinitroaniline	500	503	101	
TATB	500	469	94	
tris(o-cresyl) phosphate	500	508	102	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090701-26CCV" Sample ID: "|1|LER" File: "EXS0701021.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 469. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:03:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.04 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 3.19e+005 counts
Height: 56745.010 cps
Start Time: 6.89 min
End Time: 7.56 min

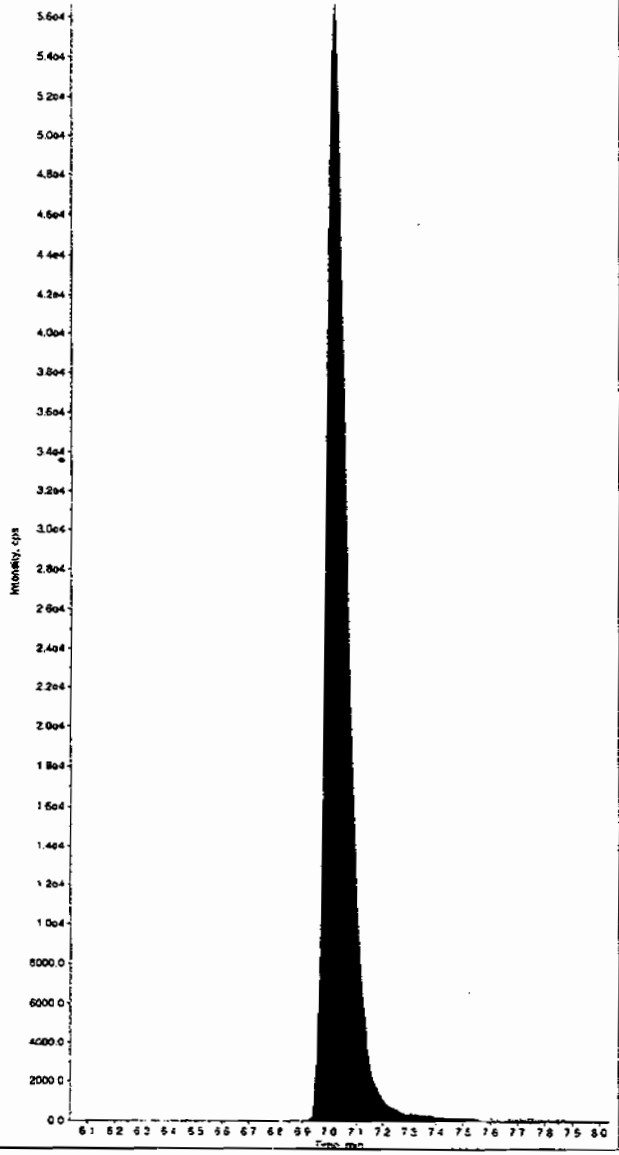

Sample Name: "WXX090701-26CCV" Sample ID: "|1|LER" File: "EXS0701021.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 503. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:03:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.25 min
Area: 7.03e+005 counts
Height: 137139.389 cps
Start Time: 8.09 min
End Time: 8.38 min

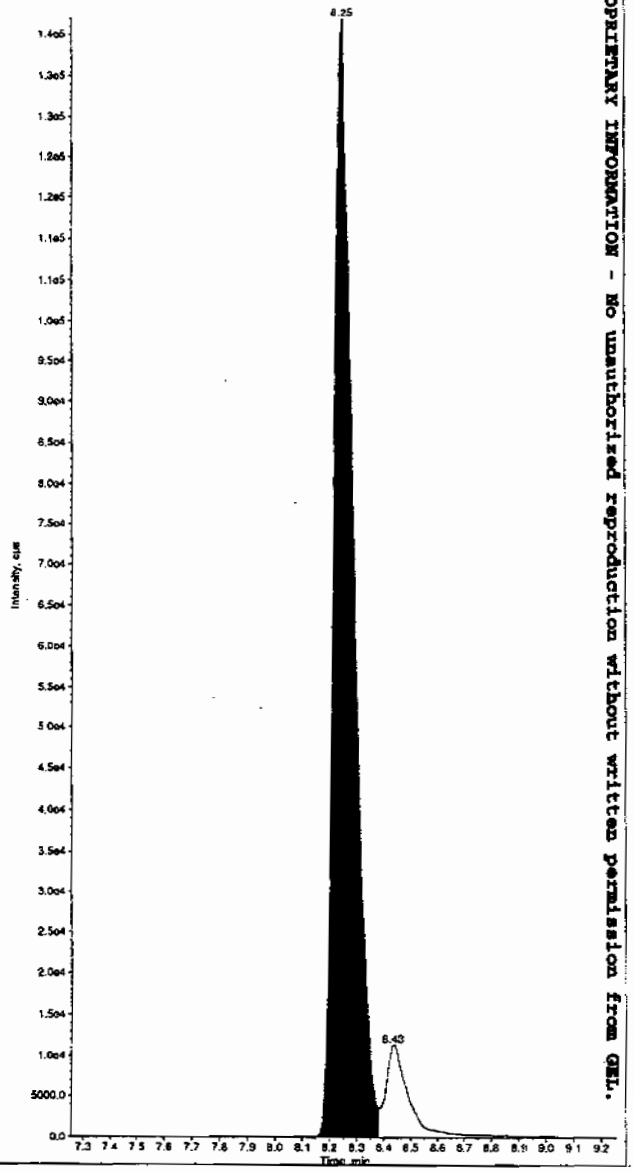

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-26CCV" Sample ID: "|1|LER" File: "EXS0701021.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 230. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:03:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.43 min
Area: 5.05e+005 counts
Height: 84792.290 cps
Start Time: 8.35 min
End Time: 9.25 min

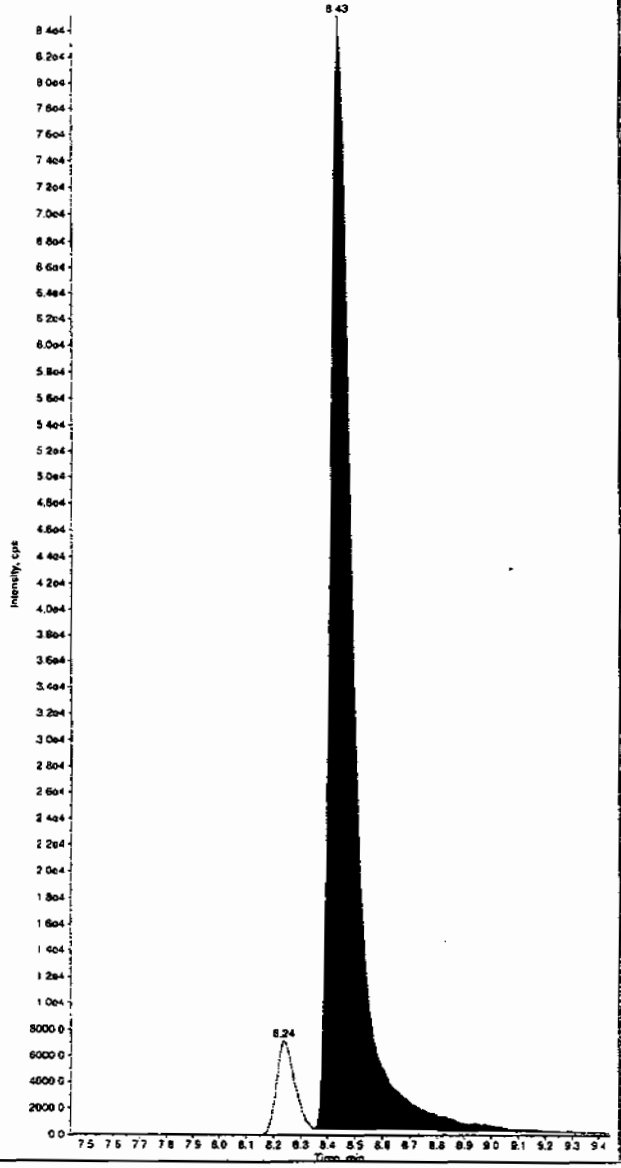

Sample Name: "WXX090701-26CCV" Sample ID: "|1|LER" File: "EXS0701021.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 498. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:03:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.09 min
Area: 1.03e+005 counts
Height: 21561.049 cps
Start Time: 4.93 min
End Time: 5.35 min

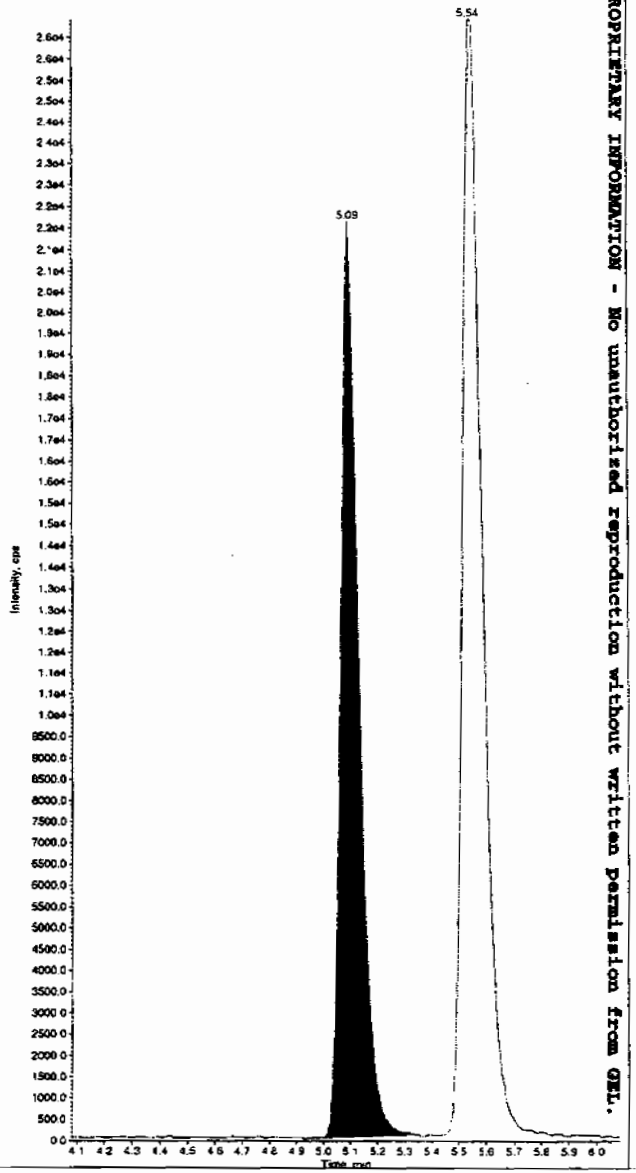

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-26CCV" Sample ID: "[1]LER" File: "EXS0701021.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 451. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:03:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.54 min
Area: 1.33e+005 counts
Height: 26262.451 cps
Start Time: 5.46 min
End Time: 5.78 min

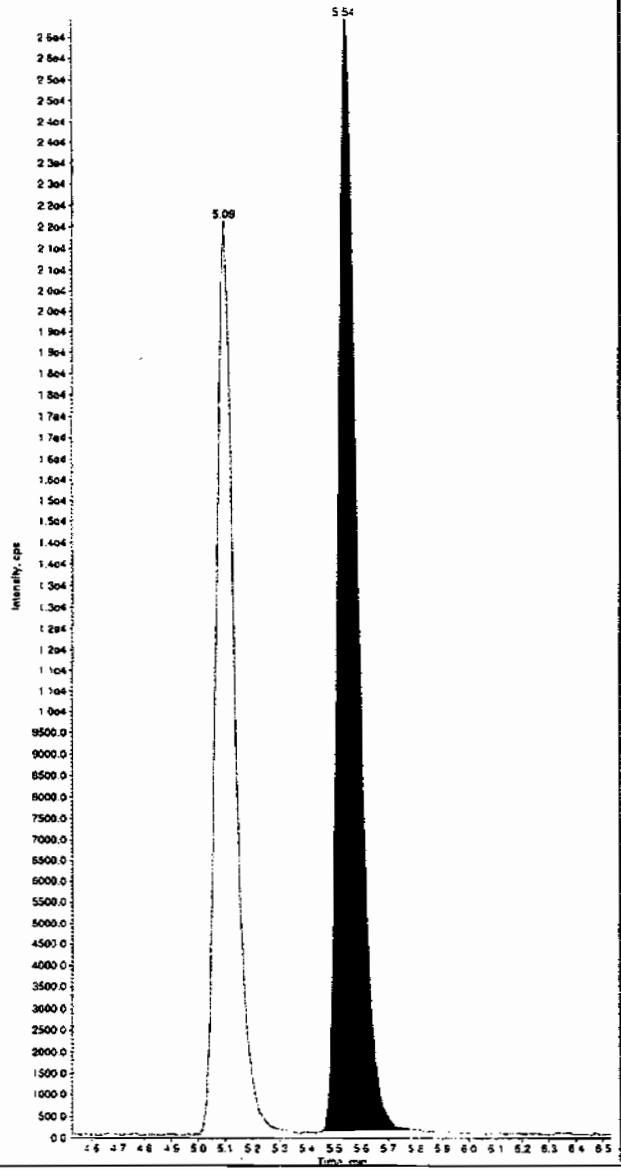

Sample Name: "WXX090701-26CCV" Sample ID: "[1]LER" File: "EXS0701021.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 508. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:03:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.47e+006 counts
Height: 1431122.681 cps
Start Time: 10.8 min
End Time: 11.2 min

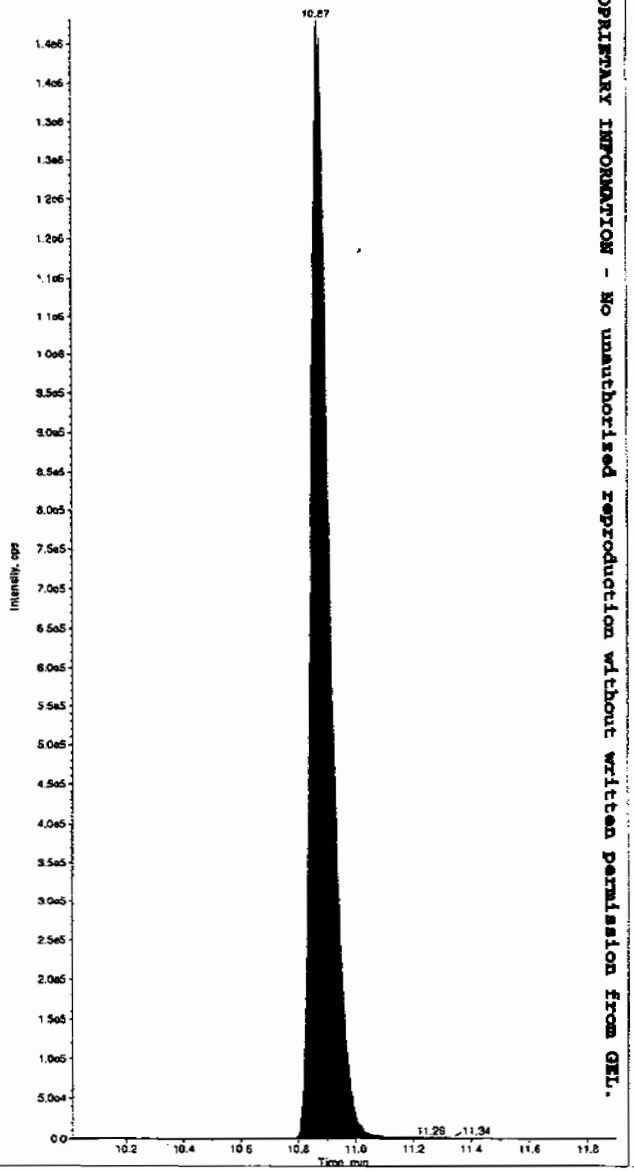

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2457

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS0701023.wiff

Analysis Date: 01-JUL-09 16:36

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	99.1	99	
2,6-Diamino-4-nitrotoluene	100	104	104	
3,4-Dinitrotoluene	50	47.5	95	
3,5-Dinitroaniline	100	81.2	81	
TATB	100	93.5	94	
tris(o-cresyl) phosphate	100	102	102	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701023.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 93.5 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:36:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.04 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 6.43e+004 counts
Height: 12525.168 cps
Start Time: 6.87 min
End Time: 7.46 min

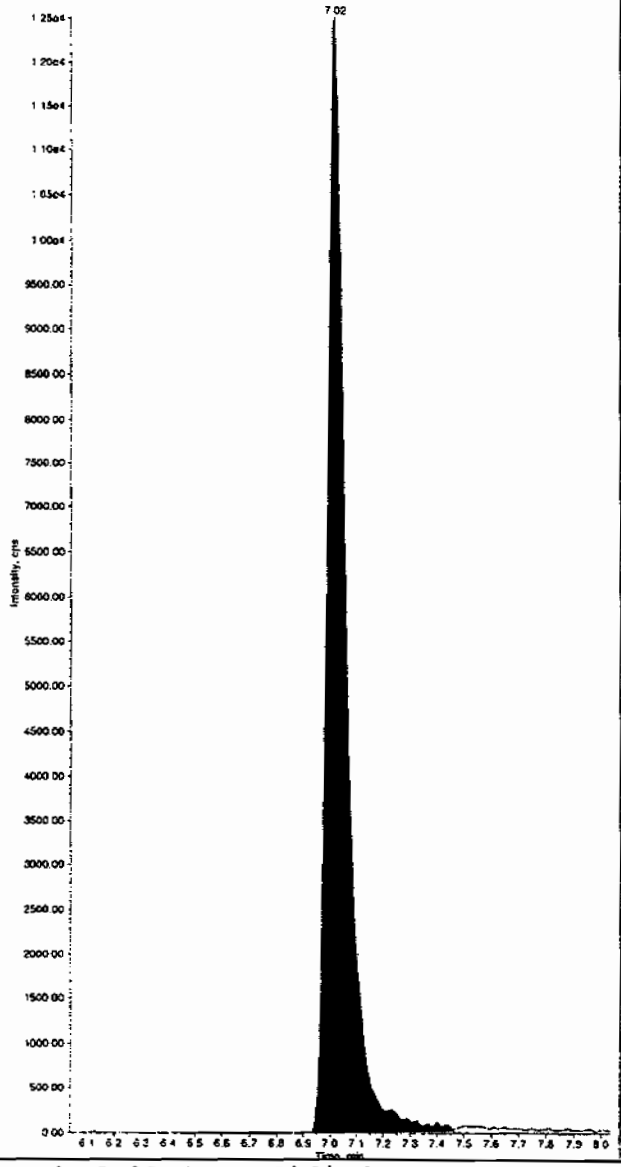

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701023.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 81.2 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:36:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.25 min
Area: 1.37e+005 counts
Height: 29695.374 cps
Start Time: 8.06 min
End Time: 8.39 min

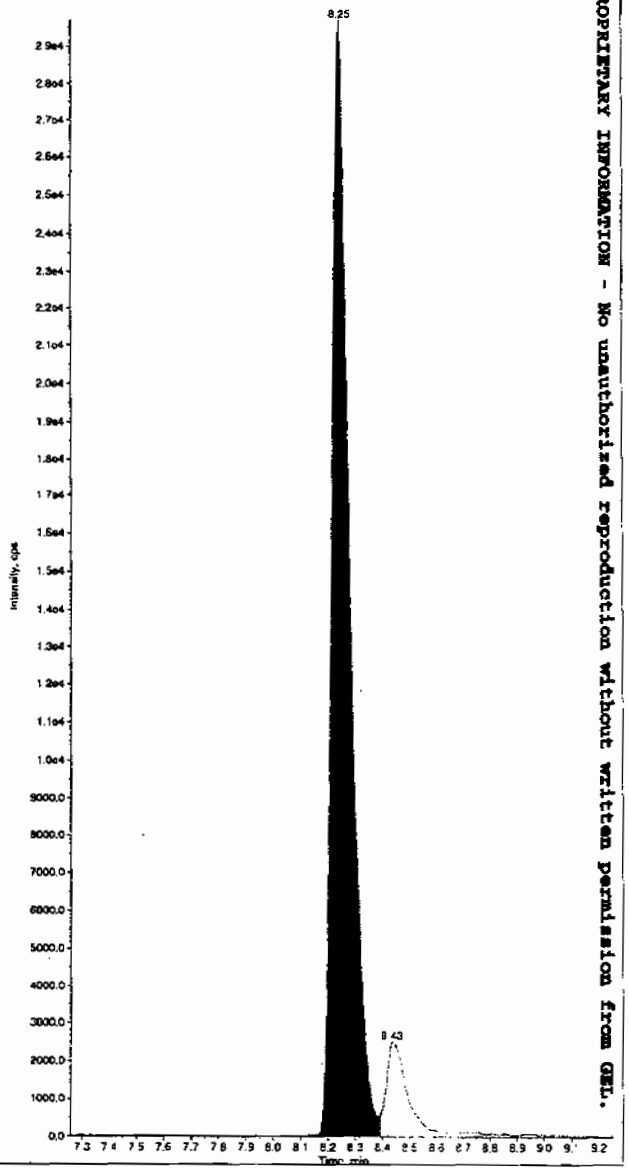

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701023.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 47.5 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:36:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.44 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.44 min
Area: 9.61e+004 counts
Height: 17450.579 cps
Start Time: 8.35 min
End Time: 8.94 min

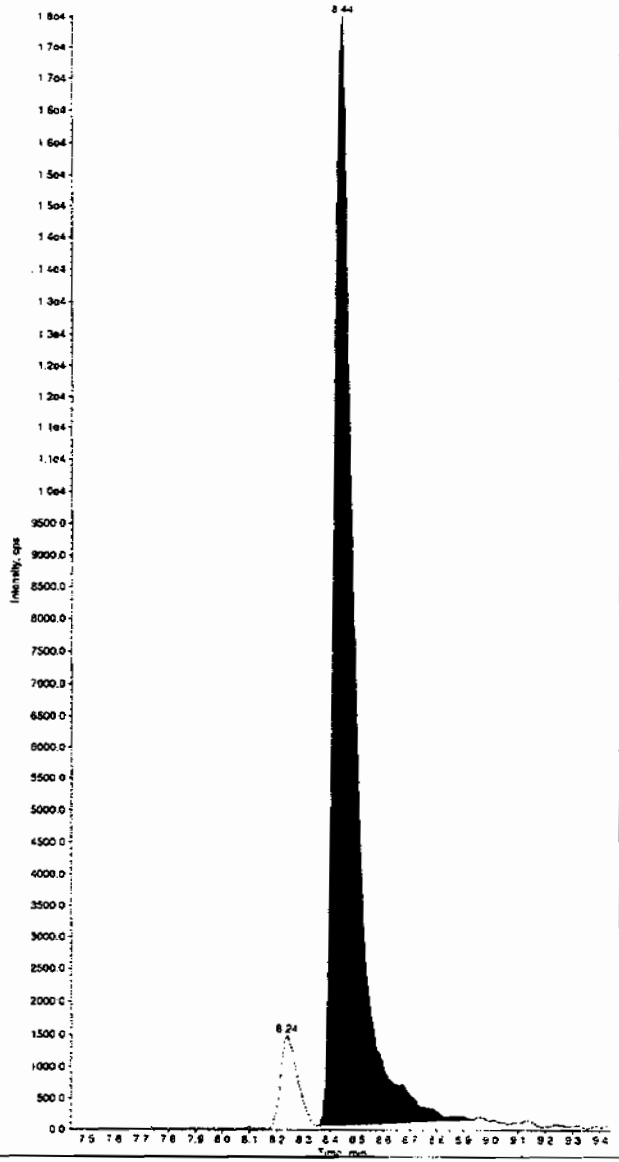

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701023.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 104. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:36:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.09 min
Area: 2.11e+004 counts
Height: 4497.255 cps
Start Time: 4.97 min
End Time: 5.32 min

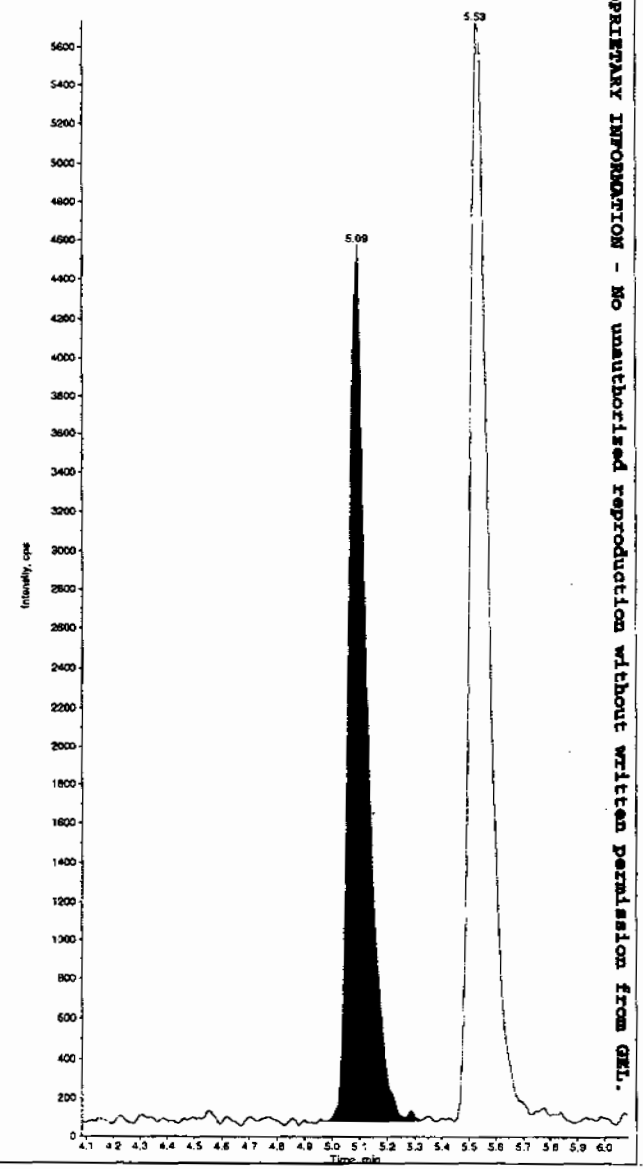

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701023.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 99.1 ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:36:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 2.83e+004 counts
Height: 5664.690 cps
Start Time: 5.45 min
End Time: 5.89 min

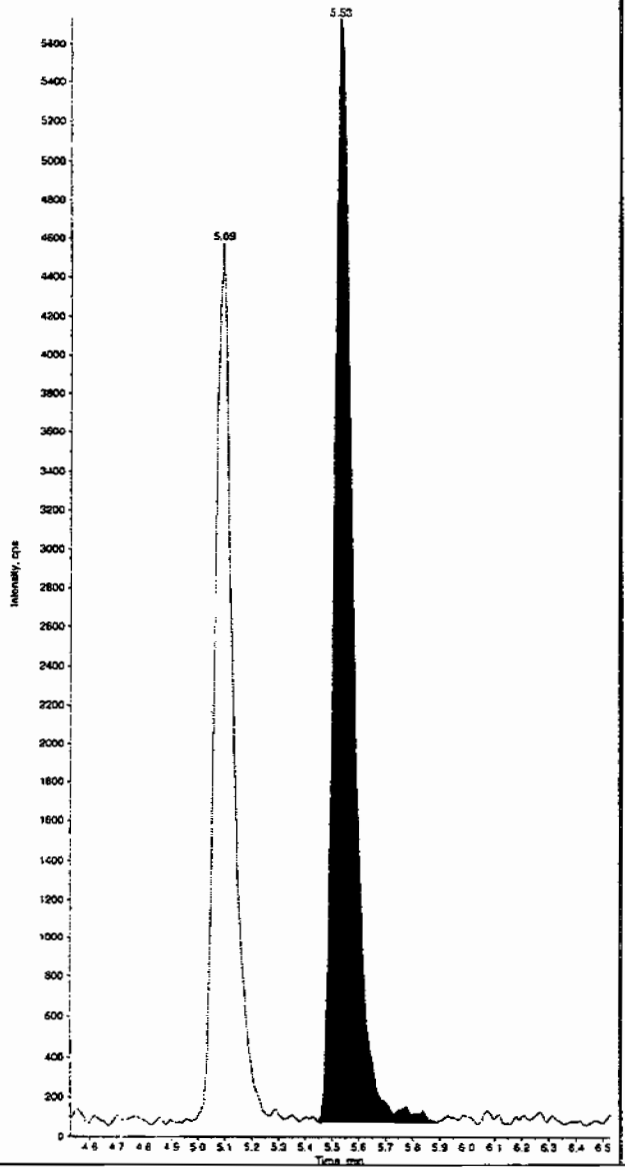

Sample Name: "WXX090701-27CRI" Sample ID: "|1|LER" File: "EXS0701023.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 102. ng/mL
Acq. Date: 7/1/2009
Acq. Time: 4:36:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.37e+006 counts
Height: 299398.926 cps
Start Time: 10.8 min
End Time: 11.2 min

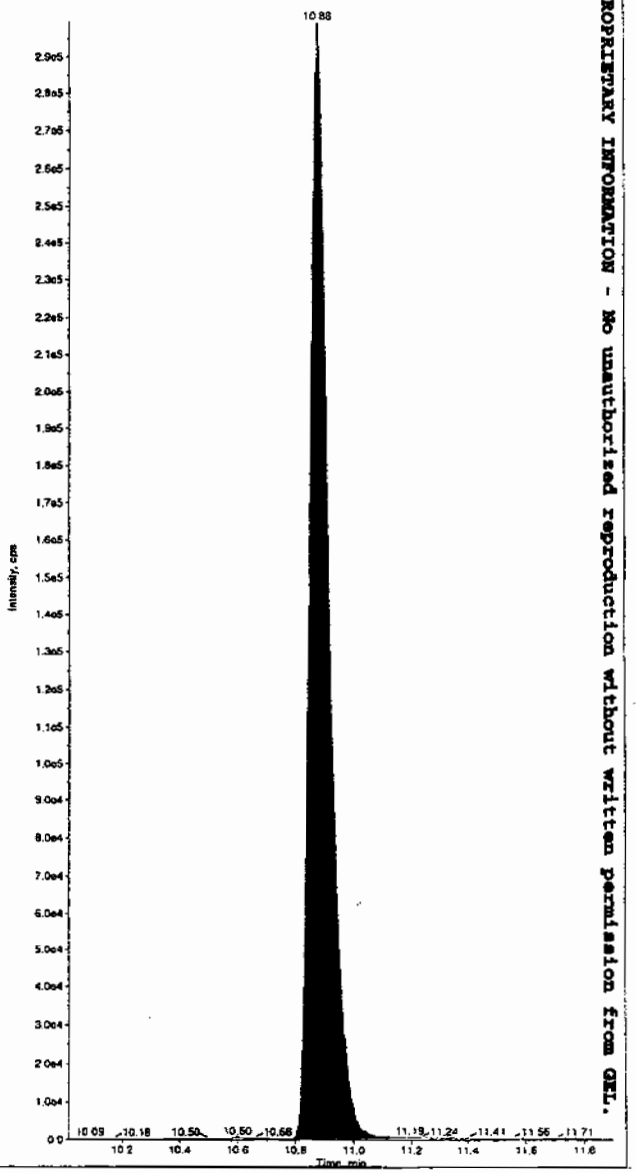

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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QUALITY CONTROL DATA

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 880641

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 1201869916

Sample Amount 2

Moisture:

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630038a

Date Analyzed: 01-JUL-09 08:48

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\063009expa.mdb, Time: Wed Jul 01 09:15:14 2009
Calibration: C:\MASSLYNX\New_Exp.PRO\CurveDB\063009expa.cdb, Time: Wed Jul 01 09:37:04 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630038a
Date: 01-Jul-2009
Time: 08:48:57
ID: 1201869916 | LANCL | 880642 | Soil | MB | 21
Vial: 1:7,A

MAP 7/2/09

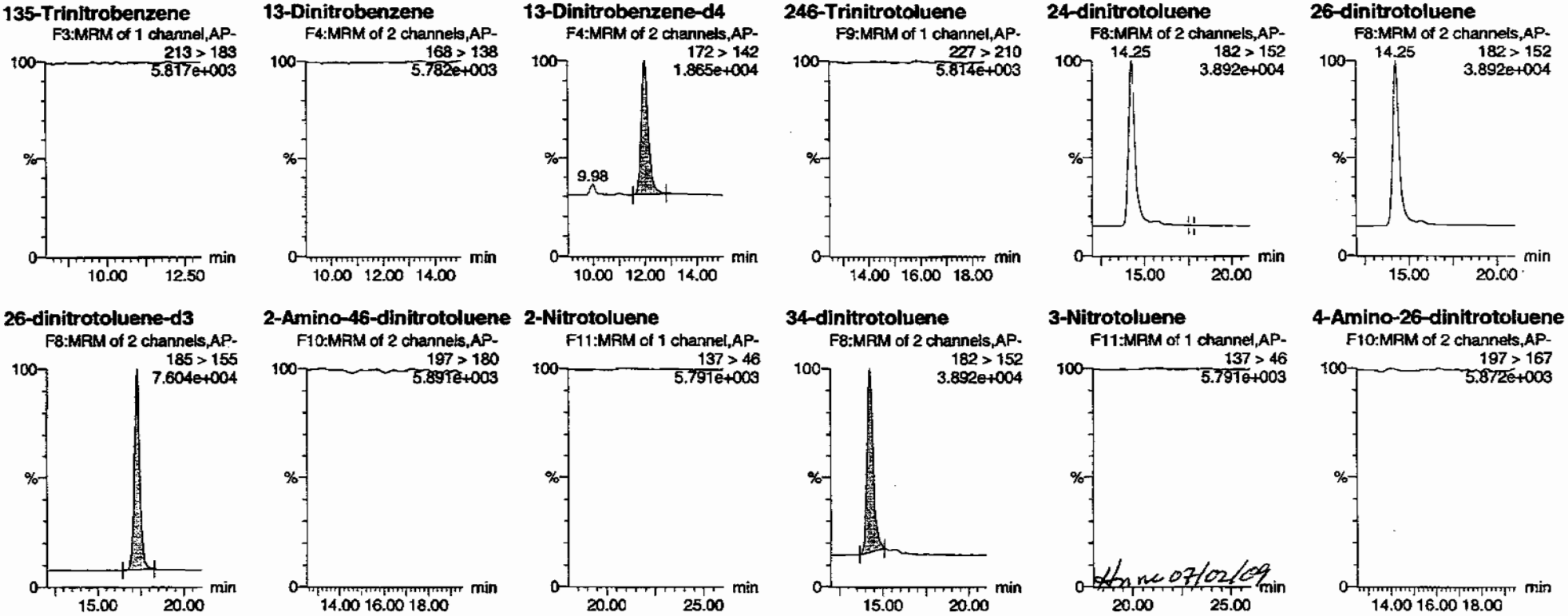

HMM 07/02/09

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

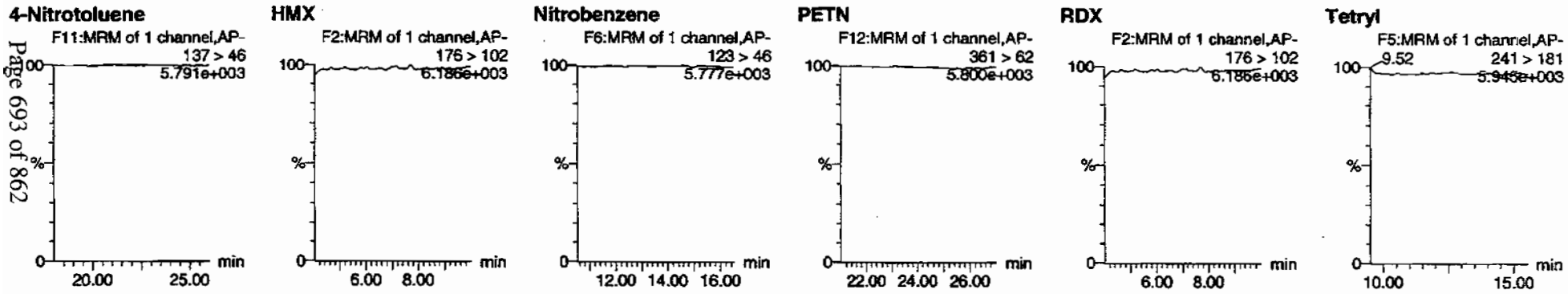

ID	Name	Trace	RT	Area	SArea	Abs Resp	Response	Flag	Modified	Modified	Height	%Rec	%Dev	S/N
1201869916	HMX	176 > 102			4072.767									
1201869916	RDX	176 > 102			4072.767									
1201869916	135-Trinitrobenzene	213 > 183			4072.767									
1201869916	13-Dinitrobenzene-d4	172 > 142	12.00	4072.767		4072.767	4072.767	bb			531.4580	106.3	6.3	280.8
1201869916	13-Dinitrobenzene	168 > 138			4072.767									
1201869916	Tetryl	241 > 181			4072.767									
1201869916	Nitrobenzene	123 > 46			4072.767									
1201869916	4-Amino-26-dinitrotoluene	197 > 167			26228.869									
1201869916	2-Amino-46-dinitrotoluene	197 > 180			26228.869									
1201869916	246-Trinitrotoluene	227 > 210			26228.869									
1201869916	34-dinitrotoluene	182 > 152	14.25	13524.124	26228.869	13524.124	257.810	bb			264.7493	105.9	5.9	495.0
1201869916	26-dinitrotoluene	182 > 152			26228.869									
1201869916	24-dinitrotoluene	182 > 152			26228.869			MM-	02-Jul-09	07:59:02				
1201869916	26-dinitrotoluene-d3	185 > 155	17.29	26228.869		26228.869	26228.869	bb			547.1772	109.4	9.4	1495.3
1201869916	2-Nitrotoluene	137 > 46			26228.869									
1201869916	4-Nitrotoluene	137 > 46			26228.869									
1201869916	3-Nitrotoluene	137 > 46			26228.869									
1201869916	PETN	361 > 62			26228.869									

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 880641

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 1201869916

Sample Amount 2

Moisture:

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630024.wiff

Date Analyzed: 30-JUN-09 17:26

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Rec 7/11/09

Sample Name: "1201869916" Sample ID: "880642|2|LER" File: "EXS0630024.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:26:22 PM

Modified: No

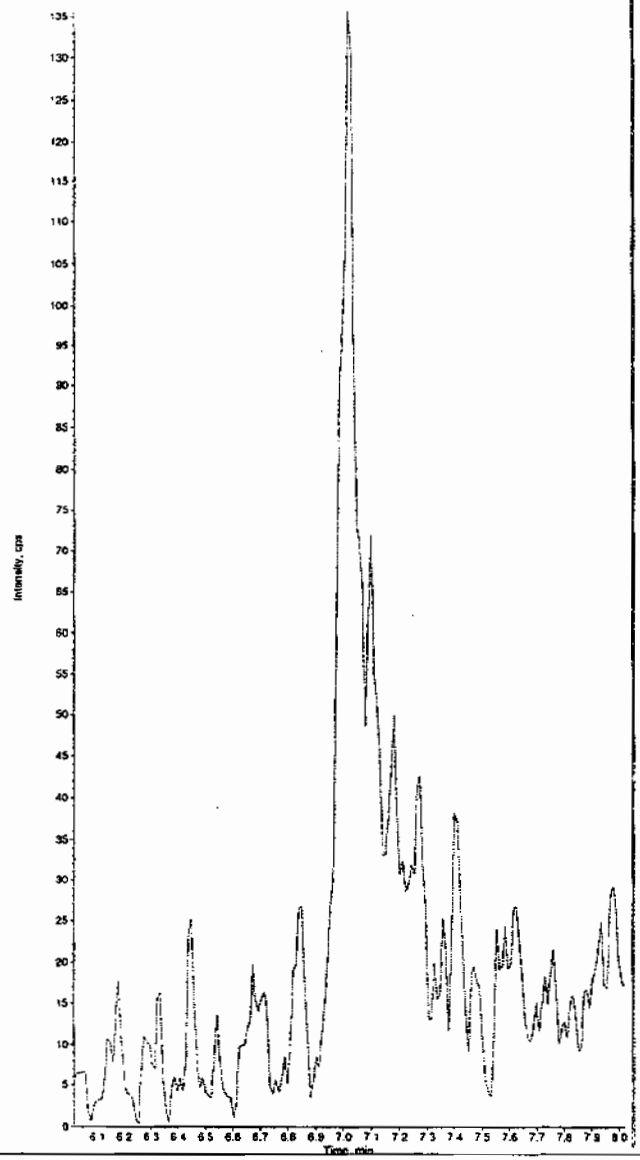

Sample Name: "1201869916" Sample ID: "880642|2|LER" File: "EXS0630024.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:26:22 PM

Modified: No

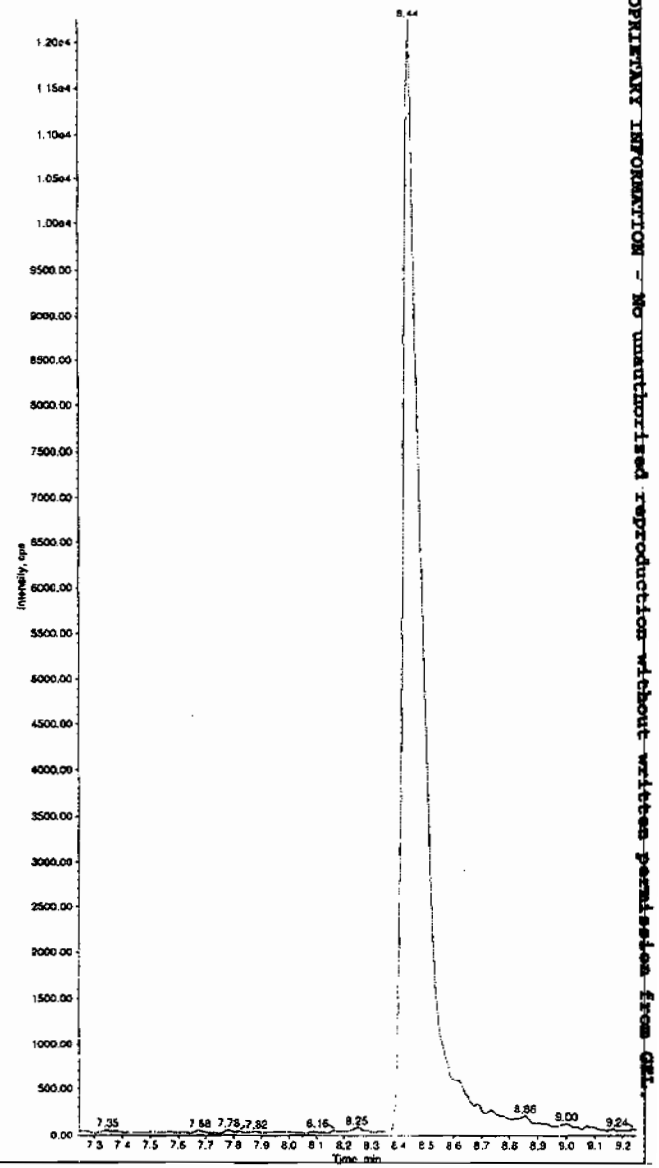

Hmm 17/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201869916" Sample ID: "880642|2|LER" File: "EXS0630024.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 258. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:26:22 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.43 min
Area: 5.47e+005 counts
Height: 100601.433 cps
Start Time: 8.28 min
End Time: 9.36 min

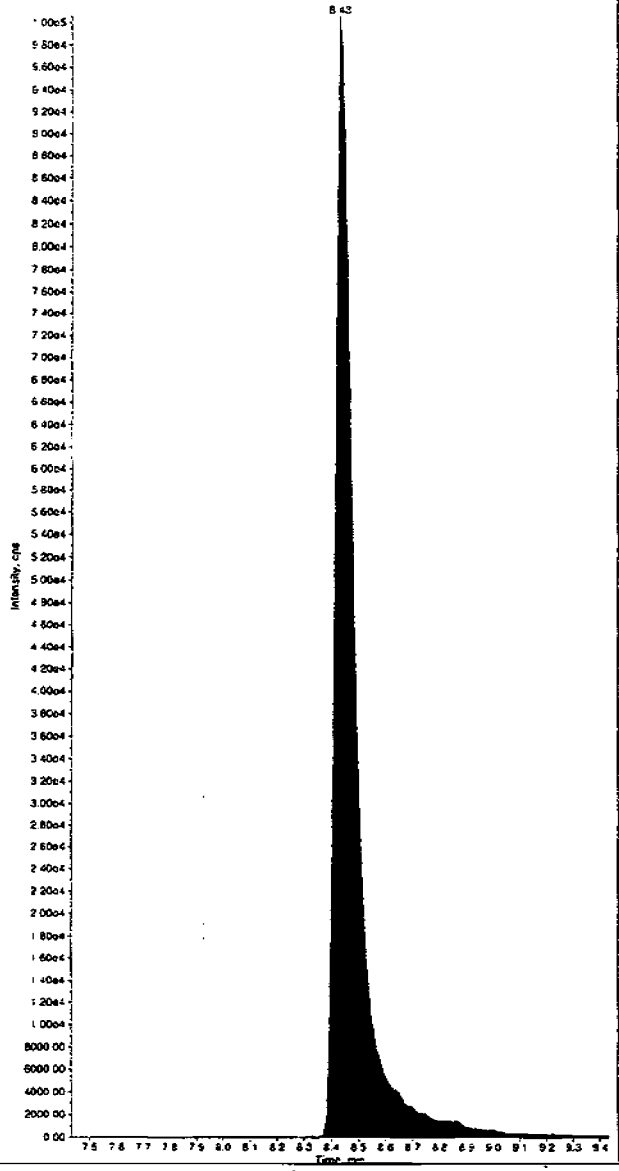

Sample Name: "1201869916" Sample ID: "880642|2|LER" File: "EXS0630024.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:26:22 PM

Modified: No

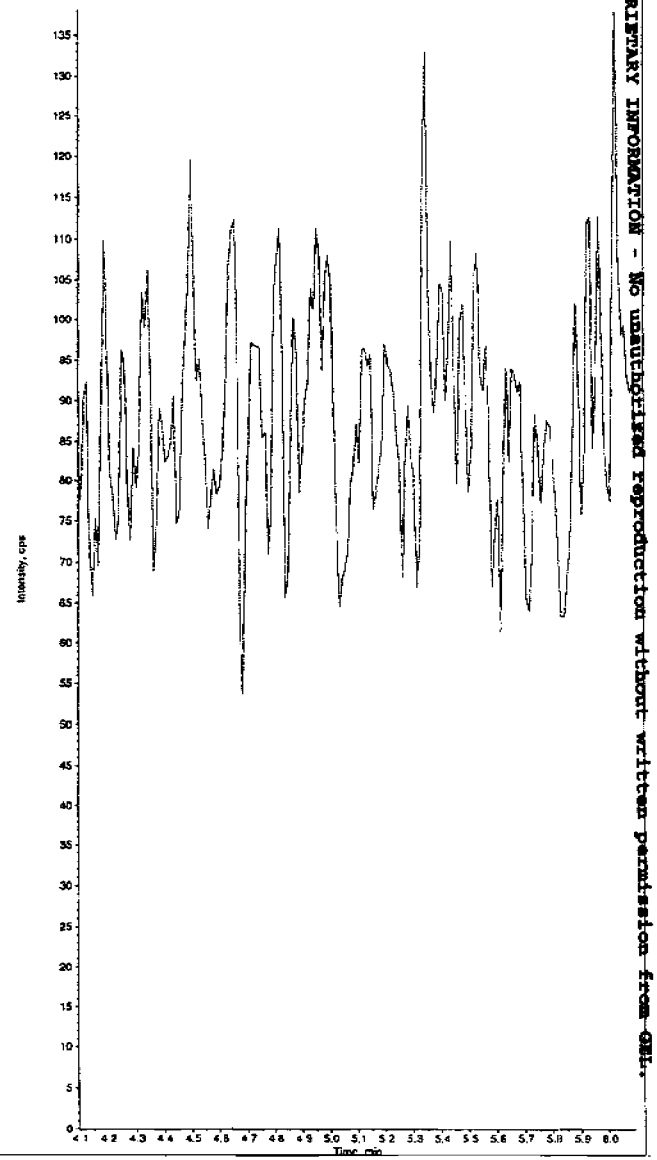

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201869916" Sample ID: "880642[2]LER" File: "EXS0630024.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:26:22 PM

Modified: No

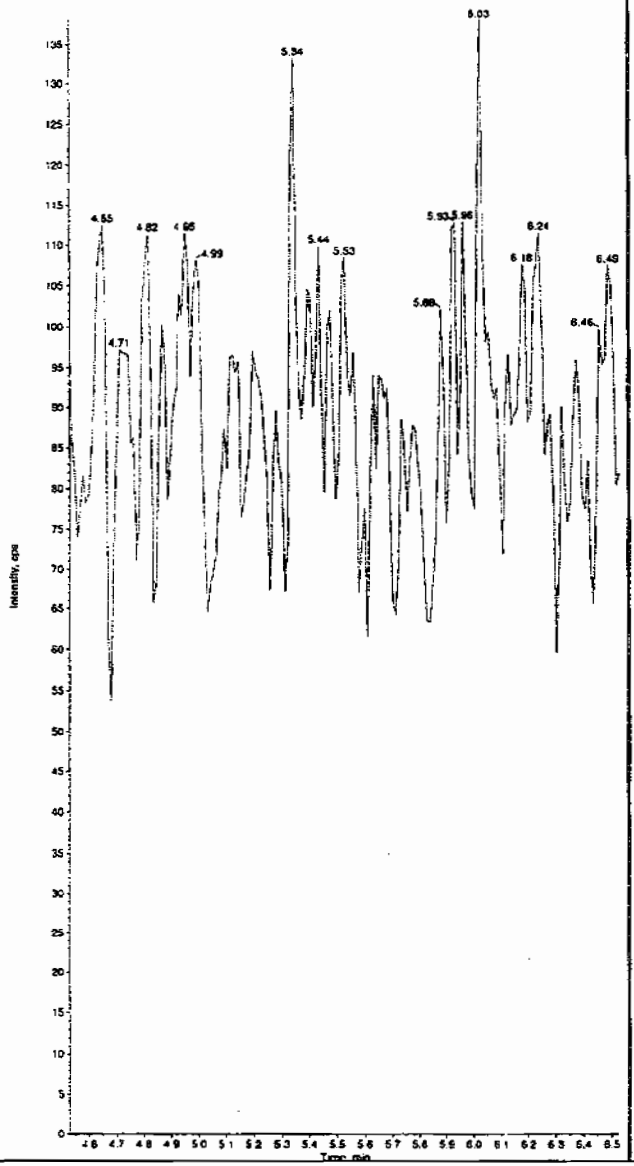

Sample Name: "1201869916" Sample ID: "880642[2]LER" File: "EXS0630024.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:26:22 PM

Modified: No

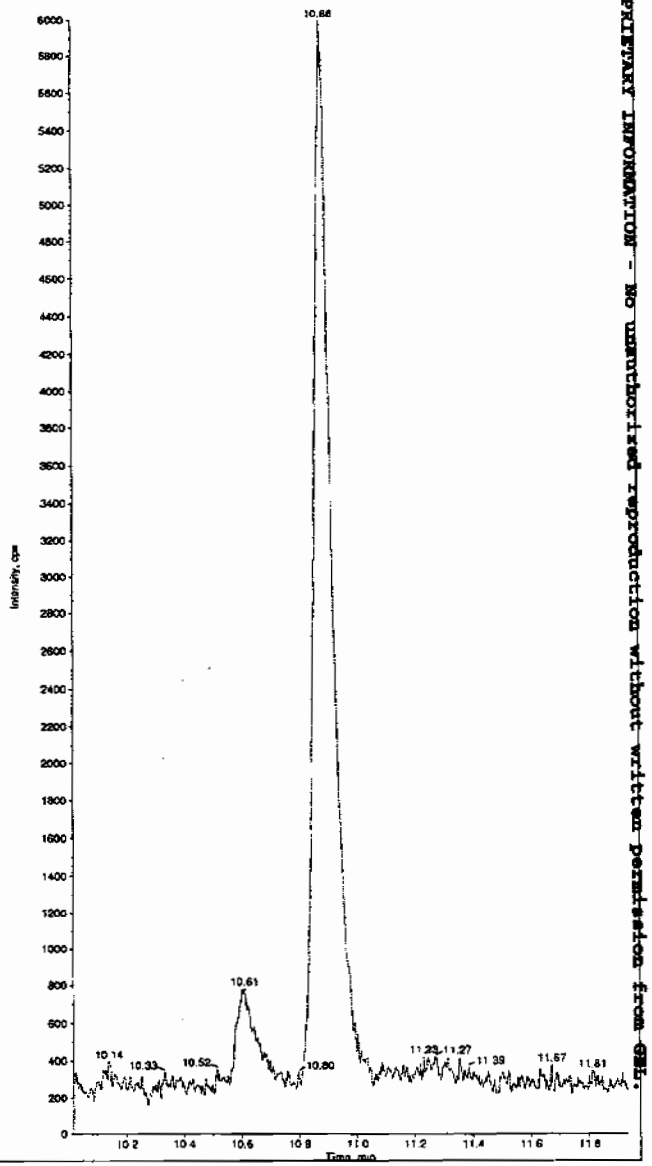

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 880641

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 1201869917

Sample Amount 2

Moisture:

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630039a

Date Analyzed: 01-JUL-09 09:18

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5440	
121-14-2	2,4-Dinitrotoluene	5130	
121-82-4	RDX	5130	
19406-51-0	4-Amino-2,6-dinitrotoluene	5160	
2691-41-0	HMX	5170	
35572-78-2	2-Amino-4,6-dinitrotoluene	5680	
479-45-8	Tetryl	4280	
606-20-2	2,6-Dinitrotoluene	4800	
78-11-5	PETN	4850	
88-72-2	o-Nitrotoluene	3980	
98-95-3	Nitrobenzene	4390	
99-08-1	m-Nitrotoluene	4120	
99-35-4	1,3,5-Trinitrobenzene	4650	
99-65-0	m-Dinitrobenzene	4980	
99-99-0	p-Nitrotoluene	4060	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630039a
Date: 01-Jul-2009
Time: 09:18:27
ID: 1201869917 | LANU | 880642 | Solid | LCS | 2 |
Vial: 1:7,B

LMT 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
8.944e+004

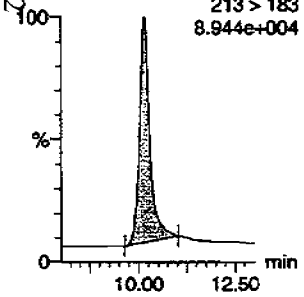

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.042e+004

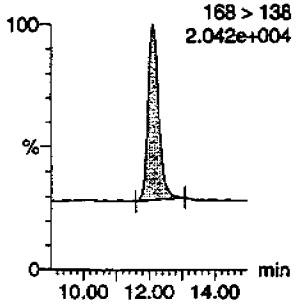

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.839e+004

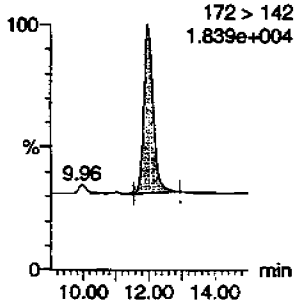

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.063e+005

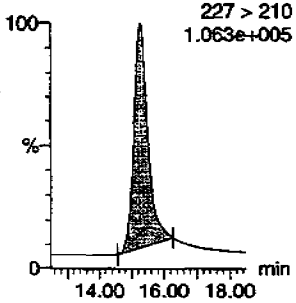

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
8.513e+004

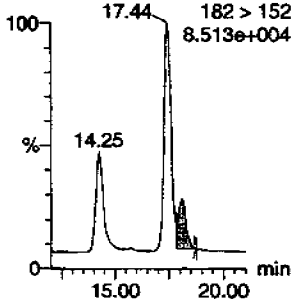

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
8.513e+004

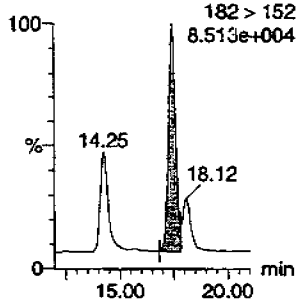

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.626e+004

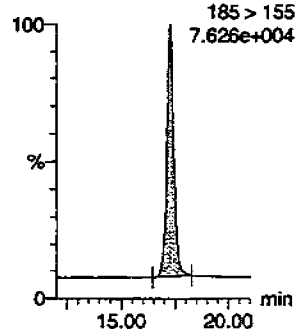

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.473e+004

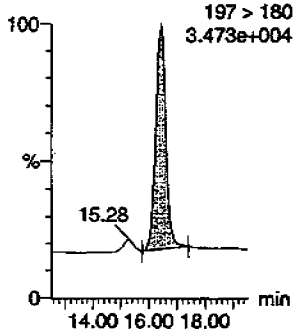

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
9.852e+003

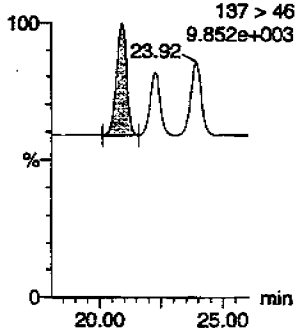

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
8.513e+004

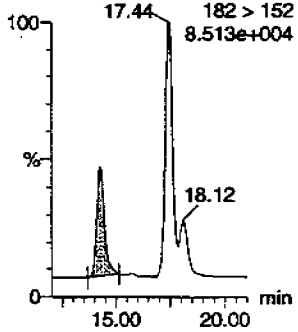

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
9.852e+003

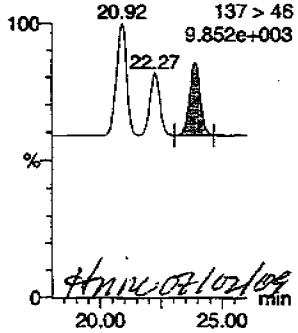

HMK 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.721e+004

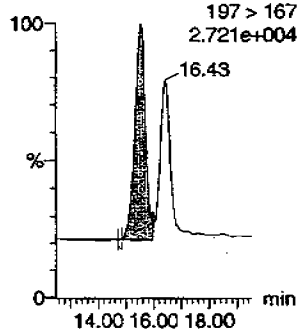

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Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

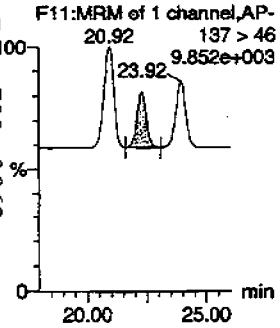

HMX

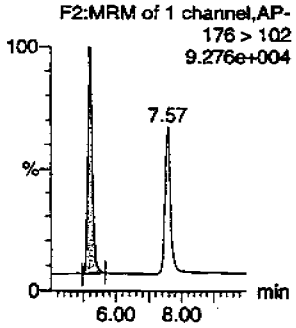

Nitrobenzene

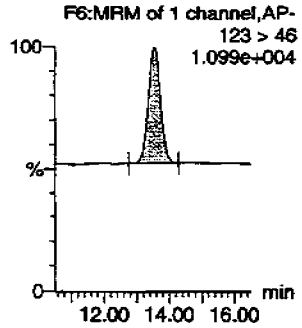

PETN

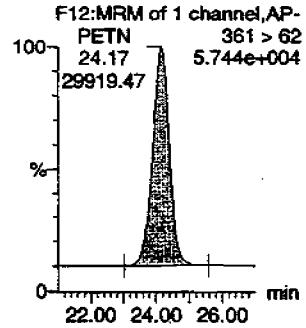

RDX

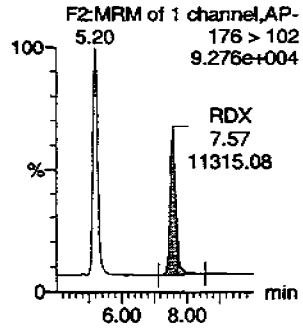

Tetryl

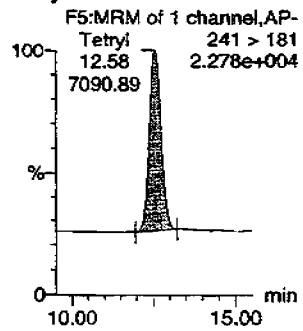

ID	Name	Trace	RT	Area	S/Area	Response	Response	Flags	Integrator	Quantitation	Amount	%Rec	%Dev	S/N
1201869917	HMX	176 > 102	5.20	13952.880	4113.963	13952.880	1695.796	bb			517.3121	103.5	3.5	1924.7
1201869917	RDX	176 > 102	7.57	11315.078	4113.963	11315.078	1375.204	bb			512.9486	102.6	2.6	1249.3
1201869917	135-Trinitrobenzene	213 > 183	10.14	25753.180	4113.963	25753.180	3129.972	bb			465.2350	93.0	-7.0	1101.1
1201869917	13-Dinitrobenzene-d4	172 > 142	12.00	4113.963		4113.963	4113.963	bb			536.8337	107.4	7.4	547.1
1201869917	13-Dinitrobenzene	168 > 138	12.14	5519.169	4113.963	5519.169	670.785	bb			498.1927	99.6	-0.4	961.2
1201869917	Tetryl	241 > 181	12.58	7090.894	4113.963	7090.894	861.808	bb			428.1104	85.6	-14.4	1375.4
1201869917	Nitrobenzene	123 > 46	13.54	2246.291	4113.963	2246.291	273.008	bb			438.8272	87.8	-12.2	265.2
1201869917	4-Amino-26-dinitrotoluene	197 > 167	15.56	9339.858	26744.926	9339.858	174.610	MM	02-Jul-09	07:53:31	516.2665	103.3	3.3	174.3
1201869917	2-Amino-46-dinitrotoluene	197 > 180	16.43	12031.815	26744.926	12031.815	224.936	bb			568.3336	113.7	13.7	307.0
1201869917	246-Trinitrotoluene	227 > 210	15.28	48133.371	26744.926	48133.371	899.860	bb			544.3477	108.9	8.9	809.6
1201869917	34-dinitrotoluene	182 > 152	14.25	14268.178	26744.926	14268.178	266.746	bb			273.9255	109.6	9.6	655.7
1201869917	26-dinitrotoluene	182 > 152	17.44	30103.324	26744.926	30103.324	562.786	MM	02-Jul-09	07:56:51	480.1275	96.0	-4.0	1521.2
1201869917	24-dinitrotoluene	182 > 152	18.12	7198.158	26744.926	7198.158	134.571	MM	02-Jul-09	07:59:25	513.3997	102.7	2.7	333.3
1201869917	26-dinitrotoluene-d3	185 > 155	17.29	26744.926		26744.926	26744.926	bb			557.9430	111.6	11.6	1269.5
1201869917	2-Nitrotoluene	137 > 46	20.92	1952.881	26744.926	1952.881	36.509	bb			398.0634	79.6	-20.4	432.8
1201869917	4-Nitrotoluene	137 > 46	22.27	1049.623	26744.926	1049.623	19.623	bb			406.1898	81.2	-18.8	239.5
1201869917	3-Nitrotoluene	137 > 46	23.92	1288.354	26744.926	1288.354	24.086	bb			411.9804	82.4	-17.6	282.0
1201869917	PETN	361 > 62	24.17	29919.471	26744.926	29919.471	559.349	bb			484.9079	97.0	-3.0	4007.3

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 880641

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 1201869917

Sample Amount 2

Moisture:

Amount Units g

Date Received: 26-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630025.wiff

Date Analyzed: 30-JUN-09 17:42

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	5170	
59229-75-3	2,6-Diamino-4-nitrotoluene	4150	
618-87-1	3,5-Dinitroaniline	4440	
6629-29-4	2,4-Diamino-6-nitrotoluene	3480	
78-30-8	tris(o-cresyl) phosphate	4520	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sample Name: "1201869917" Sample ID: "880642|2|LER" File: "EXS0630025.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 517. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:42:34 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 3.17e+005 counts
Height: 62845.551 cps
Start Time: 6.89 min
End Time: 7.45 min

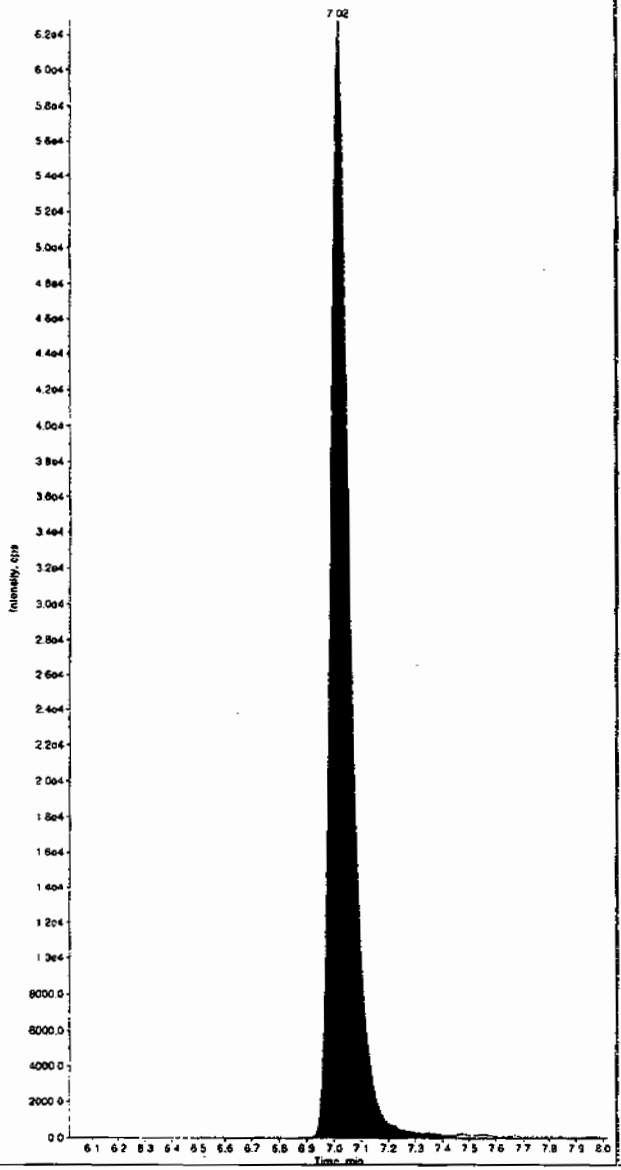

Sample Name: "1201869917" Sample ID: "880642|2|LER" File: "EXS0630025.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 444. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:42:34 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.25 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.26 min
Area: 5.61e+005 counts
Height: 126624.496 cps
Start Time: 8.19 min
End Time: 8.39 min

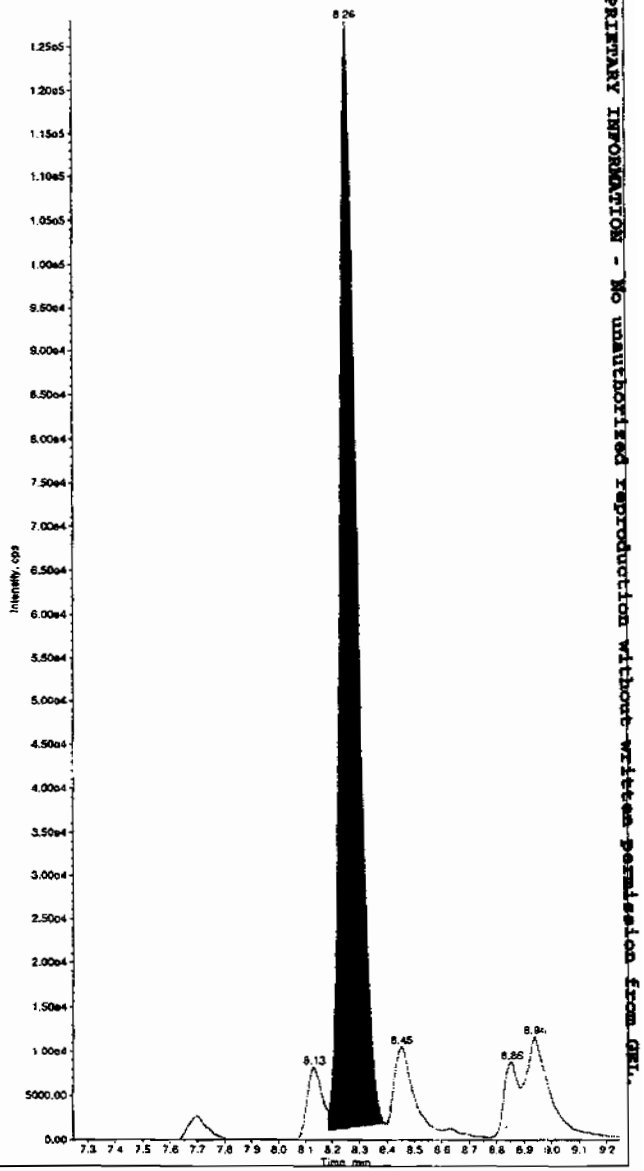

Ler 7/1/09

HMM 08/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201869917" Sample ID: "880642|2|LER" File: "EXS0630025.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 231. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:42:34 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.44 min
Area: 4.89e+005 counts
Height: 98714.111 cps
Start Time: 8.37 min
End Time: 8.74 min

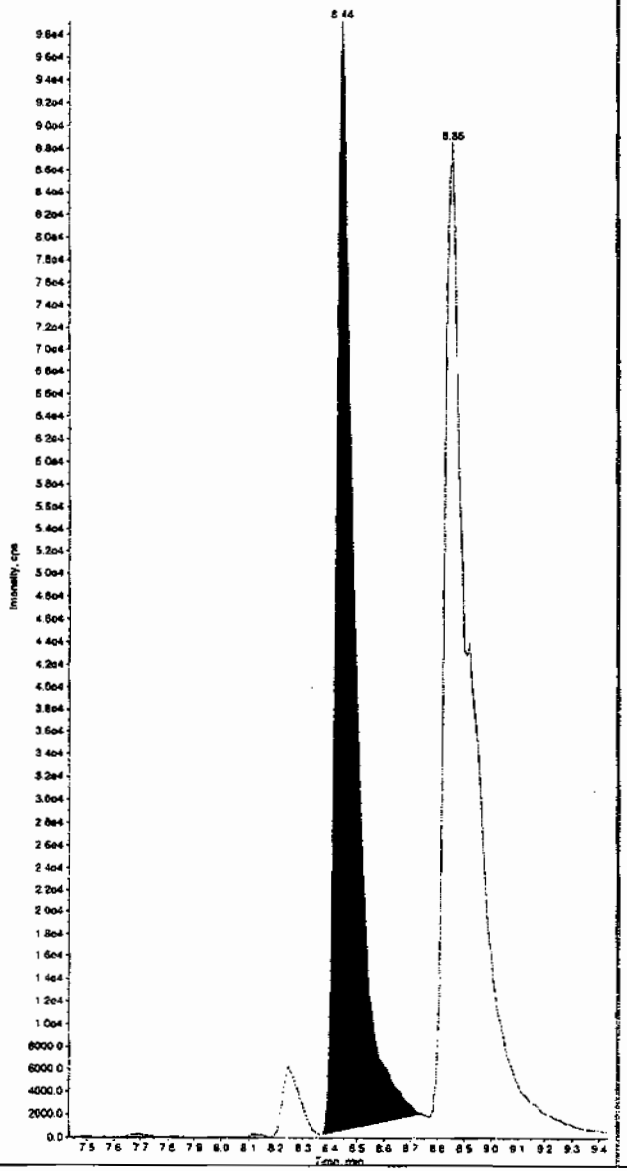

Sample Name: "1201869917" Sample ID: "880642|2|LER" File: "EXS0630025.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 415. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:42:34 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.09 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.08 min
Area: 8.42e+004 counts
Height: 17245.100 cps
Start Time: 4.99 min
End Time: 5.37 min

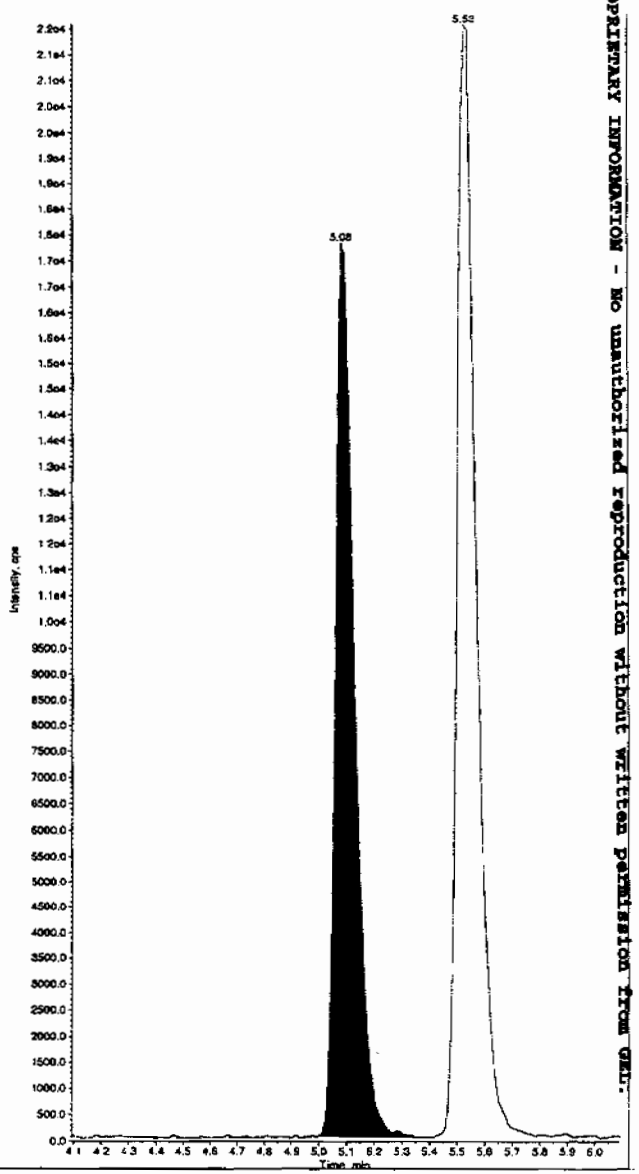

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201869917" Sample ID: "880642|2|LER" File: "EXS0630025.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 348. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:42:34 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 1.06e+005 counts
Height: 21518.595 cps
Start Time: 5.42 min
End Time: 5.79 min

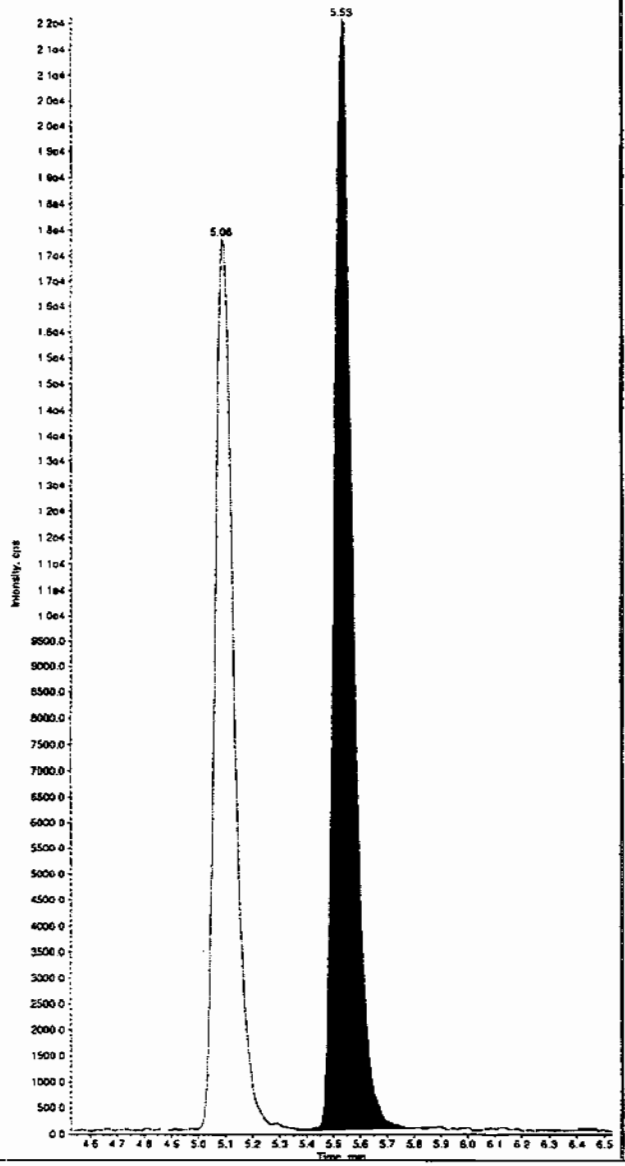

Sample Name: "1201869917" Sample ID: "880642|2|LER" File: "EXS0630025.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 452. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 5:42:34 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 5.63e+006 counts
Height: 1226727.051 cps
Start Time: 10.8 min
End Time: 11.2 min

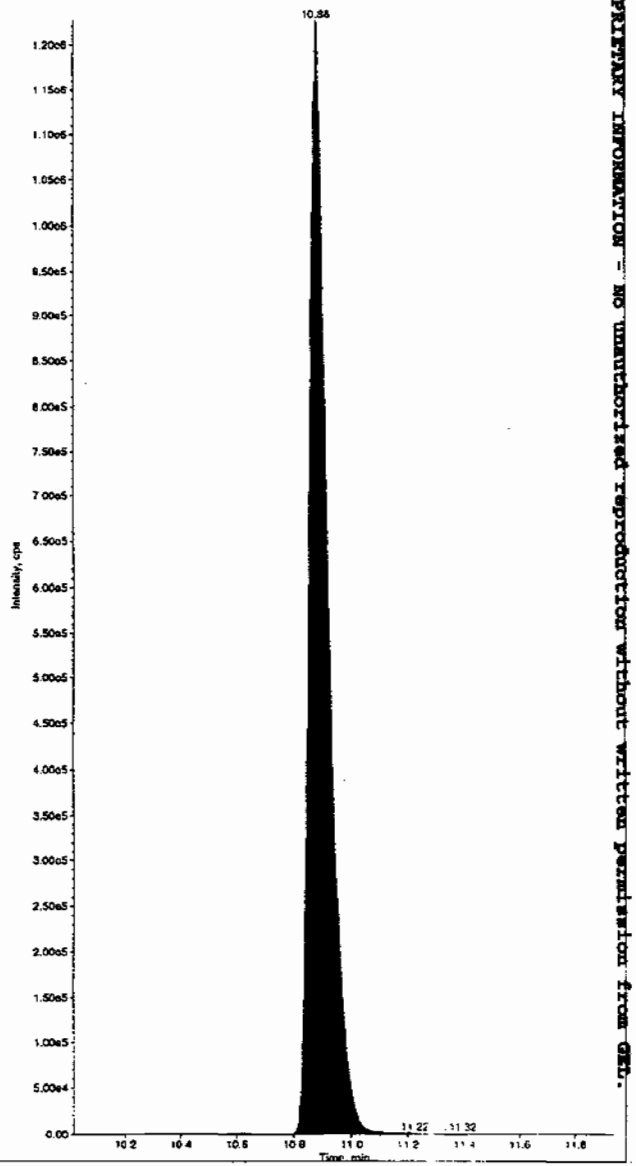

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10462(232348001MS)

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 1201869918

Sample Amount 2

Moisture: 6.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630041a

Date Analyzed: 01-JUL-09 10:17

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5890	
121-14-2	2,4-Dinitrotoluene	5270	
121-82-4	RDX	5030	
19406-51-0	4-Amino-2,6-dinitrotoluene	5340	
2691-41-0	HMX	5120	
35572-78-2	2-Amino-4,6-dinitrotoluene	5940	
479-45-8	Tetryl	4770	
606-20-2	2,6-Dinitrotoluene	5140	
78-11-5	PETN	4770	
88-72-2	o-Nitrotoluene	4190	
98-95-3	Nitrobenzene	4430	
99-08-1	m-Nitrotoluene	4220	
99-35-4	1,3,5-Trinitrobenzene	4870	
99-65-0	m-Dinitrobenzene	5190	
99-99-0	p-Nitrotoluene	4130	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630041a
Date: 01-Jul-2009
Time: 10:17:28
ID: 1201869918 | LAW | 880642 | Soil | 23234800 1 ug | 21
Vial: 1:7,D

MM 7/2/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.449e+004

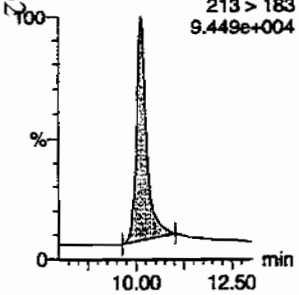

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.102e+004

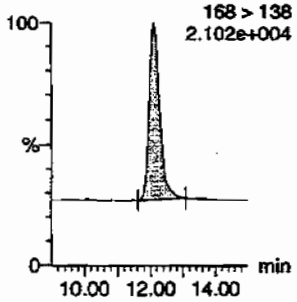

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.846e+004

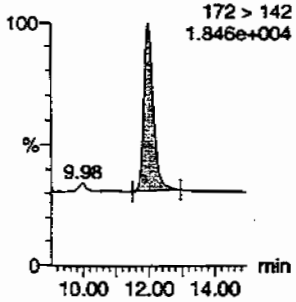

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.142e+005

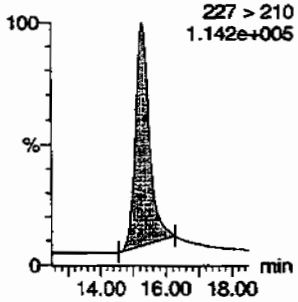

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.091e+004

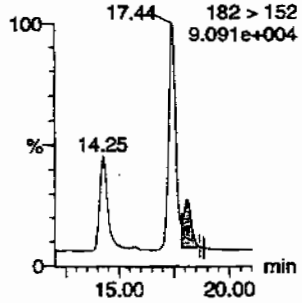

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.091e+004

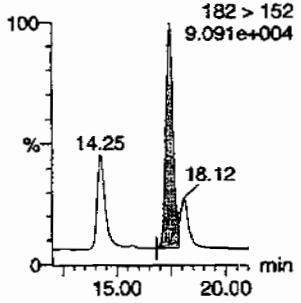

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.638e+004

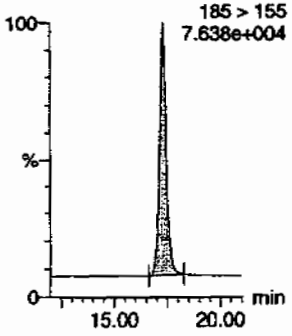

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.595e+004

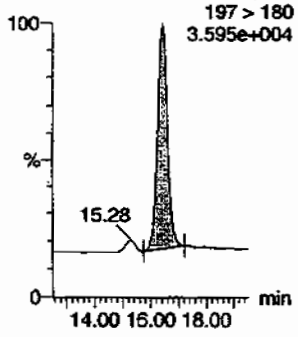

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.000e+004

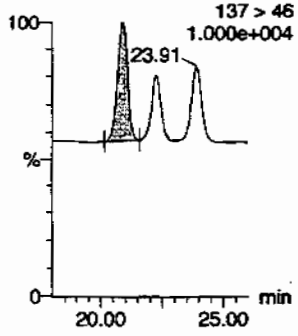

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.091e+004

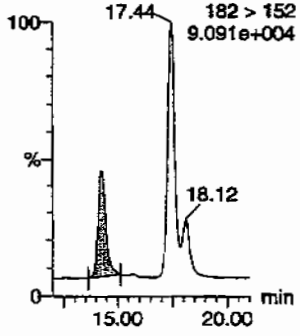

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.000e+004

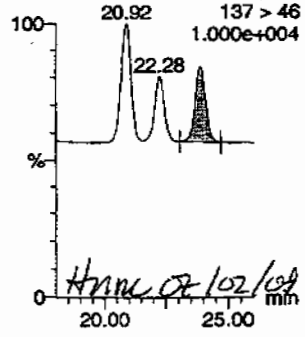

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.748e+004

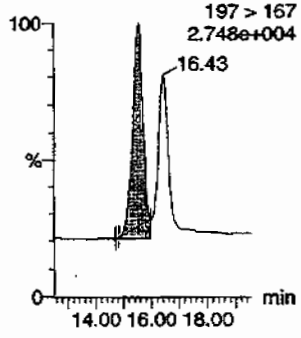

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

4-Nitrotoluene

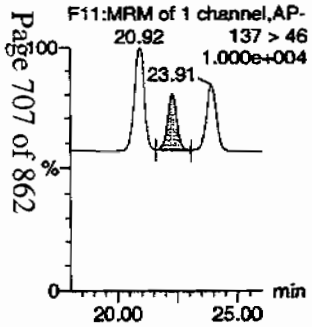

HMX

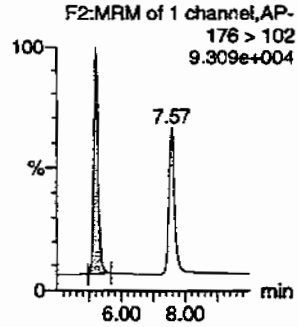

Nitrobenzene

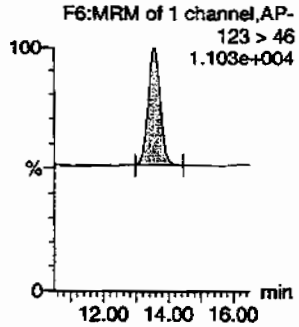

PETN

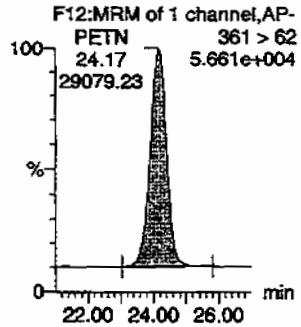

RDX

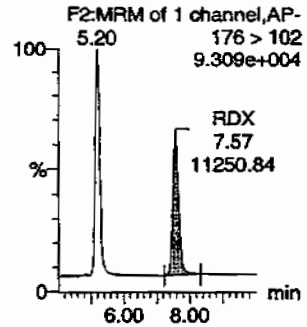

Tetryl

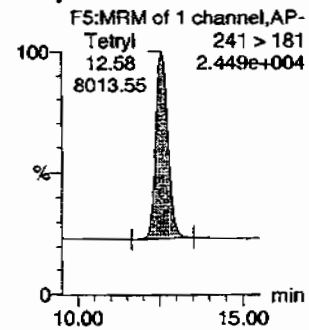

ID	Name	Trace	RT	Area	IS Area	Resp	Response	Flag	Modified	Modified	Amount	%Dev	%Dev	S/N
1201869918	HMX	176 > 102	5.20	13980.991	4168.962	13980.991	1676.795	bb			511.5160	102.3	2.3	954.9
1201869918	RDX	176 > 102	7.57	11250.843	4168.962	11250.843	1349.358	bb			503.3079	100.7	0.7	608.8
1201869918	135-Trinitrobenzene	213 > 183	10.14	27318.758	4168.962	27318.758	3276.446	bb			487.0067	97.4	-2.6	852.4
1201869918	13-Dinitrobenzene-d4	172 > 142	12.00	4168.962		4168.962	4168.962	bb			544.0105	108.8	8.8	539.8
1201869918	13-Dinitrobenzene	168 > 138	12.14	5825.981	4168.962	5825.981	698.733	bb			518.9496	103.8	3.8	479.6
1201869918	Tetryl	241 > 181	12.58	8013.550	4168.962	8013.550	961.097	bb			477.4328	95.5	-4.5	1388.8
1201869918	Nitrobenzene	123 > 46	13.54	2297.989	4168.962	2297.989	275.607	bb			443.0043	88.6	-11.4	163.9
1201869918	4-Amino-26-dinitrotoluene	197 > 167	15.56	9514.520	26364.514	9514.520	180.442	MM	02-Jul-09	07:54:09	533.5095	106.7	6.7	422.4
1201869918	2-Amino-46-dinitrotoluene	197 > 180	16.43	12405.889	26364.514	12405.889	235.276	bb			594.4588	118.9	18.9	488.1
1201869918	246-Trinitrotoluene	227 > 210	15.28	51305.445	26364.514	51305.445	973.002	bb			588.5931	117.7	17.7	1093.2
1201869918	34-dinitrotoluene	182 > 152	14.25	14735.439	26364.514	14735.439	279.456	bb			286.9780	114.8	14.8	498.4
1201869918	26-dinitrotoluene	182 > 152	17.44	31746.494	26364.514	31746.494	602.069	MM	02-Jul-09	07:57:01	513.6408	102.7	2.7	1191.9
1201869918	24-dinitrotoluene	182 > 152	18.12	7286.916	26364.514	7286.916	138.196	MM	02-Jul-09	07:59:43	527.2294	105.4	5.4	257.4
1201869918	26-dinitrotoluene-d3	185 > 155	17.29	26364.514		26364.514	26364.514	bb			550.0070	110.0	10.0	1750.8
1201869918	2-Nitrotoluene	137 > 46	20.92	2027.966	26364.514	2027.966	38.460	bb			419.3327	83.9	-16.1	489.9
1201869918	4-Nitrotoluene	137 > 46	22.28	1050.999	26364.514	1050.999	19.932	bb			412.5909	82.5	-17.5	265.0
1201869918	3-Nitrotoluene	137 > 46	23.91	1300.932	26364.514	1300.932	24.672	bb			422.0049	84.4	-15.6	307.4
1201869918	PETN	361 > 62	24.17	29079.234	26364.514	29079.234	551.484	bb			476.5684	95.3	-4.7	3868.1

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10462(232348001MS)

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 1201869918

Sample Amount 2

Moisture: 6.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630027.wiff

Date Analyzed: 30-JUN-09 18:14

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	4090	
59229-75-3	2,6-Diamino-4-nitrotoluene	4510	
618-87-1	3,5-Dinitroaniline	4350	
6629-29-4	2,4-Diamino-6-nitrotoluene	4290	
78-30-8	tris(o-cresyl) phosphate	4800	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Ker 7/1/09

Sample Name: "1201869918" Sample ID: "880642|2|LER" File: "EXS0630027.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 409. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:14:58 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 2.51e+005 counts
Height: 51050.076 cps
Start Time: 6.92 min
End Time: 7.51 min

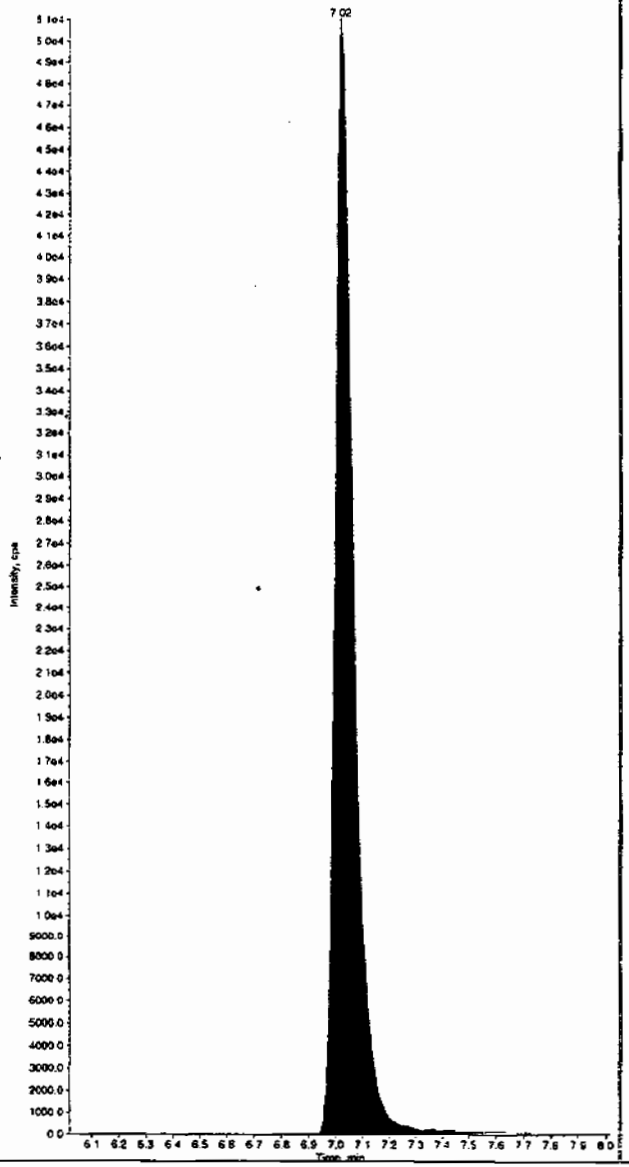

Sample Name: "1201869918" Sample ID: "880642|2|LER" File: "EXS0630027.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 435. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:14:58 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.25 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.25 min
Area: 5.49e+005 counts
Height: 127862.595 cps
Start Time: 8.17 min
End Time: 8.38 min

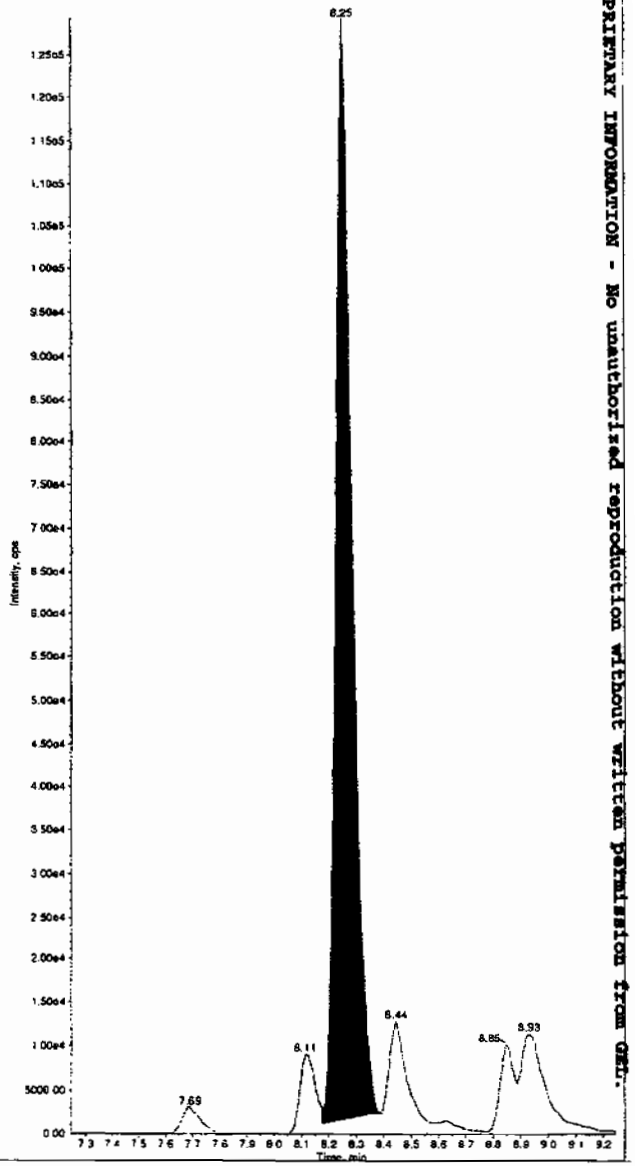

Hmin 07/02/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201869918" Sample ID: "880642|2|LER" File: "EXS0630027.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 242. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:14:58 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.44 min
Area: 5.14e+005 counts
Height: 103148.445 cps
Start Time: 8.36 min
End Time: 8.73 min

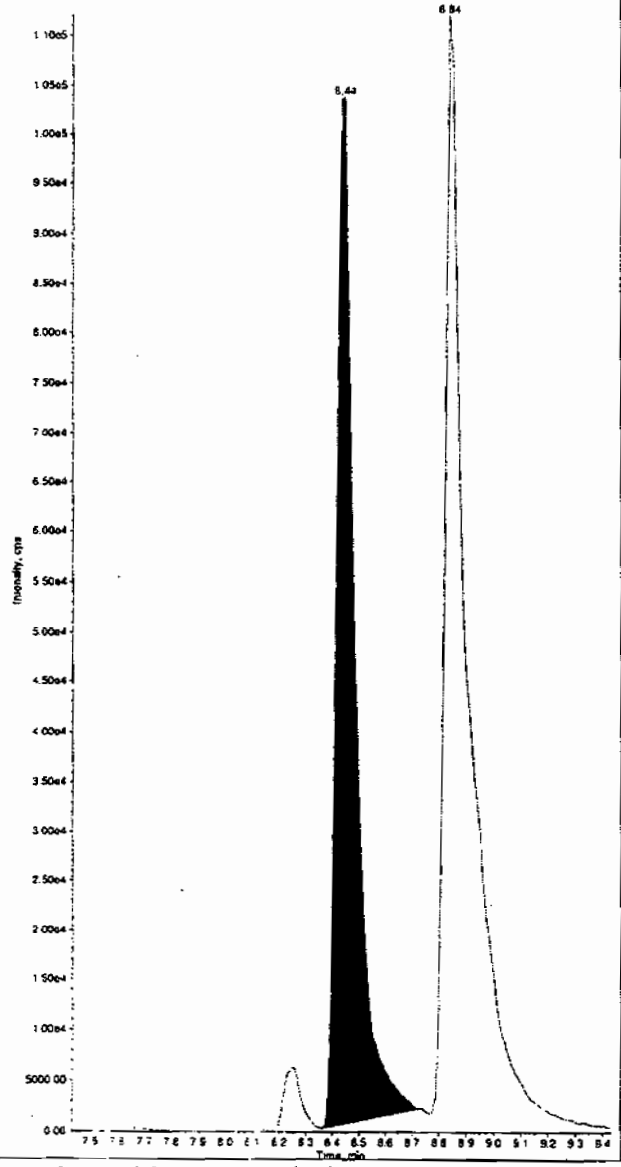

Sample Name: "1201869918" Sample ID: "880642|2|LER" File: "EXS0630027.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 451. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:14:58 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.09 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.08 min
Area: 9.14e+004 counts
Height: 19915.335 cps
Start Time: 4.98 min
End Time: 5.37 min

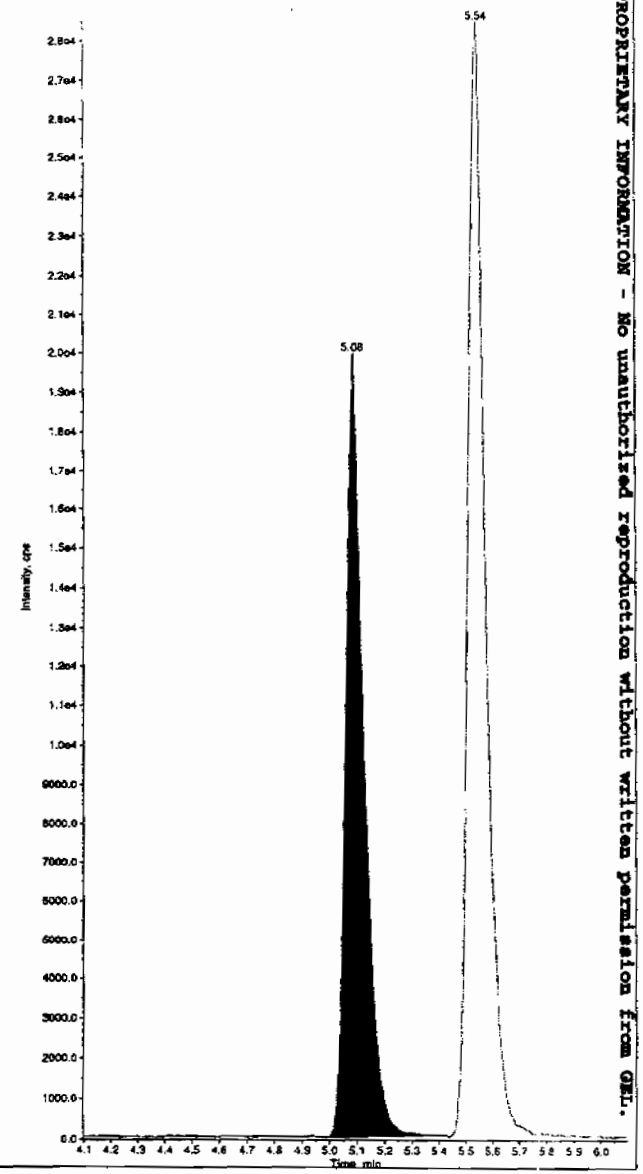

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201869918" Sample ID: "880642|2|LER" File: "EXS0630027.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 429. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:14:58 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.54 min
Area: 1.30e+005 counts
Height: 28408.617 cps
Start Time: 5.45 min
End Time: 5.93 min

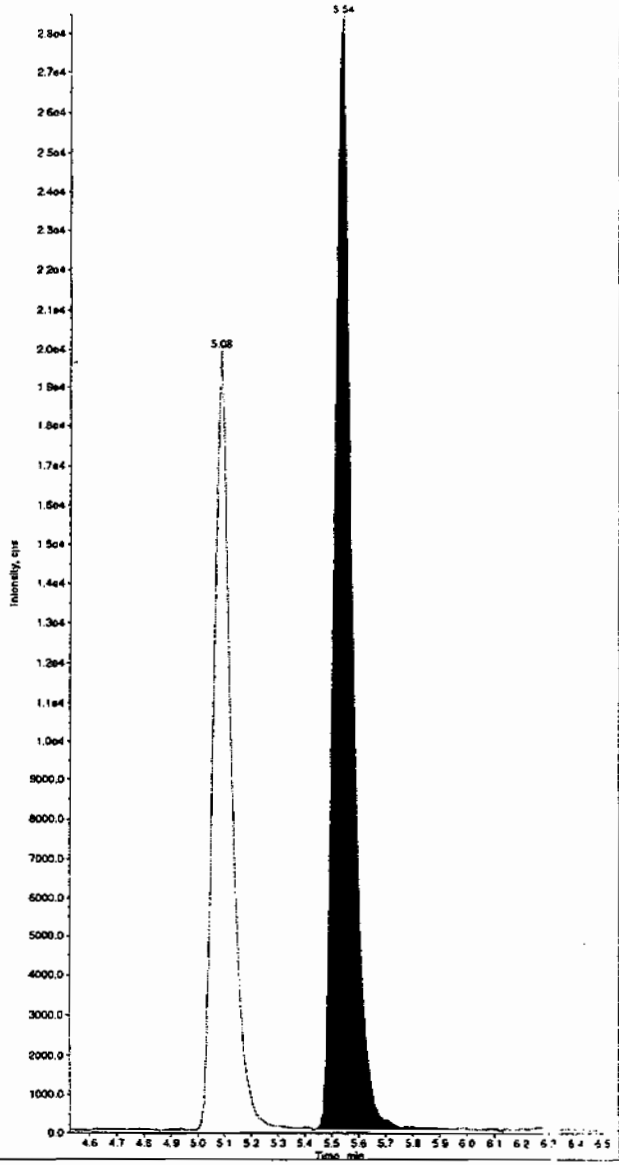

Sample Name: "1201869918" Sample ID: "880642|2|LER" File: "EXS0630027.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 480. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:14:58 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 5.96e+006 counts
Height: 1334731.934 cps
Start Time: 10.8 min
End Time: 11.2 min

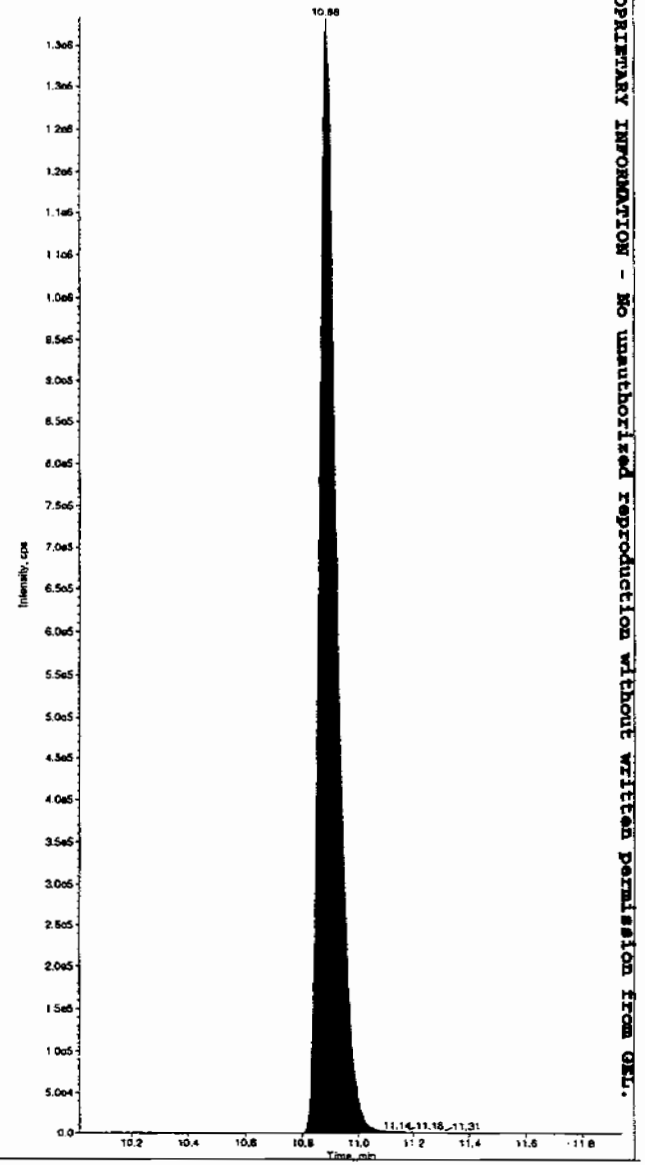

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10462(232348001MSD)

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 1201869919

Sample Amount 2

Moisture: 6.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0630042a

Date Analyzed: 01-JUL-09 10:46

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5950	
121-14-2	2,4-Dinitrotoluene	5690	
121-82-4	RDX	5280	
19406-51-0	4-Amino-2,6-dinitrotoluene	5550	
2691-41-0	HMX	5300	
35572-78-2	2-Amino-4,6-dinitrotoluene	5870	
479-45-8	Tetryl	4710	
606-20-2	2,6-Dinitrotoluene	5090	
78-11-5	PETN	4890	
88-72-2	o-Nitrotoluene	4210	
98-95-3	Nitrobenzene	4670	
99-08-1	m-Nitrotoluene	4320	
99-35-4	1,3,5-Trinitrobenzene	4930	
99-65-0	m-Dinitrobenzene	5250	
99-99-0	p-Nitrotoluene	4020	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0630042a
Date: 01-Jul-2009
Time: 10:46:57
ID: 1201869919 | LANU | 880642 | Solid | 232348001 MSD | 21
Vial: 1:7,E

LANU 7/2/09

Page 113 of 862

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.351e+004

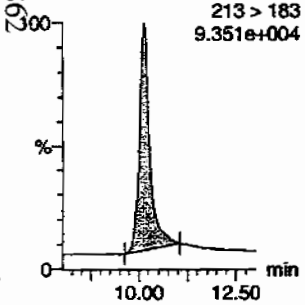

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.109e+004

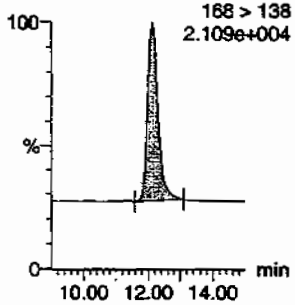

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.841e+004

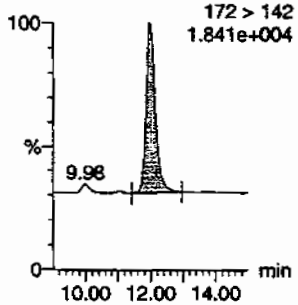

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.140e+005

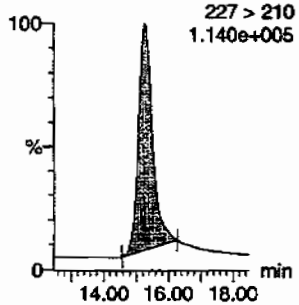

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
8.977e+004

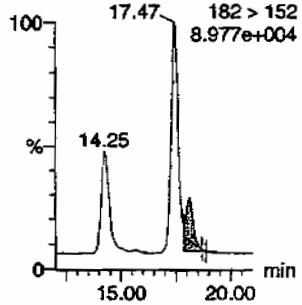

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
8.977e+004

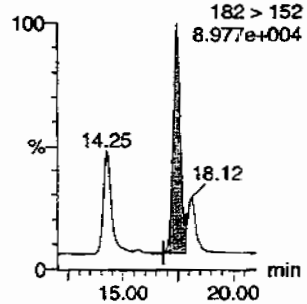

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.613e+004

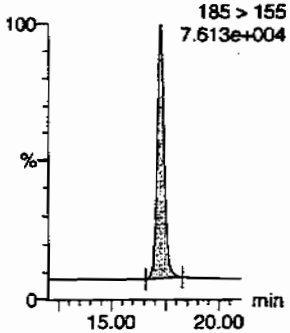

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.468e+004

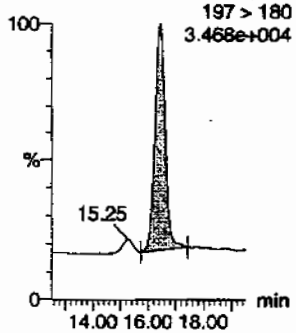

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
9.980e+003

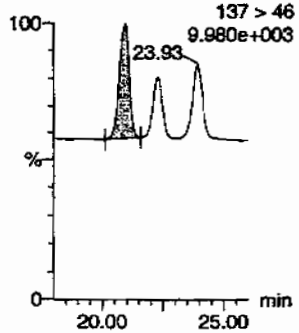

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
8.977e+004

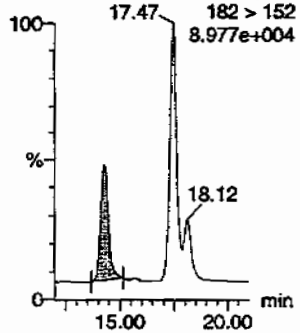

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
9.980e+003

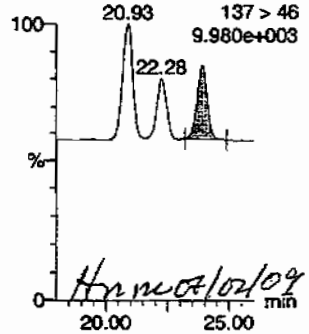

HMM 07/02/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.825e+004

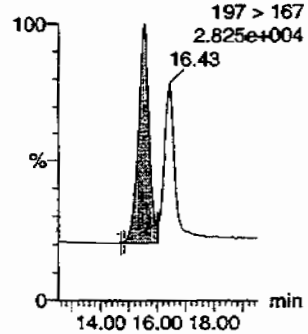

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Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\063009expA1.qld, Time: Thu Jul 02 08:02:46 2009

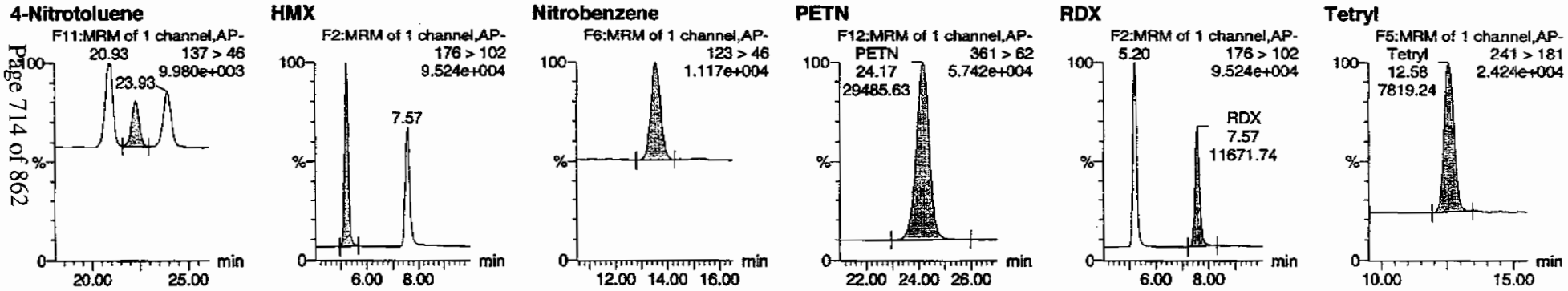

ID	Name	Trace	RT	Area	IS Area	TotalAreaEsp	Response	Flag	Modified	Modifier	Calc Amt	%Rec	%Dev	S/N
1201869919	HMX	176 > 102	5.20	14324.976	4124.343	14324.976	1736.637	bb			529.7712	106.0	6.0	2378.2
1201869919	RDX	176 > 102	7.57	11671.735	4124.343	11671.735	1414.981	bb			527.7853	105.6	5.6	1546.7
1201869919	135-Trinitrobenzene	213 > 183	10.14	27377.391	4124.343	27377.391	3319.000	bb			493.3319	98.7	-1.3	1221.9
1201869919	13-Dinitrobenzene-d4	172 > 142	12.00	4124.343		4124.343	4124.343	bb			538.1882	107.6	7.6	387.2
1201869919	13-Dinitrobenzene	168 > 138	12.14	5829.247	4124.343	5829.247	706.688	bb			524.8579	105.0	5.0	780.3
1201869919	Tetryl	241 > 181	12.58	7819.241	4124.343	7819.241	947.938	bb			470.8960	94.2	-5.8	641.6
1201869919	Nitrobenzene	123 > 46	13.54	2393.983	4124.343	2393.983	290.226	bb			466.5027	93.3	-6.7	515.3
1201869919	4-Amino-26-dinitrotoluene	197 > 167	15.56	9824.063	26183.820	9824.063	187.598	MM	02-Jul-09	07:54:19	554.6681	110.9	10.9	391.8
1201869919	2-Amino-46-dinitrotoluene	197 > 180	16.43	12164.688	26183.820	12164.688	232.294	bb			586.9236	117.4	17.4	304.4
1201869919	246-Trinitrotoluene	227 > 210	15.28	51532.621	26183.820	51532.621	984.055	bb			595.2792	119.1	19.1	1978.3
1201869919	34-dinitrotoluene	182 > 152	14.25	14976.284	26183.820	14976.284	285.984	bb			293.6813	117.5	17.5	357.5
1201869919	26-dinitrotoluene	182 > 152	17.47	31241.322	26183.820	31241.322	596.577	MM	02-Jul-09	07:57:17	508.9556	101.8	1.8	812.5
1201869919	24-dinitrotoluene	182 > 152	18.12	7804.050	26183.820	7804.050	149.024	MM	02-Jul-09	08:00:08	568.5422	113.7	13.7	186.4
1201869919	26-dinitrotoluene-d3	185 > 155	17.29	26183.820		26183.820	26183.820	bb			546.2374	109.2	9.2	1707.2
1201869919	2-Nitrotoluene	137 > 46	20.93	2020.984	26183.820	2020.984	38.592	bb			420.7729	84.2	-15.8	180.2
1201869919	4-Nitrotoluene	137 > 46	22.28	1017.205	26183.820	1017.205	19.424	bb			402.0801	80.4	-19.6	96.2
1201869919	3-Nitrotoluene	137 > 46	23.93	1321.830	26183.820	1321.830	25.241	bb			431.7430	86.3	-13.7	117.8
1201869919	PETN	361 > 62	24.17	29485.629	26183.820	29485.629	563.051	bb			488.8551	97.8	-2.2	1849.2

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10462(232348001MSD)

Lab Code: GEL

GEL Job No (SDG) 09-2457

Matrix: SOIL

GEL Sample ID: 1201869919

Sample Amount 2

Moisture: 6.5

Amount Units g

Date Received: 25-JUN-09

Extraction Type Sonication

Extraction Batch ID: 880641

Concentrated Extract Volume (mL) 10

Date Extracted: 29-JUN-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0630028.wiff

Date Analyzed: 30-JUN-09 18:31

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	6670	
59229-75-3	2,6-Diamino-4-nitrotoluene	4660	
618-87-1	3,5-Dinitroaniline	4970	
6629-29-4	2,4-Diamino-6-nitrotoluene	4340	
78-30-8	tris(o-cresyl) phosphate	5080	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sample Name: "1201869919" Sample ID: "880642|2|LER" File: "EXS0630028.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 667. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:31:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.02 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.02 min
Area: 4.09e+005 counts
Height: 79100.082 cps
Start Time: 6.89 min
End Time: 7.37 min

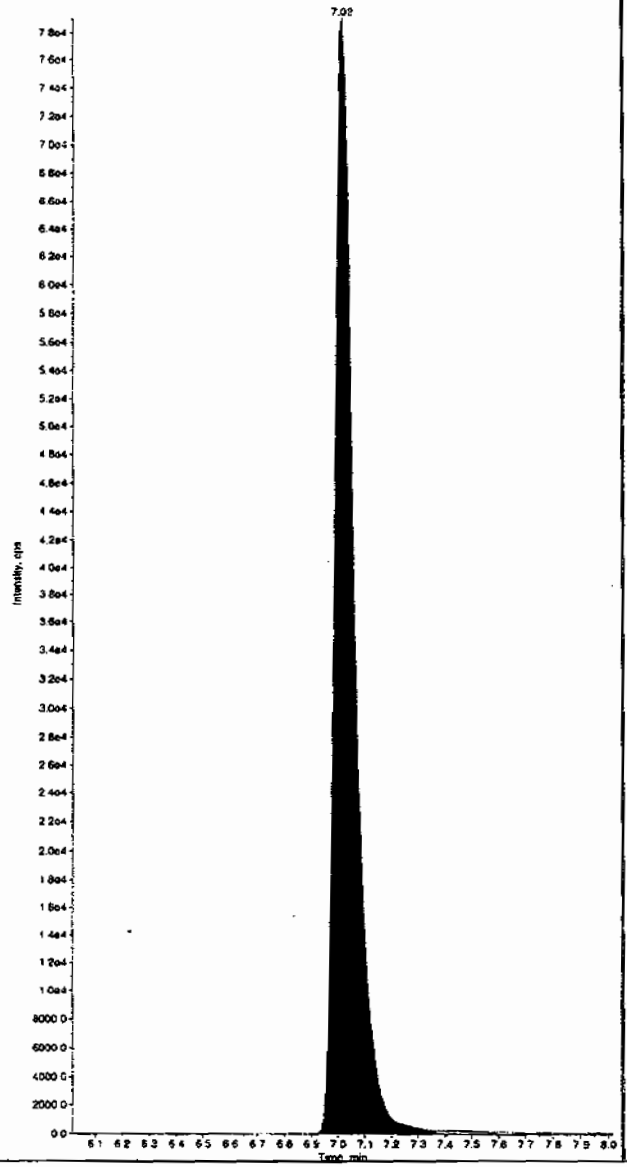

Sample Name: "1201869919" Sample ID: "880642|2|LER" File: "EXS0630028.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 497. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:31:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.25 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.25 min
Area: 6.26e+005 counts
Height: 140544.769 cps
Start Time: 8.17 min
End Time: 8.38 min

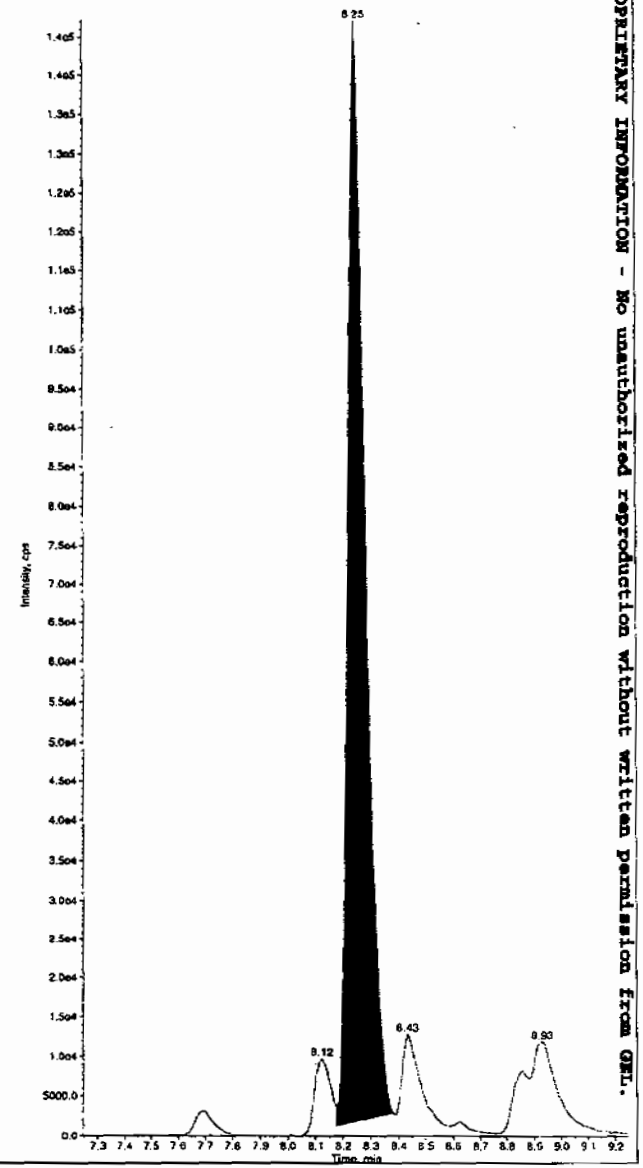

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201869919" Sample ID: "880542|2|LER" File: "EXS0630028.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 254. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:31:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.43 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.43 min
Area: 5.38e+005 counts
Height: 102533.691 cps
Start Time: 8.36 min
End Time: 8.73 min

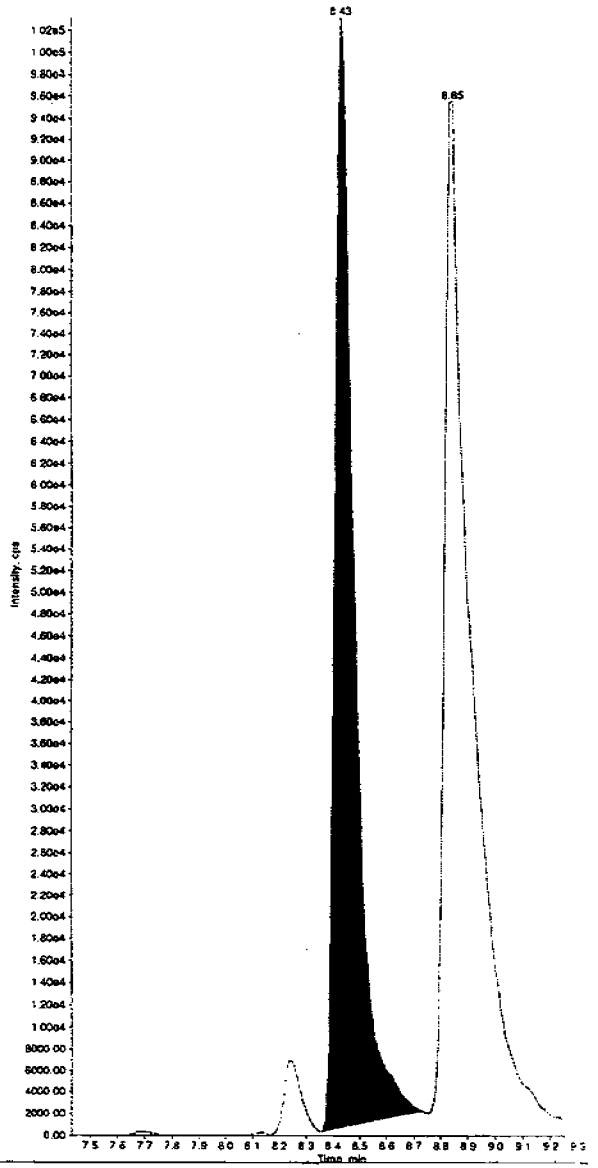

Sample Name: "1201869919" Sample ID: "880642|2|LER" File: "EXS0630028.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 466. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:31:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.09 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.08 min
Area: 9.44e+004 counts
Height: 19259.382 cps
Start Time: 4.97 min
End Time: 5.34 min

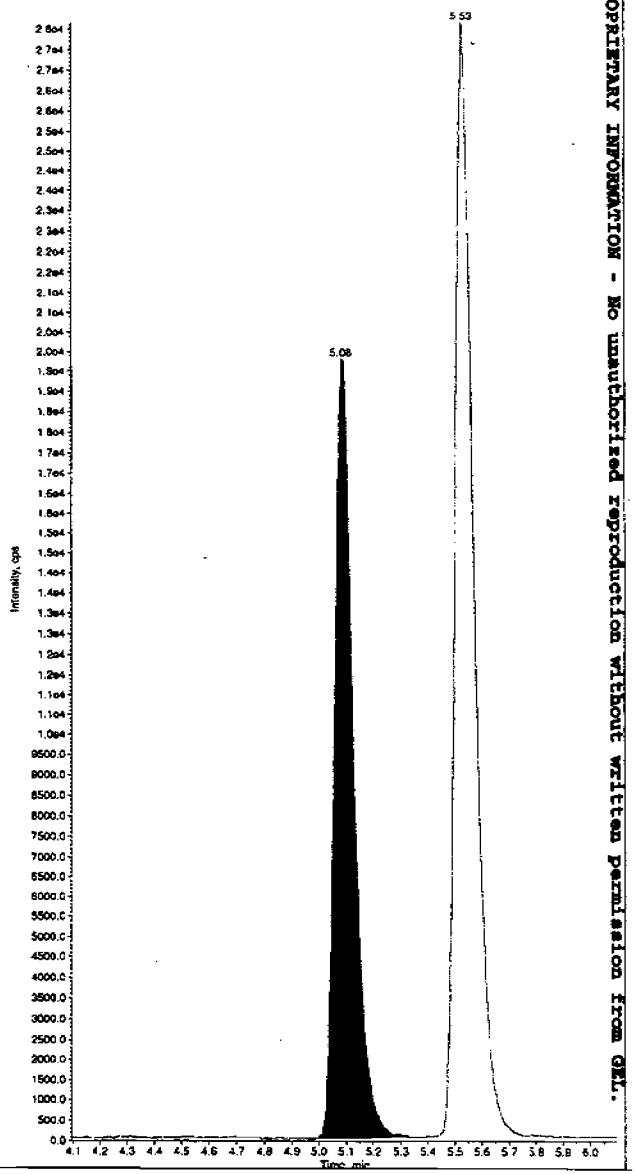

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201869919" Sample ID: "880642|2|LER" File: "EXS0630028.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 434. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:31:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 1.32e+005 counts
Height: 27573.675 cps
Start Time: 5.43 min
End Time: 5.77 min

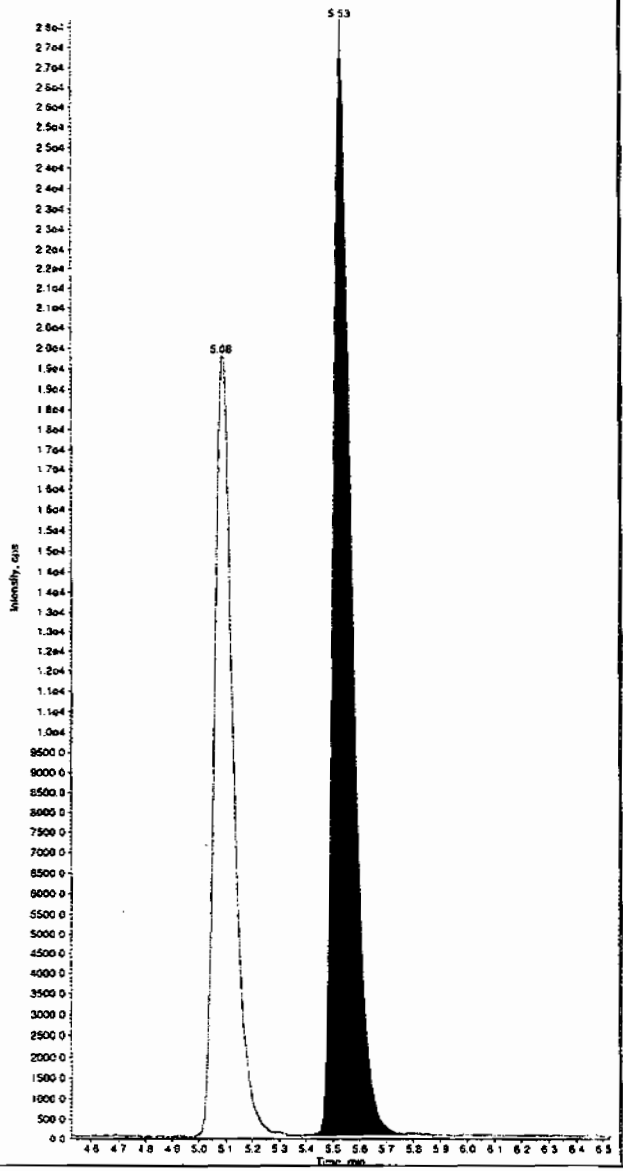

Sample Name: "1201869919" Sample ID: "880642|2|LER" File: "EXS0630028.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 508. ng/mL
Acq. Date: 6/30/2009
Acq. Time: 6:31:09 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.9 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 11.0 min
Area: 6.29e+006 counts
Height: 1396272.217 cps
Start Time: 10.9 min
End Time: 11.3 min

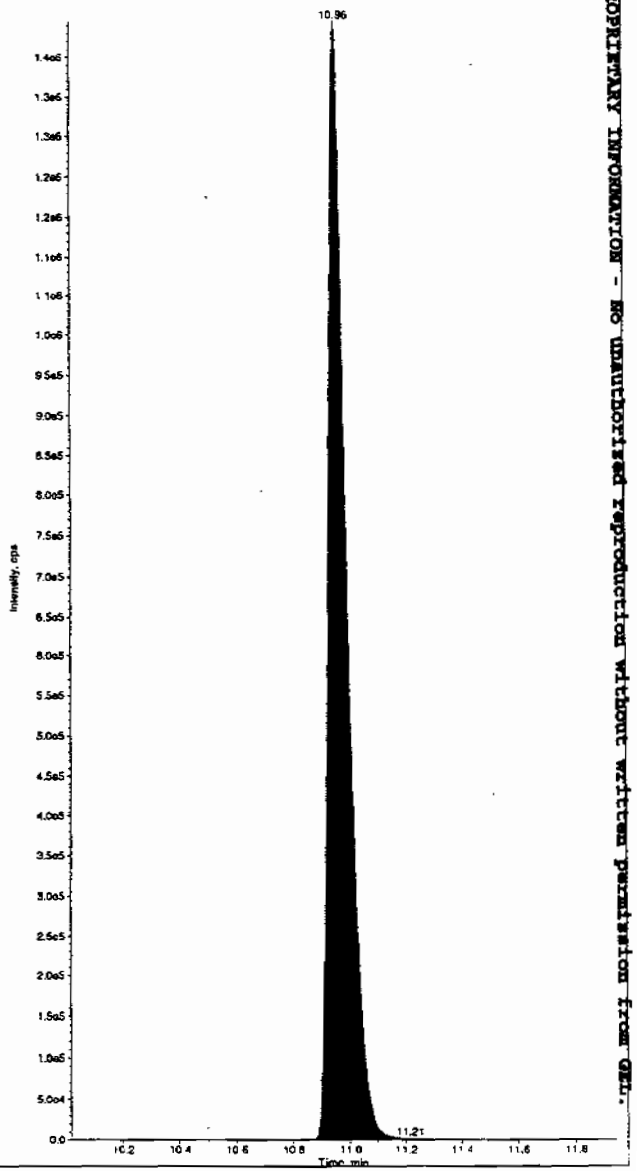

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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MISCELLANEOUS DATA

Prep Logbook

Nitroaromatics and Nitramines by High Performance Liquid Chromatography (HPLC)

Batch ID: 880641 **Verified by:** _____

Analyst: James Allnutt

Method: SW846 8330 PREP

Lab SOP: GL-OA-E-033 REV# 17

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201869916 MB	29-JUN-2009 10:45:13	2	10	5
1201869917 LCS	29-JUN-2009 10:45:13	2	10	5
232348001	29-JUN-2009 10:45:13	2	10	5
1201869918 MS (232348001)	29-JUN-2009 10:45:13	2	10	5
1201869919 MSD (232348001)	29-JUN-2009 10:45:13	2	10	5
232348002	29-JUN-2009 10:45:13	2	10	5
232348003	29-JUN-2009 10:45:13	2	10	5
232348004	29-JUN-2009 10:45:13	2	10	5

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201869917	8321 Explosives LCS	IXX090514-01	.1	mL
LCS	1201869917	8321 LANL Explosives Mix 10mg/L	UXX090616-02.2	1	mL
MS	1201869918	8321 Explosives LCS	IXX090514-01	.1	mL
MS	1201869918	8321 LANL Explosives Mix 10mg/L	UXX090616-02.2	1	mL
MSD	1201869919	8321 Explosives LCS	IXX090514-01	.1	mL
MSD	1201869919	8321 LANL Explosives Mix 10mg/L	UXX090616-02.2	1	mL
SURR	All	3,4-Dinitrotoluene (8330 Surr.) 100ppm	IXP090522-02	.05	mL

Comments:

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS #1

Date: 06/30/09
Extr. Injection Volume: 50uL
Sequence Number: 063009expA
Initial Calibration Date: 06/30/09

Method: SW846 8321A-Modified
Int. Std.: UXX090506-01.4
Mobile Phase Lot#: 1139935, 1134419
Standard-Samp Reagent Lot#: 1135125, 1128740

Reviewed BY: [illegible]
Date: 07/14/09
SOP: GL-OA-E-056Rev.11
Alt Check Std. ID: WXX090630-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP0630001a	XIBLK01	MAP	6/30/09 14:38			1		USE	B
EXP0630002a	XIBLK01	MAP	6/30/09 15:07			1		USE	B
EXP0630003a	WXXICAL-01	MAP	6/30/09 15:37			1		USE	I
EXP0630004a	WXXICAL-02	MAP	6/30/09 16:06			1		USE	I
EXP0630005a	WXXICAL-03	MAP	6/30/09 16:36			1		USE	I
EXP0630006a	WXXICAL-04	MAP	6/30/09 17:05			1		USE	I
EXP0630007a	WXXICAL-05	MAP	6/30/09 17:35			1		USE	I
EXP0630008a	WXXICAL-06	MAP	6/30/09 18:04			1		USE	I
EXP0630009a	XIBLK02	MAP	6/30/09 18:34			1		USE	B
EXP0630010a	WXXICV	MAP	6/30/09 19:03			1		USE	C
EXP0630011a	XIBLK03	MAP	6/30/09 19:33			1		USE	B
EXP0630012a	WXXCRI	MAP	6/30/09 20:02			1		USE	C
EXP0630013a	1201868644	MAP	6/30/09 20:31	880096	09-2437	2	LANL	USE	S
EXP0630014a	1201868645	MAP	6/30/09 21:01	880096	09-2437	2	LANL	USE	S
EXP0630015a	232278001	MAP	6/30/09 21:30	880096	09-2437	2	LANL	USE	S
EXP0630016a	1201868646	MAP	6/30/09 22:00	880096	09-2437	2	LANL	USE	S
EXP0630017a	1201868647	MAP	6/30/09 22:29	880096	09-2437	2	LANL	USE	S
EXP0630018a	232278002	MAP	6/30/09 22:59	880096	09-2437	2	LANL	USE	S
EXP0630019a	WXXCCV	MAP	6/30/09 23:28			1		USE	C
EXP0630020a	XIBLK04	MAP	6/30/09 23:58			1		USE	B
EXP0630021a	WXXCRI	MAP	7/1/09 0:27			1		USE	C
EXP0630022a	1201869904	MAP	7/1/09 0:57	880637	09-2468	2	LANL	USE	S
EXP0630023a	1201869905	MAP	7/1/09 1:26	880637	09-2468	2	LANL	USE	S
EXP0630024a	232342007	MAP	7/1/09 1:56	880637	09-2468	2	LANL	USE	S
EXP0630025a	1201869906	MAP	7/1/09 2:25	880637	09-2468	2	LANL	USE	S
EXP0630026a	1201869907	MAP	7/1/09 2:55	880637	09-2468	2	LANL	USE	S
EXP0630027a	WXXCCV	MAP	7/1/09 3:24			1		USE	C
EXP0630028a	XIBLK05	MAP	7/1/09 3:54			1		USE	B
EXP0630029a	WXXCRI	MAP	7/1/09 4:23			1		USE	C

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EXP0630030a	1201870677	MAP	7/1/09 4:53	880977	09-2483	2	LANL	USE	S
EXP0630031a	1201870678	MAP	7/1/09 5:22	880977	09-2483	2	LANL	USE	S
EXP0630032a	232434004	MAP	7/1/09 5:52	880977	09-2483	2	LANL	USE	S
EXP0630033a	1201870679	MAP	7/1/09 6:21	880977	09-2483	2	LANL	USE	S
EXP0630034a	1201870680	MAP	7/1/09 6:51	880977	09-2483	2	LANL	USE	S
EXP0630035a	WXXCCV	MAP	7/1/09 7:20			1		USE	C
EXP0630036a	XIBLK06	MAP	7/1/09 7:49			1		USE	B
EXP0630037a	WXXCRI	MAP	7/1/09 8:19			1		USE	C
EXP0630038a	1201869916	MAP	7/1/09 8:48	880642	09-2457	2	LANL	USE	S
EXP0630039a	1201869917	MAP	7/1/09 9:18	880642	09-2457	2	LANL	USE	S
EXP0630040a	232348001	MAP	7/1/09 9:47	880642	09-2457	2	LANL	DUSE-RA	S
EXP0630041a	1201869918	MAP	7/1/09 10:17	880642	09-2457	2	LANL	USE	S
EXP0630042a	1201869919	MAP	7/1/09 10:46	880642	09-2457	2	LANL	USE	S
EXP0630043a	232348002	MAP	7/1/09 11:16	880642	09-2457	2	LANL	USE	S
EXP0630044a	232348003	MAP	7/1/09 11:45	880642	09-2457	2	LANL	USE	S
EXP0630045a	232348004	MAP	7/1/09 12:15	880642	09-2457	2	LANL	USE	S
EXP0630046a	WXXCCV	MAP	7/1/09 12:44			1		USE	C
EXP0630047a	XIBLK07	MAP	7/1/09 13:14			1		USE	B
EXP0630048a	WXXCRI	MAP	7/1/09 13:43			1		USE	C
EXP0630049a	1201870673	MAP	7/1/09 14:13	880975	09-2473	2	LANL	USE	S
EXP0630050a	1201870674	MAP	7/1/09 14:42	880975	09-2473	2	LANL	USE	S
EXP0630051a	232424001	MAP	7/1/09 15:12	880975	09-2473	2	LANL	DUSE-RA	S
EXP0630052a	1201870675	MAP	7/1/09 15:41	880975	09-2473	2	LANL	USE	S
EXP0630053a	1201870676	MAP	7/1/09 16:11	880975	09-2473	2	LANL	USE	S
EXP0630054a	WXXCCV	MAP	7/1/09 16:40			1		USE	C
EXP0630055a	XIBLK08	MAP	7/1/09 17:10			1		USE	B
EXP0630056a	WXXCRI	MAP	7/1/09 17:39			1		USE	C

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS #1

Date: 07/13/09
Extr. Injection Volume: 50uL
Sequence Number: 071309expA
Initial Calibration Date: 07/13/09

Method: SW846 8321A-Modified
Int. Std.: UXX090506-01.4
Mobile Phase Lot#: 1151871, 1134419
Standard-Samp Reagent Lot#: 115179, 1141273

Reviewed BY: [illegible]
Date: 07/14/09
SOP: GL-OA-E-056Rev.11
Alt Check Std. ID: WXX090713-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP0713001a	XIBLK01	MAP	7/13/09 14:54			1		USE	B
EXP0713002a	XIBLK01	MAP	7/13/09 15:25			1		USE	B
EXP0713003a	WXXICAL-01	MAP	7/13/09 15:55			1		USE	I
EXP0713004a	WXXICAL-02	MAP	7/13/09 16:24			1		USE	I
EXP0713005a	WXXICAL-03	MAP	7/13/09 16:54			1		USE	I
EXP0713006a	WXXICAL-04	MAP	7/13/09 17:23			1		USE	I
EXP0713007a	WXXICAL-05	MAP	7/13/09 17:53			1		USE	I
EXP0713008a	WXXICAL-06	MAP	7/13/09 18:22			1		USE	I
EXP0713009a	XIBLK02	MAP	7/13/09 18:52			1		USE	B
EXP0713010a	WXXICV	MAP	7/13/09 19:21			1		USE	C
EXP0713011a	XIBLK03	MAP	7/13/09 19:51			1		USE	B
EXP0713012a	WXXCRI	MAP	7/13/09 20:20			1		USE	C
EXP0713013a	232348001	MAP	7/13/09 20:50	880642	09-2457	2	LANL	USE	S
EXP0713014a	232424001	MAP	7/13/09 21:19	880975	09-2473	2	LANL	USE	S
EXP0713015a	XIBLK04	MAP	7/13/09 21:49			1		USE	B
EXP0713016a	1201872315	MAP	7/13/09 22:18	881635	09-2508	2	LANL	USE	S
EXP0713017a	1201872316	MAP	7/13/09 22:48	881635	09-2508	2	LANL	USE	S
EXP0713018a	232582001	MAP	7/13/09 23:17	881635	09-2508	2	LANL	USE	S
EXP0713019a	1201872317	MAP	7/13/09 23:47	881635	09-2508	2	LANL	USE	S
EXP0713020a	1201872318	MAP	7/14/09 0:16	881635	09-2508	2	LANL	USE	S
EXP0713021a	232582002	MAP	7/14/09 0:46	881635	09-2508	2	LANL	USE	S
EXP0713022a	WXXCCV	MAP	7/14/09 1:15			1		USE	C
EXP0713023a	XIBLK05	MAP	7/14/09 1:45			1		USE	B
EXP0713024a	WXXCRI	MAP	7/14/09 2:14			1		USE	C
EXP0713025a	1201874292	MAP	7/14/09 2:44	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713026a	1201874293	MAP	7/14/09 3:13	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713027a	232752005	MAP	7/14/09 3:43	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713028a	1201874294	MAP	7/14/09 4:12	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713029a	1201874295	MAP	7/14/09 4:42	882489	09-2530	2	LANL	DUSE-RA	S

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EXP0713030a	WXXCCV	MAP	7/14/09 5:11	1	USE	C
EXP0713031a	XIBLK06	MAP	7/14/09 5:41	1	USE	B
EXP0713032a	WXXCRI	MAP	7/14/09 6:10	1	USE	C

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS4

Date: 06/30/09
Extr. Injection Volume: 10uL
Sequence Number: 063009exs
Initial Calibration Date: 063009

Method: 8321A-Modified
Int. Std.: N/A
Mobile Phase Lot#:1118668, 1130432
Standard-Samp Reagent Lot# :1135125, 1128740

Reviewed By: Hnm
Date: 07/02/09
SOP: GL-OA-E-056Rev.11
Alt Check Std. ID: WXX090630-26

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS0630001.wiff	XIBLK01	LER	6/30/2009 11:13			1		USE	B
EXS0630002.wiff	XIBLK01	LER	6/30/2009 11:29			1		USE	B
EXS0630003.wiff	WXXICAL-19	LER	6/30/2009 11:46			1		USE	I
EXS0630004.wiff	WXXICAL-20	LER	6/30/2009 12:02			1		USE	I
EXS0630005.wiff	WXXICAL-21	LER	6/30/2009 12:18			1		USE	I
EXS0630006.wiff	WXXICAL-22	LER	6/30/2009 12:34			1		USE	I
EXS0630007.wiff	WXXICAL-23	LER	6/30/2009 12:50			1		USE	I
EXS0630008.wiff	WXXICAL-24	LER	6/30/2009 13:07			1		USE	I
EXS0630009.wiff	WXXICAL-25	LER	6/30/2009 13:23			1		USE	I
EXS0630010.wiff	XIBLK02	LER	6/30/2009 13:39			1		USE	B
EXS0630011.wiff	WXXICV	LER	6/30/2009 13:55			1		USE	C
EXS0630012.wiff	XIBLK03	LER	6/30/2009 14:11			1		USE	B
EXS0630013.wiff	WXXCRI	LER	6/30/2009 14:28			1		USE	C
EXS0630014.wiff	1201868647	LER	6/30/2009 14:44	880096	09-2437	2	LANL	USE	S
EXS0630015.wiff	XIBLK04	LER	6/30/2009 15:00			1		USE	B
EXS0630016.wiff	1201870677	LER	6/30/2009 15:16	880977	09-2483	2	LANL	USE	S
EXS0630017.wiff	1201870678	LER	6/30/2009 15:32	880977	09-2483	2	LANL	USE	S
EXS0630018.wiff	232434004	LER	6/30/2009 15:49	880977	09-2483	2	LANL	USE	S
EXS0630019.wiff	1201870679	LER	6/30/2009 16:05	880977	09-2483	2	LANL	USE	S
EXS0630020.wiff	1201870680	LER	6/30/2009 16:21	880977	09-2483	2	LANL	USE	S
EXS0630021.wiff	WXXCCV	LER	6/30/2009 16:37			1		USE	C
EXS0630022.wiff	XIBLK05	LER	6/30/2009 16:53			1		USE	B
EXS0630023.wiff	WXXCRI	LER	6/30/2009 17:10			1		USE	C
EXS0630024.wiff	1201869916	LER	6/30/2009 17:26	880642	09-2457	2	LANL	USE	S
EXS0630025.wiff	1201869917	LER	6/30/2009 17:42	880642	09-2457	2	LANL	USE	S
EXS0630026.wiff	232348001	LER	6/30/2009 17:58	880642	09-2457	2	LANL	USE	S
EXS0630027.wiff	1201869918	LER	6/30/2009 18:14	880642	09-2457	2	LANL	USE	S
EXS0630028.wiff	1201869919	LER	6/30/2009 18:31	880642	09-2457	2	LANL	USE	S
EXS0630029.wiff	232348002	LER	6/30/2009 18:47	880642	09-2457	2	LANL	USE	S

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EXS0630030.wiff	232348003	LER	6/30/2009 19:03	880642	09-2457	2	LANL	DUSE	S
EXS0630031.wiff	232348004	LER	6/30/2009 19:19	880642	09-2457	2	LANL	USE	S
EXS0630032.wiff	WXXCCV	LER	6/30/2009 19:36			1		USE	C
EXS0630033.wiff	XIBLK06	LER	6/30/2009 19:52			1		USE	B
EXS0630034.wiff	WXXCRI	LER	6/30/2009 20:08			1		USE	C

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS4

Date: 07/01/09
Extr. Injection Volume: 10uL
Sequence Number: 070109exs
Initial Calibration Date: 070109

Method: 8321A-Modified
Int. Std.: N/A
Mobile Phase Lot#:1118668, 1130432
Standard-Samp Reagent Lot# :1135125, 1128740

Reviewed By: HnRC
Date: 07/14/09
SOP: GL-OA-E-056Rev.11
Alt Check Std. ID: WXX090701-26

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS0701001.wiff	XIBLK01	LER	7/1/2009 10:39			1		USE	B
EXS0701002.wiff	XIBLK01	LER	7/1/2009 10:55			1		USE	B
EXS0701003.wiff	WXXICAL-19	LER	7/1/2009 11:11			1		USE	I
EXS0701004.wiff	WXXICAL-20	LER	7/1/2009 11:28			1		USE	I
EXS0701005.wiff	WXXICAL-21	LER	7/1/2009 11:44			1		USE	I
EXS0701006.wiff	WXXICAL-22	LER	7/1/2009 12:00			1		USE	I
EXS0701007.wiff	WXXICAL-23	LER	7/1/2009 12:16			1		USE	I
EXS0701008.wiff	WXXICAL-24	LER	7/1/2009 12:32			1		USE	I
EXS0701009.wiff	WXXICAL-25	LER	7/1/2009 12:49			1		USE	I
EXS0701010.wiff	XIBLK02	LER	7/1/2009 13:05			1		USE	B
EXS0701011.wiff	WXXICV	LER	7/1/2009 13:21			1		USE	C
EXS0701012.wiff	XIBLK03	LER	7/1/2009 13:37			1		USE	B
EXS0701013.wiff	WXXCRI	LER	7/1/2009 13:53			1		USE	C
EXS0701014.wiff	232348003	LER	7/1/2009 14:10	880642	09-2457	2	LANL	USE	S
EXS0701015.wiff	XIBLK04	LER	7/1/2009 14:26			1		USE	B
EXS0701016.wiff	1201870673	LER	7/1/2009 14:42	880975	09-2473	2	LANL	USE	S
EXS0701017.wiff	1201870674	LER	7/1/2009 14:58	880975	09-2473	2	LANL	USE	S
EXS0701018.wiff	232424001	LER	7/1/2009 15:15	880975	09-2473	2	LANL	USE	S
EXS0701019.wiff	1201870675	LER	7/1/2009 15:31	880975	09-2473	2	LANL	USE	S
EXS0701020.wiff	1201870676	LER	7/1/2009 15:47	880975	09-2473	2	LANL	USE	S
EXS0701021.wiff	WXXCCV	LER	7/1/2009 16:03			1		USE	C
EXS0701022.wiff	XIBLK05	LER	7/1/2009 16:19			1		USE	B
EXS0701023.wiff	WXXCRI	LER	7/1/2009 16:36			1		USE	C

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GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 711126
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
14-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LC-MS/MS	SW846 8321A Modified	Solid	LANL
Batch ID:	**Sample Numbers:**		
880642	See Below		

Potentially affected work order(s)(SDG): 232348(09-2457)

Application Issues:

Failed RPD for MS/MSD, or PS/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The MS/MSD pair (1201869918/9) did not meet RPD acceptance limit for TATB at 48.0%. The acceptance limits are 0-30%.	1. Since all other RPD recoveries met acceptance criteria, the noted exception is attributed to vagaries in the extraction process. The data are reported with the appropriate NCR, and the discrepancy is noted in the case narrative.

Originator's Name:
Michael Penny 14-JUL-09

Data Validator/Group Leader:
Herbert Maier 14-JUL-09

GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2457

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3550B
Analytical Batch Number:	880783
Prep Batch Number:	880782

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
232348004	CAMO-09-10467
1201870209	Method Blank (MB)
1201870210	Laboratory Control Sample (LCS)
1201870211	232348004(CAMO-09-10467) Matrix Spike (MS)
1201870212	232348004(CAMO-09-10467) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 13.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation

used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232348004 (CAMO-09-10467) was selected for the matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS recoveries for this SDG were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this SDG were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
Nonconformance report (NCR) is for documentation of any procedural anomalies that may deviate from referenced SOP or contractual document. A NCR was not required for this SDG.

Manual Integration
Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS. The data reported for the MS and MSD are from the same analytical column as the parent sample.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD8A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide I)
ECD8A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticide II)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Jimmi Cao Date: 7/14/09

Roadmap for LANL 09-2457 PCB

This roadmap was analyzed by jen01212 on 07-01-2009, 11:32.
This roadmap was reviewed by jim01140 on 07-02-2009, 09:34.
This roadmap was packaged by sha01289 on 07-14-2009, 10:00.
This roadmap was validated by jim01140 on 07-14-2009, 13:31.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/037f3701.d	232348004	sample	30-JUN-2009	19:24	09-2457.sub	CAMO-09-10467	1.00000	880783	UPLOAD BOTH, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/037b3701.d	232348004	sample	30-JUN-2009	19:24	09-2457.sub	CAMO-09-10467	1.00000	880783	UPLOAD BOTH, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/035f3501.d	1201870209	mb	30-JUN-2009	18:59	09-2457.sub	PBLK01	1.00000	880783	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/036f3601.d	1201870210	lcs	30-JUN-2009	19:12	09-2457.sub	PBLK01LCS	1.00000	880783	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/038f3801.d	1201870211	ms	30-JUN-2009	19:41	09-2457.sub	CAMO-09-10467MS	1.00000	880783	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/039f3901.d	1201870212	msd	30-JUN-2009	19:57	09-2457.sub	CAMO-09-10467MSD	1.00000	880783	UPLOAD BOTH, USE HIGHER

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/035b3501.d	1201870209	mb	30-JUN-2009	18:59	09-2457.sub	PBLK01	1.00000	880783	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/036b3601.d	1201870210	lcs	30-JUN-2009	19:12	09-2457.sub	PBLK01LCS	1.00000	880783	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/038b3801.d	1201870211	ms	30-JUN-2009	19:41	09-2457.sub	CAMO-09-10467MS	1.00000	880783	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/039b3901.d	1201870212	msd	30-JUN-2009	19:57	09-2457.sub	CAMO-09-10467MSD	1.00000	880783	UPLOAD BOTH, USE HIGHER

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 19:24	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	037f3701.d	**Column:**	1 CLP1	**Level:**	LOW
	037b3701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.49	ug/kg	1.16	3.49	1
11104-28-2	Aroclor-1221	U	3.49	ug/kg	1.16	3.49	1
11141-16-5	Aroclor-1232	U	3.49	ug/kg	1.16	3.49	1
53469-21-9	Aroclor-1242	U	3.49	ug/kg	1.16	3.49	1
12672-29-6	Aroclor-1248	U	3.49	ug/kg	1.16	3.49	1
11097-69-1	Aroclor-1254	U	3.49	ug/kg	1.16	3.49	1
11096-82-5	Aroclor-1260	U	3.49	ug/kg	1.16	3.49	1

QUALITY CONTROL SUMMARY

PCB

Surrogate Recovery Report

SDG Number: 09-2457

Matrix Type: SOLID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1201870209	MB for batch 880782	70	65	80	73
1201870210	LCS for batch 880782	73	68	79	73
232348004	CAMO-09-10467	47	43	62	56
1201870211	CAMO-09-10467MS	62	57	67	62
1201870212	CAMO-09-10467MSD	52	49	59	55

Surrogate	Acceptance Limits
4CMX = 4cmx	(34%-105%)
DCB = Decachlorobiphenyl	(33%-115%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: LCS for batch 880782
Lab Sample ID: 1201870210
Instrument: ECD8A.I
Analyst: JAOC
Inj. Vol: 1 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 19:12
Dilution: 1
Prep Batch ID: 880782
Batch ID: 880783

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	LCS	Aroclor-1016	33.3	0.0	23.1	69	41-110
11096-82-5	LCS	Aroclor-1260	33.3	0.0	30.4	91	48-110

PCB

Quality Control Summary
Spike Recovery Report

SDG Number:	**09-2457**	**Sample Type:**	**Matrix Spike**	
Client ID:	**CAMO-09-10467MS**	**Matrix:**	**R**	
Lab Sample ID:	**1201870211**	**%Moisture:**	**4.5**	
Instrument:	**ECD8A.I**	**Analysis Date:**	**06/30/2009 19:41**	**Dilution: 1**
Analyst:	**JAOC**	**Prep Batch ID:**	**880782**	
Inj. Vol:	**1 uL**	**Batch ID:**	**880783**	

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	MS	Aroclor-1016	34.9	0.00	U	20.5	59	23-117
11096-82-5	MS	Aroclor-1260	34.9	0.00	U	26.7	77	27-116

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10467MSD
Lab Sample ID: 1201870212
Instrument: ECD8A.I
Analyst: JAOC
Inj. Vol: 1 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 4.5
Analysis Date: 06/30/2009 19:57
Prep Batch ID: 880782
Batch ID: 880783
Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674-11-2	MSD Aroclor-1016	34.8	0.00	U	19.3	55	23-117	6	0-30
11096-82-5	MSD Aroclor-1260	34.8	0.00	U	26.1	75	27-116	2	0-30

Method Blank Summary

SDG Number:	09-2457	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 880782	Instrument ID:	ECD8A.I_2 ECD8A.I_1	Data File:	035b3501-1.d 035f3501-1.d
Lab Sample ID:	1201870209				
Column:	CLP2 CLP1	Prep Date:	06/29/2009 16:16	Analyzed:	06/30/09 18:59
		Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 880782	1201870210	036f3601-1.d 036b3601-1.d	06/30/09	1912
02 CAMO-09-10467	232348004	037f3701.d 037b3701.d	06/30/09	1924
03 CAMO-09-10467MS	1201870211	038f3801.d 038b3801.d	06/30/09	1941
04 CAMO-09-10467MSD	1201870212	039f3901.d 039b3901.d	06/30/09	1957

SAMPLE DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232348004	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10467	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 19:24	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	037f3701.d	**Column:**	1 CLP1	**Level:**	LOW
	037b3701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.49	ug/kg	1.16	3.49	1
11104-28-2	Aroclor-1221	U	3.49	ug/kg	1.16	3.49	1
11141-16-5	Aroclor-1232	U	3.49	ug/kg	1.16	3.49	1
53469-21-9	Aroclor-1242	U	3.49	ug/kg	1.16	3.49	1
12672-29-6	Aroclor-1248	U	3.49	ug/kg	1.16	3.49	1
11097-69-1	Aroclor-1254	U	3.49	ug/kg	1.16	3.49	1
11096-82-5	Aroclor-1260	U	3.49	ug/kg	1.16	3.49	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/037f3701.d
Lab Smp Id: 232348004 Client Smp ID: CAMO-09-10467
Inj Date : 30-JUN-2009 19:24
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232348004|1|
Misc Info : |ECD82P_1SF|880783|SVAF|LANL|SOIL|CAMO-09-10467|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 37
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	4.53430	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	14967401	93.5205	3.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	20804055	123.889	4.3	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/037f3701.d

Date : 30-JUN-2009 19:24

Client ID: CAMD-09-10467

Sample Info: 1232348004|1|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

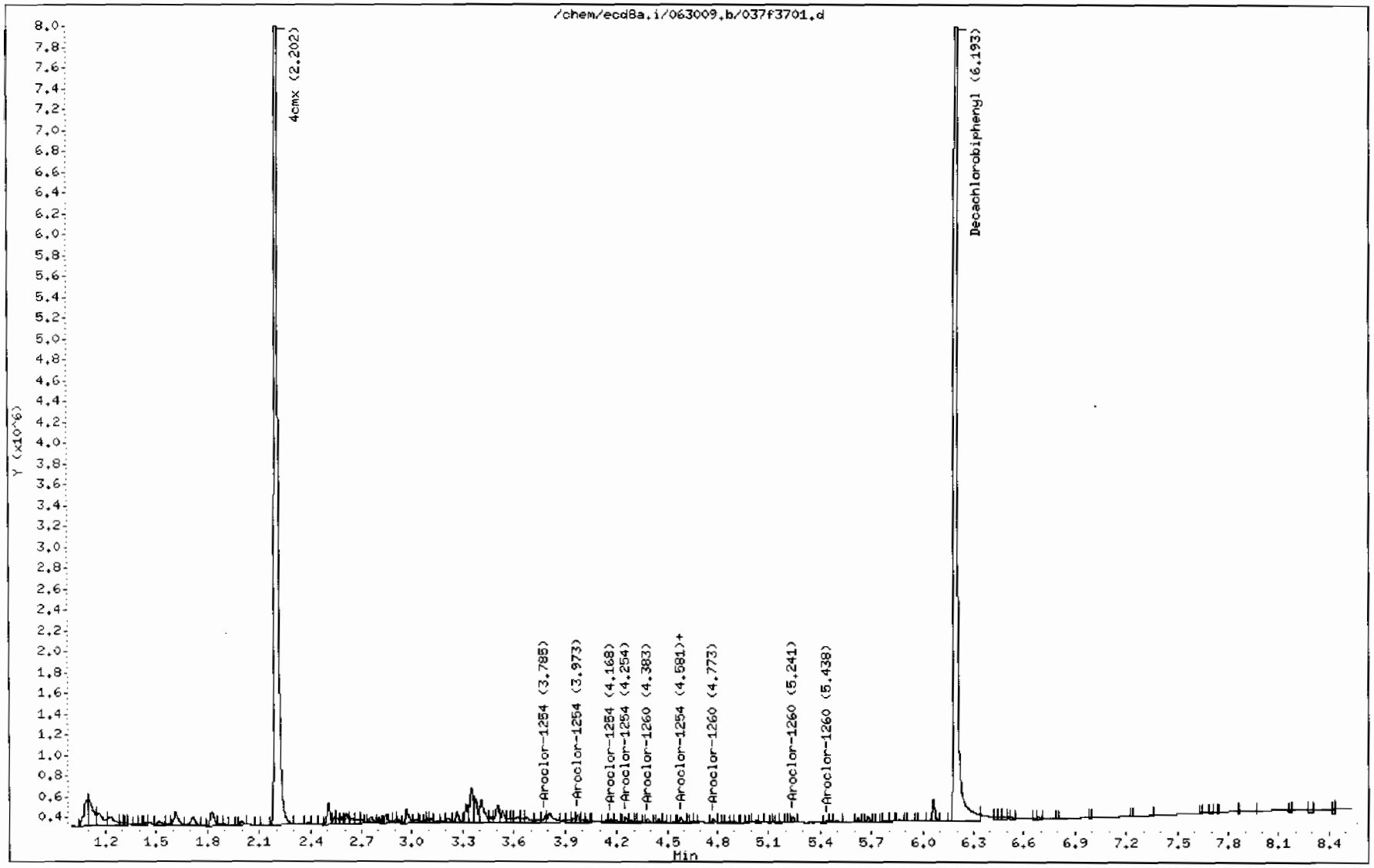

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/037b3701.d
Lab Smp Id: 232348004 Client Smp ID: CAMO-09-10467
Inj Date : 30-JUN-2009 19:24
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232348004|1|
Misc Info : |ECD82P_1SF|880783|SVAF|LANL|SOIL|CAMO-09-10467|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 37
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	4.53430	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	4999346	86.6662	3.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	6349109	112.726	3.9	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/037b3701.d
Date : 30-JUN-2009 19:24
Client ID: CAMD-09-10467
Sample Info: |2323480041|1
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

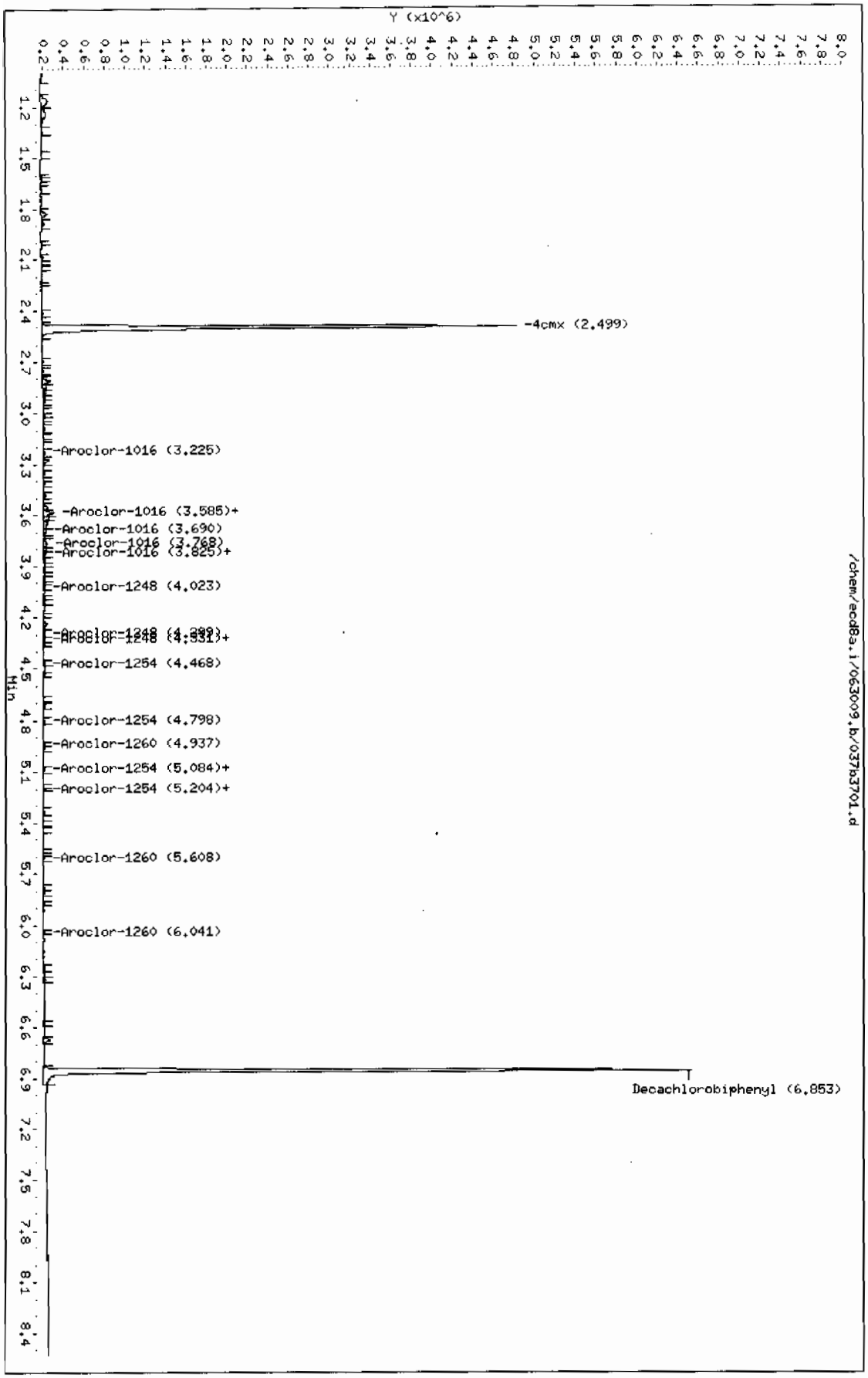

Page 1

STANDARDS DATA

Report Date: 30-Jun-2009 14:24

Calibration History

Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Start Cal Date: 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
18-JUN-2009 11:27	AR1248	/chem/ecd8a.i/061809.b/014f1401.d
01-JUN-2009 14:05	AR1242	/chem/ecd8a.i/060109a.b/018f1801.d
18-JUN-2009 10:12	AR1254	/chem/ecd8a.i/061809.b/008f0801.d
16-JUN-2009 09:56	AR1660	/chem/ecd8a.i/061609.b/008f0801.d
Cal Level: 2 , Cal Amount: 250.00000		
18-JUN-2009 11:39	AR1248	/chem/ecd8a.i/061809.b/015f1501.d
01-JUN-2009 14:17	AR1242	/chem/ecd8a.i/060109a.b/019f1901.d
18-JUN-2009 10:25	AR1254	/chem/ecd8a.i/061809.b/009f0901.d
16-JUN-2009 10:09	AR1660	/chem/ecd8a.i/061609.b/009f0901.d
Cal Level: 3 , Cal Amount: 500.00000		
18-JUN-2009 11:51	AR1248	/chem/ecd8a.i/061809.b/016f1601.d
01-JUN-2009 14:30	AR1242	/chem/ecd8a.i/060109a.b/020f2001.d
18-JUN-2009 10:37	AR1254	/chem/ecd8a.i/061809.b/010f1001.d
16-JUN-2009 10:21	AR1660	/chem/ecd8a.i/061609.b/010f1001.d
Cal Level: 4 , Cal Amount: 1000.00000		
01-JUN-2009 19:51	DDT	/chem/ecd8a.i/060109a.b/046f4601.d
01-JUN-2009 19:39	AR1268	/chem/ecd8a.i/060109a.b/045f4501.d
01-JUN-2009 19:26	AR1262	/chem/ecd8a.i/060109a.b/044f4401.d
01-JUN-2009 19:14	AR1221	/chem/ecd8a.i/060109a.b/043f4301.d
01-JUN-2009 19:02	AR1232	/chem/ecd8a.i/060109a.b/042f4201.d
18-JUN-2009 12:04	AR1248	/chem/ecd8a.i/061809.b/017f1701.d
01-JUN-2009 14:42	AR1242	/chem/ecd8a.i/060109a.b/021f2101.d
18-JUN-2009 10:50	AR1254	/chem/ecd8a.i/061809.b/011f1101.d
16-JUN-2009 10:33	AR1660	/chem/ecd8a.i/061609.b/011f1101.d
Cal Level: 5 , Cal Amount: 4000.00000		
18-JUN-2009 12:16	AR1248	/chem/ecd8a.i/061809.b/018f1801.d
01-JUN-2009 14:54	AR1242	/chem/ecd8a.i/060109a.b/022f2201.d
18-JUN-2009 11:02	AR1254	/chem/ecd8a.i/061809.b/012f1201.d
16-JUN-2009 10:46	AR1660	/chem/ecd8a.i/061609.b/012f1201.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:28	AR1268	/chem/ecd8a.i/063009.b/009f0901.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:16	AR1262	/chem/ecd8a.i/063009.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:03	AR1221	/chem/ecd8a.i/063009.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:48	AR1232	/chem/ecd8a.i/063009.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:36	AR1248	/chem/ecd8a.i/063009.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:24	AR1242	/chem/ecd8a.i/063009.b/004f0401.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:11	AR1254	/chem/ecd8a.i/063009.b/003f0301.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 10:59	AR1660	/chem/ecd8a.i/063009.b/002f0201.d

Report Date: 30-Jun-2009 14:24

Calibration History

Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Start Cal Date: 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
18-JUN-2009 11:27	AR1248	/chem/ecd8a.i/061809.b/014b1401.d
01-JUN-2009 14:05	AR1242	/chem/ecd8a.i/060109a.b/018b1801.d
18-JUN-2009 10:12	AR1254	/chem/ecd8a.i/061809.b/008b0801.d
16-JUN-2009 09:56	AR1660	/chem/ecd8a.i/061609.b/008b0801.d
Cal Level: 2 , Cal Amount: 250.00000		
18-JUN-2009 11:39	AR1248	/chem/ecd8a.i/061809.b/015b1501.d
01-JUN-2009 14:17	AR1242	/chem/ecd8a.i/060109a.b/019b1901.d
18-JUN-2009 10:25	AR1254	/chem/ecd8a.i/061809.b/009b0901.d
16-JUN-2009 10:09	AR1660	/chem/ecd8a.i/061609.b/009b0901.d
Cal Level: 3 , Cal Amount: 500.00000		
18-JUN-2009 11:51	AR1248	/chem/ecd8a.i/061809.b/016b1601.d
01-JUN-2009 14:30	AR1242	/chem/ecd8a.i/060109a.b/020b2001.d
18-JUN-2009 10:37	AR1254	/chem/ecd8a.i/061809.b/010b1001.d
16-JUN-2009 10:21	AR1660	/chem/ecd8a.i/061609.b/010b1001.d
Cal Level: 4 , Cal Amount: 1000.00000		
01-JUN-2009 19:51	DDT	/chem/ecd8a.i/060109a.b/046b4601.d
01-JUN-2009 19:39	AR1268	/chem/ecd8a.i/060109a.b/045b4501.d
01-JUN-2009 19:26	AR1262	/chem/ecd8a.i/060109a.b/044b4401.d
01-JUN-2009 19:14	AR1221	/chem/ecd8a.i/060109a.b/043b4301.d
01-JUN-2009 19:02	AR1232	/chem/ecd8a.i/060109a.b/042b4201.d
18-JUN-2009 12:04	AR1248	/chem/ecd8a.i/061809.b/017b1701.d
01-JUN-2009 14:42	AR1242	/chem/ecd8a.i/060109a.b/021b2101.d
18-JUN-2009 10:50	AR1254	/chem/ecd8a.i/061809.b/011b1101.d
16-JUN-2009 10:33	AR1660	/chem/ecd8a.i/061609.b/011b1101.d
Cal Level: 5 , Cal Amount: 4000.00000		
18-JUN-2009 12:16	AR1248	/chem/ecd8a.i/061809.b/018b1801.d
01-JUN-2009 14:54	AR1242	/chem/ecd8a.i/060109a.b/022b2201.d
18-JUN-2009 11:02	AR1254	/chem/ecd8a.i/061809.b/012b1201.d
16-JUN-2009 10:46	AR1660	/chem/ecd8a.i/061609.b/012b1201.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:28	AR1268	/chem/ecd8a.i/063009.b/009b0901.d

Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:16	AR1262	/chem/ecd8a.i/063009.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:03	AR1221	/chem/ecd8a.i/063009.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:48	AR1232	/chem/ecd8a.i/063009.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:36	AR1248	/chem/ecd8a.i/063009.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:24	AR1242	/chem/ecd8a.i/063009.b/004b0401.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:11	AR1254	/chem/ecd8a.i/063009.b/003b0301.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 10:59	AR1660	/chem/ecd8a.i/063009.b/002b0201.d

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 30-Jun-2009 14:15 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	758.000000
Initial:End Threshold	379.000000
Initial:Area Threshold	734.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	1.500000
6.500:Bunch Factor	2.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.762	2.732-2.792	5.767e+03
	3.112	3.082-3.142	7.225e+03
	3.256	3.226-3.286	2.909e+03
	3.365	3.335-3.395	2.753e+03
	3.510	3.480-3.540	3.629e+03
2 Aroclor-1221	2.347	2.317-2.377	1.552e+03
	2.461	2.431-2.491	8.835e+02
	2.493	2.463-2.523	3.730e+03
3 Aroclor-1232	2.762	2.732-2.792	2.534e+03
	3.113	3.083-3.143	3.242e+03
	3.210	3.180-3.240	2.139e+03
	3.511	3.481-3.541	1.547e+03
	3.817	3.787-3.847	1.317e+03
4 Aroclor-1242	2.762	2.732-2.792	4.058e+03
	3.113	3.083-3.143	4.963e+03
	3.257	3.227-3.287	1.993e+03
	3.349	3.319-3.379	1.776e+03
	3.511	3.481-3.541	2.575e+03
5 Aroclor-1248	3.112	3.082-3.142	3.101e+03
	3.348	3.318-3.378	3.691e+03
	3.511	3.481-3.541	4.716e+03
	3.975	3.945-4.005	4.121e+03
	4.255	4.225-4.285	3.182e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m

Compound	RT	RT Window	RF
6 Aroclor-1254	3.786	3.756-3.816	4.824e+03
	3.972	3.942-4.002	6.268e+03
	4.168	4.138-4.198	4.760e+03
	4.254	4.224-4.284	7.943e+03
	4.581	4.551-4.611	6.787e+03
7 Aroclor-1260	4.383	4.353-4.413	7.128e+03
	4.579	4.549-4.609	1.009e+04
	4.774	4.744-4.804	1.148e+04
	5.242	5.212-5.272	1.340e+04
	5.437	5.407-5.467	6.552e+03
8 Aroclor-1262	4.384	4.354-4.414	4.497e+03
	4.580	4.550-4.610	7.643e+03
	4.855	4.825-4.885	1.033e+04
	5.026	4.996-5.056	6.240e+03
	5.242	5.212-5.272	2.010e+04
9 Aroclor-1268	5.461	5.431-5.491	2.021e+04
	5.489	5.459-5.519	2.299e+04
	5.621	5.591-5.651	1.696e+04
	5.868	5.838-5.898	8.529e+03
	6.064	6.034-6.094	5.465e+04
M 10 Aroclor-Total	1.000	0.980-1.020	
$ 11 4cmx	2.202	2.172-2.232	1.600e+05
$ 12 Decachlorobiphenyl	6.193	6.163-6.223	1.679e+05
13 4,4'-DDT	4.803	4.783-4.823	5.953e+04
14 4,4'-DDD	4.610	4.590-4.630	1.238e+05
15 4,4'-DDE	4.186	4.166-4.206	1.600e+05

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 30-Jun-2009 14:15 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	733.000000
Initial:End Threshold	366.500000
Initial:Area Threshold	522.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	2.000000
9.000:Bunch Factor	2.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	3.222	3.192-3.252	2.206e+03
	3.575	3.545-3.605	2.931e+03
	3.675	3.645-3.705	1.739e+03
	3.752	3.722-3.782	1.038e+03
	3.826	3.796-3.856	1.070e+03
2 Aroclor-1221	2.743	2.713-2.773	6.391e+02
	2.856	2.826-2.886	4.078e+02
	2.905	2.875-2.935	1.496e+03
3 Aroclor-1232	3.223	3.193-3.253	1.122e+03
	3.575	3.545-3.605	1.421e+03
	3.676	3.646-3.706	8.476e+02
	3.826	3.796-3.856	4.658e+02
	3.858	3.828-3.888	4.814e+02
4 Aroclor-1242	3.223	3.193-3.253	1.708e+03
	3.576	3.546-3.606	2.110e+03
	3.677	3.647-3.707	1.298e+03
	3.752	3.723-3.783	7.735e+02
	3.827	3.797-3.857	7.883e+02
5 Aroclor-1248	3.575	3.545-3.605	1.180e+03
	3.826	3.796-3.856	1.431e+03
	4.023	3.993-4.053	1.766e+03
	4.301	4.271-4.331	2.015e+03
	4.333	4.303-4.363	2.294e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m

Compound	RT	RT Window	RF
6 Aroclor-1254	4.331	4.301-4.361	2.097e+03
	4.468	4.438-4.498	2.309e+03
	4.798	4.768-4.828	3.101e+03
	5.084	5.054-5.114	1.617e+03
	5.206	5.176-5.236	1.854e+03
7 Aroclor-1260	4.936	4.906-4.966	2.882e+03
	5.083	5.053-5.113	3.457e+03
	5.199	5.169-5.229	3.159e+03
	5.608	5.578-5.638	2.368e+03
	6.041	6.011-6.071	3.770e+03
8 Aroclor-1262	5.085	5.055-5.115	2.887e+03
	5.401	5.371-5.431	4.337e+03
	5.609	5.579-5.639	3.796e+03
	5.783	5.753-5.813	7.857e+03
	6.036	6.006-6.066	5.567e+03
9 Aroclor-1268	6.035	6.005-6.065	8.266e+03
	6.068	6.038-6.098	8.012e+03
	6.246	6.216-6.276	6.337e+03
	6.443	6.413-6.473	2.993e+03
	6.672	6.642-6.702	1.951e+04
M 10 Aroclor-Total	1.000	0.980-1.020	
$ 11 4cmx	2.499	2.469-2.529	5.769e+04
$ 12 Decachlorobiphenyl	6.853	6.823-6.883	5.632e+04
13 4,4'-DDT	5.344	5.324-5.364	1.533e+04
14 4,4'-DDD	5.123	5.103-5.143	3.856e+04
15 4,4'-DDE	4.712	4.691-4.731	5.854e+04

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd8a.i/061809.b/014f1401.d
Level 2: /chem/ecd8a.i/061809.b/015f1501.d
Level 3: /chem/ecd8a.i/061809.b/016f1601.d
Level 4: /chem/ecd8a.i/060109a.b/046f4601.d
Level 5: /chem/ecd8a.i/061809.b/018f1801.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	6382	6153	5903	5546	4852	5767	10.374
(2)	7612	7575	7256	6956	6725	7225	5.338
(3)	3028	3020	2943	2834	2722	2909	4.488
(4)	2996	2866	2782	2620	2501	2753	7.133
(5)	3855	3765	3658	3505	3360	3629	5.480
2 Aroclor-1221(1)	+++++	+++++	+++++	1552	+++++	1552	0.000
(2)	+++++	+++++	+++++	884	+++++	884	0.000
(3)	+++++	+++++	+++++	3730	+++++	3730	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	2534	+++++	2534	0.000
(2)	+++++	+++++	+++++	3242	+++++	3242	0.000
(3)	+++++	+++++	+++++	2139	+++++	2139	0.000
(4)	+++++	+++++	+++++	1547	+++++	1547	0.000
(5)	+++++	+++++	+++++	1317	+++++	1317	0.000
4 Aroclor-1242(1)	4799	4285	4051	3858	3298	4058	13.594
(2)	5376	5128	4935	4800	4573	4963	6.185
(3)	2187	2024	1984	1943	1830	1993	6.529
(4)	2101	1847	1735	1702	1495	1776	12.478
(5)	2954	2634	2536	2479	2273	2575	9.692
5 Aroclor-1248(1)	3403	3130	3072	3011	2890	3101	6.153
(2)	4054	3812	3643	3587	3362	3691	7.009
(3)	5032	4832	4709	4603	4406	4716	5.000
(4)	4199	4050	4133	4131	4094	4121	1.335
(5)	3259	3184	3247	3209	3012	3182	3.141
6 Aroclor-1254(1)	5068	4958	4838	4712	4546	4824	4.241
(2)	6310	6357	6231	6251	6194	6268	1.032
(3)	4574	4878	4790	4787	4770	4760	2.358
(4)	7476	7977	8002	8044	8218	7943	3.496
(5)	6713	7019	6939	6720	6541	6787	2.829

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

	Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
	7 Aroclor-1260(1)	7252	7304	7236	7087	6763	7128	3.081
	(2)	9666	10056	10152	10213	10356	10089	2.580
	(3)	11208	11407	11564	11701	11531	11482	1.618
	(4)	12350	13410	13592	13776	13850	13395	4.547
	(5)	6187	6485	6648	6623	6815	6552	3.591
	8 Aroclor-1262(1)	+++++	+++++	+++++	4497	+++++	4497	0.000
	(2)	+++++	+++++	+++++	7643	+++++	7643	0.000
	(3)	+++++	+++++	+++++	10334	+++++	10334	0.000
	(4)	+++++	+++++	+++++	6240	+++++	6240	0.000
	(5)	+++++	+++++	+++++	20101	+++++	20101	0.000
	9 Aroclor-1268(1)	+++++	+++++	+++++	20211	+++++	20211	0.000
	(2)	+++++	+++++	+++++	22988	+++++	22988	0.000
	(3)	+++++	+++++	+++++	16959	+++++	16959	0.000
	(4)	+++++	+++++	+++++	8529	+++++	8529	0.000
	(5)	+++++	+++++	+++++	54649	+++++	54649	0.000
M	10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	13 4,4'-DDT	+++++	+++++	+++++	59530	+++++	59530	0.000
	14 4,4'-DDD	+++++	+++++	+++++	123779	+++++	123779	0.000
	15 4,4'-DDE	+++++	+++++	+++++	160030	+++++	160030	0.000
$	11 4cmx	163405	164186	162254	160617	149759	160044	3.689
$	12 Decachlorobiphenyl	174419	173170	169471	166850	155711	167924	4.441

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd8a.i/061809.b/014b1401.d
Level 2: /chem/ecd8a.i/061809.b/015b1501.d
Level 3: /chem/ecd8a.i/061809.b/016b1601.d
Level 4: /chem/ecd8a.i/060109a.b/046b4601.d
Level 5: /chem/ecd8a.i/061809.b/018b1801.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	2354	2322	2239	2171	1943	2206	7.412
(2)	3013	3033	2968	2921	2719	2931	4.294
(3)	1838	1803	1751	1708	1595	1739	5.443
(4)	1076	1070	1043	1024	979	1038	3.769
(5)	1162	1111	1072	1038	970	1070	6.800
2 Aroclor-1221(1)	+++++	+++++	+++++	639	+++++	639	0.000
(2)	+++++	+++++	+++++	408	+++++	408	0.000
(3)	+++++	+++++	+++++	1496	+++++	1496	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	1122	+++++	1122	0.000
(2)	+++++	+++++	+++++	1421	+++++	1421	0.000
(3)	+++++	+++++	+++++	848	+++++	848	0.000
(4)	+++++	+++++	+++++	466	+++++	466	0.000
(5)	+++++	+++++	+++++	481	+++++	481	0.000
4 Aroclor-1242(1)	1987	1787	1698	1633	1432	1708	11.929
(2)	2309	2114	2133	2071	1921	2110	6.580
(3)	1488	1344	1282	1241	1137	1298	10.005
(4)	874	795	763	743	693	773	8.699
(5)	939	822	770	740	670	788	12.760
5 Aroclor-1248(1)	1246	1157	1192	1172	1136	1180	3.537
(2)	1568	1470	1429	1391	1295	1431	7.045
(3)	1893	1797	1762	1741	1635	1766	5.301
(4)	2119	2014	2009	2000	1931	2015	3.348
(5)	2414	2303	2295	2284	2171	2294	3.762
6 Aroclor-1254(1)	2236	2169	2093	2062	1927	2097	5.573
(2)	2413	2365	2312	2282	2175	2309	3.907
(3)	3072	3129	3135	3148	3022	3101	1.715
(4)	1650	1607	1604	1634	1588	1617	1.541
(5)	1860	1846	1817	1867	1880	1854	1.298

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

	Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
	7 Aroclor-1260(1)	2897	2953	2955	2898	2707	2882	3.531
	(2)	3393	3515	3573	3519	3285	3457	3.374
	(3)	3105	3221	3225	3197	3045	3159	2.529
	(4)	2359	2409	2408	2394	2270	2368	2.471
	(5)	3607	3812	3867	3865	3701	3770	3.008
	8 Aroclor-1262(1)	+++++	+++++	+++++	2887	+++++	2887	0.000
	(2)	+++++	+++++	+++++	4337	+++++	4337	0.000
	(3)	+++++	+++++	+++++	3796	+++++	3796	0.000
	(4)	+++++	+++++	+++++	7857	+++++	7857	0.000
	(5)	+++++	+++++	+++++	5567	+++++	5567	0.000
	9 Aroclor-1268(1)	+++++	+++++	+++++	8266	+++++	8266	0.000
	(2)	+++++	+++++	+++++	8012	+++++	8012	0.000
	(3)	+++++	+++++	+++++	6337	+++++	6337	0.000
	(4)	+++++	+++++	+++++	2993	+++++	2993	0.000
	(5)	+++++	+++++	+++++	19507	+++++	19507	0.000
M	10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	13 4,4'-DDT	+++++	+++++	+++++	15331	+++++	15331	0.000
	14 4,4'-DDD	+++++	+++++	+++++	38559	+++++	38559	0.000
	15 4,4'-DDE	+++++	+++++	+++++	58538	+++++	58538	0.000
$	11 4cmx	55520	58797	59142	59406	55559	57685	3.415
$	12 Decachlorobiphenyl	58551	58238	56883	56068	51876	56323	4.763

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1059

Lab File ID: 002F0201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6330.009	0.01	9.8	15.0
(2)	7224.724	7760.134	0.01	7.4	15.0
(3)	2909.461	3163.944	0.01	8.7	15.0
(4)	2752.769	2944.428	0.01	7.0	15.0
(5)	3628.674	3972.822	0.01	9.5	15.0
Aroclor-1260	7128.341	7537.503	0.01	5.7	15.0
(2)	10088.517	10760.077	0.01	6.6	15.0
(3)	11482.117	12267.009	0.01	6.8	15.0
(4)	13395.429	14219.270	0.01	6.2	15.0
(5)	6551.697	6850.457	0.01	4.6	15.0
4cmx	160044.04	157059.35	0.01	-1.9	15.0
Decachlorobiphenyl	167924.32	162129.64	0.01	-3.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1059

Lab File ID: 002B0201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2205.647	0.01	-0.0	15.0
(2)	2930.861	2901.199	0.01	-1.0	15.0
(3)	1739.079	1721.686	0.01	-1.0	15.0
(4)	1038.126	1037.560	0.01	-0.0	15.0
(5)	1070.250	1054.433	0.01	-1.5	15.0
Aroclor-1260	2882.050	2835.211	0.01	-1.6	15.0
(2)	3456.730	3472.058	0.01	0.4	15.0
(3)	3158.535	3145.666	0.01	-0.4	15.0
(4)	2368.081	2347.820	0.01	-0.8	15.0
(5)	3770.327	3768.651	0.01	-0.0	15.0
4cmx	57685.085	51468.730	0.01	-10.8	15.0
Decachlorobiphenyl	56323.158	49750.070	0.01	-11.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1835

Lab File ID: 033F3301 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6222.594	0.01	7.9	15.0
(2)	7224.724	7909.896	0.01	9.5	15.0
(3)	2909.461	3197.458	0.01	9.9	15.0
(4)	2752.769	2899.955	0.01	5.3	15.0
(5)	3628.674	3898.569	0.01	7.4	15.0
Aroclor-1260	7128.341	7627.002	0.01	7.0	15.0
(2)	10088.517	10853.926	0.01	7.6	15.0
(3)	11482.117	12192.523	0.01	6.2	15.0
(4)	13395.429	14602.143	0.01	9.0	15.0
(5)	6551.697	7015.943	0.01	7.1	15.0
4cmx	160044.04	153639.80	0.01	-4.0	15.0
Decachlorobiphenyl	167924.32	165542.67	0.01	-1.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1835

Lab File ID: 033B3301 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2198.374	0.01	-0.3	15.0
(2)	2930.861	3024.556	0.01	3.2	15.0
(3)	1739.079	1743.998	0.01	0.3	15.0
(4)	1038.126	1055.236	0.01	1.6	15.0
(5)	1070.250	1063.993	0.01	-0.6	15.0
Aroclor-1260	2882.050	2880.731	0.01	-0.0	15.0
(2)	3456.730	3559.181	0.01	3.0	15.0
(3)	3158.535	3207.590	0.01	1.6	15.0
(4)	2368.081	2405.333	0.01	1.6	15.0
(5)	3770.327	3902.843	0.01	3.5	15.0
4cmx	57685.085	50702.800	0.01	-12.1	15.0
Decachlorobiphenyl	56323.158	51373.510	0.01	-8.8	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 2136

Lab File ID: 045F4501 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6397.692	0.01	10.9	15.0
(2)	7224.724	8267.235	0.01	14.4	15.0
(3)	2909.461	3204.664	0.01	10.1	15.0
(4)	2752.769	3075.946	0.01	11.7	15.0
(5)	3628.674	4141.055	0.01	14.1	15.0
Aroclor-1260	7128.341	7802.732	0.01	9.5	15.0
(2)	10088.517	11036.924	0.01	9.4	15.0
(3)	11482.117	12297.330	0.01	7.1	15.0
(4)	13395.429	14784.108	0.01	10.4	15.0
(5)	6551.697	7141.663	0.01	9.0	15.0
4cmx	160044.04	157134.80	0.01	-1.8	15.0
Decachlorobiphenyl	167924.32	170906.25	0.01	1.8	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 2136

Lab File ID: 045B4501 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2262.512	0.01	2.6	15.0
(2)	2930.861	3109.633	0.01	6.1	15.0
(3)	1739.079	1788.773	0.01	2.8	15.0
(4)	1038.126	1083.325	0.01	4.4	15.0
(5)	1070.250	1090.367	0.01	1.9	15.0
Aroclor-1260	2882.050	2942.407	0.01	2.1	15.0
(2)	3456.730	3633.348	0.01	5.1	15.0
(3)	3158.535	3275.582	0.01	3.7	15.0
(4)	2368.081	2468.276	0.01	4.2	15.0
(5)	3770.327	4018.300	0.01	6.6	15.0
4cmx	57685.085	52113.580	0.01	-9.6	15.0
Decachlorobiphenyl	56323.158	52808.520	0.01	-6.2	15.0

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/002f0201.d
Lab Smp Id: WAR090629-04601 Client Smp ID: AR166001
Inj Date : 30-JUN-2009 10:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04601
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	15705935	100.000	98.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	16212964	100.000	96.5	80.00- 120.00	100.00(M)
1 Aroclor-1016					CAS #: 12674-11-2		
2.762	2.762	0.000	6330009	1000.00	1100	80.00- 120.00	100.00
3.112	3.112	0.000	7760134	1000.00	1070	102.59- 142.59	122.59
3.256	3.256	0.000	3163944	1000.00	1090	29.98- 69.98	49.98
3.365	3.365	0.000	2944428	1000.00	1070	26.52- 66.52	46.52
3.510	3.510	0.000	3972822	1000.00	1090	42.76- 82.76	62.76
Average of Peak Amounts =					1.08e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.383	4.383	0.000	7537503	1000.00	1060	80.00- 120.00	100.00(M)
4.579	4.579	0.000	10760077	1000.00	1070	122.75- 162.75	142.75
4.774	4.774	0.000	12267009	1000.00	1070	142.75- 182.75	162.75
5.242	5.242	0.000	14219270	1000.00	1060	168.65- 208.65	188.65
5.437	5.437	0.000	6850457	1000.00	1040	70.88- 110.88	90.88
Average of Peak Amounts =					1.06e+03		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/002f0201.d
Date : 30-JUN-2009 10:59
Client ID: AR166001
Sample Info: IWAR090629-04601

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

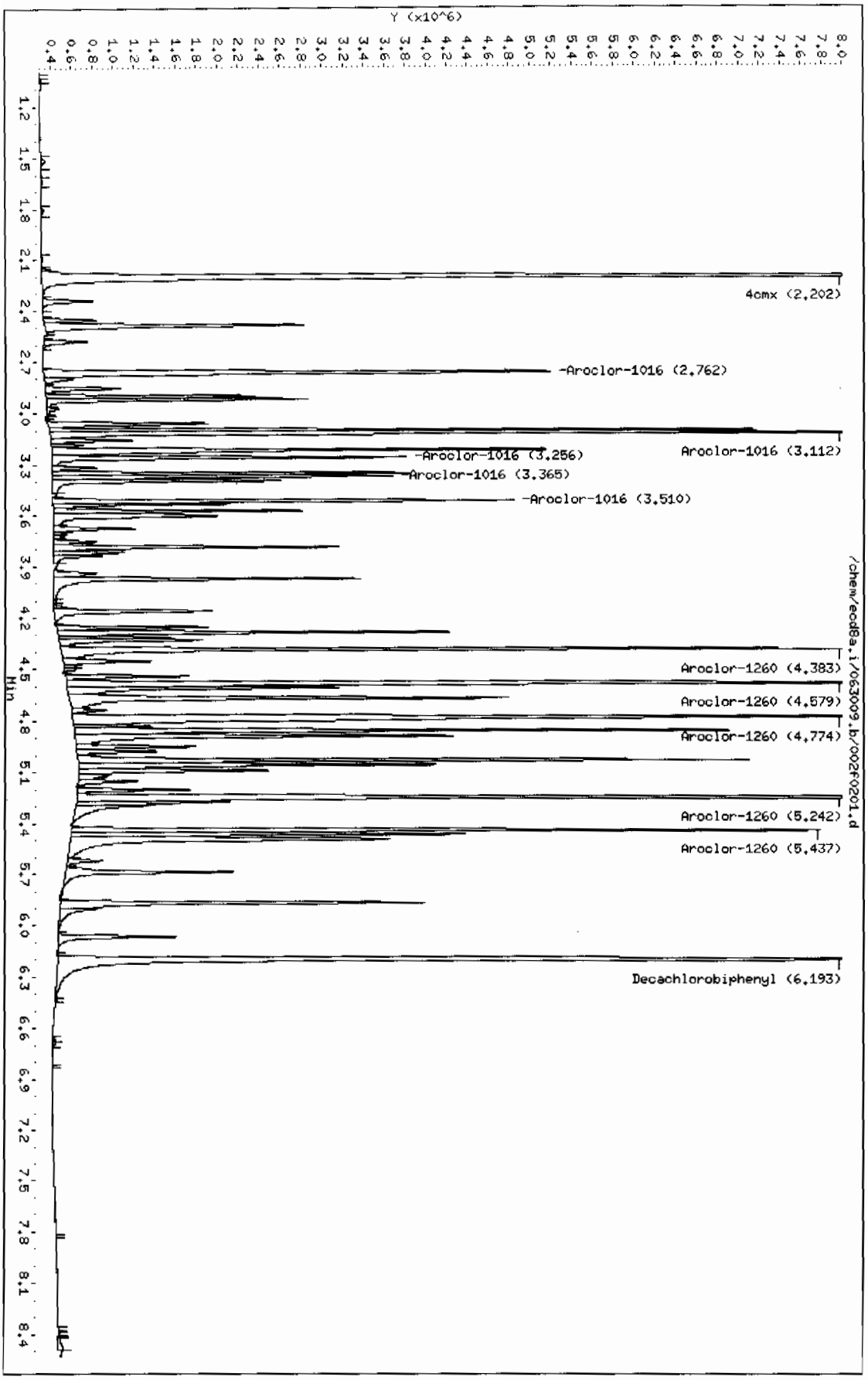

Page 1

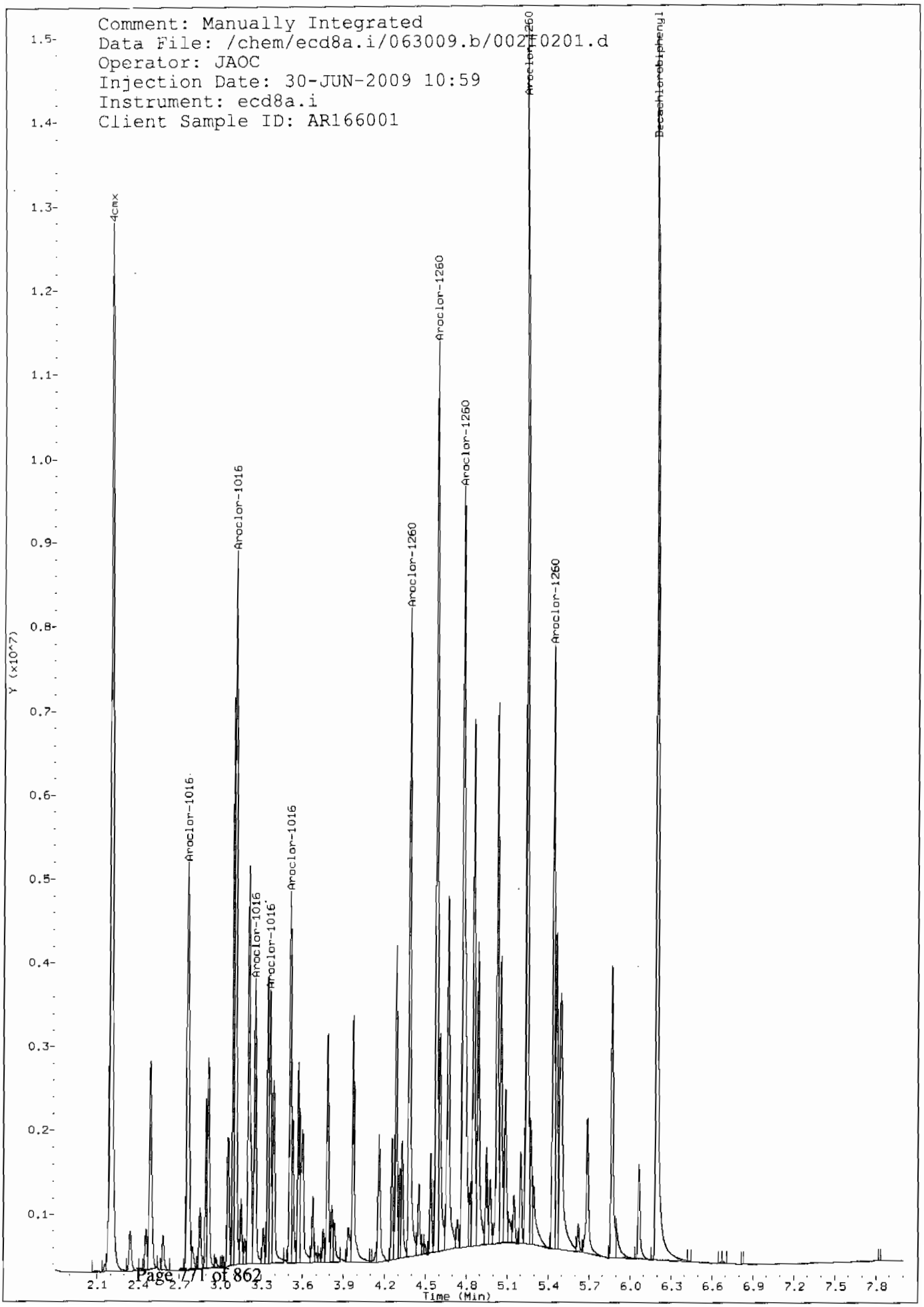
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/002F0201.d
Operator: JAOC
Injection Date: 30-JUN-2009 10:59
Instrument: ecd8a.i
Client Sample ID: AR166001
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

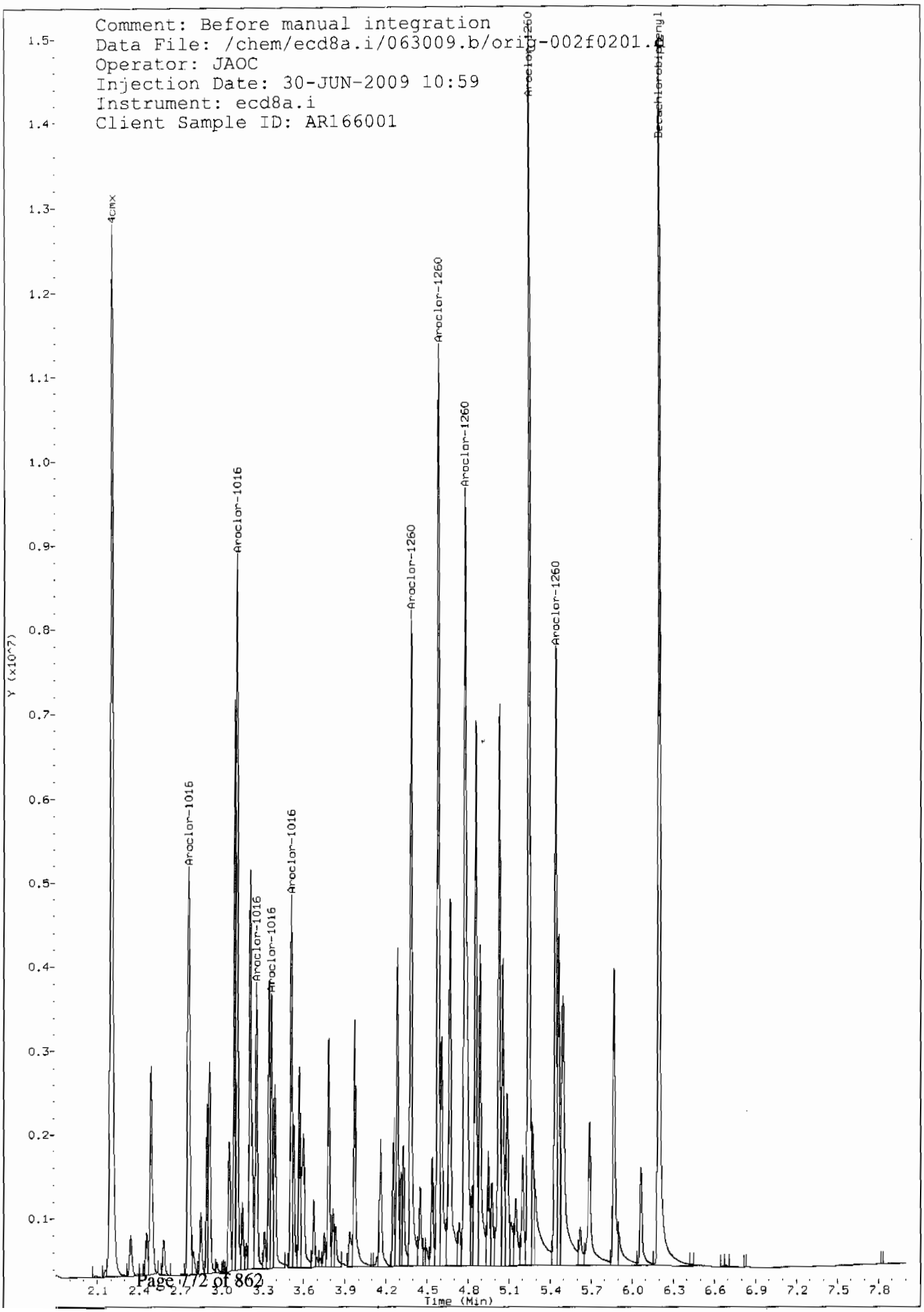
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-002f0201.
Operator: JAOC
Injection Date: 30-JUN-2009 10:59
Instrument: ecd8a.i
Client Sample ID: AR166001
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/002b0201.d
Lab Smp Id: WAR090629-04601 Client Smp ID: AR166001
Inj Date : 30-JUN-2009 10:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04601
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5146873	100.000	89.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	4975007	100.000	88.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	2205647	1000.00	1000	80.00- 120.00	100.00
3.575	3.575	0.000	2901198	1000.00	990	111.54- 151.54	131.54
3.675	3.675	0.000	1721686	1000.00	990	58.06- 98.06	78.06
3.752	3.752	0.000	1037559	1000.00	999	27.04- 67.04	47.04
3.826	3.826	0.000	1054433	1000.00	985	27.81- 67.81	47.81
Average of Peak Amounts =					993		
7 Aroclor-1260					CAS #: 11096-82-5		
4.936	4.936	0.000	2835210	1000.00	984	80.00- 120.00	100.00
5.083	5.083	0.000	3472058	1000.00	1000	102.46- 142.46	122.46
5.199	5.199	0.000	3145666	1000.00	996	90.95- 130.95	110.95
5.608	5.608	0.000	2347819	1000.00	991	62.81- 102.81	82.81
6.041	6.041	0.000	3768651	1000.00	1000	112.92- 152.92	132.92
Average of Peak Amounts =					995		

Data File: /chem/ecd8a.i/063009.b/002b0201.d
Date : 30-JUN-2009 10:59
Client ID: AR166001
Sample Info: IWAR090629-04601
Column phase: CLP2

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

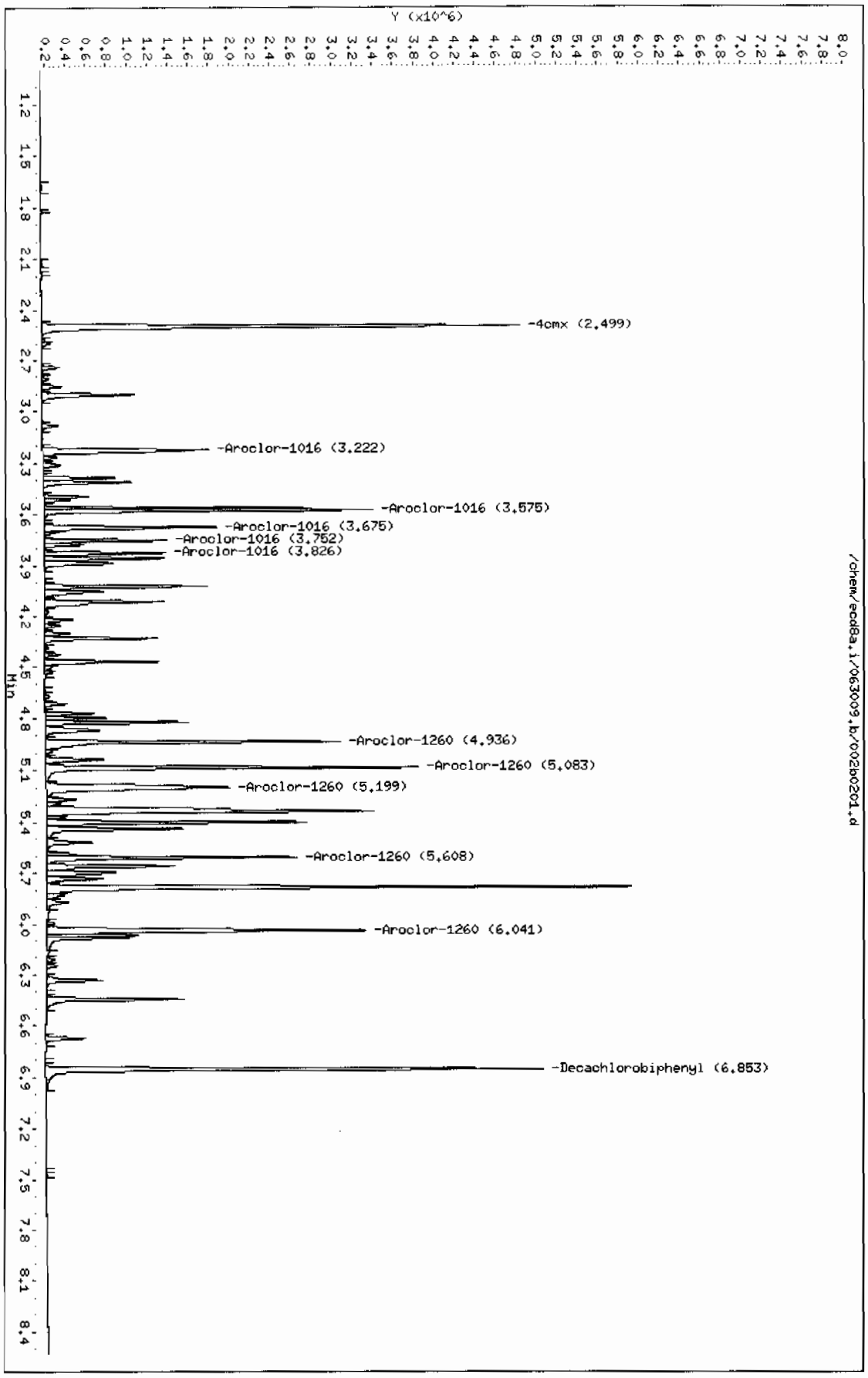

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/003f0301.d
Lab Smp Id: WAR090302-54 Client Smp ID: AR125401
Inj Date : 30-JUN-2009 11:11
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090302-54
Misc Info : |1254
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	16776449	100.000	105	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	17996048	100.000	107	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.786	3.786	0.000	4958151	1000.00	1030	80.00- 120.00	100.00
3.972	3.972	0.000	6507071	1000.00	1040	111.24- 151.24	131.24
4.168	4.168	0.000	4906754	1000.00	1030	78.96- 118.96	98.96
4.254	4.254	0.000	8062990	1000.00	1020	142.62- 182.62	162.62
4.581	4.581	0.000	7261142	1000.00	1070	126.45- 166.45	146.45

Average of Peak Amounts = 1.04e+03

Data File: /chem/ecd8a.i/063009.b/003f0301.d
Date : 30-JUN-2009 11:11
Client ID: AR125401
Sample Info: !WAR090302-54

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

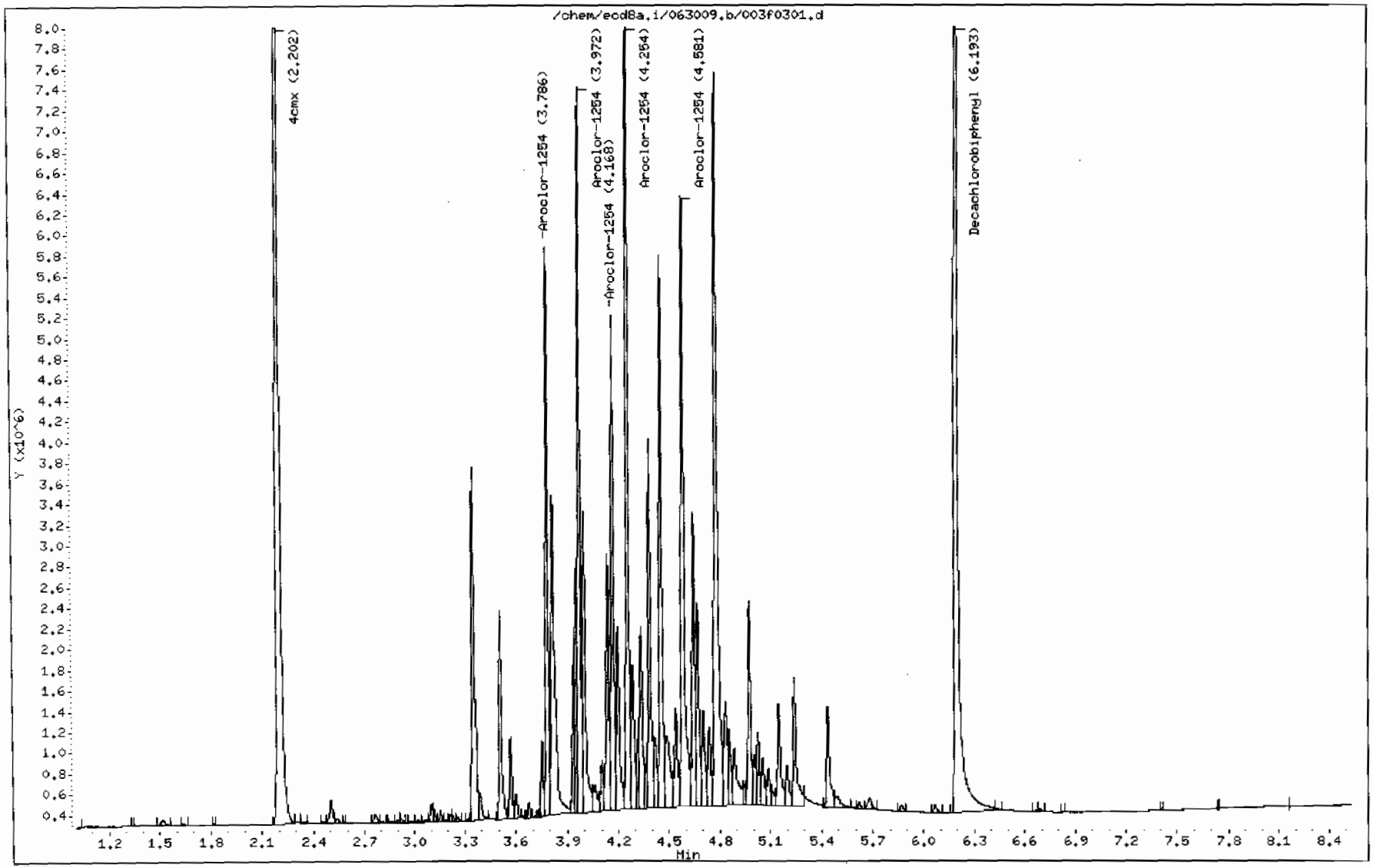

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/003b0301.d
Lab Smp Id: WAR090302-54 Client Smp ID: AR125401
Inj Date : 30-JUN-2009 11:11
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090302-54
Misc Info : |1254
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5544124	100.000	96.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5446892	100.000	96.7	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.331	4.331	0.000	2080742	1000.00	992	80.00- 120.00	100.00
4.468	4.468	0.000	2261889	1000.00	979	88.71- 128.71	108.71
4.798	4.798	0.000	3044551	1000.00	982	126.32- 166.32	146.32
5.084	5.084	0.000	1698880	1000.00	1050	61.65- 101.65	81.65
5.206	5.206	0.000	1888934	1000.00	1020	70.78- 110.78	90.78

Average of Peak Amounts = 1e+03

Data File: /chem/ecd8a.i/063009.b/003b0301.d
Date : 30-JUN-2009 11:11
Client ID: AR125401
Sample Info: IWAR090302-54

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

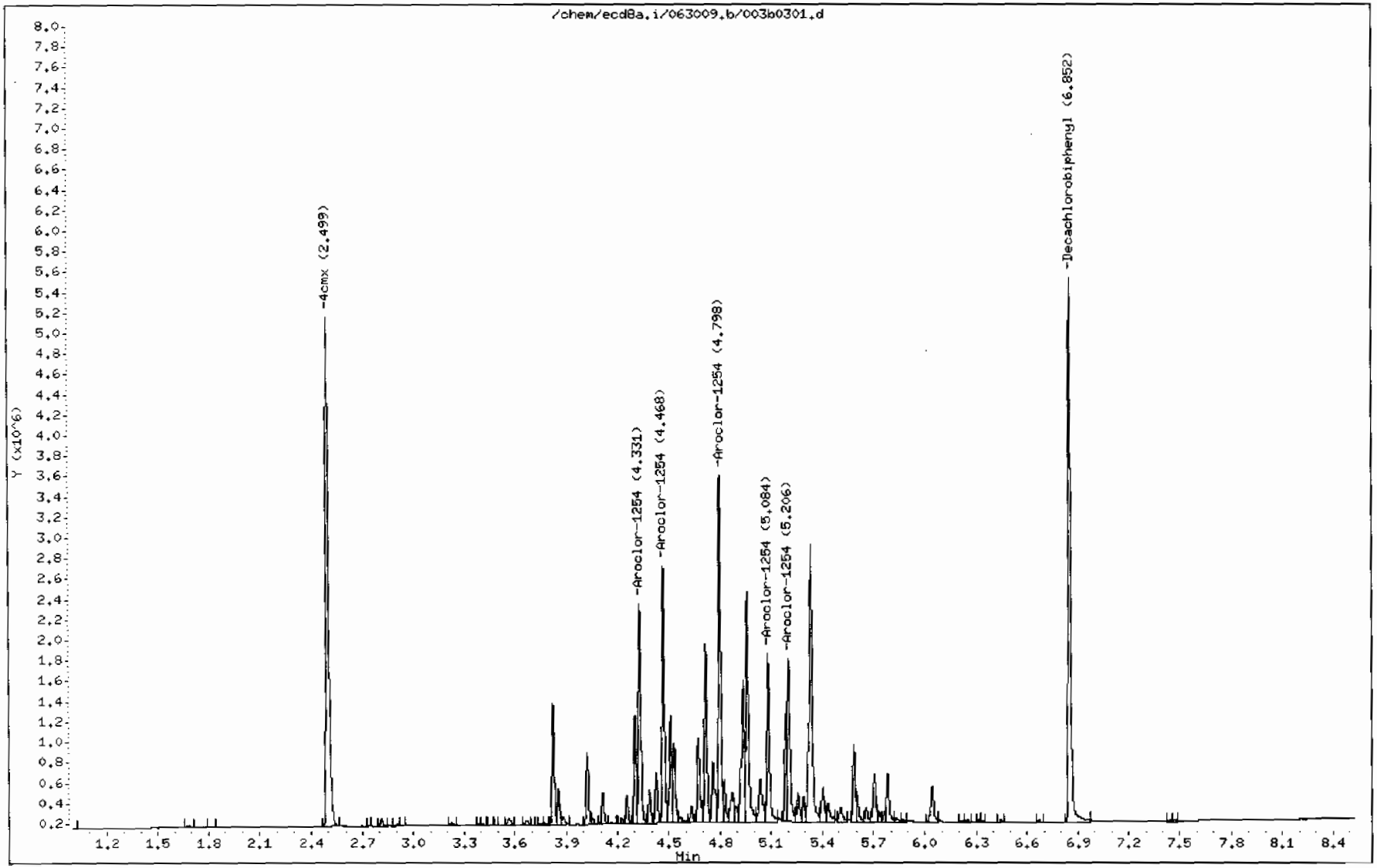

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/004f0401.d
Lab Smp Id: WAR090519-42 Client Smp ID: AR124201
Inj Date : 30-JUN-2009 11:24
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090519-42
Misc Info : |1242
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.203	2.202	0.001	17183284	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	17244477	100.000	103	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.762	2.762	0.000	4458179	1000.00	1100	80.00- 120.00	100.00(M)
3.113	3.113	0.000	5547736	1000.00	1120	104.44- 144.44	124.44
3.257	3.257	0.000	2191510	1000.00	1100	29.16- 69.16	49.16
3.349	3.349	0.000	1903092	1000.00	1070	22.69- 62.69	42.69
3.511	3.511	0.000	2802433	1000.00	1090	42.86- 82.86	62.86
Average of Peak Amounts =				1.1e+03			

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/004f0401.d
Date : 30-JUN-2009 11:24
Client ID: AR124201
Sample Info: IWAR090519-42

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

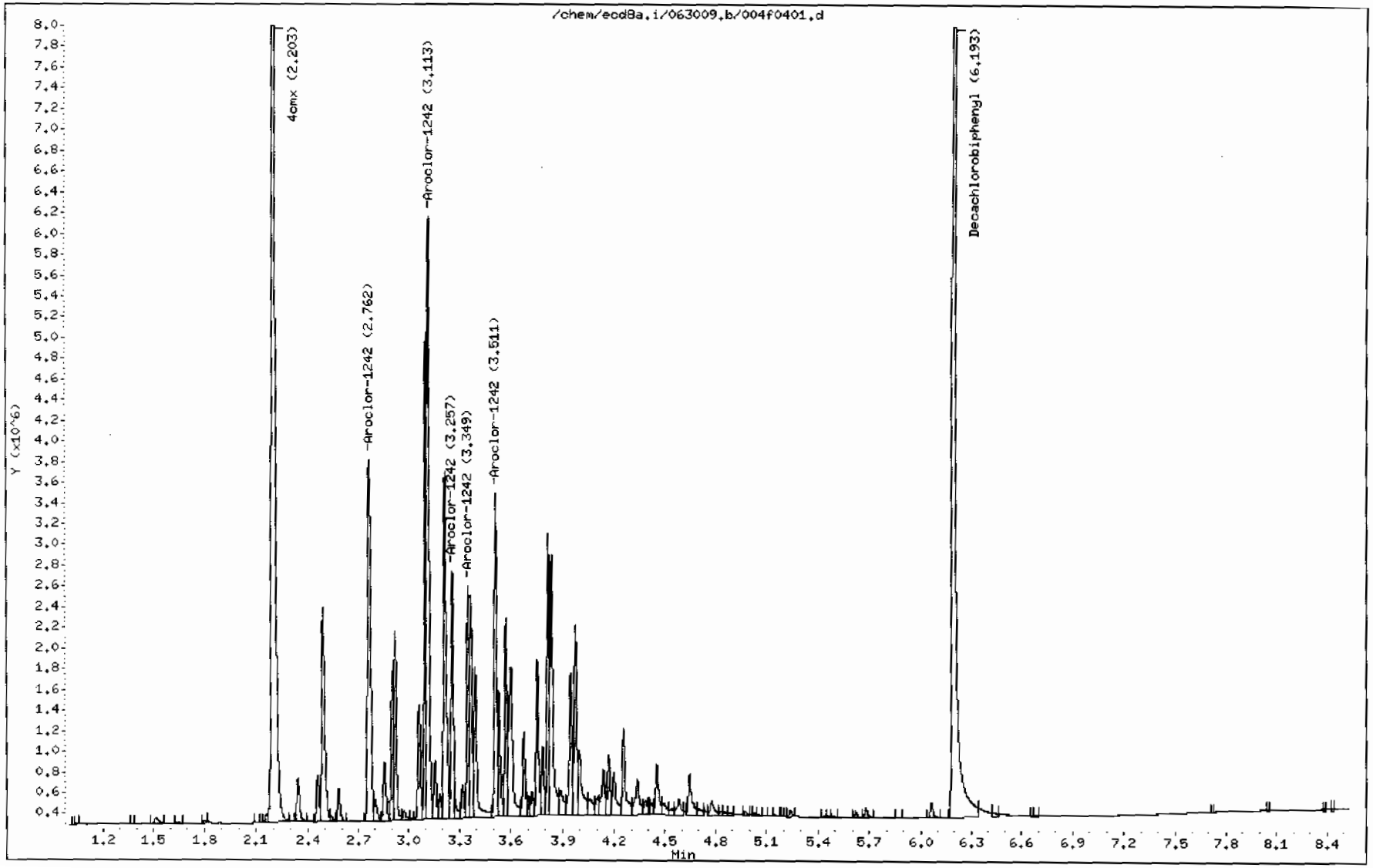

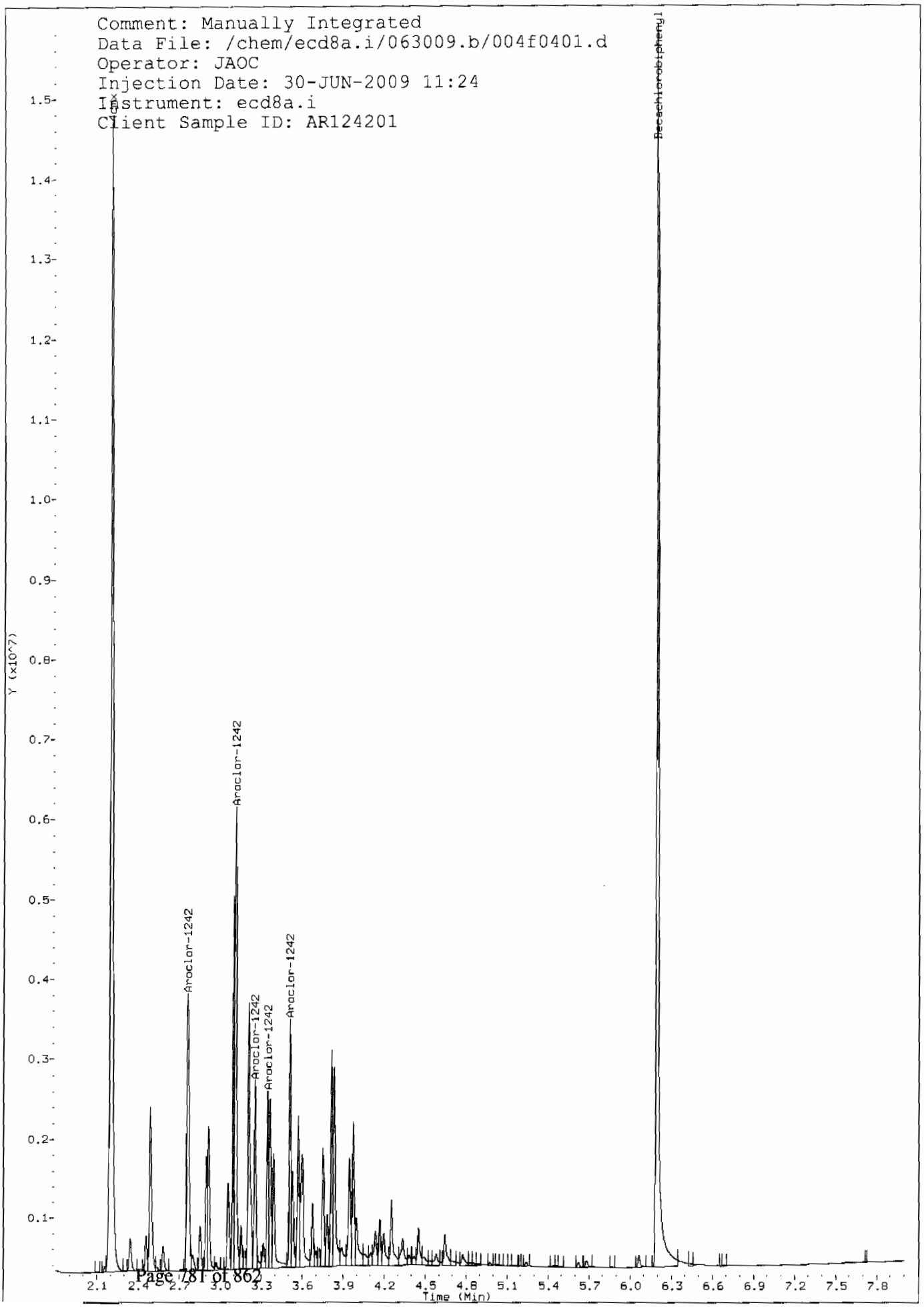
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/004f0401.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:24
Instrument: ecd8a.i
Client Sample ID: AR124201
Decachlorobiphenyl
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Y (x10^7)
Time (Min)

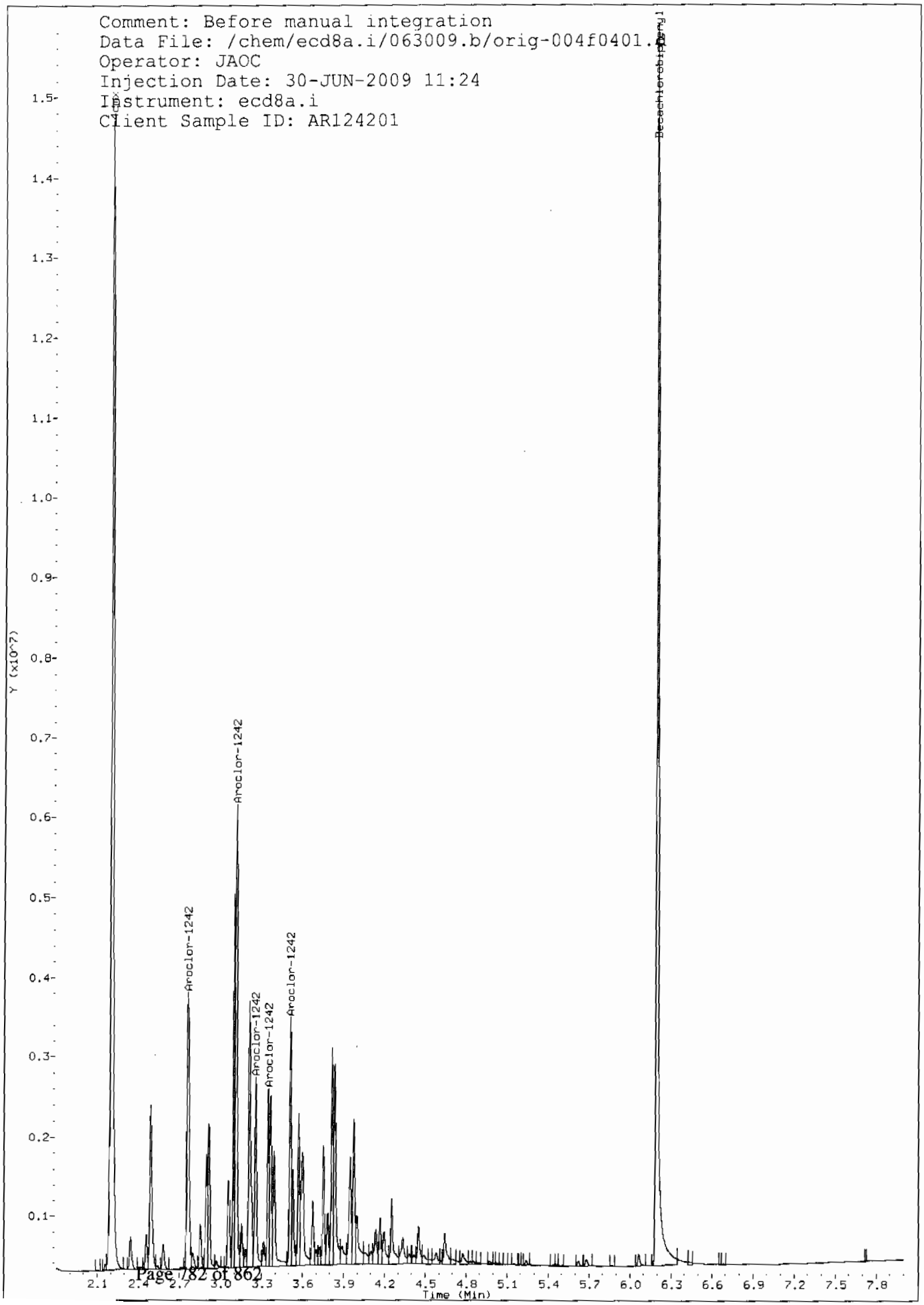
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-004f0401.D
Operator: JAOC
Injection Date: 30-JUN-2009 11:24
Instrument: ecd8a.i
Client Sample ID: AR124201
Decachlorobiphenyl
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Y (x10^7)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4 5.7 6.0 6.3 6.6 6.9 7.2 7.5 7.8
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/004b0401.d
Lab Smp Id: WAR090519-42 Client Smp ID: AR124201
Inj Date : 30-JUN-2009 11:24
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090519-42
Misc Info : |1242
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5701783	100.000	98.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	5284675	100.000	93.8	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
3.223	3.223	0.000	1548150	1000.00	907	80.00- 120.00	100.00
3.576	3.576	0.000	1999336	1000.00	948	109.14- 149.14	129.14
3.677	3.677	0.000	1202620	1000.00	926	57.68- 97.68	77.68
3.752	3.752	0.000	731324	1000.00	945	27.24- 67.24	47.24
3.827	3.827	0.000	689725	1000.00	875	24.55- 64.55	44.55

Average of Peak Amounts = 920

Data File: /chem/ecd8a.i/063009.b/004b0401.d

Date : 30-JUN-2009 11:24

Client ID: AR124201

Sample Info: IWAR090519-42

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

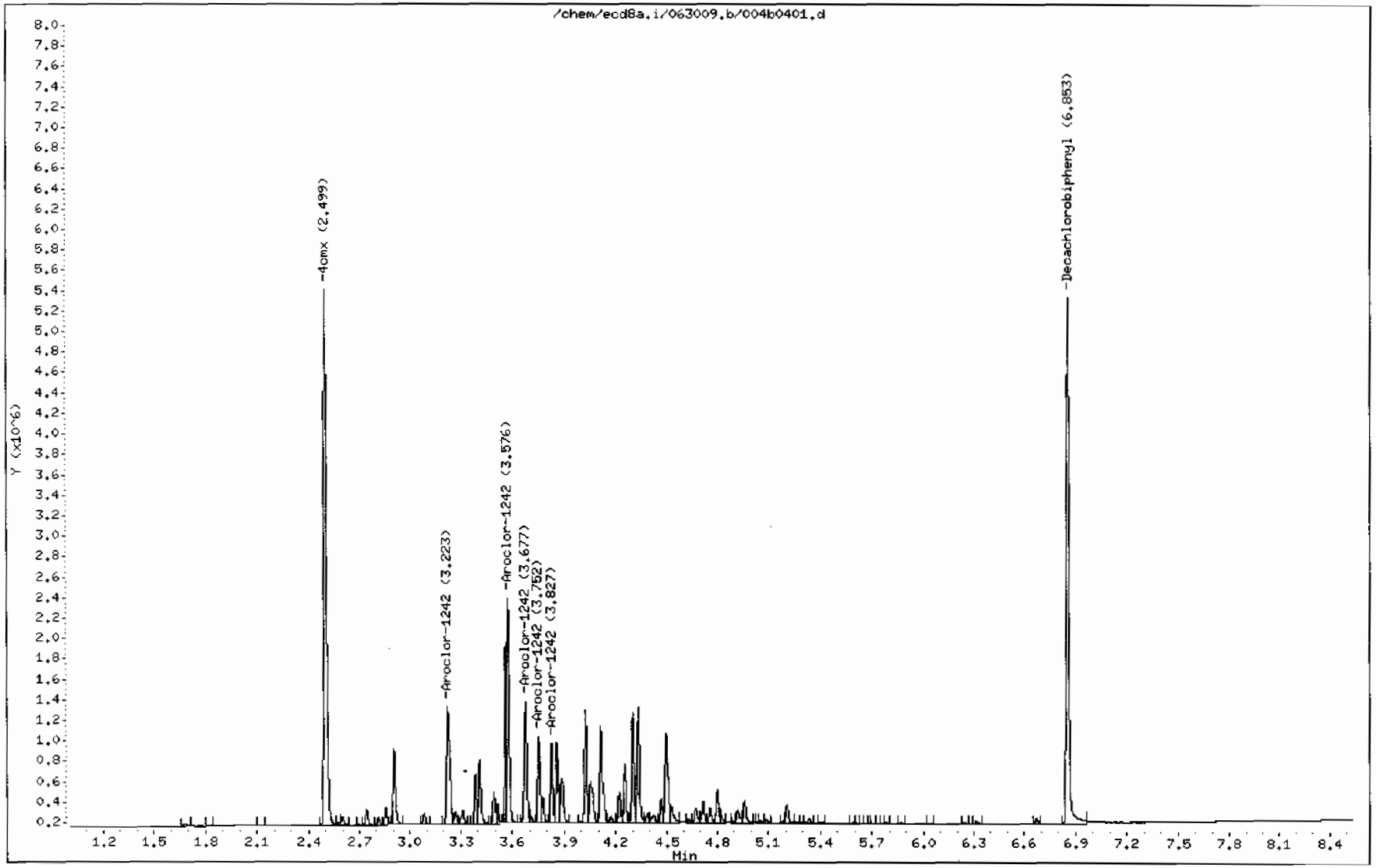

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/005f0501.d
Lab Smp Id: WAR090521-48 Client Smp ID: AR124801
Inj Date : 30-JUN-2009 11:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090521-48
Misc Info : |1248
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	18145027	100.000	113	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.192	6.193	-0.001	18386391	100.000	109	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.112	3.112	0.000	3486586	1000.00	1120	80.00- 120.00	100.00(M)
3.348	3.348	0.000	4009703	1000.00	1090	95.00- 135.00	115.00
3.511	3.511	0.000	5160786	1000.00	1090	128.02- 168.02	148.02
3.975	3.975	0.000	4377940	1000.00	1060	105.57- 145.57	125.57
4.255	4.255	0.000	3273014	1000.00	1030	73.87- 113.87	93.87

Average of Peak Amounts = 1.08e+03

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/005f0501.d

Date : 30-JUN-2009 11:36

Client ID: AR124801

Sample Info: IWAR090521-48

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

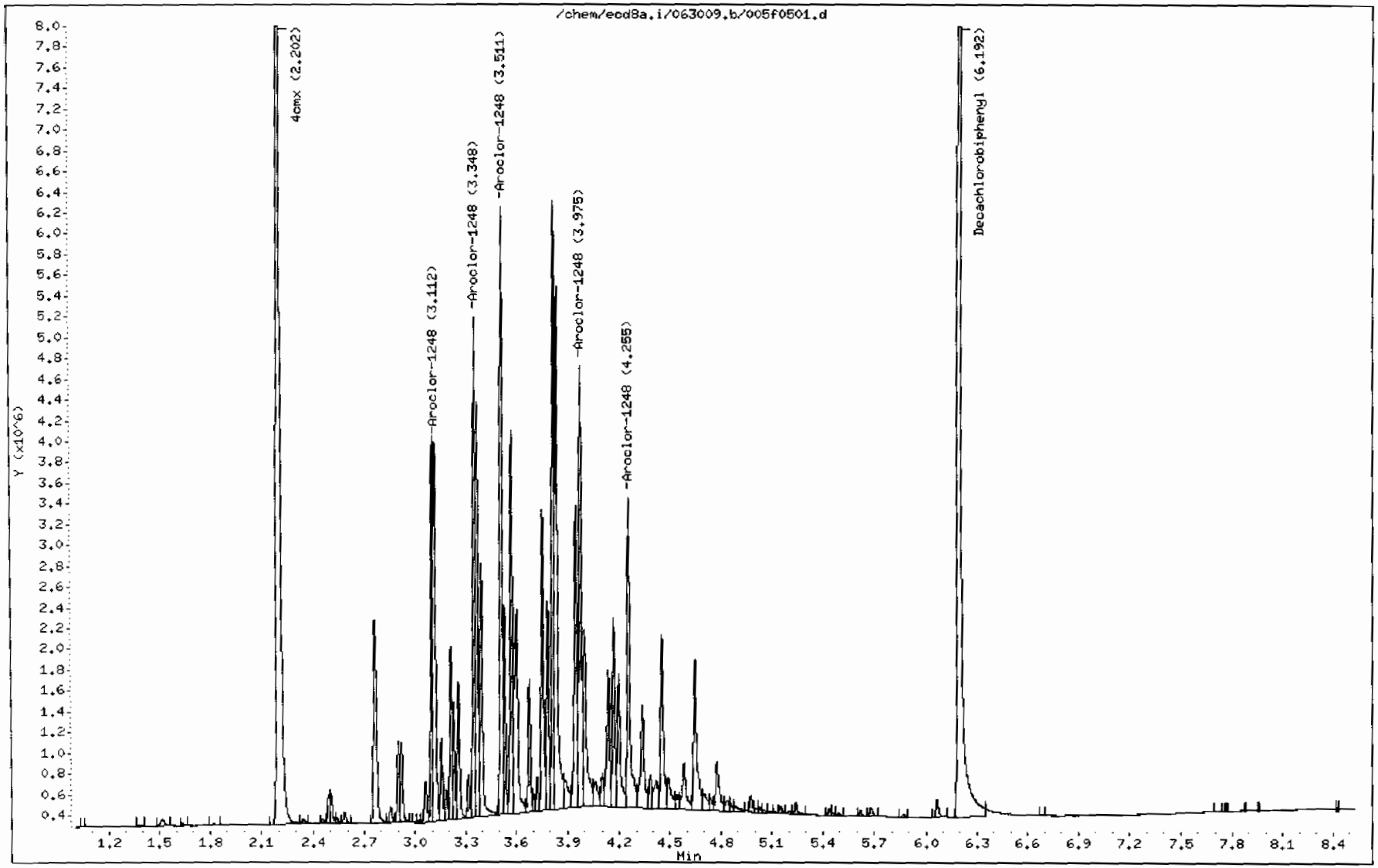

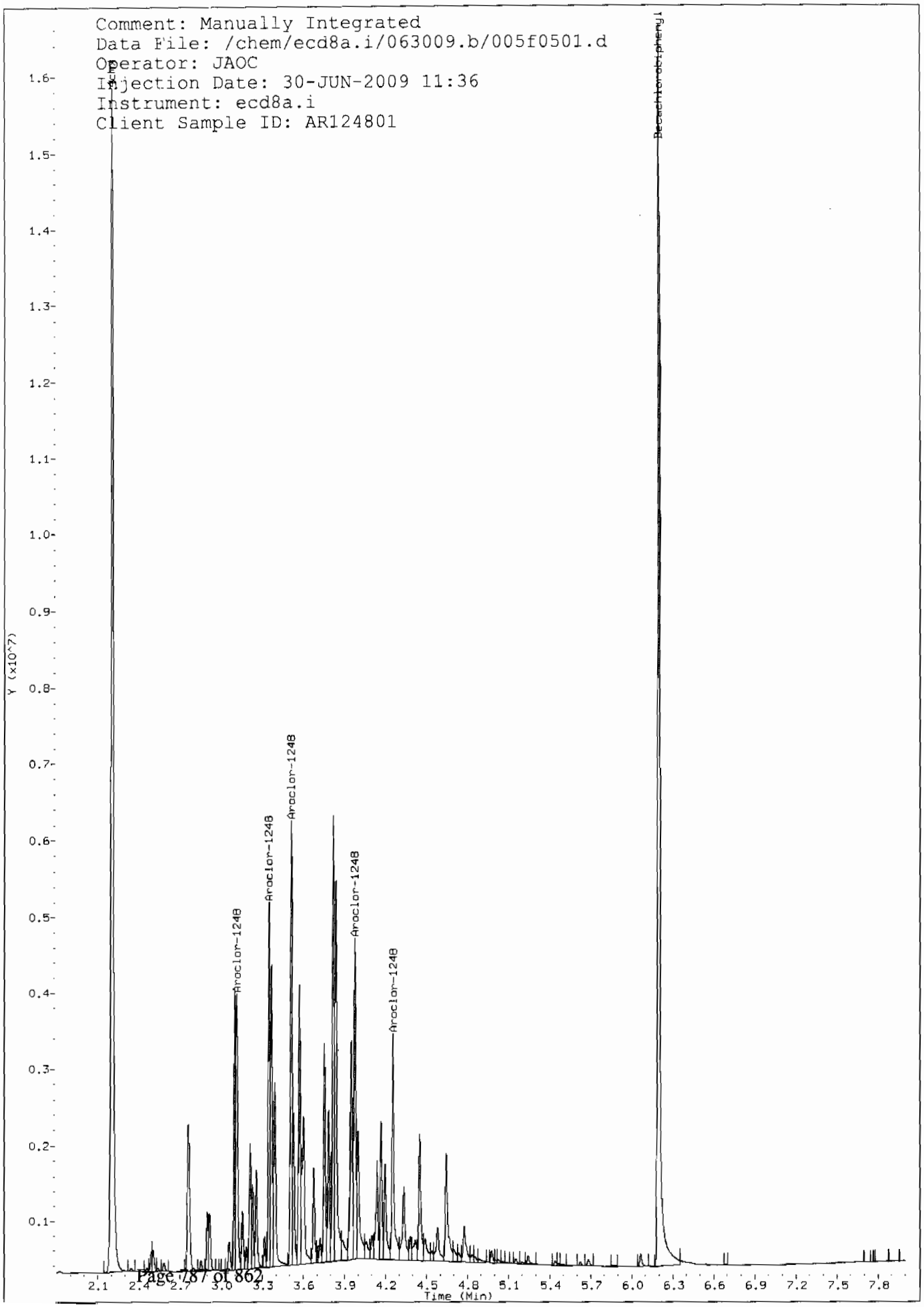
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/005f0501.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:36
Instrument: ecd8a.i
Client Sample ID: AR124801
Decachlorobiphenyl
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Y (x10^7)
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4 5.7 6.0 6.3 6.6 6.9 7.2 7.5 7.8
Time (Min)

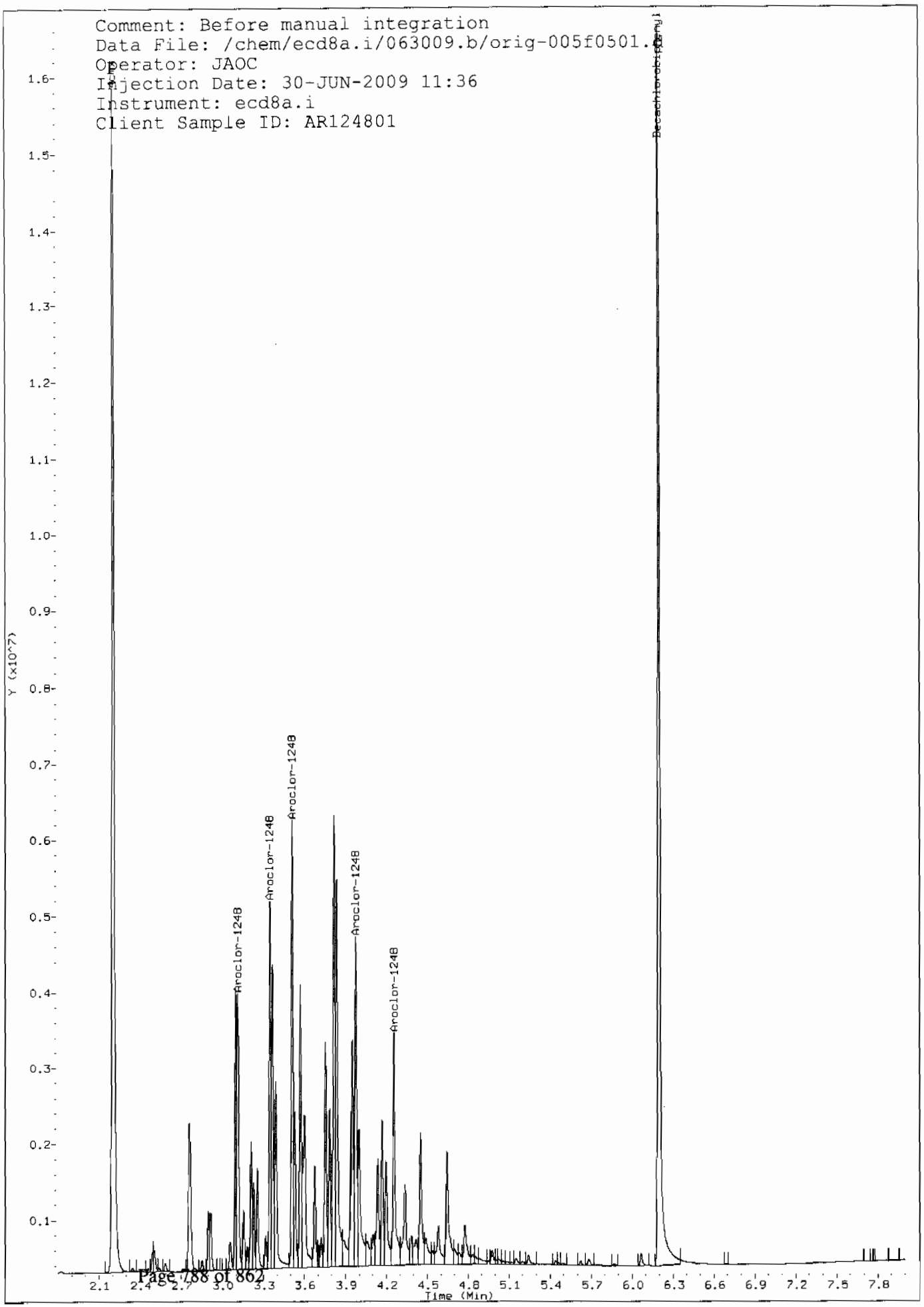
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-005f0501.D
Operator: JAOC
Injection Date: 30-JUN-2009 11:36
Instrument: ecd8a.i
Client Sample ID: AR124801
Decachlorobiphenyl
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/005b0501.d
Lab Smp Id: WAR090521-48 Client Smp ID: AR124801
Inj Date : 30-JUN-2009 11:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090521-48
Misc Info : |1248
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	6000575	100.000	104	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5603679	100.000	99.5	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.575	3.575	0.000	1178184	1000.00	998	80.00- 120.00	100.00
3.826	3.826	0.000	1472761	1000.00	1030	105.00- 145.00	125.00
4.023	4.023	0.000	1847626	1000.00	1050	136.82- 176.82	156.82
4.301	4.301	0.000	2075080	1000.00	1030	156.13- 196.13	176.13
4.333	4.333	0.000	2380793	1000.00	1040	182.07- 222.07	202.07

Average of Peak Amounts = 1.03e+03

Data File: /chem/ecd8a.i/063009.b/005b0501.d

Date : 30-JUN-2009 11:36

Client ID: AR124801

Sample Info: IWAR090521-48

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

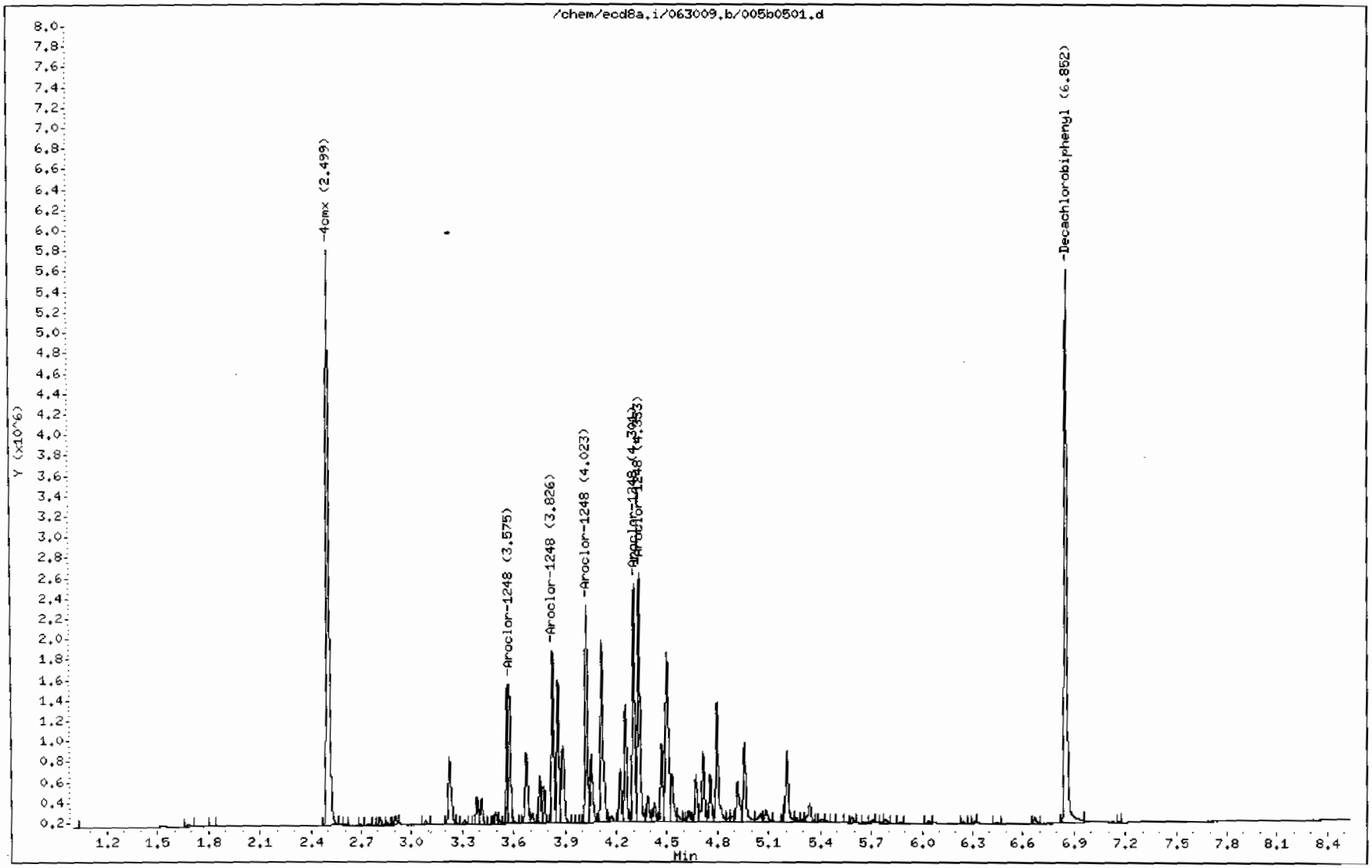

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/006f0601.d
Lab Smp Id: WAR090618-32 Client Smp ID: AR123201
Inj Date : 30-JUN-2009 11:48
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-32
Misc Info : |1232
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.203	2.202	0.001	16957655	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	18604315	100.000	111	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.762	2.762	0.000	2793110	1000.00	1100	80.00- 120.00	100.00
3.113	3.113	0.000	3336296	1000.00	1030	99.45- 139.45	119.45
3.210	3.210	0.000	2216909	1000.00	1040	59.37- 99.37	79.37
3.511	3.511	0.000	1562795	1000.00	1010	35.95- 75.95	55.95
3.817	3.817	0.000	1289064	1000.00	979	26.15- 66.15	46.15

Average of Peak Amounts = 1.03e+03

Data File: /chem/ecd8a.i/063009.b/006f0601.d

Date : 30-JUN-2009 11:48

Client ID: AR123201

Sample Info: IWAR090618-32

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

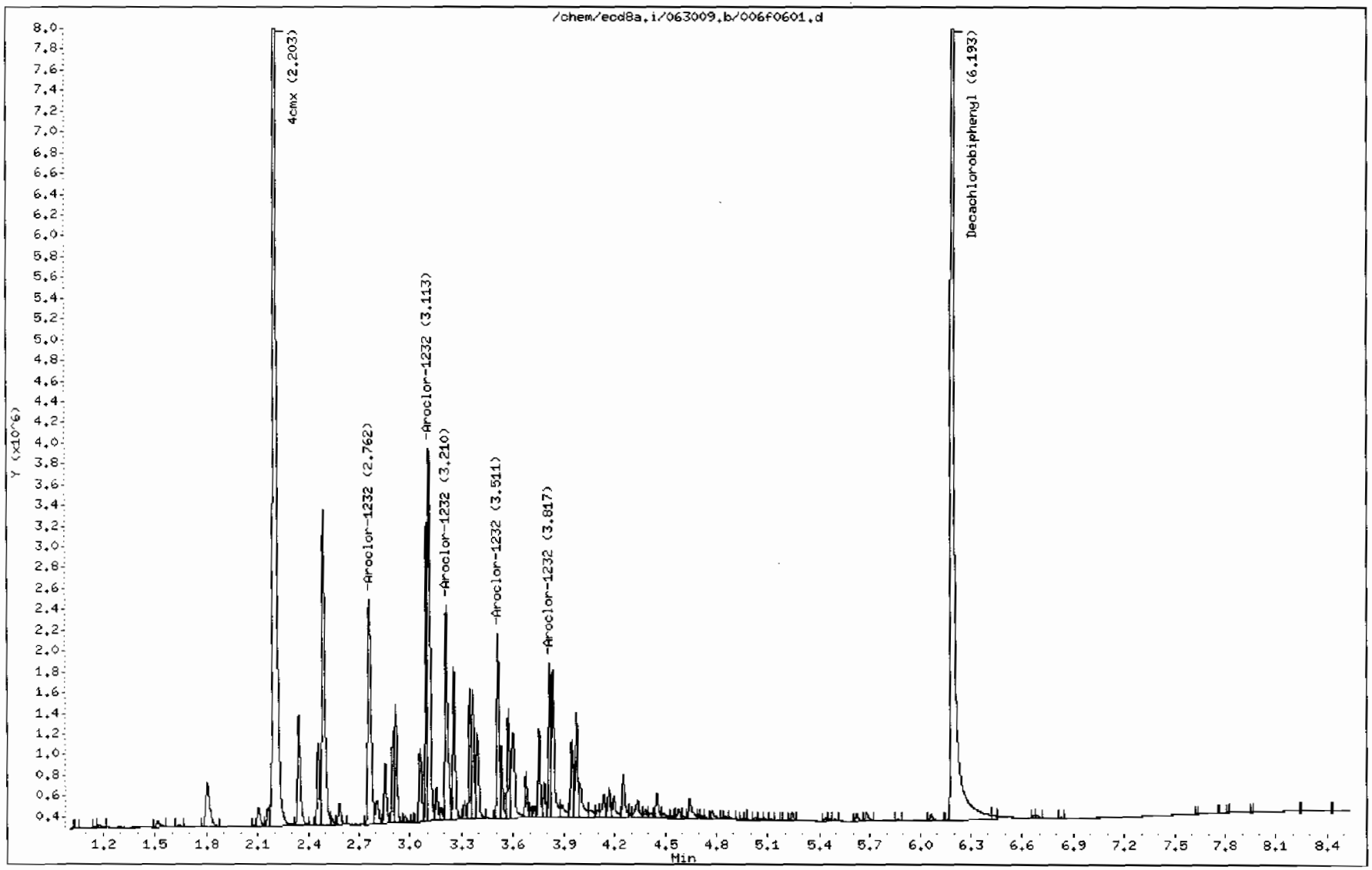

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/006b0601.d
Lab Smp Id: WAR090618-32 Client Smp ID: AR123201
Inj Date : 30-JUN-2009 11:48
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-32
Misc Info : |1232
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5607633	100.000	97.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	5526124	100.000	98.1	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
3.223	3.223	0.000	1015720	1000.00	905	80.00- 120.00	100.00
3.575	3.575	0.000	1258025	1000.00	885	103.86- 143.86	123.86
3.676	3.676	0.000	751147	1000.00	886	53.95- 93.95	73.95
3.826	3.826	0.000	397929	1000.00	854	19.18- 59.18	39.18
3.858	3.858	0.000	422363	1000.00	877	21.58- 61.58	41.58
Average of Peak Amounts =					882		

Data File: /chem/ecd8a.i/063009.b/006b0601.d

Date : 30-JUN-2009 11:48

Client ID: AR123201

Sample Info: IWAR090618-32

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

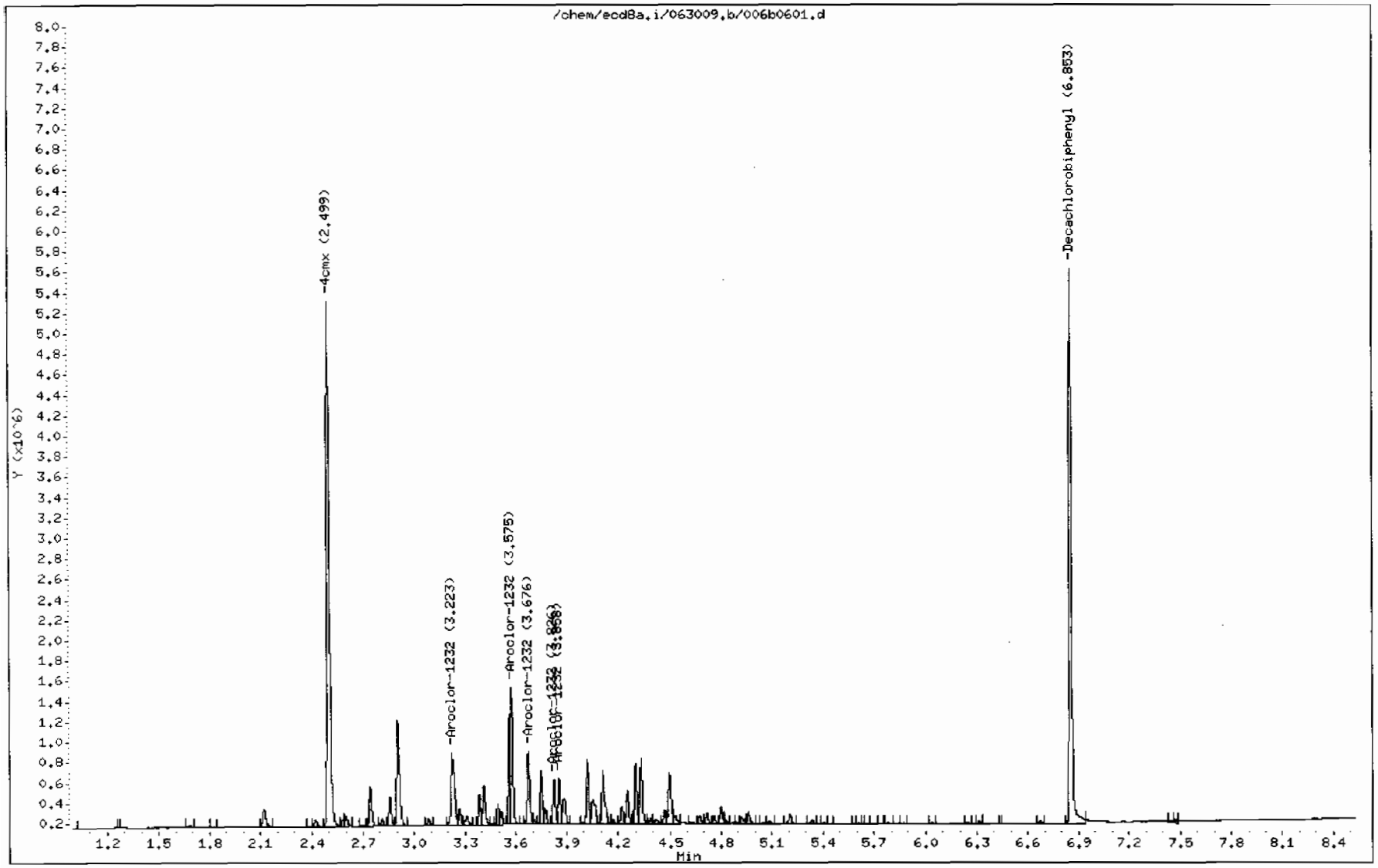

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/007f0701.d
Lab Smp Id: WAR090618-21 Client Smp ID: AR122101
Inj Date : 30-JUN-2009 12:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-21
Misc Info : |1221
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.205	2.202	0.003	16979532	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.196	6.193	0.003	19246506	100.000	115	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.347	2.347	0.000	1731266	1000.00	1120	80.00- 120.00	100.00
2.461	2.461	0.000	1014846	1000.00	1150	38.62- 78.62	58.62
2.493	2.493	0.000	4111480	1000.00	1100	217.48- 257.48	237.48

Average of Peak Amounts = 1.12e+03

Data File: /chem/ecd8a.i/063009.b/007f0701.d

Date : 30-JUN-2009 12:03

Client ID: AR122101

Sample Info: IWAR090618-21

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

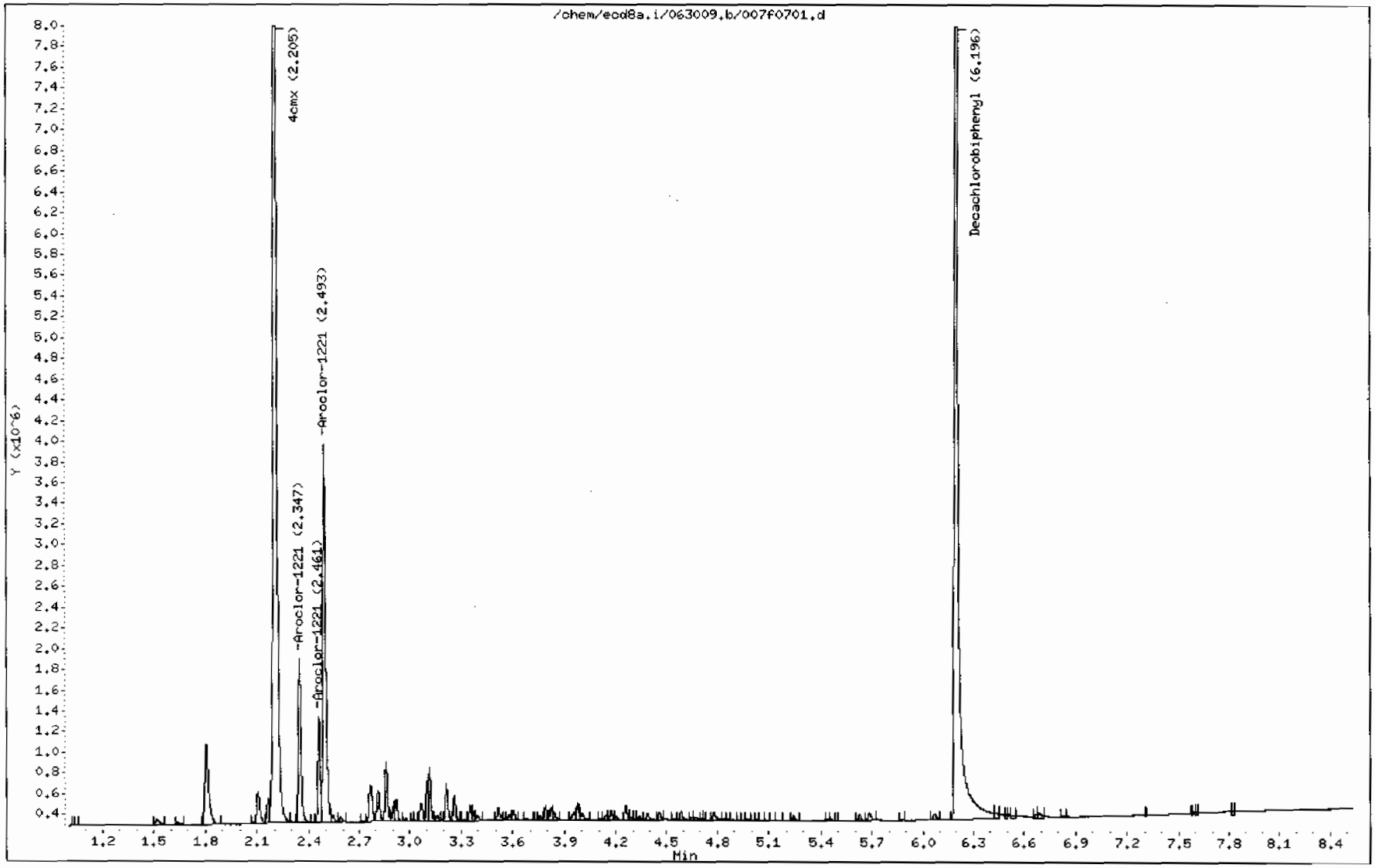

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/007b0701.d
Lab Smp Id: WAR090618-21 Client Smp ID: AR122101
Inj Date : 30-JUN-2009 12:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-21
Misc Info : |1221
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.500	2.499	0.001	5572682	100.000	96.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.855	6.853	0.002	5741006	100.000	102	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.743	2.743	0.000	570806	1000.00	893	80.00- 120.00	100.00
2.856	2.856	0.000	360134	1000.00	883	43.09- 83.09	63.09
2.905	2.905	0.000	1331894	1000.00	890	213.34- 253.34	233.34
Average of Peak Amounts =					889		

Data File: /chem/ecd8a.i/063009.b/007b0701.d

Date : 30-JUN-2009 12:03

Client ID: AR122101

Sample Info: IWAR090618-21

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

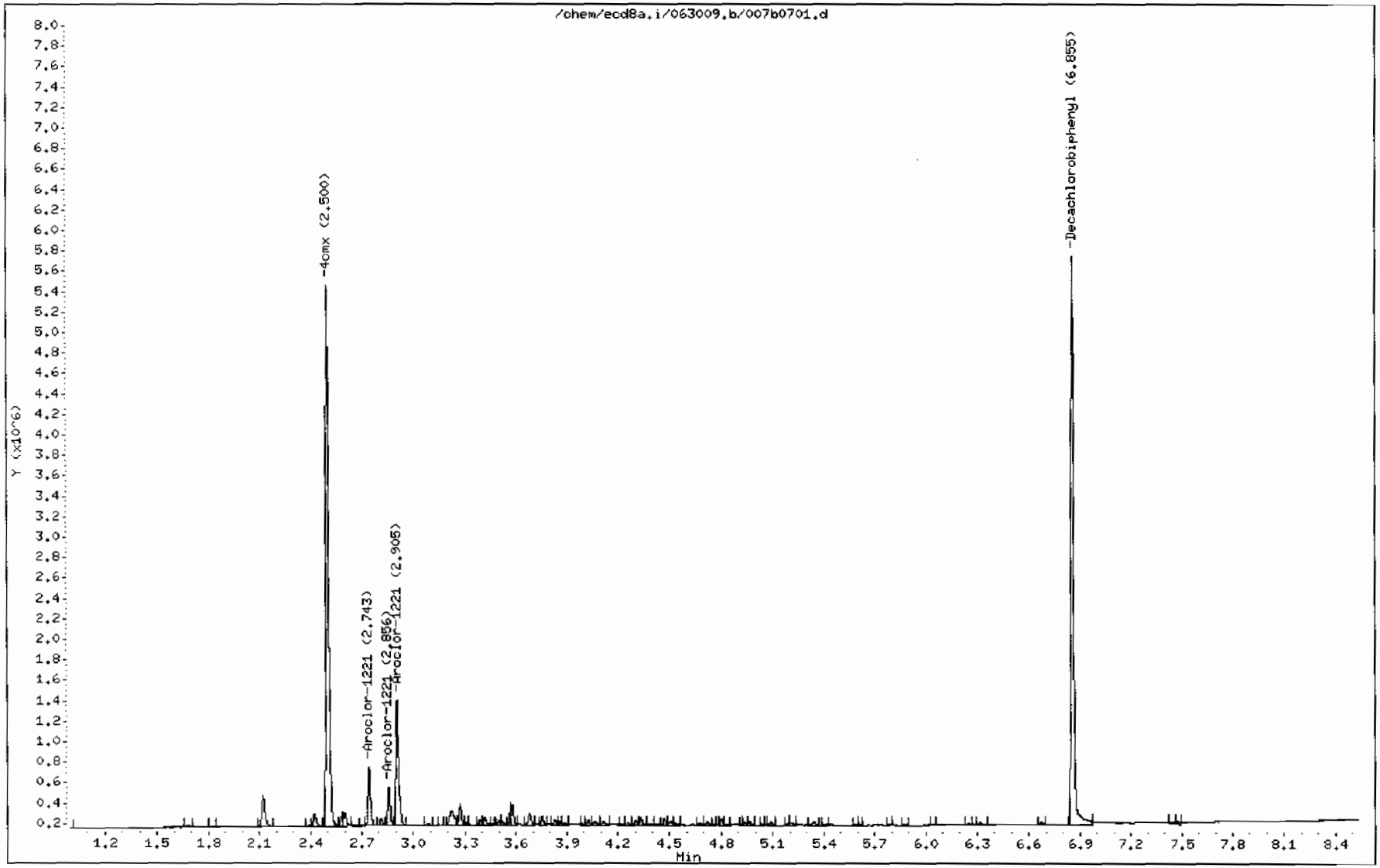

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/033f3301.d
Lab Smp Id: WAR090629-04603 Client Smp ID: AR166003
Inj Date : 30-JUN-2009 18:35
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04603
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	15363980	100.000	96.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	16554267	100.000	98.6	80.00- 120.00	100.00(M)
1 Aroclor-1016					CAS #: 12674-11-2		
2.760	2.762	-0.002	6222594	1000.00	1080	80.00- 120.00	100.00
3.110	3.112	-0.002	7909896	1000.00	1090	104.26- 144.26	127.12
3.254	3.256	-0.002	3197458	1000.00	1100	31.13- 71.13	51.38
3.364	3.365	-0.001	2899955	1000.00	1050	27.14- 67.14	46.60
3.508	3.510	-0.002	3898569	1000.00	1070	42.84- 82.84	62.65
Average of Peak Amounts =					1.08e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	7627002	1000.00	1070	80.00- 120.00	100.00(M)
4.578	4.579	-0.001	10853926	1000.00	1080	122.43- 162.43	142.31
4.772	4.774	-0.002	12192523	1000.00	1060	138.51- 178.51	159.86
5.240	5.242	-0.002	14602143	1000.00	1090	171.28- 211.28	191.45
5.435	5.437	-0.002	7015943	1000.00	1070	73.47- 113.47	91.99
Average of Peak Amounts =					1.07e+03		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/033f3301.d
Date : 30-JUN-2009 18:35
Client ID: AR166003
Sample Info: IWAR090629-04603

Column phase: CLP1

Page 1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

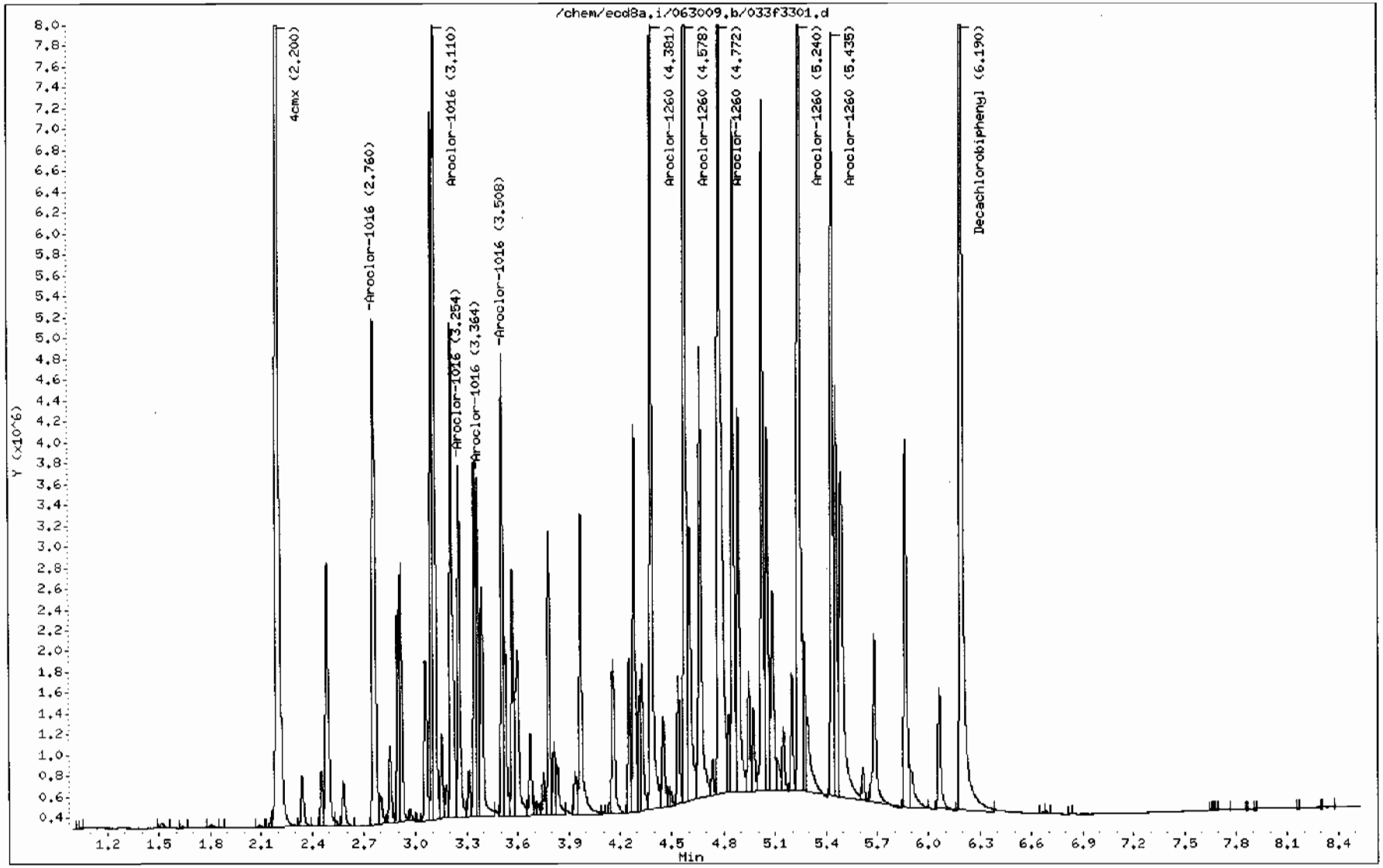

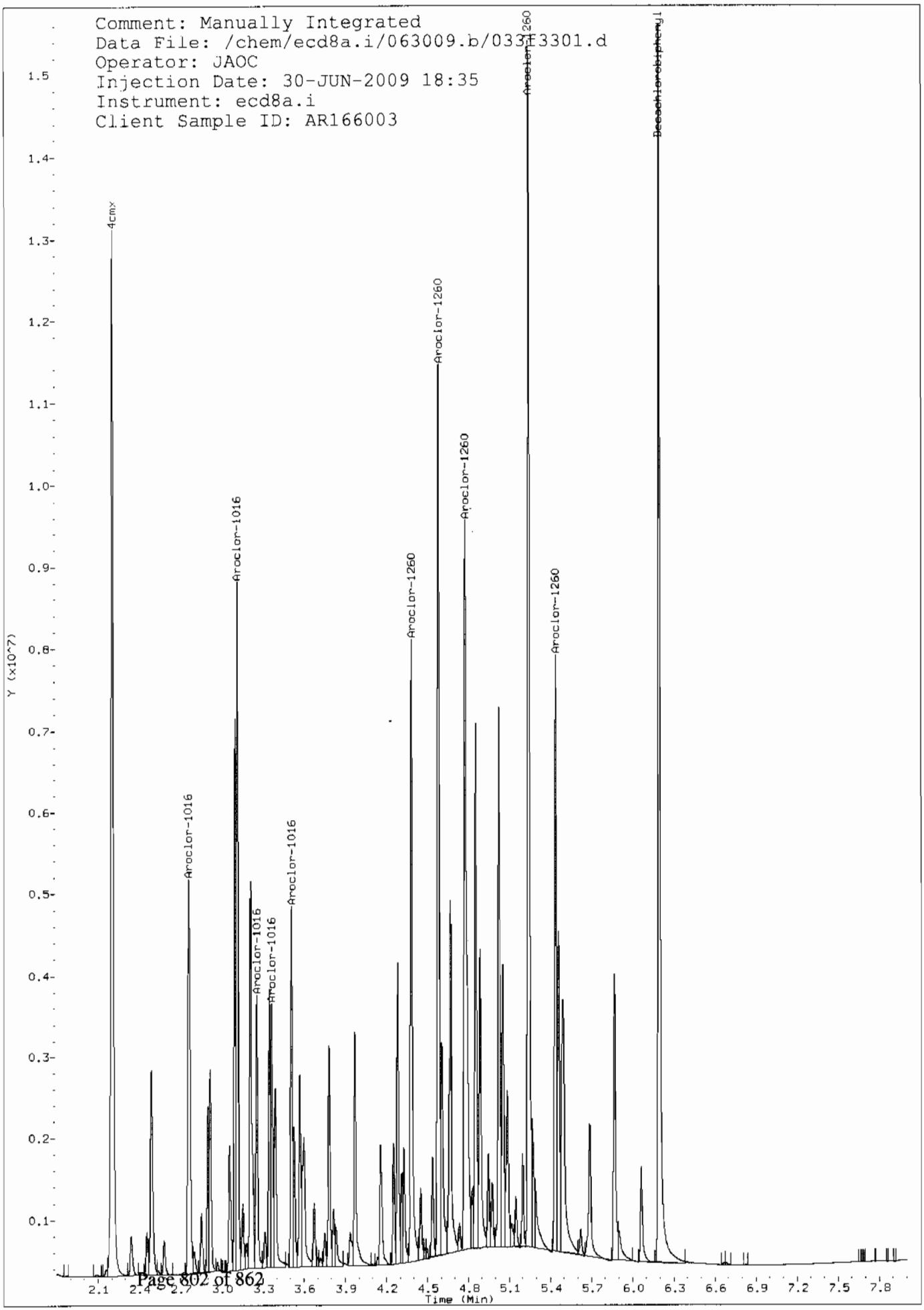
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/033f3301.d
Operator: JAOC
Injection Date: 30-JUN-2009 18:35
Instrument: ecd8a.i
Client Sample ID: AR166003
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

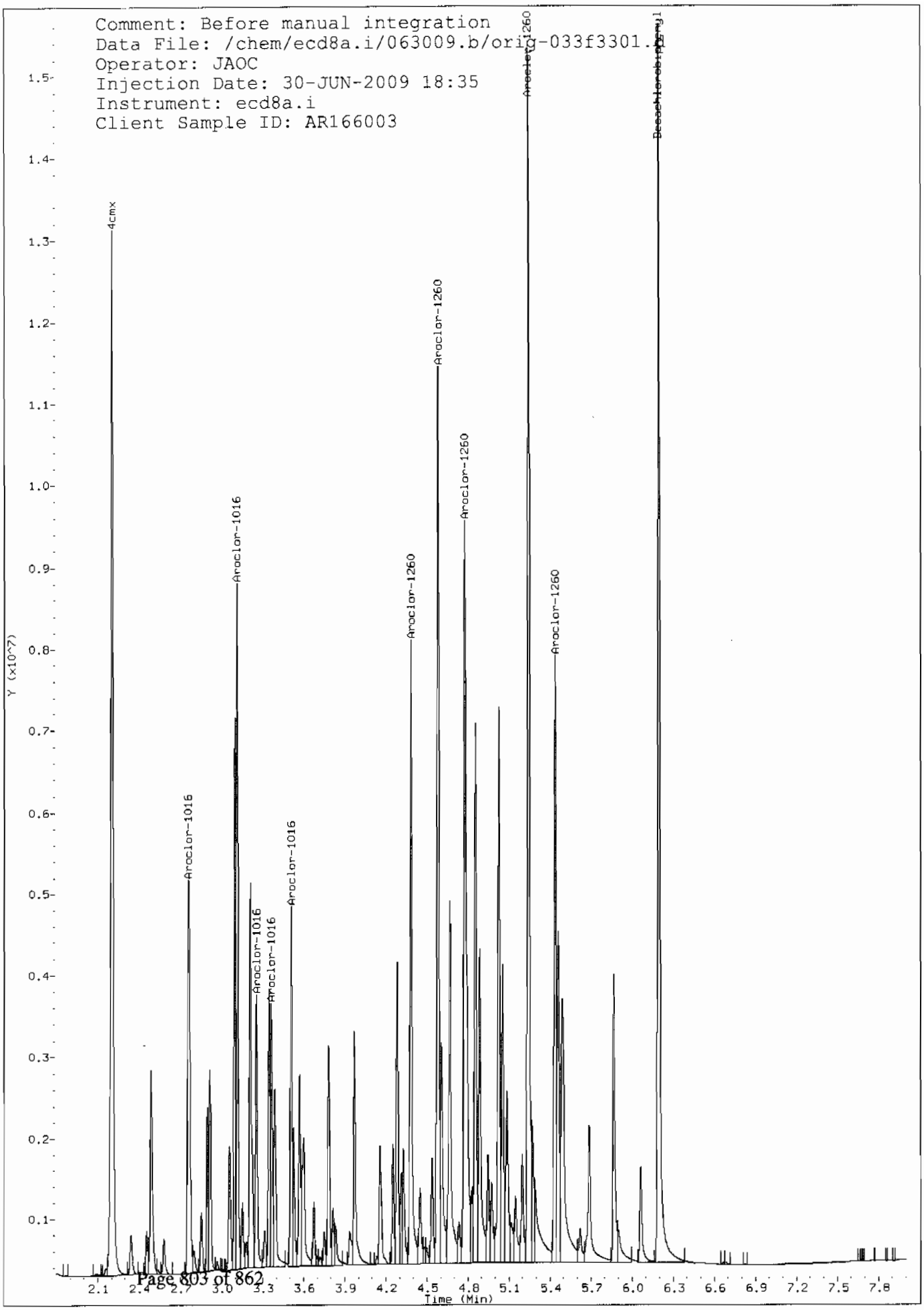
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-033f3301.
Operator: JAOC
Injection Date: 30-JUN-2009 18:35
Instrument: ecd8a.i
Client Sample ID: AR166003
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/033b3301.d
Lab Smp Id: WAR090629-04603 Client Smp ID: AR166003
Inj Date : 30-JUN-2009 18:35
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04603
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5070280	100.000	87.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	5137351	100.000	91.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	2198374	1000.00	997	80.00- 120.00	100.00
3.575	3.575	0.000	3024555	1000.00	1030	118.74- 158.74	137.58
3.675	3.675	0.000	1743998	1000.00	1000	60.26- 100.26	79.33
3.751	3.752	-0.001	1055236	1000.00	1020	28.23- 68.23	48.00
3.825	3.826	-0.001	1063993	1000.00	994	28.70- 68.70	48.40
Average of Peak Amounts =					1.01e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	2880730	1000.00	1000	80.00- 120.00	100.00
5.083	5.083	0.000	3559181	1000.00	1030	104.06- 144.06	123.55
5.198	5.199	-0.001	3207589	1000.00	1020	91.97- 131.97	111.35
5.607	5.608	-0.001	2405333	1000.00	1020	64.43- 104.43	83.50
6.040	6.041	-0.001	3902843	1000.00	1040	116.83- 156.83	135.48
Average of Peak Amounts =					1.02e+03		

Data File: /chem/ecd8a.i/063009.b/033b3301.d

Date : 30-JUN-2009 18:35

Client ID: AR166003

Sample Info: IWAR090629-04603

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

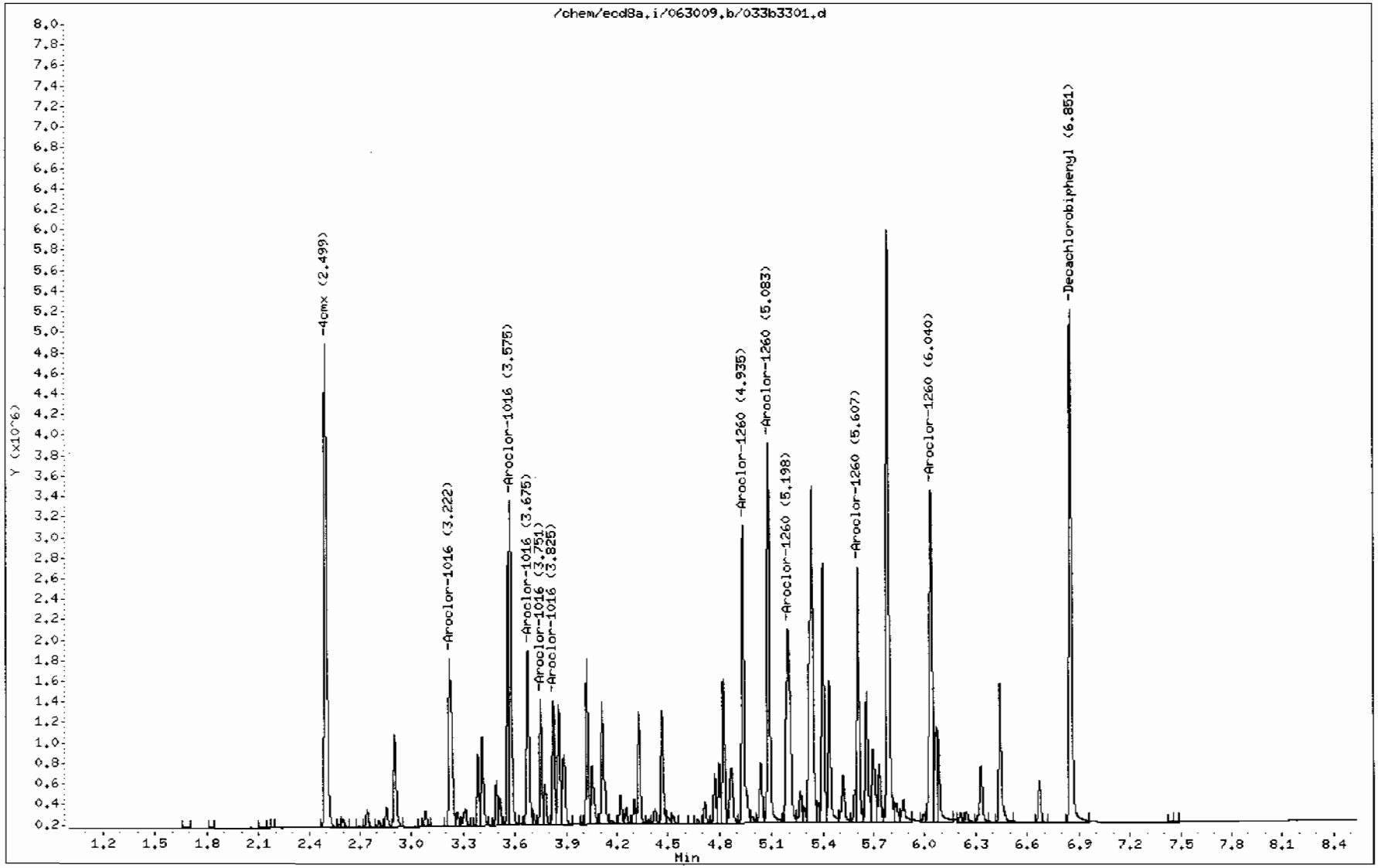

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/045f4501.d
Lab Smp Id: WAR090629-04604 Client Smp ID: AR166004
Inj Date : 30-JUN-2009 21:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04604
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 45 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	15713480	100.000	98.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	17090625	100.000	102	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.759	2.762	-0.003	6397692	1000.00	1110	80.00- 120.00	100.00(M)
3.110	3.112	-0.002	8267235	1000.00	1140	104.26- 144.26	129.22
3.253	3.256	-0.003	3204664	1000.00	1100	31.13- 71.13	50.09
3.362	3.365	-0.003	3075946	1000.00	1120	27.14- 67.14	48.08
3.508	3.510	-0.002	4141055	1000.00	1140	42.84- 82.84	64.73
Average of Peak Amounts =					1.12e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	7802732	1000.00	1090	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	11036924	1000.00	1090	122.43- 162.43	141.45
4.772	4.774	-0.002	12297330	1000.00	1070	138.51- 178.51	157.60
5.240	5.242	-0.002	14784108	1000.00	1100	171.28- 211.28	189.47
5.435	5.437	-0.002	7141663	1000.00	1090	73.47- 113.47	91.53
Average of Peak Amounts =					1.09e+03		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/045f4501.d

Date : 30-JUN-2009 21:36

Client ID: AR166004

Sample Info: IWAR090629-04604

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

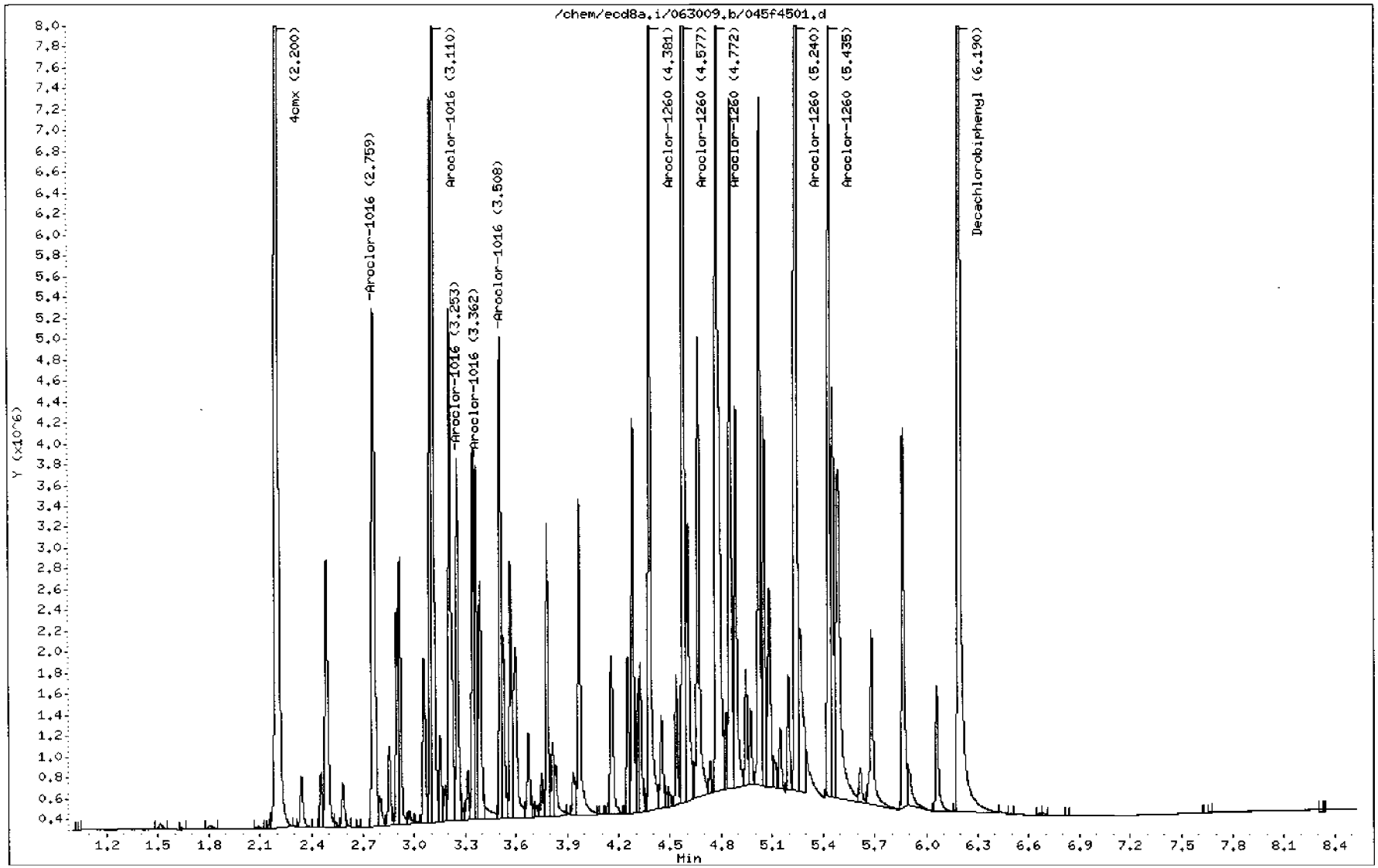

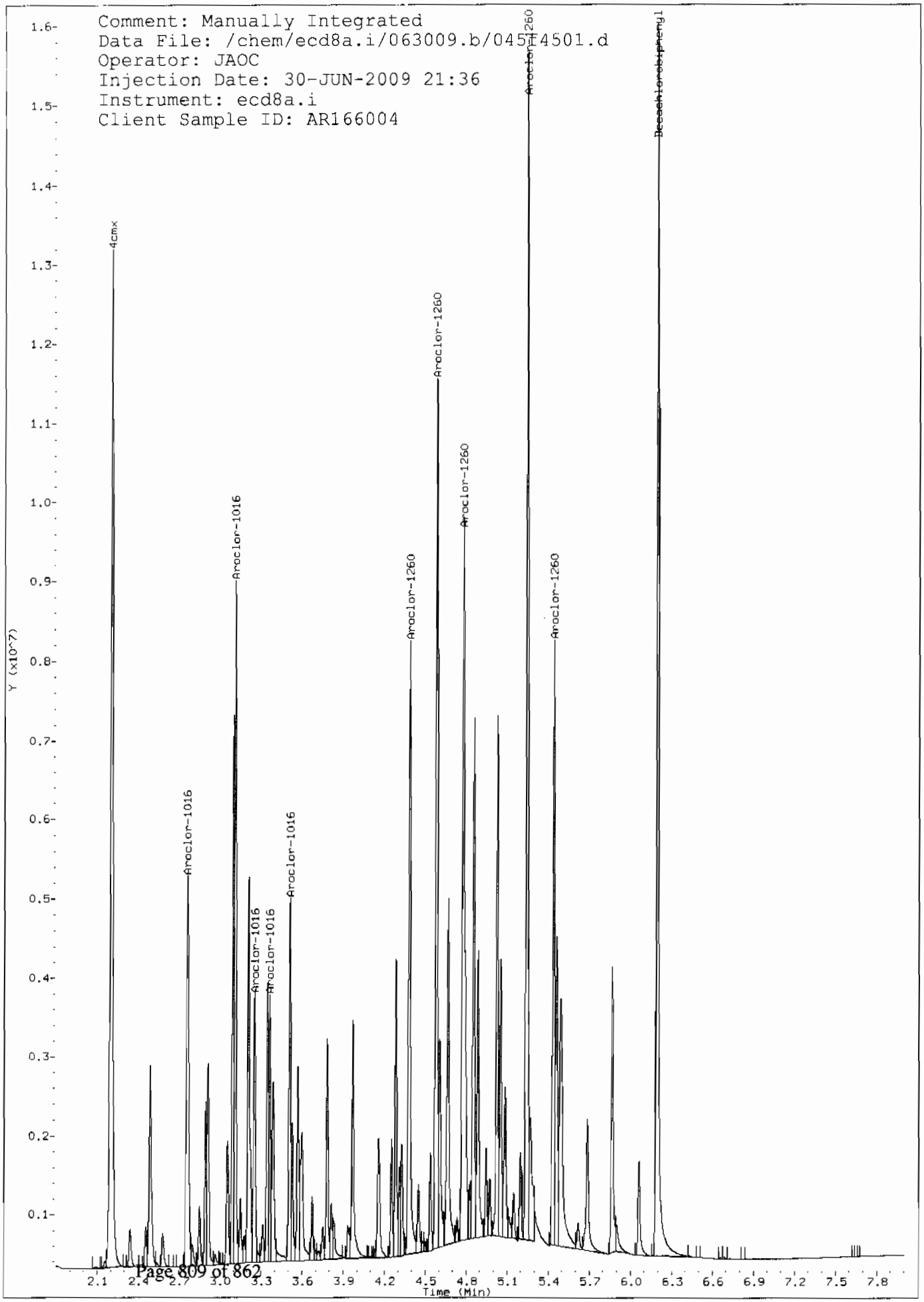
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/04514501.d
Operator: JAOC
Injection Date: 30-JUN-2009 21:36
Instrument: ecd8a.i
Client Sample ID: AR166004
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

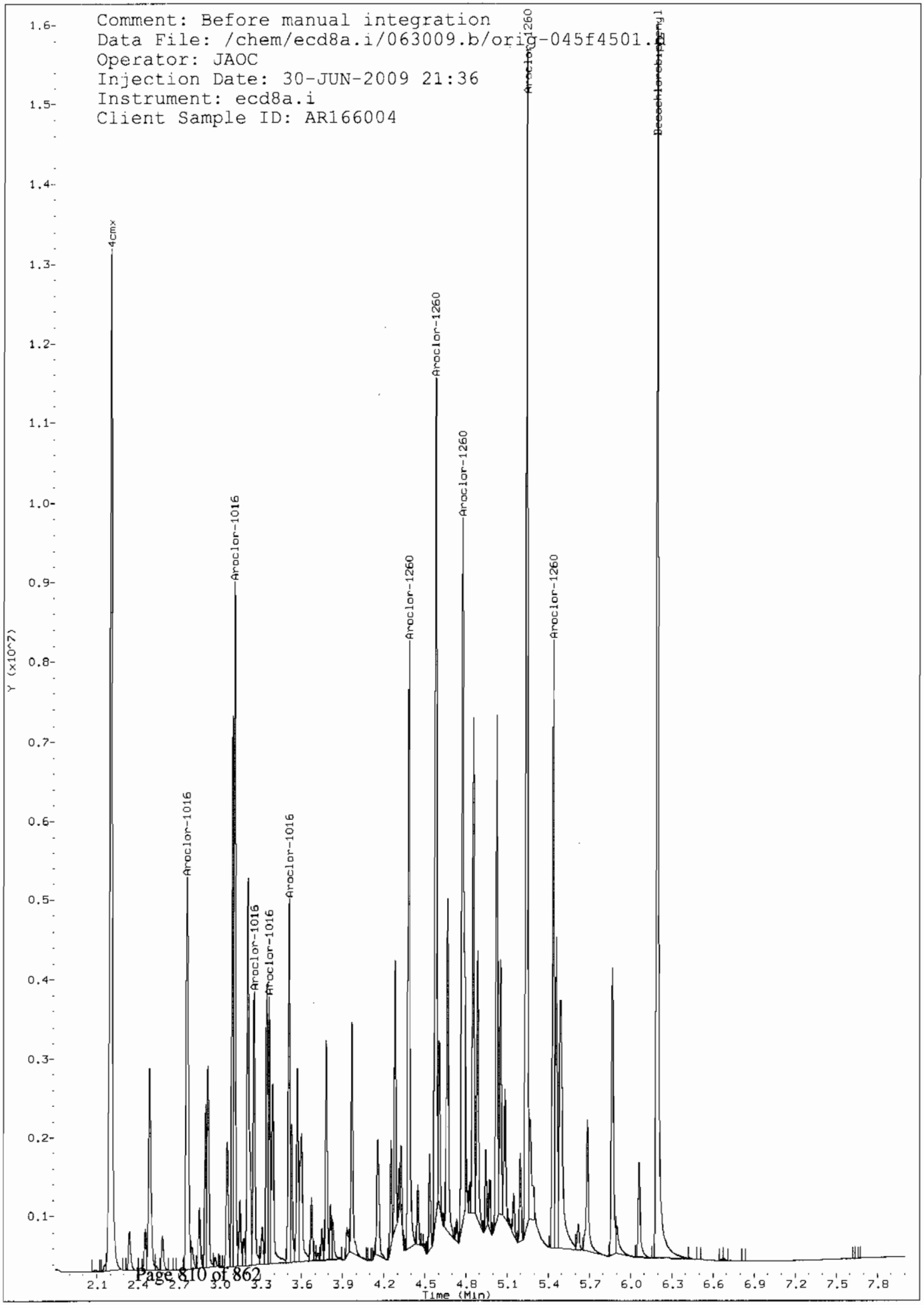
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-045f4501.d
Operator: JAOC
Injection Date: 30-JUN-2009 21:36
Instrument: ecd8a.i
Client Sample ID: AR166004
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/045b4501.d
Lab Smp Id: WAR090629-04604 Client Smp ID: AR166004
Inj Date : 30-JUN-2009 21:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04604
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 45 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	5211358	100.000	90.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	5280852	100.000	93.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.221	3.222	-0.001	2262511	1000.00	1020	80.00- 120.00	100.00
3.574	3.575	-0.001	3109633	1000.00	1060	118.74- 158.74	137.44
3.674	3.675	-0.001	1788772	1000.00	1030	60.26- 100.26	79.06
3.751	3.752	-0.001	1083324	1000.00	1040	28.23- 68.23	47.88
3.825	3.826	-0.001	1090367	1000.00	1020	28.70- 68.70	48.19
Average of Peak Amounts =				1.04e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	2942407	1000.00	1020	80.00- 120.00	100.00
5.082	5.083	-0.001	3633348	1000.00	1050	104.06- 144.06	123.48
5.197	5.199	-0.002	3275582	1000.00	1040	91.97- 131.97	111.32
5.607	5.608	-0.001	2468276	1000.00	1040	64.43- 104.43	83.89
6.039	6.041	-0.002	4018300	1000.00	1060	116.83- 156.83	136.57
Average of Peak Amounts =				1.04e+03			

Data File: /chem/ecd8a.i/063009.b/045b4501.d
Date : 30-JUN-2009 21:36
Client ID: AR166004
Sample Info: IWAR090629-04604
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

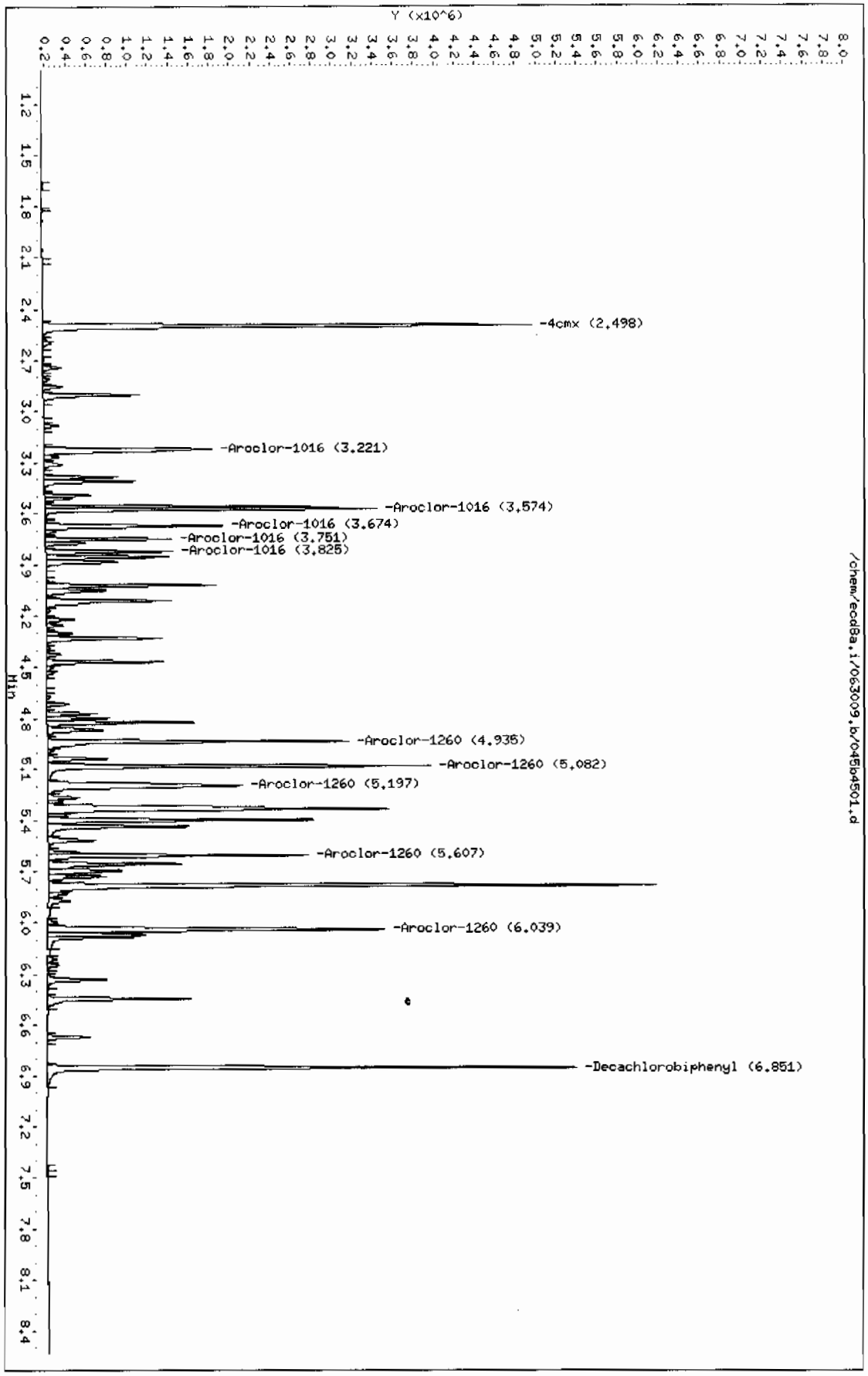

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8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/16/09	0823	2.20	6.19
02	AR166001	WAR090522-60	06/16/09	0836	2.20	6.19
03	AR125401	WAR090302-54	06/16/09	0848	2.20	6.19
04	AR124201	WAR090519-42	06/16/09	0901	2.20	6.19
05	AR124801	WAR090521-48	06/16/09	0913	2.20	6.19
06	AR166001	WAR090522-60	06/16/09	0925	2.20	6.19
07	AR124801	WAR090521-48	06/16/09	0943	2.21	6.20
08	AR166001	WAR090616-01	06/16/09	0956	2.21	6.20
09	AR166002	WAR090616-02	06/16/09	1009	2.20	6.19
10	AR166003	WAR090616-03	06/16/09	1021	2.20	6.19
11	AR166004	WAR090616-04	06/16/09	1033	2.20	6.19
12	AR166005	IAR090601-01	06/16/09	1046	2.20	6.19
13	AR166001	WAR090616-60	06/16/09	1058	2.20	6.19
14	AR123201	WAR090326-32	06/16/09	1110	2.20	6.19
15	AR122101	WAR090320-21	06/16/09	1123	2.20	6.19
16	AR126201	WAR090608-62	06/16/09	1135	2.20	6.19
17	AR126801	WAR090424-68	06/16/09	1147	2.20	6.19
18	DDTANALOGSTD	WAR090416-DD	06/16/09	1200	2.20	6.20
19	PIBLK02	WAR090519-99	06/16/09	1212	2.20	6.19
20	ZZZZZ	ZZZZZ	06/16/09	1224	2.20	6.19
21	ZZZZZ	ZZZZZ	06/16/09	1241	2.20	6.19
22	ZZZZZ	ZZZZZ	06/16/09	1253	2.20	6.19
23	ZZZZZ	ZZZZZ	06/16/09	1306	2.20	6.19
24	ZZZZZ	ZZZZZ	06/16/09	1322	2.20	6.19
25	ZZZZZ	ZZZZZ	06/16/09	1339	2.20	6.19
26	ZZZZZ	ZZZZZ	06/16/09	1355	2.20	6.19
27	ZZZZZ	ZZZZZ	06/16/09	1412	2.20	6.19
28	ZZZZZ	ZZZZZ	06/16/09	1428	2.20	6.19
29	AR166002	WAR090616-60	06/16/09	1445	2.20	6.19
30	PIBLK03	WAR090519-99	06/16/09	1457	2.20	6.19
31	ZZZZZ	ZZZZZ	06/16/09	1509	2.20	6.19
32	ZZZZZ	ZZZZZ	06/16/09	1526	2.20	6.19

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.86

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/16/09	0823	2.50	6.85
02	AR166001	WAR090522-60	06/16/09	0836	2.50	6.86
03	AR125401	WAR090302-54	06/16/09	0848	2.50	6.86
04	AR124201	WAR090519-42	06/16/09	0901	2.50	6.86
05	AR124801	WAR090521-48	06/16/09	0913	2.50	6.86
06	AR166001	WAR090522-60	06/16/09	0925	2.50	6.86
07	AR124801	WAR090521-48	06/16/09	0943	2.50	6.86
08	AR166001	WAR090616-01	06/16/09	0956	2.50	6.86
09	AR166002	WAR090616-02	06/16/09	1009	2.50	6.86
10	AR166003	WAR090616-03	06/16/09	1021	2.50	6.86
11	AR166004	WAR090616-04	06/16/09	1033	2.50	6.86
12	AR166005	IAR090601-01	06/16/09	1046	2.50	6.86
13	AR166001	WAR090616-60	06/16/09	1058	2.50	6.86
14	AR123201	WAR090326-32	06/16/09	1110	2.50	6.86
15	AR122101	WAR090320-21	06/16/09	1123	2.50	6.86
16	AR126201	WAR090608-62	06/16/09	1135	2.50	6.86
17	AR126801	WAR090424-68	06/16/09	1147	2.50	6.86
18	DDTANALOGSTD	WAR090416-DD	06/16/09	1200	2.50	6.86
19	PIBLK02	WAR090519-99	06/16/09	1212	2.50	6.86
20	ZZZZZ	ZZZZZ	06/16/09	1224	2.50	6.86
21	ZZZZZ	ZZZZZ	06/16/09	1241	2.50	6.86
22	ZZZZZ	ZZZZZ	06/16/09	1253	2.50	6.86
23	ZZZZZ	ZZZZZ	06/16/09	1306	2.50	6.86
24	ZZZZZ	ZZZZZ	06/16/09	1322	2.50	6.86
25	ZZZZZ	ZZZZZ	06/16/09	1339	2.50	6.85
26	ZZZZZ	ZZZZZ	06/16/09	1355	2.50	6.85
27	ZZZZZ	ZZZZZ	06/16/09	1412	2.50	6.85
28	ZZZZZ	ZZZZZ	06/16/09	1428	2.50	6.85
29	AR166002	WAR090616-60	06/16/09	1445	2.50	6.86
30	PIBLK03	WAR090519-99	06/16/09	1457	2.50	6.86
31	ZZZZZ	ZZZZZ	06/16/09	1509	2.50	6.86
32	ZZZZZ	ZZZZZ	06/16/09	1526	2.50	6.85

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

page 1 of 1

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/30/09	1046	2.20	6.19
02	AR166001	WAR090629-04	06/30/09	1059	2.20	6.19
03	AR125401	WAR090302-54	06/30/09	1111	2.20	6.19
04	AR124201	WAR090519-42	06/30/09	1124	2.20	6.19
05	AR124801	WAR090521-48	06/30/09	1136	2.20	6.19
06	AR123201	WAR090618-32	06/30/09	1148	2.20	6.19
07	AR122101	WAR090618-21	06/30/09	1203	2.20	6.20
08	AR126201	WAR090608-62	06/30/09	1216	2.20	6.19
09	AR126801	WAR090424-68	06/30/09	1228	2.20	6.19
10	DDTANALOGSTD	WAR090618-DD	06/30/09	1240	2.20	6.19
11	PIBLK02	WAR090519-99	06/30/09	1253	2.20	6.19
12	ZZZZZ	ZZZZZ	06/30/09	1305	2.20	6.19
13	ZZZZZ	ZZZZZ	06/30/09	1318	2.20	6.19
14	ZZZZZ	ZZZZZ	06/30/09	1330	2.20	6.19
15	ZZZZZ	ZZZZZ	06/30/09	1346	2.20	6.19
16	ZZZZZ	ZZZZZ	06/30/09	1403	2.20	6.19
17	ZZZZZ	ZZZZZ	06/30/09	1419	2.20	6.19
18	ZZZZZ	ZZZZZ	06/30/09	1436	2.20	6.19
19	ZZZZZ	ZZZZZ	06/30/09	1452	2.20	6.19
20	ZZZZZ	ZZZZZ	06/30/09	1509	2.20	6.19
21	ZZZZZ	ZZZZZ	06/30/09	1525	2.20	6.19
22	AR166002	WAR090629-04	06/30/09	1542	2.20	6.19
23	PIBLK03	WAR090519-99	06/30/09	1554	2.20	6.19
24	ZZZZZ	ZZZZZ	06/30/09	1606	2.20	6.19
25	ZZZZZ	ZZZZZ	06/30/09	1623	2.20	6.19
26	ZZZZZ	ZZZZZ	06/30/09	1639	2.20	6.19
27	ZZZZZ	ZZZZZ	06/30/09	1656	2.20	6.19
28	ZZZZZ	ZZZZZ	06/30/09	1712	2.20	6.19
29	ZZZZZ	ZZZZZ	06/30/09	1729	2.20	6.19
30	ZZZZZ	ZZZZZ	06/30/09	1745	2.20	6.19
31	ZZZZZ	ZZZZZ	06/30/09	1802	2.20	6.19
32	ZZZZZ	ZZZZZ	06/30/09	1818	2.20	6.19

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR166003	WAR090629-04	06/30/09	1835	2.20	6.19
02	PIBLK04	WAR090519-99	06/30/09	1847	2.20	6.19
03	PBLK01	1201870209	06/30/09	1859	2.20	6.19
04	PBLK01LCS	1201870210	06/30/09	1912	2.20	6.19
05	CAMO-09-10467	232348004	06/30/09	1924	2.20	6.19
06	CAMO-09-10467MS	1201870211	06/30/09	1941	2.20	6.19
07	CAMO-09-10467MSD	1201870212	06/30/09	1957	2.20	6.19
08	ZZZZZ	ZZZZZ	06/30/09	2014	2.20	6.19
09	ZZZZZ	ZZZZZ	06/30/09	2030	2.20	6.19
10	ZZZZZ	ZZZZZ	06/30/09	2047	2.20	6.19
11	ZZZZZ	ZZZZZ	06/30/09	2103	2.20	6.19
12	ZZZZZ	ZZZZZ	06/30/09	2120	2.20	6.19
13	AR166004	WAR090629-04	06/30/09	2136	2.20	6.19
14	PIBLK05	WAR090519-99	06/30/09	2148	2.20	6.19
15	ZZZZZ	ZZZZZ	06/30/09	2201	2.20	6.19
16	ZZZZZ	ZZZZZ	06/30/09	2213	2.21	6.19
17	ZZZZZ	ZZZZZ	06/30/09	2226	2.21	6.19
18	ZZZZZ	ZZZZZ	06/30/09	2242	2.20	6.19
19	ZZZZZ	ZZZZZ	06/30/09	2259	2.20	6.19
20	ZZZZZ	ZZZZZ	06/30/09	2315	2.20	6.19
21	AR166005	WAR090629-04	06/30/09	2331	2.20	6.19
22	PIBLK06	WAR090519-99	06/30/09	2344	2.20	6.19
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.85

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/30/09	1046	2.50	6.85
02	AR166001	WAR090629-04	06/30/09	1059	2.50	6.85
03	AR125401	WAR090302-54	06/30/09	1111	2.50	6.85
04	AR124201	WAR090519-42	06/30/09	1124	2.50	6.85
05	AR124801	WAR090521-48	06/30/09	1136	2.50	6.85
06	AR123201	WAR090618-32	06/30/09	1148	2.50	6.85
07	AR122101	WAR090618-21	06/30/09	1203	2.50	6.85
08	AR126201	WAR090608-62	06/30/09	1216	2.50	6.85
09	AR126801	WAR090424-68	06/30/09	1228	2.50	6.85
10	DDTANALOGSTD	WAR090618-DD	06/30/09	1240	2.50	6.85
11	PIBLK02	WAR090519-99	06/30/09	1253	2.50	6.85
12	ZZZZZ	ZZZZZ	06/30/09	1305	2.50	6.85
13	ZZZZZ	ZZZZZ	06/30/09	1318	2.50	6.85
14	ZZZZZ	ZZZZZ	06/30/09	1330	2.50	6.85
15	ZZZZZ	ZZZZZ	06/30/09	1346	2.50	6.85
16	ZZZZZ	ZZZZZ	06/30/09	1403	2.50	6.85
17	ZZZZZ	ZZZZZ	06/30/09	1419	2.50	6.85
18	ZZZZZ	ZZZZZ	06/30/09	1436	2.50	6.85
19	ZZZZZ	ZZZZZ	06/30/09	1452	2.50	6.85
20	ZZZZZ	ZZZZZ	06/30/09	1509	2.50	6.85
21	ZZZZZ	ZZZZZ	06/30/09	1525	2.50	6.85
22	AR166002	WAR090629-04	06/30/09	1542	2.50	6.85
23	PIBLK03	WAR090519-99	06/30/09	1554	2.50	6.85
24	ZZZZZ	ZZZZZ	06/30/09	1606	2.50	6.85
25	ZZZZZ	ZZZZZ	06/30/09	1623	2.50	6.85
26	ZZZZZ	ZZZZZ	06/30/09	1639	2.50	6.85
27	ZZZZZ	ZZZZZ	06/30/09	1656	2.50	6.85
28	ZZZZZ	ZZZZZ	06/30/09	1712	2.50	6.85
29	ZZZZZ	ZZZZZ	06/30/09	1729	2.50	6.85
30	ZZZZZ	ZZZZZ	06/30/09	1745	2.50	6.85
31	ZZZZZ	ZZZZZ	06/30/09	1802	2.50	6.85
32	ZZZZZ	ZZZZZ	06/30/09	1818	2.50	6.85

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2457

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.85

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR166003	WAR090629-04	06/30/09	1835	2.50	6.85
02	PIBLK04	WAR090519-99	06/30/09	1847	2.50	6.85
03	PBLK01	1201870209	06/30/09	1859	2.50	6.85
04	PBLK01LCS	1201870210	06/30/09	1912	2.50	6.85
05	CAMO-09-10467	232348004	06/30/09	1924	2.50	6.85
06	CAMO-09-10467MS	1201870211	06/30/09	1941	2.50	6.85
07	CAMO-09-10467MSD	1201870212	06/30/09	1957	2.50	6.85
08	ZZZZZ	ZZZZZ	06/30/09	2014	2.50	6.85
09	ZZZZZ	ZZZZZ	06/30/09	2030	2.50	6.85
10	ZZZZZ	ZZZZZ	06/30/09	2047	2.50	6.85
11	ZZZZZ	ZZZZZ	06/30/09	2103	2.50	6.85
12	ZZZZZ	ZZZZZ	06/30/09	2120	2.50	6.85
13	AR166004	WAR090629-04	06/30/09	2136	2.50	6.85
14	PIBLK05	WAR090519-99	06/30/09	2148	2.50	6.85
15	ZZZZZ	ZZZZZ	06/30/09	2201	2.50	6.85
16	ZZZZZ	ZZZZZ	06/30/09	2213	2.50	6.85
17	ZZZZZ	ZZZZZ	06/30/09	2226	2.50	6.85
18	ZZZZZ	ZZZZZ	06/30/09	2242	2.50	6.85
19	ZZZZZ	ZZZZZ	06/30/09	2259	2.50	6.85
20	ZZZZZ	ZZZZZ	06/30/09	2315	2.50	6.85
21	AR166005	WAR090629-04	06/30/09	2331	2.50	6.85
22	PIBLK06	WAR090519-99	06/30/09	2344	2.50	6.85
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Identification Summary

SDG Number: 09-2457 **Client ID:** CAMO-09-10467MS

Lab Sample ID: 1201870211

Data File:	038f3801.d	**Data File:**	038b3801.d
Inst:	ECD8A.I_1	**Inst:**	ECD8A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	30-JUN-09 19:41	**Analyzed:**	30-JUN-09 19:41

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							9.61
Column 1	1	2.76	2.73 – 2.79	19		ug/kg	
	2	3.11	3.08 – 3.14	19.3		ug/kg	
	3	3.25	3.23 – 3.29	20.9		ug/kg	
	4	3.36	3.33 – 3.39	21.8		ug/kg	
	5	3.51	3.48 – 3.54	21.4		ug/kg	
					20.5		
Column 2	1	3.22	3.19 – 3.25	17		ug/kg	
	2	3.57	3.54 – 3.6	19.5		ug/kg	
	3	3.67	3.64 – 3.7	19		ug/kg	
	4	3.75	3.72 – 3.78	19		ug/kg	
	5	3.83	3.8 – 3.86	18.4		ug/kg	
					18.6		
Aroclor-1260							10.6
Column 1	1	4.38	4.35 – 4.41	24.5		ug/kg	
	2	4.58	4.55 – 4.61	25.5		ug/kg	
	3	4.77	4.74 – 4.8	24.2		ug/kg	
	4	5.24	5.21 – 5.27	30.5		ug/kg	
	5	5.44	5.41 – 5.47	28.7		ug/kg	
					26.7		
Column 2	1	4.94	4.91 – 4.97	22		ug/kg	
	2	5.08	5.05 – 5.11	23.1		ug/kg	
	3	5.2	5.17 – 5.23	22.5		ug/kg	
	4	5.61	5.58 – 5.64	26		ug/kg	
	5	6.04	6.01 – 6.07	26.4		ug/kg	
					24		

Identification Summary

SDG Number: 09-2457 **Client ID:** CAMO-09-10467MSD

Lab Sample ID: 1201870212

Data File:	039f3901.d	**Data File:**	039b3901.d
Inst:	ECD8A.I_1	**Inst:**	ECD8A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	30-JUN-09 19:57	**Analyzed:**	30-JUN-09 19:57

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							12.4
Column 1	1	2.76	2.73 – 2.79	17.8*		ug/kg	
	2	3.11	3.08 – 3.14	18.6		ug/kg	
	3	3.25	3.23 – 3.29	20.1		ug/kg	
	4	3.36	3.33 – 3.39	20		ug/kg	
	5	3.51	3.48 – 3.54	19.9		ug/kg	
					19.3		
Column 2	1	3.22	3.19 – 3.25	15.8		ug/kg	
	2	3.57	3.54 – 3.6	17.8		ug/kg	
	3	3.67	3.64 – 3.7	17.3		ug/kg	
	4	3.75	3.72 – 3.78	17.1		ug/kg	
	5	3.82	3.8 – 3.86	17.1		ug/kg	
					17		
Aroclor-1260							12.6
Column 1	1	4.38	4.35 – 4.41	23.4		ug/kg	
	2	4.58	4.55 – 4.61	25.2		ug/kg	
	3	4.77	4.74 – 4.8	23.9		ug/kg	
	4	5.24	5.21 – 5.27	30.2		ug/kg	
	5	5.44	5.41 – 5.47	28		ug/kg	
					26.1		
Column 2	1	4.94	4.91 – 4.97	21.1		ug/kg	
	2	5.08	5.05 – 5.11	22.2		ug/kg	
	3	5.2	5.17 – 5.23	21.5		ug/kg	
	4	5.61	5.58 – 5.64	25		ug/kg	
	5	6.04	6.01 – 6.07	25.5		ug/kg	
					23.1		

Identification Summary

SDG Number: 09-2457 **Client ID:** LCS for batch 880782

Lab Sample ID: 1201870210

Data File: 036f3601.d **Data File:** 036b3601.d

Inst: ECD8A.I_1 **Inst:** ECD8A.I_2

Column: CLP1 **Column:** CLP2

Analyzed: 30-JUN-09 19:12 **Analyzed:** 30-JUN-09 19:12

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							11.1
Column 1	1	2.76	2.73 – 2.79	21.4		ug/kg	
	2	3.11	3.08 – 3.14	22.2		ug/kg	
	3	3.26	3.23 – 3.29	23.6		ug/kg	
	4	3.37	3.33 – 3.39	24.2		ug/kg	
	5	3.51	3.48 – 3.54	23.9		ug/kg	
					23.1		
Column 2	1	3.22	3.19 – 3.25	19.4		ug/kg	
	2	3.58	3.54 – 3.6	21.6		ug/kg	
	3	3.68	3.64 – 3.7	21		ug/kg	
	4	3.75	3.72 – 3.78	20.9		ug/kg	
	5	3.83	3.8 – 3.86	20.4		ug/kg	
					20.6		
Aroclor-1260							10.2
Column 1	1	4.38	4.35 – 4.41	27.5		ug/kg	
	2	4.58	4.55 – 4.61	28.9		ug/kg	
	3	4.77	4.74 – 4.8	27.5		ug/kg	
	4	5.24	5.21 – 5.27	35.3		ug/kg	
	5	5.44	5.41 – 5.47	32.9		ug/kg	
					30.4		
Column 2	1	4.94	4.91 – 4.97	24.9		ug/kg	
	2	5.08	5.05 – 5.11	26.4		ug/kg	
	3	5.2	5.17 – 5.23	25.5		ug/kg	
	4	5.61	5.58 – 5.64	29.9		ug/kg	
	5	6.04	6.01 – 6.07	30.6		ug/kg	
					27.5		

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2457**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201870209**				
Client Sample:	**QC for batch 880782**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 880782**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**880783**	**Inst:**	**ECD8A.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 18:59**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**06/29/2009 16:16**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**035f3501-1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	035b3501-1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.33	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/035f3501.d
Lab Smp Id: 1201870209 Client Smp ID: PBLK01
Inj Date : 30-JUN-2009 18:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870209|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 35 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	22348266	139.638	4.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.192	6.193	-0.001	26748987	159.292	5.3	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/035f3501.d

Date : 30-JUN-2009 18:59

Client ID: PBLK01

Sample Info: 1120187020911

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

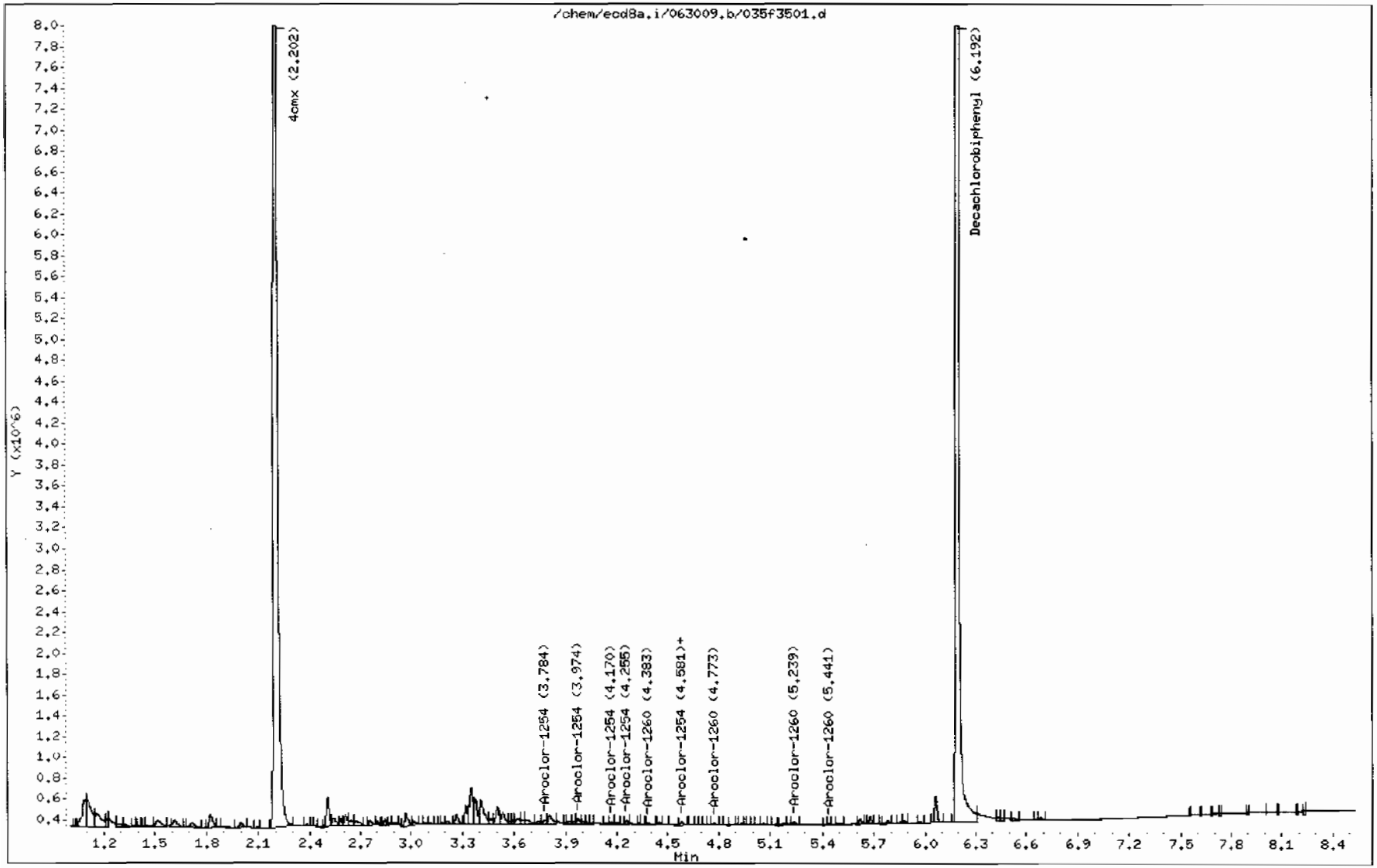

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/035b3501.d
Lab Smp Id: 1201870209 Client Smp ID: PBLK01
Inj Date : 30-JUN-2009 18:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870209|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 35 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	7469251	129.483	4.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	8204878	145.675	4.8	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/035b3501.d
Date : 30-JUN-2009 18:59
Client ID: PBLK01
Sample Info: |120187020911|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

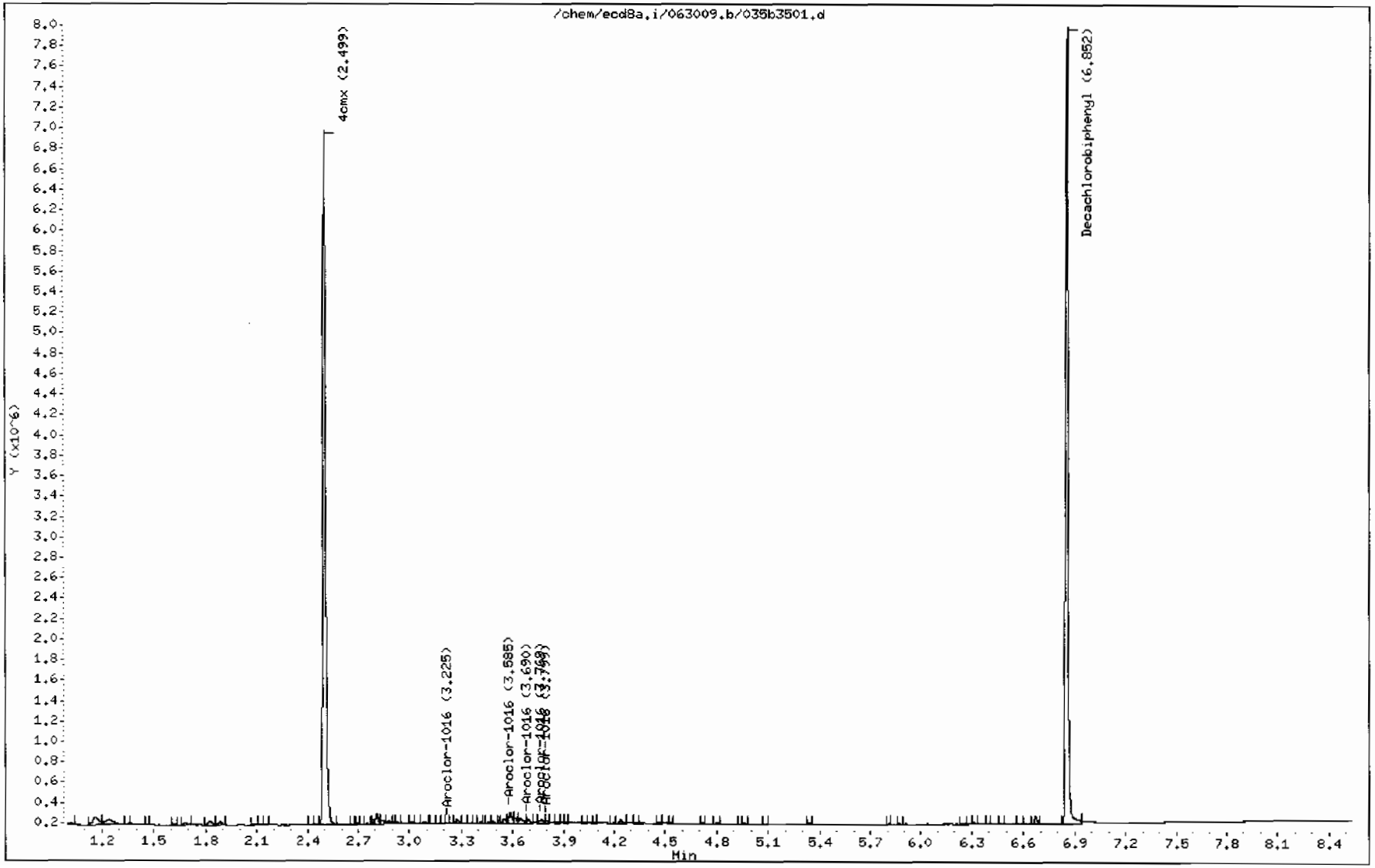

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2457			**Matrix:**	SOIL
Lab Sample ID:	1201870210				
Client Sample:	QC for batch 880782	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 880782	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 19:12	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	036f3601-1.d	**Column:**	1 CLP1	**Level:**	LOW
	036b3601-1.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		23.1	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260		30.4	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/036f3601.d
Lab Smp Id: 1201870210 Client Smp ID: PBLK01LCS
Inj Date : 30-JUN-2009 19:12
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870210|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 36 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	23353499	145.919	4.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	26590849	158.350	5.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.761	2.762	-0.001	3696297	640.917	21.4	80.00- 120.00	100.00
3.113	3.112	0.001	4819280	667.054	22.2	104.26- 144.26	130.38
3.255	3.256	-0.001	2057110	707.042	23.6	31.13- 71.13	55.65
3.365	3.365	0.000	1999113	726.219	24.2	27.14- 67.14	54.08
3.510	3.510	0.000	2604515	717.760	23.9	42.84- 82.84	70.46

Average of Peak Concentrations = 23.1

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.384	4.383	0.001	5891206	826.448	27.5	80.00- 120.00	100.00(M)
4.579	4.579	0.000	8734283	865.765	28.8	122.43- 162.43	148.26
4.774	4.774	0.000	9459716	823.865	27.5	138.51- 178.51	160.57
5.241	5.242	-0.001	14178759	1058.48	35.3	171.28- 211.28	240.68
5.437	5.437	0.000	6459924	985.992	32.9	73.47- 113.47	109.65
Average of Peak Concentrations =					30.4		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/036f3601.d
Date : 30-JUN-2009 19:12
Client ID: PBLK01LCS
Sample Info: 1120187021011
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

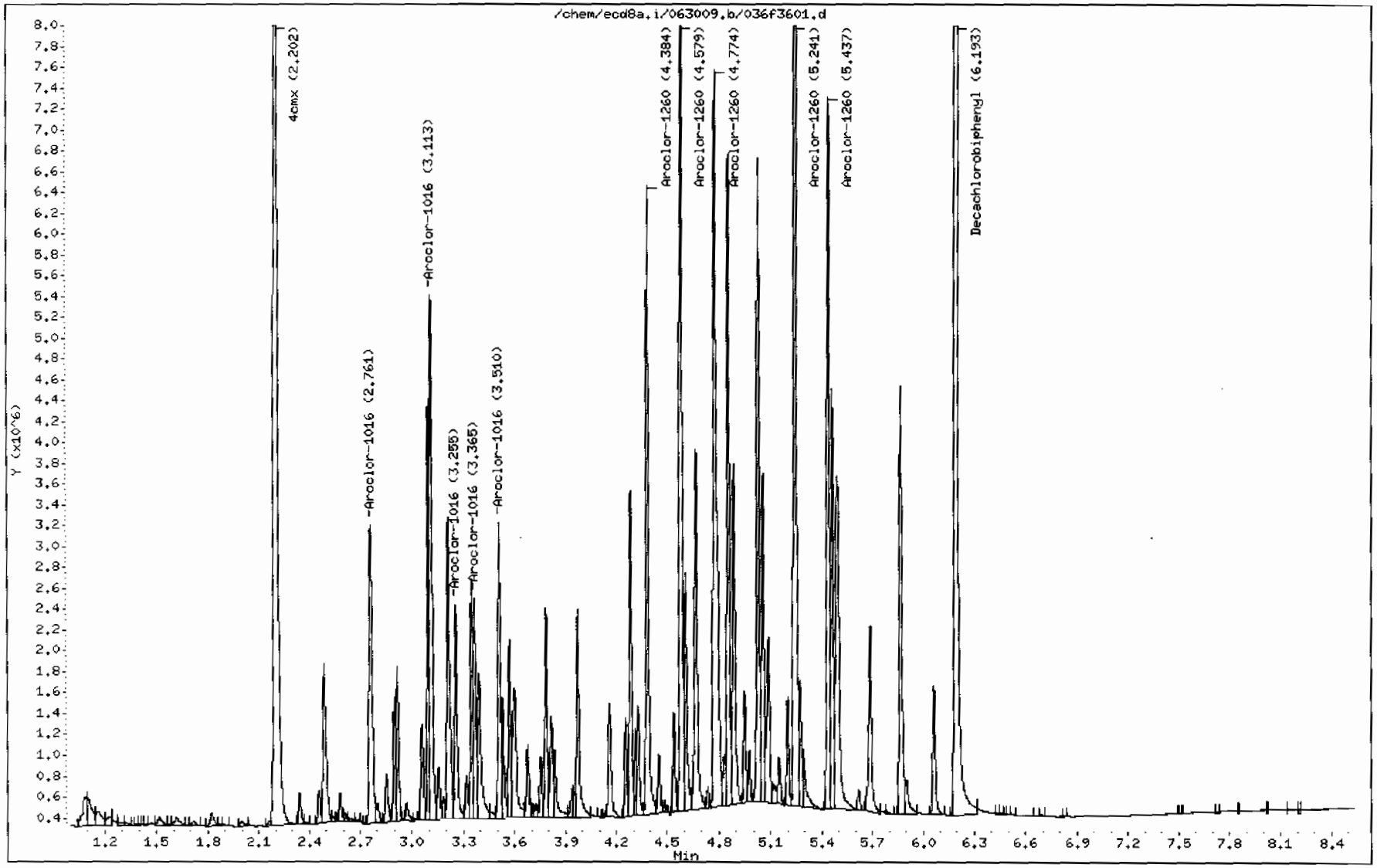

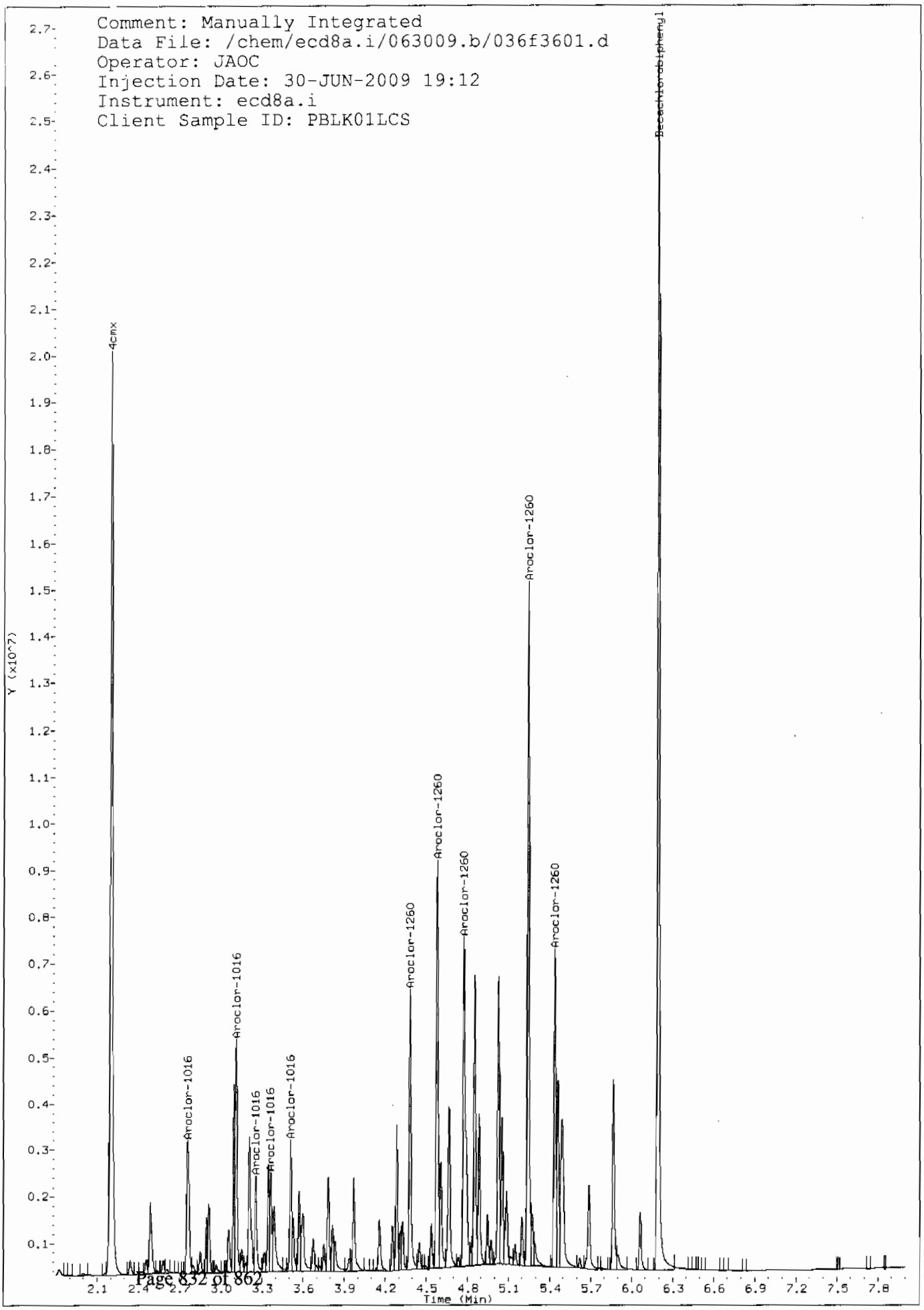
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/036f3601.d
Operator: JAOC
Injection Date: 30-JUN-2009 19:12
Instrument: ecd8a.i
Client Sample ID: PBLK01LCS
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

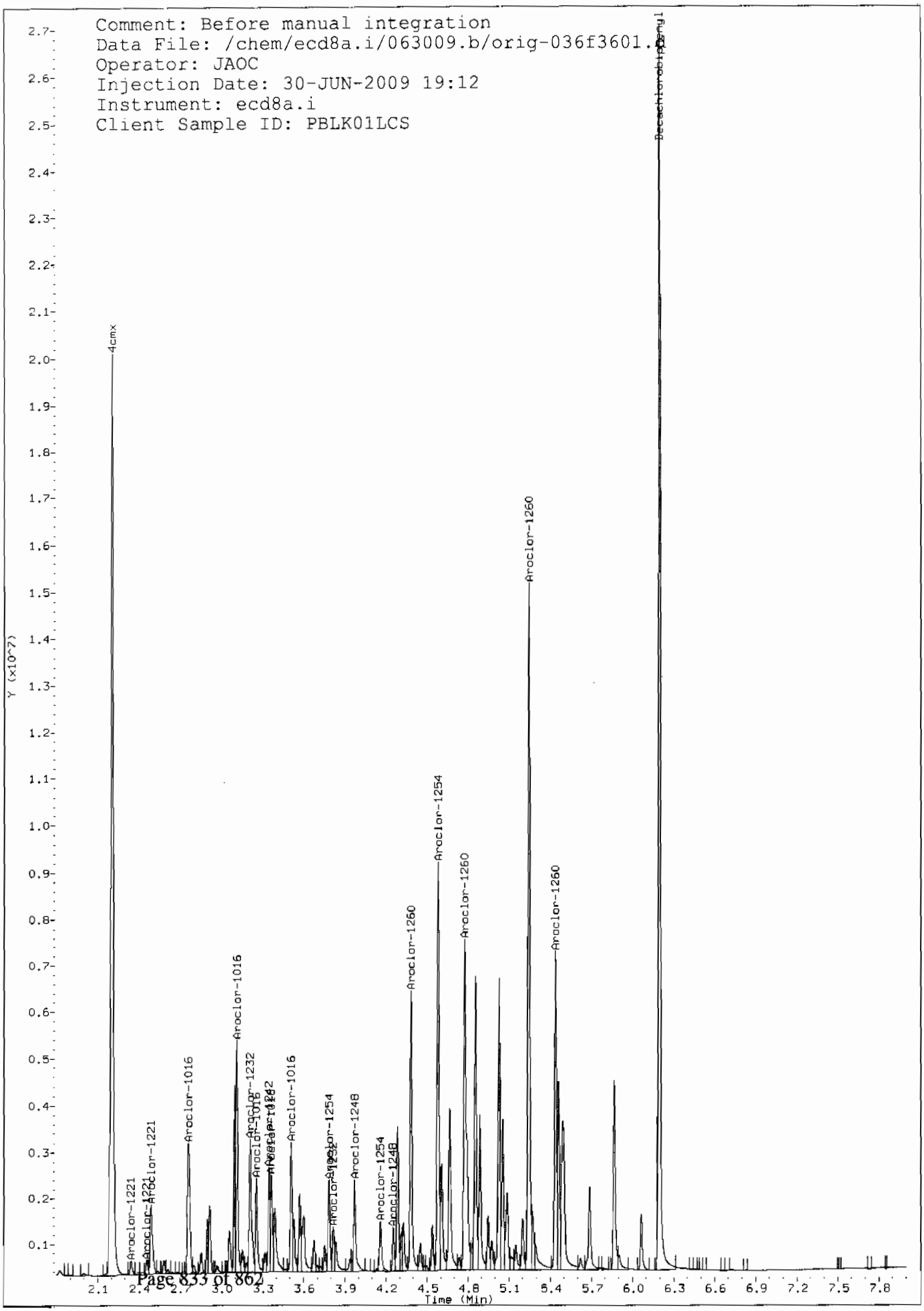
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-036f3601.
Operator: JAOC
Injection Date: 30-JUN-2009 19:12
Instrument: ecd8a.i
Client Sample ID: PBLK01LCS
Decachlorobiphenyl
4cmx
Aroclor-1260
Aroclor-1254
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1221
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/036b3601.d
Lab Smp Id: 1201870210 Client Smp ID: PBLK01LCS
Inj Date : 30-JUN-2009 19:12
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870210|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 36 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	7802262	135.256	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	8186550	145.350	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.223	3.222	0.001	1281079	580.790	19.4	80.00- 120.00	100.00
3.575	3.575	0.000	1896944	647.231	21.6	118.74- 158.74	148.07
3.675	3.675	0.000	1095603	629.990	21.0	60.26- 100.26	85.52
3.752	3.752	0.000	650861	626.957	20.9	28.23- 68.23	50.81
3.826	3.826	0.000	653836	610.919	20.4	28.70- 68.70	51.04

Average of Peak Concentrations = 20.7

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.936	4.936	0.000	2150076	746.023	24.9	80.00- 120.00	100.00
5.084	5.083	0.001	2740615	792.835	26.4	104.06- 144.06	127.47
5.199	5.199	0.000	2417909	765.516	25.5	91.97- 131.97	112.46
5.609	5.608	0.001	2122786	896.416	29.9	64.43- 104.43	98.73
6.039	6.041	-0.002	3461802	918.170	30.6	116.83- 156.83	161.01

Average of Peak Concentrations = 27.5

Data File: /chem/ecd8a.i/063009.b/036b3601.d

Date : 30-JUN-2009 19:12

Client ID: PBLK01LCS

Sample Info: |120187021011|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

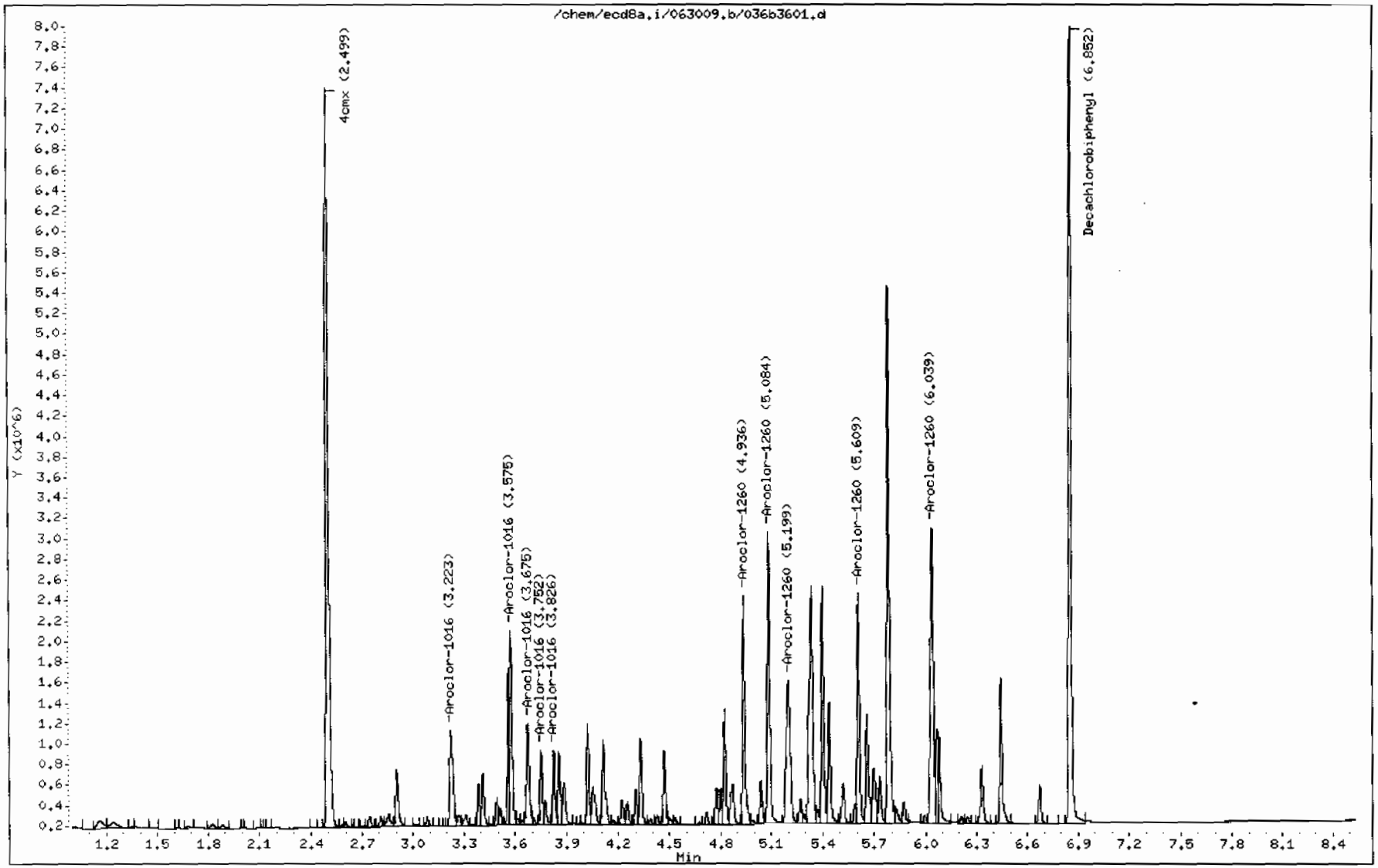

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201870211	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
Client Sample:	QC for batch 880782	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10467MS	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 19:41	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	038f3801.d	**Column:**	1 CLP1	**Level:**	LOW
	038b3801.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		20.5	ug/kg	1.16	3.49	1
11104-28-2	Aroclor-1221	U	3.49	ug/kg	1.16	3.49	1
11141-16-5	Aroclor-1232	U	3.49	ug/kg	1.16	3.49	1
53469-21-9	Aroclor-1242	U	3.49	ug/kg	1.16	3.49	1
12672-29-6	Aroclor-1248	U	3.49	ug/kg	1.16	3.49	1
11097-69-1	Aroclor-1254	U	3.49	ug/kg	1.16	3.49	1
11096-82-5	Aroclor-1260		26.7	ug/kg	1.16	3.49	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/038f3801.d
Lab Smp Id: 1201870211 Client Smp ID: CAMO-09-10467MS
Inj Date : 30-JUN-2009 19:41
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870211|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 38 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	4.53430	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	19728056	123.266	4.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	22661322	134.950	4.7	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.759	2.762	-0.003	3137777	544.073	19.0	80.00- 120.00	100.00
3.111	3.112	-0.001	3989252	552.167	19.3	104.26- 144.26	127.14
3.254	3.256	-0.002	1740999	598.392	20.9	31.13- 71.13	55.49
3.364	3.365	-0.001	1723675	626.160	21.8	27.14- 67.14	54.93
3.508	3.510	-0.002	2222852	612.580	21.4	42.84- 82.84	70.84

Average of Peak Concentrations = 20.5

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.382	4.383	-0.001	5011946	703.101	24.5	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	7379213	731.447	25.5	122.43- 162.43	147.23
4.772	4.774	-0.002	7973213	694.403	24.2	138.51- 178.51	159.08
5.239	5.242	-0.003	11706431	873.912	30.5	171.28- 211.28	233.57
5.435	5.437	-0.002	5390510	822.765	28.7	73.47- 113.47	107.55
			Average of Peak Concentrations =		26.7		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/038f3801.d
Date : 30-JUN-2009 19:41
Client ID: CAMO-09-10467MS
Sample Info: !1201870211!1!
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

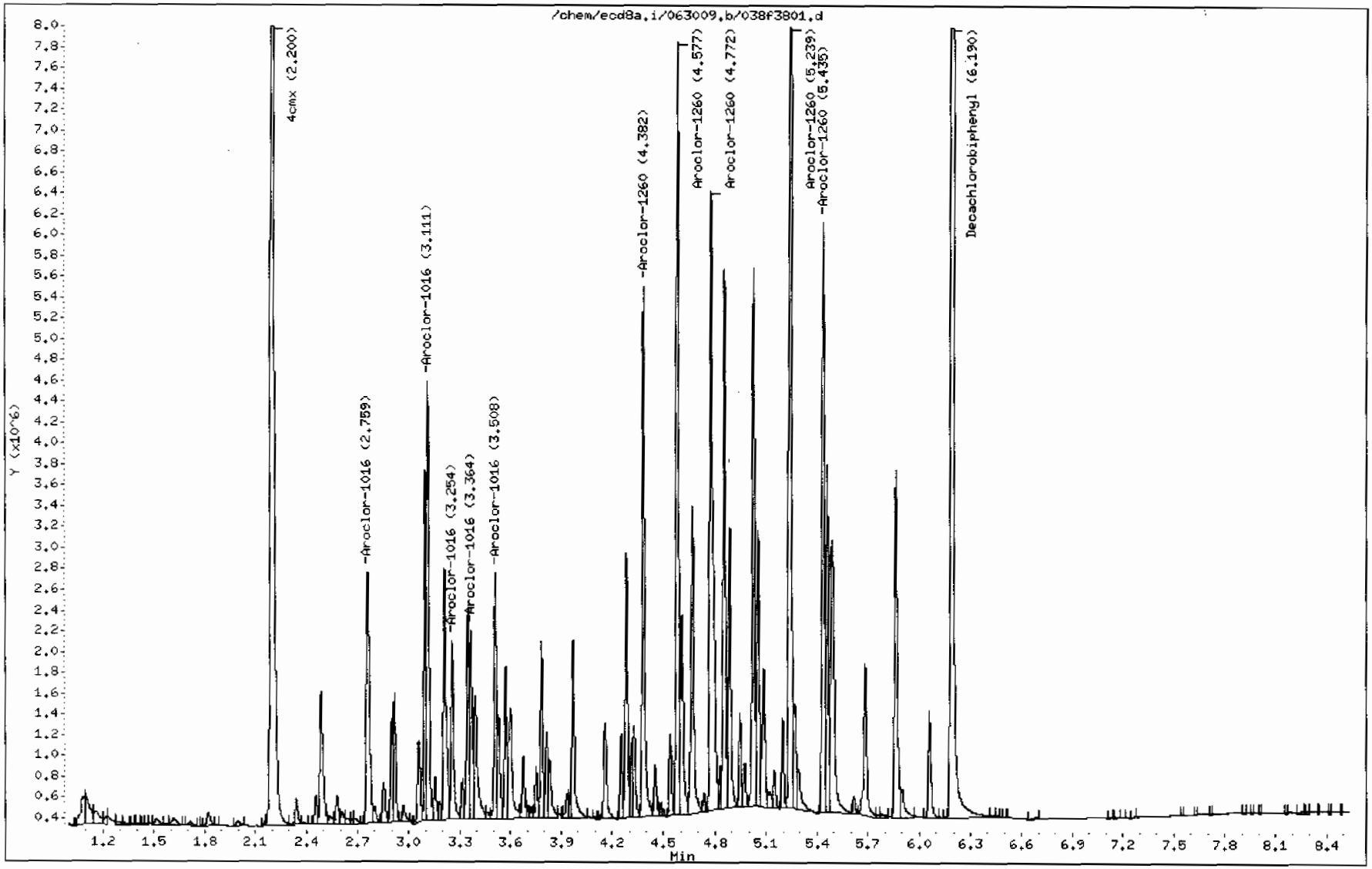

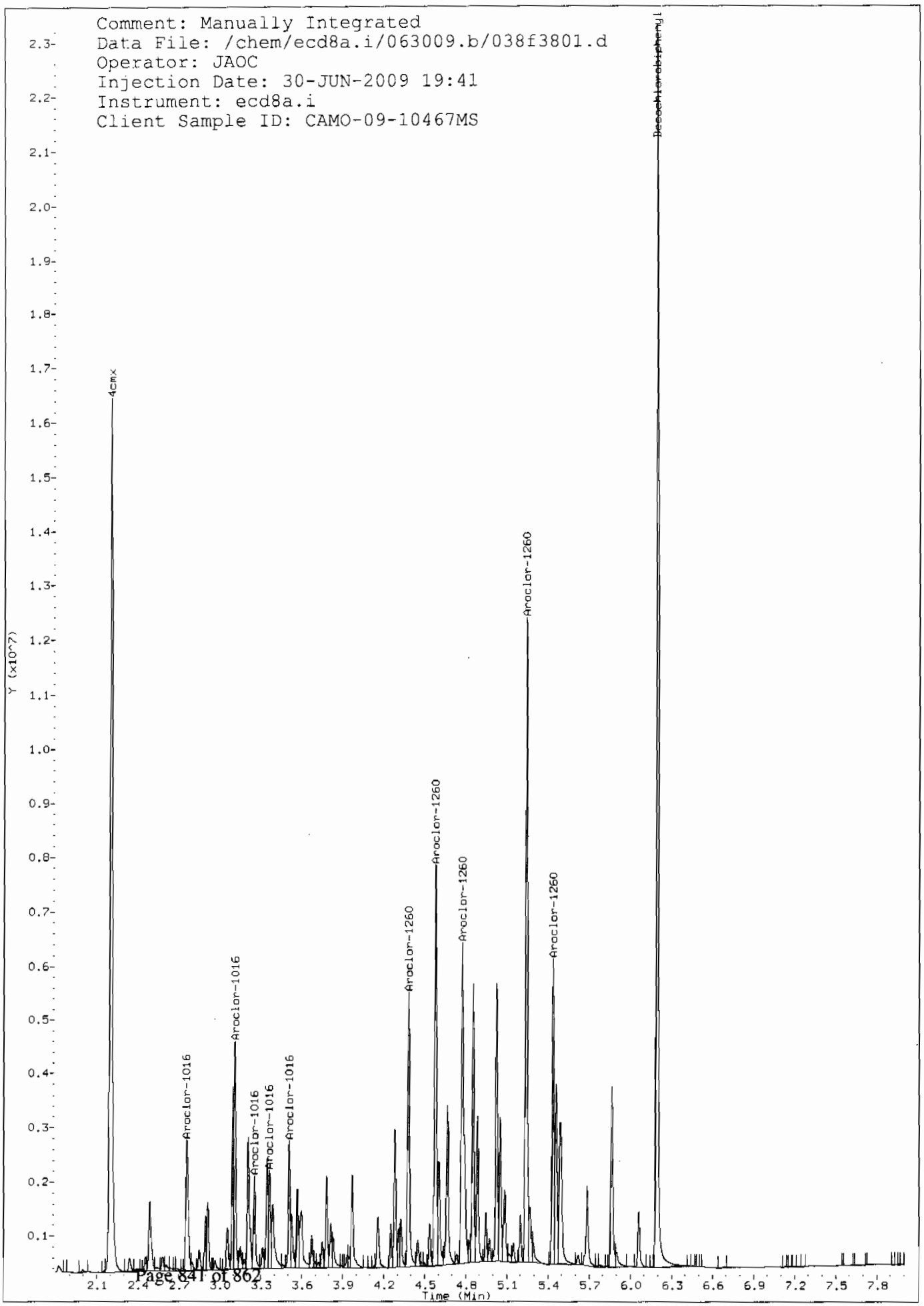
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/038f3801.d
Operator: JAOC
Injection Date: 30-JUN-2009 19:41
Instrument: ecd8a.i
Client Sample ID: CAMO-09-10467MS
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

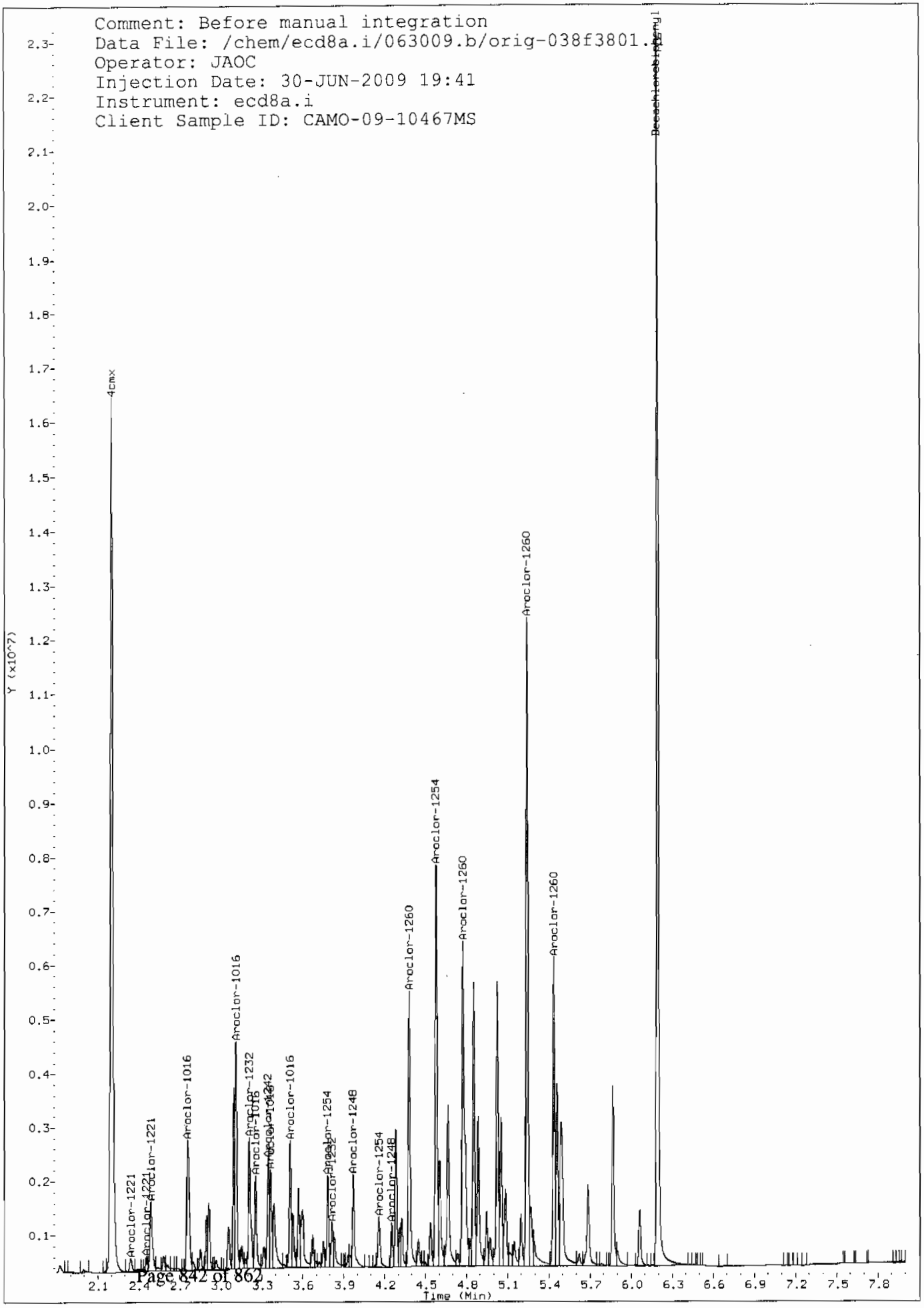
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-038f3801.
Operator: JAOC
Injection Date: 30-JUN-2009 19:41
Instrument: ecd8a.i
Client Sample ID: CAMO-09-10467MS
Y (x10^7)
Time (Min)
4cmx
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1248
Aroclor-1260

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/038b3801.d
Lab Smp Id: 1201870211 Client Smp ID: CAMO-09-10467MS
Inj Date : 30-JUN-2009 19:41
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870211|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 38 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	4.53430	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	6621829	114.793	4.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	6939284	123.205	4.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	1076297	487.950	17.0	80.00- 120.00	100.00
3.574	3.575	-0.001	1639464	559.380	19.5	118.74- 158.74	152.32
3.674	3.675	-0.001	947541	544.852	19.0	60.26- 100.26	88.04
3.751	3.752	-0.001	565505	544.736	19.0	28.23- 68.23	52.54
3.825	3.826	-0.001	564402	527.355	18.4	28.70- 68.70	52.44

Average of Peak Concentrations = 18.6

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	1816294	630.209	22.0	80.00- 120.00	100.00
5.083	5.083	0.000	2290188	662.530	23.1	104.06- 144.06	126.09
5.198	5.199	-0.001	2032310	643.434	22.4	91.97- 131.97	111.89
5.607	5.608	-0.001	1767583	746.420	26.0	64.43- 104.43	97.32
6.038	6.041	-0.003	2852133	756.468	26.4	116.83- 156.83	157.03
Average of Peak Concentrations =					24.0		

Data File: /chem/ecd8a.i/063009.b/038b3801.d
Date : 30-JUN-2009 19:41
Client ID: CAMO-09-10467MS
Sample Info: 1120187021111
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

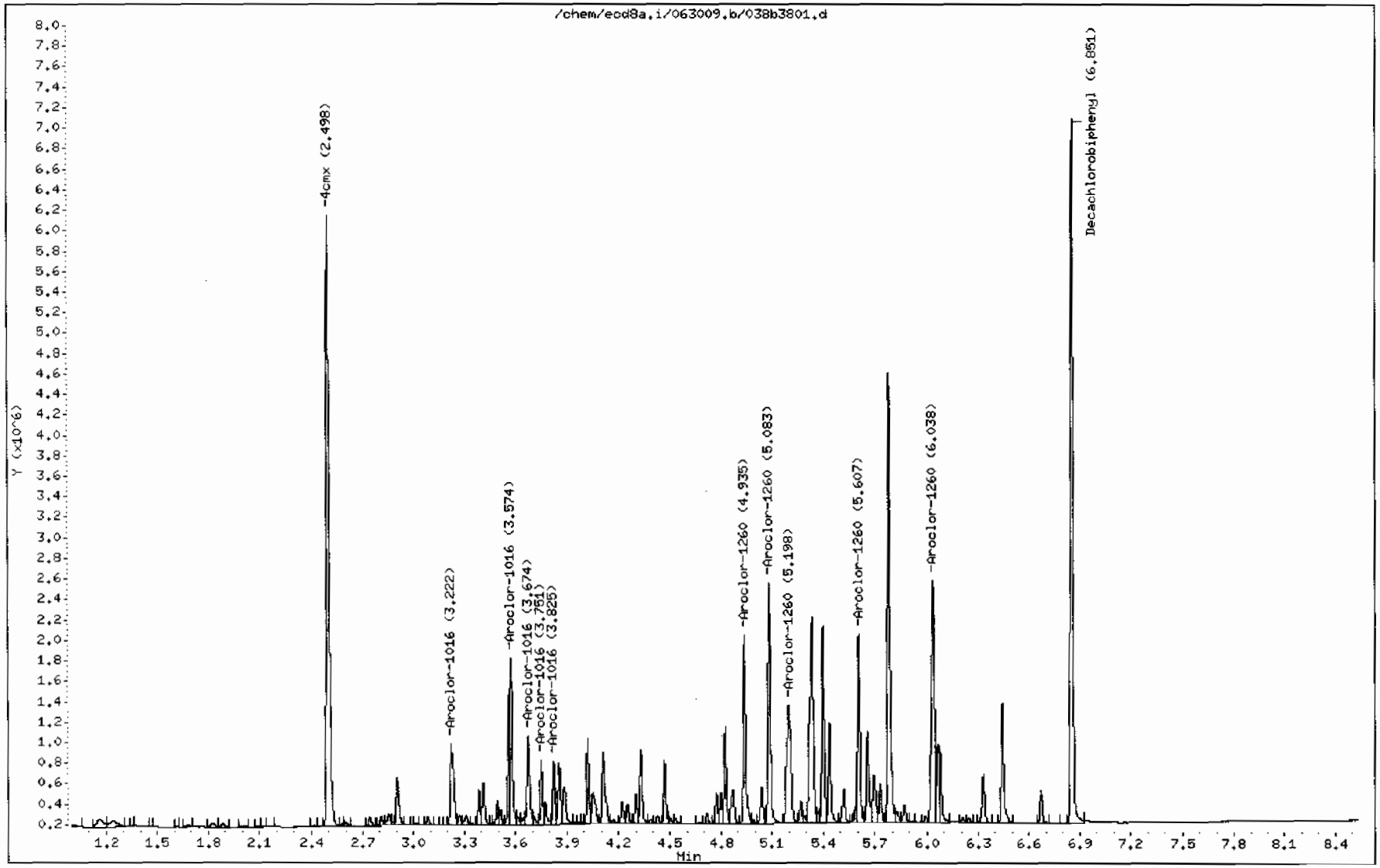

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2457	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201870212	**Date Received:**	06/25/2009 08:45	**%Moisture:**	4.5
Client Sample:	QC for batch 880782	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10467MSD	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 19:57	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30.11 g	**Final Volume:**	1 mL
Data File:	039f3901.d	**Column:**	1 CLP1	**Level:**	LOW
	039b3901.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		19.3	ug/kg	1.16	3.48	1
11104-28-2	Aroclor-1221	U	3.48	ug/kg	1.16	3.48	1
11141-16-5	Aroclor-1232	U	3.48	ug/kg	1.16	3.48	1
53469-21-9	Aroclor-1242	U	3.48	ug/kg	1.16	3.48	1
12672-29-6	Aroclor-1248	U	3.48	ug/kg	1.16	3.48	1
11097-69-1	Aroclor-1254	U	3.48	ug/kg	1.16	3.48	1
11096-82-5	Aroclor-1260		26.1	ug/kg	1.16	3.48	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/039f3901.d
Lab Smp Id: 1201870212 Client Smp ID: CAMO-09-10467MSD
Inj Date : 30-JUN-2009 19:57
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870212|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 39 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.11000	Weight of sample extracted (g)
M	4.53430	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	16698440	104.337	3.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	19824388	118.055	4.1	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.759	2.762	-0.003	2949200	511.375	17.8	80.00- 120.00	100.00
3.110	3.112	-0.002	3853117	533.324	18.6	104.26- 144.26	130.65
3.253	3.256	-0.003	1677869	576.694	20.1	31.13- 71.13	56.89
3.363	3.365	-0.002	1580005	573.969	20.0	27.14- 67.14	53.57
3.508	3.510	-0.002	2076306	572.194	19.9	42.84- 82.84	70.40

Average of Peak Concentrations = 19.3

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	4800446	673.431	23.4	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	7307452	724.334	25.2	122.43- 162.43	152.22
4.772	4.774	-0.002	7881306	686.398	23.9	138.51- 178.51	164.18
5.239	5.242	-0.003	11629982	868.205	30.2	171.28- 211.28	242.27
5.435	5.437	-0.002	5280714	806.007	28.0	73.47- 113.47	110.00
Average of Peak Concentrations -					26.1		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/039f3901.d
Date : 30-JUN-2009 19:57
Client ID: CAMO-09-10467MSD
Sample Info: |1201870212|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

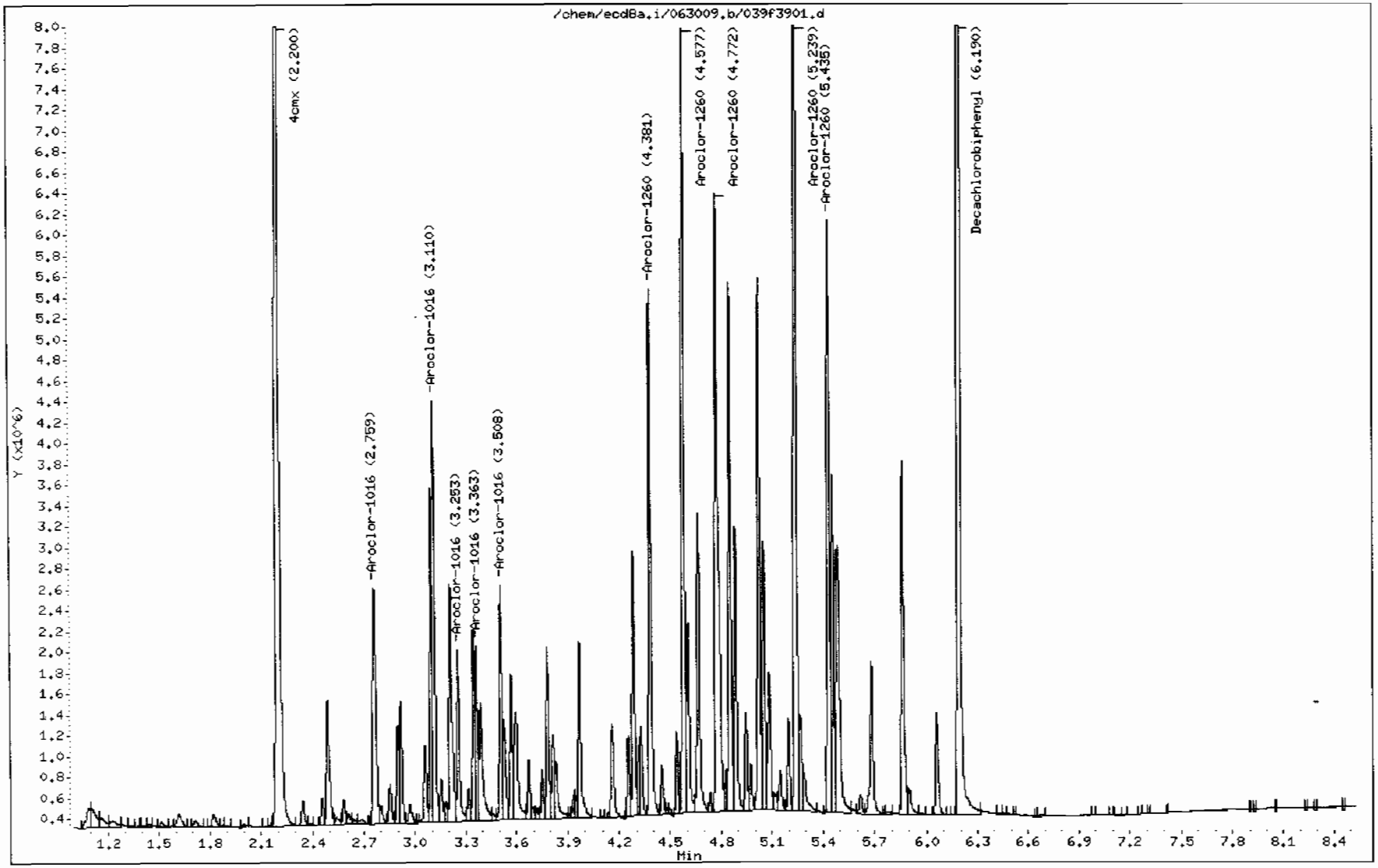

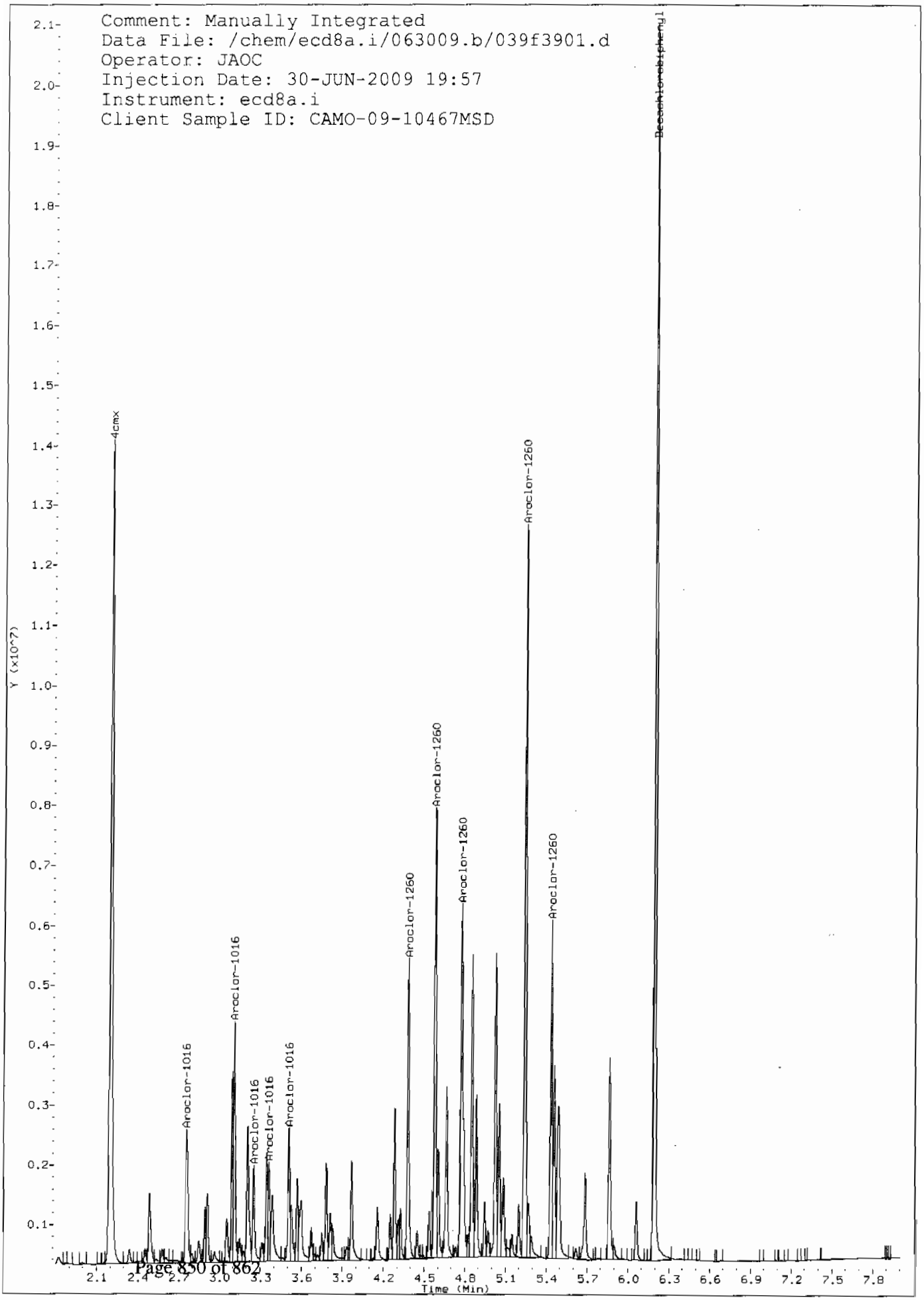
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Data File: /chem/ecd8a.i/063009.b/039f3901.d
Operator: JAOC
Injection Date: 30-JUN-2009 19:57
Instrument: ecd8a.i
Client Sample ID: CAMO-09-10467MSD
Decachlorobiphenyl
4cmx
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Y (x10^7)
Time (Min)

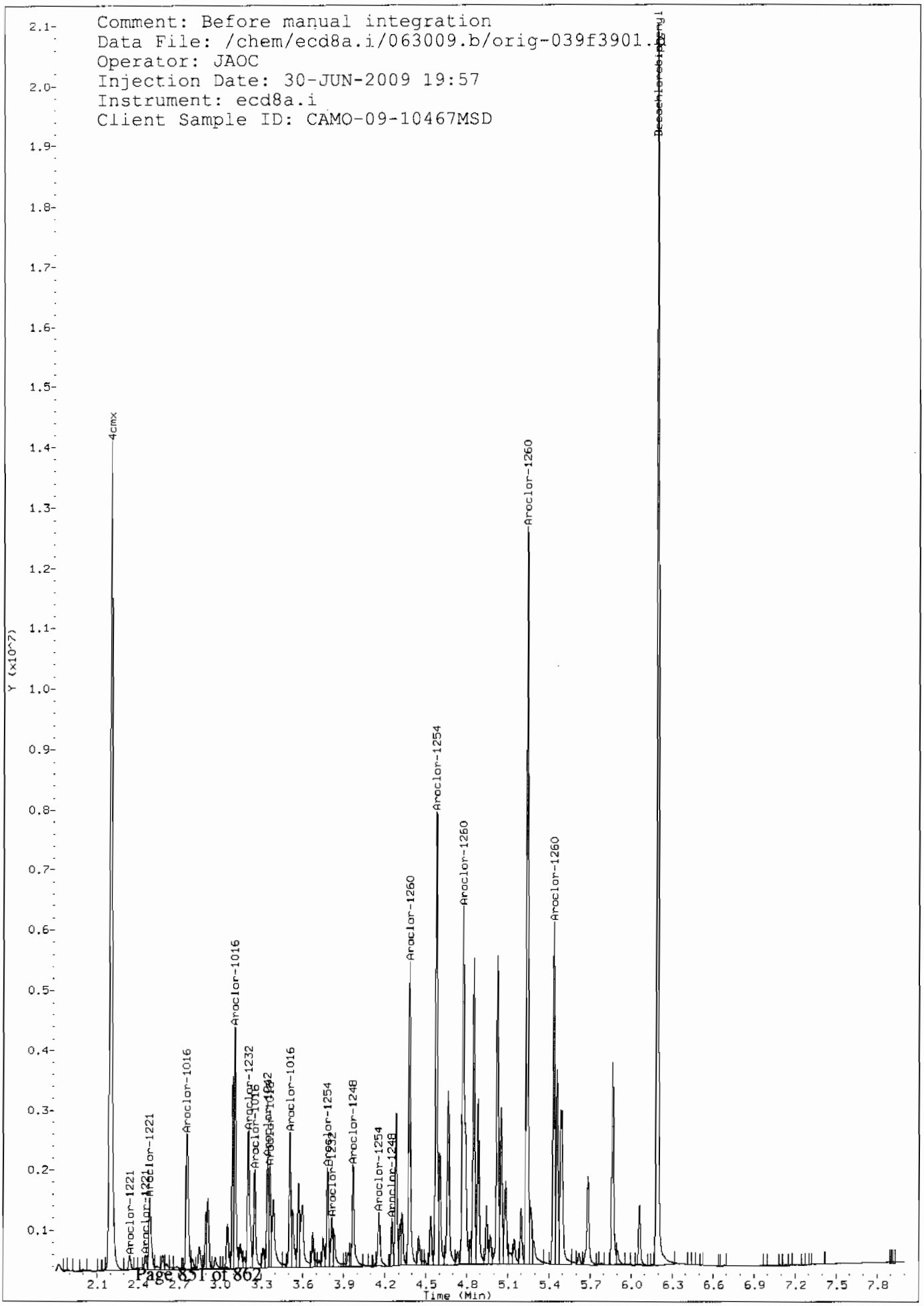
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-039f3901.
Operator: JAOC
Injection Date: 30-JUN-2009 19:57
Instrument: ecd8a.i
Client Sample ID: CAMO-09-10467MSD
Decachlorobiphenyl
4cmx
Aroclor-1260
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1016
Aroclor-1232
Aroclor-1016
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1248
Aroclor-1221
Aroclor-1221
Aroclor-1016
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/039b3901.d
Lab Smp Id: 1201870212 Client Smp ID: CAMO-09-10467MSD
Inj Date : 30-JUN-2009 19:57
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870212|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 39 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.11000	Weight of sample extracted (g)
M	4.53430	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	5627774	97.5603	3.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	6139313	109.002	3.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.221	3.222	-0.001	1003630	455.006	15.8	80.00- 120.00	100.00
3.574	3.575	-0.001	1496342	510.547	17.8	118.74- 158.74	149.09
3.674	3.675	-0.001	862679	496.055	17.2	60.26- 100.26	85.96
3.751	3.752	-0.001	510241	491.502	17.1	28.23- 68.23	50.84
3.824	3.826	-0.002	525383	490.897	17.1	28.70- 68.70	52.35

Average of Peak Concentrations = 17.0

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	1750743	607.464	21.1	80.00- 120.00	100.00
5.083	5.083	0.000	2205455	638.018	22.2	104.06- 144.06	125.97
5.198	5.199	-0.001	1947632	616.625	21.4	91.97- 131.97	111.25
5.607	5.608	-0.001	1698742	717.350	25.0	64.43- 104.43	97.03
6.038	6.041	-0.003	2765989	733.620	25.5	116.83- 156.83	157.99
Average of Peak Concentrations =					23.0		

Data File: /chem/ecd8a.i/063009.b/039b3901.d
Date : 30-JUN-2009 19:57
Client ID: CAMD-09-10467MSD
Sample Info: 1120187021211
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

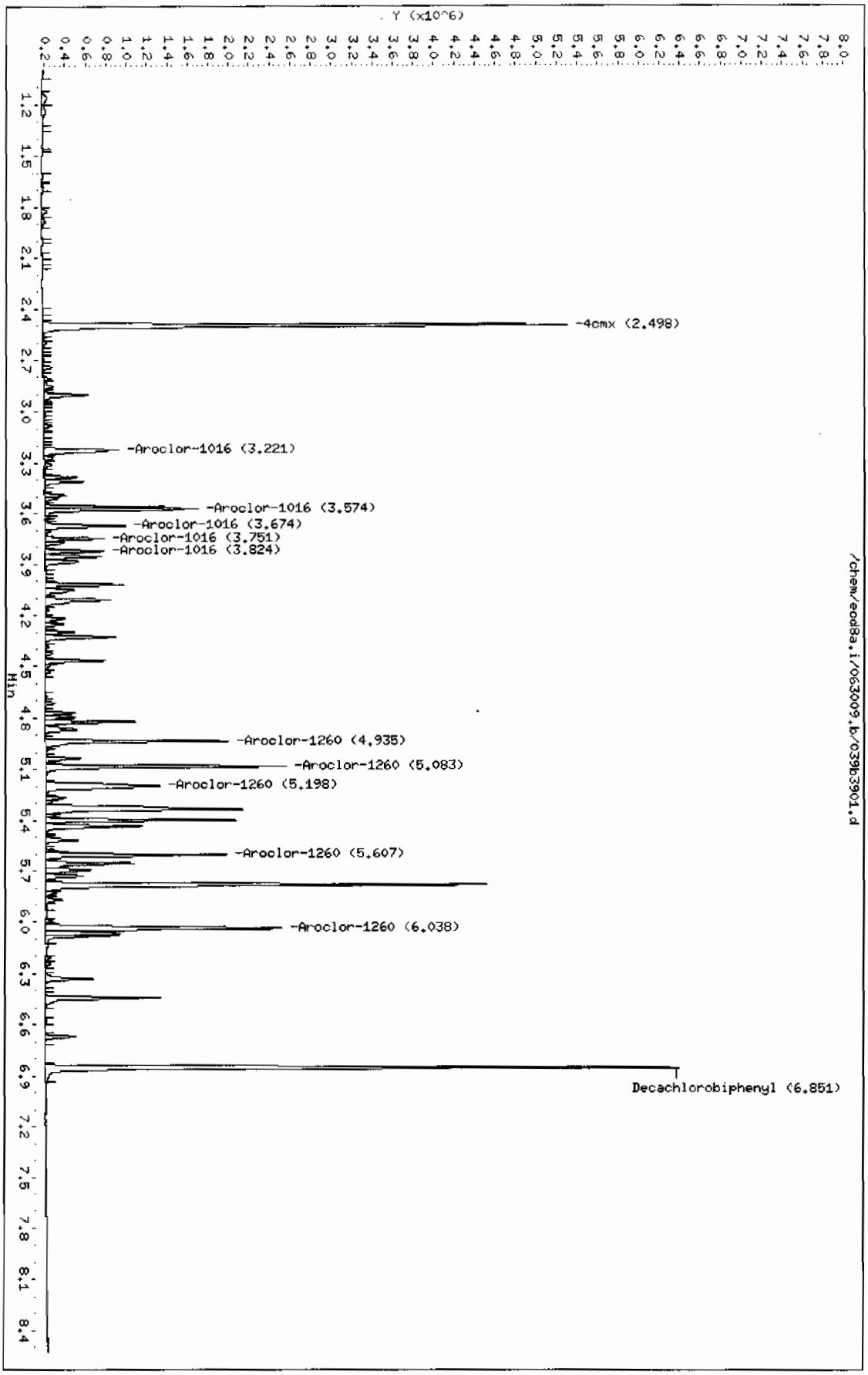

Page 1

MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD8

DATE: 06/17/2009 METHOD: ECD8-F-8082-060109.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT CY613
ALUMINA LOT 090409-A
COPPER LOT 090324-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: /chem/ecd8a.i/061609.b Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99 1	JAOC	16-JUN-2009 08:23		061609	1.0		CLEAN
002f0201.d	WAR090522-60 1	JAOC	16-JUN-2009 08:36		061609	1.0		DUSE
003f0301.d	WAR090302-54	JAOC	16-JUN-2009 08:48		061609	1.0		PASSES AVG
004f0401.d	WAR090519-42	JAOC	16-JUN-2009 09:01		061609	1.0		PASSES AVG
005f0501.d	WAR090521-48	JAOC	16-JUN-2009 09:13		061609	1.0		DUSE
006f0601.d	WAR090522-60 1	JAOC	16-JUN-2009 09:25		061609	1.0		DUSE
007f0701.d	WAR090521-48	JAOC	16-JUN-2009 09:43		061609	1.0		PASSES AVG
008f0801.d	WAR090616-01 60	JAOC	16-JUN-2009 09:56		061609	1.0		1660 LEVEL 1
009f0901.d	WAR090616-02 60	JAOC	16-JUN-2009 10:09		061609	1.0		1660 LEVEL 2
010f1001.d	WAR090616-03 60	JAOC	16-JUN-2009 10:21		061609	1.0		1660 LEVEL 3
011f1101.d	WAR090616-04 60	JAOC	16-JUN-2009 10:33		061609	1.0		1660 LEVEL 4
012f1201.d	IAR090601-01 60	JAOC	16-JUN-2009 10:46		061609	1.0		1660 LEVEL 5
013f1301.d	WAR090616-60 1	JAOC	16-JUN-2009 10:58		061609	1.0		PASSES BOTH COLUMNS
014f1401.d	WAR090326-32	JAOC	16-JUN-2009 11:10		061609	1.0		PATTERN ONLY
015f1501.d	WAR090320-21	JAOC	16-JUN-2009 11:23		061609	1.0		PATTERN ONLY

Instrument Batch: /chem/ecd8a.i/061609.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	WAR090608-62	JAOC	16-JUN-2009 11:35		061609	1.0		PATTERN ONLY
017f1701.d	WAR090424-68	JAOC	16-JUN-2009 11:47		061609	1.0		PATTERN ONLY

018f1801.d	WAR090416-DDT	JAOC	16-JUN-2009 12:00		061609	1.0		DDT
019f1901.d	WAR090519-99 2	JAOC	16-JUN-2009 12:12		061609	1.0		CLEAN
020f2001.d	231401001	JAOC	16-JUN-2009 12:24	875581	09-2220	50.0	LANL	UPLOAD BOTH, USE HIGHER
021f2101.d	1201861052	JAOC	16-JUN-2009 12:41	876831	09-2210	1.0	QC A	UPLOAD BOTH, USE HIGHER
022f2201.d	1201861053	JAOC	16-JUN-2009 12:53	876831	09-2210	1.0	QC A	UPLOAD BOTH, USE HIGHER
023f2301.d	231313016	JAOC	16-JUN-2009 13:06	876831	09-2210	10.0	LANL	UPLOAD BOTH, USE HIGHER
024f2401.d	1201861054	JAOC	16-JUN-2009 13:22	876831	09-2210	10.0	QC A	UPLOAD BOTH, USE HIGHER
025f2501.d	1201861055	JAOC	16-JUN-2009 13:39	876831	09-2210	10.0	QC A	UPLOAD BOTH, USE HIGHER
026f2601.d	231401009	JAOC	16-JUN-2009 13:55	876831	09-2220	5.0	LANL	UPLOAD BOTH, USE HIGHER
027f2701.d	231483001	JAOC	16-JUN-2009 14:12	876831	09-2245	1.0	LANL	UPLOAD BOTH, USE HIGHER
028f2801.d	231483002	JAOC	16-JUN-2009 14:28	876831	09-2245	1.0	LANL	UPLOAD BOTH, USE HIGHER
029f2901.d	WAR090616-60 2	JAOC	16-JUN-2009 14:45		061609	1.0		PASSES AVG
030f3001.d	WAR090519-99 3	JAOC	16-JUN-2009 14:57		061609	1.0		CLEAN
031f3101.d	231488001	JAOC	16-JUN-2009 15:09	876831	09-2247	5.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	231488002	JAOC	16-JUN-2009 15:26	876831	09-2247	1.0	LANL	UPLOAD BOTH, USE HIGHER
033f3301.d	231488003	JAOC	16-JUN-2009 15:42	876831	09-2247	1.0	LANL	UPLOAD BOTH, USE HIGHER
034f3401.d	231494001	JAOC	16-JUN-2009 15:59	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
035f3501.d	231494002	JAOC	16-JUN-2009 16:15	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/061609.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	231494003	JAOC	16-JUN-2009 16:32	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
037f3701.d	231494004	JAOC	16-JUN-2009 16:48	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
038f3801.d	231494006	JAOC	16-JUN-2009 17:05	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
039f3901.d	231494007	JAOC	16-JUN-2009 17:21	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
040f4001.d	231494010	JAOC	16-JUN-2009 17:38	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
041f4101.d	WAR090616-60 3	JAOC	16-JUN-2009 17:54		061609	1.0		PASSES AVG, DCB LOW

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD8

DATE: 07/01/2009 METHOD: ECD8-F-8082-060109.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT CY264
ALUMINA LOT 1134110-A
COPPER LOT 090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: /chem/ecd8a.i/063009.b Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99 1	JAOC	30-JUN-2009 10:46		063009	1.0		CLEAN
002f0201.d	WAR090629-04601	JAOC	30-JUN-2009 10:59		063009	1.0		PASSES BOTH COLUMNS
003f0301.d	WAR090302-54	JAOC	30-JUN-2009 11:11		063009	1.0		PASSES BOTH COLUMNS
004f0401.d	WAR090519-42	JAOC	30-JUN-2009 11:24		063009	1.0		PASSES BOTH COLUMNS
005f0501.d	WAR090521-48	JAOC	30-JUN-2009 11:36		063009	1.0		PASSES BOTH COLUMNS
006f0601.d	WAR090618-32	JAOC	30-JUN-2009 11:48		063009	1.0		PATTERN ONLY
007f0701.d	WAR090618-21	JAOC	30-JUN-2009 12:03		063009	1.0		PATTERN ONLY
008f0801.d	WAR090608-62	JAOC	30-JUN-2009 12:16		063009	1.0		PATTERN ONLY
009f0901.d	WAR090424-68	JAOC	30-JUN-2009 12:28		063009	1.0		PATTERN ONLY
010f1001.d	WAR090618-DDT	JAOC	30-JUN-2009 12:40		063009	1.0		DDT
011f1101.d	WAR090519-99 2	JAOC	30-JUN-2009 12:53		063009	1.0		CLEAN
012f1201.d	1201871515	JAOC	30-JUN-2009 13:05	881260	09-2475	1.0	QC A	UPLOAD BOTH, USE HIGHER
013f1301.d	1201871516	JAOC	30-JUN-2009 13:18	881260	09-2475	1.0	QC A	UPLOAD BOTH, USE HIGHER
014f1401.d	232064001	JAOC	30-JUN-2009 13:30	881260	09-2403	1.0	LANL	UPLOAD BOTH, USE HIGHER
015f1501.d	1201871517	JAOC	30-JUN-2009 13:46	881260	09-2403	1.0	QC A	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/063009.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	1201871518	JAOC	30-JUN-2009 14:03	881260	09-2403	1.0	QC A	UPLOAD BOTH, USE HIGHER
017f1701.d	232426001	JAOC	30-JUN-2009 14:19	881260	09-2475	5.0	LANL	UPLOAD BOTH, USE HIGHER

018f1801.d	232426002	JAOC	30-JUN-2009 14:36	881260	09-2475	5.0	LANL	UPLOAD BOTH, USE HIGHER
019f1901.d	232428001	JAOC	30-JUN-2009 14:52	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
020f2001.d	232428002	JAOC	30-JUN-2009 15:09	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
021f2101.d	232428003	JAOC	30-JUN-2009 15:25	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
022f2201.d	WAR090629-04602	JAOC	30-JUN-2009 15:42		063009	1.0		PASSES BOTH COLUMNS
023f2301.d	WAR090519-99 3	JAOC	30-JUN-2009 15:54		063009	1.0		CLEAN
024f2401.d	232428004	JAOC	30-JUN-2009 16:06	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
025f2501.d	232428012	JAOC	30-JUN-2009 16:23	881260	09-2477	5.0	LANL	UPLOAD BOTH, USE HIGHER
026f2601.d	232428015	JAOC	30-JUN-2009 16:39	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
027f2701.d	232507001	JAOC	30-JUN-2009 16:56	881260	09-2499	1.0	LANL	UPLOAD BOTH, USE HIGHER
028f2801.d	232507002	JAOC	30-JUN-2009 17:12	881260	09-2499	5.0	LANL	UPLOAD BOTH, USE HIGHER
029f2901.d	232507003	JAOC	30-JUN-2009 17:29	881260	09-2499	1.0	LANL	UPLOAD BOTH, USE HIGHER
030f3001.d	232507004	JAOC	30-JUN-2009 17:45	881260	09-2499	1.0	LANL	UPLOAD BOTH, USE HIGHER
031f3101.d	232507005	JAOC	30-JUN-2009 18:02	881260	09-2499	5.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	232507006	JAOC	30-JUN-2009 18:18	881260	09-2499	5.0	LANL	UPLOAD BOTH, USE HIGHER
033f3301.d	WAR090629-04603	JAOC	30-JUN-2009 18:35		063009	1.0		PASSES BOTH COLUMNS
034f3401.d	WAR090519-99 4	JAOC	30-JUN-2009 18:47		063009	1.0		CLEAN
035f3501.d	1201870209	JAOC	30-JUN-2009 18:59	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/063009.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	1201870210	JAOC	30-JUN-2009 19:12	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
037f3701.d	232348004	JAOC	30-JUN-2009 19:24	880783	09-2457	1.0	LANL	UPLOAD BOTH, USE HIGHER
038f3801.d	1201870211	JAOC	30-JUN-2009 19:41	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
039f3901.d	1201870212	JAOC	30-JUN-2009 19:57	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
040f4001.d	232357001	JAOC	30-JUN-2009 20:14	880783	09-2455	1.0	LANL	UPLOAD BOTH, USE HIGHER
041f4101.d	232357002	JAOC	30-JUN-2009 20:30	880783	09-2455	1.0	LANL	UPLOAD BOTH, USE HIGHER

042f4201.d	232363001	JAOC	30-JUN-2009 20:47	880783	09-2451		1.0 LANL	UPLOAD BOTH, USE HIGHER
043f4301.d	232363010	JAOC	30-JUN-2009 21:03	880783	09-2451		1.0 LANL	UPLOAD BOTH, USE HIGHER
044f4401.d	232363011	JAOC	30-JUN-2009 21:20	880783	09-2451		1.0 LANL	UPLOAD BOTH, USE HIGHER
045f4501.d	WAR090629-04604	JAOC	30-JUN-2009 21:36		063009		1.0	PASSES BOTH COLUMNS
046f4601.d	WAR090519-99 5	JAOC	30-JUN-2009 21:48		063009		1.0	CLEAN
047f4701.d	1201871656	JAOC	30-JUN-2009 22:01	881324	EUI-7181		1.0 QC A	UPLOAD BOTH, USE HIGHER
048f4801.d	1201871657	JAOC	30-JUN-2009 22:13	881324	EUI-7181		1.0 QC A	UPLOAD BOTH, USE HIGHER
049f4901.d	232126001	JAOC	30-JUN-2009 22:26	881324	EUI-7181		1.0 CARE	SENT FOR RE, DCB LOW, UPLOAD BOTH, USE HIGHER
050f5001.d	232141009	JAOC	30-JUN-2009 22:42	881324	232141		1.0 WASP	UPLOAD BOTH, USE HIGHER (MS/MSD CONFIRM LOW DCB)
051f5101.d	1201871658	JAOC	30-JUN-2009 22:59	881324	232141		1.0 QC A	UPLOAD BOTH, USE HIGHER
052f5201.d	1201871659	JAOC	30-JUN-2009 23:15	881324	232141		1.0 QC A	UPLOAD BOTH, USE HIGHER
053f5301.d	WAR090629-04605	JAOC	30-JUN-2009 23:31		063009		1.0	PASSES BOTH COLUMNS
054f5401.d	WAR090519-99 6	JAOC	30-JUN-2009 23:44		063009		1.0	CLEAN

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 880782 **Verified by:** _____

Analyst: Robin Hunt

Method: SW846 3550B

Lab SOP: GL–OA–E–010 REV# 18

Instrument: Semi–Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201870209 MB	29–JUN–2009 16:16:37	30	H2SO4/KMnl		1	8	1	0.03333
1201870210 LCS	29–JUN–2009 16:16:37	30	H2SO4/KMnl		1	8	1	0.03333
232348004	29–JUN–2009 16:16:37	30.01	H2SO4/KMnl		1	8	1	0.03332
1201870211 MS (232348004)	29–JUN–2009 16:16:37	30.02	H2SO4/KMnl		1	8	1	0.03331
1201870212 MSD (232348004)	29–JUN–2009 16:16:37	30.11	H2SO4/KMnl		1	8	1	0.03321
232357001	29–JUN–2009 16:16:37	30.01	H2SO4/KMnl		1	8	1	0.03332
232357002	29–JUN–2009 16:16:37	30.14	H2SO4/KMnl		1	8	1	0.03318
232363001	29–JUN–2009 16:16:37	30.05	H2SO4/KMnl		1	8	1	0.03328
232363010	29–JUN–2009 16:16:37	30.2	H2SO4/KMnl		1	8	1	0.03311
232363011	29–JUN–2009 16:16:37	30.14	H2SO4/KMnl		1	8	1	0.03318

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201870210	PCB Laboratory Control	WE090610–07	1	mL
MS	1201870211	PCB Laboratory Control	WE090610–07	1	mL
MSD	1201870212	PCB Laboratory Control	WE090610–07	1	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE090619–14	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	1:1 sulfuric acid	1133264a	5	mL
REGNT	All	Hexane	1135278–B2	150	mL
REGNT	All	5% Potassium Permanganate	B1133159–F	5	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Clean up Date: 06–29–09

Clean up Initials: RWH

Verified By: jda

Final Solvent: Hexane

Clean Up SOP: GL–OA–E–037

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2456

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2456
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009
TURNAROUND/REPORT DUE: 7/9/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10460	R	6/22/2009	
		2	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		2	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		2	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
		2	CAMO-09-10467	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2456

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2456

REQUEST NUMBER: 09-2456

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10462	1	GLASS	8290	Ice	R
CAMO-09-10462	2	GLASS	8290	Ice	R
CAMO-09-10460	1	GLASS	8290	Ice	R
CAMO-09-10460	2	GLASS	8290	Ice	R
CAMO-09-10461	1	GLASS	8290	Ice	R
CAMO-09-10461	2	GLASS	8290	Ice	R
CAMO-09-10467	1	GLASS	8290	Ice	R
CAMO-09-10467	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		6/24/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10460

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	OK
TIME COLLECTED (HH:MM)		1145	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	MO-604995	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	7.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	8.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 day ~~Regular~~ N59 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Brown / Tan, indurated, dry tuff w/ Brown rootlike intrusion containing minor clay.

FTB: CAMO-09-10470

SAMPLE COMMENTS: Sample collected 5.0' below Tuff interface.

LOCATION DESC: 03-00702 (E) of bldg. 3-159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq$ 37 dpm

$\beta/\gamma \leq$ 927 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 4:20

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10461

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	OK
TIME COLLECTED (HH:MM)		1245	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	mo-604996	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	8.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	J.S 6/22/09 ~~9.0~~ 9.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 day ~~Regular~~ NSG 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
		GS+TAL Metals	1 LITER POLY	Ice		
		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Tan / Grey, indurated, dry, tuff, w/ clay like intrusion.

SAMPLE COMMENTS: Sample collected 5.0' below tuff interface.

LOCATION DESC: 03-007-03 @ of bldg. 3159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 20$ dpm

$\beta/\gamma \leq 624$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 4:20

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10462

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	OBT4	OK
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605525	MO-604999	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	6.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	7.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 dAY Regular 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	N69	8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Brown / Tan, indurated, dry tuff

FD: CAMO-09-10467

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 03-007-07 (S) of sigma fence (E) of bldg. 3-159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 8$ dpm

$\beta/\gamma \leq 110$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Nicholas Gallegos

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 1620

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10467

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	OK
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	UA	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	UNK	MO-604999	FIELD QC TYPE:	FD	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	6.0	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	7.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 day ~~Regular~~ NSG 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+~~8082~~ J. Branch	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-10462

Brown/Tan, indurated, dry tuff.

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 03-007-07 (S) of Sigma fence (E) of bldg. 3-159

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 8$ dpm

$\beta/\gamma \leq 110$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Nicholas Gallegos

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/22/09 1605	Sherri Sherwood	6/22/09 4:20

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10470

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	NA	O.K
TIME COLLECTED (HH:MM)		1145	SUB-MEDIA:	OTHER	
PRS ID:	03-007	OK	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-604995	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	OK	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
J.B. 6/22/09						
~~2~~ 1	~~Routine~~ 15 day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-10460 est 6-23-09

SAMPLE COMMENTS: None

LOCATION DESC: 03-007-02

FIELD SCREENING/MEASUREMENT RESULTS: None

COLLECTED BY (PRINT) J. Branch REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) Sherri Sherwood	4:20
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00073
Client Sample ID: CAMO-09-10461
Sample Collection Date: 06/22/09 12:45
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00073-013
Date Received: 06/23/09 00:00
Report Date: 06/23/09 16:09

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	18.47	62.34	133.66	62.39	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	39.76	16.01	19.98	16.73		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.09	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	32.61	10.09	1.81	10.14		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.14	0.21	0.12	0.21		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.22	0.16	0.09	0.16	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	15.46	0.07	15.46	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.50	0.38	0.14	0.38	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.49	0.54	0.16	0.55		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-228	1.15	0.69	0.82	0.69		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	2.07	1.51	0.48	1.51		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	7.19	3.47	1.15	3.84		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.03	0.11	0.06	0.11	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.26

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10462	ARS Sample ID:	ARS2-09-00073-014
Sample Collection Date:	06/22/09 15:00	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	75.71	86.11	127.53	86.50	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	32.27	15.90	20.61	16.38		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	25.56	8.93	1.78	8.96		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	11.66	0.13	11.66	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	15.25	0.07	15.25	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	1.07	0.59	0.14	0.59	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.63	0.56	0.16	0.56		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-228	3.64	1.17	0.31	1.18		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	1.45	0.88	0.18	0.88		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	2.96	2.69	1.23	2.77		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.17	0.34	0.14	0.34		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 0.84

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-1770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00073
Client Sample ID: CAMO-09-10460
Sample Collection Date: 06/22/09 11:45
Sample Matrix: Soil/Solid
Request or PO Number:
ARS Sample ID: ARS2-09-00073-012
Date Received: 06/23/09 00:00
Report Date: 06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	75.82	87.89	133.72	88.39	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	49.32	17.65	20.15	18.65		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.30	0.27	0.10	0.27	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	17.11	6.87	1.85	6.89		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.09	10.15	0.10	10.15	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.11	0.13	0.07	0.13	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	13.25	0.06	13.25	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.33	0.36	0.12	0.36	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.18	0.46	0.18	0.46		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-228	2.34	1.27	0.37	1.27		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	0.70	0.54	0.16	0.54		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	2.14	2.66	1.23	2.70		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.55	0.39	0.12	0.39		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.04

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10467	ARS Sample ID:	ARS2-09-00073-015
Sample Collection Date:	06/22/09 15:00	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.84	86.53	128.32	86.99	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	35.47	16.90	21.30	17.45		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.06	0.13	0.11	0.13	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	27.35	8.90	1.67	8.94		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	10.91	0.11	10.91	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.11	0.10	0.08	0.10	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	-0.01	14.27	0.07	14.27	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	11.34	0.13	11.34	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	0.99	0.44	0.15	0.44		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	2.18	1.14	0.29	1.14		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	-0.07	97.28	0.22	97.28	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	4.92	3.06	1.16	3.26		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.07	0.19	0.09	0.19	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 0.57

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5123-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2456 VALIDATION DATE: 7/20/09 LAB CODE: ALTC

CONTRACT LABORATORY NAME: Vista Analytical Laboratory

VALIDATOR: Charissa Lewis ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☒ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that laboratory ion abundance limits were used for evaluation of the PeCDD compounds, since the laboratory uses an alternate ion for these masses due to interferences.
2. It should be noted that the samples were not analyzed within 30 days of the primary ICAL. No sample data were qualified, based on professional judgment.
3. The ICV %D was >20% with positive bias for 1,2,3,4,7,8-HxCDD. The associated sample results were NDs and, thus, were not qualified.
4. It should be noted that ICV standards are not available for 13C-OCDF and 13C-1,2,3,4-TCDF which are used in the quantitation of OCDF; 13C-2,3,7,8-TCDF; 13C-1,2,3,7,8-PeCDF and 13C-2,3,4,7,8-PeCDF. Thus, ICV %Ds could not be evaluated for these compounds. No sample data were qualified as a result.

DATA VALIDATION COVER SHEET

5123-1

Data Validation Cover Sheet

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5. An MS and MSD were not analyzed. No sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 7/21/09

VALIDATOR'S SIGNATURE: Chandra Lewis DATE: 7/20/09

Form 5123-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time and qualitative criteria for target compound identification were not met.	R, DF0	R, DF0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF0b	R, DF0b
☐	☒	☐	3. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF1d	R, DF1d
☐	☒	☐	4. The sample result is ≤5 times the concentration of the related analyte in the method blank.	N/A	U, DF4
☐	☒	☐	5. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, DF4a
☐	☐	☒	6. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	N/A	U, DF4d
☐	☒	☐	7. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF4e	R, DF4e
☐	☒	☐	8. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, DF7	J, DF7
☐	☒	☐	9. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria.	UJ, R, DF7a	J, DF7a
☐	☒	☐	10. The affected analytes were analyzed with an out of range ion abundance in the initial calibration and/or CCV.	R, DF7b	R, DF7b
☒	☐	☐	11. The ICV and/or CCV were recovered outside the method specific limits.	UJ, R, DF7c	J, R, DF7c
☐	☒	☐	12. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DF7d	J, DF7d

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DF7f	R, DF7f
☐	☒	☐	14. The affected analyte is considered rejected because the ion abundances did not meet specifications.	N/A	R, DF8
☐	☒	☐	15. The ion abundance documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF8a	R, DF8a
☐	☒	☐	16. If GC column performance was not evaluated at the required frequency or if method criteria were not met, qualify all associated detects as J and all associated non-detects as UJ.	UJ, DF8b	J, DF8b
☐	☐	☒	17. If 2, 3, 7, 8-TCDF was detected in a sample and the result was not confirmed on a second column with successful analysis of the GC column performance mix, qualify all associated detects as U.	N/A	U, DF8c
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, DF9	J-, DF9
☐	☒	☐	19. The holding time was >2 times the applicable holding time requirement.	R, DF9a	J-, DF9a
☐	☒	☐	20. The LCS percent recovery was <10%.	R, DF12	J-, DF12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, DF12a	J-, DF12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DF12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12c	R, DF12c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	24. The MS/MSD percent recovery was <10%.	R, DF12d	R, DF12d
☐	☐	☒	25. The MS/MSD percent recovery was >10% but <70%.	UJ, DF12e	J, DF12e
☐	☐	☒	26. The MS/MSD percent recovery was >70%	N/A	J+, DF12f
☐	☐	☒	27. The MS/MSD relative percent difference was >30%.	UJ, DF12g	J, DF12g
☐	☒	☐	28. The fortification sample percent recovery was <10%.	R, DF12h	J-, DF12h
☐	☒	☐	29. The fortification sample percent recovery was <40% but >10%	UJ, DF12i	J-, DF12i
☐	☒	☐	30. The fortification sample percent recovery was >135%.	N/A	J+, DF12j
☐	☒	☐	31. The fortification sample documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12k	R, DF12k
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference.	R, DF15	UJ, DF15
☐	☒	☐	33. Sample clean-up was not performed. If run log notations, spectral data and/or internal standard or labeled compound recoveries indicate interferences and extract cleanup was not performed, qualify all associated detects as J and all non-detects as UJ.	RJ, DF15a	J, DF15a
☐	☒	☐	34. The instrument performance sample did not pass method acceptance criteria.	R, DF16	R, DF16
☐	☒	☐	35. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, DF16c	R, DF16c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, DF19	J, R, DR19
☐	☒	☐	37. Duplicate, dilution, or reanalysis.	UJ, DF88	J, DF88

Sample ID: **CAMO-09-10460** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31831-001	Date Received:	25-Jun-09
Project:	09-2456	Sample Size:	10.4 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	22-Jun-09	%Solids:	96.7	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1145						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0566		
1,2,3,7,8-PeCDD	ND	0.0601		
1,2,3,4,7,8-HxCDD	ND	0.154		
1,2,3,6,7,8-HxCDD	ND	0.154		
1,2,3,7,8,9-HxCDD	ND	0.148		
1,2,3,4,6,7,8-HpCDD	ND	0.148		
OCDD	0.599			J
2,3,7,8-TCDF	ND	0.0435		
1,2,3,7,8-PeCDF	ND	0.0423		
2,3,4,7,8-PeCDF	ND	0.0449		
1,2,3,4,7,8-HxCDF	ND	0.0392		
1,2,3,6,7,8-HxCDF	ND	0.0464		
2,3,4,6,7,8-HxCDF	ND	0.0577		
1,2,3,7,8,9-HxCDF	ND	0.0723		
1,2,3,4,6,7,8-HpCDF	ND	0.0806		
1,2,3,4,7,8,9-HpCDF	ND	0.0889		
OCDF	ND	0.101		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	96.1	40 - 135	
	13C-1,2,3,7,8-PeCDD	91.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	104	40 - 135	
	13C-OCDD	111	40 - 135	
	13C-2,3,7,8-TCDF	96.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	105	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	94.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.7	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	80.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	86.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.0	40 - 135	
	13C-OCDF	99.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	91.8	40 - 135	

Totals		
Total TCDD	ND	0.0566
Total PeCDD	ND	0.0601
Total HxCDD	ND	0.152
Total HpCDD	ND	0.148
Total TCDF	ND	0.0435
Total PeCDF	ND	0.0436
Total HxCDF	ND	0.0539
Total HpCDF	ND	0.0848

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.000599**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:35

CLL
7/20/09

Sample ID: CAMO-09-10461 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31831-002	Date Received:	25-Jun-09
Project:	09-2456	Sample Size:	11.4 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	22-Jun-09	%Solids:	88.4	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1245						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0538		
1,2,3,7,8-PeCDD	ND	0.0664		
1,2,3,4,7,8-HxCDD	ND	0.116		
1,2,3,6,7,8-HxCDD	ND	0.119		
1,2,3,7,8,9-HxCDD	ND	0.113		
1,2,3,4,6,7,8-HpCDD	ND	0.157		
OCDD	ND	0.121		
2,3,7,8-TCDF	ND	0.0457		
1,2,3,7,8-PeCDF	ND	0.0442		
2,3,4,7,8-PeCDF	ND	0.0446		
1,2,3,4,7,8-HxCDF	ND	0.0455		
1,2,3,6,7,8-HxCDF	ND	0.0482		
2,3,4,6,7,8-HxCDF	ND	0.0605		
1,2,3,7,8,9-HxCDF	ND	0.0734		
1,2,3,4,6,7,8-HpCDF	ND	0.0823		
1,2,3,4,7,8,9-HpCDF	ND	0.0926		
OCDF	ND	0.114		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	95.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	106	40 - 135	
	13C-OCDD	112	40 - 135	
	13C-2,3,7,8-TCDF	97.6	40 - 135	
	13C-1,2,3,7,8-PeCDF	102	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	80.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	87.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	96.2	40 - 135	
	13C-OCDF	99.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.6	40 - 135	

Totals		
Total TCDD	ND	0.0538
Total PeCDD	ND	0.0664
Total HxCDD	ND	0.116
Total HpCDD	ND	0.157
Total TCDF	ND	0.0457
Total PeCDF	ND	0.0444
Total HxCDF	ND	0.0569
Total HpCDF	ND	0.0874

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:35

CLL
7/20/09

Sample ID: **CAMO-09-10462** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31831-003	Date Received:	25-Jun-09
Project:	09-2456	Sample Size:	10.6 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	22-Jun-09	%Solids:	95.0	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1500						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0582		
1,2,3,7,8-PeCDD	ND	0.0516		
1,2,3,4,7,8-HxCDD	ND	0.133		
1,2,3,6,7,8-HxCDD	ND	0.125		
1,2,3,7,8,9-HxCDD	ND	0.124		
1,2,3,4,6,7,8-HpCDD	ND	0.121		
OCDD	0.657			J
2,3,7,8-TCDF	ND	0.0477		
1,2,3,7,8-PeCDF	ND	0.0451		
2,3,4,7,8-PeCDF	ND	0.0464		
1,2,3,4,7,8-HxCDF	ND	0.0400		
1,2,3,6,7,8-HxCDF	ND	0.0431		
2,3,4,6,7,8-HxCDF	ND	0.0516		
1,2,3,7,8,9-HxCDF	ND	0.0653		
1,2,3,4,6,7,8-HpCDF	ND	0.0767		
1,2,3,4,7,8,9-HpCDF	ND	0.0837		
OCDF	ND	0.0899		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	96.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	99.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	110	40 - 135	
	13C-OCDD	119	40 - 135	
	13C-2,3,7,8-TCDF	98.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	101	40 - 135	
	13C-2,3,4,7,8-PeCDF	100	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	94.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	98.9	40 - 135	
	13C-OCDF	103	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.8	40 - 135	

Totals		
Total TCDD	ND	0.0582
Total PeCDD	ND	0.0516
Total HxCDD	ND	0.127
Total HpCDD	ND	0.121
Total TCDF	ND	0.0477
Total PeCDF	ND	0.0458
Total HxCDF	ND	0.0500
Total HpCDF	ND	0.0802

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.000657

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:35

CLL
7/20/09

Sample ID: CAMO-09-10467 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31831-004	Date Received:	25-Jun-09
Project:	09-2456	Sample Size:	10.6 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	22-Jun-09	%Solids:	94.1	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1500						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0590		
1,2,3,7,8-PeCDD	ND	0.0490		
1,2,3,4,7,8-HxCDD	ND	0.127		
1,2,3,6,7,8-HxCDD	ND	0.125		
1,2,3,7,8,9-HxCDD	ND	0.121		
1,2,3,4,6,7,8-HpCDD	ND	0.156		
OCDD	0.543			J
2,3,7,8-TCDF	ND	0.0469		
1,2,3,7,8-PeCDF	ND	0.0414		
2,3,4,7,8-PeCDF	ND	0.0413		
1,2,3,4,7,8-HxCDF	ND	0.0461		
1,2,3,6,7,8-HxCDF	ND	0.0470		
2,3,4,6,7,8-HxCDF	ND	0.0582		
1,2,3,7,8,9-HxCDF	ND	0.0753		
1,2,3,4,6,7,8-HpCDF	ND	0.0811		
1,2,3,4,7,8,9-HpCDF	ND	0.0840		
OCDF	ND	0.0993		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	95.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	90.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	80.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	108	40 - 135	
	13C-OCDD	115	40 - 135	
	13C-2,3,7,8-TCDF	94.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.3	40 - 135	
	13C-2,3,4,7,8-PeCDF	93.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	88.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	78.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	77.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	84.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.7	40 - 135	
	13C-OCDF	101	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	91.7	40 - 135	

Totals		
Total TCDD	ND	0.0590
Total PeCDD	ND	0.0490
Total HxCDD	ND	0.124
Total HpCDD	ND	0.156
Total TCDF	ND	0.0469
Total PeCDF	ND	0.0414
Total HxCDF	ND	0.0566
Total HpCDF	ND	0.0826

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.000543

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:35

CLL
7/20/09

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2456

31831
2.7°C

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2456
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009
TURNAROUND/REPORT DUE: 7/9/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10460	R	6/22/2009	
		2	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		2	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		2	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
		2	CAMO-09-10467	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2456

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2456

LOS ALAMOS

NATIONAL LABORATORY

REQUEST NUMBER: 09-2456

31831

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10462	1	GLASS	8290	Ice	R
CAMO-09-10462	2	GLASS	8290	Ice	R
CAMO-09-10460	1	GLASS	8290	Ice	R
CAMO-09-10460	2	GLASS	8290	Ice	R
CAMO-09-10461	1	GLASS	8290	Ice	R
CAMO-09-10461	2	GLASS	8290	Ice	R
CAMO-09-10467	1	GLASS	8290	Ice	R
CAMO-09-10467	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		6/24/09	1400	B. Benedict	Bettina L Benedict	6/25/09	1019
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Vista
Analytical Laboratory

July 01, 2009

Vista Project I.D.: 31831

Mr. Keith Greene
Los Alamos National Laboratory
ER Sample Management Office
TA-3, Building 271, DP O1-U
Los Alamos, NM 87545

Dear Mr. Greene,

Enclosed are the results for the four soil samples received at Vista Analytical Laboratory on June 25, 2009 under your Project Name "09-2456". These samples were extracted and analyzed using EPA Method 8290 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha M. Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Vista

Section I: Sample Inventory Report

Date Received: **6/25/2009**

Vista Lab. ID	Client Sample ID
31831-001	CAMO-09-10460
31831-002	CAMO-09-10461
31831-003	CAMO-09-10462
31831-004	CAMO-09-10467

SECTION II

Vista

Method Blank | **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2207	Lab Sample:	0-MB001
Sample Size:	10.0 g	Date Extracted:	27-Jun-09	Date Analyzed DB-5:	29-Jun-09
				Date Analyzed DB-225:	NA

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0620		
1,2,3,7,8-PeCDD	ND	0.0656		
1,2,3,4,7,8-HxCDD	ND	0.104		
1,2,3,6,7,8-HxCDD	ND	0.107		
1,2,3,7,8,9-HxCDD	ND	0.102		
1,2,3,4,6,7,8-HpCDD	ND	0.110		
OCDD	ND		0.581	
2,3,7,8-TCDF	ND	0.0489		
1,2,3,7,8-PeCDF	ND	0.0551		
2,3,4,7,8-PeCDF	ND	0.0576		
1,2,3,4,7,8-HxCDF	ND	0.0437		
1,2,3,6,7,8-HxCDF	ND	0.0480		
2,3,4,6,7,8-HxCDF	ND	0.0560		
1,2,3,7,8,9-HxCDF	ND	0.0699		
1,2,3,4,6,7,8-HpCDF	ND	0.0793		
1,2,3,4,7,8,9-HpCDF	ND	0.0857		
OCDF	ND	0.114		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	97.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	99.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	94.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	94.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	97.7	40 - 135	
	13C-OCDF	97.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.3	40 - 135	

Totals		
Total TCDD	ND	0.0620
Total PeCDD	ND	0.0656
Total HxCDD	ND	0.104
Total HpCDD	ND	0.110
Total TCDF	ND	0.0489
Total PeCDF	ND	0.0564
Total HxCDF	ND	0.0544
Total HpCDF	ND	0.0825

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:35

Vista

OPR Results **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2207	Lab Sample:	0-OPR001		
Sample Size:	10.0 g	Date Extracted:	27-Jun-09	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	9.72	7 - 13	IS	13C-2,3,7,8-TCDD	94.5	40 - 135	
1,2,3,7,8-PeCDD	50.0	47.6	35 - 65		13C-1,2,3,7,8-PeCDD	89.6	40 - 135	
1,2,3,4,7,8-HxCDD	50.0	47.1	35 - 65		13C-1,2,3,4,7,8-HxCDD	89.4	40 - 135	
1,2,3,6,7,8-HxCDD	50.0	47.5	35 - 65		13C-1,2,3,6,7,8-HxCDD	83.1	40 - 135	
1,2,3,7,8,9-HxCDD	50.0	50.3	35 - 65		13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
1,2,3,4,6,7,8-HpCDD	50.0	45.9	35 - 65		13C-OCDD	108	40 - 135	
OCDD	100	91.7	70 - 130		13C-2,3,7,8-TCDF	98.5	40 - 135	
2,3,7,8-TCDF	10.0	8.93	7 - 13		13C-1,2,3,7,8-PeCDF	106	40 - 135	
1,2,3,7,8-PeCDF	50.0	44.8	35 - 65		13C-2,3,4,7,8-PeCDF	96.2	40 - 135	
2,3,4,7,8-PeCDF	50.0	42.9	35 - 65		13C-1,2,3,4,7,8-HxCDF	91.6	40 - 135	
1,2,3,4,7,8-HxCDF	50.0	45.9	35 - 65		13C-1,2,3,6,7,8-HxCDF	85.1	40 - 135	
1,2,3,6,7,8-HxCDF	50.0	45.1	35 - 65		13C-2,3,4,6,7,8-HxCDF	79.5	40 - 135	
2,3,4,6,7,8-HxCDF	50.0	46.1	35 - 65		13C-1,2,3,7,8,9-HxCDF	90.7	40 - 135	
1,2,3,7,8,9-HxCDF	50.0	46.2	35 - 65		13C-1,2,3,4,6,7,8-HpCDF	88.5	40 - 135	
1,2,3,4,6,7,8-HpCDF	50.0	46.6	35 - 65		13C-1,2,3,4,7,8,9-HpCDF	95.2	40 - 135	
1,2,3,4,7,8,9-HpCDF	50.0	48.2	35 - 65		13C-OCDF	99.4	40 - 135	
OCDF	100	91.2	70 - 130	CRS	37Cl-2,3,7,8-TCDD	90.4	40 - 135	

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:35

Vista

Sample ID: CAMO-09-10460 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31831-001	Date Received:	25-Jun-09
Project:	09-2456	Sample Size:	10.4 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	22-Jun-09	%Solids:	96.7	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1145						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0566		
1,2,3,7,8-PeCDD	ND	0.0601		
1,2,3,4,7,8-HxCDD	ND	0.154		
1,2,3,6,7,8-HxCDD	ND	0.154		
1,2,3,7,8,9-HxCDD	ND	0.148		
1,2,3,4,6,7,8-HpCDD	ND	0.148		
OCDD	0.599			J
2,3,7,8-TCDF	ND	0.0435		
1,2,3,7,8-PeCDF	ND	0.0423		
2,3,4,7,8-PeCDF	ND	0.0449		
1,2,3,4,7,8-HxCDF	ND	0.0392		
1,2,3,6,7,8-HxCDF	ND	0.0464		
2,3,4,6,7,8-HxCDF	ND	0.0577		
1,2,3,7,8,9-HxCDF	ND	0.0723		
1,2,3,4,6,7,8-HpCDF	ND	0.0806		
1,2,3,4,7,8,9-HpCDF	ND	0.0889		
OCDF	ND	0.101		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	96.1	40 - 135	
	13C-1,2,3,7,8-PeCDD	91.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	104	40 - 135	
	13C-OCDD	111	40 - 135	
	13C-2,3,7,8-TCDF	96.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	105	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	94.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.7	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	80.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	86.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.0	40 - 135	
	13C-OCDF	99.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	91.8	40 - 135	

Totals		
Total TCDD	ND	0.0566
Total PeCDD	ND	0.0601
Total HxCDD	ND	0.152
Total HpCDD	ND	0.148
Total TCDF	ND	0.0435
Total PeCDF	ND	0.0436
Total HxCDF	ND	0.0539
Total HpCDF	ND	0.0848

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.000599

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:35

Vista

Sample ID: CAMO-09-10461 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31831-002	Date Received:	25-Jun-09
Project:	09-2456	Sample Size:	11.4 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	22-Jun-09	%Solids:	88.4	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1245						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0538		
1,2,3,7,8-PeCDD	ND	0.0664		
1,2,3,4,7,8-HxCDD	ND	0.116		
1,2,3,6,7,8-HxCDD	ND	0.119		
1,2,3,7,8,9-HxCDD	ND	0.113		
1,2,3,4,6,7,8-HpCDD	ND	0.157		
OCDD	ND	0.121		
2,3,7,8-TCDF	ND	0.0457		
1,2,3,7,8-PeCDF	ND	0.0442		
2,3,4,7,8-PeCDF	ND	0.0446		
1,2,3,4,7,8-HxCDF	ND	0.0455		
1,2,3,6,7,8-HxCDF	ND	0.0482		
2,3,4,6,7,8-HxCDF	ND	0.0605		
1,2,3,7,8,9-HxCDF	ND	0.0734		
1,2,3,4,6,7,8-HpCDF	ND	0.0823		
1,2,3,4,7,8,9-HpCDF	ND	0.0926		
OCDF	ND	0.114		

Labeled Standard		%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	95.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	106	40 - 135	
	13C-OCDD	112	40 - 135	
	13C-2,3,7,8-TCDF	97.6	40 - 135	
	13C-1,2,3,7,8-PeCDF	102	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	80.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	87.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	96.2	40 - 135	
	13C-OCDF	99.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.6	40 - 135	

Totals		
Total TCDD	ND	0.0538
Total PeCDD	ND	0.0664
Total HxCDD	ND	0.116
Total HpCDD	ND	0.157
Total TCDF	ND	0.0457
Total PeCDF	ND	0.0444
Total HxCDF	ND	0.0569
Total HpCDF	ND	0.0874

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:35

Vista

Sample ID: CAMO-09-10462 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31831-003	Date Received:	25-Jun-09
Project:	09-2456	Sample Size:	10.6 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	22-Jun-09	%Solids:	95.0	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1500						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0582		
1,2,3,7,8-PeCDD	ND	0.0516		
1,2,3,4,7,8-HxCDD	ND	0.133		
1,2,3,6,7,8-HxCDD	ND	0.125		
1,2,3,7,8,9-HxCDD	ND	0.124		
1,2,3,4,6,7,8-HpCDD	ND	0.121		
OCDD	0.657			J
2,3,7,8-TCDF	ND	0.0477		
1,2,3,7,8-PeCDF	ND	0.0451		
2,3,4,7,8-PeCDF	ND	0.0464		
1,2,3,4,7,8-HxCDF	ND	0.0400		
1,2,3,6,7,8-HxCDF	ND	0.0431		
2,3,4,6,7,8-HxCDF	ND	0.0516		
1,2,3,7,8,9-HxCDF	ND	0.0653		
1,2,3,4,6,7,8-HpCDF	ND	0.0767		
1,2,3,4,7,8,9-HpCDF	ND	0.0837		
OCDF	ND	0.0899		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	96.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	99.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	110	40 - 135	
	13C-OCDD	119	40 - 135	
	13C-2,3,7,8-TCDF	98.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	101	40 - 135	
	13C-2,3,4,7,8-PeCDF	100	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	94.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	98.9	40 - 135	
	13C-OCDF	103	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.8	40 - 135	

Totals		
Total TCDD	ND	0.0582
Total PeCDD	ND	0.0516
Total HxCDD	ND	0.127
Total HpCDD	ND	0.121
Total TCDF	ND	0.0477
Total PeCDF	ND	0.0458
Total HxCDF	ND	0.0500
Total HpCDF	ND	0.0802

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.000657

a Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e TEQ based on (1989) International Toxic Equivalent Factors (ITEF)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:35

Vista

Sample ID: CAMO-09-10467 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31831-004	Date Received:	25-Jun-09
Project:	09-2456	Sample Size:	10.6 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	22-Jun-09	%Solids:	94.1	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1500						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0590		
1,2,3,7,8-PeCDD	ND	0.0490		
1,2,3,4,7,8-HxCDD	ND	0.127		
1,2,3,6,7,8-HxCDD	ND	0.125		
1,2,3,7,8,9-HxCDD	ND	0.121		
1,2,3,4,6,7,8-HpCDD	ND	0.156		
OCDD	0.543			J
2,3,7,8-TCDF	ND	0.0469		
1,2,3,7,8-PeCDF	ND	0.0414		
2,3,4,7,8-PeCDF	ND	0.0413		
1,2,3,4,7,8-HxCDF	ND	0.0461		
1,2,3,6,7,8-HxCDF	ND	0.0470		
2,3,4,6,7,8-HxCDF	ND	0.0582		
1,2,3,7,8,9-HxCDF	ND	0.0753		
1,2,3,4,6,7,8-HpCDF	ND	0.0811		
1,2,3,4,7,8,9-HpCDF	ND	0.0840		
OCDF	ND	0.0993		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	95.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	90.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	80.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	108	40 - 135	
	13C-OCDD	115	40 - 135	
	13C-2,3,7,8-TCDF	94.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.3	40 - 135	
	13C-2,3,4,7,8-PeCDF	93.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	88.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	78.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	77.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	84.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.7	40 - 135	
	13C-OCDF	101	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	91.7	40 - 135	

Totals		
Total TCDD	ND	0.0590
Total PeCDD	ND	0.0490
Total HxCDD	ND	0.124
Total HpCDD	ND	0.156
Total TCDF	ND	0.0469
Total PeCDF	ND	0.0414
Total HxCDF	ND	0.0566
Total HpCDF	ND	0.0826

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.000543

a Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e TEQ based on (1989) International Toxic Equivalent Factors (ITEF)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:35

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The amount detected is above the High Calibration Limit.**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
H	**The signal-to-noise ratio is greater than 10:1.**
I	**Chemical Interference**
J	**The amount detected is below the Low Calibration Limit.**
*	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2456

31831
2.7°C

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2456
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009
TURNAROUND/REPORT DUE: 7/9/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10460	R	6/22/2009	
		2	CAMO-09-10460	R	6/22/2009	
		1	CAMO-09-10461	R	6/22/2009	
		2	CAMO-09-10461	R	6/22/2009	
		1	CAMO-09-10462	R	6/22/2009	
		2	CAMO-09-10462	R	6/22/2009	
		1	CAMO-09-10467	R	6/22/2009	
		2	CAMO-09-10467	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2456

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2456

LOS ALAMOS

NATIONAL LABORATORY

REQUEST NUMBER: 09-2456

31831

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10462	1	GLASS	8290	Ice	R
CAMO-09-10462	2	GLASS	8290	Ice	R
CAMO-09-10460	1	GLASS	8290	Ice	R
CAMO-09-10460	2	GLASS	8290	Ice	R
CAMO-09-10461	1	GLASS	8290	Ice	R
CAMO-09-10461	2	GLASS	8290	Ice	R
CAMO-09-10467	1	GLASS	8290	Ice	R
CAMO-09-10467	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/24/09	1400	B. Benedict	Bettina L Benedict	6/25/09	1019
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31831 TAT 15

Samples Arrival:	Date/Time 6/25/09 0935	Initials: LBB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 6/25/09 1058	Initials: LBB	Location: WR-2 Shelf/Rack: G 3

Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C 2.7°C	Time: 0936	Thermometer ID: IR-1				

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill	Trk # 7209 7847 5480	✓		
Sample Container Intact?		✓		
Sample Custody Seals Intact?		✓		
Chain of Custody / Sample Documentation Present?		✓		
COC Anomaly/Sample Acceptance Form completed?			✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				✓

$Na_2S_2O_3$ Preservation Documented?		COC	Sample Container	None	
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

	date	time	
CAMO-09-10460	6/22/09	1145	A & B jars
-10461		1245	
-10462		1500	
-10467		1500	

Sample Login 3/2007 rmh

EXTRACTION INFORMATION

PROCESS SHEET

Project No.-AR: 31831-1 of 1

RUSH

Prep Due: 7/3/2009

Hold Due: 7/22/2009

Client: Los Alamos National Laboratory(LOANM01F

Client Manager: Martha M. Maier

Method: EPA Method 8290 | PCDD/F (Tetra - Octa)

Project Due: 7/[illegible]/09

TAT: 14

Split Type: 2207

Matrix: Soil

LabID	Recon	Client-ID	Description	Date Received	SLoc	Shelf
001	☑	CAMO-09-10460		6/25/2009	WR-2	G-3
002	☑	CAMO-09-10461		6/25/2009	WR-2	G-3
003	☑	CAMO-09-10462		6/25/2009	WR-2	G-3
004	☑	CAMO-09-10467		6/25/2009	WR-2	G-3

% SOLIDS [illegible] 6/25/09

Instructions:

Report Options

Report Level:

EDD Type:

Report Group: Dioxins NoMDL with %Solid

TEQ Type: EPA(Default) : Min

Samples Reconciled By: [illegible] 6/25/09

Vial Box ID: MAXI

Date Requested 7/2/2009

Percent Solids

Vista Analytical Laboratory

Project: 31831 - 1 of 1

Sample ID	Chemist/Date EJ 4/25/09		Chemist/Date	Comments
	Boat Wt.	Sample + Boat Wt.	Residue + Boat Wt.	
001	1.32	3.76	3.48	
002	1.34	4.28	3.94	
003	1.35	3.75	3.63	
004	1.33	3.71	3.57	

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

%Solids 3/2007 rmh

Project: 31831

Extraction Set: 2207

Chemist: F. Bishop 6/27/09

Method(s): EPA Method 8290 | PCDD/F (Tetra - Octa)

C	ALTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/ WIT DATE	CRS CHEM/WIT DATE	AP CHEM/Date	ABSG CHEM/Date	AA CHEM/Date	Florisil CHEM/Date	RS CHEM/WIT DATE
☐	0_2207_MB001	10.00	(10.00)	FEB OB 6/27/09	TEH OB ~~6/27~~ 6/28/09	NA	TEH 6/28/09	TEH 6/28/09	TEH 6/28/09	TEH OB 6/28/09
☐	0_2207_OPR001	↓	↓	↓	↓ TEH 6/28/09	↓	↓	↓	↓	↓
☐	31831_2207_001	10.34	10.45	↓	↓	↓	↓	↓	↓	↓
☐	31831_2207_002	11.31	11.42	↓	↓	↓	↓	↓	↓	↓
☐	31831_2207_003	10.53	10.55	↓	↓	↓	↓	↓	↓	↓
☐	31831_2207_004	10.63	10.57	↓	↓	↓	↓	↓	↓	↓

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP.: SEFUN SOX SDS	Check Out:
(V4)	(V4)	(V6)	(V4)	6/27		Chemist: FEB 6/27/09
PCDD/F 0809 10A, 1041	PCDD/F 0809 10B, 1041	PCDD/F 0809 10C	PCDD/F 0809 10D	Start: 1430	SOLV: TOL	
PCB	PCB	PCB	PCB	Stop: 0800 6/28	Other: N/A	Check-In: Chemist: / /
PAH	PAH	PAH	PAH		Final Volume(s): 20 ml C14	

Comments:

hrmsgenprepL.rpt

SAMPLE DATA

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 12:26:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:26:55 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1	2,3,7,8-TCDD			NO	1.08	10.000					0.0620	
2	1,2,3,7,8-PeCDD			NO	1.03	10.000					0.0656	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.104	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.107	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.102	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.110	
7	OCDD	1.71e3	0.73	YES	1.18	10.000	41.69	1.001	~~0.64675~~	NO	0.134	0.58063
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0489	
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.0551	
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0576	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.0437	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.0480	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.0560	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.0699	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.0793	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.0857	
17	OCDF			NO	1.10	10.000					0.114	
18	13C-2,3,7,8-TCDD	1.00e6	0.79	NO	1.01	10.000	26.09	1.023	190.31	95.2	0.347	
19	13C-1,2,3,7,8-PeCDD	7.78e5	0.63	NO	0.827	10.000	30.73	1.205	181.09	90.5	0.293	
20	13C-1,2,3,4,7,8-HxCDD	7.00e5	1.26	NO	0.916	10.000	34.17	0.988	184.79	92.4	0.442	
21	13C-1,2,3,6,7,8-HxCDD	6.42e5	1.24	NO	0.921	10.000	34.28	0.991	168.53	84.3	0.440	
22	13C-1,2,3,4,6,7,8-HpCDD	6.02e5	1.06	NO	0.708	10.000	38.21	1.105	205.61	103	0.764	
23	13C-OCDD	8.95e5	0.89	NO	0.503	10.000	41.66	1.204	430.56	108	0.514	
24	13C-2,3,7,8-TCDF	1.39e6	0.79	NO	0.977	10.000	25.33	0.993	195.62	97.8	0.209	
25	13C-1,2,3,7,8-PeCDF	1.30e6	1.58	NO	0.896	10.000	29.51	1.157	199.16	99.6	0.361	
26	13C-2,3,4,7,8-PeCDF	1.24e6	1.57	NO	0.900	10.000	30.46	1.194	188.73	94.4	0.359	
27	13C-1,2,3,4,7,8-HxCDF	9.06e5	0.52	NO	1.17	10.000	33.25	0.961	187.46	93.7	0.521	
28	13C-1,2,3,6,7,8-HxCDF	1.04e6	0.52	NO	1.52	10.000	33.37	0.965	165.20	82.6	0.401	
29	13C-2,3,4,6,7,8-HxCDF	8.51e5	0.53	NO	1.25	10.000	34.00	0.983	164.84	82.4	0.487	
30	13C-1,2,3,7,8,9-HxCDF	8.19e5	0.52	NO	1.05	10.000	35.00	1.012	188.05	94.0	0.578	

6/30/09

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 12:26:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:26:55 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

31	13C-1,2,3,4,6,7,8-HpCDF	6.24e5	0.44	NO	0.868	10.000	36.87	1.066	173.82	86.9	0.617
32	13C-1,2,3,4,7,8,9-HpCDF	5.87e5	0.45	NO	0.727	10.000	38.78	1.121	195.36	97.7	0.737
33	13C-OCDF	1.22e6	0.91	NO	0.760	10.000	41.90	1.211	389.70	97.4	0.310
34	37Cl-2,3,7,8-TCDD	2.48e5			0.668	10.000	26.12	1.024	71.447	89.3	0.0919
35	13C-1,2,3,4-TCDD	1.04e6	0.80	NO	1.00	10.000	25.51	0.000	200.00	100	0.353
36	13C-1,2,3,4-TCDF	1.46e6	0.78	NO	1.00	10.000	24.10	0.000	200.00	100	0.204
37	13C-1,2,3,7,8,9-HxCDD	8.27e5	1.24	NO	1.00	10.000	34.59	0.000	200.00	100	0.405
38	Total Tetra-Dioxins				1.08	10.000					0.0289
39	Total Penta-Dioxins				1.03	10.000					0.0223
40	Total Hexa-Dioxins				1.13	10.000					0.0402
41	Total Hepta-Dioxins				1.06	10.000					0.0600
42	Total Tetra-Furans				1.09	10.000					0.0189
43	1st Func. Penta-Furans				1.16	10.000					0.0152
44	Total Penta-Furans				1.16	10.000					0.0218
45	Total Hexa-Furans				1.28	10.000					0.0283
46	Total Hepta-Furans				1.69	10.000					0.0395

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

2,3,7,8-TCDD

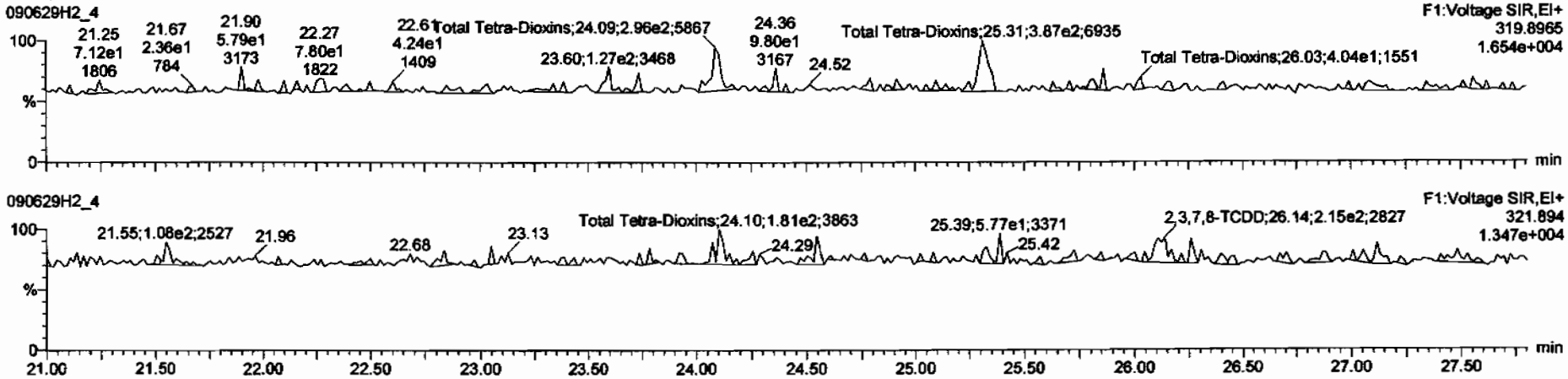

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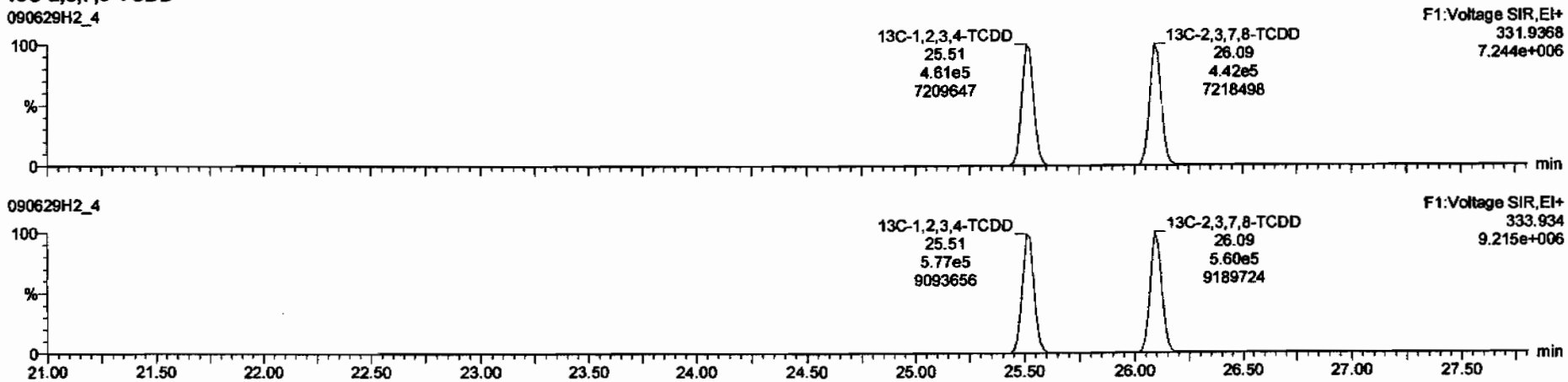

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37Cl-2,3,7,8-TCDD

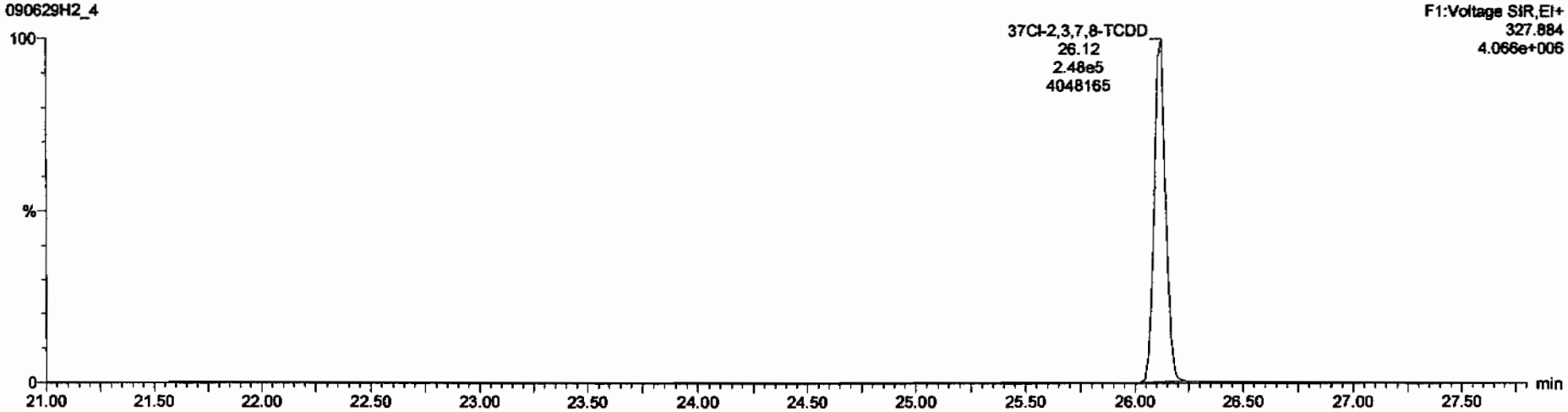

13C-1,2,3,4-TCDD

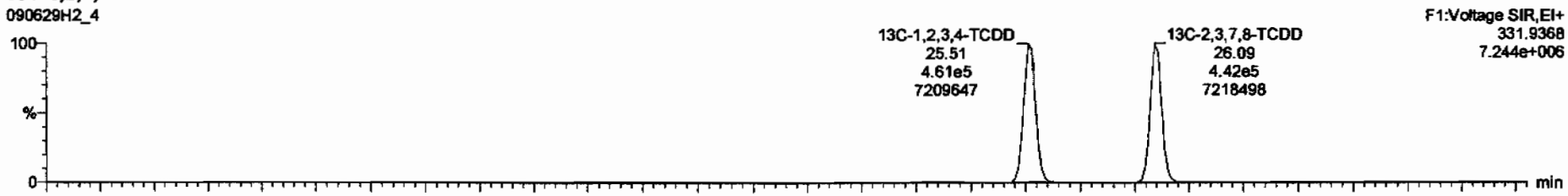

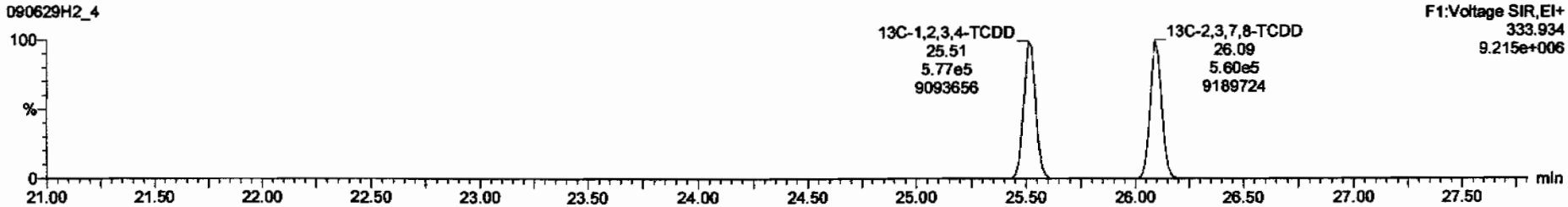

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,7,8-PeCDD

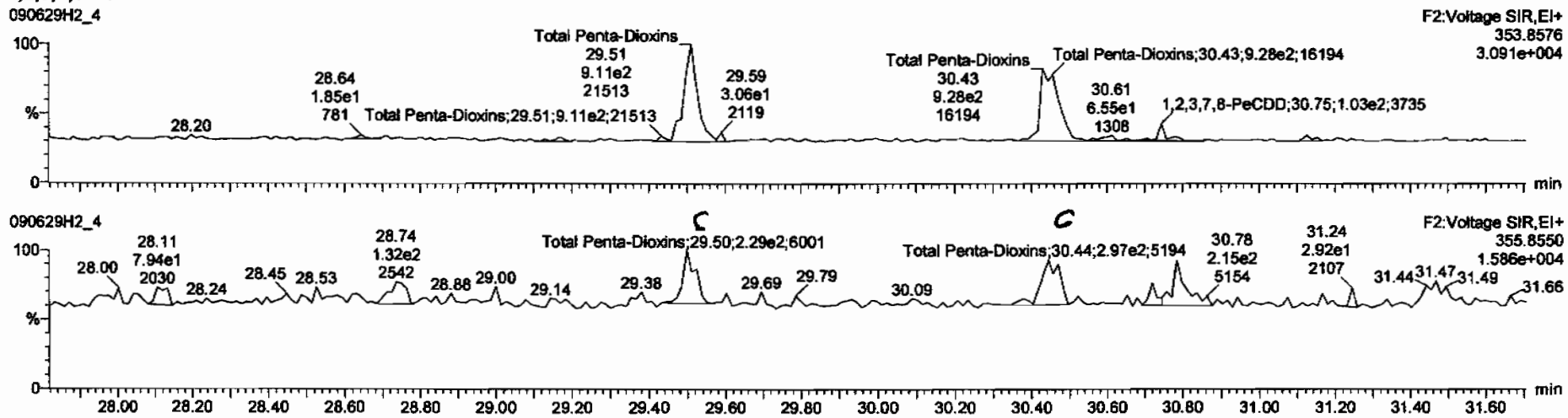

13C-1,2,3,7,8-PeCDD

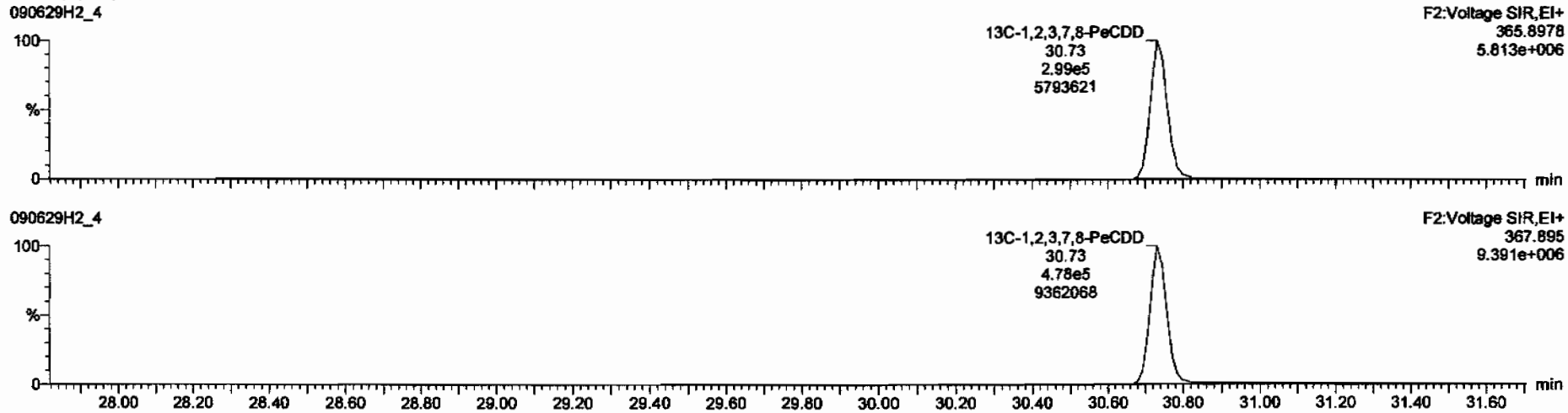

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,7,8-HxCDD

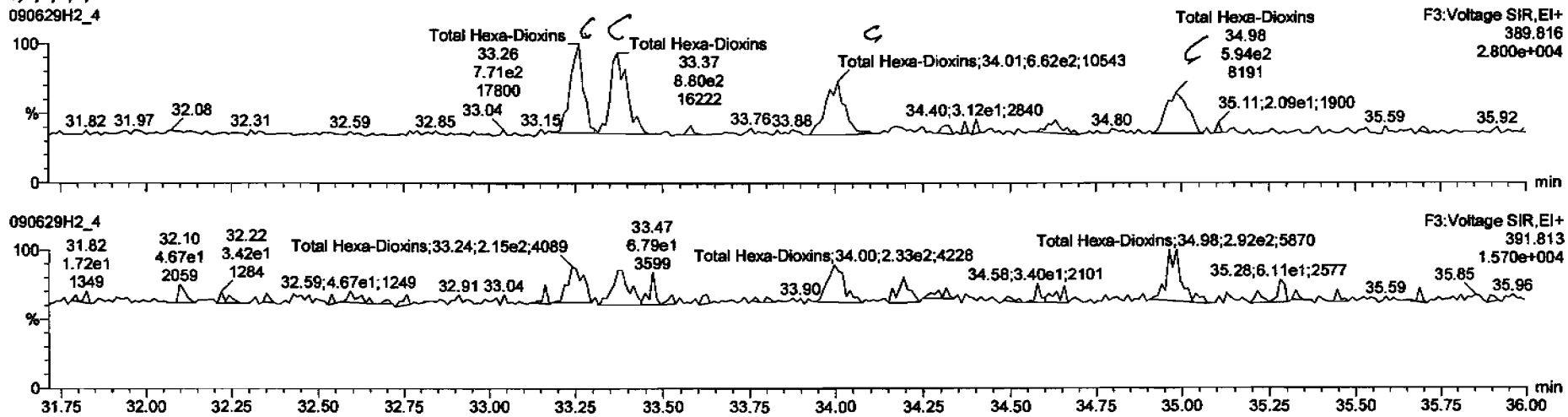

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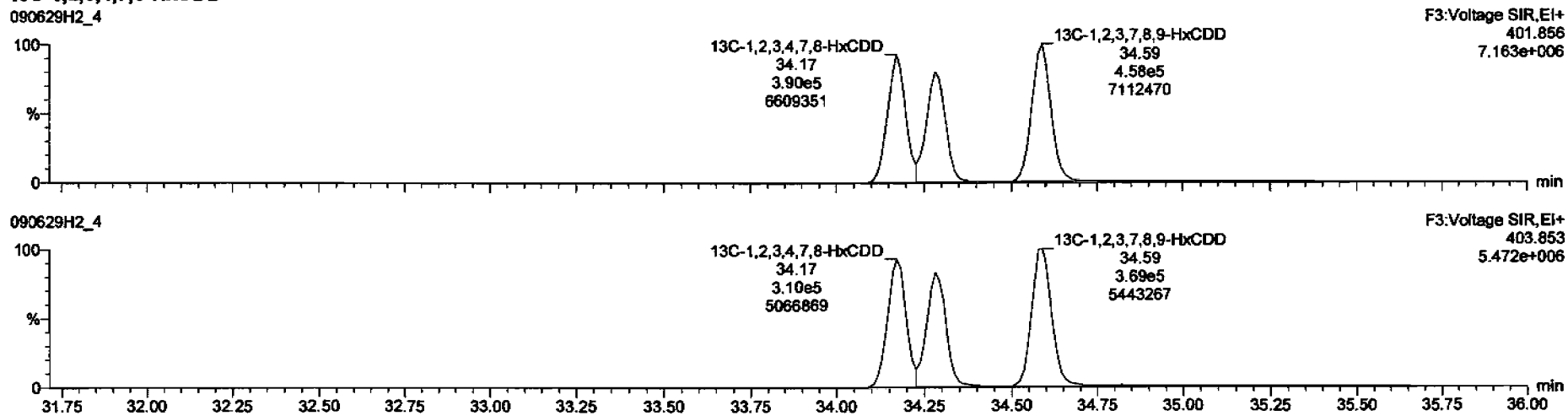

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,6,7,8-HpCDD

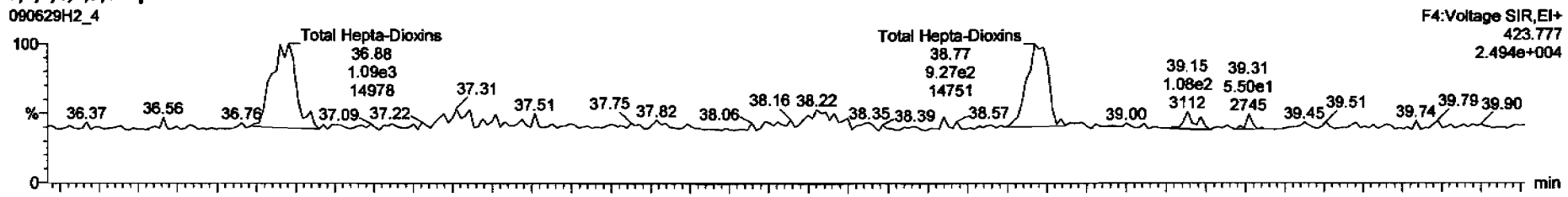

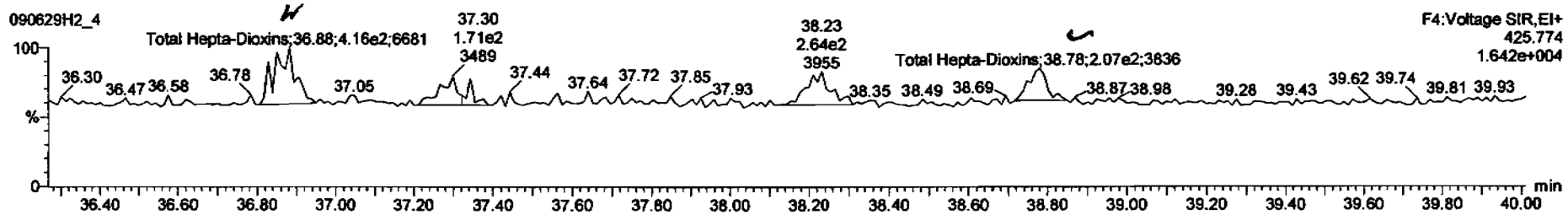

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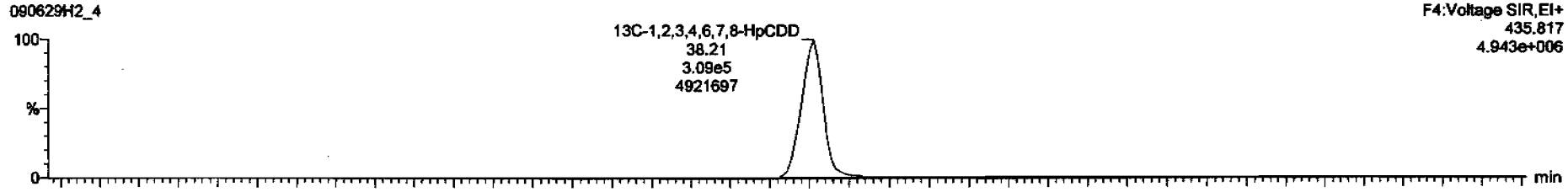

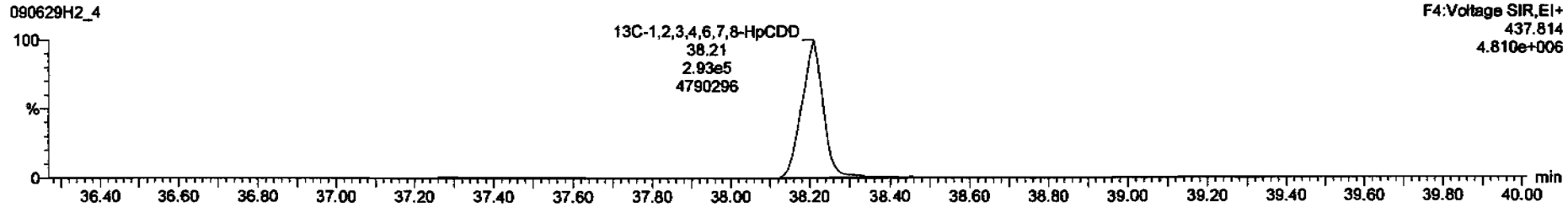

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
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Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

OCDD

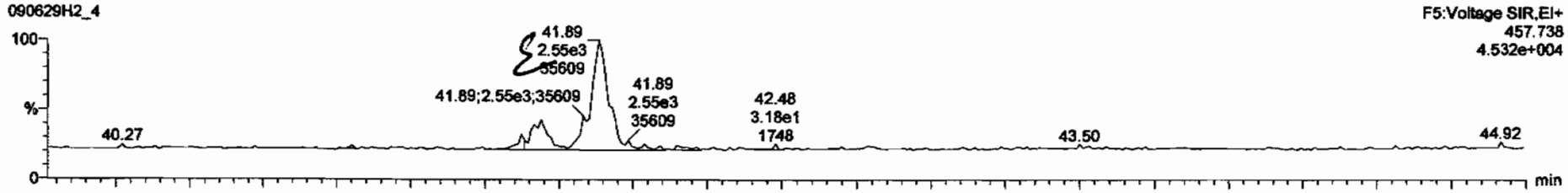

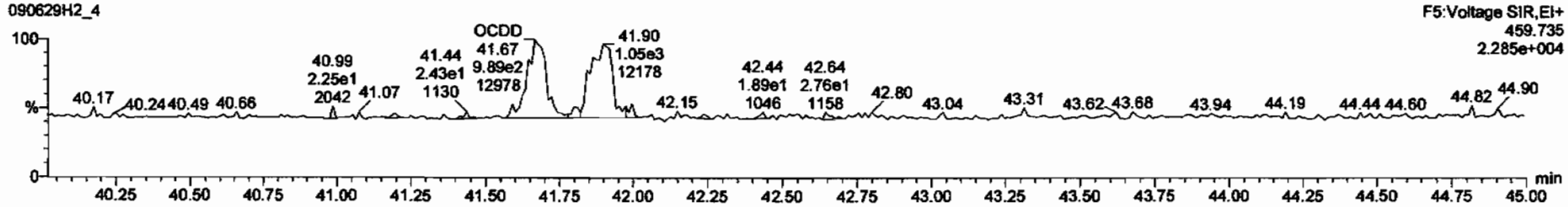

13C-OCDD

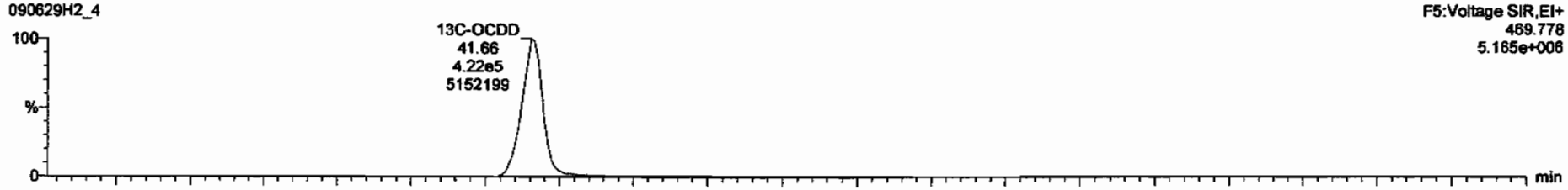

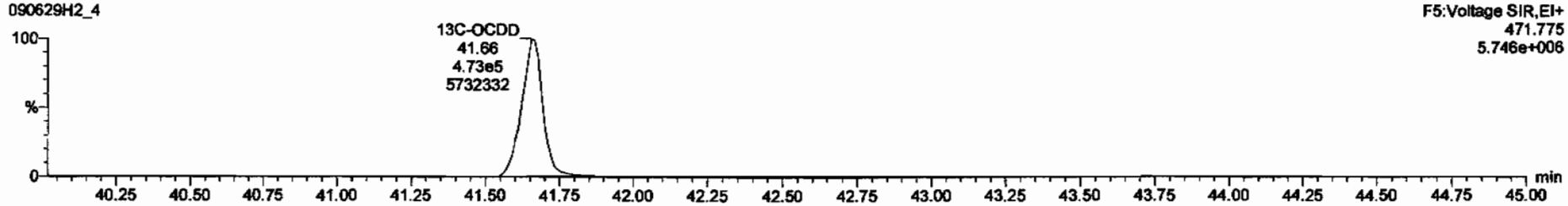

TargetLynx - 090629f2-4.qld * - [Chromatogram]

090629H2_4 - 0_2207_MB001 - 0_2207_MB001

4	1,2,3,6,7,8-HxCDD	9.12e1	1.14	NO	1.13	10.000	34.31	1.001	0.0253		0.107	0.0253
5	1,2,3,7,8,9-HxCDD	1.85e2	2.28	YES	1.10	10.000	34.63	1.010	0.0501		0.102	0.0342
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.110	
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0489	

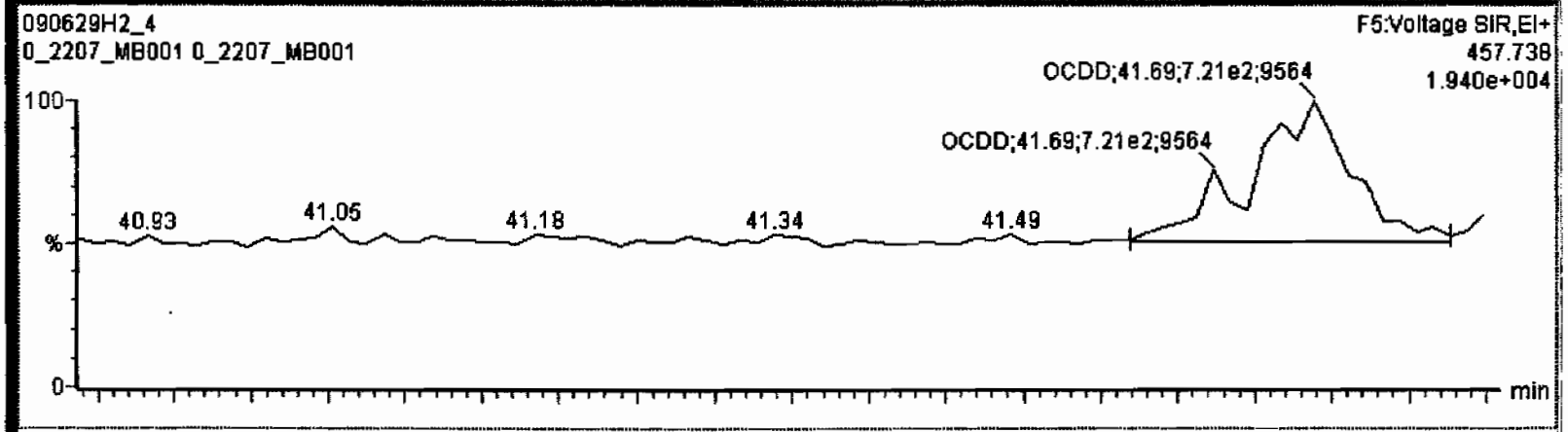

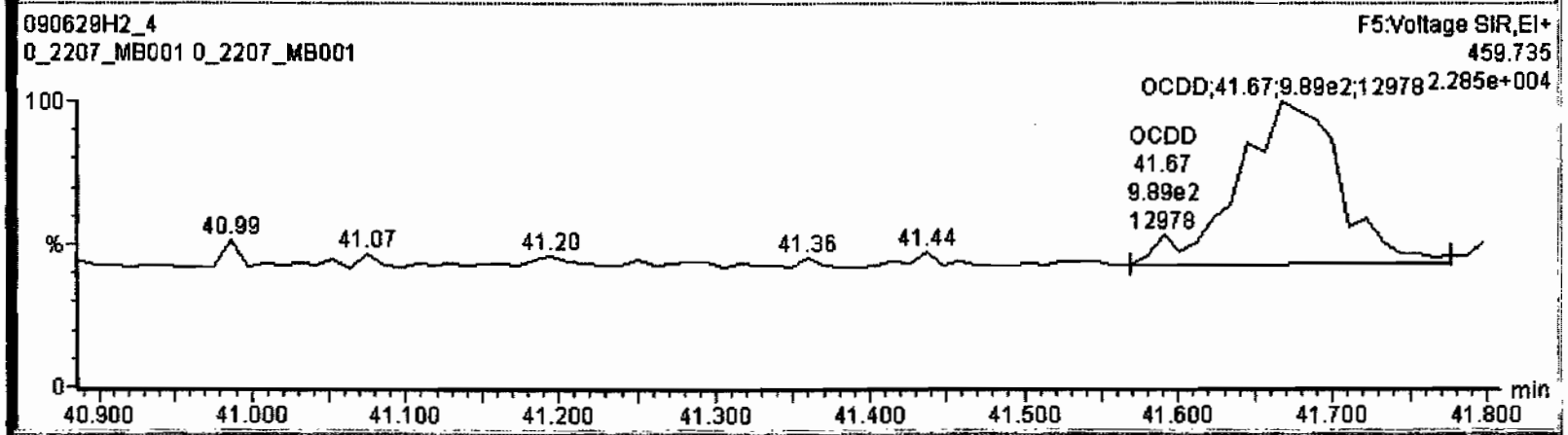

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

2,3,7,8-TCDF

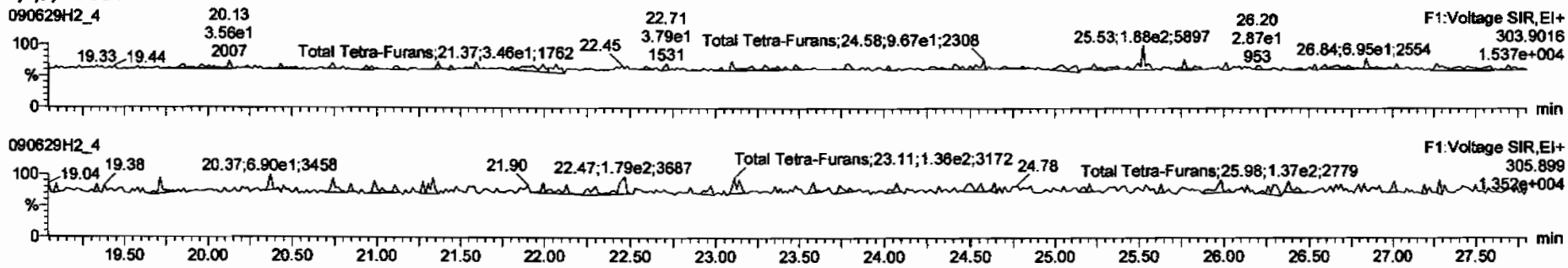

13C-2,3,7,8-TCDF

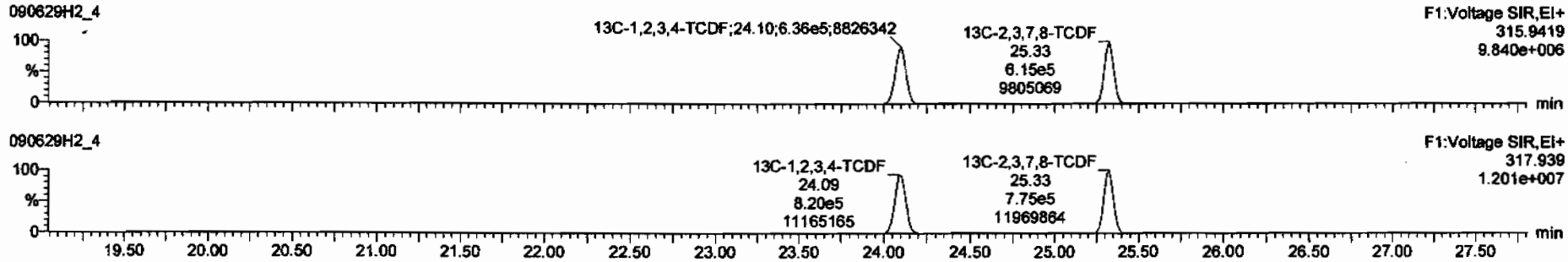

DPE1

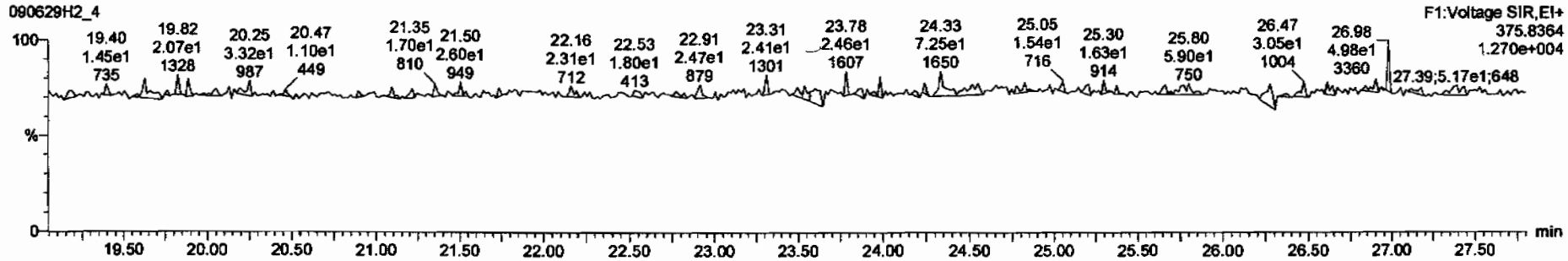

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

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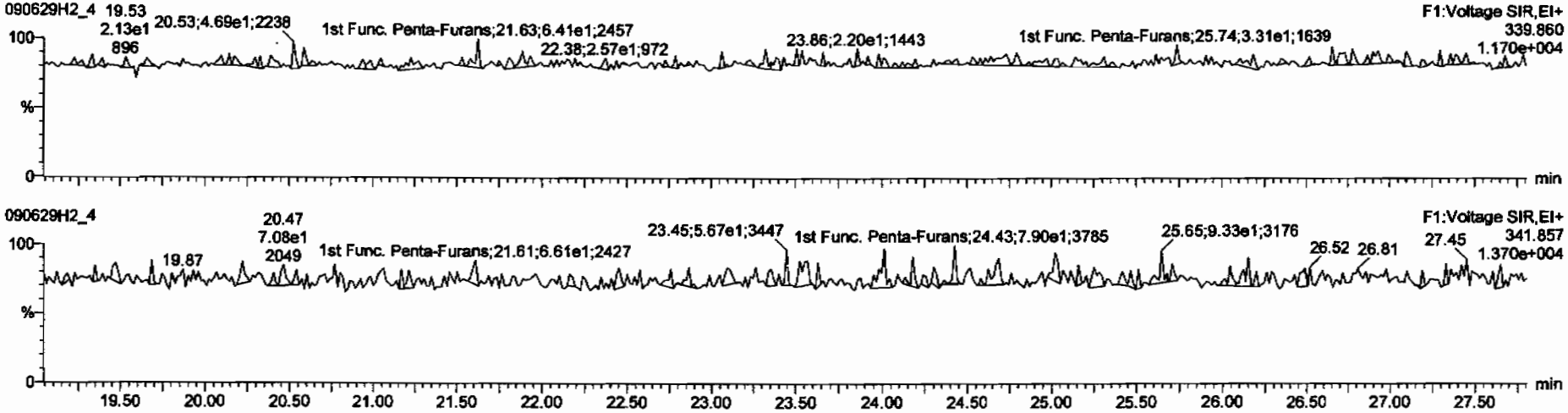

DPE6

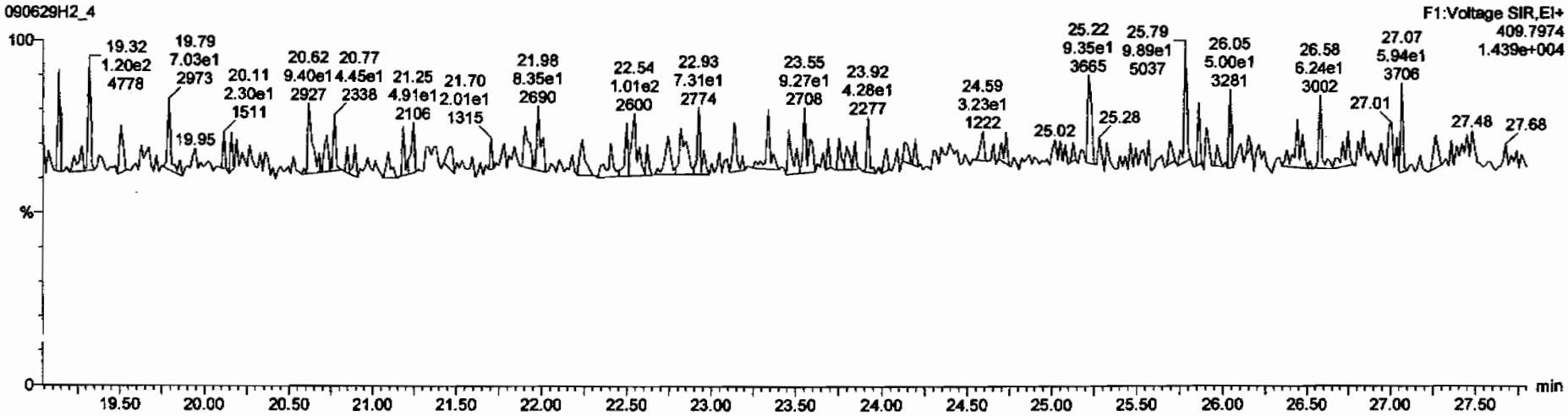

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,7,8-PeCDF

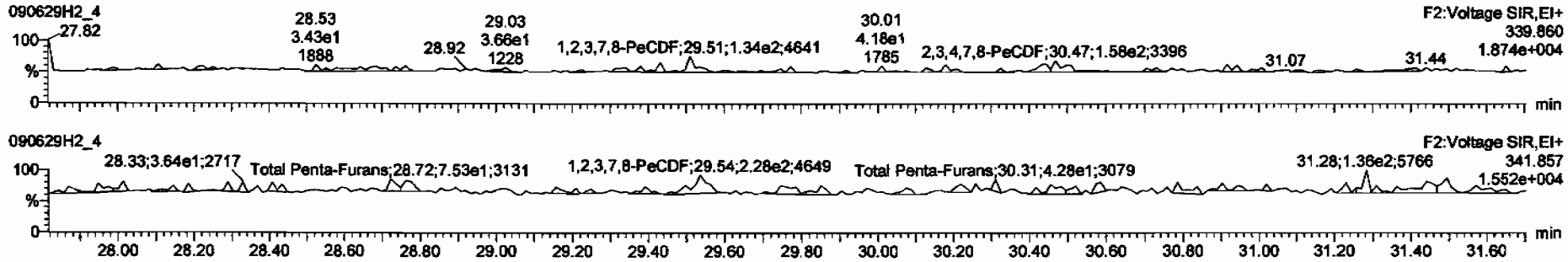

13C-1,2,3,7,8-PeCDF

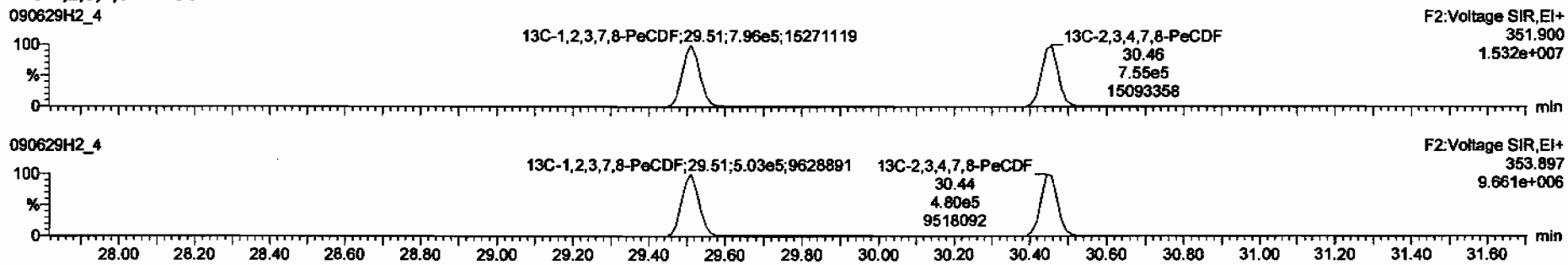

DPE2

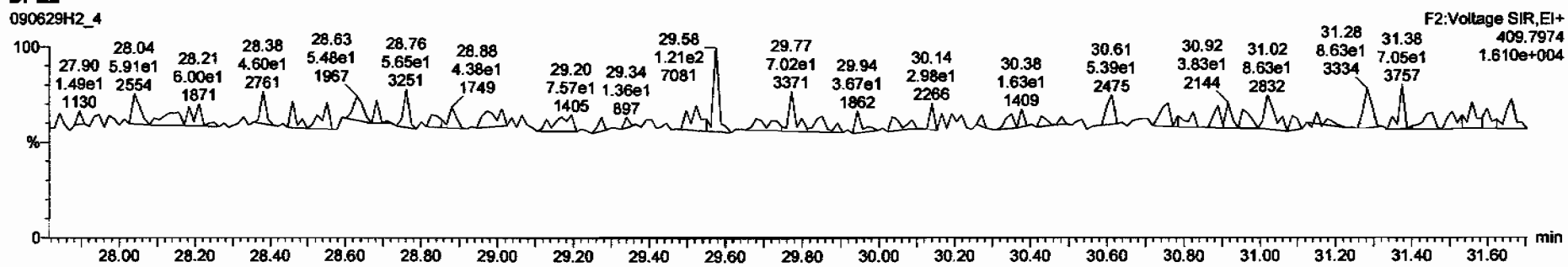

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,7,8-HxCDF

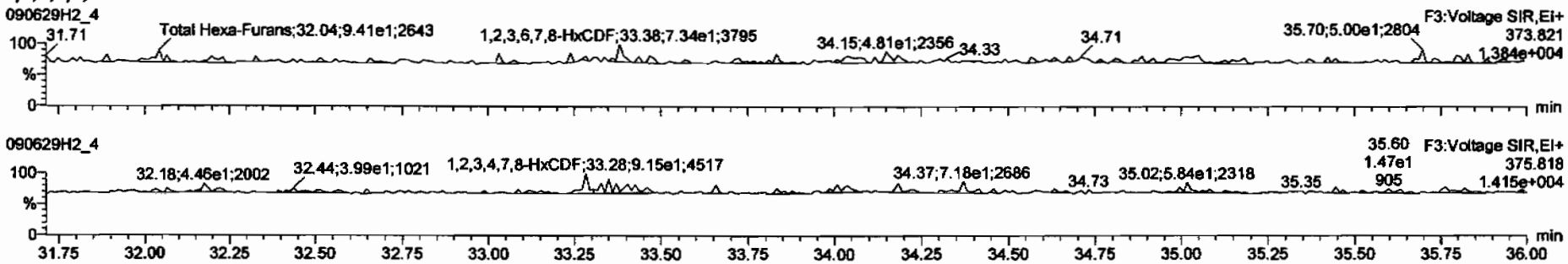

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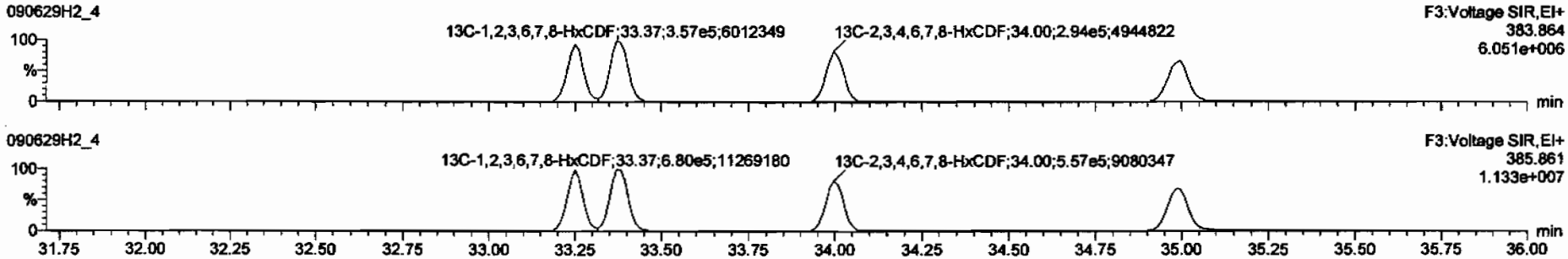

DPE3

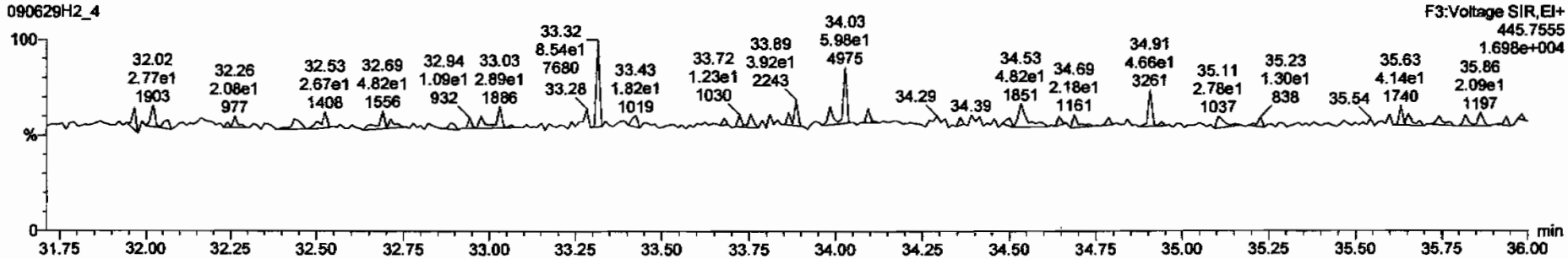

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,6,7,8-HpCDF

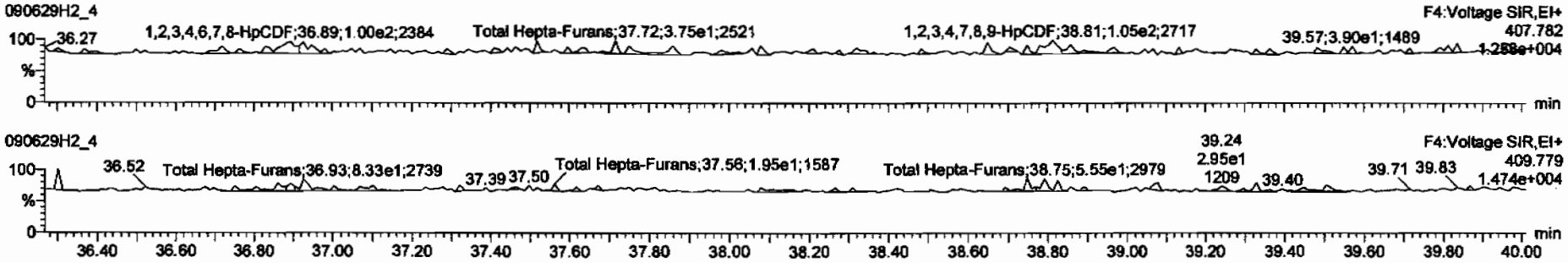

13C-1,2,3,4,6,7,8-HpCDF

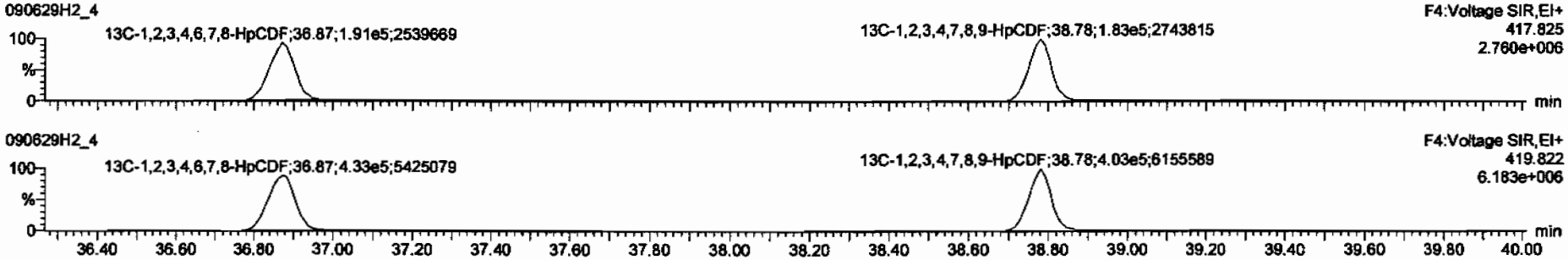

DPE4

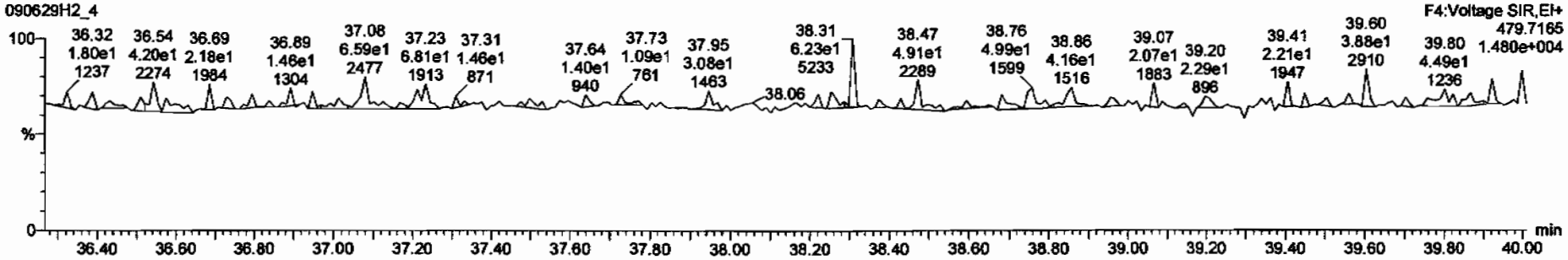

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

OCDF

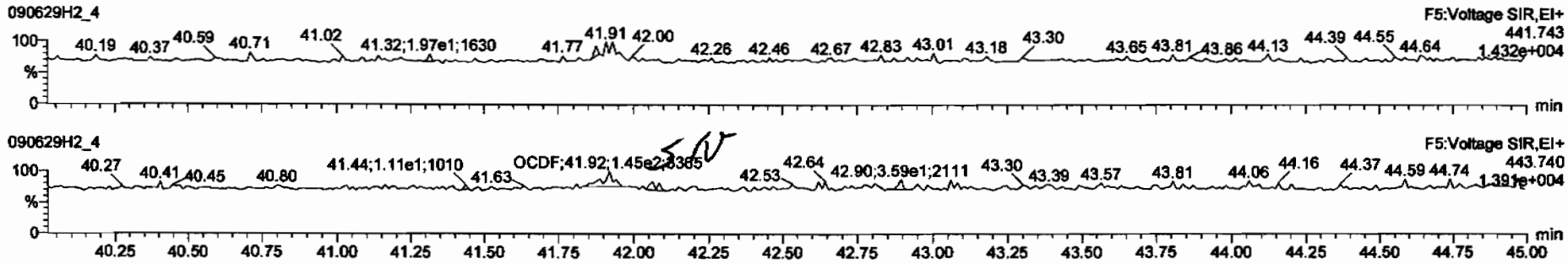

13C-OCDF

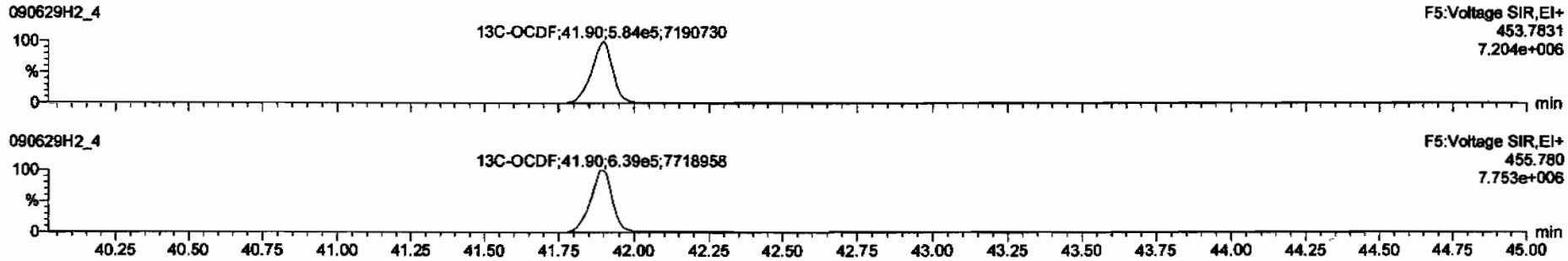

DPE5

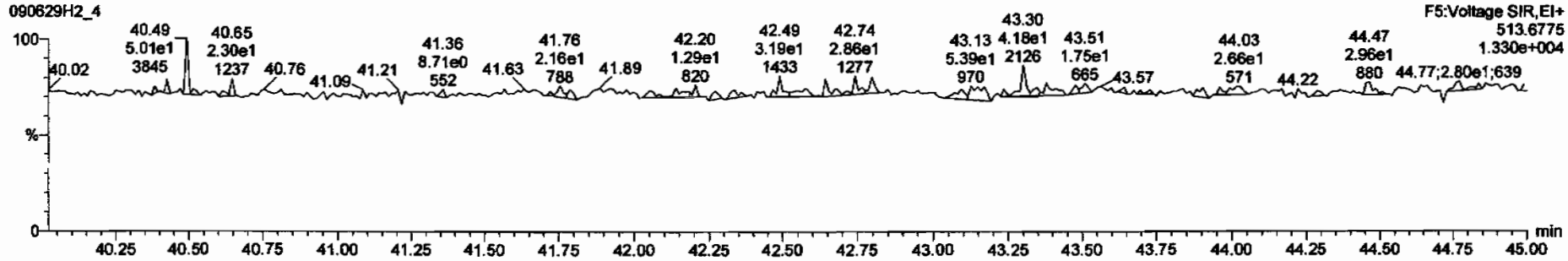

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

PFK1

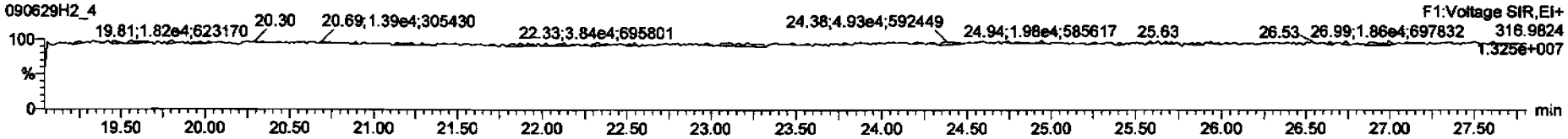

PFK2

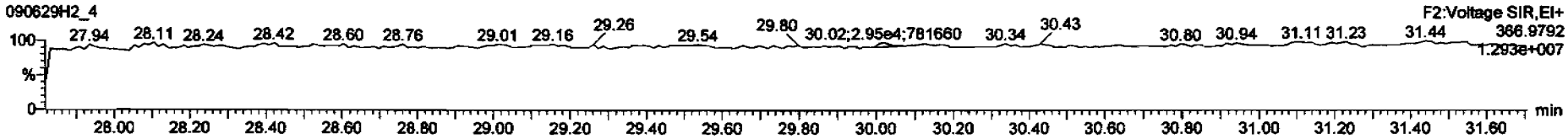

PFK3

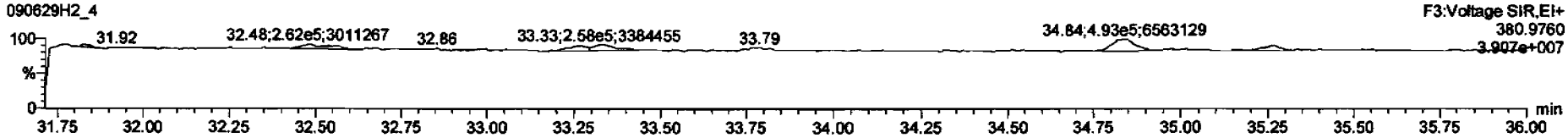

PFK4

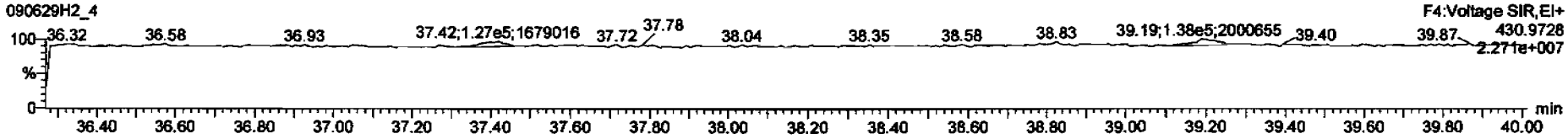

PFK5

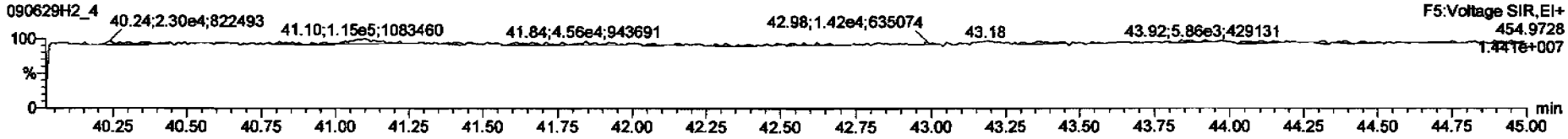

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Last Altered: Tuesday, June 30, 2009 12:18:05 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:18:32 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1	2,3,7,8-TCDD	1.02e5	0.78	NO	1.08	1.000	26.11	1.001	9.7213	97.2	0.0303	9.7213
2	1,2,3,7,8-PeCDD	3.71e5	0.62	NO	1.03	1.000	30.75	1.000	47.556	95.1	0.0495	47.556
3	1,2,3,4,7,8-HxCDD	3.18e5	1.25	NO	1.00	1.000	34.18	1.001	47.134	94.3	0.122	47.134
4	1,2,3,6,7,8-HxCDD	3.36e5	1.27	NO	1.13	1.000	34.29	1.001	47.464	94.9	0.119	47.464
5	1,2,3,7,8,9-HxCDD	3.61e5	1.25	NO	1.10	1.000	34.59	1.009	50.262	101	0.116	50.262
6	1,2,3,4,6,7,8-HpCDD	2.93e5	1.04	NO	1.06	1.000	38.22	1.000	45.856	91.7	0.202	45.856
7	OCDD	4.84e5	0.85	NO	1.18	1.000	41.68	1.000	91.654	91.7	0.154	91.654
8	2,3,7,8-TCDF	1.30e5	0.77	NO	1.09	1.000	25.33	1.001	8.9329	89.3	0.0247	8.9329
9	1,2,3,7,8-PeCDF	6.87e5	1.57	NO	1.16	1.000	29.51	1.000	44.778	89.6	0.0478	44.778
10	2,3,4,7,8-PeCDF	5.78e5	1.56	NO	1.12	1.000	30.46	1.000	42.923	85.8	0.0519	42.923
11	1,2,3,4,7,8-HxCDF	5.70e5	1.26	NO	1.41	1.000	33.26	1.001	45.926	91.9	0.0809	45.926
12	1,2,3,6,7,8-HxCDF	5.86e5	1.27	NO	1.22	1.000	33.38	1.000	45.078	90.2	0.0821	45.078
13	2,3,4,6,7,8-HxCDF	4.82e5	1.25	NO	1.28	1.000	34.01	1.001	46.095	92.2	0.107	46.095
14	1,2,3,7,8,9-HxCDF	4.56e5	1.30	NO	1.26	1.000	35.00	1.000	46.233	92.5	0.127	46.233
15	1,2,3,4,6,7,8-HpCDF	4.97e5	1.05	NO	1.69	1.000	36.88	1.001	46.551	93.1	0.146	46.551
16	1,2,3,4,7,8,9-HpCDF	4.06e5	1.03	NO	1.48	1.000	38.79	1.000	48.188	96.4	0.175	48.188
17	OCDF	6.20e5	0.92	NO	1.10	1.000	41.91	1.000	91.187	91.2	0.0934	91.187
18	13C-2,3,7,8-TCDD	9.75e5	0.79	NO	1.01	1.000	26.09	1.023	94.464	94.5	0.185	
19	13C-1,2,3,7,8-PeCDD	7.54e5	0.63	NO	0.827	1.000	30.73	1.205	89.641	89.6	0.0957	
20	13C-1,2,3,4,7,8-HxCDD	6.73e5	1.27	NO	0.916	1.000	34.16	0.988	89.402	89.4	0.284	
21	13C-1,2,3,6,7,8-HxCDD	6.29e5	1.26	NO	0.921	1.000	34.27	0.991	83.057	83.1	0.282	
22	13C-1,2,3,4,6,7,8-HpCDD	6.00e5	1.07	NO	0.708	1.000	38.21	1.105	102.98	103	0.369	
23	13C-OCDD	8.96e5	0.92	NO	0.503	1.000	41.67	1.205	216.81	108	0.300	
24	13C-2,3,7,8-TCDF	1.34e6	0.79	NO	0.977	1.000	25.31	0.992	98.459	98.5	0.111	
25	13C-1,2,3,7,8-PeCDF	1.32e6	1.56	NO	0.896	1.000	29.50	1.156	106.13	106	0.179	
26	13C-2,3,4,7,8-PeCDF	1.21e6	1.58	NO	0.900	1.000	30.44	1.193	96.249	96.2	0.178	
27	13C-1,2,3,4,7,8-HxCDF	8.80e5	0.53	NO	1.17	1.000	33.24	0.961	91.572	91.6	0.293	
28	13C-1,2,3,6,7,8-HxCDF	1.06e6	0.52	NO	1.52	1.000	33.37	0.965	85.133	85.1	0.225	
29	13C-2,3,4,6,7,8-HxCDF	8.17e5	0.52	NO	1.25	1.000	33.99	0.983	79.507	79.5	0.274	
30	13C-1,2,3,7,8,9-HxCDF	7.85e5	0.52	NO	1.05	1.000	34.99	1.012	90.673	90.7	0.325	

6/30/09
6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 12:18:05 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:18:32 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

31	13C-1,2,3,4,6,7,8-HpCDF	6.32e5	0.45	NO	0.868	1.000	36.86	1.066	88.541	88.5	0.426
32	13C-1,2,3,4,7,8,9-HpCDF	5.69e5	0.44	NO	0.727	1.000	38.78	1.122	95.182	95.2	0.509
33	13C-OCDF	1.24e6	0.89	NO	0.760	1.000	41.90	1.212	198.73	99.4	0.199
34	37Cl-2,3,7,8-TCDD	2.46e5			0.668	1.000	26.11	1.023	36.149	90.4	0.0332
35	13C-1,2,3,4-TCDD	1.02e6	0.79	NO	1.00	1.000	25.51	0.000	100.00	100	0.188
36	13C-1,2,3,4-TCDF	1.39e6	0.77	NO	1.00	1.000	24.09	0.000	100.00	100	0.108
37	13C-1,2,3,7,8,9-HxCDD	8.22e5	1.23	NO	1.00	1.000	34.58	0.000	100.00	100	0.260

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qid

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

2,3,7,8-TCDD

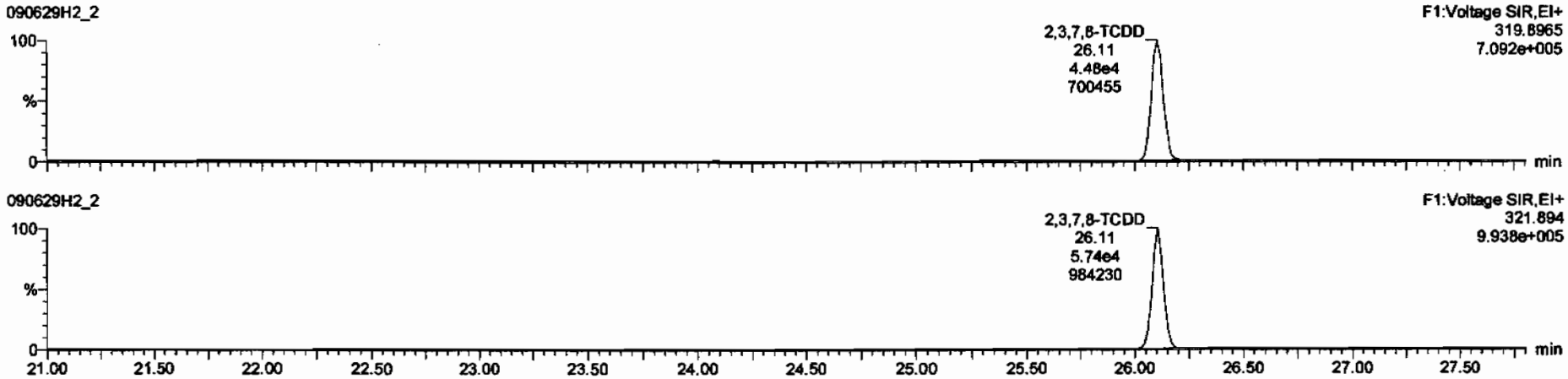

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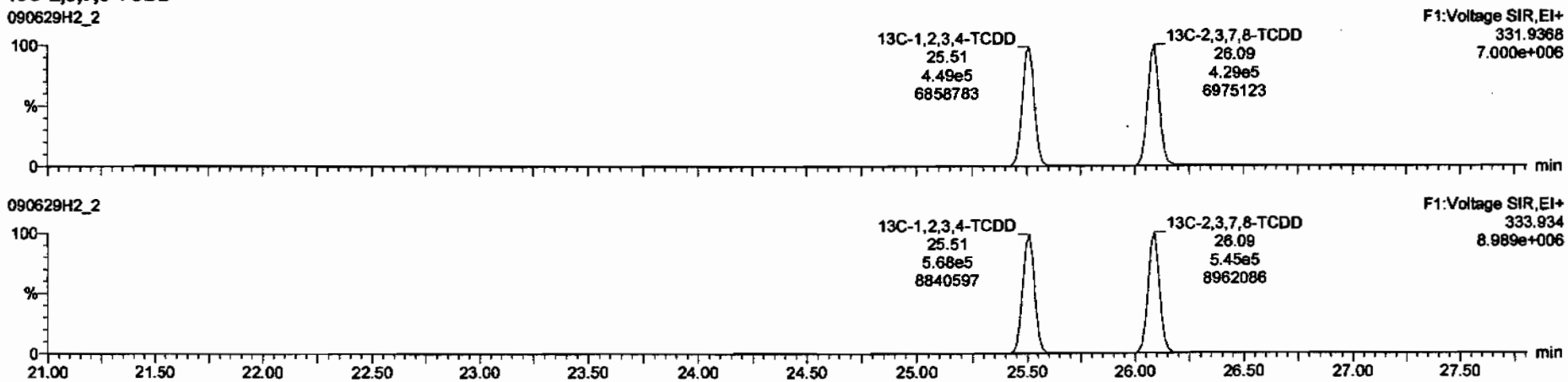

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

37Cl-2,3,7,8-TCDD

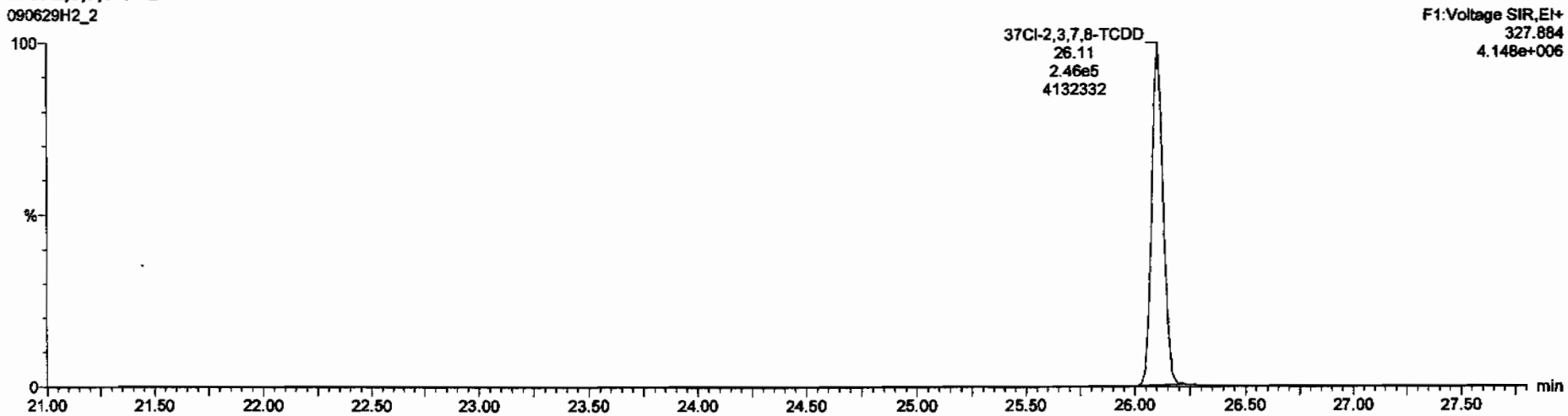

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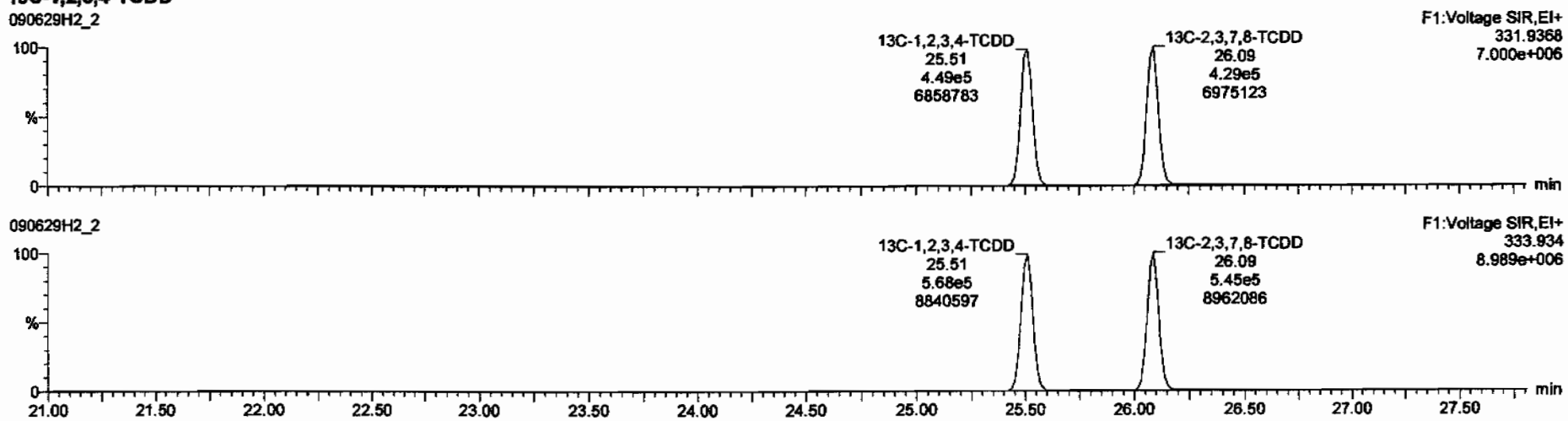

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,7,8-PeCDD

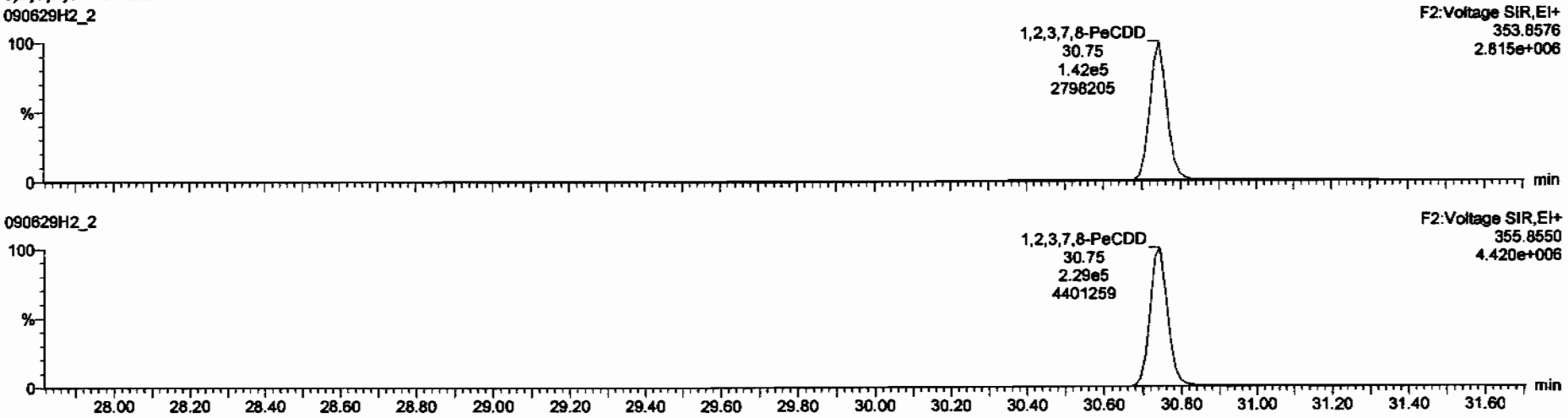

13C-1,2,3,7,8-PeCDD

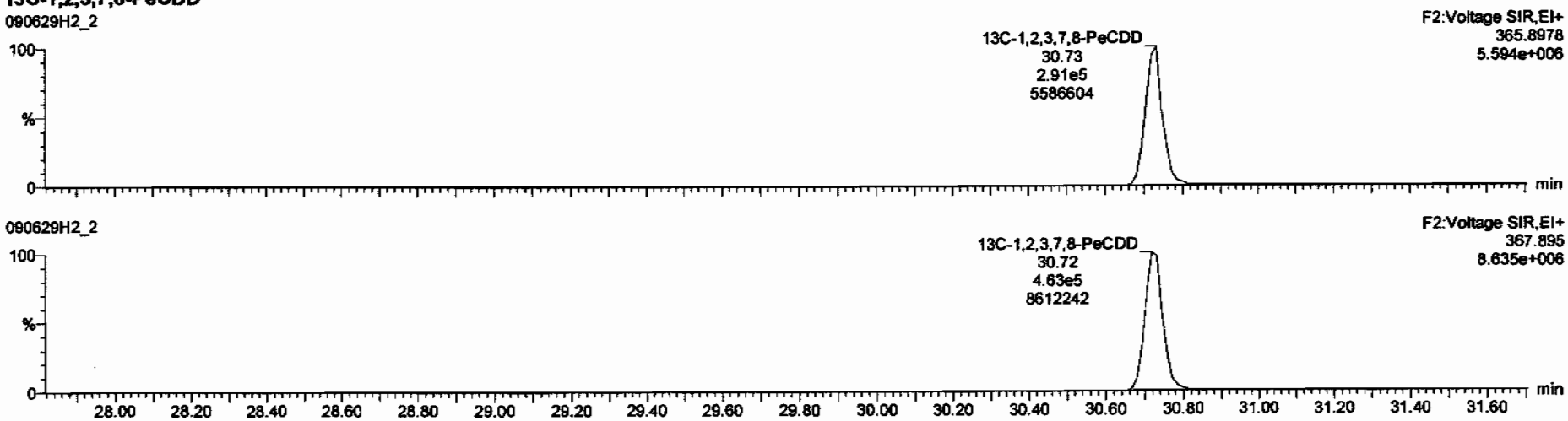

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Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,7,8-HxCDD

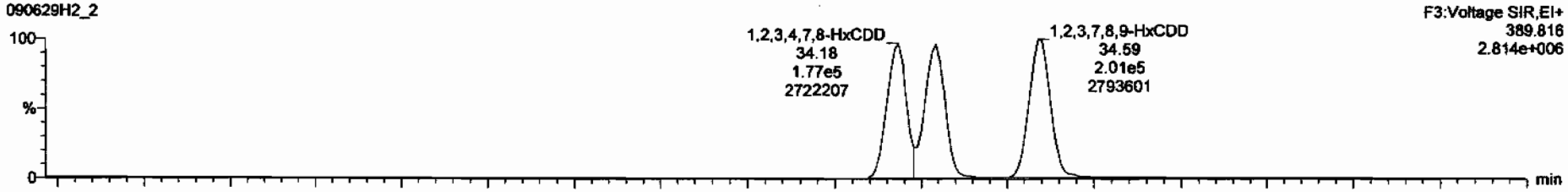

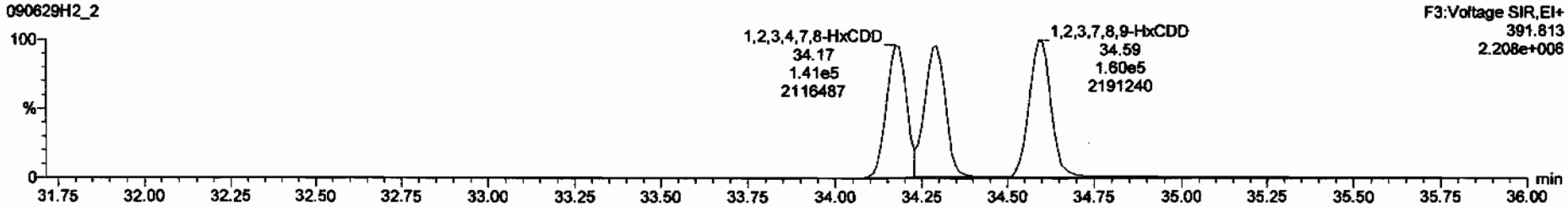

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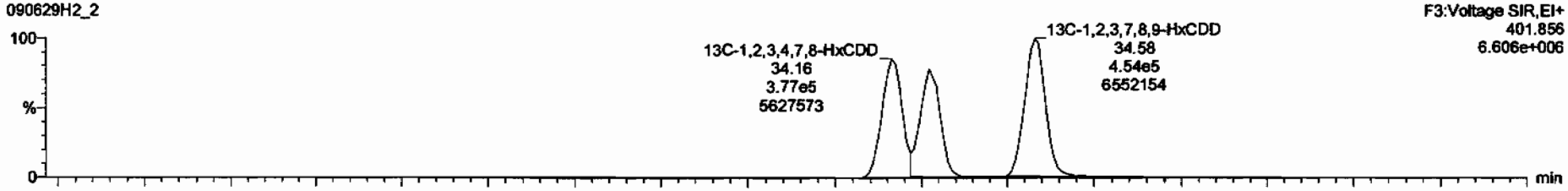

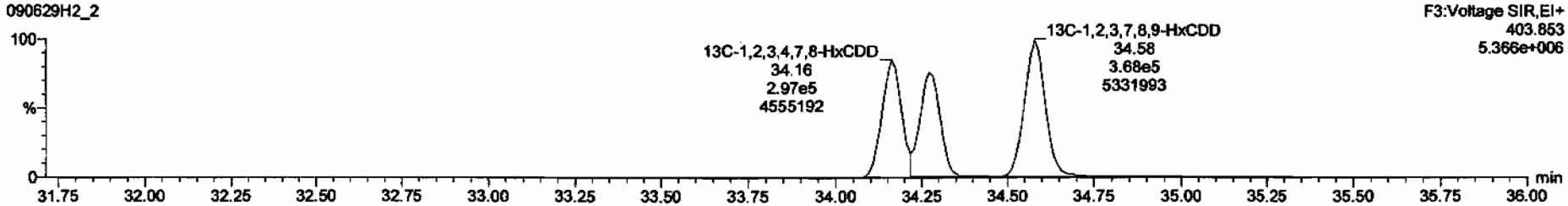

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,6,7,8-HpCDD

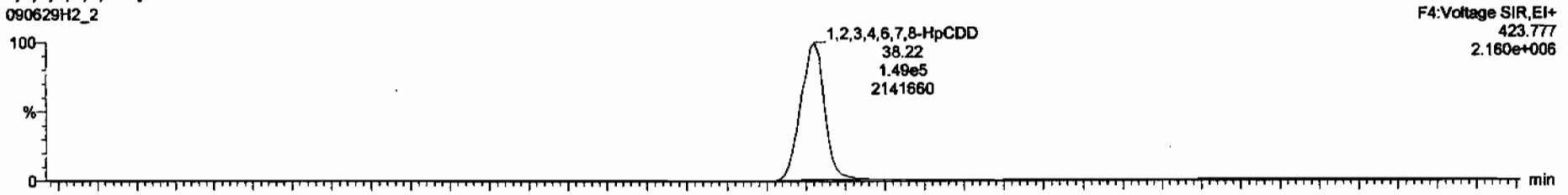

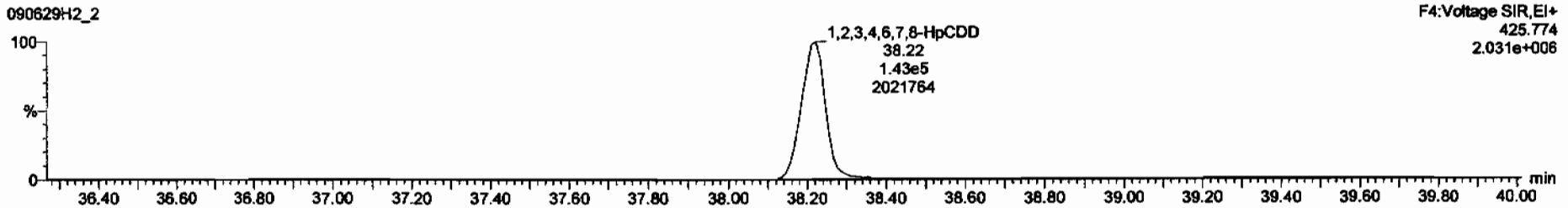

13C-1,2,3,4,6,7,8-HpCDD

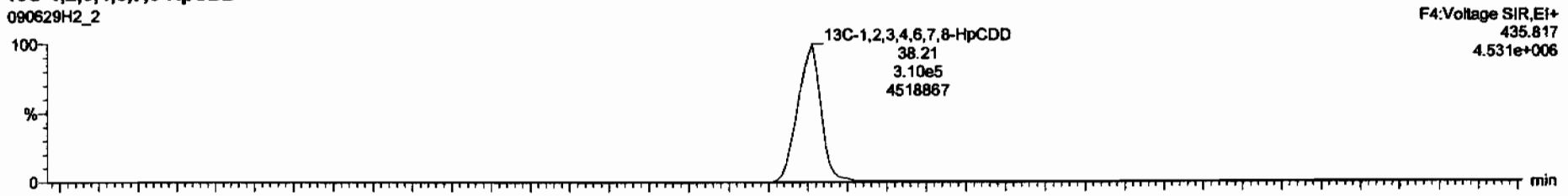

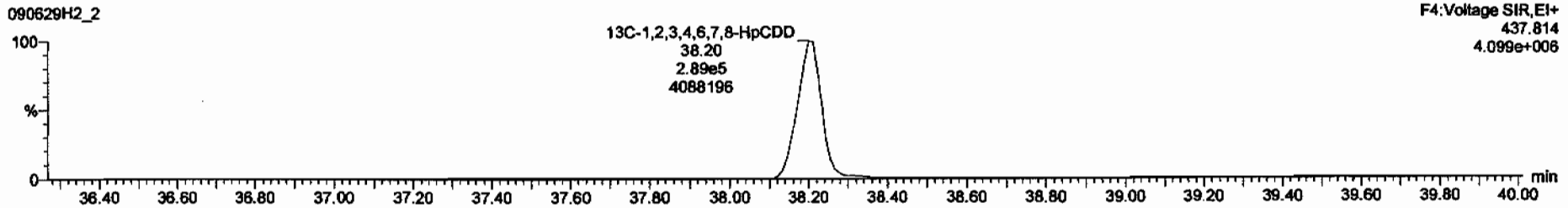

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

OCDD

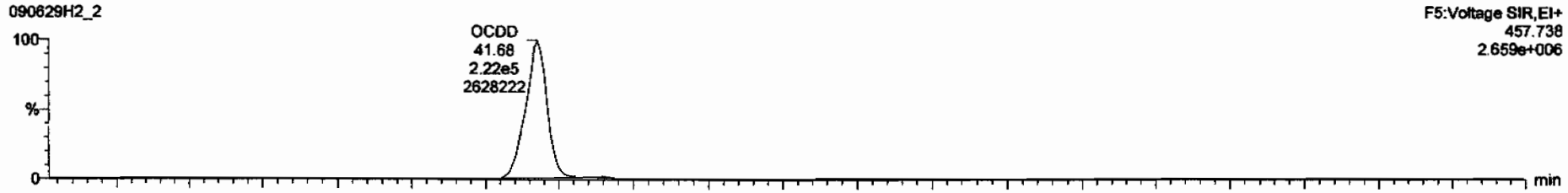

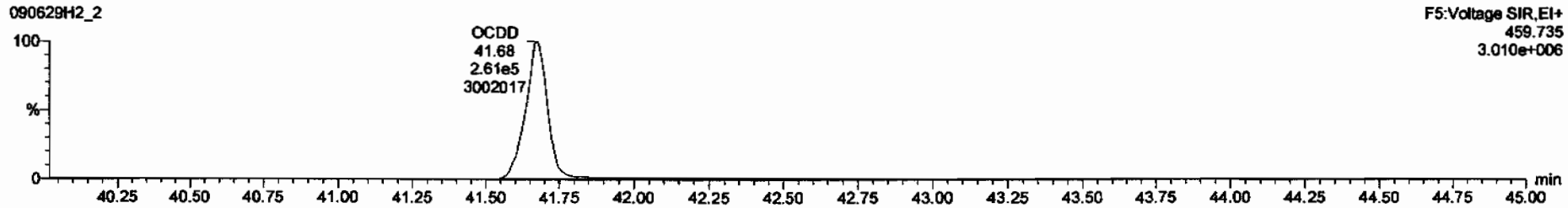

13C-OCDD

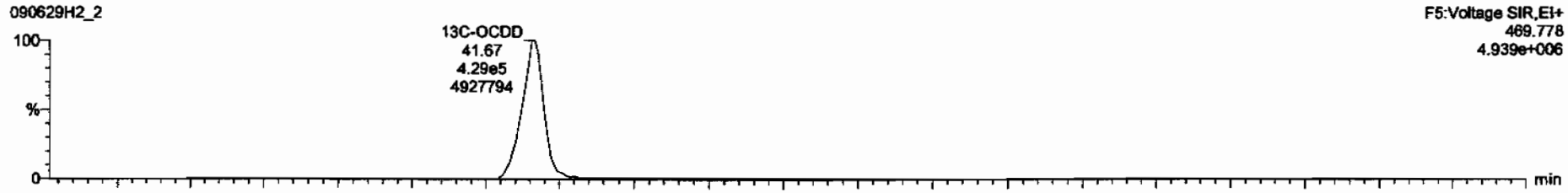

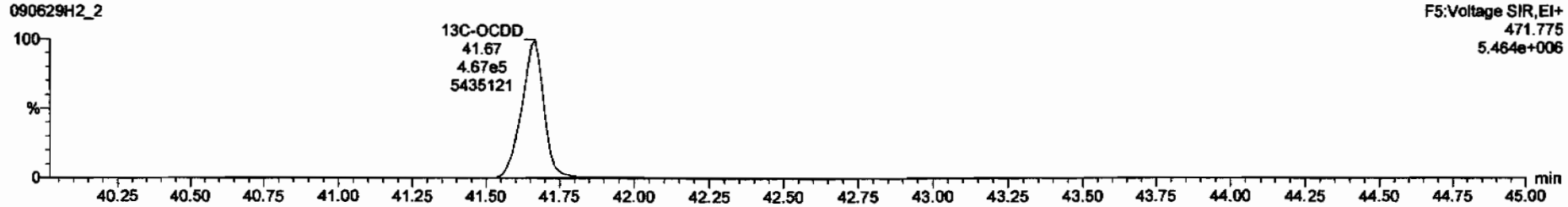

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

2,3,7,8-TCDF

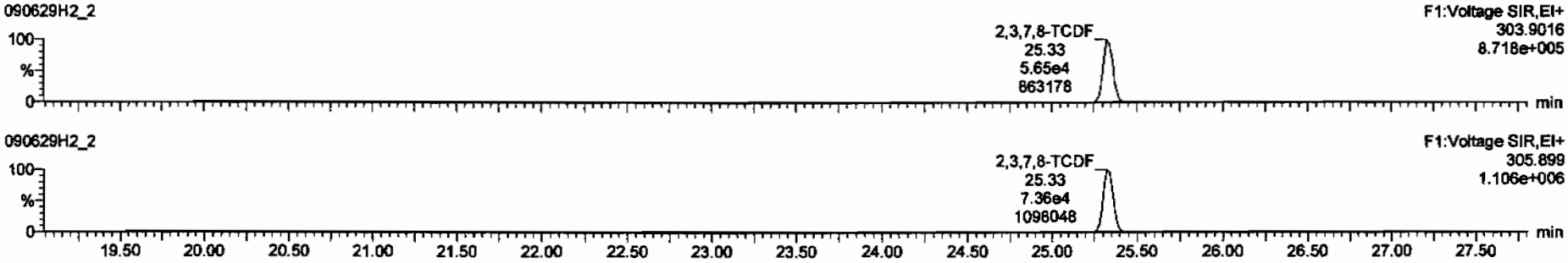

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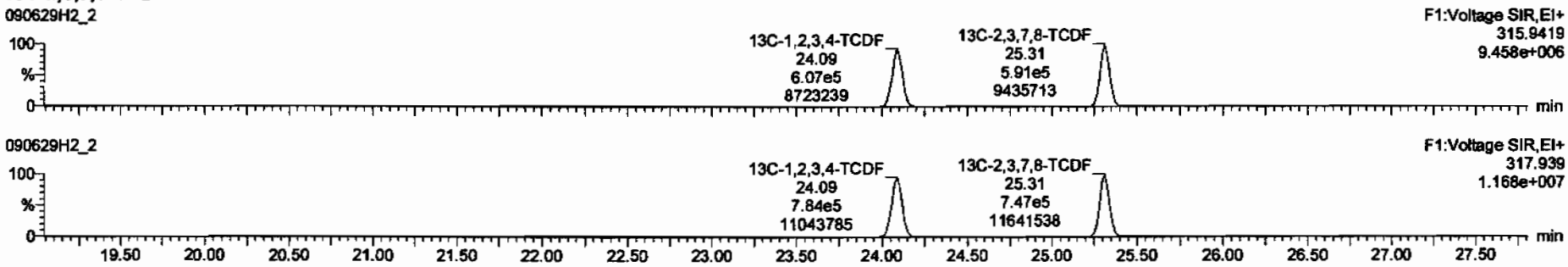

DPE1

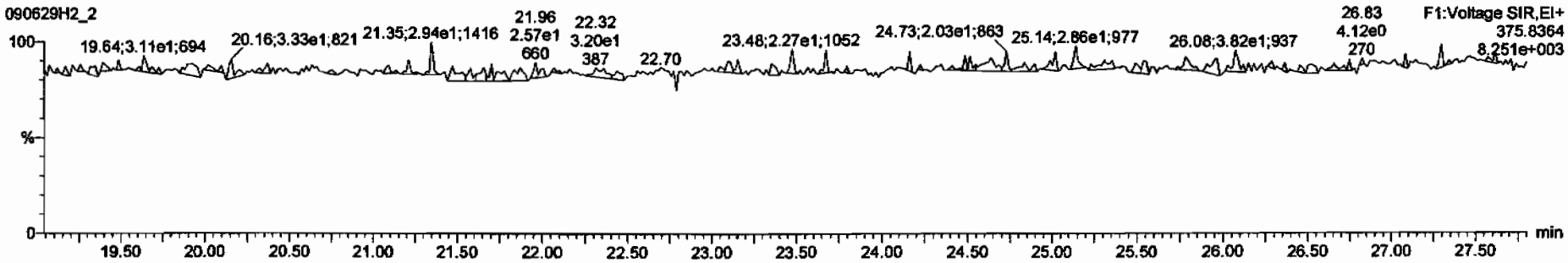

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Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

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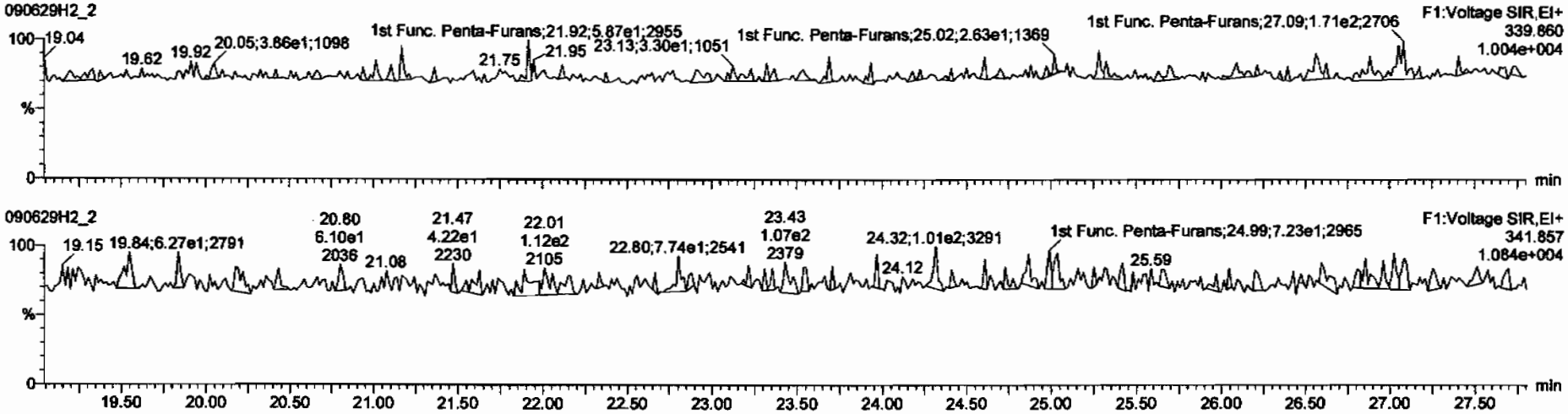

DPE6

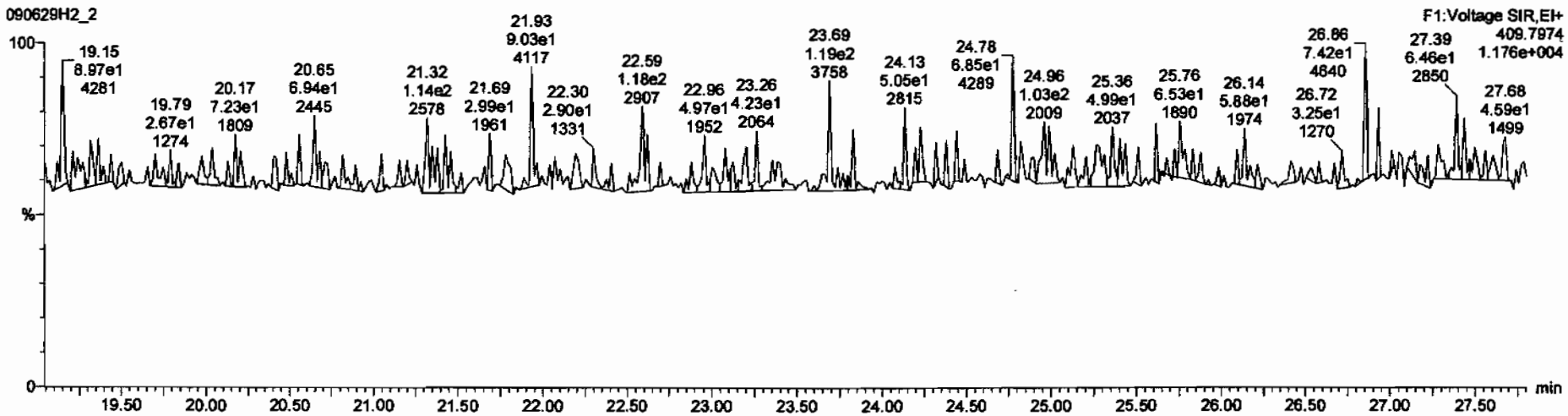

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,7,8-PeCDF

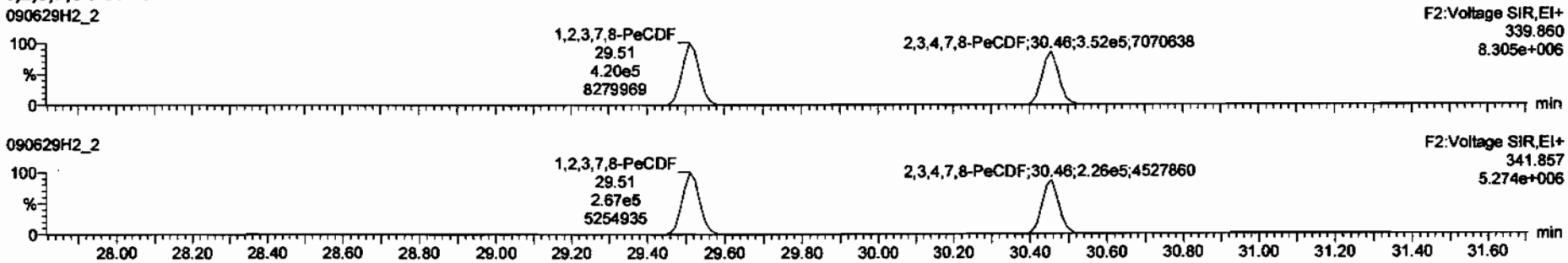

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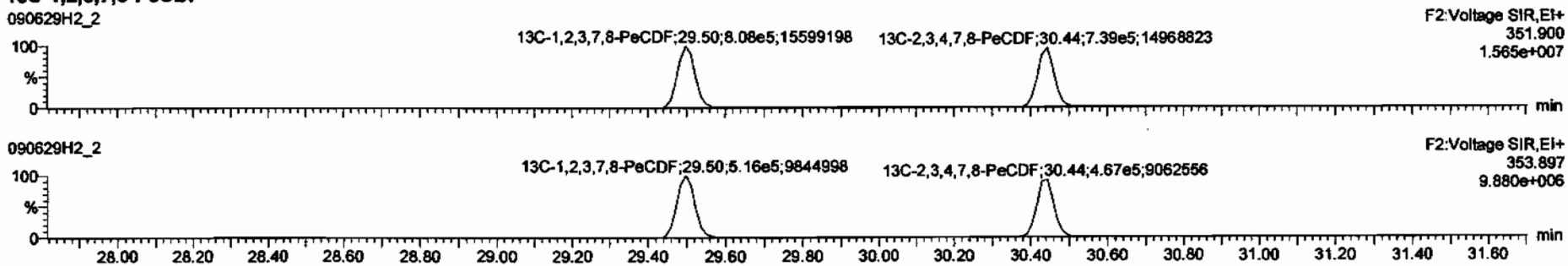

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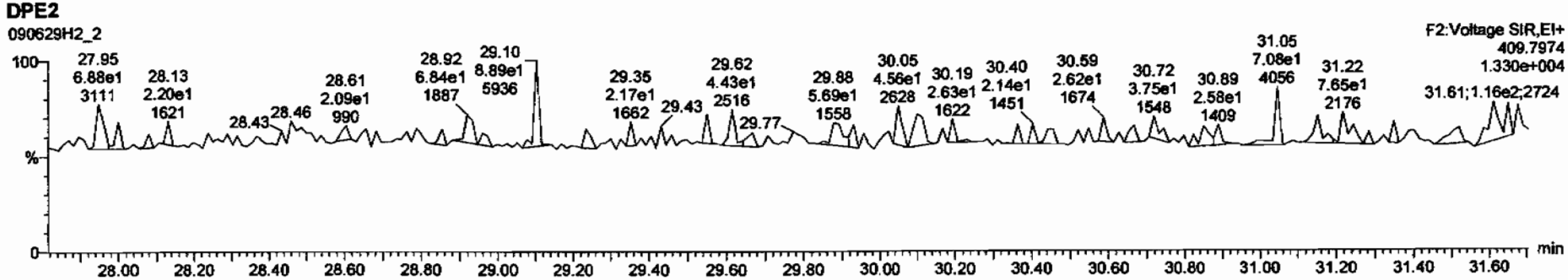

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,7,8-HxCDF

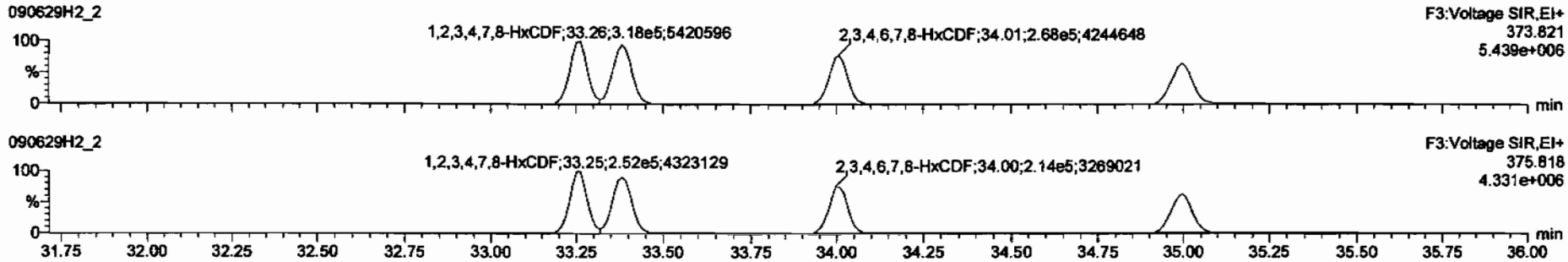

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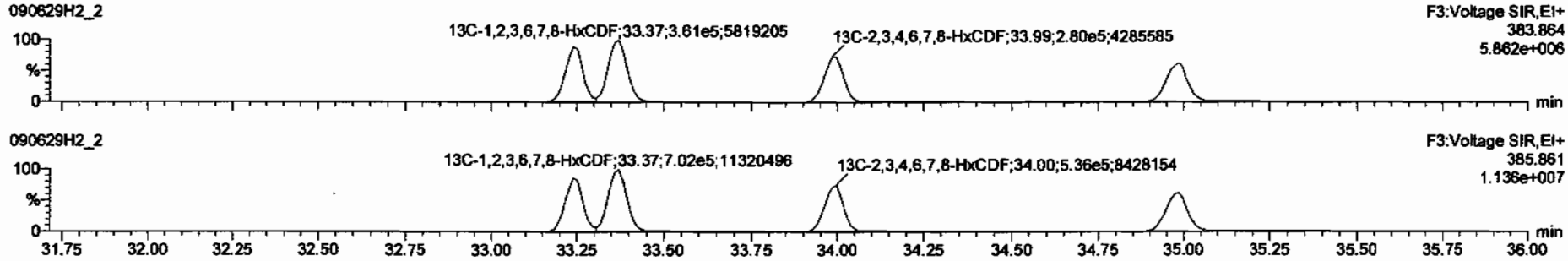

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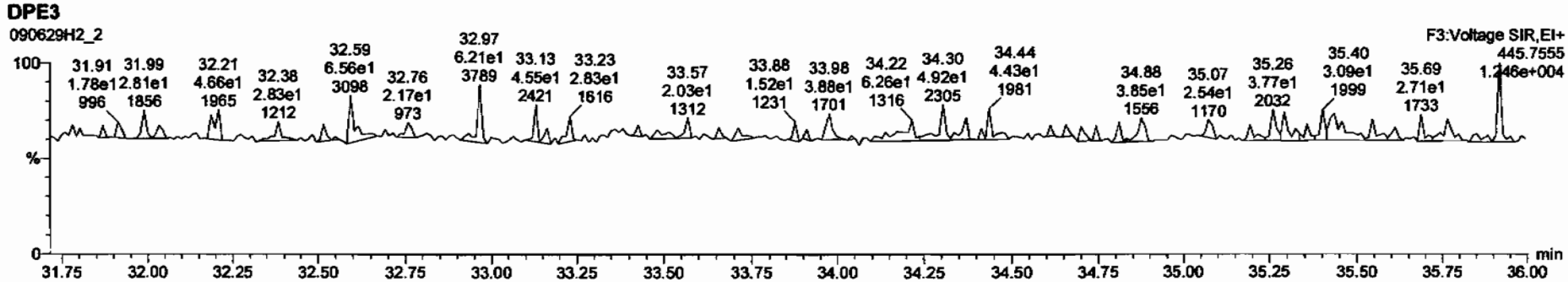

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,6,7,8-HpCDF

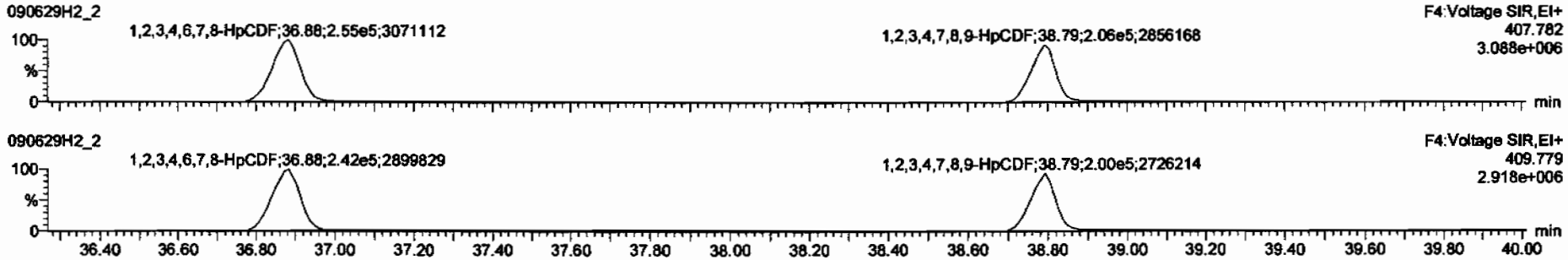

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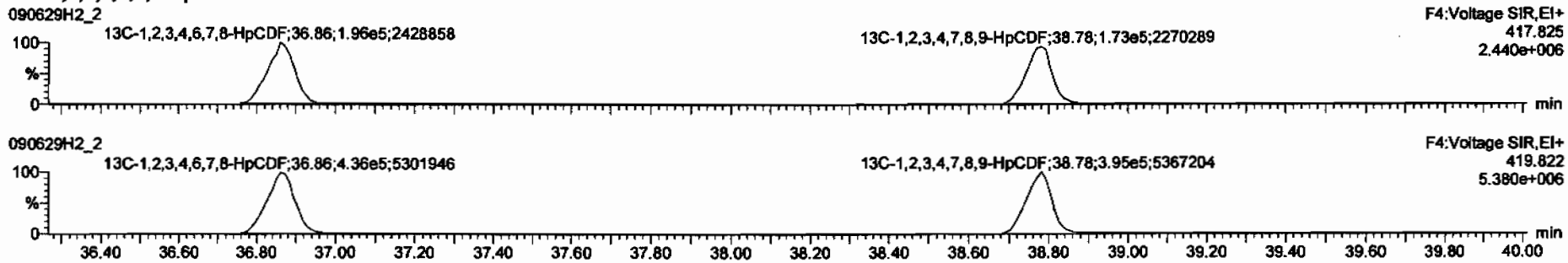

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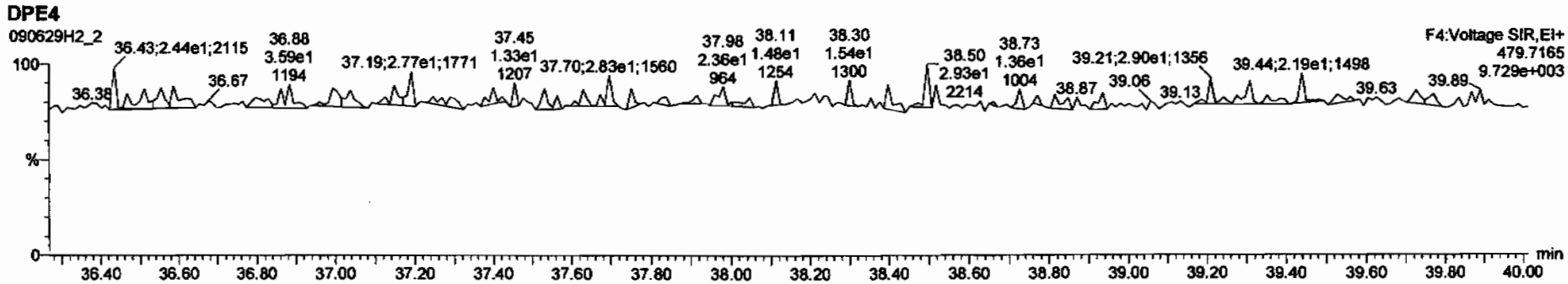

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

OCDF

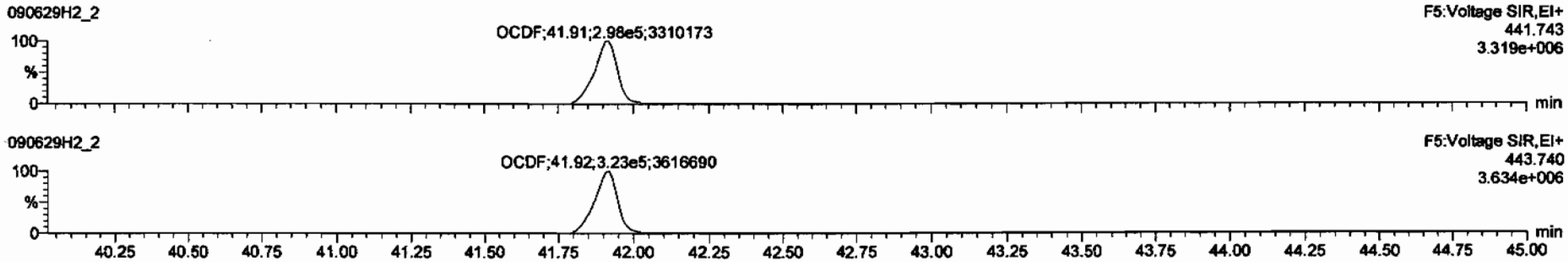

13C-OCDF

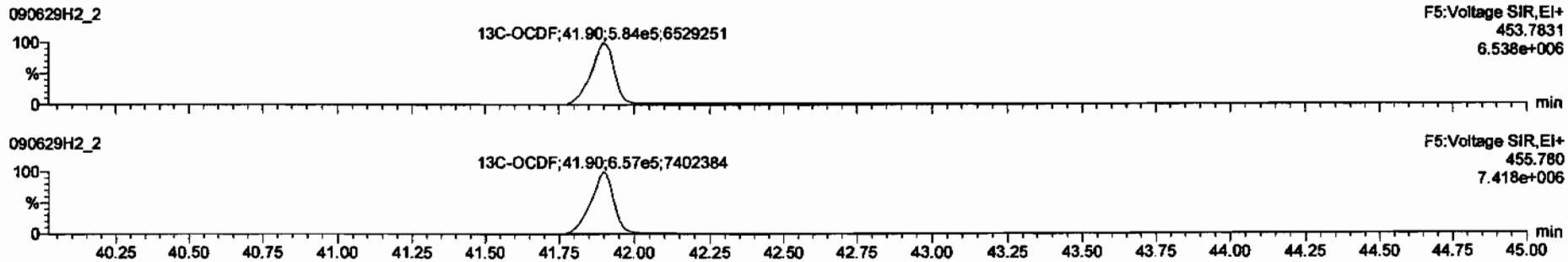

DPE5

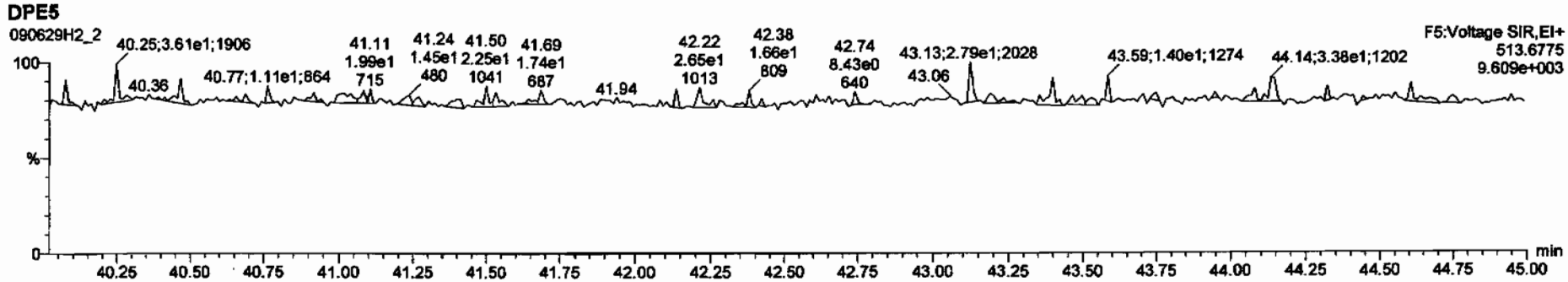

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

PFK1

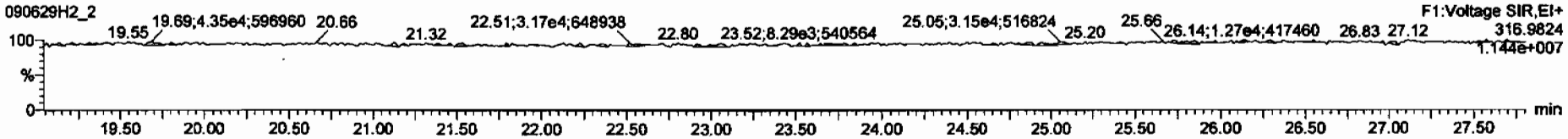

PFK2

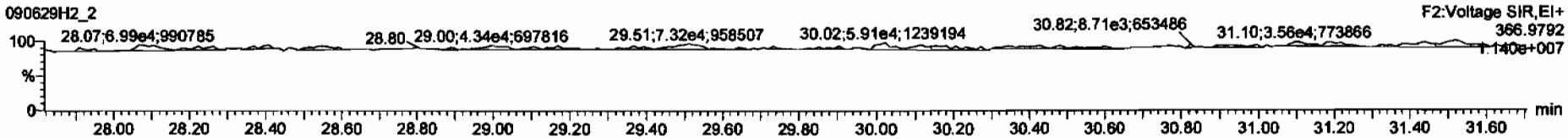

PFK3

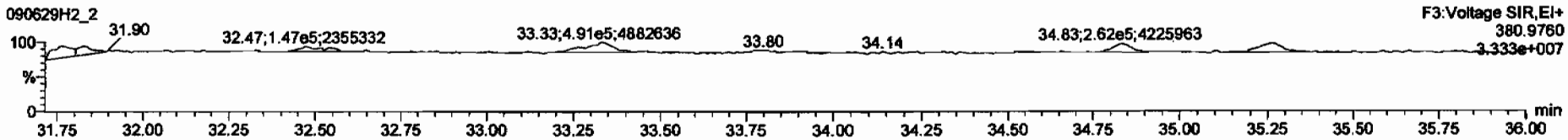

PFK4

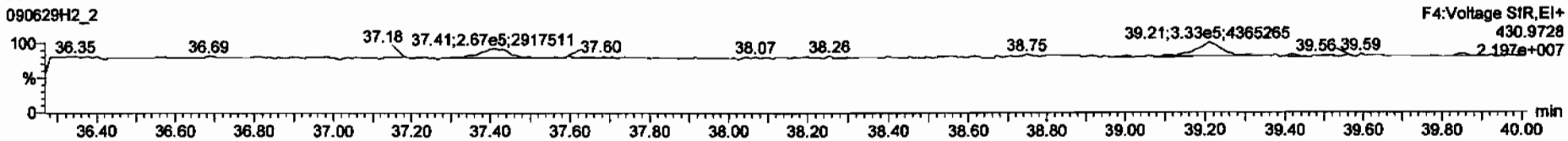

PFK5

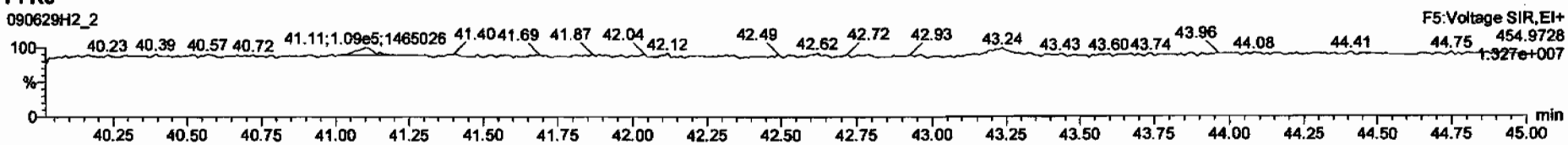

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-5.qld

Last Altered: Tuesday, June 30, 2009 12:34:09 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:37:05 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

1	2,3,7,8-TCDD			NO	1.08	10.110					0.0566	
2	1,2,3,7,8-PeCDD			NO	1.03	10.110					0.0601	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.110					0.154	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.110					0.154	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.110					0.148	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.110					0.148	
7	OCDD	1.83e3	0.76	NO	1.18	10.110	41.68	1.000	0.59875		0.105	~~0.59875~~
8	2,3,7,8-TCDF			NO	1.09	10.110					0.0435	
9	1,2,3,7,8-PeCDF			NO	1.16	10.110					0.0423	
10	2,3,4,7,8-PeCDF			NO	1.12	10.110					0.0449	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.110					0.0392	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.110					0.0464	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.110					0.0577	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.110					0.0723	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.110					0.0806	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.110					0.0889	
17	OCDF			NO	1.10	10.110					0.101	
18	13C-2,3,7,8-TCDD	1.10e6	0.80	NO	1.01	10.110	26.11	1.023	190.02	96.1	0.320	
19	13C-1,2,3,7,8-PeCDD	8.53e5	0.64	NO	0.827	10.110	30.73	1.204	180.71	91.3	0.244	
20	13C-1,2,3,4,7,8-HxCDD	7.72e5	1.25	NO	0.916	10.110	34.17	0.988	180.71	91.4	0.501	
21	13C-1,2,3,6,7,8-HxCDD	7.05e5	1.27	NO	0.921	10.110	34.28	0.991	164.13	83.0	0.498	
22	13C-1,2,3,4,6,7,8-HpCDD	6.77e5	1.06	NO	0.708	10.110	38.21	1.105	204.84	104	0.766	
23	13C-OCDD	1.03e6	0.92	NO	0.503	10.110	41.67	1.205	437.67	111	0.638	
24	13C-2,3,7,8-TCDF	1.47e6	0.79	NO	0.977	10.110	25.33	0.992	190.63	96.4	0.167	
25	13C-1,2,3,7,8-PeCDF	1.47e6	1.55	NO	0.896	10.110	29.51	1.156	207.61	105	0.357	
26	13C-2,3,4,7,8-PeCDF	1.38e6	1.57	NO	0.900	10.110	30.46	1.193	194.10	98.1	0.355	
27	13C-1,2,3,4,7,8-HxCDF	1.02e6	0.53	NO	1.17	10.110	33.25	0.961	187.47	94.8	0.523	
28	13C-1,2,3,6,7,8-HxCDF	1.16e6	0.53	NO	1.52	10.110	33.37	0.965	163.58	82.7	0.403	
29	13C-2,3,4,6,7,8-HxCDF	9.24e5	0.53	NO	1.25	10.110	34.01	0.983	158.70	80.2	0.490	
30	13C-1,2,3,7,8,9-HxCDF	8.39e5	0.53	NO	1.05	10.110	34.99	1.011	170.87	86.4	0.581	

6/30/09
6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-5.qld

Last Altered: Tuesday, June 30, 2009 12:34:09 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:37:05 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

31	13C-1,2,3,4,6,7,8-HpCDF	7.06e5	0.43	NO	0.868	10.110	36.87	1.066	174.46	88.2	0.642
32	13C-1,2,3,4,7,8,9-HpCDF	6.30e5	0.45	NO	0.727	10.110	38.78	1.121	185.90	94.0	0.768
33	13C-OCDF	1.39e6	0.87	NO	0.760	10.110	41.90	1.211	392.44	99.2	0.360
34	37Cl-2,3,7,8-TCDD	2.77e5			0.668	10.110	26.12	1.023	72.646	91.8	0.0865
35	13C-1,2,3,4-TCDD	1.13e6	0.79	NO	1.00	10.110	25.53	0.000	197.82	100	0.325
36	13C-1,2,3,4-TCDF	1.56e6	0.79	NO	1.00	10.110	24.10	0.000	197.82	100	0.163
37	13C-1,2,3,7,8,9-HxCDD	9.22e5	1.25	NO	1.00	10.110	34.59	0.000	197.82	100	0.459
38	Total Tetra-Dioxins				1.08	10.110					0.0278
39	Total Penta-Dioxins				1.03	10.110					0.0211
40	Total Hexa-Dioxins				1.13	10.110					0.0948
41	Total Hepta-Dioxins				1.06	10.110					0.0876
42	Total Tetra-Furans				1.09	10.110					0.0162
43	1st Func. Penta-Furans				1.16	10.110					0.0143
44	Total Penta-Furans				1.16	10.110					0.0162
45	Total Hexa-Furans				1.28	10.110					0.0313
46	Total Hepta-Furans				1.69	10.110					0.0454

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-5.qld

Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

2,3,7,8-TCDD

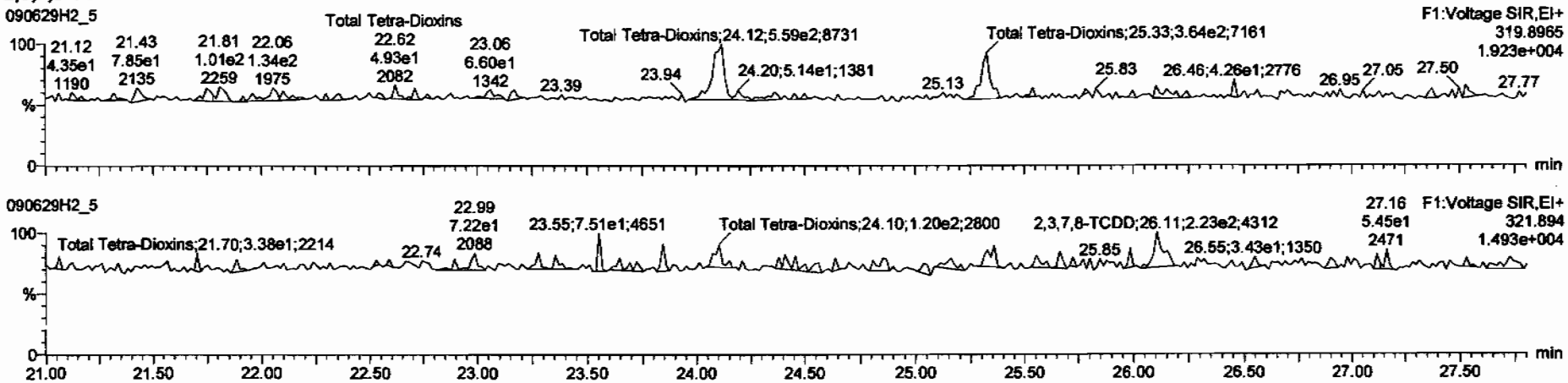

13C-2,3,7,8-TCDD

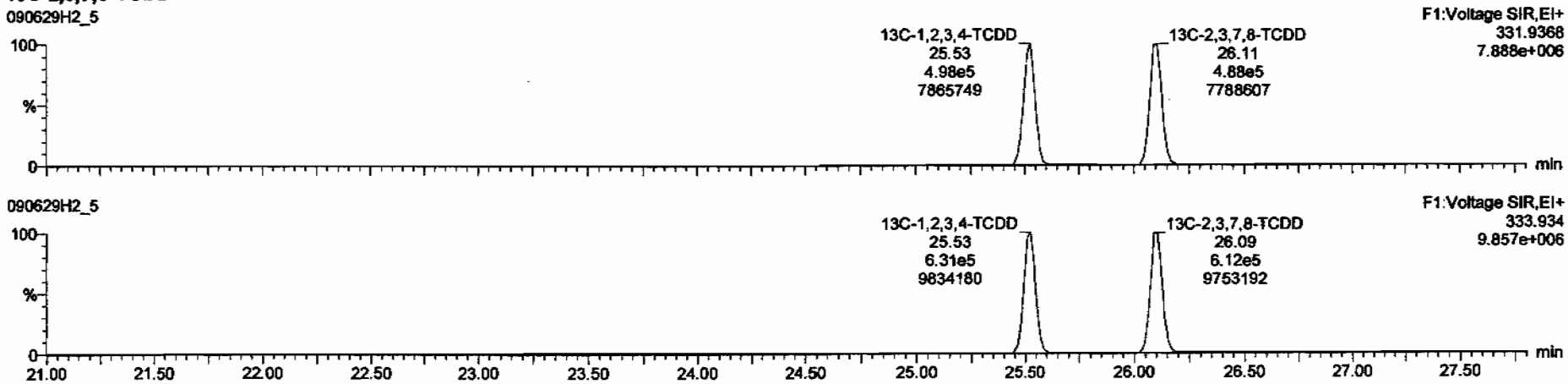

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Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

37Cl-2,3,7,8-TCDD

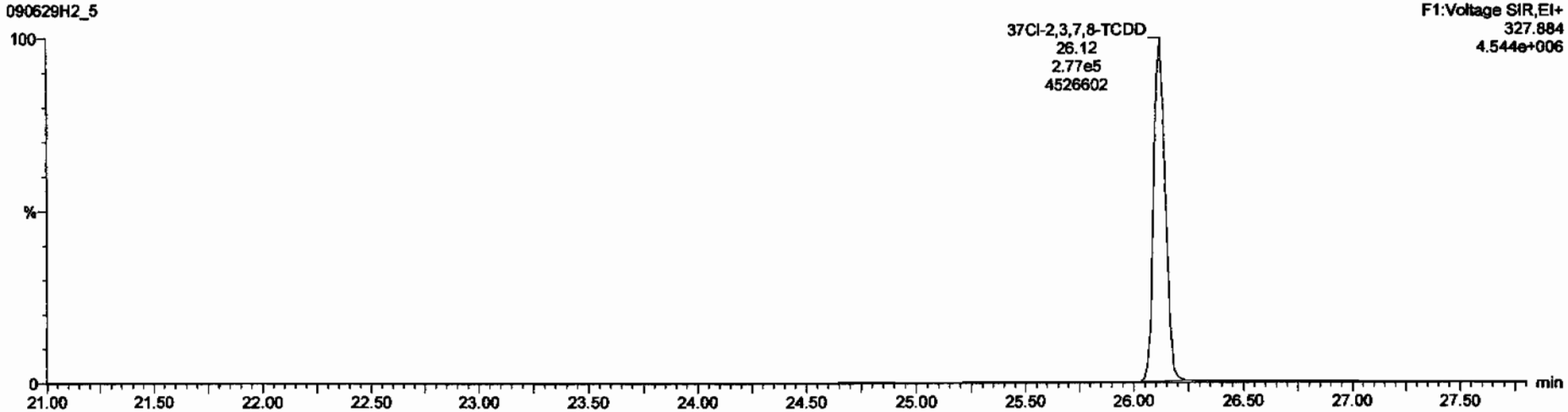

13C-1,2,3,4-TCDD

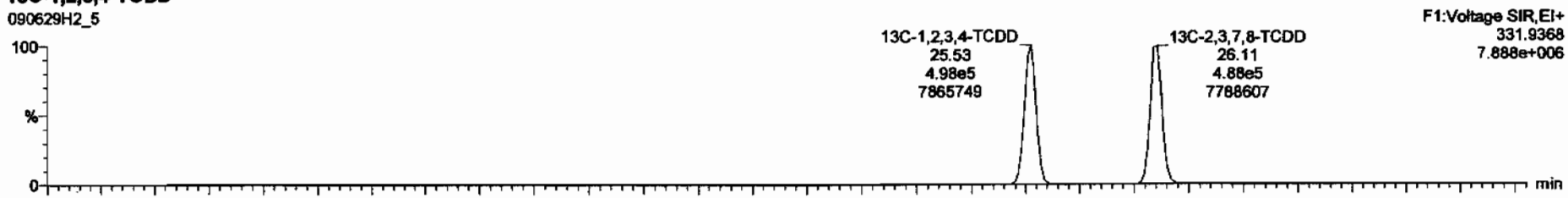

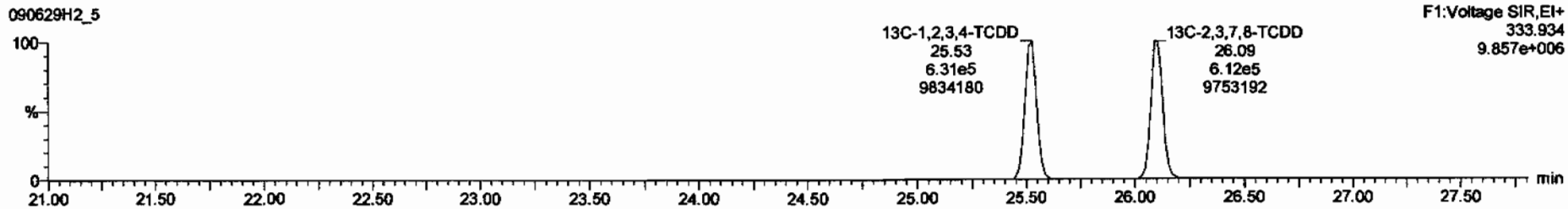

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-5.qld

Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

1,2,3,7,8-PeCDD

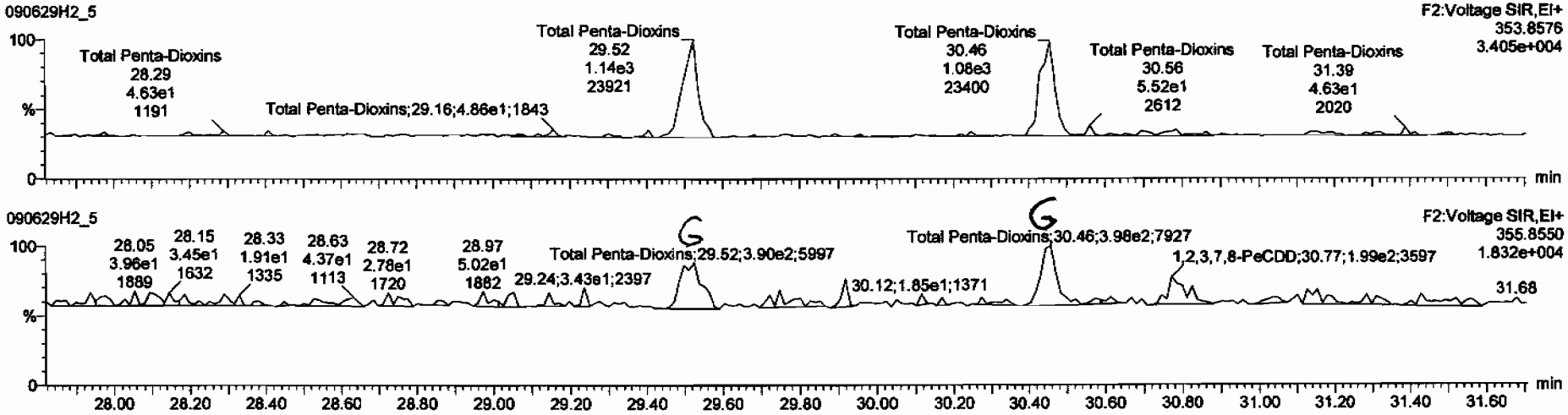

13C-1,2,3,7,8-PeCDD

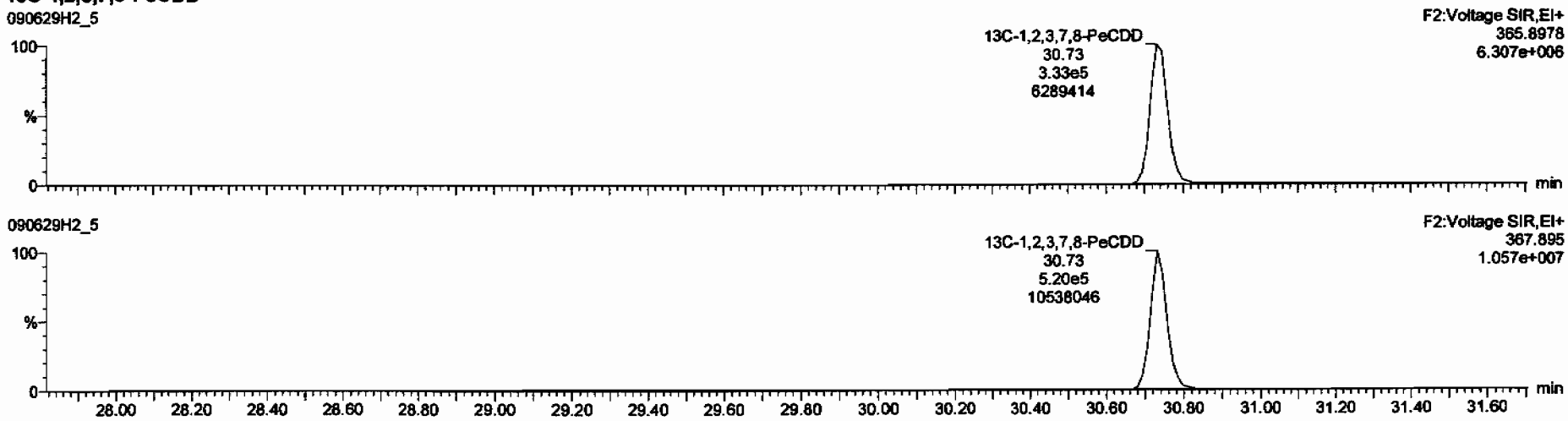

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-5.qld

Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

1,2,3,4,7,8-HxCDD

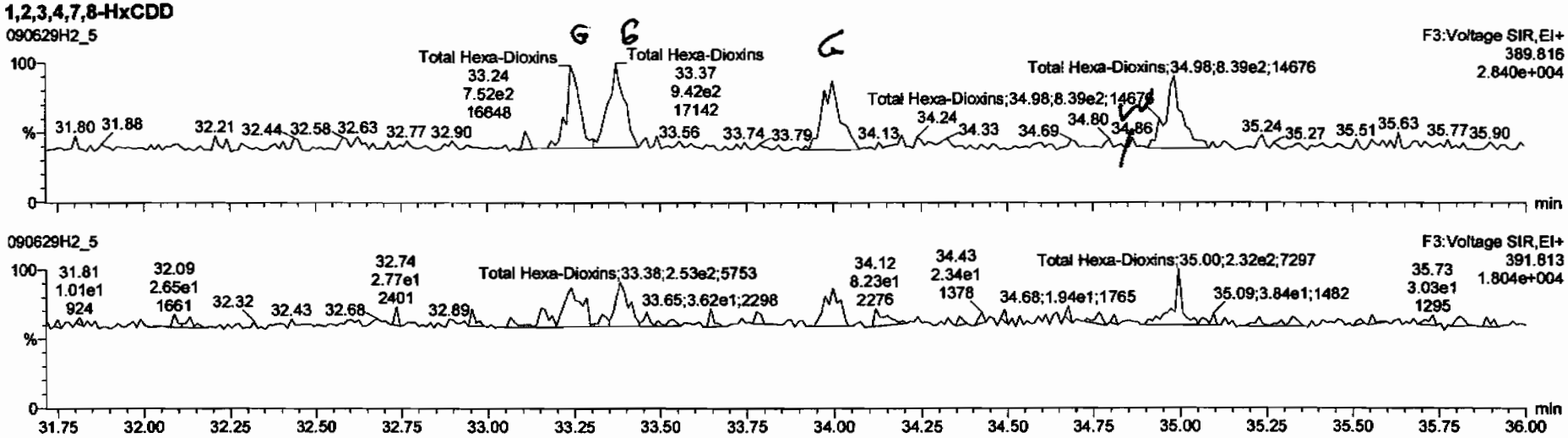

13C-1,2,3,4,7,8-HxCDD

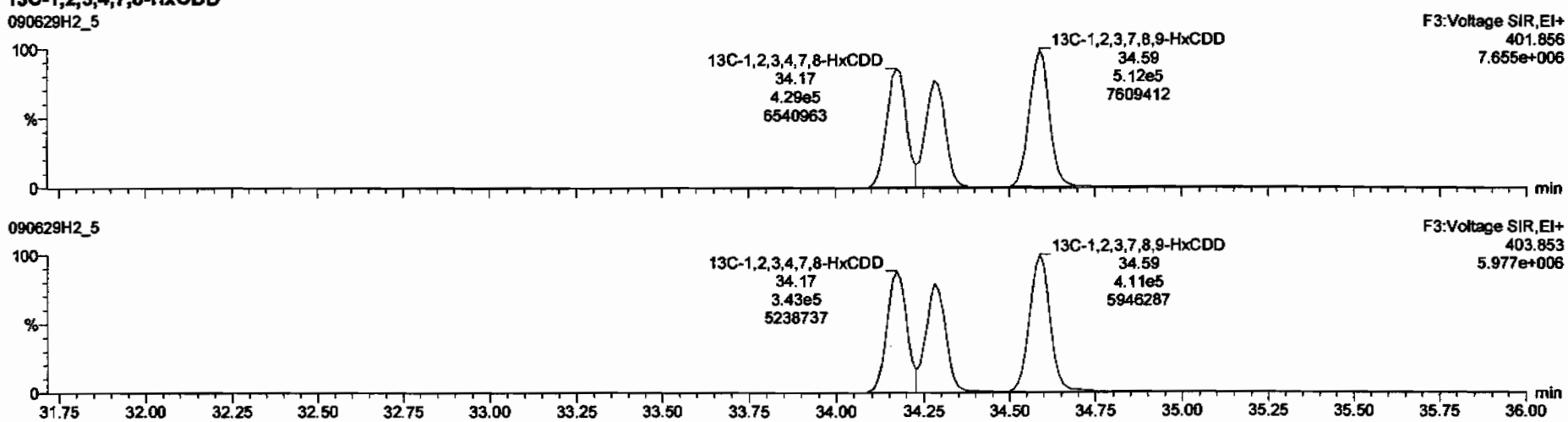

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-5.qld

Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

1,2,3,4,6,7,8-HpCDD

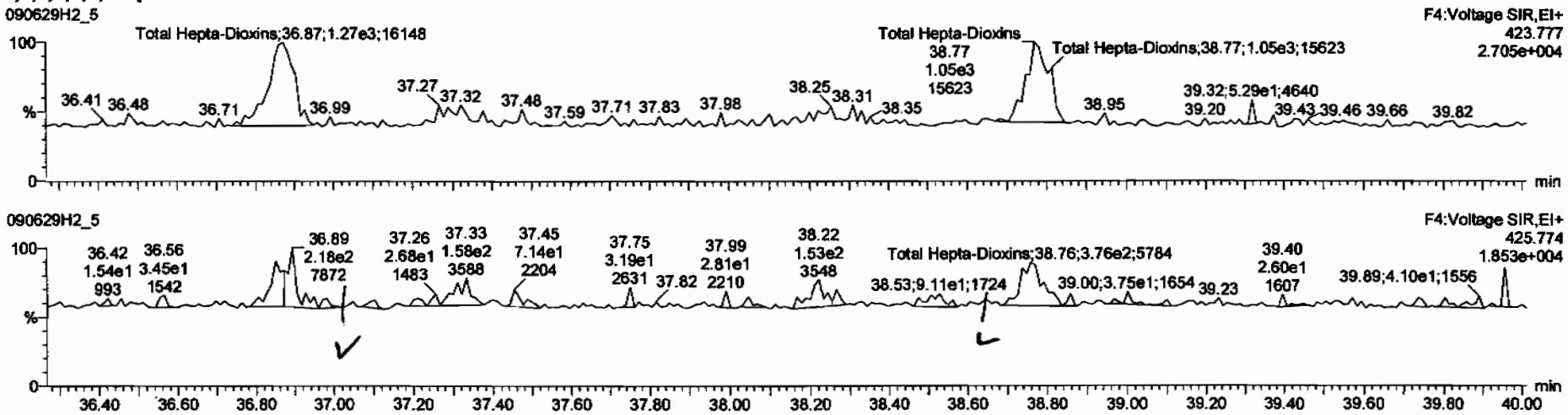

13C-1,2,3,4,6,7,8-HpCDD

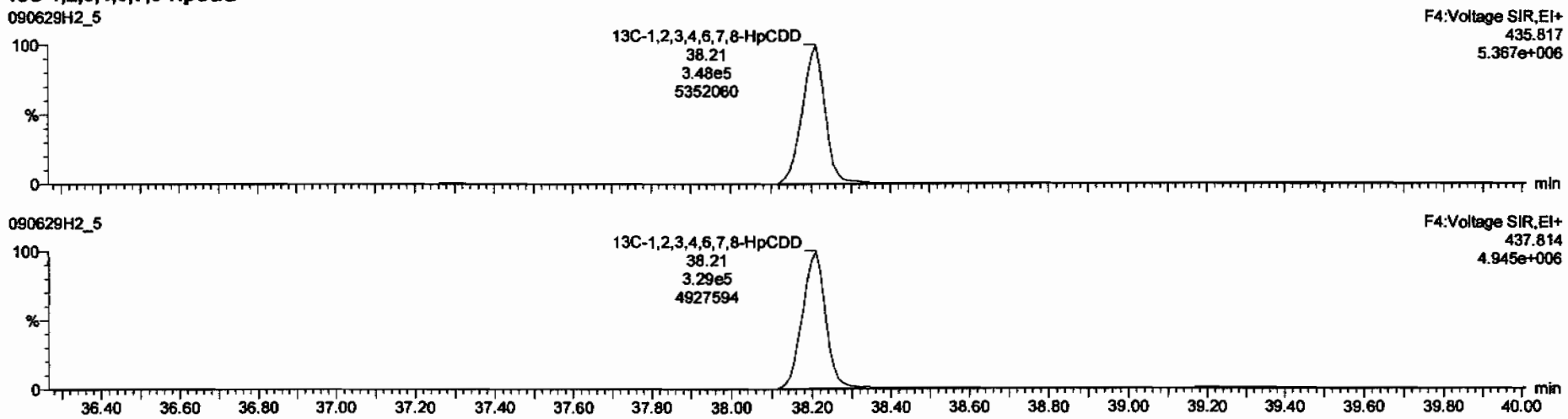

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-5.qld

Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

OCDD

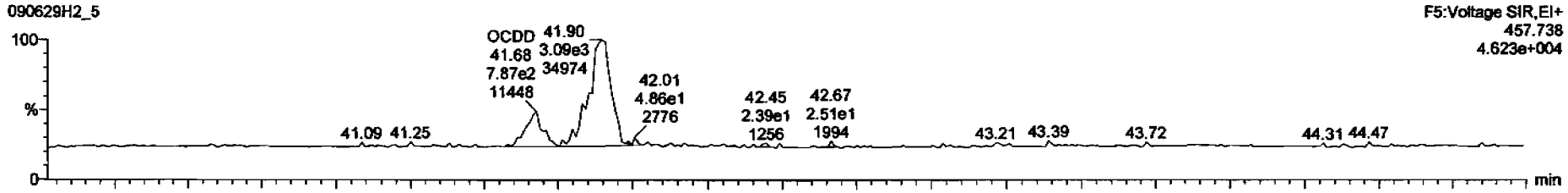

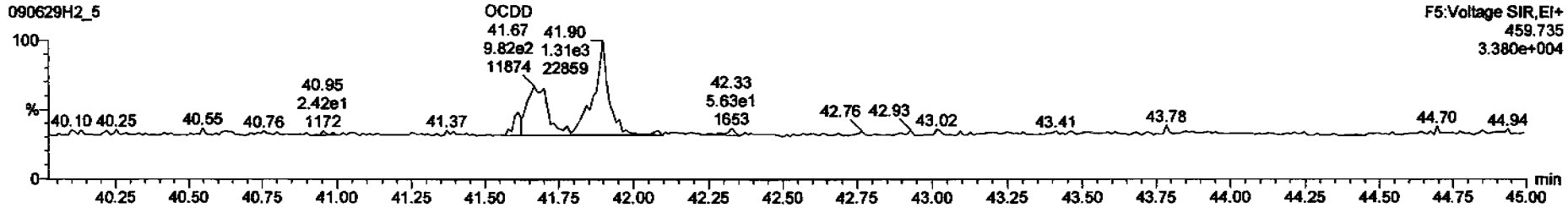

13C-OCDD

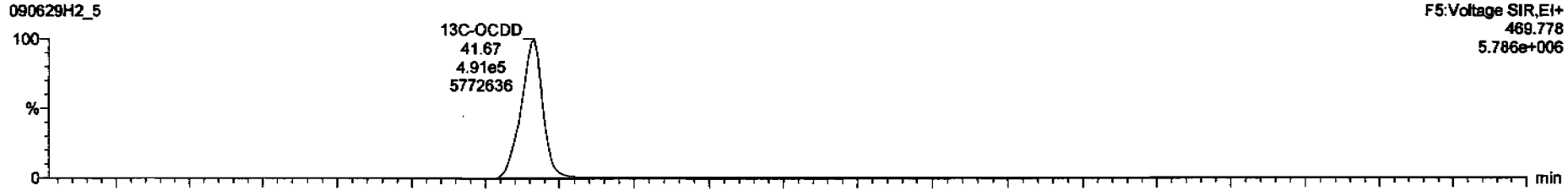

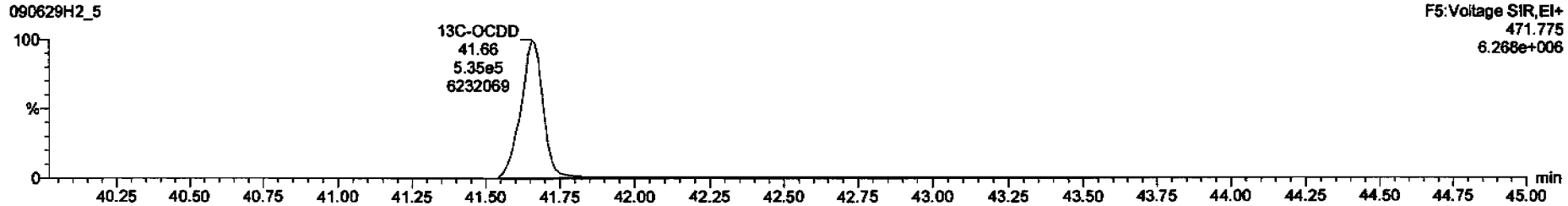

TargetLynx - 090629f2-5.qld * - [Chromatogram]

090629H2_5 - 31831_2207_001 CAMO-09-10460 10.45 - CAMO-09-10460

8	2,3,7,8-TCDF			NO	1.09	10.110					0.0435	
9	1,2,3,7,8-PeCDF	2.25e2	1.07	YES	1.16	10.110	29.54	1.001	0.0261		0.0423	0.0221
10	2,3,4,7,8-PeCDF	1.71e2	1.44	NO	1.12	10.110	30.50	1.001	0.0220		0.0449	0.0220
11	1,2,3,4,7,8-HxCDF	1.53e2	1.42	NO	1.41	10.110	33.28	1.001	0.0210		0.0392	0.0210

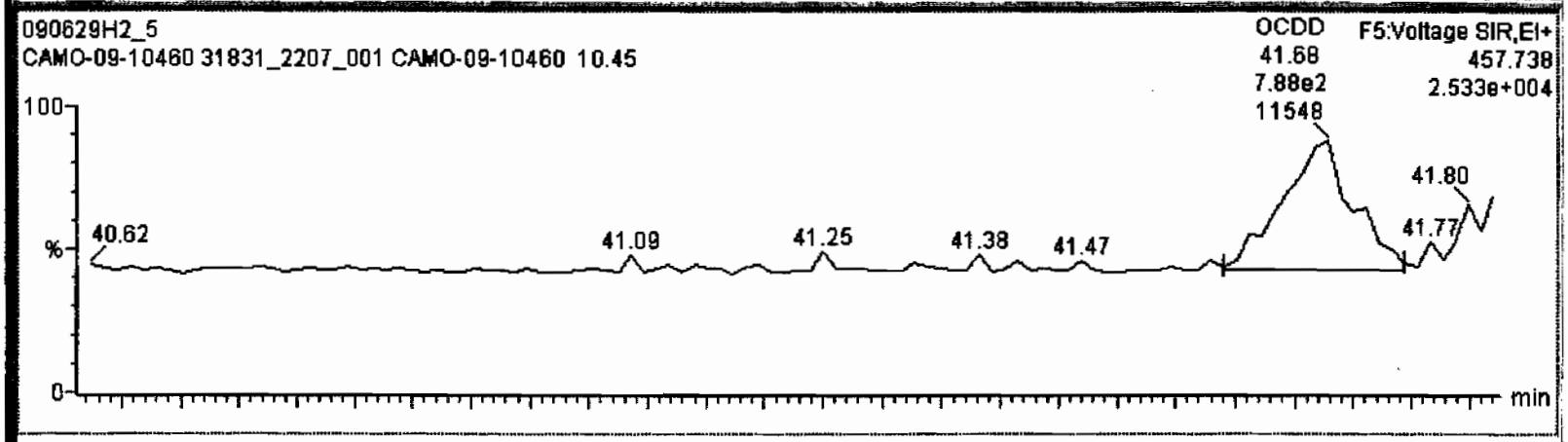

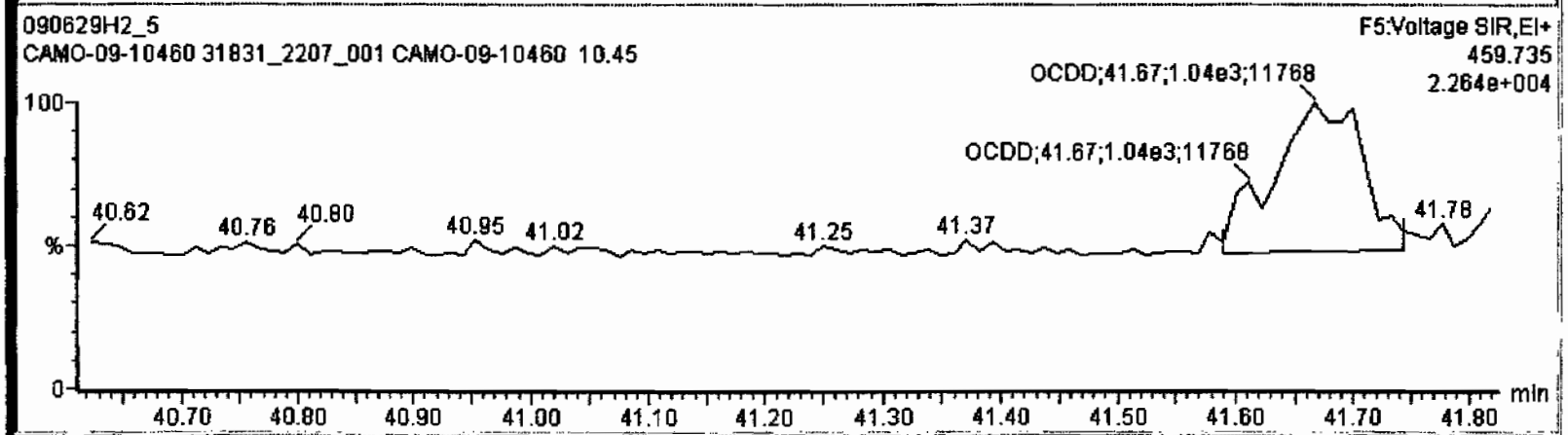

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-5.qld

Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

2,3,7,8-TCDF

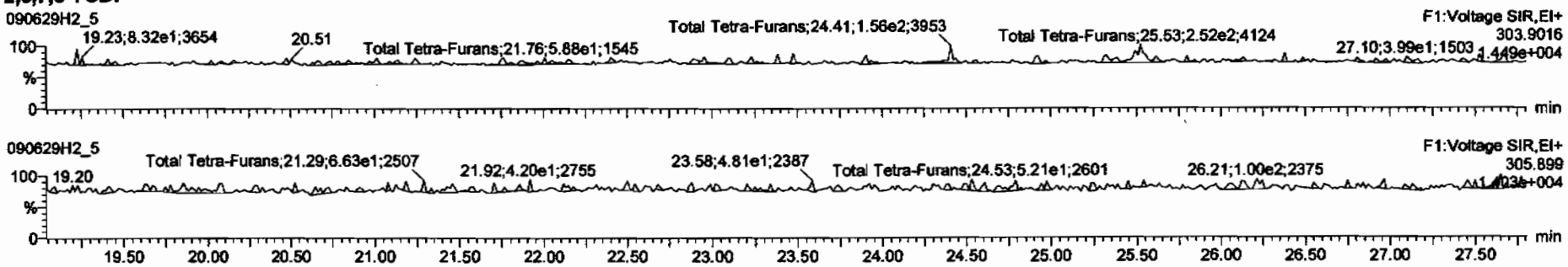

13C-2,3,7,8-TCDF

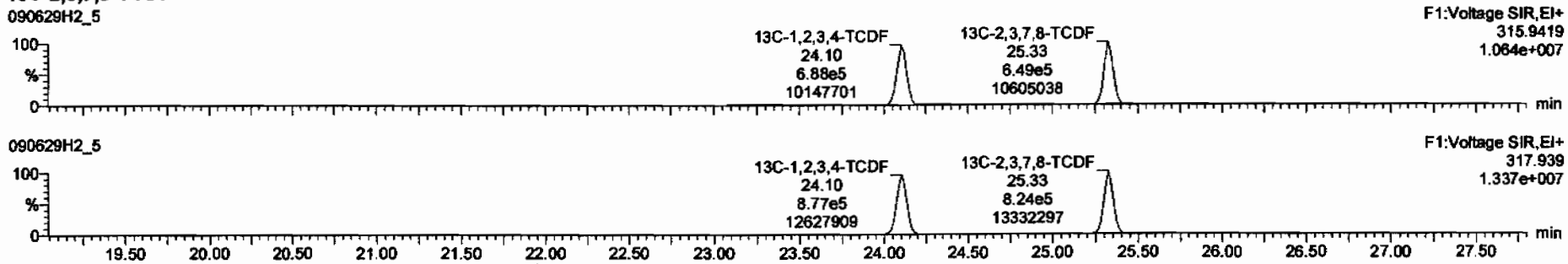

DPE1

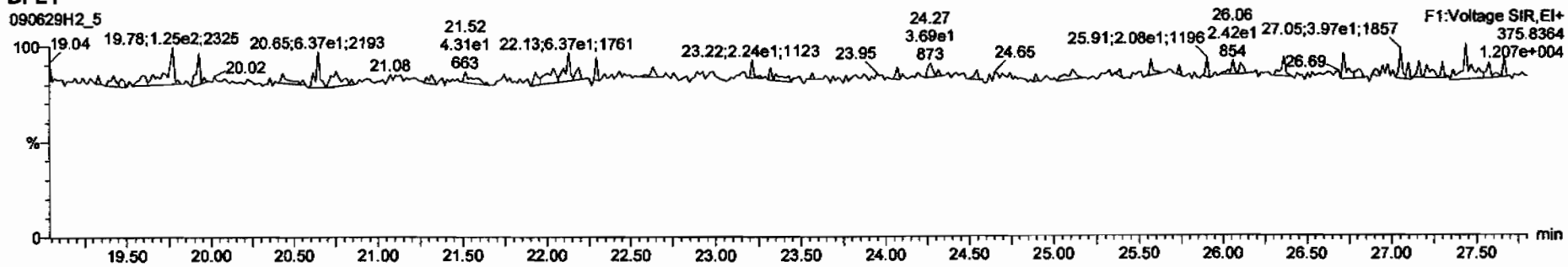

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-5.qld

Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

1st Func. Penta-Furans

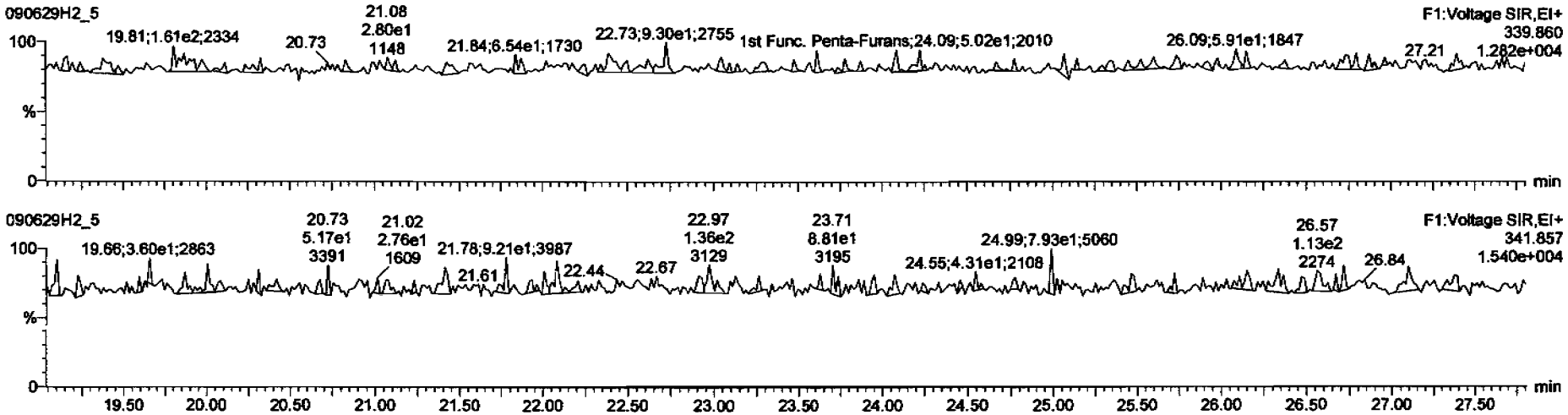

DPE6

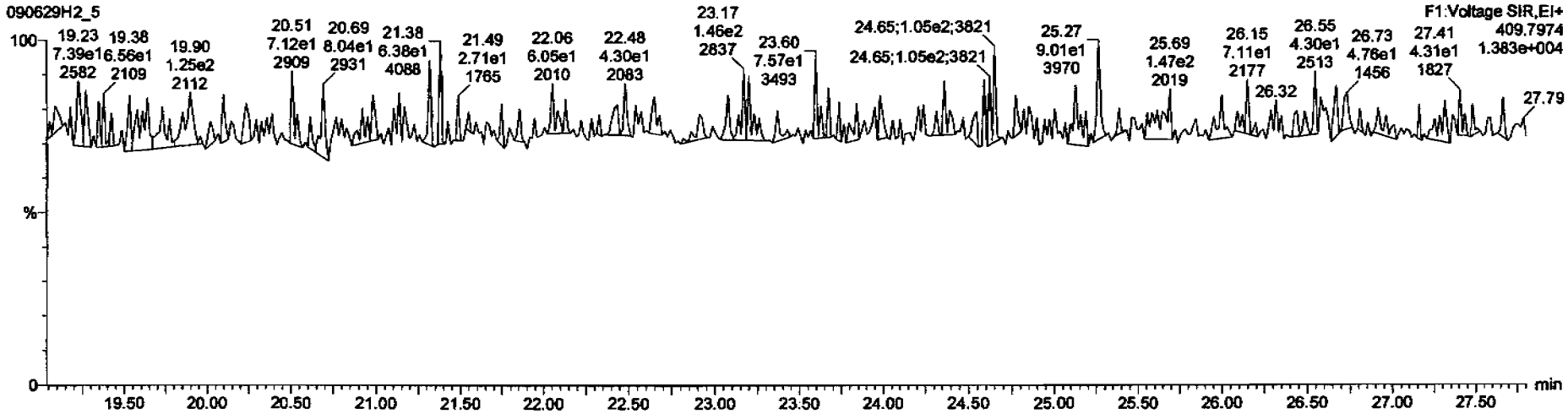

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Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

1,2,3,7,8-PeCDF

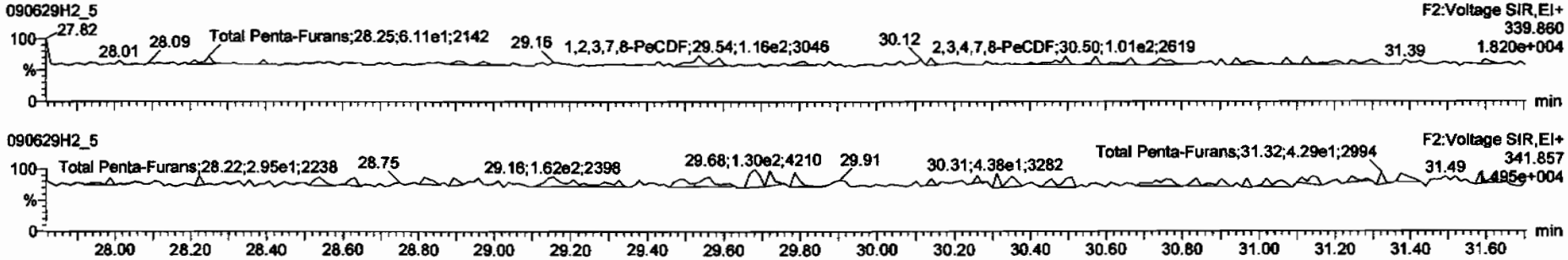

13C-1,2,3,7,8-PeCDF

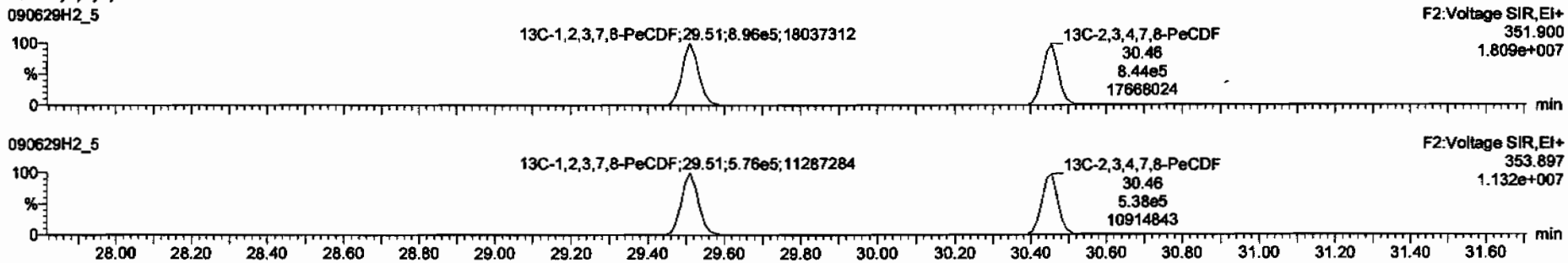

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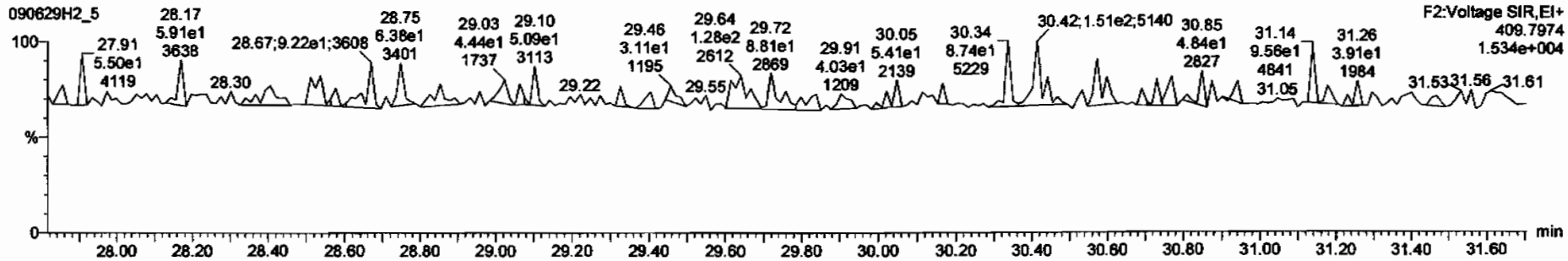

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Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

1,2,3,4,7,8-HxCDF

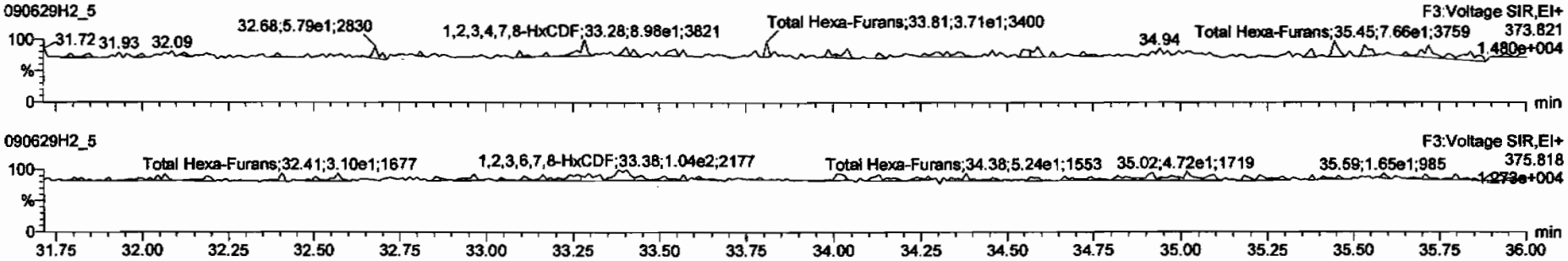

13C-1,2,3,4,7,8-HxCDF

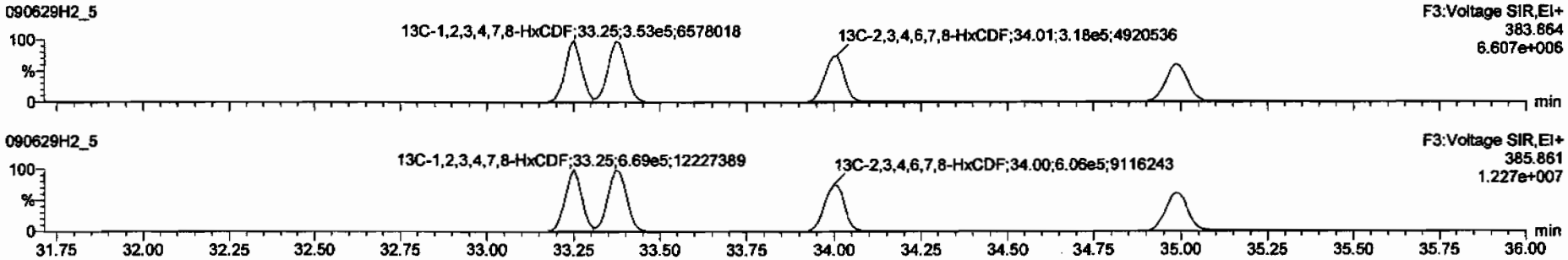

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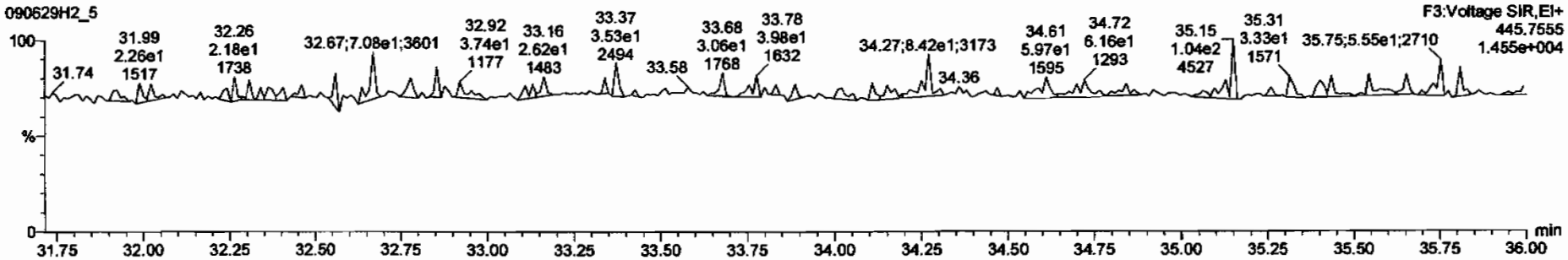

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Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

1,2,3,4,6,7,8-HpCDF

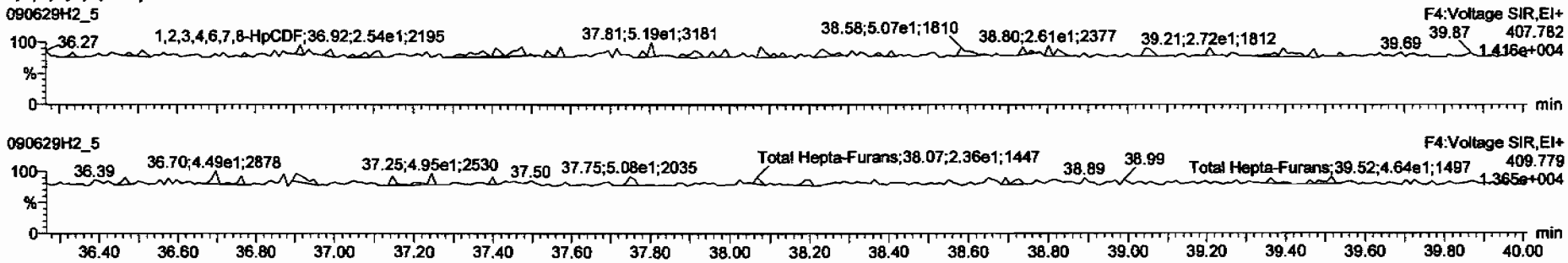

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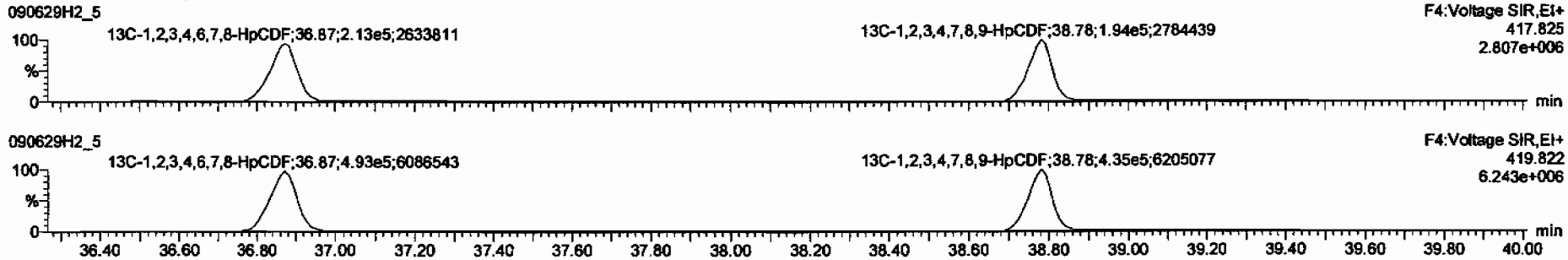

DPE4

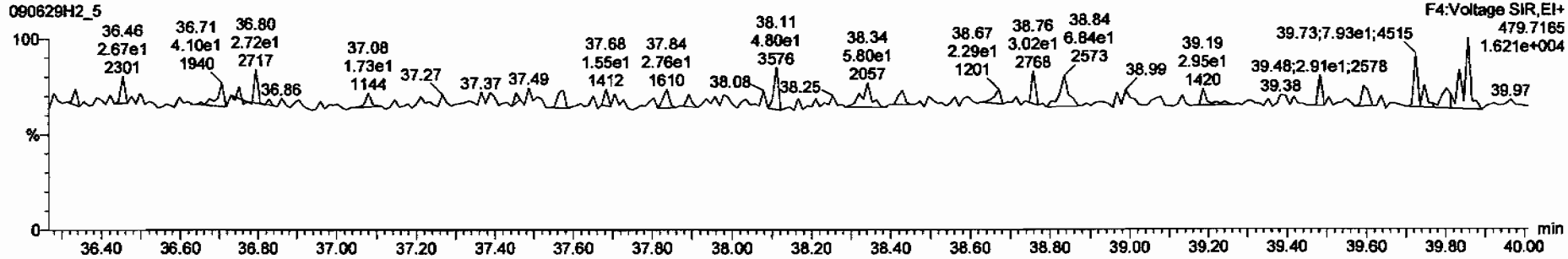

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Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

OCDF

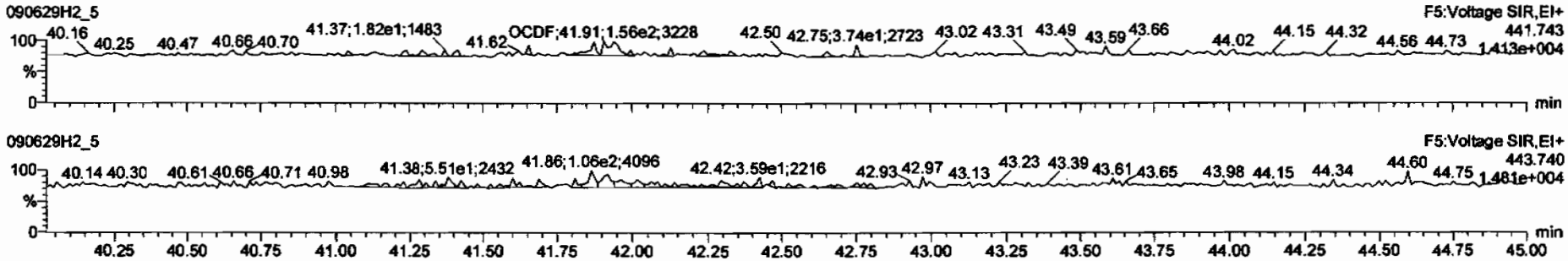

13C-OCDF

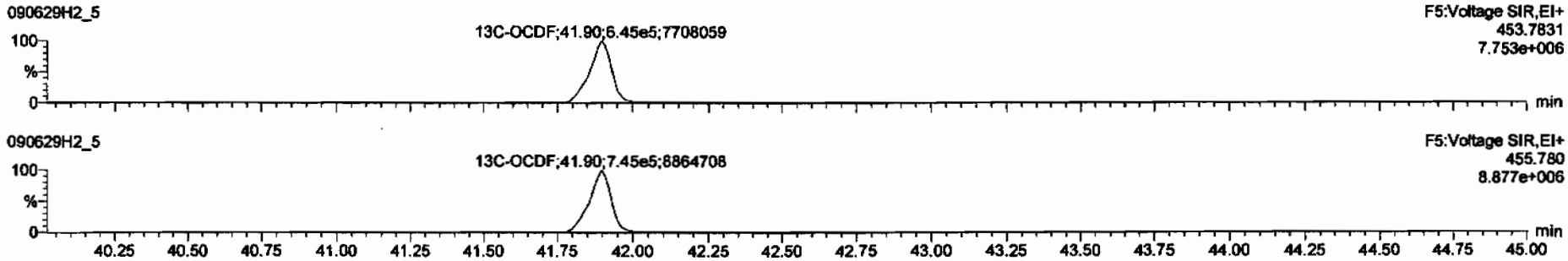

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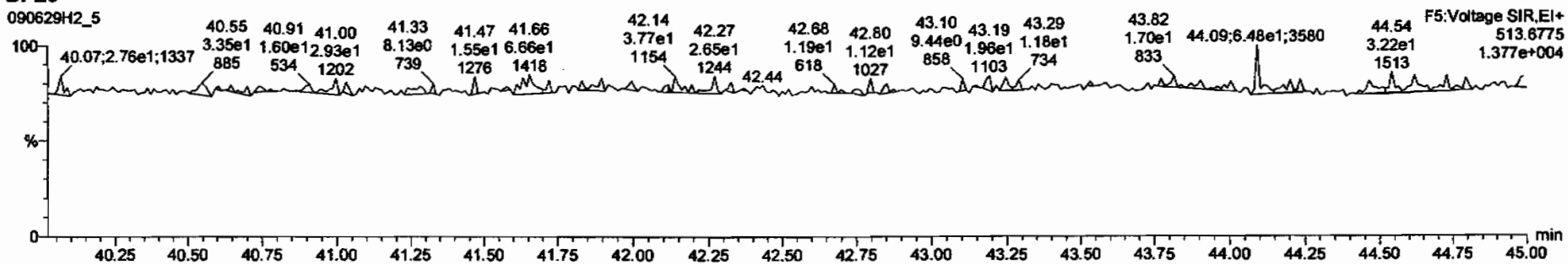

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Last Altered: Tuesday, June 30, 2009 08:11:46 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:04 Pacific Daylight Time

Name: 090629H2_5, Date: 29-Jun-2009, Time: 17:20:45, ID: 31831_2207_001 CAMO-09-10460 10.45, Description: CAMO-09-10460

PFK1

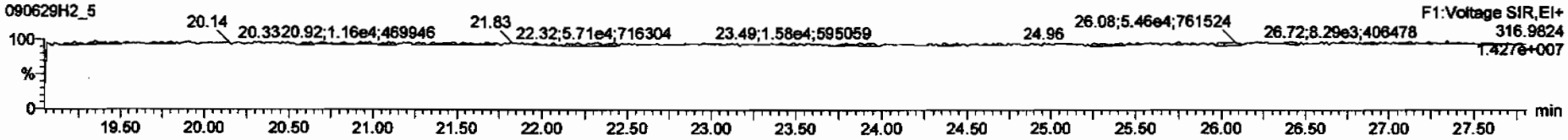

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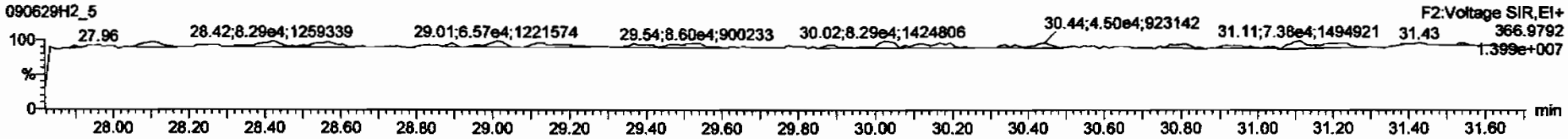

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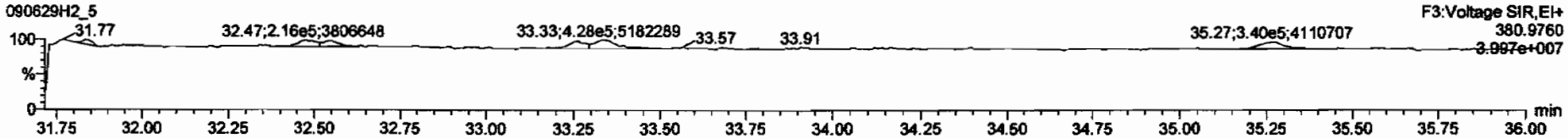

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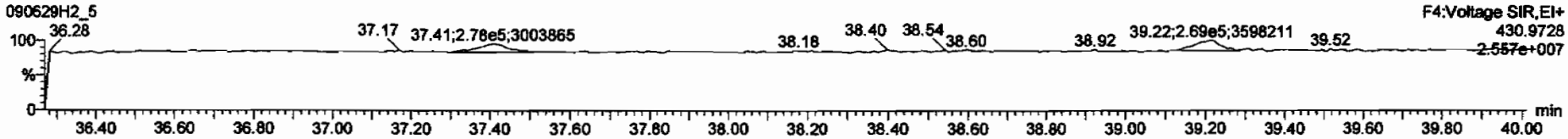

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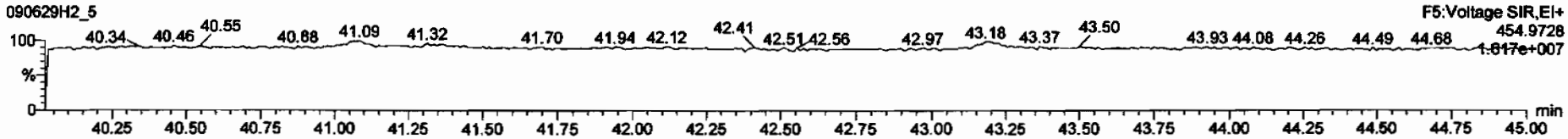

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-6.qld

Last Altered: Tuesday, June 30, 2009 12:43:56 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:44:19 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

1	2,3,7,8-TCDD			NO	1.08	10.100					0.0538
2	1,2,3,7,8-PeCDD			NO	1.03	10.100					0.0664
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.100					0.116
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.100					0.119
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.100					0.113
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.100					0.157
7	OCDD			NO	1.18	10.100					0.121
8	2,3,7,8-TCDF			NO	1.09	10.100					0.0457
9	1,2,3,7,8-PeCDF			NO	1.16	10.100					0.0442
10	2,3,4,7,8-PeCDF			NO	1.12	10.100					0.0446
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.100					0.0455
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.100					0.0482
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.100					0.0605
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.100					0.0734
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.100					0.0823
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.100					0.0926
17	OCDF			NO	1.10	10.100					0.114
18	13C-2,3,7,8-TCDD	1.11e6	0.77	NO	1.01	10.100	26.09	1.023	189.30	95.6	0.298
19	13C-1,2,3,7,8-PeCDD	9.08e5	0.63	NO	0.827	10.100	30.72	1.204	189.73	95.8	0.229
20	13C-1,2,3,4,7,8-HxCDD	7.98e5	1.24	NO	0.916	10.100	34.16	0.988	184.05	92.9	0.463
21	13C-1,2,3,6,7,8-HxCDD	7.36e5	1.25	NO	0.921	10.100	34.28	0.991	168.95	85.3	0.461
22	13C-1,2,3,4,6,7,8-HpCDD	7.04e5	1.04	NO	0.708	10.100	38.20	1.105	210.00	106	0.921
23	13C-OCDD	1.06e6	0.91	NO	0.503	10.100	41.66	1.205	444.16	112	0.621
24	13C-2,3,7,8-TCDF	1.50e6	0.78	NO	0.977	10.100	25.31	0.992	193.28	97.6	0.193
25	13C-1,2,3,7,8-PeCDF	1.44e6	1.57	NO	0.896	10.100	29.50	1.156	202.40	102	0.381
26	13C-2,3,4,7,8-PeCDF	1.39e6	1.57	NO	0.900	10.100	30.44	1.193	194.75	98.3	0.380
27	13C-1,2,3,4,7,8-HxCDF	1.00e6	0.52	NO	1.17	10.100	33.24	0.961	181.01	91.4	0.482
28	13C-1,2,3,6,7,8-HxCDF	1.16e6	0.52	NO	1.52	10.100	33.37	0.965	162.04	81.8	0.371
29	13C-2,3,4,6,7,8-HxCDF	9.41e5	0.53	NO	1.25	10.100	34.00	0.983	159.16	80.4	0.451
30	13C-1,2,3,7,8,9-HxCDF	8.82e5	0.52	NO	1.05	10.100	34.97	1.011	177.11	89.4	0.535

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-6.qld

Last Altered: Tuesday, June 30, 2009 12:43:56 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:44:19 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

31	13C-1,2,3,4,6,7,8-HpCDF	7.10e5	0.45	NO	0.868	10.100	36.86	1.066	172.89	87.3	0.632
32	13C-1,2,3,4,7,8,9-HpCDF	6.55e5	0.44	NO	0.727	10.100	38.78	1.122	190.54	96.2	0.756
33	13C-OCDF	1.42e6	0.88	NO	0.760	10.100	41.90	1.212	393.92	99.5	0.356
34	37Cl-2,3,7,8-TCDD	2.75e5			0.668	10.100	26.11	1.023	71.006	89.6	0.0738
35	13C-1,2,3,4-TCDD	1.15e6	0.81	NO	1.00	10.100	25.51	0.000	198.02	100	0.302
36	13C-1,2,3,4-TCDF	1.57e6	0.79	NO	1.00	10.100	24.09	0.000	198.02	100	0.189
37	13C-1,2,3,7,8,9-HxCDD	9.37e5	1.28	NO	1.00	10.100	34.58	0.000	198.02	100	0.424
38	Total Tetra-Dioxins				1.08	10.100					0.0251
39	Total Penta-Dioxins				1.03	10.100					0.0299
40	Total Hexa-Dioxins				1.13	10.100					0.0564
41	Total Hepta-Dioxins				1.06	10.100					0.0821
42	Total Tetra-Furans				1.09	10.100					0.0170
43	1st Func. Penta-Furans				1.16	10.100					0.0137
44	Total Penta-Furans				1.16	10.100					0.0161
45	Total Hexa-Furans				1.28	10.100					0.0344
46	Total Hepta-Furans				1.69	10.100					0.0459

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-6.qld

Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

2,3,7,8-TCDD

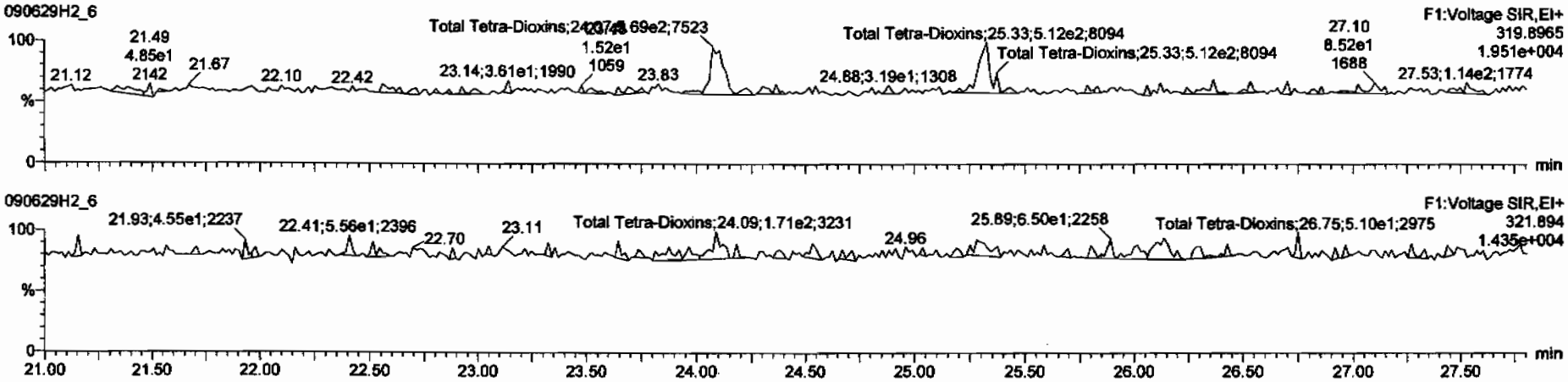

13C-2,3,7,8-TCDD

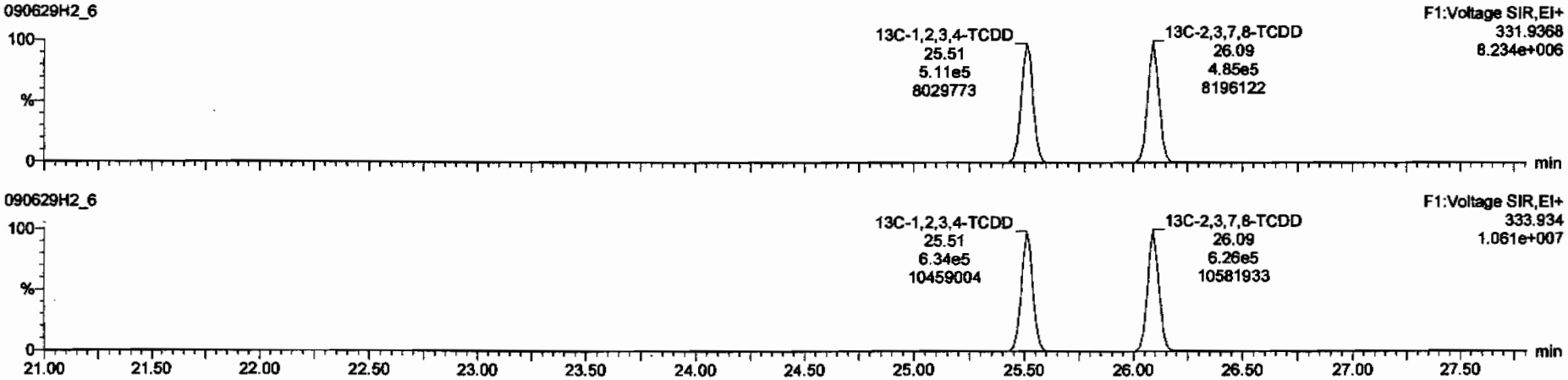

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-6.qld

Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

37Cl-2,3,7,8-TCDD

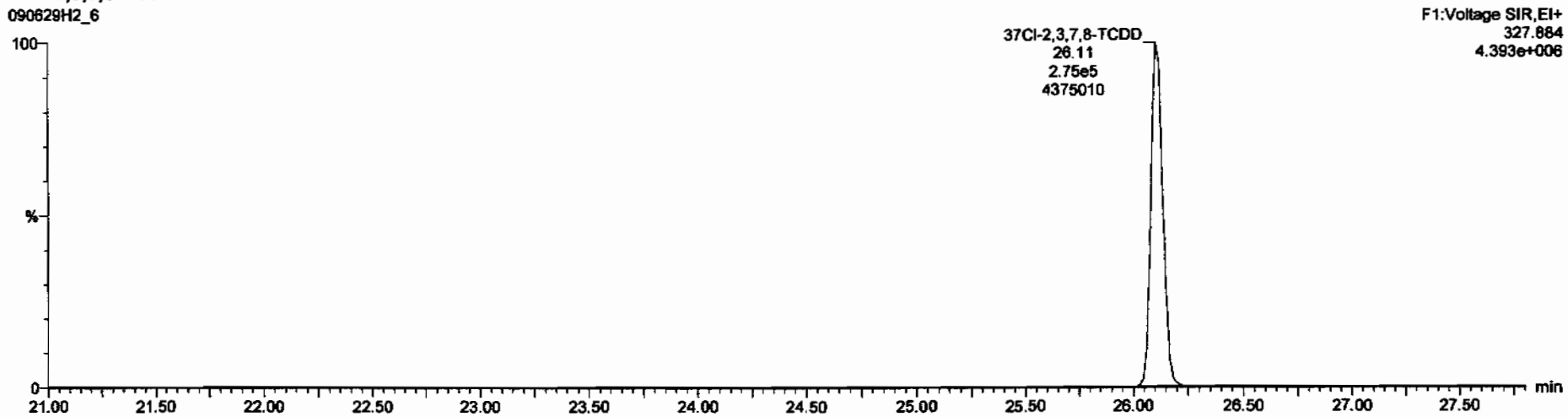

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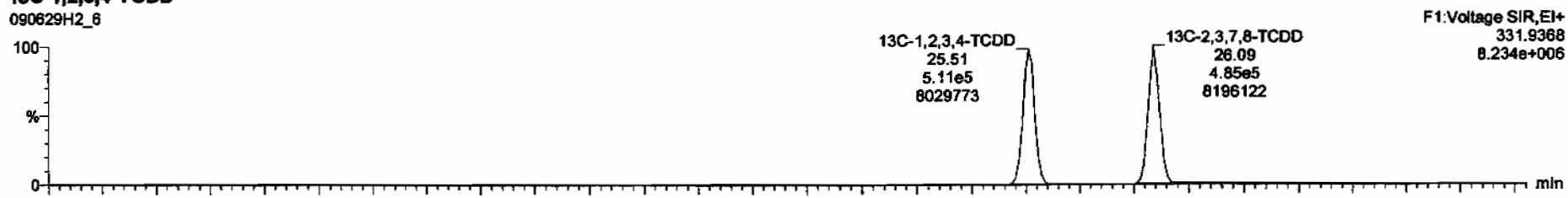

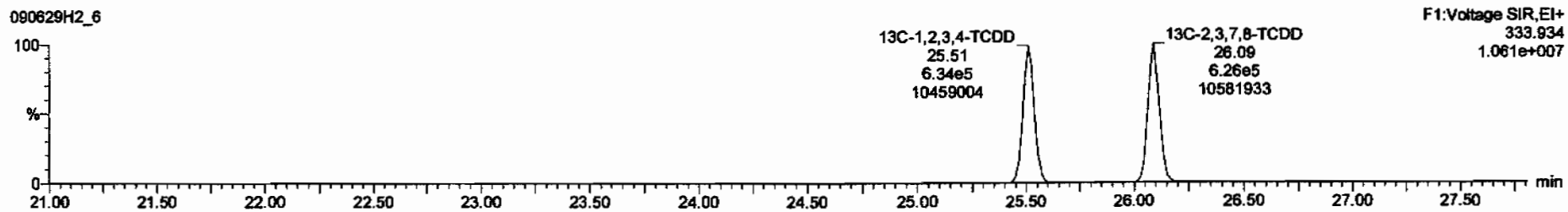

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Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

1,2,3,7,8-PeCDD

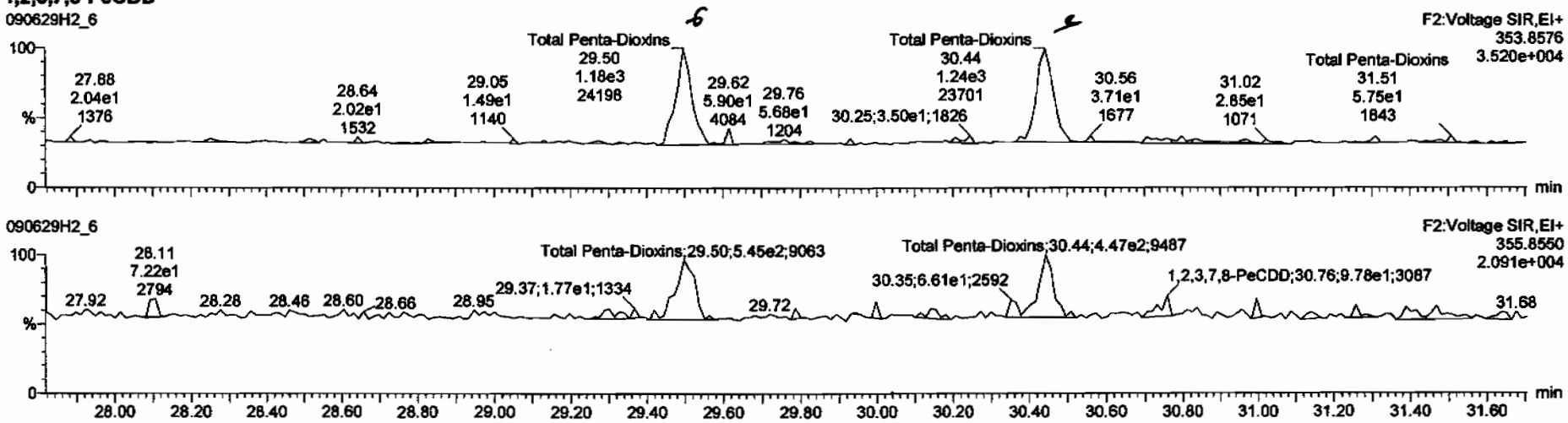

13C-1,2,3,7,8-PeCDD

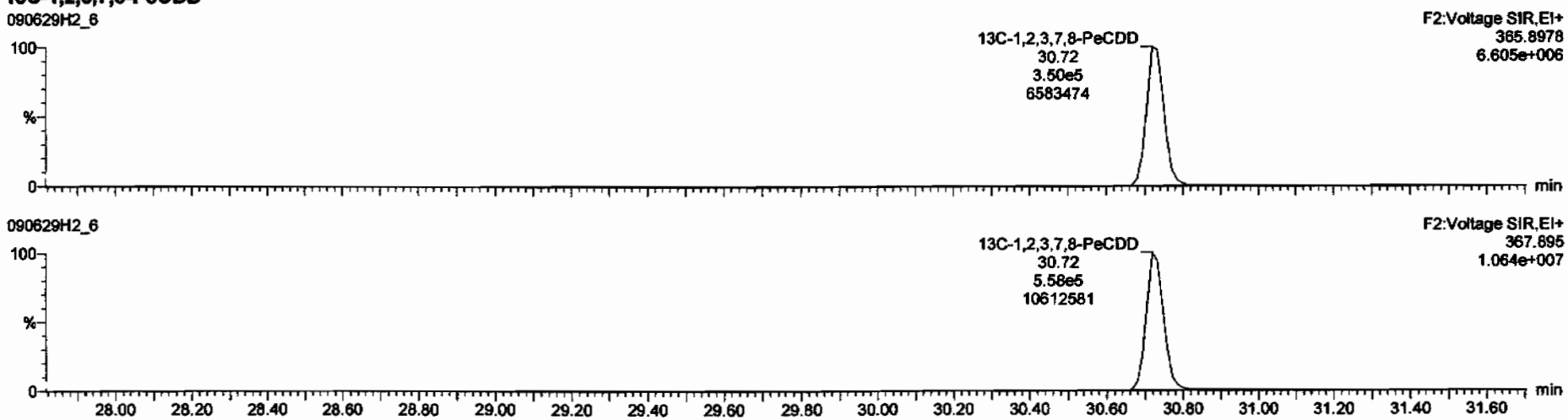

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-6.qld

Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

1,2,3,4,7,8-HxCDD

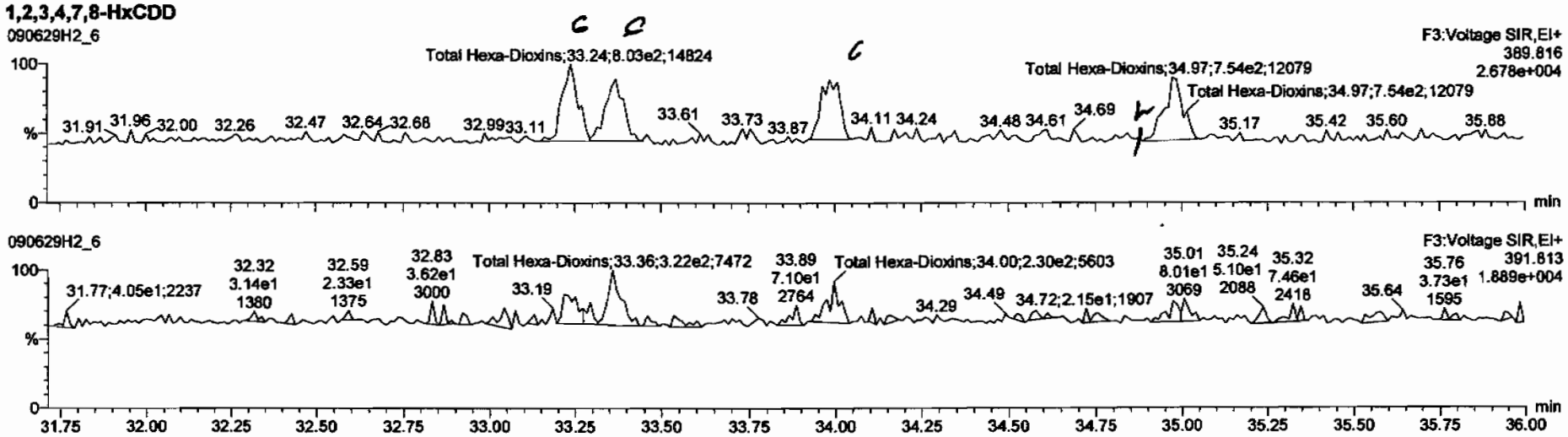

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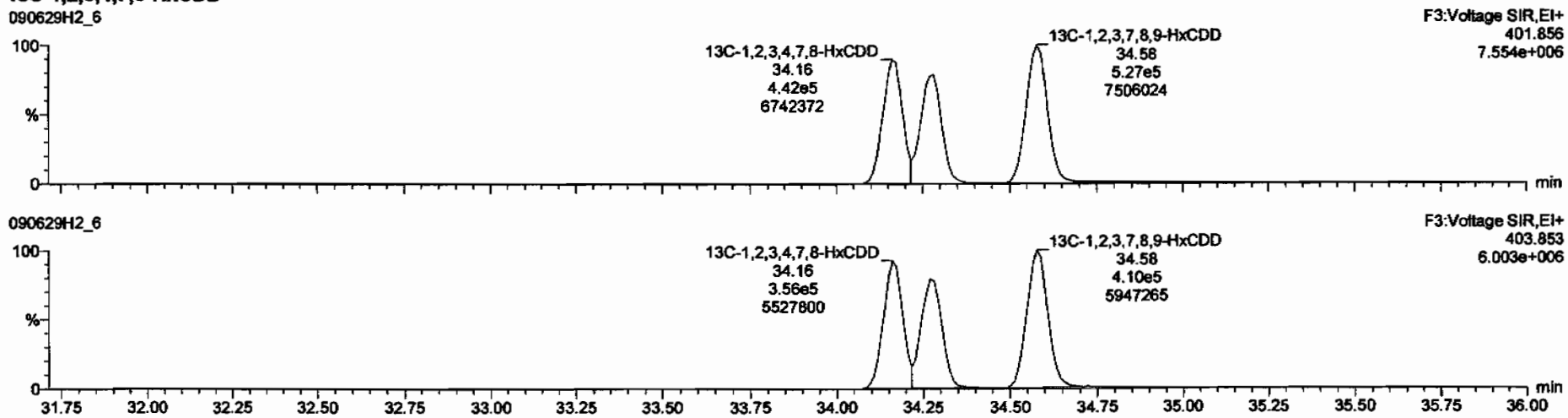

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Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

1,2,3,4,6,7,8-HpCDD

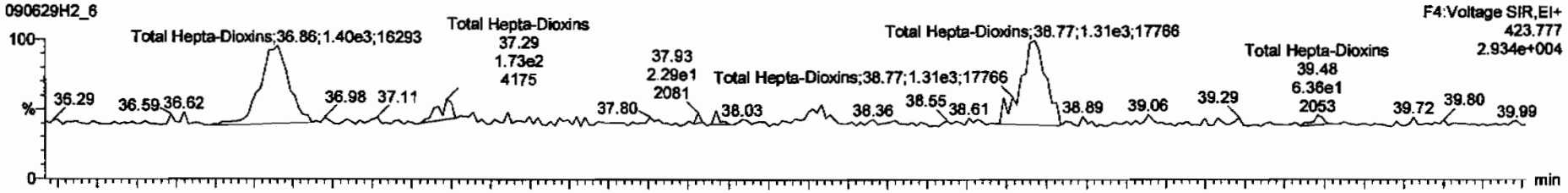

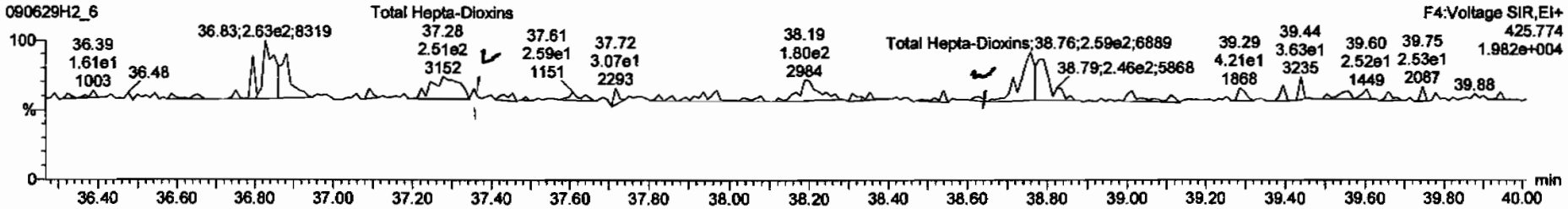

13C-1,2,3,4,6,7,8-HpCDD

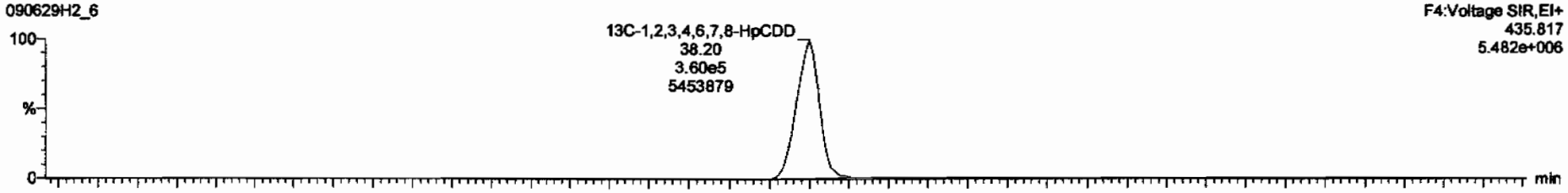

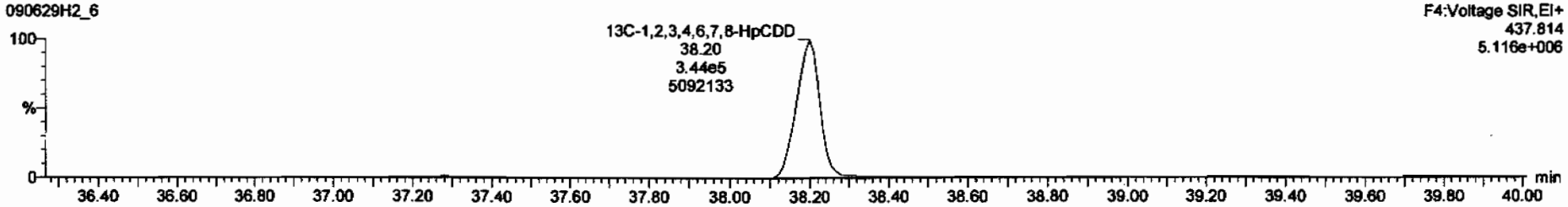

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-6.qld

Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

OCDD

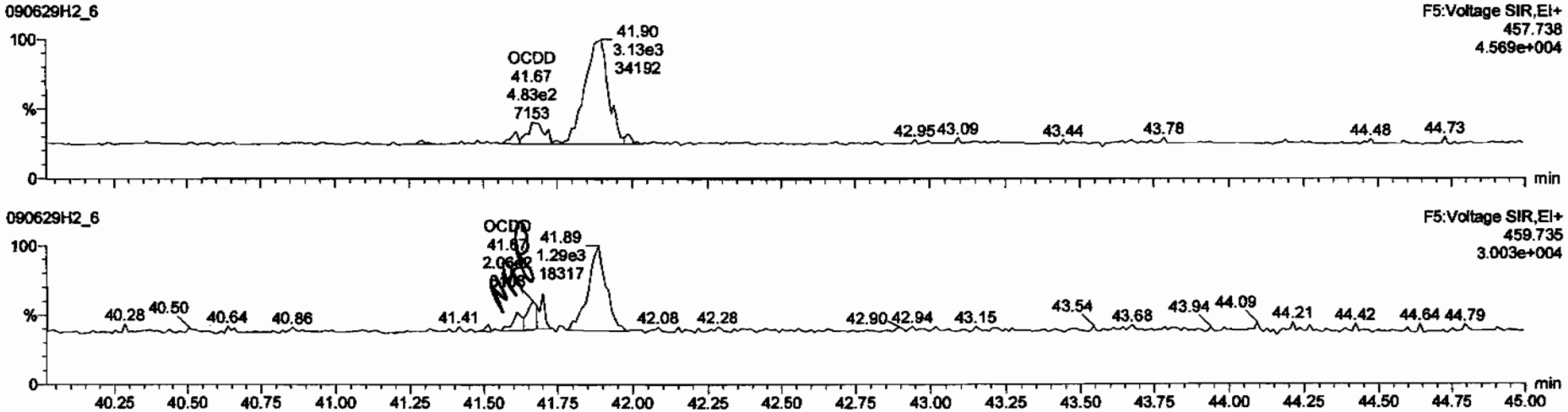

13C-OCDD

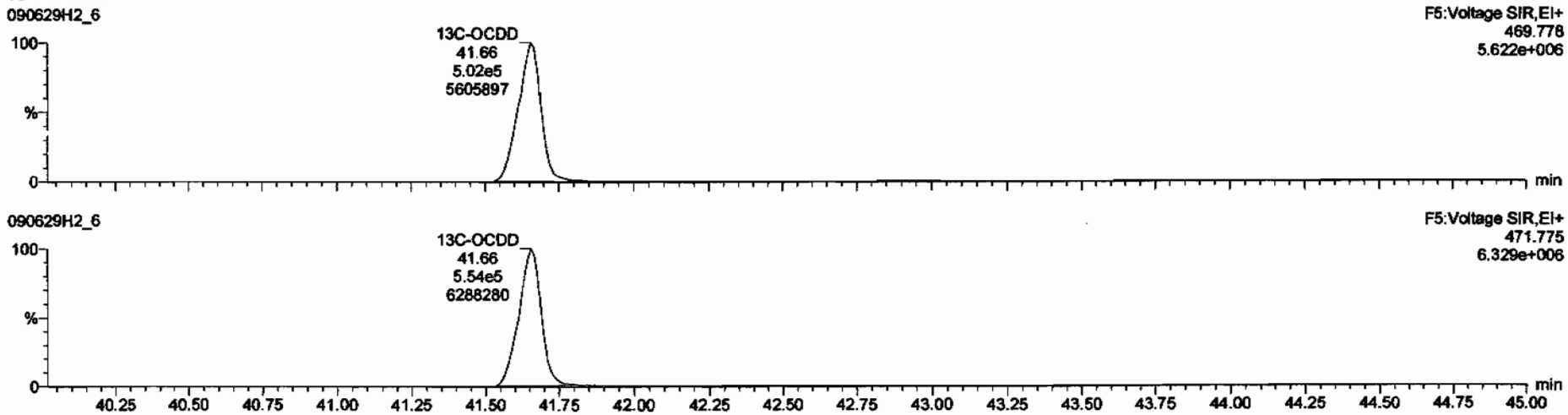

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Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

2,3,7,8-TCDF

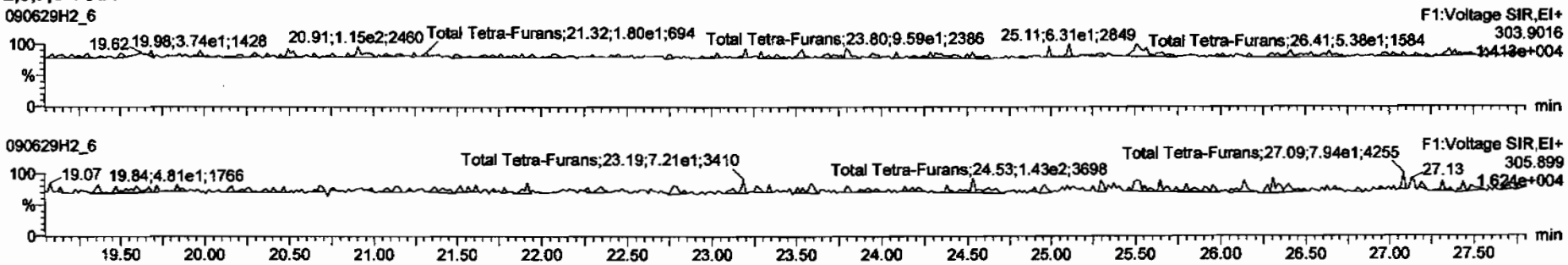

13C-2,3,7,8-TCDF

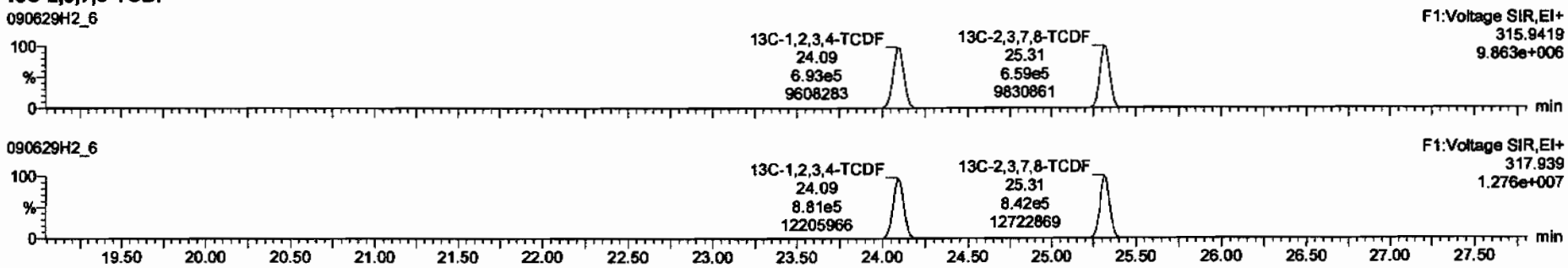

DPE1

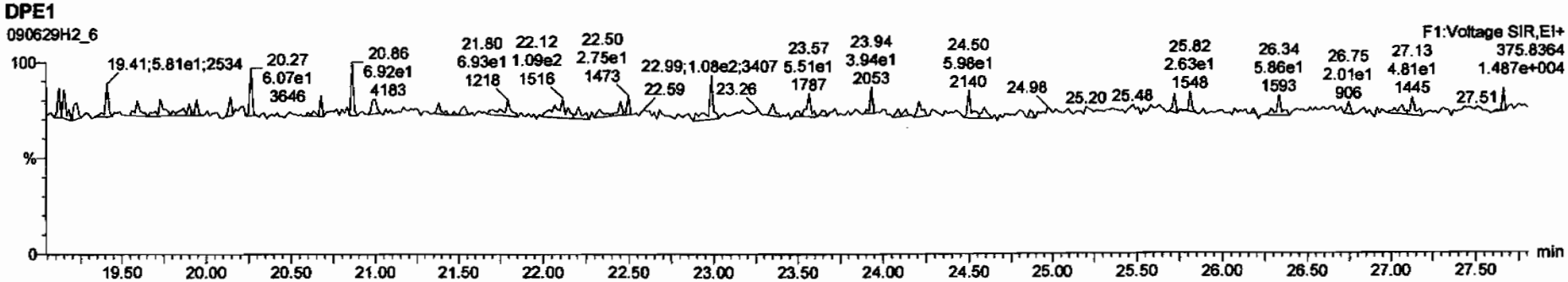

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Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

1st Func. Penta-Furans

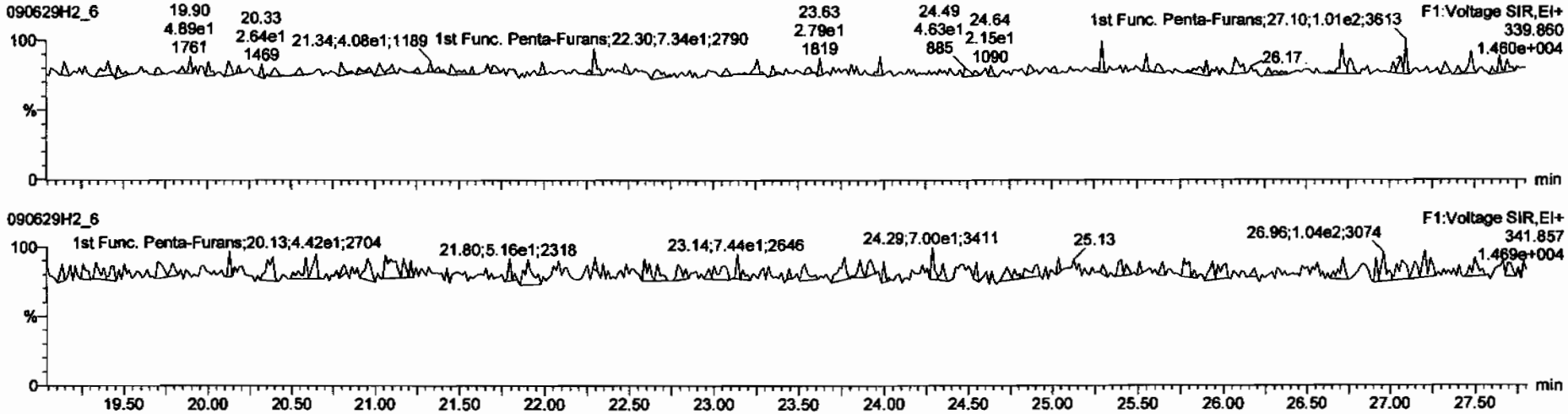

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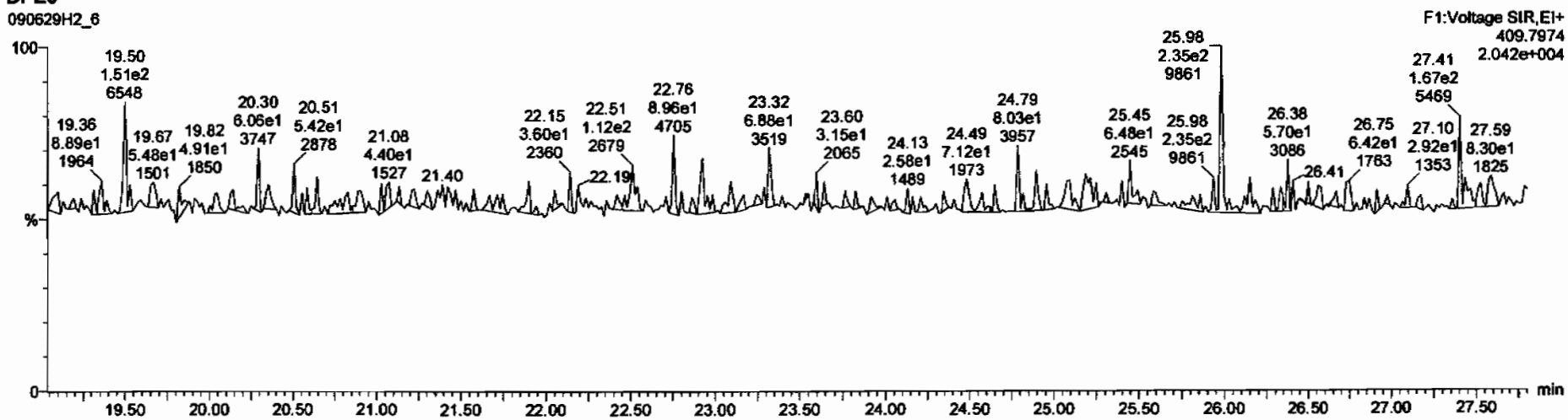

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Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

1,2,3,7,8-PeCDF

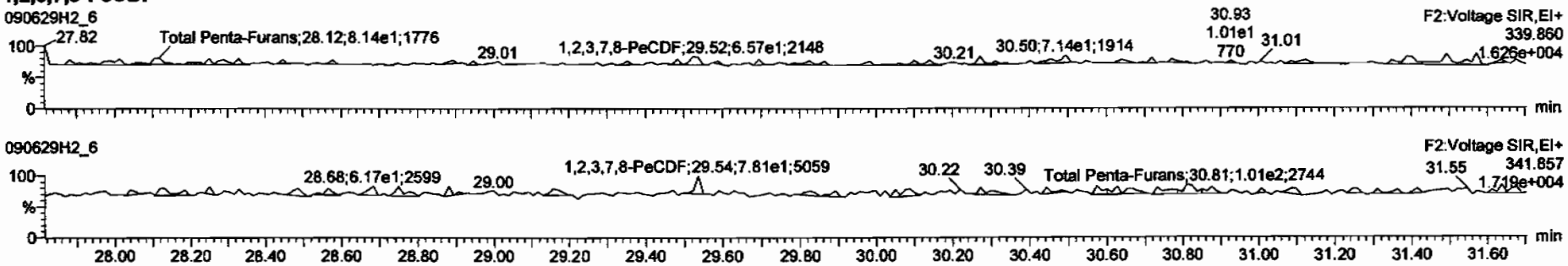

13C-1,2,3,7,8-PeCDF

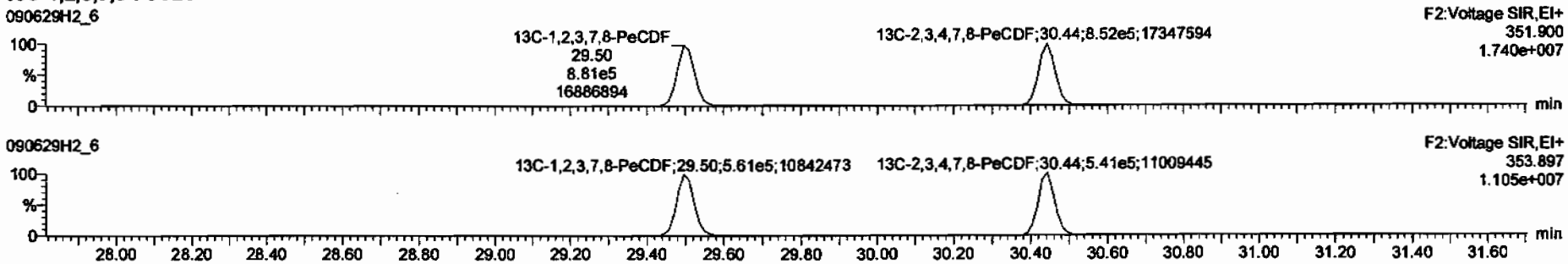

DPE2

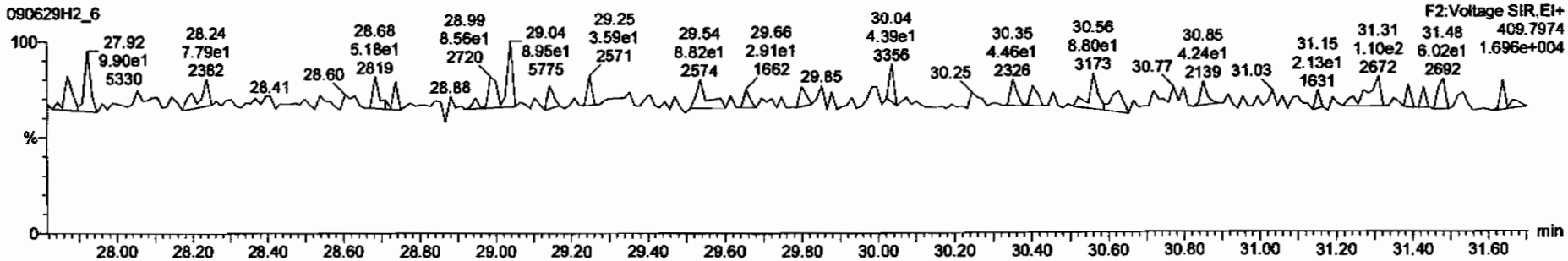

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Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

1,2,3,4,7,8-HxCDF

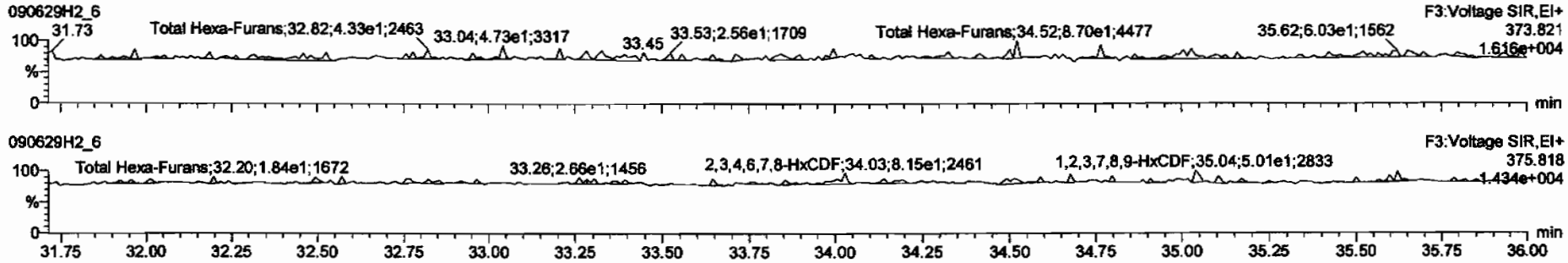

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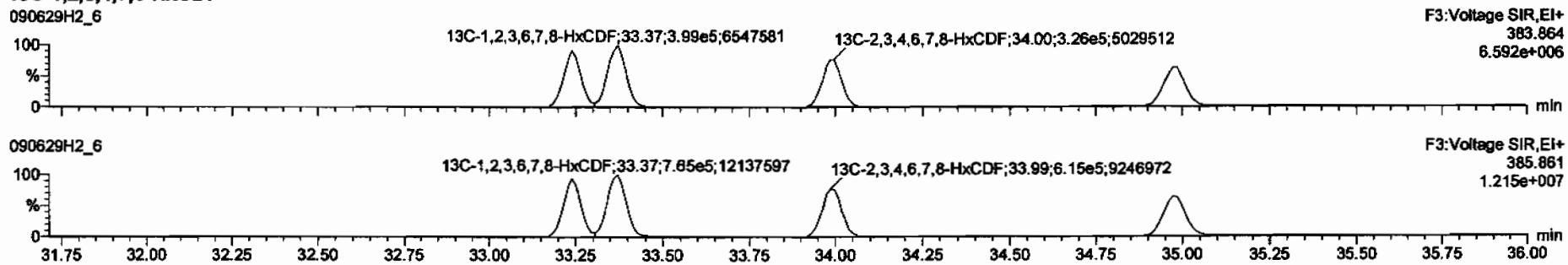

DPE3

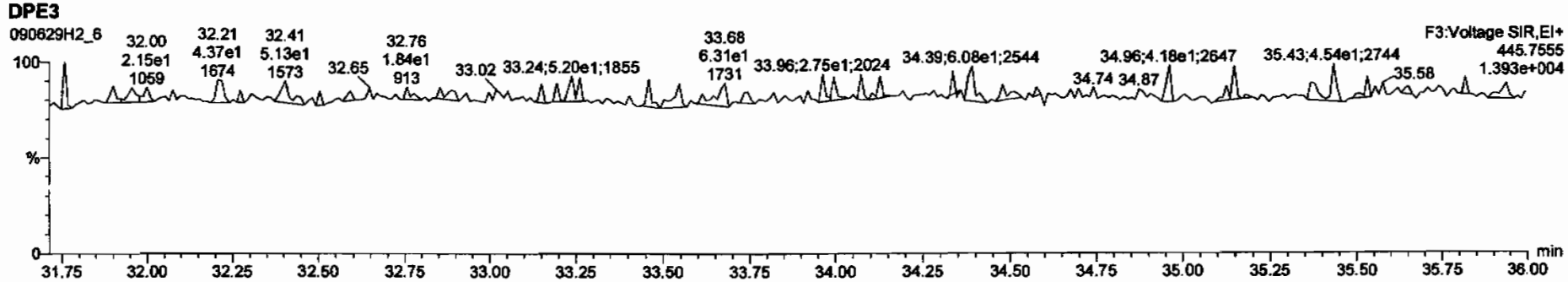

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Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

1,2,3,4,6,7,8-HpCDF

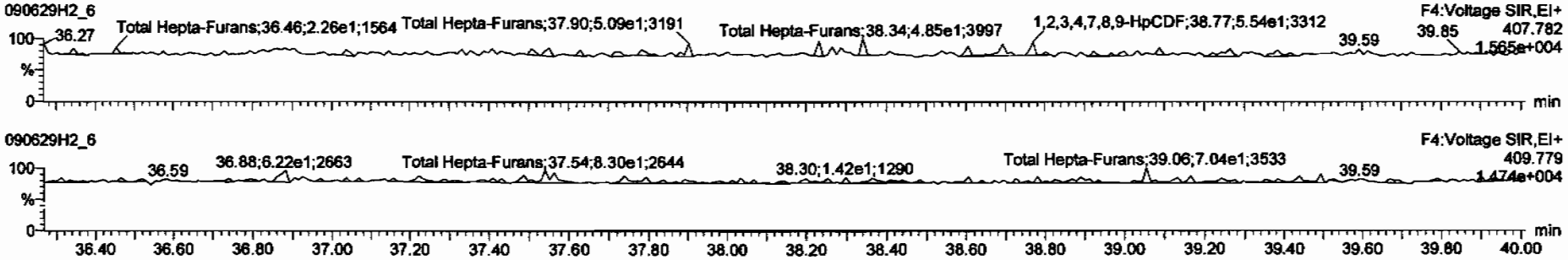

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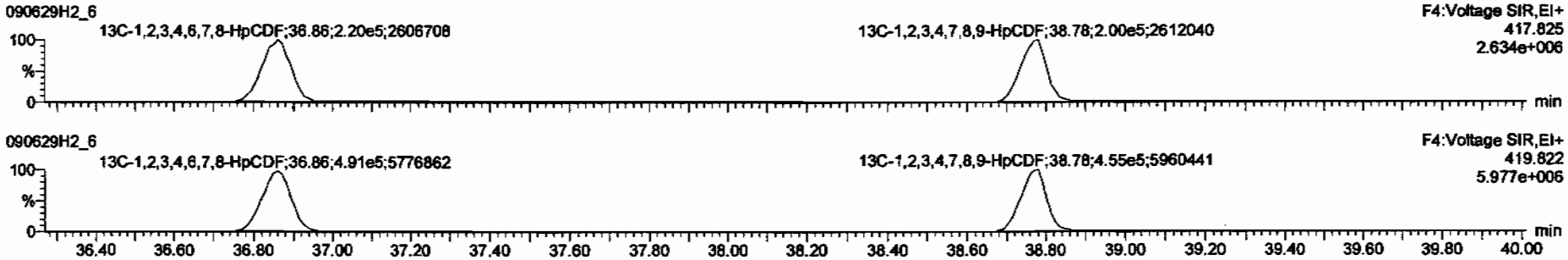

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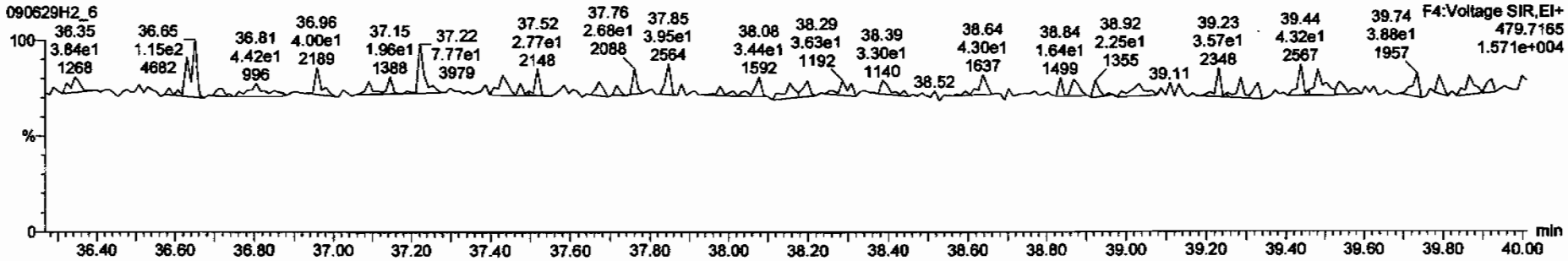

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-6.qld

Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

OCDF

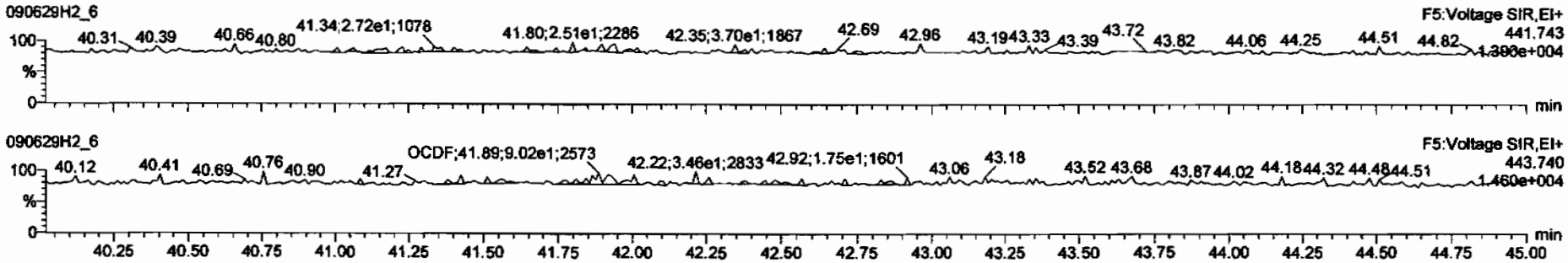

13C-OCDF

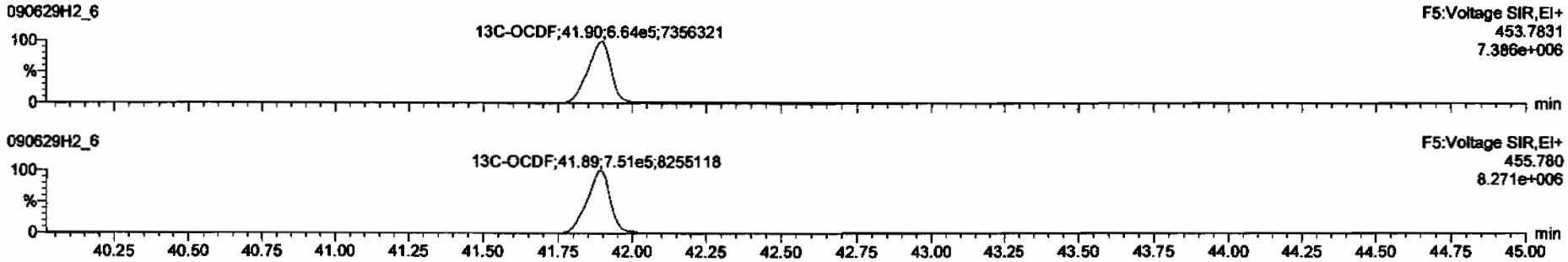

DPE5

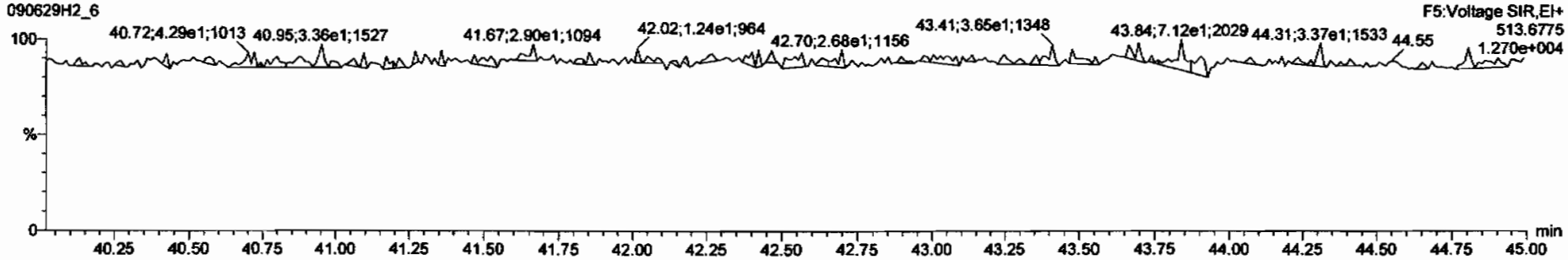

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-6.qld

Last Altered: Tuesday, June 30, 2009 08:12:13 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:12:38 Pacific Daylight Time

Name: 090629H2_6, Date: 29-Jun-2009, Time: 18:10:16, ID: 31831_2207_002 CAMO-09-10461 11.42, Description: CAMO-09-10461

PFK1

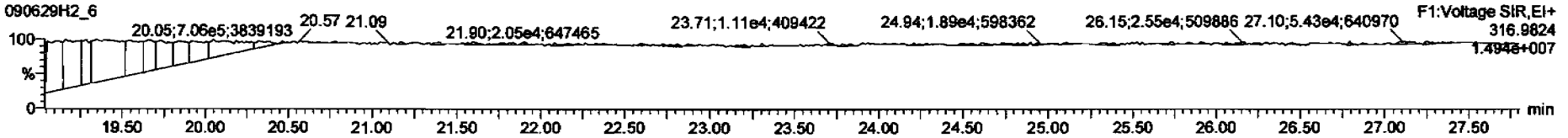

PFK2

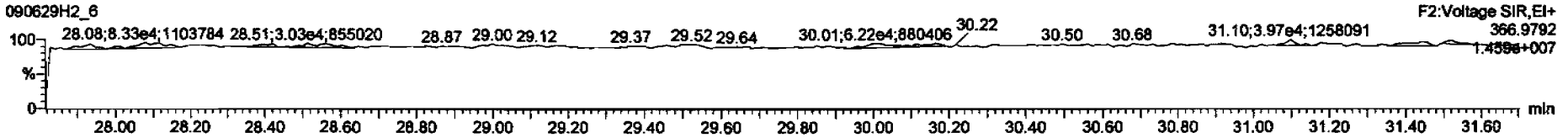

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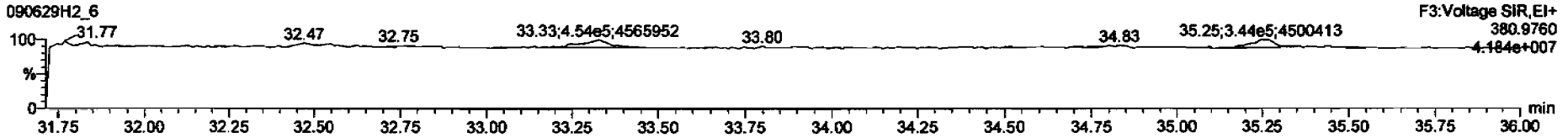

PFK4

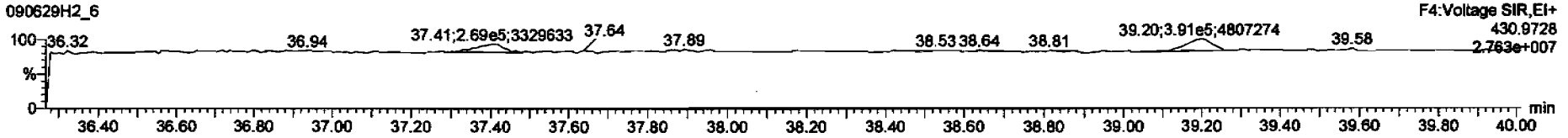

PFK5

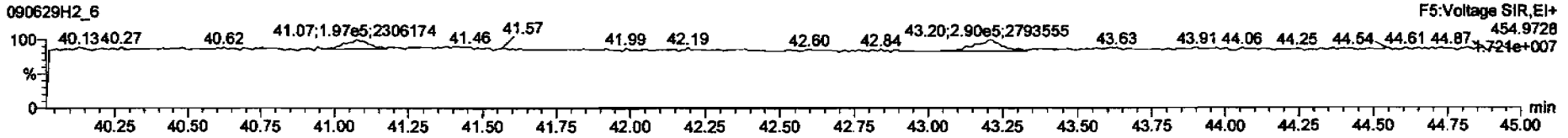

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-7.qld

Last Altered: Tuesday, June 30, 2009 12:49:03 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:49:29 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

1	2,3,7,8-TCDD			NO	1.08	10.020					0.0582	
2	1,2,3,7,8-PeCDD			NO	1.03	10.020					0.0516	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.020					0.133	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.020					0.125	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.020					0.124	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.020					0.121	
7	OCDD	2.18e3	0.96	NO	1.18	10.020	41.67	1.000	0.65680		0.147	~~0.65680~~
8	2,3,7,8-TCDF			NO	1.09	10.020					0.0477	
9	1,2,3,7,8-PeCDF			NO	1.16	10.020					0.0451	
10	2,3,4,7,8-PeCDF			NO	1.12	10.020					0.0464	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.020					0.0400	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.020					0.0431	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.020					0.0516	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.020					0.0653	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.020					0.0767	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.020					0.0837	
17	OCDF			NO	1.10	10.020					0.0899	
18	13C-2,3,7,8-TCDD	1.14e6	0.79	NO	1.01	10.020	26.09	1.023	192.17	96.3	0.323	
19	13C-1,2,3,7,8-PeCDD	9.60e5	0.63	NO	0.827	10.020	30.73	1.205	198.85	99.6	0.275	
20	13C-1,2,3,4,7,8-HxCDD	8.10e5	1.24	NO	0.916	10.020	34.17	0.988	187.81	94.1	0.522	
21	13C-1,2,3,6,7,8-HxCDD	7.42e5	1.23	NO	0.921	10.020	34.28	0.991	171.11	85.7	0.520	
22	13C-1,2,3,4,6,7,8-HpCDD	7.35e5	1.05	NO	0.708	10.020	38.20	1.104	220.34	110	0.578	
23	13C-OCDD	1.12e6	0.90	NO	0.503	10.020	41.66	1.204	475.11	119	0.545	
24	13C-2,3,7,8-TCDF	1.56e6	0.78	NO	0.977	10.020	25.33	0.993	196.41	98.4	0.157	
25	13C-1,2,3,7,8-PeCDF	1.46e6	1.56	NO	0.896	10.020	29.51	1.157	201.03	101	0.270	
26	13C-2,3,4,7,8-PeCDF	1.46e6	1.55	NO	0.900	10.020	30.46	1.194	200.18	100	0.269	
27	13C-1,2,3,4,7,8-HxCDF	1.04e6	0.53	NO	1.17	10.020	33.25	0.961	188.15	94.3	0.490	
28	13C-1,2,3,6,7,8-HxCDF	1.17e6	0.52	NO	1.52	10.020	33.37	0.965	163.38	81.9	0.377	
29	13C-2,3,4,6,7,8-HxCDF	9.68e5	0.52	NO	1.25	10.020	34.00	0.983	164.57	82.5	0.458	
30	13C-1,2,3,7,8,9-HxCDF	8.79e5	0.52	NO	1.05	10.020	34.99	1.011	177.29	88.8	0.544	

6/30/09
6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-7.qld

Last Altered: Tuesday, June 30, 2009 12:49:03 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:49:29 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

31	13C-1,2,3,4,6,7,8-HpCDF	7.24e5	0.45	NO	0.868	10.020	36.87	1.066	177.22	88.8	0.712
32	13C-1,2,3,4,7,8,9-HpCDF	6.76e5	0.45	NO	0.727	10.020	38.78	1.121	197.50	98.9	0.851
33	13C-OCDF	1.47e6	0.89	NO	0.760	10.020	41.90	1.211	409.80	103	0.391
34	37Cl-2,3,7,8-TCDD	2.77e5			0.668	10.020	26.12	1.024	70.937	88.8	0.0815
35	13C-1,2,3,4-TCDD	1.16e6	0.80	NO	1.00	10.020	25.51	0.000	199.60	100	0.328
36	13C-1,2,3,4-TCDF	1.62e6	0.79	NO	1.00	10.020	24.10	0.000	199.60	100	0.153
37	13C-1,2,3,7,8,9-HxCDD	9.40e5	1.24	NO	1.00	10.020	34.59	0.000	199.60	100	0.479
38	Total Tetra-Dioxins				1.08	10.020					0.0261
39	Total Penta-Dioxins				1.03	10.020					0.0196
40	Total Hexa-Dioxins				1.13	10.020					0.0720
41	Total Hepta-Dioxins				1.06	10.020					0.0665
42	Total Tetra-Furans				1.09	10.020					0.0174
43	1st Func. Penta-Furans				1.16	10.020					0.0147
44	Total Penta-Furans				1.16	10.020					0.0164
45	Total Hexa-Furans				1.28	10.020					0.0290
46	Total Hepta-Furans				1.69	10.020					0.0432

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-7.qld

Last Altered: Tuesday, June 30, 2009 08:12:48 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

2,3,7,8-TCDD

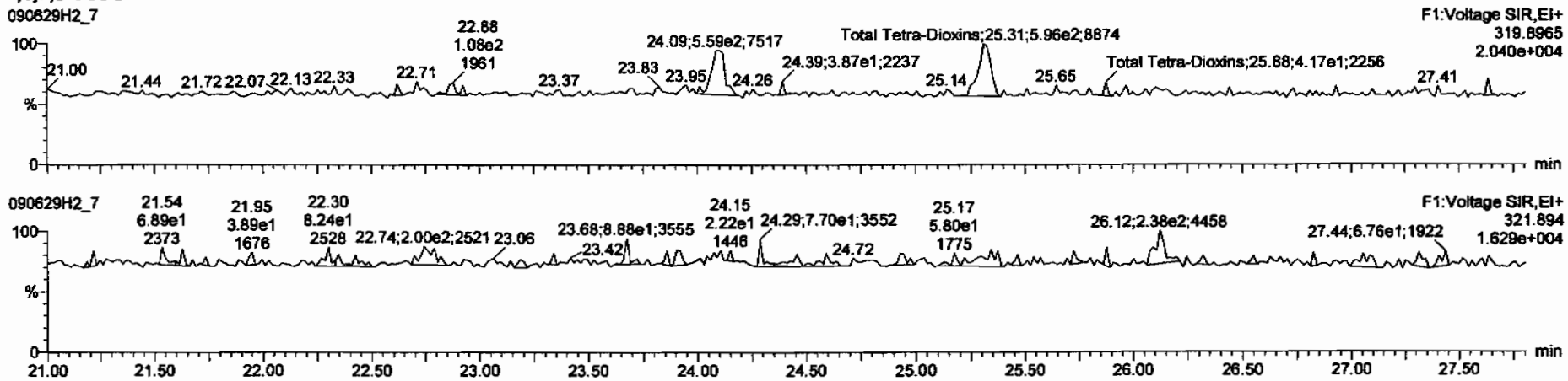

13C-2,3,7,8-TCDD

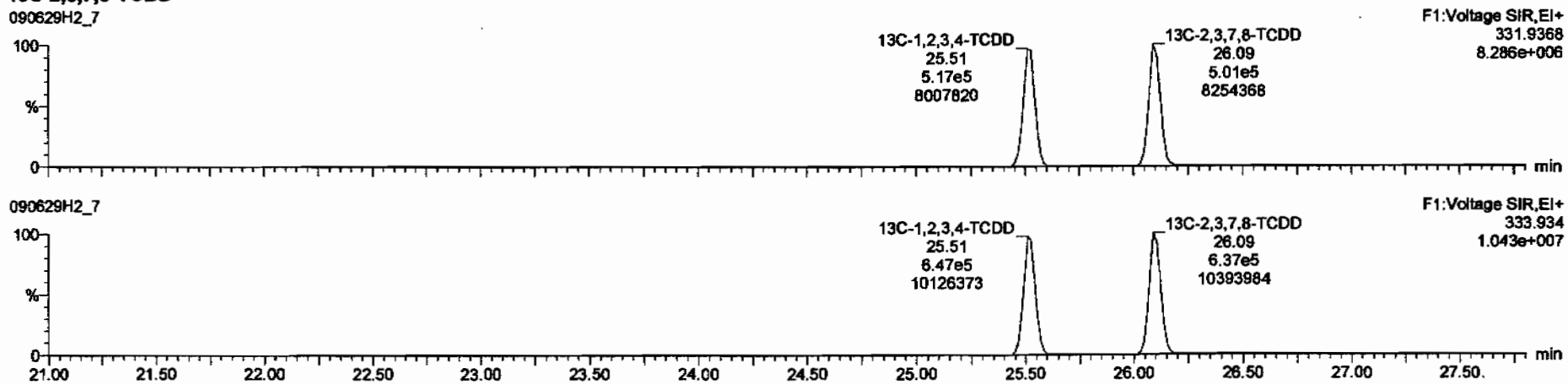

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-7.qld

Last Altered: Tuesday, June 30, 2009 08:12:48 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

37Cl-2,3,7,8-TCDD

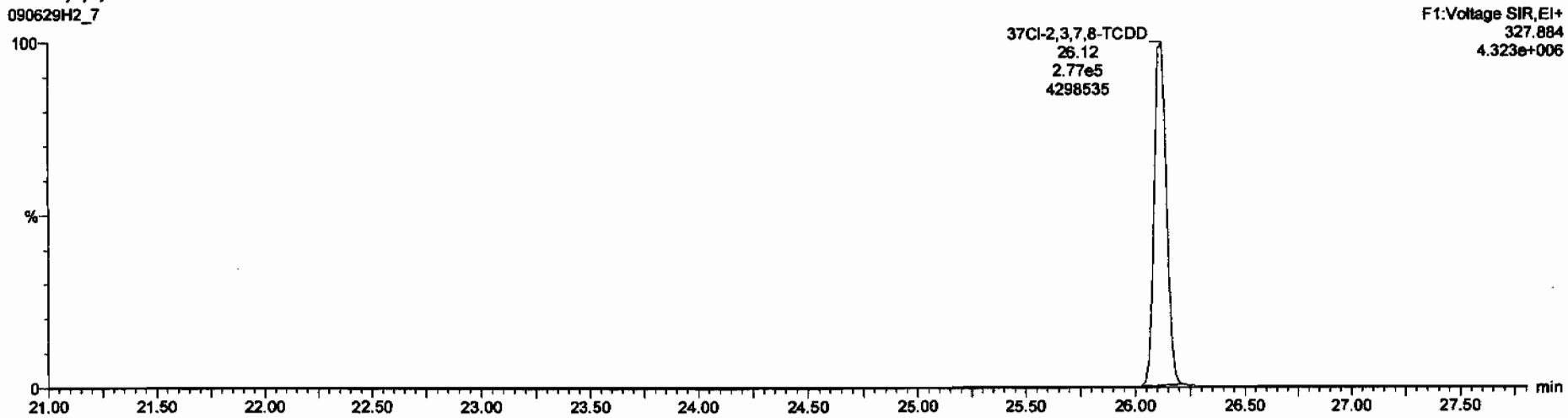

13C-1,2,3,4-TCDD

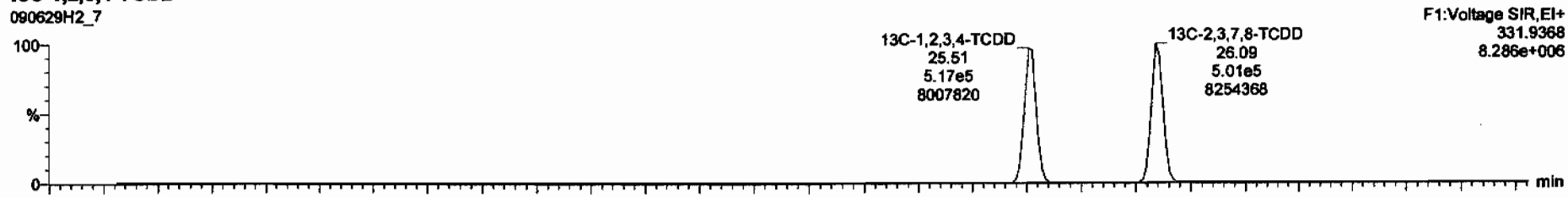

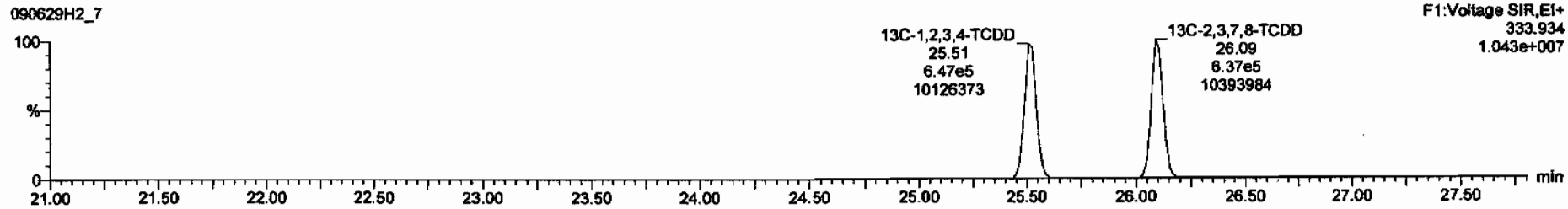

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Last Altered: Tuesday, June 30, 2009 08:12:48 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

1,2,3,7,8-PeCDD

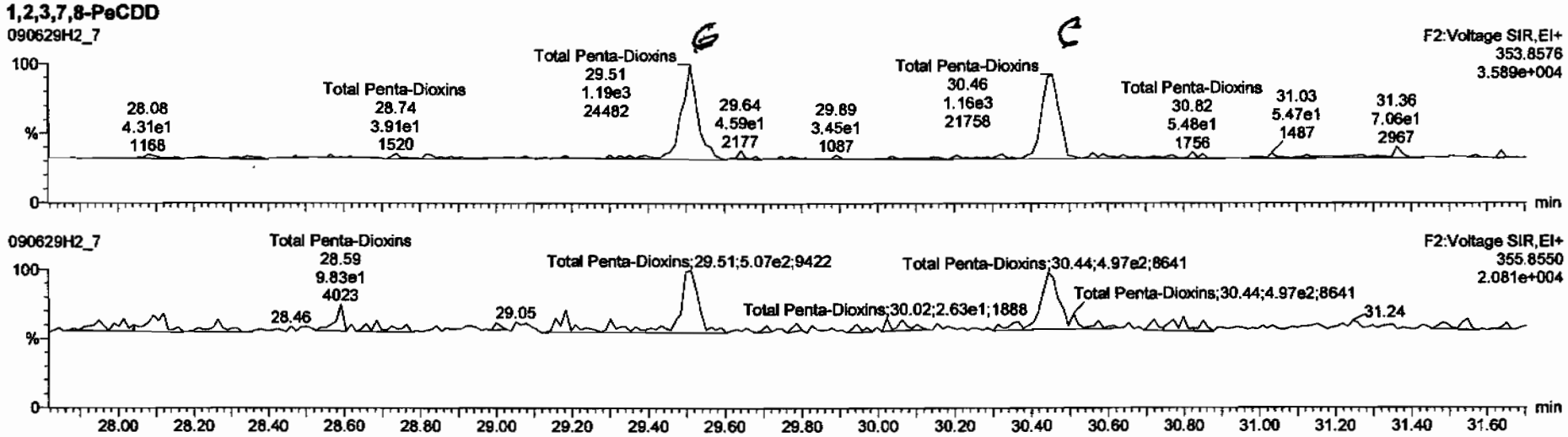

13C-1,2,3,7,8-PeCDD

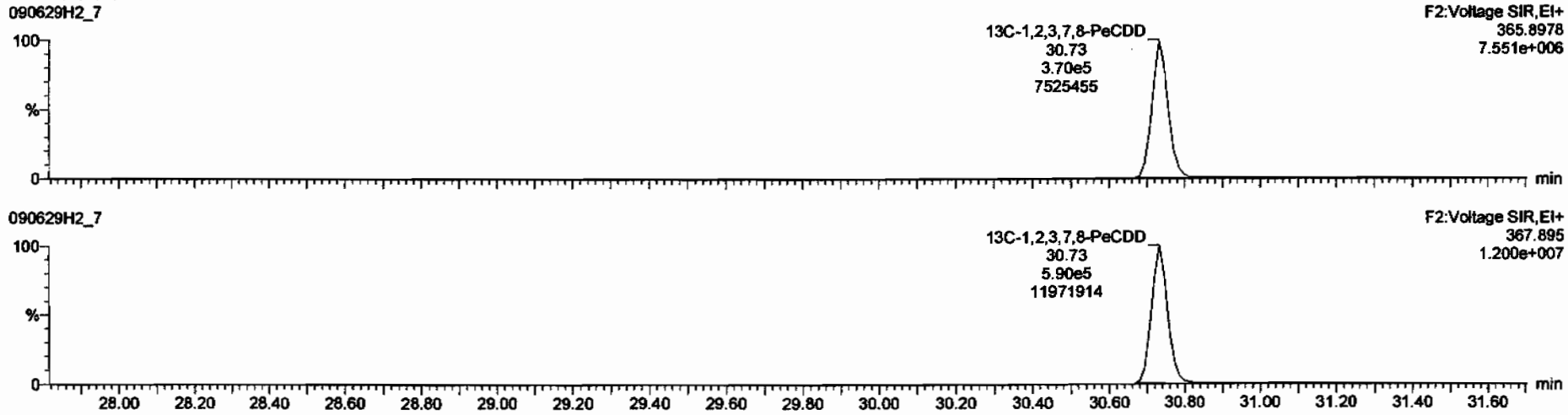

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Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

1,2,3,4,7,8-HxCDD

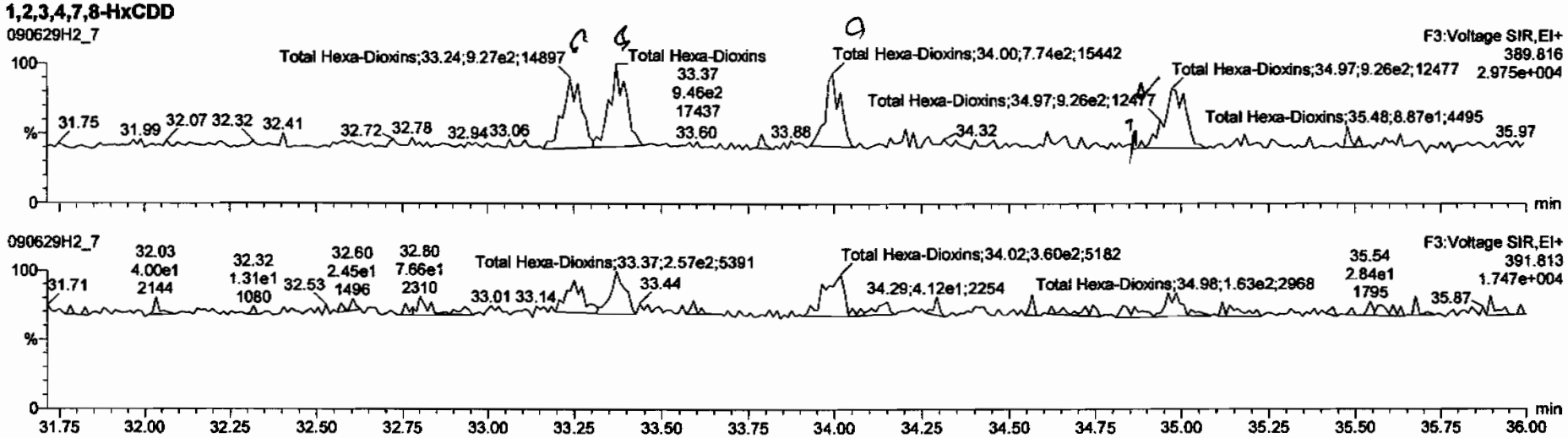

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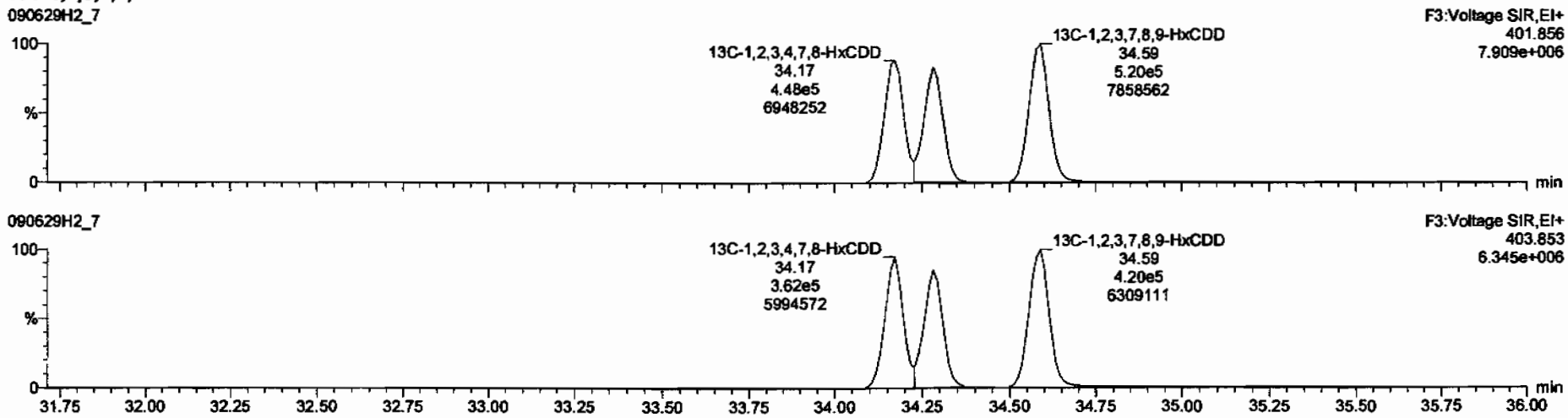

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-7.qld

Last Altered: Tuesday, June 30, 2009 08:12:48 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

1,2,3,4,6,7,8-HpCDD

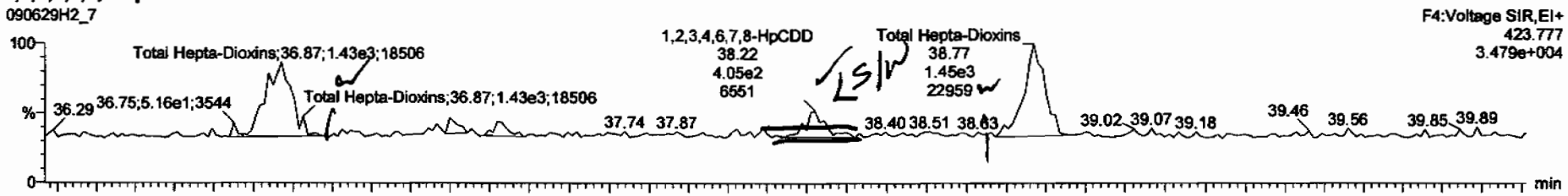

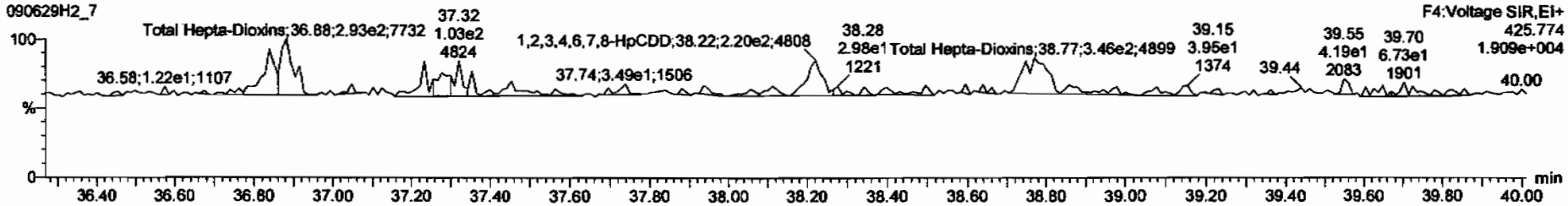

13C-1,2,3,4,6,7,8-HpCDD

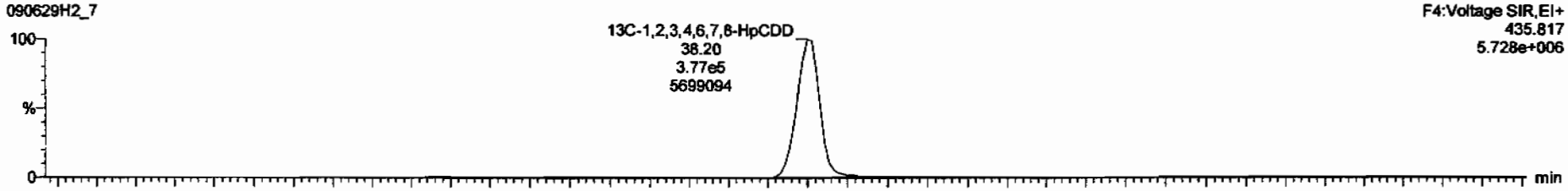

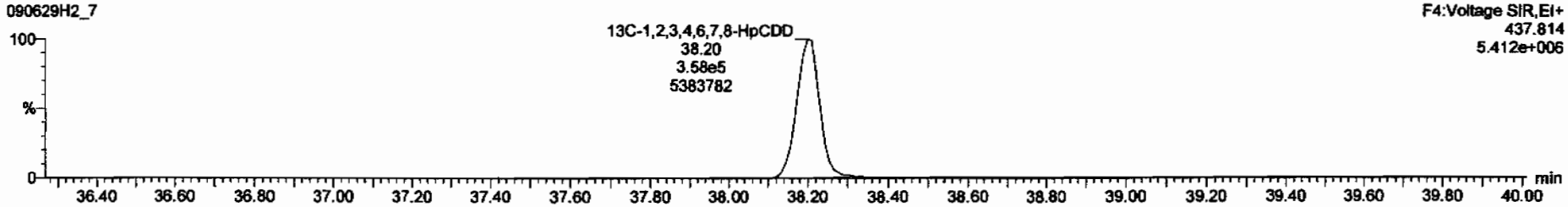

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Last Altered: Tuesday, June 30, 2009 08:12:48 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

OCDD

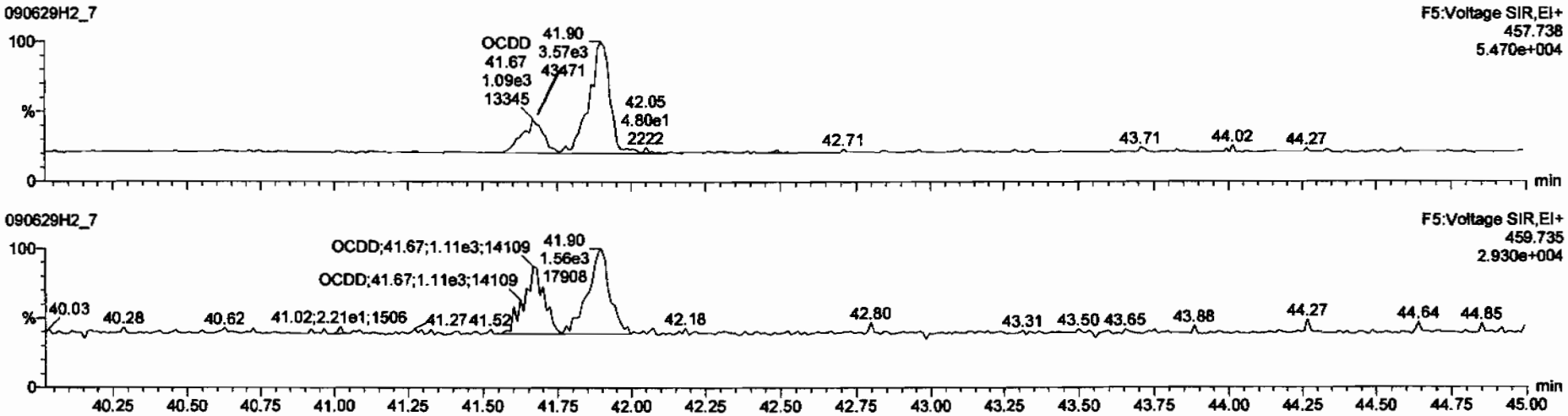

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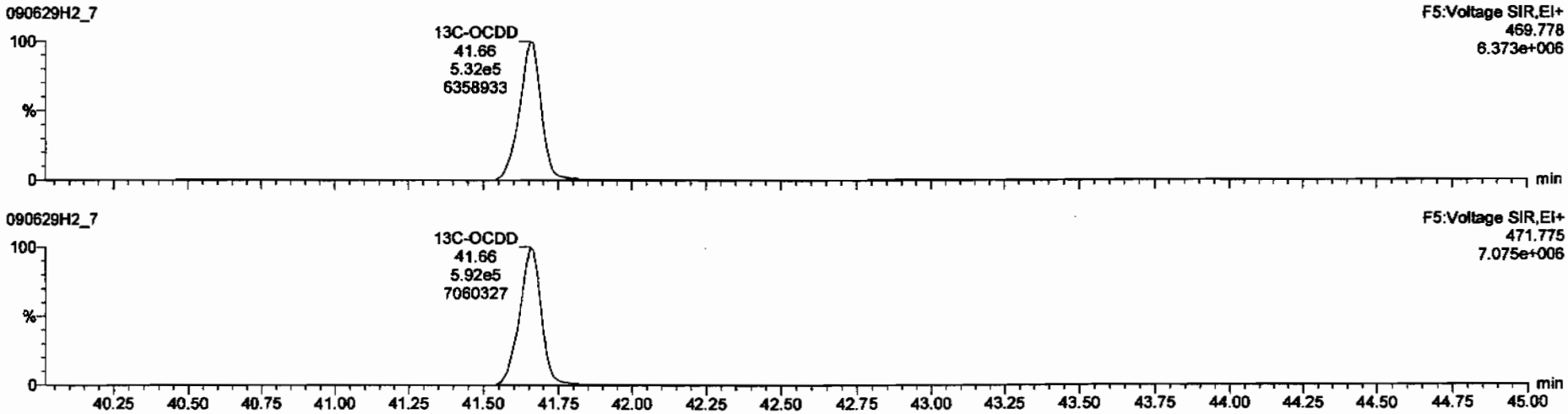

TargetLynx - 090629f2-7.qld * - [Chromatogram]

090629H2_7 - 31831_2207_003 CAMO-09-10462 10.55 - CAMO-09-10462

2,3,7,8-TCDF			NO	1.09	10.020					0.0477	
1,2,3,7,8-PeCDF	2.45e2	2.28	YES	1.16	10.020	29.54	1.001	0.0288		0.0451	0.0224
2,3,4,7,8-PeCDF			NO	1.12	10.020					0.0464	
1,2,3,4,7,8-HxCDF	8.51e1	0.22	YES	1.41	10.020	33.25	1.000	0.0116		0.0400	0.00381

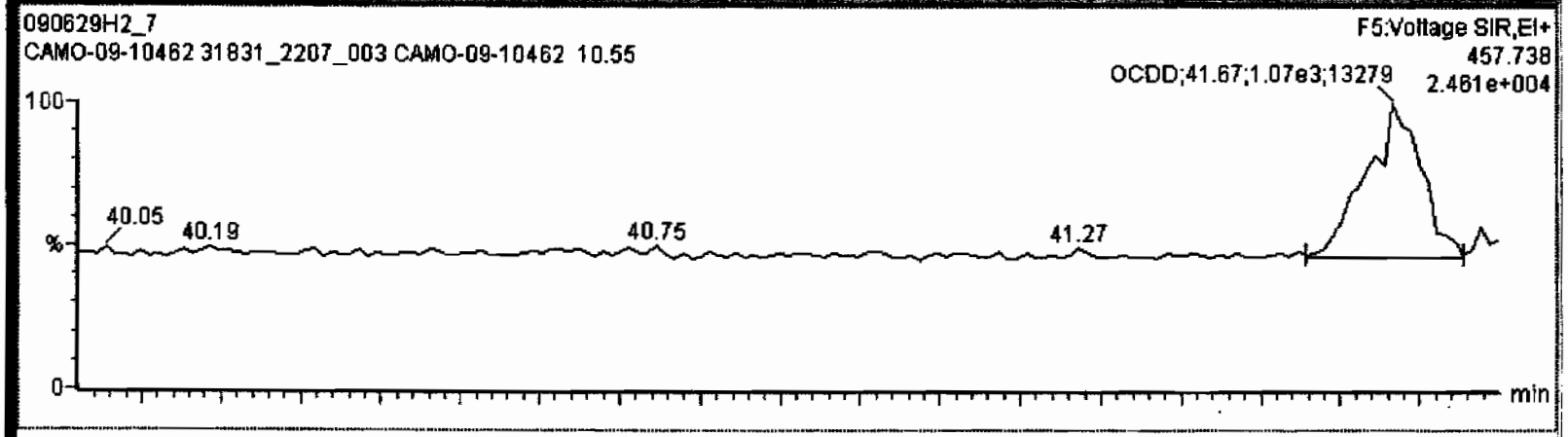

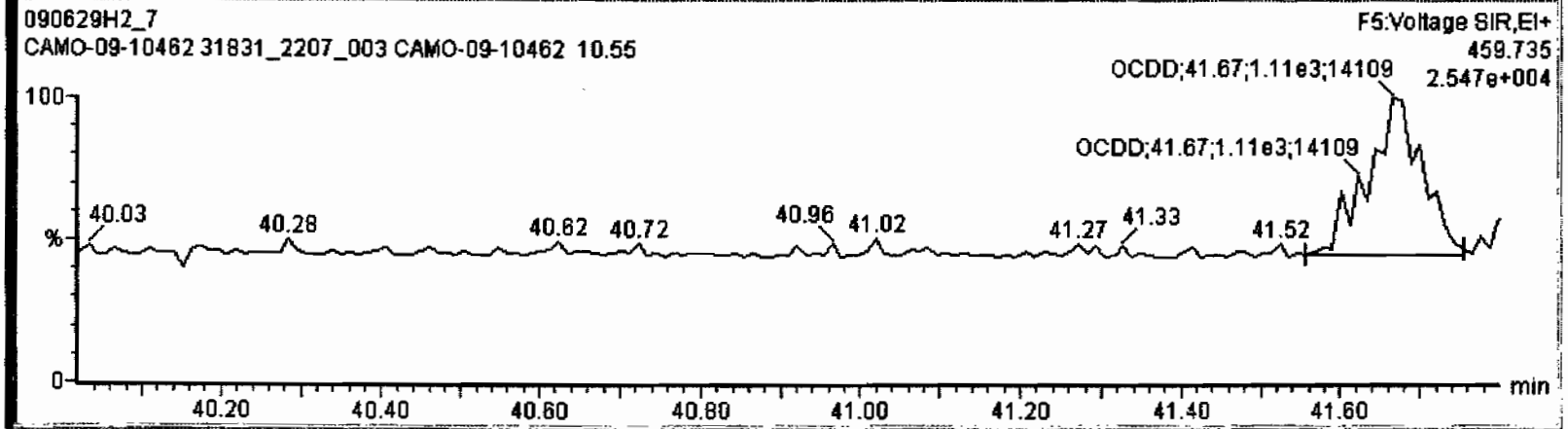

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-7.qld

Last Altered: Tuesday, June 30, 2009 08:12:48 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

2,3,7,8-TCDF

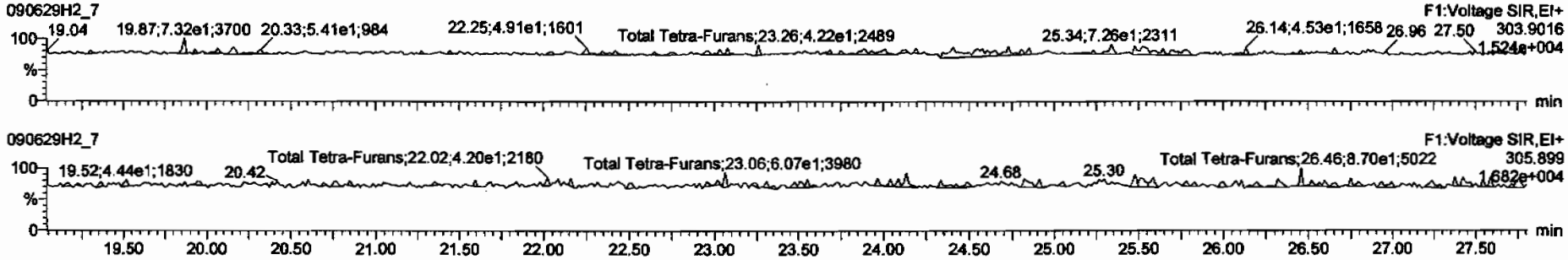

13C-2,3,7,8-TCDF

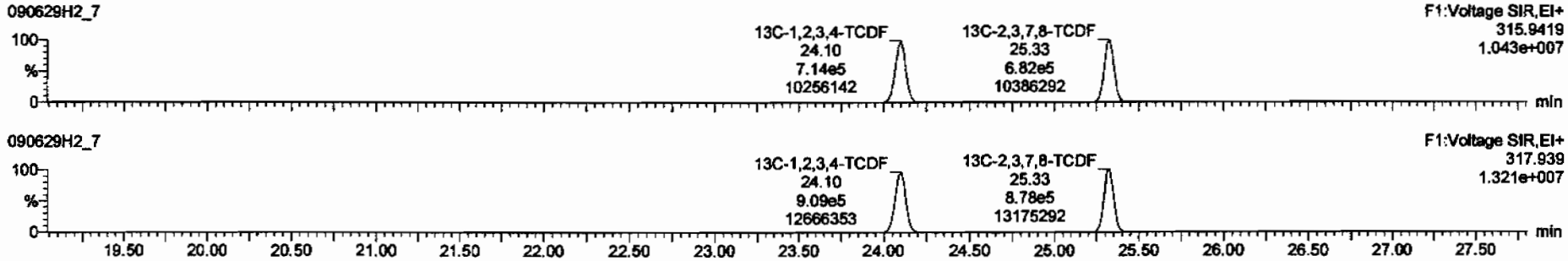

DPE1

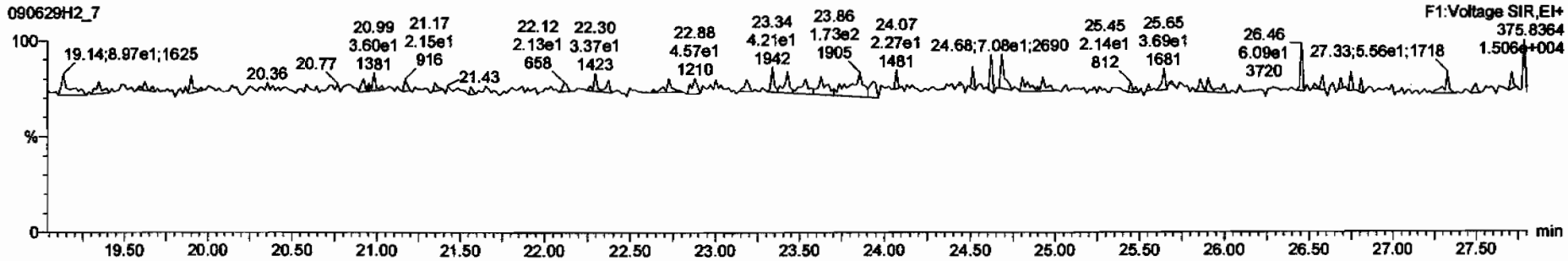

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-7.qld

Last Altered: Tuesday, June 30, 2009 08:12:48 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

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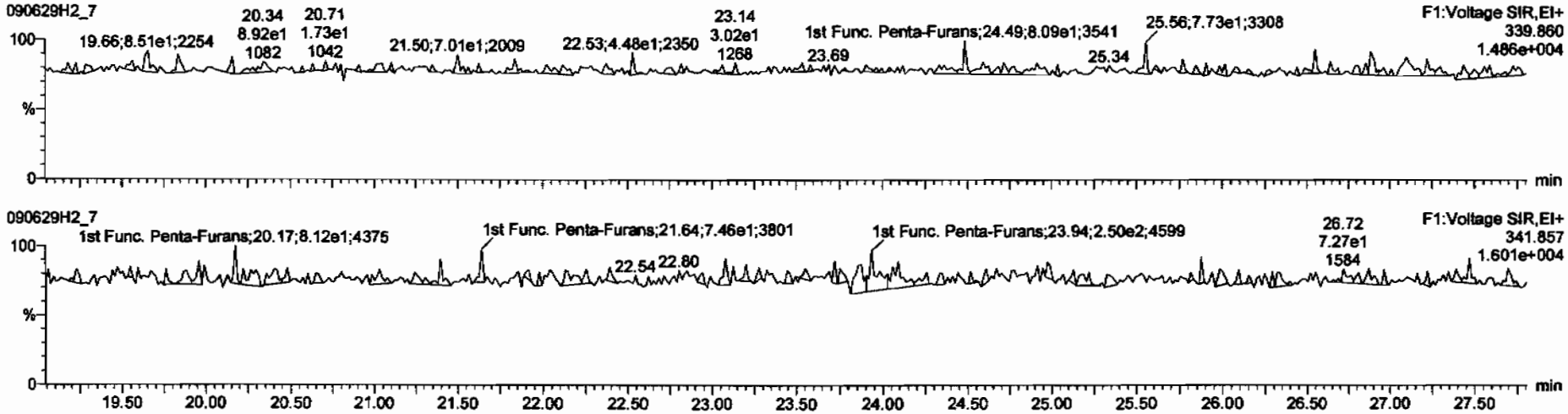

DPE6

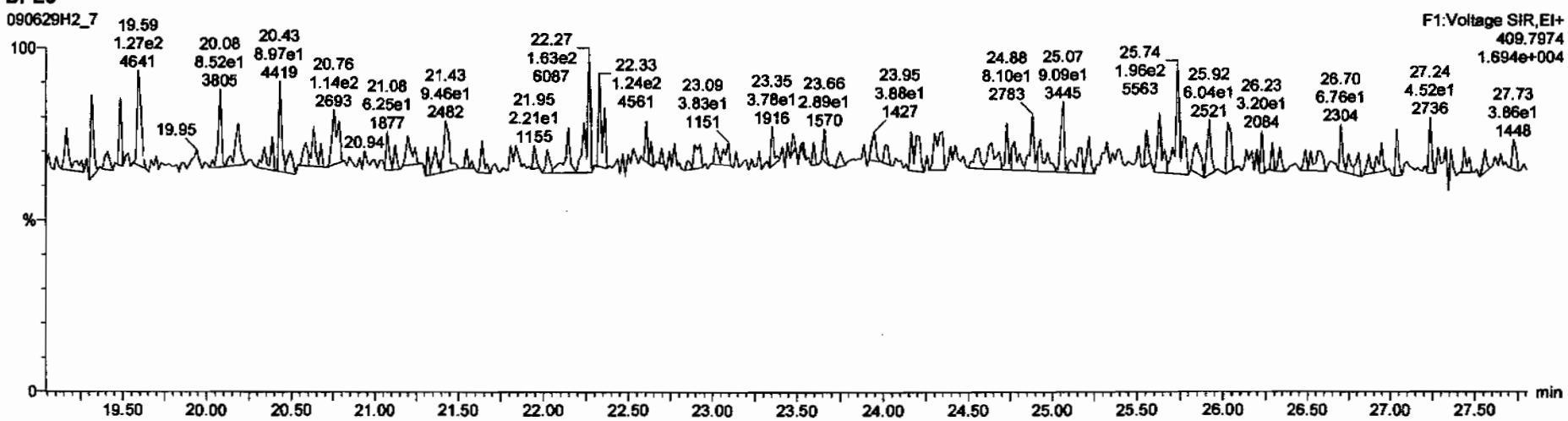

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Last Altered: Tuesday, June 30, 2009 08:12:48 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

1,2,3,7,8-PeCDF

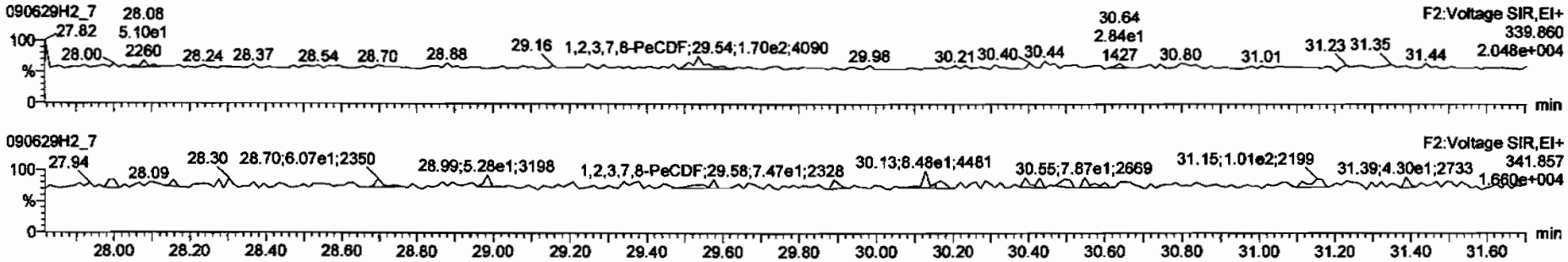

13C-1,2,3,7,8-PeCDF

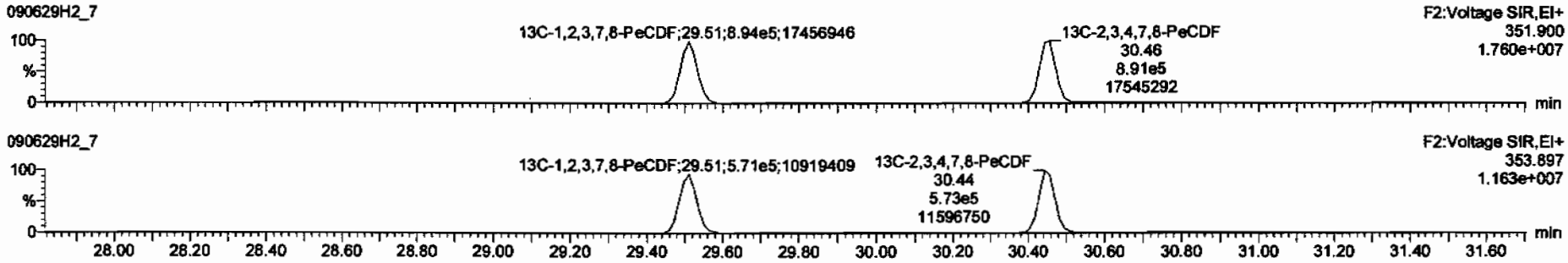

DPE2

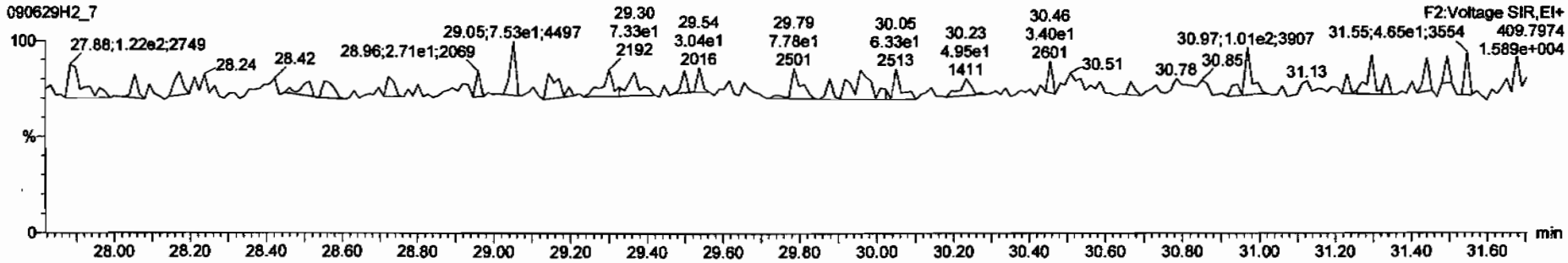

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Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

1,2,3,4,7,8-HxCDF

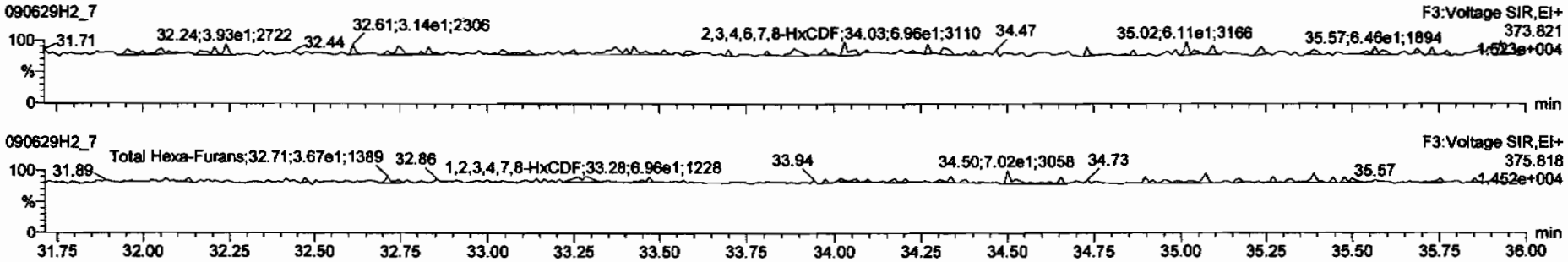

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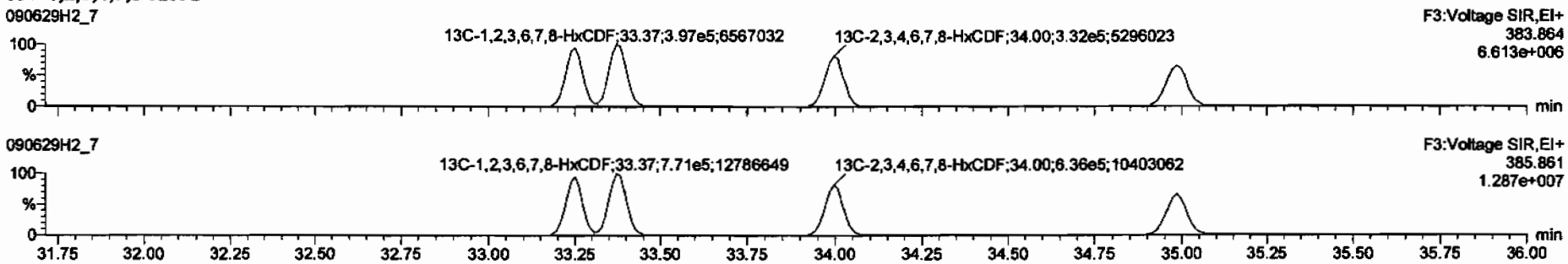

DPE3

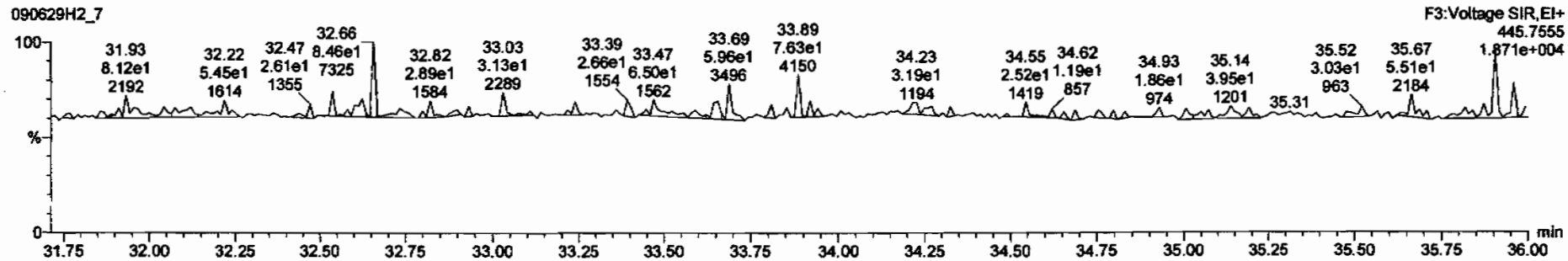

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Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

1,2,3,4,6,7,8-HpCDF

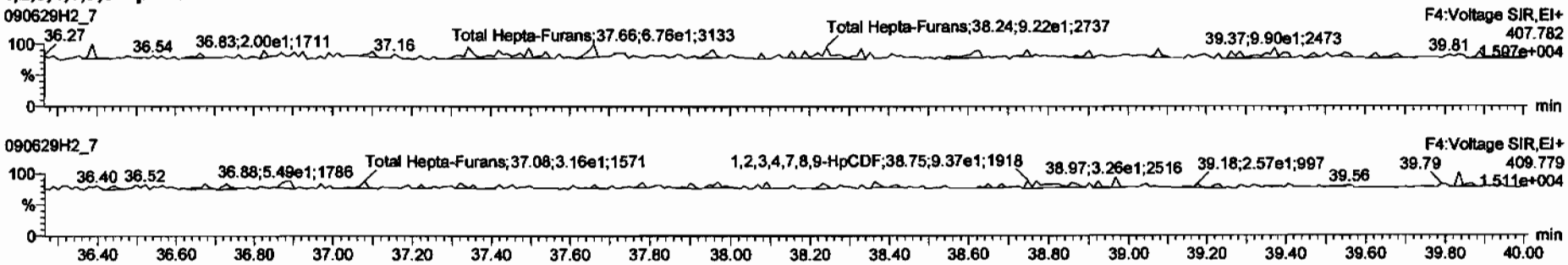

13C-1,2,3,4,6,7,8-HpCDF

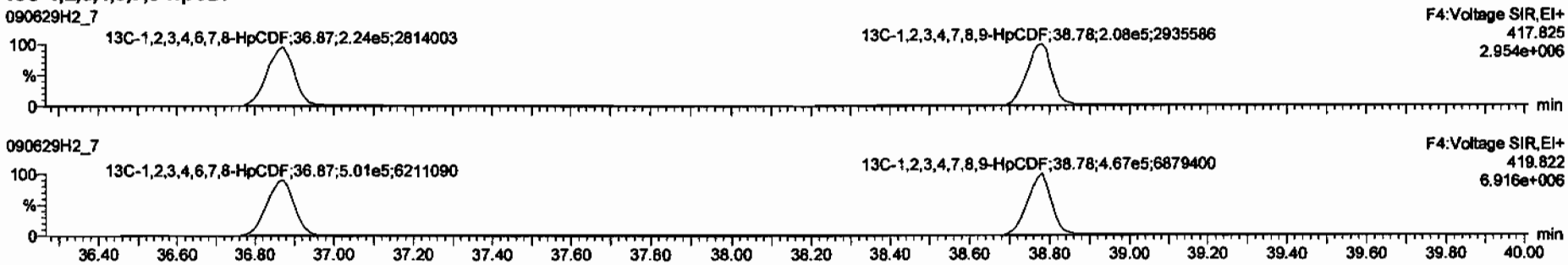

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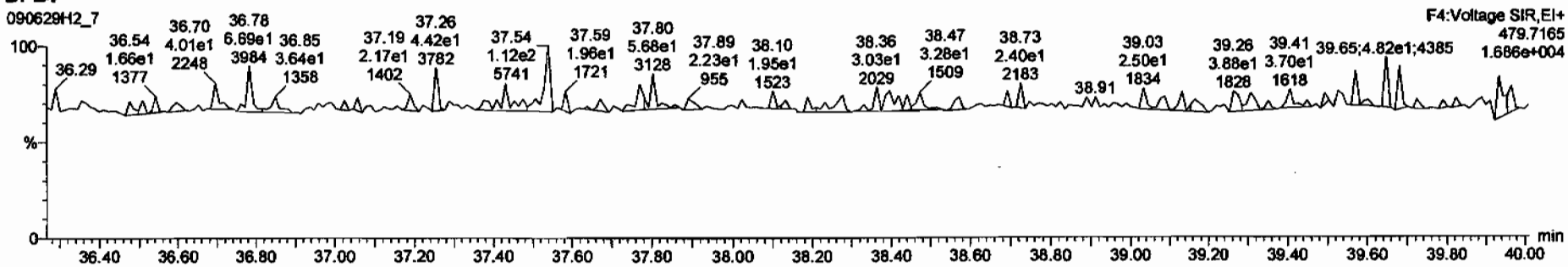

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Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

OCDF

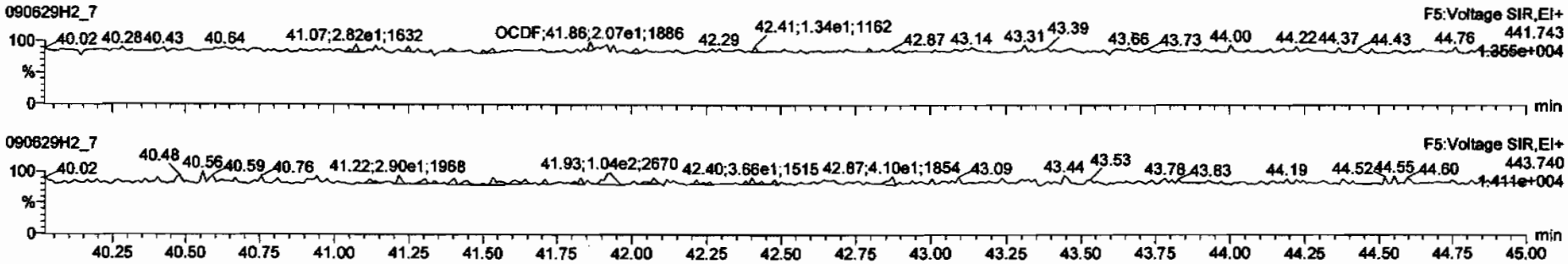

13C-OCDF

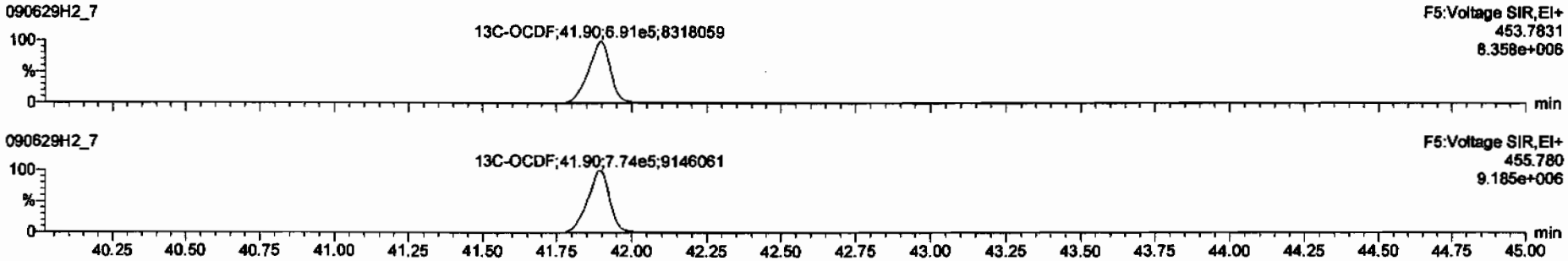

DPE5

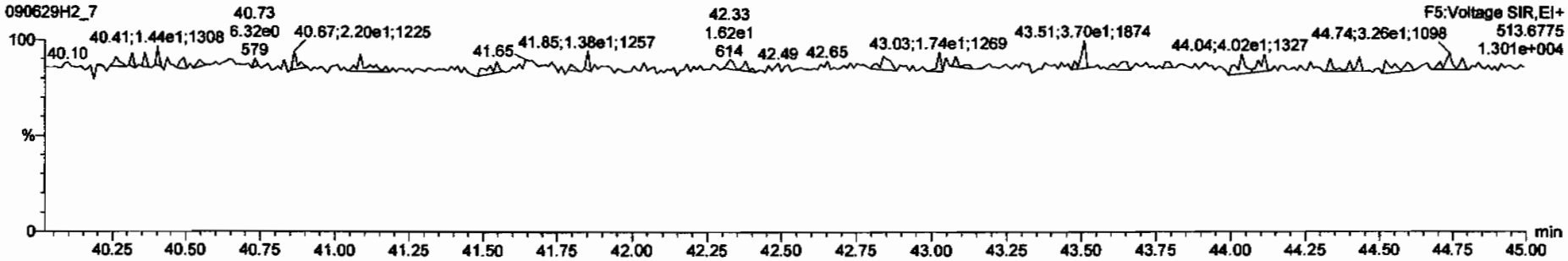

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Last Altered: Tuesday, June 30, 2009 08:12:48 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:09 Pacific Daylight Time

Name: 090629H2_7, Date: 29-Jun-2009, Time: 18:59:49, ID: 31831_2207_003 CAMO-09-10462 10.55, Description: CAMO-09-10462

PFK1

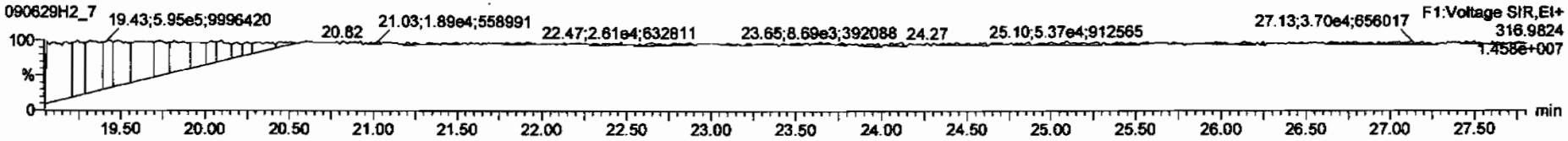

PFK2

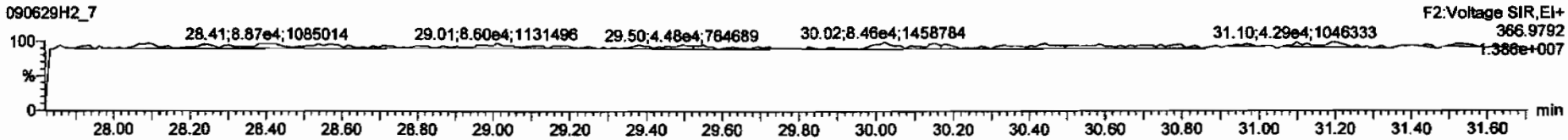

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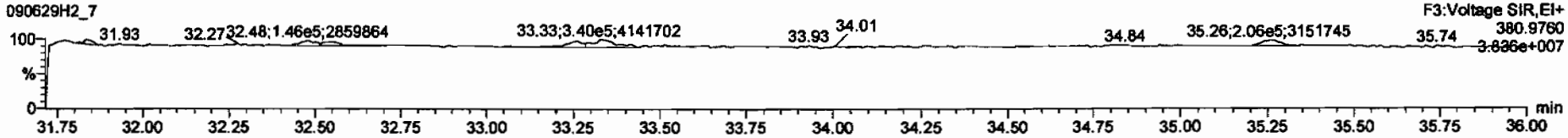

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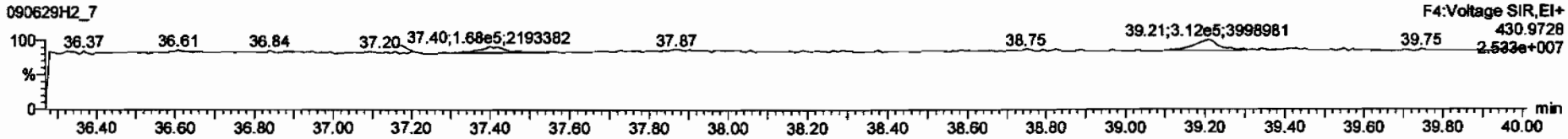

PFK5

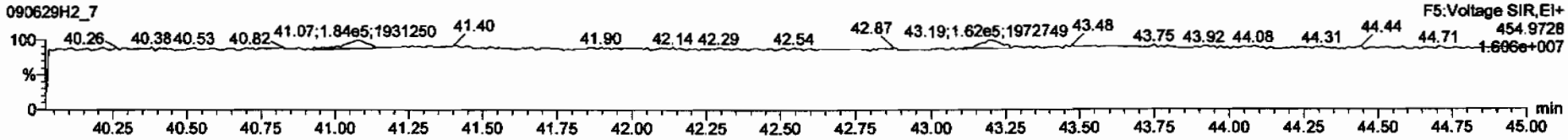

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-8.qld

Last Altered: Tuesday, June 30, 2009 12:56:35 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:57:02 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

1	2,3,7,8-TCDD			NO	1.08	9.948					0.0590	
2	1,2,3,7,8-PeCDD			NO	1.03	9.948					0.0490	
3	1,2,3,4,7,8-HxCDD			NO	1.00	9.948					0.127	
4	1,2,3,6,7,8-HxCDD			NO	1.13	9.948					0.125	
5	1,2,3,7,8,9-HxCDD			NO	1.10	9.948					0.121	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	9.948					0.156	
7	OCDD	1.71e3	0.90	NO	1.18	9.948	41.69	1.000	0.54323		0.123	~~0.54323~~
8	2,3,7,8-TCDF			NO	1.09	9.948					0.0469	
9	1,2,3,7,8-PeCDF			NO	1.16	9.948					0.0414	
10	2,3,4,7,8-PeCDF			NO	1.12	9.948					0.0413	
11	1,2,3,4,7,8-HxCDF			NO	1.41	9.948					0.0461	
12	1,2,3,6,7,8-HxCDF			NO	1.22	9.948					0.0470	
13	2,3,4,6,7,8-HxCDF			NO	1.28	9.948					0.0582	
14	1,2,3,7,8,9-HxCDF			NO	1.26	9.948					0.0753	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	9.948					0.0811	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	9.948					0.0840	
17	OCDF			NO	1.10	9.948					0.0993	
18	13C-2,3,7,8-TCDD	1.09e6	0.80	NO	1.01	9.948	26.11	1.023	188.25	93.6	0.351	
19	13C-1,2,3,7,8-PeCDD	9.04e5	0.63	NO	0.827	9.948	30.75	1.204	191.40	95.2	0.210	
20	13C-1,2,3,4,7,8-HxCDD	7.67e5	1.24	NO	0.916	9.948	34.17	0.988	180.86	90.0	0.507	
21	13C-1,2,3,6,7,8-HxCDD	6.86e5	1.27	NO	0.921	9.948	34.28	0.991	160.98	80.1	0.505	
22	13C-1,2,3,4,6,7,8-HpCDD	7.12e5	1.08	NO	0.708	9.948	38.22	1.105	217.00	108	0.621	
23	13C-OCDD	1.07e6	0.92	NO	0.503	9.948	41.68	1.205	461.58	115	0.640	
24	13C-2,3,7,8-TCDF	1.46e6	0.79	NO	0.977	9.948	25.33	0.992	190.64	94.8	0.176	
25	13C-1,2,3,7,8-PeCDF	1.38e6	1.56	NO	0.896	9.948	29.51	1.156	195.69	97.3	0.426	
26	13C-2,3,4,7,8-PeCDF	1.33e6	1.55	NO	0.900	9.948	30.46	1.193	187.96	93.5	0.424	
27	13C-1,2,3,4,7,8-HxCDF	9.67e5	0.52	NO	1.17	9.948	33.26	0.962	178.59	88.8	0.478	
28	13C-1,2,3,6,7,8-HxCDF	1.11e6	0.52	NO	1.52	9.948	33.38	0.965	158.34	78.8	0.368	
29	13C-2,3,4,6,7,8-HxCDF	9.06e5	0.53	NO	1.25	9.948	34.01	0.983	156.71	77.9	0.447	
30	13C-1,2,3,7,8,9-HxCDF	8.28e5	0.53	NO	1.05	9.948	35.00	1.012	169.91	84.5	0.531	

6/30/09
6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-8.qld

Last Altered: Tuesday, June 30, 2009 12:56:35 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:57:02 PM Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

31	13C-1,2,3,4,6,7,8-HpCDF	6.96e5	0.44	NO	0.868	9.948	36.88	1.066	173.14	86.1	0.582
32	13C-1,2,3,4,7,8,9-HpCDF	6.41e5	0.45	NO	0.727	9.948	38.79	1.121	190.45	94.7	0.695
33	13C-OCDF	1.42e6	0.88	NO	0.760	9.948	41.92	1.212	404.74	101	0.344
34	37Cl-2,3,7,8-TCDD	2.81e5			0.668	9.948	26.12	1.023	73.716	91.7	0.0930
35	13C-1,2,3,4-TCDD	1.15e6	0.81	NO	1.00	9.948	25.53	0.000	201.05	100	0.356
36	13C-1,2,3,4-TCDF	1.58e6	0.78	NO	1.00	9.948	24.10	0.000	201.05	100	0.172
37	13C-1,2,3,7,8,9-HxCDD	9.31e5	1.26	NO	1.00	9.948	34.59	0.000	201.05	100	0.465
38	Total Tetra-Dioxins				1.08	9.948					0.0252
39	Total Penta-Dioxins				1.03	9.948					0.0184
40	Total Hexa-Dioxins				1.13	9.948					0.0745
41	Total Hepta-Dioxins				1.06	9.948					0.0831
42	Total Tetra-Furans				1.09	9.948					0.0170
43	1st Func. Penta-Furans				1.16	9.948					0.0155
44	Total Penta-Furans				1.16	9.948					0.0164
45	Total Hexa-Furans				1.28	9.948					0.0341
46	Total Hepta-Furans				1.69	9.948					0.0444

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-8.qld

Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

2,3,7,8-TCDD

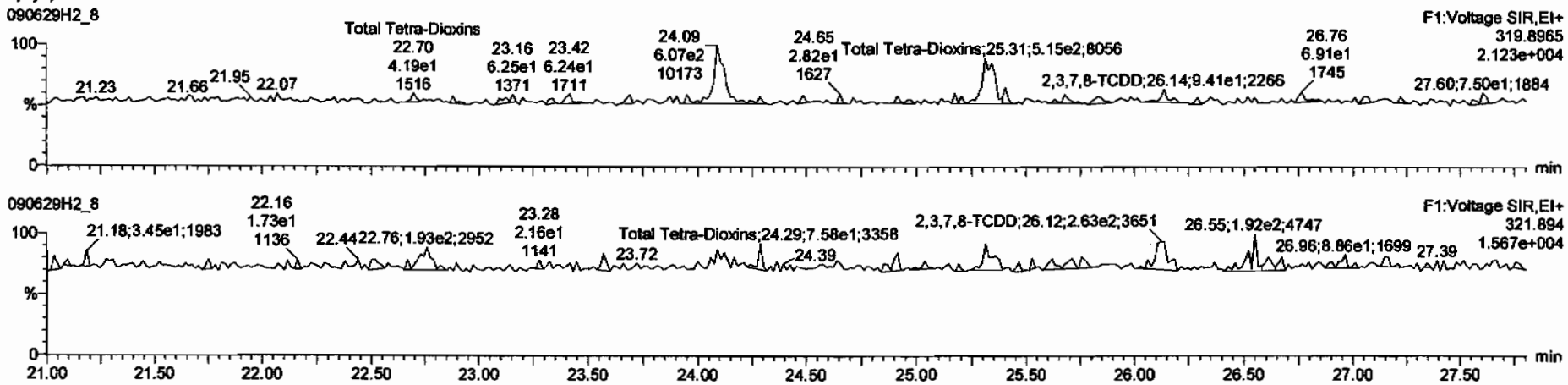

13C-2,3,7,8-TCDD

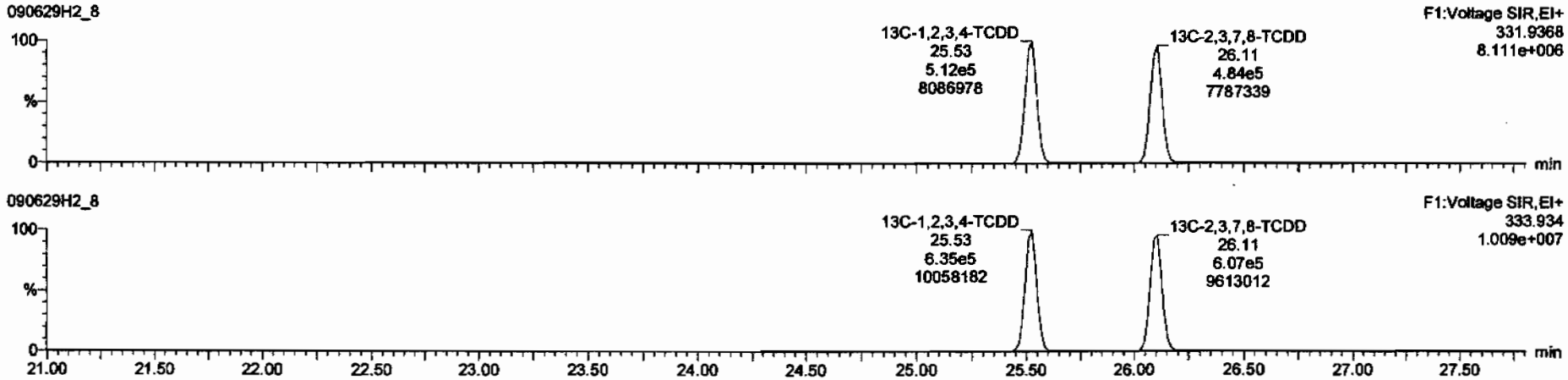

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-8.qld

Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

37Cl-2,3,7,8-TCDD

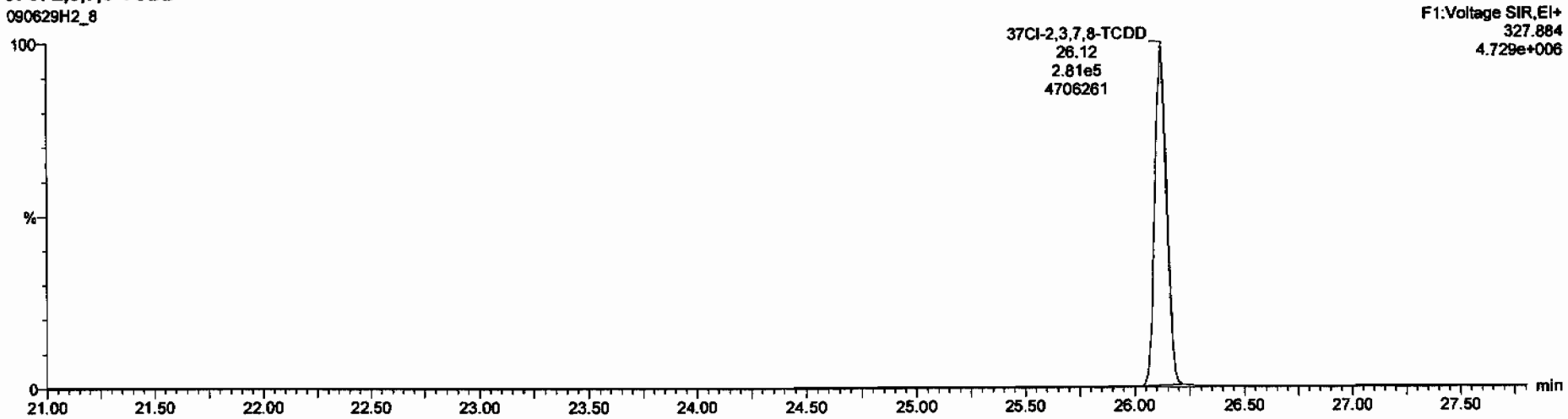

13C-1,2,3,4-TCDD

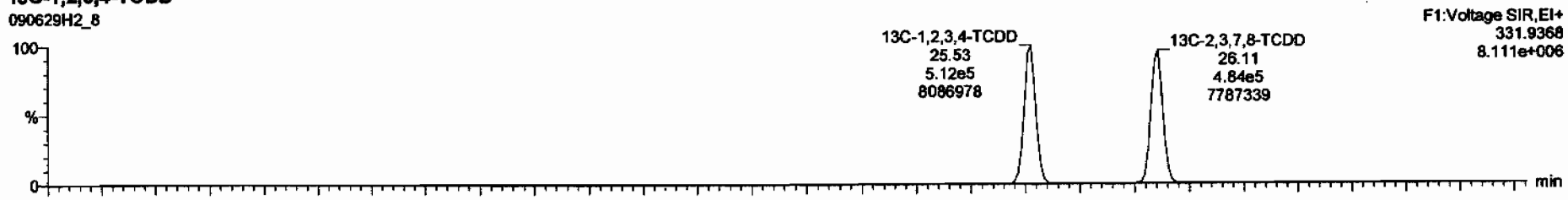

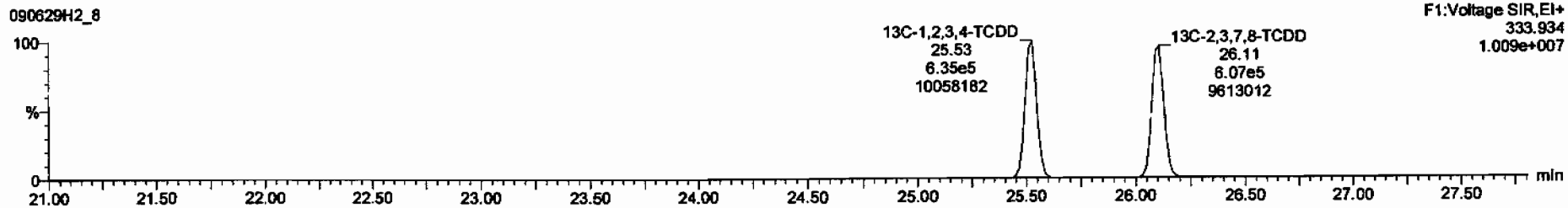

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Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

1,2,3,7,8-PeCDD

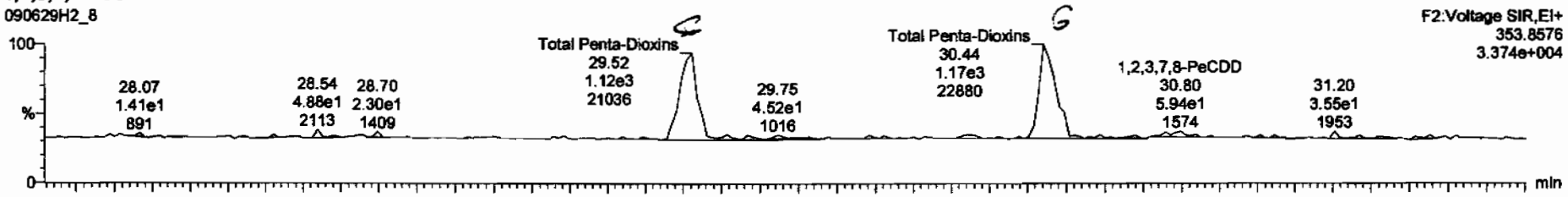

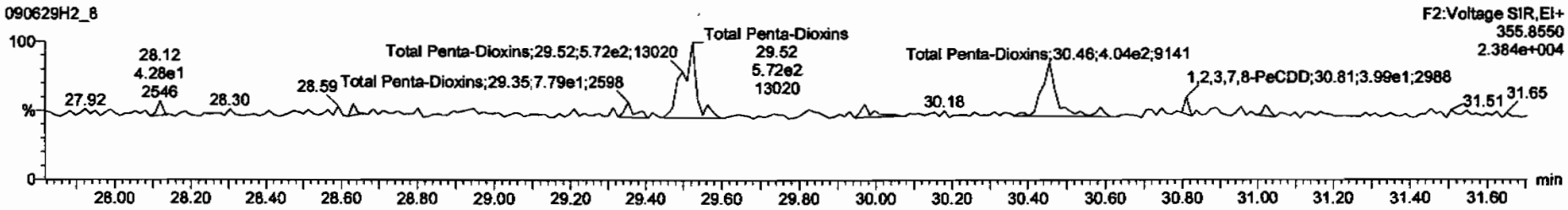

13C-1,2,3,7,8-PeCDD

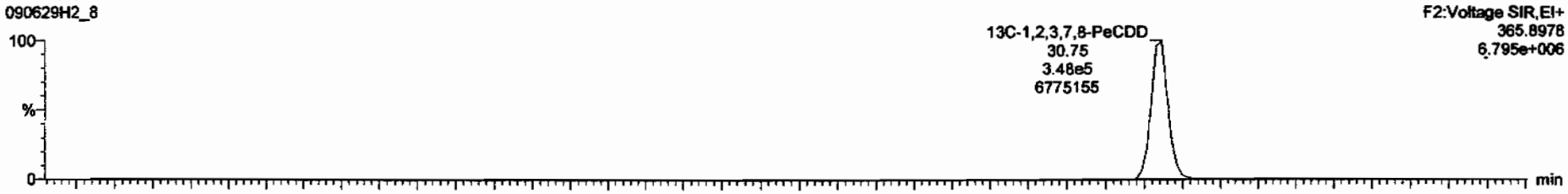

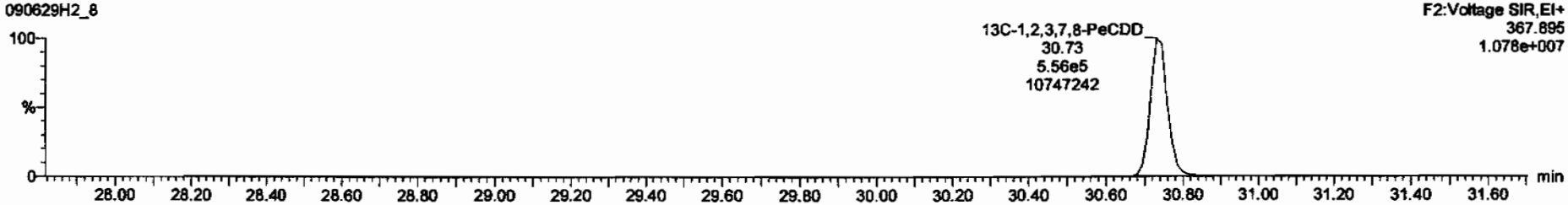

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Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

1,2,3,4,7,8-HxCDD

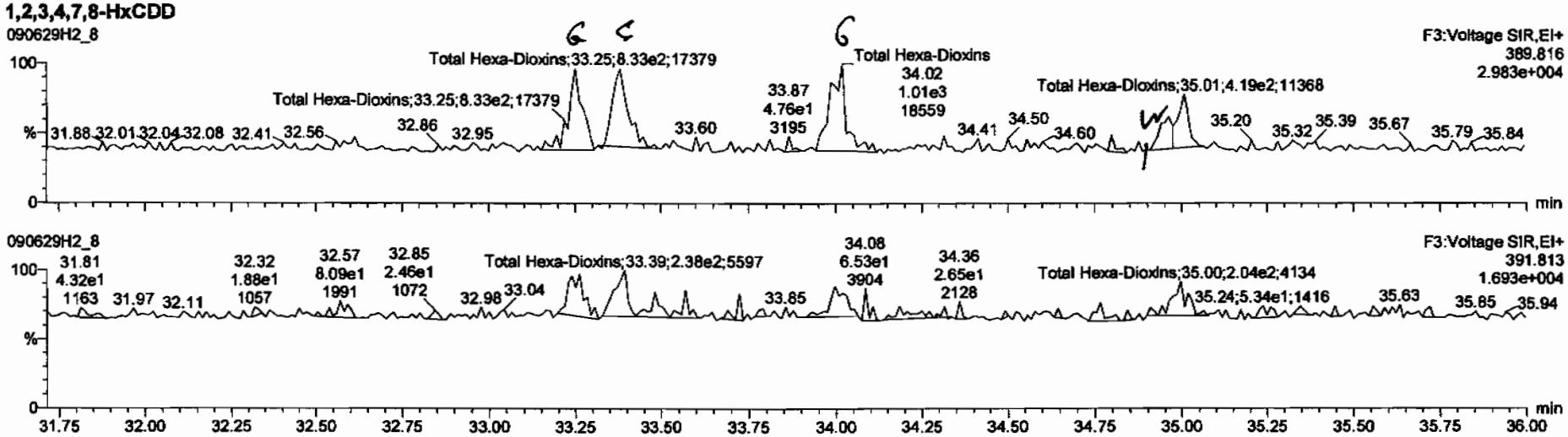

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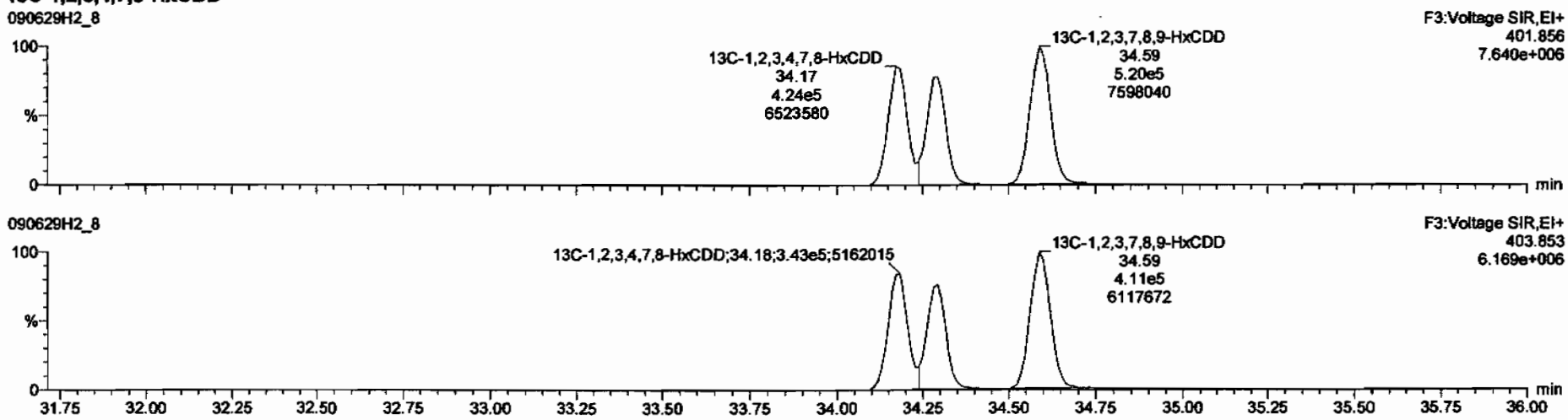

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-8.qld

Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
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Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

1,2,3,4,6,7,8-HpCDD

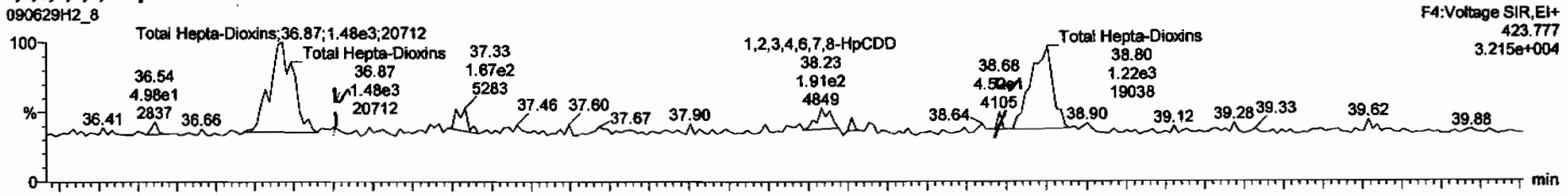

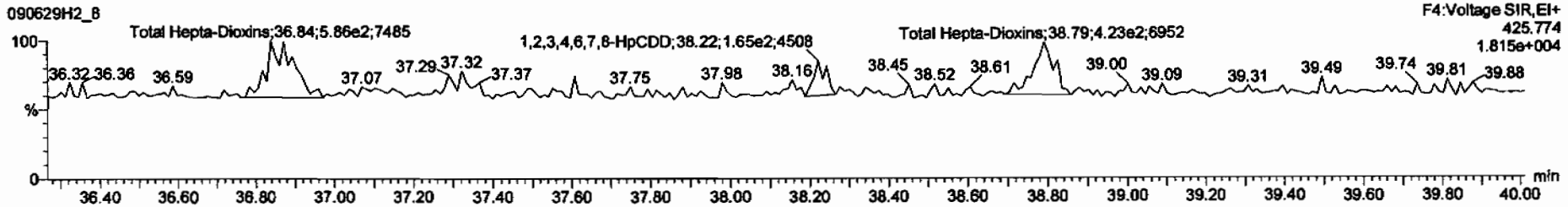

13C-1,2,3,4,6,7,8-HpCDD

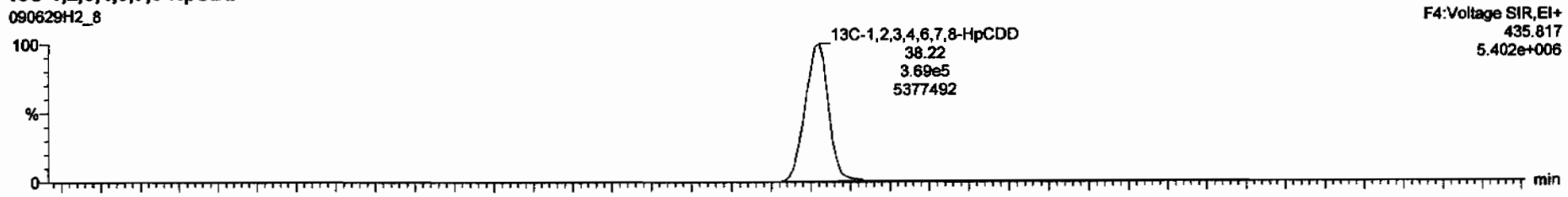

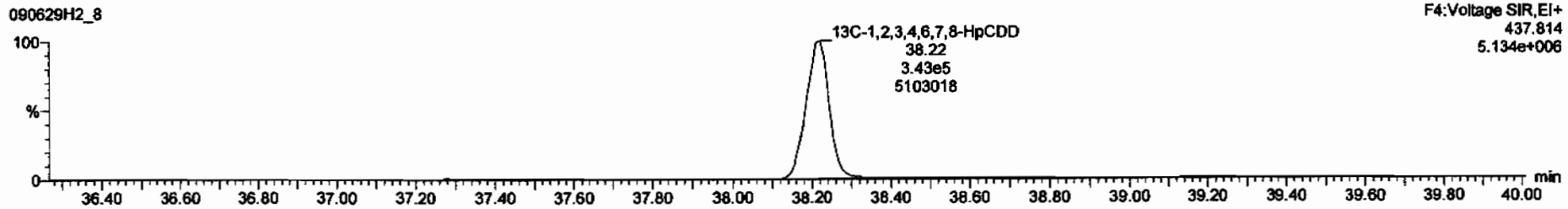

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Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

OCDD

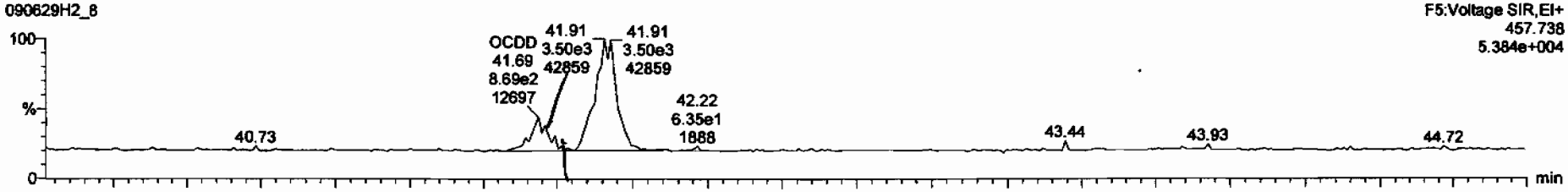

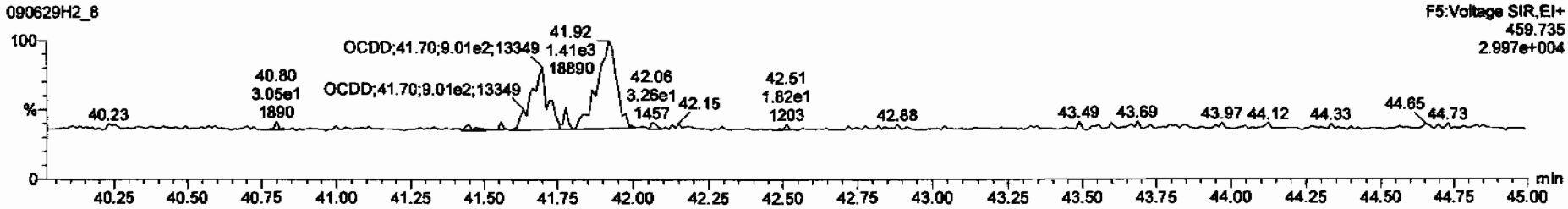

13C-OCDD

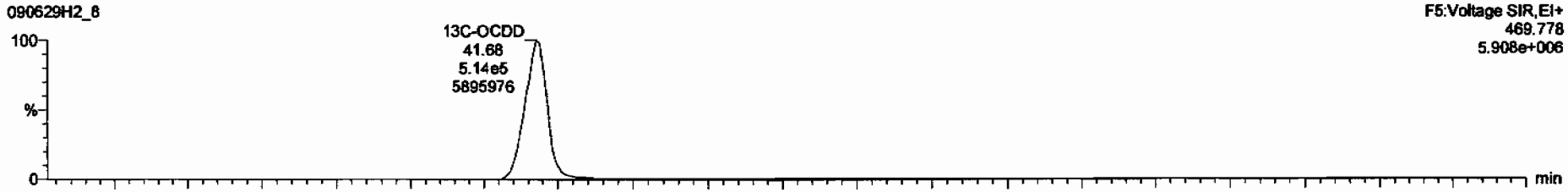

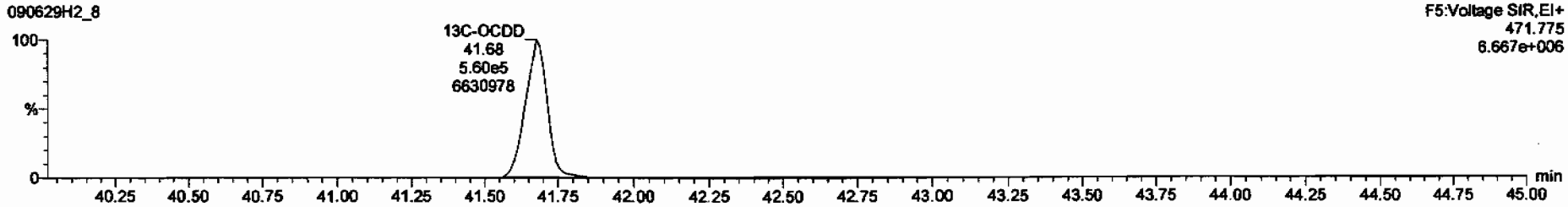

TargetLynx - 090629f2-8.qld * - [Chromatogram]

090629H2_8 - 31831_2207_004 CAMO-09-10467 10.57 - CAMO-09-10467

2,3,7,8-TCDF	1.35e2	2.84	YES	1.09	9.948	25.37	1.002	0.0171		0.0469	0.00789
1,2,3,7,8-PeCDF	1.00e2	3.87	YES	1.16	9.948	29.50	1.000	0.0126		0.0414	0.00660
2,3,4,7,8-PeCDF			NO	1.12	9.948					0.0413	
1,2,3,4,7,8-HxCDF	9.01e1	1.29	NO	1.41	9.948	33.26	1.000	0.0133		0.0461	0.0133

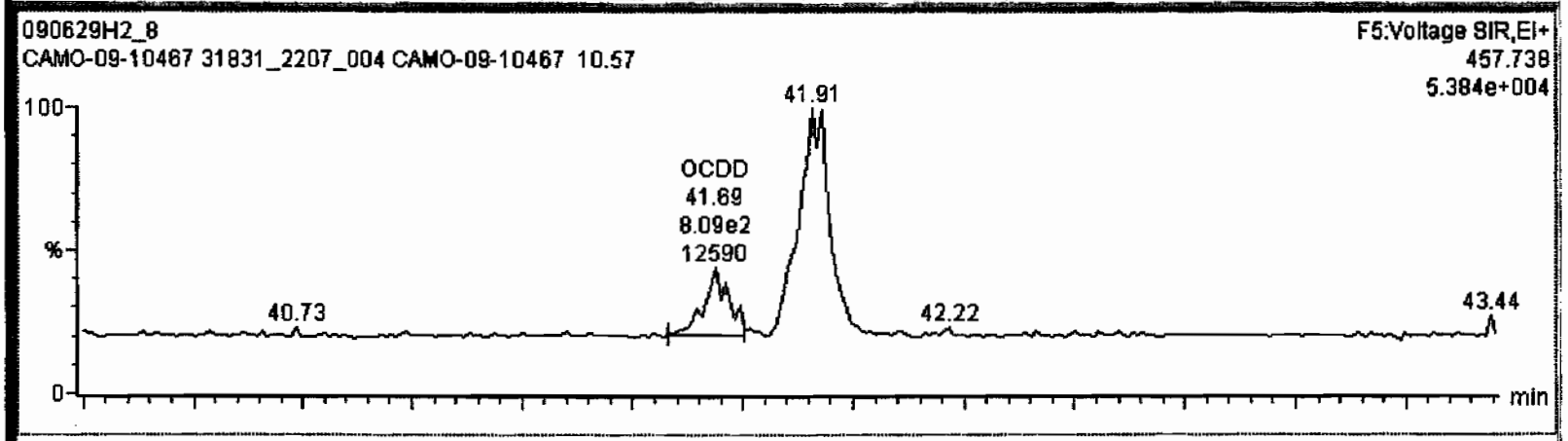

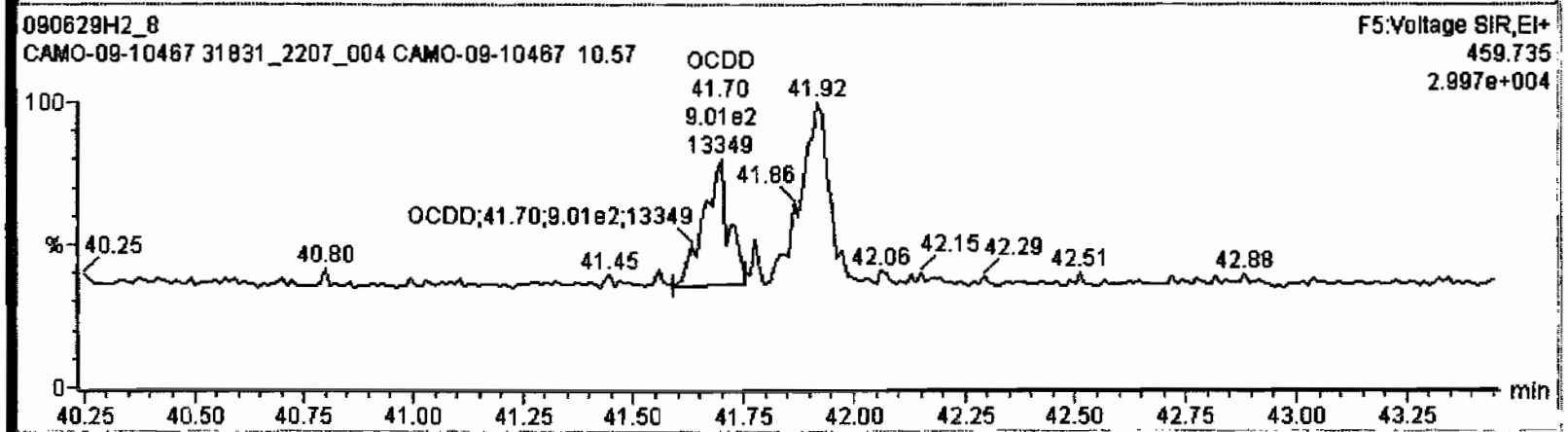

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Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

2,3,7,8-TCDF

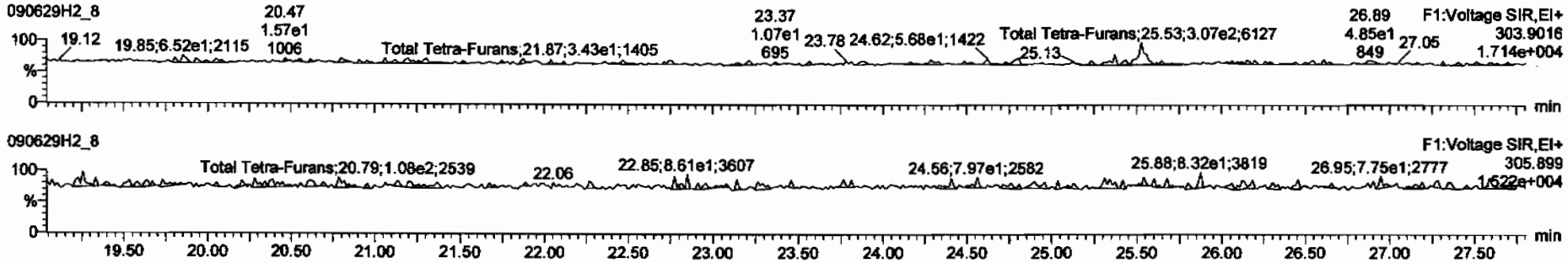

13C-2,3,7,8-TCDF

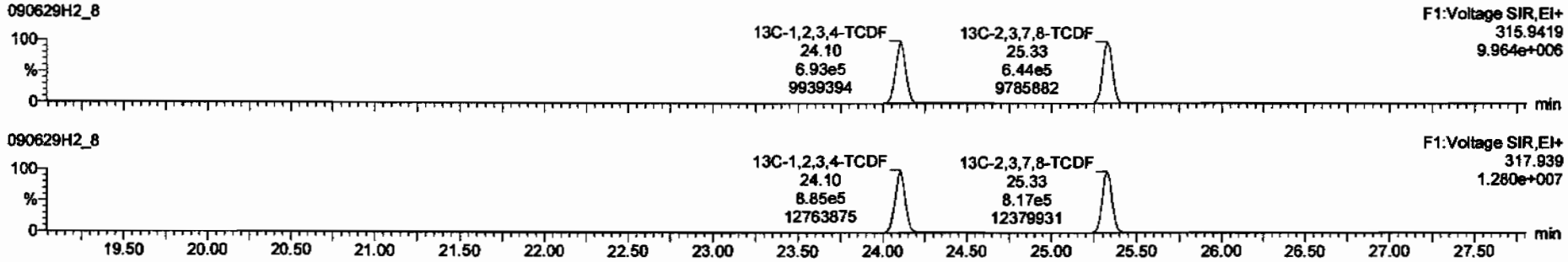

DPE1

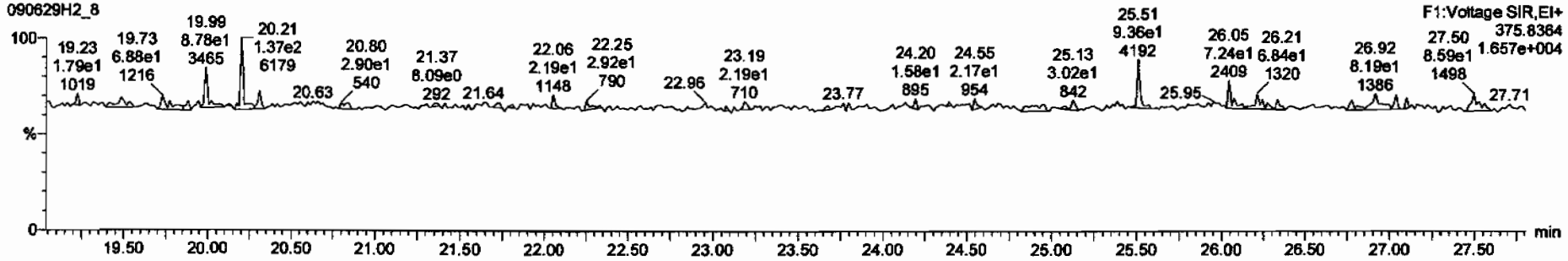

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Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

1st Func. Penta-Furans

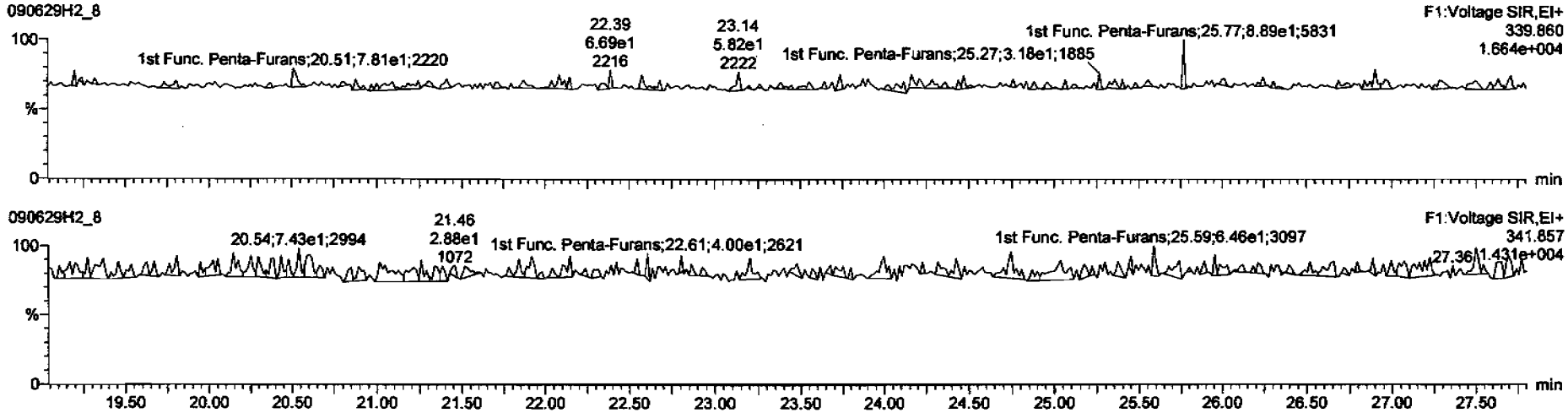

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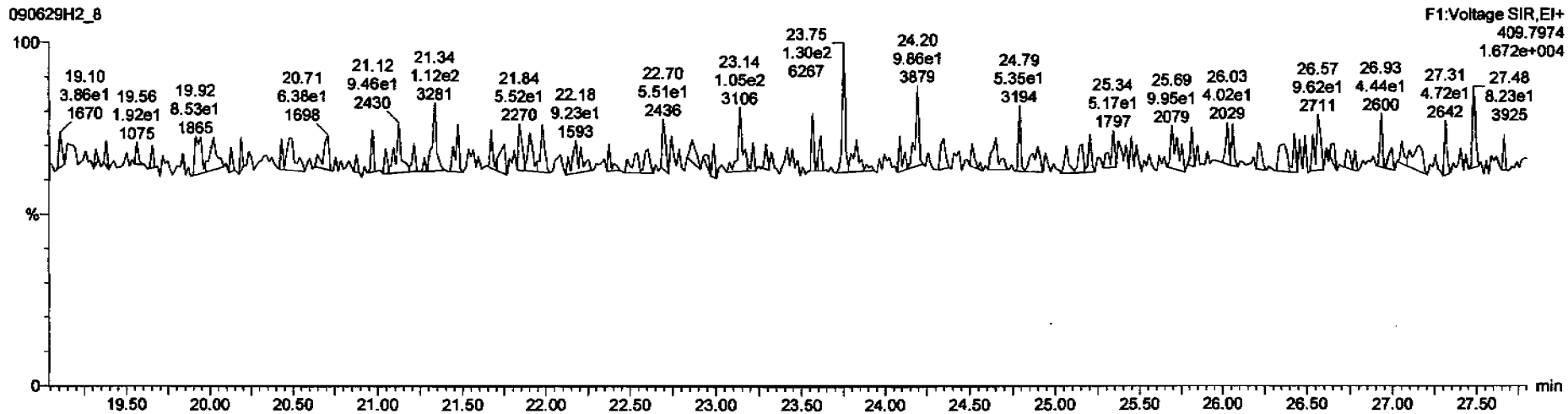

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Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

1,2,3,7,8-PeCDF

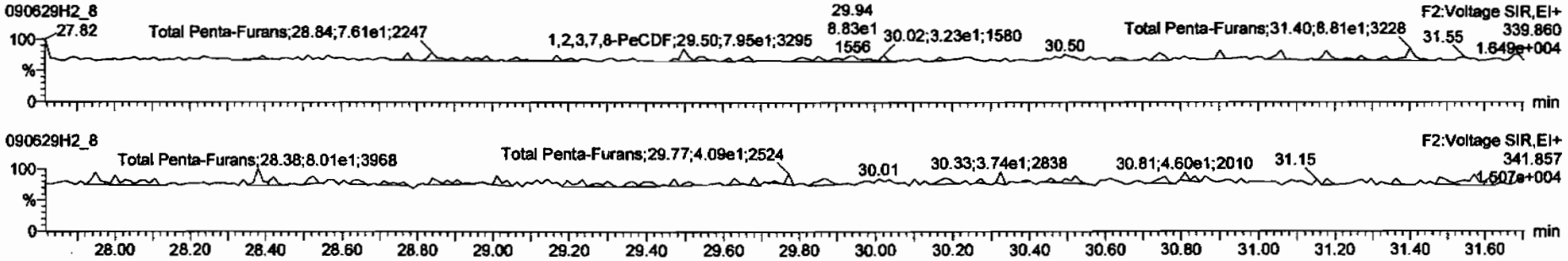

13C-1,2,3,7,8-PeCDF

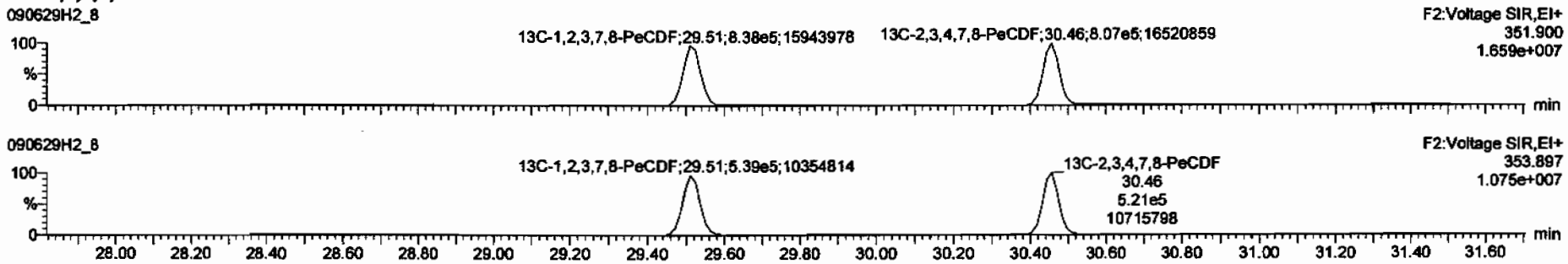

DPE2

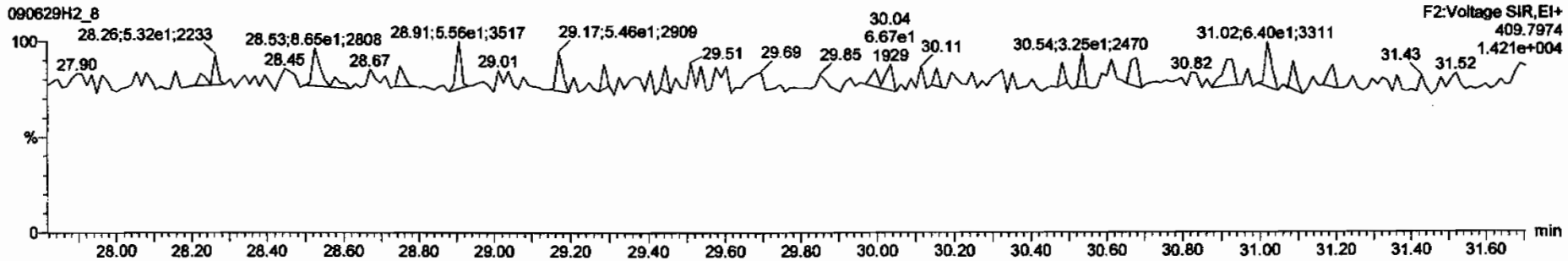

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Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

1,2,3,4,7,8-HxCDF

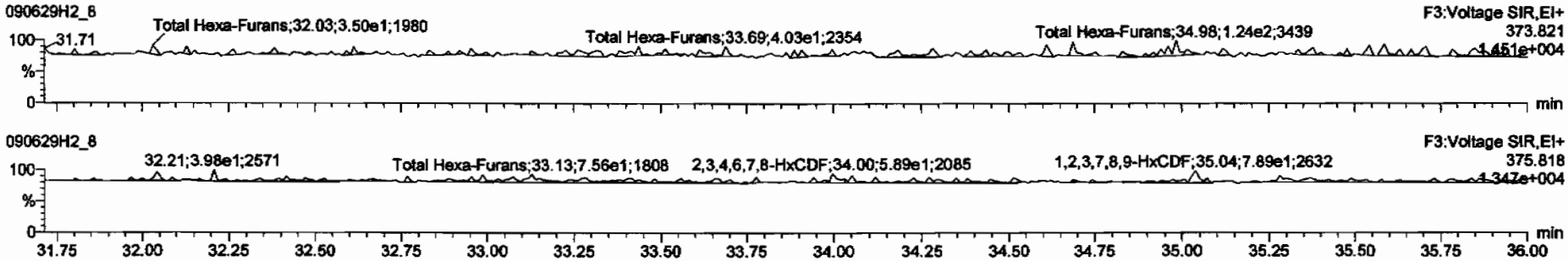

13C-1,2,3,4,7,8-HxCDF

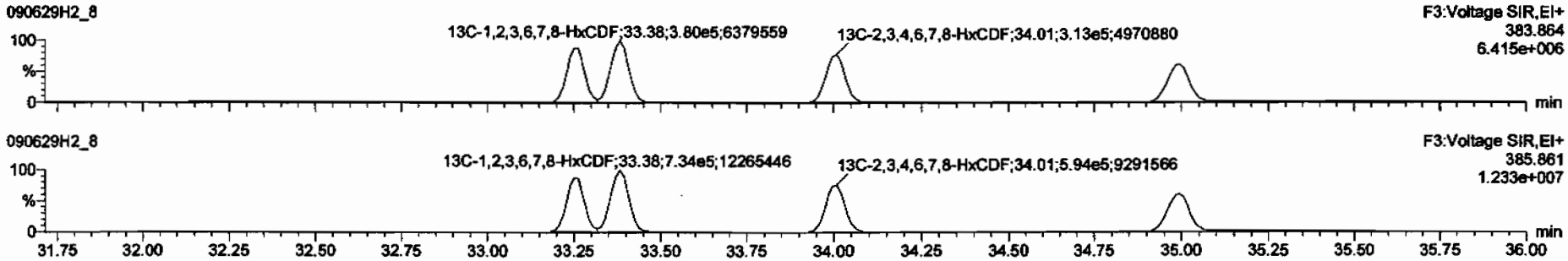

DPE3

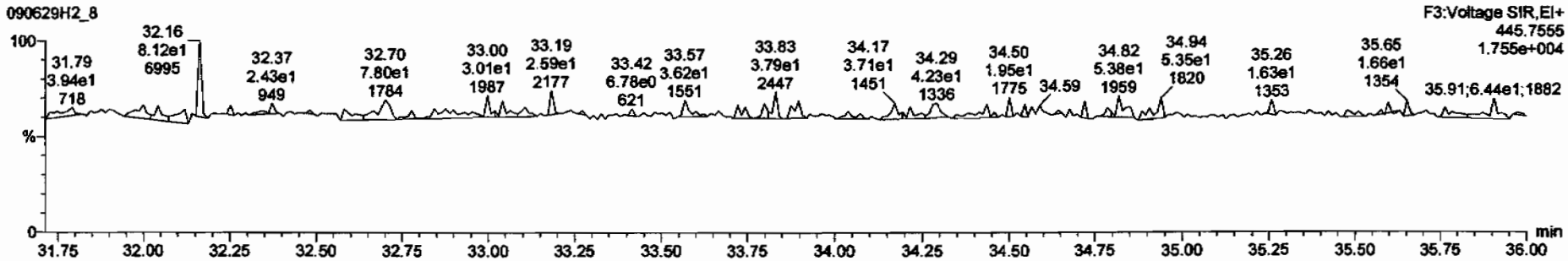

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-8.qld

Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

1,2,3,4,6,7,8-HpCDF

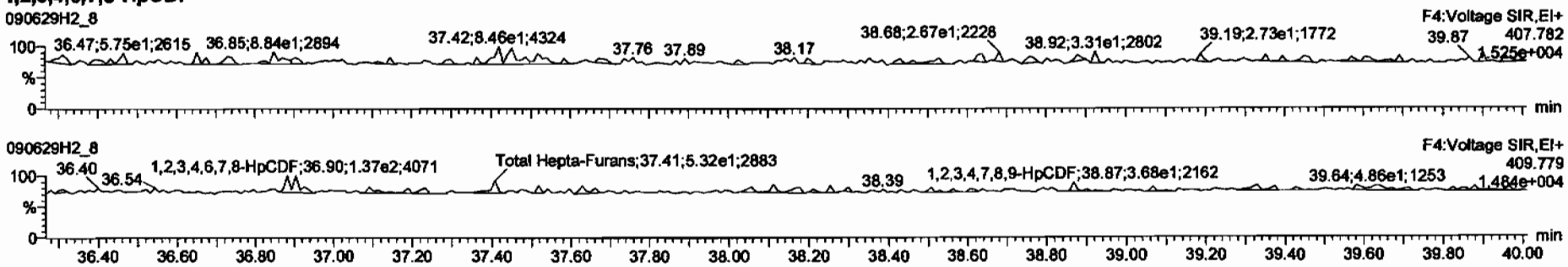

13C-1,2,3,4,6,7,8-HpCDF

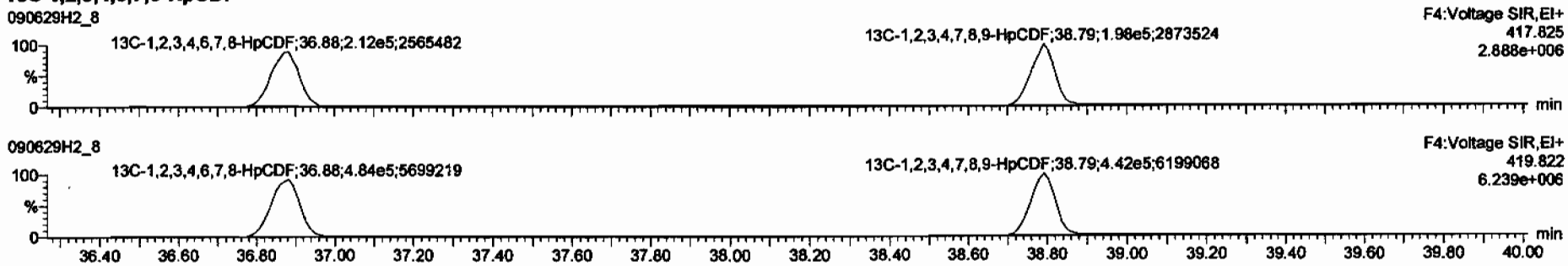

DPE4

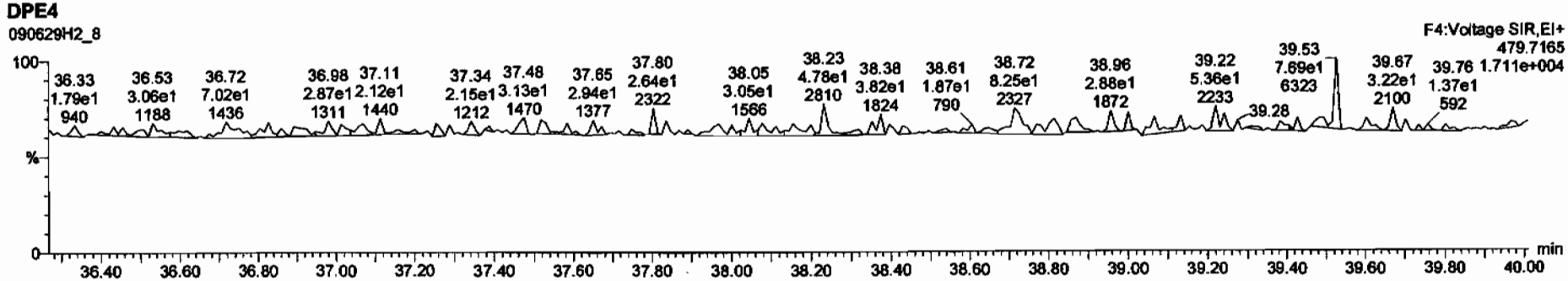

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Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

OCDF

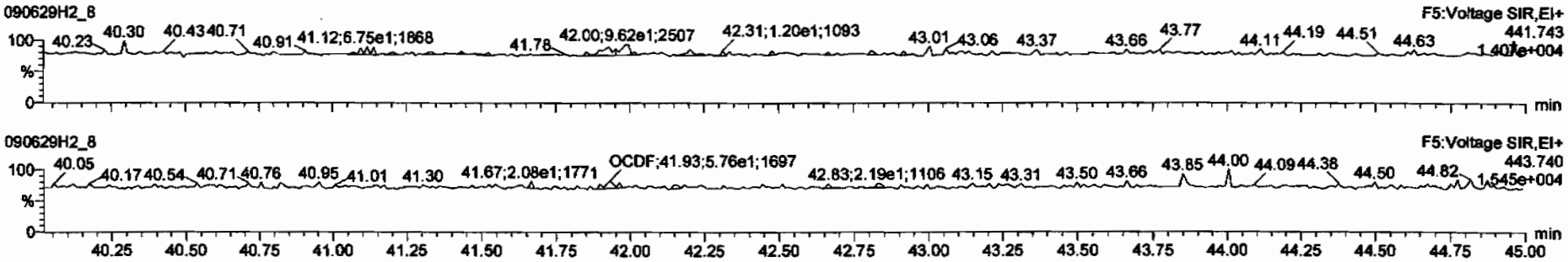

13C-OCDF

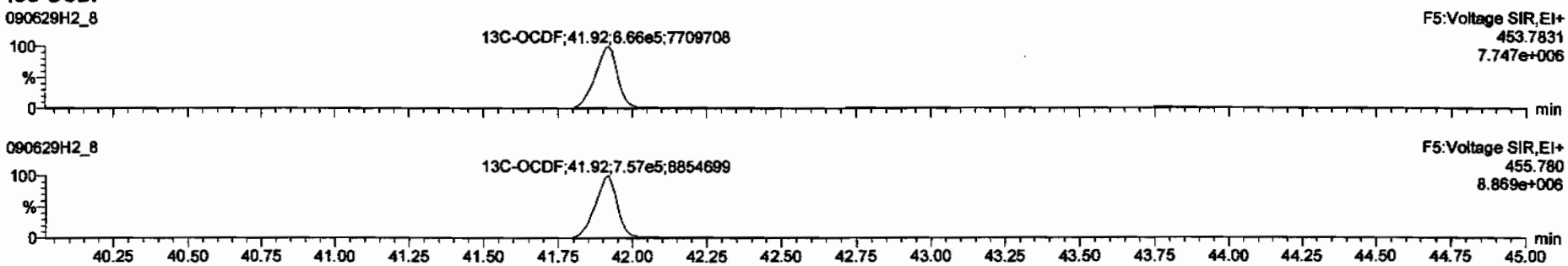

DPE5

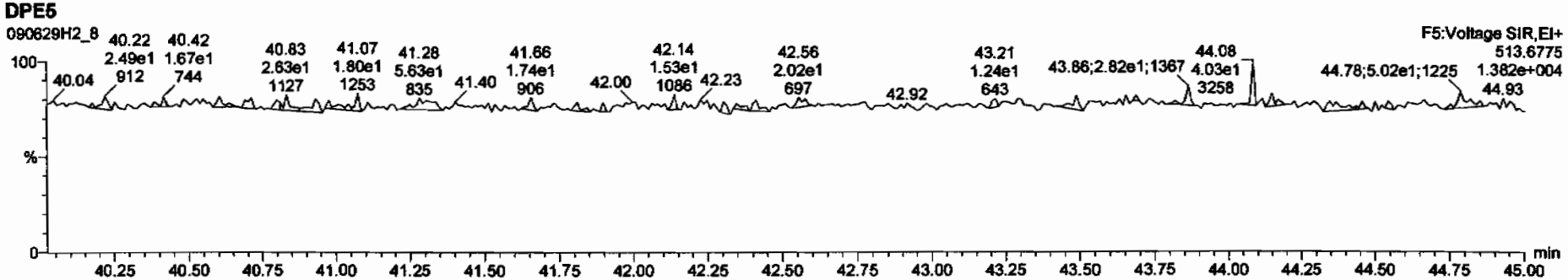

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-8.qld

Last Altered: Tuesday, June 30, 2009 08:13:20 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:13:43 Pacific Daylight Time

Name: 090629H2_8, Date: 29-Jun-2009, Time: 19:49:21, ID: 31831_2207_004 CAMO-09-10467 10.57, Description: CAMO-09-10467

PFK1

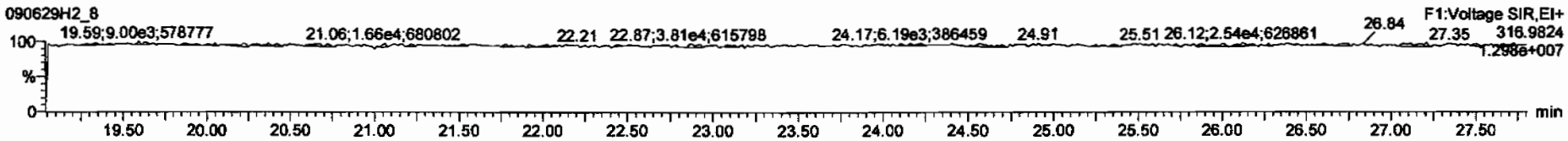

PFK2

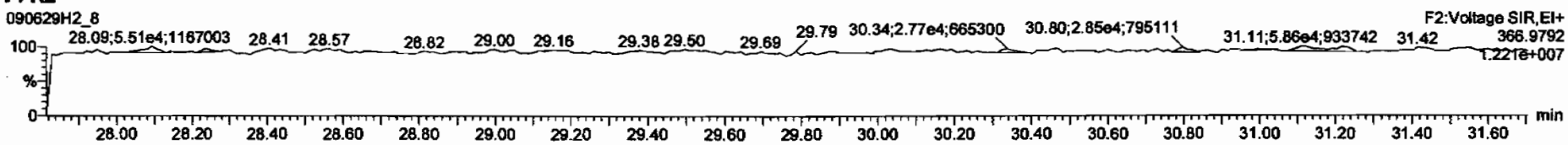

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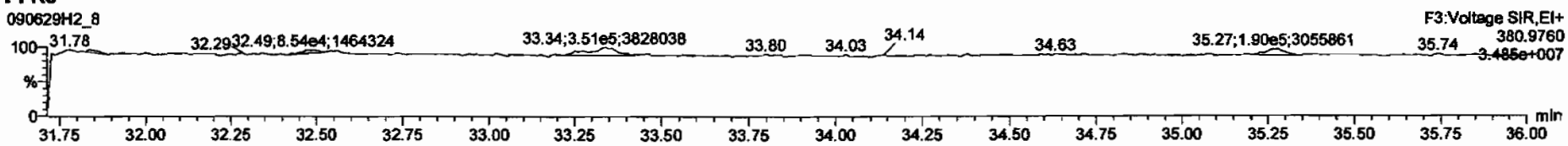

PFK4

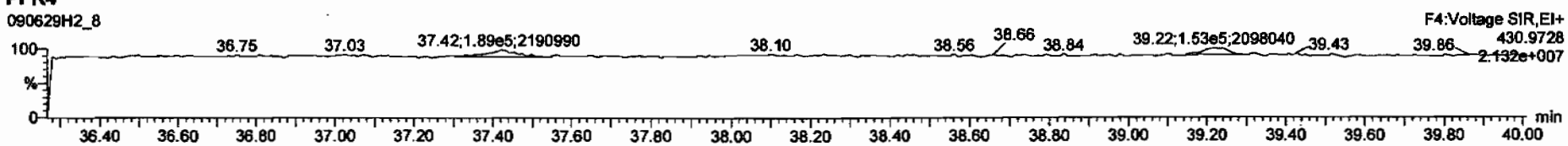

PFK5

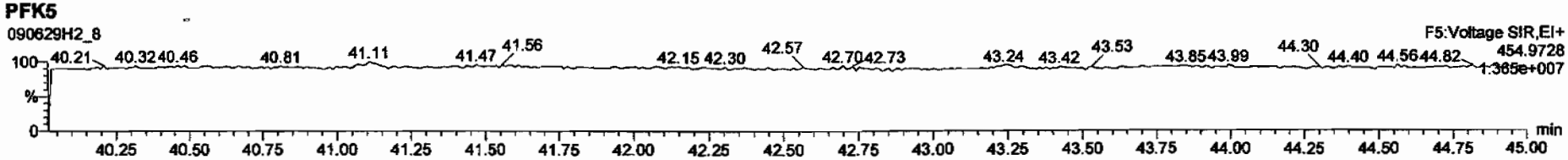

CALIBRATION DATA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1

GC Column ID: DB-5
Analysis Date: 29-Jun-09 Analysis Time: 14:01:48

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	NO	9.71	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	46.2	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	NO	46.2	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	NO	44.8	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	46.5	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	46.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.89	0.76-1.02	NO	88.2	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.74	0.65-0.89	NO	8.51	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	42.8	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	42.3	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.6	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	45.2	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	NO	44.6	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	45.5	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	46.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	87.4	63.0	159.0	Yes	80.0	120.0	Yes

8290 only

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/25/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1

GC Column ID: DB-5
Analysis Date: 29-Jun-09 Analysis Time: 14:01:48

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	100	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	97.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	111	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	257	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	108	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	103	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	NO	102	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	98.9	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	92.1	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	92.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	96.1	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	NO	99.7	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	103	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	224	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					10.0	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

8290 only

Analyst: [signature]
Date: 6/29/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, June 29, 2009 14:58:46 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:59:04 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.73
2	1,2,8,9-TCDD (Last)	26.98
3	1,2,4,7,9-PeCDD (First)	28.62
4	1,2,3,8,9-PeCDD (Last)	31.13
5	12,4,6,7,9-HxCDD (First)	32.59
6	1,2,3,7,8,9-HxCDD (Last)	34.60
7	1,2,3,4,6,7,9-HpCDD (First)	37.30
8	1,2,3,4,6,7,8-HpCDD (Last)	38.22
9	1,3,6,8-TCDF (First)	20.65
10	1,2,8,9-TCDF (Last)	27.15
11	1,3,4,6,8-PeCDF (First)	27.07
12	1,2,3,8,9-PeCDF (Last)	31.39
13	1,2,3,4,6,8-HxCDF (First)	32.03
14	1,2,3,4,8,9-HxCDF (Last)	35.00
15	1,2,3,4,6,7,8-HpCDF (First)	36.89
16	1,2,3,4,7,8,9-HpCDF (Last)	38.79

6/29/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1
GC Column ID: DB-5
Analysis Date: 29-Jun-09
Analysis Time: 14:01:48

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.024	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]
Date: 6/29/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1

GC Column ID: DB-5
Analysis Date: 29-Jun-09

Analysis Time: 14:01:48

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.121	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.211	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 6/29/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:22 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.17e4	0.81	NO	1.08	1.000	26.12	1.001	9.7118	97.1	0.0460	9.7118
2	1,2,3,7,8-PeCDD	2.60e5	0.61	NO	1.03	1.000	30.76	1.001	46.227	92.5	0.121	46.227
3	1,2,3,4,7,8-HxCDD	2.30e5	1.29	NO	1.00	1.000	34.19	1.001	46.188	92.4	0.161	46.188
4	1,2,3,6,7,8-HxCDD	2.39e5	1.22	NO	1.13	1.000	34.30	1.001	44.764	89.5	0.165	44.764
5	1,2,3,7,8,9-HxCDD	2.49e5	1.23	NO	1.10	1.000	34.60	1.009	46.510	93.0	0.158	46.510
6	1,2,3,4,6,7,8-HpCDD	2.03e5	1.05	NO	1.06	1.000	38.22	1.000	46.004	92.0	0.227	46.004
7	OCDD	3.54e5	0.89	NO	1.18	1.000	41.69	1.000	88.157	88.2	0.122	88.157
8	2,3,7,8-TCDF	9.14e4	0.74	NO	1.09	1.000	25.34	1.001	8.5130	85.1	0.0431	8.5130
9	1,2,3,7,8-PeCDF	4.26e5	1.60	NO	1.16	1.000	29.52	1.000	42.829	85.7	0.0905	42.829
10	2,3,4,7,8-PeCDF	4.04e5	1.56	NO	1.12	1.000	30.47	1.000	42.300	84.6	0.0888	42.300
11	1,2,3,4,7,8-HxCDF	3.75e5	1.27	NO	1.41	1.000	33.26	1.000	43.569	87.1	0.132	43.569
12	1,2,3,6,7,8-HxCDF	4.08e5	1.29	NO	1.22	1.000	33.39	1.000	45.197	90.4	0.132	45.197
13	2,3,4,6,7,8-HxCDF	3.49e5	1.24	NO	1.28	1.000	34.02	1.001	44.630	89.3	0.156	44.630
14	1,2,3,7,8,9-HxCDF	3.01e5	1.27	NO	1.26	1.000	35.00	1.000	44.852	89.7	0.212	44.852
15	1,2,3,4,6,7,8-HpCDF	3.51e5	1.04	NO	1.69	1.000	36.89	1.001	45.504	91.0	0.164	45.504
16	1,2,3,4,7,8,9-HpCDF	2.71e5	1.06	NO	1.48	1.000	38.79	1.000	46.451	92.9	0.194	46.451
17	OCDF	4.29e5	0.91	NO	1.10	1.000	41.92	1.001	87.361	87.4	0.166	87.361
18	13C-2,3,7,8-TCDD	6.85e5	0.79	NO	1.01	1.000	26.09	1.023	102.81	103	0.182	
19	13C-1,2,3,7,8-PeCDD	5.45e5	0.64	NO	0.827	1.000	30.73	1.205	100.32	100	0.177	
20	13C-1,2,3,4,7,8-HxCDD	4.98e5	1.24	NO	0.916	1.000	34.17	0.988	103.08	103	0.348	
21	13C-1,2,3,6,7,8-HxCDD	4.75e5	1.24	NO	0.921	1.000	34.28	0.991	97.757	97.8	0.346	
22	13C-1,2,3,4,6,7,8-HpCDD	4.14e5	1.07	NO	0.708	1.000	38.21	1.105	110.81	111	0.366	
23	13C-OCDD	6.81e5	0.89	NO	0.503	1.000	41.68	1.205	256.92	128	0.308	
24	13C-2,3,7,8-TCDF	9.87e5	0.78	NO	0.977	1.000	25.31	0.992	108.47	108	0.129	
25	13C-1,2,3,7,8-PeCDF	8.58e5	1.56	NO	0.896	1.000	29.51	1.157	102.85	103	0.256	
26	13C-2,3,4,7,8-PeCDF	8.53e5	1.55	NO	0.900	1.000	30.46	1.194	101.87	102	0.255	
27	13C-1,2,3,4,7,8-HxCDF	6.10e5	0.53	NO	1.17	1.000	33.25	0.961	98.948	98.9	0.314	
28	13C-1,2,3,6,7,8-HxCDF	7.38e5	0.53	NO	1.52	1.000	33.38	0.965	92.136	92.1	0.242	
29	13C-2,3,4,6,7,8-HxCDF	6.12e5	0.52	NO	1.25	1.000	34.00	0.983	92.862	92.9	0.294	
30	13C-1,2,3,7,8,9-HxCDF	5.34e5	0.51	NO	1.05	1.000	34.98	1.011	96.148	96.1	0.348	

6/29/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:22 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	4.56e5	0.45	NO	0.868	1.000	36.87	1.066	99.653	99.7	0.432
32	13C-1,2,3,4,7,8,9-HpCDF	3.93e5	0.45	NO	0.727	1.000	38.79	1.121	102.70	103	0.516
33	13C-OCDF	8.97e5	0.88	NO	0.760	1.000	41.90	1.211	223.90	112	0.228
34	37Cl-2,3,7,8-TCDD	4.39e4			0.668	1.000	26.12	1.024	9.9972	100	0.0673
35	13C-1,2,3,4-TCDD	6.56e5	0.78	NO	1.00	1.000	25.51	0.000	100.00	100	0.184
36	13C-1,2,3,4-TCDF	9.31e5	0.78	NO	1.00	1.000	24.09	0.000	100.00	100	0.126
37	13C-1,2,3,7,8,9-HxCDD	5.27e5	1.24	NO	1.00	1.000	34.59	0.000	100.00	100	0.319

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 8:02:11 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:02:26 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

090629H2_1	ST090629H2-1 1613 CS3 080917I		29-Jun-09	14:01:48
090629H2_2	0_2207_OPR001		29-Jun-09	14:52:10
090629H2_3	solvent blank		29-Jun-09	15:41:42
090629H2_4	0_2207_MB001		29-Jun-09	16:31:15
090629H2_5	31831_2207_001 CAMO-09-10460	10.45	29-Jun-09	17:20:45
090629H2_6	31831_2207_002 CAMO-09-10461	11.42	29-Jun-09	18:10:16
090629H2_7	31831_2207_003 CAMO-09-10462	10.55	29-Jun-09	18:59:49
090629H2_8	31831_2207_004 CAMO-09-10467	10.57	29-Jun-09	19:49:21
090629H2_9	31832_2207_001 CAMO-09-10480	11.15	29-Jun-09	20:38:54
090629H2_10	31833_2207_001 CAMO-09-6005	12.18	29-Jun-09	21:28:25
090629H2_11	31833_2207_002 CAMO-09-6047	12.12	29-Jun-09	22:17:56
090629H2_12	31837_2207_001 CAMO-09-6006	11.31	29-Jun-09	23:07:29
090629H2_13	31837_2207_002 CAMO-09-6007	10.42	29-Jun-09	23:56:59
090629H2_14	31837_2207_003 CAMO-09-6008	13.14	30-Jun-09	00:46:29
090629H2_15	31837_2207_004 CAMO-09-6009	12.25	30-Jun-09	01:36:02
090629H2_16	solvent blank		30-Jun-09	02:25:34
090629H2_17	ST090629H2-2 1613 CS3 080917I		30-Jun-09	03:15:05

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090629H2-1 End Calibration ID: ST090629H2-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range? (A)	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits		NA
-S/N > 2.5:1		✓
-CS1 within 12-hour clock		✓

Comments: (A) 8290 only J 6/30/09

Reviewed by: DMS 6/30/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 rmh

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, June 29, 2009 13:58:42 Pacific Daylight Time

M 292.9824 R 12499

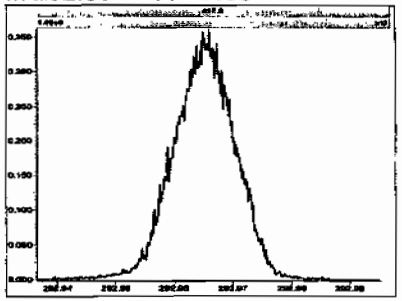

M 304.9824 R 12687

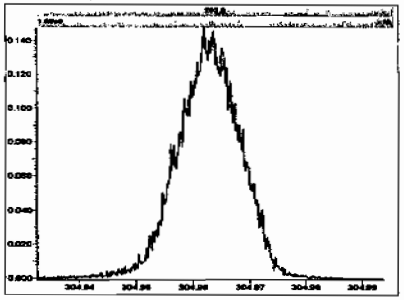

M 318.9792 R 12628

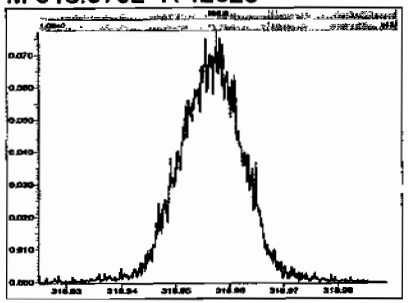

M 330.9792 R 11904

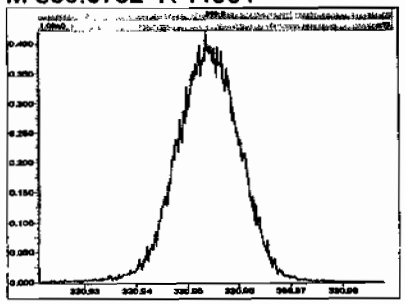

M 342.9792 R 11734

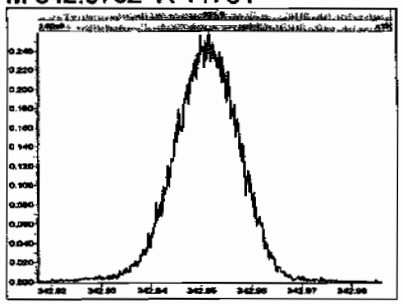

M 354.9792 R 11416

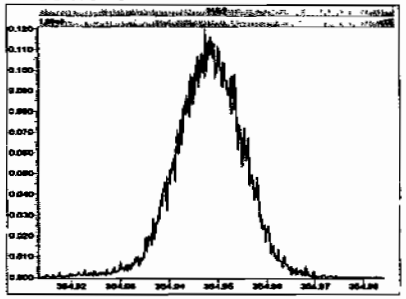

M 366.9792 R 11573

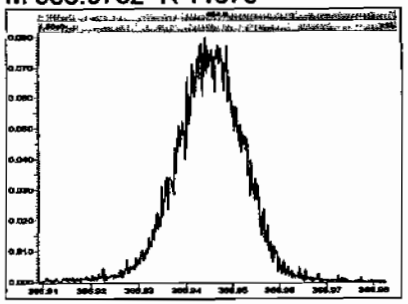

M 380.9760 R 11064

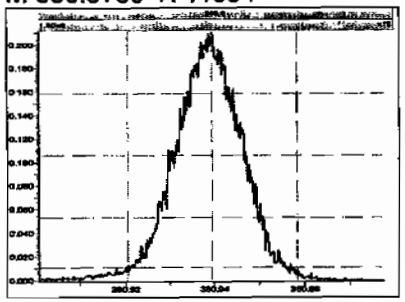

M 392.9760 R 11468

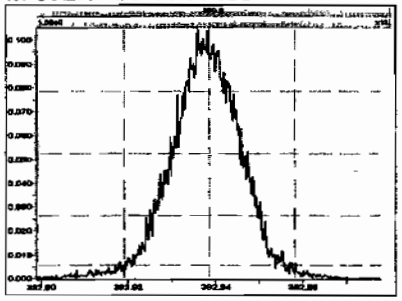

M 404.9760 R 10964

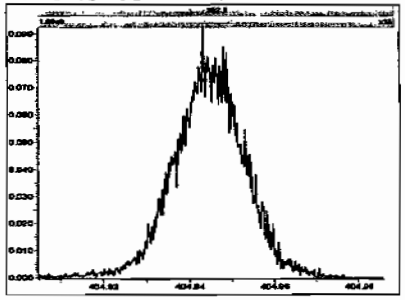

M 416.9760 R 10681

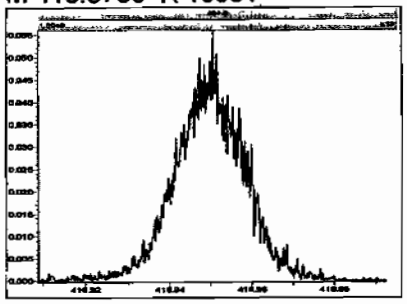

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, June 29, 2009 13:59:22 Pacific Daylight Time

M 330.9792 R 12376

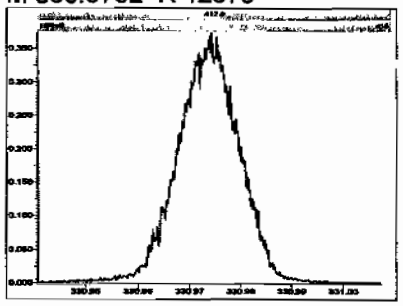

M 342.9792 R 12624

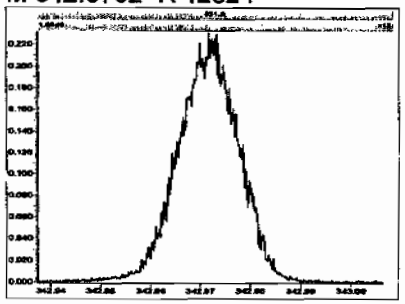

M 354.9792 R 12137

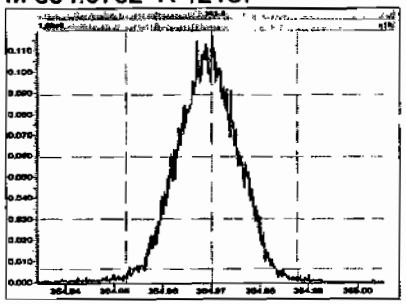

M 366.9792 R 11848

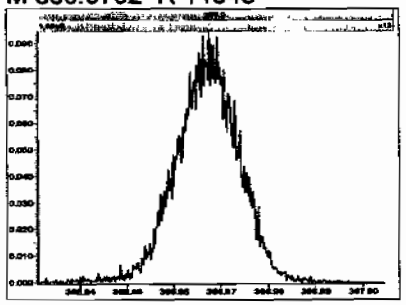

M 380.9760 R 12075

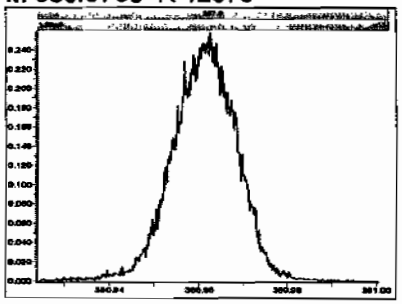

M 392.9760 R 11570

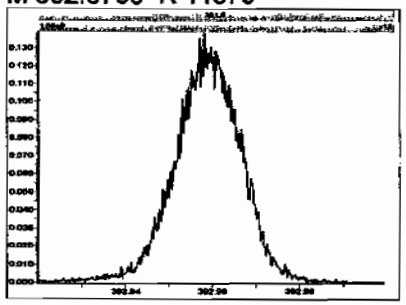

M 404.9760 R 11736

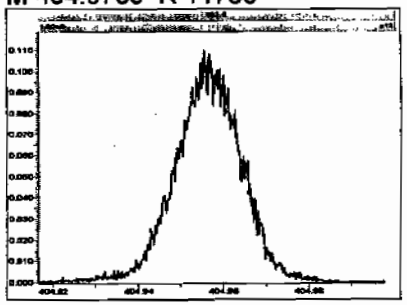

M 416.9760 R 11850

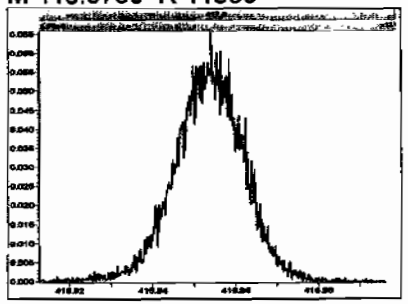

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, June 29, 2009 14:00:04 Pacific Daylight Time

M 366.9792 R 12500

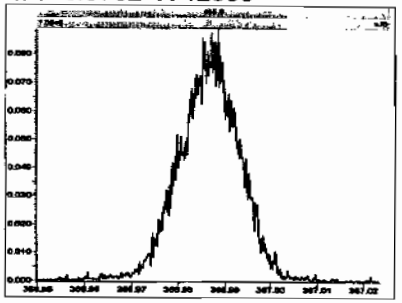

M 380.9760 R 12134

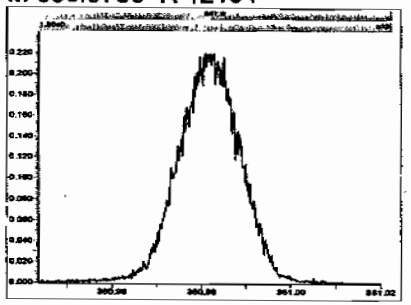

M 392.9760 R 12079

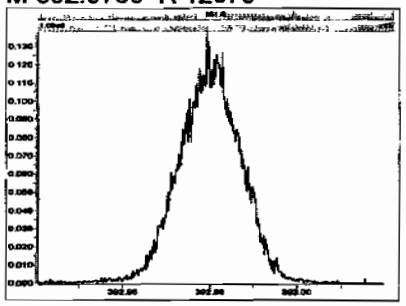

M 404.9760 R 12136

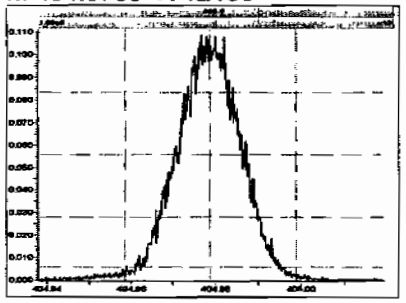

M 416.9760 R 12379

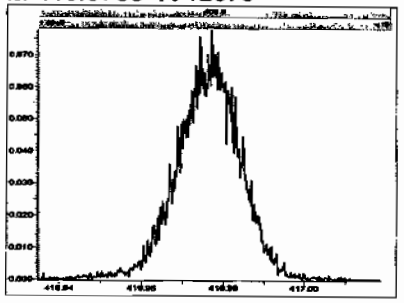

M 430.9728 R 11789

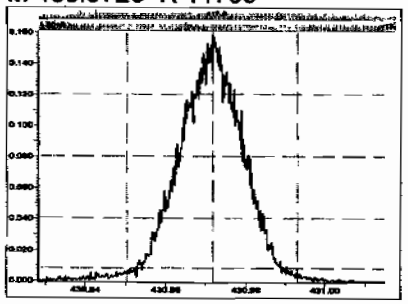

M 442.9728 R 12077

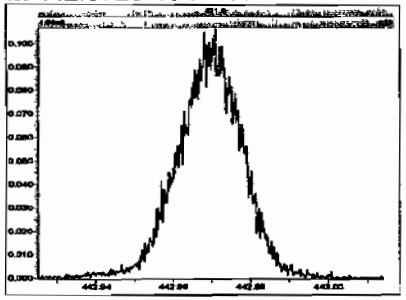

M 454.9728 R 12379

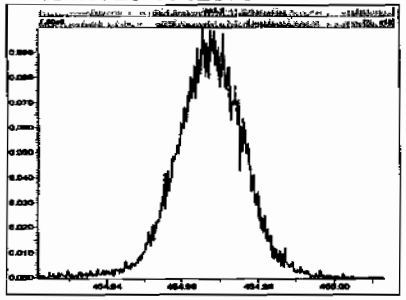

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, June 29, 2009 14:00:39 Pacific Daylight Time

M 404.9760 R 13086

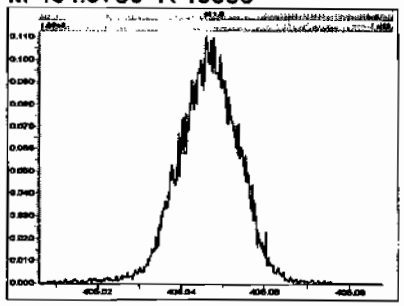

M 416.9760 R 13021

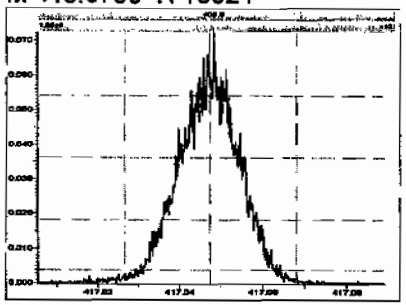

M 430.9728 R 13088

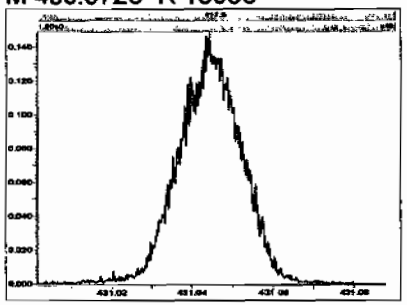

M 442.9728 R 12692

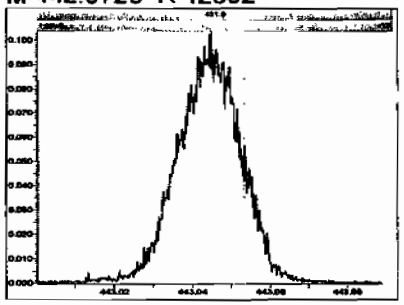

M 454.9728 R 12691

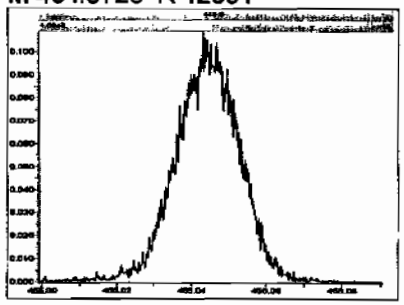

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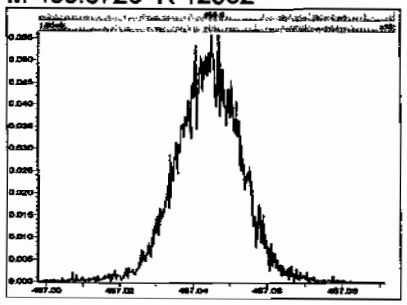

M 480.9696 R 12628

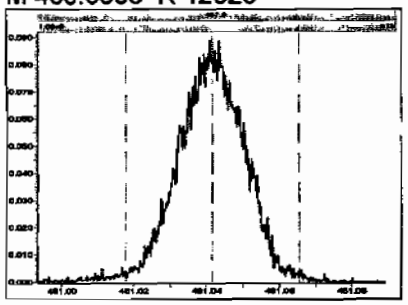

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, June 29, 2009 14:01:11 Pacific Daylight Time

M 430.9728 R 12132

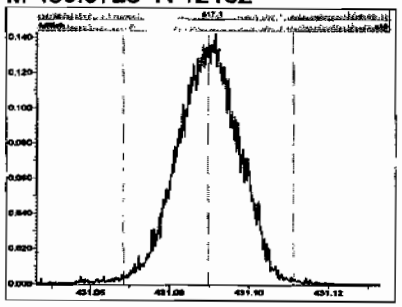

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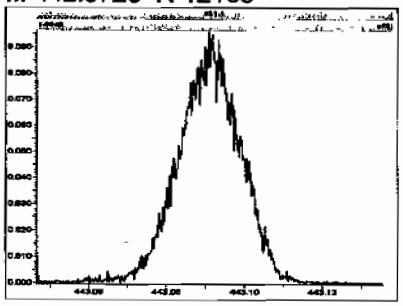

M 454.9728 R 12317

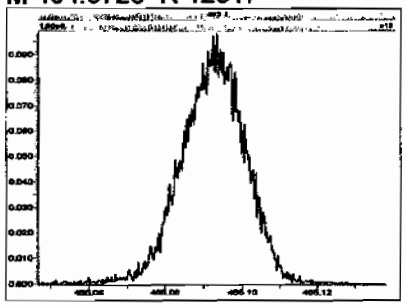

M 466.9728 R 12136

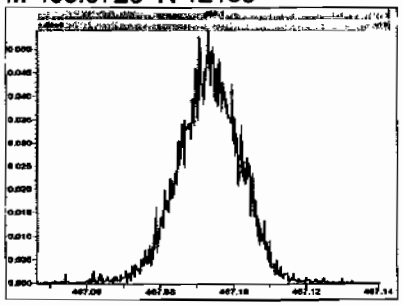

M 480.9696 R 12499

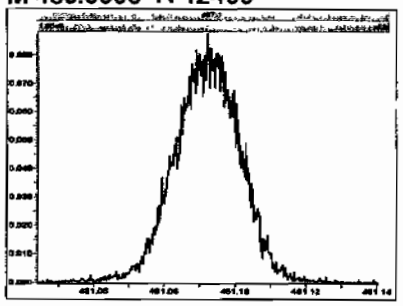

M 492.9696 R 12378

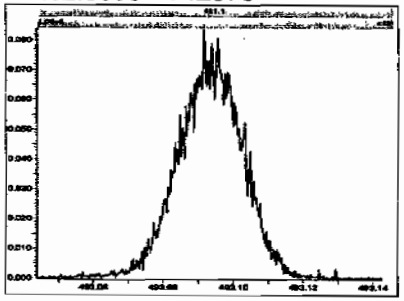

M 504.9696 R 12019

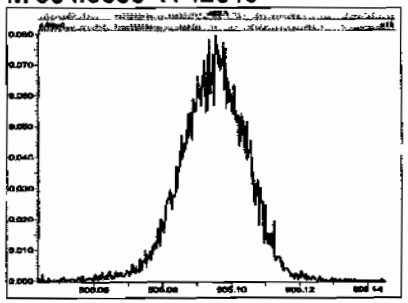

M 516.9697 R 11576

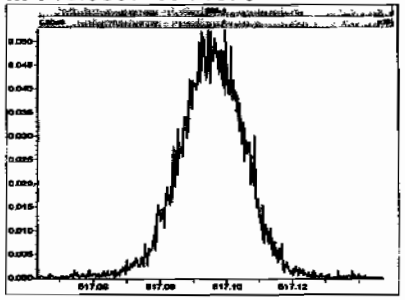

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

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Printed: Monday, June 29, 2009 14:59:04 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

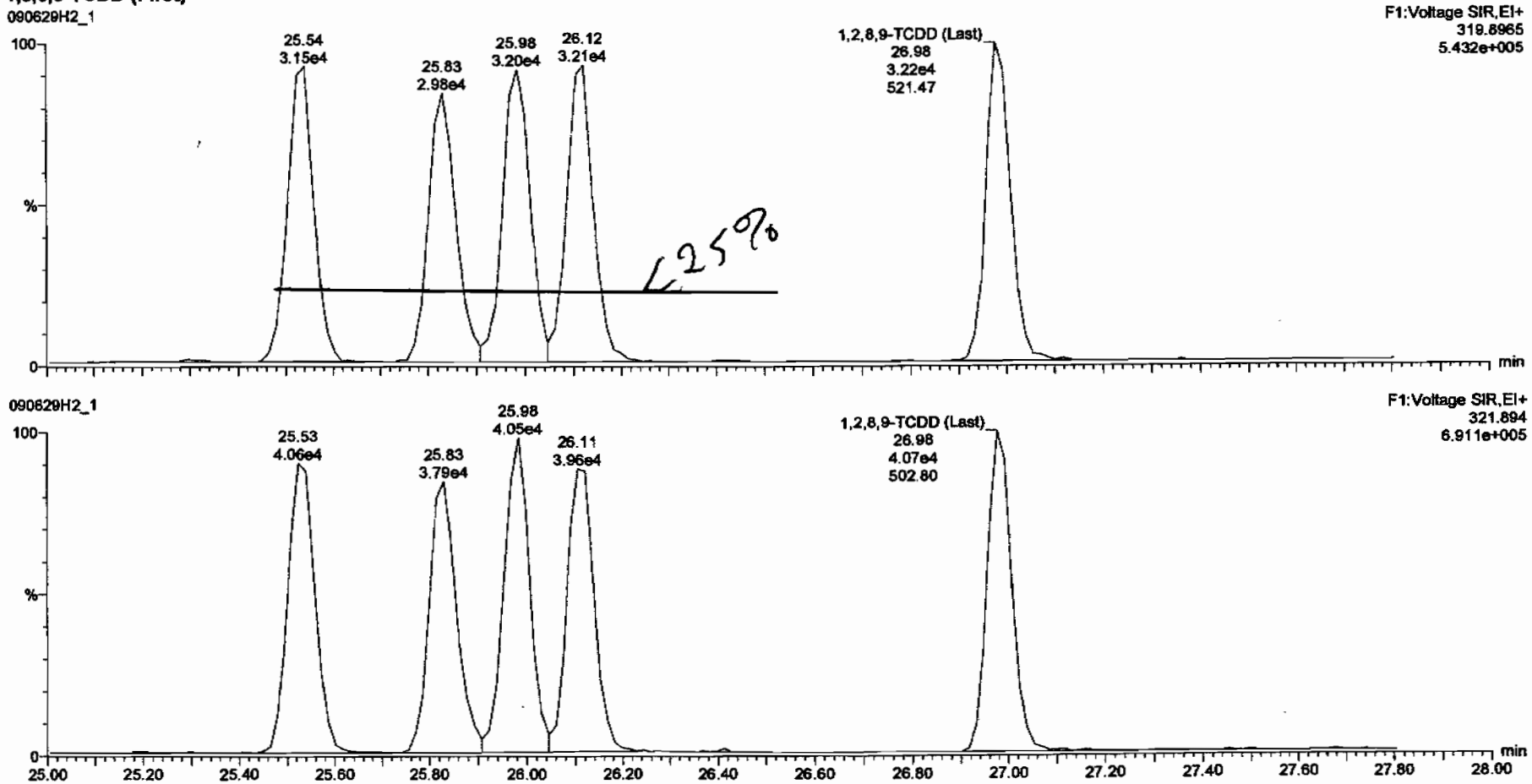

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

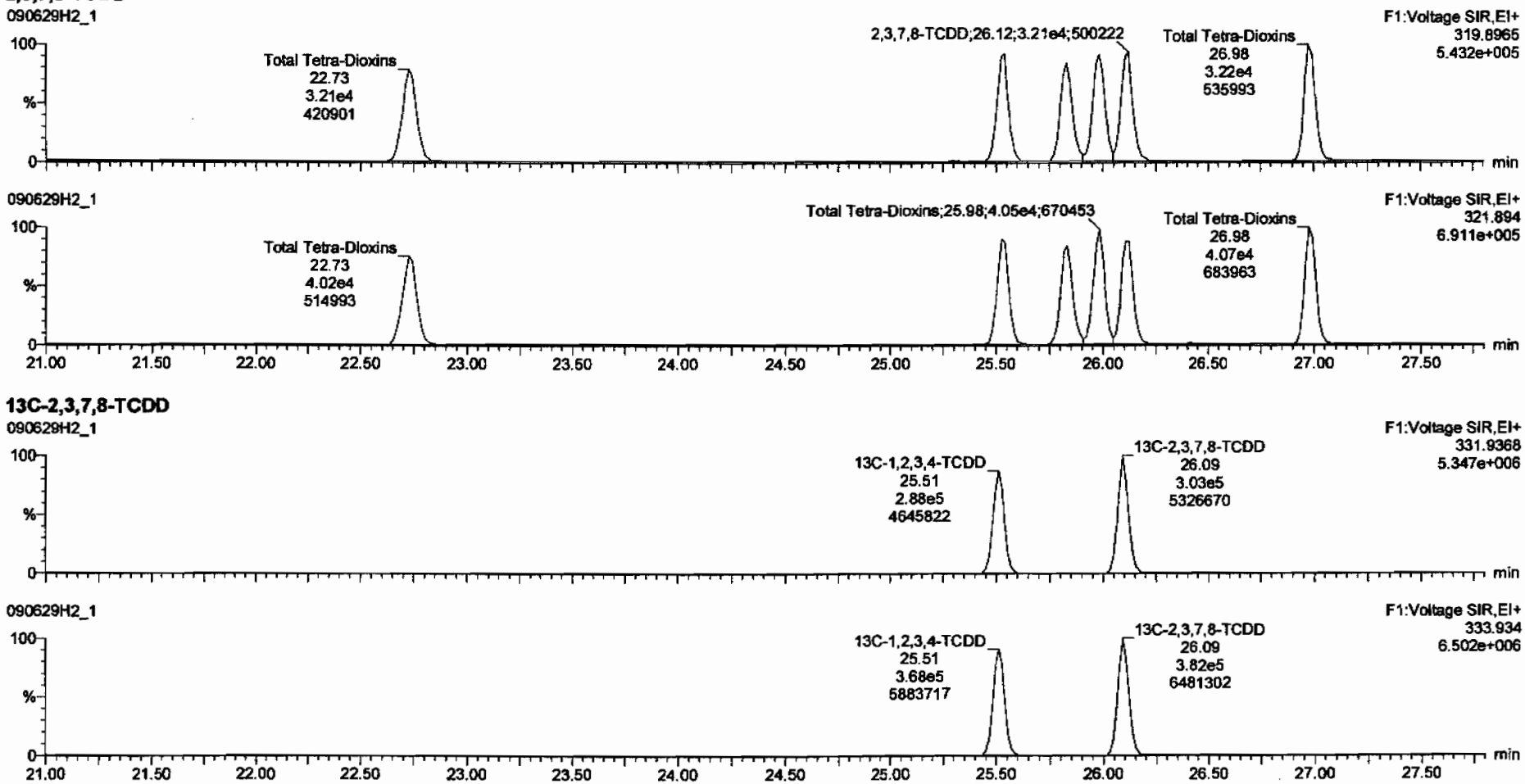

13C-2,3,7,8-TCDD

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

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37Cl-2,3,7,8-TCDD

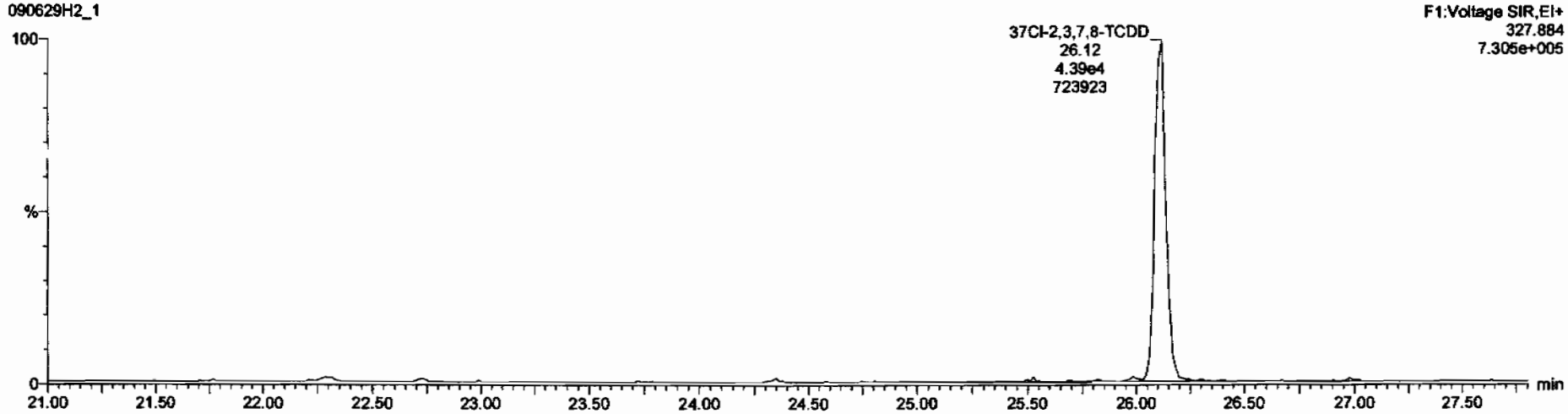

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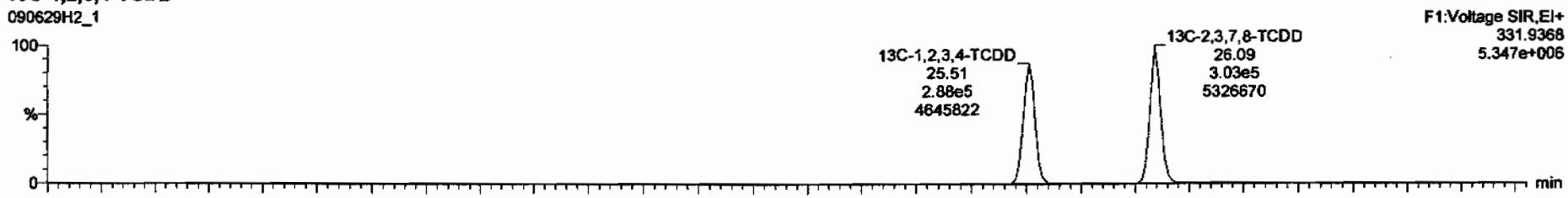

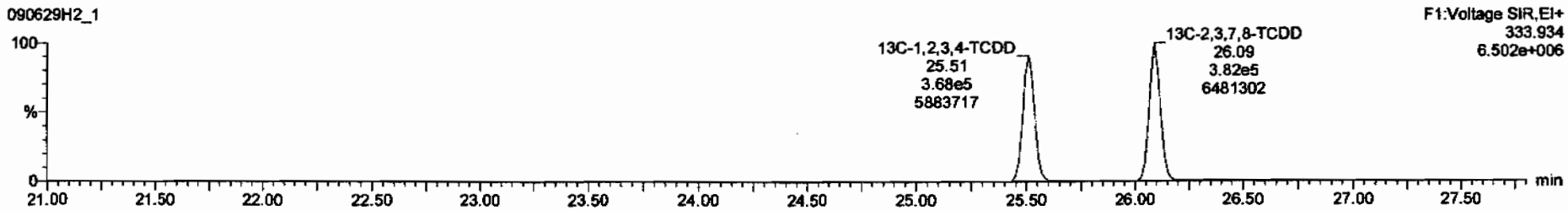

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

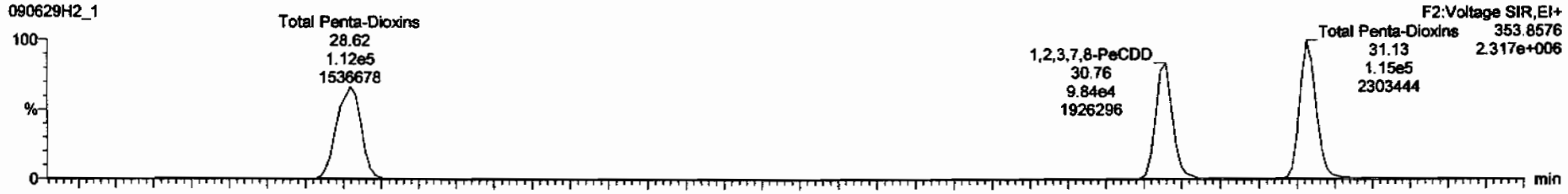

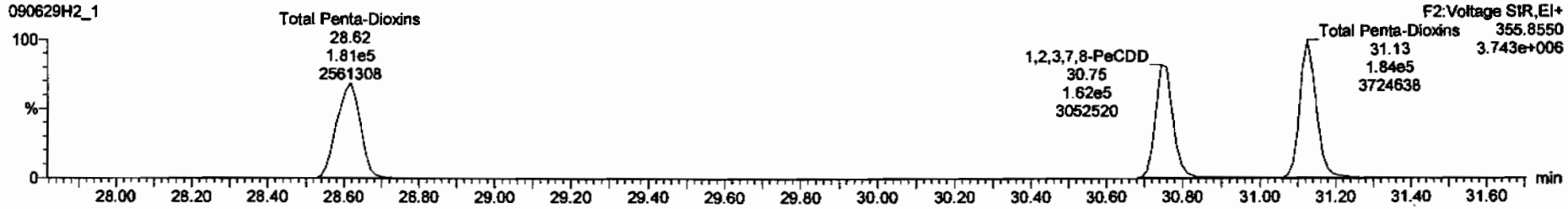

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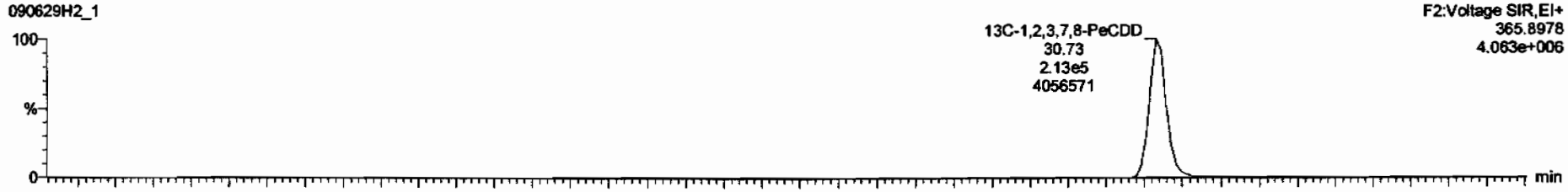

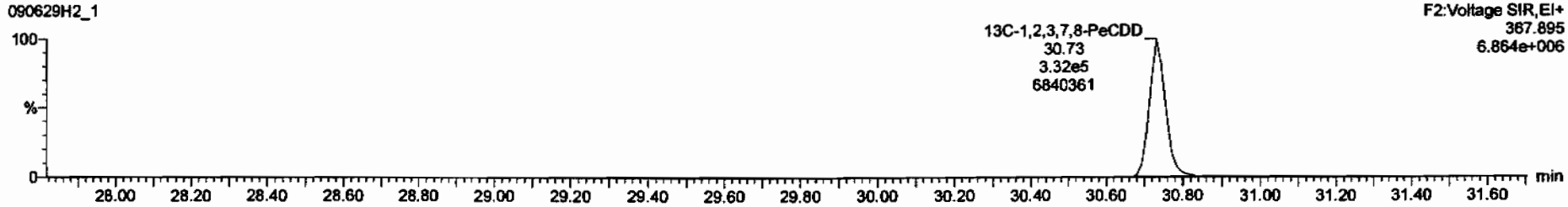

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

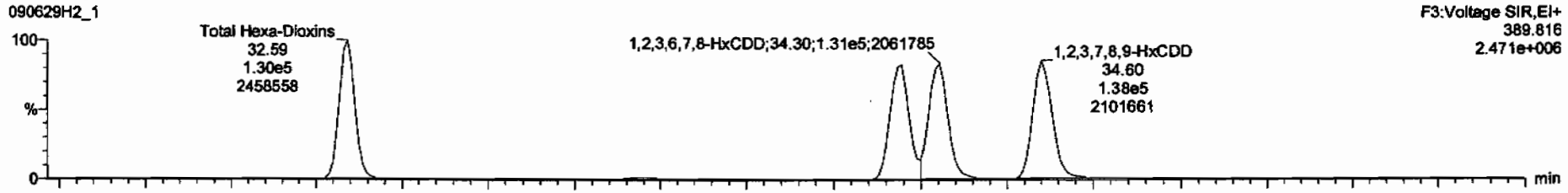

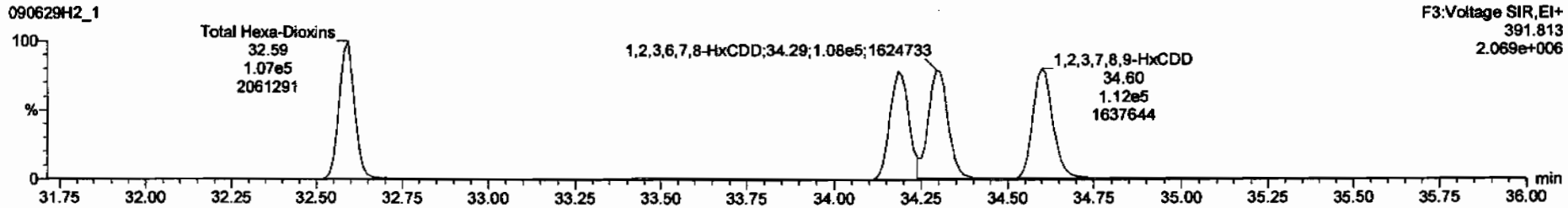

13C-1,2,3,4,7,8-HxCDD

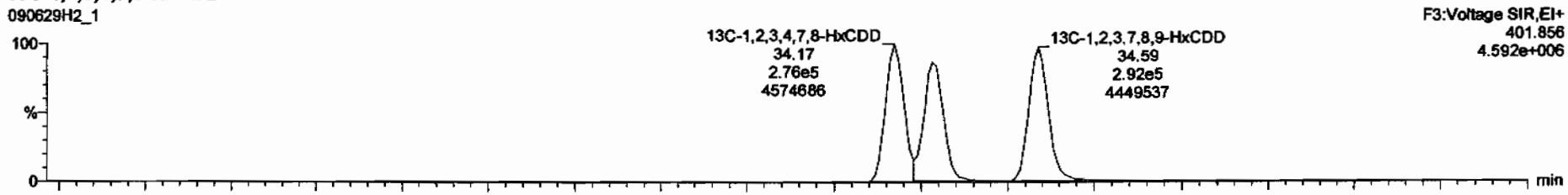

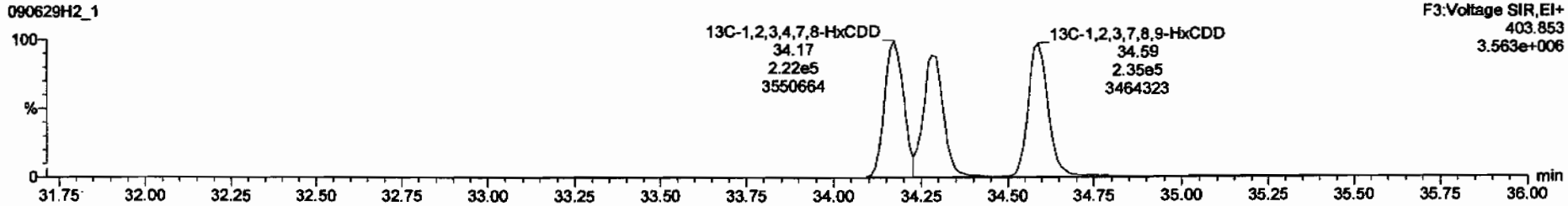

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1,2,3,4,6,7,8-HpCDD

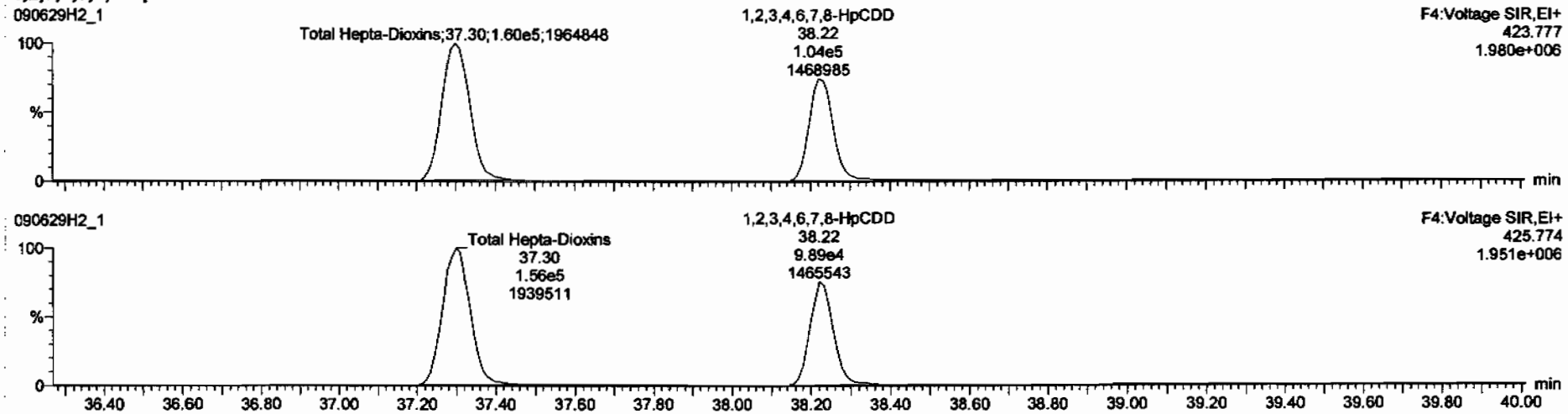

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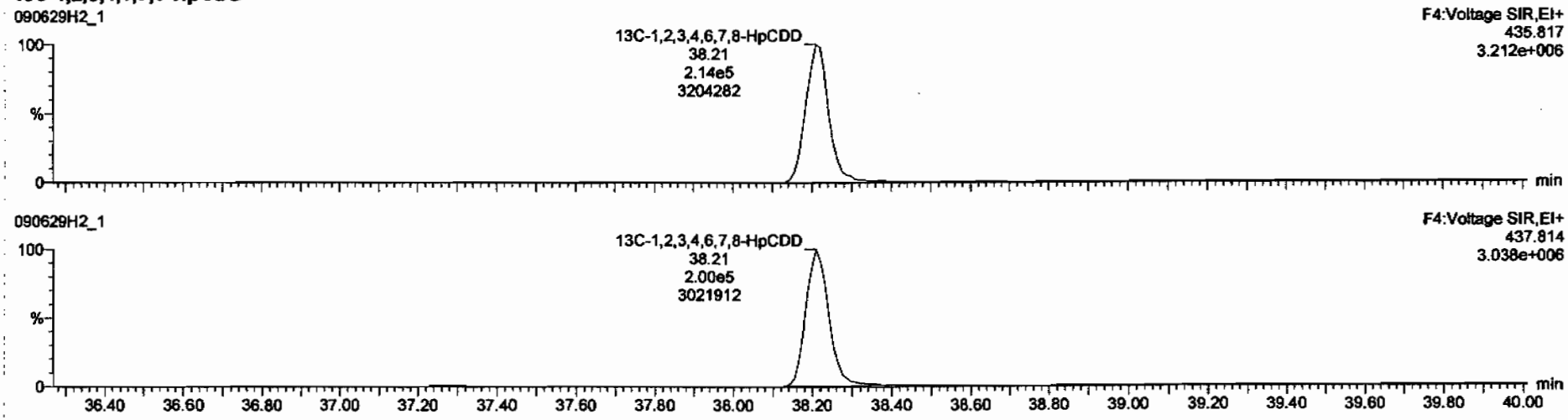

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OCDD

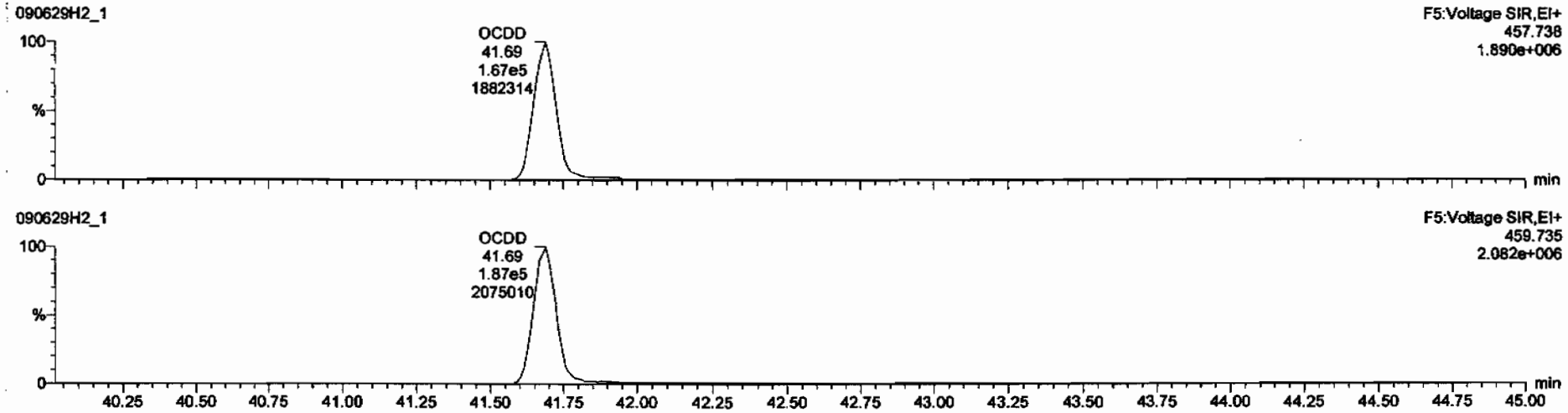

13C-OCDD

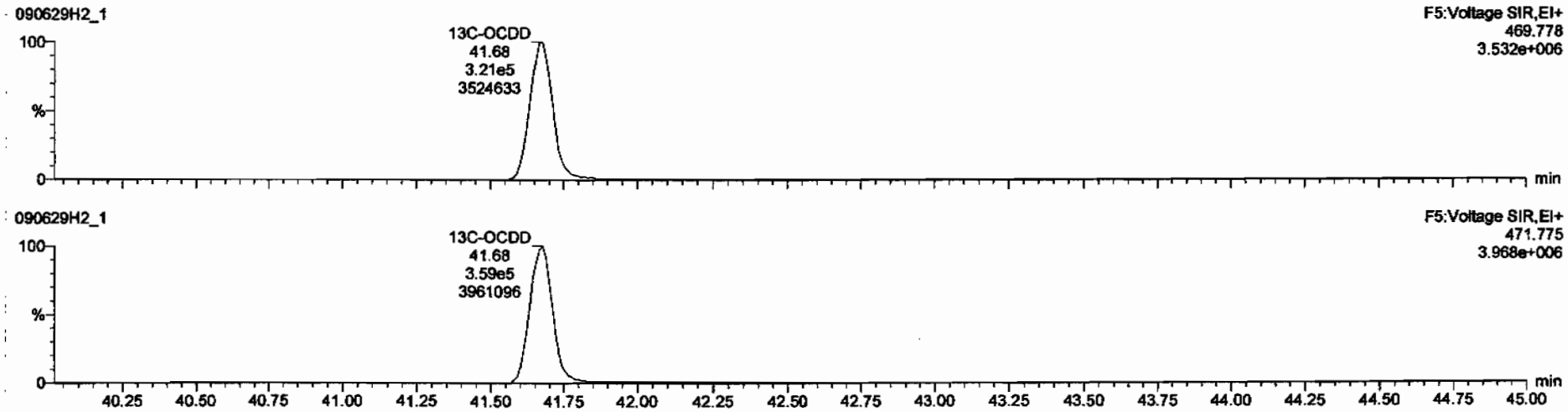

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

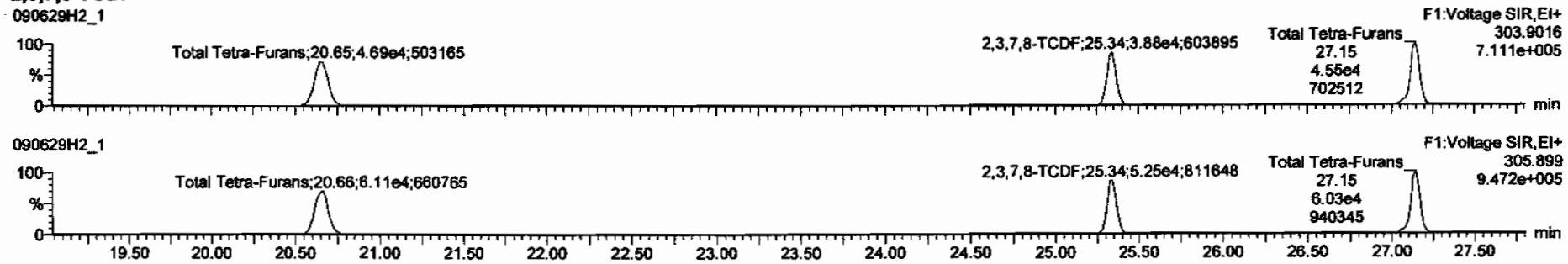

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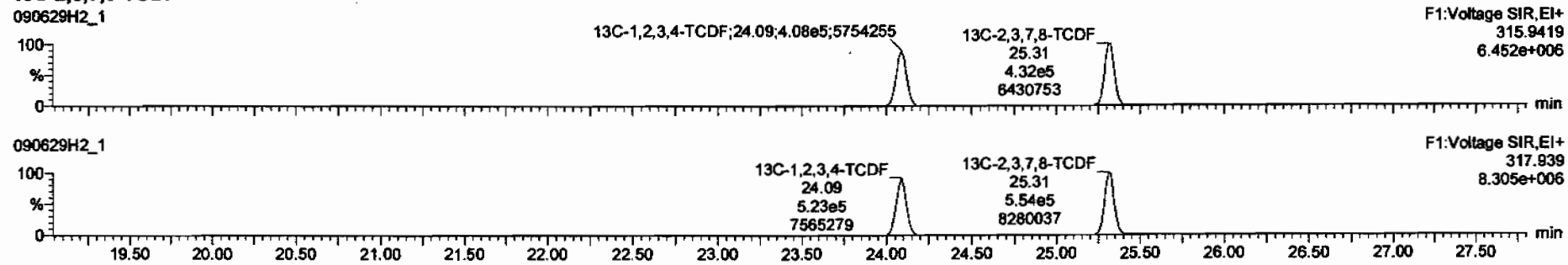

DPE1

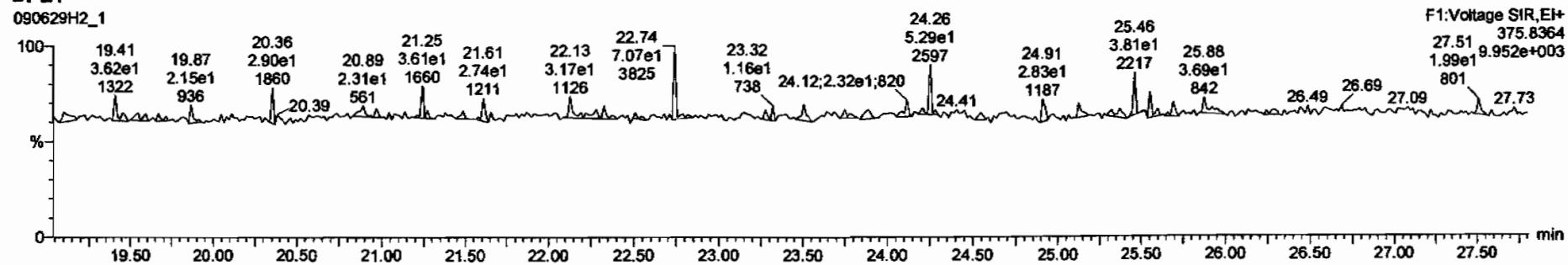

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1st Func. Penta-Furans

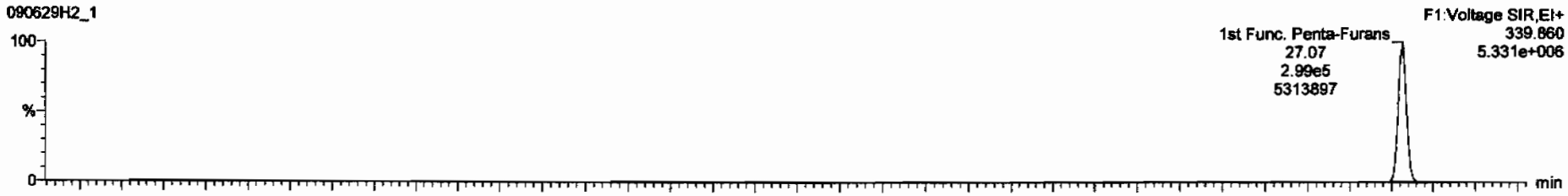

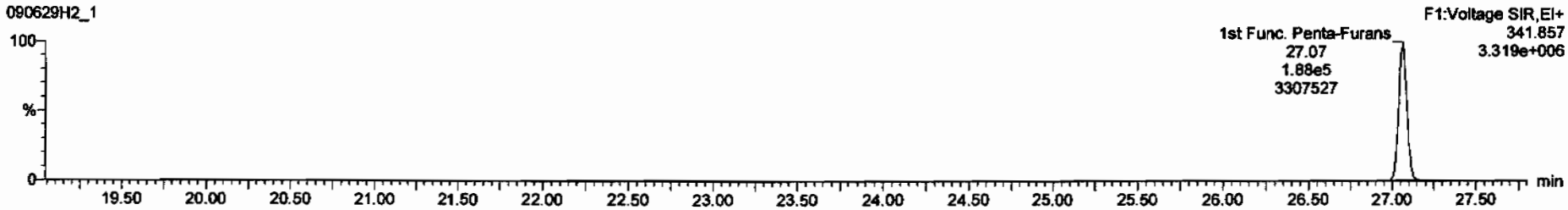

DPE6

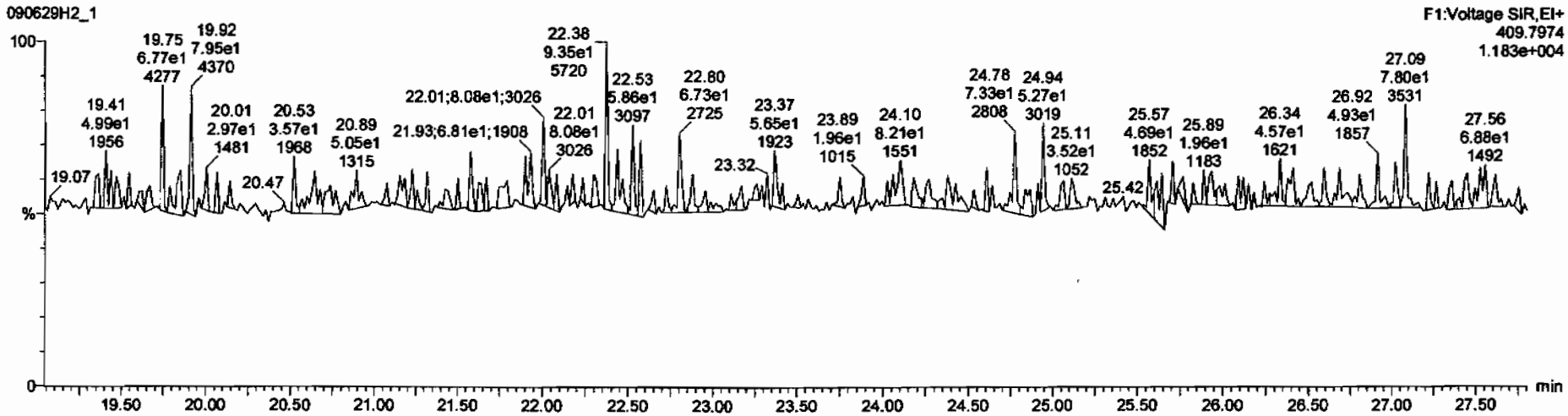

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

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Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

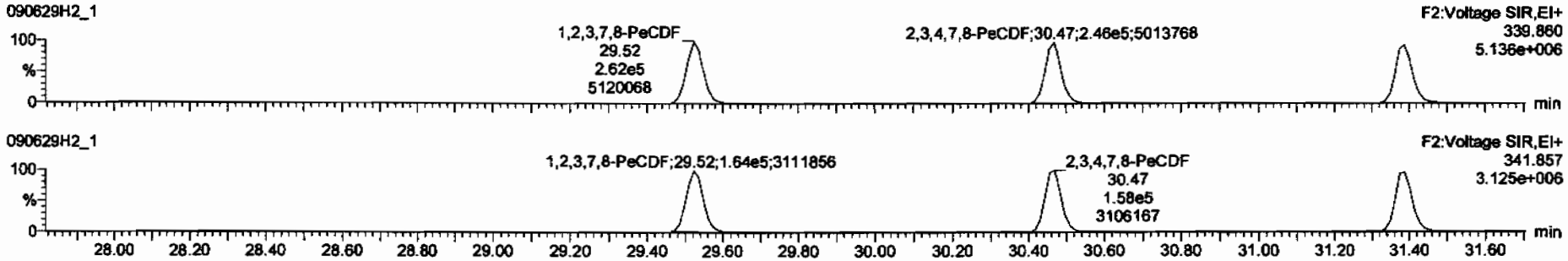

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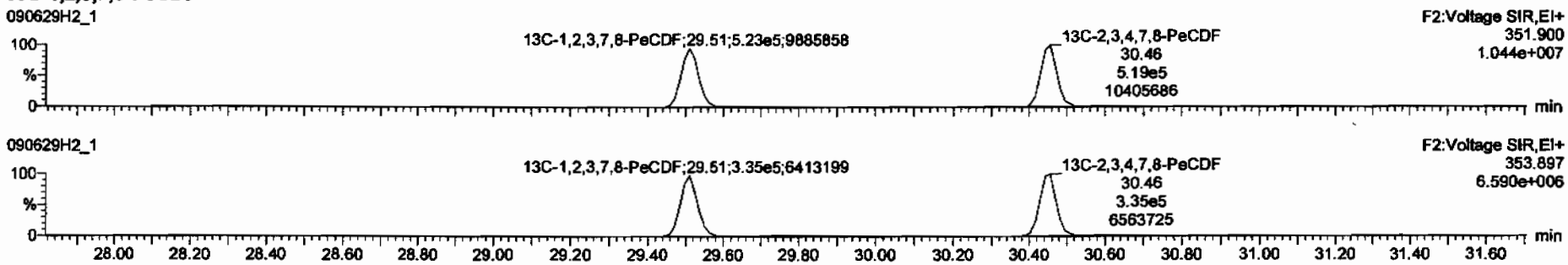

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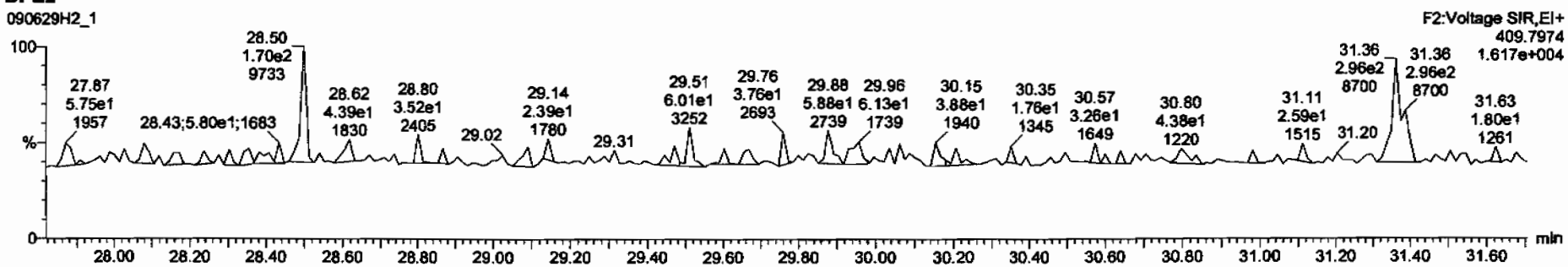

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1,2,3,4,7,8-HxCDF

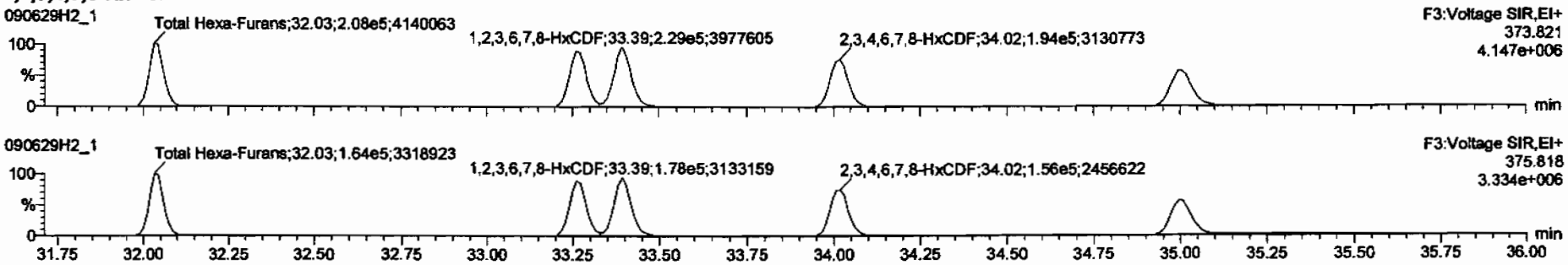

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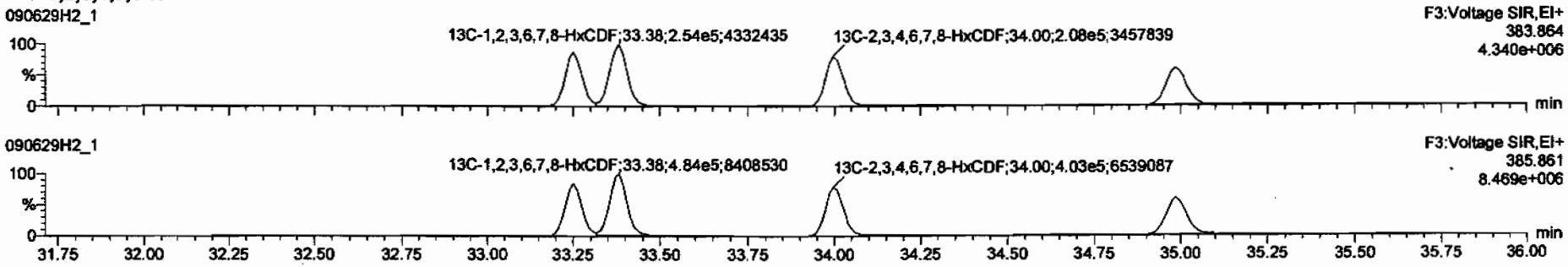

DPE3

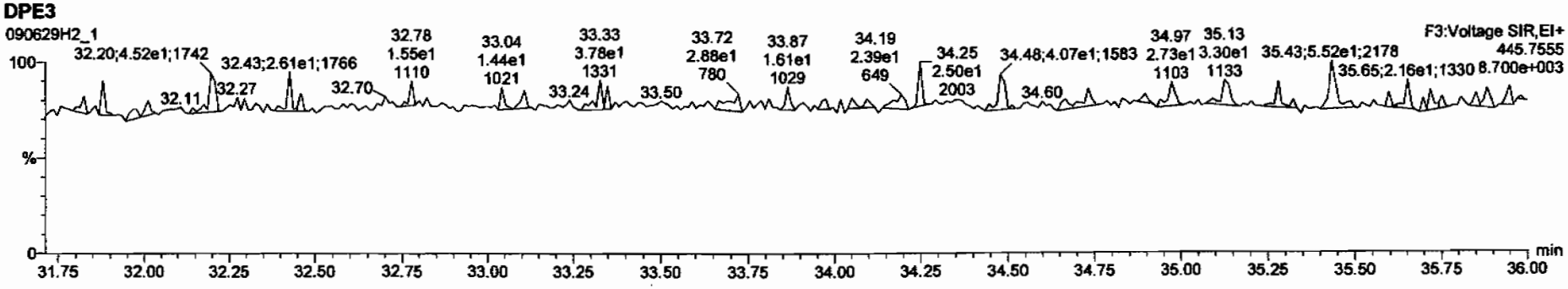

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDF

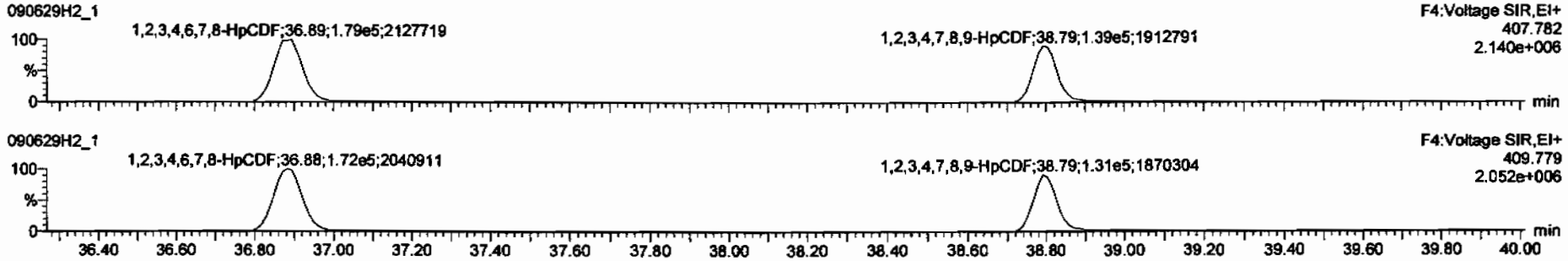

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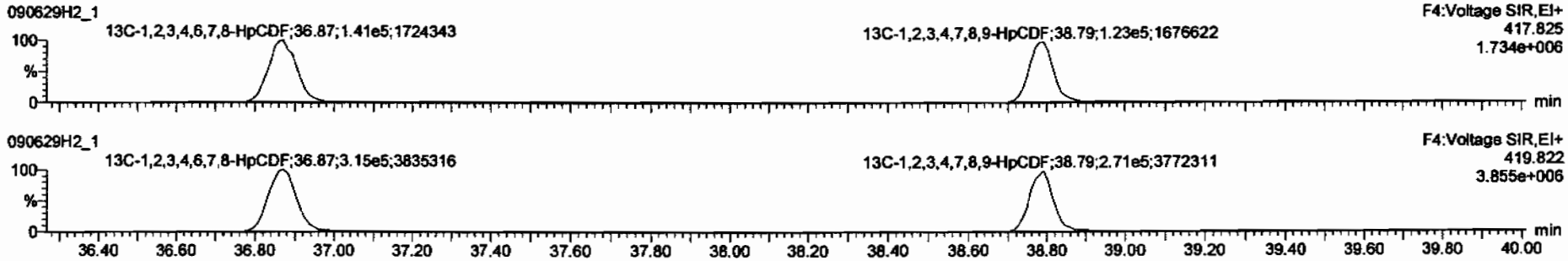

DPE4

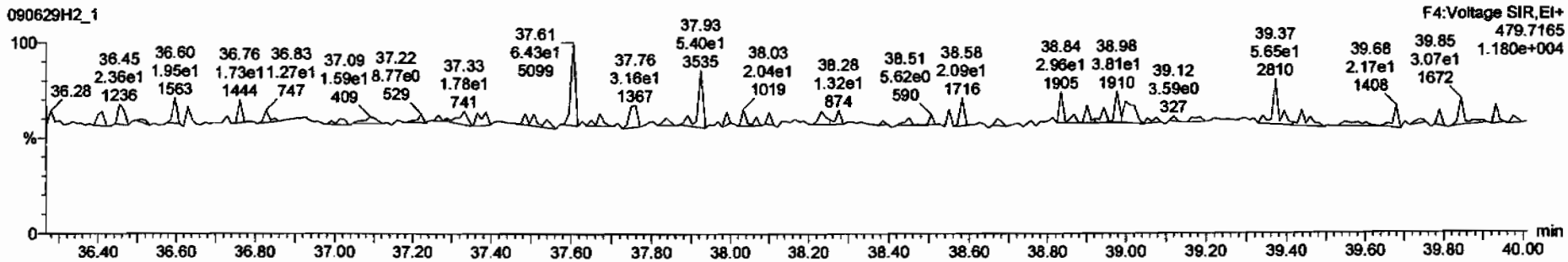

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Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDF

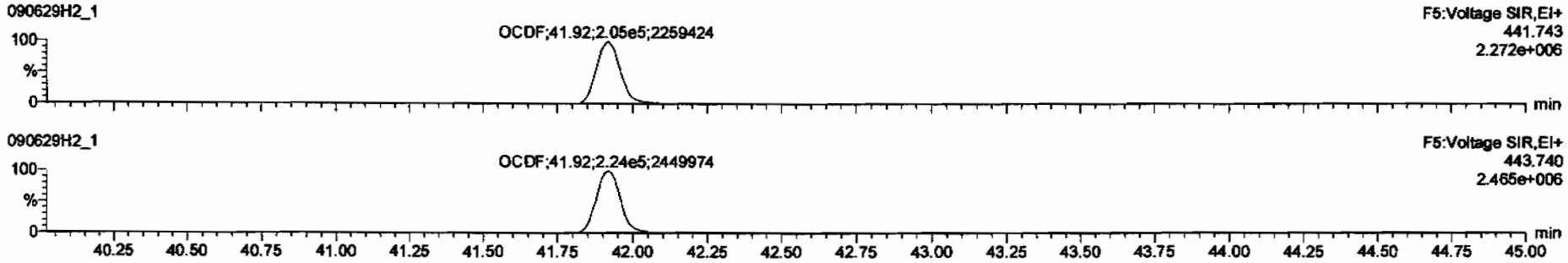

13C-OCDF

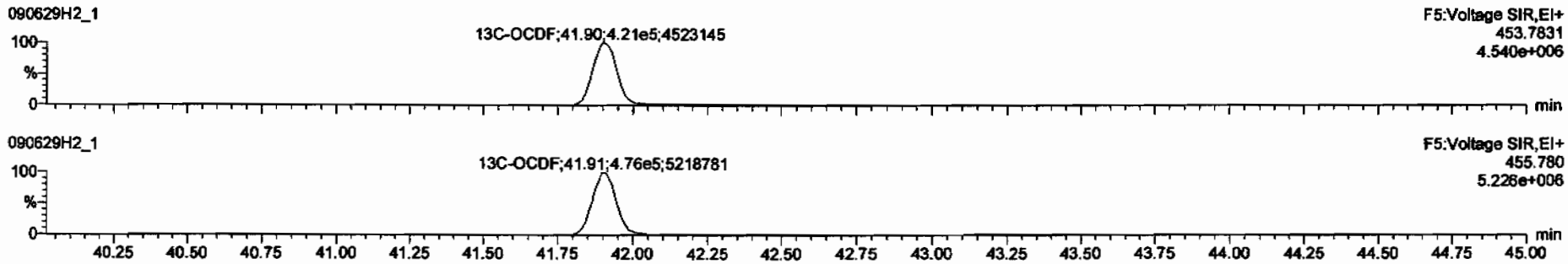

DPE5

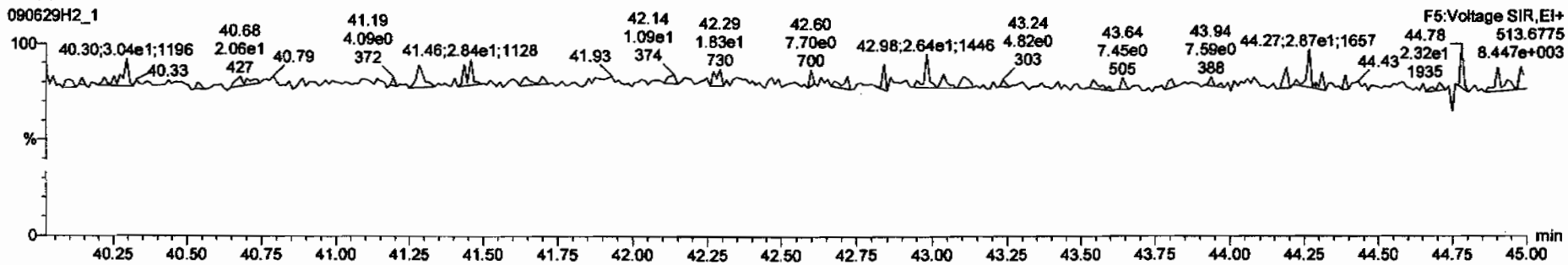

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

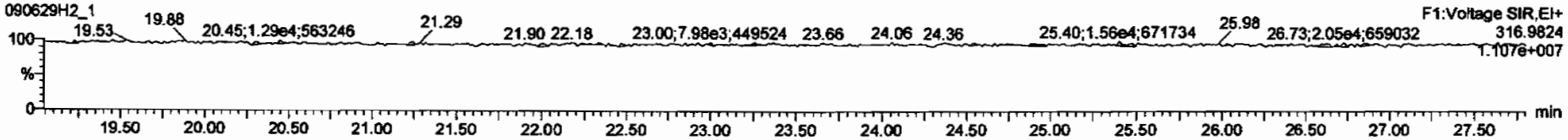

PFK2

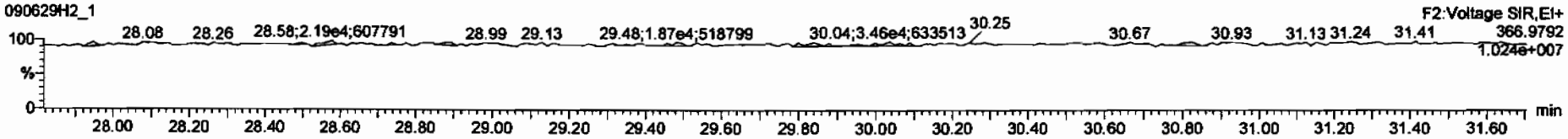

PFK3

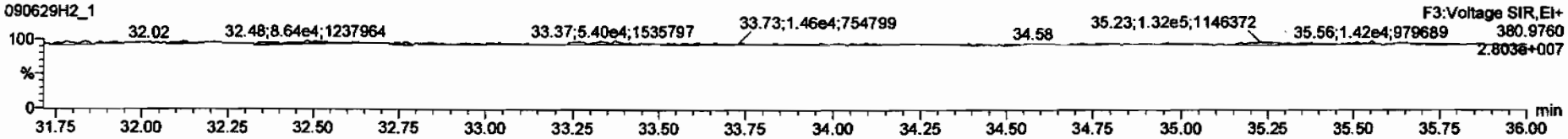

PFK4

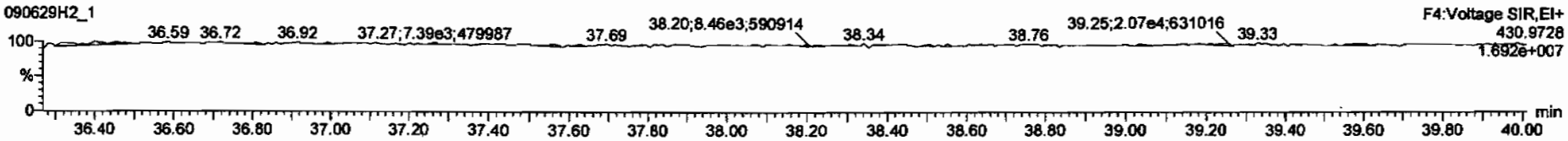

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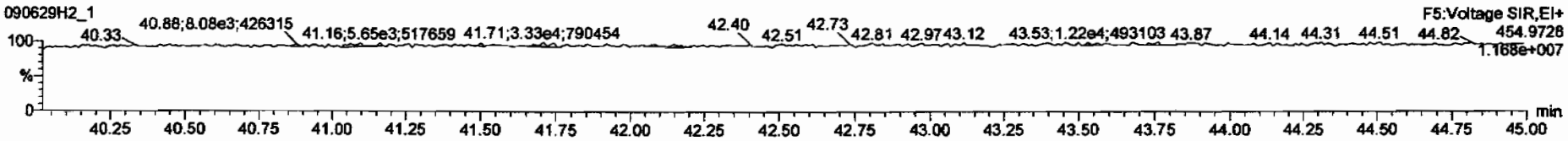

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 03:15:05

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	9.31	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	46.1	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	NO	45.9	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	NO	45.8	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	94.5	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	8.56	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	42.0	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	41.9	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.0	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.1	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	NO	45.2	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	NO	46.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	87.9	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

8290 only

Analyst: [signature]
Date: 6/30/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 03:15:05

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	102	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	98.6	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	95.4	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	111	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	253	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	99.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	99.5	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	104	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	88.2	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	92.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	96.9	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	NO	97.6	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.37-0.51	NO	102	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	220	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.28	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/30/09

8290 only

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 07:53:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:53:59 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.71
2	1,2,8,9-TCDD (Last)	26.96
3	1,2,4,7,9-PeCDD (First)	28.60
4	1,2,3,8,9-PeCDD (Last)	31.11
5	12,4,6,7,9-HxCDD (First)	32.57
6	1,2,3,7,8,9-HxCDD (Last)	34.59
7	1,2,3,4,6,7,9-HpCDD (First)	37.28
8	1,2,3,4,6,7,8-HpCDD (Last)	38.21
9	1,3,6,8-TCDF (First)	20.65
10	1,2,8,9-TCDF (Last)	27.13
11	1,3,4,6,8-PeCDF (First)	27.05
12	1,2,3,8,9-PeCDF (Last)	31.38
13	1,2,3,4,6,8-HxCDF (First)	32.02
14	1,2,3,4,8,9-HxCDF (Last)	34.98
15	1,2,3,4,6,7,8-HpCDF (First)	36.87
16	1,2,3,4,7,8,9-HpCDF (Last)	38.78

JM 6/30/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090629H2-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090629H2_17

Analysis Date: 30-Jun-09

Analysis Time: 03:15:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.156	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 6/30/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09

Analysis Time: 03:15:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 6/30/09

Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:52:16 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.64e4	0.78	NO	1.08	1.000	26.09	1.001	9.3054	93.1	0.0520	9.3054
2	1,2,3,7,8-PeCDD	2.85e5	0.62	NO	1.03	1.000	30.73	1.000	46.057	92.1	0.0816	46.057
3	1,2,3,4,7,8-HxCDD	2.47e5	1.29	NO	1.00	1.000	34.17	1.001	45.946	91.9	0.162	45.946
4	1,2,3,6,7,8-HxCDD	2.55e5	1.22	NO	1.13	1.000	34.28	1.000	45.285	90.6	0.163	45.285
5	1,2,3,7,8,9-HxCDD	2.69e5	1.27	NO	1.10	1.000	34.59	1.009	47.002	94.0	0.156	47.002
6	1,2,3,4,6,7,8-HpCDD	2.18e5	1.02	NO	1.06	1.000	38.21	1.001	45.782	91.6	0.225	45.782
7	OCDD	4.03e5	0.90	NO	1.18	1.000	41.68	1.001	94.461	94.5	0.308	94.461
8	2,3,7,8-TCDF	1.00e5	0.78	NO	1.09	1.000	25.31	1.001	8.5616	85.6	0.0417	8.5616
9	1,2,3,7,8-PeCDF	4.47e5	1.59	NO	1.16	1.000	29.51	1.001	42.017	84.0	0.0688	42.017
10	2,3,4,7,8-PeCDF	4.33e5	1.59	NO	1.12	1.000	30.44	1.000	41.931	83.9	0.0650	41.931
11	1,2,3,4,7,8-HxCDF	4.19e5	1.26	NO	1.41	1.000	33.25	1.001	43.046	86.1	0.106	43.046
12	1,2,3,6,7,8-HxCDF	4.09e5	1.27	NO	1.22	1.000	33.38	1.001	43.960	87.9	0.117	43.960
13	2,3,4,6,7,8-HxCDF	3.72e5	1.26	NO	1.28	1.000	34.00	1.000	44.070	88.1	0.134	44.070
14	1,2,3,7,8,9-HxCDF	3.30e5	1.30	NO	1.26	1.000	34.98	1.001	45.199	90.4	0.175	45.199
15	1,2,3,4,6,7,8-HpCDF	3.65e5	1.05	NO	1.69	1.000	36.87	1.001	44.842	89.7	0.169	44.842
16	1,2,3,4,7,8,9-HpCDF	2.92e5	1.01	NO	1.48	1.000	38.78	1.000	46.704	93.4	0.202	46.704
17	OCDF	4.59e5	0.91	NO	1.10	1.000	41.91	1.000	87.929	87.9	0.141	87.929
18	13C-2,3,7,8-TCDD	7.61e5	0.78	NO	1.01	1.000	26.08	1.023	102.46	102	0.194	
19	13C-1,2,3,7,8-PeCDD	5.98e5	0.62	NO	0.827	1.000	30.72	1.205	98.644	98.6	0.140	
20	13C-1,2,3,4,7,8-HxCDD	5.38e5	1.24	NO	0.916	1.000	34.15	0.988	103.25	103	0.299	
21	13C-1,2,3,6,7,8-HxCDD	4.99e5	1.27	NO	0.921	1.000	34.27	0.991	95.445	95.4	0.297	
22	13C-1,2,3,4,6,7,8-HpCDD	4.48e5	1.06	NO	0.708	1.000	38.19	1.105	111.41	111	0.357	
23	13C-OCDD	7.24e5	0.89	NO	0.503	1.000	41.66	1.205	253.46	127	0.358	
24	13C-2,3,7,8-TCDF	1.08e6	0.80	NO	0.977	1.000	25.30	0.992	106.74	107	0.133	
25	13C-1,2,3,7,8-PeCDF	9.19e5	1.60	NO	0.896	1.000	29.48	1.156	99.409	99.4	0.213	
26	13C-2,3,4,7,8-PeCDF	9.23e5	1.60	NO	0.900	1.000	30.43	1.194	99.514	99.5	0.212	
27	13C-1,2,3,4,7,8-HxCDF	6.90e5	0.51	NO	1.17	1.000	33.23	0.961	103.81	104	0.358	
28	13C-1,2,3,6,7,8-HxCDF	7.61e5	0.54	NO	1.52	1.000	33.36	0.965	88.199	88.2	0.275	
29	13C-2,3,4,6,7,8-HxCDF	6.60e5	0.51	NO	1.25	1.000	33.99	0.983	92.908	92.9	0.335	
30	13C-1,2,3,7,8,9-HxCDF	5.80e5	0.53	NO	1.05	1.000	34.96	1.011	96.898	96.9	0.397	

JG 6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:52:16 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	4.82e5	0.43	NO	0.868	1.000	36.85	1.066	97.619	97.6	0.442
32	13C-1,2,3,4,7,8,9-HpCDF	4.22e5	0.43	NO	0.727	1.000	38.77	1.122	102.27	102	0.529
33	13C-OCDF	9.51e5	0.91	NO	0.760	1.000	41.90	1.212	220.45	110	0.289
34	37Cl-2,3,7,8-TCDD	4.54e4			0.668	1.000	26.09	1.023	9.2813	92.8	0.0686
35	13C-1,2,3,4-TCDD	7.32e5	0.79	NO	1.00	1.000	25.50	0.000	100.00	100	0.196
36	13C-1,2,3,4-TCDF	1.03e6	0.78	NO	1.00	1.000	24.07	0.000	100.00	100	0.130
37	13C-1,2,3,7,8,9-HxCDD	5.68e5	1.27	NO	1.00	1.000	34.57	0.000	100.00	100	0.274

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 8:02:11 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:02:26 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

090629H2_1	ST090629H2-1 1613 CS3 080917I		29-Jun-09	14:01:48
090629H2_2	0_2207_OPR001		29-Jun-09	14:52:10
090629H2_3	solvent blank		29-Jun-09	15:41:42
090629H2_4	0_2207_MB001		29-Jun-09	16:31:15
090629H2_5	31831_2207_001 CAMO-09-10460	10.45	29-Jun-09	17:20:45
090629H2_6	31831_2207_002 CAMO-09-10461	11.42	29-Jun-09	18:10:16
090629H2_7	31831_2207_003 CAMO-09-10462	10.55	29-Jun-09	18:59:49
090629H2_8	31831_2207_004 CAMO-09-10467	10.57	29-Jun-09	19:49:21
090629H2_9	31832_2207_001 CAMO-09-10480	11.15	29-Jun-09	20:38:54
090629H2_10	31833_2207_001 CAMO-09-6005	12.18	29-Jun-09	21:28:25
090629H2_11	31833_2207_002 CAMO-09-6047	12.12	29-Jun-09	22:17:56
090629H2_12	31837_2207_001 CAMO-09-6006	11.31	29-Jun-09	23:07:29
090629H2_13	31837_2207_002 CAMO-09-6007	10.42	29-Jun-09	23:56:59
090629H2_14	31837_2207_003 CAMO-09-6008	13.14	30-Jun-09	00:46:29
090629H2_15	31837_2207_004 CAMO-09-6009	12.25	30-Jun-09	01:36:02
090629H2_16	solvent blank		30-Jun-09	02:25:34
090629H2_17	ST090629H2-2 1613 CS3 080917I		30-Jun-09	03:15:05

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:00:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:00:29 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

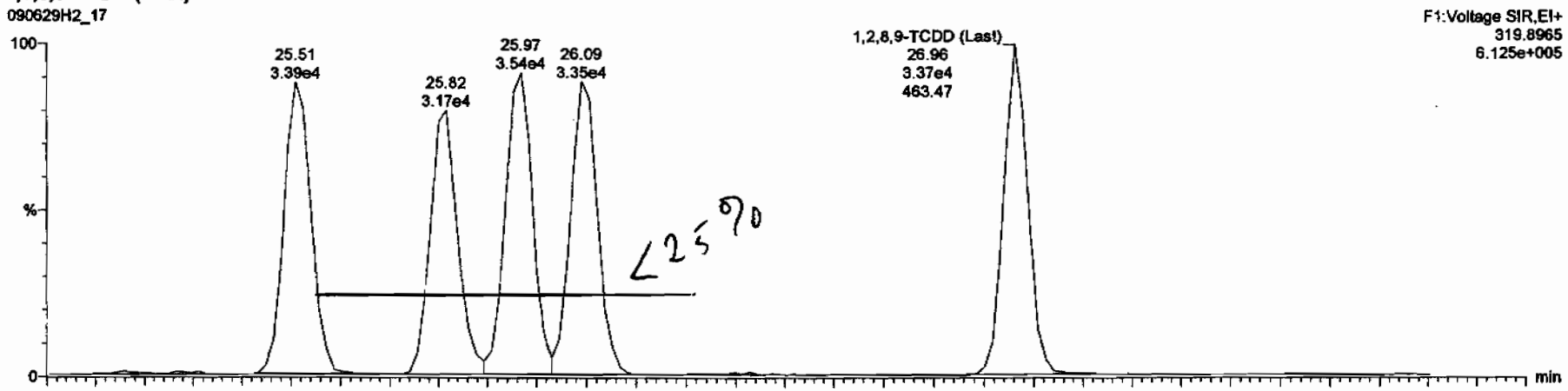

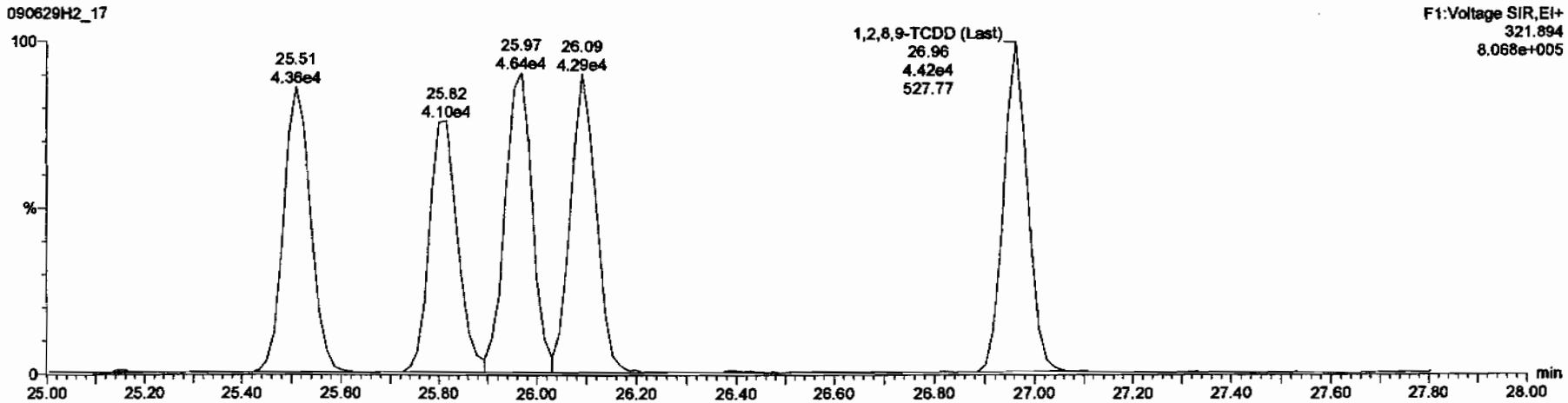

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

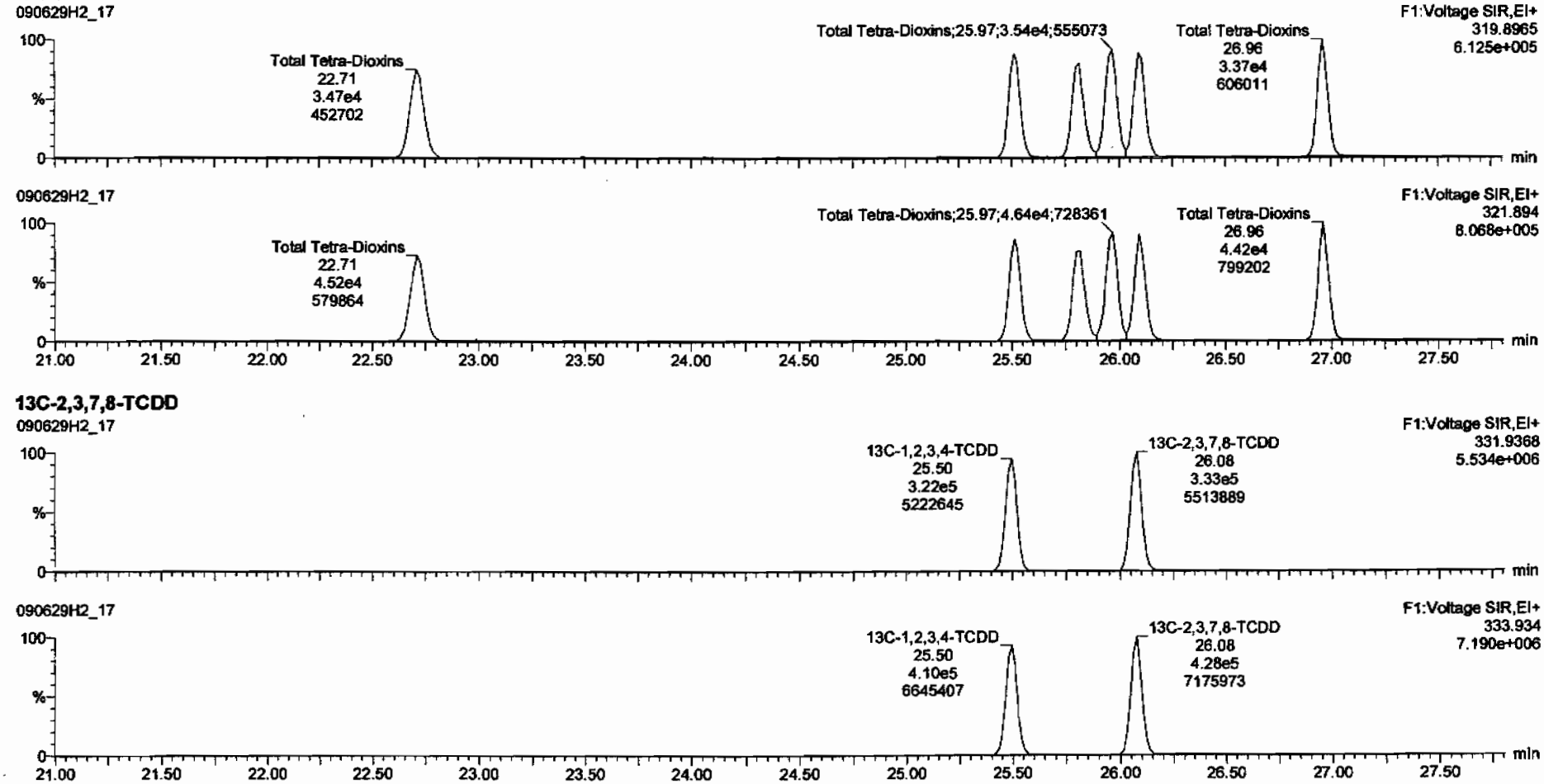

13C-2,3,7,8-TCDD

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

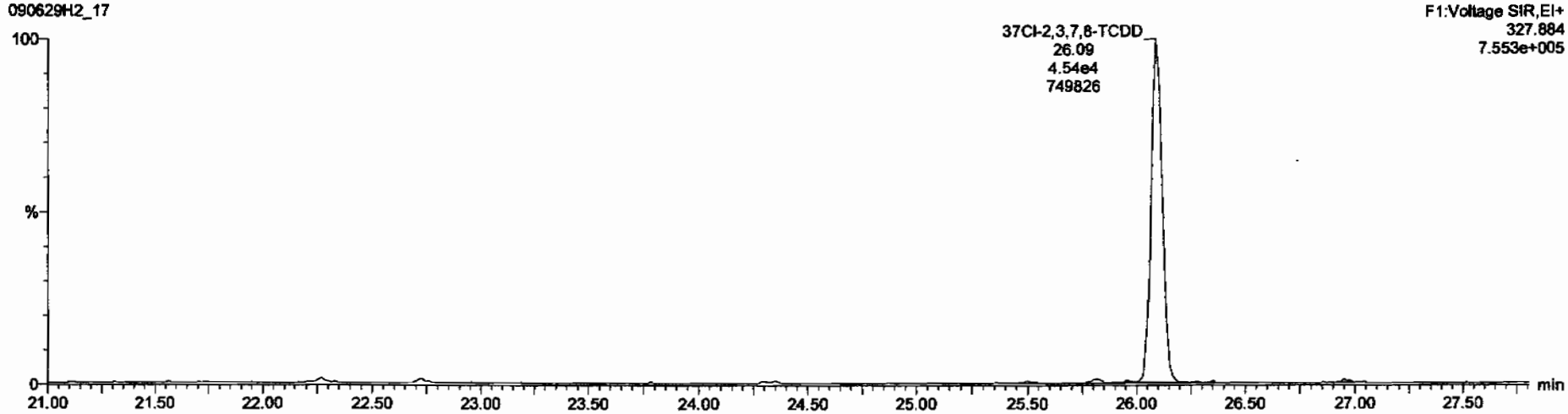

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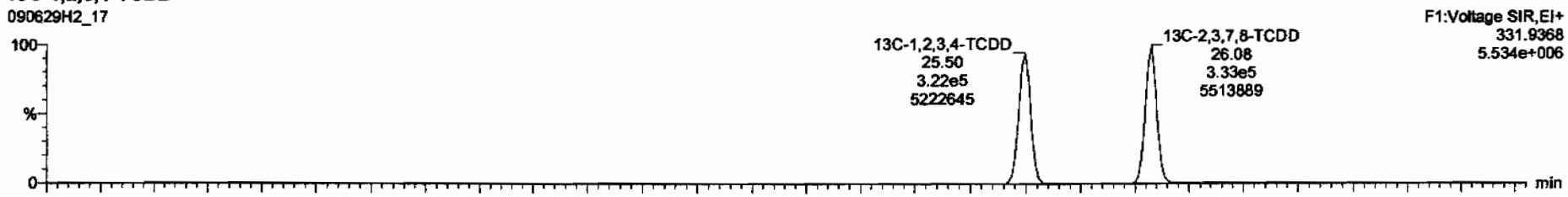

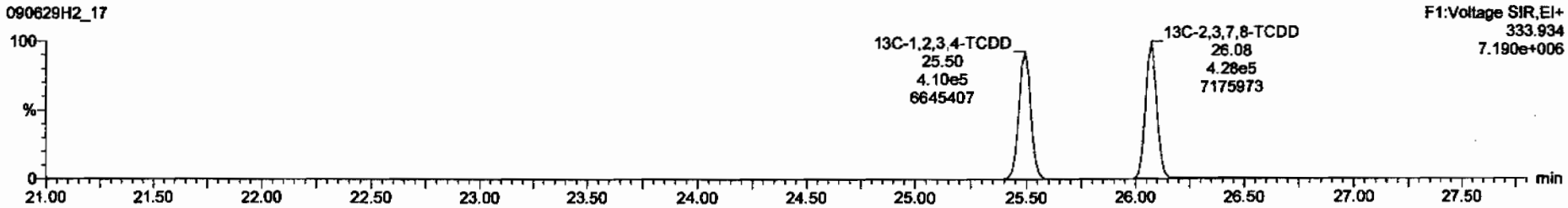

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

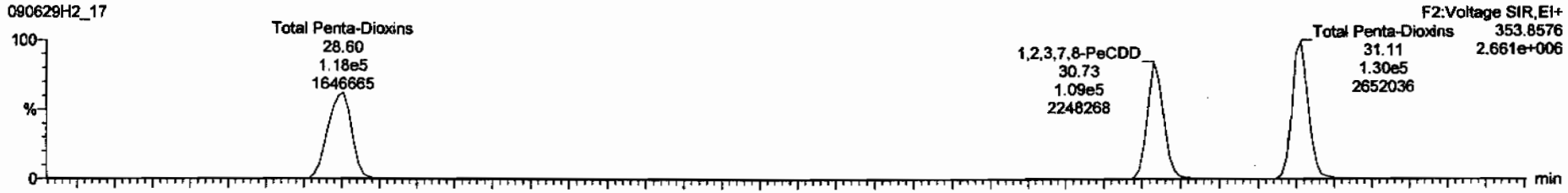

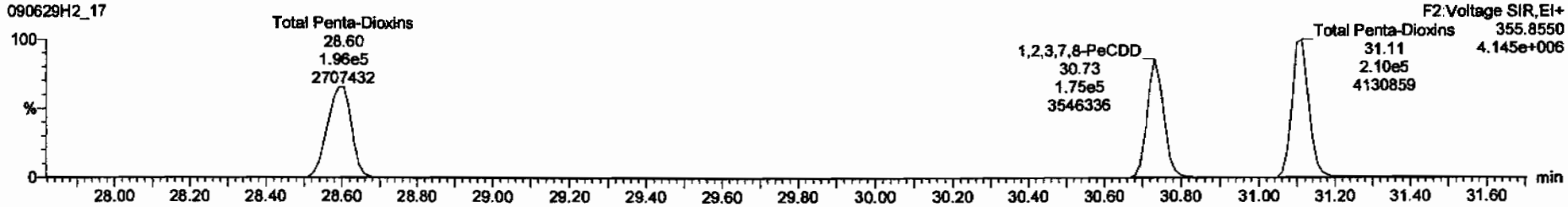

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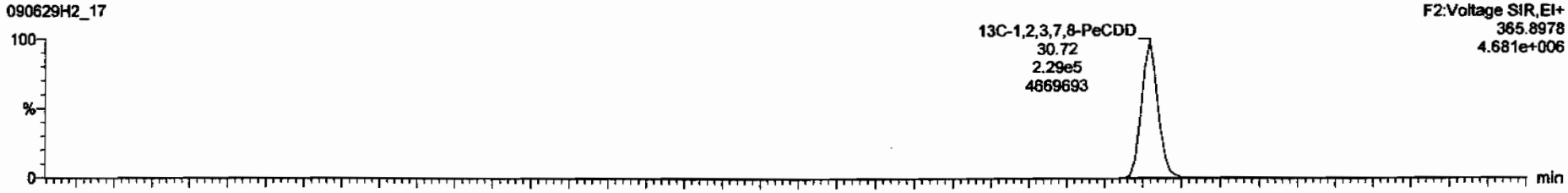

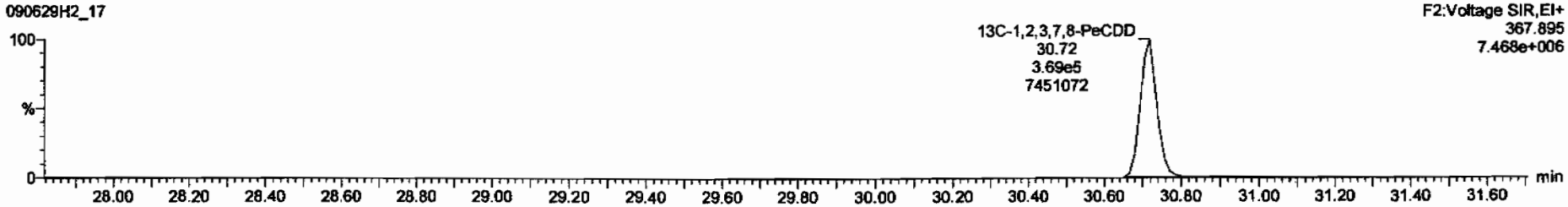

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

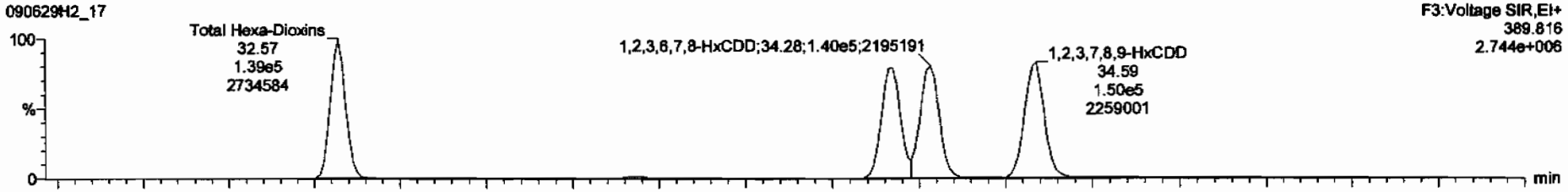

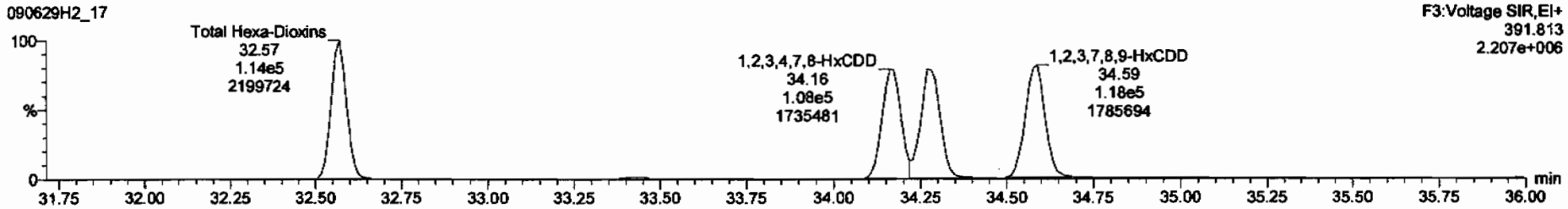

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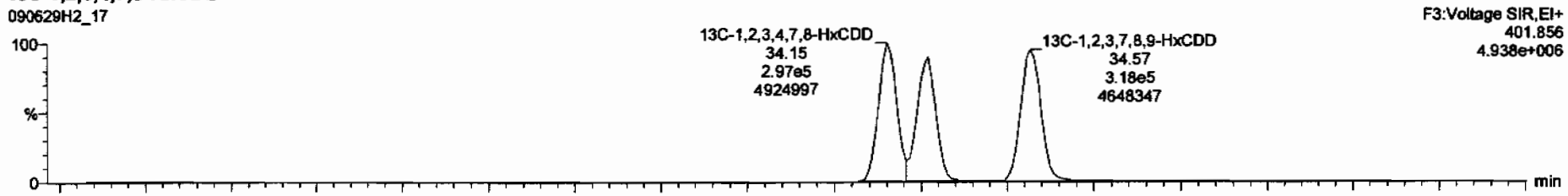

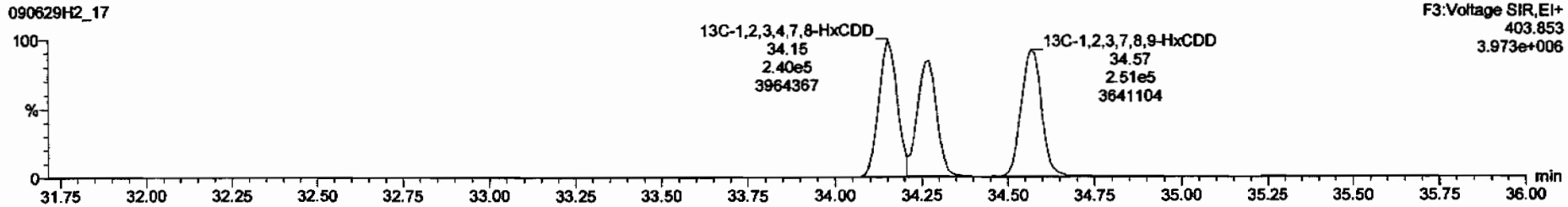

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

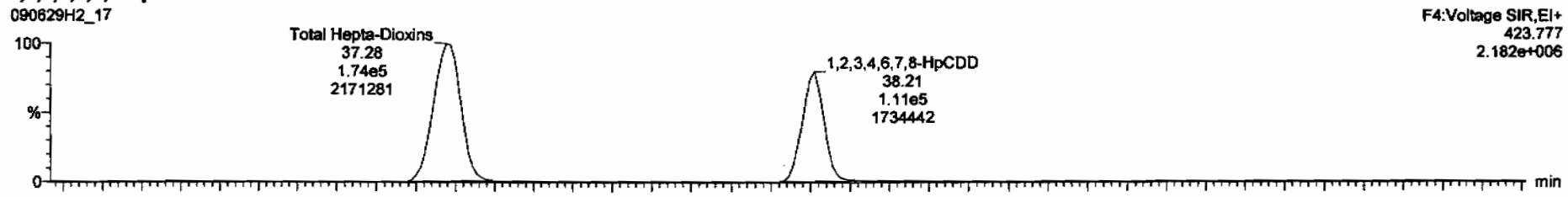

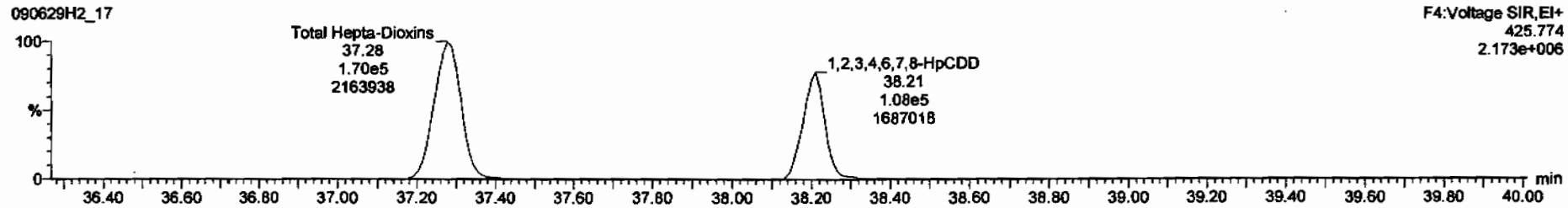

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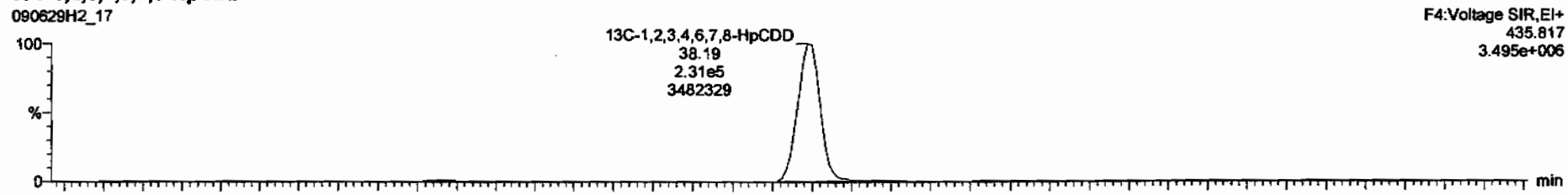

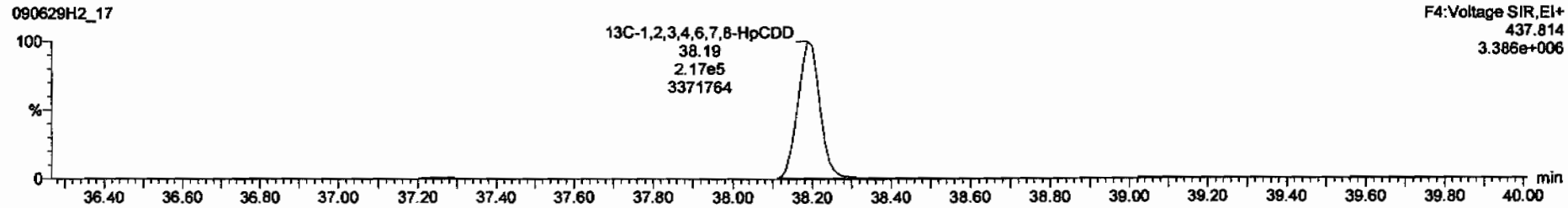

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
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Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

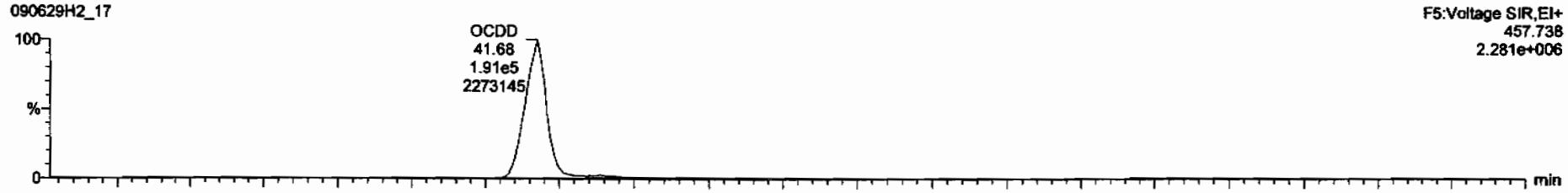

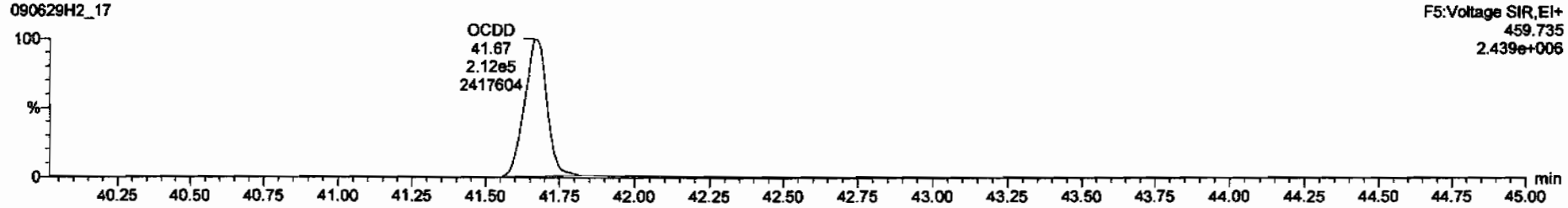

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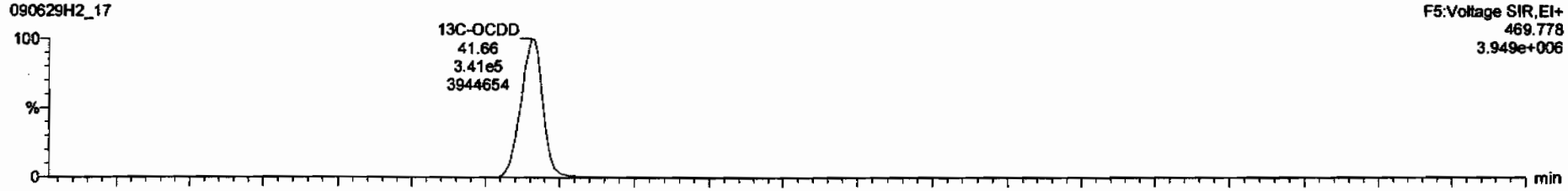

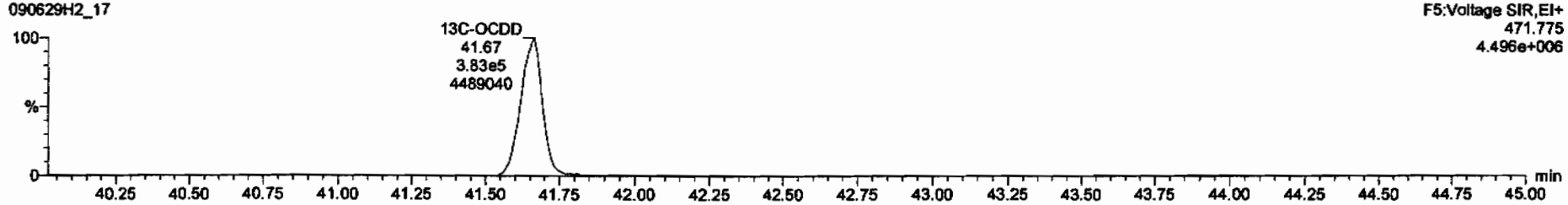

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

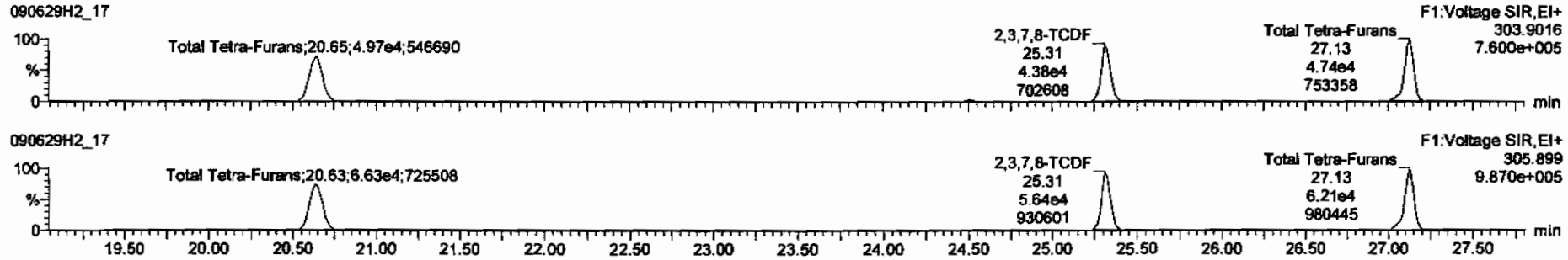

13C-2,3,7,8-TCDF

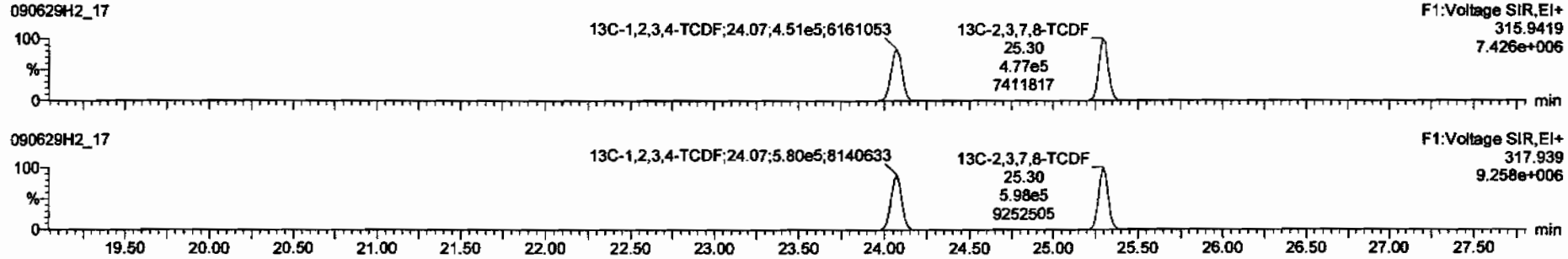

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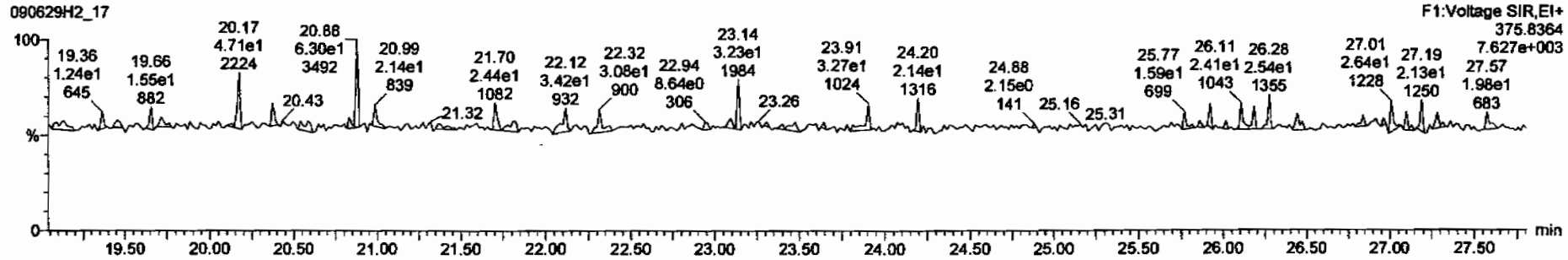

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Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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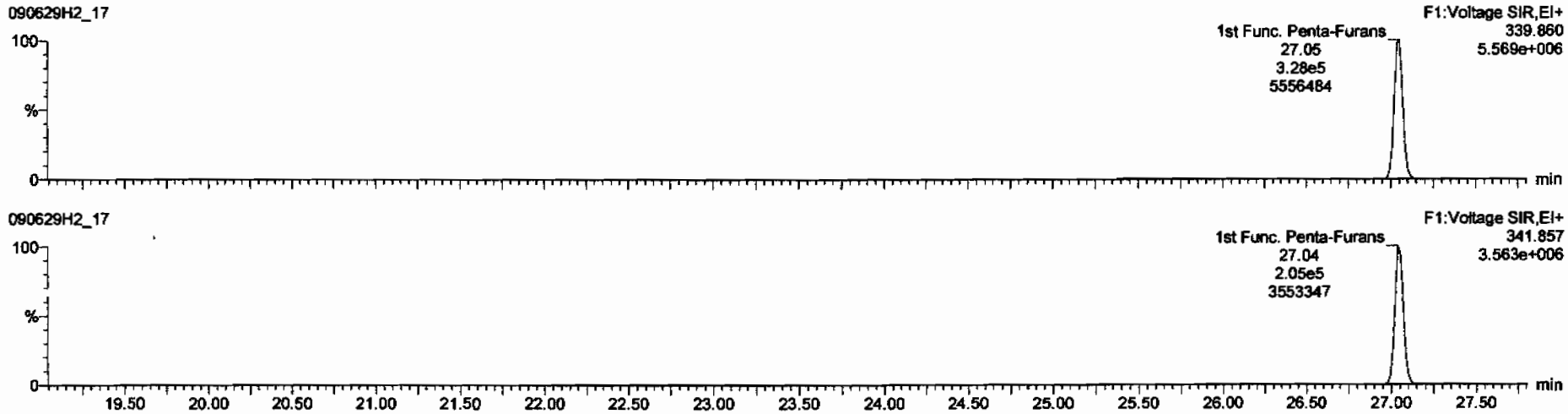

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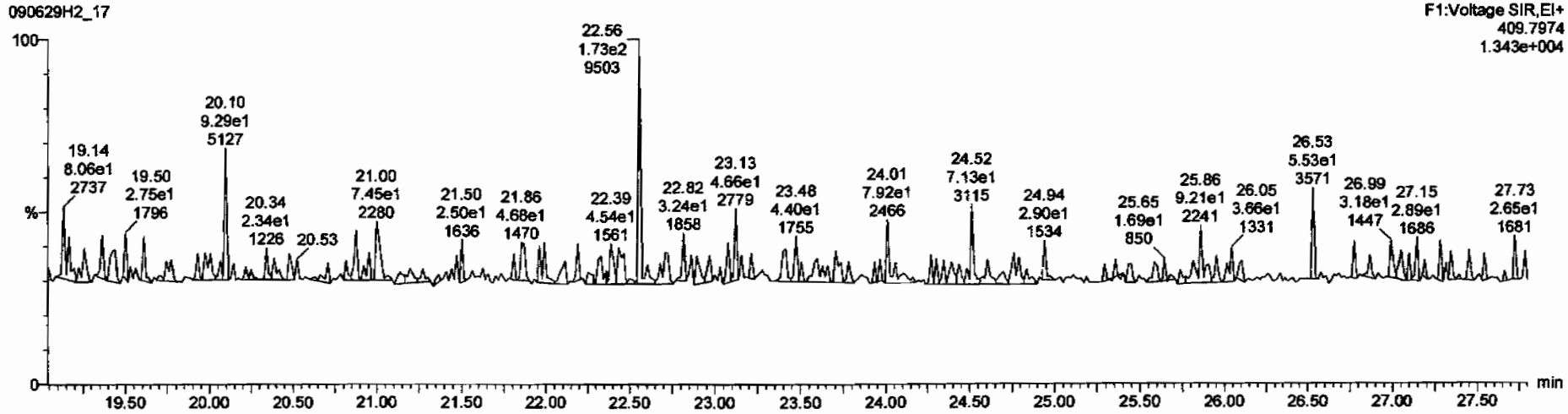

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1,2,3,7,8-PeCDF

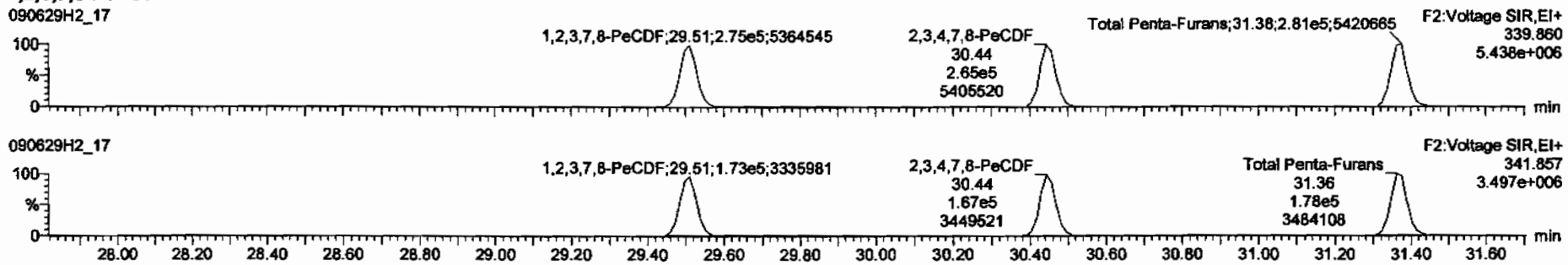

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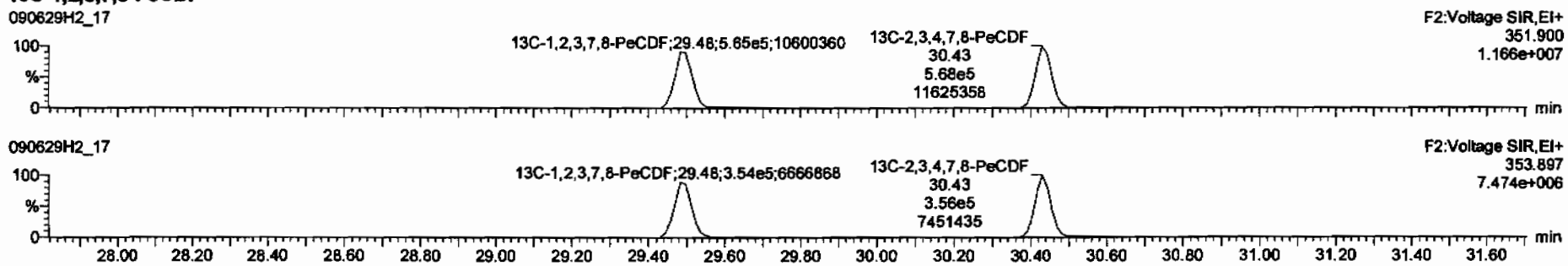

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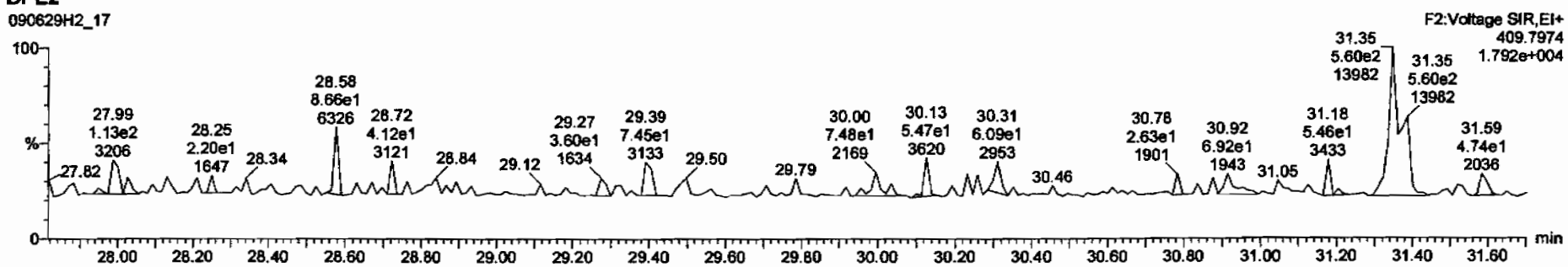

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1,2,3,4,7,8-HxCDF

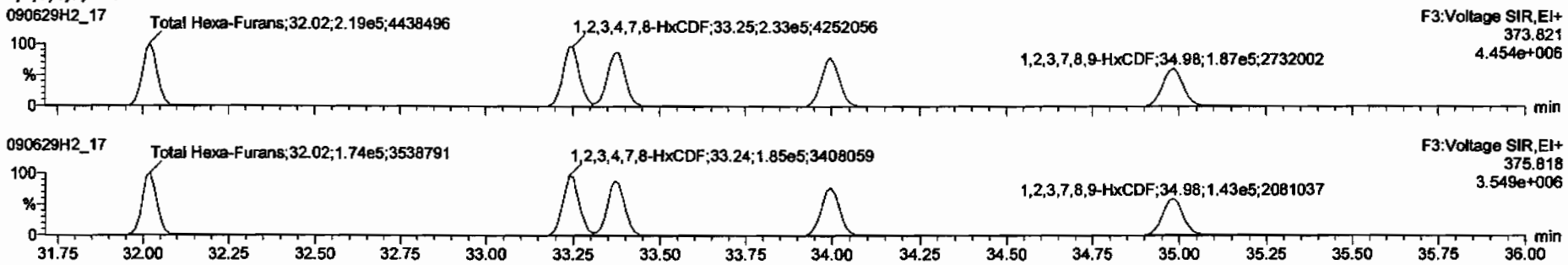

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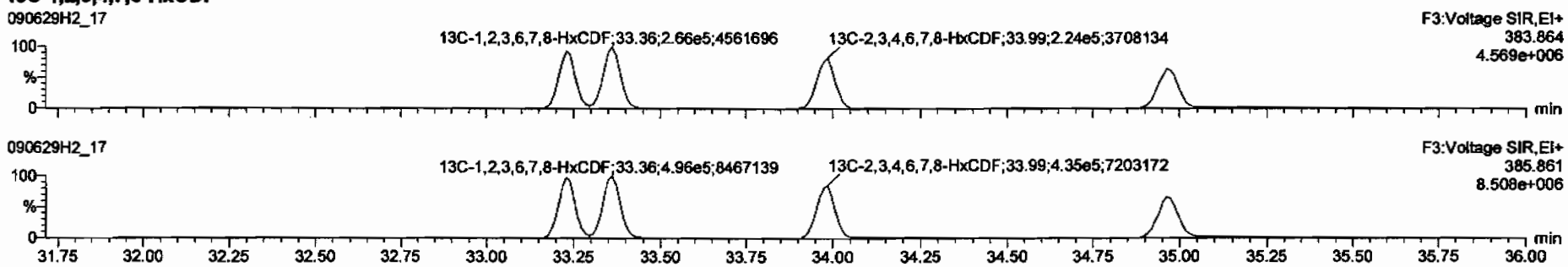

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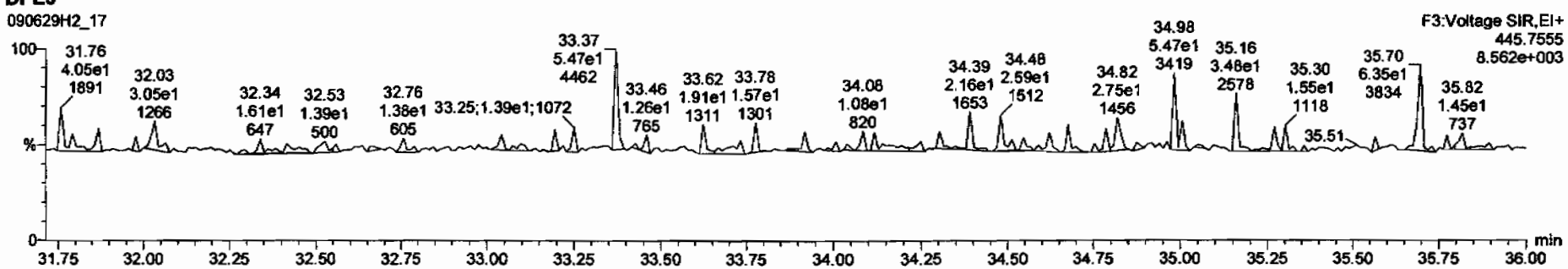

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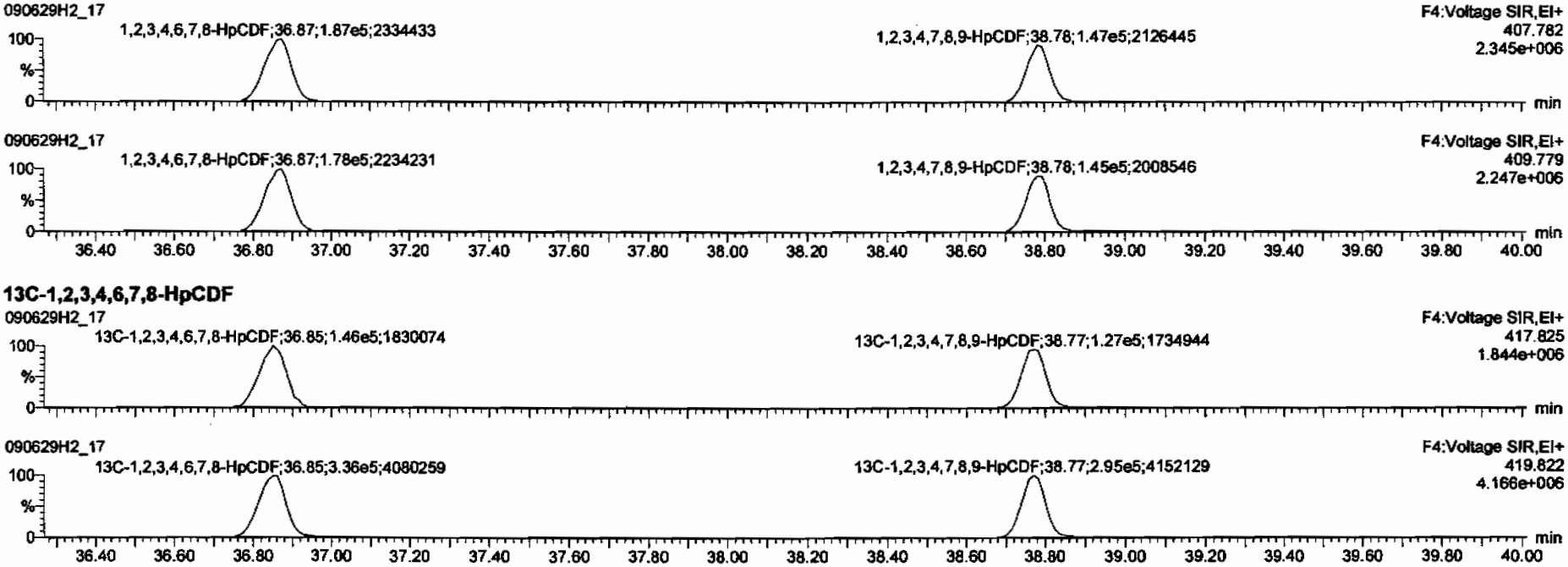

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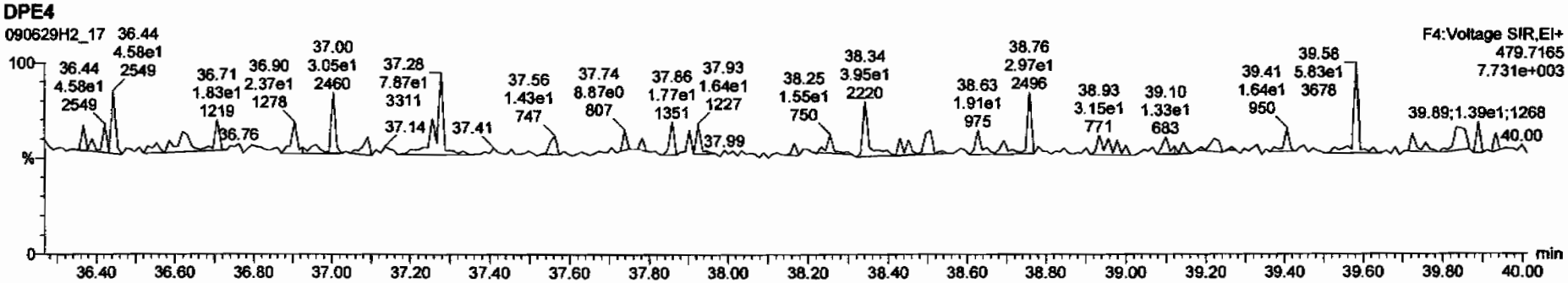

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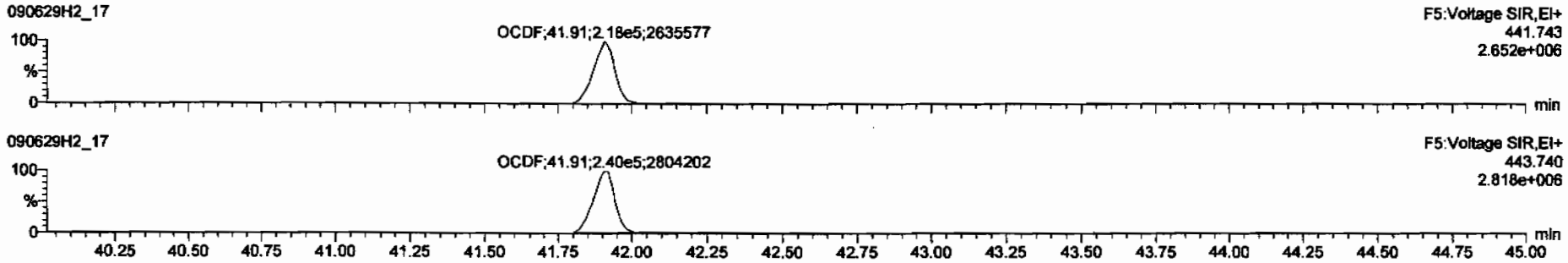

13C-OCDF

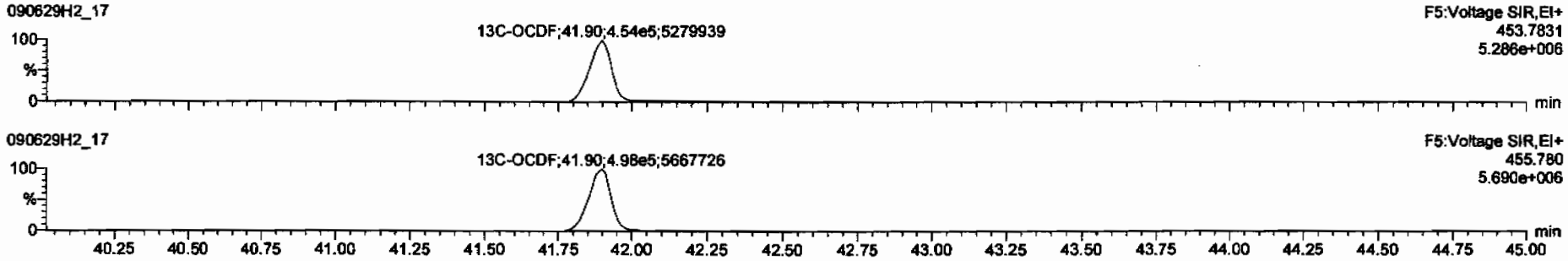

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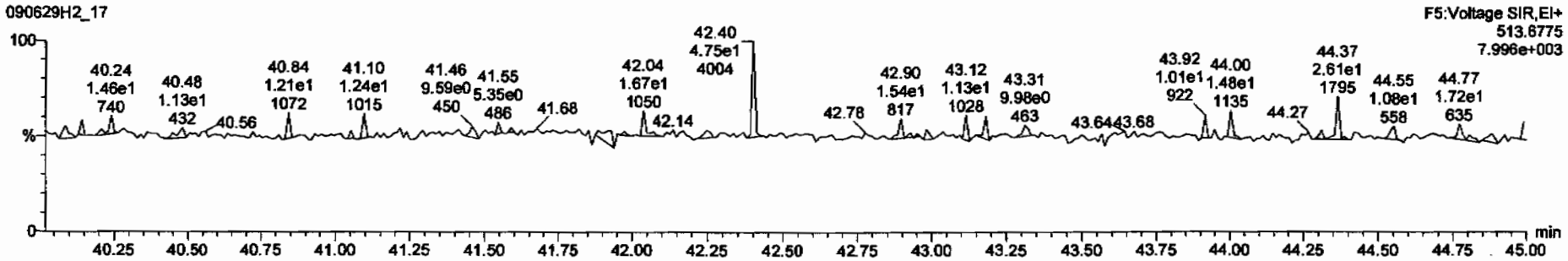

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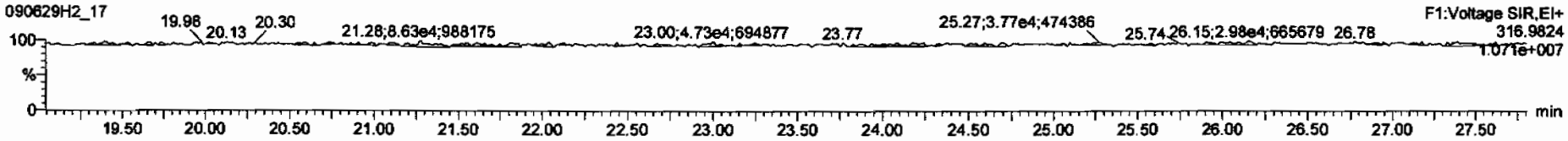

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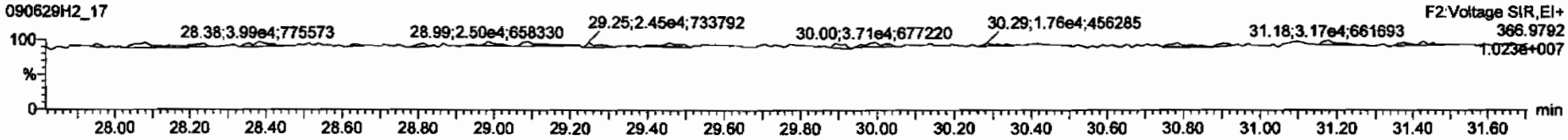

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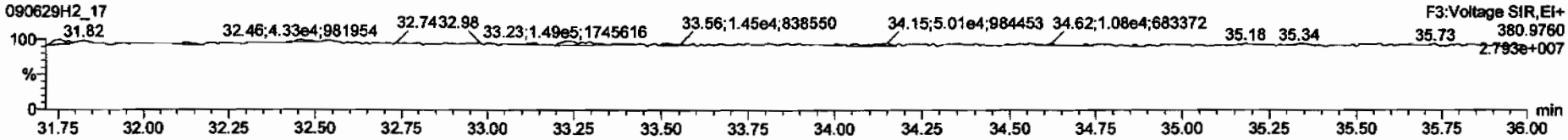

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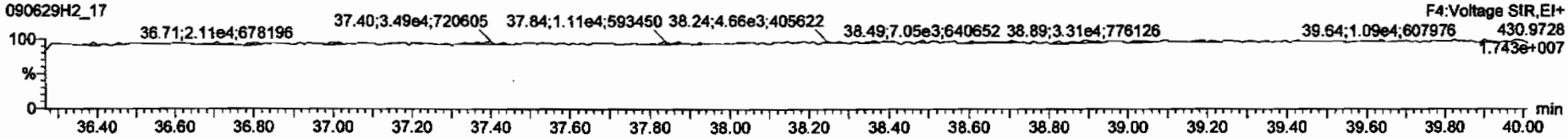

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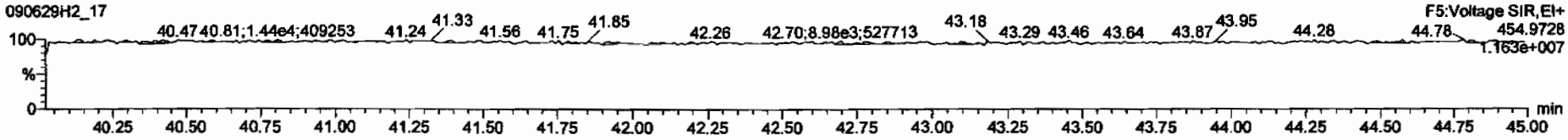

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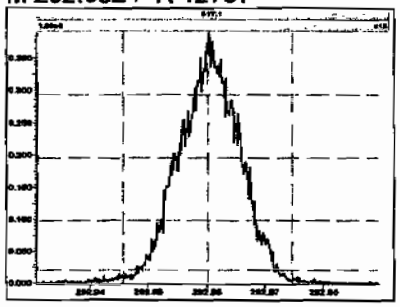

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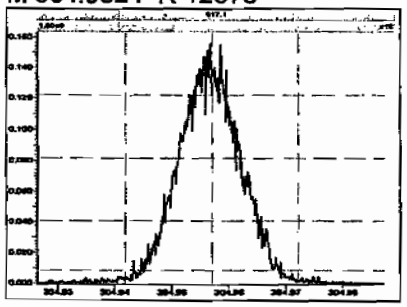

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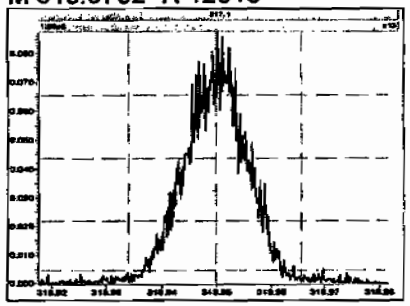

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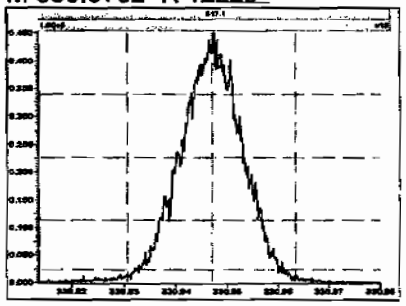

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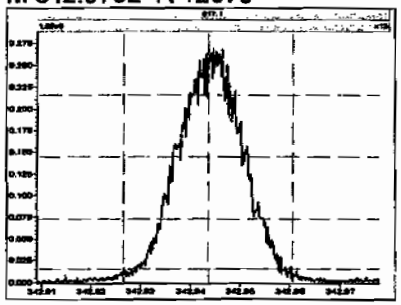

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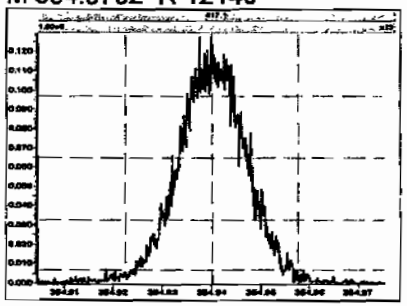

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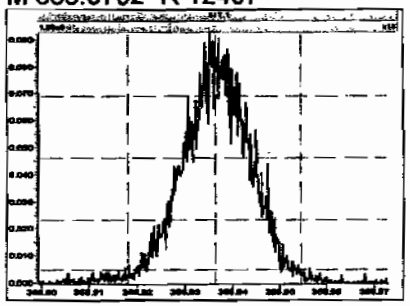

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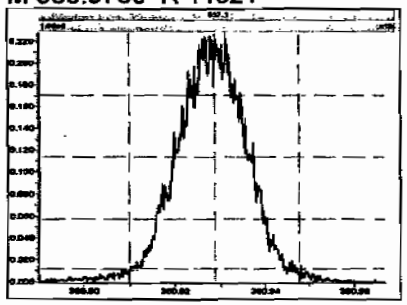

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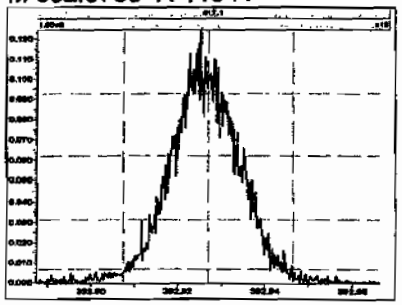

M 404.9760 R 11893

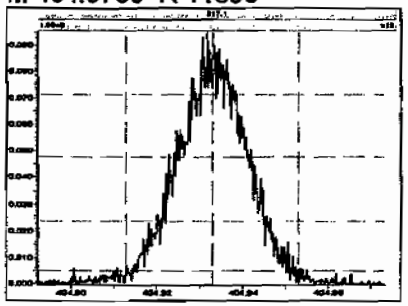

M 416.9760 R 11717

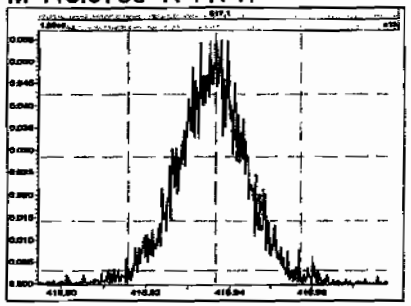

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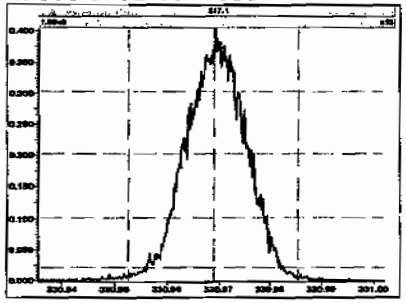

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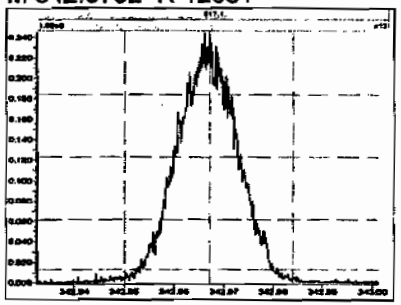

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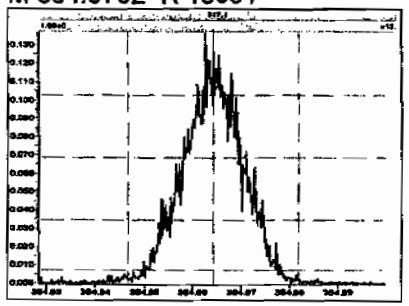

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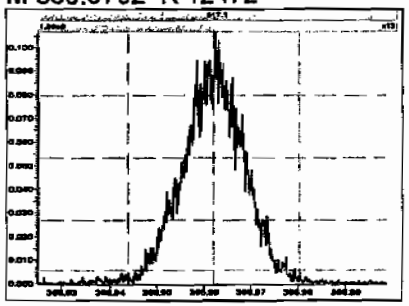

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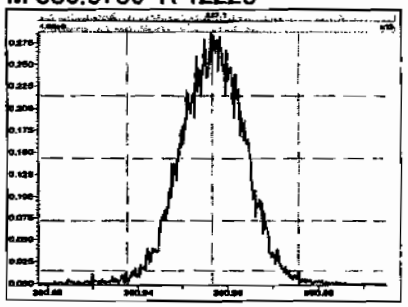

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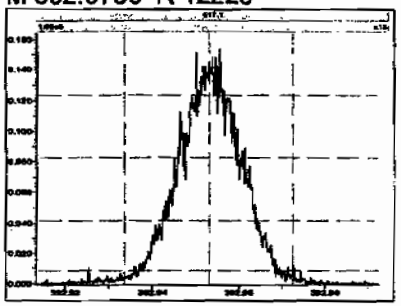

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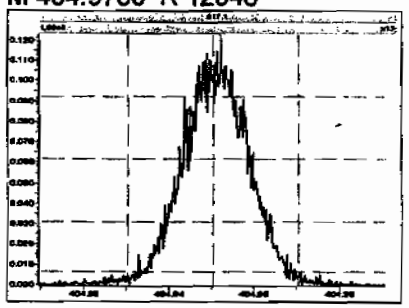

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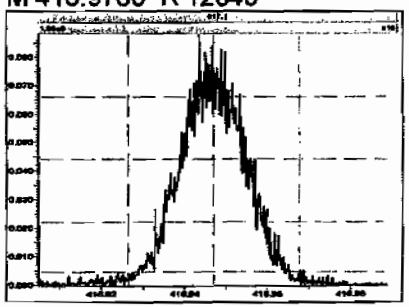

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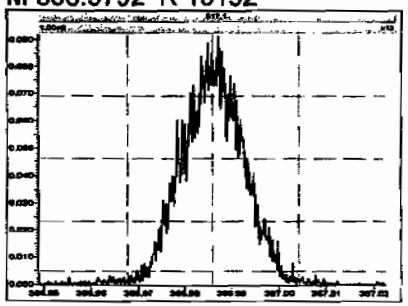

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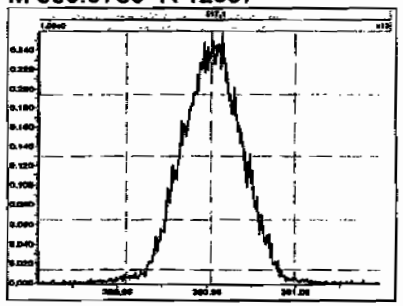

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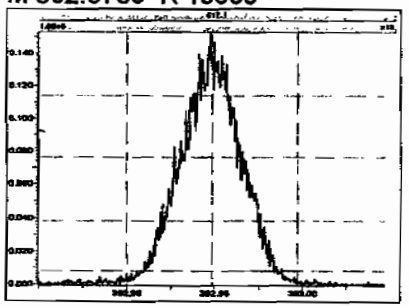

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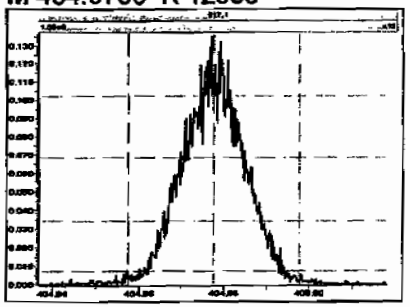

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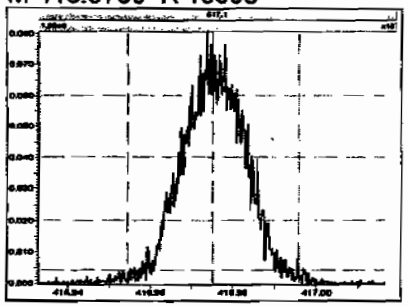

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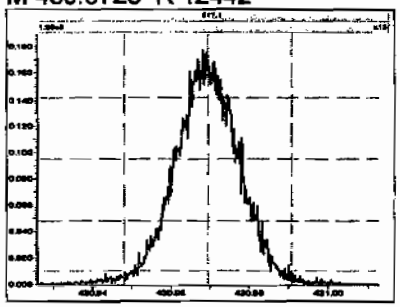

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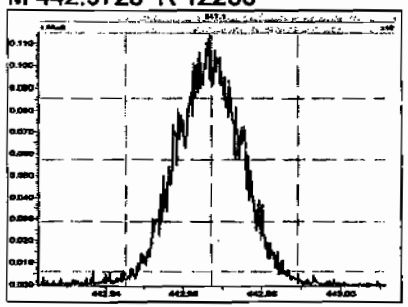

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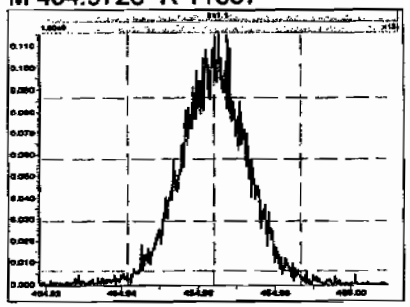

M 404.9760 R 13262

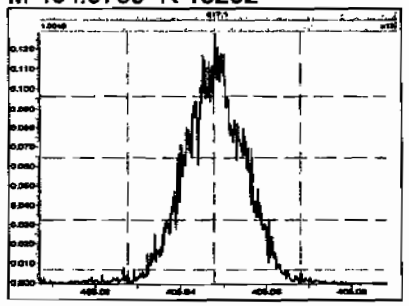

M 416.9760 R 14097

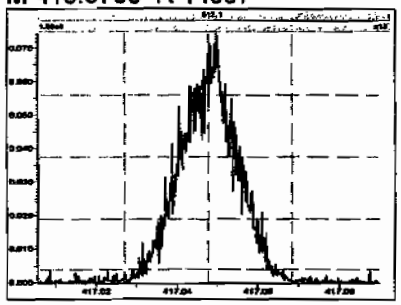

M 430.9728 R 12853

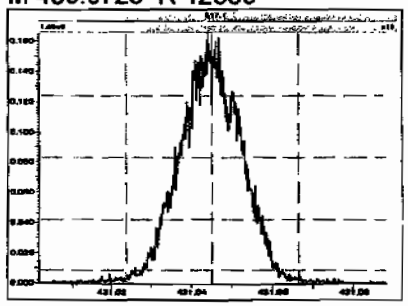

M 442.9728 R 12445

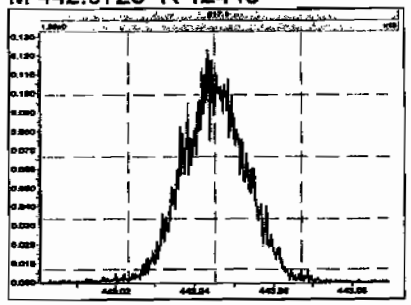

M 454.9728 R 12477

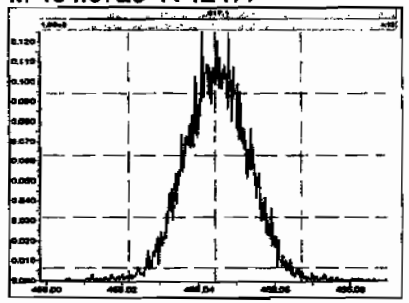

M 466.9728 R 12756

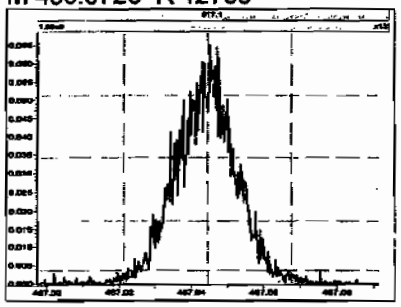

M 480.9696 R 12196

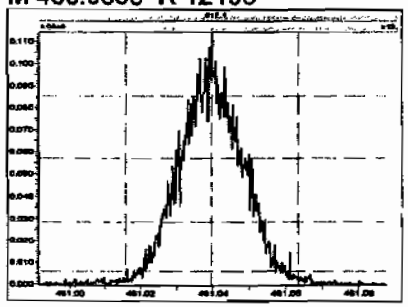

M 430.9728 R 12755

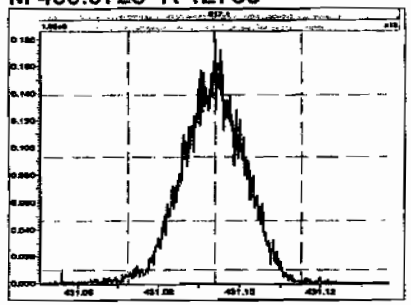

M 442.9728 R 13170

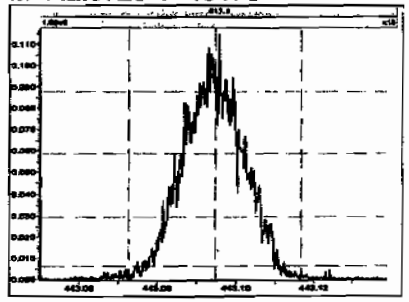

Printed: Tuesday, June 30, 2009 04:13:13 Pacific Daylight Time

M 454.9728 R 13440

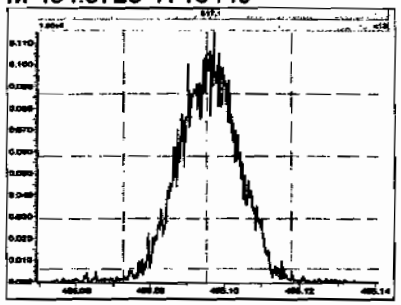

M 466.9728 R 13371

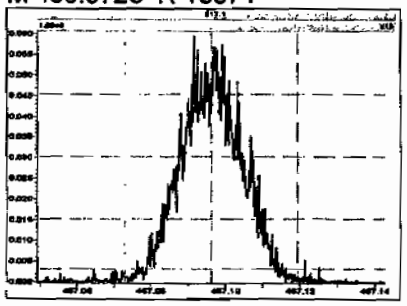

M 480.9696 R 12490

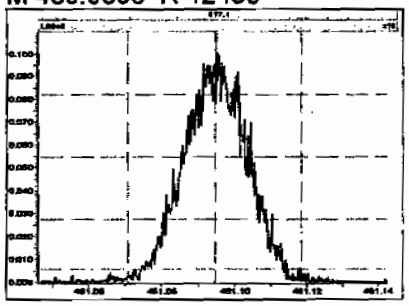

M 492.9696 R 12376

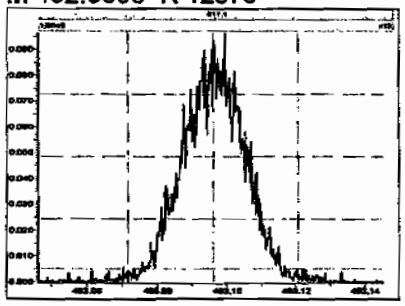

M 504.9696 R 12438

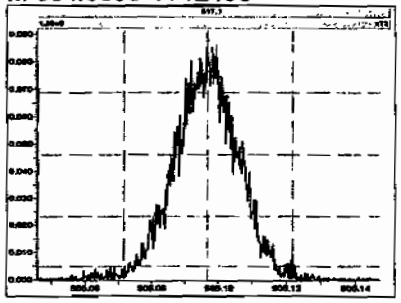

M 516.9697 R 13269

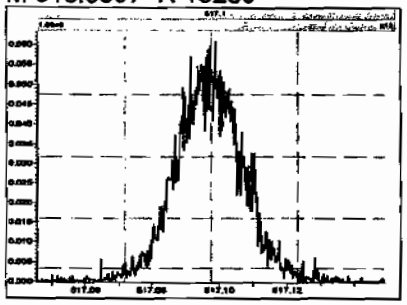

ICAL

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Compound name: 2,3,7,8-TCDD
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	IRA	Qv	RT	RRT	Area	IS Area	Conc.	% Dev.	RRF
090212H1_1	10.0	0.82	NO	25.98	1.001	7.90e4	7.49e5	9.78	-2.2	1.05
090212H1_3	0.250	0.85	NO	26.00	1.001	1.54e3	5.94e5	0.240	-4.1	1.03
090212H1_4	0.500	0.71	NO	25.98	1.001	3.65e3	6.33e5	0.536	7.1	1.16
090212H1_5	2.00	0.72	NO	26.00	1.001	1.40e4	6.64e5	1.95	-2.5	1.05
090212H1_6	40.0	0.77	NO	25.98	1.001	3.33e5	7.81e5	39.5	-1.3	1.06
090212H1_7	200	0.78	NO	26.00	1.001	1.92e6	8.66e5	206	3.0	1.11

Compound name: 1,2,3,7,8-PeCDD
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	IRA	Qv	RT	RRT	Area	IS Area	Conc.	% Dev.	RRF
090212H1_1	50.0	0.63	NO	30.65	1.000	3.03e5	6.02e5	48.6	-2.7	1.01
090212H1_3	1.25	0.69	NO	30.67	1.000	6.36e3	4.83e5	1.27	1.9	1.05
090212H1_4	2.50	0.60	NO	30.67	1.000	1.30e4	4.97e5	2.53	1.1	1.04
090212H1_5	10.0	0.61	NO	30.67	1.000	5.28e4	5.23e5	9.77	-2.3	1.01
090212H1_6	200	0.63	NO	30.67	1.000	1.31e6	6.35e5	200	-0.1	1.03
090212H1_7	1000	0.63	NO	30.67	1.000	8.09e6	7.66e5	1020	2.2	1.06

2/13/09
MS 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.00153
RRF SD: 0.0317187, Relative SD: 3.16702
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	50.0	1.26	NO	34.10	1.000	2.54e5	5.27e5	48.0	-3.9	0.962
090212H1_3	1.25	1.42	NO	34.11	1.000	5.16e3	4.08e5	1.26	1.0	1.01
090212H1_4	2.50	1.28	NO	34.11	1.001	1.10e4	4.22e5	2.61	4.2	1.04
090212H1_5	10.0	1.32	NO	34.12	1.000	4.31e4	4.47e5	9.64	-3.6	0.965
090212H1_6	200	1.27	NO	34.11	1.000	1.12e6	5.53e5	203	1.4	1.02
090212H1_7	1000	1.25	NO	34.12	1.000	7.63e6	7.54e5	1010	1.0	1.01

Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	50.0	1.27	NO	34.21	1.000	2.90e5	5.42e5	47.6	-4.8	1.07
090212H1_3	1.25	1.20	NO	34.23	1.001	6.02e3	4.14e5	1.29	3.4	1.16
090212H1_4	2.50	1.24	NO	34.23	1.001	1.23e4	4.20e5	2.60	3.9	1.17
090212H1_5	10.0	1.26	NO	34.24	1.001	4.91e4	4.60e5	9.48	-5.2	1.07
090212H1_6	200	1.30	NO	34.22	1.000	1.29e6	5.59e5	205	2.7	1.16
090212H1_7	1000	1.26	NO	34.23	1.000	8.08e6	7.18e5	1000	0.0	1.13

Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.10201
RRF SD: 0.0447729, Relative SD: 4.06282
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	50.0	1.28	NO	34.51	1.009	2.83e5	0.00e0	48.1	-3.9	1.06
090212H1_3	1.25	1.27	NO	34.53	1.010	5.79e3	0.00e0	1.28	2.4	1.13

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 1,2,3,7,8,9-HxCDD

Name	Std Conc	RA	IsRA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50	1.28	NO	34.52	1.009	1.21e4	0.00e0	2.60	4.0	1.15
090212H1_5	10.0	1.22	NO	34.53	1.009	4.70e4	0.00e0	9.41	-5.9	1.04
090212H1_6	200	1.32	NO	34.52	1.009	1.26e6	0.00e0	207	3.3	1.14
090212H1_7	1000	1.25	NO	34.53	1.009	8.13e6	0.00e0	1000	0.2	1.10

Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsRA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.03	NO	38.17	1.000	2.11e5	4.13e5	48.0	-4.0	1.02
090212H1_3	1.25	1.15	NO	38.18	1.000	4.52e3	3.21e5	1.32	5.7	1.12
090212H1_4	2.50	1.07	NO	38.18	1.000	8.68e3	3.21e5	2.54	1.7	1.08
090212H1_5	10.0	1.07	NO	38.19	1.001	3.41e4	3.36e5	9.55	-4.5	1.02
090212H1_6	200	1.07	NO	38.19	1.000	9.19e5	4.29e5	201	0.7	1.07
090212H1_7	1000	1.05	NO	38.19	1.001	6.29e6	5.88e5	1000	0.5	1.07

Compound name: OCDD
Response Factor: 1.17831
RRF SD: 0.0736447, Relative SD: 6.25001
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsRA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.91	NO	41.63	1.000	3.30e5	5.87e5	95.3	-4.7	1.12
090212H1_3	2.50	0.89	NO	41.67	1.001	7.09e3	4.40e5	2.74	9.5	1.29
090212H1_4	5.00	0.87	NO	41.65	1.000	1.25e4	4.37e5	4.85	-3.0	1.14
090212H1_5	20.0	0.85	NO	41.66	1.000	5.10e4	4.67e5	18.5	-7.3	1.09
090212H1_6	400	0.92	NO	41.68	1.000	1.48e6	6.21e5	404	1.1	1.19
090212H1_7	2000	0.89	NO	41.67	1.001	1.10e7	8.92e5	2090	4.4	1.23

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 2,3,7,8-TCDF
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IY	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	10.0	0.78	NO	25.19	1.001	1.14e5	1.07e6	9.75	-2.5	1.06
090212H1_3	0.250	0.83	NO	25.19	1.001	2.44e3	8.63e5	0.260	4.1	1.13
090212H1_4	0.500	0.84	NO	25.20	1.001	4.98e3	9.06e5	0.506	1.2	1.10
090212H1_5	2.00	0.81	NO	25.20	1.001	1.97e4	9.70e5	1.87	-6.4	1.02
090212H1_6	40.0	0.79	NO	25.20	1.001	4.71e5	1.08e6	40.1	0.3	1.09
090212H1_7	200	0.79	NO	25.20	1.001	2.66e6	1.18e6	207	3.4	1.12

Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IY	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0	1.61	NO	29.42	1.000	5.65e5	9.82e5	49.6	-0.7	1.15
090212H1_3	1.25	1.63	NO	29.43	1.000	1.11e4	7.63e5	1.25	0.1	1.16
090212H1_4	2.50	1.74	NO	29.43	1.000	2.29e4	7.80e5	2.53	1.3	1.17
090212H1_5	10.0	1.61	NO	29.43	1.000	9.64e4	8.78e5	9.48	-5.2	1.10
090212H1_6	200	1.62	NO	29.43	1.000	2.36e6	9.96e5	204	2.0	1.18
090212H1_7	1000	1.60	NO	29.45	1.000	1.42e7	1.20e6	1030	2.5	1.19

Compound name: 2,3,4,7,8-PeCDF
Response Factor: 1.11789
RRF SD: 0.0264655, Relative SD: 2.36745
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IY	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0	1.56	NO	30.35	1.000	5.35e5	9.65e5	49.6	-0.8	1.11
090212H1_3	1.25	1.51	NO	30.36	1.000	1.08e4	7.68e5	1.25	0.4	1.12

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 2,3,4,7,8-PeCDF

	Name	Std. Conc.	RA	IM	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_4	2.50	1.61	NO	30.36	1.000	2.28e4	7.94e5	2.57	2.6	1.15
2	090212H1_5	10.0	1.64	NO	30.38	1.000	9.28e4	8.67e5	9.58	-4.2	1.07
3	090212H1_6	200	1.60	NO	30.36	1.000	2.28e6	1.01e6	203	1.5	1.13
4	090212H1_7	1000	1.59	NO	30.38	1.000	1.37e7	1.22e6	1010	0.5	1.12

Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.41088
RRF SD: 0.0512913, Relative SD: 3.6354
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	IM	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_1	50.0	1.27	NO	33.19	1.001	4.59e5	6.74e5	48.3	-3.3	1.36
2	090212H1_3	1.25	1.35	NO	33.19	1.000	9.88e3	5.28e5	1.33	6.0	1.50
3	090212H1_4	2.50	1.32	NO	33.19	1.000	1.96e4	5.45e5	2.54	1.8	1.44
4	090212H1_5	10.0	1.31	NO	33.20	1.000	7.94e4	5.86e5	9.61	-3.9	1.36
5	090212H1_6	200	1.27	NO	33.20	1.001	1.99e6	7.08e5	199	-0.5	1.40
6	090212H1_7	1000	1.27	NO	33.20	1.000	1.28e7	9.05e5	1000	-0.0	1.41

Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.22218
RRF SD: 0.0229408, Relative SD: 1.87703
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	IM	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_1	50.0	1.25	NO	33.31	1.000	5.49e5	9.02e5	49.8	-0.4	1.22
2	090212H1_3	1.25	1.21	NO	33.32	1.000	1.07e4	6.79e5	1.29	3.1	1.26
3	090212H1_4	2.50	1.37	NO	33.31	1.000	2.16e4	6.99e5	2.52	1.0	1.23
4	090212H1_5	10.0	1.34	NO	33.33	1.000	8.96e4	7.51e5	9.76	-2.4	1.19
5	090212H1_6	200	1.27	NO	33.32	1.000	2.27e6	9.34e5	199	-0.5	1.22
6	090212H1_7	1000	1.27	NO	33.33	1.001	1.41e7	1.17e6	992	-0.8	1.21

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.29	NO	33.92	1.000	4.53e5	7.19e5	49.2	-1.6	1.26
090212H1_3	1.25	1.38	NO	33.93	1.000	9.11e3	5.78e5	1.23	-1.5	1.26
090212H1_4	2.50	1.28	NO	33.93	1.001	1.91e4	5.74e5	2.60	3.9	1.33
090212H1_5	10.0	1.25	NO	33.94	1.000	7.70e4	6.20e5	9.71	-2.9	1.24
090212H1_6	200	1.26	NO	33.93	1.000	1.95e6	7.64e5	200	-0.2	1.28
090212H1_7	1000	1.30	NO	33.94	1.000	1.26e7	9.59e5	1020	2.3	1.31

Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.25756
RRF SD: 0.0204635, Relative SD: 1.62723
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.25	NO	34.91	1.000	3.76e5	6.05e5	49.5	-1.0	1.24
090212H1_3	1.25	1.37	NO	34.91	1.000	7.41e3	4.73e5	1.24	-0.4	1.25
090212H1_4	2.50	1.24	NO	34.92	1.001	1.51e4	4.79e5	2.50	0.2	1.26
090212H1_5	10.0	1.28	NO	34.93	1.000	6.29e4	5.10e5	9.81	-1.9	1.23
090212H1_6	200	1.25	NO	34.92	1.001	1.68e6	6.50e5	206	2.9	1.29
090212H1_7	1000	1.28	NO	34.92	1.000	1.08e7	8.57e5	1000	0.3	1.26

Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.05	NO	36.81	1.000	4.18e5	5.07e5	48.8	-2.3	1.65
090212H1_3	1.25	1.05	NO	36.84	1.001	8.84e3	3.97e5	1.32	5.5	1.78

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Compound name: 1,2,3,4,6,7,8-HpCDF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	% Dev	RRF
090212H1_4	2.50	1.04	NO	36.82	1.000	1.73e4	3.94e5	2.60	4.0	1.76
090212H1_5	10.0	1.05	NO	36.84	1.001	6.64e4	4.25e5	9.25	-7.5	1.56
090212H1_6	200	1.06	NO	36.83	1.000	1.78e6	5.26e5	200	-0.1	1.69
090212H1_7	1000	1.06	NO	36.83	1.000	1.17e7	6.89e5	1010	0.5	1.70

Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.48054
RRF SD: 0.0286004, Relative SD: 1.93175
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	% Dev	RRF
090212H1_1	50.0	1.05	NO	38.73	1.000	3.09e5	4.20e5	49.7	-0.5	1.47
090212H1_3	1.25	0.89	NO	38.75	1.001	6.11e3	3.26e5	1.27	1.3	1.50
090212H1_4	2.50	0.99	NO	38.73	1.000	1.20e4	3.25e5	2.49	-0.4	1.47
090212H1_5	10.0	1.07	NO	38.74	1.000	4.97e4	3.47e5	9.66	-3.4	1.43
090212H1_6	200	1.04	NO	38.75	1.000	1.34e6	4.47e5	202	0.9	1.49
090212H1_7	1000	1.03	NO	38.75	1.000	9.18e6	6.08e5	1020	2.1	1.51

Compound name: OCDF
Response Factor: 1.09622
RRF SD: 0.0644136, Relative SD: 5.87597
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	% Dev	RRF
090212H1_1	100	0.93	NO	41.88	1.001	4.66e5	8.78e5	96.7	-3.3	1.06
090212H1_3	2.50	0.90	NO	41.89	1.001	1.01e4	6.65e5	2.76	10.6	1.21
090212H1_4	5.00	0.84	NO	41.88	1.001	1.79e4	6.44e5	5.08	1.6	1.11
090212H1_5	20.0	0.95	NO	41.88	1.000	7.14e4	6.95e5	18.8	-6.2	1.03
090212H1_6	400	0.94	NO	41.90	1.000	2.10e6	9.52e5	402	0.4	1.10
090212H1_7	2000	0.92	NO	41.89	1.000	1.48e7	1.39e6	1940	-3.1	1.06

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Compound name: 13C-2,3,7,8-TCDD
Response Factor: 1.01489
RRF SD: 0.0275825, Relative SD: 2.71777
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.95	1.022	7.49e5	7.37e5	100	0.1	1.02
090212H1_3	100	0.80	NO	25.97	1.022	5.94e5	6.03e5	97.2	-2.8	0.986
090212H1_4	100	0.78	NO	25.97	1.022	6.33e5	6.33e5	98.5	-1.5	1.00
090212H1_5	100	0.78	NO	25.97	1.022	6.64e5	6.68e5	97.9	-2.1	0.994
090212H1_6	100	0.79	NO	25.97	1.022	7.81e5	7.54e5	102	2.0	1.04
090212H1_7	100	0.79	NO	25.97	1.022	8.66e5	8.18e5	104	4.3	1.06

Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.827461
RRF SD: 0.0577323, Relative SD: 6.97704
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.64	NO	30.64	1.207	6.02e5	7.37e5	98.7	-1.3	0.817
090212H1_3	100	0.63	NO	30.65	1.207	4.83e5	6.03e5	96.8	-3.2	0.801
090212H1_4	100	0.61	NO	30.65	1.207	4.97e5	6.33e5	94.9	-5.1	0.786
090212H1_5	100	0.64	NO	30.65	1.207	5.23e5	6.68e5	94.6	-5.4	0.783
090212H1_6	100	0.65	NO	30.65	1.207	6.35e5	7.54e5	102	1.7	0.842
090212H1_7	100	0.64	NO	30.65	1.207	7.66e5	8.18e5	113	13.2	0.937

Compound name: 13C-1,2,3,4,7,8-HxCDD
Response Factor: 0.916247
RRF SD: 0.0122736, Relative SD: 1.33955
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.08	0.988	5.27e5	5.79e5	99.4	-0.6	0.911
090212H1_3	100	1.26	NO	34.10	0.988	4.08e5	4.37e5	102	2.0	0.934

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Compound name: 13C-1,2,3,4,7,8-HxCDD

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	100	1.26	NO	34.08	0.988	4.22e5	4.66e5	98.7	-1.3	0.904
090212H1_5	100	1.24	NO	34.11	0.988	4.47e5	4.90e5	99.6	-0.4	0.913
090212H1_6	100	1.25	NO	34.10	0.988	5.53e5	6.10e5	98.9	-1.1	0.907
090212H1_7	100	1.25	NO	34.11	0.988	7.54e5	8.12e5	101	1.4	0.929

Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.920893
RRF SD: 0.0250009, Relative SD: 2.71486
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.19	0.991	5.42e5	5.79e5	102	1.7	0.936
090212H1_3	100	1.23	NO	34.21	0.991	4.14e5	4.37e5	103	2.9	0.948
090212H1_4	100	1.29	NO	34.21	0.991	4.20e5	4.66e5	97.7	-2.3	0.900
090212H1_5	100	1.25	NO	34.22	0.991	4.60e5	4.90e5	102	2.1	0.940
090212H1_6	100	1.27	NO	34.21	0.991	5.59e5	6.10e5	99.5	-0.5	0.916
090212H1_7	100	1.23	NO	34.22	0.991	7.18e5	8.12e5	96.0	-4.0	0.884

Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.708388
RRF SD: 0.019948, Relative SD: 2.81596
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.07	NO	38.16	1.106	4.13e5	5.79e5	101	0.7	0.713
090212H1_3	100	1.09	NO	38.17	1.106	3.21e5	4.37e5	104	3.9	0.736
090212H1_4	100	1.05	NO	38.17	1.106	3.21e5	4.66e5	97.1	-2.9	0.688
090212H1_5	100	1.06	NO	38.17	1.106	3.36e5	4.90e5	96.8	-3.2	0.686
090212H1_6	100	1.06	NO	38.18	1.106	4.29e5	6.10e5	99.3	-0.7	0.703
090212H1_7	100	1.04	NO	38.17	1.106	5.88e5	8.12e5	102	2.2	0.724

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Compound name: 13C-OCDD
Response Factor: 0.502588
RRF SD: 0.0283515, Relative SD: 5.6411
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IW	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	200	0.89	NO	41.62	1.206	5.87e5	5.79e5	202	0.9	0.507
090212H1_3	200	0.92	NO	41.65	1.207	4.40e5	4.37e5	200	0.2	0.504
090212H1_4	200	0.90	NO	41.63	1.206	4.37e5	4.66e5	187	-6.7	0.469
090212H1_5	200	0.89	NO	41.65	1.206	4.67e5	4.90e5	190	-5.0	0.477
090212H1_6	200	0.91	NO	41.67	1.207	6.21e5	6.10e5	203	1.4	0.510
090212H1_7	200	0.93	NO	41.65	1.206	8.92e5	8.12e5	219	9.3	0.549

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.976814
RRF SD: 0.0185774, Relative SD: 1.90184
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IW	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.16	0.991	1.07e6	1.11e6	98.8	-1.2	0.965
090212H1_3	100	0.79	NO	25.17	0.991	8.63e5	9.05e5	97.5	-2.5	0.953
090212H1_4	100	0.78	NO	25.17	0.991	9.06e5	9.34e5	99.3	-0.7	0.970
090212H1_5	100	0.79	NO	25.17	0.991	9.70e5	9.83e5	101	1.1	0.987
090212H1_6	100	0.77	NO	25.17	0.991	1.08e6	1.10e6	100	0.4	0.980
090212H1_7	100	0.76	NO	25.17	0.991	1.18e6	1.18e6	103	2.9	1.01

Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 0.896189
RRF SD: 0.0663113, Relative SD: 7.39926
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IW	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.58	NO	29.41	1.158	9.82e5	1.11e6	98.4	-1.6	0.882
090212H1_3	100	1.57	NO	29.42	1.158	7.63e5	9.05e5	94.0	-6.0	0.842

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Compound name: 13C-1,2,3,7,8-PeCDF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	100	1.57	NO	29.42	1.158	7.80e5	9.34e5	93.1	-6.9	0.835
090212H1_5	100	1.58	NO	29.42	1.158	8.78e5	9.83e5	99.7	-0.3	0.894
090212H1_6	100	1.56	NO	29.42	1.158	9.96e5	1.10e6	101	1.0	0.905
090212H1_7	100	1.52	NO	29.43	1.159	1.20e6	1.18e6	114	13.7	1.02

Compound name: 13C-2,3,4,7,8-PeCDF
Response Factor: 0.899625
RRF SD: 0.0716088, Relative SD: 7.95986
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.57	NO	30.34	1.195	9.65e5	1.11e6	96.3	-3.7	0.866
090212H1_3	100	1.54	NO	30.35	1.195	7.68e5	9.05e5	94.2	-5.8	0.848
090212H1_4	100	1.52	NO	30.35	1.195	7.94e5	9.34e5	94.5	-5.5	0.850
090212H1_5	100	1.59	NO	30.36	1.195	8.67e5	9.83e5	98.1	-1.9	0.882
090212H1_6	100	1.55	NO	30.35	1.195	1.01e6	1.10e6	102	1.6	0.914
090212H1_7	100	1.54	NO	30.36	1.195	1.22e6	1.18e6	115	15.3	1.04

Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.16919
RRF SD: 0.0331609, Relative SD: 2.83622
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.54	NO	33.16	0.961	6.74e5	5.79e5	99.5	-0.5	1.16
090212H1_3	100	0.54	NO	33.17	0.961	5.28e5	4.37e5	104	3.5	1.21
090212H1_4	100	0.52	NO	33.17	0.961	5.45e5	4.66e5	99.9	-0.1	1.17
090212H1_5	100	0.54	NO	33.19	0.961	5.86e5	4.90e5	102	2.3	1.20
090212H1_6	100	0.53	NO	33.17	0.961	7.08e5	6.10e5	99.4	-0.6	1.16
090212H1_7	100	0.53	NO	33.19	0.961	9.05e5	8.12e5	95.3	-4.7	1.11

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Compound name: 13C-1,2,3,6,7,8-HxCDF
Response Factor: 1.51914
RRF SD: 0.0457416, Relative SD: 3.01103
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	Inv.	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.55	NO	33.29	0.965	9.02e5	5.79e5	103	2.5	1.56
090212H1_3	100	0.52	NO	33.31	0.965	6.79e5	4.37e5	102	2.4	1.56
090212H1_4	100	0.53	NO	33.29	0.965	6.99e5	4.66e5	98.7	-1.3	1.50
090212H1_5	100	0.53	NO	33.32	0.965	7.51e5	4.90e5	101	1.0	1.53
090212H1_6	100	0.52	NO	33.31	0.965	9.34e5	6.10e5	101	0.8	1.53
090212H1_7	100	0.54	NO	33.31	0.965	1.17e6	8.12e5	94.6	-5.4	1.44

Compound name: 13C-2,3,4,6,7,8-HxCDF
Response Factor: 1.24921
RRF SD: 0.0473005, Relative SD: 3.78643
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	Inv.	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.54	NO	33.91	0.983	7.19e5	5.79e5	99.3	-0.7	1.24
090212H1_3	100	0.53	NO	33.92	0.983	5.78e5	4.37e5	106	6.0	1.32
090212H1_4	100	0.55	NO	33.91	0.983	5.74e5	4.66e5	98.4	-1.6	1.23
090212H1_5	100	0.55	NO	33.93	0.983	6.20e5	4.90e5	101	1.3	1.27
090212H1_6	100	0.53	NO	33.92	0.983	7.64e5	6.10e5	100	0.4	1.25
090212H1_7	100	0.53	NO	33.93	0.983	9.59e5	8.12e5	94.5	-5.5	1.18

Compound name: 13C-1,2,3,7,8,9-HxCDF
Response Factor: 1.05297
RRF SD: 0.0198461, Relative SD: 1.88477
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	Inv.	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.53	NO	34.90	1.011	6.05e5	5.79e5	99.2	-0.8	1.04
090212H1_3	100	0.52	NO	34.90	1.011	4.73e5	4.37e5	103	2.9	1.08

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Compound name: 13C-1,2,3,7,8,9-HxCDF

Name	Std Conc	RA	W	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	100	0.53	NO	34.90	1.011	4.79e5	4.66e5	97.6	-2.4	1.03
090212H1_5	100	0.54	NO	34.92	1.011	5.10e5	4.90e5	98.9	-1.1	1.04
090212H1_6	100	0.52	NO	34.90	1.011	6.50e5	6.10e5	101	1.2	1.07
090212H1_7	100	0.53	NO	34.91	1.011	8.57e5	8.12e5	100	0.2	1.05

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 0.868264
RRF SD: 0.0231201, Relative SD: 2.6628
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	W	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.46	NO	36.80	1.066	5.07e5	5.79e5	101	0.8	0.875
090212H1_3	100	0.44	NO	36.81	1.066	3.97e5	4.37e5	105	4.7	0.909
090212H1_4	100	0.44	NO	36.81	1.066	3.94e5	4.66e5	97.3	-2.7	0.845
090212H1_5	100	0.44	NO	36.82	1.066	4.25e5	4.90e5	99.9	-0.1	0.868
090212H1_6	100	0.46	NO	36.82	1.066	5.26e5	6.10e5	99.5	-0.5	0.864
090212H1_7	100	0.45	NO	36.82	1.066	6.89e5	8.12e5	97.7	-2.3	0.849

Compound name: 13C-1,2,3,4,7,8,9-HpCDF
Response Factor: 0.726514
RRF SD: 0.0207066, Relative SD: 2.85014
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	W	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.46	NO	38.72	1.122	4.20e5	5.79e5	99.8	-0.2	0.725
090212H1_3	100	0.45	NO	38.73	1.122	3.26e5	4.37e5	103	2.8	0.747
090212H1_4	100	0.45	NO	38.72	1.122	3.25e5	4.66e5	95.9	-4.1	0.696
090212H1_5	100	0.44	NO	38.73	1.122	3.47e5	4.90e5	97.6	-2.4	0.709
090212H1_6	100	0.45	NO	38.74	1.122	4.47e5	6.10e5	101	1.0	0.734
090212H1_7	100	0.44	NO	38.74	1.122	6.08e5	8.12e5	103	3.0	0.748

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 13C-OCDF
Response Factor: 0.759527
RRF SD: 0.058777, Relative SD: 7.73863
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	200	0.91	NO	41.85	1.213	8.78e5	5.79e5	200	-0.2	0.758
090212H1_3	200	0.88	NO	41.86	1.213	6.65e5	4.37e5	200	0.2	0.761
090212H1_4	200	0.90	NO	41.85	1.213	6.44e5	4.66e5	182	-9.1	0.690
090212H1_5	200	0.90	NO	41.86	1.213	6.95e5	4.90e5	187	-6.6	0.710
090212H1_6	200	0.90	NO	41.89	1.213	9.52e5	6.10e5	206	2.8	0.781
090212H1_7	200	0.90	NO	41.88	1.213	1.39e6	8.12e5	226	12.8	0.857

Compound name: 37Cl-2,3,7,8-TCDD
Response Factor: 0.668396
RRF SD: 0.0327668, Relative SD: 4.90231
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	10.0			25.98	1.023	4.66e4	7.37e5	9.46	-5.4	0.632
090212H1_3	0.250			25.97	1.022	1.08e3	6.03e5	0.269	7.5	0.718
090212H1_4	0.500			25.98	1.023	2.17e3	6.33e5	0.512	2.4	0.685
090212H1_5	2.00			25.98	1.023	8.69e3	6.68e5	1.95	-2.7	0.650
090212H1_6	40.0			25.98	1.023	1.93e5	7.54e5	38.4	-4.1	0.641
090212H1_7	200			25.98	1.023	1.12e6	8.18e5	205	2.3	0.684

Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.81	NO	25.39	0.000	7.37e5	7.37e5	100	0.0	1.00
090212H1_3	100	0.79	NO	25.40	0.000	6.03e5	6.03e5	100	0.0	1.00

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 13C-1,2,3,4-TCDD

Name	Std Conc.	RA	Int	RT	RRT	Resp	IS Resp	Conc.	Dev	RRF
090212H1_4	100	0.79	NO	25.40	0.000	6.33e5	6.33e5	100	0.0	1.00
090212H1_5	100	0.78	NO	25.40	0.000	6.68e5	6.68e5	100	0.0	1.00
090212H1_6	100	0.78	NO	25.40	0.000	7.54e5	7.54e5	100	0.0	1.00
090212H1_7	100	0.79	NO	25.40	0.000	8.18e5	8.18e5	100	0.0	1.00

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 4.96507e-017, Relative SD: 4.96507e-015
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	Int	RT	RRT	Resp	IS Resp	Conc.	Dev	RRF
090212H1_1	100	0.78	NO	23.95	0.000	1.11e6	1.11e6	100	0.0	1.00
090212H1_3	100	0.77	NO	23.95	0.000	9.05e5	9.05e5	100	0.0	1.00
090212H1_4	100	0.77	NO	23.95	0.000	9.34e5	9.34e5	100	0.0	1.00
090212H1_5	100	0.76	NO	23.97	0.000	9.83e5	9.83e5	100	0.0	1.00
090212H1_6	100	0.77	NO	23.97	0.000	1.10e6	1.10e6	100	-0.0	1.00
090212H1_7	100	0.78	NO	23.97	0.000	1.18e6	1.18e6	100	0.0	1.00

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	Int	RT	RRT	Resp	IS Resp	Conc.	Dev	RRF
090212H1_1	100	1.22	NO	34.50	0.000	5.79e5	5.79e5	100	0.0	1.00
090212H1_3	100	1.23	NO	34.51	0.000	4.37e5	4.37e5	100	0.0	1.00
090212H1_4	100	1.25	NO	34.51	0.000	4.66e5	4.66e5	100	0.0	1.00
090212H1_5	100	1.18	NO	34.52	0.000	4.90e5	4.90e5	100	0.0	1.00
090212H1_6	100	1.26	NO	34.52	0.000	6.10e5	6.10e5	100	0.0	1.00
090212H1_7	100	1.22	NO	34.52	0.000	8.12e5	8.12e5	100	0.0	1.00

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: Total Tetra-Dioxins
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0					7.49e5	60.1		
090212H1_3	0.250					5.94e5	0.240		
090212H1_4	0.500					6.33e5	0.536		
090212H1_5	2.00					6.64e5	1.95		
090212H1_6	40.0					7.81e5	39.5		
090212H1_7	200					8.66e5	206		

Compound name: Total Penta-Dioxins
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0					6.02e5	159		
090212H1_3	1.25					4.83e5	1.30		
090212H1_4	2.50					4.97e5	2.53		
090212H1_5	10.0					5.23e5	9.77		
090212H1_6	200					6.35e5	200		
090212H1_7	1000					7.66e5	1020		

Compound name: Total Hexa-Dioxins
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0					0.00e0	191		
090212H1_3	1.25					0.00e0	3.85		

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Compound name: Total Hexa-Dioxins

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50					0.00e0	7.81		
090212H1_5	10.0					0.00e0	28.5		
090212H1_6	200					0.00e0	615		
090212H1_7	1000					0.00e0	3010		

Compound name: Total Hepta-Dioxins
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0					4.13e5	127		
090212H1_3	1.25					3.21e5	1.38		
090212H1_4	2.50					3.21e5	2.60		
090212H1_5	10.0					3.36e5	9.55		
090212H1_6	200					4.29e5	203		
090212H1_7	1000					5.88e5	1010		

Compound name: Total Tetra-Furans
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	10.0					1.07e6	35.3		
090212H1_3	0.250					8.63e5	0.269		
090212H1_4	0.500					9.06e5	0.506		
090212H1_5	2.00					9.70e5	1.88		
090212H1_6	40.0					1.08e6	40.6		
090212H1_7	200					1.18e6	209		

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 1st Func. Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RF	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0						0.00e0	46.2		
090212H1_3	1.25						0.00e0	0.00241		
090212H1_4	2.50						0.00e0	0.0270		
090212H1_5	10.0						0.00e0	0.0198		
090212H1_6	200						0.00e0	0.00694		
090212H1_7	1000						0.00e0	0.00731		

Compound name: Total Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RF	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0						0.00e0	147		
090212H1_3	1.25						0.00e0	2.51		
090212H1_4	2.50						0.00e0	5.10		
090212H1_5	10.0						0.00e0	19.1		
090212H1_6	200						0.00e0	412		
090212H1_7	1000						0.00e0	2040		

Compound name: Total Hexa-Furans
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RF	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0						0.00e0	250		
090212H1_3	1.25						0.00e0	5.09		

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: Total Hexa-Furans

Name	Std. Conc.	Area	RT	RRT	Response	IS Area	Conc.	Adj.	RRF
090212H1_4	2.50				0.00e0		10.2		
090212H1_5	10.0				0.00e0		38.9		
090212H1_6	200				0.00e0		804		
090212H1_7	1000				0.00e0		4020		

Compound name: Total Hepta-Furans
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	Area	RT	RRT	Response	IS Area	Conc.	Adj.	RRF
090212H1_1	50.0				0.00e0		98.6		
090212H1_3	1.25				0.00e0		2.59		
090212H1_4	2.50				0.00e0		5.09		
090212H1_5	10.0				0.00e0		18.9		
090212H1_6	200				0.00e0		403		
090212H1_7	1000				0.00e0		2030		

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	Area	RT	RRT	Response	IS Area	Conc.	Adj.	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: PFK2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	S/N Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	S/N Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	S/N Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: PFK4

Name	Std. Conc.	RT	W	R	RRT	Resp.	S/N Resp.	Conc.	Dev.	RRF
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: PFK5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RT	W	R	RRT	Resp.	S/N Resp.	Conc.	Dev.	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RT	W	R	RRT	Resp.	S/N Resp.	Conc.	Dev.	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: DPE2
No Calibration
Response type: External Std, Area
Curve type: RF

	Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	1.00								
	090212H1_3	1.00								
	090212H1_4	1.00								
	090212H1_5	1.00								
	090212H1_6	1.00								
	090212H1_7	1.00								

Compound name: DPE3
No Calibration
Response type: External Std, Area
Curve type: RF

	Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	1.00								
	090212H1_3	1.00								
	090212H1_4	1.00								
	090212H1_5	1.00								
	090212H1_6	1.00								
	090212H1_7	1.00								

Compound name: DPE4
No Calibration
Response type: External Std, Area
Curve type: RF

	Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	1.00								
	090212H1_3	1.00								
	090212H1_4	1.00								
	090212H1_5	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: DPE4

Name	Std Conc	RA	IN	RT	RRT	Resp	S/N Resp	Conc	%Dev	RRF
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	S/N Resp	Conc	%Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE6
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	S/N Resp	Conc	%Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	NO	9.78	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	48.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	48.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	48.1	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	48.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.91	0.76-1.02	NO	95.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	9.75	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	48.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	49.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	48.8	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	49.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.93	0.76-1.02	NO	96.7	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090212H1-1

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	100	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	98.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	99.4	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	102	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	98.8	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.5	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	NO	103	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	99.2	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	101	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	99.8	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	200	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.46	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: _____
Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	Name	RT
1	1,3,6,8-TCDD (First)	22.58
2	1,2,8,9-TCDD (Last)	26.86
3	1,2,4,7,9-PeCDD (First)	28.51
4	1,2,3,8,9-PeCDD (Last)	31.03
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.01
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.28
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.91
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

2/13/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1
GC Column ID: DB-5
Analysis Date: 12-Feb-09
Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090212H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090212H1_1

Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.90e4	0.82	NO	1.08	1.000	25.98	1.001	9.7764	97.8	0.0390	9.7764
2	1,2,3,7,8-PeCDD	3.03e5	0.63	NO	1.03	1.000	30.65	1.000	48.635	97.3	0.124	48.635
3	1,2,3,4,7,8-HxCDD	2.54e5	1.26	NO	1.00	1.000	34.10	1.000	48.035	96.1	0.187	48.035
4	1,2,3,6,7,8-HxCDD	2.90e5	1.27	NO	1.13	1.000	34.21	1.000	47.595	95.2	0.184	47.595
5	1,2,3,7,8,9-HxCDD	2.83e5	1.28	NO	1.10	1.000	34.51	1.009	48.051	96.1	0.180	48.051
6	1,2,3,4,6,7,8-HpCDD	2.11e5	1.03	NO	1.06	1.000	38.17	1.000	47.989	96.0	0.341	47.989
7	OCDD	3.30e5	0.91	NO	1.18	1.000	41.63	1.000	95.331	95.3	0.179	95.331
8	2,3,7,8-TCDF	1.14e5	0.78	NO	1.09	1.000	25.19	1.001	9.7515	97.5	0.0409	9.7515
9	1,2,3,7,8-PeCDF	5.65e5	1.61	NO	1.16	1.000	29.42	1.000	49.643	99.3	0.123	49.643
10	2,3,4,7,8-PeCDF	5.35e5	1.56	NO	1.12	1.000	30.35	1.000	49.591	99.2	0.120	49.591
11	1,2,3,4,7,8-HxCDF	4.59e5	1.27	NO	1.41	1.000	33.19	1.001	48.331	96.7	0.150	48.331
12	1,2,3,6,7,8-HxCDF	5.49e5	1.25	NO	1.22	1.000	33.31	1.000	49.809	99.6	0.137	49.809
13	2,3,4,6,7,8-HxCDF	4.53e5	1.29	NO	1.28	1.000	33.92	1.000	49.224	98.4	0.172	49.224
14	1,2,3,7,8,9-HxCDF	3.76e5	1.25	NO	1.26	1.000	34.91	1.000	49.483	99.0	0.252	49.483
15	1,2,3,4,6,7,8-HpCDF	4.18e5	1.05	NO	1.69	1.000	36.81	1.000	48.842	97.7	0.180	48.842
16	1,2,3,4,7,8,9-HpCDF	3.09e5	1.05	NO	1.48	1.000	38.73	1.000	49.738	99.5	0.251	49.738
17	OCDF	4.66e5	0.93	NO	1.10	1.000	41.88	1.001	96.743	96.7	0.177	96.743
18	13C-2,3,7,8-TCDD	7.49e5	0.77	NO	1.01	1.000	25.95	1.022	100.15	100	0.141	
19	13C-1,2,3,7,8-PeCDD	6.02e5	0.64	NO	0.827	1.000	30.64	1.207	98.735	98.7	0.269	
20	13C-1,2,3,4,7,8-HxCDD	5.27e5	1.26	NO	0.916	1.000	34.08	0.988	99.432	99.4	0.335	
21	13C-1,2,3,6,7,8-HxCDD	5.42e5	1.26	NO	0.921	1.000	34.19	0.991	101.67	102	0.334	
22	13C-1,2,3,4,6,7,8-HpCDD	4.13e5	1.07	NO	0.708	1.000	38.16	1.106	100.67	101	0.425	
23	13C-OCDD	5.87e5	0.89	NO	0.503	1.000	41.62	1.206	201.71	101	0.424	
24	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	0.977	1.000	25.16	0.991	98.780	98.8	0.129	
25	13C-1,2,3,7,8-PeCDF	9.82e5	1.58	NO	0.896	1.000	29.41	1.158	98.441	98.4	0.304	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.57	NO	0.900	1.000	30.34	1.195	96.306	96.3	0.303	
27	13C-1,2,3,4,7,8-HxCDF	6.74e5	0.54	NO	1.17	1.000	33.16	0.961	99.512	99.5	0.469	
28	13C-1,2,3,6,7,8-HxCDF	9.02e5	0.55	NO	1.52	1.000	33.29	0.965	102.54	103	0.361	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.54	NO	1.25	1.000	33.91	0.983	99.345	99.3	0.439	
30	13C-1,2,3,7,8,9-HxCDF	6.05e5	0.53	NO	1.05	1.000	34.90	1.011	99.208	99.2	0.521	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	Name	Area	RA		RRF		RT	RRT	Conc	IR	ID	EMPC
31	13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.46	NO	0.868	1.000	36.80	1.066	100.83	101	0.602	
32	13C-1,2,3,4,7,8,9-HpCDF	4.20e5	0.46	NO	0.727	1.000	38.72	1.122	99.796	99.8	0.719	
33	13C-OCDF	8.78e5	0.91	NO	0.760	1.000	41.85	1.213	199.65	99.8	0.296	
34	37Cl-2,3,7,8-TCDD	4.66e4			0.668	1.000	25.98	1.023	9.4592	94.6	0.0533	
35	13C-1,2,3,4-TCDD	7.37e5	0.81	NO	1.00	1.000	25.39	0.000	100.00	100	0.144	
36	13C-1,2,3,4-TCDF	1.11e6	0.78	NO	1.00	1.000	23.95	0.000	100.00	100	0.126	
37	13C-1,2,3,7,8,9-HxCDD	5.79e5	1.22	NO	1.00	1.000	34.50	0.000	100.00	100	0.307	

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 7:21:09 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:21:55 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Compound name: 1,3,6,8-TCDD (First)

Name	ID	Acq Date	Acq Time
090212H1_1	ST090212H1-1 1613 CS3 080917I	12-Feb-09	11:10:11
090212H1_2	solvent blank	12-Feb-09	11:59:18
090212H1_3	ST090212H1-2 1613 CS0 080917F	12-Feb-09	12:49:08
090212H1_4	ST090212H1-3 1613 CS1 080917CG	12-Feb-09	13:38:34
090212H1_5	ST090212H1-4 1613 CS2 080917H	12-Feb-09	14:28:11
090212H1_6	ST090212H1-5 1613 CS4 080917J	12-Feb-09	15:17:39
090212H1_7	ST090212H1-6 1613 CS5 080917K	12-Feb-09	16:07:03
090212H1_8	solvent blank	12-Feb-09	16:56:26
090212H1_9	SSS090212H1-1 Sec Src Std L070913A	12-Feb-09	17:45:49

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:13 Pacific Standard Time

M 292.9824 R 13157

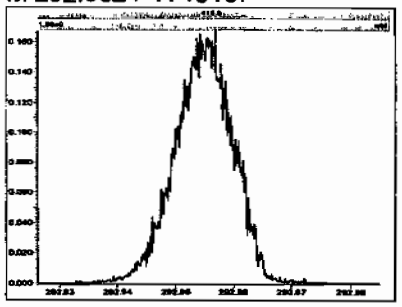

M 304.9824 R 14289

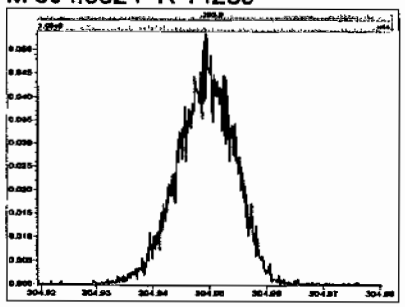

M 318.9792 R 13655

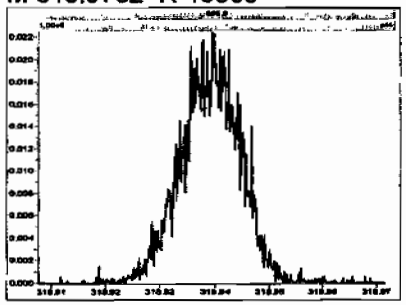

M 330.9792 R 12819

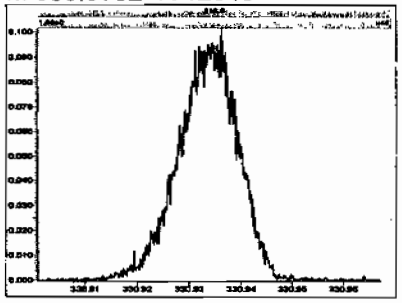

M 342.9792 R 13085

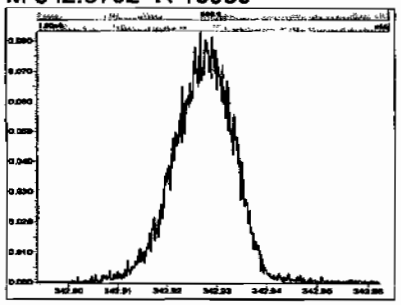

M 354.9792 R 13440

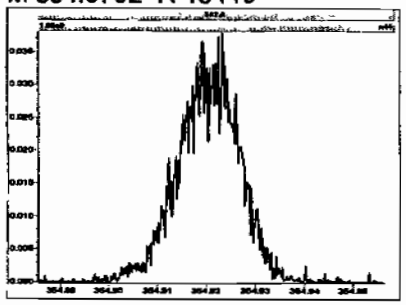

M 366.9792 R 11572

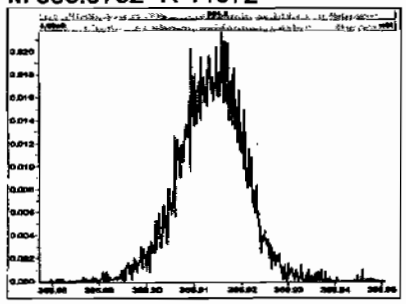

M 380.9760 R 13365

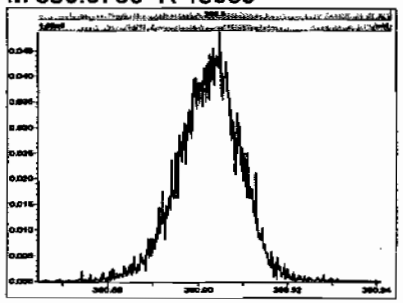

M 392.9760 R 13660

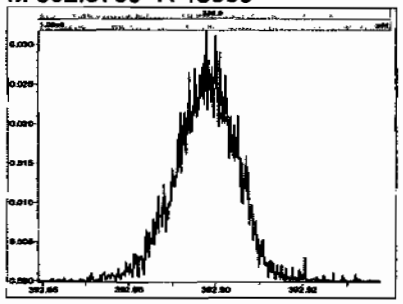

M 404.9760 R 13160

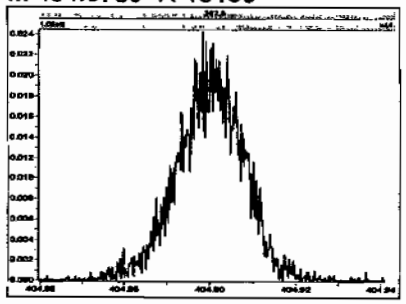

M 416.9760 R 15061

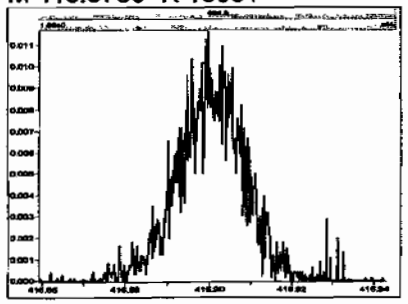

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:36 Pacific Standard Time

M 330.9792 R 13661

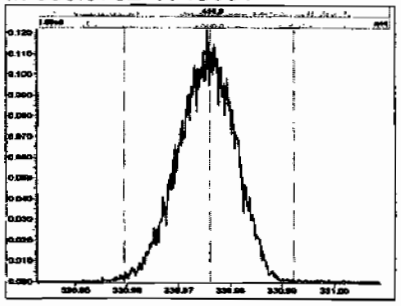

M 342.9792 R 12688

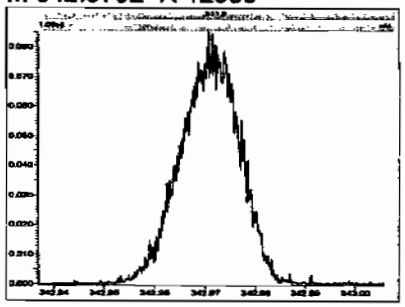

M 354.9792 R 13813

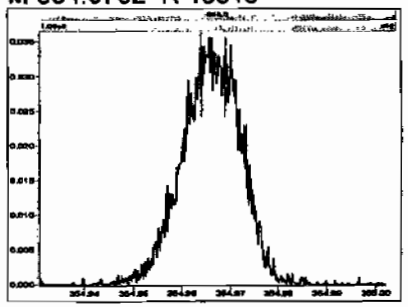

M 366.9792 R 13735

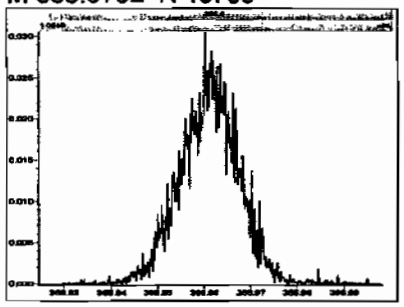

M 380.9760 R 13225

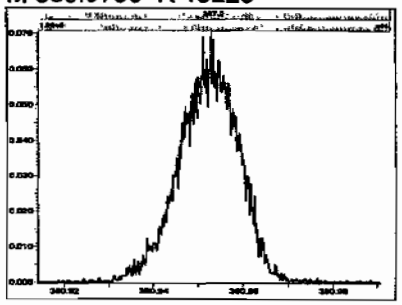

M 392.9760 R 13090

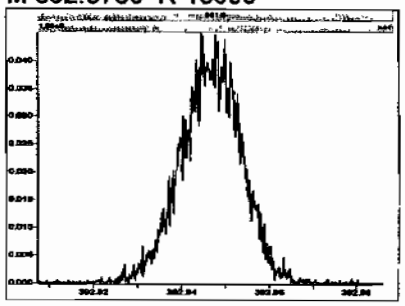

M 404.9760 R 13368

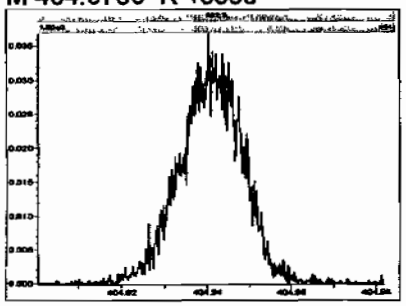

M 416.9760 R 13510

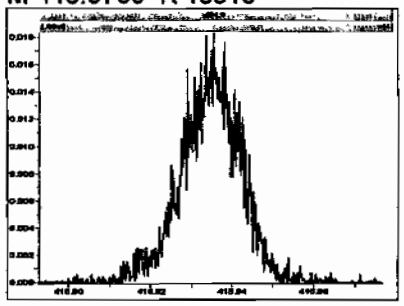

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:57 Pacific Standard Time

M 366.9792 R 13441

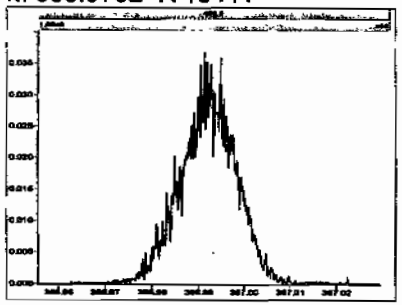

M 380.9760 R 13367

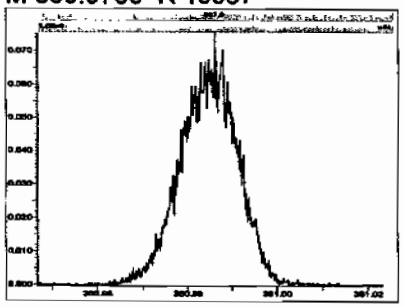

M 392.9760 R 13733

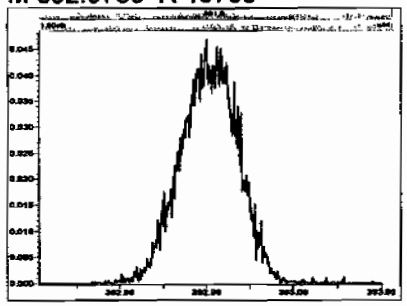

M 404.9760 R 12136

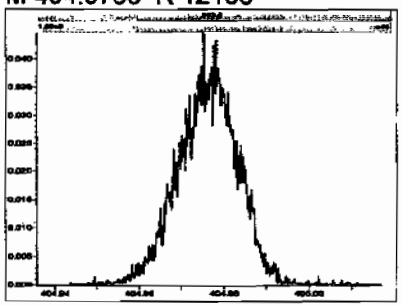

M 416.9760 R 13887

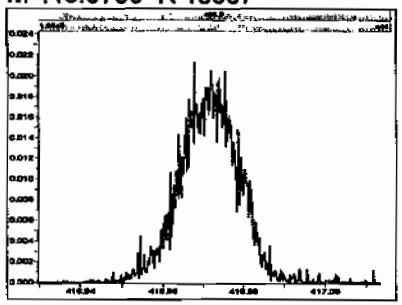

M 430.9728 R 13515

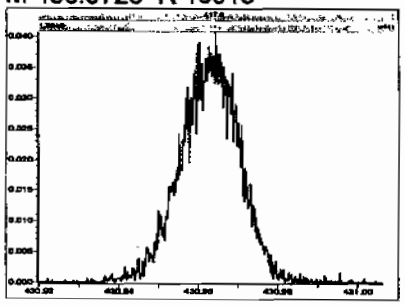

M 442.9728 R 14124

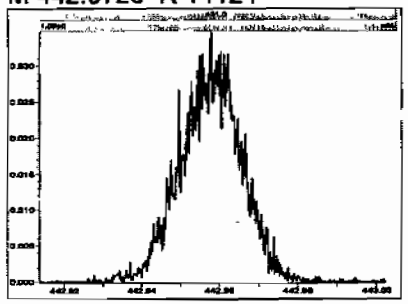

M 454.9728 R 13225

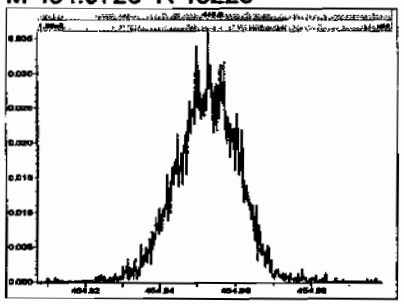

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:16 Pacific Standard Time

M 404.9760 R 13299

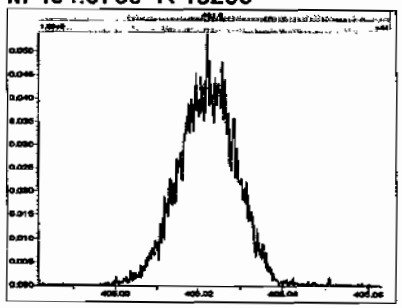

M 416.9760 R 14124

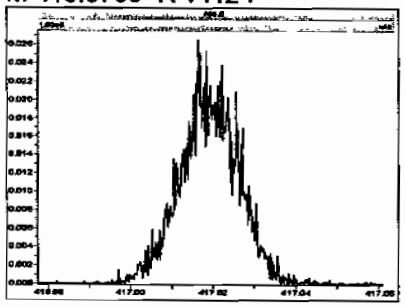

M 430.9728 R 13019

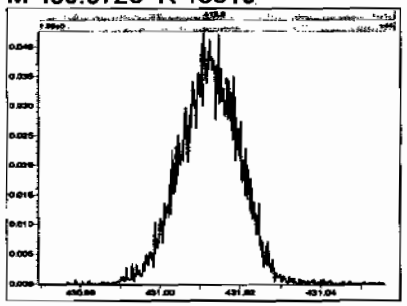

M 442.9728 R 13022

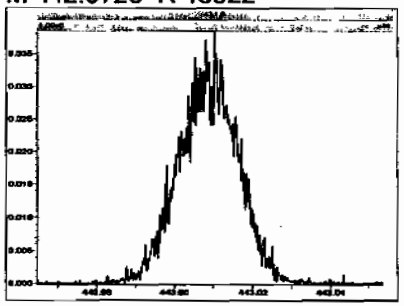

M 454.9728 R 12953

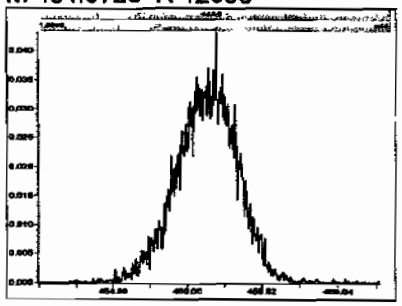

M 466.9728 R 12692

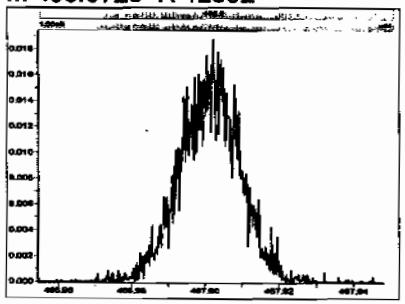

M 480.9696 R 14882

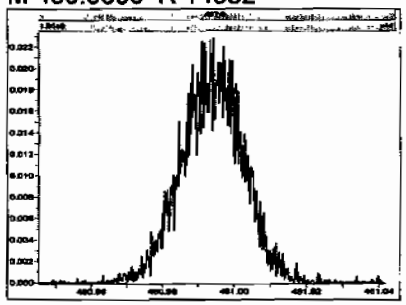

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:41 Pacific Standard Time

M 430.9728 R 12434

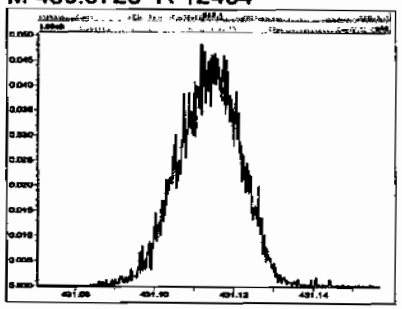

M 442.9728 R 12886

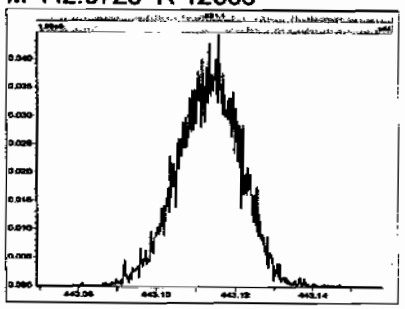

M 454.9728 R 12021

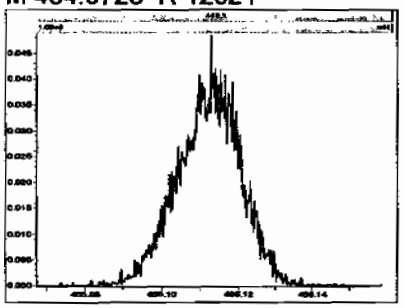

M 466.9728 R 12954

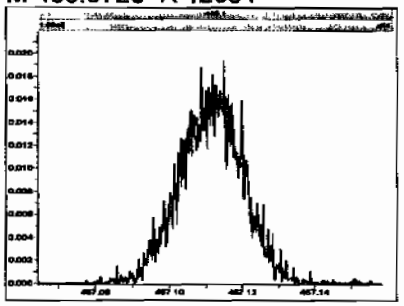

M 480.9696 R 11520

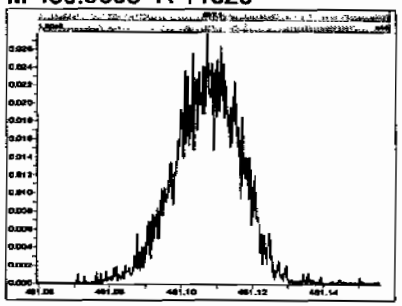

M 492.9696 R 12757

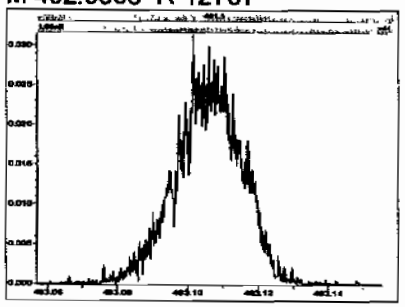

M 504.9696 R 11211

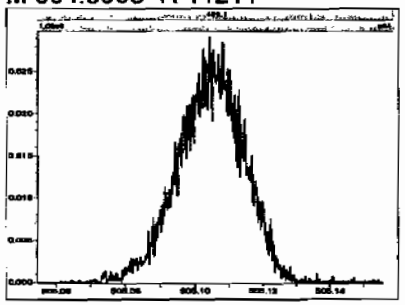

M 516.9697 R 11516

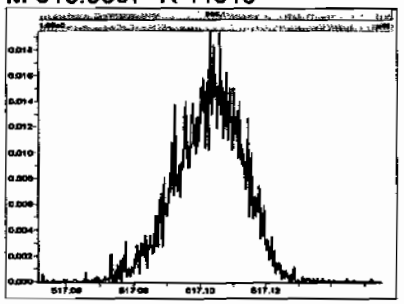

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Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

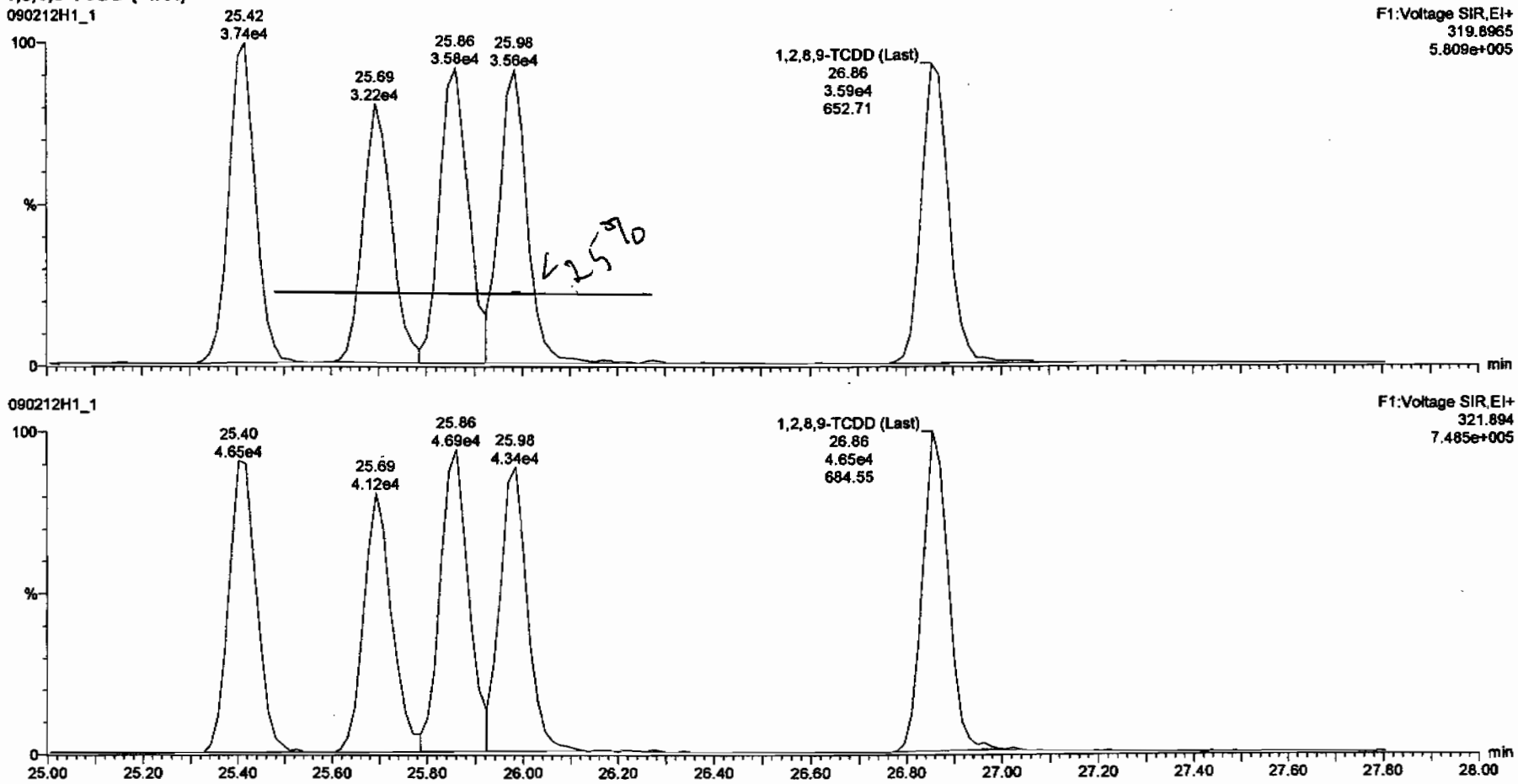

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
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2,3,7,8-TCDD

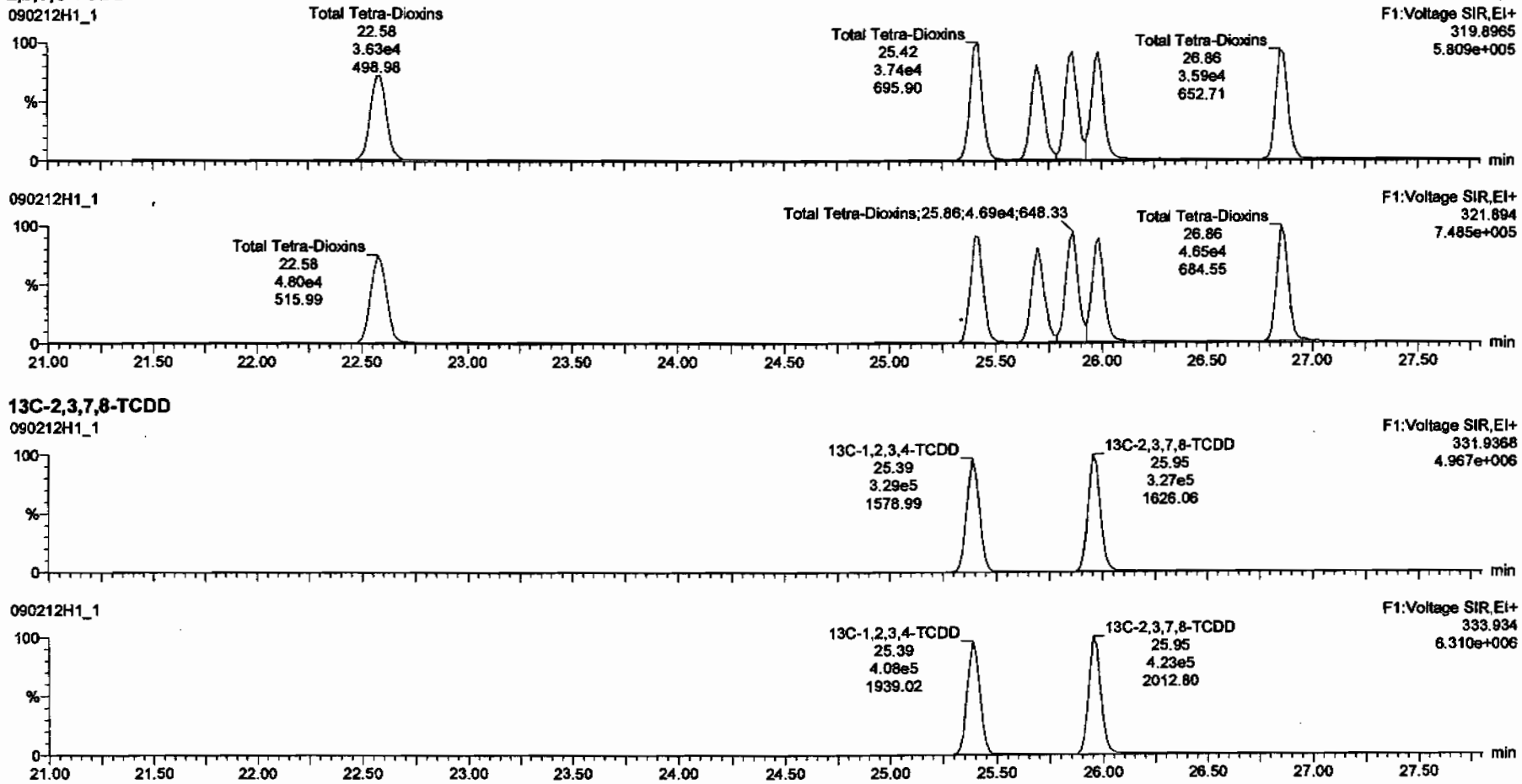

13C-2,3,7,8-TCDD

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Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

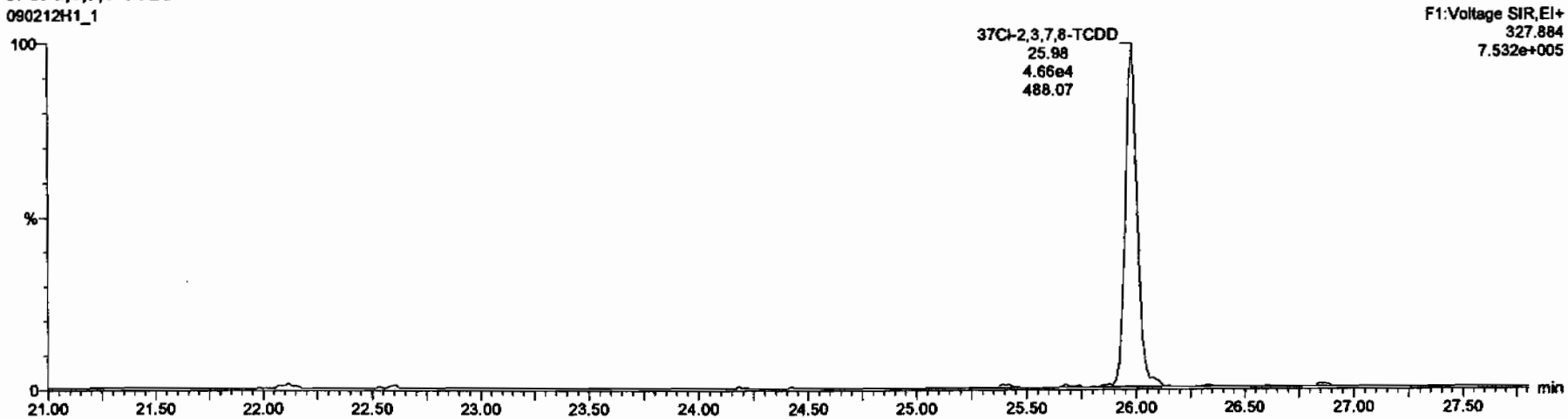

13C-1,2,3,4-TCDD

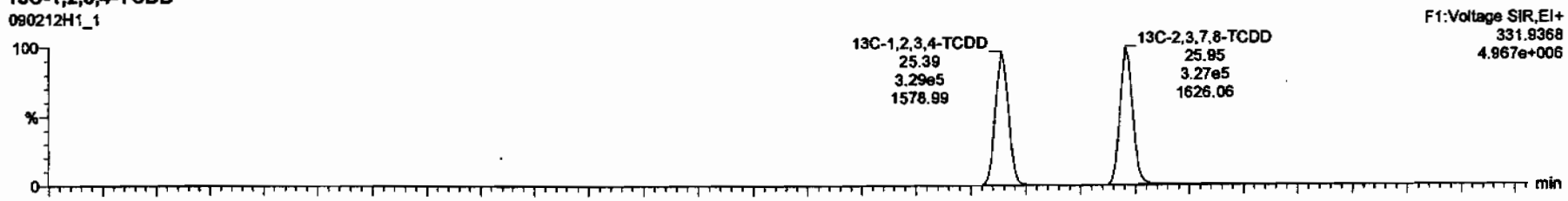

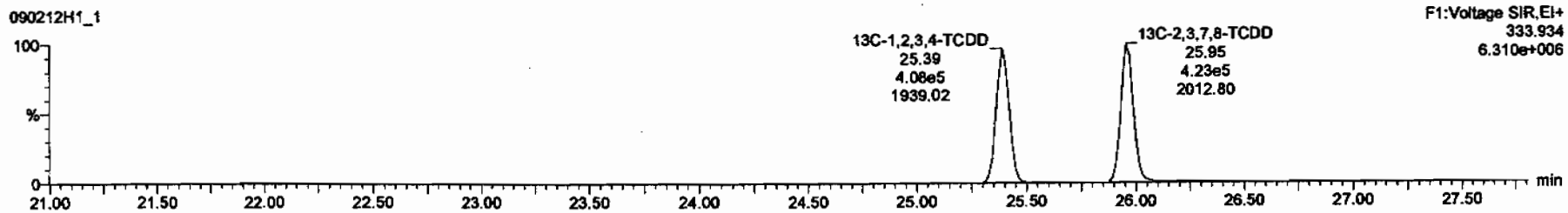

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1,2,3,7,8-PeCDD

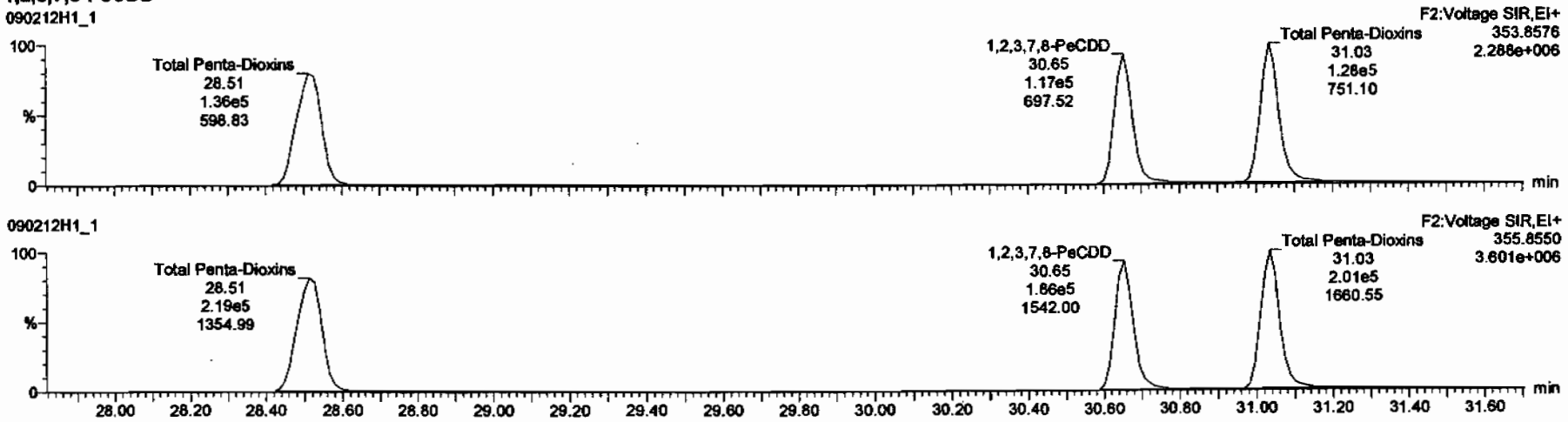

13C-1,2,3,7,8-PeCDD

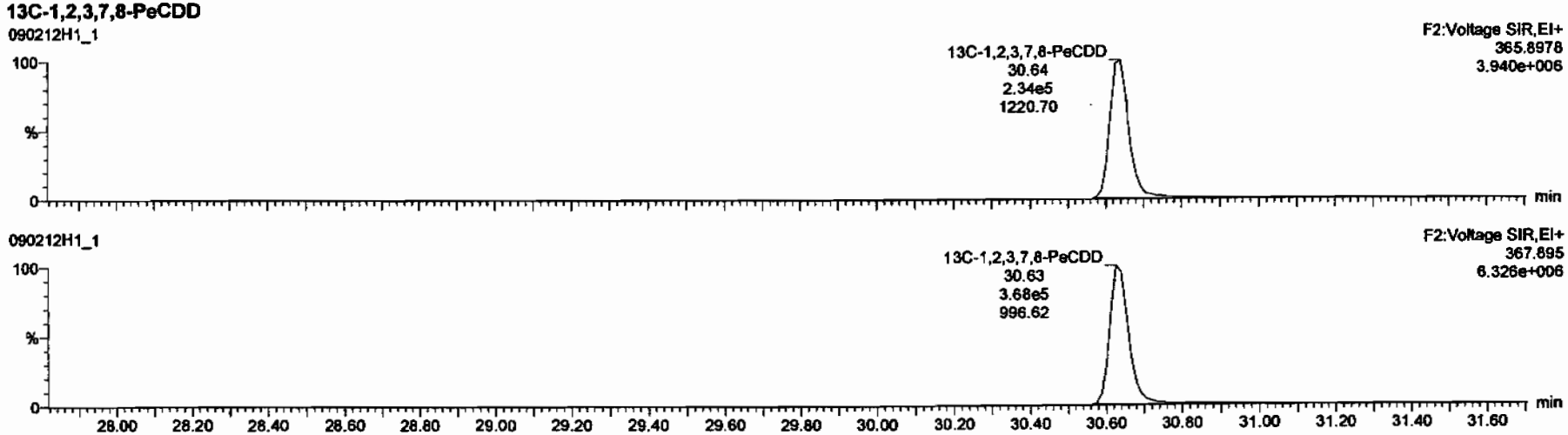

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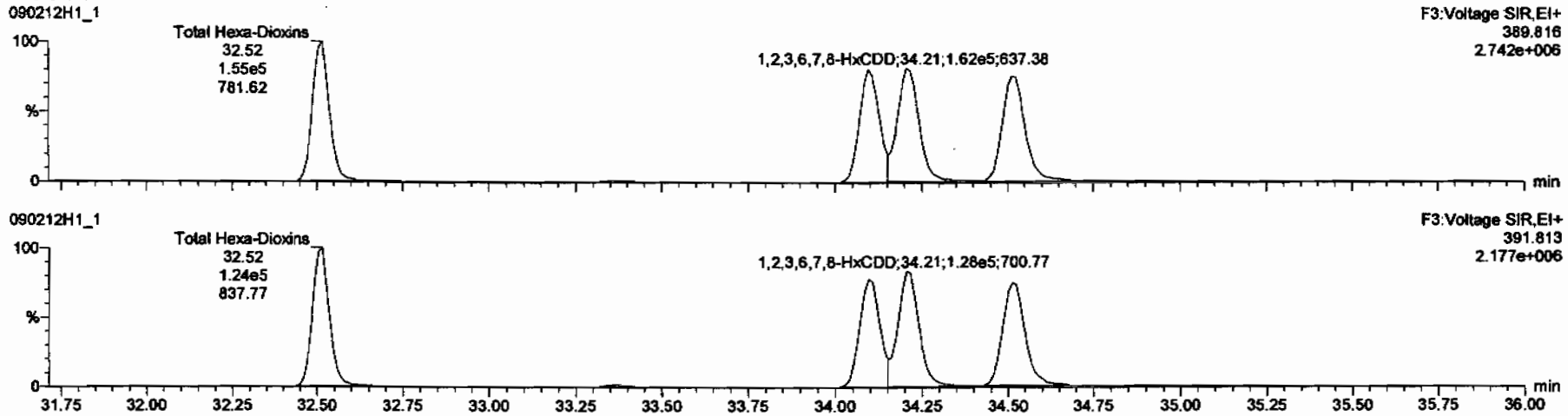

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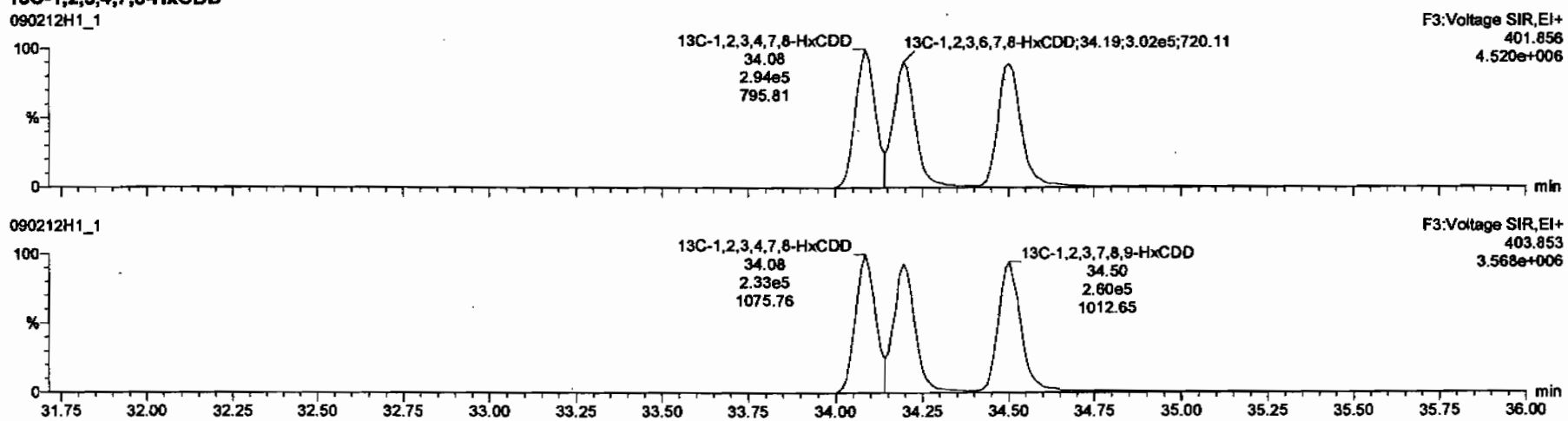

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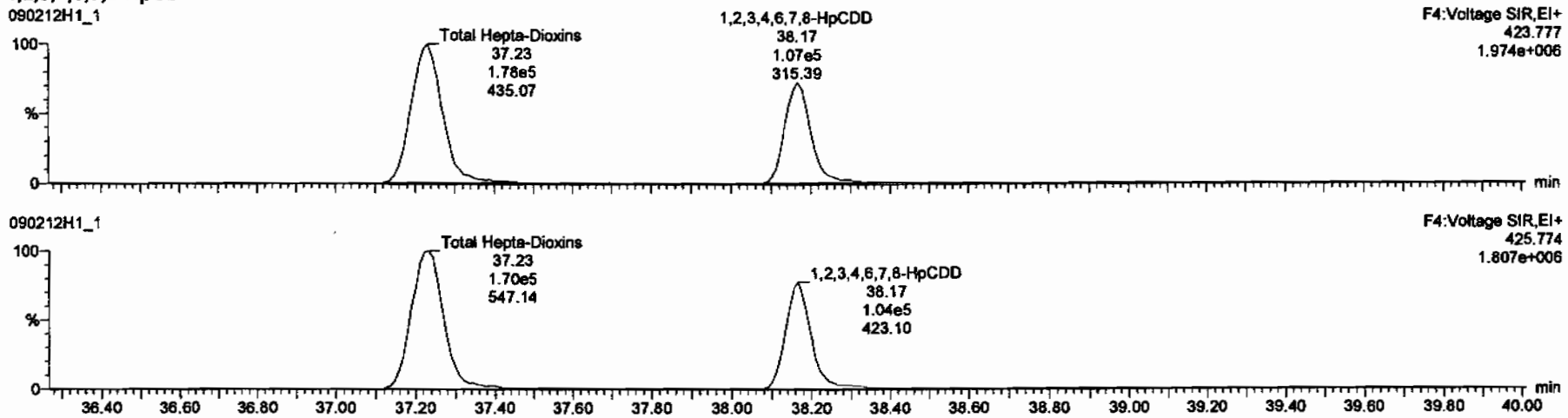

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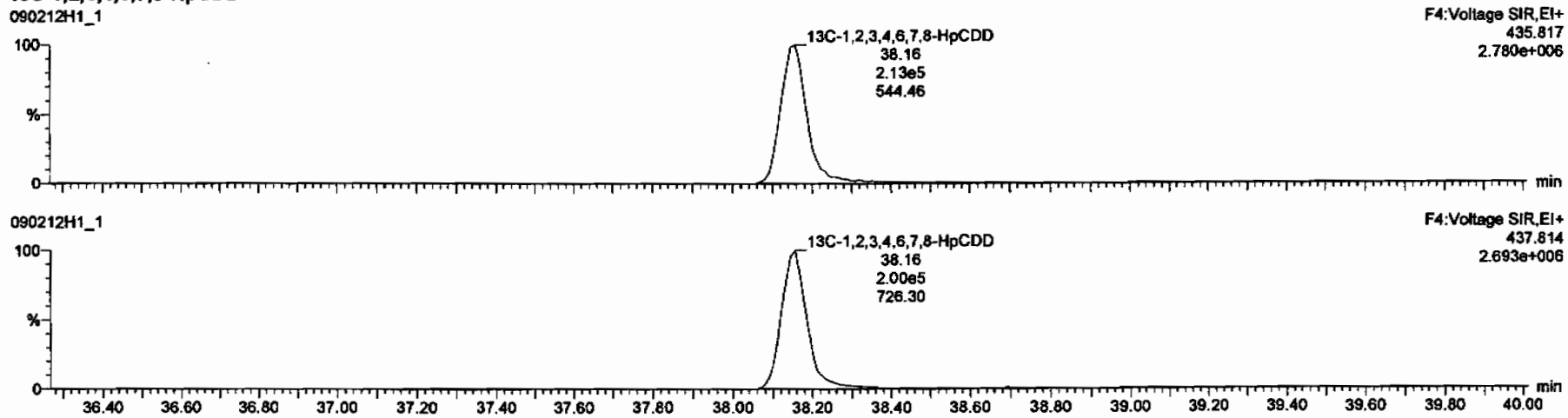

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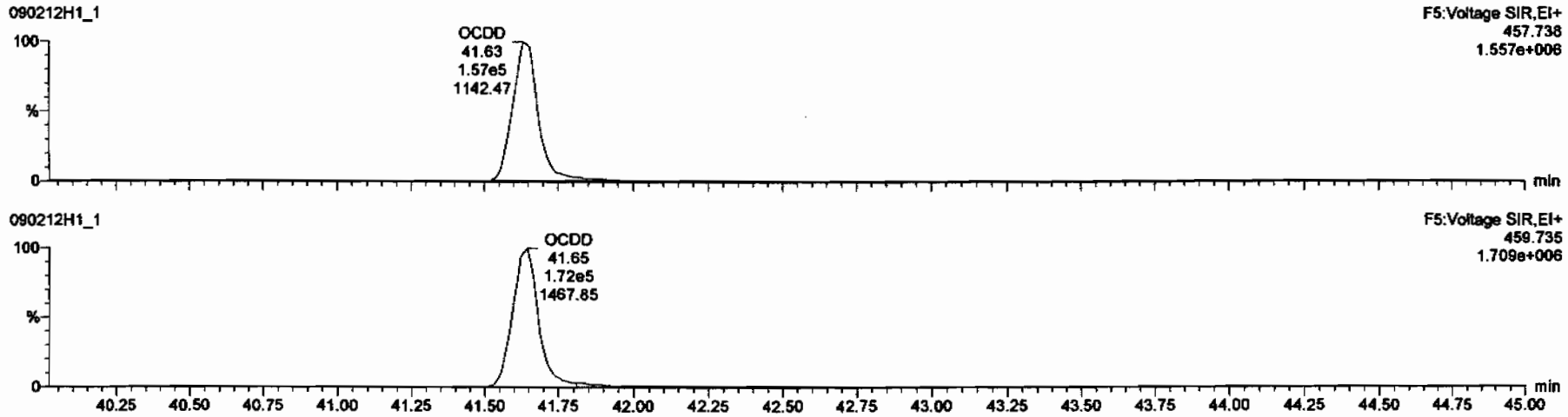

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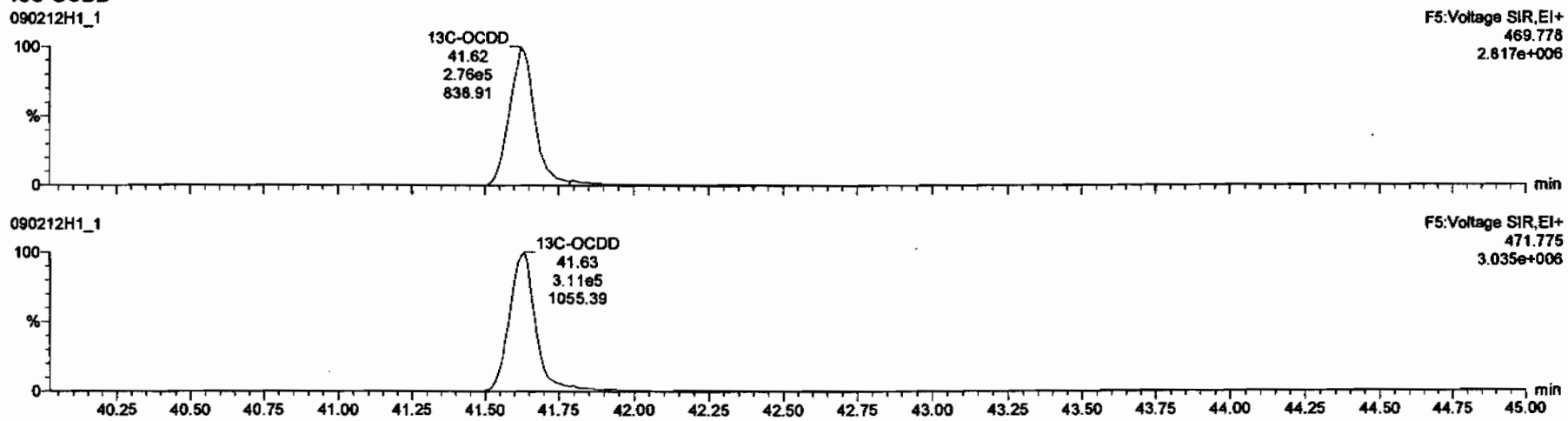

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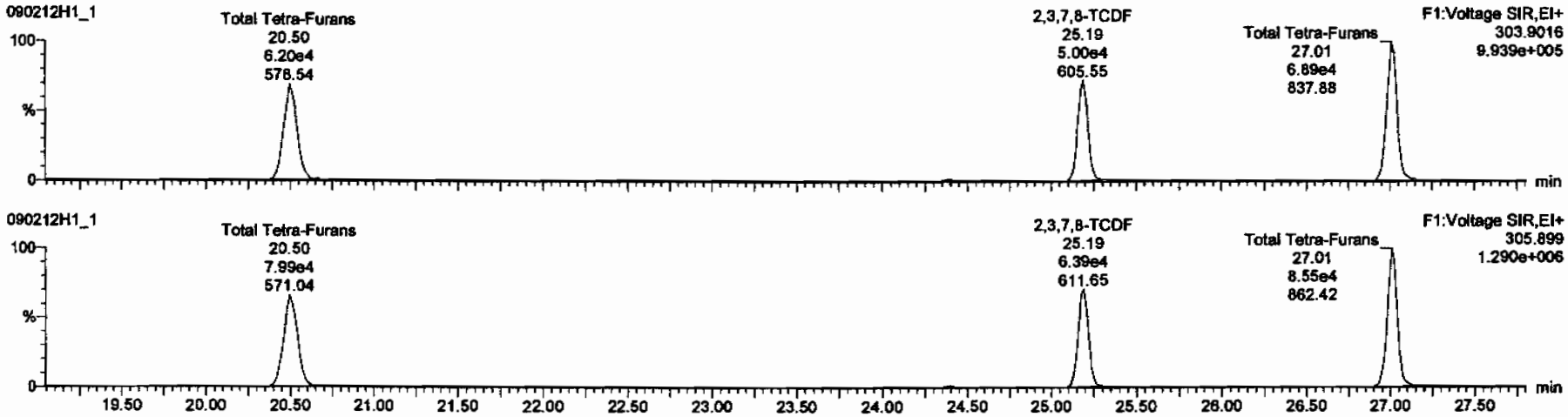

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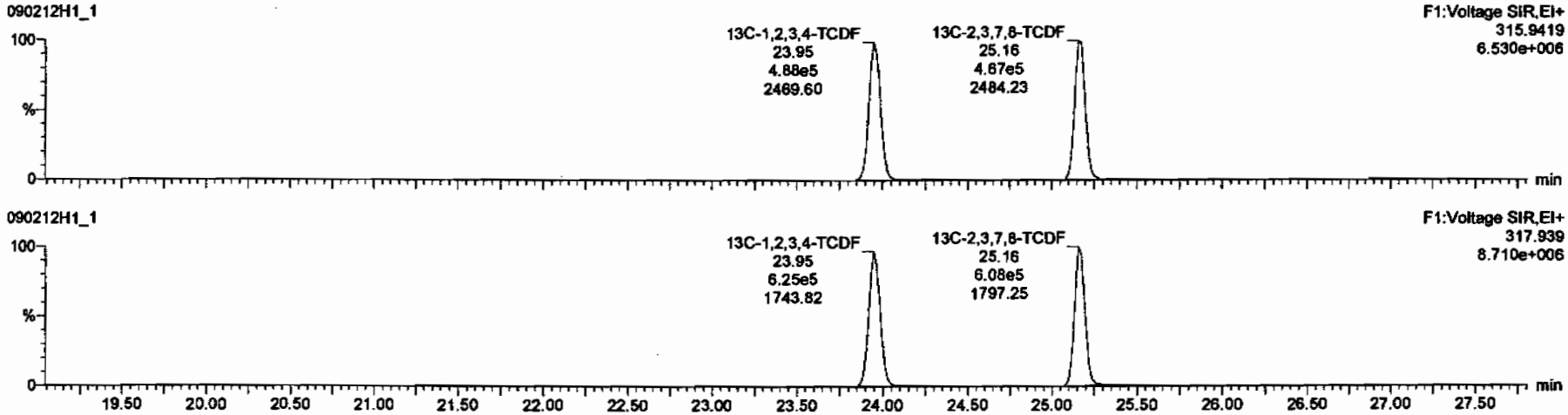

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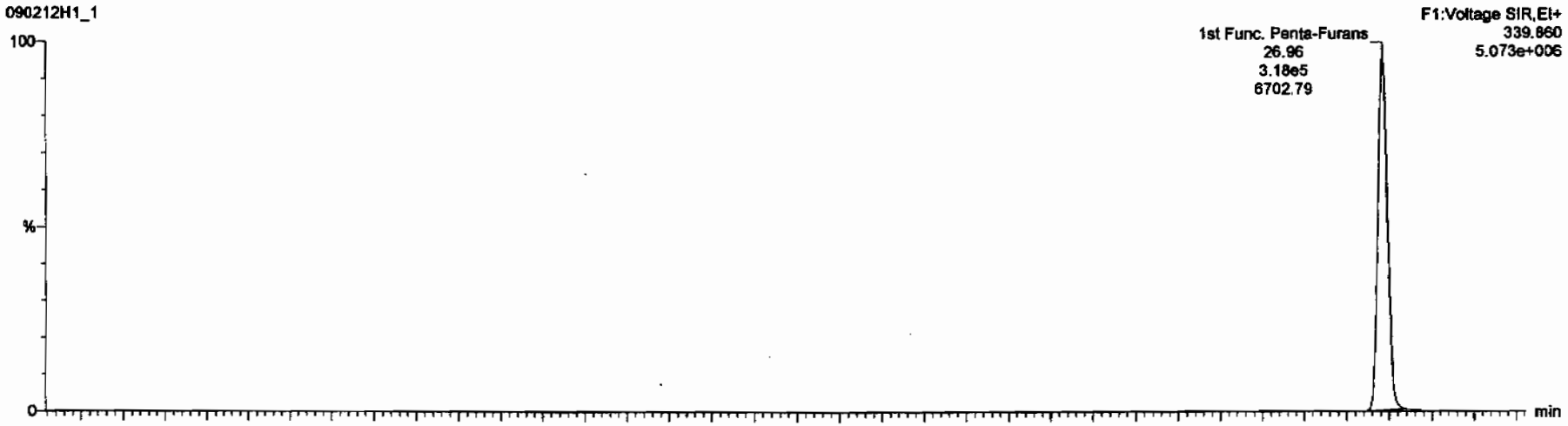

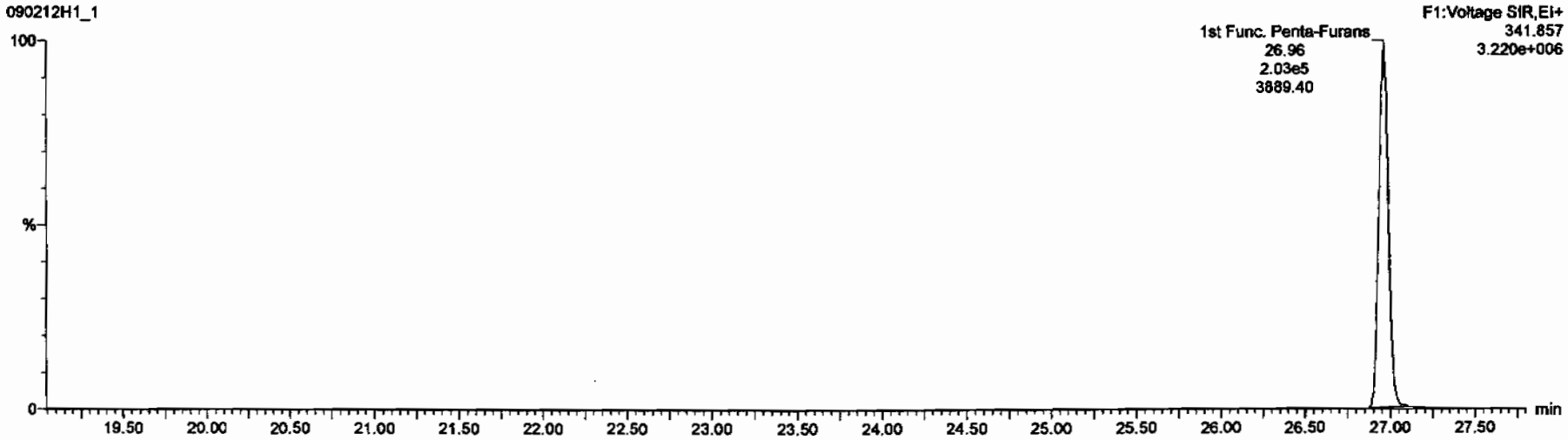

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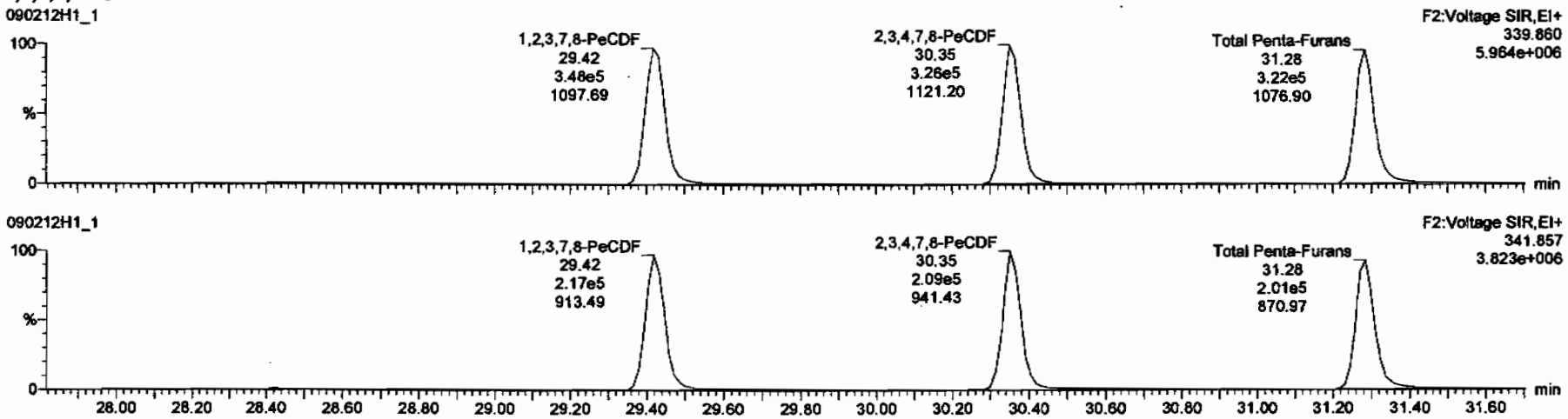

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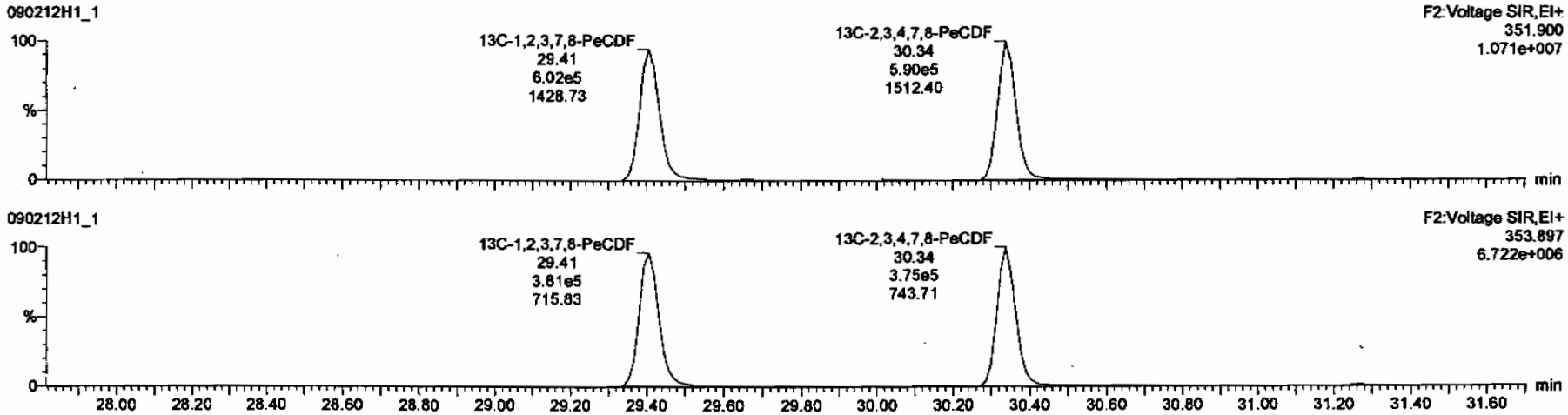

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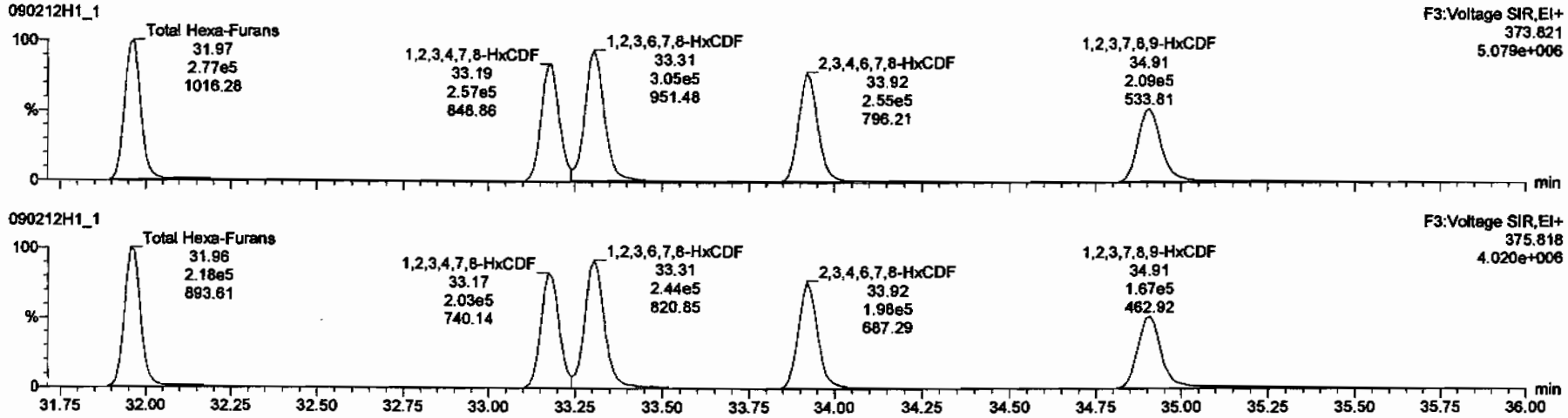

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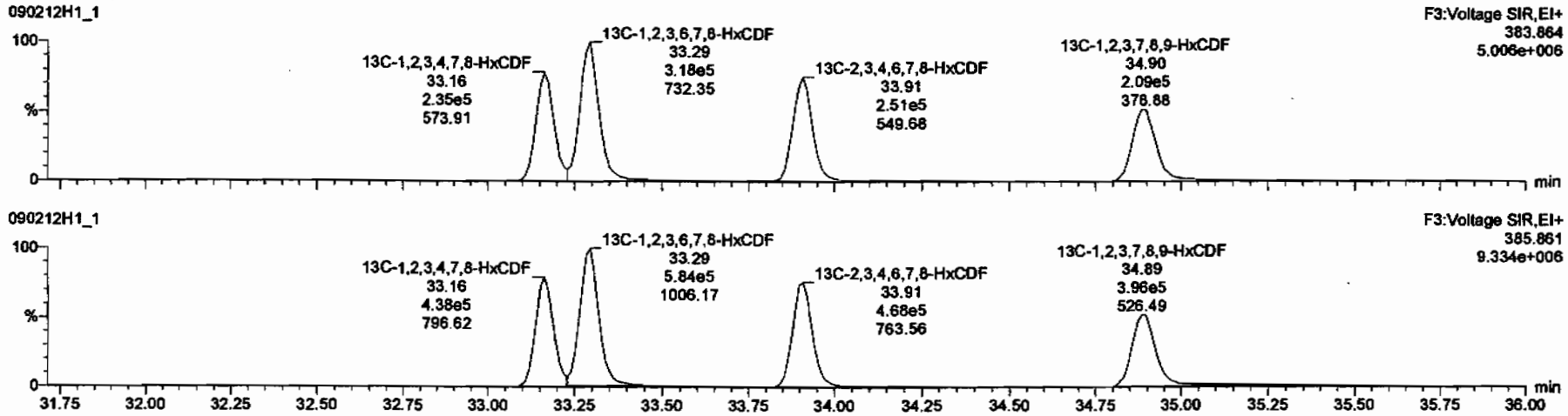

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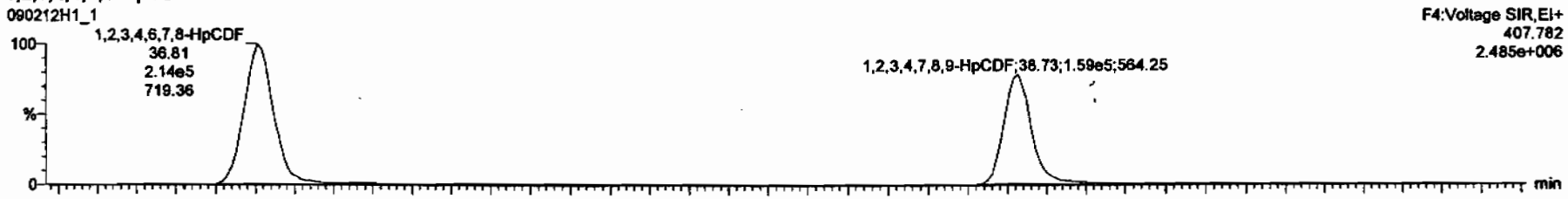

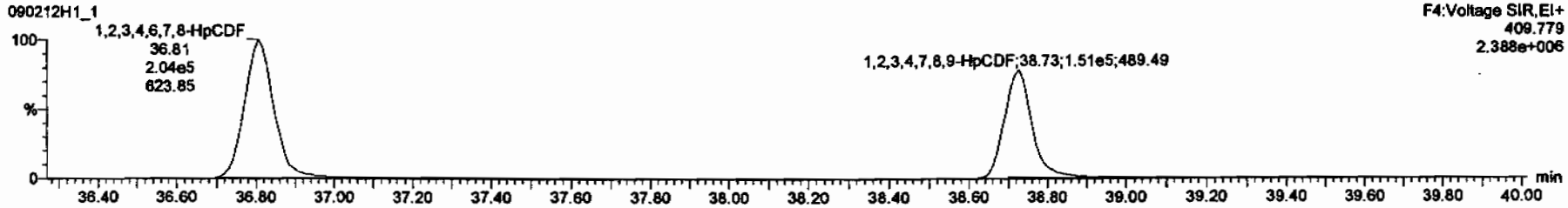

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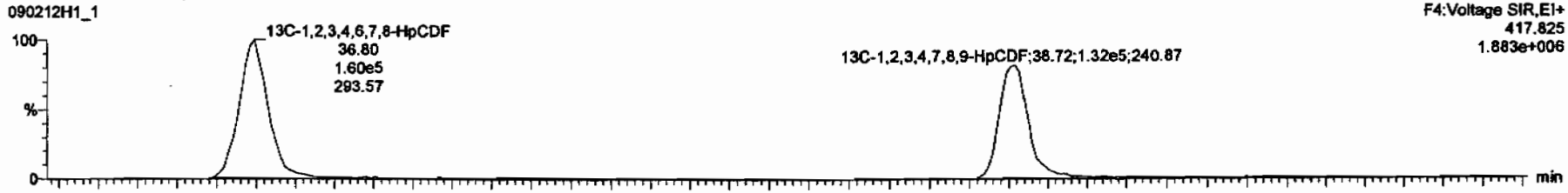

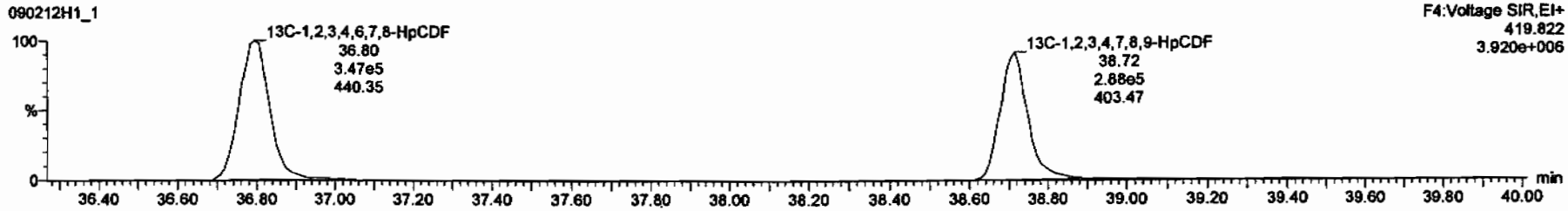

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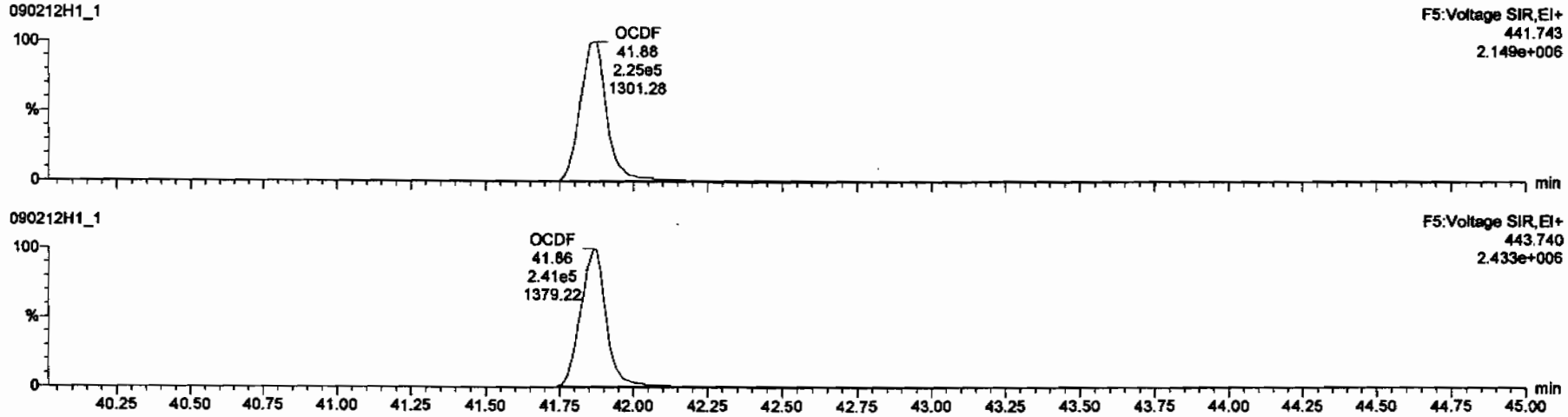

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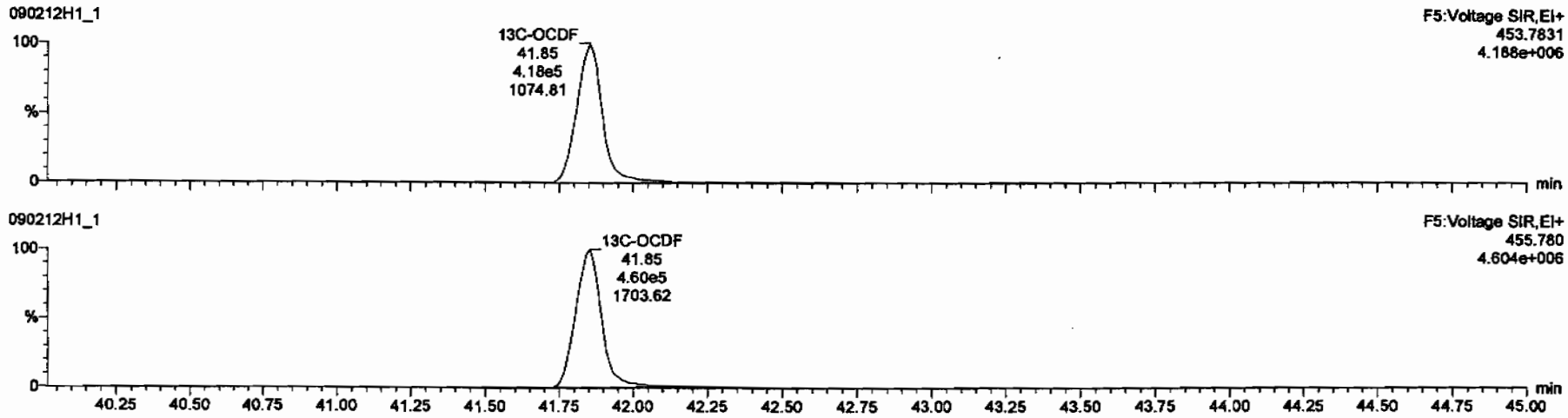

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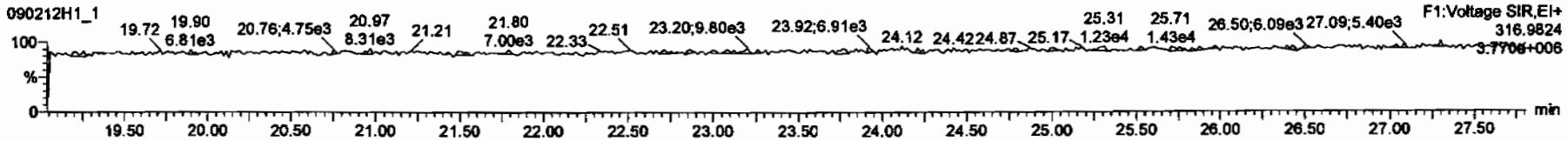

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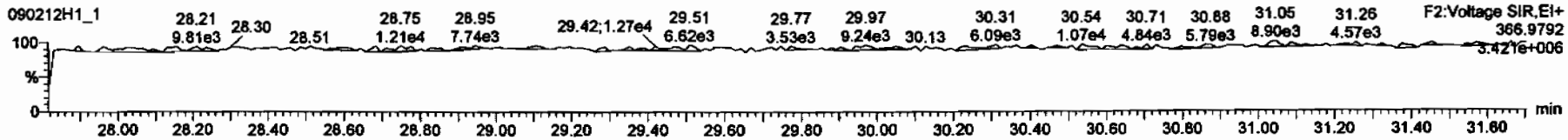

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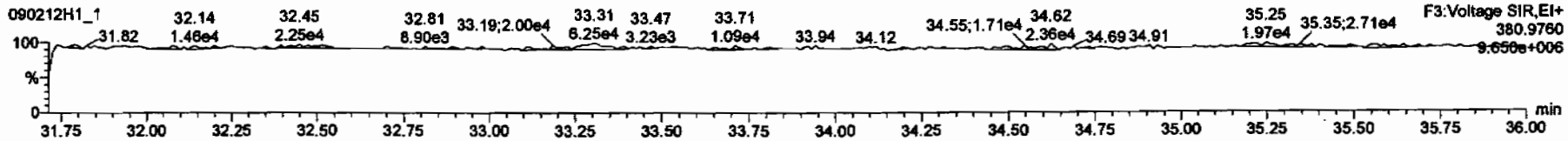

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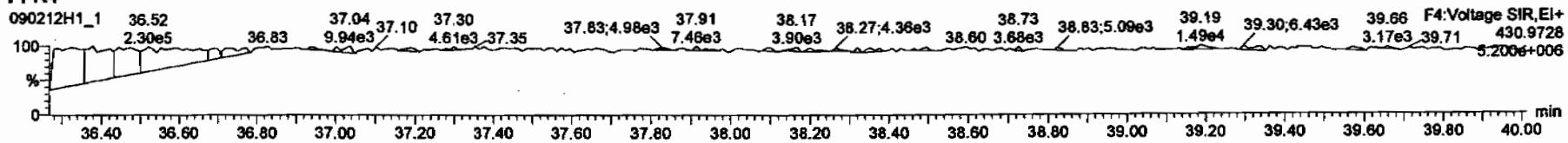

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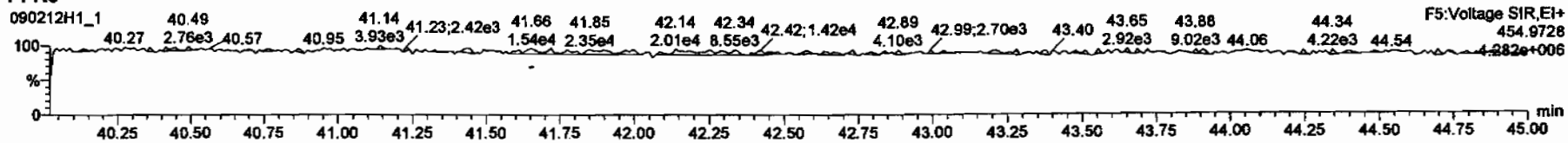

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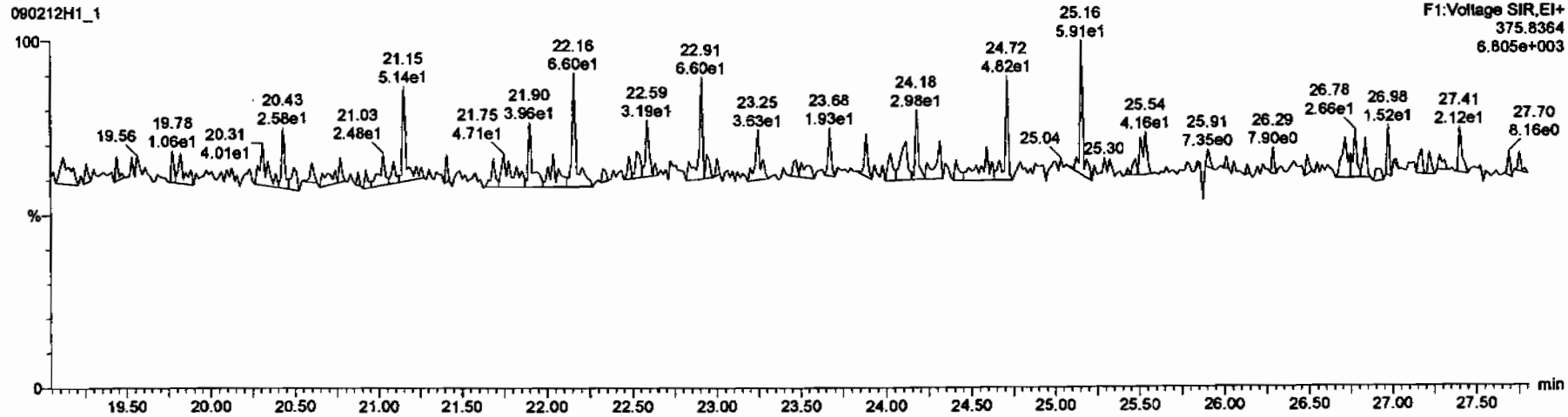

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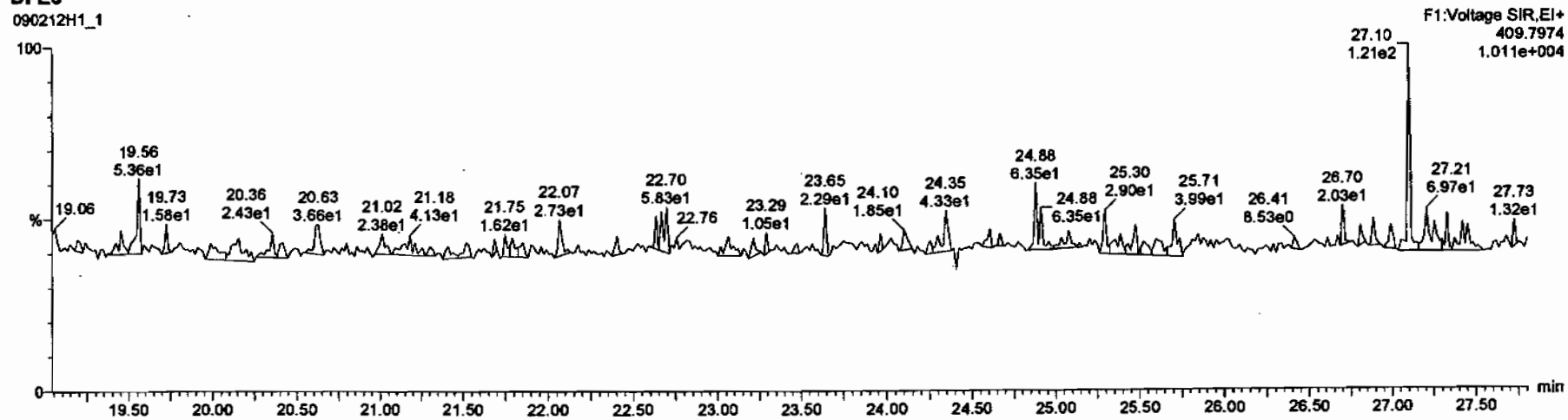

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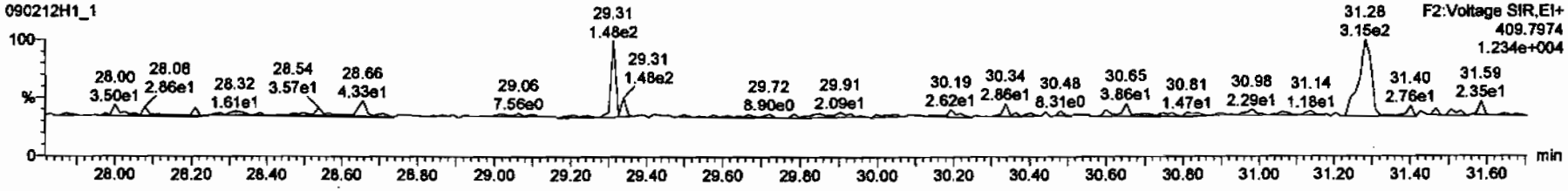

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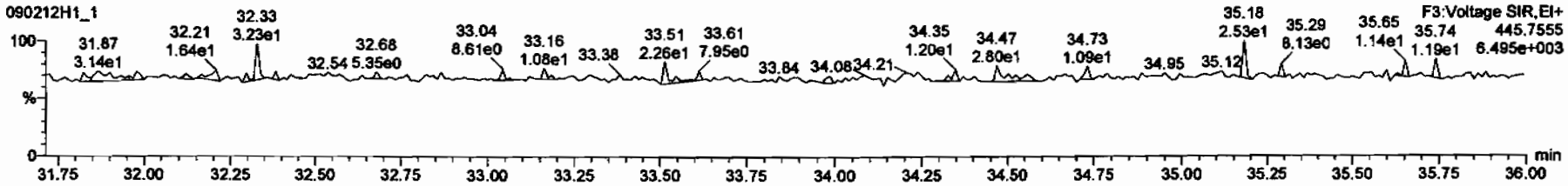

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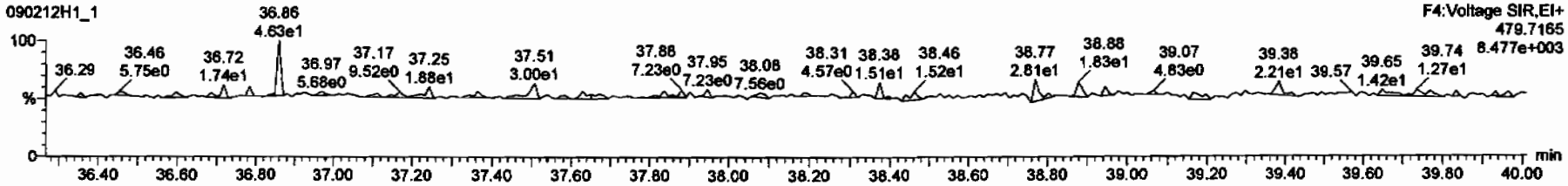

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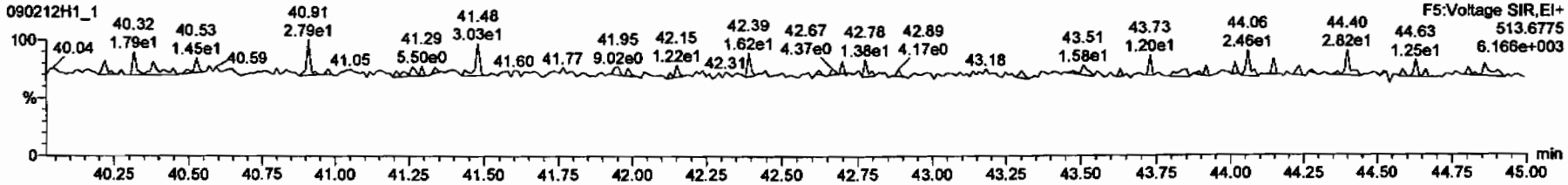

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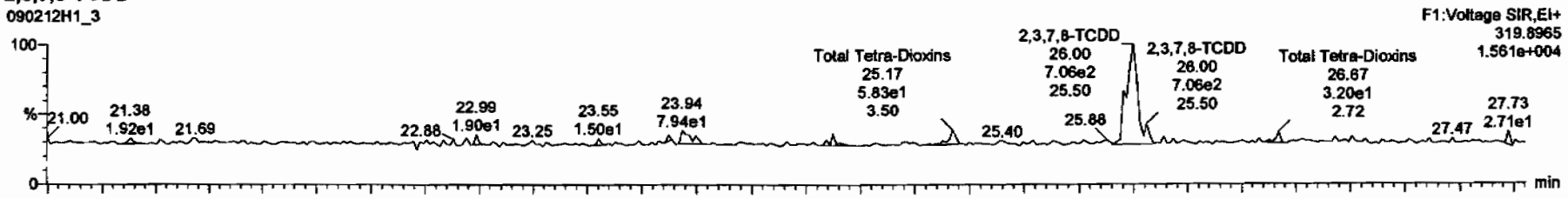

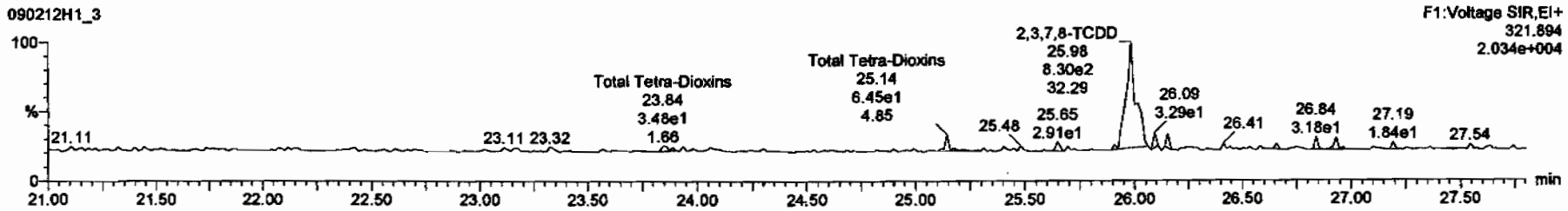

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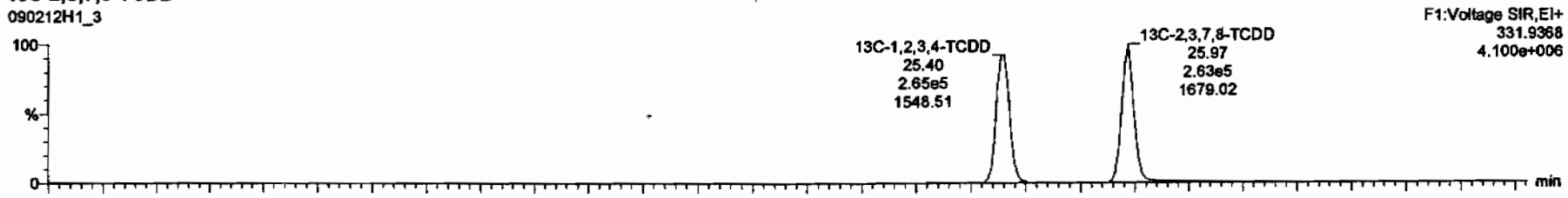

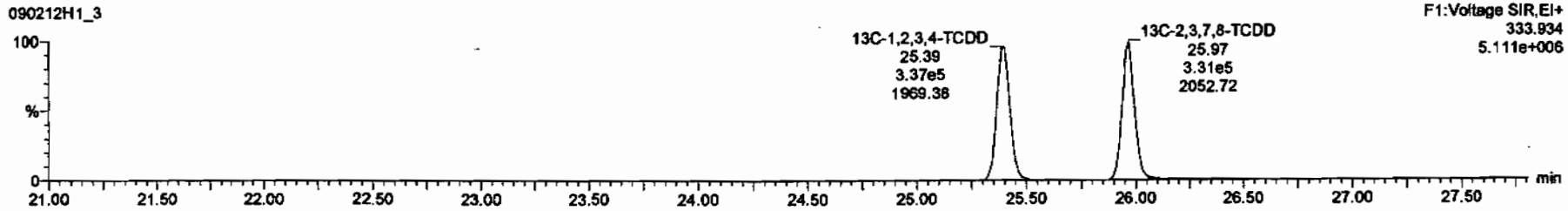

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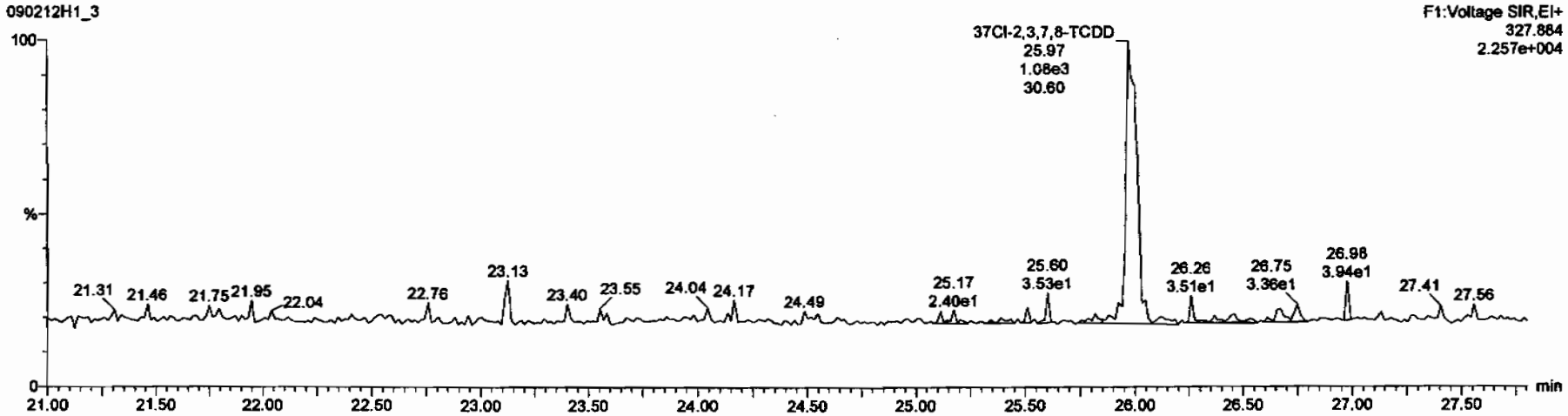

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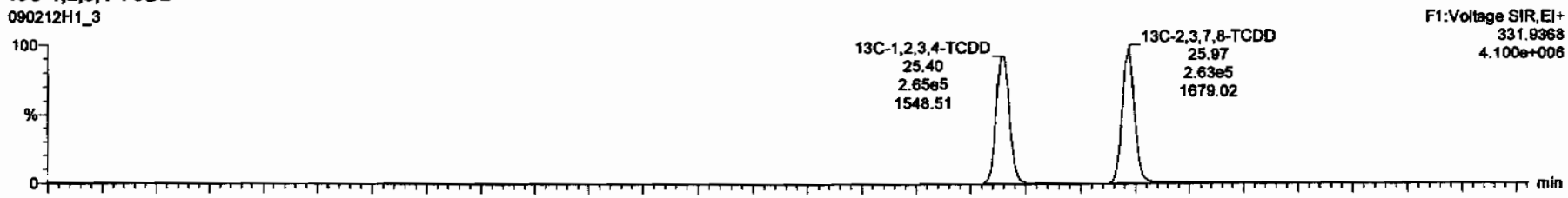

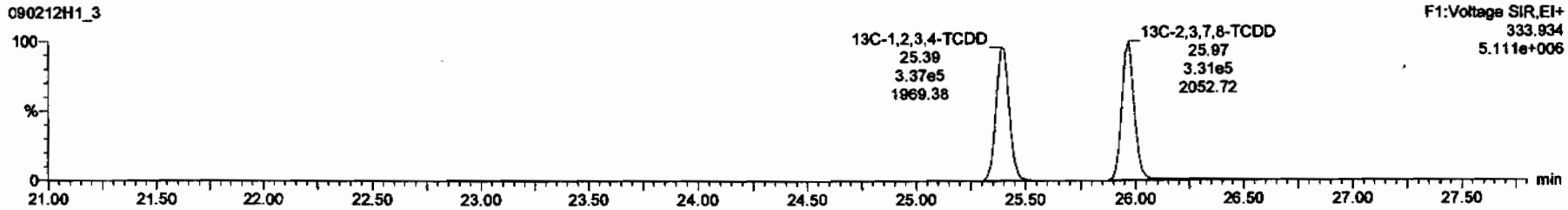

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1,2,3,7,8-PeCDD

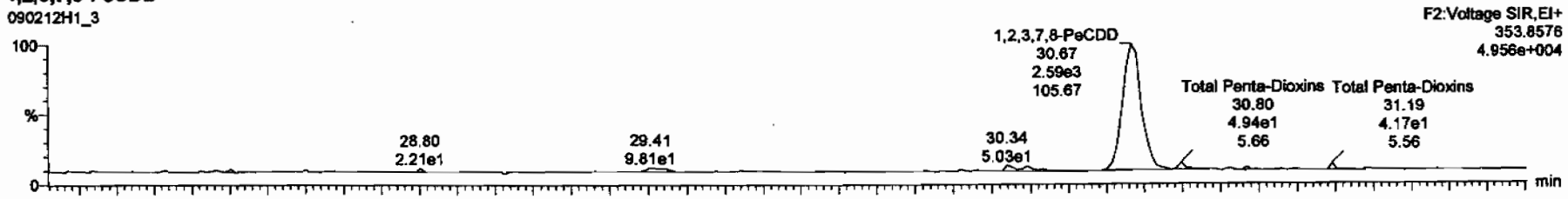

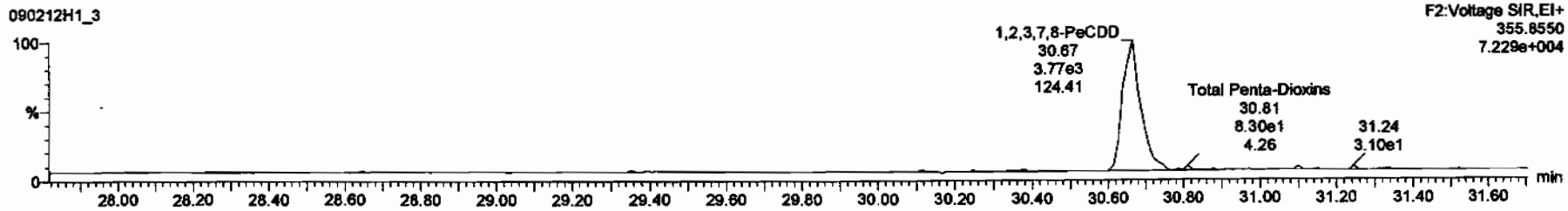

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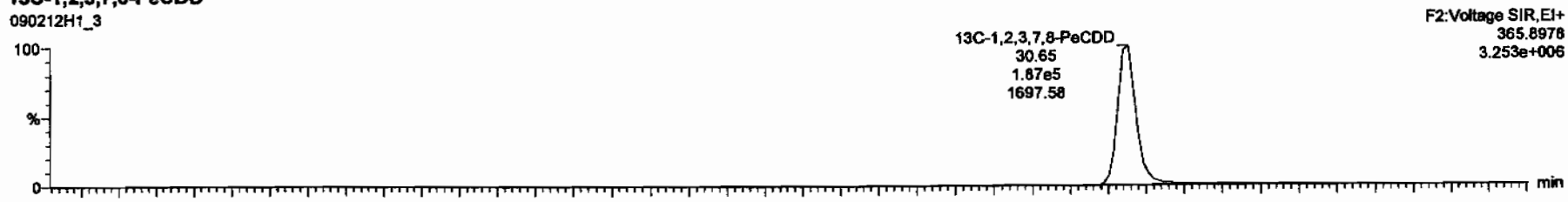

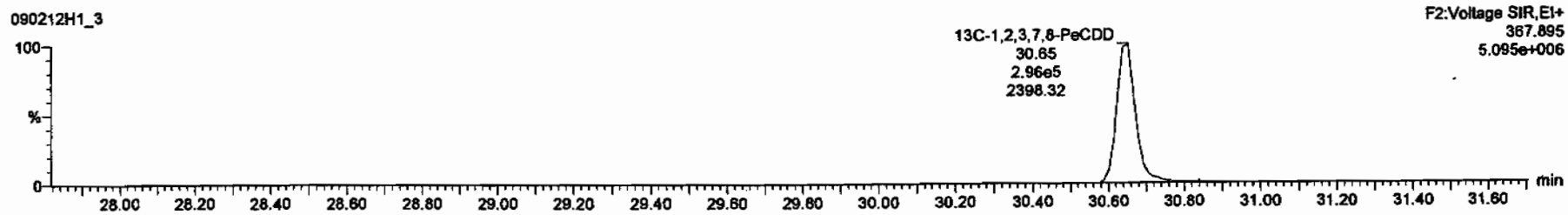

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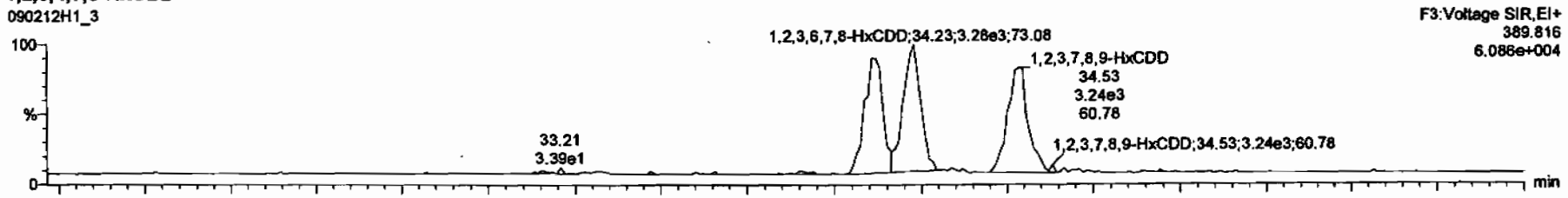

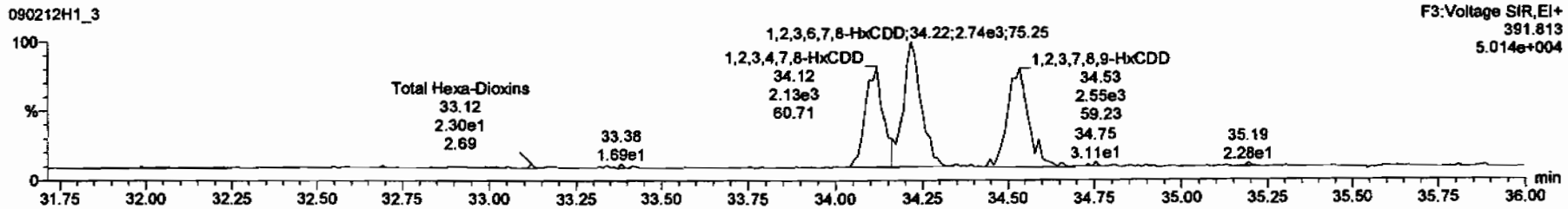

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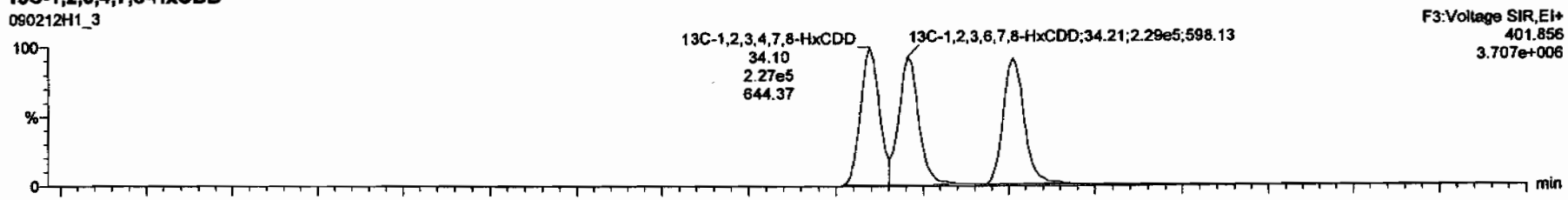

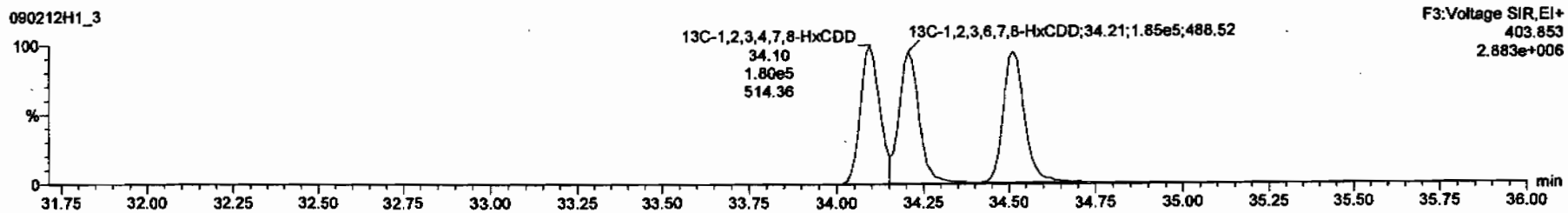

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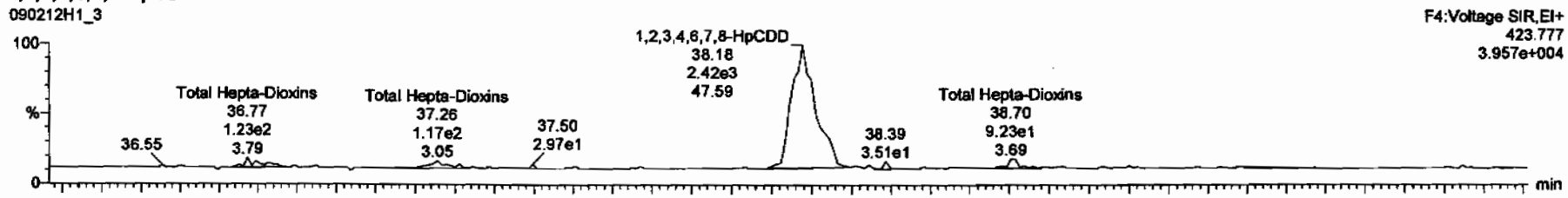

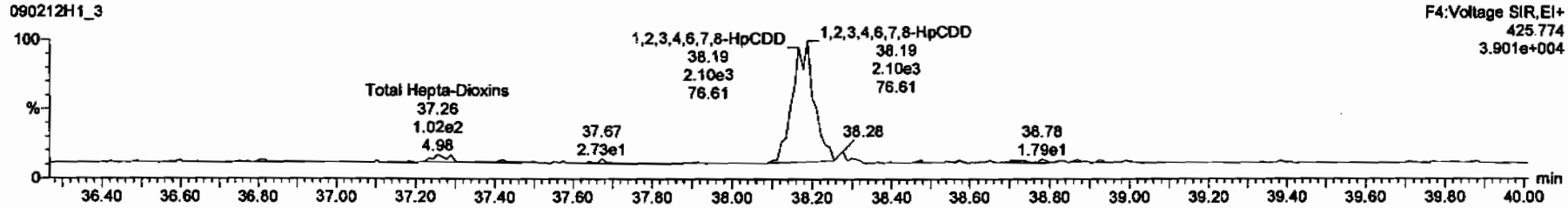

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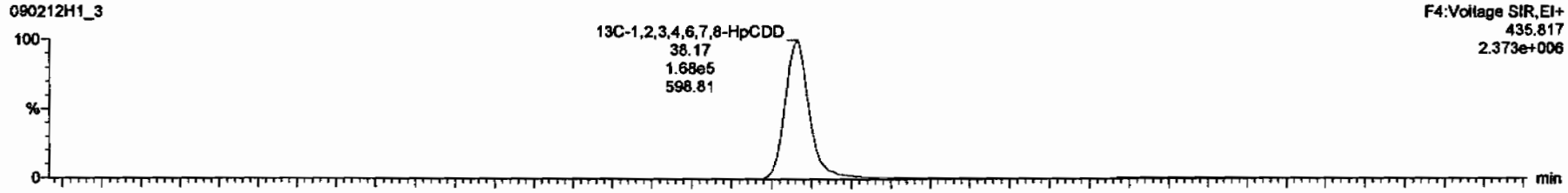

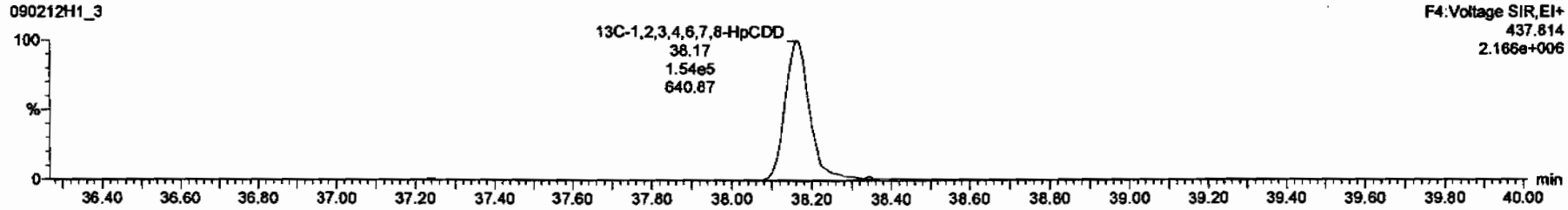

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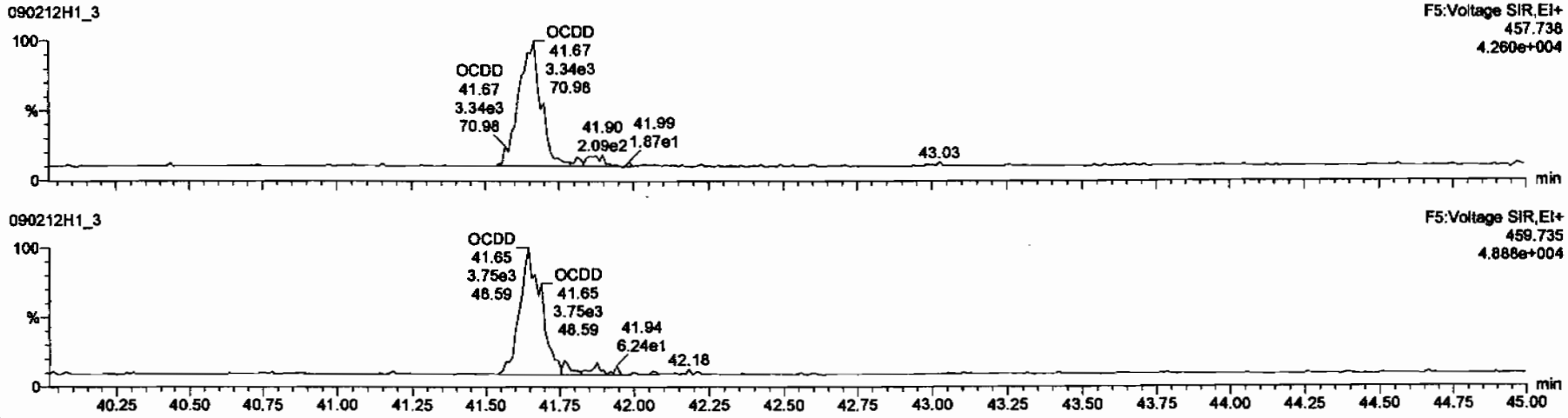

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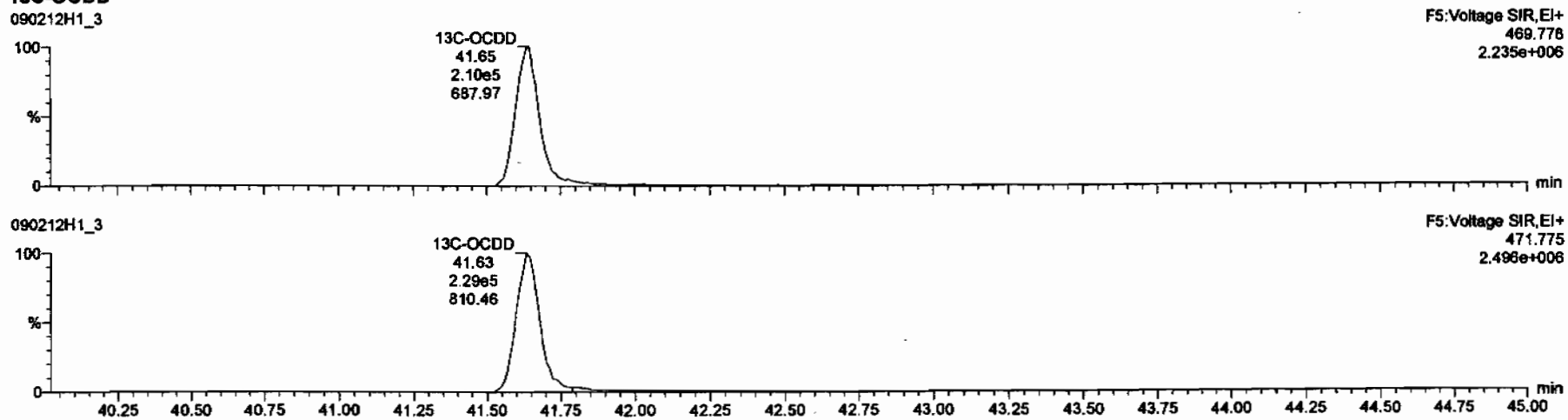

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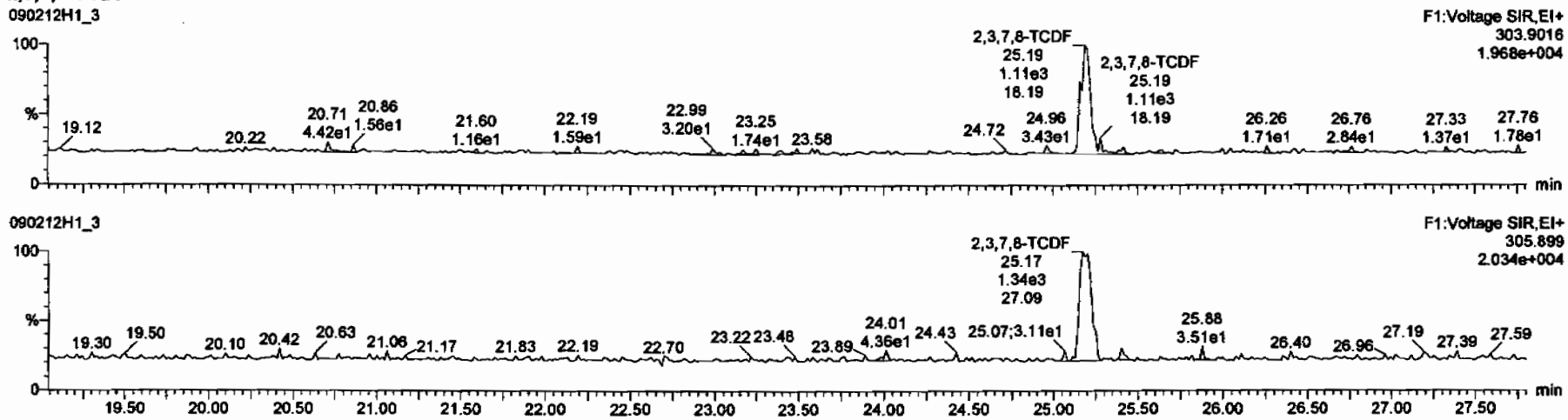

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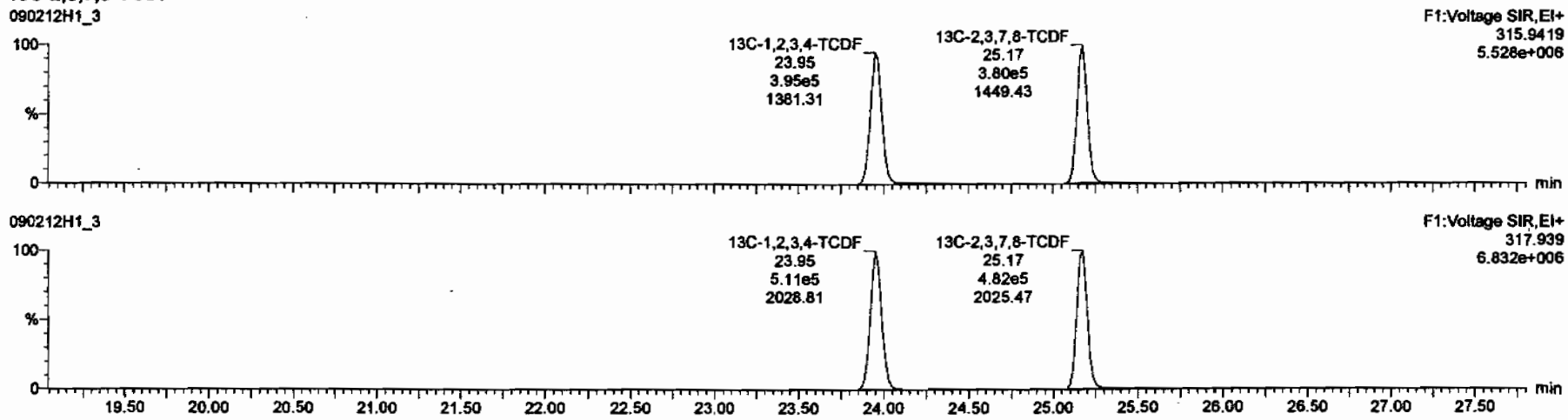

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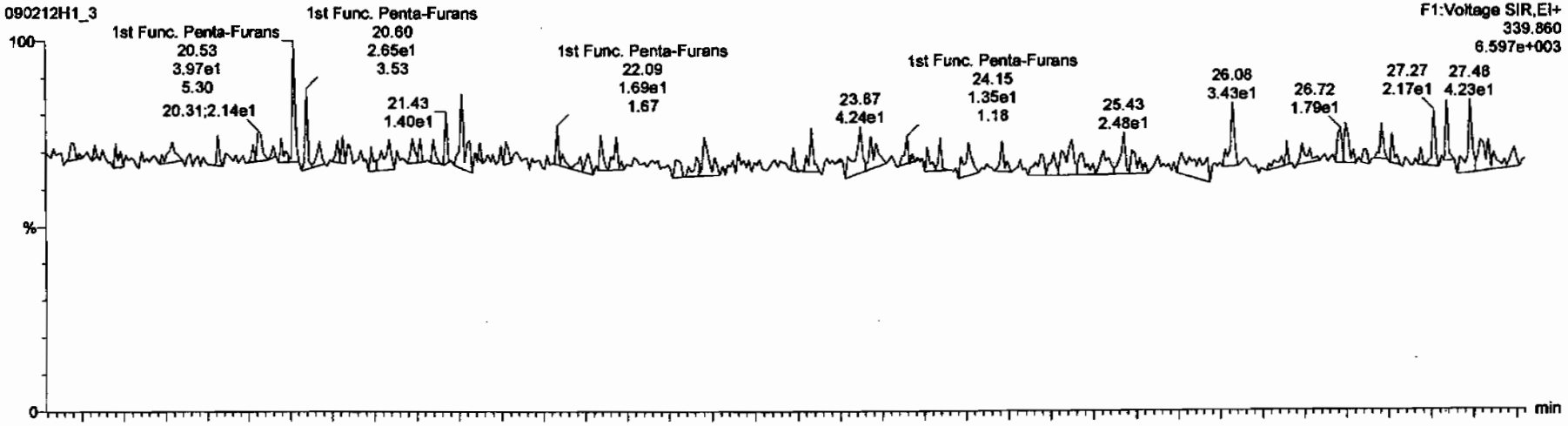

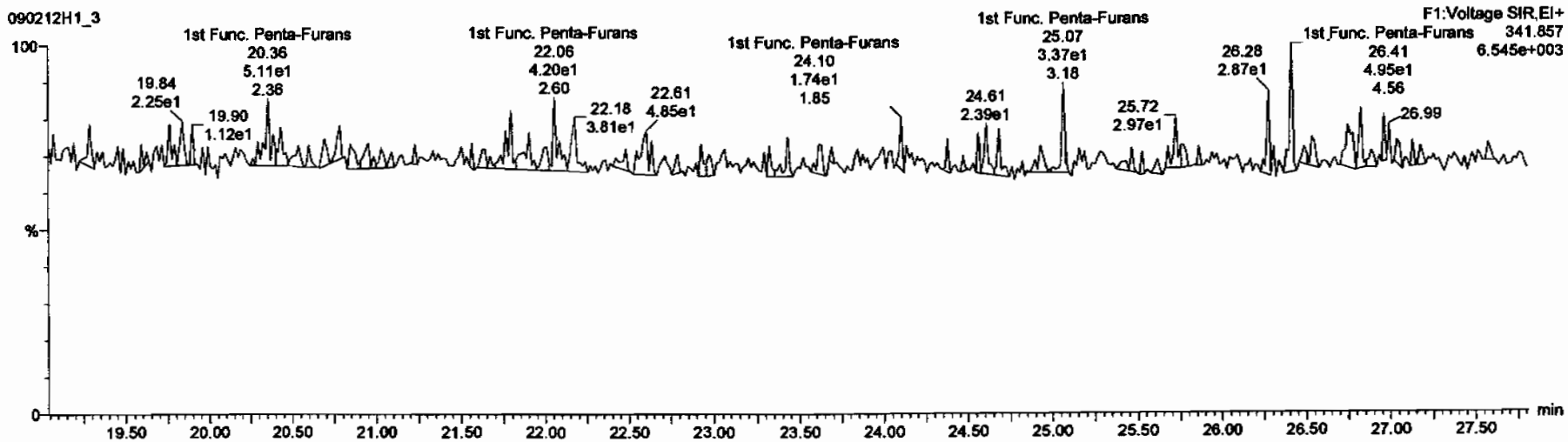

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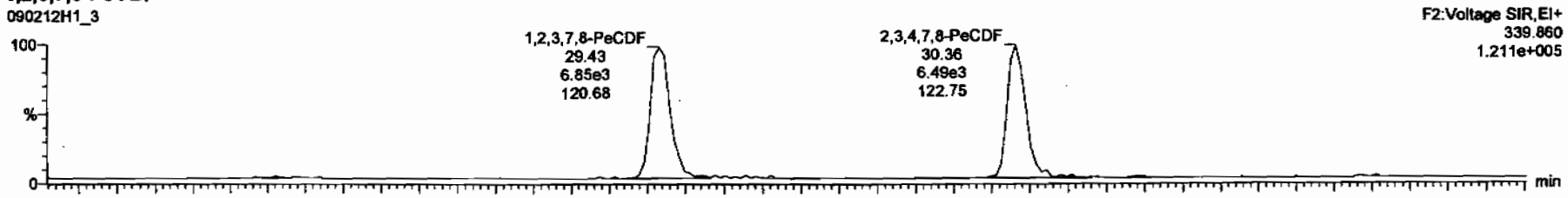

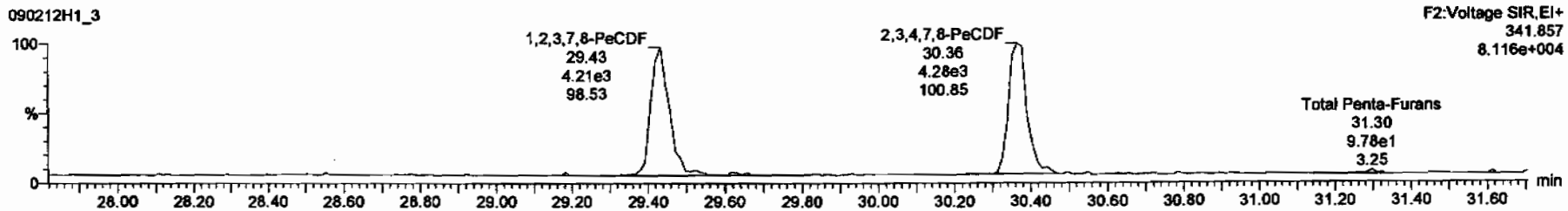

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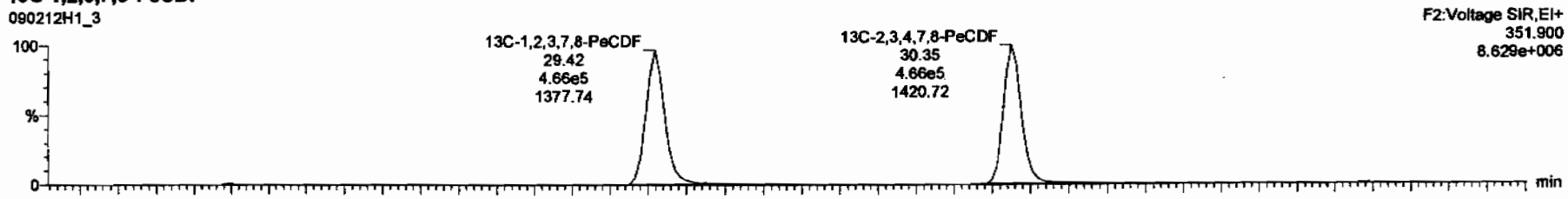

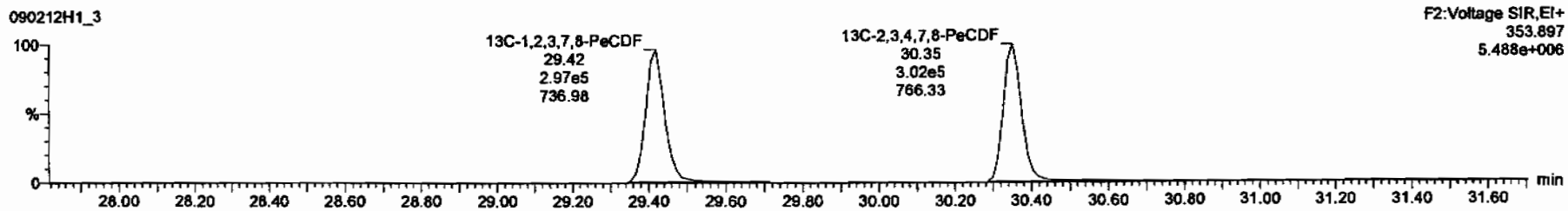

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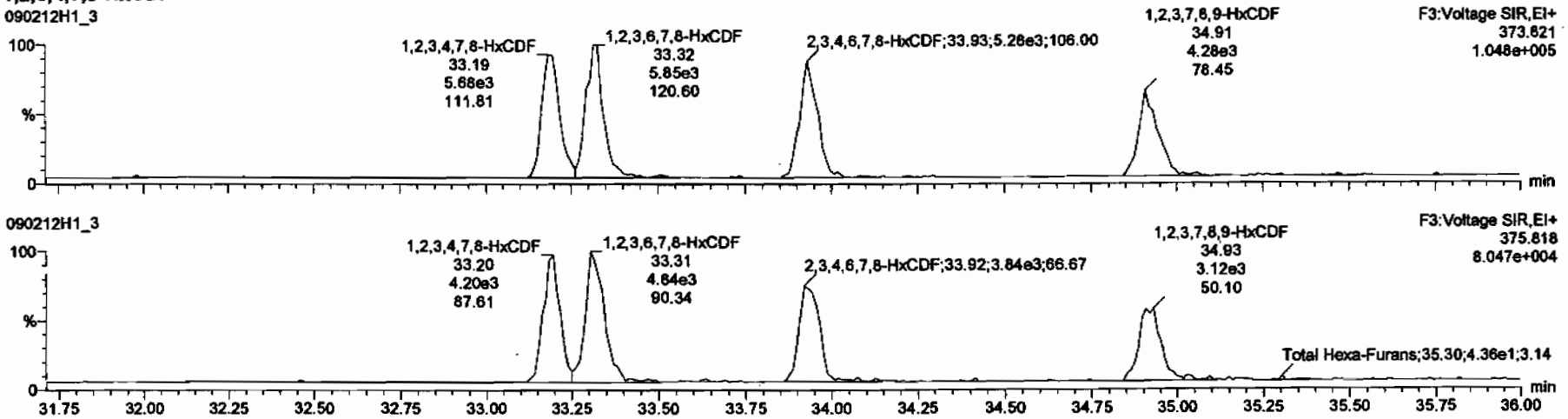

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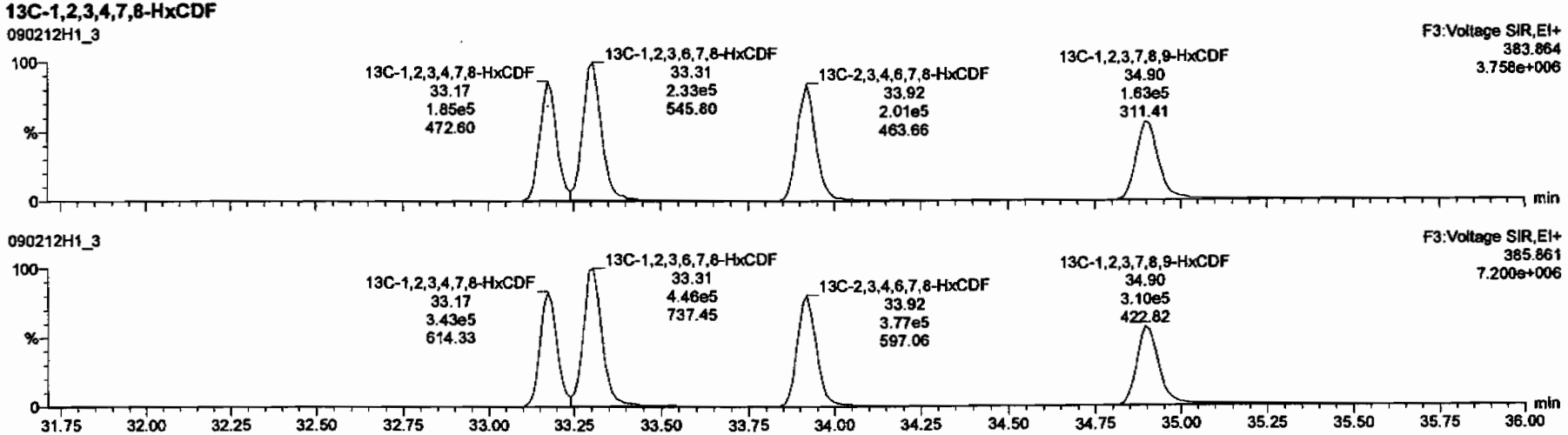

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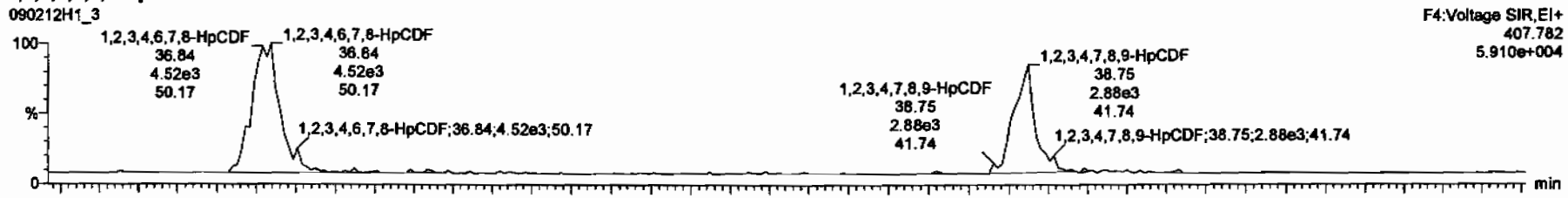

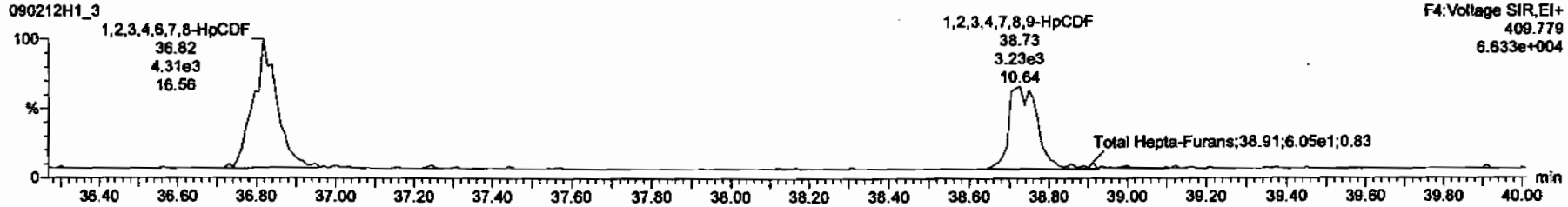

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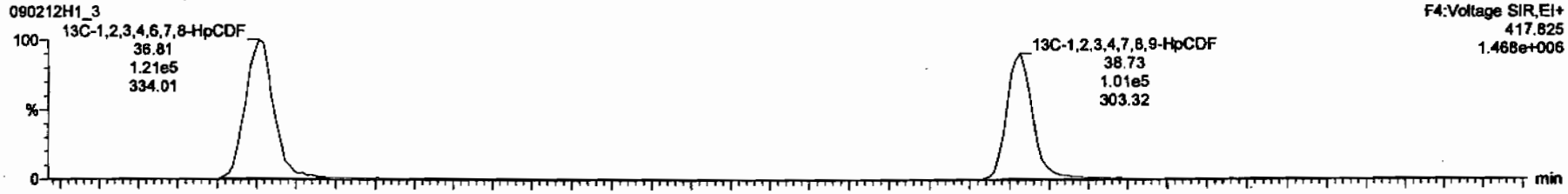

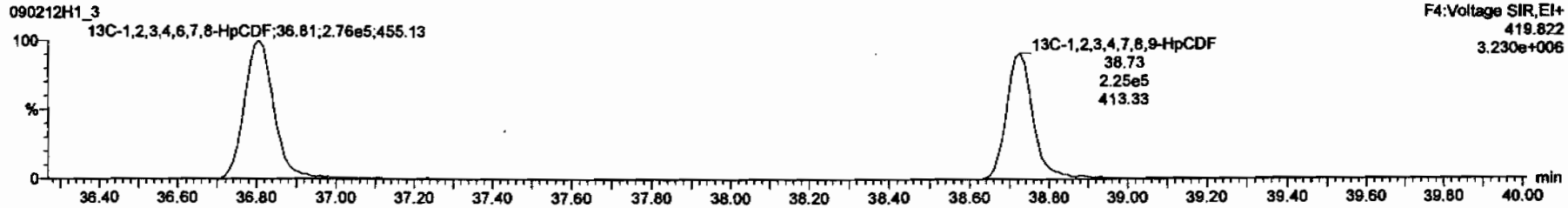

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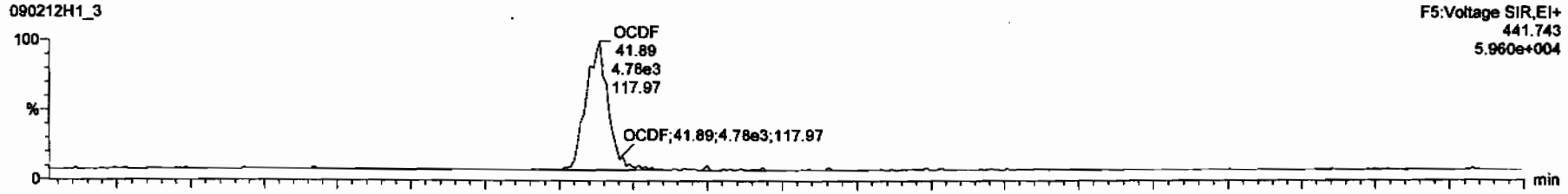

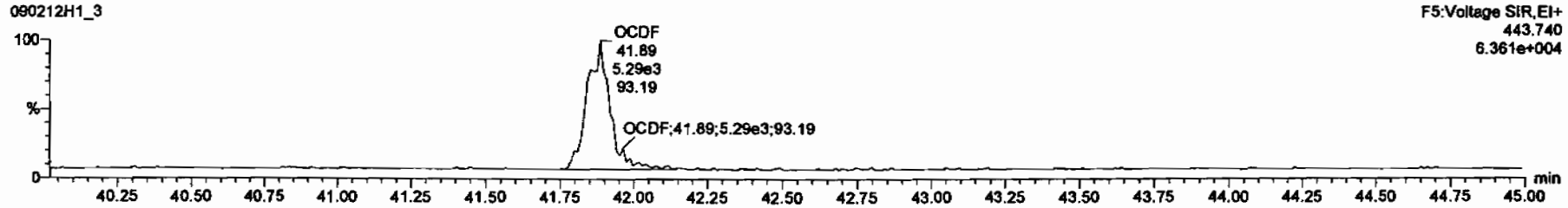

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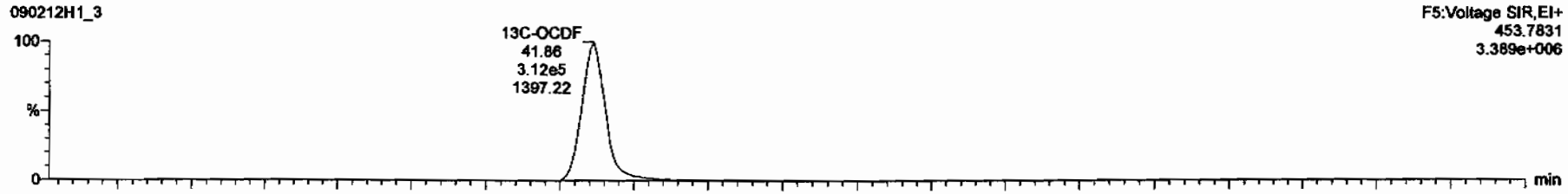

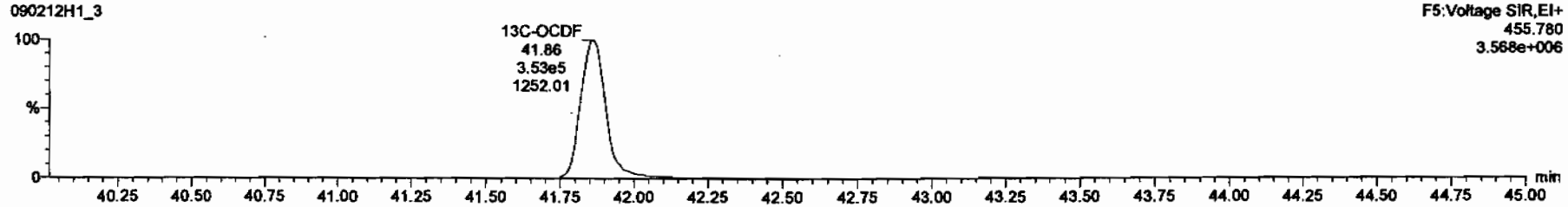

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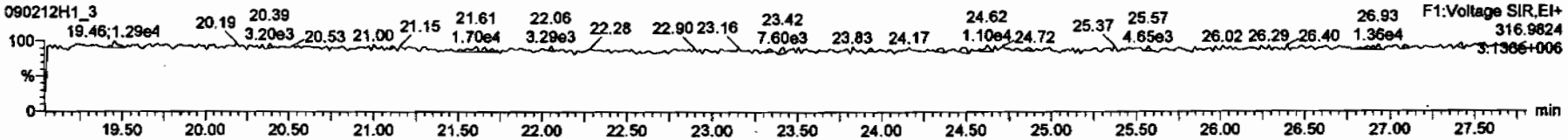

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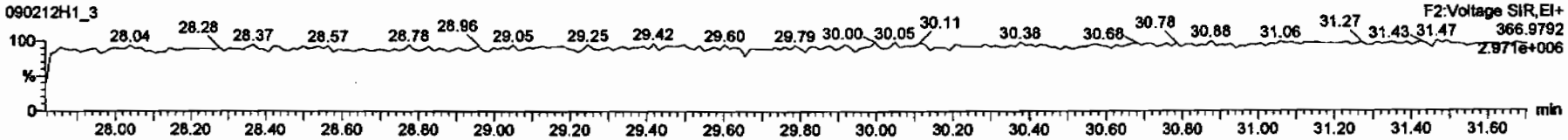

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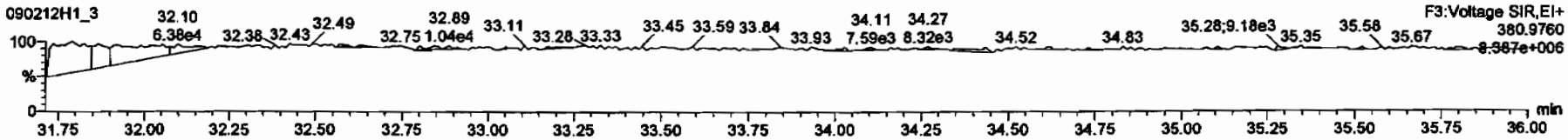

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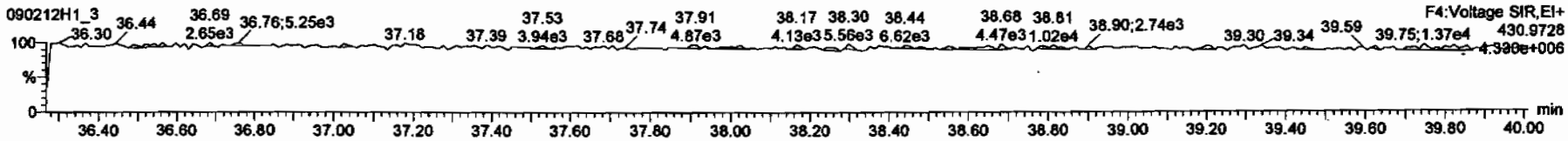

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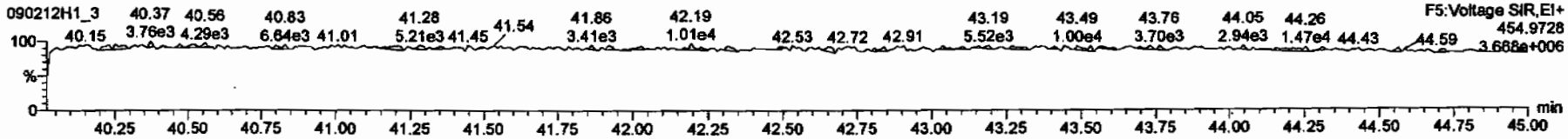

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DPE1

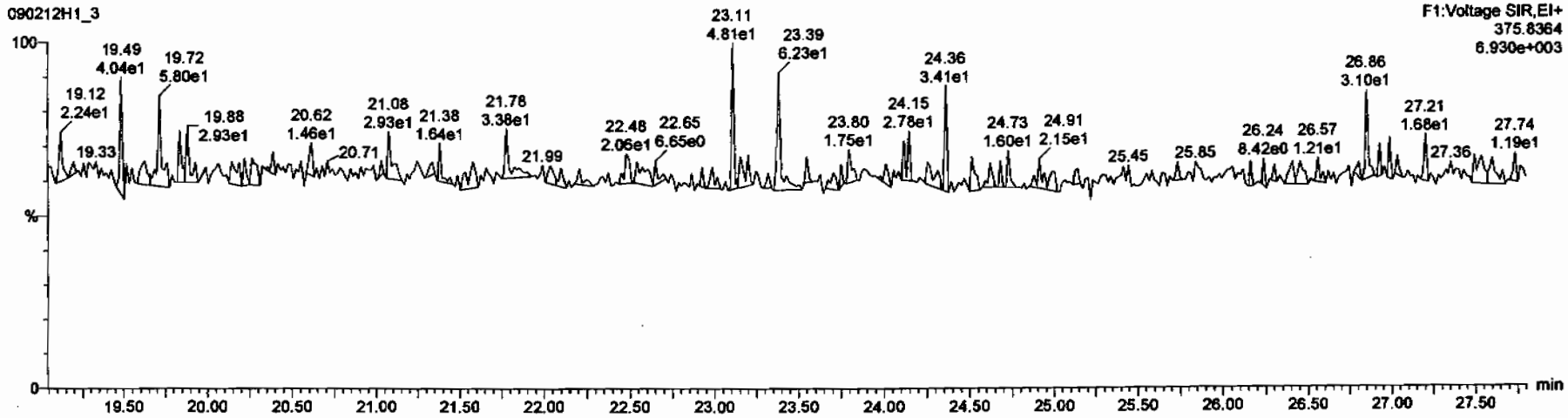

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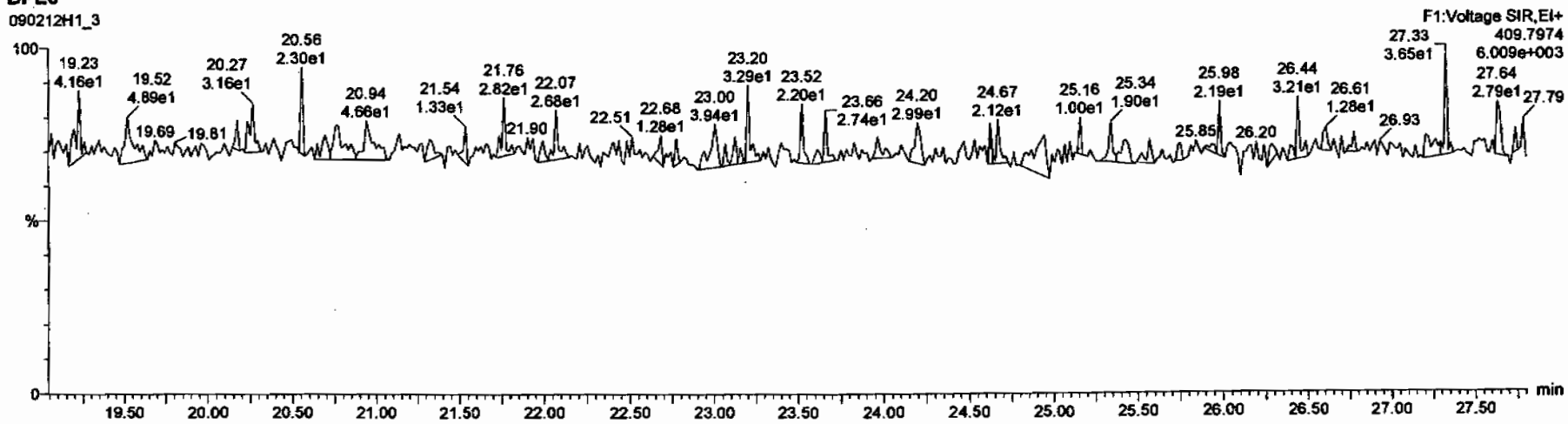

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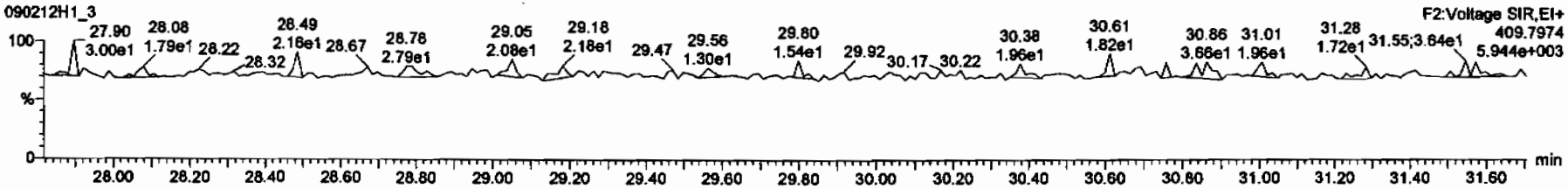

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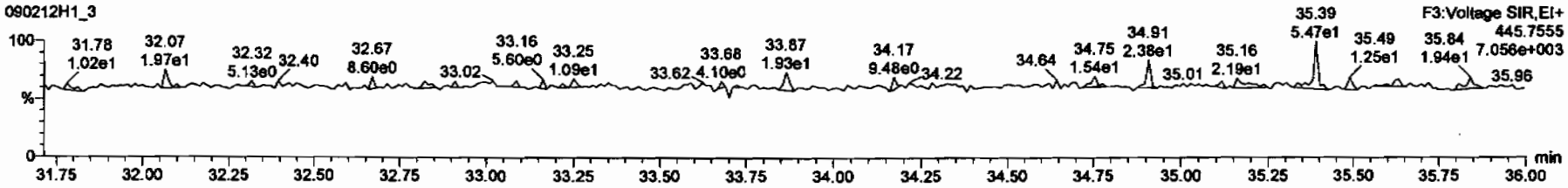

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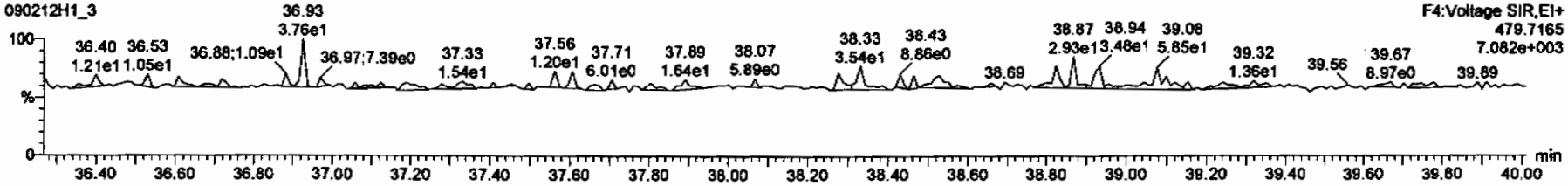

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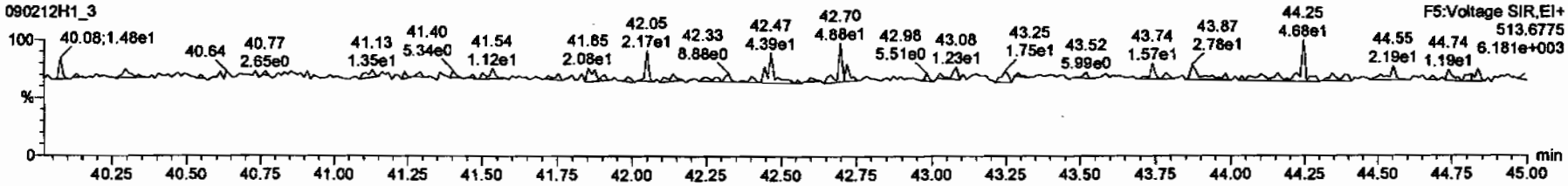

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Name: 090212H1_4, Date: 12-Feb-2009, Time: 13:38:34, ID: ST090212H1-3 1613 CS1 080917CG, Description: 1613 CS1 080917G

2,3,7,8-TCDD

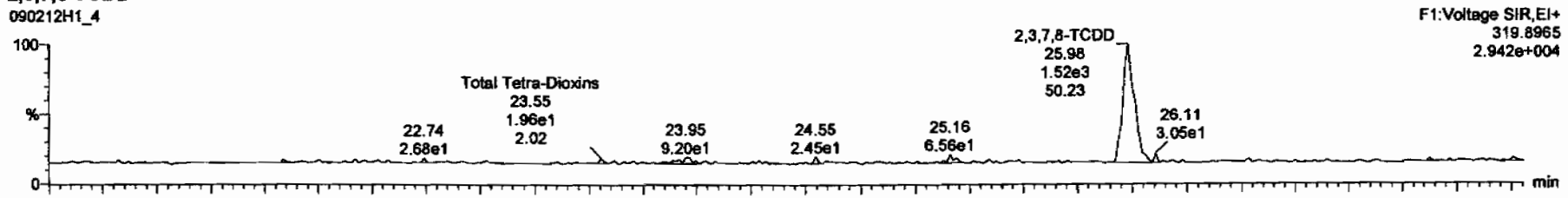

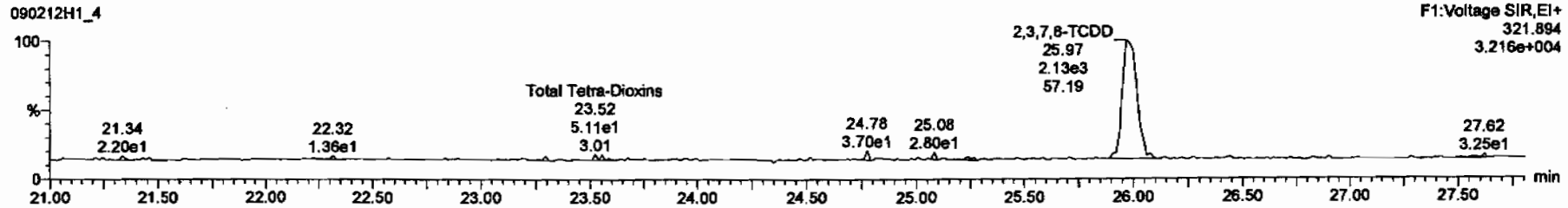

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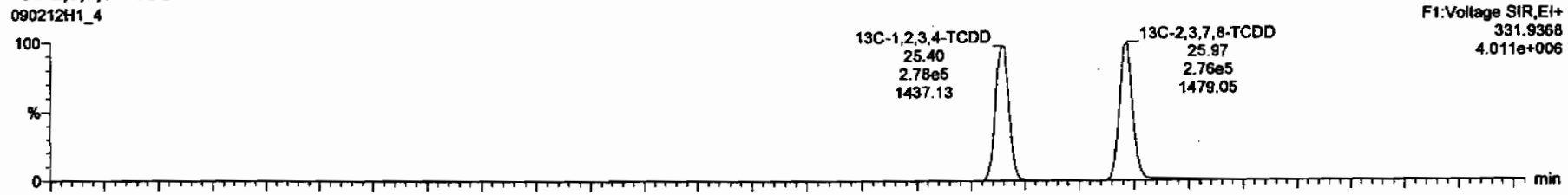

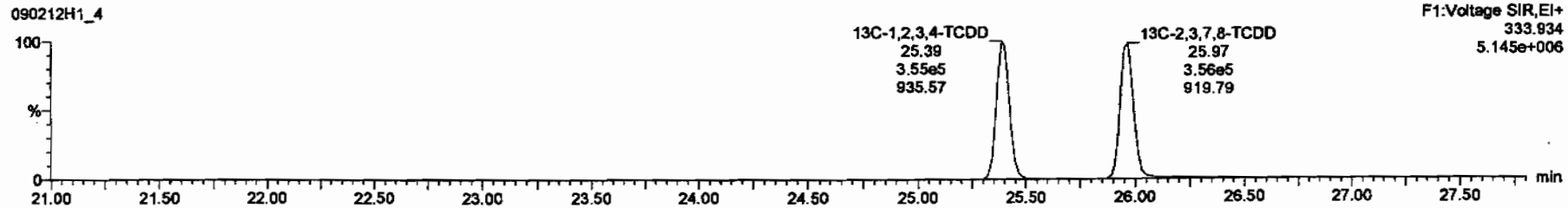

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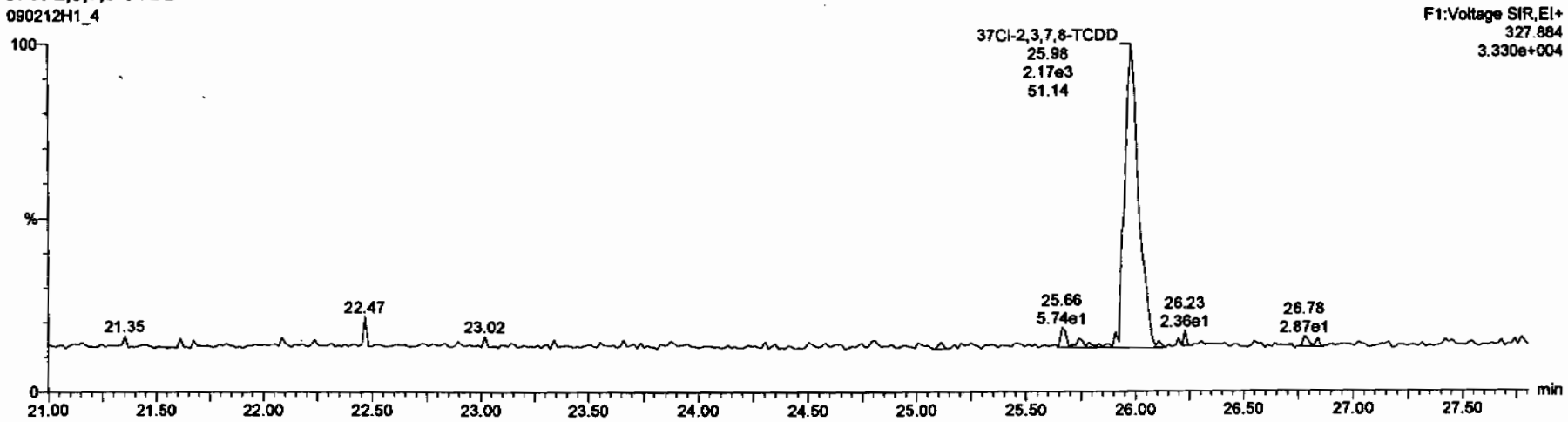

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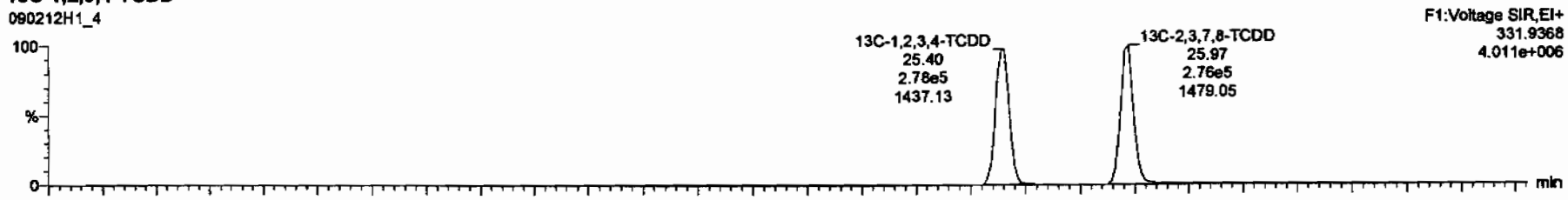

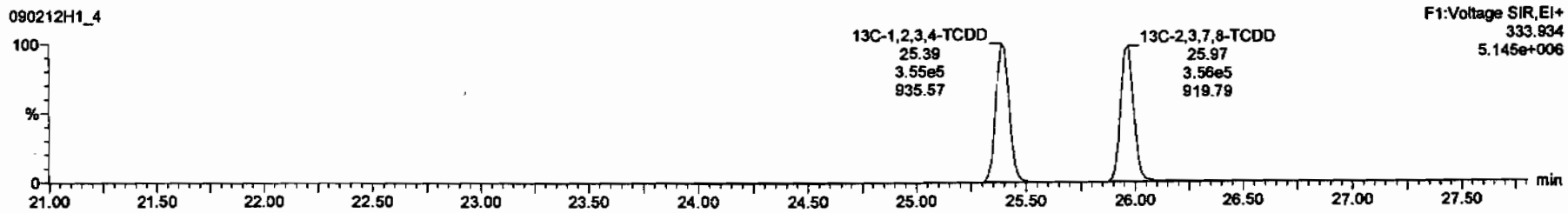

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1,2,3,7,8-PeCDD

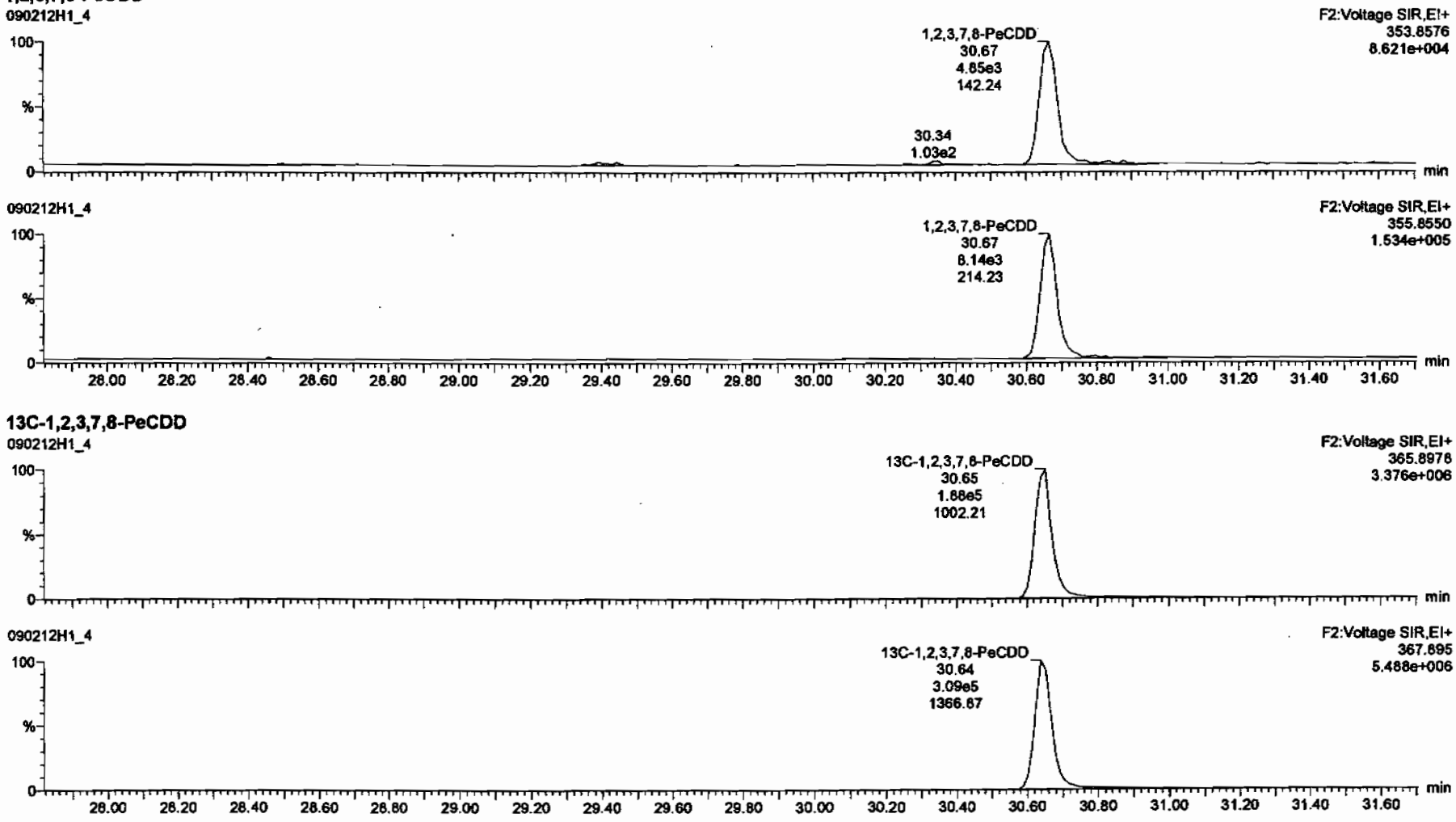

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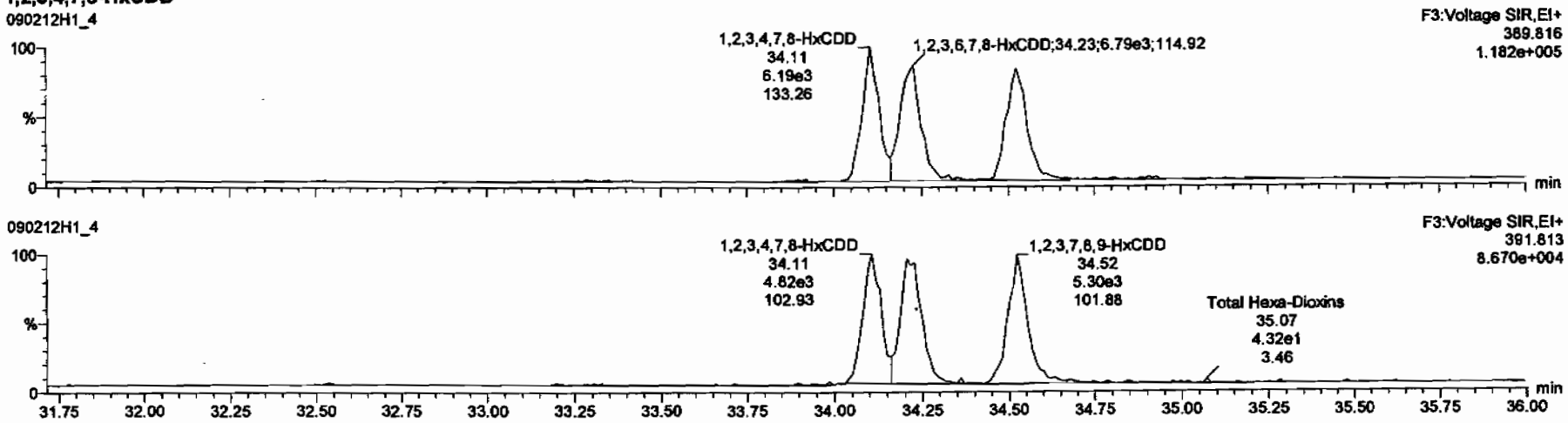

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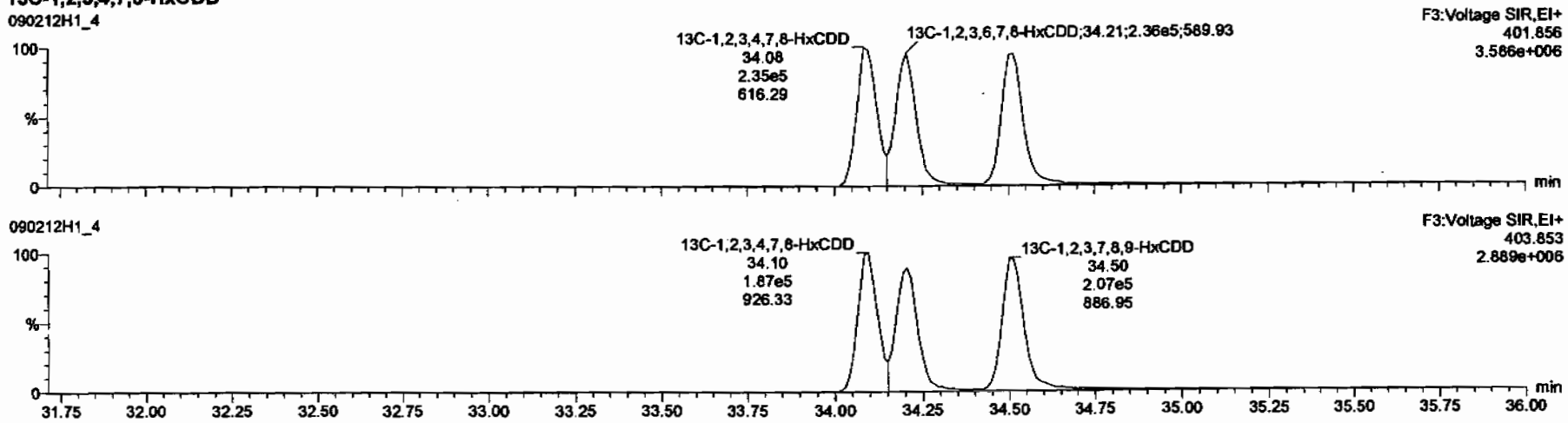

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1,2,3,4,6,7,8-HpCDD

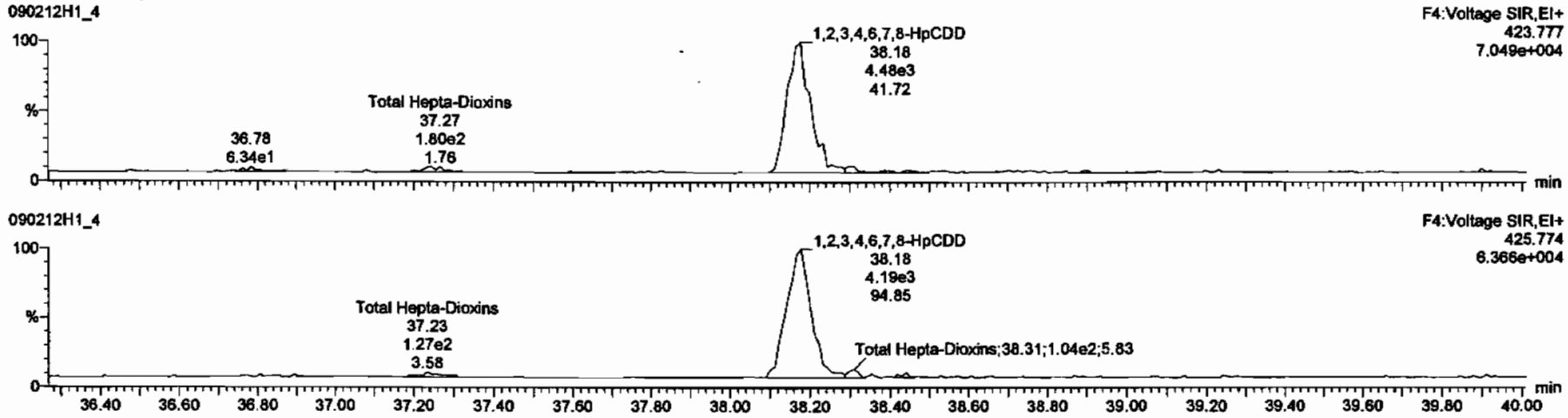

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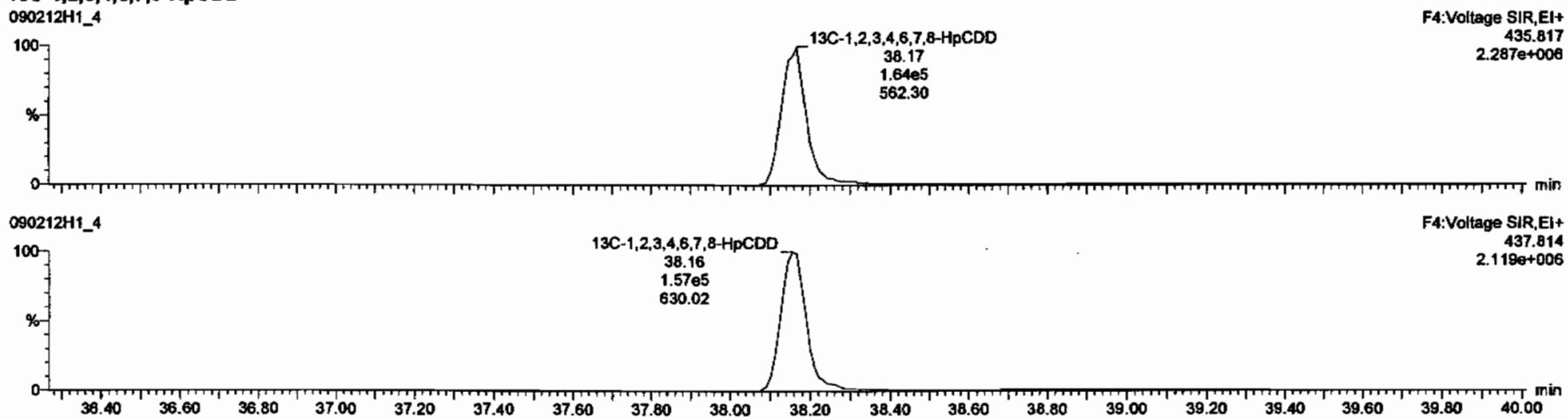

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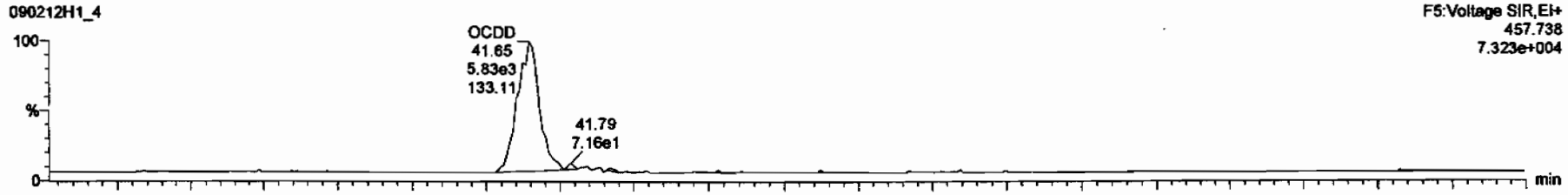

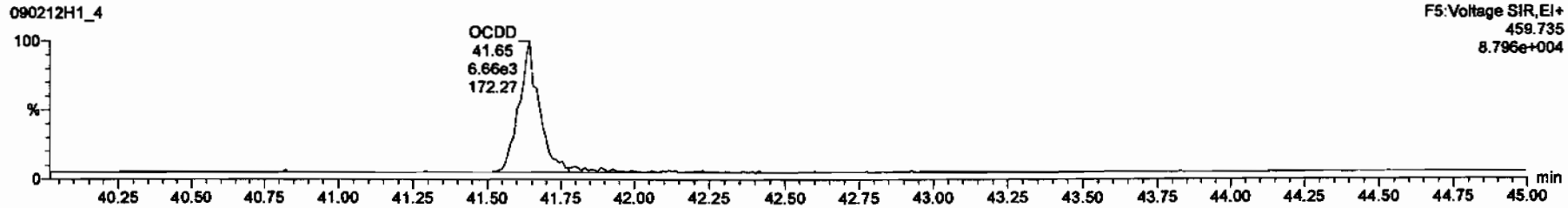

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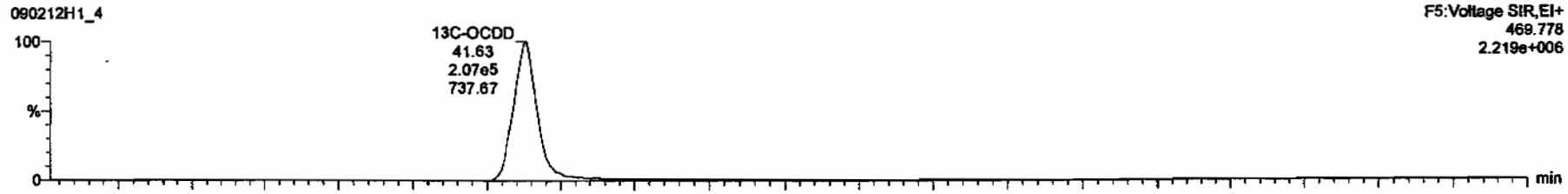

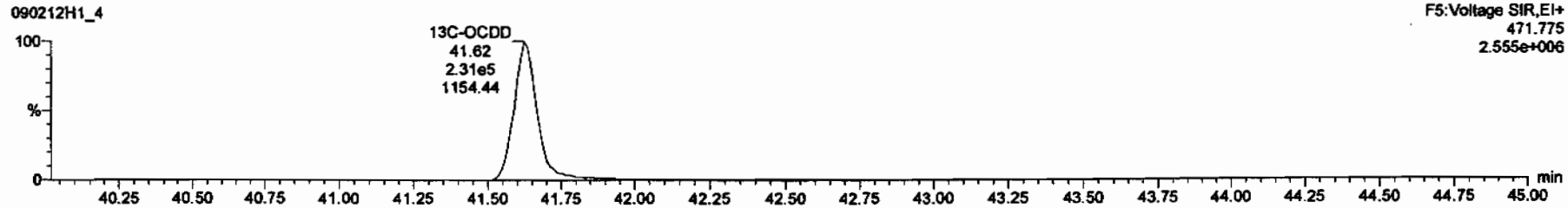

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2,3,7,8-TCDF

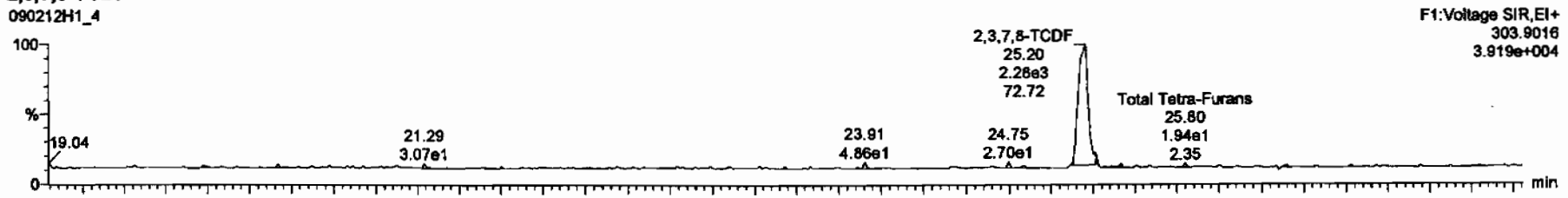

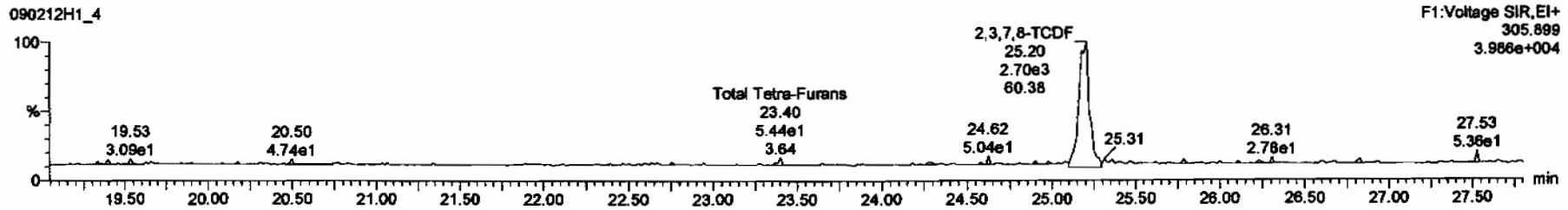

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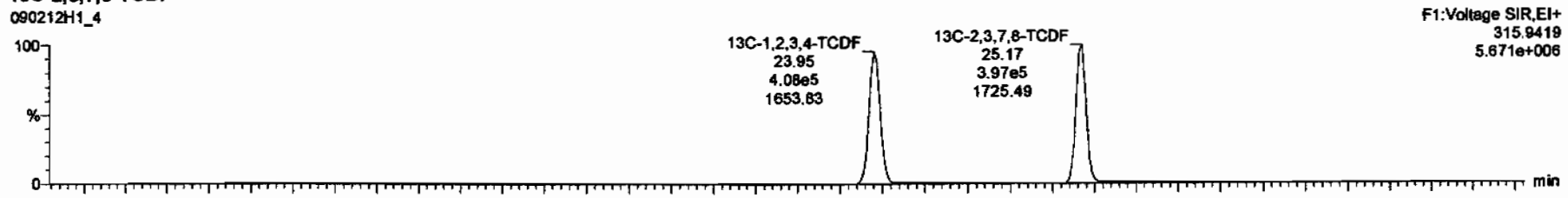

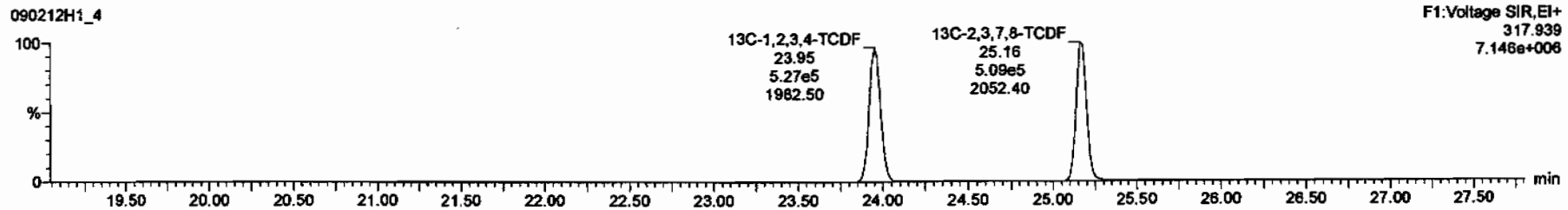

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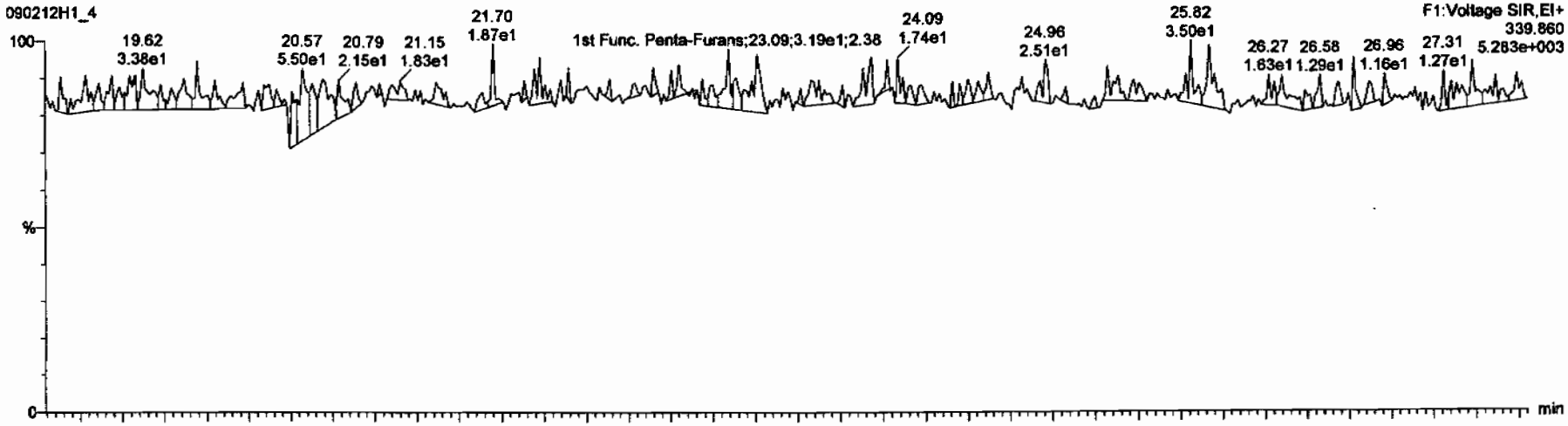

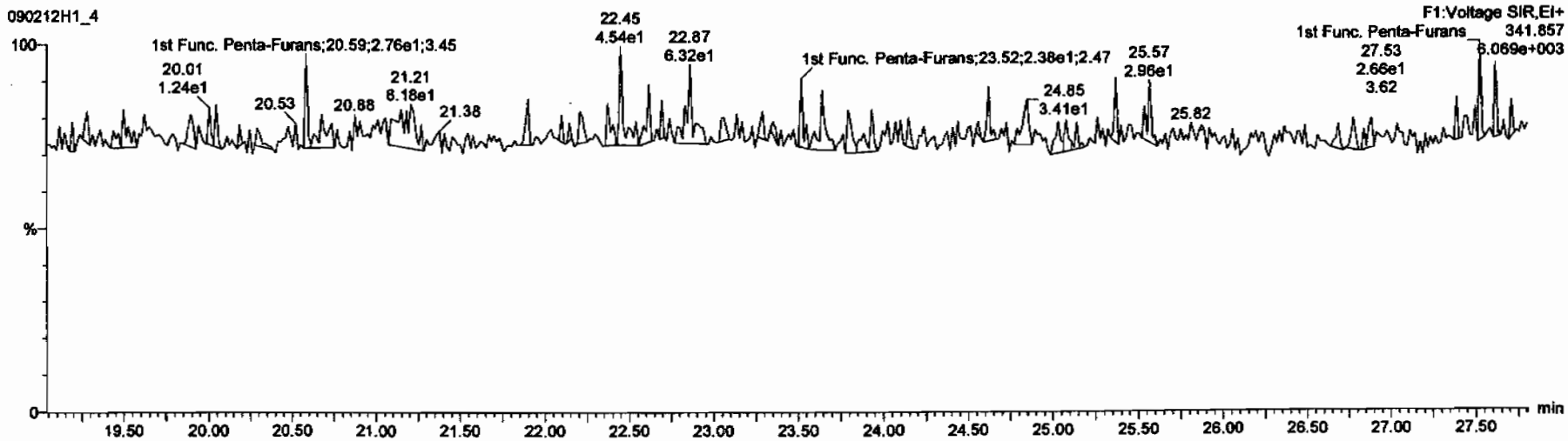

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1,2,3,7,8-PeCDF

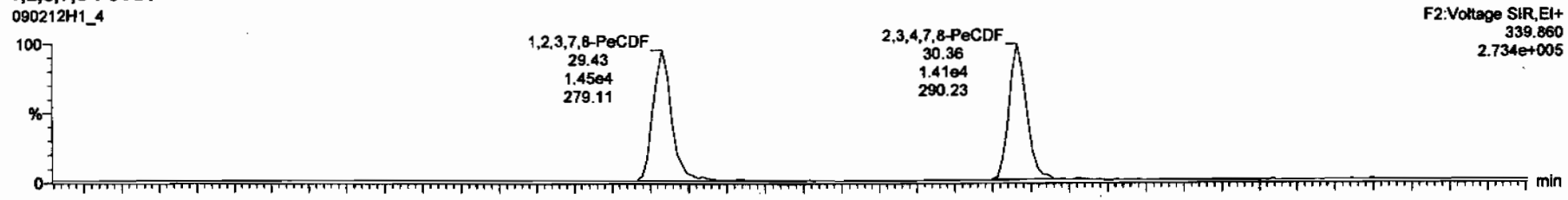

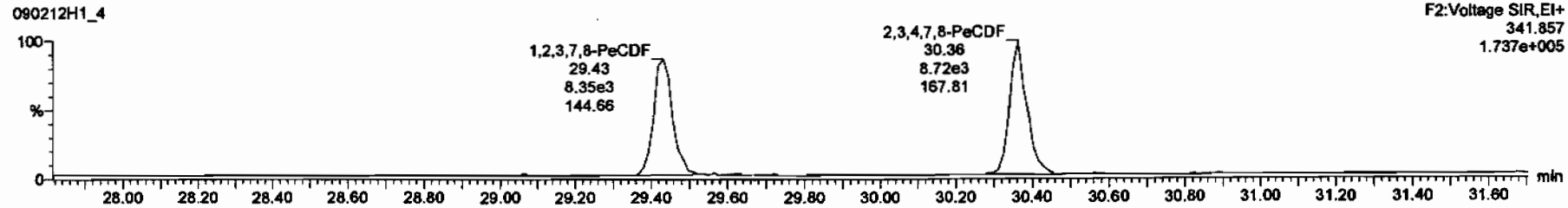

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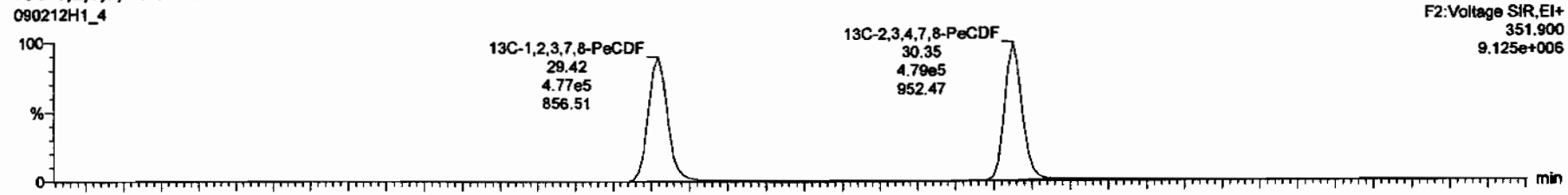

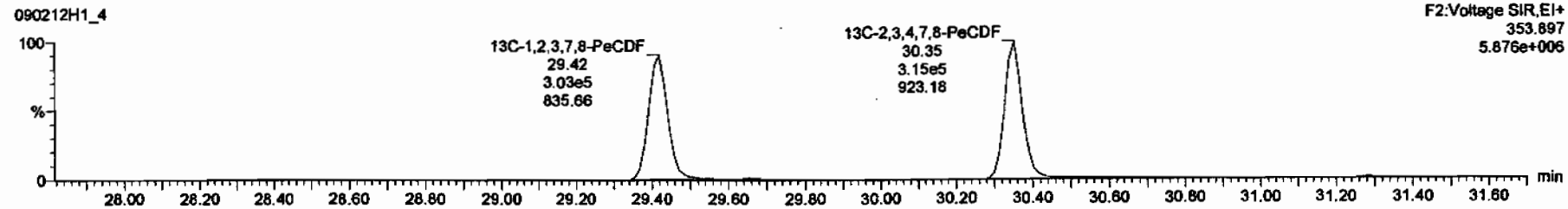

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1,2,3,4,7,8-HxCDF

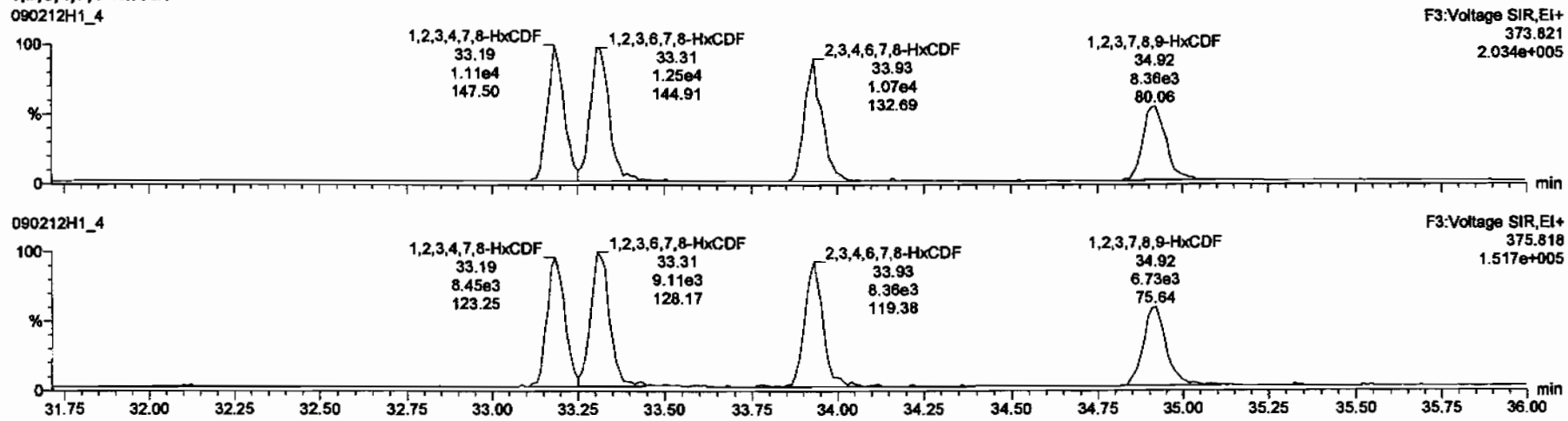

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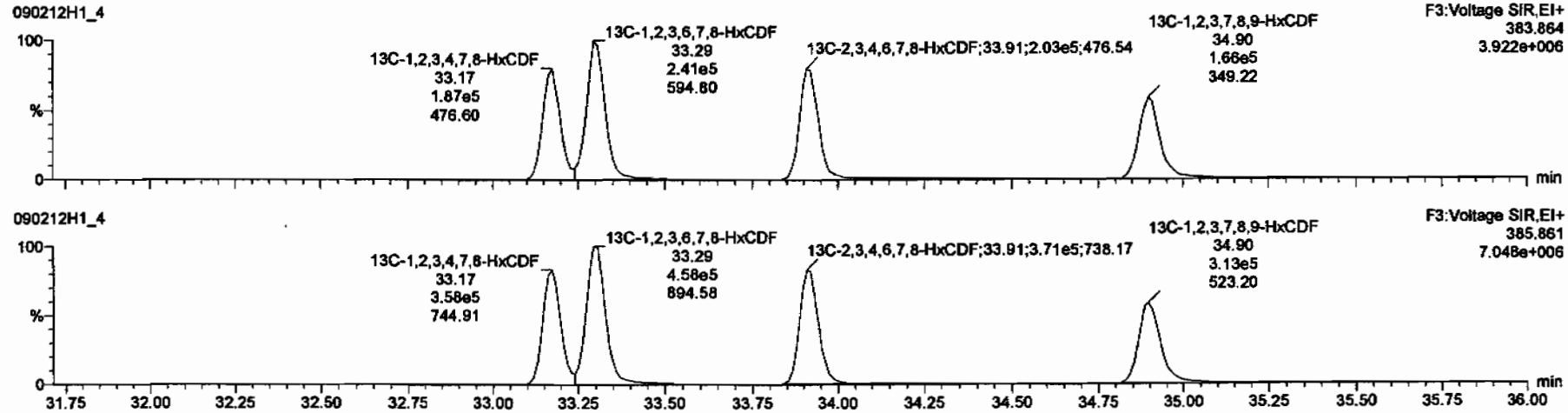

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1,2,3,4,6,7,8-HpCDF

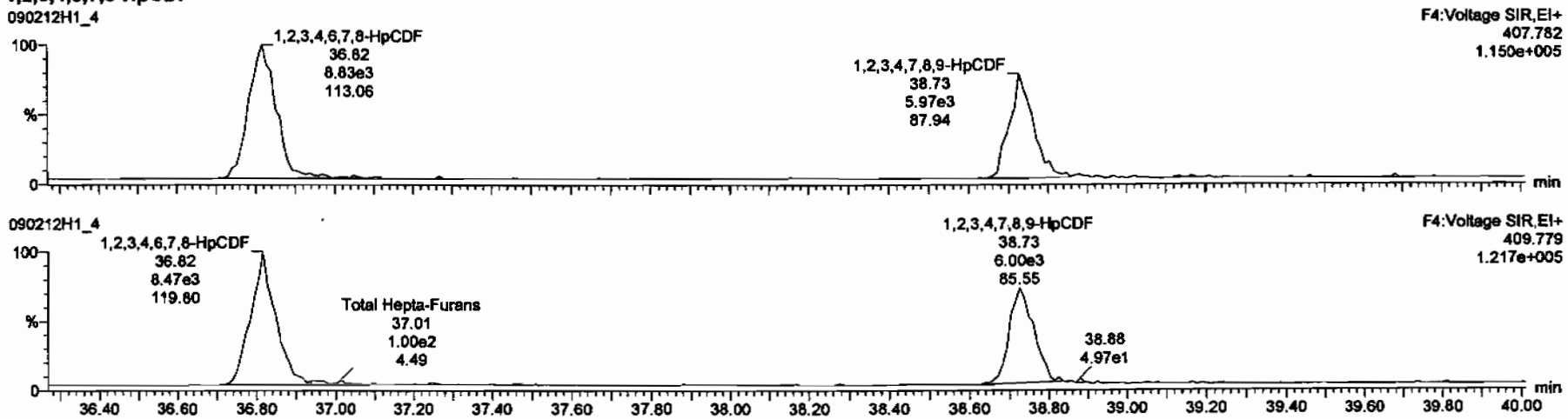

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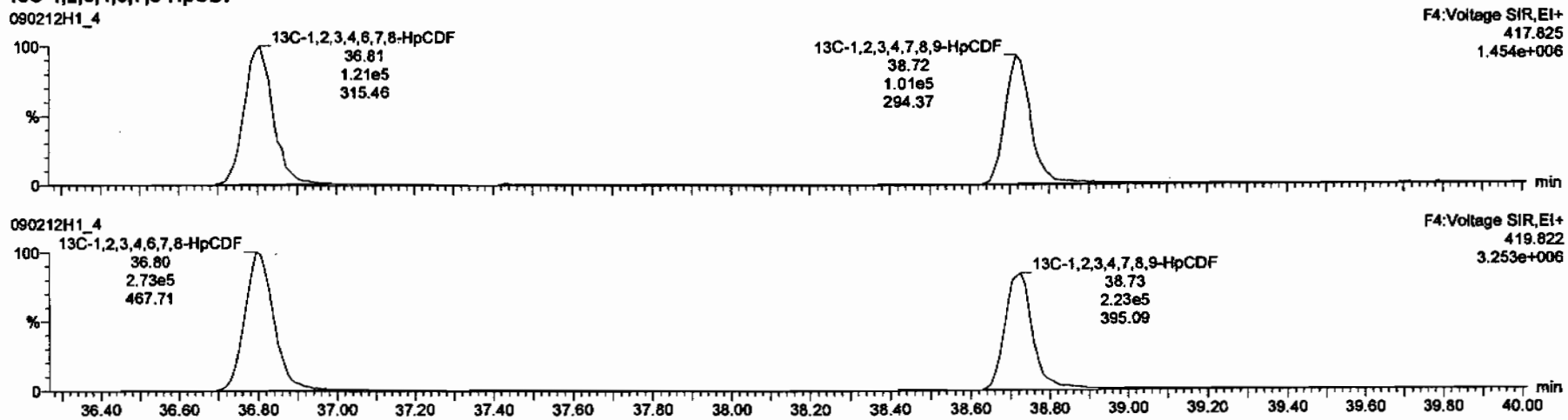

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OCDF

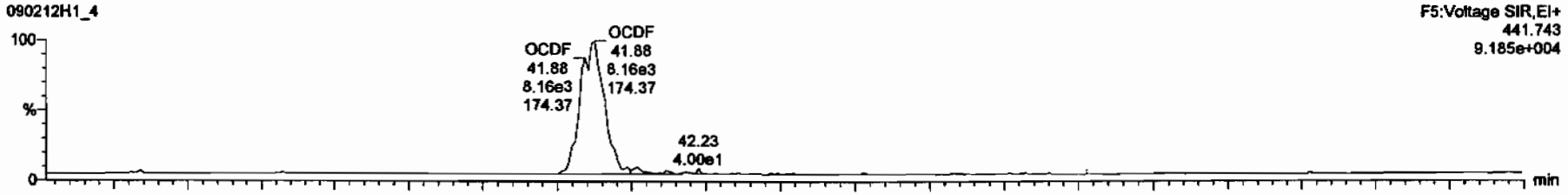

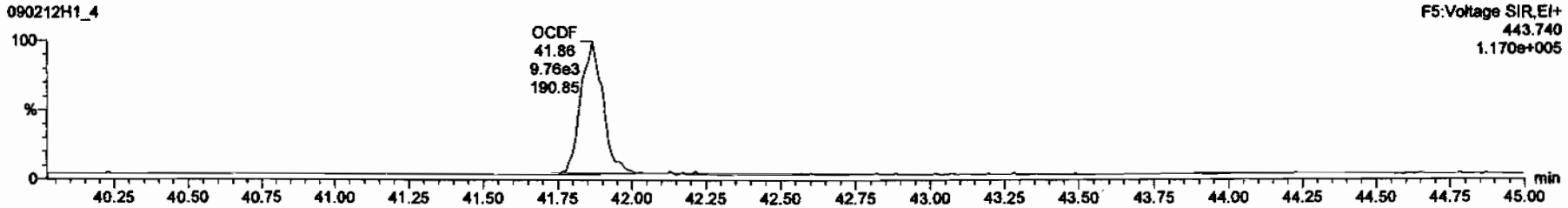

13C-OCDF

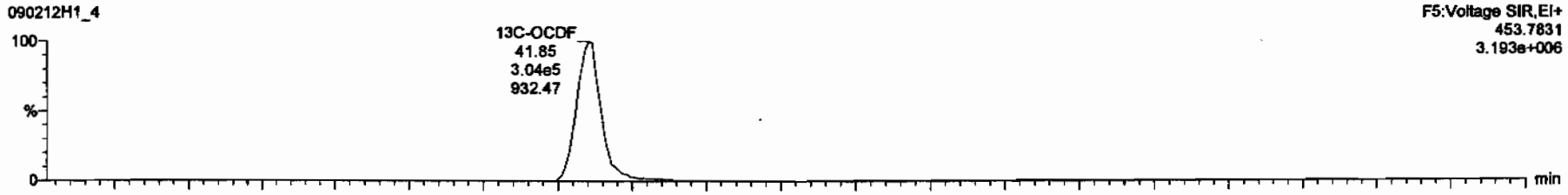

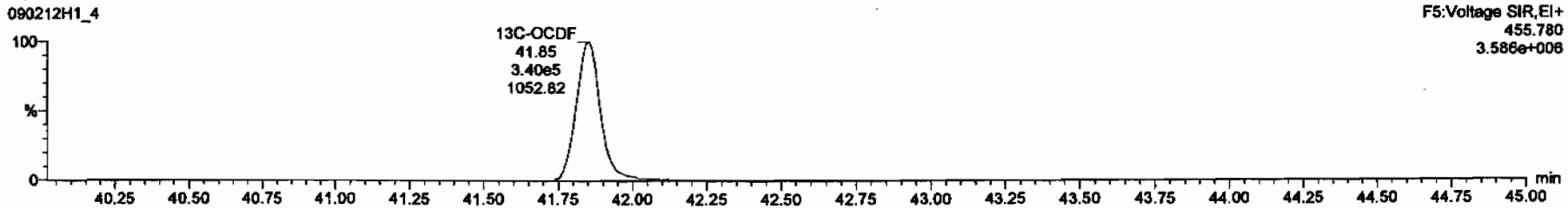

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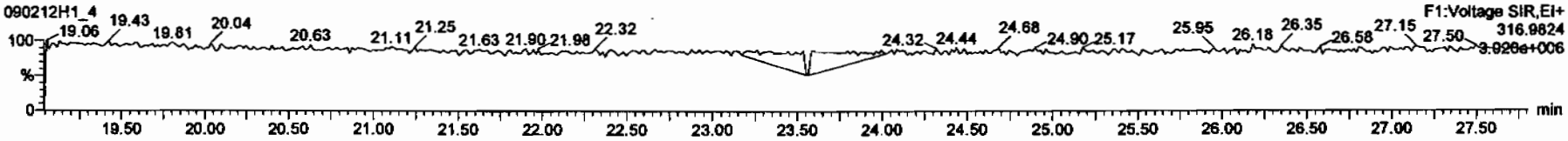

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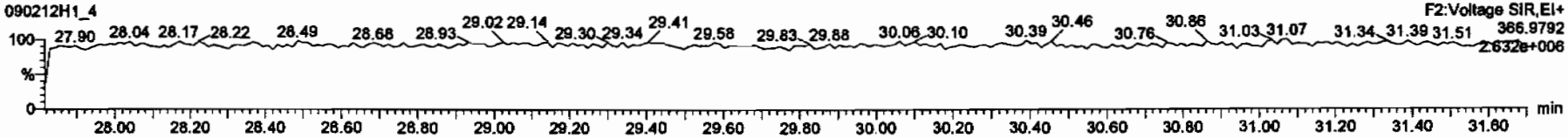

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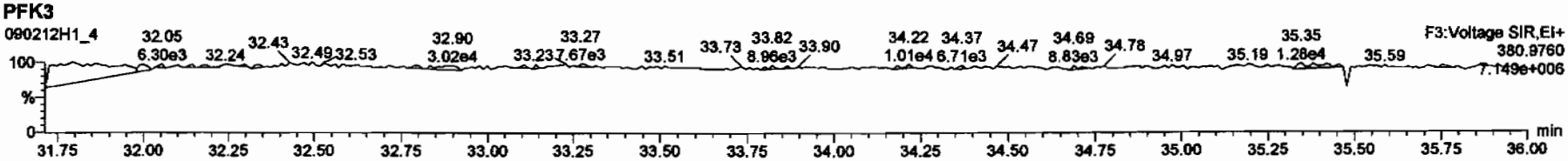

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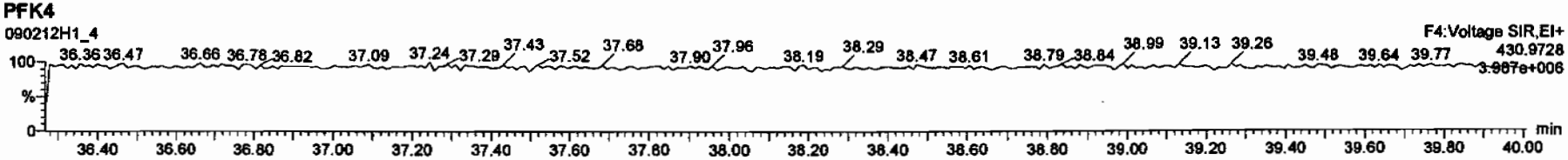

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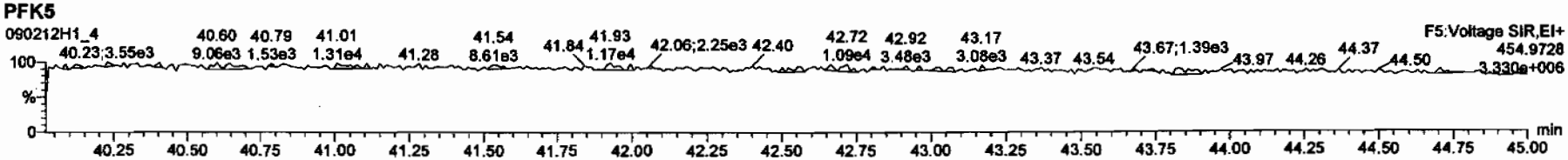

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DPE1

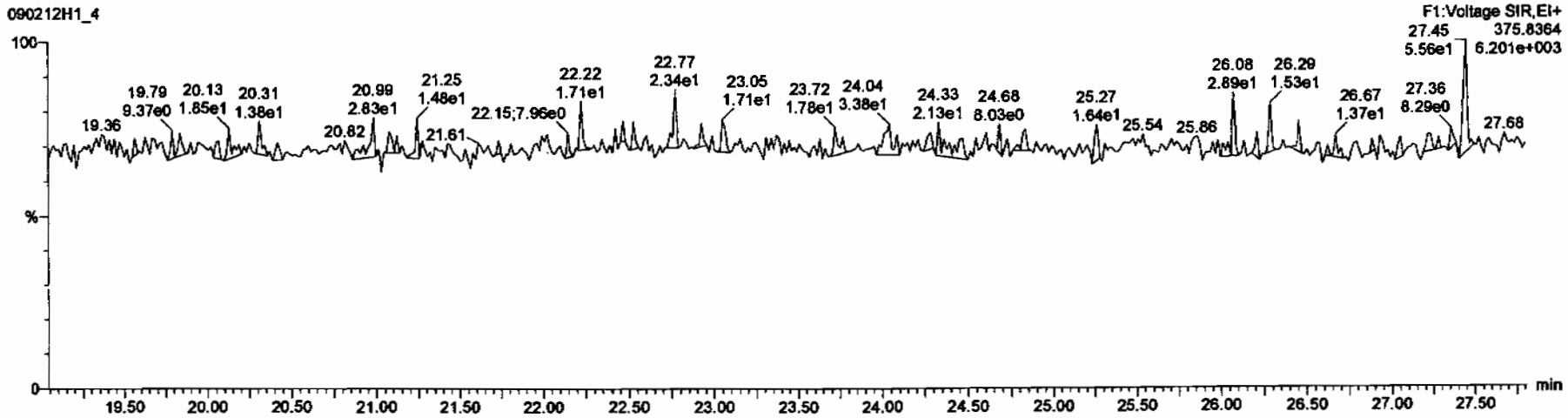

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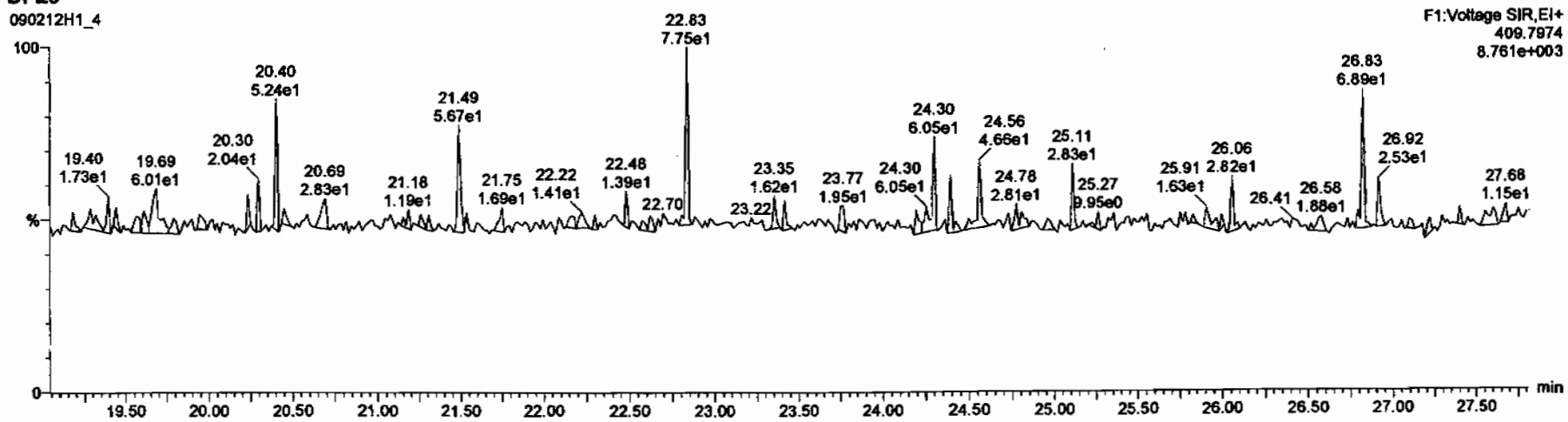

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DPE2

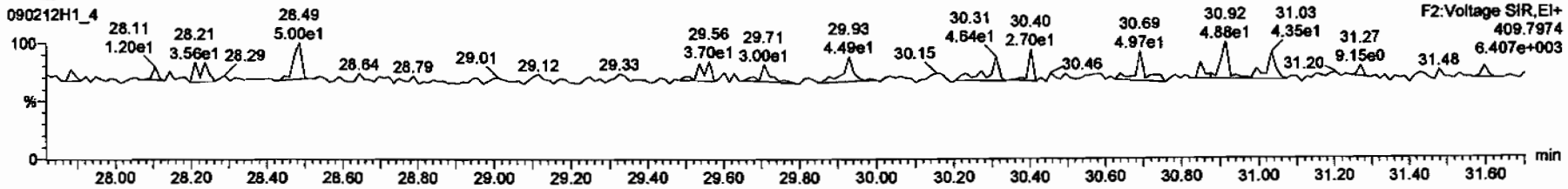

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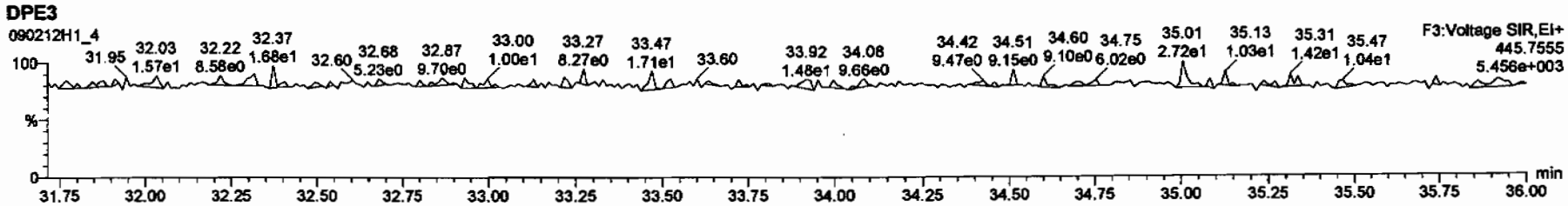

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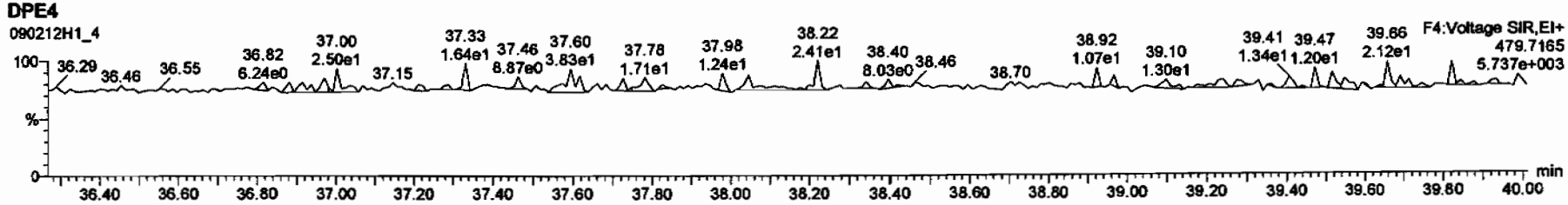

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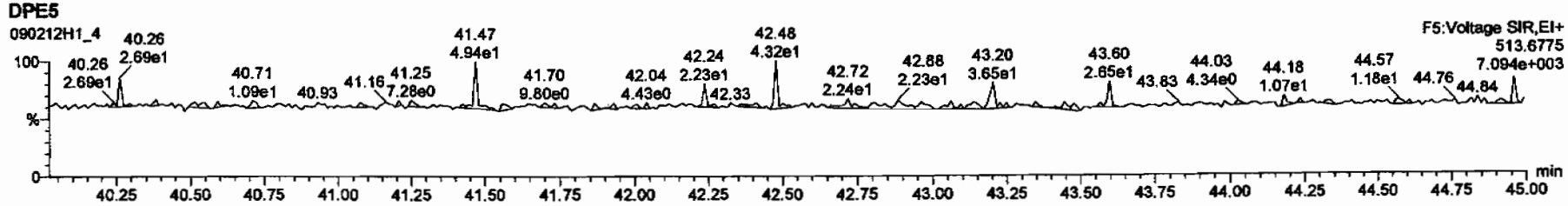

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Name: 090212H1_5, Date: 12-Feb-2009, Time: 14:28:11, ID: ST090212H1-4 1613 CS2 080917H, Description: 1613 CS2 080917H

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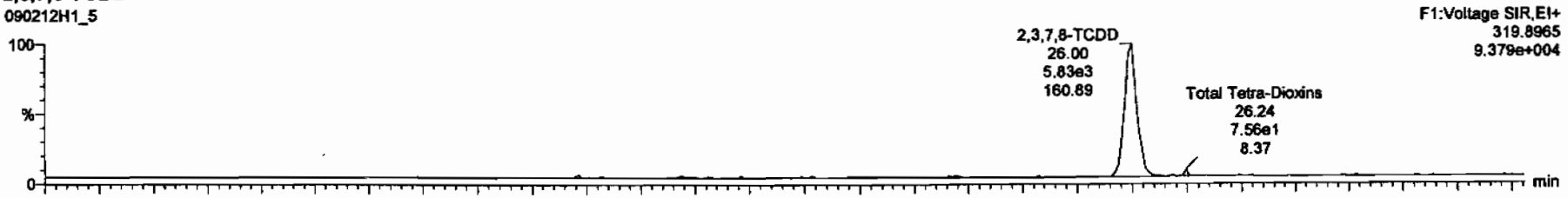

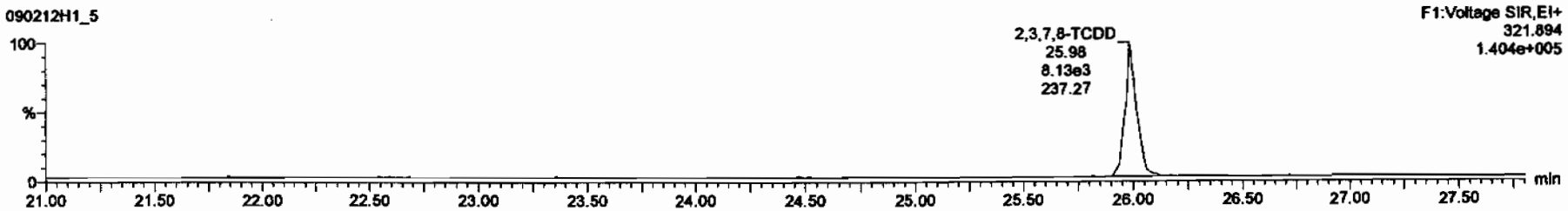

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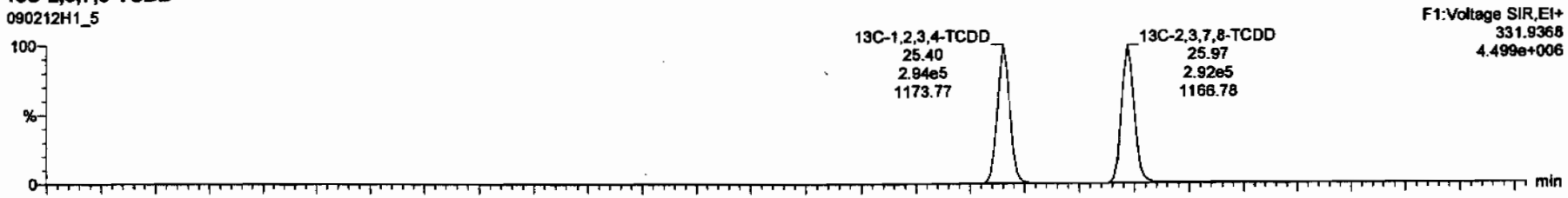

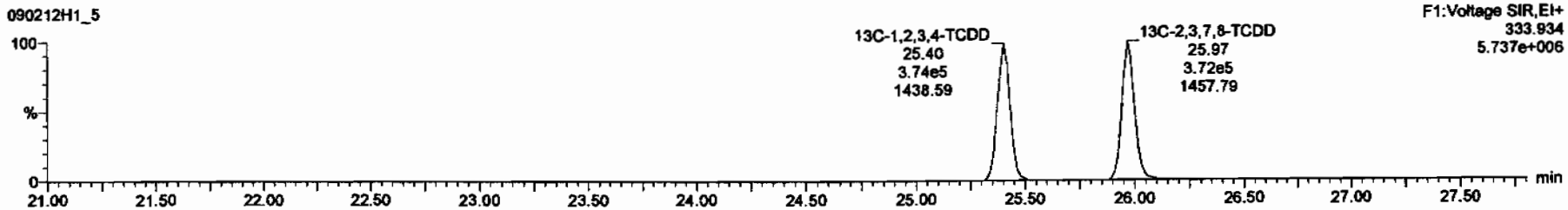

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37Cl-2,3,7,8-TCDD

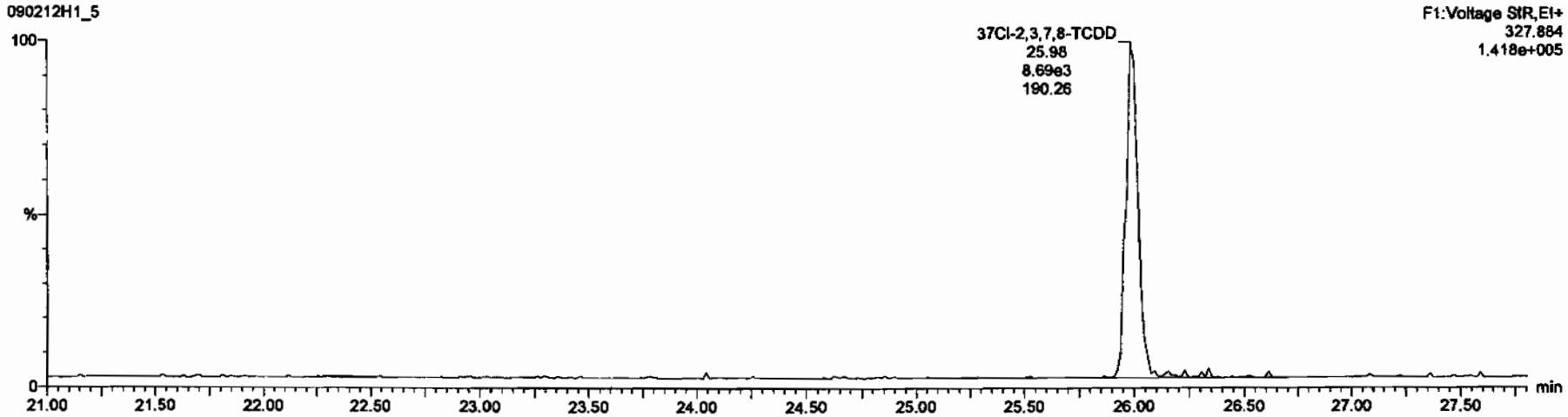

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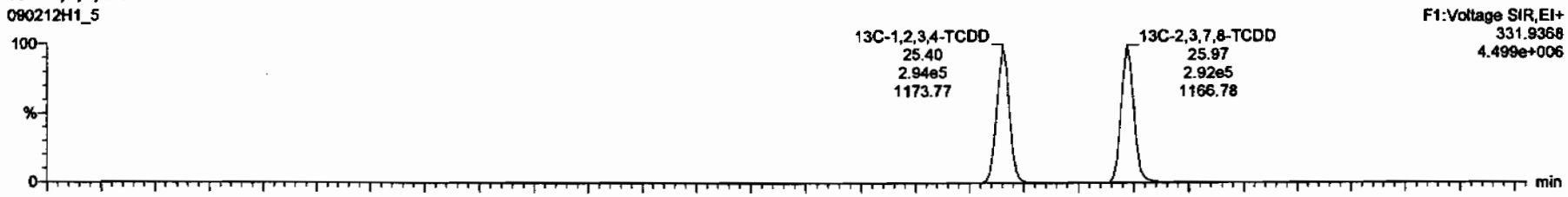

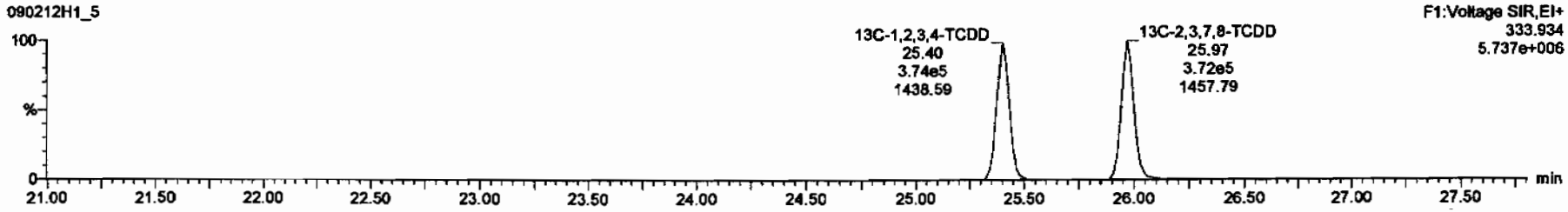

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1,2,3,7,8-PeCDD

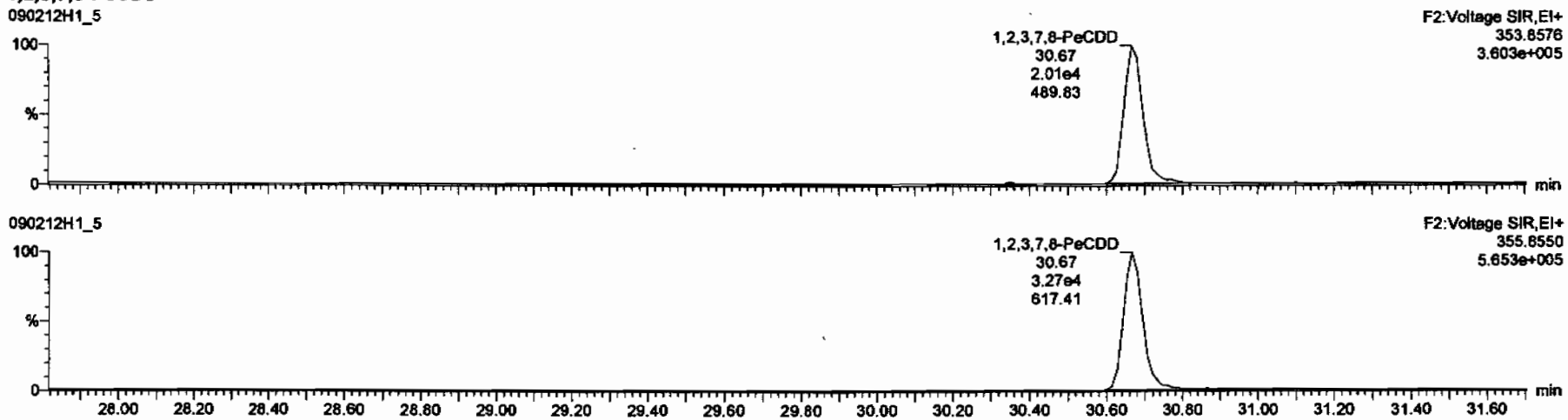

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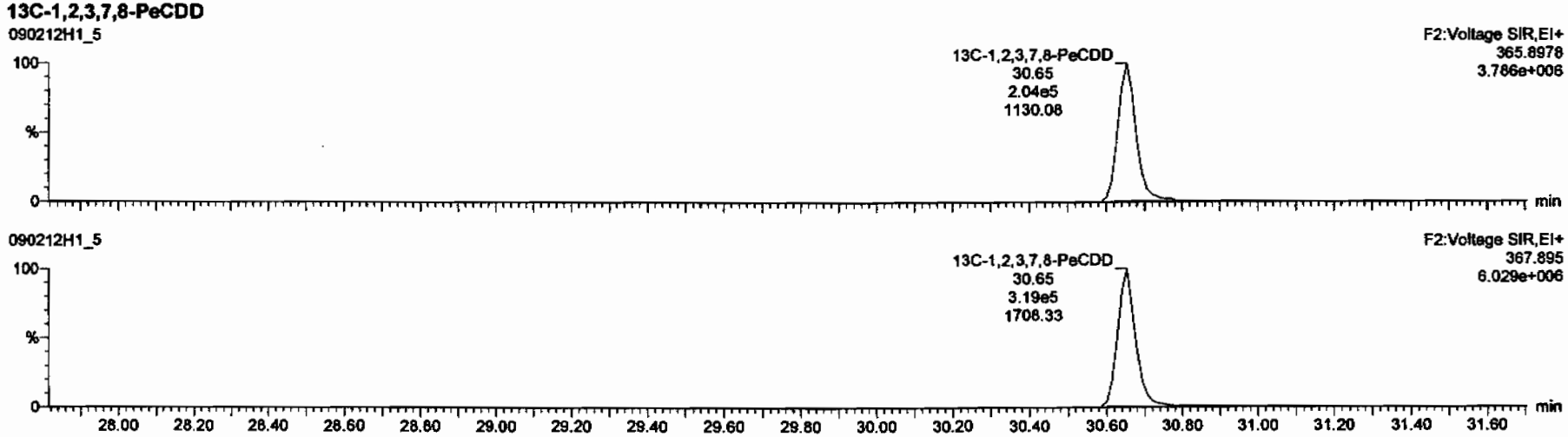

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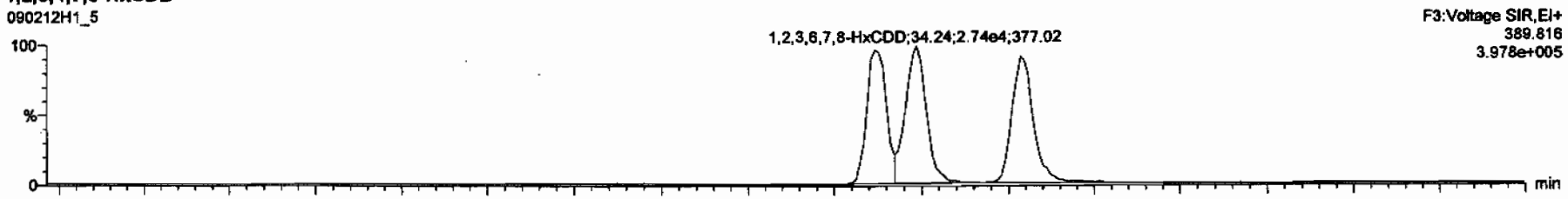

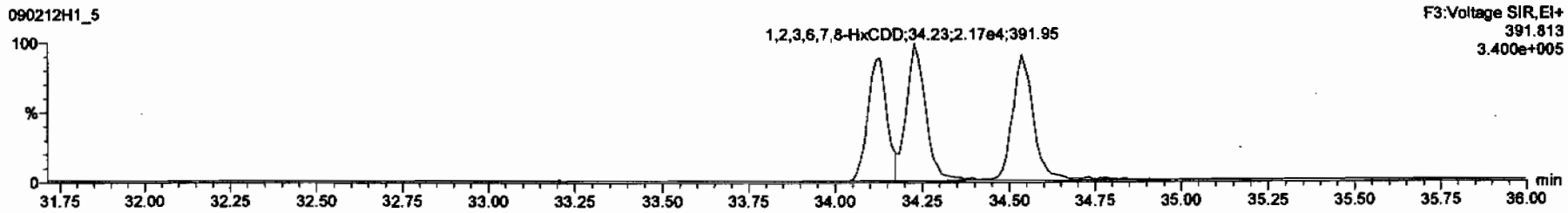

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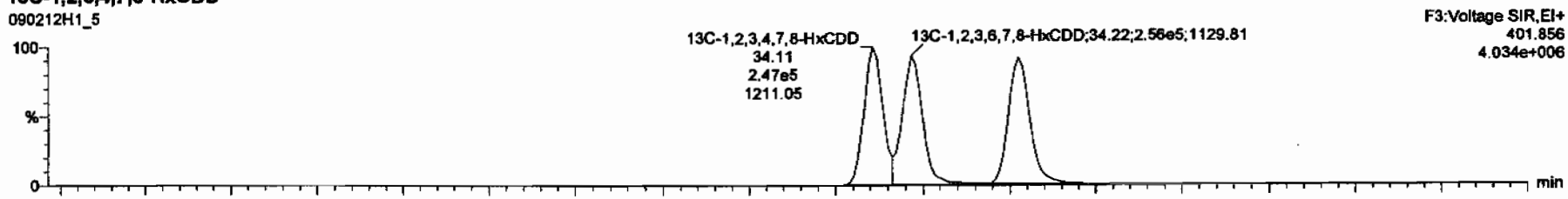

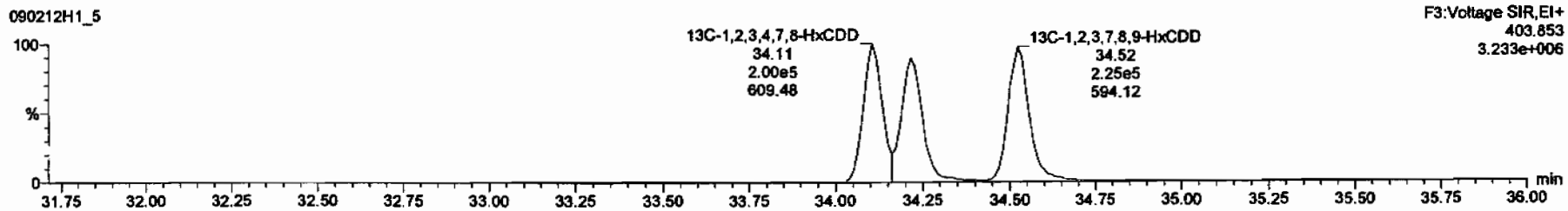

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1,2,3,4,6,7,8-HpCDD

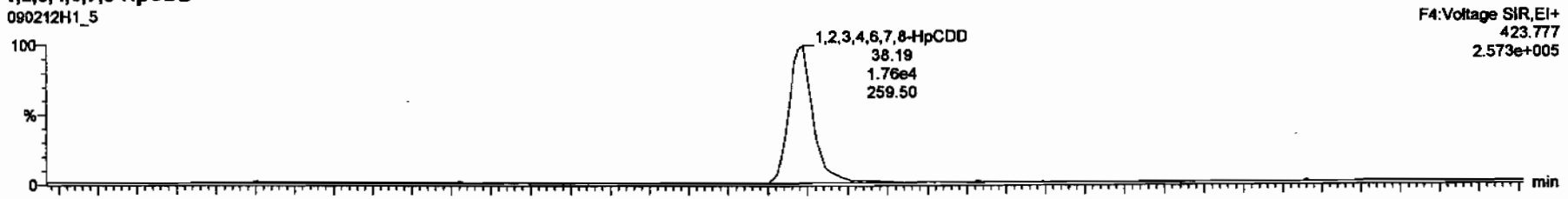

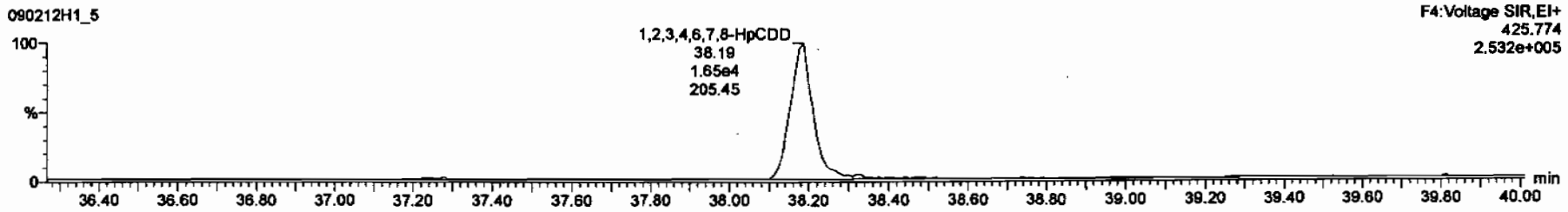

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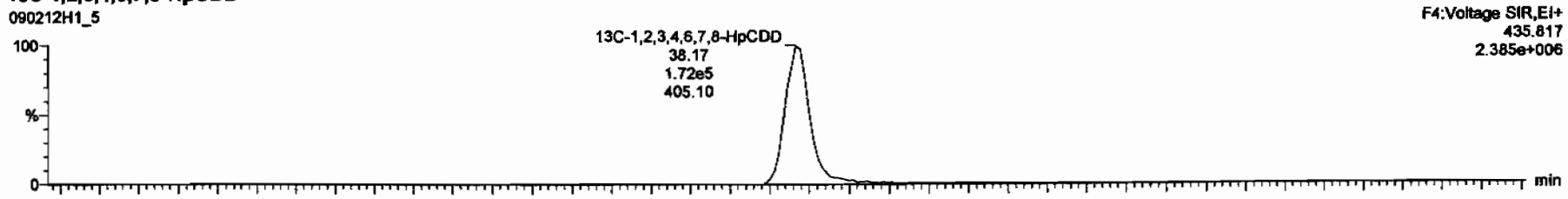

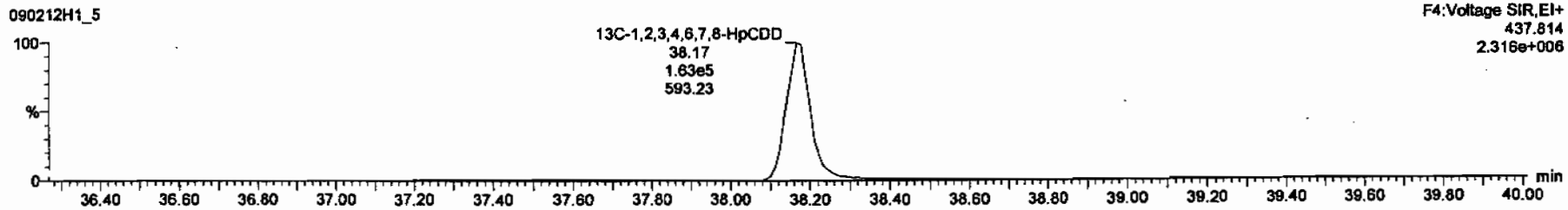

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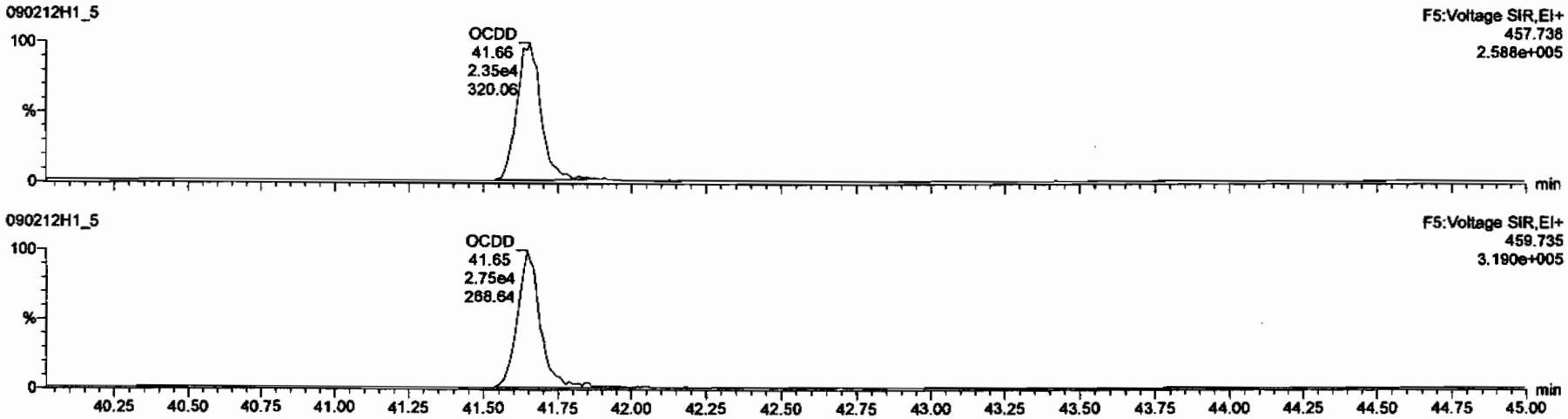

13C-OCDD

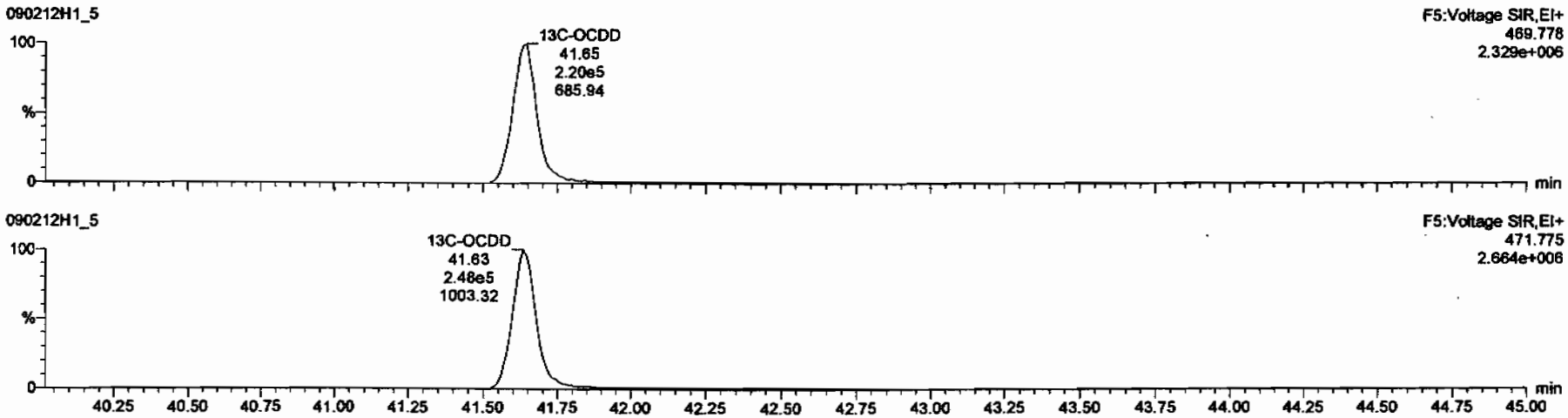

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2,3,7,8-TCDF

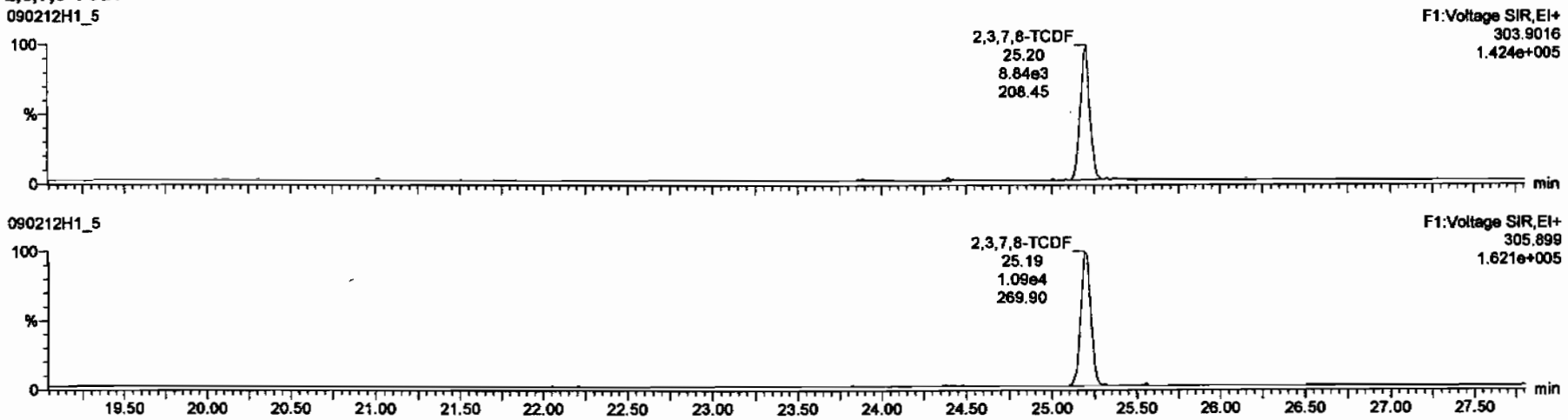

13C-2,3,7,8-TCDF

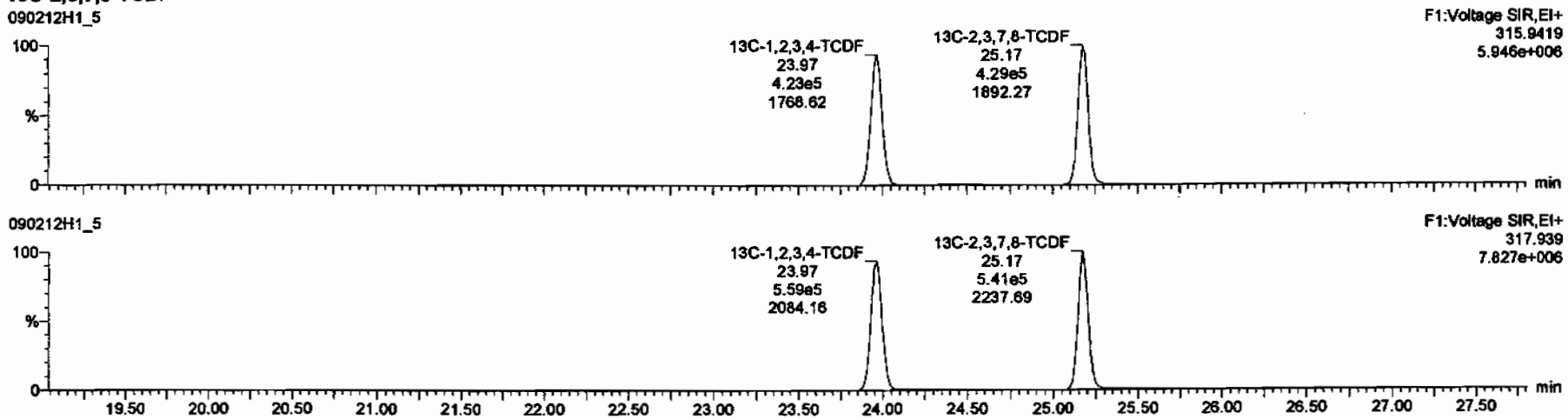

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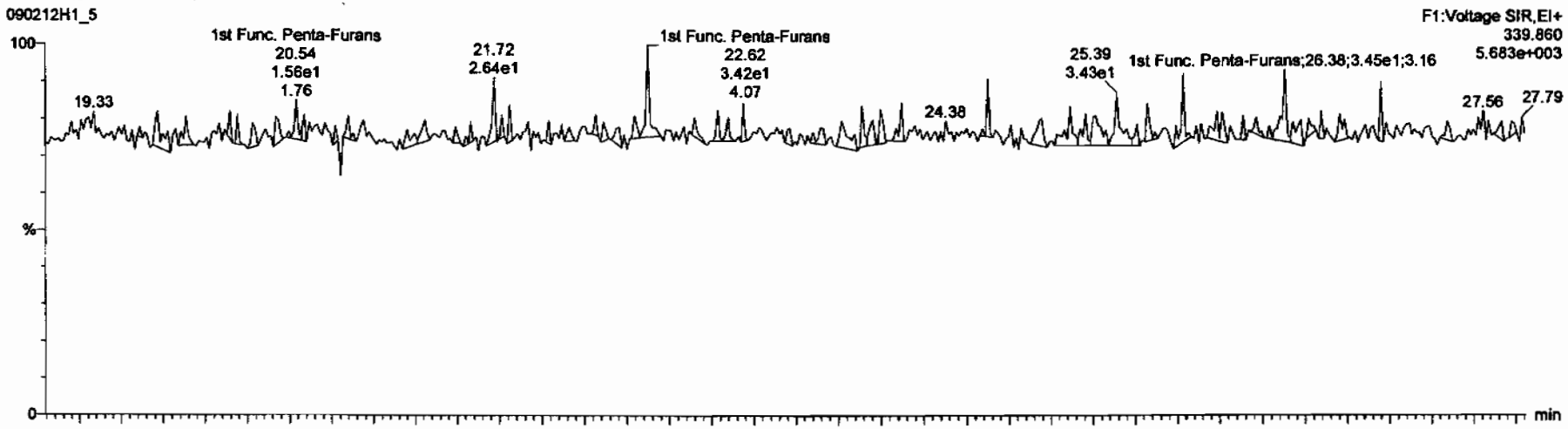

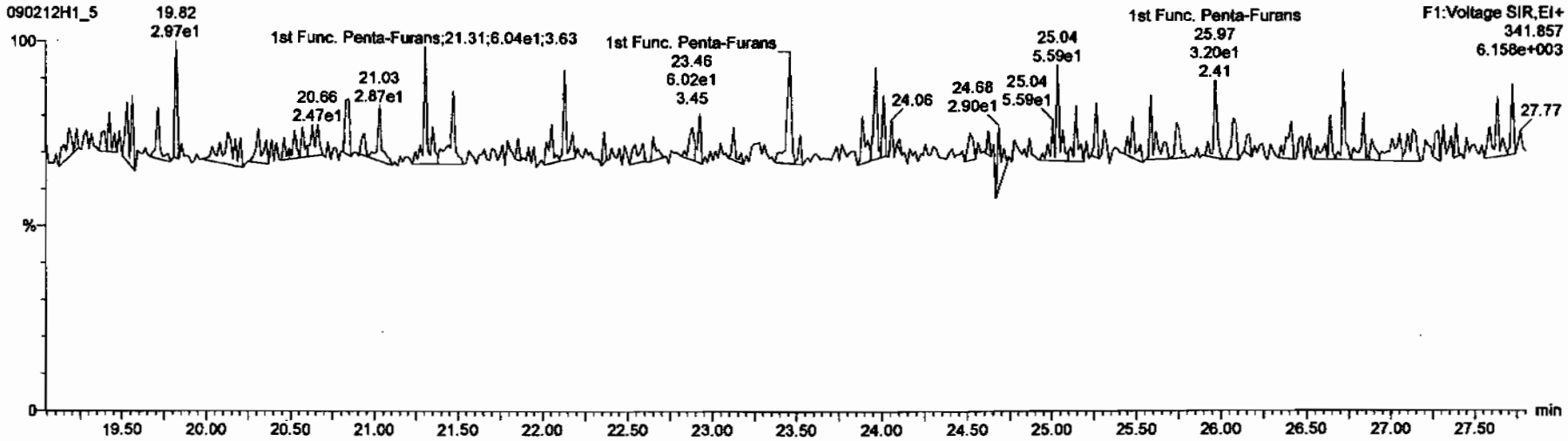

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1,2,3,7,8-PeCDF

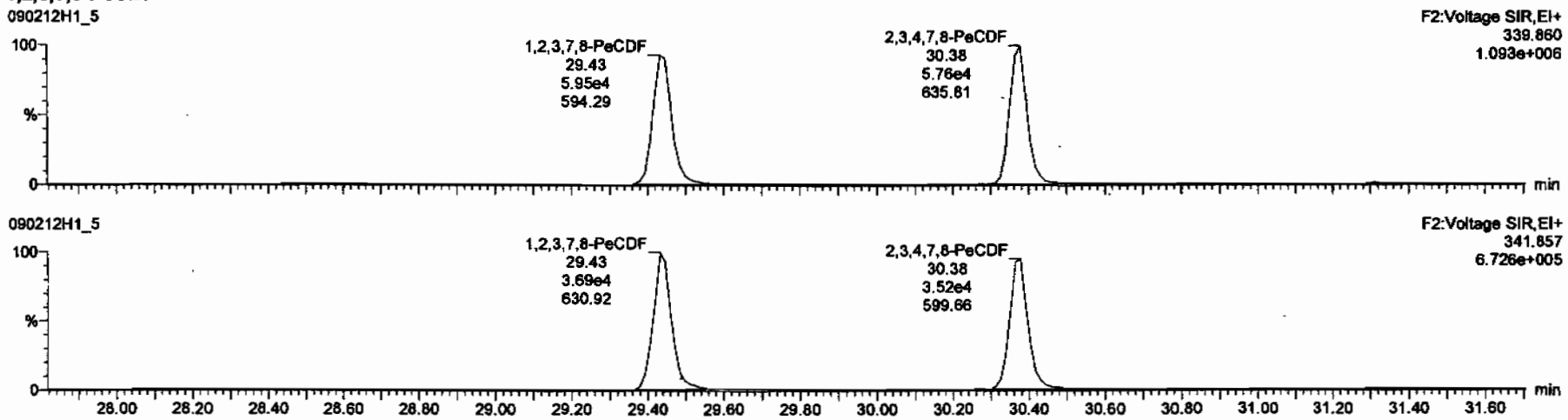

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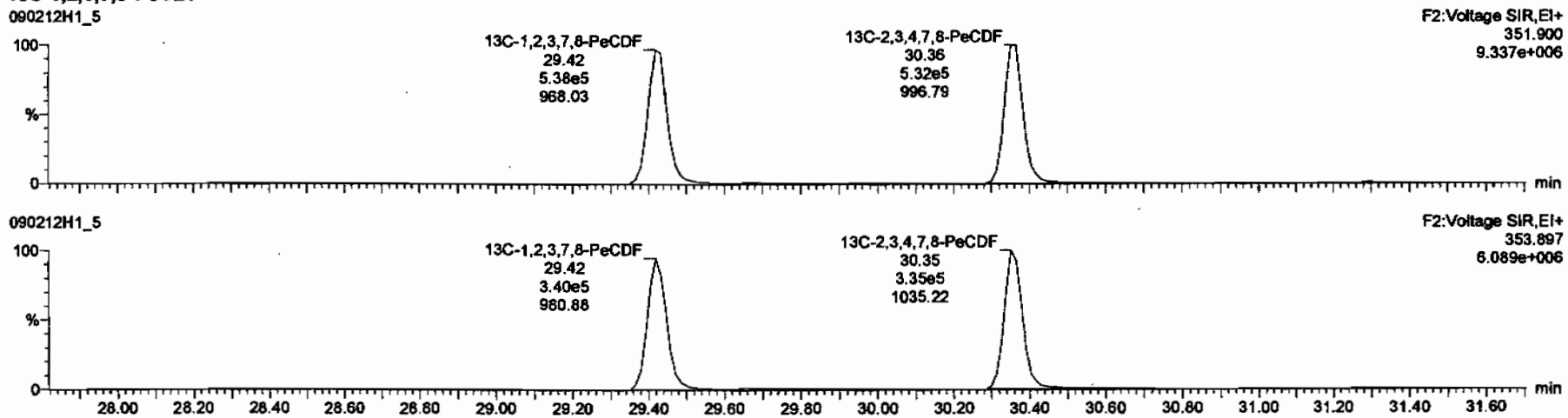

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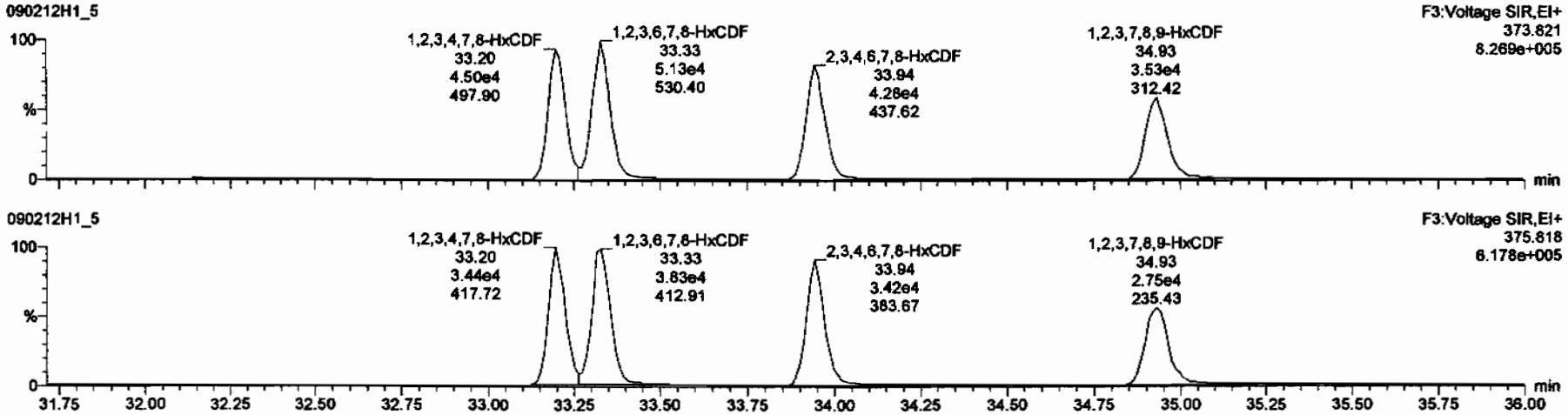

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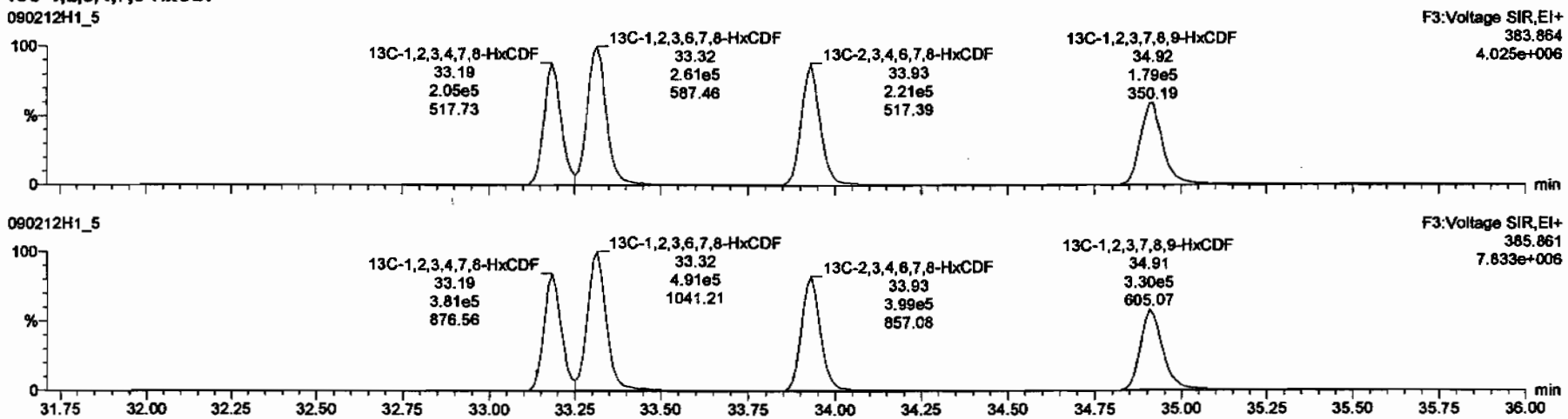

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1,2,3,4,6,7,8-HpCDF

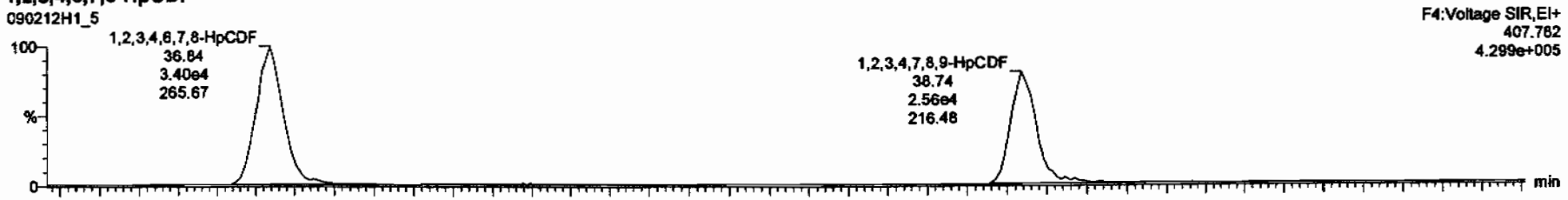

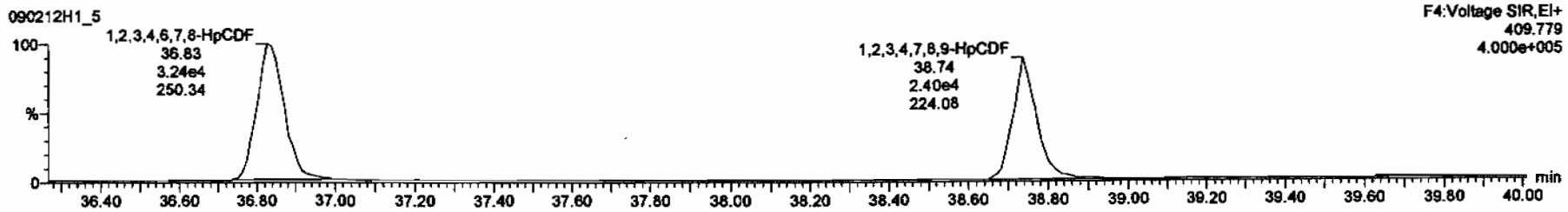

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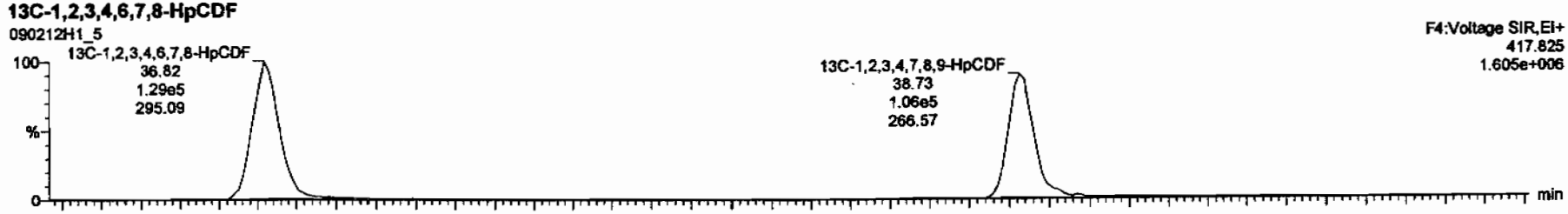

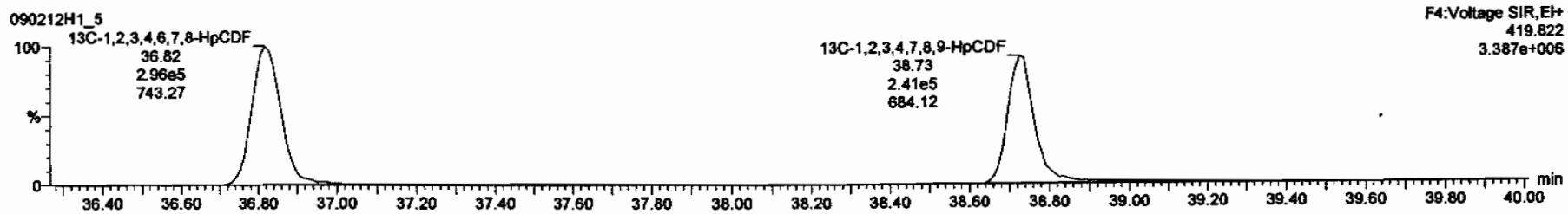

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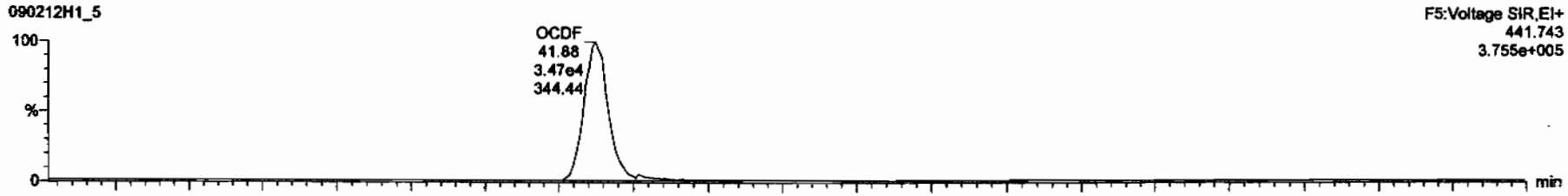

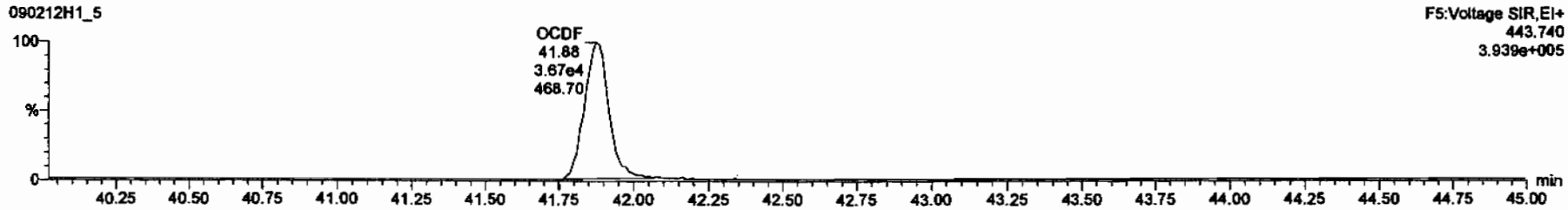

13C-OCDF

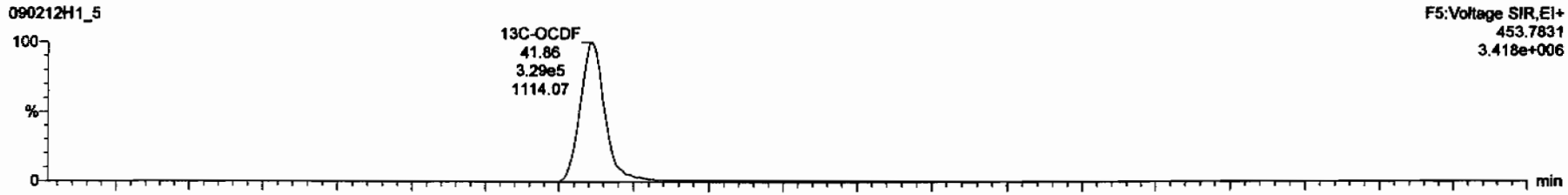

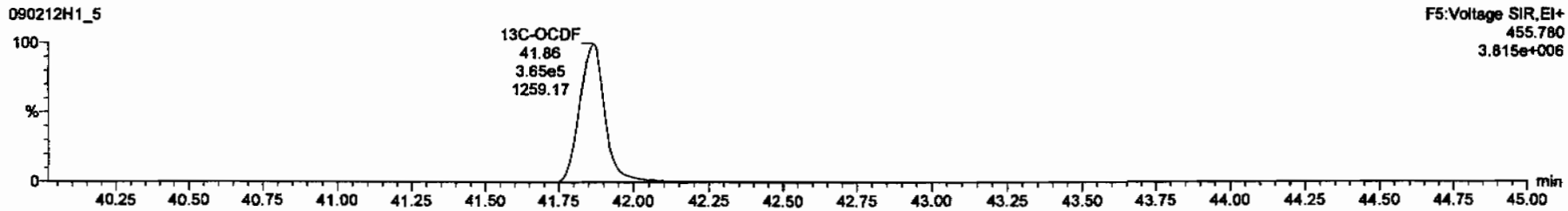

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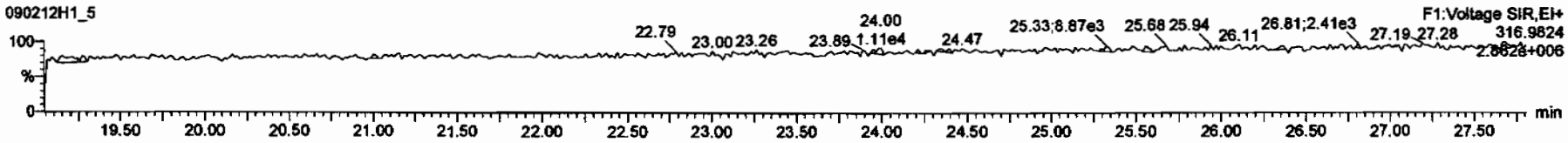

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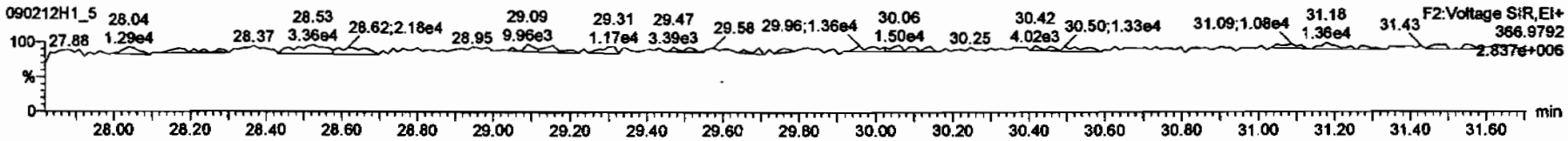

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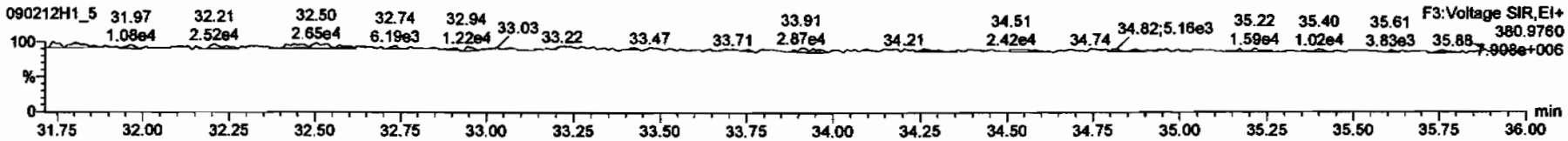

PFK4

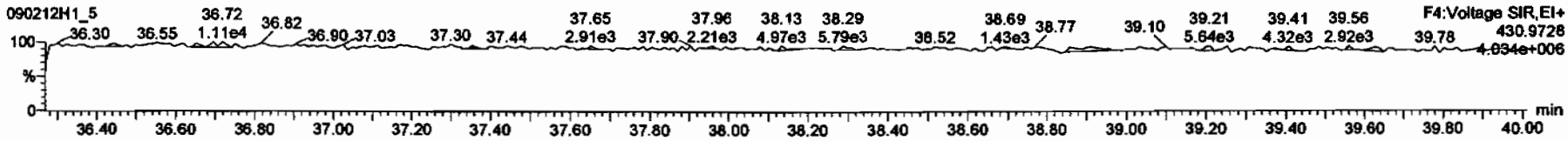

PFK5

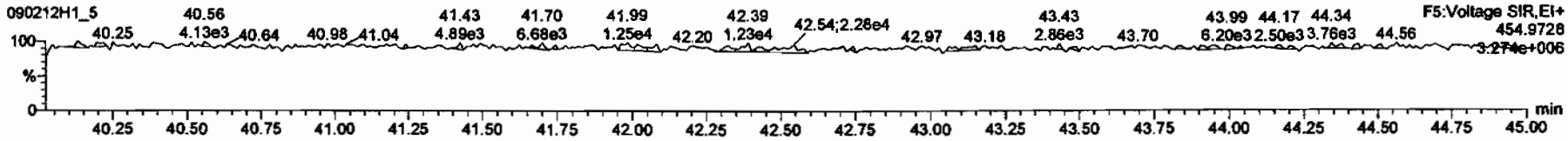

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Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_5, Date: 12-Feb-2009, Time: 14:28:11, ID: ST090212H1-4 1613 CS2 080917H, Description: 1613 CS2 080917H

DPE1

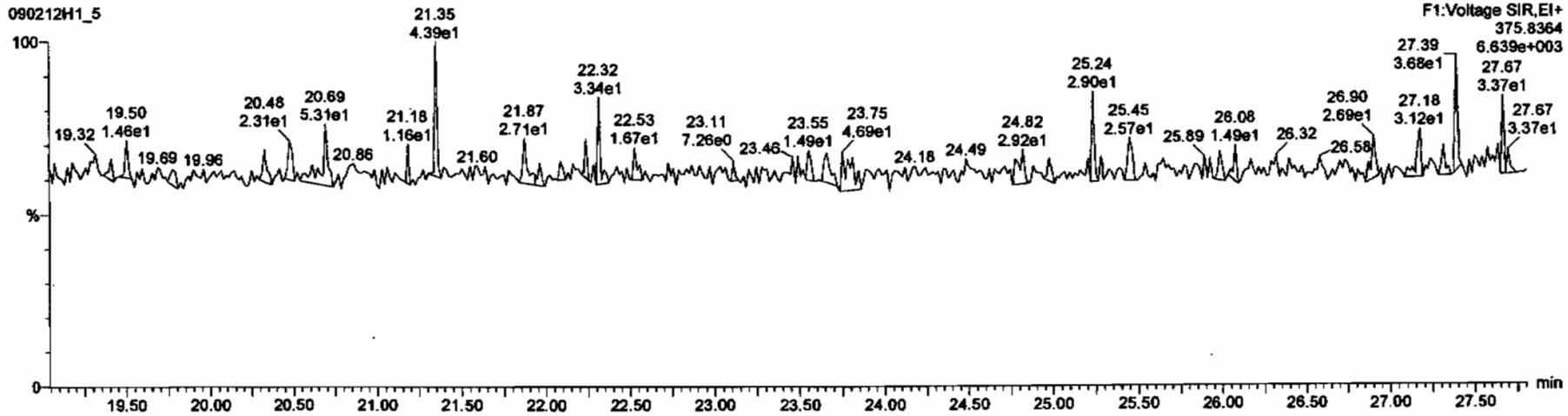

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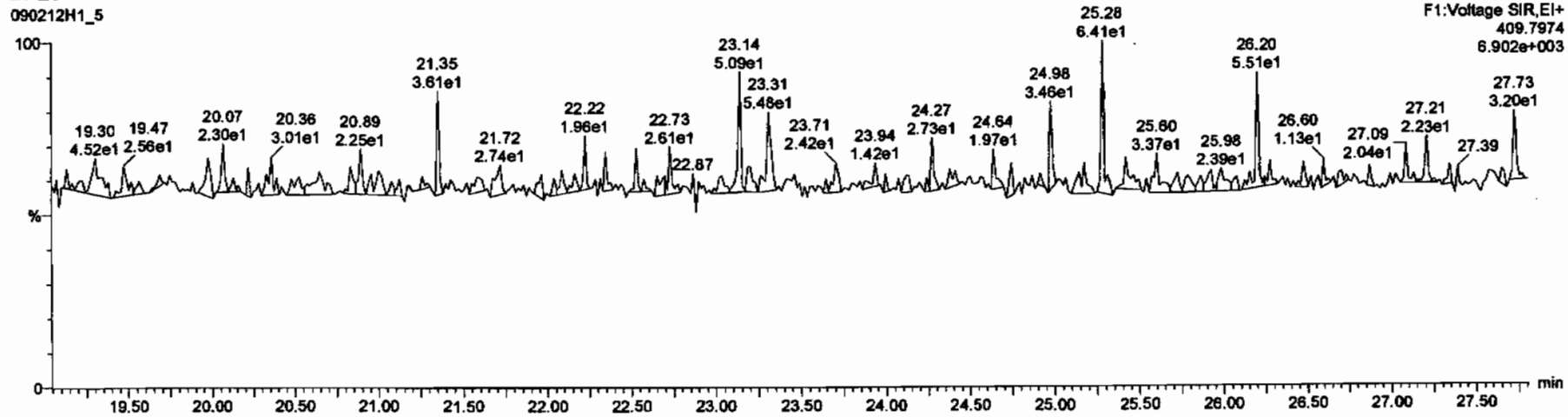

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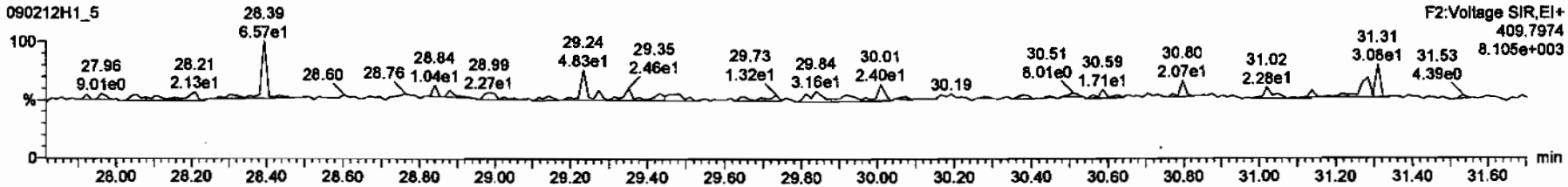

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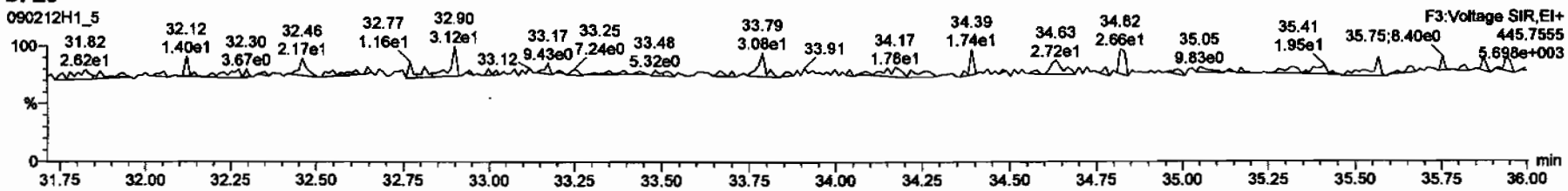

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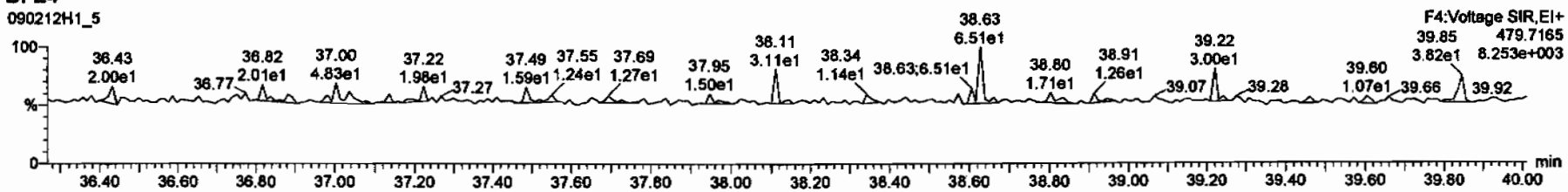

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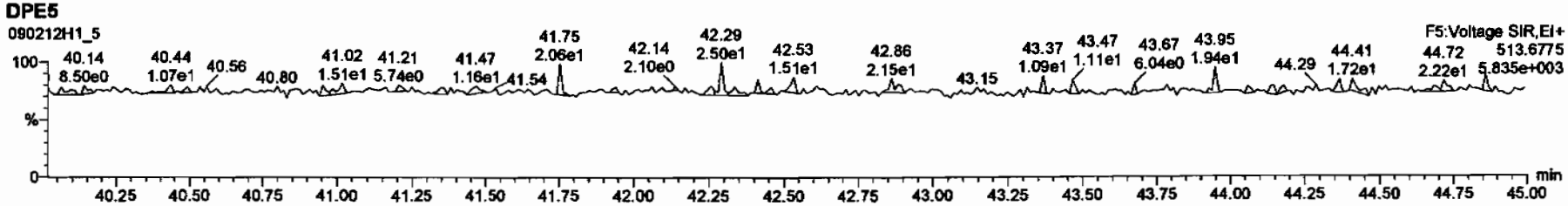

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2,3,7,8-TCDD

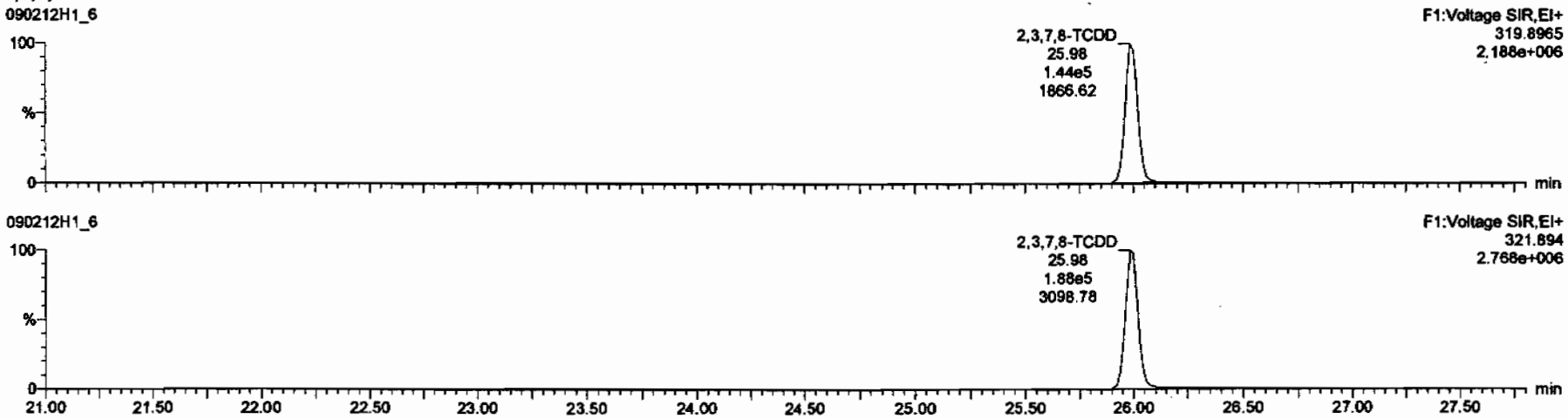

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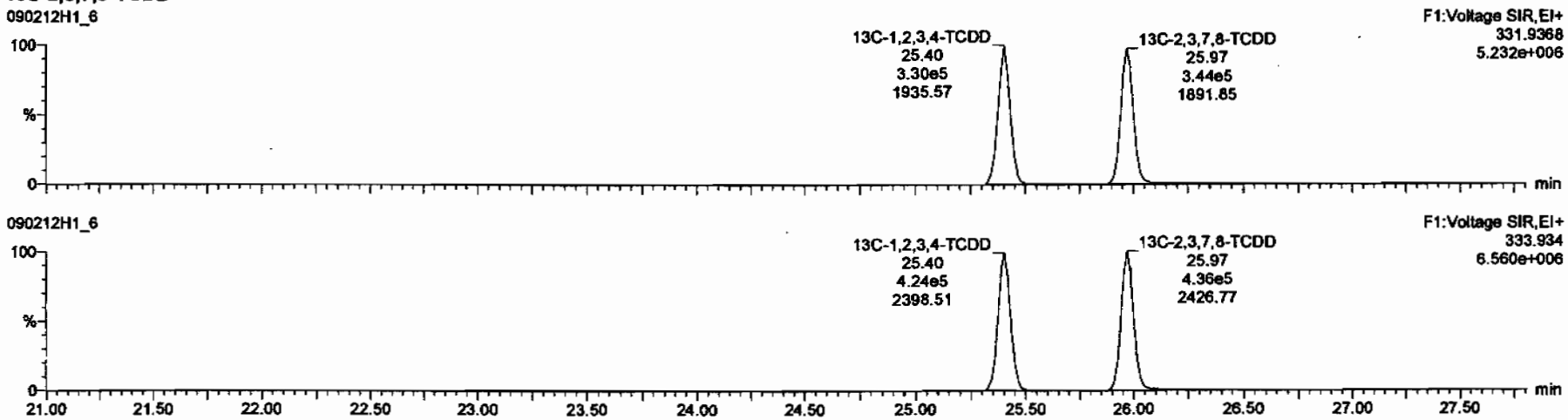

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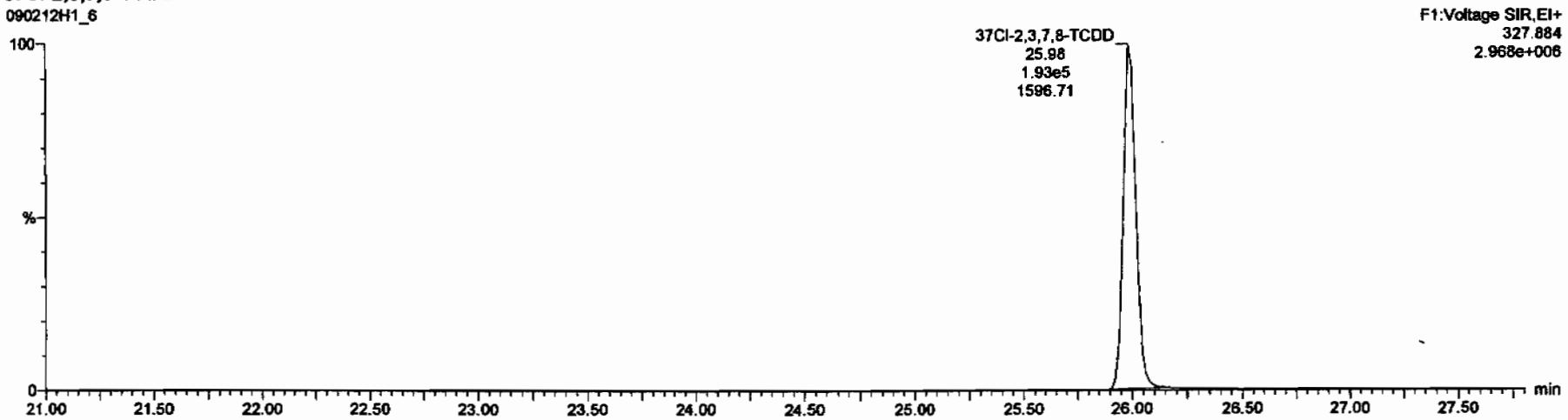

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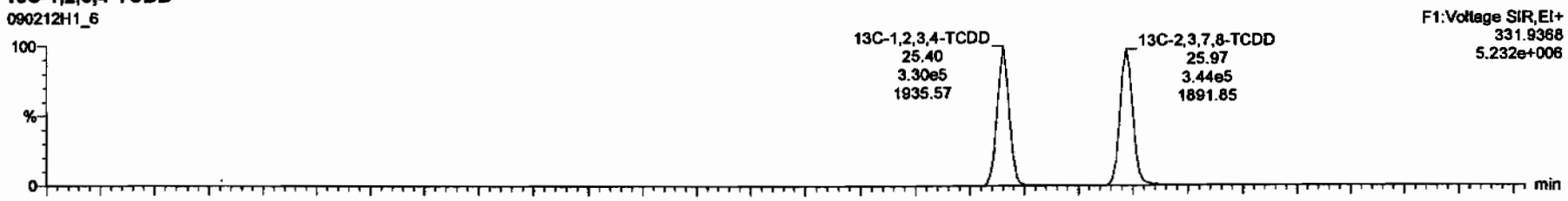

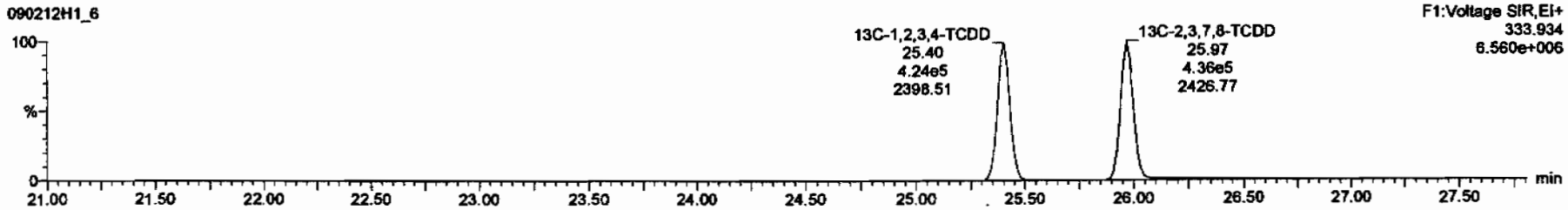

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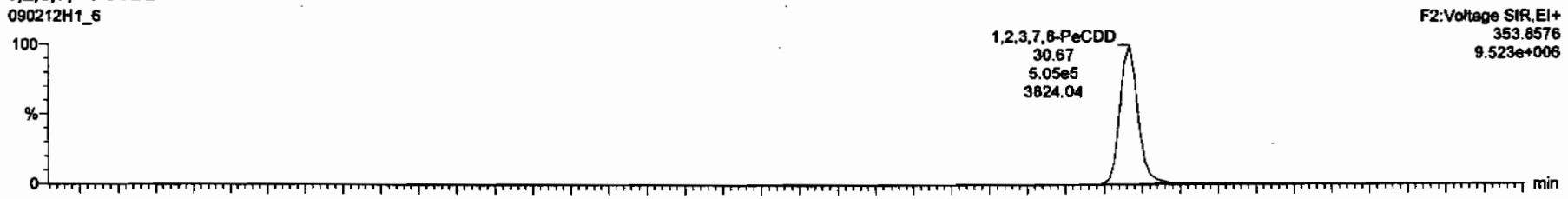

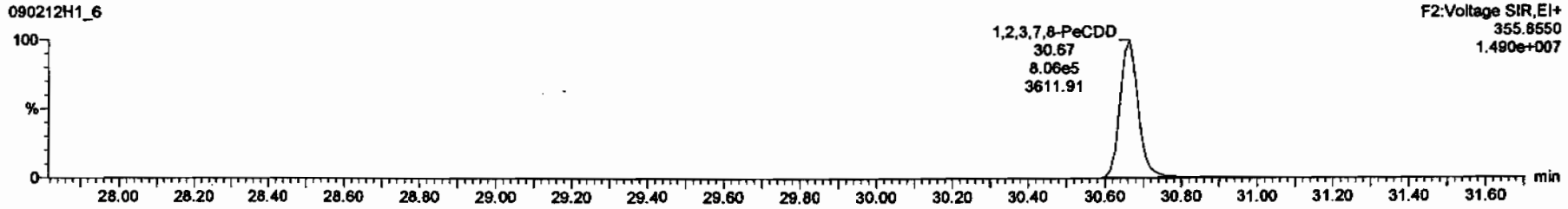

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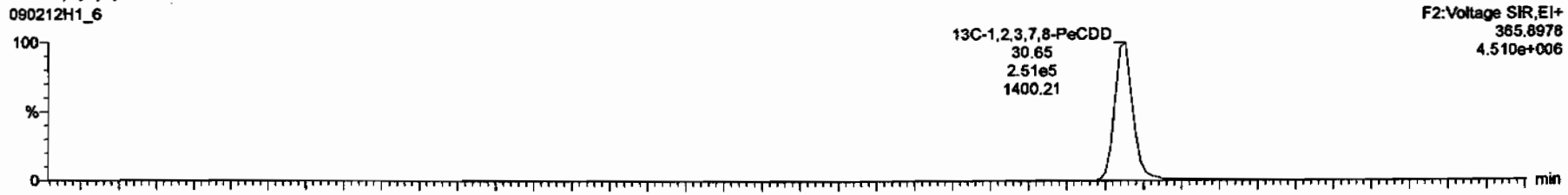

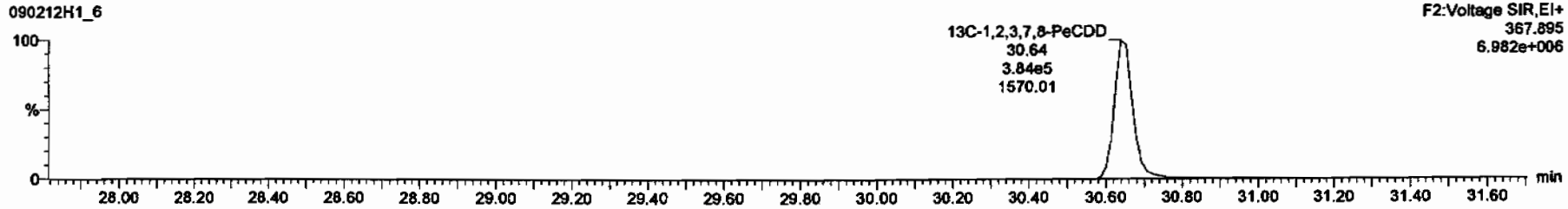

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1,2,3,4,7,8-HxCDD

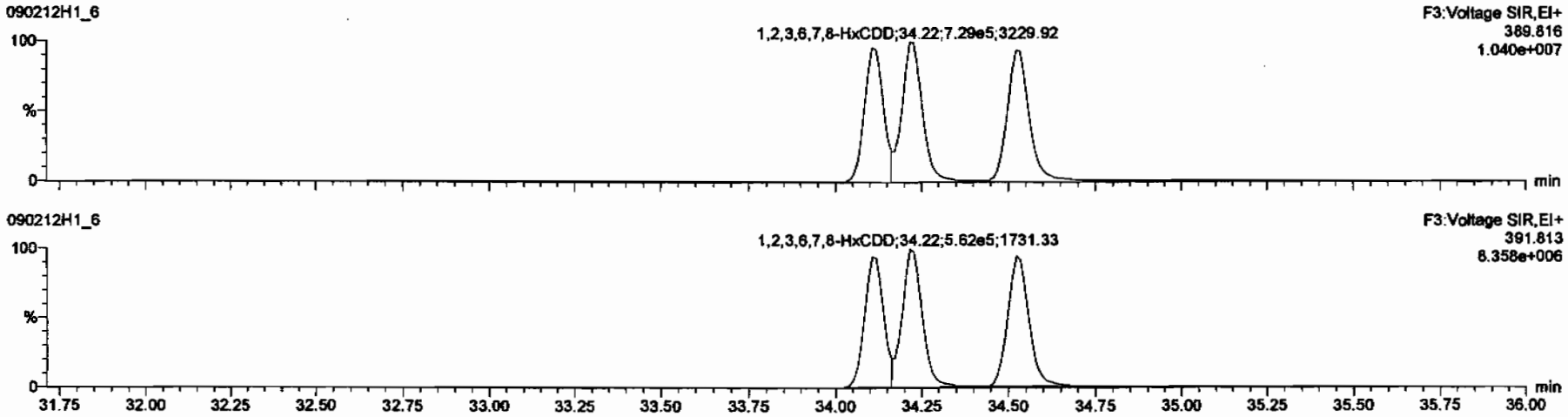

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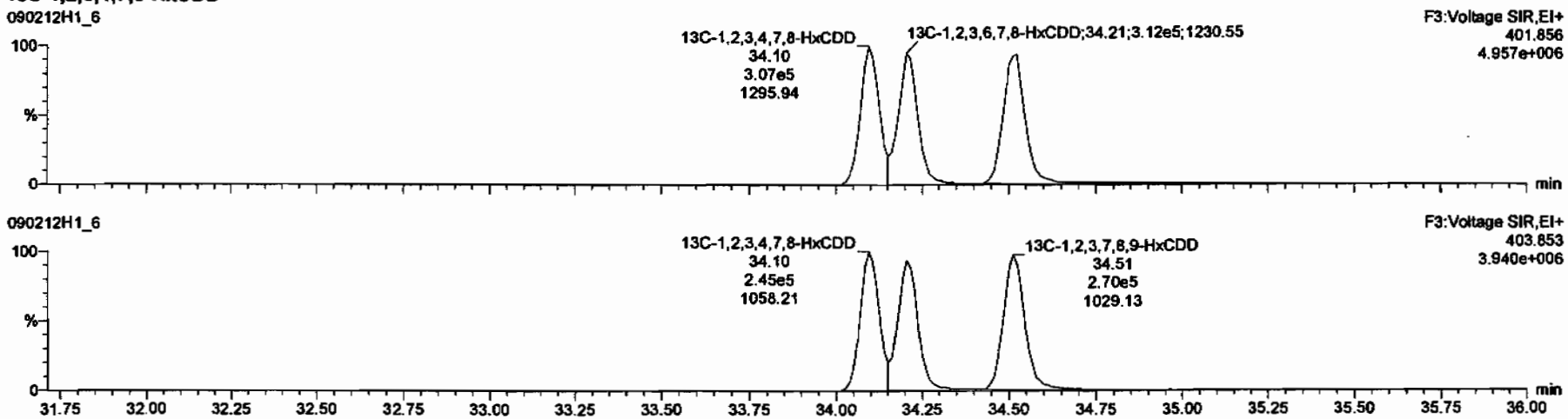

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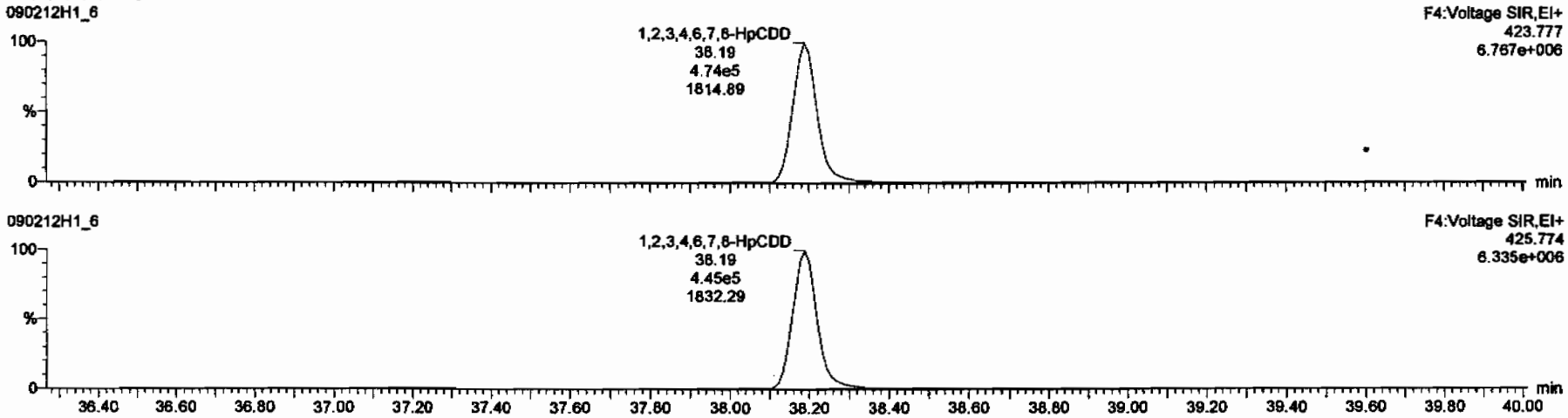

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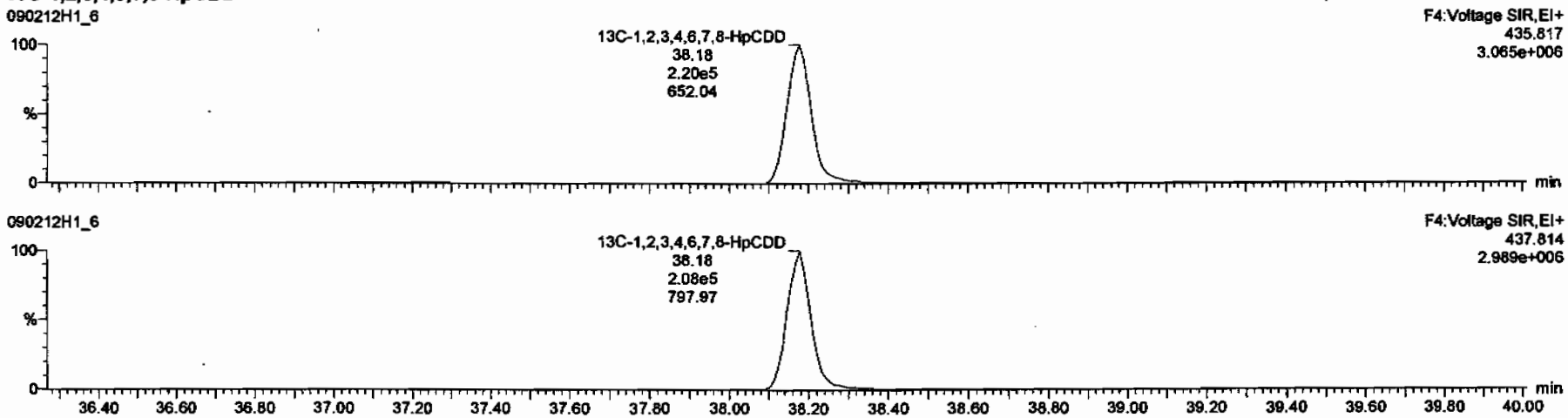

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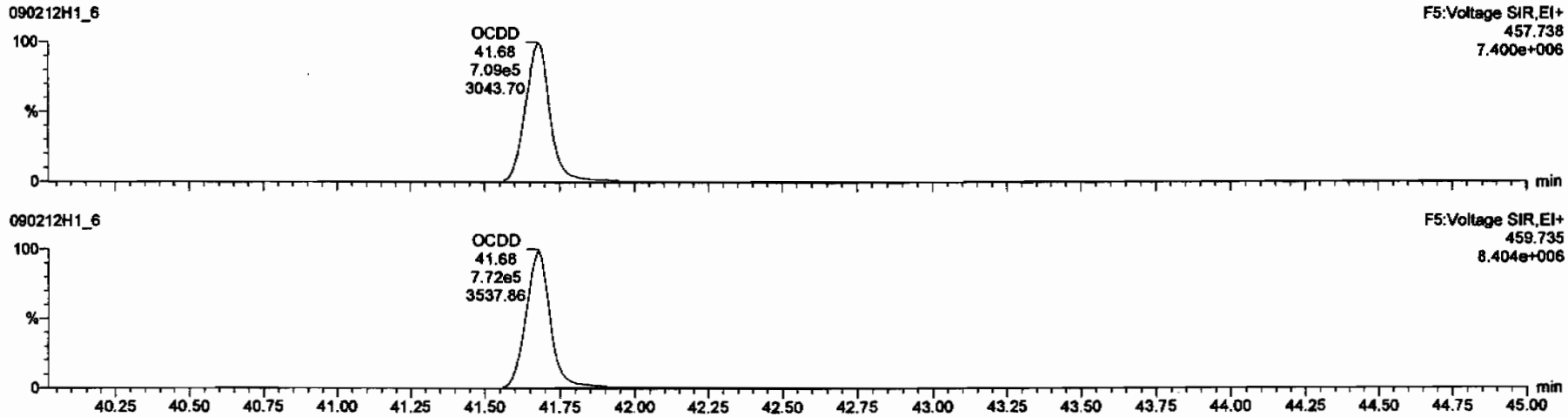

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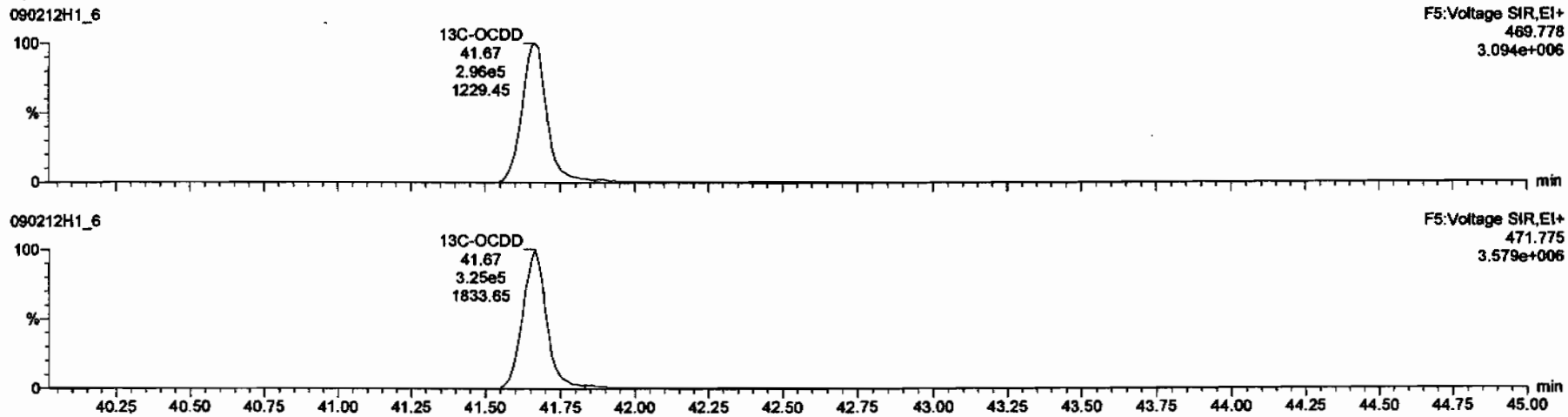

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2,3,7,8-TCDF

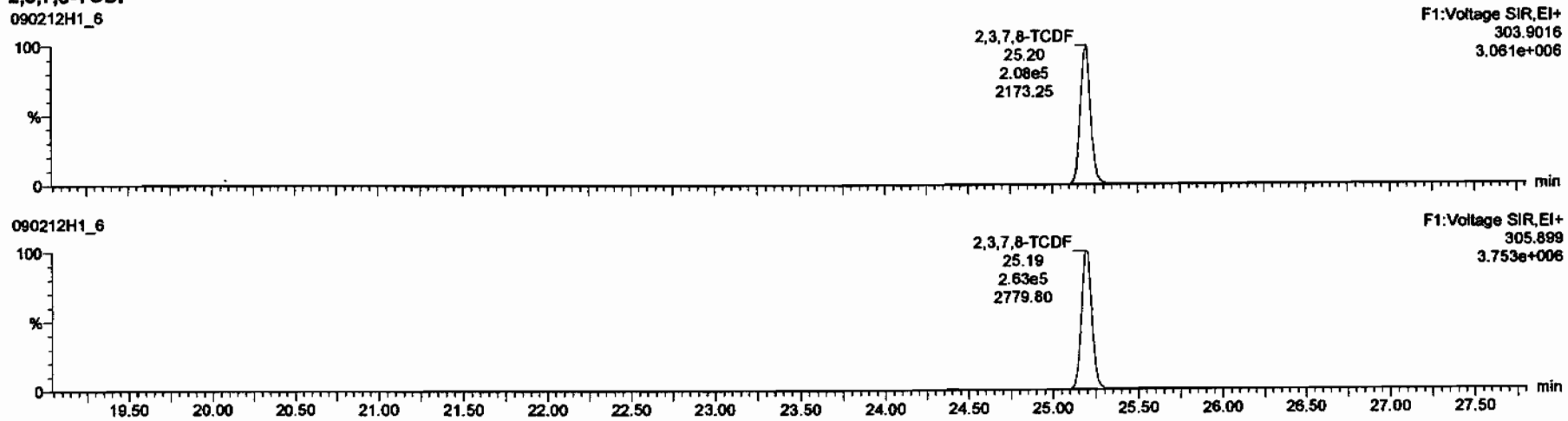

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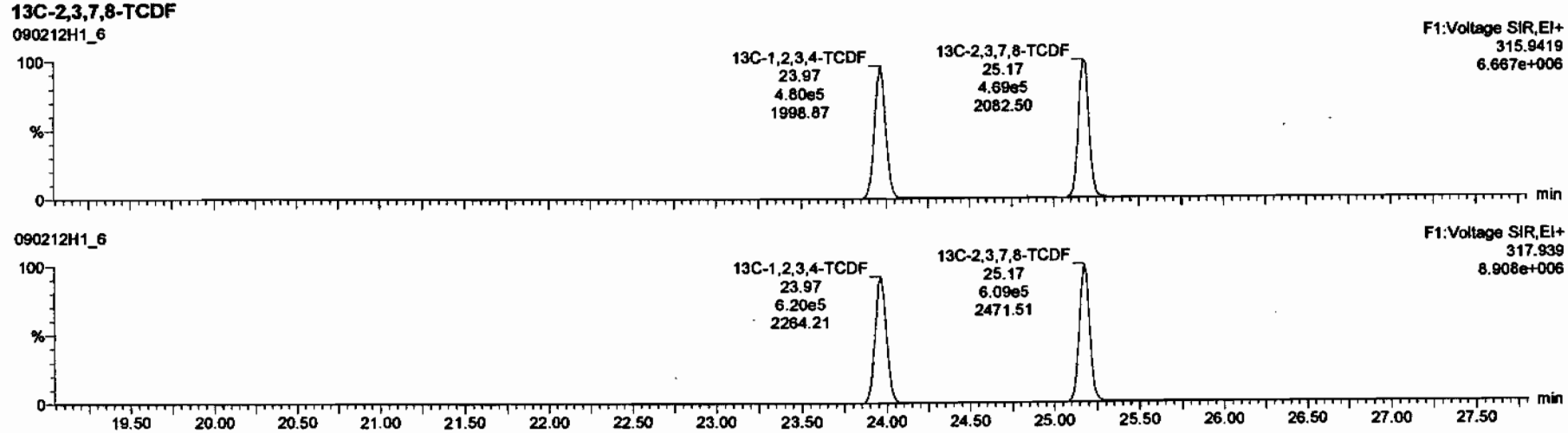

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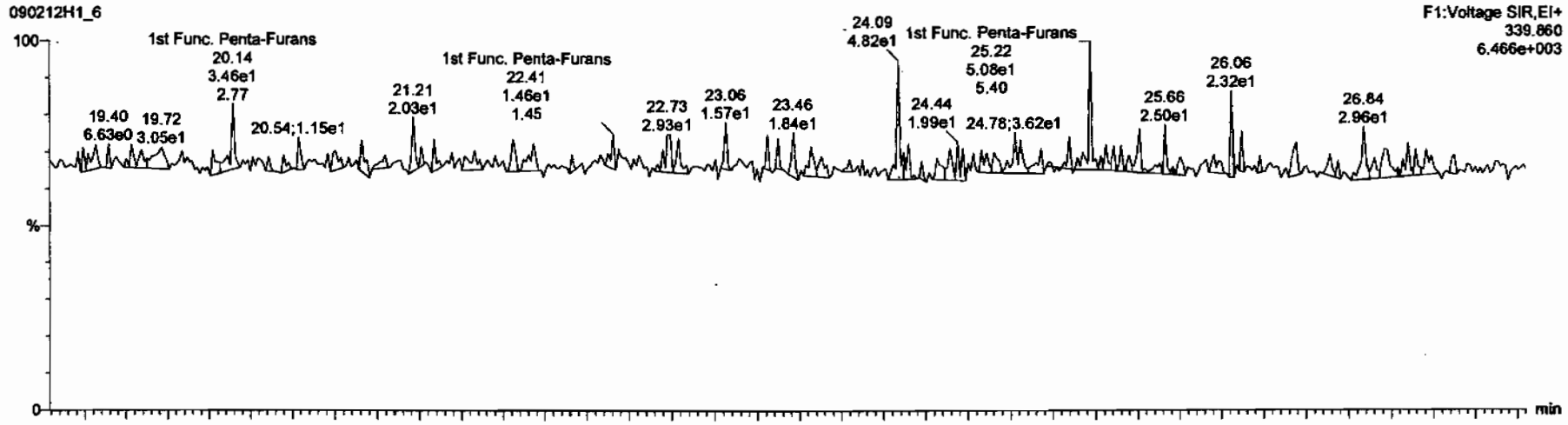

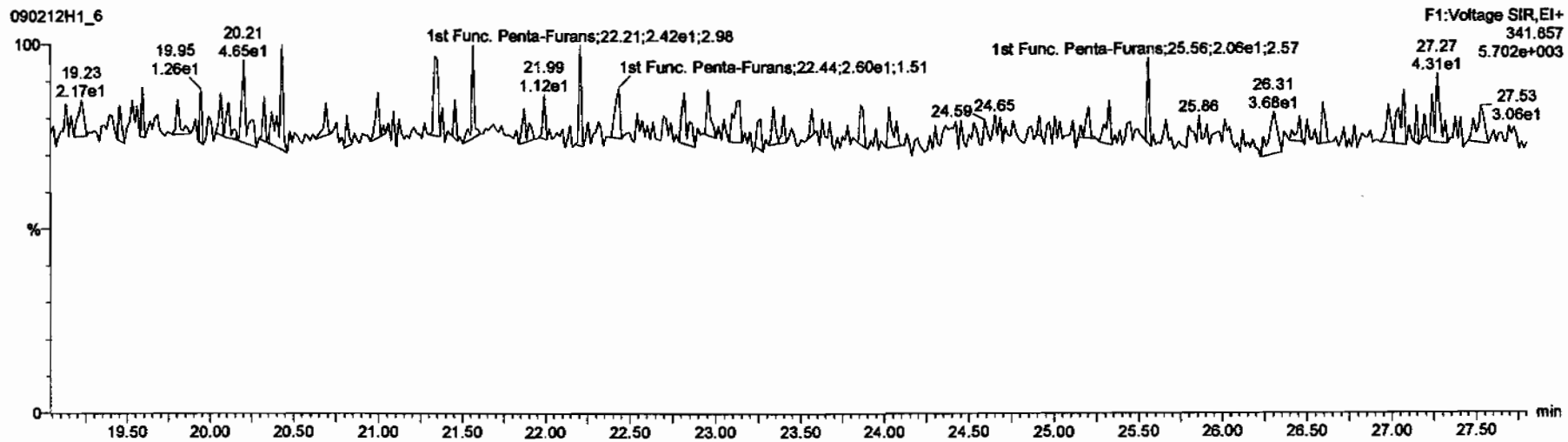

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1,2,3,7,8-PeCDF

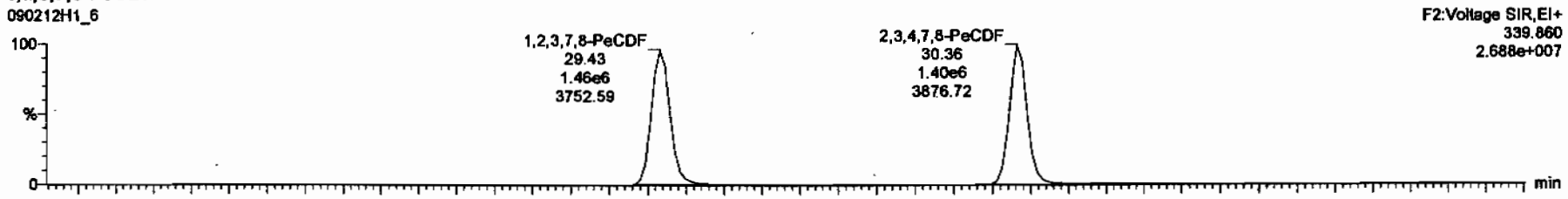

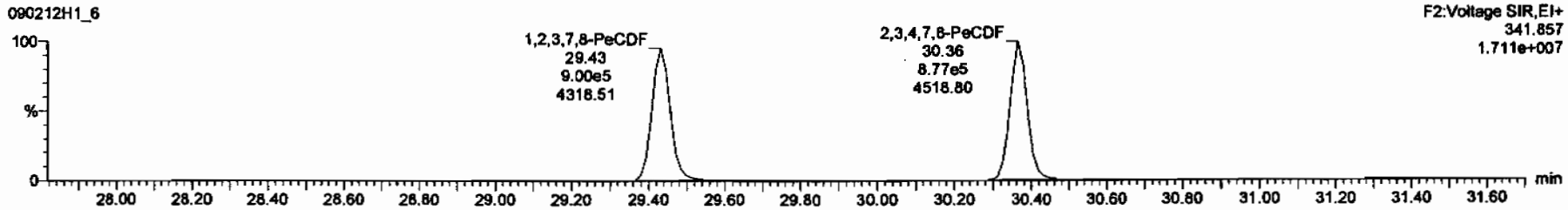

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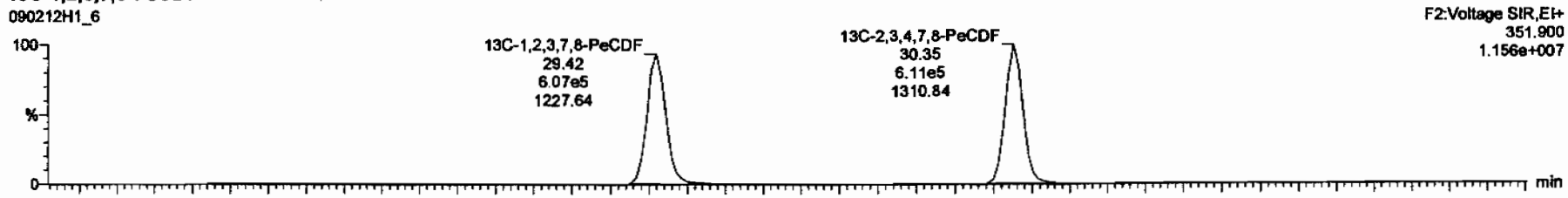

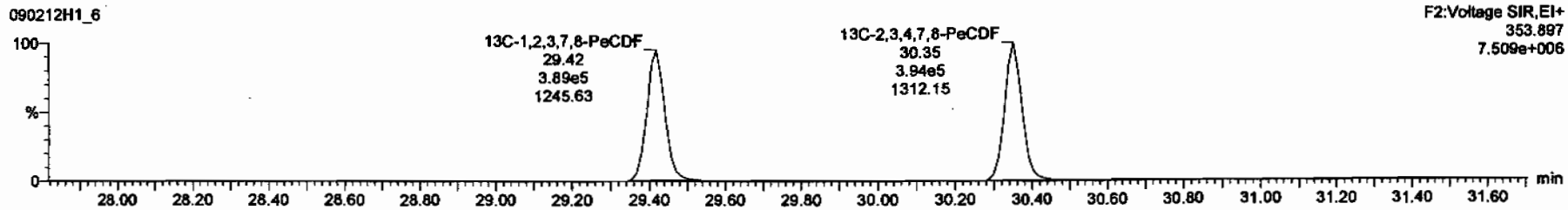

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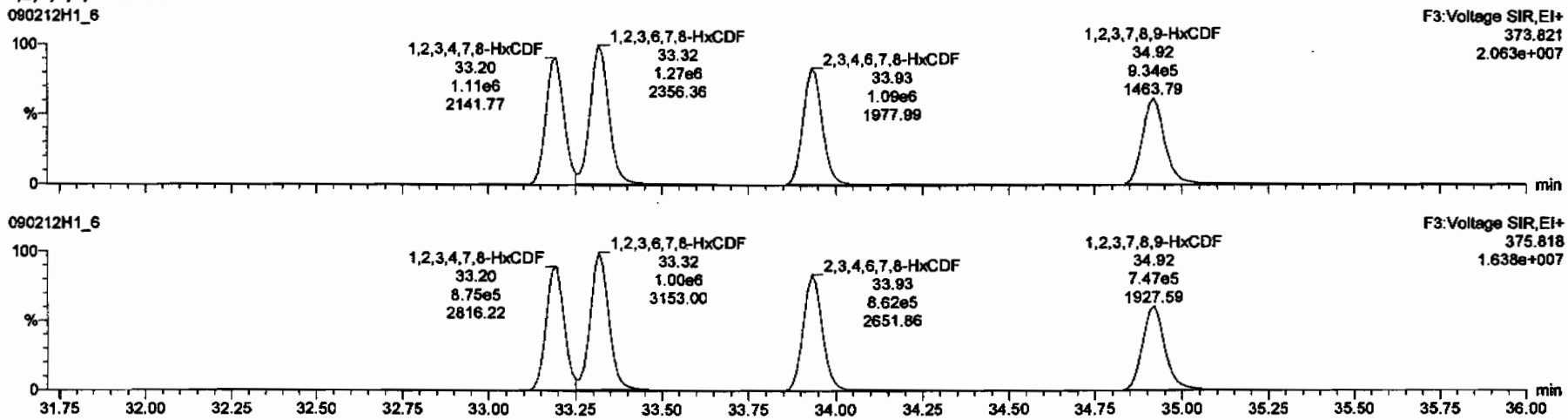

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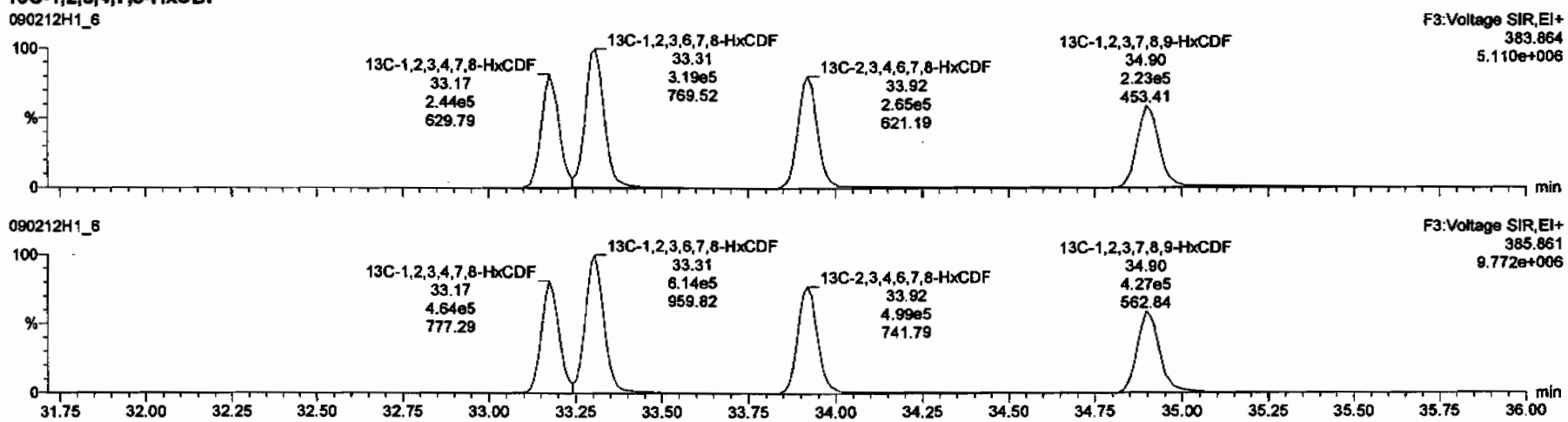

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1,2,3,4,6,7,8-HpCDF

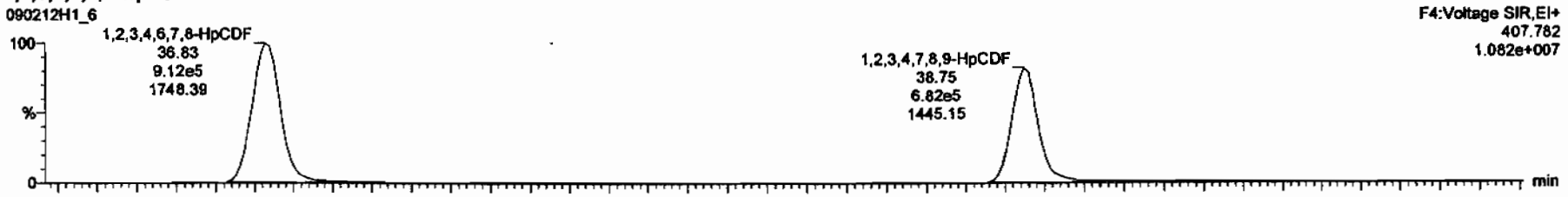

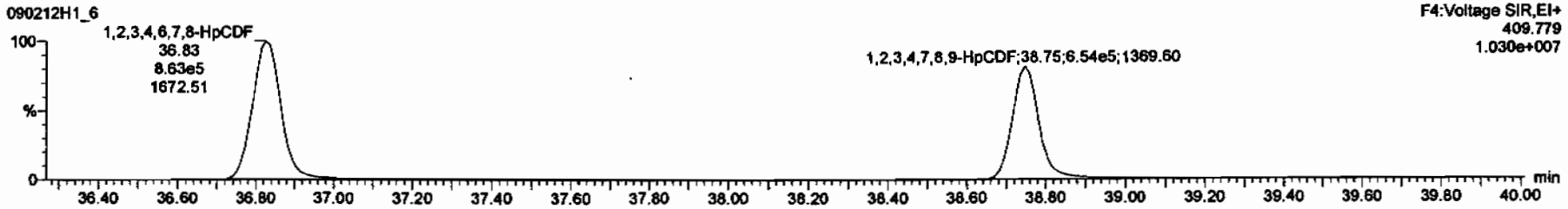

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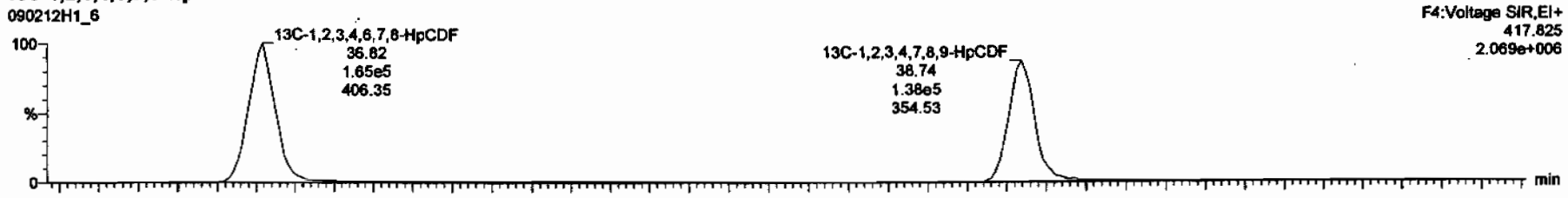

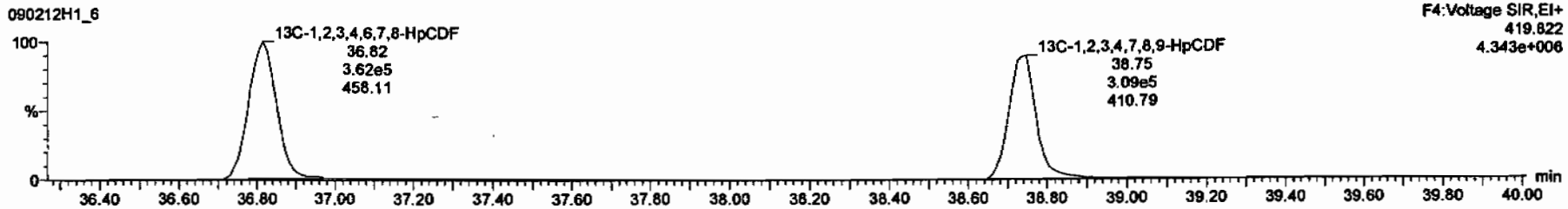

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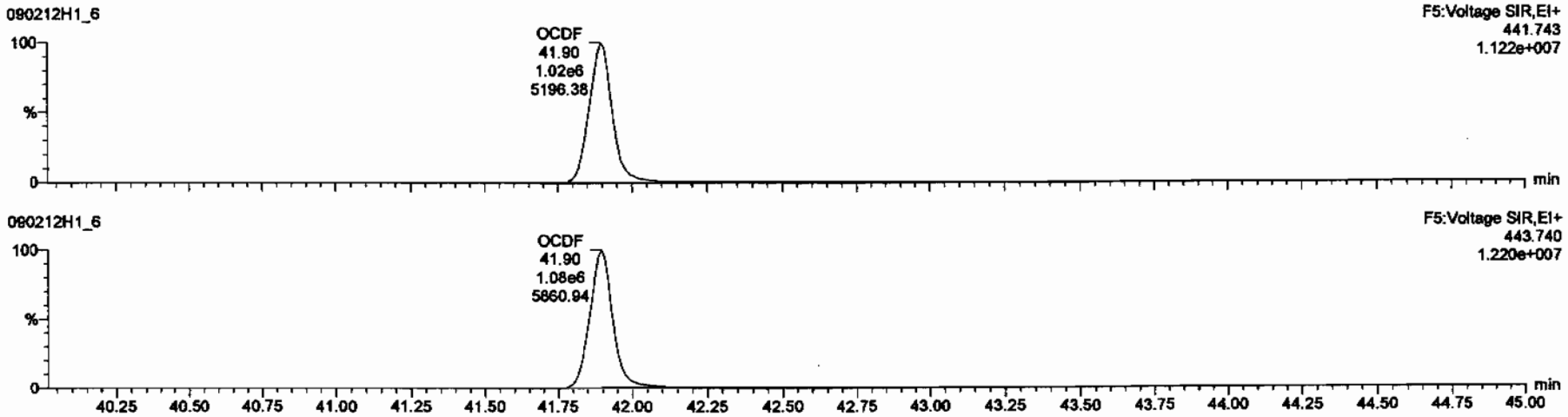

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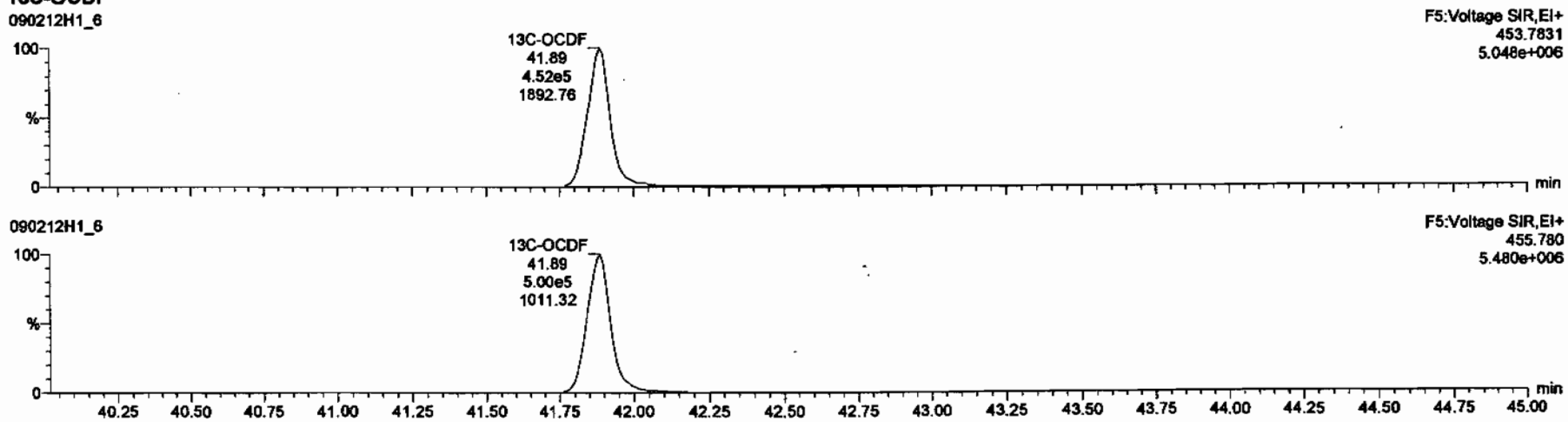

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PFK1

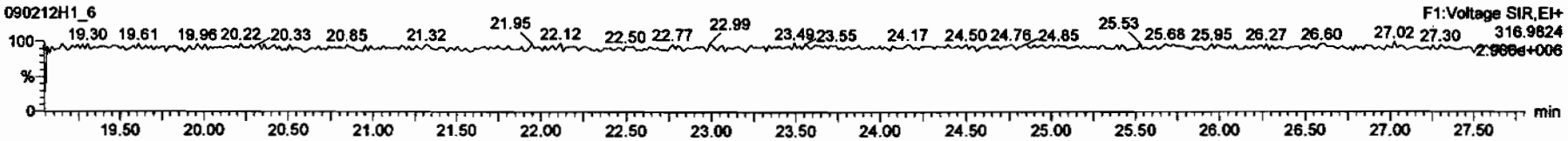

PFK2

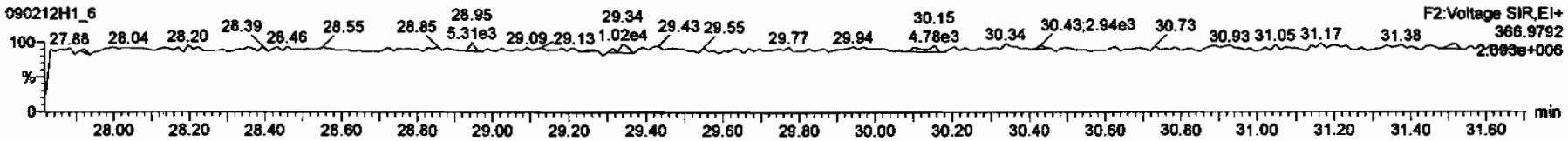

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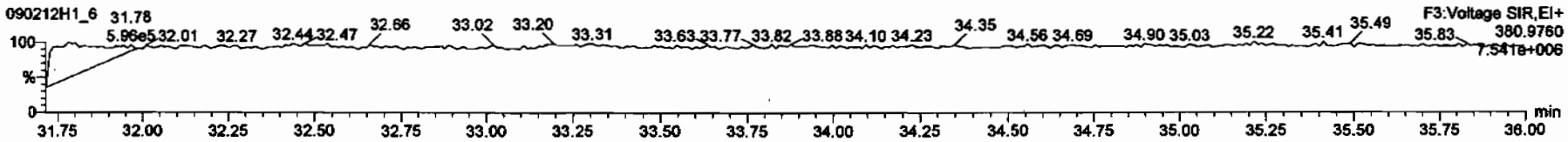

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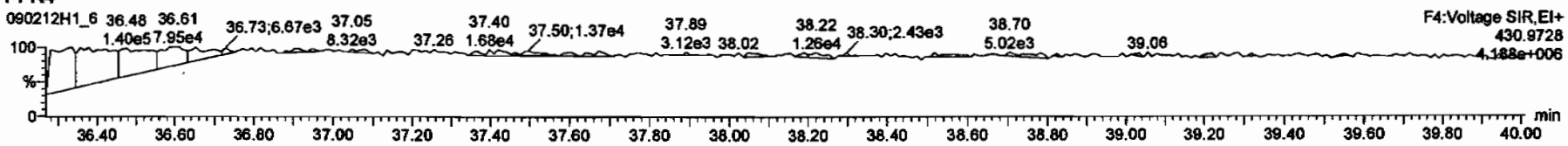

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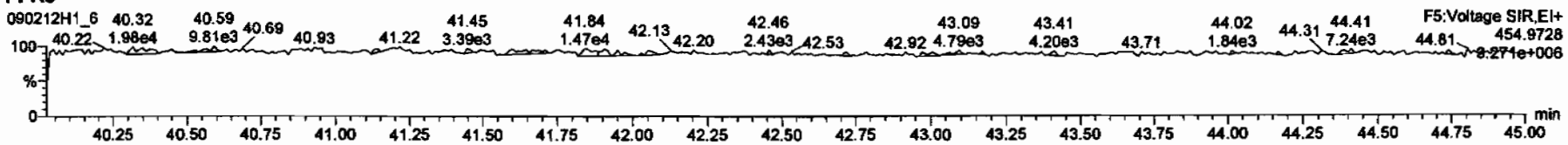

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_6, Date: 12-Feb-2009, Time: 15:17:39, ID: ST090212H1-5 1613 CS4 080917J, Description: 1613 CS4 080917J

DPE1
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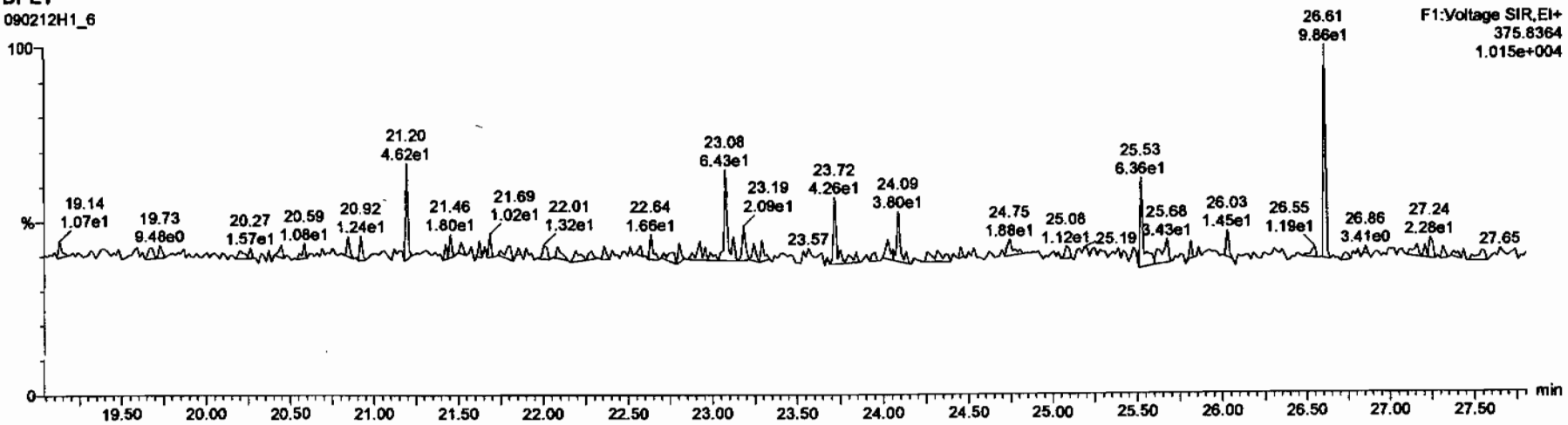

DPE6
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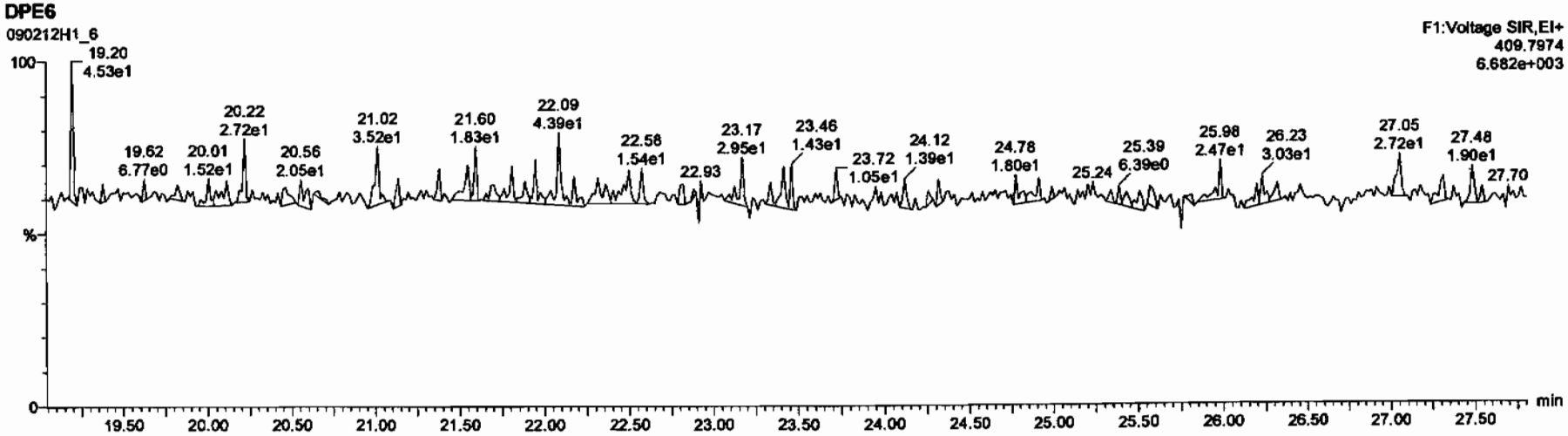

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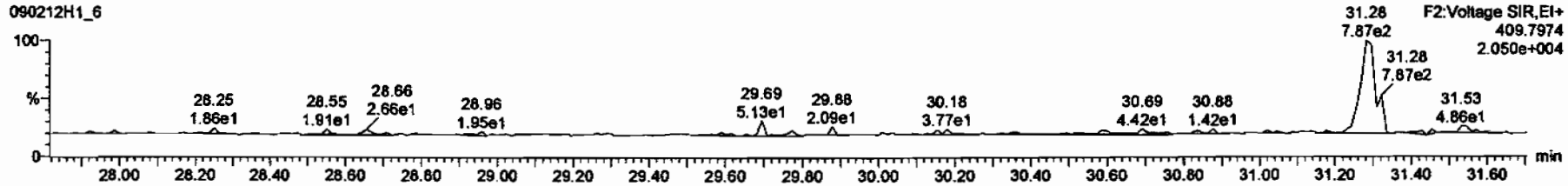

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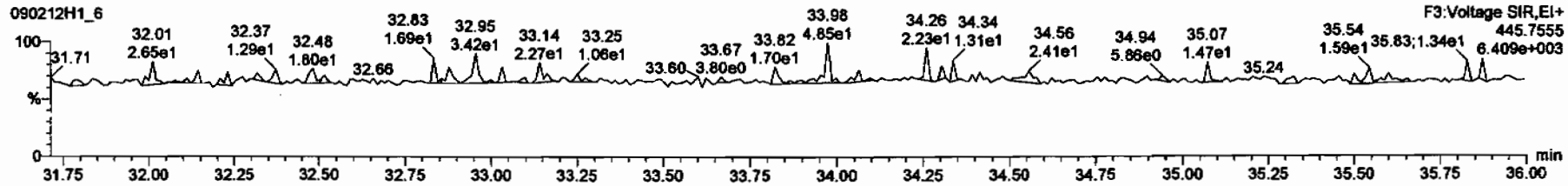

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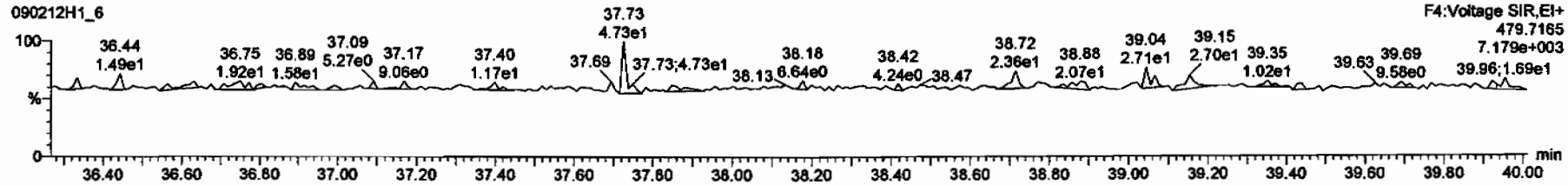

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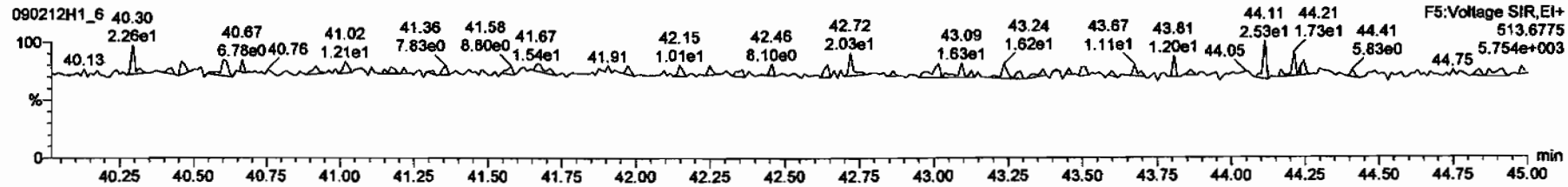

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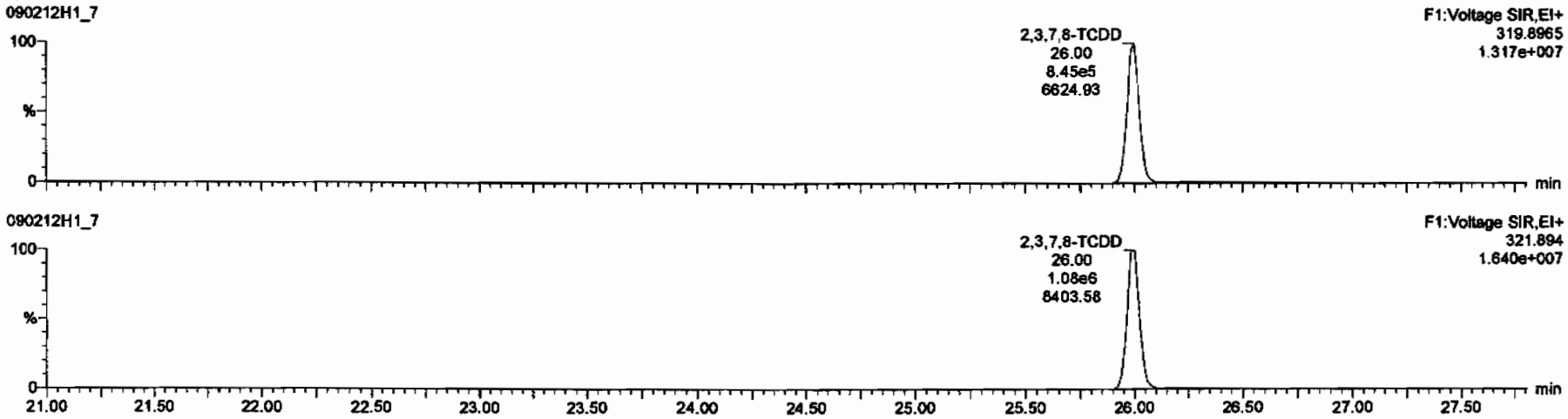

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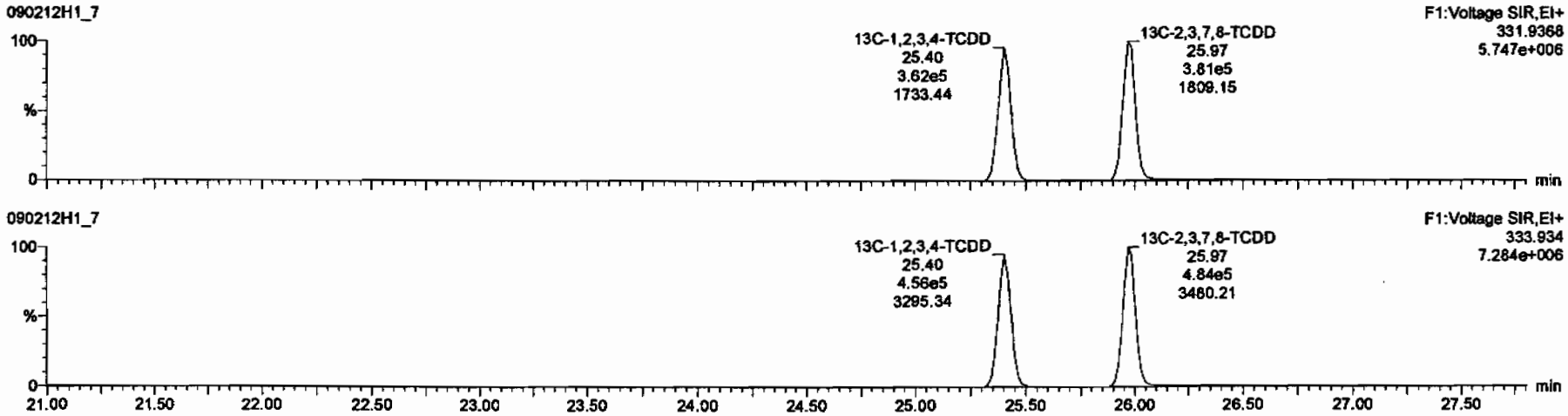

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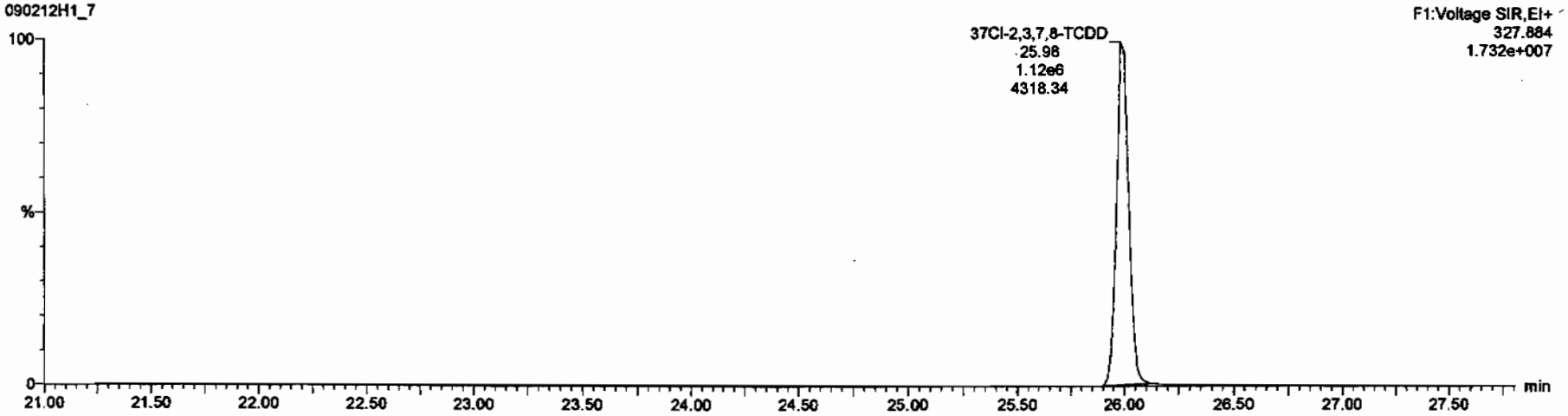

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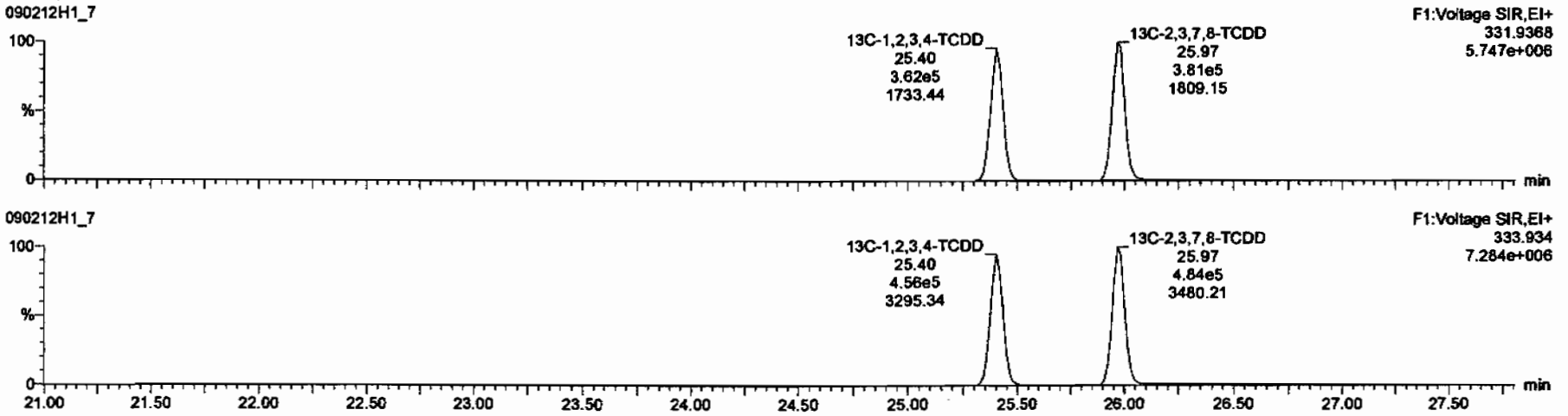

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1,2,3,7,8-PeCDD

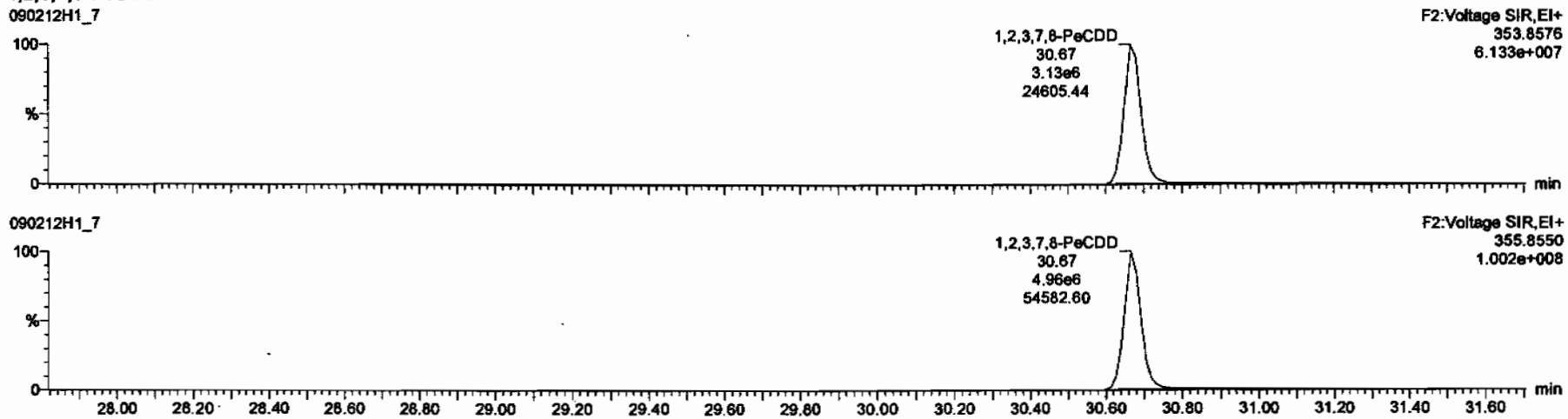

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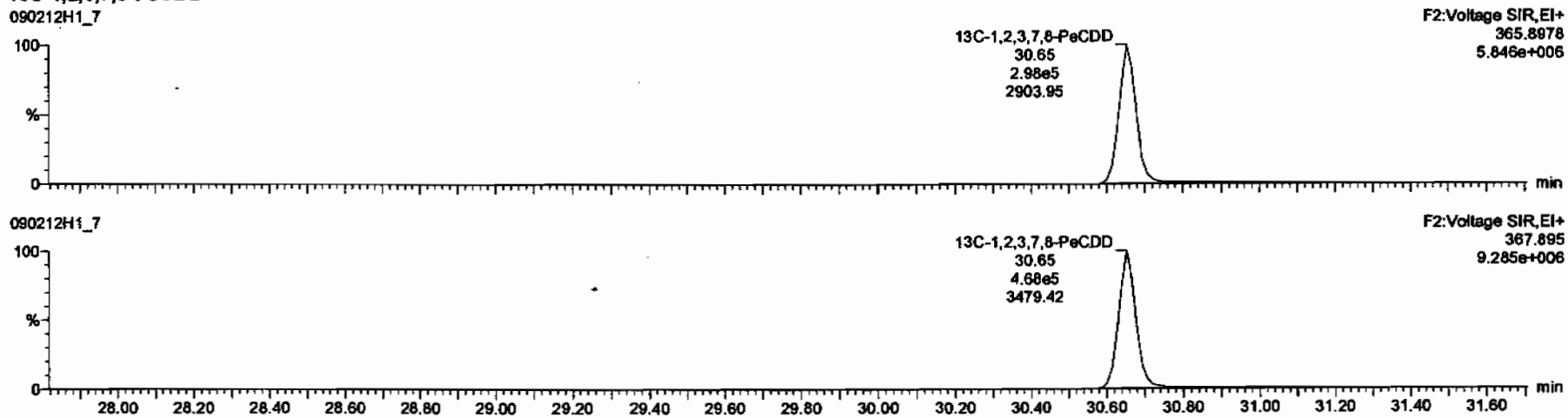

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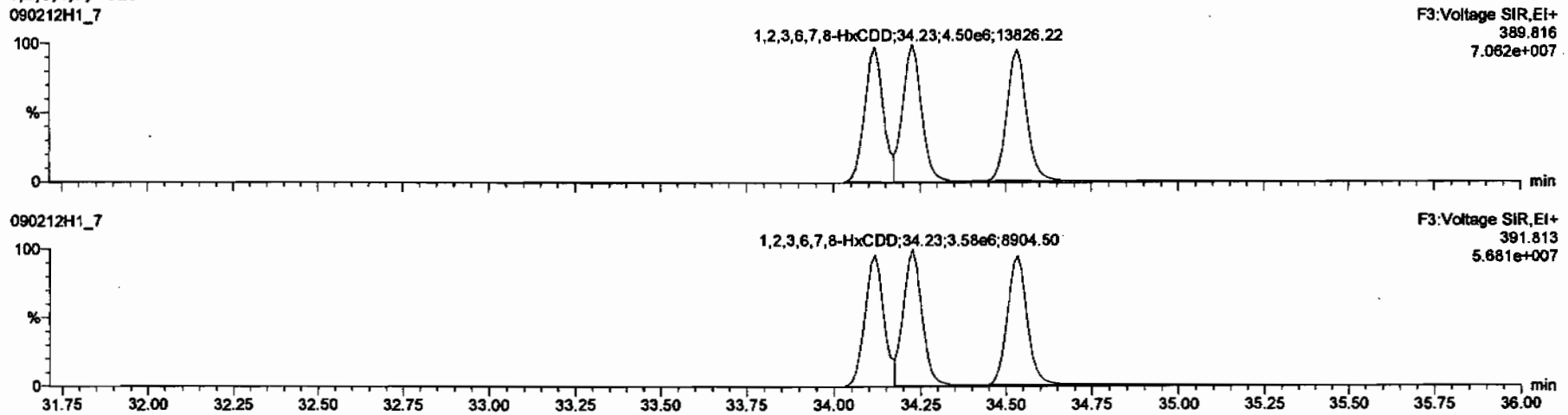

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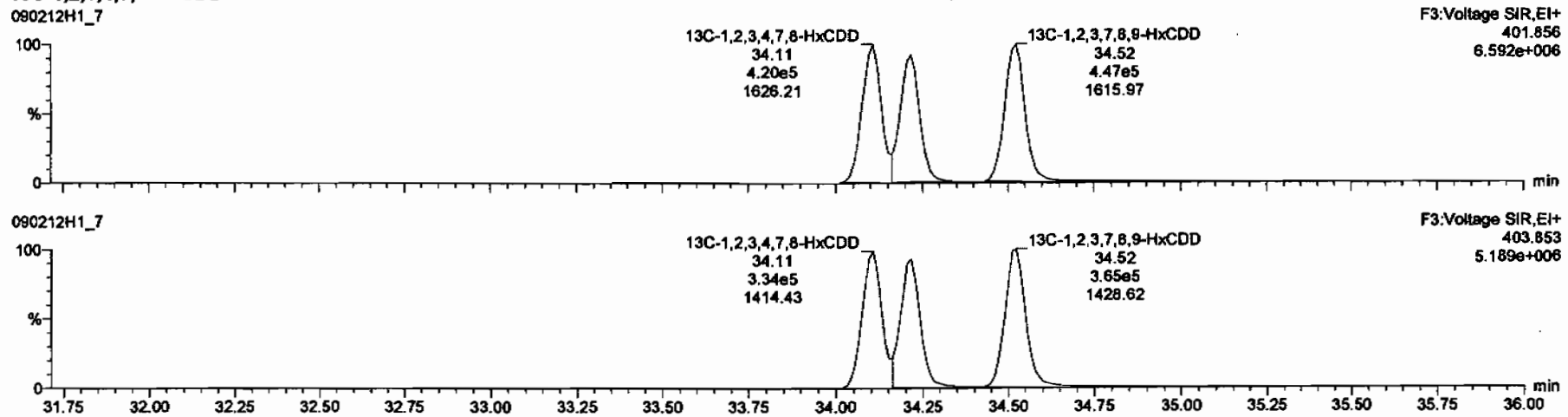

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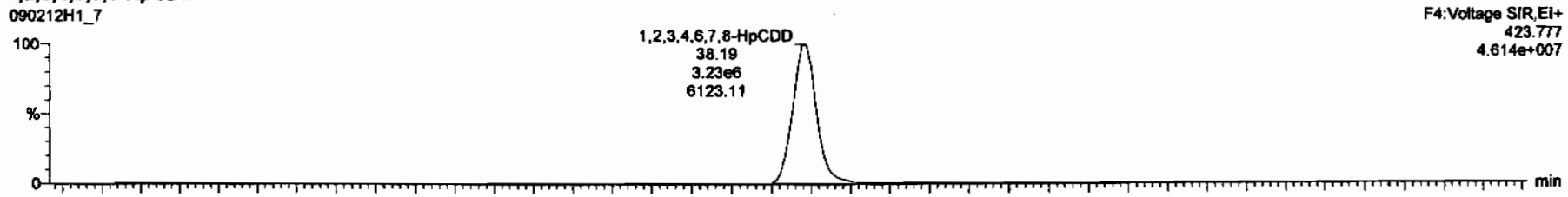

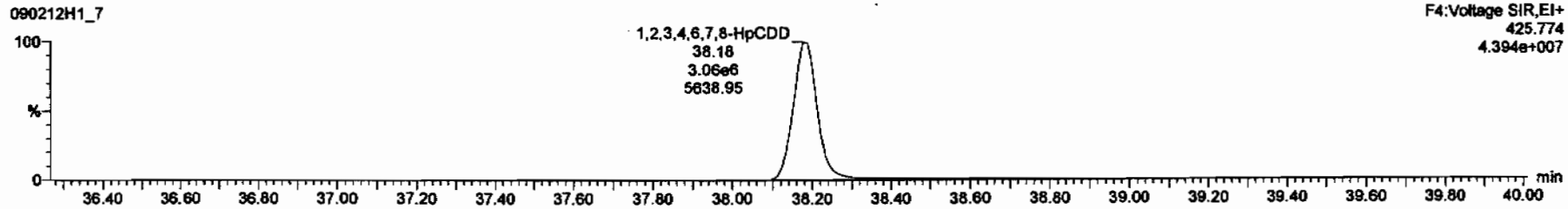

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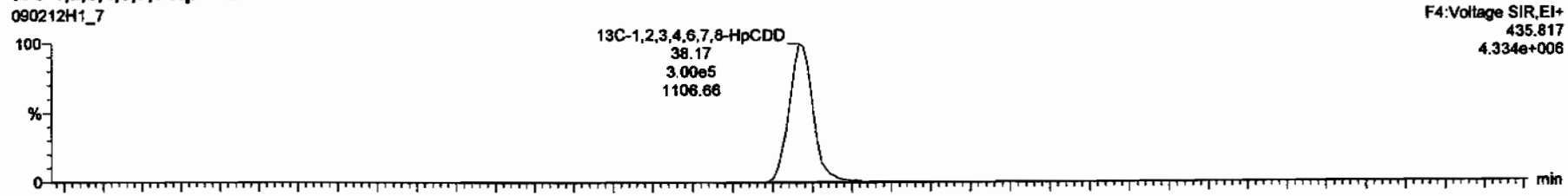

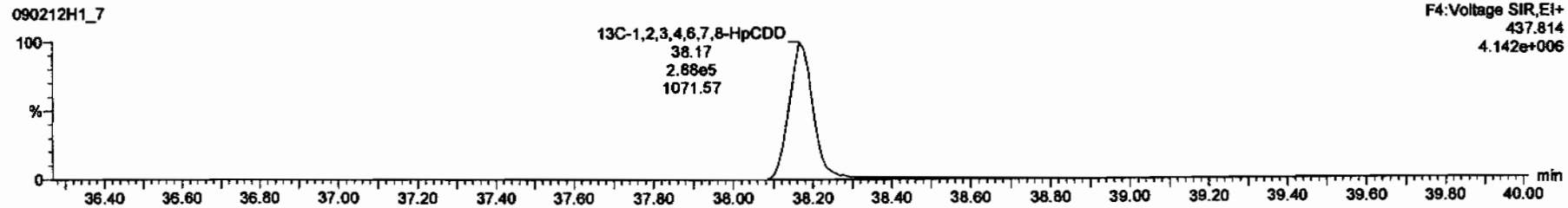

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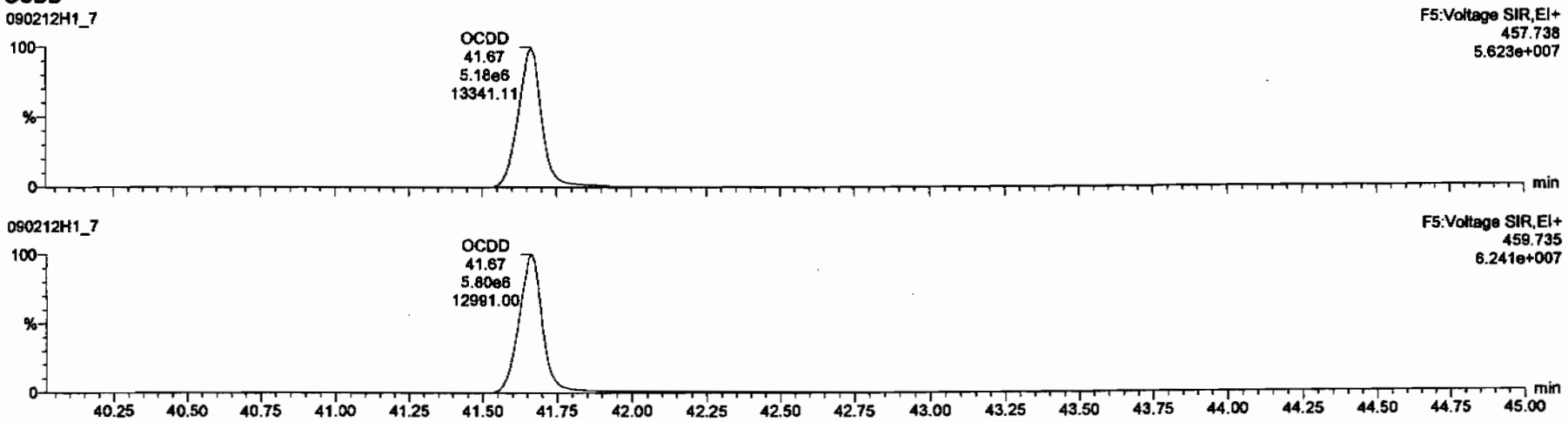

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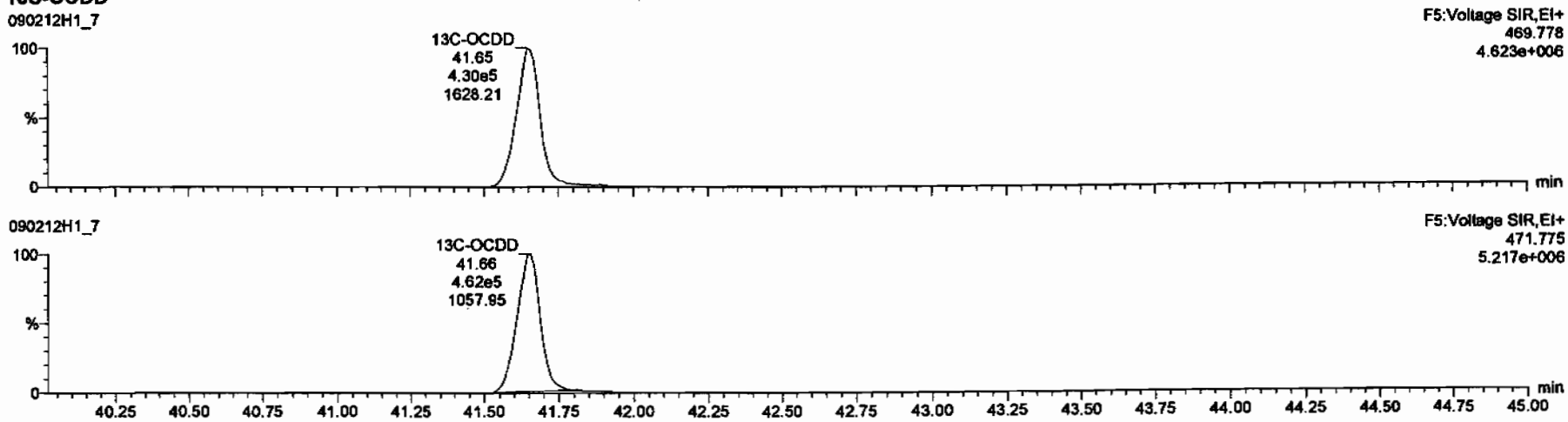

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2,3,7,8-TCDF

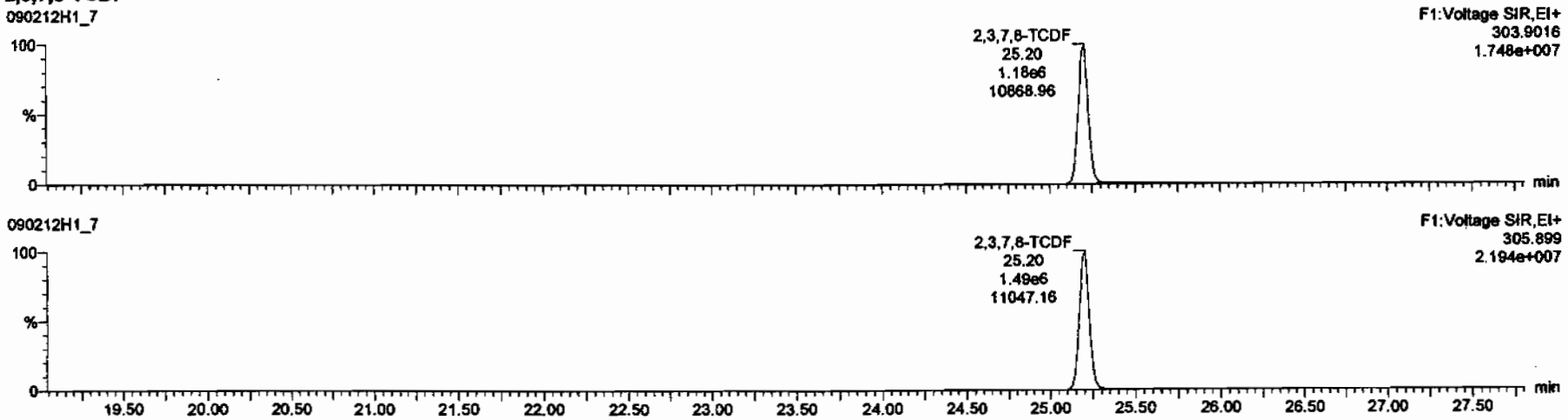

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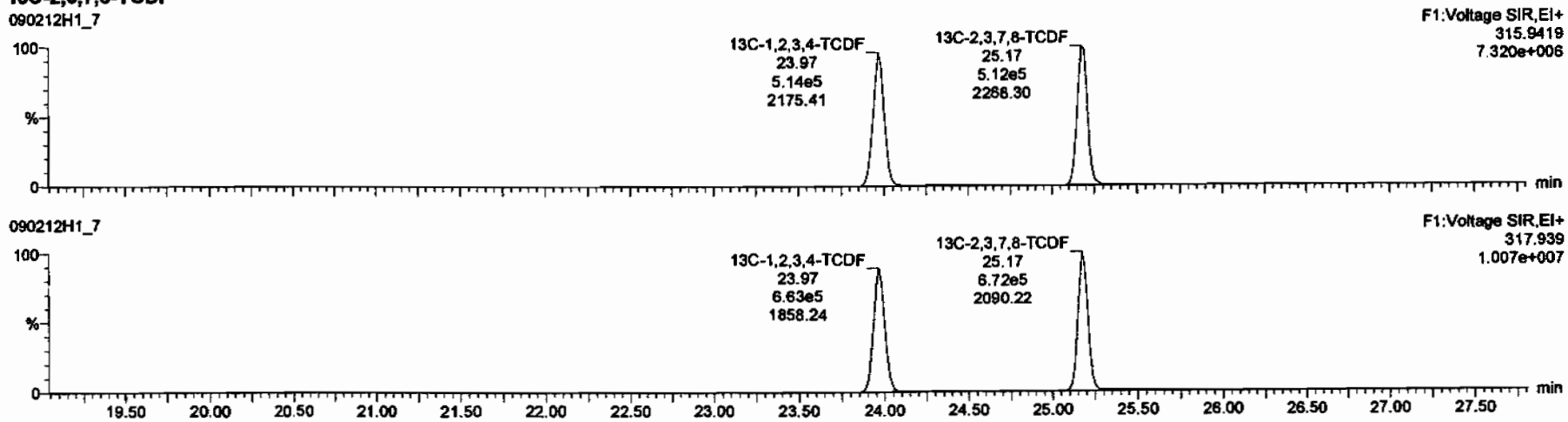

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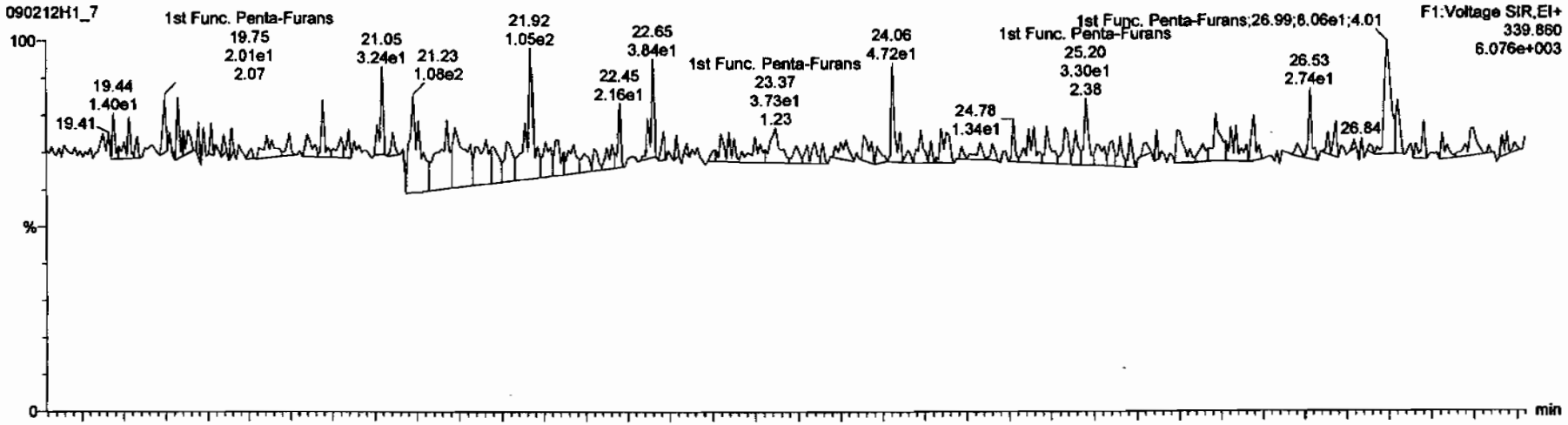

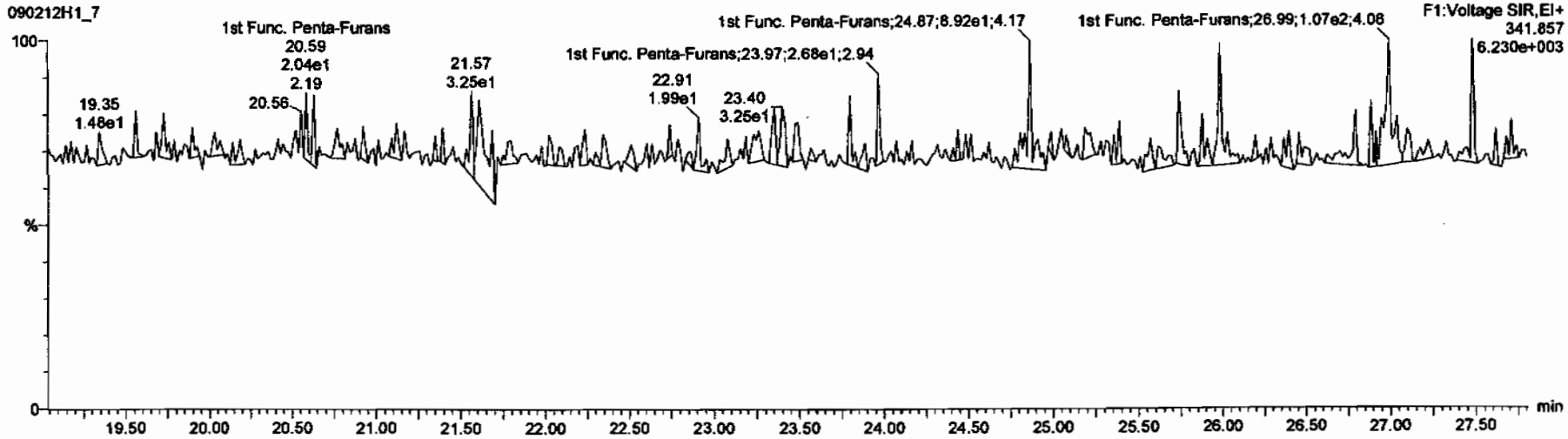

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1,2,3,7,8-PeCDF

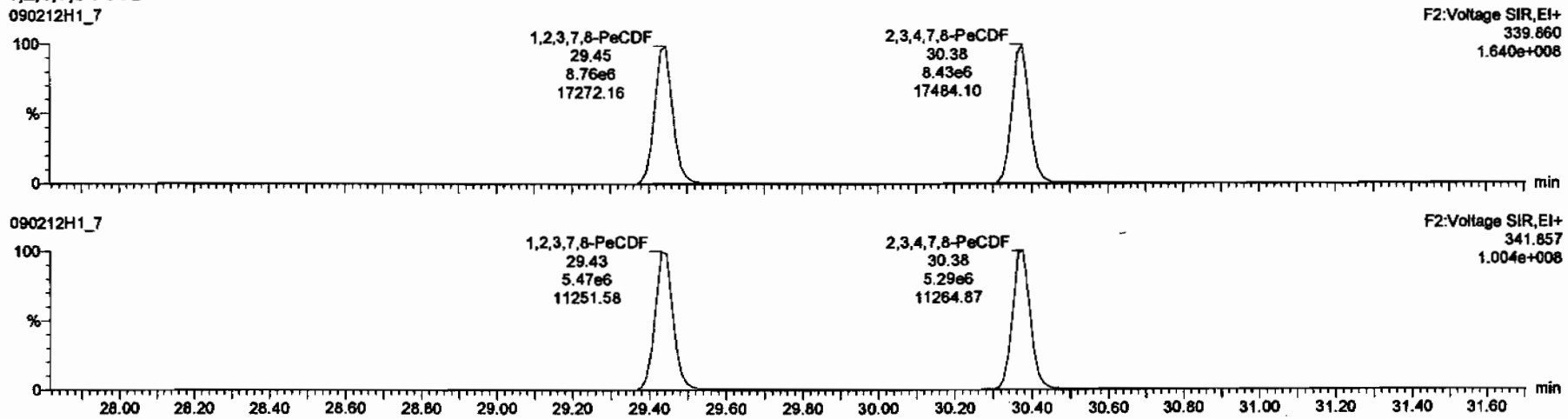

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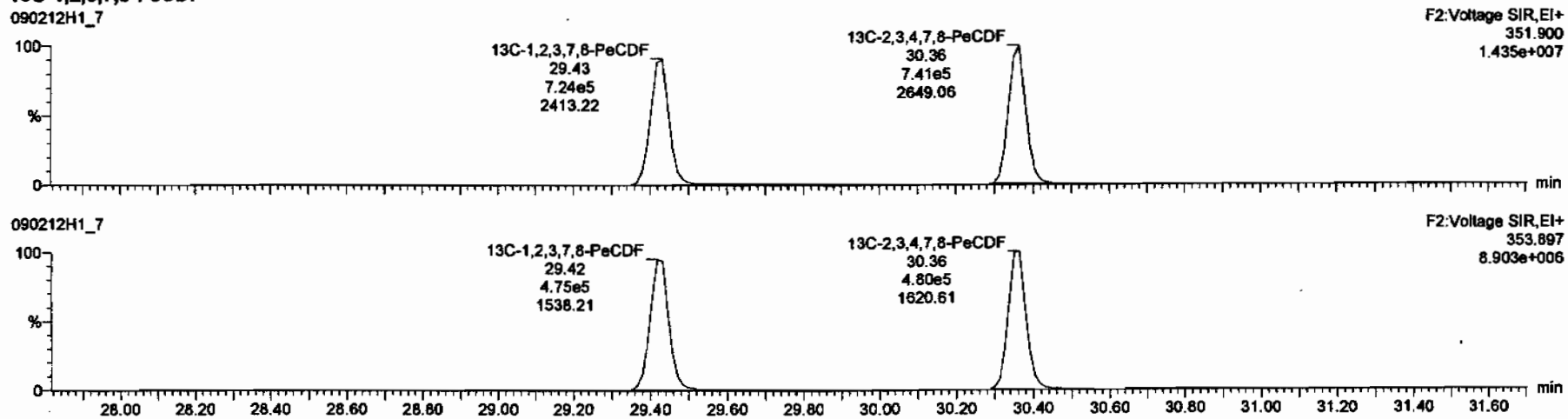

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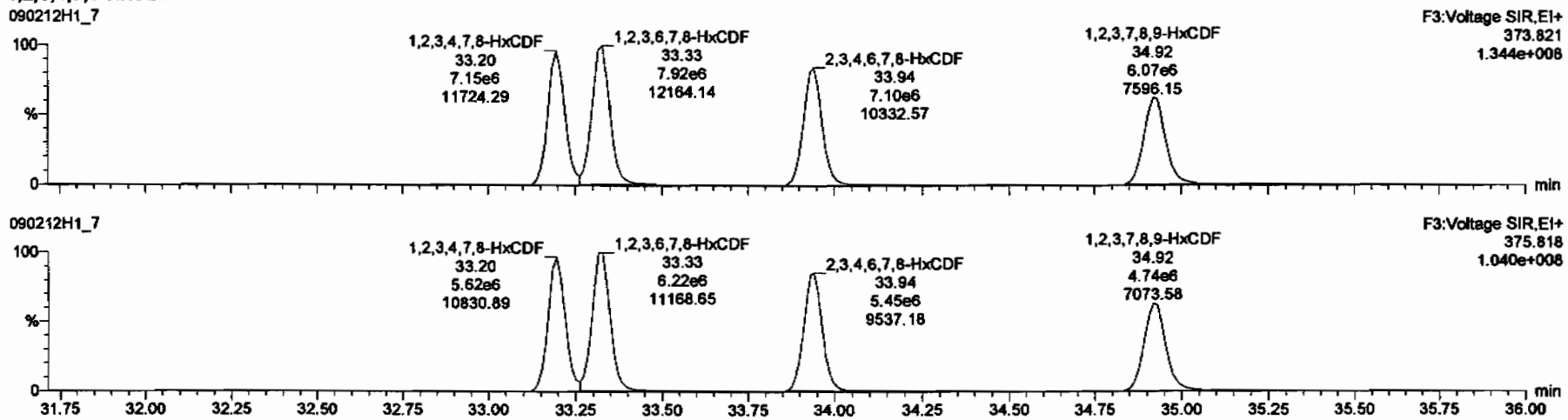

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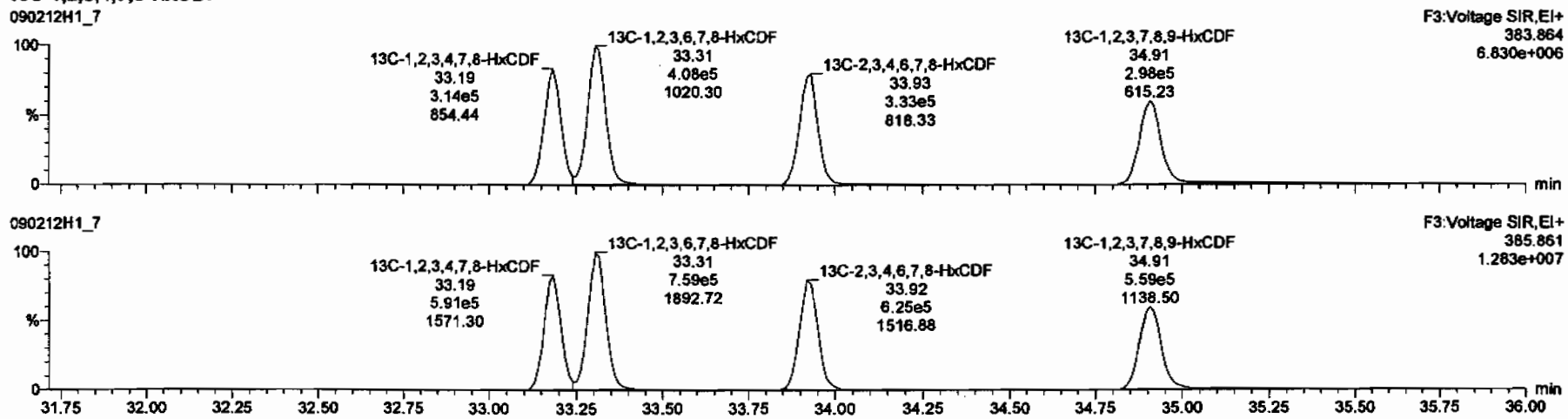

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1,2,3,4,6,7,8-HpCDF

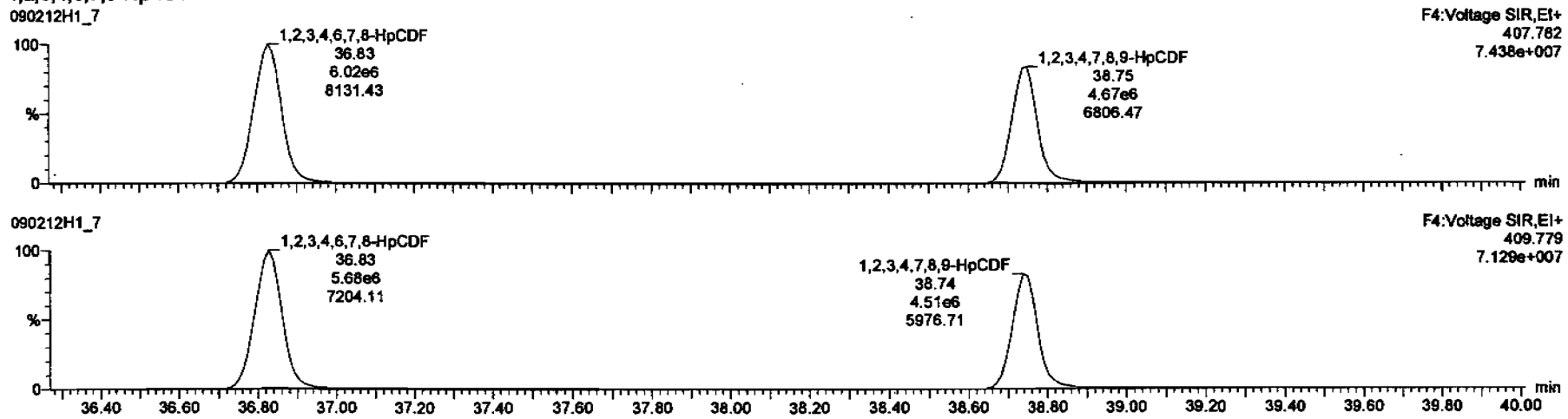

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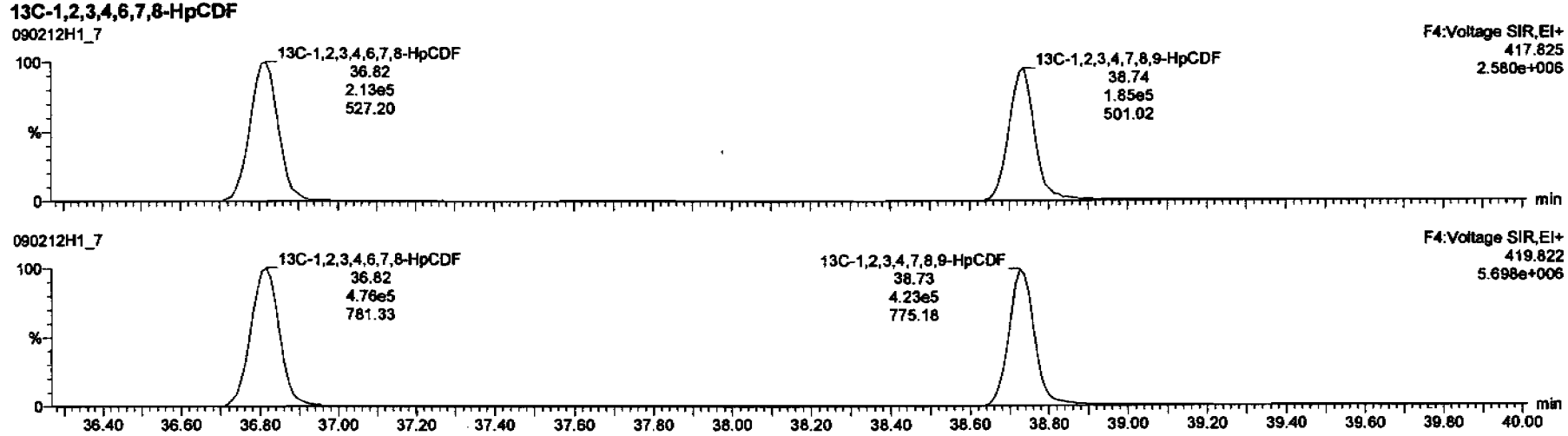

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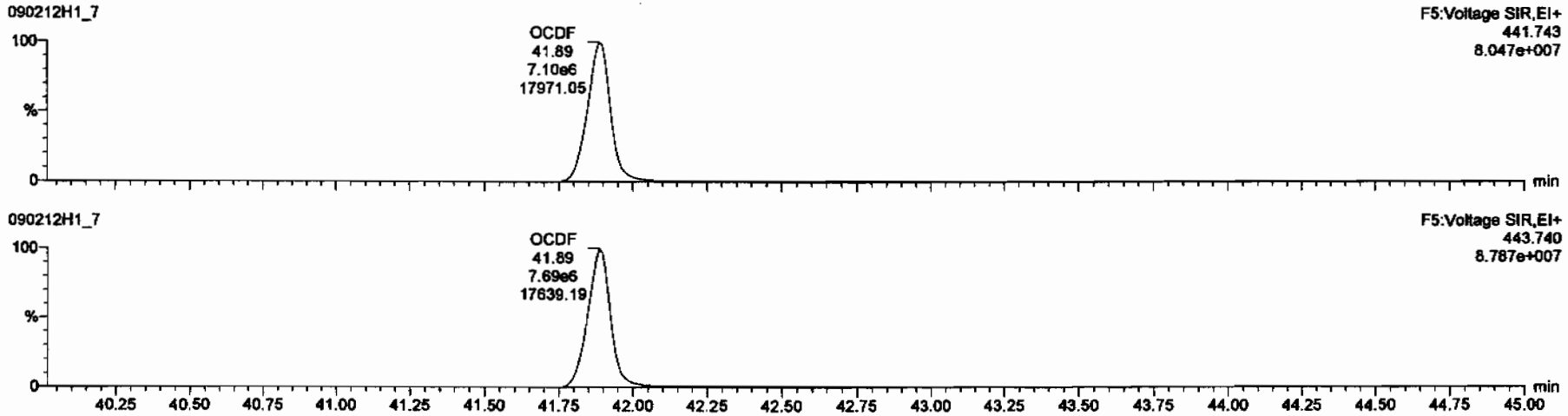

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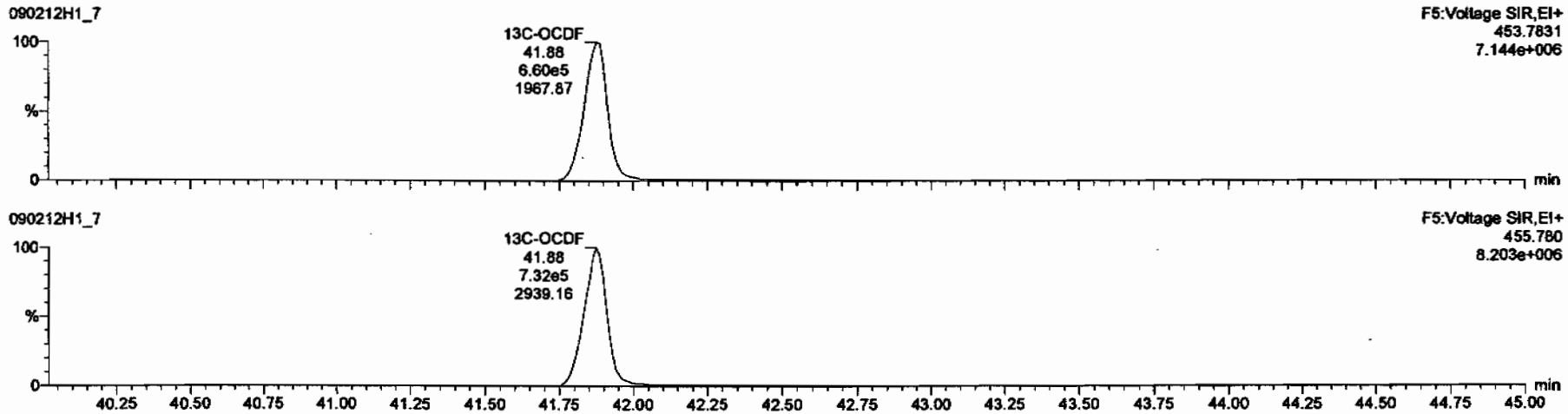

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PFK1

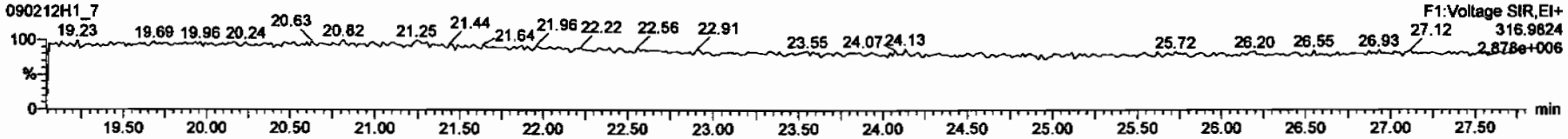

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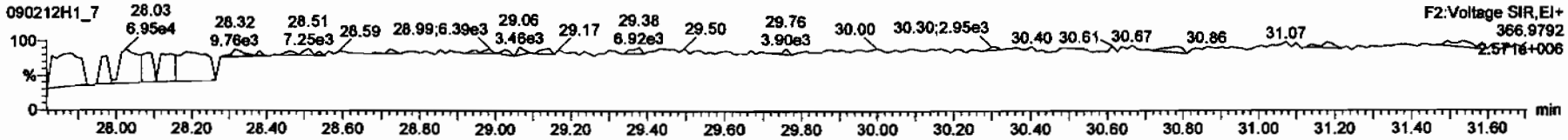

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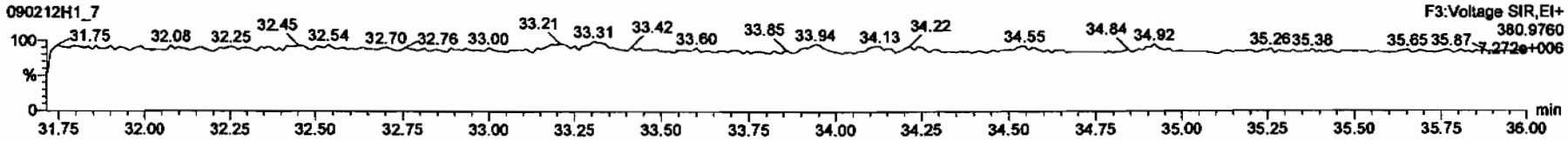

PFK4

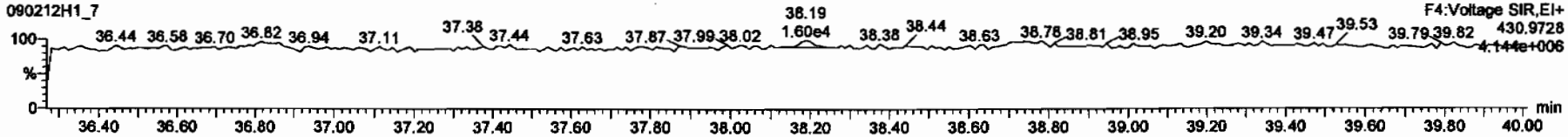

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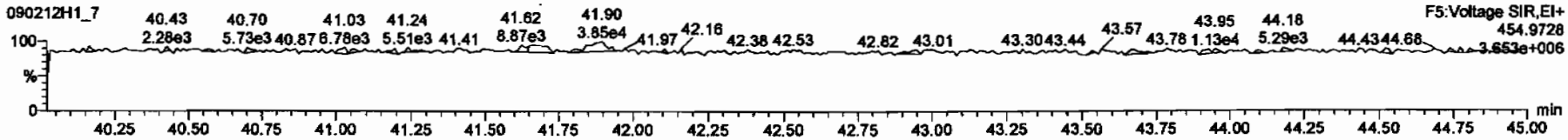

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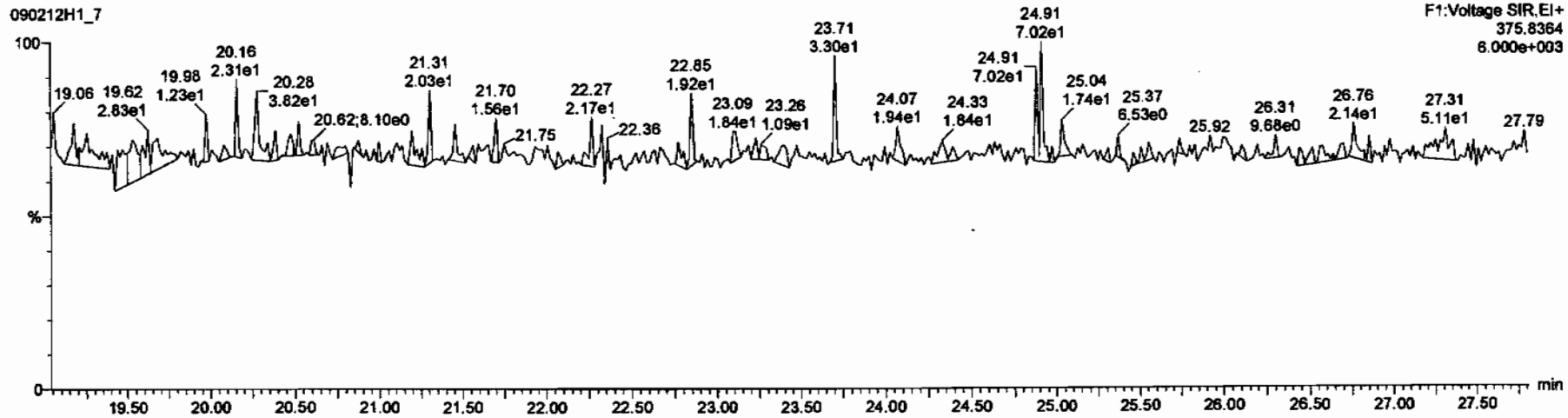

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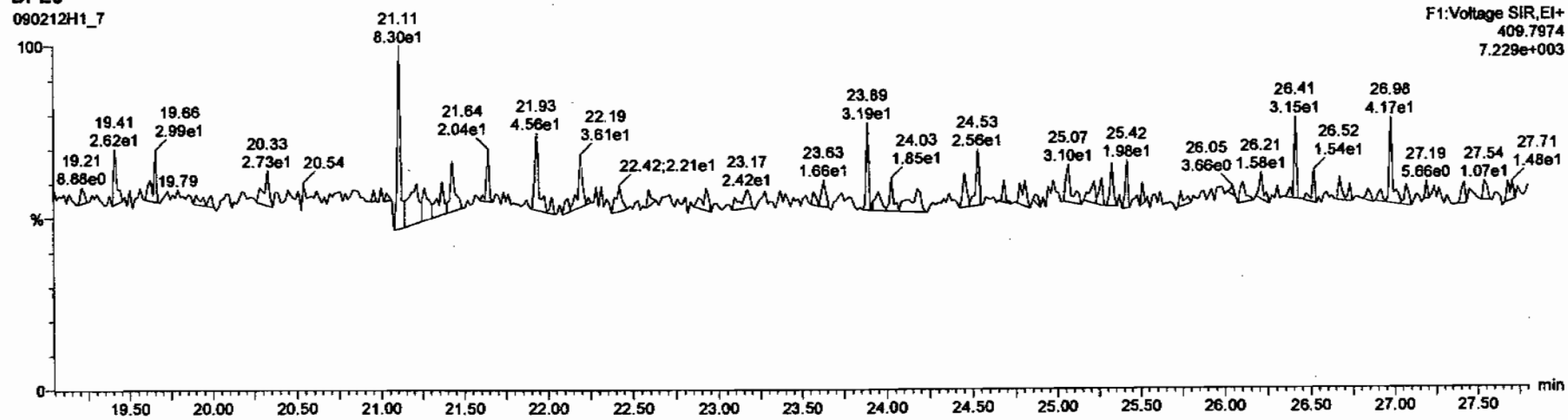

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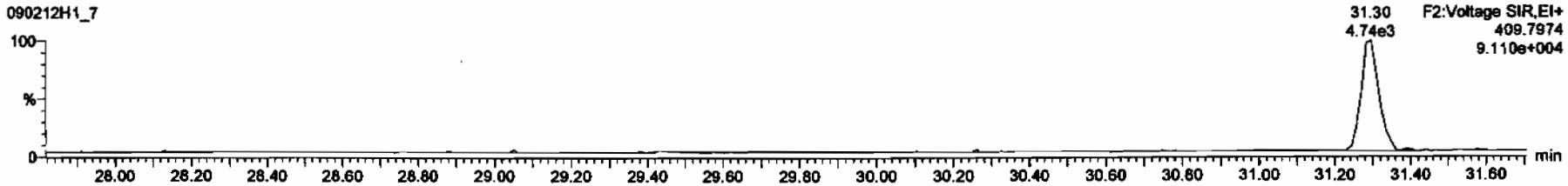

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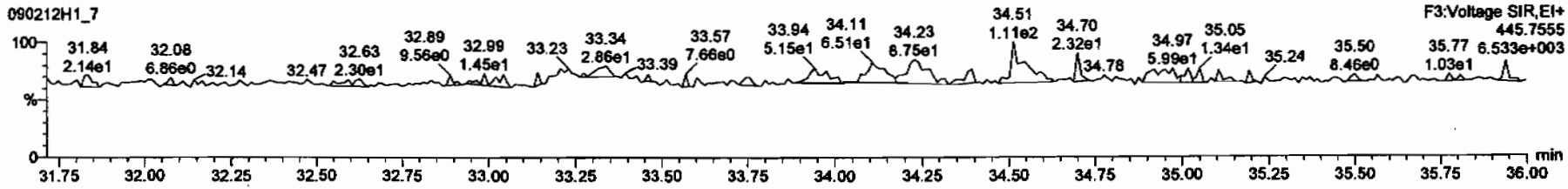

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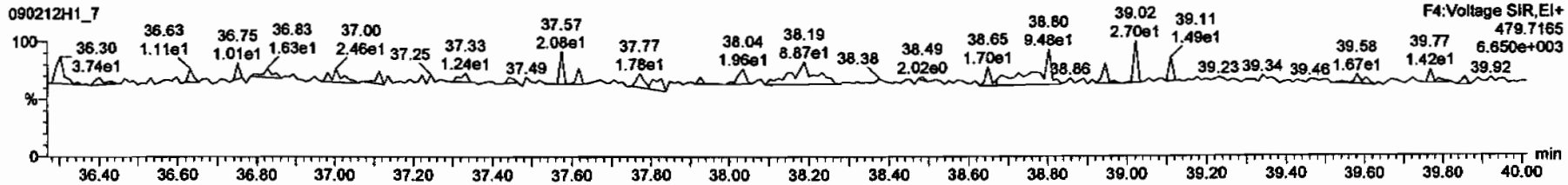

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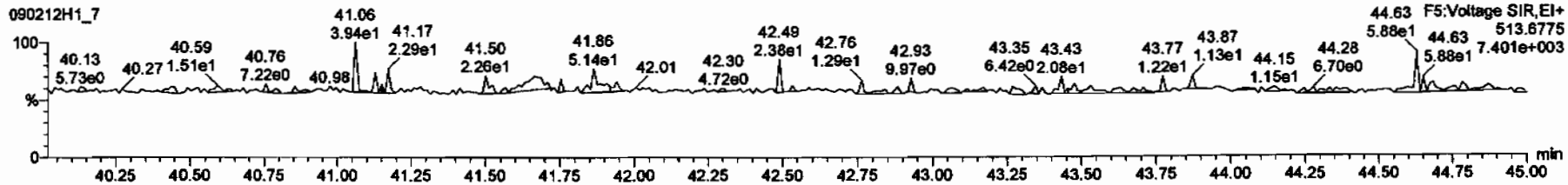

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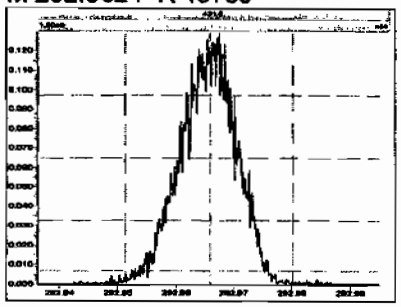

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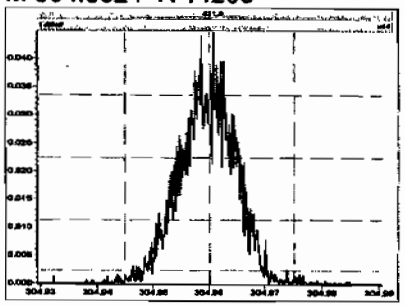

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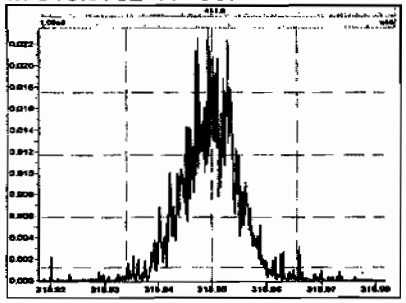

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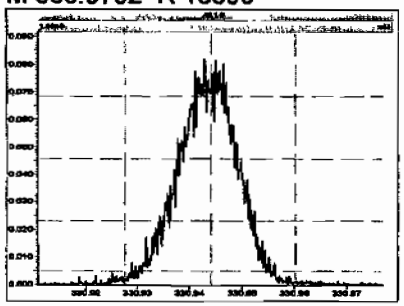

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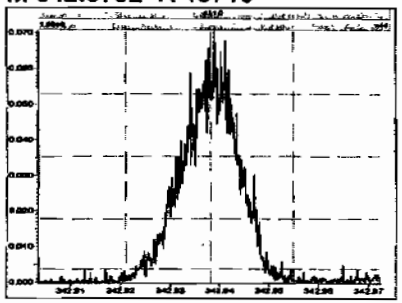

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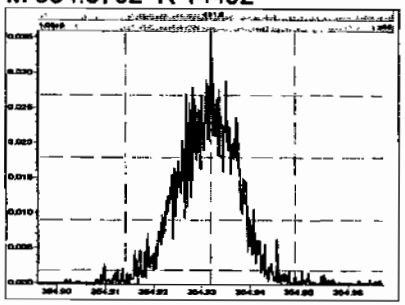

M 366.9792 R 14631

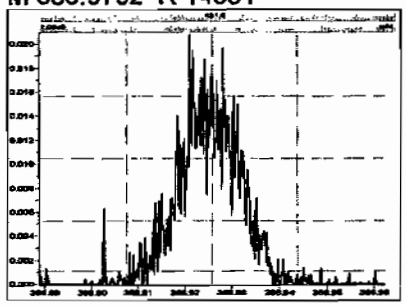

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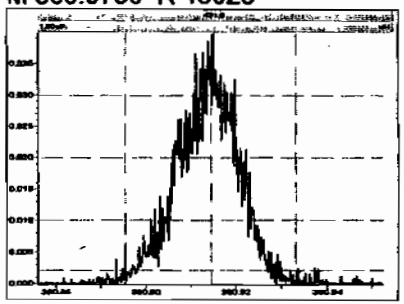

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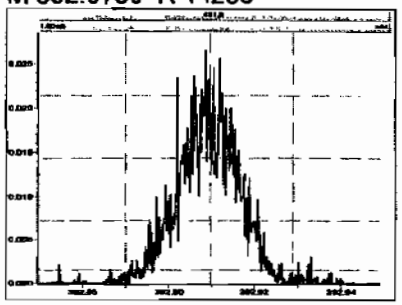

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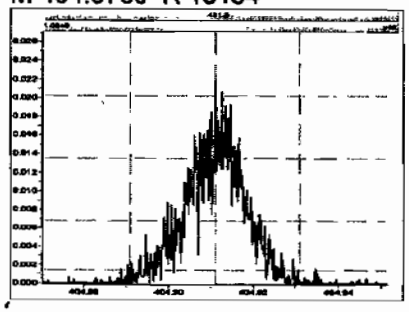

M 416.9760 R 15880

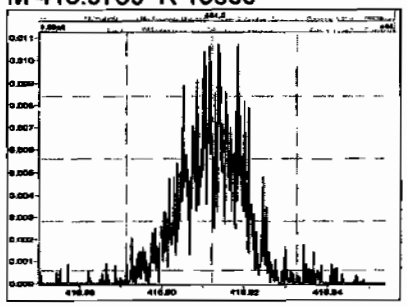

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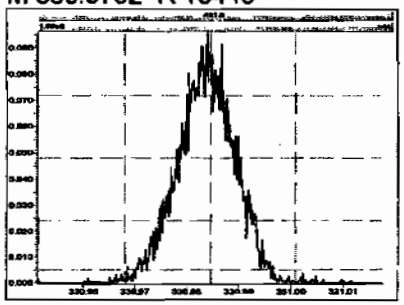

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M 342.9792 R 13880

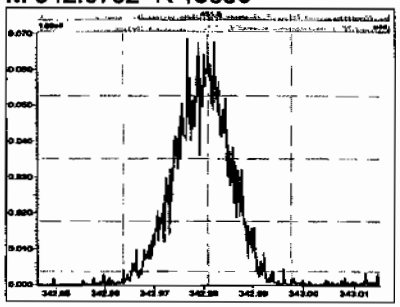

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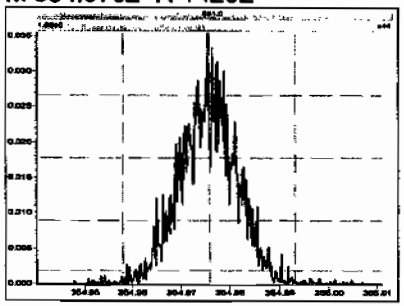

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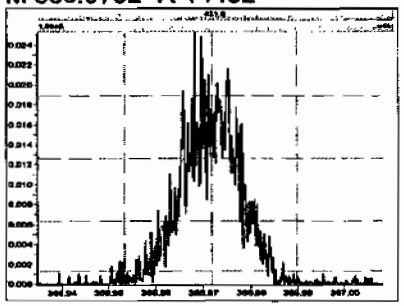

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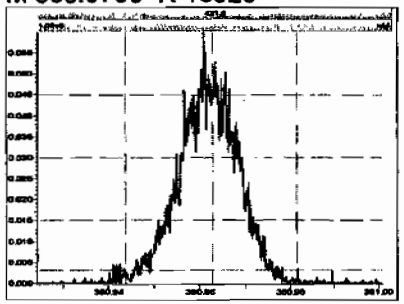

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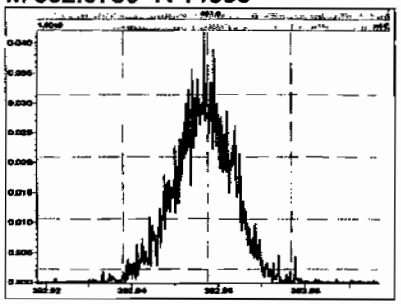

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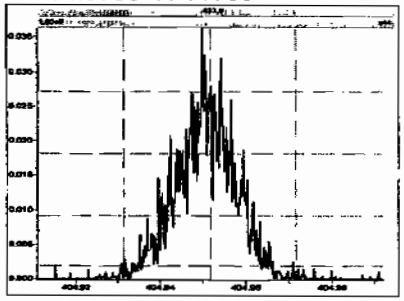

M 416.9760 R 15053

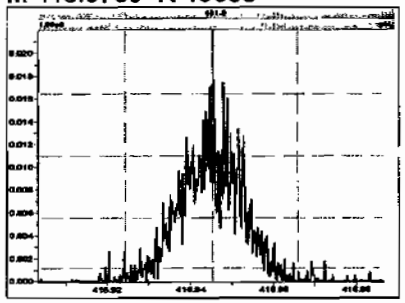

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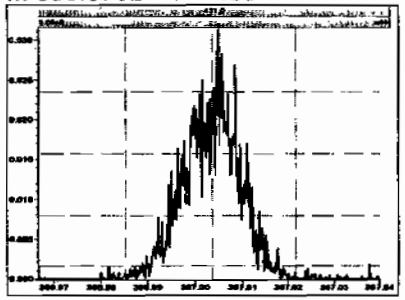

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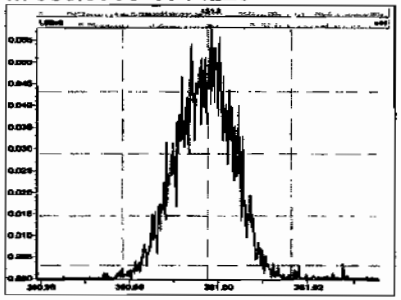

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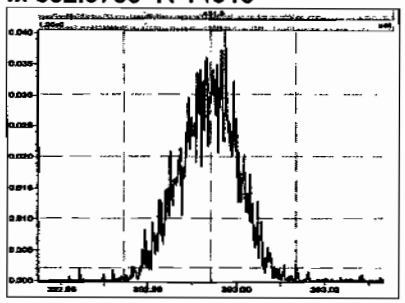

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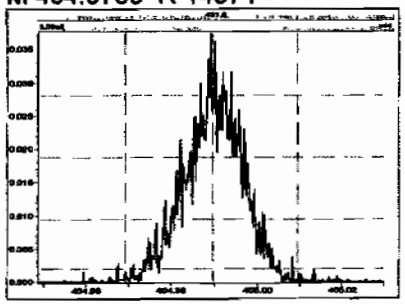

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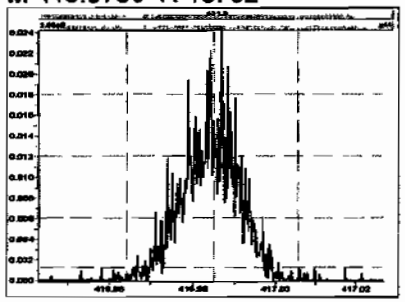

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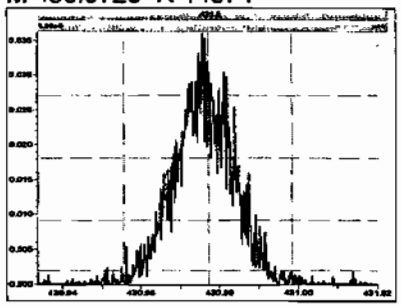

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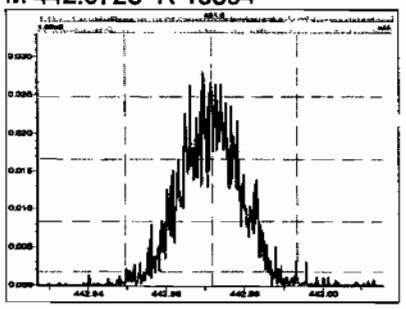

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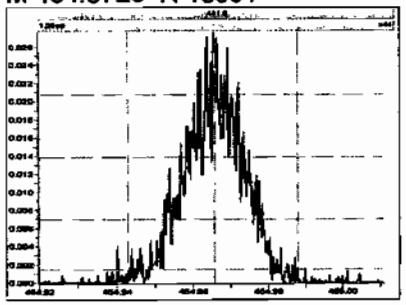

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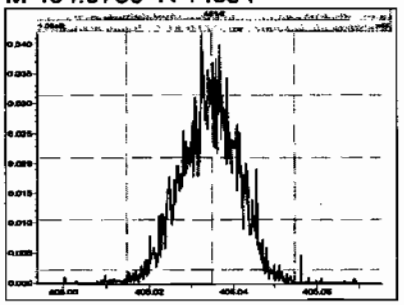

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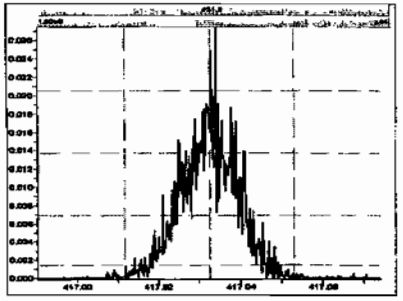

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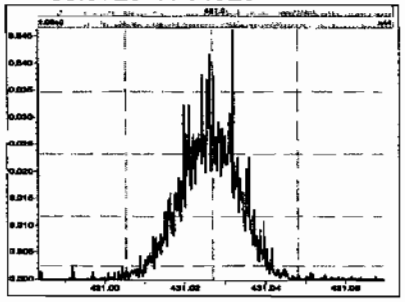

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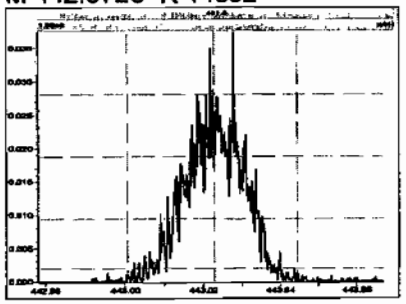

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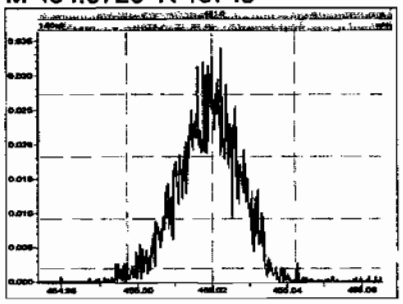

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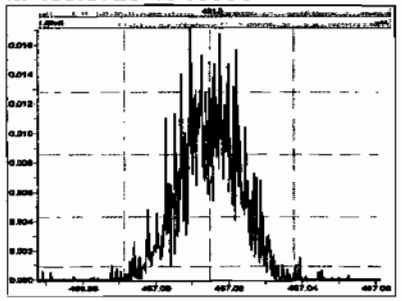

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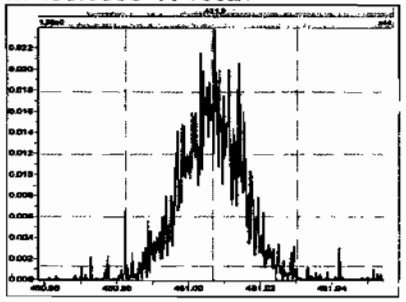

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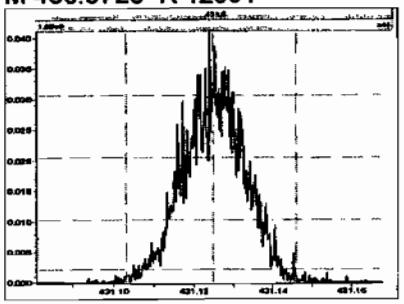

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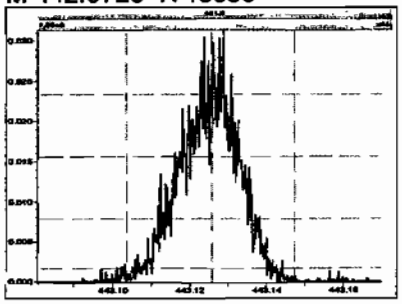

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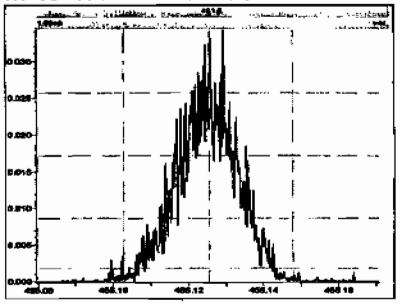

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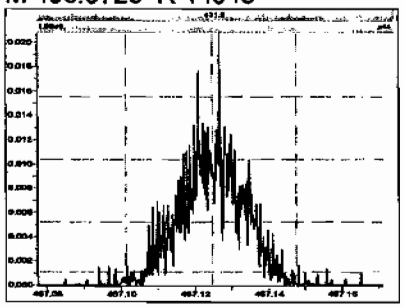

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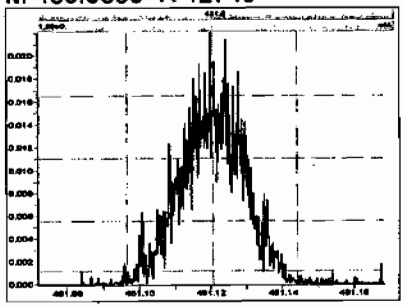

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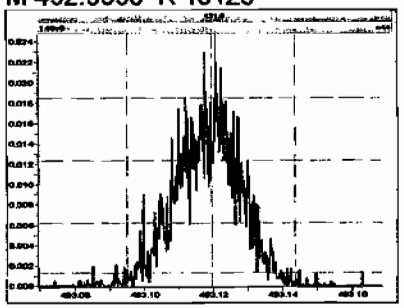

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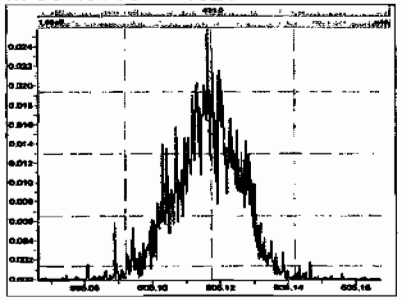

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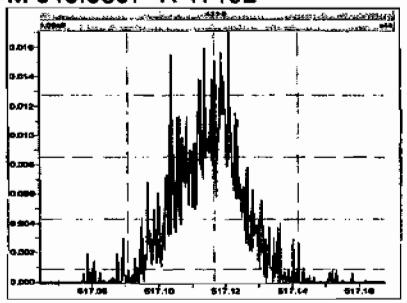

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
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Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	Name	Resp	RA		RRF	MAX	RT	RRT	Conc	%Rec	LOD	LOQ
1	2,3,7,8-TCDD	2.66e4	0.81	NO	1.08	1.000	25.98	1.001	9.5090		0.0723	9.5090
2	1,2,3,7,8-PeCDD	1.01e5	0.61	NO	1.03	1.000	30.65	1.000	47.444		0.172	47.444
3	1,2,3,4,7,8-HxCDD	9.43e4	1.26	NO	1.00	1.000	34.11	1.001	60.533		0.392	60.533
4	1,2,3,6,7,8-HxCDD	8.97e4	1.28	NO	1.13	1.000	34.22	1.000	41.292		0.312	41.292
5	1,2,3,7,8,9-HxCDD	9.40e4	1.29	NO	1.10	1.000	34.52	1.009	48.966		0.335	48.966
6	1,2,3,4,6,7,8-HpCDD	7.06e4	1.02	NO	1.06	1.000	38.18	1.001	47.757		0.360	47.757
7	OCDD	1.05e5	0.91	NO	1.18	1.000	41.66	1.000	87.851		0.375	87.851
8	2,3,7,8-TCDF	3.59e4	0.80	NO	1.09	1.000	25.20	1.001	9.2692		0.0713	9.2692
9	1,2,3,7,8-PeCDF	1.90e5	1.60	NO	1.16	1.000	29.43	1.001	47.569		0.197	47.569
10	2,3,4,7,8-PeCDF	1.76e5	1.60	NO	1.12	1.000	30.36	1.001	49.959		0.207	49.959
11	1,2,3,4,7,8-HxCDF	1.51e5	1.22	NO	1.41	1.000	33.19	1.000	47.242		0.234	47.242
12	1,2,3,6,7,8-HxCDF	1.99e5	1.24	NO	1.22	1.000	33.31	1.000	52.247		0.205	52.247
13	2,3,4,6,7,8-HxCDF	1.49e5	1.26	NO	1.28	1.000	33.93	1.001	48.194		0.285	48.194
14	1,2,3,7,8,9-HxCDF	1.18e5	1.28	NO	1.26	1.000	34.91	1.000	50.089		0.402	50.089
15	1,2,3,4,6,7,8-HpCDF	1.26e5	1.05	NO	1.69	1.000	36.81	1.000	45.609		0.324	45.609
16	1,2,3,4,7,8,9-HpCDF	9.92e4	1.09	NO	1.48	1.000	38.74	1.000	53.044		0.451	53.044
17	OCDF	1.36e5	0.92	NO	1.10	1.000	41.88	1.001	~~77825~~		102	77825
18	13C-2,3,7,8-TCDD	2.60e5	0.79	NO	1.01	1.000	25.97	1.022	100.68	101	0.251	
19	13C-1,2,3,7,8-PeCDD	2.07e5	0.62	NO	0.827	1.000	30.64	1.206	98.194	98.2	0.366	
20	13C-1,2,3,4,7,8-HxCDD	1.56e5	1.23	NO	0.916	1.000	34.08	0.988	96.272	96.3	1.12	
21	13C-1,2,3,6,7,8-HxCDD	1.93e5	1.30	NO	0.921	1.000	34.21	0.991	118.79	119	1.12	
22	13C-1,2,3,4,6,7,8-HpCDD	1.39e5	1.04	NO	0.708	1.000	38.16	1.106	111.12	111	0.936	
23	13C-OCDD	2.03e5	0.90	NO	0.503	1.000	41.65	1.207	229.27	115	1.10	
24	13C-2,3,7,8-TCDF	3.56e5	0.77	NO	0.977	1.000	25.17	0.991	47241	~~47200~~	47.8	
25	13C-1,2,3,7,8-PeCDF	3.45e5	1.53	NO	0.896	1.000	29.41	1.158	49875	~~49900~~	135	
26	13C-2,3,4,7,8-PeCDF	3.15e5	1.57	NO	0.900	1.000	30.34	1.194	45355	~~45400~~	135	
27	13C-1,2,3,4,7,8-HxCDF	2.27e5	0.52	NO	1.17	1.000	33.17	0.962	110.01	110	1.09	
28	13C-1,2,3,6,7,8-HxCDF	3.11e5	0.53	NO	1.52	1.000	33.29	0.965	116.12	116	0.841	
29	13C-2,3,4,6,7,8-HxCDF	2.41e5	0.53	NO	1.25	1.000	33.91	0.983	109.27	109	1.02	
30	13C-1,2,3,7,8,9-HxCDF	1.87e5	0.53	NO	1.05	1.000	34.90	1.011	100.48	100	1.21	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	Name	Resp	RA	Int	RRF	Wt/Vol	RT	RRT	Conc	%Rec	DL	UnF
	31 13C-1,2,3,4,6,7,8-HpCDF	1.64e5	0.42	NO	0.868	1.000	36.80	1.066	107.17	107	0.875	
	32 13C-1,2,3,4,7,8,9-HpCDF	1.26e5	0.43	NO	0.727	1.000	38.73	1.122	98.571	98.6	1.05	
	33 13C-OCDF	3.18e2	0.17	YES	0.760	1.000	41.82	1.212	0.23753	~~0.119~~	0.197	
	34 37Cl-2,3,7,8-TCDD	2.82e4			0.668	1.000	25.98	1.023	16.616	166	0.0976	
	35 13C-1,2,3,4-TCDD	2.54e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.254	
	36 13C-1,2,3,4-TCDF	7.72e2	0.44	YES	1.00	1.000	23.92	0.000	100.00	100	46.7	
	37 13C-1,2,3,7,8,9-HxCDD	1.76e5	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	1.03	

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDD

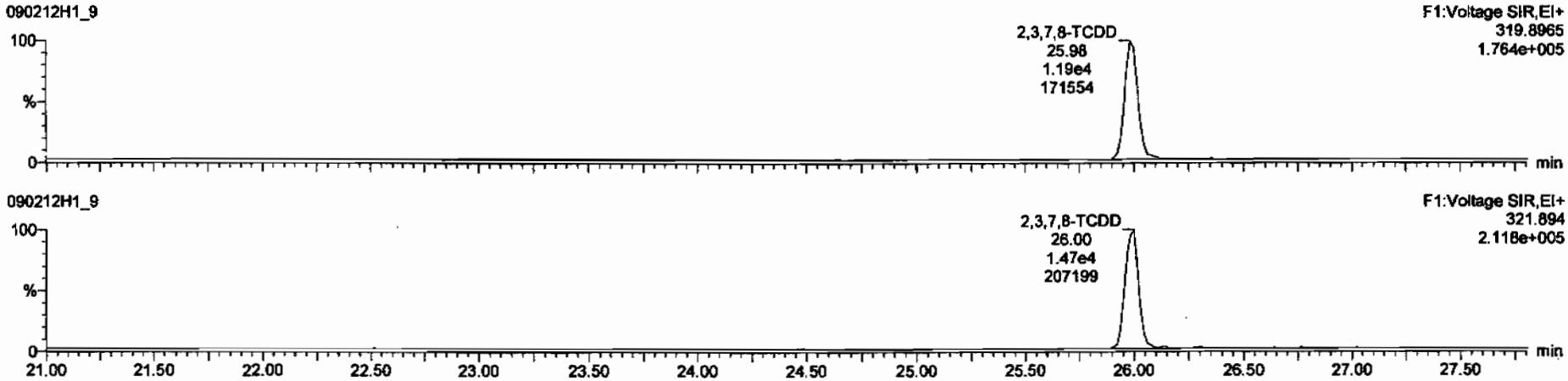

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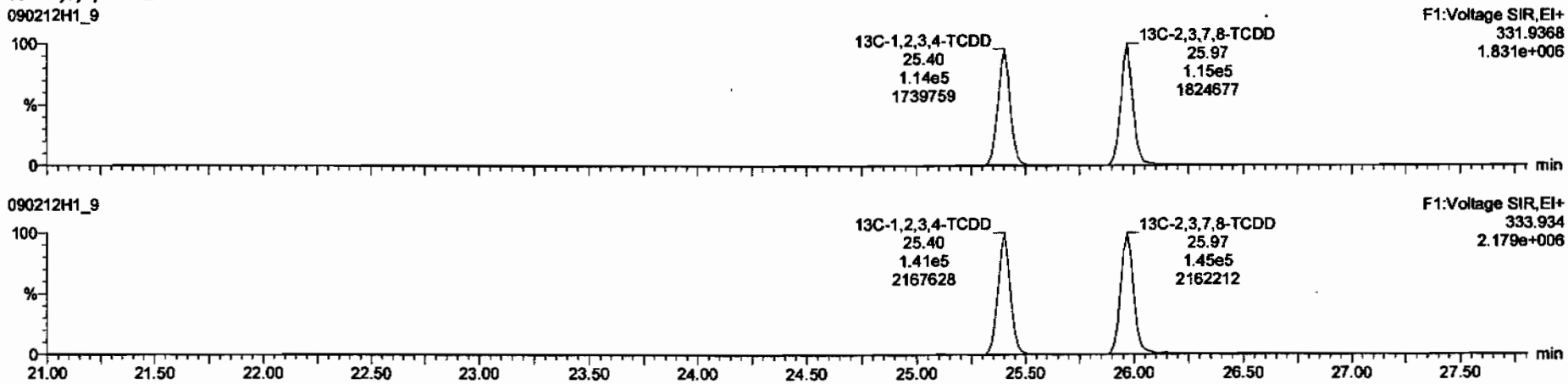

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

37Cl-2,3,7,8-TCDD

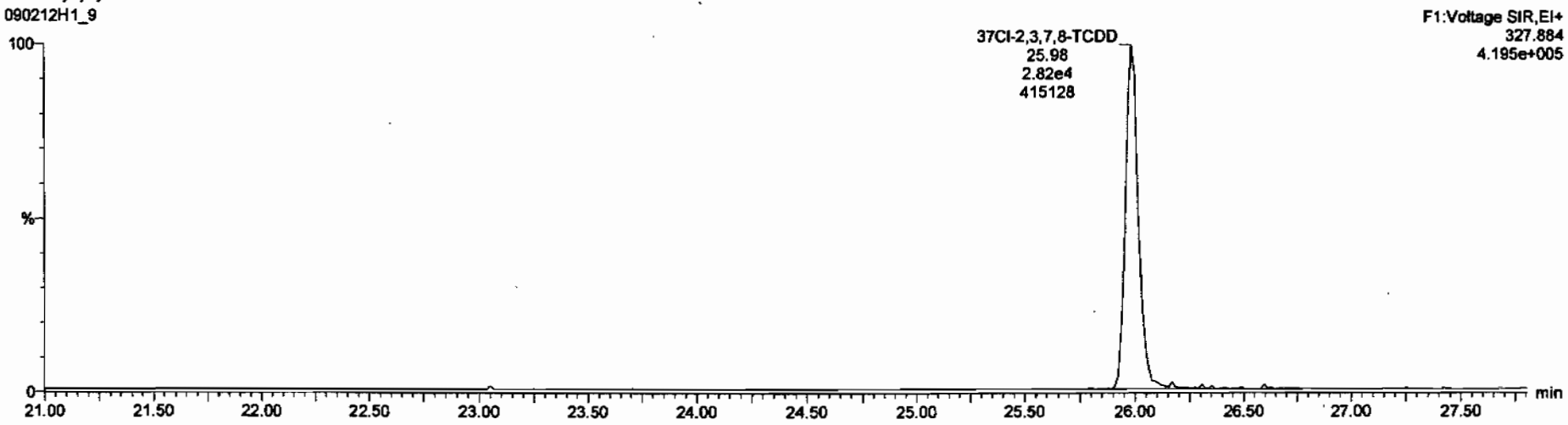

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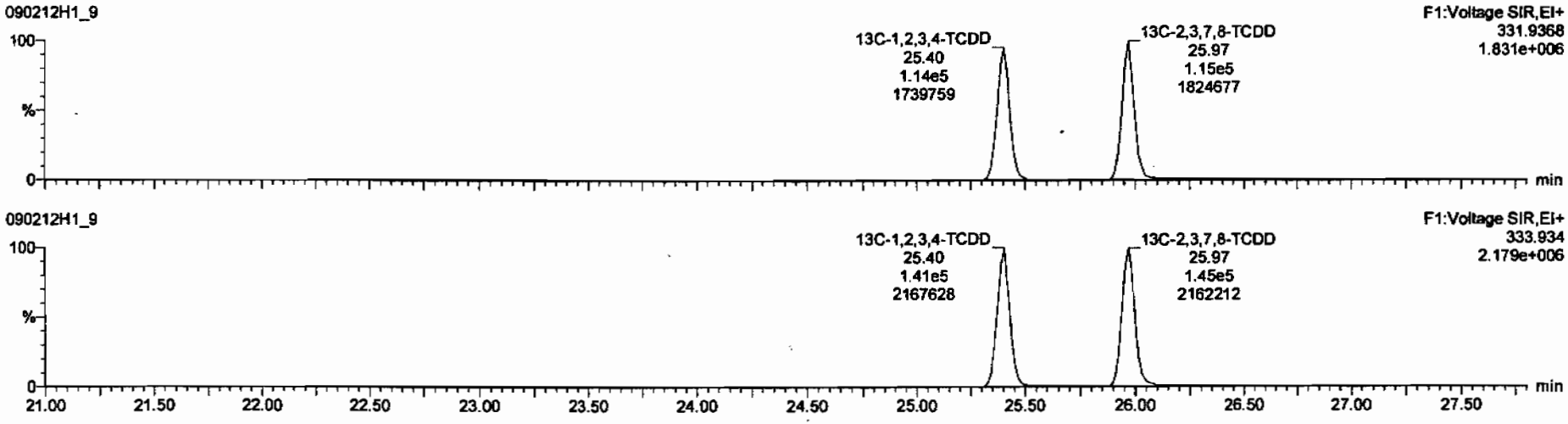

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,7,8-PeCDD

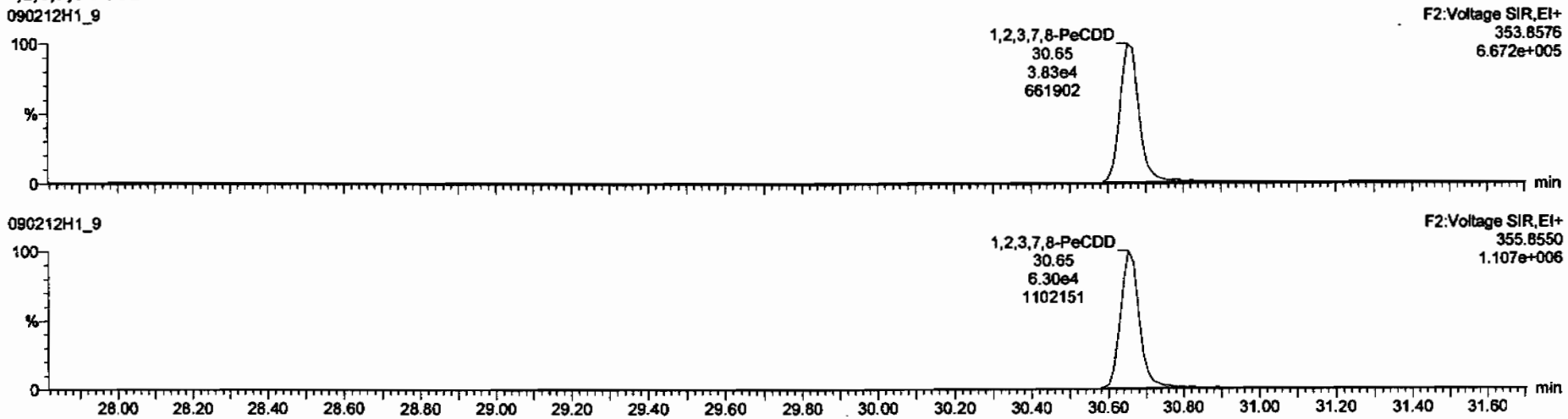

13C-1,2,3,7,8-PeCDD

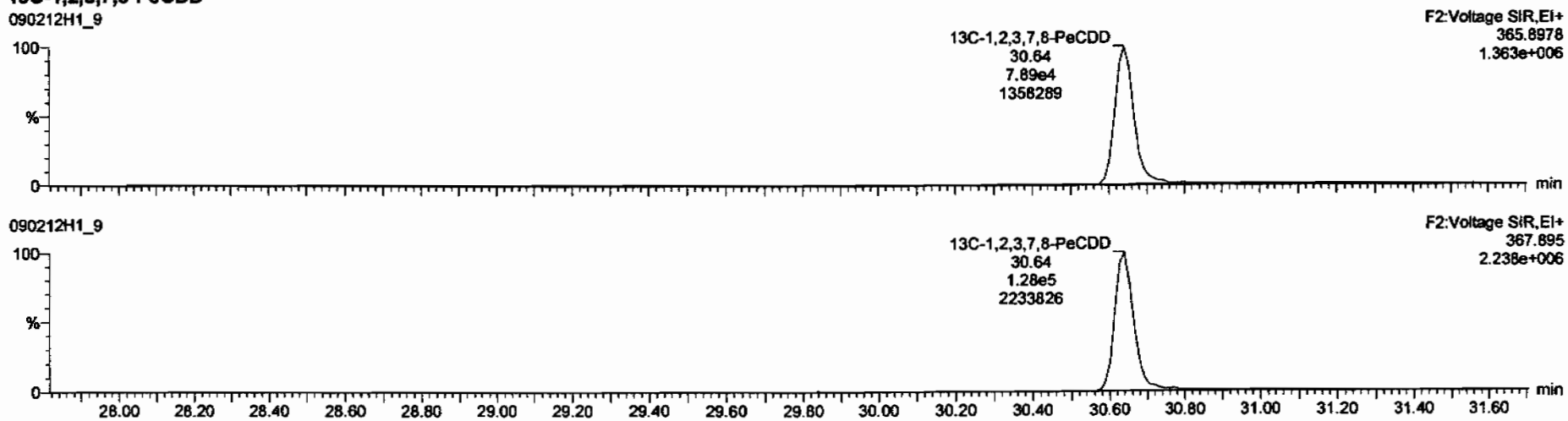

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,7,8-HxCDD

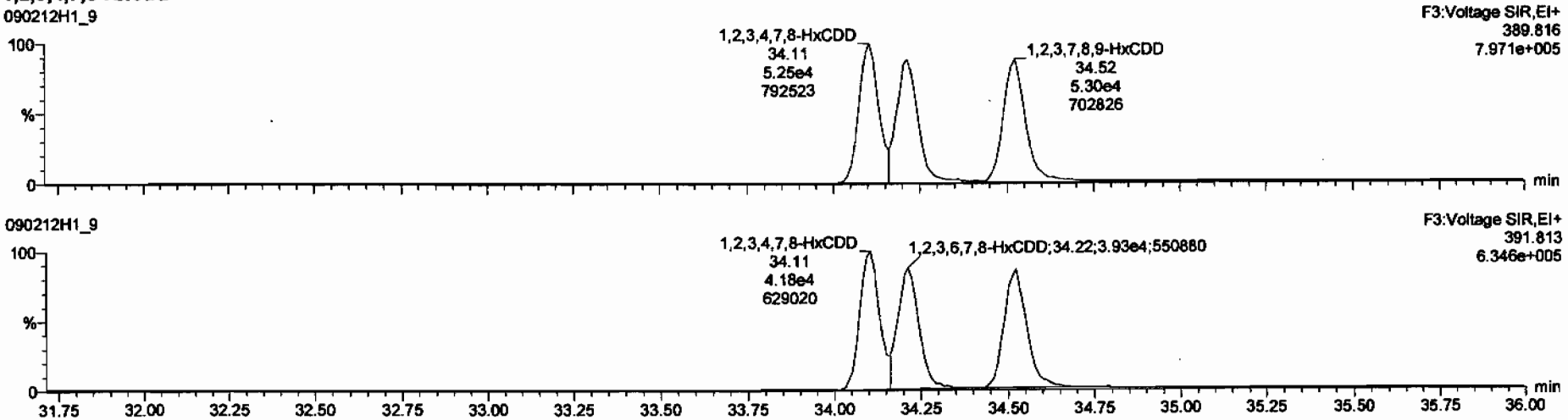

13C-1,2,3,4,7,8-HxCDD

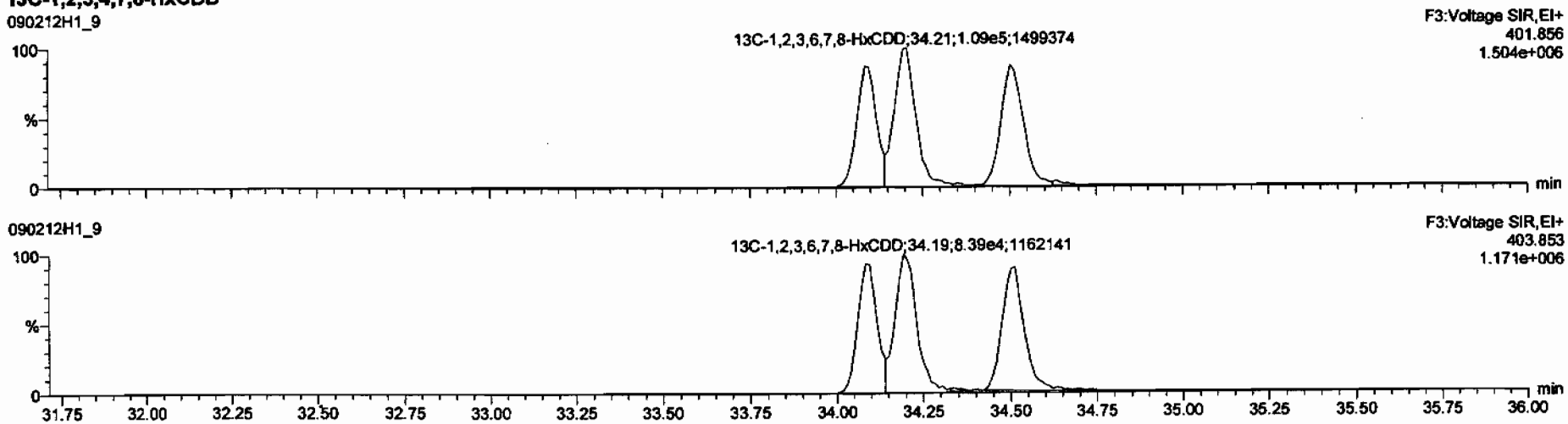

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,6,7,8-HpCDD

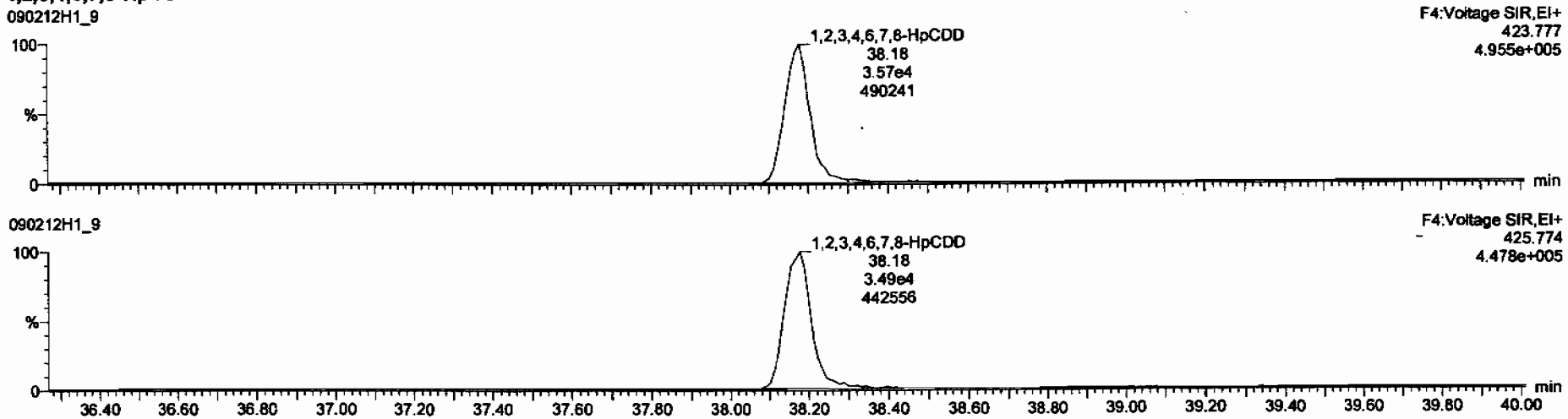

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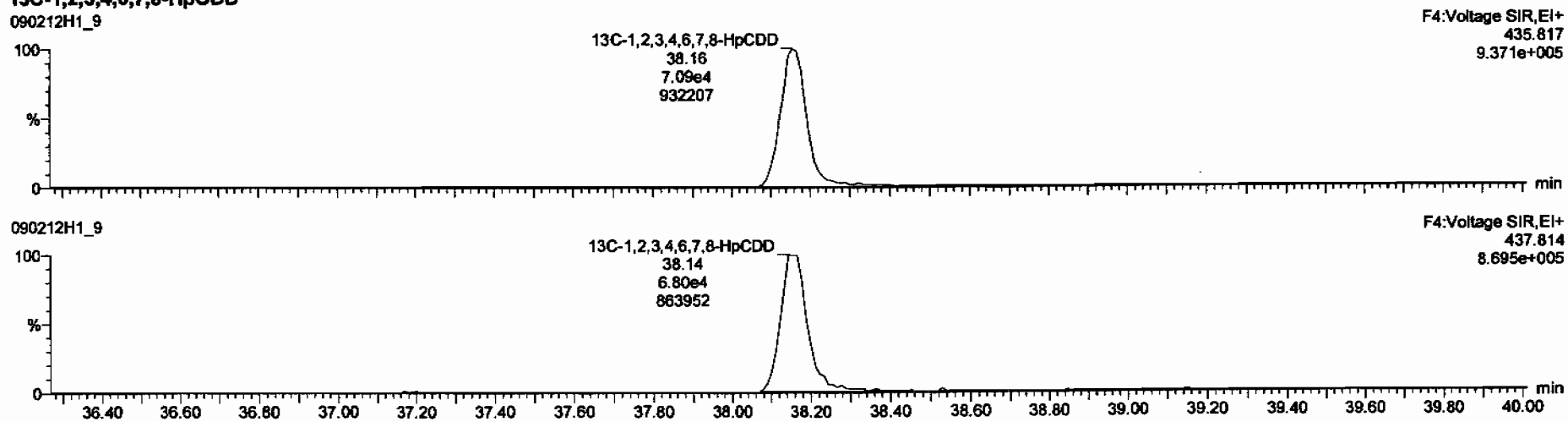

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

OCDD

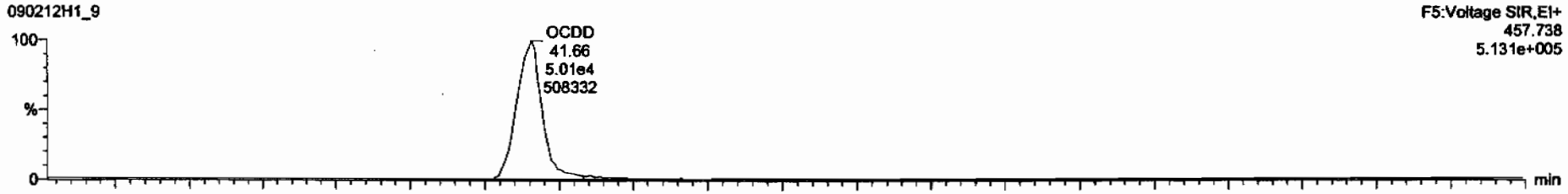

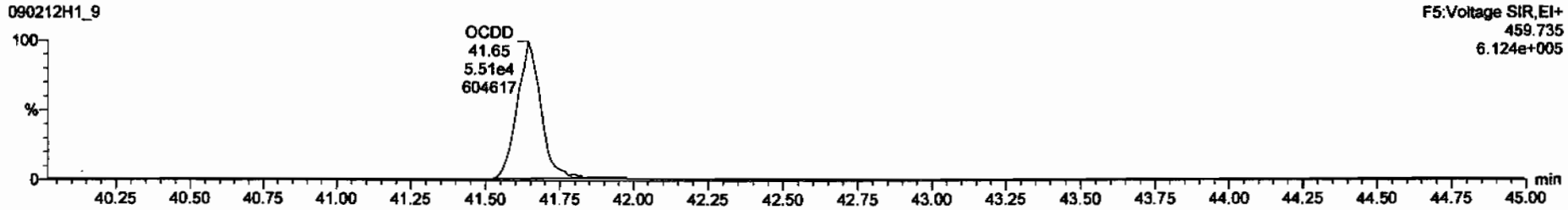

13C-OCDD

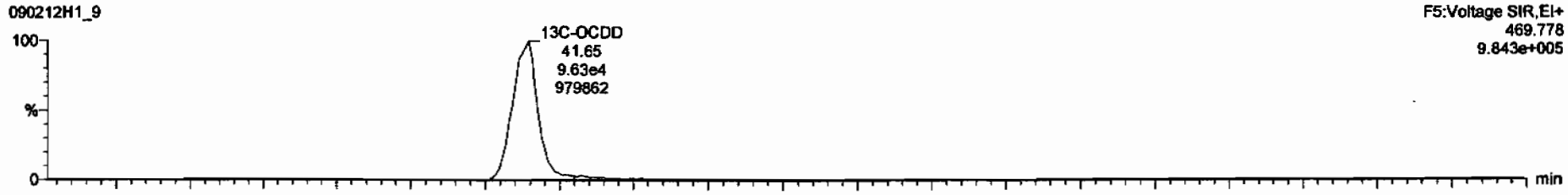

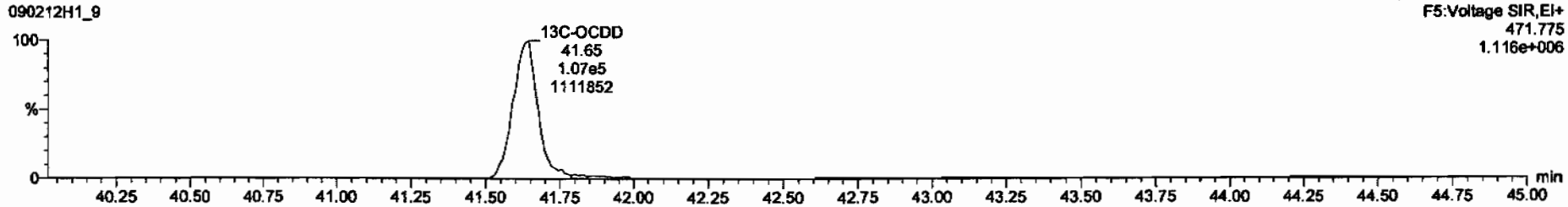

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDF

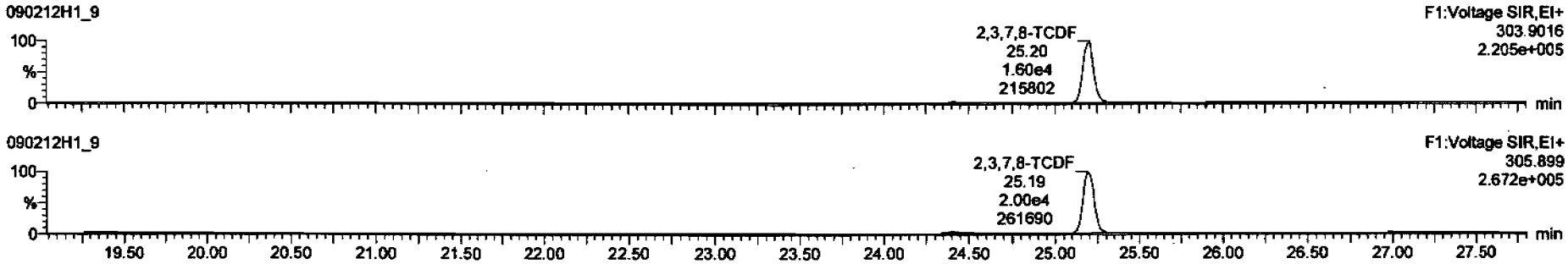

13C-2,3,7,8-TCDF

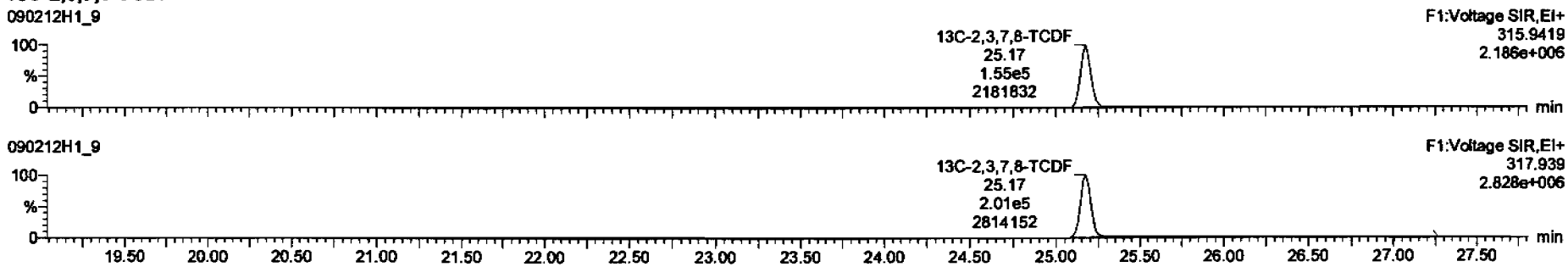

DPE1

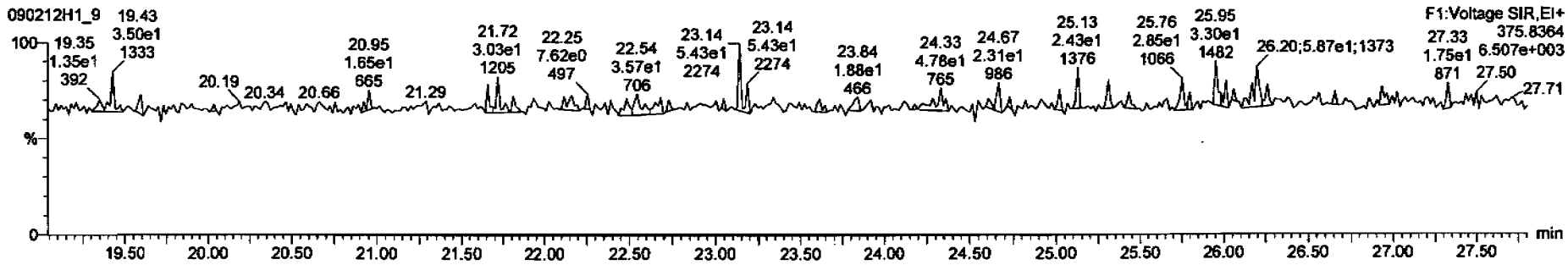

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1st Func. Penta-Furans

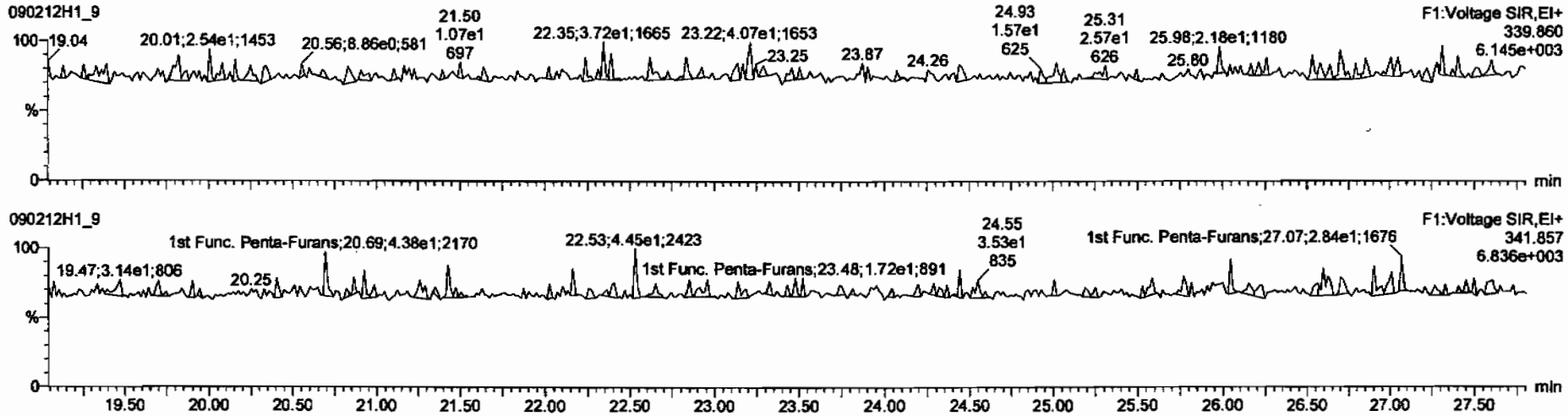

DPE6

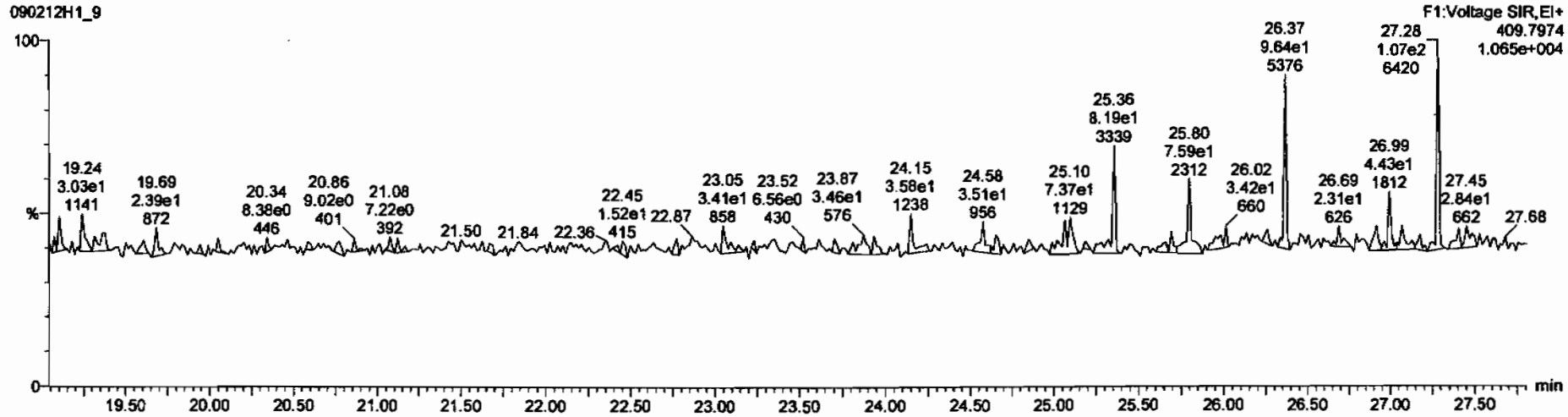

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,7,8-PeCDF

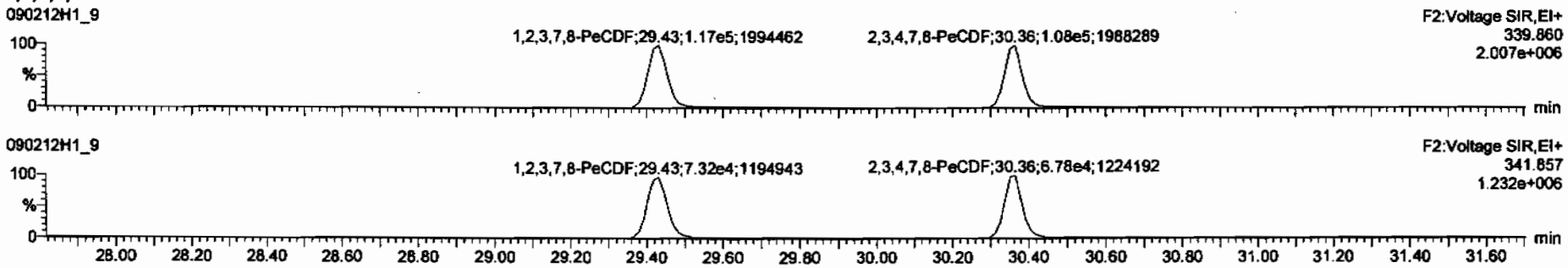

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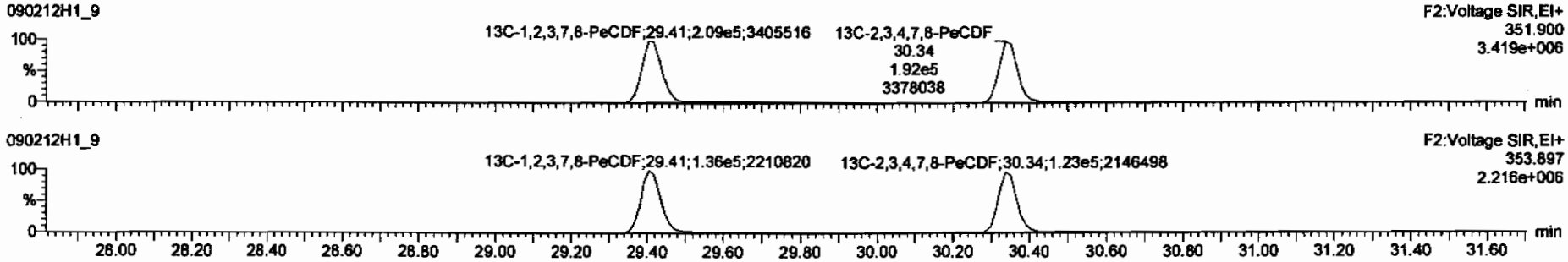

DPE2

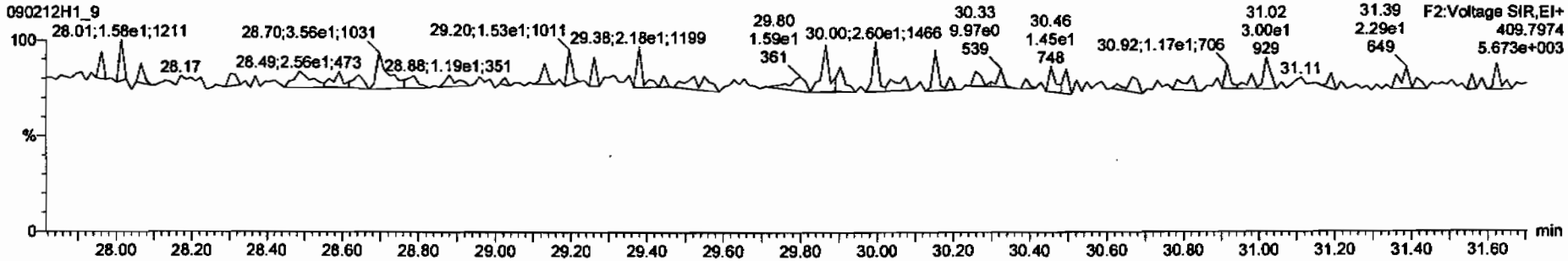

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,7,8-HxCDF

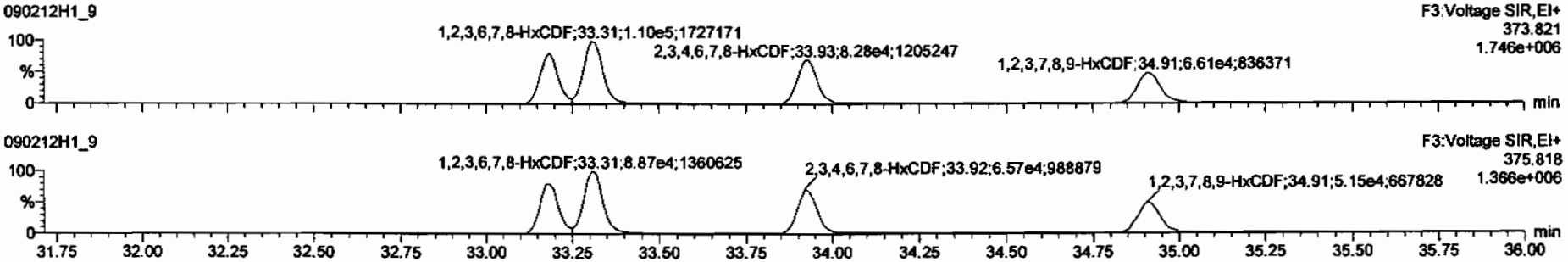

13C-1,2,3,4,7,8-HxCDF

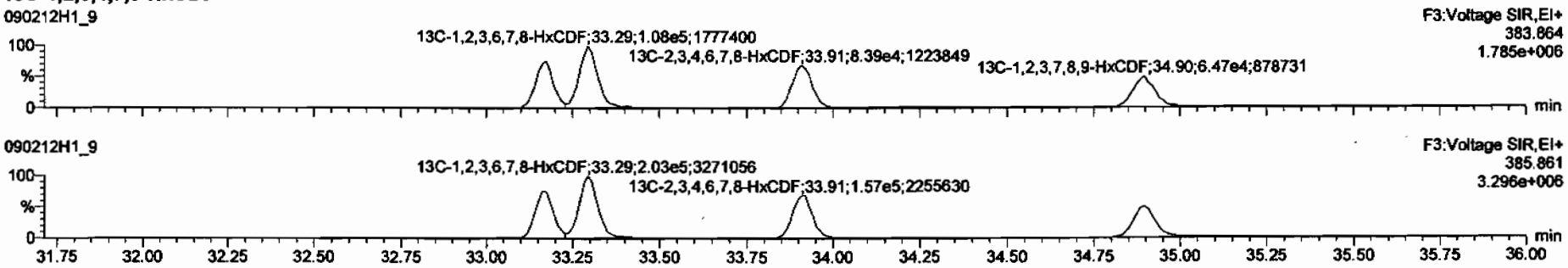

DPE3

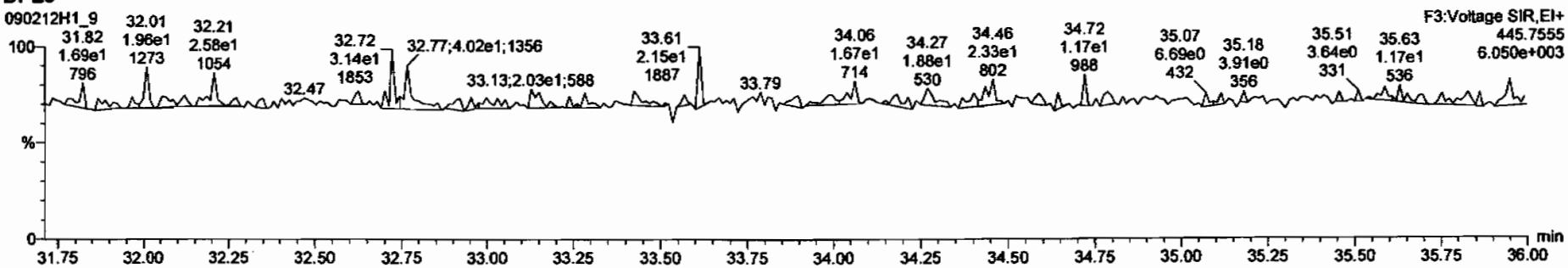

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,6,7,8-HpCDF

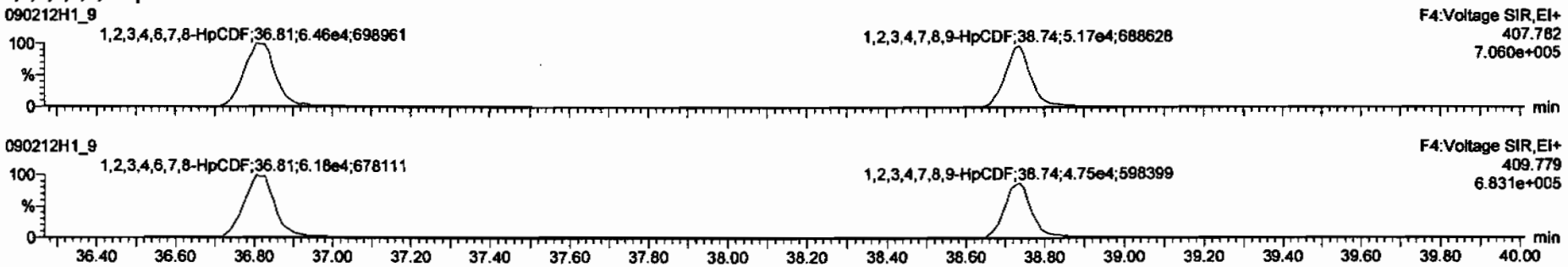

13C-1,2,3,4,6,7,8-HpCDF

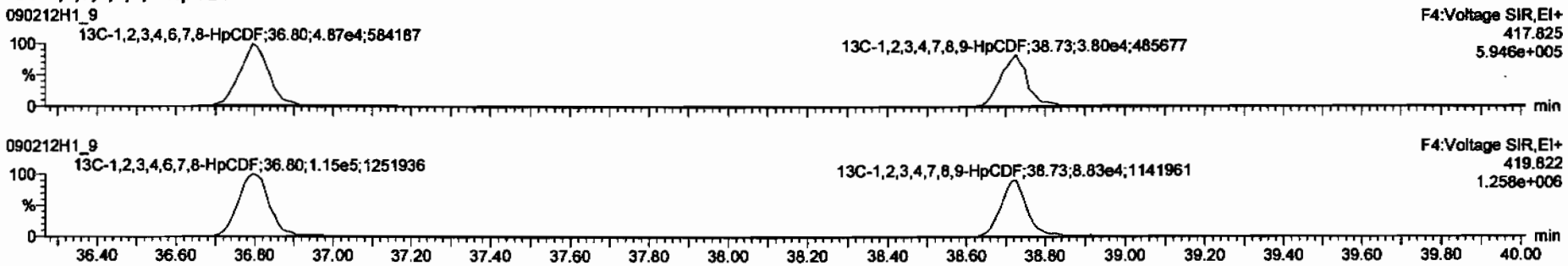

DPE4

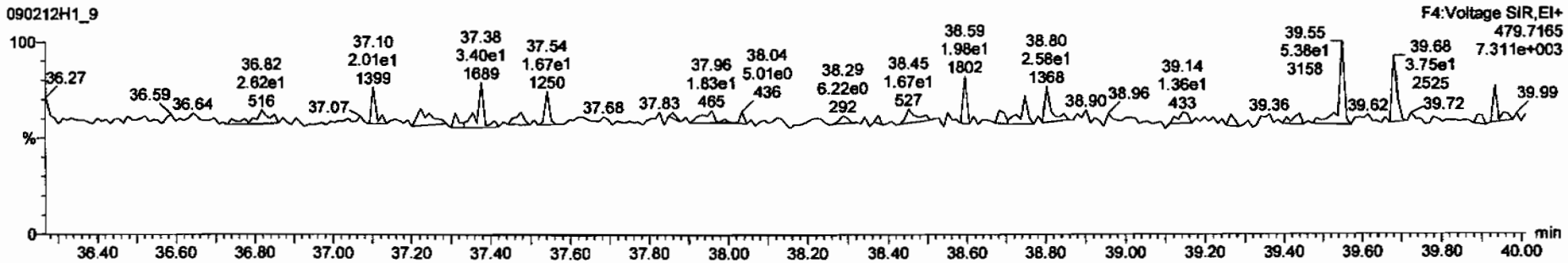

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

OCDF

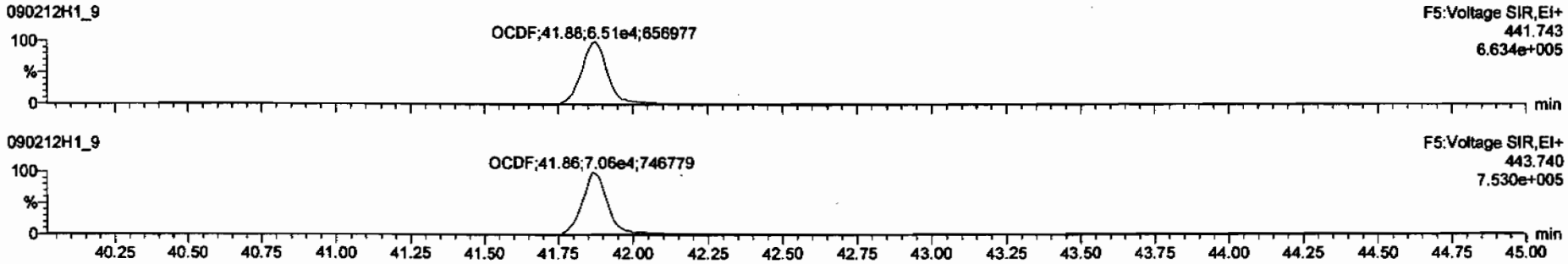

13C-OCDF

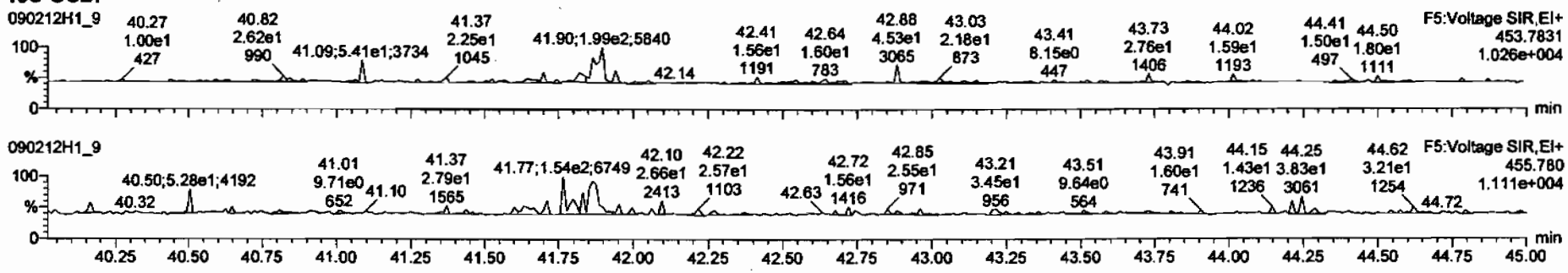

DPE5

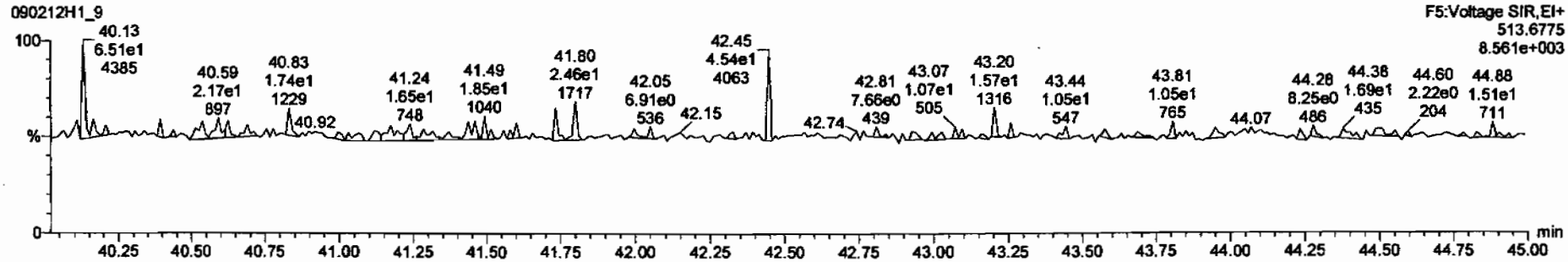

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

PFK1

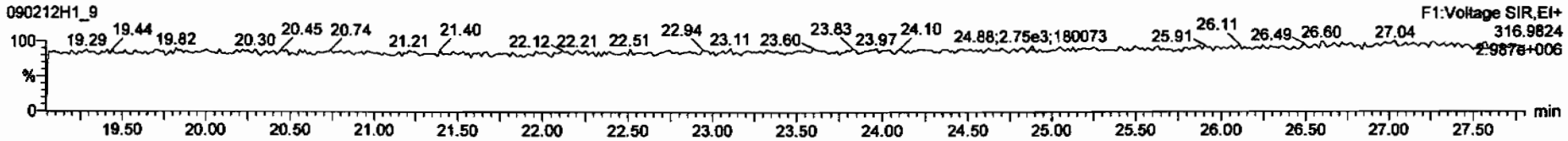

PFK2

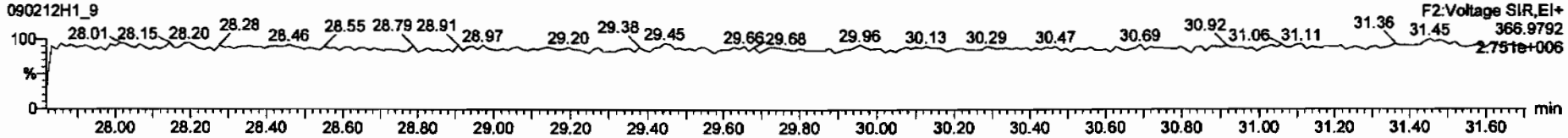

PFK3

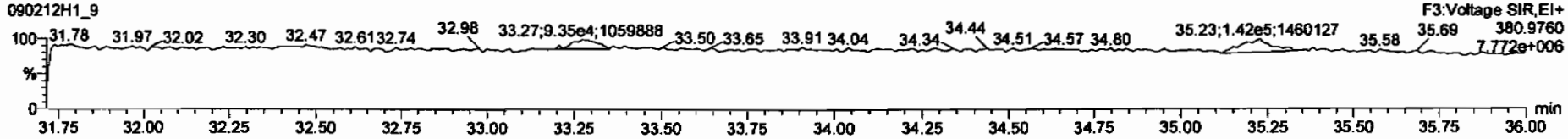

PFK4

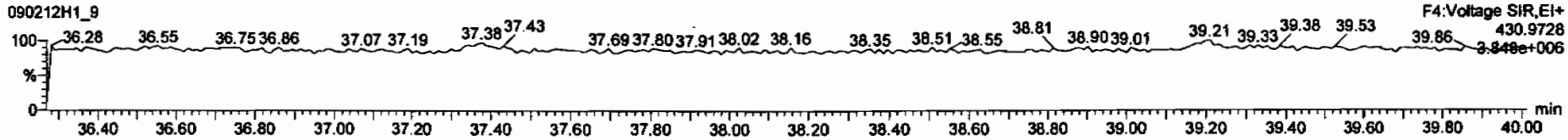

PFK5

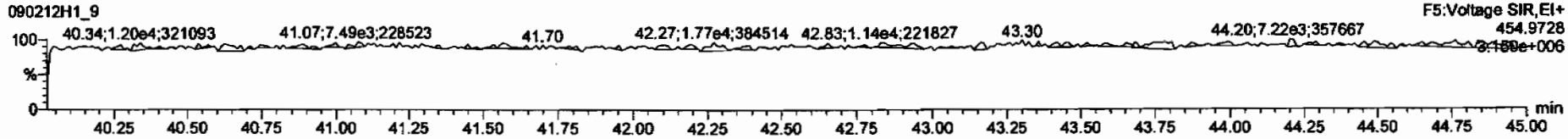

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2455

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2455

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	EPA:901.1	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	HASL-300:ISOU	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:6010B	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:6850	1	CAMO-09-10479	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2455

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6850	1	CAMO-09-10480	R	6/22/2009	
	SW-846:8015M_EXTRACTABLE	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:8082	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:8260B	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:8270C	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:9012A	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:9045C	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2455

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2455

REQUEST NUMBER: 09-2455

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
~~CAMO-09-10480~~	~~1~~	~~SEPTUM AMBER GLASS~~	~~8260B~~	~~Ice~~	~~R~~
CAMO-09-10480	1	GLASS	8270C+8082+TPH-DRO	Ice	R
CAMO-09-10480	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-10480	1	POLY	METALS-GEL	Ice	R
CAMO-09-10480	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10479	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10479	1	GLASS	8270C+8082+TPH-DRO	Ice	R
CAMO-09-10479	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-10479	1	POLY	METALS-GEL	Ice	R
CAMO-09-10479	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		**Date**	**Time**	**Received By:**		**Date**	**Time**
		6/24/09	1700				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		**Date**	**Time**	**Remarks:**
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 886 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-049(b)-00; Mortandad Cyn.

SAMPLE ID: CAMO-09-10479

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	OBT4	OK
TIME COLLECTED (HH:MM)		1000	SUB-MEDIA:	UA	
PRS ID:	03-049(b)-00	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605528	MO-605028	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	J.B 6/22/09 8.0 BH	FIELD PREP:	NA	
TOP DEPTH:	0	8.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	9.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	15 day					
1	~~Regular~~ NSG 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082+TPH-DRO	500 ML GLASS	Ice	Y	
~~2~~		~~8290~~	~~125 ML GLASS~~	Ice J.B 6/22/09	N	
	16 day					
1	~~Regular~~ NSG 6-23-09	GAMMA SPEC+ISOU	500 ML POLY	None	Y	
1		METALS-GEL	125 ML POLY	Ice	J.B 6/22/09	
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice	J	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown / Tan, indurated, dry tuff.

SAMPLE COMMENTS: Tuff Interface @ 3.0' bgs. Sample collected 5.0' below interface.

LOCATION DESC: 03-049(b)-00-05 (SW) corner of bldg. 35

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 0$ dpm

$\beta/\gamma \leq 450$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) Sherri Sherwood	4:20
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 886 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-049(b)-00; Mortandad Cyn.

SAMPLE ID: CAMO-09-10480

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	OBT4	OK
TIME COLLECTED (HH:MM)		1038	SUB-MEDIA:	UA	
PRS ID:	03-049(b)-00	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605528	MO-605034	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	7.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	8.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA J. Branch 06/22/09 BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 day ~~Regular~~ J.B. 06/23/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082+TPH-DRO	500 ML GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Grey, indurated, dry tuff w/ brown lithic fragments.

SAMPLE COMMENTS: Sample collected 5.0' below Tuff interface.

LOCATION DESC: 03-049(b)-00-10 (W) of bldg. 35.

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 26$ dpm

$\beta/\gamma \leq 42$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Nickolas Gallegos

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) Sherri Sherwood	1620
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10479	ARS Sample ID:	ARS2-09-00073-016
Sample Collection Date:	06/22/09 10:00	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:02

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	CPV	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	43.34	74.68	133.72	74.86	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	61.08	18.64	20.15	20.08		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.07	0.14	0.12	0.14	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	31.55	10.01	1.83	10.06		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	11.96	0.12	11.96	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.19	0.16	0.09	0.16	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.00	-0.03	0.08	-0.03	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	63.35	0.14	63.35	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.65	0.60	0.19	0.60		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	1.08	0.82	0.22	0.83		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	-0.07	67.36	0.19	67.36	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	3.49	2.84	1.22	2.95		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.29	0.19	0.05	0.19		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 0.94

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00073
Client Sample ID: CAMO-09-10480
Sample Collection Date: 06/22/09 10:38
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00073-017
Date Received: 06/23/09 00:00
Report Date: 06/23/09 16:03

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	71.98	87.06	133.66	87.52	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	56.91	16.19	19.08	19.48		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	0.29	0.21	4.48	0.21	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	12.16	0.12	12.16	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.19	0.14	0.10	0.14	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.04	0.09	0.08	0.09	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	12.64	0.14	12.64	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.46	0.50	0.10	0.50		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	1.54	0.87	0.32	0.87		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	1.22	1.05	0.34	1.05		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	0.29	1.69	1.12	1.69	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.17	0.22	0.09	0.22		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.19

Quality Assurance Review

NOTE: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in part or whole requires the written consent of the client

LELAP Certificate # 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2455 VALIDATION DATE: 07/24/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): VOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. The ICV/CCV %Ds were >20% for 1,2-dibromo-3-chhloropropane; dichlorodifluoromethane and dibromochloromethane. The associated sample results were NDs and, thus, were qualified UJ,V7c.

Reviewed by: JEJ Level: 1 Date: 7/27/09

VALIDATOR'S SIGNATURE: Mr. Peter Steves DATE: 07/24/09

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☐	☒	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☐	☒	☐	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☐	☒	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☐	☒	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☐	☒	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☐	☒	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☐	☒	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☒	☐	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357002	Date Received:	06/25/2009 08:45	%Moisture:	9.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10479	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882208	Inst:	VOA6.I	Dilution:	1
Run Date:	07/02/2009 14:59	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/02/2009 13:48	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6r413.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.10	ug/kg	0.376	1.10	UJ,V7c
74-87-3	Chloromethane	U	1.10	ug/kg	0.331	1.10	
75-01-4	Vinyl chloride	U	1.10	ug/kg	0.331	1.10	
74-83-9	Bromomethane	U	1.10	ug/kg	0.331	1.10	
75-00-3	Chloroethane	U	1.10	ug/kg	0.331	1.10	
75-69-4	Trichlorofluoromethane	U	1.10	ug/kg	0.630	1.10	
67-64-1	Acetone	U	5.52	ug/kg	1.83	5.52	
75-35-4	1,1-Dichloroethylene	U	1.10	ug/kg	0.331	1.10	
74-88-4	Iodomethane	U	5.52	ug/kg	1.77	5.52	
75-09-2	Methylene chloride	U	5.52	ug/kg	2.21	5.52	
75-15-0	Carbon disulfide	U	5.52	ug/kg	1.38	5.52	
156-60-5	trans-1,2-Dichloroethylene	U	1.10	ug/kg	0.331	1.10	
75-34-3	1,1-Dichloroethane	U	1.10	ug/kg	0.331	1.10	
78-93-3	2-Butanone	U	5.52	ug/kg	1.66	5.52	
156-59-2	cis-1,2-Dichloroethylene	U	1.10	ug/kg	0.331	1.10	
594-20-7	2,2-Dichloropropane	U	1.10	ug/kg	0.331	1.10	
67-66-3	Chloroform	U	1.10	ug/kg	0.331	1.10	
74-97-5	Bromochloromethane	U	1.10	ug/kg	0.365	1.10	
71-55-6	1,1,1-Trichloroethane	U	1.10	ug/kg	0.331	1.10	
563-58-6	1,1-Dichloropropene	U	1.10	ug/kg	0.331	1.10	
56-23-5	Carbon tetrachloride	U	1.10	ug/kg	0.331	1.10	
107-06-2	1,2-Dichloroethane	U	1.10	ug/kg	0.331	1.10	
71-43-2	Benzene	U	1.10	ug/kg	0.331	1.10	
79-01-6	Trichloroethylene	U	1.10	ug/kg	0.365	1.10	
78-87-5	1,2-Dichloropropane	U	1.10	ug/kg	0.331	1.10	
75-27-4	Bromodichloromethane	U	1.10	ug/kg	0.331	1.10	
74-95-3	Dibromomethane	U	1.10	ug/kg	0.331	1.10	
108-10-1	4-Methyl-2-pentanone	U	5.52	ug/kg	1.38	5.52	
10061-01-5	cis-1,3-Dichloropropylene	U	1.10	ug/kg	0.331	1.10	
108-88-3	Toluene	U	1.10	ug/kg	0.331	1.10	
10061-02-6	trans-1,3-Dichloropropylene	U	1.10	ug/kg	0.331	1.10	
79-00-5	1,1,2-Trichloroethane	U	1.10	ug/kg	0.331	1.10	
591-78-6	2-Hexanone	U	5.52	ug/kg	1.66	5.52	
142-28-9	1,3-Dichloropropane	U	1.10	ug/kg	0.331	1.10	
127-18-4	Tetrachloroethylene	U	1.10	ug/kg	0.331	1.10	
124-48-1	Dibromochloromethane	U	1.10	ug/kg	0.331	1.10	UJ,V7c
106-93-4	1,2-Dibromoethane	U	1.10	ug/kg	0.331	1.10	
108-90-7	Chlorobenzene	U	1.10	ug/kg	0.331	1.10	

P.S. 7/24/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2455**	**Date Collected:**	**06/22/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232357002**	**Date Received:**	**06/25/2009 08:45**	**%Moisture:**	**9.5**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10479**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882208**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/02/2009 14:59**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/02/2009 13:48**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6r413.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.10	ug/kg	0.331	1.10	
179601-23-1	m,p-Xylenes	U	2.21	ug/kg	0.331	2.21	
95-47-6	o-Xylene	U	1.10	ug/kg	0.331	1.10	
100-42-5	Styrene	U	1.10	ug/kg	0.331	1.10	
75-25-2	Bromoform	U	1.10	ug/kg	0.331	1.10	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.10	ug/kg	0.331	1.10	
96-18-4	1,2,3-Trichloropropane	U	1.10	ug/kg	0.331	1.10	
108-86-1	Bromobenzene	U	1.10	ug/kg	0.331	1.10	
103-65-1	n-Propylbenzene	U	1.10	ug/kg	0.331	1.10	
95-49-8	2-Chlorotoluene	U	1.10	ug/kg	0.331	1.10	
98-82-8	Isopropylbenzene	U	1.10	ug/kg	0.331	1.10	
108-67-8	1,3,5-Trimethylbenzene	U	1.10	ug/kg	0.331	1.10	
106-43-4	4-Chlorotoluene	U	1.10	ug/kg	0.331	1.10	
98-06-6	tert-Butylbenzene	U	1.10	ug/kg	0.331	1.10	
95-63-6	1,2,4-Trimethylbenzene	U	1.10	ug/kg	0.331	1.10	
135-98-8	sec-Butylbenzene	U	1.10	ug/kg	0.331	1.10	
99-87-6	4-Isopropyltoluene	U	1.10	ug/kg	0.331	1.10	
541-73-1	1,3-Dichlorobenzene	U	1.10	ug/kg	0.331	1.10	
106-46-7	1,4-Dichlorobenzene	U	1.10	ug/kg	0.331	1.10	
104-51-8	n-Butylbenzene	U	1.10	ug/kg	0.331	1.10	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.10	ug/kg	0.331	1.10	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.52	ug/kg	1.77	5.52	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.10	ug/kg	0.331	1.10	
95-50-1	1,2-Dichlorobenzene	U	1.10	ug/kg	0.331	1.10	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	189	ug/kg		J
	Unknown Siloxane	16.17	112	ug/kg		J

P.S. 7/24/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2455**	**Date Collected:**	**06/22/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232357001**	**Date Received:**	**06/25/2009 08:45**	**%Moisture:**	**11.2**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10480**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882208**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/02/2009 14:31**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/02/2009 13:45**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6r412.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.383	1.13	UJ,V7c
74-87-3	Chloromethane	U	1.13	ug/kg	0.338	1.13	
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.338	1.13	
74-83-9	Bromomethane	U	1.13	ug/kg	0.338	1.13	
75-00-3	Chloroethane	U	1.13	ug/kg	0.338	1.13	
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.642	1.13	
67-64-1	Acetone	U	5.63	ug/kg	1.87	5.63	
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.338	1.13	
74-88-4	Iodomethane	U	5.63	ug/kg	1.80	5.63	
75-09-2	Methylene chloride	U	5.63	ug/kg	2.25	5.63	
75-15-0	Carbon disulfide	U	5.63	ug/kg	1.41	5.63	
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13	
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.338	1.13	
78-93-3	2-Butanone	U	5.63	ug/kg	1.69	5.63	
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13	
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13	
67-66-3	Chloroform	U	1.13	ug/kg	0.338	1.13	
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.372	1.13	
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.338	1.13	
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.338	1.13	
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.338	1.13	
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.338	1.13	
71-43-2	Benzene	U	1.13	ug/kg	0.338	1.13	
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.372	1.13	
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13	
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.338	1.13	
74-95-3	Dibromomethane	U	1.13	ug/kg	0.338	1.13	
108-10-1	4-Methyl-2-pentanone	U	5.63	ug/kg	1.41	5.63	
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13	
108-88-3	Toluene	U	1.13	ug/kg	0.338	1.13	
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13	
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.338	1.13	
591-78-6	2-Hexanone	U	5.63	ug/kg	1.69	5.63	
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.338	1.13	
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.338	1.13	
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.338	1.13	UJ,V7c
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.338	1.13	
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.338	1.13	

P.S. 7/24/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2455**	**Date Collected:**	**06/22/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232357001**	**Date Received:**	**06/25/2009 08:45**	**%Moisture:**	**11.2**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10480**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882208**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/02/2009 14:31**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/02/2009 13:45**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6r412.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.338	1.13	
179601-23-1	m,p-Xylenes	U	2.25	ug/kg	0.338	2.25	
95-47-6	o-Xylene	U	1.13	ug/kg	0.338	1.13	
100-42-5	Styrene	U	1.13	ug/kg	0.338	1.13	
75-25-2	Bromoform	U	1.13	ug/kg	0.338	1.13	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13	
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.338	1.13	
108-86-1	Bromobenzene	U	1.13	ug/kg	0.338	1.13	
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.338	1.13	
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.338	1.13	
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.338	1.13	
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13	
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.338	1.13	
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.338	1.13	
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13	
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.338	1.13	
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.338	1.13	
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13	
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13	
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.338	1.13	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.338	1.13	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.63	ug/kg	1.80	5.63	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13	
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Siloxane	14.24	267	ug/kg		J
	Unknown Siloxane	16.17	69.3	ug/kg		J

P.S. 7/24/09

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2455 VALIDATION DATE: 07/24/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): SVOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. For the ICAL associated with sample CAMO-09-10479, the r^2 values were <0.995 for 4-chloroaniline; 2,4-dinitrophenol and hexachlorocyclopentadiene. The associated sample results were NDs and, thus, were qualified UJ,SV7a.
2. For the ICVs associated with both samples, the %Ds were >20% for benzoic acid and 2-methyl-4,6-dinitrophenol. For the CCV associated with sample -10480, the %Ds were >20% for n-methyl-n-nitrosomethylamine and 4-nitrophenol. Also, for the CCV associated with sample -10479, the %Ds were >20% for benzoic acid; 2-methyl-4,6-dinitrophenol; hexachlorocyclopentadiene and 2,4-dinitrophenol. The associated sample results were NDs and, thus, were qualified UJ,SV7c.
3. For the LCS associated with sample -10480, the %R was < the laboratory LAL but ≥10% for benzoic acid. The associated sample result was an ND and, thus, was qualified UJ,SV12a. Also, for the LCS associated with sample -

DATA VALIDATION COVER SHEET

5115-1

Records Use only

Los Alamos NATIONAL LABORATORY

Data Validation Cover Sheet

10479, the %R was > the laboratory UAL for 4-nitroaniline. The associated sample result was an ND and, thus, was not qualified.

4. The MS/MSD RPDs for 4-nitrophenol and benzyl alcohol were outside the laboratory acceptance limit. Also, the parent sample for the MS/MSD was from another LANL RN and the raw data for the parent sample were not included in the data package. The analysis of an MS/MSD is not required for SVOCs and, thus, no sample results were qualified.

Reviewed by: JEJ Level: 1 Date: 7/27/09

VALIDATOR'S SIGNATURE: Mr. Peter Steves DATE: 07/24/09

Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☒	☐	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☒	☐	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☒	☐	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☐	☒	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☐	☒	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 **Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2455**	**Date Collected:**	**06/22/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232357002**	**Date Received:**	**06/25/2009 08:45**	**%Moisture:**	**9.5**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10479**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881291**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 11:47**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/29/2009 23:29**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s5f3013.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	368	ug/kg	73.6	368	
108-95-2	Phenol	U	368	ug/kg	73.6	368	
95-57-8	2-Chlorophenol	U	368	ug/kg	73.6	368	
106-46-7	1,4-Dichlorobenzene	U	368	ug/kg	73.6	368	
621-64-7	N-Nitrosodipropylamine	U	368	ug/kg	73.6	368	
59-50-7	4-Chloro-3-methylphenol	U	368	ug/kg	36.8	368	
83-32-9	Acenaphthene	U	36.8	ug/kg	12.3	36.8	
121-14-2	2,4-Dinitrotoluene	U	368	ug/kg	36.8	368	
100-02-7	4-Nitrophenol	U	368	ug/kg	73.6	368	
87-86-5	Pentachlorophenol	U	368	ug/kg	73.6	368	
129-00-0	Pyrene	U	36.8	ug/kg	11.6	36.8	
110-86-1	Pyridine	U	368	ug/kg	73.6	368	
62-53-3	Aniline	U	368	ug/kg	129	368	
111-44-4	bis(2-Chloroethyl) ether	U	368	ug/kg	73.6	368	
541-73-1	1,3-Dichlorobenzene	U	368	ug/kg	73.6	368	
100-51-6	Benzyl alcohol	U	368	ug/kg	110	368	
95-50-1	1,2-Dichlorobenzene	U	368	ug/kg	73.6	368	
108-60-1	bis(2-Chloroisopropyl)ether	U	368	ug/kg	73.6	368	
95-48-7	o-Cresol	U	368	ug/kg	73.6	368	
65794-96-9	m,p-Cresols	U	368	ug/kg	147	368	
67-72-1	Hexachloroethane	U	368	ug/kg	73.6	368	
98-95-3	Nitrobenzene	U	368	ug/kg	73.6	368	
78-59-1	Isophorone	U	368	ug/kg	73.6	368	
88-75-5	2-Nitrophenol	U	368	ug/kg	36.8	368	
105-67-9	2,4-Dimethylphenol	U	368	ug/kg	73.6	368	
111-91-1	bis(2-Chloroethoxy)methane	U	368	ug/kg	73.6	368	
120-83-2	2,4-Dichlorophenol	U	368	ug/kg	73.6	368	
65-85-0	Benzoic acid	U	736	ug/kg	184	736	UJ,SV7c
91-20-3	Naphthalene	U	36.8	ug/kg	11.0	36.8	
106-47-8	4-Chloroaniline	U	368	ug/kg	73.6	368	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	368	ug/kg	73.6	368	
91-57-6	2-Methylnaphthalene	U	36.8	ug/kg	7.36	36.8	
77-47-4	Hexachlorocyclopentadiene	U	368	ug/kg	73.6	368	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	368	ug/kg	73.6	368	
95-95-4	2,4,5-Trichlorophenol	U	368	ug/kg	73.6	368	
91-58-7	2-Chloronaphthalene	U	36.8	ug/kg	12.9	36.8	
88-74-4	2-Nitroaniline	U	368	ug/kg	73.6	368	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	368	ug/kg	73.6	368	

P.S. 7/24/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2455**	**Date Collected:**	**06/22/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232357002**	**Date Received:**	**06/25/2009 08:45**	**%Moisture:**	**9.5**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10479**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881291**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**06/30/2009 11:47**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/29/2009 23:29**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s5f3013.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	368	ug/kg	73.6	368	
606-20-2	2,6-Dinitrotoluene	U	368	ug/kg	36.8	368	
208-96-8	Acenaphthylene	U	36.8	ug/kg	11.0	36.8	
51-28-5	2,4-Dinitrophenol	U	736	ug/kg	140	736	UJ,SV7a
132-64-9	Dibenzofuran	U	368	ug/kg	73.6	368	
84-66-2	Diethylphthalate	U	368	ug/kg	73.6	368	
86-73-7	Fluorene	U	36.8	ug/kg	11.0	36.8	
7005-72-3	4-Chlorophenylphenylether	U	368	ug/kg	36.8	368	
534-52-1	2-Methyl-4,6-dinitrophenol	U	368	ug/kg	73.6	368	UJ,SV7c
100-01-6	4-Nitroaniline	U	368	ug/kg	73.6	368	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	368	ug/kg	73.6	368	
122-66-7	Azobenzene	U	368	ug/kg	73.6	368	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	368	ug/kg	36.8	368	
118-74-1	Hexachlorobenzene	U	368	ug/kg	73.6	368	
85-01-8	Phenanthrene	U	36.8	ug/kg	11.0	36.8	
120-12-7	Anthracene	U	36.8	ug/kg	7.36	36.8	
84-74-2	Di-n-butylphthalate	U	368	ug/kg	36.8	368	
206-44-0	Fluoranthene	U	36.8	ug/kg	11.0	36.8	
85-68-7	Butylbenzylphthalate	U	368	ug/kg	73.6	368	
56-55-3	Benzo(a)anthracene	U	36.8	ug/kg	11.0	36.8	
91-94-1	3,3'-Dichlorobenzidine	U	368	ug/kg	110	368	
218-01-9	Chrysene	U	36.8	ug/kg	11.0	36.8	
117-81-7	bis(2-Ethylhexyl)phthalate	U	368	ug/kg	73.6	368	
117-84-0	Di-n-octylphthalate	U	368	ug/kg	73.6	368	
205-99-2	Benzo(b)fluoranthene	U	36.8	ug/kg	11.0	36.8	
207-08-9	Benzo(k)fluoranthene	U	36.8	ug/kg	11.0	36.8	
50-32-8	Benzo(a)pyrene	U	36.8	ug/kg	11.0	36.8	
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.8	ug/kg	11.0	36.8	
53-70-3	Dibenzo(a,h)anthracene	U	36.8	ug/kg	11.0	36.8	
191-24-2	Benzo(ghi)perylene	U	36.8	ug/kg	11.0	36.8	
120-82-1	1,2,4-Trichlorobenzene	U	368	ug/kg	73.6	368	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Aldol Condensate	3.04	263	ug/kg		JA

P.S. 7/24/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10480	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 19:50	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s1f2814.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	375	ug/kg	75.1	375	UJ,SV7c
108-95-2	Phenol	U	375	ug/kg	75.1	375	
95-57-8	2-Chlorophenol	U	375	ug/kg	75.1	375	
106-46-7	1,4-Dichlorobenzene	U	375	ug/kg	75.1	375	
621-64-7	N-Nitrosodipropylamine	U	375	ug/kg	75.1	375	
59-50-7	4-Chloro-3-methylphenol	U	375	ug/kg	37.5	375	
83-32-9	Acenaphthene	U	37.5	ug/kg	12.5	37.5	
121-14-2	2,4-Dinitrotoluene	U	375	ug/kg	37.5	375	
100-02-7	4-Nitrophenol	U	375	ug/kg	75.1	375	UJ,SV7c
87-86-5	Pentachlorophenol	U	375	ug/kg	75.1	375	
129-00-0	Pyrene	U	37.5	ug/kg	11.8	37.5	
110-86-1	Pyridine	U	375	ug/kg	75.1	375	
62-53-3	Aniline	U	375	ug/kg	131	375	
111-44-4	bis(2-Chloroethyl) ether	U	375	ug/kg	75.1	375	
541-73-1	1,3-Dichlorobenzene	U	375	ug/kg	75.1	375	
100-51-6	Benzyl alcohol	U	375	ug/kg	113	375	
95-50-1	1,2-Dichlorobenzene	U	375	ug/kg	75.1	375	
108-60-1	bis(2-Chloroisopropyl)ether	U	375	ug/kg	75.1	375	
95-48-7	o-Cresol	U	375	ug/kg	75.1	375	
65794-96-9	m,p-Cresols	U	375	ug/kg	150	375	
67-72-1	Hexachloroethane	U	375	ug/kg	75.1	375	
98-95-3	Nitrobenzene	U	375	ug/kg	75.1	375	
78-59-1	Isophorone	U	375	ug/kg	75.1	375	
88-75-5	2-Nitrophenol	U	375	ug/kg	37.5	375	
105-67-9	2,4-Dimethylphenol	U	375	ug/kg	75.1	375	
111-91-1	bis(2-Chloroethoxy)methane	U	375	ug/kg	75.1	375	
120-83-2	2,4-Dichlorophenol	U	375	ug/kg	75.1	375	
65-85-0	Benzoic acid	U	751	ug/kg	188	751	UJ,SV7c
91-20-3	Naphthalene	U	37.5	ug/kg	11.3	37.5	
106-47-8	4-Chloroaniline	U	375	ug/kg	75.1	375	
87-68-3	Hexachlorobutadiene	U	375	ug/kg	75.1	375	
91-57-6	2-Methylnaphthalene	U	37.5	ug/kg	7.51	37.5	
77-47-4	Hexachlorocyclopentadiene	U	375	ug/kg	75.1	375	
88-06-2	2,4,6-Trichlorophenol	U	375	ug/kg	75.1	375	
95-95-4	2,4,5-Trichlorophenol	U	375	ug/kg	75.1	375	
91-58-7	2-Chloronaphthalene	U	37.5	ug/kg	13.1	37.5	
88-74-4	2-Nitroaniline	U	375	ug/kg	75.1	375	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	375	ug/kg	75.1	375	

P.S. 7/24/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10480	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 19:50	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s1f2814.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	375	ug/kg	75.1	375	
606-20-2	2,6-Dinitrotoluene	U	375	ug/kg	37.5	375	
208-96-8	Acenaphthylene	U	37.5	ug/kg	11.3	37.5	
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751	
132-64-9	Dibenzofuran	U	375	ug/kg	75.1	375	
84-66-2	Diethylphthalate	U	375	ug/kg	75.1	375	
86-73-7	Fluorene	U	37.5	ug/kg	11.3	37.5	
7005-72-3	4-Chlorophenylphenylether	U	375	ug/kg	37.5	375	
534-52-1	2-Methyl-4,6-dinitrophenol	U	375	ug/kg	75.1	375	UJ,SV7c
100-01-6	4-Nitroaniline	U	375	ug/kg	75.1	375	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	375	ug/kg	75.1	375	
122-66-7	Azobenzene	U	375	ug/kg	75.1	375	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	375	ug/kg	37.5	375	
118-74-1	Hexachlorobenzene	U	375	ug/kg	75.1	375	
85-01-8	Phenanthrene	U	37.5	ug/kg	11.3	37.5	
120-12-7	Anthracene	U	37.5	ug/kg	7.51	37.5	
84-74-2	Di-n-butylphthalate	U	375	ug/kg	37.5	375	
206-44-0	Fluoranthene	U	37.5	ug/kg	11.3	37.5	
85-68-7	Butylbenzylphthalate	U	375	ug/kg	75.1	375	
56-55-3	Benzo(a)anthracene	U	37.5	ug/kg	11.3	37.5	
91-94-1	3,3'-Dichlorobenzidine	U	375	ug/kg	113	375	
218-01-9	Chrysene	U	37.5	ug/kg	11.3	37.5	
117-81-7	bis(2-Ethylhexyl)phthalate	U	375	ug/kg	75.1	375	
117-84-0	Di-n-octylphthalate	U	375	ug/kg	75.1	375	
205-99-2	Benzo(b)fluoranthene	U	37.5	ug/kg	11.3	37.5	
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.3	37.5	
50-32-8	Benzo(a)pyrene	U	37.5	ug/kg	11.3	37.5	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.5	ug/kg	11.3	37.5	
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.3	37.5	
191-24-2	Benzo(ghi)perylene	U	37.5	ug/kg	11.3	37.5	
120-82-1	1,2,4-Trichlorobenzene	U	375	ug/kg	75.1	375	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Aldol Condensate	2.91	323	ug/kg		JA

P.S. 7/24/09

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2455 VALIDATION DATE: 07/24/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. The parent sample for the MS/MSD was from another LANL RN and the raw data for the parent sample were not included in the data package. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/27/09

VALIDATOR'S SIGNATURE: Mr. Peter Steves DATE: 07/24/09

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☒	☐	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☒	☐	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☒	☐	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☒	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10480

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2455

GEL Sample ID: 232357001

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.563	2.25	0.563	ug/kg	U	1	01-JUL-09 19:13	per0701060a
	Perchlorate-O(18)			5.39	ug/kg		1	01-JUL-09 19:13	per0701060a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

P.S. 7/24/09

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Perchlorate Analysis Data Sheet

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10479

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2455

GEL Sample ID: 232357002

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 90.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	0.754	ug/kg	J	1	01-JUL-09 19:21	per0701061a
	Perchlorate-O(18)			5.20	ug/kg		1	01-JUL-09 19:21	per0701061a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

P.S. 7/24/09

DATA VALIDATION COVER SHEET

5130-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2455 VALIDATION DATE: 07/24/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☒ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not included in the data package. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/27/09

VALIDATOR'S SIGNATURE: Mr. Peter Steves DATE: 07/24/09

TPH GRO AND DRO ANALYTICAL DATA VALIDATION CHECKLIST

5130-2

TPH GRO and DRO Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The retention time criteria were not met.	R, DR0 or GR0	R, DR0 or GR0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DR0b	R, GR0b
☐	☒	☐	3. The surrogate is less than 10%R. Follow external laboratory limits.	R, DR3 or GR3	J-, DR3 or GR3
☐	☒	☐	4. The surrogate is less than the Lower Acceptance Limit, but greater than or equal to 10%R. Follow external laboratory limits.	UJ, DR3a or GR3a	J-, DR3a or GR3a
☐	☒	☐	5. The surrogate %R value is greater than the Upper Acceptance Limit. Follow external laboratory limits.	N/A	J+, DR3b or GR3b
☐	☒	☐	6. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DR3d or GR3d	R, DR3d or GR3d
☐	☒	☐	7. The sample result is less than or equal to 5 times the concentration of the related analyte in the method blank.	U, DR4 or GR4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank, but was greater than 5x.	N/A	J+, DR4a or GR4a
☐	☐	☒	9. The sample result is less than or equal to 5 times the concentration of the related analyte in the trip blank, rinsate blank or equipment blank.	U, DR4d or GR4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DR4e or GR4e	R, DR4e or GR4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, DR7 or GR7	J, DR7 or GR7

TPH GRO AND DRO ANALYTICAL DATA VALIDATION CHECKLIST

5130-2 TPH GRO and DRO Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is less than 0.995.	UJ, DR7a or GR7a	J, DR7a or GR7a
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method specific limits.	UJ, DR7c or GR7c	J, DR7c or GR7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DR7d or GR7d	J, DR7d or GR7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DR7f or GR7f	R, DR7f or GR7f
☐	☒	☐	16. The holding time was greater than 1 and less than or equal to 2 times the applicable holding time requirement.	UJ, DR9 or GR9	J-, DR9 or GR9
☐	☒	☐	17. The holding time was greater than 2 times the applicable holding time requirement.	R, DR9a or GR9a	J-, DR9a or GR9a
☐	☒	☐	18. The LCS percent recovery was less than 10%. Follow the external laboratory limits.	R, DR12 or GR12	J-, DR12 or GR12
☐	☒	☐	19. The LCS percent recovery was less than the Lower Acceptance Limit, but greater than 10%. Follow the external laboratory limits.	UJ, DR12a or GR12a	J-, DR12a or GR12a
☐	☒	☐	20. The LCS percent recovery was greater than the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DR12b or GR12b
☐	☒	☐	21. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or the external laboratory for information.	R, DR12c or GR12c	R, DR12c or GR12c
☐	☒	☐	22. The MS/MSD percent recovery was less than 10%.	R, DR12d or GR12d	R, DR12d or Gr12d
☐	☒	☐	23. The MS/MSD percent recovery was greater than 10%, but less than 70%.	UJ, DR12e or GR12e	J, DR12e or GR12e

TPH GRO AND DRO ANALYTICAL DATA VALIDATION CHECKLIST	
5130-2 TPH GRO and DRO Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The MS/MSD percent recovery was greater than 70%.	N/A	J+, DR12f or GR12f
☐	☒	☐	25. The MS/MSD relative percent difference was greater than 30%.	UJ, DR12g or GR12g	J, DR12g or GR12g
☐	☒	☐	26. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference. (Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.)	UJ, R, DR15 or GR15	R, DR15 or GR15
☐	☒	☐	27. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, DR19 or GR19	J, R, DR19 or GR19
☐	☒	☐	28. Duplicate, dilution, or reanalysis.	UJ, DR88 or GR88	J, DR88 or GR88

Flame Ionization Detector
Certificate of Analysis
Sample Summary

SDG Number:	09–2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357002	Date Received:	06/25/2009 08:45	%Moisture:	9.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO–09–10479	Method:	SW846 8015A/B SVOC	SOP Ref:	GL–OA–E–003
Batch ID:	880758	Inst:	FID7.I	Dilution:	1
Run Date:	06/30/2009 15:59	Analyst:	KXR2	Inj. Vol:	1 uL
Prep Date:	06/29/2009 16:42	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	010f1001.d	Column:	DB–5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
DRO	Diesel Range Organics	U	3.68	mg/kg	1.21	3.68

P.S. 7/24/09

Flame Ionization Detector
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357001	Date Received:	06/25/2009 08:45	%Moisture:	11.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10480	Method:	SW846 8015A/B SVOC	SOP Ref:	GL-OA-E-003
Batch ID:	880758	Inst:	FID7.I	Dilution:	1
Run Date:	06/30/2009 14:03	Analyst:	KXR2	Inj. Vol:	1 uL
Prep Date:	06/29/2009 16:42	Aliquot:	30.13 g	Final Volume:	1 mL
Data File:	007f0701.d	Column:	DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
DRO	Diesel Range Organics	U	3.74	mg/kg	1.23	3.74

P.S. 7/24/09

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2455 VALIDATION DATE: 07/24/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☒ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE): PCBs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. The parent sample for the MS/MSD was from another LANL RN and the raw data for the parent sample were not included in the data package. The analysis of an MS/MSD is not required for PCBs and, thus, no sample results were qualified.

Reviewed by: JEJ Level: 1 Date: 7/27/09

VALIDATOR'S SIGNATURE: Mr. Peter Steves	DATE: 07/24/09
Form 5116-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, P9	J-, P9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, P9b	R, P9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, P7	J, P7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, P7a	J, P7a
☐	☒	☐	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, P7d	J, P7d
☐	☐	☒	8. The multicomponent standard was not analyzed within 72 hours of the initial analysis.	R, P7e	J, P7e
☐	☒	☐	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
☐	☐	☒	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	11. The breakdown criteria have been exceeded. This can cause high bias in the reported results and potential false positive results for the breakdown products Endrin ketone, Endrin aldehyde, DDD, and DDE.	UJ, P13a	J+, P13a
☐	☐	☒	12. The breakdown documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P13b	R, P13b
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, P4	N/A
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X.	N/A	J, P4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	UJ, P4b	N/A
☐	☐	☒	16. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, P4d	N/A
☐	☒	☐	17. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P4e	R, P4e
☐	☒	☐	18. The analyte RT shifted by more than 0.05 minutes from the mid-level standard of the initial calibration.	R, P0	J, P0
☐	☒	☐	19. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P0b	R, P0b
☐	☒	☐	20. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, P3	J-, P3

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, P3a	J-, P3a
☐	☒	☐	22. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P3b
☐	☒	☐	23. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, P3c	J, P3c
☐	☒	☐	24. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P3d	R, P3d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, P12	J-, P12
☐	☒	☐	26. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, P12a	J-, P12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P12c	R, P12c
☐	☐	☒	29. The analyte was not confirmed on a second dissimilar column.	N/A	R, P8
☐	☐	☒	30. The second dissimilar column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P8a	R, P8a
☐	☒	☐	31. Duplicate, Dilution, or reanalysis.	UJ, P88	J, P88

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2 Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, P15	R, P15
☒	☐	☐	33. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, P19	J, R, P19

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	9.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10479	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 20:30	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30.14 g	**Final Volume:**	1 mL
Data File:	041f4101.d	**Column:**	1 CLP1	**Level:**	LOW
	041b4101.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.66	ug/kg	1.22	3.66	1
11104-28-2	Aroclor-1221	U	3.66	ug/kg	1.22	3.66	1
11141-16-5	Aroclor-1232	U	3.66	ug/kg	1.22	3.66	1
53469-21-9	Aroclor-1242	U	3.66	ug/kg	1.22	3.66	1
12672-29-6	Aroclor-1248	U	3.66	ug/kg	1.22	3.66	1
11097-69-1	Aroclor-1254	U	3.66	ug/kg	1.22	3.66	1
11096-82-5	Aroclor-1260	U	3.66	ug/kg	1.22	3.66	1

P.S. 7/24/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10480	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 20:14	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	040f4001.d	**Column:**	1 CLP1	**Level:**	LOW
	040b4001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.75	ug/kg	1.25	3.75	1
11104-28-2	Aroclor-1221	U	3.75	ug/kg	1.25	3.75	1
11141-16-5	Aroclor-1232	U	3.75	ug/kg	1.25	3.75	1
53469-21-9	Aroclor-1242	U	3.75	ug/kg	1.25	3.75	1
12672-29-6	Aroclor-1248	U	3.75	ug/kg	1.25	3.75	1
11097-69-1	Aroclor-1254	U	3.75	ug/kg	1.25	3.75	1
11096-82-5	Aroclor-1260	U	3.75	ug/kg	1.25	3.75	1

P.S. 7/24/09

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2455 VALIDATION DATE: 07/26/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☒ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB, Fe and Cu were detected. The Cu sample results were detects ≤5X the MB concentration and, thus, were qualified U,I4. The Fe sample results were detects >50X the MB concentration and, thus, were not qualified, based on professional judgment.
2. In the ICB, As was detected. The associated result for sample CAMO-09-10479 was a detect ≤5X the ICB concentration and, thus, was qualified U,I4b. The associated result for sample -10480 was a detect >5X the ICB concentration and, thus, was not qualified.
3. In the FR blank, sample -10482 located in RN 09-2435, which was associated with both samples from this RN, Mn, K, Na and Zn were detected. All associated sample results were detects ≥5X the FR blank concentrations and, thus, were not qualified.
4. The MS %Rs were < the laboratory LAL but ≥10% for Ca, As, Se and Tl. The As result for sample -10479 was

DATA VALIDATION COVER SHEET

5118-1

Records Use only

Data Validation Cover Sheet

Los Alamos NATIONAL LABORATORY EST. 1943

qualified ND and, thus, was qualified UJ,I6a. All other associated sample results were detects and, thus, were qualified J-,I6a. Also, the MS %Rs for Fe and Mn were >10%. However, the associated parent sample concentrations were >4X the spike concentrations. Thus, the associated sample results were not qualified, based on professional judgment.

5. The RPD between the duplicate and its parent sample for Ni was >35%, and the duplicate and parent sample results were ≥5X the PQL. The associated sample results were detects and, thus, were qualified J,I10a.
6. Results > the MDLs but < the PQLs were "J" flagged by the laboratory and, thus, were not further qualified J,I1.

Reviewed by: JEJ Level: 1 Date: 7/27/09

VALIDATOR'S SIGNATURE: Mr. Peter Steves DATE: 07/26/09

Form 5118-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☒	☐	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☒	☐	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☒	☐	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☐	☒	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☒	☐	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2455 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232357001 **BASIS:** Dry Weight **DATE COLLECTED** 22-JUN-09

CLIENT ID: CAMO-09-10480 **LEVEL:** Low **DATE RECEIVED** 25-JUN-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1340000	ug/Kg	N	7600	22400	22400	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-36-0	Antimony	1120	ug/Kg	U	346	1120	1120	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-38-2	Arsenic J-,I6a	1420	ug/kg	N	224	1120	1120	2	MS	RMJ	07/01/09 14:07	090630-2	880688
7440-39-3	Barium	25400	ug/Kg		112	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-41-7	Beryllium	271	ug/kg		22.4	112	112	2	MS	RMJ	07/01/09 14:07	090630-2	880688
7440-43-9	Cadmium	559	ug/Kg	U	112	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-70-2	Calcium J-,I6a	873000	ug/Kg	N	3350	11200	11200	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-47-3	Chromium	4130	ug/Kg		112	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-48-4	Cobalt	947	ug/Kg		224	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-50-8	Copper U,I4	1340	ug/Kg		335	1120	1120	1	P	HSC	06/30/09 15:10	063009-1	880671
7439-89-6	Iron	9270000	ug/Kg		2790	11200	11200	1	P	HSC	06/30/09 15:10	063009-1	880671
7439-92-1	Lead	3060	ug/Kg		279	1120	1120	1	P	HSC	06/30/09 15:10	063009-1	880671
7439-95-4	Magnesium	547000	ug/Kg		9500	33500	33500	1	P	HSC	06/30/09 15:10	063009-1	880671
7439-96-5	Manganese	252000	ug/Kg	*	224	1120	1120	1	P	HSC	06/30/09 15:10	063009-1	880671
7439-97-6	Mercury	13.1	ug/kg	U	4.46	13.1	13.1	1	AV	JXL1	06/30/09 10:47	063009S1-3	880840
7440-02-0	Nickel J,I10a	2400	ug/kg	*	112	447	447	2	MS	RMJ	07/01/09 14:07	090630-2	880688
7440-09-7	Potassium	400000	ug/Kg		5590	16800	16800	1	P	HSC	06/30/09 15:10	063009-1	880671
7782-49-2	Selenium J-,I6a	561	ug/kg	JN	559	1120	1120	2	MS	RMJ	07/01/09 14:07	090630-2	880688
7440-22-4	Silver	375	ug/Kg	J	112	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-23-5	Sodium	293000	ug/Kg		5030	16800	16800	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-28-0	Thallium J-,I6a	91.9	ug/kg	JN	67.1	224	224	2	MS	RMJ	07/01/09 14:07	090630-2	880688
7440-62-2	Vanadium	5990	ug/Kg		112	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-66-6	Zinc	31700	ug/Kg		224	1120	1120	1	P	HSC	06/30/09 15:10	063009-1	880671

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880671	880670	SW846 3050B	0.504	g	50	mL	06/29/09	BXA1
880688	880687	SW846 3050B	0.504	g	50	mL	06/30/09	BXA1
880840	880839	SW846 7471A Prep	0.515	g	30	mL	06/29/09	TXB3

P.S. 7/26/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2455 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232357002 **BASIS:** Dry Weight **DATE COLLECTED** 22-JUN-09

CLIENT ID: CAMO-09-10479 **LEVEL:** Low **DATE RECEIVED** 25-JUN-09

MATRIX: SOIL **%SOLIDS:** 90.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1020000	ug/Kg	N	7410	21800	21800	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-36-0	Antimony	1090	ug/Kg	U	338	1090	1090	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-38-2	Arsenic U,I4b	977	ug/kg	JN	219	1100	1100	2	MS	RMJ	07/01/09 14:37	090630-2	880688
7440-39-3	Barium	28700	ug/Kg		109	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-41-7	Beryllium	262	ug/kg		21.9	110	110	2	MS	RMJ	07/01/09 14:37	090630-2	880688
7440-43-9	Cadmium	545	ug/Kg	U	109	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-70-2	Calcium J-,I6a	726000	ug/Kg	N	3270	10900	10900	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-47-3	Chromium	9580	ug/Kg		109	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-48-4	Cobalt	764	ug/Kg		218	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-50-8	Copper U,I4	1380	ug/Kg		327	1090	1090	1	P	HSC	06/30/09 15:45	063009-1	880671
7439-89-6	Iron	8300000	ug/Kg		2720	10900	10900	1	P	HSC	06/30/09 15:45	063009-1	880671
7439-92-1	Lead	7250	ug/Kg		272	1090	1090	1	P	HSC	06/30/09 15:45	063009-1	880671
7439-95-4	Magnesium	571000	ug/Kg		9260	32700	32700	1	P	HSC	06/30/09 15:45	063009-1	880671
7439-96-5	Manganese	223000	ug/Kg	*	218	1090	1090	1	P	HSC	06/30/09 15:45	063009-1	880671
7439-97-6	Mercury	12.3	ug/kg	U	4.2	12.3	12.3	1	AV	JXL1	06/30/09 11:01	063009S1-3	880840
7440-02-0	Nickel J,I10a	2210	ug/kg	*	110	438	438	2	MS	RMJ	07/01/09 14:37	090630-2	880688
7440-09-7	Potassium	453000	ug/Kg		5450	16300	16300	1	P	HSC	06/30/09 15:45	063009-1	880671
7782-49-2	Selenium J-,I6a	610	ug/kg	JN	548	1100	1100	2	MS	RMJ	07/01/09 14:37	090630-2	880688
7440-22-4	Silver	272	ug/Kg	J	109	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-23-5	Sodium	346000	ug/Kg		4900	16300	16300	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-28-0	Thallium J-,I6a	157	ug/kg	JN	65.7	219	219	2	MS	RMJ	07/01/09 14:37	090630-2	880688
7440-62-2	Vanadium	5200	ug/Kg		109	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-66-6	Zinc	37400	ug/Kg		218	1090	1090	1	P	HSC	06/30/09 15:45	063009-1	880671

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880671	880670	SW846 3050B	0.507	g	50	mL	06/29/09	BXA1
880688	880687	SW846 3050B	0.504	g	50	mL	06/30/09	BXA1
880840	880839	SW846 7471A Prep	0.537	g	30	mL	06/29/09	TXB3

P.S. 7/26/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2455 VALIDATION DATE: 07/26/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☒ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the FR blank, sample CAMO-09-10482 located in RN 09-2435, which was associated with both samples in this RN, NO_3/NO_2 was detected. The associated sample results were detects ≤5X the FR blank concentration and, thus, were qualified U,I4d.
2. The MS %R was < the laboratory LAL but ≥10% for NO_3-N. The associated sample results were qualified NDs and, thus, were qualified UJ,I6a.
3. It should be noted that the matrix QC analyses for pH and NO_3-N were performed on a LANL parent sample from another RN. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/27/09

VALIDATOR'S SIGNATURE: Mr. Peter Steves	DATE: 07/26/09
Form 5120-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☒	☐	☐	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2455

Client Sample ID:	CAMO-09-10480	Project:	LANL01004
Sample ID:	232357001	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	11.2%		

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal												
SW9045C pH Federal "As Received"												
pH at Temp 22.9C	H	8.87		0.010	0.100	SU	1	EXF1	06/26/09	1228	880644	1
Flow Injection Analysis Federal												
SW9012A Cyanide, Total Federal "Dry Weight Corrected"												
Cyanide, Total	U	ND		76.6	282	ug/kg	1	AXC2	07/06/09	1117	881032	2
Ion Chromatography Federal												
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"												
Nitrate-N	Hh	1.64	U,I4d	0.338	1.13	mg/kg	1	MAR1	07/09/09	1824	879955	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0845	879954
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

P.S. 7/26/09

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2455

Client Sample ID:	CAMO-09-10479	Project:	LANL01004
Sample ID:	232357002	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	9.47%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 22.2C	H	8.65		0.010	0.100	SU	1	EXF1 06/26/09	1233	880644	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		72.2	266	ug/kg	1	AXC2 07/06/09	1249	881032	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	4.55	U,I4d	0.331	1.10	mg/kg	1	MAR1 07/09/09	1853	879955	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0845	879954
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

P.S. 7/26/09

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2455 VALIDATION DATE: 07/26/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Peter Steves ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☒ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The gamma spec sample results that were rejected by the laboratory due to interference or low abundance were qualified R,R5a. In the QC samples, several results were also rejected by the laboratory. No sample data were qualified as a result.
2. The reported sample results which were ≤ the MDCs were qualified U,R5.
3. The result for gamma spec analyte Th-234 for sample CAMO-09-10479 was > the MDC but ≤3X the 1-sigma TPU and, thus, was qualified U,R11.
4. It should be noted that the duplicates for all analyses were performed on LANL parent samples from other RNs. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/27/09

VALIDATOR'S SIGNATURE: Mr. Peter Steves	DATE: 07/26/09
Form 5119-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☒	☐	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☐	☐	☒	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-10480	Project:	LANL01004
Sample ID:	232357001	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	11.2%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.457		0.165	+/-0.0524	0.100	pCi/g		AXD2	07/10/09	2119	881676	2
Uranium-235/236	U	0.0134	U,R5	0.0755	+/-0.0101	0.100	pCi/g						
Uranium-238		0.388		0.0641	+/-0.0462	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.190	U,R5	0.552	+/-0.180	0.200	pCi/g		MXR1	07/06/09	1113	880723	3
Bismuth-211	UI	3.23	R,R5a	0.457	+/-0.290		pCi/g						
Bismuth-214		1.02		0.143	+/-0.0981	0.200	pCi/g						
Cadmium-109	UI	3.58	R,R5a	1.81	+/-0.594		pCi/g						
Cerium-139	U	0.00793	U,R5	0.0658	+/-0.0199	0.050	pCi/g						
Cesium-134	U	0.107		0.115	+/-0.0306	0.100	pCi/g						
Cesium-137	U	-0.0157		0.0747	+/-0.0239	0.100	pCi/g						
Cobalt-60	U	0.00872		0.0824	+/-0.025	0.100	pCi/g						
Europium-152	U	-0.0765		0.210	+/-0.0871	0.200	pCi/g						
Lanthanum-140	U	0.0333		0.159	+/-0.0455		pCi/g						
Lead-212		1.43		0.116	+/-0.0907	0.100	pCi/g						
Lead-214		1.12		0.159	+/-0.105	0.100	pCi/g						
Mercury-203	U	0.0105	U,R5	0.0903	+/-0.0265	0.100	pCi/g						
Potassium-40		36.0		0.415	+/-1.77	1.00	pCi/g						
Radium-223	U	-0.55	U,R5	1.44	+/-0.446		pCi/g						
Radium-224	UI	4.12	R,R5a	1.32	+/-0.904		pCi/g						
Radium-226		1.02		0.143	+/-0.0981		pCi/g						
Radium-228		1.51		0.263	+/-0.188	0.500	pCi/g						
Ruthenium-106	U	-0.426	U,R5	0.596	+/-0.204	0.800	pCi/g						
Sodium-22	U	-0.0396	U,R5	0.0901	+/-0.0301	0.080	pCi/g						
Strontium-85	UI	0.109	R,R5a	0.0922	+/-0.025		pCi/g						
Thallium-208		0.462		0.0749	+/-0.0509	0.080	pCi/g						
Thorium-227	U	-0.254	U,R5	0.826	+/-0.251		pCi/g						
Thorium-231	U	-0.55		1.44	+/-0.446		pCi/g						
Thorium-234	U	1.77		3.96	+/-1.63	2.00	pCi/g						
Tin-113	U	0.0342		0.103	+/-0.0299	0.100	pCi/g						
Uranium-235	U	-0.0215		0.441	+/-0.137	0.500	pCi/g						
Yttrium-88	U	-0.0256		0.0587	+/-0.0208	0.100	pCi/g						

P.S. 7/26/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-10479	Project:	LANL01004
Sample ID:	232357002	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	9.47%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.327		0.101	+/-0.0358	0.100	pCi/g		AXD2 07/14/09	0906	881676	2
Uranium-235/236	U	0.0138	U,R5	0.0464	+/-0.00734	0.100	pCi/g					
Uranium-238		0.345		0.0394	+/-0.0364	0.100	pCi/g					
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0249	U,R5	0.124	+/-0.0399	0.200	pCi/g		MXR1 07/06/09	1113	880723	4
Bismuth-211	UI	2.57	R,R5a	0.451	+/-0.248		pCi/g					
Bismuth-214		0.960		0.139	+/-0.0931	0.200	pCi/g					
Cadmium-109	UI	3.74	R,R5a	1.12	+/-0.419		pCi/g					
Cerium-139	U	-0.00258	U,R5	0.0551	+/-0.0165	0.050	pCi/g					
Cesium-134	U	0.101		0.126	+/-0.0337	0.100	pCi/g					
Cesium-137	U	0.00388		0.0877	+/-0.0267	0.100	pCi/g					
Cobalt-60	U	0.0374		0.110	+/-0.0318	0.100	pCi/g					
Europium-152	U	-0.179		0.184	+/-0.0669	0.200	pCi/g					
Lanthanum-140	U	-0.0097		0.114	+/-0.0418		pCi/g					
Lead-212		1.31		0.101	+/-0.0802	0.100	pCi/g					
Lead-214		0.892		0.150	+/-0.0894	0.100	pCi/g					
Mercury-203	U	0.0257	U,R5	0.0822	+/-0.0232	0.100	pCi/g					
Potassium-40		32.7		0.672	+/-1.53	1.00	pCi/g					
Radium-223	U	-0.402	U,R5	1.34	+/-0.405		pCi/g					
Radium-224	UI	3.73	R,R5a	1.15	+/-0.682		pCi/g					
Radium-226		0.960		0.139	+/-0.0931		pCi/g					
Radium-228		1.57		0.316	+/-0.223	0.500	pCi/g					
Ruthenium-106	U	-0.198	U,R5	0.694	+/-0.220	0.800	pCi/g					
Sodium-22	U	0.0782	U,R5	0.128	+/-0.0357	0.080	pCi/g					
Strontium-85	UI	0.0912	R,R5a	0.0889	+/-0.0264		pCi/g					
Thallium-208		0.502		0.0718	+/-0.0546	0.080	pCi/g					
Thorium-227	U	0.172	U,R5	0.705	+/-0.210		pCi/g					
Thorium-231	U	-0.402	U,R5	1.34	+/-0.405		pCi/g					
Thorium-234		1.34	U,R11	1.18	+/-0.565	2.00	pCi/g					
Tin-113	U	-0.00647	U,R5	0.0939	+/-0.028	0.100	pCi/g					
Uranium-235	U	-0.225		0.396	+/-0.125	0.500	pCi/g					
Yttrium-88	U	0.0157		0.0747	+/-0.0209	0.100	pCi/g					

P.S. 7/26/09

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2455

REQUEST NUMBER: 09-2455

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232357%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10480	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10480	1	GLASS	8270C+8082+TPH-DRO	Ice	R
CAMO-09-10480	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-10480	1	POLY	METALS-GEL	Ice	R
CAMO-09-10480	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10479	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10479	1	GLASS	8270C+8082+TPH-DRO	Ice	R
CAMO-09-10479	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-10479	1	POLY	METALS-GEL	Ice	R
CAMO-09-10479	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/24/09	1700	Patricia Dent	P. Dent	6/25/09	08:45
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2455

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2455
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 6/24/2009
TURNAROUND/REPORT DUE: 7/9/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	EPA:901.1	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	HASL-300:ISOU	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:6010B	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:6850	1	CAMO-09-10479	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2455

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6850	1	CAMO-09-10480	R	6/22/2009	
	SW-846:8015M_EXTRACTABLE	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:8082	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:8260B	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:8270C	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:9012A	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:9045C	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2455

GEL Laboratories LLC
a member of The GEL Group Inc.

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178
www.gel.com

June 26, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232357
SDG: 09-2455

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 25, 2009, and analyzed for FID Flame Ionization Detector, GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2455
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232357
SDG: 09-2455

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232357
SDG # : 09-2455

June 26, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 25, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: FID Flame Ionization Detector, GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

List of current GEL Certifications as of 26 June 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2455

REQUEST NUMBER: 09-2455

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS: 232357%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10480	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10480	1	GLASS	8270C+8082+TPH-DRO	Ice	R
CAMO-09-10480	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-10480	1	POLY	METALS-GEL	Ice	R
CAMO-09-10480	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10479	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10479	1	GLASS	8270C+8082+TPH-DRO	Ice	R
CAMO-09-10479	1	POLY	GAMMA SPEC+ISOU	None	R
CAMO-09-10479	1	POLY	METALS-GEL	Ice	R
CAMO-09-10479	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/24/09	1400	Patricia Dent	P. Dent	6/25/09	08:45
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2455

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2455

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	EPA:901.1	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	HASL-300:ISOU	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:6010B	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:6850	1	CAMO-09-10479	R	6/22/2009	

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2455

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6850	1	CAMO-09-10480	R	6/22/2009	
	SW-846:8015M_EXTRACTABLE	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:8082	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:8260B	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:8270C	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:9012A	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	
	SW-846:9045C	1	CAMO-09-10479	R	6/22/2009	
		1	CAMO-09-10480	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2455

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2455**
Received By: Patricia Dent	**Date Received: JUNE 25, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2-5,23**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5528 4C
7209 7847 5491 2C
7209 7847 5469 3C
7209 7847 5470 4C
7209 7847 5506 5C
7209 7847 5458 23C

PM (or PMA) review: Initials Rae Date 26JUN 09

ORIGIN ID: SAFA (505) 665-9868
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 51.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

4°C

Ref: 6b010amr1a01282xao

Delivery Address Barcode

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5528 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9868
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 53.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

ef: 6b010amr1a015aguko

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5491 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 52.0 LB MAN
System#: 0014176/CAFE2361
Account: S ********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7269 7847 5468 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156149-434 NRIT V3.04-08

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 51.0 LB MAN
System#: 0014176/CAFE2361
Account: S ********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7269 7847 5470 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156149-434 NRIT V3.04-08

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 52.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

CLS08181/22/23

Ref: Sb010amr1a815aguke

Delivery Address Barcode

5°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5586 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NPIT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 24JUN09
ActWgt: 63.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

CLS08181/22/23

Ref: Sb010amr2a0512bgdo

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5458 Form 0201

THU
Deliver By:
25JUN09

CHS A1

:29407 -SC-US XX CHSA

Part # 156148-434 NPIT V3.04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

GC/MS Volatile Organics
Los Alamos National Laboratory (LANL)
SDG 09-2455

Method/Analysis Information

Procedure:	Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
Analytical Method:	SW846 8260B
Prep Method:	SW846 5030
Analytical Batch Number:	882208
Prep Batch Number:	882207

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201873671	Method Blank (MB)
1201873674	Laboratory Control Sample (LCS)
1201873675	Laboratory Control Sample (LCS)
1201873672	232357001(CAMO-09-10480) Post Spike (PS)
1201873673	232357001(CAMO-09-10480) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 19.1.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232357001 (CAMO-09-10480) was designated for spike analysis in this SDG.

Matrix Spike (PS) Recovery Statement
The spike recoveries for this SDG were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate recoveries for this SDG were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-analyses were not required for samples in this SDG.

Miscellaneous Information

Electronic Package Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
A nonconformance report was not required for this SDG.

Manual Integrations
Data files associated with the initial calibration, continuing calibration check, and samples did not require manual integrations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA6.I	Gas Chromatograph/Mass Spectrometer	HP6890N/HP5975	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Erin Haubert Date: 07/16/09

Roadmap for LANL 09-2455 VOA

This roadmap was analyzed by ale01592 on 07-08-2009, 16:42.
This roadmap was reviewed by ale01592 on 07-08-2009, 16:48.
This roadmap was reviewed by lys00434 on 07-14-2009, 09:30.

Sample

exclude	manual	datafile	smpid	clientid	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA6.i/070209v6/6r412.d	232357001	CAMO-09-10480	02-JUL-2009	14:31	09-2455.sub	1	882208	
☐	N	/chem/VOA6.i/070209v6/6r413.d	232357002	CAMO-09-10479	02-JUL-2009	14:59	09-2455.sub	1	882208	

QC Sample

exclude	manual	datafile	smpid	clientid	sampletype	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA6.i/070209v6/6r404L2.d	1201873674	LCS	lcs	02-JUL-2009	10:20	all.sub	1	882208	
☐	N	/chem/VOA6.i/070209v6/6r407L2.d	1201873675	SLCS	lcs	02-JUL-2009	11:46	all.sub	1	882208	
☐	N	/chem/VOA6.i/070209v6/6r409B2.d	1201873671	BLANK	mb	02-JUL-2009	13:07	all.sub	1	882208	
☐	N	/chem/VOA6.i/070209v6/6r424.d	1201873672	CAMO-09-10480MS	ms	02-JUL-2009	20:41	09-2455.sub	1	882208	
☐	N	/chem/VOA6.i/070209v6/6r425.d	1201873673	CAMO-09-10480MSD	msd	02-JUL-2009	21:08	09-2455.sub	1	882208	

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	9.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10479	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:59	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:48	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r413.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.10	ug/kg	0.376	1.10
74-87-3	Chloromethane	U	1.10	ug/kg	0.331	1.10
75-01-4	Vinyl chloride	U	1.10	ug/kg	0.331	1.10
74-83-9	Bromomethane	U	1.10	ug/kg	0.331	1.10
75-00-3	Chloroethane	U	1.10	ug/kg	0.331	1.10
75-69-4	Trichlorofluoromethane	U	1.10	ug/kg	0.630	1.10
67-64-1	Acetone	U	5.52	ug/kg	1.83	5.52
75-35-4	1,1-Dichloroethylene	U	1.10	ug/kg	0.331	1.10
74-88-4	Iodomethane	U	5.52	ug/kg	1.77	5.52
75-09-2	Methylene chloride	U	5.52	ug/kg	2.21	5.52
75-15-0	Carbon disulfide	U	5.52	ug/kg	1.38	5.52
156-60-5	trans-1,2-Dichloroethylene	U	1.10	ug/kg	0.331	1.10
75-34-3	1,1-Dichloroethane	U	1.10	ug/kg	0.331	1.10
78-93-3	2-Butanone	U	5.52	ug/kg	1.66	5.52
156-59-2	cis-1,2-Dichloroethylene	U	1.10	ug/kg	0.331	1.10
594-20-7	2,2-Dichloropropane	U	1.10	ug/kg	0.331	1.10
67-66-3	Chloroform	U	1.10	ug/kg	0.331	1.10
74-97-5	Bromochloromethane	U	1.10	ug/kg	0.365	1.10
71-55-6	1,1,1-Trichloroethane	U	1.10	ug/kg	0.331	1.10
563-58-6	1,1-Dichloropropene	U	1.10	ug/kg	0.331	1.10
56-23-5	Carbon tetrachloride	U	1.10	ug/kg	0.331	1.10
107-06-2	1,2-Dichloroethane	U	1.10	ug/kg	0.331	1.10
71-43-2	Benzene	U	1.10	ug/kg	0.331	1.10
79-01-6	Trichloroethylene	U	1.10	ug/kg	0.365	1.10
78-87-5	1,2-Dichloropropane	U	1.10	ug/kg	0.331	1.10
75-27-4	Bromodichloromethane	U	1.10	ug/kg	0.331	1.10
74-95-3	Dibromomethane	U	1.10	ug/kg	0.331	1.10
108-10-1	4-Methyl-2-pentanone	U	5.52	ug/kg	1.38	5.52
10061-01-5	cis-1,3-Dichloropropylene	U	1.10	ug/kg	0.331	1.10
108-88-3	Toluene	U	1.10	ug/kg	0.331	1.10
10061-02-6	trans-1,3-Dichloropropylene	U	1.10	ug/kg	0.331	1.10
79-00-5	1,1,2-Trichloroethane	U	1.10	ug/kg	0.331	1.10
591-78-6	2-Hexanone	U	5.52	ug/kg	1.66	5.52
142-28-9	1,3-Dichloropropane	U	1.10	ug/kg	0.331	1.10
127-18-4	Tetrachloroethylene	U	1.10	ug/kg	0.331	1.10
124-48-1	Dibromochloromethane	U	1.10	ug/kg	0.331	1.10
106-93-4	1,2-Dibromoethane	U	1.10	ug/kg	0.331	1.10
108-90-7	Chlorobenzene	U	1.10	ug/kg	0.331	1.10

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	9.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10479	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:59	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:48	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r413.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.10	ug/kg	0.331	1.10
179601-23-1	m,p-Xylenes	U	2.21	ug/kg	0.331	2.21
95-47-6	o-Xylene	U	1.10	ug/kg	0.331	1.10
100-42-5	Styrene	U	1.10	ug/kg	0.331	1.10
75-25-2	Bromoform	U	1.10	ug/kg	0.331	1.10
79-34-5	1,1,2,2-Tetrachloroethane	U	1.10	ug/kg	0.331	1.10
96-18-4	1,2,3-Trichloropropane	U	1.10	ug/kg	0.331	1.10
108-86-1	Bromobenzene	U	1.10	ug/kg	0.331	1.10
103-65-1	n-Propylbenzene	U	1.10	ug/kg	0.331	1.10
95-49-8	2-Chlorotoluene	U	1.10	ug/kg	0.331	1.10
98-82-8	Isopropylbenzene	U	1.10	ug/kg	0.331	1.10
108-67-8	1,3,5-Trimethylbenzene	U	1.10	ug/kg	0.331	1.10
106-43-4	4-Chlorotoluene	U	1.10	ug/kg	0.331	1.10
98-06-6	tert-Butylbenzene	U	1.10	ug/kg	0.331	1.10
95-63-6	1,2,4-Trimethylbenzene	U	1.10	ug/kg	0.331	1.10
135-98-8	sec-Butylbenzene	U	1.10	ug/kg	0.331	1.10
99-87-6	4-Isopropyltoluene	U	1.10	ug/kg	0.331	1.10
541-73-1	1,3-Dichlorobenzene	U	1.10	ug/kg	0.331	1.10
106-46-7	1,4-Dichlorobenzene	U	1.10	ug/kg	0.331	1.10
104-51-8	n-Butylbenzene	U	1.10	ug/kg	0.331	1.10
96-12-8	1,2-Dibromo-3-chloropropane	U	1.10	ug/kg	0.331	1.10
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.52	ug/kg	1.77	5.52
630-20-6	1,1,1,2-Tetrachloroethane	U	1.10	ug/kg	0.331	1.10
95-50-1	1,2-Dichlorobenzene	U	1.10	ug/kg	0.331	1.10

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	189	ug/kg		J
	Unknown Siloxane	16.17	112	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10480	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:31	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:45	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r412.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.383	1.13
74-87-3	Chloromethane	U	1.13	ug/kg	0.338	1.13
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.338	1.13
74-83-9	Bromomethane	U	1.13	ug/kg	0.338	1.13
75-00-3	Chloroethane	U	1.13	ug/kg	0.338	1.13
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.642	1.13
67-64-1	Acetone	U	5.63	ug/kg	1.87	5.63
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
74-88-4	Iodomethane	U	5.63	ug/kg	1.80	5.63
75-09-2	Methylene chloride	U	5.63	ug/kg	2.25	5.63
75-15-0	Carbon disulfide	U	5.63	ug/kg	1.41	5.63
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.338	1.13
78-93-3	2-Butanone	U	5.63	ug/kg	1.69	5.63
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13
67-66-3	Chloroform	U	1.13	ug/kg	0.338	1.13
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.372	1.13
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.338	1.13
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.338	1.13
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.338	1.13
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.338	1.13
71-43-2	Benzene	U	1.13	ug/kg	0.338	1.13
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.372	1.13
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.338	1.13
74-95-3	Dibromomethane	U	1.13	ug/kg	0.338	1.13
108-10-1	4-Methyl-2-pentanone	U	5.63	ug/kg	1.41	5.63
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13
108-88-3	Toluene	U	1.13	ug/kg	0.338	1.13
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.338	1.13
591-78-6	2-Hexanone	U	5.63	ug/kg	1.69	5.63
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.338	1.13
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.338	1.13
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.338	1.13
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.338	1.13
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.338	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10480	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:31	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:45	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r412.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.338	1.13
179601-23-1	m,p-Xylenes	U	2.25	ug/kg	0.338	2.25
95-47-6	o-Xylene	U	1.13	ug/kg	0.338	1.13
100-42-5	Styrene	U	1.13	ug/kg	0.338	1.13
75-25-2	Bromoform	U	1.13	ug/kg	0.338	1.13
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.338	1.13
108-86-1	Bromobenzene	U	1.13	ug/kg	0.338	1.13
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.338	1.13
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.338	1.13
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.338	1.13
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.338	1.13
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.338	1.13
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.338	1.13
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.338	1.13
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.338	1.13
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.338	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.63	ug/kg	1.80	5.63
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	267	ug/kg		J
	Unknown Siloxane	16.17	69.3	ug/kg		J

QC Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2455

Matrix Type: SOLID

CAP Column (1) : DB-624

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201873674	LCS for batch 882207	98	99	98
1201873675	LCS for batch 882207	98	97	98
1201873671	MB for batch 882207	97	99	96
232357001	CAMO-09-10480	101	98	99
232357002	CAMO-09-10479	100	98	99
1201873672	CAMO-09-10480PS	96	100	98
1201873673	CAMO-09-10480PSD	96	99	99

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10480PS
Lab Sample ID: 1201873672
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 11.2
Analysis Date: 07/02/2009 20:41
Prep Batch ID: 882207
Batch ID: 882208

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	61.6	123	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	48.4	97	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	49.2	98	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	45.7	91	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	46.3	93	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	48.4	97	51-151
67-64-1	PS	Acetone	250	0.00	U	263	105	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	45.4	91	61-125
74-88-4	PS	Iodomethane	250	0.00	U	229	92	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	39.4	79	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	245	98	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	42.3	85	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	43.4	87	62-125
78-93-3	PS	2-Butanone	250	0.00	U	325	130	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	45.1	90	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	44.3	89	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	43.6	87	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	45.7	91	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	46.3	93	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	45.1	90	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	47.2	94	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	40.5	81	58-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10480PS
Lab Sample ID: 1201873672
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 11.2
Analysis Date: 07/02/2009 20:41
Dilution: 1
Prep Batch ID: 882207
Batch ID: 882208

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	42.8	86	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	46.5	93	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	44.6	89	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	47.6	95	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	44.0	88	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	238	95	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	47.7	95	54-133
108-88-3	PS	Toluene	50.0	0.00	U	42.5	85	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	48.1	96	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	46.3	93	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	275	110	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	44.5	89	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	45.3	91	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	49.6	99	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	46.7	93	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	44.8	90	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	43.4	87	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	88.0	88	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	45.1	90	52-127
100-42-5	PS	Styrene	50.0	0.00	U	46.5	93	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	43.0	86	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	42.9	86	63-127

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10480PS
Lab Sample ID: 1201873672
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 11.2
Analysis Date: 07/02/2009 20:41
Prep Batch ID: 882207
Batch ID: 882208
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	49.3	99	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	44.5	89	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	42.1	84	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	43.4	87	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	37.2	74	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	43.1	86	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	43.0	86	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	45.0	90	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	43.0	86	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	43.4	87	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	44.4	89	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	43.6	87	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	42.4	85	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	42.2	84	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	56.1	112	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	48.7	97	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	43.7	87	43-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10480PSD
Lab Sample ID: 1201873673
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 11.2
Analysis Date: 07/02/2009 21:08
Dilution: 1
Prep Batch ID: 882207
Batch ID: 882208

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	54.1	108	25-149	13	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	42.9	86	39-140	12	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	43.1	86	47-129	13	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	41.2	82	31-135	10	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	41.3	83	53-128	11	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	43.0	86	51-151	12	0-25
67-64-1	PSD	Acetone	250	0.00	U	259	104	21-153	2	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	40.4	81	61-125	12	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	210	84	53-142	9	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	35.9	72	59-136	9	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	219	88	46-129	11	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	38.6	77	56-126	9	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	40.0	80	62-125	8	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	323	129	26-152	1	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	41.7	83	60-130	8	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	40.7	81	55-135	8	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	40.4	81	60-127	8	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	43.3	87	61-131	6	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	42.2	84	59-131	9	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	40.9	82	57-128	10	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	42.6	85	58-136	10	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	38.6	77	58-126	5	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10480PSD
Lab Sample ID: 1201873673
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 11.2
Analysis Date: 07/02/2009 21:08
Dilution: 1
Prep Batch ID: 882207
Batch ID: 882208

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	39.6	79	56-123	8	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	42.7	85	51-137	9	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	41.9	84	60-126	6	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	45.2	90	55-138	5	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	42.0	84	60-132	5	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	234	94	58-136	1	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	45.2	90	54-133	5	0-25
108-88-3	PSD	Toluene	50.0	0.00	U	39.1	78	52-128	9	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	45.3	91	53-137	6	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	43.9	88	59-130	5	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	271	108	31-148	2	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	42.6	85	57-127	4	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	40.6	81	51-128	11	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	46.6	93	59-139	6	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	44.8	90	57-133	4	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	41.6	83	53-122	7	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	40.2	80	51-125	8	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	81.2	81	50-126	8	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	41.9	84	52-127	7	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	42.9	86	49-135	8	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	42.3	85	57-149	2	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	42.5	85	63-127	1	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10480PSD
Lab Sample ID: 1201873673
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 11.2
Analysis Date: 07/02/2009 21:08
Prep Batch ID: 882207
Batch ID: 882208
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	48.1	96	57-149	2	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	42.8	86	49-131	4	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	39.3	79	40-136	7	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	40.9	82	44-135	6	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	35.0	70	44-140	6	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	40.2	80	42-140	7	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	40.3	81	44-132	6	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	42.0	84	42-142	7	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	40.4	81	43-137	6	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	40.7	81	39-139	6	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	41.1	82	38-145	8	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	41.0	82	43-129	6	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	39.8	80	44-125	6	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	38.8	78	36-141	8	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	54.3	109	47-151	3	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	45.6	91	59-131	7	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	41.7	83	43-129	5	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: LCS for batch 882207
Lab Sample ID: 1201873674
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 10:20
Dilution: 1
Prep Batch ID: 882207
Batch ID: 882208

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	65.6	131	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	51.7	103	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	53.5	107	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	49.5	99	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	51.4	103	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	56.0	112	67-151
67-64-1	LCS	Acetone	250	0.0	320	128	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	51.3	103	70-125
74-88-4	LCS	Iodomethane	250	0.0	252	101	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	43.8	88	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	272	109	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	47.8	96	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	49.0	98	75-120
78-93-3	LCS	2-Butanone	250	0.0	401	160	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	51.1	102	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	53.5	107	74-135
67-66-3	LCS	Chloroform	50.0	0.0	49.0	98	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	51.8	104	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	52.8	106	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	52.1	104	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	53.9	108	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	45.7	91	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: LCS for batch 882207
Lab Sample ID: 1201873674
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 10:20
Dilution: 1
Prep Batch ID: 882207
Batch ID: 882208

CAS No	Parmname		Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	48.0	96	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	52.1	104	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	50.4	101	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	54.5	109	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	49.9	100	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	287	115	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	55.1	110	80-125
108-88-3	LCS	Toluene	50.0	0.0	47.7	95	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	55.5	111	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	52.0	104	76-120
591-78-6	LCS	2-Hexanone	250	0.0	335	134	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	50.4	101	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	52.3	105	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	56.4	113	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	53.4	107	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	50.8	102	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	49.9	100	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	102	102	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	51.6	103	74-120
100-42-5	LCS	Styrene	50.0	0.0	53.5	107	76-125
75-25-2	LCS	Bromoform	50.0	0.0	49.4	99	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	51.3	103	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 882207
Matrix: SOIL
Lab Sample ID: 1201873674
Instrument: VOA6.I
Analysis Date: 07/02/2009 10:20
Dilution: 1
Analyst: RXD1
Prep Batch ID: 882207
Purge Vol: 5 mL
Batch ID: 882208

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	56.4	113	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	50.2	100	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	48.6	97	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	49.2	98	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	42.3	85	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	49.1	98	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	49.9	100	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	50.4	101	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	49.5	99	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	50.0	100	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	51.9	104	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	50.9	102	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	49.7	99	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	51.3	103	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	70.1	140	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	55.0	110	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	50.6	101	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: LCS for batch 882207
Lab Sample ID: 1201873675
Instrument: VOA6.I
Analyst: RXD1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 11:46
Dilution: 1
Prep Batch ID: 882207
Batch ID: 882208

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	250	100	52-139

Method Blank Summary

SDG Number:	09-2455	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882207	Instrument ID:	VOA6.I	Data File:	6r409B2.d
Lab Sample ID:	1201873671	Prep Date:	07/02/2009 09:30	Analyzed:	07/02/09 13:07
Column:	DB-624	Heated Purge:	Yes		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 882207	1201873674	6r404L2.d	07/02/09	1020
02	LCS for batch 882207	1201873675	6r407L2.d	07/02/09	1146
03	CAMO-09-10480	232357001	6r412.d	07/02/09	1431
04	CAMO-09-10479	232357002	6r413.d	07/02/09	1459
05	CAMO-09-10480PS	1201873672	6r424.d	07/02/09	2041
06	CAMO-09-10480PSD	1201873673	6r425.d	07/02/09	2108

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2455

Instrument ID: VOA6.I **Injection Date/Time:** 02-JUL-09 09:24

Column Description: DB-624 **Lab File ID** /070209v6/6r402BFB.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	15
75	30.0 - 60.0% of mass 95	44.6
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	92.3
175	5.0 -9.0% of mass 174	7
176	95.0 - 101.0% of mass 174	97.5
177	5.0 - 9.0% of mass 176	6.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD050	W6VM090702-01	/070209v6/6r402.d	02-JUL-09 09:24
LCS	1201873674	/070209v6/6r404L2.d	02-JUL-09 10:20
VSTD250S	W6VM090702-04	/070209v6/6r406.d	02-JUL-09 11:18
SLCS	1201873675	/070209v6/6r407L2.d	02-JUL-09 11:46
BLANK	1201873671	/070209v6/6r409B2.d	02-JUL-09 13:07
CAMO-09-10480	232357001	/070209v6/6r412.d	02-JUL-09 14:31
CAMO-09-10479	232357002	/070209v6/6r413.d	02-JUL-09 14:59
CAMO-09-10480MS	1201873672	/070209v6/6r424.d	02-JUL-09 20:41
CAMO-09-10480MSD	1201873673	/070209v6/6r425.d	02-JUL-09 21:08

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2455

Instrument ID: VOA6.I **Injection Date/Time:** 15-JUN-09 16:10

Column Description: DB-624 **Lab File ID** /061509v6/6p111.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	16
75	30.0 - 60.0% of mass 95	46.2
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.5
174	50.0 - 100.0% of mass 95	89.7
175	5.0 -9.0% of mass 174	6.9
176	95.0 - 101.0% of mass 174	97.8
177	5.0 - 9.0% of mass 176	6.4

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD001	W6VM090615-08	/061509v6/6p112.d	15-JUN-09 16:38
VSTD002	W6VM090615-09	/061509v6/6p113.d	15-JUN-09 17:06
VSTD005	W6VM090615-10	/061509v6/6p114.d	15-JUN-09 17:34
VSTD010	W6VM090615-11	/061509v6/6p115.d	15-JUN-09 18:02
VSTD050	W6VM090615-13	/061509v6/6p117.d	15-JUN-09 18:58
VSTD100	W6VM090615-14	/061509v6/6p118.d	15-JUN-09 19:25
VSTD0005	W6VM090615-15	/061509v6/6p120.d	15-JUN-09 20:21
SECONDSOURCE	W6VM090615-17	/061509v6/6p122.d	15-JUN-09 21:17
VSTD005S	W6VM090615-18	/061509v6/6p123.d	15-JUN-09 21:45
VSTD010S	W6VM090615-19	/061509v6/6p124.d	15-JUN-09 22:12
VSTD025S	W6VM090615-20	/061509v6/6p125.d	15-JUN-09 22:40
VSTD050S	W6VM090615-21	/061509v6/6p126.d	15-JUN-09 23:07
VSTD100S	W6VM090615-22	/061509v6/6p127.d	15-JUN-09 23:35
VSTD250S	W6VM090615-23	/061509v6/6p128.d	16-JUN-09 00:03
SECONDSOURCE	W6VM090615-25	/061509v6/6p131.d	16-JUN-09 01:27

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA6.I

GC Column: DB-624

Client SDG: 09-2455

STD Analysis Time: 02-JUL-09 09:24

Data File: 6r402.d

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Area #	RT #	Area #	RT #	Area #	RT #
12 Hour STD	1616503	9.98	1215029	13.2	695315	15.6
Upper Limit	3233006	10.5	2430058	13.7	1390630	16.1
Lower Limit	808252	9.48	607515	12.7	347658	15.1
Sample ID						
BLK01LCS	1617446	9.98	1201116	13.2	680779	15.6
BLK01SLCS	1620650	9.98	1218765	13.2	688153	15.6
BLK01	1525938	9.98	1138668	13.2	644405	15.6
CAMO-09-10480	1568151	9.98	1164035	13.2	647058	15.6
CAMO-09-10479	1418097	9.98	1053012	13.2	578960	15.6
CAMO-09-10480MS	1541807	9.98	1126430	13.2	630712	15.6
CAMO-09-10480MSD	1395127	9.98	1032797	13.2	565351	15.6

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	9.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10479	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:59	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:48	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r413.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.10	ug/kg	0.376	1.10
74-87-3	Chloromethane	U	1.10	ug/kg	0.331	1.10
75-01-4	Vinyl chloride	U	1.10	ug/kg	0.331	1.10
74-83-9	Bromomethane	U	1.10	ug/kg	0.331	1.10
75-00-3	Chloroethane	U	1.10	ug/kg	0.331	1.10
75-69-4	Trichlorofluoromethane	U	1.10	ug/kg	0.630	1.10
67-64-1	Acetone	U	5.52	ug/kg	1.83	5.52
75-35-4	1,1-Dichloroethylene	U	1.10	ug/kg	0.331	1.10
74-88-4	Iodomethane	U	5.52	ug/kg	1.77	5.52
75-09-2	Methylene chloride	U	5.52	ug/kg	2.21	5.52
75-15-0	Carbon disulfide	U	5.52	ug/kg	1.38	5.52
156-60-5	trans-1,2-Dichloroethylene	U	1.10	ug/kg	0.331	1.10
75-34-3	1,1-Dichloroethane	U	1.10	ug/kg	0.331	1.10
78-93-3	2-Butanone	U	5.52	ug/kg	1.66	5.52
156-59-2	cis-1,2-Dichloroethylene	U	1.10	ug/kg	0.331	1.10
594-20-7	2,2-Dichloropropane	U	1.10	ug/kg	0.331	1.10
67-66-3	Chloroform	U	1.10	ug/kg	0.331	1.10
74-97-5	Bromochloromethane	U	1.10	ug/kg	0.365	1.10
71-55-6	1,1,1-Trichloroethane	U	1.10	ug/kg	0.331	1.10
563-58-6	1,1-Dichloropropene	U	1.10	ug/kg	0.331	1.10
56-23-5	Carbon tetrachloride	U	1.10	ug/kg	0.331	1.10
107-06-2	1,2-Dichloroethane	U	1.10	ug/kg	0.331	1.10
71-43-2	Benzene	U	1.10	ug/kg	0.331	1.10
79-01-6	Trichloroethylene	U	1.10	ug/kg	0.365	1.10
78-87-5	1,2-Dichloropropane	U	1.10	ug/kg	0.331	1.10
75-27-4	Bromodichloromethane	U	1.10	ug/kg	0.331	1.10
74-95-3	Dibromomethane	U	1.10	ug/kg	0.331	1.10
108-10-1	4-Methyl-2-pentanone	U	5.52	ug/kg	1.38	5.52
10061-01-5	cis-1,3-Dichloropropylene	U	1.10	ug/kg	0.331	1.10
108-88-3	Toluene	U	1.10	ug/kg	0.331	1.10
10061-02-6	trans-1,3-Dichloropropylene	U	1.10	ug/kg	0.331	1.10
79-00-5	1,1,2-Trichloroethane	U	1.10	ug/kg	0.331	1.10
591-78-6	2-Hexanone	U	5.52	ug/kg	1.66	5.52
142-28-9	1,3-Dichloropropane	U	1.10	ug/kg	0.331	1.10
127-18-4	Tetrachloroethylene	U	1.10	ug/kg	0.331	1.10
124-48-1	Dibromochloromethane	U	1.10	ug/kg	0.331	1.10
106-93-4	1,2-Dibromoethane	U	1.10	ug/kg	0.331	1.10
108-90-7	Chlorobenzene	U	1.10	ug/kg	0.331	1.10

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	9.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10479	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:59	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:48	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r413.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.10	ug/kg	0.331	1.10
179601-23-1	m,p-Xylenes	U	2.21	ug/kg	0.331	2.21
95-47-6	o-Xylene	U	1.10	ug/kg	0.331	1.10
100-42-5	Styrene	U	1.10	ug/kg	0.331	1.10
75-25-2	Bromoform	U	1.10	ug/kg	0.331	1.10
79-34-5	1,1,2,2-Tetrachloroethane	U	1.10	ug/kg	0.331	1.10
96-18-4	1,2,3-Trichloropropane	U	1.10	ug/kg	0.331	1.10
108-86-1	Bromobenzene	U	1.10	ug/kg	0.331	1.10
103-65-1	n-Propylbenzene	U	1.10	ug/kg	0.331	1.10
95-49-8	2-Chlorotoluene	U	1.10	ug/kg	0.331	1.10
98-82-8	Isopropylbenzene	U	1.10	ug/kg	0.331	1.10
108-67-8	1,3,5-Trimethylbenzene	U	1.10	ug/kg	0.331	1.10
106-43-4	4-Chlorotoluene	U	1.10	ug/kg	0.331	1.10
98-06-6	tert-Butylbenzene	U	1.10	ug/kg	0.331	1.10
95-63-6	1,2,4-Trimethylbenzene	U	1.10	ug/kg	0.331	1.10
135-98-8	sec-Butylbenzene	U	1.10	ug/kg	0.331	1.10
99-87-6	4-Isopropyltoluene	U	1.10	ug/kg	0.331	1.10
541-73-1	1,3-Dichlorobenzene	U	1.10	ug/kg	0.331	1.10
106-46-7	1,4-Dichlorobenzene	U	1.10	ug/kg	0.331	1.10
104-51-8	n-Butylbenzene	U	1.10	ug/kg	0.331	1.10
96-12-8	1,2-Dibromo-3-chloropropane	U	1.10	ug/kg	0.331	1.10
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.52	ug/kg	1.77	5.52
630-20-6	1,1,1,2-Tetrachloroethane	U	1.10	ug/kg	0.331	1.10
95-50-1	1,2-Dichlorobenzene	U	1.10	ug/kg	0.331	1.10

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	189	ug/kg		J
	Unknown Siloxane	16.17	112	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r413.d
Lab Smp Id: 232357002 Client Smp ID: CAMO-09-10479
Inj Date : 02-JUL-2009 14:59
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232357002|882208|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	9.46790	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1418097	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1053012	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	578960	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.626	9.632	(0.965)	354686	49.9155	55.1
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1365486	48.9492	54.1
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	530280	49.5915	54.8

ION RATIO REPORT

VOA REPORT

Data file: 6r413.d
Report Date: 07/06/2009 07:32
Lab. ID: 232357002 SampleType: SAMPLE
Injection Date: 25-JUN-2009 14:59
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232357002|882208|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2455
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	16081	9.97	9.71	80-120	100	(T)
64	2488	9.97	9.71	2- 62	15	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	9730	11.62	11.41	80-120	100	(T)
43	4196	11.62	11.41	199-259	43	(QT)
100	914196	11.63	11.41	11- 71	9395	(QT)
82 Bromoform				CAS#: 75-25-2		
173	2411	14.36	14.06	80-120	100	(T)
175	33352	14.36	14.06	19- 79	1383	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	9597	14.23	14.16	80-120	100	(T)
120	4433	14.24	14.16	0- 58	46	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	11800	14.23	14.53	80-120	100	(T)
75	25641	14.23	14.53	251-311	217	(QT)
77	853	14.24	14.56	714-774	7	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r413.d
Lab Smp Id: 232357002 Client Smp ID: CAMO-09-10479
Inj Date : 02-JUL-2009 14:59
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232357002|882208|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	9.46790	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	2913165	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3131812	50.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	9988478	171.436847	189	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown Siloxane					CAS #:		
16.168	6342183	101.254185	112	0		0	101

Data File: /chem/VOA6.i/070209v6/6r413.d
Date : 02-JUL-2009 14:59
Client ID: CAMO-09-10479
Sample Info: |2323570021882208111VOAF11|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

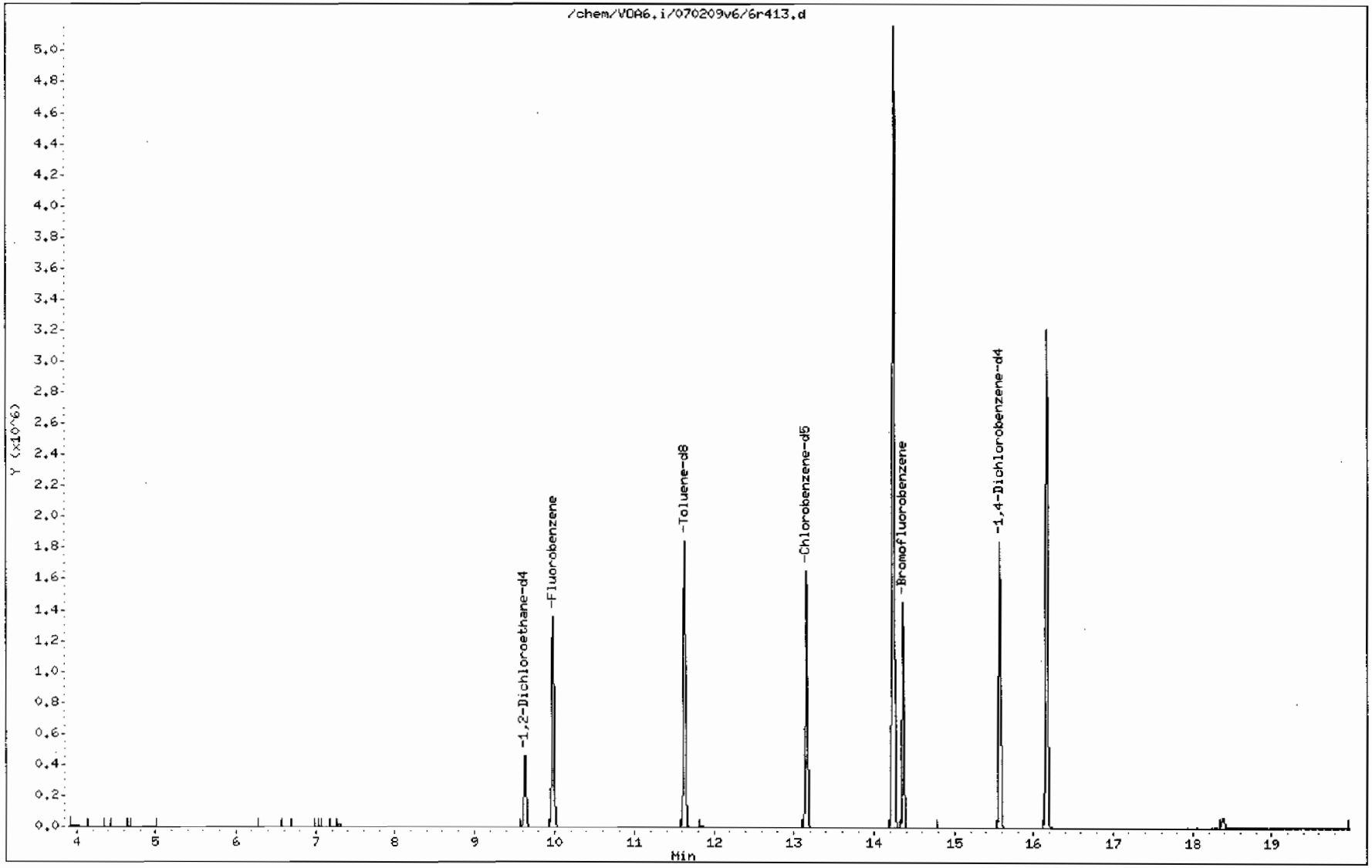

Data File: /chem/VOA6.i/070209v6/6r413.d

Date : 02-JUL-2009 14:59

Client ID: CAMO-09-10479

Instrument: VOA6.i

Sample Info: |2323570021882208|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122480	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122481	91	C8H24O4Si4	296
Cyclotetrasiloxane, octamethyl-	556-67-2	NIST05.L	122479	86	C8H24O4Si4	296

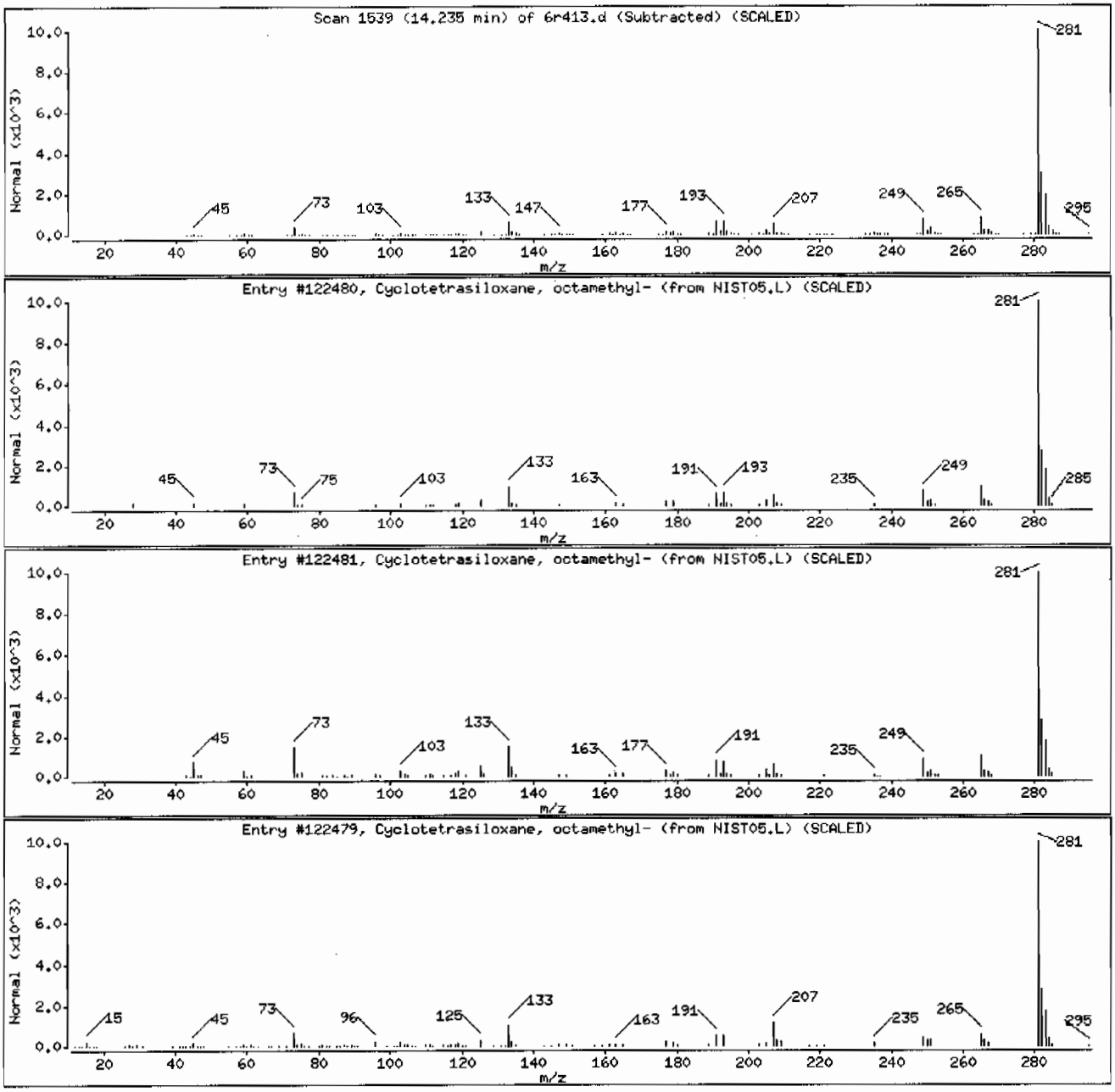

Data File: /chem/VOA6.i/070209v6/6r413.d

Date : 02-JUL-2009 14:59

Client ID: CAMO-09-10479 Instrument: VOA6.i

Sample Info: |2323570021882208|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Benzaldehyde, 2,4-bis(trimethylsiloxy)-	33617-38-8	NIST05.L	112902	78	C13H22O3Si2	282
Butanamide, 2,2,3,3,4,4,4-heptafluoro-N-	55471-01-7	NIST05.L	184036	78	C18H26F7NO3Si	493
p-Trimethylsilyloxyphenyl-bis(trimethyls	1000079-08-1	NIST05.L	161171	72	C17H34O3Si3	370

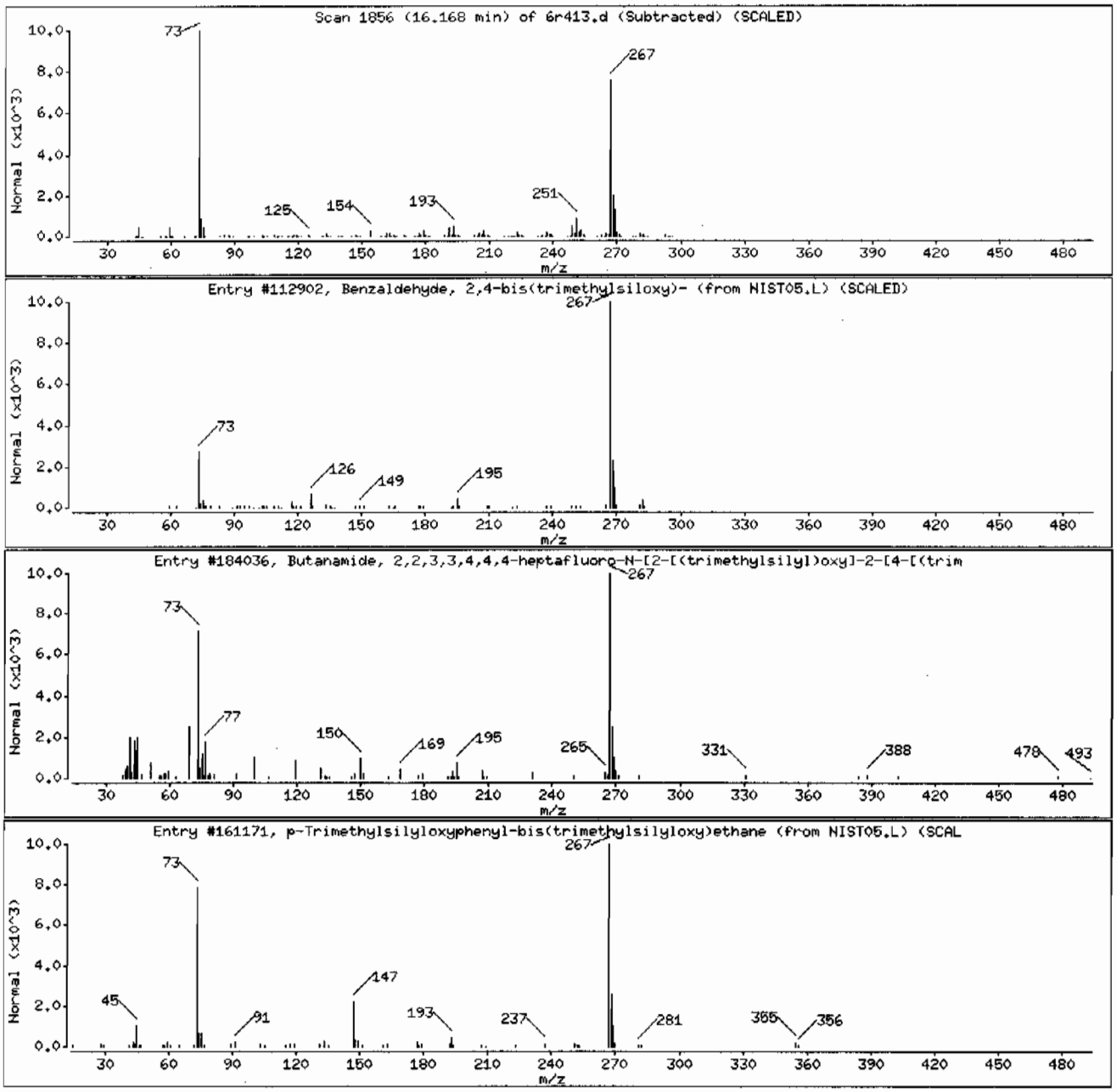

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10480	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:31	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:45	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r412.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.383	1.13
74-87-3	Chloromethane	U	1.13	ug/kg	0.338	1.13
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.338	1.13
74-83-9	Bromomethane	U	1.13	ug/kg	0.338	1.13
75-00-3	Chloroethane	U	1.13	ug/kg	0.338	1.13
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.642	1.13
67-64-1	Acetone	U	5.63	ug/kg	1.87	5.63
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
74-88-4	Iodomethane	U	5.63	ug/kg	1.80	5.63
75-09-2	Methylene chloride	U	5.63	ug/kg	2.25	5.63
75-15-0	Carbon disulfide	U	5.63	ug/kg	1.41	5.63
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.338	1.13
78-93-3	2-Butanone	U	5.63	ug/kg	1.69	5.63
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13
67-66-3	Chloroform	U	1.13	ug/kg	0.338	1.13
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.372	1.13
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.338	1.13
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.338	1.13
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.338	1.13
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.338	1.13
71-43-2	Benzene	U	1.13	ug/kg	0.338	1.13
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.372	1.13
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.338	1.13
74-95-3	Dibromomethane	U	1.13	ug/kg	0.338	1.13
108-10-1	4-Methyl-2-pentanone	U	5.63	ug/kg	1.41	5.63
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13
108-88-3	Toluene	U	1.13	ug/kg	0.338	1.13
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.338	1.13
591-78-6	2-Hexanone	U	5.63	ug/kg	1.69	5.63
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.338	1.13
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.338	1.13
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.338	1.13
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.338	1.13
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.338	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10480	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 14:31	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:45	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r412.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.338	1.13
179601-23-1	m,p-Xylenes	U	2.25	ug/kg	0.338	2.25
95-47-6	o-Xylene	U	1.13	ug/kg	0.338	1.13
100-42-5	Styrene	U	1.13	ug/kg	0.338	1.13
75-25-2	Bromoform	U	1.13	ug/kg	0.338	1.13
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.338	1.13
108-86-1	Bromobenzene	U	1.13	ug/kg	0.338	1.13
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.338	1.13
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.338	1.13
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.338	1.13
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.338	1.13
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.338	1.13
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.338	1.13
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.338	1.13
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.338	1.13
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.338	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.63	ug/kg	1.80	5.63
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	14.24	267	ug/kg		J
	Unknown Siloxane	16.17	69.3	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r412.d
Lab Smp Id: 232357001 Client Smp ID: CAMO-09-10480
Inj Date : 02-JUL-2009 14:31
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232357001|882208|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.22990	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1568151	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1164035	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	647058	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.633	9.632	(0.965)	396610	50.4747	56.8
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1509628	48.9549	55.1
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	589908	49.3619	55.6

ION RATIO REPORT

VOA REPORT

Data file: 6r412.d
Report Date: 07/02/2009 15:04
Lab. ID: 232357001 SampleType: SAMPLE
Injection Date: 25-JUN-2009 14:31
Operator: RXD1 Instrument: VOA6.i
Sample Info: |232357001|882208|1|VOAF|1|
Miscellaneous Info: LANL 5g N/A
Comment:
Method used: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2455
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 1,2-Dichloroethane				CAS#: 107-06-2		
62	18358	9.97	9.71	80-120	100	(T)
64	2786	9.97	9.71	2- 62	15	(T)
63 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	10696	11.63	11.41	80-120	100	(T)
43	4887	11.63	11.41	199-259	46	(QT)
100	1016808	11.63	11.41	11- 71	9506	(QT)
82 Bromoform				CAS#: 75-25-2		
173	2916	14.36	14.06	80-120	100	(T)
175	37905	14.36	14.06	19- 79	1300	(QT)
83 Isopropylbenzene				CAS#: 98-82-8		
105	14686	14.23	14.16	80-120	100	(T)
120	7008	14.23	14.16	0- 58	48	(T)
88 1,2,3-Trichloropropane				CAS#: 96-18-4		
110	19145	14.23	14.53	80-120	100	(T)
75	39784	14.23	14.53	251-311	208	(QT)
77	2003	14.24	14.56	714-774	10	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r412.d
Lab Smp Id: 232357001 Client Smp ID: CAMO-09-10480
Inj Date : 02-JUL-2009 14:31
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |232357001|882208|1|VOAF|1|
Misc Info : LANL 5g N/A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.22990	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 75 Chlorobenzene-d5	13.156	3223436	50.000
* 101 1,4-Dichlorobenzene-d4	15.576	3500141	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
14.235	15307687	237.443563	267	0		0	75

		CONCENTRATIONS			QUANT		
RT	AREA	ON COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	========	======
Unknown Siloxane				CAS #:			
16.168	4304753	61.4939841	69.3	0		0	101

Standard Data

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
Fluorobenzene (IS)									
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Chlorobenzene-d5 (IS)									
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
1,4-Dichlorobenzene-d4 (IS)									
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Report Date: 06-Jul-2009 15:31

Calibration History

Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Start Cal Date: 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
15-JUN-2009 21:45	ICALsubS	/chem/VOA6.i/061509v6/6p123.d
15-JUN-2009 16:38	ICALsubL+	/chem/VOA6.i/061509v6/6p112.d
Cal Level: 2 , Cal Amount: 2.00000		
15-JUN-2009 22:12	ICALsubS	/chem/VOA6.i/061509v6/6p124.d
15-JUN-2009 17:06	ICALsubL+	/chem/VOA6.i/061509v6/6p113.d
Cal Level: 3 , Cal Amount: 5.00000		
15-JUN-2009 22:40	ICALsubS	/chem/VOA6.i/061509v6/6p125.d
15-JUN-2009 17:34	ICALsubL+	/chem/VOA6.i/061509v6/6p114.d
Cal Level: 4 , Cal Amount: 10.00000		
15-JUN-2009 23:07	ICALsubS	/chem/VOA6.i/061509v6/6p126.d
15-JUN-2009 18:02	ICALsubL+	/chem/VOA6.i/061509v6/6p115.d
Cal Level: 5 , Cal Amount: 20.00000		
15-JUN-2009 23:35	ICALsubS	/chem/VOA6.i/061509v6/6p127.d
Cal Level: 6 , Cal Amount: 50.00000		
16-JUN-2009 00:03	ICALsubS	/chem/VOA6.i/061509v6/6p128.d
15-JUN-2009 18:58	ICALsubL+	/chem/VOA6.i/061509v6/6p117.d
Cal Level: 7 , Cal Amount: 100.00000		
16-JUN-2009 00:31	ICALsubS	/chem/VOA6.i/061509v6/6p129.d
15-JUN-2009 19:25	ICALsubL+	/chem/VOA6.i/061509v6/6p118.d
Cal Level: 8 , Cal Amount: 200.00000		
15-JUN-2009 20:21	BENZENE+	/chem/VOA6.i/061509v6/6p120.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

Ccal Level: 6 , Ccal Amount: 50.0

02-JUL-2009 09:24	CALsubL+	/chem/VOA6.i/070209v6/6r402.d
Ccal Level: 6 , Ccal Amount: 50.0		
02-JUL-2009 11:18	CALsubS+SS	/chem/VOA6.i/070209v6/6r406.d
Ccal Level: 6 , Ccal Amount: 50.0		
02-JUL-2009 10:50	CALsubS+SS	/chem/VOA6.i/070209v6/6r405.d
Ccal Level: 6 , Ccal Amount: 50.0		
25-JUN-2009 11:18	CALsubS+SS	/chem/VOA6.i/070209v6/6r406L.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
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Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Cal Date : 06-Jul-2009 11:53 ale01592

Calibration File Names:
Level 1: /chem/VOA6.i/061509v6/6p123.d
Level 2: /chem/VOA6.i/061509v6/6p124.d
Level 3: /chem/VOA6.i/061509v6/6p125.d
Level 4: /chem/VOA6.i/061509v6/6p126.d
Level 5: /chem/VOA6.i/061509v6/6p127.d
Level 6: /chem/VOA6.i/061509v6/6p128.d
Level 7: /chem/VOA6.i/061509v6/6p129.d
Level 8: /chem/VOA6.i/061509v6/6p120.d

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
M 1 1,3-Dichloropropylene	0.27544	0.29033	0.30650	0.32107	+++++	0.34011						
	0.35889	+++++					AVRG		0.31539		9.86340	<-
M 2 Xylenes (total)	0.59566	0.59657	0.59601	0.58227	+++++	0.58411						
	0.59134	+++++					AVRG		0.59099		1.07471	<-
M 3 1,2-Dichloroethylene (total)	0.32414	0.32656	0.33087	0.32600	+++++-	0.32023						
	0.34084	+++++					AVRG		0.32811		2.17323	<-
149 2-Chloro-1,1,1-trifluoroethan	+++++	0.29734	0.28267	0.29451	0.29820	0.30590						
	0.30582	+++++					AVRG		0.29741		2.88857	
150 Chlorotrifluoroethylene	+++++	43935	101652	246383	646724	1109403						
	1509962	+++++					LINR	0.24340	0.20463		0.99518	

GEL Laboratories LLC

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Cal Date : 06-Jul-2009 11:53 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
4 Dichlorodifluoromethane	0.13161	0.14094	0.11922	0.13531	+++++	0.17053						
	+++++	+++++					AVRG		0.13952		13.67384	<-
5 Chloromethane	0.23779	0.24450	0.21508	0.21165	+++++	0.23513						
	0.24826	+++++					AVRG		0.23207		6.57592	<-
6 Vinyl chloride	0.24395	0.23708	0.22059	0.22101	+++++	0.23679						
	0.25049	+++++					AVRG		0.23499		5.14524	<-
7 Bromomethane	0.18105	0.18725	0.18116	0.17766	+++++	0.18863						
	0.19753	+++++					AVRG		0.18554		3.86954	<-
8 Chloroethane	0.16454	0.16546	0.16079	0.15800	+++++	0.16887						
	0.17831	+++++					AVRG		0.16599		4.28991	<-
9 Trichlorofluoromethane	0.30693	0.30576	0.29943	0.29506	+++++	0.32090						
	0.33843	+++++					AVRG		0.31108		5.14818	<-
10 Ethyl Ether	0.22129	0.22569	0.20788	0.20815	+++++	0.19747						
	0.20146	+++++					AVRG		0.21032		5.25454	<-
11 Acrolein	0.01031	0.01206	0.01277	0.01270	0.01290	0.01304						
	+++++	+++++					AVRG		0.01230		8.36598	
12 Trichlorotrifluoroethane	0.08392	0.08432	0.08499	0.08626	0.08832	0.08660						
	+++++	+++++					AVRG		0.08574		1.92299	

GEL Laboratories LLC

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Cal Date : 06-Jul-2009 11:53 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
13 Acetone	12618	16737	37799	72872	+++++	356585						
	775871	+++++					LINR	0.03377	0.03909		0.99837	<-
14 1,1-Dichloroethylene	0.30080	0.31032	0.30296	0.30718	+++++	0.30016						
	0.32939	+++++					AVRG		0.30847		3.55406	<-
15 Iodomethane	0.35239	0.37137	0.37392	0.37331	+++++	0.35631						
	0.37445	+++++					AVRG		0.36696		2.69739	<-
16 Acetonitrile	0.02590	0.02605	0.02566	0.02490	+++++	0.02959						
	0.02427	+++++					AVRG		0.02606		7.11268	<-
17 Methyl acetate	0.16580	0.16150	0.15871	0.15195	+++++	0.13909						
	0.13727	+++++					AVRG		0.15239		7.81037	<-
18 Carbon disulfide	0.58961	0.67421	0.69354	0.68468	+++++	0.64591						
	0.68305	+++++					AVRG		0.66184		5.89088	<-
19 Allyl chloride	0.28034	0.27716	0.28272	0.28775	0.29694	0.28814						
	+++++	+++++					AVRG		0.28551		2.46062	
20 Methylene chloride	+++++	74487	98882	133235	+++++	482869						
	985874	+++++					LINR	-0.09825	0.23638		0.99835	
21 Acrylonitrile	0.06301	0.06531	0.06785	0.07037	0.07088	0.07138						
	+++++	+++++					AVRG		0.06813		4.97324	

GEL Laboratories LLC

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Method file : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Cal Date : 06-Jul-2009 11:53 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
22 tert-Butyl methyl ether	0.58721	0.70504	0.60204	0.59953	+++++	0.57924						
	0.61984	+++++					AVRG		0.61548		7.47666	<-
23 trans-1,2-Dichloroethylene	0.30317	0.31236	0.31106	0.30953	+++++	0.30215						
	0.32350	+++++					AVRG		0.31030		2.48329	<-
24 Vinyl acetate	0.29540	0.31030	0.36823	0.36492	+++++	0.36861						
	0.37071	+++++					AVRG		0.34636		9.84000	<-
25 1,1-Dichloroethane	0.39871	0.39339	0.39239	0.38898	+++++	0.37872						
	0.39998	+++++					AVRG		0.39203		1.96321	<-
26 Isopropyl Alcohol	0.01177	0.01177	0.01204	0.01258	0.01281	0.01381						
	0.01310	+++++					AVRG		0.01255		6.01789	
27 2-Chloro-1,3-butadiene	0.22911	0.24432	0.24771	0.26154	0.27530	0.28081						
	+++++	+++++					AVRG		0.25646		7.69184	
28 tert-butyl Alcohol	0.01975	0.01978	0.02037	0.02092	0.02147	0.02321						
	0.02205	+++++					AVRG		0.02108		6.00892	
29 Ethyl acetate	0.21882	0.19255	0.18745	0.18595	0.18581	0.18189						
	+++++	+++++					AVRG		0.19208		7.05201	
30 2-Butanone	0.05539	0.05429	0.05391	0.05513	+++++	0.05255						
	0.05006	+++++					AVRG		0.05356		3.70852	<-

GEL Laboratories LLC

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
31 cis-1,2-Dichloroethylene	0.34510	0.34077	0.35068	0.34247	+++++	0.33832						
	0.35817	+++++					AVRG		0.34592		2.12285	<-
32 Propionitrile	0.02501	0.02566	0.02758	0.02803	0.02842	0.02858						
	+++++	+++++					AVRG		0.02721		5.54678	
33 2,2-Dichloropropane	0.28560	0.27796	0.28689	0.29051	+++++	0.30049						
	0.32415	+++++					AVRG		0.29427		5.56597	<-
34 Isopropyl ether	++++-	0.69275	0.68132	0.69967	0.71415	0.73228						
	0.72086	+++++					AVRG		0.70684		2.68289	
35 Bromochloromethane	0.10578	0.11321	0.11574	0.11774	+++++	0.11580						
	0.12389	+++++					AVRG		0.11536		5.13085	<-
36 Chloroform	0.38994	0.37237	0.37763	0.37588	+++++	0.36743						
	0.38772	+++++					AVRG		0.37849		2.31445	<-
37 Methacrylonitrile	0.10026	0.10191	0.10789	0.11008	0.11174	0.11065						
	+++++	+++++					AVRG		0.10709		4.52446	
38 Tetrahydrofuran	0.13539	0.13746	0.13935	0.13956	0.14219	0.13620						
	+++++	+++++					AVRG		0.13836		1.81013	
40 1,1,1-Trichloroethane	0.28710	0.29716	0.30179	0.30737	+++++	0.31269						
	0.33548	+++++					AVRG		0.30693		5.37992	<-

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
41 Ethyl tert-butyl ether	+++++	0.64322	0.64224	0.66405	0.68271	0.71454						
	0.70716	+++++					AVRG		0.67565		4.61349	
42 Isobutyl alcohol	0.00517	0.00549	0.00646	0.00666	0.00674	0.00714						
	+++++	+++++					AVRG		0.00627		12.31212	
43 Cyclohexane	0.38774	0.39266	0.39439	0.38663	+++++	0.37663						
	0.40197	+++++					AVRG		0.39000		2.19048	<-
44 1,1-Dichloropropene	0.30021	0.30299	0.30288	0.29906	+++++	0.29567						
	0.31351	+++++					AVRG		0.30239		2.01290	<-
45 Methyl tert-amyl ether	+++++	0.22564	0.22058	0.22051	0.22550	0.22978						
	+++++	+++++					AVRG		0.22440		1.74568	
46 Carbon tetrachloride	0.25744	0.26327	0.27164	0.27724	+-+++	0.28867						
	0.31202	+++++					AVRG		0.27838		7.09602	<-
48 1,2-Dichloroethane	0.30458	0.28647	0.28717	0.27935	++++-	0.27221						
	0.28159	+++-+					AVRG		0.28523		3.83066	<-
49 Benzene	0.94902	0.94585	0.93468	0.91611	++-++	0.87809						
	0.90863	1.00168					AVRG		0.93344		4.15708	<-
50 Cyclohexene	0.46008	0.46538	0.45929	0.44925	+++++	0.44053						
	0.46736	+++++					AVRG		0.45698		2.23954	<-

GEL Laboratories LLC

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Cal Date : 06-Jul-2009 11:53 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
52 n-Butyl alcohol	0.00464	0.00511	0.00573	0.00608	+++++	0.00637						
	0.00665	0.00471					AVRG		0.00561		14.33859	<-
53 Trichloroethylene	0.23971	0.23898	0.23297	0.22707	+++++	0.22648						
	0.23867	+++++					AVRG		0.23398		2.59771	<-
54 Methyl methacrylate	0.12364	0.12892	0.14080	0.14739	0.15260	0.15458						
	+++++	+++++					AVRG		0.14132		8.98754	
55 1,2-Dichloropropane	0.22783	0.22324	0.22920	0.22835	+++++	0.22693						
	0.23499	+++++					AVRG		0.22842		1.67529	<-
56 Methylcyclohexane	0.42477	0.42266	0.42289	0.42194	+++++	0.41506						
	0.43822	+++++					AVRG		0.42426		1.79331	<-
57 1,4-Dioxane	0.00262	0.00248	0.00220	0.00221	0.00222	0.00220						
	+++++	+++++					AVRG		0.00232		7.70555	
58 Dibromomethane	0.12754	0.12546	0.12824	0.12867	+++++	0.12934						
	0.13533	+++++					AVRG		0.12910		2.58075	<-
59 Bromodichloromethane	0.22808	0.23977	0.24709	0.25744	+++++	0.27278						
	0.28977	+++++					AVRG		0.25582		8.82140	<-
60 2-Nitropropane	7384	14872	43071	93438	205860	564432						
	+++++	+++++					LINR	0.10732	0.05907		0.99899	

GEL Laboratories LLC

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Method file : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Cal Date : 06-Jul-2009 11:53 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
61 2-Chloroethylvinyl ether	727	38503	140819	281361	+++++	1407499						
	2845999	+++++					LINR	0.04757	0.14555		0.99992	<-
62 cis-1,3-Dichloropropylene	0.29610	0.30995	0.32631	0.34009	+++++	0.35815						
	0.37687	+++++					AVRG		0.33458		8.99690	<-
63 4-Methyl-2-pentanone	0.09341	0.09495	0.10248	0.10385	+++++	0.10341						
	0.10313	+++++					AVRG		0.10020		4.70281	<-
65 Toluene	0.91141	0.84023	0.82843	0.78906	+++++	0.76864						
	0.78836	+++++					AVRG		0.82102		6.31180	<-
66 Ethyl methacrylate	0.29682	0.32657	0.36240	0.38265	0.39208	0.39346						
	+++++	+++++					AVRG		0.35900		10.98089	
67 trans-1,3-Dichloropropylene	0.34306	0.36562	0.38776	0.40296	+++++	0.43261						
	0.45413	+++++					AVRG		0.39769		10.39506	<-
68 1,1,2-Trichloroethane	0.21171	0.20945	0.21496	0.21094	+++++	0.21279						
	0.21762	+++++					AVRG		0.21291		1.38840	<-
69 2-Hexanone	0.13006	0.13152	0.14213	0.14432	+++++	0.14625						
	0.13455	+++++					AVRG		0.13814		5.03470	<-
70 1,3-Dichloropropane	0.44162	0.45818	0.46027	0.45022	+++++	0.44737						
	0.45495	+++++					AVRG		0.45210		1.55643	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Cal Date : 06-Jul-2009 11:53 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
71 Tetrachloroethylene	0.30112	0.29098	0.28869	0.27504	++++++	0.27688						
	0.28831	++++++					AVRG		0.28684		3.36264	<-
72 Dibromochloromethane	0.21794	0.22938	0.24750	0.26041	++++++	0.29497						
	0.31636	++++++					AVRG		0.26109		14.59011	<-
73 1,2-Dibromoethane	0.23390	0.23870	0.25246	0.24801	++++++	0.25726						
	0.26624	++++++					AVRG		0.24943		4.78240	<-
74 1-Chlorohexane	0.27211	0.28382	0.28170	0.29483	0.29776	0.30314						
	0.30570	++++++					AVRG		0.29129		4.24604	
76 Chlorobenzene	0.93302	0.90631	0.89655	0.86163	++++++	0.84895						
	0.86484	++++++					AVRG		0.88521		3.62382	<-
77 1,1,1,2-Tetrachloroethane	0.25774	0.27070	0.28261	0.28601	++++++	0.31034						
	0.32535	++++++					AVRG		0.28879		8.67474	<-
78 Ethylbenzene	1.50952	1.50823	1.50550	1.46571	++++++	1.44903						
	1.45710	++++++					AVRG		1.48252		1.90027	<-
79 m,p-Xylenes	0.60558	0.60238	0.60019	0.58619	++++++	0.58691						
	0.59058	++++++					AVRG		0.59530		1.41623	<-
80 o-Xylene	0.57582	0.58496	0.58765	0.57442	++++++	0.57852						
	0.59287	++++++					AVRG		0.58237		1.25186	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Cal Date : 06-Jul-2009 11:53 ale01592

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
81 Styrene	0.83211	0.84335	0.89085	0.90791	+++++	0.96971						
	0.99167	+++++					AVRG		0.90594		7.15648	<-
82 Bromoform	3930	8536	22967	49700	+++++	300303						
	666165	+++++					LINR	0.03001	0.39998		0.99857	<-
83 Isopropylbenzene	2.82803	2.81708	2.83379	2.74979	+++++	2.63965						
	2.62290	+++++					AVRG		2.74854		3.48702	<-
84 cis-1,4-Dichloro-2-butene	0.14199	0.14772	0.16651	0.17591	0.18262	0.19117						
	+++++	+++++					AVRG		0.16765		11.63406	
86 Cyclohexanone	0.00869	0.00872	0.00979	0.00999	0.00983	0.01089						
	+++++	+++++					AVRG		0.00965		8.68313	<-
87 1,1,2,2-Tetrachloroethane	0.56987	0.59990	0.59690	0.60070	+++++	0.59304						
	0.60455	+++++					AVRG		0.59416		2.10532	<-
88 1,2,3-Trichloropropane	0.14867	0.17230	0.16934	0.16685	+++++	0.16003						
	0.16602	+++++					AVRG		0.16387		5.18064	<-
89 trans-1,4-Dichloro-2-butene	0.13729	0.14472	0.16105	0.17234	0.17490	0.17969						
	+++++	+++++					AVRG		0.16166		10.69889	
90 Bromobenzene	0.72430	0.71936	0.70991	0.68619	+++++	0.68341						
	0.70677	+++++					AVRG		0.70499		2.39534	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Cal Date : 06-Jul-2009 11:53 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
91 n-Propylbenzene	3.38011	3.26003	3.25004	3.15198	+++++	3.05541						
	3.00928	+++++					AVRG		3.18448		4.36680	<-
92 1,3,5-Trimethylbenzene	2.37062	2.30275	2.34618	2.28625	-++-+	2.27945						
	2.26106	+++++					AVRG		2.30772		1.82802	<-
93 2-Chlorotoluene	2.24392	2.20790	2.22098	2.13610	++-++	2.08581						
	2.07594	+++++					AVRG		2.16177		3.34713	<-
94 4-Chlorotoluene	2.02892	1.97483	1.94704	1.89262	-+++++	1.85123						
	1.86981	+++++					AVRG		1.92741		3.53942	<-
95 tert-Butylbenzene	2.29265	2.21171	2.11549	2.15275	+++++	2.11883						
	2.13761	+++++					AVRG		2.17151		3.17087	<-
96 1,2,4-Trimethylbenzene	2.39024	2.33362	2.38151	2.31035	+++++	2.28740						
	2.28977	+++++					AVRG		2.33215		1.92598	<-
97 Pentachloroethane	0.25931	0.27148	0.29993	0.31670	0.34331	0.35584						
	+++++	+++++					AVRG		0.30776		12.48378	
98 sec-Butylbenzene	3.25024	3.15460	3.11345	3.04554	+++++	2.98216						
	2.92964	+++++					AVRG		3.07927		3.81587	<-
99 4-Isopropyltoluene	2.61296	2.54519	2.56829	2.50275	+++++	2.49418						
	2.46863	+++++					AVRG		2.53200		2.11564	<-

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INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Cal Date : 06-Jul-2009 11:53 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
100 1,3-Dichlorobenzene	1.48980	1.37353	1.35950	1.31086	++-++	1.29451						
	1.32022	+++++					AVRG		1.35807		5.23744	<-
102 1,4-Dichlorobenzene	1.54639	1.45608	1.39583	1.35328	-++++	1.31084						
	1.34330	++++					AVRG		1.40095		6.21728	<-
103 Benzyl chloride	56588	120138	377253	804087	1690242	4513803						
	+++++	+++++					LINR	0.06055	1.12590		0.99993	
104 n-Butylbenzene	1.33898	1.28517	1.29407	1.25362	+++-+	1.26482						
	1.27441	+++++					AVRG		1.28518		2.33440	<-
105 bis(2-Chloroisopropyl)ether	0.06271	0.06955	0.07355	0.07817	0.07996	0.08395						
	+++++	+++++					AVRG		0.07465		10.32263	
106 1,2-Dichlorobenzene	1.38639	1.32225	1.29005	1.26309	+++++	1.22901						
	1.26443	+++++					AVRG		1.29254		4.29218	<-
107 1,2-Dibromo-3-chloropropane	0.08418	0.09329	0.10160	0.10732	-++++	0.12304						
	+++++	+++++					AVRG		0.10188		14.43017	<-
108 1,2,4-Trichlorobenzene	1.10291	1.04218	0.97103	0.94356	++-++	0.92339						
	0.92509	+++++					AVRG		0.98469		7.38894	<-
109 Hexachlorobutadiene	0.69601	0.68171	0.65202	0.62129	+++++	0.63636						
	0.64498	+++++					AVRG		0.65540		4.30874	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Cal Date : 06-Jul-2009 11:53 ale01592

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	200 Level 8										
110 Naphthalene	1.98961	1.87703	1.89516	1.85127	+++++	1.87045						
	1.88443	+++++					AVRG		1.89466		2.57499	<-
111 1,2,3-Trichlorobenzene	0.91962	0.87421	0.83927	0.80898	+++++	0.79143						
	0.79782	+++++					AVRG		0.83855		5.98571	<-
$ 47 1,2-Dichloroethane-d4	0.25044	0.25093	0.25260	0.25463	+++++	0.24546						
	0.24916	+++++					AVRG		0.25054		1.24761	<-
$ 64 Toluene-d8	1.31559	1.33322	1.32829	1.31898	+++++	1.32742						
	1.32397	+++++					AVRG		1.32458		0.48818	<-
$ 85 Bromofluorobenzene	0.92807	0.92580	0.93226	0.92712	+++++	0.91268						
	0.91485	+++++					AVRG		0.92346		0.84952	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 15-JUN-2009 16:38
End Cal Date : 16-JUN-2009 00:31
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Cal Date : 06-Jul-2009 11:53 ale01592

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 15-JUN-2009 21:17
Lab File ID: 6p122.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-17 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	2 Xylenes (total)	0.59099	0.59137	0.59137	0.050	0.06414	60.00000	Averaged	
M	3 1,2-Dichloroethylene (total	0.32811	0.32999	0.32999	0.050	0.57430	60.00000	Averaged	
M	1 1,3-Dichloropropylene	0.31539	0.34893	0.34893	0.050	10.63563	60.00000	Averaged	
	4 Dichlorodifluoromethane	0.13952	0.13683	0.13683	0.050	-1.92704	60.00000	Averaged	
	5 Chloromethane	0.23207	0.20931	0.20931	0.100	-9.80892	60.00000	Averaged	spcc
	6 Vinyl chloride	0.23499	0.21065	0.21065	0.050	-10.35677	20.00000	Averaged	ccc
	7 Bromomethane	0.18554	0.17499	0.17499	0.050	-5.68766	60.00000	Averaged	
	8 Chloroethane	0.16599	0.15689	0.15689	0.050	-5.48267	60.00000	Averaged	
	9 Trichlorofluoromethane	0.31108	0.30390	0.30390	0.050	-2.31006	60.00000	Averaged	
	10 Ethyl Ether	0.21032	0.19242	0.19242	0.001	-8.51391	60.00000	Averaged	
	13 Acetone	257	250	0.03987	0.050	2.68916	60.00000	Linear	<-
	16 Acetonitrile	0.02606	0.02962	0.02962	0.010	13.65231	60.00000	Averaged	
	14 1,1-Dichloroethylene	0.30847	0.30569	0.30569	0.050	-0.90003	20.00000	Averaged	ccc
	17 Methyl acetate	0.15239	0.19141	0.19141	0.010	25.60532	60.00000	Averaged	
	15 Iodomethane	0.36696	0.39025	0.39025	0.050	6.34848	60.00000	Averaged	
	20 Methylene chloride	47.66806	50.00000	0.24858	0.050	-4.66388	60.00000	Linear	
	18 Carbon disulfide	0.66184	0.71375	0.71375	0.050	7.84456	60.00000	Averaged	
	22 tert-Butyl methyl ether	0.61548	0.59095	0.59095	0.050	-3.98627	60.00000	Averaged	
	23 trans-1,2-Dichloroethylene	0.31030	0.30642	0.30642	0.050	-1.24902	60.00000	Averaged	
	24 Vinyl acetate	0.34636	0.18977	0.18977	0.010	-45.20998	60.00000	Averaged	
	25 1,1-Dichloroethane	0.39203	0.38761	0.38761	0.100	-1.12735	60.00000	Averaged	spcc
	30 2-Butanone	0.05356	0.06090	0.06090	0.030	13.71574	60.00000	Averaged	
	31 cis-1,2-Dichloroethylene	0.34592	0.35356	0.35356	0.050	2.20986	60.00000	Averaged	
	33 2,2-Dichloropropane	0.29427	0.30847	0.30847	0.050	4.82609	60.00000	Averaged	
	36 Chloroform	0.37849	0.37956	0.37956	0.010	0.28266	20.00000	Averaged	ccc
	35 Bromochloromethane	0.11536	0.12034	0.12034	0.010	4.31878	60.00000	Averaged	
	40 1,1,1-Trichloroethane	0.30693	0.32094	0.32094	0.010	4.56461	60.00000	Averaged	
	43 Cyclohexane	0.39000	0.38799	0.38799	0.010	-0.51659	60.00000	Averaged	
	44 1,1-Dichloropropene	0.30239	0.30591	0.30591	0.010	1.16514	60.00000	Averaged	
	52 n-Butyl alcohol	0.00561	0.00636	0.00636	0.001	13.37079	60.00000	Averaged	
	46 Carbon tetrachloride	0.27838	0.29450	0.29450	0.010	5.79087	60.00000	Averaged	
$	47 1,2-Dichloroethane-d4	0.25054	0.24537	0.24537	0.001	-2.06059	60.00000	Averaged	
	48 1,2-Dichloroethane	0.28523	0.27846	0.27846	0.010	-2.37525	60.00000	Averaged	
	49 Benzene	0.93344	0.89669	0.89669	0.010	-3.93695	60.00000	Averaged	
	50 Cyclohexene	0.45698	0.43774	0.43774	0.001	-4.21100	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6p122.d
Analysis Type: WATER
Lab Sample ID: W6VM090615-17
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Injection Date: 15-JUN-2009 21:17
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	53 Trichloroethylene	0.23398	0.23348	0.23348	0.010	-0.21210	60.00000	Averaged	
	55 1,2-Dichloropropane	0.22842	0.23301	0.23301	0.010	2.00615	20.00000	Averaged	ccc
	56 Methylcyclohexane	0.42426	0.42715	0.42715	0.010	0.68171	60.00000	Averaged	
	59 Bromodichloromethane	0.25582	0.27654	0.27654	0.010	8.09629	60.00000	Averaged	
	58 Dibromomethane	0.12910	0.13156	0.13156	0.010	1.90860	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	203	250	0.11674	0.010	-18.83979	60.00000	Linear	
	63 4-Methyl-2-pentanone	0.10020	0.11086	0.11086	0.010	10.63751	60.00000	Averaged	
	62 cis-1,3-Dichloropropylene	0.33458	0.37060	0.37060	0.010	10.76660	60.00000	Averaged	
$	64 Toluene-d8	1.32458	1.32091	1.32091	0.010	-0.27688	60.00000	Averaged	
	65 Toluene	0.82102	0.77893	0.77893	0.010	-5.12616	20.00000	Averaged	ccc
	67 trans-1,3-Dichloropropylene	0.39769	0.43972	0.43972	0.010	10.56820	60.00000	Averaged	
	68 1,1,2-Trichloroethane	0.21291	0.21809	0.21809	0.010	2.43311	60.00000	Averaged	
	69 2-Hexanone	0.13814	0.16199	0.16199	0.010	17.26788	60.00000	Averaged	
	70 1,3-Dichloropropane	0.45210	0.45865	0.45865	0.010	1.44875	60.00000	Averaged	
	71 Tetrachloroethylene	0.28684	0.28699	0.28699	0.010	0.05439	60.00000	Averaged	
	72 Dibromochloromethane	0.26109	0.30154	0.30154	0.010	15.49125	60.00000	Averaged	
	73 1,2-Dibromoethane	0.24943	0.26313	0.26313	0.010	5.49468	60.00000	Averaged	
	76 Chlorobenzene	0.88521	0.88707	0.88707	0.300	0.21000	60.00000	Averaged	spcc
	77 1,1,1,2-Tetrachloroethane	0.28879	0.31792	0.31792	0.010	10.08760	60.00000	Averaged	
	78 Ethylbenzene	1.48252	1.45927	1.45927	0.010	-1.56790	20.00000	Averaged	ccc
	79 m,p-Xylenes	0.59530	0.59207	0.59207	0.010	-0.54358	60.00000	Averaged	
	80 o-Xylene	0.58237	0.58998	0.58998	0.010	1.30655	60.00000	Averaged	
	81 Styrene	0.90594	0.97253	0.97253	0.010	7.35079	60.00000	Averaged	
	82 Bromoform	48.27471	50.00000	0.37417	0.100	-3.45058	60.00000	Linear	spcc
	83 Isopropylbenzene	2.74854	2.68539	2.68539	0.010	-2.29746	60.00000	Averaged	
	87 1,1,2,2-Tetrachloroethane	0.59416	0.60116	0.60116	0.300	1.17786	60.00000	Averaged	spcc
$	85 Bromofluorobenzene	0.92346	0.91176	0.91176	0.010	-1.26671	60.00000	Averaged	
	88 1,2,3-Trichloropropane	0.16387	0.16327	0.16327	0.010	-0.36663	60.00000	Averaged	
	90 Bromobenzene	0.70499	0.71427	0.71427	0.010	1.31641	60.00000	Averaged	
	91 n-Propylbenzene	3.18448	3.08790	3.08790	0.010	-3.03263	60.00000	Averaged	
	93 2-Chlorotoluene	2.16177	2.15596	2.15596	0.010	-0.26908	60.00000	Averaged	
	92 1,3,5-Trimethylbenzene	2.30772	2.30229	2.30229	0.010	-0.23512	60.00000	Averaged	
	94 4-Chlorotoluene	1.92741	1.92043	1.92043	0.010	-0.36226	60.00000	Averaged	
	95 tert-Butylbenzene	2.17151	2.17106	2.17106	0.010	-0.02069	60.00000	Averaged	
	96 1,2,4-Trimethylbenzene	2.33215	2.32054	2.32054	0.010	-0.49755	60.00000	Averaged	
	98 sec-Butylbenzene	3.07927	3.03817	3.03817	0.010	-1.33484	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 15-JUN-2009 21:17
Lab File ID: 6p122.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-17 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
99	4-Isopropyltoluene	2.53200	2.51684	2.51684	0.010	-0.59887	60.00000	Averaged
100	1,3-Dichlorobenzene	1.35807	1.33772	1.33772	0.010	-1.49857	60.00000	Averaged
102	1,4-Dichlorobenzene	1.40095	1.36268	1.36268	0.010	-2.73177	60.00000	Averaged
104	n-Butylbenzene	1.28518	1.26881	1.26881	0.010	-1.27351	60.00000	Averaged
106	1,2-Dichlorobenzene	1.29254	1.29006	1.29006	0.010	-0.19132	60.00000	Averaged
107	1,2-Dibromo-3-chloropropane	0.10188	0.12483	0.12483	0.010	22.52469	60.00000	Averaged
108	1,2,4-Trichlorobenzene	0.98469	0.95045	0.95045	0.010	-3.47769	60.00000	Averaged
109	Hexachlorobutadiene	0.65540	0.66095	0.66095	0.010	0.84703	60.00000	Averaged
110	Naphthalene	1.89466	1.90575	1.90575	0.010	0.58575	60.00000	Averaged
111	1,2,3-Trichlorobenzene	0.83855	0.85498	0.85498	0.010	1.95828	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.13178
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/061509v6/6p122.d
Lab Smp Id: W6VM090615-17 Client Smp ID: SECONDSOURCE
Inj Date : 15-JUN-2009 21:17
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090615-17|L-ICV|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090527-01C+IVM090611-01
Comment :
Method : /chem/VOA6.i/061509v6/VOA6-8260B-061509.m
Meth Date : 02-Jul-2009 18:45 dav01267 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 2 Xylenes (total)	106				2594405	150.000	150
M 3 1,2-Dichloroethylene (total)	96				1296763	100.000	100
M 1 1,3-Dichloropropylene	75				1371197	100.000	111
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	268854	50.0000	49.0
5 Chloromethane	50	4.713	4.713	(0.472)	411251	50.0000	45.1
6 Vinyl chloride	62	4.934	4.934	(0.494)	413890	50.0000	44.8
7 Bromomethane	94	5.498	5.498	(0.551)	343829	50.0000	47.2
8 Chloroethane	64	5.619	5.619	(0.563)	308271	50.0000	47.2
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	597111	50.0000	48.8
10 Ethyl Ether	59	6.334	6.334	(0.635)	378067	50.0000	45.7
13 Acetone	43	6.718	6.718	(0.673)	391734	250.000	257
16 Acetonitrile	41	7.078	7.078	(0.709)	1163904	1000.00	1140
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	600635	50.0000	49.5
17 Methyl acetate	43	7.102	7.102	(0.712)	1880412	250.000	314
15 Iodomethane	142	6.968	6.968	(0.698)	3833936	250.000	266

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
20 Methylene chloride	84	7.291	7.291	(0.731)	488418	50.0000	47.7
18 Carbon disulfide	76	7.096	7.096	(0.711)	7012062	250.000	270
22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	1161117	50.0000	48.0
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	602067	50.0000	49.4
24 Vinyl acetate	43	8.066	8.066	(0.808)	1864356	250.000	137
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	761592	50.0000	49.4
30 2-Butanone	43	8.694	8.694	(0.871)	598302	250.000	284
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	694696	50.0000	51.1
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	606092	50.0000	52.4
36 Chloroform	83	9.053	9.053	(0.907)	745784	50.0000	50.1
35 Bromochloromethane	128	9.023	9.023	(0.904)	236448	50.0000	52.2
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	630600	50.0000	52.3
43 Cyclohexane	56	9.413	9.413	(0.943)	762333	50.0000	49.7
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	601062	50.0000	50.6
52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1250337	5000.00	5670
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	578645	50.0000	52.9
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	482122	50.0000	49.0
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	547120	50.0000	48.8
49 Benzene	78	9.724	9.724	(0.974)	1761848	50.0000	48.0
50 Cyclohexene	67	9.834	9.834	(0.985)	860085	50.0000	47.9
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1964840	50.0000	
53 Trichloroethylene	95	10.364	10.364	(1.038)	458759	50.0000	49.9
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	457819	50.0000	51.0
56 Methylcyclohexane	83	10.608	10.608	(1.063)	839279	50.0000	50.3
59 Bromodichloromethane	83	10.864	10.864	(1.089)	543350	50.0000	54.0
58 Dibromomethane	93	10.754	10.754	(1.078)	258499	50.0000	51.0
61 2-Chloroethylvinyl ether	63	11.089	11.089	(1.111)	1146913	250.000	203
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	810617	250.000	276
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	728169	50.0000	55.4
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1931653	50.0000	49.9
65 Toluene	92	11.699	11.699	(0.889)	1139085	50.0000	47.4
67 trans-1,3-Dichloropropylene	75	11.864	11.864	(0.902)	643028	50.0000	55.3
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	318929	50.0000	51.2
69 2-Hexanone	43	12.260	12.260	(0.932)	1184446	250.000	293
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	670714	50.0000	50.7
71 Tetrachloroethylene	164	12.290	12.290	(0.934)	419688	50.0000	50.0
72 Dibromochloromethane	129	12.540	12.540	(0.953)	440961	50.0000	57.7
73 1,2-Dibromoethane	107	12.705	12.705	(0.966)	384796	50.0000	52.7
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1462363	50.0000	
76 Chlorobenzene	112	13.193	13.193	(1.003)	1297224	50.0000	50.1
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	464920	50.0000	55.0
78 Ethylbenzene	91	13.254	13.254	(1.007)	2133985	50.0000	49.2
79 m,p-Xylenes	106	13.363	13.363	(1.016)	1731637	100.000	99.4
80 o-Xylene	106	13.796	13.796	(1.049)	862768	50.0000	50.6
81 Styrene	104	13.802	13.802	(1.049)	1422191	50.0000	53.7
82 Bromoform	173	14.058	14.058	(0.903)	306428	50.0000	48.3
83 Isopropylbenzene	105	14.156	14.156	(0.909)	2199194	50.0000	48.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
87 1,1,2,2-Tetrachloroethane	83	14.436	14.436	(0.927)	492318	50.0000	50.6
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	746687	50.0000	49.4
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	133708	50.0000	49.8
90 Bromobenzene	156	14.564	14.564	(0.935)	584949	50.0000	50.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2528829	50.0000	48.5
93 2-Chlorotoluene	91	14.729	14.729	(0.946)	1765614	50.0000	49.9
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1885454	50.0000	49.9
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1572728	50.0000	49.8
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1777982	50.0000	50.0
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1900403	50.0000	49.8
98 sec-Butylbenzene	105	15.333	15.333	(0.984)	2488099	50.0000	49.3
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	2061156	50.0000	49.7
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	1095522	50.0000	49.2
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	818947	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	1115963	50.0000	48.6
104 n-Butylbenzene	92	15.887	15.887	(1.020)	1039089	50.0000	49.4
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	1056493	50.0000	49.9
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	102232	50.0000	61.3
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	778368	50.0000	48.3
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	541281	50.0000	50.4
110 Naphthalene	128	18.289	18.289	(1.174)	1560712	50.0000	50.3
111 1,2,3-Trichlorobenzene	180	18.619	18.619	(1.195)	700180	50.0000	51.0

Data File: /chem/VOA6.i/061509v6/6p122.d
Date : 15-JUN-2009 21:17
Client ID: SECONDSOURCE
Sample Info: IW6VH090615-171L-ICV11|VOAF11|
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

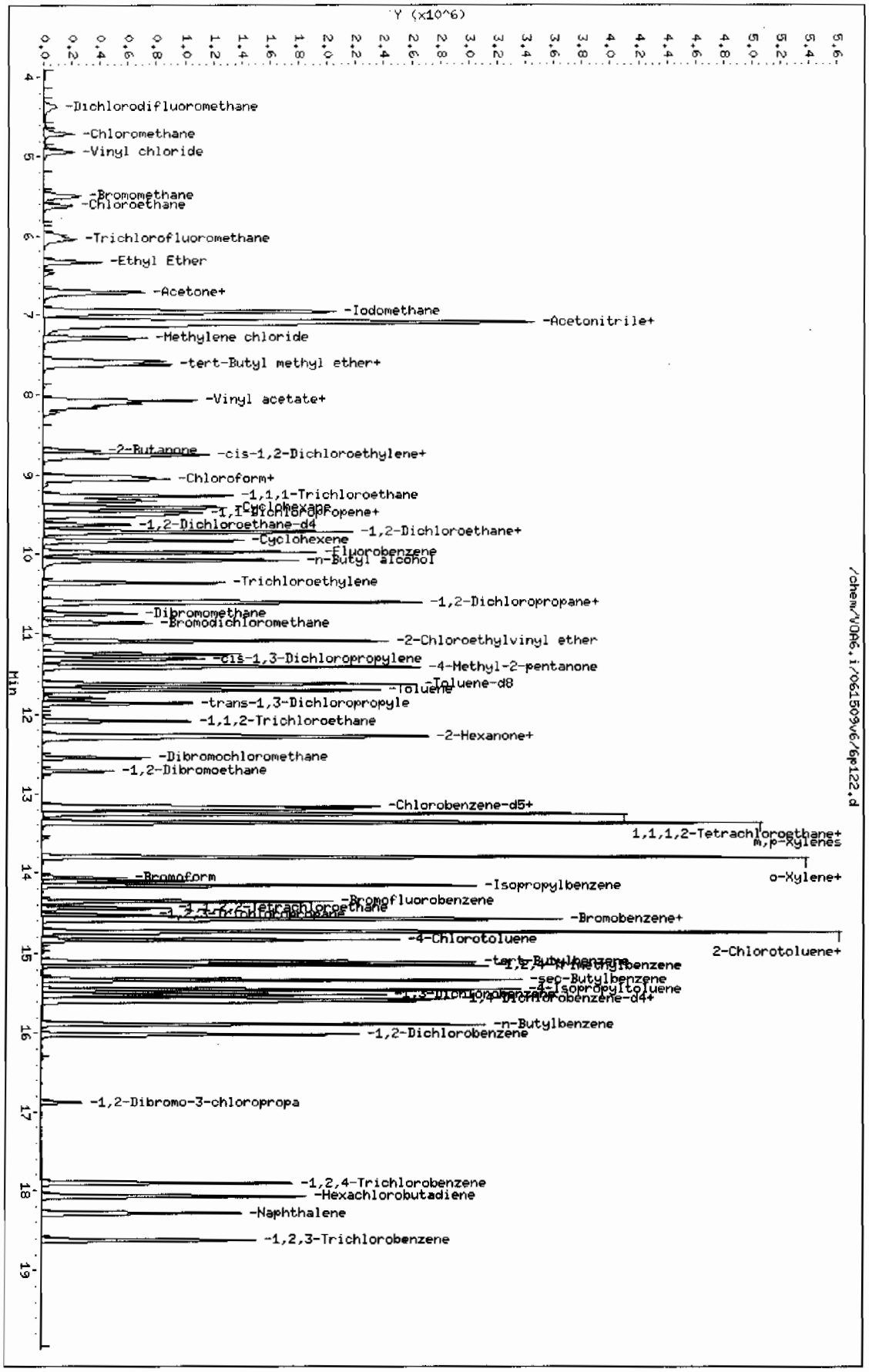

Data File: /chem/VOA6.i/061509v6/6p131.d
Report Date: 02-Jul-2009 18:45

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 16-JUN-2009 01:27
Lab File ID: 6p131.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090615-25 Quant Type: ISTD
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
150 Chlorotrifluoroethylene	132	150	0.16345	0.010	-12.01248	60.00000	Linear
149 2-Chloro-1,1,1-trifluoroeth	0.29741	0.30007	0.30007	0.010	0.89348	60.00000	Averaged
11 Acrolein	0.01230	0.01826	0.01826	0.001	48.47787	60.00000	Averaged
12 Trichlorotrifluoroethane	0.08574	0.08796	0.08796	0.050	2.59338	60.00000	Averaged
26 Isopropyl Alcohol	0.01255	0.01416	0.01416	0.001	12.77310	60.00000	Averaged
19 Allyl chloride	0.28551	0.25781	0.25781	0.010	-9.70101	60.00000	Averaged
28 tert-butyl Alcohol	0.02108	0.02335	0.02335	0.001	10.78685	60.00000	Averaged
21 Acrylonitrile	0.06813	0.06670	0.06670	0.010	-2.10050	60.00000	Averaged
34 Isopropyl ether	0.70684	0.71757	0.71757	0.001	1.51850	60.00000	Averaged
27 2-Chloro-1,3-butadiene	0.25646	0.27873	0.27873	0.010	8.68301	60.00000	Averaged
41 Ethyl tert-butyl ether	0.67565	0.69616	0.69616	0.001	3.03559	60.00000	Averaged
32 Propionitrile	0.02721	0.02683	0.02683	0.010	-1.42290	60.00000	Averaged
29 Ethyl acetate	0.19208	0.16826	0.16826	0.010	-12.40188	60.00000	Averaged
37 Methacrylonitrile	0.10709	0.10354	0.10354	0.010	-3.31123	60.00000	Averaged
38 Tetrahydrofuran	0.13836	0.13346	0.13346	0.010	-3.54546	60.00000	Averaged
42 Isobutyl alcohol	0.00627	0.00655	0.00655	0.005	4.39065	60.00000	Averaged
45 Methyl tert-amyl ether	0.22440	0.18558	0.18558	0.001	-17.30149	60.00000	Averaged
54 Methyl methacrylate	0.14132	0.14393	0.14393	0.010	1.84815	60.00000	Averaged
57 1,4-Dioxane	0.00232	0.00205	0.00205	0.001	-11.52266	60.00000	Averaged
60 2-Nitropropane	230	250	0.05311	0.010	-7.93335	60.00000	Linear
66 Ethyl methacrylate	0.35900	0.34939	0.34939	0.010	-2.67735	60.00000	Averaged
74 1-Chlorohexane	0.29129	0.30067	0.30067	0.001	3.21786	60.00000	Averaged
84 cis-1,4-Dichloro-2-butene	0.16765	0.16758	0.16758	0.010	-0.04286	60.00000	Averaged
86 Cyclohexanone	0.00965	0.00953	0.00953	0.010	-1.25952	60.00000	Averaged <-
89 trans-1,4-Dichloro-2-butene	0.16166	0.16037	0.16037	0.010	-0.80088	60.00000	Averaged
97 Pentachloroethane	0.30776	0.31329	0.31329	0.010	1.79668	60.00000	Averaged
103 Benzyl chloride	204	250	0.90663	0.010	-18.26389	60.00000	Linear
105 bis(2-Chloroisopropyl)ether	0.07465	0.07123	0.07123	0.010	-4.58560	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6p131.d
Analysis Type: WATER
Lab Sample ID: W6VM090615-25
Method: /chem/VOA6.i/061509v6/VOA6-8260B-061509.m

Injection Date: 16-JUN-2009 01:27
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31
Quant Type: ISTD

Average %D / Drift Results.	
Calculated Average %D/Drift =	7.46065
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/061509v6/6p131.d
Lab Smp Id: W6VM090615-25 Client Smp ID: SECONDSOURCE
Inj Date : 16-JUN-2009 01:27
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090615-25|S-ICV|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090601-08A+UVM090528-01C
Comment :
Method : /chem/VOA6.i/061509v6/VOA6-8260B-061509.m
Meth Date : 02-Jul-2009 18:45 dav01267 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALsubS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
150 Chlorotrifluoroethylene	116	4.290	4.290	(0.430)	924962	150.000	132
149 2-Chloro-1,1,1-trifluoroethane	118	5.065	5.065	(0.508)	1698102	150.000	151
11 Acrolein	56	6.542	6.542	(0.655)	172193	250.000	371
12 Trichlorotrifluoroethane	85	6.700	6.700	(0.671)	829627	250.000	256
26 Isopropyl Alcohol	45	6.791	6.791	(0.680)	1335415	2500.00	2820
19 Allyl chloride	41	7.145	7.145	(0.716)	2431624	250.000	226
28 tert-butyl alcohol	59	7.291	7.291	(0.731)	2202614	2500.00	2770
21 Acrylonitrile	53	7.547	7.547	(0.756)	629130	250.000	245
34 Isopropyl ether	45	8.078	8.078	(0.809)	1353604	50.0000	50.8
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	525791	50.0000	54.3
41 Ethyl tert-butyl ether	59	8.486	8.486	(0.850)	1313221	50.0000	51.5
32 Propionitrile	54	8.779	8.779	(0.880)	253020	250.000	246
29 Ethyl acetate	43	8.706	8.706	(0.872)	1586974	250.000	219
37 Methacrylonitrile	41	8.950	8.950	(0.897)	976596	250.000	242
38 Tetrahydrofuran	42	9.065	9.065	(0.582)	519500	250.000	241

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42 Isobutyl alcohol	41	9.389	9.389	(0.941)	617828	2500.00	2610
45 Methyl tert-amyl ether	55	9.742	9.742	(0.976)	350066	50.0000	41.3
54 Methyl methacrylate	69	10.589	10.589	(1.061)	1357561	250.000	255
57 1,4-Dioxane	88	10.699	10.699	(1.072)	193767	2500.00	2210
60 2-Nitropropane	43	11.071	11.071	(1.109)	500944	250.000	230
66 Ethyl methacrylate	69	11.858	11.858	(0.901)	2460727	250.000	243
74 1-Chlorohexane	55	13.052	13.052	(0.992)	423520	50.0000	51.6
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	652342	250.000	250
86 Cyclohexanone	55	14.320	14.320	(1.089)	335574	1250.00	1230
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	624266	250.000	248
97 Pentachloroethane	167	15.180	15.180	(0.975)	1219540	250.000	254
103 Benzyl chloride	91	15.717	15.717	(1.009)	3529240	250.000	204
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	277260	250.000	238
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1886367	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1408600	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	778539	50.0000	

Data File: /chem/VOA6.i/061509v6/6p131.d
Date : 16-JUN-2009 01:27
Client ID: SECONDSOURCE
Sample Info: IW6VH090615-25IS-ICV|1|VOAF1|1
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

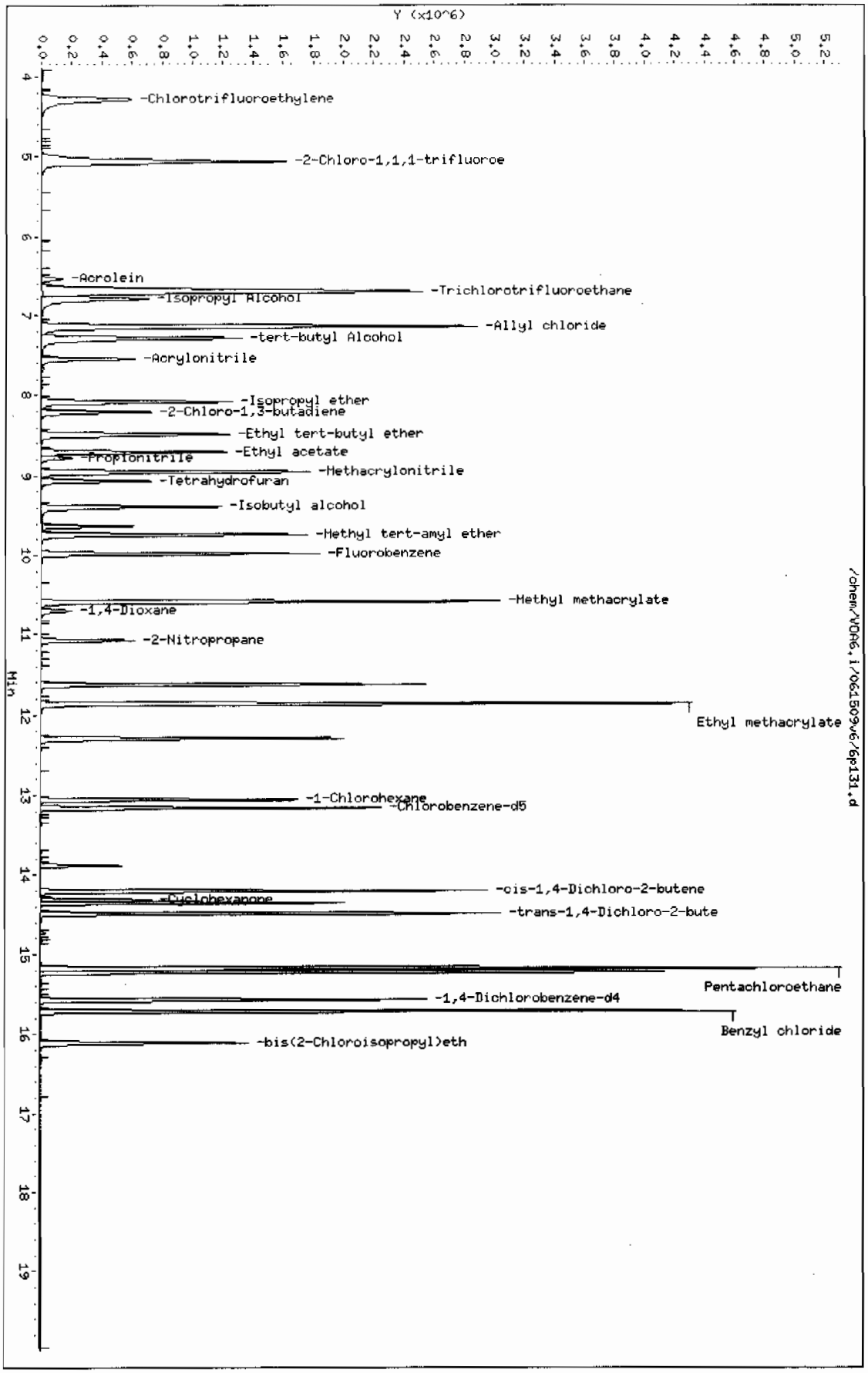

Page 1

Data File: /chem/VOA6.i/070209v6/6r402.d
Report Date: 08-Jul-2009 12:51

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 02-JUL-2009 09:24
Lab File ID: 6r402.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090702-01 Quant Type: ISTD
Method: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	2 Xylenes (total)	0.59099	0.62251	0.62251	0.050	5.33280	60.00000	Averaged	
M	3 1,2-Dichloroethylene (total	0.32811	0.34079	0.34079	0.050	3.86509	60.00000	Averaged	
M	1 1,3-Dichloropropylene	0.31539	0.36373	0.36373	0.050	15.32779	60.00000	Averaged	
	4 Dichlorodifluoromethane	0.13952	0.18740	0.18740	0.050	34.31760	60.00000	Averaged	
	5 Chloromethane	0.23207	0.24704	0.24704	0.100	6.44948	60.00000	Averaged	spcc
	6 Vinyl chloride	0.23499	0.25808	0.25808	0.050	9.82955	20.00000	Averaged	ccc
	7 Bromomethane	0.18554	0.19679	0.19679	0.050	6.06326	60.00000	Averaged	
	8 Chloroethane	0.16599	0.18195	0.18195	0.050	9.61022	60.00000	Averaged	
	9 Trichlorofluoromethane	0.31108	0.33984	0.33984	0.050	9.24284	60.00000	Averaged	
	10 Ethyl Ether	0.21032	0.20989	0.20989	0.001	-0.20399	60.00000	Averaged	
	13 Acetone	274	250	0.04264	0.050	9.77209	60.00000	Linear	<-
	16 Acetonitrile	0.02606	0.03340	0.03340	0.010	28.15994	60.00000	Averaged	
	14 1,1-Dichloroethylene	0.30847	0.33191	0.33191	0.050	7.60004	20.00000	Averaged	ccc
	17 Methyl acetate	0.15239	0.15558	0.15558	0.010	2.09473	60.00000	Averaged	
	15 Iodomethane	0.36696	0.39787	0.39787	0.050	8.42496	60.00000	Averaged	
	20 Methylene chloride	48.32472	50.00000	0.25168	0.050	-3.35056	60.00000	Linear	
	18 Carbon disulfide	0.66184	0.74430	0.74430	0.050	12.46065	60.00000	Averaged	
	22 tert-Butyl methyl ether	0.61548	0.63613	0.63613	0.050	3.35404	60.00000	Averaged	
	23 trans-1,2-Dichloroethylene	0.31030	0.32515	0.32515	0.050	4.78724	60.00000	Averaged	
	24 Vinyl acetate	0.34636	0.37832	0.37832	0.010	9.22548	60.00000	Averaged	
	25 1,1-Dichloroethane	0.39203	0.40198	0.40198	0.100	2.53816	60.00000	Averaged	spcc
	30 2-Butanone	0.05356	0.05263	0.05263	0.030	-1.73260	60.00000	Averaged	
	31 cis-1,2-Dichloroethylene	0.34592	0.35643	0.35643	0.050	3.03791	60.00000	Averaged	
	33 2,2-Dichloropropane	0.29427	0.32310	0.32310	0.050	9.79980	60.00000	Averaged	
	36 Chloroform	0.37849	0.38987	0.38987	0.010	3.00633	20.00000	Averaged	ccc
	35 Bromochloromethane	0.11536	0.12692	0.12692	0.010	10.02286	60.00000	Averaged	
	40 1,1,1-Trichloroethane	0.30693	0.33672	0.33672	0.010	9.70433	60.00000	Averaged	
	43 Cyclohexane	0.39000	0.41689	0.41689	0.010	6.89527	60.00000	Averaged	
	44 1,1-Dichloropropene	0.30239	0.32254	0.32254	0.010	6.66514	60.00000	Averaged	
	52 n-Butyl alcohol	0.00561	0.00775	0.00775	0.001	37.98841	60.00000	Averaged	
	46 Carbon tetrachloride	0.27838	0.31563	0.31563	0.010	13.38067	60.00000	Averaged	
$	47 1,2-Dichloroethane-d4	0.25054	0.25389	0.25389	0.001	1.33800	60.00000	Averaged	
	48 1,2-Dichloroethane	0.28523	0.28021	0.28021	0.010	-1.75924	60.00000	Averaged	
	49 Benzene	0.93344	0.95559	0.95559	0.010	2.37383	60.00000	Averaged	
	50 Cyclohexene	0.45698	0.48383	0.48383	0.001	5.87444	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 02-JUL-2009 09:24
Lab File ID: 6r402.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090702-01 Quant Type: ISTD
Method: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	53 Trichloroethylene	0.23398	0.24736	0.24736	0.010	5.71714	60.00000	Averaged	
	55 1,2-Dichloropropane	0.22842	0.23842	0.23842	0.010	4.37679	20.00000	Averaged	ccc
	56 Methylcyclohexane	0.42426	0.45773	0.45773	0.010	7.88875	60.00000	Averaged	
	59 Bromodichloromethane	0.25582	0.28938	0.28938	0.010	13.11681	60.00000	Averaged	
	58 Dibromomethane	0.12910	0.13981	0.13981	0.010	8.30046	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	264	250	0.15216	0.010	5.49478	60.00000	Linear	
	63 4-Methyl-2-pentanone	0.10020	0.10904	0.10904	0.010	8.82072	60.00000	Averaged	
	62 cis-1,3-Dichloropropylene	0.33458	0.38319	0.38319	0.010	14.52915	60.00000	Averaged	
$	64 Toluene-d8	1.32458	1.31291	1.31291	0.010	-0.88136	60.00000	Averaged	
	65 Toluene	0.82102	0.82142	0.82142	0.010	0.04844	20.00000	Averaged	ccc
	67 trans-1,3-Dichloropropylene	0.39769	0.45803	0.45803	0.010	15.17336	60.00000	Averaged	
	68 1,1,2-Trichloroethane	0.21291	0.22972	0.22972	0.010	7.89613	60.00000	Averaged	
	69 2-Hexanone	0.13814	0.14252	0.14252	0.010	3.17227	60.00000	Averaged	
	70 1,3-Dichloropropane	0.45210	0.47376	0.47376	0.010	4.78980	60.00000	Averaged	
	71 Tetrachloroethylene	0.28684	0.30776	0.30776	0.010	7.29458	60.00000	Averaged	
	72 Dibromochloromethane	0.26109	0.32103	0.32103	0.010	22.95764	60.00000	Averaged	
	73 1,2-Dibromoethane	0.24943	0.28147	0.28147	0.010	12.84754	60.00000	Averaged	
	76 Chlorobenzene	0.88521	0.90903	0.90903	0.300	2.69052	60.00000	Averaged	spcc
	77 1,1,1,2-Tetrachloroethane	0.28879	0.32871	0.32871	0.010	13.82249	60.00000	Averaged	
	78 Ethylbenzene	1.48252	1.54836	1.54836	0.010	4.44112	20.00000	Averaged	ccc
	79 m,p-Xylenes	0.59530	0.62876	0.62876	0.010	5.62051	60.00000	Averaged	
	80 o-Xylene	0.58237	0.61000	0.61000	0.010	4.74460	60.00000	Averaged	
	81 Styrene	0.90594	1.02888	1.02888	0.010	13.57094	60.00000	Averaged	
	82 Bromoform	52.66194	50.00000	0.40927	0.100	5.32387	60.00000	Linear	spcc
	83 Isopropylbenzene	2.74854	2.77802	2.77802	0.010	1.07266	60.00000	Averaged	
	87 1,1,2,2-Tetrachloroethane	0.59416	0.65572	0.65572	0.300	10.36108	60.00000	Averaged	spcc
$	85 Bromofluorobenzene	0.92346	0.90632	0.90632	0.010	-1.85598	60.00000	Averaged	
	88 1,2,3-Trichloropropane	0.16387	0.17727	0.17727	0.010	8.17833	60.00000	Averaged	
	90 Bromobenzene	0.70499	0.72789	0.72789	0.010	3.24823	60.00000	Averaged	
	91 n-Propylbenzene	3.18448	3.23683	3.23683	0.010	1.64400	60.00000	Averaged	
	93 2-Chlorotoluene	2.16177	2.16221	2.16221	0.010	0.02040	60.00000	Averaged	
	92 1,3,5-Trimethylbenzene	2.30772	2.37795	2.37795	0.010	3.04353	60.00000	Averaged	
	94 4-Chlorotoluene	1.92741	1.94048	1.94048	0.010	0.67824	60.00000	Averaged	
	95 tert-Butylbenzene	2.17151	2.23584	2.23584	0.010	2.96248	60.00000	Averaged	
	96 1,2,4-Trimethylbenzene	2.33215	2.40777	2.40777	0.010	3.24267	60.00000	Averaged	
	98 sec-Butylbenzene	3.07927	3.14253	3.14253	0.010	2.05422	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6r402.d
Analysis Type: WATER
Lab Sample ID: W6VM090702-01
Method: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m

Injection Date: 02-JUL-2009 09:24
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
99 4-Isopropyltoluene	2.53200	2.63545	2.63545	0.010	4.08586	60.00000	Averaged
100 1,3-Dichlorobenzene	1.35807	1.39855	1.39855	0.010	2.98058	60.00000	Averaged
102 1,4-Dichlorobenzene	1.40095	1.42905	1.42905	0.010	2.00550	60.00000	Averaged
104 n-Butylbenzene	1.28518	1.35525	1.35525	0.010	5.45247	60.00000	Averaged
106 1,2-Dichlorobenzene	1.29254	1.33849	1.33849	0.010	3.55568	60.00000	Averaged
107 1,2-Dibromo-3-chloropropane	0.10188	0.14734	0.14734	0.010	44.61536	60.00000	Averaged
108 1,2,4-Trichlorobenzene	0.98469	1.05344	1.05344	0.010	6.98191	60.00000	Averaged
109 Hexachlorobutadiene	0.65540	0.70668	0.70668	0.010	7.82482	60.00000	Averaged
110 Naphthalene	1.89466	2.14522	2.14522	0.010	13.22499	60.00000	Averaged
111 1,2,3-Trichlorobenzene	0.83855	0.91476	0.91476	0.010	9.08712	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 7.86772
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r402.d
Lab Smp Id: W6VM090702-01 Client Smp ID: VSTD050
Inj Date : 02-JUL-2009 09:24
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090702-01|change|1|VOAF|1|
Misc Info : GEL 5uL N/A UVM090603-07B+UVM090617-07C
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 2 Xylenes (total)	106				2269104	150.000	158
M 3 1,2-Dichloroethylene (total)	96				1101774	100.000	104
M 1 1,3-Dichloropropylene	75				1175948	100.000	115
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	302935	50.0000	67.2
5 Chloromethane	50	4.713	4.713	(0.472)	399334	50.0000	53.2
6 Vinyl chloride	62	4.934	4.934	(0.494)	417192	50.0000	54.9
7 Bromomethane	94	5.508	5.508	(0.552)	318118	50.0000	53.0
8 Chloroethane	64	5.629	5.629	(0.564)	294118	50.0000	54.8
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	549348	50.0000	54.6
10 Ethyl Ether	59	6.334	6.334	(0.635)	339294	50.0000	49.9
13 Acetone	43	6.718	6.718	(0.673)	344662	250.000	274
16 Acetonitrile	41	7.078	7.078	(0.709)	1079793	1000.00	1280
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	536536	50.0000	53.8
17 Methyl acetate	43	7.102	7.102	(0.712)	1257470	250.000	255
15 Iodomethane	142	6.968	6.968	(0.698)	3215823	250.000	271

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
20 Methylene chloride	84	7.297	7.297	(0.731)	406847	50.0000	48.3
18 Carbon disulfide	76	7.108	7.108	(0.712)	6015856	250.000	281
22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	1028299	50.0000	51.7
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	525607	50.0000	52.4
24 Vinyl acetate	43	8.066	8.066	(0.808)	3057741	250.000	273
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	649802	50.0000	51.3
30 2-Butanone	43	8.694	8.694	(0.871)	425362	250.000	246
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	576167	50.0000	51.5
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	522300	50.0000	54.9
36 Chloroform	83	9.053	9.053	(0.907)	630232	50.0000	51.5
35 Bromochloromethane	128	9.023	9.023	(0.904)	205166	50.0000	55.0
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	544305	50.0000	54.8
43 Cyclohexane	56	9.413	9.413	(0.943)	673910	50.0000	53.4
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	521387	50.0000	53.3
52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1252039	5000.00	6900
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	510214	50.0000	56.7
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	410413	50.0000	50.7
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	452964	50.0000	49.1
49 Benzene	78	9.724	9.724	(0.974)	1544722	50.0000	51.2
50 Cyclohexene	67	9.834	9.834	(0.985)	782107	50.0000	52.9
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1616503	50.0000	
53 Trichloroethylene	95	10.364	10.364	(1.038)	399854	50.0000	52.8
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	385408	50.0000	52.2
56 Methylcyclohexane	83	10.608	10.608	(1.063)	739914	50.0000	53.9
59 Bromodichloromethane	83	10.864	10.864	(1.089)	467784	50.0000	56.6
58 Dibromomethane	93	10.748	10.748	(1.077)	226010	50.0000	54.2
61 2-Chloroethylvinyl ether	63	11.089	11.089	(1.111)	1229856	250.000	264
63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	662455	250.000	272
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	619425	50.0000	57.3
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1595218	50.0000	49.6
65 Toluene	92	11.699	11.699	(0.889)	998048	50.0000	50.0
67 trans-1,3-Dichloropropylene	75	11.858	11.858	(0.901)	556523	50.0000	57.6
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	279120	50.0000	53.9
69 2-Hexanone	43	12.260	12.260	(0.932)	865826	250.000	258
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	575627	50.0000	52.4
71 Tetrachloroethylene	164	12.290	12.290	(0.934)	373938	50.0000	53.6
72 Dibromochloromethane	129	12.540	12.540	(0.953)	390066	50.0000	61.5
73 1,2-Dibromoethane	107	12.705	12.705	(0.966)	341998	50.0000	56.4
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1215029	50.0000	
76 Chlorobenzene	112	13.193	13.193	(1.003)	1104500	50.0000	51.3
77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	399392	50.0000	56.9
78 Ethylbenzene	91	13.254	13.254	(1.007)	1881298	50.0000	52.2
79 m,p-Xylenes	106	13.363	13.363	(1.016)	1527931	100.000	106
80 o-Xylene	106	13.796	13.796	(1.049)	741173	50.0000	52.4
81 Styrene	104	13.802	13.802	(1.049)	1250119	50.0000	56.8
82 Bromoform	173	14.064	14.064	(0.903)	284571	50.0000	52.7
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1931600	50.0000	50.5

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
87 1,1,2,2-Tetrachloroethane	83	14.442	14.442	(0.927)	455934	50.0000	55.2
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	630180	50.0000	49.1
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	123259	50.0000	54.1
90 Bromobenzene	156	14.564	14.564	(0.935)	506112	50.0000	51.6
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2250616	50.0000	50.8
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1503420	50.0000	50.0
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1653426	50.0000	51.5
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1349246	50.0000	50.3
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1554612	50.0000	51.5
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1674160	50.0000	51.6
98 sec-Butylbenzene	105	15.332	15.332	(0.984)	2185046	50.0000	51.0
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	1832471	50.0000	52.0
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	972433	50.0000	51.5
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	695315	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	993638	50.0000	51.0
104 n-Butylbenzene	92	15.887	15.887	(1.020)	942327	50.0000	52.7
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	930675	50.0000	51.8
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	102448	50.0000	72.3
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	732476	50.0000	53.5
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	491365	50.0000	53.9
110 Naphthalene	128	18.289	18.289	(1.174)	1491607	50.0000	56.6
111 1,2,3-Trichlorobenzene	180	18.618	18.618	(1.195)	636043	50.0000	54.5

Data File: /chem/VOA6.i/070209v6/6r402.d
Date : 02-JUL-2009 09:24
Client ID: VSTD050
Sample Info: IW6VH090702-01lchange11lVOAF11
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

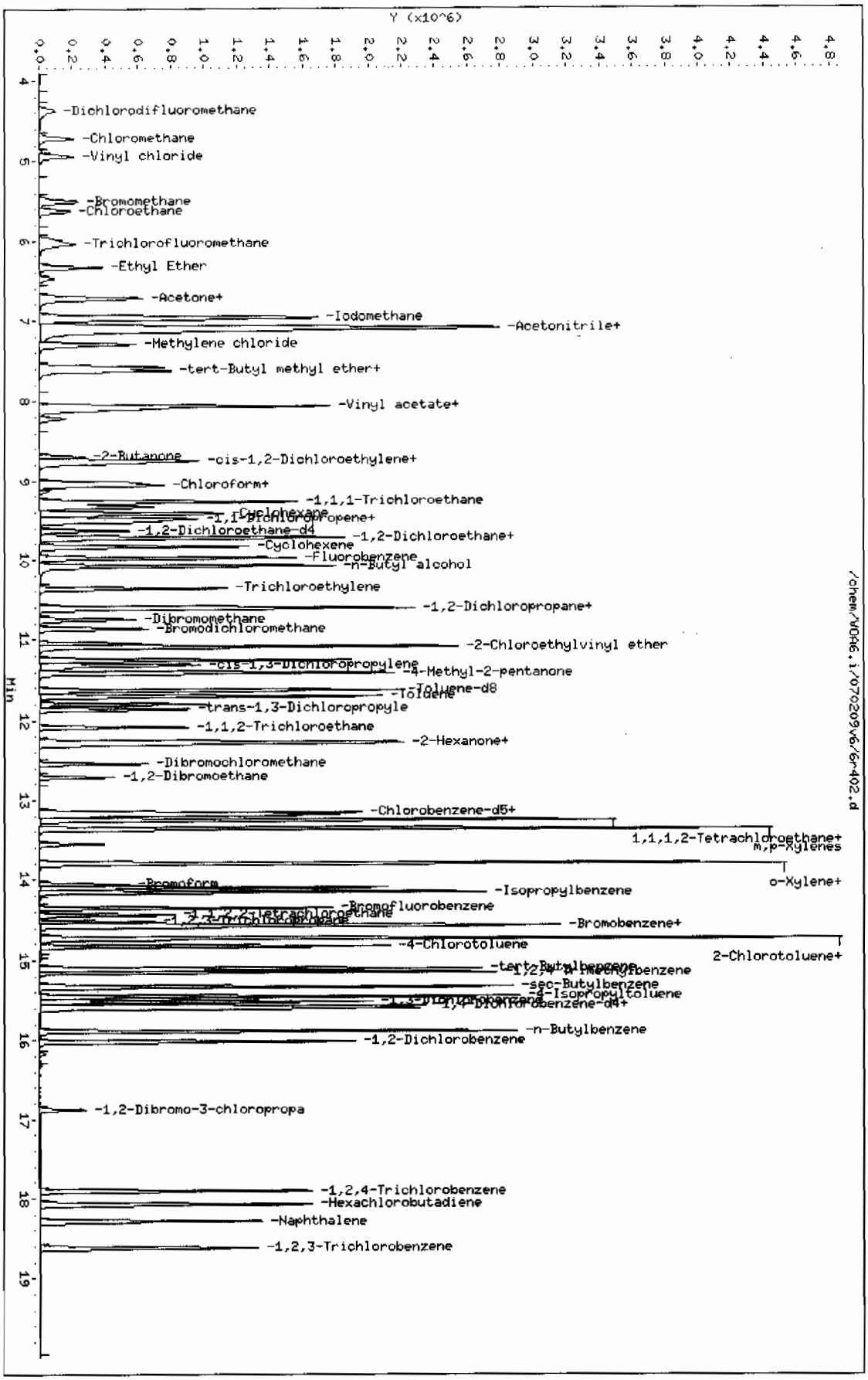

Page 1

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i Injection Date: 02-JUL-2009 11:18
Lab File ID: 6r406.d Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Analysis Type: WATER Init. Cal. Times: 16:38 00:31
Lab Sample ID: W6VM090702-04 Quant Type: ISTD
Method: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
150 Chlorotrifluoroethylene	137	150	0.17077	0.010	-8.43502	60.00000	Linear
149 2-Chloro-1,1,1-trifluoroeth	0.29741	0.31770	0.31770	0.010	6.82442	60.00000	Averaged
11 Acrolein	0.01230	0.02191	0.02191	0.001	78.18246	60.00000	Averaged <-
12 Trichlorotrifluoroethane	0.08574	0.08257	0.08257	0.050	-3.69870	60.00000	Averaged
26 Isopropyl Alcohol	0.01255	0.01557	0.01557	0.001	23.99064	60.00000	Averaged
19 Allyl chloride	0.28551	0.23777	0.23777	0.010	-16.72052	60.00000	Averaged
28 tert-butyl Alcohol	0.02108	0.02586	0.02586	0.001	22.65985	60.00000	Averaged
21 Acrylonitrile	0.06813	0.06722	0.06722	0.010	-1.33597	60.00000	Averaged
34 Isopropyl ether	0.70684	0.71050	0.71050	0.001	0.51842	60.00000	Averaged
27 2-Chloro-1,3-butadiene	0.25646	0.26028	0.26028	0.010	1.48647	60.00000	Averaged
41 Ethyl tert-butyl ether	0.67565	0.70366	0.70366	0.001	4.14463	60.00000	Averaged
32 Propionitrile	0.02721	0.02721	0.02721	0.010	-0.01589	60.00000	Averaged
29 Ethyl acetate	0.19208	0.16403	0.16403	0.010	-14.60479	60.00000	Averaged
37 Methacrylonitrile	0.10709	0.09850	0.09850	0.010	-8.02261	60.00000	Averaged
38 Tetrahydrofuran	0.13836	0.12875	0.12875	0.010	-6.94869	60.00000	Averaged
42 Isobutyl alcohol	0.00627	0.00657	0.00657	0.005	4.74715	60.00000	Averaged
45 Methyl tert-amyl ether	0.22440	0.18972	0.18972	0.001	-15.45680	60.00000	Averaged
54 Methyl methacrylate	0.14132	0.14127	0.14127	0.010	-0.03819	60.00000	Averaged
66 Ethyl methacrylate	0.35900	0.33982	0.33982	0.010	-5.34331	60.00000	Averaged
74 1-Chlorohexane	0.29129	0.30532	0.30532	0.001	4.81582	60.00000	Averaged
57 1,4-Dioxane	0.00232	0.00219	0.00219	0.001	-5.48904	60.00000	Averaged
60 2-Nitropropane	218	250	0.05034	0.010	-12.62132	60.00000	Linear
84 cis-1,4-Dichloro-2-butene	0.16765	0.16994	0.16994	0.010	1.36476	60.00000	Averaged
86 Cyclohexanone	0.00965	0.01029	0.01029	0.010	6.59974	60.00000	Averaged <-
89 trans-1,4-Dichloro-2-butene	0.16166	0.16229	0.16229	0.010	0.38695	60.00000	Averaged
97 Pentachloroethane	0.30776	0.26535	0.26535	0.010	-13.77861	60.00000	Averaged
103 Benzyl chloride	250	250	1.11405	0.010	0.15888	60.00000	Linear
105 bis(2-Chloroisopropyl)ether	0.07465	0.07747	0.07747	0.010	3.78300	60.00000	Averaged
$ 47 1,2-Dichloroethane-d4	0.25054	0.23876	0.23876	0.001	-4.70095	60.00000	Averaged
$ 64 Toluene-d8	1.32458	1.29462	1.29462	0.010	-2.26156	60.00000	Averaged
$ 85 Bromofluorobenzene	0.92346	0.90752	0.90752	0.010	-1.72583	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA6.i
Lab File ID: 6r406.d
Analysis Type: WATER
Lab Sample ID: W6VM090702-04
Method: /chem/VOA6.i/070209v6/VOA6-8260B-061509.m

Injection Date: 02-JUL-2009 11:18
Init. Cal. Date(s): 15-JUN-2009 16-JUN-2009
Init. Cal. Times: 16:38 00:31
Quant Type: ISTD

Average %D / Drift Results.	
Calculated Average %D/Drift =	7.86772
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r406.d
Lab Smp Id: W6VM090702-04 Client Smp ID: VSTD250S
Inj Date : 02-JUL-2009 11:18
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |W6VM090702-04|short/LCS|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090601-08B/UVM090624-02A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 06-Jul-2009 11:53 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
150 Chlorotrifluoroethylene	116	4.290	4.290	(0.430)	824622	150.000	137
149 2-Chloro-1,1,1-trifluoroethane	118	5.075	5.075	(0.509)	1534171	150.000	160
11 Acrolein	56	6.542	6.542	(0.655)	176328	250.000	445
12 Trichlorotrifluoroethane	85	6.706	6.706	(0.672)	664505	250.000	241
26 Isopropyl Alcohol	45	6.798	6.798	(0.681)	1252859	2500.00	3100
19 Allyl chloride	41	7.145	7.145	(0.716)	1913613	250.000	208
28 tert-Butyl Alcohol	59	7.291	7.291	(0.731)	2080919	2500.00	3070(H)
21 Acrylonitrile	53	7.554	7.554	(0.757)	541030	250.000	247
34 Isopropyl ether	45	8.084	8.084	(0.810)	1143654	50.0000	50.2
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	418950	50.0000	50.7
41 Ethyl tert-butyl ether	59	8.492	8.492	(0.851)	1132635	50.0000	52.1
32 Propionitrile	54	8.779	8.779	(0.880)	218984	250.000	250
29 Ethyl acetate	43	8.706	8.706	(0.872)	1320113	250.000	213
37 Methacrylonitrile	41	8.956	8.956	(0.897)	792725	250.000	230(H)
38 Tetrahydrofuran	42	9.066	9.066	(0.582)	432788	250.000	233(H)
42 Isobutyl alcohol	41	9.395	9.395	(0.941)	528994	2500.00	2620

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
45 Methyl tert-amyl ether	55	9.742	9.742	(0.976)	305375	50.0000	42.3
54 Methyl methacrylate	69	10.590	10.590	(1.061)	1136954	250.000	250
66 Ethyl methacrylate	69	11.858	11.858	(0.901)	2037226	250.000	237(H)
74 1-Chlorohexane	55	13.059	13.059	(0.993)	366087	50.0000	52.4(H)
57 1,4-Dioxane	88	10.699	10.699	(1.072)	176617	2500.00	2360
60 2-Nitropropane	43	11.077	11.077	(1.110)	405171	250.000	218
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	571266	250.000	253
86 Cyclohexanone	55	14.321	14.321	(1.089)	308381	1250.00	1330
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	545543	250.000	251
97 Pentachloroethane	167	15.180	15.180	(0.975)	892005	250.000	216
103 Benzyl chloride	91	15.717	15.717	(1.009)	3744952	250.000	250
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	260429	250.000	259
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1609640	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1199019	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	672311	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	384317	50.0000	47.6
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1552278	50.0000	48.9
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	610139	50.0000	49.1

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /chem/VOA6.i/070209v6/6r406.d
Date : 02-JUL-2009 11:18
Client ID: VSTD250S
Sample Info: IW6VH090702-04short/LCS|1|VOAF11|
Purge Volume: 5.0
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

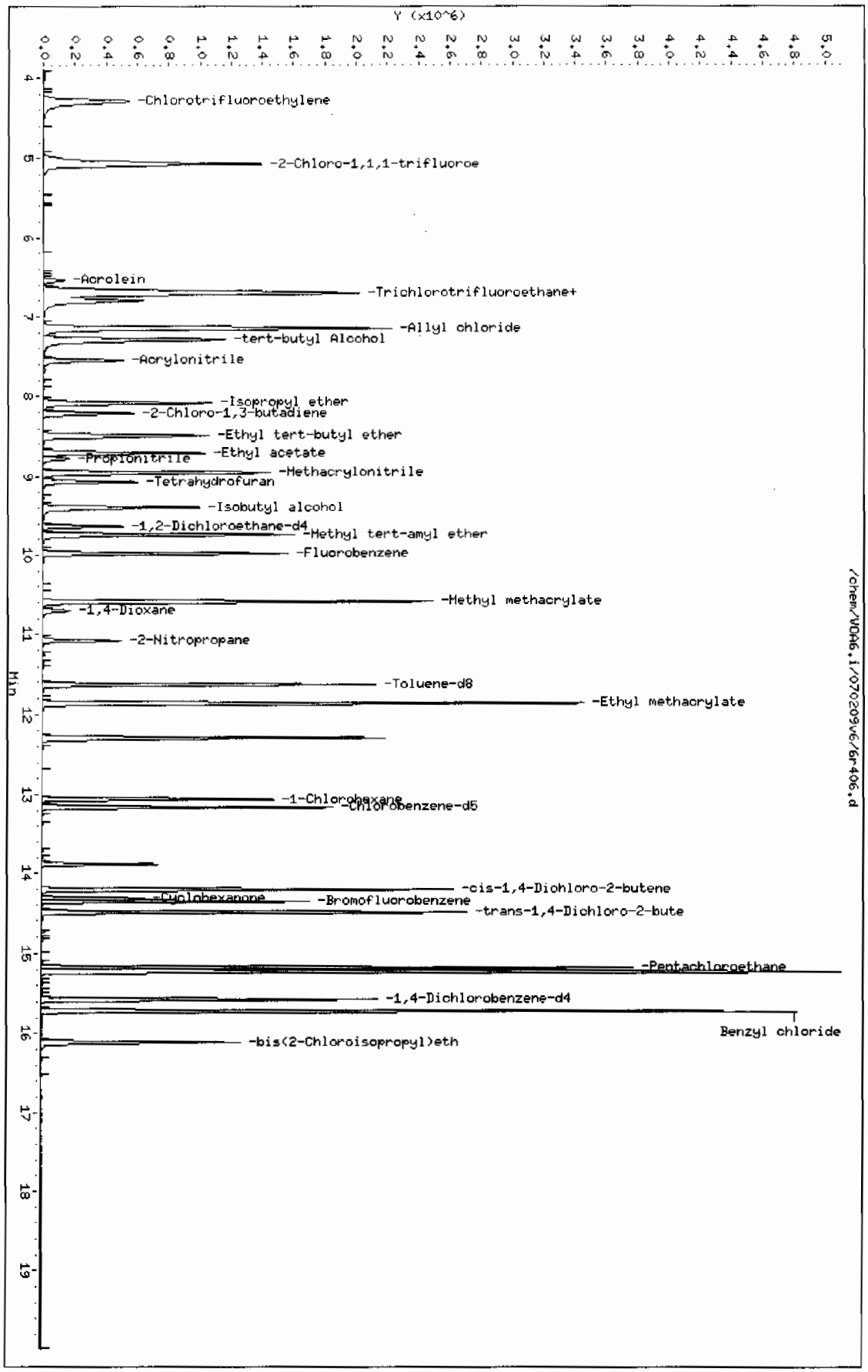

Page 1

QC Data

Data File: /chem/VOA6.i/061509v6/6p111.d

Page 1

Date : 15-JUN-2009 16:10

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

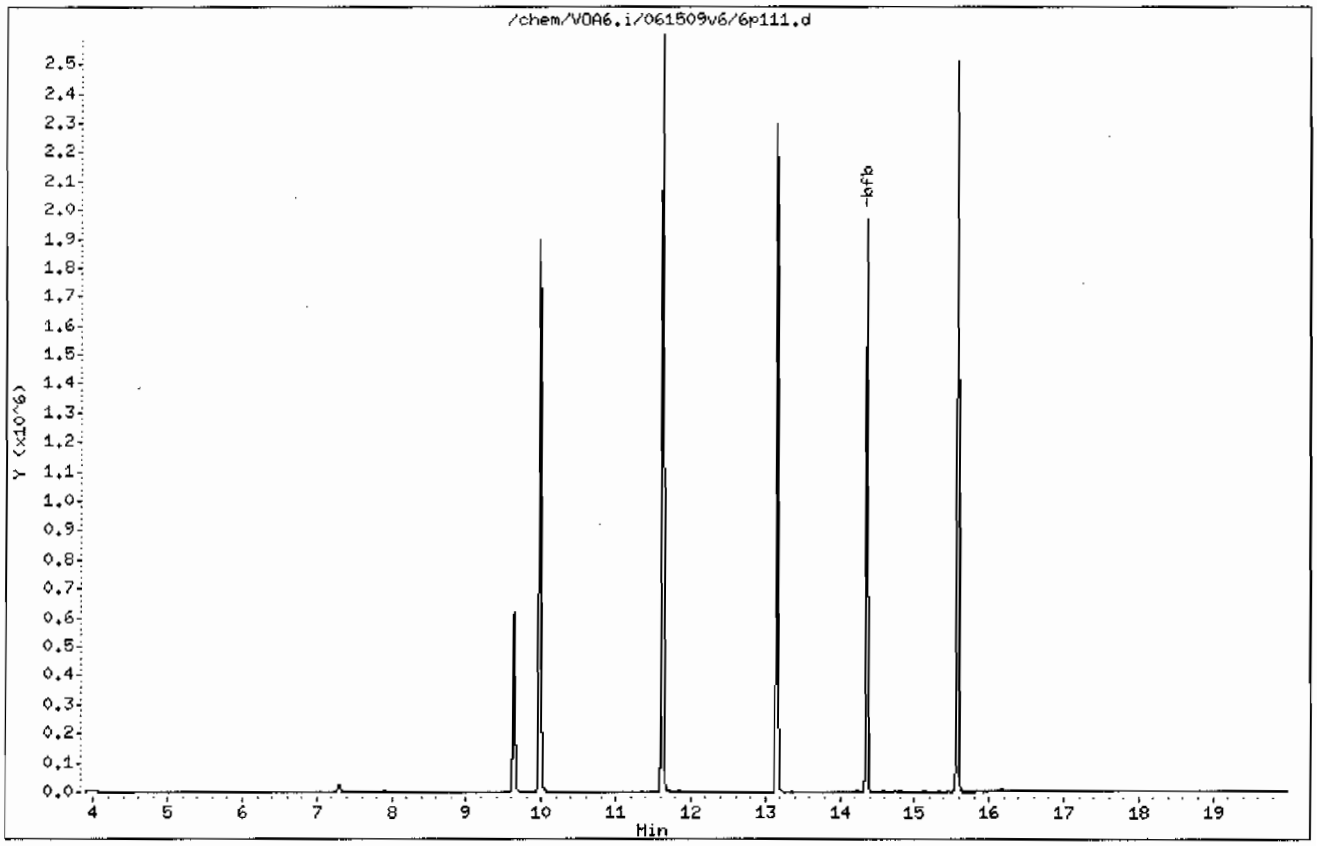

Data File: /chem/VOA6.i/061509v6/6p111.d

Date : 15-JUN-2009 16:10

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

1 bfb

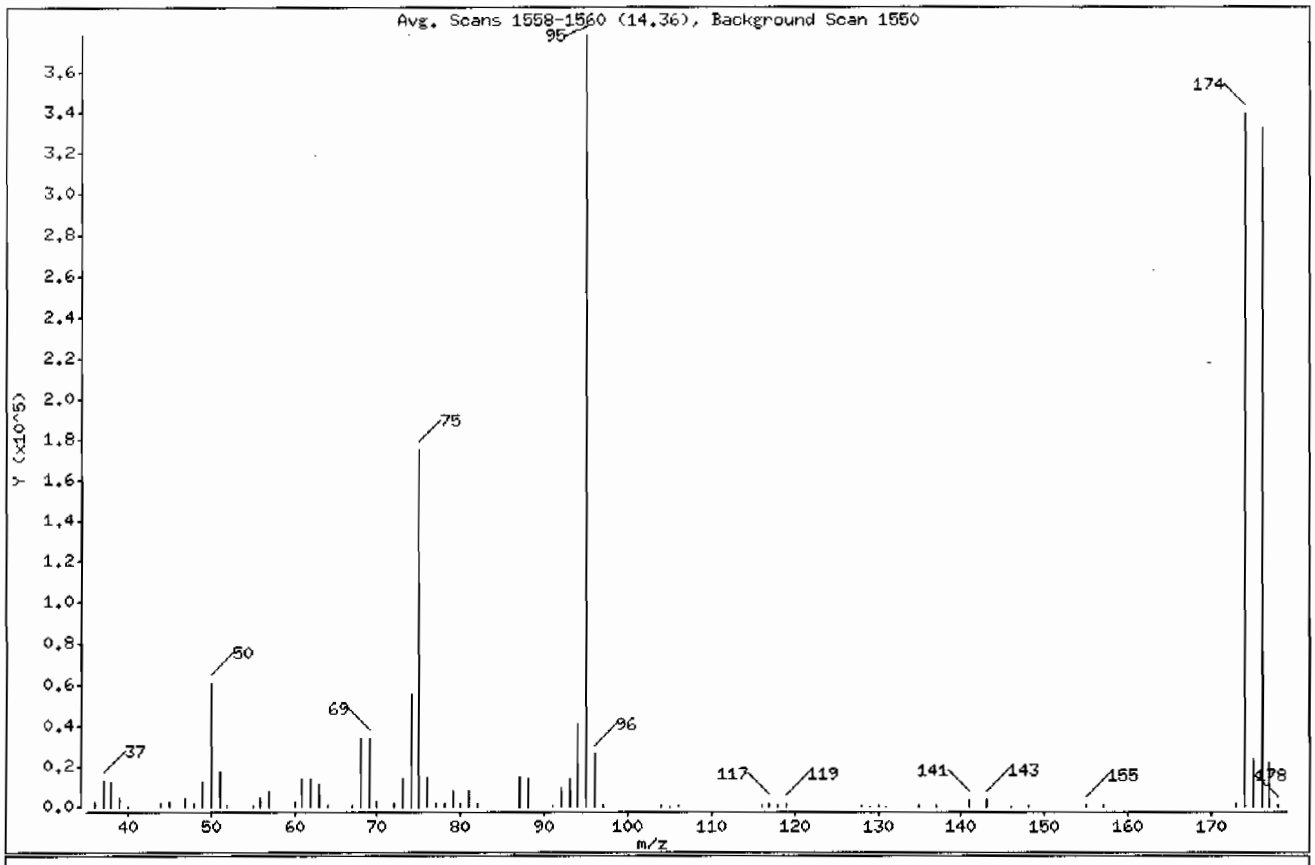

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.99
75	30.00 - 60.00% of mass 95	46.24
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.49 (0.54)
174	50.00 - 100.00% of mass 95	89.71
175	5.00 - 9.00% of mass 174	6.23 (6.94)
176	95.00 - 101.00% of mass 174	87.72 (97.77)
177	5.00 - 9.00% of mass 176	5.64 (6.43)

Data File: /chem/VOA6.i/061509v6/6p111.d

Date : 15-JUN-2009 16:10

Client ID: BFB01 Instrument: VOA6.i

Sample Info: |RINSE|BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624 Column diameter: 0.25

Data File: 6p111.d

Spectrum: Avg. Scans 1558-1560 (14.36), Background Scan 1550

Location of Maximum: 95.00

Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2269	62.00	13935	87.00	15033	130.00	1206
37.00	13180	63.00	10916	88.00	14161	131.00	168
38.00	12293	64.00	960	91.00	1067	135.00	629
39.00	4779	67.00	849	92.00	9277	137.00	637
40.00	185	68.00	33536	93.00	13940	141.00	3085
44.00	1434	69.00	34232	94.00	40720	143.00	3197
45.00	2465	70.00	2699	95.00	378240	146.00	201
47.00	4159	72.00	1532	96.00	25712	148.00	871
48.00	1584	73.00	13567	97.00	790	155.00	942
49.00	12246	74.00	55256	104.00	1142	157.00	649
50.00	60496	75.00	174912	105.00	187	173.00	1835
51.00	17576	76.00	15006	106.00	1232	174.00	339328
52.00	838	77.00	1958	116.00	1147	175.00	23552
55.00	715	78.00	1408	117.00	1930	176.00	331776
56.00	4247	79.00	7489	118.00	1112	177.00	21320
57.00	8192	80.00	2165	119.00	1755	178.00	704
60.00	2578	81.00	7460	128.00	1279		
61.00	13830	82.00	1674	129.00	402		

Data File: /chem/VOA6.i/070209v6/6r402BFB.d

Page 1

Date : 02-JUL-2009 09:24

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |W6VM090702-01|CCV/BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

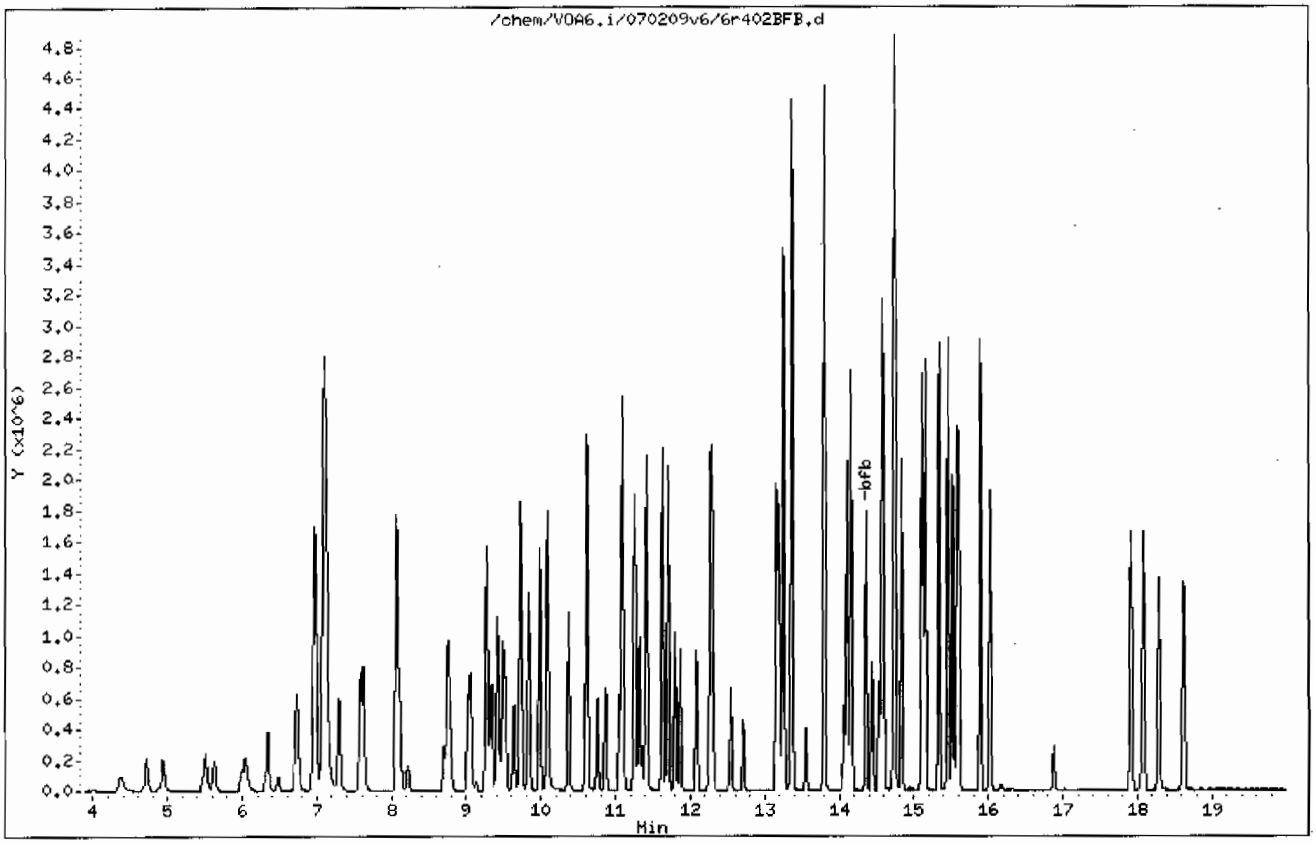

Data File: /chem/VOA6.i/070209v6/6r402BFB.d

Date : 02-JUL-2009 09:24

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |W6VM090702-01|CCV/BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

1 bfb

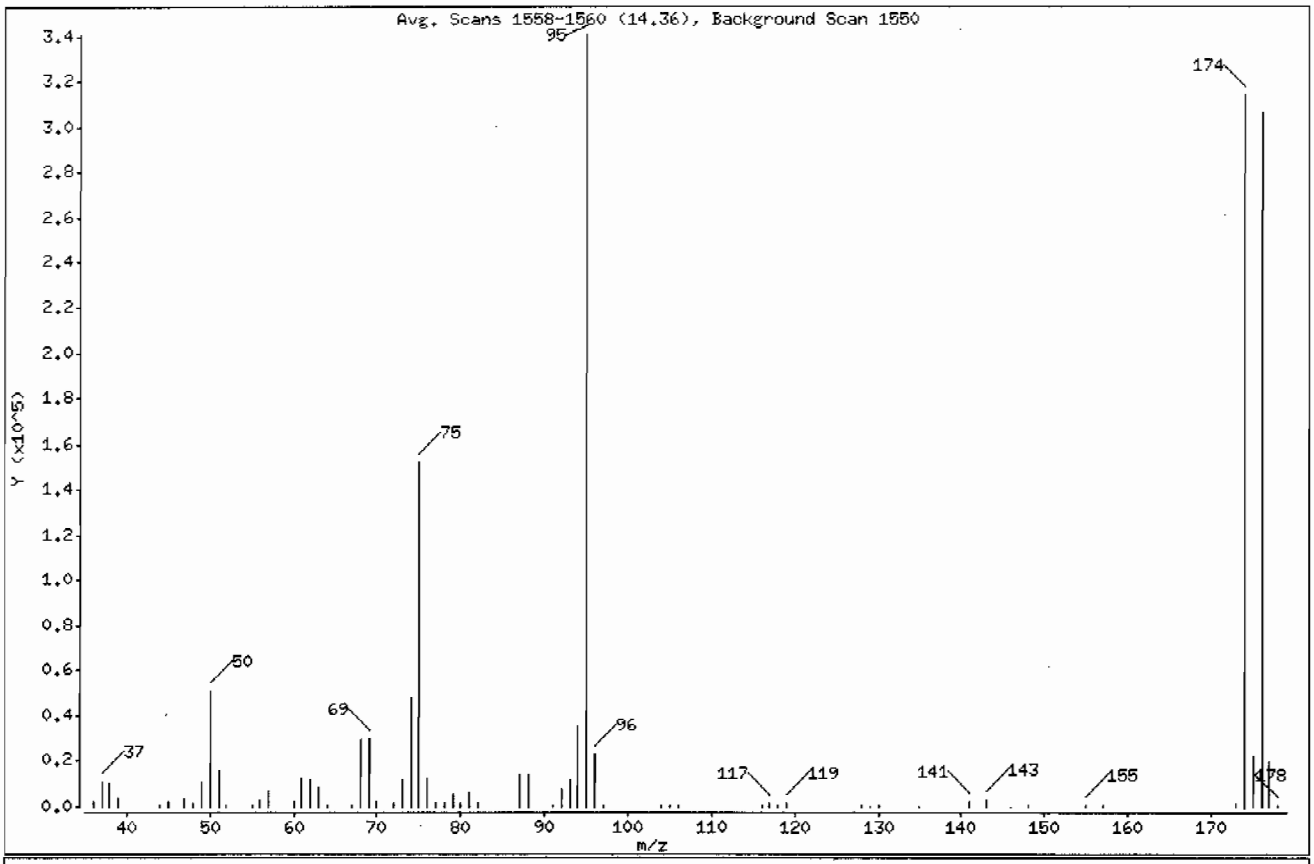

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.03
75	30.00 - 60.00% of mass 95	44.56
96	5.00 - 9.00% of mass 95	6.57
173	Less than 2.00% of mass 174	0.54 (0.58)
174	50.00 - 100.00% of mass 95	92.26
175	5.00 - 9.00% of mass 174	6.49 (7.03)
176	95.00 - 101.00% of mass 174	89.91 (97.45)
177	5.00 - 9.00% of mass 176	5.86 (6.51)

Data File: /chem/VOA6.i/070209v6/6r402BFB.d

Date : 02-JUL-2009 09:24

Client ID: BFB01

Instrument: VOA6.i

Sample Info: |W6VM090702-01|CCV/BFB|1|VOAF|1|

Operator: RXD1

Column phase: DB-624

Column diameter: 0.25

Data File: 6r402BFB.d

Spectrum: Avg. Scans 1558-1560 (14.36), Background Scan 1550

Location of Maximum: 95.00

Number of points: 67

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2206	62.00	11843	82.00	1620	128.00	1071
37.00	11120	63.00	8943	87.00	14074	129.00	173
38.00	10005	64.00	887	88.00	14027	130.00	1058
39.00	3963	67.00	701	91.00	1049	135.00	172
44.00	1048	68.00	28728	92.00	8208	141.00	2540
45.00	2057	69.00	29384	93.00	11907	143.00	2769
47.00	4080	70.00	2225	94.00	35384	146.00	171
48.00	1480	72.00	1482	95.00	340544	148.00	824
49.00	10598	73.00	11685	96.00	22384	155.00	782
50.00	51168	74.00	47568	97.00	681	157.00	570
51.00	15990	75.00	151744	104.00	1094	173.00	1827
52.00	611	76.00	12565	105.00	402	174.00	314176
55.00	637	77.00	1820	106.00	1092	175.00	22088
56.00	3481	78.00	1262	116.00	960	176.00	306176
57.00	6782	79.00	5849	117.00	1707	177.00	19944
60.00	2248	80.00	1896	118.00	1039	178.00	581
61.00	12174	81.00	6004	119.00	1436		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201873671				
Client Sample:	QC for batch 882207	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882207	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 13:07	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r409B2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201873671				
Client Sample:	QC for batch 882207	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882207	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 13:07	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r409B2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r409B2.d
Lab Smp Id: 1201873671 Client Smp ID: BLANK
Inj Date : 02-JUL-2009 13:07
Operator : RXDI Inst ID: VOA6.i
Smp Info : |1201873671|882208|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
$ 47 1,2-Dichloroethane-d4	65	9.633	9.632	(0.965)	372457	48.7121	48.7
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1525938	50.0000	
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1488151	49.3335	49.3
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1138668	50.0000	
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	570500	47.9344	47.9
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	644405	50.0000	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r409B2.d
Lab Smp Id: 1201873671 Client Smp ID: BLANK
Inj Date : 02-JUL-2009 13:07
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201873671|882208|1|VOAF|1|
Misc Info : GEL 5g N/A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA6.i/070209v6/6r409B2.d
Date : 02-JUL-2009 13:07
Client ID: BLANK
Sample Info: |1201873671|882208|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1
Column diameter: 0.25

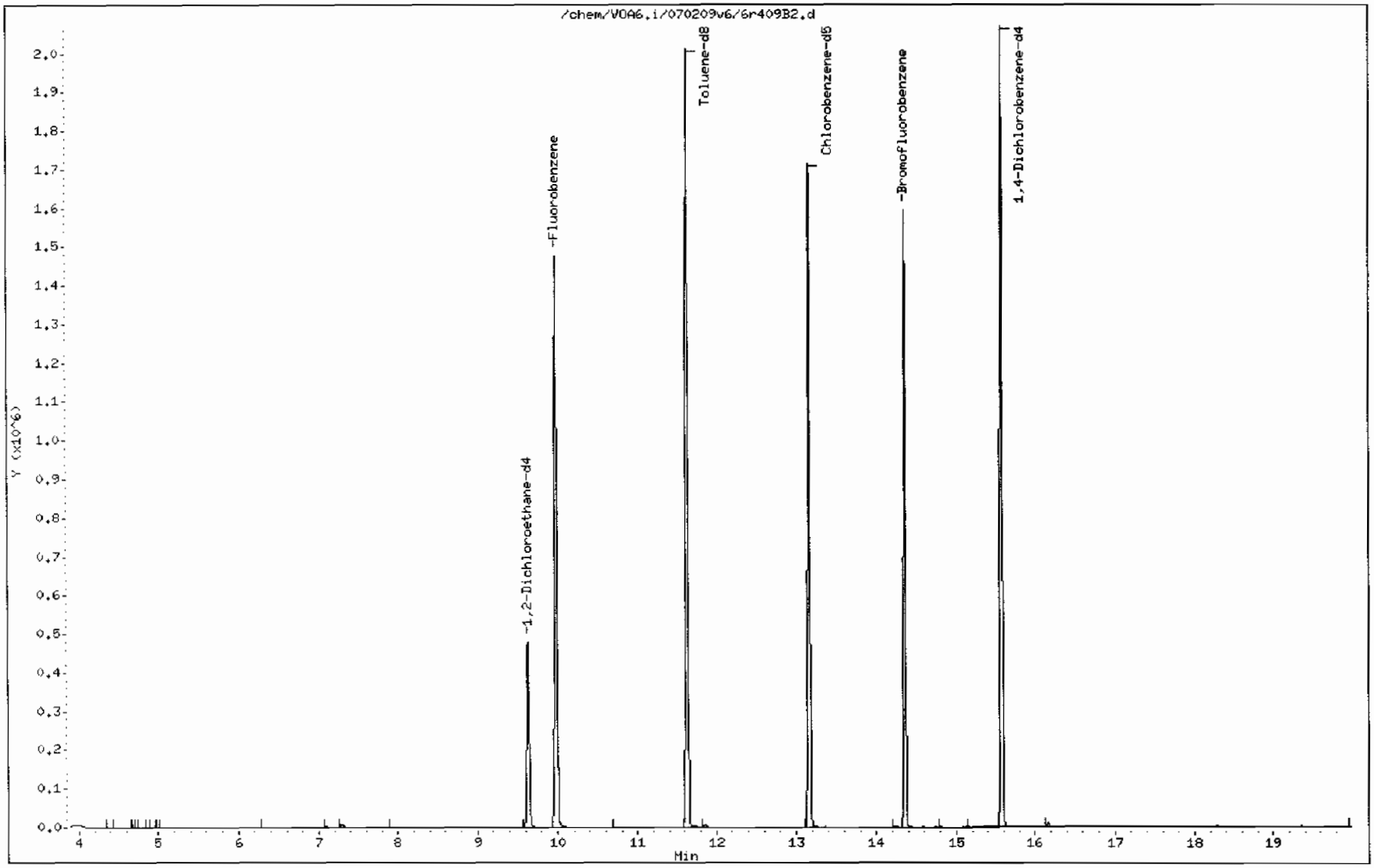

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201873674				
Client Sample:	QC for batch 882207	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882207	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 10:20	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r404L2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		65.6	ug/kg	0.340	1.00
74-87-3	Chloromethane		51.7	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		53.5	ug/kg	0.300	1.00
74-83-9	Bromomethane		49.5	ug/kg	0.300	1.00
75-00-3	Chloroethane		51.4	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		56.0	ug/kg	0.570	1.00
67-64-1	Acetone		320	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		51.3	ug/kg	0.300	1.00
74-88-4	Iodomethane		252	ug/kg	1.60	5.00
75-09-2	Methylene chloride		43.8	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		272	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		47.8	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		49.0	ug/kg	0.300	1.00
78-93-3	2-Butanone		401	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		51.1	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		53.5	ug/kg	0.300	1.00
67-66-3	Chloroform		49.0	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		51.8	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		52.8	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		52.1	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		53.9	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		45.7	ug/kg	0.300	1.00
71-43-2	Benzene		48.0	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		52.1	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		50.4	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		54.5	ug/kg	0.300	1.00
74-95-3	Dibromomethane		49.9	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		287	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		55.1	ug/kg	0.300	1.00
108-88-3	Toluene		47.7	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		55.5	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		52.0	ug/kg	0.300	1.00
591-78-6	2-Hexanone		335	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		50.4	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		52.3	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		56.4	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		53.4	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		50.8	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201873674				
Client Sample:	QC for batch 882207	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882207	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 10:20	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r404L2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		49.9	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		102	ug/kg	0.300	2.00
95-47-6	o-Xylene		51.6	ug/kg	0.300	1.00
100-42-5	Styrene		53.5	ug/kg	0.300	1.00
75-25-2	Bromoform		49.4	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		51.3	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		56.4	ug/kg	0.300	1.00
108-86-1	Bromobenzene		50.2	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		48.6	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		49.2	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		42.3	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		49.1	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		49.9	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		50.4	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		49.5	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		50.0	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		51.9	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		50.9	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		49.7	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		51.3	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		70.1	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		55.0	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		50.6	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r404L2.d
Lab Smp Id: 1201873674 Client Smp ID: LCS
Inj Date : 02-JUL-2009 10:20
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201873674|882208|1|VOAF|1|
Misc Info : GEL 5g N/A UVM090605-01C+IVM090630-01
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1 1,3-Dichloropropylene	75				1126418	110.584	110
M 2 Xylenes (total)	106				2174020	153.144	153
M 3 1,2-Dichloroethylene (total)	96				1051204	98.8601	98.9
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	296014	65.5862	65.6
5 Chloromethane	50	4.713	4.713	(0.472)	388278	51.7210	51.7
6 Vinyl chloride	62	4.934	4.934	(0.494)	406617	53.4916	53.5
7 Bromomethane	94	5.498	5.508	(0.551)	296889	49.4638	49.5
8 Chloroethane	64	5.629	5.629	(0.564)	276248	51.4453	51.4
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	563887	56.0343	56.0
10 Ethyl Ether	59	6.340	6.334	(0.635)	324398	47.6795	47.7
13 Acetone	43	6.712	6.718	(0.673)	402925	320.350	320
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	511739	51.2836	51.3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
	15 Iodomethane	142	6.968	6.968	(0.698)	2989248	251.817	252
	16 Acetonitrile	41	7.078	7.078	(0.709)	995153	1180.45	1180
	17 Methyl acetate	43	7.102	7.102	(0.712)	1194504	242.315	242
	18 Carbon disulfide	76	7.090	7.108	(0.710)	5814545	271.585	272
	20 Methylene chloride	84	7.291	7.297	(0.731)	372234	43.7671	43.8
	22 tert-Butyl methyl ether	73	7.578	7.578	(0.759)	969746	48.7060	48.7
	23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	479534	47.7731	47.8
	24 Vinyl acetate	43	8.066	8.066	(0.808)	2417398	215.754	216
	25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	621226	48.9859	49.0
	30 2-Butanone	43	8.694	8.694	(0.871)	694625	400.948	401
	31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	571670	51.0870	51.1
	33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	508844	53.4543	53.4
	35 Bromochloromethane	128	9.023	9.023	(0.904)	193333	51.8084	51.8
	36 Chloroform	83	9.053	9.053	(0.907)	599814	48.9888	49.0
	40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	523795	52.7545	52.8
	43 Cyclohexane	56	9.413	9.413	(0.943)	658040	52.1586	52.2
	44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	510011	52.1385	52.1
	46 Carbon tetrachloride	117	9.517	9.517	(0.954)	485153	53.8744	53.9
$	47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	398430	49.1609	49.2
	48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	421646	45.6975	45.7
	49 Benzene	78	9.724	9.724	(0.974)	1448058	47.9558	48.0
	50 Cyclohexene	67	9.834	9.834	(0.985)	776959	52.5581	52.6
*	51 Fluorobenzene	96	9.980	9.980	(1.000)	1617446	50.0000	
	52 n-Butyl alcohol	56	10.084	10.084	(1.010)	1177532	6485.06	6480
	53 Trichloroethylene	95	10.364	10.364	(1.038)	394330	52.0979	52.1
	55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	372467	50.4066	50.4
	56 Methylcyclohexane	83	10.608	10.608	(1.063)	727504	53.0087	53.0
	58 Dibromomethane	93	10.754	10.748	(1.078)	208470	49.9187	49.9
	59 Bromodichloromethane	83	10.864	10.864	(1.089)	450717	54.4631	54.5
	61 2-Chloroethylvinyl ether	63	11.089	11.089	(1.111)	1084316	232.674	233
	62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	596321	55.0965	55.1
	63 4-Methyl-2-pentanone	58	11.413	11.413	(0.867)	691150	287.124	287
$	64 Toluene-d8	98	11.626	11.626	(0.884)	1573879	49.4628	49.5
	65 Toluene	92	11.699	11.699	(0.889)	940996	47.7110	47.7
	67 trans-1,3-Dichloropropylene	75	11.858	11.858	(0.901)	530097	55.4876	55.5
	68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	265739	51.9567	52.0
	69 2-Hexanone	43	12.260	12.260	(0.932)	1110728	334.720	335
	70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	546984	50.3645	50.4
	71 Tetrachloroethylene	164	12.290	12.290	(0.934)	360218	52.2776	52.3
	72 Dibromochloromethane	129	12.540	12.540	(0.953)	353749	56.4007	56.4
	73 1,2-Dibromoethane	107	12.711	12.705	(0.966)	320196	53.4387	53.4
*	75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1201116	50.0000	
	76 Chlorobenzene	112	13.193	13.193	(1.003)	1079750	50.7761	50.8
	77 1,1,1,2-Tetrachloroethane	131	13.248	13.248	(1.007)	381285	54.9604	55.0
	78 Ethylbenzene	91	13.254	13.254	(1.007)	1776145	49.8728	49.9
	79 m,p-Xylenes	106	13.363	13.363	(1.016)	1451926	101.529	102
	80 o-Xylene	106	13.796	13.796	(1.049)	722094	51.6152	51.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
81 Styrene	104	13.802	13.802	(1.049)	1164533	53.5105	53.5
82 Bromoform	173	14.065	14.064	(0.903)	261098	49.4442	49.4
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1581744	42.2667	42.3
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	615258	48.9330	48.9
87 1,1,2,2-Tetrachloroethane	83	14.442	14.442	(0.927)	415373	51.3449	51.3
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	125877	56.4175	56.4(Q)
90 Bromobenzene	156	14.564	14.564	(0.935)	481532	50.1657	50.2
91 n-Propylbenzene	91	14.583	14.583	(0.936)	2106426	48.5816	48.6
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1541289	49.0530	49.0
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1449426	49.2436	49.2
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1309464	49.8980	49.9
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1491230	50.4367	50.4
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1572557	49.5238	49.5
98 sec-Butylbenzene	105	15.333	15.332	(0.984)	2095653	49.9845	50.0
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	1788606	51.8818	51.9
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	941762	50.9310	50.9
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	680779	50.0000	
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	948807	49.7415	49.7
104 n-Butylbenzene	92	15.887	15.887	(1.020)	897741	51.3040	51.3
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	890283	50.5882	50.6
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	97278	70.1247	70.1
108 1,2,4-Trichlorobenzene	180	17.911	17.911	(1.150)	675269	50.3662	50.4
109 Hexachlorobutadiene	225	18.076	18.076	(1.160)	447410	50.1378	50.1
110 Naphthalene	128	18.289	18.289	(1.174)	1371981	53.1841	53.2
111 1,2,3-Trichlorobenzene	180	18.625	18.618	(1.196)	612604	53.6553	53.6

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070209v6/6r404L2.d
Date : 02-JUL-2009 10:20
Client ID: LCS
Sample Info: 1120187367418822081IIVOAF11I
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

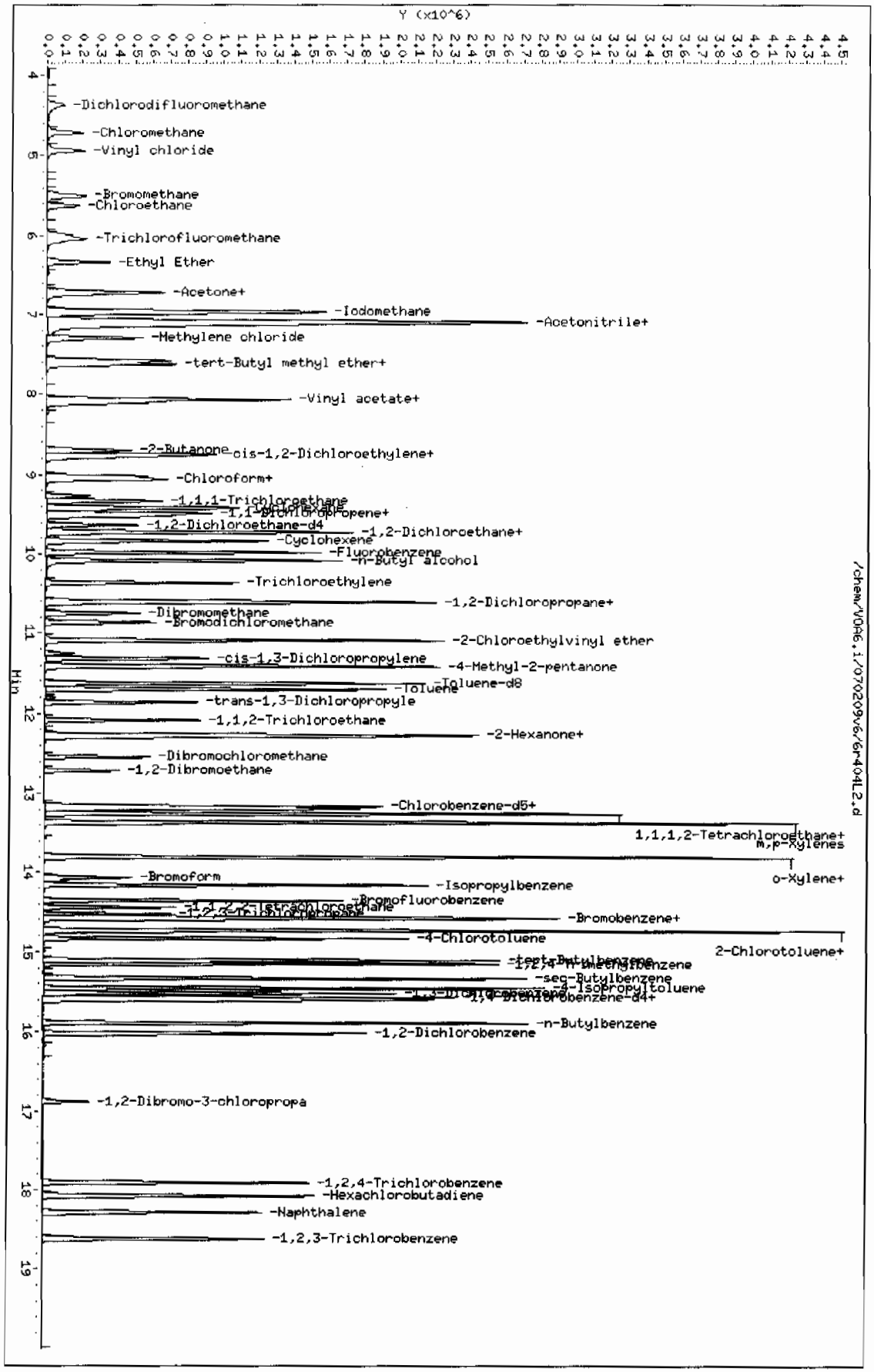

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201873675				
Client Sample:	QC for batch 882207	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882207	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 11:46	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 09:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r407L2.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2455**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201873675**				
Client Sample:	**QC for batch 882207**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882207**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882208**	**Inst:**	**VOA6.I**	**Dilution:**	**1**
Run Date:	**07/02/2009 11:46**	**Analyst:**	**RXD1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/02/2009 09:30**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**6r407L2.d**	**Column:**	**DB-624**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		250	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r407L2.d
Lab Smp Id: 1201873675 Client Smp ID: SLCS
Inj Date : 02-JUL-2009 11:46
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201873675|882208|1|VOAF|1|
Misc Info : GEL 5g N/A UVM090601-08B/UVM090624-02A
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 7 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
149 2-Chloro-1,1,1-trifluoroethane	118	5.065	5.075	(0.508)	1481893	153.725	154
150 Chlorotrifluoroethylene	116	4.290	4.290	(0.430)	797937	132.474	132
11 Acrolein	56	6.542	6.542	(0.655)	176834	443.700	444(R)
12 Trichlorotrifluoroethane	85	6.706	6.706	(0.672)	694514	249.916	250
19 Allyl chloride	41	7.145	7.145	(0.716)	1947192	210.413	210
21 Acrylonitrile	53	7.547	7.554	(0.756)	551733	249.831	250
26 Isopropyl Alcohol	45	6.791	6.798	(0.680)	1312985	3226.46	3230
27 2-Chloro-1,3-butadiene	53	8.212	8.212	(0.823)	432675	52.0496	52.0
28 tert-butyl Alcohol	59	7.291	7.291	(0.731)	2225767	3257.67	3260
29 Ethyl acetate	43	8.706	8.706	(0.872)	1362230	218.803	219
32 Propionitrile	54	8.779	8.779	(0.880)	224491	254.505	254
34 Isopropyl ether	45	8.084	8.084	(0.810)	1099997	48.0122	48.0

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
37 Methacrylonitrile	41	8.956	8.956	(0.897)	807457	232.626	233
38 Tetrahydrofuran	42	9.065	9.066	(0.582)	449841	236.228	236
41 Ethyl tert-butyl ether	59	8.486	8.492	(0.850)	1098825	50.1747	50.2
42 Isobutyl alcohol	41	9.395	9.395	(0.941)	569687	2800.96	2800
45 Methyl tert-amyl ether	55	9.736	9.742	(0.976)	296641	40.7836	40.8
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	396975	48.8846	48.9
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1620650	50.0000	
54 Methyl methacrylate	69	10.589	10.590	(1.061)	1161418	253.547	254
57 1,4-Dioxane	88	10.699	10.699	(1.072)	178597	2373.03	2370
60 2-Nitropropane	43	11.071	11.077	(1.109)	417322	223.346	223
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1564139	48.4448	48.4
66 Ethyl methacrylate	69	11.858	11.858	(0.901)	2075582	237.191	237
74 1-Chlorohexane	55	13.052	13.059	(0.992)	355994	50.1373	50.1
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1218765	50.0000	
84 cis-1,4-Dichloro-2-butene	53	14.205	14.205	(0.912)	582967	252.649	253
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	625543	49.2179	49.2
86 Cyclohexanone	55	14.320	14.321	(1.089)	339429	1442.89	1440
89 trans-1,4-Dichloro-2-butene	53	14.491	14.491	(0.930)	560095	251.730	252
97 Pentachloroethane	167	15.180	15.180	(0.975)	671067	158.431	158(R)
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	688153	50.0000	
103 Benzyl chloride	91	15.717	15.717	(1.009)	3754506	245.319	245
105 bis(2-Chloroisopropyl)ether	121	16.113	16.113	(1.034)	281663	274.152	274

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA6.i/070209v6/6r407L2.d

Date : 02-JUL-2009 11:46

Client ID: SLCS

Sample Info: |1201873675|882208|1|VOAF|1|

Column phase: DB-624

Instrument: VOA6.i

Operator: RXD1

Column diameter: 0.25

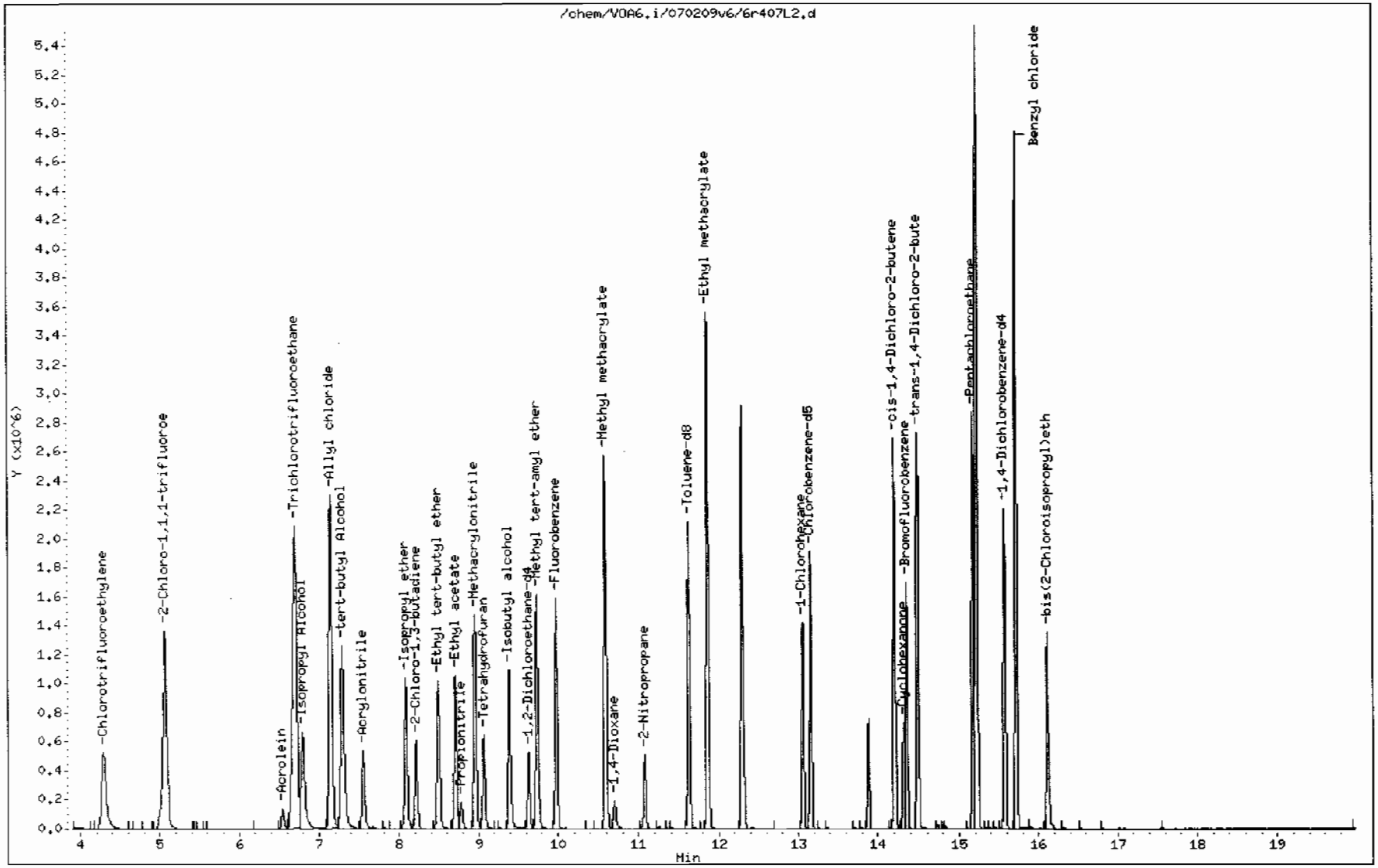

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201873672	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
Client Sample:	QC for batch 882207	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10480PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 20:41	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:47	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r424.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		69.4	ug/kg	0.383	1.13
74-87-3	Chloromethane		54.5	ug/kg	0.338	1.13
75-01-4	Vinyl chloride		55.4	ug/kg	0.338	1.13
74-83-9	Bromomethane		51.5	ug/kg	0.338	1.13
75-00-3	Chloroethane		52.2	ug/kg	0.338	1.13
75-69-4	Trichlorofluoromethane		54.5	ug/kg	0.642	1.13
67-64-1	Acetone		296	ug/kg	1.87	5.63
75-35-4	1,1-Dichloroethylene		51.2	ug/kg	0.338	1.13
74-88-4	Iodomethane		258	ug/kg	1.80	5.63
75-09-2	Methylene chloride		44.4	ug/kg	2.25	5.63
75-15-0	Carbon disulfide		276	ug/kg	1.41	5.63
156-60-5	trans-1,2-Dichloroethylene		47.6	ug/kg	0.338	1.13
75-34-3	1,1-Dichloroethane		48.9	ug/kg	0.338	1.13
78-93-3	2-Butanone		366	ug/kg	1.69	5.63
156-59-2	cis-1,2-Dichloroethylene		50.8	ug/kg	0.338	1.13
594-20-7	2,2-Dichloropropane		49.9	ug/kg	0.338	1.13
67-66-3	Chloroform		49.1	ug/kg	0.338	1.13
74-97-5	Bromochloromethane		51.5	ug/kg	0.372	1.13
71-55-6	1,1,1-Trichloroethane		52.1	ug/kg	0.338	1.13
563-58-6	1,1-Dichloropropene		50.8	ug/kg	0.338	1.13
56-23-5	Carbon tetrachloride		53.2	ug/kg	0.338	1.13
107-06-2	1,2-Dichloroethane		45.6	ug/kg	0.338	1.13
71-43-2	Benzene		48.2	ug/kg	0.338	1.13
79-01-6	Trichloroethylene		52.4	ug/kg	0.372	1.13
78-87-5	1,2-Dichloropropane		50.3	ug/kg	0.338	1.13
75-27-4	Bromodichloromethane		53.7	ug/kg	0.338	1.13
74-95-3	Dibromomethane		49.6	ug/kg	0.338	1.13
108-10-1	4-Methyl-2-pentanone		268	ug/kg	1.41	5.63
10061-01-5	cis-1,3-Dichloropropylene		53.7	ug/kg	0.338	1.13
108-88-3	Toluene		47.9	ug/kg	0.338	1.13
10061-02-6	trans-1,3-Dichloropropylene		54.2	ug/kg	0.338	1.13
79-00-5	1,1,2-Trichloroethane		52.1	ug/kg	0.338	1.13
591-78-6	2-Hexanone		310	ug/kg	1.69	5.63
142-28-9	1,3-Dichloropropane		50.2	ug/kg	0.338	1.13
127-18-4	Tetrachloroethylene		51.0	ug/kg	0.338	1.13
124-48-1	Dibromochloromethane		55.9	ug/kg	0.338	1.13
106-93-4	1,2-Dibromoethane		52.7	ug/kg	0.338	1.13
108-90-7	Chlorobenzene		50.4	ug/kg	0.338	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201873672	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
Client Sample:	QC for batch 882207	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10480PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 20:41	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:47	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r424.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		48.9	ug/kg	0.338	1.13
179601-23-1	m,p-Xylenes		99.1	ug/kg	0.338	2.25
95-47-6	o-Xylene		50.8	ug/kg	0.338	1.13
100-42-5	Styrene		52.4	ug/kg	0.338	1.13
75-25-2	Bromoform		48.4	ug/kg	0.338	1.13
79-34-5	1,1,2,2-Tetrachloroethane		48.3	ug/kg	0.338	1.13
96-18-4	1,2,3-Trichloropropane		55.5	ug/kg	0.338	1.13
108-86-1	Bromobenzene		50.1	ug/kg	0.338	1.13
103-65-1	n-Propylbenzene		47.5	ug/kg	0.338	1.13
95-49-8	2-Chlorotoluene		48.9	ug/kg	0.338	1.13
98-82-8	Isopropylbenzene		41.9	ug/kg	0.338	1.13
108-67-8	1,3,5-Trimethylbenzene		48.6	ug/kg	0.338	1.13
106-43-4	4-Chlorotoluene		48.4	ug/kg	0.338	1.13
98-06-6	tert-Butylbenzene		50.7	ug/kg	0.338	1.13
95-63-6	1,2,4-Trimethylbenzene		48.5	ug/kg	0.338	1.13
135-98-8	sec-Butylbenzene		48.8	ug/kg	0.338	1.13
99-87-6	4-Isopropyltoluene		50.0	ug/kg	0.338	1.13
541-73-1	1,3-Dichlorobenzene		49.1	ug/kg	0.338	1.13
106-46-7	1,4-Dichlorobenzene		47.8	ug/kg	0.338	1.13
104-51-8	n-Butylbenzene		47.6	ug/kg	0.338	1.13
96-12-8	1,2-Dibromo-3-chloropropane		63.2	ug/kg	0.338	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.63	ug/kg	1.80	5.63
630-20-6	1,1,1,2-Tetrachloroethane		54.8	ug/kg	0.338	1.13
95-50-1	1,2-Dichlorobenzene		49.2	ug/kg	0.338	1.13

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r424.d
Lab Smp Id: 1201873672 Client Smp ID: CAMO-09-10480MS
Inj Date : 02-JUL-2009 20:41
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201873672|882208|1|VOAF|1|
Misc Info : LANL 5g N/A 232357001MS
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 23 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.22990	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 Fluorobenzene	96	9.980	9.980	(1.000)	1541807	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1126430	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	630712	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	369702	47.8541	53.9
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1493480	50.0481	56.4
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	570586	48.9825	55.2
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	264879	61.5669	69.4
5 Chloromethane	50	4.713	4.713	(0.472)	346426	48.4099	54.5
6 Vinyl chloride	62	4.934	4.934	(0.494)	356491	49.1981	55.4
7 Bromomethane	94	5.498	5.508	(0.551)	261474	45.7006	51.5
8 Chloroethane	64	5.629	5.629	(0.564)	237052	46.3116	52.2
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	464053	48.3760	54.5

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.718	6.718	(0.673)	315105	263.121	296
14 1,1-Dichloroethylene	61	6.724	6.718	(0.674)	432141	45.4313	51.2
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	749321	42.4018	47.8
15 Iodomethane	142	6.968	6.968	(0.698)	2589407	228.836	258
20 Methylene chloride	84	7.291	7.297	(0.731)	323291	39.4310	44.4
18 Carbon disulfide	76	7.102	7.108	(0.712)	5007156	245.347	276
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	404496	42.2745	47.6
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	525145	43.4410	48.9
30 2-Butanone	43	8.694	8.694	(0.871)	536979	325.158	366
31 cis-1,2-Dichloroethylene	61	8.748	8.742	(0.877)	480820	45.0762	50.8
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	746341	43.5666	49.1
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	402082	44.3111	49.9
36 Chloroform	83	9.053	9.053	(0.907)	508670	43.5829	49.1
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	712013	43.6701	49.2
35 Bromochloromethane	128	9.023	9.023	(0.904)	162730	45.7469	51.5
40 1,1,1-Trichloroethane	97	9.328	9.328	(0.935)	438079	46.2861	52.1
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	420592	45.1066	50.8
46 Carbon tetrachloride	117	9.517	9.517	(0.954)	405558	47.2450	53.2
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	355855	40.4592	45.6
49 Benzene	78	9.724	9.724	(0.974)	1232773	42.8290	48.2
53 Trichloroethylene	95	10.364	10.364	(1.038)	335798	46.5413	52.4
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	314342	44.6275	50.3
59 Bromodichloromethane	83	10.864	10.864	(1.089)	375818	47.6405	53.7
58 Dibromomethane	93	10.754	10.748	(1.078)	175162	44.0006	49.6
63 4-Methyl-2-pentanone	58	11.412	11.413	(0.867)	536849	237.810	268
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	491990	47.6870	53.7
65 Toluene	92	11.699	11.699	(0.889)	786740	42.5346	47.9
67 trans-1,3-Dichloropropylene	75	11.858	11.858	(0.901)	431067	48.1134	54.2
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	222032	46.2895	52.1
69 2-Hexanone	43	12.260	12.260	(0.932)	855867	275.018	310
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	453441	44.5196	50.2
71 Tetrachloroethylene	164	12.290	12.290	(0.934)	292540	45.2706	51.0
72 Dibromochloromethane	129	12.540	12.540	(0.953)	291792	49.6070	55.9
73 1,2-Dibromoethane	107	12.705	12.705	(0.966)	262674	46.7453	52.6
76 Chlorobenzene	112	13.193	13.193	(1.003)	892441	44.7504	50.4
77 1,1,1,2-Tetrachloroethane	131	13.247	13.248	(1.007)	316682	48.6748	54.8
78 Ethylbenzene	91	13.254	13.254	(1.007)	1450413	43.4268	48.9
79 m,p-Xylenes	106	13.363	13.363	(1.016)	1180255	88.0041	99.1
80 o-Xylene	106	13.796	13.796	(1.049)	591881	45.1127	50.8
81 Styrene	104	13.802	13.802	(1.049)	948478	46.4724	52.4
82 Bromoform	173	14.058	14.064	(0.903)	209304	42.9845	48.4
87 1,1,2,2-Tetrachloroethane	83	14.442	14.442	(0.927)	321435	42.8872	48.3
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	101805	49.2506	55.5(Q)
90 Bromobenzene	156	14.564	14.564	(0.935)	395415	44.4641	50.1
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1692373	42.1305	47.5
93 2-Chlorotoluene	91	14.735	14.735	(0.946)	1183234	43.3910	48.9
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1290532	37.2225	41.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1254679	43.1012	48.6
94 4-Chlorotoluene	91	14.833	14.833	(0.952)	1044844	42.9751	48.4
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1231754	44.9678	50.6
96 1,2,4-Trimethylbenzene	105	15.150	15.150	(0.973)	1265768	43.0266	48.5
98 sec-Butylbenzene	105	15.332	15.332	(0.984)	1684045	43.3555	48.8
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	1416713	44.3565	50.0
104 n-Butylbenzene	92	15.887	15.887	(1.020)	684761	42.2391	47.6
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	72107	56.1059	63.2

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070209v6/6r424.d
Date : 02-JUL-2009 20:41
Client ID: CAHO-09-10480HS
Sample Info: 1120187367218822081|1|VOAF|1|
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

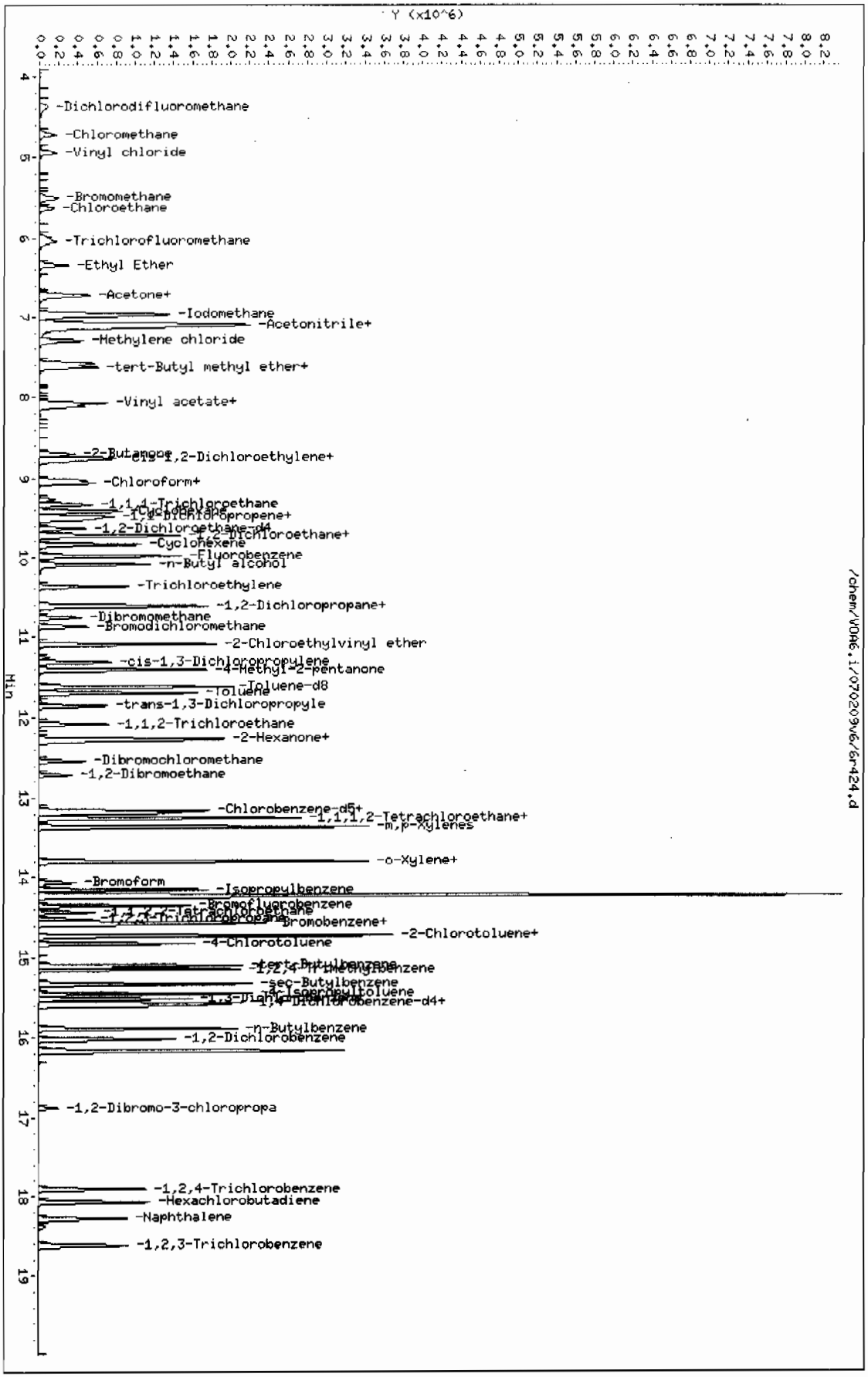

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	1201873673	Date Received:	06/25/2009 08:45	%Moisture:	11.2
Client Sample:	QC for batch 882207	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-10480PSD	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882208	Inst:	VOA6.I	Dilution:	1
Run Date:	07/02/2009 21:08	Analyst:	RXD1	Purge Vol:	5 mL
Prep Date:	07/02/2009 13:47	Aliquot:	5 g	Final Volume:	5 mL
Data File:	6r425.d	Column:	DB-624	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		61.0	ug/kg	0.383	1.13
74-87-3	Chloromethane		48.3	ug/kg	0.338	1.13
75-01-4	Vinyl chloride		48.5	ug/kg	0.338	1.13
74-83-9	Bromomethane		46.5	ug/kg	0.338	1.13
75-00-3	Chloroethane		46.5	ug/kg	0.338	1.13
75-69-4	Trichlorofluoromethane		48.4	ug/kg	0.642	1.13
67-64-1	Acetone		292	ug/kg	1.87	5.63
75-35-4	1,1-Dichloroethylene		45.6	ug/kg	0.338	1.13
74-88-4	Iodomethane		236	ug/kg	1.80	5.63
75-09-2	Methylene chloride		40.4	ug/kg	2.25	5.63
75-15-0	Carbon disulfide		247	ug/kg	1.41	5.63
156-60-5	trans-1,2-Dichloroethylene		43.5	ug/kg	0.338	1.13
75-34-3	1,1-Dichloroethane		45.1	ug/kg	0.338	1.13
78-93-3	2-Butanone		364	ug/kg	1.69	5.63
156-59-2	cis-1,2-Dichloroethylene		46.9	ug/kg	0.338	1.13
594-20-7	2,2-Dichloropropane		45.9	ug/kg	0.338	1.13
67-66-3	Chloroform		45.5	ug/kg	0.338	1.13
74-97-5	Bromochloromethane		48.7	ug/kg	0.372	1.13
71-55-6	1,1,1-Trichloroethane		47.5	ug/kg	0.338	1.13
563-58-6	1,1-Dichloropropene		46.0	ug/kg	0.338	1.13
56-23-5	Carbon tetrachloride		48.0	ug/kg	0.338	1.13
107-06-2	1,2-Dichloroethane		43.5	ug/kg	0.338	1.13
71-43-2	Benzene		44.6	ug/kg	0.338	1.13
79-01-6	Trichloroethylene		48.1	ug/kg	0.372	1.13
78-87-5	1,2-Dichloropropane		47.2	ug/kg	0.338	1.13
75-27-4	Bromodichloromethane		51.0	ug/kg	0.338	1.13
74-95-3	Dibromomethane		47.3	ug/kg	0.338	1.13
108-10-1	4-Methyl-2-pentanone		264	ug/kg	1.41	5.63
10061-01-5	cis-1,3-Dichloropropylene		50.9	ug/kg	0.338	1.13
108-88-3	Toluene		44.0	ug/kg	0.338	1.13
10061-02-6	trans-1,3-Dichloropropylene		51.0	ug/kg	0.338	1.13
79-00-5	1,1,2-Trichloroethane		49.4	ug/kg	0.338	1.13
591-78-6	2-Hexanone		305	ug/kg	1.69	5.63
142-28-9	1,3-Dichloropropane		48.0	ug/kg	0.338	1.13
127-18-4	Tetrachloroethylene		45.7	ug/kg	0.338	1.13
124-48-1	Dibromochloromethane		52.5	ug/kg	0.338	1.13
106-93-4	1,2-Dibromoethane		50.5	ug/kg	0.338	1.13
108-90-7	Chlorobenzene		46.8	ug/kg	0.338	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201873673	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
Client Sample:	QC for batch 882207	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10480PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882208	**Inst:**	VOA6.I	**Dilution:**	1
Run Date:	07/02/2009 21:08	**Analyst:**	RXD1	**Purge Vol:**	5 mL
Prep Date:	07/02/2009 13:47	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	6r425.d	**Column:**	DB-624	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		45.3	ug/kg	0.338	1.13
179601-23-1	m,p-Xylenes		91.4	ug/kg	0.338	2.25
95-47-6	o-Xylene		47.2	ug/kg	0.338	1.13
100-42-5	Styrene		48.3	ug/kg	0.338	1.13
75-25-2	Bromoform		47.6	ug/kg	0.338	1.13
79-34-5	1,1,2,2-Tetrachloroethane		47.9	ug/kg	0.338	1.13
96-18-4	1,2,3-Trichloropropane		54.2	ug/kg	0.338	1.13
108-86-1	Bromobenzene		48.2	ug/kg	0.338	1.13
103-65-1	n-Propylbenzene		44.2	ug/kg	0.338	1.13
95-49-8	2-Chlorotoluene		46.0	ug/kg	0.338	1.13
98-82-8	Isopropylbenzene		39.4	ug/kg	0.338	1.13
108-67-8	1,3,5-Trimethylbenzene		45.3	ug/kg	0.338	1.13
106-43-4	4-Chlorotoluene		45.4	ug/kg	0.338	1.13
98-06-6	tert-Butylbenzene		47.4	ug/kg	0.338	1.13
95-63-6	1,2,4-Trimethylbenzene		45.5	ug/kg	0.338	1.13
135-98-8	sec-Butylbenzene		45.9	ug/kg	0.338	1.13
99-87-6	4-Isopropyltoluene		46.3	ug/kg	0.338	1.13
541-73-1	1,3-Dichlorobenzene		46.2	ug/kg	0.338	1.13
106-46-7	1,4-Dichlorobenzene		44.9	ug/kg	0.338	1.13
104-51-8	n-Butylbenzene		43.7	ug/kg	0.338	1.13
96-12-8	1,2-Dibromo-3-chloropropane		61.2	ug/kg	0.338	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.63	ug/kg	1.80	5.63
630-20-6	1,1,1,2-Tetrachloroethane		51.3	ug/kg	0.338	1.13
95-50-1	1,2-Dichlorobenzene		47.0	ug/kg	0.338	1.13

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA6.i/070209v6/6r425.d
Lab Smp Id: 1201873673 Client Smp ID: CAMO-09-10480MSD
Inj Date : 02-JUL-2009 21:08
Operator : RXD1 Inst ID: VOA6.i
Smp Info : |1201873673|882208|1|VOAF|1|
Misc Info : LANL 5g N/A 232357001MSD
Comment :
Method : /chem/VOA6.i/070209v6/VOA6-8260B-061509.m
Meth Date : 08-Jul-2009 12:51 ale01592 Quant Type: ISTD
Cal Date : 16-JUN-2009 00:03 Cal File: 6p128.d
Als bottle: 24 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.22990	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 51 fluorobenzene	96	9.980	9.980	(1.000)	1395127	50.0000	
* 75 Chlorobenzene-d5	117	13.156	13.156	(1.000)	1032797	50.0000	
* 101 1,4-Dichlorobenzene-d4	152	15.576	15.576	(1.000)	565351	50.0000	
$ 47 1,2-Dichloroethane-d4	65	9.632	9.632	(0.965)	336874	48.1894	54.3
$ 64 Toluene-d8	98	11.626	11.626	(0.884)	1350732	49.3681	55.6
$ 85 Bromofluorobenzene	95	14.357	14.357	(0.922)	515466	49.3665	55.6
4 Dichlorodifluoromethane	85	4.370	4.370	(0.438)	210774	54.1419	61.0
5 Chloromethane	50	4.712	4.713	(0.472)	277851	42.9094	48.3
6 Vinyl chloride	62	4.934	4.934	(0.494)	282493	43.0848	48.5
7 Bromomethane	94	5.498	5.508	(0.551)	213483	41.2356	46.4
8 Chloroethane	64	5.629	5.629	(0.564)	191345	41.3123	46.5
9 Trichlorofluoromethane	101	6.042	6.042	(0.605)	373190	42.9940	48.4

Compounds	QUANT STD MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acetone	43	6.718	6.718	(0.673)	280553	258.927	292
14 1,1-Dichloroethylene	61	6.718	6.718	(0.673)	348030	40.4355	45.6
102 1,4-Dichlorobenzene	146	15.601	15.601	(1.002)	631179	39.8457	44.9
15 Iodomethane	142	6.968	6.968	(0.698)	2146681	209.656	236
20 Methylene chloride	84	7.291	7.297	(0.731)	269224	35.9064	40.4
18 Carbon disulfide	76	7.090	7.108	(0.710)	4047949	219.200	247
23 trans-1,2-Dichloroethylene	61	7.627	7.627	(0.764)	334034	38.5808	43.5
25 1,1-Dichloroethane	63	8.108	8.108	(0.812)	437751	40.0188	45.1
30 2-Butanone	43	8.693	8.694	(0.871)	482283	322.742	364
31 cis-1,2-Dichloroethylene	61	8.742	8.742	(0.876)	402219	41.6720	46.9
100 1,3-Dichlorobenzene	146	15.515	15.515	(0.996)	629623	41.0024	46.2
33 2,2-Dichloropropane	77	8.773	8.773	(0.879)	334399	40.7267	45.9
36 Chloroform	83	9.059	9.053	(0.908)	426737	40.4070	45.5
106 1,2-Dichlorobenzene	146	16.021	16.021	(1.029)	609806	41.7254	47.0
35 Bromochloromethane	128	9.023	9.023	(0.904)	139224	43.2538	48.7
40 1,1,1-Trichloroethane	97	9.327	9.328	(0.935)	361109	42.1650	47.5
44 1,1-Dichloropropene	75	9.480	9.480	(0.950)	344748	40.8599	46.0
46 Carbon tetrachloride	117	9.516	9.517	(0.954)	330948	42.6068	48.0
48 1,2-Dichloroethane	62	9.712	9.712	(0.973)	307442	38.6299	43.5
49 Benzene	78	9.724	9.724	(0.974)	1031103	39.5889	44.6
53 Trichloroethylene	95	10.364	10.364	(1.038)	278868	42.7145	48.1
55 1,2-Dichloropropane	63	10.614	10.614	(1.064)	266812	41.8621	47.2
59 Bromodichloromethane	83	10.864	10.864	(1.089)	322863	45.2307	51.0
58 Dibromomethane	93	10.754	10.748	(1.078)	151219	41.9799	47.3
63 4-Methyl-2-pentanone	58	11.412	11.413	(0.867)	485089	234.363	264
62 cis-1,3-Dichloropropylene	75	11.315	11.315	(1.134)	421801	45.1822	50.9
65 Toluene	92	11.699	11.699	(0.889)	662308	39.0536	44.0
67 trans-1,3-Dichloropropylene	75	11.857	11.858	(0.901)	372013	45.2865	51.0
68 1,1,2-Trichloroethane	83	12.083	12.083	(0.918)	193011	43.8873	49.4
69 2-Hexanone	43	12.260	12.260	(0.932)	772219	270.635	305
70 1,3-Dichloropropane	76	12.272	12.272	(0.933)	397666	42.5832	48.0
71 Tetrachloroethylene	164	12.290	12.290	(0.934)	240325	40.5619	45.7
72 Dibromochloromethane	129	12.540	12.540	(0.953)	251462	46.6264	52.5
73 1,2-Dibromoethane	107	12.711	12.705	(0.966)	230932	44.8223	50.5
76 Chlorobenzene	112	13.193	13.193	(1.003)	759824	41.5546	46.8
77 1,1,1,2-Tetrachloroethane	131	13.247	13.248	(1.007)	271864	45.5745	51.3
78 Ethylbenzene	91	13.254	13.254	(1.007)	1230945	40.1971	45.3
79 m,p-Xylenes	106	13.363	13.363	(1.016)	997973	81.1587	91.4
80 o-Xylene	106	13.796	13.796	(1.049)	504544	41.9424	47.2
81 Styrene	104	13.802	13.802	(1.049)	802150	42.8660	48.3
82 Bromoform	173	14.064	14.064	(0.903)	184494	42.2947	47.6
87 1,1,2,2-Tetrachloroethane	83	14.442	14.442	(0.927)	285657	42.5199	47.9
88 1,2,3-Trichloropropane	110	14.528	14.528	(0.933)	89200	48.1415	54.2(Q)
90 Bromobenzene	156	14.564	14.564	(0.935)	340945	42.7714	48.2
91 n-Propylbenzene	91	14.583	14.583	(0.936)	1413347	39.2521	44.2
93 2-Chlorotoluene	91	14.729	14.735	(0.946)	999205	40.8786	46.0
83 Isopropylbenzene	105	14.156	14.156	(0.909)	1087230	34.9842	39.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
92 1,3,5-Trimethylbenzene	105	14.735	14.735	(0.946)	1048736	40.1916	45.3
94 4-Chlorotoluene	91	14.832	14.833	(0.952)	879233	40.3443	45.4
95 tert-Butylbenzene	119	15.107	15.107	(0.970)	1032388	42.0468	47.4
96 1,2,4-Trimethylbenzene	105	15.149	15.150	(0.973)	1064536	40.3698	45.5
98 sec-Butylbenzene	105	15.332	15.332	(0.984)	1417944	40.7252	45.9
99 4-Isopropyltoluene	119	15.454	15.454	(0.992)	1177522	41.1298	46.3
104 n-Butylbenzene	92	15.887	15.887	(1.020)	563987	38.8113	43.7
107 1,2-Dibromo-3-chloropropane	157	16.881	16.881	(1.084)	62571	54.3147	61.2

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA6.i/070209v6/6r425.d
Date : 02-JUL-2009 21:08
Client ID: CAMO-09-10480MSD
Sample Info: 1120187367318822081111VOAF111
Column phase: DB-624

Instrument: VOA6.i
Operator: RXD1
Column diameter: 0.25

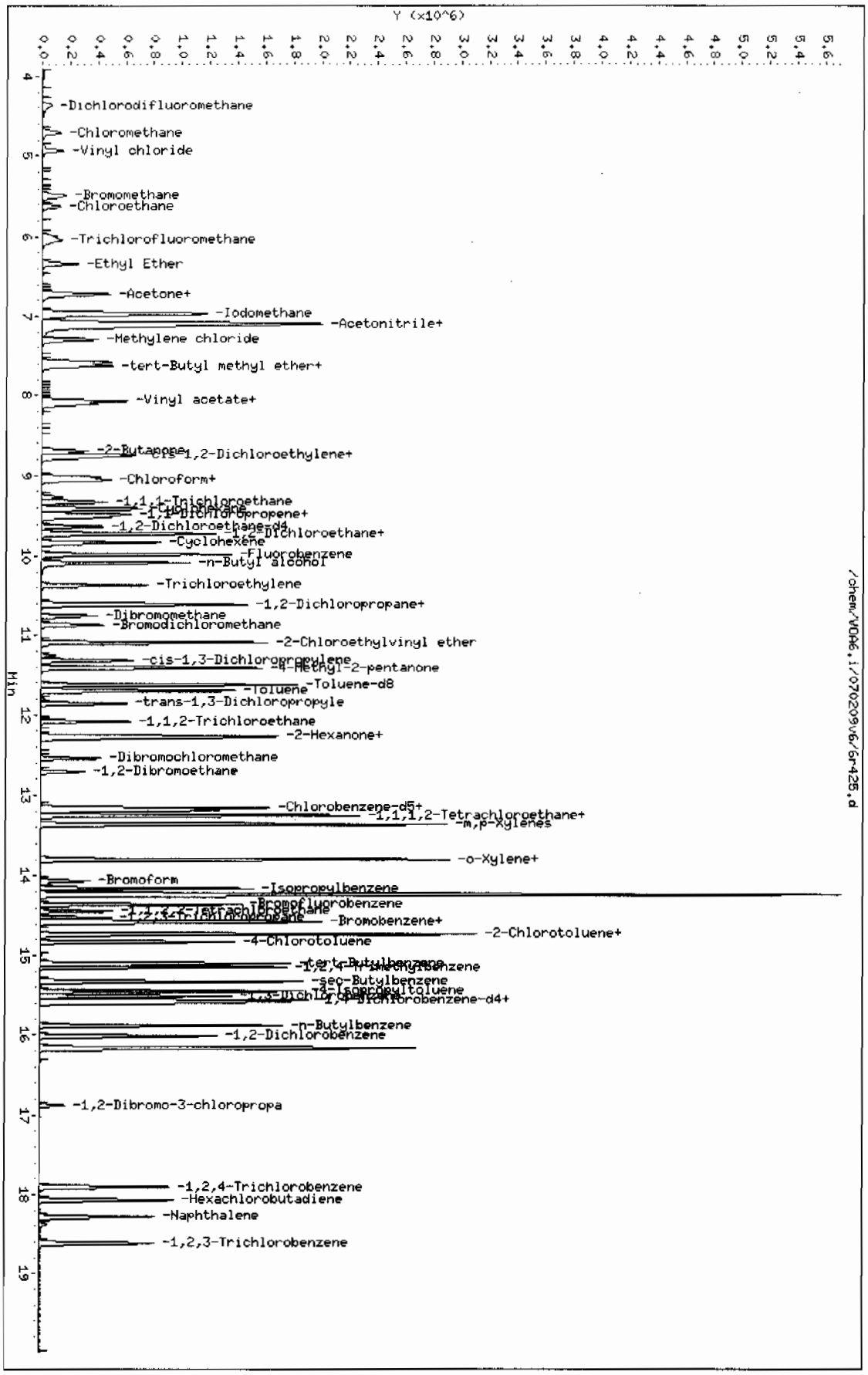

Page 1

Miscellaneous Data

Prep LogBook

Analyst: AXO1 Verified by:_____

Batch: 882207

Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873671		SW846 5030	02-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
MB	1201876745		SW846 5030	06-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
LCS	1201873674		SW846 5030	02-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
LCS	1201873675		SW846 5030	02-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
LCS	1201876746		SW846 5030	06-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
LCS	1201876747		SW846 5030	06-JUL-2009 09:30	N/A	5 g	5 mL	1	SOIL
SAMPLE	232357001		SW846 5030	02-JUL-2009 13:45	N/A	5 g	5 mL	1	SOIL
PS	1201873672	232357001	SW846 5030	02-JUL-2009 13:47	N/A	5 g	5 mL	1	SOIL
PSD	1201873673	232357001	SW846 5030	02-JUL-2009 13:47	N/A	5 g	5 mL	1	SOIL
SAMPLE	232357002		SW846 5030	02-JUL-2009 13:48	N/A	5 g	5 mL	1	SOIL
SAMPLE	232363001		SW846 5030	02-JUL-2009 13:49	N/A	5 g	5 mL	1	SOIL
SAMPLE	232363002		SW846 5030	02-JUL-2009 13:50	N/A	5 g	5 mL	1	SOIL
SAMPLE	232363003		SW846 5030	06-JUL-2009 12:40	N/A	5 g	5 mL	1	SOIL
SAMPLE	232363004		SW846 5030	06-JUL-2009 12:42	N/A	5 g	5 mL	1	SOIL
SAMPLE	232363006		SW846 5030	02-JUL-2009 13:53	N/A	5 g	5 mL	1	SOIL
SAMPLE	232363011		SW846 5030	02-JUL-2009 13:54	N/A	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 6/15/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1306

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 061509V6

Daily Standard — Volume Added for Purge (ul)

Solution ID#		Blk/ Smpl	ICV	MS/ LCS	BFB
L-ICV	W6VM090615-17		5+5		
IS	UVM090518-01	1	1		
SS	UVM090305-02	1	1		
S-ICV	W6VM090615-25		5+5		
BFB	UVM090305-02				1

Purge Amount

5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6/15/2009	9:58	6P101.D	RINSE	GEL	BLANK	5mL	1	N/A	1	w	RXD1	N/A	X	RINSE
6/15/2009	10:26	6P102.D	RINSE	GEL	BLANK	5mL	1	N/A	2	w	RXD1	N/A	X	RINSE
6/15/2009	11:16	6P103.D	W6VM090615-01	GEL	CCV	5uL	1	N/A	3	w	RXD1	N/A	X	UVM090603-07A+UVM090520-07D
6/15/2009	11:44	6P104.D	W6VM090615-02	GEL	CCV/LCS	5uL	1	N/A	4	w	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	12:36	6P105.D	W6VM090615-03	GEL	CCV	5uL	1	N/A	5	w	RXD1	N/A	X	UVM090603-07A+UVM090520-07D
6/15/2009	13:04	6P106.D	W6VM090615-04	GEL	CCV/LCS	5uL	1	N/A	6	w	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	13:32	6P107.D	W6VM090615-05	GEL	LCS	5g	1	N/A	7	s	RXD1	N/A	X	UVM090605-01A+IVM090611-01
6/15/2009	14:23	6P108.D	W6VM090615-06	GEL	CCV/LCS	5uL	1	N/A	8	w	RXD1	N/A	X	UVM090519-01E+IVM090611-01
6/15/2009	15:14	6P109.D	RINSE	GEL	BLANK	5mL	1	N/A	9	w	RXD1	N/A	X	RINSE
6/15/2009	15:42	6P110.D	W6VM090615-07	GEL	L-1	5uL	1	N/A	10	w	RXD1	N/A	X	TEST
6/15/2009	16:10	6P111.D	UVM090305-02	GEL	BFB	5mL	1	N/A	11	w	RXD1	N/A	O	
6/15/2009	16:38	6P112.D	W6VM090615-08	GEL	L-1	5uL	1	N/A	12	w	RXD1	N/A	O	UVM090603-02A+UVM090520-02D
6/15/2009	17:06	6P113.D	W6VM090615-09	GEL	L-2	5uL	1	N/A	13	w	RXD1	N/A	O	UVM090603-03A+UVM090520-03D
6/15/2009	17:34	6P114.D	W6VM090615-10	GEL	L-5	5uL	1	N/A	14	w	RXD1	N/A	O	UVM090603-04A+UVM090520-04D
6/15/2009	18:02	6P115.D	W6VM090615-11	GEL	L-10	5uL	1	N/A	15	w	RXD1	N/A	O	UVM090603-05A+UVM090520-05D
6/15/2009	18:30	6P116.D	W6VM090615-12	GEL	L-20	5uL	1	N/A	16	w	RXD1	N/A	X	Methyline Chloride would not pass
6/15/2009	18:58	6P117.D	W6VM090615-13	GEL	L-50	5uL	1	N/A	17	w	RXD1	N/A	O	UVM090603-07A+UVM090520-07D
6/15/2009	19:25	6P118.D	W6VM090615-14	GEL	L-100	5uL	1	N/A	18	w	RXD1	N/A	O	UVM090603-08A+UVM090520-08D
6/15/2009	19:53	6P119.D	RINSE	GEL	BLANK	5mL	1	N/A	19	w	RXD1	N/A	x	RINSE
6/15/2009	20:21	6P120.D	W6VM090615-15	GEL	L-0.5	5uL	1	N/A	20	w	RXD1	N/A	O	UVM090603-01A+UVM090520-01D
6/15/2009	20:49	6P121.D	W6VM090615-16	GEL	L-ICV	5uL	1	N/A	21	w	RXD1	N/A	x	UVM090605-01A+IVM090611-01
6/15/2009	21:17	6P122.D	W6VM090615-17	GEL	L-ICV	5uL	1	N/A	22	w	RXD1	N/A	O	UVM090527-01C+IVM090611-01
6/15/2009	21:45	6P123.D	W6VM090615-18	GEL	S-5	5uL	1	N/A	23	w	RXD1	N/A	O	UVM090601-01+UVM090522-01C
6/15/2009	22:12	6P124.D	W6VM090615-19	GEL	S-10	5uL	1	N/A	24	w	RXD1	N/A	O	UVM090601-02+UVM090522-02C
6/15/2009	22:40	6P125.D	W6VM090615-20	GEL	S-25	5uL	1	N/A	25	w	RXD1	N/A	O	UVM090601-03+UVM090522-03C
6/15/2009	23:07	6P126.D	W6VM090615-21	GEL	S-50	5uL	1	N/A	26	w	RXD1	N/A	O	UVM090601-04+UVM090522-04C
6/15/2009	23:35	6P127.D	W6VM090615-22	GEL	S-100	5uL	1	N/A	27	w	RXD1	N/A	O	UVM090601-05+UVM090522-05C
6/16/2009	0:03	6P128.D	W6VM090615-23	GEL	S-250	5uL	1	N/A	28	w	RXD1	N/A	O	UVM090601-06+UVM090522-06C

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 6/15/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1306

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 061509V6

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	ICV	MS/ LCS	BFB
L-ICV	W6VM090615-17		5+5		
IS	UVM090518-01	1	1		
SS	UVM090305-02	1	1		
S-ICV	W6VM090615-25		5+5		
BFB	UVM090305-02				1

Purge Amount	
5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
6/16/2009	0:31	6P129.D	W6VM090615-24	GEL	S-500	5uL	1	N/A	29	w	RXD1	N/A	O	UVM090601-07+UVM090522-07C
6/16/2009	0:59	6P130.D	RINSE	GEL	BLANK	5mL	1	N/A	30	w	RXD1	N/A	x	RINSE
6/16/2009	1:27	6P131.D	W6VM090615-25	GEL	S-ICV	5uL	1	N/A	31	w	RXD1	N/A	O	UVM090601-08A+UVM090528-01C
6/16/2009	1:55	6P132.D	RINSE	GEL	BLANK	5mL	1	N/A	32	w	RXD1	N/A	x	RINSE

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 7/2/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1341

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. 123 for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 070209V6

Daily Standard	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W6VM090702-01		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W6VM090702-02/03			5+5	
BFB	W6VM090702-01				1
SHORT	W6VM090702-04/05		5+5	5+5	
DHEC	N/A				

Purge Amount	
5	Water Purge Vol:ML
5	Soil Purge Wt..G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
2 Jul 2009	08:57	6R401.D	RINSE	GEL	RINSE	5uL	1	N/A	1	w	AXO1	N/A	X	RINSE
2 Jul 2009	09:24	6R402.D	W6VM090702-01	GEL	BFB/CCV	5uL	1	N/A	2	w	AXO1	N/A	O	UVM090603-07B+UVM090617-07C
2 Jul 2009	09:52	6R403.D	W6VM090702-02	GEL	LCS	5uL	1	N/A	3	w	AXO1	N/A	O	UVM090605-01C+IVM090630-01
2 Jul 2009	10:20	6R404.D	W6VM090702-03	GEL	LCS	5g	1	N/A	4	s	AXO1	N/A	O	UVM090605-01C+IVM090630-01
2 Jul 2009	10:50	6R405.D	W6VM090702-03	GEL	short/LCS	5uL	1	N/A	4	s	AXO1	N/A	x	AUTOSAMPLER ERROR RE INJECTED VIAL 4
2 Jul 2009	11:18	6R406.D	W6VM090702-04	GEL	short/LCS	5uL	1	N/A	5	w	AXO1	N/A	O	UVM090601-08B/UVM090624-02A
2 Jul 2009	11:46	6R407.D	W6VM090702-05	GEL	SLCS	5g	1	N/A	6	s	AXO1	N/A	O	UVM090601-08B/UVM090624-02A
2 Jul 2009	12:14	6R408.D	12018--	GEL	MB	5uL	1	N/A	7	s	AXO1	N/A	O	
2 Jul 2009	13:07	6R409.D	12018--	GEL	MB	5g	1	N/A	8	s	AXO1	N/A	O	
2 Jul 2009	13:35	6R410.D	232264009	LANL	881794	5g	1	N/A	9	s	AXO1	N/A	O	
2 Jul 2009	14:03	6R411.D	232348001	LANL	881794	5g	1	N/A	10	s	AXO1	N/A	O	Confirm IS failure, Report this file
2 Jul 2009	14:31	6R412.D	232357001	LANL	882208	5g	1	N/A	11	s	AXO1	N/A	O	
2 Jul 2009	14:59	6R413.D	232357002	LANL	882208	5g	1	N/A	12	s	AXO1	N/A	O	
2 Jul 2009	15:26	6R414.D	232363001	LANL	882208	5g	1	N/A	13	s	AXO1	N/A	O	
2 Jul 2009	15:54	6R415.D	232363002	LANL	882208	5g	1	N/A	14	s	AXO1	N/A	O	
2 Jul 2009	16:59	6R416.D	232363003	LANL	882208	5g	1	N/A	15	s	AXO1	N/A	X	RR IS failure see file 6S109
2 Jul 2009	17:27	6R417.D	232363004	LANL	882208	5g	1	N/A	16	s	AXO1	N/A	X	RR IS failure see file 6S110
2 Jul 2009	17:55	6R418.D	232363006	LANL	882208	5g	1	N/A	17	s	AXO1	N/A	O	
2 Jul 2009	18:22	6R419.D	232363011	LANL	882208	5g	1	N/A	18	s	AXO1	N/A	O	
2 Jul 2009	18:50	6R420.D	1201872763	LANL	881794	5g	1	N/A	19	s	AXO1	N/A	O	232264001MS
2 Jul 2009	19:18	6R421.D	1201872764	LANL	881794	5g	1	N/A	20	s	AXO1	N/A	O	232264001MSD
2 Jul 2009	19:45	6R422.D	1201872759	BRKL	881792	5g	1	N/A	21	s	AXO1	N/A	O	232531001MS
2 Jul 2009	20:13	6R423.D	1201872760	BRKL	881792	5g	1	N/A	22	s	AXO1	N/A	O	232531001MSD

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA6

Date: 7/2/2009 Method 8260B/624 Operator: RXD1

REVIEWED BY:
DATE:

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 4

Daily Instrument Readings:
Multiplier Voltage: 1341

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 6/15/2009

(See pg. 123 for ICAL Std. Sci. Ids)

NaHSO4 lot # n/a
Cl test lot # 72612
Sequence Number: 070209V6

Daily Standard — Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W6VM090702-01		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W6VM090702-02/03			5+5	
BFB	W6VM090702-01				1
SHORT	W6VM090702-04/05		5+5	5+5	
DHEC	N/A				

Purge Amount

5	Water Purge Vol:ML
5	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
x	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable (O/X)	Comments
2 Jul 2009	20:41	6R424.D	1201873672	LANL	882208	5g	1	N/A	23	s	AXO1	N/A	O	232357001MS
2 Jul 2009	21:08	6R425.D	1201873673	LANL	882208	5g	1	N/A	24	s	AXO1	N/A	O	232357001MSD

GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2455

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	880638
Prep Batch Number:	880635

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232357001	CAMO-09-10480
1201869908	Method Blank (MB)
1201869909	Laboratory Control Sample (LCS)
1201869910	232348001(CAMO-09-10462) Matrix Spike (MS)
1201869911	232348001(CAMO-09-10462) Matrix Spike Duplicate (MSD)

The samples in this batch were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the

second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Sample 232357002 did not meet surrogate recovery acceptance criteria in this batch. It was re-extracted within holding (batch 881291) and passed. Only the re-extracted results for that sample were reported.

Laboratory Control Sample (LCS) Recovery
The LCS(1201869909) recovered Benzoic acid at 24%. The limits are 27%-137%. The LCS failure represented less than 5% of the total requested spike analyte list. That satisfied the acceptance criteria for the client and the data results have been reported.

QC Sample Designation
The non-SDG sample 232348001 (CAMO-09-10462) was selected for analysis as the matrix spike and matrix spike duplicate. Please see the associated raw data files located in the Miscellaneous Section of the data report.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The MS(1201869910)/MSD(1201869911) RPD value for 4-Nitrophenol was 48% (limit is 30%) and for Benzyl alcohol was 52% (limit is 30%). Since 4-Nitrophenol and Benzyl alcohol were individually within the acceptance limits for the MS and MSD, the data results have been reported.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this batch met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this batch did not require dilutions.

Sample Re-extraction/Re-analysis
Sample 232357002 did not meet surrogate recovery acceptance criteria in this batch. It was re-extracted within holding (batch 881291) and passed. Only the re-extracted results for that sample were reported.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this batch: 706403. It is located in the Miscellaneous Section of the data report.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Additional Comments
Additional comments were not required for this batch.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration

The samples reported in this batch were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD1.I	HP 5973 Mass Spectrometer	HP6890/HP5973	ZB-5ms	25m x 0.2mm, 0.33um (5% Polysilarylene-95% Polydimethylsiloxane)

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	881291
Prep Batch Number:	881290

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232357002	CAMO-09-10479
1201871589	Method Blank (MB)
1201871590	Laboratory Control Sample (LCS)
1201871595	Laboratory Control Sample Duplicate (LCSD)

The samples in this batch were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this batch. A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this batch met the acceptance criteria.

Surrogate Recoveries
Sample 232357002 did not meet surrogate recovery acceptance criteria and was re-extracted within holding in this batch and passed. Only the re-extracted results for that sample were reported.

Laboratory Control Sample (LCS) Recovery
The LCS (1201871590) recovered p-Nitroaniline above its established acceptance limits. The failure represented less than 5% of the total requested analyte list. That satisfied the clients acceptance criteria and the data were reported.

Laboratory Control Sample Duplicate (LCSD) Recovery
The LCSD (1201871591) recovered p-Nitroaniline above its established acceptance limits. The failure represented less than 5% of the total requested analyte list. That satisfied the clients acceptance criteria and the data were reported.

LCS/LCSD Relative Percent Difference (RPD) Statement
Multiple LCS/LCSD RPD values exceeded their established acceptance limit. Because the analytes with failing RPD values were individually within their established spike recovery acceptance limits, the data were reported un-qualified for the RPD value failures.

QC Sample Designation
No sample was selected for analysis as the matrix spike and matrix spike duplicate.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information:

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Sample 232357002 did not meet surrogate recovery acceptance criteria and was re-extracted within holding in this batch and passed. Only the re-extracted results for that sample were reported.

Miscellaneous Information:

Nonconformance (NCR) Documentation
The following NCR was generated for this batch: 706943. It is located in the Miscellaneous Section of the data report.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Additional Comments
Additional comments were not required for this batch.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration

The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD5.I	HP Mass Spectrometer	HP6890/HP5973	DB-5MS	25m x 0.2mm, 0.33um (5% Phenylmethylpolysiloxane)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: _____ **Date:** 7-16-09

Roadmap for LANL 09-2455 SVOA

This roadmap was analyzed by rmb on 07-01-2009, 08:31.
This roadmap was reviewed by dan01134 on 07-06-2009, 08:56.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD1.i/s062809.b/s1f2814.d	232357001	28-JUN-2009	19:50	09-2455.sub	CAMO-09-10480	1	880638	
■	N	/chem/MSD1.i/s062809.b/s1f2815.d	232357002	28-JUN-2009	20:14	09-2455.sub	CAMO-09-10479	1	880638	DUSE - Fail SC - Rx(s1f2813) passes w/in hold
☐	N	/chem/MSD5.i/s063009.b/s5f3013.d	232357002	30-JUN-2009	11:47	09-2455.sub	CAMO-09-10479	1	881291	Rx of s1f2815 - passes w/in hold - use this data

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD1.i/s062809.b/s1f2805-3.d	1201869908	mb	28-JUN-2009	16:10	09-2455.sub	SBLK01	1	880638	
☐	N	/chem/MSD1.i/s062809.b/s1f2806-3.d	1201869909	lcs	28-JUN-2009	16:34	09-2455.sub	SBLK01LCS	1	880638	
☐	N	/chem/MSD5.i/s063009.b/s5f3006-2.d	1201871589	mb	30-JUN-2009	09:09	09-2455.sub	SBLK02	1	881291	
☐	N	/chem/MSD5.i/s063009.b/s5f3007-2.d	1201871590	lcs	30-JUN-2009	09:31	09-2455.sub	SBLK02LCS	1	881291	
☐	N	/chem/MSD5.i/s063009.b/s5f3008-2.d	1201871595	lcsd	30-JUN-2009	09:53	09-2455.sub	SBLK02LCSD	1	881291	

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357002	Date Received:	06/25/2009 08:45	%Moisture:	9.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10479	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881291	Inst:	MSD5.I	Dilution:	1
Run Date:	06/30/2009 11:47	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/29/2009 23:29	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5f3013.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	368	ug/kg	73.6	368
108-95-2	Phenol	U	368	ug/kg	73.6	368
95-57-8	2-Chlorophenol	U	368	ug/kg	73.6	368
106-46-7	1,4-Dichlorobenzene	U	368	ug/kg	73.6	368
621-64-7	N-Nitrosodipropylamine	U	368	ug/kg	73.6	368
59-50-7	4-Chloro-3-methylphenol	U	368	ug/kg	36.8	368
83-32-9	Acenaphthene	U	36.8	ug/kg	12.3	36.8
121-14-2	2,4-Dinitrotoluene	U	368	ug/kg	36.8	368
100-02-7	4-Nitrophenol	U	368	ug/kg	73.6	368
87-86-5	Pentachlorophenol	U	368	ug/kg	73.6	368
129-00-0	Pyrene	U	36.8	ug/kg	11.6	36.8
110-86-1	Pyridine	U	368	ug/kg	73.6	368
62-53-3	Aniline	U	368	ug/kg	129	368
111-44-4	bis(2-Chloroethyl) ether	U	368	ug/kg	73.6	368
541-73-1	1,3-Dichlorobenzene	U	368	ug/kg	73.6	368
100-51-6	Benzyl alcohol	U	368	ug/kg	110	368
95-50-1	1,2-Dichlorobenzene	U	368	ug/kg	73.6	368
108-60-1	bis(2-Chloroisopropyl)ether	U	368	ug/kg	73.6	368
95-48-7	o-Cresol	U	368	ug/kg	73.6	368
65794-96-9	m,p-Cresols	U	368	ug/kg	147	368
67-72-1	Hexachloroethane	U	368	ug/kg	73.6	368
98-95-3	Nitrobenzene	U	368	ug/kg	73.6	368
78-59-1	Isophorone	U	368	ug/kg	73.6	368
88-75-5	2-Nitrophenol	U	368	ug/kg	36.8	368
105-67-9	2,4-Dimethylphenol	U	368	ug/kg	73.6	368
111-91-1	bis(2-Chloroethoxy)methane	U	368	ug/kg	73.6	368
120-83-2	2,4-Dichlorophenol	U	368	ug/kg	73.6	368
65-85-0	Benzoic acid	U	736	ug/kg	184	736
91-20-3	Naphthalene	U	36.8	ug/kg	11.0	36.8
106-47-8	4-Chloroaniline	U	368	ug/kg	73.6	368
87-68-3	Hexachlorobutadiene	U	368	ug/kg	73.6	368
91-57-6	2-Methylnaphthalene	U	36.8	ug/kg	7.36	36.8
77-47-4	Hexachlorocyclopentadiene	U	368	ug/kg	73.6	368
88-06-2	2,4,6-Trichlorophenol	U	368	ug/kg	73.6	368
95-95-4	2,4,5-Trichlorophenol	U	368	ug/kg	73.6	368
91-58-7	2-Chloronaphthalene	U	36.8	ug/kg	12.9	36.8
88-74-4	2-Nitroaniline	U	368	ug/kg	73.6	368
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	368	ug/kg	73.6	368

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357002	Date Received:	06/25/2009 08:45	%Moisture:	9.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10479	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881291	Inst:	MSD5.I	Dilution:	1
Run Date:	06/30/2009 11:47	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/29/2009 23:29	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5f3013.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	368	ug/kg	73.6	368
606-20-2	2,6-Dinitrotoluene	U	368	ug/kg	36.8	368
208-96-8	Acenaphthylene	U	36.8	ug/kg	11.0	36.8
51-28-5	2,4-Dinitrophenol	U	736	ug/kg	140	736
132-64-9	Dibenzofuran	U	368	ug/kg	73.6	368
84-66-2	Diethylphthalate	U	368	ug/kg	73.6	368
86-73-7	Fluorene	U	36.8	ug/kg	11.0	36.8
7005-72-3	4-Chlorophenylphenylether	U	368	ug/kg	36.8	368
534-52-1	2-Methyl-4,6-dinitrophenol	U	368	ug/kg	73.6	368
100-01-6	4-Nitroaniline	U	368	ug/kg	73.6	368
	p-Nitroaniline					
122-39-4	Diphenylamine	U	368	ug/kg	73.6	368
122-66-7	Azobenzene	U	368	ug/kg	73.6	368
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	368	ug/kg	36.8	368
118-74-1	Hexachlorobenzene	U	368	ug/kg	73.6	368
85-01-8	Phenanthrene	U	36.8	ug/kg	11.0	36.8
120-12-7	Anthracene	U	36.8	ug/kg	7.36	36.8
84-74-2	Di-n-butylphthalate	U	368	ug/kg	36.8	368
206-44-0	Fluoranthene	U	36.8	ug/kg	11.0	36.8
85-68-7	Butylbenzylphthalate	U	368	ug/kg	73.6	368
56-55-3	Benzo(a)anthracene	U	36.8	ug/kg	11.0	36.8
91-94-1	3,3'-Dichlorobenzidine	U	368	ug/kg	110	368
218-01-9	Chrysene	U	36.8	ug/kg	11.0	36.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	368	ug/kg	73.6	368
117-84-0	Di-n-octylphthalate	U	368	ug/kg	73.6	368
205-99-2	Benzo(b)fluoranthene	U	36.8	ug/kg	11.0	36.8
207-08-9	Benzo(k)fluoranthene	U	36.8	ug/kg	11.0	36.8
50-32-8	Benzo(a)pyrene	U	36.8	ug/kg	11.0	36.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.8	ug/kg	11.0	36.8
53-70-3	Dibenzo(a,h)anthracene	U	36.8	ug/kg	11.0	36.8
191-24-2	Benzo(ghi)perylene	U	36.8	ug/kg	11.0	36.8
120-82-1	1,2,4-Trichlorobenzene	U	368	ug/kg	73.6	368

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	263	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357001	Date Received:	06/25/2009 08:45	%Moisture:	11.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10480	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	880638	Inst:	MSD1.1	Dilution:	1
Run Date:	06/28/2009 19:50	Analyst:	NAG1	Inj. Vol:	.5 uL
Prep Date:	06/26/2009 21:26	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s1f2814.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	375	ug/kg	75.1	375
108-95-2	Phenol	U	375	ug/kg	75.1	375
95-57-8	2-Chlorophenol	U	375	ug/kg	75.1	375
106-46-7	1,4-Dichlorobenzene	U	375	ug/kg	75.1	375
621-64-7	N-Nitrosodipropylamine	U	375	ug/kg	75.1	375
59-50-7	4-Chloro-3-methylphenol	U	375	ug/kg	37.5	375
83-32-9	Acenaphthene	U	37.5	ug/kg	12.5	37.5
121-14-2	2,4-Dinitrotoluene	U	375	ug/kg	37.5	375
100-02-7	4-Nitrophenol	U	375	ug/kg	75.1	375
87-86-5	Pentachlorophenol	U	375	ug/kg	75.1	375
129-00-0	Pyrene	U	37.5	ug/kg	11.8	37.5
110-86-1	Pyridine	U	375	ug/kg	75.1	375
62-53-3	Aniline	U	375	ug/kg	131	375
111-44-4	bis(2-Chloroethyl) ether	U	375	ug/kg	75.1	375
541-73-1	1,3-Dichlorobenzene	U	375	ug/kg	75.1	375
100-51-6	Benzyl alcohol	U	375	ug/kg	113	375
95-50-1	1,2-Dichlorobenzene	U	375	ug/kg	75.1	375
108-60-1	bis(2-Chloroisopropyl)ether	U	375	ug/kg	75.1	375
95-48-7	o-Cresol	U	375	ug/kg	75.1	375
65794-96-9	m,p-Cresols	U	375	ug/kg	150	375
67-72-1	Hexachloroethane	U	375	ug/kg	75.1	375
98-95-3	Nitrobenzene	U	375	ug/kg	75.1	375
78-59-1	Isophorone	U	375	ug/kg	75.1	375
88-75-5	2-Nitrophenol	U	375	ug/kg	37.5	375
105-67-9	2,4-Dimethylphenol	U	375	ug/kg	75.1	375
111-91-1	bis(2-Chloroethoxy)methane	U	375	ug/kg	75.1	375
120-83-2	2,4-Dichlorophenol	U	375	ug/kg	75.1	375
65-85-0	Benzoic acid	U	751	ug/kg	188	751
91-20-3	Naphthalene	U	37.5	ug/kg	11.3	37.5
106-47-8	4-Chloroaniline	U	375	ug/kg	75.1	375
87-68-3	Hexachlorobutadiene	U	375	ug/kg	75.1	375
91-57-6	2-Methylnaphthalene	U	37.5	ug/kg	7.51	37.5
77-47-4	Hexachlorocyclopentadiene	U	375	ug/kg	75.1	375
88-06-2	2,4,6-Trichlorophenol	U	375	ug/kg	75.1	375
95-95-4	2,4,5-Trichlorophenol	U	375	ug/kg	75.1	375
91-58-7	2-Chloronaphthalene	U	37.5	ug/kg	13.1	37.5
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	375	ug/kg	75.1	375
99-09-2	3-Nitroaniline	U	375	ug/kg	75.1	375

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357001	Date Received:	06/25/2009 08:45	%Moisture:	11.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10480	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	880638	Inst:	MSD1.I	Dilution:	1
Run Date:	06/28/2009 19:50	Analyst:	NAG1	Inj. Vol:	.5 uL
Prep Date:	06/26/2009 21:26	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s1f2814.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	375	ug/kg	75.1	375
606-20-2	2,6-Dinitrotoluene	U	375	ug/kg	37.5	375
208-96-8	Acenaphthylene	U	37.5	ug/kg	11.3	37.5
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751
132-64-9	Dibenzofuran	U	375	ug/kg	75.1	375
84-66-2	Diethylphthalate	U	375	ug/kg	75.1	375
86-73-7	Fluorene	U	37.5	ug/kg	11.3	37.5
7005-72-3	4-Chlorophenylphenylether	U	375	ug/kg	37.5	375
534-52-1	2-Methyl-4,6-dinitrophenol	U	375	ug/kg	75.1	375
100-01-6	4-Nitroaniline	U	375	ug/kg	75.1	375
	p-Nitroaniline					
122-39-4	Diphenylamine	U	375	ug/kg	75.1	375
122-66-7	Azobenzene	U	375	ug/kg	75.1	375
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	375	ug/kg	37.5	375
118-74-1	Hexachlorobenzene	U	375	ug/kg	75.1	375
85-01-8	Phenanthrene	U	37.5	ug/kg	11.3	37.5
120-12-7	Anthracene	U	37.5	ug/kg	7.51	37.5
84-74-2	Di-n-butylphthalate	U	375	ug/kg	37.5	375
206-44-0	Fluoranthene	U	37.5	ug/kg	11.3	37.5
85-68-7	Butylbenzylphthalate	U	375	ug/kg	75.1	375
56-55-3	Benzo(a)anthracene	U	37.5	ug/kg	11.3	37.5
91-94-1	3,3'-Dichlorobenzidine	U	375	ug/kg	113	375
218-01-9	Chrysene	U	37.5	ug/kg	11.3	37.5
117-81-7	bis(2-Ethylhexyl)phthalate	U	375	ug/kg	75.1	375
117-84-0	Di-n-octylphthalate	U	375	ug/kg	75.1	375
205-99-2	Benzo(b)fluoranthene	U	37.5	ug/kg	11.3	37.5
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.3	37.5
50-32-8	Benzo(a)pyrene	U	37.5	ug/kg	11.3	37.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.5	ug/kg	11.3	37.5
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.3	37.5
191-24-2	Benzo(ghi)perylene	U	37.5	ug/kg	11.3	37.5
120-82-1	1,2,4-Trichlorobenzene	U	375	ug/kg	75.1	375

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	323	ug/kg		JA

QC Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 09-2455

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201869908	MB for batch 880635	63	59	62	73	52	88
1201869909	LCS for batch 880635	64	59	62	75	67	84
232357001	CAMO-09-10480	59	58	59	71	51	84
1201871589	MB for batch 881290	67	64	66	71	68	84
1201871590	LCS for batch 881290	59	56	61	61	74	86
1201871595	LCSD for batch 881290	76	72	80	78	77	90
232357002	CAMO-09-10479	52	50	53	52	51	68

Surrogate		Acceptance Limits
2FP	= 2-Fluorophenol	(35%-96%)
PHL	= Phenol-d5	(36%-96%)
NBZ	= Nitrobenzene-d5	(34%-104%)
FBP	= 2-Fluorobiphenyl	(36%-100%)
TBP	= 2,4,6-Tribromophenol	(37%-106%)
TPH	= p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: LCS for batch 880635
Lab Sample ID: 1201869909
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/28/2009 16:34
Dilution: 1
Prep Batch ID: 880635
Batch ID: 880638

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1310	78	31-95
108-95-2	LCS	Phenol	1670	0.0	1040	62	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1110	67	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	941	56	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1070	64	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1200	72	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1210	73	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1290	77	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1490	90	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	1120	67	38-116
129-00-0	LCS	Pyrene	1670	0.0	1460	88	43-108
110-86-1	LCS	Pyridine	1670	0.0	1080	65	13-129
62-53-3	LCS	Aniline	1670	0.0	1080	65	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1010	61	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	979	59	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	982	59	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	968	58	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1020	61	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1010	60	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1160	69	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	933	56	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1070	64	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: LCS for batch 880635
Lab Sample ID: 1201869909
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/28/2009 16:34
Dilution: 1
Prep Batch ID: 880635
Batch ID: 880638

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1150	69	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1140	69	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1170	70	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1200	72	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1140	69	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	392	24 *	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1090	65	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1210	73	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	925	55	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1160	69	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1480	89	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1240	74	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1410	85	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1330	80	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1350	81	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1780	107	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1300	78	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1280	77	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1400	84	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	701	42	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1330	80	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1350	81	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 880635 **Matrix:** SOIL

Lab Sample ID: 1201869909

Instrument: MSD1.I **Analysis Date:** 06/28/2009 16:34 **Dilution:** 1

Analyst: NAG1 **Prep Batch ID:** 880635

Inj. Vol: .5 uL **Batch ID:** 880638

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1160	70	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1210	73	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	920	55	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	1630	98	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1430	86	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1380	83	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1160	70	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1220	73	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1230	74	45-107
120-12-7	LCS	Anthracene	1670	0.0	1270	76	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1360	82	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1260	76	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1620	97	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1270	76	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1340	81	45-98
218-01-9	LCS	Chrysene	1670	0.0	1360	82	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1460	88	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1400	84	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1240	75	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1340	81	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1300	78	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1190	72	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: LCS for batch 880635
Lab Sample ID: 1201869909
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/28/2009 16:34
Dilution: 1
Prep Batch ID: 880635
Batch ID: 880638

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1240	75	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1250	75	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1040	63	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10462MS
Lab Sample ID: 1201869910
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 17:48
Prep Batch ID: 880635
Batch ID: 880638
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	1780	0.00	U	1200	68	32-90
108-95-2	MS	Phenol	1780	0.00	U	1070	60	32-105
95-57-8	MS	2-Chlorophenol	1780	0.00	U	1130	64	33-106
106-46-7	MS	1,4-Dichlorobenzene	1780	0.00	U	963	54	33-95
621-64-7	MS	N-Nitrosodipropylamine	1780	0.00	U	1020	57	31-109
59-50-7	MS	4-Chloro-3-methylphenol	1780	0.00	U	1210	68	38-119
83-32-9	MS	Acenaphthene	1780	0.00	U	1200	67	39-100
121-14-2	MS	2,4-Dinitrotoluene	1780	0.00	U	1290	73	42-107
100-02-7	MS	4-Nitrophenol	1780	0.00	U	1490	84	24-120
87-86-5	MS	Pentachlorophenol	1780	0.00	U	1230	69	26-121
129-00-0	MS	Pyrene	1780	0.00	U	1510	85	34-120
110-86-1	MS	Pyridine	1780	0.00	U	918	52	30-95
62-53-3	MS	Aniline	1780	0.00	U	1160	65	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	1780	0.00	U	1040	59	34-101
541-73-1	MS	1,3-Dichlorobenzene	1780	0.00	U	1020	57	31-97
100-51-6	MS	Benzyl alcohol	1780	0.00	U	875	49	17-120
95-50-1	MS	1,2-Dichlorobenzene	1780	0.00	U	1020	57	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	1780	0.00	U	1070	60	32-113
95-48-7	MS	o-Cresol	1780	0.00	U	1000	56	31-119
65794-96-9	MS	m,p-Cresols	1780	0.00	U	1240	69	35-125
67-72-1	MS	Hexachloroethane	1780	0.00	U	970	55	30-100
98-95-3	MS	Nitrobenzene	1780	0.00	U	1130	64	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10462MS
Lab Sample ID: 1201869910
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 17:48
Prep Batch ID: 880635
Batch ID: 880638

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	1780	0.00	U	1190	67	34-110
88-75-5	MS	2-Nitrophenol	1780	0.00	U	1180	66	32-108
105-67-9	MS	2,4-Dimethylphenol	1780	0.00	U	1360	77	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	1780	0.00	U	1250	70	35-108
120-83-2	MS	2,4-Dichlorophenol	1780	0.00	U	1190	67	38-110
65-85-0	MS	Benzoic acid	1780	0.00	U	571	32	18-134
91-20-3	MS	Naphthalene	1780	0.00	U	1120	63	31-105
106-47-8	MS	4-Chloroaniline	1780	0.00	U	1240	70	29-123
87-68-3	MS	Hexachlorobutadiene	1780	0.00	U	939	53	31-109
91-57-6	MS	2-Methylnaphthalene	1780	0.00	U	1200	68	32-110
77-47-4	MS	Hexachlorocyclopentadiene	1780	0.00	U	1480	83	21-122
88-06-2	MS	2,4,6-Trichlorophenol	1780	0.00	U	1120	63	37-108
95-95-4	MS	2,4,5-Trichlorophenol	1780	0.00	U	1430	81	37-116
91-58-7	MS	2-Chloronaphthalene	1780	0.00	U	1330	75	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	1780	0.00	U	1330	75	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	1780	0.00	U	1830	103	39-117
131-11-3	MS	Dimethylphthalate	1780	0.00	U	1300	73	41-105
606-20-2	MS	2,6-Dinitrotoluene	1780	0.00	U	1280	72	41-103
208-96-8	MS	Acenaphthylene	1780	0.00	U	1420	80	41-103
51-28-5	MS	2,4-Dinitrophenol	1780	0.00	U	552	31	25-104
132-64-9	MS	Dibenzofuran	1780	0.00	U	1310	74	40-114
84-66-2	MS	Diethylphthalate	1780	0.00	U	1350	76	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10462MS
Lab Sample ID: 1201869910
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 17:48
Dilution: 1
Prep Batch ID: 880635
Batch ID: 880638

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	1780	0.00	U	1170	66	48-99
7005-72-3	MS	4-Chlorophenylphenylether	1780	0.00	U	1210	68	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	1780	0.00	U	852	48	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	1780	0.00	U	1810	102	35-139
122-39-4	MS	Diphenylamine	1780	0.00	U	1470	83	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	1780	0.00	U	1390	78	37-118
101-55-3	MS	4-Bromophenylphenylether	1780	0.00	U	1190	67	39-112
118-74-1	MS	Hexachlorobenzene	1780	0.00	U	1220	69	38-113
85-01-8	MS	Phenanthrene	1780	0.00	U	1250	70	38-110
120-12-7	MS	Anthracene	1780	0.00	U	1300	73	38-112
84-74-2	MS	Di-n-butylphthalate	1780	0.00	U	1370	77	42-119
206-44-0	MS	Fluoranthene	1780	0.00	U	1300	73	38-119
85-68-7	MS	Butylbenzylphthalate	1780	0.00	U	1650	93	39-126
56-55-3	MS	Benzo(a)anthracene	1780	0.00	U	1340	75	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	1780	0.00	U	1380	78	35-106
218-01-9	MS	Chrysene	1780	0.00	U	1370	77	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	1780	0.00	U	1500	85	40-125
117-84-0	MS	Di-n-octylphthalate	1780	0.00	U	1490	84	30-147
205-99-2	MS	Benzo(b)fluoranthene	1780	0.00	U	1390	78	38-117
207-08-9	MS	Benzo(k)fluoranthene	1780	0.00	U	1300	73	39-120
50-32-8	MS	Benzo(a)pyrene	1780	0.00	U	1330	75	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	1780	0.00	U	1160	65	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10462MS
Lab Sample ID: 1201869910
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 17:48
Prep Batch ID: 880635
Batch ID: 880638
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	1780	0.00	U	1170	66	32-124
191-24-2	MS	Benzo(ghi)perylene	1780	0.00	U	1210	68	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	1780	0.00	U	1090	61	31-105

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2455

Client ID: CAMO-09-10462MSD

Lab Sample ID: 1201869911

Instrument: MSD1.I

Analyst: NAG1

Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate

Matrix: R

%Moisture: 6.5

Analysis Date: 06/28/2009 18:13

Dilution: 1

Prep Batch ID: 880635

Batch ID: 880638

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD N-Methyl-N-nitrosomethylam	1780	0.00	U	1080	60	32-90	11	0-30
108-95-2	MSD Phenol	1780	0.00	U	1010	57	32-105	6	0-30
95-57-8	MSD 2-Chlorophenol	1780	0.00	U	1050	59	33-106	7	0-30
106-46-7	MSD 1,4-Dichlorobenzene	1780	0.00	U	912	51	33-95	5	0-30
621-64-7	MSD N-Nitrosodipropylamine	1780	0.00	U	1080	60	31-109	5	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	1780	0.00	U	1140	64	38-119	6	0-30
83-32-9	MSD Acenaphthene	1780	0.00	U	1170	66	39-100	2	0-30
121-14-2	MSD 2,4-Dinitrotoluene	1780	0.00	U	1240	70	42-107	4	0-30
100-02-7	MSD 4-Nitrophenol	1780	0.00	U	913	51	24-120	48 *	0-30
87-86-5	MSD Pentachlorophenol	1780	0.00	U	1020	57	26-121	19	0-30
129-00-0	MSD Pyrene	1780	0.00	U	1350	76	34-120	11	0-30
110-86-1	MSD Pyridine	1780	0.00	U	738	41	30-95	22	0-30
62-53-3	MSD Aniline	1780	0.00	U	1040	58	34-111	11	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	1780	0.00	U	969	54	34-101	7	0-30
541-73-1	MSD 1,3-Dichlorobenzene	1780	0.00	U	963	54	31-97	5	0-30
100-51-6	MSD Benzyl alcohol	1780	0.00	U	514	29	17-120	52 *	0-30
95-50-1	MSD 1,2-Dichlorobenzene	1780	0.00	U	951	53	32-102	7	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	1780	0.00	U	1010	57	32-113	5	0-30
95-48-7	MSD o-Cresol	1780	0.00	U	988	55	31-119	2	0-30
65794-96-9	MSD m,p-Cresols	1780	0.00	U	1210	68	35-125	2	0-30
67-72-1	MSD Hexachloroethane	1780	0.00	U	918	51	30-100	6	0-30
98-95-3	MSD Nitrobenzene	1780	0.00	U	1090	61	33-108	4	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10462MSD
Lab Sample ID: 1201869911
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 18:13
Prep Batch ID: 880635
Batch ID: 880638
Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD Isophorone	1780	0.00	U	1130	63	34-110	5	0-30
88-75-5	MSD 2-Nitrophenol	1780	0.00	U	1150	64	32-108	2	0-30
105-67-9	MSD 2,4-Dimethylphenol	1780	0.00	U	1410	79	32-115	3	0-30
111-91-1	MSD bis(2-Chloroethoxy)methane	1780	0.00	U	1200	67	35-108	4	0-30
120-83-2	MSD 2,4-Dichlorophenol	1780	0.00	U	1140	64	38-110	5	0-30
65-85-0	MSD Benzoic acid	1780	0.00	U	448	25	18-134	24	0-30
91-20-3	MSD Naphthalene	1780	0.00	U	1080	61	31-105	4	0-30
106-47-8	MSD 4-Chloroaniline	1780	0.00	U	1170	65	29-123	6	0-30
87-68-3	MSD Hexachlorobutadiene	1780	0.00	U	902	51	31-109	4	0-30
91-57-6	MSD 2-Methylnaphthalene	1780	0.00	U	1160	65	32-110	4	0-30
77-47-4	MSD Hexachlorocyclopentadiene	1780	0.00	U	1450	81	21-122	2	0-30
88-06-2	MSD 2,4,6-Trichlorophenol	1780	0.00	U	1120	63	37-108	0	0-30
95-95-4	MSD 2,4,5-Trichlorophenol	1780	0.00	U	1480	83	37-116	3	0-30
91-58-7	MSD 2-Chloronaphthalene	1780	0.00	U	1300	73	37-103	3	0-30
88-74-4	MSD 2-Nitroaniline *o-Nitroaniline*	1780	0.00	U	1320	74	36-115	0	0-30
99-09-2	MSD 3-Nitroaniline *m-Nitroaniline*	1780	0.00	U	1800	101	39-117	1	0-30
131-11-3	MSD Dimethylphthalate	1780	0.00	U	1250	70	41-105	4	0-30
606-20-2	MSD 2,6-Dinitrotoluene	1780	0.00	U	1230	69	41-103	4	0-30
208-96-8	MSD Acenaphthylene	1780	0.00	U	1380	78	41-103	2	0-30
51-28-5	MSD 2,4-Dinitrophenol	1780	0.00	U	451	25	25-104	20	0-30
132-64-9	MSD Dibenzofuran	1780	0.00	U	1290	72	40-114	2	0-30
84-66-2	MSD Diethylphthalate	1780	0.00	U	1310	74	43-110	3	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: CAMO-09-10462MSD
Lab Sample ID: 1201869911
Instrument: MSD1.I
Analyst: NAG1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 6.5
Analysis Date: 06/28/2009 18:13
Dilution: 1
Prep Batch ID: 880635
Batch ID: 880638

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD Fluorene	1780	0.00	U	1130	63	48-99	3	0-30
7005-72-3	MSD 4-Chlorophenylphenylether	1780	0.00	U	1180	66	42-111	3	0-30
534-52-1	MSD 2-Methyl-4,6-dinitrophenol	1780	0.00	U	727	41	19-118	16	0-30
100-01-6	MSD 4-Nitroaniline *p-Nitroaniline*	1780	0.00	U	1740	97	35-139	4	0-30
122-39-4	MSD Diphenylamine	1780	0.00	U	1360	76	41-112	8	0-30
122-66-7	MSD Azobenzene *1,2-Diphenylhydrazine*	1780	0.00	U	1300	73	37-118	7	0-30
101-55-3	MSD 4-Bromophenylphenylether	1780	0.00	U	1110	62	39-112	7	0-30
118-74-1	MSD Hexachlorobenzene	1780	0.00	U	1160	65	38-113	5	0-30
85-01-8	MSD Phenanthrene	1780	0.00	U	1190	67	38-110	4	0-30
120-12-7	MSD Anthracene	1780	0.00	U	1230	69	38-112	6	0-30
84-74-2	MSD Di-n-butylphthalate	1780	0.00	U	1320	74	42-119	4	0-30
206-44-0	MSD Fluoranthene	1780	0.00	U	1250	70	38-119	4	0-30
85-68-7	MSD Butylbenzylphthalate	1780	0.00	U	1500	84	39-126	10	0-30
56-55-3	MSD Benzo(a)anthracene	1780	0.00	U	1220	69	39-110	9	0-30
91-94-1	MSD 3,3'-Dichlorobenzidine	1780	0.00	U	1290	72	35-106	7	0-30
218-01-9	MSD Chrysene	1780	0.00	U	1290	72	39-109	6	0-30
117-81-7	MSD bis(2-Ethylhexyl)phthalate	1780	0.00	U	1430	80	40-125	5	0-30
117-84-0	MSD Di-n-octylphthalate	1780	0.00	U	1330	75	30-147	11	0-30
205-99-2	MSD Benzo(b)fluoranthene	1780	0.00	U	1200	67	38-117	15	0-30
207-08-9	MSD Benzo(k)fluoranthene	1780	0.00	U	1240	70	39-120	5	0-30
50-32-8	MSD Benzo(a)pyrene	1780	0.00	U	1280	72	40-115	4	0-30
193-39-5	MSD Indeno(1,2,3-cd)pyrene	1780	0.00	U	1200	67	32-120	3	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	**09-2455**	**Sample Type:**	**Matrix Spike Duplicate**	
Client ID:	**CAMO-09-10462MSD**	**Matrix:**	**R**	
Lab Sample ID:	**1201869911**	**%Moisture:**	**6.5**	
Instrument:	**MSD1.I**	**Analysis Date:**	**06/28/2009 18:13**	**Dilution: 1**
Analyst:	**NAG1**	**Prep Batch ID:**	**880635**	
Inj. Vol:	**.5 uL**	**Batch ID:**	**880638**	

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD Dibenzo(a,h)anthracene	1780	0.00	U	1240	69	32-124	6	0-30
191-24-2	MSD Benzo(ghi)perylene	1780	0.00	U	1250	70	28-119	4	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	1780	0.00	U	1040	58	31-105	4	0-30

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2455

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 881290

Matrix: SOIL

Lab Sample ID: 1201871590

Instrument: MSD5.I

Analysis Date: 06/30/2009 09:31

Dilution: 1

Analyst: RMB

Prep Batch ID: 881290

Inj. Vol: .5 uL

Batch ID: 881291

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1040	63	31-95
108-95-2	LCS	Phenol	1670	0.0	943	57	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	997	60	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	942	57	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1090	66	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1210	72	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1050	63	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1320	79	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1270	76	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	1440	86	38-116
129-00-0	LCS	Pyrene	1670	0.0	1320	79	43-108
110-86-1	LCS	Pyridine	1670	0.0	963	58	13-129
62-53-3	LCS	Aniline	1670	0.0	1100	66	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	940	56	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	961	58	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	763	46	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	987	59	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1000	60	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1040	62	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1100	66	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	963	58	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1010	60	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 881290 **Matrix:** SOIL

Lab Sample ID: 1201871590

Instrument: MSD5.I **Analysis Date:** 06/30/2009 09:31 **Dilution:** 1

Analyst: RMB **Prep Batch ID:** 881290

Inj. Vol: .5 uL **Batch ID:** 881291

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1060	63	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1030	62	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1040	63	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1000	60	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1070	64	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	801	48	27-137
91-20-3	LCS	Naphthalene	1670	0.0	942	57	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1310	79	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1040	62	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1100	66	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1210	72	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1070	64	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1230	74	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1050	63	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1230	74	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1660	100	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1210	72	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1230	74	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1120	67	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	1280	77	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1140	68	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1300	78	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: LCS for batch 881290
Lab Sample ID: 1201871590
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 09:31
Dilution: 1
Prep Batch ID: 881290
Batch ID: 881291

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1120	67	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1140	68	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	1430	86	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	2380	143 *	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1430	86	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1240	75	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1180	71	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1300	78	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1260	75	45-107
120-12-7	LCS	Anthracene	1670	0.0	1320	79	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1380	83	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1410	85	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1360	81	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1370	82	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1300	78	45-98
218-01-9	LCS	Chrysene	1670	0.0	1380	83	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1390	84	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1280	77	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1330	80	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1430	86	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1430	86	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1490	89	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 881290 **Matrix:** SOIL

Lab Sample ID: 1201871590

Instrument: MSD5.I **Analysis Date:** 06/30/2009 09:31 **Dilution:** 1

Analyst: RMB **Prep Batch ID:** 881290

Inj. Vol: .5 uL **Batch ID:** 881291

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1520	91	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1460	88	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1030	62	36-109

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2455

Sample Type: Laboratory Control Sample Duplicate

Client ID: LCSD for batch 881290

Matrix: SOIL

Lab Sample ID: 1201871595

Instrument: MSD5.I

Analysis Date: 06/30/2009 09:53

Dilution: 1

Analyst: RMB

Prep Batch ID: 881290

Inj. Vol: .5 uL

Batch ID: 881291

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	LCSD N-Methyl-N-nitrosomethylam	1670	0.0	1330	80	31-95	24	0-30
108-95-2	LCSD Phenol	1670	0.0	1290	77	37-104	31 *	0-30
95-57-8	LCSD 2-Chlorophenol	1670	0.0	1320	79	40-105	28	0-30
106-46-7	LCSD 1,4-Dichlorobenzene	1670	0.0	1190	71	34-103	23	0-30
621-64-7	LCSD N-Nitrosodipropylamine	1670	0.0	1460	87	36-110	28	0-30
59-50-7	LCSD 4-Chloro-3-methylphenol	1670	0.0	1480	89	46-114	20	0-30
83-32-9	LCSD Acenaphthene	1670	0.0	1300	78	40-105	21	0-30
121-14-2	LCSD 2,4-Dinitrotoluene	1670	0.0	1440	86	49-107	8	0-30
100-02-7	LCSD 4-Nitrophenol	1670	0.0	1320	79	33-110	4	0-30
87-86-5	LCSD Pentachlorophenol	1670	0.0	1490	89	38-116	3	0-30
129-00-0	LCSD Pyrene	1670	0.0	1370	82	43-108	4	0-30
110-86-1	LCSD Pyridine	1670	0.0	1240	74	13-129	25	0-30
62-53-3	LCSD Aniline	1670	0.0	1500	90	30-121	31 *	0-30
111-44-4	LCSD bis(2-Chloroethyl) ether	1670	0.0	1220	73	37-106	26	0-30
541-73-1	LCSD 1,3-Dichlorobenzene	1670	0.0	1220	73	33-103	24	0-30
100-51-6	LCSD Benzyl alcohol	1670	0.0	1010	60	31-100	28	0-30
95-50-1	LCSD 1,2-Dichlorobenzene	1670	0.0	1260	76	34-108	25	0-30
108-60-1	LCSD bis(2-Chloroisopropyl)ether	1670	0.0	1290	77	34-120	25	0-30
95-48-7	LCSD o-Cresol	1670	0.0	1330	80	39-111	25	0-30
65794-96-9	LCSD m,p-Cresols	1670	0.0	1480	89	43-118	29	0-30
67-72-1	LCSD Hexachloroethane	1670	0.0	1250	75	34-105	26	0-30
98-95-3	LCSD Nitrobenzene	1670	0.0	1310	78	37-110	26	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: LCSD for batch 881290
Lab Sample ID: 1201871595
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample Duplicate
Matrix: SOIL
Analysis Date: 06/30/2009 09:53
Dilution: 1
Prep Batch ID: 881290
Batch ID: 881291

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	LCSD Isophorone	1670	0.0	1370	82	41-108	26	0-30
88-75-5	LCSD 2-Nitrophenol	1670	0.0	1360	82	35-112	27	0-30
105-67-9	LCSD 2,4-Dimethylphenol	1670	0.0	1330	80	35-114	24	0-30
111-91-1	LCSD bis(2-Chloroethoxy)methane	1670	0.0	1320	79	40-109	28	0-30
120-83-2	LCSD 2,4-Dichlorophenol	1670	0.0	1410	85	45-109	27	0-30
65-85-0	LCSD Benzoic acid	1670	0.0	1360	81	27-137	52 *	0-30
91-20-3	LCSD Naphthalene	1670	0.0	1200	72	35-105	24	0-30
106-47-8	LCSD 4-Chloroaniline	1670	0.0	1660	100	30-122	24	0-30
87-68-3	LCSD Hexachlorobutadiene	1670	0.0	1330	80	37-111	24	0-30
91-57-6	LCSD 2-Methylnaphthalene	1670	0.0	1430	86	40-106	26	0-30
77-47-4	LCSD Hexachlorocyclopentadiene	1670	0.0	1790	107	24-135	39 *	0-30
88-06-2	LCSD 2,4,6-Trichlorophenol	1670	0.0	1310	79	46-107	20	0-30
95-95-4	LCSD 2,4,5-Trichlorophenol	1670	0.0	1510	91	44-110	21	0-30
91-58-7	LCSD 2-Chloronaphthalene	1670	0.0	1370	82	44-104	26	0-30
88-74-4	LCSD 2-Nitroaniline *o-Nitroaniline*	1670	0.0	1470	88	44-113	18	0-30
99-09-2	LCSD 3-Nitroaniline *m-Nitroaniline*	1670	0.0	1830	110	48-113	9	0-30
131-11-3	LCSD Dimethylphthalate	1670	0.0	1370	82	47-104	13	0-30
606-20-2	LCSD 2,6-Dinitrotoluene	1670	0.0	1410	85	47-103	14	0-30
208-96-8	LCSD Acenaphthylene	1670	0.0	1390	83	43-104	21	0-30
51-28-5	LCSD 2,4-Dinitrophenol	1670	0.0	1360	82	32-114	7	0-30
132-64-9	LCSD Dibenzofuran	1670	0.0	1410	85	47-112	22	0-30
84-66-2	LCSD Diethylphthalate	1670	0.0	1410	85	50-108	8	0-30

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2455

Sample Type: Laboratory Control Sample Duplicate

Client ID: LCSD for batch 881290

Matrix: SOIL

Lab Sample ID: 1201871595

Instrument: MSD5.I

Analysis Date: 06/30/2009 09:53

Dilution: 1

Analyst: RMB

Prep Batch ID: 881290

Inj. Vol: .5 uL

Batch ID: 881291

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	LCSD Fluorene	1670	0.0	1330	80	49-102	17	0-30
7005-72-3	LCSD 4-Chlorophenylphenylether	1670	0.0	1360	81	50-109	18	0-30
534-52-1	LCSD 2-Methyl-4,6-dinitrophenol	1670	0.0	1530	92	35-114	6	0-30
100-01-6	LCSD 4-Nitroaniline *p-Nitroaniline*	1670	0.0	2540	152 *	44-139	6	0-30
122-39-4	LCSD Diphenylamine	1670	0.0	1580	95	46-111	10	0-30
122-66-7	LCSD Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1440	86	40-119	15	0-30
101-55-3	LCSD 4-Bromophenylphenylether	1670	0.0	1330	80	45-112	12	0-30
118-74-1	LCSD Hexachlorobenzene	1670	0.0	1410	84	44-115	8	0-30
85-01-8	LCSD Phenanthrene	1670	0.0	1360	81	45-107	7	0-30
120-12-7	LCSD Anthracene	1670	0.0	1410	85	46-106	7	0-30
84-74-2	LCSD Di-n-butylphthalate	1670	0.0	1450	87	52-115	5	0-30
206-44-0	LCSD Fluoranthene	1670	0.0	1470	88	50-115	4	0-30
85-68-7	LCSD Butylbenzylphthalate	1670	0.0	1420	85	49-115	4	0-30
56-55-3	LCSD Benzo(a)anthracene	1670	0.0	1410	85	48-105	3	0-30
91-94-1	LCSD 3,3'-Dichlorobenzidine	1670	0.0	1290	77	45-98	1	0-30
218-01-9	LCSD Chrysene	1670	0.0	1410	85	48-105	2	0-30
117-81-7	LCSD bis(2-Ethylhexyl)phthalate	1670	0.0	1450	87	50-117	4	0-30
117-84-0	LCSD Di-n-octylphthalate	1670	0.0	1390	83	39-123	8	0-30
205-99-2	LCSD Benzo(b)fluoranthene	1670	0.0	1390	83	46-111	4	0-30
207-08-9	LCSD Benzo(k)fluoranthene	1670	0.0	1500	90	46-114	5	0-30
50-32-8	LCSD Benzo(a)pyrene	1670	0.0	1480	89	49-112	4	0-30
193-39-5	LCSD Indeno(1,2,3-cd)pyrene	1670	0.0	1470	88	45-128	1	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: LCSD for batch 881290
Lab Sample ID: 1201871595
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample Duplicate
Matrix: SOIL
Analysis Date: 06/30/2009 09:53
Dilution: 1
Prep Batch ID: 881290
Batch ID: 881291

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	LCSD Dibenzo(a,h)anthracene	1670	0.0	1510	90	44-131	1	0-30
191-24-2	LCSD Benzo(ghi)perylene	1670	0.0	1430	86	42-128	3	0-30
120-82-1	LCSD 1,2,4-Trichlorobenzene	1670	0.0	1320	79	36-109	25	0-30

Method Blank Summary

SDG Number:	09-2455	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 880635	Instrument ID:	MSD1.I	Data File:	s1f2805-2.d
Lab Sample ID:	1201869908	Prep Date:	06/26/2009 21:26	Analyzed:	06/28/09 16:10
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 880635	1201869909	s1f2806-2.d	06/28/09	1634
04 CAMO-09-10480	232357001	s1f2814.d	06/28/09	1950

Method Blank Summary

SDG Number:	09-2455	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881290	Instrument ID:	MSD5.I	Data File:	s5f3006-2.d
Lab Sample ID:	1201871589	Prep Date:	06/29/2009 23:29	Analyzed:	06/30/09 09:09
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 881290	1201871590	s5f3007-2.d	06/30/09	0931
02 LCSD for batch 881290	1201871595	s5f3008-2.d	06/30/09	0953
03 CAMO-09-10479	232357002	s5f3013.d	06/30/09	1147

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2455

Instrument ID: MSD1.I **Injection Date/Time:** 19-JUN-09 09:41

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD1.i/s061909.b/s1f1901.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	52.8
68	Less than 2% of mass 69	1.9
69	Mass 69 Relative Abundance	41.4
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	44.6
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.5
275	10 - 30% of mass 198	26.1
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	74.2
442	Greater than 40% of mass 198	87.2
443	17 - 23% of mass 442	19.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICAL01	WBN090602-08	/chem/MSD1.i/s061909.b/s1f1903	19-JUN-09 10:25
MEGAICAL10	WBN090602-07	/chem/MSD1.i/s061909.b/s1f1904	19-JUN-09 10:57
MEGAICAL020	WBN090602-06	/chem/MSD1.i/s061909.b/s1f1905	19-JUN-09 11:27
MEGAICAL040	WBN090602-05.1	/chem/MSD1.i/s061909.b/s1f1906	19-JUN-09 11:55
MEGAICAL050	WBN090602-04	/chem/MSD1.i/s061909.b/s1f1907	19-JUN-09 12:25
MEGAICAL080	WBN090602-03	/chem/MSD1.i/s061909.b/s1f1908	19-JUN-09 12:54
MEGAICAL100	WBN090602-02	/chem/MSD1.i/s061909.b/s1f1909	19-JUN-09 13:23
MEGAICAL120	WBN090602-01	/chem/MSD1.i/s061909.b/s1f1910	19-JUN-09 13:54
MEGAICV	WBN090602-09.1	/chem/MSD1.i/s061909.b/s1f1911	19-JUN-09 14:24
AP12ICAL10	WBN090528-07	/chem/MSD1.i/s061909.b/s1f1913	19-JUN-09 15:17
AP12ICAL20	WBN090528-06	/chem/MSD1.i/s061909.b/s1f1914	19-JUN-09 15:42
AP12ICAL40	WBN090528-05.1	/chem/MSD1.i/s061909.b/s1f1915	19-JUN-09 16:07
AP12ICAL50	WBN090528-04	/chem/MSD1.i/s061909.b/s1f1916	19-JUN-09 16:33
AP12ICAL80	WBN090528-03	/chem/MSD1.i/s061909.b/s1f1917	19-JUN-09 16:58
AP12ICAL100	WBN090528-02	/chem/MSD1.i/s061909.b/s1f1918	19-JUN-09 17:23
AP12ICAL120	WBN090528-01	/chem/MSD1.i/s061909.b/s1f1919	19-JUN-09 17:48

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2455

Instrument ID: MSD1.I **Injection Date/Time:** 19-JUN-09 09:41

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD1.i/s061909.b/s1f1901.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	52.8
68	Less than 2% of mass 69	1.9
69	Mass 69 Relative Abundance	41.4
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	44.6
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.5
275	10 - 30% of mass 198	26.1
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	74.2
442	Greater than 40% of mass 198	87.2
443	17 - 23% of mass 442	19.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ap12ICV	WBN090528-08.1	/chem/MSD1.i/s061909.b/s1f1920	19-JUN-09 18:13

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2455

Instrument ID: MSD1.I **Injection Date/Time:** 28-JUN-09 14:38

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD1.i/s062809.b/s1f2801.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	58.2
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	43.4
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	50
197	0 - 1% of mass 198	0.5
199	5 - 9% of mass 198	6.6
275	10 - 30% of mass 198	23.8
365	Greater than 1% of mass 198	2.9
441	Present, but less than mass 443	74.2
442	Greater than 40% of mass 198	74.1
443	17 - 23% of mass 442	19.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090510-01.3	/chem/MSD1.i/s062809.b/s1f2802	28-JUN-09 14:55
AP12CVS	WBN090619-01.1	/chem/MSD1.i/s062809.b/s1f2803	28-JUN-09 15:23
SBLK01	1201869908	/chem/MSD1.i/s062809.b/s1f2805	28-JUN-09 16:10
SBLK01LCS	1201869909	/chem/MSD1.i/s062809.b/s1f2806	28-JUN-09 16:34
CAMO-09-10480	232357001	/chem/MSD1.i/s062809.b/s1f2814	28-JUN-09 19:50

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2455

Instrument ID: MSD5.I **Injection Date/Time:** 25-JUN-09 14:07

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s062509.b/s5f2510.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40.6
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	37.2
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	42.2
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.7
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	72.4
442	Greater than 40% of mass 198	88.9
443	17 - 23% of mass 442	20

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICAL001	WBN090602-08	/chem/MSD5.i/s062509.b/s5f2512	25-JUN-09 14:42
MEGAICAL010	WBN090602-07	/chem/MSD5.i/s062509.b/s5f2513	25-JUN-09 15:10
MEGAICAL020	WBN090602-06	/chem/MSD5.i/s062509.b/s5f2514	25-JUN-09 15:38
MEGAICAL040	WBN090602-05.1	/chem/MSD5.i/s062509.b/s5f2515	25-JUN-09 16:05
MEGAICAL050	WBN090602-04	/chem/MSD5.i/s062509.b/s5f2516	25-JUN-09 16:33
MEGAICAL080	WBN090602-03	/chem/MSD5.i/s062509.b/s5f2517	25-JUN-09 17:02
MEGAICAL100	WBN090602-02	/chem/MSD5.i/s062509.b/s5f2518	25-JUN-09 17:29
MEGAICAL120	WBN090602-01	/chem/MSD5.i/s062509.b/s5f2519	25-JUN-09 17:57
AP12ICAL010	WBN090528-07	/chem/MSD5.i/s062509.b/s5f2522	25-JUN-09 19:10
AP12ICAL020	WBN090528-06	/chem/MSD5.i/s062509.b/s5f2523	25-JUN-09 19:32
AP12ICAL040	WBN090528-05.1	/chem/MSD5.i/s062509.b/s5f2524	25-JUN-09 19:55
AP12ICAL050	WBN090528-04	/chem/MSD5.i/s062509.b/s5f2525	25-JUN-09 20:18
AP12ICAL080	WBN090528-03	/chem/MSD5.i/s062509.b/s5f2526	25-JUN-09 20:41
AP12ICAL100	WBN090528-02	/chem/MSD5.i/s062509.b/s5f2527	25-JUN-09 21:03
AP12ICAL120	WBN090528-01	/chem/MSD5.i/s062509.b/s5f2528	25-JUN-09 21:25
AP12ICV	WBN090528-08.5	/chem/MSD5.i/s062509.b/s5f2530	25-JUN-09 22:11

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2455

Instrument ID: MSD5.I **Injection Date/Time:** 26-JUN-09 08:28

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s062509.b/s5f2531.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	42.2
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	38.3
70	Less than 2% of mass 69	0.4
127	40 - 60% of mass 198	42.2
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.7
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	77.7
442	Greater than 40% of mass 198	87.4
443	17 - 23% of mass 442	18.9

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICV	WBN090602-09.1	/chem/MSD5.i/s062509.b/s5f2533	26-JUN-09 09:03

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2455

Instrument ID: MSD5.I **Injection Date/Time:** 30-JUN-09 07:20

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s063009.b/s5f3001.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	43.3
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	38.1
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	43.1
197	0 - 1% of mass 198	0.3
199	5 - 9% of mass 198	7
275	10 - 30% of mass 198	27.5
365	Greater than 1% of mass 198	3.5
441	Present, but less than mass 443	75.8
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	19.4

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090617-02.4	/chem/MSD5.i/s063009.b/s5f3002	30-JUN-09 07:33
AP12CVS	WBN090619-01.4	/chem/MSD5.i/s063009.b/s5f3003	30-JUN-09 08:01
SBLK02	1201871589	/chem/MSD5.i/s063009.b/s5f3006	30-JUN-09 09:09
SBLK02LCS	1201871590	/chem/MSD5.i/s063009.b/s5f3007	30-JUN-09 09:31
SBLK02LCSD	1201871595	/chem/MSD5.i/s063009.b/s5f3008	30-JUN-09 09:53
CAMO-09-10479	232357002	/chem/MSD5.i/s063009.b/s5f3013	30-JUN-09 11:47

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: MSD1.I

GC Column: J&W DB-5MS

Client SDG: 09-2455

STD Analysis Time: 28-JUN-09 14:55

Data File: s1f2802.d

	1,4-Dichlorobenzene-d4				Naphthalene-d8				Acenaphthene-d10				Phenanthrene-d10				Chrysene-d12				Perylene-d12			
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 Hour STD	280573		3.89		1152834		4.76		543050		6		1028030		6.98		841587		8.65		723932		10.1	
Upper Limit	561146		4.39		2305668		5.26		1086100		6.5		2056060		7.48		1683174		9.15		1447864		10.6	
Lower Limit	140287		3.39		576417		4.26		271525		5.5		514015		6.48		420794		8.15		361966		9.59	
Sample ID																								
BLK01	337511		3.89		1322068		4.75		642823		6		1216791		6.98		1018105		8.64		799623		10.1	
BLK01LCS	295004		3.89		1189285		4.76		583548		6		1095915		6.98		884459		8.64		756719		10.1	
CAMO-09-10480	307481		3.89		1216433		4.75		586798		6		1112848		6.98		865500		8.63		638438		10.1	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: MSD5.I

GC Column: J&W DB-5MS

Client SDG: 09-2455

STD Analysis Time: 30-JUN-09 07:33

Data File: s5f3002.d

	1,4 Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	530611		4.03	1952119		4.9	1185692		6.16	2252154		7.34	2408088		9.77	2308901		11.5
Upper Limit	1061222		4.53	3904238		5.4	2371384		6.66	4504308		7.84	4816176		10.3	4617802		12.0
Lower Limit	265306		3.53	976060		4.4	592846		5.66	1126077		6.84	1204044		9.27	1154451		11.0
Sample ID																		
BLK02	531814		4.03	1876466		4.9	1206683		6.16	2281516		7.34	2405778		9.76	2237367		11.5
BLK02LCS	506505		4.02	1869644		4.9	1162461		6.16	2270131		7.34	2474374		9.77	2431307		11.5
BLK02LCSD	522327		4.02	1953420		4.9	1193341		6.16	2321866		7.34	2485658		9.77	2346413		11.5
CAMO-09-10479	549132		4.02	1931313		4.9	1246738		6.16	2403101		7.34	2600884		9.76	2451328		11.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357002	Date Received:	06/25/2009 08:45	%Moisture:	9.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10479	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881291	Inst:	MSD5.I	Dilution:	1
Run Date:	06/30/2009 11:47	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/29/2009 23:29	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5f3013.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	368	ug/kg	73.6	368
108-95-2	Phenol	U	368	ug/kg	73.6	368
95-57-8	2-Chlorophenol	U	368	ug/kg	73.6	368
106-46-7	1,4-Dichlorobenzene	U	368	ug/kg	73.6	368
621-64-7	N-Nitrosodipropylamine	U	368	ug/kg	73.6	368
59-50-7	4-Chloro-3-methylphenol	U	368	ug/kg	36.8	368
83-32-9	Acenaphthene	U	36.8	ug/kg	12.3	36.8
121-14-2	2,4-Dinitrotoluene	U	368	ug/kg	36.8	368
100-02-7	4-Nitrophenol	U	368	ug/kg	73.6	368
87-86-5	Pentachlorophenol	U	368	ug/kg	73.6	368
129-00-0	Pyrene	U	36.8	ug/kg	11.6	36.8
110-86-1	Pyridine	U	368	ug/kg	73.6	368
62-53-3	Aniline	U	368	ug/kg	129	368
111-44-4	bis(2-Chloroethyl) ether	U	368	ug/kg	73.6	368
541-73-1	1,3-Dichlorobenzene	U	368	ug/kg	73.6	368
100-51-6	Benzyl alcohol	U	368	ug/kg	110	368
95-50-1	1,2-Dichlorobenzene	U	368	ug/kg	73.6	368
108-60-1	bis(2-Chloroisopropyl)ether	U	368	ug/kg	73.6	368
95-48-7	o-Cresol	U	368	ug/kg	73.6	368
65794-96-9	m,p-Cresols	U	368	ug/kg	147	368
67-72-1	Hexachloroethane	U	368	ug/kg	73.6	368
98-95-3	Nitrobenzene	U	368	ug/kg	73.6	368
78-59-1	Isophorone	U	368	ug/kg	73.6	368
88-75-5	2-Nitrophenol	U	368	ug/kg	36.8	368
105-67-9	2,4-Dimethylphenol	U	368	ug/kg	73.6	368
111-91-1	bis(2-Chloroethoxy)methane	U	368	ug/kg	73.6	368
120-83-2	2,4-Dichlorophenol	U	368	ug/kg	73.6	368
65-85-0	Benzoic acid	U	736	ug/kg	184	736
91-20-3	Naphthalene	U	36.8	ug/kg	11.0	36.8
106-47-8	4-Chloroaniline	U	368	ug/kg	73.6	368
87-68-3	Hexachlorobutadiene	U	368	ug/kg	73.6	368
91-57-6	2-Methylnaphthalene	U	36.8	ug/kg	7.36	36.8
77-47-4	Hexachlorocyclopentadiene	U	368	ug/kg	73.6	368
88-06-2	2,4,6-Trichlorophenol	U	368	ug/kg	73.6	368
95-95-4	2,4,5-Trichlorophenol	U	368	ug/kg	73.6	368
91-58-7	2-Chloronaphthalene	U	36.8	ug/kg	12.9	36.8
88-74-4	2-Nitroaniline	U	368	ug/kg	73.6	368
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	368	ug/kg	73.6	368

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357002	Date Received:	06/25/2009 08:45	%Moisture:	9.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10479	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881291	Inst:	MSD5.I	Dilution:	1
Run Date:	06/30/2009 11:47	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/29/2009 23:29	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5f3013.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	368	ug/kg	73.6	368
606-20-2	2,6-Dinitrotoluene	U	368	ug/kg	36.8	368
208-96-8	Acenaphthylene	U	36.8	ug/kg	11.0	36.8
51-28-5	2,4-Dinitrophenol	U	736	ug/kg	140	736
132-64-9	Dibenzofuran	U	368	ug/kg	73.6	368
84-66-2	Diethylphthalate	U	368	ug/kg	73.6	368
86-73-7	Fluorene	U	36.8	ug/kg	11.0	36.8
7005-72-3	4-Chlorophenylphenylether	U	368	ug/kg	36.8	368
534-52-1	2-Methyl-4,6-dinitrophenol	U	368	ug/kg	73.6	368
100-01-6	4-Nitroaniline	U	368	ug/kg	73.6	368
	p-Nitroaniline					
122-39-4	Diphenylamine	U	368	ug/kg	73.6	368
122-66-7	Azobenzene	U	368	ug/kg	73.6	368
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	368	ug/kg	36.8	368
118-74-1	Hexachlorobenzene	U	368	ug/kg	73.6	368
85-01-8	Phenanthrene	U	36.8	ug/kg	11.0	36.8
120-12-7	Anthracene	U	36.8	ug/kg	7.36	36.8
84-74-2	Di-n-butylphthalate	U	368	ug/kg	36.8	368
206-44-0	Fluoranthene	U	36.8	ug/kg	11.0	36.8
85-68-7	Butylbenzylphthalate	U	368	ug/kg	73.6	368
56-55-3	Benzo(a)anthracene	U	36.8	ug/kg	11.0	36.8
91-94-1	3,3'-Dichlorobenzidine	U	368	ug/kg	110	368
218-01-9	Chrysene	U	36.8	ug/kg	11.0	36.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	368	ug/kg	73.6	368
117-84-0	Di-n-octylphthalate	U	368	ug/kg	73.6	368
205-99-2	Benzo(b)fluoranthene	U	36.8	ug/kg	11.0	36.8
207-08-9	Benzo(k)fluoranthene	U	36.8	ug/kg	11.0	36.8
50-32-8	Benzo(a)pyrene	U	36.8	ug/kg	11.0	36.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.8	ug/kg	11.0	36.8
53-70-3	Dibenzo(a,h)anthracene	U	36.8	ug/kg	11.0	36.8
191-24-2	Benzo(ghi)perylene	U	36.8	ug/kg	11.0	36.8
120-82-1	1,2,4-Trichlorobenzene	U	368	ug/kg	73.6	368

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	263	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s063009.b/s5f3013.d
Lab Smp Id: 232357002 Client Smp ID: CAMO-09-10479
Inj Date : 30-JUN-2009 11:47
Operator : RMB Inst ID: MSD5.i
Smp Info : |232357002|881291|1|SVMF|2|LANLRE
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Meth Date : 30-Jun-2009 08:16 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	9.46790	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.025	4.031	(1.000)	549132	40.0000	
* 29 Naphthalene-d8	136	4.895	4.903	(1.000)	1931313	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1246738	40.0000	
* 67 Phenanthrene-d10	188	7.336	7.344	(1.000)	2403101	40.0000	
* 91 Chrysene-d12	240	9.760	9.771	(1.000)	2600884	40.0000	
* 98 Perylene-d12	264	11.524	11.538	(1.000)	2451328	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.213	(0.798)	628844	52.1552	1920
$ 5 Phenol-d5	99	3.737	3.742	(0.928)	793150	49.8913	1840
$ 20 Nitrobenzene-d5	82	4.384	4.397	(0.895)	377633	26.3874	972
$ 39 2-Fluorobiphenyl	172	5.637	5.644	(0.915)	834789	25.8902	953
$ 60 2,4,6-Tribromophenol	329	6.760	6.766	(1.097)	258684	50.8528	1870
$ 81 p-Terphenyl-d14	244	8.719	8.726	(0.893)	1357852	34.1136	1260

ION RATIO REPORT

SV REPORT

Data file: s5f3013.d
Report Date: 06/30/2009 12:29
Lab. ID: 232357002 SampleType: SAMPLE
Injection Date: 30-JUN-2009 11:47
Operator: RMB Instrument: MSD5.i
Sample Info: |232357002|881291|1|SVMF|2|LANLRE
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2455
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	48649	3.74	3.81	80-120	100	(T)
93	264	3.82	3.81	166-226	1	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	55845	4.38	4.27	80-120	100	(T)
42	34629	4.38	4.27	58-118	62	(T)
31 4-Chloroaniline			CAS#: 106-47-8			
127	180	4.95	4.93	80-120	100	( )
65	103	4.94	4.93	1- 61	58	( )
41 m-Nitroaniline			CAS#: 99-09-2			
138	327	6.15	6.11	80-120	100	( )
92	7021	6.16	6.11	80-140	2141	(Q)
108	26021	6.16	6.11	0- 40	7935	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	268785	6.16	5.92	80-120	100	(T)
164	1246738	6.16	5.92	0- 40	464	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	165949	6.16	5.98	80-120	100	(T)
63	2605	6.16	5.98	57-117	2	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 2,4-Dinitrophenol			CAS#: 51-28-5			
184	143	6.29	6.18	80-120	100	(T)
154	158	6.19	6.19	614-674	111	(Q)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	165949	6.16	6.28	80-120	100	(T)
89	2805	6.16	6.28	39- 99	2	(QT)
63	2605	6.16	6.28	20- 80	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	10609	6.76	6.58	80-120	100	(T)
165	11737	6.76	6.58	61-121	111	(T)
167	3686	6.76	6.58	0- 44	35	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	806	6.76	6.59	80-120	100	(T)
105	1250	6.75	6.59	4- 64	155	(QT)
51	1254	6.76	6.59	41-101	156	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	17705	6.76	6.94	80-120	100	(T)
141	95083	6.76	6.94	34- 94	537	(QT)
250	35915	6.76	6.94	67-127	203	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s063009.b/s5f3013.d
Lab Smp Id: 232357002 Client Smp ID: CAMO-09-10479
Inj Date : 30-JUN-2009 11:47
Operator : RMB Inst ID: MSD5.i
Smp Info : |232357002|881291|1|SVMF|2|LANLRE
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Meth Date : 30-Jun-2009 08:16 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	9.46790	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.025	3543806	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.043	633048	7.14539779	263	0		0	10

Data File: /chem/MSD5.i/s063009.b/s5f3013.d

Date : 30-JUN-2009 11:47

Client ID: CAMD-09-10479

Sample Info: |2323570021881291111SVMF12|LANLRE

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

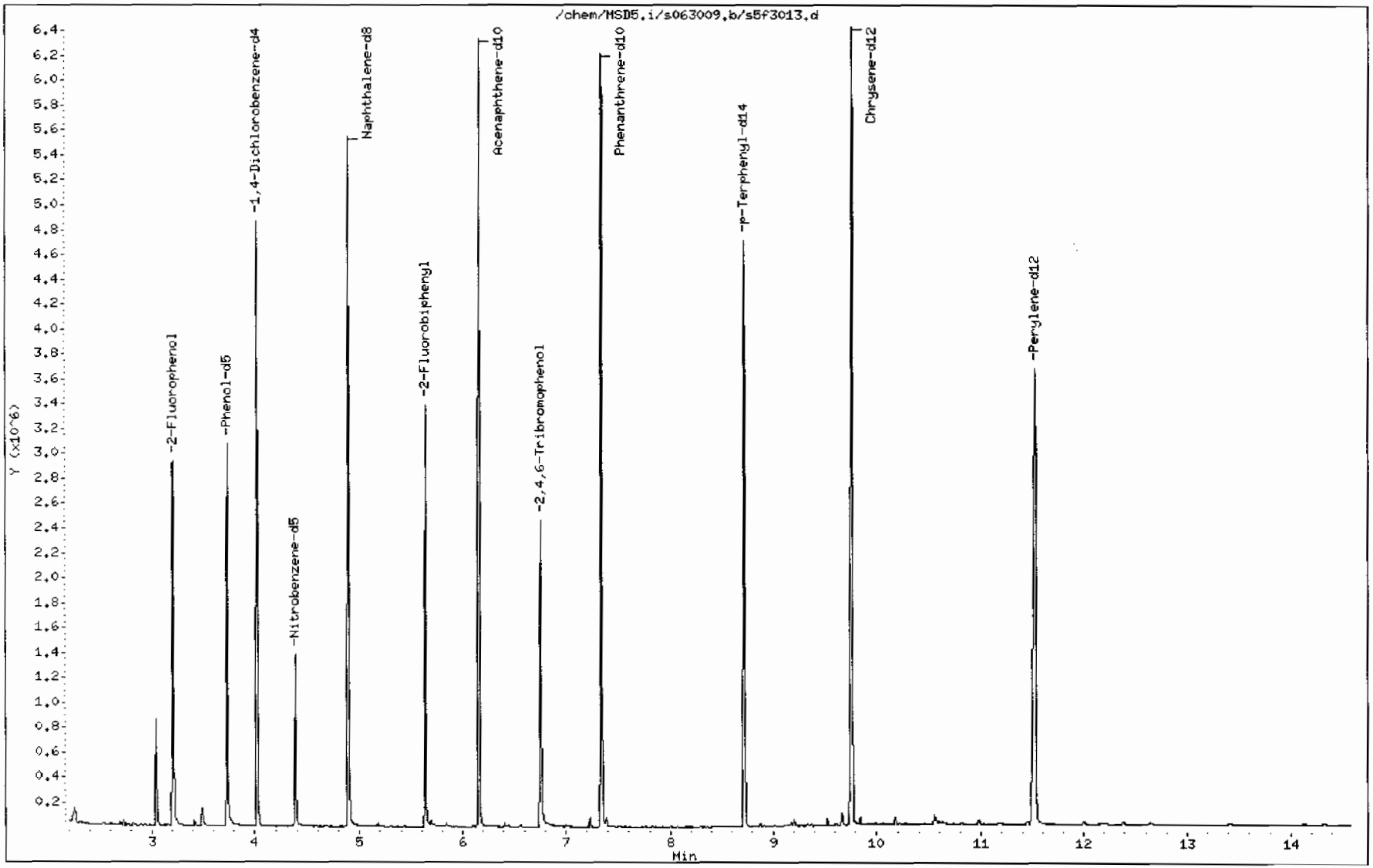

Data File: /chem/MSD5.i/s063009.b/s5f3013.d

Date : 30-JUN-2009 11:47

Client ID: CAMO-09-10479

Instrument: MSD5.i

Sample Info: 1232357002188129111SVMFI2ILANLRE

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	64	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116

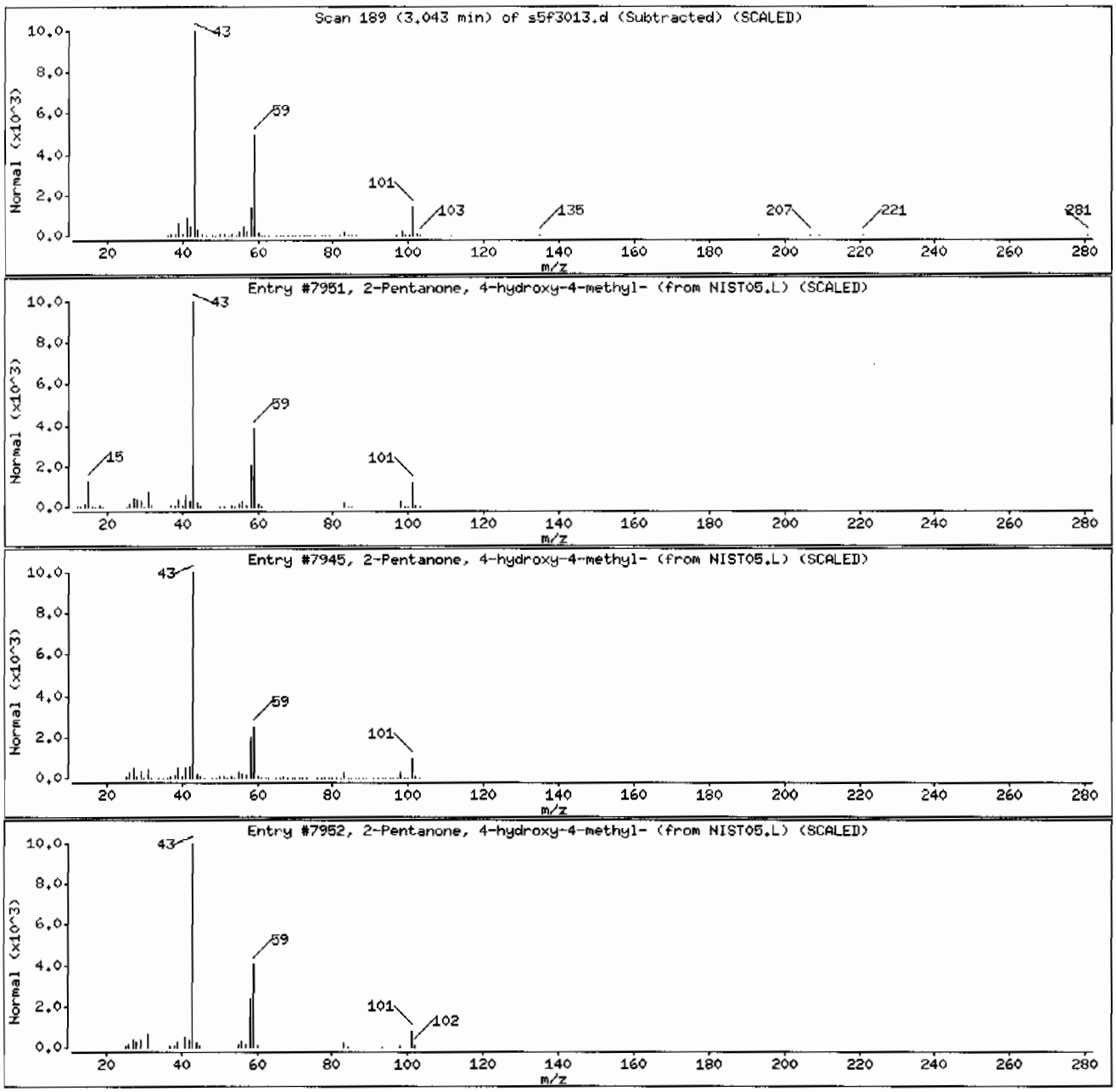

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357001	Date Received:	06/25/2009 08:45	%Moisture:	11.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10480	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	880638	Inst:	MSD1.1	Dilution:	1
Run Date:	06/28/2009 19:50	Analyst:	NAG1	Inj. Vol:	.5 uL
Prep Date:	06/26/2009 21:26	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s1f2814.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	375	ug/kg	75.1	375
108-95-2	Phenol	U	375	ug/kg	75.1	375
95-57-8	2-Chlorophenol	U	375	ug/kg	75.1	375
106-46-7	1,4-Dichlorobenzene	U	375	ug/kg	75.1	375
621-64-7	N-Nitrosodipropylamine	U	375	ug/kg	75.1	375
59-50-7	4-Chloro-3-methylphenol	U	375	ug/kg	37.5	375
83-32-9	Acenaphthene	U	37.5	ug/kg	12.5	37.5
121-14-2	2,4-Dinitrotoluene	U	375	ug/kg	37.5	375
100-02-7	4-Nitrophenol	U	375	ug/kg	75.1	375
87-86-5	Pentachlorophenol	U	375	ug/kg	75.1	375
129-00-0	Pyrene	U	37.5	ug/kg	11.8	37.5
110-86-1	Pyridine	U	375	ug/kg	75.1	375
62-53-3	Aniline	U	375	ug/kg	131	375
111-44-4	bis(2-Chloroethyl) ether	U	375	ug/kg	75.1	375
541-73-1	1,3-Dichlorobenzene	U	375	ug/kg	75.1	375
100-51-6	Benzyl alcohol	U	375	ug/kg	113	375
95-50-1	1,2-Dichlorobenzene	U	375	ug/kg	75.1	375
108-60-1	bis(2-Chloroisopropyl)ether	U	375	ug/kg	75.1	375
95-48-7	o-Cresol	U	375	ug/kg	75.1	375
65794-96-9	m,p-Cresols	U	375	ug/kg	150	375
67-72-1	Hexachloroethane	U	375	ug/kg	75.1	375
98-95-3	Nitrobenzene	U	375	ug/kg	75.1	375
78-59-1	Isophorone	U	375	ug/kg	75.1	375
88-75-5	2-Nitrophenol	U	375	ug/kg	37.5	375
105-67-9	2,4-Dimethylphenol	U	375	ug/kg	75.1	375
111-91-1	bis(2-Chloroethoxy)methane	U	375	ug/kg	75.1	375
120-83-2	2,4-Dichlorophenol	U	375	ug/kg	75.1	375
65-85-0	Benzoic acid	U	751	ug/kg	188	751
91-20-3	Naphthalene	U	37.5	ug/kg	11.3	37.5
106-47-8	4-Chloroaniline	U	375	ug/kg	75.1	375
87-68-3	Hexachlorobutadiene	U	375	ug/kg	75.1	375
91-57-6	2-Methylnaphthalene	U	37.5	ug/kg	7.51	37.5
77-47-4	Hexachlorocyclopentadiene	U	375	ug/kg	75.1	375
88-06-2	2,4,6-Trichlorophenol	U	375	ug/kg	75.1	375
95-95-4	2,4,5-Trichlorophenol	U	375	ug/kg	75.1	375
91-58-7	2-Chloronaphthalene	U	37.5	ug/kg	13.1	37.5
88-74-4	2-Nitroaniline	U	375	ug/kg	75.1	375
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	375	ug/kg	75.1	375

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357001	Date Received:	06/25/2009 08:45	%Moisture:	11.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10480	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	880638	Inst:	MSD1.I	Dilution:	1
Run Date:	06/28/2009 19:50	Analyst:	NAG1	Inj. Vol:	.5 uL
Prep Date:	06/26/2009 21:26	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s1f2814.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	375	ug/kg	75.1	375
606-20-2	2,6-Dinitrotoluene	U	375	ug/kg	37.5	375
208-96-8	Acenaphthylene	U	37.5	ug/kg	11.3	37.5
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751
132-64-9	Dibenzofuran	U	375	ug/kg	75.1	375
84-66-2	Diethylphthalate	U	375	ug/kg	75.1	375
86-73-7	Fluorene	U	37.5	ug/kg	11.3	37.5
7005-72-3	4-Chlorophenylphenylether	U	375	ug/kg	37.5	375
534-52-1	2-Methyl-4,6-dinitrophenol	U	375	ug/kg	75.1	375
100-01-6	4-Nitroaniline	U	375	ug/kg	75.1	375
	p-Nitroaniline					
122-39-4	Diphenylamine	U	375	ug/kg	75.1	375
122-66-7	Azobenzene	U	375	ug/kg	75.1	375
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	375	ug/kg	37.5	375
118-74-1	Hexachlorobenzene	U	375	ug/kg	75.1	375
85-01-8	Phenanthrene	U	37.5	ug/kg	11.3	37.5
120-12-7	Anthracene	U	37.5	ug/kg	7.51	37.5
84-74-2	Di-n-butylphthalate	U	375	ug/kg	37.5	375
206-44-0	Fluoranthene	U	37.5	ug/kg	11.3	37.5
85-68-7	Butylbenzylphthalate	U	375	ug/kg	75.1	375
56-55-3	Benzo(a)anthracene	U	37.5	ug/kg	11.3	37.5
91-94-1	3,3'-Dichlorobenzidine	U	375	ug/kg	113	375
218-01-9	Chrysene	U	37.5	ug/kg	11.3	37.5
117-81-7	bis(2-Ethylhexyl)phthalate	U	375	ug/kg	75.1	375
117-84-0	Di-n-octylphthalate	U	375	ug/kg	75.1	375
205-99-2	Benzo(b)fluoranthene	U	37.5	ug/kg	11.3	37.5
207-08-9	Benzo(k)fluoranthene	U	37.5	ug/kg	11.3	37.5
50-32-8	Benzo(a)pyrene	U	37.5	ug/kg	11.3	37.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.5	ug/kg	11.3	37.5
53-70-3	Dibenzo(a,h)anthracene	U	37.5	ug/kg	11.3	37.5
191-24-2	Benzo(ghi)perylene	U	37.5	ug/kg	11.3	37.5
120-82-1	1,2,4-Trichlorobenzene	U	375	ug/kg	75.1	375

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	2.91	323	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2814.d
Lab Smp Id: 232357001 Client Smp ID: CAMO-09-10480
Inj Date : 28-JUN-2009 19:50
Operator : nagl Inst ID: MSD1.i
Smp Info : |232357001|880638|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	11.23000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	307481	40.0000	
* 29 Naphthalene-d8	136	4.751	4.757	(1.000)	1216433	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	586798	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1112848	40.0000	
* 91 Chrysene-d12	240	8.634	8.645	(1.000)	865500	40.0000	
* 98 Perylene-d12	264	10.081	10.086	(1.000)	638438	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	477182	58.5408	2200
$ 5 Phenol-d5	99	3.599	3.598	(0.926)	585675	57.7896	2170
$ 20 Nitrobenzene-d5	82	4.246	4.251	(0.894)	306344	29.5844	1110
$ 39 2-Fluorobiphenyl	172	5.493	5.492	(0.916)	566098	35.4133	1330
$ 60 2,4,6-Tribromophenol	329	6.534	6.533	(1.089)	104903	50.8201	1910
$ 81 p-Terphenyl-d14	244	7.892	7.898	(0.914)	609679	41.9779	1580

ION RATIO REPORT

SV REPORT

Data file: s1f2814.d
Report Date: 06/29/2009 10:15
Lab. ID: 232357001 SampleType: SAMPLE
Injection Date: 28-JUN-2009 19:50
Operator: nagl Instrument: MSD1.i
Sample Info: |232357001|880638|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090617-01
Comment:
Method used: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2455
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	27733	3.60	3.67	80-120	100	(T)
93	118	3.69	3.67	194-254	0	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	42359	4.25	4.13	80-120	100	(T)
42	30149	4.25	4.13	52-112	71	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	131344	6.00	5.77	80-120	100	(T)
164	594567	6.00	5.77	0- 40	453	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	74345	6.00	5.82	80-120	100	(T)
63	1320	6.00	5.82	69-129	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	74345	6.00	6.11	80-120	100	(T)
89	1199	6.00	6.10	45-105	2	(QT)
63	1320	6.00	6.10	29- 89	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	6602	6.53	6.37	80-120	100	(T)
165	6925	6.53	6.37	56-116	105	(T)
167	2551	6.53	6.37	0- 43	39	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	6377	6.53	6.67	80-120	100	(T)
141	50752	6.53	6.67	54-114	796	(QT)
250	13741	6.53	6.67	66-126	215	(QT)
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	1957	10.08	10.02	80-120	100	(T)
253	315	10.07	10.02	0- 51	16	( )
125	450	10.07	10.02	0- 30	23	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2814.d
Lab Smp Id: 232357001 Client Smp ID: CAMO-09-10480
Inj Date : 28-JUN-2009 19:50
Operator : nag1 Inst ID: MSD1.i
Smp Info : |232357001|880638|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
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Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	11.23000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.887	2042819	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
2.910	439569	8.60711125	323	0		0	10

Data File: /chem/MSD1.i/s062809.b/s1f2814.d
Date : 28-JUN-2009 19:50
Client ID: CAMD-09-10480
Sample Info: 1232357001|880638|1|SVMF1|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nag1
Column diameter: 0.20

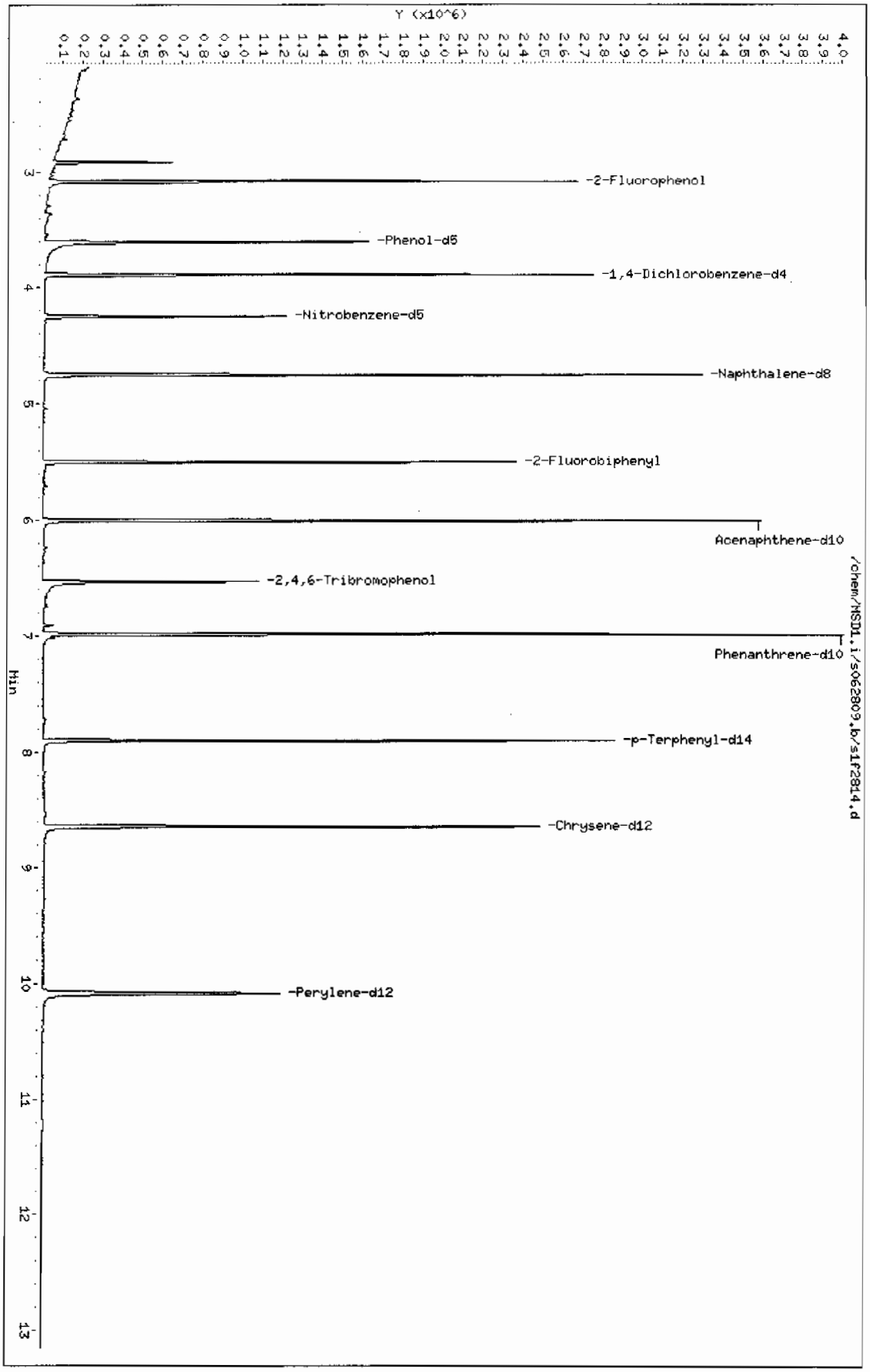

Page 1

Data File: /chem/MSD1.i/s062809.b/s1f2814.d

Date : 28-JUN-2009 19:50

Client ID: CAMO-09-10480

Instrument: MSD1.i

Sample Info: 1232357001|880638|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: nag1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	39	C6H12O2	116

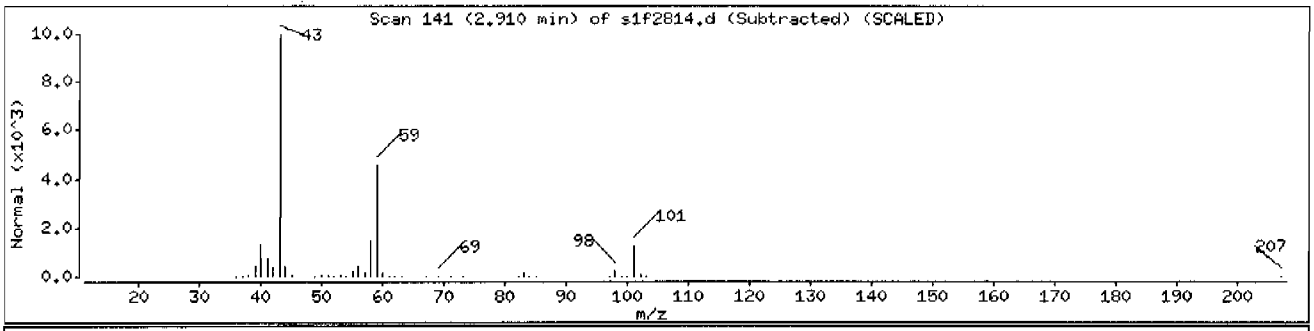

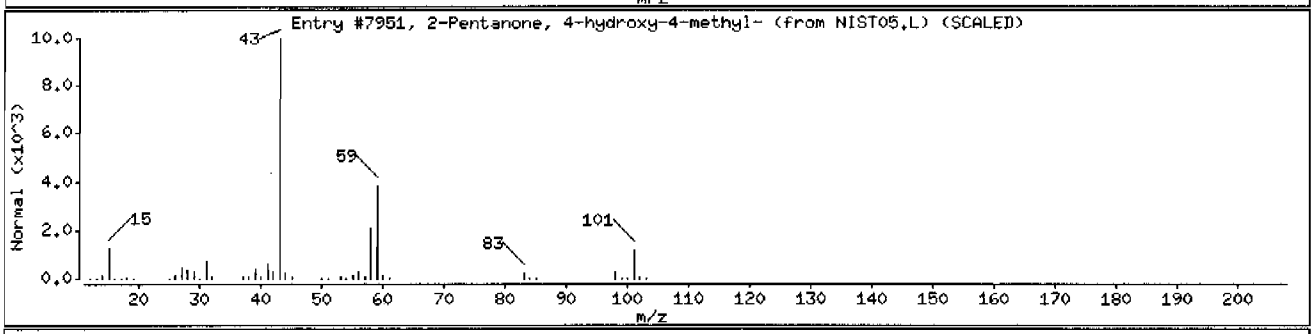

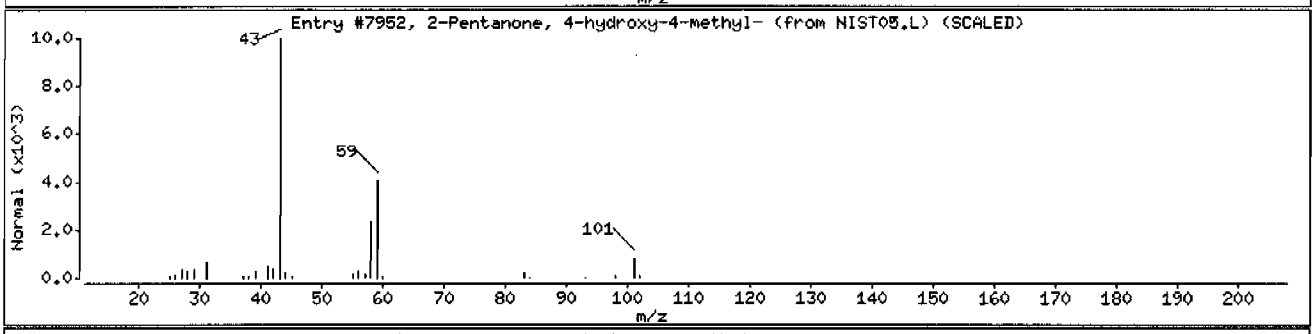

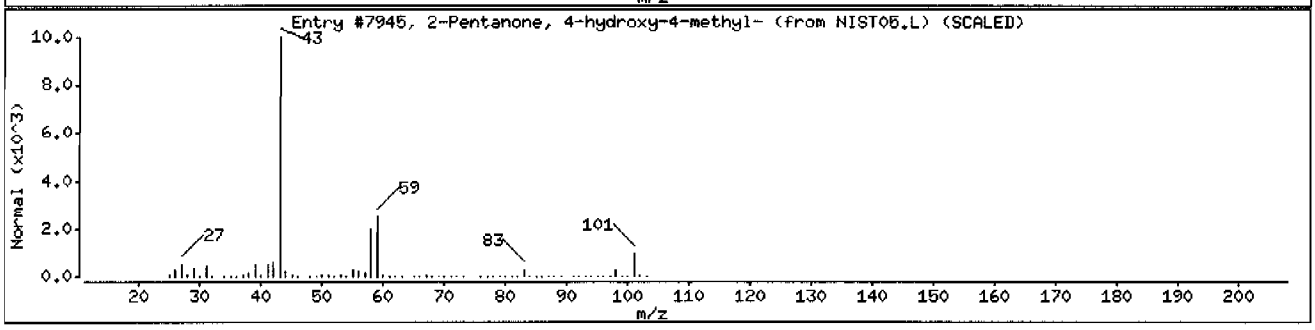

Standard Data

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 29-Jun-2009 11:37

Calibration History

Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Start Cal Date: 19-JUN-2009 10:25
End Cal Date : 20-JUN-2009 04:39

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
19-JUN-2009 10:25	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1903.d
Cal Level: 2 , Cal Amount: 10.00000		
20-JUN-2009 02:17	nev	/chem/MSD1.i/s061909.b/s1f1940.d
19-JUN-2009 23:06	hex	/chem/MSD1.i/s061909.b/s1f1932.d
19-JUN-2009 19:21	pest	/chem/MSD1.i/s061909.b/s1f1923.d
19-JUN-2009 15:17	ap12	/chem/MSD1.i/s061909.b/s1f1913.d
19-JUN-2009 10:57	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1904.d
Cal Level: 3 , Cal Amount: 20.00000		
20-JUN-2009 02:41	nev	/chem/MSD1.i/s061909.b/s1f1941.d
19-JUN-2009 23:30	hex	/chem/MSD1.i/s061909.b/s1f1933.d
19-JUN-2009 19:46	pest	/chem/MSD1.i/s061909.b/s1f1924.d
19-JUN-2009 15:42	ap12	/chem/MSD1.i/s061909.b/s1f1914.d
19-JUN-2009 11:27	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1905.d
Cal Level: 4 , Cal Amount: 40.00000		
20-JUN-2009 03:05	nev	/chem/MSD1.i/s061909.b/s1f1942.d
19-JUN-2009 23:55	hex	/chem/MSD1.i/s061909.b/s1f1934.d
19-JUN-2009 20:10	pest	/chem/MSD1.i/s061909.b/s1f1925.d
19-JUN-2009 16:07	ap12	/chem/MSD1.i/s061909.b/s1f1915.d
19-JUN-2009 11:55	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1906.d
Cal Level: 5 , Cal Amount: 50.00000		
20-JUN-2009 03:28	nev	/chem/MSD1.i/s061909.b/s1f1943.d
20-JUN-2009 00:19	hex	/chem/MSD1.i/s061909.b/s1f1935.d
19-JUN-2009 20:35	pest	/chem/MSD1.i/s061909.b/s1f1926.d
19-JUN-2009 16:33	ap12	/chem/MSD1.i/s061909.b/s1f1916.d
19-JUN-2009 12:25	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1907.d
Cal Level: 6 , Cal Amount: 80.00000		
20-JUN-2009 03:52	nev	/chem/MSD1.i/s061909.b/s1f1944.d
20-JUN-2009 00:43	hex	/chem/MSD1.i/s061909.b/s1f1936.d
19-JUN-2009 20:59	pest	/chem/MSD1.i/s061909.b/s1f1927.d
19-JUN-2009 16:58	ap12	/chem/MSD1.i/s061909.b/s1f1917.d
19-JUN-2009 12:54	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1908.d
Cal Level: 7 , Cal Amount: 100.00000		

20-JUN-2009 04:15	nev	/chem/MSD1.i/s061909.b/s1f1945.d
20-JUN-2009 01:07	hex	/chem/MSD1.i/s061909.b/s1f1937.d
19-JUN-2009 21:24	pest	/chem/MSD1.i/s061909.b/s1f1928.d
19-JUN-2009 17:23	ap12	/chem/MSD1.i/s061909.b/s1f1918.d
19-JUN-2009 13:23	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1909.d

Cal Level: 8 , Cal Amount: 120.00000		
20-JUN-2009 04:39	nev	/chem/MSD1.i/s061909.b/s1f1946.d
19-JUN-2009 21:50	pest	/chem/MSD1.i/s061909.b/s1f1929.d
19-JUN-2009 17:48	ap12	/chem/MSD1.i/s061909.b/s1f1919.d
19-JUN-2009 13:54	MEGAIICARE	/chem/MSD1.i/s061909.b/s1f1910.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
28-JUN-2009 14:55	MEGAIICARE	/chem/MSD1.i/s062809.b/s1f2802.d
Ccal Level: 4 , Ccal Amount: 40.0		
28-JUN-2009 15:47	pest	/chem/MSD1.i/s062809.b/s1f2804.d
Ccal Level: 4 , Ccal Amount: 40.0		
28-JUN-2009 15:23	ap12	/chem/MSD1.i/s062809.b/s1f2803.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2009 10:25
End Cal Date : 20-JUN-2009 04:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Cal Date : 29-Jun-2009 09:53 rmb

Calibration File Names:
Level 1: /chem/MSD1.i/s061909.b/s1f1903.d
Level 2: /chem/MSD1.i/s061909.b/s1f1940.d
Level 3: /chem/MSD1.i/s061909.b/s1f1941.d
Level 4: /chem/MSD1.i/s061909.b/s1f1942.d
Level 5: /chem/MSD1.i/s061909.b/s1f1943.d
Level 6: /chem/MSD1.i/s061909.b/s1f1944.d
Level 7: /chem/MSD1.i/s061909.b/s1f1945.d
Level 8: /chem/MSD1.i/s061909.b/s1f1946.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.48200	0.49919	0.52282	0.48768	0.52174					
	0.51579	0.50948					AVRG		0.50553		3.22517
2 Pyridine	+++++	0.86853	0.87557	0.91246	0.82351	0.87772					
	0.91401	0.88809					AVRG		0.87998		3.47901
4 Aniline	+++++	0.71536	0.72947	0.71185	0.67913	0.71234					
	0.71585	0.70156					AVRG		0.70937		2.20861
209 Benzaldehyde	+++++	1.21708	1.16856	1.09301	1.08102	1.06567					
	1.01021	0.96981					AVRG		1.08648		7.85756
6 Phenol	+++++	1.37663	1.41906	1.41106	1.32092	1.38909					
	1.37851	1.32741					AVRG		1.37467		2.76112

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Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	1.25617	1.22540	1.40152	1.27182	1.19779	1.26644					
	1.29278	1.25180					AVRG		1.27047		4.75606
8 2-Chlorophenol	+++++	1.11161	1.18177	1.12825	1.04761	1.10740					
	1.08307	1.04311					AVRG		1.10040		4.38042
203 n-Decane	+++++	2.60620	2.68274	2.50510	2.30966	2.37689					
	2.26207	2.14946					AVRG		2.41326		7.98512
9 1,3-Dichlorobenzene	+++++	1.39810	1.42855	1.36839	1.25661	1.31441					
	1.27650	1.24012					AVRG		1.32610		5.53173
11 1,4-Dichlorobenzene	+++++	1.39213	1.45913	1.37002	1.27539	1.32655					
	1.30878	1.26419					AVRG		1.34231		5.16588
12 Benzyl alcohol	+++++	0.75661	0.81546	0.80340	0.74742	0.77760					
	0.77958	0.74796					AVRG		0.77543		3.45245
13 1,2-Dichlorobenzene	+++++	1.30212	1.33650	1.25020	1.16766	1.21938					
	1.19891	1.14932					AVRG		1.23201		5.58410
14 bis(2-Chloroisopropyl)ether	+++++	3.38185	3.53138	3.38082	3.15058	3.23692					
	3.20077	2.98621					AVRG		3.26693		5.50026
15 o-Cresol	+++++	0.94714	1.00173	0.97233	0.90285	0.94300					
	0.93685	0.91134					AVRG		0.94503		3.60124

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
16 Acetophenone	+++++	1.59463	1.53547	1.46966	1.43608	1.48712					
	1.43208	1.42822					AVRG		1.48332		4.19240
17 N-Nitrosodipropylamine	0.78889	0.75755	0.79360	0.80341	0.77280	0.76694					
	0.75519	0.76421					AVRG		0.77532		2.30108
18 m,p-Cresols	+++++	1.21957	1.32685	1.28069	1.18296	1.25286					
	1.24985	1.22762					AVRG		1.24863		3.69385
19 Hexachloroethane	+++++	0.55610	0.58907	0.56307	0.53008	0.54701					
	0.53570	0.53062					AVRG		0.55024		3.86959
21 Nitrobenzene	+++++	0.35096	0.37387	0.34993	0.32357	0.31962					
	0.30370	0.28947					AVRG		0.33016		8.95477
22 Isophorone	+++++	0.65379	0.68043	0.64042	0.59370	0.59162					
	0.55972	0.53757					AVRG		0.60818		8.53279
23 2-Nitrophenol	+++++	0.14487	0.15070	0.14310	0.13065	0.12701					
	0.12056	0.11622					AVRG		0.13330		9.84456
24 2,4-Dimethylphenol	+++++	0.26668	0.28431	0.25174	0.23020	0.22534					
	0.21075	0.20193					AVRG		0.23871		12.58797
25 bis(2-Chloroethoxy)methane	+++++	0.34493	0.35836	0.33600	0.31018	0.30501					
	0.29060	0.27727					AVRG		0.31748		9.37530

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
26 2,4-Dichlorophenol	+++++	0.22642	0.24100	0.22460	0.20600	0.20413					
	0.19300	0.18553					AVRG		0.21152		9.38724
27 Benzoic acid	+++++	+++++	0.16158	0.18642	0.18012	0.18106					
	0.17904	0.18348					AVRG		0.17862		4.90232
28 1,2,4-Trichlorobenzene	+++++	0.30156	0.30289	0.28181	0.25947	0.25957					
	0.24458	0.23246					AVRG		0.26891		10.16563
30 Naphthalene	0.89862	0.87579	0.89953	0.82767	0.76064	0.74570					
	0.70410	0.66360					AVRG		0.79696		11.45783
204 alpha-Terpineol	+++++	0.38802	0.40564	0.37786	0.34411	0.34387					
	0.32397	0.30550					AVRG		0.35557		10.16020
31 4-Chloroaniline	+++++	0.36855	0.27844	0.25552	0.33535	0.24754					
	0.31094	0.30142					AVRG		0.29968		14.45914
189 Caprolactam	+++++	0.08664	0.08597	0.08609	0.08346	0.08669					
	0.08433	0.08505					AVRG		0.08546		1.43469
32 Hexachlorobutadiene	+++++	0.19313	0.19688	0.18560	0.16954	0.16880					
	0.15751	0.15100					AVRG		0.17464		10.10600
33 4-Chloro-3-methylphenol	+++++	0.24998	0.27357	0.26312	0.24248	0.24087					
	0.22917	0.22053					AVRG		0.24567		7.50395

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.60371	0.58029	0.58493	0.55030	0.50320	0.49211					
	0.46431	0.44878					AVRG		0.52845		11.18089
35 1-Methylnaphthalene	0.62005	0.59925	0.62060	0.57739	0.51995	0.51211					
	0.48503	0.46507					AVRG		0.54993		11.26027
36 Hexachlorocyclopentadiene	+++++	0.17894	0.20477	0.20729	0.20374	0.20216					
	0.19186	0.18926					AVRG		0.19686		5.29042
208 1,1'-Biphenyl	+++++	1.31209	1.30596	1.23060	1.24289	1.22963					
	1.21237	1.18798					AVRG		1.24593		3.73248
205 2,3-Dichloroaniline	+++++	0.47461	0.50656	0.48755	0.46828	0.47080					
	0.46128	0.45392					AVRG		0.47471		3.69792
37 2,4,6-Trichlorophenol	+++++	0.29294	0.31130	0.30235	0.29065	0.29315					
	0.29280	0.29587					AVRG		0.29701		2.47244
38 2,4,5-Trichlorophenol	+++++	0.29960	0.31273	0.31482	0.30241	0.31026					
	0.31338	0.30425					AVRG		0.30821		1.95855
40 2-Chloronaphthalene	0.93946	0.91774	0.96060	0.92155	0.88023	0.89539					
	0.87112	0.87525					AVRG		0.90767		3.58147
42 o-Nitroaniline	+++++	0.32774	0.37555	0.37465	0.36453	0.37522					
	0.36529	0.37316					AVRG		0.36516		4.69499

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
41 m-Nitroaniline	+++++	0.17687	0.15861	0.19986	0.20433	0.20897					
	0.20166	0.20799					AVRG		0.19404		9.79102
43 Dimethylphthalate	+++++	1.11549	1.16724	1.12824	1.07421	1.08202					
	1.07630	1.06654					AVRG		1.10143		3.35917
44 2,6-Dinitrotoluene	+++++	0.26652	0.28215	0.27476	0.26000	0.26510					
	0.25606	0.25595					AVRG		0.26579		3.68067
45 Acenaphthylene	1.49255	1.46360	1.56521	1.49154	1.41952	1.42825					
	1.37588	1.37177					AVRG		1.45104		4.51169
47 Acenaphthene	1.00056	0.97314	1.01854	0.97375	0.93113	0.94480					
	0.92988	0.92626					AVRG		0.96226		3.62182
48 2,4-Dinitrophenol	+++++	+++++	0.10105	0.11320	0.12015	0.12651					
	0.12568	0.13260					AVRG		0.11987		9.42845
49 Dibenzofuran	+++++	1.37255	1.44852	1.38085	1.29975	1.32843					
	1.30187	1.29467					AVRG		1.34666		4.22869
50 2,4-Dinitrotoluene	+++++	0.33254	0.37307	0.35859	0.34767	0.35285					
	0.34563	0.34575					AVRG		0.35087		3.59826
51 Diethylphthalate	+++++	1.20198	1.23851	1.19610	1.13612	1.16001					
	1.13000	1.11005					AVRG		1.16754		3.95546

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	100 Level 7	120 Level 8									
52 4-Nitrophenol	+++++	0.11759	0.15173	0.16979	0.17137	0.17947					
	0.17562	0.18234					AVRG		0.16399		13.86759
53 Fluorene	1.22408	1.11991	1.16092	1.14811	1.07713	1.09577					
	1.08246	1.08204					AVRG		1.12380		4.56915
54 4-Chlorophenylphenylether	+++++	0.57442	0.61308	0.58283	0.55778	0.56983					
	0.56258	0.56682					AVRG		0.57534		3.21697
55 2-Methyl-4,6-dinitrophenol	+++++	0.07604	0.09086	0.09929	0.10120	0.10284					
	0.10400	0.10452					AVRG		0.09697		10.64820
56 p-Nitroaniline	+++++	0.17121	0.13124	0.16579	0.17305	0.16283					
	0.17543	0.19183					AVRG		0.16734		11.01623
133 Diphenylamine	+++++	0.48129	0.48960	0.46390	0.44743	0.44519					
	0.44733	0.44123					AVRG		0.45942		4.19863
58 1,2-Diphenylhydrazine	+++++	0.67320	0.70454	0.69293	0.67013	0.66742					
	0.66912	0.65306					AVRG		0.67577		2.55639
59 Tributylphosphate	+++++	1.28244	1.32267	1.32822	1.19066	1.23471					
	1.30706	1.26273					AVRG		1.27550		3.92980
61 4-Bromophenylphenylether	+++++	0.16611	0.17386	0.17183	0.16529	0.16807					
	0.17112	0.17143					AVRG		0.16967		1.89265

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
63 Hexachlorobenzene	+++++	0.17513	0.18522	0.18298	0.17831	0.18168					
	0.18918	0.18399					AVRG		0.18236		2.52089
207 Atrazine	+++++	0.04497	0.04063	0.03582	0.03022	0.02375					
	0.01921	0.00751					AVRG		0.02887		45.23977 <-
65 Pentachlorophenol	+++++	0.07606	0.09309	0.09899	0.09962	0.10215					
	0.10549	0.10660					AVRG		0.09743		10.71771
206 n-Octadecane	+++++	0.67279	0.70089	0.66992	0.64040	0.63128					
	0.61172	0.57734					AVRG		0.64348		6.46852
68 Phenanthrene	0.90540	0.85677	0.88250	0.84650	0.82028	0.81608					
	0.82849	0.81940					AVRG		0.84693		3.87550
69 Anthracene	0.89265	0.83824	0.87223	0.84619	0.83403	0.81854					
	0.82910	0.83336					AVRG		0.84554		2.91938
72 Di-n-butylphthalate	+++++	1.05953	1.12835	1.07997	1.04909	1.02663					
	1.01611	0.99866					AVRG		1.05119		4.15555
76 Fluoranthene	0.98795	0.91244	0.98295	0.93584	0.92204	0.95423					
	0.94556	0.94430					AVRG		0.94816		2.80821
77 Benzidine	+++++	0.15541	0.13191	0.14558	0.14806	0.18602					
	0.18997	+++++					AVRG		0.15949		14.66150

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
79 Pyrene	1.05814	1.12715	1.13110	1.09947	1.02415	0.99412					
	1.04549	0.99718					AVRG		1.05960		5.15773
85 Butylbenzylphthalate	+++++	0.47502	0.49795	0.47523	0.43801	0.42995					
	0.43196	0.40331					AVRG		0.45020		7.37418
89 Benzo(a)anthracene	0.94192	0.88516	0.91095	0.93020	0.93737	0.93740					
	0.93774	0.93541					AVRG		0.92702		2.09594
90 3,3'-Dichlorobenzidine	+++++	0.22851	0.27061	0.27882	0.28049	0.30500					
	0.30674	0.29618					AVRG		0.28091		9.57059
92 Chrysene	0.88117	0.84012	0.92653	0.91478	0.86143	0.82303					
	0.89903	0.87206					AVRG		0.87727		4.06968
93 bis(2-Ethylhexyl)phthalate	0.53950	0.64519	0.70350	0.68810	0.64243	0.64191					
	0.64987	0.60899					AVRG		0.63994		7.82231
94 Di-n-octylphthalate	+++++	1.10082	1.20152	1.29792	1.19339	1.20092					
	1.26030	1.22577					AVRG		1.21152		5.09284
95 Benzo(b)fluoranthene	9128	104797	232933	635811	824004	1324673					
	1659087	2174712					LINR	0.08318	1.04555		0.99724
96 Benzo(k)fluoranthene	0.98443	1.03464	1.17272	1.05245	1.05440	1.00312					
	1.01025	1.04981					AVRG		1.04523		5.50968

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INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2009 10:25
End Cal Date : 20-JUN-2009 04:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	9342	90108	231220	572464	775776	1201747					
	1424624	1900990					LINR	0.04728	0.90514		0.99953
99 Indeno(1,2,3-cd)pyrene	4120	82442	235938	573724	795528	1209808					
	1404232	1769105					LINR	0.01800	0.86627		0.99837
100 Dibenzo(a,h)anthracene	3337	54062	178458	442612	644949	979897					
	1140573	1448888					LINR	0.04864	0.71354		0.99842
101 Benzo(ghi)perylene	5611	69442	204237	486052	660896	993425					
	1147215	1420533					LINR	-0.00684	0.69826		0.99663
102 1,4-Dioxane	+++++	0.38596	0.36544	0.34027	0.33565	0.34066					
	0.33258	0.33411					AVRG		0.34781		5.80000
103 Methyl methacrylate	+++++	0.20448	0.20715	0.19233	0.19367	0.19179					
	0.18849	0.18873					AVRG		0.19523		3.84394
104 Ethyl methacrylate	+++++	0.97834	0.94772	0.91075	0.89747	0.91953					
	0.88615	0.88662					AVRG		0.91808		3.72016
105 2-Picoline	+++++	1.36882	1.35125	1.31492	1.28859	1.31988					
	1.26566	1.27156					AVRG		1.31153		2.98057
106 N-Nitrosomethylethylamine	+++++	0.45269	0.45693	0.45506	0.45555	0.48642					
	0.47447	0.47506					AVRG		0.46517		2.84966

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Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.65978	0.65242	0.63613	0.62725	0.63869					
	0.60769	0.59830					AVRG		0.63147		3.53998
108 N-Nitrosodiethylamine	+++++	0.45237	0.47181	0.46900	0.46410	0.50118					
	0.48351	0.48207					AVRG		0.47486		3.31266
109 Ethyl Methanesulfonate	+++++	0.78305	0.76259	0.74163	0.72538	0.75853					
	0.73017	0.73681					AVRG		0.74831		2.75343
110 Pentachloroethane	+++++	0.41686	0.40471	0.39663	0.37757	0.38459					
	0.37003	0.36716					AVRG		0.38822		4.77681
111 N-Nitrosopyrrolidine	+++++	0.41392	0.46565	0.48213	0.48507	0.53097					
	0.52132	0.52764					AVRG		0.48953		8.56286
113 N-Nitrosomorpholine	+++++	0.87464	0.95854	0.95612	0.95125	1.02666					
	0.98659	1.00626					AVRG		0.96572		5.08000
114 o-Toluidine	+++++	2.10291	1.98140	1.98641	1.91400	1.97626					
	1.92341	1.91393					AVRG		1.97119		3.37435
115 N-Nitrosopiperidine	+++++	0.14057	0.14426	0.13730	0.13672	0.14036					
	0.13598	0.13664					AVRG		0.13883		2.17171
116 a,a-Dimethylphenethylamine	+++++	0.76262	0.94344	1.04747	1.05725	1.16130					
	1.12771	1.13703					AVRG		1.03383		13.57497

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
117 Triethylphosphorothioate	+++++	0.17431	0.16995	0.17461	0.15334	0.16483						
	0.17584	0.17224					AVRG		0.16930		4.69879	
118 2,6-Dichlorophenol	+++++	0.21015	0.20699	0.20720	0.20976	0.21897						
	0.21409	0.21895					AVRG		0.21230		2.41106	
119 Hexachloropropene	+++++	0.13437	0.15442	0.15037	0.15156	0.15463						
	0.14860	0.15601					AVRG		0.14999		4.91264	
120 p-Phenylenediamine	+++++	0.13075	0.16810	0.19345	0.12569	0.13707						
	0.12620	0.10178					AVRG		0.14043		21.74685	<-
121 N-Nitrosodi-n-butylamine	+++++	0.19231	0.20597	0.18860	0.18371	0.18919						
	0.18385	0.18843					AVRG		0.19030		3.96933	
122 Safrole	+++++	0.22768	0.22415	0.21084	0.20613	0.20211						
	0.19903	0.19905					AVRG		0.20985		5.60785	
123 1,2,4,5-Tetrachlorobenzene	+++++	0.50254	0.50731	0.47841	0.49138	0.48743						
	0.48835	0.48232					AVRG		0.49111		2.12418	
124 Isosafrole	+++++	0.34793	0.35747	0.33779	0.33823	0.33347						
	0.32697	0.32249					AVRG		0.33776		3.54517	
125 1,4-Naphthoquinone	+++++	0.41902	0.43074	0.35934	0.31896	0.22943						
	0.20916	0.17939					AVRG		0.30658		33.32086	<-

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
126 m-Dinitrobenzene	+++++	0.16649	0.18171	0.18067	0.17572	0.18068					
	0.17483	0.17819					AVRG		0.17690		2.98481
127 Pentachlorobenzene	+++++	0.44472	0.45485	0.43193	0.44082	0.44743					
	0.44775	0.44725					AVRG		0.44497		1.59961
128 1-Naphthylamine	+++++	0.89010	0.89479	0.87519	0.88015	0.87220					
	0.86643	0.84705					AVRG		0.87513		1.81168
129 2-Naphthylamine	+++++	0.83542	0.89847	0.81435	0.76980	0.84734					
	0.85932	0.85427					AVRG		0.83985		4.77649
130 2,3,4,6-Tetrachlorophenol	+++++	0.24119	0.27975	0.27049	0.26349	0.27787					
	0.27928	0.28092					AVRG		0.27043		5.30267
131 5-Nitro-o-toluidine	+++++	0.25292	0.27490	0.27873	0.28254	0.28809					
	0.28190	0.28295					AVRG		0.27743		4.15958
132 Thionazin	+++++	0.19505	0.19364	0.19577	0.17396	0.18750					
	0.19052	0.18166					AVRG		0.18830		4.25413
134 Sulfotepp	+++++	0.08702	0.08633	0.09145	0.08602	0.09629					
	0.10000	0.10046					AVRG		0.09251		6.90974
135 Phorate	+++++	0.36474	0.36970	0.37029	0.33678	0.35575					
	0.37507	0.37046					AVRG		0.36326		3.62750

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
136 1,3,5-Trinitrobenzene	+++++	0.14223	0.16559	0.17262	0.16567	0.16029					
	0.16066	0.16341					AVRG		0.16150		5.84553
137 Phenacetin	+++++	0.25919	0.28354	0.27522	0.27502	0.27966					
	0.28060	0.27334					AVRG		0.27523		2.88544
138 Diallate	+++++	0.25773	0.25658	0.24634	0.24671	0.24185					
	0.23996	0.22337					AVRG		0.24465		4.72857
139 Dimethoate	+++++	0.19704	0.20290	0.21439	0.19335	0.21191					
	0.21633	0.21639					AVRG		0.20747		4.63505
140 4-Aminobiphenyl	+++++	0.44568	0.43297	0.41319	0.41739	0.39791					
	0.37243	0.30856					AVRG		0.39830		11.57600
141 Pentachloronitrobenzene	+++++	0.08371	0.08538	0.08021	0.07752	0.07394					
	0.07021	0.06462					AVRG		0.07651		9.73648
142 Pronamide	+++++	0.27578	0.28241	0.27168	0.26994	0.26199					
	0.25462	0.24201					AVRG		0.26549		5.17422
143 Dinoseb	+++++	0.12030	0.14456	0.16068	0.15820	0.16690					
	0.16919	0.16617					AVRG		0.15514		11.23565
144 Disulfoton	+++++	0.30312	0.30303	0.30991	0.27625	0.29268					
	0.30592	0.30456					AVRG		0.29935		3.82768

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Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
145 Methyl parathion	+++++	0.19747	0.20048	0.20736	0.18895	0.20335						
	0.20936	0.20720					AVRG		0.20202		3.52894	
146 4-Nitroquinoline-1-oxide	+++++	0.02064	0.02473	0.02173	0.01915	0.01522						
	0.01367	0.01234					AVRG		0.01821		25.12780	<-
147 Methapyrilene	+++++	32711	102965	248355	439608	811059						
	1038154	1205301					LINR	0.24644	0.48572		0.99292	
148 Isodrin	+++++	0.10436	0.10876	0.10365	0.10056	0.10170						
	0.10205	0.09531					AVRG		0.10234		3.99128	
149 Aramite	+++++	0.04378	0.04924	0.04806	0.04694	0.04496						
	0.04403	0.04112					AVRG		0.04545		6.16845	
150 Kepone	+++++	0.08320	0.09207	0.08856	0.08247	0.07946						
	0.08454	0.07851					AVRG		0.08412		5.73745	
151 p-(Dimethylamino)azobenzene	+++++	0.28449	0.29131	0.28460	0.28643	0.28330						
	0.27077	0.26193					AVRG		0.28040		3.66242	
152 Chlorobenzilate	+++++	0.20185	0.22348	0.24448	0.25905	0.28393						
	0.28551	0.27028					AVRG		0.25265		12.42000	
153 3,3'-Dimethylbenzidine	+++++	0.34879	0.36498	0.39422	0.41306	0.42943						
	0.44632	0.43214					AVRG		0.40413		9.02325	

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Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
154 Famphur	+++++	0.36151	0.38750	0.40237	0.36474	0.38504						
	0.40311	0.40110					AVRG		0.38648		4.53384	
155 2-Acetylaminofluorene	+++++	0.21190	0.28140	0.29163	0.30925	0.33204						
	0.33318	0.32370					AVRG		0.29758		14.33077	
157 7,12Dimethylbenz(a)anthracene	+++++	0.44809	0.47557	0.48042	0.51270	0.52722						
	0.51428	0.50337					AVRG		0.49452		5.58811	
158 3-Methylcholanthrene	+++++	34538	121383	261560	350926	583770						
	812862	950134					LINR	0.10901	0.46319		0.99889	
26 Phthalic anhydride	+++++	0.11209	0.08415	0.07227	0.07606	0.08283						
	0.05888	0.07871					AVRG		0.08071		20.07071	<-
173 Carbazole	0.77448	0.70318	0.71078	0.67015	0.62603	0.57769						
	0.58756	0.61323					AVRG		0.65789		10.43305	
174 Hexachlorophene	+++++	481570	1111269	1692239	2049941	2557918						
	+++++	+++++					LINR	6.11720	0.08914		0.99602	
179 Dibenzo(a,e)pyrene	+++++	9366	65841	222828	313083	504724						
	651551	+++++					LINR	0.23510	0.43458		0.99684	
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	++-++	++++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
184 p-Benzoquinone	+++++	0.23321	0.27521	0.34417	0.29559	0.32183					
	0.36502	0.34771					AVRG		0.31182		14.95563
191 Parathion	+++++	0.06723	0.06899	0.07296	0.06847	0.07388					
	0.08012	0.08062					AVRG		0.07318		7.46828
192 Methoxychlor	+++++	0.57700	0.65005	0.64584	0.61633	0.62111					
	0.61611	0.60131					AVRG		0.61825		4.05843
210 m-Toluidine	+++++	1.39101	1.49037	1.21269	1.16268	1.36516					
	1.29292	1.37738					AVRG		1.32746		8.47883
211 p-Toluidine	+++++	1.19012	1.10280	1.20730	1.15648	1.18316					
	1.15473	1.07886					AVRG		1.15335		4.07696
212 Cis Diallate	+++++	0.24920	0.26404	0.25152	0.25272	0.24930					
	0.24794	0.23339					AVRG		0.24973		3.60952
213 Trans Diallate	+++++	0.30321	0.30186	0.28981	0.29025	0.28453					
	0.28231	0.26279					AVRG		0.28782		4.72857
214 1,4-Dinitrobenzene	+++++	0.15118	0.16466	0.16871	0.16337	0.16462					
	0.15970	0.16192					AVRG		0.16202		3.41022
215 2-Ethoxyethanol	+++++	0.79663	0.84948	0.86358	0.80922	0.87947					
	0.86284	0.85219					AVRG		0.84477		3.59803

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
216 Methylenebis(2-chloroaniline)	+++++	0.09307	0.09165	0.10482	0.10671	0.11800					
	0.12333	0.12763					AVRG		0.10932		12.99207
229 2,2'-Dichlorobenzil	+++++	0.60595	0.62508	0.59634	0.57542	0.57897					
	0.56734	0.54800					AVRG		0.58530		4.40199
230 4-Chlorothioanisole	+++++	0.24396	0.25213	0.25424	0.25879	0.27375					
	0.28517	0.25673					AVRG		0.26068		5.38888
231 4-Chlorothiophenol	+++++	13384	45494	113478	145753	321264					
	406861	+++++					LINR	0.25144	0.22973		0.99222
232 bis(p-Chlorophenyl)sulfone	+++++	0.36628	0.36171	0.34971	0.33521	0.33547					
	0.33408	0.32320					AVRG		0.34367		4.63632
233 bis(p-Chlorophenyl)disulfide	+++++	0.14997	0.13243	0.13177	0.12500	0.12277					
	0.11813	0.11062					AVRG		0.12724		9.88005
234 Diphenyl disulfide	+++++	0.23977	0.22329	0.21928	0.21333	0.21900					
	0.22032	0.20255					AVRG		0.21965		5.09486
235 Diphenyl sulfide	+++++	0.80669	0.83850	0.82228	0.81867	0.89493					
	0.90351	0.82573					AVRG		0.84433		4.58799
236 Phenyl sulfone	+++++	0.39374	0.39091	0.38045	0.36966	0.38376					
	0.39426	0.37147					AVRG		0.38347		2.65415

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	100 Level 7	120 Level 8									
237 Hydroxymethyl phthalimide	+++++	0.20097	0.20654	0.22212	0.22843	0.21226					
	0.20814	0.19992					AVRG		0.21120		5.04176
238 Phthalic acid	+++++	15612	31950	95649	120918	255230					
	321476	362929					LINR	0.19218	0.17041		0.99076
239 Thiophenol	+++++	28073	75689	179152	229481	483900					
	588159	668617					LINR	0.15652	1.24866		0.99164
240 bis(Chloromethyl)ether	+++++	0.81589	0.90398	0.81636	0.87542	0.89758					
	0.94279	0.78702					AVRG		0.86272		6.61854
241 Octachlorostyrene	+++++	0.08570	0.08815	0.09015	0.09163	0.09732					
	0.09571	0.09306					AVRG		0.09167		4.46596
M 225 Trichlorophenols	+++++	0.29627	0.31201	0.30858	0.29653	0.30170					
	0.30309	0.30006					AVRG		0.30261		1.94991
M 226 Tetrachlorophenols	+++++	0.24119	0.27975	0.27049	0.26349	0.27787					
	0.27928	0.28092					AVRG		0.27043		5.30267
M 227 Benzo(b,k)fluoranthene	0.73483	0.91582	0.99695	1.00773	0.98116	0.98180					
	1.02043	1.04013					AVRG		0.95986		10.21470
M 228 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e-00 <-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2009 10:25
End Cal Date : 20-JUN-2009 04:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Cal Date : 29-Jun-2009 09:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
$ 3 2-Fluorophenol	+++++	1.03738	1.10328	1.08556	1.01262	1.08631						
	1.06974	1.02785					AVRG		1.06039		3.24467	
$ 5 Phenol-d5	+++++	1.31808	1.38688	1.34836	1.26140	1.33197						
	1.31657	1.26556					AVRG		1.31840		3.36603	
$ 187 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 20 Nitrobenzene-d5	+++++	0.38842	0.39849	0.35248	0.32356	0.31856						
	0.30617	0.29583					AVRG		0.34050		11.83615	
$ 39 2-Fluorobiphenyl	+++++	1.10794	1.16579	1.11428	1.06399	1.07752						
	1.05856	1.03964					AVRG		1.08967		3.93158	
$ 60 2,4,6-Tribromophenol	+++++	0.12257	0.13896	0.14092	0.13922	0.14610						
	0.14652	0.15067					AVRG		0.14071		6.46486	
$ 81 p-Terphenyl-d14	+++++	0.67223	0.67968	0.68597	0.65300	0.65158						
	0.68407	0.67210					AVRG		0.67123		2.08348	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2009 10:25
End Cal Date : 20-JUN-2009 04:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Cal Date : 29-Jun-2009 09:53 rmb

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

Report Date: 30-Jun-2009 07:54

Calibration History

Method : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Start Cal Date: 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
25-JUN-2009 14:42	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2512.d
Cal Level: 2 , Cal Amount: 10.00000		
26-JUN-2009 15:54	nev	/chem/MSD5.i/s062509.b/s5f2551.d
26-JUN-2009 12:32	hex	/chem/MSD5.i/s062509.b/s5f2542.d
26-JUN-2009 09:31	pest	/chem/MSD5.i/s062509.b/s5f2534.d
25-JUN-2009 19:10	ap12	/chem/MSD5.i/s062509.b/s5f2522.d
25-JUN-2009 15:10	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2513.d
Cal Level: 3 , Cal Amount: 20.00000		
26-JUN-2009 16:17	nev	/chem/MSD5.i/s062509.b/s5f2552.d
26-JUN-2009 12:55	hex	/chem/MSD5.i/s062509.b/s5f2543.d
26-JUN-2009 09:53	pest	/chem/MSD5.i/s062509.b/s5f2535.d
25-JUN-2009 19:32	ap12	/chem/MSD5.i/s062509.b/s5f2523.d
25-JUN-2009 15:38	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2514.d
Cal Level: 4 , Cal Amount: 40.00000		
26-JUN-2009 16:39	nev	/chem/MSD5.i/s062509.b/s5f2553.d
26-JUN-2009 13:17	hex	/chem/MSD5.i/s062509.b/s5f2544.d
26-JUN-2009 10:16	pest	/chem/MSD5.i/s062509.b/s5f2536.d
25-JUN-2009 19:55	ap12	/chem/MSD5.i/s062509.b/s5f2524.d
25-JUN-2009 16:05	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2515.d
Cal Level: 5 , Cal Amount: 50.00000		
26-JUN-2009 17:01	nev	/chem/MSD5.i/s062509.b/s5f2554.d
26-JUN-2009 13:40	hex	/chem/MSD5.i/s062509.b/s5f2545.d
26-JUN-2009 10:39	pest	/chem/MSD5.i/s062509.b/s5f2537.d
25-JUN-2009 20:18	ap12	/chem/MSD5.i/s062509.b/s5f2525.d
25-JUN-2009 16:33	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2516.d
Cal Level: 6 , Cal Amount: 80.00000		
26-JUN-2009 17:24	nev	/chem/MSD5.i/s062509.b/s5f2555.d
26-JUN-2009 14:02	hex	/chem/MSD5.i/s062509.b/s5f2546.d
26-JUN-2009 11:02	pest	/chem/MSD5.i/s062509.b/s5f2538.d
25-JUN-2009 20:41	ap12	/chem/MSD5.i/s062509.b/s5f2526.d
25-JUN-2009 17:02	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2517.d
Cal Level: 7 , Cal Amount: 100.00000		

26-JUN-2009 17:47	nev	/chem/MSD5.i/s062509.b/s5f2556.d
26-JUN-2009 14:25	hex	/chem/MSD5.i/s062509.b/s5f2547.d
26-JUN-2009 11:25	pest	/chem/MSD5.i/s062509.b/s5f2539.d
25-JUN-2009 21:03	ap12	/chem/MSD5.i/s062509.b/s5f2527.d
25-JUN-2009 17:29	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2518.d

Cal Level: 8 , Cal Amount: 120.00000

26-JUN-2009 18:09	nev	/chem/MSD5.i/s062509.b/s5f2557.d
26-JUN-2009 11:47	pest	/chem/MSD5.i/s062509.b/s5f2540.d
25-JUN-2009 21:25	ap12	/chem/MSD5.i/s062509.b/s5f2528.d
25-JUN-2009 17:57	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2519.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0

30-JUN-2009 07:33	MEGAIICARE	/chem/MSD5.i/s063009.b/s5f3002.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Cal Date : 30-Jun-2009 07:53 rmb

Calibration File Names:
Level 1: /chem/MSD5.i/s062509.b/s5f2512.d
Level 2: /chem/MSD5.i/s062509.b/s5f2551.d
Level 3: /chem/MSD5.i/s062509.b/s5f2552.d
Level 4: /chem/MSD5.i/s062509.b/s5f2553.d
Level 5: /chem/MSD5.i/s062509.b/s5f2554.d
Level 6: /chem/MSD5.i/s062509.b/s5f2555.d
Level 7: /chem/MSD5.i/s062509.b/s5f2556.d
Level 8: /chem/MSD5.i/s062509.b/s5f2557.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.44023	0.49064	0.47716	0.46210	0.46052					
	0.47841	0.46192					AVRG		0.46728		3.49500
2 Pyridine	+++++	0.69279	0.75514	0.74169	0.59556	0.56835					
	0.76016	0.72634					AVRG		0.69143		11.33716
4 Aniline	+++++	0.44415	0.52170	0.51663	0.49970	0.50458					
	0.52141	0.50721					AVRG		0.50220		5.37034
209 Benzaldehyde	+++++	0.85159	0.89015	0.81871	0.79990	0.75839					
	0.74985	0.70918					AVRG		0.79683		7.86449
6 Phenol	+++++	1.14962	1.24888	1.18550	1.14101	1.11147					
	1.12731	1.08172					AVRG		1.14936		4.73589

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Cal Date : 30-Jun-2009 07:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	0.90051	0.90959	0.96460	0.91224	0.88038	0.84926					
	0.85216	0.81790					AVRG		0.88583		5.19026
8 2-Chlorophenol	+++++	0.95967	1.04338	0.98839	0.94752	0.92897					
	0.94964	0.90735					AVRG		0.96070		4.60720
203 n-Decane	+++++	1.76533	1.83008	1.65405	1.57800	1.43467					
	1.36362	1.28290					AVRG		1.55838		13.23692
9 1,3-Dichlorobenzene	+++++	1.19264	1.28772	1.18603	1.14421	1.08989					
	1.09658	1.05091					AVRG		1.14971		6.95854
11 1,4-Dichlorobenzene	+++++	1.20398	1.26798	1.17125	1.13840	1.08879					
	1.09132	1.04491					AVRG		1.14381		6.71389
12 Benzyl alcohol	+++++	0.56979	0.63670	0.62573	0.60396	0.60465					
	0.61546	0.58777					AVRG		0.60629		3.73063
13 1,2-Dichlorobenzene	+++++	1.15580	1.17968	1.08323	1.05201	0.99640					
	1.00595	0.96590					AVRG		1.06271		7.67104
14 bis(2-Chloroisopropyl)ether	+++++	2.22903	2.36787	2.18504	2.06888	1.93644					
	1.87607	1.76841					AVRG		2.06168		10.34954
15 o-Cresol	+++++	0.73909	0.77770	0.73149	0.71184	0.68497					
	0.69315	0.66420					AVRG		0.71463		5.34449

GEL Laboratories LLC

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Integrator : HP RTE
Method file : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Cal Date : 30-Jun-2009 07:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
16 Acetophenone	+++++	1.11152	1.14047	1.10567	1.07838	1.07242					
	1.04402	1.04190					AVRG		1.08491		3.35447
17 N-Nitrosodipropylamine	0.53750	0.60668	0.67952	0.64418	0.62140	0.62312					
	0.64069	0.59864					AVRG		0.61897		6.68884
18 m,p-Cresols	+++++	0.95993	1.03790	0.98085	0.94779	0.92236					
	0.94191	0.89906					AVRG		0.95569		4.67544
19 Hexachloroethane	+++++	0.41401	0.45409	0.43628	0.42388	0.41362					
	0.42132	0.40627					AVRG		0.42421		3.83148
21 Nitrobenzene	+++++	0.30294	0.32276	0.28522	0.28127	0.25509					
	0.25224	0.23551					AVRG		0.27643		11.11561
22 Isophorone	+++++	0.54758	0.58414	0.54133	0.51835	0.48143					
	0.47395	0.43472					AVRG		0.51164		10.00571
23 2-Nitrophenol	+++++	0.14529	0.15968	0.13060	0.12565	0.11851					
	0.11804	0.11062					AVRG		0.12977		13.28936
24 2,4-Dimethylphenol	+++++	0.24006	0.26073	0.23521	0.22763	0.20780					
	0.20628	0.19018					AVRG		0.22398		10.73144
25 bis(2-Chloroethoxy)methane	+++++	0.32945	0.33889	0.30691	0.29506	0.26818					
	0.26319	0.24472					AVRG		0.29234		12.06634

GEL Laboratories LLC

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Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
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Method file : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Cal Date : 30-Jun-2009 07:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
26 2,4-Dichlorophenol	+++++	0.23679	0.25509	0.23664	0.22756	0.21060					
	0.20430	0.18739					AVRG		0.22262		10.36895
27 Benzoic acid	+++++	+++++	51071	179236	222805	415300					
	636355	696809					LINR	0.30650	0.14372		0.99499
28 1,2,4-Trichlorobenzene	+++++	0.31579	0.32696	0.29301	0.27810	0.25284					
	0.24524	0.22654					AVRG		0.27693		13.50910
30 Naphthalene	0.92630	0.81441	0.84437	0.74175	0.71375	0.63501					
	+++++	+++++					AVRG		0.77927		13.28698
204 alpha-Terpineol	+++++	0.27539	0.29587	0.27412	0.26160	0.23729					
	0.22709	0.21031					AVRG		0.25452		11.98565
31 4-Chloroaniline	+++++	49594	132620	425679	656127	1107368					
	1404474	+++++					LINR	0.18534	0.32589		0.99103
189 Caprolactam	+++++	0.07040	0.08077	0.07795	0.07939	0.08243					
	0.08208	0.08270					AVRG		0.07939		5.44768
32 Hexachlorobutadiene	+++++	0.22957	0.23375	0.21257	0.20237	0.18593					
	0.18127	0.16955					AVRG		0.20215		12.15251
33 4-Chloro-3-methylphenol	+++++	0.22052	0.23942	0.22592	0.22085	0.20102					
	0.19961	0.18500					AVRG		0.21319		8.75387

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Cal Date : 30-Jun-2009 07:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.54547	0.51742	0.53737	0.48509	0.46571	0.42309					
	0.40601	0.37515					AVRG		0.46942		13.47765
35 1-Methylnaphthalene	0.61675	0.54291	0.56151	0.50018	0.48099	0.43377					
	0.41494	+++++					AVRG		0.50729		14.13879
36 Hexachlorocyclopentadiene	+++++	27986	82848	201022	230899	383354					
	546120	529744					LINR	0.06768	0.19504		0.99133
208 1,1'-Biphenyl	+++++	1.15705	1.15621	1.07607	1.06999	0.99440					
	0.93860	0.92132					AVRG		1.04481		9.22094
205 2,3-Dichloroaniline	+++++	0.43038	0.47856	0.47126	0.45828	0.43340					
	0.43590	0.41815					AVRG		0.44656		5.11263
37 2,4,6-Trichlorophenol	+++++	0.28676	0.32859	0.32419	0.31870	0.30788					
	0.30664	0.29394					AVRG		0.30953		4.99573
38 2,4,5-Trichlorophenol	+++++	0.31119	0.35383	0.35359	0.34899	0.32750					
	0.32118	0.30897					AVRG		0.33218		5.93452
40 2-Chloronaphthalene	0.90782	0.88976	0.95381	0.88628	0.86190	0.79283					
	0.77800	0.73919					AVRG		0.85120		8.64193
42 o-Nitroaniline	+++++	0.22990	0.27677	0.28660	0.28311	0.27222					
	0.27973	0.26622					AVRG		0.27065		7.09467

GEL Laboratories LLC

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
41 m-Nitroaniline	+++++	13390	28329	139268	173437	345778					
	493724	513131					LINR	0.29884	0.19829		0.99453
43 Dimethylphthalate	+++++	1.04940	1.13308	1.04947	1.03679	0.97403					
	0.95746	0.91235					AVRG		1.01609		7.22171
44 2,6-Dinitrotoluene	+++++	0.23053	0.26215	0.25119	0.24633	0.23672					
	0.23773	0.22882					AVRG		0.24192		4.95083
45 Acenaphthylene	1.32250	1.32839	1.43067	1.30894	1.28012	1.15975					
	1.12592	1.07678					AVRG		1.25413		9.61726
47 Acenaphthene	0.86434	0.82293	0.89161	0.84103	0.82730	0.77871					
	0.77201	0.74002					AVRG		0.81724		6.19484
48 2,4-Dinitrophenol	+++++	++++	27401	92512	114873	206533					
	316209	327495					LINR	0.31618	0.12695		0.99276
49 Dibenzofuran	+++++	1.22775	1.32738	1.22440	1.19116	1.08140					
	1.04556	1.00480					AVRG		1.15749		10.04078
50 2,4-Dinitrotoluene	+++++	0.28811	0.33236	0.33277	0.32207	0.31602					
	0.32001	0.30435					AVRG		0.31653		5.01775
51 Diethylphthalate	+++++	1.02375	1.11667	1.04486	1.01847	0.95382					
	0.93049	0.87854					AVRG		0.99523		8.00568

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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End Cal Date : 26-JUN-2009 18:09
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Integrator : HP RTE
Method file : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Cal Date : 30-Jun-2009 07:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
52 4-Nitrophenol	+++++	0.10237	0.13339	0.15027	0.14627	0.15044					
	0.15471	0.15539					AVRG		0.14183		13.32362
53 Fluorene	1.08263	1.02003	1.09222	1.03146	1.00049	0.93401					
	0.91950	0.87726					AVRG		0.99470		7.82414
54 4-Chlorophenylphenylether	+++++	0.58767	0.63875	0.60550	0.58889	0.55750					
	0.55283	0.52876					AVRG		0.57998		6.33880
55 2-Methyl-4,6-dinitrophenol	+++++	21239	62983	165240	200894	364502					
	508544	531313					LINR	0.16218	0.10002		0.99855
56 p-Nitroaniline	+++++	0.10363	0.09786	0.10787	0.10361	0.11040					
	+++++	+++++					AVRG		0.10468		4.57223
133 Diphenylamine	+++++	0.42588	0.42331	0.39385	0.39040	0.38179					
	0.39613	0.37595					AVRG		0.39819		4.85853
58 1,2-Diphenylhydrazine	+++++	0.52955	0.56955	0.53115	0.51761	0.47792					
	0.46451	0.44849					AVRG		0.50554		8.53737
59 Tributylphosphate	+++++	1.00806	1.18622	1.23669	1.16465	1.10392					
	1.07665	0.99822					AVRG		1.11063		8.12668
61 4-Bromophenylphenylether	+++++	0.19446	0.21087	0.19593	0.19164	0.18443					
	0.18455	0.17645					AVRG		0.19119		5.76073

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INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Cal Date : 30-Jun-2009 07:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
63 Hexachlorobenzene	+++++	0.20663	0.22068	0.20559	0.20389	0.19450						
	0.19301	0.18516					AVRG		0.20135		5.75118	
207 Atrazine	+++++	0.03899	0.03935	0.03659	0.03414	0.02579						
	0.02506	0.01147					AVRG		0.03020		33.49708	<-
65 Pentachlorophenol	+++++	29080	74972	189390	229767	418008						
	576136	593432					LINR	0.13477	0.11155		0.99815	
206 n-Octadecane	+++++	0.47475	0.50082	0.45712	0.43884	0.39852						
	0.38292	0.36185					AVRG		0.43069		11.86963	
68 Phenanthrene	0.88355	0.80072	0.83106	0.77370	0.74248	0.67864						
	0.65899	0.62552					AVRG		0.74933		11.98568	
69 Anthracene	0.80079	0.78389	0.83647	0.77814	0.74916	0.68231						
	0.65679	0.62923					AVRG		0.73960		10.09070	
72 Di-n-butylphthalate	+++++	0.92678	1.00428	0.92303	0.88168	0.79411						
	0.73607	0.69755					AVRG		0.85193		13.15447	
76 Fluoranthene	0.87967	0.89588	0.95145	0.91545	0.88662	0.80387						
	0.76584	0.73008					AVRG		0.85361		9.11643	
77 Benzidine	+++++	0.19760	0.17186	0.13560	0.15750	0.17176						
	+++++	+++++					AVRG		0.16686		13.59632	

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Cal Date : 30-Jun-2009 07:53 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
79 Pyrene	0.91265	0.94419	1.00845	0.90726	0.87106	0.79690					
	0.79234	0.74808					AVRG		0.87262		10.07157
85 Butylbenzylphthalate	++++++	0.35330	0.41644	0.38432	0.37612	0.36818					
	0.36866	0.35103					AVRG		0.37401		5.90957
89 Benzo(a)anthracene	0.93687	0.86506	0.93282	0.88495	0.85327	0.81322					
	0.79963	0.78038					AVRG		0.85828		6.82989
90 3,3'-Dichlorobenzidine	++++++	0.27335	0.29372	0.28527	0.28392	0.28609					
	0.29172	0.29334					AVRG		0.28677		2.49370
92 Chrysene	0.89108	0.82456	0.87830	0.86396	0.77658	0.72635					
	0.71171	0.67721					AVRG		0.78622		9.89559
93 bis(2-Ethylhexyl)phthalate	0.36763	0.54183	0.61773	0.55490	0.53303	0.51324					
	0.50377	0.47385					AVRG		0.51325		14.10892
94 Di-n-octylphthalate	++++++	0.87264	1.03338	0.94180	0.92021	0.86905					
	0.90617	0.85721					AVRG		0.91435		6.63445
95 Benzo(b)fluoranthene	0.83575	0.83776	0.94486	0.89597	0.89706	0.88345					
	0.87605	0.89631					AVRG		0.88340		3.99003
96 Benzo(k)fluoranthene	0.83667	0.88573	0.95144	0.92402	0.88042	0.80919					
	0.87047	0.78400					AVRG		0.86774		6.47091

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	0.68279	0.75497	0.84574	0.83044	0.81295	0.78346					
	0.78610	0.75963					AVRG		0.78201		6.56659
99 Indeno(1,2,3-cd)pyrene	0.68768	0.76122	0.82731	0.85825	0.80224	0.83562					
	0.77091	0.74337					AVRG		0.78583		7.13057
100 Dibenzo(a,h)anthracene	0.55928	0.62675	0.66243	0.69649	0.65909	0.67837					
	0.63358	0.60851					AVRG		0.64056		6.79267
101 Benzo(ghi)perylene	0.62928	0.66607	0.71083	0.72801	0.67267	0.69867					
	0.63897	0.61503					AVRG		0.66994		6.05494
102 1,4-Dioxane	+++++	0.27310	0.33649	0.31633	0.31586	0.30752					
	0.30760	0.30009					AVRG		0.30814		6.24756
103 Methyl methacrylate	+++++	0.16571	0.14464	0.16919	0.16853	0.13461					
	0.14912	0.14745					AVRG		0.15418		8.81814
104 Ethyl methacrylate	+++++	0.71311	0.75791	0.73095	0.72426	0.71167					
	0.71385	0.70503					AVRG		0.72240		2.47238
105 2-Picoline	+++++	1.11548	1.17142	1.11300	1.10983	1.09598					
	1.08845	1.07485					AVRG		1.10986		2.77913
106 N-Nitrosomethylethylamine	+++++	0.39956	0.41468	0.41346	0.41221	0.41623					
	0.42662	0.42599					AVRG		0.41554		2.20553

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
107 Methyl methanesulfonate	+++++	0.47558	0.50132	0.48450	0.48273	0.46970					
	0.48198	0.46348					AVRG		0.47990		2.52987
108 N-Nitrosodiethylamine	+++++	0.39546	0.40809	0.41357	0.41074	0.41897					
	0.41660	0.42103					AVRG		0.41207		2.08747
109 Ethyl Methanesulfonate	+++++	0.55498	0.59813	0.57386	0.57552	0.57488					
	0.58581	0.57709					AVRG		0.57718		2.26529
110 Pentachloroethane	+++++	0.32980	0.34246	0.32767	0.32795	0.32606					
	0.31926	0.32166					AVRG		0.32784		2.27134
111 N-Nitrosopyrrolidine	+++++	0.36971	0.39411	0.42033	0.41585	0.42732					
	0.42989	0.42616					AVRG		0.41191		5.38141
113 N-Nitrosomorpholine	+++++	0.64474	0.66018	0.67778	0.67210	0.67246					
	0.66541	0.65964					AVRG		0.66462		1.66103
114 o-Toluidine	+++++	1.61381	1.49415	1.47472	1.43016	1.39203					
	1.34155	1.32892					AVRG		1.43933		6.87634
115 N-Nitrosopiperidine	+++++	0.12839	0.13413	0.13516	0.13244	0.13401					
	0.13430	0.13333					AVRG		0.13311		1.68824
116 a,a-Dimethylphenethylamine	+++++	0.63521	0.68983	0.83773	0.84651	0.86822					
	0.88737	0.88928					AVRG		0.80774		12.65773

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	r2	%RSD or R^2
	100 Level 7	120 Level 8									
117 Triethylphosphorothioate	+++++	0.19064	0.20260	0.20099	0.19502	0.19185					
	0.18753	0.18646					AVRG		0.19358		3.24858
118 2,6-Dichlorophenol	+++++	0.22516	0.23849	0.23337	0.23367	0.23208					
	0.23139	0.22767					AVRG		0.23169		1.86464
119 Hexachloropropene	+++++	0.11814	0.13192	0.13900	0.13353	0.14270					
	0.15051	0.15068					AVRG		0.13807		8.32008
120 p-Phenylenediamine	+++++	43977	99414	308611	373494	696188					
	963689	995859					LINR	0.12820	0.20874		0.99126
121 N-Nitrosodi-n-butylamine	+++++	0.17823	0.17723	0.18484	0.17833	0.17974					
	0.18115	0.17847					AVRG		0.17971		1.43983
122 Safrole	+++++	0.21837	0.22703	0.21735	0.21549	0.21160					
	0.20575	0.20421					AVRG		0.21426		3.67215
123 1,2,4,5-Tetrachlorobenzene	+++++	0.54138	0.55353	0.51470	0.51225	0.49714					
	0.48155	0.47070					AVRG		0.51018		5.89454
124 Isosafrole	+++++	0.32966	0.34665	0.33144	0.33467	0.32864					
	0.32331	0.32007					AVRG		0.33063		2.60072
125 1,4-Naphthoquinone	+++++	0.31987	0.36331	0.33039	0.32211	0.26630					
	+++++	+++++					AVRG		0.32039		10.89181

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
126 m-Dinitrobenzene	+-++++	0.14698	0.17243	0.17441	0.16744	0.16475					
	0.17068	0.16207					AVRG		0.16554		5.58667
127 Pentachlorobenzene	+++++	0.50210	0.51268	0.47854	0.47885	0.46376					
	0.45302	0.44508					AVRG		0.47629		5.13583
128 1-Naphthylamine	+++++	0.71576	0.74676	0.71478	0.73564	0.70096					
	0.70170	0.66704					AVRG		0.71181		3.64479
129 2-Naphthylamine	+++++	0.65048	0.67212	0.63289	0.62367	0.60738					
	0.67547	0.62734					AVRG		0.64134		3.98982
130 2,3,4,6-Tetrachlorophenol	+++++	0.26896	0.31335	0.32826	0.31414	0.31017					
	0.32221	0.30193					AVRG		0.30843		6.26838
131 5-Nitro-o-toluidine	+++++	0.22244	0.25484	0.25927	0.26491	0.26382					
	0.26232	0.26458					AVRG		0.25602		5.95016
132 Thionazin	+++-+	0.13992	0.16083	0.16656	0.16351	0.16350					
	0.15944	0.15655					AVRG		0.15862		5.58077
134 Sulfotepp	+++++	0.11001	0.12298	0.12668	0.11604	0.11569					
	0.11568	0.11405					AVRG		0.11730		4.80512
135 Phorate	+++++	0.29230	0.33975	0.34982	0.32693	0.31677					
	0.31242	0.30198					AVRG		0.32000		6.36308

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
136 1,3,5-Trinitrobenzene	+++++	0.07807	0.09604	0.10968	0.11316	0.11642					
	0.12063	0.11865					AVRG		0.10752		14.26247
137 Phenacetin	+++++	0.20290	0.22171	0.22556	0.22545	0.22049					
	0.22407	0.22896					AVRG		0.22131		3.87405
138 Diallate	+++++	0.21704	0.21096	0.20865	0.20571	0.20547					
	0.19847	0.19919					AVRG		0.20650		3.15687
139 Dimethoate	+++++	0.14997	0.18004	0.19018	0.19006	0.19876					
	0.19392	0.19159					AVRG		0.18493		8.87531
140 4-Aminobiphenyl	+++++	0.39954	0.37157	0.34033	0.38960	0.38731					
	0.37146	0.32708					AVRG		0.36955		7.22857
141 Pentachloronitrobenzene	+++++	0.09293	0.09496	0.09184	0.09009	0.08786					
	0.08371	0.08367					AVRG		0.08929		4.95202
142 Pronamide	+++++	0.27271	0.27709	0.26759	0.26568	0.25326					
	0.24278	0.24492					AVRG		0.26058		5.22110
143 Dinoseb	+++++	31988	96506	256390	323328	575312					
	818250	840863					LINR	0.17281	0.15992		0.99762
144 Disulfoton	+++++	0.24425	0.29551	0.29849	0.27680	0.27235					
	0.26633	0.25788					AVRG		0.27309		7.12374

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145 Methyl parathion	+++++	0.10770	0.14875	0.15826	0.16106	0.16736						
	0.16426	0.16189					AVRG		0.15275		13.56103	
146 4-Nitroquinoline-1-oxide	+++++	0.01141	0.01322	0.01133	0.01062	0.00818						
	0.00868	0.00809					AVRG		0.01022		19.09653	<-
147 Methapyrilene	+++++	0.42026	0.44488	0.43856	0.43377	0.40715						
	0.40099	0.37457					AVRG		0.41717		5.94225	
148 Isodrin	+++++	0.10571	0.10794	0.10433	0.10601	0.10397						
	0.10008	0.10248					AVRG		0.10436		2.45344	
149 Aramite	+++++	0.04905	0.05045	0.05167	0.05357	0.05214						
	0.04972	0.04968					AVRG		0.05090		3.18460	
150 Kepone	+++++	0.04990	0.06374	0.06858	0.06953	0.07010						
	0.07444	0.07444					AVRG		0.06725		12.61524	
151 p-(Dimethylamino)azobenzene	+++++	0.20254	0.21029	0.20667	0.20747	0.19714						
	0.19688	0.19360					AVRG		0.20208		3.13600	
152 Chlorobenzilate	+++++	0.29145	0.30146	0.29895	0.30236	0.30552						
	0.29673	0.30007					AVRG		0.29951		1.50134	
153 3,3'-Dimethylbenzidine	+++++	0.46677	0.47630	0.42302	0.43278	0.41562						
	0.43046	0.43922					AVRG		0.44059		5.12372	

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	100 Level 7	120 Level 8									
154 Famphur	+++++	0.28070	0.34471	0.37738	0.35216	0.35407					
	0.35151	0.34312					AVRG		0.34338		8.69120
155 2-Acetylaminofluorene	+++++	0.21740	0.26283	0.27987	0.28264	0.28876					
	0.29539	0.30354					AVRG		0.27578		10.43001
157 7,12Dimethylbenz(a)anthracene	+++++	0.45233	0.47142	0.46173	0.47665	0.44445					
	0.44076	0.43541					AVRG		0.45468		3.46334
158 3-Methylcholanthrene	+++++	0.38164	0.42107	0.41321	0.41394	0.40883					
	0.41065	0.41489					AVRG		0.40918		3.11363
26 Phthalic anhydride	+++++	34490	64897	175190	219706	434516					
	592574	638483					LINR	0.15802	0.12664		0.99629
173 Carbazole	30520	150845	307142	743993	923267	1782076					
	2604833	2666301					LINR	0.13905	0.49388		0.99084
174 Hexachlorophene	+++++	480806	2278613	3488755	6057217	7167289					
	+++++	+++++					LINR	10.43537	0.08980		0.99073
179 Dibenzo(a,e)pyrene	+++++	0.38443	0.37707	0.43058	0.39017	0.45492					
	0.38756	0.34953					AVRG		0.39632		8.87511
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e-00		0.000e+00 <-

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	100 Level 7	120 Level 8									
184 p-Benzoquinone	+++++	6354	22229	56493	80248	134257					
	176805	204907					LINR	0.21207	0.17005		0.99849
191 Parathion	+++++	0.06241	0.08380	0.09228	0.08665	0.09019					
	0.08792	0.08819					AVRG		0.08449		11.94545
192 Methoxychlor	+++++	0.47987	0.56846	0.54978	0.51458	0.52157					
	0.47918	0.44390					AVRG		0.50839		8.56166
210 m-Toluidine	+++++	82014	176998	423487	569165	1017485					
	1470841	1569700					LINR	0.22355	1.33578		0.99386
211 p-Toluidine	+++++	48655	120805	272230	351988	651296					
	846340	873954					LINR	0.14365	0.74877		0.99481
212 Cis Diallate	+++++	0.19980	0.20241	0.21284	0.20964	0.21416					
	0.21304	0.21632					AVRG		0.20975		2.98917
213 Trans Diallate	+++++	0.25534	0.24819	0.24547	0.24201	0.24173					
	0.23350	0.23435					AVRG		0.24294		3.15687
214 1,4-Dinitrobenzene	+++++	0.17121	0.20381	0.18645	0.17549	0.17568					
	0.18326	0.17442					AVRG		0.18147		6.16594
215 2-Ethoxyethanol	+++++	0.42738	0.64231	0.63531	0.62447	0.60898					
	0.63642	0.61711					AVRG		0.59885		12.77596

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216 Methylenebis(2-chloroaniline)	+++++	0.08449	0.09509	0.10697	0.10796	0.12155					
	0.12865	0.12373					AVRG		0.10978		14.66692
229 2,2'-Dichlorobenzil	+++++	0.43514	0.47184	0.44898	0.45185	0.43856					
	0.44140	0.43749					AVRG		0.44646		2.85679
230 4-Chlorothioanisole	+++++	0.26856	0.27242	0.26616	0.27394	0.26615					
	0.26741	0.26488					AVRG		0.26850		1.27497
231 4-Chlorothiophenol	+++++	41768	132011	275353	382851	635600					
	848320	930133					LINR	0.16594	0.21026		0.99850
232 bis(p-Chlorophenyl)sulfone	+++++	0.31542	0.31724	0.29112	0.29450	0.28313					
	0.28387	0.28770					AVRG		0.29614		4.84670
233 bis(p-Chlorophenyl)disulfide	+++++	0.08882	0.09796	0.10629	0.09493	0.09841					
	0.10107	0.10018					AVRG		0.09824		5.52014
234 Diphenyl disulfide	+++++	0.17514	0.18495	0.17946	0.18101	0.17947					
	0.17997	0.17866					AVRG		0.17981		1.62468
235 Diphenyl sulfide	+++++	0.85058	0.85814	0.81105	0.81875	0.77524					
	0.75190	0.74816					AVRG		0.80197		5.57629
236 Phenyl sulfone	+++++	0.36602	0.35985	0.34325	0.35342	0.33956					
	0.33842	0.33797					AVRG		0.34836		3.27307

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Cal Date : 30-Jun-2009 07:53 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
237 Hydroxymethyl phthalimide	+++++	0.13574	0.15119	0.15892	0.13998	0.12536						
	0.12935	0.12316					AVRG		0.13767		9.72353	
238 Phthalic acid	+++++	0.06939	0.07287	0.08292	0.11566	0.12455						
	0.14463	0.15090					AVRG		0.10870		31.11787	<-
239 Thiophenol	+++++	0.60742	0.77250	0.81805	0.90219	0.94227						
	0.93729	0.94386					AVRG		0.84623		14.74711	
240 bis(Chloromethyl)ether	+++++	0.85590	0.85616	0.81409	0.81889	0.83526						
	0.80381	0.79901					AVRG		0.82616		2.83945	
241 Octachlorostyrene	+++++	0.10243	0.10326	0.09498	0.09677	0.09556						
	0.09562	0.09577					AVRG		0.09777		3.59684	
M 225 Trichlorophenols	+++++	0.29897	0.34121	0.33889	0.33385	0.31769						
	0.31391	0.30146					AVRG		0.32085		5.43035	
M 226 Tetrachlorophenols	+++++	0.26896	0.31335	0.32826	0.31414	0.31017						
	0.32221	0.30193					AVRG		0.30843		6.26838	
M 227 Benzo(b,k)fluoranthene	0.83621	0.86175	0.94815	0.91000	0.88874	0.84632						
	0.87326	0.84016					AVRG		0.87557		4.41963	
M 228 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e-00	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Cal Date : 30-Jun-2009 07:53 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
$ 3 2-Fluorophenol	++++	0.84209	0.92035	0.89559	0.87122	0.86709					
	0.89027	0.86129					AVRG		0.87827		2.93514
$ 5 Phenol-d5	+++++	1.12824	1.23711	1.20172	1.15464	1.13363					
	1.14808	1.10269					AVRG		1.15801		3.99148
$ 187 2-Chlorophenol-d4	+++++	+++++	+++++	++++	+++++	++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-
$ 20 Nitrobenzene-d5	+++++	0.32326	0.35849	0.32302	0.30818	0.26119					
	0.25859	0.24209					AVRG		0.29640		14.47409
$ 39 2-Fluorobiphenyl	+++++	1.12044	1.19637	1.09339	1.05081	0.95786					
	0.92784	0.89472					AVRG		1.03449		10.74330
$ 60 2,4,6-Tribromophenol	+++++	0.13461	0.16754	0.16952	0.16904	0.16702					
	0.17089	0.16383					AVRG		0.16321		7.84797
$ 81 p-Terphenyl-d14	+++++	0.64272	0.69513	0.63531	0.60706	0.57674					
	0.57751	0.55064					AVRG		0.61216		8.06339

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Cal Date : 30-Jun-2009 07:53 rmb

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 19-JUN-2009 14:24
Lab File ID: s1f1911-AQA.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 3	2-Fluorophenol	1.06039	1.16161	1.16161	0.000	9.54482	60.00000	Averaged
$ 5	Phenol-d5	1.31840	1.39564	1.39564	0.000	5.85855	60.00000	Averaged
$ 20	Nitrobenzene-d5	0.34050	0.35134	0.35134	0.000	3.18397	60.00000	Averaged
$ 39	2-Fluorobiphenyl	1.08967	1.14407	1.14407	0.000	4.99220	60.00000	Averaged
$ 60	2,4,6-Tribromophenol	0.14071	0.14252	0.14252	0.000	1.28989	60.00000	Averaged
$ 81	p-Terphenyl-d14	0.67123	0.72139	0.72139	0.000	7.47158	60.00000	Averaged
1	N-Methyl-N-nitrosomethylami	0.50553	0.60596	0.60596	0.000	19.86694	60.00000	Averaged
2	Pyridine	0.87998	0.84075	0.84075	0.000	-4.45858	60.00000	Averaged
4	Aniline	0.70937	0.75413	0.75413	0.000	6.31053	60.00000	Averaged
6	Phenol	1.37467	1.47050	1.47050	0.001	6.97076	20.00000	Averaged ccc
7	bis(2-Chloroethyl) ether	1.27047	1.27610	1.27610	0.000	0.44366	60.00000	Averaged
8	2-Chlorophenol	1.10040	1.20486	1.20486	0.000	9.49261	60.00000	Averaged
203	n-Decane	2.41316	2.61568	2.61568	0.000	8.39223	60.00000	Averaged
9	1,3-Dichlorobenzene	1.32610	1.45445	1.45445	0.000	9.67907	60.00000	Averaged
11	1,4-Dichlorobenzene	1.34231	1.43863	1.43863	0.001	7.17532	20.00000	Averaged ccc
13	1,2-Dichlorobenzene	1.23201	1.29877	1.29877	0.000	5.41894	60.00000	Averaged
14	bis(2-Chloroisopropyl)ether	3.26693	3.55426	3.55426	0.000	8.79510	60.00000	Averaged
12	Benzyl alcohol	0.77543	0.83423	0.83423	0.000	7.58282	60.00000	Averaged
15	o-Cresol	0.94503	0.99543	0.99543	0.000	5.33274	60.00000	Averaged
18	m,p-Cresols	1.24863	1.33847	1.33847	0.000	7.19476	60.00000	Averaged
17	N-Nitrosodipropylamine	0.77532	0.82373	0.82373	0.050	6.24299	60.00000	Averaged spcc
19	Hexachloroethane	0.55024	0.59169	0.59169	0.000	7.53395	60.00000	Averaged
21	Nitrobenzene	0.33016	0.38861	0.38861	0.000	17.70492	60.00000	Averaged
22	Isophorone	0.60818	0.68588	0.68588	0.000	12.77597	60.00000	Averaged
23	2-Nitrophenol	0.13330	0.14439	0.14439	0.001	8.31394	20.00000	Averaged ccc
24	2,4-Dimethylphenol	0.23871	0.25387	0.25387	0.000	6.35029	60.00000	Averaged
25	bis(2-Chloroethoxy)methane	0.31748	0.33365	0.33365	0.000	5.09263	60.00000	Averaged
26	2,4-Dichlorophenol	0.21152	0.22211	0.22211	0.001	5.00208	20.00000	Averaged ccc
27	Benzoic acid	0.17862	0.21712	0.21712	0.000	21.55726	60.00000	Averaged
28	1,2,4-Trichlorobenzene	0.26891	0.27244	0.27244	0.000	1.31411	60.00000	Averaged
30	Naphthalene	0.79696	0.82939	0.82939	0.000	4.07012	60.00000	Averaged
204	alpha-Terpineol	0.35557	0.35897	0.35897	0.000	0.95850	60.00000	Averaged
31	4-Chloroaniline	0.29968	0.29895	0.29895	0.000	-0.24435	60.00000	Averaged
32	Hexachlorobutadiene	0.17464	0.17591	0.17591	0.001	0.72828	20.00000	Averaged ccc
33	4-Chloro-3-methylphenol	0.24567	0.26117	0.26117	0.001	6.30610	20.00000	Averaged ccc
34	2-Methylnaphthalene	0.52845	0.59292	0.59292	0.000	12.19822	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 19-JUN-2009 14:24
Lab File ID: s1f1911-AQA.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	0.54993	0.56417	0.56417	0.000	2.58922	60.00000	Averaged
36 Hexachlorocyclopentadiene	0.19686	0.18605	0.18605	0.050	-5.49010	60.00000	Averaged|spcc
205 2,3-Dichloroaniline	0.47471	0.48134	0.48134	0.000	1.39536	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.29701	0.29841	0.29841	0.001	0.47402	20.00000	Averaged|ccc
38 2,4,5-Trichlorophenol	0.30821	0.31160	0.31160	0.000	1.10127	60.00000	Averaged
40 2-Chloronaphthalene	0.90767	0.91840	0.91840	0.000	1.18267	60.00000	Averaged
42 o-Nitroaniline	0.36516	0.37009	0.37009	0.000	1.34973	60.00000	Averaged
41 m-Nitroaniline	0.19404	0.20337	0.20337	0.000	4.80650	60.00000	Averaged
43 Dimethylphthalate	1.10143	1.12531	1.12531	0.000	2.16741	60.00000	Averaged
44 2,6-Dinitrotoluene	0.26579	0.29894	0.29894	0.000	12.47254	60.00000	Averaged
50 2,4-Dinitrotoluene	0.35087	0.38900	0.38900	0.000	10.86592	60.00000	Averaged
45 Acenaphthylene	1.45104	1.49249	1.49249	0.000	2.85667	60.00000	Averaged
47 Acenaphthene	0.96226	0.95041	0.95041	0.001	-1.23145	20.00000	Averaged|ccc
48 2,4-Dinitrophenol	0.11987	0.12003	0.12003	0.050	0.13865	60.00000	Averaged|spcc
49 Dibenzofuran	1.34666	1.37978	1.37978	0.000	2.45944	60.00000	Averaged
51 Diethylphthalate	1.16754	1.17534	1.17534	0.000	0.66858	60.00000	Averaged
52 4-Nitrophenol	0.16399	0.17179	0.17179	0.050	4.75580	60.00000	Averaged|spcc
53 Fluorene	1.12380	1.11861	1.11861	0.000	-0.46194	60.00000	Averaged
54 4-Chlorophenylphenylether	0.57534	0.58638	0.58638	0.000	1.91945	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	0.09697	0.12707	0.12707	0.000	31.05108	60.00000	Averaged
56 p-Nitroaniline	0.16734	0.17164	0.17164	0.000	2.57246	60.00000	Averaged
133 Diphenylamine	0.45942	0.46646	0.46646	0.001	1.53176	20.00000	Averaged|ccc
58 1,2-Diphenylhydrazine	0.67577	0.70508	0.70508	0.000	4.33731	60.00000	Averaged
61 4-Bromophenylphenylether	0.16967	0.17146	0.17146	0.000	1.05641	60.00000	Averaged
63 Hexachlorobenzene	0.18236	0.17975	0.17975	0.000	-1.42664	60.00000	Averaged
65 Pentachlorophenol	0.09743	0.10608	0.10608	0.001	8.87953	20.00000	Averaged|ccc
206 n-Octadecane	0.64348	0.66183	0.66183	0.000	2.85269	60.00000	Averaged
68 Phenanthrene	0.84693	0.83807	0.83807	0.000	-1.04525	60.00000	Averaged
69 Anthracene	0.84554	0.85352	0.85352	0.000	0.94384	60.00000	Averaged
72 Di-n-butylphthalate	1.05119	1.08239	1.08239	0.000	2.96812	60.00000	Averaged
76 Fluoranthene	0.94816	0.97995	0.97995	0.001	3.35209	20.00000	Averaged|ccc
79 Pyrene	1.05960	1.03723	1.03723	0.000	-2.11090	60.00000	Averaged
85 Butylbenzylphthalate	0.45020	0.47887	0.47887	0.000	6.36874	60.00000	Averaged
89 Benzo(a)anthracene	0.92702	0.92865	0.92865	0.000	0.17578	60.00000	Averaged
92 Chrysene	0.87727	0.88419	0.88419	0.000	0.78929	60.00000	Averaged
93 bis(2-Ethylhexyl)phthalate	0.63994	0.68143	0.68143	0.000	6.48450	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 19-JUN-2009 14:24
Lab File ID: s1f1911-AQA.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
94	Di-n-octylphtnalate	1.21152	1.23847	1.23847	0.001	2.22461	20.00000	Averaged	ccc
95	Benzo(b)fluoranthene	39.15729	40.00000	0.93656	0.000	-2.10678	60.00000	Linear	
96	Benzo(k)fluoranthene	1.04523	1.06604	1.06604	0.000	1.99111	60.00000	Averaged	
97	Benzo(a)pyrene	40.04325	40.00000	0.86332	0.001	0.10811	20.00000	Linear	ccc
99	Indeno(1,2,3-cd)pyrene	39.73904	40.00000	0.84502	0.000	-0.65240	60.00000	Linear	
100	Dibenzo(a,h)anthracene	39.99753	40.00000	0.67879	0.000	-0.00617	60.00000	Linear	
101	Benzo(ghi)perylene	41.11100	40.00000	0.72243	0.000	2.77751	60.00000	Linear	
126	m-Dinitrobenzene	0.17690	0.18181	0.18181	0.000	2.77342	60.00000	Averaged	
130	2,3,4,6-Tetrachlorophenol	0.27043	0.27485	0.27485	0.000	1.63510	60.00000	Averaged	
143	Dinoseb	0.15514	0.15560	0.15560	0.000	0.29523	60.00000	Averaged	
173	Carbazole	0.65789	0.67204	0.67204	0.000	2.15038	60.00000	Averaged	
184	p-Benzoquinone	0.31182	0.22799	0.22799	0.000	-26.88360	60.00000	Averaged	
192	Methoxychlor	0.61825	0.65001	0.65001	0.000	5.13624	60.00000	Averaged	
211	p-Toluidine	1.15335	1.05178	1.05178	0.000	-8.80675	60.00000	Averaged	
210	m-Toluidine	1.32746	1.32880	1.32880	0.000	0.10116	60.00000	Averaged	
26	Phthalic anhydride	0.08071	0.07644	0.07644	0.000	-5.29087	60.00000	Averaged	
179	Dibenzo(a,e)pyrene	27.12811	40.00000	0.19256	0.000	-32.17972	60.00000	Linear	
214	1,4-Dinitrobenzene	0.16202	0.16829	0.16829	0.000	3.86504	60.00000	Averaged	
215	2-Ethoxyethanol	0.84477	0.96707	0.96707	0.000	14.47711	60.00000	Averaged	
216	Methylenebis(2-chloroaniline)	0.10932	0.12526	0.12526	0.000	14.58882	60.00000	Averaged	
M 225	Trichlorophenols	0.30261	0.30501	0.30501	0.000	0.79345	60.00000	Averaged	
M 226	Tetrachlorophenols	0.27043	0.27485	0.27485	0.000	1.63510	60.00000	Averaged	
M 227	Benzo(b,k)fluoranthene	0.95986	1.00130	1.00130	0.000	4.31763	60.00000	Averaged	

GEL Laboratories LLC

Data file : /chem/MSD1.i/s061909.b/s1f1911-AQA.d
Lab Smp Id: WBN090602-09.1 Client Smp ID: MEGAICV
Inj Date : 19-JUN-2009 14:24
Operator : nag1 Inst ID: MSD1.i
Smp Info : |WBN090602-09.1|40 PPM|1|SVMF|1|MEGAICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m
Meth Date : 26-Jun-2009 09:37 hnm Quant Type: ISTD
Cal Date : 20-JUN-2009 04:39 Cal File: s1f1946.d
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.904	3.904	(1.000)	153330	40.0000	
* 29 Naphthalene-d8	136	4.775	4.775	(1.000)	689834	40.0000	
* 46 Acenaphthene-d10	164	6.016	6.022	(1.000)	395209	40.0000	
* 67 Phenanthrene-d10	188	7.004	7.004	(1.000)	755757	40.0000	
* 91 Chrysene-d12	240	8.675	8.675	(1.000)	730995	40.0000	
* 98 Perylene-d12	264	10.133	10.133	(1.000)	640582	40.0000	
$ 3 2-Fluorophenol	112	3.087	3.087	(0.791)	178109	40.0000	43.8
$ 5 Phenol-d5	99	3.616	3.616	(0.926)	213994	40.0000	42.3
$ 20 Nitrobenzene-d5	82	4.269	4.269	(0.894)	242368	40.0000	41.3
$ 39 2-Fluorobiphenyl	172	5.516	5.516	(0.917)	452148	40.0000	42.0
$ 60 2,4,6-Tribromophenol	329	6.551	6.551	(1.089)	56327	40.0000	40.5
$ 81 p-Terphenyl-d14	244	7.922	7.916	(0.913)	527329	40.0000	43.0
1 N-Methyl-N-nitrosomethylamine	74	2.387	2.387	(0.611)	92912	40.0000	47.9
2 Pyridine	79	2.416	2.416	(0.619)	128912	40.0000	38.2
4 Aniline	66	3.687	3.693	(0.944)	115631	40.0000	42.5
6 Phenol	94	3.628	3.628	(0.929)	225471	40.0000	42.8(Q)
7 bis(2-Chloroethyl) ether	63	3.704	3.710	(0.949)	195665	40.0000	40.2
8 2-Chlorophenol	128	3.769	3.769	(0.965)	184741	40.0000	43.8
203 n-Decane	43	3.757	3.757	(0.962)	401062	40.0000	43.4
9 1,3-Dichlorobenzene	146	3.875	3.875	(0.992)	223011	40.0000	43.9
11 1,4-Dichlorobenzene	146	3.916	3.916	(1.003)	220585	40.0000	42.9
13 1,2-Dichlorobenzene	146	4.022	4.022	(1.030)	199141	40.0000	42.2
14 bis(2-Chloroisopropyl)ether	45	4.051	4.051	(1.038)	544975	40.0000	43.5
12 Benzyl alcohol	108	3.969	3.975	(1.017)	127913	40.0000	43.0
15 o-Cresol	107	4.022	4.022	(1.030)	152629	40.0000	42.1
18 m,p-Cresols	107	4.122	4.128	(1.056)	205227	40.0000	42.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.145	4.146	(1.062)	126302	40.0000	42.5
19 Hexachloroethane	117	4.251	4.251	(1.089)	90724	40.0000	43.0
21 Nitrobenzene	77	4.287	4.287	(0.898)	268079	40.0000	47.1
22 Isophorone	82	4.434	4.440	(0.929)	473142	40.0000	45.1
23 2-Nitrophenol	139	4.498	4.498	(0.942)	99602	40.0000	43.3
24 2,4-Dimethylphenol	122	4.487	4.487	(0.940)	175125	40.0000	42.5
25 bis(2-Chloroethoxy)methane	93	4.557	4.557	(0.954)	230160	40.0000	42.0
26 2,4-Dichlorophenol	162	4.657	4.657	(0.975)	153216	40.0000	42.0
27 Benzoic acid	105	4.545	4.551	(0.952)	149778	40.0000	48.6
28 1,2,4-Trichlorobenzene	180	4.722	4.722	(0.989)	187938	40.0000	40.5
30 Naphthalene	128	4.787	4.793	(1.002)	572143	40.0000	41.6
204 alpha-Terpineol	59	4.763	4.763	(0.998)	247633	40.0000	40.4
31 4-Chloroaniline	127	4.804	4.804	(1.006)	206224	40.0000	39.9
32 Hexachlorobutadiene	225	4.851	4.857	(1.016)	121347	40.0000	40.3
33 4-Chloro-3-methylphenol	107	5.110	5.116	(1.070)	180161	40.0000	42.5
34 2-Methylnaphthalene	142	5.269	5.269	(1.103)	409014	40.0000	44.9
35 1-Methylnaphthalene	142	5.339	5.345	(1.118)	389184	40.0000	41.0
36 Hexachlorocyclopentadiene	237	5.369	5.369	(0.892)	73529	40.0000	37.8
205 2,3-Dichloroaniline	161	5.463	5.463	(0.908)	190229	40.0000	40.6
37 2,4,6-Trichlorophenol	196	5.457	5.457	(0.907)	117936	40.0000	40.2
38 2,4,5-Trichlorophenol	196	5.481	5.481	(0.911)	123147	40.0000	40.4
40 2-Chloronaphthalene	162	5.622	5.622	(0.934)	362961	40.0000	40.5
42 o-Nitroaniline	65	5.681	5.681	(0.944)	146263	40.0000	40.5
41 m-Nitroaniline	138	5.969	5.969	(0.992)	80373	40.0000	41.9
43 Dimethylphthalate	163	5.786	5.792	(0.962)	444731	40.0000	40.9
44 2,6-Dinitrotoluene	165	5.839	5.845	(0.971)	118145	40.0000	45.0
50 2,4-Dinitrotoluene	165	6.128	6.128	(1.019)	153735	40.0000	44.3
45 Acenaphthylene	152	5.922	5.928	(0.984)	589846	40.0000	41.1
47 Acenaphthene	154	6.039	6.045	(1.004)	375610	40.0000	39.5
48 2,4-Dinitrophenol	184	6.034	6.040	(1.003)	47438	40.0000	40.0(Q)
49 Dibenzofuran	168	6.157	6.157	(1.023)	545303	40.0000	41.0
51 Diethylphthalate	149	6.269	6.269	(1.042)	464506	40.0000	40.3
52 4-Nitrophenol	139	6.057	6.057	(1.007)	67891	40.0000	41.9
53 Fluorene	166	6.392	6.392	(1.063)	442085	40.0000	39.8
54 4-Chlorophenylphenylether	204	6.369	6.375	(1.059)	231742	40.0000	40.8
55 2-Methyl-4,6-dinitrophenol	198	6.404	6.404	(0.914)	96037	40.0000	52.4
56 p-Nitroaniline	138	6.386	6.392	(1.062)	67835	40.0000	41.0
133 Diphenylamine	169	6.445	6.451	(0.920)	352530	40.0000	40.6
58 1,2-Diphenylhydrazine	77	6.481	6.481	(0.925)	532870	40.0000	41.7
61 4-Bromophenylphenylether	248	6.698	6.698	(0.956)	129585	40.0000	40.4
63 Hexachlorobenzene	284	6.751	6.751	(0.964)	135850	40.0000	39.4
65 Pentachlorophenol	266	6.869	6.869	(0.981)	80170	40.0000	43.6
206 n-Octadecane	57	6.851	6.857	(0.978)	500185	40.0000	41.1
68 Phenanthrene	178	7.016	7.016	(1.002)	633381	40.0000	39.6
69 Anthracene	178	7.045	7.051	(1.006)	645055	40.0000	40.4
72 Di-n-butylphthalate	149	7.292	7.292	(1.041)	818025	40.0000	41.2
76 Fluoranthene	202	7.728	7.728	(1.103)	740602	40.0000	41.3

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
79 Pyrene	202	7.869	7.869	(0.907)	758212	40.0000	39.2
85 Butylbenzylphthalate	149	8.186	8.186	(0.944)	350055	40.0000	42.5
89 Benzo(a)anthracene	228	8.663	8.663	(0.999)	678838	40.0000	40.1
92 Chrysene	228	8.692	8.692	(1.002)	646341	40.0000	40.3
93 bis(2-Ethylhexyl)phthalate	149	8.545	8.545	(0.985)	498124	40.0000	42.6
94 Di-n-octylphthalate	149	9.080	9.081	(0.896)	793343	40.0000	40.9
95 Benzo(b)fluoranthene	252	9.663	9.663	(0.954)	599943	40.0000	39.2
96 Benzo(k)fluoranthene	252	9.698	9.698	(0.957)	682885	40.0000	40.8
97 Benzo(a)pyrene	252	10.063	10.063	(0.993)	553028	40.0000	40.0
99 Indeno(1,2,3-cd)pyrene	276	11.768	11.774	(1.161)	541303	40.0000	39.7
100 Dibenzo(a,h)anthracene	278	11.774	11.780	(1.162)	434819	40.0000	40.0
101 Benzo(ghi)perylene	276	12.274	12.280	(1.211)	462777	40.0000	41.1
126 m-Dinitrobenzene	168	5.828	5.828	(0.969)	71851	40.0000	41.1
130 2,3,4,6-Tetrachlorophenol	232	6.228	6.234	(1.035)	108623	40.0000	40.6
143 Dinoseb	211	6.957	6.957	(0.993)	117597	40.0000	40.1
173 Carbazole	167	7.133	7.134	(1.018)	507896	40.0000	40.9
184 p-Benzoquinone	54	3.393	3.393	(0.869)	34958	40.0000	29.2
192 Methoxychlor	227	8.533	8.533	(0.984)	475151	40.0000	42.0(H)
211 p-Toluidine	106	4.181	4.187	(1.071)	161269	40.0000	36.5
210 m-Toluidine	106	4.204	4.210	(1.077)	203745	40.0000	40.0
26 Phthalic anhydride	104	5.298	5.298	(1.110)	52732	40.0000	37.9(M)
179 Dibenzo(a,e)pyrene	302	16.162	16.186	(1.595)	123353	40.0000	27.1
214 1,4-Dinitrobenzene	168	5.769	5.769	(0.959)	66508	40.0000	41.5
215 2-Ethoxyethanol	59	2.222	2.222	(0.569)	148281	40.0000	45.8
216 Methylenebis(2-chloroaniline)	231	8.592	8.592	(0.990)	91568	40.0000	45.8(Q)
M 225 Trichlorophenols	196				241083	80.0000	80.6
M 226 Tetrachlorophenols	232				108623	40.0000	40.6
M 227 Benzo(b,k)fluoranthene	252				1282828	80.0000	83.4

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD1.i/s061909.b/s1f1911-AQA.d
Date : 19-JUN-2009 14:24
Client ID: MECAICV
Sample Info: IWBN090602-09,1140 PPM!1!SVMF!1!MECAICV
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nag1
Column diameter: 0.20

Page 1

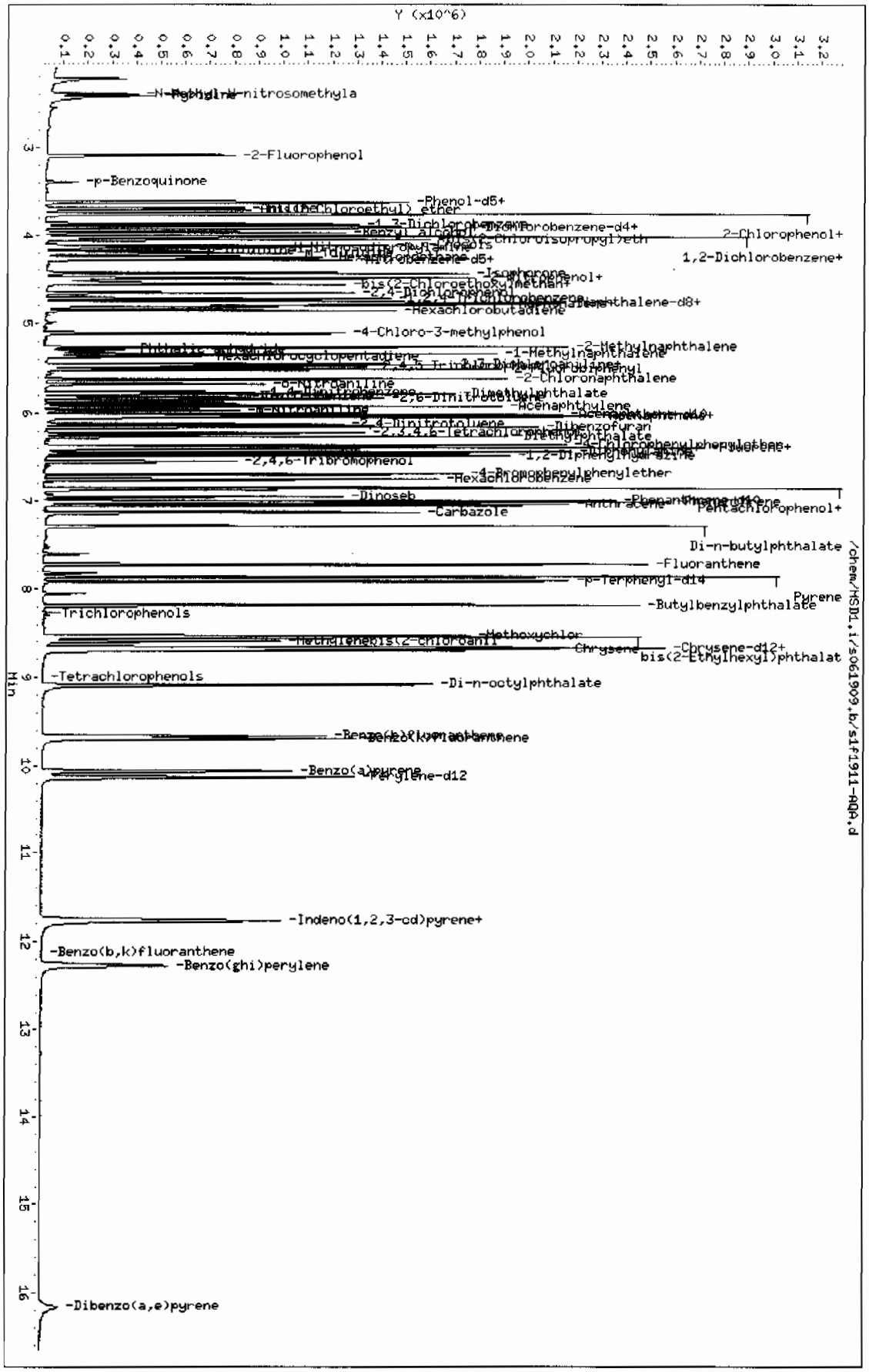

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 19-JUN-2009 18:13
Lab File ID: s1f1920-AQA.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090528-08.1 Quant Type: ISTD
Method: /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	1.08648	0.98923	0.98923	0.000	-8.95109	60.00000	Averaged
16 Acetophenone	1.48332	1.55702	1.55702	0.000	4.96811	60.00000	Averaged
189 Caprolactam	0.08546	0.09444	0.09444	0.000	10.50612	60.00000	Averaged
208 1,1'-Biphenyl	1.24593	1.31427	1.31427	0.000	5.48448	60.00000	Averaged
207 Atrazine	0.02887	0.03204	0.03204	0.000	10.98690	60.00000	Averaged
77 Benzidine	0.15949	0.15125	0.15125	0.000	-5.16420	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28091	0.30301	0.30301	0.000	7.87025	60.00000	Averaged
102 1,4-Dioxane	0.34781	0.45327	0.45327	0.000	30.32148	60.00000	Averaged
103 Methyl methacrylate	0.19523	0.26061	0.26061	0.000	33.48656	60.00000	Averaged
104 Ethyl methacrylate	0.91808	1.17837	1.17837	0.000	28.35166	60.00000	Averaged
105 2-Picoline	1.31153	1.38784	1.38784	0.000	5.81889	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.46517	0.49851	0.49851	0.000	7.16704	60.00000	Averaged
107 Methyl methanesulfonate	0.63147	0.72132	0.72132	0.000	14.22913	60.00000	Averaged
108 N-Nitrosodiethylamine	0.47486	0.51586	0.51586	0.000	8.63398	60.00000	Averaged
109 Ethyl Methanesulfonate	0.74831	0.95506	0.95506	0.000	27.62942	60.00000	Averaged
110 Pentachloroethane	0.38822	0.55796	0.55796	0.000	43.72254	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.48953	0.52718	0.52718	0.000	7.69061	60.00000	Averaged
113 N-Nitrosomorpholine	0.96572	1.02456	1.02456	0.000	6.09256	60.00000	Averaged
114 o-Toluidine	1.97119	2.08945	2.08945	0.000	5.99968	60.00000	Averaged
115 N-Nitrosopiperidine	0.13883	0.14467	0.14467	0.000	4.20142	60.00000	Averaged
116 a,a-Dimethylphenethylamine	1.03383	1.09797	1.09797	0.000	6.20367	60.00000	Averaged
118 2,6-Dichlorophenol	0.21230	0.23526	0.23526	0.000	10.81243	60.00000	Averaged
119 Hexachloropropene	0.14999	0.23680	0.23680	0.000	57.87235	60.00000	Averaged
120 p-Phenylenediamine	0.14043	0.15933	0.15933	0.000	13.45879	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.19030	0.20004	0.20004	0.000	5.12294	60.00000	Averaged
122 Safrole	0.20985	0.25643	0.25643	0.000	22.19512	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.49111	0.54799	0.54799	0.000	11.58274	60.00000	Averaged
124 Isosafrole	0.33776	0.47072	0.47072	0.000	39.36391	60.00000	Averaged
125 1,4-Naphthoquinone	0.30658	0.35779	0.35779	0.000	16.70490	60.00000	Averaged
127 Pentachlorobenzene	0.44497	0.46989	0.46989	0.000	5.60059	60.00000	Averaged
128 1-Naphthylamine	0.87513	0.94862	0.94862	0.000	8.39728	60.00000	Averaged
129 2-Naphthylamine	0.83985	0.82524	0.82524	0.000	-1.74014	60.00000	Averaged
131 5-Nitro-o-toluidine	0.27743	0.30479	0.30479	0.000	9.86190	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.16150	0.21062	0.21062	0.000	30.41818	60.00000	Averaged
137 Phenacetin	0.27523	0.30054	0.30054	0.000	9.19681	60.00000	Averaged
138 Diallate	0.24465	0.25246	0.25246	0.000	3.19399	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 19-JUN-2009 18:13
Lab File ID: s1f1920-AQA.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090528-08.1 Quant Type: ISTD
Method: /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.24973	0.28023	0.28023	0.000	12.21162	60.00000	Averaged
213 Trans Diallate	0.28782	0.29702	0.29702	0.000	3.19399	60.00000	Averaged
140 4-Aminobiphenyl	0.39830	0.45050	0.45050	0.000	13.10385	60.00000	Averaged
141 Pentachloronitrobenzene	0.07651	0.08512	0.08512	0.000	11.25609	60.00000	Averaged
142 Pronamide	0.26549	0.28324	0.28324	0.000	6.68397	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01821	0.02192	0.02192	0.000	20.35913	60.00000	Averaged
147 Methapyrilene	42.43377	40.00000	0.39558	0.000	6.08443	60.00000	Linear
148 Isodrin	0.10234	0.10090	0.10090	0.000	-1.40974	60.00000	Averaged
149 Aramite	0.04545	0.04294	0.04294	0.000	-5.50587	60.00000	Averaged
150 Kepone	0.08412	0.09244	0.09244	0.000	9.89227	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28040	0.29202	0.29202	0.000	4.14510	60.00000	Averaged
152 Chlorobenzilate	0.25265	0.25597	0.25597	0.000	1.31074	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.40413	0.41326	0.41326	0.000	2.25804	60.00000	Averaged
155 2-Acetylaminofluorene	0.29758	0.31743	0.31743	0.000	6.66947	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.49452	0.46389	0.46389	0.000	-6.19413	60.00000	Averaged
158 3-Methylcholanthrene	40.51908	40.00000	0.41871	0.000	1.29770	60.00000	Linear

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Data file : /chem/MSD1.i/s061909.b/s1f1920-AQA.d
Lab Smp Id: WBN090528-08.1 Client Smp ID: ap12ICV
Inj Date : 19-JUN-2009 18:13
Operator : nag1 Inst ID: MSD1.i
Smp Info : |WBN090528-08.1|40 PPM|1|SVMF|1|AP12ICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s061909.b/MSD1-M8270AQA-061909.m
Meth Date : 24-Jun-2009 08:26 hnm Quant Type: ISTD
Cal Date : 20-JUN-2009 03:05 Cal File: s1f1942.d
Als bottle: 20 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.904	3.904	(1.000)	154563	40.0000	
* 29 Naphthalene-d8	136	4.775	4.775	(1.000)	626388	40.0000	
* 46 Acenaphthene-d10	164	6.016	6.016	(1.000)	389616	40.0000	
* 67 Phenanthrene-d10	188	7.004	7.004	(1.000)	775254	40.0000	
* 91 Chrysene-d12	240	8.669	8.669	(1.000)	772722	40.0000	
* 98 Perylene-d12	264	10.127	10.127	(1.000)	670331	40.0000	
209 Benzaldehyde	77	3.634	3.634	(0.931)	152898	40.0000	36.4
16 Acetophenone	105	4.157	4.157	(1.065)	240657	40.0000	42.0
189 Caprolactam	113	5.045	5.045	(1.057)	59157	40.0000	44.2
208 1,1'-Biphenyl	154	5.592	5.592	(0.930)	512059	40.0000	42.2
207 Atrazine	173	6.769	6.769	(0.966)	24841	40.0000	44.4
77 Benzidine	184	7.781	7.781	(0.898)	116878	40.0000	37.9
90 3,3'-Dichlorobenzidine	252	8.598	8.598	(0.992)	234146	40.0000	43.1
102 1,4-Dioxane	88	2.222	2.222	(0.569)	70059	40.0000	52.1
103 Methyl methacrylate	100	2.216	2.216	(0.568)	40281	40.0000	53.4
104 Ethyl methacrylate	69	2.599	2.599	(0.666)	182133	40.0000	51.3
105 2-Picoline	93	2.799	2.799	(0.717)	214509	40.0000	42.3
106 N-Nitrosomethylethylamine	88	2.846	2.846	(0.729)	77051	40.0000	42.9
107 Methyl methanesulfonate	80	2.999	2.999	(0.768)	111489	40.0000	45.7
108 N-Nitrosodiethylamine	102	3.234	3.234	(0.828)	79733	40.0000	43.4
109 Ethyl Methanesulfonate	79	3.393	3.393	(0.869)	147617	40.0000	51.0
110 Pentachloroethane	167	3.734	3.734	(0.956)	86240	40.0000	57.5
111 N-Nitrosopyrrolidine	100	4.146	4.146	(1.062)	81482	40.0000	43.1(Q)
113 N-Nitrosomorpholine	56	4.169	4.169	(1.068)	158359	40.0000	42.4
114 o-Toluidine	106	4.181	4.181	(1.071)	322952	40.0000	42.4
115 N-Nitrosopiperidine	114	4.387	4.387	(0.919)	90617	40.0000	41.7

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.675	4.675	(0.979)	687753	40.0000	42.5
118 2,6-Dichlorophenol	162	4.816	4.816	(1.009)	147361	40.0000	44.3
119 Hexachloropropene	213	4.845	4.845	(1.015)	148328	40.0000	63.1
120 p-Phenylenediamine	108	5.051	5.051	(1.058)	99805	40.0000	45.4
121 N-Nitrosodi-n-butylamine	84	5.016	5.016	(1.050)	125305	40.0000	42.0(T)
122 Safrole	162	5.187	5.187	(1.086)	160626	40.0000	48.9
123 1,2,4,5-Tetrachlorobenzene	216	5.387	5.387	(0.895)	213506	40.0000	44.6
124 Isosafrole	162	5.551	5.551	(0.923)	183400	40.0000	55.7
125 1,4-Naphthoquinone	158	5.740	5.740	(0.954)	139401	40.0000	46.7
127 Pentachlorobenzene	250	6.128	6.128	(1.019)	183075	40.0000	42.2
128 1-Naphthylamine	143	6.210	6.210	(1.032)	369596	40.0000	43.4
129 2-Naphthylamine	143	6.263	6.263	(1.041)	321526	40.0000	39.3
131 5-Nitro-o-toluidine	152	6.381	6.381	(1.061)	118753	40.0000	43.9
136 1,3,5-Trinitrobenzene	75	6.592	6.592	(0.941)	163285	40.0000	52.2
137 Phenacetin	108	6.634	6.634	(0.947)	232993	40.0000	43.7(Q)
138 Diallate	86	6.622	6.622	(0.945)	195724	40.0000	41.3
212 Cis Diallate	86	6.681	6.681	(0.954)	32587	6.00000	6.7
213 Trans Diallate	86	6.622	6.622	(0.945)	195724	34.0000	35.1
140 4-Aminobiphenyl	169	6.863	6.863	(0.980)	349250	40.0000	45.2
141 Pentachloronitrobenzene	237	6.875	6.875	(0.982)	65993	40.0000	44.5(Q)
142 Pronamide	173	6.869	6.869	(0.981)	219580	40.0000	42.7
146 4-Nitroquinoline-1-oxide	101	7.469	7.469	(1.066)	16994	40.0000	48.1
147 Methapyrilene	58	7.486	7.486	(1.069)	306673	40.0000	42.4
148 Isodrin	193	7.639	7.639	(1.091)	78224	40.0000	39.4
149 Aramite	185	7.869	7.869	(1.123)	33293	40.0000	37.8
150 Kepone	272	8.292	8.292	(1.184)	71662	40.0000	44.0
151 p-(Dimethylamino)azobenzene	120	7.992	7.992	(0.922)	225654	40.0000	41.6
152 Chlorobenzilate	251	8.010	8.010	(0.924)	197791	40.0000	40.5
153 3,3'-Dimethylbenzidine	212	8.204	8.204	(0.946)	319335	40.0000	40.9
155 2-Acetylaminofluorene	181	8.386	8.386	(0.967)	245286	40.0000	42.7
157 7,12Dimethylbenz(a)anthracene	256	9.633	9.633	(0.951)	310959	40.0000	37.5
158 3-Methylcholanthrene	268	10.486	10.486	(1.035)	280674	40.0000	40.5(Q)

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD1.i/s061909.b/s1f1920-AQA.d
Date : 19-JUN-2009 18:13
Client ID: ap12ICV
Sample Info: INBN090528-08,1|40 PPM|1|SWMF11|AP12ICV
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nag1
Column diameter: 0.20

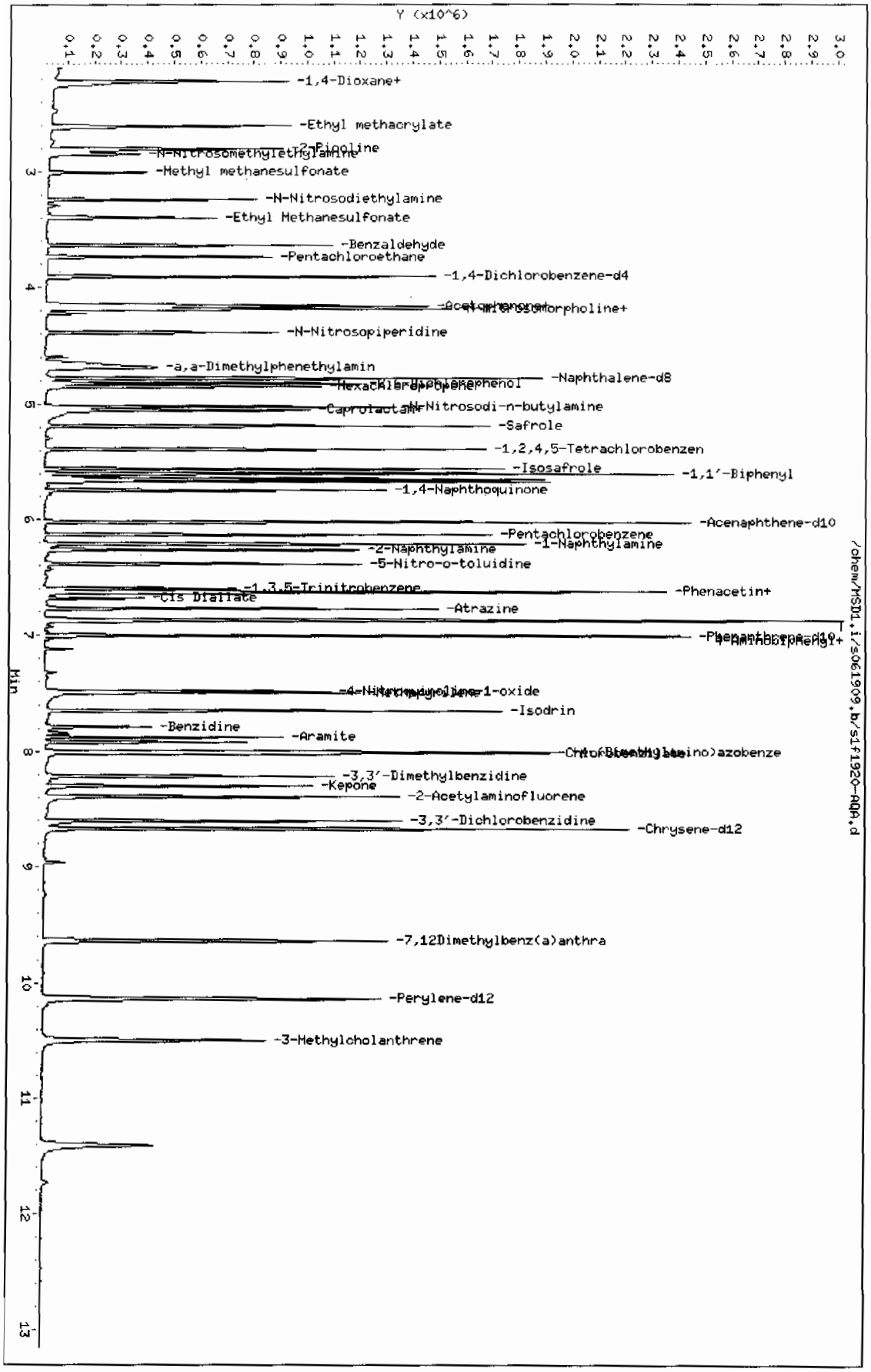

Page 1

Data File: /chem/MSD5.i/s062509.b/s5f2530.d
Report Date: 26-Jun-2009 10:43

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2530.d
Analysis Type: WATER
Lab Sample ID: WBN090528-08.5
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 25-JUN-2009 22:11
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 10:16
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.79683	0.68969	0.68969	0.000	-13.44538	60.00000	Averaged
16 Acetophenone	1.08491	1.09337	1.09337	0.000	0.78008	60.00000	Averaged
189 Caprolactam	0.07939	0.08623	0.08623	0.000	8.62020	60.00000	Averaged
208 1,1'-Biphenyl	1.04483	1.10113	1.10113	0.000	5.39117	60.00000	Averaged
207 Atrazine	0.03020	0.02623	0.02623	0.000	-13.14245	60.00000	Averaged
77 Benzidine	0.16686	0.16548	0.16548	0.000	-0.82680	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28677	0.30900	0.30900	0.000	7.75178	60.00000	Averaged
102 1,4-Dioxane	0.30814	0.37821	0.37821	0.000	22.74029	60.00000	Averaged
103 Methyl methacrylate	0.15418	0.20577	0.20577	0.000	33.46578	60.00000	Averaged
104 Ethyl methacrylate	0.72240	0.86947	0.86947	0.000	20.35908	60.00000	Averaged
105 2-Picoline	1.10986	1.11145	1.11145	0.000	0.14364	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.41554	0.43916	0.43916	0.000	5.68448	60.00000	Averaged
107 Methyl methanesulfonate	0.47990	0.53510	0.53510	0.000	11.50234	60.00000	Averaged
108 N-Nitrosodiethylamine	0.41207	0.42418	0.42418	0.000	2.93858	60.00000	Averaged
109 Ethyl Methanesulfonate	0.57718	0.71921	0.71921	0.000	24.60806	60.00000	Averaged
110 Pentachloroethane	0.32784	0.45184	0.45184	0.000	37.82372	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.41191	0.43254	0.43254	0.000	5.00958	60.00000	Averaged
113 N-Nitrosomorpholine	0.66462	0.70098	0.70098	0.000	5.47224	60.00000	Averaged
114 o-Toluidine	1.43933	1.46147	1.46147	0.000	1.53771	60.00000	Averaged
115 N-Nitrosopiperidine	0.13311	0.13919	0.13919	0.000	4.57041	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.80774	0.88284	0.88284	0.000	9.29822	60.00000	Averaged
118 2,6-Dichlorophenol	0.23169	0.24346	0.24346	0.000	5.07768	60.00000	Averaged
119 Hexachloropropene	0.13807	0.22200	0.22200	0.000	60.78426	60.00000	Averaged <-
120 p-Phenylenediamine	41.67913	40.00000	0.19074	0.000	4.19784	60.00000	Linear
121 N-Nitrosodi-n-butylamine	0.17971	0.18978	0.18978	0.000	5.59950	60.00000	Averaged
122 Safrole	0.21426	0.25431	0.25431	0.000	18.69392	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.51018	0.55414	0.55414	0.000	8.61659	60.00000	Averaged
124 Isosafrole	0.33063	0.45825	0.45825	0.000	38.59723	60.00000	Averaged
125 1,4-Naphthoquinone	0.32039	0.31743	0.31743	0.000	-0.92461	60.00000	Averaged
127 Pentachlorobenzene	0.47629	0.49731	0.49731	0.000	4.41334	60.00000	Averaged
128 1-Naphthylamine	0.71181	0.74533	0.74533	0.000	4.70975	60.00000	Averaged
129 2-Naphthylamine	0.64134	0.57650	0.57650	0.000	-10.10953	60.00000	Averaged
131 5-Nitro-o-toluidine	0.25602	0.27374	0.27374	0.000	6.92121	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.10752	0.13454	0.13454	0.000	25.12508	60.00000	Averaged
137 Phenacetin	0.22130	0.23937	0.23937	0.000	8.16340	60.00000	Averaged
138 Diallate	0.20650	0.20770	0.20770	0.000	0.58296	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 25-JUN-2009 22:11
Lab File ID: s5f2530.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 10:16
Lab Sample ID: WBN090528-08.5 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20975	0.22776	0.22776	0.000	8.58954	60.00000	Averaged
213 Trans Diallate	0.24294	0.24436	0.24436	0.000	0.58296	60.00000	Averaged
140 4-Aminobiphenyl	0.36955	0.40991	0.40991	0.000	10.91902	60.00000	Averaged
141 Pentachloronitrobenzene	0.08929	0.09331	0.09331	0.000	4.50272	60.00000	Averaged
142 Pronamide	0.26058	0.26773	0.26773	0.000	2.74451	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01022	0.01223	0.01223	0.000	19.62918	60.00000	Averaged
147 Methapyrilene	0.41717	0.44149	0.44149	0.000	5.82947	60.00000	Averaged
148 Isodrin	0.10436	0.10072	0.10072	0.000	-3.48541	60.00000	Averaged
149 Aramite	0.05090	0.04734	0.04734	0.000	-6.97764	60.00000	Averaged
150 Kepone	0.06725	0.06505	0.06505	0.000	-3.27279	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.20208	0.21351	0.21351	0.000	5.65511	60.00000	Averaged
152 Chlorobenzilate	0.29951	0.30883	0.30883	0.000	3.11302	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.44059	0.46027	0.46027	0.000	4.46551	60.00000	Averaged
155 2-Acetylaminofluorene	0.27578	0.31027	0.31027	0.000	12.50985	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.45468	0.42550	0.42550	0.000	-6.41815	60.00000	Averaged
158 3-Methylcholanthrene	0.40918	0.41886	0.41886	0.000	2.36719	60.00000	Averaged

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Data file : /chem/MSD5.i/s062509.b/s5f2530.d
Lab Smp Id: WBN090528-08.5 Client Smp ID: AP12ICV
Inj Date : 25-JUN-2009 22:11
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090528-08.5|40 PPM|1|SVM|1|AP12ICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m
Meth Date : 26-Jun-2009 10:43 hnm Quant Type: ISTD
Cal Date : 25-JUN-2009 21:25 Cal File: s5f2528.d
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: hpclpl

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.031	4.031	(1.000)	513917	40.0000	
* 29 Naphthalene-d8	136	4.901	4.901	(1.000)	1759940	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.160	(1.000)	1124731	40.0000	
* 67 Phenanthrene-d10	188	7.342	7.342	(1.000)	2155121	40.0000	
* 91 Chrysene-d12	240	9.766	9.766	(1.000)	2326057	40.0000	
* 98 Perylene-d12	264	11.524	11.524	(1.000)	2206835	40.0000	
209 Benzaldehyde	77	3.754	3.754	(0.931)	354443	40.0000	34.6
16 Acetophenone	105	4.278	4.278	(1.061)	561903	40.0000	40.3
189 Caprolactam	113	5.172	5.172	(1.055)	151764	40.0000	43.4
208 1,1'-Biphenyl	154	5.719	5.719	(0.928)	1238478	40.0000	42.2
207 Atrazine	173	7.031	7.031	(0.958)	56529	40.0000	34.7
77 Benzidine	184	8.495	8.495	(0.870)	384927	40.0000	39.7
90 3,3'-Dichlorobenzidine	252	9.689	9.689	(0.992)	718760	40.0000	43.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
102 1,4-Dioxane	88	2.337	2.337	(0.580)	194371	40.0000	49.1
103 Methyl methacrylate	100	2.331	2.331	(0.578)	105751	40.0000	53.4
104 Ethyl methacrylate	69	2.713	2.713	(0.673)	446835	40.0000	48.1
105 2-Picoline	93	2.913	2.913	(0.723)	571194	40.0000	40.0
106 N-Nitrosomethylethylamine	88	2.960	2.960	(0.734)	225690	40.0000	42.3
107 Methyl methanesulfonate	80	3.119	3.119	(0.774)	274996	40.0000	44.6
108 N-Nitrosodiethylamine	102	3.354	3.354	(0.832)	217991	40.0000	41.2
109 Ethyl Methanesulfonate	79	3.507	3.507	(0.870)	369616	40.0000	49.8
110 Pentachloroethane	167	3.854	3.854	(0.956)	232206	40.0000	55.1
111 N-Nitrosopyrrolidine	100	4.266	4.266	(1.058)	222292	40.0000	42.0(Q)
113 N-Nitrosomorpholine	56	4.290	4.290	(1.064)	360248	40.0000	42.2
114 o-Toluidine	106	4.307	4.307	(1.069)	751073	40.0000	40.6
115 N-Nitrosopiperidine	114	4.507	4.507	(0.920)	244971	40.0000	41.8
116 a,a-Dimethylphenethylamine	58	4.772	4.772	(0.974)	1553746	40.0000	43.7
118 2,6-Dichlorophenol	162	4.943	4.943	(1.008)	428468	40.0000	42.0
119 Hexachloropropene	213	4.972	4.972	(1.014)	390700	40.0000	64.3
120 p-Phenylenediamine	108	5.178	5.178	(1.056)	335699	40.0000	41.7
121 N-Nitrosodi-n-butylamine	84	5.137	5.137	(1.048)	333995	40.0000	42.2(I)
122 Safrole	162	5.307	5.307	(1.083)	447572	40.0000	47.5
123 1,2,4,5-Tetrachlorobenzene	216	5.513	5.513	(0.895)	623256	40.0000	43.4
124 Isosafrole	162	5.678	5.678	(0.922)	515408	40.0000	55.4
125 1,4-Naphthoquinone	158	5.872	5.872	(0.953)	357026	40.0000	39.6
127 Pentachlorobenzene	250	6.278	6.278	(1.019)	559342	40.0000	41.8
128 1-Naphthylamine	143	6.366	6.366	(1.033)	838296	40.0000	41.9
129 2-Naphthylamine	143	6.425	6.425	(1.043)	648408	40.0000	36.0
131 5-Nitro-o-toluidine	152	6.566	6.566	(1.066)	307889	40.0000	42.8
136 1,3,5-Trinitrobenzene	75	6.819	6.819	(0.929)	289941	40.0000	50.0
137 Phenacetin	108	6.860	6.860	(0.934)	515877	40.0000	43.3(Q)
138 Diallate	86	6.842	6.842	(0.932)	447626	40.0000	40.2
212 Cis Diallate	86	6.925	6.925	(0.943)	73628	6.00000	6.5(a)
213 Trans Diallate	86	6.842	6.842	(0.932)	447626	34.0000	34.2
140 4-Aminobiphenyl	169	7.154	7.154	(0.974)	883396	40.0000	44.4
141 Pentachloronitrobenzene	237	7.178	7.178	(0.978)	201104	40.0000	41.8(Q)
142 Pronamide	173	7.166	7.166	(0.976)	576989	40.0000	41.1
146 4-Nitroquinoline-1-oxide	101	8.013	8.013	(1.091)	26348	40.0000	47.8
147 Methapyrilene	58	8.042	8.042	(1.095)	951461	40.0000	42.3
148 Isodrin	193	8.272	8.272	(1.127)	217072	40.0000	38.6
149 Aramite	185	8.666	8.666	(1.180)	102033	40.0000	37.2
150 Kepone	272	9.260	9.260	(1.261)	140182	40.0000	38.7
151 p-(Dimethylamino)azobenzene	120	8.848	8.848	(0.906)	496641	40.0000	42.3
152 Chlorobenzilate	251	8.878	8.878	(0.909)	718358	40.0000	41.2
153 3,3'-Dimethylbenzidine	212	9.166	9.166	(0.939)	1070613	40.0000	41.8
155 2-Acetylaminofluorene	181	9.413	9.413	(0.964)	721716	40.0000	45.0
157 7,12Dimethylbenz(a)anthracene	256	10.948	10.948	(0.950)	938999	40.0000	37.4
158 3-Methylcholanthrene	268	11.954	11.954	(1.037)	924361	40.0000	40.9(Q)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s062509.b/s5f2530.d
Date : 25-JUN-2009 22:11
Client ID: AP12ICV
Sample Info: IWBN090528-08,5140 PPM11SVM11AP12ICV
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

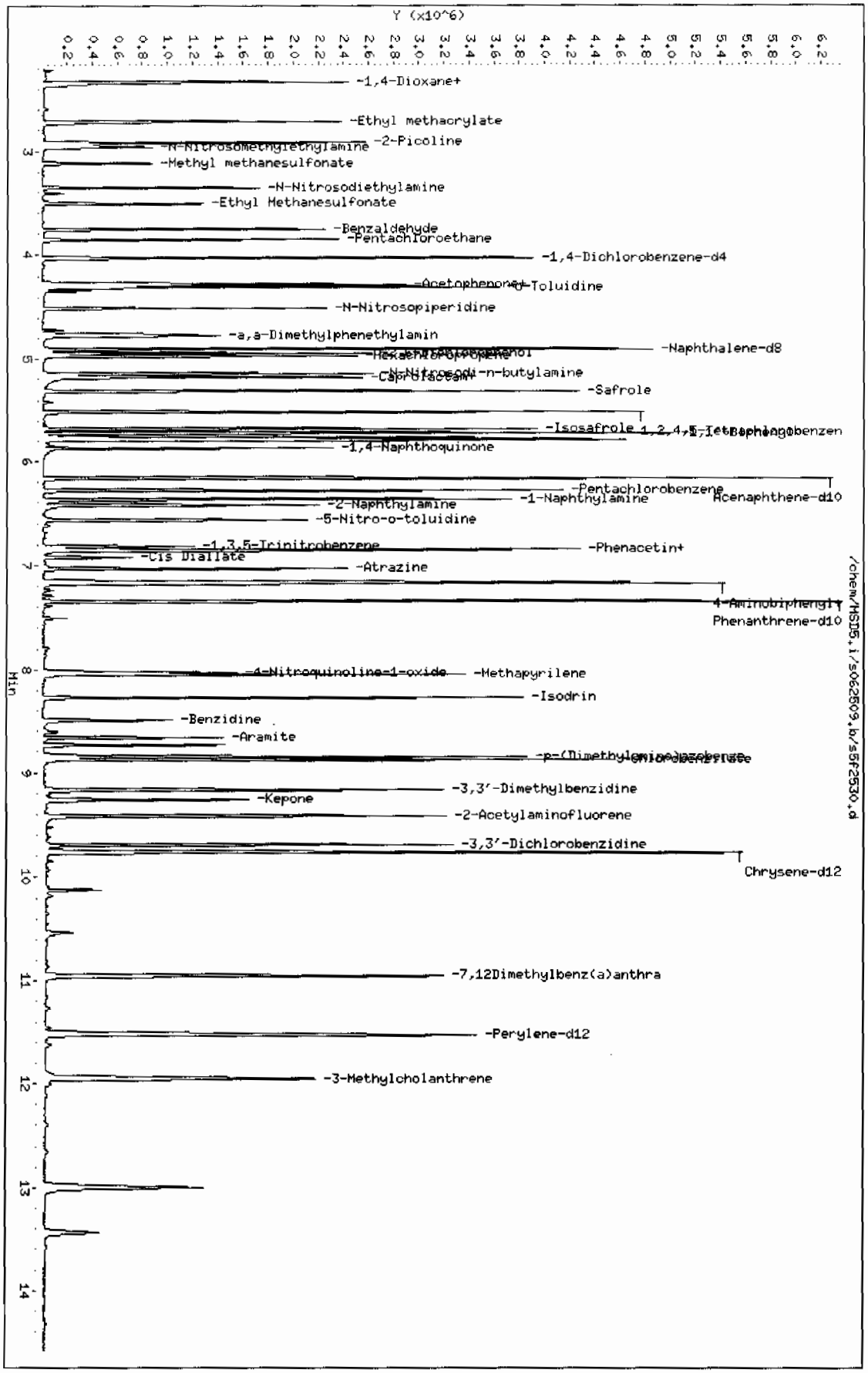

Page 1

Data File: /chem/MSD5.i/s062509.b/s5f2533.d
Report Date: 26-Jun-2009 09:26

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2533.d
Analysis Type: WATER
Lab Sample ID: WBN090602-09.1
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 26-JUN-2009 09:03
Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Init. Cal. Times: 14:42 21:25
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$	3 2-Fluorophenol	0.87827	0.92425	0.92425	0.000	5.23547	60.00000	Averaged
$	5 Phenol-d5	1.15801	1.18114	1.18114	0.000	1.99696	60.00000	Averaged
$	20 Nitrobenzene-d5	0.29640	0.32886	0.32886	0.000	10.95026	60.00000	Averaged
$	39 2-Fluorobiphenyl	1.03449	1.12238	1.12238	0.000	8.49584	60.00000	Averaged
$	60 2,4,6-Tribromophenol	0.16321	0.16963	0.16963	0.000	3.93360	60.00000	Averaged
$	81 p-Terphenyl-d14	0.61216	0.71476	0.71476	0.000	16.76084	60.00000	Averaged
	1 N-Methyl-N-nitrosomethylami	0.46728	0.54505	0.54505	0.000	16.64238	60.00000	Averaged
	2 Pyridine	0.69143	0.70995	0.70995	0.000	2.67819	60.00000	Averaged
	4 Aniline	0.50220	0.53118	0.53118	0.000	5.77120	60.00000	Averaged
	6 Phenol	1.14936	1.18675	1.18675	0.001	3.25298	20.00000	Averaged ccc
	7 bis(2-Chloroethyl) ether	0.88583	0.90830	0.90830	0.000	2.53655	60.00000	Averaged
	8 2-Chlorophenol	0.96070	1.02584	1.02584	0.000	6.78060	60.00000	Averaged
	203 n-Decane	1.55838	1.69824	1.69824	0.000	8.97494	60.00000	Averaged
	9 1,3-Dichlorobenzene	1.14971	1.22756	1.22756	0.000	6.77092	60.00000	Averaged
	11 1,4-Dichlorobenzene	1.14381	1.19501	1.19501	0.001	4.47626	20.00000	Averaged ccc
	13 1,2-Dichlorobenzene	1.06271	1.08794	1.08794	0.000	2.37401	60.00000	Averaged
	14 bis(2-Chloroisopropyl)ether	2.06168	2.20216	2.20216	0.000	6.81386	60.00000	Averaged
	12 Benzyl alcohol	0.60629	0.63280	0.63280	0.000	4.37103	60.00000	Averaged
	15 o-Cresol	0.71463	0.71377	0.71377	0.000	-0.12043	60.00000	Averaged
	18 m,p-Cresols	0.95569	0.97996	0.97996	0.000	2.54026	60.00000	Averaged
	17 N-Nitrosodipropylamine	0.61897	0.66847	0.66847	0.050	7.99822	60.00000	Averaged spcc
	19 Hexachloroethane	0.42421	0.45290	0.45290	0.000	6.76415	60.00000	Averaged
	21 Nitrobenzene	0.27643	0.32316	0.32316	0.000	16.90510	60.00000	Averaged
	22 Isophorone	0.51164	0.58577	0.58577	0.000	14.48914	60.00000	Averaged
	23 2-Nitrophenol	0.12977	0.13565	0.13565	0.001	4.53272	20.00000	Averaged ccc
	24 2,4-Dimethylphenol	0.22398	0.23682	0.23682	0.000	5.73150	60.00000	Averaged
	25 bis(2-Chloroethoxy)methane	0.29234	0.30563	0.30563	0.000	4.54679	60.00000	Averaged
	26 2,4-Dichlorophenol	0.22262	0.23707	0.23707	0.001	6.49090	20.00000	Averaged ccc
	27 Benzoic acid	49.71978	40.00000	0.13459	0.000	24.29945	60.00000	Linear
	28 1,2,4-Trichlorobenzene	0.27693	0.28464	0.28464	0.000	2.78700	60.00000	Averaged
	30 Naphthalene	0.77927	0.75380	0.75380	0.000	-3.26722	60.00000	Averaged
	204 alpha-Terpineol	0.25452	0.26630	0.26630	0.000	4.62601	60.00000	Averaged
	31 4-Chloroaniline	47.43792	40.00000	0.32609	0.000	18.59479	60.00000	Linear
	32 Hexachlorobutadiene	0.20215	0.20705	0.20705	0.001	2.42592	20.00000	Averaged ccc
	33 4-Chloro-3-methylphenol	0.21319	0.22983	0.22983	0.001	7.80207	20.00000	Averaged ccc
	34 2-Methylnaphthalene	0.46942	0.52808	0.52808	0.000	12.49823	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 26-JUN-2009 09:03
Lab File ID: s5f2533.d Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 21:25
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	0.50729	0.49555	0.49555	0.000	-2.31520	60.00000	Averaged
36 Hexachlorocyclopentadiene	39.64221	40.00000	0.18009	0.050	-0.89448	60.00000	Linear spcc
205 2,3-Dichloroaniline	0.44656	0.49099	0.49099	0.000	9.94845	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.30953	0.32810	0.32810	0.001	6.00118	20.00000	Averaged ccc
38 2,4,5-Trichlorophenol	0.33218	0.36608	0.36608	0.000	10.20698	60.00000	Averaged
40 2-Chloronaphthalene	0.85120	0.90066	0.90066	0.000	5.81012	60.00000	Averaged
42 o-Nitroaniline	0.27065	0.28553	0.28553	0.000	5.49930	60.00000	Averaged
41 m-Nitroaniline	38.41712	40.00000	0.13119	0.000	-3.95720	60.00000	Linear
43 Dimethylphthalate	1.01609	1.07110	1.07110	0.000	5.41428	60.00000	Averaged
44 2,6-Dinitrotoluene	0.24192	0.27930	0.27930	0.000	15.44876	60.00000	Averaged
50 2,4-Dinitrotoluene	0.31653	0.36215	0.36215	0.000	14.41426	60.00000	Averaged
45 Acenaphthylene	1.25413	1.36304	1.36304	0.000	8.68388	60.00000	Averaged
47 Acenaphthene	0.81724	0.84415	0.84415	0.001	3.29259	20.00000	Averaged ccc
48 2,4-Dinitrophenol	41.95216	40.00000	0.09301	0.050	4.88039	60.00000	Linear spcc
49 Dibenzofuran	1.15749	1.23802	1.23802	0.000	6.95699	60.00000	Averaged
51 Diethylphthalate	0.99523	1.06353	1.06353	0.000	6.86293	60.00000	Averaged
52 4-Nitrophenol	0.14183	0.13849	0.13849	0.050	-2.35609	60.00000	Averaged spcc
53 Fluorene	0.99470	1.03686	1.03686	0.000	4.23858	60.00000	Averaged
54 4-Chlorophenylphenylether	0.57998	0.61529	0.61529	0.000	6.08785	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	55.17976	40.00000	0.12176	0.000	37.94939	60.00000	Linear
56 p-Nitroaniline	0.10468	0.10711	0.10711	0.000	2.32364	60.00000	Averaged
133 Diphenylamine	0.39819	0.42143	0.42143	0.001	5.83632	20.00000	Averaged ccc
58 1,2-Diphenylhydrazine	0.50554	0.55423	0.55423	0.000	9.63098	60.00000	Averaged
61 4-Bromophenylphenylether	0.19119	0.20218	0.20218	0.000	5.74963	60.00000	Averaged
63 Hexachlorobenzene	0.20135	0.21304	0.21304	0.000	5.80172	60.00000	Averaged
65 Pentachlorophenol	42.93985	40.00000	0.10471	0.001	7.34962	20.00000	Linear ccc
206 n-Octadecane	0.43069	0.46656	0.46656	0.000	8.32965	60.00000	Averaged
68 Phenanthrene	0.74933	0.76655	0.76655	0.000	2.29763	60.00000	Averaged
69 Anthracene	0.73960	0.78221	0.78221	0.000	5.76128	60.00000	Averaged
72 Di-n-butylphthalate	0.85193	0.94952	0.94952	0.000	11.45527	60.00000	Averaged
76 Fluoranthene	0.85361	0.92888	0.92888	0.001	8.81843	20.00000	Averaged ccc
79 Pyrene	0.87262	0.93192	0.93192	0.000	6.79628	60.00000	Averaged
85 Butylbenzylphthalate	0.37401	0.41884	0.41884	0.000	11.98745	60.00000	Averaged
89 Benzo(a)anthracene	0.85828	0.89070	0.89070	0.000	3.77758	60.00000	Averaged
92 Chrysene	0.78622	0.81917	0.81917	0.000	4.19176	60.00000	Averaged
93 bis(2-Ethylhexyl)phthalate	0.51325	0.58454	0.58454	0.000	13.89072	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 26-JUN-2009 09:03
Lab File ID: s5f2533.d Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 21:25
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	0.91435	1.00400	1.00400	0.001	9.80457	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.88340	0.92115	0.92115	0.000	4.27302	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.86774	0.92327	0.92327	0.000	6.39833	60.00000	Averaged	
	97 Benzo(a)pyrene	0.78201	0.83388	0.83388	0.001	6.63286	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78583	0.79439	0.79439	0.000	1.09020	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	0.64056	0.66834	0.66834	0.000	4.33609	60.00000	Averaged	
	101 Benzo(ghi)perylene	0.66994	0.67440	0.67440	0.000	0.66555	60.00000	Averaged	
	126 m-Dinitrobenzene	0.16554	0.17075	0.17075	0.000	3.14663	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30843	0.31127	0.31127	0.000	0.91990	60.00000	Averaged	
	143 Dinoseb	44.22962	40.00000	0.14919	0.000	10.57406	60.00000	Linear	
	173 Carbazole	41.25747	40.00000	0.44073	0.000	3.14368	60.00000	Linear	
	184 p-Benzoquinone	23.92059	40.00000	0.06563	0.000	-40.19852	60.00000	Linear	
	192 Methoxychlor	0.50819	0.59122	0.59122	0.000	16.33706	60.00000	Averaged	
	211 p-Toluidine	43.31403	40.00000	0.70324	0.000	8.28508	60.00000	Linear	
	210 m-Toluidine	41.09601	40.00000	1.07377	0.000	2.74002	60.00000	Linear	
	26 Phthalic anhydride	43.89917	40.00000	0.11898	0.000	9.74792	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	0.39632	0.23471	0.23471	0.000	-40.77708	60.00000	Averaged	
	214 1,4-Dinitrobenzene	0.18147	0.18811	0.18811	0.000	3.65351	60.00000	Averaged	
	215 2-Ethoxyethanol	0.59885	0.70005	0.70005	0.000	16.89800	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.10978	0.11539	0.11539	0.000	5.11341	60.00000	Averaged	
M	225 Trichlorophenols	0.32085	0.34709	0.34709	0.000	8.17820	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30843	0.31127	0.31127	0.000	0.91990	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.87557	0.92221	0.92221	0.000	5.32615	60.00000	Averaged	

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Data file : /chem/MSD5.i/s062509.b/s5f2533.d
Lab Smp Id: WBN090602-09.1 Client Smp ID: MEGAICV
Inj Date : 26-JUN-2009 09:03
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090602-09.1|40 PPM|1|SVM|1|MEGAICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m
Meth Date : 26-Jun-2009 09:26 rmb Quant Type: ISTD
Cal Date : 25-JUN-2009 19:55 Cal File: s5f2524.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.032	4.032	(1.000)	451724	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1704563	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1006448	40.0000	
* 67 Phenanthrene-d10	188	7.345	7.345	(1.000)	1867078	40.0000	
* 91 Chrysene-d12	240	9.767	9.767	(1.000)	1916495	40.0000	
* 98 Perylene-d12	264	11.529	11.529	(1.000)	1772024	40.0000	
$ 3 2-Fluorophenol	112	3.208	3.208	(0.796)	417507	40.0000	42.1
$ 5 Phenol-d5	99	3.743	3.743	(0.928)	533549	40.0000	40.8
$ 20 Nitrobenzene-d5	82	4.398	4.398	(0.897)	560561	40.0000	44.4
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	1129616	40.0000	43.4
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	170721	40.0000	41.6
$ 81 p-Terphenyl-d14	244	8.727	8.727	(0.894)	1369835	40.0000	46.7
1 N-Methyl-N-nitrosomethylamine	74	2.505	2.505	(0.621)	246213	40.0000	46.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
2 Pyridine	79	2.539	2.539	(0.630)	320702	40.0000	41.1
4 Aniline	66	3.815	3.815	(0.946)	239947	40.0000	42.3
6 Phenol	94	3.752	3.752	(0.931)	536083	40.0000	41.3(Q)
7 bis(2-Chloroethyl) ether	63	3.829	3.829	(0.950)	410301	40.0000	41.0
8 2-Chlorophenol	128	3.897	3.897	(0.967)	463398	40.0000	42.7
203 n-Decane	43	3.878	3.878	(0.962)	767136	40.0000	43.6
9 1,3-Dichlorobenzene	146	3.998	3.998	(0.992)	554517	40.0000	42.7
11 1,4-Dichlorobenzene	146	4.046	4.046	(1.004)	539813	40.0000	41.8
13 1,2-Dichlorobenzene	146	4.147	4.147	(1.029)	491448	40.0000	40.9
14 bis(2-Chloroisopropyl)ether	45	4.176	4.176	(1.036)	994767	40.0000	42.7
12 Benzyl alcohol	108	4.099	4.099	(1.017)	285849	40.0000	41.7
15 o-Cresol	107	4.147	4.147	(1.029)	322429	40.0000	40.0
18 m,p-Cresols	107	4.248	4.248	(1.054)	442673	40.0000	41.0
17 N-Nitrosodipropylamine	70	4.268	4.268	(1.059)	301966	40.0000	43.2
19 Hexachloroethane	117	4.378	4.378	(1.086)	204587	40.0000	42.7
21 Nitrobenzene	77	4.412	4.412	(0.900)	550854	40.0000	46.8
22 Isophorone	82	4.561	4.561	(0.930)	998489	40.0000	45.8
23 2-Nitrophenol	139	4.624	4.624	(0.943)	231229	40.0000	41.8
24 2,4-Dimethylphenol	122	4.614	4.614	(0.941)	403677	40.0000	42.3
25 bis(2-Chloroethoxy)methane	93	4.682	4.682	(0.955)	520973	40.0000	41.8
26 2,4-Dichlorophenol	162	4.788	4.788	(0.976)	404106	40.0000	42.6
27 Benzoic acid	105	4.677	4.677	(0.954)	229416	40.0000	49.7
28 1,2,4-Trichlorobenzene	180	4.850	4.850	(0.989)	485193	40.0000	41.1
30 Naphthalene	128	4.918	4.918	(1.003)	1284908	40.0000	38.7(Q)
204 alpha-Terpineol	59	4.889	4.889	(0.997)	453924	40.0000	41.8
31 4-Chloroaniline	127	4.932	4.932	(1.006)	555837	40.0000	47.4
32 Hexachlorobutadiene	225	4.980	4.980	(1.016)	352928	40.0000	41.0
33 4-Chloro-3-methylphenol	107	5.245	5.245	(1.070)	391753	40.0000	43.1
34 2-Methylnaphthalene	142	5.399	5.399	(1.101)	900153	40.0000	45.0
35 1-Methylnaphthalene	142	5.471	5.471	(1.116)	844693	40.0000	39.1
36 Hexachlorocyclopentadiene	237	5.505	5.505	(0.893)	181254	40.0000	39.6
205 2,3-Dichloroaniline	161	5.597	5.597	(0.908)	494154	40.0000	44.0
37 2,4,6-Trichlorophenol	196	5.587	5.587	(0.906)	330218	40.0000	42.4
38 2,4,5-Trichlorophenol	196	5.616	5.616	(0.911)	368445	40.0000	44.1
40 2-Chloronaphthalene	162	5.755	5.755	(0.934)	906463	40.0000	42.3
42 o-Nitroaniline	65	5.808	5.808	(0.942)	287375	40.0000	42.2
41 m-Nitroaniline	138	6.112	6.112	(0.991)	132031	40.0000	38.4
43 Dimethylphthalate	163	5.919	5.919	(0.960)	1078006	40.0000	42.2
44 2,6-Dinitrotoluene	165	5.977	5.977	(0.970)	281098	40.0000	46.2
50 2,4-Dinitrotoluene	165	6.276	6.276	(1.018)	364487	40.0000	45.8
45 Acenaphthylene	152	6.064	6.064	(0.984)	1371830	40.0000	43.5
47 Acenaphthene	154	6.189	6.189	(1.004)	849596	40.0000	41.3
48 2,4-Dinitrophenol	184	6.184	6.184	(1.003)	93607	40.0000	42.0
49 Dibenzofuran	168	6.314	6.314	(1.024)	1246000	40.0000	42.8
51 Diethylphthalate	149	6.430	6.430	(1.043)	1070389	40.0000	42.7
52 4-Nitrophenol	139	6.203	6.203	(1.006)	139386	40.0000	39.0
53 Fluorene	166	6.579	6.579	(1.067)	1043548	40.0000	41.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
54 4-Chlorophenylphenylether	204	6.550	6.550	(1.062)	619261	40.0000	42.4
55 2-Methyl-4,6-dinitrophenol	198	6.593	6.593	(0.898)	227338	40.0000	55.2
56 p-Nitroaniline	138	6.574	6.574	(1.066)	107798	40.0000	40.9
133 Diphenylamine	169	6.641	6.641	(0.904)	786838	40.0000	42.3
58 1,2-Diphenylhydrazine	77	6.675	6.675	(0.909)	1034789	40.0000	43.8
61 4-Bromophenylphenylether	248	6.945	6.945	(0.946)	377491	40.0000	42.3
63 Hexachlorobenzene	284	7.017	7.017	(0.955)	397753	40.0000	42.3
65 Pentachlorophenol	266	7.166	7.166	(0.976)	195510	40.0000	42.9
206 n-Octadecane	57	7.147	7.147	(0.973)	871112	40.0000	43.3
68 Phenanthrene	178	7.364	7.364	(1.003)	1431207	40.0000	40.9
69 Anthracene	178	7.407	7.407	(1.009)	1460442	40.0000	42.3
72 Di-n-butylphthalate	149	7.759	7.759	(1.056)	1772829	40.0000	44.6
76 Fluoranthene	202	8.414	8.414	(1.146)	1734295	40.0000	43.5
79 Pyrene	202	8.630	8.630	(0.884)	1786021	40.0000	42.7
85 Butylbenzylphthalate	149	9.150	9.150	(0.937)	802710	40.0000	44.8
89 Benzo(a)anthracene	228	9.752	9.752	(0.999)	1707017	40.0000	41.5
92 Chrysene	228	9.796	9.796	(1.003)	1569944	40.0000	41.7
93 bis(2-Ethylhexyl)phthalate	149	9.675	9.675	(0.991)	1120270	40.0000	45.6
94 Di-n-octylphthalate	149	10.354	10.354	(0.898)	1779108	40.0000	43.9
95 Benzo(b)fluoranthene	252	10.985	10.985	(0.953)	1632300	40.0000	41.7
96 Benzo(k)fluoranthene	252	11.019	11.019	(0.956)	1636049	40.0000	42.6
97 Benzo(a)pyrene	252	11.447	11.447	(0.993)	1477653	40.0000	42.6
99 Indeno(1,2,3-cd)pyrene	276	13.402	13.402	(1.162)	1407684	40.0000	40.4
100 Dibenzo(a,h)anthracene	278	13.412	13.412	(1.163)	1184313	40.0000	41.7
101 Benzo(ghi)perylene	276	13.975	13.975	(1.212)	1195053	40.0000	40.3
126 m-Dinitrobenzene	168	5.963	5.963	(0.967)	171847	40.0000	41.2
130 2,3,4,6-Tetrachlorophenol	232	6.396	6.396	(1.037)	313275	40.0000	40.4
143 Dinoseb	211	7.287	7.287	(0.992)	278552	40.0000	44.2
173 Carbazole	167	7.523	7.523	(1.024)	822880	40.0000	41.2
184 p-Benzoquinone	54	3.516	3.516	(0.872)	29647	40.0000	23.9
192 Methoxychlor	227	9.627	9.627	(0.986)	1133064	40.0000	46.5
211 p-Toluidine	106	4.306	4.306	(1.068)	317671	40.0000	43.3
210 m-Toluidine	106	4.330	4.330	(1.074)	485048	40.0000	41.1
26 Phthalic anhydride	104	5.433	5.433	(1.108)	202802	40.0000	43.9
179 Dibenzo(a,e)pyrene	302	18.343	18.343	(1.591)	415918	40.0000	23.7
214 1,4-Dinitrobenzene	75	5.900	5.900	(0.957)	189318	40.0000	41.5
215 2-Ethoxyethanol	59	2.341	2.341	(0.581)	316229	40.0000	46.8
216 Methylenebis(2-chloroaniline)	231	9.690	9.690	(0.992)	221148	40.0000	42.0(Q)
M 225 Trichlorophenols	196				698663	80.0000	86.5
M 226 Tetrachlorophenols	232				313275	40.0000	40.4
M 227 Benzo(b,k)fluoranthene	252				3268349	80.0000	84.3

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s062509.b/s5f2533.d
Date : 26-JUN-2009 09:03
Client ID: MEGAICV
Sample Info: IWBN090602-09,1|40 PPM|1|SVM11|MEGAICV
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

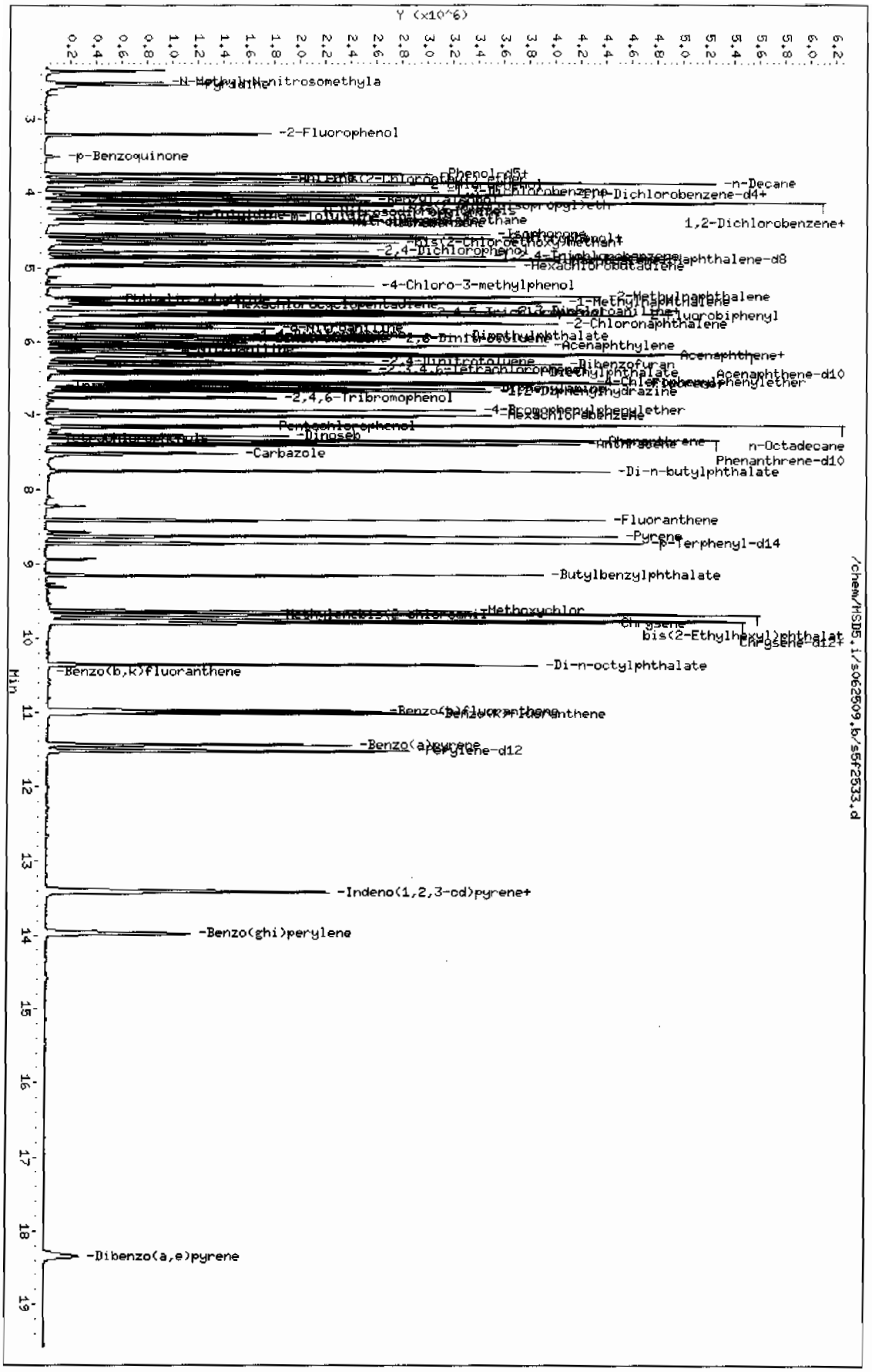

Page 1

Data File: /chem/MSD1.i/s062809.b/s1f2802.d
Report Date: 29-Jun-2009 09:53

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i
Lab File ID: s1f2802.d
Analysis Type:
Lab Sample ID: WBN090510-01.3 Quant Type: ISTD
Method: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m

Injection Date: 28-JUN-2009 14:55
Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Init. Cal. Times: 10:25 04:39

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$	3 2-Fluorophenol	1.06039	1.09477	1.09477	0.000	3.24194	60.00000	Averaged
$	5 Phenol-d5	1.31840	1.23926	1.23926	0.000	-6.00326	60.00000	Averaged
$	20 Nitrobenzene-d5	0.34050	0.30480	0.30480	0.000	-10.48379	60.00000	Averaged
$	39 2-Fluorobiphenyl	1.08967	1.20142	1.20142	0.000	10.25493	60.00000	Averaged
$	60 2,4,6-Tribromophenol	0.14071	0.14368	0.14368	0.000	2.10785	60.00000	Averaged
$	81 p-Terphenyl-d14	0.67123	0.68973	0.68973	0.000	2.75617	60.00000	Averaged
	1 N-Methyl-N-nitrosomethylami	0.50553	0.62248	0.62248	0.000	23.13456	60.00000	Averaged
	2 Pyridine	0.87998	0.96092	0.96092	0.000	9.19701	60.00000	Averaged
	4 Aniline	0.70937	0.61601	0.61601	0.000	-13.15997	60.00000	Averaged
	6 Phenol	1.37467	1.29495	1.29495	0.001	-5.79947	20.00000	Averaged ccc
	7 bis(2-Chloroethyl) ether	1.27047	1.15727	1.15727	0.000	-8.91009	60.00000	Averaged
	8 2-Chlorophenol	1.10040	1.06765	1.06765	0.000	-2.97628	60.00000	Averaged
	203 n-Decane	2.41316	2.10707	2.10707	0.000	-12.68436	60.00000	Averaged
	9 1,3-Dichlorobenzene	1.32610	1.20175	1.20175	0.000	-9.37709	60.00000	Averaged
	11 1,4-Dichlorobenzene	1.34231	1.17780	1.17780	0.001	-12.25595	20.00000	Averaged ccc
	13 1,2-Dichlorobenzene	1.23201	1.06200	1.06200	0.000	-13.79940	60.00000	Averaged
	14 bis(2-Chloroisopropyl)ether	3.26693	3.07900	3.07900	0.000	-5.75259	60.00000	Averaged
	12 Benzyl alcohol	0.77543	0.73546	0.73546	0.000	-5.15465	60.00000	Averaged
	15 o-Cresol	0.94503	0.82773	0.82773	0.000	-12.41238	60.00000	Averaged
	18 m,p-Cresols	1.24863	1.14610	1.14610	0.000	-8.21104	60.00000	Averaged
	17 N-Nitrosodipropylamine	0.77532	0.73625	0.73625	0.050	-5.03954	60.00000	Averaged spcc
	19 Hexachloroethane	0.55024	0.49282	0.49282	0.000	-10.43423	60.00000	Averaged
	21 Nitrobenzene	0.33016	0.31592	0.31592	0.000	-4.31243	60.00000	Averaged
	22 Isophorone	0.60818	0.58356	0.58356	0.000	-4.04786	60.00000	Averaged
	23 2-Nitrophenol	0.13330	0.13555	0.13555	0.001	1.68280	20.00000	Averaged ccc
	24 2,4-Dimethylphenol	0.23871	0.23725	0.23725	0.000	-0.61207	60.00000	Averaged
	25 bis(2-Chloroethoxy)methane	0.31748	0.33089	0.33089	0.000	4.22545	60.00000	Averaged
	26 2,4-Dichlorophenol	0.21152	0.19582	0.19582	0.001	-7.42462	20.00000	Averaged ccc
	27 Benzoic acid	0.17862	0.17572	0.17572	0.000	-1.62233	60.00000	Averaged
	28 1,2,4-Trichlorobenzene	0.26891	0.24297	0.24297	0.000	-9.64656	60.00000	Averaged
	30 Naphthalene	0.79696	0.76945	0.76945	0.000	-3.45142	60.00000	Averaged
	204 alpha-Terpineol	0.35557	0.30108	0.30108	0.000	-15.32250	60.00000	Averaged
	31 4-Chloroaniline	0.29968	0.28248	0.28248	0.000	-5.74063	60.00000	Averaged
	32 Hexachlorobutadiene	0.17464	0.14096	0.14096	0.001	-19.28215	20.00000	Averaged ccc
	33 4-Chloro-3-methylphenol	0.24567	0.23441	0.23441	0.001	-4.58390	20.00000	Averaged ccc
	34 2-Methylnaphthalene	0.52845	0.48442	0.48442	0.000	-8.33267	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 28-JUN-2009 14:55
Lab File ID: s1f2802.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090510-01.3 Quant Type: ISTD
Method: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35	1-Methylnaphthalene	0.54993	0.50580	0.50580	0.000	-8.02499	60.00000	Averaged	
36	Hexachlorocyclopentadiene	0.19686	0.22578	0.22578	0.050	14.69252	60.00000	Averaged	spcc
205	2,3-Dichloroaniline	0.47471	0.54903	0.54903	0.000	15.65544	60.00000	Averaged	
37	2,4,6-Trichlorophenol	0.29701	0.31806	0.31806	0.001	7.08707	20.00000	Averaged	ccc
38	2,4,5-Trichlorophenol	0.30821	0.31842	0.31842	0.000	3.31420	60.00000	Averaged	
40	2-Chloronaphthalene	0.90767	1.00644	1.00644	0.000	10.88170	60.00000	Averaged	
42	o-Nitroaniline	0.36516	0.40398	0.40398	0.000	10.62930	60.00000	Averaged	
41	m-Nitroaniline	0.19404	0.22267	0.22267	0.000	14.75182	60.00000	Averaged	
43	Dimethylphthalate	1.10143	1.17225	1.17225	0.000	6.42994	60.00000	Averaged	
44	2,6-Dinitrotoluene	0.26579	0.27924	0.27924	0.000	5.05868	60.00000	Averaged	
50	2,4-Dinitrotoluene	0.35087	0.36438	0.36438	0.000	3.85027	60.00000	Averaged	
45	Acenaphthylene	1.45104	1.69589	1.69589	0.000	16.87398	60.00000	Averaged	
47	Acenaphthene	0.96226	1.01791	1.01791	0.001	5.78307	20.00000	Averaged	ccc
48	2,4-Dinitrophenol	0.11987	0.13095	0.13095	0.050	9.24286	60.00000	Averaged	spcc
49	Dibenzofuran	1.34666	1.46141	1.46141	0.000	8.52111	60.00000	Averaged	
51	Diethylphthalate	1.16754	1.28566	1.28566	0.000	10.11751	60.00000	Averaged	
52	4-Nitrophenol	0.16399	0.21088	0.21088	0.050	28.59576	60.00000	Averaged	spcc
53	Fluorene	1.12380	1.18186	1.18186	0.000	5.16588	60.00000	Averaged	
54	4-Chlorophenylphenylether	0.57534	0.57389	0.57389	0.000	-0.25084	60.00000	Averaged	
55	2-Methyl-4,6-dinitrophenol	0.09697	0.10045	0.10045	0.000	3.59026	60.00000	Averaged	
56	p-Nitroaniline	0.16734	0.16918	0.16918	0.000	1.10016	60.00000	Averaged	
133	Diphenylamine	0.45942	0.49802	0.49802	0.001	8.40085	20.00000	Averaged	ccc
58	1,2-Diphenylhydrazine	0.67577	0.71734	0.71734	0.000	6.15165	60.00000	Averaged	
61	4-Bromophenylphenylether	0.16967	0.16273	0.16273	0.000	-4.09300	60.00000	Averaged	
63	Hexachlorobenzene	0.18236	0.16974	0.16974	0.000	-6.92044	60.00000	Averaged	
65	Pentachlorophenol	0.09743	0.10498	0.10498	0.001	7.74686	20.00000	Averaged	ccc
206	n-Octadecane	0.64348	0.65025	0.65025	0.000	1.05283	60.00000	Averaged	
68	Phenanthrene	0.84693	0.85245	0.85245	0.000	0.65263	60.00000	Averaged	
69	Anthracene	0.84554	0.85681	0.85681	0.000	1.33316	60.00000	Averaged	
72	Di-n-butylphthalate	1.05119	1.13238	1.13238	0.000	7.72385	60.00000	Averaged	
76	Fluoranthene	0.94816	0.96013	0.96013	0.001	1.26187	20.00000	Averaged	ccc
79	Pyrene	1.05960	1.21521	1.21521	0.000	14.68609	60.00000	Averaged	
85	Butylbenzylphthalate	0.45020	0.52099	0.52099	0.000	15.72417	60.00000	Averaged	
89	Benzo(a)anthracene	0.92702	0.93185	0.93185	0.000	0.52145	60.00000	Averaged	
92	Chrysene	0.87727	0.95277	0.95277	0.000	8.60622	60.00000	Averaged	
93	bis(2-Ethylhexyl)phthalate	0.63994	0.73991	0.73991	0.000	15.62272	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 28-JUN-2009 14:55
Lab File ID: s1f2802.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090510-01.3 Quant Type: ISTD
Method: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	1.21152	1.33077	1.33077	0.001	9.84284	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	38.52486	40.00000	0.92003	0.000	-3.68784	60.00000	Linear	
	96 Benzo(k)fluoranthene	1.04523	1.11232	1.11232	0.000	6.41901	60.00000	Averaged	
	97 Benzo(a)pyrene	41.40248	40.00000	0.89408	0.001	3.50619	20.00000	Linear	ccc
	99 Indeno(1,2,3-cd)pyrene	36.98656	40.00000	0.78541	0.000	-7.53360	60.00000	Linear	
	100 Dibenzo(a,h)anthracene	36.62014	40.00000	0.61854	0.000	-8.44965	60.00000	Linear	
	101 Benzo(ghi)perylene	38.40746	40.00000	0.67524	0.000	-3.98134	60.00000	Linear	
	126 m-Dinitrobenzene	0.17690	0.20759	0.20759	0.000	17.35184	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.27043	0.26706	0.26706	0.000	-1.24529	60.00000	Averaged	
	143 Dinoseb	0.15514	0.15818	0.15818	0.000	1.95542	60.00000	Averaged	
	173 Carbazole	0.65789	0.73517	0.73517	0.000	11.74640	60.00000	Averaged	
	184 p-Benzoquinone	0.31182	0.15910	0.15910	0.000	-48.97838	60.00000	Averaged	
	192 Methoxychlor	0.61825	0.61183	0.61183	0.000	-1.03822	60.00000	Averaged	
	211 p-Toluidine	1.15335	0.94698	0.94698	0.000	-17.89278	60.00000	Averaged	
	210 m-Toluidine	1.32746	1.32158	1.32158	0.000	-0.44297	60.00000	Averaged	
	26 Phthalic anhydride	0.08071	0.08983	0.08983	0.000	11.29802	60.00000	Averaged	
	179 Dibenzo(a,e)pyrene	41.94141	40.00000	0.35350	0.000	4.85353	60.00000	Linear	
	214 1,4-Dinitrobenzene	0.16202	0.18564	0.18564	0.000	14.57629	60.00000	Averaged	
	215 2-Ethoxyethanol	0.84477	0.90072	0.90072	0.000	6.62334	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.10932	0.07348	0.07348	0.000	-32.78451	60.00000	Averaged	
M	225 Trichlorophenols	0.30261	0.31824	0.31824	0.000	5.16573	60.00000	Averaged	
M	226 Tetrachlorophenols	0.27043	0.26706	0.26706	0.000	-1.24529	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.95986	1.01617	1.01617	0.000	5.86737	60.00000	Averaged	

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Data file : /chem/MSD1.i/s062809.b/s1f2802.d
Lab Smp Id: WBN090510-01.3 Client Smp ID: MEGACVS
Inj Date : 28-JUN-2009 14:55
Operator : nagl Inst ID: MSD1.i
Smp Info : |WBN090510-01.3|40 PPM|1|SVMF|1|MEGACVS
Misc Info : |MSD8270|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	280573	40.0000	
* 29 Naphthalene-d8	136	4.757	4.757	(1.000)	1152834	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	543050	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1028030	40.0000	
* 91 Chrysene-d12	240	8.645	8.645	(1.000)	841587	40.0000	
* 98 Perylene-d12	264	10.086	10.086	(1.000)	723932	40.0000	
$ 3 2-Fluorophenol	112	3.069	3.069	(0.790)	307163	40.0000	41.3
$ 5 Phenol-d5	99	3.598	3.598	(0.926)	347702	40.0000	37.6
$ 20 Nitrobenzene-d5	82	4.251	4.251	(0.894)	351388	40.0000	35.8
$ 39 2-Fluorobiphenyl	172	5.492	5.492	(0.916)	652431	40.0000	44.1
$ 60 2,4,6-Tribromophenol	329	6.533	6.533	(1.089)	78023	40.0000	40.8
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	580471	40.0000	41.1
1 N-Methyl-N-nitrosomethylamine	74	2.369	2.369	(0.610)	174651	40.0000	49.2
2 Pyridine	79	2.398	2.398	(0.617)	269607	40.0000	43.7
4 Aniline	66	3.675	3.675	(0.946)	172837	40.0000	34.7
6 Phenol	94	3.610	3.610	(0.929)	363327	40.0000	37.7(Q)
7 bis(2-Chloroethyl) ether	63	3.692	3.692	(0.950)	324698	40.0000	36.4
8 2-Chlorophenol	128	3.751	3.751	(0.965)	299554	40.0000	38.8
203 n-Decane	43	3.740	3.740	(0.962)	591186	40.0000	34.9
9 1,3-Dichlorobenzene	146	3.857	3.857	(0.992)	337178	40.0000	36.2
11 1,4-Dichlorobenzene	146	3.898	3.898	(1.003)	330459	40.0000	35.1
13 1,2-Dichlorobenzene	146	4.004	4.004	(1.030)	297969	40.0000	34.5
14 bis(2-Chloroisopropyl)ether	45	4.034	4.034	(1.038)	863884	40.0000	37.7
12 Benzyl alcohol	108	3.957	3.957	(1.018)	206351	40.0000	37.9(H)
15 o-Cresol	107	4.004	4.004	(1.030)	232239	40.0000	35.0
18 m,p-Cresols	107	4.104	4.104	(1.056)	321566	40.0000	36.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.128	4.128	(1.062)	206572	40.0000	38.0
19 Hexachloroethane	117	4.234	4.234	(1.089)	138273	40.0000	35.8
21 Nitrobenzene	77	4.269	4.269	(0.897)	364205	40.0000	38.3
22 Isophorone	82	4.416	4.416	(0.928)	672747	40.0000	38.4
23 2-Nitrophenol	139	4.481	4.481	(0.942)	156262	40.0000	40.7
24 2,4-Dimethylphenol	122	4.469	4.469	(0.939)	273505	40.0000	39.8
25 bis(2-Chloroethoxy)methane	93	4.540	4.540	(0.954)	381464	40.0000	41.7
26 2,4-Dichlorophenol	162	4.640	4.640	(0.975)	225748	40.0000	37.0(H)
27 Benzoic acid	105	4.522	4.522	(0.951)	202575	40.0000	39.4
28 1,2,4-Trichlorobenzene	180	4.704	4.704	(0.989)	280099	40.0000	36.1
30 Naphthalene	128	4.769	4.769	(1.002)	887047	40.0000	38.6
204 alpha-Terpineol	59	4.745	4.745	(0.998)	347101	40.0000	33.9
31 4-Chloroaniline	127	4.787	4.787	(1.006)	325648	40.0000	37.7
32 Hexachlorobutadiene	225	4.834	4.834	(1.016)	162506	40.0000	32.3
33 4-Chloro-3-methylphenol	107	5.098	5.098	(1.072)	270238	40.0000	38.2
34 2-Methylnaphthalene	142	5.251	5.251	(1.104)	558456	40.0000	36.7
35 1-Methylnaphthalene	142	5.322	5.322	(1.119)	583103	40.0000	36.8
36 Hexachlorocyclopentadiene	237	5.351	5.351	(0.892)	122611	40.0000	45.9
205 2,3-Dichloroaniline	161	5.445	5.445	(0.908)	298152	40.0000	46.3
37 2,4,6-Trichlorophenol	196	5.434	5.434	(0.906)	172720	40.0000	42.8
38 2,4,5-Trichlorophenol	196	5.463	5.463	(0.911)	172918	40.0000	41.3
40 2-Chloronaphthalene	162	5.604	5.604	(0.934)	546546	40.0000	44.4
42 o-Nitroaniline	65	5.657	5.657	(0.943)	219379	40.0000	44.2
41 m-Nitroaniline	138	5.951	5.951	(0.992)	120919	40.0000	45.9(H)
43 Dimethylphthalate	163	5.769	5.769	(0.962)	636593	40.0000	42.6
44 2,6-Dinitrotoluene	165	5.822	5.822	(0.971)	151640	40.0000	42.0(H)
50 2,4-Dinitrotoluene	165	6.110	6.110	(1.019)	197877	40.0000	41.5
45 Acenaphthylene	152	5.904	5.904	(0.984)	920952	40.0000	46.7
47 Acenaphthene	154	6.022	6.022	(1.004)	552774	40.0000	42.3
48 2,4-Dinitrophenol	184	6.016	6.016	(1.003)	71110	40.0000	43.7(QH)
49 Dibenzofuran	168	6.139	6.139	(1.024)	793621	40.0000	43.4
51 Diethylphthalate	149	6.251	6.251	(1.042)	698179	40.0000	44.0
52 4-Nitrophenol	139	6.034	6.034	(1.006)	114518	40.0000	51.4(H)
53 Fluorene	166	6.375	6.375	(1.063)	641807	40.0000	42.1
54 4-Chlorophenylphenylether	204	6.351	6.351	(1.059)	311652	40.0000	39.9
55 2-Methyl-4,6-dinitrophenol	198	6.386	6.386	(0.915)	103262	40.0000	41.4(H)
56 p-Nitroaniline	138	6.369	6.369	(1.062)	91873	40.0000	40.4
133 Diphenylamine	169	6.428	6.428	(0.921)	511977	40.0000	43.4
58 1,2-Diphenylhydrazine	77	6.457	6.457	(0.925)	737449	40.0000	42.5(H)
61 4-Bromophenylphenylether	248	6.675	6.675	(0.956)	167288	40.0000	38.4(H)
63 Hexachlorobenzene	284	6.733	6.733	(0.965)	174493	40.0000	37.2
65 Pentachlorophenol	266	6.851	6.851	(0.981)	107918	40.0000	43.1
206 n-Octadecane	57	6.833	6.833	(0.979)	668478	40.0000	40.4
68 Phenanthrene	178	6.998	6.998	(1.003)	876349	40.0000	40.3
69 Anthracene	178	7.028	7.028	(1.007)	880830	40.0000	40.5
72 Di-n-butylphthalate	149	7.275	7.275	(1.042)	1164124	40.0000	43.1
76 Fluoranthene	202	7.710	7.710	(1.104)	987041	40.0000	40.5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	7.845	7.845	(0.907)	1022708	40.0000	45.9
85 Butylbenzylphthalate	149	8.163	8.163	(0.944)	438461	40.0000	46.3
89 Benzo(a)anthracene	228	8.633	8.633	(0.999)	784236	40.0000	40.2
92 Chrysene	228	8.663	8.663	(1.002)	801838	40.0000	43.4(H)
93 bis(2-Ethylhexyl)phthalate	149	8.516	8.516	(0.985)	622700	40.0000	46.2
94 Di-n-octylphthalate	149	9.045	9.045	(0.897)	963386	40.0000	43.9
95 Benzo(b)fluoranthene	252	9.622	9.622	(0.954)	666038	40.0000	38.5
96 Benzo(k)fluoranthene	252	9.651	9.651	(0.957)	805244	40.0000	42.6
97 Benzo(a)pyrene	252	10.016	10.016	(0.993)	647252	40.0000	41.4
99 Indeno(1,2,3-cd)pyrene	276	11.692	11.692	(1.159)	568582	40.0000	37.0
100 Dibenzo(a,h)anthracene	278	11.698	11.698	(1.160)	447781	40.0000	36.6
101 Benzo(ghi)perylene	276	12.198	12.198	(1.209)	488826	40.0000	38.4(Q)
126 m-Dinitrobenzene	168	5.810	5.810	(0.969)	112734	40.0000	46.9
130 2,3,4,6-Tetrachlorophenol	232	6.210	6.210	(1.035)	145027	40.0000	39.5
143 Dinoseb	211	6.939	6.939	(0.994)	162611	40.0000	40.8(H)
173 Carbazole	167	7.116	7.116	(1.019)	755774	40.0000	44.7
184 p-Benzoquinone	54	3.375	3.375	(0.868)	44638	40.0000	20.4
192 Methoxychlor	227	8.504	8.504	(0.984)	514910	40.0000	39.6
211 p-Toluidine	106	4.163	4.163	(1.071)	265698	40.0000	32.8
210 m-Toluidine	106	4.187	4.187	(1.077)	370799	40.0000	39.8(H)
26 Phthalic anhydride	104	5.281	5.281	(1.110)	103560	40.0000	44.5
179 Dibenzo(a,c)pyrene	302	16.033	16.033	(1.590)	255912	40.0000	41.9
214 1,4-Dinitrobenzene	168	5.751	5.751	(0.959)	100812	40.0000	45.8(H)
215 2-Ethoxyethanol	59	2.204	2.204	(0.567)	252719	40.0000	42.6
216 Methylenebis(2-chloroaniline)	231	8.563	8.563	(0.990)	61838	40.0000	26.9(Q)
M 225 Trichlorophenols	196				345638	80.0000	84.1
M 226 Tetrachlorophenols	232				145027	40.0000	39.5
M 227 Benzo(b,k)fluoranthene	252				1471282	80.0000	84.7

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD1.i/s062809.b/s1f2802.d
Date : 28-JUN-2009 14:55
Client ID: MEGACVS
Sample Info: IWBN090510-01,3140 PPM|1|SVHF|1|MEGACVS
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nagi
Column diameter: 0.20

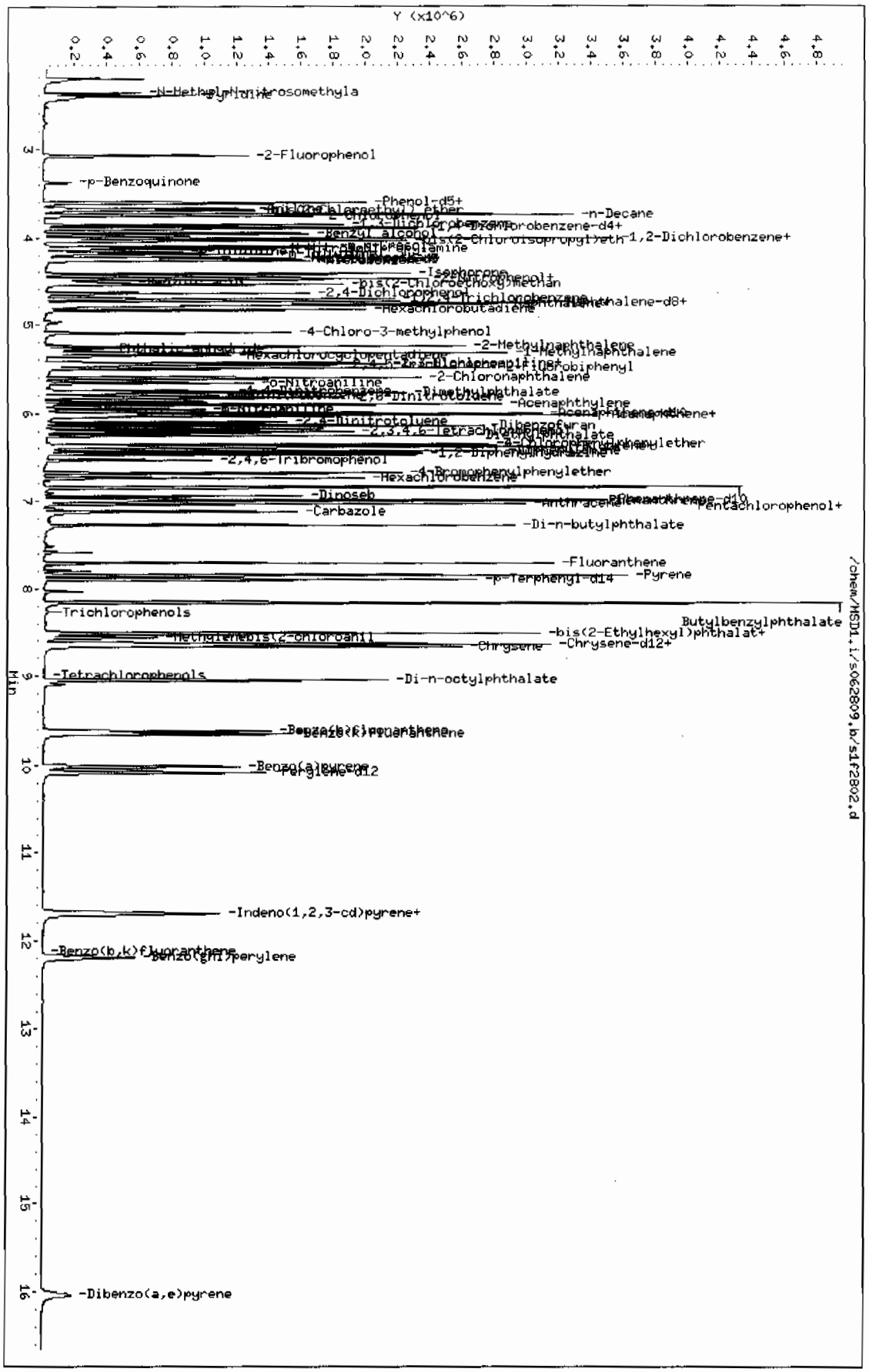

Page 1

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 28-JUN-2009 15:23
Lab File ID: s1f2803.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090619-01.1 Quant Type: ISTD
Method: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	1.08648	0.99410	0.99410	0.000	-8.50220	60.00000	Averaged
16 Acetophenone	1.48332	1.28179	1.28179	0.000	-13.58677	60.00000	Averaged
189 Caprolactam	0.08546	0.08141	0.08141	0.000	-4.73703	60.00000	Averaged
208 1,1'-Biphenyl	1.24593	1.31725	1.31725	0.000	5.72422	60.00000	Averaged
207 Atrazine	0.02887	0.04399	0.04399	0.000	52.37694	60.00000	Averaged
77 Benzidine	0.15949	0.25012	0.25012	0.000	56.82639	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28091	0.28992	0.28992	0.000	3.20896	60.00000	Averaged
102 1,4-Dioxane	0.34781	0.37913	0.37913	0.000	9.00366	60.00000	Averaged
103 Methyl methacrylate	0.19523	0.18074	0.18074	0.000	-7.42562	60.00000	Averaged
104 Ethyl methacrylate	0.91808	0.91853	0.91853	0.000	0.04850	60.00000	Averaged
105 2-Picoline	1.31153	1.29425	1.29425	0.000	-1.31707	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.46517	0.48176	0.48176	0.000	3.56727	60.00000	Averaged
107 Methyl methanesulfonate	0.63147	0.54519	0.54519	0.000	-13.66235	60.00000	Averaged
108 N-Nitrosodiethylamine	0.47486	0.48496	0.48496	0.000	2.12637	60.00000	Averaged
109 Ethyl Methanesulfonate	0.74831	0.70800	0.70800	0.000	-5.38631	60.00000	Averaged
110 Pentachloroethane	0.38822	0.33469	0.33469	0.000	-13.78748	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.48953	0.48753	0.48753	0.000	-0.40750	60.00000	Averaged
113 N-Nitrosomorpholine	0.96572	0.75745	0.75745	0.000	-21.56597	60.00000	Averaged
114 o-Toluidine	1.97119	1.71187	1.71187	0.000	-13.15520	60.00000	Averaged
115 N-Nitrosopiperidine	0.13883	0.13939	0.13939	0.000	0.40131	60.00000	Averaged
116 a,a-Dimethylphenethylamine	1.03383	1.04956	1.04956	0.000	1.52140	60.00000	Averaged
118 2,6-Dichlorophenol	0.21230	0.19289	0.19289	0.000	-9.14377	60.00000	Averaged
119 Hexachloropropene	0.14999	0.11390	0.11390	0.000	-24.06425	60.00000	Averaged
120 p-Phenylenediamine	0.14043	0.20738	0.20738	0.000	47.66780	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.19030	0.17387	0.17387	0.000	-8.63351	60.00000	Averaged
122 Safrole	0.20985	0.18270	0.18270	0.000	-12.93954	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.49111	0.46173	0.46173	0.000	-5.98234	60.00000	Averaged
124 Isosafrole	0.33776	0.37855	0.37855	0.000	12.07563	60.00000	Averaged
125 1,4-Naphthoquinone	0.30658	0.39887	0.39887	0.000	30.10540	60.00000	Averaged
127 Pentachlorobenzene	0.44497	0.39588	0.39588	0.000	-11.03134	60.00000	Averaged
128 1-Naphthylamine	0.87513	0.92291	0.92291	0.000	5.45945	60.00000	Averaged
129 2-Naphthylamine	0.83985	0.94471	0.94471	0.000	12.48529	60.00000	Averaged
131 5-Nitro-o-toluidine	0.27743	0.31089	0.31089	0.000	12.05728	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.16150	0.15321	0.15321	0.000	-5.13202	60.00000	Averaged
137 Phenacetin	0.27523	0.27923	0.27923	0.000	1.45322	60.00000	Averaged
138 Diallate	0.24465	0.26388	0.26388	0.000	7.86039	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD1.i Injection Date: 28-JUN-2009 15:23
Lab File ID: s1f2803.d Init. Cal. Date(s): 19-JUN-2009 20-JUN-2009
Analysis Type: Init. Cal. Times: 10:25 04:39
Lab Sample ID: WBN090619-01.1 Quant Type: ISTD
Method: /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.24973	0.28999	0.28999	0.000	16.12148	60.00000	Averaged
213 Trans Diallate	0.28782	0.31045	0.31045	0.000	7.86039	60.00000	Averaged
140 4-Aminobiphenyl	0.39830	0.47031	0.47031	0.000	18.07841	60.00000	Averaged
141 Pentachloronitrobenzene	0.07651	0.06723	0.06723	0.000	-12.13009	60.00000	Averaged
142 Pronamide	0.26549	0.25219	0.25219	0.000	-5.00946	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01821	0.02635	0.02635	0.000	44.69630	60.00000	Averaged
147 Methapyrilene	64.64949	40.00000	0.66535	0.000	61.62374	60.00000	Linear <-
148 Isodrin	0.10234	0.09499	0.09499	0.000	-7.18075	60.00000	Averaged
149 Aramite	0.04545	0.04970	0.04970	0.000	9.35321	60.00000	Averaged
150 Kepone	0.08412	0.07174	0.07174	0.000	-14.71865	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28040	0.31935	0.31935	0.000	13.89116	60.00000	Averaged
152 Chlorobenzilate	0.25265	0.27495	0.27495	0.000	8.82331	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.40413	0.47955	0.47955	0.000	18.66209	60.00000	Averaged
155 2-Acetylaminofluorene	0.29758	0.32534	0.32534	0.000	9.32727	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.49452	0.47236	0.47236	0.000	-4.48049	60.00000	Averaged
158 3-Methylcholanthrene	38.34131	40.00000	0.39349	0.000	-4.14672	60.00000	Linear

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2803.d
Lab Smp Id: WBN090619-01.1 Client Smp ID: AP12CVS
Inj Date : 28-JUN-2009 15:23
Operator : nag1 Inst ID: MSD1.i
Smp Info : |WBN090619-01.1|40 PPM|1|SVMF|1|AP12CVS
Misc Info : |MSD8270|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 28-Jun-2009 15:49 llo00884 Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.893	3.893	(1.000)	310710	40.0000	
* 29 Naphthalene-d8	136	4.757	4.757	(1.000)	1202345	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	591181	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1124362	40.0000	
* 91 Chrysene-d12	240	8.639	8.639	(1.000)	950199	40.0000	
* 98 Perylene-d12	264	10.080	10.080	(1.000)	740617	40.0000	
209 Benzaldehyde	77	3.616	3.616	(0.929)	308878	40.0000	36.6
16 Acetophenone	105	4.140	4.140	(1.063)	398264	40.0000	34.6
189 Caprolactam	113	5.028	5.028	(1.057)	97888	40.0000	38.1
208 1,1'-Biphenyl	154	5.575	5.575	(0.929)	778735	40.0000	42.3
207 Atrazine	173	6.751	6.751	(0.967)	49462	40.0000	61.0
77 Benzidine	184	7.757	7.757	(0.898)	237668	40.0000	62.7
90 3,3'-Dichlorobenzidine	252	8.569	8.569	(0.992)	275482	40.0000	41.3
102 1,4-Dioxane	88	2.216	2.216	(0.569)	117798	40.0000	43.6
103 Methyl methacrylate	100	2.204	2.204	(0.566)	56156	40.0000	37.0
104 Ethyl methacrylate	69	2.587	2.587	(0.665)	285395	40.0000	40.0
105 2-Picoline	93	2.781	2.781	(0.714)	402137	40.0000	39.5
106 N-Nitrosomethylethylamine	88	2.828	2.828	(0.726)	149688	40.0000	41.4
107 Methyl methanesulfonate	80	2.987	2.987	(0.767)	169396	40.0000	34.5
108 N-Nitrosodiethylamine	102	3.222	3.222	(0.828)	150681	40.0000	40.8
109 Ethyl Methanesulfonate	79	3.375	3.375	(0.867)	219983	40.0000	37.8
110 Pentachloroethane	167	3.716	3.716	(0.955)	103993	40.0000	34.5
111 N-Nitrosopyrrolidine	100	4.128	4.128	(1.060)	151481	40.0000	39.8(Q)
113 N-Nitrosomorpholine	56	4.151	4.151	(1.066)	235349	40.0000	31.4
114 o-Toluidine	106	4.169	4.169	(1.071)	531896	40.0000	34.7
115 N-Nitrosopiperidine	114	4.369	4.369	(0.918)	167595	40.0000	40.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.651	4.651	(0.978)	1261933	40.0000	40.6
118 2,6-Dichlorophenol	162	4.798	4.798	(1.009)	231918	40.0000	36.3
119 Hexachloropropene	213	4.828	4.828	(1.015)	136945	40.0000	30.4
120 p-Phenylenediamine	108	5.034	5.034	(1.058)	249336	40.0000	59.1
121 N-Nitrosodi-n-butylamine	84	4.998	4.998	(1.051)	209046	40.0000	36.5(T)
122 Safrole	162	5.163	5.163	(1.085)	219669	40.0000	34.8
123 1,2,4,5-Tetrachlorobenzene	216	5.369	5.369	(0.895)	272964	40.0000	37.6
124 Isosafrole	162	5.534	5.534	(0.923)	223791	40.0000	44.8
125 1,4-Naphthoquinone	158	5.722	5.722	(0.954)	235806	40.0000	52.0
127 Pentachlorobenzene	250	6.110	6.110	(1.019)	234036	40.0000	35.6
128 1-Naphthylamine	143	6.192	6.192	(1.032)	545604	40.0000	42.2
129 2-Naphthylamine	143	6.245	6.245	(1.041)	558495	40.0000	45.0
131 5-Nitro-o-toluidine	152	6.363	6.363	(1.061)	183789	40.0000	44.8
136 1,3,5-Trinitrobenzene	75	6.575	6.575	(0.942)	172262	40.0000	37.9
137 Phenacetin	108	6.610	6.610	(0.947)	313950	40.0000	40.6(Q)
138 Diallate	86	6.604	6.604	(0.946)	296697	40.0000	43.1
212 Cis Diallate	86	6.663	6.663	(0.954)	48908	6.00000	7.0
213 Trans Diallate	86	6.604	6.604	(0.946)	296697	34.0000	36.7
140 4-Aminobiphenyl	169	6.845	6.845	(0.981)	528800	40.0000	47.2
141 Pentachloronitrobenzene	237	6.857	6.857	(0.982)	75592	40.0000	35.1(Q)
142 Pronamide	173	6.851	6.851	(0.981)	283554	40.0000	38.0
146 4-Nitroquinoline-1-oxide	101	7.451	7.451	(1.067)	29630	40.0000	57.9
147 Methapyrilene	58	7.463	7.463	(1.069)	748089	40.0000	64.6
148 Isodrin	193	7.622	7.622	(1.092)	106808	40.0000	37.1
149 Aramite	185	7.851	7.851	(1.125)	55878	40.0000	43.7
150 Kepone	272	8.269	8.269	(1.185)	80656	40.0000	34.1
151 p-(Dimethylamino)azobenzene	120	7.975	7.975	(0.923)	303449	40.0000	45.6
152 Chlorobenzilate	251	7.986	7.986	(0.924)	261254	40.0000	43.5
153 3,3'-Dimethylbenzidine	212	8.180	8.180	(0.947)	455672	40.0000	47.5
155 2-Acetylaminofluorene	181	8.357	8.357	(0.967)	309138	40.0000	43.7
157 7,12Dimethylbenz(a)anthracene	256	9.592	9.592	(0.952)	349840	40.0000	38.2
158 3-Methylcholanthrene	268	10.433	10.433	(1.035)	291426	40.0000	38.3(Q)

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.

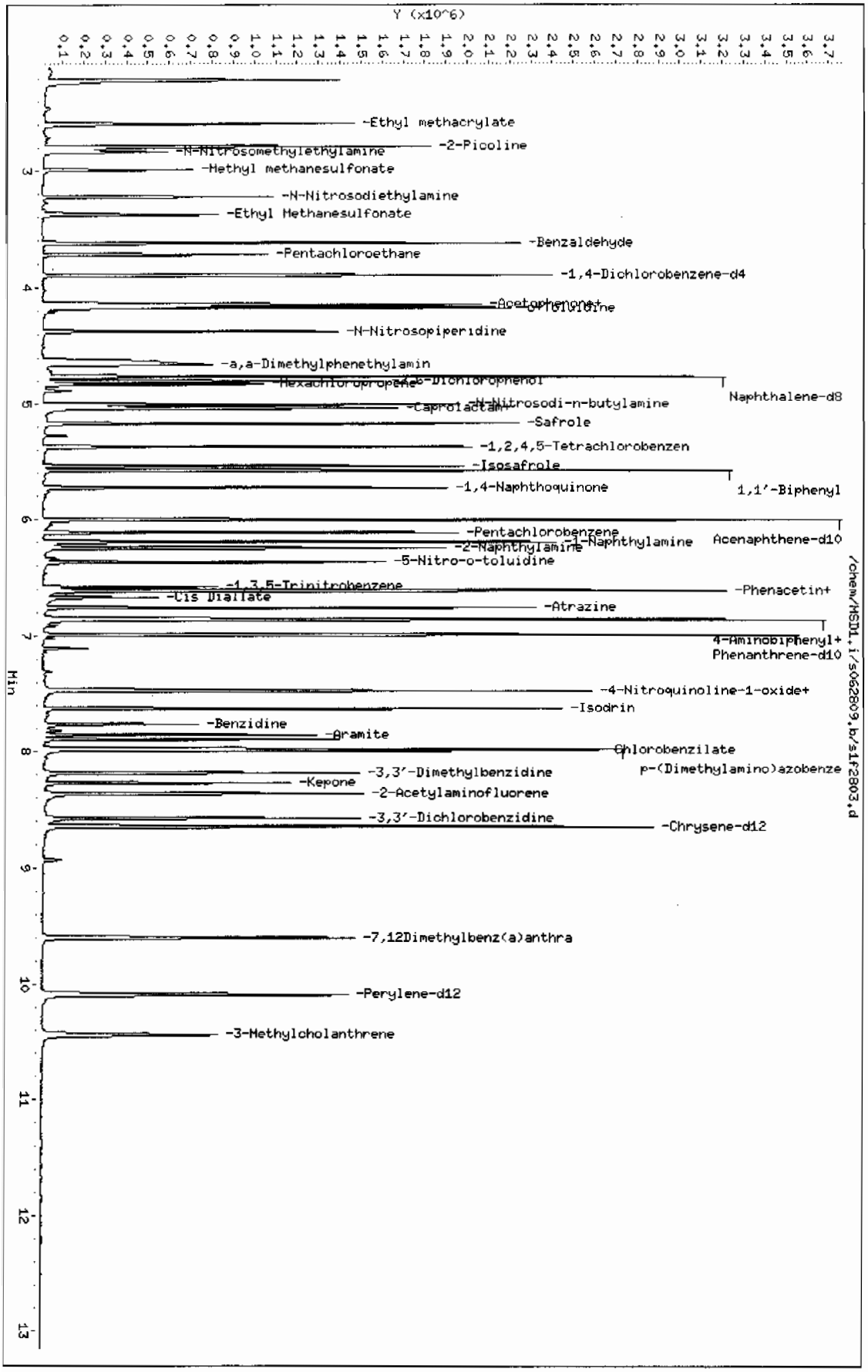
Data File: /chem/MSD1.i/s062809.b/s1f2803.d
Date : 28-JUN-2009 15:23
Client ID: AP12CVS
Sample Info: WBN090619-01,1|40 PPM|1|SVMF|1|AP12CVS
Column phase: J&W DB-5MS
Instrument: MSD1.i
Operator: nagl
Column diameter: 0.20
Page 1
Y (x10^6)
Min
-Ethyl methacrylate
-2-Picoline
-N-Nitrosomethylethylamine
-Methyl methanesulfonate
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Pentachloroethane
-1,4-Dichlorobenzene-d4
-Acetophenone+
-N-Nitrosopiperidine
-a,a-Dimethylphenethylamin
-Hexachloropropene
-2,6-Dichlorophenol
Naphthalene-d8
-N-Nitrosodi-n-butylamine
-Caprolactam
-Safrole
-1,2,4,5-Tetrachlorobenzen
-Isosafrole
-1,4-Naphthoquinone
1,1'-Biphenyl
-Pentachlorobenzene
-1-Naphthylamine
-2-Naphthylamine
Acenaphthene-d10
-5-Nitro-o-toluidine
-1,3,5-Trinitrobenzene
-Phenacetin+
-Cis Diallate
-Atrazine
4-Aminobiphenyl+
Phenanthrene-d10
-4-Nitroquinoline-1-oxide+
-Isodrin
-Benzidine
-Pramite
-Chlorobenzilate
-3,3'-Dimethylbenzidine
p-(Dimethylamino)azobenze
-Kepone
-2-Acetylaminofluorene
-3,3'-Dichlorobenzidine
-Chrysene-d12
-7,12Dimethylbenz(a)anthra
-Perylene-d12
-3-Methylcholanthrene
/chem/MSD1.i/s062809.b/s1f2803.d

Data File: /chem/MSD5.i/s063009.b/s5f3002.d
Report Date: 30-Jun-2009 08:16

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f3002.d
Analysis Type: WATER
Lab Sample ID: WBN090617-02.4
Method: /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m

Injection Date: 30-JUN-2009 07:33
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$	3 2-Fluorophenol	0.87827	0.89254	0.89254	0.000	1.62414	60.00000	Averaged	
$	5 Phenol-d5	1.15801	1.15551	1.15551	0.000	-0.21631	60.00000	Averaged	
$	20 Nitrobenzene-d5	0.29640	0.32692	0.32692	0.000	10.29611	60.00000	Averaged	
$	39 2-Fluorobiphenyl	1.03449	1.06513	1.06513	0.000	2.96181	60.00000	Averaged	
$	60 2,4,6-Tribromophenol	0.16321	0.17230	0.17230	0.000	5.56880	60.00000	Averaged	
$	81 p-Terphenyl-d14	0.61216	0.62787	0.62787	0.000	2.56729	60.00000	Averaged	
	1 N-Methyl-N-nitrosomethylami	0.46728	0.49358	0.49358	0.000	5.62810	60.00000	Averaged	
	2 Pyridine	0.69143	0.76898	0.76898	0.000	11.21501	60.00000	Averaged	
	4 Aniline	0.50220	0.52807	0.52807	0.000	5.15153	60.00000	Averaged	
	6 Phenol	1.14936	1.15305	1.15305	0.001	0.32067	20.00000	Averaged	ccc
	7 bis(2-Chloroethyl) ether	0.88583	0.90843	0.90843	0.000	2.55100	60.00000	Averaged	
	8 2-Chlorophenol	0.96070	0.97557	0.97557	0.000	1.54721	60.00000	Averaged	
	203 n-Decane	1.55838	1.65849	1.65849	0.000	6.42442	60.00000	Averaged	
	9 1,3-Dichlorobenzene	1.14971	1.17618	1.17618	0.000	2.30205	60.00000	Averaged	
	11 1,4-Dichlorobenzene	1.14381	1.16953	1.16953	0.001	2.24935	20.00000	Averaged	ccc
	13 1,2-Dichlorobenzene	1.06271	1.08294	1.08294	0.000	1.90331	60.00000	Averaged	
	14 bis(2-Chloroisopropyl)ether	2.06168	2.19391	2.19391	0.000	6.41380	60.00000	Averaged	
	12 Benzyl alcohol	0.60629	0.58480	0.58480	0.000	-3.54593	60.00000	Averaged	
	15 o-Cresol	0.71463	0.72631	0.72631	0.000	1.63369	60.00000	Averaged	
	18 m,p-Cresols	0.95569	0.95033	0.95033	0.000	-0.56099	60.00000	Averaged	
	17 N-Nitrosodipropylamine	0.61897	0.68794	0.68794	0.050	11.14349	60.00000	Averaged	spcc
	19 Hexachloroethane	0.42421	0.45214	0.45214	0.000	6.58417	60.00000	Averaged	
	21 Nitrobenzene	0.27643	0.29762	0.29762	0.000	7.66520	60.00000	Averaged	
	22 Isophorone	0.51164	0.54999	0.54999	0.000	7.49496	60.00000	Averaged	
	23 2-Nitrophenol	0.12977	0.14047	0.14047	0.001	8.24581	20.00000	Averaged	ccc
	24 2,4-Dimethylphenol	0.22398	0.23847	0.23847	0.000	6.46895	60.00000	Averaged	
	25 bis(2-Chloroethoxy)methane	0.29234	0.30548	0.30548	0.000	4.49377	60.00000	Averaged	
	26 2,4-Dichlorophenol	0.22262	0.24116	0.24116	0.001	8.32486	20.00000	Averaged	ccc
	27 Benzoic acid	53.55818	40.00000	0.14838	0.000	33.89545	60.00000	Linear	
	28 1,2,4-Trichlorobenzene	0.27693	0.29602	0.29602	0.000	6.89653	60.00000	Averaged	
	30 Naphthalene	0.77927	0.75677	0.75677	0.000	-2.88706	60.00000	Averaged	
	204 alpha-Terpineol	0.25452	0.28454	0.28454	0.000	11.79399	60.00000	Averaged	
	31 4-Chloroaniline	38.98273	40.00000	0.25720	0.000	-2.54316	60.00000	Linear	
	32 Hexachlorobutadiene	0.20215	0.21718	0.21718	0.001	7.43738	20.00000	Averaged	ccc
	33 4-Chloro-3-methylphenol	0.21319	0.23082	0.23082	0.001	8.27018	20.00000	Averaged	ccc
	34 2-Methylnaphthalene	0.46942	0.49284	0.49284	0.000	4.99051	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 30-JUN-2009 07:33
Lab File ID: s5f3002.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090617-02.4 Quant Type: ISTD
Method: /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35	1-Methylnaphthalene	0.50729	0.51100	0.51100	0.000	0.72996	60.00000	Averaged	
36	Hexachlorocyclopentadiene	51.35213	40.00000	0.23719	0.050	28.38032	60.00000	Linear	spcc
205	2,3-Dichloroaniline	0.44656	0.47531	0.47531	0.000	6.43736	60.00000	Averaged	
37	2,4,6-Trichlorophenol	0.30953	0.32363	0.32363	0.001	4.55586	20.00000	Averaged	ccc
38	2,4,5-Trichlorophenol	0.33218	0.36279	0.36279	0.000	9.21616	60.00000	Averaged	
40	2-Chloronaphthalene	0.85120	0.87137	0.87137	0.000	2.36977	60.00000	Averaged	
42	o-Nitroaniline	0.27065	0.28783	0.28783	0.000	6.34682	60.00000	Averaged	
41	m-Nitroaniline	34.25218	40.00000	0.11054	0.000	-14.36954	60.00000	Linear	
43	Dimethylphthalate	1.01609	1.05162	1.05162	0.000	3.49705	60.00000	Averaged	
44	2,6-Dinitrotoluene	0.24192	0.25143	0.25143	0.000	3.93132	60.00000	Averaged	
50	2,4-Dinitrotoluene	0.31653	0.33290	0.33290	0.000	5.17226	60.00000	Averaged	
45	Acenaphthylene	1.25413	1.32875	1.32875	0.000	5.94942	60.00000	Averaged	
47	Acenaphthene	0.81724	0.86445	0.86445	0.001	5.77614	20.00000	Averaged	ccc
48	2,4-Dinitrophenol	54.47468	40.00000	0.13275	0.050	36.18670	60.00000	Linear	spcc
49	Dibenzofuran	1.15749	1.19798	1.19798	0.000	3.49822	60.00000	Averaged	
51	Diethylphthalate	0.99523	1.03461	1.03461	0.000	3.95686	60.00000	Averaged	
52	4-Nitrophenol	0.14183	0.15587	0.15587	0.050	9.89561	60.00000	Averaged	spcc
53	Fluorene	0.99470	1.02316	1.02316	0.000	2.86117	60.00000	Averaged	
54	4-Chlorophenylphenylether	0.57998	0.59337	0.59337	0.000	2.30709	60.00000	Averaged	
55	2-Methyl-4,6-dinitrophenol	51.02275	40.00000	0.11137	0.000	27.55688	60.00000	Linear	
56	p-Nitroaniline	0.10468	0.09303	0.09303	0.000	-11.12735	60.00000	Averaged	
133	Diphenylamine	0.39819	0.40117	0.40117	0.001	0.74817	20.00000	Averaged	ccc
58	1,2-Diphenylhydrazine	0.50554	0.52788	0.52788	0.000	4.41988	60.00000	Averaged	
61	4-Bromophenylphenylether	0.19119	0.19421	0.19421	0.000	1.58192	60.00000	Averaged	
63	Hexachlorobenzene	0.20135	0.20797	0.20797	0.000	3.28788	60.00000	Averaged	
65	Pentachlorophenol	45.29279	40.00000	0.11128	0.001	13.23197	20.00000	Linear	ccc
206	n-Octadecane	0.43069	0.44990	0.44990	0.000	4.46156	60.00000	Averaged	
68	Phenanthrene	0.74933	0.76599	0.76599	0.000	2.22293	60.00000	Averaged	
69	Anthracene	0.73960	0.77446	0.77446	0.000	4.71323	60.00000	Averaged	
72	Di-n-butylphthalate	0.85193	0.89662	0.89662	0.000	5.24597	60.00000	Averaged	
76	Fluoranthene	0.85361	0.91535	0.91535	0.001	7.23332	20.00000	Averaged	ccc
79	Pyrene	0.87262	0.90587	0.90587	0.000	3.81148	60.00000	Averaged	
85	Butylbenzylphthalate	0.37401	0.38862	0.38862	0.000	3.90678	60.00000	Averaged	
89	Benzo(a)anthracene	0.85828	0.88919	0.88919	0.000	3.60178	60.00000	Averaged	
92	Chrysene	0.78622	0.81210	0.81210	0.000	3.29187	60.00000	Averaged	
93	bis(2-Ethylhexyl)phthalate	0.51325	0.54445	0.54445	0.000	6.07999	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 30-JUN-2009 07:33
Lab File ID: s5f3002.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090617-02.4 Quant Type: ISTD
Method: /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	0.91435	0.91856	0.91856	0.001	0.46094	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.88340	0.90081	0.90081	0.000	1.97109	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.86774	0.92432	0.92432	0.000	6.51961	60.00000	Averaged	
	97 Benzo(a)pyrene	0.78201	0.83858	0.83858	0.001	7.23465	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78583	0.84031	0.84031	0.000	6.93339	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	0.64056	0.69269	0.69269	0.000	8.13704	60.00000	Averaged	
	101 Benzo(ghi)perylene	0.66994	0.69796	0.69796	0.000	4.18198	60.00000	Averaged	
	126 m-Dinitrobenzene	0.16554	0.17330	0.17330	0.000	4.68722	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30843	0.33025	0.33025	0.000	7.07354	60.00000	Averaged	
	143 Dinoseb	51.85140	40.00000	0.17966	0.000	29.62851	60.00000	Linear	
	173 Carbazole	35.25281	40.00000	0.36659	0.000	-11.86797	60.00000	Linear	
	184 p-Benzoquinone	31.78641	40.00000	0.09907	0.000	-20.53396	60.00000	Linear	
	192 Methoxychlor	0.50819	0.59932	0.59932	0.000	17.93171	60.00000	Averaged	
	211 p-Toluidine	43.17534	40.00000	0.70065	0.000	7.93834	60.00000	Linear	
	210 m-Toluidine	41.69481	40.00000	1.09377	0.000	4.23702	60.00000	Linear	
	26 Phthalic anhydride	46.04116	40.00000	0.12576	0.000	15.10291	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	0.39632	0.41741	0.41741	0.000	5.32140	60.00000	Averaged	
	214 1,4-Dinitrobenzene	0.18147	0.20721	0.20721	0.000	14.18237	60.00000	Averaged	
	215 2-Ethoxyethanol	0.59885	0.62200	0.62200	0.000	3.86554	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.10978	0.09566	0.09566	0.000	-12.85887	60.00000	Averaged	
M	225 Trichlorophenols	0.32085	0.34321	0.34321	0.000	6.96815	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30843	0.33025	0.33025	0.000	7.07354	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.87557	0.91257	0.91257	0.000	4.22499	60.00000	Averaged	

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Data file : /chem/MSD5.i/s063009.b/s5f3002.d
Lab Smp Id: WBN090617-02.4 Client Smp ID: MEGACVS
Inj Date : 30-JUN-2009 07:33
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090617-02.4|40 PPM|1|SVM|1|MEGACVS
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Meth Date : 30-Jun-2009 08:16 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.031	4.031	(1.000)	530611	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1952119	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1185692	40.0000	
* 67 Phenanthrene-d10	188	7.344	7.344	(1.000)	2252154	40.0000	
* 91 Chrysene-d12	240	9.771	9.771	(1.000)	2408088	40.0000	
* 98 Perylene-d12	264	11.538	11.538	(1.000)	2308901	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.213	(0.797)	473589	40.0000	40.6
$ 5 Phenol-d5	99	3.742	3.742	(0.928)	613126	40.0000	39.9
$ 20 Nitrobenzene-d5	82	4.397	4.397	(0.897)	638187	40.0000	44.1
$ 39 2-Fluorobiphenyl	172	5.644	5.644	(0.916)	1262916	40.0000	41.2
$ 60 2,4,6-Tribromophenol	329	6.766	6.766	(1.098)	204290	40.0000	42.2
$ 81 p-Terphenyl-d14	244	8.726	8.726	(0.893)	1511975	40.0000	41.0
1 N-Methyl-N-nitrosomethylamine	74	2.505	2.505	(0.621)	261901	40.0000	42.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
2 Pyridine	79	2.539	2.539	(0.630)	408028	40.0000	44.5
4 Aniline	66	3.815	3.815	(0.946)	280199	40.0000	42.1
6 Phenol	94	3.752	3.752	(0.931)	611819	40.0000	40.1(Q)
7 bis(2-Chloroethyl) ether	63	3.829	3.829	(0.950)	482022	40.0000	41.0
8 2-Chlorophenol	128	3.897	3.897	(0.967)	517646	40.0000	40.6
203 n-Decane	43	3.877	3.877	(0.962)	880015	40.0000	42.6
9 1,3-Dichlorobenzene	146	3.998	3.998	(0.992)	624093	40.0000	40.9
11 1,4-Dichlorobenzene	146	4.046	4.046	(1.004)	620568	40.0000	40.9
13 1,2-Dichlorobenzene	146	4.147	4.147	(1.029)	574618	40.0000	40.8
14 bis(2-Chloroisopropyl)ether	45	4.176	4.176	(1.036)	1164112	40.0000	42.6
12 Benzyl alcohol	108	4.099	4.099	(1.017)	310299	40.0000	38.6
15 o-Cresol	107	4.147	4.147	(1.029)	385388	40.0000	40.6
18 m,p-Cresols	107	4.248	4.248	(1.054)	504253	40.0000	39.8
17 N-Nitrosodipropylamine	70	4.267	4.267	(1.059)	365030	40.0000	44.4
19 Hexachloroethane	117	4.378	4.378	(1.086)	239910	40.0000	42.6
21 Nitrobenzene	77	4.412	4.412	(0.900)	580994	40.0000	43.1
22 Isophorone	82	4.561	4.561	(0.930)	1073644	40.0000	43.0
23 2-Nitrophenol	139	4.624	4.624	(0.943)	274217	40.0000	43.3
24 2,4-Dimethylphenol	122	4.614	4.614	(0.941)	465528	40.0000	42.6
25 bis(2-Chloroethoxy)methane	93	4.681	4.681	(0.955)	596332	40.0000	41.8
26 2,4-Dichlorophenol	162	4.787	4.787	(0.976)	470765	40.0000	43.3
27 Benzoic acid	105	4.677	4.677	(0.954)	289656	40.0000	53.6
28 1,2,4-Trichlorobenzene	180	4.850	4.850	(0.989)	577874	40.0000	42.8
30 Naphthalene	128	4.917	4.917	(1.003)	1477300	40.0000	38.8(Q)
204 alpha-Terpineol	59	4.893	4.893	(0.998)	555463	40.0000	44.7
31 4-Chloroaniline	127	4.932	4.932	(1.006)	502087	40.0000	39.0
32 Hexachlorobutadiene	225	4.980	4.980	(1.016)	423960	40.0000	43.0
33 4-Chloro-3-methylphenol	107	5.245	5.245	(1.070)	450596	40.0000	43.3
34 2-Methylnaphthalene	142	5.399	5.399	(1.101)	962086	40.0000	42.0
35 1-Methylnaphthalene	142	5.476	5.476	(1.117)	997525	40.0000	40.3
36 Hexachlorocyclopentadiene	237	5.505	5.505	(0.893)	281234	40.0000	51.4
205 2,3-Dichloroaniline	161	5.596	5.596	(0.908)	563570	40.0000	42.6
37 2,4,6-Trichlorophenol	196	5.587	5.587	(0.906)	383724	40.0000	41.8
38 2,4,5-Trichlorophenol	196	5.616	5.616	(0.911)	430161	40.0000	43.7
40 2-Chloronaphthalene	162	5.755	5.755	(0.934)	1033178	40.0000	40.9
42 o-Nitroaniline	65	5.813	5.813	(0.943)	341275	40.0000	42.5
41 m-Nitroaniline	138	6.112	6.112	(0.991)	131065	40.0000	34.2
43 Dimethylphthalate	163	5.919	5.919	(0.960)	1246896	40.0000	41.4
44 2,6-Dinitrotoluene	165	5.977	5.977	(0.970)	298123	40.0000	41.6
50 2,4-Dinitrotoluene	165	6.275	6.275	(1.018)	394715	40.0000	42.1
45 Acenaphthylene	152	6.063	6.063	(0.984)	1575485	40.0000	42.4
47 Acenaphthene	154	6.189	6.189	(1.004)	1024971	40.0000	42.3
48 2,4-Dinitrophenol	184	6.184	6.184	(1.003)	157402	40.0000	54.5
49 Dibenzofuran	168	6.314	6.314	(1.024)	1420438	40.0000	41.4
51 Diethylphthalate	149	6.429	6.429	(1.043)	1226728	40.0000	41.6
52 4-Nitrophenol	139	6.203	6.203	(1.006)	184814	40.0000	44.0
53 Fluorene	166	6.579	6.579	(1.067)	1213154	40.0000	41.1

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
54 4-Chlorophenylphenylether	204	6.550	6.550	(1.062)	703549	40.0000	40.9
55 2-Methyl-4,6-dinitrophenol	198	6.593	6.593	(0.896)	250814	40.0000	51.0
56 p-Nitroaniline	138	6.579	6.579	(1.067)	110302	40.0000	35.5
133 Diphenylamine	169	6.641	6.641	(0.904)	903490	40.0000	40.3
58 1,2-Diphenylhydrazine	77	6.680	6.680	(0.910)	1188878	40.0000	41.8
61 4-Bromophenylphenylether	248	6.945	6.945	(0.946)	437401	40.0000	40.6
63 Hexachlorobenzene	284	7.022	7.022	(0.956)	468388	40.0000	41.3
65 Pentachlorophenol	266	7.171	7.171	(0.976)	250611	40.0000	45.3
206 n-Octadecane	57	7.147	7.147	(0.973)	1013255	40.0000	41.8
68 Phenanthrene	178	7.368	7.368	(1.003)	1725126	40.0000	40.9
69 Anthracene	178	7.412	7.412	(1.009)	1744194	40.0000	41.9
72 Di-n-butylphthalate	149	7.758	7.758	(1.056)	2019330	40.0000	42.1
76 Fluoranthene	202	8.413	8.413	(1.146)	2061512	40.0000	42.9
79 Pyrene	202	8.630	8.630	(0.883)	2181426	40.0000	41.5
85 Butylbenzylphthalate	149	9.155	9.155	(0.937)	935832	40.0000	41.6
89 Benzo(a)anthracene	228	9.757	9.757	(0.999)	2141244	40.0000	41.4
92 Chrysene	228	9.800	9.800	(1.003)	1955607	40.0000	41.3
93 bis(2-Ethylhexyl)phthalate	149	9.675	9.675	(0.990)	1311090	40.0000	42.4
94 Di-n-octylphthalate	149	10.359	10.359	(0.898)	2120874	40.0000	40.2
95 Benzo(b)fluoranthene	252	10.989	10.989	(0.952)	2079892	40.0000	40.8
96 Benzo(k)fluoranthene	252	11.028	11.028	(0.956)	2134159	40.0000	42.6
97 Benzo(a)pyrene	252	11.452	11.452	(0.992)	1936209	40.0000	42.9
99 Indeno(1,2,3-cd)pyrene	276	13.416	13.416	(1.163)	1940194	40.0000	42.8
100 Dibenzo(a,h)anthracene	278	13.426	13.426	(1.164)	1599345	40.0000	43.2
101 Benzo(ghi)perylene	276	13.989	13.989	(1.212)	1611516	40.0000	41.7
126 m-Dinitrobenzene	168	5.962	5.962	(0.967)	205476	40.0000	41.9
130 2,3,4,6-Tetrachlorophenol	232	6.396	6.396	(1.037)	391572	40.0000	42.8
143 Dinoseb	211	7.287	7.287	(0.992)	404628	40.0000	51.8
173 Carbazole	167	7.527	7.527	(1.025)	825622	40.0000	35.2
184 p-Benzoquinone	54	3.516	3.516	(0.872)	52568	40.0000	31.8
192 Methoxychlor	227	9.632	9.632	(0.986)	1443217	40.0000	47.2
211 p-Toluidine	106	4.306	4.306	(1.068)	371770	40.0000	43.2
210 m-Toluidine	106	4.330	4.330	(1.074)	580365	40.0000	41.7
26 Phthalic anhydride	104	5.433	5.433	(1.108)	245494	40.0000	46.0
179 Dibenzo(a,e)pyrene	302	18.381	18.381	(1.593)	963763	40.0000	42.1
214 1,4-Dinitrobenzene	75	5.905	5.905	(0.958)	245690	40.0000	45.7
215 2-Ethoxyethanol	59	2.346	2.346	(0.582)	330042	40.0000	41.5
216 Methylenebis(2-chloroaniline)	231	9.694	9.694	(0.992)	230363	40.0000	34.8(Q)
M 225 Trichlorophenols	196				813885	80.0000	85.6
M 226 Tetrachlorophenols	232				391572	40.0000	42.8
M 227 Benzo(b,k)fluoranthene	252				4214051	80.0000	83.4

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s063009.b/s5F3002.d
Date : 30-JUN-2009 07:33
Client ID: MECACVS
Sample Info: IWBN090617-02,4140 PPM11|SVM11|MECACVS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

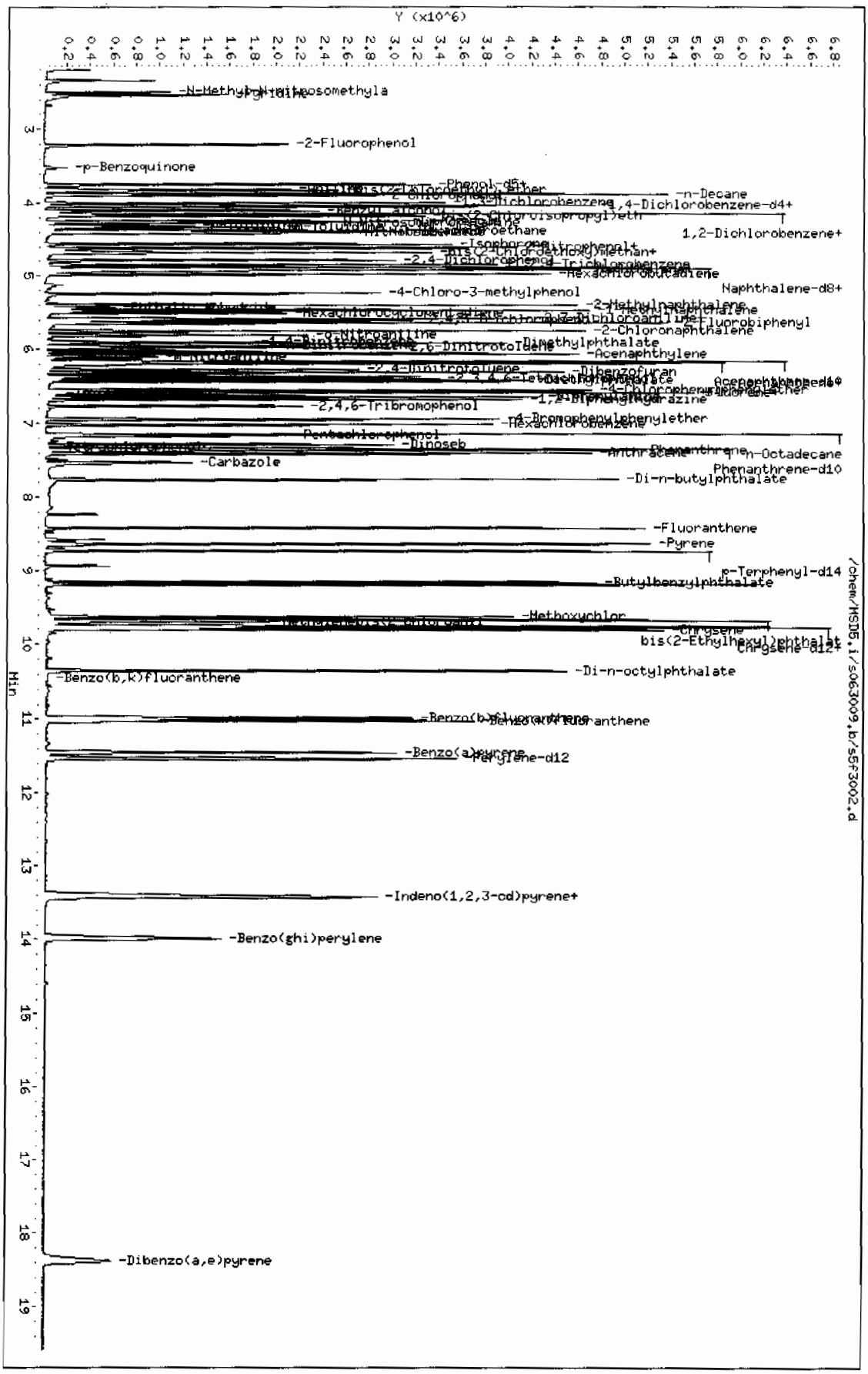

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 30-JUN-2009 08:01
Lab File ID: s5f3003.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090619-01.4 Quant Type: ISTD
Method: /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.79683	0.82510	0.82510	0.000	3.54832	60.00000	Averaged
16 Acetophenone	1.08491	1.05618	1.05618	0.000	-2.64815	60.00000	Averaged
189 Caprolactam	0.07939	0.07853	0.07853	0.000	-1.08758	60.00000	Averaged
208 1,1'-Biphenyl	1.04481	1.06144	1.06144	0.000	1.59207	60.00000	Averaged
207 Atrazine	0.03020	0.03999	0.03999	0.000	32.41906	60.00000	Averaged
77 Benzidine	0.16686	0.08631	0.08631	0.000	-48.27552	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28677	0.28157	0.28157	0.000	-1.81374	60.00000	Averaged
102 1,4-Dioxane	0.30814	0.31999	0.31999	0.000	3.84339	60.00000	Averaged
103 Methyl methacrylate	0.15418	0.17083	0.17083	0.000	10.80241	60.00000	Averaged
104 Ethyl methacrylate	0.72240	0.73653	0.73653	0.000	1.95605	60.00000	Averaged
105 2-Picoline	1.10986	1.09638	1.09638	0.000	-1.21393	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.41554	0.41423	0.41423	0.000	-0.31495	60.00000	Averaged
107 Methyl methanesulfonate	0.47990	0.50576	0.50576	0.000	5.38986	60.00000	Averaged
108 N-Nitrosodiethylamine	0.41207	0.42197	0.42197	0.000	2.40232	60.00000	Averaged
109 Ethyl Methanesulfonate	0.57718	0.58463	0.58463	0.000	1.29092	60.00000	Averaged
110 Pentachloroethane	0.32784	0.34120	0.34120	0.000	4.07614	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.41191	0.41972	0.41972	0.000	1.89536	60.00000	Averaged
113 N-Nitrosomorpholine	0.66462	0.69055	0.69055	0.000	3.90210	60.00000	Averaged
114 o-Toluidine	1.43933	1.39785	1.39785	0.000	-2.88189	60.00000	Averaged
115 N-Nitrosopiperidine	0.13311	0.13098	0.13098	0.000	-1.59869	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.80774	0.85000	0.85000	0.000	5.23271	60.00000	Averaged
118 2,6-Dichlorophenol	0.23169	0.23383	0.23383	0.000	0.92187	60.00000	Averaged
119 Hexachloropropene	0.13807	0.17458	0.17458	0.000	26.44567	60.00000	Averaged
120 p-Phenylenediamine	32.39036	40.00000	0.14227	0.000	-19.02410	60.00000	Linear
121 N-Nitrosodi-n-butylamine	0.17971	0.18957	0.18957	0.000	5.48271	60.00000	Averaged
122 Safrole	0.21426	0.21632	0.21632	0.000	0.96404	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.51018	0.51975	0.51975	0.000	1.87672	60.00000	Averaged
124 Isosafrole	0.33063	0.32990	0.32990	0.000	-0.22222	60.00000	Averaged
125 1,4-Naphthoquinone	0.32039	0.34389	0.34389	0.000	7.33294	60.00000	Averaged
127 Pentachlorobenzene	0.47629	0.48819	0.48819	0.000	2.49795	60.00000	Averaged
128 1-Naphthylamine	0.71181	0.70883	0.70883	0.000	-0.41814	60.00000	Averaged
129 2-Naphthylamine	0.64134	0.65710	0.65710	0.000	2.45849	60.00000	Averaged
131 5-Nitro-o-toluidine	0.25602	0.24435	0.24435	0.000	-4.55931	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.10752	0.11965	0.11965	0.000	11.27865	60.00000	Averaged
137 Phenacetin	0.22131	0.21374	0.21374	0.000	-3.41677	60.00000	Averaged
138 Diallate	0.20650	0.21059	0.21059	0.000	1.98096	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 30-JUN-2009 08:01
Lab File ID: s5f3003.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090619-01.4 Quant Type: ISTD
Method: /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20975	0.21689	0.21689	0.000	3.40508	60.00000	Averaged
213 Trans Diallate	0.24294	0.24775	0.24775	0.000	1.98096	60.00000	Averaged
140 4-Aminobiphenyl	0.36955	0.28956	0.28956	0.000	-21.64486	60.00000	Averaged
141 Pentachloronitrobenzene	0.08929	0.09306	0.09306	0.000	4.21631	60.00000	Averaged
142 Pronamide	0.26058	0.26924	0.26924	0.000	3.32425	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01022	0.01354	0.01354	0.000	32.47259	60.00000	Averaged
147 Methapyrilene	0.41717	0.42045	0.42045	0.000	0.78753	60.00000	Averaged
148 Isodrin	0.10436	0.10753	0.10753	0.000	3.03855	60.00000	Averaged
149 Aramite	0.05090	0.05174	0.05174	0.000	1.66109	60.00000	Averaged
150 Kepone	0.06725	0.08096	0.08096	0.000	20.39301	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.20208	0.20608	0.20608	0.000	1.97868	60.00000	Averaged
152 Chlorobenzilate	0.29951	0.30252	0.30252	0.000	1.00611	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.44059	0.35348	0.35348	0.000	-19.77129	60.00000	Averaged
155 2-Acetylaminofluorene	0.27578	0.28173	0.28173	0.000	2.15812	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.45468	0.45146	0.45146	0.000	-0.70717	60.00000	Averaged
158 3-Methylcholanthrene	0.40918	0.39500	0.39500	0.000	-3.46525	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD5.i/s063009.b/s5f3003.d
Lab Smp Id: WBN090619-01.4 Client Smp ID: AP12CVS
Inj Date : 30-JUN-2009 08:01
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090619-01.4|40 PPM|1|SVM|1|AP12CVS
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Meth Date : 06-Jul-2009 08:35 dan01134 Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.031	4.031	(1.000)	521130	40.0000	
* 29 Naphthalene-d8	136	4.896	4.896	(1.000)	1802381	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.160	(1.000)	1147146	40.0000	
* 67 Phenanthrene-d10	188	7.343	7.343	(1.000)	2174863	40.0000	
* 91 Chrysene-d12	240	9.760	9.760	(1.000)	2301200	40.0000	
* 98 Perylene-d12	264	11.525	11.525	(1.000)	2084351	40.0000	
209 Benzaldehyde	77	3.755	3.755	(0.931)	429984	40.0000	41.4
16 Acetophenone	105	4.278	4.278	(1.061)	550407	40.0000	38.9
189 Caprolactam	113	5.172	5.172	(1.056)	141533	40.0000	39.6
208 1,1'-Biphenyl	154	5.719	5.719	(0.928)	1217626	40.0000	40.6
207 Atrazine	173	7.031	7.031	(0.958)	86971	40.0000	53.0
77 Benzidine	184	8.495	8.495	(0.870)	198616	40.0000	20.7
90 3,3'-Dichlorobenzidine	252	9.689	9.689	(0.993)	647954	40.0000	39.3

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
102 1,4-Dioxane	88	2.343	2.343	(0.581)	166754	40.0000	41.5
103 Methyl methacrylate	100	2.337	2.337	(0.580)	89026	40.0000	44.3
104 Ethyl methacrylate	69	2.713	2.713	(0.673)	383826	40.0000	40.8
105 2-Picoline	93	2.913	2.913	(0.723)	571359	40.0000	39.5
106 N-Nitrosomethylethylamine	88	2.960	2.960	(0.734)	215866	40.0000	39.9
107 Methyl methanesulfonate	80	3.113	3.113	(0.772)	263569	40.0000	42.2
108 N-Nitrosodiethylamine	102	3.355	3.355	(0.832)	219899	40.0000	41.0
109 Ethyl Methanesulfonate	79	3.507	3.507	(0.870)	304669	40.0000	40.5
110 Pentachloroethane	167	3.854	3.854	(0.956)	177809	40.0000	41.6
111 N-Nitrosopyrrolidine	100	4.266	4.266	(1.058)	218727	40.0000	40.8(Q)
113 N-Nitrosomorpholine	56	4.284	4.284	(1.063)	359866	40.0000	41.6
114 o-Toluidine	106	4.307	4.307	(1.069)	728464	40.0000	38.8
115 N-Nitrosopiperidine	114	4.507	4.507	(0.921)	236078	40.0000	39.4
116 a,a-Dimethylphenethylamine	58	4.754	4.754	(0.971)	1532027	40.0000	42.1
118 2,6-Dichlorophenol	162	4.937	4.937	(1.008)	421446	40.0000	40.4
119 Hexachloropropene	213	4.966	4.966	(1.014)	314668	40.0000	50.6
120 p-Phenylenediamine	108	5.178	5.178	(1.058)	256426	40.0000	32.4
121 N-Nitrosodi-n-butylamine	84	5.137	5.137	(1.049)	341671	40.0000	42.2(T)
122 Safrole	162	5.307	5.307	(1.084)	389897	40.0000	40.4
123 1,2,4,5-Tetrachlorobenzene	216	5.513	5.513	(0.895)	596232	40.0000	40.8
124 Isosafrole	162	5.678	5.678	(0.922)	378443	40.0000	39.9
125 1,4-Naphthoquinone	158	5.872	5.872	(0.953)	394491	40.0000	42.9
127 Pentachlorobenzene	250	6.278	6.278	(1.019)	560024	40.0000	41.0
128 1-Naphthylamine	143	6.366	6.366	(1.033)	813131	40.0000	39.8
129 2-Naphthylamine	143	6.425	6.425	(1.043)	753794	40.0000	41.0
131 5-Nitro-o-toluidine	152	6.566	6.566	(1.066)	280307	40.0000	38.2
136 1,3,5-Trinitrobenzene	75	6.813	6.813	(0.928)	260218	40.0000	44.5
137 Phenacetin	108	6.854	6.854	(0.934)	464866	40.0000	38.6(Q)
138 Diallate	86	6.843	6.843	(0.932)	458005	40.0000	40.8
212 Cis Diallate	86	6.925	6.925	(0.943)	70755	6.00000	6.2(a)
213 Trans Diallate	86	6.843	6.843	(0.932)	458005	34.0000	34.7
140 4-Aminobiphenyl	169	7.154	7.154	(0.974)	629763	40.0000	31.3
141 Pentachloronitrobenzene	237	7.172	7.172	(0.977)	202390	40.0000	41.7(Q)
142 Pronamide	173	7.166	7.166	(0.976)	585560	40.0000	41.3
146 4-Nitroquinoline-1-oxide	101	8.013	8.013	(1.091)	29444	40.0000	53.0
147 Methapyrilene	58	8.042	8.042	(1.095)	914432	40.0000	40.3
148 Isodrin	193	8.272	8.272	(1.127)	233868	40.0000	41.2
149 Aramite	185	8.666	8.666	(1.180)	112530	40.0000	40.7
150 Kepone	272	9.260	9.260	(1.261)	176078	40.0000	48.2
151 p-(Dimethylamino)azobenzene	120	8.848	8.848	(0.907)	474237	40.0000	40.8
152 Chlorobenzilate	251	8.878	8.878	(0.910)	696160	40.0000	40.4
153 3,3'-Dimethylbenzidine	212	9.166	9.166	(0.939)	813436	40.0000	32.1
155 2-Acetylaminofluorene	181	9.413	9.413	(0.964)	648310	40.0000	40.9
157 7,12Dimethylbenz(a)anthracene	256	10.948	10.948	(0.950)	941006	40.0000	39.7
158 3-Methylcholanthrene	268	11.948	11.948	(1.037)	823314	40.0000	38.6(Q)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

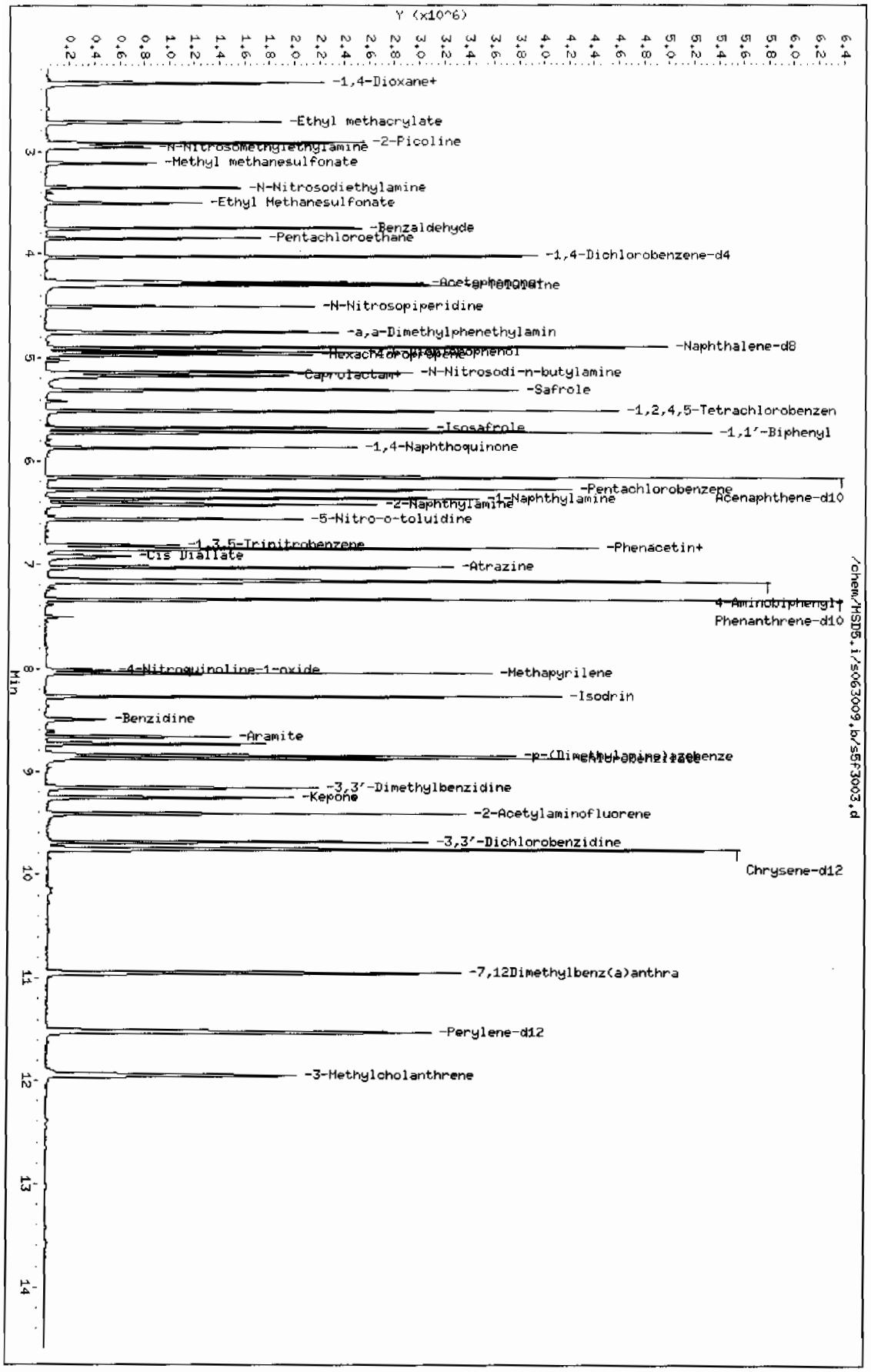
Data File: /chem/MSD5.i/s063009.b/s5f3003.d
Date : 30-JUN-2009 08:01
Client ID: AP12CVS
Sample Info: IWBN090619-01,4140 PPM11SVM11AP12CVS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS
Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20
Page 1
Y (x10^6)
Min
-1,4-Dioxane+
-Ethyl methacrylate
-N-Nitrosomethylethylamine
-2-Picoline
-Methyl methanesulfonate
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Pentachloroethane
-1,4-Dichlorobenzene-d4
-Acetophenone
-N-Nitrosopiperidine
-a,a-Dimethylphenethylamin
-Naphthalene-d8
-Hexachlorophene
-Caprolactam+
-N-Nitrosodi-n-butylamine
-Safrole
-1,2,4,5-Tetrachlorobenzen
-Isosafrole
-1,1'-Biphenyl
-1,4-Naphthoquinone
-Pentachlorobenzene
-1-Naphthylamine
Acenaphthene-d10
-2-Naphthylamine
-5-Nitro-o-toluidine
-1,3,5-Trinitrobenzene
-Phenacetin+
-Cis Diallate
-Atrazine
4-Aminobiphenyl+
Phenanthrene-d10
-4-Nitroquinoline-1-oxide
-Methapyrilene
-Isodrin
-Benzidine
-Aramite
-p-(Dimethylamino)azobenze
-3,3'-Dimethylbenzidine
-Kepone
-2-Acetylaminofluorene
-3,3'-Dichlorobenzidine
Chrysene-d12
-7,12Dimethylbenz(a)anthra
-Perylene-d12
-3-Methylcholanthrene
/chem/MSD5.i/s063009.b/s5f3003.d

QC Data

Data File: /chem/MSD1.i/s061909.b/s1f1901.d

Page 1

Date : 19-JUN-2009 09:41

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: |WBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

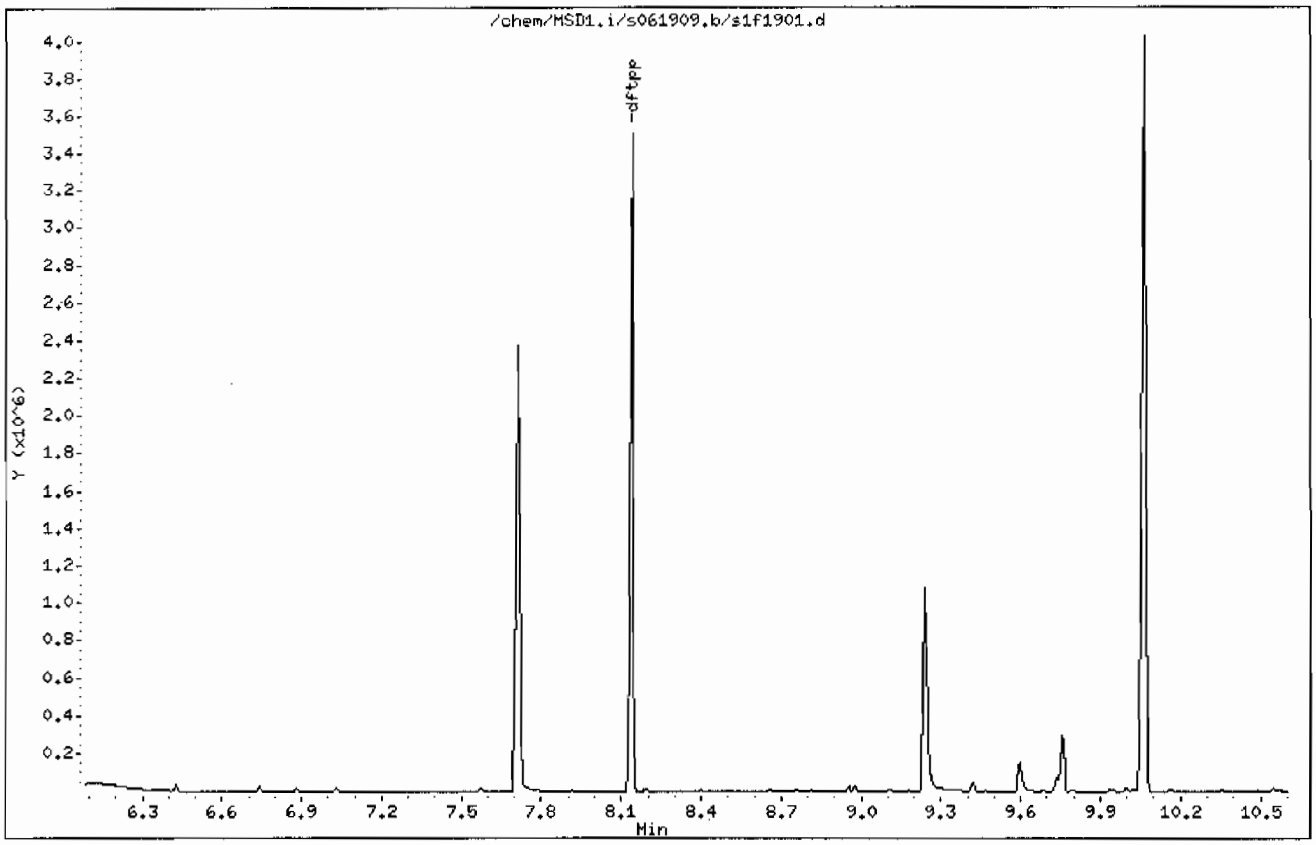

Data File: /chem/MSD1.i/s061909.b/s1f1901.d

Date : 19-JUN-2009 09:41

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: |WBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

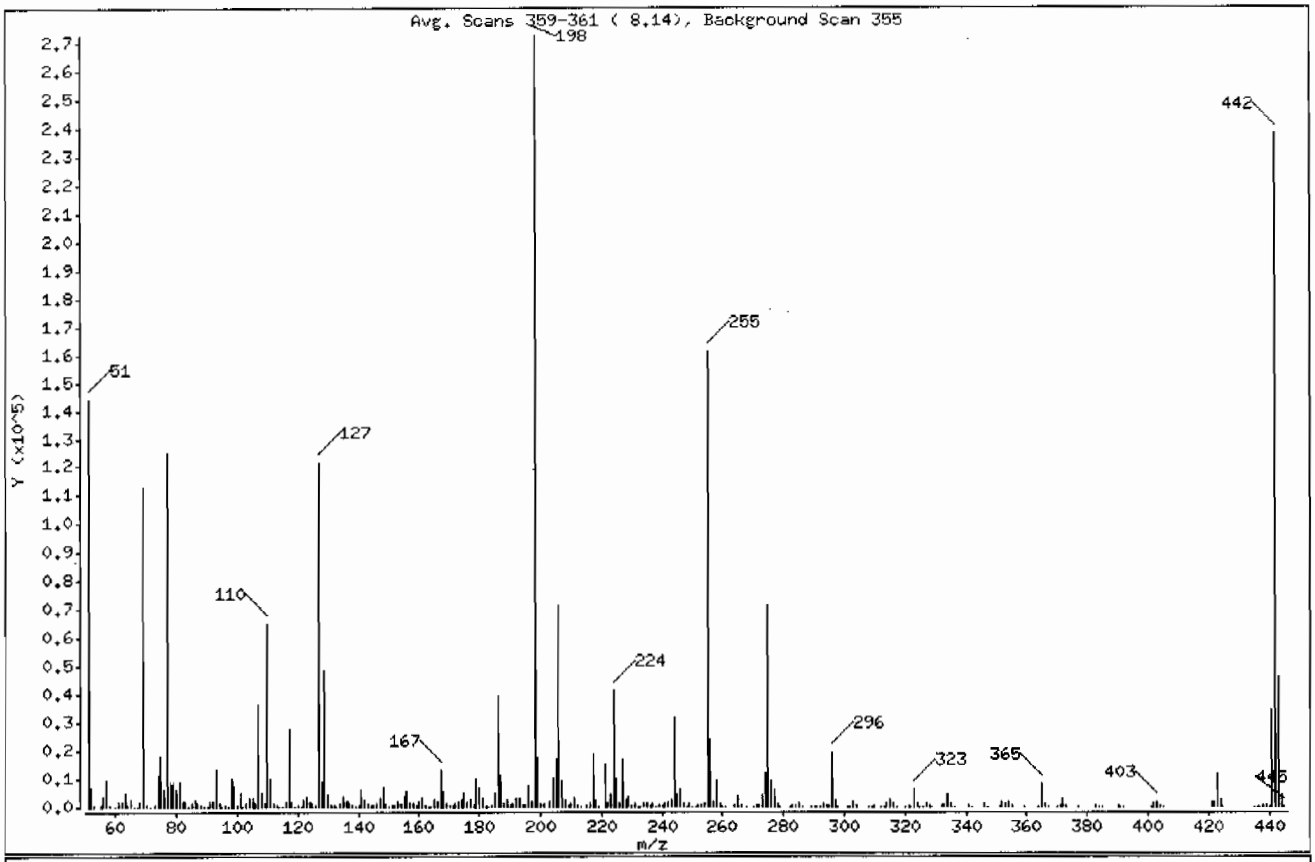

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	52.84
68	Less than 2.00% of mass 69	0.77 (1.86)
69	Mass 69 relative abundance	41.45
70	Less than 2.00% of mass 69	0.21 (0.50)
127	40.00 - 60.00% of mass 198	44.56
197	Less than 1.00% of mass 198	0.60
199	5.00 - 9.00% of mass 198	6.50
275	10.00 - 30.00% of mass 198	26.13
365	Greater than 1.00% of mass 198	3.08
441	Present, but less than mass 443	12.69
442	Greater than 40.00% of mass 198	87.22
443	17.00 - 23.00% of mass 442	17.10 (19.61)

Data File: /chem/MSD1.i/s061909.b/s1f1901.d

Date : 19-JUN-2009 09:41

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1f1901.d
Spectrum: Avg. Scans 359-361 (8.14), Background Scan 355
Location of Maximum: 198.00
Number of points: 308

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	144000	132.00	510	211.00	3026	301.00	246
52.00	6834	133.00	177	212.00	360	302.00	305
53.00	343	134.00	1394	213.00	164	303.00	2173
55.00	787	135.00	3774	215.00	914	304.00	627
56.00	4068	136.00	1615	216.00	1449	308.00	231
57.00	9114	137.00	2008	217.00	18736	309.00	171
58.00	421	138.00	401	218.00	2313	310.00	328
60.00	119	139.00	297	219.00	178	312.00	62
61.00	1606	140.00	703	221.00	14863	313.00	151
62.00	1831	141.00	6162	222.00	1184	314.00	955
63.00	5200	142.00	2336	223.00	4234	315.00	2255
64.00	657	143.00	1525	224.00	41120	316.00	1155
65.00	2387	144.00	370	225.00	10245	317.00	184
66.00	151	145.00	319	226.00	995	320.00	57
67.00	195	146.00	1235	227.00	17224	321.00	689
68.00	2096	147.00	3283	228.00	2306	322.00	248
69.00	112984	148.00	7044	229.00	3506	323.00	6039
70.00	568	149.00	1438	230.00	433	324.00	1107
71.00	150	150.00	300	231.00	1431	325.00	61
73.00	885	151.00	885	232.00	204	326.00	130
74.00	11286	152.00	458	233.00	296	327.00	1289
75.00	17976	153.00	2154	234.00	980	328.00	570
76.00	6004	154.00	1527	235.00	1237	329.00	51
77.00	124472	155.00	3545	236.00	693	332.00	534
78.00	8043	156.00	5340	237.00	1249	333.00	600
79.00	8188	157.00	1091	238.00	184	334.00	4082
80.00	6006	158.00	1300	239.00	626	335.00	964
81.00	8490	159.00	879	240.00	531	336.00	66
82.00	2171	160.00	2049	241.00	999	341.00	669
83.00	2012	161.00	2826	242.00	2145	342.00	135
84.00	205	162.00	774	243.00	2201	346.00	1351
85.00	1514	163.00	241	244.00	31816	347.00	261
86.00	2442	164.00	305	245.00	4092	351.00	114
87.00	1097	165.00	2661	246.00	6209	352.00	1916
88.00	436	166.00	1984	247.00	1254	353.00	1208

Data File: /chem/MSD1.i/s061909.b/s1f1901.d

Date : 19-JUN-2009 09:41

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1f1901.d

Spectrum: Avg. Scans 359-361 (8.14), Background Scan 355

Location of Maximum: 198.00

Number of points: 308

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	189	167.00	13309	248.00	299	354.00	2035
90.00	50	168.00	5470	249.00	989	355.00	343
91.00	1919	169.00	1021	250.00	141	359.00	144
92.00	2096	170.00	445	251.00	235	364.00	55
93.00	13128	171.00	584	252.00	333	365.00	8409
94.00	1018	172.00	1192	253.00	683	366.00	1284
95.00	212	173.00	1716	254.00	1139	367.00	64
96.00	577	174.00	2698	255.00	161152	370.00	191
97.00	296	175.00	5260	256.00	23520	371.00	414
98.00	10043	176.00	1668	257.00	1826	372.00	3203
99.00	7527	177.00	2251	258.00	9113	373.00	824
100.00	749	178.00	848	259.00	1456	377.00	110
101.00	4743	179.00	9845	260.00	264	383.00	853
102.00	198	180.00	6646	261.00	272	384.00	236
103.00	1467	181.00	3041	264.00	320	385.00	51
104.00	2893	182.00	409	265.00	3669	390.00	507
105.00	2821	183.00	239	266.00	471	391.00	292
106.00	1011	184.00	847	268.00	126	392.00	286
107.00	36656	185.00	4785	270.00	166	401.00	174
108.00	5319	186.00	39312	271.00	332	402.00	1406
109.00	1152	187.00	11209	272.00	418	403.00	1940
110.00	65224	188.00	1055	273.00	4699	404.00	655
111.00	9931	189.00	2225	274.00	12077	405.00	61
112.00	1095	190.00	375	275.00	71216	421.00	1756
113.00	391	191.00	1173	276.00	9331	422.00	1652
114.00	107	192.00	3247	277.00	6268	423.00	12003
115.00	133	193.00	3444	278.00	960	424.00	2274
116.00	1973	194.00	706	279.00	104	425.00	133
117.00	27840	195.00	452	282.00	99	435.00	69
118.00	2068	196.00	7824	283.00	568	436.00	53
119.00	230	197.00	1623	284.00	552	437.00	119
120.00	371	198.00	272576	285.00	1001	438.00	391
121.00	157	199.00	17728	286.00	187	439.00	580
122.00	2556	200.00	1409	289.00	207	440.00	288
123.00	3627	201.00	1364	290.00	191	441.00	34584

Data File: /chem/MSD1.i/s061909.b/s1f1901.d

Date : 19-JUN-2009 09:41

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: |WBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1f1901.d

Spectrum: Avg. Scans 359-361 (8,14), Background Scan 355

Location of Maximum: 198.00

Number of points: 308

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1608	203.00	1870	291.00	111	442.00	237760
125.00	1454	204.00	10311	292.00	264	443.00	46616
126.00	815	205.00	16952	293.00	1292	444.00	4457
127.00	121464	206.00	71176	294.00	328	445.00	279
128.00	8908	207.00	9189	295.00	382		
129.00	48768	208.00	2437	296.00	19720		
130.00	4107	209.00	866	297.00	2809		
131.00	823	210.00	1342	298.00	165		

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

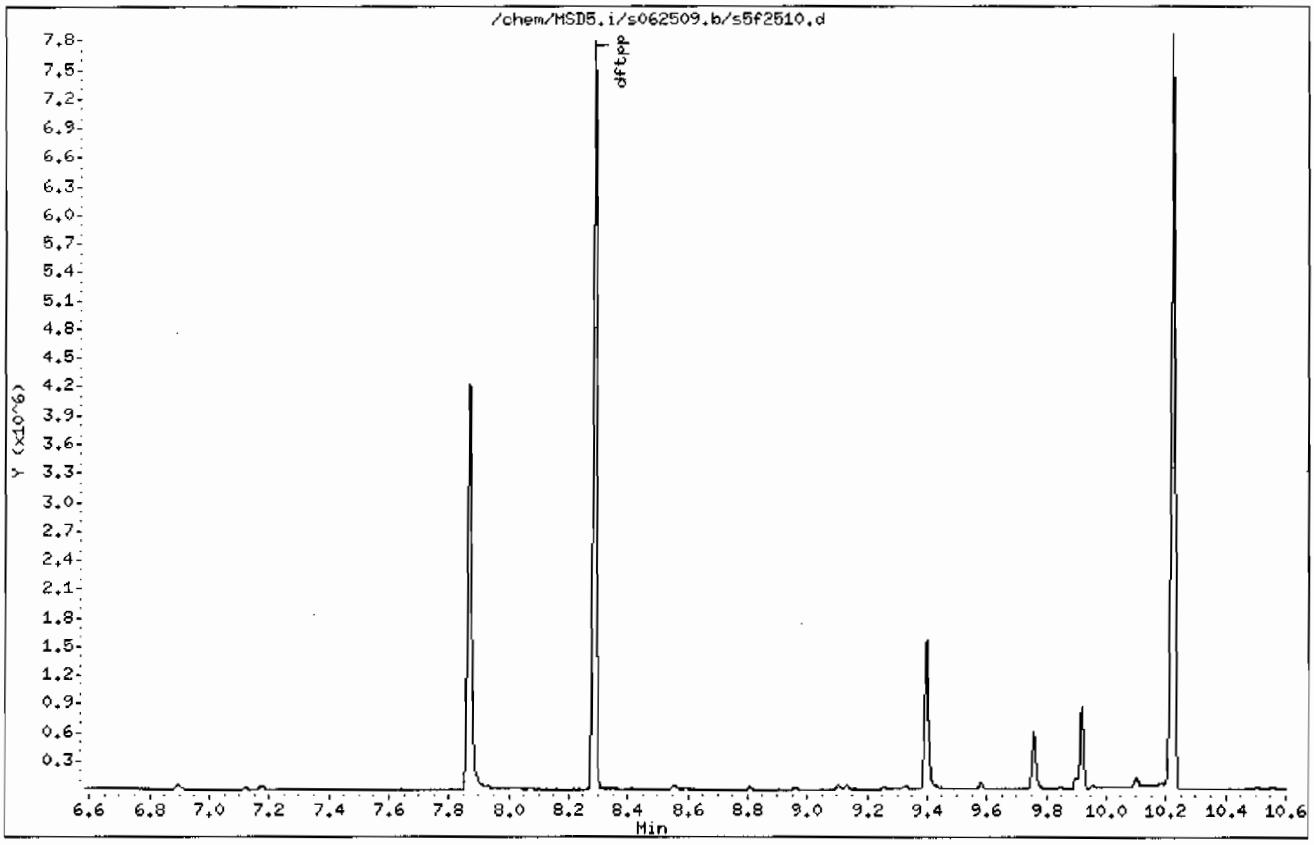

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

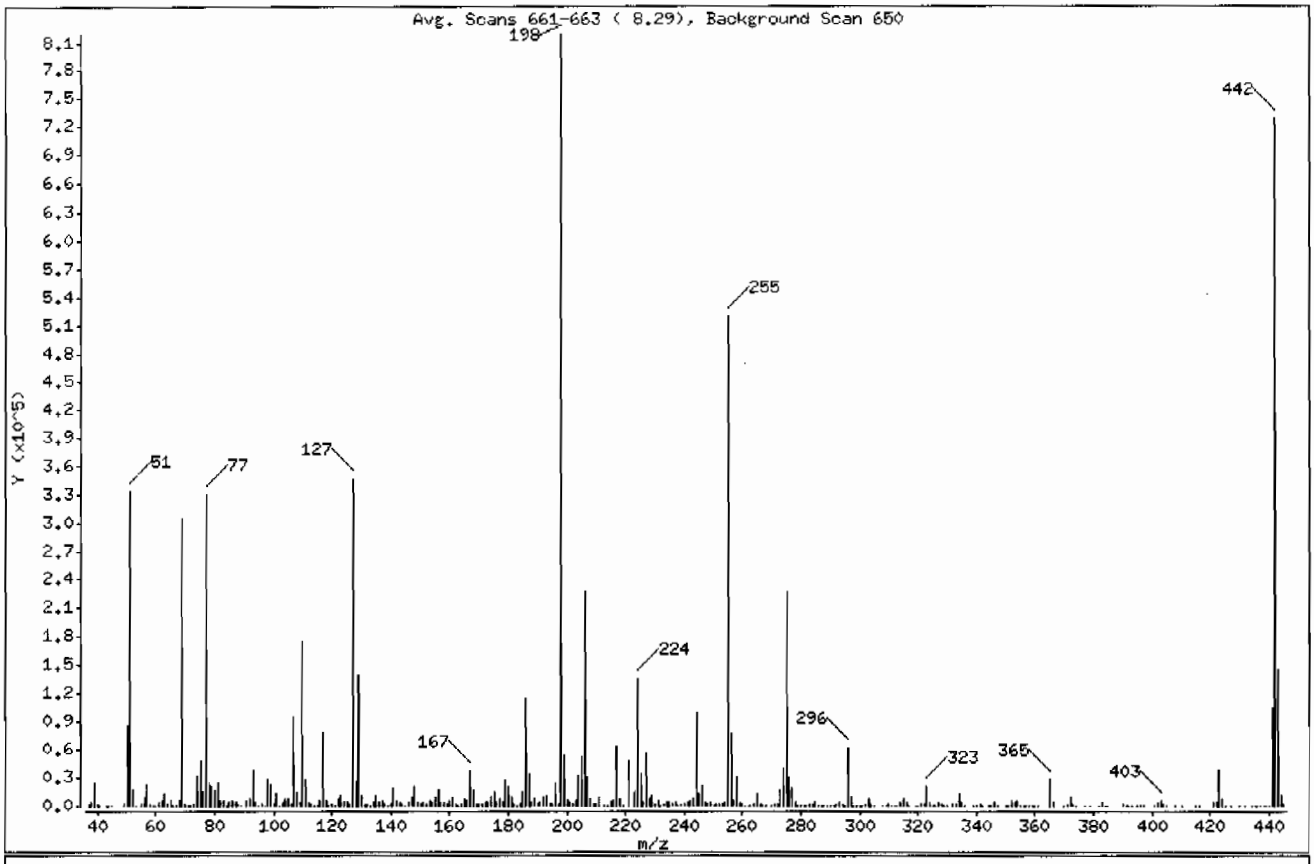

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.61
68	Less than 2.00% of mass 69	0.65 (1.74)
69	Mass 69 relative abundance	37.21
70	Less than 2.00% of mass 69	0.22 (0.59)
127	40.00 - 60.00% of mass 198	42.23
197	Less than 1.00% of mass 198	0.20
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 30.00% of mass 198	27.74
365	Greater than 1.00% of mass 198	3.39
441	Present, but less than mass 443	12.90
442	Greater than 40.00% of mass 198	88.92
443	17.00 - 23.00% of mass 442	17.81 (20.03)

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d
Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1138	132.00	1206	224.00	135680	316.00	4346
38.00	4283	133.00	226	225.00	33672	317.00	724
39.00	24376	134.00	3902	226.00	3982	319.00	199
40.00	1095	135.00	10990	227.00	56520	320.00	278
41.00	377	136.00	4516	228.00	8381	321.00	1904
43.00	83	137.00	5167	229.00	11198	322.00	1049
44.00	53	138.00	1139	230.00	1508	323.00	20544
45.00	651	139.00	686	231.00	4747	324.00	3833
49.00	1842	140.00	2033	232.00	906	325.00	443
50.00	85864	141.00	18056	233.00	1144	326.00	441
51.00	332416	142.00	5920	234.00	3535	327.00	3582
52.00	16009	143.00	3898	235.00	4352	328.00	1881
53.00	680	144.00	1153	236.00	2596	329.00	411
55.00	1744	145.00	796	237.00	4493	330.00	67
56.00	10124	146.00	3833	238.00	149	332.00	1501
57.00	22896	147.00	8537	239.00	2028	333.00	2044
58.00	1220	148.00	20240	240.00	1558	334.00	12375
59.00	387	149.00	3724	241.00	3207	335.00	3249
60.00	170	150.00	975	242.00	6476	336.00	306
61.00	4094	151.00	2947	243.00	7666	339.00	390
62.00	4868	152.00	1120	244.00	100592	340.00	156
63.00	13455	153.00	5976	245.00	12760	341.00	2032
64.00	2223	154.00	4578	246.00	19808	342.00	558
65.00	6554	155.00	9784	247.00	4078	344.00	42
66.00	399	156.00	16170	248.00	1014	345.00	49
67.00	136	157.00	3266	249.00	3682	346.00	3814
68.00	5300	158.00	3502	250.00	900	347.00	894
69.00	304576	159.00	2575	251.00	988	350.00	113
70.00	1791	160.00	6522	252.00	1107	351.00	234
71.00	141	161.00	8738	253.00	2216	352.00	6066
72.00	193	162.00	2332	254.00	3272	353.00	3622
73.00	2630	163.00	733	255.00	519616	354.00	5630
74.00	32008	164.00	965	256.00	76312	355.00	936
75.00	49176	165.00	7434	257.00	5701	356.00	159
76.00	15003	166.00	5583	258.00	30480	357.00	134

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d
Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	329536	167.00	37360	259.00	4688	358.00	50
78.00	21848	168.00	16760	260.00	1050	359.00	514
79.00	21520	169.00	2806	261.00	818	360.00	90
80.00	17208	170.00	1585	262.00	281	361.00	66
81.00	24696	171.00	1950	263.00	357	365.00	27752
82.00	5995	172.00	3353	264.00	1198	366.00	3838
83.00	5784	173.00	4618	265.00	12254	370.00	420
84.00	731	174.00	9069	266.00	2093	371.00	1264
85.00	4077	175.00	15586	267.00	419	372.00	10324
86.00	6050	176.00	4443	268.00	101	373.00	2774
87.00	2825	177.00	6975	270.00	767	374.00	88
88.00	1193	178.00	2852	271.00	964	377.00	347
89.00	527	179.00	28744	272.00	1488	379.00	53
91.00	5217	180.00	20024	273.00	16303	382.00	46
92.00	6689	181.00	9747	274.00	39584	383.00	2936
93.00	36944	182.00	1277	275.00	227072	384.00	811
94.00	3121	183.00	633	276.00	30592	385.00	279
95.00	410	184.00	2511	277.00	19040	390.00	1527
96.00	1703	185.00	14675	278.00	3536	391.00	836
97.00	405	186.00	114752	279.00	847	392.00	606
98.00	27784	187.00	33024	280.00	137	393.00	78
99.00	23016	188.00	3270	281.00	305	395.00	178
100.00	1807	189.00	7565	282.00	573	396.00	60
101.00	12467	190.00	1456	283.00	2171	397.00	44
102.00	633	191.00	3531	284.00	1562	401.00	502
103.00	3694	192.00	9327	285.00	3393	402.00	3711
104.00	8033	193.00	10576	286.00	586	403.00	5371
105.00	8061	194.00	2381	287.00	70	404.00	2149
106.00	2335	195.00	1583	288.00	178	405.00	328
107.00	96840	196.00	24512	289.00	728	408.00	44
108.00	15060	197.00	1668	290.00	735	410.00	195
109.00	3168	198.00	818496	291.00	471	415.00	117
110.00	175616	199.00	55264	292.00	1011	416.00	64
111.00	27672	200.00	4870	293.00	4463	421.00	4380
112.00	3394	201.00	4357	294.00	950	422.00	4373

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVHF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d
Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	1009	202.00	2129	295.00	722	423.00	37104
114.00	389	203.00	6231	296.00	62712	424.00	6752
115.00	427	204.00	31184	297.00	9287	425.00	610
116.00	5229	205.00	52096	298.00	618	427.00	44
117.00	79808	206.00	227136	299.00	244	430.00	41
118.00	5242	207.00	30208	300.00	51	432.00	68
119.00	641	208.00	7259	301.00	781	434.00	57
120.00	1537	209.00	2346	302.00	1183	435.00	42
121.00	459	210.00	2765	303.00	7108	436.00	46
122.00	6606	211.00	9606	304.00	2260	437.00	88
123.00	11016	213.00	938	305.00	253	438.00	260
124.00	4477	214.00	263	308.00	883	439.00	169
125.00	4654	215.00	2833	309.00	636	440.00	115
126.00	1781	216.00	5142	310.00	1042	441.00	105616
127.00	345664	217.00	63232	311.00	221	442.00	727808
128.00	25848	218.00	7687	312.00	209	443.00	145792
129.00	139648	219.00	590	313.00	595	444.00	12170
130.00	11462	221.00	48472	314.00	3436	445.00	968
131.00	2254	223.00	13920	315.00	7722		

Data File: /chem/MSD1.i/s062809.b/s1f2801.d

Date : 28-JUN-2009 14:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

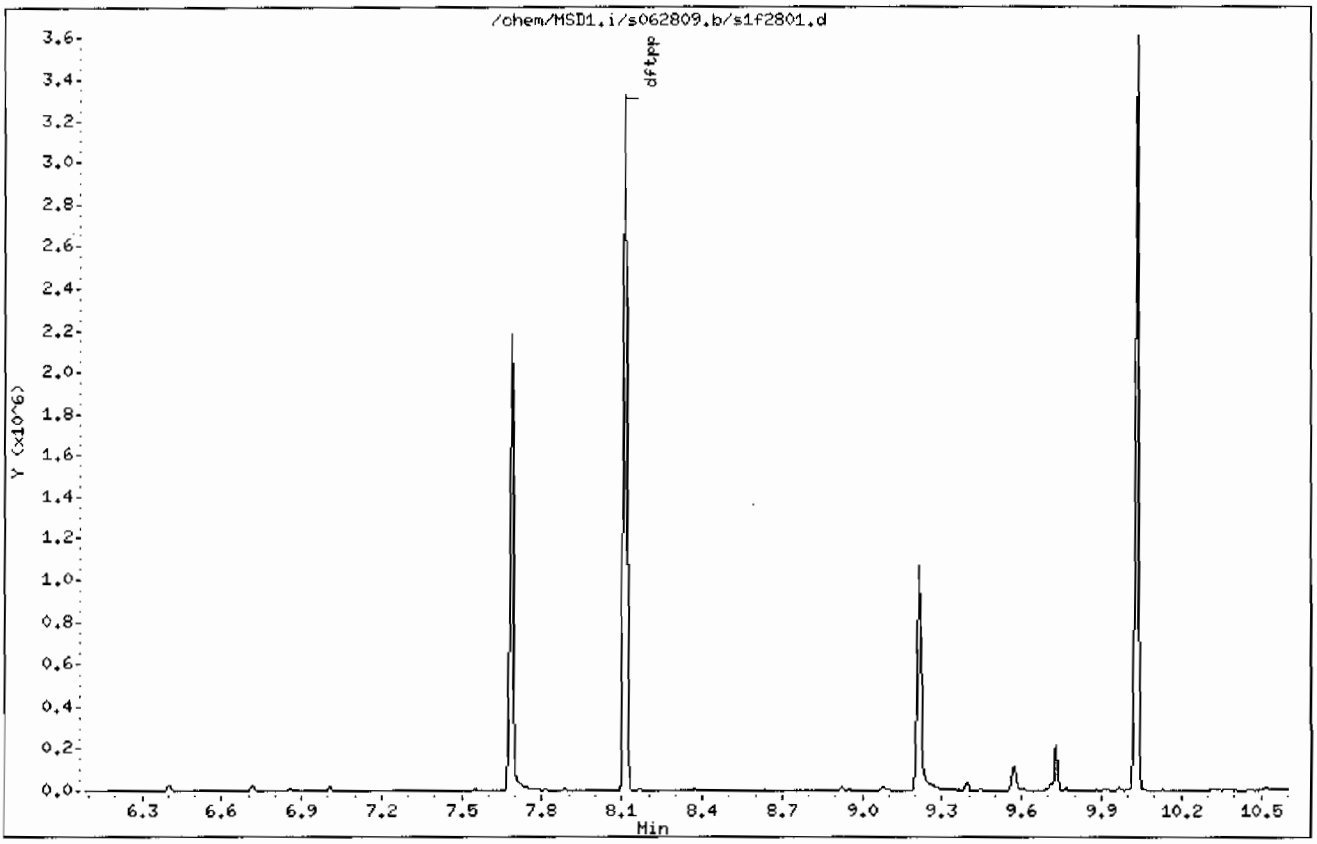

Data File: /chem/MSD1.i/s062809.b/s1f2801.d

Date : 28-JUN-2009 14:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: IWBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

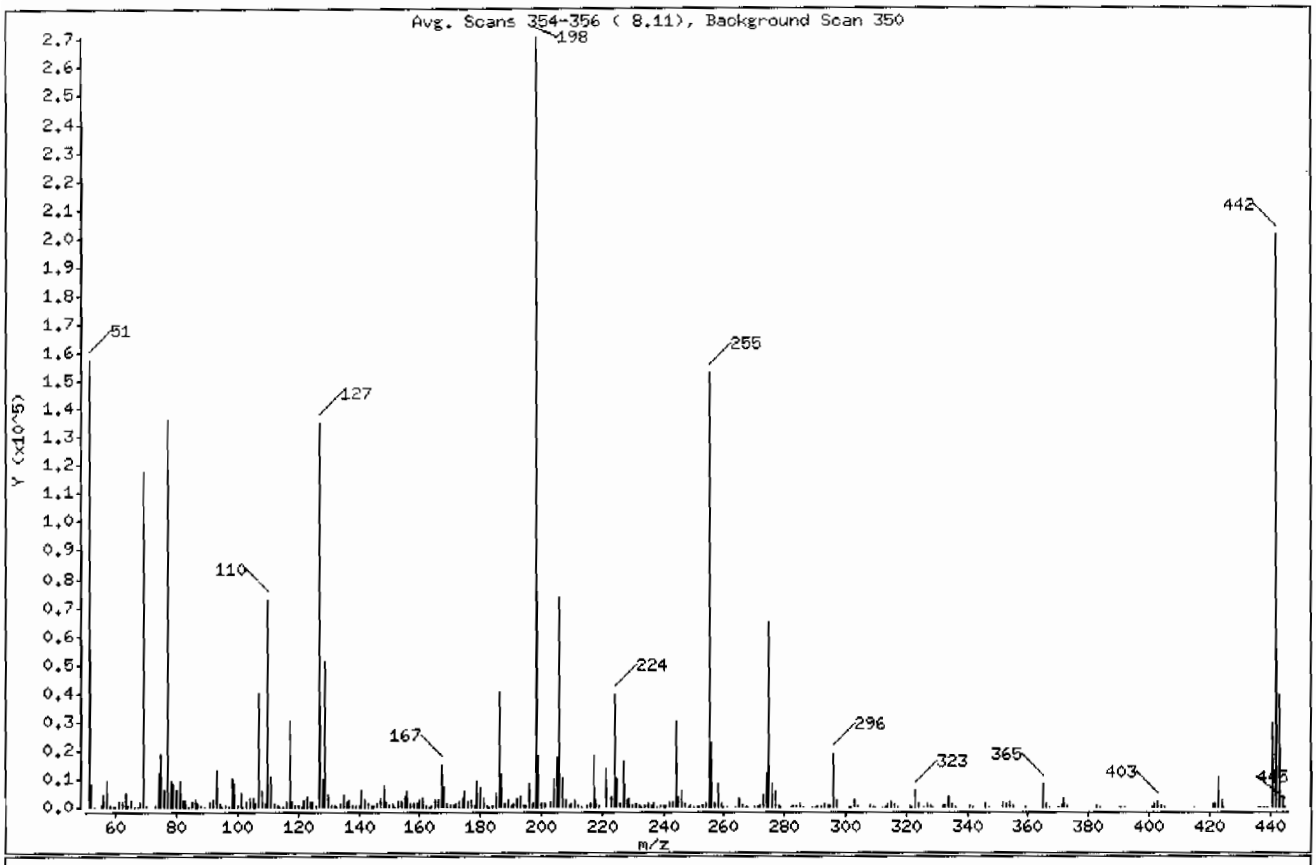

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	58.22
68	Less than 2.00% of mass 69	0.64 (1.48)
69	Mass 69 relative abundance	43.38
70	Less than 2.00% of mass 69	0.25 (0.57)
127	40.00 - 60.00% of mass 198	49.95
197	Less than 1.00% of mass 198	0.54
199	5.00 - 9.00% of mass 198	6.57
275	10.00 - 30.00% of mass 198	23.82
365	Greater than 1.00% of mass 198	2.93
441	Present, but less than mass 443	10.80
442	Greater than 40.00% of mass 198	74.10
443	17.00 - 23.00% of mass 442	14.55 (19.63)

Date : 28-JUN-2009 14:38

Client ID: DFTPP Instrument: MSD1.i

Sample Info: |WBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Data File: s1f2801.d
Spectrum: Avg. Scans 354-356 (8.11), Background Scan 350
Location of Maximum: 198.00
Number of points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	157696	130.00	4482	206.00	73248	291.00	142
52.00	8058	131.00	895	207.00	9728	292.00	267
53.00	257	132.00	483	208.00	2403	293.00	1093
55.00	714	133.00	127	209.00	867	294.00	349
56.00	4065	134.00	1456	210.00	940	295.00	330
57.00	9619	135.00	4358	211.00	2657	296.00	18592
58.00	458	136.00	1648	212.00	422	297.00	2582
59.00	54	137.00	2211	213.00	212	301.00	216
60.00	58	138.00	547	215.00	805	302.00	241
61.00	1693	139.00	427	216.00	1536	303.00	2296
62.00	1850	140.00	724	217.00	18072	304.00	594
63.00	5082	141.00	6453	218.00	2418	308.00	341
64.00	657	142.00	2252	219.00	322	309.00	182
65.00	2551	143.00	1481	221.00	13674	310.00	269
66.00	139	144.00	346	223.00	4012	312.00	51
67.00	189	145.00	352	224.00	39312	313.00	144
68.00	1736	146.00	1087	225.00	9721	314.00	1019
69.00	117488	147.00	3379	226.00	1120	315.00	2090
70.00	666	148.00	7460	227.00	15893	316.00	1262
73.00	792	149.00	1611	228.00	2346	317.00	267
74.00	11695	150.00	518	229.00	3210	321.00	558
75.00	18464	151.00	1163	230.00	539	322.00	230
76.00	6275	152.00	146	231.00	1371	323.00	5586
77.00	136384	153.00	2113	232.00	349	324.00	1130
78.00	9068	154.00	1661	233.00	297	326.00	87
79.00	7807	155.00	3734	234.00	928	327.00	1096
80.00	6128	156.00	5722	235.00	1157	328.00	650
81.00	9136	157.00	1219	236.00	733	329.00	58
82.00	2246	158.00	1275	237.00	1284	332.00	403
83.00	2239	159.00	976	238.00	121	333.00	497
84.00	301	160.00	2250	239.00	622	334.00	3849
85.00	1564	161.00	3089	240.00	498	335.00	979
86.00	2499	162.00	820	241.00	836	336.00	93
87.00	1194	163.00	284	242.00	2090	341.00	727
88.00	510	164.00	361	243.00	2129	342.00	143

Data File: /chem/MSD1.i/s062809.b/s1f2801.d

Date : 28-JUN-2009 14:38

Client ID: DFTPP

Instrument: MSD1.i

Sample Info: |WBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s1f2801.d
Spectrum: Avg. Scans 354-356 (8.11), Background Scan 350
Location of Maximum: 198.00
Number of points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	261	165.00	2390	244.00	30176	346.00	1192
91.00	2031	166.00	2287	245.00	3818	347.00	246
92.00	2213	167.00	15212	246.00	5674	352.00	1766
93.00	13090	168.00	7036	247.00	1156	353.00	1101
94.00	1046	169.00	1270	248.00	267	354.00	1752
95.00	217	170.00	783	249.00	887	355.00	333
96.00	607	171.00	504	250.00	97	359.00	170
97.00	282	172.00	1264	251.00	292	365.00	7926
98.00	10261	173.00	1656	252.00	303	366.00	1138
99.00	8255	174.00	2956	253.00	590	367.00	60
100.00	857	175.00	5589	254.00	964	370.00	74
101.00	5015	176.00	1616	255.00	152640	371.00	482
102.00	303	177.00	2348	256.00	22544	372.00	3208
103.00	1740	178.00	716	257.00	1546	373.00	714
104.00	3142	179.00	9496	258.00	8391	383.00	762
105.00	3060	180.00	6653	259.00	1310	384.00	255
106.00	988	181.00	3099	260.00	228	390.00	308
107.00	39768	182.00	575	261.00	241	391.00	235
108.00	5833	183.00	274	264.00	282	392.00	181
109.00	1157	184.00	897	265.00	3263	401.00	152
110.00	72976	185.00	4790	266.00	389	402.00	1390
111.00	10594	186.00	40744	267.00	60	403.00	1774
112.00	1486	187.00	11527	268.00	71	404.00	736
113.00	498	188.00	1147	270.00	160	405.00	60
114.00	54	189.00	2478	271.00	281	415.00	51
115.00	162	190.00	366	272.00	350	421.00	1545
116.00	2011	191.00	1176	273.00	4162	422.00	1515
117.00	30632	192.00	3308	274.00	11904	423.00	10644
118.00	2160	193.00	3613	275.00	64520	424.00	2206
119.00	360	194.00	703	276.00	8379	425.00	210
120.00	423	195.00	464	277.00	5477	436.00	167
121.00	117	196.00	8008	278.00	892	437.00	238
122.00	2314	197.00	1455	279.00	174	438.00	168
123.00	3827	198.00	270848	282.00	116	439.00	191
124.00	1671	199.00	17800	283.00	607	441.00	29240

Date : 28-JUN-2009 14:38

Client ID: DFTPP Instrument: MSD1.i

Sample Info: IWBN090526-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Data File: s1f2801.d
Spectrum: Avg. Scans 354-356 (8.11), Background Scan 350
Location of Maximum: 198.00
Number of points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	1672	200.00	1385	284.00	493	442.00	200704
126.00	722	201.00	1524	285.00	985	443.00	39408
127.00	135296	203.00	1796	286.00	147	444.00	3498
128.00	10214	204.00	10208	289.00	218	445.00	161
129.00	50968	205.00	17720	290.00	199		

Data File: /chem/MSD5.i/s063009.b/s5f3001.d

Date : 30-JUN-2009 07:20

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

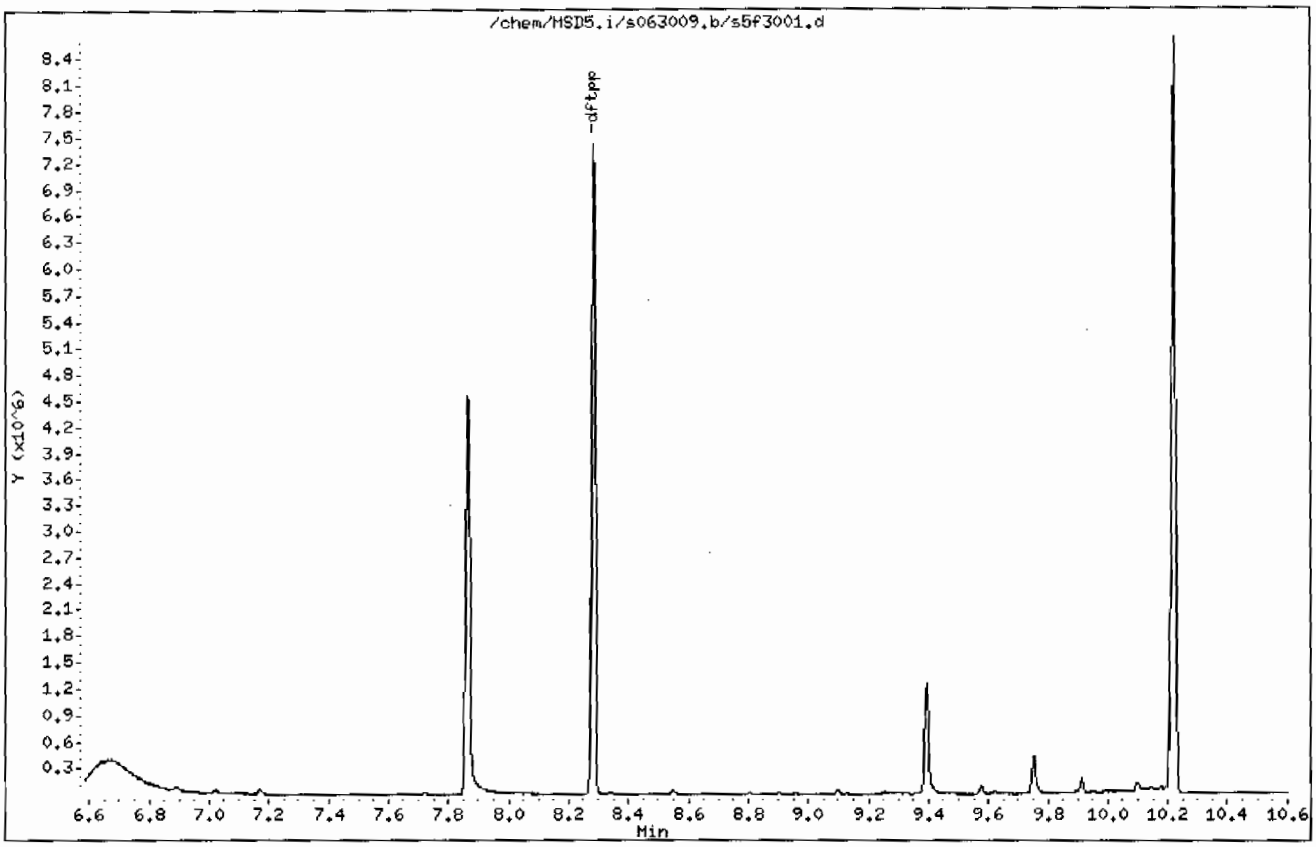

Data File: /chem/MSD5.i/s063009.b/s5f3001.d

Date : 30-JUN-2009 07:20

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

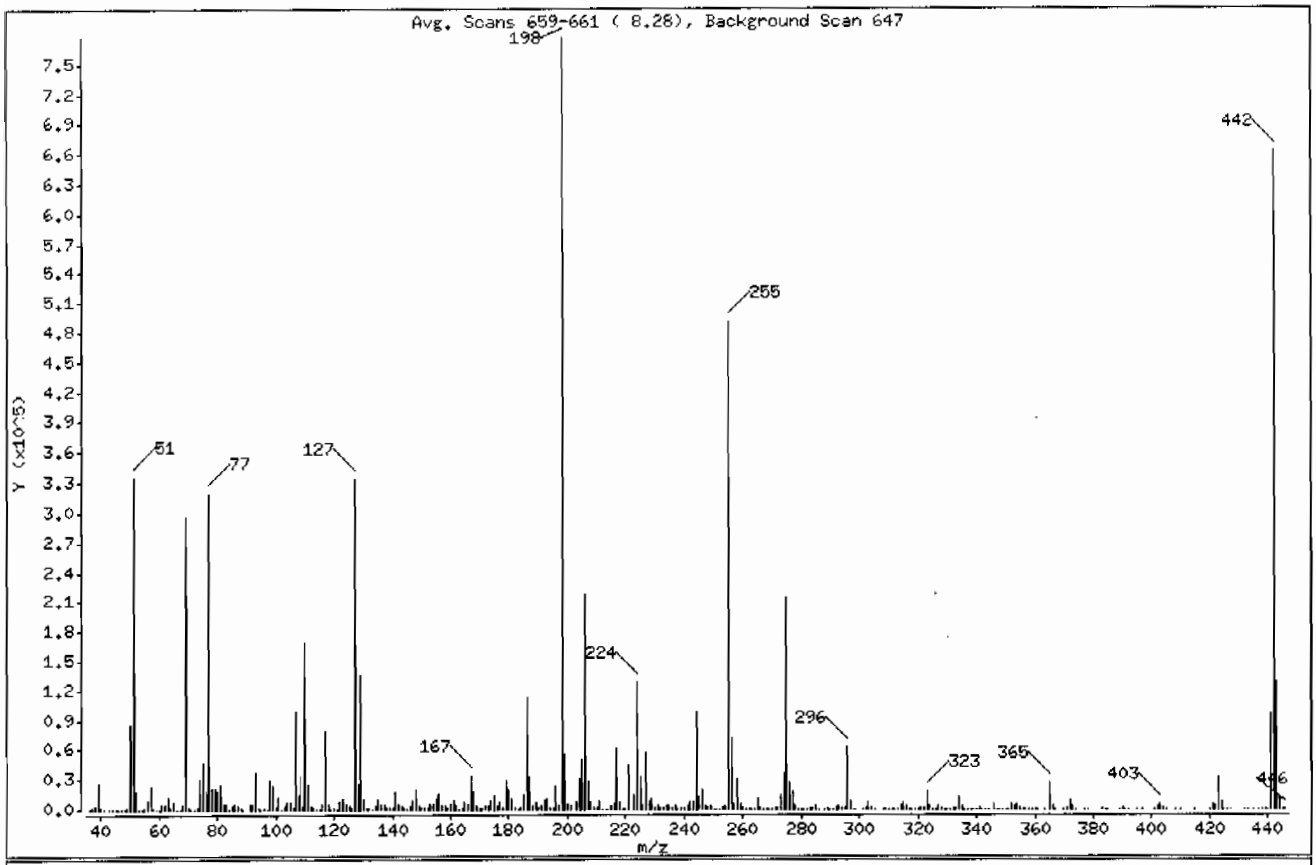

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	43.27
68	Less than 2.00% of mass 69	0.65 (1.71)
69	Mass 69 relative abundance	38.07
70	Less than 2.00% of mass 69	0.19 (0.51)
127	40.00 - 60.00% of mass 198	43.08
197	Less than 1.00% of mass 198	0.35
199	5.00 - 9.00% of mass 198	7.02
275	10.00 - 30.00% of mass 198	27.54
365	Greater than 1.00% of mass 198	3.48
441	Present, but less than mass 443	12.52
442	Greater than 40.00% of mass 198	85.27
443	17.00 - 23.00% of mass 442	16.52 (19.38)

Data File: /chem/MSD5.i/s063009.b/s5f3001.d

Date : 30-JUN-2009 07:20

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f3001.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 647
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	72	130.00	10385	224.00	129256	320.00	177
37.00	959	131.00	1955	225.00	32504	321.00	1766
38.00	4276	132.00	1215	226.00	3197	322.00	1196
39.00	26208	133.00	678	227.00	56656	323.00	18720
40.00	1306	134.00	4107	228.00	7592	324.00	3313
41.00	749	135.00	10263	229.00	11164	325.00	197
43.00	165	136.00	4493	230.00	1293	326.00	443
44.00	72	137.00	5357	231.00	4427	327.00	3516
45.00	734	138.00	1321	232.00	1084	328.00	1621
46.00	102	139.00	953	233.00	1180	329.00	414
47.00	42	140.00	1674	234.00	3386	330.00	54
48.00	57	141.00	16976	235.00	3690	331.00	68
49.00	2587	142.00	6028	236.00	2675	332.00	1286
50.00	85560	143.00	3601	237.00	3603	333.00	1903
51.00	335872	144.00	1000	238.00	764	334.00	11819
52.00	17744	145.00	867	239.00	2028	335.00	3262
53.00	752	146.00	3328	240.00	1524	336.00	453
54.00	55	147.00	9645	241.00	2835	337.00	44
55.00	1961	148.00	20424	242.00	6510	338.00	100
56.00	8976	149.00	4038	243.00	6729	339.00	341
57.00	23040	150.00	1506	244.00	98264	340.00	196
58.00	1303	151.00	2357	245.00	11838	341.00	2558
59.00	251	152.00	1249	246.00	20232	342.00	625
60.00	261	153.00	5854	247.00	3684	343.00	59
61.00	4477	154.00	4515	248.00	1064	344.00	53
62.00	4470	155.00	10381	249.00	3689	346.00	4589
63.00	13178	156.00	15808	250.00	844	347.00	867
64.00	1471	157.00	3173	251.00	763	348.00	47
65.00	6261	158.00	3235	252.00	874	349.00	48
66.00	540	159.00	2476	253.00	1546	350.00	189
67.00	434	160.00	5128	254.00	2842	351.00	228
68.00	5046	161.00	8668	255.00	491264	352.00	5381
69.00	295488	162.00	2695	256.00	71384	353.00	3936
70.00	1505	163.00	732	257.00	5460	354.00	5654
71.00	390	164.00	1075	258.00	29664	355.00	1220

Data File: /chem/MSD5.i/s063009.b/s5f3001.d

Date : 30-JUN-2009 07:20

Client ID: DFTPP | Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVHF|1|DFTPP

Volume Injected (uL): 1.0 | Operator: rmb

Column phase: Phenomenex ZB-5MS | Column diameter: 0.20

Data File: s5f3001.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 647
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	76	165.00	6705	259.00	4978	356.00	162
73.00	2316	166.00	6105	260.00	901	357.00	73
74.00	30232	167.00	33888	261.00	786	358.00	65
75.00	46720	168.00	17696	262.00	313	359.00	435
76.00	15856	169.00	2727	263.00	112	360.00	191
77.00	320128	170.00	1276	264.00	879	361.00	87
78.00	22136	171.00	2300	265.00	11569	363.00	46
79.00	22088	172.00	3837	266.00	1357	365.00	27024
80.00	17472	173.00	4450	267.00	493	366.00	3419
81.00	24272	174.00	8566	268.00	104	367.00	127
82.00	5976	175.00	14996	269.00	53	370.00	509
83.00	5245	176.00	4365	270.00	310	371.00	1262
84.00	535	177.00	7627	271.00	1095	372.00	9049
85.00	3936	178.00	2270	272.00	1496	373.00	2782
86.00	6015	179.00	28376	273.00	14843	374.00	205
87.00	2865	180.00	18808	274.00	36416	377.00	152
88.00	1071	181.00	10031	275.00	213760	378.00	52
89.00	671	182.00	1733	276.00	26616	383.00	2249
91.00	5025	183.00	521	277.00	18632	384.00	717
92.00	6235	184.00	2429	278.00	3208	385.00	179
93.00	37656	185.00	14364	279.00	530	389.00	59
94.00	2451	186.00	112464	280.00	145	390.00	1152
95.00	465	187.00	31680	281.00	326	391.00	680
96.00	1629	188.00	3268	282.00	379	392.00	674
97.00	293	189.00	7973	283.00	2116	395.00	68
98.00	28176	190.00	1114	284.00	1915	397.00	137
99.00	22464	191.00	3076	285.00	2977	401.00	565
100.00	1982	192.00	9202	286.00	666	402.00	3391
101.00	12666	193.00	10194	288.00	247	403.00	5247
102.00	848	194.00	2146	289.00	895	404.00	2157
103.00	3594	195.00	1397	290.00	713	405.00	407
104.00	7587	196.00	22984	291.00	379	408.00	82
105.00	7505	197.00	2688	292.00	991	410.00	239
106.00	2171	198.00	776256	293.00	3941	415.00	88
107.00	98880	199.00	54480	294.00	1054	420.00	50

Data File: /chem/MSD5.i/s063009.b/s5f3001.d

Date : 30-JUN-2009 07:20

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f3001.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 647
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
108.00	13960	200.00	4567	295.00	1328	421.00	5080
109.00	3095	201.00	3758	296.00	62392	422.00	3903
110.00	170368	203.00	6580	297.00	8324	423.00	32616
111.00	25088	204.00	30104	298.00	566	424.00	7645
112.00	3303	205.00	49624	299.00	167	425.00	604
113.00	1174	206.00	217344	301.00	786	426.00	42
114.00	575	207.00	28992	302.00	1285	427.00	63
115.00	129	208.00	6857	303.00	6955	432.00	45
116.00	5616	209.00	2169	304.00	2058	433.00	44
117.00	78584	210.00	1303	305.00	267	435.00	141
118.00	5889	211.00	8642	308.00	842	437.00	198
119.00	850	212.00	528	309.00	867	438.00	115
120.00	1304	213.00	892	310.00	829	439.00	247
121.00	458	214.00	138	311.00	89	440.00	142
122.00	6842	215.00	2943	312.00	136	441.00	97152
123.00	10293	216.00	4664	313.00	357	442.00	661888
124.00	4641	217.00	60496	314.00	2846	443.00	128248
125.00	4065	218.00	7902	315.00	6806	444.00	11741
126.00	1158	219.00	262	316.00	3679	445.00	856
127.00	334400	220.00	425	317.00	581	446.00	49
128.00	24672	221.00	44632	318.00	78		
129.00	136320	223.00	13405	319.00	57		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			Matrix:	SOIL
Lab Sample ID:	1201869908				
Client Sample:	QC for batch 880635	Client:	LANL010	Project:	QC
Client ID:	MB for batch 880635	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	880638	Inst:	MSD1.I	Dilution:	1
Run Date:	06/28/2009 16:10	Analyst:	NAG1	Inj. Vol:	.5 uL
Prep Date:	06/26/2009 21:26	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s1f2805-2.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	33.3	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	66.7	333
87-86-5	Pentachlorophenol	U	333	ug/kg	66.7	333
129-00-0	Pyrene	U	33.3	ug/kg	10.5	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	133	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	333	ug/kg	66.7	333
99-09-2	3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201869908				
Client Sample:	QC for batch 880635	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 880635	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 16:10	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2805-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	33.3	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	33.3	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.12	157	ug/kg		J
	Unknown Aldol Condensate	2.91	482	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2805-3.d
Lab Smp Id: 1201869908 Client Smp ID: SBLK01
Inj Date : 28-JUN-2009 16:10
Operator : nagl Inst ID: MSD1.i
Smp Info : |1201869908|880638|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	337511	40.0000	
* 29 Naphthalene-d8	136	4.751	4.757	(1.000)	1322068	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	642823	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1216791	40.0000	
* 91 Chrysene-d12	240	8.639	8.645	(1.000)	1018105	40.0000	
* 98 Perylene-d12	264	10.081	10.086	(1.000)	799623	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	566209	63.2823	2110
$ 5 Phenol-d5	99	3.599	3.598	(0.926)	659532	59.2870	1980
$ 20 Nitrobenzene-d5	82	4.246	4.251	(0.894)	346865	30.8211	1030
$ 39 2-Fluorobiphenyl	172	5.493	5.492	(0.916)	640873	36.5969	1220
$ 60 2,4,6-Tribromophenol	329	6.528	6.533	(1.088)	117157	51.8099	1730
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	748604	43.8173	1460

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2805-3.d
Lab Smp Id: 1201869908 Client Smp ID: SBLK01
Inj Date : 28-JUN-2009 16:10
Operator : nag1 Inst ID: MSD1.i
Smp Info : |1201869908|880638|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.887	2220230	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.122	261062	4.70332552	157	0		0	10
Unknown Aldol Condensate				CAS #:			
2.910	801786	14.4450878	482	0		0	10

Data File: /chem/MSD1.i/s062809.b/s1f2805-3.d
Date : 28-JUN-2009 16:10
Client ID: SBLK01
Sample Info: !1201869908188063811SVMFI1!SBLK01
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD1.i

Operator: nag1
Column diameter: 0.20

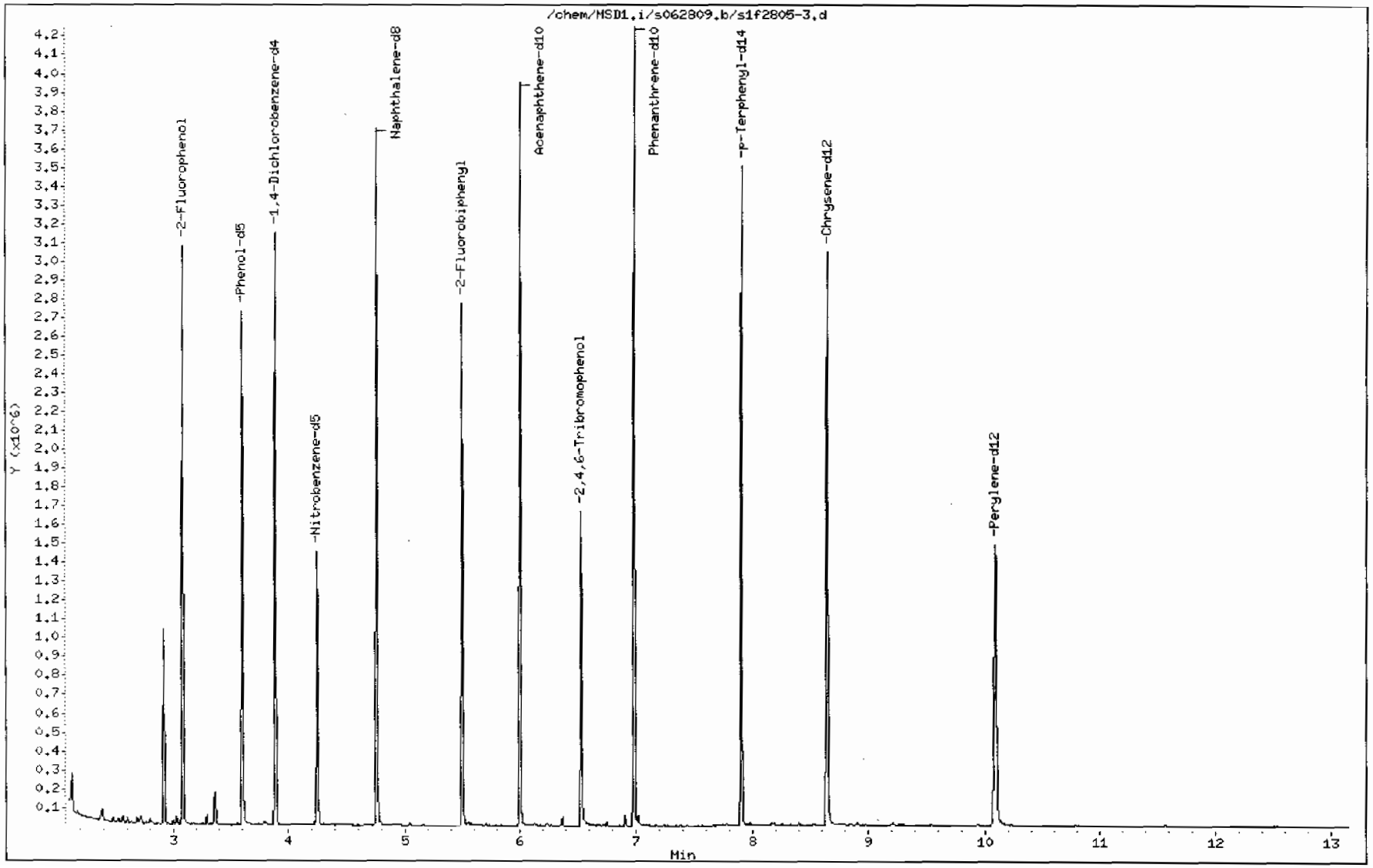

Data File: /chem/MSD1.i/s062809.b/s1f2805-3.d

Date : 28-JUN-2009 16:10

Client ID: SBLK01

Instrument: MSD1.i

Sample Info: |1201869908|880638|1|SVMF1|SBLK01

Volume Injected (uL): 0.5

Operator: nag1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2355	25	C3H5Cl0	92
Ethanol, 2-nitro-, propionate (ester)	5390-28-3	NIST05.L	21507	17	C5H9N04	147
Acetic acid, hydrazide	1068-57-1	NIST05.L	761	16	C2H6N20	74

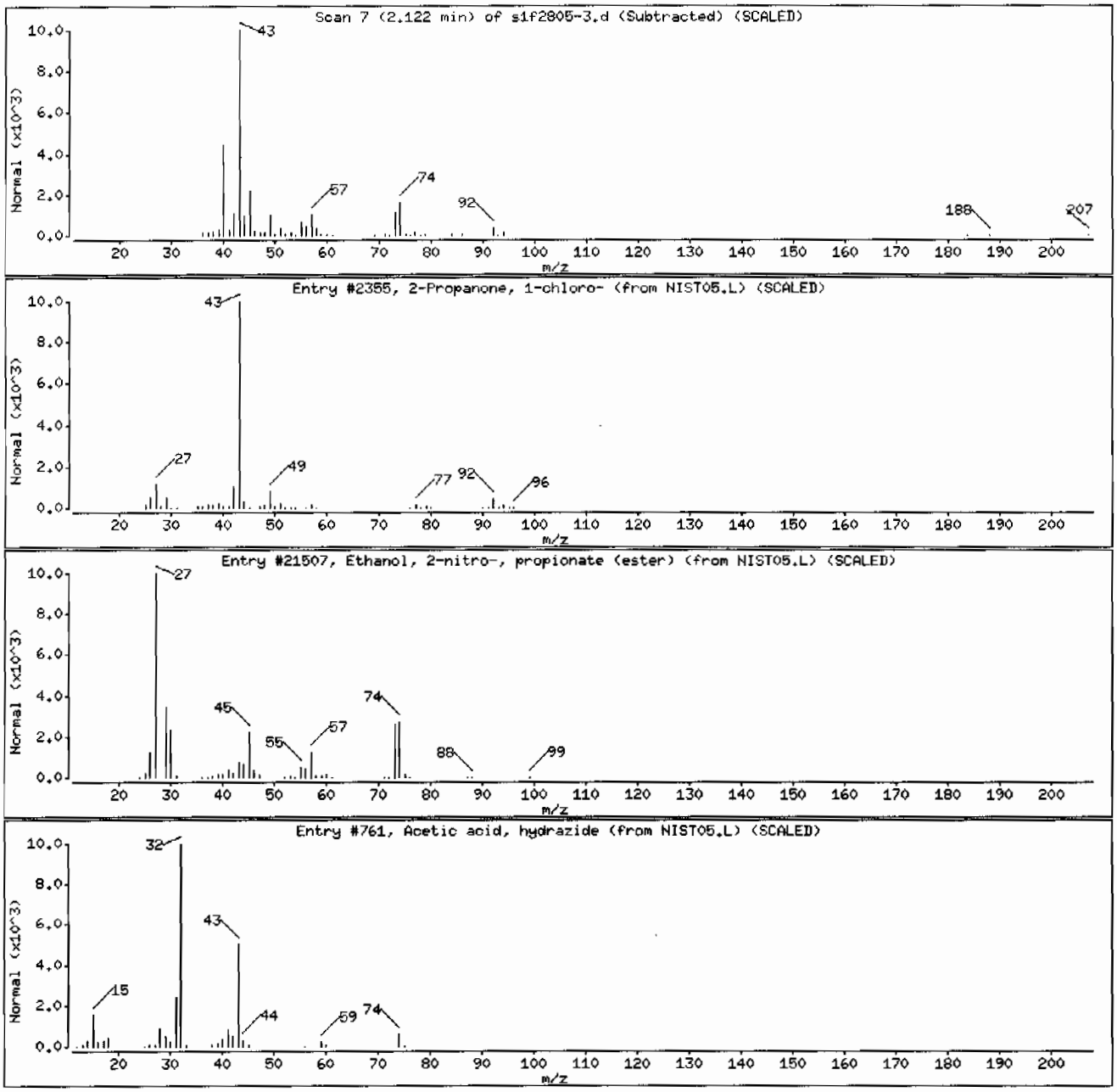

Data File: /chem/MSD1.i/s062809.b/s1f2805-3.d

Date : 28-JUN-2009 16:10

Client ID: SBLK01 Instrument: MSD1.i

Sample Info: |120186990818806381|1|SVMF|1|SBLK01

Volume Injected (uL): 0.5 Operator: nag1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Diacetamide	625-77-4	NIST05.L	3936	9	C4H7NO2	101

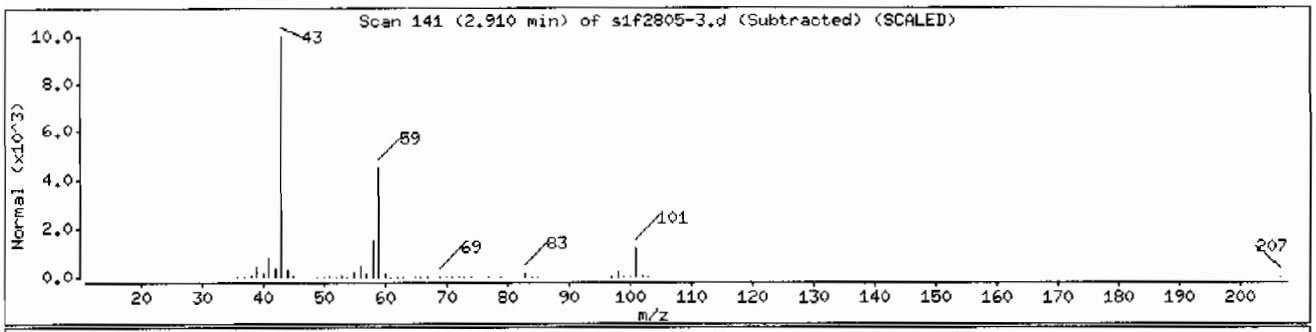

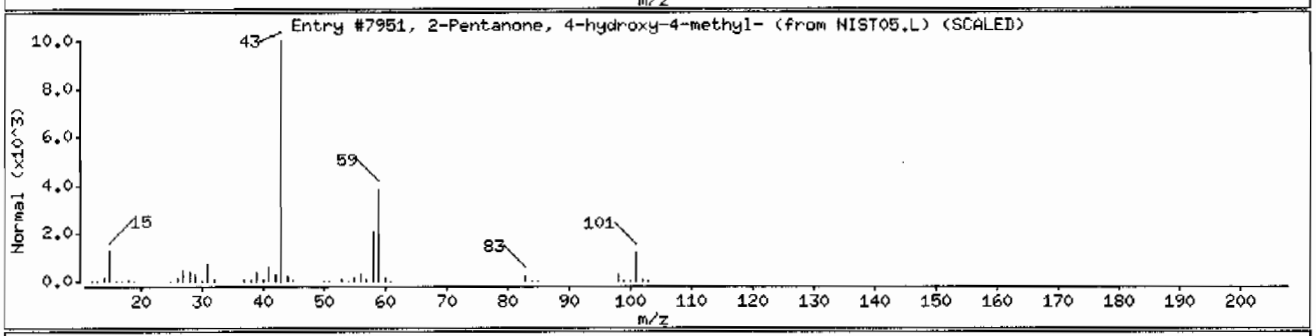

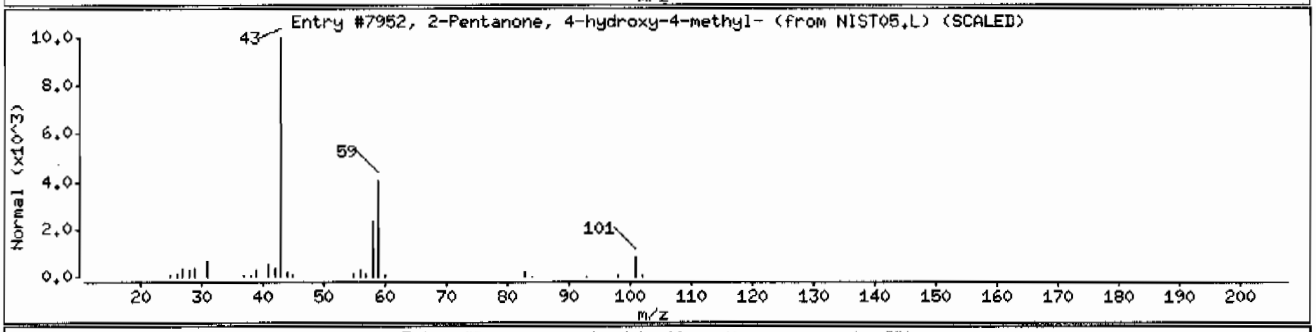

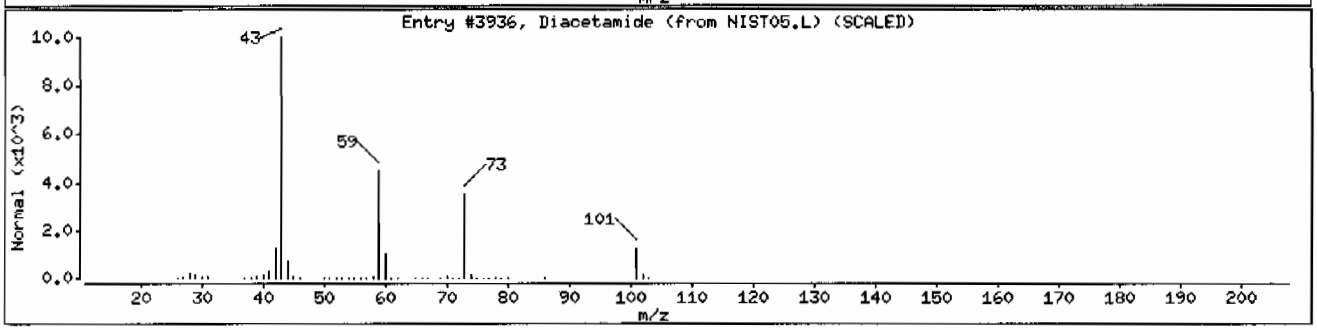

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201871589				
Client Sample:	QC for batch 881290	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881290	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881291	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	06/30/2009 09:09	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/29/2009 23:29	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5f3006-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	33.3	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	66.7	333
87-86-5	Pentachlorophenol	U	333	ug/kg	66.7	333
129-00-0	Pyrene	U	33.3	ug/kg	10.5	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	133	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	333	ug/kg	66.7	333
99-09-2	3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201871589				
Client Sample:	QC for batch 881290	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881290	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881291	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	06/30/2009 09:09	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/29/2009 23:29	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5f3006-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	33.3	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	33.3	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	306	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s063009.b/s5f3006-2.d
Lab Smp Id: 1201871589 Client Smp ID: SBLK02
Inj Date : 30-JUN-2009 09:09
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201871589|881291|1|SVMF|1|SBLK02
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Meth Date : 30-Jun-2009 08:16 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.025	4.031	(1.000)	531814	40.0000	
* 29 Naphthalene-d8	136	4.896	4.903	(1.000)	1876466	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1206683	40.0000	
* 67 Phenanthrene-d10	188	7.337	7.344	(1.000)	2281516	40.0000	
* 91 Chrysene-d12	240	9.760	9.771	(1.000)	2405778	40.0000	
* 98 Perylene-d12	264	11.525	11.538	(1.000)	2237367	40.0000	
$ 3 2-Fluorophenol	112	3.207	3.213	(0.797)	781461	66.9236	2230
$ 5 Phenol-d5	99	3.737	3.742	(0.928)	992726	64.4786	2150
$ 20 Nitrobenzene-d5	82	4.384	4.397	(0.895)	461703	33.2048	1110
$ 39 2-Fluorobiphenyl	172	5.637	5.644	(0.915)	1107442	35.4864	1180
$ 60 2,4,6-Tribromophenol	329	6.760	6.766	(1.097)	335660	68.1753	2270
$ 81 p-Terphenyl-d14	244	8.719	8.726	(0.893)	1549597	42.0882	1400

GEL Laboratories LLC

Data file : /chem/MSD5.i/s063009.b/s5f3006-2.d
Lab Smp Id: 1201871589 Client Smp ID: SBLK02
Inj Date : 30-JUN-2009 09:09
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201871589|881291|1|SVMF|1|SBLK02
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Meth Date : 30-Jun-2009 08:16 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.025	3394411	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.043	779022	9.18005942	306	0		0	10

Data File: /chem/MSD5.i/s063009.b/s5f3006-2.d
Date : 30-JUN-2009 09:09
Client ID: SBLK02
Sample Info: |120187158918812911|1|SVMF|1|SBLK02
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

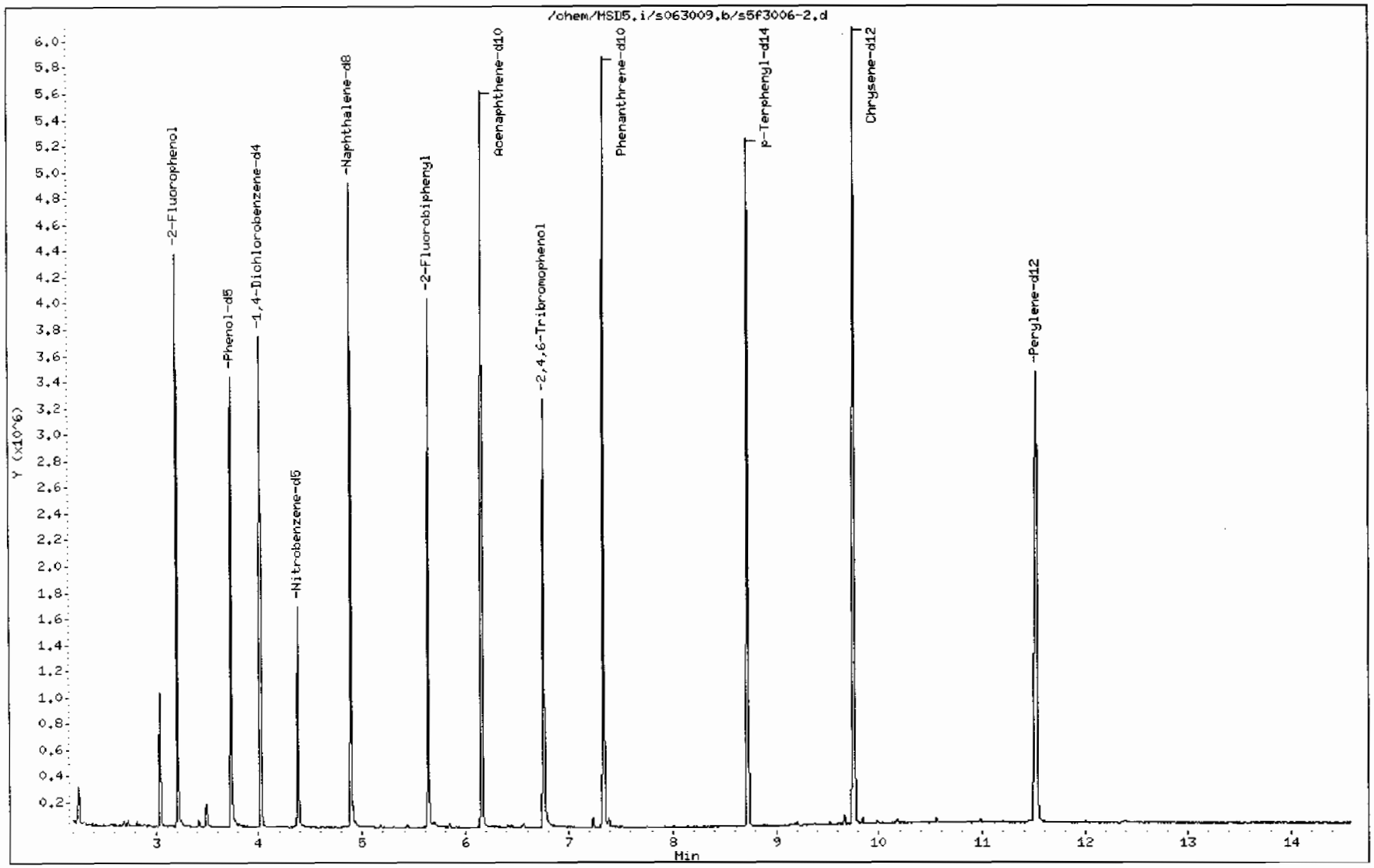

Data File: /chem/MSD5.i/s063009.b/s5f3006-2.d

Date : 30-JUN-2009 09:09

Client ID: SBLK02

Instrument: MSD5.i

Sample Info: |120187158918812911|1|SVMF|1|SBLK02

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	64	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7977	38	C6H12O2	116

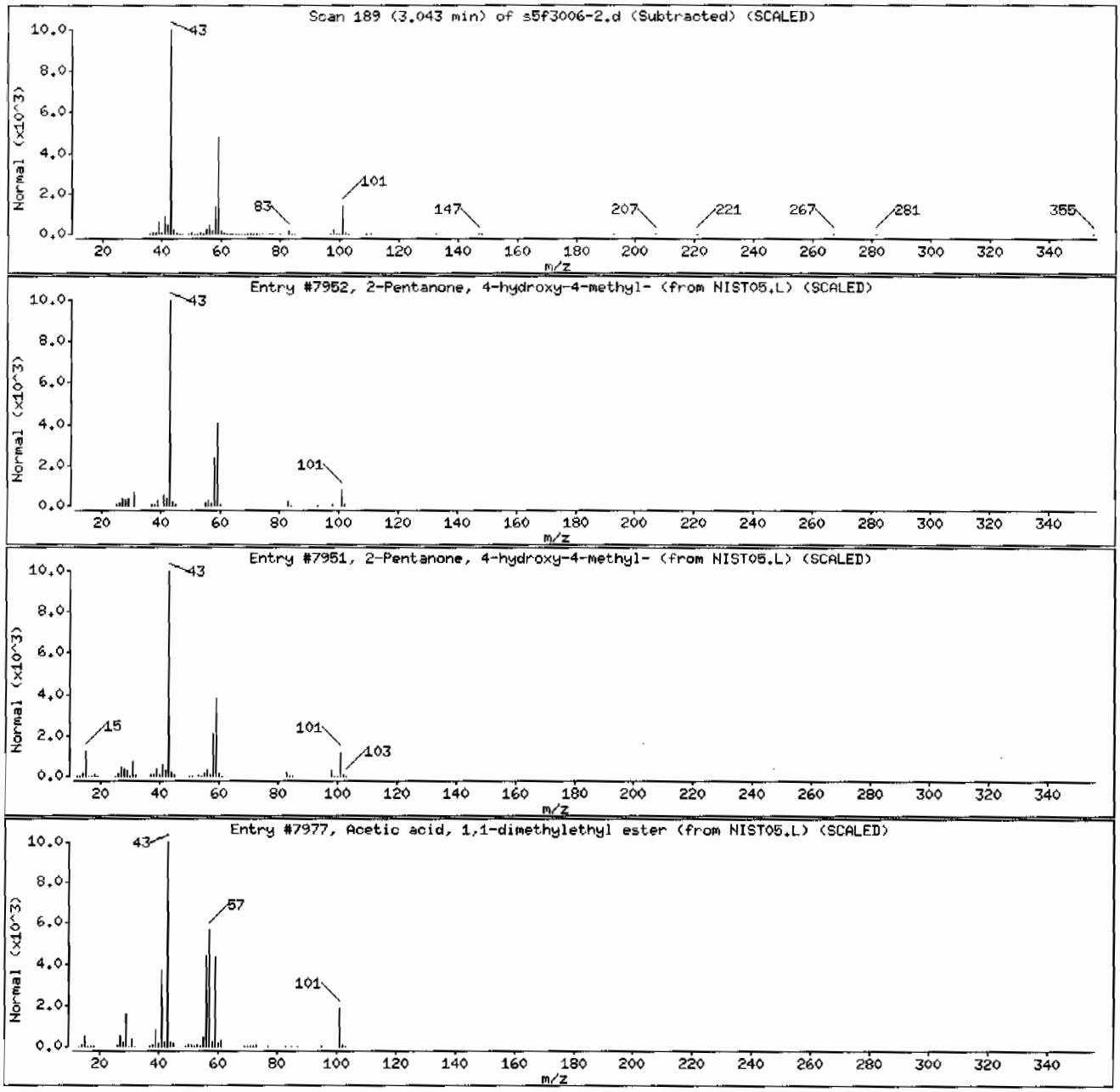

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201869909				
Client Sample:	QC for batch 880635	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 880635	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	880638	**Inst:**	MSD1.I	**Dilution:**	1
Run Date:	06/28/2009 16:34	**Analyst:**	NAG1	**Inj. Vol:**	.5 uL
Prep Date:	06/26/2009 21:26	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s1f2806-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1310	ug/kg	66.7	333
108-95-2	Phenol		1040	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1110	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		941	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1070	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1200	ug/kg	33.3	333
83-32-9	Acenaphthene		1210	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene		1290	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1490	ug/kg	66.7	333
87-86-5	Pentachlorophenol		1120	ug/kg	66.7	333
129-00-0	Pyrene		1460	ug/kg	10.5	33.3
110-86-1	Pyridine		1080	ug/kg	66.7	333
62-53-3	Aniline		1080	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether		1010	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		979	ug/kg	66.7	333
100-51-6	Benzyl alcohol		982	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		968	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1020	ug/kg	66.7	333
95-48-7	o-Cresol		1010	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1160	ug/kg	133	333
67-72-1	Hexachloroethane		933	ug/kg	66.7	333
98-95-3	Nitrobenzene		1070	ug/kg	66.7	333
78-59-1	Isophorone		1150	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1140	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol		1170	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane		1200	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1140	ug/kg	66.7	333
65-85-0	Benzoic acid	J	392	ug/kg	167	667
91-20-3	Naphthalene		1090	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1210	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		925	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1160	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1480	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1240	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1410	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1330	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline		1350	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline		1780	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			Matrix:	SOIL
Lab Sample ID:	1201869909				
Client Sample:	QC for batch 880635	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 880635	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	880638	Inst:	MSD1.I	Dilution:	1
Run Date:	06/28/2009 16:34	Analyst:	NAG1	Inj. Vol:	.5 uL
Prep Date:	06/26/2009 21:26	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s1f2806-2.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1300	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1280	ug/kg	33.3	333
208-96-8	Acenaphthylene		1400	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		701	ug/kg	127	667
132-64-9	Dibenzofuran		1330	ug/kg	66.7	333
84-66-2	Diethylphthalate		1350	ug/kg	66.7	333
86-73-7	Fluorene		1160	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1210	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol		920	ug/kg	66.7	333
100-01-6	4-Nitroaniline		1630	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1430	ug/kg	66.7	333
122-66-7	Azobenzene		1380	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1160	ug/kg	33.3	333
118-74-1	Hexachlorobenzene		1220	ug/kg	66.7	333
85-01-8	Phenanthrene		1230	ug/kg	10.0	33.3
120-12-7	Anthracene		1270	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1360	ug/kg	33.3	333
206-44-0	Fluoranthene		1260	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1620	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1270	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1340	ug/kg	100	333
218-01-9	Chrysene		1360	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1460	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1400	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1240	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1340	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1300	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1190	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1240	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1250	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1040	ug/kg	66.7	333

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Data file : /chem/MSD1.i/s062809.b/s1f2806-3.d
Lab Smp Id: 1201869909 Client Smp ID: SBLK01LCS
Inj Date : 28-JUN-2009 16:34
Operator : nagl Inst ID: MSD1.i
Smp Info : |1201869909|880638|1|SVMF|1|SBLK01LCS
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	295004	40.0000	
* 29 Naphthalene-d8	136	4.757	4.757	(1.000)	1189285	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	583548	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1095915	40.0000	
* 91 Chrysene-d12	240	8.639	8.645	(1.000)	884459	40.0000	
* 98 Perylene-d12	264	10.086	10.086	(1.000)	756719	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	503328	64.3600	2140
$ 5 Phenol-d5	99	3.604	3.598	(0.927)	572195	58.8474	1960
$ 20 Nitrobenzene-d5	82	4.251	4.251	(0.894)	313734	30.9897	1030
$ 39 2-Fluorobiphenyl	172	5.498	5.492	(0.917)	597543	37.5886	1250
$ 60 2,4,6-Tribromophenol	329	6.534	6.533	(1.089)	137218	66.8453	2230
$ 81 p-Terphenyl-d14	244	7.892	7.898	(0.914)	622303	41.9286	1400

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.616	3.610	(0.930)	315831	31.1522	1040(Q)
8 2-Chlorophenol	128	3.751	3.751	(0.965)	271029	33.3962	1110
11 1,4-Dichlorobenzene	146	3.898	3.898	(1.003)	279370	28.2201	941
17 N-Nitrosodipropylamine	70	4.122	4.128	(1.061)	182699	31.9511	1060(Q)
28 1,2,4-Trichlorobenzene	180	4.704	4.704	(0.989)	249977	31.2661	1040
33 4-Chloro-3-methylphenol	107	5.104	5.098	(1.073)	262871	35.9881	1200
47 Acenaphthene	154	6.022	6.022	(1.004)	509818	36.3167	1210
50 2,4-Dinitrotoluene	165	6.104	6.110	(1.018)	197461	38.5760	1280
52 4-Nitrophenol	139	6.040	6.034	(1.007)	107084	44.7611	1490
65 Pentachlorophenol	266	6.851	6.851	(0.981)	89854	33.6618	1120
79 Pyrene	202	7.845	7.845	(0.908)	1026550	43.8148	1460
2 Pyridine	79	2.428	2.398	(0.625)	209992	32.3564	1080
4 Aniline	66	3.669	3.675	(0.944)	170016	32.4976	1080
7 bis(2-Chloroethyl) ether	63	3.687	3.692	(0.949)	283507	30.2575	1010
9 1,3-Dichlorobenzene	146	3.857	3.857	(0.992)	287235	29.3693	979
12 Benzyl alcohol	108	3.957	3.957	(1.018)	168503	29.4642	982
13 1,2-Dichlorobenzene	146	4.004	4.004	(1.030)	263811	29.0342	968
14 bis(2-Chloroisopropyl)ether	45	4.034	4.034	(1.038)	740487	30.7333	1020
15 o-Cresol	107	4.010	4.004	(1.032)	210681	30.2281	1010
18 m,p-Cresols	107	4.104	4.104	(1.056)	319212	34.6639	1160
19 Hexachloroethane	117	4.234	4.234	(1.089)	113582	27.9893	933
21 Nitrobenzene	77	4.263	4.269	(0.896)	315550	32.1454	1070
22 Isophorone	82	4.416	4.416	(0.928)	621433	34.3667	1140
23 2-Nitrophenol	139	4.481	4.481	(0.942)	136137	34.3488	1140
24 2,4-Dimethylphenol	122	4.469	4.469	(0.939)	248240	34.9769	1160
25 bis(2-Chloroethoxy)methane	93	4.540	4.540	(0.954)	339428	35.9591	1200
26 2,4-Dichlorophenol	162	4.640	4.640	(0.975)	215478	34.2622	1140
27 Benzoic acid	105	4.504	4.522	(0.947)	62402	11.7503	392(aQR)
30 Naphthalene	128	4.769	4.769	(1.002)	773621	32.6489	1090
31 4-Chloroaniline	127	4.787	4.787	(1.006)	323062	36.2579	1210
32 Hexachlorobutadiene	225	4.834	4.834	(1.016)	144057	27.7444	925
34 2-Methylnaphthalene	142	5.251	5.251	(1.104)	545167	34.6973	1160
36 Hexachlorocyclopentadiene	237	5.351	5.351	(0.892)	127833	44.5115	1480
37 2,4,6-Trichlorophenol	196	5.440	5.434	(0.907)	161388	37.2468	1240
38 2,4,5-Trichlorophenol	196	5.469	5.463	(0.912)	190650	42.4014	1410
40 2-Chloronaphthalene	162	5.604	5.604	(0.934)	529138	39.9600	1330
42 o-Nitroaniline	65	5.657	5.657	(0.943)	214967	40.3525	1340
41 m-Nitroaniline	138	5.951	5.951	(0.992)	151219	53.4189	1780
43 Dimethylphthalate	163	5.769	5.769	(0.962)	625774	38.9442	1300
44 2,6-Dinitrotoluene	165	5.822	5.822	(0.971)	149049	38.4389	1280
45 Acenaphthylene	152	5.904	5.904	(0.984)	886520	41.8786	1400
48 2,4-Dinitrophenol	184	6.016	6.016	(1.003)	36750	21.0157	700(Q)
49 Dibenzofuran	168	6.139	6.139	(1.024)	782139	39.8115	1330
51 Diethylphthalate	149	6.251	6.251	(1.042)	688726	40.4352	1350
53 Fluorene	166	6.375	6.375	(1.063)	570007	34.7675	1160
54 4-Chlorophenylphenylether	204	6.351	6.351	(1.059)	304642	36.2955	1210
55 2-Methyl-4,6-dinitrophenol	198	6.387	6.386	(0.915)	73323	27.5999	920

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.375	6.369	(1.063)	119715	49.0383	1630
133 Diphenylamine	169	6.428	6.428	(0.921)	540328	42.9268	1430
58 1,2-Diphenylhydrazine	77	6.463	6.457	(0.926)	765817	41.3627	1380
61 4-Bromophenylphenylether	248	6.681	6.675	(0.957)	162131	34.8771	1160
63 Hexachlorobenzene	284	6.734	6.733	(0.965)	182417	36.5116	1220
68 Phenanthrene	178	6.998	6.998	(1.003)	853410	36.7786	1220
69 Anthracene	178	7.028	7.028	(1.007)	886097	38.2498	1270
72 Di-n-butylphthalate	149	7.275	7.275	(1.042)	1178731	40.9276	1360
76 Fluoranthene	202	7.710	7.710	(1.104)	982386	37.8165	1260
85 Butylbenzylphthalate	149	8.157	8.163	(0.944)	484326	48.6533	1620
89 Benzo(a)anthracene	228	8.628	8.633	(0.999)	779638	38.0352	1270
90 3,3'-Dichlorobenzidine	252	8.569	8.569	(0.992)	250314	40.3001	1340
92 Chrysene	228	8.663	8.663	(1.003)	791110	40.7837	1360
93 bis(2-Ethylhexyl)phthalate	149	8.516	8.516	(0.986)	620837	43.8756	1460
94 Di-n-octylphthalate	149	9.045	9.045	(0.897)	963278	42.0287	1400
95 Benzo(b)fluoranthene	252	9.622	9.622	(0.954)	671882	37.2953	1240
96 Benzo(k)fluoranthene	252	9.651	9.651	(0.957)	795985	40.2550	1340
97 Benzo(a)pyrene	252	10.016	10.016	(0.993)	635110	38.9815	1300
99 Indeno(1,2,3-cd)pyrene	276	11.692	11.692	(1.159)	574443	35.7729	1190
100 Dibenzo(a,h)anthracene	278	11.704	11.698	(1.160)	477617	37.3281	1240
101 Benzo(ghi)perylene	276	12.198	12.198	(1.209)	499273	37.5224	1250(Q)
1 N-Methyl-N-nitrosomethylamine	74	2.381	2.369	(0.613)	146323	39.2464	1310

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD1.i/s062809.b/s1f2806-3.d
Date : 28-JUN-2009 16:34
Client ID: SBLK01LCS
Sample Info: 1120186990918806381|SVMF1|SBLK01LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nag1
Column diameter: 0.20

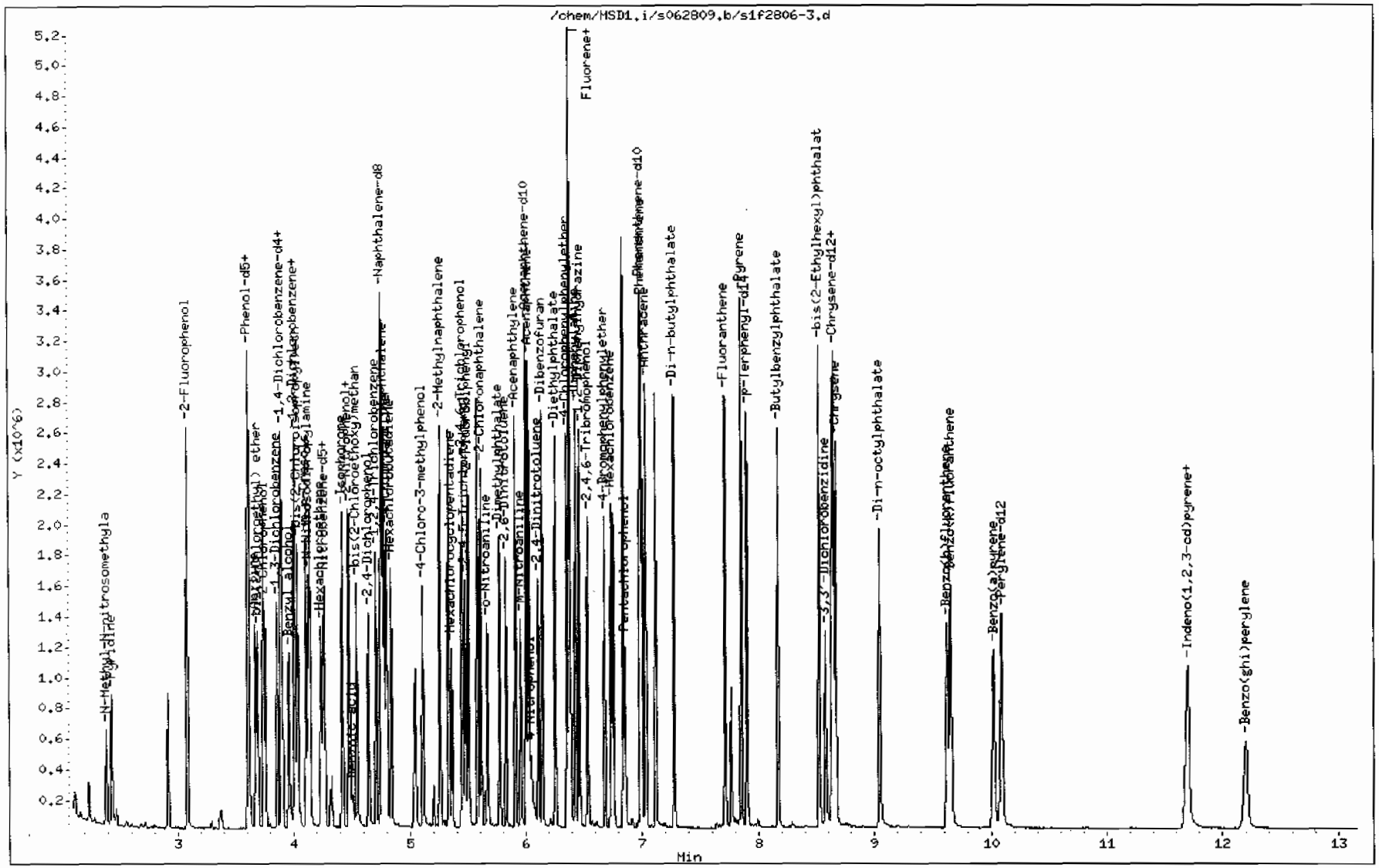

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201871590				
Client Sample:	QC for batch 881290	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881290	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881291	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	06/30/2009 09:31	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/29/2009 23:29	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5f3007-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1040	ug/kg	66.7	333
108-95-2	Phenol		943	ug/kg	66.7	333
95-57-8	2-Chlorophenol		997	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		942	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1090	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1210	ug/kg	33.3	333
83-32-9	Acenaphthene		1050	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene		1320	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1270	ug/kg	66.7	333
87-86-5	Pentachlorophenol		1440	ug/kg	66.7	333
129-00-0	Pyrene		1320	ug/kg	10.5	33.3
110-86-1	Pyridine		963	ug/kg	66.7	333
62-53-3	Aniline		1100	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether		940	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		961	ug/kg	66.7	333
100-51-6	Benzyl alcohol		763	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		987	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1000	ug/kg	66.7	333
95-48-7	o-Cresol		1040	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1100	ug/kg	133	333
67-72-1	Hexachloroethane		963	ug/kg	66.7	333
98-95-3	Nitrobenzene		1010	ug/kg	66.7	333
78-59-1	Isophorone		1060	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1030	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol		1040	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane		1000	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1070	ug/kg	66.7	333
65-85-0	Benzoic acid		801	ug/kg	167	667
91-20-3	Naphthalene		942	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1310	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1040	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1100	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1210	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1070	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1230	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1050	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*		1230	ug/kg	66.7	333
99-09-2	3-Nitroaniline		1660	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			Matrix:	SOIL
Lab Sample ID:	1201871590				
Client Sample:	QC for batch 881290	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 881290	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881291	Inst:	MSD5.I	Dilution:	1
Run Date:	06/30/2009 09:31	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/29/2009 23:29	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5f3007-2.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1210	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1230	ug/kg	33.3	333
208-96-8	Acenaphthylene		1120	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		1280	ug/kg	127	667
132-64-9	Dibenzofuran		1140	ug/kg	66.7	333
84-66-2	Diethylphthalate		1300	ug/kg	66.7	333
86-73-7	Fluorene		1120	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1140	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol		1430	ug/kg	66.7	333
100-01-6	4-Nitroaniline		2380	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1430	ug/kg	66.7	333
122-66-7	Azobenzene		1240	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1180	ug/kg	33.3	333
118-74-1	Hexachlorobenzene		1300	ug/kg	66.7	333
85-01-8	Phenanthrene		1260	ug/kg	10.0	33.3
120-12-7	Anthracene		1320	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1380	ug/kg	33.3	333
206-44-0	Fluoranthene		1410	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1360	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1370	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1300	ug/kg	100	333
218-01-9	Chrysene		1380	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1390	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1280	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1330	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1430	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1430	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1490	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1520	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1460	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1030	ug/kg	66.7	333

GEL Laboratories LLC

Data file : /chem/MSD5.i/s063009.b/s5f3007-2.d
Lab Smp Id: 1201871590 Client Smp ID: SBLK02LCS
Inj Date : 30-JUN-2009 09:31
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201871590|881291|1|SVMF|1|SBLK02LCS
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Meth Date : 30-Jun-2009 08:16 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 7 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.025	4.031	(1.000)	506505	40.0000	
* 29 Naphthalene-d8	136	4.895	4.903	(1.000)	1869644	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1162461	40.0000	
* 67 Phenanthrene-d10	188	7.342	7.344	(1.000)	2270131	40.0000	
* 91 Chrysene-d12	240	9.766	9.771	(1.000)	2474374	40.0000	
* 98 Perylene-d12	264	11.530	11.538	(1.000)	2431307	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.213	(0.798)	653287	58.7424	1960
$ 5 Phenol-d5	99	3.737	3.742	(0.928)	814595	55.5526	1850
$ 20 Nitrobenzene-d5	82	4.390	4.397	(0.897)	422707	30.5112	1020
$ 39 2-Fluorobiphenyl	172	5.637	5.644	(0.915)	918790	30.5613	1020
$ 60 2,4,6-Tribromophenol	329	6.766	6.766	(1.098)	350631	73.9252	2460
$ 81 p-Terphenyl-d14	244	8.719	8.726	(0.893)	1630081	43.0468	1430

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.748	3.752	(0.931)	411554	28.2779	942(Q)
8 2-Chlorophenol	128	3.890	3.897	(0.966)	363711	29.8981	997
11 1,4-Dichlorobenzene	146	4.037	4.046	(1.003)	409379	28.2650	942
17 N-Nitrosodipropylamine	70	4.260	4.267	(1.058)	257418	32.8433	1090(Q)
28 1,2,4-Trichlorobenzene	180	4.843	4.850	(0.989)	400151	30.9145	1030
33 4-Chloro-3-methylphenol	107	5.248	5.245	(1.072)	360429	36.1700	1200
47 Acenaphthene	154	6.184	6.189	(1.004)	750309	31.5915	1050
50 2,4-Dinitrotoluene	165	6.272	6.275	(1.018)	364650	39.6412	1320
52 4-Nitrophenol	139	6.207	6.203	(1.008)	156727	38.0227	1270
65 Pentachlorophenol	266	7.172	7.171	(0.977)	238696	43.0947	1440
79 Pyrene	202	8.625	8.630	(0.883)	2143884	39.7167	1320
2 Pyridine	79	2.560	2.539	(0.636)	252826	28.8767	962
4 Aniline	66	3.807	3.815	(0.946)	209162	32.8915	1100
7 bis(2-Chloroethyl) ether	63	3.819	3.829	(0.949)	316419	28.2090	940
9 1,3-Dichlorobenzene	146	3.990	3.998	(0.991)	419552	28.8186	961
12 Benzyl alcohol	108	4.096	4.099	(1.018)	175841	22.9041	763
13 1,2-Dichlorobenzene	146	4.143	4.147	(1.029)	398544	29.6168	987
14 bis(2-Chloroisopropyl)ether	45	4.166	4.176	(1.035)	783770	30.0223	1000
15 o-Cresol	107	4.148	4.147	(1.031)	282610	31.2305	1040
18 m,p-Cresols	107	4.243	4.248	(1.054)	400114	33.0632	1100
19 Hexachloroethane	117	4.372	4.378	(1.086)	155109	28.8758	962
21 Nitrobenzene	77	4.401	4.412	(0.899)	389666	30.1581	1000
22 Isophorone	82	4.554	4.561	(0.930)	759081	31.7412	1060
23 2-Nitrophenol	139	4.619	4.624	(0.944)	188130	31.0157	1030
24 2,4-Dimethylphenol	122	4.607	4.614	(0.941)	327244	31.2576	1040
25 bis(2-Chloroethoxy)methane	93	4.672	4.681	(0.954)	410668	30.0539	1000
26 2,4-Dichlorophenol	162	4.784	4.787	(0.977)	334924	32.1868	1070
27 Benzoic acid	105	4.690	4.677	(0.958)	79010	24.0219	801
30 Naphthalene	128	4.913	4.917	(1.004)	1029149	28.2549	942(Q)
31 4-Chloroaniline	127	4.931	4.932	(1.007)	485294	39.2729	1310
32 Hexachlorobutadiene	225	4.978	4.980	(1.017)	295049	31.2271	1040
34 2-Methylnaphthalene	142	5.395	5.399	(1.102)	726014	33.0894	1100
36 Hexachlorocyclopentadiene	237	5.495	5.505	(0.892)	189772	36.1880	1210
37 2,4,6-Trichlorophenol	196	5.584	5.587	(0.906)	289383	32.1704	1070
38 2,4,5-Trichlorophenol	196	5.619	5.616	(0.912)	356787	36.9588	1230
40 2-Chloronaphthalene	162	5.748	5.755	(0.933)	781905	31.6085	1050
42 o-Nitroaniline	65	5.807	5.813	(0.943)	290283	36.9058	1230
41 m-Nitroaniline	138	6.107	6.112	(0.991)	218831	49.9283	1660
43 Dimethylphthalate	163	5.907	5.919	(0.959)	1068194	36.1744	1200
44 2,6-Dinitrotoluene	165	5.972	5.977	(0.969)	259995	36.9802	1230
45 Acenaphthylene	152	6.060	6.063	(0.984)	1221559	33.5160	1120
48 2,4-Dinitrophenol	184	6.178	6.184	(1.003)	94704	38.3165	1280(Q)
49 Dibenzofuran	168	6.307	6.314	(1.024)	1149104	34.1604	1140
51 Diethylphthalate	149	6.425	6.429	(1.043)	1130571	39.0891	1300
53 Fluorene	166	6.572	6.579	(1.067)	973978	33.6929	1120
54 4-Chlorophenylphenylether	204	6.548	6.550	(1.063)	575363	34.1355	1140
55 2-Methyl-4,6-dinitrophenol	198	6.589	6.593	(0.897)	206954	42.9438	1430

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.572	6.579	(1.067)	217227	71.4088	2380(R)
133 Diphenylamine	169	6.637	6.641	(0.904)	971410	42.9857	1430
58 1,2-Diphenylhydrazine	77	6.672	6.680	(0.909)	1069062	37.2611	1240
61 4-Bromophenylphenylether	248	6.937	6.945	(0.945)	383009	35.2982	1180
63 Hexachlorobenzene	284	7.013	7.022	(0.955)	445636	38.9970	1300
68 Phenanthrene	178	7.360	7.368	(1.002)	1604983	37.7403	1260
69 Anthracene	178	7.407	7.412	(1.009)	1658613	39.5147	1320
72 Di-n-butylphthalate	149	7.754	7.758	(1.056)	1998441	41.3330	1380
76 Fluoranthene	202	8.407	8.413	(1.145)	2054855	42.4162	1410
85 Butylbenzylphthalate	149	9.148	9.155	(0.937)	942649	40.7439	1360
89 Benzo(a)anthracene	228	9.754	9.757	(0.999)	2189711	41.2434	1370
90 3,3'-Dichlorobenzidine	252	9.695	9.689	(0.993)	692825	39.0552	1300
92 Chrysene	228	9.795	9.800	(1.003)	2010898	41.3468	1380
93 bis(2-Ethylhexyl)phthalate	149	9.672	9.675	(0.990)	1327965	41.8268	1390
94 Di-n-octylphthalate	149	10.348	10.359	(0.897)	2133590	38.3901	1280
95 Benzo(b)fluoranthene	252	10.983	10.989	(0.953)	2146348	39.9726	1330
96 Benzo(k)fluoranthene	252	11.019	11.028	(0.956)	2261417	42.8755	1430
97 Benzo(a)pyrene	252	11.448	11.452	(0.993)	2038029	42.8764	1430
99 Indeno(1,2,3-cd)pyrene	276	13.401	13.416	(1.162)	2128971	44.5721	1480
100 Dibenzo(a,h)anthracene	278	13.418	13.426	(1.164)	1771593	45.5011	1520
101 Benzo(ghi)perylene	276	13.977	13.989	(1.212)	1788717	43.9264	1460
1 N-Methyl-N-nitrosomethylamine	74	2.513	2.505	(0.624)	185274	31.3119	1040

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD5.i/s063009.b/s5f3007-2.d
Date : 30-JUN-2009 09:31
Client ID: SBLK02LCS
Sample Info: 1120187159018812911|SVMF1|SBLK02LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

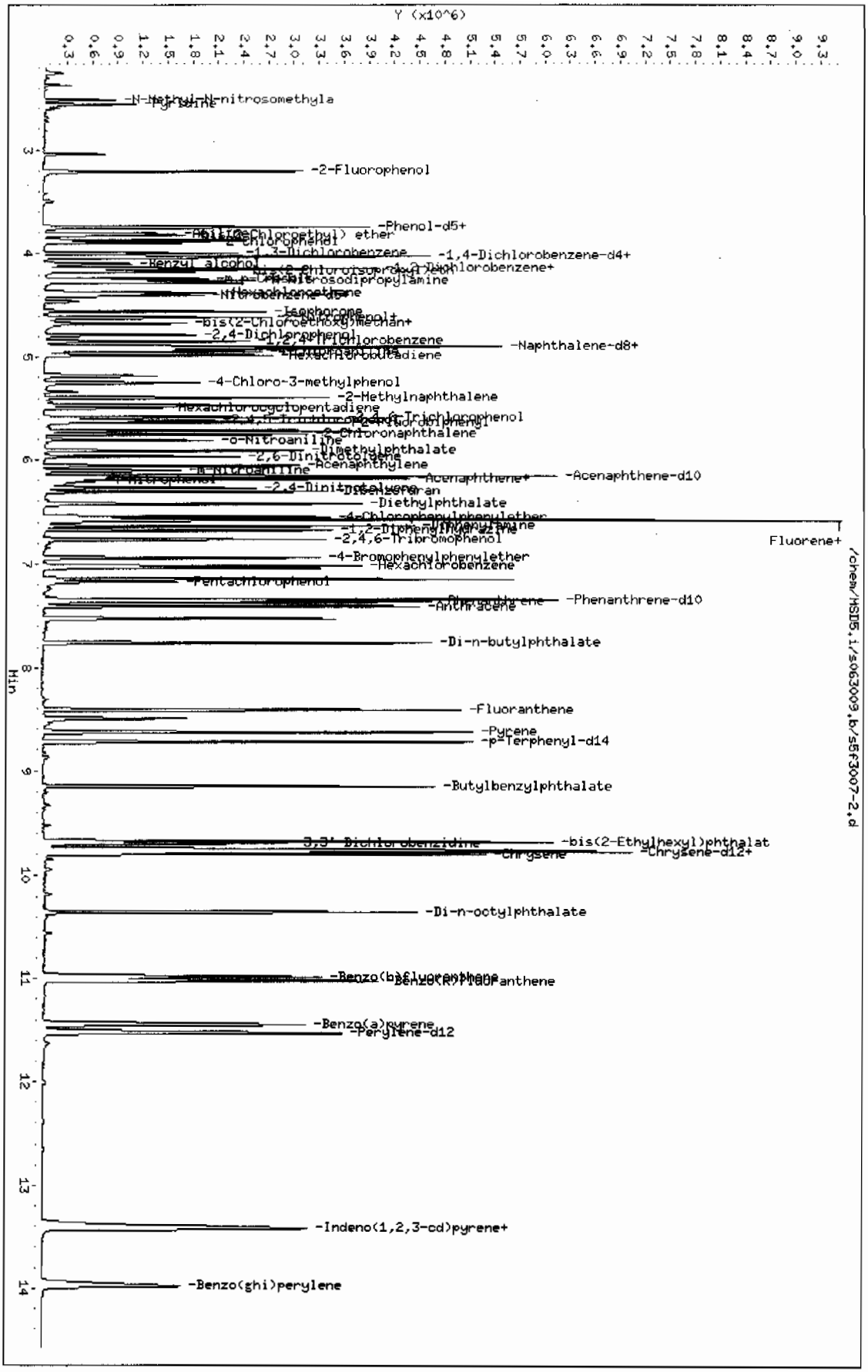

Page 1

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			Matrix:	SOIL
Lab Sample ID:	1201871595				
Client Sample:	QC for batch 881290	Client:	LANL010	Project:	QC
Client ID:	LCSD for batch 881290	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881291	Inst:	MSD5.I	Dilution:	1
Run Date:	06/30/2009 09:53	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/29/2009 23:29	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5f3008-2.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1330	ug/kg	66.7	333
108-95-2	Phenol		1290	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1320	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1190	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1460	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1480	ug/kg	33.3	333
83-32-9	Acenaphthene		1300	ug/kg	11.1	33.3
121-14-2	2,4-Dinitrotoluene		1440	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1320	ug/kg	66.7	333
87-86-5	Pentachlorophenol		1490	ug/kg	66.7	333
129-00-0	Pyrene		1370	ug/kg	10.5	33.3
110-86-1	Pyridine		1240	ug/kg	66.7	333
62-53-3	Aniline		1500	ug/kg	117	333
111-44-4	bis(2-Chloroethyl) ether		1220	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1220	ug/kg	66.7	333
100-51-6	Benzyl alcohol		1010	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1260	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1290	ug/kg	66.7	333
95-48-7	o-Cresol		1330	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1480	ug/kg	133	333
67-72-1	Hexachloroethane		1250	ug/kg	66.7	333
98-95-3	Nitrobenzene		1310	ug/kg	66.7	333
78-59-1	Isophorone		1370	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1360	ug/kg	33.3	333
105-67-9	2,4-Dimethylphenol		1330	ug/kg	66.7	333
111-91-1	bis(2-Chloroethoxy)methane		1320	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1410	ug/kg	66.7	333
65-85-0	Benzoic acid		1360	ug/kg	167	667
91-20-3	Naphthalene		1200	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1660	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1330	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1430	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1790	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1310	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1510	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1370	ug/kg	11.7	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*		1470	ug/kg	66.7	333
99-09-2	3-Nitroaniline		1830	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			Matrix:	SOIL
Lab Sample ID:	1201871595				
Client Sample:	QC for batch 881290	Client:	LANL010	Project:	QC
Client ID:	LCSD for batch 881290	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881291	Inst:	MSD5.I	Dilution:	1
Run Date:	06/30/2009 09:53	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/29/2009 23:29	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5f3008-2.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1370	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1410	ug/kg	33.3	333
208-96-8	Acenaphthylene		1390	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		1360	ug/kg	127	667
132-64-9	Dibenzofuran		1410	ug/kg	66.7	333
84-66-2	Diethylphthalate		1410	ug/kg	66.7	333
86-73-7	Fluorene		1330	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1360	ug/kg	33.3	333
534-52-1	2-Methyl-4,6-dinitrophenol		1530	ug/kg	66.7	333
100-01-6	4-Nitroaniline		2540	ug/kg	66.7	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1580	ug/kg	66.7	333
122-66-7	Azobenzene		1440	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1330	ug/kg	33.3	333
118-74-1	Hexachlorobenzene		1410	ug/kg	66.7	333
85-01-8	Phenanthrene		1360	ug/kg	10.0	33.3
120-12-7	Anthracene		1410	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1450	ug/kg	33.3	333
206-44-0	Fluoranthene		1470	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1420	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1410	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1290	ug/kg	100	333
218-01-9	Chrysene		1410	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1450	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1390	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1390	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1500	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1480	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1470	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1510	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1430	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1320	ug/kg	66.7	333

GEL Laboratories LLC

Data file : /chem/MSD5.i/s063009.b/s5f3008-2.d
Lab Smp Id: 1201871595 Client Smp ID: SBLK02LCSD
Inj Date : 30-JUN-2009 09:53
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201871595|881291|1|SVMF|1|SBLK02LCSD
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s063009.b/MSD5-M8270C-062509.m
Meth Date : 30-Jun-2009 08:16 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 8 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2455.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.025	4.031	(1.000)	522327	40.0000	
* 29 Naphthalene-d8	136	4.896	4.903	(1.000)	1953420	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1193341	40.0000	
* 67 Phenanthrene-d10	188	7.342	7.344	(1.000)	2321866	40.0000	
* 91 Chrysene-d12	240	9.766	9.771	(1.000)	2485658	40.0000	
* 98 Perylene-d12	264	11.524	11.538	(1.000)	2346413	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.213	(0.798)	873927	76.2016	2540
$ 5 Phenol-d5	99	3.743	3.742	(0.930)	1096267	72.4969	2420
$ 20 Nitrobenzene-d5	82	4.390	4.397	(0.897)	578457	39.9627	1330
$ 39 2-Fluorobiphenyl	172	5.643	5.644	(0.916)	1200108	38.8856	1300
$ 60 2,4,6-Tribromophenol	329	6.766	6.766	(1.098)	376795	77.3857	2580
$ 81 p-Terphenyl-d14	244	8.719	8.726	(0.893)	1704903	44.8183	1490

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.749	3.752	(0.931)	581500	38.7446	1290(Q)
8 2-Chlorophenol	128	3.890	3.897	(0.966)	496346	39.5652	1320
11 1,4-Dichlorobenzene	146	4.037	4.046	(1.003)	532632	35.6609	1190
17 N-Nitrosodipropylamine	70	4.260	4.267	(1.058)	353216	43.7008	1460(Q)
28 1,2,4-Trichlorobenzene	180	4.848	4.850	(0.990)	535977	39.6317	1320
33 4-Chloro-3-methylphenol	107	5.248	5.245	(1.072)	461738	44.3494	1480
47 Acenaphthene	154	6.184	6.189	(1.004)	951032	39.0066	1300
50 2,4-Dinitrotoluene	165	6.272	6.275	(1.018)	406612	43.0592	1440
52 4-Nitrophenol	139	6.207	6.203	(1.008)	167102	39.4908	1320
65 Pentachlorophenol	266	7.172	7.171	(0.977)	253646	44.5636	1480
79 Pyrene	202	8.625	8.630	(0.883)	2233016	41.1801	1370
2 Pyridine	79	2.560	2.539	(0.636)	335804	37.1924	1240
4 Aniline	66	3.807	3.815	(0.946)	294848	44.9616	1500(Q)
7 bis(2-Chloroethyl) ether	63	3.819	3.829	(0.949)	422803	36.5515	1220(Q)
9 1,3-Dichlorobenzene	146	3.990	3.998	(0.991)	548407	36.5285	1220
12 Benzyl alcohol	108	4.096	4.099	(1.018)	239117	30.2027	1010
13 1,2-Dichlorobenzene	146	4.143	4.147	(1.029)	525919	37.8984	1260
14 bis(2-Chloroisopropyl)ether	45	4.166	4.176	(1.035)	1039964	38.6291	1290
15 o-Cresol	107	4.148	4.147	(1.031)	373021	39.9730	1330
18 m,p-Cresols	107	4.243	4.248	(1.054)	553872	44.3824	1480
19 Hexachloroethane	117	4.372	4.378	(1.086)	207209	37.4065	1250
21 Nitrobenzene	77	4.401	4.412	(0.899)	529655	39.2344	1310
22 Isophorone	82	4.554	4.561	(0.930)	1025896	41.0584	1370
23 2-Nitrophenol	139	4.619	4.624	(0.944)	258389	40.7721	1360
24 2,4-Dimethylphenol	122	4.607	4.614	(0.941)	435700	39.8324	1330
25 bis(2-Chloroethoxy)methane	93	4.672	4.681	(0.954)	566190	39.6584	1320
26 2,4-Dichlorophenol	162	4.784	4.787	(0.977)	460582	42.3645	1410
27 Benzoic acid	105	4.666	4.677	(0.953)	199831	40.7323	1360
30 Naphthalene	128	4.913	4.917	(1.004)	1374628	36.1214	1200(Q)
31 4-Chloroaniline	127	4.931	4.932	(1.007)	674529	49.7969	1660
32 Hexachlorobutadiene	225	4.978	4.980	(1.017)	393252	39.8358	1330
34 2-Methylnaphthalene	142	5.395	5.399	(1.102)	981189	42.8016	1430
36 Hexachlorocyclopentadiene	237	5.495	5.505	(0.892)	296674	53.6939	1790
37 2,4,6-Trichlorophenol	196	5.584	5.587	(0.906)	363572	39.3720	1310
38 2,4,5-Trichlorophenol	196	5.619	5.616	(0.912)	449935	45.4019	1510
40 2-Chloronaphthalene	162	5.748	5.755	(0.933)	1043518	41.0926	1370
42 o-Nitroaniline	65	5.807	5.813	(0.943)	355549	44.0339	1470
41 m-Nitroaniline	138	6.107	6.112	(0.991)	253334	54.7783	1820
43 Dimethylphthalate	163	5.913	5.919	(0.960)	1248236	41.1777	1370
44 2,6-Dinitrotoluene	165	5.972	5.977	(0.969)	305796	42.3693	1410
45 Acenaphthylene	152	6.060	6.063	(0.984)	1555143	41.5644	1380
48 2,4-Dinitrophenol	184	6.184	6.184	(1.004)	106994	40.8975	1360(Q)
49 Dibenzofuran	168	6.307	6.314	(1.024)	1464082	42.3978	1410
51 Diethylphthalate	149	6.425	6.429	(1.043)	1254588	42.2545	1410
53 Fluorene	166	6.572	6.579	(1.067)	1180558	39.7823	1330
54 4-Chlorophenylphenylether	204	6.548	6.550	(1.063)	704907	40.7390	1360
55 2-Methyl-4,6-dinitrophenol	198	6.590	6.593	(0.897)	228121	45.7773	1520

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.572	6.579	(1.067)	237737	76.1289	2540(R)
133 Diphenylamine	169	6.637	6.641	(0.904)	1094092	47.3357	1580
58 1,2-Diphenylhydrazine	77	6.672	6.680	(0.909)	1264096	43.0771	1440
61 4-Bromophenylphenylether	248	6.942	6.945	(0.946)	442638	39.8848	1330
63 Hexachlorobenzene	284	7.013	7.022	(0.955)	492764	42.1603	1400
68 Phenanthrene	178	7.360	7.368	(1.002)	1768727	40.6639	1360
69 Anthracene	178	7.407	7.412	(1.009)	1818082	42.3488	1410
72 Di-n-butylphthalate	149	7.754	7.758	(1.056)	2149481	43.4663	1450
76 Fluoranthene	202	8.407	8.413	(1.145)	2191643	44.2318	1470
85 Butylbenzylphthalate	149	9.148	9.155	(0.937)	990303	42.6094	1420
89 Benzo(a)anthracene	228	9.754	9.757	(0.999)	2258302	42.3423	1410
90 3,3'-Dichlorobenzidine	252	9.695	9.689	(0.993)	688357	38.6272	1290
92 Chrysene	228	9.795	9.800	(1.003)	2065834	42.2835	1410
93 bis(2-Ethylhexyl)phthalate	149	9.672	9.675	(0.990)	1386830	43.4826	1450
94 Di-n-octylphthalate	149	10.348	10.359	(0.898)	2234093	41.6528	1390
95 Benzo(b)fluoranthene	252	10.983	10.989	(0.953)	2162708	41.7345	1390
96 Benzo(k)fluoranthene	252	11.019	11.028	(0.956)	2290847	45.0049	1500
97 Benzo(a)pyrene	252	11.442	11.452	(0.993)	2037195	44.4096	1480
99 Indeno(1,2,3-cd)pyrene	276	13.401	13.416	(1.163)	2032988	44.1026	1470
100 Dibenzo(a,h)anthracene	278	13.418	13.426	(1.164)	1700285	45.2496	1510
101 Benzo(ghi)perylene	276	13.977	13.989	(1.213)	1680805	42.7697	1420
1 N-Methyl-N-nitrosomethylamine	74	2.513	2.505	(0.624)	243651	39.9306	1330

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD5.i/s063009.b/s5f3008-2.d
Date : 30-JUN-2009 09:53
Client ID: SBLK02LCSD
Sample Info: 1120187159518812911|1|SVHF|1|SBLK02LCSD
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RHB
Column diameter: 0.20

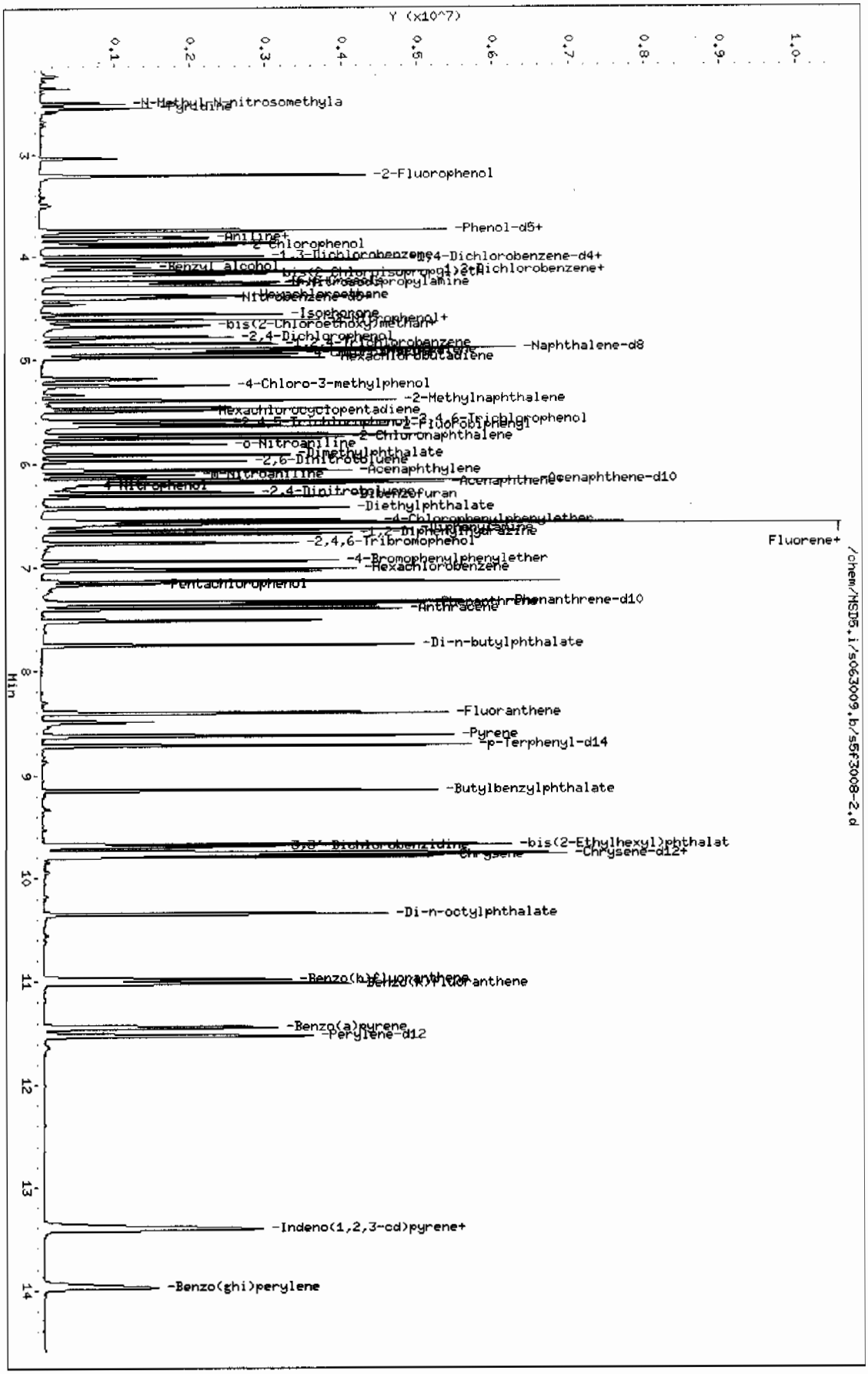

Page 1

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 880635 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201869908 MB	26-JUN-2009 21:26:44	30	1	0.03333
1201869909 LCS	26-JUN-2009 21:26:44	30	1	0.03333
231671005 - 2	26-JUN-2009 21:26:44	30.04	1	0.03329
232348001	26-JUN-2009 21:26:44	30	1	0.03333
1201869910 MS (232348001)	26-JUN-2009 21:26:44	30.08	1	0.03324
1201869911 MSD (232348001)	26-JUN-2009 21:26:44	30	1	0.03333
232348002	26-JUN-2009 21:26:44	30	1	0.03333
232348003	26-JUN-2009 21:26:44	30.05	1	0.03328
232348004	26-JUN-2009 21:26:44	30	1	0.03333
232357001	26-JUN-2009 21:26:44	30.02	1	0.03331
232357002	26-JUN-2009 21:26:44	30.07	1	0.03326
232363001	26-JUN-2009 21:26:44	30	1	0.03333
232363002	26-JUN-2009 21:26:44	30	1	0.03333
232363003	26-JUN-2009 21:26:44	30	1	0.03333
232363004	26-JUN-2009 21:26:44	30.08	1	0.03324
232363005	26-JUN-2009 21:26:44	30.04	1	0.03329
232363006	26-JUN-2009 21:26:44	30.03	1	0.0333
232363007	26-JUN-2009 21:26:44	30	1	0.03333
232363008	26-JUN-2009 21:26:44	30	1	0.03333
232363009	26-JUN-2009 21:26:44	30.02	1	0.03331
232363010	26-JUN-2009 21:26:44	30	1	0.03333
232363011	26-JUN-2009 21:26:44	30.01	1	0.03332

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201869909	BENZIDINE LCS	UE090608-18	1	mL
LCS	1201869909	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
MS	1201869910	BENZIDINE LCS	UE090608-18	1	mL
MS	1201869910	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
MSD	1201869911	BENZIDINE LCS	UE090608-18	1	mL
MSD	1201869911	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1140603-D	150	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: JAM

Final Solvent: CH2Cl2

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 881290 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201871589 MB	29-JUN-2009 23:29:08	30	1	0.03333
1201871590 LCS	29-JUN-2009 23:29:08	30	1	0.03333
1201871595 LCSD	29-JUN-2009 23:29:08	30	1	0.03333
232151010 - 2	29-JUN-2009 23:29:08	15	1	0.06667
232357002 - 2	29-JUN-2009 23:29:08	30	1	0.03333

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201871590	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
LCS	1201871590	BENZIDINE LCS	UE090622-18	1	mL
LCSD	1201871595	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
LCSD	1201871595	BENZIDINE LCS	UE090622-18	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1143854-D	150	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: AAW

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD1

DATE: 06/19/2009 METHOD: See raw data OPERATOR: JMB3 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:116462-D-D
Multiplier Voltage: 1094 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090526-01 Internal Std ID: WBN090607-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD1.i/s061909.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s1b2208.d	WBN090206-05.1	JMB3	22-FEB-2009 19:22	40PPM	s022209	1.0	MEGAICAL	Used for peak location.
s1b2313.d	WBN090126-06.1	JMB3	23-FEB-2009 21:55	40PPM	s022309	1.0	APICAL	Used for peak location.
s1b2324.d	WBN090106-09	JMB3	24-FEB-2009 02:13	120PPM	s022309	1.0	PESTICAL	Used for peak location.
s1b2332.d	WBN090129-14	JMB3	24-FEB-2009 05:16	1250 PPM	s022309	1.0	HEXICAL	Used for peak location.
s1b2342.d	UBN090126-07	JMB3	24-FEB-2009 09:11	120 PPM	s022309	1.0	NEVICAL	Used for peak location.
s1f1901-D.d	WBN090526-01	JMB3	19-JUN-2009 09:41	50 PPM	s061909	1.0	DFTPP	Use; 8270D MEGA/AP ICAL & ICV
s1f1901.d	WBN090526-01	JMB3	19-JUN-2009 09:41	50 PPM	s061909	1.0	DFTPP	Use; 8270C MEGA/AP ICAL & ICV
s1f1902.d	instr blk	nagl	19-JUN-2009 09:57	-------	s061909	1.0	INSTR BLK	IB
s1f1903.d	WBN090602-08	nagl	19-JUN-2009 10:25	1 PPM	s061909	1.0	MEGAICAL	USE; LEV 1
s1f1904.d	WBN090602-07	nagl	19-JUN-2009 10:57	10 PPM	s061909	1.0	MEGAICAL	USE; LEV 2
s1f1905.d	WBN090602-06	nagl	19-JUN-2009 11:27	20 PPM	s061909	1.0	MEGAICAL	USE; LEV 3
s1f1906.d	WBN090602-05.1	nagl	19-JUN-2009 11:55	40 PPM	s061909	1.0	MEGAICAL	USE; LEV 4
s1f1907.d	WBN090602-04	nagl	19-JUN-2009 12:25	50 PPM	s061909	1.0	MEGAICAL	USE; LEV 5
s1f1908.d	WBN090602-03	nagl	19-JUN-2009 12:54	80 PPM	s061909	1.0	MEGAICAL	USE; LEV 6
s1f1909.d	WBN090602-02	nagl	19-JUN-2009 13:23	100 PPM	s061909	1.0	MEGAICAL	USE; LEV 7
s1f1910.d	WBN090602-01	nagl	19-JUN-2009 13:54	120 PPM	s061909	1.0	MEGAICAL	USE; LEV 8
s1f1911-AQA.d	WBN090602-09.1	nagl	19-JUN-2009 14:24	40 PPM	s061909	1.0	MEGAICV	USE; AQA ICV ***207/120/125/146/26 >15% RSD
s1f1911-BOE.d	WBN090602-09.1	nagl	19-JUN-2009 14:24	40 PPM	s061909	1.0	MEGAICV	USE; BOE ICV ***207/120/125/146/26 >15% RSD ***
s1f1911-D.d	WBN090602-09.1	nagl	19-JUN-2009 14:24	40 PPM	s061909	1.0	MEGAICV	USE; 8270D ICV ***207/125 >20% RSD*** <20% OUTLIERS

s1f1911.d	WBN090602-09.1	nag1	19-JUN-2009 14:24	40 PPM	s061909		1.0	MEGAICV	PASSED USE AQA ICV
s1f1912.d	instr blk	nag1	19-JUN-2009 14:53	-------	s061909		1.0	INSTR BLK	IB
s1f1913.d	WBN090528-07	nag1	19-JUN-2009 15:17	10 PPM	s061909		1.0	AP12ICAL	USE; LEV 2
s1f1914.d	WBN090528-06	nag1	19-JUN-2009 15:42	20 PPM	s061909		1.0	AP12ICAL	USE; LEV 3
s1f1915.d	WBN090528-05.1	nag1	19-JUN-2009 16:07	40 PPM	s061909		1.0	AP12ICAL	USE; LEV 4
s1f1916.d	WBN090528-04	nag1	19-JUN-2009 16:33	50 PPM	s061909		1.0	AP12ICAL	USE; LEV 5
s1f1917.d	WBN090528-03	nag1	19-JUN-2009 16:58	80 PPM	s061909		1.0	AP12ICAL	USE; LEV 6
s1f1918.d	WBN090528-02	nag1	19-JUN-2009 17:23	100 PPM	s061909		1.0	AP12ICAL	USE; LEV 7
s1f1919.d	WBN090528-01	nag1	19-JUN-2009 17:48	120 PPM	s061909		1.0	AP12ICAL	USE; LEV 8
s1f1920-AQA.d	WBN090528-08.1	nag1	19-JUN-2009 18:13	40 PPM	s061909		1.0	AP12ICV	USE; ICV
s1f1920-D.d	WBN090528-08.1	nag1	19-JUN-2009 18:13	40 PPM	s061909		1.0	AP12ICV	USE; ICV <20% OUTLIERS
s1f1920.d	WBN090528-08.1	nag1	19-JUN-2009 18:13	40 PPM	s061909		1.0	AP12ICV	USE; ICV
s1f1921-D.d	WBN090526-01	nag1	19-JUN-2009 18:39	50 PPM	s061909		1.0	DFTPP	Use; 8270D PEST/HEX/NEV ICAL & ICV
s1f1921.d	WBN090526-01	nag1	19-JUN-2009 18:39	50 PPM	s061909		1.0	DFTPP	Use; 8270D PEST/HEX/NEV ICAL & ICV
s1f1922.d	instr blk	nag1	19-JUN-2009 18:56	-------	s061909		1.0	INSTR BLK	IB
s1f1923.d	WBN090609-24	nag1	19-JUN-2009 19:21	10 PPM	s061909		1.0	PESTICAL	USE; LEV 2
s1f1924.d	WBN090609-23	nag1	19-JUN-2009 19:46	20 PPM	s061909		1.0	PESTICAL	USE; LEV 3
s1f1925.d	WBN090609-22.1	nag1	19-JUN-2009 20:10	40 PPM	s061909		1.0	PESTICAL	USE; LEV 4
s1f1926.d	WBN090609-21	nag1	19-JUN-2009 20:35	50 PPM	s061909		1.0	PESTICAL	USE; LEV 5
s1f1927.d	WBN090609-20	nag1	19-JUN-2009 20:59	80 PPM	s061909		1.0	PESTICAL	USE; LEV 6
s1f1928.d	WBN090609-19	nag1	19-JUN-2009 21:24	100 PPM	s061909		1.0	PESTICAL	USE; LEV 7
s1f1929.d	WBN090609-18	nag1	19-JUN-2009 21:50	120 PPM	s061909		1.0	PESTICAL	USE; LEV 8
s1f1930-AQA.d	WBN090609-25.1	nag1	19-JUN-2009 22:16	40 PPM	s061909		1.0	PESTICV	USE; AQA ICV
s1f1930-D.d	WBN090609-25.1	nag1	19-JUN-2009 22:16	40 PPM	s061909		1.0	PESTICV	USE; 8270D ICV <20% OUTLIERS
s1f1930.d	WBN090609-25.1	nag1	19-JUN-2009 22:16	40 PPM	s061909		1.0	PESTICV	PASSED USE AQA ICV
s1f1931.d	instr blk	nag1	19-JUN-2009 22:41	-------	s061909		1.0	INSTR BLK	IB
s1f1932.d	WBN090422-16	nag1	19-JUN-2009 23:06	500 PPM	s061909		1.0	HEXICAL	USE; LEV 2

s1f1933.d	WBN090422-15	nag1	19-JUN-2009 23:30	1000 PPM	s061909	1.0	HEXICAL	USE; LEV 3
s1f1934.d	WBN090422-14	nag1	19-JUN-2009 23:55	1250 PPM	s061909	1.0	HEXICAL	USE; LEV 4
s1f1935.d	WBN090422-13	nag1	20-JUN-2009 00:19	1500 PPM	s061909	1.0	HEXICAL	USE; LEV 5
s1f1936.d	WBN090422-12	nag1	20-JUN-2009 00:43	1750 PPM	s061909	1.0	HEXICAL	USE; LEV 6
s1f1937.d	UBN090317-02.3	nag1	20-JUN-2009 01:07	2000 PPM	s061909	1.0	HEXICAL	USE; LEV 7
s1f1938-AQA.d	WBN090422-10.2	nag1	20-JUN-2009 01:30	1250PPM	s061909	1.0	HEXICV	USE; AQA ICV
s1f1938-D.d	WBN090422-10.2	nag1	20-JUN-2009 01:30	1250PPM	s061909	1.0	HEXICV	USE; 8270D ICV <20% OUTLIERS
s1f1938.d	WBN090422-10.2	nag1	20-JUN-2009 01:30	1250PPM	s061909	1.0	HEXICV	PASSED USE AQA ICV
s1f1939.d	instr blk	nag1	20-JUN-2009 01:54	-------	s061909	1.0	INSTR BLK	IB
s1f1940.d	UBN090428-01	nag1	20-JUN-2009 02:17	10 PPM	s061909	1.0	NEVICAL	USE; LEV 2
s1f1941.d	UBN090428-02	nag1	20-JUN-2009 02:41	20 PPM	s061909	1.0	NEVICAL	USE; LEV 3
s1f1942.d	UBN090428-03	nag1	20-JUN-2009 03:05	40 PPM	s061909	1.0	NEVICAL	USE; LEV 4
s1f1943.d	UBN090428-04	nag1	20-JUN-2009 03:28	50 PPM	s061909	1.0	NEVICAL	USE; LEV 5
s1f1944.d	UBN090428-05	nag1	20-JUN-2009 03:52	80 PPM	s061909	1.0	NEVICAL	USE; LEV 6
s1f1945.d	UBN090428-06	nag1	20-JUN-2009 04:15	100 PPM	s061909	1.0	NEVICAL	USE; LEV 7
s1f1946.d	UBN090428-07	nag1	20-JUN-2009 04:39	120 PPM	s061909	1.0	NEVICV	USE; LEV 8

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD5

DATE: 06/25/2009 METHOD:8270C MSD5-DFTPPx.m OPERATOR:rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1424 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD5.i/s062509.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s5f2501.d	WBN090624-01	rmb	25-JUN-2009 07:16	50PPM	s062509	1.0	DFTPP	DUSE
s5f2502.d	WBN090617-02.4	RMB	25-JUN-2009 07:29	40 PPM	s062509	1.0	MEGACVS	DUSE - fail
s5f2503.d	WBN090617-02.4	RMB	25-JUN-2009 08:12	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - cut column
s5f2504.d	WBN090624-01	rmb	25-JUN-2009 09:17	50PPM	s062509	1.0	DFTPP	DUSE
s5f2505.d	WBN090617-02.4	RMB	25-JUN-2009 09:30	40 PPM	s062509	1.0	MEGACVS	DUSE - fail
s5f2506.d	WBN090619-01.4	RMB	25-JUN-2009 09:58	40 PPM	s062509	1.0	AP12CVS	DUSE
s5f2507.d	WBN090617-02.4	RMB	25-JUN-2009 10:36	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - clean IP
s5f2508.d	WBN090624-01	rmb	25-JUN-2009 12:55	50PPM	s062509	1.0	DFTPP	DUSE
s5f2509.d	WBN090617-02.4	RMB	25-JUN-2009 13:09	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - run ICAL
s5f2510-D.d	WBN090624-01	rmb	25-JUN-2009 14:07	50PPM	s062509	1.0	DFTPP	
s5f2510.d	WBN090624-01	rmb	25-JUN-2009 14:07	50PPM	s062509	1.0	DFTPP	
s5f2511.d	instrument blank	RMB	25-JUN-2009 14:20		s062509	1.0		
s5f2512.d	WBN090602-08	RMB	25-JUN-2009 14:42	1 PPM	s062509	1.0	MEGAICAL001	
s5f2513.d	WBN090602-07	RMB	25-JUN-2009 15:10	10 PPM	s062509	1.0	MEGAICAL010	
s5f2514.d	WBN090602-06	RMB	25-JUN-2009 15:38	20 PPM	s062509	1.0	MEGAICAL020	
s5f2515.d	WBN090602-05.1	RMB	25-JUN-2009 16:05	40 PPM	s062509	1.0	MEGAICAL040	
s5f2516.d	WBN090602-04	RMB	25-JUN-2009 16:33	50 PPM	s062509	1.0	MEGAICAL050	
s5f2517.d	WBN090602-03	RMB	25-JUN-2009 17:02	80 PPM	s062509	1.0	MEGAICAL080	
s5f2518.d	WBN090602-02	RMB	25-JUN-2009 17:29	100 PPM	s062509	1.0	MEGAICAL100	

s5f2519.d	WBN090602-01	RMB	25-JUN-2009 17:57	120 PPM	s062509	1.0	MEGAICAL120	
s5f2520.d	instrument blank	RMB	25-JUN-2009 18:25		s062509	1.0		
s5f2521.d	WBN090602-09.1	RMB	25-JUN-2009 18:48	40 PPM	s062509	1.0	MEGAICV	DUSE - fail
s5f2522.d	WBN090528-07	RMB	25-JUN-2009 19:10	10 PPM	s062509	1.0	AP12ICAL010	
s5f2523.d	WBN090528-06	RMB	25-JUN-2009 19:32	20 PPM	s062509	1.0	AP12ICAL020	
s5f2524.d	WBN090528-05.1	RMB	25-JUN-2009 19:55	40 PPM	s062509	1.0	AP12ICAL040	
s5f2525.d	WBN090528-04	RMB	25-JUN-2009 20:18	50 PPM	s062509	1.0	AP12ICAL050	
s5f2526.d	WBN090528-03	RMB	25-JUN-2009 20:41	80 PPM	s062509	1.0	AP12ICAL080	
s5f2527.d	WBN090528-02	RMB	25-JUN-2009 21:03	100 PPM	s062509	1.0	AP12ICAL100	
s5f2528.d	WBN090528-01	RMB	25-JUN-2009 21:25	120 PPM	s062509	1.0	AP12ICAL120	
s5f2529.d	instrument blank	RMB	25-JUN-2009 21:48		s062509	1.0		
s5f2530-625.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 625 - 062509
s5f2530-D.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 8270D - 062509
s5f2530.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 8270C - 062509
s5f2531-D.d	WBN090624-01	rmb	26-JUN-2009 08:28	50PPM	s062509	1.0	DFTPP	
s5f2531.d	WBN090624-01	rmb	26-JUN-2009 08:28	50PPM	s062509	1.0	DFTPP	
s5f2532.d	instrument blank	RMB	26-JUN-2009 08:41		s062509	1.0		
s5f2533-625.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 625 - 062509
s5f2533-BOE.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - BOE - 062509
s5f2533-D.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 8270D - 062509
s5f2533.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 8270C - 062509
s5f2534.d	WBN090609-24	RMB	26-JUN-2009 09:31	10 PPM	s062509	1.0	PESTICAL010	
s5f2535.d	WBN090609-23	RMB	26-JUN-2009 09:53	20 PPM	s062509	1.0	PESTICAL020	
s5f2536.d	WBN090609-22.1	RMB	26-JUN-2009 10:16	40 PPM	s062509	1.0	PESTICAL040	
s5f2537.d	WBN090609-21	RMB	26-JUN-2009 10:39	50 PPM	s062509	1.0	PESTICAL050	
s5f2538.d	WBN090609-20	RMB	26-JUN-2009 11:02	80 PPM	s062509	1.0	PESTICAL080	
s5f2539.d	WBN090609-19	RMB	26-JUN-2009 11:25	100 PPM	s062509	1.0	PESTICAL100	

s5f2540.d	WBN090609-18	RMB	26-JUN-2009 11:47	120 PPM	s062509	1.0	PESTICAL120	
s5f2541.d	instrument blank	RMB	26-JUN-2009 12:10		s062509	1.0		
s5f2542.d	WBN090624-16	RMB	26-JUN-2009 12:32	500 PPM	s062509	1.0	HEXICAL500	
s5f2543.d	WBN090624-15	RMB	26-JUN-2009 12:55	1000 PPM	s062509	1.0	HEXICAL1000	
s5f2544.d	WBN090624-14	RMB	26-JUN-2009 13:17	1250 PPM	s062509	1.0	HEXICAL1250	
s5f2545.d	WBN090624-13	RMB	26-JUN-2009 13:40	1500 PPM	s062509	1.0	HEXICAL1500	
s5f2546.d	WBN090624-12	RMB	26-JUN-2009 14:02	1750 PPM	s062509	1.0	HEXICAL1750	
s5f2547.d	UBN090317-02.6	RMB	26-JUN-2009 14:25	2000 PPM	s062509	1.0	HEXICAL2000	
s5f2548.d	instrument blank	RMB	26-JUN-2009 14:47		s062509	1.0		
s5f2549-D.d	WBN090609-25.1	RMB	26-JUN-2009 15:10	40 PPM	s062509	1.0	PESTICV	PESTICV - 8270D - 062509
s5f2549.d	WBN090609-25.1	RMB	26-JUN-2009 15:10	40 PPM	s062509	1.0	PESTICV	PESTICV - 8270C - 062509
s5f2550-D.d	WBN090624-10.1	RMB	26-JUN-2009 15:32	1250 PPM	s062509	1.0	HEXICV	HEXICV - 8270D - 062509
s5f2550.d	WBN090624-10.1	RMB	26-JUN-2009 15:32	1250 PPM	s062509	1.0	HEXICV	HEXICV - 8270C - 062509
s5f2551.d	UBN090428-01	RMB	26-JUN-2009 15:54	10 PPM	s062509	1.0	NEVADAICAL010	
s5f2552.d	UBN090428-02	RMB	26-JUN-2009 16:17	20 PPM	s062509	1.0	NEVADAICAL020	
s5f2553.d	UBN090428-03	RMB	26-JUN-2009 16:39	40 PPM	s062509	1.0	NEVADAICAL040	
s5f2554.d	UBN090428-04	RMB	26-JUN-2009 17:01	50 PPM	s062509	1.0	NEVADAICAL050	
s5f2555.d	UBN090428-05	RMB	26-JUN-2009 17:24	80 PPM	s062509	1.0	NEVADAICAL080	
s5f2556.d	UBN090428-06	RMB	26-JUN-2009 17:47	100 PPM	s062509	1.0	NEVADAICAL100	
s5f2557.d	UBN090428-07	RMB	26-JUN-2009 18:09	120 PPM	s062509	1.0	NEVADAICAL120	

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD1

DATE: 06/30/2009 METHOD: See raw data OPERATOR: lof/rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1212 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD1.i/s062809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s1f2801.d	WBN090526-01	JMB3	28-JUN-2009 14:38	50 PPM	s062809	1.0	DFTPP	
s1f2802.d	WBN090510-01.3	nagl	28-JUN-2009 14:55	40 PPM	s062809	1.0	MEGACVS	280573
s1f2803.d	WBN090619-01.1	nagl	28-JUN-2009 15:23	40 PPM	s062809	1.0	AP12CVS	
s1f2804.d	WBN090609-22.2	nagl	28-JUN-2009 15:47	40 PPM	s062809	1.0	PESTCVS	
s1f2805-2.d	1201869908	nagl	28-JUN-2009 16:10	880638	09-2457	1.0	SBLK01	
s1f2805-3.d	1201869908	nagl	28-JUN-2009 16:10	880638	09-2455	1.0	SBLK01	
s1f2805-4.d	1201869908	nagl	28-JUN-2009 16:10	880638	09-2451	1.0	SBLK01	
s1f2805.d	1201869908	nagl	28-JUN-2009 16:10	880638	09-2287	1.0	SBLK01	
s1f2806-2.d	1201869909	nagl	28-JUN-2009 16:34	880638	09-2457	1.0	SBLK01LCS	
s1f2806-3.d	1201869909	nagl	28-JUN-2009 16:34	880638	09-2455	1.0	SBLK01LCS	
s1f2806-4.d	1201869909	nagl	28-JUN-2009 16:34	880638	09-2451	1.0	SBLK01LCS	
s1f2806.d	1201869909	nagl	28-JUN-2009 16:34	880638	09-2287	1.0	SBLK01LCS	
s1f2807.d	231671005	nagl	28-JUN-2009 16:58	880638	09-2287	1.0	LANL	Rx of s2f1730 - passes SS out of holding - report both
s1f2808.d	232348001	nagl	28-JUN-2009 17:23	880638	09-2457	1.0	LANL	
s1f2809.d	1201869910	nagl	28-JUN-2009 17:48	880638	09-2457	1.0	MS	
s1f2810.d	1201869911	nagl	28-JUN-2009 18:13	880638	09-2457	1.0	MSD	
s1f2811.d	232348002	nagl	28-JUN-2009 18:37	880638	09-2457	1.0	LANL	
s1f2812.d	232348003	nagl	28-JUN-2009 19:01	880638	09-2457	1.0	LANL	
s1f2813.d	232348004	nagl	28-JUN-2009 19:25	880638	09-2457	1.0	LANL	

s1f2814.d	232357001	nag1	28-JUN-2009 19:50	880638	09-2455		1.0	LANL	
s1f2815.d	232357002	nag1	28-JUN-2009 20:14	880638	09-2455		1.0	LANL	DUSE - Fail SS - Rx(s5f3013) passes w/in hold
s1f2816.d	232363001	nag1	28-JUN-2009 20:38	880638	09-2451		1.0	LANL	
s1f2817.d	232363002	nag1	28-JUN-2009 21:03	880638	09-2451		1.0	LANL	
s1f2818.d	232363003	nag1	28-JUN-2009 21:26	880638	09-2451		1.0	LANL	
s1f2819.d	232363004	nag1	28-JUN-2009 21:51	880638	09-2451		1.0	LANL	
s1f2820.d	232363005	nag1	28-JUN-2009 22:15	880638	09-2451		1.0	LANL	
s1f2821.d	232363006	nag1	28-JUN-2009 22:39	880638	09-2451		1.0	LANL	
s1f2822.d	232363007	nag1	28-JUN-2009 23:03	880638	09-2451		1.0	LANL	
s1f2823.d	232363008	nag1	28-JUN-2009 23:27	880638	09-2451		1.0	LANL	
s1f2824.d	232363009	nag1	28-JUN-2009 23:51	880638	09-2451		1.0	LANL	
s1f2825.d	232363010	nag1	29-JUN-2009 00:15	880638	09-2451		1.0	LANL	
s1f2826.d	232363011	nag1	29-JUN-2009 00:40	880638	09-2451		1.0	LANL	

Instrument Batch: /chem/MSD1.i/s062809.b

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD5

DATE: 06/30/2009 METHOD:8270C MSD5-DFTPPx.m OPERATOR:rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1424 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD5.i/s063009.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s5f3001.d	WBN090624-01	rmb	30-JUN-2009 07:20	50PPM	s063009	1.0	DFTPP	
s5f3002.d	WBN090617-02.4	RMB	30-JUN-2009 07:33	40 PPM	s063009	1.0	MEGACVS	530611
s5f3003.d	WBN090619-01.4	RMB	30-JUN-2009 08:01	40 PPM	s063009	1.0	AP12CVS	
s5f3004.d	1201871485	RMB	30-JUN-2009 08:23	881247	232217	1.0	SBLK01	
s5f3005.d	1201871486	RMB	30-JUN-2009 08:46	881247	232217	1.0	SBLK01LCS	
s5f3006-2.d	1201871589	RMB	30-JUN-2009 09:09	881291	09-2455	1.0	SBLK02	
s5f3006.d	1201871589	RMB	30-JUN-2009 09:09	881291	232151	1.0	SBLK02	
s5f3007-2.d	1201871590	RMB	30-JUN-2009 09:31	881291	09-2455	1.0	SBLK02LCS	
s5f3007.d	1201871590	RMB	30-JUN-2009 09:31	881291	232151	1.0	SBLK02LCS	
s5f3008-2.d	1201871595	RMB	30-JUN-2009 09:53	881291	09-2455	1.0	SBLK02LCSD	
s5f3008.d	1201871595	RMB	30-JUN-2009 09:53	881291	232151	1.0	SBLK02LCSD	
s5f3009.d	232217001	RMB	30-JUN-2009 10:16	881247	232217	1.0	SAIC	
s5f3010.d	1201871487	RMB	30-JUN-2009 10:39	881247	232217	1.0	SAIC17001MS	
s5f3011.d	1201871488	RMB	30-JUN-2009 11:02	881247	232217	1.0	SAIC17001MSD	
s5f3012.d	232151010	RMB	30-JUN-2009 11:25	881291	232151	1.0	ORBCRE	DUSE - Rx of s4f2627 - Fail SS(confrims)
s5f3013.d	232357002	RMB	30-JUN-2009 11:47	881291	09-2455	1.0	LANLRE	Rx of s1f2815 - passes w/in hold - use this data

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 706403
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
30-JUN-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
SEMIVOA GC/MS	SW846 8270C	Solid	LANL
Batch ID:	**Sample Numbers:**		
880638	See Below		

Potentially affected work order(s)(SDG): 231671(09-2287),232348(09-2457),232357(09-2455),232363(09-2451)

Application Issues:

Failed RPD for MS/MSD, or PS/PSD

Failed Recovery for LCS/LCSD

Failed Yield for Surrogates

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Sample 232357002 recovered 2,4,6-Tribromophenol at 26%. The limits are 37%-106%.	1. Sample 232357002 was re-extracted within holding in batch 881291. Since the re-extract was within the acceptance limits for all surrogates, the re-extracted data results have been reported.
2. The LCS(1201869909) recovered Benzoic acid at 24%. The limits are 27%-137%.	2. The LCS failure represented less than 5% of the total requested spike analyte list. That satisfied the acceptance criteria for the client and the data results have been reported.
3. The MS(1201869910)/MSD(1201869911) RPD value for 4-Nitrophenol was 48% (limit is 30%) and for Benzyl alcohol was 52% (limit is 30%).	3. Since 4-Nitrophenol and Benzyl alcohol were individually within the acceptance limits for the MS and MSD, the data results have been reported.
4. Sample 231671005 was re-extracted out of holding from batch 877239 for surrogate failures.	4. Since the re-extract was out of holding and was within the acceptance limits for all surrogates, the both sets of data results have been reported.

Originator's Name:

Richard Bomar 30-JUN-09

Data Validator/Group Leader:

Barbara Bailey 01-JUL-09

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
01-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
SEMIVOA GC/MS	SW846 8270C	Solid	LANL, ORBJ
Batch ID:	**Sample Numbers:**		
881291	See Below		

Potentially affected work order(s)(SDG): 232151,232357(09-2455)

Application Issues:

Failed RPD for MS/MSD, or PS/PSD

Failed Recovery for LCS/LCSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The LCS(1201871590) and LCSD(1201871595) recovered p-Nitroaniline at 143% and 152%. The limits are 44%-139%.	1. The LCS and LCSD failures represented less than 5% of the total requested spike analyte list. That satisfied the acceptance criteria for the client and the data results have been reported.
2. Multiple LCS/LCSD RPD values exceeded their established acceptance limit. Please see the QC Summary report for the specific failures.	2. Because the analytes with failing RPD values were individually within their established spike recovery acceptance limits, the data were reported un-qualified for the RPD value failures.

Originator's Name:

Richard Bomar 01-JUL-09

Data Validator/Group Leader:

Daniel Beacham 16-JUL-09

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2809.d
Lab Smp Id: 1201869910 Client Smp ID: CAMO-09-10462MS
Inj Date : 28-JUN-2009 17:48
Operator : nag1 Inst ID: MSD1.i
Smp Info : |1201869910|880638|1|SVMF|1|MS
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 9 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.08000	weight of sample
M	6.53160	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	335766	40.0000	
* 29 Naphthalene-d8	136	4.757	4.757	(1.000)	1344134	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	667488	40.0000	
* 67 Phenanthrene-d10	188	6.987	6.981	(1.000)	1254705	40.0000	
* 91 Chrysene-d12	240	8.645	8.645	(1.000)	997134	40.0000	
* 98 Perylene-d12	264	10.086	10.086	(1.000)	816850	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	514730	57.8276	2060
$ 5 Phenol-d5	99	3.604	3.598	(0.927)	575203	51.9751	1850
$ 20 Nitrobenzene-d5	82	4.251	4.251	(0.894)	339065	29.6335	1050
$ 39 2-Fluorobiphenyl	172	5.498	5.492	(0.917)	605971	33.3251	1180
$ 60 2,4,6-Tribromophenol	329	6.534	6.533	(1.089)	134255	57.1776	2030
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	634013	37.8906	1350

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.616	3.610	(0.930)	348241	30.1790	1070(Q)
8 2-Chlorophenol	128	3.751	3.751	(0.965)	293624	31.7880	1130
11 1,4-Dichlorobenzene	146	3.898	3.898	(1.003)	304955	27.0648	963
17 N-Nitrosodipropylamine	70	4.122	4.128	(1.061)	186892	28.7165	1020(Q)
28 1,2,4-Trichlorobenzene	180	4.704	4.704	(0.989)	275712	30.5122	1080
33 4-Chloro-3-methylphenol	107	5.104	5.098	(1.073)	280385	33.9637	1210
47 Acenaphthene	154	6.022	6.022	(1.004)	540432	33.6563	1200
50 2,4-Dinitrotoluene	165	6.104	6.110	(1.018)	212530	36.2986	1290
52 4-Nitrophenol	139	6.045	6.034	(1.008)	114591	41.8755	1490
65 Pentachlorophenol	266	6.851	6.851	(0.981)	105856	34.6379	1230
79 Pyrene	202	7.845	7.845	(0.907)	1120098	42.4053	1510
2 Pyridine	79	2.428	2.398	(0.625)	190751	25.8235	918
4 Aniline	66	3.669	3.675	(0.944)	194655	32.6902	1160(Q)
7 bis(2-Chloroethyl) ether	63	3.687	3.692	(0.949)	312313	29.2854	1040
9 1,3-Dichlorobenzene	146	3.851	3.857	(0.991)	318414	28.6049	1020
12 Benzyl alcohol	108	3.957	3.957	(1.018)	160163	24.6061	875
13 1,2-Dichlorobenzene	146	4.004	4.004	(1.030)	297067	28.7252	1020
14 bis(2-Chloroisopropyl)ether	45	4.034	4.034	(1.038)	821800	29.9674	1060
15 o-Cresol	107	4.010	4.004	(1.032)	223796	28.2117	1000
18 m,p-Cresols	107	4.104	4.104	(1.056)	364195	34.7475	1240
19 Hexachloroethane	117	4.234	4.234	(1.089)	125962	27.2718	970
21 Nitrobenzene	77	4.263	4.269	(0.896)	352863	31.8054	1130
22 Isophorone	82	4.416	4.416	(0.928)	681486	33.3461	1190
23 2-Nitrophenol	139	4.481	4.481	(0.942)	148442	33.1388	1180
24 2,4-Dimethylphenol	122	4.475	4.469	(0.941)	307202	38.2981	1360
25 bis(2-Chloroethoxy)methane	93	4.540	4.540	(0.954)	373468	35.0073	1240
26 2,4-Dichlorophenol	162	4.640	4.640	(0.975)	237492	33.4123	1190
27 Benzoic acid	105	4.510	4.522	(0.948)	96422	16.0647	571(aQ)
30 Naphthalene	128	4.769	4.769	(1.002)	846907	31.6242	1120
31 4-Chloroaniline	127	4.787	4.787	(1.006)	350297	34.7855	1240
32 Hexachlorobutadiene	225	4.834	4.834	(1.016)	154865	26.3900	939
34 2-Methylnaphthalene	142	5.251	5.251	(1.104)	599740	33.7733	1200
36 Hexachlorocyclopentadiene	237	5.351	5.351	(0.892)	136776	41.6366	1480
37 2,4,6-Trichlorophenol	196	5.440	5.434	(0.907)	156032	31.4823	1120
38 2,4,5-Trichlorophenol	196	5.469	5.463	(0.912)	207184	40.2840	1430
40 2-Chloronaphthalene	162	5.604	5.604	(0.934)	566690	37.4141	1330
42 o-Nitroaniline	65	5.657	5.657	(0.943)	227144	37.2764	1320
41 m-Nitroaniline	138	5.951	5.951	(0.992)	166178	51.3213	1820
43 Dimethylphthalate	163	5.769	5.769	(0.962)	672923	36.6121	1300
44 2,6-Dinitrotoluene	165	5.822	5.822	(0.971)	160167	36.1118	1280
45 Acenaphthylene	152	5.904	5.904	(0.984)	965482	39.8732	1420
48 2,4-Dinitrophenol	184	6.022	6.016	(1.004)	31048	15.5223	552(aQ)
49 Dibenzofuran	168	6.139	6.139	(1.024)	826012	36.7573	1310
51 Diethylphthalate	149	6.251	6.251	(1.042)	738978	37.9296	1350
53 Fluorene	166	6.375	6.375	(1.063)	617088	32.9059	1170
54 4-Chlorophenylphenylether	204	6.351	6.351	(1.059)	327160	34.0766	1210
55 2-Methyl-4,6-dinitrophenol	198	6.387	6.386	(0.914)	72893	23.9657	852

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.375	6.369	(1.063)	141896	50.8150	1810
133 Diphenylamine	169	6.434	6.428	(0.921)	597495	41.4611	1470
58 1,2-Diphenylhydrazine	77	6.463	6.457	(0.925)	827644	39.0448	1390
61 4-Bromophenylphenylether	248	6.681	6.675	(0.956)	177857	33.4181	1190
63 Hexachlorobenzene	284	6.734	6.733	(0.964)	196280	34.3144	1220
68 Phenanthrene	178	6.998	6.998	(1.002)	930604	35.0297	1240
69 Anthracene	178	7.034	7.028	(1.007)	971084	36.6134	1300
72 Di-n-butylphthalate	149	7.275	7.275	(1.041)	1271566	38.5634	1370
76 Fluoranthene	202	7.710	7.710	(1.104)	1090083	36.6517	1300
85 Butylbenzylphthalate	149	8.163	8.163	(0.944)	521588	46.4758	1650
89 Benzo(a)anthracene	228	8.633	8.633	(0.999)	872112	37.7389	1340
90 3,3'-Dichlorobenzidine	252	8.575	8.569	(0.992)	272305	38.8867	1380
92 Chrysene	228	8.663	8.663	(1.002)	844625	38.6222	1370
93 bis(2-Ethylhexyl)phthalate	149	8.516	8.516	(0.985)	674667	42.2921	1500
94 Di-n-octylphthalate	149	9.045	9.045	(0.897)	1034618	41.8183	1490
95 Benzo(b)fluoranthene	252	9.622	9.622	(0.954)	762309	39.0299	1390
96 Benzo(k)fluoranthene	252	9.651	9.651	(0.957)	782113	36.6418	1300
97 Benzo(a)pyrene	252	10.016	10.016	(0.993)	658464	37.5146	1330
99 Indeno(1,2,3-cd)pyrene	276	11.698	11.692	(1.160)	565402	32.6814	1160
100 Dibenzo(a,h)anthracene	278	11.704	11.698	(1.160)	449446	32.7901	1170
101 Benzo(ghi)perylene	276	12.198	12.198	(1.209)	487432	33.9097	1210(Q)
1 N-Methyl-N-nitrosomethylamine	74	2.399	2.369	(0.617)	143398	33.7926	1200

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD1.i/s062809.b/s1f2809.d
Date : 28-JUN-2009 17:48
Client ID: CAMD-09-10462MS
Sample Info: 1120186991018806338|1|SWMF14|MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nag1
Column diameter: 0.20

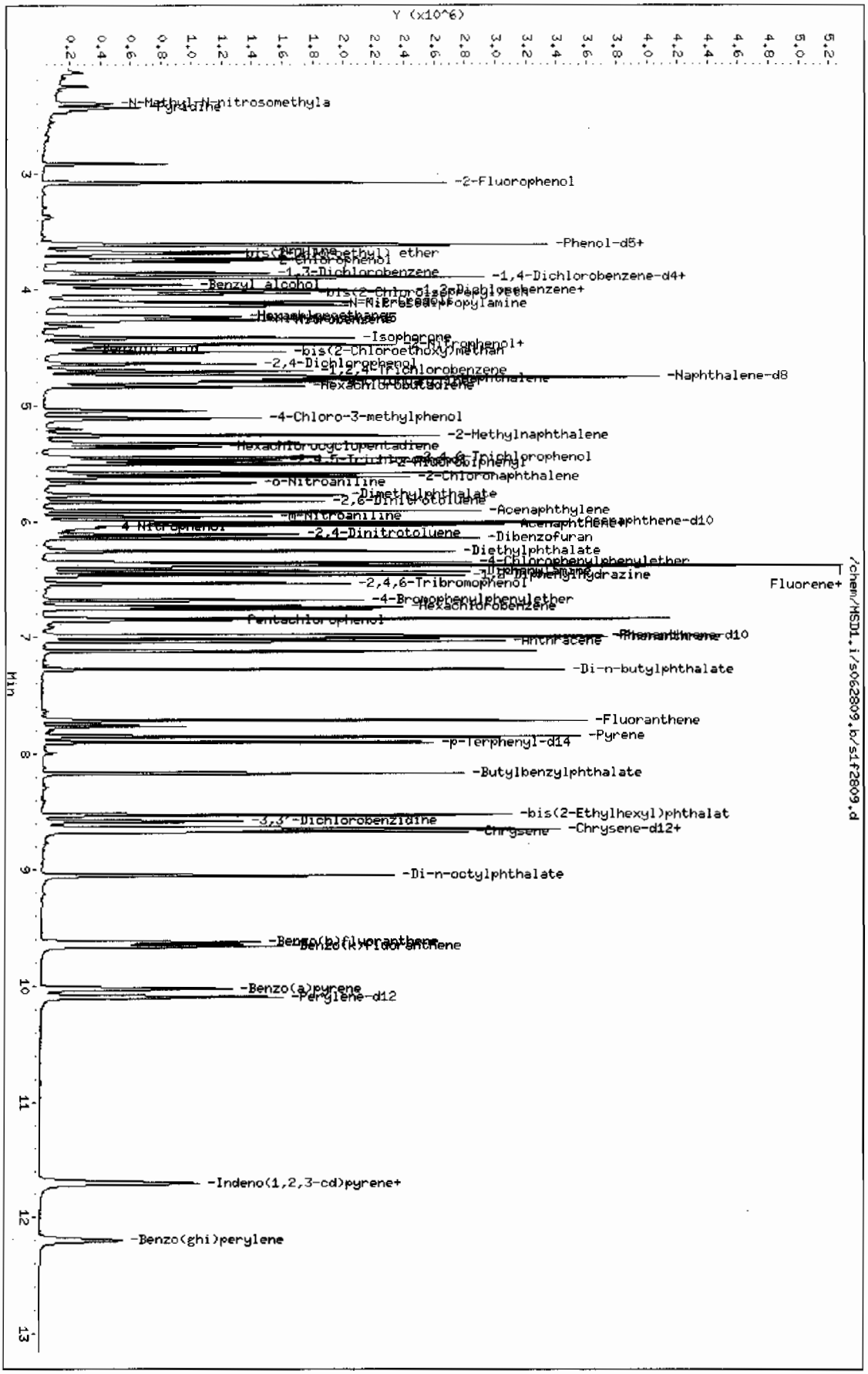

Page 1

GEL Laboratories LLC

Data file : /chem/MSD1.i/s062809.b/s1f2810.d
Lab Smp Id: 1201869911 Client Smp ID: CAMO-09-10462MSD
Inj Date : 28-JUN-2009 18:13
Operator : nagl Inst ID: MSD1.i
Smp Info : |1201869911|880638|1|SVMF|1|MSD
Misc Info : |MSD8270_SF|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD1.i/s062809.b/MSD1-M8270AQA-061909.m
Meth Date : 29-Jun-2009 09:53 rmb Quant Type: ISTD
Cal Date : 20-JUN-2009 03:28 Cal File: s1f1943.d
Als bottle: 10 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2457.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	6.53160	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.887	3.887	(1.000)	313882	40.0000	
* 29 Naphthalene-d8	136	4.757	4.757	(1.000)	1230116	40.0000	
* 46 Acenaphthene-d10	164	5.998	5.998	(1.000)	600843	40.0000	
* 67 Phenanthrene-d10	188	6.981	6.981	(1.000)	1159888	40.0000	
* 91 Chrysene-d12	240	8.645	8.645	(1.000)	994188	40.0000	
* 98 Perylene-d12	264	10.086	10.086	(1.000)	897057	40.0000	
$ 3 2-Fluorophenol	112	3.075	3.069	(0.791)	404865	48.6560	1740
$ 5 Phenol-d5	99	3.604	3.598	(0.927)	448621	43.3635	1550
$ 20 Nitrobenzene-d5	82	4.252	4.251	(0.894)	254006	24.2572	865
$ 39 2-Fluorobiphenyl	172	5.493	5.492	(0.916)	478981	29.2631	1040
$ 60 2,4,6-Tribromophenol	329	6.534	6.533	(1.089)	101891	48.2074	1720
$ 81 p-Terphenyl-d14	244	7.898	7.898	(0.914)	507752	30.4348	1080

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.610	3.610	(0.929)	305010	28.2754	1010(Q)
8 2-Chlorophenol	128	3.752	3.751	(0.965)	255418	29.5798	1050
11 1,4-Dichlorobenzene	146	3.899	3.898	(1.003)	269400	25.5763	912
17 N-Nitrosodipropylamine	70	4.122	4.128	(1.061)	184030	30.2482	1080(Q)
28 1,2,4-Trichlorobenzene	180	4.704	4.704	(0.989)	241060	29.1501	1040
33 4-Chloro-3-methylphenol	107	5.104	5.098	(1.073)	240545	31.8385	1140
47 Acenaphthene	154	6.022	6.022	(1.004)	476181	32.9442	1170
50 2,4-Dinitrotoluene	165	6.104	6.110	(1.018)	183323	34.7831	1240
52 4-Nitrophenol	139	6.045	6.034	(1.008)	63072	25.6055	913
65 Pentachlorophenol	266	6.851	6.851	(0.981)	80761	28.5866	1020
79 Pyrene	202	7.851	7.845	(0.908)	995545	37.8016	1350
2 Pyridine	79	2.422	2.398	(0.623)	142857	20.6881	738
4 Aniline	66	3.669	3.675	(0.944)	162460	29.1857	1040
7 bis(2-Chloroethyl) ether	63	3.687	3.692	(0.949)	270900	27.1731	969
9 1,3-Dichlorobenzene	146	3.852	3.857	(0.991)	281081	27.0116	963
12 Benzyl alcohol	108	3.957	3.957	(1.018)	87624	14.4003	514
13 1,2-Dichlorobenzene	146	4.004	4.004	(1.030)	257691	26.6550	950
14 bis(2-Chloroisopropyl)ether	45	4.034	4.034	(1.038)	726672	28.3460	1010
15 o-Cresol	107	4.010	4.004	(1.032)	205460	27.7061	988
18 m,p-Cresols	107	4.104	4.104	(1.056)	331534	33.8367	1210
19 Hexachloroethane	117	4.234	4.234	(1.089)	111151	25.7429	918
21 Nitrobenzene	77	4.263	4.269	(0.896)	309507	30.4833	1090
22 Isophorone	82	4.416	4.416	(0.928)	593163	31.7145	1130
23 2-Nitrophenol	139	4.481	4.481	(0.942)	132206	32.2498	1150
24 2,4-Dimethylphenol	122	4.475	4.469	(0.941)	290259	39.5399	1410
25 bis(2-Chloroethoxy)methane	93	4.540	4.540	(0.954)	328015	33.5965	1200
26 2,4-Dichlorophenol	162	4.640	4.640	(0.975)	207085	31.8348	1140
27 Benzoic acid	105	4.504	4.522	(0.947)	69036	12.5681	448(aQ)
30 Naphthalene	128	4.769	4.769	(1.002)	742741	30.3052	1080
31 4-Chloroaniline	127	4.787	4.787	(1.006)	301386	32.7025	1170
32 Hexachlorobutadiene	225	4.834	4.834	(1.016)	135821	25.2900	902
34 2-Methylnaphthalene	142	5.251	5.251	(1.104)	526886	32.4208	1160
36 Hexachlorocyclopentadiene	237	5.351	5.351	(0.892)	119922	40.5549	1450
37 2,4,6-Trichlorophenol	196	5.440	5.434	(0.907)	140069	31.3962	1120
38 2,4,5-Trichlorophenol	196	5.469	5.463	(0.912)	191869	41.4442	1480
40 2-Chloronaphthalene	162	5.604	5.604	(0.934)	495566	36.3474	1300
42 o-Nitroaniline	65	5.657	5.657	(0.943)	203765	37.1487	1320
41 m-Nitroaniline	138	5.951	5.951	(0.992)	147337	50.5495	1800
43 Dimethylphthalate	163	5.763	5.769	(0.961)	579076	35.0006	1250
44 2,6-Dinitrotoluene	165	5.822	5.822	(0.971)	137909	34.5422	1230
45 Acenaphthylene	152	5.904	5.904	(0.984)	845538	38.7929	1380
48 2,4-Dinitrophenol	184	6.016	6.016	(1.003)	22744	12.6323	450(aQ)
49 Dibenzofuran	168	6.140	6.139	(1.024)	729166	36.0467	1280
51 Diethylphthalate	149	6.251	6.251	(1.042)	645518	36.8075	1310
53 Fluorene	166	6.375	6.375	(1.063)	535817	31.7413	1130
54 4-Chlorophenylphenylether	204	6.351	6.351	(1.059)	285097	32.9891	1180
55 2-Methyl-4,6-dinitrophenol	198	6.387	6.386	(0.915)	57311	20.3831	727

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.369	6.369	(1.062)	122358	48.6784	1740
133 Diphenylamine	169	6.428	6.428	(0.921)	507297	38.0798	1360
58 1,2-Diphenylhydrazine	77	6.457	6.457	(0.925)	712890	36.3804	1300
61 4-Bromophenylphenylether	248	6.675	6.675	(0.956)	152839	31.0649	1110
63 Hexachlorobenzene	284	6.734	6.733	(0.965)	171635	32.4589	1160
68 Phenanthrene	178	6.998	6.998	(1.003)	822091	33.4748	1190
69 Anthracene	178	7.028	7.028	(1.007)	846850	34.5395	1230
72 Di-n-butylphthalate	149	7.275	7.275	(1.042)	1130985	37.1038	1320
76 Fluoranthene	202	7.710	7.710	(1.104)	961008	34.9532	1250
85 Butylbenzylphthalate	149	8.163	8.163	(0.944)	470421	42.0407	1500
89 Benzo(a)anthracene	228	8.634	8.633	(0.999)	789396	34.2608	1220
90 3,3'-Dichlorobenzidine	252	8.575	8.569	(0.992)	252457	36.1591	1290
92 Chrysene	228	8.663	8.663	(1.002)	789675	36.2166	1290
93 bis(2-Ethylhexyl)phthalate	149	8.522	8.516	(0.986)	638893	40.1683	1430
94 Di-n-octylphthalate	149	9.045	9.045	(0.897)	1016246	37.4031	1330
95 Benzo(b)fluoranthene	252	9.628	9.622	(0.954)	710719	33.6375	1200
96 Benzo(k)fluoranthene	252	9.657	9.651	(0.957)	817966	34.8951	1240
97 Benzo(a)pyrene	252	10.022	10.016	(0.994)	688119	35.7904	1280
99 Indeno(1,2,3-cd)pyrene	276	11.698	11.692	(1.160)	637166	33.5177	1200
100 Dibenzo(a,h)anthracene	278	11.704	11.698	(1.160)	523247	34.6443	1240
101 Benzo(ghi)perylene	276	12.204	12.198	(1.210)	553392	35.0655	1250(Q)
1 N-Methyl-N-nitrosomethylamine	74	2.393	2.369	(0.616)	119978	30.2449	1080

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD1.i/s062809.b/s1f2810.d
Date : 28-JUN-2009 18:13
Client ID: CAMO-09-10462MSD
Sample Info: 1120186991188063811ISVMF11MSD
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD1.i
Operator: nag1
Column diameter: 0.20

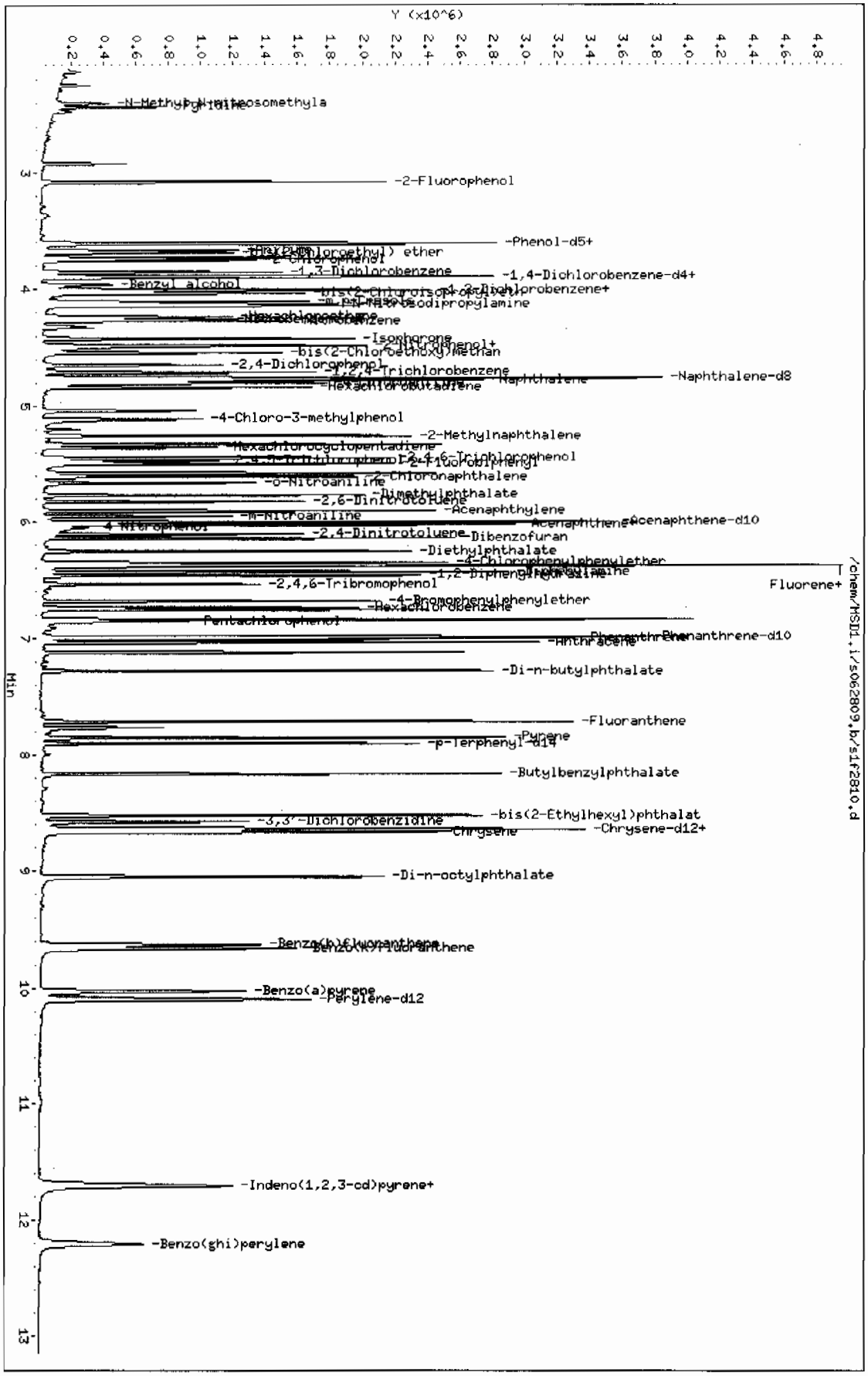

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2455

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881210
Prep Batch Number:	881208

Sample Analysis

Sample ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201871403	Interference Check Sample (ICS)
1201871399	Method Blank (MB)
1201871400	Laboratory Control Sample (LCS)
1201871401	232347001(CAMO-09-10462) Matrix Spike (MS)
1201871402	232347001(CAMO-09-10462) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

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Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232347001 (CAMO-09-10462) from SDG 09-2458 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

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Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards Prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

- Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert K Mauer **Date:** 07/06/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10480

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2455

GEL Sample ID: 232357001

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.563	2.25	0.563	ug/kg	U	1	01-JUL-09 19:13	per0701060a
	Perchlorate-O(18)			5.39	ug/kg		1	01-JUL-09 19:13	per0701060a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10479

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2455

GEL Sample ID: 232357002

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 90.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	0.754	ug/kg	J	1	01-JUL-09 19:21	per0701061a
	Perchlorate-O(18)			5.20	ug/kg		1	01-JUL-09 19:21	per0701061a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2455

Extract Batch Code: 881208

Date Filtered: 29–JUN–09

Matrix: SOIL

Sample ID: 1201871400

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	1.92	ug/kg	96		70 – 130
Perchlorate–O(18)		4.5	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2455

Extract Batch Code: 881208

Date Filtered: 29–JUN–09

Matrix: SOIL

Sample ID: 1201871403

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.05	ug/kg	102		70 – 130
Perchlorate–O(18)		4.76	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701048a
Date: 01-Jul-2009
Time: 17:34:01
ID: 1201871403
Vial: 2:1,C

|LANL|881210|SOLZO|IKS|1|

CWW 07-02-09

Perchlorate

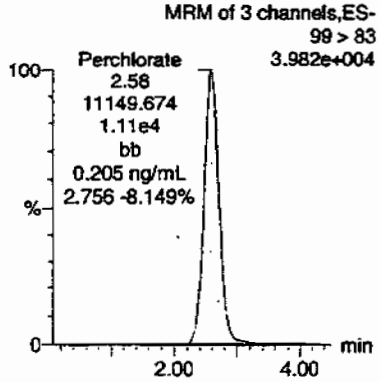

Perchlorate

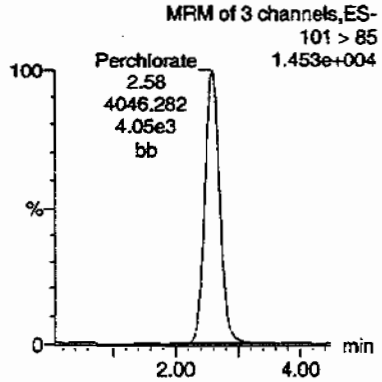

Perchlorate-101

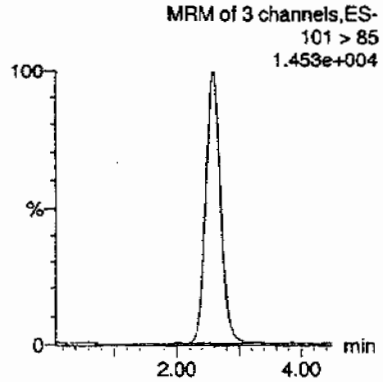

Perchlorate-O(18)

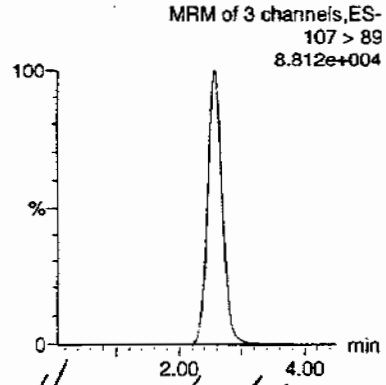

Hnm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871403	Perchlorate	99 > 83	2.58	11149.674	11149.674	bb			0.2046	102.28	2.28	4776.1...	2.76
1201871403	Perchlorate-101	101 > 85	2.58	4046.282	4046.282	bb			0.2028	101.40	1.40	1435.2...	
1201871403	Perchlorate-O(18)	107 > 89	2.56	24308.160	24308.160	bb			0.4760	95.19	-4.81	6491.0...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2455

Extract Batch Code: 881208

Date Extracted: 29–JUN–09

GEL MS/PS ID: 1201871401

Client ID: CAMO–09–10462

GEL MSD/PSD ID: 1201871402

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.14	2.82	ug/kg	5.16	109	4.69	87.3	9.63	30	75 – 125
Perchlorate–O(18)	0	5.19	ug/kg	5.33		5.12		4.07		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2455

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	01–JUL–09	per0701001a	IPB001
Perchlorate–101	0.00	0	NA	01–JUL–09	per0701001a	IPB001
Perchlorate	0.00	0	NA	01–JUL–09	per0701002a	IPB001
Perchlorate–101	0.00	0	NA	01–JUL–09	per0701002a	IPB001

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Page 394 of 1306

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070109a.mdb 01 Jul 2009 12:10:01
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070109a.cdb 02 Jul 2009 07:24:30

Name: per0701001a
Date: 01-Jul-2009
Time: 10:54:25
ID: IPB001
Vial: 1:1,A

CWW 07-02-09

Perchlorate

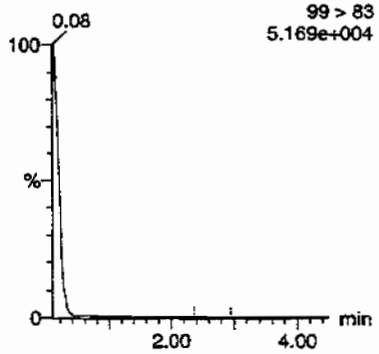

Perchlorate

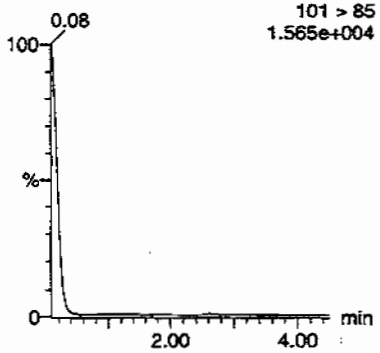

Perchlorate-101

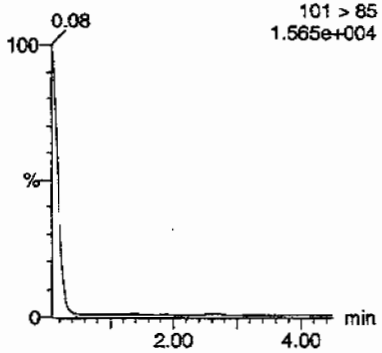

Perchlorate-O(18)

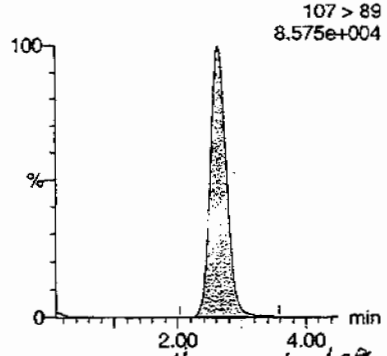

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.66	49.406	49.406	bb			0.0009			5.982	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.64	24564.691	24564.691	bb			0.4810	96.20	-3.80	5193.1...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Name: per0701002a
Date: 01-Jul-2009
Time: 11:02:50
ID: IPB001
Vial: 1:1,A

CWW 07-02-09

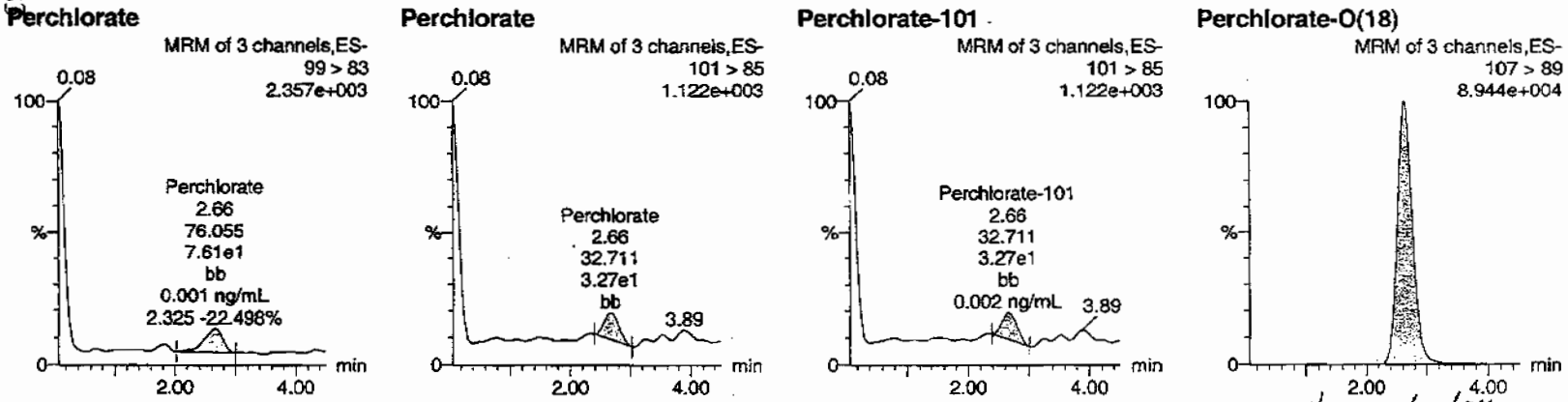

Hmc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.66	76.055	76.055	bb			0.0014			16.332	2.33
IPB001	Perchlorate-101	101 > 85	2.66	32.711	32.711	bb			0.0016			11.080	
IPB001	Perchlorate-O(18)	107 > 89	2.64	25490.703	25490.703	bb			0.4991	99.82	-0.18	2802.3...	

Perchlorate Continuing Calibration Blank

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2455

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	01–JUL–09	per0701008a	IPB002
Perchlorate–101	0.00	0	NA	01–JUL–09	per0701008a	IPB002
Perchlorate	0.00	0	NA	01–JUL–09	per0701010a	IPB003
Perchlorate–101	0.00	0	NA	01–JUL–09	per0701010a	IPB003
Perchlorate	0.00	0	NA	01–JUL–09	per0701022a	IPB004
Perchlorate–101	0.00	0	NA	01–JUL–09	per0701022a	IPB004
Perchlorate	0.00	0	NA	01–JUL–09	per0701033a	IPB005
Perchlorate–101	0.00	0	NA	01–JUL–09	per0701033a	IPB005
Perchlorate	0.00	0	NA	01–JUL–09	per0701044a	IPB006
Perchlorate–101	0.00	0	NA	01–JUL–09	per0701044a	IPB006
Perchlorate	0.00	0	NA	01–JUL–09	per0701057a	IPB007
Perchlorate–101	0.00	0	NA	01–JUL–09	per0701057a	IPB007
Perchlorate	0.00	0	NA	01–JUL–09	per0701070a	IPB008

Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2455

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	01-JUL-09	per0701070a	IPB008

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701008a
Date: 01-Jul-2009
Time: 12:04:05
ID: IPB002
Vial: 1:1,A

CWW 07-02-09

Perchlorate

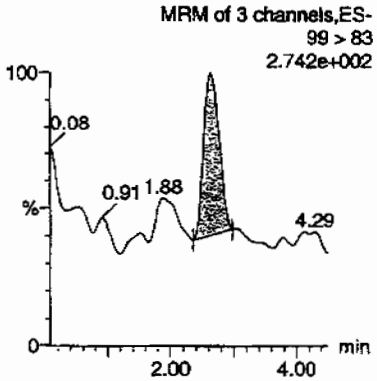

Perchlorate

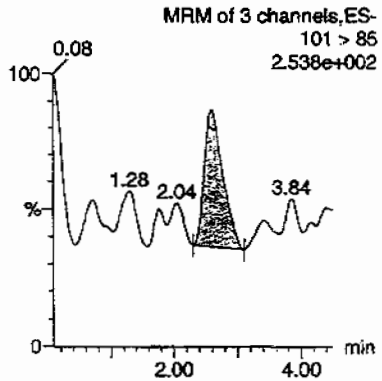

Perchlorate-101

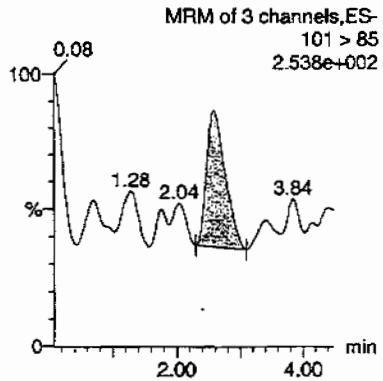

Perchlorate-O(18)

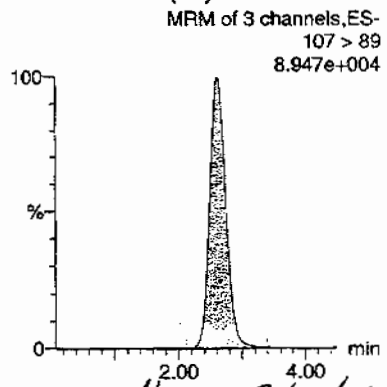

Hnm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.64	46.964	46.964	bb			0.0009			11.914	1.10
IPB002	Perchlorate-101	101 > 85	2.59	42.835	42.835	bb			0.0021			14.302	
IPB002	Perchlorate-O(18)	107 > 89	2.61	25538.781	25538.781	bb			0.5000	100.01 ✓	0.01	4126.7...	

OKAY LA 0500

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701010a
Date: 01-Jul-2009
Time: 12:20:34
ID: IPB003
Vial: 1:1,A

GWD 07-02-09

Perchlorate

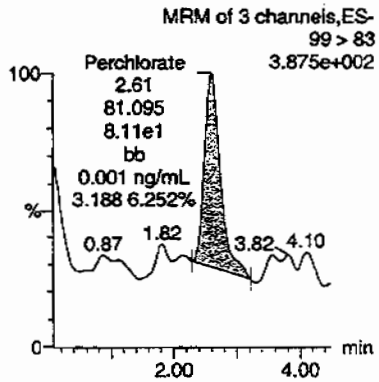

Perchlorate

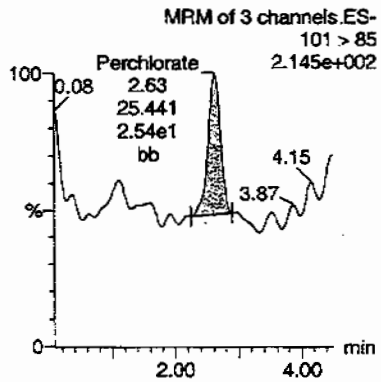

Perchlorate-101

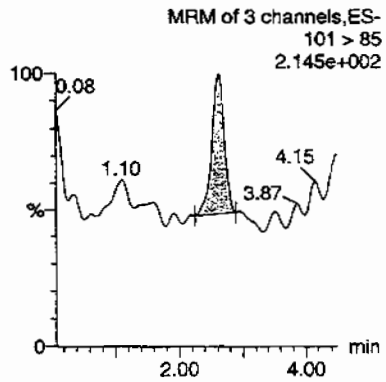

Perchlorate-O(18)

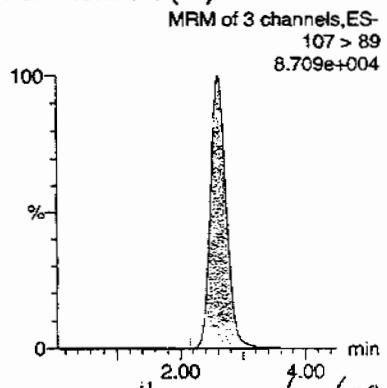

Hune 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.61	81.095	81.095	bb			0.0015			12.199	3.19
IPB003	Perchlorate-101	101 > 85	2.63	25.441	25.441	bb			0.0013			8.394	
IPB003	Perchlorate-O(18)	107 > 89	2.61	24698.920	24698.920	bb			0.4836	96.72	-3.28	3133.5...	

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Quantify Sample Report . MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701022a
Date: 01-Jul-2009
Time: 13:59:27
ID: IPB004
Vial: 1:1,A

CWW 07-02-09

Perchlorate

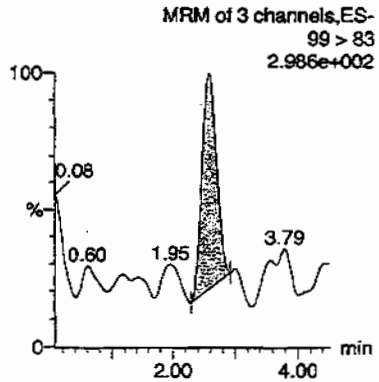

Perchlorate

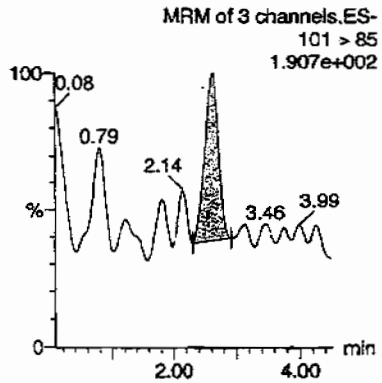

Perchlorate-101

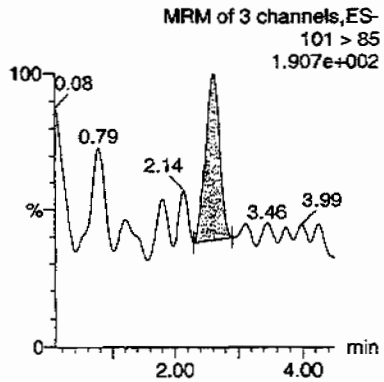

Perchlorate-O(18)

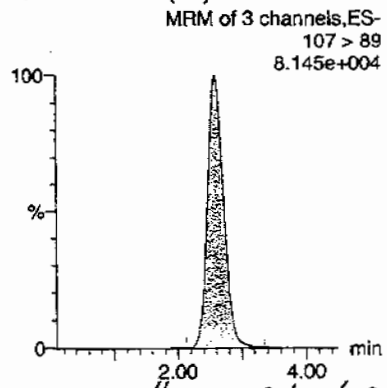

HNM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.59	63.504	63.504	bb			0.0012			23.712	2.11
IPB004	Perchlorate-101	101 > 85	2.63	30.093	30.093	bb			0.0015			4.572	
IPB004	Perchlorate-O(18)	107 > 89	2.60	23150.107	23150.107	bb			0.4533	90.66	-9.34	3355.9...	

ok 24 LOQ 0.0500

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Quantify Sample Report . MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701033a
Date: 01-Jul-2009
Time: 15:30:09
ID: IPB005
Vial: 1:1,A

CWW
07-02-09

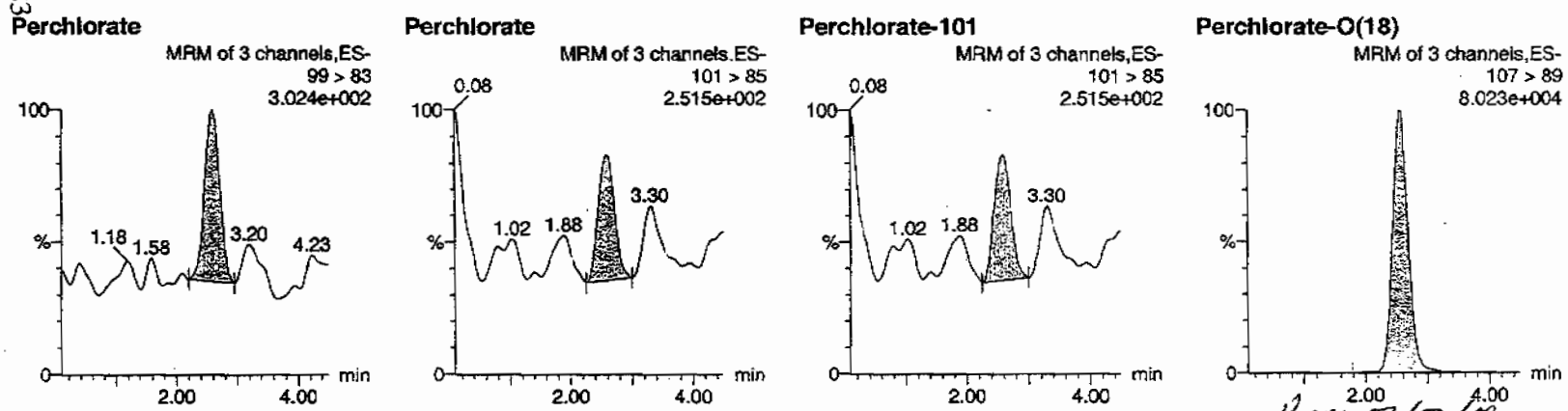

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83	2.59	56.302	56.302	bb			0.0010			13.274	1.52
IPB005	Perchlorate-101	101 > 85	2.59	36.924	36.924	bb			0.0019			4.826	
IPB005	Perchlorate-O(18)	107 > 89	2.56	22773.992	22773.992	bb			0.4459	89.18	-10.82	3791.8...	

OKAY
LO.0500

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701044a
Date: 01-Jul-2009
Time: 17:00:52
ID: IPB006
Vial: 1:1,A

07-02-09

Perchlorate

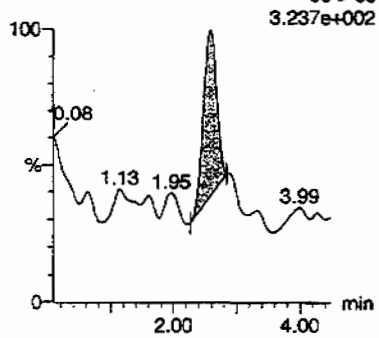

Perchlorate

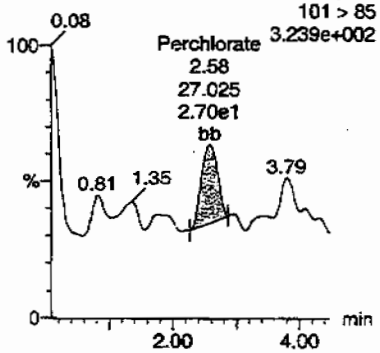

Perchlorate-101

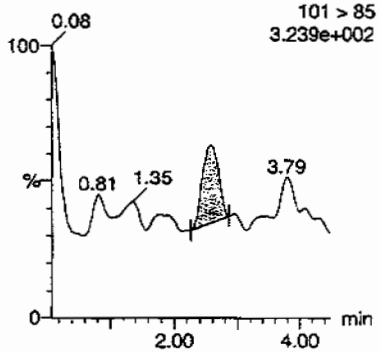

Perchlorate-O(18)

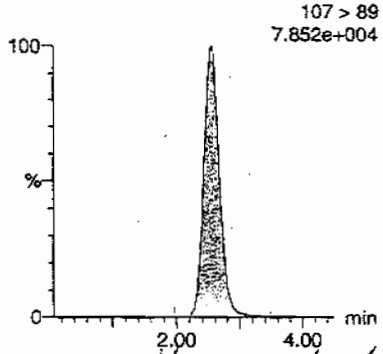

AWW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	2.59	47.843	47.843	bb			0.0009			15.575	1.77
IPB006	Perchlorate-101	101 > 85	2.58	27.025	27.025	bb			0.0014			12.086	
IPB006	Perchlorate-O(18)	107 > 89	2.55	22037.490	22037.490	bb			0.4315	86.30	-13.70	7493.5...	

OKAY
LOQ500

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Date: 01-Jul-2009
Time: 18:48:16
ID: IPB007
Vial: 1:1,A

CWW 07-02-09

Perchlorate

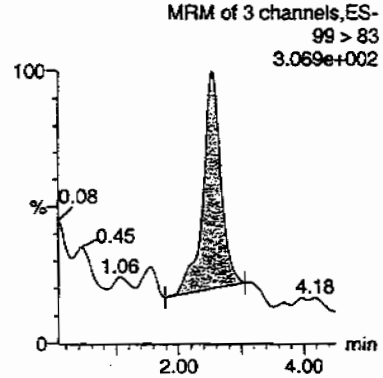

Perchlorate

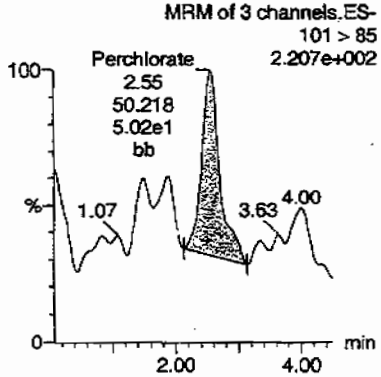

Perchlorate-101

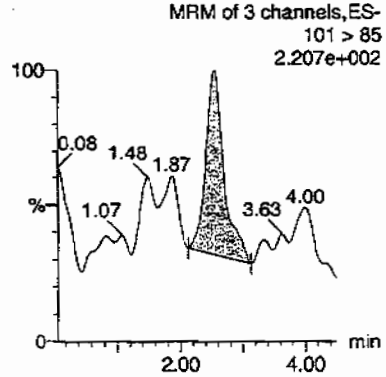

Perchlorate-O(18)

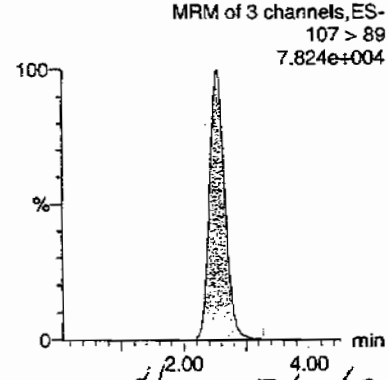

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83	2.54	80.913	80.913	bb			0.0015			41.066	1.61
IPB007	Perchlorate-101	101 > 85	2.55	50.218	50.218	bb			0.0025			19.221	
IPB007	Perchlorate-O(18)	107 > 89	2.54	22100.811	22100.811	bb			0.4327	86.55*	-13.45	4624.2...	

QUAL
LD.0500

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Page 0883

Name: per0701070a
Date: 01-Jul-2009
Time: 20:35:47
ID: IPB008
Vial: 1:1,A

CWW 07-02-09

Perchlorate

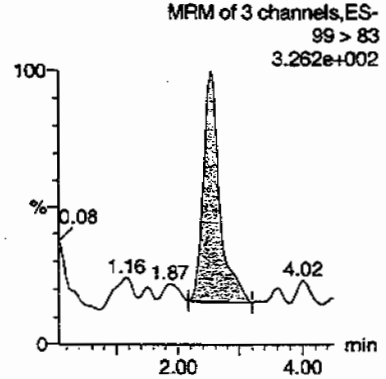

Perchlorate

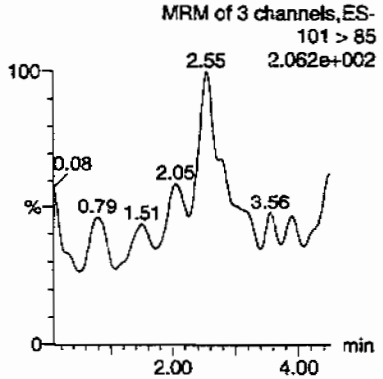

Perchlorate-101

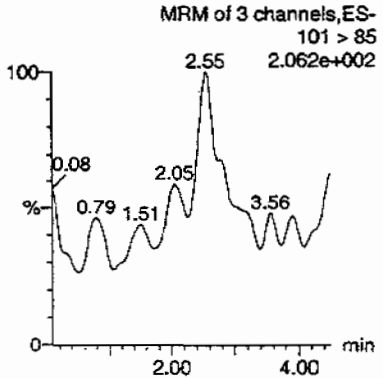

Perchlorate-O(18)

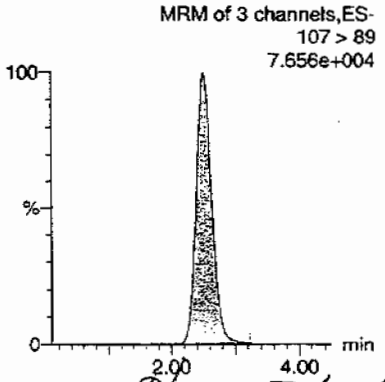

AMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83	2.54	84.984	84.984	bb			0.0016			14.349	0.00
IPB008	Perchlorate-101	101 > 85											
IPB008	Perchlorate-O(18)	107 > 89	2.51	21464.076	21464.076	bb			0.4203	84.05	-15.95	7084.3...	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/RbI (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWW 01-09-08

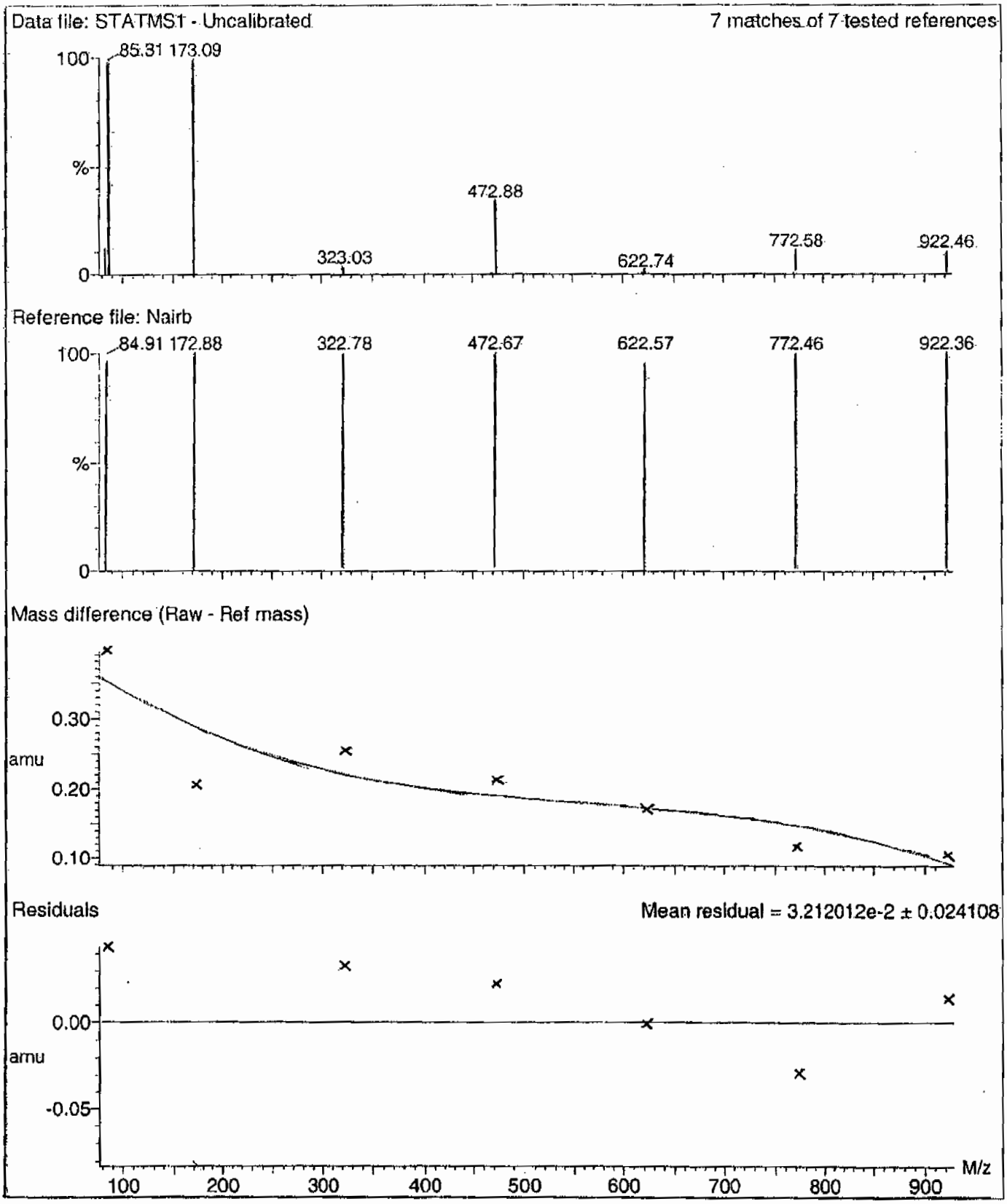

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

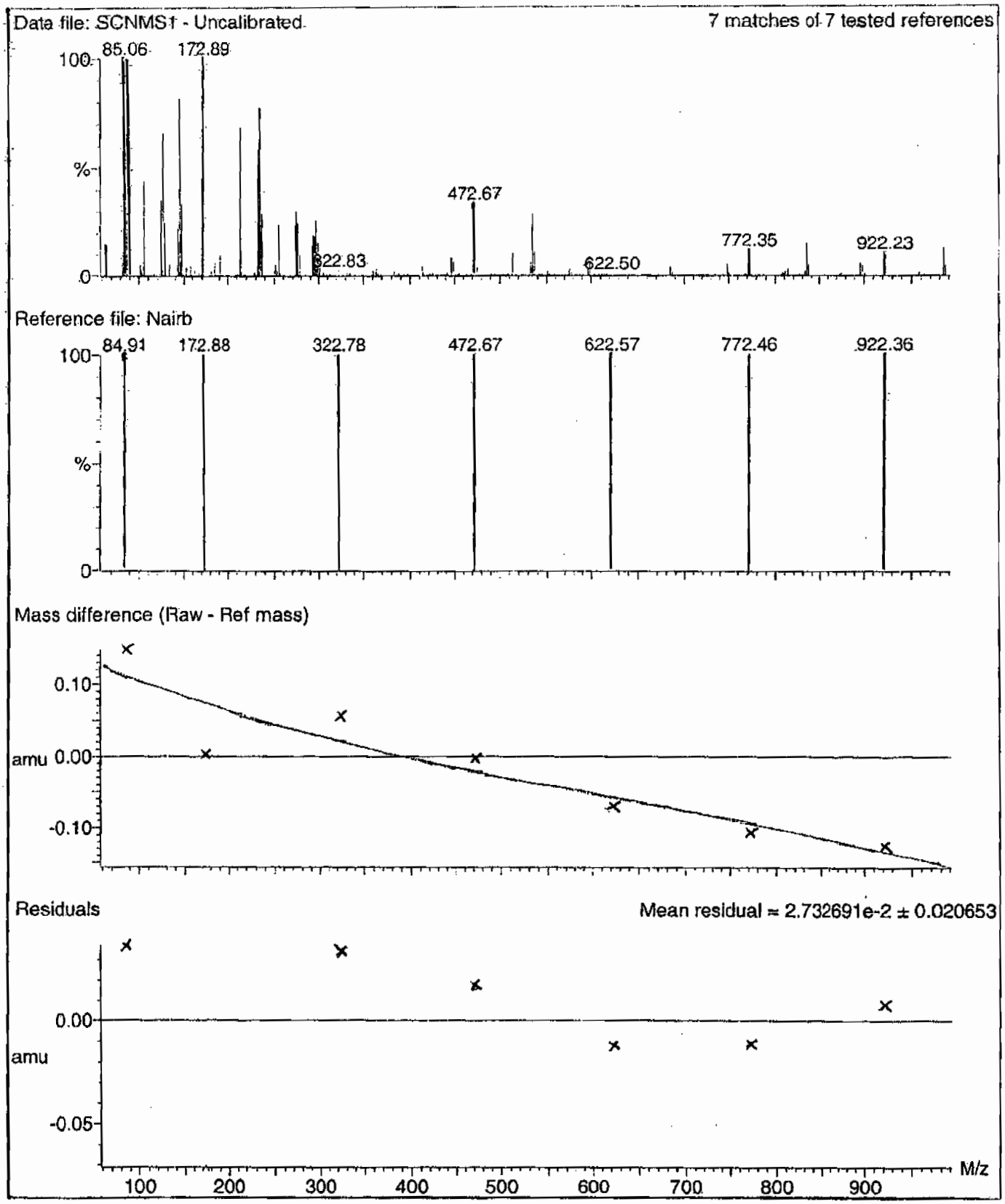

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

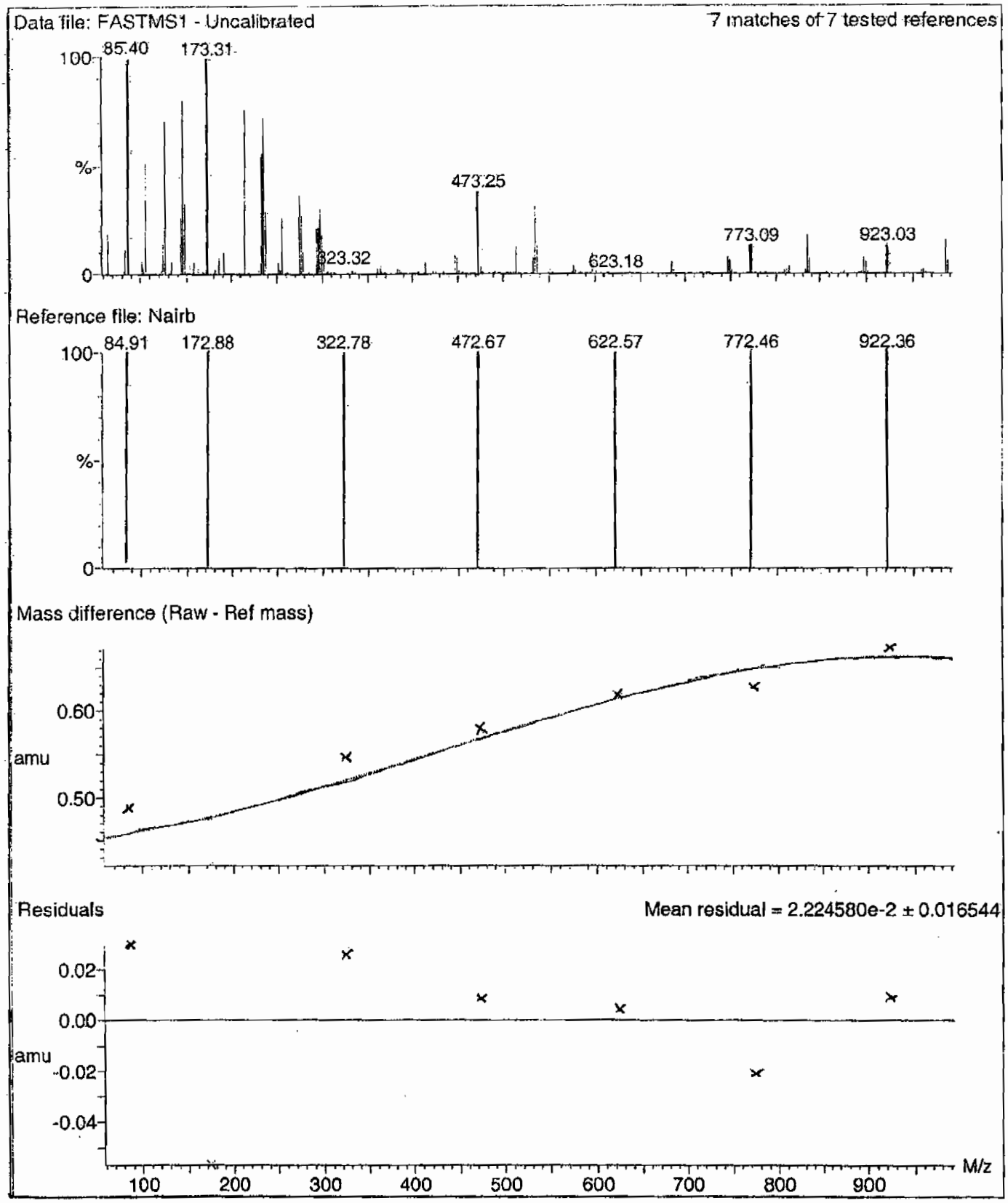

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

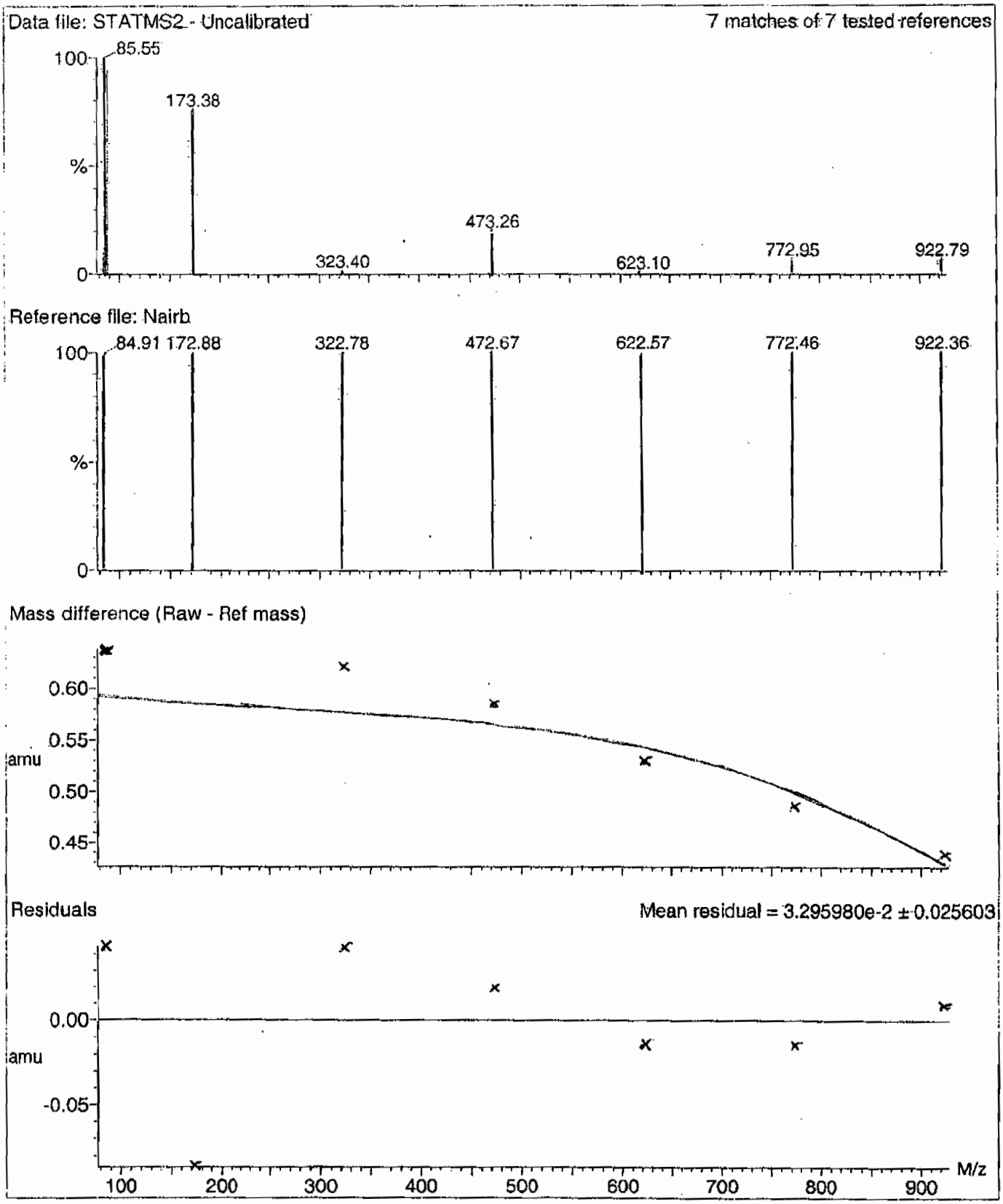

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scanning

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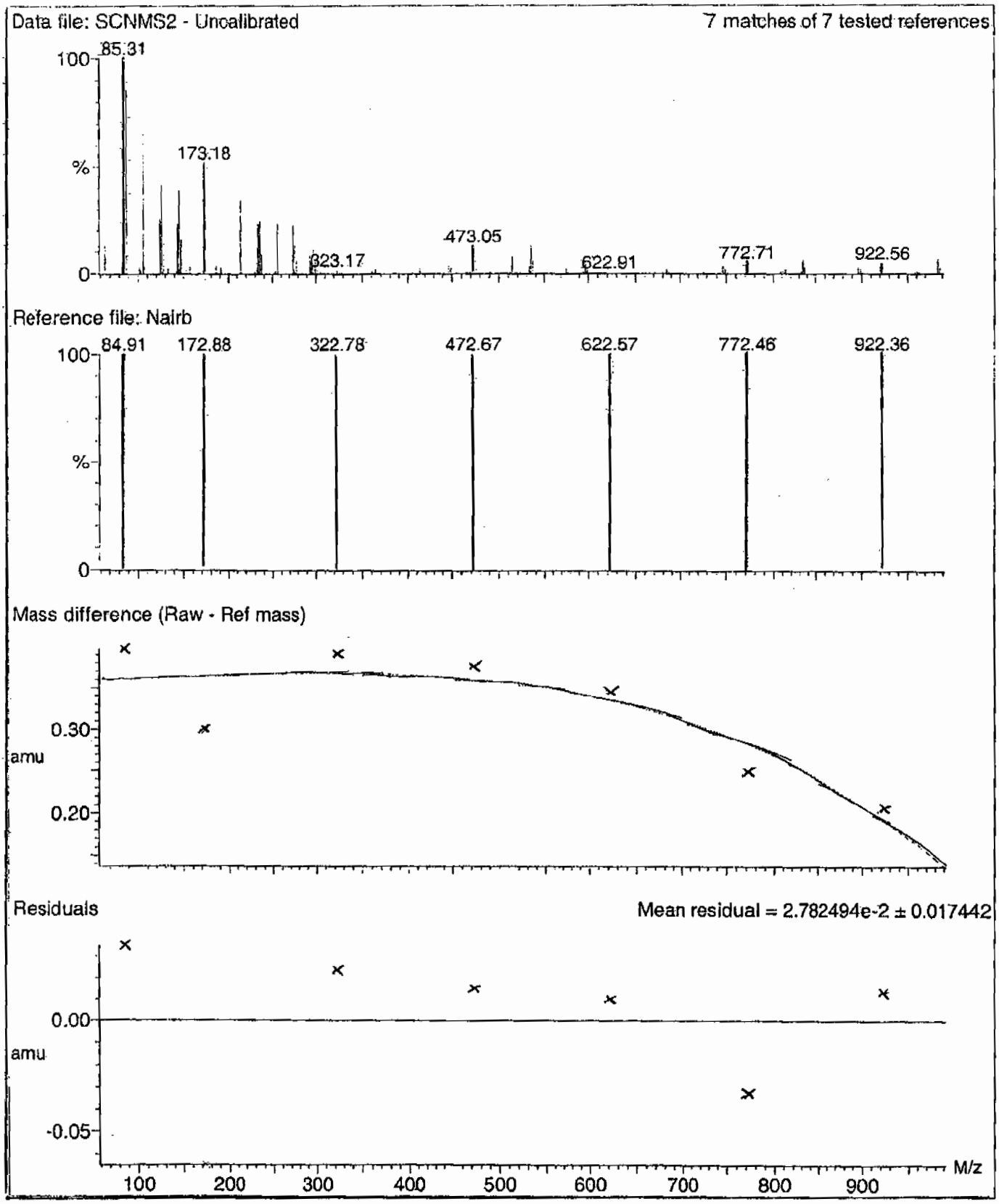

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Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

Data file: FASTMS2 - Uncalibrated

7 matches of 7 tested references

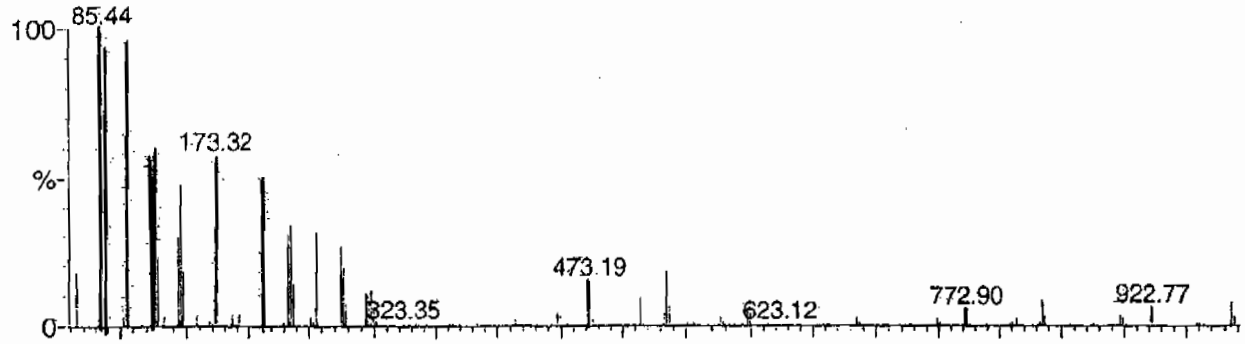

Reference file: Nairb

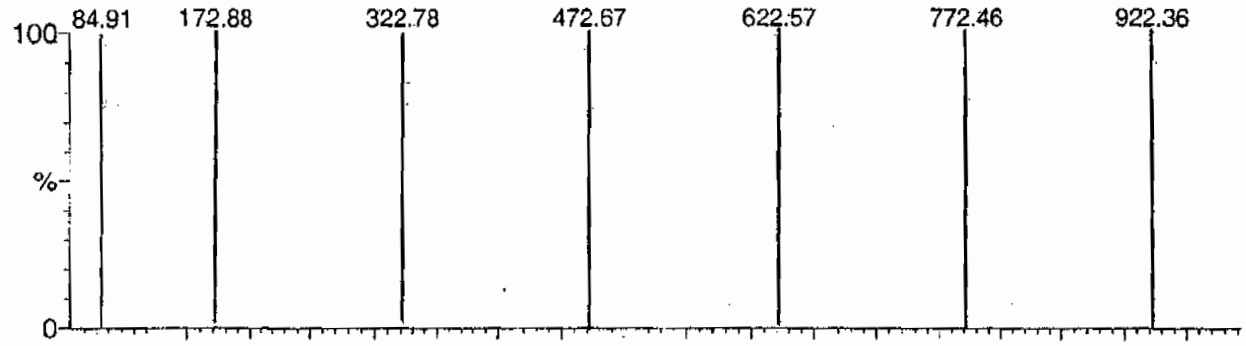

Mass difference (Raw - Ref mass)

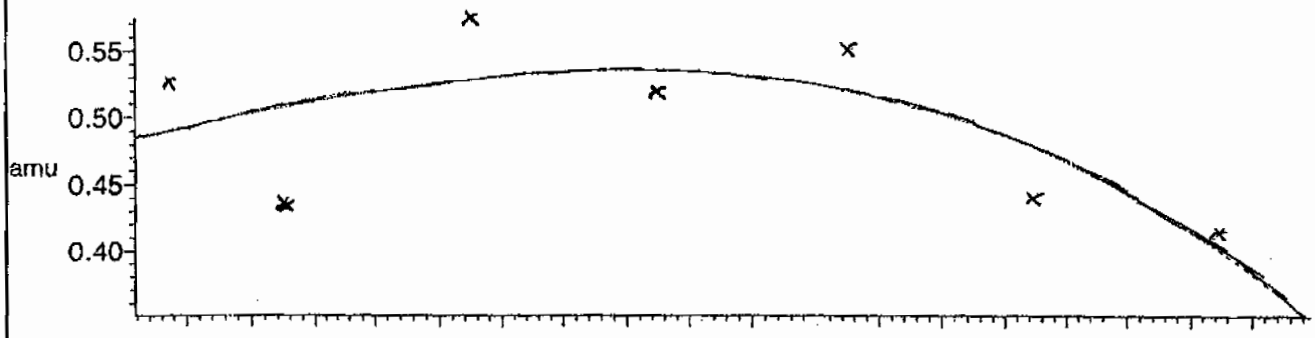

Residuals

Mean residual = 3.598289e-2 ± 0.017899

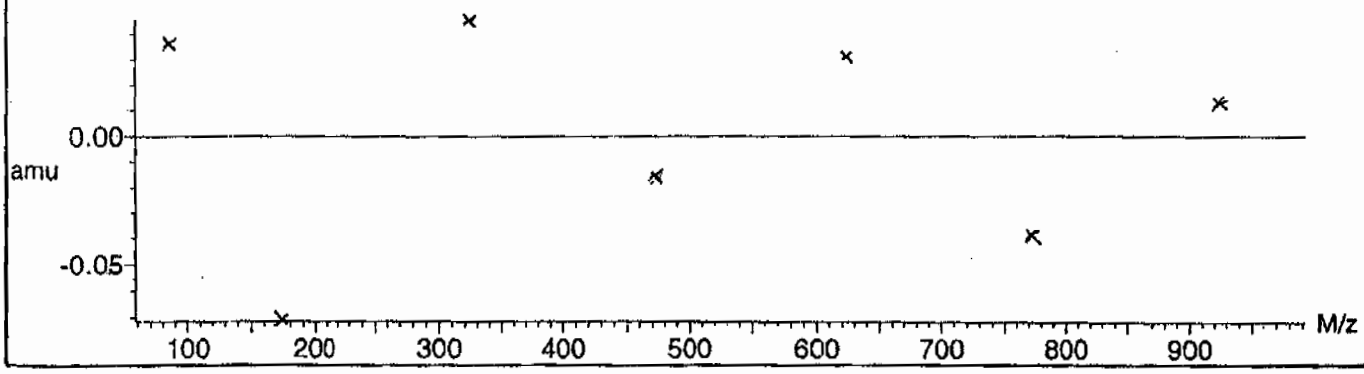

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Wednesday, July 01, 2009 10:43:16 Eastern Daylight Time

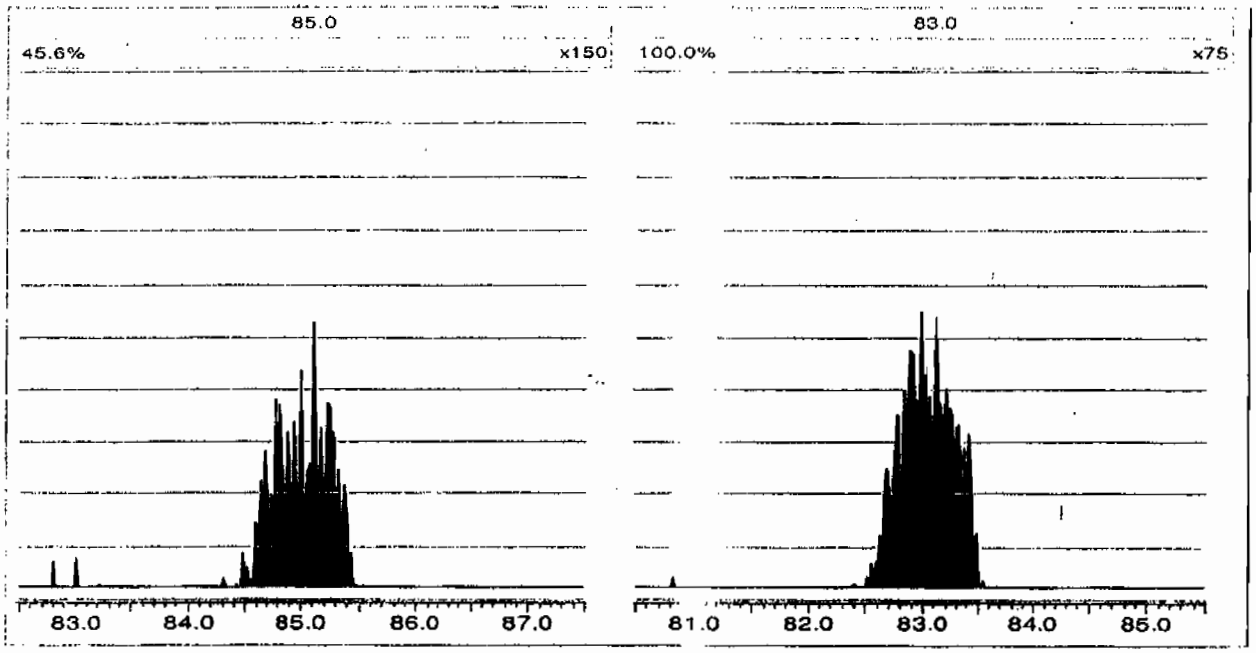

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2455

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0701006a**	**01–JUL–09**	**26293.3**				
Lower Area Limit			**13146.65**				
Upper Area Limit			**52586.6**				
1201871399	per0701046a	01–JUL–09 17:17	21754.9	2.55	2.57602	1.01	
1201871400	per0701047a	01–JUL–09 17:25	23006.2	2.55	2.5636	1.005	
1201871403	per0701048a	01–JUL–09 17:34	24308.2	2.56	2.57613	1.006	
232357001	per0701060a	01–JUL–09 19:13	24444	2.54	2.53883	1	
232357002	per0701061a	01–JUL–09 19:21	24020.2	2.53	2.55115	1.008	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10480

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2455

GEL Sample ID: 232357001

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.563	2.25	0.563	ug/kg	U	1	01-JUL-09 19:13	per0701060a
	Perchlorate-O(18)			5.39	ug/kg		1	01-JUL-09 19:13	per0701060a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701060a
Date: 01-Jul-2009
Time: 19:13:09
ID: 232357001
Vial: 2:2,F

|LANL|881210|SOLID|1|

CWW 07-02-09

Perchlorate

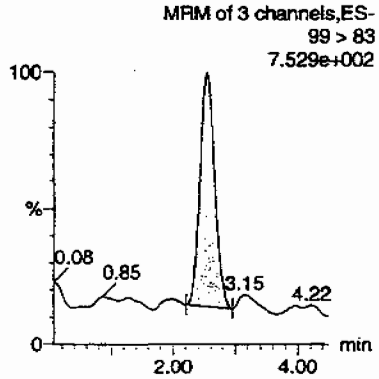

Perchlorate

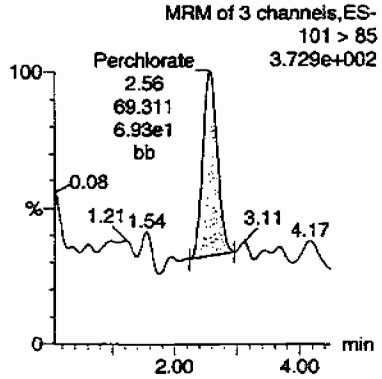

Perchlorate-101

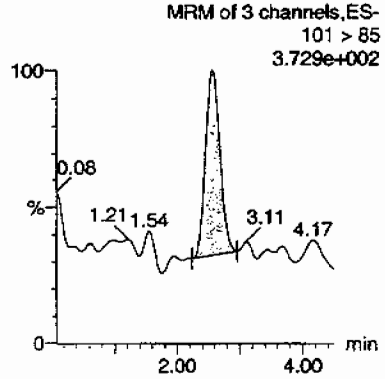

Perchlorate-O(18)

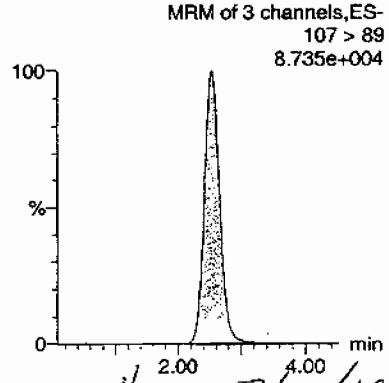

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232357001	Perchlorate	99 > 83	2.54	181.673	181.673	bb			0.0033			136.432	2.62
232357001	Perchlorate-101	101 > 85	2.56	69.311	69.311	bb			0.0035			30.988	
232357001	Perchlorate-O(18)	107 > 89	2.54	24444.039	24444.039	bb			0.4786	95.72	-4.28	2384.9...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10479

Date Received: 25-JUN-09

GEL Job No (SDG): 09-2455

GEL Sample ID: 232357002

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 90.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	0.754	ug/kg	J	1	01-JUL-09 19:21	per0701061a
	Perchlorate-O(18)			5.20	ug/kg		1	01-JUL-09 19:21	per0701061a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701061a
Date: 01-Jul-2009
Time: 19:21:23
ID: 232357002
Vial: 2:3,A

|LANL| 881210 | SDLZD | 1 |

GWO
07-02-09

Perchlorate

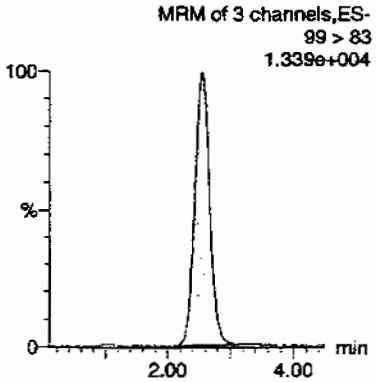

Perchlorate

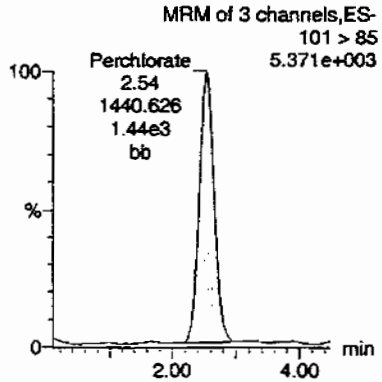

Perchlorate-101

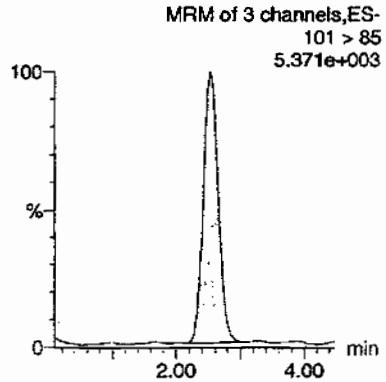

Perchlorate-O(18)

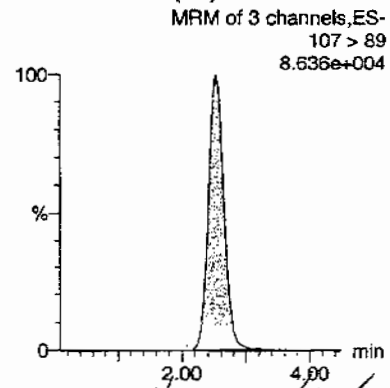

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232357002	Perchlorate	99 > 83	2.55	3720.423	3720.423	bb			0.0683			776.981	2.58
232357002	Perchlorate-101	101 > 85	2.54	1440.626	1440.626	bb			0.0722			425.425	
232357002	Perchlorate-O(18)	107 > 89	2.53	24020.236	24020.236	bb			0.4703	94.06	-5.94	4080.7...	

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PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2455

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 01–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 54505.72

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2455

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 01-JUL-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 19951.18

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070109a.mdb 01 Jul 2009 12:10:01
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070109a.cdb 02 Jul 2009 07:24:30

Compound name: Perchlorate
Response Factor: 54505.7
RRF SD: 1176.27, % Relative SD: 2.15807
Response type: External Std, Area
Curve type: RF

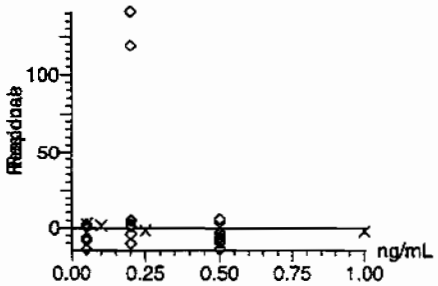

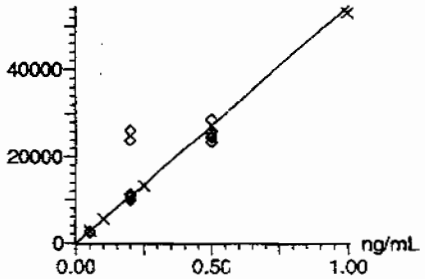

CWW
07-02-09

Compound name: Perchlorate-101
Response Factor: 19951.2
RRF SD: 548.059, % Relative SD: 2.747
Response type: External Std, Area
Curve type: RF

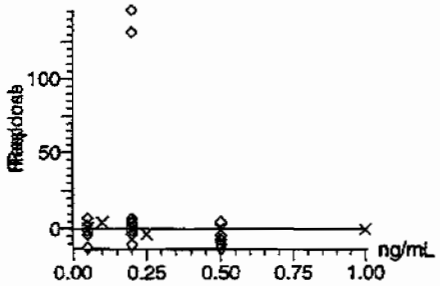

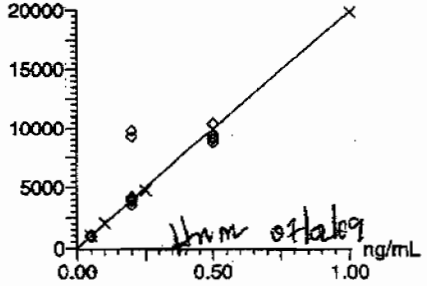

HMM 07/02/09

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Compound name: Perchlorate-O(18)
Response Factor: 51072.6
RRF SD: 1175.28, % Relative SD: 2.30119
Response type: External Std, Area
Curve type: RF

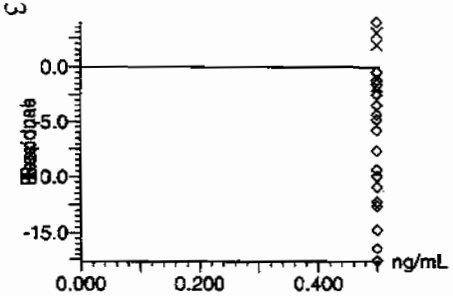

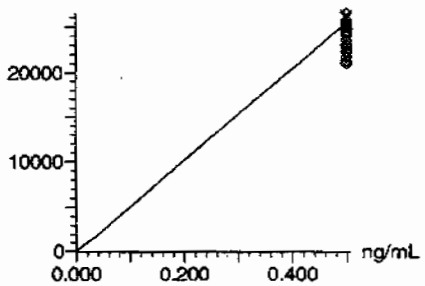

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2455

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.53	105.52	01-JUL-09 12:12	per0701009a
Perchlorate Isotope Ratio		2.75		01-JUL-09 12:12	per0701009a
Perchlorate-101	.5	.52	104.75	01-JUL-09 12:12	per0701009a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701009a
Date: 01-Jul-2009
Time: 12:12:19
ID: WCL090610-06ICV
Vial: 1:2,A

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Pass
[illegible]
07-02-09

Perchlorate

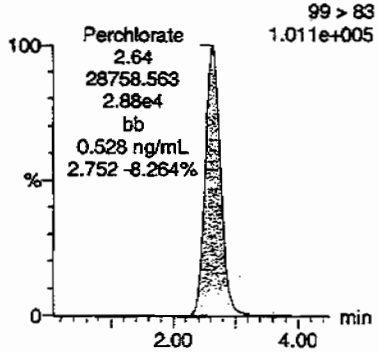

Perchlorate

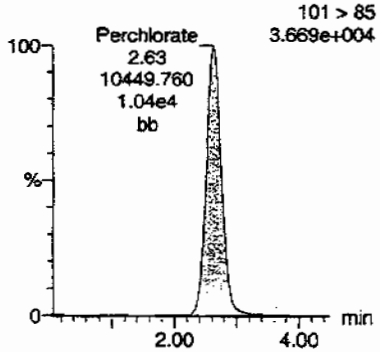

Perchlorate-101

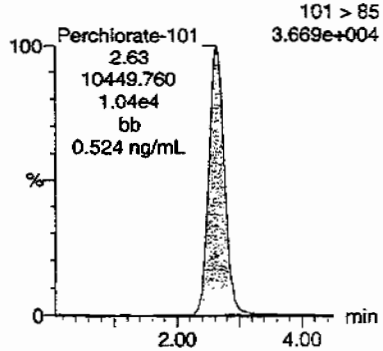

Perchlorate-O(18)

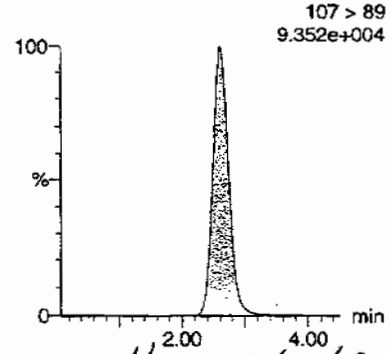

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06ICV	Perchlorate	99 > 83	2.64	28758.563	28758.563	bb			0.5276	105.52	5.52	9714.9...	2.75
WCL090610-06ICV	Perchlorate-101	101 > 85	2.63	10449.760	10449.760	bb			0.5238	104.75	4.75	1403.6...	
WCL090610-06ICV	Perchlorate-O(18)	107 > 89	2.61	26543.766	26543.766	bb			0.5197	103.95	3.95	6555.3...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2455

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.46	92.04	01-JUL-09 13:51	per0701021a
Perchlorate Isotope Ratio		2.76		01-JUL-09 13:51	per0701021a
Perchlorate-101	.5	.46	91.25	01-JUL-09 13:51	per0701021a
Perchlorate	.5	.45	90.24	01-JUL-09 15:21	per0701032a
Perchlorate Isotope Ratio		2.74		01-JUL-09 15:21	per0701032a
Perchlorate-101	.5	.45	89.87	01-JUL-09 15:21	per0701032a
Perchlorate	.5	.47	93.83	01-JUL-09 16:52	per0701043a
Perchlorate Isotope Ratio		2.69		01-JUL-09 16:52	per0701043a
Perchlorate-101	.5	.48	95.39	01-JUL-09 16:52	per0701043a
Perchlorate	.5	.48	96.04	01-JUL-09 18:39	per0701056a
Perchlorate Isotope Ratio		2.82		01-JUL-09 18:39	per0701056a
Perchlorate-101	.5	.47	93.11	01-JUL-09 18:39	per0701056a
Perchlorate	.5	.43	85.8	01-JUL-09 20:27	per0701069a

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2455

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate Isotope Ratio		2.69		01–JUL–09 20:27	per0701069a
Perchlorate–101	.5	.44	87.28	01–JUL–09 20:27	per0701069a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701021a
Date: 01-Jul-2009
Time: 13:51:12
ID: WCL090610-06CCV
Vial: 1:2,A

Pwas
aw
07-01-09

Perchlorate

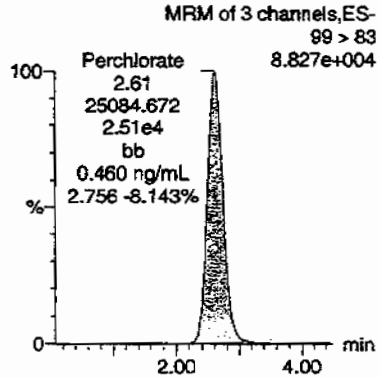

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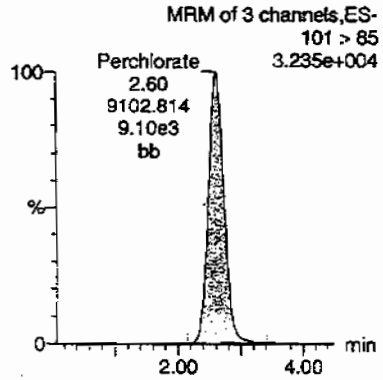

Perchlorate-101

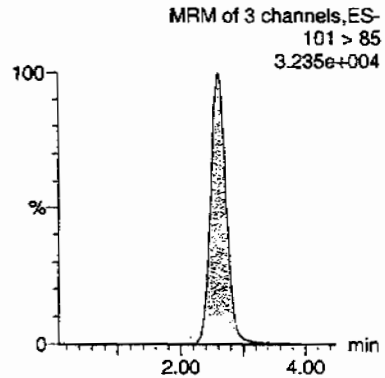

Perchlorate-O(18)

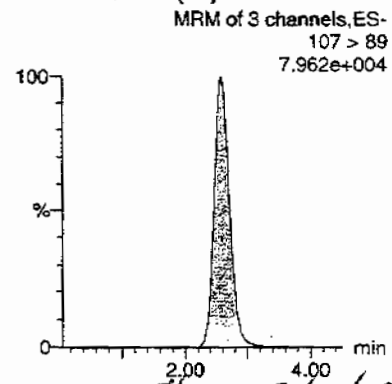

Amc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.61	25084.672	25084.672	bb			0.4602	92.04	-7.96	9361.1...	2.76
WCL090610-06CCV	Perchlorate-101	101 > 85	2.60	9102.814	9102.814	bb			0.4563	91.25	-8.75	1049.0...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.59	22411.676	22411.676	bb			0.4388	87.76	-12.24	4872.6...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Page 48 of 83

Name: per0701032a
Date: 01-Jul-2009
Time: 15:21:55
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
07-02-09

Perchlorate

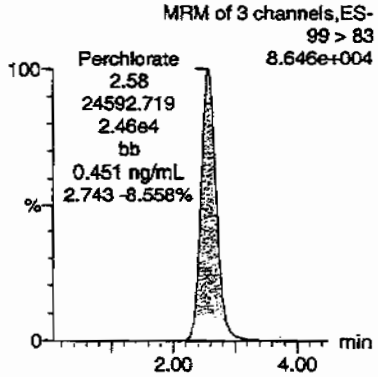

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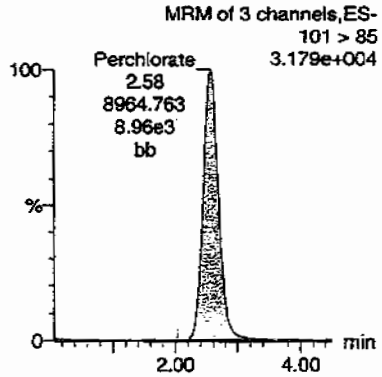

Perchlorate-101

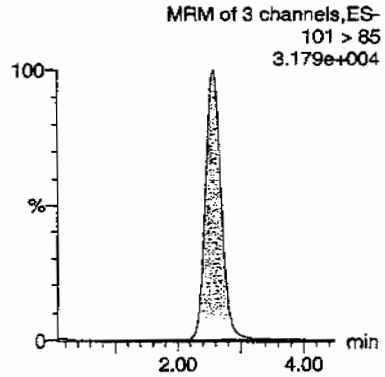

Perchlorate-O(18)

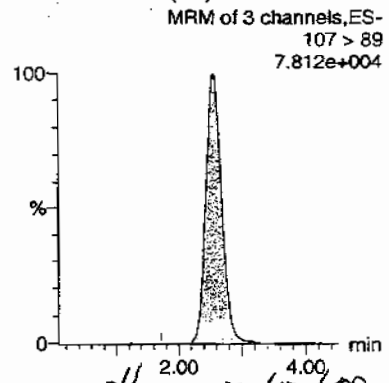

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.58	24592.719	24592.719	bb			0.4512	90.24	-9.76	3932.3...	2.74
WCL090610-06CCV	Perchlorate-101	101 > 85	2.58	8964.763	8964.763	bb			0.4493	89.87	-10.13	2152.6...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.56	22317.896	22317.896	bb			0.4370	87.40	-12.60	656.097	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701043a
Date: 01-Jul-2009
Time: 16:52:38
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
07-02-09

Perchlorate

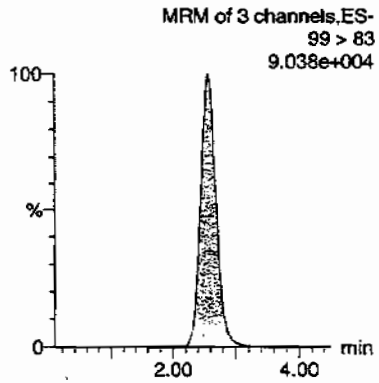

Perchlorate

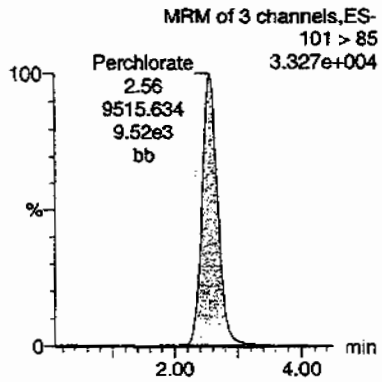

Perchlorate-101

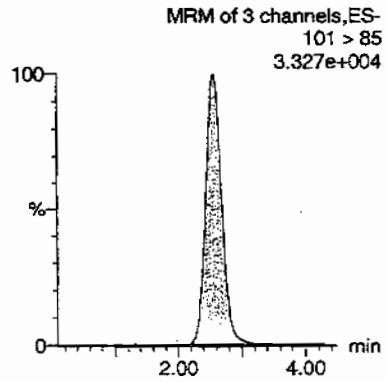

Perchlorate-O(18)

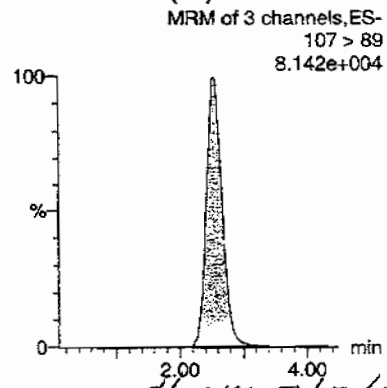

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.56	25570.629	25570.629	bb			0.4691	93.83	-6.17	6213.7...	2.69
WCL090610-06CCV	Perchlorate-101	101 > 85	2.56	9515.634	9515.634	bb			0.4769	95.39	-4.61	1118.3...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.55	22977.973	22977.973	bb			0.4499	89.98	-10.02	4541.5...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701056a
Date: 01-Jul-2009
Time: 18:39:48
ID: WCL090610-06CCV
Vial: 1:2,A

Prep
CWW
07-02-09

Perchlorate

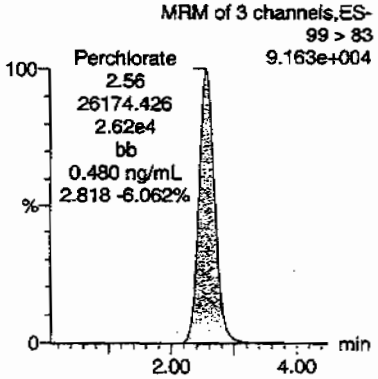

Perchlorate

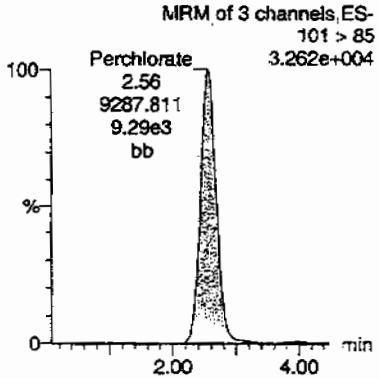

Perchlorate-101

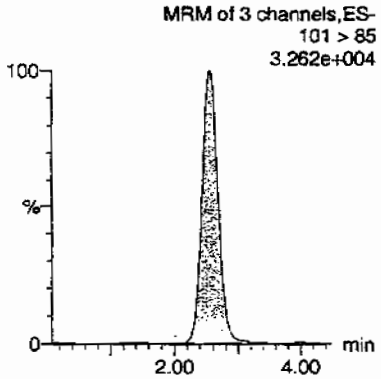

Perchlorate-O(18)

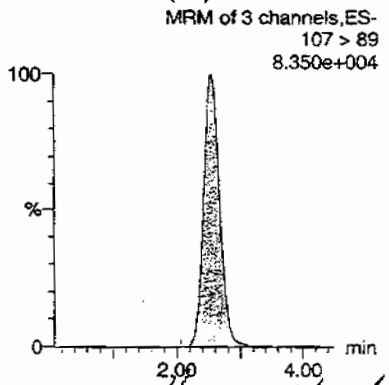

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.56	26174.426	26174.426	bb			0.4802	96.04	-3.96	14089....	2.82
WCL090610-06CCV	Perchlorate-101	101 > 85	2.56	9287.811	9287.811	bb			0.4655	93.11	-6.89	3038.9...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.55	23575.309	23575.309	bb			0.4616	92.32	-7.68	3475.6...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701069a
Date: 01-Jul-2009
Time: 20:27:19
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
aw
07-02-09

Perchlorate

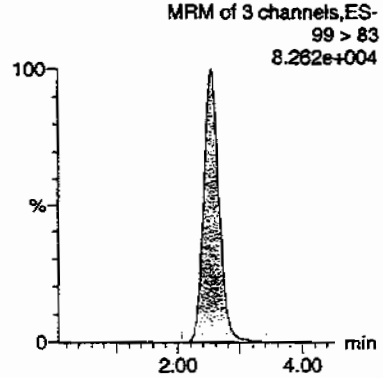

Perchlorate

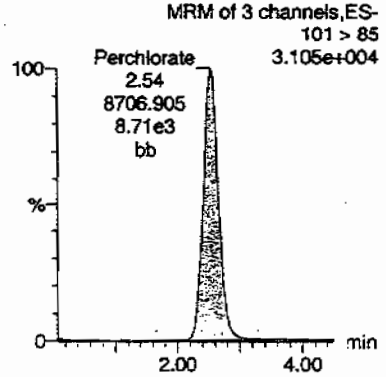

Perchlorate-101

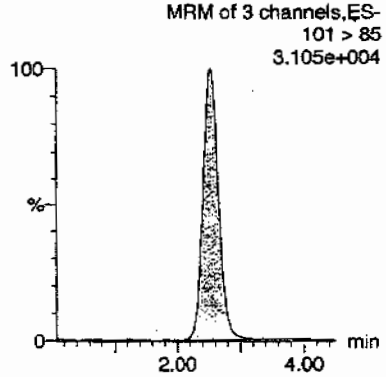

Perchlorate-O(18)

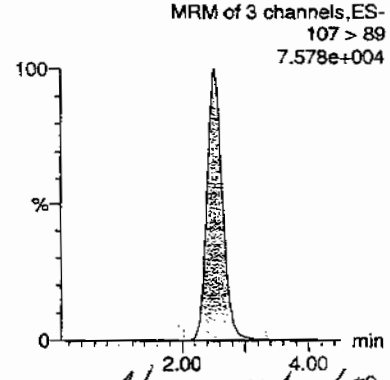

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.54	23382.703	23382.703	bb			0.4290	85.80	-14.20	6678.1...	2.69
WCL090610-06CCV	Perchlorate-101	101 > 85	2.54	8706.905	8706.905	bb			0.4364	87.28	-12.72	2888.0...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.53	21349.877	21349.877	bb			0.4180	83.61	-16.39	419.974	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2455

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	102.45	01–JUL–09 12:28	per0701011a
Perchlorate Isotope Ratio		2.62		01–JUL–09 12:28	per0701011a
Perchlorate–101	.05	.05	106.99	01–JUL–09 12:28	per0701011a
Perchlorate	.05	.05	93.74	01–JUL–09 14:07	per0701023a
Perchlorate Isotope Ratio		2.68		01–JUL–09 14:07	per0701023a
Perchlorate–101	.05	.05	95.68	01–JUL–09 14:07	per0701023a
Perchlorate	.05	.05	91.64	01–JUL–09 15:38	per0701034a
Perchlorate Isotope Ratio		2.54		01–JUL–09 15:38	per0701034a
Perchlorate–101	.05	.05	98.58	01–JUL–09 15:38	per0701034a
Perchlorate	.05	.05	101.06	01–JUL–09 17:09	per0701045a
Perchlorate Isotope Ratio		2.7		01–JUL–09 17:09	per0701045a

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2455

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate–101	.05	.05	102.11	01–JUL–09 17:09	per0701045a
Perchlorate	.05	.05	100.43	01–JUL–09 18:56	per0701058a
Perchlorate Isotope Ratio		2.84		01–JUL–09 18:56	per0701058a
Perchlorate–101	.05	.05	96.54	01–JUL–09 18:56	per0701058a
Perchlorate	.05	.05	93.24	01–JUL–09 20:44	per0701071a
Perchlorate Isotope Ratio		2.91		01–JUL–09 20:44	per0701071a
Perchlorate–101	.05	.04	87.63	01–JUL–09 20:44	per0701071a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701011a
Date: 01-Jul-2009
Time: 12:28:48
ID: WCL090610-07CRI
Vial: 1:2,B

Pres
Cwo
07-02-09

Perchlorate

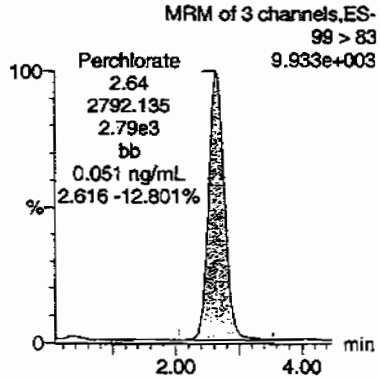

Perchlorate

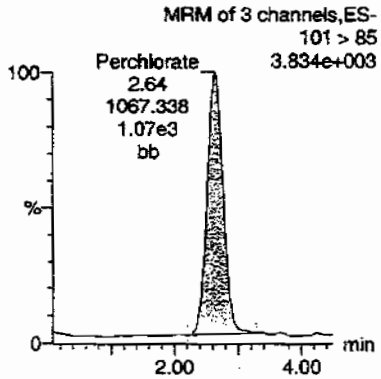

Perchlorate-101

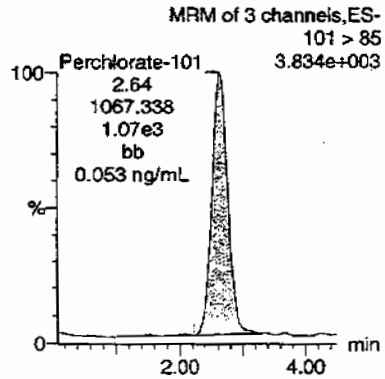

Perchlorate-O(18)

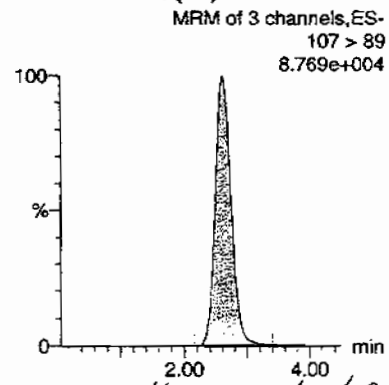

Hrm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.64	2792.135	2792.135	bb			0.0512	102.45	2.45	1309.2...	2.62
WCL090610-07CRI	Perchlorate-101	101 > 85	2.64	1067.338	1067.338	bb			0.0535	106.99	6.99	469.506	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.63	24908.549	24908.549	bb			0.4877	97.54	-2.46	3535.4...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701023a
Date: 01-Jul-2009
Time: 14:07:41
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
[illegible]
07-02-09

Perchlorate

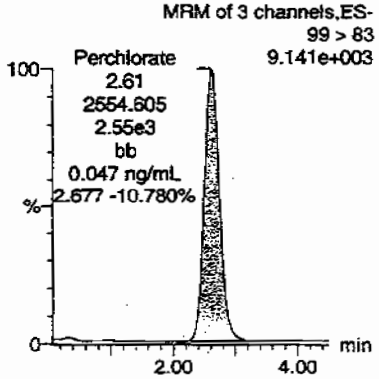

Perchlorate

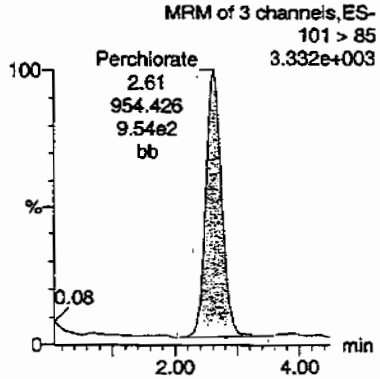

Perchlorate-101

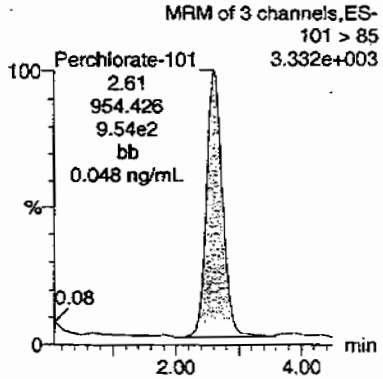

Perchlorate-O(18)

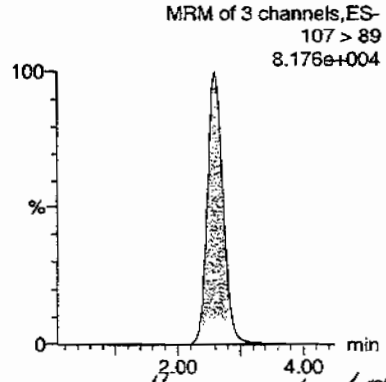

Hnm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.61	2554.605	2554.605	bb			0.0469	93.74	-6.26	531.538	2.68
WCL090610-07CRI	Perchlorate-101	101 > 85	2.61	954.426	954.426	bb			0.0478	95.68	-4.32	217.520	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.60	23158.055	23158.055	bb			0.4534	90.69	-9.31	1225.6...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701034a
Date: 01-Jul-2009
Time: 15:38:24
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
07-02-09

Perchlorate

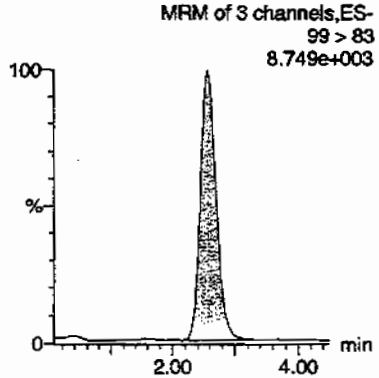

Perchlorate

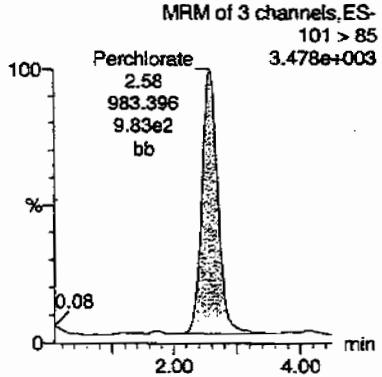

Perchlorate-101

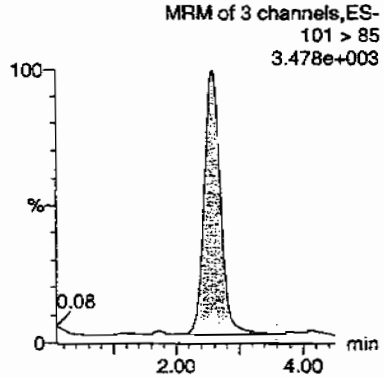

Perchlorate-O(18)

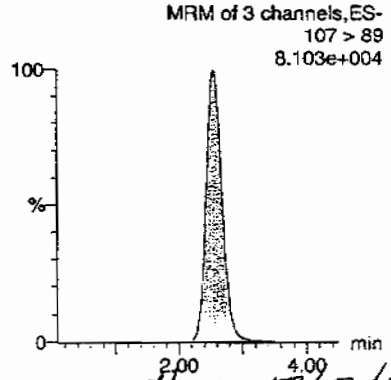

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.58	2497.578	2497.578	bb			0.0458	91.64	-8.36	511.436	2.54
WCL090610-07CRI	Perchlorate-101	101 > 85	2.58	983.396	983.396	bb			0.0493	98.58	-1.42	473.891	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.56	22748.477	22748.477	bb			0.4454	89.08	-10.92	5866.9...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Page 40 of 83

Name: per0701045a
Date: 01-Jul-2009
Time: 17:09:06
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
aw
07-02-09

Perchlorate

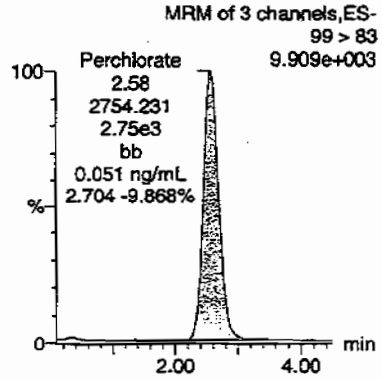

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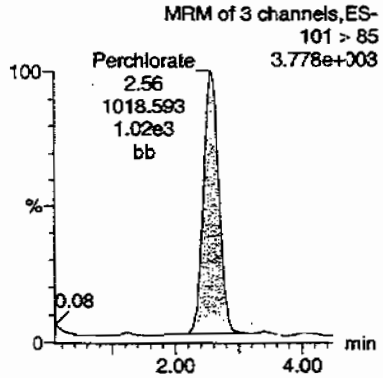

Perchlorate-101

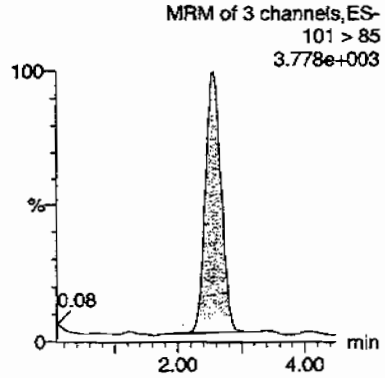

Perchlorate-O(18)

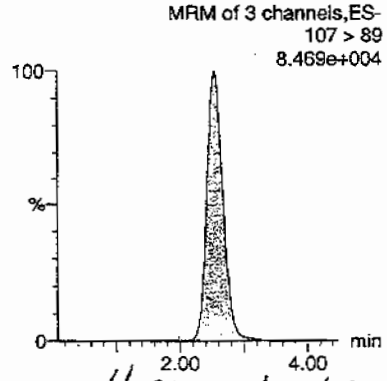

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.58	2754.231	2754.231	bb			0.0505	101.06	1.06	2453.6...	2.70
WCL090610-07CRI	Perchlorate-101	101 > 85	2.56	1018.593	1018.593	bb			0.0511	102.11	2.11	800.039	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.55	24057.582	24057.582	bb			0.4710	94.21	-5.79	2929.1...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701058a
Date: 01-Jul-2009
Time: 18:56:30
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
aw
07-02-09

Perchlorate

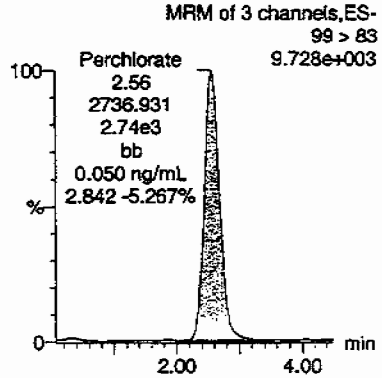

Perchlorate

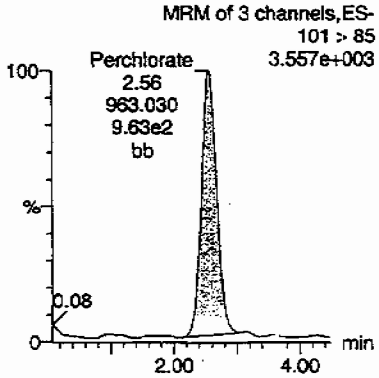

Perchlorate-101

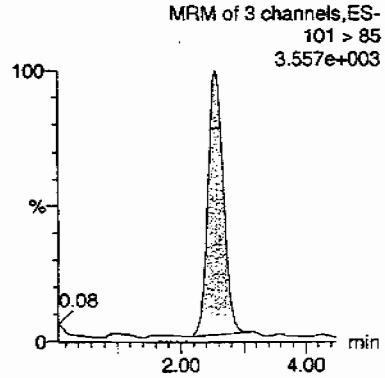

Perchlorate-O(18)

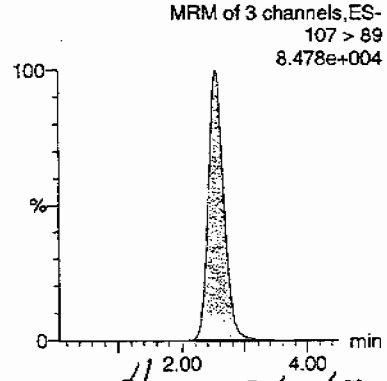

AM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.56	2736.931	2736.931	bb			0.0502	100.43	0.43	372.637	2.84
WCL090610-07CRI	Perchlorate-101	101 > 85	2.56	963.030	963.030	bb			0.0483	96.54	-3.46	137.419	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.55	24059.672	24059.672	bb			0.4711	94.22	-5.78	7156.9...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

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Name: per0701071a
Date: 01-Jul-2009
Time: 20:44:02
ID: WCL090610-07CRI
Vial: 1:2,B

Page 83
07-02-09

Perchlorate

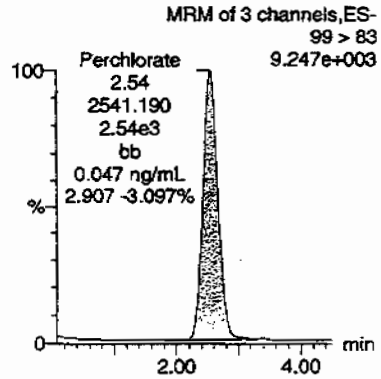

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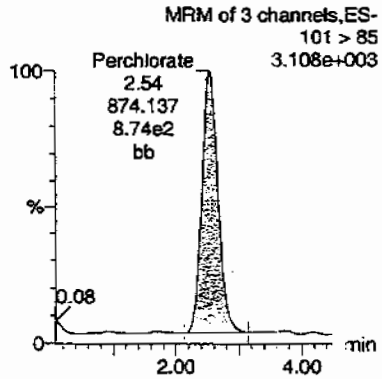

Perchlorate-101

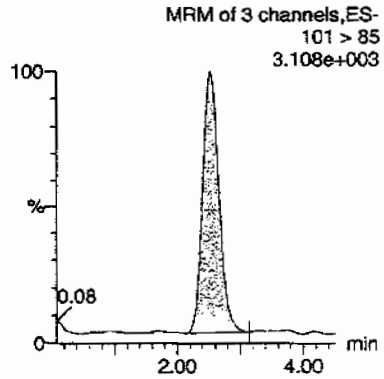

Perchlorate-O(18)

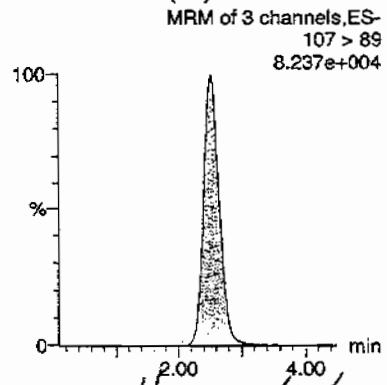

Hrm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.54	2541.190	2541.190	bb			0.0466	93.24	-6.76	1872.5...	2.91
WCL090610-07CRI	Perchlorate-101	101 > 85	2.54	874.137	874.137	bb			0.0438	87.63	-12.37	219.401	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.53	23134.523	23134.523	bb			0.4530	90.59	-9.41	4145.6...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

MB

Date Received: 29-JUN-09

GEL Job No (SDG): 09-2455

GEL Sample ID: 1201871399

Date Filtered: 29-JUN-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	01-JUL-09 17:17	per0701046a
	Perchlorate-O(18)			4.26	ug/kg		1	01-JUL-09 17:17	per0701046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701046a
Date: 01-Jul-2009
Time: 17:17:22
ID: 1201871399
Vial: 2:1,A

| LANL | 831210 | 50620 | MB | 11

CWW 07-02-09

Perchlorate

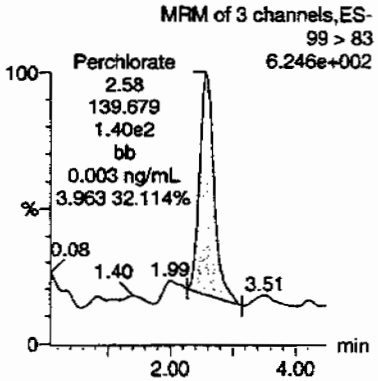

Perchlorate

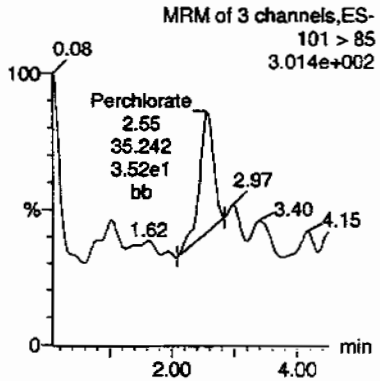

Perchlorate-101

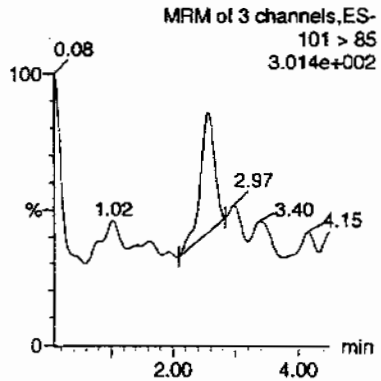

Perchlorate-O(18)

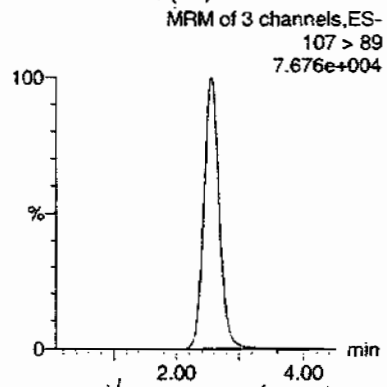

Hmc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871399	Perchlorate	99 > 83	2.58	139.679	139.679	bb			0.0026			133.567	3.96
1201871399	Perchlorate-101	101 > 85	2.55	35.242	35.242	bb			0.0018			15.786	
1201871399	Perchlorate-O(18)	107 > 89	2.55	21754.889	21754.889	bb			0.4260	85.19	-14.81	3325.5...	

okay
<0.0500

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881208

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 29–JUN–09

GEL Job No (SDG): 09–2455

GEL Sample ID: 1201871400

Date Filtered: 29–JUN–09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.5	2	1.92	ug/kg	J	1	01–JUL–09 17:25	per0701047a
	Perchlorate–O(18)			4.50	ug/kg		1	01–JUL–09 17:25	per0701047a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701047a
Date: 01-Jul-2009
Time: 17:25:48
ID: 1201871400
Vial: 2:1,B

|LANL|881210|SOZO|LCS|11

CWW 07-02-09

Perchlorate

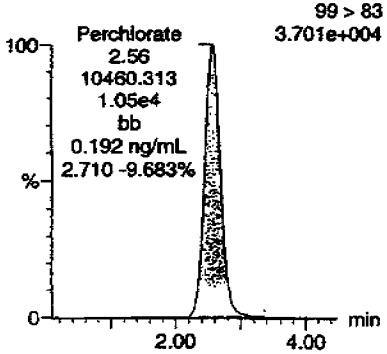

Perchlorate

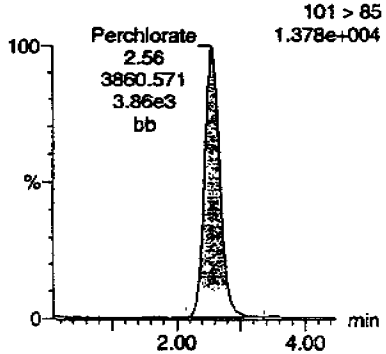

Perchlorate-101

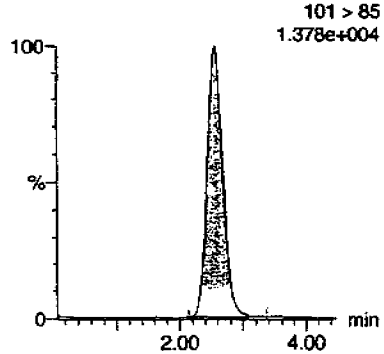

Perchlorate-O(18)

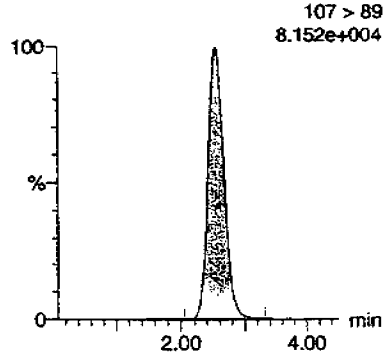

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871400	Perchlorate	99 > 83	2.56	10460.313	10460.313	bb			0.1919	95.96	-4.04	4111.9...	2.71
1201871400	Perchlorate-101	101 > 85	2.56	3860.571	3860.571	bb			0.1935	96.75	-3.25	1177.4...	
1201871400	Perchlorate-O(18)	107 > 89	2.55	23006.162	23006.162	bb			0.4505	90.09	-9.91	1884.3...	

$\frac{10460.313}{54505.7} = 0.1919$

Hmw 07/02/09

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 881208 **Verified by:**
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201871399 MB	29-JUN-2009 12:54:23	2	20	10
1201871400 LCS	29-JUN-2009 12:54:23	2	20	10
232278001	29-JUN-2009 12:54:23	2	20	10
232278002	29-JUN-2009 12:54:23	2	20	10
232347001	29-JUN-2009 12:54:23	2	20	10
1201871401 MS (232347001)	29-JUN-2009 12:54:23	2	20	10
1201871402 MSD (232347001)	29-JUN-2009 12:54:23	2	20	10
232347002	29-JUN-2009 12:54:23	2	20	10
232347003	29-JUN-2009 12:54:23	2	20	10
232347004	29-JUN-2009 12:54:23	2	20	10
232357001	29-JUN-2009 12:54:23	2	20	10
232357002	29-JUN-2009 12:54:23	2	20	10
232367001	29-JUN-2009 12:54:23	2	20	10
232367002	29-JUN-2009 12:54:23	2	20	10
232367003	29-JUN-2009 12:54:23	2	20	10
232367004	29-JUN-2009 12:54:23	2	20	10
232367005	29-JUN-2009 12:54:23	2	20	10
232367006	29-JUN-2009 12:54:23	2	20	10
232367007	29-JUN-2009 12:54:23	2	20	10
232367008	29-JUN-2009 12:54:23	2	20	10
232367009	29-JUN-2009 12:54:23	2	20	10
232367010	29-JUN-2009 12:54:23	2	20	10
232367011	29-JUN-2009 12:54:23	2	20	10
1201871403 ICS	29-JUN-2009 12:54:23	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201871403	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
LCS	1201871400	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MS	1201871401	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MSD	1201871402	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL

Comments:

Desalting cartridges used: 090603-1-H & 090401-Ba

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 07/01/09
Extr. Injection Volume: 20uL
Sequence Number: per070109a
Initial Calibration Date: 07/01/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: Hnm
Date: 07/02/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090618-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0701001a	IPB001	CWW	7/1/2009 10:54			1		USE	B
per0701002a	IPB001	CWW	7/1/2009 11:02			1		USE	B
per0701003a	WCLICAL-01	CWW	7/1/2009 11:22			1		USE	I
per0701004a	WCLICAL-02	CWW	7/1/2009 11:31			1		USE	I
per0701005a	WCLICAL-03	CWW	7/1/2009 11:39			1		USE	I
per0701006a	WCLICAL-04	CWW	7/1/2009 11:47			1		USE	I
per0701007a	WCLICAL-05	CWW	7/1/2009 11:55			1		USE	I
per0701008a	IPB002	CWW	7/1/2009 12:04			1		USE	B
per0701009a	WCLICV	CWW	7/1/2009 12:12			1		USE	C
per0701010a	IPB003	CWW	7/1/2009 12:20			1		USE	B
per0701011a	WCLCRI	CWW	7/1/2009 12:28			1		USE	C
per0701012a	1201865599	CWW	7/1/2009 12:37	878816	VARIOUS	1	LANL	USE	S
per0701013a	1201865600	CWW	7/1/2009 12:45	878816	VARIOUS	1	LANL	USE	S
per0701014a	1201865603	CWW	7/1/2009 12:53	878816	VARIOUS	1	LANL	USE	S
per0701015a	232037001	CWW	7/1/2009 13:01	878816	09-2367	1	LANL	USE	S
per0701016a	232037002	CWW	7/1/2009 13:10	878816	09-2367	1	LANL	USE	S
per0701017a	1201865601	CWW	7/1/2009 13:18	878816	09-2367	1	LANL	USE	S
per0701018a	1201865602	CWW	7/1/2009 13:26	878816	09-2367	1	LANL	USE	S
per0701019a	232037003	CWW	7/1/2009 13:34	878816	09-2367	1	LANL	USE	S
per0701020a	232037004	CWW	7/1/2009 13:42	878816	09-2367	1	LANL	USE	S
per0701021a	WCLCCV	CWW	7/1/2009 13:51			1		USE	C
per0701022a	IPB004	CWW	7/1/2009 13:59			1		USE	B
per0701023a	WCLCRI	CWW	7/1/2009 14:07			1		USE	C
per0701024a	232037005	CWW	7/1/2009 14:15	878816	09-2367	1	LANL	USE	S
per0701025a	232037006	CWW	7/1/2009 14:24	878816	09-2367	1	LANL	USE	S
per0701026a	232037007	CWW	7/1/2009 14:32	878816	09-2367	1	LANL	USE	S
per0701027a	232037008	CWW	7/1/2009 14:40	878816	09-2367	1	LANL	USE	S
per0701028a	232037009	CWW	7/1/2009 14:48	878816	09-2367	1	LANL	USE	S
per0701029a	232047001	CWW	7/1/2009 14:57	878816	09-2373	1	LANL	USE	S

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per0701030a	232047002	CWW	7/1/2009 15:05	878816	09-2373	1	LANL	USE	S
per0701031a	232047003	CWW	7/1/2009 15:13	878816	09-2373	1	LANL	USE	S
per0701032a	WCLCCV	CWW	7/1/2009 15:21			1		USE	C
per0701033a	IPB005	CWW	7/1/2009 15:30			1		USE	B
per0701034a	WCLCRI	CWW	7/1/2009 15:38			1		USE	C
per0701035a	232047004	CWW	7/1/2009 15:46	878816	09-2373	1	LANL	USE	S
per0701036a	232047005	CWW	7/1/2009 15:54	878816	09-2373	1	LANL	USE	S
per0701037a	232047006	CWW	7/1/2009 16:03	878816	09-2373	1	LANL	USE	S
per0701038a	232047007	CWW	7/1/2009 16:11	878816	09-2373	1	LANL	USE	S
per0701039a	232047008	CWW	7/1/2009 16:19	878816	09-2373	1	LANL	USE	S
per0701040a	232076001	CWW	7/1/2009 16:27	878816	09-2394	1	LANL	USE	S
per0701041a	232076002	CWW	7/1/2009 16:36	878816	09-2394	1	LANL	USE	S
per0701042a	232076003	CWW	7/1/2009 16:44	878816	09-2394	1	LANL	USE	S
per0701043a	WCLCCV	CWW	7/1/2009 16:52			1		USE	C
per0701044a	IPB006	CWW	7/1/2009 17:00			1		USE	B
per0701045a	WCLCRI	CWW	7/1/2009 17:09			1		USE	C
per0701046a	1201871399	CWW	7/1/2009 17:17	881210	VARIOUS	1	LANL	USE	S
per0701047a	1201871400	CWW	7/1/2009 17:25	881210	VARIOUS	1	LANL	USE	S
per0701048a	1201871403	CWW	7/1/2009 17:34	881210	VARIOUS	1	LANL	USE	S
per0701049a	232278001	CWW	7/1/2009 17:42	881210	09-2437	1	LANL	USE	S
per0701050a	232278002	CWW	7/1/2009 17:50	881210	09-2437	1	LANL	USE	S
per0701051a	232347001	CWW	7/1/2009 17:58	881210	09-2458	1	LANL	USE	S
per0701052a	1201871401	CWW	7/1/2009 18:06	881210	09-2458	1	LANL	USE	S
per0701053a	1201871402	CWW	7/1/2009 18:15	881210	09-2458	1	LANL	USE	S
per0701054a	232347002	CWW	7/1/2009 18:23	881210	09-2458	1	LANL	USE	S
per0701055a	232347003	CWW	7/1/2009 18:31	881210	09-2458	1	LANL	USE	S
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per0701057a	IPB007	CWW	7/1/2009 18:48			1		USE	B
per0701058a	WCLCRI	CWW	7/1/2009 18:56			1		USE	C
per0701059a	232347004	CWW	7/1/2009 19:04	881210	09-2458	1	LANL	USE	S
per0701060a	232357001	CWW	7/1/2009 19:13	881210	09-2455	1	LANL	USE	S
per0701061a	232357002	CWW	7/1/2009 19:21	881210	09-2455	1	LANL	USE	S
per0701062a	232367001	CWW	7/1/2009 19:29	881210	09-2452	1	LANL	USE	S
per0701063a	232367002	CWW	7/1/2009 19:37	881210	09-2452	1	LANL	USE	S
per0701064a	232367003	CWW	7/1/2009 19:46	881210	09-2452	1	LANL	USE	S
per0701065a	232367004	CWW	7/1/2009 19:54	881210	09-2452	1	LANL	USE	S
per0701066a	232367005	CWW	7/1/2009 20:02	881210	09-2452	1	LANL	USE	S

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per0701067a	232367006	CWW	7/1/2009 20:10	881210	09-2452	1	LANL	USE	S
per0701068a	232367007	CWW	7/1/2009 20:19	881210	09-2452	1	LANL	USE	S
per0701069a	WCLCCV	CWW	7/1/2009 20:27			1		USE	C
per0701070a	IPB008	CWW	7/1/2009 20:35			1		USE	B
per0701071a	WCLCRI	CWW	7/1/2009 20:44			1		USE	C
per0701072a	232367008	CWW	7/1/2009 20:52	881210	09-2452	1	LANL	USE	S
per0701073a	232367009	CWW	7/1/2009 21:00	881210	09-2452	1	LANL	USE	S
per0701074a	232367010	CWW	7/1/2009 21:08	881210	09-2452	1	LANL	USE	S
per0701075a	232367011	CWW	7/1/2009 21:17	881210	09-2452	1	LANL	USE	S
per0701076a	IPB009	CWW	7/1/2009 21:25			1		USE	B
per0701077a	Cartridge screen	CWW	7/1/2009 21:33	In-house		1	GEL	USE	B
per0701078a	WCLCCV	CWW	7/1/2009 21:42			1		USE	C
per0701079a	IPB010	CWW	7/1/2009 21:50			1		USE	B
per0701080a	WCLCRI	CWW	7/1/2009 21:59			1		USE	C

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701052a
Date: 01-Jul-2009
Time: 18:06:52
ID: 1201871401
Vial: 2:2,A

|LANL|881210|SOLCD|MS|1|

CWW
07-02-09

Perchlorate

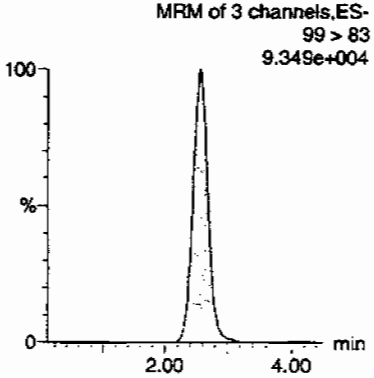

Perchlorate

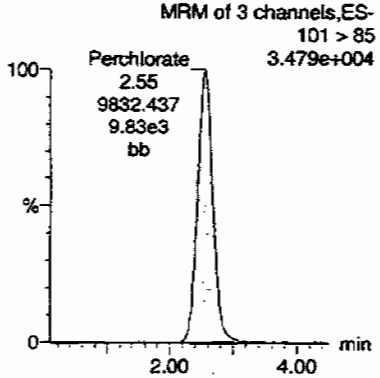

Perchlorate-101

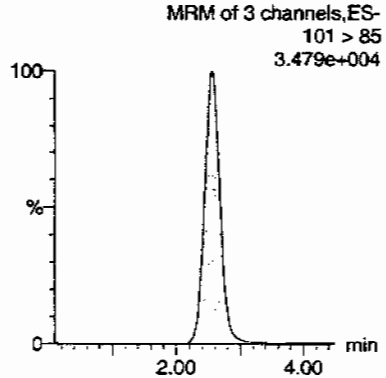

Perchlorate-O(18)

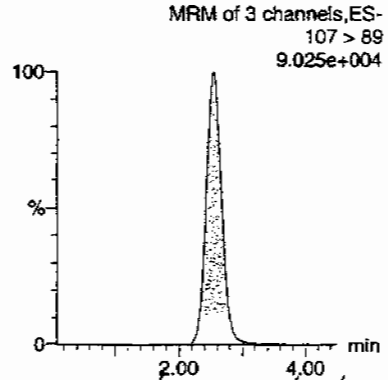

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871401	Perchlorate	99 > 83	2.56	26292.652	26292.652	bb			0.4824	241.19	141.19	8246.4...	2.67
1201871401	Perchlorate-101	101 > 85	2.55	9832.437	9832.437	bb			0.4928	246.41	146.41	3440.4...	
1201871401	Perchlorate-O(18)	107 > 89	2.54	25431.664	25431.664	bb			0.4980	99.59	-0.41	9504.8...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070109a.qld

Last Altered: Thursday, July 02, 2009 7:24:32 AM Eastern Daylight Time
Printed: Thursday, July 02, 2009 7:38:22 AM Eastern Daylight Time

Name: per0701053a
Date: 01-Jul-2009
Time: 18:15:07
ID: 1201871402
Vial: 2:2,B

|LANL|881210|50120|M50|1|

CWW 07-02-09

Perchlorate

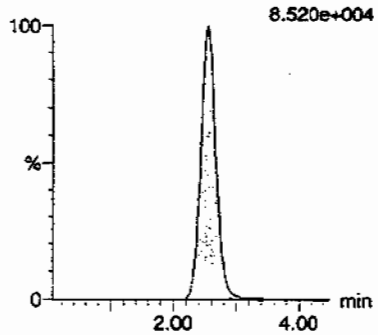

Perchlorate

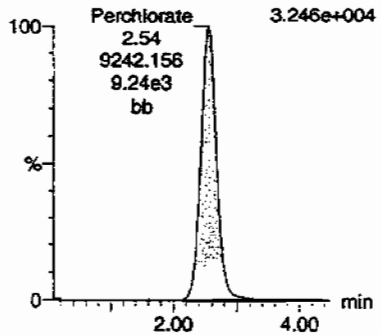

Perchlorate-101

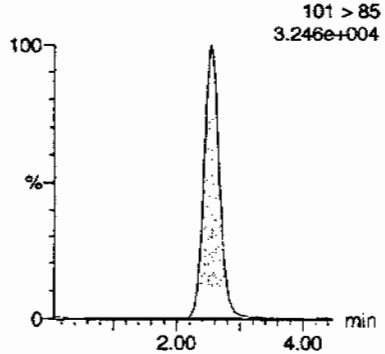

Perchlorate-O(18)

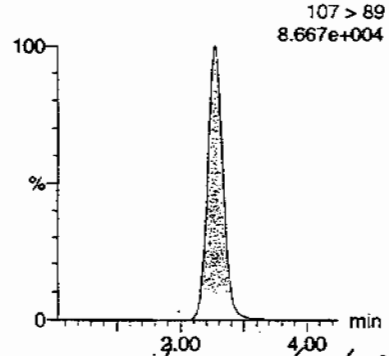

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871402	Perchlorate	99 > 83	2.55	23876.094	23876.094	bb			0.4380	219.02	119.02	7842.4...	2.58
1201871402	Perchlorate-101	101 > 85	2.54	9242.156	9242.156	bb			0.4632	231.62	131.62	2549.8...	
1201871402	Perchlorate-O(18)	107 > 89	2.54	24417.879	24417.879	bb			0.4781	95.62	-4.38	594.552	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

GC SEMIVOLATILE DRO ANALYSIS

DRO Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2455

Method/Analysis Information

Procedure:	**Analysis of Diesel Range Organics by Flame Ionization Detector**
Analytical Method:	SW846 8015A/B SVOC
Prep Method:	SW846 3550B
Analytical Batch Number:	880758
Prep Batch Number:	880757

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8015A/B SVOC:

Sample ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201870159	Method Blank (MB)
1201870160	Laboratory Control Sample (LCS)
1201870161	232357001(CAMO-09-10480) Matrix Spike (MS)
1201870162	232357001(CAMO-09-10480) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-003 REV# 17.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232357001 (CAMO-09-10480) was selected for the matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS recovery was within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recovery was within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
Nonconformance report (NCR) is for documentation of any procedural anomalies that may deviate from referenced SOP or contractual document. A NCR was not required for this SDG.

Manual Integrations
Certain standards and QC samples may have required manual integrations to correctly position the baseline as set in the calibration standard injections. If manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Some of the samples were manually integrated.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The GC-FID analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
FID7.I	Agilent GC FID	Agilent 6890N GC/FID	DB-5MS	30m x 0.25mm, 0.25um(J&W)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Andy Whitlock **Date:** 7-14-2009

Roadmap for LANL 09-2455 DRO

This roadmap was analyzed by kev01577 on 07-01-2009, 09:25.
This roadmap was reviewed by jcb on 07-02-2009, 11:17.
This roadmap was packaged by yml on 07-13-2009, 17:29.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/fid7.i/063009dr/007f0701.d	232357001	30-JUN-2009	14:03	09-2455.sub	CAMO-09-10480	1.00000	880758	USE
☐	N	/chem/fid7.i/063009dr/010f1001.d	232357002	30-JUN-2009	15:59	09-2455.sub	CAMO-09-10479	1.00000	880758	USE

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/fid7.i/063009dr/005f0501.d	1201870159	mb	30-JUN-2009	12:46	09-2455.sub	DBLK01	1.00000	880758	USE
☐	N	/chem/fid7.i/063009dr/006f0601.d	1201870160	lcs	30-JUN-2009	13:24	09-2455.sub	DBLK01LCS	1.00000	880758	USE
☐	N	/chem/fid7.i/063009dr/008f0801.d	1201870161	ms	30-JUN-2009	14:41	09-2455.sub	CAMO-09-10480MS	1.00000	880758	USE
☐	N	/chem/fid7.i/063009dr/009f0901.d	1201870162	msd	30-JUN-2009	15:20	09-2455.sub	CAMO-09-10480MSD	1.00000	880758	USE

SAMPLE DATA SUMMARY

Flame Ionization Detector
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	9.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10479	**Method:**	SW846 8015A/B SVOC	**SOP Ref:**	GL-OA-E-003
Batch ID:	880758	**Inst:**	FID7.I	**Dilution:**	1
Run Date:	06/30/2009 15:59	**Analyst:**	KXR2	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:42	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	010f1001.d	**Column:**	DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
DRO	Diesel Range Organics	U	3.68	mg/kg	1.21	3.68

Flame Ionization Detector
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357001	Date Received:	06/25/2009 08:45	%Moisture:	11.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10480	Method:	SW846 8015A/B SVOC	SOP Ref:	GL-OA-E-003
Batch ID:	880758	Inst:	FID7.I	Dilution:	1
Run Date:	06/30/2009 14:03	Analyst:	KXR2	Inj. Vol:	1 uL
Prep Date:	06/29/2009 16:42	Aliquot:	30.13 g	Final Volume:	1 mL
Data File:	007f0701.d	Column:	DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
DRO	Diesel Range Organics	U	3.74	mg/kg	1.23	3.74

QUALITY CONTROL SUMMARY

Flame Ionization Detector

Surrogate Recovery Report

SDG Number: 09-2455

Matrix Type: SOLID

CAP Column (1) : DB-5MS

Sample ID	Client ID	OTP %REC
1201870159	MB for batch 880757	51
1201870160	LCS for batch 880757	86
232357001	CAMO-09-10480	38
1201870161	CAMO-09-10480MS	54
1201870162	CAMO-09-10480MSD	60
232357002	CAMO-09-10479	48

Surrogate	Acceptance Limits
OTP = o-Terphenyl	(24%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Flame Ionization Detector

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Client ID: LCS for batch 880757
Lab Sample ID: 1201870160
Instrument: FID7.I
Analyst: KXR2
Inj. Vol: 1 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 13:24
Dilution: 1
Prep Batch ID: 880757
Batch ID: 880758

CAS No		Parmname	Amount Added mg/kg	Sample Conc. mg/kg	Spike Conc. mg/kg	Recovery %	Acceptance Limits
DRO	LCS	Diesel Range Organics	33.3	0.0	18.4	55	53-114

Flame Ionization Detector
Quality Control Summary
Spike Recovery Report

SDG Number:	**09-2455**	**Sample Type:**	**Matrix Spike**	
Client ID:	**CAMO-09-10480MS**	**Matrix:**	**R**	
Lab Sample ID:	**1201870161**	**%Moisture:**	**11.2**	
Instrument:	**FID7.I**	**Analysis Date:**	**06/30/2009 14:41**	**Dilution: 1**
Analyst:	**KXR2**	**Prep Batch ID:**	**880757**	
Inj. Vol:	**1 uL**	**Batch ID:**	**880758**	

CAS No	Parmname		Amount Added mg/kg	Sample Conc. mg/kg		Spike Conc. mg/kg	Recovery %	Acceptance Limits
DRO	MS	Diesel Range Organics	37.5	0.00	U	13.6	36	21-122

Flame Ionization Detector

Quality Control Summary

Spike Recovery Report

SDG Number:	**09-2455**	**Sample Type:**	**Matrix Spike Duplicate**		
Client ID:	**CAMO-09-10480MSD**	**Matrix:**	**R**		
Lab Sample ID:	**1201870162**	**%Moisture:**	**11.2**		
Instrument:	**FID7.I**	**Analysis Date:**	**06/30/2009 15:20**	**Dilution: 1**	
Analyst:	**KXR2**	**Prep Batch ID:**	**880757**		
Inj. Vol:	**1 uL**	**Batch ID:**	**880758**		

CAS No	Parmname	Amount Added mg/kg	Sample Conc. mg/kg		Spike Conc. mg/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
DRO	MSD Diesel Range Organics	37.3	0.00	U	11.0	30	21-122	21	0-30

Method Blank Summary

SDG Number:	09-2455	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 880757	Instrument ID:	FID7.I	Data File:	005f0501.d
Lab Sample ID:	1201870159	Prep Date:	06/29/2009 16:42	Analyzed:	06/30/09 12:46
Column:	DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 880757	1201870160	006f0601.d	06/30/09	1324
02	CAMO-09-10480	232357001	007f0701.d	06/30/09	1403
03	CAMO-09-10480MS	1201870161	008f0801.d	06/30/09	1441
04	CAMO-09-10480MSD	1201870162	009f0901.d	06/30/09	1520
05	CAMO-09-10479	232357002	010f1001.d	06/30/09	1559

SAMPLE DATA

Flame Ionization Detector
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357002	**Date Received:**	06/25/2009 08:45	**%Moisture:**	9.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10479	**Method:**	SW846 8015A/B SVOC	**SOP Ref:**	GL-OA-E-003
Batch ID:	880758	**Inst:**	FID7.I	**Dilution:**	1
Run Date:	06/30/2009 15:59	**Analyst:**	KXR2	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:42	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	010f1001.d	**Column:**	DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
DRO	Diesel Range Organics	U	3.68	mg/kg	1.21	3.68

GEL Laboratories LLC

DB-5MS .25mm

Data file : /chem/fid7.i/063009dr/010f1001.d
Lab Smp Id: 232357002 Client Smp ID: CAMO-09-10479
Inj Date : 30-JUN-2009 15:59
Operator : KXR2 Inst ID: fid7.i
Smp Info : |232357002|1|
Misc Info : |FIDDRO_SF|880758|FIDF|LANL|
Comment : 45C for 4 min; 20C/min ramp; 280C for 4 min.
Method : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Meth Date : 01-Jul-2009 09:04 kev01577 Quant Type: ESTD
Cal Date : 25-JUN-2009 22:56 Cal File: 009f0901.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weigth of sample extracted (g)
M	9.46790	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (mg/L)	FINAL (mg/Kg)
$ 2 o-Terphenyl					CAS #: 84-15-1
12.854	12.865	-0.011	215900	9.65025	0.36

Data File: /chem/fid7.i/063009dr/010f1001.d
Date : 30-JUN-2009 15:59
Client ID: CAMD-09-10479
Sample Info: 1232357002111
Volume Injected (uL): 1.0
Column phase: DB-5MS

Instrument: fid7.i
Operator: KXR2
Column diameter: 0.25

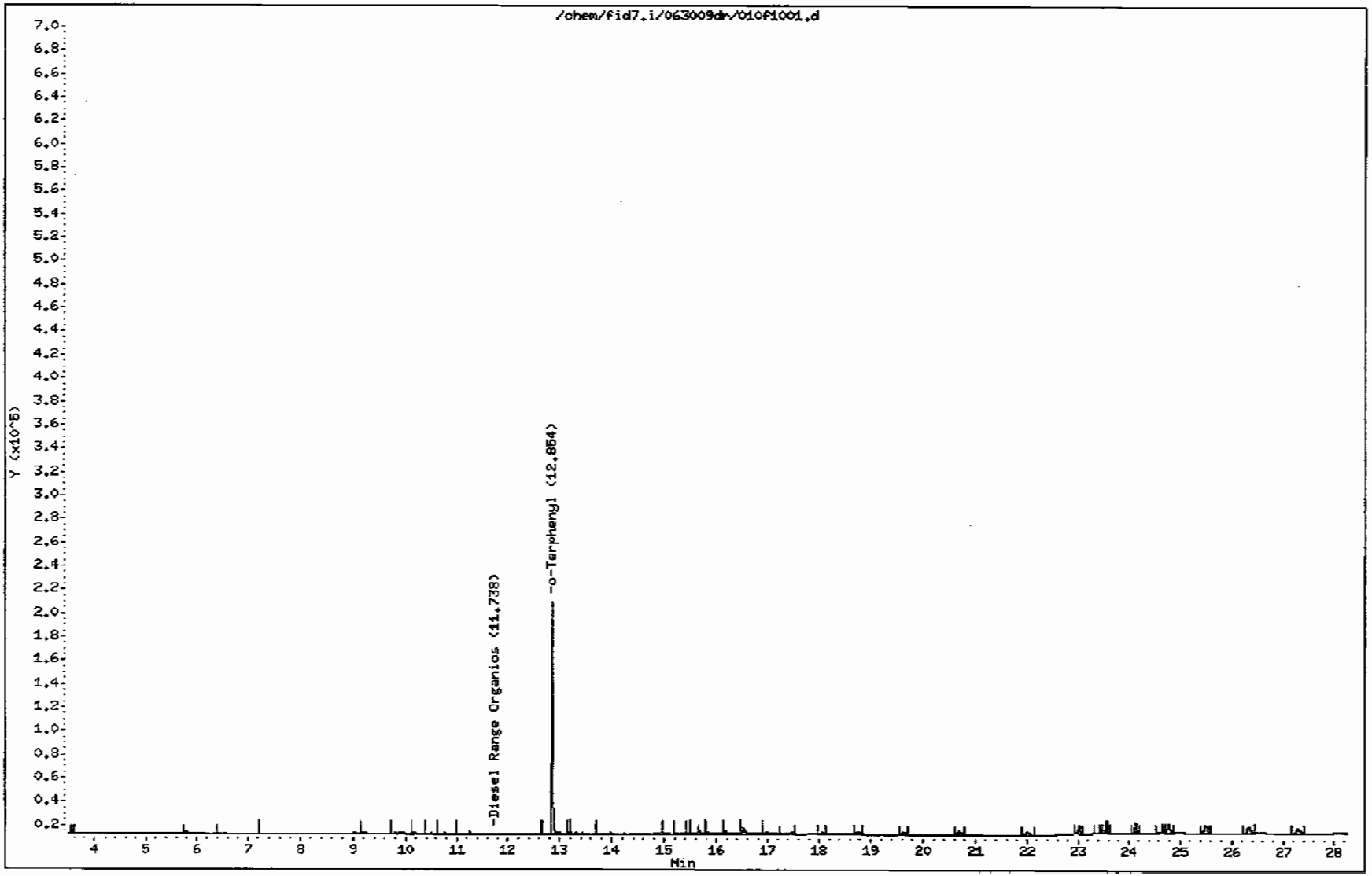

Flame Ionization Detector
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357001	Date Received:	06/25/2009 08:45	%Moisture:	11.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10480	Method:	SW846 8015A/B SVOC	SOP Ref:	GL-OA-E-003
Batch ID:	880758	Inst:	FID7.I	Dilution:	1
Run Date:	06/30/2009 14:03	Analyst:	KXR2	Inj. Vol:	1 uL
Prep Date:	06/29/2009 16:42	Aliquot:	30.13 g	Final Volume:	1 mL
Data File:	007f0701.d	Column:	DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
DRO	Diesel Range Organics	U	3.74	mg/kg	1.23	3.74

GEL Laboratories LLC

DB-5MS .25mm

Data file : /chem/fid7.i/063009dr/007f0701.d
Lab Smp Id: 232357001 Client Smp ID: CAMO-09-10480
Inj Date : 30-JUN-2009 14:03
Operator : KXR2 Inst ID: fid7.i
Smp Info : |232357001|1|
Misc Info : |FIDDRO_SF|880758|FIDF|LANL|
Comment : 45C for 4 min; 20C/min ramp; 280C for 4 min.
Method : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Meth Date : 01-Jul-2009 09:04 kev01577 Quant Type: ESTD
Cal Date : 25-JUN-2009 22:56 Cal File: 009f0901.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.13000	Weigth of sample extracted (g)
M	11.22990	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (mg/L)	FINAL (mg/Kg)
$ 2 o-Terphenyl					CAS #: 84-15-1
12.853	12.865	-0.012	171483	7.66492	0.29

Data File: /chem/fid7.i/063009dr/007f0701.d
Date : 30-JUN-2009 14:03
Client ID: DAMO-09-10480
Sample Info: |23235700111|
Volume Injected (uL): 1.0
Column phase: DB-5MS

Instrument: fid7.i
Operator: KXR2
Column diameter: 0.25

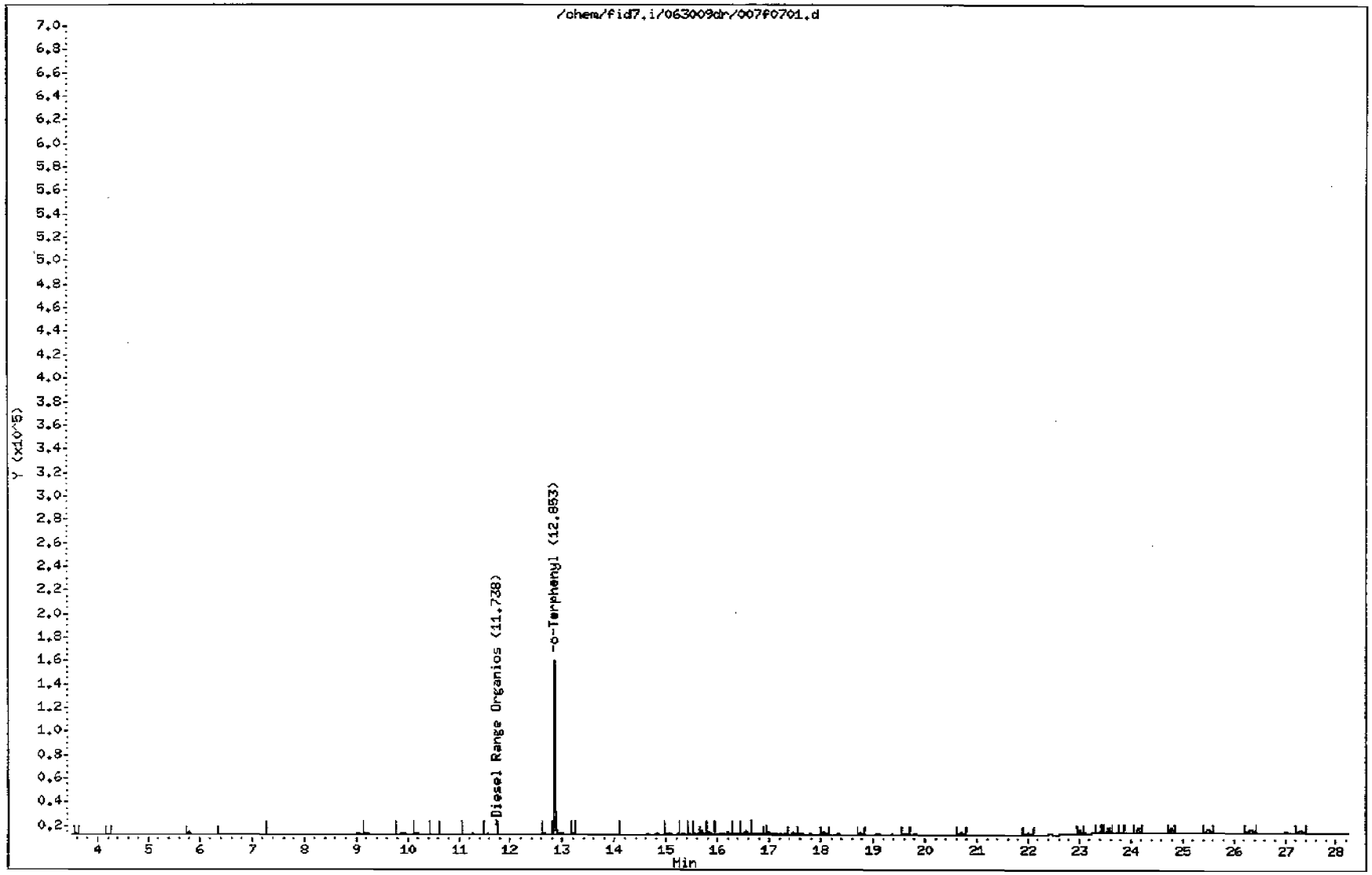

STANDARDS DATA

Report Date: 01-Jul-2009 09:03

Calibration History

Method : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Start Cal Date: 08-MAY-2009 17:11
End Cal Date : 25-JUN-2009 22:56

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 2 , Cal Amount: 100.00000		
25-JUN-2009 19:42	dro	/chem/fid7.i/062509dr/004f0401.d
Cal Level: 3 , Cal Amount: 200.00000		
25-JUN-2009 20:20	dro	/chem/fid7.i/062509dr/005f0501.d
Cal Level: 4 , Cal Amount: 500.00000		
25-JUN-2009 20:59	dro	/chem/fid7.i/062509dr/006f0601.d
Cal Level: 5 , Cal Amount: 1000.00000		
25-JUN-2009 21:38	dro	/chem/fid7.i/062509dr/007f0701.d
Cal Level: 6 , Cal Amount: 2000.00000		
25-JUN-2009 22:17	dro	/chem/fid7.i/062509dr/008f0801.d
Cal Level: 7 , Cal Amount: 5000.00000		
25-JUN-2009 22:56	dro	/chem/fid7.i/062509dr/009f0901.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 5

Ccal Level: 5 , Ccal Amount: 1000		
30-JUN-2009 21:08	dro	/chem/fid7.i/063009dr/018f1801.d
Ccal Level: 5 , Ccal Amount: 1000		
30-JUN-2009 16:37	dro	/chem/fid7.i/063009dr/011f1101.d
Ccal Level: 5 , Ccal Amount: 1000		
30-JUN-2009 11:28	dro	/chem/fid7.i/063009dr/003f0301.d

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COMPOUND LISTING

Method file : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 01-Jul-2009 08:48 Number of Cpnds : 6
Data Type : GC DATA

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	100.000000
Initial:End Threshold	50.000000
Initial:Area Threshold	100.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	11.000000
Initial:Negative Peaks	OFF
Initial:Tension	7.000000
5.000:Force Cluster ON	n/a
17.000:Force Cluster OFF	n/a
17.371:Tension	1.000000

		Compound	RT	RT Window	RF
	3	Decane (C10)	6.878	6.848-6.908	
S	1	Diesel Range Organics	11.738	6.856-16.621	1.565e+04
$	2	o-Terphenyl	12.865	12.835-12.895	2.237e+04
	4	Octacosane (C28)	16.581	16.551-16.611	
S	75	JP-4	6.750	3.500-10.000	
S	76	Motor oil	17.000	14.000-20.000	

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INITIAL CALIBRATION DATA

Start Cal Date : 08-MAY-2009 17:11
End Cal Date : 25-JUN-2009 22:56
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Cal Date : 01-Jul-2009 08:48 kev01577
Curve Type : Average

Calibration File Names:
Level 2: /chem/fid7.i/062509dr/004f0401.d
Level 3: /chem/fid7.i/062509dr/005f0501.d
Level 4: /chem/fid7.i/062509dr/006f0601.d
Level 5: /chem/fid7.i/062509dr/007f0701.d
Level 6: /chem/fid7.i/062509dr/008f0801.d
Level 7: /chem/fid7.i/062509dr/009f0901.d

	Compound	100.000 Level 2	200.000 Level 3	500.000 Level 4	1000.000 Level 5	2000.000 Level 6	5000.000 Level 7	RRF	% RSD
	3 Decane (C10)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
S	1 Diesel Range Organics	14618	15421	16280	15662	16235	15670	15648	3.895
	4 Octacosane (C28)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
S	75 JP-4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
S	76 Motor oil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$	2 o-Terphenyl	23984	23579	23459	22274	21404	19534	22373	7.542

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

Instrument ID: FID7 Calibration Date: 06/30/09 Time: 1128

Lab File ID: 003F0301 Init. Calib. Date(s): 06/25/09 06/25/09

Init. Calib. Times: 1942 2256

GC Column: DB-5MS ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Diesel Range Organics	15647.533	16275.067	0.01	-4.0	15.0
o-Terphenyl	22372.557	21344.740	0.01	-4.6	15.0

FORM VII SV

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

Instrument ID: FID7 Calibration Date: 06/30/09 Time: 1637

Lab File ID: 011F1101 Init. Calib. Date(s): 06/25/09 06/25/09

Init. Calib. Times: 1942 2256

GC Column: DB-5MS ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Diesel Range Organics	15647.533	15955.979	0.01	2.0	15.0
o-Terphenyl	22372.557	22072.800	0.01	-1.3	15.0

FORM VII SV

GEL Laboratories LLC

DB-5MS .25mm

Data file : /chem/fid7.i/063009dr/003f0301.d
Lab Smp Id: UFI090611-01 D1 Client Smp ID: DSTD01
Inj Date : 30-JUN-2009 11:28
Operator : KXR2 Inst ID: fid7.i
Smp Info : |UFI090611-01 D1
Misc Info :
Comment : 45C for 4 min; 20C/min ramp; 280C for 4 min.
Method : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Meth Date : 01-Jul-2009 09:04 kev01577 Quant Type: ESTD
Cal Date : 25-JUN-2009 22:56 Cal File: 009f0901.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: dro.sub
Target Version: 3.50 Sample Matrix: None

	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (mg/L)	ON-COL (mg/L)	
S	1 Diesel Range Organics					CAS #:	
	6.856- 16.621			16275067	1000.00	1040	(M)
$	2 o-Terphenyl					CAS #: 84-15-1	
	12.865	12.865	0.000	1067237	50.0000	47.7	(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/fid7.i/063009dr/003f0301.d
Date : 30-JUN-2009 11:28
Client ID: DSTD01
Sample Info: !UFI090611-01 D1

Column phase: DB-5MS

Instrument: fid7.i

Operator: KXR2
Column diameter: 0.25

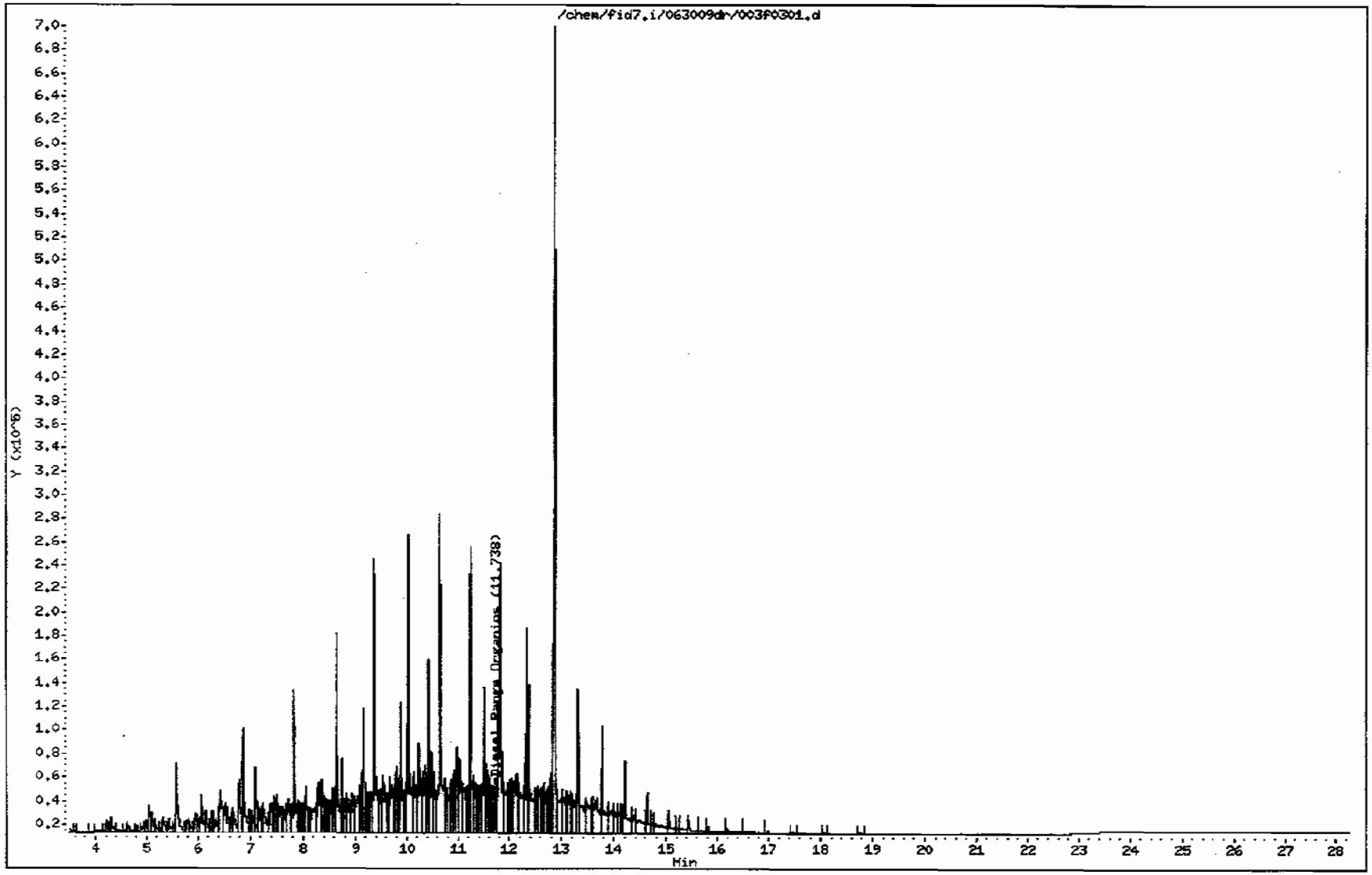

Data File: /chem/fid7.i/063009dr/003f0301.d
Injection Date: 30-JUN-2009 11:28
Instrument: fid7.i
Client Sample ID: DSTD01

Before KAR 7/1/09

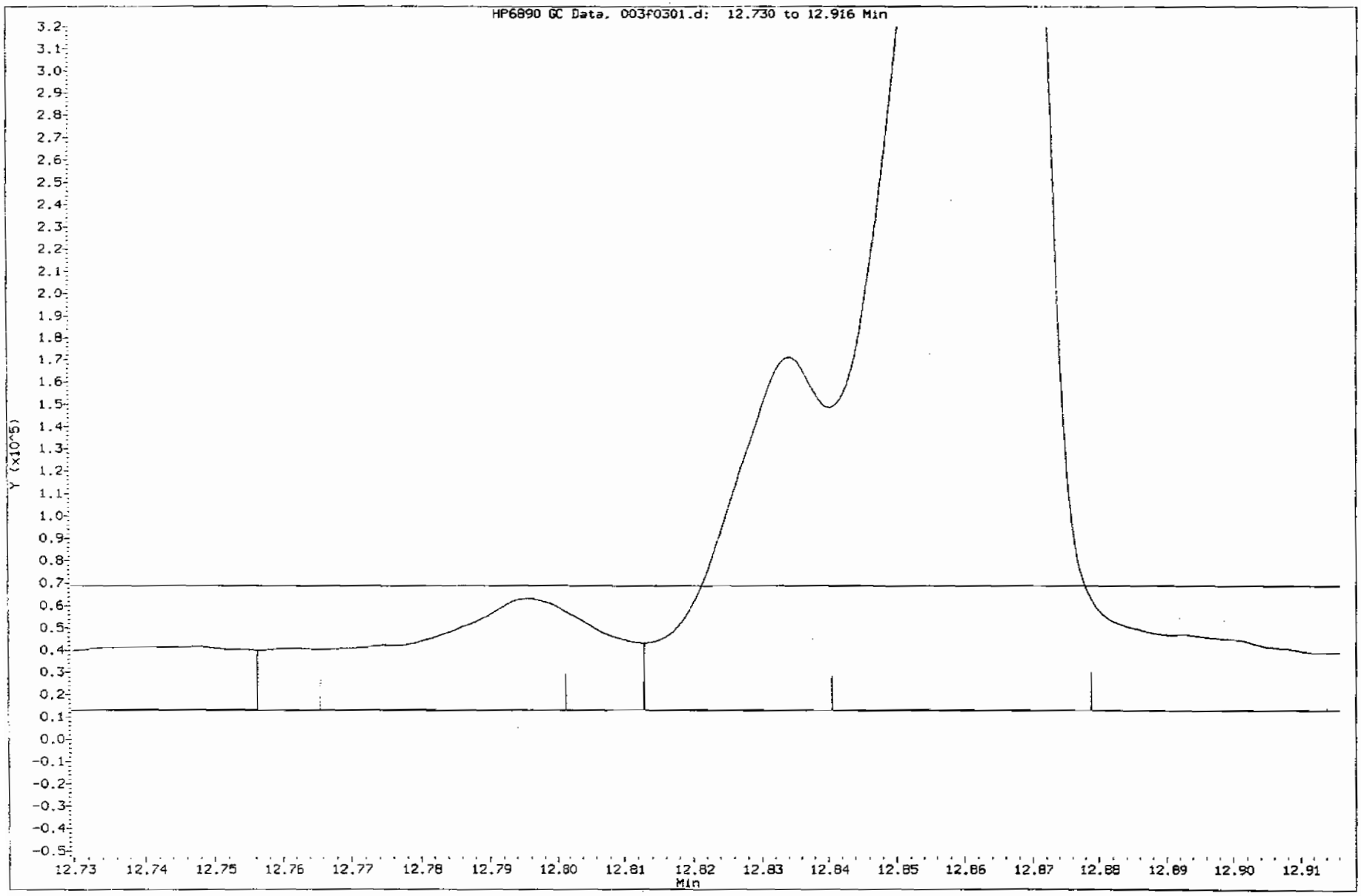

Data File: /chem/fid7.i/063009dr/003f0301.d
Injection Date: 30-JUN-2009 11:28
Instrument: fid7.i
Client Sample ID: DSTD01

After std 8/4/09

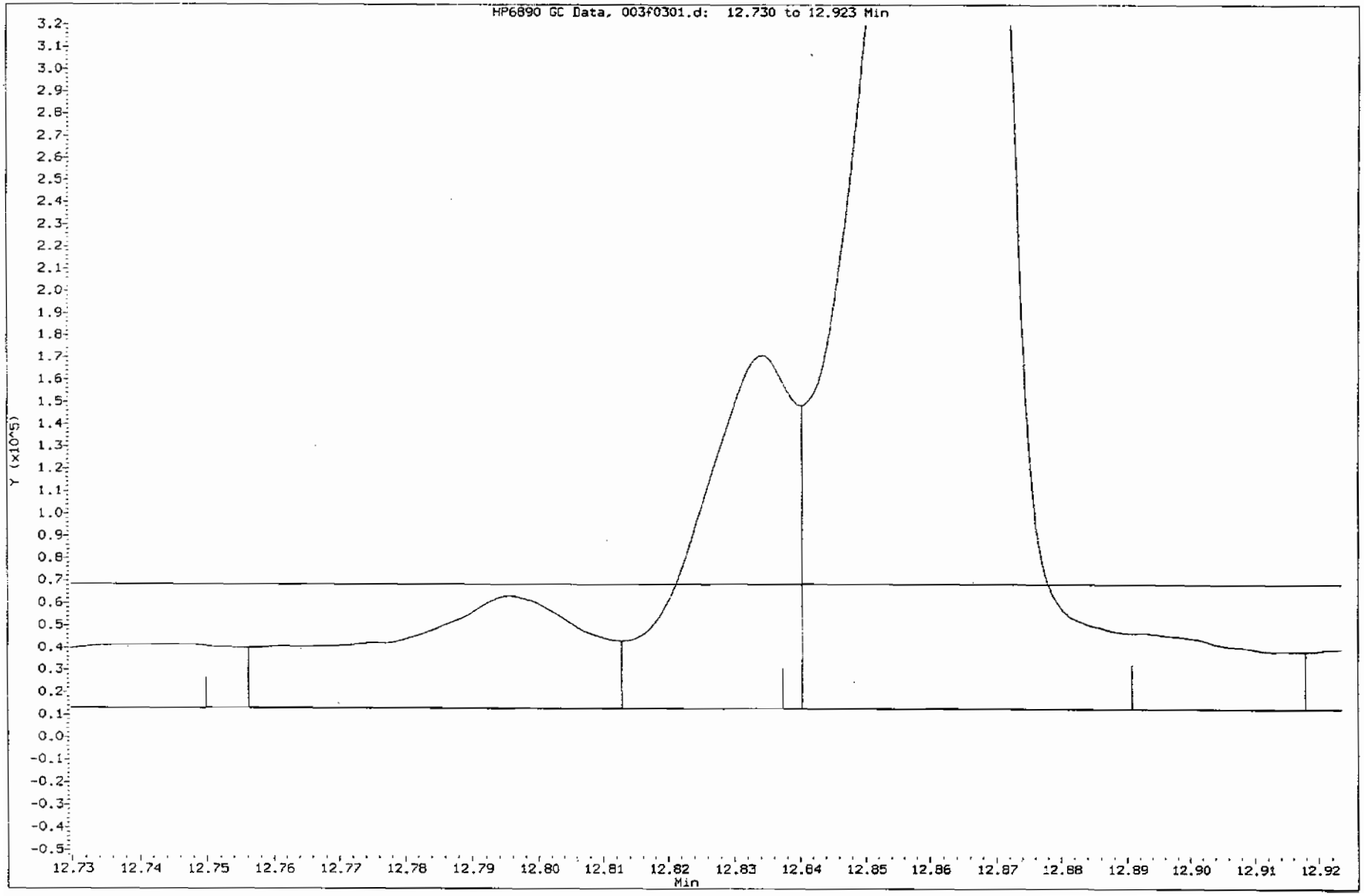

GEL Laboratories LLC

DB-5MS .25mm

Data file : /chem/fid7.i/063009dr/011f1101.d
Lab Smp Id: UFI090611-01 D2 Client Smp ID: DSTD02
Inj Date : 30-JUN-2009 16:37
Operator : KXR2 Inst ID: fid7.i
Smp Info : |UFI090611-01 D2
Misc Info :
Comment : 45C for 4 min; 20C/min ramp; 280C for 4 min.
Method : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Meth Date : 01-Jul-2009 09:04 kev01577 Quant Type: ESTD
Cal Date : 25-JUN-2009 22:56 Cal File: 009f0901.d
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: dro.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (mg/L)	AMOUNTS ON-COL (mg/L)		
S 1 Diesel Range Organics					CAS #:		
6.856- 16.621			15955979	1000.00	1020		(M)
$ 2 o-Terphenyl					CAS #: 84-15-1		
12.867	12.865	0.002	1103640	50.0000	49.3		(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/fid7.i/063009dr/011f1101.d
Date : 30-JUN-2009 16:37
Client ID: DSTD02
Sample Info: IWFI090611-01 D2

Column phase: DB-5MS

Page 1

Instrument: fid7.i

Operator: XXR2
Column diameter: 0.25

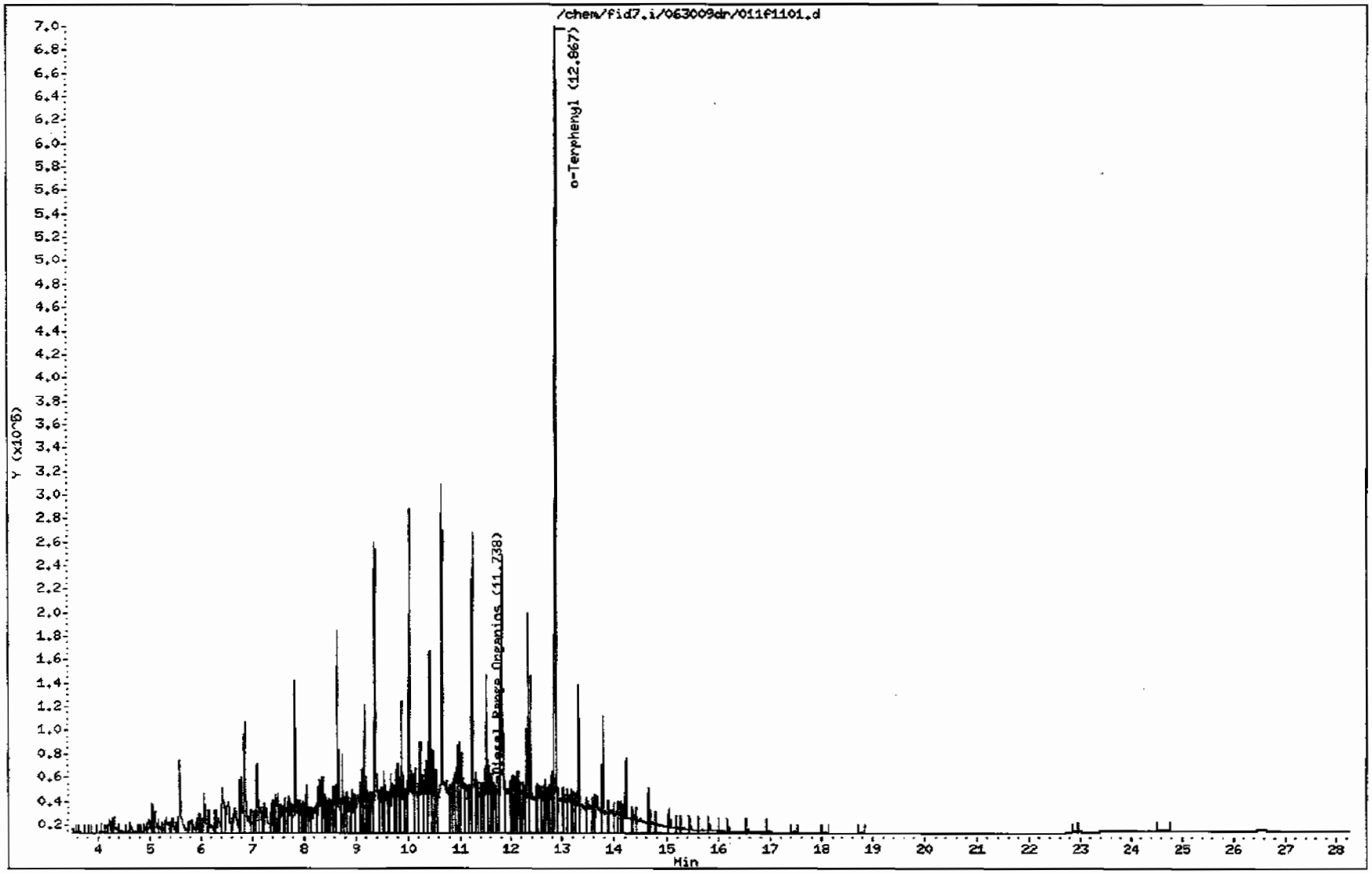

Data File: /chem/fid7.i/063009dr/011f1101.d
Injection Date: 30-JUN-2009 16:37
Instrument: fid7.i
Client Sample ID: DSTD02

Below MRL 7/1/09

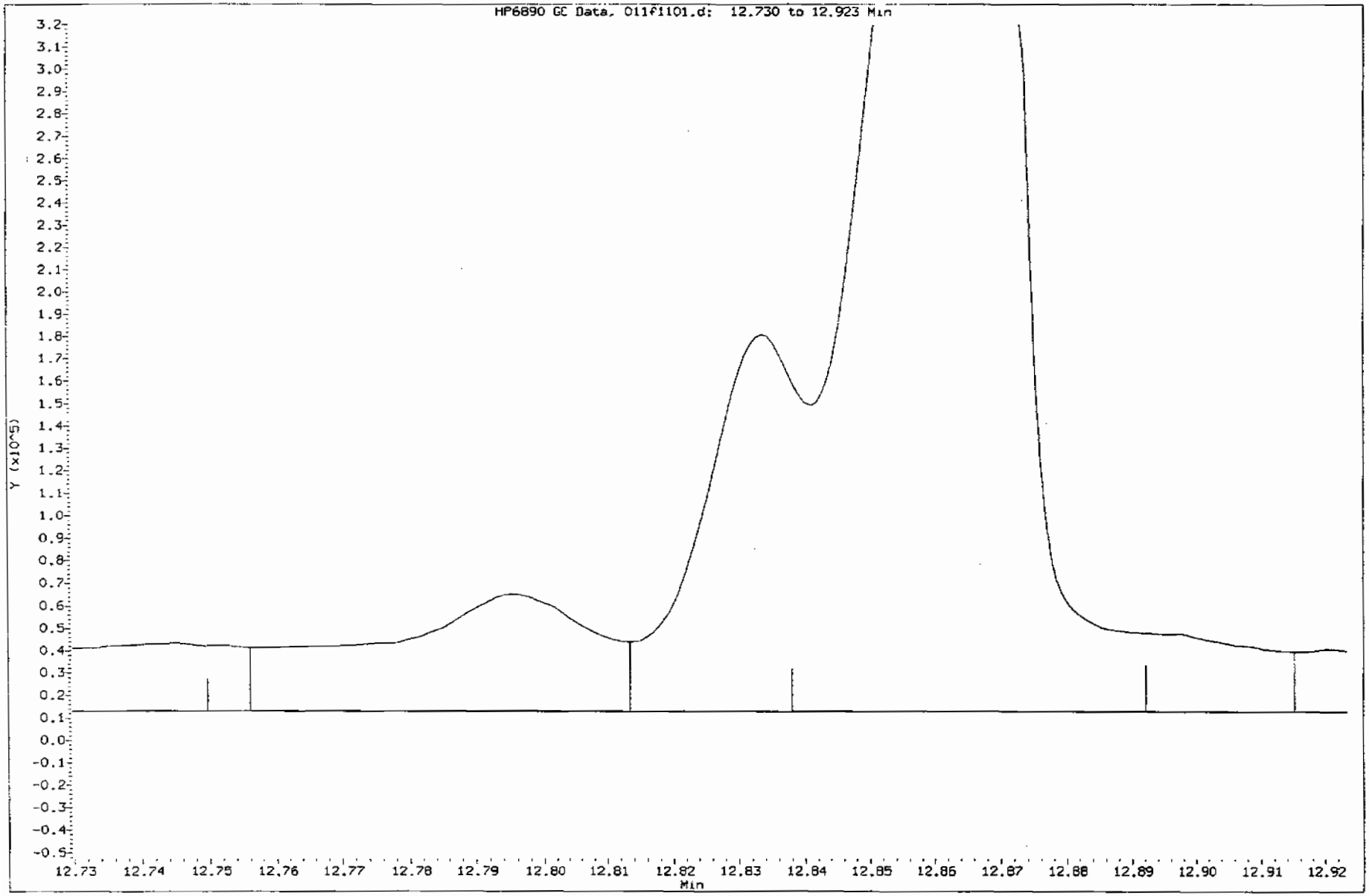

Data File: /chem/fid7.i/063009dr/011f1101.d
Injection Date: 30-JUN-2009 16:37
Instrument: fid7.i
Client Sample ID: DSTD02

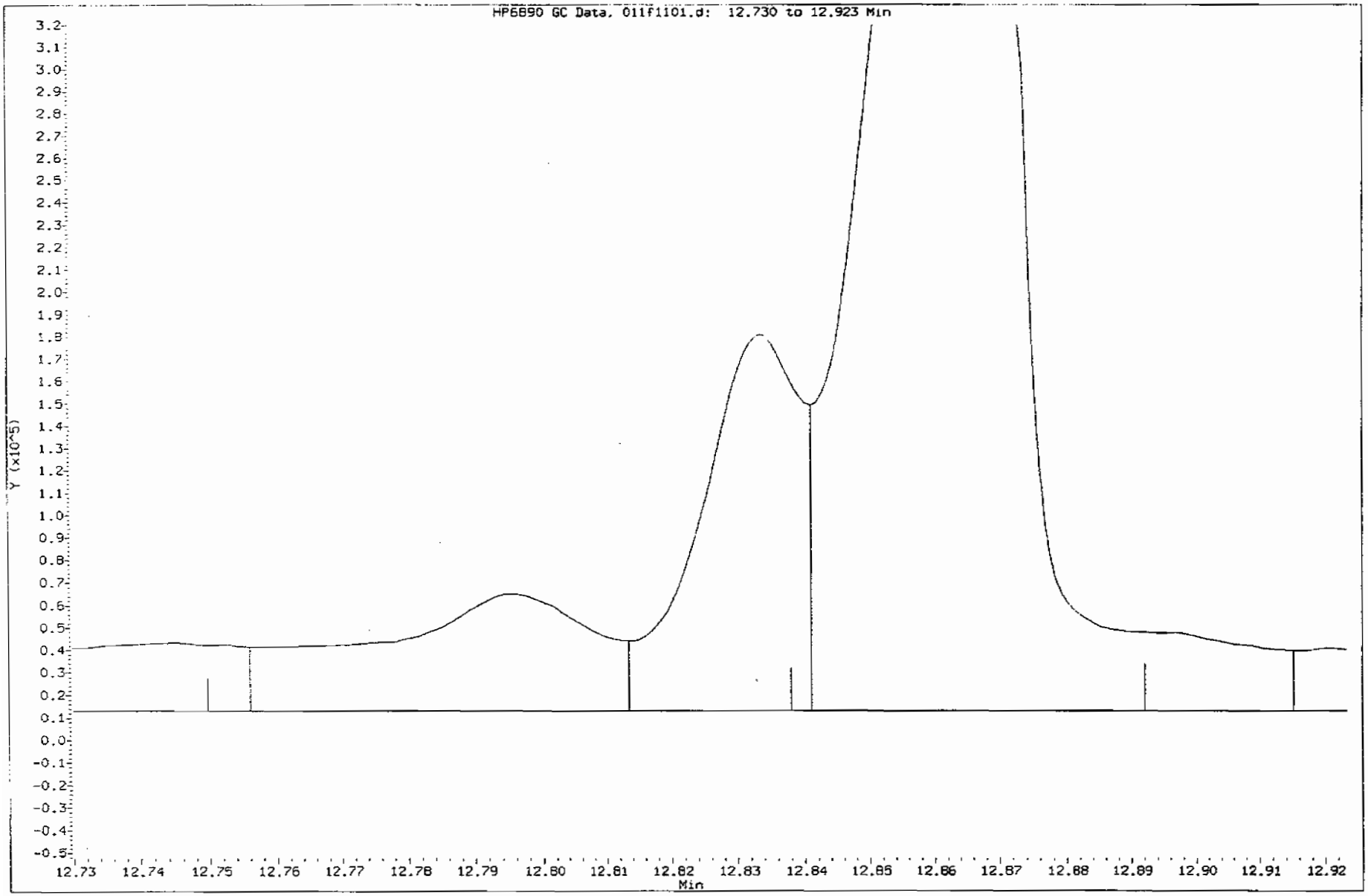

8D
DRO ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

GC Column: DB-5MS ID: 0.25 (mm) Init. Calib. Date(s): 06/25/09 06/25/09

Instrument ID: FID7

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 12.87

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT
01	EFH RTMARKER	WFI090311-01	06/25/09	1745		
02	DIBLK01	WFI090519-06	06/25/09	1824	12.86	
03	RTMARKER	UFI090527-03	06/25/09	1903		
04	CSTD01	UFI081230-11	06/25/09	1942	12.86	
05	CSTD02	UFI081230-12	06/25/09	2020	12.86	
06	CSTD03	UFI081230-13	06/25/09	2059	12.87	
07	CSTD04	UFI081230-14	06/25/09	2138	12.87	
08	CSTD05	UFI081230-15	06/25/09	2217	12.89	
09	CSTD06	UFI081230-16	06/25/09	2256	12.91*	
10	DSTD01	UFI090429-02	06/25/09	2335	12.87	
11	DIBLK02	WFI090519-06	06/26/09	0014	12.86	
12	ZZZZZ	ZZZZZ	06/26/09	0053	12.86	
13	ZZZZZ	ZZZZZ	06/26/09	0132	12.86	
14	ZZZZZ	ZZZZZ	06/26/09	0211	12.86	
15	ZZZZZ	ZZZZZ	06/26/09	0250	12.86	
16	ZZZZZ	ZZZZZ	06/26/09	0329	12.86	
17	ZZZZZ	ZZZZZ	06/26/09	0408	12.86	
18	ZZZZZ	ZZZZZ	06/26/09	0447	12.86	
19	DSTD02	UFI090429-02	06/26/09	0526	12.87	
20	DIBLK03	WFI090519-06	06/26/09	0606	12.86	
21	ZZZZZ	ZZZZZ	06/26/09	0645	12.86	
22	ZZZZZ	ZZZZZ	06/26/09	0723	12.86	
23	ZZZZZ	ZZZZZ	06/26/09	0801	12.89	
24	ZZZZZ	ZZZZZ	06/26/09	0840	12.85	
25	ZZZZZ	ZZZZZ	06/26/09	0919	12.86	
26	ZZZZZ	ZZZZZ	06/26/09	0957	12.86	
27	DSTD03	UFI090429-02	06/26/09	1036	12.87	
28	DIBLK04	WFI090519-06	06/26/09	1114	12.86	
29	ZZZZZ	ZZZZZ	06/26/09	1153	12.86	
30	ZZZZZ	ZZZZZ	06/26/09	1231	12.86	
31	ZZZZZ	ZZZZZ	06/26/09	1310	12.86	
32	ZZZZZ	ZZZZZ	06/26/09	1348	12.86	

S1 = o-Terphenyl QC LIMITS (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
DRO ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

GC Column: DB-5MS ID: 0.25 (mm) Init. Calib. Date(s): 06/25/09 06/25/09

Instrument ID: FID7

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 12.87

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT
01	DIBLK01	WFI090519-06	06/30/09	1011	12.85	
02	RTMARKER	UFI090527-03	06/30/09	1050		
03	DSTD01	UFI090611-01	06/30/09	1128	12.87	
04	DIBLK02	WFI090519-06	06/30/09	1207	12.85	
05	DBLK01	1201870159	06/30/09	1246	12.85	
06	DBLK01LCS	1201870160	06/30/09	1324	12.86	
07	CAMO-09-10480	232357001	06/30/09	1403	12.85	
08	CAMO-09-10480MS	1201870161	06/30/09	1441	12.85	
09	CAMO-09-10480MSD	1201870162	06/30/09	1520	12.85	
10	CAMO-09-10479	232357002	06/30/09	1559	12.85	
11	DSTD02	UFI090611-01	06/30/09	1637	12.87	
12	DIBLK03	WFI090519-06	06/30/09	1716	12.85	
13	ZZZZZ	ZZZZZ	06/30/09	1754	12.85	
14	ZZZZZ	ZZZZZ	06/30/09	1832	12.86	
15	ZZZZZ	ZZZZZ	06/30/09	1912	12.86	
16	ZZZZZ	ZZZZZ	06/30/09	1950	12.85	
17	ZZZZZ	ZZZZZ	06/30/09	2029	12.85	
18	DSTD03	UFI090611-01	06/30/09	2108	12.87	
19	DIBLK04	WFI090519-06	06/30/09	2147	12.85	
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

S1 = o-Terphenyl QC LIMITS (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

QUALITY CONTROL DATA

Flame Ionization Detector
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201870159				
Client Sample:	QC for batch 880757	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 880757	**Method:**	SW846 8015A/B SVOC	**SOP Ref:**	GL-OA-E-003
Batch ID:	880758	**Inst:**	FID7.I	**Dilution:**	1
Run Date:	06/30/2009 12:46	**Analyst:**	KXR2	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:42	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	005f0501.d	**Column:**	DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
DRO	Diesel Range Organics	U	3.33	mg/kg	1.10	3.33

GEL Laboratories LLC

DB-5MS .25mm

Data file : /chem/fid7.i/063009dr/005f0501.d
Lab Smp Id: 1201870159 Client Smp ID: DBLK01
Inj Date : 30-JUN-2009 12:46
Operator : KXR2 Inst ID: fid7.i
Smp Info : |1201870159|1|
Misc Info : |FIDDRO_SF|880758|FIDF|MB|
Comment : 45C for 4 min; 20C/min ramp; 280C for 4 min.
Method : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Meth Date : 01-Jul-2009 09:04 kev01577 Quant Type: ESTD
Cal Date : 25-JUN-2009 22:56 Cal File: 009f0901.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weigth of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (mg/L)	FINAL (mg/Kg)
$ 2 o-Terphenyl					CAS #: 84-15-1
12.853	12.865	-0.012	226164	10.1090	0.34

Data File: /chem/fid7.i/063009dr/005f0501.d

Date : 30-JUN-2009 12:46

Client ID: DBLK01

Sample Info: 1120187015911

Volume Injected (uL): 1.0

Column phase: DB-5MS

Instrument: fid7.i

Operator: KXR2

Column diameter: 0.25

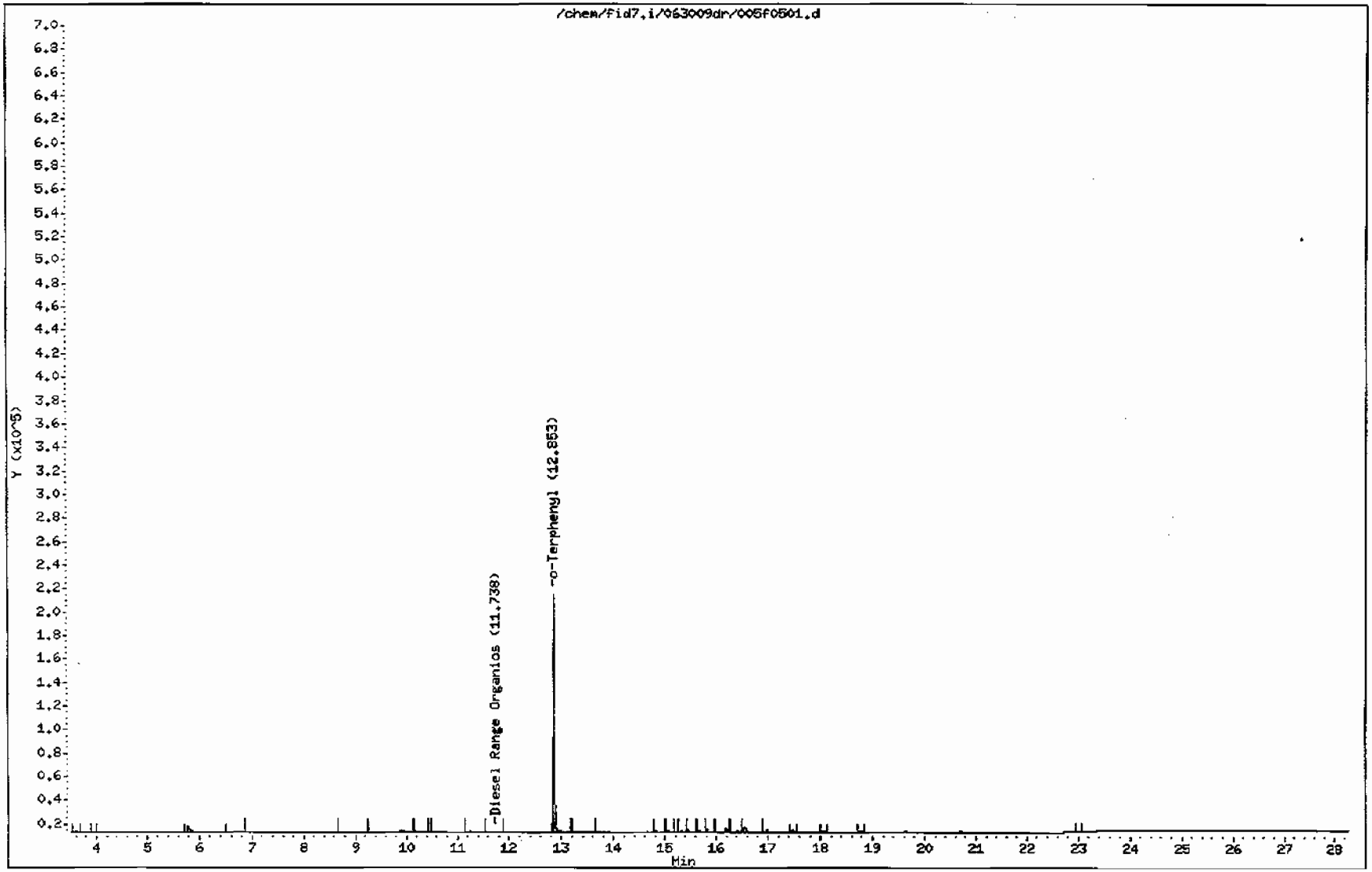

Flame Ionization Detector
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201870160				
Client Sample:	QC for batch 880757	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 880757	**Method:**	SW846 8015A/B SVOC	**SOP Ref:**	GL-OA-E-003
Batch ID:	880758	**Inst:**	FID7.I	**Dilution:**	1
Run Date:	06/30/2009 13:24	**Analyst:**	KXR2	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:42	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	006f0601.d	**Column:**	DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
DRO	Diesel Range Organics		18.4	mg/kg	1.10	3.33

GEL Laboratories LLC

DB-5MS .25mm

Data file : /chem/fid7.i/063009dr/006f0601.d
Lab Smp Id: 1201870160 Client Smp ID: DBLK01LCS
Inj Date : 30-JUN-2009 13:24
Operator : KXR2 Inst ID: fid7.i
Smp Info : |1201870160|1|
Misc Info : |FIDDRO_SF|880758|FIDF|LCS|
Comment : 45C for 4 min; 20C/min ramp; 280C for 4 min.
Method : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Meth Date : 01-Jul-2009 09:04 kev01577 Quant Type: ESTD
Cal Date : 25-JUN-2009 22:56 Cal File: 009f0901.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weigth of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (mg/L)	FINAL (mg/Kg)	
S 1 Diesel Range Organics					CAS #:	
6.856- 16.621			8637288	551.990	18.4	(M)
S 2 o-Terphenyl					CAS #: 84-15-1	
12.855	12.865	-0.010	385029	17.2099	0.57	(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/fid7.i/063009dr/006f0601.d
Date : 30-JUN-2009 13:24
Client ID: DBLK01LCS
Sample Info: |120187016011|
Volume Injected (uL): 1.0
Column phase: DB-5MS

Instrument: fid7.i

Operator: KXR2
Column diameter: 0.25

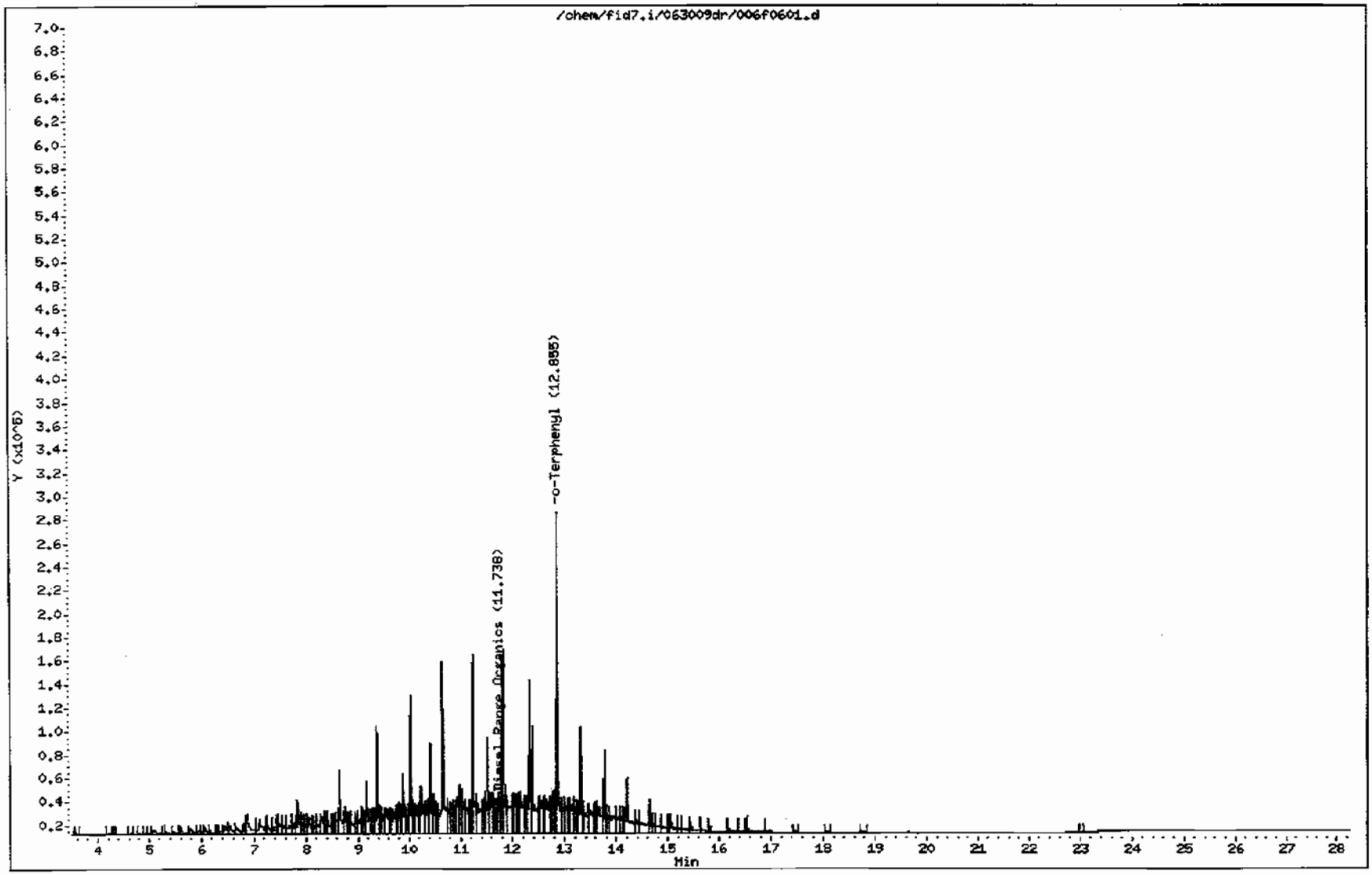

Data File: /chem/fid7.i/063009dr/006f0601.d
Injection Date: 30-JUN-2009 13:24
Instrument: fid7.i
Client Sample ID: DBLK01LCS

Blank KTR 7/1/09

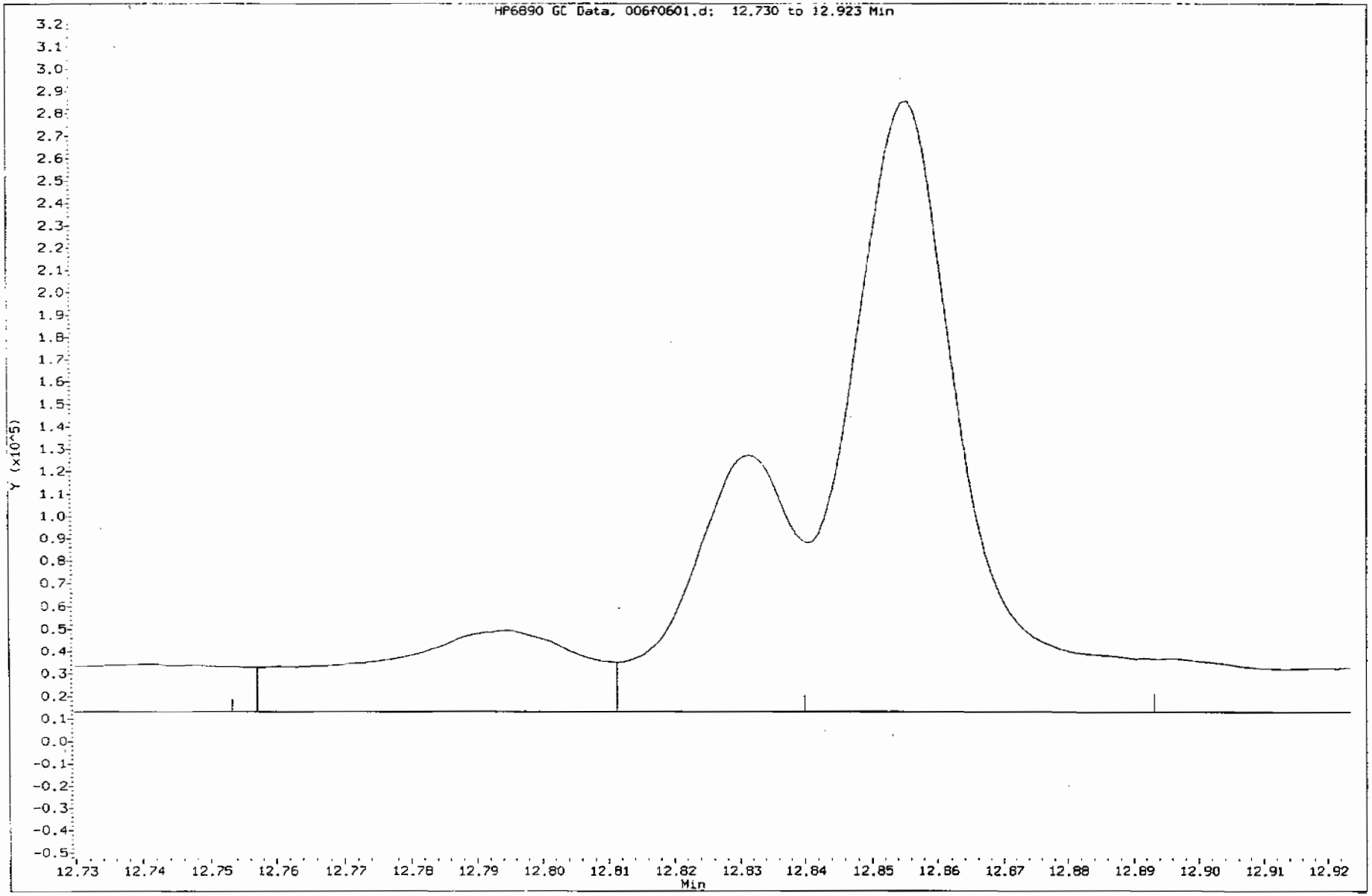

Data File: /chem/fid7.1/063009dr/006f0601.d
Injection Date: 30-JUN-2009 13:24
Instrument: fid7.1
Client Sample ID: DBLK01LCS

After [illegible]

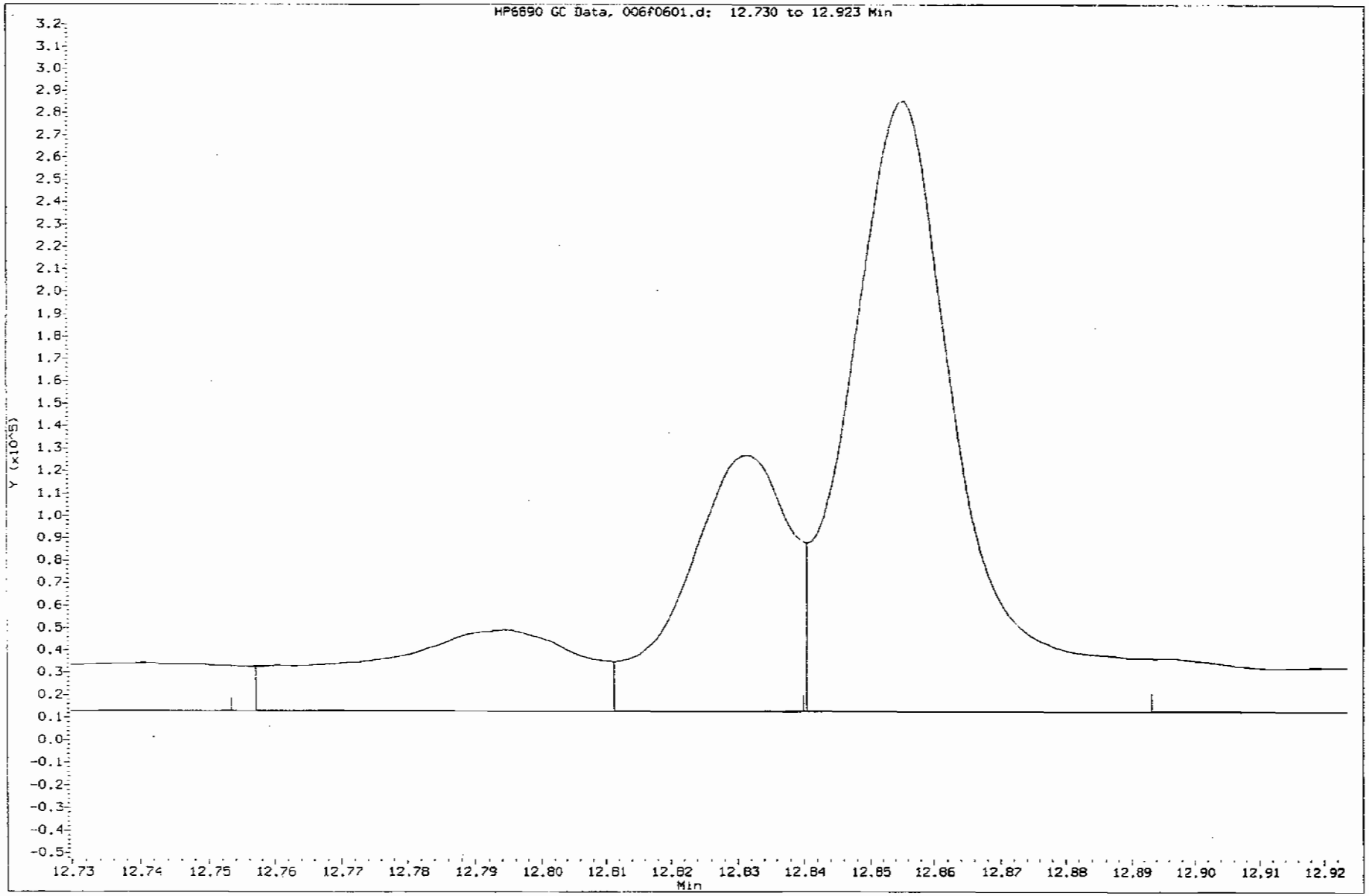

Flame Ionization Detector
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	1201870161	Date Received:	06/25/2009 08:45	%Moisture:	11.2
Client Sample:	QC for batch 880757	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-10480MS	Method:	SW846 8015A/B SVOC	SOP Ref:	GL-OA-E-003
Batch ID:	880758	Inst:	FID7.I	Dilution:	1
Run Date:	06/30/2009 14:41	Analyst:	KXR2	Inj. Vol:	1 uL
Prep Date:	06/29/2009 16:42	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	008f0801.d	Column:	DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
DRO	Diesel Range Organics		13.6	mg/kg	1.24	3.75

GEL Laboratories LLC

DB-5MS .25mm

Data file : /chem/fid7.i/063009dr/008f0801.d
Lab Smp Id: 1201870161 Client Smp ID: CAMO-09-10480MS
Inj Date : 30-JUN-2009 14:41
Operator : KXR2 Inst ID: fid7.i
Smp Info : |1201870161|1|
Misc Info : |FIDDRO_SF|880758|FIDF|MS|
Comment : 45C for 4 min; 20C/min ramp; 280C for 4 min.
Method : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Meth Date : 01-Jul-2009 09:04 kev01577 Quant Type: ESTD
Cal Date : 25-JUN-2009 22:56 Cal File: 009f0901.d
Als bottle: 8 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.04000	Weigth of sample extracted (g)
M	11.22990	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (mg/L)	FINAL (mg/Kg)
S 1 Diesel Range Organics					CAS #:
6.856	16.621		5665476	362.068	13.6
$ 2 o-Terphenyl					CAS #: 84-15-1
12.854	12.865	-0.011	243303	10.8751	0.41

Data File: /chem/fid7.i/063009dr/008f0801.d

Date : 30-JUN-2009 14:41

Client ID: CAMO-09-10480MS

Sample Info: !120187016!!!

Volume Injected (uL): 1.0

Column phase: DB-5MS

Instrument: fid7.i

Operator: KXR2

Column diameter: 0.25

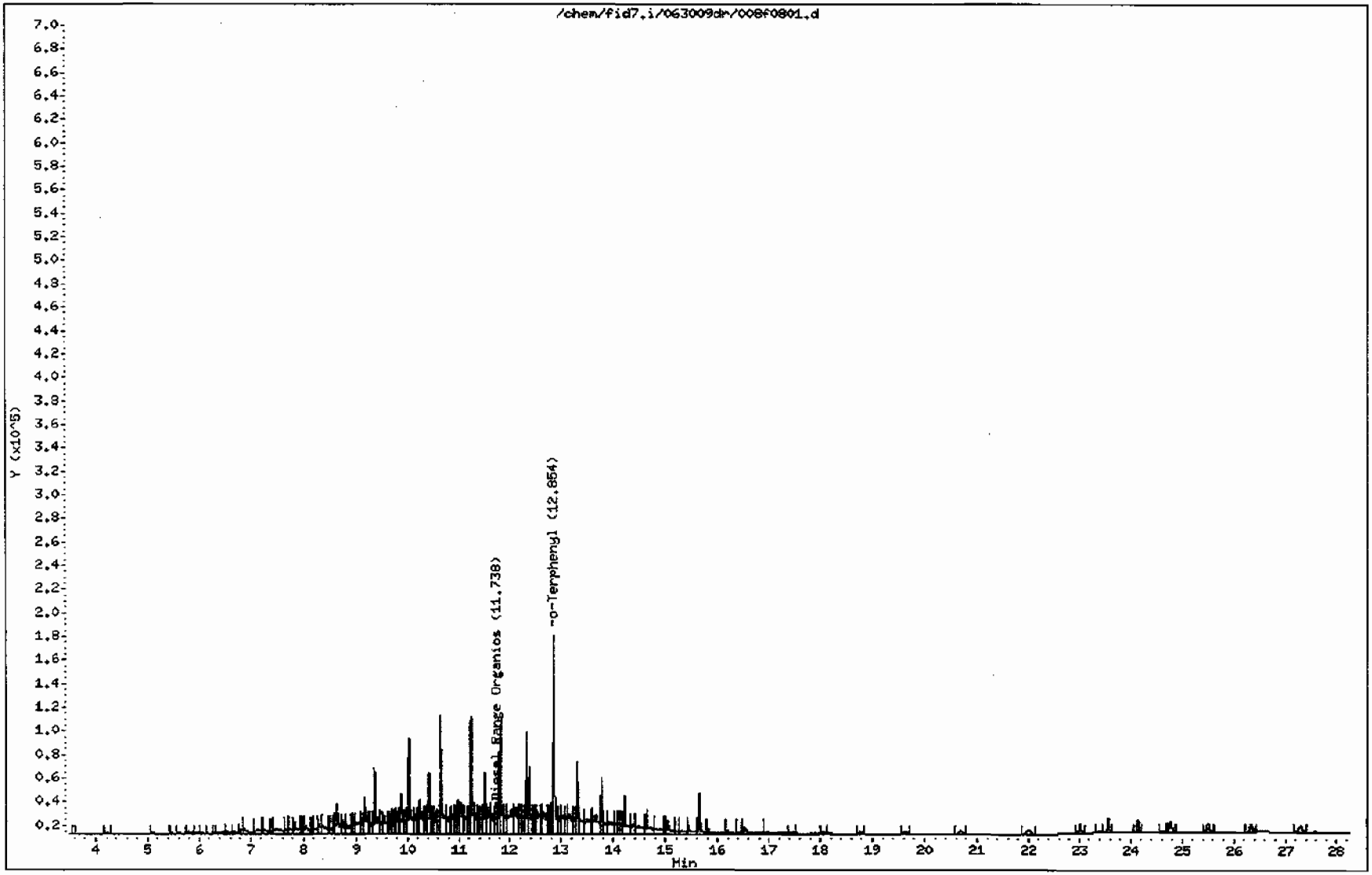

Flame Ionization Detector
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	1201870162	Date Received:	06/25/2009 08:45	%Moisture:	11.2
Client Sample:	QC for batch 880757	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-10480MSD	Method:	SW846 8015A/B SVOC	SOP Ref:	GL-OA-E-003
Batch ID:	880758	Inst:	FID7.I	Dilution:	1
Run Date:	06/30/2009 15:20	Analyst:	KXR2	Inj. Vol:	1 uL
Prep Date:	06/29/2009 16:42	Aliquot:	30.2 g	Final Volume:	1 mL
Data File:	009f0901.d	Column:	DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
DRO	Diesel Range Organics		11.0	mg/kg	1.23	3.73

GEL Laboratories LLC

DB-5MS .25mm

Data file : /chem/fid7.i/063009dr/009f0901.d
Lab Smp Id: 1201870162 Client Smp ID: CAMO-09-10480MSD
Inj Date : 30-JUN-2009 15:20
Operator : KXR2 Inst ID: fid7.i
Smp Info : |1201870162|1|
Misc Info : |FIDDRO_SF|880758|FIDF|MSD|
Comment : 45C for 4 min; 20C/min ramp; 280C for 4 min.
Method : /chem/fid7.i/063009dr/FID7a.i_b_DRO_051109.m
Meth Date : 01-Jul-2009 09:04 kev01577 Quant Type: ESTD
Cal Date : 25-JUN-2009 22:56 Cal File: 009f0901.d
Als bottle: 9 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.20000	Weigth of sample extracted (g)
M	11.22990	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (mg/L)	FINAL (mg/Kg)
$ 1 Diesel Range Organics					CAS #:
6.856- 16.621			4630990	295.957	11.0
$ 2 o-Terphenyl					CAS #: 84-15-1
12.854	12.865	-0.011	266657	11.9189	0.44

Data File: /chem/fid7.i/063009dr/009f0901.d
Date : 30-JUN-2009 15:20
Client ID: CAMO-09-10480MSD
Sample Info: |120187016211|
Volume Injected (uL): 1.0
Column phase: DB-5MS

Instrument: fid7.i
Operator: KXR2
Column diameter: 0.25

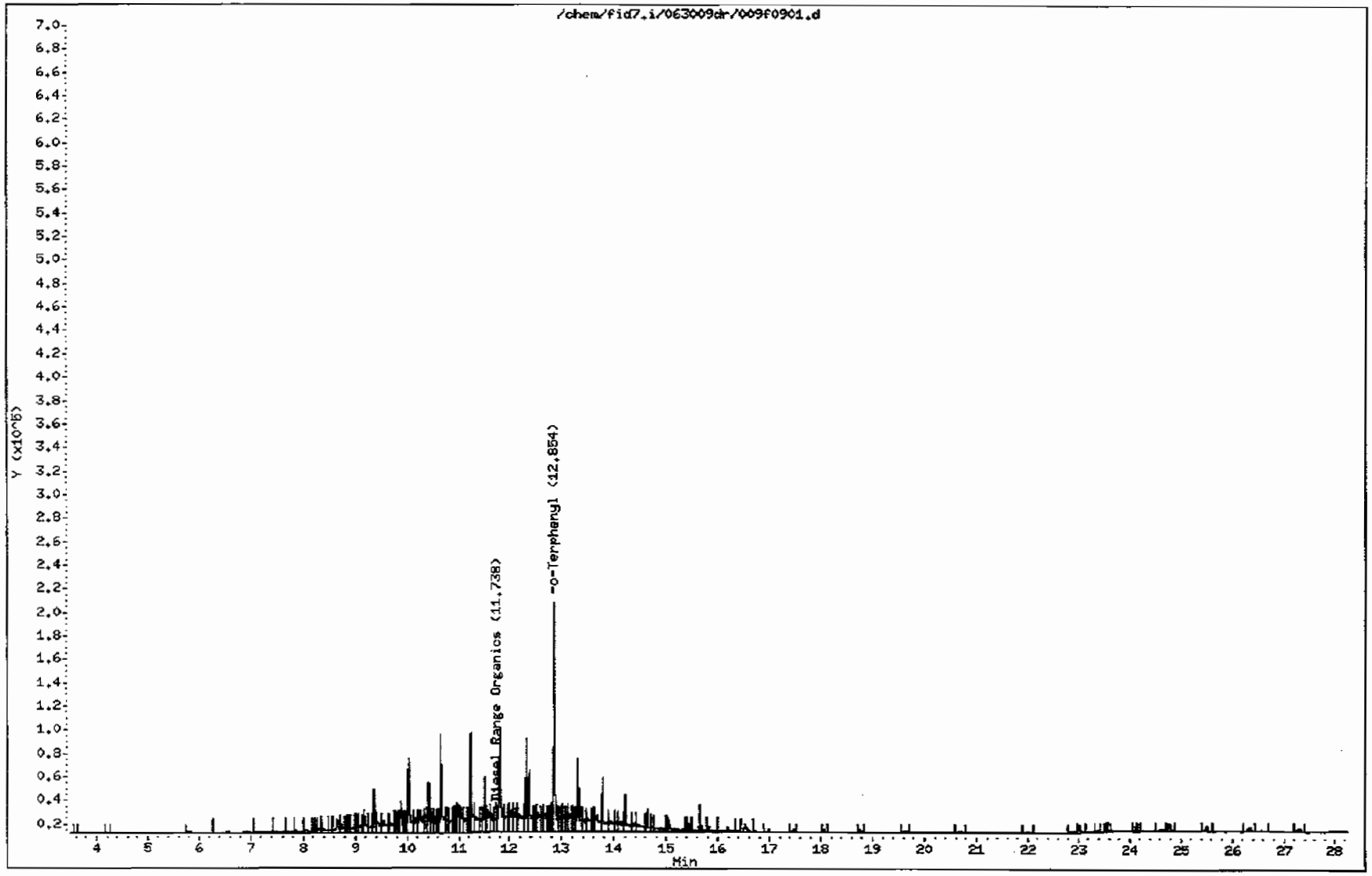

MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: FID7.i

DATE: 06/29/2009 METHOD: FID7a.i_b_DRO_051109.m OPERATOR:KXR2 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 16 on pg. 16 Solvent REMAT ID:CH2CL2

Calibration & QC Information
GC Column: DB-5MS 30m x 0.25mm x 0.25um
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
FID analysis of GEL SOP:GL-OA-E-003

Sequence Number:062509DR Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WFI090311-01 RT	KXR2	25-JUN-2009 17:45		SDGa00426	1.0		RTMARKER, USED FOR METHOD DEVOLPMENT
002f0201.d	WFI090519-06 B1	KXR2	25-JUN-2009 18:24		SDGa00426	1.0		CLEAN
003f0301.d	UFI090527-03 RT	KXR2	25-JUN-2009 19:03		SDGa00426	1.0		RTMARKER
004f0401.d	UFI081230-11 100	KXR2	25-JUN-2009 19:42		SDGa00426	1.0		LEVEL 1
005f0501.d	UFI081230-12 200	KXR2	25-JUN-2009 20:20		SDGa00426	1.0		LEVEL 2
006f0601.d	UFI081230-13 500	KXR2	25-JUN-2009 20:59		SDGa00426	1.0		LEVEL 3
007f0701.d	UFI081230-14 1000	KXR2	25-JUN-2009 21:38		SDGa00426	1.0		LEVEL 4
008f0801.d	UFI081230-15 2000	KXR2	25-JUN-2009 22:17		SDGa00426	1.0		LEVEL 5
009f0901.d	UFI081230-16 5000	KXR2	25-JUN-2009 22:56		SDGa00426	1.0		LEVEL 6
010f1001.d	UFI090429-02 D1	KXR2	25-JUN-2009 23:35		SDGa00426	1.0		PASSES
011f1101.d	WFI090519-06 B2	KXR2	26-JUN-2009 00:14		SDGa00426	1.0		CLEAN
012f1201.d	1201867545	KXR2	26-JUN-2009 00:53	879642	09-2341	1.0	MB	USE
013f1301.d	1201867546	KXR2	26-JUN-2009 01:32	879642	09-2341	1.0	LCS	USE
014f1401.d	231919001	KXR2	26-JUN-2009 02:11	879642	09-2341	1.0	LANL	USE
015f1501.d	231926001	KXR2	26-JUN-2009 02:50	879642	09-2350	1.0	LANL	USE

Instrument Batch: /chem/fid7.i/062509dr Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	232074001	KXR2	26-JUN-2009 03:29	879642	09-2392	1.0	LANL	USE

017f1701.d	1201867547	KXR2	26-JUN-2009 04:08	879642	09-2392		1.0	MS	USE
018f1801.d	1201867548	KXR2	26-JUN-2009 04:47	879642	09-2392		1.0	MSD	USE
019f1901.d	UFI090429-02 D2	KXR2	26-JUN-2009 05:26		SDGa00426		1.0		PASSES
020f2001.d	WFI090519-06 B3	KXR2	26-JUN-2009 06:06		SDGa00426		1.0		CLEAN
021f2101.d	1201867314	KXR2	26-JUN-2009 06:45	879525	09-2358		1.0	MB	USE
022f2201.d	1201867315	KXR2	26-JUN-2009 07:23	879642	09-2358		1.0	LCS	USE
023f2301.d	231930005	KXR2	26-JUN-2009 08:01	879642	09-2358		1.0	LANL	DUSE
024f2401.d	231935007	KXR2	26-JUN-2009 08:40	879642	09-2360		1.0	LANL	DUSE
025f2501.d	1201867316	KXR2	26-JUN-2009 09:19	879642	09-2360		1.0	MS	DUSE
026f2601.d	1201867317	KXR2	26-JUN-2009 09:57	879642	09-2360		1.0	MSD	DUSE
027f2701.d	UFI090429-02 D3	KXR2	26-JUN-2009 10:36		SDGa00426		1.0		PASSES
028f2801.d	WFI090519-06 B4	KXR2	26-JUN-2009 11:14		SDGa00426		1.0		CLEAN
029f2901.d	1201868594	KXR2	26-JUN-2009 11:53	880063	09-2434		1.0	MB	USE
030f3001.d	1201868595	KXR2	26-JUN-2009 12:31	880063	09-2434		1.0	LCS	USE
031f3101.d	232264001	KXR2	26-JUN-2009 13:10	880063	09-2434		1.0	LANL	USE
032f3201.d	1201868596	KXR2	26-JUN-2009 13:48	880063	09-2434		1.0	MS	USE
033f3301.d	1201868597	KXR2	26-JUN-2009 14:27	880063	09-2434		1.0	MSD	USE
034f3401.d	232264002	KXR2	26-JUN-2009 15:05	880063	09-2434		1.0	LANL	USE
035f3501.d	232264003	KXR2	26-JUN-2009 15:43	880063	09-2434		1.0	LANL	USE

Instrument Batch: /chem/fid7.i/062509dr

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	UFI090429-02 D4	KXR2	26-JUN-2009 16:21		SDGa00426	1.0		PASSES
037f3701.d	WFI090519-06 B5	KXR2	26-JUN-2009 17:00		SDGa00426	1.0		CLEAN
038f3801.d	232264004	KXR2	26-JUN-2009 17:39	880063	09-2434	1.0	LANL	USE
039f3901.d	232264005	KXR2	26-JUN-2009 18:17	880063	09-2434	1.0	LANL	USE
040f4001.d	232264006	KXR2	26-JUN-2009 18:56	880063	09-2434	1.0	LANL	USE
041f4101.d	232264007	KXR2	26-JUN-2009 19:35	880063	09-2434	1.0	LANL	USE

042f4201.d	232264008	KXR2	26-JUN-2009 20:13	880063	09-2434	1.0	LANL	USE
043f4301.d	232264009	KXR2	26-JUN-2009 20:52	880063	09-2434	1.0	LANL	USE
044f4401.d	WE090624-04	KXR2	26-JUN-2009 21:31		SDGa00426	1.0		SURROGATE SCREEN
045f4501.d	UFI090429-02 D5	KXR2	26-JUN-2009 22:10		SDGa00426	1.0		PASSES
046f4601.d	WFI090519-06 B6	KXR2	26-JUN-2009 22:48		SDGa00426	1.0		CLEAN
047f4701.d	231930005	KXR2	26-JUN-2009 23:27	879525	09-2358	20.0	LANL	USE
048f4801.d	231935007	KXR2	27-JUN-2009 00:05	879525	09-2360	10.0	LANL	USE
049f4901.d	1201867316	KXR2	27-JUN-2009 00:44	879525	09-2360	10.0	MS	USE
050f5001.d	1201867317	KXR2	27-JUN-2009 01:23	879525	09-2360	10.0	MSD	USE
051f5101.d	UFI090429-02 D6	KXR2	27-JUN-2009 02:02		SDGa00426	1.0		PASSES
052f5201.d	WFI090519-06 B7	KXR2	27-JUN-2009 02:41		SDGa00426	1.0		CLEAN

GEL ORGANIC RUN LOG INSTRUMENT ID: FID7.i

DATE: 07/01/2009 METHOD: FID7a.i_b_DRO_051109.m OPERATOR:KXR2 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 16 on pg. 16 Solvent REMAT ID:CH2CL2

Calibration & QC Information
GC Column: DB-5MS 30m x 0.25mm x 0.25um
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
FID analysis of GEL SOP:GL-OA-E-003

Sequence Number:063009DR Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WFI090519-06 B1	KXR2	30-JUN-2009 10:11		SDGa26091	1.0	CLEAN	
002f0201.d	UFI090527-03 RT	KXR2	30-JUN-2009 10:50		SDGa26091	1.0	RTMARKER	
003f0301.d	UFI090611-01 D1	KXR2	30-JUN-2009 11:28		SDGa26091	1.0	PASSES	
004f0401.d	WFI090519-06 B2	KXR2	30-JUN-2009 12:07		SDGa26091	1.0	CLEAN	
005f0501.d	1201870159	KXR2	30-JUN-2009 12:46	880758	09-2455	1.0	MB	USE
006f0601.d	1201870160	KXR2	30-JUN-2009 13:24	880758	09-2455	1.0	LCS	USE
007f0701.d	232357001	KXR2	30-JUN-2009 14:03	880758	09-2455	1.0	LANL	USE
008f0801.d	1201870161	KXR2	30-JUN-2009 14:41	880758	09-2455	1.0	MS	USE
009f0901.d	1201870162	KXR2	30-JUN-2009 15:20	880758	09-2455	1.0	MSD	USE
010f1001.d	232357002	KXR2	30-JUN-2009 15:59	880758	09-2455	1.0	LANL	USE
011f1101.d	UFI090611-01 D2	KXR2	30-JUN-2009 16:37		SDGa26091	1.0	PASSES	
012f1201.d	WFI090519-06 B3	KXR2	30-JUN-2009 17:16		SDGa26091	1.0	CLEAN	
013f1301.d	232394001	KXR2	30-JUN-2009 17:54	880758	232394	1.0	SNLS	USE
014f1401.d	1201870163	KXR2	30-JUN-2009 18:32	880758	232394	1.0	MS	USE
015f1501.d	1201870164	KXR2	30-JUN-2009 19:12	880758	232394	1.0	MSD	USE

Instrument Batch: /chem/fid7.i/063009dr Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	232394002	KXR2	30-JUN-2009 19:50	880758	232394	1.0	SNLS	USE

017f1701.d	232394003	KXR2	30-JUN-2009 20:29	680758	232394		1.0	SNLS	USE
018f1801.d	UFI090611-01 D3	KXR2	30-JUN-2009 21:08		SDGa26091		1.0		PASSES
019f1901.d	WFI090519-06 B4	KXR2	30-JUN-2009 21:47		SDGa26091		1.0		CLEAN

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 880757 **Verified by:** _____

Analyst: Robin Hunt

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201870159 MB	29-JUN-2009 16:42:18	30	1	0.03333
1201870160 LCS	29-JUN-2009 16:42:18	30	1	0.03333
232357001	29-JUN-2009 16:42:18	30.13	1	0.03319
1201870161 MS (232357001)	29-JUN-2009 16:42:18	30.04	1	0.03329
1201870162 MSD (232357001)	29-JUN-2009 16:42:18	30.2	1	0.03311
232357002	29-JUN-2009 16:42:18	30.02	1	0.03331
232394001	29-JUN-2009 16:42:18	30.02	1	0.03331
1201870163 MS (232394001)	29-JUN-2009 16:42:18	30.11	1	0.03321
1201870164 MSD (232394001)	29-JUN-2009 16:42:18	30.13	1	0.03319
232394002	29-JUN-2009 16:42:18	30.15	1	0.03317
232394003	29-JUN-2009 16:42:18	30.18	1	0.03313

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201870160	TPH DRO LCS	UE090604-07	1	mL
MS	1201870161	TPH DRO LCS	UE090604-07	1	mL
MS	1201870163	TPH DRO LCS	UE090604-07	1	mL
MSD	1201870162	TPH DRO LCS	UE090604-07	1	mL
MSD	1201870164	TPH DRO LCS	UE090604-07	1	mL
SURR	All	20 ppm surrogate	WE090609-04	1	mL
REGNT	All	Methylene Chloride	1143854-D	300	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: jda

Final Solvent: CH2Cl2

GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2455

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3550B
Analytical Batch Number:	880783
Prep Batch Number:	880782

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201870209	Method Blank (MB)
1201870210	Laboratory Control Sample (LCS)
1201870211	232348004(CAMO-09-10467) Matrix Spike (MS)
1201870212	232348004(CAMO-09-10467) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 13.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and

reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
A LANL sample of similar matrix from another SDG (09-2457) was selected for the matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the

analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
Nonconformance report (NCR) is for documentation of any procedural anomalies that may deviate from referenced SOP or contractual document. A NCR was not required for this SDG.

Manual Integration
Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD8A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide I)
ECD8A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticide II)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Jimmi Cao Date: 7/14/09

Roadmap for LANL 09-2455 PCB

This roadmap was analyzed by jen01212 on 07-01-2009, 11:32.
This roadmap was reviewed by jim01140 on 07-02-2009, 09:41.
This roadmap was packaged by sha01289 on 07-14-2009, 10:16.
This roadmap was validated by jim01140 on 07-14-2009, 13:22.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/040f4001.d	232357001	sample	30-JUN-2009	20:14	09-2455.sub	CAMO-09-10480	1.00000	880783	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/041f4101.d	232357002	sample	30-JUN-2009	20:30	09-2455.sub	CAMO-09-10479	1.00000	880783	UPLOAD BOTH, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/040b4001.d	232357001	sample	30-JUN-2009	20:14	09-2455.sub	CAMO-09-10480	1.00000	880783	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/041b4101.d	232357002	sample	30-JUN-2009	20:30	09-2455.sub	CAMO-09-10479	1.00000	880783	UPLOAD BOTH, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/035f3501-1.d	1201870209	mb	30-JUN-2009	18:59	09-2455.sub	PBLK01	1.00000	880783	
☐	N	/chem/ecd8a.i/063009.b/036f3601-1.d	1201870210	lcs	30-JUN-2009	19:12	09-2455.sub	PBLK01LCS	1.00000	880783	

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/035b3501-1.d	1201870209	mb	30-JUN-2009	18:59	09-2455.sub	PBLK01	1.00000	880783	
☐	N	/chem/ecd8a.i/063009.b/036b3601-1.d	1201870210	lcs	30-JUN-2009	19:12	09-2455.sub	PBLK01LCS	1.00000	880783	

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357002	Date Received:	06/25/2009 08:45	%Moisture:	9.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10479	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	880783	Inst:	ECD8A.I	Dilution:	1
Run Date:	06/30/2009 20:30	Analyst:	JAOC	Inj. Vol:	1 uL
Prep Date:	06/29/2009 16:16	Aliquot:	30.14 g	Final Volume:	1 mL
Data File:	041f4101.d	Column:	1 CLP1	Level:	LOW
	041b4101.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.66	ug/kg	1.22	3.66	1
11104-28-2	Aroclor-1221	U	3.66	ug/kg	1.22	3.66	1
11141-16-5	Aroclor-1232	U	3.66	ug/kg	1.22	3.66	1
53469-21-9	Aroclor-1242	U	3.66	ug/kg	1.22	3.66	1
12672-29-6	Aroclor-1248	U	3.66	ug/kg	1.22	3.66	1
11097-69-1	Aroclor-1254	U	3.66	ug/kg	1.22	3.66	1
11096-82-5	Aroclor-1260	U	3.66	ug/kg	1.22	3.66	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	**Date Collected:**	06/22/2009 12:00	**Matrix:**	R
Lab Sample ID:	232357001	**Date Received:**	06/25/2009 08:45	**%Moisture:**	11.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10480	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 20:14	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	040f4001.d	**Column:**	1 CLP1	**Level:**	LOW
	040b4001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.75	ug/kg	1.25	3.75	1
11104-28-2	Aroclor-1221	U	3.75	ug/kg	1.25	3.75	1
11141-16-5	Aroclor-1232	U	3.75	ug/kg	1.25	3.75	1
53469-21-9	Aroclor-1242	U	3.75	ug/kg	1.25	3.75	1
12672-29-6	Aroclor-1248	U	3.75	ug/kg	1.25	3.75	1
11097-69-1	Aroclor-1254	U	3.75	ug/kg	1.25	3.75	1
11096-82-5	Aroclor-1260	U	3.75	ug/kg	1.25	3.75	1

QUALITY CONTROL SUMMARY

Surrogate Recovery Report

SDG Number: 09–2455

Matrix Type: SOLID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1201870209	MB for batch 880782	70	65	80	73
1201870210	LCS for batch 880782	73	68	79	73
232357001	CAMO–09–10480	46	43	57	51
232357002	CAMO–09–10479	47	44	66	61

Surrogate	Acceptance Limits
4CMX = 4cmx	(34%–105%)
DCB = Decachlorobiphenyl	(33%–115%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2455
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 880782
Matrix: SOIL
Lab Sample ID: 1201870210
Instrument: ECD8A.I
Analysis Date: 06/30/2009 19:12
Dilution: 1
Analyst: JAOC
Prep Batch ID: 880782
Inj. Vol: 1 uL
Batch ID: 880783

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	LCS	Aroclor-1016	33.3	0.0	23.1	69	41-110
11096-82-5	LCS	Aroclor-1260	33.3	0.0	30.4	91	48-110

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10467MS
Lab Sample ID: 1201870211
Instrument: ECD8A.I
Analyst: JAOC
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 4.5
Analysis Date: 06/30/2009 19:41
Prep Batch ID: 880782
Batch ID: 880783
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	MS	Aroclor-1016	34.9	0.00	U	20.5	59	23-117
11096-82-5	MS	Aroclor-1260	34.9	0.00	U	26.7	77	27-116

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2457
Client ID: CAMO-09-10467MSD
Lab Sample ID: 1201870212
Instrument: ECD8A.I
Analyst: JAOC
Inj. Vol: 1 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 4.5
Analysis Date: 06/30/2009 19:57
Dilution: 1
Prep Batch ID: 880782
Batch ID: 880783

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674-11-2	MSD Aroclor-1016	34.8	0.00	U	19.3	55	23-117	6	0-30
11096-82-5	MSD Aroclor-1260	34.8	0.00	U	26.1	75	27-116	2	0-30

Method Blank Summary

SDG Number:	09-2455	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 880782	Instrument ID:	ECD8A.I_2 ECD8A.I_1	Data File:	035b3501-1.d 035f3501-1.d
Lab Sample ID:	1201870209				
Column:	CLP2 CLP1	Prep Date:	06/29/2009 16:16	Analyzed:	06/30/09 18:59
		Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 880782	1201870210	036f3601-1.d 036b3601-1.d	06/30/09	1912
04 CAMO-09-10480	232357001	040f4001.d 040b4001.d	06/30/09	2014
05 CAMO-09-10479	232357002	041f4101.d 041b4101.d	06/30/09	2030

SAMPLE DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357002	Date Received:	06/25/2009 08:45	%Moisture:	9.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10479	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	880783	Inst:	ECD8A.I	Dilution:	1
Run Date:	06/30/2009 20:30	Analyst:	JAOC	Inj. Vol:	1 uL
Prep Date:	06/29/2009 16:16	Aliquot:	30.14 g	Final Volume:	1 mL
Data File:	041f4101.d	Column:	1 CLP1	Level:	LOW
	041b4101.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.66	ug/kg	1.22	3.66	1
11104-28-2	Aroclor-1221	U	3.66	ug/kg	1.22	3.66	1
11141-16-5	Aroclor-1232	U	3.66	ug/kg	1.22	3.66	1
53469-21-9	Aroclor-1242	U	3.66	ug/kg	1.22	3.66	1
12672-29-6	Aroclor-1248	U	3.66	ug/kg	1.22	3.66	1
11097-69-1	Aroclor-1254	U	3.66	ug/kg	1.22	3.66	1
11096-82-5	Aroclor-1260	U	3.66	ug/kg	1.22	3.66	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/041f4101.d
Lab Smp Id: 232357002 Client Smp ID: CAMO-09-10479
Inj Date : 30-JUN-2009 20:30
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232357002|1|
Misc Info : |ECD82P_1SF|880783|SVAF|LANL|SOIL|CAMO-09-10479|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 41
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.14000	Weight of sample extracted (g)
M	9.46790	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	14995427	93.6956	3.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.189	6.193	-0.004	22322242	132.930	4.9	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/041f4101.d

Date : 30-JUN-2009 20:30

Client ID: CAMO-09-10479

Sample Info: {232357002|1}

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

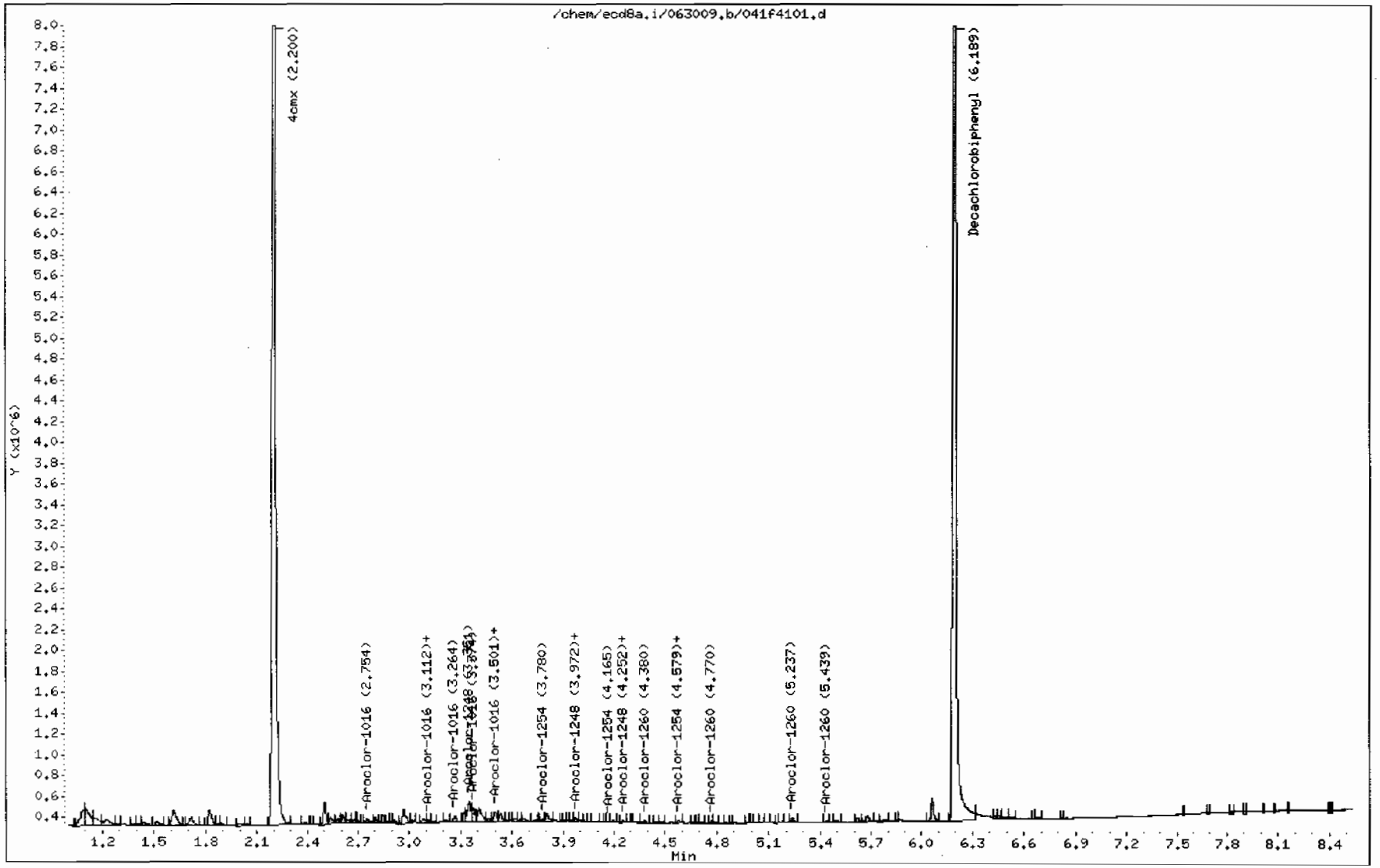

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/041b4101.d
Lab Smp Id: 232357002 Client Smp ID: CAMO-09-10479
Inj Date : 30-JUN-2009 20:30
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232357002|1|
Misc Info : |ECD82P_1SF|880783|SVAF|LANL|SOIL|CAMO-09-10479|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 41
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.14000	Weight of sample extracted (g)
M	9.46790	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5062577	87.7623	3.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.850	6.853	-0.003	6865686	121.898	4.5	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/041b4101.d
Date : 30-JUN-2009 20:30
Client ID: CAMO-09-10479
Sample Info: |23235700211|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

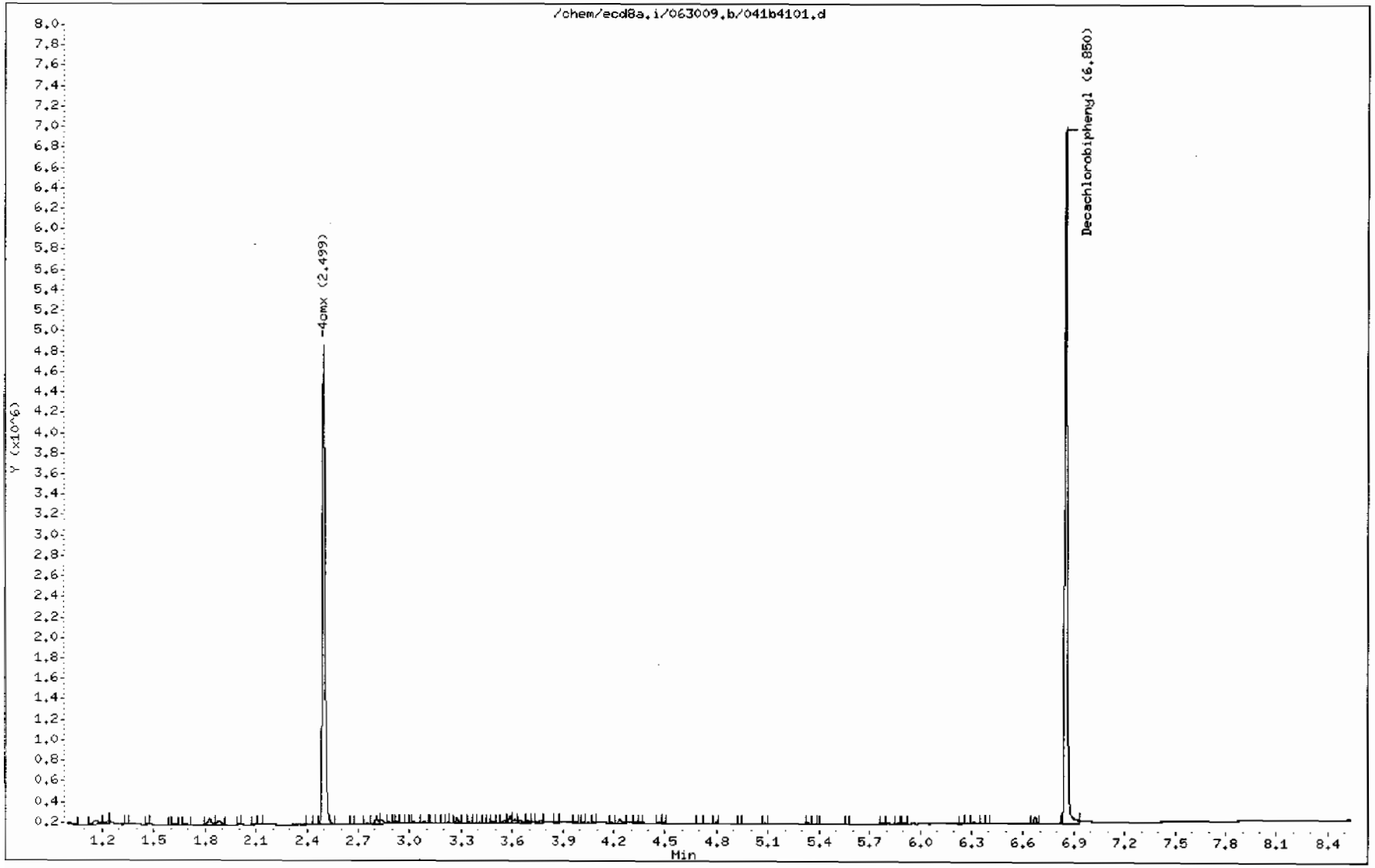

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2455	Date Collected:	06/22/2009 12:00	Matrix:	R
Lab Sample ID:	232357001	Date Received:	06/25/2009 08:45	%Moisture:	11.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10480	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	880783	Inst:	ECD8A.I	Dilution:	1
Run Date:	06/30/2009 20:14	Analyst:	JAOC	Inj. Vol:	1 uL
Prep Date:	06/29/2009 16:16	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	040f4001.d	Column:	1 CLP1	Level:	LOW
	040b4001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.75	ug/kg	1.25	3.75	1
11104-28-2	Aroclor-1221	U	3.75	ug/kg	1.25	3.75	1
11141-16-5	Aroclor-1232	U	3.75	ug/kg	1.25	3.75	1
53469-21-9	Aroclor-1242	U	3.75	ug/kg	1.25	3.75	1
12672-29-6	Aroclor-1248	U	3.75	ug/kg	1.25	3.75	1
11097-69-1	Aroclor-1254	U	3.75	ug/kg	1.25	3.75	1
11096-82-5	Aroclor-1260	U	3.75	ug/kg	1.25	3.75	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/040f4001.d
Lab Smp Id: 232357001 Client Smp ID: CAMO-09-10480
Inj Date : 30-JUN-2009 20:14
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232357001|1|
Misc Info : |ECD82P_1SF|880783|SVAF|LANL|SOIL|CAMO-09-10480|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 40
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	11.22990	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	14800039	92.4748	3.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	19005381	113.178	4.2	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/040f4001.d

Page 1

Date : 30-JUN-2009 20:14

Client ID: CAMO-09-10480

Instrument: ecd8a.i

Sample Info: |2323570011|1|

Volume Injected (uL): 1.0

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25

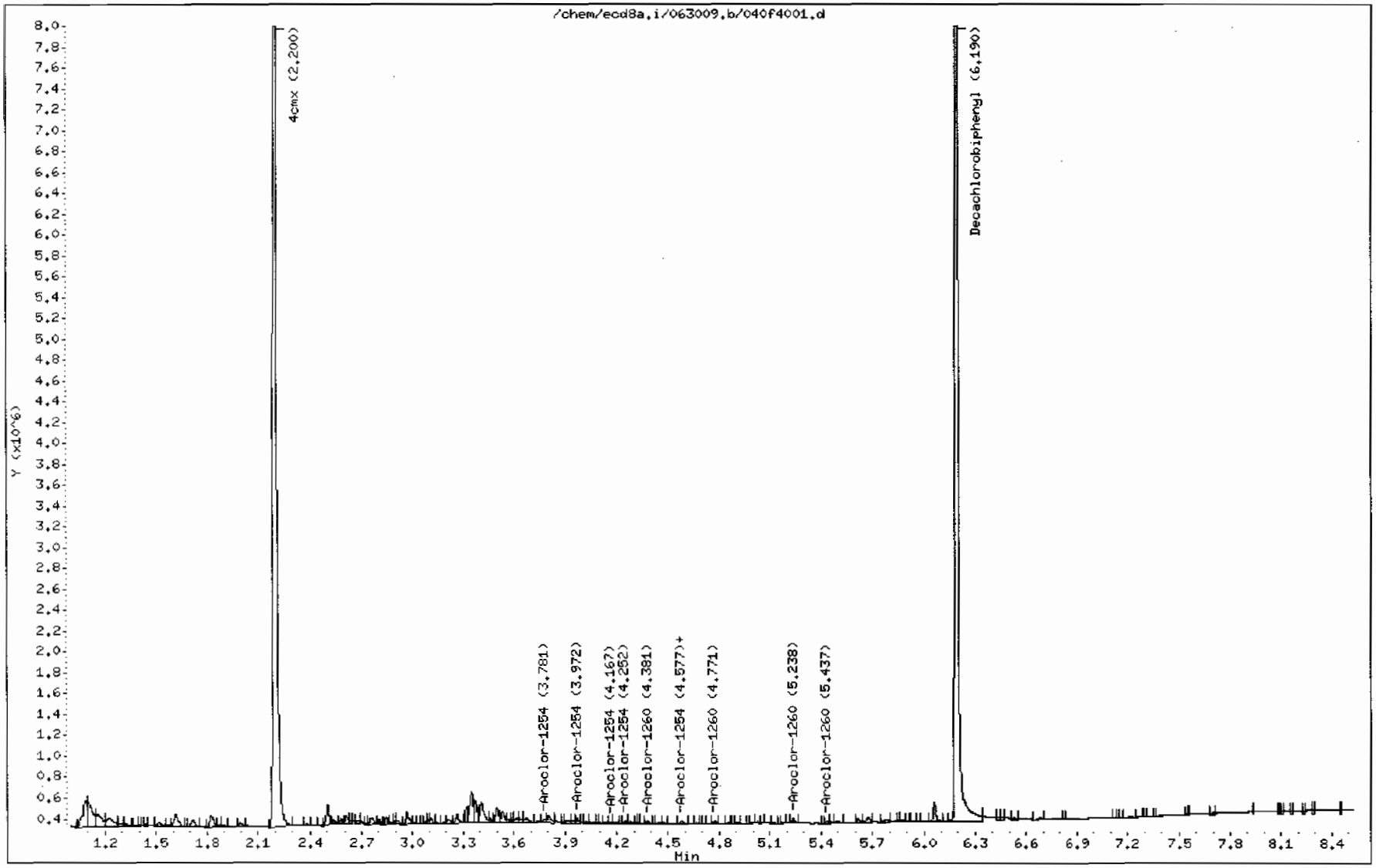

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/040b4001.d
Lab Smp Id: 232357001 Client Smp ID: CAMO-09-10480
Inj Date : 30-JUN-2009 20:14
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232357001|1|
Misc Info : |ECD82P_1SF|880783|SVAF|LANL|SOIL|CAMO-09-10480|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 40
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	11.22990	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	4964888	86.0688	3.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	5795868	102.904	3.9	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/040b4001.d

Date : 30-JUN-2009 20:14

Client ID: CAMO-09-10480

Sample Info: 1232357001|1|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

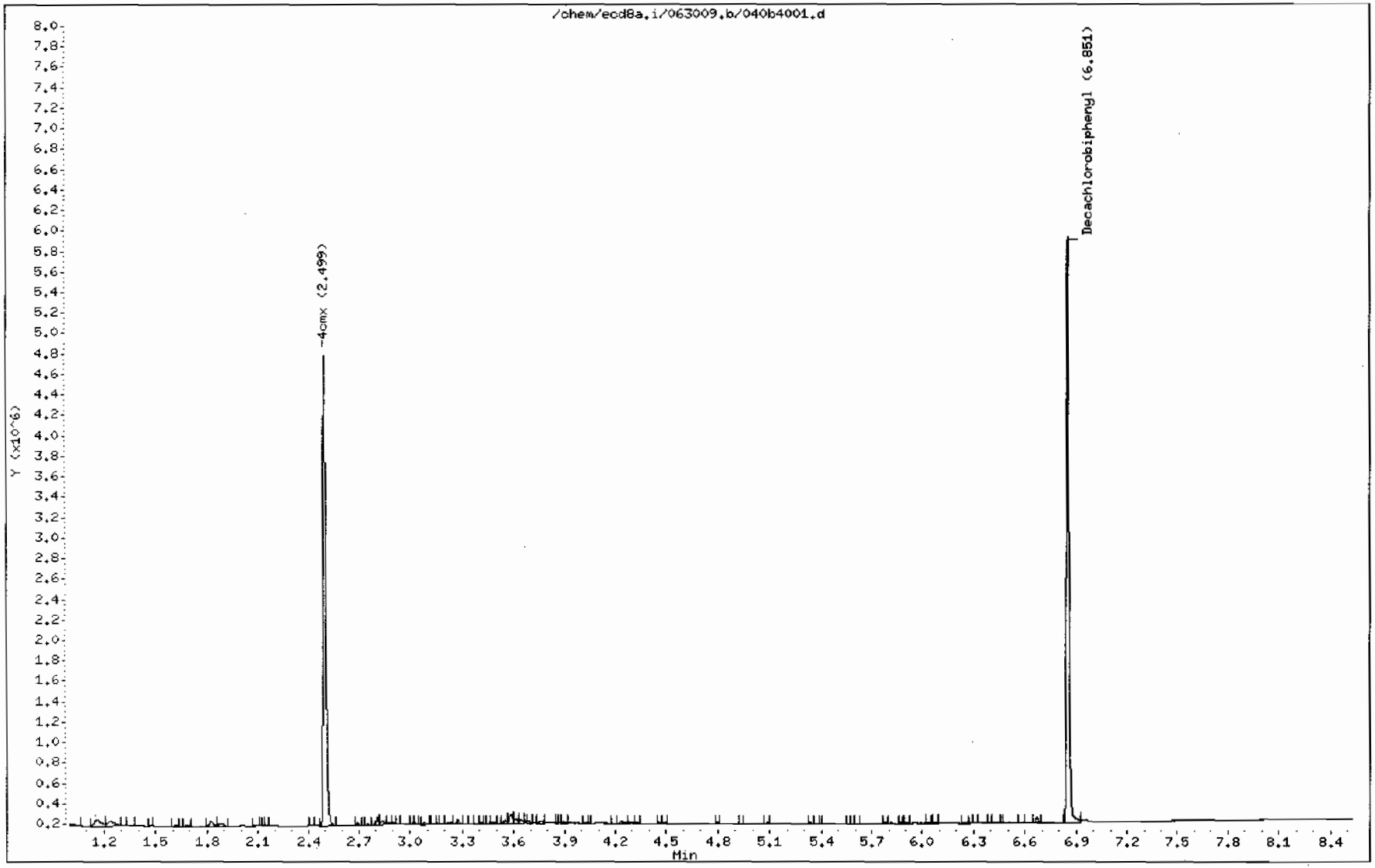

STANDARDS DATA

Report Date: 30-Jun-2009 14:24

Calibration History

Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Start Cal Date: 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
18-JUN-2009 11:27	AR1248	/chem/ecd8a.i/061809.b/014f1401.d
01-JUN-2009 14:05	AR1242	/chem/ecd8a.i/060109a.b/018f1801.d
18-JUN-2009 10:12	AR1254	/chem/ecd8a.i/061809.b/008f0801.d
16-JUN-2009 09:56	AR1660	/chem/ecd8a.i/061609.b/008f0801.d
Cal Level: 2 , Cal Amount: 250.00000		
18-JUN-2009 11:39	AR1248	/chem/ecd8a.i/061809.b/015f1501.d
01-JUN-2009 14:17	AR1242	/chem/ecd8a.i/060109a.b/019f1901.d
18-JUN-2009 10:25	AR1254	/chem/ecd8a.i/061809.b/009f0901.d
16-JUN-2009 10:09	AR1660	/chem/ecd8a.i/061609.b/009f0901.d
Cal Level: 3 , Cal Amount: 500.00000		
18-JUN-2009 11:51	AR1248	/chem/ecd8a.i/061809.b/016f1601.d
01-JUN-2009 14:30	AR1242	/chem/ecd8a.i/060109a.b/020f2001.d
18-JUN-2009 10:37	AR1254	/chem/ecd8a.i/061809.b/010f1001.d
16-JUN-2009 10:21	AR1660	/chem/ecd8a.i/061609.b/010f1001.d
Cal Level: 4 , Cal Amount: 1000.00000		
01-JUN-2009 19:51	DDT	/chem/ecd8a.i/060109a.b/046f4601.d
01-JUN-2009 19:39	AR1268	/chem/ecd8a.i/060109a.b/045f4501.d
01-JUN-2009 19:26	AR1262	/chem/ecd8a.i/060109a.b/044f4401.d
01-JUN-2009 19:14	AR1221	/chem/ecd8a.i/060109a.b/043f4301.d
01-JUN-2009 19:02	AR1232	/chem/ecd8a.i/060109a.b/042f4201.d
18-JUN-2009 12:04	AR1248	/chem/ecd8a.i/061809.b/017f1701.d
01-JUN-2009 14:42	AR1242	/chem/ecd8a.i/060109a.b/021f2101.d
18-JUN-2009 10:50	AR1254	/chem/ecd8a.i/061809.b/011f1101.d
16-JUN-2009 10:33	AR1660	/chem/ecd8a.i/061609.b/011f1101.d
Cal Level: 5 , Cal Amount: 4000.00000		
18-JUN-2009 12:16	AR1248	/chem/ecd8a.i/061809.b/018f1801.d
01-JUN-2009 14:54	AR1242	/chem/ecd8a.i/060109a.b/022f2201.d
18-JUN-2009 11:02	AR1254	/chem/ecd8a.i/061809.b/012f1201.d
16-JUN-2009 10:46	AR1660	/chem/ecd8a.i/061609.b/012f1201.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:28	AR1268	/chem/ecd8a.i/063009.b/009f0901.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:16	AR1262	/chem/ecd8a.i/063009.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:03	AR1221	/chem/ecd8a.i/063009.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:48	AR1232	/chem/ecd8a.i/063009.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:36	AR1248	/chem/ecd8a.i/063009.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:24	AR1242	/chem/ecd8a.i/063009.b/004f0401.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:11	AR1254	/chem/ecd8a.i/063009.b/003f0301.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 10:59	AR1660	/chem/ecd8a.i/063009.b/002f0201.d

Report Date: 30-Jun-2009 14:24

Calibration History

Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Start Cal Date: 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
18-JUN-2009 11:27	AR1248	/chem/ecd8a.i/061809.b/014b1401.d
01-JUN-2009 14:05	AR1242	/chem/ecd8a.i/060109a.b/018b1801.d
18-JUN-2009 10:12	AR1254	/chem/ecd8a.i/061809.b/008b0801.d
16-JUN-2009 09:56	AR1660	/chem/ecd8a.i/061609.b/008b0801.d
Cal Level: 2 , Cal Amount: 250.00000		
18-JUN-2009 11:39	AR1248	/chem/ecd8a.i/061809.b/015b1501.d
01-JUN-2009 14:17	AR1242	/chem/ecd8a.i/060109a.b/019b1901.d
18-JUN-2009 10:25	AR1254	/chem/ecd8a.i/061809.b/009b0901.d
16-JUN-2009 10:09	AR1660	/chem/ecd8a.i/061609.b/009b0901.d
Cal Level: 3 , Cal Amount: 500.00000		
18-JUN-2009 11:51	AR1248	/chem/ecd8a.i/061809.b/016b1601.d
01-JUN-2009 14:30	AR1242	/chem/ecd8a.i/060109a.b/020b2001.d
18-JUN-2009 10:37	AR1254	/chem/ecd8a.i/061809.b/010b1001.d
16-JUN-2009 10:21	AR1660	/chem/ecd8a.i/061609.b/010b1001.d
Cal Level: 4 , Cal Amount: 1000.00000		
01-JUN-2009 19:51	DDT	/chem/ecd8a.i/060109a.b/046b4601.d
01-JUN-2009 19:39	AR1268	/chem/ecd8a.i/060109a.b/045b4501.d
01-JUN-2009 19:26	AR1262	/chem/ecd8a.i/060109a.b/044b4401.d
01-JUN-2009 19:14	AR1221	/chem/ecd8a.i/060109a.b/043b4301.d
01-JUN-2009 19:02	AR1232	/chem/ecd8a.i/060109a.b/042b4201.d
18-JUN-2009 12:04	AR1248	/chem/ecd8a.i/061809.b/017b1701.d
01-JUN-2009 14:42	AR1242	/chem/ecd8a.i/060109a.b/021b2101.d
18-JUN-2009 10:50	AR1254	/chem/ecd8a.i/061809.b/011b1101.d
16-JUN-2009 10:33	AR1660	/chem/ecd8a.i/061609.b/011b1101.d
Cal Level: 5 , Cal Amount: 4000.00000		
18-JUN-2009 12:16	AR1248	/chem/ecd8a.i/061809.b/018b1801.d
01-JUN-2009 14:54	AR1242	/chem/ecd8a.i/060109a.b/022b2201.d
18-JUN-2009 11:02	AR1254	/chem/ecd8a.i/061809.b/012b1201.d
16-JUN-2009 10:46	AR1660	/chem/ecd8a.i/061609.b/012b1201.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:28	AR1268	/chem/ecd8a.i/063009.b/009b0901.d

Ccal Level: 4 , Ccal Amount: 1000
30-JUN-2009 12:16 | AR1262 | /chem/ecd8a.i/063009.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000
30-JUN-2009 12:03 | AR1221 | /chem/ecd8a.i/063009.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000
30-JUN-2009 11:48 | AR1232 | /chem/ecd8a.i/063009.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000
30-JUN-2009 11:36 | AR1248 | /chem/ecd8a.i/063009.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000
30-JUN-2009 11:24 | AR1242 | /chem/ecd8a.i/063009.b/004b0401.d
Ccal Level: 4 , Ccal Amount: 1000
30-JUN-2009 11:11 | AR1254 | /chem/ecd8a.i/063009.b/003b0301.d
Ccal Level: 4 , Ccal Amount: 1000
30-JUN-2009 10:59 | AR1660 | /chem/ecd8a.i/063009.b/002b0201.d

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 30-Jun-2009 14:15 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	758.000000
Initial:End Threshold	379.000000
Initial:Area Threshold	734.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	1.500000
6.500:Bunch Factor	2.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.762	2.732-2.792	5.767e+03
	3.112	3.082-3.142	7.225e+03
	3.256	3.226-3.286	2.909e+03
	3.365	3.335-3.395	2.753e+03
	3.510	3.480-3.540	3.629e+03
2 Aroclor-1221	2.347	2.317-2.377	1.552e+03
	2.461	2.431-2.491	8.835e+02
	2.493	2.463-2.523	3.730e+03
3 Aroclor-1232	2.762	2.732-2.792	2.534e+03
	3.113	3.083-3.143	3.242e+03
	3.210	3.180-3.240	2.139e+03
	3.511	3.481-3.541	1.547e+03
	3.817	3.787-3.847	1.317e+03
4 Aroclor-1242	2.762	2.732-2.792	4.058e+03
	3.113	3.083-3.143	4.963e+03
	3.257	3.227-3.287	1.993e+03
	3.349	3.319-3.379	1.776e+03
	3.511	3.481-3.541	2.575e+03
5 Aroclor-1248	3.112	3.082-3.142	3.101e+03
	3.348	3.318-3.378	3.691e+03
	3.511	3.481-3.541	4.716e+03
	3.975	3.945-4.005	4.121e+03
	4.255	4.225-4.285	3.182e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	3.786	3.756-3.816	4.824e+03
		3.972	3.942-4.002	6.268e+03
		4.168	4.138-4.198	4.760e+03
		4.254	4.224-4.284	7.943e+03
		4.581	4.551-4.611	6.787e+03
	7 Aroclor-1260	4.383	4.353-4.413	7.128e+03
		4.579	4.549-4.609	1.009e+04
		4.774	4.744-4.804	1.148e+04
		5.242	5.212-5.272	1.340e+04
		5.437	5.407-5.467	6.552e+03
	8 Aroclor-1262	4.384	4.354-4.414	4.497e+03
		4.580	4.550-4.610	7.643e+03
		4.855	4.825-4.885	1.033e+04
		5.026	4.996-5.056	6.240e+03
		5.242	5.212-5.272	2.010e+04
	9 Aroclor-1268	5.461	5.431-5.491	2.021e+04
		5.489	5.459-5.519	2.299e+04
		5.621	5.591-5.651	1.696e+04
		5.868	5.838-5.898	8.529e+03
		6.064	6.034-6.094	5.465e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	2.202	2.172-2.232	1.600e+05
$	12 Decachlorobiphenyl	6.193	6.163-6.223	1.679e+05
	13 4,4'-DDT	4.803	4.783-4.823	5.953e+04
	14 4,4'-DDD	4.610	4.590-4.630	1.238e+05
	15 4,4'-DDE	4.186	4.166-4.206	1.600e+05

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 30-Jun-2009 14:15 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	733.000000
Initial:End Threshold	366.500000
Initial:Area Threshold	522.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	2.000000
9.000:Bunch Factor	2.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	3.222	3.192-3.252	2.206e+03
	3.575	3.545-3.605	2.931e+03
	3.675	3.645-3.705	1.739e+03
	3.752	3.722-3.782	1.038e+03
	3.826	3.796-3.856	1.070e+03
2 Aroclor-1221	2.743	2.713-2.773	6.391e+02
	2.856	2.826-2.886	4.078e+02
	2.905	2.875-2.935	1.496e+03
3 Aroclor-1232	3.223	3.193-3.253	1.122e+03
	3.575	3.545-3.605	1.421e+03
	3.676	3.646-3.706	8.476e+02
	3.826	3.796-3.856	4.658e+02
	3.858	3.828-3.888	4.814e+02
4 Aroclor-1242	3.223	3.193-3.253	1.708e+03
	3.576	3.546-3.606	2.110e+03
	3.677	3.647-3.707	1.298e+03
	3.752	3.723-3.783	7.735e+02
	3.827	3.797-3.857	7.883e+02
5 Aroclor-1248	3.575	3.545-3.605	1.180e+03
	3.826	3.796-3.856	1.431e+03
	4.023	3.993-4.053	1.766e+03
	4.301	4.271-4.331	2.015e+03
	4.333	4.303-4.363	2.294e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	4.331	4.301-4.361	2.097e+03
		4.468	4.438-4.498	2.309e+03
		4.798	4.768-4.828	3.101e+03
		5.084	5.054-5.114	1.617e+03
		5.206	5.176-5.236	1.854e+03
	7 Aroclor-1260	4.936	4.906-4.966	2.882e+03
		5.083	5.053-5.113	3.457e+03
		5.199	5.169-5.229	3.159e+03
		5.608	5.578-5.638	2.368e+03
		6.041	6.011-6.071	3.770e+03
	8 Aroclor-1262	5.085	5.055-5.115	2.887e+03
		5.401	5.371-5.431	4.337e+03
		5.609	5.579-5.639	3.796e+03
		5.783	5.753-5.813	7.857e+03
		6.036	6.006-6.066	5.567e+03
	9 Aroclor-1268	6.035	6.005-6.065	8.266e+03
		6.068	6.038-6.098	8.012e+03
		6.246	6.216-6.276	6.337e+03
		6.443	6.413-6.473	2.993e+03
		6.672	6.642-6.702	1.951e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	2.499	2.469-2.529	5.769e+04
$	12 Decachlorobiphenyl	6.853	6.823-6.883	5.632e+04
	13 4,4'-DDT	5.344	5.324-5.364	1.533e+04
	14 4,4'-DDD	5.123	5.103-5.143	3.856e+04
	15 4,4'-DDE	4.712	4.691-4.731	5.854e+04

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd8a.i/061809.b/014f1401.d
Level 2: /chem/ecd8a.i/061809.b/015f1501.d
Level 3: /chem/ecd8a.i/061809.b/016f1601.d
Level 4: /chem/ecd8a.i/060109a.b/046f4601.d
Level 5: /chem/ecd8a.i/061809.b/018f1801.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	6382	6153	5903	5546	4852	5767	10.374
(2)	7612	7575	7256	6956	6725	7225	5.338
(3)	3028	3020	2943	2834	2722	2909	4.488
(4)	2996	2866	2782	2620	2501	2753	7.133
(5)	3855	3765	3658	3505	3360	3629	5.480
2 Aroclor-1221(1)	+++++	+++++	+++++	1552	+++++	1552	0.000
(2)	+++++	+++++	+++++	884	+++++	884	0.000
(3)	+++++	+++++	+++++	3730	+++++	3730	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	2534	+++++	2534	0.000
(2)	+++++	+++++	+++++	3242	+++++	3242	0.000
(3)	+++++	+++++	+++++	2139	+++++	2139	0.000
(4)	+++++	+++++	+++++	1547	+++++	1547	0.000
(5)	+++++	+++++	+++++	1317	+++++	1317	0.000
4 Aroclor-1242(1)	4799	4285	4051	3858	3298	4058	13.594
(2)	5376	5128	4935	4800	4573	4963	6.185
(3)	2187	2024	1984	1943	1830	1993	6.529
(4)	2101	1847	1735	1702	1495	1776	12.478
(5)	2954	2634	2536	2479	2273	2575	9.692
5 Aroclor-1248(1)	3403	3130	3072	3011	2890	3101	6.153
(2)	4054	3812	3643	3587	3362	3691	7.009
(3)	5032	4832	4709	4603	4406	4716	5.000
(4)	4199	4050	4133	4131	4094	4121	1.335
(5)	3259	3184	3247	3209	3012	3182	3.141
6 Aroclor-1254(1)	5068	4958	4838	4712	4546	4824	4.241
(2)	6310	6357	6231	6251	6194	6268	1.032
(3)	4574	4878	4790	4787	4770	4760	2.358
(4)	7476	7977	8002	8044	8218	7943	3.496
(5)	6713	7019	6939	6720	6541	6787	2.829

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

	Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
	7 Aroclor-1260(1)	7252	7304	7236	7087	6763	7128	3.081
	(2)	9666	10056	10152	10213	10356	10089	2.580
	(3)	11208	11407	11564	11701	11531	11482	1.618
	(4)	12350	13410	13592	13776	13850	13395	4.547
	(5)	6187	6485	6648	6623	6815	6552	3.591
	8 Aroclor-1262(1)	*****	*****	*****	4497	*****	4497	0.000
	(2)	*****	*****	*****	7643	*****	7643	0.000
	(3)	*****	*****	*****	10334	*****	10334	0.000
	(4)	*****	*****	*****	6240	*****	6240	0.000
	(5)	*****	*****	*****	20101	*****	20101	0.000
	9 Aroclor-1268(1)	*****	*****	*****	20211	*****	20211	0.000
	(2)	*****	*****	*****	22988	*****	22988	0.000
	(3)	*****	*****	*****	16959	*****	16959	0.000
	(4)	*****	*****	*****	8529	*****	8529	0.000
	(5)	*****	*****	*****	54649	*****	54649	0.000
M	10 Aroclor-Total	*****	*****	*****	*****	*****	*****	*****
	13 4,4'-DDT	*****	*****	*****	59530	*****	59530	0.000
	14 4,4'-DDD	*****	*****	*****	123779	*****	123779	0.000
	15 4,4'-DDE	*****	*****	*****	160030	*****	160030	0.000
$	11 4cmx	163405	164186	162254	160617	149759	160044	3.689
$	12 Decachlorobiphenyl	174419	173170	169471	166850	155711	167924	4.441

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd8a.i/061809.b/014b1401.d
Level 2: /chem/ecd8a.i/061809.b/015b1501.d
Level 3: /chem/ecd8a.i/061809.b/016b1601.d
Level 4: /chem/ecd8a.i/060109a.b/046b4601.d
Level 5: /chem/ecd8a.i/061809.b/018b1801.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	2354	2322	2239	2171	1943	2206	7.412
(2)	3013	3033	2968	2921	2719	2931	4.294
(3)	1838	1803	1751	1708	1595	1739	5.443
(4)	1076	1070	1043	1024	979	1038	3.769
(5)	1162	1111	1072	1038	970	1070	6.800
2 Aroclor-1221(1)	*****	*****	*****	639	*****	639	0.000
(2)	*****	*****	*****	408	*****	408	0.000
(3)	*****	*****	*****	1496	*****	1496	0.000
3 Aroclor-1232(1)	*****	*****	*****	1122	*****	1122	0.000
(2)	*****	*****	*****	1421	*****	1421	0.000
(3)	*****	*****	*****	848	*****	848	0.000
(4)	*****	*****	*****	466	*****	466	0.000
(5)	*****	*****	*****	481	*****	481	0.000
4 Aroclor-1242(1)	1987	1787	1698	1633	1432	1708	11.929
(2)	2309	2114	2133	2071	1921	2110	6.580
(3)	1488	1344	1282	1241	1137	1298	10.005
(4)	874	795	763	743	693	773	8.699
(5)	939	822	770	740	670	788	12.760
5 Aroclor-1248(1)	1246	1157	1192	1172	1136	1180	3.537
(2)	1568	1470	1429	1391	1295	1431	7.045
(3)	1893	1797	1762	1741	1635	1766	5.301
(4)	2119	2014	2009	2000	1931	2015	3.348
(5)	2414	2303	2295	2284	2171	2294	3.762
6 Aroclor-1254(1)	2236	2169	2093	2062	1927	2097	5.573
(2)	2413	2365	2312	2282	2175	2309	3.907
(3)	3072	3129	3135	3148	3022	3101	1.715
(4)	1650	1607	1604	1634	1588	1617	1.541
(5)	1860	1846	1817	1867	1880	1854	1.298

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
7 Aroclor-1260(1)	2897	2953	2955	2898	2707	2882	3.531
(2)	3393	3515	3573	3519	3285	3457	3.374
(3)	3105	3221	3225	3197	3045	3159	2.529
(4)	2359	2409	2408	2394	2270	2368	2.471
(5)	3607	3812	3867	3865	3701	3770	3.008
8 Aroclor-1262(1)	*****	*****	*****	2887	*****	2887	0.000
(2)	*****	*****	*****	4337	*****	4337	0.000
(3)	*****	*****	*****	3796	*****	3796	0.000
(4)	*****	*****	*****	7857	*****	7857	0.000
(5)	*****	*****	*****	5567	*****	5567	0.000
9 Aroclor-1268(1)	*****	*****	*****	8266	*****	8266	0.000
(2)	*****	*****	*****	8012	*****	8012	0.000
(3)	*****	*****	*****	6337	*****	6337	0.000
(4)	*****	*****	*****	2993	*****	2993	0.000
(5)	*****	*****	*****	19507	*****	19507	0.000
M 10 Aroclor-Total	*****	*****	*****	*****	*****	*****	*****
13 4,4'-DDT	*****	*****	*****	15331	*****	15331	0.000
14 4,4'-DDD	*****	*****	*****	38559	*****	38559	0.000
15 4,4'-DDE	*****	*****	*****	58538	*****	58538	0.000
$ 11 4cmx	55520	58797	59142	59406	55559	57685	3.415
$ 12 Decachlorobiphenyl	58551	58238	56883	56068	51876	56323	4.763

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1059

Lab File ID: 002F0201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6330.009	0.01	9.8	15.0
(2)	7224.724	7760.134	0.01	7.4	15.0
(3)	2909.461	3163.944	0.01	8.7	15.0
(4)	2752.769	2944.428	0.01	7.0	15.0
(5)	3628.674	3972.822	0.01	9.5	15.0
Aroclor-1260	7128.341	7537.503	0.01	5.7	15.0
(2)	10088.517	10760.077	0.01	6.6	15.0
(3)	11482.117	12267.009	0.01	6.8	15.0
(4)	13395.429	14219.270	0.01	6.2	15.0
(5)	6551.697	6850.457	0.01	4.6	15.0
4cmx	160044.04	157059.35	0.01	-1.9	15.0
Decachlorobiphenyl	167924.32	162129.64	0.01	-3.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1059

Lab File ID: 002B0201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2205.647	0.01	-0.0	15.0
(2)	2930.861	2901.199	0.01	-1.0	15.0
(3)	1739.079	1721.686	0.01	-1.0	15.0
(4)	1038.126	1037.560	0.01	-0.0	15.0
(5)	1070.250	1054.433	0.01	-1.5	15.0
Aroclor-1260	2882.050	2835.211	0.01	-1.6	15.0
(2)	3456.730	3472.058	0.01	0.4	15.0
(3)	3158.535	3145.666	0.01	-0.4	15.0
(4)	2368.081	2347.820	0.01	-0.8	15.0
(5)	3770.327	3768.651	0.01	-0.0	15.0
4cmx	57685.085	51468.730	0.01	-10.8	15.0
Decachlorobiphenyl	56323.158	49750.070	0.01	-11.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1835

Lab File ID: 033F3301 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6222.594	0.01	7.9	15.0
(2)	7224.724	7909.896	0.01	9.5	15.0
(3)	2909.461	3197.458	0.01	9.9	15.0
(4)	2752.769	2899.955	0.01	5.3	15.0
(5)	3628.674	3898.569	0.01	7.4	15.0
Aroclor-1260	7128.341	7627.002	0.01	7.0	15.0
(2)	10088.517	10853.926	0.01	7.6	15.0
(3)	11482.117	12192.523	0.01	6.2	15.0
(4)	13395.429	14602.143	0.01	9.0	15.0
(5)	6551.697	7015.943	0.01	7.1	15.0
4cmx	160044.04	153639.80	0.01	-4.0	15.0
Decachlorobiphenyl	167924.32	165542.67	0.01	-1.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1835

Lab File ID: 033B3301 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2198.374	0.01	-0.3	15.0
(2)	2930.861	3024.556	0.01	3.2	15.0
(3)	1739.079	1743.998	0.01	0.3	15.0
(4)	1038.126	1055.236	0.01	1.6	15.0
(5)	1070.250	1063.993	0.01	-0.6	15.0
Aroclor-1260	2882.050	2880.731	0.01	-0.0	15.0
(2)	3456.730	3559.181	0.01	3.0	15.0
(3)	3158.535	3207.590	0.01	1.6	15.0
(4)	2368.081	2405.333	0.01	1.6	15.0
(5)	3770.327	3902.843	0.01	3.5	15.0
4cmx	57685.085	50702.800	0.01	-12.1	15.0
Decachlorobiphenyl	56323.158	51373.510	0.01	-8.8	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 2136

Lab File ID: 045F4501 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6397.692	0.01	10.9	15.0
(2)	7224.724	8267.235	0.01	14.4	15.0
(3)	2909.461	3204.664	0.01	10.1	15.0
(4)	2752.769	3075.946	0.01	11.7	15.0
(5)	3628.674	4141.055	0.01	14.1	15.0
Aroclor-1260	7128.341	7802.732	0.01	9.5	15.0
(2)	10088.517	11036.924	0.01	9.4	15.0
(3)	11482.117	12297.330	0.01	7.1	15.0
(4)	13395.429	14784.108	0.01	10.4	15.0
(5)	6551.697	7141.663	0.01	9.0	15.0
4cmx	160044.04	157134.80	0.01	-1.8	15.0
Decachlorobiphenyl	167924.32	170906.25	0.01	1.8	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 2136

Lab File ID: 045B4501 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2262.512	0.01	2.6	15.0
(2)	2930.861	3109.633	0.01	6.1	15.0
(3)	1739.079	1788.773	0.01	2.8	15.0
(4)	1038.126	1083.325	0.01	4.4	15.0
(5)	1070.250	1090.367	0.01	1.9	15.0
Aroclor-1260	2882.050	2942.407	0.01	2.1	15.0
(2)	3456.730	3633.348	0.01	5.1	15.0
(3)	3158.535	3275.582	0.01	3.7	15.0
(4)	2368.081	2468.276	0.01	4.2	15.0
(5)	3770.327	4018.300	0.01	6.6	15.0
4cmx	57685.085	52113.580	0.01	-9.6	15.0
Decachlorobiphenyl	56323.158	52808.520	0.01	-6.2	15.0

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/002f0201.d
Lab Smp Id: WAR090629-04601 Client Smp ID: AR166001
Inj Date : 30-JUN-2009 10:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04601
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	15705935	100.000	98.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	16212964	100.000	96.5	80.00- 120.00	100.00(M)
1 Aroclor-1016					CAS #: 12674-11-2		
2.762	2.762	0.000	6330009	1000.00	1100	80.00- 120.00	100.00
3.112	3.112	0.000	7760134	1000.00	1070	102.59- 142.59	122.59
3.256	3.256	0.000	3163944	1000.00	1090	29.98- 69.98	49.98
3.365	3.365	0.000	2944428	1000.00	1070	26.52- 66.52	46.52
3.510	3.510	0.000	3972822	1000.00	1090	42.76- 82.76	62.76
Average of Peak Amounts =					1.08e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.383	4.383	0.000	7537503	1000.00	1060	80.00- 120.00	100.00(M)
4.579	4.579	0.000	10760077	1000.00	1070	122.75- 162.75	142.75
4.774	4.774	0.000	12267009	1000.00	1070	142.75- 182.75	162.75
5.242	5.242	0.000	14219270	1000.00	1060	168.65- 208.65	188.65
5.437	5.437	0.000	6850457	1000.00	1040	70.88- 110.88	90.88
Average of Peak Amounts =					1.06e+03		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/002f0201.d
Date : 30-JUN-2009 10:59
Client ID: AR166001
Sample Info: IWAR090629-0401
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

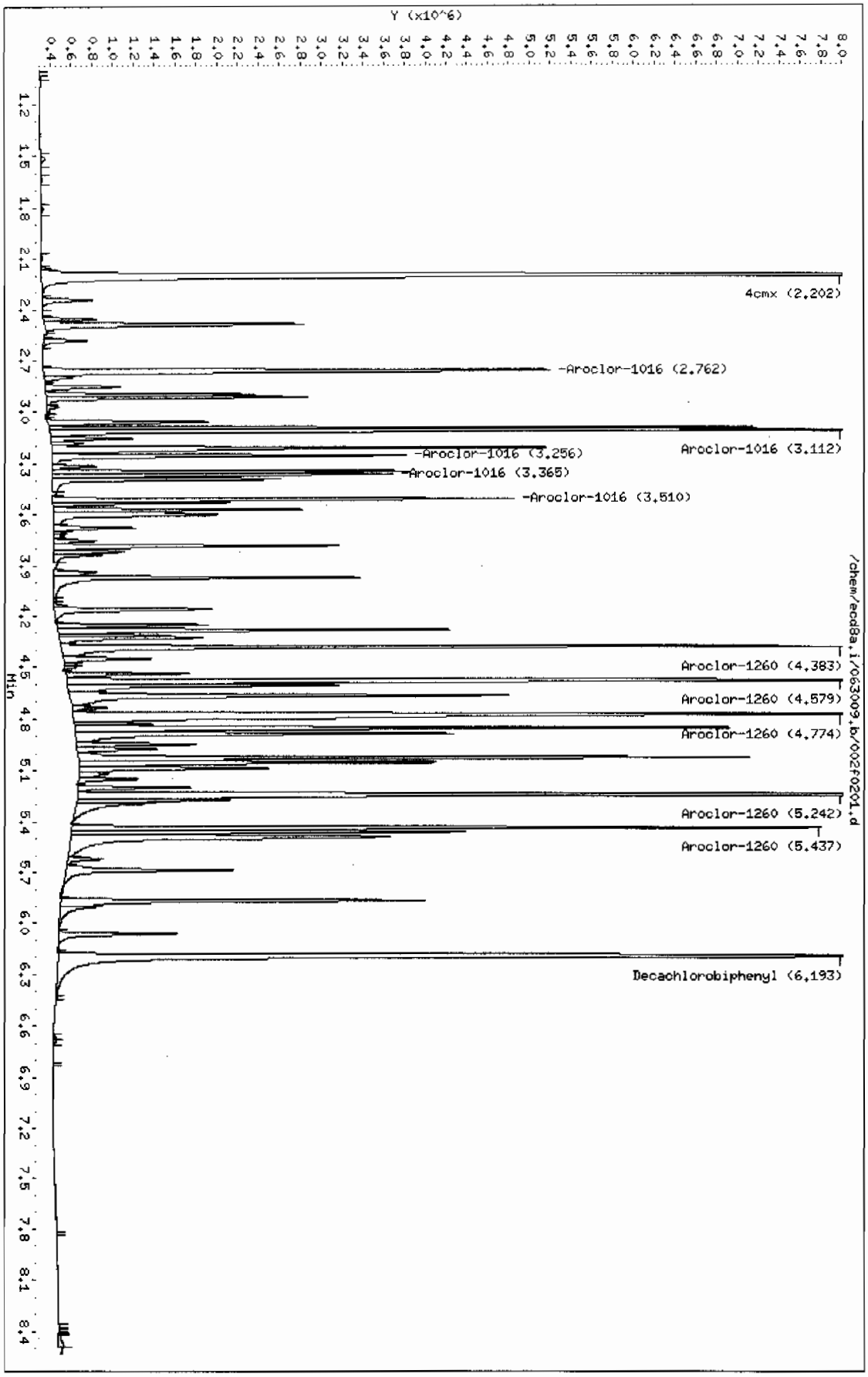

Page 1

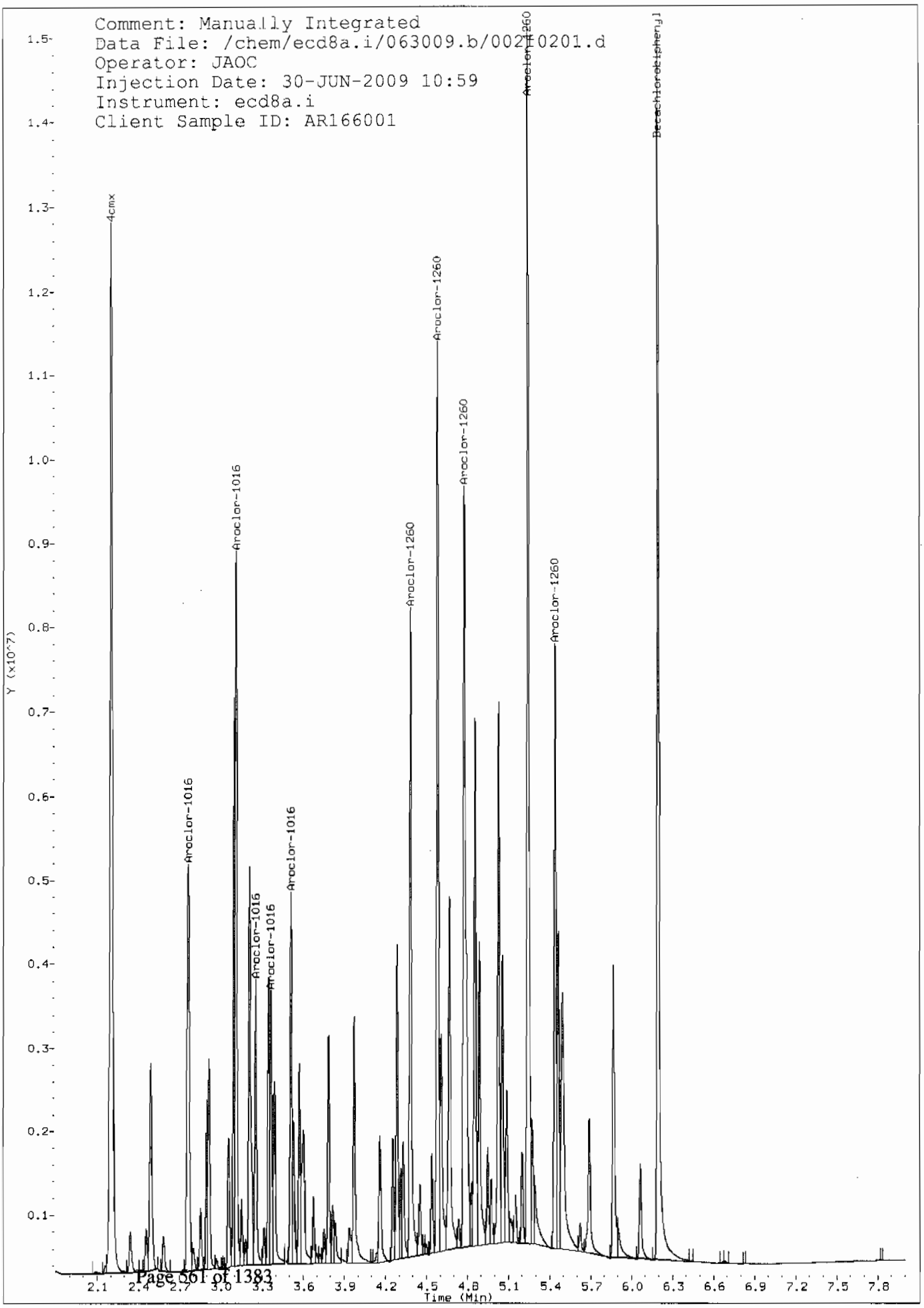
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Data File: /chem/ecd8a.i/063009.b/00210201.d
Operator: JAOC
Injection Date: 30-JUN-2009 10:59
Instrument: ecd8a.i
Client Sample ID: AR166001
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

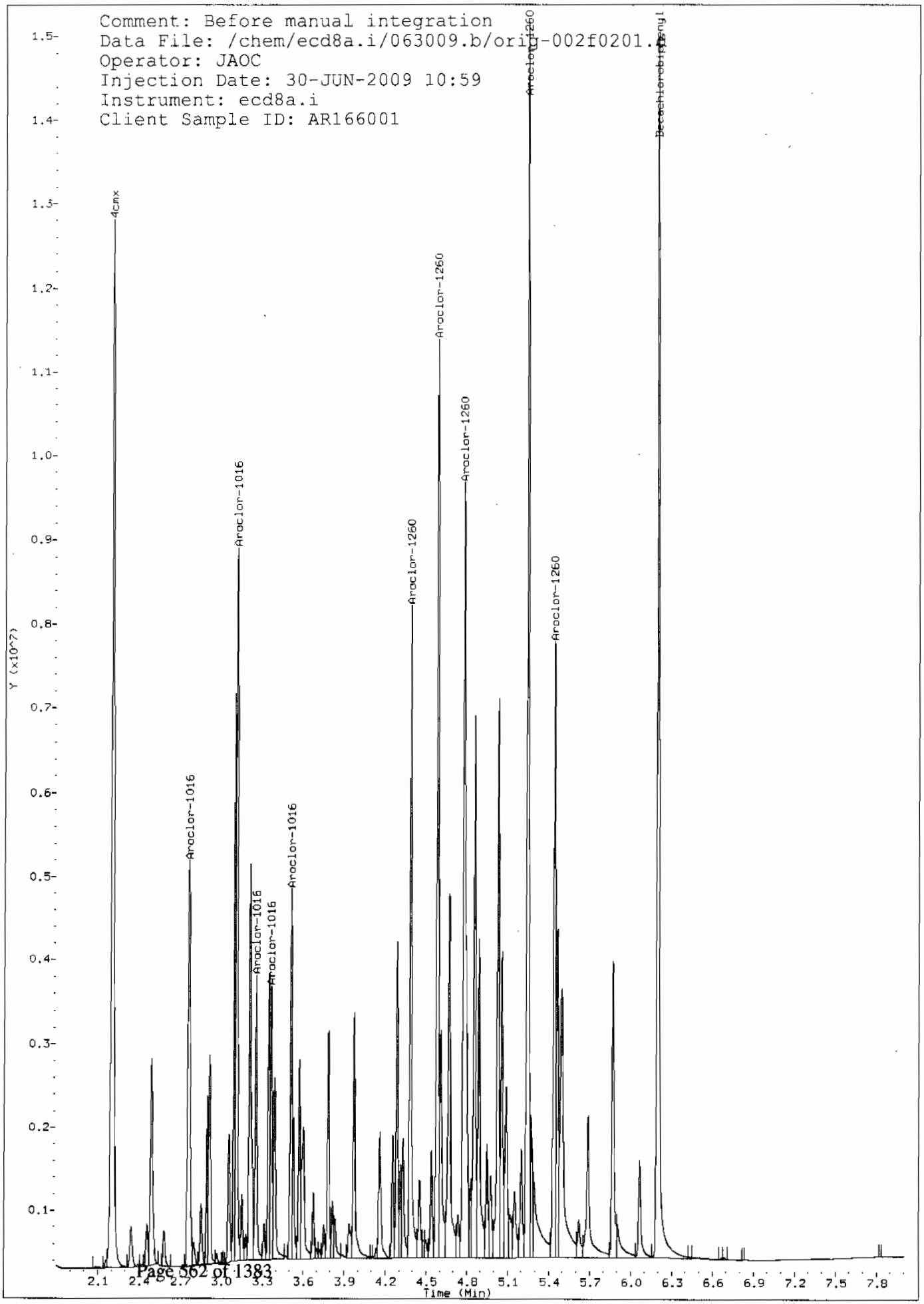
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Operator: JAOC
Injection Date: 30-JUN-2009 10:59
Instrument: ecd8a.i
Client Sample ID: AR166001
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/002b0201.d
Lab Smp Id: WAR090629-04601 Client Smp ID: AR166001
Inj Date : 30-JUN-2009 10:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04601
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5146873	100.000	89.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	4975007	100.000	88.3	80.00- 120.00	100.00
1 Arcclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	2205647	1000.00	1000	80.00- 120.00	100.00
3.575	3.575	0.000	2901198	1000.00	990	111.54- 151.54	131.54
3.675	3.675	0.000	1721686	1000.00	990	58.06- 98.06	78.06
3.752	3.752	0.000	1037559	1000.00	999	27.04- 67.04	47.04
3.826	3.826	0.000	1054433	1000.00	985	27.81- 67.81	47.81
Average of Peak Amounts =					993		
7 Aroclor-1260					CAS #: 11096-82-5		
4.936	4.936	0.000	2835210	1000.00	984	80.00- 120.00	100.00
5.083	5.083	0.000	3472058	1000.00	1000	102.46- 142.46	122.46
5.199	5.199	0.000	3145666	1000.00	996	90.95- 130.95	110.95
5.608	5.608	0.000	2347819	1000.00	991	62.81- 102.81	82.81
6.041	6.041	0.000	3768651	1000.00	1000	112.92- 152.92	132.92
Average of Peak Amounts =					995		

Data File: /chem/ecd8a.i/063009.b/002b0201.d
Date : 30-JUN-2009 10:59
Client ID: AR166001
Sample Info: IWAR090629-04601
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

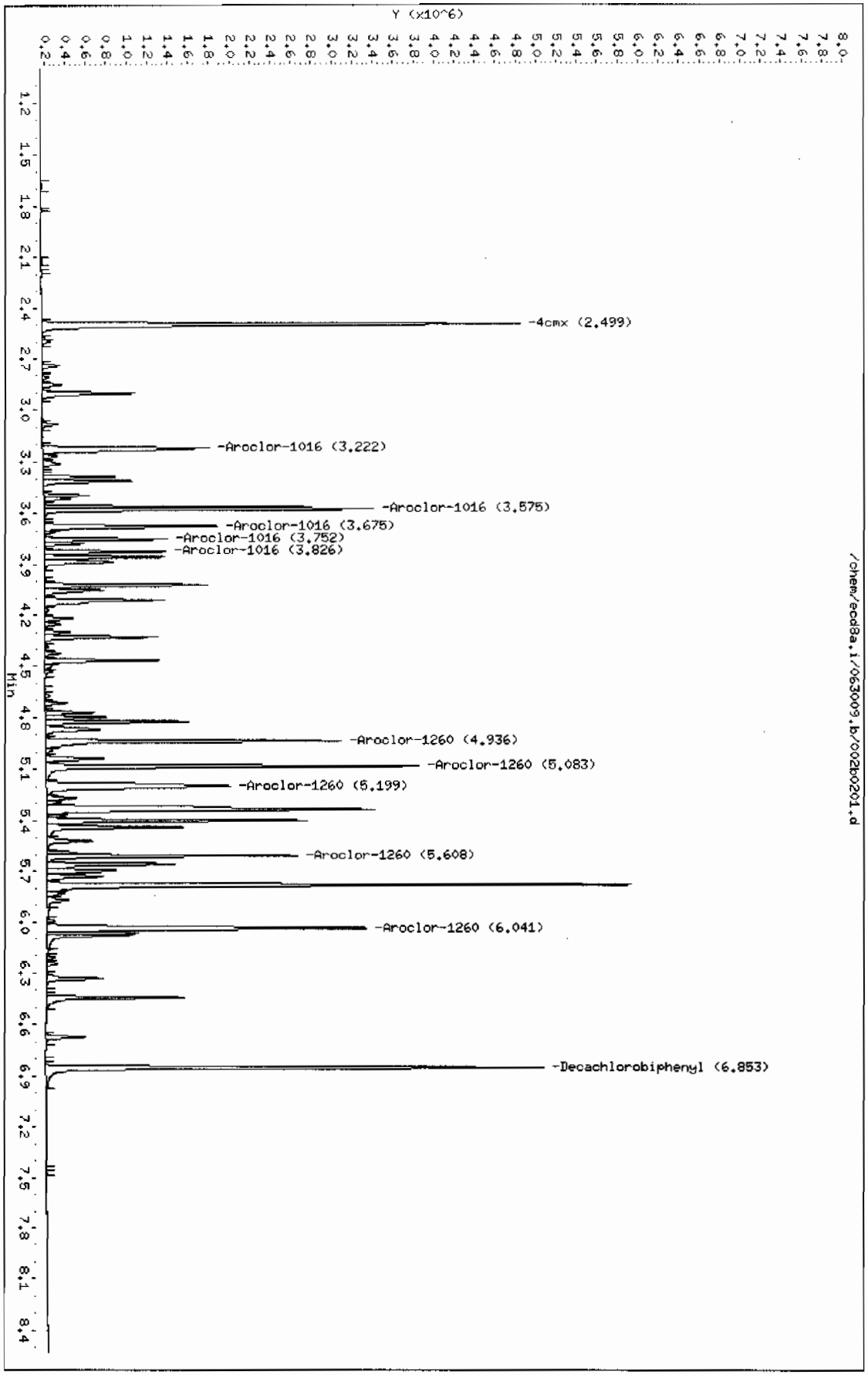

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/003f0301.d
Lab Smp Id: WAR090302-54 Client Smp ID: AR125401
Inj Date : 30-JUN-2009 11:11
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090302-54
Misc Info : |1254
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	16776449	100.000	105	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	17996048	100.000	107	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.786	3.786	0.000	4958151	1000.00	1030	80.00- 120.00	100.00
3.972	3.972	0.000	6507071	1000.00	1040	111.24- 151.24	131.24
4.168	4.168	0.000	4906754	1000.00	1030	78.96- 118.96	98.96
4.254	4.254	0.000	8062990	1000.00	1020	142.62- 182.62	162.62
4.581	4.581	0.000	7261142	1000.00	1070	126.45- 166.45	146.45

Average of Peak Amounts = 1.04e+03

Data File: /chem/ecd8a.i/063009.b/003f0301.d

Date : 30-JUN-2009 11:11

Client ID: AR125401

Sample Info: IWAR090302-54

Column phase: CLP1

Page 1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

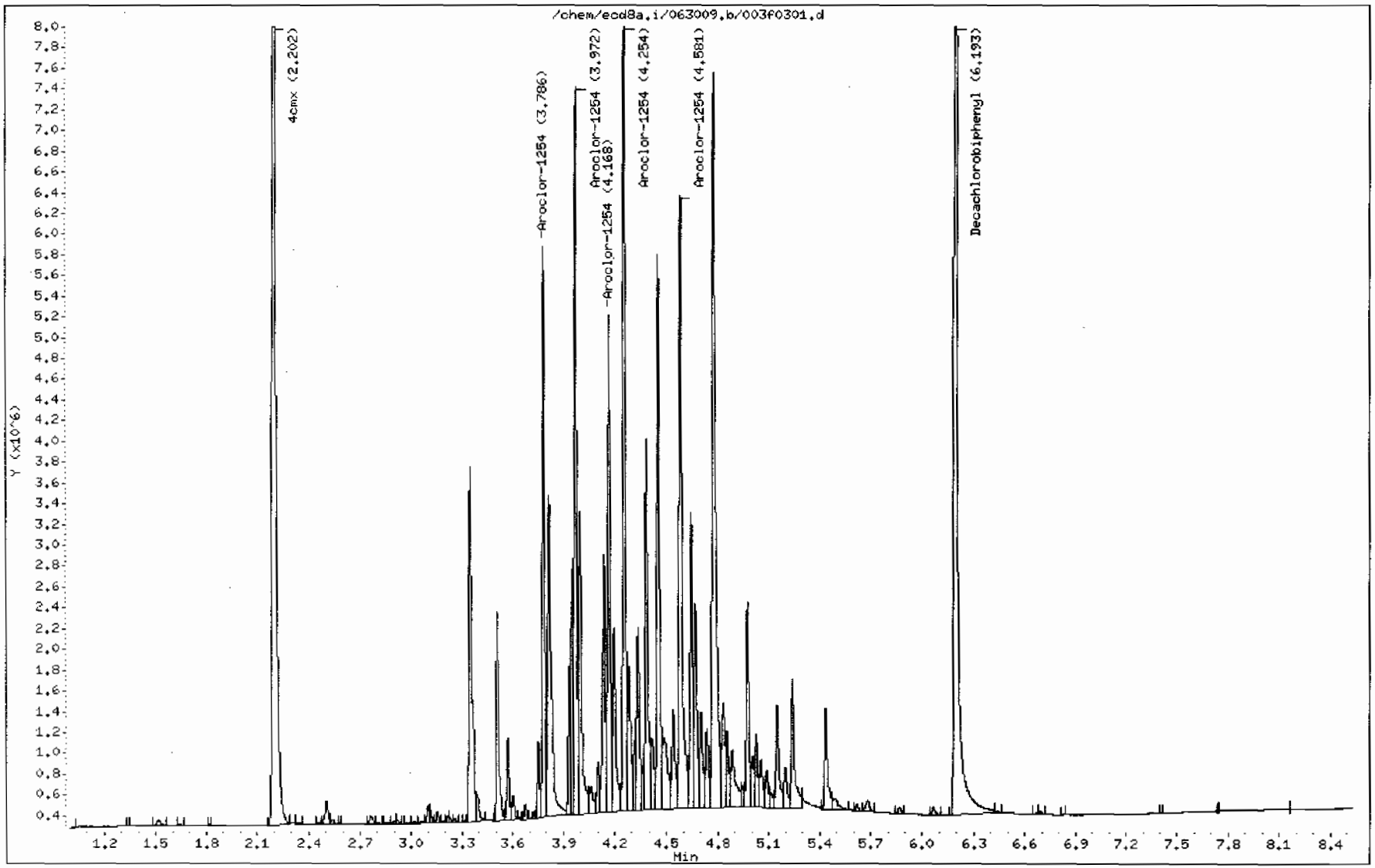

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/003b0301.d
Lab Smp Id: WAR090302-54 Client Smp ID: AR125401
Inj Date : 30-JUN-2009 11:11
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090302-54
Misc Info : |1254
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5544124	100.000	96.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5446892	100.000	96.7	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.331	4.331	0.000	2080742	1000.00	992	80.00- 120.00	100.00
4.468	4.468	0.000	2261889	1000.00	979	88.71- 128.71	108.71
4.798	4.798	0.000	3044551	1000.00	982	126.32- 166.32	146.32
5.084	5.084	0.000	1698880	1000.00	1050	61.65- 101.65	81.65
5.206	5.206	0.000	1888934	1000.00	1020	70.78- 110.78	90.78
Average of Peak Amounts =					1e+03		

Data File: /chem/ecd8a.i/063009.b/003b0301.d

Page 1

Date : 30-JUN-2009 11:11

Client ID: AR125401

Instrument: ecd8a.i

Sample Info: IWAR090302-54

Operator: JAOC

Column phase: CLP2

Column diameter: 0.25

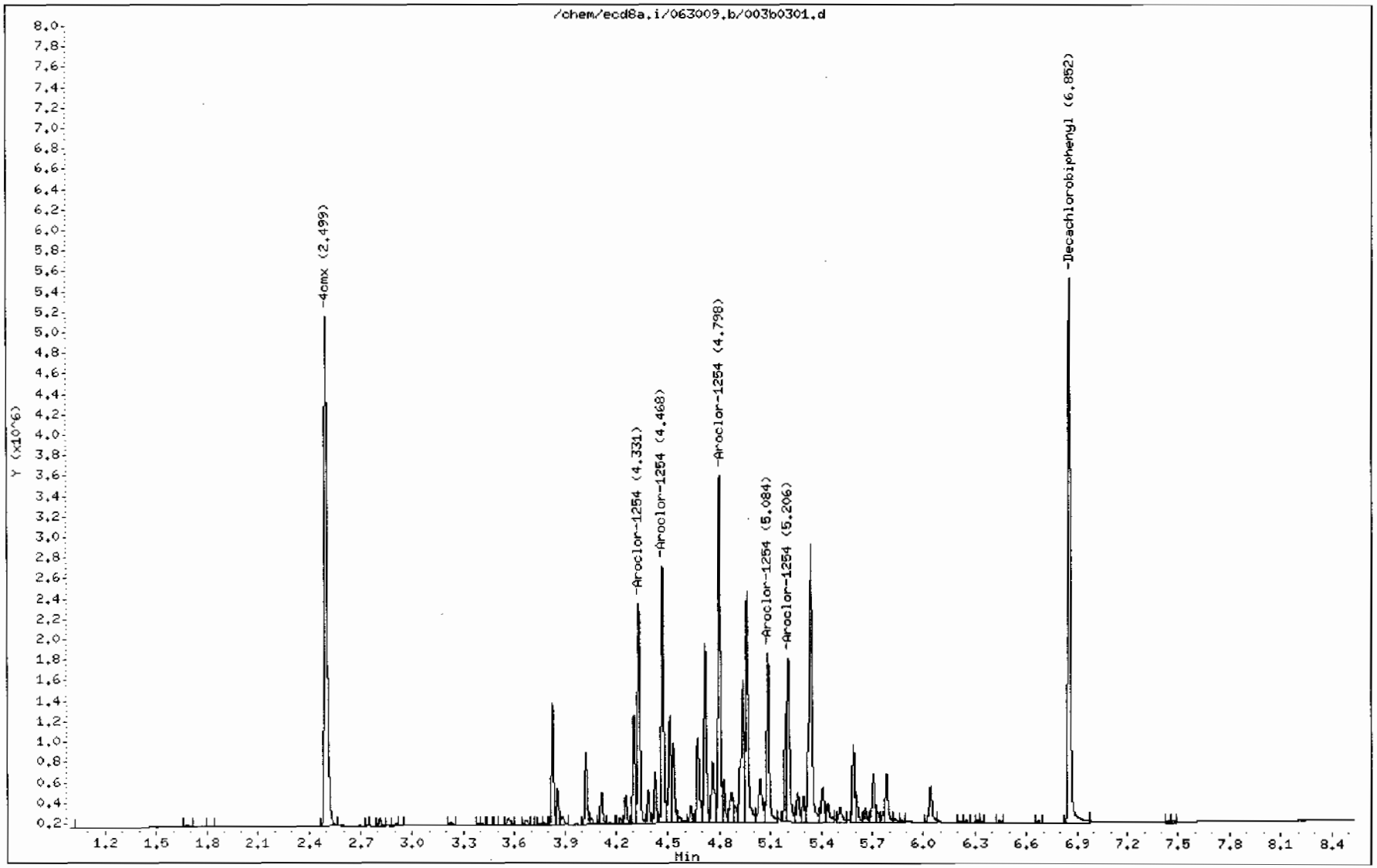

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/004f0401.d
Lab Smp Id: WAR090519-42 Client Smp ID: AR124201
Inj Date : 30-JUN-2009 11:24
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090519-42
Misc Info : |1242
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.203	2.202	0.001	17183284	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	17244477	100.000	103	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.762	2.762	0.000	4458179	1000.00	1100	80.00- 120.00	100.00(M)
3.113	3.113	0.000	5547736	1000.00	1120	104.44- 144.44	124.44
3.257	3.257	0.000	2191510	1000.00	1100	29.16- 69.16	49.16
3.349	3.349	0.000	1903092	1000.00	1070	22.69- 62.69	42.69
3.511	3.511	0.000	2802433	1000.00	1090	42.86- 82.86	62.86

Average of Peak Amounts = 1.1e+03

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/004f0401.d

Date : 30-JUN-2009 11:24

Client ID: AR124201

Sample Info: IWAR090519-42

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

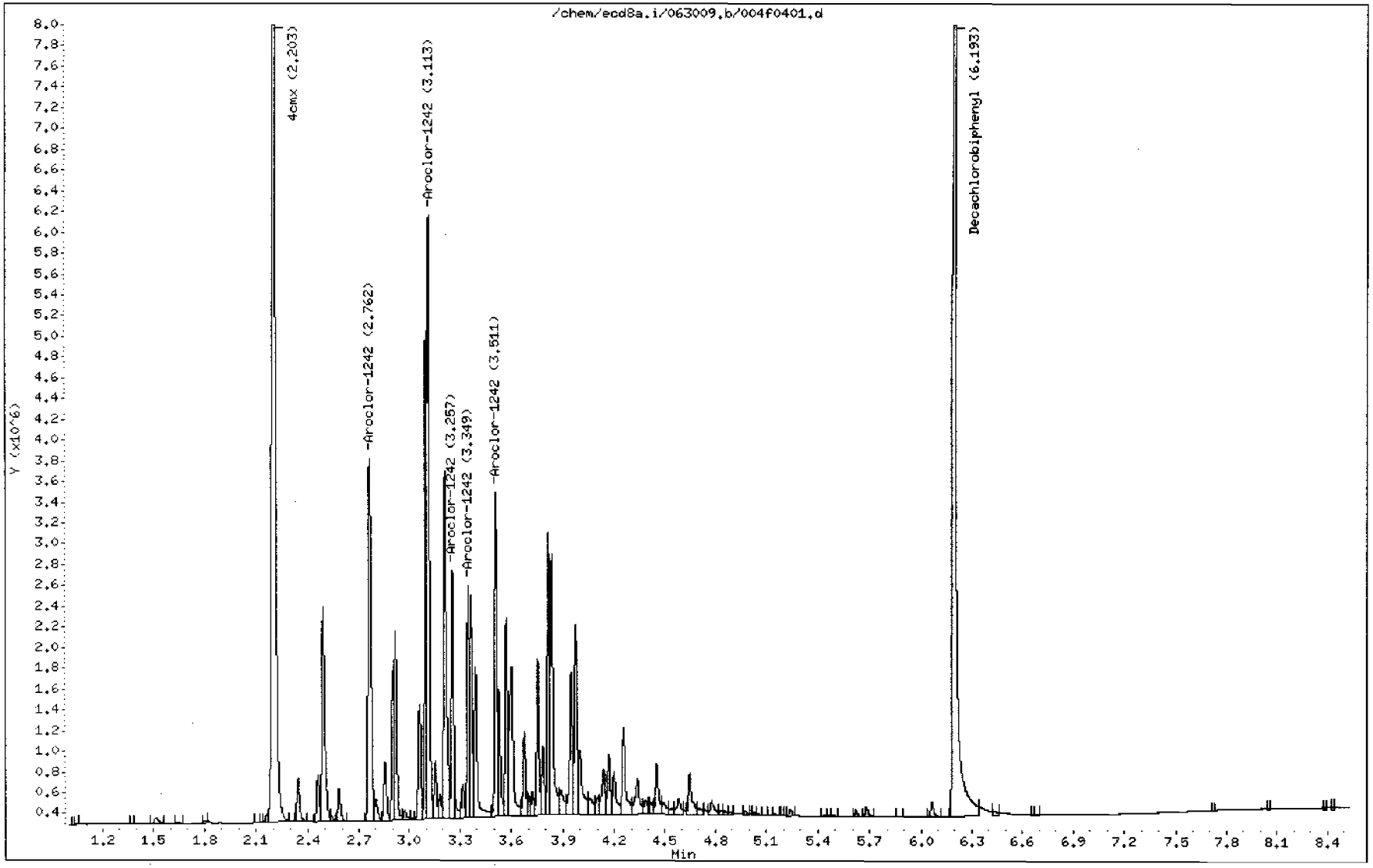

Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/004f0401.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:24
Instrument: ecd8a.i
Client Sample ID: AR124201

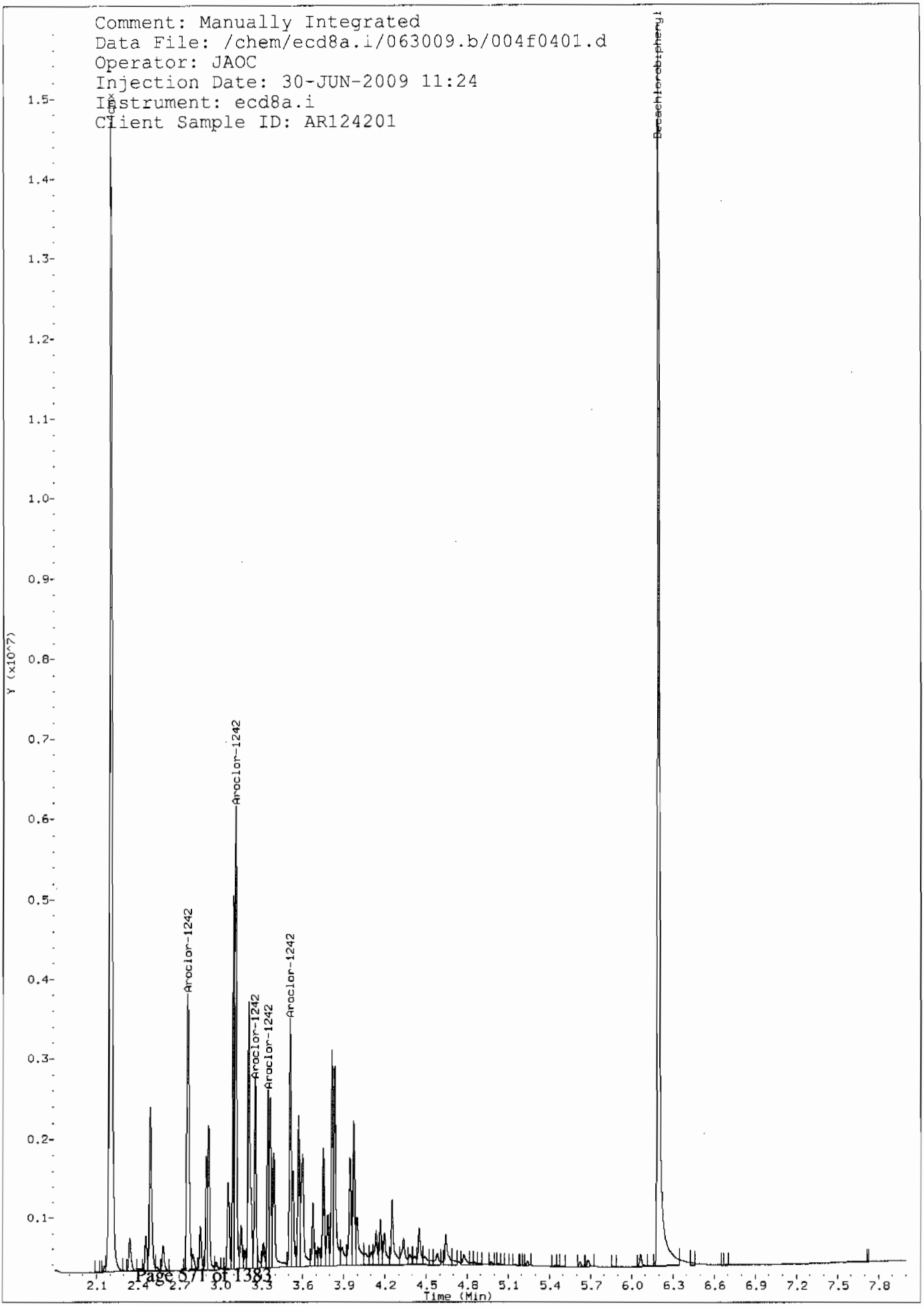

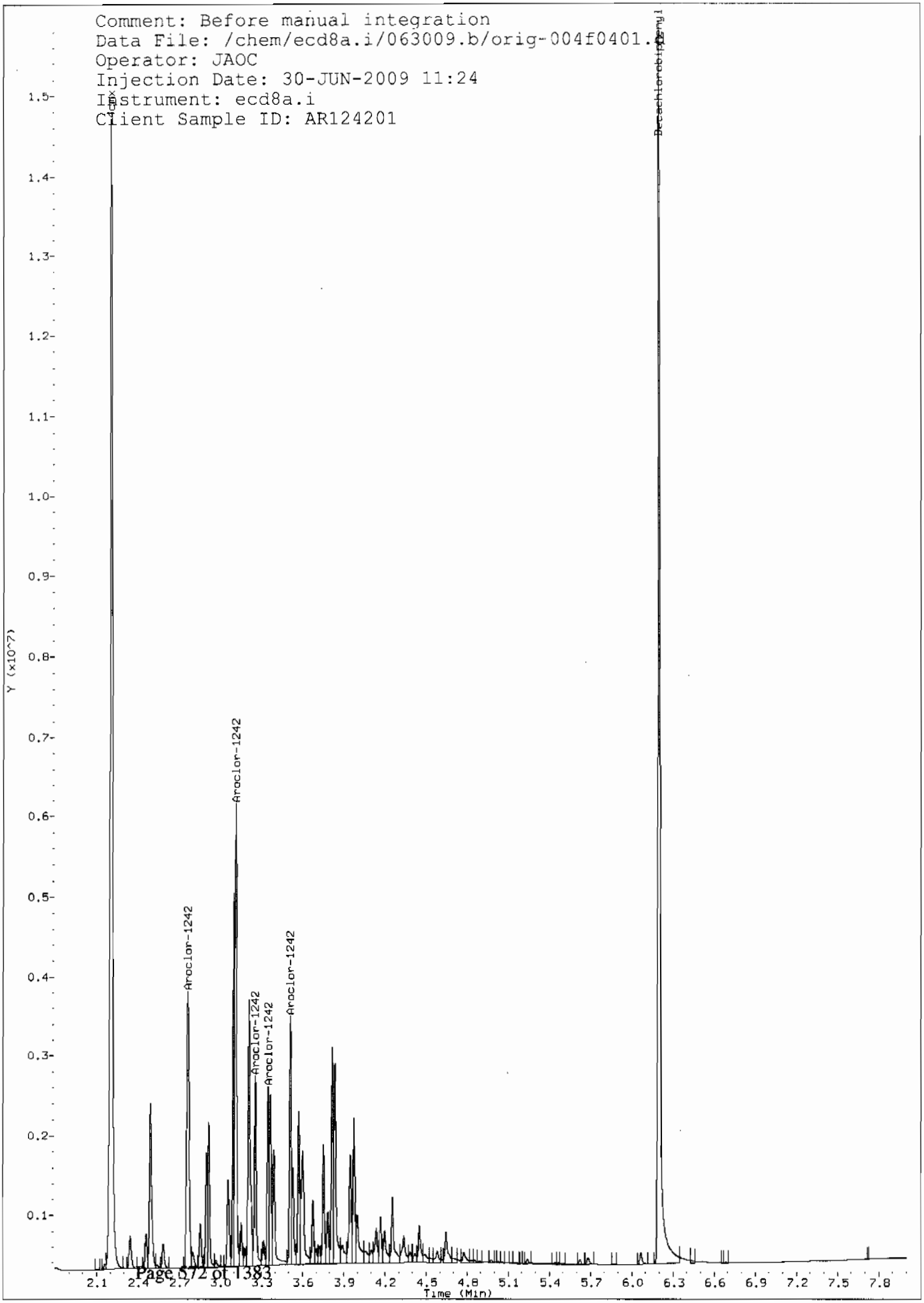
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-004f0401.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:24
Instrument: ecd8a.i
Client Sample ID: AR124201
Decachlorobiphenyl
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/004b0401.d
Lab Smp Id: WAR090519-42 Client Smp ID: AR124201
Inj Date : 30-JUN-2009 11:24
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090519-42
Misc Info : |1242
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5701783	100.000	98.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	5284675	100.000	93.8	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
3.223	3.223	0.000	1548150	1000.00	907	80.00- 120.00	100.00
3.576	3.576	0.000	1999336	1000.00	948	109.14- 149.14	129.14
3.677	3.677	0.000	1202620	1000.00	926	57.68- 97.68	77.68
3.752	3.752	0.000	731324	1000.00	945	27.24- 67.24	47.24
3.827	3.827	0.000	689725	1000.00	875	24.55- 64.55	44.55
Average of Peak Amounts =					920		

Data File: /chem/ecd8a.i/063009.b/004b0401.d

Date : 30-JUN-2009 11:24

Client ID: AR124201

Sample Info: IWAR090519-42

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

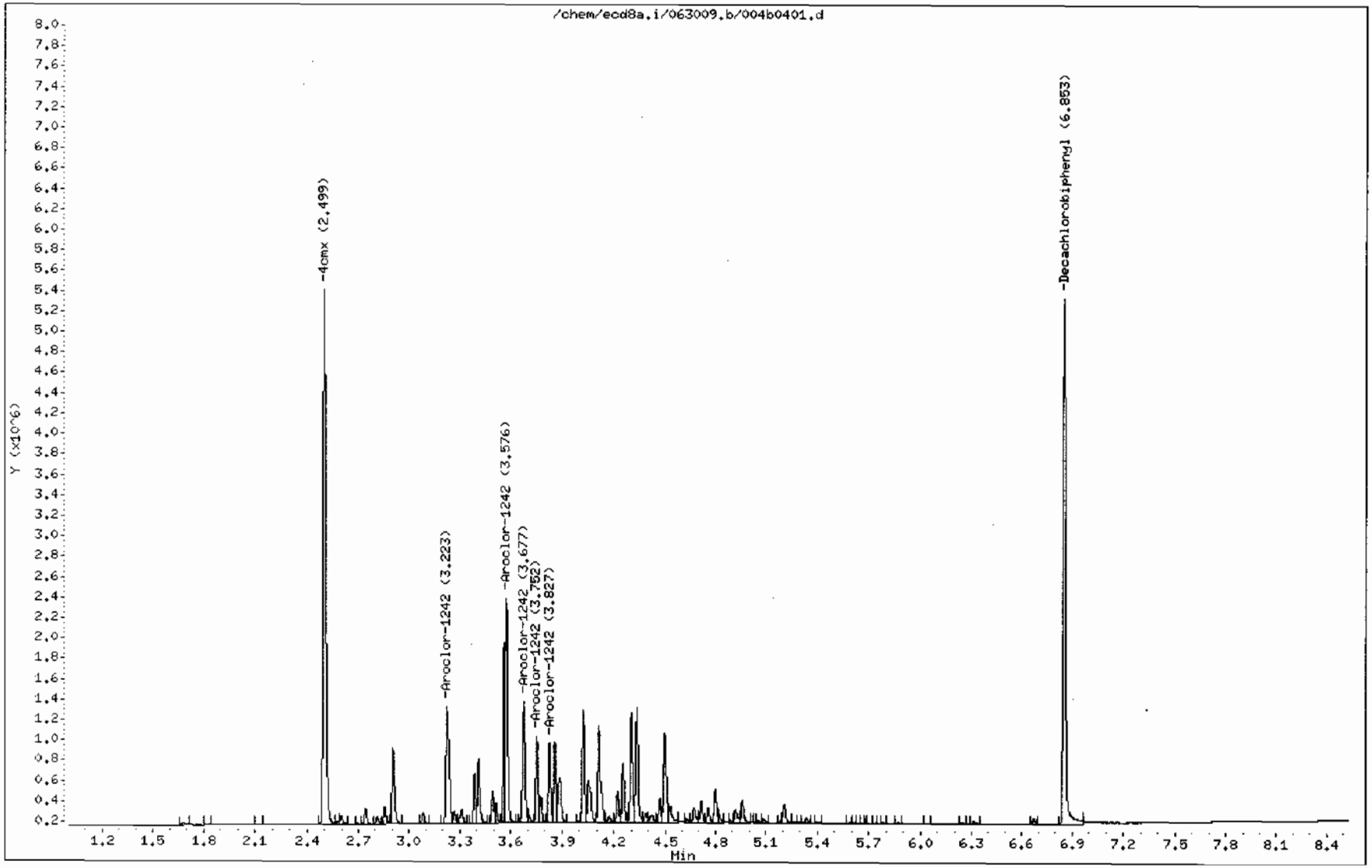

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/005f0501.d
Lab Smp Id: WAR090521-48 Client Smp ID: AR124801
Inj Date : 30-JUN-2009 11:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090521-48
Misc Info : |1248
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	18145027	100.000	113	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.192	6.193	-0.001	18386391	100.000	109	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.112	3.112	0.000	3486586	1000.00	1120	80.00- 120.00	100.00(M)
3.348	3.348	0.000	4009703	1000.00	1090	95.00- 135.00	115.00
3.511	3.511	0.000	5160786	1000.00	1090	128.02- 168.02	148.02
3.975	3.975	0.000	4377940	1000.00	1060	105.57- 145.57	125.57
4.255	4.255	0.000	3273014	1000.00	1030	73.87- 113.87	93.87

Average of Peak Amounts = 1.08e+03

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/005f0501.d
Date : 30-JUN-2009 11:36
Client ID: AR124801
Sample Info: !WAR090521-48

Column phase: CLP1

Instrument: ecd8a.i

Operator: JADC
Column diameter: 0.25

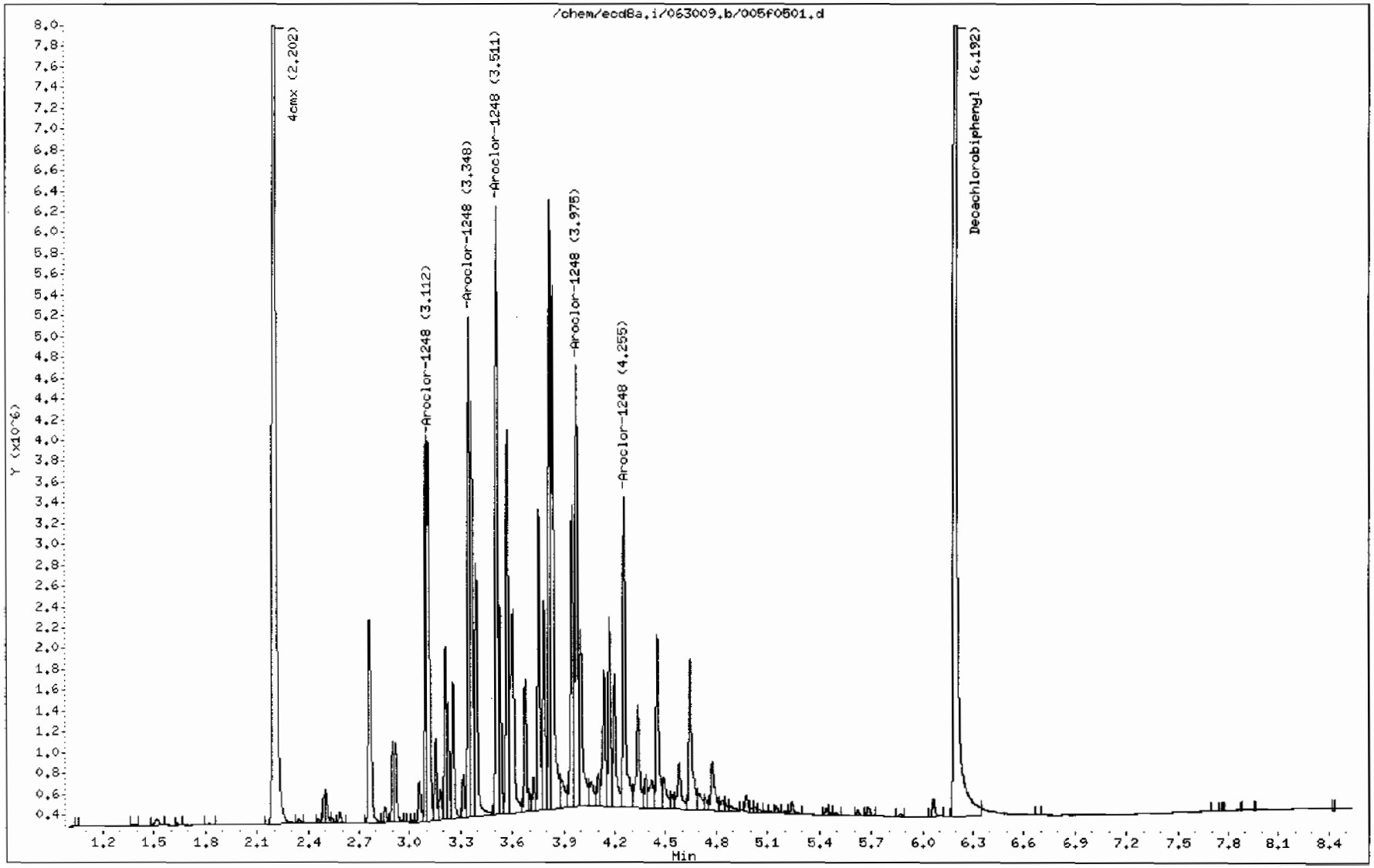

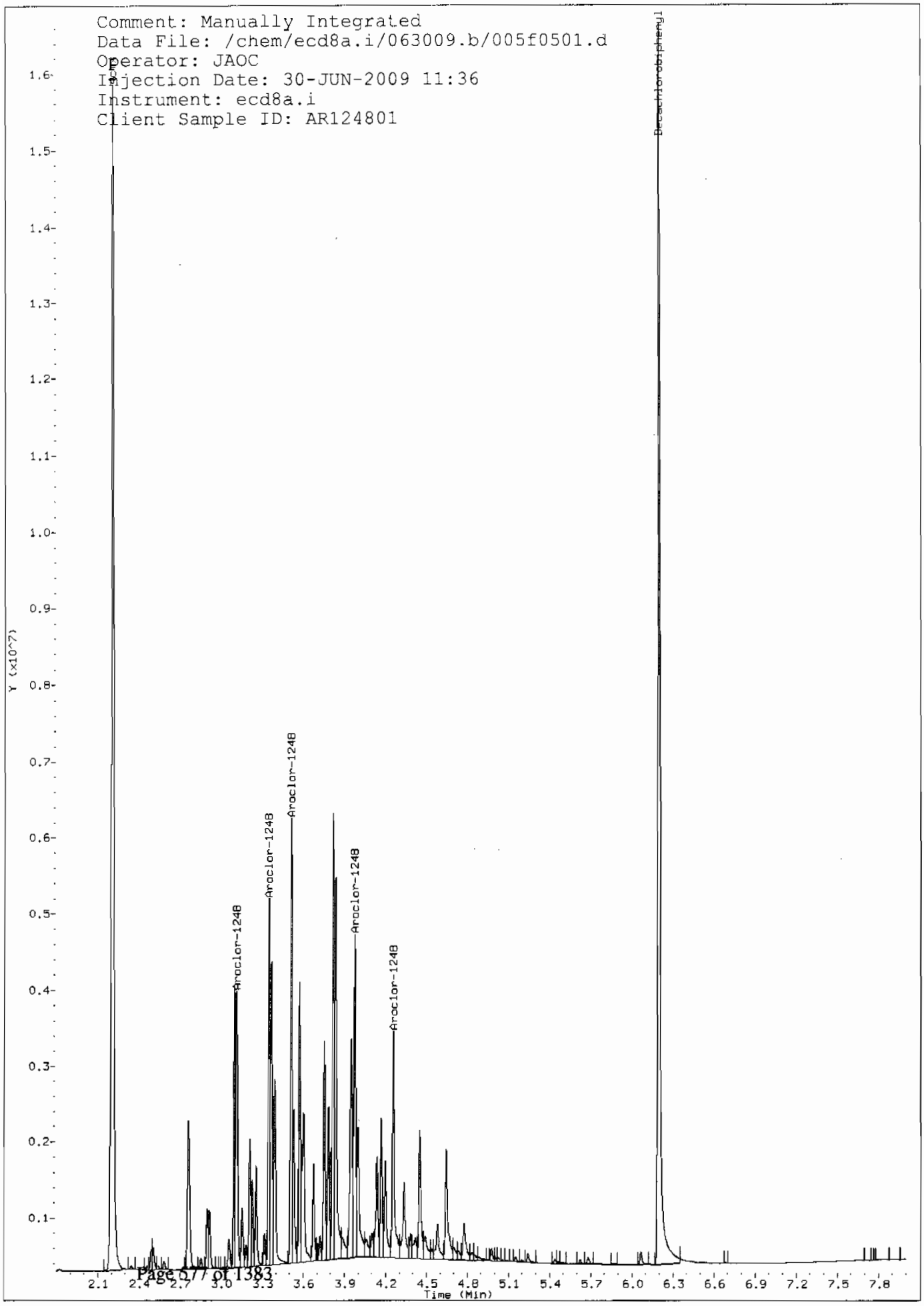
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/005f0501.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:36
Instrument: ecd8a.i
Client Sample ID: AR124801
Decachlorobiphenyl
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Y (x10^7)
Time (Min)

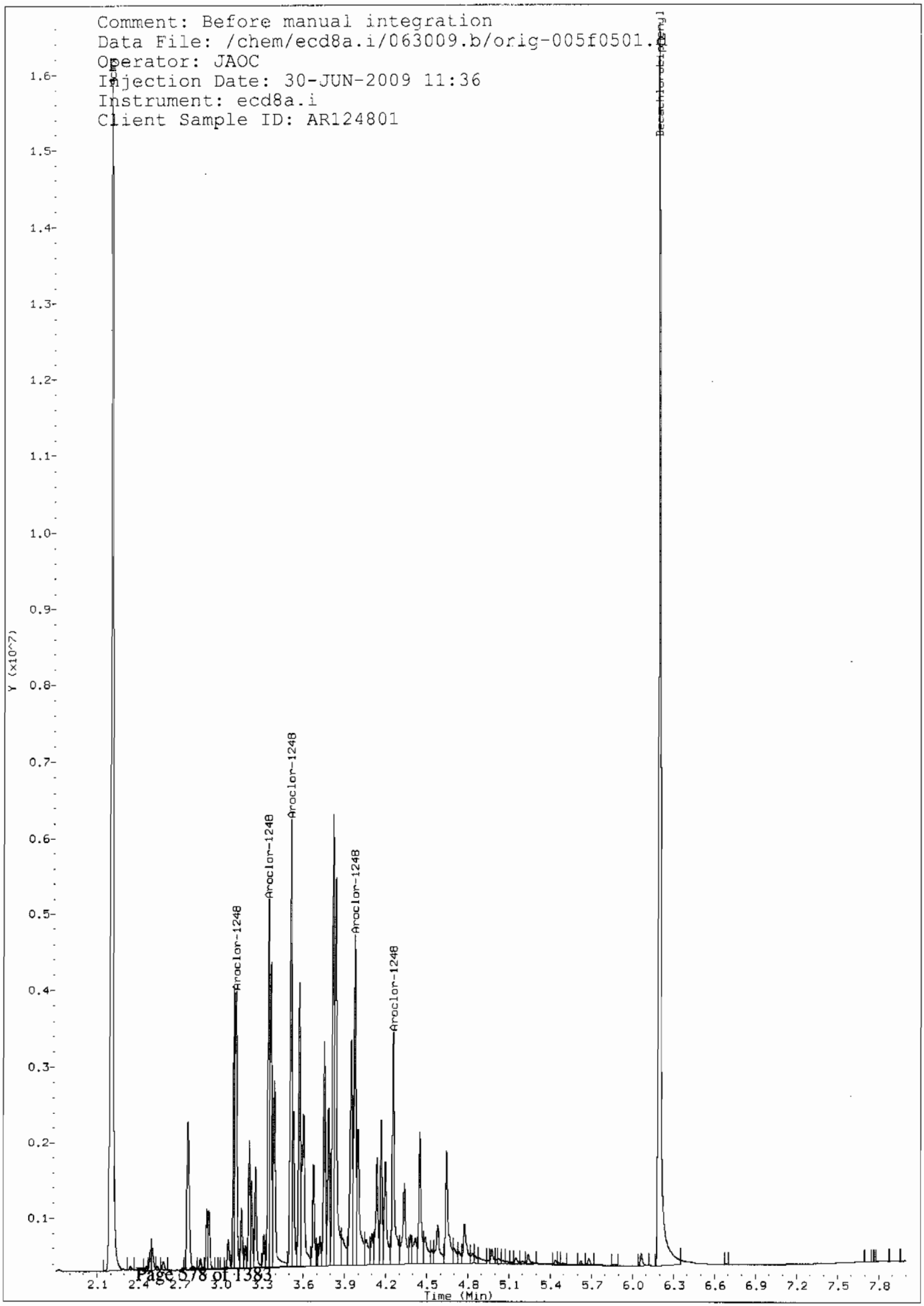
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-005f0501.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:36
Instrument: ecd8a.i
Client Sample ID: AR124801
Decachlorodiphenyl
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/005b0501.d
Lab Smp Id: WAR090521-48 Client Smp ID: AR124801
Inj Date : 30-JUN-2009 11:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090521-48
Misc Info : |1248
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	6000575	100.000	104	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5603679	100.000	99.5	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.575	3.575	0.000	1178184	1000.00	998	80.00- 120.00	100.00
3.826	3.826	0.000	1472761	1000.00	1030	105.00- 145.00	125.00
4.023	4.023	0.000	1847626	1000.00	1050	136.82- 176.82	156.82
4.301	4.301	0.000	2075080	1000.00	1030	156.13- 196.13	176.13
4.333	4.333	0.000	2380793	1000.00	1040	182.07- 222.07	202.07

Average of Peak Amounts = 1.03e+03

Data File: /chem/ecd8a.i/063009.b/005b0501.d
Date : 30-JUN-2009 11:36
Client ID: AR124801
Sample Info: IWAR090521-48

Column phase: CLP2

Instrument: ecd8a.i

Operator: JADC
Column diameter: 0.25

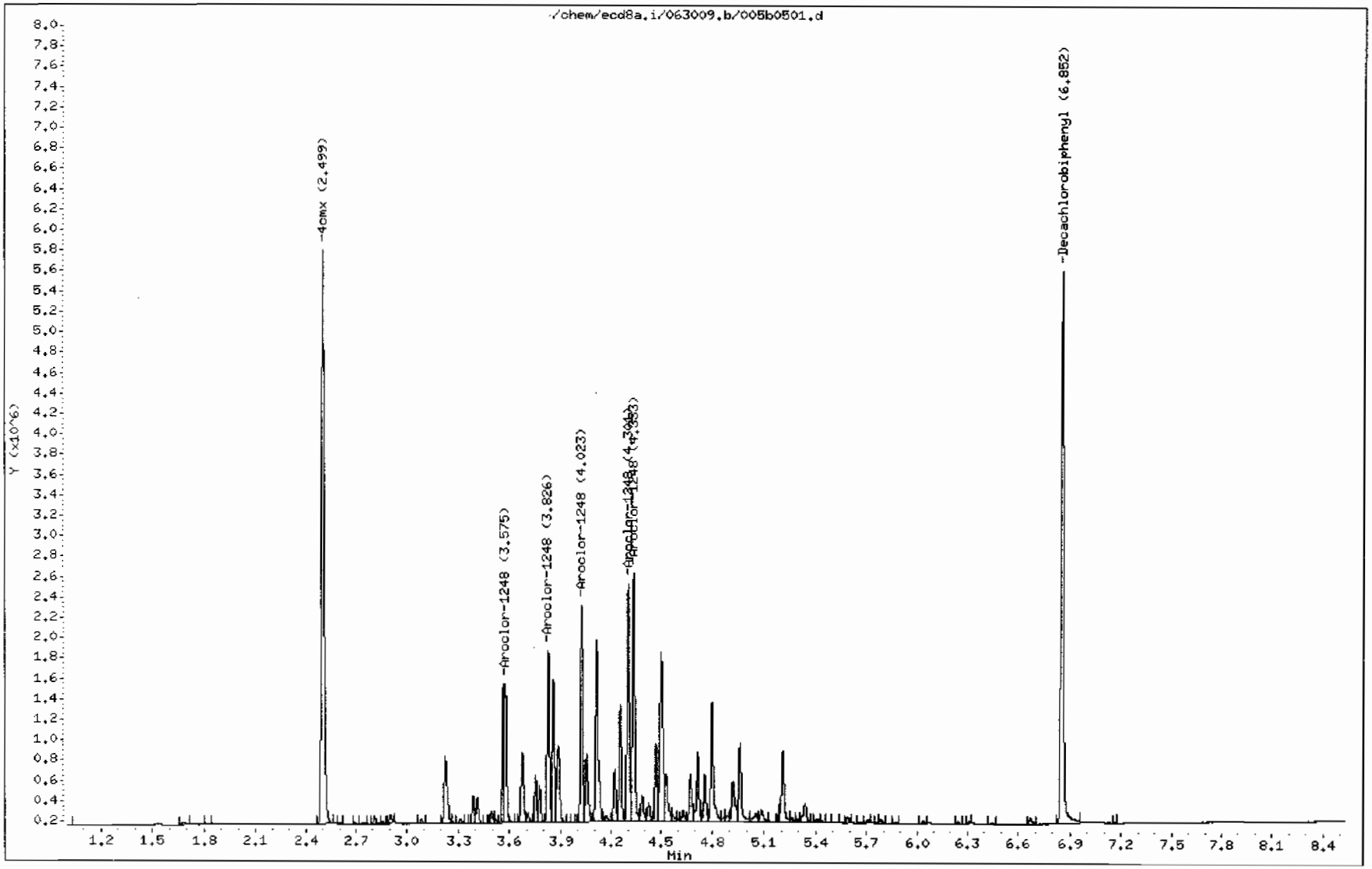

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/006f0601.d
Lab Smp Id: WAR090618-32 Client Smp ID: AR123201
Inj Date : 30-JUN-2009 11:48
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-32
Misc Info : |1232
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.203	2.202	0.001	16957655	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	18604315	100.000	111	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.762	2.762	0.000	2793110	1000.00	1100	80.00- 120.00	100.00
3.113	3.113	0.000	3336296	1000.00	1030	99.45- 139.45	119.45
3.210	3.210	0.000	2216909	1000.00	1040	59.37- 99.37	79.37
3.511	3.511	0.000	1562795	1000.00	1010	35.95- 75.95	55.95
3.817	3.817	0.000	1289064	1000.00	979	26.15- 66.15	46.15

Average of Peak Amounts = 1.03e+03

Data File: /chem/ecd8a.i/063009.b/006f0601.d

Date : 30-JUN-2009 11:48

Client ID: AR123201

Sample Info: IWAR090618-32

Column phase: CLP1

Page 1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

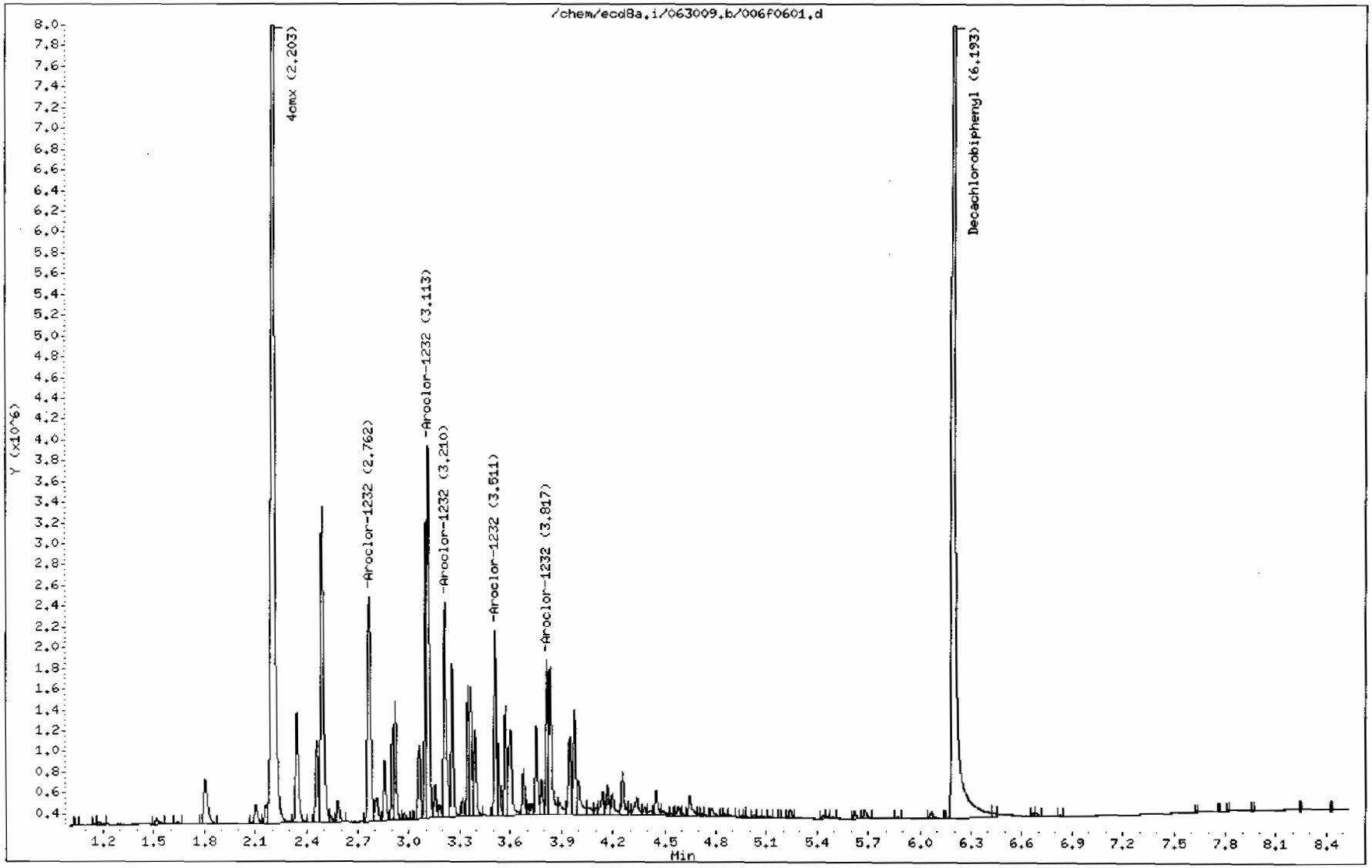

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/006b0601.d
Lab Smp Id: WAR090618-32 Client Smp ID: AR123201
Inj Date : 30-JUN-2009 11:48
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-32
Misc Info : |1232
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5607633	100.000	97.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	5526124	100.000	98.1	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
3.223	3.223	0.000	1015720	1000.00	905	80.00- 120.00	100.00
3.575	3.575	0.000	1258025	1000.00	885	103.86- 143.86	123.86
3.676	3.676	0.000	751147	1000.00	886	53.95- 93.95	73.95
3.826	3.826	0.000	397929	1000.00	854	19.18- 59.18	39.18
3.858	3.858	0.000	422363	1000.00	877	21.58- 61.58	41.58
Average of Peak Amounts =					882		

Data File: /chem/ecd8a.i/063009.b/006b0601.d
Date : 30-JUN-2009 11:48
Client ID: AR123201
Sample Info: IWAR090618-32

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

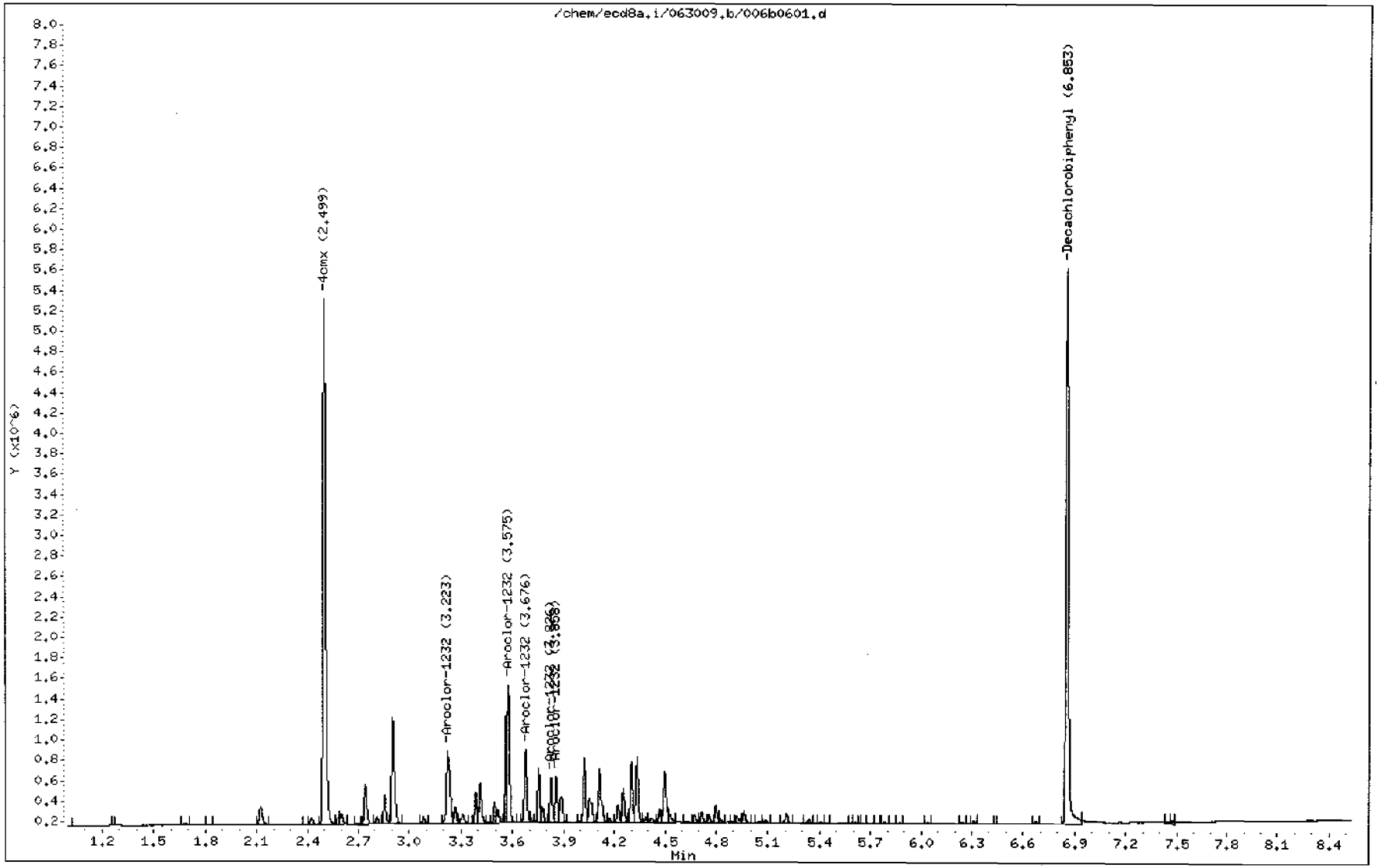

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/007f0701.d
Lab Smp Id: WAR090618-21 Client Smp ID: AR122101
Inj Date : 30-JUN-2009 12:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-21
Misc Info : |1221
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.205	2.202	0.003	16979532	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.196	6.193	0.003	19246506	100.000	115	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.347	2.347	0.000	1731266	1000.00	1120	80.00- 120.00	100.00
2.461	2.461	0.000	1014846	1000.00	1150	38.62- 78.62	58.62
2.493	2.493	0.000	4111480	1000.00	1100	217.48- 257.48	237.48

Average of Peak Amounts = 1.12e+03

Data File: /chem/ecd8a.i/063009.b/007f0701.d

Date : 30-JUN-2009 12:03

Client ID: AR122101

Sample Info: IWAR090618-21

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

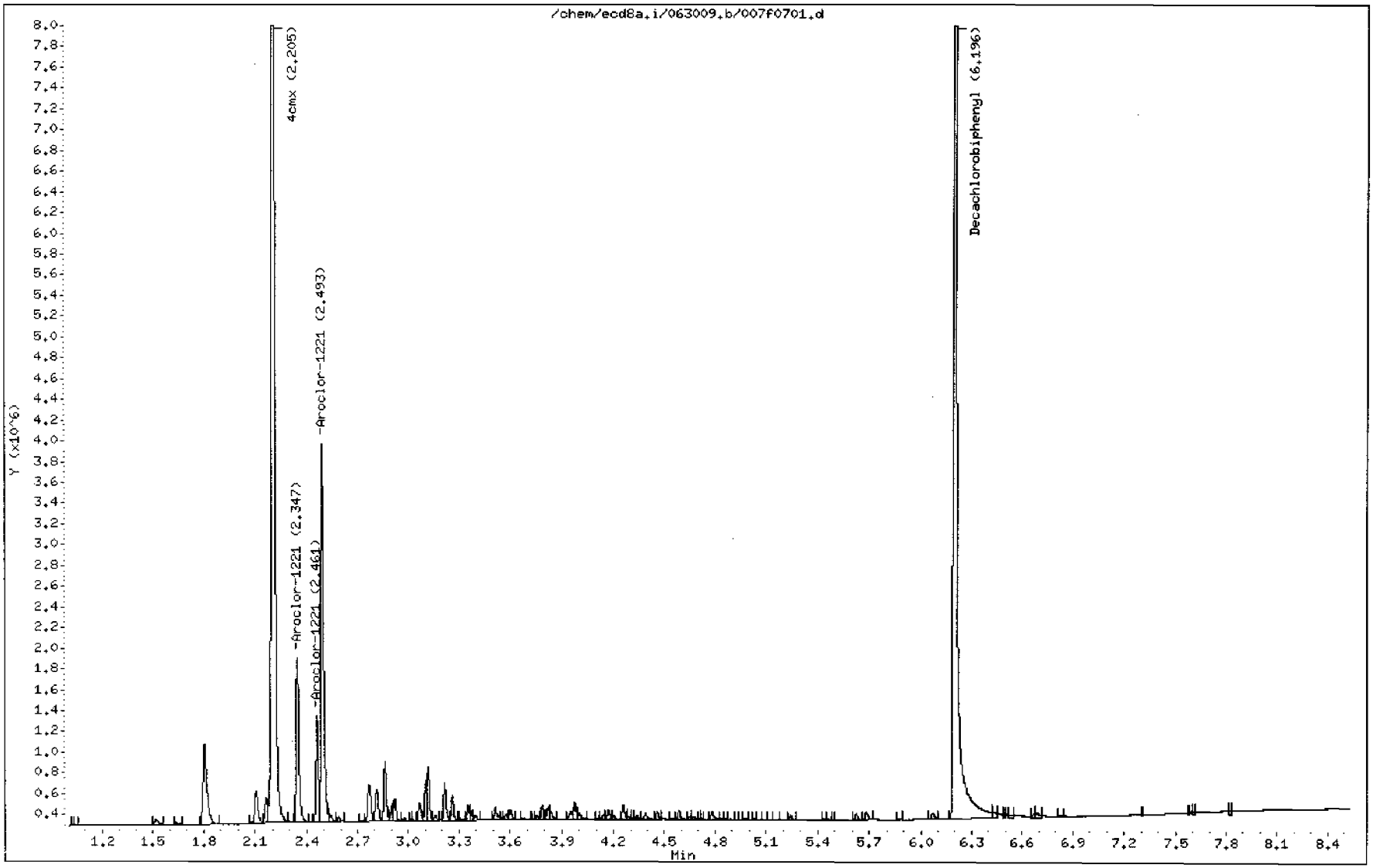

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/007b0701.d
Lab Smp Id: WAR090618-21 Client Smp ID: AR122101
Inj Date : 30-JUN-2009 12:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-21
Misc Info : |1221
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.500	2.499	0.001	5572682	100.000	96.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.855	6.853	0.002	5741006	100.000	102	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.743	2.743	0.000	570806	1000.00	893	80.00- 120.00	100.00
2.856	2.856	0.000	360134	1000.00	883	43.09- 83.09	63.09
2.905	2.905	0.000	1331894	1000.00	890	213.34- 253.34	233.34
Average of Peak Amounts =					889		

Data File: /chem/ecd8a.i/063009.b/007b0701.d

Date : 30-JUN-2009 12:03

Client ID: AR122101

Sample Info: IWAR090618-21

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

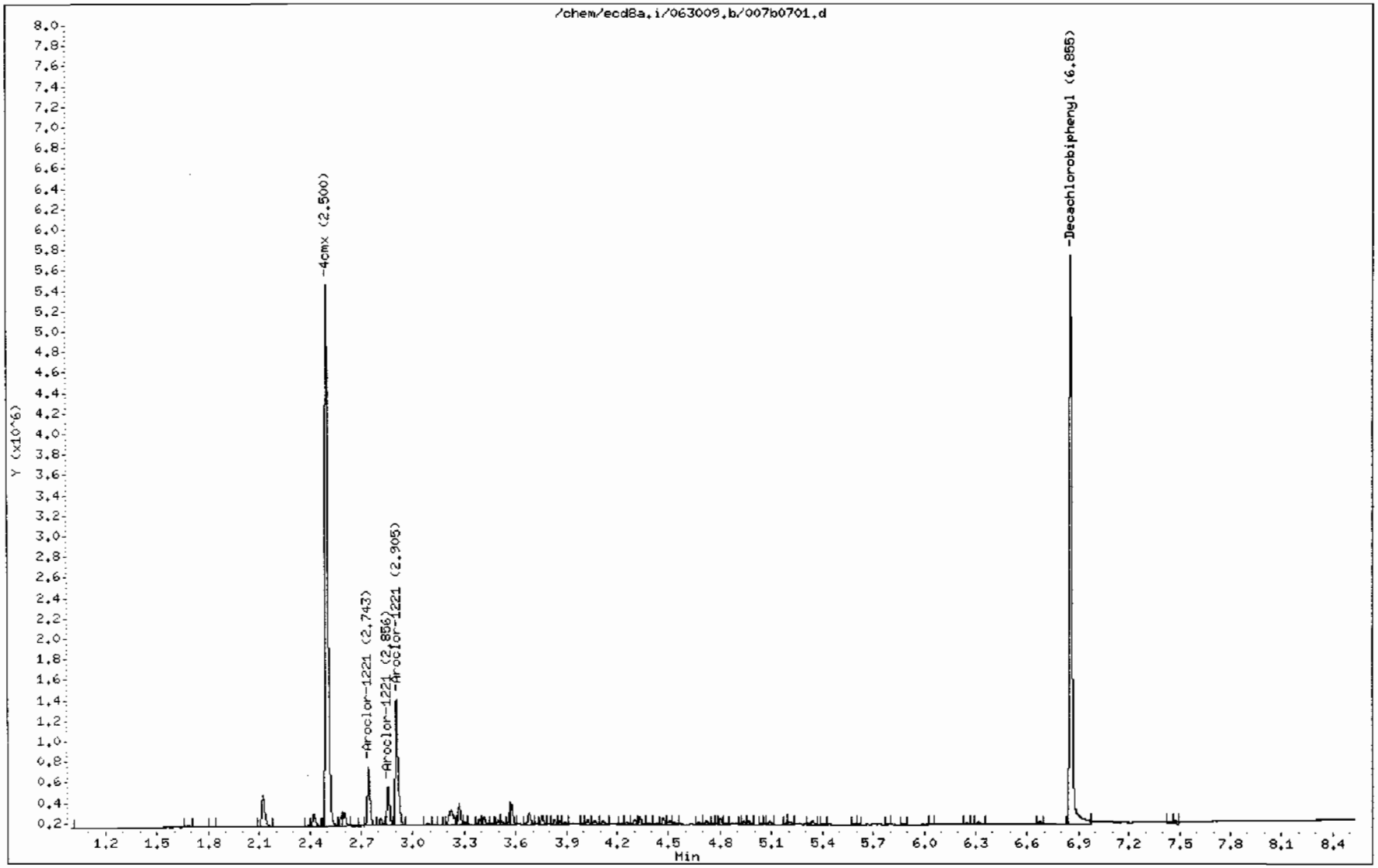

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/033f3301.d
Lab Smp Id: WAR090629-04603 Client Smp ID: AR166003
Inj Date : 30-JUN-2009 18:35
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04603
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	15363980	100.000	96.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	16554267	100.000	98.6	80.00- 120.00	100.00(M)
1 Aroclor-1016					CAS #: 12674-11-2		
2.760	2.762	-0.002	6222594	1000.00	1080	80.00- 120.00	100.00
3.110	3.112	-0.002	7909896	1000.00	1090	104.26- 144.26	127.12
3.254	3.256	-0.002	3197458	1000.00	1100	31.13- 71.13	51.38
3.364	3.365	-0.001	2899955	1000.00	1050	27.14- 67.14	46.60
3.508	3.510	-0.002	3898569	1000.00	1070	42.84- 82.84	62.65
Average of Peak Amounts =				1.08e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	7627002	1000.00	1070	80.00- 120.00	100.00(M)
4.578	4.579	-0.001	10853926	1000.00	1080	122.43- 162.43	142.31
4.772	4.774	-0.002	12192523	1000.00	1060	138.51- 178.51	159.86
5.240	5.242	-0.002	14602143	1000.00	1090	171.28- 211.28	191.45
5.435	5.437	-0.002	7015943	1000.00	1070	73.47- 113.47	91.99
Average of Peak Amounts =				1.07e+03			

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/033f3301.d
Date : 30-JUN-2009 18:35
Client ID: AR166403
Sample Info: IWAR090629-04603
Column phase: CLP1

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

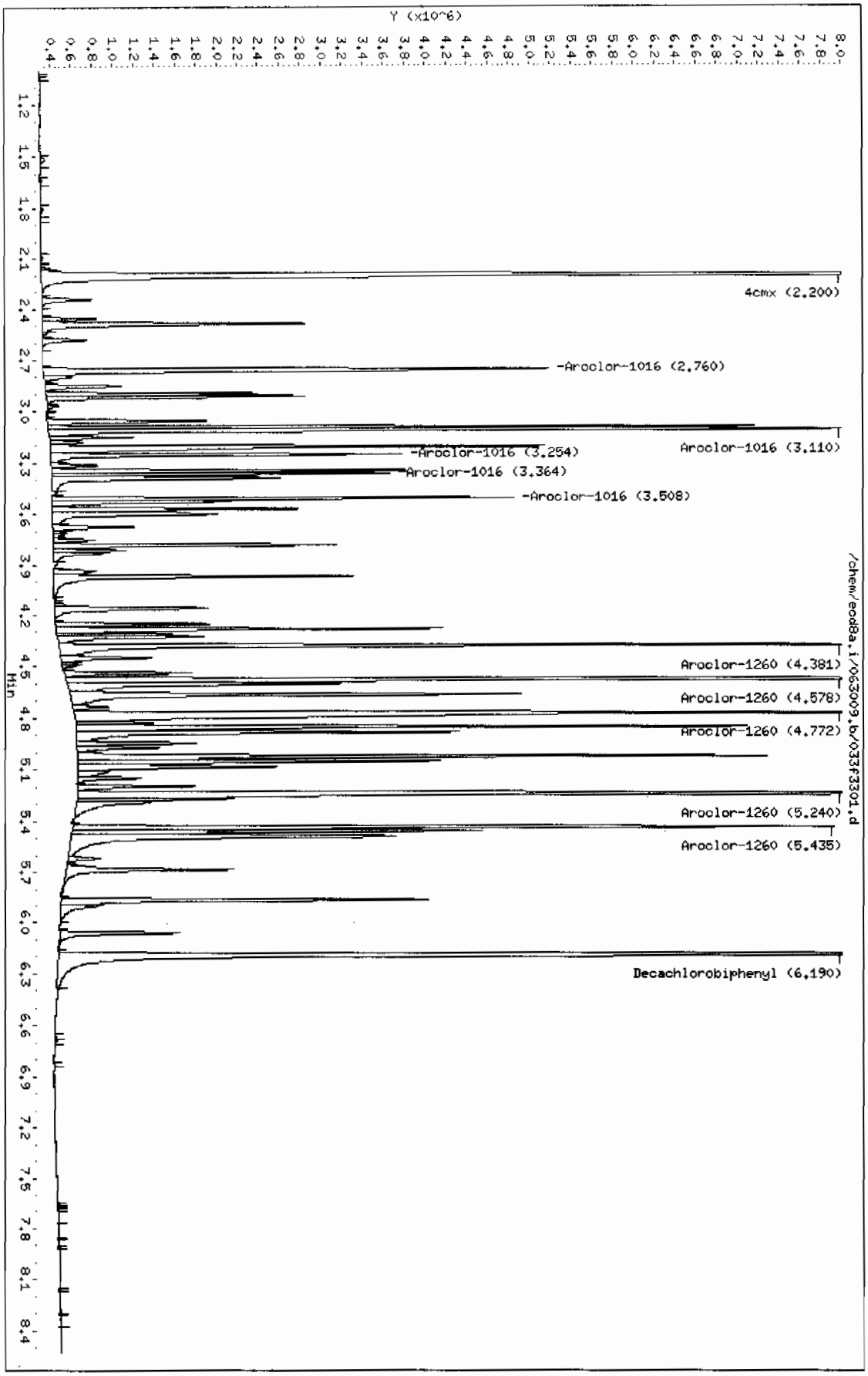

Page 1

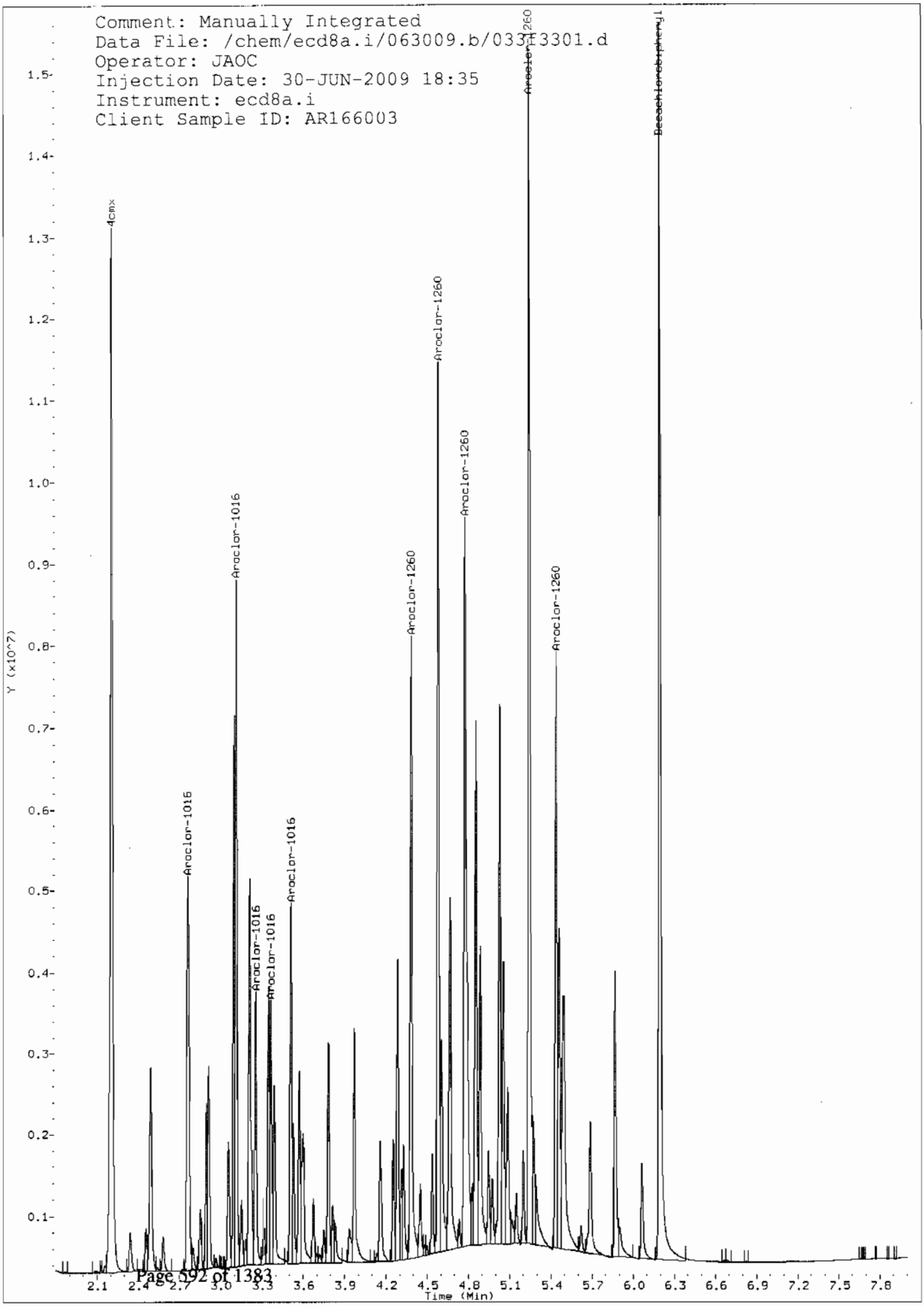
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/033f3301.d
Operator: JAOC
Injection Date: 30-JUN-2009 18:35
Instrument: ecd8a.i
Client Sample ID: AR166003
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

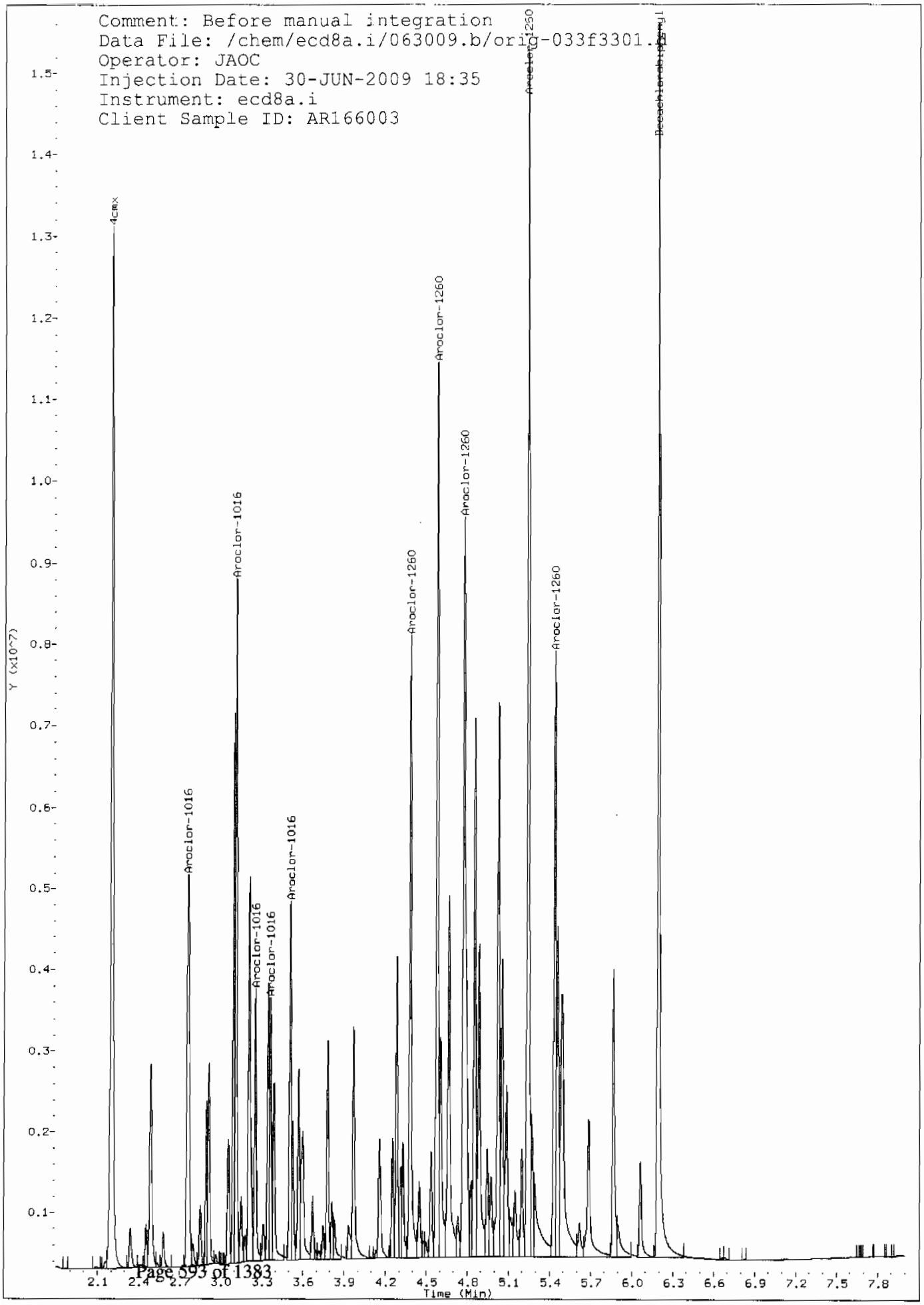
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-033f3301.D
Operator: JAOC
Injection Date: 30-JUN-2009 18:35
Instrument: ecd8a.i
Client Sample ID: AR166003
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/033b3301.d
Lab Smp Id: WAR090629-04603 Client Smp ID: AR166003
Inj Date : 30-JUN-2009 18:35
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04603
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5070280	100.000	87.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	5137351	100.000	91.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	2198374	1000.00	997	80.00- 120.00	100.00
3.575	3.575	0.000	3024555	1000.00	1030	118.74- 158.74	137.58
3.675	3.675	0.000	1743998	1000.00	1000	60.26- 100.26	79.33
3.751	3.752	-0.001	1055236	1000.00	1020	28.23- 68.23	48.00
3.825	3.826	-0.001	1063993	1000.00	994	28.70- 68.70	48.40
Average of Peak Amounts =				1.01e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	2880730	1000.00	1000	80.00- 120.00	100.00
5.083	5.083	0.000	3559181	1000.00	1030	104.06- 144.06	123.55
5.198	5.199	-0.001	3207589	1000.00	1020	91.97- 131.97	111.35
5.607	5.608	-0.001	2405333	1000.00	1020	64.43- 104.43	83.50
6.040	6.041	-0.001	3902843	1000.00	1040	116.83- 156.83	135.48
Average of Peak Amounts =				1.02e+03			

Data File: /chem/ecd8a.i/063009.b/033b3301.d

Date : 30-JUN-2009 18:35

Client ID: AR166003

Sample Info: WAR090629-04603

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

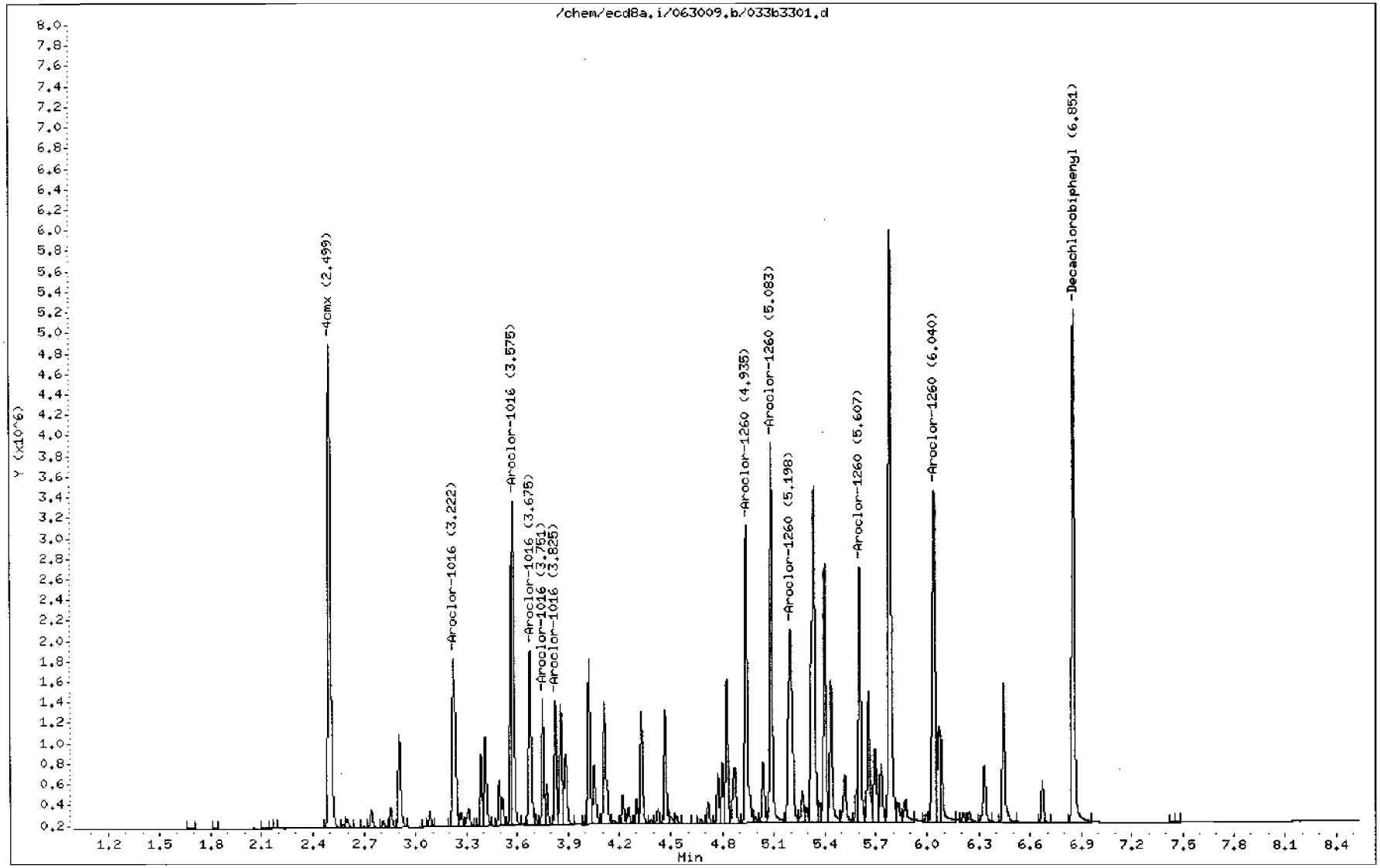

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/045f4501.d
Lab Smp Id: WAR090629-04604 Client Smp ID: AR166004
Inj Date : 30-JUN-2009 21:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04604
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 45 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	15713480	100.000	98.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	17090625	100.000	102	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.759	2.762	-0.003	6397692	1000.00	1110	80.00- 120.00	100.00(M)
3.110	3.112	-0.002	8267235	1000.00	1140	104.26- 144.26	129.22
3.253	3.256	-0.003	3204664	1000.00	1100	31.13- 71.13	50.09
3.362	3.365	-0.003	3075946	1000.00	1120	27.14- 67.14	48.08
3.508	3.510	-0.002	4141055	1000.00	1140	42.84- 82.84	64.73
Average of Peak Amounts =				1.12e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	7802732	1000.00	1090	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	11036924	1000.00	1090	122.43- 162.43	141.45
4.772	4.774	-0.002	12297330	1000.00	1070	138.51- 178.51	157.60
5.240	5.242	-0.002	14784108	1000.00	1100	171.28- 211.28	189.47
5.435	5.437	-0.002	7141663	1000.00	1090	73.47- 113.47	91.53
Average of Peak Amounts =				1.09e+03			

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/045F4501.d
Date : 30-JUN-2009 21:36
Client ID: AR166004
Sample Info: !WAR090629-04604
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

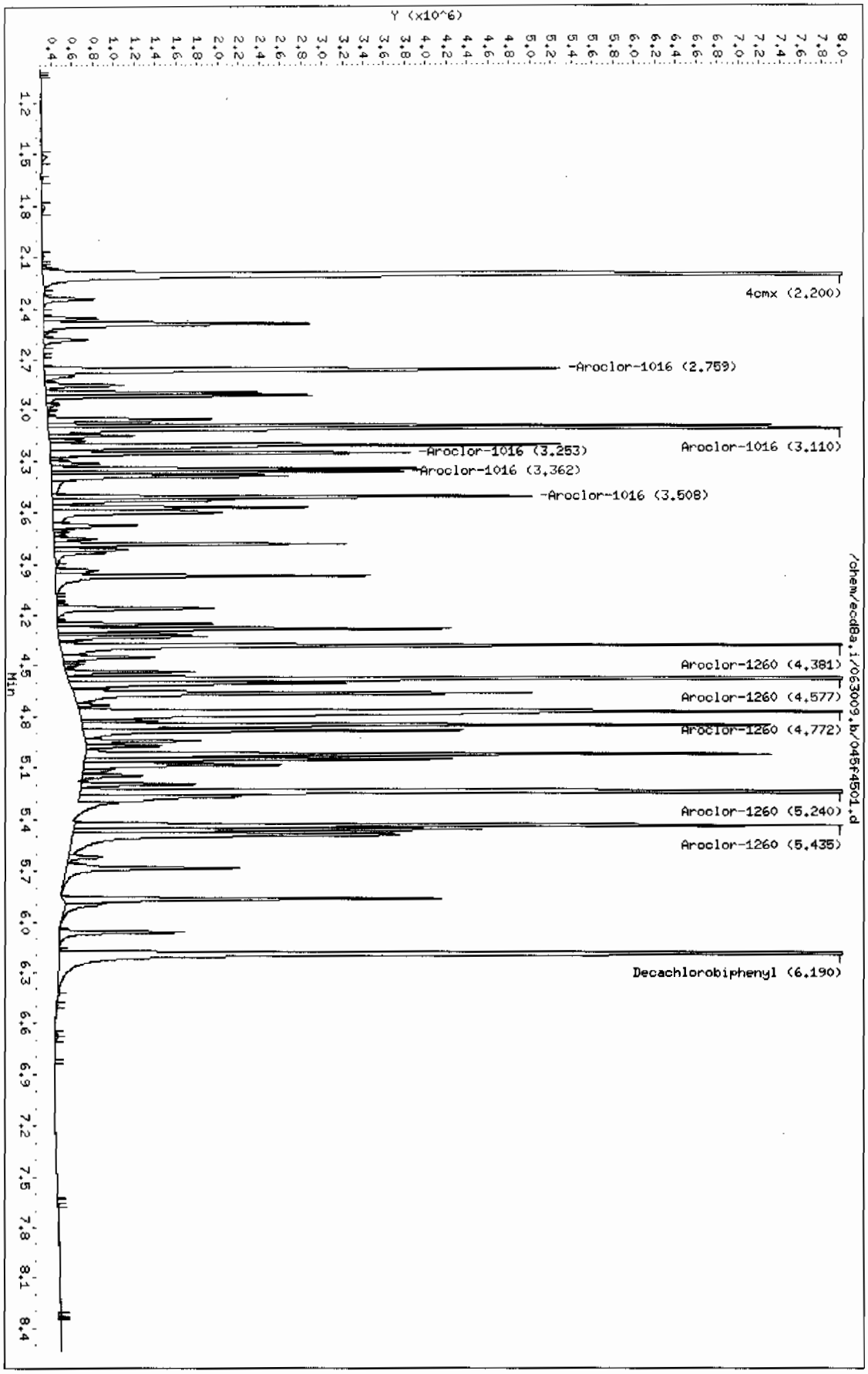

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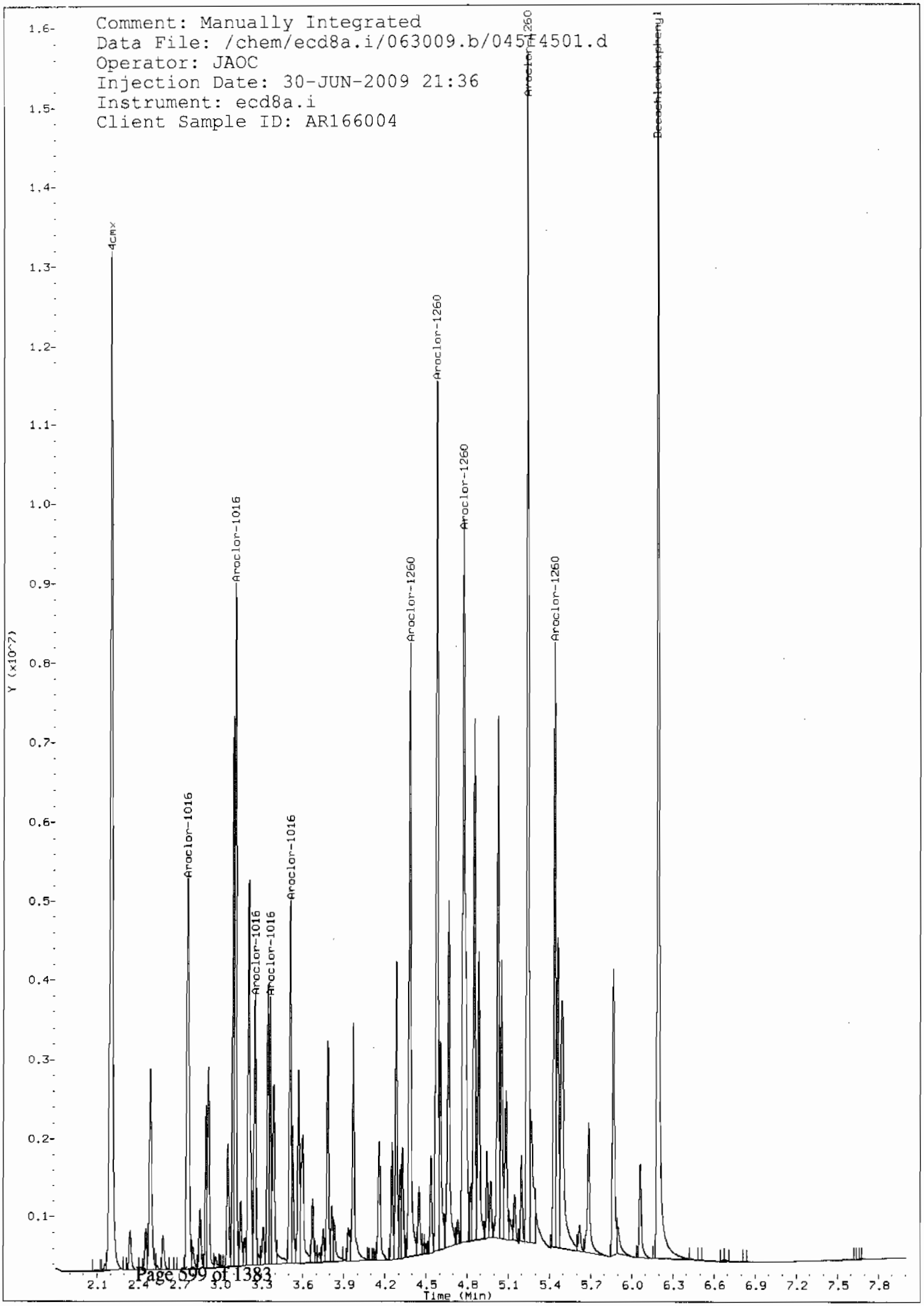
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/04514501.d
Operator: JAOC
Injection Date: 30-JUN-2009 21:36
Instrument: ecd8a.i
Client Sample ID: AR166004
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

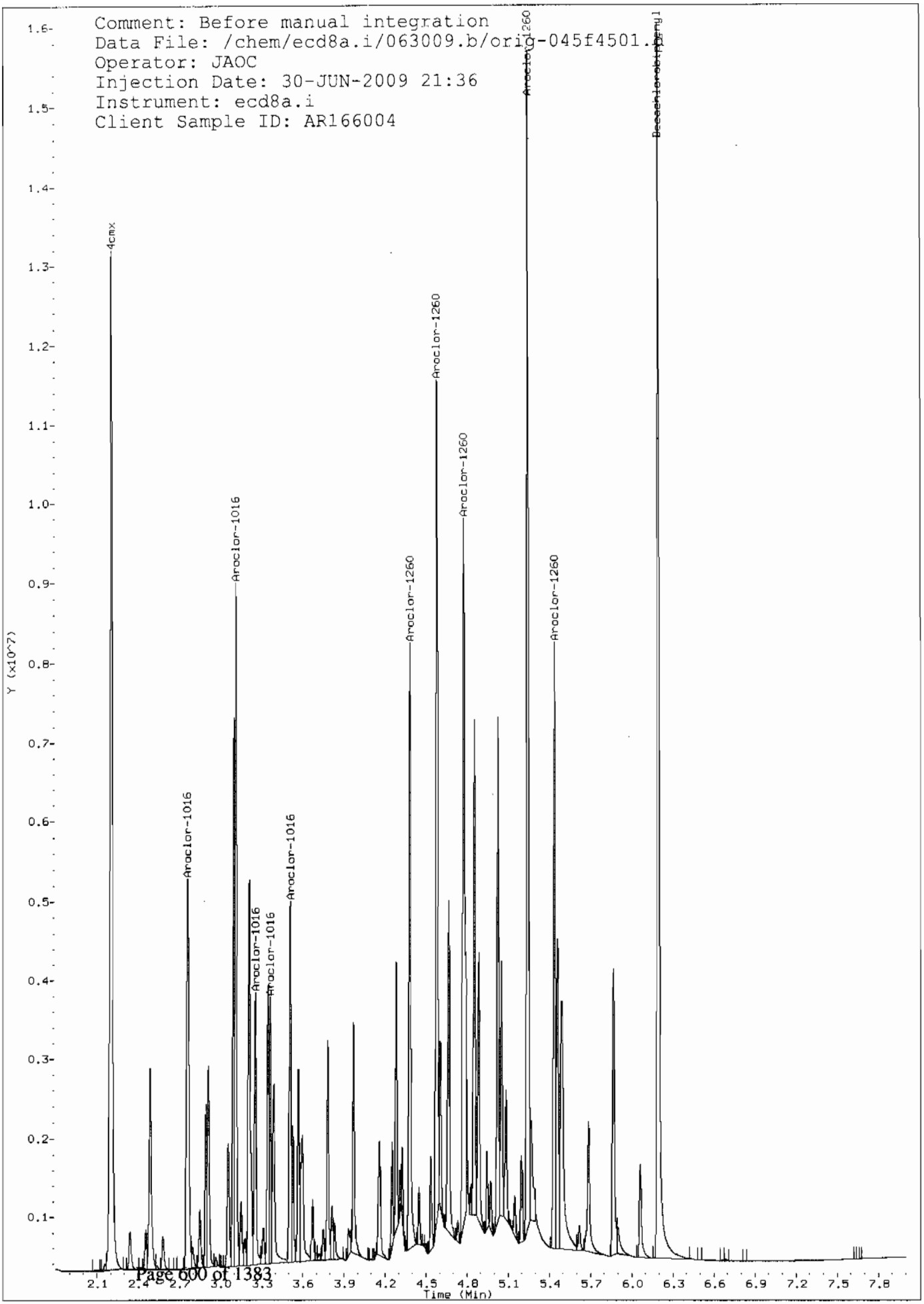
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-045f4501.
Operator: JAOC
Injection Date: 30-JUN-2009 21:36
Instrument: ecd8a.i
Client Sample ID: AR166004
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/045b4501.d
Lab Smp Id: WAR090629-04604 Client Smp ID: AR166004
Inj Date : 30-JUN-2009 21:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04604
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 45 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	5211358	100.000	90.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	5280852	100.000	93.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.221	3.222	-0.001	2262511	1000.00	1020	80.00- 120.00	100.00
3.574	3.575	-0.001	3109633	1000.00	1060	118.74- 158.74	137.44
3.674	3.675	-0.001	1788772	1000.00	1030	60.26- 100.26	79.06
3.751	3.752	-0.001	1083324	1000.00	1040	28.23- 68.23	47.88
3.825	3.826	-0.001	1090367	1000.00	1020	28.70- 68.70	48.19
Average of Peak Amounts =				1.04e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	2942407	1000.00	1020	80.00- 120.00	100.00
5.082	5.083	-0.001	3633348	1000.00	1050	104.06- 144.06	123.48
5.197	5.199	-0.002	3275582	1000.00	1040	91.97- 131.97	111.32
5.607	5.608	-0.001	2468276	1000.00	1040	64.43- 104.43	83.89
6.039	6.041	-0.002	4018300	1000.00	1060	116.83- 156.83	136.57
Average of Peak Amounts =				1.04e+03			

Data File: /chem/ecd8a.i/063009.b/045b4501.d
Date : 30-JUN-2009 21:36
Client ID: AR166004
Sample Info: IWAR090629-04604
Column phase: CLP2

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

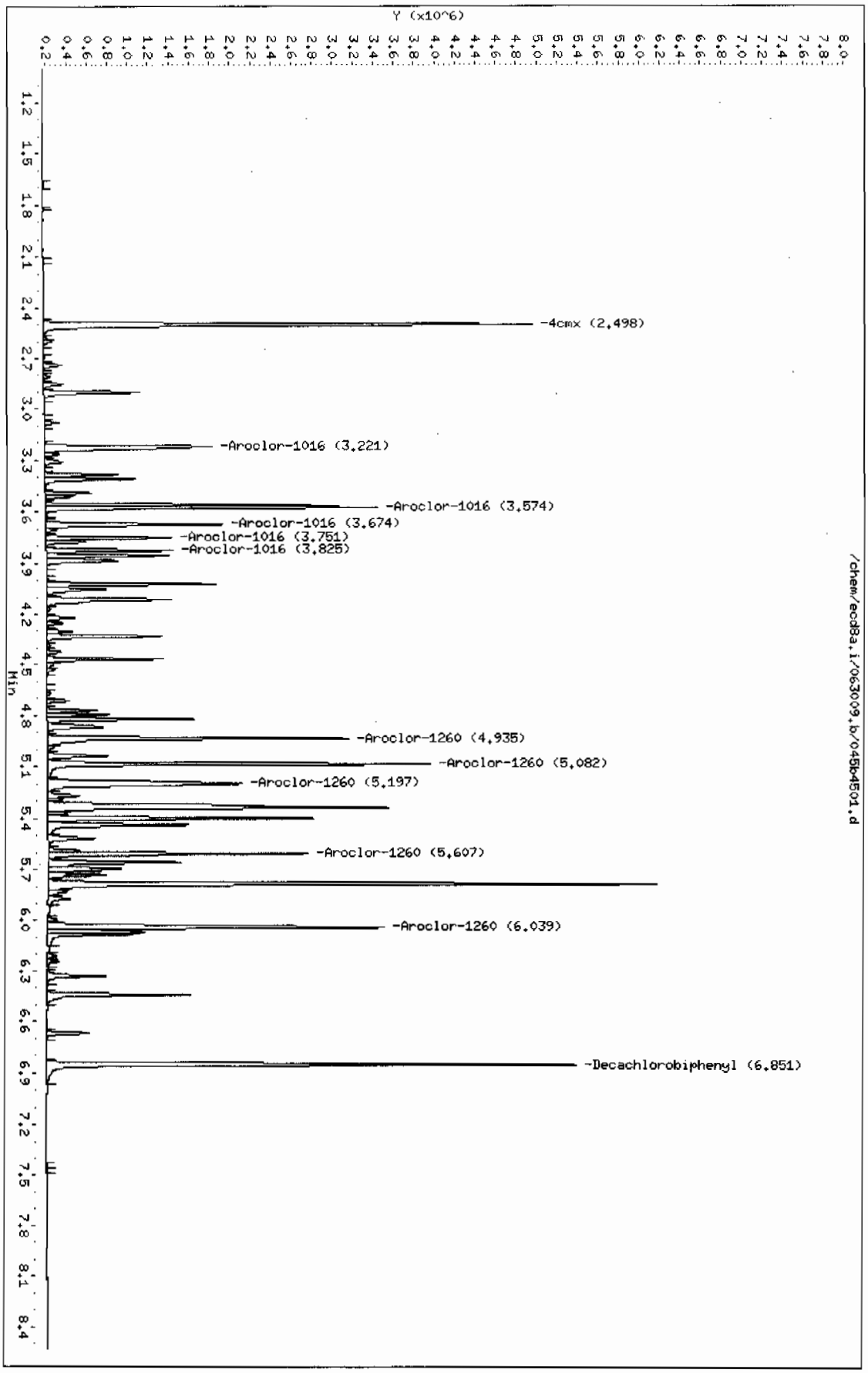

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8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/16/09	0823	2.20	6.19
02	AR166001	WAR090522-60	06/16/09	0836	2.20	6.19
03	AR125401	WAR090302-54	06/16/09	0848	2.20	6.19
04	AR124201	WAR090519-42	06/16/09	0901	2.20	6.19
05	AR124801	WAR090521-48	06/16/09	0913	2.20	6.19
06	AR166001	WAR090522-60	06/16/09	0925	2.20	6.19
07	AR124801	WAR090521-48	06/16/09	0943	2.21	6.20
08	AR166001	WAR090616-01	06/16/09	0956	2.21	6.20
09	AR166002	WAR090616-02	06/16/09	1009	2.20	6.19
10	AR166003	WAR090616-03	06/16/09	1021	2.20	6.19
11	AR166004	WAR090616-04	06/16/09	1033	2.20	6.19
12	AR166005	IAR090601-01	06/16/09	1046	2.20	6.19
13	AR166001	WAR090616-60	06/16/09	1058	2.20	6.19
14	AR123201	WAR090326-32	06/16/09	1110	2.20	6.19
15	AR122101	WAR090320-21	06/16/09	1123	2.20	6.19
16	AR126201	WAR090608-62	06/16/09	1135	2.20	6.19
17	AR126801	WAR090424-68	06/16/09	1147	2.20	6.19
18	DDTANALOGSTD	WAR090416-DD	06/16/09	1200	2.20	6.20
19	PIBLK02	WAR090519-99	06/16/09	1212	2.20	6.19
20	ZZZZZ	ZZZZZ	06/16/09	1224	2.20	6.19
21	ZZZZZ	ZZZZZ	06/16/09	1241	2.20	6.19
22	ZZZZZ	ZZZZZ	06/16/09	1253	2.20	6.19
23	ZZZZZ	ZZZZZ	06/16/09	1306	2.20	6.19
24	ZZZZZ	ZZZZZ	06/16/09	1322	2.20	6.19
25	ZZZZZ	ZZZZZ	06/16/09	1339	2.20	6.19
26	ZZZZZ	ZZZZZ	06/16/09	1355	2.20	6.19
27	ZZZZZ	ZZZZZ	06/16/09	1412	2.20	6.19
28	ZZZZZ	ZZZZZ	06/16/09	1428	2.20	6.19
29	AR166002	WAR090616-60	06/16/09	1445	2.20	6.19
30	PIBLK03	WAR090519-99	06/16/09	1457	2.20	6.19
31	ZZZZZ	ZZZZZ	06/16/09	1509	2.20	6.19
32	ZZZZZ	ZZZZZ	06/16/09	1526	2.20	6.19

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	ZZZZZ	ZZZZZ	06/16/09	1542	2.20	6.19
02	ZZZZZ	ZZZZZ	06/16/09	1559	2.20	6.19
03	ZZZZZ	ZZZZZ	06/16/09	1615	2.20	6.19
04	ZZZZZ	ZZZZZ	06/16/09	1632	2.20	6.19
05	ZZZZZ	ZZZZZ	06/16/09	1648	2.20	6.19
06	ZZZZZ	ZZZZZ	06/16/09	1705	2.20	6.19
07	ZZZZZ	ZZZZZ	06/16/09	1721	2.20	6.19
08	ZZZZZ	ZZZZZ	06/16/09	1738	2.20	6.19
09	AR166003	WAR090616-60	06/16/09	1754	2.20	6.19
10	PIBLK04	WAR090519-99	06/16/09	1806	2.20	6.19
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	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.86

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/16/09	0823	2.50	6.85
02	AR166001	WAR090522-60	06/16/09	0836	2.50	6.86
03	AR125401	WAR090302-54	06/16/09	0848	2.50	6.86
04	AR124201	WAR090519-42	06/16/09	0901	2.50	6.86
05	AR124801	WAR090521-48	06/16/09	0913	2.50	6.86
06	AR166001	WAR090522-60	06/16/09	0925	2.50	6.86
07	AR124801	WAR090521-48	06/16/09	0943	2.50	6.86
08	AR166001	WAR090616-01	06/16/09	0956	2.50	6.86
09	AR166002	WAR090616-02	06/16/09	1009	2.50	6.86
10	AR166003	WAR090616-03	06/16/09	1021	2.50	6.86
11	AR166004	WAR090616-04	06/16/09	1033	2.50	6.86
12	AR166005	IAR090601-01	06/16/09	1046	2.50	6.86
13	AR166001	WAR090616-60	06/16/09	1058	2.50	6.86
14	AR123201	WAR090326-32	06/16/09	1110	2.50	6.86
15	AR122101	WAR090320-21	06/16/09	1123	2.50	6.86
16	AR126201	WAR090608-62	06/16/09	1135	2.50	6.86
17	AR126801	WAR090424-68	06/16/09	1147	2.50	6.86
18	DDTANALOGSTD	WAR090416-DD	06/16/09	1200	2.50	6.86
19	PIBLK02	WAR090519-99	06/16/09	1212	2.50	6.86
20	ZZZZZ	ZZZZZ	06/16/09	1224	2.50	6.86
21	ZZZZZ	ZZZZZ	06/16/09	1241	2.50	6.86
22	ZZZZZ	ZZZZZ	06/16/09	1253	2.50	6.86
23	ZZZZZ	ZZZZZ	06/16/09	1306	2.50	6.86
24	ZZZZZ	ZZZZZ	06/16/09	1322	2.50	6.86
25	ZZZZZ	ZZZZZ	06/16/09	1339	2.50	6.85
26	ZZZZZ	ZZZZZ	06/16/09	1355	2.50	6.85
27	ZZZZZ	ZZZZZ	06/16/09	1412	2.50	6.85
28	ZZZZZ	ZZZZZ	06/16/09	1428	2.50	6.85
29	AR166002	WAR090616-60	06/16/09	1445	2.50	6.86
30	PIBLK03	WAR090519-99	06/16/09	1457	2.50	6.86
31	ZZZZZ	ZZZZZ	06/16/09	1509	2.50	6.86
32	ZZZZZ	ZZZZZ	06/16/09	1526	2.50	6.85

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.86

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	ZZZZZ	ZZZZZ	06/16/09	1542	2.50	6.85
02	ZZZZZ	ZZZZZ	06/16/09	1559	2.50	6.85
03	ZZZZZ	ZZZZZ	06/16/09	1615	2.50	6.85
04	ZZZZZ	ZZZZZ	06/16/09	1632	2.50	6.85
05	ZZZZZ	ZZZZZ	06/16/09	1648	2.50	6.86
06	ZZZZZ	ZZZZZ	06/16/09	1705	2.50	6.85
07	ZZZZZ	ZZZZZ	06/16/09	1721	2.50	6.85
08	ZZZZZ	ZZZZZ	06/16/09	1738	2.50	6.85
09	AR166003	WAR090616-60	06/16/09	1754	2.50	6.85
10	PIBLK04	WAR090519-99	06/16/09	1806	2.50	6.86
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QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/30/09	1046	2.20	6.19
02	AR166001	WAR090629-04	06/30/09	1059	2.20	6.19
03	AR125401	WAR090302-54	06/30/09	1111	2.20	6.19
04	AR124201	WAR090519-42	06/30/09	1124	2.20	6.19
05	AR124801	WAR090521-48	06/30/09	1136	2.20	6.19
06	AR123201	WAR090618-32	06/30/09	1148	2.20	6.19
07	AR122101	WAR090618-21	06/30/09	1203	2.20	6.20
08	AR126201	WAR090608-62	06/30/09	1216	2.20	6.19
09	AR126801	WAR090424-68	06/30/09	1228	2.20	6.19
10	DDTANALOGSTD	WAR090618-DD	06/30/09	1240	2.20	6.19
11	PIBLK02	WAR090519-99	06/30/09	1253	2.20	6.19
12	ZZZZZ	ZZZZZ	06/30/09	1305	2.20	6.19
13	ZZZZZ	ZZZZZ	06/30/09	1318	2.20	6.19
14	ZZZZZ	ZZZZZ	06/30/09	1330	2.20	6.19
15	ZZZZZ	ZZZZZ	06/30/09	1346	2.20	6.19
16	ZZZZZ	ZZZZZ	06/30/09	1403	2.20	6.19
17	ZZZZZ	ZZZZZ	06/30/09	1419	2.20	6.19
18	ZZZZZ	ZZZZZ	06/30/09	1436	2.20	6.19
19	ZZZZZ	ZZZZZ	06/30/09	1452	2.20	6.19
20	ZZZZZ	ZZZZZ	06/30/09	1509	2.20	6.19
21	ZZZZZ	ZZZZZ	06/30/09	1525	2.20	6.19
22	AR166002	WAR090629-04	06/30/09	1542	2.20	6.19
23	PIBLK03	WAR090519-99	06/30/09	1554	2.20	6.19
24	ZZZZZ	ZZZZZ	06/30/09	1606	2.20	6.19
25	ZZZZZ	ZZZZZ	06/30/09	1623	2.20	6.19
26	ZZZZZ	ZZZZZ	06/30/09	1639	2.20	6.19
27	ZZZZZ	ZZZZZ	06/30/09	1656	2.20	6.19
28	ZZZZZ	ZZZZZ	06/30/09	1712	2.20	6.19
29	ZZZZZ	ZZZZZ	06/30/09	1729	2.20	6.19
30	ZZZZZ	ZZZZZ	06/30/09	1745	2.20	6.19
31	ZZZZZ	ZZZZZ	06/30/09	1802	2.20	6.19
32	ZZZZZ	ZZZZZ	06/30/09	1818	2.20	6.19

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR166003	WAR090629-04	06/30/09	1835	2.20	6.19
02	PIBLK04	WAR090519-99	06/30/09	1847	2.20	6.19
03	PBLK01	1201870209	06/30/09	1859	2.20	6.19
04	PBLK01LCS	1201870210	06/30/09	1912	2.20	6.19
05	ZZZZZ	ZZZZZ	06/30/09	1924	2.20	6.19
06	ZZZZZ	ZZZZZ	06/30/09	1941	2.20	6.19
07	ZZZZZ	ZZZZZ	06/30/09	1957	2.20	6.19
08	CAMO-09-10480	232357001	06/30/09	2014	2.20	6.19
09	CAMO-09-10479	232357002	06/30/09	2030	2.20	6.19
10	ZZZZZ	ZZZZZ	06/30/09	2047	2.20	6.19
11	ZZZZZ	ZZZZZ	06/30/09	2103	2.20	6.19
12	ZZZZZ	ZZZZZ	06/30/09	2120	2.20	6.19
13	AR166004	WAR090629-04	06/30/09	2136	2.20	6.19
14	PIBLK05	WAR090519-99	06/30/09	2148	2.20	6.19
15	ZZZZZ	ZZZZZ	06/30/09	2201	2.20	6.19
16	ZZZZZ	ZZZZZ	06/30/09	2213	2.21	6.19
17	ZZZZZ	ZZZZZ	06/30/09	2226	2.21	6.19
18	ZZZZZ	ZZZZZ	06/30/09	2242	2.20	6.19
19	ZZZZZ	ZZZZZ	06/30/09	2259	2.20	6.19
20	ZZZZZ	ZZZZZ	06/30/09	2315	2.20	6.19
21	AR166005	WAR090629-04	06/30/09	2331	2.20	6.19
22	PIBLK06	WAR090519-99	06/30/09	2344	2.20	6.19
23						
24						
25						
26						
27						
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29						
30						
31						
32						

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.85

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/30/09	1046	2.50	6.85
02	AR166001	WAR090629-04	06/30/09	1059	2.50	6.85
03	AR125401	WAR090302-54	06/30/09	1111	2.50	6.85
04	AR124201	WAR090519-42	06/30/09	1124	2.50	6.85
05	AR124801	WAR090521-48	06/30/09	1136	2.50	6.85
06	AR123201	WAR090618-32	06/30/09	1148	2.50	6.85
07	AR122101	WAR090618-21	06/30/09	1203	2.50	6.85
08	AR126201	WAR090608-62	06/30/09	1216	2.50	6.85
09	AR126801	WAR090424-68	06/30/09	1228	2.50	6.85
10	DDTANALOGSTD	WAR090618-DD	06/30/09	1240	2.50	6.85
11	PIBLK02	WAR090519-99	06/30/09	1253	2.50	6.85
12	ZZZZZ	ZZZZZ	06/30/09	1305	2.50	6.85
13	ZZZZZ	ZZZZZ	06/30/09	1318	2.50	6.85
14	ZZZZZ	ZZZZZ	06/30/09	1330	2.50	6.85
15	ZZZZZ	ZZZZZ	06/30/09	1346	2.50	6.85
16	ZZZZZ	ZZZZZ	06/30/09	1403	2.50	6.85
17	ZZZZZ	ZZZZZ	06/30/09	1419	2.50	6.85
18	ZZZZZ	ZZZZZ	06/30/09	1436	2.50	6.85
19	ZZZZZ	ZZZZZ	06/30/09	1452	2.50	6.85
20	ZZZZZ	ZZZZZ	06/30/09	1509	2.50	6.85
21	ZZZZZ	ZZZZZ	06/30/09	1525	2.50	6.85
22	AR166002	WAR090629-04	06/30/09	1542	2.50	6.85
23	PIBLK03	WAR090519-99	06/30/09	1554	2.50	6.85
24	ZZZZZ	ZZZZZ	06/30/09	1606	2.50	6.85
25	ZZZZZ	ZZZZZ	06/30/09	1623	2.50	6.85
26	ZZZZZ	ZZZZZ	06/30/09	1639	2.50	6.85
27	ZZZZZ	ZZZZZ	06/30/09	1656	2.50	6.85
28	ZZZZZ	ZZZZZ	06/30/09	1712	2.50	6.85
29	ZZZZZ	ZZZZZ	06/30/09	1729	2.50	6.85
30	ZZZZZ	ZZZZZ	06/30/09	1745	2.50	6.85
31	ZZZZZ	ZZZZZ	06/30/09	1802	2.50	6.85
32	ZZZZZ	ZZZZZ	06/30/09	1818	2.50	6.85

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2455

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.85

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR166003	WAR090629-04	06/30/09	1835	2.50	6.85
02	PIBLK04	WAR090519-99	06/30/09	1847	2.50	6.85
03	PBLK01	1201870209	06/30/09	1859	2.50	6.85
04	PBLK01LCS	1201870210	06/30/09	1912	2.50	6.85
05	ZZZZZ	ZZZZZ	06/30/09	1924	2.50	6.85
06	ZZZZZ	ZZZZZ	06/30/09	1941	2.50	6.85
07	ZZZZZ	ZZZZZ	06/30/09	1957	2.50	6.85
08	CAMO-09-10480	232357001	06/30/09	2014	2.50	6.85
09	CAMO-09-10479	232357002	06/30/09	2030	2.50	6.85
10	ZZZZZ	ZZZZZ	06/30/09	2047	2.50	6.85
11	ZZZZZ	ZZZZZ	06/30/09	2103	2.50	6.85
12	ZZZZZ	ZZZZZ	06/30/09	2120	2.50	6.85
13	AR166004	WAR090629-04	06/30/09	2136	2.50	6.85
14	PIBLK05	WAR090519-99	06/30/09	2148	2.50	6.85
15	ZZZZZ	ZZZZZ	06/30/09	2201	2.50	6.85
16	ZZZZZ	ZZZZZ	06/30/09	2213	2.50	6.85
17	ZZZZZ	ZZZZZ	06/30/09	2226	2.50	6.85
18	ZZZZZ	ZZZZZ	06/30/09	2242	2.50	6.85
19	ZZZZZ	ZZZZZ	06/30/09	2259	2.50	6.85
20	ZZZZZ	ZZZZZ	06/30/09	2315	2.50	6.85
21	AR166005	WAR090629-04	06/30/09	2331	2.50	6.85
22	PIBLK06	WAR090519-99	06/30/09	2344	2.50	6.85
23						
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26						
27						
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29						
30						
31						
32						

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Identification Summary

SDG Number: 09-2455 **Client ID:** LCS for batch 880782

Lab Sample ID: 1201870210

Data File:	036f3601.d	**Data File:**	036b3601.d
Inst:	ECD8A.I_1	**Inst:**	ECD8A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	30-JUN-09 19:12	**Analyzed:**	30-JUN-09 19:12

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							11.1
Column 1	1	2.76	2.73 – 2.79	21.4		ug/kg	
	2	3.11	3.08 – 3.14	22.2		ug/kg	
	3	3.26	3.23 – 3.29	23.6		ug/kg	
	4	3.37	3.33 – 3.39	24.2		ug/kg	
	5	3.51	3.48 – 3.54	23.9		ug/kg	
					23.1		
Column 2	1	3.22	3.19 – 3.25	19.4		ug/kg	
	2	3.58	3.54 – 3.6	21.6		ug/kg	
	3	3.68	3.64 – 3.7	21		ug/kg	
	4	3.75	3.72 – 3.78	20.9		ug/kg	
	5	3.83	3.8 – 3.86	20.4		ug/kg	
					20.6		
Aroclor-1260							10.2
Column 1	1	4.38	4.35 – 4.41	27.5		ug/kg	
	2	4.58	4.55 – 4.61	28.9		ug/kg	
	3	4.77	4.74 – 4.8	27.5		ug/kg	
	4	5.24	5.21 – 5.27	35.3		ug/kg	
	5	5.44	5.41 – 5.47	32.9		ug/kg	
					30.4		
Column 2	1	4.94	4.91 – 4.97	24.9		ug/kg	
	2	5.08	5.05 – 5.11	26.4		ug/kg	
	3	5.2	5.17 – 5.23	25.5		ug/kg	
	4	5.61	5.58 – 5.64	29.9		ug/kg	
	5	6.04	6.01 – 6.07	30.6		ug/kg	
					27.5		

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2455			**Matrix:**	SOIL
Lab Sample ID:	1201870209				
Client Sample:	QC for batch 880782	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 880782	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 18:59	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	035f3501–1.d	**Column:**	1 CLP1	**Level:**	LOW
	035b3501–1.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.33	ug/kg	1.11	3.33	1
11104–28–2	Aroclor–1221	U	3.33	ug/kg	1.11	3.33	1
11141–16–5	Aroclor–1232	U	3.33	ug/kg	1.11	3.33	1
53469–21–9	Aroclor–1242	U	3.33	ug/kg	1.11	3.33	1
12672–29–6	Aroclor–1248	U	3.33	ug/kg	1.11	3.33	1
11097–69–1	Aroclor–1254	U	3.33	ug/kg	1.11	3.33	1
11096–82–5	Aroclor–1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/035f3501-1.d
Lab Smp Id: 1201870209 Client Smp ID: PBLK01
Inj Date : 30-JUN-2009 18:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870209|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 35 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	22348266	139.638	4.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.192	6.193	-0.001	26748987	159.292	5.3	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/035f3501-1.d
Date : 30-JUN-2009 18:59
Client ID: PBLK01
Sample Info: |120187020911|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

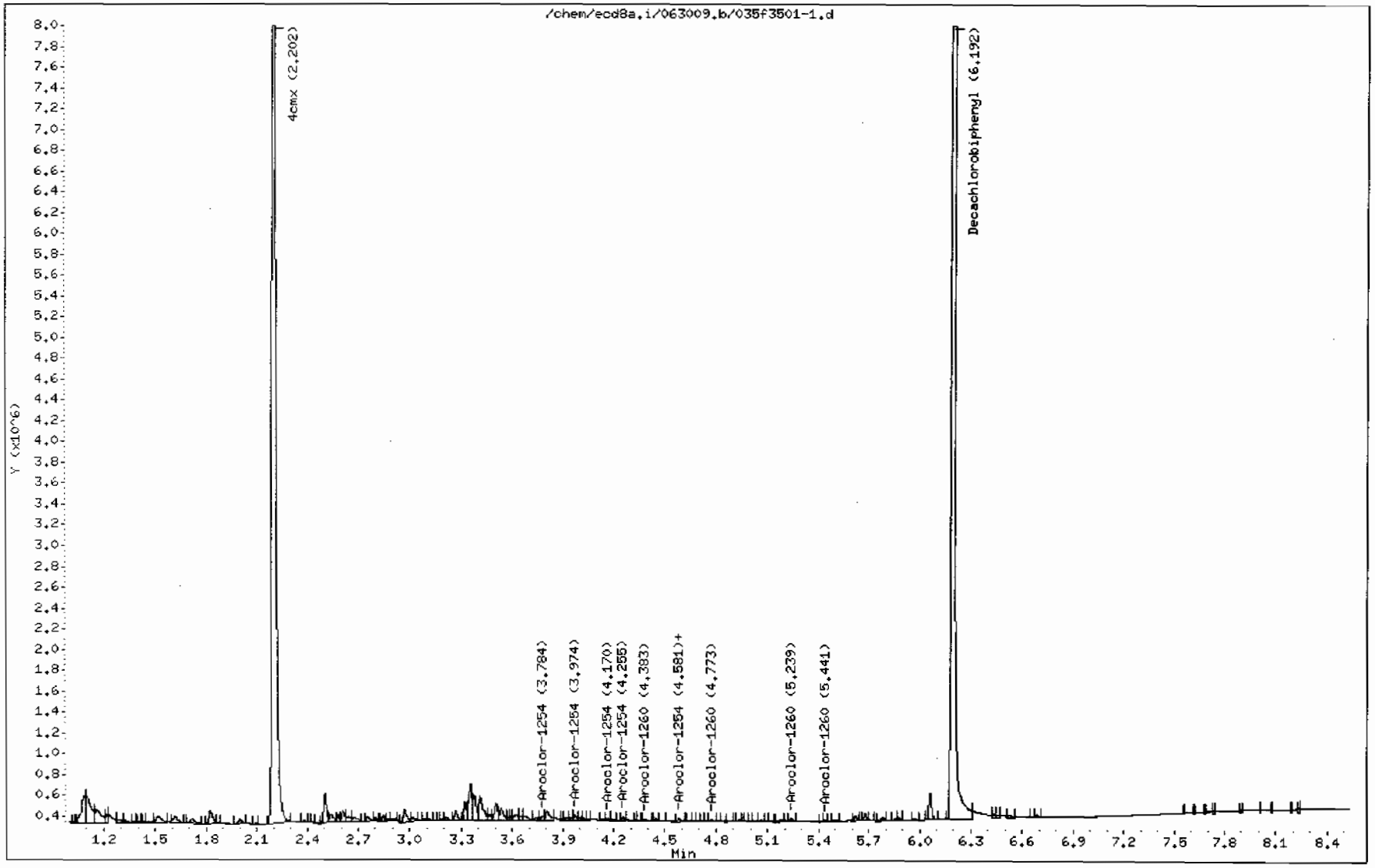

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 1NJ VOL

Data file : /chem/ecd8a.i/063009.b/035b3501-1.d
Lab Smp Id: 1201870209 Client Smp ID: PBLK01
Inj Date : 30-JUN-2009 18:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870209|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 35 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	7469251	129.483	4.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	8204878	145.675	4.8	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/035b3501-1.d
Date : 30-JUN-2009 18:59
Client ID: PBLK01
Sample Info: I120187020911
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

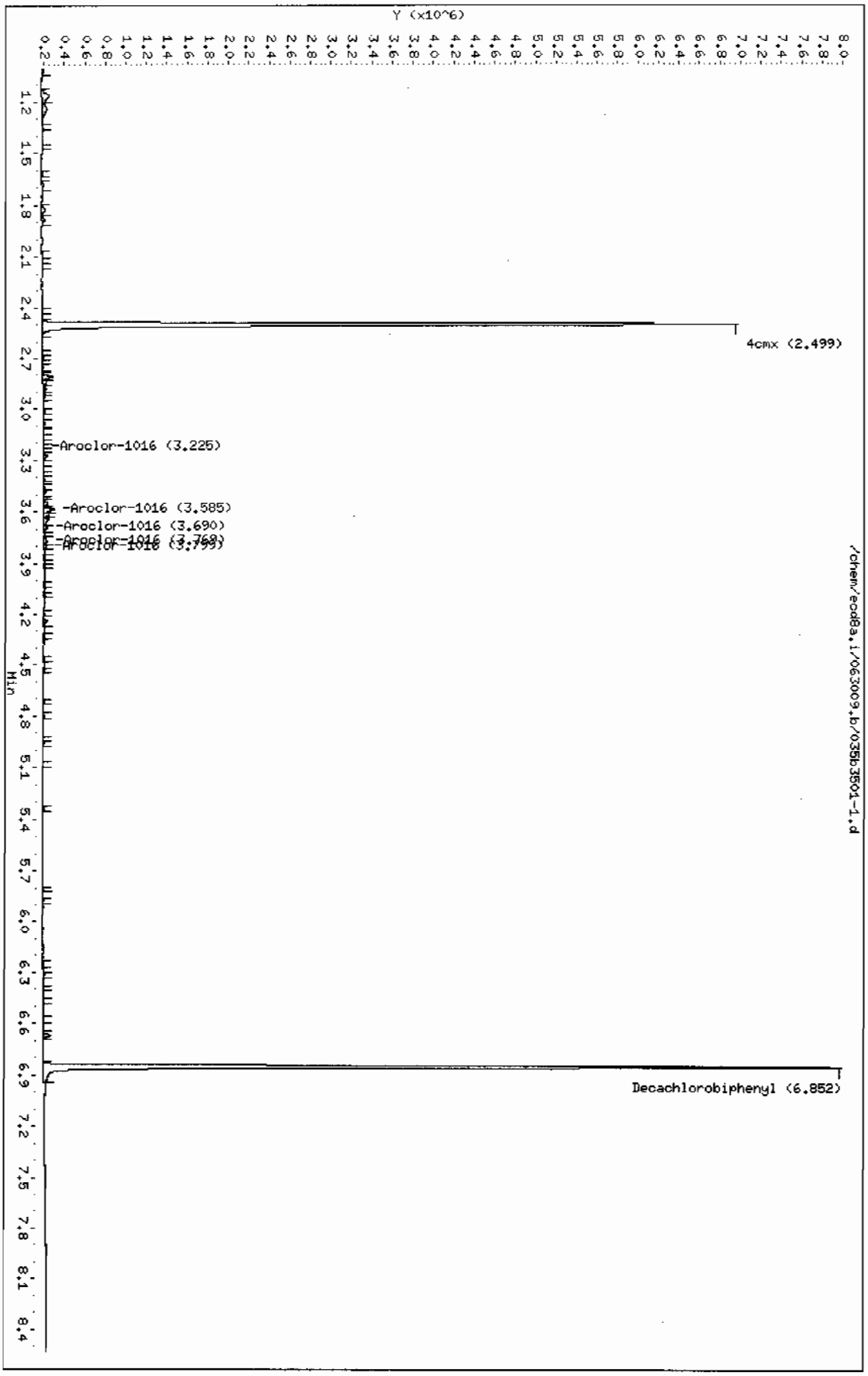

Page 1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2455			**Matrix:**	SOIL
Lab Sample ID:	1201870210				
Client Sample:	QC for batch 880782	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 880782	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	880783	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 19:12	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 16:16	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	036f3601-1.d	**Column:**	1 CLP1	**Level:**	LOW
	036b3601-1.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		23.1	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260		30.4	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/036f3601-1.d
Lab Smp Id: 1201870210 Client Smp ID: PBLK01LCS
Inj Date : 30-JUN-2009 19:12
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870210|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 36 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	23353499	145.919	4.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	26590849	158.350	5.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.761	2.762	-0.001	3696297	640.917	21.4	80.00- 120.00	100.00
3.113	3.112	0.001	4819280	667.054	22.2	104.26- 144.26	130.38
3.255	3.256	-0.001	2057110	707.042	23.6	31.13- 71.13	55.65
3.365	3.365	0.000	1999113	726.219	24.2	27.14- 67.14	54.08

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.510	3.510	0.000	2604515	717.760	23.9	42.84- 82.84	70.46
Average of Peak Concentrations =					23.0		
7 Aroclor-1260					CAS #: 11096-82-5		
4.384	4.383	0.001	5891206	826.448	27.5	80.00- 120.00	100.00(M)
4.579	4.579	0.000	8734283	865.765	28.8	122.43- 162.43	148.26
4.774	4.774	0.000	9459716	823.865	27.5	138.51- 178.51	160.57
5.241	5.242	-0.001	14178759	1058.48	35.3	171.28- 211.28	240.68
5.437	5.437	0.000	6459924	985.992	32.9	73.47- 113.47	109.65
Average of Peak Concentrations =					30.4		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/036f3601-1.d
Date : 30-JUN-2009 19:12
Client ID: PBLK01LCS
Sample Info: |120187021011|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

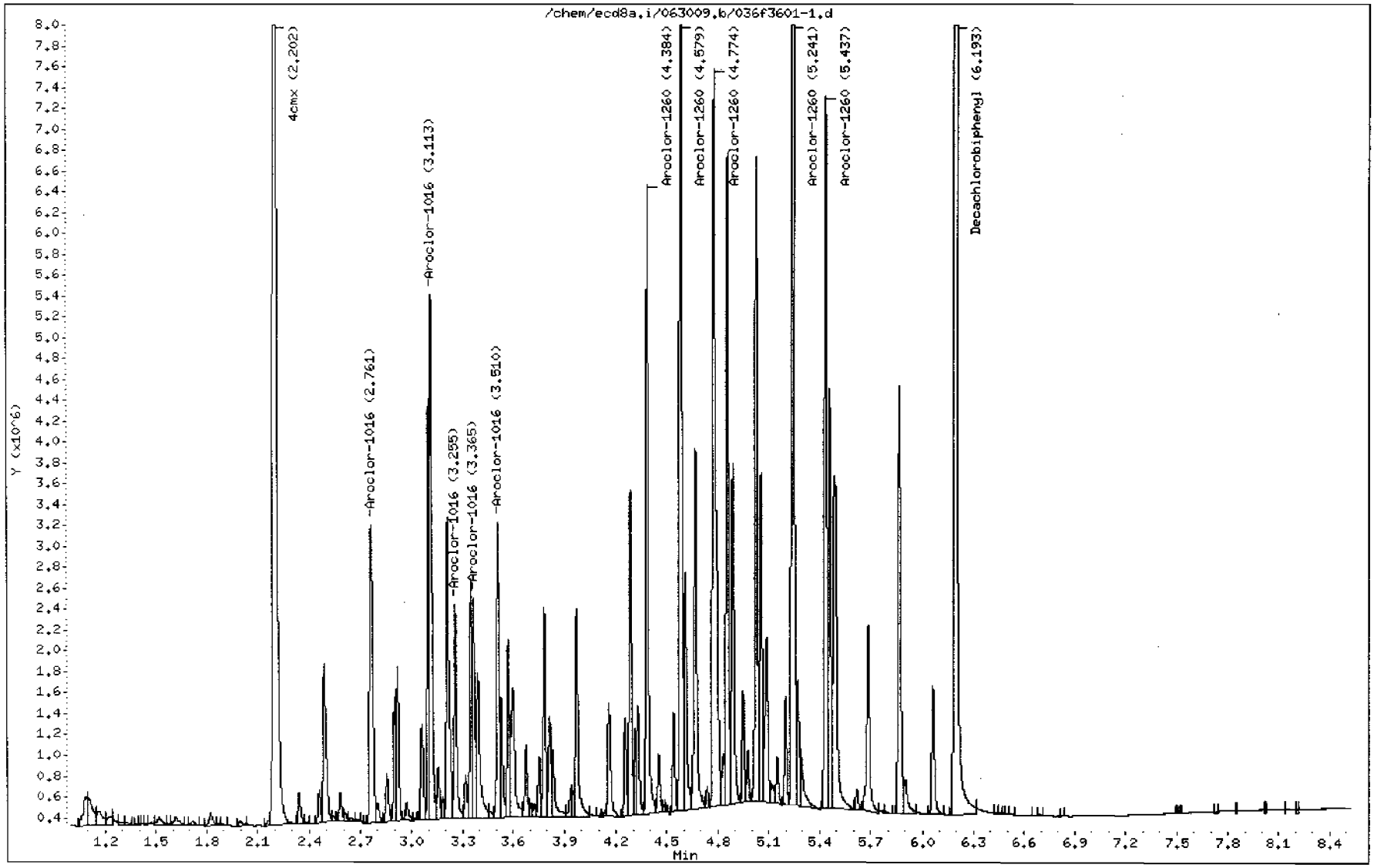

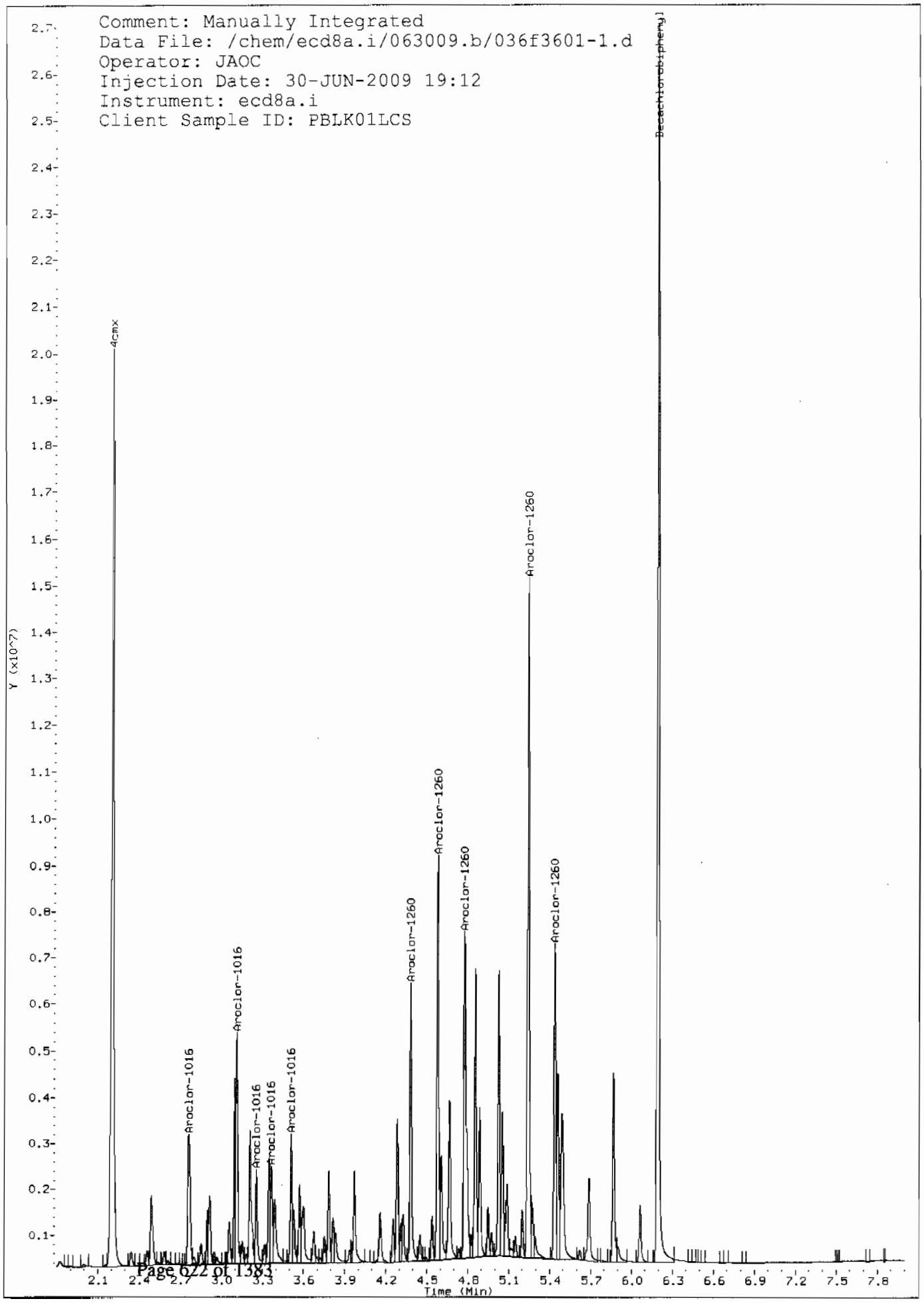
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/036f3601-1.d
Operator: JAOC
Injection Date: 30-JUN-2009 19:12
Instrument: ecd8a.i
Client Sample ID: PBLK01LCS
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
Time (Min)

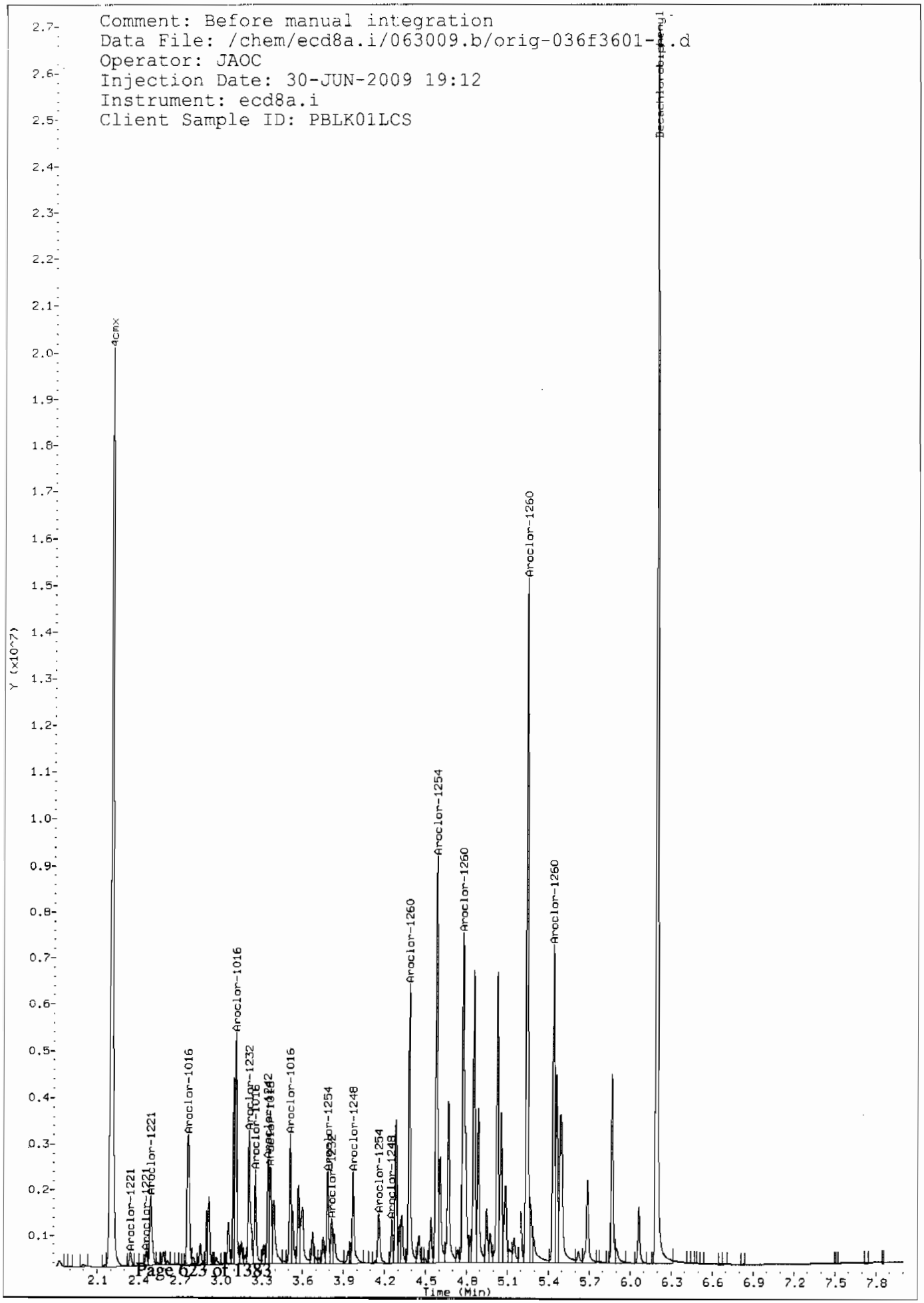
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-036f3601-1.d
Operator: JAOC
Injection Date: 30-JUN-2009 19:12
Instrument: ecd8a.i
Client Sample ID: PBLK01LCS
Decachlorobiphenyl
4cmX
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1248
Aroclor-1260
Y (x10^7)
Time (Min)

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/036b3601-1.d
Lab Smp Id: 1201870210 Client Smp ID: PBLK01LCS
Inj Date : 30-JUN-2009 19:12
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870210|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 36 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2455.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclpl

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	7802262	135.256	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	8186550	145.350	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.223	3.222	0.001	1281079	580.790	19.4	80.00- 120.00	100.00
3.575	3.575	0.000	1896944	647.231	21.6	118.74- 158.74	148.07
3.675	3.675	0.000	1095603	629.990	21.0	60.26- 100.26	85.52
3.752	3.752	0.000	650861	626.957	20.9	28.23- 68.23	50.81

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.826	3.826	0.000	653836	610.919	20.4	28.70- 68.70	51.04
Average of Peak Concentrations =					20.6		
7 Aroclor-1260					CAS #: 11096-82-5		
4.936	4.936	0.000	2150076	746.023	24.9	80.00- 120.00	100.00
5.084	5.083	0.001	2740615	792.835	26.4	104.06- 144.06	127.47
5.199	5.199	0.000	2417909	765.516	25.5	91.97- 131.97	112.46
5.609	5.608	0.001	2122786	896.416	29.9	64.43- 104.43	98.73
6.039	6.041	-0.002	3461802	918.170	30.6	116.83- 156.83	161.01
Average of Peak Concentrations =					27.5		

Data File: /chem/ecd8a.i/063009.b/036b3601-1.d
Date : 30-JUN-2009 19:12
Client ID: PBLK01LCS
Sample Info: |120187021011|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

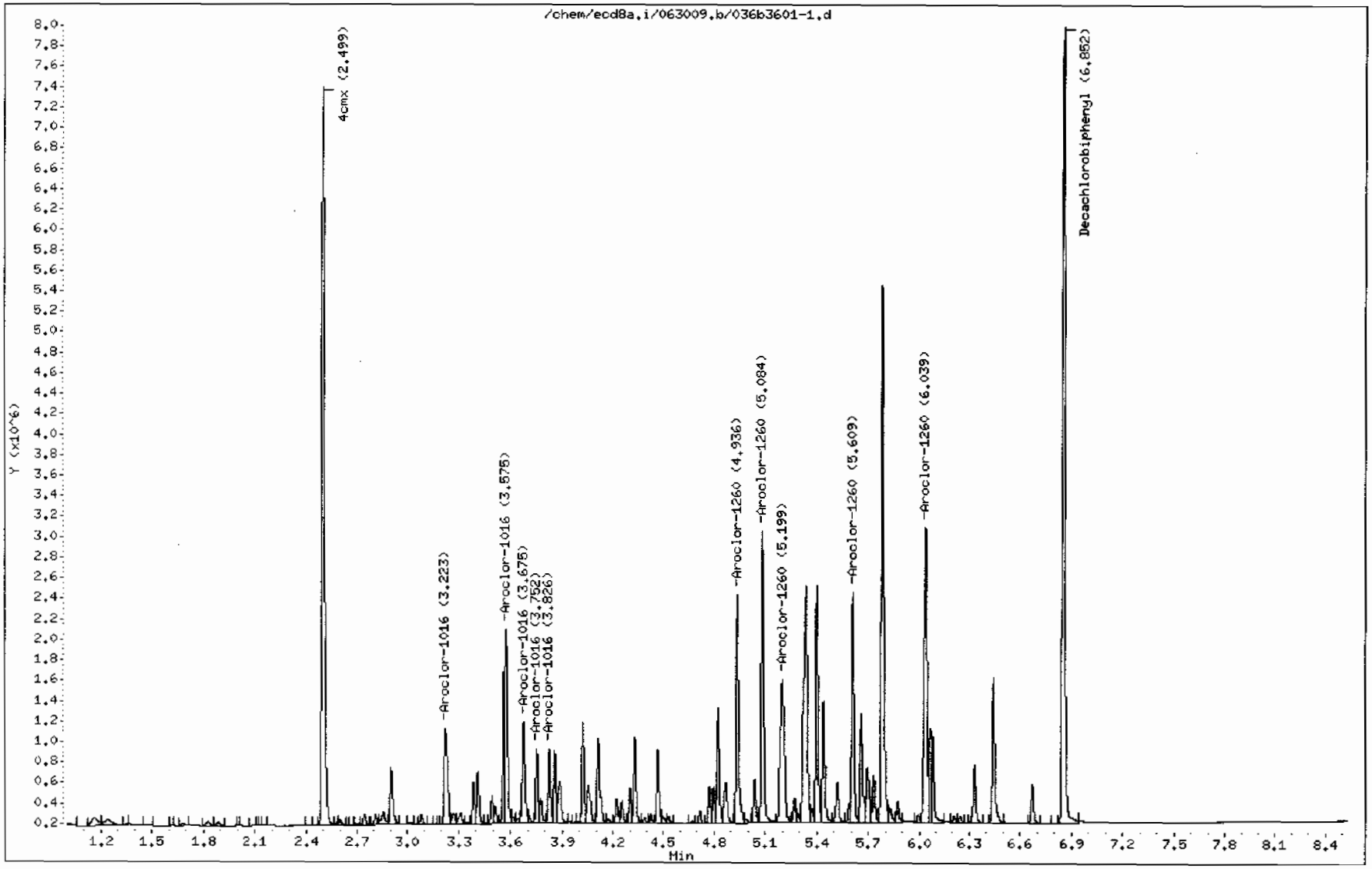

MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD8

DATE: 06/17/2009 METHOD: ECD8-F-8082-060109.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT CY613
ALUMINA LOT 090409-A
COPPER LOT 090324-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: /chem/ecd8a.i/061609.b Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99 1	JAOC	16-JUN-2009 08:23		061609	1.0		CLEAN
002f0201.d	WAR090522-60 1	JAOC	16-JUN-2009 08:36		061609	1.0		DUSE
003f0301.d	WAR090302-54	JAOC	16-JUN-2009 08:48		061609	1.0		PASSES AVG
004f0401.d	WAR090519-42	JAOC	16-JUN-2009 09:01		061609	1.0		PASSES AVG
005f0501.d	WAR090521-48	JAOC	16-JUN-2009 09:13		061609	1.0		DUSE
006f0601.d	WAR090522-60 1	JAOC	16-JUN-2009 09:25		061609	1.0		DUSE
007f0701.d	WAR090521-48	JAOC	16-JUN-2009 09:43		061609	1.0		PASSES AVG
008f0801.d	WAR090616-01 60	JAOC	16-JUN-2009 09:56		061609	1.0		1660 LEVEL 1
009f0901.d	WAR090616-02 60	JAOC	16-JUN-2009 10:09		061609	1.0		1660 LEVEL 2
010f1001.d	WAR090616-03 60	JAOC	16-JUN-2009 10:21		061609	1.0		1660 LEVEL 3
011f1101.d	WAR090616-04 60	JAOC	16-JUN-2009 10:33		061609	1.0		1660 LEVEL 4
012f1201.d	IAR090601-01 60	JAOC	16-JUN-2009 10:46		061609	1.0		1660 LEVEL 5
013f1301.d	WAR090616-60 1	JAOC	16-JUN-2009 10:58		061609	1.0		PASSES BOTH COLUMNS
014f1401.d	WAR090326-32	JAOC	16-JUN-2009 11:10		061609	1.0		PATTERN ONLY
015f1501.d	WAR090320-21	JAOC	16-JUN-2009 11:23		061609	1.0		PATTERN ONLY

Instrument Batch: /chem/ecd8a.i/061609.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	WAR090608-62	JAOC	16-JUN-2009 11:35		061609	1.0		PATTERN ONLY
017f1701.d	WAR090424-68	JAOC	16-JUN-2009 11:47		061609	1.0		PATTERN ONLY

018f1801.d	WAR090416-DDT	JAOC	16-JUN-2009 12:00		061609		1.0		DDT
019f1901.d	WAR090519-99 2	JAOC	16-JUN-2009 12:12		061609		1.0		CLEAN
020f2001.d	231401001	JAOC	16-JUN-2009 12:24	875581	09-2220		50.0	LANL	UPLOAD BOTH, USE HIGHER
021f2101.d	1201861052	JAOC	16-JUN-2009 12:41	876831	09-2210		1.0	QC A	UPLOAD BOTH, USE HIGHER
022f2201.d	1201861053	JAOC	16-JUN-2009 12:53	876831	09-2210		1.0	QC A	UPLOAD BOTH, USE HIGHER
023f2301.d	231313016	JAOC	16-JUN-2009 13:06	876831	09-2210		10.0	LANL	UPLOAD BOTH, USE HIGHER
024f2401.d	1201861054	JAOC	16-JUN-2009 13:22	876831	09-2210		10.0	QC A	UPLOAD BOTH, USE HIGHER
025f2501.d	1201861055	JAOC	16-JUN-2009 13:39	876831	09-2210		10.0	QC A	UPLOAD BOTH, USE HIGHER
026f2601.d	231401009	JAOC	16-JUN-2009 13:55	876831	09-2220		5.0	LANL	UPLOAD BOTH, USE HIGHER
027f2701.d	231483001	JAOC	16-JUN-2009 14:12	876831	09-2245		1.0	LANL	UPLOAD BOTH, USE HIGHER
028f2801.d	231483002	JAOC	16-JUN-2009 14:28	876831	09-2245		1.0	LANL	UPLOAD BOTH, USE HIGHER
029f2901.d	WAR090616-60 2	JAOC	16-JUN-2009 14:45		061609		1.0		PASSES AVG
030f3001.d	WAR090519-99 3	JAOC	16-JUN-2009 14:57		061609		1.0		CLEAN
031f3101.d	231488001	JAOC	16-JUN-2009 15:09	876831	09-2247		5.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	231488002	JAOC	16-JUN-2009 15:26	876831	09-2247		1.0	LANL	UPLOAD BOTH, USE HIGHER
033f3301.d	231488003	JAOC	16-JUN-2009 15:42	876831	09-2247		1.0	LANL	UPLOAD BOTH, USE HIGHER
034f3401.d	231494001	JAOC	16-JUN-2009 15:59	876831	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER
035f3501.d	231494002	JAOC	16-JUN-2009 16:15	876831	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	231494003	JAOC	16-JUN-2009 16:32	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
037f3701.d	231494004	JAOC	16-JUN-2009 16:48	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
038f3801.d	231494006	JAOC	16-JUN-2009 17:05	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
039f3901.d	231494007	JAOC	16-JUN-2009 17:21	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
040f4001.d	231494010	JAOC	16-JUN-2009 17:38	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
041f4101.d	WAR090616-60 3	JAOC	16-JUN-2009 17:54		061609	1.0		PASSES AVG, DCB LOW

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD8

DATE: 07/01/2009 METHOD: ECD8-F-8082-060109.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT CY264
ALUMINA LOT 1134110-A
COPPER LOT 090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: /chem/ecd8a.i/063009.b Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99 1	JAOC	30-JUN-2009 10:46		063009	1.0		CLEAN
002f0201.d	WAR090629-04601	JAOC	30-JUN-2009 10:59		063009	1.0		PASSES BOTH COLUMNS
003f0301.d	WAR090302-54	JAOC	30-JUN-2009 11:11		063009	1.0		PASSES BOTH COLUMNS
004f0401.d	WAR090519-42	JAOC	30-JUN-2009 11:24		063009	1.0		PASSES BOTH COLUMNS
005f0501.d	WAR090521-48	JAOC	30-JUN-2009 11:36		063009	1.0		PASSES BOTH COLUMNS
006f0601.d	WAR090618-32	JAOC	30-JUN-2009 11:48		063009	1.0		PATTERN ONLY
007f0701.d	WAR090618-21	JAOC	30-JUN-2009 12:03		063009	1.0		PATTERN ONLY
008f0801.d	WAR090608-62	JAOC	30-JUN-2009 12:16		063009	1.0		PATTERN ONLY
009f0901.d	WAR090424-68	JAOC	30-JUN-2009 12:28		063009	1.0		PATTERN ONLY
010f1001.d	WAR090618-DDT	JAOC	30-JUN-2009 12:40		063009	1.0		DDT
011f1101.d	WAR090519-99 2	JAOC	30-JUN-2009 12:53		063009	1.0		CLEAN
012f1201.d	1201871515	JAOC	30-JUN-2009 13:05	881260	09-2475	1.0	QC A	UPLOAD BOTH, USE HIGHER
013f1301.d	1201871516	JAOC	30-JUN-2009 13:18	881260	09-2475	1.0	QC A	UPLOAD BOTH, USE HIGHER
014f1401.d	232064001	JAOC	30-JUN-2009 13:30	881260	09-2403	1.0	LANL	UPLOAD BOTH, USE HIGHER
015f1501.d	1201871517	JAOC	30-JUN-2009 13:46	881260	09-2403	1.0	QC A	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/063009.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	1201871518	JAOC	30-JUN-2009 14:03	881260	09-2403	1.0	QC A	UPLOAD BOTH, USE HIGHER
017f1701.d	232426001	JAOC	30-JUN-2009 14:19	881260	09-2475	5.0	LANL	UPLOAD BOTH, USE HIGHER

018f1801.d	232426002	JAOC	30-JUN-2009 14:36	881260	09-2475	5.0	LANL	UPLOAD BOTH, USE HIGHER
019f1901.d	232428001	JAOC	30-JUN-2009 14:52	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
020f2001.d	232428002	JAOC	30-JUN-2009 15:09	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
021f2101.d	232428003	JAOC	30-JUN-2009 15:25	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
022f2201.d	WAR090629-04602	JAOC	30-JUN-2009 15:42		063009	1.0		PASSES BOTH COLUMNS
023f2301.d	WAR090519-99 3	JAOC	30-JUN-2009 15:54		063009	1.0		CLEAN
024f2401.d	232428004	JAOC	30-JUN-2009 16:06	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
025f2501.d	232428012	JAOC	30-JUN-2009 16:23	881260	09-2477	5.0	LANL	UPLOAD BOTH, USE HIGHER
026f2601.d	232428015	JAOC	30-JUN-2009 16:39	881260	09-2477	1.0	LANL	UPLOAD BOTH, USE HIGHER
027f2701.d	232507001	JAOC	30-JUN-2009 16:56	881260	09-2499	1.0	LANL	UPLOAD BOTH, USE HIGHER
028f2801.d	232507002	JAOC	30-JUN-2009 17:12	881260	09-2499	5.0	LANL	UPLOAD BOTH, USE HIGHER
029f2901.d	232507003	JAOC	30-JUN-2009 17:29	881260	09-2499	1.0	LANL	UPLOAD BOTH, USE HIGHER
030f3001.d	232507004	JAOC	30-JUN-2009 17:45	881260	09-2499	1.0	LANL	UPLOAD BOTH, USE HIGHER
031f3101.d	232507005	JAOC	30-JUN-2009 18:02	881260	09-2499	5.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	232507006	JAOC	30-JUN-2009 18:18	881260	09-2499	5.0	LANL	UPLOAD BOTH, USE HIGHER
033f3301.d	WAR090629-04603	JAOC	30-JUN-2009 18:35		063009	1.0		PASSES BOTH COLUMNS
034f3401.d	WAR090519-99 4	JAOC	30-JUN-2009 18:47		063009	1.0		CLEAN
035f3501.d	1201870209	JAOC	30-JUN-2009 18:59	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/063009.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	1201870210	JAOC	30-JUN-2009 19:12	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
037f3701.d	232348004	JAOC	30-JUN-2009 19:24	880783	09-2457	1.0	LANL	UPLOAD BOTH, USE HIGHER
038f3801.d	1201870211	JAOC	30-JUN-2009 19:41	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
039f3901.d	1201870212	JAOC	30-JUN-2009 19:57	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
040f4001.d	232357001	JAOC	30-JUN-2009 20:14	880783	09-2455	1.0	LANL	UPLOAD BOTH, USE HIGHER
041f4101.d	232357002	JAOC	30-JUN-2009 20:30	880783	09-2455	1.0	LANL	UPLOAD BOTH, USE HIGHER

042f4201.d	232363001	JAOC	30-JUN-2009 20:47	880783	09-2451		1.0 LANL	UPLOAD BOTH, USE HIGHER
043f4301.d	232363010	JAOC	30-JUN-2009 21:03	880783	09-2451		1.0 LANL	UPLOAD BOTH, USE HIGHER
044f4401.d	232363011	JAOC	30-JUN-2009 21:20	880783	09-2451		1.0 LANL	UPLOAD BOTH, USE HIGHER
045f4501.d	WAR090629-04604	JAOC	30-JUN-2009 21:36		063009		1.0	PASSES BOTH COLUMNS
046f4601.d	WAR090519-99 5	JAOC	30-JUN-2009 21:48		063009		1.0	CLEAN
047f4701.d	1201871656	JAOC	30-JUN-2009 22:01	881324	EUI-7181		1.0 QC A	UPLOAD BOTH, USE HIGHER
048f4801.d	1201871657	JAOC	30-JUN-2009 22:13	881324	EUI-7181		1.0 QC A	UPLOAD BOTH, USE HIGHER
049f4901.d	232126001	JAOC	30-JUN-2009 22:26	881324	EUI-7181		1.0 CARE	SENT FOR RE, DCB LOW, UPLOAD BOTH, USE HIGHER
050f5001.d	232141009	JAOC	30-JUN-2009 22:42	881324	232141		1.0 WASP	UPLOAD BOTH, USE HIGHER (MS/MSD CONFIRM LOW DCB)
051f5101.d	1201871658	JAOC	30-JUN-2009 22:59	881324	232141		1.0 QC A	UPLOAD BOTH, USE HIGHER
052f5201.d	1201871659	JAOC	30-JUN-2009 23:15	881324	232141		1.0 QC A	UPLOAD BOTH, USE HIGHER
053f5301.d	WAR090629-04605	JAOC	30-JUN-2009 23:31		063009		1.0	PASSES BOTH COLUMNS
054f5401.d	WAR090519-99 6	JAOC	30-JUN-2009 23:44		063009		1.0	CLEAN

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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/038b3801.d
Lab Smp Id: 1201870211 Client Smp ID: CAMO-09-10467MS
Inj Date : 30-JUN-2009 19:41
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870211|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 38 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	4.53430	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	6621829	114.793	4.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	6939284	123.205	4.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	1076297	487.950	17.0	80.00- 120.00	100.00
3.574	3.575	-0.001	1639464	559.380	19.5	118.74- 158.74	152.32
3.674	3.675	-0.001	947541	544.852	19.0	60.26- 100.26	88.04
3.751	3.752	-0.001	565505	544.736	19.0	28.23- 68.23	52.54
3.825	3.826	-0.001	564402	527.355	18.4	28.70- 68.70	52.44
Average of Peak Concentrations =					18.6		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
**	======	========	========	=======	=======	==========	=====
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	1816294	630.209	22.0	80.00- 120.00	100.00
5.083	5.083	0.000	2290188	662.530	23.1	104.06- 144.06	126.09
5.198	5.199	-0.001	2032310	643.434	22.4	91.97- 131.97	111.89
5.607	5.608	-0.001	1767583	746.420	26.0	64.43- 104.43	97.32
6.038	6.041	-0.003	2852133	756.468	26.4	116.83- 156.83	157.03
			Average of Peak Concentrations =		24.0		

Data File: /chem/ecd8a.i/063009.b/0386b3801.d
Date : 30-JUN-2009 19:41
Client ID: CAWO-09-10467WS
Sample Info: 1120187021111
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

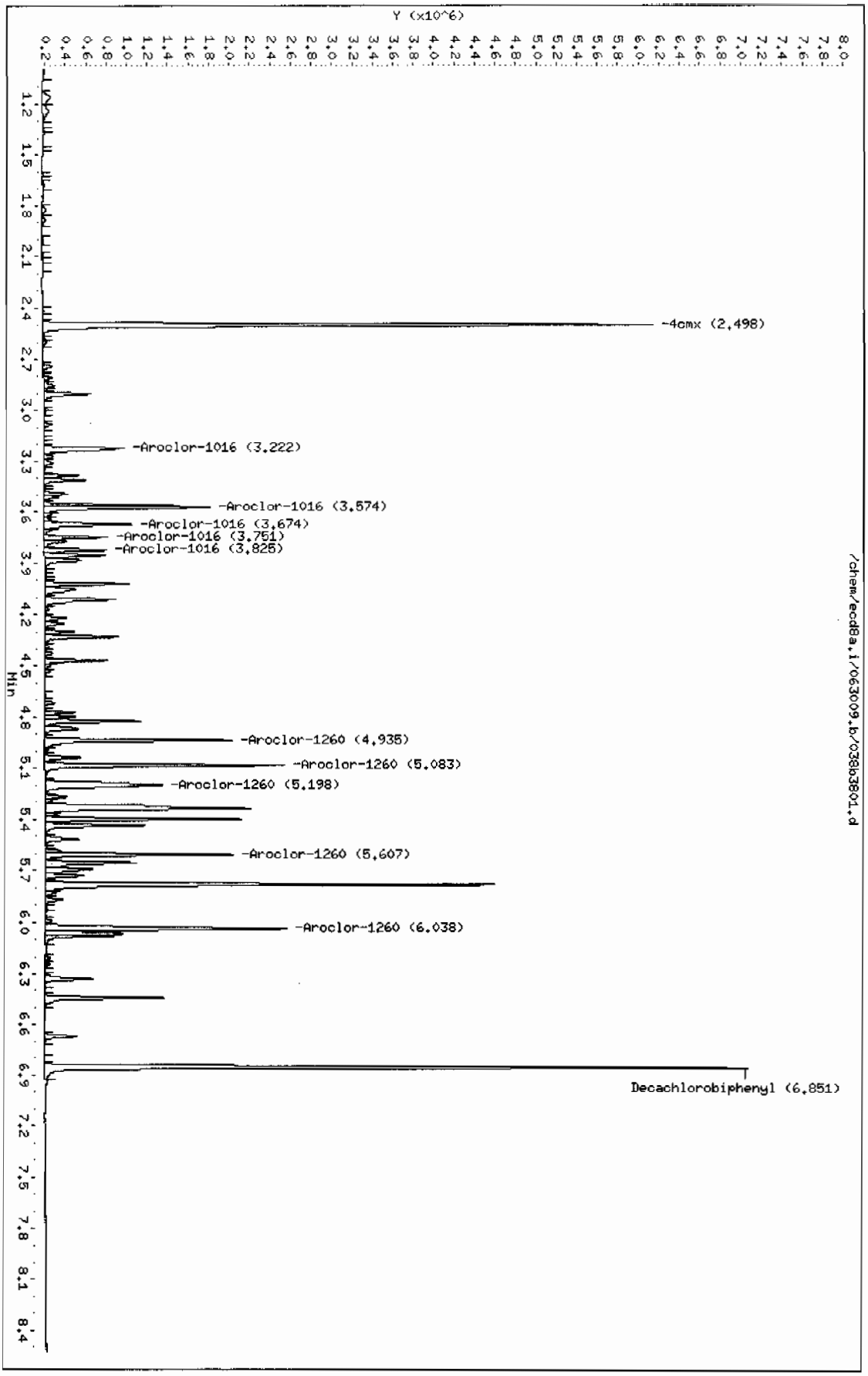

Page 1

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/038f3801.d
Lab Smp Id: 1201870211 Client Smp ID: CAMO-09-10467MS
Inj Date : 30-JUN-2009 19:41
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870211|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 38 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	4.53430	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	19728056	123.266	4.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	22661322	134.950	4.7	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.759	2.762	-0.003	3137777	544.073	19.0	80.00- 120.00	100.00
3.111	3.112	-0.001	3989252	552.167	19.3	104.26- 144.26	127.14
3.254	3.256	-0.002	1740999	598.392	20.9	31.13- 71.13	55.49
3.364	3.365	-0.001	1723675	626.160	21.8	27.14- 67.14	54.93
3.508	3.510	-0.002	2222852	612.580	21.4	42.84- 82.84	70.84
Average of Peak Concentrations =					20.5		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor 1260					CAS #: 11096-82-5		
4.382	4.383	-0.001	5011946	703.101	24.5	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	7379213	731.447	25.5	122.43- 162.43	147.23
4.772	4.774	-0.002	7973213	694.403	24.2	138.51- 178.51	159.08
5.239	5.242	-0.003	11706431	873.912	30.5	171.28- 211.28	233.57
5.435	5.437	-0.002	5390510	822.765	28.7	73.47- 113.47	107.55
Average of Peak Concentrations =					26.7		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/038f3801.d

Date : 30-JUN-2009 19:41

Client ID: CAMO-09-10467MS

Sample Info: |120187021111|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

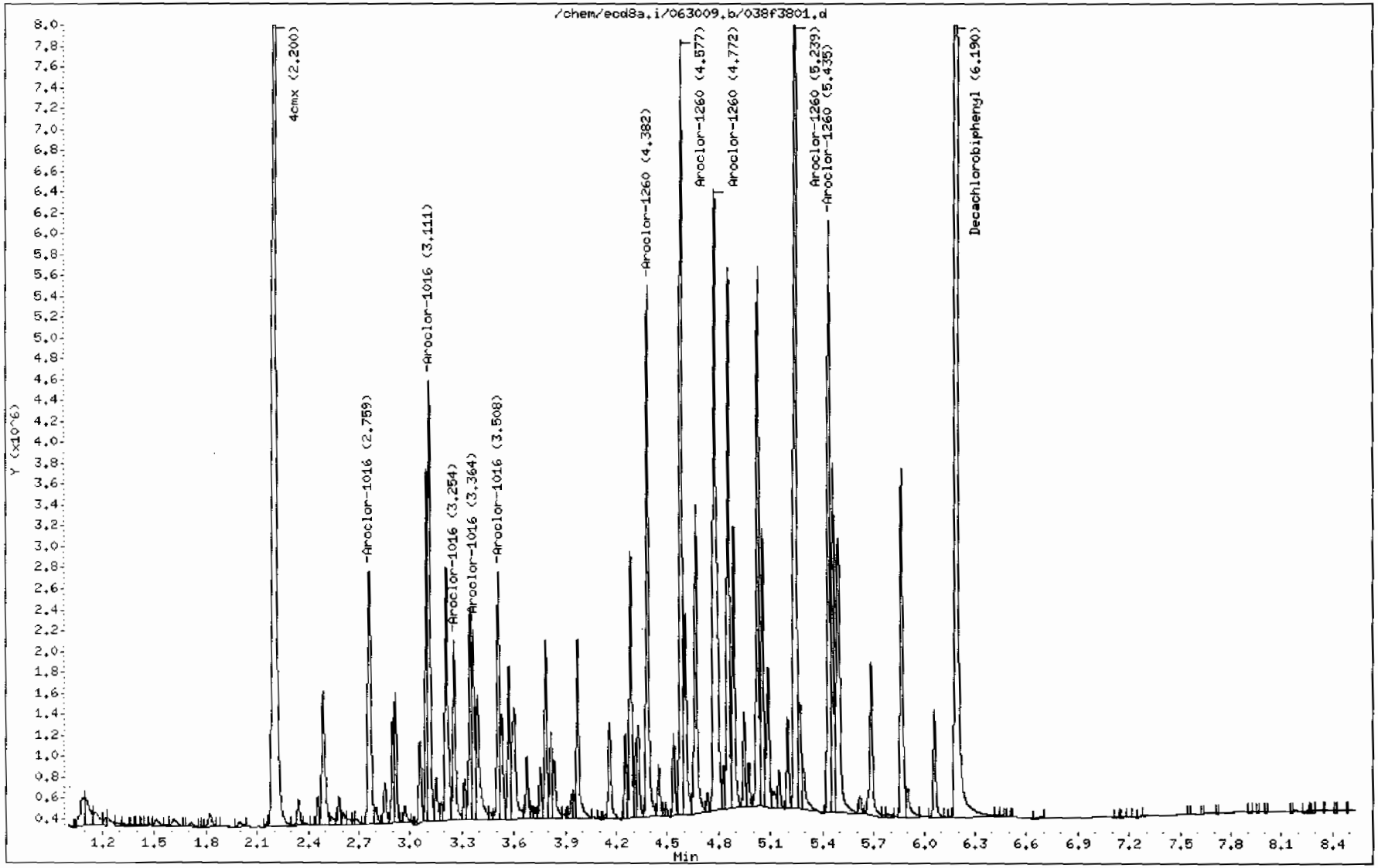

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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/039b3901.d
Lab Smp Id: 1201870212 Client Smp ID: CAMO-09-10467MSD
Inj Date : 30-JUN-2009 19:57
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870212|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 39 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.11000	Weight of sample extracted (g)
M	4.53430	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	5627774	97.5603	3.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	6139313	109.002	3.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.221	3.222	-0.001	1003630	455.006	15.8	80.00- 120.00	100.00
3.574	3.575	-0.001	1496342	510.547	17.8	118.74- 158.74	149.09
3.674	3.675	-0.001	862679	496.055	17.2	60.26- 100.26	85.96
3.751	3.752	-0.001	510241	491.502	17.1	28.23- 68.23	50.84
3.824	3.826	-0.002	525383	490.897	17.1	28.70- 68.70	52.35

Average of Peak Concentrations = 17.0

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	1750743	607.464	21.1	80.00- 120.00	100.00
5.083	5.083	0.000	2205455	638.018	22.2	104.06- 144.06	125.97
5.198	5.199	-0.001	1947632	616.625	21.4	91.97- 131.97	111.25
5.607	5.608	-0.001	1698742	717.350	25.0	64.43- 104.43	97.03
6.038	6.041	-0.003	2765989	733.620	25.5	116.83- 156.83	157.99
Average of Peak Concentrations =					23.0		

Data File: /chem/ecd8a.i/063009.b/039b3901.d
Date : 30-JUN-2009 19:57
Client ID: CAMD-09-10467MSD
Sample Info: 1120187021211
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

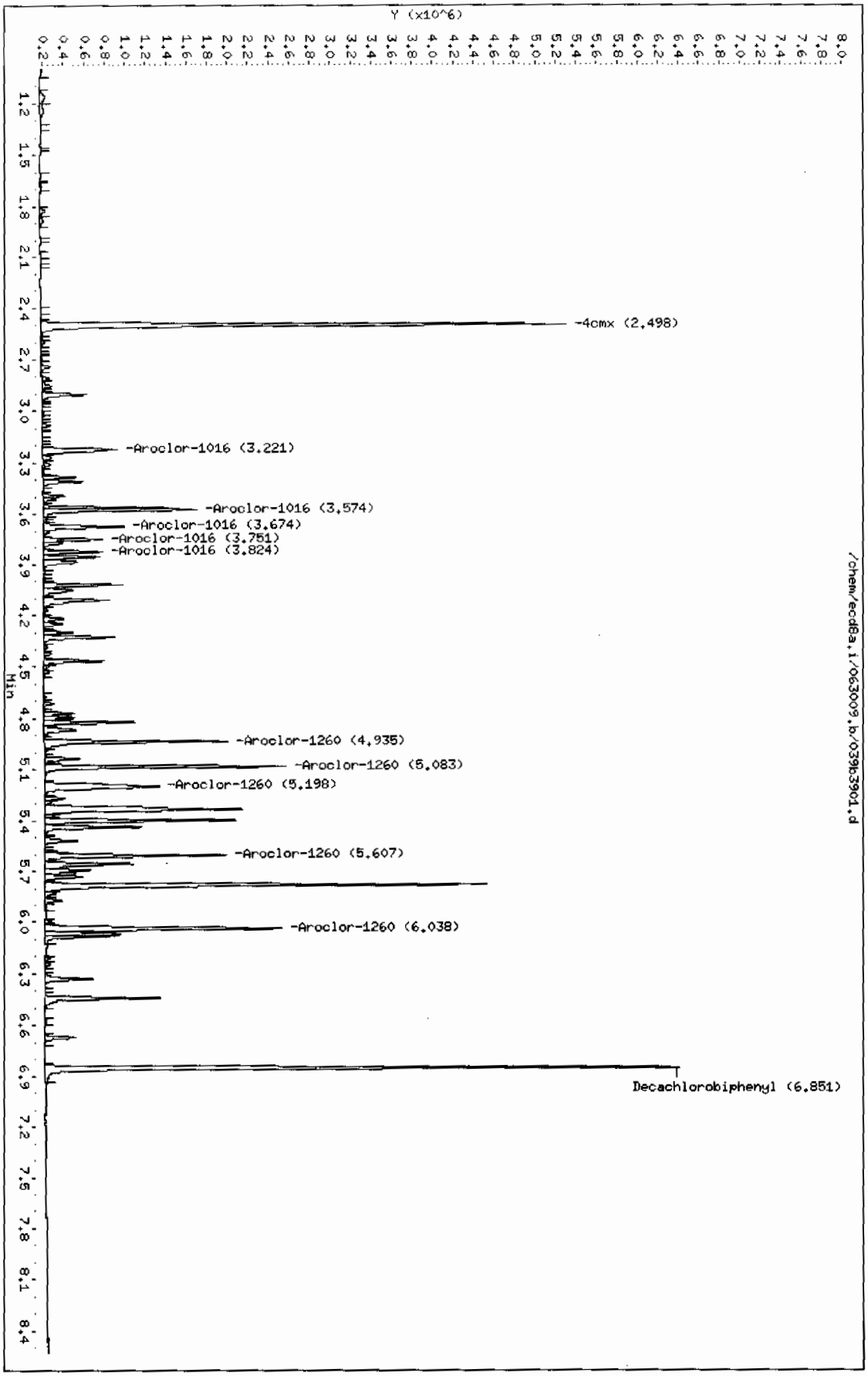

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/039f3901.d
Lab Smp Id: 1201870212 Client Smp ID: CAMO-09-10467MSD
Inj Date : 30-JUN-2009 19:57
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201870212|1|
Misc Info : |ECD82P_1SF|880783|SVAF|QC A|SO1L|MSD|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 39 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2457.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.11000	Weight of sample extracted (g)
M	4.53430	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	16698440	104.337	3.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	19824388	118.055	4.1	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.759	2.762	-0.003	2949200	511.375	17.8	80.00- 120.00	100.00
3.110	3.112	-0.002	3853117	533.324	18.6	104.26- 144.26	130.65
3.253	3.256	-0.003	1677869	576.694	20.1	31.13- 71.13	56.89
3.363	3.365	-0.002	1580005	573.969	20.0	27.14- 67.14	53.57
3.508	3.510	-0.002	2076306	572.194	19.9	42.84- 82.84	70.40
Average of Peak Concentrations =					19.3		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	4800446	673.431	23.4	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	7307452	724.334	25.2	122.43- 162.43	152.22
4.772	4.774	-0.002	7881306	686.398	23.9	138.51- 178.51	164.18
5.239	5.242	-0.003	11629982	868.205	30.2	171.28- 211.28	242.27
5.435	5.437	-0.002	5280714	806.007	28.0	73.47- 113.47	110.00
Average of Peak Concentrations =					26.1		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/039f3901.d
Date : 30-JUN-2009 19:57
Client ID: CAMO-09-10467MSD
Sample Info: |120187021211|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

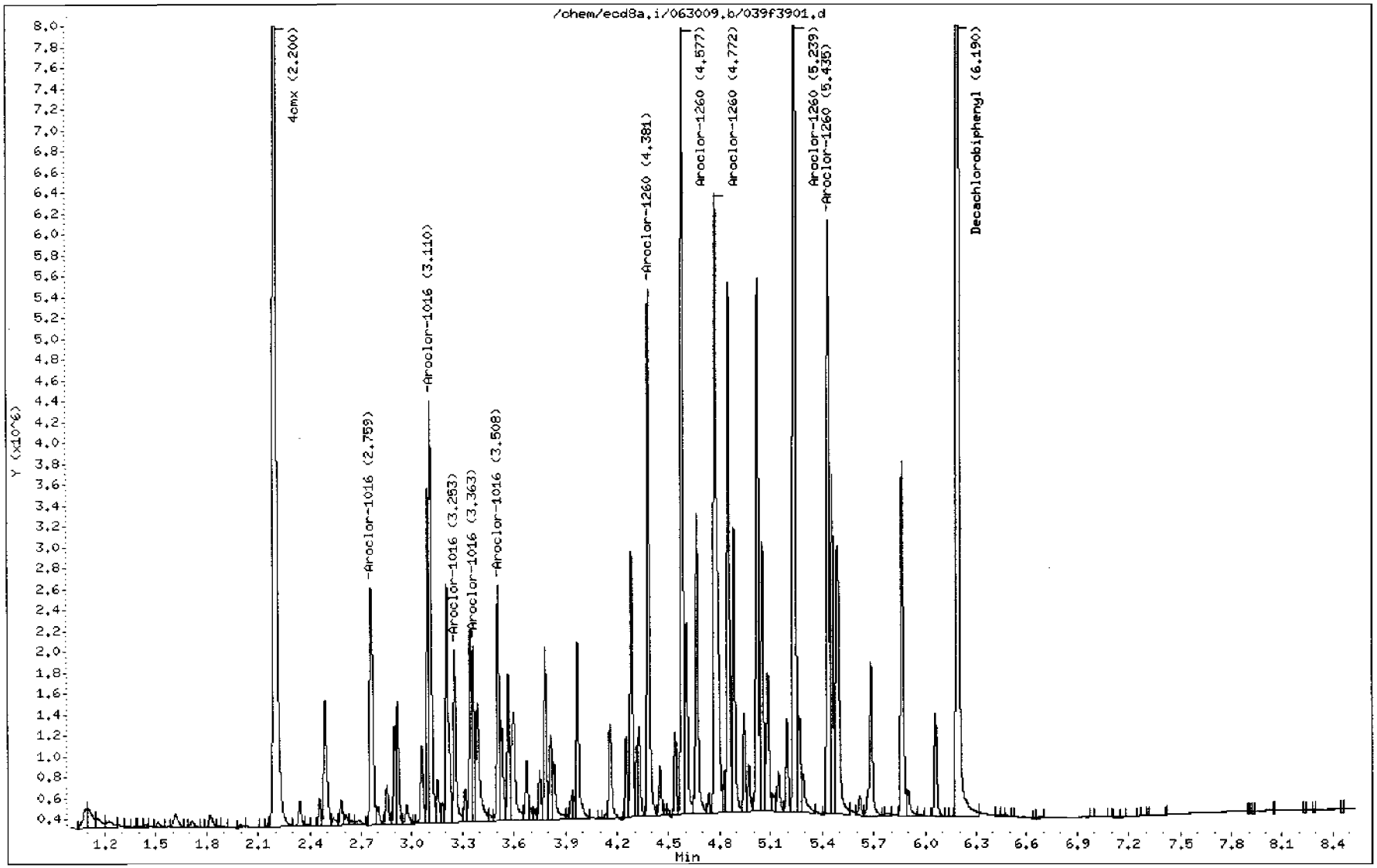

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 880782 **Verified by:** _____

Analyst: Robin Hunt

Method: SW846 3550B

Lab SOP: GL–OA–E–010 REV# 18

Instrument: Semi–Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201870209 MB	29–JUN–2009 16:16:37	30	H2SO4/KMnl		1	8	1	0.03333
1201870210 LCS	29–JUN–2009 16:16:37	30	H2SO4/KMnl		1	8	1	0.03333
232348004	29–JUN–2009 16:16:37	30.01	H2SO4/KMnl		1	8	1	0.03332
1201870211 MS (232348004)	29–JUN–2009 16:16:37	30.02	H2SO4/KMnl		1	8	1	0.03331
1201870212 MSD (232348004)	29–JUN–2009 16:16:37	30.11	H2SO4/KMnl		1	8	1	0.03321
232357001	29–JUN–2009 16:16:37	30.01	H2SO4/KMnl		1	8	1	0.03332
232357002	29–JUN–2009 16:16:37	30.14	H2SO4/KMnl		1	8	1	0.03318
232363001	29–JUN–2009 16:16:37	30.05	H2SO4/KMnl		1	8	1	0.03328
232363010	29–JUN–2009 16:16:37	30.2	H2SO4/KMnl		1	8	1	0.03311
232363011	29–JUN–2009 16:16:37	30.14	H2SO4/KMnl		1	8	1	0.03318

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201870210	PCB Laboratory Control	WE090610–07	1	mL
MS	1201870211	PCB Laboratory Control	WE090610–07	1	mL
MSD	1201870212	PCB Laboratory Control	WE090610–07	1	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE090619–14	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	1:1 sulfuric acid	1133264a	5	mL
REGNT	All	Hexane	1135278–B2	150	mL
REGNT	All	5% Potassium Permanganate	B1133159–F	5	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Clean up Date: 06–29–09

Clean up Initials: RWH

Verified By: jda

Final Solvent: Hexane

Clean Up SOP: GL–OA–E–037

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2455

Sample Analysis

Sample ID	**Client ID**
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201869975	Method Blank (MB) **ICP**
1201869976	Laboratory Control Sample (LCS)
1201869979	232357001(CAMO-09-10480L) Serial Dilution (SD)
1201869977	232357001(CAMO-09-10480D) Sample Duplicate (DUP)
1201869978	232357001(CAMO-09-10480S) Matrix Spike (MS)
1201869980	232357001(CAMO-09-10480SD) Matrix Spike Duplicate (MSD)
1201870011	Method Blank (MB) **ICP-MS**
1201870012	Laboratory Control Sample (LCS)
1201870015	232357001(CAMO-09-10480L) Serial Dilution (SD)
1201870013	232357001(CAMO-09-10480D) Sample Duplicate (DUP)
1201870014	232357001(CAMO-09-10480S) Matrix Spike (MS)
1201870016	232357001(CAMO-09-10480SD) Matrix Spike Duplicate (MSD)
1201870315	Method Blank (MB) **CVAA**
1201870316	Laboratory Control Sample (LCS)
1201870319	232357001(CAMO-09-10480L) Serial Dilution (SD)
1201870317	232357001(CAMO-09-10480D) Sample Duplicate (DUP)
1201870318	232357001(CAMO-09-10480S) Matrix Spike (MS)
1201870320	232357001(CAMO-09-10480SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	880671, 880688 and 880840
Prep Batch :	880670, 880687 and 880839
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following sample was selected as the quality control (QC) sample for this SDG: 232357001.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of aluminum, arsenic, selenium and thallium, as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements with the exceptions of manganese and nickel, as indicated by the "*" qualifiers.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of arsenic, calcium, selenium and thallium, as indicated by the "N" qualifiers.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCRs were generated for this SDG: 707356 and 707884. A copy of each NCR is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Parson **Date:** 7/15/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2455 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232357001 **BASIS:** Dry Weight **DATE COLLECTED** 22-JUN-09

CLIENT ID: CAMO-09-10480 **LEVEL:** Low **DATE RECEIVED** 25-JUN-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1340000	ug/Kg	N	7600	22400	22400	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-36-0	Antimony	1120	ug/Kg	U	346	1120	1120	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-38-2	Arsenic	1420	ug/kg	N	224	1120	1120	2	MS	RMJ	07/01/09 14:07	090630-2	880688
7440-39-3	Barium	25400	ug/Kg		112	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-41-7	Beryllium	271	ug/kg		22.4	112	112	2	MS	RMJ	07/01/09 14:07	090630-2	880688
7440-43-9	Cadmium	559	ug/Kg	U	112	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-70-2	Calcium	873000	ug/Kg	N	3350	11200	11200	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-47-3	Chromium	4130	ug/Kg		112	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-48-4	Cobalt	947	ug/Kg		224	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-50-8	Copper	1340	ug/Kg		335	1120	1120	1	P	HSC	06/30/09 15:10	063009-1	880671
7439-89-6	Iron	9270000	ug/Kg		2790	11200	11200	1	P	HSC	06/30/09 15:10	063009-1	880671
7439-92-1	Lead	3060	ug/Kg		279	1120	1120	1	P	HSC	06/30/09 15:10	063009-1	880671
7439-95-4	Magnesium	547000	ug/Kg		9500	33500	33500	1	P	HSC	06/30/09 15:10	063009-1	880671
7439-96-5	Manganese	252000	ug/Kg	*	224	1120	1120	1	P	HSC	06/30/09 15:10	063009-1	880671
7439-97-6	Mercury	13.1	ug/kg	U	4.46	13.1	13.1	1	AV	JXL1	06/30/09 10:47	063009S1-3	880840
7440-02-0	Nickel	2400	ug/kg	*	112	447	447	2	MS	RMJ	07/01/09 14:07	090630-2	880688
7440-09-7	Potassium	400000	ug/Kg		5590	16800	16800	1	P	HSC	06/30/09 15:10	063009-1	880671
7782-49-2	Selenium	561	ug/kg	JN	559	1120	1120	2	MS	RMJ	07/01/09 14:07	090630-2	880688
7440-22-4	Silver	375	ug/Kg	J	112	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-23-5	Sodium	293000	ug/Kg		5030	16800	16800	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-28-0	Thallium	91.9	ug/kg	JN	67.1	224	224	2	MS	RMJ	07/01/09 14:07	090630-2	880688
7440-62-2	Vanadium	5990	ug/Kg		112	559	559	1	P	HSC	06/30/09 15:10	063009-1	880671
7440-66-6	Zinc	31700	ug/Kg		224	1120	1120	1	P	HSC	06/30/09 15:10	063009-1	880671

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880671	880670	SW846 3050B	0.504	g	50	mL	06/29/09	BXA1
880688	880687	SW846 3050B	0.504	g	50	mL	06/30/09	BXA1
880840	880839	SW846 7471A Prep	0.515	g	30	mL	06/29/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2455 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232357002 **BASIS:** Dry Weight **DATE COLLECTED** 22-JUN-09

CLIENT ID: CAMO-09-10479 **LEVEL:** Low **DATE RECEIVED** 25-JUN-09

MATRIX: SOIL **%SOLIDS:** 90.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1020000	ug/Kg	N	7410	21800	21800	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-36-0	Antimony	1090	ug/Kg	U	338	1090	1090	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-38-2	Arsenic	977	ug/kg	JN	219	1100	1100	2	MS	RMJ	07/01/09 14:37	090630-2	880688
7440-39-3	Barium	28700	ug/Kg		109	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-41-7	Beryllium	262	ug/kg		21.9	110	110	2	MS	RMJ	07/01/09 14:37	090630-2	880688
7440-43-9	Cadmium	545	ug/Kg	U	109	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-70-2	Calcium	726000	ug/Kg	N	3270	10900	10900	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-47-3	Chromium	9580	ug/Kg		109	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-48-4	Cobalt	764	ug/Kg		218	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-50-8	Copper	1380	ug/Kg		327	1090	1090	1	P	HSC	06/30/09 15:45	063009-1	880671
7439-89-6	Iron	8300000	ug/Kg		2720	10900	10900	1	P	HSC	06/30/09 15:45	063009-1	880671
7439-92-1	Lead	7250	ug/Kg		272	1090	1090	1	P	HSC	06/30/09 15:45	063009-1	880671
7439-95-4	Magnesium	571000	ug/Kg		9260	32700	32700	1	P	HSC	06/30/09 15:45	063009-1	880671
7439-96-5	Manganese	223000	ug/Kg	*	218	1090	1090	1	P	HSC	06/30/09 15:45	063009-1	880671
7439-97-6	Mercury	12.3	ug/kg	U	4.2	12.3	12.3	1	AV	JXL1	06/30/09 11:01	063009S1-3	880840
7440-02-0	Nickel	2210	ug/kg	*	110	438	438	2	MS	RMJ	07/01/09 14:37	090630-2	880688
7440-09-7	Potassium	453000	ug/Kg		5450	16300	16300	1	P	HSC	06/30/09 15:45	063009-1	880671
7782-49-2	Selenium	610	ug/kg	JN	548	1100	1100	2	MS	RMJ	07/01/09 14:37	090630-2	880688
7440-22-4	Silver	272	ug/Kg	J	109	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-23-5	Sodium	346000	ug/Kg		4900	16300	16300	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-28-0	Thallium	157	ug/kg	JN	65.7	219	219	2	MS	RMJ	07/01/09 14:37	090630-2	880688
7440-62-2	Vanadium	5200	ug/Kg		109	545	545	1	P	HSC	06/30/09 15:45	063009-1	880671
7440-66-6	Zinc	37400	ug/Kg		218	1090	1090	1	P	HSC	06/30/09 15:45	063009-1	880671

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
880671	880670	SW846 3050B	0.507	g	50	mL	06/29/09	BXA1
880688	880687	SW846 3050B	0.504	g	50	mL	06/30/09	BXA1
880840	880839	SW846 7471A Prep	0.537	g	30	mL	06/29/09	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2455

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5320	ug/L	5000	ug/L	106.4	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Antimony	533	ug/L	500	ug/L	106.5	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Barium	536	ug/L	500	ug/L	107.3	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Cadmium	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Calcium	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Cobalt	480	ug/L	500	ug/L	96.1	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Copper	522	ug/L	500	ug/L	104.3	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Iron	5220	ug/L	5000	ug/L	104.4	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Lead	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Magnesium	5500	ug/L	5000	ug/L	110	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Manganese	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Potassium	2480	ug/L	2500	ug/L	99.1	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Silver	256	ug/L	250	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Sodium	2650	ug/L	2500	ug/L	106.1	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Zinc	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 08:32	063009-1
	Mercury	5.1	ug/L	5	ug/L	102	90.0 – 110.0	AV	30-JUN-09 09:36	063009S1-3
	Arsenic	48.8	ug/L	50	ug/L	97.5	90.0 – 110.0	MS	01-JUL-09 13:02	090630-2
	Beryllium	51.1	ug/L	50	ug/L	102.2	90.0 – 110.0	MS	01-JUL-09 13:02	090630-2
	Nickel	53.2	ug/L	50	ug/L	106.3	90.0 – 110.0	MS	01-JUL-09 13:02	090630-2
	Selenium	48.6	ug/L	50	ug/L	97.3	90.0 – 110.0	MS	01-JUL-09 13:02	090630-2
	Thallium	49.2	ug/L	50	ug/L	98.4	90.0 – 110.0	MS	01-JUL-09 13:02	090630-2
CCV01										
	Aluminum	5240	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Antimony	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Barium	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Cadmium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	30-JUN-09 09:33	063009-1
	Chromium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30-JUN-09 09:33	063009-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2455

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Copper	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Iron	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Lead	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Magnesium	5250	ug/L	5000	ug/L	105.1	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Manganese	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Potassium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Silver	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Sodium	10200	ug/L	10000	ug/L	102.2	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Zinc	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Mercury	5.13	ug/L	5	ug/L	102.5	80.0 – 120.0	AV	30–JUN–09 09:41	063009S1–3
	Arsenic	48.9	ug/L	50	ug/L	97.8	90.0 – 110.0	MS	01–JUL–09 13:32	090630–2
	Beryllium	52.7	ug/L	50	ug/L	105.4	90.0 – 110.0	MS	01–JUL–09 13:32	090630–2
	Nickel	51.4	ug/L	50	ug/L	102.8	90.0 – 110.0	MS	01–JUL–09 13:32	090630–2
	Selenium	50	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	01–JUL–09 13:32	090630–2
	Thallium	48.2	ug/L	50	ug/L	96.4	90.0 – 110.0	MS	01–JUL–09 13:32	090630–2
CCV02										
	Aluminum	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Antimony	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Barium	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Cadmium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Calcium	5260	ug/L	5000	ug/L	105.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Chromium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Cobalt	500	ug/L	500	ug/L	100	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Copper	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Lead	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Magnesium	5280	ug/L	5000	ug/L	105.6	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Manganese	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2455

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Sodium	10300	ug/L	10000	ug/L	103.3	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Zinc	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30-JUN-09 09:54	063009-1
	Mercury	5	ug/L	5	ug/L	100	80.0 – 120.0	AV	30-JUN-09 10:05	063009S1-3
	Arsenic	49	ug/L	50	ug/L	98	90.0 – 110.0	MS	01-JUL-09 13:55	090630-2
	Beryllium	51.6	ug/L	50	ug/L	103.2	90.0 – 110.0	MS	01-JUL-09 13:55	090630-2
	Nickel	52.1	ug/L	50	ug/L	104.2	90.0 – 110.0	MS	01-JUL-09 13:55	090630-2
	Selenium	49.1	ug/L	50	ug/L	98.3	90.0 – 110.0	MS	01-JUL-09 13:55	090630-2
	Thallium	49.4	ug/L	50	ug/L	98.7	90.0 – 110.0	MS	01-JUL-09 13:55	090630-2
CCV03										
	Mercury	5.09	ug/L	5	ug/L	101.8	80.0 – 120.0	AV	30-JUN-09 10:29	063009S1-3
	Aluminum	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Antimony	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Barium	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Cadmium	515	ug/L	500	ug/L	103.1	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Calcium	5150	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Chromium	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Cobalt	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Copper	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Iron	4940	ug/L	5000	ug/L	98.9	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Lead	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Magnesium	5190	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Manganese	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Potassium	4790	ug/L	5000	ug/L	95.9	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Silver	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	30-JUN-09 10:57	063009-1
	Zinc	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-JUN-09 10:57	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2455

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Arsenic	47.5	ug/L	50	ug/L	95	90.0 - 110.0	MS	01-JUL-09 14:43	090630-2
	Beryllium	52.5	ug/L	50	ug/L	105	90.0 - 110.0	MS	01-JUL-09 14:43	090630-2
	Nickel	51.6	ug/L	50	ug/L	103.2	90.0 - 110.0	MS	01-JUL-09 14:43	090630-2
	Selenium	48.4	ug/L	50	ug/L	96.8	90.0 - 110.0	MS	01-JUL-09 14:43	090630-2
	Thallium	48.6	ug/L	50	ug/L	97.2	90.0 - 110.0	MS	01-JUL-09 14:43	090630-2
CCV04										
	Mercury	5.22	ug/L	5	ug/L	104.4	80.0 - 120.0	AV	30-JUN-09 10:53	063009S1-3
	Aluminum	5210	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Antimony	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Barium	511	ug/L	500	ug/L	102.3	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Cadmium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Chromium	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Cobalt	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Copper	505	ug/L	500	ug/L	100.9	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Iron	4990	ug/L	5000	ug/L	99.8	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Lead	512	ug/L	500	ug/L	102.3	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Manganese	510	ug/L	500	ug/L	102	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Potassium	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Silver	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Zinc	506	ug/L	500	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
CCV05										
	Mercury	5.04	ug/L	5	ug/L	100.7	80.0 - 120.0	AV	30-JUN-09 11:17	063009S1-3
	Aluminum	5340	ug/L	5000	ug/L	106.7	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Antimony	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Barium	515	ug/L	500	ug/L	103	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Cadmium	517	ug/L	500	ug/L	103.5	90.0 - 110.0	P	30-JUN-09 13:02	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2455

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Calcium	5320	ug/L	5000	ug/L	106.3	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Chromium	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Cobalt	518	ug/L	500	ug/L	103.7	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Copper	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Iron	5100	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Lead	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Magnesium	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Manganese	515	ug/L	500	ug/L	103	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Potassium	4990	ug/L	5000	ug/L	99.7	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Silver	515	ug/L	500	ug/L	103	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Sodium	10500	ug/L	10000	ug/L	104.8	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Vanadium	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
	Zinc	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30-JUN-09 13:02	063009-1
CCV06										
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Antimony	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Barium	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Cadmium	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Calcium	5280	ug/L	5000	ug/L	105.6	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Chromium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Cobalt	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Copper	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Iron	5080	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Lead	522	ug/L	500	ug/L	104.5	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Magnesium	5300	ug/L	5000	ug/L	106	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Manganese	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Potassium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Silver	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Sodium	10600	ug/L	10000	ug/L	106	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
	Vanadium	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	30-JUN-09 14:20	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2455

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Zinc	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30-JUN-09 14:20	063009-1
CCV07										
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Antimony	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Barium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Cadmium	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Calcium	5340	ug/L	5000	ug/L	106.8	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Chromium	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Cobalt	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Copper	495	ug/L	500	ug/L	98.9	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Iron	5140	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Lead	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Magnesium	5350	ug/L	5000	ug/L	107.1	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Manganese	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Potassium	5010	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Silver	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Sodium	10500	ug/L	10000	ug/L	105.4	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Vanadium	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	30-JUN-09 14:43	063009-1
CCV08										
	Aluminum	5290	ug/L	5000	ug/L	105.9	90.0 – 110.0	P	30-JUN-09 15:52	063009-1
	Antimony	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	30-JUN-09 15:52	063009-1
	Barium	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	30-JUN-09 15:52	063009-1
	Cadmium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30-JUN-09 15:52	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	30-JUN-09 15:52	063009-1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30-JUN-09 15:52	063009-1
	Cobalt	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-JUN-09 15:52	063009-1
	Copper	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30-JUN-09 15:52	063009-1
	Iron	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	30-JUN-09 15:52	063009-1
	Lead	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	30-JUN-09 15:52	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2455

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Manganese	514	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Potassium	4840	ug/L	5000	ug/L	96.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Silver	512	ug/L	500	ug/L	102.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Zinc	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	30-JUN-09 15:52	063009-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2455

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.189	ug/L	.2	ug/L	94.5	70.0 – 130.0	AV	30-JUN-09 09:39	063009S1-3
	Thallium	1.1	ug/L	1	ug/L	110.3	70.0 – 130.0	MS	01-JUL-09 13:14	090630-2
	Arsenic	4.24	ug/L	5	ug/L	84.9	70.0 – 130.0	MS	01-JUL-09 13:14	090630-2
	Selenium	5.62	ug/L	5	ug/L	112.3	70.0 – 130.0	MS	01-JUL-09 13:14	090630-2
	Nickel	2.24	ug/L	2	ug/L	112.2	70.0 – 130.0	MS	01-JUL-09 13:14	090630-2
	Beryllium	.615	ug/L	.5	ug/L	123	70.0 – 130.0	MS	01-JUL-09 13:14	090630-2
PQL01										
	Aluminum	208	ug/L	200	ug/L	104.1	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Antimony	9.51	ug/L	10	ug/L	95.1	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Barium	5.29	ug/L	5	ug/L	105.7	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Cadmium	5.32	ug/L	5	ug/L	106.3	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Calcium	103	ug/L	100	ug/L	103.4	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Chromium	5.14	ug/L	5	ug/L	102.9	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Cobalt	5.22	ug/L	5	ug/L	104.4	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Copper	9.75	ug/L	10	ug/L	97.5	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Iron	114	ug/L	100	ug/L	114.1	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Lead	11.2	ug/L	10	ug/L	111.8	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Magnesium	331	ug/L	300	ug/L	110.5	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Manganese	10.7	ug/L	10	ug/L	106.9	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Potassium	153	ug/L	150	ug/L	102.1	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Silver	5.26	ug/L	5	ug/L	105.1	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Sodium	156	ug/L	150	ug/L	104.3	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Vanadium	5.17	ug/L	5	ug/L	103.5	70.0 – 130.0	P	30-JUN-09 08:45	063009-1
	Zinc	10.5	ug/L	10	ug/L	104.6	70.0 – 130.0	P	30-JUN-09 08:45	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2455

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 08:39	063009-1
	Antimony	3.1	+/-10	U	3.1	10.0	SOL	P	30-JUN-09 08:39	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 08:39	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 08:39	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 08:39	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 08:39	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 08:39	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 08:39	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 08:39	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 08:39	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 08:39	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 08:39	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 08:39	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 08:39	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 08:39	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 08:39	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 08:39	063009-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	30-JUN-09 09:38	063009S1-3
	Arsenic	1.05	+/-5	J	1.0	5.0	SOL	MS	01-JUL-09 13:08	090630-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	01-JUL-09 13:08	090630-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	01-JUL-09 13:08	090630-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	01-JUL-09 13:08	090630-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	01-JUL-09 13:08	090630-2
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 09:40	063009-1
	Antimony	3.1	+/-10	U	3.1	10.0	SOL	P	30-JUN-09 09:40	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 09:40	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 09:40	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 09:40	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 09:40	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 09:40	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2455

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 09:40	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 09:40	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 09:40	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 09:40	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 09:40	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 09:40	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 09:40	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 09:40	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 09:40	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 09:40	063009-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	30-JUN-09 09:44	063009S1-3
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	01-JUL-09 13:38	090630-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	01-JUL-09 13:38	090630-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	01-JUL-09 13:38	090630-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	01-JUL-09 13:38	090630-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	01-JUL-09 13:38	090630-2
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 10:01	063009-1
	Antimony	3.1	+/-10	U	3.1	10.0	SOL	P	30-JUN-09 10:01	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 10:01	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 10:01	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 10:01	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 10:01	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 10:01	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 10:01	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 10:01	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 10:01	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 10:01	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 10:01	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 10:01	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 10:01	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2455

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 10:01	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 10:01	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 10:01	063009-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	30-JUN-09 10:07	063009S1-3
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	01-JUL-09 14:01	090630-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	01-JUL-09 14:01	090630-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	01-JUL-09 14:01	090630-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	01-JUL-09 14:01	090630-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	01-JUL-09 14:01	090630-2
CCB03										
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	30-JUN-09 10:31	063009S1-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 11:04	063009-1
	Antimony	3.1	+/-10	U	3.1	10.0	SOL	P	30-JUN-09 11:04	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 11:04	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 11:04	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 11:04	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 11:04	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 11:04	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 11:04	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 11:04	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 11:04	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 11:04	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 11:04	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 11:04	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 11:04	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 11:04	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 11:04	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 11:04	063009-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	01-JUL-09 14:49	090630-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	01-JUL-09 14:49	090630-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	01-JUL-09 14:49	090630-2

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2455

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	01-JUL-09 14:49	090630-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	01-JUL-09 14:49	090630-2
CCB04										
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	30-JUN-09 10:55	063009S1-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 11:59	063009-1
	Antimony	3.1	+/-10	U	3.1	10.0	SOL	P	30-JUN-09 11:59	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 11:59	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 11:59	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 11:59	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 11:59	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 11:59	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 11:59	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 11:59	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 11:59	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 11:59	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 11:59	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 11:59	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 11:59	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 11:59	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 11:59	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 11:59	063009-1
CCB05										
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	30-JUN-09 11:19	063009S1-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 13:09	063009-1
	Antimony	3.1	+/-10	U	3.1	10.0	SOL	P	30-JUN-09 13:09	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 13:09	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 13:09	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 13:09	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 13:09	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 13:09	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 13:09	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2455

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 13:09	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 13:09	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 13:09	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 13:09	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 13:09	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 13:09	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 13:09	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 13:09	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 13:09	063009-1
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 14:26	063009-1
	Antimony	3.1	+/-10	U	3.1	10.0	SOL	P	30-JUN-09 14:26	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 14:26	063009-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 14:26	063009-1
	Calcium	30.0	+/-100	U	30.0	100	SOL	P	30-JUN-09 14:26	063009-1
	Chromium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 14:26	063009-1
	Cobalt	2.0	+/-5	U	2.0	5.0	SOL	P	30-JUN-09 14:26	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	30-JUN-09 14:26	063009-1
	Iron	25.0	+/-100	U	25.0	100	SOL	P	30-JUN-09 14:26	063009-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	30-JUN-09 14:26	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	30-JUN-09 14:26	063009-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 14:26	063009-1
	Potassium	50.0	+/-150	U	50.0	150	SOL	P	30-JUN-09 14:26	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 14:26	063009-1
	Sodium	45.0	+/-150	U	45.0	150	SOL	P	30-JUN-09 14:26	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 14:26	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	SOL	P	30-JUN-09 14:26	063009-1
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	30-JUN-09 14:50	063009-1
	Antimony	3.1	+/-10	U	3.1	10.0	SOL	P	30-JUN-09 14:50	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	30-JUN-09 14:50	063009-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2455

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 14:50	063009–1
	Calcium	30.0	+/–100	U	30.0	100	SOL	P	30–JUN–09 14:50	063009–1
	Chromium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 14:50	063009–1
	Cobalt	2.0	+/–5	U	2.0	5.0	SOL	P	30–JUN–09 14:50	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	30–JUN–09 14:50	063009–1
	Iron	25.0	+/–100	U	25.0	100	SOL	P	30–JUN–09 14:50	063009–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	30–JUN–09 14:50	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	30–JUN–09 14:50	063009–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 14:50	063009–1
	Potassium	50.0	+/–150	U	50.0	150	SOL	P	30–JUN–09 14:50	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 14:50	063009–1
	Sodium	45.0	+/–150	U	45.0	150	SOL	P	30–JUN–09 14:50	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 14:50	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 14:50	063009–1
CCB08										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	30–JUN–09 15:59	063009–1
	Antimony	3.1	+/–10	U	3.1	10.0	SOL	P	30–JUN–09 15:59	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 15:59	063009–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 15:59	063009–1
	Calcium	30.0	+/–100	U	30.0	100	SOL	P	30–JUN–09 15:59	063009–1
	Chromium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 15:59	063009–1
	Cobalt	2.0	+/–5	U	2.0	5.0	SOL	P	30–JUN–09 15:59	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	30–JUN–09 15:59	063009–1
	Iron	25.0	+/–100	U	25.0	100	SOL	P	30–JUN–09 15:59	063009–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	30–JUN–09 15:59	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	30–JUN–09 15:59	063009–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 15:59	063009–1
	Potassium	50.0	+/–150	U	50.0	150	SOL	P	30–JUN–09 15:59	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 15:59	063009–1
	Sodium	45.0	+/–150	U	45.0	150	SOL	P	30–JUN–09 15:59	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	30–JUN–09 15:59	063009–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2455

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Zinc	2.0	+/–10	U	2.0	10.0	SOL	P	30–JUN–09 15:59	063009–1

METALS
–3b–
PREPARATION BLANK SUMMARY

SDG NO. 09–2455
Contract: LANL01004
Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201869975								
	Aluminum	6510	ug/Kg	+/–19157.088	U	P	6510	19200
	Antimony	297	ug/Kg	+/–957.854	U	P	297	958
	Barium	95.8	ug/Kg	+/–478.927	U	P	95.8	479
	Chromium	95.8	ug/Kg	+/–478.927	U	P	95.8	479
	Calcium	2870	ug/Kg	+/–9578.544	U	P	2870	9580
	Cadmium	95.8	ug/Kg	+/–478.927	U	P	95.8	479
	Cobalt	192	ug/Kg	+/–478.927	U	P	192	479
	Iron	3500	ug/Kg	+/–9578.544	J	P	2390	9580
	Magnesium	8140	ug/Kg	+/–28735.632	U	P	8140	28700
	Zinc	192	ug/Kg	+/–957.854	U	P	192	958
	Vanadium	95.8	ug/Kg	+/–478.927	U	P	95.8	479
	Sodium	4310	ug/Kg	+/–14367.816	U	P	4310	14400
	Silver	95.8	ug/Kg	+/–478.927	U	P	95.8	479
	Potassium	4790	ug/Kg	+/–14367.816	U	P	4790	14400
	Manganese	192	ug/Kg	+/–957.854	U	P	192	958
	Lead	239	ug/Kg	+/–957.854	U	P	239	958
	Copper	479	ug/Kg	+/–957.854	J	P	287	958
1201870011								
	Beryllium	19.2	ug/kg	+/–96.154	U	MS	19.2	96.2
	Nickel	96.2	ug/kg	+/–384.615	U	MS	96.2	385
	Selenium	481	ug/kg	+/–961.538	U	MS	481	962
	Arsenic	192	ug/kg	+/–961.538	U	MS	192	962
	Thallium	57.7	ug/kg	+/–192.308	U	MS	57.7	192
1201870315								
	Mercury	4.06	ug/kg	+/–11.928	U	AV	4.06	11.9

METALS
-4-
Interference Check Sample

SDG No: 09-2455

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	521000	ug/L	500000	ug/L	104	80.0 – 120.0	30-JUN-09 08:52	063009-1
	Antimony	5.63	ug/L					30-JUN-09 08:52	063009-1
	Barium	-4.95	ug/L					30-JUN-09 08:52	063009-1
	Cadmium	-2.65	ug/L					30-JUN-09 08:52	063009-1
	Calcium	479000	ug/L	500000	ug/L	95.8	80.0 – 120.0	30-JUN-09 08:52	063009-1
	Chromium	2.29	ug/L					30-JUN-09 08:52	063009-1
	Cobalt	-1.33	ug/L					30-JUN-09 08:52	063009-1
	Copper	1.81	ug/L					30-JUN-09 08:52	063009-1
	Iron	181000	ug/L	200000	ug/L	90.7	80.0 – 120.0	30-JUN-09 08:52	063009-1
	Lead	-4.71	ug/L					30-JUN-09 08:52	063009-1
	Magnesium	476000	ug/L	500000	ug/L	95.2	80.0 – 120.0	30-JUN-09 08:52	063009-1
	Manganese	13.1	ug/L					30-JUN-09 08:52	063009-1
	Potassium	-32.1	ug/L					30-JUN-09 08:52	063009-1
	Silver	-0.79	ug/L					30-JUN-09 08:52	063009-1
	Sodium	31.8	ug/L					30-JUN-09 08:52	063009-1
	Vanadium	-2.42	ug/L					30-JUN-09 08:52	063009-1
	Zinc	-6.97	ug/L					30-JUN-09 08:52	063009-1
ICSAB01									
	Aluminum	519000	ug/L	500000	ug/L	104	80.0 – 120.0	30-JUN-09 08:58	063009-1
	Antimony	561	ug/L	500	ug/L	112	80.0 – 120.0	30-JUN-09 08:58	063009-1
	Barium	498	ug/L	500	ug/L	99.6	80.0 – 120.0	30-JUN-09 08:58	063009-1
	Cadmium	480	ug/L	500	ug/L	95.9	80.0 – 120.0	30-JUN-09 08:58	063009-1
	Calcium	473000	ug/L	500000	ug/L	94.6	80.0 – 120.0	30-JUN-09 08:58	063009-1
	Chromium	496	ug/L	500	ug/L	99.3	80.0 – 120.0	30-JUN-09 08:58	063009-1
	Cobalt	467	ug/L	500	ug/L	93.4	80.0 – 120.0	30-JUN-09 08:58	063009-1
	Copper	562	ug/L	500	ug/L	112	80.0 – 120.0	30-JUN-09 08:58	063009-1
	Iron	179000	ug/L	200000	ug/L	89.6	80.0 – 120.0	30-JUN-09 08:58	063009-1
	Lead	471	ug/L	500	ug/L	94.3	80.0 – 120.0	30-JUN-09 08:58	063009-1
	Magnesium	470000	ug/L	500000	ug/L	94.1	80.0 – 120.0	30-JUN-09 08:58	063009-1

METALS
–4–
Interference Check Sample

SDG No: 09–2455

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	500	ug/L	500	ug/L	100	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Potassium	5110	ug/L	5000	ug/L	102	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Silver	282	ug/L	250	ug/L	113	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Sodium	5390	ug/L	5000	ug/L	108	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Vanadium	519	ug/L	500	ug/L	104	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Zinc	495	ug/L	500	ug/L	99	80.0 – 120.0	30–JUN–09 08:58	063009–1

METALS
–4–
Interference Check Sample

SDG No: 09–2455

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	0.722	ug/L					01–JUL–09 13:20	090630–2
	Beryllium	0.07	ug/L					01–JUL–09 13:20	090630–2
	Nickel	3.97	ug/L					01–JUL–09 13:20	090630–2
	Selenium	–1.19	ug/L					01–JUL–09 13:20	090630–2
	Thallium	0.055	ug/L					01–JUL–09 13:20	090630–2
ICSAB01									
	Arsenic	22.4	ug/L	20	ug/L	112	80.0 – 120.0	01–JUL–09 13:26	090630–2
	Beryllium	22.1	ug/L	20	ug/L	110	80.0 – 120.0	01–JUL–09 13:26	090630–2
	Nickel	22.3	ug/L	22.1	ug/L	101	80.0 – 120.0	01–JUL–09 13:26	090630–2
	Selenium	20.9	ug/L	20	ug/L	104	80.0 – 120.0	01–JUL–09 13:26	090630–2
	Thallium	18.6	ug/L	20	ug/L	93.2	80.0 – 120.0	01–JUL–09 13:26	090630–2

METALS
-5a-

Matrix Spike Summary

SDG NO. 09-2455 **Client ID** CAMO-09-10480S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 89

Sample ID: 232357001 **Spike ID:** 1201869978

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Vanadium	ug/Kg	75-125	58600		5990		55200	95.4		P
Zinc	ug/Kg	75-125	79200		31700		55200	85.9		P
Aluminum	ug/Kg	75-125	1950000		1340000		552000	110		P
Antimony	ug/Kg	75-125	54500		346	U	55200	98.7		P
Barium	ug/Kg	75-125	74100		25400		55200	88.2		P
Cadmium	ug/Kg	75-125	52700		112	U	55200	95.5		P
Calcium	ug/Kg	75-125	1250000		873000		552000	68.5	N	P
Chromium	ug/Kg	75-125	57500		4130		55200	96.6		P
Cobalt	ug/Kg	75-125	52400		947		55200	93.1		P
Copper	ug/Kg	75-125	56900		1340		55200	101		P
Iron	ug/Kg		8320000		9270000		552000	-172	N/A	P
Lead	ug/Kg	75-125	56700		3060		55200	97.2		P
Magnesium	ug/Kg	75-125	1050000		547000		552000	91		P
Manganese	ug/Kg		228000		252000		55200	-42.9	N/A	P
Potassium	ug/Kg	75-125	968000		400000		552000	103		P
Silver	ug/Kg	75-125	54100		375	J	55200	97.3		P
Sodium	ug/Kg	75-125	870000		293000		552000	104		P

METALS
–5a–
Matrix Spike Duplicate Summary

SDG NO. 09–2455 **Client ID** CAMO–09–10480SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 89

Sample ID: 232357001 **Spike ID:** 1201869980

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg	75–125	2180000		1340000		557000	151	N	P
Antimony	ug/Kg	75–125	54600		346	U	55700	98.2		P
Barium	ug/Kg	75–125	74500		25400		55700	88.2		P
Cadmium	ug/Kg	75–125	53900		112	U	55700	96.8		P
Calcium	ug/Kg	75–125	1370000		873000		557000	88.7		P
Chromium	ug/Kg	75–125	57500		4130		55700	95.9		P
Cobalt	ug/Kg	75–125	52600		947		55700	92.8		P
Copper	ug/Kg	75–125	57200		1340		55700	100		P
Iron	ug/Kg		9050000		9270000		557000	–40	N/A	P
Lead	ug/Kg	75–125	57400		3060		55700	97.5		P
Magnesium	ug/Kg	75–125	1080000		547000		557000	96.3		P
Manganese	ug/Kg		239000		252000		55700	–22.8	N/A	P
Potassium	ug/Kg	75–125	1000000		400000		557000	108		P
Silver	ug/Kg	75–125	54300		375	J	55700	96.8		P
Sodium	ug/Kg	75–125	904000		293000		557000	110		P
Vanadium	ug/Kg	75–125	59300		5990		55700	95.8		P
Zinc	ug/Kg	75–125	81100		31700		55700	88.7		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2455 **Client ID** CAMO-09-10480S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 89

Sample ID: 232357001 **Spike ID:** 1201870014

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	5770		1420		8840	49.2	N	MS
Beryllium	ug/kg	75-125	5640		271		5520	97.2		MS
Nickel	ug/kg	75-125	8260		2400		5520	106		MS
Selenium	ug/kg	75-125	1560		561	J	2210	45.2	N	MS
Thallium	ug/kg	75-125	5170		91.9	J	11000	46	N	MS

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO. 09-2455 **Client ID** CAMO-09-10480SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 89

Sample ID: 232357001 **Spike ID:** 1201870016

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	6060		1420		9010	51.4	N	MS
Beryllium	ug/kg	75-125	5850		271		5630	99.1		MS
Nickel	ug/kg	75-125	8060		2400		5630	101		MS
Selenium	ug/kg	75-125	1540		561	J	2250	43.6	N	MS
Thallium	ug/kg	75-125	5350		91.9	J	11300	46.7	N	MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2455 **Client ID** CAMO-09-10480S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 89

Sample ID: 232357001 **Spike ID:** 1201870318

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	144		4.46	U	131	109		AV

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO.	09-2455	**Client ID**	CAMO-09-10480SD
Contract:	LANL01004	**Level:**	Low
Matrix:	SOIL	**% Solids:**	89
Sample ID:	232357001	**Spike ID:**	1201870320

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	129		4.46	U	115	110		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2455

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10480D

Sample ID: 232357001 **Duplicate ID:** 1201869977 **Percent Solids for Dup:** 89

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	1340000		1500000		11.1		P
Antimony	ug/Kg		346	U	349	U			P
Barium	ug/Kg	+/–20%	25400		25300		.354		P
Cadmium	ug/Kg		112	U	112	U			P
Calcium	ug/Kg	+/–20%	873000		772000		12.3		P
Chromium	ug/Kg	+/–20%	4130		4210		1.89		P
Cobalt	ug/Kg	+/–562	947		809		15.7		P
Copper	ug/Kg	+/–1120	1340		1650		20.7		P
Iron	ug/Kg	+/–20%	9270000		9210000		.643		P
Lead	ug/Kg	+/–1120	3060		2940		4.01		P
Magnesium	ug/Kg	+/–20%	547000		564000		3.19		P
Manganese	ug/Kg	+/–20%	252000		193000		26.7	*	P
Potassium	ug/Kg	+/–20%	400000		408000		1.93		P
Silver	ug/Kg	+/–562	375	J	296	J	23.6		P
Sodium	ug/Kg	+/–20%	293000		277000		5.45		P
Vanadium	ug/Kg	+/–20%	5990		6060		1.21		P
Zinc	ug/Kg	+/–20%	31700		31200		1.64		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2455

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10480SD

Sample ID: 1201869978 **Duplicate ID:** 1201869980 **Percent Solids for Dup:** 89

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	1950000		2180000		11.2		P
Antimony	ug/Kg	+/–20	54500		54600		.292		P
Barium	ug/Kg	+/–20	74100		74500		.517		P
Cadmium	ug/Kg	+/–20	52700		53900		2.12		P
Calcium	ug/Kg	+/–20	1250000		1370000		8.8		P
Chromium	ug/Kg	+/–20	57500		57500		.0104		P
Cobalt	ug/Kg	+/–20	52400		52600		.413		P
Copper	ug/Kg	+/–20	56900		57200		.585		P
Iron	ug/Kg	+/–20	8320000		9050000		8.41		P
Lead	ug/Kg	+/–20	56700		57400		1.1		P
Magnesium	ug/Kg	+/–20	1050000		1080000		3.16		P
Manganese	ug/Kg	+/–20	228000		239000		4.7		P
Potassium	ug/Kg	+/–20	968000		1000000		3.49		P
Silver	ug/Kg	+/–20	54100		54300		.268		P
Sodium	ug/Kg	+/–20	870000		904000		3.9		P
Vanadium	ug/Kg	+/–20	58600		59300		1.1		P
Zinc	ug/Kg	+/–20	79200		81100		2.37		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2455

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10480D

Sample ID: 232357001 **Duplicate ID:** 1201870013 **Percent Solids for Dup:** 89

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/–1100	1420		1570		10		MS
Beryllium	ug/kg	+/–110	271		336		21.4		MS
Nickel	ug/kg	+/–20%	2400		3470		36.4	*	MS
Selenium	ug/kg		561	J	552	U	200		MS
Thallium	ug/kg	+/–221	91.9	J	95.4	J	3.8		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2455

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10480SD

Sample ID: 1201870014 **Duplicate ID:** 1201870016 **Percent Solids for Dup:** 89

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/–20	5770		6060		4.84		MS
Beryllium	ug/kg	+/–20	5640		5850		3.73		MS
Nickel	ug/kg	+/–20	8260		8060		2.47		MS
Selenium	ug/kg	+/–20	1560		1540		1.13		MS
Thallium	ug/kg	+/–20	5170		5350		3.45		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2455

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10480D

Sample ID: 232357001 **Duplicate ID:** 1201870317 **Percent Solids for Dup:** 89

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg		4.46	U	4.39	U			AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2455

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10480SD

Sample ID: 1201870318 **Duplicate ID:** 1201870320 **Percent Solids for Dup:** 89

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/–20	144		129		10.9		AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2455

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201869976								
	Aluminum	ug/Kg	7290000	7480000		103	63.5-118	P
	Antimony	ug/Kg	121000	121000		100	39.1-132.1	P
	Barium	ug/Kg	475000	484000		102	82-110.6	P
	Cadmium	ug/Kg	116000	123000		106	77.9-115.2	P
	Calcium	ug/Kg	3720000	3560000		95.6	77.4-111.7	P
	Chromium	ug/Kg	84000	75900		90.4	66.6-116.5	P
	Cobalt	ug/Kg	83000	81300		97.9	79-113.9	P
	Copper	ug/Kg	105000	102000		97.3	77.6-112	P
	Iron	ug/Kg	20000000	18100000		90.8	51.5-145.5	P
	Lead	ug/Kg	161000	168000		105	83.1-114.7	P
	Magnesium	ug/Kg	2980000	2980000		100	81-114.3	P
	Manganese	ug/Kg	398000	370000		92.9	76.6-106.6	P
	Potassium	ug/Kg	2390000	2260000		94.5	72.2-111.1	P
	Silver	ug/Kg	133000	134000		101	81.7-115.7	P
	Sodium	ug/Kg	614000	577000		93.9	71.5-109.3	P
	Vanadium	ug/Kg	166000	152000		91.5	65-118.6	P
	Zinc	ug/Kg	195000	196000		101	82.8-111.9	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2455

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201870012								
	Beryllium	ug/kg	90000	90900		101	81.2-126.8	MS
	Nickel	ug/kg	101000	105000		104	83.3-121.4	MS
	Selenium	ug/kg	173000	172000		99.7	80.2-125.9	MS
	Thallium	ug/kg	202000	200000		99.3	78-123.2	MS
	Arsenic	ug/kg	257000	256000		99.6	83-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2455

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201870316								
	Mercury	ug/kg	5150	5560		108	71.6-128.3	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2455 **Client ID** CAMO-09-10480L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232357001 **Serial Dilution ID:** 1201869979

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	12000		12300		2.08		10	P
Antimony	3.1	U	15.5	U				P
Barium	227		244		7.27		10	P
Cadmium	1	U	5	U				P
Calcium	7820		7950		1.66		10	P
Chromium	37		40.7		10			P
Cobalt	8.48		10	U	100			P
Copper	12		16.8	J	39.6			P
Iron	82900		86000		3.74		10	P
Lead	27.4		32.3	J	17.7			P
Magnesium	4890		5150		5.32		10	P
Manganese	2250		2420		7.56		10	P
Potassium	3580		3660		2.09		10	P
Silver	3.35	J	5	U	100			P
Sodium	2620		2670		1.72		10	P
Vanadium	53.6		55		2.61		10	P
Zinc	284		310		8.98		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2455 **Client ID** CAMO-09-10480L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232357001 **Serial Dilution ID:** 1201870015

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	6.37		6.45	J	1.26			MS
Beryllium	1.21		1.33	J	9.5			MS
Nickel	10.7		10.6		1.4			MS
Selenium	2.51	J	12.5	U	100			MS
Thallium	.411	J	1.5	U	100			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2455 **Client ID** CAMO-09-10480L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232357001 **Serial Dilution ID:** 1201870319

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.068	U	.34	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2455 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880670						
1201869975	MB for batch 880670	MB	S	29-JUN-09	.522g	50mL	
1201869976	LCS for batch 880670	LCS	S	29-JUN-09	.512g	50mL	
1201869978	CAMO-09-10480S	MS	S	29-JUN-09	.51g	50mL	
1201869980	CAMO-09-10480SD	MSD	S	29-JUN-09	.506g	50mL	
1201869977	CAMO-09-10480D	DUP	S	29-JUN-09	.501g	50mL	
232357001	CAMO-09-10480	SAMPLE	S	29-JUN-09	.504g	50mL	
232357002	CAMO-09-10479	SAMPLE	S	29-JUN-09	.507g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2455 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880687						
1201870011	MB for batch 880687	MB	S	30-JUN-09	.52g	50mL	
1201870012	LCS for batch 880687	LCS	S	30-JUN-09	.506g	50mL	
1201870014	CAMO-09-10480S	MS	S	30-JUN-09	.51g	50mL	
1201870016	CAMO-09-10480SD	MSD	S	30-JUN-09	.5g	50mL	
1201870013	CAMO-09-10480D	DUP	S	30-JUN-09	.51g	50mL	
232357001	CAMO-09-10480	SAMPLE	S	30-JUN-09	.504g	50mL	
232357002	CAMO-09-10479	SAMPLE	S	30-JUN-09	.504g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2455 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	880839						
1201870315	MB for batch 880839	MB	S	29-JUN-09	.503g	30mL	
1201870316	LCS for batch 880839	LCS	S	29-JUN-09	.209g	30mL	
1201870318	CAMO-09-10480S	MS	S	29-JUN-09	.517g	30mL	
1201870320	CAMO-09-10480SD	MSD	S	29-JUN-09	.586g	30mL	
1201870317	CAMO-09-10480D	DUP	S	29-JUN-09	.524g	30mL	
232357001	CAMO-09-10480	SAMPLE	S	29-JUN-09	.515g	30mL	
232357002	CAMO-09-10479	SAMPLE	S	29-JUN-09	.537g	30mL	

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 01–JUL–09 **End Date:** 01–JUL–09

Client Sdg: 09–2455
Method MS
Data File: 090630–2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	12:45			X		X											X		X			X		
S10	1	12:51			X		X											X		X			X		
S100	1	12:56			X		X											X		X			X		
ICV01	1	13:02			X		X											X		X			X		
ICB01	1	13:08			X		X											X		X			X		
CRDL01	1	13:14			X		X											X		X			X		
ICSA01	1	13:20			X		X											X		X			X		
ICSAB01	1	13:26			X		X											X		X			X		
CCV01	1	13:32			X		X											X		X			X		
CCB01	1	13:38			X		X											X		X			X		
1201870011	2	13:44			X		X											X		X			X		
1201870012	40	13:50			X		X											X		X			X		
CCV02	1	13:55			X		X											X		X			X		
CCB02	1	14:01			X		X											X		X			X		
232357001	2	14:07			X		X											X		X			X		
1201870013	2	14:13			X		X											X		X			X		
1201870014	2	14:19			X		X											X		X			X		
1201870016	2	14:25			X		X											X		X			X		
1201870015	10	14:31			X		X											X		X			X		
232357002	2	14:37			X		X											X		X			X		
CCV03	1	14:43			X		X											X		X			X		
CCB03	1	14:49			X		X											X		X			X		

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 30-JUN-09 **End Date:** 30-JUN-09

Client Sdg: 09-2455
Method P
Data File: 063009-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	08:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	08:06		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	08:12	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	08:19	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	08:26	X						X				X		X							X			
ICV01	1	08:32	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	08:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	08:45	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	08:52	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	08:58	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	09:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	09:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	09:17																							
ZZZZZZ	1	09:24																							
CCV01	1	09:33	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	09:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR03	1	09:47	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV02	1	09:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	10:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	10:15																							
ZZZZZZ	1	10:22																							
ZZZZZZ	1	10:29																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:43																							
ZZZZZZ	5	10:50																							
CCV03	1	10:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	11:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	11:11																							
ZZZZZZ	5	11:18																							
ZZZZZZ	5	11:25																							
ZZZZZZ	5	11:32																							
ZZZZZZ	25	11:38																							
ZZZZZZ	5	11:45																							
CCV04	1	11:52	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	11:59	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	12:06																							
ZZZZZZ	2	12:13																							
ZZZZZZ	1	12:20																							
ZZZZZZ	1	12:27																							
ZZZZZZ	1	12:34																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	12:41																							
ZZZZZZ	1	12:48																							
ZZZZZZ	1	12:55																							
CCV05	1	13:02	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	13:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	13:16																							
ZZZZZZ	1	13:23																							
ZZZZZZ	1	13:30																							
ZZZZZZ	1	13:38																							
ZZZZZZ	1	13:45																							
ZZZZZZ	1	13:52																							
ZZZZZZ	5	13:59																							
ZZZZZZ	1	14:05																							
ZZZZZZ	1	14:13																							
CCV06	1	14:20	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	14:26	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV07	1	14:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	14:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869975	1	14:56	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869976	2	15:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232357001	1	15:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869977	1	15:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869978	1	15:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869980	1	15:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201869979	5	15:38	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232357002	1	15:45	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV08	1	15:52	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB08	1	15:59	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 30-JUN-09 **End Date:** 30-JUN-09

Client Sdg: 09-2455
Method AV
Data File: 063009S1-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:24															X								
S0.2	1	09:26															X								
S0.5	1	09:28															X								
S2.0	1	09:29															X								
S5.0	1	09:31															X								
S10	1	09:33															X								
ICV01	1	09:36															X								
ICB01	1	09:38															X								
CRDL01	1	09:39															X								
CCV01	1	09:41															X								
CCB01	1	09:44															X								
ZZZZZZ	1	09:46																							
ZZZZZZ	10	09:48																							
ZZZZZZ	1	09:50																							
ZZZZZZ	1	09:52																							
ZZZZZZ	1	09:54																							
ZZZZZZ	1	09:56																							
ZZZZZZ	5	09:58																							
ZZZZZZ	1	09:59																							
ZZZZZZ	1	10:01																							
ZZZZZZ	1	10:03																							
CCV02	1	10:05															X								
CCB02	1	10:07															X								
ZZZZZZ	1	10:09																							
ZZZZZZ	1	10:11																							
ZZZZZZ	1	10:13																							
ZZZZZZ	1	10:15																							
ZZZZZZ	1	10:17																							
ZZZZZZ	1	10:19																							
ZZZZZZ	1	10:21																							
ZZZZZZ	1	10:23																							
ZZZZZZ	1	10:25																							
ZZZZZZ	1	10:27																							
CCV03	1	10:29															X								
CCB03	1	10:31															X								
ZZZZZZ	1	10:33																							
ZZZZZZ	1	10:35																							
ZZZZZZ	1	10:37																							
ZZZZZZ	1	10:39																							
ZZZZZZ	1	10:41																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																						
1201870315	1	10:43														X								
1201870316	10	10:45														X								
232357001	1	10:47														X								
1201870317	1	10:49														X								
1201870318	1	10:51														X								
CCV04	1	10:53														X								
CCB04	1	10:55														X								
1201870320	1	10:57														X								
1201870319	5	10:59														X								
232357002	1	11:01														X								
ZZZZZZ	1	11:03																						
ZZZZZZ	1	11:05																						
ZZZZZZ	1	11:07																						
ZZZZZZ	1	11:09																						
ZZZZZZ	1	11:11																						
ZZZZZZ	1	11:13																						
ZZZZZZ	1	11:15																						
CCV05	1	11:17														X								
CCB05	1	11:19														X								

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2455

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2455

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
MERCURY				
SOLID	Mercury		0.068	.2

METALS
–10–
Instrument Detection Limits

SDG NO. 09–2455

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 23–JUL–07

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.1	10
	Arsenic	188.979	5.0	15
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	30.0	100
	Chromium	267.716	1.0	5
	Cobalt	228.616	2.0	5
	Copper	324.752	3.0	10
	Iron	238.204	25.0	100
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.0	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	15
	Silver	328.068	1.0	5
	Sodium	589.592	45.0	150
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	2.0	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2455
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
–11–
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09–2455
Effective Dates: 01–MAY–09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	–0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	–31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2455
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2455
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2455
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2455
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2455

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS6

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2455

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

Raw Data

Method: Hg_ReAlign
Result: 070709

Sample ID: Hg_ReAlign

Hg 253.652 Rep: 1

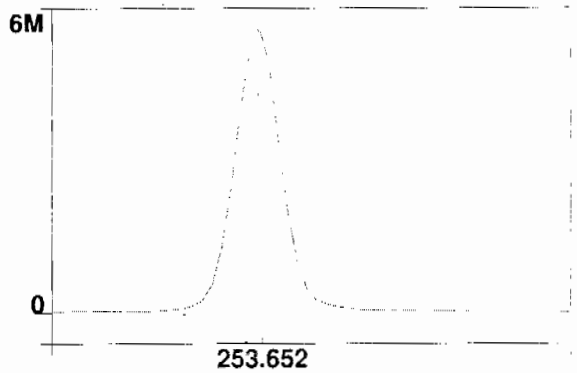

Intensity: 5578330.2 cps
Conc:

1

Start Time: 6/30/2009 08:00:09
Plasma On Time: 6/29/2009 15:26:31
Logged In Analyst: Optima3
Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 8
Sample ID: S0
Date Collected: 6/30/2009 08:00:09
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7332.9	7332.9	98.1	%	08:02:02
1	Y RADIAL	6768.4	6768.4	97.75	%	08:02:02
1	Al 396.153Radial†	-69.2	-70.5	[0.00]	ug/L	08:02:02
1	Ca 317.933Radial†	30.7	31.3	[0.00]	ug/L	08:02:22
1	Fe 238.204 Radial†	34.0	34.7	[0.00]	ug/L	08:02:22
1	K 766.490 Radial†	2350.8	2396.2	[0.00]	ug/L	08:02:02
1	Mg 279.077 IEC†	1.8	1.8	[0.00]	ug/L	08:02:22
1	Na 589.592 Radial†	-137.1	-139.7	[0.00]	ug/L	08:02:02
1	Sr 421.552†	-74.2	-75.6	[0.00]	ug/L	08:02:02
1	Sc 361.383	723693.7	723693.7	100.70	%	08:03:19
1	Y 371.029	565792.8	565792.8	100.67	%	08:03:19
1	Ag 328.068†	572.4	568.4	[0.00]	ug/L	08:03:19
1	As 188.979†	-46.3	-46.0	[0.00]	ug/L	08:03:39
1	B 249.677†	-1020.4	-1013.3	[0.00]	ug/L	08:03:19
1	Ba 233.527†	-1.7	-1.7	[0.00]	ug/L	08:03:39
1	Be 313.107†	-4879.3	-4845.6	[0.00]	ug/L	08:03:19
1	Cd 226.502†	-281.3	-279.4	[0.00]	ug/L	08:03:39
1	Co 228.616†	-99.0	-98.3	[0.00]	ug/L	08:03:39
1	Cr 267.716†	-47.5	-47.2	[0.00]	ug/L	08:03:19
1	Cu 324.752†	5579.8	5541.2	[0.00]	ug/L	08:03:19
1	Mn 257.610†	659.8	655.2	[0.00]	ug/L	08:03:19
1	Mo 202.031†	7.3	7.3	[0.00]	ug/L	08:03:39
1	Ni 231.604†	119.2	118.4	[0.00]	ug/L	08:03:39
1	P 214.914†	315.8	313.6	[0.00]	ug/L	08:03:39
1	Pb 220.353†	-12.1	-12.0	[0.00]	ug/L	08:03:39
1	S 181.975 Axial†	77.2	76.7	[0.00]	ug/L	08:03:39
1	Sb 206.836†	60.4	60.0	[0.00]	ug/L	08:03:39
1	Se 196.026†	-31.0	-30.8	[0.00]	ug/L	08:03:39
1	Si 251.611†	415.3	412.5	[0.00]	ug/L	08:03:39
1	Sn 189.927†	11.9	11.8	[0.00]	ug/L	08:03:39
1	Ti 334.940†	-1389.6	-1380.0	[0.00]	ug/L	08:03:19
1	Tl 190.801†	-57.8	-57.4	[0.00]	ug/L	08:03:39
1	U 409.014†	-4755.0	-4722.1	[0.00]	ug/L	08:03:19
1	V 292.402†	-1589.6	-1578.6	[0.00]	ug/L	08:03:19
1	Zn 213.857†	901.8	895.6	[0.00]	ug/L	08:03:39
1	SiO2†	429.1	426.2	[0.00]	ug/L	08:04:35
2	Sc Radial	7660.2	7660.2	102	%	08:02:27
2	Y RADIAL	7100.7	7100.7	102.5	%	08:02:27
2	Al 396.153Radial†	-86.3	-84.2	[0.00]	ug/L	08:02:27
2	Ca 317.933Radial†	21.4	20.9	[0.00]	ug/L	08:02:47
2	Fe 238.204 Radial†	36.8	35.9	[0.00]	ug/L	08:02:47
2	K 766.490 Radial†	2362.0	2304.8	[0.00]	ug/L	08:02:27
2	Mg 279.077 IEC†	5.1	5.0	[0.00]	ug/L	08:02:47
2	Na 589.592 Radial†	-283.4	-276.5	[0.00]	ug/L	08:02:27
2	Sr 421.552†	-46.7	-45.6	[0.00]	ug/L	08:02:27
2	Sc 361.383	713270.6	713270.6	99.246	%	08:03:44
2	Y 371.029	557882.4	557882.4	99.267	%	08:03:44
2	Ag 328.068†	711.7	717.1	[0.00]	ug/L	08:03:44
2	As 188.979†	-32.3	-32.5	[0.00]	ug/L	08:04:04
2	B 249.677†	-913.5	-920.4	[0.00]	ug/L	08:03:44

2	Ba 233.527†	-1.8	-1.8	[0.00]	ug/L	08:04:04
2	Be 313.107†	-4896.3	-4933.5	[0.00]	ug/L	08:03:44
2	Cd 226.502†	-295.8	-298.0	[0.00]	ug/L	08:04:04
2	Co 228.616†	-106.2	-107.0	[0.00]	ug/L	08:04:04
2	Cr 267.716†	-79.3	-79.9	[0.00]	ug/L	08:03:44
2	Cu 324.752†	5643.3	5686.2	[0.00]	ug/L	08:03:44
2	Mn 257.610†	692.3	697.5	[0.00]	ug/L	08:03:44
2	Mo 202.031†	19.0	19.2	[0.00]	ug/L	08:04:04
2	Ni 231.604†	121.8	122.7	[0.00]	ug/L	08:04:04
2	P 214.914†	309.8	312.1	[0.00]	ug/L	08:04:04
2	Pb 220.353†	-3.0	-3.0	[0.00]	ug/L	08:04:04
2	S 181.975 Axial†	69.7	70.3	[0.00]	ug/L	08:04:04
2	Sb 206.836†	54.7	55.1	[0.00]	ug/L	08:04:04
2	Se 196.026†	-23.1	-23.3	[0.00]	ug/L	08:04:04
2	Si 251.611†	423.6	426.8	[0.00]	ug/L	08:04:04
2	Sn 189.927†	7.3	7.3	[0.00]	ug/L	08:04:04
2	Ti 334.940†	-1312.1	-1322.1	[0.00]	ug/L	08:03:44
2	Tl 190.801†	-61.2	-61.7	[0.00]	ug/L	08:04:04
2	U 409.014†	-4836.8	-4873.6	[0.00]	ug/L	08:03:44
2	V 292.402†	-1570.5	-1582.4	[0.00]	ug/L	08:03:44
2	Zn 213.857†	928.6	935.7	[0.00]	ug/L	08:04:04
2	SiO2†	424.7	427.9	[0.00]	ug/L	08:04:40
3	Sc Radial	7430.7	7430.7	99.4	%	08:02:52
3	Y RADIAL	6903.8	6903.8	99.70	%	08:02:52
3	Al 396.153Radial†	-62.8	-63.2	[0.00]	ug/L	08:02:52
3	Ca 317.933Radial†	34.9	35.1	[0.00]	ug/L	08:03:12
3	Fe 238.204 Radial†	33.6	33.8	[0.00]	ug/L	08:03:12
3	K 766.490 Radial†	2505.8	2520.6	[0.00]	ug/L	08:02:52
3	Mg 279.077 IEC†	2.3	2.3	[0.00]	ug/L	08:03:12
3	Na 589.592 Radial†	9.5	9.6	[0.00]	ug/L	08:02:52
3	Sr 421.552†	-46.2	-46.4	[0.00]	ug/L	08:02:52
3	Sc 361.383	719103.6	719103.6	100.06	%	08:04:10
3	Y 371.029	562324.5	562324.5	100.06	%	08:04:10
3	Ag 328.068†	612.8	612.4	[0.00]	ug/L	08:04:10
3	As 188.979†	-27.8	-27.8	[0.00]	ug/L	08:04:30
3	B 249.677†	-886.6	-886.0	[0.00]	ug/L	08:04:10
3	Ba 233.527†	5.0	5.0	[0.00]	ug/L	08:04:30
3	Be 313.107†	-4868.9	-4866.1	[0.00]	ug/L	08:04:10
3	Cd 226.502†	-266.1	-265.9	[0.00]	ug/L	08:04:30
3	Co 228.616†	-93.0	-93.0	[0.00]	ug/L	08:04:30
3	Cr 267.716†	-105.1	-105.1	[0.00]	ug/L	08:04:10
3	Cu 324.752†	5691.2	5687.9	[0.00]	ug/L	08:04:10
3	Mn 257.610†	686.5	686.1	[0.00]	ug/L	08:04:10
3	Mo 202.031†	25.0	25.0	[0.00]	ug/L	08:04:30
3	Ni 231.604†	118.4	118.3	[0.00]	ug/L	08:04:30
3	P 214.914†	318.8	318.6	[0.00]	ug/L	08:04:30
3	Pb 220.353†	-24.8	-24.7	[0.00]	ug/L	08:04:30
3	S 181.975 Axial†	79.4	79.3	[0.00]	ug/L	08:04:30
3	Sb 206.836†	56.7	56.7	[0.00]	ug/L	08:04:30
3	Se 196.026†	-32.3	-32.3	[0.00]	ug/L	08:04:30
3	Si 251.611†	396.3	396.0	[0.00]	ug/L	08:04:30
3	Sn 189.927†	18.3	18.3	[0.00]	ug/L	08:04:30
3	Ti 334.940†	-1343.5	-1342.7	[0.00]	ug/L	08:04:10
3	Tl 190.801†	-63.3	-63.2	[0.00]	ug/L	08:04:30
3	U 409.014†	-4953.4	-4950.5	[0.00]	ug/L	08:04:10
3	V 292.402†	-1535.5	-1534.6	[0.00]	ug/L	08:04:10
3	Zn 213.857†	944.6	944.1	[0.00]	ug/L	08:04:30
3	SiO2†	456.8	456.5	[0.00]	ug/L	08:04:45

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
Sc 361.383	718689.3	5223.89	0.73%	100.00	%
Sc Radial	7474.6	167.97	2.25%	100	%
Y 371.029	561999.9	3965.18	0.71%	100.00	%
Y RADIAL	6924.3	167.10	2.41%	100.0	%
Ag 328.068†	632.6	76.36	12.07%	[0.00]	ug/L
Al 396.153Radial†	-72.6	10.68	14.70%	[0.00]	ug/L
As 188.979†	-35.4	9.45	26.67%	[0.00]	ug/L
B 249.677†	-939.9	65.84	7.01%	[0.00]	ug/L

Ba 233.527†	0.5	3.89	769.35%	[0.00]	ug/L
Be 313.107†	-4881.7	46.00	0.94%	[0.00]	ug/L
Ca 317.933Radial†	29.1	7.36	25.29%	[0.00]	ug/L
Cd 226.502†	-281.1	16.12	5.73%	[0.00]	ug/L
Co 228.616†	-99.4	7.08	7.12%	[0.00]	ug/L
Cr 267.716†	-77.4	29.04	37.52%	[0.00]	ug/L
Cu 324.752†	5638.4	84.19	1.49%	[0.00]	ug/L
Fe 238.204 Radial†	34.8	1.08	3.11%	[0.00]	ug/L
K 766.490 Radial†	2407.2	108.32	4.50%	[0.00]	ug/L
Mg 279.077 IEC†	3.0	1.67	54.91%	[0.00]	ug/L
Mn 257.610†	679.6	21.90	3.22%	[0.00]	ug/L
Mo 202.031†	17.1	9.03	52.69%	[0.00]	ug/L
Na 589.592 Radial†	-135.6	143.12	105.58%	[0.00]	ug/L
Ni 231.604†	119.8	2.51	2.09%	[0.00]	ug/L
P 214.914†	314.8	3.38	1.07%	[0.00]	ug/L
Pb 220.353†	-13.3	10.92	82.37%	[0.00]	ug/L
S 181.975 Axial†	75.4	4.65	6.16%	[0.00]	ug/L
Sb 206.836†	57.3	2.49	4.36%	[0.00]	ug/L
Se 196.026†	-28.8	4.81	16.71%	[0.00]	ug/L
Si 251.611†	411.8	15.40	3.74%	[0.00]	ug/L
Sn 189.927†	12.5	5.52	44.16%	[0.00]	ug/L
Sr 421.552†	-55.9	17.09	30.60%	[0.00]	ug/L
Ti 334.940†	-1348.3	29.36	2.18%	[0.00]	ug/L
Tl 190.801†	-60.8	3.03	4.98%	[0.00]	ug/L
U 409.014†	-4848.7	116.20	2.40%	[0.00]	ug/L
V 292.402†	-1565.2	26.55	1.70%	[0.00]	ug/L
Zn 213.857†	925.1	25.93	2.80%	[0.00]	ug/L
SiO2†	436.9	17.05	3.90%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 6/30/2009 08:06:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7536.7	7536.7	101	%	08:08:52
1	Y RADIAL	6939.1	6939.1	100.2	%	08:08:52
1	K 766.490 Radial†	7002.8	4537.9	[1000]	ug/L	08:08:47
1	Sr 421.552†	34034.9	33810.4	[100]	ug/L	08:08:47
1	Sc 361.383	734393.9	734393.9	102.19	%	08:09:19
1	Y 371.029	573053.1	573053.1	101.97	%	08:09:19
1	Ag 328.068†	18107.9	17088.1	[100]	ug/L	08:09:19
1	As 188.979†	245.2	275.4	[100]	ug/L	08:09:39
1	B 249.677†	3110.2	3983.6	[100]	ug/L	08:09:19
1	Ba 233.527†	14955.4	14635.1	[100]	ug/L	08:09:19
1	Be 313.107†	222292.2	222420.4	[100]	ug/L	08:09:19
1	Cd 226.502†	7806.4	7920.5	[100]	ug/L	08:09:39
1	Co 228.616†	5943.2	5915.6	[100]	ug/L	08:09:39
1	Cr 267.716†	7405.7	7324.8	[100]	ug/L	08:09:19
1	Cu 324.752†	34513.6	28137.2	[100]	ug/L	08:09:19
1	Mn 257.610†	97154.7	94397.5	[100]	ug/L	08:09:19
1	Mo 202.031†	1505.5	1456.1	[100]	ug/L	08:09:39
1	Ni 231.604†	3998.2	3792.9	[100]	ug/L	08:09:39
1	P 214.914†	1350.2	1006.6	[500]	ug/L	08:09:39
1	Pb 220.353†	890.6	884.8	[100]	ug/L	08:09:39
1	S 181.975 Axial†	232.7	152.3	[200]	ug/L	08:09:39
1	Sb 206.836†	401.3	335.5	[100]	ug/L	08:09:39
1	Se 196.026†	174.4	199.5	[100]	ug/L	08:09:39
1	Si 251.611†	17145.7	16367.3	[500]	ug/L	08:09:19
1	Sn 189.927†	597.0	571.7	[100]	ug/L	08:09:39
1	Ti 334.940†	55327.0	55492.2	[100]	ug/L	08:09:19
1	Tl 190.801†	353.4	406.6	[100]	ug/L	08:09:39
1	U 409.014†	-1643.9	3240.0	[100]	ug/L	08:09:19
1	V 292.402†	9828.0	11183.0	[100]	ug/L	08:09:19
1	Zn 213.857†	12345.3	11156.2	[100]	ug/L	08:09:19
1	SiO2†	16831.6	16034.7	[1069.5]	ug/L	08:10:36
2	Sc Radial	7396.9	7396.9	99.0	%	08:09:02
2	Y RADIAL	6800.1	6800.1	98.21	%	08:09:02
2	K 766.490 Radial†	6887.5	4552.7	[1000]	ug/L	08:08:57
2	Sr 421.552†	34356.2	34773.1	[100]	ug/L	08:08:57
2	Sc 361.383	729336.4	729336.4	101.48	%	08:09:45
2	Y 371.029	568343.4	568343.4	101.13	%	08:09:45
2	Ag 328.068†	18043.8	17147.7	[100]	ug/L	08:09:45
2	As 188.979†	267.9	299.4	[100]	ug/L	08:10:05
2	B 249.677†	2982.8	3879.2	[100]	ug/L	08:09:45
2	Ba 233.527†	14864.7	14647.2	[100]	ug/L	08:09:45
2	Be 313.107†	220607.8	222269.0	[100]	ug/L	08:09:45
2	Cd 226.502†	7778.0	7945.6	[100]	ug/L	08:10:05
2	Co 228.616†	5930.9	5943.8	[100]	ug/L	08:10:05
2	Cr 267.716†	7358.5	7328.4	[100]	ug/L	08:09:45
2	Cu 324.752†	34059.7	27924.1	[100]	ug/L	08:09:45
2	Mn 257.610†	96466.5	94378.6	[100]	ug/L	08:09:45
2	Mo 202.031†	1502.6	1463.6	[100]	ug/L	08:10:05
2	Ni 231.604†	3991.0	3813.0	[100]	ug/L	08:10:05
2	P 214.914†	1333.3	999.1	[500]	ug/L	08:10:05
2	Pb 220.353†	883.7	884.1	[100]	ug/L	08:10:05
2	S 181.975 Axial†	238.4	159.5	[200]	ug/L	08:10:05
2	Sb 206.836†	392.3	329.4	[100]	ug/L	08:10:05
2	Se 196.026†	178.3	204.5	[100]	ug/L	08:10:05
2	Si 251.611†	17027.5	16367.1	[500]	ug/L	08:09:45
2	Sn 189.927†	595.1	573.9	[100]	ug/L	08:10:05
2	Ti 334.940†	54903.8	55450.6	[100]	ug/L	08:09:45
2	Tl 190.801†	340.2	396.0	[100]	ug/L	08:10:05
2	U 409.014†	-1533.7	3337.4	[100]	ug/L	08:09:45

2	V 292.402†	9767.9	11190.5	[100]	ug/L	08:09:45
2	Zn 213.857†	12219.7	11116.2	[100]	ug/L	08:09:45
2	SiO2†	16580.2	15901.3	[1069.5]	ug/L	08:10:41
3	Sc Radial	7592.7	7592.7	102	%	08:09:12
3	Y RADIAL	7005.7	7005.7	101.2	%	08:09:12
3	K 766.490 Radial†	7071.4	4554.3	[1000]	ug/L	08:09:07
3	Sr 421.552†	34873.0	34386.5	[100]	ug/L	08:09:07
3	Sc 361.383	738752.0	738752.0	102.79	%	08:10:10
3	Y 371.029	576233.1	576233.1	102.53	%	08:10:10
3	Ag 328.068†	18197.8	17071.0	[100]	ug/L	08:10:10
3	As 188.979†	254.2	282.7	[100]	ug/L	08:10:30
3	B 249.677†	3118.6	3973.8	[100]	ug/L	08:10:10
3	Ba 233.527†	15063.6	14654.0	[100]	ug/L	08:10:10
3	Be 313.107†	223875.9	222677.8	[100]	ug/L	08:10:10
3	Cd 226.502†	7755.4	7825.9	[100]	ug/L	08:10:30
3	Co 228.616†	5940.8	5878.9	[100]	ug/L	08:10:30
3	Cr 267.716†	7475.5	7349.9	[100]	ug/L	08:10:10
3	Cu 324.752†	34750.0	28167.8	[100]	ug/L	08:10:10
3	Mn 257.610†	97657.0	94325.2	[100]	ug/L	08:10:10
3	Mo 202.031†	1495.8	1438.1	[100]	ug/L	08:10:30
3	Ni 231.604†	4016.8	3787.9	[100]	ug/L	08:10:30
3	P 214.914†	1333.5	982.5	[500]	ug/L	08:10:30
3	Pb 220.353†	877.8	867.2	[100]	ug/L	08:10:30
3	S 181.975 Axial†	222.6	141.1	[200]	ug/L	08:10:30
3	Sb 206.836†	398.6	330.5	[100]	ug/L	08:10:30
3	Se 196.026†	170.3	194.5	[100]	ug/L	08:10:30
3	Si 251.611†	17254.1	16373.7	[500]	ug/L	08:10:10
3	Sn 189.927†	587.6	559.2	[100]	ug/L	08:10:30
3	Ti 334.940†	55848.1	55679.6	[100]	ug/L	08:10:10
3	Tl 190.801†	343.9	395.3	[100]	ug/L	08:10:30
3	U 409.014†	-1621.5	3271.3	[100]	ug/L	08:10:10
3	V 292.402†	9943.5	11238.7	[100]	ug/L	08:10:10
3	Zn 213.857†	12396.5	11134.7	[100]	ug/L	08:10:10
3	SiO2†	16720.9	15829.9	[1069.5]	ug/L	08:10:46

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	734160.8	4712.12	0.64%	102.15	%
Sc Radial	7508.7	100.86	1.34%	100	%
Y 371.029	572543.2	3969.45	0.69%	101.88	%
Y RADIAL	6915.0	104.91	1.52%	99.86	%
Ag 328.068†	17102.3	40.29	0.24%	[100]	ug/L
As 188.979†	285.9	12.31	4.31%	[100]	ug/L
B 249.677†	3945.5	57.65	1.46%	[100]	ug/L
Ba 233.527†	14645.4	9.59	0.07%	[100]	ug/L
Be 313.107†	222455.7	206.65	0.09%	[100]	ug/L
Cd 226.502†	7897.3	63.13	0.80%	[100]	ug/L
Co 228.616†	5912.7	32.55	0.55%	[100]	ug/L
Cr 267.716†	7334.4	13.58	0.19%	[100]	ug/L
Cu 324.752†	28076.4	132.76	0.47%	[100]	ug/L
K 766.490 Radial†	4548.3	9.03	0.20%	[1000]	ug/L
Mn 257.610†	94367.1	37.47	0.04%	[100]	ug/L
Mo 202.031†	1452.6	13.10	0.90%	[100]	ug/L
Ni 231.604†	3797.9	13.28	0.35%	[100]	ug/L
P 214.914†	996.1	12.30	1.24%	[500]	ug/L
Pb 220.353†	878.7	9.94	1.13%	[100]	ug/L
S 181.975 Axial†	151.0	9.23	6.12%	[200]	ug/L
Sb 206.836†	331.8	3.25	0.98%	[100]	ug/L
Se 196.026†	199.5	5.01	2.51%	[100]	ug/L
Si 251.611†	16369.4	3.77	0.02%	[500]	ug/L
Sn 189.927†	568.3	7.94	1.40%	[100]	ug/L
Sr 421.552†	34323.3	484.48	1.41%	[100]	ug/L
Ti 334.940†	55540.8	122.03	0.22%	[100]	ug/L
Tl 190.801†	399.3	6.30	1.58%	[100]	ug/L
U 409.014†	3282.9	49.72	1.51%	[100]	ug/L
V 292.402†	11204.1	30.19	0.27%	[100]	ug/L
Zn 213.857†	11135.7	20.05	0.18%	[100]	ug/L
SiO2†	15922.0	103.97	0.65%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 6/30/2009 08:12:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7331.6	7331.6	98.1	%	08:14:48
1	Y RADIAL	6711.6	6711.6	96.93	%	08:14:48
1	Al 396.153Radial†	6146.5	6339.0	[5000]	ug/L	08:14:48
1	Ca 317.933Radial†	3679.6	3722.2	[5000]	ug/L	08:14:48
1	K 766.490 Radial†	24598.6	22671.0	[5000]	ug/L	08:14:48
1	Mg 279.077 IEC†	216.5	217.7	[5000]	ug/L	08:15:08
1	Sr 421.552†	169572.9	172935.1	[500]	ug/L	08:14:48
1	Sc 361.383	769868.5	769868.5	107.12	%	08:16:07
1	Y 371.029	593513.7	593513.7	105.61	%	08:16:07
1	Ag 328.068†	87541.8	81089.5	[500]	ug/L	08:16:07
1	As 188.979†	1409.8	1351.5	[500]	ug/L	08:16:27
1	B 249.677†	19467.3	19113.1	[500]	ug/L	08:16:07
1	Ba 233.527†	73932.8	69017.4	[500]	ug/L	08:16:07
1	Be 313.107†	1136680.0	1065997.8	[500]	ug/L	08:16:07
1	Cd 226.502†	39456.0	37114.2	[500]	ug/L	08:16:27
1	Co 228.616†	29402.6	27547.4	[500]	ug/L	08:16:27
1	Cr 267.716†	37090.5	34702.2	[500]	ug/L	08:16:07
1	Cu 324.752†	149279.1	133716.9	[500]	ug/L	08:16:07
1	Mn 257.610†	473775.8	441600.6	[500]	ug/L	08:16:07
1	Mo 202.031†	7403.7	6894.4	[500]	ug/L	08:16:27
1	Ni 231.604†	19288.8	17886.7	[500]	ug/L	08:16:27
1	P 214.914†	5408.5	4734.1	[2500]	ug/L	08:16:27
1	Pb 220.353†	4336.2	4061.2	[500]	ug/L	08:16:27
1	S 181.975 Axial†	819.7	689.8	[1000]	ug/L	08:16:27
1	Sb 206.836†	1784.5	1608.6	[500]	ug/L	08:16:27
1	Se 196.026†	996.6	959.1	[500]	ug/L	08:16:27
1	Si 251.611†	85511.7	79415.3	[2500]	ug/L	08:16:07
1	Sn 189.927†	2931.4	2724.0	[500]	ug/L	08:16:27
1	Ti 334.940†	282238.5	264824.2	[500]	ug/L	08:16:07
1	Tl 190.801†	1928.3	1860.8	[500]	ug/L	08:16:27
1	U 409.014†	10443.6	14598.1	[500]	ug/L	08:16:07
1	V 292.402†	55566.5	53437.8	[500]	ug/L	08:16:07
1	Zn 213.857†	57403.7	52662.5	[500]	ug/L	08:16:07
1	SiO2†	86466.0	80281.1	[5347.5]	ug/L	08:17:27
2	Sc Radial	7012.2	7012.2	93.8	%	08:15:13
2	Y RADIAL	6406.9	6406.9	92.53	%	08:15:13
2	Al 396.153Radial†	6199.2	6680.6	[5000]	ug/L	08:15:13
2	Ca 317.933Radial†	3669.6	3882.5	[5000]	ug/L	08:15:13
2	K 766.490 Radial†	24515.2	23724.5	[5000]	ug/L	08:15:13
2	Mg 279.077 IEC†	213.8	224.8	[5000]	ug/L	08:15:33
2	Sr 421.552†	170064.4	181333.7	[500]	ug/L	08:15:13
2	Sc 361.383	741530.7	741530.7	103.18	%	08:16:34
2	Y 371.029	572044.7	572044.7	101.79	%	08:16:34
2	Ag 328.068†	87246.2	83926.1	[500]	ug/L	08:16:34
2	As 188.979†	1416.7	1408.5	[500]	ug/L	08:16:54
2	B 249.677†	19479.9	19819.7	[500]	ug/L	08:16:34
2	Ba 233.527†	73805.8	71531.8	[500]	ug/L	08:16:34
2	Be 313.107†	1135032.3	1104951.6	[500]	ug/L	08:16:34
2	Cd 226.502†	39893.2	38945.5	[500]	ug/L	08:16:54
2	Co 228.616†	29720.4	28904.3	[500]	ug/L	08:16:54
2	Cr 267.716†	37001.7	35939.3	[500]	ug/L	08:16:34
2	Cu 324.752†	148954.2	138727.6	[500]	ug/L	08:16:34
2	Mn 257.610†	472845.3	457600.6	[500]	ug/L	08:16:34
2	Mo 202.031†	7472.5	7225.2	[500]	ug/L	08:16:54
2	Ni 231.604†	19486.5	18766.4	[500]	ug/L	08:16:54
2	P 214.914†	5446.9	4964.3	[2500]	ug/L	08:16:54
2	Pb 220.353†	4388.1	4266.1	[500]	ug/L	08:16:54
2	S 181.975 Axial†	832.2	731.2	[1000]	ug/L	08:16:54
2	Sb 206.836†	1819.4	1706.1	[500]	ug/L	08:16:54

2	Se 196.026†	994.2	992.4	[500]	ug/L	08:16:54
2	Si 251.611†	85264.0	82225.8	[2500]	ug/L	08:16:34
2	Sn 189.927†	2961.9	2858.2	[500]	ug/L	08:16:54
2	Ti 334.940†	282021.6	274682.7	[500]	ug/L	08:16:34
2	Tl 190.801†	1952.3	1953.0	[500]	ug/L	08:16:54
2	U 409.014†	10246.1	14779.2	[500]	ug/L	08:16:34
2	V 292.402†	55595.3	55448.0	[500]	ug/L	08:16:34
2	Zn 213.857†	57330.7	54639.6	[500]	ug/L	08:16:34
2	SiO2†	85458.1	82388.9	[5347.5]	ug/L	08:17:32
3	Sc Radial	7281.7	7281.7	97.4	%	08:15:38
3	Y RADIAL	6673.6	6673.6	96.38	%	08:15:38
3	Al 396.153Radial†	6002.9	6234.6	[5000]	ug/L	08:15:38
3	Ca 317.933Radial†	3580.6	3646.4	[5000]	ug/L	08:15:38
3	K 766.490 Radial†	24009.6	22238.6	[5000]	ug/L	08:15:38
3	Mg 279.077 IEC†	207.3	209.8	[5000]	ug/L	08:15:58
3	Sr 421.552†	165542.3	169984.4	[500]	ug/L	08:15:38
3	Sc 361.383	732297.7	732297.7	101.89	%	08:17:02
3	Y 371.029	565284.2	565284.2	100.58	%	08:17:02
3	Ag 328.068†	86631.1	84388.6	[500]	ug/L	08:17:02
3	As 188.979†	1413.7	1422.9	[500]	ug/L	08:17:22
3	B 249.677†	19357.3	19937.5	[500]	ug/L	08:17:02
3	Ba 233.527†	73252.9	71891.1	[500]	ug/L	08:17:02
3	Be 313.107†	1126344.5	1110295.2	[500]	ug/L	08:17:02
3	Cd 226.502†	39932.3	39471.3	[500]	ug/L	08:17:22
3	Co 228.616†	29714.9	29262.1	[500]	ug/L	08:17:22
3	Cr 267.716†	36694.0	36089.5	[500]	ug/L	08:17:02
3	Cu 324.752†	147084.2	138712.4	[500]	ug/L	08:17:02
3	Mn 257.610†	469176.5	459778.1	[500]	ug/L	08:17:02
3	Mo 202.031†	7457.0	7301.3	[500]	ug/L	08:17:22
3	Ni 231.604†	19533.9	19051.1	[500]	ug/L	08:17:22
3	P 214.914†	5449.9	5033.8	[2500]	ug/L	08:17:22
3	Pb 220.353†	4412.4	4343.7	[500]	ug/L	08:17:22
3	S 181.975 Axial†	840.6	749.6	[1000]	ug/L	08:17:22
3	Sb 206.836†	1816.0	1725.0	[500]	ug/L	08:17:22
3	Se 196.026†	1002.2	1012.3	[500]	ug/L	08:17:22
3	Si 251.611†	84453.6	82472.4	[2500]	ug/L	08:17:02
3	Sn 189.927†	2978.8	2910.9	[500]	ug/L	08:17:22
3	Ti 334.940†	278860.4	275026.5	[500]	ug/L	08:17:02
3	Tl 190.801†	1948.7	1973.3	[500]	ug/L	08:17:22
3	U 409.014†	9966.0	14629.5	[500]	ug/L	08:17:02
3	V 292.402†	54895.9	55441.0	[500]	ug/L	08:17:02
3	Zn 213.857†	56933.7	54950.6	[500]	ug/L	08:17:02
3	SiO2†	86700.3	84652.2	[5347.5]	ug/L	08:17:37

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	747899.0	19578.21	2.62%	104.06	%
Sc Radial	7208.5	171.81	2.38%	96.4	%
Y 371.029	576947.5	14739.54	2.55%	102.66	%
Y RADIAL	6597.4	166.02	2.52%	95.28	%
Ag 328.068†	83134.7	1786.23	2.15%	[500]	ug/L
Al 396.153Radial†	6418.0	233.28	3.63%	[5000]	ug/L
As 188.979†	1394.3	37.77	2.71%	[500]	ug/L
B 249.677†	19623.4	445.89	2.27%	[500]	ug/L
Ba 233.527†	70813.4	1565.76	2.21%	[500]	ug/L
Be 313.107†	1093748.2	24180.62	2.21%	[500]	ug/L
Ca 317.933Radial†	3750.4	120.53	3.21%	[5000]	ug/L
Cd 226.502†	38510.3	1237.37	3.21%	[500]	ug/L
Co 228.616†	28571.3	904.57	3.17%	[500]	ug/L
Cr 267.716†	35577.0	761.31	2.14%	[500]	ug/L
Cu 324.752†	137052.3	2888.55	2.11%	[500]	ug/L
K 766.490 Radial†	22878.0	764.29	3.34%	[5000]	ug/L
Mg 279.077 IEC†	217.4	7.53	3.46%	[5000]	ug/L
Mn 257.610†	452993.1	9926.07	2.19%	[500]	ug/L
Mo 202.031†	7140.3	216.36	3.03%	[500]	ug/L
Ni 231.604†	18568.1	607.02	3.27%	[500]	ug/L
P 214.914†	4910.7	156.86	3.19%	[2500]	ug/L
Pb 220.353†	4223.7	145.95	3.46%	[500]	ug/L
S 181.975 Axial†	723.5	30.63	4.23%	[1000]	ug/L

Sb 206.836†	1679.9	62.46	3.72%	[500]	ug/L
Se 196.026†	987.9	26.86	2.72%	[500]	ug/L
Si 251.611†	81371.2	1698.29	2.09%	[2500]	ug/L
Sn 189.927†	2831.0	96.35	3.40%	[500]	ug/L
Sr 421.552†	174751.0	5888.55	3.37%	[500]	ug/L
Ti 334.940†	271511.1	5793.62	2.13%	[500]	ug/L
Tl 190.801†	1929.0	59.92	3.11%	[500]	ug/L
U 409.014†	14668.9	96.79	0.66%	[500]	ug/L
V 292.402†	54775.6	1158.59	2.12%	[500]	ug/L
Zn 213.857†	54084.3	1241.03	2.29%	[500]	ug/L
SiO2†	82440.7	2186.02	2.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 6/30/2009 08:19:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7204.7	7204.7	96.4	%	08:22:02
1	Y RADIAL	7061.7	7061.7	102.0	%	08:21:42
1	Al 396.153Radial†	12196.2	12725.7	[10000]	ug/L	08:21:42
1	Ca 317.933Radial†	7147.7	7386.4	[10000]	ug/L	08:22:02
1	Fe 238.204 Radial†	2424.5	2480.5	[10000]	ug/L	08:22:02
1	K 766.490 Radial†	45808.2	45117.1	[10000]	ug/L	08:21:42
1	Mg 279.077 IEC†	418.3	431.0	[10000]	ug/L	08:22:02
1	Na 589.592 Radial†	161229.1	167404.7	[10000]	ug/L	08:21:42
1	Sr 421.552†	336493.3	349155.2	[1000]	ug/L	08:21:42
1	Sc 361.383	731644.6	731644.6	101.80	%	08:23:01
1	Y 371.029	562448.6	562448.6	100.08	%	08:23:01
1	Ag 328.068†	173528.7	169823.4	[1000]	ug/L	08:23:01
1	As 188.979†	2839.1	2824.3	[1000]	ug/L	08:23:21
1	B 249.677†	40015.0	40246.4	[1000]	ug/L	08:23:01
1	Ba 233.527†	146287.3	143696.5	[1000]	ug/L	08:23:01
1	Be 313.107†	2249343.7	2214396.2	[1000]	ug/L	08:23:01
1	Cd 226.502†	81183.1	80026.7	[1000]	ug/L	08:23:01
1	Co 228.616†	59665.4	58708.3	[1000]	ug/L	08:23:01
1	Cr 267.716†	73671.7	72444.6	[1000]	ug/L	08:23:01
1	Cu 324.752†	290566.6	279783.1	[1000]	ug/L	08:23:01
1	Mn 257.610†	937074.5	919802.1	[1000]	ug/L	08:23:01
1	Mo 202.031†	14767.8	14489.2	[1000]	ug/L	08:23:21
1	Ni 231.604†	38890.7	38082.2	[1000]	ug/L	08:23:01
1	P 214.914†	10479.1	9978.8	[5000]	ug/L	08:23:21
1	Pb 220.353†	8695.5	8554.8	[1000]	ug/L	08:23:21
1	S 181.975 Axial†	1600.3	1496.5	[2000]	ug/L	08:23:21
1	Sb 206.836†	3574.8	3454.3	[1000]	ug/L	08:23:21
1	Se 196.026†	2002.9	1996.2	[1000]	ug/L	08:23:21
1	Si 251.611†	167224.9	163852.0	[5000]	ug/L	08:23:01
1	Sn 189.927†	5879.4	5762.8	[1000]	ug/L	08:23:21
1	Ti 334.940†	562505.4	553893.3	[1000]	ug/L	08:23:01
1	Tl 190.801†	3903.4	3895.0	[1000]	ug/L	08:23:21
1	U 409.014†	25254.0	29655.6	[1000]	ug/L	08:23:01
1	V 292.402†	112154.0	111733.3	[1000]	ug/L	08:23:01
1	Zn 213.857†	113078.1	110150.7	[1000]	ug/L	08:23:01
1	SiO2†	166605.1	163218.1	[10695]	ug/L	08:24:22
2	Sc Radial	7030.2	7030.2	94.1	%	08:22:27
2	Y RADIAL	5925.9	5925.9	85.58	%	08:22:07
2	Al 396.153Radial†	12831.1	13714.8	[10000]	ug/L	08:22:07
2	Ca 317.933Radial†	7296.2	7728.2	[10000]	ug/L	08:22:27
2	Fe 238.204 Radial†	2474.3	2595.9	[10000]	ug/L	08:22:27
2	K 766.490 Radial†	47735.1	48345.1	[10000]	ug/L	08:22:07
2	Mg 279.077 IEC†	418.7	442.2	[10000]	ug/L	08:22:27
2	Na 589.592 Radial†	168332.5	179107.6	[10000]	ug/L	08:22:07
2	Sr 421.552†	352945.4	375309.4	[1000]	ug/L	08:22:07
2	Sc 361.383	736250.1	736250.1	102.44	%	08:23:29
2	Y 371.029	566550.5	566550.5	100.81	%	08:23:29
2	Ag 328.068†	173180.3	168417.0	[1000]	ug/L	08:23:29
2	As 188.979†	2763.2	2732.7	[1000]	ug/L	08:23:49
2	B 249.677†	39944.8	39932.0	[1000]	ug/L	08:23:29
2	Ba 233.527†	145645.5	142171.1	[1000]	ug/L	08:23:29
2	Be 313.107†	2241322.6	2192745.1	[1000]	ug/L	08:23:29
2	Cd 226.502†	80530.2	78890.5	[1000]	ug/L	08:23:29
2	Co 228.616†	59248.5	57934.7	[1000]	ug/L	08:23:29
2	Cr 267.716†	73330.1	71658.4	[1000]	ug/L	08:23:29
2	Cu 324.752†	290171.2	277611.7	[1000]	ug/L	08:23:29
2	Mn 257.610†	932429.5	909509.9	[1000]	ug/L	08:23:29
2	Mo 202.031†	14414.1	14053.2	[1000]	ug/L	08:23:49
2	Ni 231.604†	38630.1	37588.9	[1000]	ug/L	08:23:29

2	P 214.914†	10255.7	9696.3	[5000]	ug/L	08:23:49
2	Pb 220.353†	8495.4	8306.1	[1000]	ug/L	08:23:49
2	S 181.975 Axial†	1560.2	1447.6	[2000]	ug/L	08:23:49
2	Sb 206.836†	3479.3	3339.0	[1000]	ug/L	08:23:49
2	Se 196.026†	1946.5	1928.8	[1000]	ug/L	08:23:49
2	Si 251.611†	166585.8	162200.7	[5000]	ug/L	08:23:29
2	Sn 189.927†	5744.7	5595.1	[1000]	ug/L	08:23:49
2	Ti 334.940†	561361.9	549320.8	[1000]	ug/L	08:23:29
2	Tl 190.801†	3783.4	3753.9	[1000]	ug/L	08:23:49
2	U 409.014†	25427.8	29670.0	[1000]	ug/L	08:23:29
2	V 292.402†	111767.7	110667.1	[1000]	ug/L	08:23:29
2	Zn 213.857†	112281.5	108678.3	[1000]	ug/L	08:23:29
2	SiO2†	169107.1	164636.8	[10695]	ug/L	08:24:27
3	Sc Radial	7179.0	7179.0	96.0	%	08:22:52
3	Y RADIAL	6782.9	6782.9	97.96	%	08:22:32
3	Al 396.153Radial†	12455.1	13040.5	[10000]	ug/L	08:22:32
3	Ca 317.933Radial†	7211.3	7479.1	[10000]	ug/L	08:22:52
3	Fe 238.204 Radial†	2448.1	2514.1	[10000]	ug/L	08:22:52
3	K 766.490 Radial†	46541.4	46050.6	[10000]	ug/L	08:22:32
3	Mg 279.077 IEC†	421.5	435.8	[10000]	ug/L	08:22:52
3	Na 589.592 Radial†	163743.5	170621.2	[10000]	ug/L	08:22:32
3	Sr 421.552†	342328.1	356479.3	[1000]	ug/L	08:22:32
3	Sc 361.383	754192.3	754192.3	104.94	%	08:23:56
3	Y 371.029	580172.7	580172.7	103.23	%	08:23:56
3	Ag 328.068†	173481.6	164682.5	[1000]	ug/L	08:23:56
3	As 188.979†	2839.1	2740.9	[1000]	ug/L	08:24:16
3	B 249.677†	40141.4	39191.7	[1000]	ug/L	08:23:56
3	Ba 233.527†	146129.4	139249.9	[1000]	ug/L	08:23:56
3	Be 313.107†	2245004.3	2144204.4	[1000]	ug/L	08:23:56
3	Cd 226.502†	80829.2	77305.3	[1000]	ug/L	08:23:56
3	Co 228.616†	59391.2	56694.9	[1000]	ug/L	08:23:56
3	Cr 267.716†	73470.2	70089.1	[1000]	ug/L	08:23:56
3	Cu 324.752†	291067.4	271727.3	[1000]	ug/L	08:23:56
3	Mn 257.610†	935327.1	890617.8	[1000]	ug/L	08:23:56
3	Mo 202.031†	14715.4	14005.6	[1000]	ug/L	08:24:16
3	Ni 231.604†	38693.3	36752.0	[1000]	ug/L	08:23:56
3	P 214.914†	10487.0	9678.6	[5000]	ug/L	08:24:16
3	Pb 220.353†	8683.7	8288.1	[1000]	ug/L	08:24:16
3	S 181.975 Axial†	1594.1	1443.7	[2000]	ug/L	08:24:16
3	Sb 206.836†	3539.1	3315.3	[1000]	ug/L	08:24:16
3	Se 196.026†	2006.3	1940.6	[1000]	ug/L	08:24:16
3	Si 251.611†	167230.5	158946.5	[5000]	ug/L	08:23:56
3	Sn 189.927†	5871.1	5582.2	[1000]	ug/L	08:24:16
3	Ti 334.940†	562636.9	537499.6	[1000]	ug/L	08:23:56
3	Tl 190.801†	3902.1	3779.2	[1000]	ug/L	08:24:16
3	U 409.014†	25678.7	29318.6	[1000]	ug/L	08:23:56
3	V 292.402†	111958.9	108253.7	[1000]	ug/L	08:23:56
3	Zn 213.857†	112557.5	106333.8	[1000]	ug/L	08:23:56
3	SiO2†	166725.6	158440.2	[10695]	ug/L	08:24:32

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	740695.7	11913.08	1.61%	103.06	%
Sc Radial	7138.0	94.18	1.32%	95.5	%
Y 371.029	569723.9	9278.37	1.63%	101.37	%
Y RADIAL	6590.2	591.92	8.98%	95.17	%
Ag 328.068†	167641.0	2656.88	1.58%	[1000]	ug/L
Al 396.153Radial†	13160.3	505.29	3.84%	[10000]	ug/L
As 188.979†	2766.0	50.67	1.83%	[1000]	ug/L
B 249.677†	39790.0	541.48	1.36%	[1000]	ug/L
Ba 233.527†	141705.8	2259.47	1.59%	[1000]	ug/L
Be 313.107†	2183781.9	35944.05	1.65%	[1000]	ug/L
Ca 317.933Radial†	7531.2	176.79	2.35%	[10000]	ug/L
Cd 226.502†	78740.8	1366.83	1.74%	[1000]	ug/L
Co 228.616†	57779.3	1015.70	1.76%	[1000]	ug/L
Cr 267.716†	71397.4	1199.28	1.68%	[1000]	ug/L
Cu 324.752†	276374.0	4168.09	1.51%	[1000]	ug/L
Fe 238.204 Radial†	2530.2	59.32	2.34%	[10000]	ug/L
K 766.490 Radial†	46504.2	1661.12	3.57%	[10000]	ug/L

Mg 279.077 IEC†	436.3	5.61	1.29%	[10000]	ug/L
Mn 257.610†	906643.3	14801.82	1.63%	[1000]	ug/L
Mo 202.031†	14182.7	266.55	1.88%	[1000]	ug/L
Na 589.592 Radial†	172377.9	6045.95	3.51%	[10000]	ug/L
Ni 231.604†	37474.4	672.45	1.79%	[1000]	ug/L
P 214.914†	9784.6	168.42	1.72%	[5000]	ug/L
Pb 220.353†	8383.0	149.05	1.78%	[1000]	ug/L
S 181.975 Axial†	1462.6	29.43	2.01%	[2000]	ug/L
Sb 206.836†	3369.5	74.35	2.21%	[1000]	ug/L
Se 196.026†	1955.2	35.97	1.84%	[1000]	ug/L
Si 251.611†	161666.4	2496.06	1.54%	[5000]	ug/L
Sn 189.927†	5646.7	100.73	1.78%	[1000]	ug/L
Sr 421.552†	360314.6	13492.36	3.74%	[1000]	ug/L
Ti 334.940†	546904.5	8459.75	1.55%	[1000]	ug/L
Tl 190.801†	3809.4	75.25	1.98%	[1000]	ug/L
U 409.014†	29548.0	198.85	0.67%	[1000]	ug/L
V 292.402†	110218.0	1782.72	1.62%	[1000]	ug/L
Zn 213.857†	108387.6	1924.98	1.78%	[1000]	ug/L
SiO2†	162098.4	3246.49	2.00%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 6/30/2009 08:26:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7395.9	7395.9	98.9	%	08:28:57
1	Y RADIAL	6757.0	6757.0	97.58	%	08:28:57
1	Al 396.153Radial†	58979.0	59679.3	[50000]	ug/L	08:28:37
1	Ca 317.933Radial†	34828.4	35170.0	[50000]	ug/L	08:28:57
1	Fe 238.204 Radial†	4716.7	4732.1	[20000]	ug/L	08:28:57
1	Mg 279.077 IEC†	1974.9	1992.8	[50000]	ug/L	08:28:57
1	Na 589.592 Radial†	312800.4	316264.9	[20000]	ug/L	08:28:37
1	Sc 361.383	728229.0	728229.0	101.33	%	08:29:54
1	Y 371.029	558499.0	558499.0	99.377	%	08:29:54
2	Sc Radial	7352.7	7352.7	98.4	%	08:29:22
2	Y RADIAL	6711.0	6711.0	96.92	%	08:29:22
2	Al 396.153Radial†	59889.8	60955.7	[50000]	ug/L	08:29:02
2	Ca 317.933Radial†	34701.3	35247.7	[50000]	ug/L	08:29:22
2	Fe 238.204 Radial†	4700.8	4744.0	[20000]	ug/L	08:29:22
2	Mg 279.077 IEC†	1971.2	2000.9	[50000]	ug/L	08:29:22
2	Na 589.592 Radial†	318315.5	323730.2	[20000]	ug/L	08:29:02
2	Sc 361.383	719163.9	719163.9	100.07	%	08:30:00
2	Y 371.029	551632.9	551632.9	98.155	%	08:30:00
3	Sc Radial	7422.8	7422.8	99.3	%	08:29:47
3	Y RADIAL	6775.3	6775.3	97.85	%	08:29:47
3	Al 396.153Radial†	60312.5	60805.9	[50000]	ug/L	08:29:27
3	Ca 317.933Radial†	34904.4	35118.8	[50000]	ug/L	08:29:47
3	Fe 238.204 Radial†	4722.7	4720.8	[20000]	ug/L	08:29:47
3	Mg 279.077 IEC†	1986.0	1996.8	[50000]	ug/L	08:29:47
3	Na 589.592 Radial†	321104.6	323480.3	[20000]	ug/L	08:29:27
3	Sc 361.383	728485.1	728485.1	101.36	%	08:30:05
3	Y 371.029	558549.8	558549.8	99.386	%	08:30:05

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	725292.7	5309.24	0.73%	100.92	%
Sc Radial	7390.4	35.39	0.48%	98.9	%
Y 371.029	556227.2	3978.89	0.72%	98.973	%
Y RADIAL	6747.8	33.13	0.49%	97.45	%
Al 396.153Radial†	60480.3	697.72	1.15%	[50000]	ug/L
Ca 317.933Radial†	35178.8	64.92	0.18%	[50000]	ug/L
Fe 238.204 Radial†	4732.3	11.57	0.24%	[20000]	ug/L
Mg 279.077 IEC†	1996.9	4.02	0.20%	[50000]	ug/L
Na 589.592 Radial†	321158.5	4239.77	1.32%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	167.4	0.00000	0.999993	
Al 396.153Radial	3	Lin Thru 0	0.0	1.214	0.00000	0.999844	
As 188.979	3	Lin Thru 0	0.0	2.771	0.00000	0.999991	
B 249.677	3	Lin Thru 0	0.0	39.68	0.00000	0.999985	
Ba 233.527	3	Lin Thru 0	0.0	141.7	0.00000	0.999996	
Be 313.107	3	Lin Thru 0	0.0	2185	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.7059	0.00000	0.999891	
Cd 226.502	3	Lin Thru 0	0.0	78.40	0.00000	0.999962	
Co 228.616	3	Lin Thru 0	0.0	57.66	0.00000	0.999988	
Cr 267.716	3	Lin Thru 0	0.0	71.36	0.00000	0.999996	
Cu 324.752	3	Lin Thru 0	0.0	276.0	0.00000	0.999993	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.2399	0.00000	0.999626	
K 766.490 Radial	3	Lin Thru 0	0.0	4.635	0.00000	0.999978	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0401	0.00000	0.999811
Mn 257.610	3	Lin Thru 0	0.0	906.8	0.00000	0.999993
Mo 202.031	3	Lin Thru 0	0.0	14.20	0.00000	0.999994
Na 589.592 Radia	2	Lin Thru 0	0.0	16.29	0.00000	0.999581
Ni 231.604	3	Lin Thru 0	0.0	37.41	0.00000	0.999993
P 214.914	3	Lin Thru 0	0.0	1.959	0.00000	0.999998
Pb 220.353	3	Lin Thru 0	0.0	8.399	0.00000	0.999987
S 181.975 Axial	3	Lin Thru 0	0.0	0.7299	0.00000	0.999986
Sb 206.836	3	Lin Thru 0	0.0	3.367	0.00000	0.999998
Se 196.026	3	Lin Thru 0	0.0	1.960	0.00000	0.999990
Si 251.611	3	Lin Thru 0	0.0	32.38	0.00000	0.999996
Sn 189.927	3	Lin Thru 0	0.0	5.650	0.00000	0.999999
Sr 421.552	3	Lin Thru 0	0.0	358.0	0.00000	0.999921
Ti 334.940	3	Lin Thru 0	0.0	546.2	0.00000	0.999995
Tl 190.801	3	Lin Thru 0	0.0	3.820	0.00000	0.999979
U 409.014	3	Lin Thru 0	0.0	29.53	0.00000	0.999946
V 292.402	3	Lin Thru 0	0.0	110.1	0.00000	0.999996
Zn 213.857	3	Lin Thru 0	0.0	108.4	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	15.21	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 6/30/2009 08:32:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7311.1	7311.1	97.8	%			08:34:29
1	Y RADIAL	6721.5	6721.5	97.07	%			08:34:29
1	Al 396.153Radial†	6272.0	6484.9	5317.7	ug/L	5317.7	ppb	08:34:09
1	Ca 317.933Radial†	3582.0	3633.1	5146.7	ug/L	5146.7	ppb	08:34:29
1	Fe 238.204 Radial†	1260.1	1253.5	5240.1	ug/L	5240.1	ppb	08:34:29
1	K 766.490 Radial†	13670.6	11569.2	2483.4	ug/L	2483.4	ppb	08:34:09
1	Mg 279.077 1EC†	218.5	220.3	5498.7	ug/L	5498.7	ppb	08:34:29
1	Na 589.592 Radial†	42038.9	43114.8	2646.1	ug/L	2646.1	ppb	08:34:09
1	Sr 421.552†	169418.8	173264.0	483.88	ug/L	483.88	ppb	08:34:09
1	Sc 361.383	742145.3	742145.3	103.26	%			08:35:26
1	Y 371.029	574749.9	574749.9	102.27	%			08:35:26
1	Ag 328.068†	44211.4	42181.4	255.12	ug/L	255.12	ppb	08:35:26
1	As 188.979†	1339.9	1333.0	483.93	ug/L	483.93	ppb	08:35:46
1	B 249.677†	19594.8	19915.4	499.11	ug/L	499.11	ppb	08:35:26
1	Ba 233.527†	78271.1	75796.8	535.91	ug/L	535.91	ppb	08:35:26
1	Be 313.107†	582097.1	568581.3	261.42	ug/L	261.42	ppb	08:35:26
1	Cd 226.502†	39466.2	38500.0	490.79	ug/L	490.79	ppb	08:35:46
1	Co 228.616†	28280.5	27486.1	476.94	ug/L	476.94	ppb	08:35:46
1	Cr 267.716†	36963.9	35873.1	503.38	ug/L	503.38	ppb	08:35:26
1	Cu 324.752†	154059.0	143551.4	520.49	ug/L	520.49	ppb	08:35:26
1	Mn 257.610†	490018.2	473851.2	523.10	ug/L	523.10	ppb	08:35:26
1	Mo 202.031†	7718.1	7457.0	525.30	ug/L	525.30	ppb	08:35:46
1	Ni 231.604†	20442.3	19676.4	525.64	ug/L	525.64	ppb	08:35:46
1	P 214.914†	5439.5	4952.8	2430.0	ug/L	2430.0	ppb	08:35:46
1	Pb 220.353†	4408.1	4282.1	511.42	ug/L	511.42	ppb	08:35:46
1	S 181.975 Axial†	2049.7	1909.5	2614.9	ug/L	2614.9	ppb	08:35:46
1	Sb 206.836†	1869.3	1753.0	528.00	ug/L	528.00	ppb	08:35:46
1	Se 196.026†	5231.7	5095.1	2618.6	ug/L	2618.6	ppb	08:35:46
1	Si 251.611†	167612.2	161902.9	4983.0	ug/L	4983.0	ppb	08:35:26
1	Sn 189.927†	3142.3	3030.5	537.29	ug/L	537.29	ppb	08:35:46
1	Ti 334.940†	286278.1	278578.4	509.91	ug/L	509.91	ppb	08:35:26
1	Tl 190.801†	1924.1	1924.0	507.00	ug/L	507.00	ppb	08:35:46
1	U 409.014†	11414.2	15902.2	536.85	ug/L	536.85	ppb	08:35:26
1	V 292.402†	55390.3	55204.8	507.68	ug/L	507.68	ppb	08:35:26
1	Zn 213.857†	58307.0	55539.1	507.72	ug/L	507.72	ppb	08:35:26
1	SiO2†	167219.3	161497.4	10582	ug/L	10582	ppb	08:36:44
2	Sc Radial	7274.5	7274.5	97.3	%			08:34:54
2	Y RADIAL	6697.6	6697.6	96.73	%			08:34:54
2	Al 396.153Radial†	6255.2	6499.9	5329.7	ug/L	5329.7	ppb	08:34:34
2	Ca 317.933Radial†	3558.1	3626.9	5137.9	ug/L	5137.9	ppb	08:34:54
2	Fe 238.204 Radial†	1245.9	1245.3	5206.4	ug/L	5206.4	ppb	08:34:54
2	K 766.490 Radial†	13611.2	11578.5	2485.3	ug/L	2485.3	ppb	08:34:34
2	Mg 279.077 IEC†	219.7	222.7	5558.2	ug/L	5558.2	ppb	08:34:54
2	Na 589.592 Radial†	42036.0	43328.0	2659.2	ug/L	2659.2	ppb	08:34:34
2	Sr 421.552†	168803.2	173502.8	484.55	ug/L	484.55	ppb	08:34:34
2	Sc 361.383	733513.4	733513.4	102.06	%			08:35:52
2	Y 371.029	568212.8	568212.8	101.11	%			08:35:52
2	Ag 328.068†	43958.9	42437.9	256.64	ug/L	256.64	ppb	08:35:52
2	As 188.979†	1336.4	1344.8	488.20	ug/L	488.20	ppb	08:36:12
2	B 249.677†	19510.6	20056.2	502.63	ug/L	502.63	ppb	08:35:52
2	Ba 233.527†	77397.0	75832.3	536.16	ug/L	536.16	ppb	08:35:52
2	Be 313.107†	576054.7	569294.5	261.75	ug/L	261.75	ppb	08:35:52
2	Cd 226.502†	39397.2	38882.0	495.67	ug/L	495.67	ppb	08:36:12
2	Co 228.616†	28277.3	27805.3	482.49	ug/L	482.49	ppb	08:36:12
2	Cr 267.716†	36653.8	35990.4	505.02	ug/L	505.02	ppb	08:35:52
2	Cu 324.752†	152551.9	143830.4	521.50	ug/L	521.50	ppb	08:35:52
2	Mn 257.610†	485576.9	475083.9	524.45	ug/L	524.45	ppb	08:35:52
2	Mo 202.031†	7722.0	7548.8	531.76	ug/L	531.76	ppb	08:36:12
2	Ni 231.604†	20462.9	19929.6	532.41	ug/L	532.41	ppb	08:36:12

2	P 214.914†	5426.8	5002.3	2455.2	ug/L	2455.2 ppb	08:36:12
2	Pb 220.353†	4388.7	4313.2	515.16	ug/L	515.16 ppb	08:36:12
2	S 181.975 Axial†	2036.4	1919.9	2629.1	ug/L	2629.1 ppb	08:36:12
2	Sb 206.836†	1877.4	1782.2	536.82	ug/L	536.82 ppb	08:36:12
2	Se 196.026†	5200.7	5124.4	2633.4	ug/L	2633.4 ppb	08:36:12
2	Si 251.611†	165998.4	162231.9	4993.0	ug/L	4993.0 ppb	08:35:52
2	Sn 189.927†	3121.5	3045.9	540.00	ug/L	540.00 ppb	08:36:12
2	Ti 334.940†	283330.6	278952.8	510.60	ug/L	510.60 ppb	08:35:52
2	Tl 190.801†	1916.6	1938.6	510.80	ug/L	510.80 ppb	08:36:12
2	U 409.014†	11015.3	15641.4	528.02	ug/L	528.02 ppb	08:35:52
2	V 292.402†	54718.8	55178.2	507.51	ug/L	507.51 ppb	08:35:52
2	Zn 213.857†	57714.9	55623.4	508.45	ug/L	508.45 ppb	08:35:52
2	SiO2†	167334.4	163515.8	10715	ug/L	10715 ppb	08:36:49
3	Sc Radial	7288.8	7288.8	97.5	%		08:35:19
3	Y RADIAL	6706.2	6706.2	96.85	%		08:35:19
3	Al 396.153Radial†	6253.6	6485.7	5318.1	ug/L	5318.1 ppb	08:34:59
3	Ca 317.933Radial†	3567.3	3629.1	5141.1	ug/L	5141.1 ppb	08:35:19
3	Fe 238.204 Radial†	1249.8	1246.8	5212.6	ug/L	5212.6 ppb	08:35:19
3	K 766.490 Radial†	13537.7	11475.5	2463.1	ug/L	2463.1 ppb	08:34:59
3	Mg 279.077 IEC†	215.7	218.2	5446.1	ug/L	5446.1 ppb	08:35:19
3	Na 589.592 Radial†	41958.3	43163.3	2649.0	ug/L	2649.0 ppb	08:34:59
3	Sr 421.552†	169081.7	173447.1	484.39	ug/L	484.39 ppb	08:34:59
3	Sc 361.383	733570.0	733570.0	102.07	%		08:36:18
3	Y 371.029	568459.5	568459.5	101.15	%		08:36:18
3	Ag 328.068†	43827.3	42305.6	255.84	ug/L	255.84 ppb	08:36:18
3	As 188.979†	1326.6	1335.2	484.71	ug/L	484.71 ppb	08:36:38
3	B 249.677†	19479.8	20024.6	501.84	ug/L	501.84 ppb	08:36:18
3	Ba 233.527†	77507.0	75934.2	536.88	ug/L	536.88 ppb	08:36:18
3	Be 313.107†	575610.8	568816.2	261.53	ug/L	261.53 ppb	08:36:18
3	Cd 226.502†	39293.8	38777.8	494.34	ug/L	494.34 ppb	08:36:38
3	Co 228.616†	28220.0	27747.0	481.47	ug/L	481.47 ppb	08:36:38
3	Cr 267.716†	36597.3	35932.3	504.20	ug/L	504.20 ppb	08:36:18
3	Cu 324.752†	153006.8	144264.6	523.08	ug/L	523.08 ppb	08:36:18
3	Mn 257.610†	485201.7	474679.6	524.01	ug/L	524.01 ppb	08:36:18
3	Mo 202.031†	7703.1	7529.7	530.42	ug/L	530.42 ppb	08:36:38
3	Ni 231.604†	20403.2	19869.5	530.80	ug/L	530.80 ppb	08:36:38
3	P 214.914†	5408.5	4984.0	2445.5	ug/L	2445.5 ppb	08:36:38
3	Pb 220.353†	4351.6	4276.6	510.79	ug/L	510.79 ppb	08:36:38
3	S 181.975 Axial†	2025.2	1908.7	2613.8	ug/L	2613.8 ppb	08:36:38
3	Sb 206.836†	1863.8	1768.7	532.77	ug/L	532.77 ppb	08:36:38
3	Se 196.026†	5202.5	5125.8	2634.2	ug/L	2634.2 ppb	08:36:38
3	Si 251.611†	166092.4	162311.4	4995.5	ug/L	4995.5 ppb	08:36:18
3	Sn 189.927†	3112.8	3037.1	538.46	ug/L	538.46 ppb	08:36:38
3	Ti 334.940†	283620.0	279215.0	511.08	ug/L	511.08 ppb	08:36:18
3	Tl 190.801†	1917.3	1939.2	510.95	ug/L	510.95 ppb	08:36:38
3	U 409.014†	11453.0	16069.4	542.52	ug/L	542.52 ppb	08:36:18
3	V 292.402†	54718.6	55173.8	507.48	ug/L	507.48 ppb	08:36:18
3	Zn 213.857†	57781.1	55683.9	509.02	ug/L	509.02 ppb	08:36:18
3	SiO2†	166907.8	163085.1	10687	ug/L	10687 ppb	08:36:54

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	736409.6	102.47	%	0.691				0.67%
Sc Radial	7291.5	97.5	%	0.25				0.25%
Y 371.029	570474.1	101.51	%	0.659				0.65%
Y RADIAL	6708.4	96.88	%	0.174				0.18%
Ag 328.068†	42308.3	255.87	ug/L	0.764	255.87	ppb	0.764	0.30%
QC value within limits for Ag 328.068 Recovery = 102.35%								
Al 396.153Radial†	6490.2	5321.8	ug/L	6.84	5321.8	ppb	6.84	0.13%
QC value within limits for Al 396.153Radial Recovery = 106.44%								
As 188.979†	1337.7	485.61	ug/L	2.269	485.61	ppb	2.269	0.47%
QC value within limits for As 188.979 Recovery = 97.12%								
B 249.677†	19998.8	501.19	ug/L	1.848	501.19	ppb	1.848	0.37%
QC value within limits for B 249.677 Recovery = 100.24%								
Ba 233.527†	75854.4	536.31	ug/L	0.503	536.31	ppb	0.503	0.09%
QC value within limits for Ba 233.527 Recovery = 107.26%								
Be 313.107†	568897.3	261.57	ug/L	0.167	261.57	ppb	0.167	0.06%
QC value within limits for Be 313.107 Recovery = 104.63%								
Ca 317.933Radial†	3629.7	5141.9	ug/L	4.41	5141.9	ppb	4.41	0.09%

```
   QC value within limits for Ca 317.933Radial  Recovery = 102.84%
Cd 226.502†            38720.0      493.60 ug/L         2.523      493.60 ppb          2.523   0.51%
   QC value within limits for Cd 226.502  Recovery = 98.72%
Co 228.616†            27679.5      480.30 ug/L         2.955      480.30 ppb          2.955   0.62%
   QC value within limits for Co 228.616  Recovery = 96.06%
Cr 267.716†            35931.9      504.20 ug/L         0.823      504.20 ppb          0.823   0.16%
   QC value within limits for Cr 267.716  Recovery = 100.84%
Cu 324.752†           143882.1      521.69 ug/L         1.302      521.69 ppb          1.302   0.25%
   QC value within limits for Cu 324.752  Recovery = 104.34%
Fe 238.204 Radial†      1248.5      5219.7 ug/L        17.92      5219.7 ppb         17.92   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.39%
K 766.490 Radial†      11541.1      2477.3 ug/L        12.30      2477.3 ppb         12.30   0.50%
   QC value within limits for K 766.490 Radial  Recovery = 99.09%
Mg 279.077 IEC†          220.4      5501.0 ug/L        56.09      5501.0 ppb         56.09   1.02%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 110.02%
Mn 257.610†           474538.3      523.86 ug/L         0.690      523.86 ppb          0.690   0.13%
   QC value within limits for Mn 257.610  Recovery = 104.77%
Mo 202.031†             7511.8      529.16 ug/L         3.409      529.16 ppb          3.409   0.64%
   QC value within limits for Mo 202.031  Recovery = 105.83%
Na 589.592 Radial†     43202.0      2651.4 ug/L         6.86      2651.4 ppb          6.86   0.26%
   QC value within limits for Na 589.592 Radial  Recovery = 106.06%
Ni 231.604†            19825.2      529.62 ug/L         3.534      529.62 ppb          3.534   0.67%
   QC value within limits for Ni 231.604  Recovery = 105.92%
P 214.914†              4979.7      2443.5 ug/L        12.68      2443.5 ppb         12.68   0.52%
   QC value within limits for P 214.914  Recovery = 97.74%
Pb 220.353†             4290.6      512.46 ug/L         2.360      512.46 ppb          2.360   0.46%
   QC value within limits for Pb 220.353  Recovery = 102.49%
S 181.975 Axial†        1912.7      2619.3 ug/L         8.53      2619.3 ppb          8.53   0.33%
   QC value within limits for S 181.975 Axial  Recovery = 104.77%
Sb 206.836†             1768.0      532.53 ug/L         4.414      532.53 ppb          4.414   0.83%
   QC value within limits for Sb 206.836  Recovery = 106.51%
Se 196.026†             5115.1      2628.7 ug/L         8.78      2628.7 ppb          8.78   0.33%
   QC value within limits for Se 196.026  Recovery = 105.15%
Si 251.611†           162148.7      4990.5 ug/L         6.62      4990.5 ppb          6.62   0.13%
   QC value within limits for Si 251.611  Recovery = 99.81%
Sn 189.927†             3037.8      538.58 ug/L         1.361      538.58 ppb          1.361   0.25%
   QC value within limits for Sn 189.927  Recovery = 107.72%
Sr 421.552†           173404.7      484.27 ug/L         0.349      484.27 ppb          0.349   0.07%
   QC value within limits for Sr 421.552  Recovery = 96.85%
Ti 334.940†           278915.4      510.53 ug/L         0.584      510.53 ppb          0.584   0.11%
   QC value within limits for Ti 334.940  Recovery = 102.11%
Tl 190.801†             1933.9      509.58 ug/L         2.243      509.58 ppb          2.243   0.44%
   QC value within limits for Tl 190.801  Recovery = 101.92%
U 409.014†             15871.0      535.80 ug/L         7.305      535.80 ppb          7.305   1.36%
   QC value within limits for U 409.014  Recovery = 107.16%
V 292.402†             55185.6      507.56 ug/L         0.110      507.56 ppb          0.110   0.02%
   QC value within limits for V 292.402  Recovery = 101.51%
Zn 213.857†            55615.4      508.40 ug/L         0.654      508.40 ppb          0.654   0.13%
   QC value within limits for Zn 213.857  Recovery = 101.68%
SiO2†                 162699.4       10661 ug/L          69.7       10661 ppb           69.7   0.65%
   QC value within limits for SiO2  Recovery = 99.69%
QC Failed.  Continue with analysis.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 6/30/2009 08:39:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7601.5	7601.5	102	%			08:40:58
1	Y RADIAL	7021.8	7021.8	101.4	%			08:40:58
1	Al 396.153Radial†	-76.5	-2.6	-2.1567	ug/L	-2.1567	ppb	08:40:58
1	Ca 317.933Radial†	33.4	3.8	5.3776	ug/L	5.3776	ppb	08:41:18
1	Fe 238.204 Radial†	37.6	2.2	9.2474	ug/L	9.2474	ppb	08:41:18
1	K 766.490 Radial†	2581.0	130.8	28.208	ug/L	28.208	ppb	08:40:58
1	Mg 279.077 IEC†	0.5	-2.6	-64.453	ug/L	-64.453	ppb	08:41:18
1	Na 589.592 Radial†	-143.1	-5.2	-0.3171	ug/L	-0.3171	ppb	08:40:58
1	Sr 421.552†	-51.1	5.6	0.0157	ug/L	0.0157	ppb	08:40:58
1	Sc 361.383	721142.6	721142.6	100.34	%			08:42:15
1	Y 371.029	564655.5	564655.5	100.47	%			08:42:15
1	Ag 328.068†	614.3	-20.5	-0.1160	ug/L	-0.1160	ppb	08:42:15
1	As 188.979†	-23.4	12.1	4.3570	ug/L	4.3570	ppb	08:42:35
1	B 249.677†	-582.3	359.6	9.0628	ug/L	9.0628	ppb	08:42:15
1	Ba 233.527†	20.3	19.7	0.1392	ug/L	0.1392	ppb	08:42:35
1	Be 313.107†	-4751.1	146.8	0.0669	ug/L	0.0669	ppb	08:42:15
1	Cd 226.502†	-282.9	-0.8	-0.0112	ug/L	-0.0112	ppb	08:42:35
1	Co 228.616†	-100.1	-0.3	-0.0047	ug/L	-0.0047	ppb	08:42:35
1	Cr 267.716†	-50.9	26.7	0.3755	ug/L	0.3755	ppb	08:42:15
1	Cu 324.752†	5612.3	-45.2	-0.1632	ug/L	-0.1632	ppb	08:42:15
1	Mn 257.610†	701.4	19.4	0.0238	ug/L	0.0238	ppb	08:42:35
1	Mo 202.031†	22.6	5.3	0.3767	ug/L	0.3767	ppb	08:42:35
1	Ni 231.604†	146.7	26.4	0.7070	ug/L	0.7070	ppb	08:42:35
1	P 214.914†	307.0	-8.8	-4.4889	ug/L	-4.4889	ppb	08:42:35
1	Pb 220.353†	-28.4	-15.0	-1.7872	ug/L	-1.7872	ppb	08:42:35
1	S 181.975 Axial†	75.0	-0.7	-0.9099	ug/L	-0.9099	ppb	08:42:35
1	Sb 206.836†	58.3	0.8	0.2323	ug/L	0.2323	ppb	08:42:35
1	Se 196.026†	-30.1	-1.2	-0.5968	ug/L	-0.5968	ppb	08:42:35
1	Si 251.611†	433.8	20.5	0.6297	ug/L	0.6297	ppb	08:42:35
1	Sn 189.927†	7.7	-4.9	-0.8615	ug/L	-0.8615	ppb	08:42:35
1	Ti 334.940†	-1422.8	-69.7	-0.1260	ug/L	-0.1260	ppb	08:42:15
1	Tl 190.801†	-44.6	16.3	4.2752	ug/L	4.2752	ppb	08:42:35
1	U 409.014†	-4967.7	-102.1	-3.4593	ug/L	-3.4593	ppb	08:42:15
1	V 292.402†	-1558.5	12.0	0.1047	ug/L	0.1047	ppb	08:42:15
1	Zn 213.857†	954.8	26.4	0.2410	ug/L	0.2410	ppb	08:42:35
1	SiO2†	430.2	-8.2	-0.5457	ug/L	-0.5457	ppb	08:43:31
2	Sc Radial	7362.4	7362.4	98.5	%			08:41:23
2	Y RADIAL	6811.5	6811.5	98.37	%			08:41:23
2	Al 396.153Radial†	-79.9	-8.5	-7.0111	ug/L	-7.0111	ppb	08:41:23
2	Ca 317.933Radial†	28.2	-0.4	-0.6266	ug/L	-0.6266	ppb	08:41:43
2	Fe 238.204 Radial†	33.9	-0.4	-1.6120	ug/L	-1.6120	ppb	08:41:43
2	K 766.490 Radial†	2372.6	1.6	0.3348	ug/L	0.3348	ppb	08:41:23
2	Mg 279.077 IEC†	2.7	-0.3	-6.6483	ug/L	-6.6483	ppb	08:41:43
2	Na 589.592 Radial†	-194.1	-61.5	-3.7725	ug/L	-3.7725	ppb	08:41:23
2	Sr 421.552†	-59.5	-4.6	-0.0127	ug/L	-0.0127	ppb	08:41:23
2	Sc 361.383	709208.7	709208.7	98.681	%			08:42:40
2	Y 371.029	555090.4	555090.4	98.771	%			08:42:40
2	Ag 328.068†	564.1	-61.0	-0.3641	ug/L	-0.3641	ppb	08:42:40
2	As 188.979†	-35.6	-0.6	-0.2289	ug/L	-0.2289	ppb	08:43:00
2	B 249.677†	-626.2	305.3	7.6930	ug/L	7.6930	ppb	08:42:40
2	Ba 233.527†	3.8	3.3	0.0236	ug/L	0.0236	ppb	08:43:00
2	Be 313.107†	-4739.3	79.1	0.0362	ug/L	0.0362	ppb	08:42:40
2	Cd 226.502†	-277.4	0.0	0.0008	ug/L	0.0008	ppb	08:43:00
2	Co 228.616†	-78.7	19.7	0.3421	ug/L	0.3421	ppb	08:43:00
2	Cr 267.716†	5.5	82.9	1.1624	ug/L	1.1624	ppb	08:42:40
2	Cu 324.752†	5692.5	130.2	0.4717	ug/L	0.4717	ppb	08:42:40
2	Mn 257.610†	663.0	-7.7	-0.0086	ug/L	-0.0086	ppb	08:43:00
2	Mo 202.031†	20.5	3.7	0.2595	ug/L	0.2595	ppb	08:43:00
2	Ni 231.604†	145.0	27.2	0.7260	ug/L	0.7260	ppb	08:43:00

2	P 214.914†	321.5	11.0	5.4982	ug/L	5.4982 ppb	08:43:00
2	Pb 220.353†	5.3	18.6	2.2131	ug/L	2.2131 ppb	08:43:00
2	S 181.975 Axial†	80.8	6.5	8.8568	ug/L	8.8568 ppb	08:43:00
2	Sb 206.836†	62.7	6.3	1.8523	ug/L	1.8523 ppb	08:43:00
2	Se 196.026†	-21.3	7.2	3.6577	ug/L	3.6577 ppb	08:43:00
2	Si 251.611†	440.4	34.5	1.0656	ug/L	1.0656 ppb	08:43:00
2	Sn 189.927†	10.4	-2.0	-0.3500	ug/L	-0.3500 ppb	08:43:00
2	Ti 334.940†	-1330.5	-0.0	0.0000	ug/L	0.0000 ppb	08:42:40
2	Tl 190.801†	-57.5	2.5	0.6582	ug/L	0.6582 ppb	08:43:00
2	U 409.014†	-4821.6	-37.3	-1.2666	ug/L	-1.2666 ppb	08:42:40
2	V 292.402†	-1545.3	-0.8	-0.0067	ug/L	-0.0067 ppb	08:42:40
2	Zn 213.857†	934.9	22.3	0.2010	ug/L	0.2010 ppb	08:43:00
2	SiO2†	467.2	36.6	2.4059	ug/L	2.4059 ppb	08:43:36
3	Sc Radial	7531.9	7531.9	101	%		08:41:48
3	Y RADIAL	6932.5	6932.5	100.1	%		08:41:48
3	Al 396.153Radial†	-64.4	8.8	7.2185	ug/L	7.2185 ppb	08:41:48
3	Ca 317.933Radial†	28.1	-1.2	-1.7339	ug/L	-1.7339 ppb	08:42:08
3	Fe 238.204 Radial†	34.0	-1.0	-4.2524	ug/L	-4.2524 ppb	08:42:08
3	K 766.490 Radial†	2517.4	91.0	19.640	ug/L	19.640 ppb	08:41:48
3	Mg 279.077 IEC†	4.8	1.7	42.633	ug/L	42.633 ppb	08:42:08
3	Na 589.592 Radial†	-181.8	-44.8	-2.7524	ug/L	-2.7524 ppb	08:41:48
3	Sr 421.552†	-7.9	48.0	0.1342	ug/L	0.1342 ppb	08:41:48
3	Sc 361.383	717543.5	717543.5	99.841	%		08:43:06
3	Y 371.029	562243.3	562243.3	100.04	%		08:43:06
3	Ag 328.068†	733.3	101.9	0.6059	ug/L	0.6059 ppb	08:43:06
3	As 188.979†	-22.7	12.7	4.5745	ug/L	4.5745 ppb	08:43:26
3	B 249.677†	-621.9	317.0	7.9909	ug/L	7.9909 ppb	08:43:06
3	Ba 233.527†	9.8	9.3	0.0660	ug/L	0.0660 ppb	08:43:26
3	Be 313.107†	-4668.4	205.9	0.0939	ug/L	0.0939 ppb	08:43:06
3	Cd 226.502†	-260.8	19.9	0.2548	ug/L	0.2548 ppb	08:43:26
3	Co 228.616†	-104.9	-5.6	-0.0962	ug/L	-0.0962 ppb	08:43:26
3	Cr 267.716†	-107.3	-30.0	-0.4214	ug/L	-0.4214 ppb	08:43:06
3	Cu 324.752†	5580.9	-48.6	-0.1764	ug/L	-0.1764 ppb	08:43:06
3	Mn 257.610†	660.2	-18.4	-0.0216	ug/L	-0.0216 ppb	08:43:26
3	Mo 202.031†	18.5	1.4	0.0960	ug/L	0.0960 ppb	08:43:26
3	Ni 231.604†	145.2	25.7	0.6864	ug/L	0.6864 ppb	08:43:26
3	P 214.914†	316.1	1.8	0.9886	ug/L	0.9886 ppb	08:43:26
3	Pb 220.353†	-18.2	-5.0	-0.5942	ug/L	-0.5942 ppb	08:43:26
3	S 181.975 Axial†	74.8	-0.5	-0.6830	ug/L	-0.6830 ppb	08:43:26
3	Sb 206.836†	45.9	-11.3	-3.3175	ug/L	-3.3175 ppb	08:43:26
3	Se 196.026†	-20.8	7.9	4.0410	ug/L	4.0410 ppb	08:43:26
3	Si 251.611†	442.8	31.7	0.9554	ug/L	0.9554 ppb	08:43:26
3	Sn 189.927†	18.7	6.3	1.1088	ug/L	1.1088 ppb	08:43:26
3	Ti 334.940†	-1425.7	-79.7	-0.1466	ug/L	-0.1466 ppb	08:43:06
3	Tl 190.801†	-50.9	9.8	2.5513	ug/L	2.5513 ppb	08:43:26
3	U 409.014†	-4789.5	51.6	1.7472	ug/L	1.7472 ppb	08:43:06
3	V 292.402†	-1556.1	6.6	0.0661	ug/L	0.0661 ppb	08:43:06
3	Zn 213.857†	957.3	33.7	0.3060	ug/L	0.3060 ppb	08:43:26
3	SiO2†	457.2	21.1	1.3325	ug/L	1.3325 ppb	08:43:41

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	715964.9	99.621	%	0.8518				0.86%
Sc Radial	7498.6	100	%	1.6				1.64%
Y 371.029	560663.1	99.762	%	0.8851				0.89%
Y RADIAL	6922.0	99.97	%	1.524				1.52%
Ag 328.068†	6.8	0.0419	ug/L	0.50392	0.0419	ppb	0.50392	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-0.8	-0.6498	ug/L	7.23350	-0.6498	ppb	7.23350	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	8.1	2.9008	ug/L	2.71265	2.9008	ppb	2.71265	93.51%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	327.3	8.2489	ug/L	0.72044	8.2489	ppb	0.72044	8.73%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.8	0.0763	ug/L	0.05850	0.0763	ppb	0.05850	76.71%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	143.9	0.0657	ug/L	0.02888	0.0657	ppb	0.02888	43.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.7	1.0057	ug/L	3.82643	1.0057	ppb	3.82643	380.47%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                6.4      0.0815 ug/L       0.15021      0.0815 ppb        0.15021 184.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.6      0.0804 ug/L       0.23125      0.0804 ppb        0.23125 287.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               26.5      0.3722 ug/L       0.79191      0.3722 ppb        0.79191 212.78%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               12.1      0.0440 ug/L       0.37040      0.0440 ppb        0.37040 841.44%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.3      1.1277 ug/L       7.15474      1.1277 ppb        7.15474 634.48%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         74.4     16.061 ug/L       14.2773     16.061 ppb        14.2773  88.89%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4     -9.4894 ug/L      53.59919     -9.4894 ppb       53.59919 564.83%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -2.2     -0.0022 ug/L       0.02340     -0.0022 ppb        0.02340 >999.9%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                3.5      0.2441 ug/L       0.14099      0.2441 ppb        0.14099  57.77%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -37.2     -2.2807 ug/L       1.77531     -2.2807 ppb        1.77531  77.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               26.4      0.7064 ug/L       0.01981      0.7064 ppb        0.01981   2.80%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 1.3      0.6660 ug/L       5.00137      0.6660 ppb        5.00137 750.97%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -0.5     -0.0561 ug/L       2.05369     -0.0561 ppb        2.05369 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           1.8      2.4213 ug/L       5.57447      2.4213 ppb        5.57447 230.23%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               -1.4     -0.4109 ug/L       2.64424     -0.4109 ppb        2.64424 643.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.6      2.3673 ug/L       2.57415      2.3673 ppb        2.57415 108.74%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               28.9      0.8836 ug/L       0.22666      0.8836 ppb        0.22666  25.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -0.2     -0.0342 ug/L       1.02240     -0.0342 ppb        1.02240 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               16.4      0.0457 ug/L       0.07791      0.0457 ppb        0.07791 170.38%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -49.8     -0.0909 ug/L       0.07939     -0.0909 ppb        0.07939  87.37%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                9.5      2.4949 ug/L       1.80916      2.4949 ppb        1.80916  72.52%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -29.3     -0.9929 ug/L       2.61405     -0.9929 ppb        2.61405 263.27%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 5.9      0.0547 ug/L       0.05658      0.0547 ppb        0.05658 103.45%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               27.5      0.2493 ug/L       0.05300      0.2493 ppb        0.05300  21.26%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     16.5      1.0642 ug/L       1.49397      1.0642 ppb        1.49397 140.38%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 6/30/2009 08:45:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7469.8	7469.8	99.9	%			08:47:44
1	Y RADIAL	6890.6	6890.6	99.51	%			08:47:44
1	Al 396.153Radial†	175.4	248.2	203.90	ug/L	203.90	ppb	08:47:44
1	Ca 317.933Radial†	103.5	74.5	105.52	ug/L	105.52	ppb	08:48:04
1	Fe 238.204 Radial†	63.0	28.3	117.94	ug/L	117.94	ppb	08:48:04
1	K 766.490 Radial†	3099.8	694.7	149.59	ug/L	149.59	ppb	08:47:44
1	Mg 279.077 IEC†	18.2	15.1	377.15	ug/L	377.15	ppb	08:48:04
1	Na 589.592 Radial†	2396.5	2533.6	155.49	ug/L	155.49	ppb	08:47:44
1	Sr 421.552†	1663.1	1720.0	4.8031	ug/L	4.8031	ppb	08:47:44
1	Sc 361.383	725321.6	725321.6	100.92	%			08:49:01
1	Y 371.029	567853.4	567853.4	101.04	%			08:49:01
1	Ag 328.068†	1530.3	883.7	5.2825	ug/L	5.2825	ppb	08:49:01
1	As 188.979†	12.1	47.4	17.111	ug/L	17.111	ppb	08:49:21
1	B 249.677†	1246.2	2174.8	54.774	ug/L	54.774	ppb	08:49:01
1	Ba 233.527†	767.7	760.2	5.3731	ug/L	5.3731	ppb	08:49:21
1	Be 313.107†	6713.9	11534.3	5.2910	ug/L	5.2910	ppb	08:49:01
1	Cd 226.502†	144.1	423.9	5.3963	ug/L	5.3963	ppb	08:49:21
1	Co 228.616†	193.0	290.7	5.0579	ug/L	5.0579	ppb	08:49:21
1	Cr 267.716†	317.5	392.0	5.4832	ug/L	5.4832	ppb	08:49:01
1	Cu 324.752†	8440.7	2725.1	9.8818	ug/L	9.8818	ppb	08:49:01
1	Mn 257.610†	10489.3	9713.8	10.720	ug/L	10.720	ppb	08:49:01
1	Mo 202.031†	172.5	153.8	10.834	ug/L	10.834	ppb	08:49:21
1	Ni 231.604†	340.9	218.0	5.8229	ug/L	5.8229	ppb	08:49:21
1	P 214.914†	620.8	300.4	151.53	ug/L	151.53	ppb	08:49:21
1	Pb 220.353†	78.8	91.3	10.926	ug/L	10.926	ppb	08:49:21
1	S 181.975 Axial†	179.1	102.0	139.75	ug/L	139.75	ppb	08:49:21
1	Sb 206.836†	84.0	25.9	7.9773	ug/L	7.9773	ppb	08:49:21
1	Se 196.026†	0.8	29.5	15.487	ug/L	15.487	ppb	08:49:21
1	Si 251.611†	3837.4	3390.5	104.32	ug/L	104.32	ppb	08:49:01
1	Sn 189.927†	78.5	65.3	11.575	ug/L	11.575	ppb	08:49:21
1	Ti 334.940†	1430.2	2765.4	5.0414	ug/L	5.0414	ppb	08:49:01
1	Tl 190.801†	24.6	85.1	22.333	ug/L	22.333	ppb	08:49:21
1	U 409.014†	-3151.4	1726.2	58.424	ug/L	58.424	ppb	08:49:01
1	V 292.402†	-1092.4	482.8	4.6171	ug/L	4.6171	ppb	08:49:01
1	Zn 213.857†	2104.5	1160.2	10.630	ug/L	10.630	ppb	08:49:21
1	SiO2†	3737.0	3266.0	213.91	ug/L	213.91	ppb	08:50:18
2	Sc Radial	7389.0	7389.0	98.9	%			08:48:09
2	Y RADIAL	6822.2	6822.2	98.53	%			08:48:09
2	Al 396.153Radial†	187.2	262.0	215.31	ug/L	215.31	ppb	08:48:09
2	Ca 317.933Radial†	104.7	76.8	108.86	ug/L	108.86	ppb	08:48:29
2	Fe 238.204 Radial†	62.6	28.5	119.06	ug/L	119.06	ppb	08:48:29
2	K 766.490 Radial†	3147.0	776.2	167.20	ug/L	167.20	ppb	08:48:09
2	Mg 279.077 IEC†	15.7	12.9	321.01	ug/L	321.01	ppb	08:48:29
2	Na 589.592 Radial†	2342.4	2505.1	153.74	ug/L	153.74	ppb	08:48:09
2	Sr 421.552†	1719.8	1795.5	5.0140	ug/L	5.0140	ppb	08:48:09
2	Sc 361.383	733226.2	733226.2	102.02	%			08:49:27
2	Y 371.029	573027.7	573027.7	101.96	%			08:49:27
2	Ag 328.068†	1568.7	904.9	5.4068	ug/L	5.4068	ppb	08:49:27
2	As 188.979†	19.6	54.7	19.748	ug/L	19.748	ppb	08:49:47
2	B 249.677†	1211.3	2127.2	53.574	ug/L	53.574	ppb	08:49:27
2	Ba 233.527†	742.7	727.5	5.1428	ug/L	5.1428	ppb	08:49:47
2	Be 313.107†	6763.7	11511.4	5.2808	ug/L	5.2808	ppb	08:49:27
2	Cd 226.502†	135.2	413.6	5.2649	ug/L	5.2649	ppb	08:49:47
2	Co 228.616†	208.3	303.6	5.2795	ug/L	5.2795	ppb	08:49:47
2	Cr 267.716†	250.3	322.7	4.5115	ug/L	4.5115	ppb	08:49:27
2	Cu 324.752†	8539.6	2731.8	9.9063	ug/L	9.9063	ppb	08:49:27
2	Mn 257.610†	10566.6	9677.5	10.681	ug/L	10.681	ppb	08:49:27
2	Mo 202.031†	166.3	145.9	10.280	ug/L	10.280	ppb	08:49:47
2	Ni 231.604†	323.5	197.3	5.2697	ug/L	5.2697	ppb	08:49:47

2	P 214.914†	614.1	287.1	144.74 ug/L	144.74 ppb	08:49:47
2	Pb 220.353†	84.8	96.4	11.526 ug/L	11.526 ppb	08:49:47
2	S 181.975 Axial†	160.4	81.8	112.05 ug/L	112.05 ppb	08:49:47
2	Sb 206.836†	89.6	30.6	9.3585 ug/L	9.3585 ppb	08:49:47
2	Se 196.026†	8.6	37.2	19.421 ug/L	19.421 ppb	08:49:47
2	Si 251.611†	3808.8	3321.5	102.20 ug/L	102.20 ppb	08:49:27
2	Sn 189.927†	77.2	63.1	11.195 ug/L	11.195 ppb	08:49:47
2	Ti 334.940†	1503.2	2821.7	5.1427 ug/L	5.1427 ppb	08:49:27
2	Tl 190.801†	30.6	90.8	23.822 ug/L	23.822 ppb	08:49:47
2	U 409.014†	-3028.0	1880.8	63.661 ug/L	63.661 ppb	08:49:27
2	V 292.402†	-1064.8	521.6	4.9718 ug/L	4.9718 ppb	08:49:27
2	Zn 213.857†	2100.2	1133.4	10.389 ug/L	10.389 ppb	08:49:47
2	SiO2†	3824.9	3312.2	216.97 ug/L	216.97 ppb	08:50:23
3	Sc Radial	7545.0	7545.0	101 %		08:48:34
3	Y RADIAL	6987.4	6987.4	100.9 %		08:48:34
3	Al 396.153Radial†	179.1	250.1	205.50 ug/L	205.50 ppb	08:48:34
3	Ca 317.933Radial†	97.6	67.6	95.785 ug/L	95.785 ppb	08:48:54
3	Fe 238.204 Radial†	60.5	25.2	105.16 ug/L	105.16 ppb	08:48:54
3	K 766.490 Radial†	3097.9	661.8	142.50 ug/L	142.50 ppb	08:48:34
3	Mg 279.077 IEC†	15.1	11.9	296.23 ug/L	296.23 ppb	08:48:54
3	Na 589.592 Radial†	2493.3	2605.6	159.91 ug/L	159.91 ppb	08:48:34
3	Sr 421.552†	1679.3	1719.5	4.8017 ug/L	4.8017 ppb	08:48:34
3	Sc 361.383	735021.6	735021.6	102.27 %		08:49:52
3	Y 371.029	575191.2	575191.2	102.35 %		08:49:52
3	Ag 328.068†	1514.9	848.6	5.0767 ug/L	5.0767 ppb	08:49:52
3	As 188.979†	13.6	48.8	17.600 ug/L	17.600 ppb	08:50:12
3	B 249.677†	1366.1	2275.7	57.317 ug/L	57.317 ppb	08:49:52
3	Ba 233.527†	773.0	755.3	5.3414 ug/L	5.3414 ppb	08:50:12
3	Be 313.107†	6813.5	11543.9	5.2957 ug/L	5.2957 ppb	08:49:52
3	Cd 226.502†	136.9	415.0	5.2844 ug/L	5.2844 ppb	08:50:12
3	Co 228.616†	211.0	305.8	5.3190 ug/L	5.3190 ppb	08:50:12
3	Cr 267.716†	318.4	388.7	5.4401 ug/L	5.4401 ppb	08:49:52
3	Cu 324.752†	8436.2	2610.3	9.4650 ug/L	9.4650 ppb	08:49:52
3	Mn 257.610†	10583.1	9668.4	10.669 ug/L	10.669 ppb	08:49:52
3	Mo 202.031†	172.2	151.2	10.654 ug/L	10.654 ppb	08:50:12
3	Ni 231.604†	340.6	213.2	5.6963 ug/L	5.6963 ppb	08:50:12
3	P 214.914†	625.1	296.4	149.59 ug/L	149.59 ppb	08:50:12
3	Pb 220.353†	81.2	92.7	11.086 ug/L	11.086 ppb	08:50:12
3	S 181.975 Axial†	161.5	82.5	113.02 ug/L	113.02 ppb	08:50:12
3	Sb 206.836†	96.1	36.7	11.181 ug/L	11.181 ppb	08:50:12
3	Se 196.026†	-0.5	28.3	14.812 ug/L	14.812 ppb	08:50:12
3	Si 251.611†	3835.0	3338.0	102.70 ug/L	102.70 ppb	08:49:52
3	Sn 189.927†	80.7	66.4	11.763 ug/L	11.763 ppb	08:50:12
3	Ti 334.940†	1516.6	2831.1	5.1624 ug/L	5.1624 ppb	08:49:52
3	Tl 190.801†	19.2	79.6	20.887 ug/L	20.887 ppb	08:50:12
3	U 409.014†	-3277.7	1643.9	55.640 ug/L	55.640 ppb	08:49:52
3	V 292.402†	-957.8	628.7	5.9348 ug/L	5.9348 ppb	08:49:52
3	Zn 213.857†	2101.3	1129.5	10.352 ug/L	10.352 ppb	08:50:12
3	SiO2†	3842.2	3319.9	217.46 ug/L	217.46 ppb	08:50:28

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	731189.8	101.74	%	0.718				0.71%
Sc Radial	7467.9	99.9	%	1.04				1.04%
Y 371.029	572024.1	101.78	%	0.671				0.66%
Y RADIAL	6900.1	99.65	%	1.199				1.20%
Ag 328.068†	879.1	5.2553	ug/L	0.16669	5.2553	ppb	0.16669	3.17%
QC value within limits for Ag 328.068 Recovery = 105.11%								
Al 396.153Radial†	253.4	208.24	ug/L	6.175	208.24	ppb	6.175	2.97%
QC value within limits for Al 396.153Radial Recovery = 104.12%								
As 188.979†	50.3	18.153	ug/L	1.4027	18.153	ppb	1.4027	7.73%
QC value within limits for As 188.979 Recovery = 121.02%								
B 249.677†	2192.5	55.222	ug/L	1.9115	55.222	ppb	1.9115	3.46%
QC value within limits for B 249.677 Recovery = 110.44%								
Ba 233.527†	747.6	5.2858	ug/L	0.12480	5.2858	ppb	0.12480	2.36%
QC value within limits for Ba 233.527 Recovery = 105.72%								
Be 313.107†	11529.8	5.2891	ug/L	0.00762	5.2891	ppb	0.00762	0.14%
QC value within limits for Be 313.107 Recovery = 105.78%								
Ca 317.933Radial†	73.0	103.39	ug/L	6.794	103.39	ppb	6.794	6.57%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.39%
Cd 226.502†              417.5      5.3152 ug/L       0.07090      5.3152 ppb        0.07090   1.33%
   QC value within limits for Cd 226.502  Recovery = 106.30%
Co 228.616†              300.0      5.2188 ug/L       0.14074      5.2188 ppb        0.14074   2.70%
   QC value within limits for Co 228.616  Recovery = 104.38%
Cr 267.716†              367.8      5.1449 ug/L       0.54900      5.1449 ppb        0.54900  10.67%
   QC value within limits for Cr 267.716  Recovery = 102.90%
Cu 324.752†             2689.1      9.7511 ug/L       0.24804      9.7511 ppb        0.24804   2.54%
   QC value within limits for Cu 324.752  Recovery = 97.51%
Fe 238.204 Radial†       27.3      114.05 ug/L         7.726      114.05 ppb          7.726   6.77%
   QC value within limits for Fe 238.204 Radial  Recovery = 114.05%
K 766.490 Radial†        710.9      153.10 ug/L        12.717      153.10 ppb         12.717   8.31%
   QC value within limits for K 766.490 Radial  Recovery = 102.07%
Mg 279.077 IEC†          13.3      331.46 ug/L        41.459      331.46 ppb         41.459  12.51%
   QC value within limits for Mg 279.077 IEC  Recovery = 110.49%
Mn 257.610†             9686.5      10.690 ug/L        0.0263      10.690 ppb         0.0263   0.25%
   QC value within limits for Mn 257.610  Recovery = 106.90%
Mo 202.031†              150.3      10.589 ug/L        0.2827      10.589 ppb         0.2827   2.67%
   QC value within limits for Mo 202.031  Recovery = 105.89%
Na 589.592 Radial†      2548.1      156.38 ug/L         3.178      156.38 ppb          3.178   2.03%
   QC value within limits for Na 589.592 Radial  Recovery = 104.25%
Ni 231.604†              209.5      5.5963 ug/L       0.28988      5.5963 ppb        0.28988   5.18%
   QC value within limits for Ni 231.604  Recovery = 111.93%
P 214.914†               294.6      148.62 ug/L         3.496      148.62 ppb          3.496   2.35%
   QC value within limits for P 214.914  Recovery = 99.08%
Pb 220.353†               93.5      11.179 ug/L        0.3107      11.179 ppb         0.3107   2.78%
   QC value within limits for Pb 220.353  Recovery = 111.79%
S 181.975 Axial†          88.8      121.61 ug/L        15.720      121.61 ppb         15.720  12.93%
   QC value within limits for S 181.975 Axial  Recovery = 121.61%
Sb 206.836†               31.1      9.5055 ug/L       1.60681      9.5055 ppb        1.60681  16.90%
   QC value within limits for Sb 206.836  Recovery = 95.06%
Se 196.026†               31.7      16.573 ug/L        2.4893      16.573 ppb         2.4893  15.02%
   QC value within limits for Se 196.026  Recovery = 110.49%
Si 251.611†             3350.0      103.07 ug/L         1.109      103.07 ppb          1.109   1.08%
   QC value within limits for Si 251.611  Recovery = 103.07%
Sn 189.927†               64.9      11.511 ug/L        0.2890      11.511 ppb         0.2890   2.51%
   QC value within limits for Sn 189.927  Recovery = 115.11%
Sr 421.552†             1745.0      4.8729 ug/L       0.12215      4.8729 ppb        0.12215   2.51%
   QC value within limits for Sr 421.552  Recovery = 97.46%
Ti 334.940†             2806.1      5.1155 ug/L       0.06491      5.1155 ppb        0.06491   1.27%
   QC value within limits for Ti 334.940  Recovery = 102.31%
Tl 190.801†               85.1      22.347 ug/L        1.4678      22.347 ppb         1.4678   6.57%
   QC value within limits for Tl 190.801  Recovery = 111.74%
U 409.014†              1750.3      59.242 ug/L        4.0728      59.242 ppb         4.0728   6.87%
   QC value within limits for U 409.014  Recovery = 118.48%
V 292.402†               544.3      5.1746 ug/L       0.68186      5.1746 ppb        0.68186  13.18%
   QC value within limits for V 292.402  Recovery = 103.49%
Zn 213.857†             1141.0      10.457 ug/L        0.1509      10.457 ppb         0.1509   1.44%
   QC value within limits for Zn 213.857  Recovery = 104.57%
SiO2†                   3299.4      216.11 ug/L         1.925      216.11 ppb          1.925   0.89%
   QC value within limits for SiO2  Recovery = 101.46%
All analyte(s) passed QC.
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2	P 214.914†	326.8	14.7	7.3199	ug/L	7.3199 ppb	15:00:51
2	Pb 220.353†	-3.8	9.4	1.1191	ug/L	1.1191 ppb	15:00:51
2	S 181.975 Axial†	90.8	16.1	22.084	ug/L	22.084 ppb	15:00:51
2	Sb 206.836†	54.8	-2.0	0.4504	ug/L	0.4504 ppb	15:00:51
2	Se 196.026†	-35.8	-7.4	-3.6628	ug/L	-3.6628 ppb	15:00:51
2	Si 251.611†	994.6	591.0	17.389	ug/L	17.389 ppb	15:00:51
2	Sn 189.927†	367.1	357.7	63.305	ug/L	63.305 ppb	15:00:51
2	Ti 334.940†	-1007.0	333.0	0.6108	ug/L	0.6108 ppb	15:00:31
2	Tl 190.801†	-58.0	2.3	0.5999	ug/L	0.5999 ppb	15:00:51
2	U 409.014†	4804.4	4.9	0.1620	ug/L	0.1620 ppb	15:00:31
2	V 292.402†	-1640.0	-88.3	-0.7981	ug/L	-0.7981 ppb	15:00:31
2	Zn 213.857†	1123.4	207.5	1.8989	ug/L	1.8989 ppb	15:00:51
2	SiO2†	1030.6	602.1	37.617	ug/L	37.617 ppb	15:01:27
3	Sc Radial	7552.2	7552.2	101	%		14:59:38
3	Y RADIAL	6960.8	6960.8	100.5	%		14:59:38
3	Al 396.153Radial†	-49.7	23.5	19.358	ug/L	19.358 ppb	14:59:38
3	Ca 317.933Radial†	41.3	11.8	16.663	ug/L	16.663 ppb	14:59:59
3	Fe 238.204 Radial†	44.6	9.4	39.045	ug/L	39.045 ppb	14:59:59
3	K 766.490 Radial†	2349.2	-82.2	-17.724	ug/L	-17.724 ppb	14:59:38
3	Mg 279.077 IEC†	3.5	0.5	11.365	ug/L	11.365 ppb	14:59:59
3	Na 589.592 Radial†	-16.4	119.3	7.3240	ug/L	7.3240 ppb	14:59:38
3	Sr 421.552†	33.2	88.7	0.2475	ug/L	0.2475 ppb	14:59:38
3	Sc 361.383	720287.1	720287.1	100.22	%		15:00:56
3	Y 371.029	563591.6	563591.6	100.28	%		15:00:56
3	Ag 328.068†	611.1	-22.9	-0.1293	ug/L	-0.1293 ppb	15:00:56
3	As 188.979†	-36.5	-1.0	-0.3423	ug/L	-0.3423 ppb	15:01:16
3	B 249.677†	-676.0	265.4	6.6881	ug/L	6.6881 ppb	15:00:56
3	Ba 233.527†	22.8	22.3	0.1573	ug/L	0.1573 ppb	15:01:16
3	Be 313.107†	-4626.8	265.2	0.1226	ug/L	0.1226 ppb	15:00:56
3	Cd 226.502†	-278.4	3.3	0.0386	ug/L	0.0386 ppb	15:01:16
3	Co 228.616†	-112.0	-12.3	-0.2165	ug/L	-0.2165 ppb	15:01:16
3	Cr 267.716†	-63.6	13.9	0.1942	ug/L	0.1942 ppb	15:00:56
3	Cu 324.752†	7050.7	1396.7	5.0634	ug/L	5.0634 ppb	15:00:56
3	Mn 257.610†	1193.2	511.0	0.5682	ug/L	0.5682 ppb	15:00:56
3	Mo 202.031†	10.7	-6.4	-0.4493	ug/L	-0.4493 ppb	15:01:16
3	Ni 231.604†	148.0	27.9	0.7461	ug/L	0.7461 ppb	15:01:16
3	P 214.914†	325.9	10.3	5.1100	ug/L	5.1100 ppb	15:01:16
3	Pb 220.353†	0.6	13.8	1.6452	ug/L	1.6452 ppb	15:01:16
3	S 181.975 Axial†	87.8	12.2	16.718	ug/L	16.718 ppb	15:01:16
3	Sb 206.836†	57.2	-0.2	0.9466	ug/L	0.9466 ppb	15:01:16
3	Se 196.026†	-42.4	-13.6	-6.7957	ug/L	-6.7957 ppb	15:01:16
3	Si 251.611†	997.2	583.2	17.191	ug/L	17.191 ppb	15:01:16
3	Sn 189.927†	364.9	351.6	62.238	ug/L	62.238 ppb	15:01:16
3	Ti 334.940†	-1052.7	297.9	0.5434	ug/L	0.5434 ppb	15:00:56
3	Tl 190.801†	-61.8	-0.9	-0.2293	ug/L	-0.2293 ppb	15:01:16
3	U 409.014†	-4665.1	194.0	6.5637	ug/L	6.5637 ppb	15:00:56
3	V 292.402†	-1551.6	17.0	0.1555	ug/L	0.1555 ppb	15:00:56
3	Zn 213.857†	1107.2	179.7	1.6421	ug/L	1.6421 ppb	15:01:16
3	SiO2†	1073.6	634.3	39.825	ug/L	39.825 ppb	15:01:32

Mean Data: 1201869975|880671|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	716151.0	99.647	%	0.5277				0.53%
Sc Radial	7382.8	98.8	%	1.97				2.00%
Y 371.029	560581.0	99.748	%	0.4705				0.47%
Y RADIAL	6823.8	98.55	%	1.714				1.74%
Ag 328.068†	8.5	0.0607	ug/L	0.41369	0.0607	ppb	0.41369	681.84%
Al 396.153Radial†	7.4	6.0493	ug/L	15.74059	6.0493	ppb	15.74059	260.21%
As 188.979†	3.2	1.1474	ug/L	2.05748	1.1474	ppb	2.05748	179.32%
B 249.677†	230.8	5.8139	ug/L	0.76094	5.8139	ppb	0.76094	13.09%
Ba 233.527†	18.5	0.1301	ug/L	0.04779	0.1301	ppb	0.04779	36.75%
Be 313.107†	232.9	0.1080	ug/L	0.01916	0.1080	ppb	0.01916	17.75%
Ca 317.933Radial†	15.4	21.805	ug/L	6.4557	21.805	ppb	6.4557	29.61%
Cd 226.502†	5.4	0.0656	ug/L	0.08364	0.0656	ppb	0.08364	127.59%
Co 228.616†	-9.9	-0.1731	ug/L	0.06072	-0.1731	ppb	0.06072	35.09%
Cr 267.716†	18.6	0.2607	ug/L	0.63964	0.2607	ppb	0.63964	245.39%
Cu 324.752†	1379.1	4.9995	ug/L	0.17120	4.9995	ppb	0.17120	3.42%
Fe 238.204 Radial†	8.8	36.524	ug/L	7.4574	36.524	ppb	7.4574	20.42%
K 766.490 Radial†	-9.8	-2.1203	ug/L	13.95967	-2.1203	ppb	13.95967	658.39%

Mg 279.077 IEC†	0.8	20.940	ug/L	21.5415	20.940	ppb	21.5415 102.87%
Mn 257.610†	487.8	0.5421	ug/L	0.06172	0.5421	ppb	0.06172 11.39%
Mo 202.031†	1.6	0.1121	ug/L	0.53481	0.1121	ppb	0.53481 477.20%
Na 589.592 Radial†	141.1	8.6624	ug/L	1.68985	8.6624	ppb	1.68985 19.51%
Ni 231.604†	29.0	0.7741	ug/L	0.15313	0.7741	ppb	0.15313 19.78%
P 214.914†	7.8	3.8186	ug/L	4.29514	3.8186	ppb	4.29514 112.48%
Pb 220.353†	9.2	1.0882	ug/L	0.57303	1.0882	ppb	0.57303 52.66%
S 181.975 Axial†	11.5	15.808	ug/L	6.7768	15.808	ppb	6.7768 42.87%
Sb 206.836†	-0.9	0.7526	ug/L	0.26526	0.7526	ppb	0.26526 35.24%
Se 196.026†	-5.5	-2.6680	ug/L	4.70468	-2.6680	ppb	4.70468 176.34%
Si 251.611†	594.1	17.510	ug/L	0.3944	17.510	ppb	0.3944 2.25%
Sn 189.927†	352.1	62.327	ug/L	0.9365	62.327	ppb	0.9365 1.50%
Sr 421.552†	63.5	0.1772	ug/L	0.07035	0.1772	ppb	0.07035 39.71%
Ti 334.940†	318.1	0.5829	ug/L	0.03516	0.5829	ppb	0.03516 6.03%
Tl 190.801†	2.1	0.5646	ug/L	0.77685	0.5646	ppb	0.77685 137.59%
U 409.014†	52.5	1.7739	ug/L	4.22140	1.7739	ppb	4.22140 237.98%
V 292.402†	-6.6	-0.0603	ug/L	0.65705	-0.0603	ppb	0.65705 >999.9%
Zn 213.857†	192.7	1.7621	ug/L	0.12920	1.7621	ppb	0.12920 7.33%
SiO2†	609.8	38.180	ug/L	1.4481	38.180	ppb	1.4481 3.79%

Sequence No.: 4
Sample ID: 1201869976|880671|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 39
Date Collected: 6/30/2009 15:03:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869976|880671|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7479.0	7479.0	100	%			15:05:55
1	Y RADIAL	7339.8	7339.8	106.0	%			15:05:55
1	Al 396.153Radial†	46852.5	46897.5	38600	ug/L	38600	ppb	15:05:35
1	Ca 317.933Radial†	13014.0	12977.2	18384	ug/L	18384	ppb	15:05:35
1	Fe 238.204 Radial†	22471.2	22423.1	93483	ug/L	93483	ppb	15:05:35
1	K 766.490 Radial†	56757.7	54317.1	11705	ug/L	11705	ppb	15:05:35
1	Mg 279.077 IEC†	624.0	620.6	15400	ug/L	15400	ppb	15:05:55
1	Na 589.592 Radial†	48334.9	48442.0	2973.0	ug/L	2973.0	ppb	15:05:35
1	Sr 421.552†	294280.7	294163.3	821.43	ug/L	821.43	ppb	15:05:35
1	Sc 361.383	752548.3	752548.3	104.71	%			15:06:54
1	Y 371.029	618227.1	618227.1	110.00	%			15:06:54
1	Ag 328.068†	115505.9	109676.3	688.06	ug/L	688.06	ppb	15:06:54
1	As 188.979†	3743.7	3610.7	1329.5	ug/L	1329.5	ppb	15:07:14
1	B 249.677†	29196.7	28823.0	717.88	ug/L	717.88	ppb	15:06:54
1	Ba 233.527†	367607.6	351067.5	2478.4	ug/L	2478.4	ppb	15:06:54
1	Be 313.107†	1050355.1	1007978.8	465.64	ug/L	465.64	ppb	15:06:54
1	Cd 226.502†	52201.9	50134.3	628.89	ug/L	628.89	ppb	15:06:54
1	Co 228.616†	25043.8	24016.4	413.35	ug/L	413.35	ppb	15:07:14
1	Cr 267.716†	28690.3	27476.8	388.19	ug/L	388.19	ppb	15:06:54
1	Cu 324.752†	155567.3	142929.5	523.34	ug/L	523.34	ppb	15:06:54
1	Mn 257.610†	1788497.0	1707348.7	1894.3	ug/L	1894.3	ppb	15:06:54
1	Mo 202.031†	6463.1	6155.2	439.42	ug/L	439.42	ppb	15:07:14
1	Ni 231.604†	20208.9	19179.8	512.41	ug/L	512.41	ppb	15:07:14
1	P 214.914†	7657.5	6998.2	3415.1	ug/L	3415.1	ppb	15:07:14
1	Pb 220.353†	7534.3	7208.5	857.78	ug/L	857.78	ppb	15:07:14
1	S 181.975 Axial†	872.4	757.7	1030.4	ug/L	1030.4	ppb	15:07:14
1	Sb 206.836†	2217.3	2060.3	618.38	ug/L	618.38	ppb	15:07:14
1	Se 196.026†	1340.6	1309.0	982.33	ug/L	982.33	ppb	15:07:14
1	Si 251.611†	265487.6	253130.9	7798.8	ug/L	7798.8	ppb	15:06:54
1	Sn 189.927†	3282.7	3122.5	561.50	ug/L	561.50	ppb	15:07:14
1	Ti 334.940†	1053605.2	1007549.2	1845.6	ug/L	1845.6	ppb	15:06:54
1	Tl 190.801†	4115.9	3991.5	1066.5	ug/L	1066.5	ppb	15:07:14
1	U 409.014†	-9209.8	-3946.7	-145.87	ug/L	-145.87	ppb	15:06:54
1	V 292.402†	89051.8	86610.3	776.91	ug/L	776.91	ppb	15:06:54
1	Zn 213.857†	116595.8	110424.8	1004.7	ug/L	1004.7	ppb	15:06:54
1	SiO2†	262073.1	249844.9	16389	ug/L	16389	ppb	15:08:14
2	Sc Radial	7456.7	7456.7	99.8	%			15:06:20
2	Y RADIAL	7317.7	7317.7	105.7	%			15:06:20
2	Al 396.153Radial†	46924.5	47109.9	38775	ug/L	38775	ppb	15:06:00
2	Ca 317.933Radial†	13016.8	13019.0	18443	ug/L	18443	ppb	15:06:00
2	Fe 238.204 Radial†	22481.6	22500.8	93807	ug/L	93807	ppb	15:06:00
2	K 766.490 Radial†	56339.2	54067.4	11652	ug/L	11652	ppb	15:06:00
2	Mg 279.077 IEC†	627.3	625.8	15529	ug/L	15529	ppb	15:06:20
2	Na 589.592 Radial†	48470.8	48722.8	2990.3	ug/L	2990.3	ppb	15:06:00
2	Sr 421.552†	295138.1	295903.1	826.29	ug/L	826.29	ppb	15:06:00
2	Sc 361.383	752907.0	752907.0	104.76	%			15:07:21
2	Y 371.029	619253.3	619253.3	110.19	%			15:07:21
2	Ag 328.068†	115525.9	109642.9	687.97	ug/L	687.97	ppb	15:07:21
2	As 188.979†	3763.1	3627.6	1335.7	ug/L	1335.7	ppb	15:07:41
2	B 249.677†	29268.3	28878.0	719.24	ug/L	719.24	ppb	15:07:21
2	Ba 233.527†	367537.7	350833.6	2476.7	ug/L	2476.7	ppb	15:07:21
2	Be 313.107†	1051233.7	1008339.5	465.80	ug/L	465.80	ppb	15:07:21
2	Cd 226.502†	52349.1	50251.1	630.34	ug/L	630.34	ppb	15:07:21
2	Co 228.616†	25156.6	24112.7	415.01	ug/L	415.01	ppb	15:07:41
2	Cr 267.716†	28819.0	27586.7	389.73	ug/L	389.73	ppb	15:07:21
2	Cu 324.752†	155441.2	142738.3	522.67	ug/L	522.67	ppb	15:07:21
2	Mn 257.610†	1788336.3	1706381.4	1893.2	ug/L	1893.2	ppb	15:07:21
2	Mo 202.031†	6467.8	6156.7	439.54	ug/L	439.54	ppb	15:07:41
2	Ni 231.604†	20339.7	19295.5	515.50	ug/L	515.50	ppb	15:07:41

2	P 214.914†	7661.7	6998.7	3415.3	ug/L	3415.3 ppb	15:07:41
2	Pb 220.353†	7543.7	7214.2	858.45	ug/L	858.45 ppb	15:07:41
2	S 181.975 Axial†	877.5	762.2	1036.6	ug/L	1036.6 ppb	15:07:41
2	Sb 206.836†	2213.3	2055.4	616.94	ug/L	616.94 ppb	15:07:41
2	Se 196.026†	1339.5	1307.4	982.58	ug/L	982.58 ppb	15:07:41
2	Si 251.611†	264506.5	252073.6	7766.2	ug/L	7766.2 ppb	15:07:21
2	Sn 189.927†	3295.9	3133.6	563.49	ug/L	563.49 ppb	15:07:41
2	Ti 334.940†	1053208.7	1006691.3	1844.1	ug/L	1844.1 ppb	15:07:21
2	Tl 190.801†	4124.4	3997.7	1068.2	ug/L	1068.2 ppb	15:07:41
2	U 409.014†	-9091.4	-3829.5	-141.94	ug/L	-141.94 ppb	15:07:21
2	V 292.402†	89222.2	86732.5	777.98	ug/L	777.98 ppb	15:07:21
2	Zn 213.857†	116838.8	110603.6	1006.3	ug/L	1006.3 ppb	15:07:21
2	SiO2†	264620.7	252157.5	16541	ug/L	16541 ppb	15:08:20
3	Sc Radial	7642.1	7642.1	102	%		15:06:45
3	Y RADIAL	7509.1	7509.1	108.4	%		15:06:45
3	Al 396.153Radial†	46606.6	45657.7	37579	ug/L	37579 ppb	15:06:25
3	Ca 317.933Radial†	12882.4	12570.9	17808	ug/L	17808 ppb	15:06:25
3	Fe 238.204 Radial†	22371.3	21846.1	91078	ug/L	91078 ppb	15:06:25
3	K 766.490 Radial†	55980.8	52346.6	11280	ug/L	11280 ppb	15:06:25
3	Mg 279.077 IEC†	615.1	598.6	14855	ug/L	14855 ppb	15:06:45
3	Na 589.592 Radial†	48122.1	47203.0	2897.0	ug/L	2897.0 ppb	15:06:25
3	Sr 421.552†	292826.8	286464.6	799.93	ug/L	799.93 ppb	15:06:25
3	Sc 361.383	750408.3	750408.3	104.41	%		15:07:49
3	Y 371.029	616066.6	616066.6	109.62	%		15:07:49
3	Ag 328.068†	115128.5	109629.5	687.02	ug/L	687.02 ppb	15:07:49
3	As 188.979†	3805.1	3679.7	1354.0	ug/L	1354.0 ppb	15:08:09
3	B 249.677†	29287.8	28989.8	722.21	ug/L	722.21 ppb	15:07:49
3	Ba 233.527†	366172.4	350694.2	2475.8	ug/L	2475.8 ppb	15:07:49
3	Be 313.107†	1044439.5	1005173.9	464.35	ug/L	464.35 ppb	15:07:49
3	Cd 226.502†	52107.2	50185.8	629.83	ug/L	629.83 ppb	15:07:49
3	Co 228.616†	25376.3	24403.2	420.10	ug/L	420.10 ppb	15:08:09
3	Cr 267.716†	28644.9	27511.5	388.62	ug/L	388.62 ppb	15:07:49
3	Cu 324.752†	155255.6	143054.7	523.66	ug/L	523.66 ppb	15:07:49
3	Mn 257.610†	1782764.1	1706728.9	1893.3	ug/L	1893.3 ppb	15:07:49
3	Mo 202.031†	6514.9	6222.3	443.99	ug/L	443.99 ppb	15:08:09
3	Ni 231.604†	20469.2	19484.2	520.54	ug/L	520.54 ppb	15:08:09
3	P 214.914†	7725.8	7084.4	3460.8	ug/L	3460.8 ppb	15:08:09
3	Pb 220.353†	7623.6	7314.6	870.45	ug/L	870.45 ppb	15:08:09
3	S 181.975 Axial†	885.9	773.0	1051.6	ug/L	1051.6 ppb	15:08:09
3	Sb 206.836†	2233.5	2081.8	625.07	ug/L	625.07 ppb	15:08:09
3	Se 196.026†	1369.7	1340.6	990.39	ug/L	990.39 ppb	15:08:09
3	Si 251.611†	263223.2	251685.3	7754.1	ug/L	7754.1 ppb	15:07:49
3	Sn 189.927†	3355.8	3201.5	575.24	ug/L	575.24 ppb	15:08:09
3	Ti 334.940†	1050428.1	1007375.8	1845.3	ug/L	1845.3 ppb	15:07:49
3	Tl 190.801†	4160.8	4045.7	1080.7	ug/L	1080.7 ppb	15:08:09
3	U 409.014†	-9109.0	-3875.2	-143.16	ug/L	-143.16 ppb	15:07:49
3	V 292.402†	88851.2	86660.7	777.75	ug/L	777.75 ppb	15:07:49
3	Zn 213.857†	116323.7	110481.7	1005.5	ug/L	1005.5 ppb	15:07:49
3	SiO2†	264114.6	252513.8	16564	ug/L	16564 ppb	15:08:25

Mean Data: 1201869976|880671|2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	751954.5	104.63	%	0.188				0.18%
Sc Radial	7525.9	101	%	1.4				1.34%
Y 371.029	617849.0	109.94	%	0.289				0.26%
Y RADIAL	7388.9	106.7	%	1.51				1.42%
Ag 328.068†	109649.6	687.69	ug/L	0.575	687.69	ppb	0.575	0.08%
Al 396.153Radial†	46555.1	38318	ug/L	646.0	38318	ppb	646.0	1.69%
As 188.979†	3639.3	1339.7	ug/L	12.70	1339.7	ppb	12.70	0.95%
B 249.677†	28896.9	719.78	ug/L	2.217	719.78	ppb	2.217	0.31%
Ba 233.527†	350865.1	2477.0	ug/L	1.33	2477.0	ppb	1.33	0.05%
Be 313.107†	1007164.1	465.26	ug/L	0.792	465.26	ppb	0.792	0.17%
Ca 317.933Radial†	12855.7	18212	ug/L	350.6	18212	ppb	350.6	1.93%
Cd 226.502†	50190.4	629.69	ug/L	0.738	629.69	ppb	0.738	0.12%
Co 228.616†	24177.4	416.15	ug/L	3.517	416.15	ppb	3.517	0.85%
Cr 267.716†	27525.0	388.85	ug/L	0.797	388.85	ppb	0.797	0.21%
Cu 324.752†	142907.5	523.22	ug/L	0.505	523.22	ppb	0.505	0.10%
Fe 238.204 Radial†	22256.7	92790	ug/L	1490.9	92790	ppb	1490.9	1.61%
K 766.490 Radial†	53577.0	11546	ug/L	231.7	11546	ppb	231.7	2.01%

Mg 279.077 IEC†	615.0	15261	ug/L	357.8	15261	ppb	357.8	2.34%
Mn 257.610†	1706819.7	1893.6	ug/L	0.58	1893.6	ppb	0.58	0.03%
Mo 202.031†	6178.1	440.98	ug/L	2.603	440.98	ppb	2.603	0.59%
Na 589.592 Radial†	48122.6	2953.4	ug/L	49.63	2953.4	ppb	49.63	1.68%
Ni 231.604†	19319.8	516.15	ug/L	4.104	516.15	ppb	4.104	0.80%
P 214.914†	7027.1	3430.4	ug/L	26.34	3430.4	ppb	26.34	0.77%
Pb 220.353†	7245.8	862.23	ug/L	7.130	862.23	ppb	7.130	0.83%
S 181.975 Axial†	764.3	1039.5	ug/L	10.87	1039.5	ppb	10.87	1.05%
Sb 206.836†	2065.9	620.13	ug/L	4.337	620.13	ppb	4.337	0.70%
Se 196.026†	1319.0	985.10	ug/L	4.581	985.10	ppb	4.581	0.47%
Si 251.611†	252296.6	7773.0	ug/L	23.16	7773.0	ppb	23.16	0.30%
Sn 189.927†	3152.5	566.74	ug/L	7.424	566.74	ppb	7.424	1.31%
Sr 421.552†	292177.0	815.88	ug/L	14.026	815.88	ppb	14.026	1.72%
Ti 334.940†	1007205.4	1845.0	ug/L	0.82	1845.0	ppb	0.82	0.04%
Tl 190.801†	4011.6	1071.8	ug/L	7.72	1071.8	ppb	7.72	0.72%
U 409.014†	-3883.8	-143.66	ug/L	2.010	-143.66	ppb	2.010	1.40%
V 292.402†	86667.8	777.55	ug/L	0.567	777.55	ppb	0.567	0.07%
Zn 213.857†	110503.4	1005.5	ug/L	0.80	1005.5	ppb	0.80	0.08%
SiO2†	251505.4	16498	ug/L	95.2	16498	ppb	95.2	0.58%

Sequence No.: 5
Sample ID: 232357001|880671|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 40
Date Collected: 6/30/2009 15:10:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232357001|880671|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7666.1	7666.1	103	%			15:12:27
1	Y RADIAL	8823.8	8823.8	127.4	%			15:12:27
1	Al 396.153Radial†	14923.8	14623.7	12042	ug/L	12042	ppb	15:12:27
1	Ca 317.933Radial†	5701.4	5529.8	7833.7	ug/L	7833.7	ppb	15:12:27
1	Fe 238.204 Radial†	20500.9	19953.9	83178	ug/L	83178	ppb	15:12:27
1	K 766.490 Radial†	19586.6	16690.1	3589.1	ug/L	3589.1	ppb	15:12:27
1	Mg 279.077 IEC†	206.1	197.9	4863.6	ug/L	4863.6	ppb	15:12:48
1	Na 589.592 Radial†	43758.6	42801.0	2626.8	ug/L	2626.8	ppb	15:12:27
1	Sr 421.552†	11235.5	11010.7	30.676	ug/L	30.676	ppb	15:12:27
1	Sc 361.383	768992.6	768992.6	107.00	%			15:13:45
1	Y 371.029	736031.1	736031.1	130.97	%			15:13:45
1	Ag 328.068†	-3544.9	-3945.7	3.4731	ug/L	3.4731	ppb	15:13:50
1	As 188.979†	-68.8	-28.9	22.604	ug/L	22.604	ppb	15:14:10
1	B 249.677†	799.4	1687.0	36.751	ug/L	36.751	ppb	15:13:50
1	Ba 233.527†	34304.8	32060.3	225.98	ug/L	225.98	ppb	15:13:50
1	Be 313.107†	-18957.8	-12835.9	2.3910	ug/L	2.3910	ppb	15:13:50
1	Cd 226.502†	448.1	699.9	-0.7472	ug/L	-0.7472	ppb	15:14:10
1	Co 228.616†	940.9	978.8	8.3271	ug/L	8.3271	ppb	15:14:10
1	Cr 267.716†	2556.4	2466.5	36.478	ug/L	36.478	ppb	15:14:10
1	Cu 324.752†	8113.7	1944.5	11.855	ug/L	11.855	ppb	15:13:50
1	Mn 257.610†	2173610.4	2030745.1	2249.8	ug/L	2249.8	ppb	15:13:45
1	Mo 202.031†	85.6	62.9	9.8555	ug/L	9.8555	ppb	15:14:10
1	Ni 231.604†	1488.7	1271.5	33.976	ug/L	33.976	ppb	15:14:10
1	P 214.914†	4488.9	3880.5	1917.0	ug/L	1917.0	ppb	15:14:10
1	Pb 220.353†	274.6	269.9	26.630	ug/L	26.630	ppb	15:14:10
1	S 181.975 Axial†	132.9	48.8	64.421	ug/L	64.421	ppb	15:14:10
1	Sb 206.836†	93.4	30.0	-0.2492	ug/L	-0.2492	ppb	15:14:10
1	Se 196.026†	-530.1	-466.7	39.535	ug/L	39.535	ppb	15:14:10
1	Si 251.611†	296617.9	276803.0	8547.3	ug/L	8547.3	ppb	15:13:50
1	Sn 189.927†	106.2	86.8	22.355	ug/L	22.355	ppb	15:14:10
1	Ti 334.940†	2077049.1	1942528.2	3557.0	ug/L	3557.0	ppb	15:13:45
1	Tl 190.801†	-205.6	-131.4	6.8933	ug/L	6.8933	ppb	15:14:10
1	U 409.014†	-15445.2	-9586.1	-334.89	ug/L	-334.89	ppb	15:13:45
1	V 292.402†	6447.3	7590.8	52.925	ug/L	52.925	ppb	15:13:50
1	Zn 213.857†	34743.0	31545.2	282.02	ug/L	282.02	ppb	15:13:50
1	SiO2†	298959.4	278966.2	18343	ug/L	18343	ppb	15:15:18
2	Sc Radial	7727.5	7727.5	103	%			15:12:53
2	Y RADIAL	8847.7	8847.7	127.8	%			15:12:53
2	Al 396.153Radial†	14974.2	14556.8	11987	ug/L	11987	ppb	15:12:53
2	Ca 317.933Radial†	5716.8	5500.6	7792.3	ug/L	7792.3	ppb	15:12:53
2	Fe 238.204 Radial†	20585.9	19877.5	82859	ug/L	82859	ppb	15:12:53
2	K 766.490 Radial†	19690.5	16639.0	3577.9	ug/L	3577.9	ppb	15:12:53
2	Mg 279.077 IEC†	206.6	196.7	4834.3	ug/L	4834.3	ppb	15:13:13
2	Na 589.592 Radial†	43940.5	42638.1	2616.8	ug/L	2616.8	ppb	15:12:53
2	Sr 421.552†	11319.3	11004.7	30.660	ug/L	30.660	ppb	15:12:53
2	Sc 361.383	760689.4	760689.4	105.84	%			15:14:16
2	Y 371.029	728251.6	728251.6	129.58	%			15:14:16
2	Ag 328.068†	-3640.6	-4072.2	2.6269	ug/L	2.6269	ppb	15:14:21
2	As 188.979†	-64.3	-25.3	23.856	ug/L	23.856	ppb	15:14:41
2	B 249.677†	714.1	1614.5	34.945	ug/L	34.945	ppb	15:14:21
2	Ba 233.527†	34638.0	32725.1	230.67	ug/L	230.67	ppb	15:14:21
2	Be 313.107†	-19154.4	-13215.1	2.2308	ug/L	2.2308	ppb	15:14:21
2	Cd 226.502†	438.5	695.4	-0.7666	ug/L	-0.7666	ppb	15:14:41
2	Co 228.616†	944.2	991.5	8.5436	ug/L	8.5436	ppb	15:14:41
2	Cr 267.716†	2615.9	2548.8	37.629	ug/L	37.629	ppb	15:14:41
2	Cu 324.752†	8155.0	2066.3	12.278	ug/L	12.278	ppb	15:14:21
2	Mn 257.610†	2158894.3	2039015.2	2258.9	ug/L	2258.9	ppb	15:14:16
2	Mo 202.031†	100.3	77.6	10.871	ug/L	10.871	ppb	15:14:41
2	Ni 231.604†	1501.5	1298.8	34.705	ug/L	34.705	ppb	15:14:41

2	P 214.914†	4544.0	3978.3	1967.1	ug/L	1967.1 ppb	15:14:41
2	Pb 220.353†	287.3	284.7	28.419	ug/L	28.419 ppb	15:14:41
2	S 181.975 Axial†	122.4	40.2	52.751	ug/L	52.751 ppb	15:14:41
2	Sb 206.836†	80.5	18.8	-3.5851	ug/L	-3.5851 ppb	15:14:41
2	Se 196.026†	-533.3	-475.1	34.170	ug/L	34.170 ppb	15:14:41
2	Si 251.611†	299205.8	282273.9	8716.2	ug/L	8716.2 ppb	15:14:21
2	Sn 189.927†	110.7	92.1	23.263	ug/L	23.263 ppb	15:14:41
2	Ti 334.940†	2057937.9	1945660.8	3562.8	ug/L	3562.8 ppb	15:14:16
2	Tl 190.801†	-211.9	-139.4	4.8872	ug/L	4.8872 ppb	15:14:41
2	U 409.014†	-15456.0	-9753.9	-340.53	ug/L	-340.53 ppb	15:14:16
2	V 292.402†	6568.1	7770.7	54.598	ug/L	54.598 ppb	15:14:21
2	Zn 213.857†	35084.6	32222.3	288.30	ug/L	288.30 ppb	15:14:21
2	SiO2†	296222.6	279430.3	18373	ug/L	18373 ppb	15:15:23
3	Sc Radial	7552.1	7552.1	101	%		15:13:18
3	Y RADIAL	8692.3	8692.3	125.5	%		15:13:18
3	Al 396.153Radial†	14707.7	14629.4	12047	ug/L	12047 ppb	15:13:18
3	Ca 317.933Radial†	5608.1	5521.4	7821.7	ug/L	7821.7 ppb	15:13:18
3	Fe 238.204 Radial†	20092.7	19851.7	82752	ug/L	82752 ppb	15:13:18
3	K 766.490 Radial†	19229.4	16624.8	3574.9	ug/L	3574.9 ppb	15:13:18
3	Mg 279.077 IEC†	207.7	202.6	4979.0	ug/L	4979.0 ppb	15:13:38
3	Na 589.592 Radial†	42948.8	42643.6	2617.1	ug/L	2617.1 ppb	15:13:18
3	Sr 421.552†	11058.0	11000.4	30.648	ug/L	30.648 ppb	15:13:18
3	Sc 361.383	767309.2	767309.2	106.77	%		15:14:47
3	Y 371.029	734323.9	734323.9	130.66	%		15:14:47
3	Ag 328.068†	-3426.0	-3841.5	3.9602	ug/L	3.9602 ppb	15:14:52
3	As 188.979†	-54.9	-15.9	27.218	ug/L	27.218 ppb	15:15:12
3	B 249.677†	716.2	1610.7	34.856	ug/L	34.856 ppb	15:14:52
3	Ba 233.527†	34096.6	31935.6	225.10	ug/L	225.10 ppb	15:14:52
3	Be 313.107†	-18800.5	-12727.4	2.4512	ug/L	2.4512 ppb	15:14:52
3	Cd 226.502†	441.9	695.0	-0.7595	ug/L	-0.7595 ppb	15:15:12
3	Co 228.616†	953.6	992.6	8.5634	ug/L	8.5634 ppb	15:15:12
3	Cr 267.716†	2581.9	2495.7	36.879	ug/L	36.879 ppb	15:15:12
3	Cu 324.752†	8098.5	1947.0	11.840	ug/L	11.840 ppb	15:14:52
3	Mn 257.610†	2172102.4	2033789.6	2253.1	ug/L	2253.1 ppb	15:14:47
3	Mo 202.031†	94.3	71.2	10.412	ug/L	10.412 ppb	15:15:12
3	Ni 231.604†	1516.6	1300.7	34.756	ug/L	34.756 ppb	15:15:12
3	P 214.914†	4511.8	3911.1	1933.0	ug/L	1933.0 ppb	15:15:12
3	Pb 220.353†	278.2	273.9	27.145	ug/L	27.145 ppb	15:15:12
3	S 181.975 Axial†	122.7	39.5	51.753	ug/L	51.753 ppb	15:15:12
3	Sb 206.836†	96.7	33.3	0.7346	ug/L	0.7346 ppb	15:15:12
3	Se 196.026†	-525.4	-463.3	39.832	ug/L	39.832 ppb	15:15:12
3	Si 251.611†	293634.6	274616.9	8479.8	ug/L	8479.8 ppb	15:14:52
3	Sn 189.927†	121.9	101.7	24.961	ug/L	24.961 ppb	15:15:12
3	Ti 334.940†	2075152.4	1945010.6	3561.6	ug/L	3561.6 ppb	15:14:47
3	Tl 190.801†	-215.0	-140.6	4.5342	ug/L	4.5342 ppb	15:15:12
3	U 409.014†	-15431.7	-9605.2	-335.48	ug/L	-335.48 ppb	15:14:47
3	V 292.402†	6453.3	7609.6	53.158	ug/L	53.158 ppb	15:14:52
3	Zn 213.857†	34544.9	31430.9	281.00	ug/L	281.00 ppb	15:14:52
3	SiO2†	294215.8	275136.2	18091	ug/L	18091 ppb	15:15:28

Mean Data: 232357001|880671|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	765663.7	106.54	%	0.611				0.57%
Sc Radial	7648.6	102	%	1.2				1.16%
Y 371.029	732868.9	130.40	%	0.728				0.56%
Y RADIAL	8787.9	126.9	%	1.21				0.95%
Ag 328.068†	-3953.2	3.3534	ug/L	0.67466	3.3534	ppb	0.67466	20.12%
Al 396.153Radial†	14603.3	12025	ug/L	33.2	12025	ppb	33.2	0.28%
As 188.979†	-23.4	24.559	ug/L	2.3861	24.559	ppb	2.3861	9.72%
B 249.677†	1637.4	35.517	ug/L	1.0693	35.517	ppb	1.0693	3.01%
Ba 233.527†	32240.3	227.25	ug/L	2.997	227.25	ppb	2.997	1.32%
Be 313.107†	-12926.2	2.3576	ug/L	0.11394	2.3576	ppb	0.11394	4.83%
Ca 317.933Radial†	5517.3	7815.9	ug/L	21.28	7815.9	ppb	21.28	0.27%
Cd 226.502†	696.8	-0.7578	ug/L	0.00983	-0.7578	ppb	0.00983	1.30%
Co 228.616†	987.6	8.4780	ug/L	0.13107	8.4780	ppb	0.13107	1.55%
Cr 267.716†	2503.7	36.995	ug/L	0.5843	36.995	ppb	0.5843	1.58%
Cu 324.752†	1985.9	11.991	ug/L	0.2489	11.991	ppb	0.2489	2.08%
Fe 238.204 Radial†	19894.4	82930	ug/L	221.6	82930	ppb	221.6	0.27%
K 766.490 Radial†	16651.3	3580.6	ug/L	7.50	3580.6	ppb	7.50	0.21%

Mg 279.077 IEC†	199.1	4892.3	ug/L	76.51	4892.3	ppb	76.51	1.56%
Mn 257.610†	2034516.6	2253.9	ug/L	4.60	2253.9	ppb	4.60	0.20%
Mo 202.031†	70.6	10.380	ug/L	0.5087	10.380	ppb	0.5087	4.90%
Na 589.592 Radial†	42694.2	2620.3	ug/L	5.68	2620.3	ppb	5.68	0.22%
Ni 231.604†	1290.3	34.479	ug/L	0.4364	34.479	ppb	0.4364	1.27%
P 214.914†	3923.3	1939.1	ug/L	25.58	1939.1	ppb	25.58	1.32%
Pb 220.353†	276.2	27.398	ug/L	0.9211	27.398	ppb	0.9211	3.36%
S 181.975 Axial†	42.8	56.308	ug/L	7.0437	56.308	ppb	7.0437	12.51%
Sb 206.836†	27.4	-1.0332	ug/L	2.26405	-1.0332	ppb	2.26405	219.13%
Se 196.026†	-468.3	37.846	ug/L	3.1870	37.846	ppb	3.1870	8.42%
Si 251.611†	277897.9	8581.1	ug/L	121.81	8581.1	ppb	121.81	1.42%
Sn 189.927†	93.5	23.526	ug/L	1.3226	23.526	ppb	1.3226	5.62%
Sr 421.552†	11005.3	30.661	ug/L	0.0145	30.661	ppb	0.0145	0.05%
Ti 334.940†	1944399.9	3560.4	ug/L	3.03	3560.4	ppb	3.03	0.09%
Tl 190.801†	-137.2	5.4382	ug/L	1.27242	5.4382	ppb	1.27242	23.40%
U 409.014†	-9648.4	-336.96	ug/L	3.101	-336.96	ppb	3.101	0.92%
V 292.402†	7657.0	53.560	ug/L	0.9063	53.560	ppb	0.9063	1.69%
Zn 213.857†	31732.8	283.77	ug/L	3.951	283.77	ppb	3.951	1.39%
SiO2†	277844.2	18269	ug/L	155.0	18269	ppb	155.0	0.85%

Sequence No.: 6
Sample ID: 1201869977|880671|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 41
Date Collected: 6/30/2009 15:17:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869977|880671|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7556.0	7556.0	101	%			15:19:30
1	Y RADIAL	8588.0	8588.0	124.0	%			15:19:30
1	Al 396.153Radial†	16314.6	16211.4	13349	ug/L	13349	ppb	15:19:30
1	Ca 317.933Radial†	4957.1	4874.6	6905.5	ug/L	6905.5	ppb	15:19:30
1	Fe 238.204 Radial†	19945.2	19695.4	82100	ug/L	82100	ppb	15:19:30
1	K 766.490 Radial†	19588.7	16970.4	3655.2	ug/L	3655.2	ppb	15:19:30
1	Mg 279.077 IEC†	213.1	207.8	5109.5	ug/L	5109.5	ppb	15:19:50
1	Na 589.592 Radial†	40550.7	40249.2	2470.2	ug/L	2470.2	ppb	15:19:30
1	Sr 421.552†	14627.0	14525.2	40.502	ug/L	40.502	ppb	15:19:30
1	Sc 361.383	728204.6	728204.6	101.32	%			15:20:48
1	Y 371.029	700365.4	700365.4	124.62	%			15:20:48
1	Ag 328.068†	-3547.1	-4133.4	2.0341	ug/L	2.0341	ppb	15:20:53
1	As 188.979†	-43.9	-7.9	30.033	ug/L	30.033	ppb	15:21:13
1	B 249.677†	681.1	1612.1	34.940	ug/L	34.940	ppb	15:20:53
1	Ba 233.527†	33476.5	33038.6	232.89	ug/L	232.89	ppb	15:20:53
1	Be 313.107†	-17986.2	-12869.4	2.4022	ug/L	2.4022	ppb	15:20:53
1	Cd 226.502†	421.4	697.0	-0.6594	ug/L	-0.6594	ppb	15:21:13
1	Co 228.616†	844.8	933.2	7.5299	ug/L	7.5299	ppb	15:21:13
1	Cr 267.716†	2538.0	2582.2	38.083	ug/L	38.083	ppb	15:21:13
1	Cu 324.752†	8774.6	3021.6	15.696	ug/L	15.696	ppb	15:20:53
1	Mn 257.610†	1618696.7	1596865.9	1771.2	ug/L	1771.2	ppb	15:20:48
1	Mo 202.031†	81.8	63.6	9.8329	ug/L	9.8329	ppb	15:21:13
1	Ni 231.604†	1332.2	1195.0	31.931	ug/L	31.931	ppb	15:21:13
1	P 214.914†	3590.3	3228.6	1584.8	ug/L	1584.8	ppb	15:21:13
1	Pb 220.353†	262.8	272.6	27.305	ug/L	27.305	ppb	15:21:13
1	S 181.975 Axial†	137.8	60.5	80.311	ug/L	80.311	ppb	15:21:13
1	Sb 206.836†	91.6	33.1	0.5604	ug/L	0.5604	ppb	15:21:13
1	Se 196.026†	-533.7	-498.0	20.055	ug/L	20.055	ppb	15:21:13
1	Si 251.611†	303918.5	299535.4	9249.4	ug/L	9249.4	ppb	15:20:53
1	Sn 189.927†	101.6	87.7	22.350	ug/L	22.350	ppb	15:21:13
1	Ti 334.940†	1973216.6	1948781.3	3568.4	ug/L	3568.4	ppb	15:20:48
1	Tl 190.801†	-192.4	-129.1	5.3980	ug/L	5.3980	ppb	15:21:13
1	U 409.014†	-14733.6	-9692.4	-338.35	ug/L	-338.35	ppb	15:20:48
1	V 292.402†	6398.9	7880.5	55.691	ug/L	55.691	ppb	15:20:53
1	Zn 213.857†	33570.1	32206.4	288.23	ug/L	288.23	ppb	15:20:53
1	SiO2†	304220.3	299808.2	19713	ug/L	19713	ppb	15:22:20
2	Sc Radial	7700.4	7700.4	103	%			15:19:55
2	Y RADIAL	8743.2	8743.2	126.3	%			15:19:55
2	Al 396.153Radial†	16615.7	16201.1	13341	ug/L	13341	ppb	15:19:55
2	Ca 317.933Radial†	4990.9	4815.5	6821.7	ug/L	6821.7	ppb	15:19:55
2	Fe 238.204 Radial†	20259.2	19630.4	81829	ug/L	81829	ppb	15:19:55
2	K 766.490 Radial†	19810.9	16822.8	3624.4	ug/L	3624.4	ppb	15:19:55
2	Mg 279.077 IEC†	208.7	199.5	4904.6	ug/L	4904.6	ppb	15:20:15
2	Na 589.592 Radial†	41289.3	40214.2	2468.1	ug/L	2468.1	ppb	15:19:55
2	Sr 421.552†	14919.6	14538.0	40.538	ug/L	40.538	ppb	15:19:55
2	Sc 361.383	747736.5	747736.5	104.04	%			15:21:19
2	Y 371.029	711970.9	711970.9	126.69	%			15:21:19
2	Ag 328.068†	-3525.4	-4021.1	2.5968	ug/L	2.5968	ppb	15:21:24
2	As 188.979†	-56.7	-19.0	25.138	ug/L	25.138	ppb	15:21:44
2	B 249.677†	631.7	1547.1	33.325	ug/L	33.325	ppb	15:21:24
2	Ba 233.527†	33135.5	31847.8	224.49	ug/L	224.49	ppb	15:21:24
2	Be 313.107†	-17659.4	-12091.6	2.3467	ug/L	2.3467	ppb	15:21:24
2	Cd 226.502†	428.0	692.5	-0.6869	ug/L	-0.6869	ppb	15:21:44
2	Co 228.616†	826.4	893.7	7.2206	ug/L	7.2206	ppb	15:21:44
2	Cr 267.716†	2564.8	2542.6	37.513	ug/L	37.513	ppb	15:21:44
2	Cu 324.752†	8678.2	2702.6	14.525	ug/L	14.525	ppb	15:21:24
2	Mn 257.610†	1581573.3	1519454.6	1685.8	ug/L	1685.8	ppb	15:21:19
2	Mo 202.031†	78.9	58.7	9.4691	ug/L	9.4691	ppb	15:21:44
2	Ni 231.604†	1315.9	1145.0	30.595	ug/L	30.595	ppb	15:21:44

2	P 214.914†	3604.8	3150.0	1545.0	ug/L	1545.0 ppb	15:21:44
2	Pb 220.353†	277.7	280.2	28.235	ug/L	28.235 ppb	15:21:44
2	S 181.975 Axial†	116.8	36.8	47.803	ug/L	47.803 ppb	15:21:44
2	Sb 206.836†	85.3	24.7	-1.4579	ug/L	-1.4579 ppb	15:21:44
2	Se 196.026†	-513.6	-464.9	36.035	ug/L	36.035 ppb	15:21:44
2	Si 251.611†	298149.0	286155.0	8836.1	ug/L	8836.1 ppb	15:21:24
2	Sn 189.927†	101.6	85.2	21.870	ug/L	21.870 ppb	15:21:44
2	Ti 334.940†	1925527.7	1852075.3	3391.3	ug/L	3391.3 ppb	15:21:19
2	Tl 190.801†	-189.2	-121.1	5.5796	ug/L	5.5796 ppb	15:21:44
2	U 409.014†	-14619.7	-9203.0	-321.75	ug/L	-321.75 ppb	15:21:19
2	V 292.402†	6323.1	7642.7	53.788	ug/L	53.788 ppb	15:21:24
2	Zn 213.857†	33063.6	30854.1	275.80	ug/L	275.80 ppb	15:21:24
2	SiO2†	303845.3	291605.0	19174	ug/L	19174 ppb	15:22:26
3	Sc Radial	7564.1	7564.1	101	%		15:20:21
3	Y RADIAL	8648.5	8648.5	124.9	%		15:20:21
3	Al 396.153Radial†	16390.7	16269.4	13397	ug/L	13397 ppb	15:20:21
3	Ca 317.933Radial†	4937.4	4849.9	6870.4	ug/L	6870.4 ppb	15:20:21
3	Fe 238.204 Radial†	19892.4	19622.3	81795	ug/L	81795 ppb	15:20:21
3	K 766.490 Radial†	19373.5	16737.1	3605.9	ug/L	3605.9 ppb	15:20:21
3	Mg 279.077 IEC†	210.8	205.3	5048.2	ug/L	5048.2 ppb	15:20:41
3	Na 589.592 Radial†	40448.2	40105.2	2461.4	ug/L	2461.4 ppb	15:20:21
3	Sr 421.552†	14674.1	14556.4	40.589	ug/L	40.589 ppb	15:20:21
3	Sc 361.383	758240.1	758240.1	105.50	%		15:21:50
3	Y 371.029	720052.8	720052.8	128.12	%		15:21:50
3	Ag 328.068†	-3454.5	-3907.0	3.2546	ug/L	3.2546 ppb	15:21:55
3	As 188.979†	-65.3	-26.4	22.399	ug/L	22.399 ppb	15:22:15
3	B 249.677†	531.8	1444.0	30.731	ug/L	30.731 ppb	15:21:55
3	Ba 233.527†	32621.3	30919.3	217.93	ug/L	217.93 ppb	15:21:55
3	Be 313.107†	-17591.3	-11792.0	2.4574	ug/L	2.4574 ppb	15:21:55
3	Cd 226.502†	445.8	703.6	-0.5411	ug/L	-0.5411 ppb	15:22:15
3	Co 228.616†	813.9	870.9	6.8483	ug/L	6.8483 ppb	15:22:15
3	Cr 267.716†	2549.8	2494.2	36.829	ug/L	36.829 ppb	15:22:15
3	Cu 324.752†	8592.1	2505.5	13.808	ug/L	13.808 ppb	15:21:55
3	Mn 257.610†	1598152.7	1514111.4	1679.9	ug/L	1679.9 ppb	15:21:50
3	Mo 202.031†	87.3	65.6	9.9563	ug/L	9.9563 ppb	15:22:15
3	Ni 231.604†	1297.2	1109.7	29.654	ug/L	29.654 ppb	15:22:15
3	P 214.914†	3597.9	3095.4	1517.4	ug/L	1517.4 ppb	15:22:15
3	Pb 220.353†	234.7	235.7	22.954	ug/L	22.954 ppb	15:22:15
3	S 181.975 Axial†	126.6	44.6	58.492	ug/L	58.492 ppb	15:22:15
3	Sb 206.836†	84.0	22.4	-2.0857	ug/L	-2.0857 ppb	15:22:15
3	Se 196.026†	-523.9	-467.8	34.442	ug/L	34.442 ppb	15:22:15
3	Si 251.611†	297536.3	281604.7	8695.6	ug/L	8695.6 ppb	15:21:55
3	Sn 189.927†	106.5	88.4	22.449	ug/L	22.449 ppb	15:22:15
3	Ti 334.940†	1945996.7	1845839.3	3379.9	ug/L	3379.9 ppb	15:21:50
3	Tl 190.801†	-196.4	-125.4	4.3264	ug/L	4.3264 ppb	15:22:15
3	U 409.014†	-14608.3	-8997.6	-314.79	ug/L	-314.79 ppb	15:21:50
3	V 292.402†	6221.2	7461.9	52.186	ug/L	52.186 ppb	15:21:55
3	Zn 213.857†	32684.9	30054.9	268.43	ug/L	268.43 ppb	15:21:55
3	SiO2†	308102.7	291594.8	19173	ug/L	19173 ppb	15:22:31

Mean Data: 1201869977|880671|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	744727.1	103.62	%	2.121				2.05%
Sc Radial	7606.8	102	%	1.1				1.07%
Y 371.029	710796.4	126.48	%	1.761				1.39%
Y RADIAL	8659.9	125.1	%	1.13				0.90%
Ag 328.068†	-4020.5	2.6285	ug/L	0.61085	2.6285	ppb	0.61085	23.24%
Al 396.153Radial†	16227.3	13363	ug/L	30.3	13363	ppb	30.3	0.23%
As 188.979†	-17.8	25.857	ug/L	3.8674	25.857	ppb	3.8674	14.96%
B 249.677†	1534.4	32.999	ug/L	2.1233	32.999	ppb	2.1233	6.43%
Ba 233.527†	31935.2	225.10	ug/L	7.499	225.10	ppb	7.499	3.33%
Be 313.107†	-12251.0	2.4021	ug/L	0.05531	2.4021	ppb	0.05531	2.30%
Ca 317.933Radial†	4846.7	6865.9	ug/L	42.06	6865.9	ppb	42.06	0.61%
Cd 226.502†	697.7	-0.6291	ug/L	0.07746	-0.6291	ppb	0.07746	12.31%
Co 228.616†	899.3	7.1996	ug/L	0.34126	7.1996	ppb	0.34126	4.74%
Cr 267.716†	2539.7	37.475	ug/L	0.6275	37.475	ppb	0.6275	1.67%
Cu 324.752†	2743.2	14.676	ug/L	0.9529	14.676	ppb	0.9529	6.49%
Fe 238.204 Radial†	19649.4	81908	ug/L	167.0	81908	ppb	167.0	0.20%
K 766.490 Radial†	16843.4	3628.5	ug/L	24.89	3628.5	ppb	24.89	0.69%

Mg 279.077 JEC†	204.2	5020.8	ug/L	105.16	5020.8	ppb	105.16	2.09%
Mn 257.610†	1543477.3	1712.3	ug/L	51.09	1712.3	ppb	51.09	2.98%
Mo 202.031†	62.6	9.7527	ug/L	0.25330	9.7527	ppb	0.25330	2.60%
Na 589.592 Radial†	40189.5	2466.5	ug/L	4.61	2466.5	ppb	4.61	0.19%
Ni 231.604†	1149.9	30.726	ug/L	1.1446	30.726	ppb	1.1446	3.73%
P 214.914†	3158.0	1549.1	ug/L	33.87	1549.1	ppb	33.87	2.19%
Pb 220.353†	262.8	26.165	ug/L	2.8192	26.165	ppb	2.8192	10.77%
S 181.975 Axial†	47.3	62.202	ug/L	16.5689	62.202	ppb	16.5689	26.64%
Sb 206.836†	26.7	-0.9944	ug/L	1.38259	-0.9944	ppb	1.38259	139.04%
Se 196.026†	-476.9	30.177	ug/L	8.8022	30.177	ppb	8.8022	29.17%
Si 251.611†	289098.4	8927.0	ug/L	287.85	8927.0	ppb	287.85	3.22%
Sn 189.927†	87.1	22.223	ug/L	0.3093	22.223	ppb	0.3093	1.39%
Sr 421.552†	14539.9	40.543	ug/L	0.0439	40.543	ppb	0.0439	0.11%
Ti 334.940†	1882232.0	3446.6	ug/L	105.68	3446.6	ppb	105.68	3.07%
Tl 190.801†	-125.2	5.1013	ug/L	0.67721	5.1013	ppb	0.67721	13.28%
U 409.014†	-9297.7	-324.96	ug/L	12.107	-324.96	ppb	12.107	3.73%
V 292.402†	7661.7	53.888	ug/L	1.7546	53.888	ppb	1.7546	3.26%
Zn 213.857†	31038.4	277.49	ug/L	10.009	277.49	ppb	10.009	3.61%
SiO2†	294336.0	19353	ug/L	311.6	19353	ppb	311.6	1.61%

Sequence No.: 7
Sample ID: 1201869978|880671|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 42
Date Collected: 6/30/2009 15:24:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869978|880671|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7529.2	7529.2	101	%			15:26:53
1	Y RADIAL	8873.6	8873.6	128.2	%			15:26:33
1	Al 396.153Radial†	21783.4	21697.9	17847	ug/L	17847	ppb	15:26:33
1	Ca 317.933Radial†	8219.2	8130.4	11518	ug/L	11518	ppb	15:26:33
1	Fe 238.204 Radial†	18525.2	18356.0	76532	ug/L	76532	ppb	15:26:33
1	K 766.490 Radial†	43866.7	41141.1	8858.3	ug/L	8858.3	ppb	15:26:33
1	Mg 279.077 IEC†	383.1	377.3	9350.2	ug/L	9350.2	ppb	15:26:53
1	Na 589.592 Radial†	130846.4	130032.3	7980.4	ug/L	7980.4	ppb	15:26:33
1	Sr 421.552†	182660.5	181390.5	506.52	ug/L	506.52	ppb	15:26:33
1	Sc 361.383	750278.0	750278.0	104.40	%			15:27:52
1	Y 371.029	710244.0	710244.0	126.38	%			15:27:52
1	Ag 328.068†	81723.9	77650.4	490.17	ug/L	490.17	ppb	15:27:52
1	As 188.979†	1335.5	1314.7	506.01	ug/L	506.01	ppb	15:28:12
1	B 249.677†	20477.5	20555.2	510.34	ug/L	510.34	ppb	15:27:52
1	Ba 233.527†	98969.9	94802.5	669.76	ug/L	669.76	ppb	15:27:52
1	Be 313.107†	1112112.0	1070170.9	498.24	ug/L	498.24	ppb	15:27:52
1	Cd 226.502†	39539.8	38156.1	478.08	ug/L	478.08	ppb	15:28:12
1	Co 228.616†	28909.0	27791.3	474.53	ug/L	474.53	ppb	15:28:12
1	Cr 267.716†	38568.6	37022.2	521.11	ug/L	521.11	ppb	15:27:52
1	Cu 324.752†	152756.0	140686.1	514.23	ug/L	514.23	ppb	15:27:52
1	Mn 257.610†	1945565.7	1862972.8	2063.9	ug/L	2063.9	ppb	15:27:52
1	Mo 202.031†	7182.3	6862.8	488.12	ug/L	488.12	ppb	15:28:12
1	Ni 231.604†	19910.2	18952.1	506.28	ug/L	506.28	ppb	15:28:12
1	P 214.914†	4504.3	3999.9	1891.9	ug/L	1891.9	ppb	15:28:12
1	Pb 220.353†	4527.8	4350.5	515.18	ug/L	515.18	ppb	15:28:12
1	S 181.975 Axial†	3835.0	3598.2	4925.9	ug/L	4925.9	ppb	15:28:12
1	Sb 206.836†	1800.9	1667.8	493.19	ug/L	493.19	ppb	15:28:12
1	Se 196.026†	528.3	534.8	529.52	ug/L	529.52	ppb	15:28:12
1	Si 251.611†	444538.6	425410.6	13120	ug/L	13120	ppb	15:27:52
1	Sn 189.927†	2994.2	2855.6	512.29	ug/L	512.29	ppb	15:28:12
1	Ti 334.940†	2065204.3	1979602.1	3624.7	ug/L	3624.7	ppb	15:27:52
1	Tl 190.801†	1750.0	1737.1	492.39	ug/L	492.39	ppb	15:28:12
1	U 409.014†	639.9	5461.7	174.54	ug/L	174.54	ppb	15:27:52
1	V 292.402†	60298.7	59325.2	530.58	ug/L	530.58	ppb	15:27:52
1	Zn 213.857†	83317.3	78884.3	715.71	ug/L	715.71	ppb	15:27:52
1	SiO2†	440284.1	421310.2	27667	ug/L	27667	ppb	15:29:13
2	Sc Radial	7402.3	7402.3	99.0	%			15:27:19
2	Y RADIAL	8400.0	8400.0	121.3	%			15:26:59
2	Al 396.153Radial†	20874.7	21151.1	17397	ug/L	17397	ppb	15:26:59
2	Ca 317.933Radial†	7804.0	7851.1	11122	ug/L	11122	ppb	15:26:59
2	Fe 238.204 Radial†	17601.5	17738.5	73958	ug/L	73958	ppb	15:26:59
2	K 766.490 Radial†	42129.6	40133.6	8640.4	ug/L	8640.4	ppb	15:26:59
2	Mg 279.077 IEC†	384.7	385.5	9556.0	ug/L	9556.0	ppb	15:27:19
2	Na 589.592 Radial†	125161.7	126518.9	7764.8	ug/L	7764.8	ppb	15:26:59
2	Sr 421.552†	174353.1	176110.7	491.77	ug/L	491.77	ppb	15:26:59
2	Sc 361.383	745113.2	745113.2	103.68	%			15:28:20
2	Y 371.029	705364.1	705364.1	125.51	%			15:28:20
2	Ag 328.068†	81236.0	77722.4	489.78	ug/L	489.78	ppb	15:28:20
2	As 188.979†	1313.1	1301.9	500.94	ug/L	500.94	ppb	15:28:40
2	B 249.677†	20274.7	20495.6	509.02	ug/L	509.02	ppb	15:28:20
2	Ba 233.527†	98639.4	95140.9	672.16	ug/L	672.16	ppb	15:28:20
2	Be 313.107†	1105321.8	1071005.6	498.64	ug/L	498.64	ppb	15:28:20
2	Cd 226.502†	39095.8	37990.5	476.27	ug/L	476.27	ppb	15:28:40
2	Co 228.616†	28637.6	27721.5	473.34	ug/L	473.34	ppb	15:28:40
2	Cr 267.716†	38191.9	36914.9	519.56	ug/L	519.56	ppb	15:28:20
2	Cu 324.752†	152280.9	141242.1	516.10	ug/L	516.10	ppb	15:28:20
2	Mn 257.610†	1937299.3	1867917.3	2069.0	ug/L	2069.0	ppb	15:28:20
2	Mo 202.031†	7114.4	6845.0	486.70	ug/L	486.70	ppb	15:28:40
2	Ni 231.604†	19702.4	18883.9	504.46	ug/L	504.46	ppb	15:28:40

2	P 214.914†	4443.1	3970.7	1878.5 ug/L	1878.5 ppb	15:28:40
2	Pb 220.353†	4472.3	4326.9	512.52 ug/L	512.52 ppb	15:28:40
2	S 181.975 Axial†	3778.5	3569.1	4886.1 ug/L	4886.1 ppb	15:28:40
2	Sb 206.836†	1789.6	1668.8	493.42 ug/L	493.42 ppb	15:28:40
2	Se 196.026†	512.2	522.8	514.79 ug/L	514.79 ppb	15:28:40
2	Si 251.611†	442377.9	426278.1	13147 ug/L	13147 ppb	15:28:20
2	Sn 189.927†	2962.0	2844.4	510.08 ug/L	510.08 ppb	15:28:40
2	Ti 334.940†	2056394.4	1984816.8	3634.2 ug/L	3634.2 ppb	15:28:20
2	Tl 190.801†	1715.4	1715.3	486.79 ug/L	486.79 ppb	15:28:40
2	U 409.014†	559.5	5388.4	172.37 ug/L	172.37 ppb	15:28:20
2	V 292.402†	59847.3	59290.1	530.60 ug/L	530.60 ppb	15:28:20
2	Zn 213.857†	82954.4	79087.5	717.86 ug/L	717.86 ppb	15:28:20
2	SiO2†	437803.0	421840.4	27702 ug/L	27702 ppb	15:29:18
3	Sc Radial	7471.0	7471.0	100.0 %		15:27:44
3	Y RADIAL	8541.1	8541.1	123.3 %		15:27:24
3	Al 396.153Radial†	21457.7	21540.8	17718 ug/L	17718 ppb	15:27:24
3	Ca 317.933Radial†	8045.1	8020.0	11361 ug/L	11361 ppb	15:27:24
3	Fe 238.204 Radial†	18108.0	18082.0	75389 ug/L	75389 ppb	15:27:24
3	K 766.490 Radial†	43247.7	40861.5	8797.7 ug/L	8797.7 ppb	15:27:24
3	Mg 279.077 IEC†	389.7	386.8	9589.3 ug/L	9589.3 ppb	15:27:44
3	Na 589.592 Radial†	128137.8	128335.5	7876.3 ug/L	7876.3 ppb	15:27:24
3	Sr 421.552†	178740.9	178883.5	499.52 ug/L	499.52 ppb	15:27:24
3	Sc 361.383	744425.3	744425.3	103.58 %		15:28:47
3	Y 371.029	705349.0	705349.0	125.51 %		15:28:47
3	Ag 328.068†	81187.0	77747.6	490.39 ug/L	490.39 ppb	15:28:47
3	As 188.979†	1328.1	1317.6	506.88 ug/L	506.88 ppb	15:29:07
3	B 249.677†	20219.2	20460.1	508.02 ug/L	508.02 ppb	15:28:47
3	Ba 233.527†	98426.4	95023.2	671.33 ug/L	671.33 ppb	15:28:47
3	Be 313.107†	1104910.6	1071593.8	498.91 ug/L	498.91 ppb	15:28:47
3	Cd 226.502†	39224.3	38149.3	478.13 ug/L	478.13 ppb	15:29:07
3	Co 228.616†	28683.9	27791.7	474.54 ug/L	474.54 ppb	15:29:07
3	Cr 267.716†	38285.1	37038.9	521.33 ug/L	521.33 ppb	15:28:47
3	Cu 324.752†	151504.0	140627.9	513.96 ug/L	513.96 ppb	15:28:47
3	Mn 257.610†	1932004.5	1864532.5	2065.4 ug/L	2065.4 ppb	15:28:47
3	Mo 202.031†	7135.3	6871.5	488.66 ug/L	488.66 ppb	15:29:07
3	Ni 231.604†	19800.9	18996.6	507.47 ug/L	507.47 ppb	15:29:07
3	P 214.914†	4442.9	3974.5	1879.8 ug/L	1879.8 ppb	15:29:07
3	Pb 220.353†	4474.1	4332.7	513.14 ug/L	513.14 ppb	15:29:07
3	S 181.975 Axial†	3802.4	3595.5	4922.2 ug/L	4922.2 ppb	15:29:07
3	Sb 206.836†	1787.9	1668.9	493.48 ug/L	493.48 ppb	15:29:07
3	Se 196.026†	504.0	515.3	515.79 ug/L	515.79 ppb	15:29:07
3	Si 251.611†	440380.3	424743.9	13100 ug/L	13100 ppb	15:28:47
3	Sn 189.927†	2968.5	2853.4	511.80 ug/L	511.80 ppb	15:29:07
3	Ti 334.940†	2053173.9	1983540.8	3631.9 ug/L	3631.9 ppb	15:28:47
3	Tl 190.801†	1718.5	1719.8	487.93 ug/L	487.93 ppb	15:29:07
3	U 409.014†	428.2	5262.1	167.92 ug/L	167.92 ppb	15:28:47
3	V 292.402†	59956.4	59448.8	531.86 ug/L	531.86 ppb	15:28:47
3	Zn 213.857†	82774.3	78987.5	716.77 ug/L	716.77 ppb	15:28:47
3	SiO2†	444518.7	428714.2	28153 ug/L	28153 ppb	15:29:24

Mean Data: 1201869978|880671|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	746605.5	103.88	%	0.445				0.43%
Sc Radial	7467.5	99.9	%	0.85				0.85%
Y 371.029	706985.7	125.80	%	0.502				0.40%
Y RADIAL	8604.9	124.3	%	3.51				2.83%
Ag 328.068†	77706.8	490.11	ug/L	0.310	490.11	ppb	0.310	0.06%
Al 396.153Radial†	21463.3	17654	ug/L	231.8	17654	ppb	231.8	1.31%
As 188.979†	1311.4	504.61	ug/L	3.210	504.61	ppb	3.210	0.64%
B 249.677†	20503.7	509.13	ug/L	1.163	509.13	ppb	1.163	0.23%
Ba 233.527†	94988.9	671.08	ug/L	1.218	671.08	ppb	1.218	0.18%
Be 313.107†	1070923.4	498.60	ug/L	0.336	498.60	ppb	0.336	0.07%
Ca 317.933Radial†	8000.5	11334	ug/L	199.3	11334	ppb	199.3	1.76%
Cd 226.502†	38098.6	477.49	ug/L	1.061	477.49	ppb	1.061	0.22%
Co 228.616†	27768.2	474.14	ug/L	0.693	474.14	ppb	0.693	0.15%
Cr 267.716†	36992.0	520.66	ug/L	0.966	520.66	ppb	0.966	0.19%
Cu 324.752†	140852.0	514.76	ug/L	1.166	514.76	ppb	1.166	0.23%
Fe 238.204 Radial†	18058.8	75293	ug/L	1289.7	75293	ppb	1289.7	1.71%
K 766.490 Radial†	40712.1	8765.5	ug/L	112.47	8765.5	ppb	112.47	1.28%

Mg 279.077 1EC†	383.2	9498.5	ug/L	129.52	9498.5	ppb	129.52	1.36%
Mn 257.610†	1865140.9	2066.1	ug/L	2.63	2066.1	ppb	2.63	0.13%
Mo 202.031†	6859.8	487.83	ug/L	1.014	487.83	ppb	1.014	0.21%
Na 589.592 Radial†	128295.5	7873.8	ug/L	107.83	7873.8	ppb	107.83	1.37%
Ni 231.604†	18944.2	506.07	ug/L	1.517	506.07	ppb	1.517	0.30%
P 214.914†	3981.7	1883.4	ug/L	7.37	1883.4	ppb	7.37	0.39%
Pb 220.353†	4336.7	513.61	ug/L	1.387	513.61	ppb	1.387	0.27%
S 181.975 Axial†	3587.6	4911.4	ug/L	21.98	4911.4	ppb	21.98	0.45%
Sb 206.836†	1668.5	493.36	ug/L	0.148	493.36	ppb	0.148	0.03%
Se 196.026†	524.3	520.03	ug/L	8.234	520.03	ppb	8.234	1.58%
Si 251.611†	425477.5	13122	ug/L	23.8	13122	ppb	23.8	0.18%
Sn 189.927†	2851.1	511.39	ug/L	1.161	511.39	ppb	1.161	0.23%
Sr 421.552†	178794.9	499.27	ug/L	7.375	499.27	ppb	7.375	1.48%
Ti 334.940†	1982653.2	3630.3	ug/L	4.97	3630.3	ppb	4.97	0.14%
Tl 190.801†	1724.1	489.03	ug/L	2.959	489.03	ppb	2.959	0.61%
U 409.014†	5370.7	171.61	ug/L	3.375	171.61	ppb	3.375	1.97%
V 292.402†	59354.7	531.01	ug/L	0.731	531.01	ppb	0.731	0.14%
Zn 213.857†	78986.4	716.78	ug/L	1.073	716.78	ppb	1.073	0.15%
SiO2†	423954.9	27841	ug/L	271.6	27841	ppb	271.6	0.98%

Sequence No.: 8
Sample ID: 1201869980|880671|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 43
Date Collected: 6/30/2009 15:31:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869980|880671|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7360.1	7360.1	98.5	%			15:33:47
1	Y RADIAL	8765.4	8765.4	126.6	%			15:33:27
1	Al 396.153Radial†	23686.0	24126.9	19847	ug/L	19847	ppb	15:33:27
1	Ca 317.933Radial†	8681.1	8787.0	12448	ug/L	12448	ppb	15:33:27
1	Fe 238.204 Radial†	19490.8	19759.1	82380	ug/L	82380	ppb	15:33:27
1	K 766.490 Radial†	44092.1	42370.5	9123.3	ug/L	9123.3	ppb	15:33:27
1	Mg 279.077 IEC†	392.6	395.6	9802.5	ug/L	9802.5	ppb	15:33:47
1	Na 589.592 Radial†	131745.6	133929.9	8219.6	ug/L	8219.6	ppb	15:33:27
1	Sr 421.552†	181247.9	184122.2	514.14	ug/L	514.14	ppb	15:33:27
1	Sc 361.383	739794.8	739794.8	102.94	%			15:34:46
1	Y 371.029	708473.8	708473.8	126.06	%			15:34:46
1	Ag 328.068†	80005.6	77090.4	488.72	ug/L	488.72	ppb	15:34:46
1	As 188.979†	1308.5	1306.6	505.23	ug/L	505.23	ppb	15:35:06
1	B 249.677†	20073.9	20441.1	507.05	ug/L	507.05	ppb	15:34:46
1	Ba 233.527†	97850.9	95058.8	671.55	ug/L	671.55	ppb	15:34:46
1	Be 313.107†	1092965.7	1066666.4	497.13	ug/L	497.13	ppb	15:34:46
1	Cd 226.502†	39672.0	38821.3	485.89	ug/L	485.89	ppb	15:34:46
1	Co 228.616†	28641.2	27923.6	476.31	ug/L	476.31	ppb	15:35:06
1	Cr 267.716†	37814.7	36813.3	518.32	ug/L	518.32	ppb	15:34:46
1	Cu 324.752†	150180.2	140257.3	513.02	ug/L	513.02	ppb	15:34:46
1	Mn 257.610†	2002732.0	1944916.7	2155.0	ug/L	2155.0	ppb	15:34:46
1	Mo 202.031†	7179.4	6957.4	495.17	ug/L	495.17	ppb	15:35:06
1	Ni 231.604†	19864.7	19178.2	512.32	ug/L	512.32	ppb	15:35:06
1	P 214.914†	4849.5	4396.3	2090.6	ug/L	2090.6	ppb	15:35:06
1	Pb 220.353†	4505.0	4389.7	519.71	ug/L	519.71	ppb	15:35:06
1	S 181.975 Axial†	3789.5	3606.0	4936.2	ug/L	4936.2	ppb	15:35:06
1	Sb 206.836†	1780.5	1672.5	494.30	ug/L	494.30	ppb	15:35:06
1	Se 196.026†	490.0	504.8	533.84	ug/L	533.84	ppb	15:35:06
1	Si 251.611†	456400.8	442968.4	13662	ug/L	13662	ppb	15:34:46
1	Sn 189.927†	2970.2	2873.0	515.89	ug/L	515.89	ppb	15:35:06
1	Ti 334.940†	2156688.2	2096508.6	3838.8	ug/L	3838.8	ppb	15:34:46
1	Tl 190.801†	1712.2	1724.1	491.30	ug/L	491.30	ppb	15:35:06
1	U 409.014†	-498.2	4364.8	136.68	ug/L	136.68	ppb	15:34:46
1	V 292.402†	59870.6	59727.7	533.21	ug/L	533.21	ppb	15:34:46
1	Zn 213.857†	83907.9	80589.0	730.78	ug/L	730.78	ppb	15:34:46
1	SiO2†	470788.9	456920.9	30008	ug/L	30008	ppb	15:36:06
2	Sc Radial	7423.4	7423.4	99.3	%			15:34:12
2	Y RADIAL	8545.6	8545.6	123.4	%			15:33:52
2	Al 396.153Radial†	23549.6	23784.5	19565	ug/L	19565	ppb	15:33:52
2	Ca 317.933Radial†	8627.8	8658.1	12265	ug/L	12265	ppb	15:33:52
2	Fe 238.204 Radial†	19346.4	19444.9	81071	ug/L	81071	ppb	15:33:52
2	K 766.490 Radial†	43732.5	41626.7	8962.7	ug/L	8962.7	ppb	15:33:52
2	Mg 279.077 IEC†	391.0	390.6	9679.5	ug/L	9679.5	ppb	15:34:12
2	Na 589.592 Radial†	130746.0	131782.5	8087.8	ug/L	8087.8	ppb	15:33:52
2	Sr 421.552†	179927.1	181222.8	506.04	ug/L	506.04	ppb	15:33:52
2	Sc 361.383	745736.2	745736.2	103.76	%			15:35:13
2	Y 371.029	714013.6	714013.6	127.05	%			15:35:13
2	Ag 328.068†	80293.1	76748.4	486.26	ug/L	486.26	ppb	15:35:13
2	As 188.979†	1322.6	1310.0	506.16	ug/L	506.16	ppb	15:35:33
2	B 249.677†	20217.4	20424.0	506.73	ug/L	506.73	ppb	15:35:13
2	Ba 233.527†	98250.3	94686.3	668.93	ug/L	668.93	ppb	15:35:13
2	Be 313.107†	1096993.8	1062089.0	495.01	ug/L	495.01	ppb	15:35:13
2	Cd 226.502†	39781.1	38619.4	483.46	ug/L	483.46	ppb	15:35:13
2	Co 228.616†	28639.8	27700.5	472.47	ug/L	472.47	ppb	15:35:33
2	Cr 267.716†	37991.9	36691.3	516.58	ug/L	516.58	ppb	15:35:13
2	Cu 324.752†	151295.1	140169.4	512.62	ug/L	512.62	ppb	15:35:13
2	Mn 257.610†	2010606.5	1937004.8	2146.1	ug/L	2146.1	ppb	15:35:13
2	Mo 202.031†	7180.0	6902.5	491.21	ug/L	491.21	ppb	15:35:33
2	Ni 231.604†	19877.4	19036.6	508.54	ug/L	508.54	ppb	15:35:33

2	P 214.914†	4850.2	4359.5	2072.8	ug/L	2072.8 ppb	15:35:33
2	Pb 220.353†	4503.1	4353.0	515.39	ug/L	515.39 ppb	15:35:33
2	S 181.975 Axial†	3786.4	3573.7	4891.9	ug/L	4891.9 ppb	15:35:33
2	Sb 206.836†	1786.9	1664.8	491.94	ug/L	491.94 ppb	15:35:33
2	Se 196.026†	483.5	494.7	524.29	ug/L	524.29 ppb	15:35:33
2	Si 251.611†	459492.5	442415.6	13645	ug/L	13645 ppb	15:35:13
2	Sn 189.927†	2972.8	2852.5	512.16	ug/L	512.16 ppb	15:35:33
2	Ti 334.940†	2167406.8	2090146.0	3827.2	ug/L	3827.2 ppb	15:35:13
2	Tl 190.801†	1708.2	1707.0	486.68	ug/L	486.68 ppb	15:35:33
2	U 409.014†	-538.1	4330.1	135.67	ug/L	135.67 ppb	15:35:13
2	V 292.402†	60220.6	59601.7	532.21	ug/L	532.21 ppb	15:35:13
2	Zn 213.857†	84084.1	80109.4	726.52	ug/L	726.52 ppb	15:35:13
2	SiO2†	464199.8	446926.9	29351	ug/L	29351 ppb	15:36:12
3	Sc Radial	7477.0	7477.0	100	%		15:34:37
3	Y RADIAL	8751.6	8751.6	126.4	%		15:34:17
3	Al 396.153Radial†	23510.2	23575.2	19393	ug/L	19393 ppb	15:34:17
3	Ca 317.933Radial†	8592.7	8560.8	12127	ug/L	12127 ppb	15:34:17
3	Fe 238.204 Radial†	19307.3	19266.2	80326	ug/L	80326 ppb	15:34:17
3	K 766.490 Radial†	43898.7	41477.1	8930.4	ug/L	8930.4 ppb	15:34:17
3	Mg 279.077 IEC†	394.5	391.3	9697.0	ug/L	9697.0 ppb	15:34:37
3	Na 589.592 Radial†	131257.0	131349.6	8061.3	ug/L	8061.3 ppb	15:34:17
3	Sr 421.552†	180071.9	180068.7	502.82	ug/L	502.82 ppb	15:34:17
3	Sc 361.383	752480.0	752480.0	104.70	%		15:35:41
3	Y 371.029	721181.4	721181.4	128.32	%		15:35:41
3	Ag 328.068†	81319.2	77034.8	487.73	ug/L	487.73 ppb	15:35:41
3	As 188.979†	1313.2	1289.6	498.67	ug/L	498.67 ppb	15:36:01
3	B 249.677†	20544.2	20561.6	510.27	ug/L	510.27 ppb	15:35:41
3	Ba 233.527†	98899.4	94457.7	667.32	ug/L	667.32 ppb	15:35:41
3	Be 313.107†	1109210.5	1064282.3	496.02	ug/L	496.02 ppb	15:35:41
3	Cd 226.502†	40047.8	38530.5	482.41	ug/L	482.41 ppb	15:35:41
3	Co 228.616†	28649.1	27462.0	468.33	ug/L	468.33 ppb	15:36:01
3	Cr 267.716†	38217.3	36578.5	514.99	ug/L	514.99 ppb	15:35:41
3	Cu 324.752†	153510.3	140978.4	515.51	ug/L	515.51 ppb	15:35:41
3	Mn 257.610†	2027772.0	1936033.8	2144.9	ug/L	2144.9 ppb	15:35:41
3	Mo 202.031†	7187.9	6848.0	487.33	ug/L	487.33 ppb	15:36:01
3	Ni 231.604†	19884.8	18872.0	504.14	ug/L	504.14 ppb	15:36:01
3	P 214.914†	4881.9	4347.9	2066.7	ug/L	2066.7 ppb	15:36:01
3	Pb 220.353†	4501.0	4312.1	510.55	ug/L	510.55 ppb	15:36:01
3	S 181.975 Axial†	3799.0	3553.0	4863.7	ug/L	4863.7 ppb	15:36:01
3	Sb 206.836†	1784.3	1646.9	486.51	ug/L	486.51 ppb	15:36:01
3	Se 196.026†	484.5	491.5	520.17	ug/L	520.17 ppb	15:36:01
3	Si 251.611†	462594.3	441409.4	13614	ug/L	13614 ppb	15:35:41
3	Sn 189.927†	2979.1	2832.8	508.60	ug/L	508.60 ppb	15:36:01
3	Ti 334.940†	2189173.5	2092215.2	3830.9	ug/L	3830.9 ppb	15:35:41
3	Tl 190.801†	1710.0	1694.0	483.32	ug/L	483.32 ppb	15:36:01
3	U 409.014†	-175.6	4681.0	147.64	ug/L	147.64 ppb	15:35:41
3	V 292.402†	60793.8	59629.0	532.53	ug/L	532.53 ppb	15:35:41
3	Zn 213.857†	84922.8	80184.2	727.31	ug/L	727.31 ppb	15:35:41
3	SiO2†	465497.4	444157.0	29169	ug/L	29169 ppb	15:36:17

Mean Data: 1201869980|880671|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	746003.7	103.80	%	0.883				0.85%
Sc Radial	7420.2	99.3	%	0.78				0.79%
Y 371.029	714556.3	127.15	%	1.134				0.89%
Y RADIAL	8687.5	125.5	%	1.78				1.42%
Ag 328.068†	76957.9	487.57	ug/L	1.239	487.57	ppb	1.239	0.25%
Al 396.153Radial†	23828.9	19602	ug/L	229.2	19602	ppb	229.2	1.17%
As 188.979†	1302.1	503.36	ug/L	4.080	503.36	ppb	4.080	0.81%
B 249.677†	20475.6	508.02	ug/L	1.957	508.02	ppb	1.957	0.39%
Ba 233.527†	94734.3	669.27	ug/L	2.137	669.27	ppb	2.137	0.32%
Be 313.107†	1064345.9	496.06	ug/L	1.061	496.06	ppb	1.061	0.21%
Ca 317.933Radial†	8668.6	12280	ug/L	160.7	12280	ppb	160.7	1.31%
Cd 226.502†	38657.1	483.92	ug/L	1.783	483.92	ppb	1.783	0.37%
Co 228.616†	27695.4	472.37	ug/L	3.991	472.37	ppb	3.991	0.84%
Cr 267.716†	36694.4	516.63	ug/L	1.669	516.63	ppb	1.669	0.32%
Cu 324.752†	140468.4	513.72	ug/L	1.566	513.72	ppb	1.566	0.30%
Fe 238.204 Radial†	19490.0	81259	ug/L	1040.2	81259	ppb	1040.2	1.28%
K 766.490 Radial†	41824.8	9005.5	ug/L	103.31	9005.5	ppb	103.31	1.15%

Mg 279.077 IEC†	392.5	9726.3	ug/L	66.55	9726.3	ppb	66.55	0.68%
Mn 257.610†	1939318.4	2148.6	ug/L	5.50	2148.6	ppb	5.50	0.26%
Mo 202.031†	6902.6	491.24	ug/L	3.920	491.24	ppb	3.920	0.80%
Na 589.592 Radial†	132354.0	8122.9	ug/L	84.81	8122.9	ppb	84.81	1.04%
Ni 231.604†	19028.9	508.34	ug/L	4.093	508.34	ppb	4.093	0.81%
P 214.914†	4367.9	2076.7	ug/L	12.42	2076.7	ppb	12.42	0.60%
Pb 220.353†	4351.6	515.22	ug/L	4.578	515.22	ppb	4.578	0.89%
S 181.975 Axial†	3577.6	4897.3	ug/L	36.52	4897.3	ppb	36.52	0.75%
Sb 206.836†	1661.4	490.92	ug/L	3.995	490.92	ppb	3.995	0.81%
Se 196.026†	497.0	526.10	ug/L	7.011	526.10	ppb	7.011	1.33%
Si 251.611†	442264.5	13641	ug/L	24.3	13641	ppb	24.3	0.18%
Sn 189.927†	2852.7	512.22	ug/L	3.649	512.22	ppb	3.649	0.71%
Sr 421.552†	181804.6	507.67	ug/L	5.832	507.67	ppb	5.832	1.15%
Ti 334.940†	2092956.6	3832.3	ug/L	5.95	3832.3	ppb	5.95	0.16%
Tl 190.801†	1708.4	487.10	ug/L	4.005	487.10	ppb	4.005	0.82%
U 409.014†	4458.6	140.00	ug/L	6.641	140.00	ppb	6.641	4.74%
V 292.402†	59652.8	532.65	ug/L	0.511	532.65	ppb	0.511	0.10%
Zn 213.857†	80294.2	728.20	ug/L	2.266	728.20	ppb	2.266	0.31%
SiO2†	449335.0	29509	ug/L	441.2	29509	ppb	441.2	1.50%

Sequence No.: 9
Sample ID: 1201869979|880671|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 44
Date Collected: 6/30/2009 15:38:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201869979|880671|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7647.5	7647.5	102	%			15:40:20
1	Y RADIAL	7377.6	7377.6	106.5	%			15:40:20
1	Al 396.153Radial†	2982.2	2987.4	2460.0	ug/L	2460.0	ppb	15:40:20
1	Ca 317.933Radial†	1170.9	1115.3	1580.0	ug/L	1580.0	ppb	15:40:40
1	Fe 238.204 Radial†	4259.4	4128.2	17209	ug/L	17209	ppb	15:40:20
1	K 766.490 Radial†	6012.9	3469.7	746.01	ug/L	746.01	ppb	15:40:20
1	Mg 279.077 IEC†	43.6	39.5	970.93	ug/L	970.93	ppb	15:40:40
1	Na 589.592 Radial†	8842.0	8777.6	538.71	ug/L	538.71	ppb	15:40:20
1	Sr 421.552†	2250.0	2255.0	6.2828	ug/L	6.2828	ppb	15:40:20
1	Sc 361.383	732431.4	732431.4	101.91	%			15:41:37
1	Y 371.029	598063.2	598063.2	106.42	%			15:41:37
1	Ag 328.068†	-246.3	-874.3	0.3710	ug/L	0.3710	ppb	15:41:37
1	As 188.979†	-46.8	-10.5	3.0538	ug/L	3.0538	ppb	15:41:57
1	B 249.677†	-365.2	581.5	13.462	ug/L	13.462	ppb	15:41:37
1	Ba 233.527†	6943.8	6813.0	48.024	ug/L	48.024	ppb	15:41:37
1	Be 313.107†	-7608.9	-2584.4	0.5283	ug/L	0.5283	ppb	15:41:37
1	Cd 226.502†	-120.7	162.6	0.0732	ug/L	0.0732	ppb	15:41:57
1	Co 228.616†	114.1	211.4	1.8754	ug/L	1.8754	ppb	15:41:57
1	Cr 267.716†	446.8	515.8	7.6239	ug/L	7.6239	ppb	15:41:37
1	Cu 324.752†	6409.6	650.9	3.3537	ug/L	3.3537	ppb	15:41:37
1	Mn 257.610†	440214.1	431275.1	477.74	ug/L	477.74	ppb	15:41:37
1	Mo 202.031†	20.2	2.7	1.3151	ug/L	1.3151	ppb	15:41:57
1	Ni 231.604†	423.1	295.4	7.8934	ug/L	7.8934	ppb	15:41:57
1	P 214.914†	1166.8	830.1	410.36	ug/L	410.36	ppb	15:41:57
1	Pb 220.353†	65.5	77.5	8.0802	ug/L	8.0802	ppb	15:41:57
1	S 181.975 Axial†	90.8	13.7	18.253	ug/L	18.253	ppb	15:41:57
1	Sb 206.836†	59.3	0.9	-1.6391	ug/L	-1.6391	ppb	15:41:57
1	Se 196.026†	-130.0	-98.8	7.0203	ug/L	7.0203	ppb	15:41:57
1	Si 251.611†	62271.1	60691.0	1874.1	ug/L	1874.1	ppb	15:41:37
1	Sn 189.927†	35.4	22.2	5.3705	ug/L	5.3705	ppb	15:41:57
1	Ti 334.940†	408454.4	402139.1	736.36	ug/L	736.36	ppb	15:41:37
1	Tl 190.801†	-85.8	-23.4	2.4732	ug/L	2.4732	ppb	15:41:57
1	U 409.014†	-6884.1	-1906.2	-66.675	ug/L	-66.675	ppb	15:41:37
1	V 292.402†	17.4	1582.2	11.051	ug/L	11.051	ppb	15:41:37
1	Zn 213.857†	7895.2	6822.0	61.069	ug/L	61.069	ppb	15:41:37
1	SiO2†	60611.8	59037.7	3881.9	ug/L	3881.9	ppb	15:42:54
2	Sc Radial	7565.5	7565.5	101	%			15:40:45
2	Y RADIAL	7301.8	7301.8	105.5	%			15:40:45
2	Al 396.153Radial†	2912.6	2950.3	2429.4	ug/L	2429.4	ppb	15:40:45
2	Ca 317.933Radial†	1180.1	1136.8	1610.4	ug/L	1610.4	ppb	15:41:05
2	Fe 238.204 Radial†	4186.1	4101.0	17095	ug/L	17095	ppb	15:40:45
2	K 766.490 Radial†	5857.6	3380.0	726.53	ug/L	726.53	ppb	15:40:45
2	Mg 279.077 IEC†	45.8	42.2	1038.6	ug/L	1038.6	ppb	15:41:05
2	Na 589.592 Radial†	8555.8	8588.5	527.10	ug/L	527.10	ppb	15:40:45
2	Sr 421.552†	2210.7	2240.0	6.2406	ug/L	6.2406	ppb	15:40:45
2	Sc 361.383	738910.4	738910.4	102.81	%			15:42:03
2	Y 371.029	603986.4	603986.4	107.47	%			15:42:03
2	Ag 328.068†	-228.3	-854.6	0.4434	ug/L	0.4434	ppb	15:42:03
2	As 188.979†	-34.7	1.7	7.4815	ug/L	7.4815	ppb	15:42:23
2	B 249.677†	-401.5	549.4	12.659	ug/L	12.659	ppb	15:42:03
2	Ba 233.527†	7118.3	6923.0	48.800	ug/L	48.800	ppb	15:42:03
2	Be 313.107†	-7734.5	-2641.1	0.5309	ug/L	0.5309	ppb	15:42:03
2	Cd 226.502†	-145.4	139.7	-0.2064	ug/L	-0.2064	ppb	15:42:23
2	Co 228.616†	126.6	222.6	2.0486	ug/L	2.0486	ppb	15:42:23
2	Cr 267.716†	496.1	559.9	8.2364	ug/L	8.2364	ppb	15:42:03
2	Cu 324.752†	6463.6	648.3	3.3374	ug/L	3.3374	ppb	15:42:03
2	Mn 257.610†	450474.7	437467.4	484.56	ug/L	484.56	ppb	15:42:03
2	Mo 202.031†	42.7	24.4	2.8343	ug/L	2.8343	ppb	15:42:23
2	Ni 231.604†	407.7	276.8	7.3959	ug/L	7.3959	ppb	15:42:23

2	P 214.914†	1174.4	827.5	409.13 ug/L	409.13 ppb	15:42:23
2	Pb 220.353†	43.3	55.3	5.4503 ug/L	5.4503 ppb	15:42:23
2	S 181.975 Axial†	95.4	17.4	23.366 ug/L	23.366 ppb	15:42:23
2	Sb 206.836†	63.3	4.3	-0.6117 ug/L	-0.6117 ppb	15:42:23
2	Se 196.026†	-138.0	-105.4	3.2719 ug/L	3.2719 ppb	15:42:23
2	Si 251.611†	62198.2	60084.4	1855.3 ug/L	1855.3 ppb	15:42:03
2	Sn 189.927†	43.0	29.4	6.6343 ug/L	6.6343 ppb	15:42:23
2	Ti 334.940†	418961.6	408844.5	748.64 ug/L	748.64 ppb	15:42:03
2	Tl 190.801†	-81.0	-18.0	4.0197 ug/L	4.0197 ppb	15:42:23
2	U 409.014†	-6641.9	-1611.4	-56.680 ug/L	-56.680 ppb	15:42:03
2	V 292.402†	28.7	1593.1	11.192 ug/L	11.192 ppb	15:42:03
2	Zn 213.857†	8105.2	6958.3	62.340 ug/L	62.340 ppb	15:42:03
2	SiO2†	61312.9	59198.1	3892.3 ug/L	3892.3 ppb	15:42:59
3	Sc Radial	7697.3	7697.3	103 %		15:41:10
3	Y RADIAL	7445.5	7445.5	107.5 %		15:41:10
3	Al 396.153Radial†	3003.4	2989.1	2461.4 ug/L	2461.4 ppb	15:41:10
3	Ca 317.933Radial†	1179.8	1116.5	1581.7 ug/L	1581.7 ppb	15:41:30
3	Fe 238.204 Radial†	4311.6	4152.0	17308 ug/L	17308 ppb	15:41:10
3	K 766.490 Radial†	5929.6	3350.8	720.23 ug/L	720.23 ppb	15:41:10
3	Mg 279.077 IEC†	48.6	44.1	1085.5 ug/L	1085.5 ppb	15:41:30
3	Na 589.592 Radial†	8813.5	8694.0	533.58 ug/L	533.58 ppb	15:41:10
3	Sr 421.552†	2273.7	2263.8	6.3073 ug/L	6.3073 ppb	15:41:10
3	Sc 361.383	734367.2	734367.2	102.18 %		15:42:28
3	Y 371.029	599961.3	599961.3	106.75 %		15:42:28
3	Ag 328.068†	-279.1	-905.8	0.2117 ug/L	0.2117 ppb	15:42:28
3	As 188.979†	-32.9	3.3	8.1200 ug/L	8.1200 ppb	15:42:48
3	B 249.677†	-487.4	462.9	10.466 ug/L	10.466 ppb	15:42:28
3	Ba 233.527†	7139.6	6986.7	49.248 ug/L	49.248 ppb	15:42:28
3	Be 313.107†	-7712.3	-2665.9	0.5331 ug/L	0.5331 ppb	15:42:28
3	Cd 226.502†	-125.9	157.8	0.0003 ug/L	0.0003 ppb	15:42:48
3	Co 228.616†	107.3	204.4	1.7152 ug/L	1.7152 ppb	15:42:48
3	Cr 267.716†	516.8	583.1	8.5677 ug/L	8.5677 ppb	15:42:28
3	Cu 324.752†	6423.8	648.2	3.3496 ug/L	3.3496 ppb	15:42:28
3	Mn 257.610†	451597.8	441277.1	488.78 ug/L	488.78 ppb	15:42:28
3	Mo 202.031†	27.3	9.6	1.8041 ug/L	1.8041 ppb	15:42:48
3	Ni 231.604†	396.3	268.1	7.1628 ug/L	7.1628 ppb	15:42:48
3	P 214.914†	1160.8	821.3	405.77 ug/L	405.77 ppb	15:42:48
3	Pb 220.353†	46.3	58.6	5.8176 ug/L	5.8176 ppb	15:42:48
3	S 181.975 Axial†	92.3	15.0	20.001 ug/L	20.001 ppb	15:42:48
3	Sb 206.836†	50.5	-7.8	-4.2593 ug/L	-4.2593 ppb	15:42:48
3	Se 196.026†	-130.9	-99.3	7.0773 ug/L	7.0773 ppb	15:42:48
3	Si 251.611†	61399.8	59677.2	1842.8 ug/L	1842.8 ppb	15:42:28
3	Sn 189.927†	41.8	28.4	6.4765 ug/L	6.4765 ppb	15:42:48
3	Ti 334.940†	419635.8	412025.3	754.46 ug/L	754.46 ppb	15:42:28
3	Tl 190.801†	-87.7	-25.1	2.2405 ug/L	2.2405 ppb	15:42:48
3	U 409.014†	-6839.6	-1844.9	-64.613 ug/L	-64.613 ppb	15:42:28
3	V 292.402†	-3.5	1561.7	10.843 ug/L	10.843 ppb	15:42:28
3	Zn 213.857†	8048.4	6951.5	62.255 ug/L	62.255 ppb	15:42:28
3	SiO2†	61095.9	59354.7	3902.7 ug/L	3902.7 ppb	15:43:04

Mean Data: 1201869979|880671|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	735236.3	102.30	%	0.463				0.45%
Sc Radial	7636.8	102	%	0.9				0.87%
Y 371.029	600670.3	106.88	%	0.538				0.50%
Y RADIAL	7374.9	106.5	%	1.04				0.97%
Ag 328.068†	-878.3	0.3421	ug/L	0.11852	0.3421	ppb	0.11852	34.65%
Al 396.153Radial†	2975.6	2450.3	ug/L	18.10	2450.3	ppb	18.10	0.74%
As 188.979†	-1.8	6.2184	ug/L	2.75917	6.2184	ppb	2.75917	44.37%
B 249.677†	531.3	12.196	ug/L	1.5506	12.196	ppb	1.5506	12.71%
Ba 233.527†	6907.6	48.691	ug/L	0.6195	48.691	ppb	0.6195	1.27%
Be 313.107†	-2630.5	0.5308	ug/L	0.00237	0.5308	ppb	0.00237	0.45%
Ca 317.933Radial†	1122.9	1590.7	ug/L	17.08	1590.7	ppb	17.08	1.07%
Cd 226.502†	153.4	-0.0443	ug/L	0.14503	-0.0443	ppb	0.14503	327.63%
Co 228.616†	212.8	1.8797	ug/L	0.16671	1.8797	ppb	0.16671	8.87%
Cr 267.716†	553.0	8.1427	ug/L	0.47887	8.1427	ppb	0.47887	5.88%
Cu 324.752†	649.1	3.3469	ug/L	0.00847	3.3469	ppb	0.00847	0.25%
Fe 238.204 Radial†	4127.1	17204	ug/L	106.4	17204	ppb	106.4	0.62%
K 766.490 Radial†	3400.2	730.92	ug/L	13.438	730.92	ppb	13.438	1.84%

Mg 279.077 IEC†	42.0	1031.7	ug/L	57.62	1031.7	ppb	57.62	5.59%
Mn 257.610†	436673.2	483.69	ug/L	5.570	483.69	ppb	5.570	1.15%
Mo 202.031†	12.2	1.9845	ug/L	0.77552	1.9845	ppb	0.77552	39.08%
Na 589.592 Radial†	8686.7	533.13	ug/L	5.819	533.13	ppb	5.819	1.09%
Ni 231.604†	280.1	7.4840	ug/L	0.37319	7.4840	ppb	0.37319	4.99%
P 214.914†	826.3	408.42	ug/L	2.373	408.42	ppb	2.373	0.58%
Pb 220.353†	63.8	6.4494	ug/L	1.42425	6.4494	ppb	1.42425	22.08%
S 181.975 Axial†	15.3	20.540	ug/L	2.5991	20.540	ppb	2.5991	12.65%
Sb 206.836†	-0.9	-2.1700	ug/L	1.88089	-2.1700	ppb	1.88089	86.68%
Se 196.026†	-101.2	5.7899	ug/L	2.18078	5.7899	ppb	2.18078	37.67%
Si 251.611†	60150.9	1857.4	ug/L	15.77	1857.4	ppb	15.77	0.85%
Sn 189.927†	26.6	6.1604	ug/L	0.68867	6.1604	ppb	0.68867	11.18%
Sr 421.552†	2252.9	6.2769	ug/L	0.03373	6.2769	ppb	0.03373	0.54%
Ti 334.940†	407669.6	746.49	ug/L	9.239	746.49	ppb	9.239	1.24%
Tl 190.801†	-22.2	2.9112	ug/L	0.96709	2.9112	ppb	0.96709	33.22%
U 409.014†	-1787.5	-62.656	ug/L	5.2769	-62.656	ppb	5.2769	8.42%
V 292.402†	1579.0	11.029	ug/L	0.1756	11.029	ppb	0.1756	1.59%
Zn 213.857†	6910.6	61.888	ug/L	0.7103	61.888	ppb	0.7103	1.15%
SiO2†	59196.8	3892.3	ug/L	10.41	3892.3	ppb	10.41	0.27%

Sequence No.: 10
Sample ID: 232357002|880671|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 45
Date Collected: 6/30/2009 15:45:14
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232357002|880671|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7539.7	7539.7	101	%			15:47:07
1	Y RADIAL	8467.6	8467.6	122.3	%			15:47:07
1	Al 396.153Radial†	11468.2	11441.8	9421.8	ug/L	9421.8	ppb	15:47:07
1	Ca 317.933Radial†	4781.3	4710.9	6673.5	ug/L	6673.5	ppb	15:47:07
1	Fe 238.204 Radial†	18528.3	18333.5	76423	ug/L	76423	ppb	15:47:07
1	K 766.490 Radial†	22015.8	19418.4	4179.0	ug/L	4179.0	ppb	15:47:07
1	Mg 279.077 IEC†	220.5	215.5	5307.3	ug/L	5307.3	ppb	15:47:27
1	Na 589.592 Radial†	52425.2	52107.9	3198.0	ug/L	3198.0	ppb	15:47:07
1	Sr 421.552†	10528.6	10493.5	29.243	ug/L	29.243	ppb	15:47:07
1	Sc 361.383	752169.1	752169.1	104.66	%			15:48:24
1	Y 371.029	703213.3	703213.3	125.13	%			15:48:24
1	Ag 328.068†	-3328.4	-3812.9	2.1362	ug/L	2.1362	ppb	15:48:29
1	As 188.979†	-81.5	-42.4	16.973	ug/L	16.973	ppb	15:48:49
1	B 249.677†	-247.6	703.3	12.427	ug/L	12.427	ppb	15:48:29
1	Ba 233.527†	38878.7	37147.7	261.89	ug/L	261.89	ppb	15:48:29
1	Be 313.107†	-20902.5	-15090.3	1.6246	ug/L	1.6246	ppb	15:48:29
1	Cd 226.502†	377.0	641.4	-0.6928	ug/L	-0.6928	ppb	15:48:49
1	Co 228.616†	842.3	904.2	6.8818	ug/L	6.8818	ppb	15:48:49
1	Cr 267.716†	6323.7	6119.6	87.534	ug/L	87.534	ppb	15:48:29
1	Cu 324.752†	8214.6	2210.5	12.429	ug/L	12.429	ppb	15:48:29
1	Mn 257.610†	1940806.0	1853739.2	2053.8	ug/L	2053.8	ppb	15:48:24
1	Mo 202.031†	77.4	56.8	8.9885	ug/L	8.9885	ppb	15:48:49
1	Ni 231.604†	2267.2	2046.5	54.692	ug/L	54.692	ppb	15:48:49
1	P 214.914†	3744.8	3263.3	1606.3	ug/L	1606.3	ppb	15:48:49
1	Pb 220.353†	623.4	608.9	67.123	ug/L	67.123	ppb	15:48:49
1	S 181.975 Axial†	475.5	379.0	517.32	ug/L	517.32	ppb	15:48:49
1	Sb 206.836†	96.3	34.8	-0.4796	ug/L	-0.4796	ppb	15:48:49
1	Se 196.026†	-490.9	-440.3	30.331	ug/L	30.331	ppb	15:48:49
1	Si 251.611†	321045.7	306343.9	9459.4	ug/L	9459.4	ppb	15:48:29
1	Sn 189.927†	115.5	97.9	23.700	ug/L	23.700	ppb	15:48:49
1	Ti 334.940†	2096910.9	2004923.5	3671.2	ug/L	3671.2	ppb	15:48:24
1	Tl 190.801†	-203.3	-133.5	6.3837	ug/L	6.3837	ppb	15:48:49
1	U 409.014†	-16451.8	-10870.8	-377.65	ug/L	-377.65	ppb	15:48:24
1	V 292.402†	5623.7	6938.6	47.714	ug/L	47.714	ppb	15:48:29
1	Zn 213.857†	40639.9	37905.9	341.27	ug/L	341.27	ppb	15:48:29
1	SiO2†	329453.8	314352.6	20669	ug/L	20669	ppb	15:49:57
2	Sc Radial	7716.6	7716.6	103	%			15:47:32
2	Y RADIAL	8624.5	8624.5	124.6	%			15:47:32
2	Al 396.153Radial†	11642.5	11350.1	9346.4	ug/L	9346.4	ppb	15:47:32
2	Ca 317.933Radial†	4887.3	4705.0	6665.2	ug/L	6665.2	ppb	15:47:32
2	Fe 238.204 Radial†	18924.8	18296.6	76269	ug/L	76269	ppb	15:47:32
2	K 766.490 Radial†	22348.6	19240.6	4140.7	ug/L	4140.7	ppb	15:47:32
2	Mg 279.077 IEC†	220.5	210.5	5183.3	ug/L	5183.3	ppb	15:47:52
2	Na 589.592 Radial†	53055.6	51527.5	3162.4	ug/L	3162.4	ppb	15:47:32
2	Sr 421.552†	10752.7	10471.4	29.181	ug/L	29.181	ppb	15:47:32
2	Sc 361.383	751816.7	751816.7	104.61	%			15:48:55
2	Y 371.029	703442.8	703442.8	125.17	%			15:48:55
2	Ag 328.068†	-3175.1	-3667.8	2.9508	ug/L	2.9508	ppb	15:49:00
2	As 188.979†	-70.1	-31.5	20.838	ug/L	20.838	ppb	15:49:20
2	B 249.677†	-125.7	819.7	15.371	ug/L	15.371	ppb	15:49:00
2	Ba 233.527†	39214.0	37485.6	264.28	ug/L	264.28	ppb	15:49:00
2	Be 313.107†	-21249.5	-15431.5	1.4553	ug/L	1.4553	ppb	15:49:00
2	Cd 226.502†	378.5	642.9	-0.6543	ug/L	-0.6543	ppb	15:49:20
2	Co 228.616†	846.5	908.6	6.9729	ug/L	6.9729	ppb	15:49:20
2	Cr 267.716†	6376.4	6172.8	88.275	ug/L	88.275	ppb	15:49:00
2	Cu 324.752†	8303.5	2299.2	12.741	ug/L	12.741	ppb	15:49:00
2	Mn 257.610†	1931778.8	1845979.0	2045.2	ug/L	2045.2	ppb	15:48:55
2	Mo 202.031†	72.4	52.1	8.6434	ug/L	8.6434	ppb	15:49:20
2	Ni 231.604†	2293.3	2072.4	55.386	ug/L	55.386	ppb	15:49:20

2	P 214.914†	3715.5	3237.0	1592.9	ug/L	1592.9 ppb	15:49:20
2	Pb 220.353†	608.0	594.5	65.402	ug/L	65.402 ppb	15:49:20
2	S 181.975 Axial†	482.7	386.0	527.00	ug/L	527.00 ppb	15:49:20
2	Sb 206.836†	93.1	31.8	-1.3558	ug/L	-1.3558 ppb	15:49:20
2	Se 196.026†	-491.4	-441.0	29.471	ug/L	29.471 ppb	15:49:20
2	Si 251.611†	325823.6	311055.0	9604.9	ug/L	9604.9 ppb	15:49:00
2	Sn 189.927†	125.8	107.8	25.438	ug/L	25.438 ppb	15:49:20
2	Ti 334.940†	2092682.5	2001820.6	3665.5	ug/L	3665.5 ppb	15:48:55
2	Tl 190.801†	-216.7	-146.4	2.9239	ug/L	2.9239 ppb	15:49:20
2	U 409.014†	-16330.9	-10762.5	-373.97	ug/L	-373.97 ppb	15:48:55
2	V 292.402†	5623.2	6940.6	47.761	ug/L	47.761 ppb	15:49:00
2	Zn 213.857†	41013.9	38281.6	344.76	ug/L	344.76 ppb	15:49:00
2	SiO2†	329260.1	314315.0	20667	ug/L	20667 ppb	15:50:02
3	Sc Radial	7686.9	7686.9	103	%		15:47:57
3	Y RADIAL	8562.2	8562.2	123.7	%		15:47:57
3	Al 396.153Radial†	11584.4	11337.1	9335.6	ug/L	9335.6 ppb	15:47:57
3	Ca 317.933Radial†	4862.4	4699.0	6656.6	ug/L	6656.6 ppb	15:47:57
3	Fe 238.204 Radial†	18780.0	18226.4	75977	ug/L	75977 ppb	15:47:57
3	K 766.490 Radial†	22285.5	19262.7	4145.4	ug/L	4145.4 ppb	15:47:57
3	Mg 279.077 IEC†	222.1	212.9	5243.9	ug/L	5243.9 ppb	15:48:17
3	Na 589.592 Radial†	53020.1	51691.2	3172.4	ug/L	3172.4 ppb	15:47:57
3	Sr 421.552†	10741.0	10500.2	29.262	ug/L	29.262 ppb	15:47:57
3	Sc 361.383	753716.3	753716.3	104.87	%		15:49:26
3	Y 371.029	705232.9	705232.9	125.49	%		15:49:26
3	Ag 328.068†	-3264.3	-3745.3	2.3948	ug/L	2.3948 ppb	15:49:31
3	As 188.979†	-73.2	-34.4	19.783	ug/L	19.783 ppb	15:49:51
3	B 249.677†	-138.0	808.3	15.103	ug/L	15.103 ppb	15:49:31
3	Ba 233.527†	39321.7	37493.8	264.34	ug/L	264.34 ppb	15:49:31
3	Be 313.107†	-21242.8	-15373.9	1.4931	ug/L	1.4931 ppb	15:49:31
3	Cd 226.502†	394.7	657.4	-0.4359	ug/L	-0.4359 ppb	15:49:51
3	Co 228.616†	861.7	921.1	7.1853	ug/L	7.1853 ppb	15:49:51
3	Cr 267.716†	6383.6	6164.3	88.149	ug/L	88.149 ppb	15:49:31
3	Cu 324.752†	8357.9	2331.0	12.840	ug/L	12.840 ppb	15:49:31
3	Mn 257.610†	1941964.4	1851037.1	2050.7	ug/L	2050.7 ppb	15:49:26
3	Mo 202.031†	82.9	62.0	9.3187	ug/L	9.3187 ppb	15:49:51
3	Ni 231.604†	2283.0	2057.1	54.975	ug/L	54.975 ppb	15:49:51
3	P 214.914†	3746.8	3257.9	1603.8	ug/L	1603.8 ppb	15:49:51
3	Pb 220.353†	624.6	608.8	67.132	ug/L	67.132 ppb	15:49:51
3	S 181.975 Axial†	468.9	371.7	507.39	ug/L	507.39 ppb	15:49:51
3	Sb 206.836†	102.0	40.0	1.0903	ug/L	1.0903 ppb	15:49:51
3	Se 196.026†	-496.6	-444.8	26.563	ug/L	26.563 ppb	15:49:51
3	Si 251.611†	323755.8	308298.3	9519.8	ug/L	9519.8 ppb	15:49:31
3	Sn 189.927†	128.4	109.9	25.794	ug/L	25.794 ppb	15:49:51
3	Ti 334.940†	2100784.9	2004504.6	3670.4	ug/L	3670.4 ppb	15:49:26
3	Tl 190.801†	-219.6	-148.7	2.3947	ug/L	2.3947 ppb	15:49:51
3	U 409.014†	-16372.6	-10763.0	-373.95	ug/L	-373.95 ppb	15:49:26
3	V 292.402†	5642.6	6945.6	47.852	ug/L	47.852 ppb	15:49:31
3	Zn 213.857†	41106.8	38271.4	344.69	ug/L	344.69 ppb	15:49:31
3	SiO2†	329322.1	313580.9	20618	ug/L	20618 ppb	15:50:07

Mean Data: 232357002|880671|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	752567.4	104.71	%	0.141				0.13%
Sc Radial	7647.7	102	%	1.3				1.24%
Y 371.029	703963.0	125.26	%	0.197				0.16%
Y RADIAL	8551.4	123.5	%	1.14				0.92%
Ag 328.068†	-3742.0	2.4939	ug/L	0.41625	2.4939	ppb	0.41625	16.69%
Al 396.153Radial†	11376.3	9368.0	ug/L	46.98	9368.0	ppb	46.98	0.50%
As 188.979†	-36.1	19.198	ug/L	1.9981	19.198	ppb	1.9981	10.41%
B 249.677†	777.1	14.301	ug/L	1.6277	14.301	ppb	1.6277	11.38%
Ba 233.527†	37375.7	263.50	ug/L	1.394	263.50	ppb	1.394	0.53%
Be 313.107†	-15298.6	1.5243	ug/L	0.08890	1.5243	ppb	0.08890	5.83%
Ca 317.933Radial†	4705.0	6665.1	ug/L	8.45	6665.1	ppb	8.45	0.13%
Cd 226.502†	647.2	-0.5944	ug/L	0.13855	-0.5944	ppb	0.13855	23.31%
Co 228.616†	911.3	7.0133	ug/L	0.15570	7.0133	ppb	0.15570	2.22%
Cr 267.716†	6152.2	87.986	ug/L	0.3967	87.986	ppb	0.3967	0.45%
Cu 324.752†	2280.2	12.670	ug/L	0.2146	12.670	ppb	0.2146	1.69%
Fe 238.204 Radial†	18285.5	76223	ug/L	226.7	76223	ppb	226.7	0.30%
K 766.490 Radial†	19307.2	4155.1	ug/L	20.89	4155.1	ppb	20.89	0.50%

Mg 279.077 IEC†	213.0	5244.8	ug/L	62.01	5244.8	ppb	62.01	1.18%
Mn 257.610†	1850251.7	2049.9	ug/L	4.35	2049.9	ppb	4.35	0.21%
Mo 202.031†	57.0	8.9835	ug/L	0.33768	8.9835	ppb	0.33768	3.76%
Na 589.592 Radial†	51775.5	3177.6	ug/L	18.37	3177.6	ppb	18.37	0.58%
Ni 231.604†	2058.7	55.018	ug/L	0.3490	55.018	ppb	0.3490	0.63%
P 214.914†	3252.7	1601.0	ug/L	7.13	1601.0	ppb	7.13	0.45%
Pb 220.353†	604.1	66.552	ug/L	0.9960	66.552	ppb	0.9960	1.50%
S 181.975 Axial†	378.9	517.24	ug/L	9.805	517.24	ppb	9.805	1.90%
Sb 206.836†	35.5	-0.2484	ug/L	1.23935	-0.2484	ppb	1.23935	498.99%
Se 196.026†	-442.0	28.788	ug/L	1.9747	28.788	ppb	1.9747	6.86%
Si 251.611†	308565.7	9528.0	ug/L	73.10	9528.0	ppb	73.10	0.77%
Sn 189.927†	105.2	24.977	ug/L	1.1203	24.977	ppb	1.1203	4.49%
Sr 421.552†	10488.3	29.229	ug/L	0.0421	29.229	ppb	0.0421	0.14%
Ti 334.940†	2003749.6	3669.0	ug/L	3.08	3669.0	ppb	3.08	0.08%
Tl 190.801†	-142.9	3.9008	ug/L	2.16649	3.9008	ppb	2.16649	55.54%
U 409.014†	-10798.8	-375.19	ug/L	2.132	-375.19	ppb	2.132	0.57%
V 292.402†	6941.6	47.776	ug/L	0.0698	47.776	ppb	0.0698	0.15%
Zn 213.857†	38152.9	343.57	ug/L	1.992	343.57	ppb	1.992	0.58%
SiO2†	314082.8	20651	ug/L	28.6	20651	ppb	28.6	0.14%

Sequence No.: 11
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 15:52:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7392.6	7392.6	98.9	%			15:54:14
1	Y RADIAL	6831.1	6831.1	98.65	%			15:54:14
1	Al 396.153Radial†	6384.8	6528.2	5353.8	ug/L	5353.8	ppb	15:54:14
1	Ca 317.933Radial†	3686.9	3698.7	5239.7	ug/L	5239.7	ppb	15:54:14
1	Fe 238.204 Radial†	1233.5	1212.4	5070.0	ug/L	5070.0	ppb	15:54:34
1	K 766.490 Radial†	24999.4	22869.4	4920.7	ug/L	4920.7	ppb	15:54:09
1	Mg 279.077 IEC†	209.4	208.7	5208.0	ug/L	5208.0	ppb	15:54:34
1	Na 589.592 Radial†	167953.4	169950.9	10430	ug/L	10430	ppb	15:54:09
1	Sr 421.552†	173977.9	175962.5	491.42	ug/L	491.42	ppb	15:54:09
1	Sc 361.383	743690.7	743690.7	103.48	%			15:55:43
1	Y 371.029	574212.4	574212.4	102.17	%			15:55:43
1	Ag 328.068†	88739.6	85123.7	511.65	ug/L	511.65	ppb	15:55:43
1	As 188.979†	1447.8	1434.5	520.56	ug/L	520.56	ppb	15:56:03
1	B 249.677†	19920.6	20190.8	505.90	ug/L	505.90	ppb	15:55:43
1	Ba 233.527†	75114.0	72588.3	513.29	ug/L	513.29	ppb	15:55:43
1	Be 313.107†	1157668.5	1123631.7	515.47	ug/L	515.47	ppb	15:55:43
1	Cd 226.502†	40637.1	39552.0	504.22	ug/L	504.22	ppb	15:56:03
1	Co 228.616†	30224.8	29308.2	508.49	ug/L	508.49	ppb	15:56:03
1	Cr 267.716†	37736.9	36545.7	512.82	ug/L	512.82	ppb	15:55:43
1	Cu 324.752†	151200.3	140478.8	509.35	ug/L	509.35	ppb	15:55:43
1	Mn 257.610†	481419.3	464555.3	512.83	ug/L	512.83	ppb	15:55:43
1	Mo 202.031†	7567.4	7295.9	513.95	ug/L	513.95	ppb	15:56:03
1	Ni 231.604†	19802.2	19016.7	507.99	ug/L	507.99	ppb	15:56:03
1	P 214.914†	5532.0	5031.2	2472.1	ug/L	2472.1	ppb	15:56:03
1	Pb 220.353†	4494.8	4356.9	520.34	ug/L	520.34	ppb	15:56:03
1	S 181.975 Axial†	857.8	753.6	1031.3	ug/L	1031.3	ppb	15:56:03
1	Sb 206.836†	1837.2	1718.1	516.80	ug/L	516.80	ppb	15:56:03
1	Se 196.026†	1010.8	1005.5	531.10	ug/L	531.10	ppb	15:56:03
1	Si 251.611†	87008.6	83671.7	2566.7	ug/L	2566.7	ppb	15:55:43
1	Sn 189.927†	3003.5	2890.0	512.42	ug/L	512.42	ppb	15:56:03
1	Ti 334.940†	286554.6	278269.5	509.36	ug/L	509.36	ppb	15:55:43
1	Tl 190.801†	1965.3	1960.0	516.18	ug/L	516.18	ppb	15:56:03
1	U 409.014†	10786.1	15272.3	515.53	ug/L	515.53	ppb	15:55:43
1	V 292.402†	56589.2	56252.0	517.03	ug/L	517.03	ppb	15:55:43
1	Zn 213.857†	58438.7	55549.0	507.96	ug/L	507.96	ppb	15:55:43
1	SiO2†	85865.0	82541.5	5389.4	ug/L	5389.4	ppb	15:57:03
2	Sc Radial	7563.8	7563.8	101	%			15:54:44
2	Y RADIAL	6952.9	6952.9	100.4	%			15:54:44
2	Al 396.153Radial†	6473.5	6469.8	5305.5	ug/L	5305.5	ppb	15:54:44
2	Ca 317.933Radial†	3725.1	3652.1	5173.6	ug/L	5173.6	ppb	15:54:44
2	Fe 238.204 Radial†	1246.4	1196.9	5005.6	ug/L	5005.6	ppb	15:55:04
2	K 766.490 Radial†	25155.6	22451.7	4830.5	ug/L	4830.5	ppb	15:54:39
2	Mg 279.077 IEC†	215.7	210.1	5245.3	ug/L	5245.3	ppb	15:55:04
2	Na 589.592 Radial†	167405.4	165566.2	10161	ug/L	10161	ppb	15:54:39
2	Sr 421.552†	173610.7	171618.6	479.29	ug/L	479.29	ppb	15:54:39
2	Sc 361.383	736578.7	736578.7	102.49	%			15:56:10
2	Y 371.029	568582.4	568582.4	101.17	%			15:56:10
2	Ag 328.068†	87970.1	85200.9	512.10	ug/L	512.10	ppb	15:56:10
2	As 188.979†	1438.6	1439.1	522.18	ug/L	522.18	ppb	15:56:30
2	B 249.677†	19816.6	20275.2	508.01	ug/L	508.01	ppb	15:56:10
2	Ba 233.527†	74484.7	72675.2	513.91	ug/L	513.91	ppb	15:56:10
2	Be 313.107†	1146088.8	1123135.4	515.24	ug/L	515.24	ppb	15:56:10
2	Cd 226.502†	40673.3	39966.5	509.52	ug/L	509.52	ppb	15:56:30
2	Co 228.616†	30183.5	29549.9	512.70	ug/L	512.70	ppb	15:56:30
2	Cr 267.716†	37369.9	36539.7	512.74	ug/L	512.74	ppb	15:56:10
2	Cu 324.752†	149465.5	140197.0	508.32	ug/L	508.32	ppb	15:56:10
2	Mn 257.610†	477259.4	464988.6	513.30	ug/L	513.30	ppb	15:56:10
2	Mo 202.031†	7576.9	7375.8	519.57	ug/L	519.57	ppb	15:56:30
2	Ni 231.604†	19805.0	19204.2	513.00	ug/L	513.00	ppb	15:56:30

2	P 214.914†	5548.0	5098.5	2506.7 ug/L	2506.7 ppb	15:56:30
2	Pb 220.353†	4482.5	4386.9	523.92 ug/L	523.92 ppb	15:56:30
2	S 181.975 Axial†	856.1	759.9	1040.0 ug/L	1040.0 ppb	15:56:30
2	Sb 206.836†	1835.4	1733.5	521.56 ug/L	521.56 ppb	15:56:30
2	Se 196.026†	1007.5	1011.8	534.09 ug/L	534.09 ppb	15:56:30
2	Si 251.611†	86181.3	83676.4	2566.7 ug/L	2566.7 ppb	15:56:10
2	Sn 189.927†	3000.1	2914.7	516.77 ug/L	516.77 ppb	15:56:30
2	Ti 334.940†	283810.8	278266.1	509.35 ug/L	509.35 ppb	15:56:10
2	Tl 190.801†	1980.1	1992.7	524.72 ug/L	524.72 ppb	15:56:30
2	U 409.014†	10428.8	15024.2	507.14 ug/L	507.14 ppb	15:56:10
2	V 292.402†	56028.9	56233.3	516.92 ug/L	516.92 ppb	15:56:10
2	Zn 213.857†	57986.8	55653.4	508.90 ug/L	508.90 ppb	15:56:10
2	SiO2†	86048.5	83521.8	5453.6 ug/L	5453.6 ppb	15:57:08
3	Sc Radial	7629.1	7629.1	102 %		15:55:14
3	Y RADIAL	7031.2	7031.2	101.5 %		15:55:14
3	Al 396.153Radial†	6423.1	6365.7	5220.0 ug/L	5220.0 ppb	15:55:14
3	Ca 317.933Radial†	3714.0	3609.7	5113.6 ug/L	5113.6 ppb	15:55:14
3	Fe 238.204 Radial†	1236.5	1176.7	4920.8 ug/L	4920.8 ppb	15:55:35
3	K 766.490 Radial†	25116.6	22200.8	4776.4 ug/L	4776.4 ppb	15:55:09
3	Mg 279.077 IEC†	207.6	200.4	5001.5 ug/L	5001.5 ppb	15:55:35
3	Na 589.592 Radial†	168735.2	165453.6	10154 ug/L	10154 ppb	15:55:09
3	Sr 421.552†	174182.3	170710.7	476.75 ug/L	476.75 ppb	15:55:09
3	Sc 361.383	747076.8	747076.8	103.95 %		15:56:38
3	Y 371.029	576159.0	576159.0	102.52 %		15:56:38
3	Ag 328.068†	89375.6	85346.9	512.94 ug/L	512.94 ppb	15:56:38
3	As 188.979†	1443.8	1424.4	516.88 ug/L	516.88 ppb	15:56:58
3	B 249.677†	20109.7	20285.5	508.30 ug/L	508.30 ppb	15:56:38
3	Ba 233.527†	75729.9	72851.8	515.15 ug/L	515.15 ppb	15:56:38
3	Be 313.107†	1165222.4	1125828.0	516.48 ug/L	516.48 ppb	15:56:38
3	Cd 226.502†	40756.6	39489.0	503.43 ug/L	503.43 ppb	15:56:58
3	Co 228.616†	30278.2	29227.2	507.09 ug/L	507.09 ppb	15:56:58
3	Cr 267.716†	37926.9	36563.2	513.06 ug/L	513.06 ppb	15:56:38
3	Cu 324.752†	152097.2	140679.4	510.07 ug/L	510.07 ppb	15:56:38
3	Mn 257.610†	485326.4	466205.4	514.64 ug/L	514.64 ppb	15:56:38
3	Mo 202.031†	7598.8	7292.9	513.73 ug/L	513.73 ppb	15:56:58
3	Ni 231.604†	19847.3	18973.3	506.83 ug/L	506.83 ppb	15:56:58
3	P 214.914†	5569.7	5043.2	2478.1 ug/L	2478.1 ppb	15:56:58
3	Pb 220.353†	4504.7	4346.8	519.11 ug/L	519.11 ppb	15:56:58
3	S 181.975 Axial†	863.9	755.6	1034.2 ug/L	1034.2 ppb	15:56:58
3	Sb 206.836†	1832.0	1705.1	512.89 ug/L	512.89 ppb	15:56:58
3	Se 196.026†	1030.2	1019.9	537.90 ug/L	537.90 ppb	15:56:58
3	Si 251.611†	87713.4	83968.6	2575.9 ug/L	2575.9 ppb	15:56:38
3	Sn 189.927†	3007.4	2880.7	510.74 ug/L	510.74 ppb	15:56:58
3	Ti 334.940†	288512.1	278897.4	510.51 ug/L	510.51 ppb	15:56:38
3	Tl 190.801†	1973.1	1958.9	515.92 ug/L	515.92 ppb	15:56:58
3	U 409.014†	10473.8	14924.6	503.77 ug/L	503.77 ppb	15:56:38
3	V 292.402†	56778.9	56186.6	516.42 ug/L	516.42 ppb	15:56:38
3	Zn 213.857†	58897.4	55734.3	509.70 ug/L	509.70 ppb	15:56:38
3	SiO2†	86419.9	82699.2	5400.0 ug/L	5400.0 ppb	15:57:13

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	742448.7	103.31	%	0.746				0.72%
Sc Radial	7528.5	101	%	1.6				1.62%
Y 371.029	572984.6	101.95	%	0.700				0.69%
Y RADIAL	6938.4	100.2	%	1.46				1.45%
Ag 328.068†	85223.8	512.23	ug/L	0.658	512.23	ppb	0.658	0.13%
QC value within limits for Ag 328.068 Recovery = 102.45%								
Al 396.153Radial†	6454.6	5293.1	ug/L	67.75	5293.1	ppb	67.75	1.28%
QC value within limits for Al 396.153Radial Recovery = 105.86%								
As 188.979†	1432.7	519.87	ug/L	2.717	519.87	ppb	2.717	0.52%
QC value within limits for As 188.979 Recovery = 103.97%								
B 249.677†	20250.5	507.40	ug/L	1.311	507.40	ppb	1.311	0.26%
QC value within limits for B 249.677 Recovery = 101.48%								
Ba 233.527†	72705.1	514.12	ug/L	0.947	514.12	ppb	0.947	0.18%
QC value within limits for Ba 233.527 Recovery = 102.82%								
Be 313.107†	1124198.3	515.73	ug/L	0.657	515.73	ppb	0.657	0.13%
QC value within limits for Be 313.107 Recovery = 103.15%								
Ca 317.933Radial†	3653.5	5175.6	ug/L	63.05	5175.6	ppb	63.05	1.22%

```
   QC value within limits for Ca 317.933Radial  Recovery = 103.51%
Cd 226.502†            39669.2      505.72 ug/L         3.309      505.72 ppb          3.309   0.65%
   QC value within limits for Cd 226.502  Recovery = 101.14%
Co 228.616†            29361.7      509.43 ug/L         2.921      509.43 ppb          2.921   0.57%
   QC value within limits for Co 228.616  Recovery = 101.89%
Cr 267.716†            36549.5      512.87 ug/L         0.171      512.87 ppb          0.171   0.03%
   QC value within limits for Cr 267.716  Recovery = 102.57%
Cu 324.752†           140451.7      509.25 ug/L         0.876      509.25 ppb          0.876   0.17%
   QC value within limits for Cu 324.752  Recovery = 101.85%
Fe 238.204 Radial†      1195.3      4998.8 ug/L         74.81      4998.8 ppb          74.81   1.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.98%
K 766.490 Radial†      22507.3      4842.6 ug/L         72.87      4842.6 ppb          72.87   1.50%
   QC value within limits for K 766.490 Radial  Recovery = 96.85%
Mg 279.077 IEC†          206.4      5151.6 ug/L        131.28      5151.6 ppb         131.28   2.55%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.03%
Mn 257.610†           465249.7      513.59 ug/L         0.936      513.59 ppb          0.936   0.18%
   QC value within limits for Mn 257.610  Recovery = 102.72%
Mo 202.031†            7321.5      515.75 ug/L         3.310      515.75 ppb          3.310   0.64%
   QC value within limits for Mo 202.031  Recovery = 103.15%
Na 589.592 Radial†    166990.2       10249 ug/L         157.4       10249 ppb          157.4   1.54%
   QC value within limits for Na 589.592 Radial  Recovery = 102.49%
Ni 231.604†            19064.7      509.27 ug/L         3.278      509.27 ppb          3.278   0.64%
   QC value within limits for Ni 231.604  Recovery = 101.85%
P 214.914†              5057.7      2485.6 ug/L         18.51      2485.6 ppb          18.51   0.74%
   QC value within limits for P 214.914  Recovery = 99.43%
Pb 220.353†             4363.5      521.12 ug/L         2.496      521.12 ppb          2.496   0.48%
   QC value within limits for Pb 220.353  Recovery = 104.22%
S 181.975 Axial†         756.4      1035.1 ug/L          4.42      1035.1 ppb           4.42   0.43%
   QC value within limits for S 181.975 Axial  Recovery = 103.51%
Sb 206.836†             1718.9      517.08 ug/L         4.344      517.08 ppb          4.344   0.84%
   QC value within limits for Sb 206.836  Recovery = 103.42%
Se 196.026†             1012.4      534.36 ug/L         3.408      534.36 ppb          3.408   0.64%
   QC value within limits for Se 196.026  Recovery = 106.87%
Si 251.611†            83772.3      2569.7 ug/L          5.33      2569.7 ppb           5.33   0.21%
   QC value within limits for Si 251.611  Recovery = 102.79%
Sn 189.927†             2895.1      513.31 ug/L         3.114      513.31 ppb          3.114   0.61%
   QC value within limits for Sn 189.927  Recovery = 102.66%
Sr 421.552†           172763.9      482.48 ug/L         7.839      482.48 ppb          7.839   1.62%
   QC value within limits for Sr 421.552  Recovery = 96.50%
Ti 334.940†           278477.7      509.74 ug/L         0.664      509.74 ppb          0.664   0.13%
   QC value within limits for Ti 334.940  Recovery = 101.95%
Tl 190.801†             1970.6      518.94 ug/L         5.011      518.94 ppb          5.011   0.97%
   QC value within limits for Tl 190.801  Recovery = 103.79%
U 409.014†             15073.7      508.81 ug/L         6.054      508.81 ppb          6.054   1.19%
   QC value within limits for U 409.014  Recovery = 101.76%
V 292.402†             56224.0      516.79 ug/L         0.322      516.79 ppb          0.322   0.06%
   QC value within limits for V 292.402  Recovery = 103.36%
Zn 213.857†            55645.6      508.86 ug/L         0.871      508.86 ppb          0.871   0.17%
   QC value within limits for Zn 213.857  Recovery = 101.77%
SiO2†                  82920.8      5414.3 ug/L         34.42      5414.3 ppb          34.42   0.64%
   QC value within limits for SiO2  Recovery = 101.25%
All analyte(s) passed QC.
```

Sequence No.: 12
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 15:59:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7369.9	7369.9	98.6	%			16:01:16
1	Y RADIAL	6844.4	6844.4	98.85	%			16:01:16
1	Al 396.153Radial†	-59.2	12.6	10.377	ug/L	10.377	ppb	16:01:16
1	Ca 317.933Radial†	33.2	4.6	6.5450	ug/L	6.5450	ppb	16:01:36
1	Fe 238.204 Radial†	37.0	2.7	11.352	ug/L	11.352	ppb	16:01:36
1	K 766.490 Radial†	2418.3	45.5	9.8141	ug/L	9.8141	ppb	16:01:16
1	Mg 279.077 IEC†	2.3	-0.8	-19.006	ug/L	-19.006	ppb	16:01:36
1	Na 589.592 Radial†	-198.6	-65.9	-4.0422	ug/L	-4.0422	ppb	16:01:16
1	Sr 421.552†	-79.9	-25.1	-0.0703	ug/L	-0.0703	ppb	16:01:16
1	Sc 361.383	726891.3	726891.3	101.14	%			16:02:33
1	Y 371.029	569168.5	569168.5	101.28	%			16:02:33
1	Ag 328.068†	697.4	56.9	0.3397	ug/L	0.3397	ppb	16:02:33
1	As 188.979†	-38.2	-2.3	-0.8482	ug/L	-0.8482	ppb	16:02:53
1	B 249.677†	-671.7	275.8	6.9498	ug/L	6.9498	ppb	16:02:33
1	Ba 233.527†	33.8	33.0	0.2312	ug/L	0.2312	ppb	16:02:53
1	Be 313.107†	-4696.0	238.7	0.1095	ug/L	0.1095	ppb	16:02:33
1	Cd 226.502†	-284.9	-0.6	-0.0089	ug/L	-0.0089	ppb	16:02:53
1	Co 228.616†	-86.0	14.4	0.2516	ug/L	0.2516	ppb	16:02:53
1	Cr 267.716†	-69.6	8.6	0.1188	ug/L	0.1188	ppb	16:02:33
1	Cu 324.752†	5760.4	57.0	0.2072	ug/L	0.2072	ppb	16:02:33
1	Mn 257.610†	807.8	119.1	0.1332	ug/L	0.1332	ppb	16:02:33
1	Mo 202.031†	25.5	8.1	0.5713	ug/L	0.5713	ppb	16:02:53
1	Ni 231.604†	141.8	20.4	0.5460	ug/L	0.5460	ppb	16:02:53
1	P 214.914†	314.2	-4.2	-2.1738	ug/L	-2.1738	ppb	16:02:53
1	Pb 220.353†	-13.6	-0.2	-0.0209	ug/L	-0.0209	ppb	16:02:53
1	S 181.975 Axial†	92.0	15.6	21.315	ug/L	21.315	ppb	16:02:53
1	Sb 206.836†	53.2	-4.6	-1.3693	ug/L	-1.3693	ppb	16:02:53
1	Se 196.026†	-33.1	-4.0	-1.9932	ug/L	-1.9932	ppb	16:02:53
1	Si 251.611†	527.7	110.0	3.3813	ug/L	3.3813	ppb	16:02:53
1	Sn 189.927†	13.3	0.6	0.1119	ug/L	0.1119	ppb	16:02:53
1	Ti 334.940†	-1299.6	63.3	0.1154	ug/L	0.1154	ppb	16:02:33
1	Tl 190.801†	-48.1	13.2	3.4495	ug/L	3.4495	ppb	16:02:53
1	U 409.014†	-4846.5	56.9	1.9255	ug/L	1.9255	ppb	16:02:33
1	V 292.402†	-1646.4	-62.6	-0.5598	ug/L	-0.5598	ppb	16:02:33
1	Zn 213.857†	1000.6	64.2	0.5878	ug/L	0.5878	ppb	16:02:53
1	SiO2†	506.6	64.0	4.1738	ug/L	4.1738	ppb	16:03:49
2	Sc Radial	7474.7	7474.7	100	%			16:01:41
2	Y RADIAL	6888.8	6888.8	99.49	%			16:01:41
2	Al 396.153Radial†	-87.5	-14.9	-12.233	ug/L	-12.233	ppb	16:01:41
2	Ca 317.933Radial†	26.4	-2.7	-3.8030	ug/L	-3.8030	ppb	16:02:01
2	Fe 238.204 Radial†	39.6	4.8	19.820	ug/L	19.820	ppb	16:02:01
2	K 766.490 Radial†	2372.9	-34.3	-7.3891	ug/L	-7.3891	ppb	16:01:41
2	Mg 279.077 IEC†	3.2	0.2	4.5260	ug/L	4.5260	ppb	16:02:01
2	Na 589.592 Radial†	-109.1	26.5	1.6262	ug/L	1.6262	ppb	16:01:41
2	Sr 421.552†	-82.0	-26.1	-0.0729	ug/L	-0.0729	ppb	16:01:41
2	Sc 361.383	727502.2	727502.2	101.23	%			16:02:58
2	Y 371.029	568746.1	568746.1	101.20	%			16:02:58
2	Ag 328.068†	721.7	80.3	0.4829	ug/L	0.4829	ppb	16:02:58
2	As 188.979†	-34.1	1.7	0.6198	ug/L	0.6198	ppb	16:03:19
2	B 249.677†	-686.8	261.4	6.5865	ug/L	6.5865	ppb	16:02:58
2	Ba 233.527†	47.1	46.0	0.3244	ug/L	0.3244	ppb	16:03:19
2	Be 313.107†	-4841.6	98.8	0.0452	ug/L	0.0452	ppb	16:02:58
2	Cd 226.502†	-268.2	16.1	0.2033	ug/L	0.2033	ppb	16:03:19
2	Co 228.616†	-87.4	13.1	0.2251	ug/L	0.2251	ppb	16:03:19
2	Cr 267.716†	-59.9	18.2	0.2544	ug/L	0.2544	ppb	16:02:58
2	Cu 324.752†	5579.9	-126.1	-0.4559	ug/L	-0.4559	ppb	16:02:58
2	Mn 257.610†	753.5	64.7	0.0738	ug/L	0.0738	ppb	16:02:58
2	Mo 202.031†	7.9	-9.3	-0.6544	ug/L	-0.6544	ppb	16:03:19
2	Ni 231.604†	136.5	15.0	0.4017	ug/L	0.4017	ppb	16:03:19

2	P 214.914†	304.8	-13.7	-6.9260	ug/L	-6.9260	ppb	16:03:19
2	Pb 220.353†	-6.8	6.5	0.7689	ug/L	0.7689	ppb	16:03:19
2	S 181.975 Axial†	94.8	18.2	24.961	ug/L	24.961	ppb	16:03:19
2	Sb 206.836†	53.9	-4.0	-1.2212	ug/L	-1.2212	ppb	16:03:19
2	Se 196.026†	-25.0	4.0	2.1270	ug/L	2.1270	ppb	16:03:19
2	Si 251.611†	485.0	67.3	2.0965	ug/L	2.0965	ppb	16:03:19
2	Sn 189.927†	11.3	-1.4	-0.2431	ug/L	-0.2431	ppb	16:03:19
2	Ti 334.940†	-1357.2	7.5	0.0117	ug/L	0.0117	ppb	16:02:58
2	Tl 190.801†	-54.0	7.4	1.9319	ug/L	1.9319	ppb	16:03:19
2	U 409.014†	-4788.7	118.1	3.9945	ug/L	3.9945	ppb	16:02:58
2	V 292.402†	-1579.9	4.4	0.0367	ug/L	0.0367	ppb	16:02:58
2	Zn 213.857†	1037.5	99.8	0.9166	ug/L	0.9166	ppb	16:03:19
2	SiO2†	486.4	43.6	2.9058	ug/L	2.9058	ppb	16:03:54
3	Sc Radial	7403.0	7403.0	99.0	%			16:02:06
3	Y RADIAL	6847.2	6847.2	98.89	%			16:02:06
3	Al 396.153Radial†	-54.0	18.1	14.884	ug/L	14.884	ppb	16:02:06
3	Ca 317.933Radial†	31.7	2.9	4.1275	ug/L	4.1275	ppb	16:02:26
3	Fe 238.204 Radial†	37.0	2.6	10.803	ug/L	10.803	ppb	16:02:26
3	K 766.490 Radial†	2437.2	53.6	11.551	ug/L	11.551	ppb	16:02:06
3	Mg 279.077 1EC†	2.8	-0.2	-4.3818	ug/L	-4.3818	ppb	16:02:26
3	Na 589.592 Radial†	-102.2	32.4	1.9864	ug/L	1.9864	ppb	16:02:06
3	Sr 421.552†	12.5	68.5	0.1913	ug/L	0.1913	ppb	16:02:06
3	Sc 361.383	724912.0	724912.0	100.87	%			16:03:24
3	Y 371.029	566560.2	566560.2	100.81	%			16:03:24
3	Ag 328.068†	611.5	-26.3	-0.1562	ug/L	-0.1562	ppb	16:03:24
3	As 188.979†	-25.8	9.9	3.5743	ug/L	3.5743	ppb	16:03:44
3	B 249.677†	-797.7	149.0	3.7569	ug/L	3.7569	ppb	16:03:24
3	Ba 233.527†	-2.1	-2.6	-0.0191	ug/L	-0.0191	ppb	16:03:44
3	Be 313.107†	-4783.9	138.9	0.0636	ug/L	0.0636	ppb	16:03:24
3	Cd 226.502†	-262.4	20.9	0.2656	ug/L	0.2656	ppb	16:03:44
3	Co 228.616†	-117.9	-17.5	-0.3023	ug/L	-0.3023	ppb	16:03:44
3	Cr 267.716†	-91.4	-13.2	-0.1862	ug/L	-0.1862	ppb	16:03:24
3	Cu 324.752†	5727.1	39.5	0.1438	ug/L	0.1438	ppb	16:03:24
3	Mn 257.610†	762.8	76.6	0.0860	ug/L	0.0860	ppb	16:03:24
3	Mo 202.031†	23.2	5.8	0.4125	ug/L	0.4125	ppb	16:03:44
3	Ni 231.604†	129.2	8.3	0.2223	ug/L	0.2223	ppb	16:03:44
3	P 214.914†	315.7	-1.8	-0.9448	ug/L	-0.9448	ppb	16:03:44
3	Pb 220.353†	-9.3	4.1	0.4857	ug/L	0.4857	ppb	16:03:44
3	S 181.975 Axial†	83.4	7.2	9.8891	ug/L	9.8891	ppb	16:03:44
3	Sb 206.836†	58.2	0.4	0.1393	ug/L	0.1393	ppb	16:03:44
3	Se 196.026†	-28.4	0.6	0.3462	ug/L	0.3462	ppb	16:03:44
3	Si 251.611†	508.5	92.3	2.8372	ug/L	2.8372	ppb	16:03:44
3	Sn 189.927†	13.9	1.3	0.2327	ug/L	0.2327	ppb	16:03:44
3	Ti 334.940†	-1350.6	9.3	0.0167	ug/L	0.0167	ppb	16:03:24
3	Tl 190.801†	-65.3	-3.9	-1.0304	ug/L	-1.0304	ppb	16:03:44
3	U 409.014†	-4846.3	44.0	1.4896	ug/L	1.4896	ppb	16:03:24
3	V 292.402†	-1605.2	-26.2	-0.2317	ug/L	-0.2317	ppb	16:03:24
3	Zn 213.857†	1020.7	86.8	0.7986	ug/L	0.7986	ppb	16:03:44
3	SiO2†	500.0	58.8	3.8345	ug/L	3.8345	ppb	16:03:59

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	726435.2	101.08	%	0.188				0.19%
Sc Radial	7415.8	99.2	%	0.72				0.72%
Y 371.029	568158.2	101.10	%	0.249				0.25%
Y RADIAL	6860.1	99.07	%	0.359				0.36%
Ag 328.068†	37.0	0.2221	ug/L	0.33539	0.2221	ppb	0.33539	150.99%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.3	4.3424	ug/L	14.53076	4.3424	ppb	14.53076	334.62%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.1	1.1153	ug/L	2.25251	1.1153	ppb	2.25251	201.97%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	228.8	5.7644	ug/L	1.74802	5.7644	ppb	1.74802	30.32%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.4	0.1788	ug/L	0.17762	0.1788	ppb	0.17762	99.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	158.8	0.0728	ug/L	0.03311	0.0728	ppb	0.03311	45.49%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.6	2.2898	ug/L	5.41322	2.2898	ppb	5.41322	236.40%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                12.1      0.1533 ug/L       0.14389      0.1533 ppb        0.14389  93.85%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 3.3      0.0581 ug/L       0.31243      0.0581 ppb        0.31243 537.72%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 4.5      0.0623 ug/L       0.22565      0.0623 ppb        0.22565 361.94%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -9.9     -0.0350 ug/L       0.36590     -0.0350 ppb        0.36590 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4      13.992 ug/L        5.0547      13.992 ppb         5.0547  36.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          21.6      4.6586 ug/L      10.46975      4.6586 ppb       10.46975 224.74%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -6.2873 ug/L      11.88120     -6.2873 ppb       11.88120 188.97%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                86.8      0.0976 ug/L       0.03136      0.0976 ppb        0.03136  32.12%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 1.5      0.1098 ug/L       0.66654      0.1098 ppb        0.66654 607.14%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -2.3     -0.1432 ug/L       3.38145     -0.1432 ppb        3.38145 >999.9%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.6      0.3900 ug/L       0.16215      0.3900 ppb        0.16215  41.58%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.6     -3.3482 ug/L       3.15883     -3.3482 ppb        3.15883  94.34%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 3.5      0.4112 ug/L       0.40015      0.4112 ppb        0.40015  97.30%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           13.7      18.722 ug/L        7.8634      18.722 ppb         7.8634  42.00%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.8     -0.8171 ug/L       0.83153     -0.8171 ppb        0.83153 101.77%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.2      0.1600 ug/L       2.06638      0.1600 ppb        2.06638 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                89.9      2.7717 ug/L       0.64491      2.7717 ppb        0.64491  23.27%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.2      0.0338 ug/L       0.24736      0.0338 ppb        0.24736 730.83%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 5.8      0.0161 ug/L       0.15179      0.0161 ppb        0.15179 944.43%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                26.7      0.0479 ug/L       0.05850      0.0479 ppb        0.05850 122.09%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.5      1.4503 ug/L       2.27843      1.4503 ppb        2.27843 157.10%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 73.0      2.4699 ug/L       1.33823      2.4699 ppb        1.33823  54.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -28.1     -0.2516 ug/L       0.29875     -0.2516 ppb        0.29875 118.75%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                83.6      0.7677 ug/L       0.16655      0.7677 ppb        0.16655  21.70%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      55.5      3.6380 ug/L       0.65642      3.6380 ppb        0.65642  18.04%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, June 30, 2009 22:52:42
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090618\Sample.286
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	830.0	830.024	39.066	4.7
	Mg	24.0	12529.9	12529.893	156.398	1.2
	Co	58.9	24212.7	24212.702	100.161	0.4
	Rh	102.9	37511.6	37511.589	395.993	1.1
	In	114.9	38745.5	38745.472	159.919	0.4
	Pb	208.0	14013.9	14013.871	118.558	0.8
⌈>	Ba	137.9	32540.8	32540.831	272.871	0.8
⌊	Ba++	69.0	1555.0	0.048	0.001	1.8
⌈>	Ce	139.9	45543.1	45543.085	403.475	0.9
⌊	CeO	155.9	880.8	0.019	0.000	1.2
	Bkgd	220.0	7.7	7.700	2.636	34.2

Current Optimization File Data

Current Value	Description
0.92	Nebulizer Gas Flow
6.25	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	9.0	1994.8
Co	59	21	10.3	36617.2
In	115	21	12.3	47706.9

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	577	2080	0.618
Be	9.0	8.9	2032	2080	0.615
Mg	24.0	24.0	5690	2120	0.577
Mg	25.0	25.0	5948	2080	0.662
Mg	26.0	25.9	6143	2120	0.659
Co	58.9	59.0	14169	2170	0.624
Rh	102.9	103.0	24885	2230	0.699
In	114.9	114.9	27782	2260	0.690
Ce	139.9	139.9	33851	2280	0.768
Pb	206.0	205.9	49924	2420	0.679
Pb	207.0	207.0	50195	2385	0.761
Pb	208.0	208.1	50439	2430	0.741
U	238.1	238.1	57746	2470	0.725

Report Date/Time: Tuesday, June 30, 2009 22:46:11

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, July 01, 2009 12:45:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\Blank.190

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		29	
	Be	9		ug/L		2	
	B	11		ug/L		142	
	Na	23		ug/L		11672	
	Mg	24		ug/L		667	
	Al	27		ug/L		5668	
	P	31		ug/L		3808	
	K	39		ug/L		392003	
	Ca	43		ug/L		604	
>	Sc	45		ug/L		660873	
	V	51		ug/L		26871	
	Cr	52		ug/L		2564	
	Cr	53		ug/L		108954	
	Mn	55		ug/L		867	
	Fe	57		ug/L		3906	
	Co	59		ug/L		206	
	Ni	60		ug/L		42	
	Cu	63		ug/L		110	
	Cu	65		ug/L		83	
	Zn	66		ug/L		229	
	Zn	67		ug/L		7929	
	Zn	68		ug/L		654	
>	Ge	74		ug/L		133257	
	As	75		ug/L		813	
	Se	77		ug/L		4665	
	Se	82		ug/L		-15	
	Kr	83		ug/L		60	
	Sr	88		ug/L		76	
	Y	89		ug/L		17	
	Ag	107		ug/L		28	
	Cd	111		ug/L		15	
	Cd	114		ug/L		20	
>	In	115		ug/L		58498	
	Sn	120		ug/L		285	
	Sb	121		ug/L		225	
	Sb	123		ug/L		501	
	Ba	135		ug/L		13	
	Ba	137		ug/L		20	
	Ho	165		ug/L		11	
>	Lu	175		ug/L		59770	
	Tl	205		ug/L		358	
	Pb	208		ug/L		855	
	Bi	209		ug/L		40	
	U	238		ug/L		55	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, July 01, 2009 12:51:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\Standard 1.191

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	10.852	2758	0.004
	Be	9	**10.000**	**ug/L**	6.801	1058	0.002
	B	11	**20.000**	**ug/L**	6.371	2455	0.003
	Na	23	**1000.000**	**ug/L**	2.361	1500227	2.212
	Mg	24	**1000.000**	**ug/L**	4.785	1030223	1.530
	Al	27	**1000.000**	**ug/L**	4.106	1610709	2.385
	P	31	**1000.000**	**ug/L**	2.010	126377	0.182
	K	39	**1000.000**	**ug/L**	2.128	2250326	2.752
	Ca	43	**1000.000**	**ug/L**	0.956	4968	0.006
>	Sc	45		**ug/L**		672898	672897.541
	V	51	**10.000**	**ug/L**	8.799	52773	0.038
	Cr	52	**10.000**	**ug/L**	2.317	24658	0.033
	Cr	53		**ug/L**		103659	-0.011
	Mn	55	**10.000**	**ug/L**	0.748	31789	0.046
	Fe	57	**1000.000**	**ug/L**	1.055	62966	0.088
	Co	59	**10.000**	**ug/L**	0.880	22044	0.032
	Ni	60	**10.000**	**ug/L**	0.964	4570	0.007
	Cu	63		**ug/L**		10063	0.015
	Cu	65	**10.000**	**ug/L**	2.733	4957	0.007
	Zn	66	**10.000**	**ug/L**	1.150	3078	0.021
	Zn	67		**ug/L**		7805	-0.001
	Zn	68		**ug/L**		2835	0.016
>	Ge	74		**ug/L**		133422	133421.618
	As	75	**10.000**	**ug/L**	3.452	4911	0.031
	Se	77		**ug/L**		4441	-0.002
	Se	82	**10.000**	**ug/L**	0.789	295	0.002
	Kr	83		**ug/L**		55	-0.000
	Sr	88	**10.000**	**ug/L**	1.026	34541	0.584
	Y	89		**ug/L**		32	0.000
	Ag	107	**10.000**	**ug/L**	1.012	14318	0.242
	Cd	111	**10.000**	**ug/L**	1.191	3256	0.055
	Cd	114		**ug/L**		7483	0.126
>	In	115		**ug/L**		59013	59012.673
	Sn	120	**10.000**	**ug/L**	1.286	13435	0.223
	Sb	121	**10.000**	**ug/L**	8.082	9963	0.165
	Sb	123		**ug/L**		7775	0.123
	Ba	135		**ug/L**		3101	0.051
	Ba	137	**10.000**	**ug/L**	1.783	5457	0.090
	Ho	165		**ug/L**		12	0.000
>	Lu	175		**ug/L**		60357	60356.837
	Tl	205	**10.000**	**ug/L**	1.516	21411	0.349
	Pb	208	**10.000**	**ug/L**	0.517	28454	0.457
	Bi	209		**ug/L**		51	0.000
	U	238	**10.000**	**ug/L**	0.326	26785	0.443

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, July 01, 2009 12:56:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\Standard 2.192

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.037**	**ug/L**	9.033	28065	0.042
	Be	9	**99.994**	**ug/L**	5.422	10387	0.016
	B	11	**200.074**	**ug/L**	5.153	23862	0.036
	Na	23	**10004.761**	**ug/L**	3.200	15467131	23.232
	Mg	24	**10005.683**	**ug/L**	4.245	10800532	16.236
	Al	27	**9999.584**	**ug/L**	3.244	15807851	23.753
	P	31	**9994.903**	**ug/L**	1.307	1155446	1.731
	K	39	**10007.584**	**ug/L**	3.907	20216764	29.796
	Ca	43	**10003.473**	**ug/L**	2.041	45195	0.067
>	Sc	45		**ug/L**		665060	665060.144
	V	51	**100.018**	**ug/L**	1.278	283140	0.385
	Cr	52	**99.996**	**ug/L**	0.356	219692	0.326
	Cr	53		**ug/L**		119052	0.014
	Mn	55	**99.986**	**ug/L**	0.738	302215	0.453
	Fe	57	**9997.406**	**ug/L**	0.066	572098	0.854
	Co	59	**99.985**	**ug/L**	0.651	212850	0.320
	Ni	60	**99.990**	**ug/L**	0.301	44324	0.067
	Cu	63		**ug/L**		97702	0.147
	Cu	65	**99.987**	**ug/L**	0.874	47601	0.071
	Zn	66	**100.015**	**ug/L**	0.725	28767	0.217
	Zn	67		**ug/L**		12154	0.033
	Zn	68		**ug/L**		22648	0.167
>	Ge	74		**ug/L**		131582	131582.343
	As	75	**99.930**	**ug/L**	1.467	38552	0.287
	Se	77		**ug/L**		6489	0.014
	Se	82	**100.009**	**ug/L**	2.421	3065	0.023
	Kr	83		**ug/L**		64	0.000
	Sr	88	**99.995**	**ug/L**	1.544	332530	5.812
	Y	89		**ug/L**		57	0.001
	Ag	107	**99.993**	**ug/L**	0.717	137550	2.404
	Cd	111	**100.008**	**ug/L**	0.802	31681	0.554
	Cd	114		**ug/L**		72621	1.269
>	In	115		**ug/L**		57209	57208.585
	Sn	120	**100.022**	**ug/L**	0.488	130598	2.278
	Sb	121	**100.125**	**ug/L**	6.518	108178	1.889
	Sb	123		**ug/L**		82729	1.439
	Ba	135		**ug/L**		30235	0.521
	Ba	137	**100.009**	**ug/L**	0.439	52715	0.909
	Ho	165		**ug/L**		17	0.000
>	Lu	175		**ug/L**		57992	57992.386
	Tl	205	**99.994**	**ug/L**	1.202	201355	3.466
	Pb	208	**100.002**	**ug/L**	0.500	266365	4.579
	Bi	209		**ug/L**		98	0.001
	U	238	**99.990**	**ug/L**	0.419	254330	4.385

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, July 01, 2009 13:02:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 1.193

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.091**	ug/L	8.984	14817	0.022
	Be	9	**51.110**	ug/L	4.756	5379	0.008
	B	11	**106.945**	ug/L	4.915	12991	0.019
	Na	23	**5119.546**	ug/L	4.394	8024788	11.888
	Mg	24	**4902.546**	ug/L	5.805	5362963	7.955
	Al	27	**5119.061**	ug/L	5.092	8203007	12.160
	P	31	**5244.824**	ug/L	1.149	616241	0.909
	K	39	**5007.616**	ug/L	6.544	10445543	14.909
	Ca	43	**5114.446**	ug/L	0.829	23714	0.034
>	Sc	45		ug/L		673969	673968.543
	V	51	**51.069**	ug/L	1.278	159918	0.197
	Cr	52	**52.943**	ug/L	0.818	119099	0.173
	Cr	53		ug/L		117219	0.009
	Mn	55	**49.518**	ug/L	1.220	152123	0.224
	Fe	57	**5175.056**	ug/L	1.440	302042	0.442
	Co	59	**51.898**	ug/L	0.929	112062	0.166
	Ni	60	**53.167**	ug/L	1.576	23903	0.035
	Cu	63		ug/L		49357	0.073
	Cu	65	**50.182**	ug/L	0.178	24254	0.036
	Zn	66	**51.110**	ug/L	0.593	14869	0.111
	Zn	67		ug/L		10386	0.019
	Zn	68		ug/L		11927	0.085
>	Ge	74		ug/L		132082	132082.226
	As	75	**48.769**	ug/L	1.038	19300	0.140
	Se	77		ug/L		5802	0.009
	Se	82	**48.631**	ug/L	1.334	1489	0.011
	Kr	83		ug/L		62	0.000
	Sr	88	**51.157**	ug/L	1.206	172255	2.974
	Y	89		ug/L		56	0.001
	Ag	107	**50.733**	ug/L	1.690	70659	1.220
	Cd	111	**52.573**	ug/L	1.769	16864	0.291
	Cd	114		ug/L		38748	0.669
>	In	115		ug/L		57909	57909.076
	Sn	120	**50.379**	ug/L	1.944	66720	1.147
	Sb	121	**50.754**	ug/L	3.356	55660	0.957
	Sb	123		ug/L		42852	0.732
	Ba	135		ug/L		15669	0.268
	Ba	137	**50.875**	ug/L	0.587	27063	0.462
	Ho	165		ug/L		18	0.000
>	Lu	175		ug/L		58502	58502.466
	Tl	205	**49.212**	ug/L	1.071	100156	1.706
	Pb	208	**51.664**	ug/L	0.396	139223	2.366
	Bi	209		ug/L		75	0.001
	U	238	**53.087**	ug/L	0.188	136248	2.328

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	104.183				
	Be	9	102.220				
	B	11	106.945				
	Na	23	102.391				
	Mg	24	98.051				
	Al	27	101.368				
	P	31	104.896				
	K	39	100.152				
	Ca	43	102.289				
>	Sc	45		102.0			
	V	51	102.137				
	Cr	52	105.886				
	Cr	53					
	Mn	55	99.035				
	Fe	57	103.501				
	Co	59	103.797				
	Ni	60	106.334				
	Cu	63					
	Cu	65	100.364				
	Zn	66	102.221				
	Zn	67					
	Zn	68					
>	Ge	74		99.1			
	As	75	97.539				
	Se	77					
	Se	82	97.263				
	Kr	83					
	Sr	88	102.313				
	Y	89					
	Ag	107	101.466				
	Cd	111	105.146				
	Cd	114					
>	In	115		99.0			
	Sn	120	100.759				
	Sb	121	101.508				
	Sb	123					
	Ba	135					
	Ba	137	101.750				
	Ho	165					
>	Lu	175		97.9			
	Tl	205	98.424				
	Pb	208	103.328				
	Bi	209					
	U	238	106.175				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, July 01, 2009 13:08:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 2.194

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.032**	**ug/L**	92.807	38	0.000
	Be	9	**0.003**	**ug/L**	595.607	2	0.000
	B	11	**3.584**	**ug/L**	29.467	568	0.001
	Na	23	**1.211**	**ug/L**	84.289	13673	0.003
	Mg	24	**1.235**	**ug/L**	130.298	2000	0.002
	Al	27	**-0.658**	**ug/L**	224.851	4668	-0.002
	P	31	**0.043**	**ug/L**	4545.990	3852	0.000
	K	39	**-3.176**	**ug/L**	256.060	390273	-0.009
	Ca	43	**3.313**	**ug/L**	245.893	625	0.000
>	Sc	45		**ug/L**		668230	668230.129
	V	51	**0.362**	**ug/L**	170.503	28123	0.001
	Cr	52	**0.419**	**ug/L**	6.567	3509	0.001
	Cr	53		**ug/L**		112076	0.003
	Mn	55	**0.012**	**ug/L**	76.184	914	0.000
	Fe	57	**9.100**	**ug/L**	28.313	4467	0.001
	Co	59	**0.014**	**ug/L**	39.263	237	0.000
	Ni	60	**-0.001**	**ug/L**	816.248	42	-0.000
	Cu	63		**ug/L**		106	-0.000
	Cu	65	**-0.008**	**ug/L**	299.940	80	-0.000
	Zn	66	**0.030**	**ug/L**	173.079	239	0.000
	Zn	67		**ug/L**		8228	0.002
	Zn	68		**ug/L**		676	0.000
>	Ge	74		**ug/L**		134348	134347.506
	As	75	**1.047**	**ug/L**	63.363	1224	0.003
	Se	77		**ug/L**		4823	0.001
	Se	82	**0.120**	**ug/L**	187.795	-11	0.000
	Kr	83		**ug/L**		64	0.000
	Sr	88	**0.007**	**ug/L**	70.980	100	0.000
	Y	89		**ug/L**		25	0.000
	Ag	107	**0.008**	**ug/L**	92.971	40	0.000
	Cd	111	**0.016**	**ug/L**	150.802	20	0.000
	Cd	114		**ug/L**		27	0.000
>	In	115		**ug/L**		58722	58721.951
	Sn	120	**0.256**	**ug/L**	2.897	629	0.006
	Sb	121	**0.974**	**ug/L**	11.540	1306	0.018
	Sb	123		**ug/L**		986	0.008
	Ba	135		**ug/L**		16	0.000
	Ba	137	**-0.001**	**ug/L**	801.031	20	-0.000
	Ho	165		**ug/L**		14	0.000
>	Lu	175		**ug/L**		59770	59770.377
	Tl	205	**0.182**	**ug/L**	26.613	735	0.006
	Pb	208	**-0.005**	**ug/L**	352.414	842	-0.000
	Bi	209		**ug/L**		39	-0.000
	U	238	**0.038**	**ug/L**	12.510	155	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.1			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.0			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, July 01, 2009 13:14:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 3.195

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.831**	ug/L	11.442	3136	0.005
	Be	9	**0.615**	ug/L	3.346	67	0.000
	B	11	**17.099**	ug/L	7.411	2221	0.003
	Na	23	**273.940**	ug/L	1.487	444819	0.636
	Mg	24	**19.636**	ug/L	8.527	22351	0.032
	Al	27	**17.257**	ug/L	9.157	33706	0.041
	P	31	**60.249**	ug/L	1.072	11022	0.010
	K	39	**339.956**	ug/L	9.393	1092309	1.012
	Ca	43	**107.625**	ug/L	3.489	1113	0.001
>	Sc	45		ug/L		680479	680479.482
	V	51	**11.513**	ug/L	9.494	57842	0.044
	Cr	52	**3.833**	ug/L	1.714	11154	0.013
	Cr	53		ug/L		104473	-0.011
	Mn	55	**5.541**	ug/L	1.074	17978	0.025
	Fe	57	**33.729**	ug/L	6.245	5982	0.003
	Co	59	**1.127**	ug/L	1.868	2664	0.004
	Ni	60	**2.243**	ug/L	3.203	1060	0.001
	Cu	63		ug/L		1251	0.002
	Cu	65	**1.182**	ug/L	4.674	661	0.001
	Zn	66	**11.342**	ug/L	1.046	3552	0.025
	Zn	67		ug/L		8100	0.000
	Zn	68		ug/L		3120	0.018
>	Ge	74		ug/L		134984	134983.538
	As	75	**4.244**	ug/L	0.299	2469	0.012
	Se	77		ug/L		4444	-0.002
	Se	82	**5.615**	ug/L	6.419	163	0.001
	Kr	83		ug/L		54	-0.000
	Sr	88	**11.132**	ug/L	0.889	38595	0.647
	Y	89		ug/L		19	0.000
	Ag	107	**1.078**	ug/L	3.894	1570	0.026
	Cd	111	**1.210**	ug/L	3.342	414	0.007
	Cd	114		ug/L		885	0.015
>	In	115		ug/L		59529	59529.362
	Sn	120	**5.269**	ug/L	1.926	7434	0.120
	Sb	121	**1.767**	ug/L	12.264	2211	0.033
	Sb	123		ug/L		1735	0.021
	Ba	135		ug/L		706	0.012
	Ba	137	**2.158**	ug/L	1.555	1196	0.020
	Ho	165		ug/L		16	0.000
>	Lu	175		ug/L		59955	59955.483
	Tl	205	**1.103**	ug/L	0.902	2651	0.038
	Pb	208	**2.256**	ug/L	2.299	7051	0.103
	Bi	209		ug/L		48	0.000
	U	238	**0.282**	ug/L	4.302	796	0.012

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	108.308				
	Be	9	122.967				
	B	11	113.990				
	Na	23	109.576				
	Mg	24	130.907				
	Al	27	115.047				
	P	31	120.498				
	K	39	113.319				
	Ca	43	107.625				
>	Sc	45		103.0			
	V	51	115.129				
	Cr	52	127.764				
	Cr	53					
	Mn	55	110.825				
	Fe	57	134.915				
	Co	59	112.666				
	Ni	60	112.155				
	Cu	63					
	Cu	65	118.219				
	Zn	66	113.417				
	Zn	67					
	Zn	68					
>	Ge	74		101.3			
	As	75	84.878				
	Se	77					
	Se	82	112.306				
	Kr	83					
	Sr	88	111.319				
	Y	89					
	Ag	107	107.753				
	Cd	111	121.038				
	Cd	114					
>	In	115		101.8			
	Sn	120	105.386				
	Sb	121	88.331				
	Sb	123					
	Ba	135					
	Ba	137	107.915				
	Ho	165					
>	Lu	175		100.3			
	Tl	205	110.275				
	Pb	208	112.820				
	Bi	209					
	U	238	140.817				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Mg	24	CRDL is out of limits
QC Std 3	Fe	57	CRDL is out of limits
QC Std 3	U	238	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, July 01, 2009 13:20:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 4.196

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.209**	ug/L	12.706	85	0.000
	Be	9	**0.070**	ug/L	36.773	9	0.000
	B	11	**2.231**	ug/L	3.909	397	0.000
	Na	23	**109591.272**	ug/L	1.597	165108241	254.482
	Mg	24	**100487.672**	ug/L	3.767	105778638	163.059
	Al	27	**107164.201**	ug/L	1.741	165136844	254.557
	P	31	**95037.192**	ug/L	0.177	10683946	16.463
	K	39	**101219.387**	ug/L	4.406	195941130	301.363
	Ca	43	**95781.572**	ug/L	0.360	416968	0.642
>	Sc	45		ug/L		648748	648748.338
	V	51	**-1.078**	ug/L	44.428	23684	-0.004
	Cr	52	**4.217**	ug/L	4.868	11451	0.014
	Cr	53		ug/L		89224	-0.027
	Mn	55	**5.764**	ug/L	0.263	17797	0.026
	Fe	57	**84951.463**	ug/L	0.630	4713190	7.259
	Co	59	**0.351**	ug/L	5.530	929	0.001
	Ni	60	**3.972**	ug/L	2.796	1757	0.003
	Cu	63		ug/L		2936	0.004
	Cu	65	**4.528**	ug/L	5.038	2181	0.003
	Zn	66	**6.294**	ug/L	2.333	1856	0.014
	Zn	67		ug/L		7243	0.000
	Zn	68		ug/L		765	0.001
>	Ge	74		ug/L		120797	120796.896
	As	75	**0.722**	ug/L	36.384	988	0.002
	Se	77		ug/L		4921	0.006
	Se	82	**-1.186**	ug/L	27.213	-47	-0.000
	Kr	83		ug/L		124	0.001
	Sr	88	**1.202**	ug/L	1.962	3801	0.070
	Y	89		ug/L		133	0.002
	Ag	107	**0.532**	ug/L	49.302	712	0.013
	Cd	111	**2.187**	ug/L	36.141	662	0.012
	Cd	114		ug/L		2841	0.053
>	In	115		ug/L		53393	53392.760
	Sn	120	**0.254**	ug/L	21.452	570	0.006
	Sb	121	**0.339**	ug/L	15.775	547	0.006
	Sb	123		ug/L		415	-0.001
	Ba	135		ug/L		201	0.004
	Ba	137	**0.709**	ug/L	7.728	359	0.006
	Ho	165		ug/L		155	0.003
>	Lu	175		ug/L		52895	52895.288
	Tl	205	**0.055**	ug/L	26.843	417	0.002
	Pb	208	**0.512**	ug/L	7.948	1995	0.023
	Bi	209		ug/L		111	0.001
	U	238	**0.002**	ug/L	47.733	53	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	109.591				
	Mg	24	100.488				
	Al	27	107.164				
	P	31	95.037				
	K	39	101.219				
	Ca	43	95.782				
>	Sc	45			98.2		
	V	51					
	Cr	52	113.969				
	Cr	53					
	Mn	55	99.380				
	Fe	57	84.951				
	Co	59	140.215				
	Ni	60	147.127				
	Cu	63					
	Cu	65	156.144				
	Zn	66	174.822				
	Zn	67					
	Zn	68					
>	Ge	74			90.6		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	100.180				
	Y	89					
	Ag	107					
	Cd	111	546.739				
	Cd	114					
>	In	115			91.3		
	Sn	120					
	Sb	121	338.624				
	Sb	123					
	Ba	135					
	Ba	137	105.759				
	Ho	165					
>	Lu	175			88.5		
	Tl	205					
	Pb	208	255.793				
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, July 01, 2009 13:26:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 5.197

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.047**	**ug/L**	9.827	5693	0.009
	Be	9	**22.087**	**ug/L**	8.501	2205	0.003
	B	11	**23.356**	**ug/L**	5.068	2796	0.004
	Na	23	**108371.864**	**ug/L**	3.421	160778151	251.650
	Mg	24	**107245.596**	**ug/L**	3.589	111104299	174.025
	Al	27	**114730.866**	**ug/L**	1.879	174011427	272.531
	P	31	**96859.899**	**ug/L**	0.883	10717620	16.779
	K	39	**97321.500**	**ug/L**	3.358	185358656	289.758
	Ca	43	**96112.140**	**ug/L**	0.136	411858	0.644
>	Sc	45		**ug/L**		638616	638615.732
	V	51	**18.696**	**ug/L**	3.763	71919	0.072
	Cr	52	**23.962**	**ug/L**	1.097	52432	0.078
	Cr	53		**ug/L**		91716	-0.021
	Mn	55	**25.578**	**ug/L**	0.503	74862	0.116
	Fe	57	**85754.187**	**ug/L**	1.332	4682815	7.328
	Co	59	**19.696**	**ug/L**	1.016	40423	0.063
	Ni	60	**22.338**	**ug/L**	2.118	9543	0.015
	Cu	63		**ug/L**		20033	0.031
	Cu	65	**23.199**	**ug/L**	1.565	10666	0.017
	Zn	66	**26.316**	**ug/L**	1.258	6956	0.057
	Zn	67		**ug/L**		7958	0.008
	Zn	68		**ug/L**		4628	0.034
>	Ge	74		**ug/L**		118332	118331.702
	As	75	**22.401**	**ug/L**	1.214	8332	0.064
	Se	77		**ug/L**		5218	0.009
	Se	82	**20.867**	**ug/L**	5.273	565	0.005
	Kr	83		**ug/L**		121	0.001
	Sr	88	**21.895**	**ug/L**	0.493	66875	1.273
	Y	89		**ug/L**		119	0.002
	Ag	107	**19.526**	**ug/L**	1.675	24666	0.469
	Cd	111	**20.384**	**ug/L**	1.405	5935	0.113
	Cd	114		**ug/L**		15992	0.304
>	In	115		**ug/L**		52491	52490.551
	Sn	120	**20.119**	**ug/L**	1.176	24306	0.458
	Sb	121	**21.793**	**ug/L**	2.152	21776	0.411
	Sb	123		**ug/L**		16577	0.307
	Ba	135		**ug/L**		5646	0.108
	Ba	137	**21.075**	**ug/L**	1.307	9963	0.191
	Ho	165		**ug/L**		161	0.003
>	Lu	175		**ug/L**		51939	51939.120
	Tl	205	**18.638**	**ug/L**	3.955	33851	0.646
	Pb	208	**20.505**	**ug/L**	1.176	49501	0.939
	Bi	209		**ug/L**		113	0.001
	U	238	**20.118**	**ug/L**	2.075	45861	0.882

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	105.233				
	Be	9	110.433				
	B	11	116.782				
	Na	23	108.372				
	Mg	24	107.246				
	Al	27	114.731				
	P	31	96.860				
	K	39	97.322				
	Ca	43	96.112				
>	Sc	45		96.6			
	V	51	93.481				
	Cr	52	101.106				
	Cr	53					
	Mn	55	99.141				
	Fe	57	85.754				
	Co	59	97.265				
	Ni	60	98.407				
	Cu	63					
	Cu	65	101.304				
	Zn	66	111.508				
	Zn	67					
	Zn	68					
>	Ge	74		88.8			
	As	75	112.007				
	Se	77					
	Se	82	104.333				
	Kr	83					
	Sr	88	103.279				
	Y	89					
	Ag	107	97.629				
	Cd	111	99.922				
	Cd	114					
>	In	115		89.7			
	Sn	120	100.596				
	Sb	121	108.421				
	Sb	123					
	Ba	135					
	Ba	137	101.960				
	Ho	165					
>	Lu	175		86.9			
	Tl	205	93.188				
	Pb	208	101.512				
	Bi	209					
	U	238	100.589				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 01, 2009 13:32:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 6.198

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.093**	**ug/L**	10.895	14569	0.022
	Be	9	**52.706**	**ug/L**	5.670	5560	0.008
	B	11	**105.931**	**ug/L**	4.919	12899	0.019
	Na	23	**5380.426**	**ug/L**	7.428	8454267	12.494
	Mg	24	**5324.990**	**ug/L**	5.699	5839288	8.641
	Al	27	**5410.369**	**ug/L**	4.416	8689696	12.852
	P	31	**5238.589**	**ug/L**	2.100	616951	0.907
	K	39	**5021.848**	**ug/L**	1.917	10502383	14.952
	Ca	43	**5099.091**	**ug/L**	1.203	23700	0.034
>	Sc	45		**ug/L**		675558	675557.758
	V	51	**50.519**	**ug/L**	1.496	158865	0.195
	Cr	52	**50.787**	**ug/L**	1.488	114630	0.166
	Cr	53		**ug/L**		115882	0.007
	Mn	55	**48.319**	**ug/L**	0.290	148807	0.219
	Fe	57	**5070.462**	**ug/L**	0.747	296702	0.433
	Co	59	**50.472**	**ug/L**	0.986	109245	0.161
	Ni	60	**51.384**	**ug/L**	0.544	23159	0.034
	Cu	63		**ug/L**		48222	0.071
	Cu	65	**48.473**	**ug/L**	0.252	23487	0.035
	Zn	66	**52.654**	**ug/L**	0.896	14792	0.114
	Zn	67		**ug/L**		10250	0.021
	Zn	68		**ug/L**		11875	0.088
>	Ge	74		**ug/L**		127620	127619.931
	As	75	**48.889**	**ug/L**	1.934	18697	0.140
	Se	77		**ug/L**		5829	0.011
	Se	82	**49.957**	**ug/L**	1.619	1478	0.012
	Kr	83		**ug/L**		60	0.000
	Sr	88	**51.232**	**ug/L**	0.349	170155	2.978
	Y	89		**ug/L**		55	0.001
	Ag	107	**49.603**	**ug/L**	0.529	68142	1.193
	Cd	111	**51.677**	**ug/L**	1.835	16350	0.286
	Cd	114		**ug/L**		38192	0.668
>	In	115		**ug/L**		57114	57114.141
	Sn	120	**49.173**	**ug/L**	0.514	64243	1.120
	Sb	121	**49.168**	**ug/L**	4.313	53183	0.928
	Sb	123		**ug/L**		40924	0.708
	Ba	135		**ug/L**		14988	0.259
	Ba	137	**49.475**	**ug/L**	0.591	25988	0.450
	Ho	165		**ug/L**		20	0.000
>	Lu	175		**ug/L**		57770	57769.819
	Tl	205	**48.174**	**ug/L**	2.018	96809	1.670
	Pb	208	**50.829**	**ug/L**	0.832	135268	2.327
	Bi	209		**ug/L**		77	0.001
	U	238	**51.766**	**ug/L**	1.017	131187	2.270

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	102.185				
	Be	9	105.411				
	B	11	105.931				
	Na	23	107.609				
	Mg	24	106.500				
	Al	27	107.136				
	P	31	104.772				
	K	39	100.437				
	Ca	43	101.982				
>	Sc	45		102.2			
	V	51	101.037				
	Cr	52	101.574				
	Cr	53					
	Mn	55	96.638				
	Fe	57	101.409				
	Co	59	100.945				
	Ni	60	102.768				
	Cu	63					
	Cu	65	96.946				
	Zn	66	105.308				
	Zn	67					
	Zn	68					
>	Ge	74		95.8			
	As	75	97.778				
	Se	77					
	Se	82	99.915				
	Kr	83					
	Sr	88	102.464				
	Y	89					
	Ag	107	99.205				
	Cd	111	103.354				
	Cd	114					
>	In	115		97.6			
	Sn	120	98.346				
	Sb	121	98.336				
	Sb	123					
	Ba	135					
	Ba	137	98.949				
	Ho	165					
>	Lu	175		96.7			
	Tl	205	96.349				
	Pb	208	101.658				
	Bi	209					
	U	238	103.532				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 01, 2009 13:38:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 7.199

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.004**	ug/L	1048.811	30	0.000
	Be	9	**0.016**	ug/L	37.054	3	0.000
	B	11	**2.576**	ug/L	33.367	446	0.000
	Na	23	**6.930**	ug/L	45.473	22351	0.016
	Mg	24	**2.496**	ug/L	78.738	3334	0.004
	Al	27	**-0.861**	ug/L	151.314	4334	-0.002
	P	31	**1.946**	ug/L	8.344	4033	0.000
	K	39	**18.337**	ug/L	1.245	428327	0.055
	Ca	43	**-1.079**	ug/L	715.095	599	-0.000
>	Sc	45		ug/L		661253	661252.758
	V	51	**0.025**	ug/L	1847.434	26949	0.000
	Cr	52	**-0.224**	ug/L	53.716	2081	-0.001
	Cr	53		ug/L		109812	0.001
	Mn	55	**-0.030**	ug/L	59.714	778	-0.000
	Fe	57	**8.537**	ug/L	11.106	4391	0.001
	Co	59	**0.001**	ug/L	683.677	208	0.000
	Ni	60	**-0.001**	ug/L	2274.809	42	-0.000
	Cu	63		ug/L		109	-0.000
	Cu	65	**0.025**	ug/L	56.979	95	0.000
	Zn	66	**-0.029**	ug/L	24.717	212	-0.000
	Zn	67		ug/L		8142	0.004
	Zn	68		ug/L		646	0.000
>	Ge	74		ug/L		128322	128321.730
	As	75	**0.430**	ug/L	80.049	942	0.001
	Se	77		ug/L		4888	0.003
	Se	82	**0.305**	ug/L	88.271	-5	0.000
	Kr	83		ug/L		58	0.000
	Sr	88	**0.003**	ug/L	94.694	83	0.000
	Y	89		ug/L		21	0.000
	Ag	107	**0.001**	ug/L	709.209	28	0.000
	Cd	111	**-0.009**	ug/L	125.246	11	-0.000
	Cd	114		ug/L		25	0.000
>	In	115		ug/L		56071	56071.491
	Sn	120	**0.102**	ug/L	14.477	404	0.002
	Sb	121	**0.712**	ug/L	19.151	969	0.013
	Sb	123		ug/L		728	0.004
	Ba	135		ug/L		13	0.000
	Ba	137	**-0.006**	ug/L	178.937	16	-0.000
	Ho	165		ug/L		14	0.000
>	Lu	175		ug/L		57133	57132.927
	Tl	205	**0.144**	ug/L	23.159	628	0.005
	Pb	208	**-0.014**	ug/L	33.027	781	-0.001
	Bi	209		ug/L		40	0.000
	U	238	**0.029**	ug/L	1.803	126	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.1			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		95.6			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870011
Sample Date/Time: Wednesday, July 01, 2009 13:44:06
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 880688|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\1201870011.200

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.041**	ug/L	41.842	17	-0.000
	Be	9	**0.003**	ug/L	302.894	2	0.000
	B	11	**1.185**	ug/L	15.081	282	0.000
	Na	23	**3.685**	ug/L	73.266	17344	0.009
	Mg	24	**0.313**	ug/L	299.496	1000	0.001
	Al	27	**-1.062**	ug/L	180.880	4001	-0.003
	P	31	**49.020**	ug/L	5.957	9437	0.008
	K	39	**9.135**	ug/L	130.303	410839	0.027
	Ca	43	**-6.710**	ug/L	34.690	575	-0.000
>	Sc	45		ug/L		662125	662124.913
	V	51	**-1.847**	ug/L	28.523	22208	-0.007
	Cr	52	**0.305**	ug/L	42.801	3229	0.001
	Cr	53		ug/L		90151	-0.029
	Mn	55	**0.282**	ug/L	15.440	1716	0.001
	Fe	57	**15.556**	ug/L	19.320	4793	0.001
	Co	59	**0.201**	ug/L	27.283	631	0.001
	Ni	60	**0.181**	ug/L	12.203	122	0.000
	Cu	63		ug/L		369	0.000
	Cu	65	**0.305**	ug/L	4.603	228	0.000
	Zn	66	**0.003**	ug/L	296.234	217	0.000
	Zn	67		ug/L		6754	-0.006
	Zn	68		ug/L		612	-0.000
>	Ge	74		ug/L		125979	125978.664
	As	75	**0.166**	ug/L	413.651	831	0.000
	Se	77		ug/L		3740	-0.005
	Se	82	**0.404**	ug/L	187.941	-2	0.000
	Kr	83		ug/L		55	-0.000
	Sr	88	**0.008**	ug/L	43.729	100	0.000
	Y	89		ug/L		27	0.000
	Ag	107	**-0.001**	ug/L	401.718	25	-0.000
	Cd	111	**0.002**	ug/L	391.742	15	0.000
	Cd	114		ug/L		20	0.000
>	In	115		ug/L		56824	56824.173
	Sn	120	**0.214**	ug/L	24.434	554	0.005
	Sb	121	**0.159**	ug/L	34.268	389	0.003
	Sb	123		ug/L		307	-0.003
	Ba	135		ug/L		16	0.000
	Ba	137	**0.003**	ug/L	23.921	22	0.000
	Ho	165		ug/L		18	0.000
>	Lu	175		ug/L		58252	58251.780
	Tl	205	**0.250**	ug/L	3.070	854	0.009
	Pb	208	**0.197**	ug/L	7.003	1357	0.009
	Bi	209		ug/L		62	0.000
	U	238	**0.003**	ug/L	91.381	62	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.5			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870012
Sample Date/Time: Wednesday, July 01, 2009 13:50:01
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 880688|40|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\1201870012.201

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.183**	ug/L	9.982	665	0.001
	Be	9	**22.992**	ug/L	8.089	2480	0.004
	B	11	**37.311**	ug/L	6.756	4739	0.007
	Na	23	**163.114**	ug/L	4.473	273598	0.379
	Mg	24	**881.688**	ug/L	5.738	987718	1.431
	Al	27	**2634.891**	ug/L	4.137	4325815	6.259
	P	31	**224.965**	ug/L	1.275	30874	0.039
	K	39	**665.439**	ug/L	0.608	1776683	1.981
	Ca	43	**977.154**	ug/L	2.738	5150	0.007
>	Sc	45		ug/L		690160	690159.767
	V	51	**35.408**	ug/L	0.718	122151	0.136
	Cr	52	**18.120**	ug/L	0.180	43505	0.059
	Cr	53		ug/L		119892	0.009
	Mn	55	**93.894**	ug/L	0.566	294544	0.425
	Fe	57	**2895.549**	ug/L	0.066	174848	0.247
	Co	59	**21.652**	ug/L	0.679	47999	0.069
	Ni	60	**26.496**	ug/L	0.785	12220	0.018
	Cu	63		ug/L		26126	0.038
	Cu	65	**25.667**	ug/L	1.383	12747	0.018
	Zn	66	**51.433**	ug/L	0.337	14863	0.112
	Zn	67		ug/L		10958	0.024
	Zn	68		ug/L		12676	0.092
>	Ge	74		ug/L		131215	131214.508
	As	75	**64.778**	ug/L	0.321	25206	0.186
	Se	77		ug/L		6346	0.013
	Se	82	**43.617**	ug/L	0.381	1325	0.010
	Kr	83		ug/L		51	-0.000
	Sr	88	**43.355**	ug/L	2.150	146260	2.520
	Y	89		ug/L		13775	0.237
	Ag	107	**4.872**	ug/L	1.037	6824	0.117
	Cd	111	**29.111**	ug/L	1.326	9366	0.161
	Cd	114		ug/L		22177	0.382
>	In	115		ug/L		58023	58023.366
	Sn	120	**12.620**	ug/L	2.423	16956	0.287
	Sb	121	**8.936**	ug/L	1.107	10003	0.169
	Sb	123		ug/L		7653	0.123
	Ba	135		ug/L		37253	0.628
	Ba	137	**120.879**	ug/L	1.090	65184	1.098
	Ho	165		ug/L		548	0.009
>	Lu	175		ug/L		59334	59334.224
	Tl	205	**50.724**	ug/L	1.310	104684	1.758
	Pb	208	**43.966**	ug/L	0.594	120290	2.013
	Bi	209		ug/L		217	0.003
	U	238	**0.424**	ug/L	4.015	1158	0.019

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		104.4			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.3			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 01, 2009 13:55:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 6.202

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.900**	ug/L	10.451	14356	0.021
	Be	9	**51.573**	ug/L	7.590	5383	0.008
	B	11	**101.736**	ug/L	5.472	12262	0.018
	Na	23	**4983.999**	ug/L	4.179	7748274	11.573
	Mg	24	**4703.656**	ug/L	4.873	5101845	7.632
	Al	27	**5212.153**	ug/L	5.291	8281856	12.381
	P	31	**5165.916**	ug/L	2.090	602017	0.895
	K	39	**4894.779**	ug/L	2.865	10138093	14.573
	Ca	43	**4993.894**	ug/L	0.510	22978	0.033
>	Sc	45		ug/L		668406	668406.410
	V	51	**51.075**	ug/L	2.007	158626	0.197
	Cr	52	**51.480**	ug/L	0.655	114929	0.168
	Cr	53		ug/L		118832	0.013
	Mn	55	**48.558**	ug/L	1.214	147956	0.220
	Fe	57	**5099.938**	ug/L	1.423	295257	0.436
	Co	59	**50.828**	ug/L	1.122	108854	0.163
	Ni	60	**52.094**	ug/L	0.529	23229	0.035
	Cu	63		ug/L		48331	0.072
	Cu	65	**49.044**	ug/L	0.136	23511	0.035
	Zn	66	**51.503**	ug/L	0.706	14631	0.112
	Zn	67		ug/L		10222	0.020
	Zn	68		ug/L		11755	0.086
>	Ge	74		ug/L		129000	129000.133
	As	75	**48.994**	ug/L	1.381	18935	0.141
	Se	77		ug/L		5923	0.011
	Se	82	**49.142**	ug/L	2.719	1470	0.012
	Kr	83		ug/L		53	-0.000
	Sr	88	**51.491**	ug/L	1.151	170233	2.993
	Y	89		ug/L		49	0.001
	Ag	107	**50.283**	ug/L	0.381	68764	1.209
	Cd	111	**51.818**	ug/L	0.600	16324	0.287
	Cd	114		ug/L		38157	0.671
>	In	115		ug/L		56859	56858.829
	Sn	120	**49.424**	ug/L	1.111	64275	1.126
	Sb	121	**49.737**	ug/L	5.016	53543	0.938
	Sb	123		ug/L		41327	0.719
	Ba	135		ug/L		15069	0.262
	Ba	137	**49.935**	ug/L	1.473	26113	0.454
	Ho	165		ug/L		15	0.000
>	Lu	175		ug/L		57518	57517.807
	Tl	205	**49.363**	ug/L	1.428	98755	1.711
	Pb	208	**51.796**	ug/L	0.663	137225	2.372
	Bi	209		ug/L		75	0.001
	U	238	**52.717**	ug/L	1.187	133009	2.312

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	101.799				
	Be	9	103.147				
	B	11	101.736				
	Na	23	99.680				
	Mg	24	94.073				
	Al	27	103.211				
	P	31	103.318				
	K	39	97.896				
	Ca	43	99.878				
>	Sc	45		101.1			
	V	51	102.151				
	Cr	52	102.960				
	Cr	53					
	Mn	55	97.115				
	Fe	57	101.999				
	Co	59	101.656				
	Ni	60	104.188				
	Cu	63					
	Cu	65	98.088				
	Zn	66	103.005				
	Zn	67					
	Zn	68					
>	Ge	74		96.8			
	As	75	97.987				
	Se	77					
	Se	82	98.285				
	Kr	83					
	Sr	88	102.981				
	Y	89					
	Ag	107	100.566				
	Cd	111	103.636				
	Cd	114					
>	In	115		97.2			
	Sn	120	98.847				
	Sb	121	99.473				
	Sb	123					
	Ba	135					
	Ba	137	99.870				
	Ho	165					
>	Lu	175		96.2			
	Tl	205	98.726				
	Pb	208	103.593				
	Bi	209					
	U	238	105.435				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 01, 2009 14:01:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 7.203

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.014**	**ug/L**	128.398	25	-0.000
	Be	9	**-0.007**	**ug/L**	148.375	1	-0.000
	B	11	**2.684**	**ug/L**	20.370	463	0.000
	Na	23	**1.432**	**ug/L**	207.707	14007	0.003
	Mg	24	**1.219**	**ug/L**	74.524	2000	0.002
	Al	27	**-1.719**	**ug/L**	63.517	3000	-0.004
	P	31	**1.465**	**ug/L**	73.689	4017	0.000
	K	39	**14.343**	**ug/L**	197.606	424622	0.043
	Ca	43	**-7.814**	**ug/L**	41.355	575	-0.000
>	Sc	45		**ug/L**		667848	667847.585
	V	51	**0.370**	**ug/L**	120.428	28101	0.001
	Cr	52	**-0.115**	**ug/L**	95.571	2340	-0.000
	Cr	53		**ug/L**		113022	0.004
	Mn	55	**-0.005**	**ug/L**	97.329	862	-0.000
	Fe	57	**7.234**	**ug/L**	21.126	4360	0.001
	Co	59	**0.011**	**ug/L**	50.386	231	0.000
	Ni	60	**0.007**	**ug/L**	146.077	46	0.000
	Cu	63		**ug/L**		102	-0.000
	Cu	65	**0.010**	**ug/L**	254.515	89	0.000
	Zn	66	**0.030**	**ug/L**	110.801	233	0.000
	Zn	67		**ug/L**		8084	0.002
	Zn	68		**ug/L**		655	0.000
>	Ge	74		**ug/L**		130661	130660.797
	As	75	**0.827**	**ug/L**	71.687	1107	0.002
	Se	77		**ug/L**		5035	0.004
	Se	82	**0.602**	**ug/L**	41.785	4	0.000
	Kr	83		**ug/L**		57	-0.000
	Sr	88	**0.007**	**ug/L**	55.911	97	0.000
	Y	89		**ug/L**		28	0.000
	Ag	107	**0.006**	**ug/L**	103.997	36	0.000
	Cd	111	**-0.020**	**ug/L**	113.550	8	-0.000
	Cd	114		**ug/L**		27	0.000
>	In	115		**ug/L**		56797	56797.429
	Sn	120	**0.106**	**ug/L**	35.487	414	0.002
	Sb	121	**0.552**	**ug/L**	15.401	810	0.010
	Sb	123		**ug/L**		614	0.002
	Ba	135		**ug/L**		10	-0.000
	Ba	137	**-0.001**	**ug/L**	1197.223	19	-0.000
	Ho	165		**ug/L**		14	0.000
>	Lu	175		**ug/L**		57903	57902.693
	Tl	205	**0.206**	**ug/L**	14.780	761	0.007
	Pb	208	**-0.009**	**ug/L**	55.239	804	-0.000
	Bi	209		**ug/L**		47	0.000
	U	238	**0.029**	**ug/L**	18.931	128	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.1			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		96.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232357001
Sample Date/Time: Wednesday, July 01, 2009 14:07:47
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880688|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\232357001.204

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**32.260**	**ug/L**	10.433	9540	0.014
	Be	9	**1.213**	**ug/L**	7.704	134	0.000
	B	11	**3.112**	**ug/L**	13.228	538	0.001
	Na	23	**1763.347**	**ug/L**	4.492	2879863	4.095
	Mg	24	**2130.752**	**ug/L**	3.145	2421798	3.458
	Al	27	**6977.629**	**ug/L**	5.343	11612544	16.575
	P	31	**880.358**	**ug/L**	2.205	110824	0.153
	K	39	**2145.472**	**ug/L**	5.517	4888194	6.388
	Ca	43	**3184.586**	**ug/L**	0.812	15583	0.021
>	Sc	45		**ug/L**		700265	700265.324
	V	51	**13.405**	**ug/L**	4.772	64615	0.052
	Cr	52	**11.322**	**ug/L**	0.614	28600	0.037
	Cr	53		**ug/L**		85754	-0.042
	Mn	55	**568.180**	**ug/L**	0.523	1803915	2.575
	Fe	57	**26146.066**	**ug/L**	1.125	1568718	2.234
	Co	59	**3.449**	**ug/L**	0.641	7942	0.011
	Ni	60	**10.734**	**ug/L**	1.609	5050	0.007
	Cu	63		**ug/L**		5832	0.008
	Cu	65	**6.293**	**ug/L**	1.619	3237	0.004
	Zn	66	**94.998**	**ug/L**	0.611	26271	0.206
	Zn	67		**ug/L**		10554	0.024
	Zn	68		**ug/L**		20317	0.156
>	Ge	74		**ug/L**		126447	126446.774
	As	75	**6.374**	**ug/L**	7.134	3086	0.018
	Se	77		**ug/L**		3438	-0.008
	Se	82	**2.508**	**ug/L**	34.153	60	0.001
	Kr	83		**ug/L**		118	0.000
	Sr	88	**13.410**	**ug/L**	0.672	44781	0.779
	Y	89		**ug/L**		343235	5.984
	Ag	107	**0.210**	**ug/L**	7.701	316	0.005
	Cd	111	**1.210**	**ug/L**	6.653	398	0.007
	Cd	114		**ug/L**		70	0.001
>	In	115		**ug/L**		57357	57357.333
	Sn	120	**10.658**	**ug/L**	0.796	14202	0.243
	Sb	121	**0.410**	**ug/L**	16.860	665	0.008
	Sb	123		**ug/L**		521	0.001
	Ba	135		**ug/L**		27697	0.444
	Ba	137	**84.937**	**ug/L**	0.648	48127	0.772
	Ho	165		**ug/L**		13953	0.224
>	Lu	175		**ug/L**		62335	62334.991
	Tl	205	**0.411**	**ug/L**	3.120	1261	0.014
	Pb	208	**7.675**	**ug/L**	1.784	22797	0.351
	Bi	209		**ug/L**		189	0.002
	U	238	**1.307**	**ug/L**	2.691	3631	0.057

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		106.0			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		104.3			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870013
Sample Date/Time: Wednesday, July 01, 2009 14:13:42
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 880688|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\1201870013.205

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**38.412**	**ug/L**	9.247	11186	0.016
	Be	9	**1.521**	**ug/L**	7.825	165	0.000
	B	11	**3.472**	**ug/L**	13.038	575	0.001
	Na	23	**1563.025**	**ug/L**	5.737	2515100	3.629
	Mg	24	**2721.456**	**ug/L**	2.594	3044464	4.416
	Al	27	**8694.440**	**ug/L**	1.435	14239029	20.653
	P	31	**1503.083**	**ug/L**	0.680	183443	0.260
	K	39	**2476.921**	**ug/L**	6.226	5490175	7.375
	Ca	43	**4970.989**	**ug/L**	0.957	23587	0.033
>	Sc	45		**ug/L**		689251	689251.330
	V	51	**18.301**	**ug/L**	5.827	76616	0.070
	Cr	52	**13.013**	**ug/L**	1.528	31952	0.042
	Cr	53		**ug/L**		78864	-0.050
	Mn	55	**849.148**	**ug/L**	0.910	2652876	3.848
	Fe	57	**31055.465**	**ug/L**	1.184	1833079	2.654
	Co	59	**4.650**	**ug/L**	2.834	10462	0.015
	Ni	60	**15.696**	**ug/L**	1.760	7247	0.010
	Cu	63		**ug/L**		7627	0.011
	Cu	65	**8.156**	**ug/L**	1.980	4103	0.006
	Zn	66	**112.538**	**ug/L**	1.013	31010	0.244
	Zn	67		**ug/L**		11038	0.028
	Zn	68		**ug/L**		24231	0.187
>	Ge	74		**ug/L**		126168	126168.016
	As	75	**7.130**	**ug/L**	11.901	3351	0.020
	Se	77		**ug/L**		3104	-0.010
	Se	82	**2.183**	**ug/L**	21.000	50	0.001
	Kr	83		**ug/L**		134	0.001
	Sr	88	**17.161**	**ug/L**	0.998	57238	0.998
	Y	89		**ug/L**		401916	7.014
	Ag	107	**0.278**	**ug/L**	7.177	409	0.007
	Cd	111	**1.392**	**ug/L**	15.426	455	0.008
	Cd	114		**ug/L**		74	0.001
>	In	115		**ug/L**		57307	57307.450
	Sn	120	**11.256**	**ug/L**	1.427	14970	0.256
	Sb	121	**0.223**	**ug/L**	13.043	462	0.004
	Sb	123		**ug/L**		375	-0.002
	Ba	135		**ug/L**		40983	0.653
	Ba	137	**125.089**	**ug/L**	1.339	71298	1.137
	Ho	165		**ug/L**		16503	0.263
>	Lu	175		**ug/L**		62716	62716.328
	Tl	205	**0.432**	**ug/L**	6.535	1314	0.015
	Pb	208	**9.103**	**ug/L**	1.545	27034	0.417
	Bi	209		**ug/L**		234	0.003
	U	238	**1.387**	**ug/L**	0.975	3874	0.061

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		104.3			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		104.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870014
Sample Date/Time: Wednesday, July 01, 2009 14:19:38
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 880688|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\1201870014.206

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**60.640**	ug/L	7.879	17866	0.026
	Be	9	**25.522**	ug/L	4.066	2784	0.004
	B	11	**52.103**	ug/L	4.522	6634	0.009
	Na	23	**2888.952**	ug/L	4.870	4694854	6.708
	Mg	24	**3367.547**	ug/L	2.279	3816341	5.464
	Al	27	**9426.787**	ug/L	3.081	15633839	22.392
	P	31	**1807.323**	ug/L	1.268	222568	0.313
	K	39	**3702.470**	ug/L	3.311	8107374	11.023
	Ca	43	**4494.857**	ug/L	1.401	21661	0.030
>	Sc	45		ug/L		698091	698091.222
	V	51	**41.699**	ug/L	1.111	140475	0.161
	Cr	52	**37.160**	ug/L	1.237	87391	0.121
	Cr	53		ug/L		83263	-0.046
	Mn	55	**732.811**	ug/L	1.809	2318633	3.321
	Fe	57	**29737.384**	ug/L	0.749	1777990	2.541
	Co	59	**28.222**	ug/L	0.080	63220	0.090
	Ni	60	**37.412**	ug/L	1.478	17434	0.025
	Cu	63		ug/L		31038	0.044
	Cu	65	**31.065**	ug/L	1.586	15583	0.022
	Zn	66	**133.329**	ug/L	1.319	36644	0.289
	Zn	67		ug/L		11899	0.035
	Zn	68		ug/L		28427	0.221
>	Ge	74		ug/L		125988	125987.804
	As	75	**26.128**	ug/L	1.808	10222	0.075
	Se	77		ug/L		3056	-0.011
	Se	82	**7.061**	ug/L	9.333	194	0.002
	Kr	83		ug/L		121	0.001
	Sr	88	**41.466**	ug/L	0.957	136664	2.410
	Y	89		ug/L		382378	6.747
	Ag	107	**23.210**	ug/L	0.703	31653	0.558
	Cd	111	**4.935**	ug/L	3.514	1562	0.027
	Cd	114		ug/L		1882	0.033
>	In	115		ug/L		56673	56673.361
	Sn	120	**33.212**	ug/L	1.737	43146	0.756
	Sb	121	**36.107**	ug/L	2.098	38815	0.681
	Sb	123		ug/L		29718	0.516
	Ba	135		ug/L		38656	0.623
	Ba	137	**119.327**	ug/L	0.100	67256	1.084
	Ho	165		ug/L		15527	0.250
>	Lu	175		ug/L		62015	62014.598
	Tl	205	**23.402**	ug/L	1.142	50680	0.811
	Pb	208	**18.149**	ug/L	0.859	52419	0.831
	Bi	209		ug/L		193	0.002
	U	238	**26.180**	ug/L	0.808	71252	1.148

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		105.6			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		103.8			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870016
Sample Date/Time: Wednesday, July 01, 2009 14:25:33
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 880688|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\1201870016.207

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**60.819**	**ug/L**	8.008	17845	0.026
	Be	9	**25.973**	**ug/L**	5.910	2821	0.004
	B	11	**54.756**	**ug/L**	5.744	6935	0.010
	Na	23	**3219.660**	**ug/L**	3.346	5209640	7.476
	Mg	24	**3209.682**	**ug/L**	2.735	3621220	5.208
	Al	27	**8605.161**	**ug/L**	2.502	14214558	20.441
	P	31	**1956.840**	**ug/L**	0.430	239642	0.339
	K	39	**3613.371**	**ug/L**	4.474	7887767	10.758
	Ca	43	**4780.467**	**ug/L**	0.576	22901	0.032
>	Sc	45		**ug/L**		695124	695124.101
	V	51	**38.804**	**ug/L**	1.111	132132	0.149
	Cr	52	**36.439**	**ug/L**	0.943	85380	0.119
	Cr	53		**ug/L**		81919	-0.047
	Mn	55	**671.710**	**ug/L**	1.765	2116371	3.044
	Fe	57	**29913.769**	**ug/L**	1.067	1780829	2.556
	Co	59	**28.476**	**ug/L**	1.280	63508	0.091
	Ni	60	**35.782**	**ug/L**	1.008	16606	0.024
	Cu	63		**ug/L**		31274	0.045
	Cu	65	**31.531**	**ug/L**	1.589	15748	0.023
	Zn	66	**128.326**	**ug/L**	0.036	35254	0.278
	Zn	67		**ug/L**		11544	0.032
	Zn	68		**ug/L**		27511	0.214
>	Ge	74		**ug/L**		125888	125888.232
	As	75	**26.887**	**ug/L**	2.260	10486	0.077
	Se	77		**ug/L**		3069	-0.011
	Se	82	**6.845**	**ug/L**	11.250	188	0.002
	Kr	83		**ug/L**		136	0.001
	Sr	88	**40.863**	**ug/L**	0.814	134678	2.375
	Y	89		**ug/L**		395738	6.983
	Ag	107	**23.727**	**ug/L**	1.175	32355	0.570
	Cd	111	**4.539**	**ug/L**	2.080	1438	0.025
	Cd	114		**ug/L**		1916	0.033
>	In	115		**ug/L**		56672	56671.714
	Sn	120	**34.543**	**ug/L**	0.485	44863	0.787
	Sb	121	**38.135**	**ug/L**	1.195	40985	0.719
	Sb	123		**ug/L**		31605	0.549
	Ba	135		**ug/L**		34762	0.560
	Ba	137	**106.663**	**ug/L**	0.815	60167	0.969
	Ho	165		**ug/L**		16042	0.258
>	Lu	175		**ug/L**		62063	62062.807
	Tl	205	**23.748**	**ug/L**	0.784	51462	0.823
	Pb	208	**17.658**	**ug/L**	0.314	51065	0.808
	Bi	209		**ug/L**		180	0.002
	U	238	**26.462**	**ug/L**	0.440	72075	1.160

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		105.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		103.8			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201870015
Sample Date/Time: Wednesday, July 01, 2009 14:31:29
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 880688|10|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\1201870015.208

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**6.173**	**ug/L**	10.781	1848	0.003
	Be	9	**0.265**	**ug/L**	2.589	31	0.000
	B	11	**2.089**	**ug/L**	25.944	410	0.000
	Na	23	**360.696**	**ug/L**	10.046	598360	0.838
	Mg	24	**477.472**	**ug/L**	4.457	542450	0.775
	Al	27	**1351.772**	**ug/L**	2.903	2251273	3.211
	P	31	**201.681**	**ug/L**	0.463	28464	0.035
	K	39	**481.697**	**ug/L**	10.746	1417555	1.434
	Ca	43	**627.858**	**ug/L**	2.732	3581	0.004
>	Sc	45		**ug/L**		699366	699366.337
	V	51	**2.088**	**ug/L**	29.689	34069	0.008
	Cr	52	**2.015**	**ug/L**	2.851	7314	0.007
	Cr	53		**ug/L**		98025	-0.025
	Mn	55	**128.656**	**ug/L**	0.705	408634	0.583
	Fe	57	**5780.631**	**ug/L**	0.531	349594	0.494
	Co	59	**0.715**	**ug/L**	1.768	1817	0.002
	Ni	60	**2.108**	**ug/L**	5.354	1026	0.001
	Cu	63		**ug/L**		1268	0.002
	Cu	65	**1.260**	**ug/L**	4.943	718	0.001
	Zn	66	**18.381**	**ug/L**	0.631	5438	0.040
	Zn	67		**ug/L**		8372	0.005
	Zn	68		**ug/L**		4519	0.030
>	Ge	74		**ug/L**		130788	130787.609
	As	75	**1.288**	**ug/L**	47.712	1282	0.004
	Se	77		**ug/L**		4153	-0.003
	Se	82	**0.346**	**ug/L**	30.875	-4	0.000
	Kr	83		**ug/L**		73	0.000
	Sr	88	**2.574**	**ug/L**	2.074	8815	0.150
	Y	89		**ug/L**		68995	1.181
	Ag	107	**0.024**	**ug/L**	9.343	61	0.001
	Cd	111	**0.124**	**ug/L**	31.675	55	0.001
	Cd	114		**ug/L**		28	0.000
>	In	115		**ug/L**		58427	58426.991
	Sn	120	**2.182**	**ug/L**	1.375	3188	0.050
	Sb	121	**0.026**	**ug/L**	78.480	253	0.000
	Sb	123		**ug/L**		193	-0.005
	Ba	135		**ug/L**		5357	0.090
	Ba	137	**17.375**	**ug/L**	0.688	9416	0.158
	Ho	165		**ug/L**		2686	0.045
>	Lu	175		**ug/L**		59516	59515.649
	Tl	205	**0.190**	**ug/L**	3.607	748	0.007
	Pb	208	**1.623**	**ug/L**	3.144	5273	0.074
	Bi	209		**ug/L**		80	0.001
	U	238	**0.244**	**ug/L**	3.109	691	0.011

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		105.8			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.6			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232357002
Sample Date/Time: Wednesday, July 01, 2009 14:37:24
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 880688|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\232357002.209

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**70.415**	ug/L	9.916	20933	0.030
	Be	9	**1.197**	ug/L	6.807	133	0.000
	B	11	**1.517**	ug/L	12.144	342	0.000
	Na	23	**2099.544**	ug/L	3.815	3447599	4.875
	Mg	24	**2854.689**	ug/L	4.681	3265410	4.632
	Al	27	**5850.814**	ug/L	7.664	9799018	13.898
	P	31	**798.516**	ug/L	0.588	101521	0.138
	K	39	**2805.094**	ug/L	3.071	6301430	8.352
	Ca	43	**3273.812**	ug/L	1.689	16101	0.022
>	Sc	45		ug/L		704567	704567.113
	V	51	**12.525**	ug/L	5.038	62636	0.048
	Cr	52	**8.572**	ug/L	1.179	22449	0.028
	Cr	53		ug/L		79739	-0.052
	Mn	55	**703.181**	ug/L	0.544	2245929	3.186
	Fe	57	**24905.269**	ug/L	0.164	1503648	2.128
	Co	59	**3.270**	ug/L	1.961	7586	0.010
	Ni	60	**10.087**	ug/L	1.915	4778	0.007
	Cu	63		ug/L		6026	0.008
	Cu	65	**6.309**	ug/L	0.564	3266	0.005
	Zn	66	**128.213**	ug/L	0.577	36130	0.278
	Zn	67		ug/L		12103	0.034
	Zn	68		ug/L		28130	0.213
>	Ge	74		ug/L		129131	129131.354
	As	75	**4.459**	ug/L	9.477	2440	0.013
	Se	77		ug/L		3185	-0.010
	Se	82	**2.785**	ug/L	16.660	70	0.001
	Kr	83		ug/L		115	0.000
	Sr	88	**15.242**	ug/L	0.685	52103	0.886
	Y	89		ug/L		344252	5.862
	Ag	107	**0.204**	ug/L	1.439	316	0.005
	Cd	111	**1.230**	ug/L	6.996	414	0.007
	Cd	114		ug/L		99	0.001
>	In	115		ug/L		58723	58722.918
	Sn	120	**10.238**	ug/L	0.708	13978	0.233
	Sb	121	**0.150**	ug/L	6.075	392	0.003
	Sb	123		ug/L		337	-0.003
	Ba	135		ug/L		40508	0.652
	Ba	137	**124.991**	ug/L	0.596	70577	1.136
	Ho	165		ug/L		14307	0.230
>	Lu	175		ug/L		62130	62129.765
	Tl	205	**0.718**	ug/L	6.174	1918	0.025
	Pb	208	**26.400**	ug/L	0.786	75987	1.209
	Bi	209		ug/L		809	0.012
	U	238	**1.371**	ug/L	3.761	3793	0.060

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		106.6			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		103.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 01, 2009 14:43:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 6.210

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.308**	**ug/L**	10.467	14526	0.021
	Be	9	**52.514**	**ug/L**	6.446	5610	0.008
	B	11	**104.400**	**ug/L**	4.218	12874	0.019
	Na	23	**5602.963**	**ug/L**	1.743	8913162	13.011
	Mg	24	**5143.426**	**ug/L**	2.152	5710164	8.346
	Al	27	**5322.198**	**ug/L**	2.498	8654350	12.642
	P	31	**5162.920**	**ug/L**	1.001	615765	0.894
	K	39	**4457.994**	**ug/L**	3.156	9484439	13.273
	Ca	43	**5046.774**	**ug/L**	1.198	23760	0.034
>	Sc	45		**ug/L**		684105	684105.484
	V	51	**48.919**	**ug/L**	2.268	156658	0.188
	Cr	52	**50.914**	**ug/L**	0.420	116361	0.166
	Cr	53		**ug/L**		111149	-0.002
	Mn	55	**48.039**	**ug/L**	0.563	149818	0.218
	Fe	57	**5039.205**	**ug/L**	0.454	298628	0.431
	Co	59	**50.349**	**ug/L**	0.889	110359	0.161
	Ni	60	**51.574**	**ug/L**	0.374	23538	0.034
	Cu	63		**ug/L**		49238	0.072
	Cu	65	**48.684**	**ug/L**	1.088	23886	0.035
	Zn	66	**51.822**	**ug/L**	1.223	15023	0.112
	Zn	67		**ug/L**		9919	0.016
	Zn	68		**ug/L**		12145	0.087
>	Ge	74		**ug/L**		131655	131654.563
	As	75	**47.509**	**ug/L**	1.415	18761	0.136
	Se	77		**ug/L**		5396	0.006
	Se	82	**48.386**	**ug/L**	3.075	1477	0.011
	Kr	83		**ug/L**		54	-0.000
	Sr	88	**51.718**	**ug/L**	1.502	172515	3.006
	Y	89		**ug/L**		70	0.001
	Ag	107	**50.117**	**ug/L**	0.936	69146	1.205
	Cd	111	**51.621**	**ug/L**	1.672	16404	0.286
	Cd	114		**ug/L**		38529	0.671
>	In	115		**ug/L**		57367	57366.652
	Sn	120	**49.793**	**ug/L**	0.417	65336	1.134
	Sb	121	**48.794**	**ug/L**	4.963	53010	0.920
	Sb	123		**ug/L**		41030	0.707
	Ba	135		**ug/L**		15225	0.261
	Ba	137	**49.646**	**ug/L**	1.203	26297	0.451
	Ho	165		**ug/L**		25	0.000
>	Lu	175		**ug/L**		58256	58256.457
	Tl	205	**48.598**	**ug/L**	1.668	98492	1.685
	Pb	208	**51.073**	**ug/L**	1.042	137061	2.338
	Bi	209		**ug/L**		93	0.001
	U	238	**52.514**	**ug/L**	0.307	134207	2.303

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	100.615				
	Be	9	105.028				
	B	11	104.400				
	Na	23	112.059				
	Mg	24	102.869				
	Al	27	105.390				
	P	31	103.258				
	K	39	89.160				
	Ca	43	100.935				
>	Sc	45		103.5			
	V	51	97.838				
	Cr	52	101.828				
	Cr	53					
	Mn	55	96.079				
	Fe	57	100.784				
	Co	59	100.699				
	Ni	60	103.148				
	Cu	63					
	Cu	65	97.369				
	Zn	66	103.643				
	Zn	67					
	Zn	68					
>	Ge	74		98.8			
	As	75	95.018				
	Se	77					
	Se	82	96.772				
	Kr	83					
	Sr	88	103.437				
	Y	89					
	Ag	107	100.233				
	Cd	111	103.241				
	Cd	114					
>	In	115		98.1			
	Sn	120	99.586				
	Sb	121	97.587				
	Sb	123					
	Ba	135					
	Ba	137	99.293				
	Ho	165					
>	Lu	175		97.5			
	Tl	205	97.197				
	Pb	208	102.145				
	Bi	209					
	U	238	105.027				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Na	23	CCV is out of limits (+/- 10%)
QC Std 6	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 01, 2009 14:49:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: c:\elandata\Dataset\090630\QC Std 7.211

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.048**	ug/L	38.678	44	0.000
	Be	9	**0.021**	ug/L	76.006	4	0.000
	B	11	**2.160**	ug/L	28.530	414	0.000
	Na	23	**1.551**	ug/L	125.016	14674	0.004
	Mg	24	**0.580**	ug/L	179.440	1333	0.001
	Al	27	**-0.962**	ug/L	98.427	4334	-0.002
	P	31	**2.606**	ug/L	43.818	4283	0.000
	K	39	**-0.729**	ug/L	3071.827	407798	-0.002
	Ca	43	**-14.191**	ug/L	35.269	565	-0.000
>	Sc	45		ug/L		689358	689358.047
	V	51	**-0.861**	ug/L	98.676	25723	-0.003
	Cr	52	**-0.018**	ug/L	708.418	2633	-0.000
	Cr	53		ug/L		108666	-0.007
	Mn	55	**0.012**	ug/L	19.415	943	0.000
	Fe	57	**4.681**	ug/L	8.018	4350	0.000
	Co	59	**0.015**	ug/L	13.355	247	0.000
	Ni	60	**-0.003**	ug/L	499.267	43	-0.000
	Cu	63		ug/L		110	-0.000
	Cu	65	**-0.002**	ug/L	517.192	86	-0.000
	Zn	66	**-0.058**	ug/L	152.151	212	-0.000
	Zn	67		ug/L		7956	0.000
	Zn	68		ug/L		656	0.000
>	Ge	74		ug/L		133646	133645.968
	As	75	**0.567**	ug/L	12.848	1033	0.002
	Se	77		ug/L		4742	0.000
	Se	82	**0.264**	ug/L	205.361	-7	0.000
	Kr	83		ug/L		61	0.000
	Sr	88	**0.010**	ug/L	62.961	110	0.001
	Y	89		ug/L		23	0.000
	Ag	107	**0.004**	ug/L	19.519	33	0.000
	Cd	111	**-0.004**	ug/L	270.171	13	-0.000
	Cd	114		ug/L		33	0.000
>	In	115		ug/L		58433	58433.281
	Sn	120	**0.115**	ug/L	15.966	438	0.003
	Sb	121	**0.605**	ug/L	19.413	892	0.011
	Sb	123		ug/L		665	0.003
	Ba	135		ug/L		13	0.000
	Ba	137	**0.005**	ug/L	96.423	23	0.000
	Ho	165		ug/L		18	0.000
>	Lu	175		ug/L		59225	59225.440
	Tl	205	**0.165**	ug/L	30.752	694	0.006
	Pb	208	**0.001**	ug/L	648.522	851	0.000
	Bi	209		ug/L		42	0.000
	U	238	**0.031**	ug/L	19.664	135	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		104.3			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

==========

Method Name: SOIL
Method Description: 7471A, ILM04 ANALYST JXL1
Element: Hg

Date: 06/30/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 063009S1.SIF Results Data Set Name: 063009S1

==========

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 06/30/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0037	0.0037	09:23:29	No
2			0.0037	0.0037	09:24:04	No
Mean:			0.0037			
SD :			0.0000			
%RSD:			1.1021			

Auto-zero performed.

==========

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 06/30/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0038	0.0075	09:25:26	No
2			0.0036	0.0073	09:26:01	No
Mean:			0.0037			
SD :			0.0002			
%RSD:			4.0598			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.01863
Intercept : 0.00000

==========

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 06/30/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0079	0.0116	09:27:25	No
2			0.0077	0.0114	09:28:00	No
Mean:			0.0078			
SD :			0.0002			
%RSD:			2.1935			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99621 Slope: 0.01550
Intercept : 0.00023

==========

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 06/30/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0288	0.0325	09:29:24	No
2			0.0282	0.0319	09:29:58	No
Mean:			0.0285			
SD :			0.0005			
%RSD:			1.7093			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99946 Slope: 0.01403
Intercept : 0.00054

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 06/30/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0679	0.0716	09:31:23	No
2			0.0676	0.0713	09:31:58	No
Mean:			0.0677			
SD :			0.0002			
%RSD:			0.2859			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99976 Slope: 0.01344
Intercept : 0.00086

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 06/30/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1311	0.1348	09:33:24	No
2			0.1295	0.1332	09:33:59	No
Mean:			0.1303			
SD :			0.0011			
%RSD:			0.8805			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99977 Slope: 0.01299
Intercept : 0.00137

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0037	---	----	----	----
S0.2	0.0037	0.200	0.182	0.0002	4.1
S0.5	0.0078	0.500	0.498	0.0002	2.2
S2.0	0.0285	2.000	2.089	0.0005	1.7
S5.0	0.0677	5.000	5.109	0.0002	0.3
S10	0.1303	10.000	9.928	0.0011	0.9
Calib Blank	0.0037	---	----	----	----

Correlation Coefficient: 0.99977 Slope: 0.01299 Intercept: 0.0014

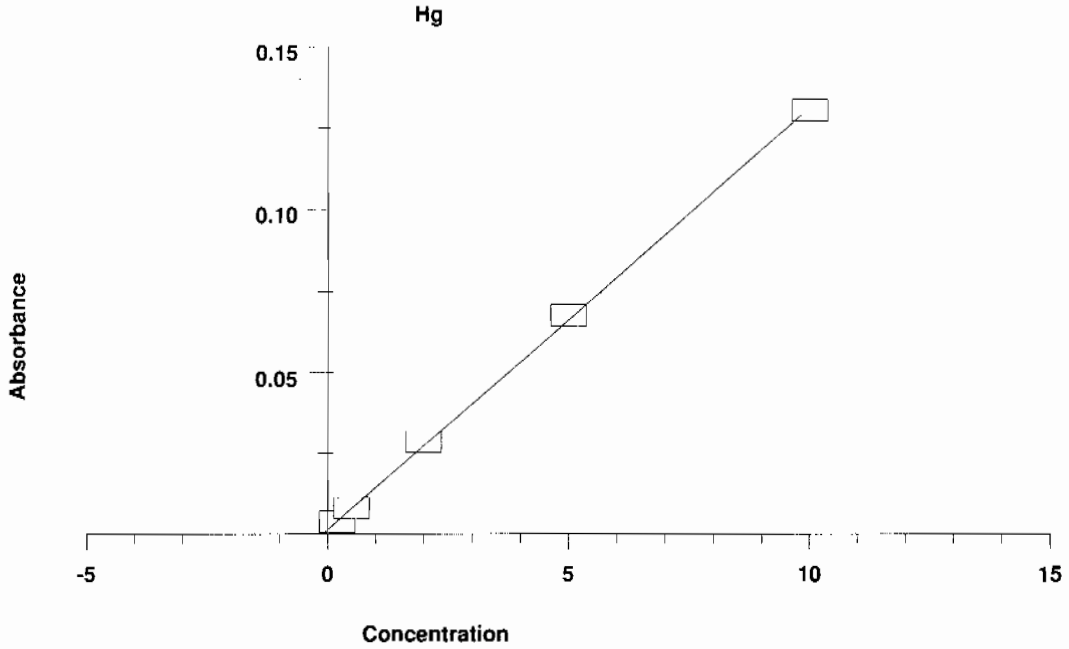

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Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 06/30/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.083	5.083	0.0674	0.0711	09:35:28	No
2	5.116	5.116	0.0678	0.0715	09:36:03	No
Mean:	5.100	5.100	0.0676			
SD :	0.0235	0.0235	0.0003			
%RSD:	0.5	0.5	0.4523			

QC value within specified limits.

==========

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 06/30/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.055	-0.055	0.0007	0.0044	09:37:25	No
2	-0.067	-0.067	0.0005	0.0042	09:38:00	No
Mean:	-0.061	-0.061	0.0006			
SD :	0.0088	0.0088	0.0001			
%RSD:	14.4	14.4	19.8453			

QC value within specified limits.

==========

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 06/30/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.200	0.200	0.0040	0.0077	09:39:23	No
2	0.178	0.178	0.0037	0.0074	09:39:58	No
Mean:	0.189	0.189	0.0038			
SD :	0.0154	0.0154	0.0002			
%RSD:	8.1	8.1	5.2296			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 06/30/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.086	5.086	0.0674	0.0711	09:41:23	No
2	5.166	5.166	0.0685	0.0722	09:41:58	No
Mean:	5.126	5.126	0.0679			
SD :	0.0563	0.0563	0.0007			
%RSD:	1.1	1.1	1.0767			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 06/30/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.011	-0.011	0.0012	0.0049	09:43:25	No
2	-0.022	-0.022	0.0011	0.0048	09:44:00	No
Mean:	-0.017	-0.017	0.0011			
SD :	0.0073	0.0073	0.0001			
%RSD:	43.8	43.8	8.2309			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 06/30/2009
Sample ID: 1201865282|i||878680|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.033	-0.033	0.0009	0.0046	09:45:26	No
2	-0.035	-0.035	0.0009	0.0046	09:46:01	No
Mean:	-0.034	-0.034	0.0009			
SD :	0.0017	0.0017	0.0000			
%RSD:	5.0	5.0	2.3830			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 06/30/2009
Sample ID: 1201865283|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.536	3.536	0.0473	0.0510	09:47:25	No
2	3.452	3.452	0.0462	0.0499	09:48:00	No
Mean:	3.494	3.494	0.0467			
SD :	0.0591	0.0591	0.0008			
%RSD:	1.7	1.7	1.6420			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 06/30/2009
Sample ID: 231844001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.169	0.169	0.0036	0.0073	09:49:26	No
2	0.164	0.164	0.0035	0.0072	09:50:00	No
Mean:	0.166	0.166	0.0035			
SD :	0.0034	0.0034	0.0000			
%RSD:	2.1	2.1	1.2695			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 06/30/2009
Sample ID: 1201865284|i|||DUP

%RSD: 14.9 14.9 7.5354

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 06/30/2009
Sample ID: 231844004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.236	0.236	0.0044	0.0081	10:03:16	No
2	0.229	0.229	0.0043	0.0080	10:03:50	No
Mean:	0.232	0.232	0.0044			
SD :	0.0048	0.0048	0.0001			
%RSD:	2.1	2.1	1.4335			

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 06/30/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.946	4.946	0.0656	0.0693	10:05:14	No
2	5.055	5.055	0.0670	0.0707	10:05:48	No
Mean:	5.001	5.001	0.0663			
SD :	0.0776	0.0776	0.0010			
%RSD:	1.6	1.6	1.5196			

QC value within specified limits.

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 06/30/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.022	-0.022	0.0011	0.0048	10:07:16	No
2	-0.025	-0.025	0.0010	0.0047	10:07:50	No
Mean:	-0.023	-0.023	0.0011			
SD :	0.0019	0.0019	0.0000			
%RSD:	8.4	8.4	2.3704			

QC value within specified limits.

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 06/30/2009
Sample ID: 231844005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.266	0.266	0.0048	0.0085	10:09:15	No
2	0.256	0.256	0.0047	0.0084	10:09:49	No
Mean:	0.261	0.261	0.0048			
SD :	0.0072	0.0072	0.0001			
%RSD:	2.7	2.7	1.9537			

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 06/30/2009
Sample ID: 231844006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.187	0.187	0.0038	0.0075	10:11:13	No
2	0.183	0.183	0.0037	0.0074	10:11:48	No
Mean:	0.185	0.185	0.0038			
SD :	0.0028	0.0028	0.0000			
%RSD:	1.5	1.5	0.9643			

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 06/30/2009
Sample ID: 231844007|i|||

%RSD: 3.9 3.9 1.2090

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Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 06/30/2009
Sample ID: 231844013|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.135	0.135	0.0031	0.0068	10:25:13	No
2	0.125	0.125	0.0030	0.0067	10:25:48	No
Mean:	0.130	0.130	0.0031			
SD :	0.0068	0.0068	0.0001			
%RSD:	5.2	5.2	2.8982			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 06/30/2009
Sample ID: 231844014|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.135	0.135	0.0031	0.0068	10:27:16	No
2	0.134	0.134	0.0031	0.0068	10:27:51	No
Mean:	0.134	0.134	0.0031			
SD :	0.0005	0.0005	0.0000			
%RSD:	0.4	0.4	0.2190			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 06/30/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.959	4.959	0.0658	0.0695	10:29:18	No
2	5.216	5.216	0.0691	0.0728	10:29:53	No
Mean:	5.087	5.087	0.0674			
SD :	0.1812	0.1812	0.0024			
%RSD:	3.6	3.6	3.4903			

QC value within specified limits.

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Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 06/30/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.025	-0.025	0.0010	0.0047	10:31:21	No
2	-0.039	-0.039	0.0009	0.0046	10:31:56	No
Mean:	-0.032	-0.032	0.0009			
SD :	0.0098	0.0098	0.0001			
%RSD:	30.5	30.5	13.4772			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 06/30/2009
Sample ID: 231844015|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.205	0.205	0.0040	0.0077	10:33:20	No
2	0.197	0.197	0.0039	0.0076	10:33:55	No
Mean:	0.201	0.201	0.0040			
SD :	0.0061	0.0061	0.0001			
%RSD:	3.0	3.0	1.9860			

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Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 06/30/2009
Sample ID: 231844016|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.017	0.017	0.0016	0.0053	10:35:15	No
2	0.008	0.008	0.0015	0.0052	10:35:51	No
Mean:	0.012	0.012	0.0015			
SD :	0.0061	0.0061	0.0001			
%RSD:	50.2	50.2	5.2289			

Element: Hg Seq. No.: 38 AS Loc.: 34 Date: 06/30/2009
Sample ID: 231844017|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.166	0.166	0.0035	0.0072	10:37:11	No
2	0.157	0.157	0.0034	0.0071	10:37:46	No
Mean:	0.162	0.162	0.0035			
SD :	0.0065	0.0065	0.0001			
%RSD:	4.0	4.0	2.4452			

Element: Hg Seq. No.: 39 AS Loc.: 35 Date: 06/30/2009
Sample ID: 231844018|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.282	0.282	0.0050	0.0087	10:39:07	No
2	0.279	0.279	0.0050	0.0087	10:39:42	No
Mean:	0.280	0.280	0.0050			
SD :	0.0016	0.0016	0.0000			
%RSD:	0.6	0.6	0.4237			

Element: Hg Seq. No.: 40 AS Loc.: 36 Date: 06/30/2009
Sample ID: 231844019|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.070	0.070	0.0023	0.0060	10:41:04	No
2	0.064	0.064	0.0022	0.0059	10:41:39	No
Mean:	0.067	0.067	0.0022			
SD :	0.0043	0.0043	0.0001			
%RSD:	6.4	6.4	2.4847			

Element: Hg Seq. No.: 41 AS Loc.: 37 Date: 06/30/2009
Sample ID: 1201870315|i||880840|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.036	-0.036	0.0009	0.0046	10:43:01	No
2	-0.052	-0.052	0.0007	0.0044	10:43:36	No
Mean:	-0.044	-0.044	0.0008			
SD :	0.0116	0.0116	0.0002			
%RSD:	26.2	26.2	19.0253			

Element: Hg Seq. No.: 42 AS Loc.: 38 Date: 06/30/2009
Sample ID: 1201870316|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.889	3.889	0.0519	0.0556	10:44:58	No
2	3.852	3.852	0.0514	0.0551	10:45:33	No
Mean:	3.870	3.870	0.0516			
SD :	0.0262	0.0262	0.0003			

%RSD: 0.7 0.7 0.6586

Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 06/30/2009
Sample ID: 232357001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.029	0.029	0.0017	0.0054	10:46:56	No
2	0.026	0.026	0.0017	0.0054	10:47:32	No
Mean:	0.028	0.028	0.0017			
SD :	0.0019	0.0019	0.0000			
%RSD:	6.8	6.8	1.4218			

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 06/30/2009
Sample ID: 1201870317|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.015	0.015	0.0016	0.0053	10:48:56	No
2	0.003	0.003	0.0014	0.0051	10:49:31	No
Mean:	0.009	0.009	0.0015			
SD :	0.0084	0.0084	0.0001			
%RSD:	97.1	97.1	7.3971			

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 06/30/2009
Sample ID: 1201870318|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.227	2.227	0.0303	0.0340	10:50:55	No
2	2.169	2.169	0.0295	0.0332	10:51:30	No
Mean:	2.198	2.198	0.0299			
SD :	0.0409	0.0409	0.0005			
%RSD:	1.9	1.9	1.7740			

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 06/30/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.241	5.241	0.0694	0.0731	10:52:55	No
2	5.197	5.197	0.0689	0.0726	10:53:30	No
Mean:	5.219	5.219	0.0692			
SD :	0.0311	0.0311	0.0004			
%RSD:	0.6	0.6	0.5849			

QC value within specified limits.

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 06/30/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.031	-0.031	0.0010	0.0047	10:54:58	No
2	-0.038	-0.038	0.0009	0.0046	10:55:33	No
Mean:	-0.034	-0.034	0.0009			
SD :	0.0049	0.0049	0.0001			
%RSD:	14.2	14.2	6.8500			

QC value within specified limits.

Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 06/30/2009
Sample ID: 1201870320|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.257	2.257	0.0307	0.0344	10:56:59	No
2	2.211	2.211	0.0301	0.0338	10:57:34	No
Mean:	2.234	2.234	0.0304			
SD :	0.0329	0.0329	0.0004			
%RSD:	1.5	1.5	1.4071			

Element: Hg Seq. No.: 49 AS Loc.: 43 Date: 06/30/2009
Sample ID: 1201870319|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.098	-0.098	0.0001	0.0038	10:59:00	No
2	-0.103	-0.103	0.0000	0.0037	10:59:35	No
Mean:	-0.101	-0.101	0.0001			
SD :	0.0039	0.0039	0.0001			
%RSD:	3.8	3.8	84.9635			

Element: Hg Seq. No.: 50 AS Loc.: 44 Date: 06/30/2009
Sample ID: 232357002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.015	0.015	0.0016	0.0053	11:01:00	No
2	0.001	0.001	0.0014	0.0051	11:01:35	No
Mean:	0.008	0.008	0.0015			
SD :	0.0099	0.0099	0.0001			
%RSD:	118.4	118.4	8.7245			

Element: Hg Seq. No.: 51 AS Loc.: 45 Date: 06/30/2009
Sample ID: 232367001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.110	0.110	0.0028	0.0065	11:03:01	No
2	0.104	0.104	0.0027	0.0064	11:03:36	No
Mean:	0.107	0.107	0.0028			
SD :	0.0044	0.0044	0.0001			
%RSD:	4.1	4.1	2.0532			

Element: Hg Seq. No.: 52 AS Loc.: 46 Date: 06/30/2009
Sample ID: 232367002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.155	0.155	0.0034	0.0071	11:05:02	No
2	0.144	0.144	0.0032	0.0069	11:05:37	No
Mean:	0.150	0.150	0.0033			
SD :	0.0079	0.0079	0.0001			
%RSD:	5.3	5.3	3.0861			

Element: Hg Seq. No.: 53 AS Loc.: 47 Date: 06/30/2009
Sample ID: 232367003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.157	0.157	0.0034	0.0071	11:07:04	No
2	0.155	0.155	0.0034	0.0071	11:07:38	No
Mean:	0.156	0.156	0.0034			
SD :	0.0013	0.0013	0.0000			

%RSD: 0.8 0.8 0.4895

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Element: Hg Seq. No.: 54 AS Loc.: 48 Date: 06/30/2009
Sample ID: 232367004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.114	0.114	0.0029	0.0065	11:09:02	No
2	0.107	0.107	0.0028	0.0064	11:09:37	No
Mean:	0.111	0.111	0.0028			
SD :	0.0054	0.0054	0.0001			
%RSD:	4.9	4.9	2.5062			

==========

Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 06/30/2009
Sample ID: 232367005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.136	0.136	0.0031	0.0068	11:10:58	No
2	0.124	0.124	0.0030	0.0067	11:11:33	No
Mean:	0.130	0.130	0.0031			
SD :	0.0085	0.0085	0.0001			
%RSD:	6.6	6.6	3.6315			

==========

Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 06/30/2009
Sample ID: 232367006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.111	0.111	0.0028	0.0065	11:12:53	No
2	0.095	0.095	0.0026	0.0063	11:13:28	No
Mean:	0.103	0.103	0.0027			
SD :	0.0115	0.0115	0.0001			
%RSD:	11.2	11.2	5.5352			

==========

Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 06/30/2009
Sample ID: 232367007|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.360	0.360	0.0060	0.0097	11:14:48	No
2	0.347	0.347	0.0059	0.0096	11:15:23	No
Mean:	0.354	0.354	0.0060			
SD :	0.0091	0.0091	0.0001			
%RSD:	2.6	2.6	1.9918			

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Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 06/30/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.044	5.044	0.0669	0.0706	11:16:47	No
2	5.027	5.027	0.0667	0.0704	11:17:22	No
Mean:	5.036	5.036	0.0668			
SD :	0.0116	0.0116	0.0002			
%RSD:	0.2	0.2	0.2260			

QC value within specified limits.

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Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 06/30/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.062	-0.062	0.0006	0.0043	11:18:50	No
2	-0.072	-0.072	0.0004	0.0041	11:19:25	No
Mean:	-0.067	-0.067	0.0005			
SD :	0.0073	0.0073	0.0001			
%RSD:	10.9	10.9	19.2888			

QC value within specified limits.

==========

Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 06/30/2009
Sample ID: 232367008|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.217	0.217	0.0042	0.0079	11:20:50	No
2	0.207	0.207	0.0041	0.0078	11:21:25	No
Mean:	0.212	0.212	0.0041			
SD :	0.0066	0.0066	0.0001			
%RSD:	3.1	3.1	2.0692			

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Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 06/30/2009
Sample ID: 232367009|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.087	0.087	0.0025	0.0062	11:22:47	No
2	0.074	0.074	0.0023	0.0060	11:23:22	No
Mean:	0.081	0.081	0.0024			
SD :	0.0097	0.0097	0.0001			
%RSD:	12.0	12.0	5.1997			

==========

Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 06/30/2009
Sample ID: 232367010|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.123	0.123	0.0030	0.0067	11:24:44	No
2	0.110	0.110	0.0028	0.0065	11:25:19	No
Mean:	0.116	0.116	0.0029			
SD :	0.0086	0.0086	0.0001			
%RSD:	7.4	7.4	3.8976			

==========

Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 06/30/2009
Sample ID: 232367011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.120	0.120	0.0029	0.0066	11:26:42	No
2	0.098	0.098	0.0026	0.0063	11:27:16	No
Mean:	0.109	0.109	0.0028			
SD :	0.0154	0.0154	0.0002			
%RSD:	14.1	14.1	7.1714			

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Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 06/30/2009
Sample ID: 1201865321|i||878699|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.058	-0.058	0.0006	0.0043	11:28:40	No
2	-0.078	-0.078	0.0004	0.0041	11:29:14	No
Mean:	-0.068	-0.068	0.0005			
SD :	0.0139	0.0139	0.0002			

Miscellaneous

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 880839

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870316	UI031809A	.209	g
MS	1201870318	WHG090629-14	.3	mL
MSD	1201870320	WHG090629-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870315		SW846 7471A Prep	29-JUN-2009 15:35	0.503 g	30 mL	59.64215	SOIL
LCS	1201870316		SW846 7471A Prep	29-JUN-2009 15:35	0.209 g	30 mL	143.54067	SOIL
SAMPLE	232357001		SW846 7471A Prep	29-JUN-2009 15:35	0.515 g	30 mL	58.25243	SOIL
DUP	1201870317	232357001	SW846 7471A Prep	29-JUN-2009 15:35	0.524 g	30 mL	57.25191	SOIL
MS	1201870318	232357001	SW846 7471A Prep	29-JUN-2009 15:35	0.517 g	30 mL	58.02708	SOIL
MSD	1201870320	232357001	SW846 7471A Prep	29-JUN-2009 15:35	0.586 g	30 mL	51.19454	SOIL
SDILT	1201870319	232357001	SW846 7471A Prep	29-JUN-2009 15:35	0.515 g	30 mL	58.25243	SOIL
SAMPLE	232357002		SW846 7471A Prep	29-JUN-2009 15:35	0.537 g	30 mL	55.86592	SOIL
SAMPLE	232367001		SW846 7471A Prep	29-JUN-2009 15:35	0.515 g	30 mL	58.25243	SOIL
SAMPLE	232367002		SW846 7471A Prep	29-JUN-2009 15:35	0.536 g	30 mL	55.97015	SOIL
SAMPLE	232367003		SW846 7471A Prep	29-JUN-2009 15:35	0.55 g	30 mL	54.54545	SOIL
SAMPLE	232367004		SW846 7471A Prep	29-JUN-2009 15:35	0.5 g	30 mL	60	SOIL
SAMPLE	232367005		SW846 7471A Prep	29-JUN-2009 15:35	0.557 g	30 mL	53.85996	SOIL
SAMPLE	232367006		SW846 7471A Prep	29-JUN-2009 15:35	0.522 g	30 mL	57.47126	SOIL
SAMPLE	232367007		SW846 7471A Prep	29-JUN-2009 15:35	0.559 g	30 mL	53.66726	SOIL
SAMPLE	232367008		SW846 7471A Prep	29-JUN-2009 15:35	0.501 g	30 mL	59.88024	SOIL
SAMPLE	232367009		SW846 7471A Prep	29-JUN-2009 15:35	0.549 g	30 mL	54.64481	SOIL
SAMPLE	232367010		SW846 7471A Prep	29-JUN-2009 15:35	0.511 g	30 mL	58.70841	SOIL
SAMPLE	232367011		SW846 7471A Prep	29-JUN-2009 15:35	0.535 g	30 mL	56.07477	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1125379-C	7.5 mL	5% KMnO4 solution
1100716-C	2 mL	Hg reducing agent
WHG090629-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090629-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG090629-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090629-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090629-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090629-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

Comments Sample 232357001 is a rocky brown soil.
Digestion Start Date: 29-JUN-09 15:35
Digestion End Date: 29-JUN-09 16:05

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 880670

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201869976	UI652380	.512	g
MS	1201869978	UI090622-01	.25	mL
MS	1201869978	UI090622-06	.25	mL
MSD	1201869980	UI090622-01	.25	mL
MSD	1201869980	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201869975		SW846 3050B	29-JUN-2009 15:53	0.522 g	50 mL	95.78544	SOIL
LCS	1201869976		SW846 3050B	29-JUN-2009 15:53	0.512 g	50 mL	97.65625	SOIL
SAMPLE	232357001		SW846 3050B	29-JUN-2009 15:53	0.504 g	50 mL	99.20635	SOIL
DUP	1201869977	232357001	SW846 3050B	29-JUN-2009 15:53	0.501 g	50 mL	99.8004	SOIL
MS	1201869978	232357001	SW846 3050B	29-JUN-2009 15:53	0.51 g	50 mL	98.03922	SOIL
MSD	1201869980	232357001	SW846 3050B	29-JUN-2009 15:53	0.506 g	50 mL	98.81423	SOIL
SDILT	1201869979	232357001	SW846 3050B	29-JUN-2009 15:53	0.504 g	50 mL	99.20635	SOIL
SAMPLE	232357002		SW846 3050B	29-JUN-2009 15:53	0.507 g	50 mL	98.61933	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments sample#232357001 is a brown, fine soil.

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 880687

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870012	UI652380	.506	g
MS	1201870014	UI042709-A	.5	mL
MS	1201870014	UI042709-B	.5	mL
MSD	1201870016	UI042709-A	.5	mL
MSD	1201870016	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870011		SW846 3050B	30-JUN-2009 15:50	0.52 g	50 mL	96.15385	SOIL
LCS	1201870012		SW846 3050B	30-JUN-2009 15:50	0.506 g	50 mL	98.81423	SOIL
SAMPLE	232357001		SW846 3050B	30-JUN-2009 15:50	0.504 g	50 mL	99.20635	SOIL
DUP	1201870013	232357001	SW846 3050B	30-JUN-2009 15:50	0.51 g	50 mL	98.03922	SOIL
MS	1201870014	232357001	SW846 3050B	30-JUN-2009 15:50	0.51 g	50 mL	98.03922	SOIL
MSD	1201870016	232357001	SW846 3050B	30-JUN-2009 15:50	0.5 g	50 mL	100	SOIL
SDILT	1201870015	232357001	SW846 3050B	30-JUN-2009 15:50	0.504 g	50 mL	99.20635	SOIL
SAMPLE	232357002		SW846 3050B	30-JUN-2009 15:50	0.504 g	50 mL	99.20635	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments sample#232357001 is a brown, fine soil.

NCR Report No.: 707356
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
01-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3050B/6020	Solid	LANL
Batch ID:	**Sample Numbers:**		
880688	See Below		

Potentially affected work order(s)(SDG): 232357(09-2455)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:

1. Failed Recovery for MS/PS:

   QC 1201870014MS

2. Failed RPD for DUP:

   QC 1201870013DUP

3. Failed Recovery for MSD/PSD:

   QC 1201870016MSD

NRG Disposition:

The matrix spike(matrix spike duplicate) recovery failed outside of the control limits for As, Tl and Se due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

The sample and sample duplicate % RPD failed outside of the control limits for Ni due to possible sample homogeneity and/or matrix interferences. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Rose Jenkins 02-JUL-09

Data Validator/Group Leader:

Samantha Jacobs 02-JUL-09

NCR Report No.: 707884
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
02-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
880671	See Below		

Potentially affected work order(s)(SDG): 232357(09-2455)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201869978MS 2. Failed RPD for DUP: QC 1201869977DUP 3. Failed Recovery for MSD/PSD: QC 1201869980MSD	1. The matrix spike recovery failed outside of the control limits for calcium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The sample and sample duplicate % RPD failed outside the control limits for manganese due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike duplicate recovery failed outside of the control limits for aluminum due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:
Helen Camello 03-JUL-09

Data Validator/Group Leader:
Jerry Wigfall 03-JUL-09

Standard Logbook

Serial ID:	UHG910621-01	**Opened:**	02-SEP-08	**Amount :**	125 mL
Name:	MHGSTOCK1	**Received:**	29-AUG-08	**Catalog Number :**	PLHG4-2Y
Type:	Source Material	**Expires:**	30-AUG-09	**Lot Number :**	14-04HG
Employee:	Tara Griffin			**Solvent :**	10% HNO3
Supplier:	Spex				

Description: Mercury Source Standard #1 1,000 mg/L

Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID:	UHG910623-02	**Opened:**	02-SEP-08	**Amount :**	100 mL
Name:	MHGSTOCK2	**Received:**	29-AUG-08	**Catalog Number :**	AHG1KN-100
Type:	Source Material	**Expires:**	02-SEP-09	**Lot Number :**	4801240
Employee:	Tara Griffin			**Solvent :**	3% HNO3
Supplier:	Ricca Chemical Company				

Description: Mercury Source Standard #2 1,000 mg/L

Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID:	UI031809A	**Opened:**	18-MAR-09	**Catalog Number :**	540
Name:	METALSOILSRM	**Received:**	18-MAR-09	**Lot Number :**	D061-540
Type:	Source Material	**Expires:**	10-OCT-10		
Employee:	Jamie Johnson				
Supplier:	ERA				

Description: Metals LCS Soil SRM

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI080818-09 **Opened:** 18-AUG-08 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 18-AUG-08 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 18-AUG-09 **Lot Number :** 1010290
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI080818-10 **Opened:** 18-AUG-08 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 18-AUG-08 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 18-AUG-09 **Lot Number :** 1010289
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Standard Logbook

Serial ID:	UI081025-41	**Opened:**	08-JAN-09	**Amount :**	500 mL
Name:	SECOND SOURCE STD -1	**Received:**	25-OCT-08	**Catalog Number :**	SGELMX39-500B
Type:	Source Material	**Expires:**	31-OCT-09	**Lot Number :**	4810407
Employee:	Helen Camello			**Solvent :**	5%HNO3,TR.HF
Supplier:	RICCA				
Description:	SECOND SOURCE STD #1B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID:	UI090121-40	**Opened:**	22-JAN-09	**Amount :**	500 mL
Name:	TRACE ICP Stock PQL St	**Received:**	20-JAN-09	**Catalog Number :**	160543-01-03
Type:	Source Material	**Expires:**	22-JAN-10	**Lot Number :**	1014592
Employee:	Helen Camello			**Solvent :**	+/-0.5%in2%HNO3+TrHF
Supplier:	02si				
Description:	TRACE ICP Stock PQL Standard				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	7.5 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	50 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	7.5 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	75 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Standard Logbook

Serial ID:	UI090209-42	**Opened:**	27-FEB-09	**Amount :**	500 mL
Name:	SI 1000mg/L	**Received:**	09-FEB-09	**Catalog Number :**	060014-02-03
Type:	Source Material	**Expires:**	28-FEB-10	**Lot Number :**	1014829
Employee:	Helen Camello			**Solvent :**	0.3%H2O(NH4)2SiF6
Supplier:	o2si				

Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6

Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID:	UI090320-40	**Opened:**	20-APR-09	**Amount :**	500 mL
Name:	TRACE CALSTD#1A SOUF	**Received:**	20-MAR-09	**Catalog Number :**	HP2270-1-500
Type:	Source Material	**Expires:**	20-APR-10	**Lot Number :**	0907202
Employee:	Helen Camello			**Solvent :**	HNO3
Supplier:	Environmental Express				

Description: Trace Calibration Std #1A

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID:	UI090320-41	**Opened:**	20-APR-09	**Amount :**	500 mL
Name:	TRACE CALSTD#1B SOUF	**Received:**	20-MAR-09	**Catalog Number :**	HP2270-2-500
Type:	Source Material	**Expires:**	20-APR-10	**Lot Number :**	0907201
Employee:	Helen Camello			**Solvent :**	HNO3
Supplier:	Environmental Express				

Description: Trace Calibration Standard #1B

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Standard Logbook

Serial ID:	UI090320-42	**Opened:**	04-MAY-09	**Amount :**	200 mL
Name:	SILICON	**Received:**	16-APR-09	**Catalog Number :**	HP100050-4F
Type:	Source Material	**Expires:**	04-MAY-10	**Lot Number :**	0901403
Employee:	Helen Camello			**Solvent :**	H20/tr HF
Supplier:	ENVIRNMENTAL EXPRESS				
Description:	SILICON 1000mg/L H20/tr HF				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID:	UI090413-12	**Opened:**	13-APR-09	**Amount :**	250 mL
Name:	ICP-MS ICSAB Master B	**Received:**	13-APR-09	**Catalog Number :**	160033-02
Type:	Source Material	**Expires:**	13-APR-10	**Lot Number :**	1015648
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% in 2% HNO3
Supplier:	02SI				
Description:	ICPMS ICSAB Master B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID:	UI090413-13	**Opened:**	13-APR-09	**Amount :**	250 mL
Name:	ICP-MS ICSAB Master C	**Received:**	13-APR-09	**Catalog Number :**	160033-03
Type:	Source Material	**Expires:**	13-APR-10	**Lot Number :**	1013684
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% in 2% HNO3
Supplier:	02SI				
Description:	ICPMS ICSAB Master C				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Standard Logbook

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-11 **Opened:** 10-JUN-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 10-JUN-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 10-JUN-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.12 **Opened:** 30-JUN-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 01-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Standard Logbook

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL

Analyte	Concentration	Analyte	Concentration
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg

Analyte	Concentration	Analyte	Concentration
Selenium	173 mg/kg	Silica	2201 mg/kg
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Standard Logbook

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090629-01 **Opened:** 29-JUN-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 29-JUN-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 30-JUN-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090629-02 **Opened:** 29-JUN-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 29-JUN-09
Type: Intermediate **Expires:** 30-JUN-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090629-07 **Opened:** 29-JUN-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 29-JUN-09
Type: Working **Expires:** 05-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090629-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Standard Logbook

Serial ID: WHG090629-08 **Opened:** 29-JUN-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 29-JUN-09
Type: Working **Expires:** 05-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090629-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090629-09 **Opened:** 29-JUN-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 29-JUN-09
Type: Working **Expires:** 05-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090629-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090629-10 **Opened:** 29-JUN-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 29-JUN-09
Type: Working **Expires:** 05-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090629-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090629-11 **Opened:** 29-JUN-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 29-JUN-09
Type: Working **Expires:** 05-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090629-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Standard Logbook

Serial ID: WHG090629-12 **Opened:** 29-JUN-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 29-JUN-09
Type: Working **Expires:** 05-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090629-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090629-14 **Opened:** 29-JUN-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 29-JUN-09
Type: Working **Expires:** 05-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090630-42 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090630-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090630-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090630-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090630-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090630-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090630-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090630-43 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090630-44 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1 %HNO3 -1143746
Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090630-45 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 -1143746
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090630-46 **Opened:** 30-JUN-09 **Solvent :** 3%HCL AND 1%HNO3 -1143746
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090630-47 **Opened:** 30-JUN-09 **Solvent :** 3%HCL &1%HNO3-1143746
Name: PQL Working Standard **Received:** 22-JAN-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090121-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090121-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Arsenic	7.5 mg/L	2 mL	1000 mL	15 ug/L
UI090121-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090121-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Calcium	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090121-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090121-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Selenium	7.5 mg/L	2 mL	1000 mL	15 ug/L
UI090121-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Sodium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090121-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090121-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090629-04B **Opened:** 29-JUN-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 29-JUN-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 30-JUN-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090630-04AB **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090629-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090629-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090629-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090629-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090629-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090629-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090629-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090629-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090629-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090629-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090629-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090629-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090630-04B **Opened:** 30-JUN-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 01-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090630-05B **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090630-06B **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI080818-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI080818-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI080818-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI080818-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI080818-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI080818-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI080818-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI080818-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI080818-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI080818-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI080818-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI080818-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI080818-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI080818-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI080818-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI080818-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI080818-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI080818-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI080818-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090630-07B **Opened:** 30-JUN-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 01-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090630-08B **Opened:** 30-JUN-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 30-JUN-09
Type: Working **Expires:** 01-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1090957-A
Name: B-KMnO4(VWR)-MER
Type: Reagent/Solvent
Employee: Tara Griffin
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Opened: 09-MAR-09
Received: 09-MAR-09
Expires: 09-MAR-10
Verified: 07-AUG-07

Lot Number : 48162839

Serial ID: 1100716-C **Opened:** 02-APR-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 02-APR-09
Type: Reagent/Solvent **Expires:** 02-OCT-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1125379-C **Opened:** 21-MAY-09
Name: B-KMnO4-MER **Received:** 21-MAY-09
Type: Reagent/Solvent **Expires:** 21-NOV-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.

Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1143705 **Opened:** 29-JUN-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 06-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1143746 **Opened:** 29-JUN-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JUN-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 05-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Carnello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Standard Logbook

Serial ID:	908024-A	**Opened:**	22-DEC-08	**Lot Number :**	48053817
Name:	B-NH2OH.HCl-MER	**Received:**	22-DEC-08		
Type:	Reagent/Solvent	**Expires:**	22-DEC-09		
Employee:	Tara Griffin				
Supplier:	Fisher Scientific				
Description:	Hydroxlyamine Hydrochloride				
Comments:	None				

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2455

Method/Analysis Information

Product: **pH**

Analytical Batch: 880644 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201869922	232367001(CAMO-09-6005) Sample Duplicate (DUP)
1201869923	232347004(CAMO-09-10467) Sample Duplicate (DUP)
1201869924	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHecT LogR pH/ISE.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232347004 (CAMO-09-10467) and 232367001 (CAMO-09-6005).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 1201869922 (CAMO-09-6005), 1201869923 (CAMO-09-10467), 232357001 (CAMO-09-10480) and 232357002 (CAMO-09-10479).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881032	**Method:**	SW846 9012A
Prep Batch :	881030	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201870869	Method Blank (MB)
1201870870	232357001(CAMO-09-10480) Sample Duplicate (DUP)
1201870871	232357002(CAMO-09-10479) Sample Duplicate (DUP)
1201870872	232357001(CAMO-09-10480) Matrix Spike (MS)
1201870873	232357002(CAMO-09-10479) Matrix Spike (MS)
1201870874	232357001(CAMO-09-10480) Matrix Spike Duplicate (MSD)
1201870875	232357002(CAMO-09-10479) Matrix Spike Duplicate (MSD)
1201870876	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232357001 (CAMO-09-10480) and 232357002 (CAMO-09-10479).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201870870 (CAMO-09-10480), 1201870871 (CAMO-09-10479), 232357001 (CAMO-09-10480) and 232357002 (CAMO-09-10479).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Negative Bias
No Chlorinated Cyanide results exceed the Total Cyanide results by more than three times the PQL

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1201870876 (LCS).

Sample Re-analysis
The following samples were re-analyzed due to CCB failure: 1201870871 (CAMO-09-10479), 1201870873 (CAMO-09-10479), 1201870875 (CAMO-09-10479) and 232357002 (CAMO-09-10479).

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	879955	**Method:**	EPA 300.0
Prep Batch :	879954	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201868385	Method Blank (MB)
1201868386	232076001(CAMO-09-6611) Sample Duplicate (DUP)
1201868387	232076001(CAMO-09-6611) Matrix Spike (MS)
1201868388	232076001(CAMO-09-6611) Matrix Spike Duplicate (MSD)
1201868389	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232076001 (CAMO-09-6611).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201868387 (CAMO-09-6611).

Matrix Spike Duplicate (MSD) Recovery Statement
The spike duplicate recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201868388 (CAMO-09-6611).

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232357001 (CAMO-09-10480) and 232357002 (CAMO-09-10479).

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 710465 1201868387 (CAMO-09-6611) and 1201868388 (CAMO-09-6611).

Manual Integrations

Manual integrations were not required for the samples in this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 16July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2455 GEL Work Order: 232357

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2455

Client Sample ID:	CAMO-09-10480	Project:	LANL01004
Sample ID:	232357001	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	11.2%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.9C	H	8.87	0.010	0.100	SU	1	EXF1 06/26/09	1228	880644	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	76.6	282	ug/kg	1	AXC2 07/06/09	1117	881032	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.64	0.338	1.13	mg/kg	1	MAR1 07/09/09	1824	879955	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0845	879954
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 15, 2009

Client SDG: 09-2455

Client Sample ID:	CAMO-09-10479	Project:	LANL01004
Sample ID:	232357002	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09 12:00		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	9.47%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.2C	H	8.65	0.010	0.100	SU	1	EXF1 06/26/09	1233	880644	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	72.2	266	ug/kg	1	AXC2 07/06/09	1249	881032	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	4.55	0.331	1.10	mg/kg	1	MAR1 07/09/09	1853	879955	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0845	879954
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/06/09	0853	881030

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 15, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232357

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis											
Batch 880644											
QC1201869922 232367001 DUP											
pH		H	8.09	H	8.08	SU	0.124		(0%-10%)	EXF1	06/26/09 12:39
QC1201869923 232347004 DUP											
pH		H	9.07	H	8.92	SU	1.67		(0%-10%)		06/26/09 12:25
QC1201869924 LCS											
pH	7.00				7.02	SU		100	(95%-105%)		06/26/09 12:07
Flow Injection Analysis											
Batch 881032											
QC1201870870 232357001 DUP											
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		(+/-247)	AXC2	07/06/09 11:18
QC1201870871 232357002 DUP											
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		(+/-266)		07/06/09 12:49
QC1201870876 LCS											
Cyanide, Total	174000				154000	ug/kg		88.5	(46%-145%)		07/06/09 11:13
QC1201870869 MB											
Cyanide, Total				U	250	ug/kg					07/06/09 11:12
QC1201870872 232357001 MS											
Cyanide, Total	5520	U	ND		5740	ug/kg		104	(50%-130%)		07/06/09 11:19
QC1201870873 232357002 MS											
Cyanide, Total	4760	U	ND		4690	ug/kg		98.6	(50%-130%)		07/06/09 12:50
QC1201870874 232357001 MSD											
Cyanide, Total	4940	U	ND		4940	ug/kg	15.0	100	(0%-30%)		07/06/09 11:20
QC1201870875 232357002 MSD											
Cyanide, Total	5210	U	ND		5260	ug/kg	11.4	101	(0%-30%)		07/06/09 12:51
Ion Chromatography											
Batch 879955											
QC1201868386 232076001 DUP											
Nitrate-N		Hh	1.45	Hh	1.45	mg/kg	0.0736 ^		(+/-1.07)	MAR1	07/09/09 12:37
QC1201868389 LCS											
Nitrate-N	50.0				47.1	mg/kg		94.3	(90%-110%)		07/09/09 11:40
QC1201868385 MB											
Nitrate-N				U	1.00	mg/kg					07/09/09 11:11
QC1201868387 232076001 MS											
Nitrate-N	53.4	Hh	1.45	Hh	48.7	mg/kg		88.5*	(90%-110%)		07/09/09 13:06
QC1201868388 232076001 MSD											
Nitrate-N	53.4	Hh	1.45	Hh	49.0	mg/kg	0.791	89.2*	(0%-20%)		07/09/09 13:35

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

** Analyte is a surrogate compound

< Result is less than value reported

QC Summary

Workorder: 232357

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 15-JUL-2009 04:53

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2455

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**06-JUL-2009 11:06:57**	**OM_7-6-2009_10-57-13**	**148**	**150**	**99**	**(90%-110%)**	**Yes**
CCV	06-JUL-2009 11:21:16	OM_7-6-2009_10-57-13	105	100	105	(90%-110%)	Yes
ICV	**06-JUL-2009 12:43:38**	**OM_7-6-2009_12-35-43**	**153**	**150**	**102**	**(90%-110%)**	**Yes**
CCV	06-JUL-2009 12:57:55	OM_7-6-2009_12-35-43	102	100	102	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**06-JUL-2009 11:08:48**	**OM_7-6-2009_10-57-13**	**-2.21**	**5**	**Yes**
CCB	06-JUL-2009 11:23:06	OM_7-6-2009_10-57-13	-3.02	5	Yes
ICB	**06-JUL-2009 12:45:28**	**OM_7-6-2009_12-35-43**	**-1.68**	**5**	**Yes**
CCB	06-JUL-2009 12:59:46	OM_7-6-2009_12-35-43	-1.6	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 15-JUL-2009 04:53

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2455**

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**09-JUL-2009 10:13:00**	**090709**	**4.7057**	**5**	**94**	**(90%-110%)**	**Yes**
CCV	09-JUL-2009 15:02:00	090709	7.3099	7.5	98	(90%-110%)	Yes
CCV	09-JUL-2009 19:22:00	090709	4.7231	5	95	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**09-JUL-2009 10:42:00**	**090709**	**0**	**0.1**	**Yes**
CCB	09-JUL-2009 15:31:00	090709	0	0.1	Yes
CCB	09-JUL-2009 19:51:00	090709	0	0.1	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881030

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870876	URF071009-01	.25	g
MS	1201870872	URF1091135-02	.025	mL
MS	1201870873	URF1091135-02	.025	mL
MSD	1201870874	URF1091135-02	.025	mL
MSD	1201870875	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870869		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
LCS	1201870876		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.25 g	25 mL	100	SOIL
SAMPLE	232347001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232347002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232347003		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232347004		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232357001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
DUP	1201870870	232357001	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
MS	1201870872	232357001	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.51 g	25 mL	49.01961	SOIL
MSD	1201870874	232357001	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232357002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
DUP	1201870871	232357002	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
MS	1201870873	232357002	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.58 g	25 mL	43.10345	SOIL
MSD	1201870875	232357002	SW846 9010B Prep	06-JUL-2009 08:53	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232367001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232367002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232367003		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232367004		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232367005		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232367006		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232367007		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232367008		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232367009		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232367010		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232367011		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232424001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232426001		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232426002		SW846 9010B Prep	06-JUL-2009 08:53	>12	0.52 g	25 mL	48.07692	SOIL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description	Comments
090615-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN090702-07	.0375 mL	150 ppb CN Distilled ICV Standard	
1113815-C	1.25 mL	0.8N H3NO3S	
1095846-C	2.5 mL	50% H2SO4 CN Prep	
1095854-C	1 mL	51% MgCl2 Soln	
1091828-C	1.25 mL	Bismuth Nitrate Solution	

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/6/2009 10:59:47	OM_7-6-2009_10-57-13
150 ppb		1	axc2	7/6/2009 11:00:39	OM_7-6-2009_10-57-13
100 ppb		1	axc2	7/6/2009 11:01:32	OM_7-6-2009_10-57-13
50 ppb		1	axc2	7/6/2009 11:02:25	OM_7-6-2009_10-57-13
10 ppb		1	axc2	7/6/2009 11:03:18	OM_7-6-2009_10-57-13
CRDL 5.0 ppb		1	axc2	7/6/2009 11:04:12	OM_7-6-2009_10-57-13
ICAL-00		1	axc2	7/6/2009 11:05:06	OM_7-6-2009_10-57-13
ICV		1	axc2	7/6/2009 11:06:57	OM_7-6-2009_10-57-13
ICB		1	axc2	7/6/2009 11:08:48	OM_7-6-2009_10-57-13
CRDL		1	axc2	7/6/2009 11:10:37	OM_7-6-2009_10-57-13
1201870869	881032	1	axc2	7/6/2009 11:12:27	OM_7-6-2009_10-57-13
1201870876	881032	50	axc2	7/6/2009 11:13:21	OM_7-6-2009_10-57-13
232347001	881032	1	axc2	7/6/2009 11:14:14	OM_7-6-2009_10-57-13
232347002	881032	1	axc2	7/6/2009 11:15:07	OM_7-6-2009_10-57-13
232347003	881032	1	axc2	7/6/2009 11:16:00	OM_7-6-2009_10-57-13
232347004	881032	1	axc2	7/6/2009 11:16:53	OM_7-6-2009_10-57-13
232357001	881032	1	axc2	7/6/2009 11:17:46	OM_7-6-2009_10-57-13
1201870870	881032	1	axc2	7/6/2009 11:18:39	OM_7-6-2009_10-57-13
1201870872	881032	1	axc2	7/6/2009 11:19:31	OM_7-6-2009_10-57-13
1201870874	881032	1	axc2	7/6/2009 11:20:23	OM_7-6-2009_10-57-13
CCV		1	axc2	7/6/2009 11:21:16	OM_7-6-2009_10-57-13
CCB		1	axc2	7/6/2009 11:23:06	OM_7-6-2009_10-57-13
232357002*	881032	1	axc2	7/6/2009 11:24:55	OM_7-6-2009_10-57-13
1201870871*	881032	1	axc2	7/6/2009 11:25:46	OM_7-6-2009_10-57-13
1201870873*	881032	1	axc2	7/6/2009 11:26:38	OM_7-6-2009_10-57-13
1201870875*	881032	1	axc2	7/6/2009 11:27:30	OM_7-6-2009_10-57-13
232367001*	881032	1	axc2	7/6/2009 11:28:21	OM_7-6-2009_10-57-13
232367002*	881032	1	axc2	7/6/2009 11:29:15	OM_7-6-2009_10-57-13
232367003*	881032	1	axc2	7/6/2009 11:30:08	OM_7-6-2009_10-57-13
232367004*	881032	1	axc2	7/6/2009 11:31:02	OM_7-6-2009_10-57-13
232367005*	881032	1	axc2	7/6/2009 11:31:55	OM_7-6-2009_10-57-13
232367006*	881032	1	axc2	7/6/2009 11:32:48	OM_7-6-2009_10-57-13
CCV		1	axc2	7/6/2009 11:33:41	OM_7-6-2009_10-57-13

Author: axc2 Date : 7/6/2009

Original Run Filename: OM_7-6-2009_10-57-13.OMN created 7/6/2009 10:57:13
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-6-2009_10-57-13.OMN last modified 7/6/2009 11:34:45
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090706-01	1	S1	200	8.64	7/6/2009@10:59:47			200 ppb
WCN090706-02	1	S2	150	6.60	7/6/2009@11:00:39			150 ppb
WCN090706-03	1	S3	100	4.45	7/6/2009@11:01:32			100 ppb
WCN090706-04	1	S4	50.0	2.29	7/6/2009@11:02:25			50 ppb
WCN090706-05	1	S5	10.0	0.493	7/6/2009@11:03:18			10 ppb
WCN090706-06	1	S6	5.00	0.340	7/6/2009@11:04:12			CRDL 5.0 ppb
WCN090706-08	1	S7	0.00	-0.0232	7/6/2009@11:05:06			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99981 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090706-07	1	S8	148	6.46	7/6/2009@11:06:57			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-1.4 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-1.4 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090706-08	1	S7	-2.21	-0.0172	7/6/2009@11:08:48			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.21 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.21 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090706-06	1	S6	6.12	0.343	7/6/2009@11:10:37			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.12 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.12 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870869|881032|MB	1	1	0.257	0.0894	7/6/2009@11:12:27			
1201870876||LCS	1	2	30.8	1.41	7/6/2009@11:13:21		50.00	
232347001	1	3	0.215	0.0875	7/6/2009@11:14:14			
232347002	1	4	-0.0230	0.0773	7/6/2009@11:15:07			
232347003	1	5	-0.321	0.0644	7/6/2009@11:16:00			
232347004	1	6	3.52	0.230	7/6/2009@11:16:53			
232357001	1	7	-0.298	0.0654	7/6/2009@11:17:46			
1201870870||DUP	1	8	-0.473	0.0578	7/6/2009@11:18:39			
1201870872||MS	1	9	104	4.59	7/6/2009@11:19:31			
1201870874||MSD	1	10	100	4.41	7/6/2009@11:20:23			
WCN090706-03	1	S3	105	4.61	7/6/2009@11:21:16			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	4.9 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	4.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090706-08	1	S7	-3.02	-0.0520	7/6/2009@11:23:06			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-3.02 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-3.02 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232357002	1	11	-0.198	0.0697	7/6/2009@11:24:55			
1201870871||DUP	1	12	0.0866	0.0820	7/6/2009@11:25:46			
1201870873||MS	1	13	102	4.46	7/6/2009@11:26:38			
1201870875||MSD	1	14	103	4.51	7/6/2009@11:27:30			
232367001	1	15	0.563	0.103	7/6/2009@11:28:21			
232367002	1	16	0.416	0.0963	7/6/2009@11:29:15			
232367003	1	17	-0.706	0.0478	7/6/2009@11:30:08			
232367004	1	18	0.168	0.0855	7/6/2009@11:31:02			
232367005	1	19	0.462	0.0982	7/6/2009@11:31:55			
232367006	1	20	2.28	0.177	7/6/2009@11:32:48			
WCN090706-03	1	S3	110	4.84	7/6/2009@11:33:41			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	10.2 > 10.0					
		Message	CCV Failed					
		Action	Stop Run					
DQM Test: < - Percent Relative Difference								
		Result:	10.2 > 10.0					
		Message	CCV Passed					
		Action	Continue					

Analyte Properties Table for OM_7-6-2009_10-57-13.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/6/2009

Channel 1: Current View

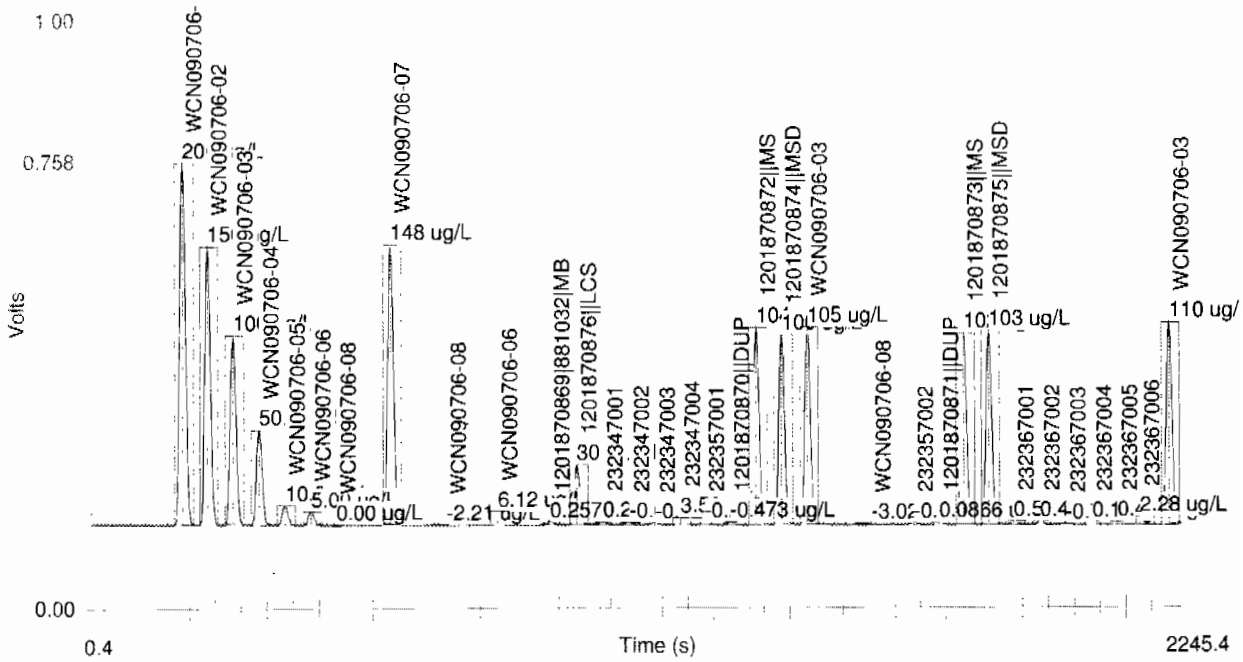

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.64	0.614	0.9	7/6/2009	11:00:51
2	150	1	6.60	0.472	-0.7	7/6/2009	11:01:43
3	100	1	4.45	0.322	-1.3	7/6/2009	11:02:35
4	50.0	1	2.29	0.163	-2.2	7/6/2009	11:03:28
5	10.0	1	0.493	0.0339	3.6	7/6/2009	11:04:21
6	5.00	1	0.340	0.0230	-15.3	7/6/2009	11:05:15
7	0.00	1	-0.0232	-0.00204		7/6/2009	11:06:09

Figure 1: TCYANIDE

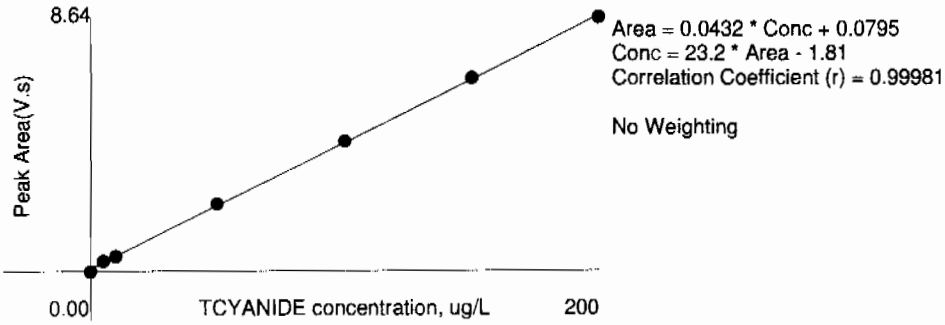

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/6/2009 12:36:28	OM_7-6-2009_12-35-43
150 ppb		1	axc2	7/6/2009 12:37:20	OM_7-6-2009_12-35-43
100 ppb		1	axc2	7/6/2009 12:38:13	OM_7-6-2009_12-35-43
50 ppb		1	axc2	7/6/2009 12:39:06	OM_7-6-2009_12-35-43
10 ppb		1	axc2	7/6/2009 12:39:59	OM_7-6-2009_12-35-43
CRDL 5.0 ppb		1	axc2	7/6/2009 12:40:53	OM_7-6-2009_12-35-43
ICAL-00		1	axc2	7/6/2009 12:41:47	OM_7-6-2009_12-35-43
ICV		1	axc2	7/6/2009 12:43:38	OM_7-6-2009_12-35-43
ICB		1	axc2	7/6/2009 12:45:28	OM_7-6-2009_12-35-43
CRDL		1	axc2	7/6/2009 12:47:19	OM_7-6-2009_12-35-43
232357002	881032	1	axc2	7/6/2009 12:49:08	OM_7-6-2009_12-35-43
1201870871	881032	1	axc2	7/6/2009 12:49:59	OM_7-6-2009_12-35-43
1201870873	881032	1	axc2	7/6/2009 12:50:51	OM_7-6-2009_12-35-43
1201870875	881032	1	axc2	7/6/2009 12:51:43	OM_7-6-2009_12-35-43
232367001	881032	1	axc2	7/6/2009 12:52:35	OM_7-6-2009_12-35-43
232367002	881032	1	axc2	7/6/2009 12:53:29	OM_7-6-2009_12-35-43
232367003	881032	1	axc2	7/6/2009 12:54:23	OM_7-6-2009_12-35-43
232367004	881032	1	axc2	7/6/2009 12:55:16	OM_7-6-2009_12-35-43
232367005	881032	1	axc2	7/6/2009 12:56:10	OM_7-6-2009_12-35-43
232367006	881032	1	axc2	7/6/2009 12:57:03	OM_7-6-2009_12-35-43
CCV		1	axc2	7/6/2009 12:57:55	OM_7-6-2009_12-35-43
CCB		1	axc2	7/6/2009 12:59:46	OM_7-6-2009_12-35-43
232367007	881032	1	axc2	7/6/2009 13:01:35	OM_7-6-2009_12-35-43
232367008	881032	1	axc2	7/6/2009 13:02:27	OM_7-6-2009_12-35-43
232367009	881032	1	axc2	7/6/2009 13:03:20	OM_7-6-2009_12-35-43
232367010	881032	1	axc2	7/6/2009 13:04:13	OM_7-6-2009_12-35-43
232367011	881032	1	axc2	7/6/2009 13:05:06	OM_7-6-2009_12-35-43
232424001	881032	1	axc2	7/6/2009 13:05:59	OM_7-6-2009_12-35-43
232426001	881032	1	axc2	7/6/2009 13:06:51	OM_7-6-2009_12-35-43
232426002	881032	1	axc2	7/6/2009 13:07:43	OM_7-6-2009_12-35-43
CCV		1	axc2	7/6/2009 13:08:36	OM_7-6-2009_12-35-43
CCB		1	axc2	7/6/2009 13:10:27	OM_7-6-2009_12-35-43

Author: axc2 Date : 7/6/2009

Original Run Filename: OM_7-6-2009_12-35-43.OMN created 7/6/2009 12:35:43
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-6-2009_12-35-43.OMN last modified 7/6/2009 13:11:31
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090706-01	1	S1	200	11.2	7/6/2009@12:36:28			200 ppb
WCN090706-02	1	S2	150	8.46	7/6/2009@12:37:20			150 ppb
WCN090706-03	1	S3	100	5.50	7/6/2009@12:38:13			100 ppb
WCN090706-04	1	S4	50.0	2.96	7/6/2009@12:39:06			50 ppb
WCN090706-05	1	S5	10.0	0.632	7/6/2009@12:39:59			10 ppb
WCN090706-06	1	S6	5.00	0.451	7/6/2009@12:40:53			CRDL 5.0 ppb
WCN090706-08	1	S7	0.00	1.43e-4	7/6/2009@12:41:47			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99980 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090706-07	1	S8	153	8.57	7/6/2009@12:43:38			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	2.0 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.0 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090706-08	1	S7	-1.68	-0.00459	7/6/2009@12:45:28			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.68 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.68 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090706-06	1	S6	6.79	0.465	7/6/2009@12:47:19			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.79 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.79 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
232357002|881032|	1	11	-0.166	0.0795	7/6/2009@12:49:08			
1201870871||DUP	1	12	0.0193	0.0898	7/6/2009@12:49:59			
1201870873||MS	1	13	98.6	5.55	7/6/2009@12:50:51			
1201870875||MSD	1	14	101	5.68	7/6/2009@12:51:43			
232367001	1	15	0.648	0.125	7/6/2009@12:52:35			
232367002	1	16	0.126	0.0958	7/6/2009@12:53:29			
232367003	1	17	-1.51	0.00486	7/6/2009@12:54:23			
232367004	1	18	0.173	0.0983	7/6/2009@12:55:16			
232367005	1	19	0.178	0.0986	7/6/2009@12:56:10			
232367006	1	20	-0.739	0.0478	7/6/2009@12:57:03			
WCN090706-03	1	S3	102	5.73	7/6/2009@12:57:55			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	1.8 < 10.0					

		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	1.8 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090706-08	1	S7	-1.60	0.00	7/6/2009@12:59:46			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-1.60 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-1.60 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232367007	1	21	3.20	0.266	7/6/2009@13:01:35			
232367008	1	22	2.56	0.231	7/6/2009@13:02:27			
232367009	1	23	1.63	0.179	7/6/2009@13:03:20			
232367010	1	24	0.232	0.102	7/6/2009@13:04:13			
232367011	1	25	-0.464	0.0630	7/6/2009@13:05:06			
232424001	1	26	0.797	0.133	7/6/2009@13:05:59			
232426001	1	27	0.0603	0.0921	7/6/2009@13:06:51			
232426002	1	28	0.752	0.130	7/6/2009@13:07:43			
WCN090706-03	1	S3	103	5.81	7/6/2009@13:08:36			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	3.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	3.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090706-08	1	S7	-2.53	-0.0517	7/6/2009@13:10:27			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-2.53 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-2.53 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_7-6-2009_12-35-43.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/6/2009

Channel 1: Current View

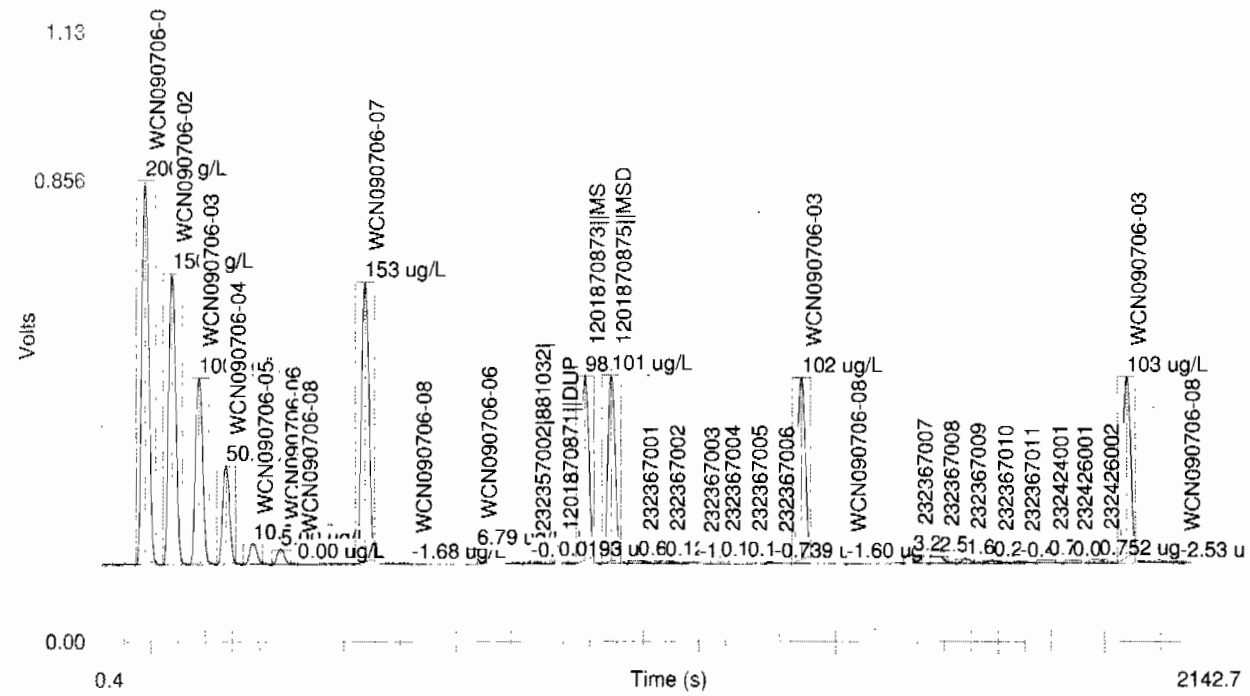

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	11.2	0.709	0.0	7/6/2009	12:37:32
2	150	1	8.46	0.536	-0.7	7/6/2009	12:38:24
3	100	1	5.50	0.344	2.3	7/6/2009	12:39:17
4	50.0	1	2.96	0.183	-3.4	7/6/2009	12:40:09
5	10.0	1	0.632	0.0371	2.0	7/6/2009	12:41:03
6	5.00	1	0.451	0.0264	-22.7	7/6/2009	12:41:56
7	0.00	1	1.43e-4	0.00246		7/6/2009	12:42:51

Figure 1: TCYANIDE

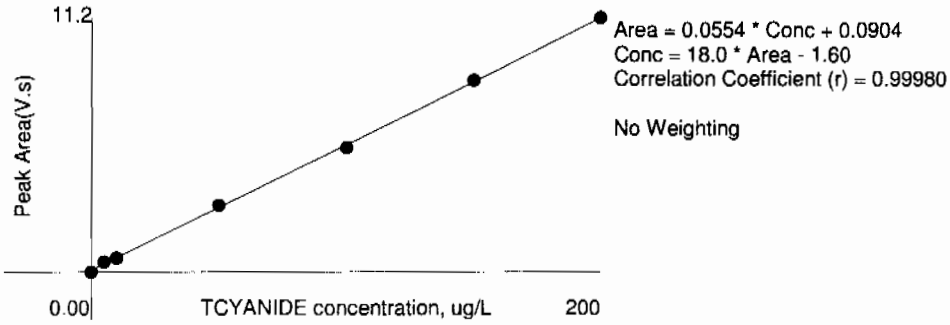

Ion Chromatography

Prep LogBook

Analyst: MAR1 Verified by:_____

Batch: 879954

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201868389	UIC090627SPK	.8	mL
MS	1201868387	UIC090627SPK	.8	mL
MSD	1201868388	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201868385		EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
LCS	1201868389		EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232076001		EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
DUP	1201868386	232076001	EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
MS	1201868387	232076001	EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
MSD	1201868388	232076001	EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232076002		EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232076003		EPA 300.0 PREP	09-JUL-2009 08:45	4.01 g	40 mL	9.97506	SOIL
SAMPLE	232079001		EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232079002		EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232079003		EPA 300.0 PREP	09-JUL-2009 08:45	4.02 g	40 mL	9.95025	SOIL
SAMPLE	232079004		EPA 300.0 PREP	09-JUL-2009 08:45	4.02 g	40 mL	9.95025	SOIL
SAMPLE	232079005		EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232357001		EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL
SAMPLE	232357002		EPA 300.0 PREP	09-JUL-2009 08:45	4 g	40 mL	10	SOIL

Comments

This is runlog for Sequence 090707.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	07/03/09 22:08		1	090707	MAR1
ICAL-06	07/03/09 22:41		1	090707	MAR1
ICAL-05	07/03/09 23:14		1	090707	MAR1
ICAL-04	07/03/09 23:47		1	090707	MAR1

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE085;300;9058

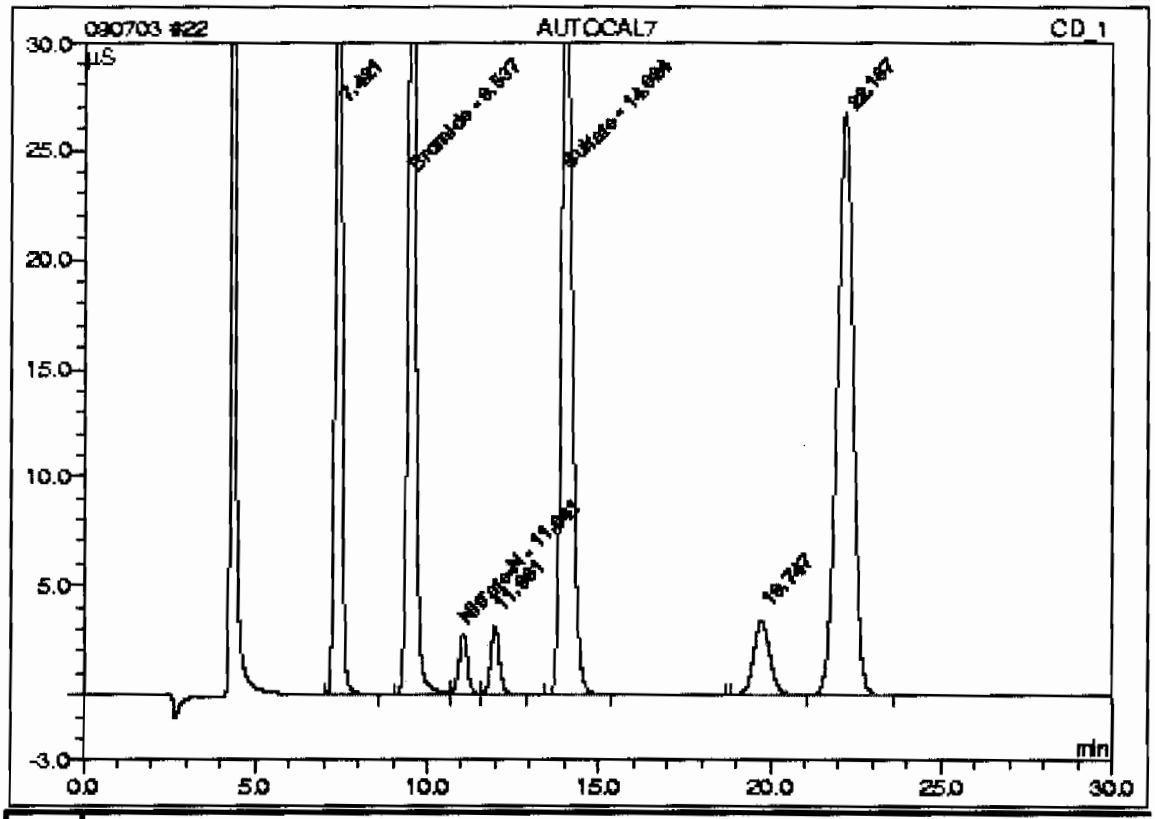

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	20.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	5.0000	n.a.	n.a.	n.a.	n.a.
2	9.54	Bromide	5.0000	5.0000		10.49618	20.17
n.a.	n.a.	Chlorate	5.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	10.0000	10.0000		0.81946	1.58
5	14.02	Sulfate	40.0000	40.0000		12.51803	24.06
Total:				55.0000	0.000	23.834	45.81

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

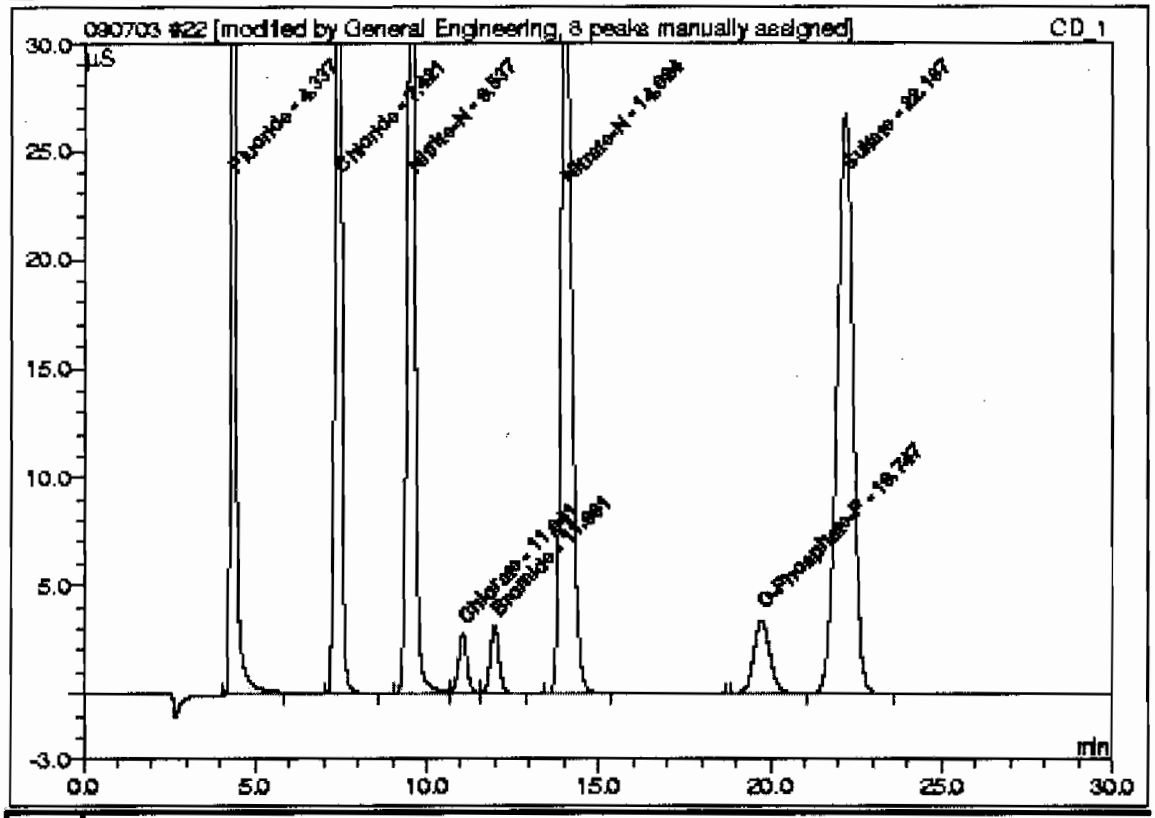

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	10.0000	10.0444	*	6.95356	11.79
2	7.42	Chloride	20.0000	20.3404		10.85875	18.41
3	9.54	Nitrite-N	10.0000	10.0541		10.49618	17.80
4	11.04	Chlorate	5.0000	4.9982		0.81946	1.39
5	11.98	Bromide	5.0000	5.0134		0.92846	1.57
6	14.02	Nitrate-N	10.0000	10.1573		12.51803	21.22
7	19.75	O-Phosphate-P	5.0000	5.0143		1.85201	3.14
8	22.19	Sulfate	40.0000	40.5382		14.55536	24.68
Total:				106.1605	0.000	59.982	100.00

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE085;300;9056

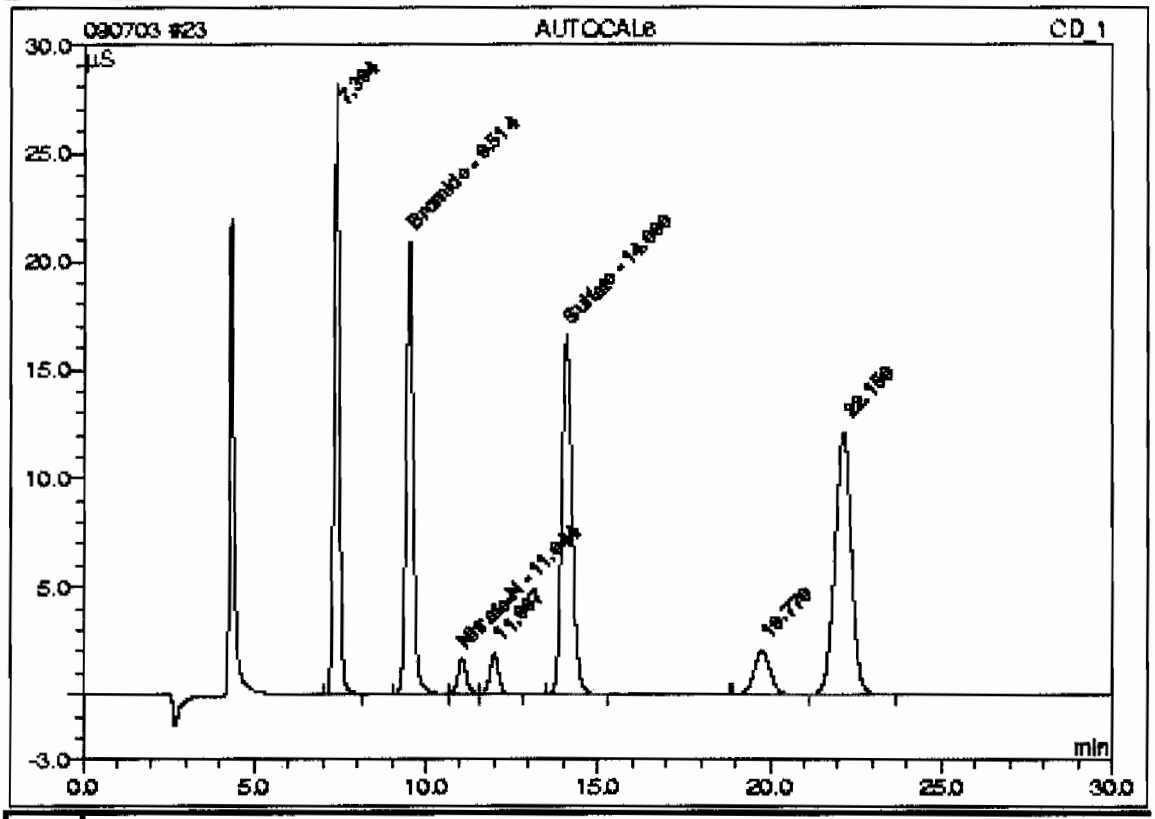

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	3.0000	n.a.	n.a.	n.a.	n.a.
2	9.51	Bromide	3.0000	2.6148		5.08735	20.64
n.a.	n.a.	Chlorate	3.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	5.0000	5.6894		0.49447	2.01
5	14.08	Sulfate	20.0000	18.8591		5.72345	23.22
Total:				27.1634	0.000	11.305	45.87

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE0816;300;9058

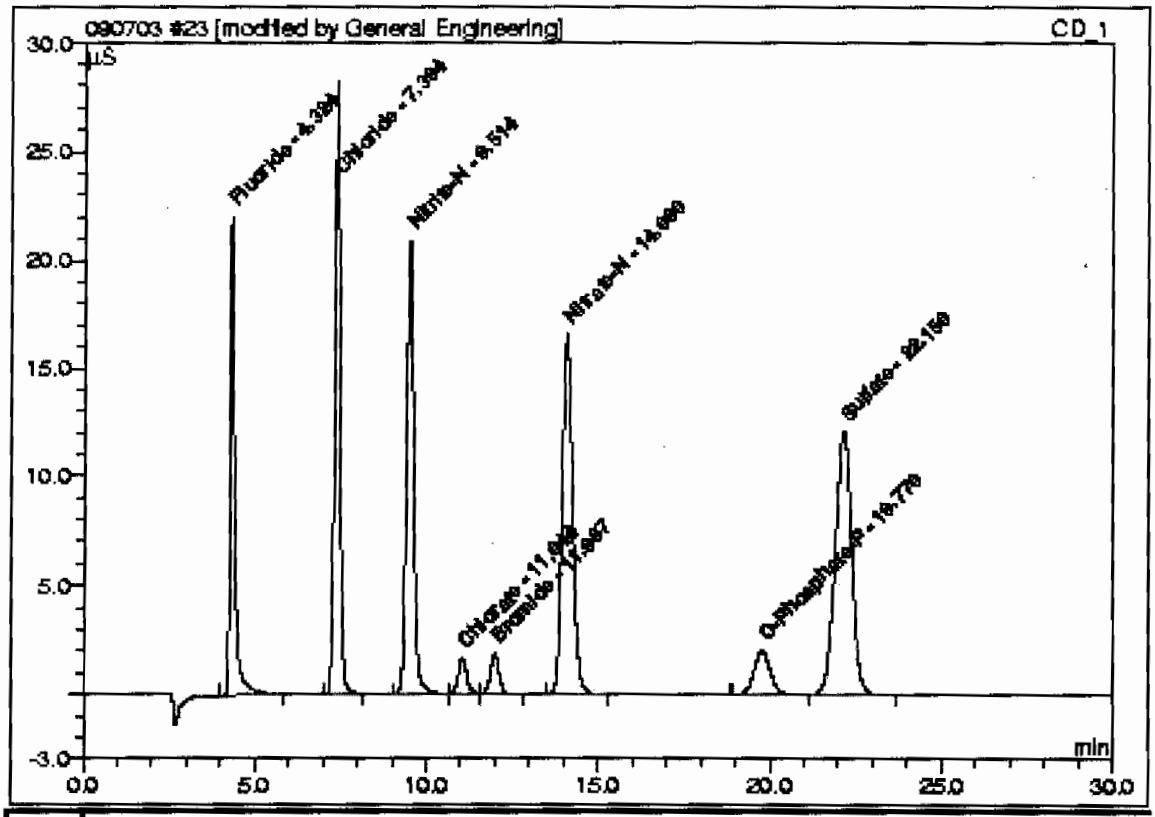

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	5.0000	4.9254	*	3.38643	12.09
2	7.39	Chloride	10.0000	9.3510		4.93051	17.59
3	9.51	Nitrite-N	5.0000	4.9036		5.08735	18.15
4	11.04	Chlorate	3.0000	3.0238		0.49447	1.76
5	11.99	Bromide	3.0000	3.0288		0.55878	1.99
6	14.08	Nitrate-N	5.0000	4.6989		5.72345	20.42
7	19.77	O-Phosphate-P	3.0000	3.0156		1.10727	3.95
8	22.15	Sulfate	20.0000	18.9608		6.74477	24.06
Total:				51.9078	0.000	28.033	100.00

24 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703sn	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

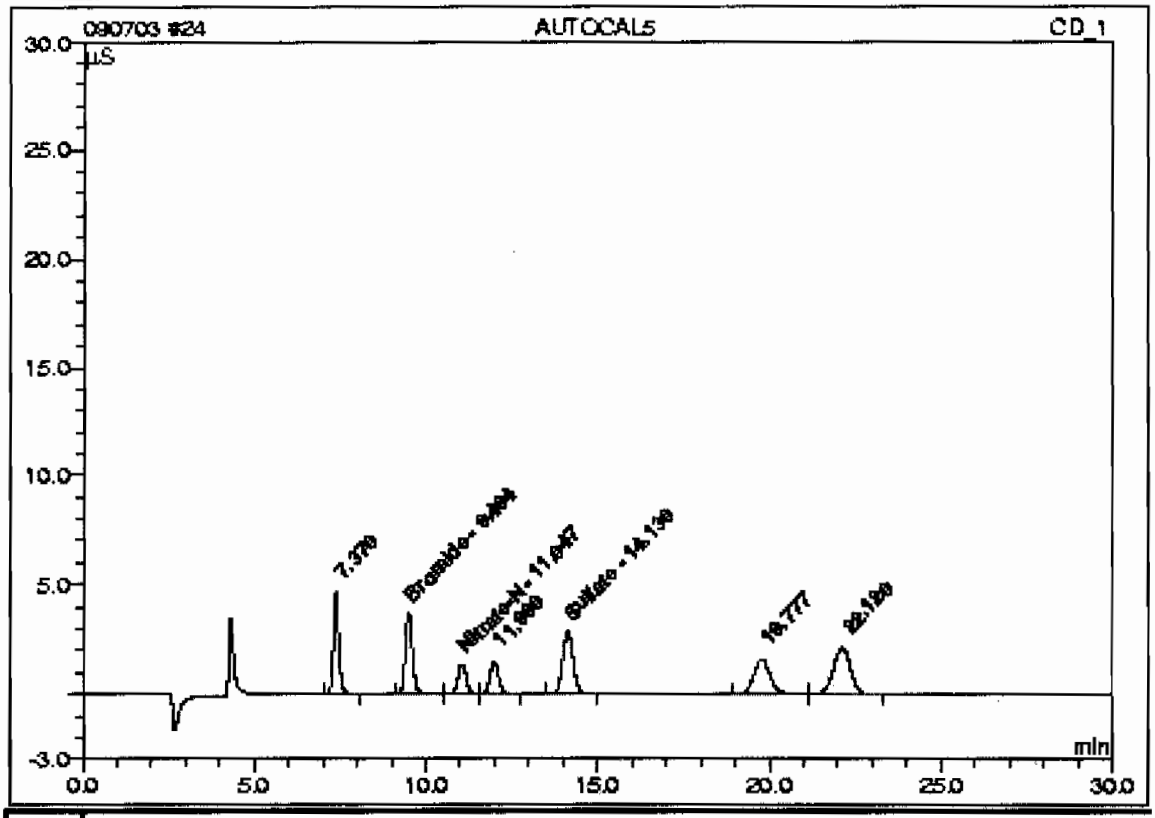

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	2.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	2.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	2.5000	1.1051		0.92663	15.98
n.a.	n.a.	Chlorate	2.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	1.0000	3.6480		0.40624	7.01
5	14.13	Sulfate	4.0000	3.8794		1.01074	17.44
Total:				8.6325	0.000	2.344	40.43

24 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9058

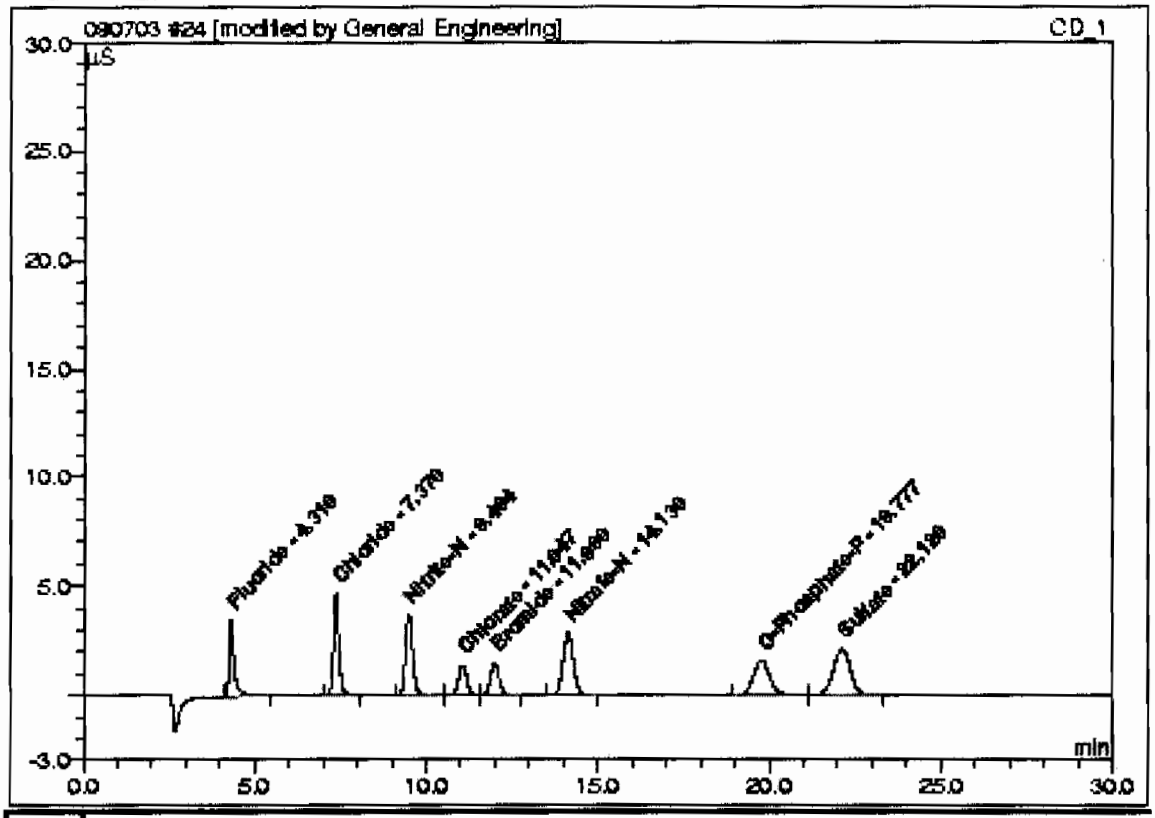

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	1.0000	0.9326	*	0.60409	9.44
2	7.37	Chloride	2.0000	1.7967		0.85540	13.36
3	9.49	Nitrite-N	1.0000	0.9416		0.92663	14.48
4	11.05	Chlorate	2.5000	2.4878		0.40624	6.35
5	11.99	Bromide	2.5000	2.4502		0.45103	7.05
6	14.13	Nitrate-N	1.0000	0.9129		1.01074	15.79
7	19.78	O-Phosphate-P	2.5000	2.4771		0.90660	14.16
8	22.12	Sulfate	4.0000	3.7545		1.24042	19.38
Total:				15.7534	0.000	6.401	100.00

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

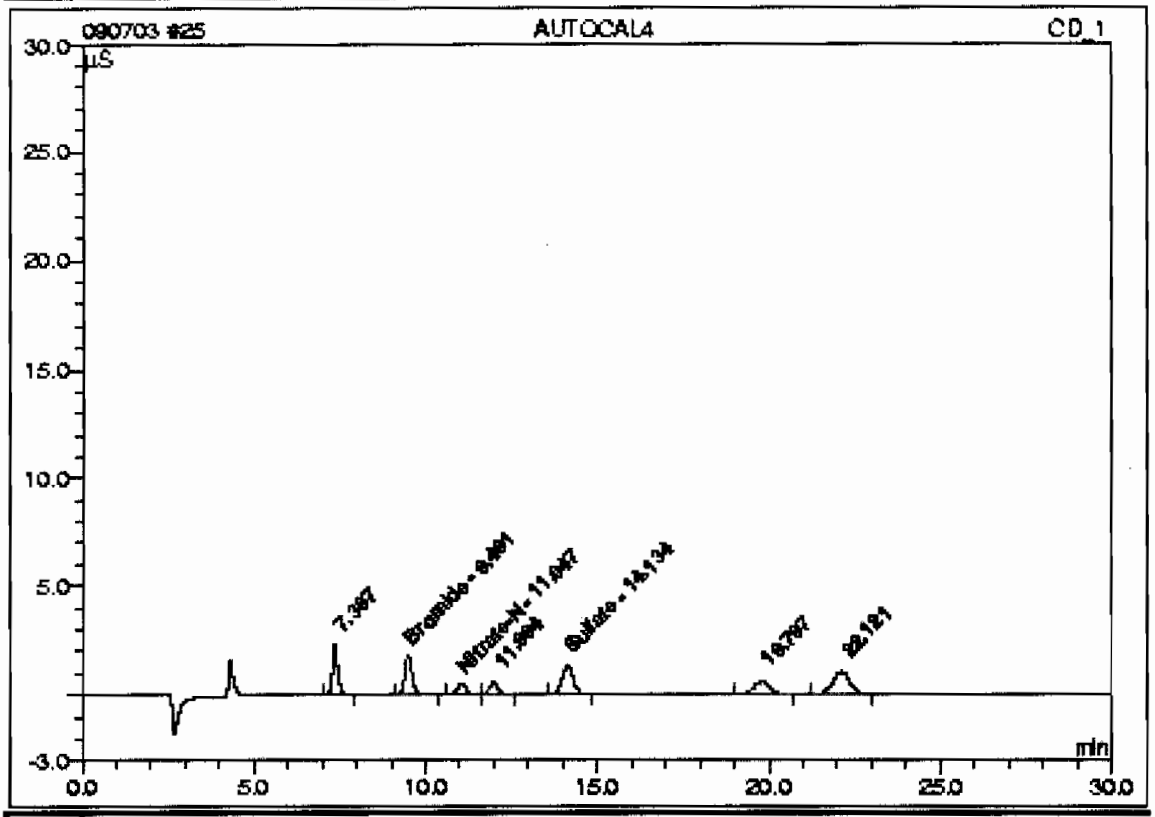

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	1.0000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	1.0000	0.9160		0.44459	16.96
n.a.	n.a.	Chlorate	1.0000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.5000	0.1296		0.15634	5.97
5	14.13	Sulfate	2.0000	2.1573		0.49242	18.79
Total:				3.2029	0.000	1.093	41.72

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

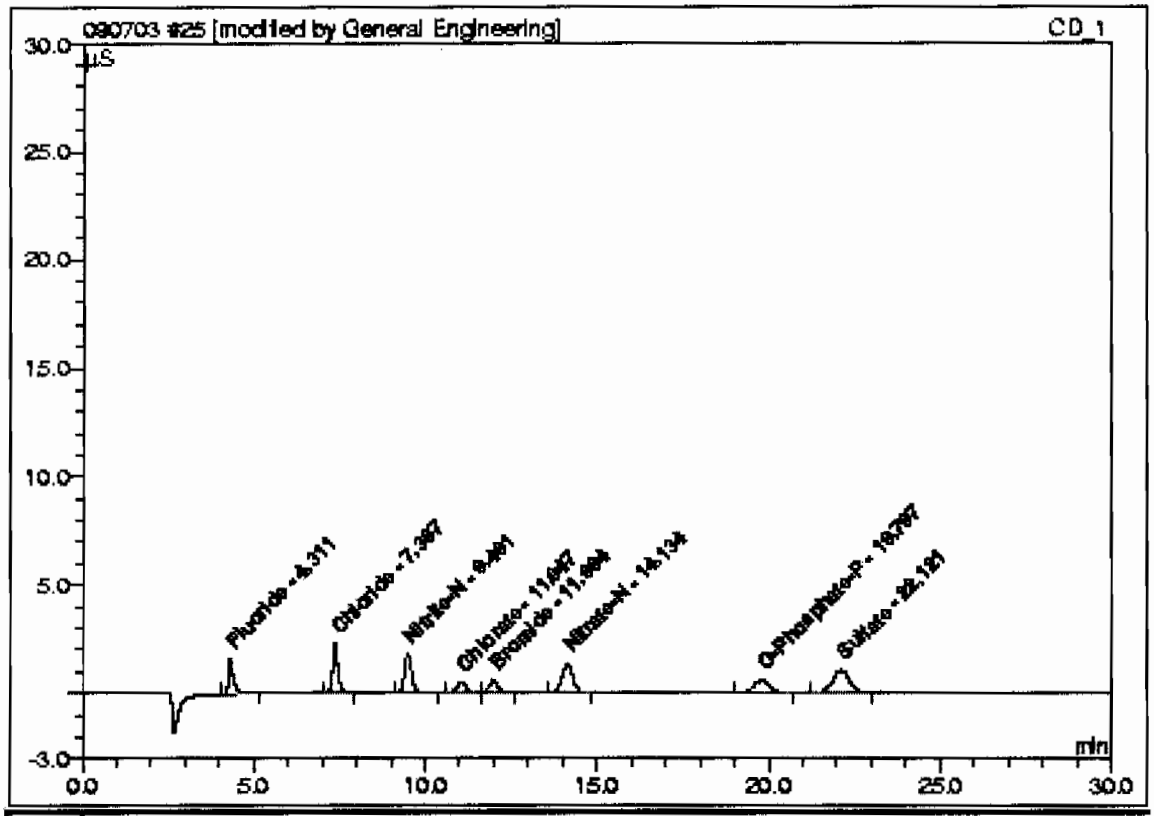

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.5000	0.4772	*	0.28671	9.86
2	7.37	Chloride	1.0000	0.9876		0.41893	14.41
3	9.49	Nitrite-N	0.5000	0.4826		0.44459	15.29
4	11.05	Chlorate	1.0000	0.9695		0.15634	5.38
5	11.99	Bromide	1.0000	0.9693		0.17517	6.02
6	14.13	Nitrate-N	0.5000	0.4966		0.49242	16.94
7	19.80	O-Phosphate-P	1.0000	0.9414		0.33440	11.50
8	22.12	Sulfate	2.0000	1.9824		0.59899	20.60
Total:				7.3065	0.000	2.908	100.00

This is runlog for Sequence 090703.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-03	07/04/09 00:20		1	090703	MAR1
ICAL-02	07/04/09 00:53		1	090703	MAR1
ICAL-01	07/04/09 01:26		1	090703	MAR1
ICV	07/04/09 01:59		1	090703	MAR1
ICB	07/04/09 02:32		1	090703	MAR1

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

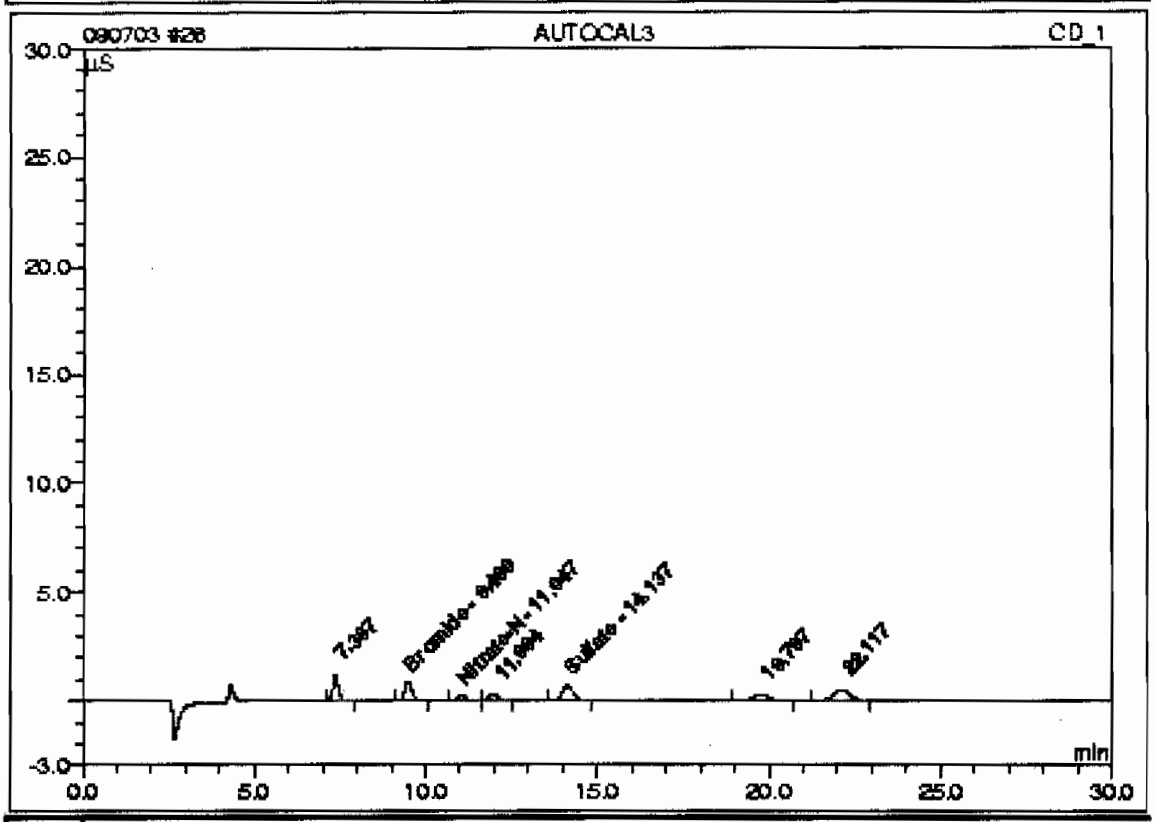

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.5000	0.7242		0.21812	16.45
n.a.	n.a.	Chlorate	0.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.2500	-0.6565		0.07808	5.89
5	14.14	Sulfate	1.0000	1.2980		0.24968	18.83
Total:				1.3557	0.000	0.546	41.17

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

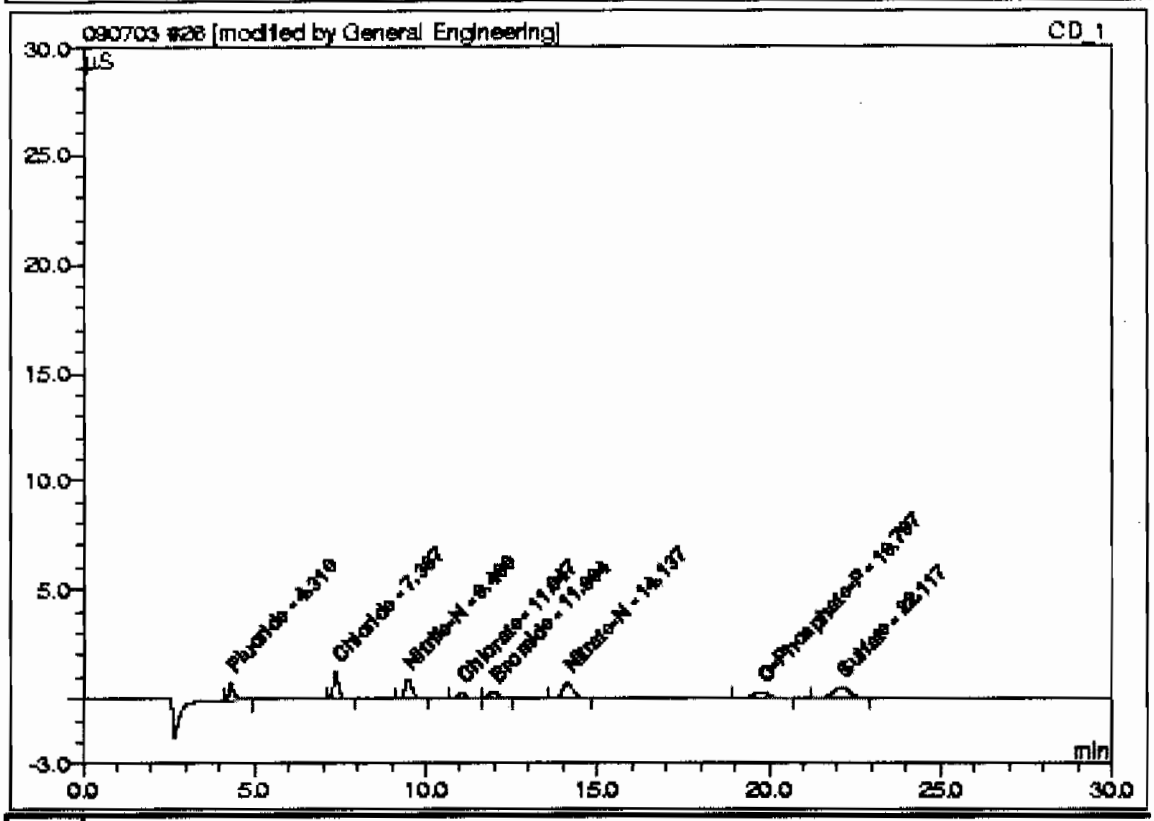

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.2500	0.2638	*	0.13800	9.43
2	7.37	Chloride	0.5000	0.6284		0.22515	15.38
3	9.49	Nitrite-N	0.2500	0.2669		0.21812	14.90
4	11.05	Chlorate	0.5000	0.4940		0.07808	5.33
5	11.99	Bromide	0.5000	0.4991		0.08759	5.98
6	14.14	Nitrate-N	0.2500	0.3016		0.24968	17.05
7	19.80	O-Phosphate-P	0.5000	0.4965		0.16491	11.26
8	22.12	Sulfate	1.0000	1.1634		0.30252	20.66
Total:				4.1037	0.000	1.464	100.00

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

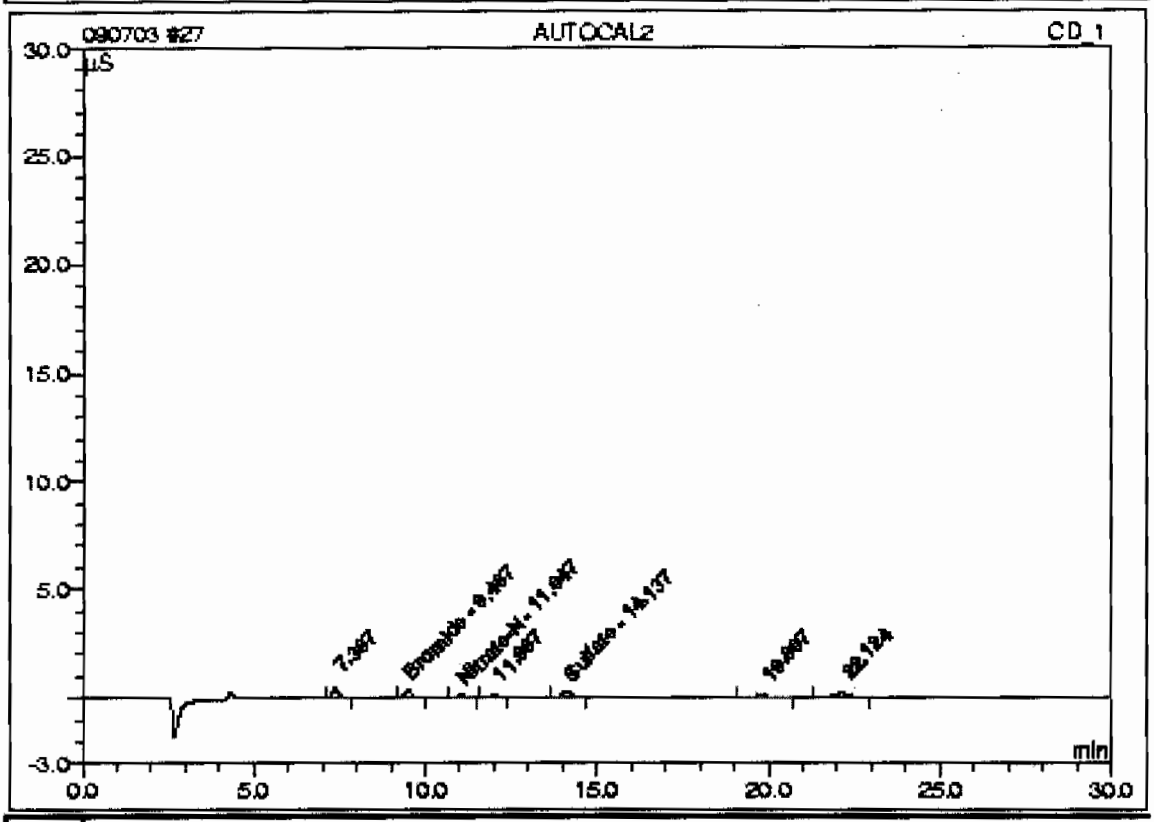

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.2000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.2000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.2000	0.5534		0.08703	16.21
n.a.	n.a.	Chlorate	0.2000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.1000	-0.9832		0.03083	5.74
5	14.14	Sulfate	0.4000	0.7269		0.10053	18.72
Total:				0.2971	0.000	0.218	40.67

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

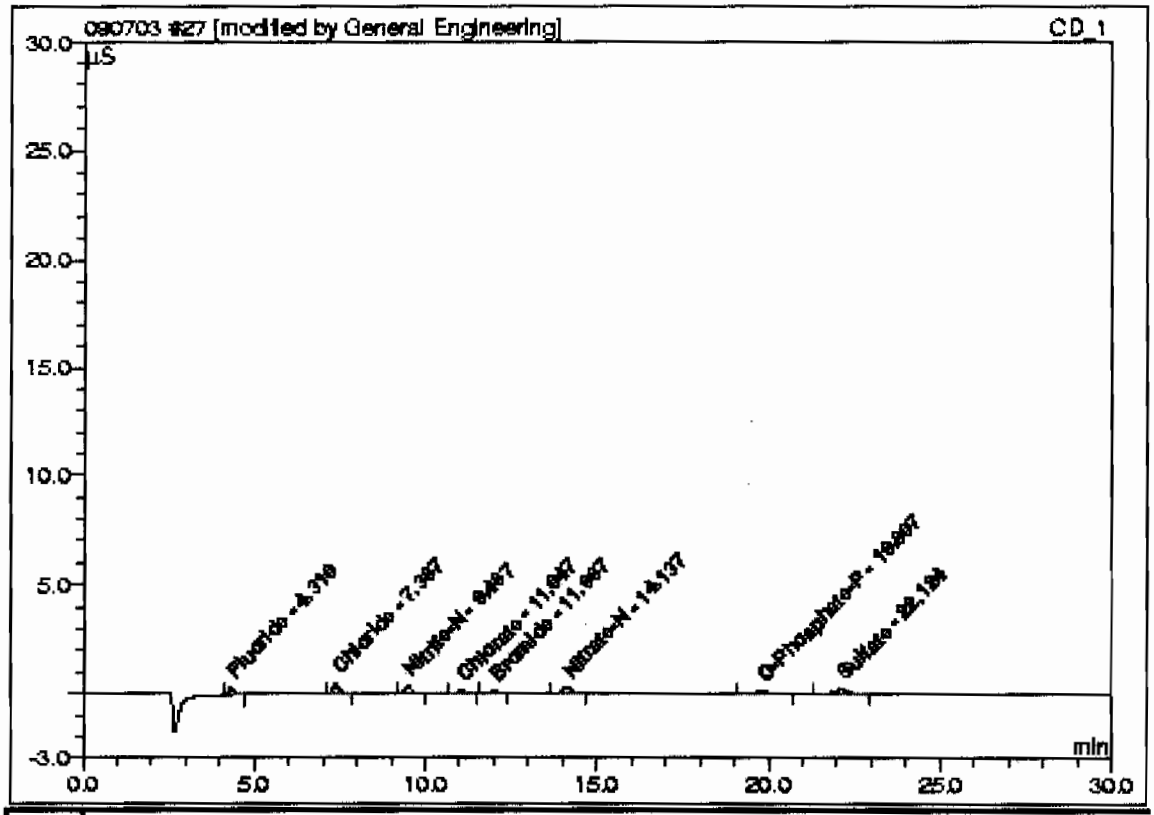

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.1000	0.1408	*	0.05234	8.88
2	7.37	Chloride	0.2000	0.3848		0.09372	15.91
3	9.49	Nitrite-N	0.1000	0.1421		0.08703	14.77
4	11.05	Chlorate	0.2000	0.2070		0.03083	5.23
5	11.99	Bromide	0.2000	0.2104		0.03382	5.74
6	14.14	Nitrate-N	0.1000	0.1817		0.10053	17.06
7	19.81	O-Phosphate-P	0.2000	0.2212		0.06603	11.21
8	22.12	Sulfate	0.4000	0.6729		0.12497	21.21
Total:				2.1609	0.000	0.589	100.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

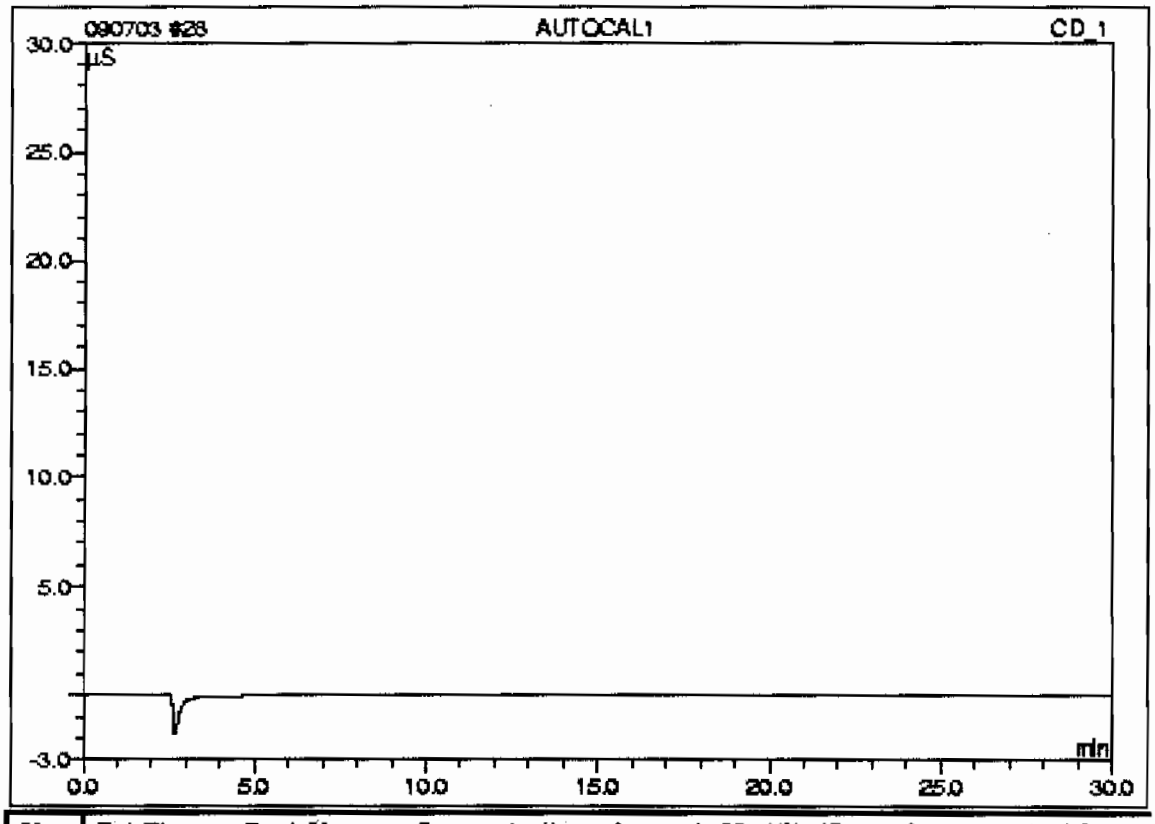

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-015880;GLGCE088;300;9058

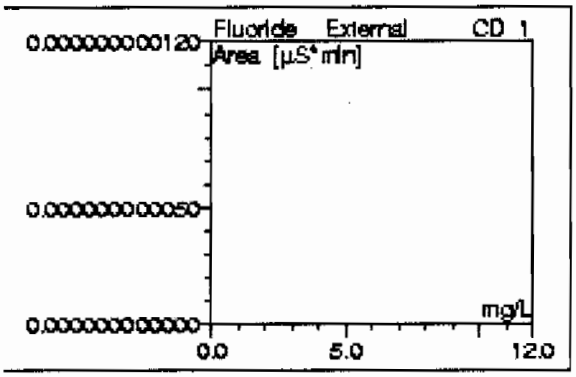

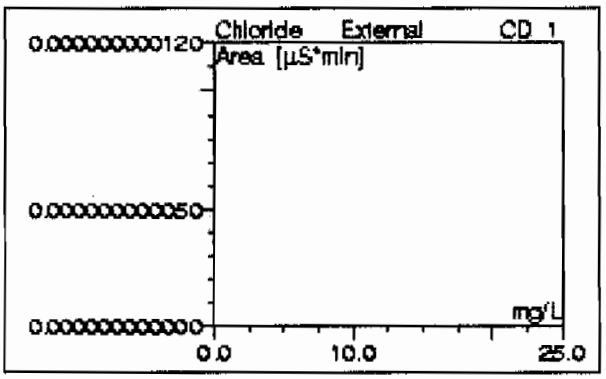

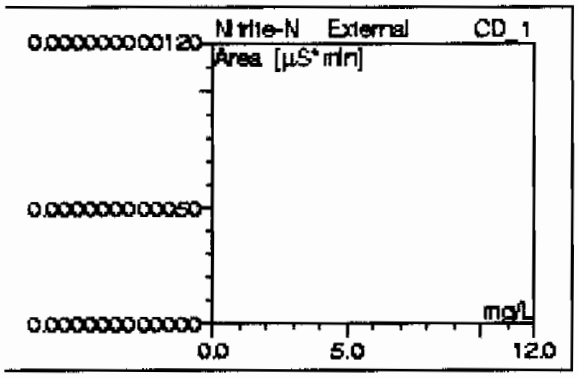

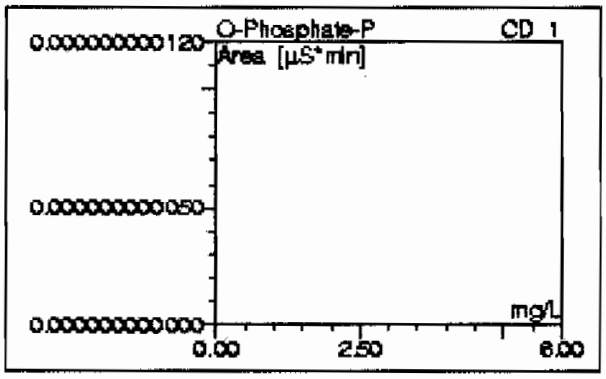

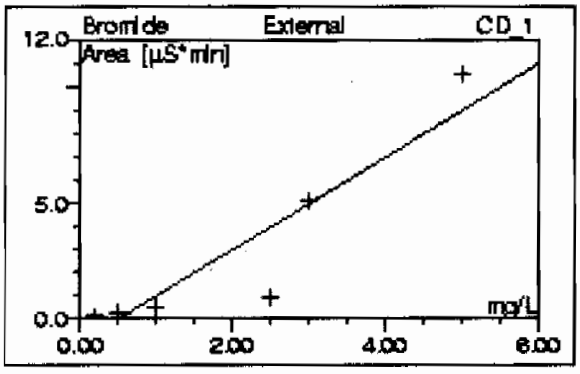

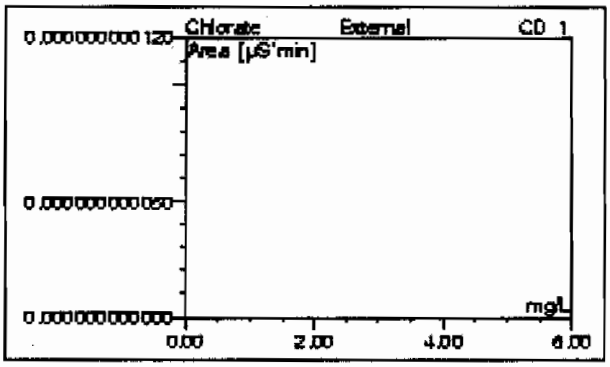

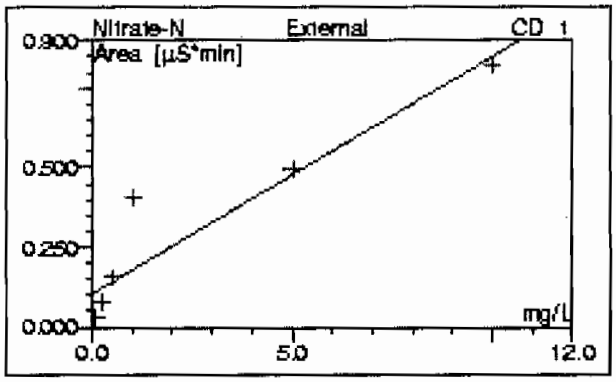

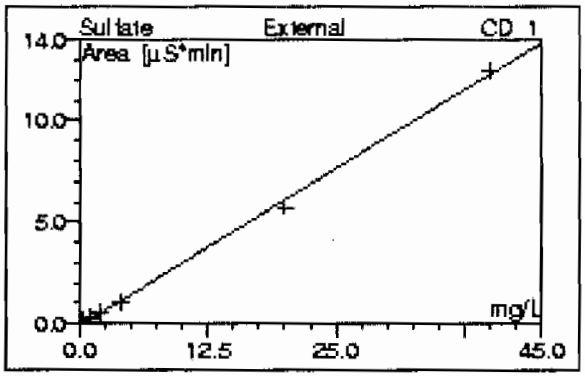

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Chloride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrite-N	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Bromide	0LOff	85.7419	-1.0196	1.9997	0.0000
n.a.	n.a.	Chlorate	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrate-N	0LOff	86.4468	0.1041	0.0746	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8340	-0.1257	0.3112	0.0000
Average:				90.6742	-0.1301	0.2982	0.0000

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

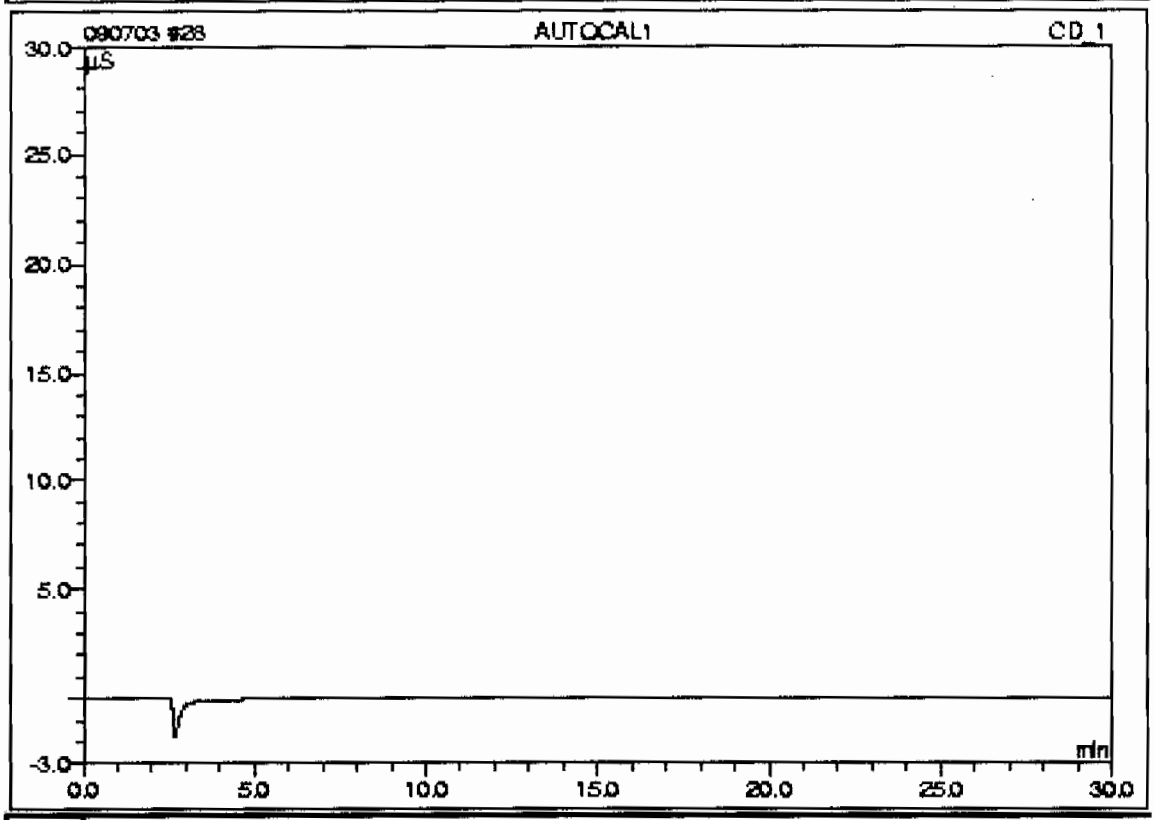

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCB085;300;9058

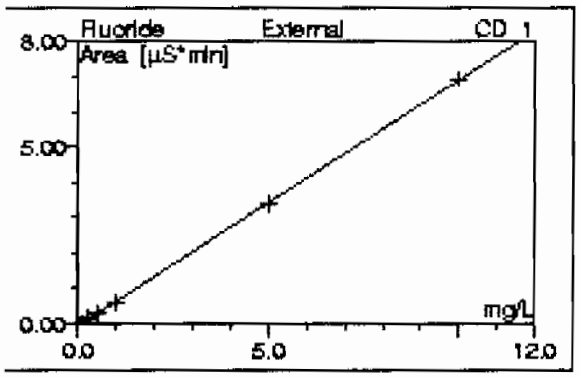

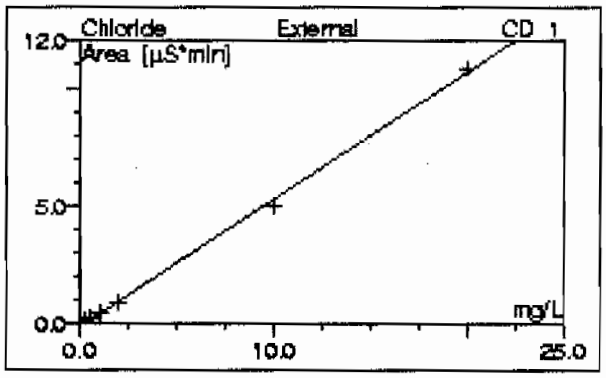

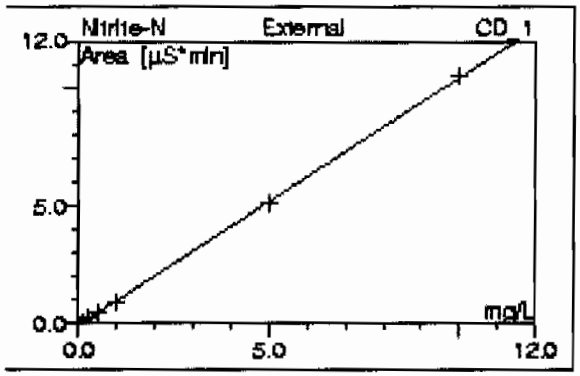

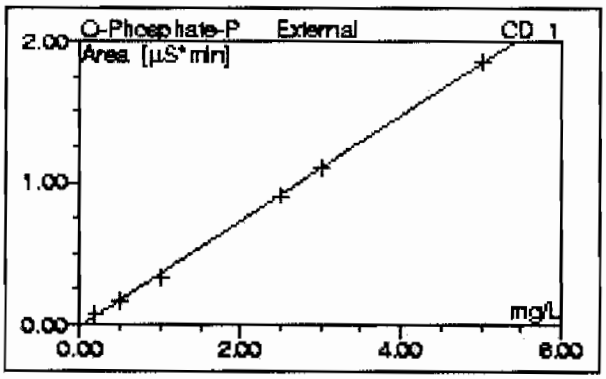

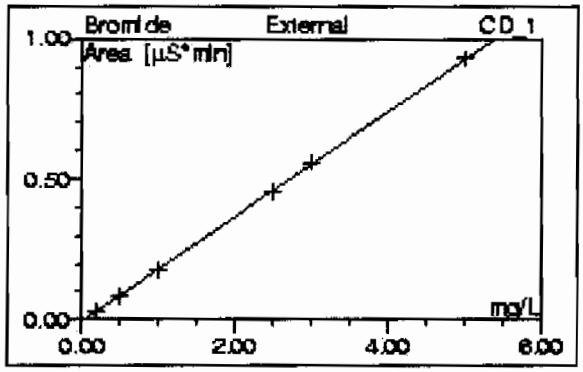

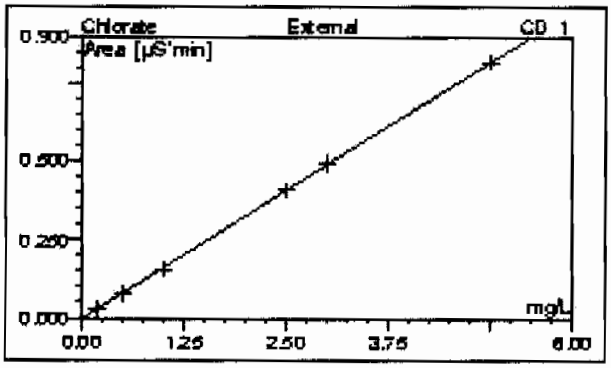

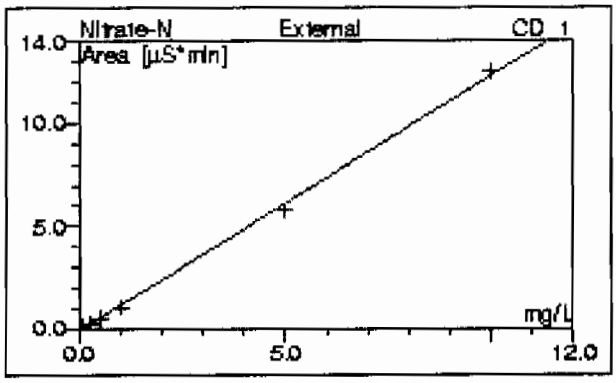

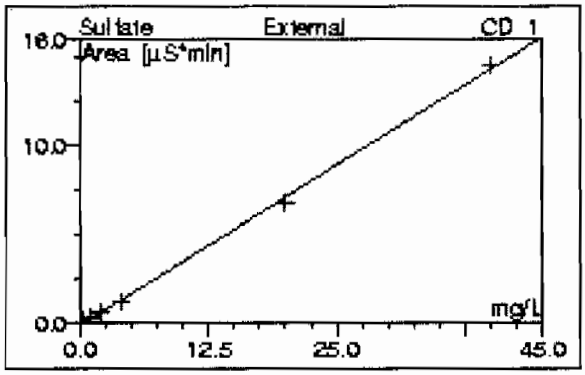

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9818	-0.0458	0.6968	0.0000
n.a.	n.a.	Chloride	0LOff	99.8028	-0.1138	0.5394	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9773	-0.0622	1.0502	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	99.9702	-0.0164	0.3726	0.0000
n.a.	n.a.	Bromide	0LOff	99.9731	-0.0054	0.1863	0.0000
n.a.	n.a.	Chlorate	0LOff	99.9897	-0.0032	0.1646	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.8940	-0.1257	1.2448	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8797	-0.1186	0.3620	0.0000
Average:				99.9261	-0.0614	0.5771	0.0000

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

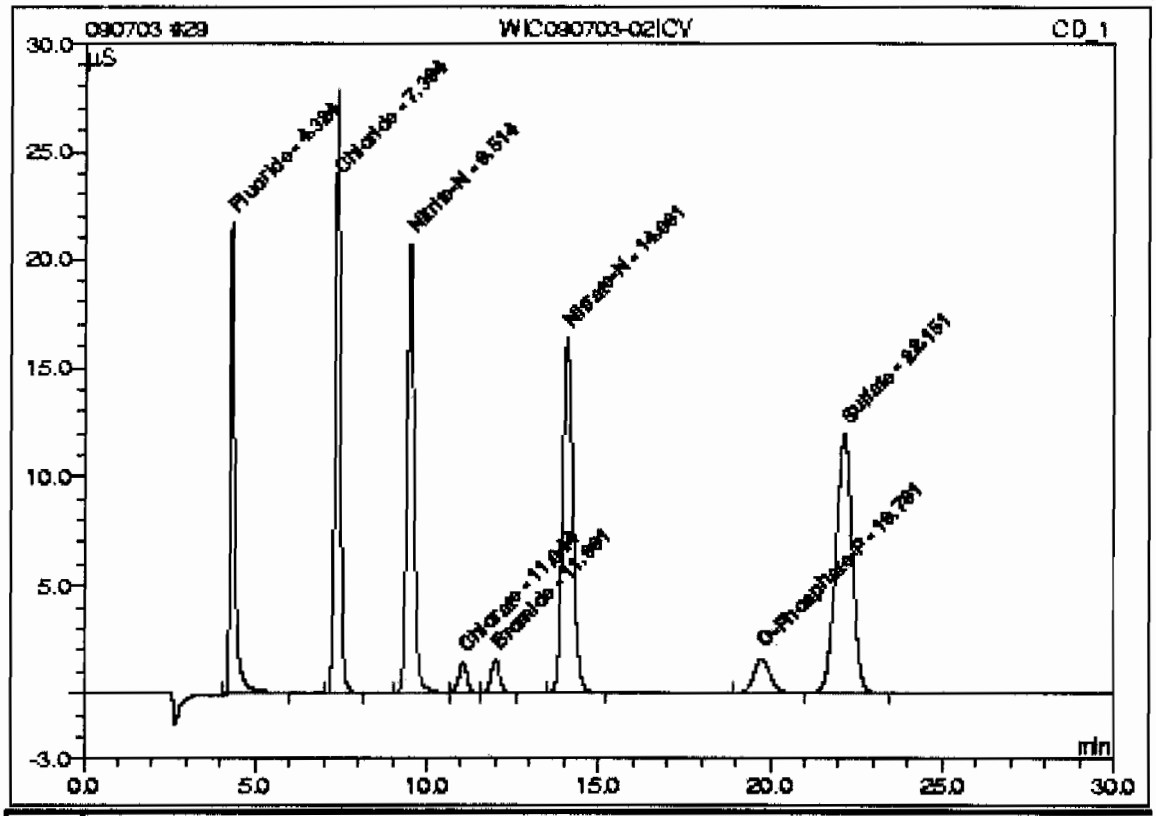

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.08	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65338	24.40
Total:				49.6694	0.000	27.271	100.00

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

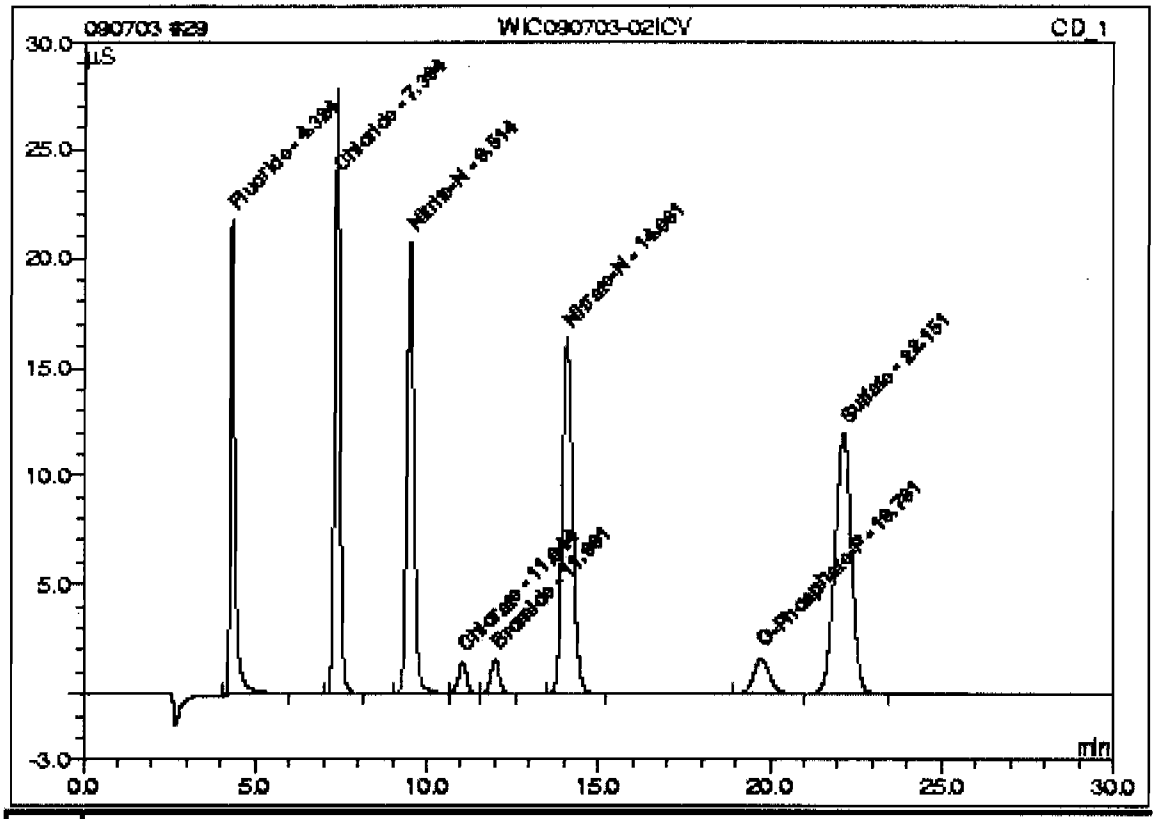

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86495	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.08	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7089		6.65338	24.40
Total:				49.6694	0.000	27.271	100.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

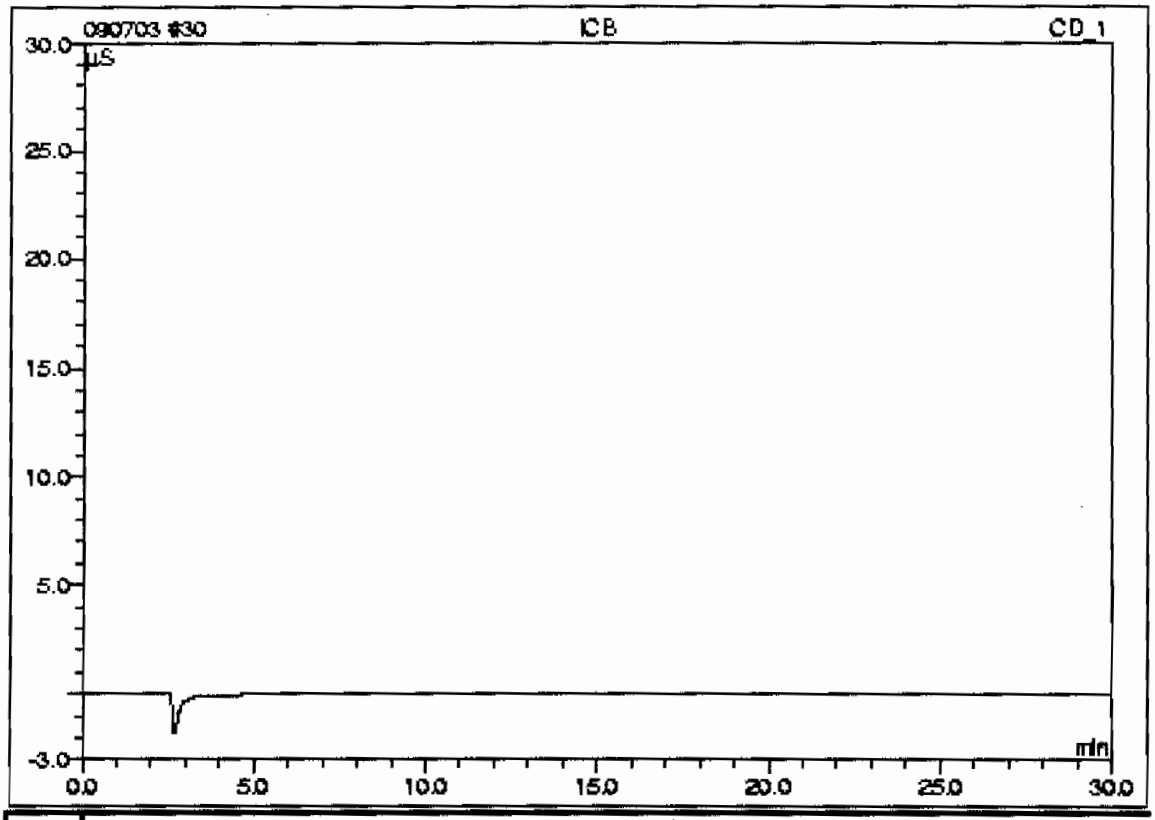

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9058

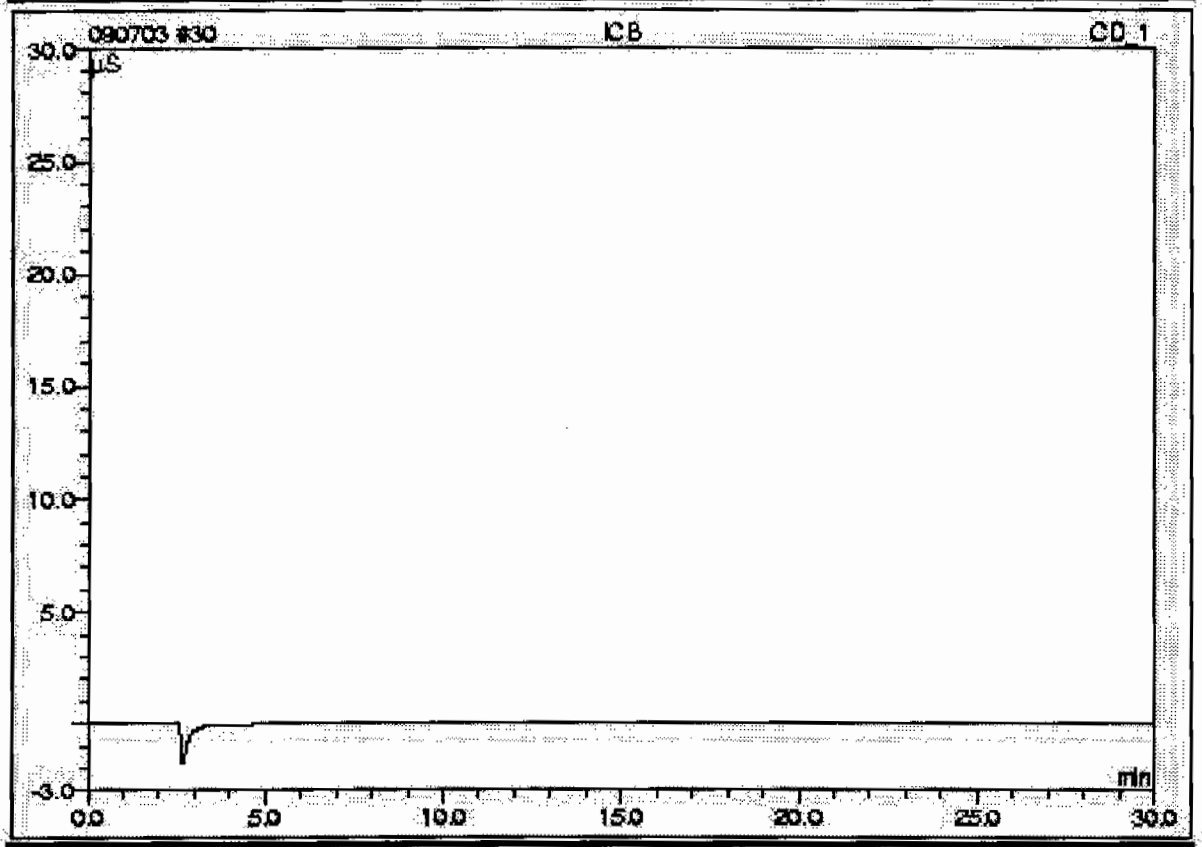

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 090709.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/09/09 09:44		1	090709	MAR1
ICV	07/09/09 10:13		1	090709	MAR1
ICB	07/09/09 10:42		1	090709	MAR1
1201868385	07/09/09 11:11	879955	1	090709	MAR1
1201868389	07/09/09 11:40	879955	1	090709	MAR1
232076001	07/09/09 12:09	879955	1	090709	MAR1
1201868386	07/09/09 12:37	879955	1	090709	MAR1
1201868387	07/09/09 13:06	879955	1	090709	MAR1
1201868388	07/09/09 13:35	879955	1	090709	MAR1
232076002	07/09/09 14:04	879955	1	090709	MAR1
232076003	07/09/09 14:33	879955	1	090709	MAR1
CVH	07/09/09 15:02		1	090709	MAR1
CCB	07/09/09 15:31		1	090709	MAR1
232079001	07/09/09 16:00	879955	1	090709	MAR1
232079002	07/09/09 16:29	879955	1	090709	MAR1
232079003	07/09/09 16:58	879955	1	090709	MAR1
232079004	07/09/09 17:27	879955	1	090709	MAR1
232079005	07/09/09 17:55	879955	1	090709	MAR1
232357001	07/09/09 18:24	879955	1	090709	MAR1
232357002	07/09/09 18:53	879955	1	090709	MAR1
CCV	07/09/09 19:22		1	090709	MAR1
CCB	07/09/09 19:51		1	090709	MAR1
1201871608	07/09/09 20:20	881302	1	090709	MAR1
1201871612	07/09/09 20:49	881302	1	090709	MAR1
232509001	07/09/09 21:18	881302	1	090709	MAR1
1201871609	07/09/09 21:47	881302	1	090709	MAR1
1201871610	07/09/09 22:16	881302	1	090709	MAR1
1201871611	07/09/09 22:45	881302	1	090709	MAR1

232509002	07/09/09 23:13	881302	1	090709	MAR1
232509003	07/09/09 23:42	881302	1	090709	MAR1

9 WIC090709-02ICV

Sample Name:	WIC090709-02ICV	*Injection Volume:*	1.0
Vial Number:	2	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 10:13	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

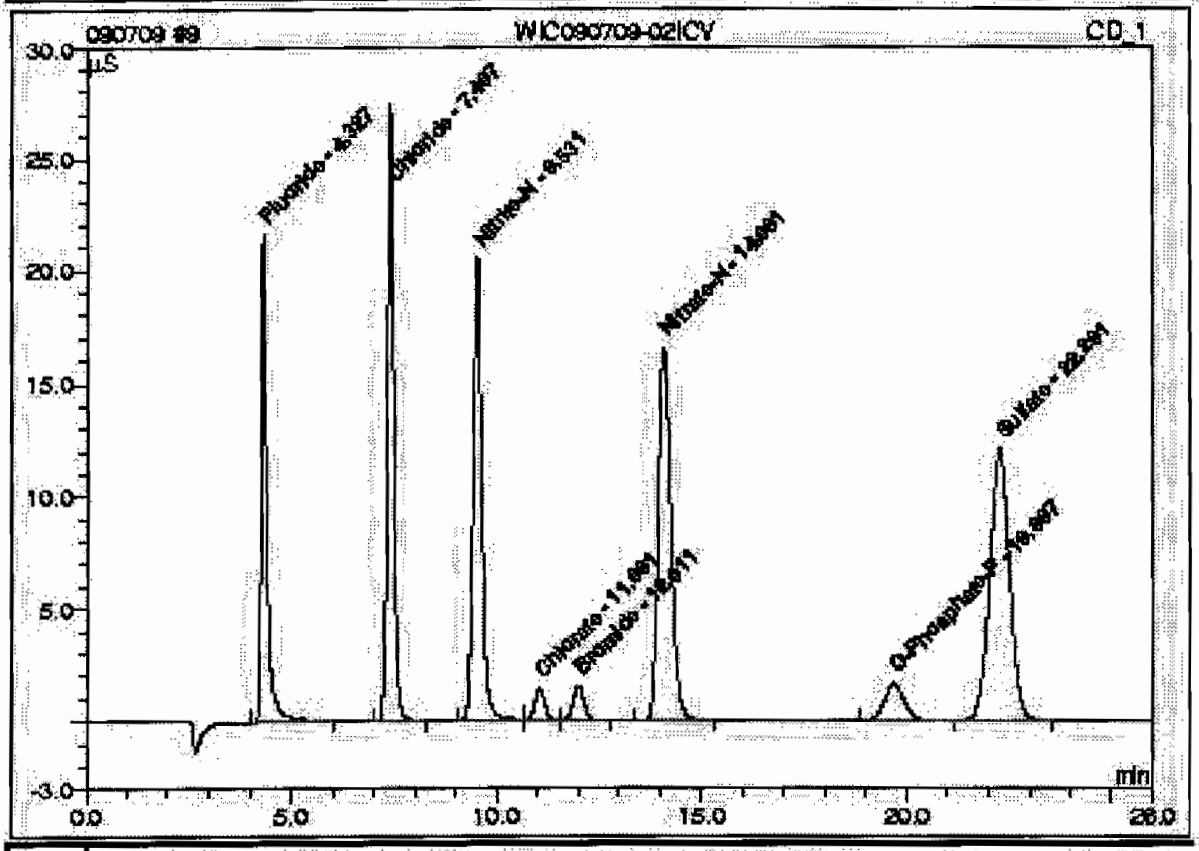

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.8959		3.36585	12.23
2	7.41	Chloride	n.a.	9.2383		4.86975	17.69
3	9.53	Nitrite-N	n.a.	4.8673		5.04924	18.35
4	11.08	Chlorate	n.a.	2.5659		0.41908	1.52
5	12.01	Bromide	n.a.	2.4471		0.45043	1.64
6	14.09	Nitrate-N	n.a.	4.7057		5.73197	20.83
7	19.70	O-Phosphate-P	n.a.	2.4685		0.90341	3.28
8	22.29	Sulfate	n.a.	18.9257		6.73209	24.46
Total:				50.1143	0.000	27.522	100.00

10 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	3	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 10:42	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9058

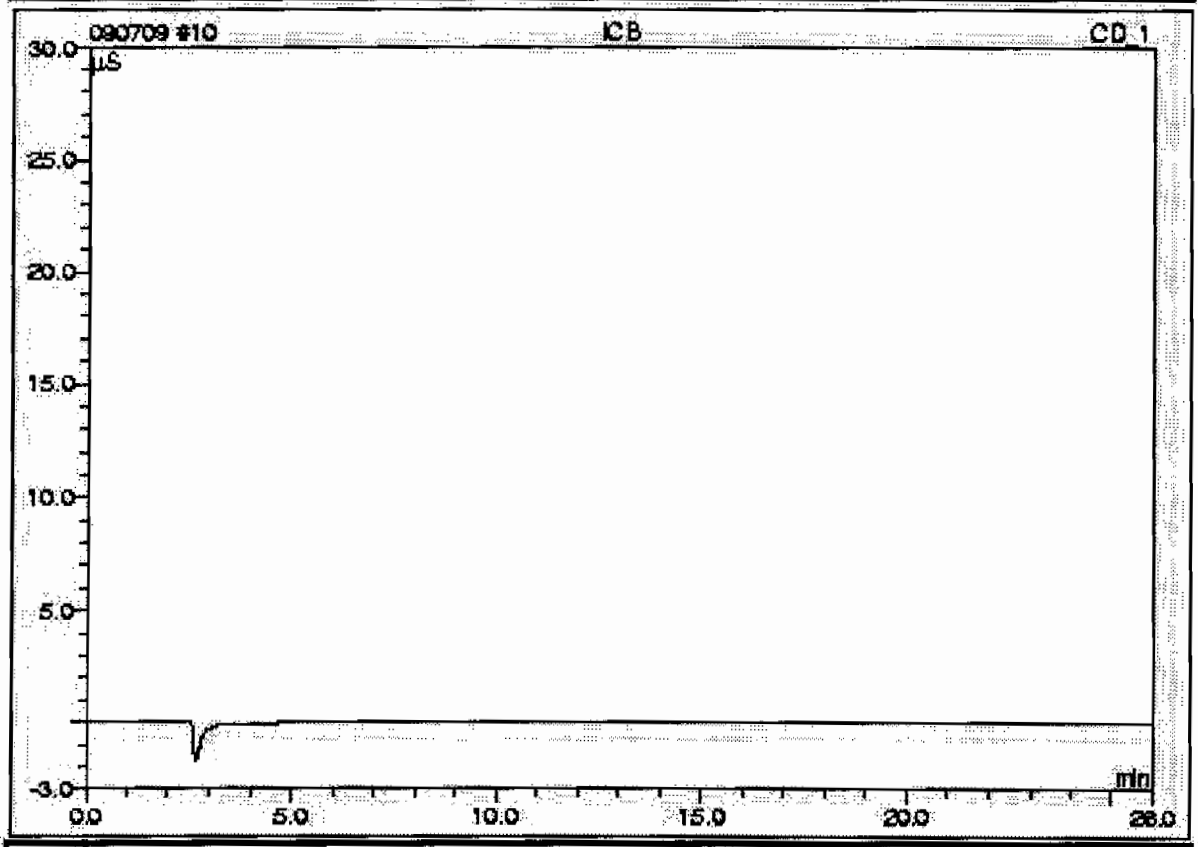

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

11 1201868385/879955/1/1/MB

Sample Name:	1201868385/879955/1/1/MB	*Injection Volume:*	1.0
Vial Number:	4	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 11:11	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9058

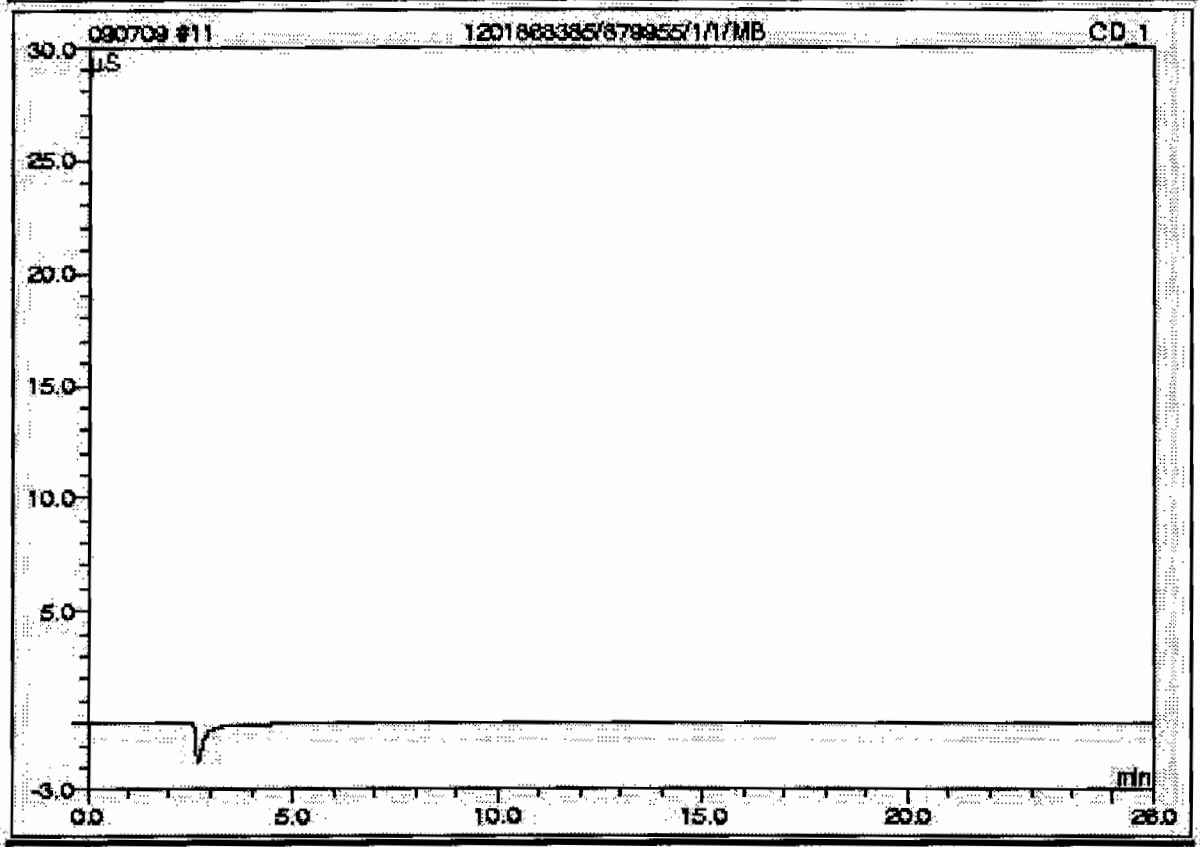

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

12 1201868389/879955/1/1/LCS

Sample Name:	1201868389/879955/1/1/LCS	*Injection Volume:*	1.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 11:40	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

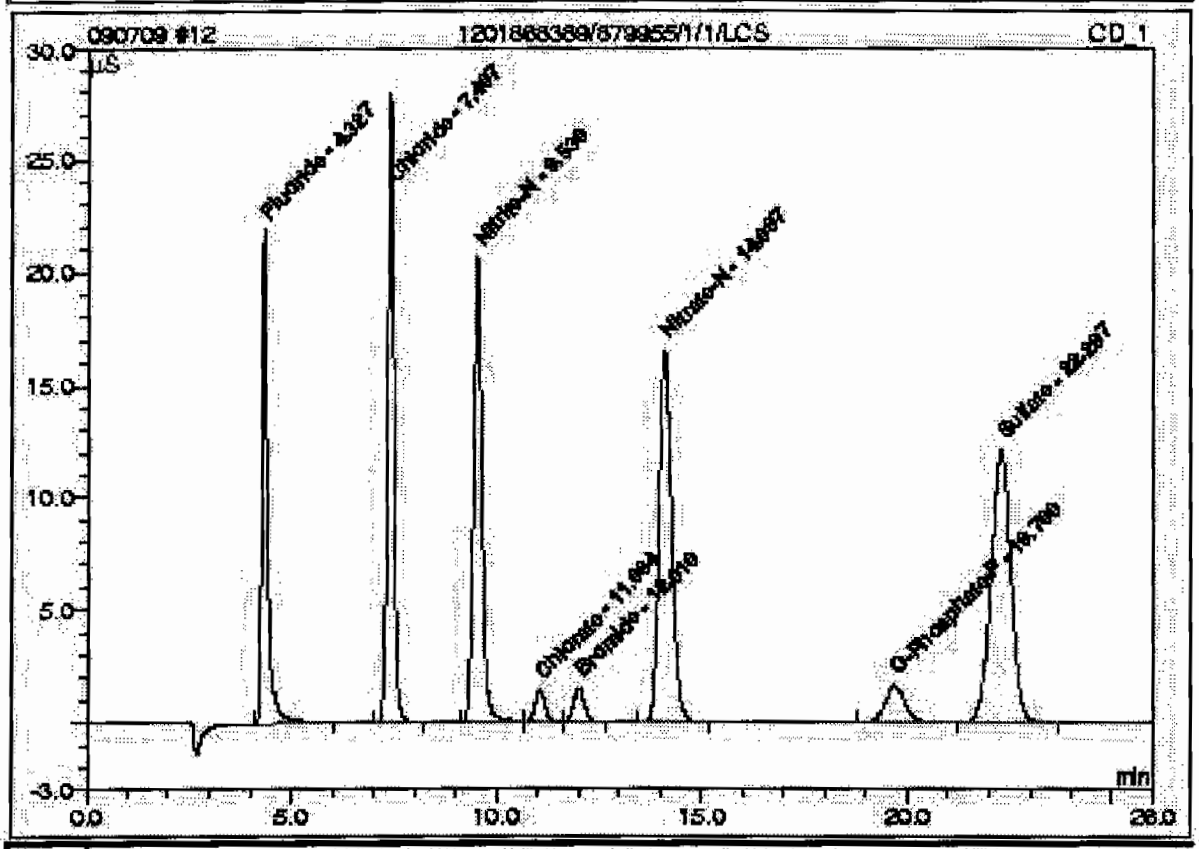

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9490		3.40283	12.27
2	7.41	Chloride	n.a.	9.3912		4.95224	17.86
3	9.53	Nitrite-N	n.a.	4.8957		5.07908	18.32
4	11.06	Chlorate	n.a.	2.5722		0.42014	1.52
5	12.01	Bromide	n.a.	2.4424		0.44957	1.62
6	14.10	Nitrate-N	n.a.	4.7127		5.74068	20.70
7	19.70	O-Phosphate-P	n.a.	2.4715		0.90452	3.26
8	22.30	Sulfate	n.a.	19.0575		6.77979	24.45
Total:				50.4922	0.000	27.729	100.00

13 232076001/879955/1/1/

Sample Name:	232076001/879955/1/1/	Injection Volume:	1.0
Vial Number:	6	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantit. Method:	090703an	Sample Amount:	1.0000
Recording Time:	7/9/09 12:09	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

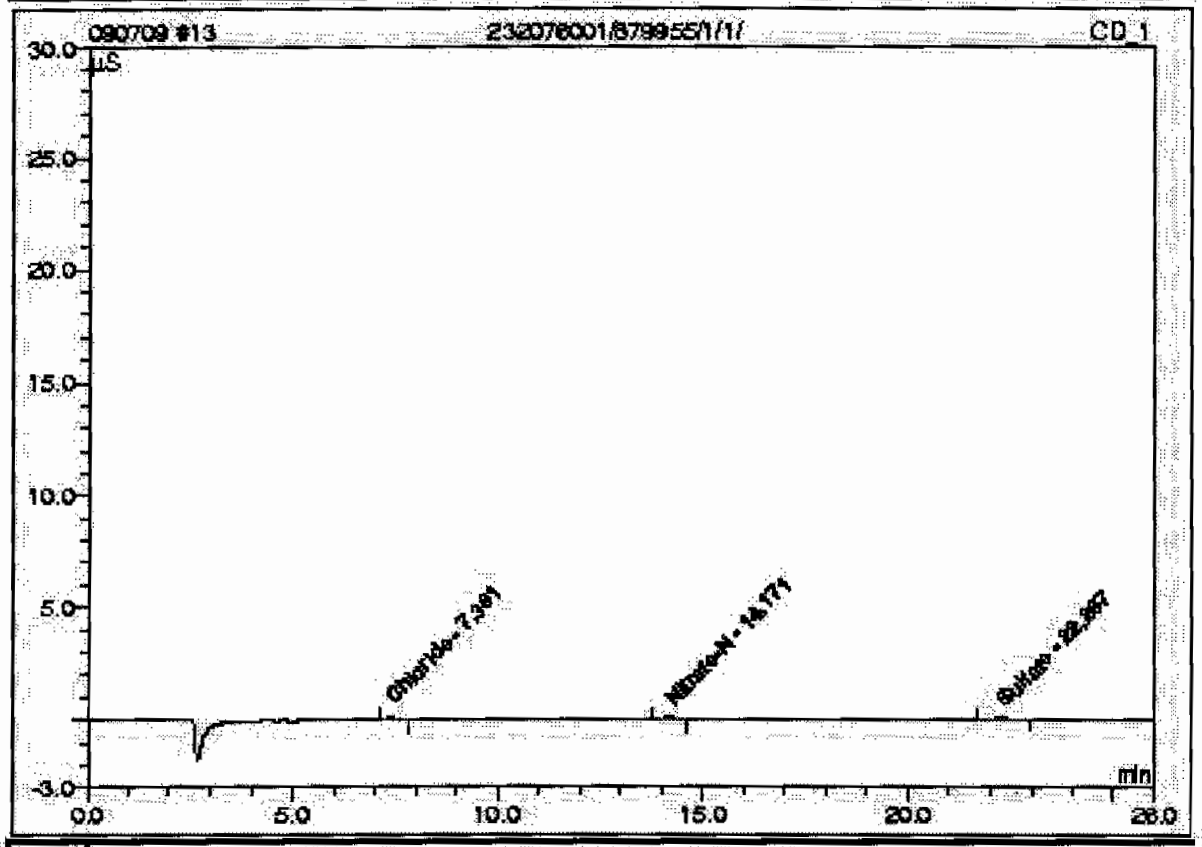

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
1	7.39	Chloride	n.a.	0.2835		0.03907	27.09
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
2	14.17	Nitrate-N	n.a.	0.1360		0.04361	30.22
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.27	Sulfate	n.a.	0.4979		0.06161	42.70
Total:				0.9174	0.000	0.144	100.00

14 1201868386/879955/1/1/DUP

Sample Name:	1201868386/879955/1/1/DUP	*Injection Volume:*	1.0
Vial Number:	7	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 12:37	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE088;300;9058

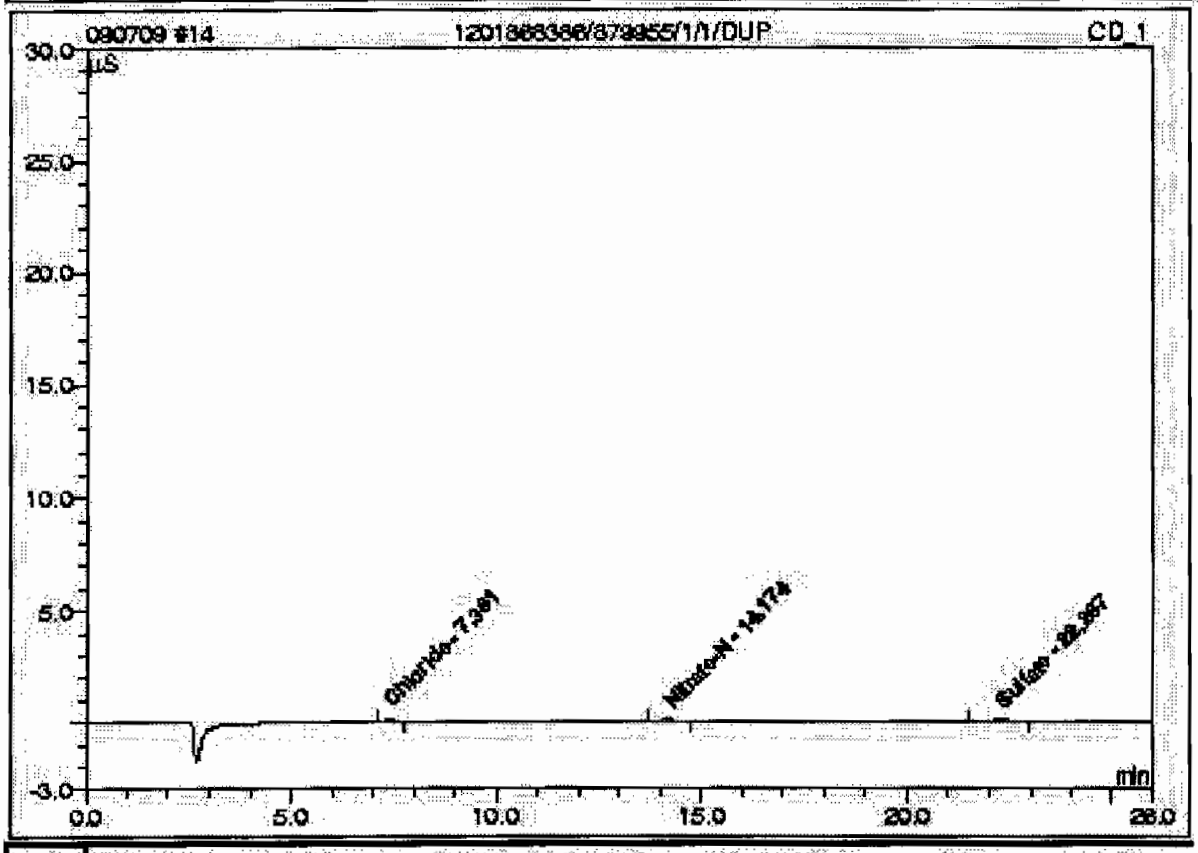

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
1	7.38	Chloride	n.a.	0.2818		0.03815	26.78
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
2	14.17	Nitrate-N	n.a.	0.1359		0.04347	30.52
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.27	Sulfate	n.a.	0.4957		0.06092	42.70
Total:				0.9134	0.000	0.142	100.00

15 1201868387/879955/1/1/MS

Sample Name:	1201868387/879955/1/1/MS	*Injection Volume:*	1.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantit. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 13:08	*Analyst:*	MAR1
Run Time (min):	25.00	*Column:*	AS9HC-014108;GLGCE085;300;9056

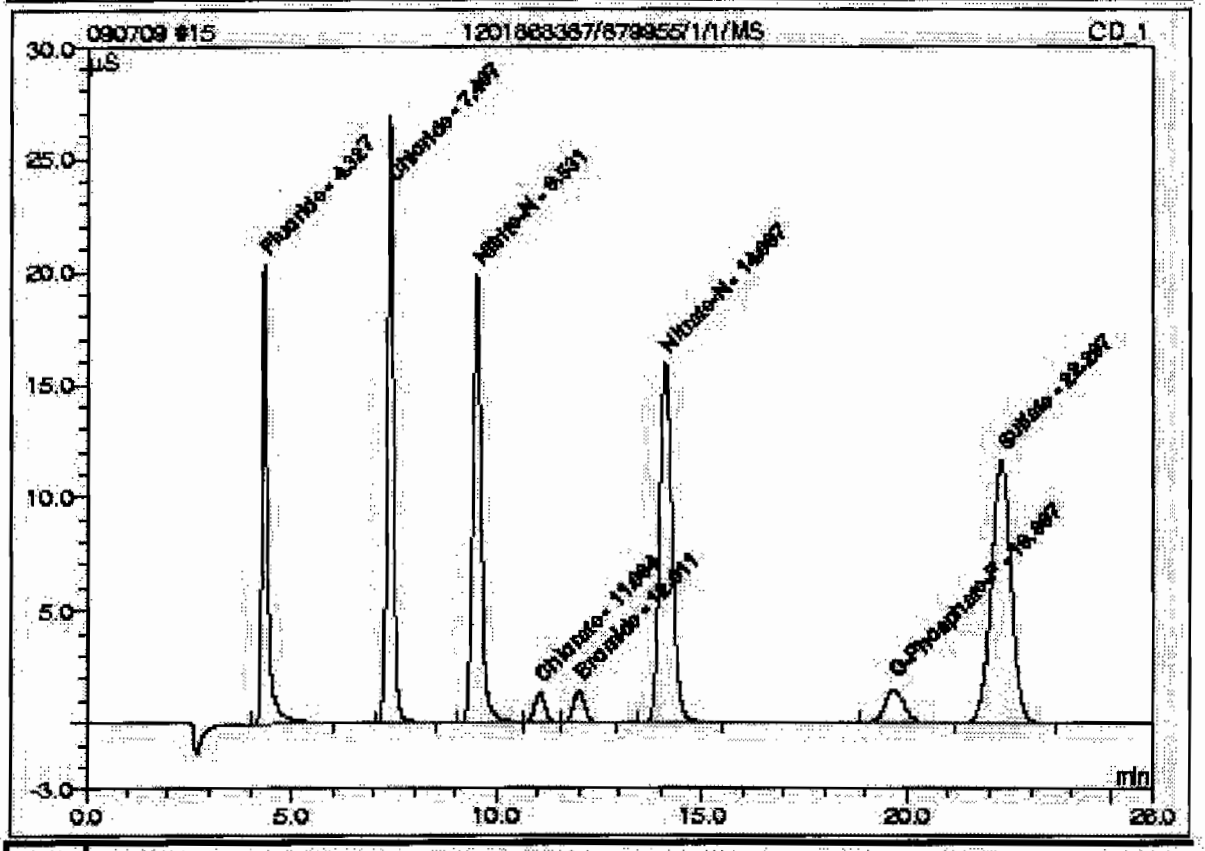

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.6274		3.17877	11.97
2	7.41	Chloride	n.a.	9.0564		4.77162	17.97
3	9.53	Nitrite-N	n.a.	4.6952		4.86850	18.33
4	11.08	Chlorate	n.a.	2.4959		0.40757	1.53
5	12.01	Bromide	n.a.	2.4061		0.44280	1.67
6	14.10	Nitrate-N	n.a.	4.5591		5.54947	20.90
7	19.70	O-Phosphate-P	n.a.	2.2713		0.82991	3.12
8	22.30	Sulfate	n.a.	18.3092		6.50890	24.51
Total:				48.4205	0.000	26.558	100.00

16 1201868388/879955/1/1/MSD

Sample Name:	1201868388/879955/1/1/MSD	*Injection Volume:*	1.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantit. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 13:35	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9058

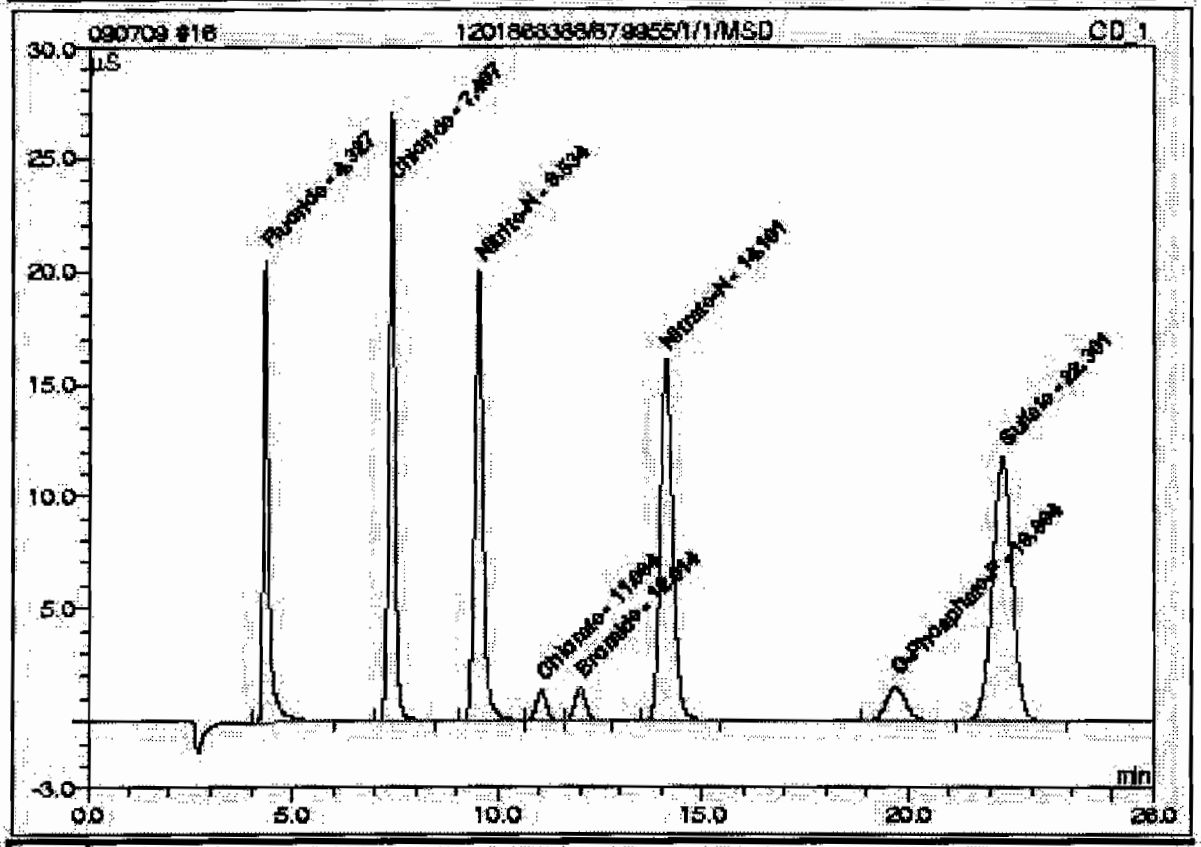

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.39	Fluoride	n.a.	4.6576		3.19979	11.95
2	7.41	Chloride	n.a.	9.1278		4.81014	17.96
3	9.53	Nitrite-N	n.a.	4.7369		4.91217	18.34
4	11.06	Chlorate	n.a.	2.5124		0.41029	1.53
5	12.01	Bromide	n.a.	2.4098		0.44349	1.66
6	14.10	Nitrate-N	n.a.	4.5953		5.59451	20.89
7	19.69	O-Phosphate-P	n.a.	2.3039		0.84186	3.14
8	22.30	Sulfate	n.a.	18.4742		6.56864	24.53
Total:				48.8171	0.000	26.781	100.00

19 WIC090709-02CVH

Sample Name:	WIC090709-02CVH	*Injection Volume:*	1.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 15:02	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE088;300;9056

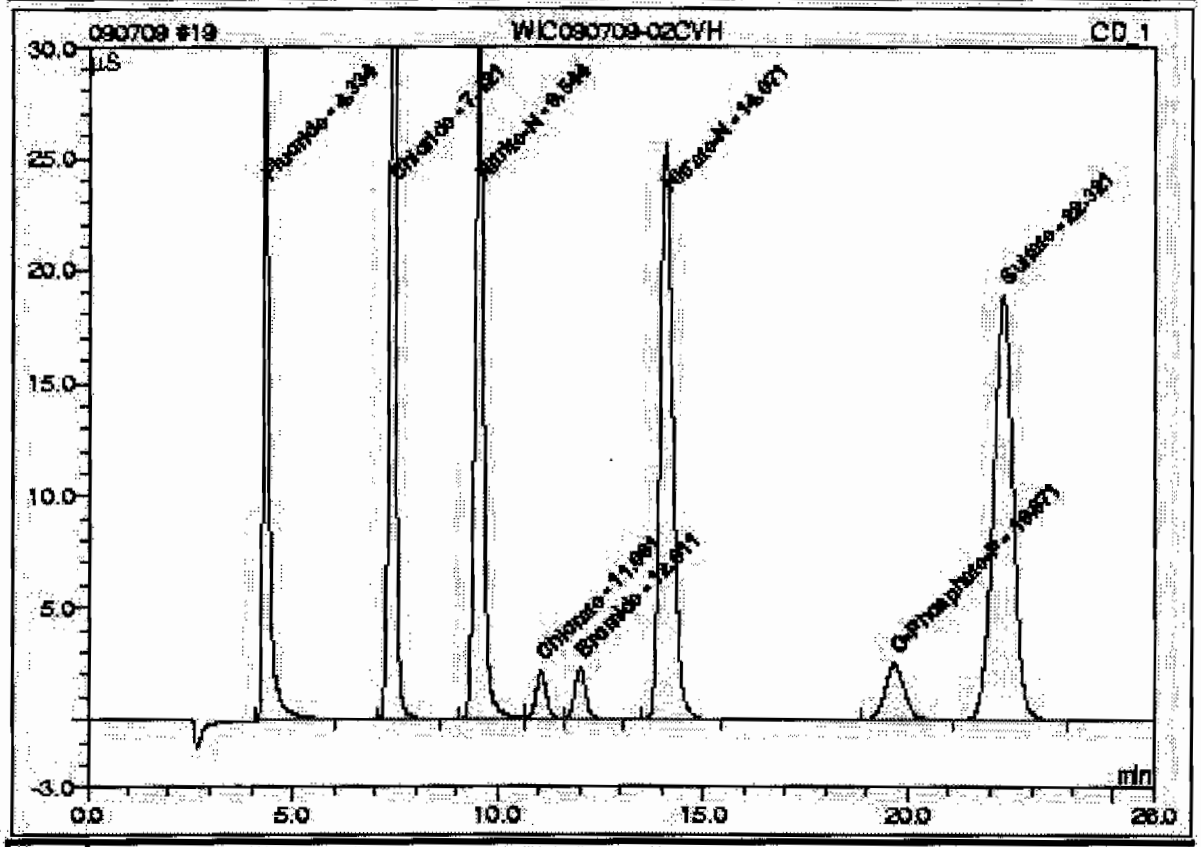

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	7.4939		5.17629	12.08
2	7.42	Chloride	n.a.	14.6381		7.78266	18.16
3	9.54	Nitrite-N	n.a.	7.4253		7.73560	18.05
4	11.06	Chlorate	n.a.	3.8805		0.63548	1.49
5	12.01	Bromide	n.a.	3.7324		0.69985	1.61
6	14.07	Nitrate-N	n.a.	7.3099		8.97360	20.94
7	19.67	O-Phosphate-P	n.a.	3.7095		1.36580	3.19
8	22.32	Sulfate	n.a.	29.2984		10.48677	24.48
Total:				77.4881	0.000	42.846	100.00

20 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 15:31	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE088;300;9058

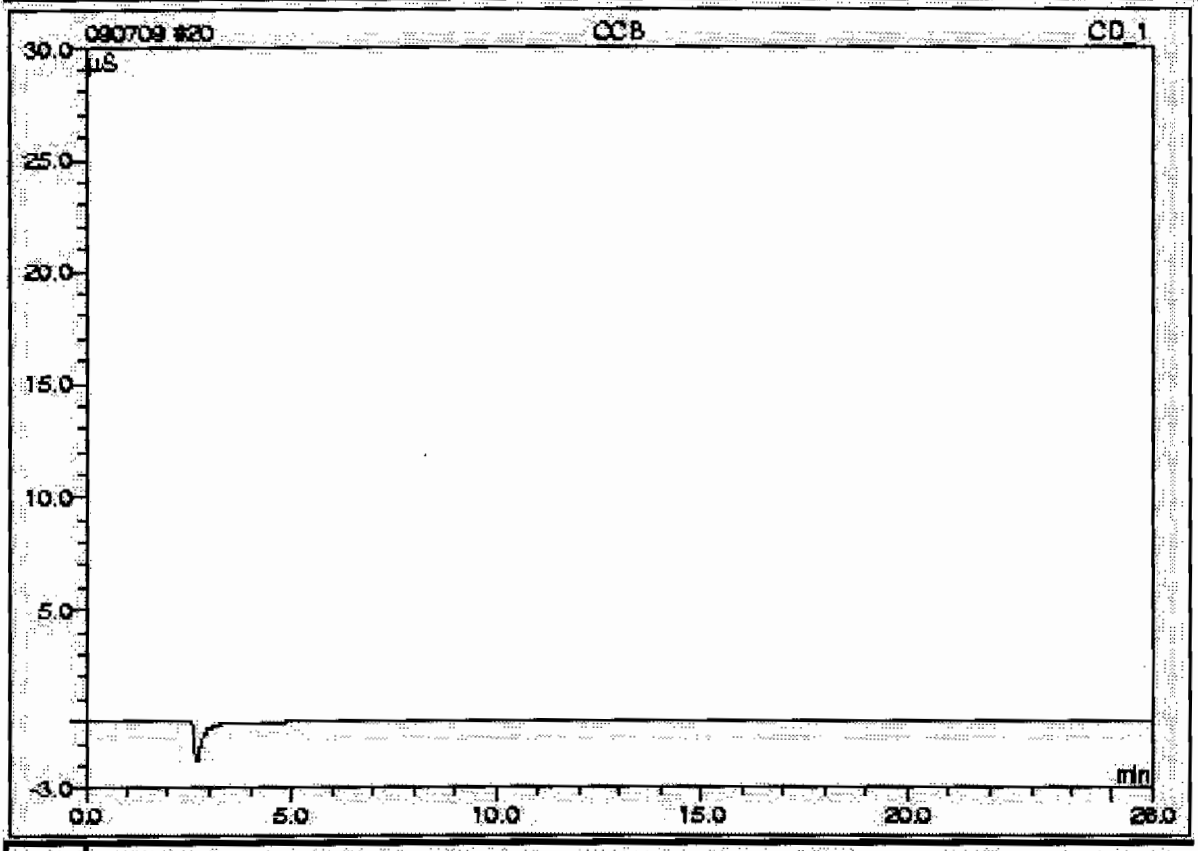

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

26 232357001/879955/1/1/

Sample Name:	232357001/879955/1/1/	Injection Volume:	1.0
Vial Number:	19	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	090703an	Sample Amount:	1.0000
Recording Time:	7/9/09 18:24	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014109;GLGCE085;300;9055

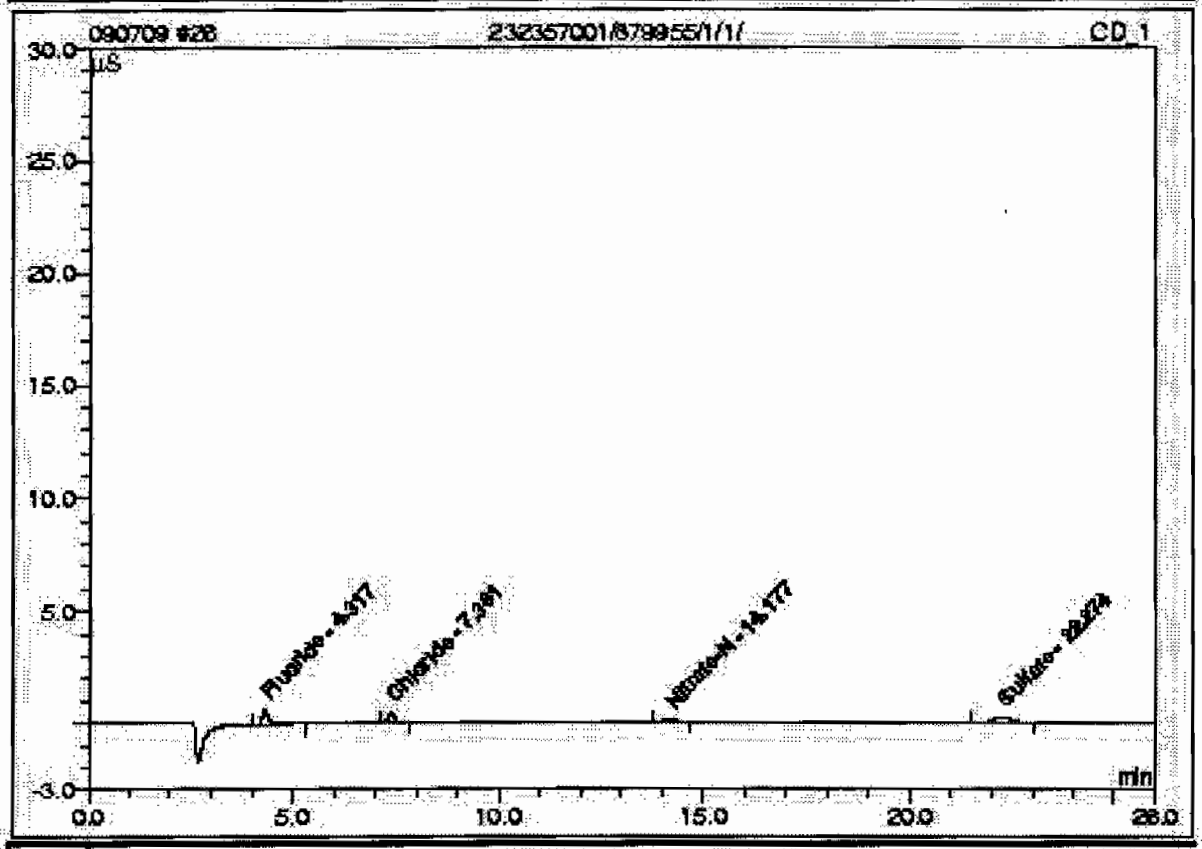

No.	Ret. Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.2505		0.12873	28.98
2	7.38	Chloride	n.a.	0.3701		0.08578	19.31
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.18	Nitrate-N	n.a.	0.1456		0.05544	12.48
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	22.27	Sulfate	n.a.	0.8093		0.17431	39.24
Total:				1.5753	0.000	0.444	100.00

27 232357002/879955/1/1/

Sample Name:	232357002/879955/1/1/	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 18:53	*Analyst:*	MAR1
Run Time (min):	25.00	*Column:*	AS9HC-014108;GLGCE088;300;9058

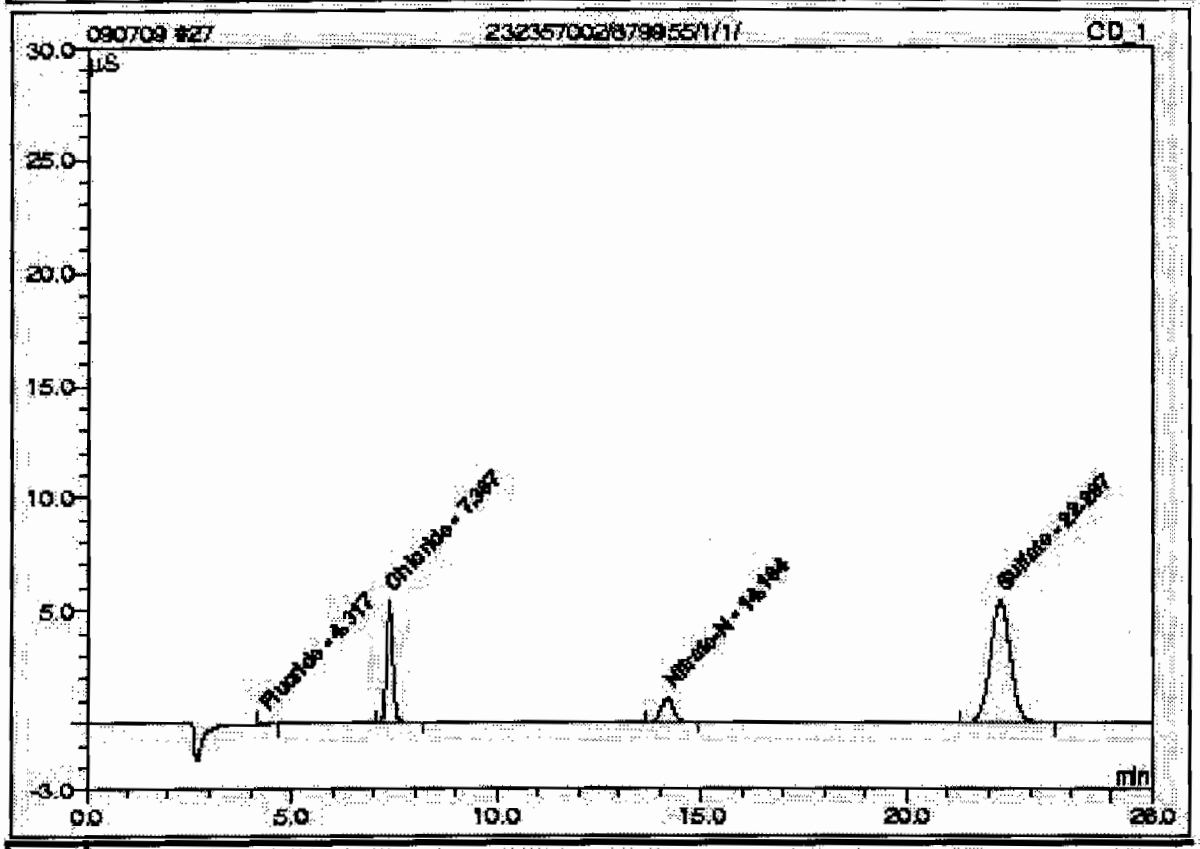

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.0963		0.02060	0.46
2	7.39	Chloride	n.a.	2.0735		1.00470	22.26
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.16	Nitrate-N	n.a.	0.4121		0.38722	8.58
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	22.30	Sulfate	n.a.	8.8951		3.10121	68.71
Total:				11.4759	0.000	4.514	100.00

28 WIC090709-02CCV

Sample Name:	WIC090709-02CCV	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 19:22	*Analyst:*	MAR1
Run Time (min):	25.00	*Column:*	AS9HC-014108;GLGCE088;300;9058

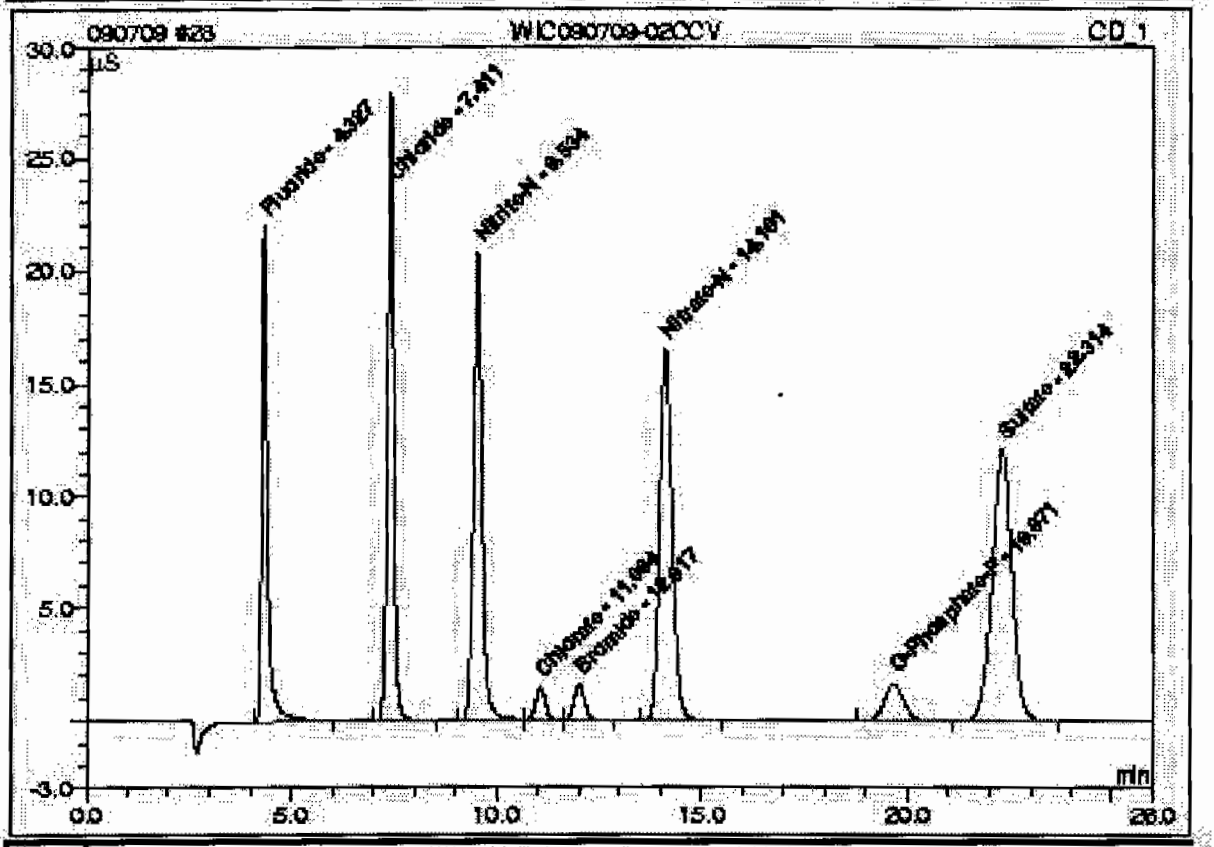

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9573		3.40865	12.28
2	7.41	Chloride	n.a.	9.4236		4.96972	17.90
3	9.53	Nitrite-N	n.a.	4.9050		5.09879	18.33
4	11.06	Chlorate	n.a.	2.5794		0.42132	1.52
5	12.02	Bromide	n.a.	2.4750		0.45564	1.64
6	14.10	Nitrate-N	n.a.	4.7231		5.75357	20.72
7	19.67	O-Phosphate-P	n.a.	2.4631		0.90140	3.25
8	22.31	Sulfate	n.a.	19.0142		6.76413	24.36
Total:				50.5407	0.000	27.763	100.00

29 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 19:51	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE088;300;9058

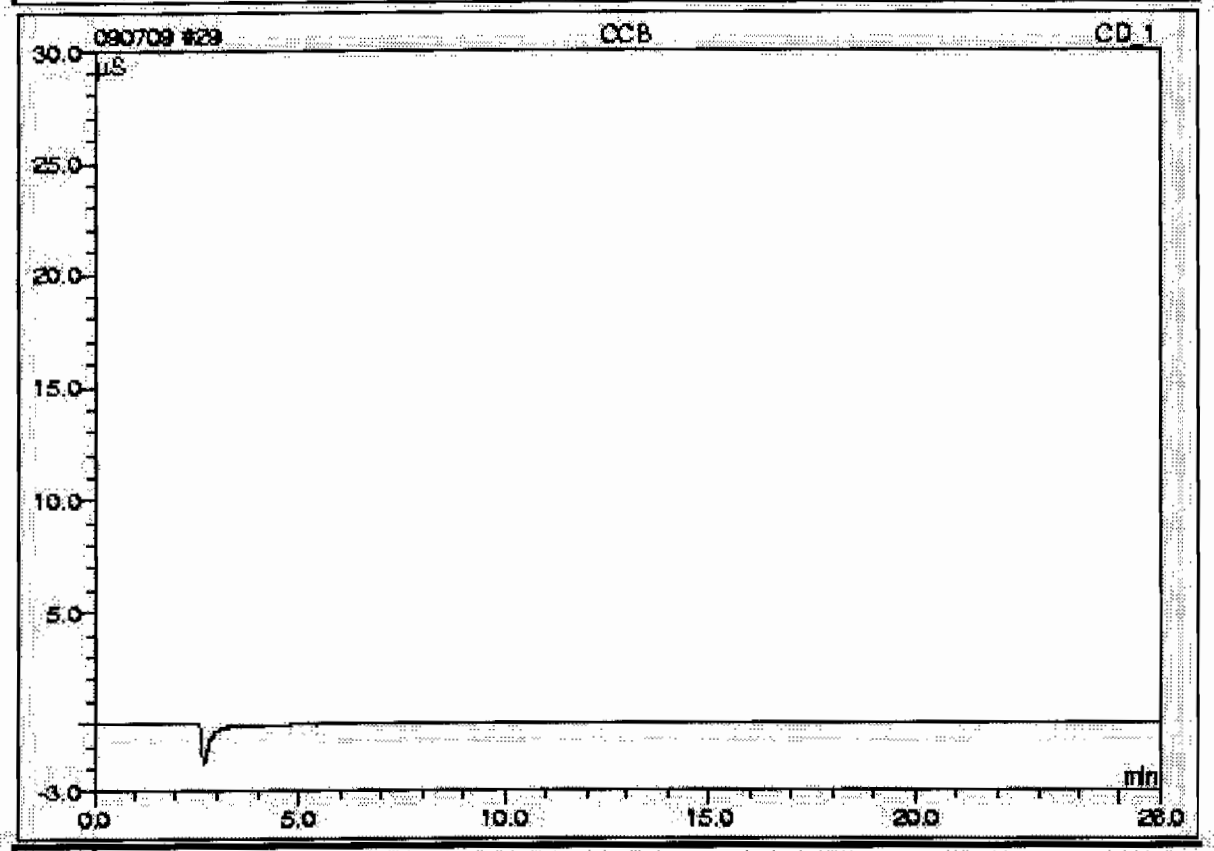

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

pH

pH / Corrosivity LogBook

Analyst: EXF1
Batch: 880644
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201869924	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201869924 LCS		Soil	11:40	11:45	26-JUN-09 12:07	pH	20	20	7.02	21.0'C	7	100.286	
1201869924 LCS		Soil	11:40	11:45	26-JUN-09 12:07	pH 2	20	20	7.03	21.0'C	7	100.429	
232347001		Soil	11:40	11:45	26-JUN-09 12:11	pH	20	20	8.92	23.3'C			
232347001		Soil	11:40	11:45	26-JUN-09 12:11	pH 2	20	20	8.96	23.2'C			
232347002		Soil	11:40	11:45	26-JUN-09 12:12	pH	20	20	8.4	23.1'C			
232347002		Soil	11:40	11:45	26-JUN-09 12:12	pH 2	20	20	8.38	23.0'C			
232347003		Soil	11:40	11:45	26-JUN-09 12:16	pH	20	20	8.87	23.0'C			
232347003		Soil	11:40	11:45	26-JUN-09 12:16	pH 2	20	20	8.84	23.0'C			
232347004		Soil	11:40	11:45	26-JUN-09 12:19	pH	20	20	9.07	22.1'C			
232347004		Soil	11:40	11:45	26-JUN-09 12:19	pH 2	20	20	9.06	22.1'C			
CCV			11:40	11:45	26-JUN-09 12:22	pH	20	20	7.02	21.0'C	7	100.286	
CCV			11:40	11:45	26-JUN-09 12:22	pH 2	20	20	7.01	21.0'C	7	100.143	
1201869923 DUP	232347004	Soil	11:40	11:45	26-JUN-09 12:25	pH	20	20	8.92	22.7'C			1.668
1201869923 DUP	232347004	Soil	11:40	11:45	26-JUN-09 12:25	pH 2	20	20	8.94	22.7'C			1.333
232357001		Soil	11:40	11:45	26-JUN-09 12:28	pH	20	20	8.87	22.9'C			
232357001		Soil	11:40	11:45	26-JUN-09 12:28	pH 2	20	20	8.85	22.9'C			
232357002		Soil	11:40	11:45	26-JUN-09 12:33	pH	20	20	8.65	22.2'C			
232357002		Soil	11:40	11:45	26-JUN-09 12:33	pH 2	20	20	8.64	22.2'C			
232367001		Soil	11:40	11:45	26-JUN-09 12:36	pH	20	20	8.09	22.2'C			
232367001		Soil	11:40	11:45	26-JUN-09 12:36	pH 2	20	20	8.09	22.3'C			
1201869922 DUP	232367001	Soil	11:40	11:45	26-JUN-09 12:39	pH	20	20	8.08	21.9'C			.124
1201869922 DUP	232367001	Soil	11:40	11:45	26-JUN-09 12:39	pH 2	20	20	8.05	21.9'C			.496
CCV			11:40	11:45	26-JUN-09 12:43	pH	20	20	7	21.2'C	7	100	
CCV			11:40	11:45	26-JUN-09 12:43	pH 2	20	20	7	21.2'C	7	100	
232367002		Soil	11:40	11:45	26-JUN-09 12:43	pH	20	20	7.38	22.6'C			
232367002		Soil	11:40	11:45	26-JUN-09 12:43	pH 2	20	20	7.34	22.8'C			
232367003		Soil	11:40	11:45	26-JUN-09 12:48	pH	20	20	8.27	22.6'C			
232367003		Soil	11:40	11:45	26-JUN-09 12:48	pH 2	20	20	8.27	22.6'C			

pH / Corrosivity LogBook

Analyst: EXF1
Batch: 880644
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201869924	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
232367004		Soil	11:40	11:45	26-JUN-09 12:49	pH	20	20	5.23	22.4'C			
232367004		Soil	11:40	11:45	26-JUN-09 12:49	pH 2	20	20	5.24	22.4'C			
232367005		Soil	11:40	11:45	26-JUN-09 12:54	pH	20	20	7.45	22.0'C			
232367005		Soil	11:40	11:45	26-JUN-09 12:54	pH 2	20	20	7.48	22.1'C			
232367006		Soil	11:40	11:45	26-JUN-09 12:57	pH	20	20	7.94	21.9'C			
232367006		Soil	11:40	11:45	26-JUN-09 12:57	pH 2	20	20	7.9	21.9'C			
CCV			11:40	11:45	26-JUN-09 13:00	pH	20	20	6.99	21.4'C	7	99.857	
CCV			11:40	11:45	26-JUN-09 13:00	pH 2	20	20	6.99	21.5'C	7	99.857	
232367007		Soil	11:40	11:45	26-JUN-09 13:05	pH	20	20	6.56	22.4'C			
232367007		Soil	11:40	11:45	26-JUN-09 13:05	pH 2	20	20	6.54	22.4'C			
232367008		Soil	11:40	11:45	26-JUN-09 13:09	pH	20	20	5.89	22.4'C			
232367008		Soil	11:40	11:45	26-JUN-09 13:09	pH 2	20	20	5.92	22.4'C			
232367009		Soil	11:40	11:45	26-JUN-09 13:14	pH	20	20	7.1	22.2'C			
232367009		Soil	11:40	11:45	26-JUN-09 13:14	pH 2	20	20	7.11	22.2'C			
232367010		Soil	11:40	11:45	26-JUN-09 13:15	pH	20	20	7.72	22.0'C			
232367010		Soil	11:40	11:45	26-JUN-09 13:15	pH 2	20	20	7.71	22.0'C			
232367011		Soil	11:40	11:45	26-JUN-09 13:17	pH	20	20	7.64	21.8'C			
232367011		Soil	11:40	11:45	26-JUN-09 13:17	pH 2	20	20	7.6	21.8'C			
CCV			11:40	11:45	26-JUN-09 13:18	pH	20	20	7	21.4'C	7	100	
CCV			11:40	11:45	26-JUN-09 13:18	pH 2	20	20	6.99	21.4'C	7	99.857	

Calibration Information:
Run Date: 26-JUN-09 10:01
Instrument: PHX742
Analyst: RXG2

Standard	Observed	Theoretical		C	%Recovery
IMM090626-PH1	4.01	4	SU	21.5	100.25
IMM090626-PH-	7	7	SU	21.5	100
UPH090626b3-1	10.02	10	SU	21.5	100.2
UPH090626-03e-	2.02	2	SU	21.5	101
090626F30-1	11.99	12	SU	21.5	99.917
IMM090626g3-1	7.02	7	SU	21.5	100.29

Comments:

Miscellaneous

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
10-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
IC	EPA 300.0	Solid	LANL
Batch ID:	**Sample Numbers:**		
879955	See Below		

Potentially affected work order(s)(SDG): 232076(09-2394),232079(09-2397),232357(09-2455)

Application Issues:

Failed Recovery for MS/PS

Sample Analyzed out of Holding

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/MSD: QC 1201868387MS, 1201868388MSD 2. Sample Analyzed out of Holding: 232076 001,002,003 232079 001,002,003,004,005	1. The MS and MSD recoveries fall outside of the GEL acceptance limits but within the client specified limits. 2. Samples were received with insufficient time to prep and analyze within the remaining method-specified holding time. The samples were analyzed within 48 hrs of extraction.

Originator's Name:

Mary Sherwood 10-JUL-09

Data Validator/Group Leader:

Julia Hamilton 10-JUL-09

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2455

Method/Analysis Information

Procedure: **Dry Weight-Percent Moisture**

Analytical Method:

Analytical Batch Number: 880781

Sample ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201870208	232357001(CAMO-09-10480) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-020 REV# 9.

Calibration Information:

Quality Control (QC) Information:

Designated QC
The following sample was used for QC: 232357001 (CAMO-09-10480). The QC was from LANL work order 232357.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU. Not Applicable.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
The data for these samples was transferred from batch 880629. 232357001 (CAMO-09-10480) and 232357002 (CAMO-09-10479).

Blank Decision Level
Not Applicable. The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881676
Prep Batch Number:	880629

Sample ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201872427	Method Blank (MB)
1201872428	232347001(CAMO-09-10462) Sample Duplicate (DUP)
1201872429	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201872427 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232347001 (CAMO-09-10462). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Sample 232357002 (CAMO-09-10479) was recounted due to a peak shift.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	880723
Prep Batch Number:	880629

Sample ID	Client ID
232357001	CAMO-09-10480
232357002	CAMO-09-10479
1201870087	Method Blank (MB)
1201870088	232347001(CAMO-09-10462) Sample Duplicate (DUP)
1201870089	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, November 2008, January 2009, February 2009, April 2009 and June 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232347001 (CAMO-09-10462). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The method blank 1201870087 (MB) result is greater than 1.65 times the CSU but less than the MDC for Hg-203.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232357001	CAMO-09-10480
			232357002	CAMO-09-10479
			1201870088	CAMO-09-10462(232347001DUP)
		Cadmium-109	232357001	CAMO-09-10480
			232357002	CAMO-09-10479
			1201870088	CAMO-09-10462(232347001DUP)
		Radium-224	232357001	CAMO-09-10480
			232357002	CAMO-09-10479
			1201870088	CAMO-09-10462(232347001DUP)
UI	Data rejected due to low abundance.	Strontium-85	232357001	CAMO-09-10480
			232357002	CAMO-09-10479

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: Pamela Willis 7/15/09

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2455 GEL Work Order: 232357

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-10480	Project:	LANL01004
Sample ID:	232357001	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	11.2%		

ameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
vimetric Solids											
ls Received"											
Alpha Spec Analysis											
OU "Dry Weight Corrected"											
ranium-233/234		0.457	0.165	+/-0.0524	0.100	pCi/g	AXD2	07/10/09	2119	881676	2
ranium-235/236	U	0.0134	0.0755	+/-0.0101	0.100	pCi/g					
ranium-238		0.388	0.0641	+/-0.0462	0.100	pCi/g					
Gamma Spec Analysis											
AMMA SPEC "Dry Weight Corrected"											
mericium-241	U	0.190	0.552	+/-0.180	0.200	pCi/g	MXR1	07/06/09	1113	880723	3
ismuth-211	UI	3.23	0.457	+/-0.290		pCi/g					
ismuth-214		1.02	0.143	+/-0.0981	0.200	pCi/g					
admium-109	UI	3.58	1.81	+/-0.594		pCi/g					
erium-139	U	0.00793	0.0658	+/-0.0199	0.050	pCi/g					
esium-134	U	0.107	0.115	+/-0.0306	0.100	pCi/g					
esium-137	U	-0.0157	0.0747	+/-0.0239	0.100	pCi/g					
obalt-60	U	0.00872	0.0824	+/-0.025	0.100	pCi/g					
uropium-152	U	-0.0765	0.210	+/-0.0871	0.200	pCi/g					
anthanum-140	U	0.0333	0.159	+/-0.0455		pCi/g					
ead-212		1.43	0.116	+/-0.0907	0.100	pCi/g					
ead-214		1.12	0.159	+/-0.105	0.100	pCi/g					
ercury-203	U	0.0105	0.0903	+/-0.0265	0.100	pCi/g					
otassium-40		36.0	0.415	+/-1.77	1.00	pCi/g					
adium-223	U	-0.55	1.44	+/-0.446		pCi/g					
adium-224	UI	4.12	1.32	+/-0.904		pCi/g					
adium-226		1.02	0.143	+/-0.0981		pCi/g					
adium-228		1.51	0.263	+/-0.188	0.500	pCi/g					
uthenium-106	U	-0.426	0.596	+/-0.204	0.800	pCi/g					
odium-22	U	-0.0396	0.0901	+/-0.0301	0.080	pCi/g					
trontium-85	UI	0.109	0.0922	+/-0.025		pCi/g					
hallium-208		0.462	0.0749	+/-0.0509	0.080	pCi/g					
horium-227	U	-0.254	0.826	+/-0.251		pCi/g					
horium-231	U	-0.55	1.44	+/-0.446		pCi/g					
horium-234	U	1.77	3.96	+/-1.63	2.00	pCi/g					
in-113	U	0.0342	0.103	+/-0.0299	0.100	pCi/g					
ranium-235	U	-0.0215	0.441	+/-0.137	0.500	pCi/g					
ttrium-88	U	-0.0256	0.0587	+/-0.0208	0.100	pCi/g					

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-10480
Sample ID: 232357001

Project: LANL01004
Client ID: LANL010

ameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

following Analytical Methods were performed

thod	Description
	ASTM D 2216 (Modified)
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3

rogate/Tracer recovery	Test	Recovery %	Acceptable Limits
ium-232 Tracer	ISOU "Dry Weight Corrected"	95.7	(50%-105%)

tes:
PU is calculated at the 67% confidence level (1-sigma).
ne Qualifiers in this report are defined as follows :

* Analyte is a surrogate compound
: Result is less than value reported
· Result is greater than value reported
\ The TIC is a suspected aldol-condensation product
} For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
: Analyte has been confirmed by GC/MS analysis
) Results are reported from a diluted aliquot of the sample
} Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
} Organics--Concentration of the target analyte exceeds the instrument calibration range
' Estimated Value
I Analytical holding time was exceeded
Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
J Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC).
Quantitation is based on nearest internal standard response factor
J/A RPD or %Recovery limits do not apply.
JD Analyte concentration is not detected above the detection limit
JJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
' Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is lso <70%
R Sample results are rejected
J Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
JI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
' QC Samples were not spiked with this compound

Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-10480
Sample ID: 232357001

Project: LANL01004
Client ID: LANL010

ameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
5-day BOD--The 2:1 depletion requirement was not met for this sample
Preparation or preservation holding time was exceeded
he above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID:	CAMO-09-10479	Project:	LANL01004
Sample ID:	232357002	Client ID:	LANL010
Matrix:	R		
Collect Date:	22-JUN-09		
Receive Date:	25-JUN-09		
Collector:	Client		
Moisture:	9.47%		

ameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
vimetric Solids											
\s Received"											
Alpha Spec Analysis											
OU "Dry Weight Corrected"											
ranium-233/234		0.327	0.101	+/-0.0358	0.100	pCi/g	AXD2	07/14/09	0906	881676	2
ranium-235/236	U	0.0138	0.0464	+/-0.00734	0.100	pCi/g					
ranium-238		0.345	0.0394	+/-0.0364	0.100	pCi/g					
Gamma Spec Analysis											
AMMA SPEC "Dry Weight Corrected"											
mericium-241	U	0.0249	0.124	+/-0.0399	0.200	pCi/g	MXR1	07/06/09	1113	880723	4
ismuth-211	UI	2.57	0.451	+/-0.248		pCi/g					
ismuth-214		0.960	0.139	+/-0.0931	0.200	pCi/g					
admium-109	UI	3.74	1.12	+/-0.419		pCi/g					
erium-139	U	-0.00258	0.0551	+/-0.0165	0.050	pCi/g					
esium-134	U	0.101	0.126	+/-0.0337	0.100	pCi/g					
esium-137	U	0.00388	0.0877	+/-0.0267	0.100	pCi/g					
obalt-60	U	0.0374	0.110	+/-0.0318	0.100	pCi/g					
uropium-152	U	-0.179	0.184	+/-0.0669	0.200	pCi/g					
anthanum-140	U	-0.0097	0.114	+/-0.0418		pCi/g					
ead-212		1.31	0.101	+/-0.0802	0.100	pCi/g					
ead-214		0.892	0.150	+/-0.0894	0.100	pCi/g					
ercury-203	U	0.0257	0.0822	+/-0.0232	0.100	pCi/g					
otassium-40		32.7	0.672	+/-1.53	1.00	pCi/g					
adium-223	U	-0.402	1.34	+/-0.405		pCi/g					
adium-224	UI	3.73	1.15	+/-0.682		pCi/g					
adium-226		0.960	0.139	+/-0.0931		pCi/g					
adium-228		1.57	0.316	+/-0.223	0.500	pCi/g					
uthenium-106	U	-0.198	0.694	+/-0.220	0.800	pCi/g					
odium-22	U	0.0782	0.128	+/-0.0357	0.080	pCi/g					
trontium-85	UI	0.0912	0.0889	+/-0.0264		pCi/g					
hallium-208		0.502	0.0718	+/-0.0546	0.080	pCi/g					
horium-227	U	0.172	0.705	+/-0.210		pCi/g					
horium-231	U	-0.402	1.34	+/-0.405		pCi/g					
horium-234		1.34	1.18	+/-0.565	2.00	pCi/g					
in-113	U	-0.00647	0.0939	+/-0.028	0.100	pCi/g					
ranium-235	U	-0.225	0.396	+/-0.125	0.500	pCi/g					
ttrium-88	U	0.0157	0.0747	+/-0.0209	0.100	pCi/g					

Certificate of Analysis

Company : Los Alamos National Laboratory
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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-10479
Sample ID: 232357002

Project: LANL01004
Client ID: LANL010

ameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

following Analytical Methods were performed

thod	Description
	ASTM D 2216 (Modified)
	DOE EML HASL-300, U-02-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3

rogate/Tracer recovery	Test	Recovery %	Acceptable Limits
nium-232 Tracer	ISOU "Dry Weight Corrected"	99.6	(50%-105%)

tes:
PU is calculated at the 67% confidence level (1-sigma).
ne Qualifiers in this report are defined as follows :

* Analyte is a surrogate compound
: Result is less than value reported
· Result is greater than value reported
\ The TIC is a suspected aldol-condensation product
3 For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
3D Results are either below the MDC or tracer recovery is low
] Analyte has been confirmed by GC/MS analysis
) Results are reported from a diluted aliquot of the sample
3 Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
3 Organics--Concentration of the target analyte exceeds the instrument calibration range
? Estimated Value
I Analytical holding time was exceeded
Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
J Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC).
Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
' Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is lso <70%
R Sample results are rejected
J Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
JI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 15, 2009

Client Sample ID: CAMO-09-10479
Sample ID: 232357002

Project: LANL01004
Client ID: LANL010

ameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

QC Samples were not spiked with this compound
Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
5-day BOD--The 2:1 depletion requirement was not met for this sample
Preparation or preservation holding time was exceeded
he above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 15, 2009

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232357

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 881676										
QC1201872428 232347001 DUP										
Uranium-233/234		0.400		0.438	pCi/g	0.185		(0-1)	AXD2	07/10/0921:20
	TPU:	+/-0.0502		+/-0.0525						
	Yield:	88.7		96.5						
Uranium-235/236	U	0.0205	U	0.0373	pCi/g	0.354		(0-1)		
	TPU:	+/-0.0103		+/-0.0134						
	Yield:	88.7		96.5						
Uranium-238		0.389		0.426	pCi/g	0.187		(0-1)		
	TPU:	+/-0.049		+/-0.0501						
	Yield:	88.7		96.5						
QC1201872429 LCS										
Uranium-233/234				6.29	pCi/g			(75%-125%)		07/10/0921:20
	TPU:			+/-0.579						
	Yield:			95.1						
Uranium-235/236			U	0.193	pCi/g			(75%-125%)		
	TPU:			+/-0.0659						
	Yield:			95.1						
Uranium-238	5.75			5.46	pCi/g		95	(75%-125%)		
	TPU:			+/-0.515						
	Yield:			95.1						
QC1201872427 MB										
Uranium-233/234			U	0.00117	pCi/g					07/10/0921:20
	TPU:			+/-0.00535						
	Yield:			88.4						
Uranium-235/236			U	0.00258	pCi/g					
	TPU:			+/-0.00448						
	Yield:			88.4						
Uranium-238			U	-0.00418	pCi/g					
	TPU:			+/-0.00362						
	Yield:			88.4						
Rad Gamma Spec										
Batch 880723										
QC1201870088 232347001 DUP										
Americium-241	U	0.0377	U	-0.014	pCi/g	0.392		(0-1)	MXR1	07/06/0913:26
	TPU:	+/-0.0335		+/-0.0325						
Bismuth-211	UI	3.40	UI	3.35	pCi/g	0.0451		(0-1)		
	TPU:	+/-0.275		+/-0.235						
Bismuth-214		0.809		1.11	pCi/g	0.688		(0-1)		
	TPU:	+/-0.109		+/-0.106						
Cadmium-109	UI	3.43	UI	1.78	pCi/g	0.953		(0-1)		
	TPU:	+/-0.391		+/-0.478						
Cerium-139	U	0.00322	U	0.00273	pCi/g	0.00819		(0-1)		
	TPU:	+/-0.0153		+/-0.0143						
Cesium-134	UI	0.123	U	0.0702	pCi/g	0.414		(0-1)		

QC Summary

Workorder: 232357

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
	TPU:	+/-0.0303		+/-0.0329						
Cesium-137	U	-0.0461	U	0.00686	pCi/g	0.537		(0-1)		
	TPU:	+/-0.024		+/-0.0253						
Cobalt-60	U	0.0206	U	0.0483	pCi/g	0.268		(0-1)		
	TPU:	+/-0.0208		+/-0.0308						
Europium-152	U	0.0854	U	-0.00341	pCi/g	0.350		(0-1)		
	TPU:	+/-0.0714		+/-0.0553						
Lanthanum-140	U	0.136	U	0.00972	pCi/g	0.602		(0-1)		
	TPU:	+/-0.0438		+/-0.0613						
Lead-212		1.57		1.24	pCi/g	0.894		(0-1)		
	TPU:	+/-0.103		+/-0.0826						
Lead-214		1.18		1.17	pCi/g	0.0426		(0-1)		
	TPU:	+/-0.101		+/-0.0871						
Mercury-203	U	0.0427	U	0.0497	pCi/g	0.0729		(0-1)		
	TPU:	+/-0.0246		+/-0.023						
Potassium-40		34.1		37.0	pCi/g	0.450		(0-1)		
	TPU:	+/-1.47		+/-1.73						
Radium-223	U	0.686	U	-0.935	pCi/g	1.05		(0-1)		
	TPU:	+/-0.373		+/-0.398						
Radium-224	UI	4.11	UI	1.87	pCi/g	0.813		(0-1)		
	TPU:	+/-0.855		+/-0.526						
Radium-226		0.809		1.11	pCi/g	0.688		(0-1)		
	TPU:	+/-0.109		+/-0.106						
Radium-228		1.54		1.85	pCi/g	0.389		(0-1)		
	TPU:	+/-0.204		+/-0.196						
Ruthenium-106	U	-0.131	U	0.249	pCi/g	0.443		(0-1)		
	TPU:	+/-0.199		+/-0.229						
Sodium-22	U	-0.0127	U	0.0656	pCi/g	0.594		(0-1)		
	TPU:	+/-0.0293		+/-0.0366						
Strontium-85	U	-0.16	U	0.0891	pCi/g	2.20		(0-1)		
	TPU:	+/-0.0277		+/-0.0287						
Thallium-208	UI	0.514		0.553	pCi/g	0.195		(0-1)		
	TPU:	+/-0.0464		+/-0.0545						
Thorium-227	U	0.380	U	0.285	pCi/g	0.113		(0-1)		
	TPU:	+/-0.210		+/-0.206						
Thorium-231	U	0.686	U	-0.935	pCi/g	1.05		(0-1)		
	TPU:	+/-0.373		+/-0.398						
Thorium-234	UI	1.04	U	0.234	pCi/g	0.522		(0-1)		
	TPU:	+/-0.450		+/-0.324						
Tin-113	U	0.0149	U	0.0637	pCi/g	0.472		(0-1)		
	TPU:	+/-0.0248		+/-0.0271						
Uranium-235	U	0.046	U	0.144	pCi/g	0.219		(0-1)		
	TPU:	+/-0.112		+/-0.112						
Yttrium-88	U	-0.00755	U	0.0495	pCi/g	0.642		(0-1)		
	TPU:	+/-0.0169		+/-0.0276						
QC1201870089 LCS										
Americium-241	15.9			13.9	pCi/g		87	(75%-125%)		07/06/0913:26
	TPU:			+/-0.762						
Bismuth-211				2.35	pCi/g					
	TPU:			+/-0.313						
Bismuth-214				0.749	pCi/g					

QC Summary

Workorder: 232357

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
		TPU:		+/-0.126						
Cadmium-109				41.7	pCi/g					
		TPU:		+/-2.53						
Cerium-139			U	0.0265	pCi/g					
		TPU:		+/-0.0204						
Cesium-134			U	0.0915	pCi/g					
		TPU:		+/-0.0501						
Cesium-137	5.64			5.69	pCi/g		101	(75%-125%)		
		TPU:		+/-0.206						
Cobalt-60	6.93			7.00	pCi/g		101	(75%-125%)		
		TPU:		+/-0.317						
Europium-152			U	-0.0931	pCi/g					
		TPU:		+/-0.096						
Lanthanum-140			U	-0.00788	pCi/g					
		TPU:		+/-0.0399						
Lead-212				0.791	pCi/g					
		TPU:		+/-0.0858						
Lead-214				0.817	pCi/g					
		TPU:		+/-0.111						
Mercury-203			U	0.0068	pCi/g					
		TPU:		+/-0.0287						
Potassium-40			U	0.882	pCi/g					
		TPU:		+/-0.296						
Radium-223			U	-0.144	pCi/g					
		TPU:		+/-0.563						
Radium-224			U	0.731	pCi/g					
		TPU:		+/-1.21						
Radium-226				0.749	pCi/g					
		TPU:		+/-0.126						
Radium-228				0.901	pCi/g					
		TPU:		+/-0.322						
Ruthenium-106			U	-0.0538	pCi/g					
		TPU:		+/-0.319						
Sodium-22			U	0.00409	pCi/g					
		TPU:		+/-0.0308						
Strontium-85			U	0.0975	pCi/g					
		TPU:		+/-0.0349						
Thallium-208				0.389	pCi/g					
		TPU:		+/-0.0586						
Thorium-227			U	0.562	pCi/g					
		TPU:		+/-0.336						
Thorium-231			U	-0.144	pCi/g					
		TPU:		+/-0.563						
Thorium-234			U	-0.50	pCi/g					
		TPU:		+/-1.05						
Tin-113			U	0.0455	pCi/g					
		TPU:		+/-0.0403						
Uranium-235			U	0.115	pCi/g					
		TPU:		+/-0.142						
Yttrium-88			U	0.0327	pCi/g					
		TPU:		+/-0.0281						

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 232357

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
QC1201870087 MB										
Americium-241			U	0.0262	pCi/g					07/06/0913:25
	TPU:			+/-0.0393						
Bismuth-211			U	0.0284	pCi/g					
	TPU:			+/-0.060						
Bismuth-214			U	-0.00377	pCi/g					
	TPU:			+/-0.021						
Cadmium-109			U	0.0317	pCi/g					
	TPU:			+/-0.153						
Cerium-139			U	-0.00888	pCi/g					
	TPU:			+/-0.00557						
Cesium-134			U	0.000343	pCi/g					
	TPU:			+/-0.00823						
Cesium-137			U	0.00112	pCi/g					
	TPU:			+/-0.00737						
Cobalt-60			U	-0.00518	pCi/g					
	TPU:			+/-0.00691						
Europium-152			U	-0.0246	pCi/g					
	TPU:			+/-0.0215						
Lanthanum-140			U	-0.00511	pCi/g					
	TPU:			+/-0.0125						
Lead-212			U	0.012	pCi/g					
	TPU:			+/-0.0134						
Lead-214			U	0.0244	pCi/g					
	TPU:			+/-0.0274						
Mercury-203			U	0.0126	pCi/g					
	TPU:			+/-0.00733						
Potassium-40			U	0.0477	pCi/g					
	TPU:			+/-0.0998						
Radium-223			U	-0.0804	pCi/g					
	TPU:			+/-0.135						
Radium-224			U	-0.0288	pCi/g					
	TPU:			+/-0.142						
Radium-226			U	-0.00377	pCi/g					
	TPU:			+/-0.021						
Radium-228			U	0.0383	pCi/g					
	TPU:			+/-0.0336						
Ruthenium-106			U	-0.00429	pCi/g					
	TPU:			+/-0.0683						
Sodium-22			U	0.00479	pCi/g					
	TPU:			+/-0.00703						
Strontium-85			U	-0.0205	pCi/g					
	TPU:			+/-0.0121						
Thallium-208			U	-0.00328	pCi/g					
	TPU:			+/-0.00912						
Thorium-227			U	-0.00817	pCi/g					
	TPU:			+/-0.0774						
Thorium-231			U	-0.0804	pCi/g					
	TPU:			+/-0.135						
Thorium-234			U	-0.424	pCi/g					
	TPU:			+/-0.357						

QC Summary

Workorder: 232357

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 880723										
Tin-113			U	0.0126	pCi/g					
	TPU:			+/-0.00807						
Uranium-235			U	-0.0746	pCi/g					
	TPU:			+/-0.0499						
Yttrium-88			U	-0.00169	pCi/g					
	TPU:			+/-0.00982						

Notes:
The Qualifiers in this report are defined as follows:

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

QC Summary

Workorder: 232357

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 881676 Product: U Date: 7/15/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/15/09

Secondary Review Performed By: [signature] 7/15/09

7/6 7/17

PV

Uranium Que Sheet

01-JUL-09

Batch #: 881676 Analyst: AXD2 First Client Due Date:17-JUL-09 Internal Due Date:06-JUL-09

Tracer Isotope: U-232/U-236 Tracer Code: 1283-B Expiration Date: 12/16/09 Vol: 0.1

LCS Isotope: U-238 LCS Code: ~~1463-G~~ Expiration Date: ~~4/16/10~~ Vol: ~~0.1~~ 7/2/09

Spike Isotope: U-238 Spike Code: Expiration Date: Vol:

Prep Date: 7/02/09 Initials: AMD Pipet ID: 29710058 Balance ID: 5241027 2 Witness: 7/2/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g) (1/f)	U Det #
232347001-1	CAMO-09-10462	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	1	1	0.500	133
232347002-1	CAMO-09-10460	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	2	2	0.524	134
232347003-1	CAMO-09-10461	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	3	3	0.515	135
232347004-1	CAMO-09-10467	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	4	4	0.565	~~136~~ 165
232357001-1	CAMO-09-10480	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	5	5	0.508	137
232357002-1	CAMO-09-10479	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	6	6	0.522	~~138~~ 166
232358001-1	CAMO-09-6005	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	7	7	0.518	139
232358002-1	CAMO-09-6029	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	8	8	0.527	140
232358003-1	CAMO-09-6037	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	9	9	0.514	141
232358004-1	CAMO-09-6033	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	10	10	0.517	142
232358005-1	CAMO-09-6030	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	11	11	0.503	144
232358006-1	CAMO-09-6031	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	12	12	0.525	145
232358007-1	CAMO-09-6032	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	13	13	0.508	146
232358008-1	CAMO-09-6036	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	14	14	0.513	147
232358009-1	CAMO-09-6028	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	15	15	0.515	148
232358010-1	CAMO-09-6047	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	16	16	0.503	149
232358011-1	CAMO-09-6048	SAMPLE		.1 pCi/g	SOIL	LANL010	22-JUN-09	17	17	0.507	150
1201872427-1	MB for batch 881676	MB		.1 pCi/g	SOIL	QC ACCOUNT		18	18	~~0.505~~	151
1201872428-1	CAMO-09-10462(232347001DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	22-JUN-09	19	19	0.502	152
1201872429-1	LCS for batch 881676	LCS		.1 pCi/g	SOIL	QC ACCOUNT		20	20	0.109	153

*SPM 0244-A exp. 10/31/20

Choose SOP used: GL-RAD-A-011
GL-RAD-A-038
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: [signature] 7/15/09

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 881676

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201872428	DUP	Uranium-233/234	0.502 g	0.438	0.0525	0.171	.002330677	pCi/g	NO
		Uranium-235/236	0.502 g	0.0373	0.0134	0.0785	.005139442	pCi/g	NO
		Uranium-238	0.502 g	0.426	0.0501	0.0667	-.00832669	pCi/g	NO
1201872429	LCS	Uranium-233/234	0.109 g	6.29	0.579	0.788	.010733945	pCi/g	NO
		Uranium-235/236	0.109 g	0.193	0.0659	0.361	.023669725	pCi/g	NO
		Uranium-238	0.109 g	5.46	0.515	0.307	-.03834862	pCi/g	NO
1201872427	MB	Uranium-233/234	1.00 g	0.00117	0.00535	0.095	.00117	pCi/g	YES
		Uranium-235/236	1.00 g	0.00258	0.00448	0.0436	.00258	pCi/g	YES
		Uranium-238	1.00 g	-0.00418	0.00362	0.037	-.00418	pCi/g	NO
232347001	CAMO-09-10462	Uranium-233/234	0.500 g	0.400	0.0502	0.188	.00234	pCi/g	NO
		Uranium-235/236	0.500 g	0.0205	0.0103	0.0863	.00516	pCi/g	YES
		Uranium-238	0.500 g	0.389	0.049	0.0733	-.00836	pCi/g	NO
232347002	CAMO-09-10460	Uranium-233/234	0.524 g	0.376	0.0478	0.167	.002232824	pCi/g	NO
		Uranium-235/236	0.524 g	0.00	0.0144	0.0765	.004923664	pCi/g	YES
		Uranium-238	0.524 g	0.353	0.0445	0.065	-.00797710	pCi/g	NO
232347003	CAMO-09-10461	Uranium-233/234	0.515 g	0.325	0.041	0.161	.002271845	pCi/g	NO
		Uranium-235/236	0.515 g	0.00872	0.00875	0.0735	.005009709	pCi/g	YES
		Uranium-238	0.515 g	0.300	0.039	0.0625	-.00811650	pCi/g	NO
232347004	CAMO-09-10467	Uranium-233/234	0.565 g	0.425	0.0414	0.093	.002070796	pCi/g	NO
		Uranium-235/236	0.565 g	0.0354	0.011	0.0426	.004566372	pCi/g	NO
		Uranium-238	0.565 g	0.341	0.0355	0.0362	-.00739823	pCi/g	NO
232357001	CAMO-09-10480	Uranium-233/234	0.508 g	0.457	0.0524	0.165	.002303150	pCi/g	NO
		Uranium-235/236	0.508 g	0.0134	0.0101	0.0755	.005078740	pCi/g	YES
		Uranium-238	0.508 g	0.388	0.0462	0.0641	-.00822835	pCi/g	NO
232357002	CAMO-09-10479	Uranium-233/234	0.522 g	0.327	0.0358	0.101	.002241379	pCi/g	NO
		Uranium-235/236	0.522 g	0.0138	0.00734	0.0464	.004942529	pCi/g	YES
		Uranium-238	0.522 g	0.345	0.0364	0.0394	-.00800766	pCi/g	NO
232358001	CAMO-09-6005	Uranium-233/234	0.518 g	0.834	0.0827	0.171	.002258687	pCi/g	NO
		Uranium-235/236	0.518 g	0.0419	0.0157	0.0785	.004980695	pCi/g	NO
		Uranium-238	0.518 g	0.787	0.0789	0.0667	-.00806950	pCi/g	NO
232358002	CAMO-09-6029	Uranium-233/234	0.527 g	0.751	0.0744	0.161	.002220114	pCi/g	NO
		Uranium-235/236	0.527 g	0.0437	0.0188	0.0737	.004895636	pCi/g	NO
		Uranium-238	0.527 g	0.803	0.0773	0.0626	-.00793169	pCi/g	NO
232358003	CAMO-09-6037	Uranium-233/234	0.514 g	0.818	0.0814	0.171	.002276265	pCi/g	NO
		Uranium-235/236	0.514 g	0.0326	0.0125	0.0785	.005019455	pCi/g	NO
		Uranium-238	0.514 g	0.776	0.0775	0.0666	-.00813230	pCi/g	NO
232358004	CAMO-09-6033	Uranium-233/234	0.517 g	0.772	0.0771	0.166	.002263056	pCi/g	NO
		Uranium-235/236	0.517 g	0.0271	0.0158	0.0762	.004990329	pCi/g	NO
		Uranium-238	0.517 g	0.950	0.089	0.0647	-.00808511	pCi/g	NO
232358005	CAMO-09-6030	Uranium-233/234	0.503 g	1.59	0.153	0.269	.002326044	pCi/g	NO
		Uranium-235/236	0.503 g	0.0585	0.0211	0.123	.005129225	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232358005	CAMO-09-6030	Uranium-238	0.503 g	1.79	0.167	0.105	-.00831014	pCi/g	NO
232358006	CAMO-09-6031	Uranium-233/234	0.525 g	0.839	0.082	0.166	.002228571	pCi/g	NO
		Uranium-235/236	0.525 g	0.0588	0.018	0.0763	.004914286	pCi/g	NO
		Uranium-238	0.525 g	0.820	0.0801	0.0648	-.00796190	pCi/g	NO
232358007	CAMO-09-6032	Uranium-233/234	0.508 g	3.84	0.301	0.197	.002303150	pCi/g	NO
		Uranium-235/236	0.508 g	0.182	0.0354	0.0902	.005078740	pCi/g	NO
		Uranium-238	0.508 g	4.78	0.367	0.0766	-.00822835	pCi/g	NO
232358008	CAMO-09-6036	Uranium-233/234	0.513 g	0.855	0.0848	0.176	.002280702	pCi/g	NO
		Uranium-235/236	0.513 g	0.0525	0.0163	0.0805	.005029240	pCi/g	NO
		Uranium-238	0.513 g	1.02	0.0959	0.0684	-.00814815	pCi/g	NO
232358009	CAMO-09-6028	Uranium-233/234	0.515 g	0.732	0.0785	0.203	.002271845	pCi/g	NO
		Uranium-235/236	0.515 g	0.0442	0.0159	0.093	.005009709	pCi/g	NO
		Uranium-238	0.515 g	0.630	0.0699	0.079	-.00811650	pCi/g	NO
232358010	CAMO-09-6047	Uranium-233/234	0.503 g	0.530	0.0589	0.180	.002326044	pCi/g	NO
		Uranium-235/236	0.503 g	0.0342	0.0131	0.0823	.005129225	pCi/g	NO
		Uranium-238	0.503 g	0.624	0.0663	0.0699	-.00831014	pCi/g	NO
232358011	CAMO-09-6048	Uranium-233/234	0.507 g	0.860	0.0829	0.170	.002307692	pCi/g	NO
		Uranium-235/236	0.507 g	0.0462	0.015	0.0778	.005088757	pCi/g	NO
		Uranium-238	0.507 g	0.889	0.0851	0.0661	-.00824458	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S0232347001_UU SAMPLE QTY: 0.500 G
DETECTOR NUMBER :76229 AVERAGE %EFFICIENCY :24.5240 % YIELD : 88.659	COUNT DATE:10-JUL-2009 21:19:23 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.352E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.352E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29642 dpm RESULTS : 4.69574 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B133.CNF;361 BKG DATE : 5-JUL-2009 EFF FILE : W133.CNF;107 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	102.000	96.527	2.000	9.1924	100.0000	4.00E-01	5.02E-02	8.86E-02	1.88E-01	4.15E-02
U232	5302.100	1156.000	1151.000	5.000	2.2361	100.0000	4.77E+00	3.64E-01	2.16E-02	5.43E-02	1.41E-01
U-235	4391.000	4.000	4.000	0.000	3.0409	80.90000	2.05E-02	1.03E-02	3.62E-02	8.63E-02	1.02E-02
U-238	4184.730	95.000	94.000	1.000	3.2215	100.0000	3.89E-01	4.90E-02	3.11E-02	7.33E-02	4.06E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

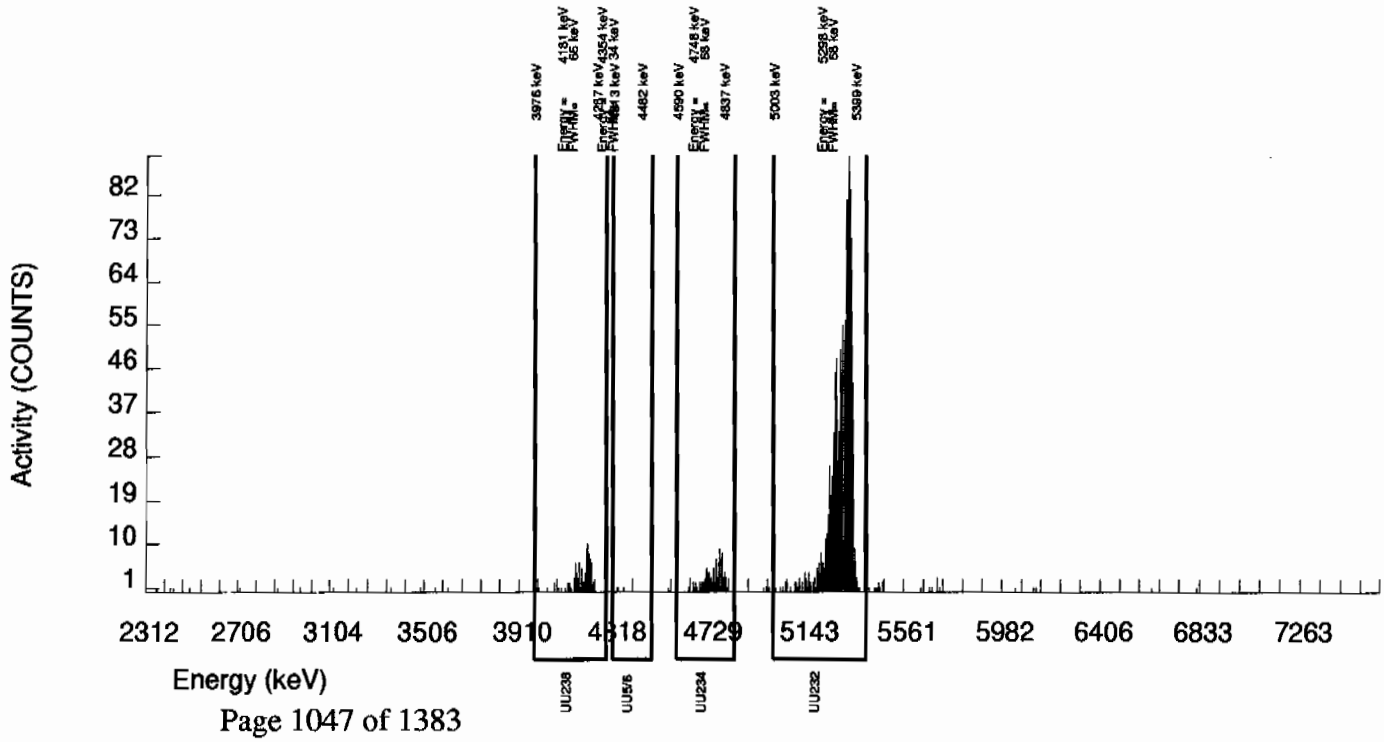

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S0232357001_UU SAMPLE QTY: 0.508 G
DETECTOR NUMBER :64288 AVERAGE %EFFICIENCY :25.5715 % YIELD : 95.738	COUNT DATE:10-JUL-2009 21:19:33 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
SOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B137.CNF;326
PCI/G : 2.315E+01	PCI/G : 2.315E+01	NOMINAL : 5.29642 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.07072 dpm	EFF FILE : W137.CNF;88
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	133.000	126.090	3.000	9.1924	100.0000	4.57E-01	5.24E-02	7.75E-02	1.65E-01	4.16E-02
U232	5302.100	1303.000	1296.000	7.000	2.6458	100.0000	4.70E+00	3.52E-01	2.23E-02	5.44E-02	1.31E-01
U-235	4391.000	4.000	3.000	1.000	3.0409	80.90000	1.34E-02	1.01E-02	3.17E-02	7.55E-02	1.00E-02
U-238	4184.730	107.000	107.000	0.000	3.2215	100.0000	3.88E-01	4.62E-02	2.71E-02	6.41E-02	3.75E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

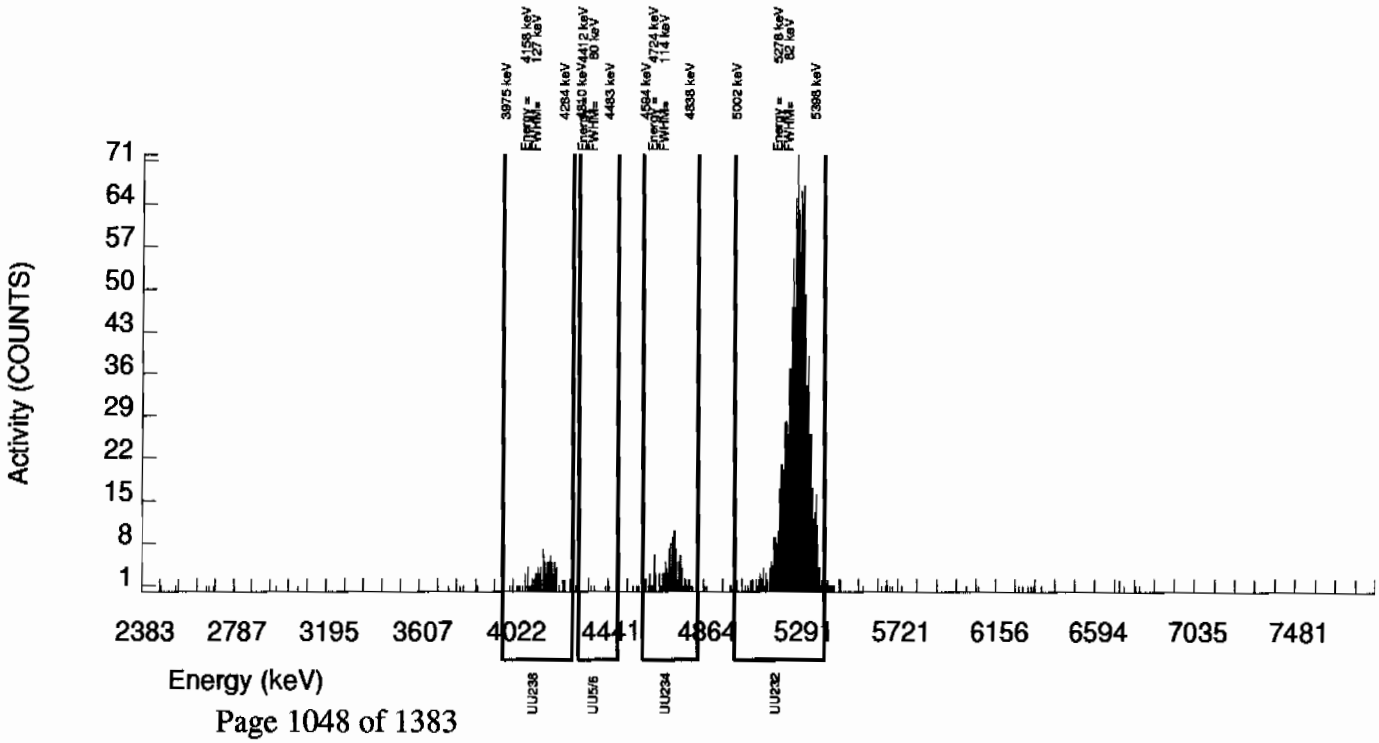

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S0232357002_UU SAMPLE QTY: 0.522 G
DETECTOR NUMBER :74545 AVERAGE %EFFICIENCY :38.9197 % YIELD : 99.606	COUNT DATE:14-JUL-2009 09:06:28 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.253E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.253E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29642 dpm RESULTS : 5.27555 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B166.CNF;106 BKG DATE : 12-JUL-2009 EFF FILE : W166.CNF;34 CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	160.000	146.809	7.000	9.1924	100.0000	3.27E-01	3.58E-02	4.76E-02	1.01E-01	2.82E-02
U232	5302.100	2058.000	2052.000	6.000	2.4495	100.0000	4.57E+00	3.24E-01	1.27E-02	3.14E-02	1.01E-01
U-235	4391.000	6.000	5.000	1.000	3.0409	80.90000	1.38E-02	7.34E-03	1.95E-02	4.64E-02	7.28E-03
U-238	4184.730	157.000	155.000	2.000	3.2215	100.0000	3.45E-01	3.64E-02	1.67E-02	3.94E-02	2.81E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

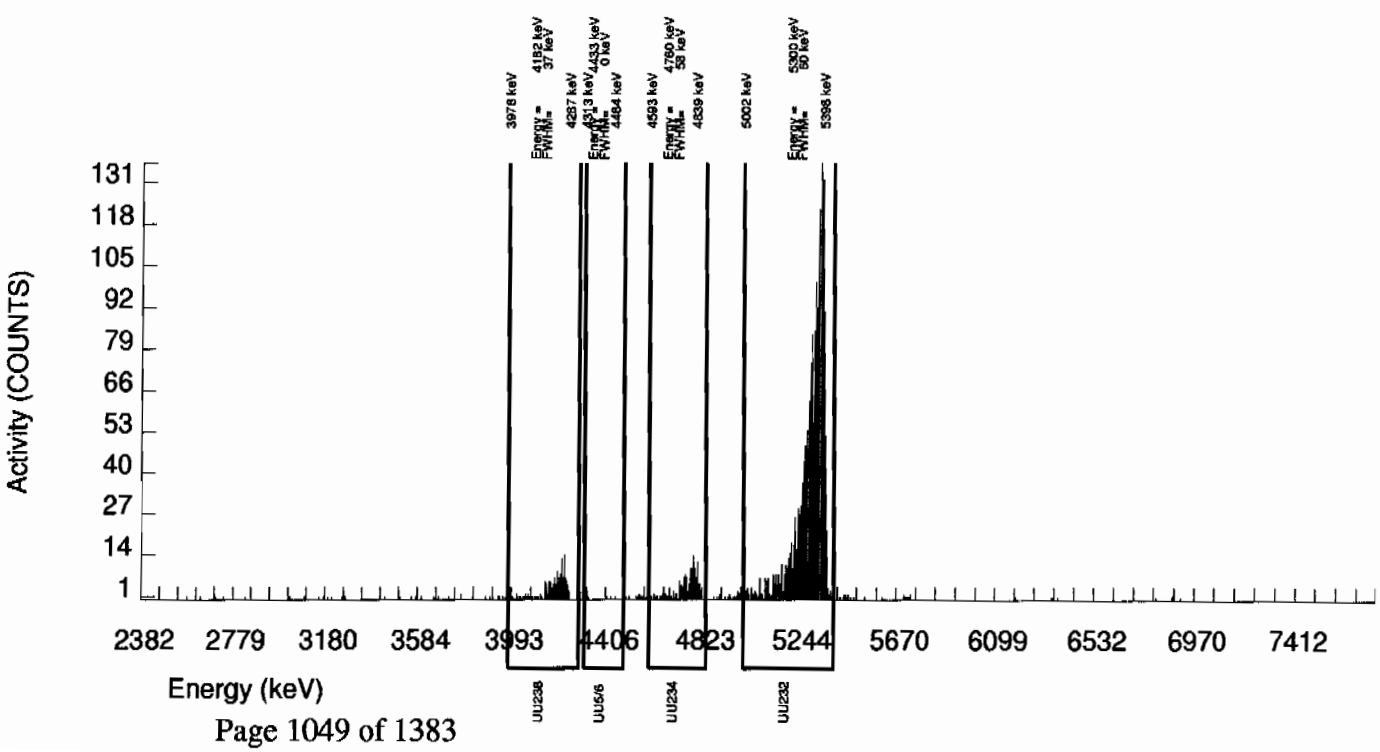

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 2-JUL-2009 00:00:00.	SAMPLE ID : S1201872427_UU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :75556 AVERAGE %EFFICIENCY :24.3854 % YIELD : 88.388	COUNT DATE:10-JUL-2009 21:20:05 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 1.176E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29504 dpm RESULTS : 4.68017 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B151.CNF;329 BKG DATE : 5-JUL-2009 EFF FILE : W151.CNF;104 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	7.000	0.558	3.000	9.1924	100.0000	1.17E-03	5.35E-03	4.47E-02	9.50E-02	5.35E-03
U232	5302.100	1143.000	1141.000	2.000	1.4142	100.0000	2.39E+00	1.82E-01	6.88E-03	1.94E-02	7.07E-02
U-235	4391.000	2.000	1.000	1.000	3.0409	80.90000	2.58E-03	4.48E-03	1.83E-02	4.36E-02	4.47E-03
U-238	4184.730	0.000	-2.000	2.000	3.2215	100.0000	-4.18E-03	3.62E-03	1.57E-02	3.70E-02	3.62E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

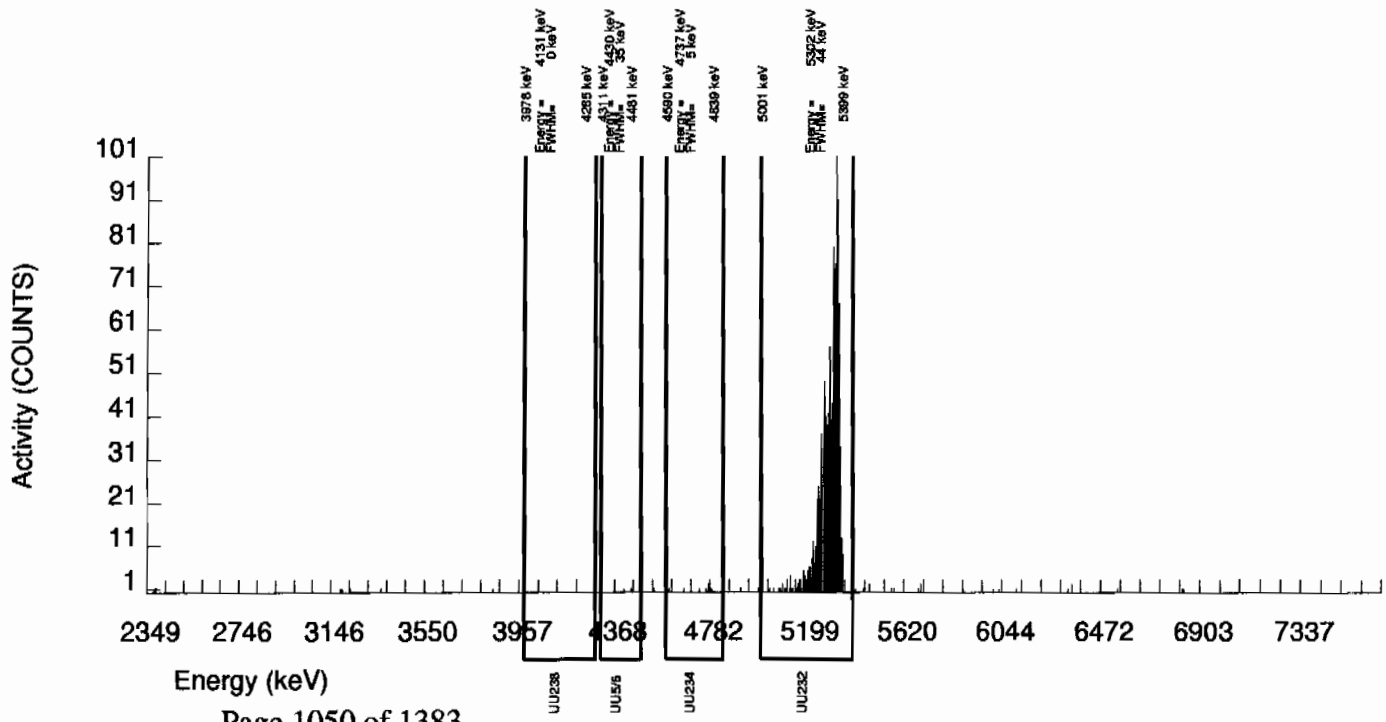

Alpha Spectroscopy Software Version 2.0
effective date: 06-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 22-JUN-2009 00:00:00	SAMPLE ID : S1201872428_UU SAMPLE QTY: 0.502 G
DETECTOR NUMBER :76222 AVERAGE %EFFICIENCY :24.6763 % YIELD : 96.532	COUNT DATE:10-JUL-2009 21:20:08 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.343E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.343E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29643 dpm RESULTS : 5.11276 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B152.CNF;326 BKG DATE : 5-JUL-2009 EFF FILE : W152.CNF;91 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	126.000	116.196	6.000	9.1924	100.0000	4.38E-01	5.25E-02	8.06E-02	1.71E-01	4.27E-02
U232	5302.100	1263.000	1261.000	2.000	1.4142	100.0000	4.75E+00	3.58E-01	1.24E-02	3.50E-02	1.34E-01
U-235	4391.000	8.000	8.000	0.000	3.0409	80.90000	3.73E-02	1.34E-02	3.29E-02	7.85E-02	1.32E-02
U-238	4184.730	114.000	113.000	1.000	3.2215	100.0000	4.26E-01	5.01E-02	2.82E-02	6.67E-02	4.04E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

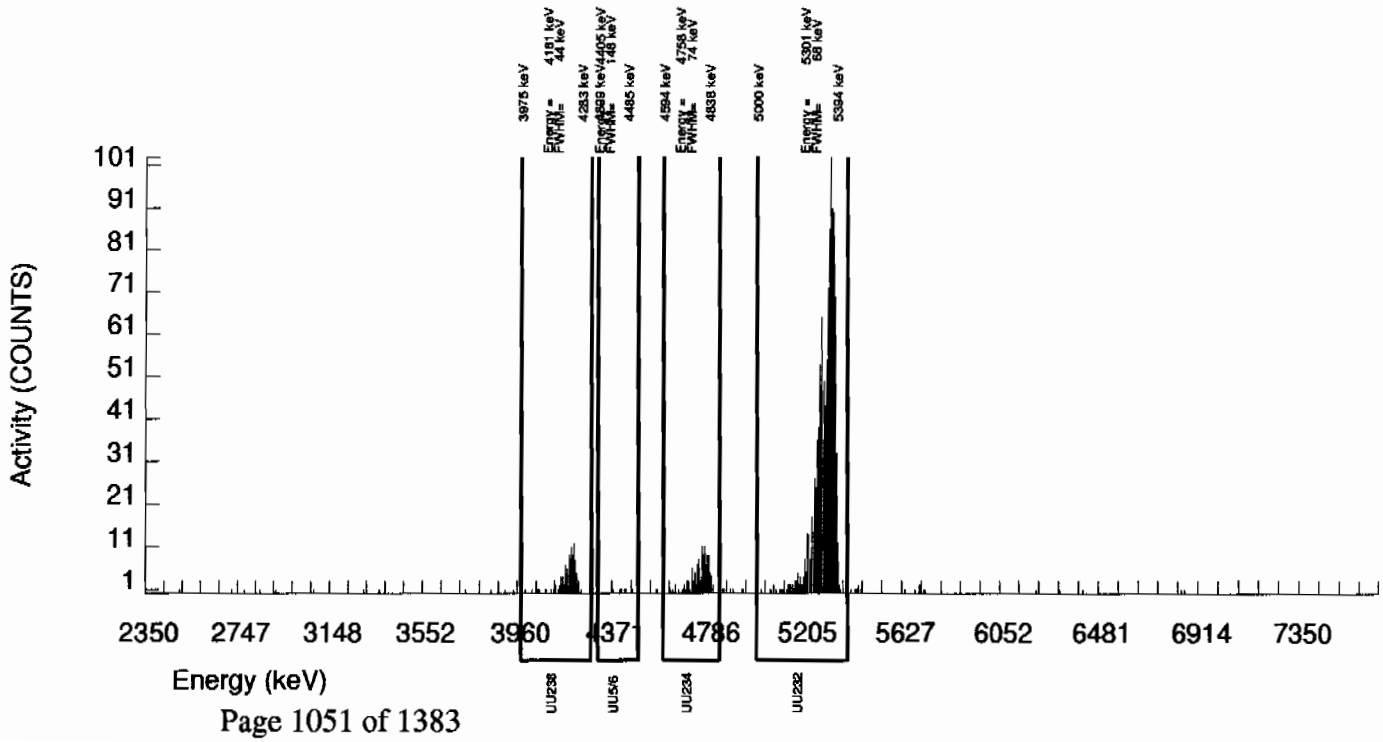

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 881676 SAMPLE DATE : 2-JUL-2009 00:00:00.	SAMPLE ID : S1201872429_UU SAMPLE QTY: 0.109 G
DETECTOR NUMBER :76223 AVERAGE %EFFICIENCY :25.0846 % YIELD : 95.112	COUNT DATE:10-JUL-2009 21:20:10 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 1.079E+02	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.079E+02	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29504 dpm RESULTS : 5.03620 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B153.CNF;321 BKG DATE : 5-JUL-2009 EFF FILE : W153.CNF;94 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	367.000	363.190	0.000	9.1924	100.0000	6.29E+00	5.79E-01	3.70E-01	7.88E-01	3.30E-01
U232	5302.100	1268.000	1263.000	5.000	2.2361	100.0000	2.19E+01	1.76E+00	9.01E-02	2.27E-01	6.18E-01
U-235	4391.000	9.000	9.000	0.000	3.0409	80.90000	1.93E-01	6.59E-02	1.51E-01	3.61E-01	6.42E-02
U-238	4184.730	317.000	315.000	2.000	3.2215	100.0000	5.46E+00	5.15E-01	1.30E-01	3.07E-01	3.09E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

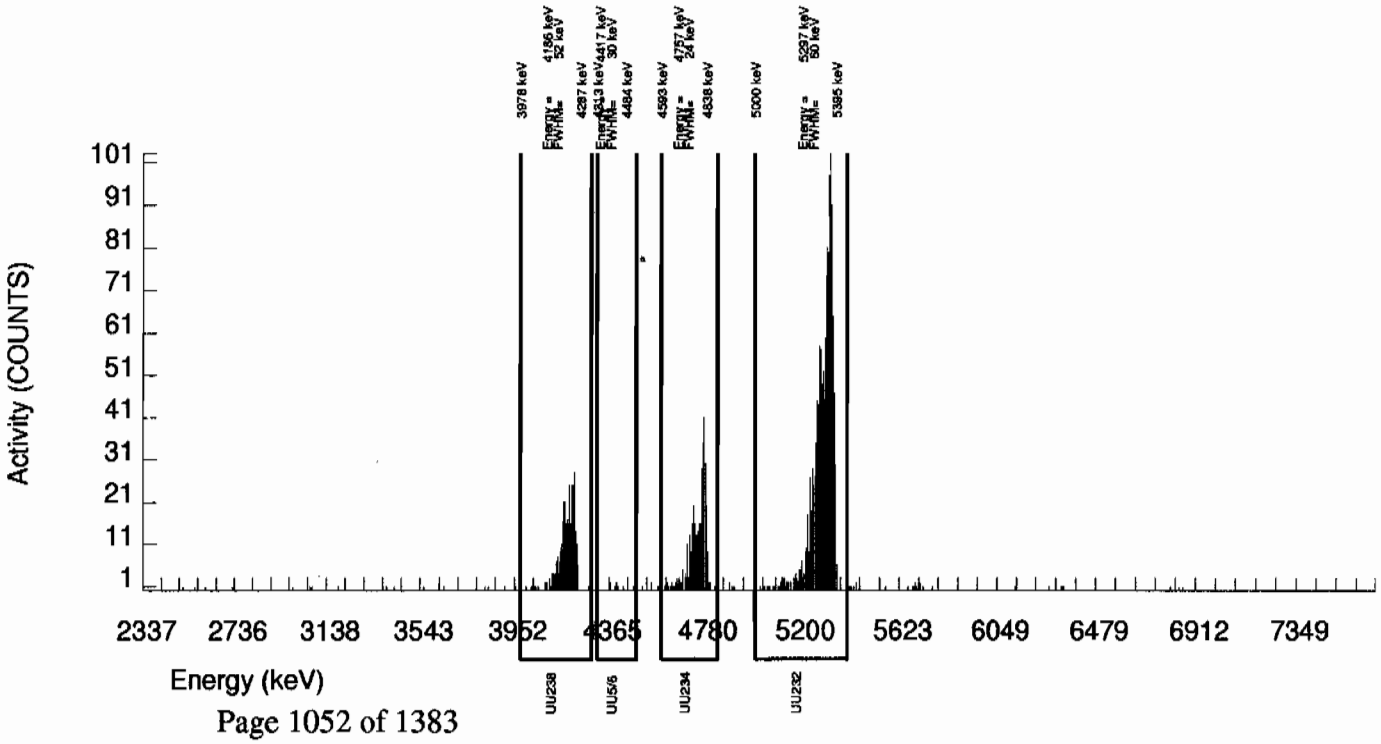

Radiochemistry Batch Checklist, Rev 9

Batch# 880723 Product: 85 Date: 7/14/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			NA
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		
Batch non-conformances second reviewed and disposition verified to be completed.	✓		
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/06

Primary Review Performed By: S. Ensland 7/14/09

Secondary Review Performed By: K Pat 7/14/09

NAEL

7/17/09

Gamma Spec Que Sheet

1.G.- 7/6/09

06/26/2009

Batch #: 880723 **Analyst:** MXR1 **First Client DueDate** 07/17/2009 **Internal Due Date:** 07/06/2009

Gamma Spike Isotope: Mixed Gamma **Spike Code:** NA **Expiration Date:** NA **Vol:** NA **Nominal Concentration:** NA

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1 mL **Nominal Concentration:**

Am241: 15.92
Cs137: 5.639
Co60: 6.934

Initials: MS **Prep Date:** 6/29/09 **Witness:** NA

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
232278001-1	CAMO-09-10458	SAMPLE		.05 pCi/g	LANL010	SOIL	19-JUN-09 12:00:00	114.89	1	6/26/09
232278002-1	CAMO-09-10459	SAMPLE		.05 pCi/g	LANL010	SOIL	19-JUN-09 12:00:00	107.41	4	6/26/09
232347001-1	CAMO-09-10462	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	126.58	5	6/29/09
232347002-1	CAMO-09-10460	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	126.18	8	
232347003-1	CAMO-09-10461	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	126.88	13	
232347004-1	CAMO-09-10467	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	117.04	14	
232357001-1	CAMO-09-10480	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	112.85	15	
232357002-1	CAMO-09-10479	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	123.92	17	
232358001-1	CAMO-09-6005	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	126.60	18	
232358002-1	CAMO-09-6029	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	134.40	6 ~~20~~	
232358003-1	CAMO-09-6037	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	145.04	21	
232358004-1	CAMO-09-6033	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	134.08	22	
232358005-1	CAMO-09-6030	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	124.55	23	
232358006-1	CAMO-09-6031	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	137.44	9	
232358007-1	CAMO-09-6032	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	100.62	10	
232358008-1	CAMO-09-6036	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	121.35	11	
232358009-1	CAMO-09-6028	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	133.79	12	
232358010-1	CAMO-09-6047	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	133.28	16	
232358011-1	CAMO-09-6048	SAMPLE		.05 pCi/g	LANL010	SOIL	22-JUN-09 12:00:00	140.17	17	
1201870087-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	6/29/09	145.00	18	
1201870088-1	DUP CAMO-09-10462(232347001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	22-JUN-09 12:00:00	126.58	21	
1201870089-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	6/29/09	155.44	23	

GEL Laboratories LLC, Radiochemistry Division

history ✓
✓ dailies

Data Reviewed By: 7/14/09 7/14/09 7/14/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
880723	232278001	SAMPLE	06-JUL-09	Americium-241	-0.02865	0.3004	0.200
				Cerium-139	-0.02708	0.05534	0.050
				Cesium-134	0.079	0.1089	0.100
				Sodium-22	-0.00122	0.09266	0.080
				Thorium-234	1.894	2.345	2.00
880723	232278002	SAMPLE	06-JUL-09	Americium-241	0.06485	0.4038	0.200
				Cerium-139	0.02396	0.05051	0.050
				Cesium-134	0.08321	0.1081	0.100
				Thorium-234	0.7778	3.126	2.00
880723	232347001	SAMPLE	06-JUL-09	Cerium-139	0.00322	0.05179	0.050
				Sodium-22	-0.01266	0.09296	0.080
880723	232347002	SAMPLE	06-JUL-09	Americium-241	-0.02283	0.3001	0.200
				Thorium-234	0.05455	2.452	2.00
880723	232347003	SAMPLE	06-JUL-09	Cerium-139	-0.02302	0.0534	0.050
				Cesium-134	0.06555	0.1146	0.100
				Sodium-22	-0.02734	0.09677	0.080
880723	232347004	SAMPLE	06-JUL-09	Americium-241	-0.1319	0.2026	0.200
				Sodium-22	-0.03291	0.08205	0.080
880723	232357001	SAMPLE	06-JUL-09	Americium-241	0.1896	0.5516	0.200
				Cerium-139	0.00793	0.06582	0.050
				Cesium-134	0.1066	0.1145	0.100
				Europium-152	-0.07653	0.2101	0.200
				Sodium-22	-0.03956	0.09005	0.080
				Thorium-234	1.773	3.964	2.00
				Tin-113	0.03416	0.1027	0.100
880723	232357002	SAMPLE	06-JUL-09	Cerium-139	-0.00258	0.05512	0.050
				Cesium-134	0.1012	0.1262	0.100
				Cobalt-60	0.03742	0.1101	0.100
				Sodium-22	0.07822	0.1284	0.080
880723	232358001	SAMPLE	06-JUL-09	Americium-241	-0.09201	0.3101	0.200
				Thorium-234	1.374	2.732	2.00
880723	232358002	SAMPLE	06-JUL-09	Americium-241	-0.00825	0.3532	0.200
				Cerium-139	-0.02578	0.05591	0.050
				Cesium-134	0.1035	0.1101	0.100
				Sodium-22	-0.00959	0.08291	0.080
				Thorium-234	0.04384	2.856	2.00
880723	232358003	SAMPLE	06-JUL-09	Cerium-139	0.02318	0.05644	0.050
				Europium-152	0.04234	0.2023	0.200
				Sodium-22	0.01882	0.1079	0.080
880723	232358004	SAMPLE	06-JUL-09	Americium-241	0.1542	0.2185	0.200
880723	232358005	SAMPLE	06-JUL-09	Americium-241	0.03761	0.2596	0.200
				Cesium-134	0.09445	0.1113	0.100
				Sodium-22	0.0009	0.0846	0.080
880723	232358006	SAMPLE	06-JUL-09	Americium-241	-0.09827	0.2741	0.200
				Thorium-234	1.296	2.522	2.00

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
880723	232358007	SAMPLE	06-JUL-09	Americium-241	-0.2092	0.4481	0.200
				Cerium-139	-0.04366	0.05338	0.050
				Cesium-134	0.06817	0.1004	0.100
				Thorium-234	1.337	3.717	2.00
880723	232358008	SAMPLE	06-JUL-09	Americium-241	0.03138	0.2196	0.200
				Cerium-139	-0.00184	0.05079	0.050
880723	232358009	SAMPLE	06-JUL-09	Americium-241	0.04656	0.2499	0.200
				Thorium-234	0.7319	2.098	2.00
880723	232358010	SAMPLE	06-JUL-09	Americium-241	0.03489	0.2668	0.200
				Thorium-234	0.6745	2.145	2.00
880723	232358011	SAMPLE	06-JUL-09	Cerium-139	0.0218	0.0597	0.050
				Cesium-134	0.08665	0.1167	0.100
				Europium-152	0.02076	0.2073	0.200
				Sodium-22	-0.01757	0.0957	0.080
880723	1201870087	MB	06-JUL-09				
880723	1201870088	DUP	06-JUL-09	Cesium-134	0.07015	0.1197	0.100
				Cobalt-60	0.04829	0.1095	0.100
				Sodium-22	0.06557	0.1294	0.080
				Yttrium-88	0.04953	0.1057	0.100
880723	1201870089	LCS	06-JUL-09	Cerium-139	0.02647	0.07455	0.050
				Cesium-134	0.09152	0.1776	0.100
				Europium-152	-0.09306	0.3002	0.200
				Mercury-203	0.0068	0.1031	0.100
				Potassium-40	0.8824	1.186	1.00
				Ruthenium-106	-0.05382	1.089	0.800
				Sodium-22	0.00409	0.1016	0.080
				Thorium-234	-0.5	3.431	2.00
				Tin-113	0.04546	0.143	0.100
				Uranium-235	0.1149	0.5185	0.500
				Yttrium-88	0.03265	0.104	0.100

Gamma Review Report based on Result > MDA for Batch:880723

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232278001	19-JUN-09 12:00	06-JUL-09 11:09	17	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	V	1.619	0.1888	pCi/g	0.2779	N	911.4	3	1.374	IDENTIFIED	10.51	☐	
Americium-243	INT	0.3215	0.0449	pCi/g	0.1076	N	74.72	2	1.186	IDENTIFIED	13.32	☐	
Annihilation Rad.	—	0.1565	0.04511	pCi/g	0.05139	N	511.1	2	1.916	IDENTIFIED	28.69	☐	
Pb-214 Bismuth-211	INT	2.902	0.2519	pCi/g	0.3915	Y	352.3	4	1.223	IDENTIFIED	8.085	☑ UI	
Bismuth-212	LA	1.672	0.3372	pCi/g	0.8179	N	727.6	1	1.628	FAIL_ABUND	19.81	☐	
Bismuth-214	V	0.9322	0.0967	pCi/g	0.1266	0.200	609.6	4	1.281	IDENTIFIED	9.689	☐	
Pb-214 Cadmium-109	INT	1.853	0.4465	pCi/g	1.44	Y	87.12	4	1.197	IDENTIFIED	23.65	☑ UI	
Cerium-143	—	710.3	240	pCi/g	0	N	87.12	4	1.197	NOT_IDENTI	23.65	☐	
Gross Gamma	—	8.454	1.478	pCi/g	2.459	N		0				☐	
Iodine-135	—	4.71E+17	0	pCi/g	0	N	511.1	2	1.916	NOT_IDENTI	28.69	☐	
Krypton-85	HE	20.25	4.521	pCi/g	16.75	N	239	7	1.295	NOT_IDENTI	4.491	☐	
Lead-212	V	1.379	0.07975	pCi/g	0.1014	0.100	239	7	1.295	IDENTIFIED	4.491	☐	
Lead-214	V	1.009	0.0915	pCi/g	0.1334	0.100	352.3	4	1.223	IDENTIFIED	8.085	☐	
Neptunium-237	HE	0.5335	0.1398	pCi/g	0.4526	N	87.12	4	1.197	IDENTIFIED	23.65	☐	
Polonium-212	NI	1.379	0.07975	pCi/g	0.1014	N	239	7	1.295	IDENTIFIED	4.491	☐	
Polonium-214	NI	1.009	0.0915	pCi/g	0.1334	N	352.3	4	1.223	IDENTIFIED	8.085	☐	
Polonium-216	NI	1.379	0.07975	pCi/g	0.1014	N	239	7	1.295	IDENTIFIED	4.491	☐	
Polonium-218	NI	1.009	0.0915	pCi/g	0.1334	N	352.3	4	1.223	IDENTIFIED	8.085	☐	
Potassium-40	V	33.66	1.605	pCi/g	0.6663	1.00	1461	1	1.887	IDENTIFIED	3.182	☐	
Pb-214 Radium-224	INT	3.559	0.7624	pCi/g	1.155	Y	242.1	1	1.879	IDENTIFIED	21.23	☑ UI	
Radium-226	V	0.9322	0.0967	pCi/g	0.1266	Y	609.6	4	1.281	IDENTIFIED	9.689	☐	
Radium-228	V	1.619	0.1888	pCi/g	0.2779	0.500	911.4	3	1.374	IDENTIFIED	10.51	☐	
Strontium-85	LA	0.1059	0.02363	pCi/g	0.08757	Y	239	7	1.295	NOT_IDENTI	4.491	☑ UI	Data rejected due to low abundance.
Technetium-99m	—	1.83E+18	0	pCi/g	0	N	239	7	1.295	NOT_IDENTI	4.491	☐	
Thallium-200	HE	501	853.1	pCi/g	0	N	74.72	2	1.186	NOT_IDENTI	13.32	☐	
Thallium-208	V	0.4973	0.04815	pCi/g	0.06629	0.080	583.5	1	1.355	IDENTIFIED	9.15	☐	
Thorium-228	V	1.379	0.07975	pCi/g	0.1014	N	239	7	1.295	IDENTIFIED	4.491	☐	
Thorium-230	V	0.9322	0.0967	pCi/g	0.1266	N	609.6	4	1.281	IDENTIFIED	9.689	☐	
Thorium-232	V	1.619	0.1888	pCi/g	0.2779	N	911.4	3	1.374	IDENTIFIED	10.51	☐	
Tin-126	HE	0.1817	0.04377	pCi/g	0.142	N	87.12	4	1.197	IDENTIFIED	23.65	☐	
Titanium-44	LA	0.3324	0.0322	pCi/g	0.09217	N	77.17	1	1.14	FAIL_ABUND	8.698	☐	
Total Uranium	—	5.5704	3.67E-06	ug/g	3.4911	N		0				☐	
Uranium-234	V	0.9322	0.0967	pCi/g	0.1266	N	609.6	4	1.281	IDENTIFIED	9.689	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232278002	19-JUN-09 12:00	06-JUL-09 11:09	17	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	V	1.295	0.1596	pCi/g	0.2321	N	910.6	3	1.218	IDENTIFIED	11.05	☐	
Americium-243	INT	0.2888	0.04404	pCi/g	0.1042	N	74.89	2	1.009	IDENTIFIED	14.13	☐	
Annihilation Rad.	HE	0.1227	0.03743	pCi/g	0.04963	N	510.2	2	1.521	IDENTIFIED	30.38	☐	
Bismuth-211	INT	3.155	0.2446	pCi/g	0.3135	Y	351.8	4	1.336	IDENTIFIED	6.979	☑ UI	
Bismuth-214	V	0.9587	0.08326	pCi/g	0.1227	0.200	608.9	4	1.429	IDENTIFIED	7.868	☐	
Cadmium-109	INT	2.038	0.6811	pCi/g	1.606	Y	87.02	4	1.243	IDENTIFIED	32.88	☑ UI	
Cerium-143	—	1428	271.1	pCi/g	0	N	327.4	1	0.7605	FAIL_DECAY	31.85	☐	
Gross Gamma	—	8.2	1.262	pCi/g	1.992	N		0				☐	
Iodine-123	HE	2.89E+07	3.05E+07	pCi/g	0	N	87.02	4	1.243	NOT_IDENTI	32.88	☐	
Iodine-135	—	1.85E+17	0	pCi/g	0	N	510.2	2	1.521	NOT_IDENTI	30.38	☐	
Lead-212	V	1.496	0.08352	pCi/g	0.08703	0.100	238.5	5	1.145	IDENTIFIED	3.88	☐	
Lead-214	V	1.098	0.08977	pCi/g	0.1135	0.100	351.8	4	1.336	IDENTIFIED	6.979	☐	
Neptunium-237	HE	0.5866	0.2052	pCi/g	0.4566	N	87.02	4	1.243	IDENTIFIED	32.88	☐	
Polonium-212	NI	1.496	0.08352	pCi/g	0.08703	N	238.5	5	1.145	IDENTIFIED	3.88	☐	

Polonium-214	NL	1.098	0.08977	pCi/g	0.1135	N	351.8	4	1.336	IDENTIFIED	6.979	☐	
Polonium-216	NL	1.496	0.08352	pCi/g	0.08703	N	238.5	5	1.145	IDENTIFIED	3.88	☐	
Polonium-218	NL	1.098	0.08977	pCi/g	0.1135	N	351.8	4	1.336	IDENTIFIED	6.979	☐	
Potassium-40	V	33.6	1.587	pCi/g	0.5461	1.00	1460	1	1.898	IDENTIFIED	3.109	☐	
Radium-224	INT	4.094	0.7389	pCi/g	0.9906	Y	241.4	1	1.864	IDENTIFIED	17.74	☑ UI	
Radium-226	V	0.9587	0.08326	pCi/g	0.1227	Y	608.9	4	1.429	IDENTIFIED	7.868	☐	
Radium-228	V	1.295	0.1596	pCi/g	0.2321	0.500	910.6	3	1.218	IDENTIFIED	11.05	☐	
Thallium-200	HE	866.7	780.3	pCi/g	0	N	74.89	2	1.009	NOT_IDENTI	14.13	☐	
Thallium-208	V	0.4307	0.04533	pCi/g	0.06202	0.080	582.9	1	1.483	IDENTIFIED	10.04	☐	
Thorium-228	V	1.496	0.08352	pCi/g	0.08702	N	238.5	5	1.145	IDENTIFIED	3.88	☐	
Thorium-230	V	0.9587	0.08326	pCi/g	0.1227	N	608.9	4	1.429	IDENTIFIED	7.868	☐	
Thorium-232	V	1.295	0.1596	pCi/g	0.2321	N	910.6	3	1.218	IDENTIFIED	11.05	☐	
Tin-126	HE	0.1998	0.06676	pCi/g	0.1627	N	87.02	4	1.243	IDENTIFIED	32.88	☐	
Titanium-44	LA	0.3192	0.03395	pCi/g	0.0853	N	76.99	1	1.014	FAIL_ABUND	8.955	☐	
Uranium-234	V	0.9587	0.08326	pCi/g	0.1227	N	608.9	4	1.429	IDENTIFIED	7.868	☐	
Zirconium-97	—	2.70E+07	6.45E+06	pCi/g	0	N	238.5	5	1.145	NOT_IDENTI	3.88	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347001	22-JUN-09 12:00	06-JUL-09 11:10	14	SAMPLE	LOAD	1	LANL	LANL01004/GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	V	1.541	0.204	pCi/g	0.2519	N	910.9	3	1.558	IDENTIFIED	11.7	☐	
Americium-243	INT	0.3557	0.03064	pCi/g	0.05889	N	74.72	2	1.313	IDENTIFIED	7.672	☐	
Bismuth-210	HE	1.748	0.4374	pCi/g	0.8962	N	46.01	3	1.237	IDENTIFIED	24.72	☐	
Bismuth-211	INT	3.397	0.275	pCi/g	0.3458	Y	352	4	1.364	IDENTIFIED	7.066	☑ UI	
Bismuth-212	HE	1.242	0.3252	pCi/g	0.7543	N	728.3	1	1.73	FAIL_ABUND	25.78	☐	
Bismuth-214	V	0.8092	0.1092	pCi/g	0.1264	0.200	609.5	4	1.526	IDENTIFIED	12.82	☐	
Cadmium-109	INT	3.432	0.3906	pCi/g	0.9704	Y	87.26	4	1.235	IDENTIFIED	10.73	☑ UI	
Cerium-143	—	416.4	68.66	pCi/g	0	N	328.2	1	1.429	FAIL_DECAY	37.24	☐	
Cesium-134	LA	0.1225	0.03032	pCi/g	0.1057	0.100	795.1	1	2.575	FAIL_ABUND	24.38	☑ UI	Data rejected due to low abundance.
Gross Gamma	—	8.961	1.367	pCi/g	3.346	N		0				☐	
Iodine-123	HE	1.91E+05	6.69E+05	pCi/g	0	N	87.26	4	1.235	NOT_IDENTI	10.73	☐	
Lead-210	HE	1.748	0.4374	pCi/g	0.8962	N	46.01	3	1.237	IDENTIFIED	24.72	☐	
Lead-212	V	1.573	0.1026	pCi/g	0.09622	0.100	238.7	5	1.387	IDENTIFIED	3.672	☐	
Lead-214	V	1.182	0.1005	pCi/g	0.1206	0.100	352	4	1.364	IDENTIFIED	7.066	☐	
Lutetium-177	HE	2.001	0.7856	pCi/g	1.914	N	209.4	1	0.8217	FAIL_ABUND	38.94	☐	
Neptunium-237	INT	0.9922	0.1524	pCi/g	0.2793	N	87.26	4	1.235	IDENTIFIED	10.73	☐	
Niobium-95m	HE	0.3344	0.07641	pCi/g	0.244	N	238.7	5	1.387	NOT_IDENTI	3.672	☐	
Polonium-210	HE	1.748	0.4361	pCi/g	0.8962	N	46.01	3	1.237	IDENTIFIED	24.72	☐	
Polonium-212	NL	1.573	0.1026	pCi/g	0.09622	N	238.7	5	1.387	IDENTIFIED	3.672	☐	
Polonium-214	NL	1.182	0.1005	pCi/g	0.1206	N	352	4	1.364	IDENTIFIED	7.066	☐	
Polonium-216	NL	1.573	0.1026	pCi/g	0.09622	N	238.7	5	1.387	IDENTIFIED	3.672	☐	
Polonium-218	NL	1.182	0.1005	pCi/g	0.1206	N	352	4	1.364	IDENTIFIED	7.066	☐	
Potassium-40	V	34.07	1.474	pCi/g	0.3715	1.00	1460	1	2.124	IDENTIFIED	3.01	☐	
Radium-224	INT	4.114	0.8547	pCi/g	1.095	Y	241.3	1	2.26	IDENTIFIED	20.19	☑ UI	
Radium-226	V	0.8092	0.1092	pCi/g	0.1264	Y	609.5	4	1.526	IDENTIFIED	12.82	☐	
Radium-228	V	1.541	0.204	pCi/g	0.2519	0.500	910.9	3	1.558	IDENTIFIED	11.7	☐	
Sodium-24	HE	1.30E+05	1.02E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-200	HE	13.24	123.6	pCi/g	0	N	74.72	2	1.313	NOT_IDENTI	7.672	☐	
Thallium-208	LA	0.5139	0.04639	pCi/g	0.1427	0.080	583	1	1.428	FAIL_ABUND	8.243	☑ UI	Data rejected due to low abundance.
Thorium-228	V	1.573	0.1026	pCi/g	0.09621	N	238.7	5	1.387	IDENTIFIED	3.672	☐	
Thorium-230	V	0.8092	0.1092	pCi/g	0.1264	N	609.5	4	1.526	IDENTIFIED	12.82	☐	
Thorium-232	V	1.541	0.204	pCi/g	0.2519	N	910.9	3	1.558	IDENTIFIED	11.7	☐	
Thorium-23	NVD	1.041	0.4498	pCi/g	1.041	2.00	63.17	2	1.46	IDENTIFIED	42.28	☑ UI	
Tin-126	INT	0.3379	0.03846	pCi/g	0.09541	N	87.26	4	1.235	IDENTIFIED	10.73	☐	
Titanium-44	LA	0.3349	0.02366	pCi/g	0.06286	N	77.06	1	1.348	FAIL_ABUND	5.898	☐	
Total Uranium	—	3.1186	1.34E-06	ug/g	1.5512	N		0				☐	
Uranium-234	V	0.8092	0.1092	pCi/g	0.1264	N	609.5	4	1.526	IDENTIFIED	12.82	☐	
Uranium-238	HE	1.041	0.4498	pCi/g	1.041	N	63.17	2	1.46	IDENTIFIED	42.28	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347002	22-JUN-09 12:00	06-JUL-09 11:10	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.324	0.154	pCi/g	0.2311	N	910.7	3	1.608	IDENTIFIED	9.647	☐	
Americium-243	INT	0.3368	0.04565	pCi/g	0.09334	N	74.87	2	1.268	IDENTIFIED	12.46	☐	
Annihilation Rad.	HE	0.1076	0.03777	pCi/g	0.04879	N	510.4	2	1.682	IDENTIFIED	34.99	☐	
Bismuth-211	INT	2.85	0.2449	pCi/g	0.3527	Y	351.7	4	1.332	IDENTIFIED	7.926	☑ UI	
Bismuth-212	HE	1.137	0.2603	pCi/g	0.7149	N	726.9	1	1.595	FAIL_ABUND	22.52	☐	
Bismuth-214	✓	0.927	0.08287	pCi/g	0.1101	0.200	608.9	4	1.623	IDENTIFIED	8.103	☐	
Cerium-143	—	422.6	66.64	pCi/g	0	N	327.6	1	0.9507	FAIL_DECAY	32.76	☐	
Gross Gamma	—	7.897	1.437	pCi/g	2.86	N		0				☐	
Iodine-123	HE	8.85E+05	6.40E+05	pCi/g	0	N	87.26	3	0.7836	NOT_IDENTI	41.61	☐	
Iodine-133	HE	24.38	1226	pCi/g	0	N	510.4	2	1.682	FAIL_DECAY	34.99	☐	
Lead-212	✓	1.438	0.07686	pCi/g	0.08837	0.100	238.5	7	1.282	IDENTIFIED	3.866	☐	
Lead-214	✓	0.9915	0.08902	pCi/g	0.1229	0.100	351.7	4	1.332	IDENTIFIED	7.926	☐	
Lutetium-177	LA	3.602	0.7909	pCi/g	1.843	N	209.1	1	1.259	FAIL_ABUND	21.77	☐	
Neptunium-237	HE	0.4351	0.1882	pCi/g	0.4336	N	87.26	3	0.7836	IDENTIFIED	41.61	☐	
Niobium-95m	HE	0.2944	0.06585	pCi/g	0.2234	N	238.5	7	1.282	NOT_IDENTI	3.866	☐	
Niobium-97	HE	7323	15950	pCi/g	0	N	238.5	7	1.282	NOT_IDENTI	3.866	☐	
Polonium-212	NM	1.438	0.07686	pCi/g	0.08837	N	238.5	7	1.282	IDENTIFIED	3.866	☐	
Polonium-214	NM	0.9915	0.08902	pCi/g	0.1229	N	351.7	4	1.332	IDENTIFIED	7.926	☐	
Polonium-216	NM	1.438	0.07686	pCi/g	0.08837	N	238.5	7	1.282	IDENTIFIED	3.866	☐	
Polonium-218	NM	0.9915	0.08902	pCi/g	0.1229	N	351.7	4	1.332	IDENTIFIED	7.926	☐	
Potassium-40	✓	31.53	1.64	pCi/g	0.4613	1.00	1460	1	1.997	IDENTIFIED	3.016	☐	
Radium-224	INT	3.509	0.6263	pCi/g	1.005	Y	241.4	1	1.698	IDENTIFIED	17.61	☑ UI	
Radium-226	✓	0.927	0.08287	pCi/g	0.1101	Y	608.9	4	1.623	IDENTIFIED	8.103	☐	
Radium-228	✓	1.324	0.154	pCi/g	0.2311	0.500	910.7	3	1.608	IDENTIFIED	9.647	☐	
Thallium-200	—	211.5	105.6	pCi/g	0	N	74.87	2	1.268	NOT_IDENTI	12.46	☐	
Thallium-208	✓	0.378	0.03829	pCi/g	0.05771	0.080	582.9	1	1.424	IDENTIFIED	9.589	☐	
Thorium-228	✓	1.438	0.07686	pCi/g	0.08836	N	238.5	7	1.282	IDENTIFIED	3.866	☐	
Thorium-230	✓	0.927	0.08287	pCi/g	0.1101	N	608.9	4	1.623	IDENTIFIED	8.103	☐	
Thorium-232	✓	1.324	0.154	pCi/g	0.2311	N	910.7	3	1.608	IDENTIFIED	9.647	☐	
Tin-126	HE	0.1482	0.06224	pCi/g	0.1456	N	87.26	3	0.7836	IDENTIFIED	41.61	☐	
Titanium-44	NA	0.3301	0.03334	pCi/g	0.07993	N	77.1	1	1.29	FAIL_ABUND	8.552	☐	
Uranium-234	✓	0.927	0.08287	pCi/g	0.1101	N	608.9	4	1.623	IDENTIFIED	8.103	☐	
Zirconium-97	—	9.12E+05	3.67E+05	pCi/g	0	N	238.5	7	1.282	NOT_IDENTI	3.866	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347003	22-JUN-09 12:00	06-JUL-09 11:11	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.751	0.2124	pCi/g	0.309	N	911.3	3	1.92	IDENTIFIED	10.96	☐	
Americium-243	INT	0.2754	0.02658	pCi/g	0.06656	N	75.18	2	0.8968	IDENTIFIED	8.639	☐	
Annihilation Rad.	HE	0.09375	0.04197	pCi/g	0.06237	N	510.9	3	1.513	IDENTIFIED	44.64	☐	
Bismuth-211	INT	3.095	0.2322	pCi/g	0.3586	Y	352.1	4	1.702	IDENTIFIED	6.561	☑ UI	
Bismuth-212	HE	1.07	0.3135	pCi/g	0.8028	N	727.4	1	2.089	FAIL_ABUND	28.9	☐	
Bismuth-214	✓	0.951	0.09602	pCi/g	0.1703	0.200	609.2	4	1.429	IDENTIFIED	8.949	☐	
Cadmium-109	INT	2.628	0.4265	pCi/g	1.309	Y	87.51	5	1.051	IDENTIFIED	15.74	☑ UI	
Cerium-143	—	117	48.08	pCi/g	0	N	87.51	5	1.051	NOT_IDENTI	15.74	☐	
Gross Gamma	—	8.348	1.641	pCi/g	2.811	N		0				☐	
Iodine-123	HE	3.69E+05	7.53E+05	pCi/g	0	N	87.51	5	1.051	NOT_IDENTI	15.74	☐	
Iodine-133	HE	2172	1483	pCi/g	0	N	510.9	3	1.513	FAIL_DECAY	44.64	☐	
Iodine-135	HE	1.18E+14	2.31E+14	pCi/g	0	N	510.9	3	1.513	NOT_IDENTI	44.64	☐	
Lead-212	✓	1.403	0.08499	pCi/g	0.09638	0.100	238.9	5	1.207	IDENTIFIED	4.008	☐	
Lead-214	✓	1.077	0.0855	pCi/g	0.125	0.100	352.1	4	1.702	IDENTIFIED	6.561	☐	
Lutetium-177	HE	2.955	0.8163	pCi/g	1.878	N	209.4	2	1.509	FAIL_ABUND	27.34	☐	
Neptunium-237	INT	0.7599	0.1461	pCi/g	0.2968	N	87.51	5	1.051	IDENTIFIED	15.74	☐	

Niobium-97	HE	23230	19470	pCi/g	0	N	238.9	5	1.207	NOT_IDENTI	4.008	☐	
Polonium-212	NR	1.403	0.08499	pCi/g	0.09638	N	238.9	5	1.207	IDENTIFIED	4.008	☐	
Polonium-214	NR	1.077	0.0855	pCi/g	0.125	N	352.1	4	1.702	IDENTIFIED	6.561	☐	
Polonium-216	NR	1.403	0.08499	pCi/g	0.09638	N	238.9	5	1.207	IDENTIFIED	4.008	☐	
Polonium-218	NR	1.077	0.0855	pCi/g	0.125	N	352.1	4	1.702	IDENTIFIED	6.561	☐	
Potassium-40	✓	32.64	1.433	pCi/g	0.7562	1.00	1461	1	2.128	IDENTIFIED	3.152	☐	
Radium-224	INT	3.985	0.5993	pCi/g	1.097	Y	241.9	1	1.665	IDENTIFIED	14.51	☑ UI	
Radium-226	✓	0.951	0.09602	pCi/g	0.1703	Y	609.2	4	1.429	IDENTIFIED	8.949	☐	
Radium-228	✓	1.751	0.2124	pCi/g	0.309	0.500	911.3	3	1.92	IDENTIFIED	10.96	☐	
Technetium-99m	HE	1.53E+14	8.15E+14	pCi/g	0	N	356.3	2	1.709	NOT_IDENTI	64.48	☐	
Thallium-200	HE	10.34	133	pCi/g	0	N	75.18	2	0.8968	NOT_IDENTI	8.639	☐	
Thallium-208	✓	0.4182	0.05215	pCi/g	0.07944	0.080	583.3	1	1.208	IDENTIFIED	11.76	☐	
Thorium-228	✓	1.403	0.08499	pCi/g	0.09637	N	238.9	5	1.207	IDENTIFIED	4.008	☐	
Thorium-230	✓	0.951	0.09602	pCi/g	0.1703	N	609.2	4	1.429	IDENTIFIED	8.949	☐	
Thorium-232	✓	1.751	0.2124	pCi/g	0.309	N	911.3	3	1.92	IDENTIFIED	10.96	☐	
Tin-126	INT	0.2588	0.04199	pCi/g	0.1287	N	87.51	5	1.051	IDENTIFIED	15.74	☐	
Titanium-44	LA	0.2888	0.02243	pCi/g	0.06484	N	77.46	1	1.023	FAIL_ABUND	6.508	☐	
Total Uranium	—	2.9386	1.83E-06	ug/g	1.5598	N		0				☐	
Tungsten-181	HE	0.3713	0.1099	pCi/g	0.3653	N	209.4	2	1.509	NOT_IDENTI	27.34	☐	
Uranium-234	✓	0.951	0.09602	pCi/g	0.1703	N	609.2	4	1.429	IDENTIFIED	8.949	☐	
Zirconium-97	HE	6.91E+05	4.15E+05	pCi/g	0	N	356.3	2	1.709	FAIL_DECAY	64.48	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232347004	22-JUN-09 12:00	06-JUL-09 11:12	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.309	0.1816	pCi/g	0.2483	N	911.4	3	1.639	IDENTIFIED	12.57	☐	
Americium-243	INT	0.3564	0.03834	pCi/g	0.0813	N	74.89	2	1.372	IDENTIFIED	10.08	☐	
Annihilation Rad.	—	0.1317	0.03579	pCi/g	0.04363	N	510.4	1	1.974	IDENTIFIED	27.01	☐	
Bismuth-211	INT	3.193	0.2473	pCi/g	0.3144	Y	351.4	4	1.463	IDENTIFIED	7.07	☑ UI	
Bismuth-212	HE	0.8295	0.2575	pCi/g	0.7011	N	727.4	1	1.589	FAIL_ABUND	30.76	☐	
Bismuth-214	✓	0.9676	0.08886	pCi/g	0.1112	0.200	609	4	1.667	IDENTIFIED	8.287	☐	
Cadmium-109	INT	2.347	0.371	pCi/g	1.312	Y	87.14	4	1.158	IDENTIFIED	15.2	☑ UI	
Cerium-143	—	570.3	90.07	pCi/g	0	N	294.7	1	1.375	FAIL_DECAY	11.48	☐	
Gold-195	HE	0.417	0.1197	pCi/g	0.3827	N	74.89	2	1.372	FAIL_ABUND	10.08	☐	
Gross Gamma	—	9.114	1.425	pCi/g	2.803	N		0				☐	
Iodine-123	HE	3.05E+05	6.89E+05	pCi/g	0	N	87.14	4	1.158	NOT_IDENTI	15.2	☐	
Iodine-135	HE	2.62E+14	1.84E+14	pCi/g	0	N	795.9	1	1.422	NOT_IDENTI	63.4	☐	
Lead-212	✓	1.513	0.07811	pCi/g	0.08855	0.100	238.4	6	1.377	IDENTIFIED	3.658	☐	
Lead-214	✓	1.111	0.09078	pCi/g	0.1096	0.100	351.4	4	1.463	IDENTIFIED	7.07	☐	
Lutetium-177	HE	2.558	0.6576	pCi/g	1.808	N	209.1	1	1.331	FAIL_ABUND	25.56	☐	
Neptunium-237	INT	0.6786	0.1281	pCi/g	0.394	N	87.14	4	1.158	IDENTIFIED	15.2	☐	
Niobium-95m	LA	0.6992	0.08646	pCi/g	0.2848	N	238.4	6	1.377	NOT_IDENTI	3.658	☐	
Polonium-212	NR	1.513	0.07811	pCi/g	0.08855	N	238.4	6	1.377	IDENTIFIED	3.658	☐	
Polonium-214	NR	1.111	0.09078	pCi/g	0.1096	N	351.4	4	1.463	IDENTIFIED	7.07	☐	
Polonium-216	NR	1.513	0.07811	pCi/g	0.08855	N	238.4	6	1.377	IDENTIFIED	3.658	☐	
Polonium-218	NR	1.111	0.09078	pCi/g	0.1096	N	351.4	4	1.463	IDENTIFIED	7.07	☐	
Potassium-40	✓	36.91	1.686	pCi/g	0.5986	1.00	1461	1	2.081	IDENTIFIED	2.773	☐	
Radium-224	INT	3.89	0.699	pCi/g	1.007	Y	241.3	1	1.983	IDENTIFIED	17.74	☑ UI	
Radium-226	✓	0.9676	0.08886	pCi/g	0.1112	Y	609	4	1.667	IDENTIFIED	8.287	☐	
Radium-228	✓	1.309	0.1816	pCi/g	0.2483	0.500	911.4	3	1.639	IDENTIFIED	12.57	☐	
Sodium-24	HE	30130	1.11E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-208	✓	0.4981	0.04106	pCi/g	0.06007	0.080	582.8	1	1.663	IDENTIFIED	7.501	☐	
Thorium-228	✓	1.513	0.07811	pCi/g	0.08854	N	238.4	6	1.377	IDENTIFIED	3.658	☐	
Thorium-230	✓	0.9675	0.08886	pCi/g	0.1112	N	609	4	1.667	IDENTIFIED	8.287	☐	
Thorium-232	✓	1.309	0.1816	pCi/g	0.2483	N	911.4	3	1.639	IDENTIFIED	12.57	☐	
Tin-126	INT	0.2311	0.03653	pCi/g	0.1296	N	87.14	4	1.158	IDENTIFIED	15.2	☐	
Titanium-44	LA	0.325	0.02783	pCi/g	0.07874	N	77.14	1	1.263	FAIL_ABUND	7.65	☐	
Total Uranium	—	4.5006	2.27E-06	ug/g	2.7572	N		0				☐	

Uranium-234	✓	0.9675	0.08886	pCi/g	0.1112	N	609	4	1.667	IDENTIFIED	8.287	☐
Zirconium-97	—	1.94E+06	3.49E+05	pCi/g	0	N	238.4	6	1.377	NOT_IDENTI	3.658	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232357001	22-JUN-09 12:00	06-JUL-09 11:13	14	SAMPLE	REVW	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.509	0.1876	pCi/g	0.2625	N	911.1	3	1.49	IDENTIFIED	11.12	☐	
Americium-243	HE	0.2523	0.05863	pCi/g	0.143	N	74.93	1	1.258	IDENTIFIED	22.56	☐	
Annihilation Rad.	—	0.1937	0.04516	pCi/g	0.05861	N	511	1	2.374	IDENTIFIED	23.14	☐	
Bismuth-211	INT	3.228	0.2896	pCi/g	0.4568	Y	352	4	1.393	IDENTIFIED	8.289	☑ UI	
Bismuth-212	HE	0.9923	0.2564	pCi/g	0.7781	N	727.4	1	1.167	FAIL_ABUND	25.54	☐	
Bismuth-214	✓	1.02	0.09811	pCi/g	0.1433	0.200	609.2	4	1.646	IDENTIFIED	8.871	☐	
Cadmium-109	INT	3.584	0.5935	pCi/g	1.808	Y	87.38	5	1.269	IDENTIFIED	15.53	☑ UI	
Cerium-143	—	345.8	71.84	pCi/g	0	N	87.38	5	1.269	FAIL_DECAY	15.53	☐	
Gross Gamma	—	8.668	1.478	pCi/g	2.728	N		0				☐	
Iodine-123	HE	3.93E+05	8.66E+05	pCi/g	0	N	87.38	5	1.269	NOT_IDENTI	15.53	☐	
Krypton-85	HE	21.41	4.938	pCi/g	18.21	N	238.7	8	1.303	NOT_IDENTI	4.781	☐	
Lead-212	✓	1.433	0.09065	pCi/g	0.1157	0.100	238.7	8	1.303	IDENTIFIED	4.781	☐	
Lead-214	✓	1.123	0.1049	pCi/g	0.1592	0.100	352	4	1.393	IDENTIFIED	8.289	☐	
Neptunium-237	INT	1.036	0.2022	pCi/g	0.527	N	87.38	5	1.269	IDENTIFIED	15.53	☐	
Niobium-97	HE	22290	19090	pCi/g	0	N	238.7	8	1.303	NOT_IDENTI	4.781	☐	
Polonium-212	NR	1.433	0.09065	pCi/g	0.1157	N	238.7	8	1.303	IDENTIFIED	4.781	☐	
Polonium-214	NR	1.123	0.1049	pCi/g	0.1592	N	352	4	1.393	IDENTIFIED	8.289	☐	
Polonium-216	NR	1.433	0.09065	pCi/g	0.1157	N	238.7	8	1.303	IDENTIFIED	4.781	☐	
Polonium-218	NR	1.123	0.1049	pCi/g	0.1592	N	352	4	1.393	IDENTIFIED	8.289	☐	
Potassium-40	✓	35.95	1.773	pCi/g	0.415	1.00	1461	1	2.312	IDENTIFIED	3.119	☐	
Radium-224	INT	4.12	0.9041	pCi/g	1.316	Y	241.5	1	2.002	IDENTIFIED	21.67	☑ UI	
Radium-226	✓	1.02	0.09811	pCi/g	0.1433	Y	609.2	4	1.646	IDENTIFIED	8.871	☐	
Radium-228	✓	1.509	0.1876	pCi/g	0.2625	0.500	911.1	3	1.49	IDENTIFIED	11.12	☐	
Strontium-85	LA	0.1085	0.02501	pCi/g	0.09224	Y	238.7	8	1.303	NOT_IDENTI	4.781	☑ UI	Data rejected due to low abundance.
Thallium-208	✓	0.462	0.0509	pCi/g	0.0749	0.080	583.2	1	1.269	IDENTIFIED	10.55	☐	
Thorium-228	✓	1.433	0.09065	pCi/g	0.1157	N	238.7	8	1.303	IDENTIFIED	4.781	☐	
Thorium-230	✓	1.02	0.09811	pCi/g	0.1433	N	609.2	4	1.646	IDENTIFIED	8.871	☐	
Thorium-232	✓	1.509	0.1876	pCi/g	0.2625	N	911.1	3	1.49	IDENTIFIED	11.12	☐	
Tin-126	INT	0.3529	0.05844	pCi/g	0.1794	N	87.38	5	1.269	IDENTIFIED	15.53	☐	
Titanium-44	LA	0.3599	0.04049	pCi/g	0.1186	N	77.28	1	1.207	FAIL_ABUND	9.786	☐	
Uranium-234	✓	1.02	0.09811	pCi/g	0.1433	N	609.2	4	1.646	IDENTIFIED	8.871	☐	
Zirconium-97	—	2.18E+06	4.16E+05	pCi/g	0	N	238.7	8	1.303	NOT_IDENTI	4.781	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232357002	22-JUN-09 12:00	06-JUL-09 11:13	14	SAMPLE	REVW	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.569	0.2231	pCi/g	0.3156	N	911.3	3	1.34	IDENTIFIED	13.27	☐	
Americium-243	INT	0.3927	0.03641	pCi/g	0.06875	N	75.01	2	1.524	IDENTIFIED	8.249	☐	
Annihilation Rad.	HE	0.1265	0.04118	pCi/g	0.05782	N	510.7	1	1.605	IDENTIFIED	32.38	☐	
Bismuth-211	INT	2.565	0.2481	pCi/g	0.4508	Y	352	4	1.154	IDENTIFIED	8.984	☑ UI	
Bismuth-212	HE	0.9936	0.3913	pCi/g	0.8078	N	727.3	1	2.309	FAIL_ABUND	39.11	☐	
Bismuth-214	✓	0.9603	0.09312	pCi/g	0.1391	0.200	609.2	4	1.476	IDENTIFIED	8.596	☐	
Cadmium-109	INT	3.743	0.4193	pCi/g	1.119	Y	87.48	5	1.037	IDENTIFIED	10.45	☑ UI	
Cerium-143	—	245.1	60.11	pCi/g	0	N	87.48	5	1.037	FAIL_DECAY	10.45	☐	
Gross Gamma	—	8.676	1.471	pCi/g	3.737	N		0				☐	
Iodine-123	HE	9.47E+05	7.11E+05	pCi/g	0	N	87.48	5	1.037	NOT_IDENTI	10.45	☐	
Krypton-85	HE	18.01	5.22	pCi/g	17.54	N	238.8	8	0.9679	NOT_IDENTI	4.246	☐	
Lead-212	✓	1.314	0.08024	pCi/g	0.1013	0.100	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Lead-214	✓	0.8922	0.08938	pCi/g	0.1499	0.100	352	4	1.154	IDENTIFIED	8.984	☐	
Lutetium-177	HE	3.324	0.7019	pCi/g	1.959	N	209.4	1	1.197	FAIL_ABUND	20.78	☐	
Neptunium-237	INT	1.082	0.1648	pCi/g	0.3226	N	87.48	5	1.037	IDENTIFIED	10.45	☐	

Polonium-212	NM	1.314	0.08024	pCi/g	0.1013	N	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Polonium-214	NM	0.8922	0.08938	pCi/g	0.1499	N	352	4	1.154	IDENTIFIED	8.984	☐	
Polonium-216	NM	1.314	0.08024	pCi/g	0.1013	N	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Polonium-218	NM	0.8922	0.08938	pCi/g	0.1499	N	352	4	1.154	IDENTIFIED	8.984	☐	
Potassium-40	✓	32.72	1.527	pCi/g	0.672	1.00	1460	1	2.027	IDENTIFIED	3.51	☐	
Radium-224	INT	3.727	0.6822	pCi/g	1.154	Y	241.8	1	1.749	IDENTIFIED	17.91	☑ UI	
Radium-226	✓	0.9603	0.09312	pCi/g	0.1391	Y	609.2	4	1.476	IDENTIFIED	8.596	☐	
Radium-228	✓	1.569	0.2231	pCi/g	0.3156	0.500	911.3	3	1.34	IDENTIFIED	13.27	☐	
Sodium-24	HE	2.01E+05	1.28E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.09123	0.02644	pCi/g	0.08886	Y	238.8	8	0.9679	NOT_IDENTI	4.246	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	2.10E+14	9.26E+14	pCi/g	0	N	238.8	8	0.9679	NOT_IDENTI	4.246	☐	
Thallium-200	HE	62.85	124.4	pCi/g	0	N	75.01	2	1.524	NOT_IDENTI	8.249	☐	
Thallium-208	✓	0.5023	0.05455	pCi/g	0.07183	0.080	582.9	1	1.366	IDENTIFIED	10.11	☐	
Thorium-228	✓	1.314	0.08024	pCi/g	0.1013	N	238.8	8	0.9679	IDENTIFIED	4.246	☐	
Thorium-230	✓	0.9603	0.09312	pCi/g	0.1391	N	609.2	4	1.476	IDENTIFIED	8.596	☐	
Thorium-232	✓	1.569	0.2231	pCi/g	0.3156	N	911.3	3	1.34	IDENTIFIED	13.27	☐	
Thorium-234	✓	1.338	0.5645	pCi/g	1.18	2.00	63.42	2	0.9014	IDENTIFIED	41.19	☐	
Tin-126	INT	0.3686	0.04129	pCi/g	0.1101	N	87.48	5	1.037	IDENTIFIED	10.45	☐	
Titanium-44	LA	0.3721	0.0241	pCi/g	0.07574	N	77.4	1	1.024	FAIL_ABUND	4.935	☐	
Total Uranium	—	3.8778	1.68E-06	ug/g	1.7586	N		0				☐	
Uranium-234	✓	0.9603	0.09312	pCi/g	0.1391	N	609.2	4	1.476	IDENTIFIED	8.596	☐	
Uranium-238	HE	1.338	0.5645	pCi/g	1.18	N	63.42	2	0.9014	IDENTIFIED	41.19	☐	
Zirconium-97	—	1.26E+06	4.38E+05	pCi/g	0	N	238.8	8	0.9679	NOT_IDENTI	4.246	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358001	22-JUN-09 12:00	06-JUL-09 11:14	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	2.133	0.1918	pCi/g	0.1729	N	911.3	3	1.675	IDENTIFIED	6.082	☐	
Americium-243	INT	0.4382	0.04643	pCi/g	0.1008	N	74.86	2	1.197	IDENTIFIED	9.738	☐	
Annihilation Rad.	—	0.1464	0.0309	pCi/g	0.04104	N	510.9	1	1.751	IDENTIFIED	20.85	☐	
Bismuth-211	INT	4.16	0.2514	pCi/g	0.2621	Y	352	4	1.204	IDENTIFIED	5.12	☑ UI	
Bismuth-212	✓	1.39	0.232	pCi/g	0.4068	N	727.4	1	1.805	IDENTIFIED	15.92	☐	
Bismuth-214	✓	1.267	0.08793	pCi/g	0.09982	0.200	609.4	4	1.486	IDENTIFIED	5.31	☐	
Cadmium-109	INT	3.903	0.5349	pCi/g	1.284	Y	87.24	4	1.085	IDENTIFIED	12.91	☑ UI	
Cerium-143	—	421.4	63.67	pCi/g	0	N	328.6	1	1.152	FAIL_DECAY	41.04	☐	
Gross Gamma	—	11.28	1.295	pCi/g	2.784	N		0				☐	
Iodine-123	HE	8.42E+05	5.98E+05	pCi/g	0	N	87.24	4	1.085	NOT_IDENTI	12.91	☐	
Krypton-85	LA	21.7	3.635	pCi/g	12.4	N	238.7	8	1.251	NOT_IDENTI	2.71	☐	
Lead-212	✓	2.013	0.09026	pCi/g	0.0811	0.100	238.7	8	1.251	IDENTIFIED	2.71	☐	
Lead-214	✓	1.447	0.09524	pCi/g	0.09133	0.100	352	4	1.204	IDENTIFIED	5.12	☐	
Lutetium-177	HE	2.63	0.6064	pCi/g	1.687	N	209.5	1	1.385	FAIL_ABUND	22.89	☐	
Neptunium-237	INT	1.128	0.1936	pCi/g	0.3637	N	87.24	4	1.085	IDENTIFIED	12.91	☐	
Niobium-95	HE	0.08889	0.02175	pCi/g	0.0714	N	238.7	8	1.251	NOT_IDENTI	2.71	☐	
Polonium-212	NM	2.013	0.09026	pCi/g	0.0811	N	238.7	8	1.251	IDENTIFIED	2.71	☐	
Polonium-214	NM	1.447	0.09524	pCi/g	0.09133	N	352	4	1.204	IDENTIFIED	5.12	☐	
Polonium-216	NM	2.013	0.09026	pCi/g	0.0811	N	238.7	8	1.251	IDENTIFIED	2.71	☐	
Polonium-218	NM	1.447	0.09524	pCi/g	0.09133	N	352	4	1.204	IDENTIFIED	5.12	☐	
Potassium-40	✓	35.47	1.557	pCi/g	0.4815	1.00	1461	1	2.329	IDENTIFIED	2.205	☐	
Radium-224	INT	5.385	0.7126	pCi/g	0.9217	Y	241.6	1	1.944	IDENTIFIED	12.94	☑ UI	
Radium-226	✓	1.267	0.08793	pCi/g	0.09982	Y	609.4	4	1.486	IDENTIFIED	5.31	☐	
Radium-228	✓	2.133	0.1918	pCi/g	0.1729	0.500	911.3	3	1.675	IDENTIFIED	6.082	☐	
Strontium-85	LA	0.1099	0.01841	pCi/g	0.06282	Y	238.7	8	1.251	NOT_IDENTI	2.71	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	105.1	94.38	pCi/g	0	N	74.86	2	1.197	NOT_IDENTI	9.738	☐	
Thallium-208	✓	0.5903	0.04077	pCi/g	0.05186	0.080	583.4	1	1.576	IDENTIFIED	5.687	☐	
Thorium-228	✓	2.013	0.09026	pCi/g	0.0811	N	238.7	8	1.251	IDENTIFIED	2.71	☐	
Thorium-230	✓	1.267	0.08793	pCi/g	0.09981	N	609.4	4	1.486	IDENTIFIED	5.31	☐	
Thorium-232	✓	2.133	0.1918	pCi/g	0.1729	N	911.3	3	1.675	IDENTIFIED	6.082	☐	
Tin-126	INT	0.3843	0.05266	pCi/g	0.1272	N	87.24	4	1.085	IDENTIFIED	12.91	☐	

Titanium-44 LA	0.4808	0.03377	pCi/g	0.08842	N	77.16	1	1.072	FAIL_ABUND	5.6	☐
Total Uranium —	4.1088	2.32E-06	ug/g	4.0676	N		0				☐
Uranium-234 ✓	1.267	0.08793	pCi/g	0.09981	N	609.4	4	1.486	IDENTIFIED	5.31	☐
Zirconium-97	1.68E+06	2.90E+05	pCi/g	0	N	238.7	8	1.251	NOT_IDENTI	2.71	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358002	22-JUN-09 12:00	06-JUL-09 11:15	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.572	0.1711	pCi/g	0.2552	N	911.1	3	1.807	IDENTIFIED	9.61	☐	
Americium-243 INT	0.4221	0.04618	pCi/g	0.1116	N	74.91	2	1.166	IDENTIFIED	9.964	☐	
Annihilation Rad. HE	0.1086	0.03742	pCi/g	0.0545	N	510.7	2	1.923	IDENTIFIED	34.33	☐	
Barium-137m HE	0.08788	0.02299	pCi/g	0.08543	N	87.46	6	1.414	NOT_IDENTI	12.13	☐	
Bismuth-211 INT	3.907	0.2742	pCi/g	0.3685	Y	351.9	4	1.275	IDENTIFIED	6.232	☑ UI	
Bismuth-212 LA	1.89	0.3042	pCi/g	0.8692	N	727.4	1	1.463	FAIL_ABUND	15.65	☐	
Bismuth-214 ✓	1.17	0.08972	pCi/g	0.1256	0.200	609.2	4	1.454	IDENTIFIED	6.724	☐	
Cadmium-109 INT	3.865	0.5059	pCi/g	1.535	Y	87.46	6	1.414	IDENTIFIED	12.13	☑ UI	
Cerium-143 —	467.8	74.93	pCi/g	0	N	328.7	1	1.273	FAIL_DECAY	41.9	☐	
Cesium-137 LA	0.0929	0.0243	pCi/g	0.0903	0.100	87.46	6	1.414	NOT_IDENTI	12.13	☑ UI	Data rejected due to low abundance.
Gross Gamma —	9.98	1.482	pCi/g	3.94	N		0				☐	
Iodine-123 HE	1.43E+06	7.79E+05	pCi/g	0	N	87.46	6	1.414	NOT_IDENTI	12.13	☐	
Iodine-133 HE	1823	1353	pCi/g	0	N	510.7	2	1.923	FAIL_DECAY	34.33	☐	
Krypton-85 HE	18.1	4.908	pCi/g	16.42	N	238.7	8	1.113	NOT_IDENTI	3.901	☐	
Lead-212 ✓	1.538	0.08253	pCi/g	0.1098	0.100	238.7	8	1.113	IDENTIFIED	3.901	☐	
Lead-214 ✓	1.359	0.1018	pCi/g	0.1318	0.100	351.9	4	1.275	IDENTIFIED	6.232	☐	
Lutetium-177 HE	3.572	0.9073	pCi/g	2.155	N	209.6	1	1.364	FAIL_ABUND	25.24	☐	
Neptunium-237 INT	1.118	0.1862	pCi/g	0.4939	N	87.46	6	1.414	IDENTIFIED	12.13	☐	
Niobium-95 HE	0.09161	0.02629	pCi/g	0.08879	N	238.7	8	1.113	NOT_IDENTI	3.901	☐	
Polonium-212 NL	1.538	0.08253	pCi/g	0.1098	N	238.7	8	1.113	IDENTIFIED	3.901	☐	
Polonium-214 NL	1.359	0.1018	pCi/g	0.1318	N	351.9	4	1.275	IDENTIFIED	6.232	☐	
Polonium-216 NL	1.538	0.08253	pCi/g	0.1098	N	238.7	8	1.113	IDENTIFIED	3.901	☐	
Polonium-218 NL	1.359	0.1018	pCi/g	0.1318	N	351.9	4	1.275	IDENTIFIED	6.232	☐	
Potassium-40 ✓	32.51	1.485	pCi/g	0.5252	1.00	1460	1	2.096	IDENTIFIED	3.149	☐	
Radium-224 INT	4.072	0.7147	pCi/g	1.249	Y	241.8	1	1.776	IDENTIFIED	17.3	☑ UI	
Radium-226 ✓	1.17	0.08972	pCi/g	0.1256	Y	609.2	4	1.454	IDENTIFIED	6.724	☐	
Radium-228 ✓	1.572	0.1711	pCi/g	0.2552	0.500	911.1	3	1.807	IDENTIFIED	9.61	☐	
Strontium-85 LA	0.09168	0.02486	pCi/g	0.08318	Y	238.7	8	1.113	NOT_IDENTI	3.901	☑ UI	Data rejected due to low abundance.
Thallium-200 HE	53.8	128.6	pCi/g	0	N	74.91	2	1.166	NOT_IDENTI	9.964	☐	
Thallium-208 ✓	0.5372	0.04644	pCi/g	0.06992	0.080	583.1	1	1.511	IDENTIFIED	8.046	☐	
Thorium-228 ✓	1.538	0.08253	pCi/g	0.1098	N	238.7	8	1.113	IDENTIFIED	3.901	☐	
Thorium-230 ✓	1.17	0.08972	pCi/g	0.1256	N	609.2	4	1.454	IDENTIFIED	6.724	☐	
Thorium-232 ✓	1.572	0.1711	pCi/g	0.2552	N	911.1	3	1.807	IDENTIFIED	9.61	☐	
Tin-126 INT	0.3806	0.04981	pCi/g	0.152	N	87.46	6	1.414	IDENTIFIED	12.13	☐	
Titanium-44 LA	0.4049	0.03378	pCi/g	0.1001	N	77.16	1	1.105	FAIL_ABUND	6.983	☐	
Uranium-234 ✓	1.17	0.08972	pCi/g	0.1256	N	609.2	4	1.454	IDENTIFIED	6.724	☐	
Zirconium-97 —	9.77E+05	3.70E+05	pCi/g	0	N	238.7	8	1.113	NOT_IDENTI	3.901	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358003	22-JUN-09 12:00	06-JUL-09 11:15	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	2.261	0.2397	pCi/g	0.2889	N	911.5	3	1.924	IDENTIFIED	9.312	☐	
Americium-243 INT	0.4772	0.03704	pCi/g	0.06462	N	74.75	1	1.691	IDENTIFIED	6.782	☐	
Annihilation Rad. —	0.1432	0.03547	pCi/g	0.05717	N	511.2	3	2.783	IDENTIFIED	24.56	☐	
Bismuth-210 HE	1.463	0.437	pCi/g	1.038	N	46.34	3	1.458	IDENTIFIED	29.62	☐	
Bismuth-211 INT	4.385	0.3076	pCi/g	0.3927	Y	351.9	4	1.362	IDENTIFIED	6.252	☑ UI	
Bismuth-212 LA	1.695	0.3141	pCi/g	0.9542	N	727.4	1	2.367	FAIL_ABUND	17.99	☐	
Bismuth-214 ✓	1.353	0.1141	pCi/g	0.1561	0.200	609.4	4	1.647	IDENTIFIED	7.236	☐	
Cadmium-109 INT	2.925	0.4422	pCi/g	1.103	Y	87.26	4	1.275	IDENTIFIED	14.54	☑ UI	

Cerium-143	—	439.5	73.37	pCi/g	0	N	87.26	4	1.275	FAIL_DECAY	14.54	☐	
Cesium-134	LA	0.1363	0.03353	pCi/g	0.1285	0.100	511.2	3	2.783	NOT_IDENTI	24.56	☑ UI	Data rejected due to low abundance.
Curium-243	HE	0.1703	0.05197	pCi/g	0.1646	N	105.2	2	1.571	FAIL_ABUND	30.13	☐	
Europium-155	HE	0.19	0.05801	pCi/g	0.1754	N	105.2	2	1.571	IDENTIFIED	30.13	☐	
Gross Gamma	—	10.84	1.425	pCi/g	4.949	N		0				☐	
Iodine-135	HE	2.28E+14	2.25E+14	pCi/g	0	N	511.2	3	2.783	NOT_IDENTI	24.56	☐	
Krypton-85	HE	23.68	5.17	pCi/g	17.8	N	238.6	8	1.381	NOT_IDENTI	3.293	☐	
Lead-210	HE	1.463	0.437	pCi/g	1.038	N	46.34	3	1.458	IDENTIFIED	29.62	☐	
Lead-212	✓	1.86	0.09366	pCi/g	0.1022	0.100	238.6	8	1.381	IDENTIFIED	3.293	☐	
Lead-214	✓	1.525	0.1142	pCi/g	0.137	0.100	351.9	4	1.362	IDENTIFIED	6.252	☐	
Lutetium-177	HE	2.694	0.8282	pCi/g	2.018	N	209.8	1	1.019	FAIL_ABUND	30.59	☐	
Neptunium-237	INT	0.8457	0.1548	pCi/g	0.3177	N	87.26	4	1.275	IDENTIFIED	14.54	☐	
Niobium-95m	LA	0.8427	0.08878	pCi/g	0.3082	N	238.6	8	1.381	NOT_IDENTI	3.293	☐	
Polonium-210	HE	1.463	0.436	pCi/g	1.038	N	46.34	3	1.458	IDENTIFIED	29.62	☐	
Polonium-212	MU	1.86	0.09366	pCi/g	0.1022	N	238.6	8	1.381	IDENTIFIED	3.293	☐	
Polonium-214	MU	1.525	0.1142	pCi/g	0.137	N	351.9	4	1.362	IDENTIFIED	6.252	☐	
Polonium-216	MU	1.86	0.09366	pCi/g	0.1022	N	238.6	8	1.381	IDENTIFIED	3.293	☐	
Polonium-218	MU	1.525	0.1142	pCi/g	0.137	N	351.9	4	1.362	IDENTIFIED	6.252	☐	
Potassium-40	✓	36.25	1.666	pCi/g	0.6059	1.00	1461	1	2.33	IDENTIFIED	3.317	☐	
Radium-224	INT	4.81	0.7379	pCi/g	1.165	Y	241.4	1	1.819	IDENTIFIED	15.03	☑ UI	
Radium-226	✓	1.353	0.1141	pCi/g	0.1561	Y	609.4	4	1.647	IDENTIFIED	7.236	☐	
Radium-228	✓	2.261	0.2397	pCi/g	0.2889	0.500	911.5	3	1.924	IDENTIFIED	9.312	☐	
Sodium-24	HE	32470	1.49E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.1199	0.02619	pCi/g	0.09019	Y	238.6	8	1.381	NOT_IDENTI	3.293	☑ UI	Data rejected due to low abundance.
Thallium-208	✓	0.653	0.0603	pCi/g	0.07731	0.080	583.1	1	1.566	IDENTIFIED	8.419	☐	
Thorium-228	✓	1.86	0.09366	pCi/g	0.1022	N	238.6	8	1.381	IDENTIFIED	3.293	☐	
Thorium-230	✓	1.353	0.1141	pCi/g	0.1561	N	609.4	4	1.647	IDENTIFIED	7.236	☐	
Thorium-232	✓	2.261	0.2397	pCi/g	0.2889	N	911.5	3	1.924	IDENTIFIED	9.312	☐	
Thorium-234	✓	1.589	0.4542	pCi/g	1.132	2.00	63.45	2	1.558	IDENTIFIED	27.24	☐	
Tin-126	INT	0.288	0.04353	pCi/g	0.1085	N	87.26	4	1.275	IDENTIFIED	14.54	☐	
Titanium-44	LA	0.4134	0.02545	pCi/g	0.06911	N	77.19	1	1.381	FAIL_ABUND	4.816	☐	
Total Uranium	—	4.7595	1.35E-06	ug/g	1.6872	N		0				☐	
Uranium-234	✓	1.353	0.1141	pCi/g	0.1561	N	609.4	4	1.647	IDENTIFIED	7.236	☐	
Uranium-238	HE	1.589	0.4542	pCi/g	1.132	N	63.45	2	1.558	IDENTIFIED	27.24	☐	
Zirconium-97	—	1.30E+06	3.98E+05	pCi/g	0	N	238.6	8	1.381	NOT_IDENTI	3.293	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358004	22-JUN-09 12:00	06-JUL-09 11:16	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.789	0.1785	pCi/g	0.1869	N	912	3	2.264	IDENTIFIED	7.78	☐	
Americium-243	INT	0.4293	0.03709	pCi/g	0.0825	N	74.96	1	1.184	IDENTIFIED	7.711	☐	
Annihilation Rad.	—	0.1187	0.02972	pCi/g	0.03867	N	511.2	1	1.637	IDENTIFIED	24.84	☐	
Barium-137m	HE	0.06664	0.0265	pCi/g	0.05138	N	662.3	2	4.059	IDENTIFIED	39.59	☐	
Bismuth-211	INT	4.265	0.2276	pCi/g	0.2684	Y	352.2	4	1.452	IDENTIFIED	4.291	☑ UI	
Bismuth-212	LA	1.07	0.2041	pCi/g	0.5496	N	727.7	1	1.946	FAIL_ABUND	18.45	☐	
Bismuth-214	✓	1.218	0.08888	pCi/g	0.09523	0.200	609.8	4	1.849	IDENTIFIED	5.825	☐	
Cadmium-109	INT	2.966	0.4768	pCi/g	1.45	Y	87.27	3	1.44	IDENTIFIED	15.45	☑ UI	
Cerium-143	—	563.4	73.65	pCi/g	0	N	328.6	1	1.227	NOT_IDENTI	25.65	☐	
Cesium-134	LA	0.1239	0.03203	pCi/g	0.0772	0.100	796.4	3	1.789	FAIL_ABUND	25.44	☑ UI	Data rejected due to low abundance.
Cesium-135	HE	0.2766	0.07788	pCi/g	0.2529	N	796.4	3	1.789	NOT_IDENTI	25.44	☐	
Cesium-137	PW	0.07044	0.02801	pCi/g	0.05431	0.100	662.3	2	4.059	IDENTIFIED	39.59	☑ UI	Data rejected due to high peak-width.
Gross Gamma	—	10.65	1.438	pCi/g	2.539	N		0				☐	
Iodine-135	HE	9.01E+13	1.43E+14	pCi/g	0	N	796.4	3	1.789	NOT_IDENTI	25.44	☐	
Krypton-85	LA	36.6	3.979	pCi/g	14.06	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Lead-212	✓	1.927	0.0854	pCi/g	0.08158	0.100	238.9	10	1.276	IDENTIFIED	2.672	☐	
Lead-214	✓	1.484	0.08812	pCi/g	0.09539	0.100	352.2	4	1.452	IDENTIFIED	4.291	☐	
Lutetium-177	LA	3.262	0.6076	pCi/g	1.703	N	209.4	1	1.29	FAIL_ABUND	18.43	☐	
Neptunium-237	INT	0.8577	0.1638	pCi/g	0.306	N	87.27	3	1.44	IDENTIFIED	15.45	☐	

Niobium-95	HE	0.1067	0.02143	pCi/g	0.07036	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Niobium-95m	HE	0.3124	0.06595	pCi/g	0.2082	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Niobium-97	—	30060	14280	pCi/g	0	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	
Polonium-212	NU	1.927	0.0854	pCi/g	0.08158	N	238.9	10	1.276	IDENTIFIED	2.672	☐	
Polonium-214	NU	1.484	0.08812	pCi/g	0.09539	N	352.2	4	1.452	IDENTIFIED	4.291	☐	
Polonium-216	NU	1.927	0.0854	pCi/g	0.08158	N	238.9	10	1.276	IDENTIFIED	2.672	☐	
Polonium-218	NU	1.484	0.08812	pCi/g	0.09539	N	352.2	4	1.452	IDENTIFIED	4.291	☐	
Potassium-40	✓	35.47	1.45	pCi/g	0.4535	1.00	1462	1	3.057	IDENTIFIED	2.145	☑ UI ~~Data rejected due to high peak width.~~	use 7/13/0
Radium-224	INT	4.41	0.5304	pCi/g	0.9269	Y	241.9	1	1.633	IDENTIFIED	11.71	☑ UI	
Radium-226	✓	1.218	0.08888	pCi/g	0.09523	Y	609.8	4	1.849	IDENTIFIED	5.825	☐	
Radium-228	✓	1.789	0.1785	pCi/g	0.1869	0.500	912	3	2.264	IDENTIFIED	7.78	☐	
Strontium-85	LA	0.1854	0.02016	pCi/g	0.07122	Y	238.9	10	1.276	NOT_IDENTI	2.672	☑ UI Data rejected due to low abundance.	
Thallium-208	✓	0.5986	0.03995	pCi/g	0.04788	0.080	583.7	1	1.923	IDENTIFIED	5.451	☐	
Thorium-228	✓	1.927	0.0854	pCi/g	0.08157	N	238.9	10	1.276	IDENTIFIED	2.672	☐	
Thorium-230	✓	1.218	0.08888	pCi/g	0.09523	N	609.8	4	1.849	IDENTIFIED	5.825	☐	
Thorium-232	✓	1.789	0.1785	pCi/g	0.1869	N	912	3	2.264	IDENTIFIED	7.78	☐	
Thorium-234	✓	1.871	0.8171	pCi/g	1.822	2.00	63.31	2	1.194	IDENTIFIED	42.81	☐	
Tin-126	INT	0.2921	0.04695	pCi/g	0.1417	N	87.27	3	1.44	IDENTIFIED	15.45	☐	
Titanium-44	LA	0.4238	0.02877	pCi/g	0.07727	N	77.24	1	1.144	FAIL_ABUND	5.496	☐	
Total Uranium	—	5.5493	2.43E-06	ug/g	2.7129	N		0				☐	
Uranium-234	✓	1.218	0.08888	pCi/g	0.09523	N	609.8	4	1.849	IDENTIFIED	5.825	☐	
Uranium-238	HE	1.871	0.8171	pCi/g	1.822	N	63.31	2	1.194	IDENTIFIED	42.81	☐	
Zirconium-97	—	1.00E+06	2.71E+05	pCi/g	0	N	238.9	10	1.276	NOT_IDENTI	2.672	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358005	22-JUN-09 12:00	06-JUL-09 11:17	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.862	0.2037	pCi/g	0.2234	N	911.4	3	1.857	IDENTIFIED	9.297	☐	
Americium-243	INT	0.3028	0.03678	pCi/g	0.08602	N	74.91	2	0.7915	IDENTIFIED	11.3	☐	
Annihilation Rad.	—	0.1736	0.03482	pCi/g	0.04667	N	511	2	1.615	IDENTIFIED	19.84	☐	
Barium-137m	✓	0.6385	0.05341	pCi/g	0.05779	N	661.8	3	1.501	IDENTIFIED	7.965	☐	
Bismuth-211	INT	3.528	0.2664	pCi/g	0.3119	Y	352	4	1.155	IDENTIFIED	6.813	☑ UI	
Bismuth-212	HE	0.8136	0.3143	pCi/g	0.7194	N	728.2	1	0.8874	FAIL_ABUND	38.43	☐	
Bismuth-214	✓	1.015	0.08806	pCi/g	0.1195	0.200	609.5	4	1.468	IDENTIFIED	7.824	☐	
Cadmium-109	INT	2.638	0.4955	pCi/g	1.204	Y	87.27	3	1.112	IDENTIFIED	18.15	☑ UI	
Cerium-143	—	103.7	44.32	pCi/g	0	N	661.8	3	1.501	FAIL_DECAY	7.965	☐	
Cesium-137	✓	0.675	0.05649	pCi/g	0.06109	0.100	661.8	3	1.501	IDENTIFIED	7.965	☐	
Gross Gamma	—	9.156	1.342	pCi/g	2.259	N		0				☐	
Iodine-135	HE	8.35E+13	1.95E+14	pCi/g	0	N	511	2	1.615	NOT_IDENTI	19.84	☐	
Krypton-85	HE	19.2	3.959	pCi/g	14.07	N	238.7	7	1.002	NOT_IDENTI	3.623	☐	
Lead-212	✓	1.518	0.07746	pCi/g	0.08613	0.100	238.7	7	1.002	IDENTIFIED	3.623	☐	
Lead-214	✓	1.227	0.09804	pCi/g	0.1088	0.100	352	4	1.155	IDENTIFIED	6.813	☐	
Lutetium-177	HE	2.132	0.5817	pCi/g	1.655	N	209.1	1	1.09	FAIL_ABUND	27.15	☐	
Neptunium-237	INT	0.7627	0.1635	pCi/g	0.3842	N	87.27	3	1.112	IDENTIFIED	18.15	☐	
Polonium-212	NU	1.518	0.07746	pCi/g	0.08613	N	238.7	7	1.002	IDENTIFIED	3.623	☐	
Polonium-214	NU	1.227	0.09804	pCi/g	0.1088	N	352	4	1.155	IDENTIFIED	6.813	☐	
Polonium-216	NU	1.518	0.07746	pCi/g	0.08613	N	238.7	7	1.002	IDENTIFIED	3.623	☐	
Polonium-218	NU	1.227	0.09804	pCi/g	0.1088	N	352	4	1.155	IDENTIFIED	6.813	☐	
Potassium-40	✓	30.7	1.526	pCi/g	0.5374	1.00	1461	1	2.196	IDENTIFIED	3.274	☐	
Radium-224	INT	4.28	0.5881	pCi/g	0.9812	Y	241.6	1	1.626	IDENTIFIED	13.45	☑ UI	
Radium-226	✓	1.015	0.08806	pCi/g	0.1195	Y	609.5	4	1.468	IDENTIFIED	7.824	☐	
Radium-228	✓	1.862	0.2037	pCi/g	0.2234	0.500	911.4	3	1.857	IDENTIFIED	9.297	☐	
Strontium-85	LA	0.09728	0.02005	pCi/g	0.07128	Y	238.7	7	1.002	NOT_IDENTI	3.623	☑ UI Data rejected due to low abundance.	
Thallium-200	HE	122.5	110.9	pCi/g	0	N	74.91	2	0.7915	NOT_IDENTI	11.3	☐	
Thallium-208	✓	0.4916	0.04905	pCi/g	0.05767	0.080	583.6	1	1.534	IDENTIFIED	9.435	☐	
Thorium-228	✓	1.518	0.07746	pCi/g	0.08612	N	238.7	7	1.002	IDENTIFIED	3.623	☐	
Thorium-230	✓	1.015	0.08806	pCi/g	0.1195	N	609.5	4	1.468	IDENTIFIED	7.824	☐	
Thorium-232	✓	1.862	0.2037	pCi/g	0.2234	N	911.4	3	1.857	IDENTIFIED	9.297	☐	

Thorium-234	V	2.907	1.375	pCi/g	1.961	2.00	63.4	2	0.9269	IDENTIFIED	46.43	☐
Tin-126	INT	0.2597	0.04879	pCi/g	0.1193	N	87.27	3	1.112	IDENTIFIED	18.15	☐
Titanium-44	LA	0.3603	0.02904	pCi/g	0.0714	N	77.16	1	0.8512	FAIL_ABUND	6.686	☐
Total Uranium	—	8.6355	4.09E-06	ug/g	2.9198	N		0				☐
Uranium-234	V	1.015	0.08806	pCi/g	0.1195	N	609.5	4	1.468	IDENTIFIED	7.824	☐
Uranium-238	HE	2.907	1.375	pCi/g	1.961	N	63.4	2	0.9269	IDENTIFIED	46.43	☐
Zirconium-97	HE	6.14E+05	3.46E+05	pCi/g	0	N	238.7	7	1.002	NOT_IDENTI	3.623	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358006	22-JUN-09 12:00	06-JUL-09 12:13	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	V	1.805	0.1767	pCi/g	0.2115	N	911.3	3	1.472	IDENTIFIED	7.848	☐	
Americium-243	INT	0.4268	0.04437	pCi/g	0.09371	N	74.95	1	1.233	IDENTIFIED	9.703	☐	
Annihilation Rad.	—	0.1203	0.03317	pCi/g	0.04589	N	510.9	1	2.171	IDENTIFIED	27.4	☐	
Bismuth-211	INT	3.927	0.2537	pCi/g	0.3131	Y	352	4	1.376	IDENTIFIED	5.626	☑ UJ	
Bismuth-212	HE	1.134	0.2732	pCi/g	0.6622	N	727.6	1	1.847	FAIL_ABUND	23.69	☐	
Bismuth-214	V	1.291	0.1008	pCi/g	0.09379	0.200	609.5	4	1.477	IDENTIFIED	6.661	☐	
Cadmium-109	INT	3.637	0.6003	pCi/g	1.264	Y	87.29	3	1.268	IDENTIFIED	15.99	☑ UJ	
Cerium-143	—	151.1	43.53	pCi/g	0	N	328.2	1	1.029	FAIL_DECAY	39.22	☐	
Cesium-134	LA	0.09185	0.03873	pCi/g	0.08808	0.100	795.8	1	1.44	FAIL_ABUND	41.97	☑ UI	Data rejected due to low abundance.
Gross Gamma	—	10.6	1.515	pCi/g	3.444	N		0				☐	
Lead-212	V	1.816	0.08659	pCi/g	0.08519	0.100	238.8	5	1.155	IDENTIFIED	3.125	☐	
Lead-214	V	1.366	0.09516	pCi/g	0.1103	0.100	352	4	1.376	IDENTIFIED	5.626	☐	
Lutetium-177	HE	2.316	0.7408	pCi/g	1.711	N	209.6	1	1.195	FAIL_ABUND	31.87	☐	
Neptunium-237	INT	1.051	0.2047	pCi/g	0.4074	N	87.29	3	1.268	IDENTIFIED	15.99	☐	
Polonium-212	NU	1.816	0.08659	pCi/g	0.08519	N	238.8	5	1.155	IDENTIFIED	3.125	☐	
Polonium-214	NU	1.366	0.09516	pCi/g	0.1103	N	352	4	1.376	IDENTIFIED	5.626	☐	
Polonium-216	NU	1.816	0.08659	pCi/g	0.08519	N	238.8	5	1.155	IDENTIFIED	3.125	☐	
Polonium-218	NU	1.366	0.09516	pCi/g	0.1103	N	352	4	1.376	IDENTIFIED	5.626	☐	
Potassium-40	V	38.09	1.73	pCi/g	0.414	1.00	1461	1	2.131	IDENTIFIED	2.561	☐	
Radium-224	INT	4.148	0.5391	pCi/g	0.9694	Y	241.9	1	1.577	IDENTIFIED	12.69	☑ UJ	
Radium-226	V	1.291	0.1008	pCi/g	0.09379	Y	609.5	4	1.477	IDENTIFIED	6.661	☐	
Radium-228	V	1.805	0.1767	pCi/g	0.2115	0.500	911.3	3	1.472	IDENTIFIED	7.848	☐	
Thallium-208	V	0.561	0.04468	pCi/g	0.05521	0.080	583.3	1	1.235	IDENTIFIED	7.136	☐	
Thorium-228	V	1.816	0.08659	pCi/g	0.08518	N	238.8	5	1.155	IDENTIFIED	3.125	☐	
Thorium-230	V	1.291	0.1008	pCi/g	0.09378	N	609.5	4	1.477	IDENTIFIED	6.661	☐	
Thorium-232	V	1.805	0.1767	pCi/g	0.2115	N	911.3	3	1.472	IDENTIFIED	7.848	☐	
Tin-126	INT	0.358	0.0591	pCi/g	0.1251	N	87.29	3	1.268	IDENTIFIED	15.99	☐	
Titanium-44	LA	0.4284	0.03104	pCi/g	0.08068	N	77.22	1	1.004	FAIL_ABUND	6.176	☐	
Total Uranium	—	3.8635	2.20E-06	ug/g	3.7541	N		0				☐	
Uranium-234	V	1.291	0.1008	pCi/g	0.09378	N	609.5	4	1.477	IDENTIFIED	6.661	☐	
Zirconium-97	HE	5.21E+05	2.95E+05	pCi/g	0	N	238.8	5	1.155	NOT_IDENTI	3.125	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358007	22-JUN-09 12:00	06-JUL-09 12:13	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	V	1.63	0.1896	pCi/g	0.2322	N	911.5	3	1.946	IDENTIFIED	9.86	☐	
Americium-243	INT	0.3283	0.05295	pCi/g	0.1306	N	75.02	2	1.075	IDENTIFIED	15.17	☐	
Annihilation Rad.	—	0.1453	0.04229	pCi/g	0.05808	N	511.3	2	1.983	IDENTIFIED	28.92	☐	
Barium-137m	V	0.8585	0.05648	pCi/g	0.0683	N	661.9	2	1.451	IDENTIFIED	6.098	☐	
Bismuth-211	INT	3.972	0.3049	pCi/g	0.3716	Y	352.2	4	1.364	IDENTIFIED	6.755	☑ UJ	
Bismuth-212	HE	1.426	0.368	pCi/g	0.7641	N	728.3	1	2.123	FAIL_ABUND	25.48	☐	
Bismuth-214	V	1.224	0.105	pCi/g	0.1276	0.200	609.7	4	1.203	IDENTIFIED	7.686	☐	
Cadmium-109	INT	3.421	0.6628	pCi/g	1.489	Y	87.47	3	1.102	IDENTIFIED	18.53	☑ UJ	
Cerium-143	—	228.2	57.18	pCi/g	0	N	328.2	1	1.015	NOT_IDENTI	63.67	☐	
Cesium-137	V	0.9076	0.05975	pCi/g	0.0722	0.100	661.9	2	1.451	IDENTIFIED	6.098	☐	
Gross Gamma	—	10.36	1.53	pCi/g	3.722	N		0				☐	

Iodine-133	HE	1359	1484	pCi/g	0	N	511.3	2	1.983	FAIL_DECAY	28.92	☐	
Krypton-85	HE	16.65	5.203	pCi/g	16.59	N	238.9	8	1.125	NOT_IDENTI	3.85	☐	
Lead-212	V	1.695	0.09163	pCi/g	0.1102	0.100	238.9	8	1.125	IDENTIFIED	3.85	☐	
Lead-214	V	1.382	0.112	pCi/g	0.1336	0.100	352.2	4	1.364	IDENTIFIED	6.755	☐	
Lutetium-177	HE	3.235	0.7765	pCi/g	2.053	N	209.8	1	1.76	FAIL_ABUND	23.82	☐	
Mercury-203	LA	0.094	0.02364	pCi/g	0.08444	0.100	75.02	2	1.075	NOT_IDENTI	15.17	☑ UI	Data rejected due to low abundance.
Neptunium-237	INT	0.9889	0.2171	pCi/g	0.4874	N	87.47	3	1.102	IDENTIFIED	18.53	☐	
Niobium-97	HE	16400	21030	pCi/g	0	N	238.9	8	1.125	NOT_IDENTI	3.85	☐	
Polonium-212	NU	1.695	0.09163	pCi/g	0.1102	N	238.9	8	1.125	IDENTIFIED	3.85	☐	
Polonium-214	NU	1.382	0.112	pCi/g	0.1336	N	352.2	4	1.364	IDENTIFIED	6.755	☐	
Polonium-215	HE	1.406	0.4174	pCi/g	1.331	N	270.3	4	1.996	FAIL_ABUND	20.43	☐	
Polonium-216	NU	1.695	0.09163	pCi/g	0.1102	N	238.9	8	1.125	IDENTIFIED	3.85	☐	
Polonium-218	NU	1.382	0.112	pCi/g	0.1336	N	352.2	4	1.364	IDENTIFIED	6.755	☐	
Potassium-40	V	30.04	1.66	pCi/g	0.5993	1.00	1461	1	2.112	IDENTIFIED	3.464	☐	
Radium-223	LA	1.406	0.4174	pCi/g	1.331	Y	270.3	4	1.996	FAIL_ABUND	20.43	☑ UI	Data rejected due to low abundance.
Radium-224	INT	4.43	0.64	pCi/g	1.254	Y	241.9	1	1.47	IDENTIFIED	14.12	☑ UI	
Radium-226	V	1.224	0.105	pCi/g	0.1276	Y	609.7	4	1.203	IDENTIFIED	7.686	☐	
Radium-228	V	1.63	0.1896	pCi/g	0.2322	0.500	911.5	3	1.946	IDENTIFIED	9.86	☐	
Strontium-85	LA	0.08437	0.02637	pCi/g	0.08409	Y	238.9	8	1.125	NOT_IDENTI	3.85	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	2.26E+13	1.07E+15	pCi/g	0	N	238.9	8	1.125	NOT_IDENTI	3.85	☐	
Thallium-207	HE	1.406	0.4174	pCi/g	1.331	N	270.3	4	1.996	FAIL_ABUND	20.43	☐	
Thallium-208	V	0.4918	0.05982	pCi/g	0.06676	0.080	583.6	1	1.503	IDENTIFIED	11.69	☐	
Thorium-228	V	1.695	0.09163	pCi/g	0.1102	N	238.9	8	1.125	IDENTIFIED	3.85	☐	
Thorium-230	V	1.224	0.105	pCi/g	0.1276	N	609.7	4	1.203	IDENTIFIED	7.686	☐	
Thorium-231	LA	1.406	0.4174	pCi/g	1.331	Y	270.3	4	1.996	FAIL_ABUND	20.43	☑ UI	Data rejected due to low abundance.
Thorium-232	V	1.63	0.1896	pCi/g	0.2322	N	911.5	3	1.946	IDENTIFIED	9.86	☐	
Tin-126	INT	0.3368	0.06525	pCi/g	0.1476	N	87.47	3	1.102	IDENTIFIED	18.53	☐	
Titanium-44	LA	0.3652	0.03835	pCi/g	0.1042	N	77.33	1	0.9388	FAIL_ABUND	8.967	☐	
Uranium-234	V	1.224	0.105	pCi/g	0.1276	N	609.7	4	1.203	IDENTIFIED	7.686	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358008	22-JUN-09 12:00	06-JUL-09 12:14	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	V	1.632	0.1592	pCi/g	0.2206	N	911.1	3	1.363	IDENTIFIED	8.14	☐	
Americium-243	INT	0.386	0.03376	pCi/g	0.08765	N	74.24	1	0.9841	IDENTIFIED	7.862	☐	
Annihilation Rad.	HE	0.0793	0.03042	pCi/g	0.05476	N	510.5	2	1.622	IDENTIFIED	38.24	☐	
Barium-137m	V	0.2094	0.03184	pCi/g	0.06038	N	661.5	2	1.271	IDENTIFIED	14.79	☐	
Bismuth-211	INT	3.838	0.2754	pCi/g	0.3133	Y	351.4	4	1.264	IDENTIFIED	6.263	☑ UI	
Bismuth-212	HE	1.157	0.2429	pCi/g	0.6978	N	726.8	1	1.322	FAIL_ABUND	20.51	☐	
Bismuth-214	V	1.124	0.09325	pCi/g	0.1134	0.200	609	4	1.292	IDENTIFIED	7.12	☐	
Cadmium-109	INT	3.689	0.4391	pCi/g	1.2	Y	86.65	3	1.043	IDENTIFIED	11.02	☑ UI	
Cerium-143	—	607.3	85.58	pCi/g	0	N	327.7	1	1.28	FAIL_DECAY	20.51	☐	
Cesium-134	LA	0.09583	0.03475	pCi/g	0.09514	0.100	795	1	1.375	FAIL_ABUND	36.06	☑ UI	Data rejected due to low abundance.
Cesium-135	INT	0.5928	0.1361	pCi/g	0.2499	N	269.5	2	1.317	IDENTIFIED	22.51	☐	
Cesium-137	V	0.2213	0.03367	pCi/g	0.06383	0.100	661.5	2	1.271	IDENTIFIED	14.79	☐	
Gross Gamma	—	9.893	1.548	pCi/g	4.038	N		0				☐	
Iodine-133	—	2456	1198	pCi/g	0	N	510.5	2	1.622	FAIL_DECAY	38.24	☐	
Iodine-135	HE	2.20E+14	1.94E+14	pCi/g	0	N	269.5	2	1.317	NOT_IDENTI	22.51	☐	
Lead-212	V	1.631	0.08467	pCi/g	0.09313	0.100	238.1	7	1.018	IDENTIFIED	3.225	☐	
Lead-214	V	1.335	0.1019	pCi/g	0.1092	0.100	351.4	4	1.264	IDENTIFIED	6.263	☐	
Lutetium-177	HE	2.035	0.5974	pCi/g	1.87	N	208.8	1	0.9527	FAIL_ABUND	29.19	☐	
Neptunium-237	INT	1.067	0.168	pCi/g	0.4366	N	86.65	3	1.043	IDENTIFIED	11.02	☐	
Niobium-95m	LA	1.065	0.0988	pCi/g	0.3223	N	238.1	7	1.018	NOT_IDENTI	3.225	☐	
Niobium-97	HE	5947	20640	pCi/g	0	N	238.1	7	1.018	NOT_IDENTI	3.225	☐	
Polonium-212	NU	1.631	0.08467	pCi/g	0.09313	N	238.1	7	1.018	IDENTIFIED	3.225	☐	
Polonium-214	NU	1.335	0.1019	pCi/g	0.1092	N	351.4	4	1.264	IDENTIFIED	6.263	☐	
Polonium-216	NU	1.631	0.08467	pCi/g	0.09313	N	238.1	7	1.018	IDENTIFIED	3.225	☐	
Polonium-218	NU	1.335	0.1019	pCi/g	0.1092	N	351.4	4	1.264	IDENTIFIED	6.263	☐	

Potassium-40	✓	31.95	1.397	pCi/g	0.4832	1.00	1461	2	1.797	IDENTIFIED	2.807	☐	
Radium-224	INT	4.368	0.631	pCi/g	1.059	Y	241.1	1	1.841	IDENTIFIED	14.03	☑	UI
Radium-226	✓	1.124	0.09325	pCi/g	0.1134	Y	609	4	1.292	IDENTIFIED	7.12	☐	
Radium-228	✓	1.632	0.1592	pCi/g	0.2206	0.500	911.1	3	1.363	IDENTIFIED	8.14	☐	
Thallium-208	✓	0.5997	0.04791	pCi/g	0.06153	0.080	582.8	1	1.322	IDENTIFIED	7.077	☐	
Thorium-228	✓	1.631	0.08467	pCi/g	0.09312	N	238.1	7	1.018	IDENTIFIED	3.225	☐	
Thorium-230	✓	1.123	0.09325	pCi/g	0.1134	N	609	4	1.292	IDENTIFIED	7.12	☐	
Thorium-232	✓	1.632	0.1592	pCi/g	0.2206	N	911.1	3	1.363	IDENTIFIED	8.14	☐	
Thorium-234	✓	2.199	0.7521	pCi/g	1.846	2.00	62.89	2	1.043	IDENTIFIED	33.12	☐	
Tin-126	INT	0.3632	0.04323	pCi/g	0.1242	N	86.65	3	1.043	IDENTIFIED	11.02	☐	
Titanium-44	LA	0.2108	0.02417	pCi/g	0.07151	N	1461	2	1.797	NOT_IDENTI	2.807	☐	
Total Uranium	—	6.5818	2.24E-06	ug/g	2.7485	N		0				☐	
Uranium-234	✓	1.123	0.09325	pCi/g	0.1134	N	609	4	1.292	IDENTIFIED	7.12	☐	
Uranium-238	HE	2.199	0.7521	pCi/g	1.846	N	62.89	2	1.043	IDENTIFIED	33.12	☐	
Zirconium-97	—	1.58E+06	3.85E+05	pCi/g	0	N	238.1	7	1.018	NOT_IDENTI	3.225	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358009	22-JUN-09 12:00	06-JUL-09 12:15	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	✓	1.724	0.1812	pCi/g	0.2099	N	911.6	3	1.711	IDENTIFIED	8.966	☐	
Americium-243	INT	0.3617	0.03857	pCi/g	0.09256	N	74.91	2	0.9843	IDENTIFIED	10.11	☐	
Annihilation Rad.	—	0.1462	0.03873	pCi/g	0.04519	N	510.9	2	1.929	IDENTIFIED	26.32	☐	
Bismuth-211	INT	3.51	0.213	pCi/g	0.3157	Y	352	4	1.407	IDENTIFIED	5.193	☑	UI
Bismuth-212	HE	0.7593	0.2842	pCi/g	0.7016	N	727.2	1	1.384	FAIL_ABUND	37.17	☐	
Bismuth-214	✓	1.189	0.09193	pCi/g	0.1161	0.200	609.6	4	1.499	IDENTIFIED	6.545	☐	
Cadmium-109	INT	2.879	0.5765	pCi/g	0.9974	Y	87.09	3	1.166	IDENTIFIED	19.66	☑	UI
Cerium-143	—	294.9	53.15	pCi/g	0	N	328.3	1	1.576	FAIL_DECAY	23.93	☐	
Gross Gamma	—	9.62	1.536	pCi/g	3.108	N		0				☐	
Iodine-133	HE	958.7	1230	pCi/g	0	N	510.9	2	1.929	FAIL_DECAY	26.32	☐	
Iodine-135	HE	2.87E+14	1.95E+14	pCi/g	0	N	796	1	1.437	NOT_IDENTI	59.01	☐	
Krypton-85	HE	14.67	3.733	pCi/g	13.69	N	238.7	8	1.105	NOT_IDENTI	3.25	☐	
Lead-212	✓	1.69	0.08134	pCi/g	0.08427	0.100	238.7	8	1.105	IDENTIFIED	3.25	☐	
Lead-214	✓	1.221	0.08067	pCi/g	0.115	0.100	352	4	1.407	IDENTIFIED	5.193	☐	
Lutetium-177	HE	2.166	0.6427	pCi/g	1.723	N	209	1	0.9473	FAIL_ABUND	29.55	☐	
Neptunium-237	INT	0.8325	0.1875	pCi/g	0.4305	N	87.09	3	1.166	IDENTIFIED	19.66	☐	
Niobium-97	HE	14960	17740	pCi/g	0	N	238.7	8	1.105	NOT_IDENTI	3.25	☐	
Polonium-212	NU	1.69	0.08134	pCi/g	0.08427	N	238.7	8	1.105	IDENTIFIED	3.25	☐	
Polonium-214	NU	1.221	0.08067	pCi/g	0.115	N	352	4	1.407	IDENTIFIED	5.193	☐	
Polonium-216	NU	1.69	0.08134	pCi/g	0.08427	N	238.7	8	1.105	IDENTIFIED	3.25	☐	
Polonium-218	NU	1.221	0.08067	pCi/g	0.115	N	352	4	1.407	IDENTIFIED	5.193	☐	
Potassium-40	✓	33.27	1.51	pCi/g	0.4814	1.00	1461	1	2.176	IDENTIFIED	2.81	☐	
Radium-224	INT	4.809	0.5951	pCi/g	0.959	Y	241.7	1	1.701	IDENTIFIED	12.06	☑	UI
Radium-226	✓	1.189	0.09193	pCi/g	0.1161	Y	609.6	4	1.499	IDENTIFIED	6.545	☐	
Radium-228	✓	1.724	0.1812	pCi/g	0.2099	0.500	911.6	3	1.711	IDENTIFIED	8.966	☐	
Strontium-85	LA	0.07437	0.01892	pCi/g	0.06936	Y	238.7	8	1.105	NOT_IDENTI	3.25	☑	UI Data rejected due to low abundance.
Thallium-200	HE	71.81	110.8	pCi/g	0	N	74.91	2	0.9843	NOT_IDENTI	10.11	☐	
Thallium-208	✓	0.6004	0.04472	pCi/g	0.05175	0.080	583.4	1	1.537	IDENTIFIED	6.533	☐	
Thorium-228	✓	1.69	0.08134	pCi/g	0.08426	N	238.7	8	1.105	IDENTIFIED	3.25	☐	
Thorium-230	✓	1.189	0.09192	pCi/g	0.1161	N	609.6	4	1.499	IDENTIFIED	6.545	☐	
Thorium-232	✓	1.724	0.1812	pCi/g	0.2099	N	911.6	3	1.711	IDENTIFIED	8.966	☐	
Tin-126	INT	0.2835	0.05676	pCi/g	0.1449	N	87.09	3	1.166	IDENTIFIED	19.66	☐	
Titanium-44	LA	0.3375	0.0268	pCi/g	0.07676	N	77.13	1	0.9425	FAIL_ABUND	7.145	☐	
Uranium-234	✓	1.189	0.09192	pCi/g	0.1161	N	609.6	4	1.499	IDENTIFIED	6.545	☐	
Zirconium-97	HE	5.86E+05	3.41E+05	pCi/g	0	N	238.7	8	1.105	NOT_IDENTI	3.25	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358010	22-JUN-09 12:00	06-JUL-09 12:15	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	V	1.268	0.1544	pCi/g	0.214	N	911.2	3	1.407	IDENTIFIED	10.63	☐	
Americium-243	INT	0.3227	0.03039	pCi/g	0.08982	N	74.99	2	0.8266	IDENTIFIED	8.598	☐	
Annihilation Rad.	—	0.1066	0.02966	pCi/g	0.04456	N	510.8	1	1.398	IDENTIFIED	27.66	☐	
Bismuth-211	INT	2.977	0.2078	pCi/g	0.292	Y	352	4	1.187	IDENTIFIED	6.253	☑ UI	
Bismuth-212	HE	0.7208	0.2216	pCi/g	0.432	N	727.8	1	1.505	IDENTIFIED	30.44	☐	
Bismuth-214	V	0.8354	0.0764	pCi/g	0.1031	0.200	609.4	4	1.325	IDENTIFIED	8.229	☐	
Cadmium-109	INT	3.051	0.4664	pCi/g	1.22	Y	87.42	3	1.153	IDENTIFIED	14.67	☑ UI	
Cerium-143	—	417.8	62.67	pCi/g	0	N	143.9	1	1.255	FAIL_DECAY	60.06	☐	
Cesium-134	LA	0.08507	0.03213	pCi/g	0.08472	0.100	795.6	3	1.458	FAIL_ABUND	37.55	☑ UI	Data rejected due to low abundance.
Cesium-135	HE	0.2794	0.08216	pCi/g	0.263	N	795.6	3	1.458	NOT_IDENTI	37.55	☐	
Gross Gamma	—	8.778	1.53	pCi/g	3.696	N		0				☐	
Iodine-135	HE	9.35E+13	1.75E+14	pCi/g	0	N	795.6	3	1.458	NOT_IDENTI	37.55	☐	
Krypton-85	HE	17.34	3.91	pCi/g	13.32	N	238.7	8	1.007	NOT_IDENTI	3.328	☐	
Lead-212	V	1.406	0.06818	pCi/g	0.08328	0.100	238.7	8	1.007	IDENTIFIED	3.328	☐	
Lead-214	V	1.036	0.07718	pCi/g	0.1053	0.100	352	4	1.187	IDENTIFIED	6.253	☐	
Lutetium-177	HE	1.965	0.5225	pCi/g	1.664	N	209.4	1	0.9367	FAIL_ABUND	26.45	☐	
Neptunium-237	INT	0.8821	0.1627	pCi/g	0.359	N	87.42	3	1.153	IDENTIFIED	14.67	☐	
Niobium-95m	HE	0.2212	0.06565	pCi/g	0.2084	N	238.7	8	1.007	NOT_IDENTI	3.328	☐	
Polonium-212	NU	1.406	0.06818	pCi/g	0.08328	N	238.7	8	1.007	IDENTIFIED	3.328	☐	
Polonium-214	NU	1.036	0.07718	pCi/g	0.1053	N	352	4	1.187	IDENTIFIED	6.253	☐	
Polonium-216	NU	1.406	0.06818	pCi/g	0.08328	N	238.7	8	1.007	IDENTIFIED	3.328	☐	
Polonium-218	NU	1.036	0.07718	pCi/g	0.1053	N	352	4	1.187	IDENTIFIED	6.253	☐	
Potassium-40	V	33.5	1.666	pCi/g	0.4277	1.00	1460	1	1.84	IDENTIFIED	2.649	☐	
Radium-224	INT	3.836	0.5378	pCi/g	0.9471	Y	241.5	1	1.74	IDENTIFIED	13.75	☑ UI	
Radium-226	V	0.8354	0.0764	pCi/g	0.1031	Y	609.4	4	1.325	IDENTIFIED	8.229	☐	
Radium-228	V	1.268	0.1544	pCi/g	0.214	0.500	911.2	3	1.407	IDENTIFIED	10.63	☐	
Sodium-24	HE	4349	94310	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.0879	0.01981	pCi/g	0.0675	Y	238.7	8	1.007	NOT_IDENTI	3.328	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	15.85	102.6	pCi/g	0	N	74.99	2	0.8266	NOT_IDENTI	8.598	☐	
Thallium-208	V	0.3829	0.03727	pCi/g	0.0526	0.080	583.3	1	1.427	IDENTIFIED	9.106	☐	
Thorium-228	V	1.406	0.06818	pCi/g	0.08327	N	238.7	8	1.007	IDENTIFIED	3.328	☐	
Thorium-230	V	0.8354	0.07639	pCi/g	0.1031	N	609.4	4	1.325	IDENTIFIED	8.229	☐	
Thorium-232	V	1.268	0.1544	pCi/g	0.214	N	911.2	3	1.407	IDENTIFIED	10.63	☐	
Tin-126	INT	0.3004	0.04592	pCi/g	0.1207	N	87.42	3	1.153	IDENTIFIED	14.67	☐	
Titanium-44	LA	0.2862	0.02211	pCi/g	0.07942	N	77.31	1	0.9059	FAIL_ABUND	6.665	☐	
Uranium-234	V	0.8354	0.07639	pCi/g	0.1031	N	609.4	4	1.325	IDENTIFIED	8.229	☐	
Zirconium-97	—	1.10E+06	2.98E+05	pCi/g	0	N	238.7	8	1.007	NOT_IDENTI	3.328	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232358011	22-JUN-09 12:00	06-JUL-09 13:25	14.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	V	1.881	0.2293	pCi/g	0.3157	N	911.1	3	1.568	IDENTIFIED	11.07	☐	
Americium-243	INT	0.4184	0.03099	pCi/g	0.07569	N	75.07	2	0.8441	IDENTIFIED	6.077	☐	
Annihilation Rad.	—	0.1534	0.03422	pCi/g	0.06489	N	510.7	2	1.528	IDENTIFIED	22.05	☐	
Bismuth-210	HE	1.039	0.4722	pCi/g	1.029	N	47.1	3	0.8966	IDENTIFIED	45.27	☐	
Bismuth-211	INT	4.395	0.3246	pCi/g	0.4175	Y	352.1	4	1.122	IDENTIFIED	6.457	☑ UI	
Bismuth-212	LA	1.641	0.2895	pCi/g	0.9255	N	727	1	1.334	FAIL_ABUND	17.04	☐	
Bismuth-214	V	1.432	0.1109	pCi/g	0.1507	0.200	609.3	4	1.468	IDENTIFIED	6.308	☐	
Cadmium-109	INT	4.519	0.4886	pCi/g	1.27	Y	87.4	4	1.175	IDENTIFIED	10.03	☑ UI	
Cerium-143	—	537.2	82.33	pCi/g	0	N	328.1	1	0.9133	FAIL_DECAY	30.65	☐	
Gross Gamma	—	11.14	1.652	pCi/g	5.074	N		0				☐	
Iodine-123	HE	1.10E+06	8.81E+05	pCi/g	0	N	87.4	4	1.175	NOT_IDENTI	10.03	☐	
Iodine-135	HE	1.77E+14	2.97E+14	pCi/g	0	N	510.7	2	1.528	NOT_IDENTI	22.05	☐	
Krypton-85	HE	21.6	5.147	pCi/g	17.69	N	238.8	7	0.9479	NOT_IDENTI	3.193	☐	
Lead-210	HE	1.039	0.4722	pCi/g	1.029	N	47.1	3	0.8966	IDENTIFIED	45.27	☐	
Lead-212	V	1.921	0.1042	pCi/g	0.1035	0.100	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Lead-214	V	1.529	0.1197	pCi/g	0.1374	0.100	352.1	4	1.122	IDENTIFIED	6.457	☐	

Lutetium-177	HE	2.756	0.6653	pCi/g	2.147	N	209.4	2	0.973	FAIL_ABUND	23.85	☐	
Neptunium-237	INT	1.306	0.1952	pCi/g	0.3661	N	87.4	4	1.175	IDENTIFIED	10.03	☐	
Polonium-210	HE	1.039	0.4718	pCi/g	1.029	N	47.1	3	0.8966	IDENTIFIED	45.27	☐	
Polonium-212	NM	1.921	0.1042	pCi/g	0.1035	N	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Polonium-214	NM	1.529	0.1197	pCi/g	0.1374	N	352.1	4	1.122	IDENTIFIED	6.457	☐	
Polonium-216	NM	1.921	0.1042	pCi/g	0.1035	N	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Polonium-218	NM	1.529	0.1197	pCi/g	0.1374	N	352.1	4	1.122	IDENTIFIED	6.457	☐	
Potassium-40	✓	33.13	1.517	pCi/g	0.645	1.00	1460	1	2.056	IDENTIFIED	3.395	☐	
Radium-224	INT	5.993	0.787	pCi/g	1.178	Y	241.7	1	1.85	IDENTIFIED	12.58	☑ UI	
Radium-226	✓	1.432	0.1109	pCi/g	0.1507	Y	609.3	4	1.468	IDENTIFIED	6.308	☐	
Radium-228	✓	1.881	0.2293	pCi/g	0.3157	0.500	911.1	3	1.568	IDENTIFIED	11.07	☐	
Strontium-85	LA	0.1095	0.0261	pCi/g	0.08971	Y	238.8	7	0.9479	NOT_IDENTI	3.193	☑ UI	Data rejected due to low abundance.
Thallium-200	—	330.9	142.5	pCi/g	0	N	75.07	2	0.8441	NOT_IDENTI	6.077	☐	
Thallium-208	✓	0.6846	0.05723	pCi/g	0.07306	0.080	583.1	1	1.295	IDENTIFIED	7.359	☐	
Thorium-228	✓	1.921	0.1042	pCi/g	0.1035	N	238.8	7	0.9479	IDENTIFIED	3.193	☐	
Thorium-230	✓	1.432	0.1109	pCi/g	0.1507	N	609.3	4	1.468	IDENTIFIED	6.308	☐	
Thorium-232	✓	1.881	0.2293	pCi/g	0.3157	N	911.1	3	1.568	IDENTIFIED	11.07	☐	
Thorium-234	✓	2.03	0.5234	pCi/g	1.339	2.00	63.58	2	0.7811	IDENTIFIED	24.13	☐	
Tin-126	INT	0.4449	0.0481	pCi/g	0.1249	N	87.4	4	1.175	IDENTIFIED	10.03	☐	
Titanium-44	LA	0.4533	0.02695	pCi/g	0.04994	N	77.37	1	0.8709	IDENTIFIED	4.215	☐	
Total Uranium	—	6.1865	1.56E-06	ug/g	1.9959	N		0				☐	
Tungsten-181	LA	0.8397	0.1697	pCi/g	0.4426	N	209.4	2	0.973	NOT_IDENTI	23.85	☐	
Uranium-234	✓	1.432	0.1109	pCi/g	0.1507	N	609.3	4	1.468	IDENTIFIED	6.308	☐	
Uranium-238	HE	2.03	0.5234	pCi/g	1.339	N	63.58	2	0.7811	IDENTIFIED	24.13	☐	
Zirconium-97	—	1.51E+06	4.48E+05	pCi/g	0	N	238.8	7	0.9479	NOT_IDENTI	3.193	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201870087		06-JUL-09 13:25	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Iodine-133	HE	1.945	2.835	pCi/g	0	N	0	3	0	NOT_IDENTI	0	☐	
Sodium-24	HE	11.58	31.11	pCi/g	0	N	0	3	0	NOT_IDENTI	0	☐	
Technetium-99m	HE	2.90E+06	7.86E+06	pCi/g	0	N	0	3	0	NOT_IDENTI	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201870088	22-JUN-09 12:00	06-JUL-09 13:26	14.1	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	✓	1.852	0.1959	pCi/g	0.2983	N	911.3	3	1.872	IDENTIFIED	9.286	☐	
Americium-243	INT	0.3219	0.03457	pCi/g	0.05697	N	74.92	2	1.86	IDENTIFIED	10.05	☐	
Annihilation Rad.		0.1653	0.04065	pCi/g	0.06081	N	510.9	1	1.989	IDENTIFIED	24.38	☐	
Bismuth-211	INT	3.351	0.2347	pCi/g	0.3891	Y	351.9	4	1.735	IDENTIFIED	6.242	☑ UI	
Bismuth-212	HE	1.122	0.3518	pCi/g	0.8301	N	728.4	1	0.9433	FAIL_ABUND	31.03	☐	
Bismuth-214	✓	1.105	0.1059	pCi/g	0.146	0.200	609.5	4	1.548	IDENTIFIED	8.549	☐	
Cadmium-109	INT	1.776	0.4778	pCi/g	1.036	Y	87.37	5	1.182	IDENTIFIED	26.58	☑ UI	
Cerium-143	—	404.8	73.43	pCi/g	0	N	87.37	5	1.182	FAIL_DECAY	26.58	☐	
Gross Gamma	—	9.167	1.494	pCi/g	4.215	N		0				☐	
Iodine-123	HE	1.56E+05	8.05E+05	pCi/g	0	N	87.37	5	1.182	NOT_IDENTI	26.58	☐	
Lead-212	✓	1.242	0.0826	pCi/g	0.1199	0.100	238.7	6	1.298	IDENTIFIED	5.45	☐	
Lead-214	✓	1.166	0.08713	pCi/g	0.1357	0.100	351.9	4	1.735	IDENTIFIED	6.242	☐	
Lutetium-177	HE	2.12	0.7561	pCi/g	1.944	N	209.2	1	1.039	FAIL_ABUND	35.53	☐	
Neptunium-237	HE	0.5135	0.1479	pCi/g	0.3149	N	87.37	5	1.182	IDENTIFIED	26.58	☐	
Niobium-95m	HE	0.3978	0.08466	pCi/g	0.2796	N	238.7	6	1.298	NOT_IDENTI	5.45	☐	
Polonium-212	NM	1.242	0.0826	pCi/g	0.1199	N	238.7	6	1.298	IDENTIFIED	5.45	☐	
Polonium-214	NM	1.166	0.08713	pCi/g	0.1357	N	351.9	4	1.735	IDENTIFIED	6.242	☐	
Polonium-216	NM	1.242	0.0826	pCi/g	0.1199	N	238.7	6	1.298	IDENTIFIED	5.45	☐	
Polonium-218	NM	1.166	0.08713	pCi/g	0.1357	N	351.9	4	1.735	IDENTIFIED	6.242	☐	
Potassium-40	✓	36.95	1.728	pCi/g	0.6903	1.00	1461	1	2.251	IDENTIFIED	3.429	☐	
Radium-224	INT	1.869	0.5258	pCi/g	1.766	Y	241.9	1	1.747	IDENTIFIED	27.97	☑ UI	

Radium-226	✓	1.105	0.1059	pCi/g	0.146	Y	609.5	4	1.548	IDENTIFIED	8.549	☐
Radium-228	✓	1.852	0.1959	pCi/g	0.2983	0.500	911.3	3	1.872	IDENTIFIED	9.286	☐
Thallium-200	HE	217.6	140.7	pCi/g	0	N	74.92	2	1.86	NOT_IDENTI	10.05	☐
Thallium-208	✓	0.5532	0.05448	pCi/g	0.07586	0.080	583.5	1	1.49	IDENTIFIED	9.089	☐
Thorium-228	✓	1.242	0.0826	pCi/g	0.1199	N	238.7	6	1.298	IDENTIFIED	5.45	☐
Thorium-230	✓	1.105	0.1059	pCi/g	0.146	N	609.5	4	1.548	IDENTIFIED	8.549	☐
Thorium-232	✓	1.852	0.1959	pCi/g	0.2983	N	911.3	3	1.872	IDENTIFIED	9.286	☐
Tin-126	HE	0.1749	0.04704	pCi/g	0.1018	N	87.37	5	1.182	IDENTIFIED	26.58	☐
Titanium-44	LA	0.3206	0.02248	pCi/g	0.06434	N	77.18	1	1.395	FAIL_ABUND	5.87	☐
Uranium-234	✓	1.105	0.1059	pCi/g	0.146	N	609.5	4	1.548	IDENTIFIED	8.549	☐
Zirconium-97	—	1.45E+06	4.84E+05	pCi/g	0	N	238.7	6	1.298	NOT_IDENTI	5.45	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201870089		06-JUL-09 13:26	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	HE	0.9005	0.3218	pCi/g	0.7673	N	911.8	3	1.21	FAIL_ABUND	35.26	☐	
Americium-241		13.85	0.7615	pCi/g	0.5338	0.200	59.58	1	0.9376	IDENTIFIED	2.93	☐	
Barium-137m		5.378	0.1939	pCi/g	0.1264	N	661.8	2	1.43	IDENTIFIED	2.544	☐	
Bismuth-211		2.347	0.3131	pCi/g	0.6246	Y	352	4	1.227	IDENTIFIED	12.94	☐	
Bismuth-214		0.7493	0.1256	pCi/g	0.3398	0.200	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Cadmium-109		41.67	2.53	pCi/g	2.129	Y	88.1	3	0.9674	IDENTIFIED	3.62	☐	
Cesium-137		5.685	0.2056	pCi/g	0.1336	0.100	661.8	2	1.43	IDENTIFIED	2.544	☐	
Cobalt-57		0.3418	0.03143	pCi/g	0.06079	N	122	1	1.044	IDENTIFIED	8.709	☐	
Cobalt-60		6.996	0.3172	pCi/g	0.09187	0.100	1333	1	2.292	IDENTIFIED	2.66	☐	
Gross Gamma		27.66	3.85	pCi/g	2.868	N		0				☐	
Iodine-123	HE	309.5	254.3	pCi/g	0	N	88.1	3	0.9674	NOT_IDENTI	3.62	☐	
Iodine-133	HE	4.574	14.36	pCi/g	0	N	510.8	1	1.889	FAIL_DECAY	69.59	☐	
Lead-212		0.7908	0.0858	pCi/g	0.191	0.100	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Lead-214		0.8165	0.111	pCi/g	0.2178	0.100	352	4	1.227	IDENTIFIED	12.94	☐	
Neptunium-237		1.446	0.2916	pCi/g	0.861	N	93.14	1	1.546	NOT_IDENTI	34.98	☐	
Niobium-97		172.6	72.02	pCi/g	0	N	238.7	6	0.9457	NOT_IDENTI	10.24	☐	
Polonium-212		0.7908	0.0858	pCi/g	0.191	N	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Polonium-214		0.8165	0.111	pCi/g	0.2178	N	352	4	1.227	IDENTIFIED	12.94	☐	
Polonium-216		0.7908	0.0858	pCi/g	0.191	N	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Polonium-218		0.8165	0.111	pCi/g	0.2178	N	352	4	1.227	IDENTIFIED	12.94	☐	
Radium-226		0.7493	0.1256	pCi/g	0.3398	Y	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Radium-228		0.9005	0.3218	pCi/g	0.7673	0.500	911.8	3	1.21	FAIL_ABUND	35.26	☐	
Sodium-24	HE	49.76	113.4	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-208		0.3886	0.05855	pCi/g	0.1251	0.080	583.2	1	1.194	IDENTIFIED	14.71	☐	
Thorium-228		0.7908	0.0858	pCi/g	0.191	N	238.7	6	0.9457	IDENTIFIED	10.24	☐	
Thorium-230		0.7493	0.1256	pCi/g	0.3398	N	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Thorium-232	HE	0.9005	0.3218	pCi/g	0.7673	N	911.8	3	1.21	FAIL_ABUND	35.26	☐	
Tin-126		4.142	0.2515	pCi/g	0.2129	N	88.1	3	0.9674	IDENTIFIED	3.62	☐	
Titanium-44	HE	0.1874	0.04985	pCi/g	0.103	N	77.2	1	1.001	FAIL_ABUND	26.21	☐	
Uranium-234		0.7493	0.1256	pCi/g	0.3398	N	609.7	4	1.153	FAIL_ABUND	16.34	☐	
Zirconium-97	HE	1379	1103	pCi/g	0	N	238.7	6	0.9457	NOT_IDENTI	10.24	☐	

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232278001-1 06-JUL-2009 11:09	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.902			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.853			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.559			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1059			
232278002-1 06-JUL-2009 11:09	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.155			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.038			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.094			
232347001-1 06-JUL-2009 11:10	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.397			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.432			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1225		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.114			
	Thallium-208	UI	UI	UI	Data rejected due to low abundance.		.5139		.08	.08
	Thorium-234	UI	UI	UI	Data rejected due to no valid peak		1.041			
232347002-1 06-JUL-2009 11:10	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.85			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.509			
232347003-1 06-JUL-2009 11:11	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.095			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.628			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.985			
232347004-1 06-JUL-2009 11:12	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.193			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.347			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232347004-1 06-JUL-2009 11:12	Radium-224	UI	UI	UI	Data rejected due to interference.		3.89			
232357001-1 06-JUL-2009 11:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.228			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.584			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.12			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1085			
232357002-1 06-JUL-2009 11:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.565			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.743			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.727			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09123			
232358001-1 06-JUL-2009 11:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.16			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.903			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.385			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1099			
232358002-1 06-JUL-2009 11:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.907			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.865			
	Cesium-137	UI	UI	UI	Data rejected due to low abundance.		.0929		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.072			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09168			
232358003-1 06-JUL-2009 11:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.385			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232358003-1 06-JUL-2009 11:15	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.925			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1363		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.81			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1199			
232358004-1 06-JUL-2009 11:16	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.265			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.966			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1239		.1	.1
	Cesium-137	UI	UI	UI	Data rejected due to high peak-width.		.07044		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.41			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1854			
232358005-1 06-JUL-2009 11:17	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.528			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.638			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.28			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09728			
232358006-1 06-JUL-2009 12:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.927			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.637			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09185		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.148			
232358007-1 06-JUL-2009 12:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.972			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.421			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232358007-1 06-JUL-2009 12:13	Mercury-203	UI	UI	UI	Data rejected due to low abundance.		.094		.1	.1
	Radium-223	UI	UI	UI	Data rejected due to low abundance.		1.406			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.43			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08437			
	Thorium-231	UI	UI	UI	Data rejected due to low abundance.		1.406			
232358008-1 06-JUL-2009 12:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.838			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.689			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09583		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.368			
232358009-1 06-JUL-2009 12:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.51			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.879			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.809			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07437			
232358010-1 06-JUL-2009 12:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.977			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.051			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08507		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.836			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0879			
232358011-1 06-JUL-2009 13:25	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.395			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.519			

GEL QUALS

Batch ID: 880723

Report run on: July 14, 2009 9:43 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232358011-1 06-JUL-2009 13:25	Radium-224	UI	UI	UI	Data rejected due to interference.		5.993			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1095			
1201870088-1 DUP 06-JUL-2009 13:26	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.351			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.776			
	Radium-224	UI	UI	UI	Data rejected due to interference.		1.869			

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertainty	Units	DL	RDL
880723	232358011	SAMPLE	06-JUL-09	Uranium-235	0.3154	0.1286	pCi/g	0.224	0.500
				Zirconium-97	1.51E+06	4.48E+05	pCi/g	0	N
880723	1201870087	MB	06-JUL-09	Sodium-24	11.58	31.11	pCi/g	0	N
				Technetium-99m	2.90E+06	7.86E+06	pCi/g	0	N
880723	1201870088	DUP	06-JUL-09	Bismuth-211	3.351	0.2347	pCi/g	0.1946	Y
				Bismuth-214	1.105	0.1059	pCi/g	0.07306	0.200
				Cadmium-109	1.776	0.4778	pCi/g	0.5182	Y
				Cerium-143	404.8	73.43	pCi/g	0	N
				Cesium-134	0.07015	0.03286	pCi/g	0.05989	0.100
				Gross Gamma	9.167	1.494	pCi/g	2.054	N
				Iodine-123	1.56E+05	8.05E+05	pCi/g	0	N
				Krypton-85	17.58	5.659	pCi/g	9.205	N
				Lead-212	1.242	0.0826	pCi/g	0.05997	0.100
				Lead-214	1.166	0.08713	pCi/g	0.06789	0.100
				Mercury-203	0.04967	0.02295	pCi/g	0.04104	0.100
				Potassium-40	36.95	1.728	pCi/g	0.3454	1.00
				Radium-224	1.869	0.5258	pCi/g	0.8835	Y
				Radium-226	1.105	0.1059	pCi/g	0.07306	Y
				Radium-228	1.852	0.1959	pCi/g	0.1492	0.500
				Sodium-22	0.06557	0.03655	pCi/g	0.06473	0.080
				Strontium-85	0.08913	0.0287	pCi/g	0.04668	Y
				Thallium-200	217.6	140.7	pCi/g	0	N
				Thallium-208	0.5532	0.05448	pCi/g	0.03795	0.080
				Tin-113	0.06374	0.02705	pCi/g	0.04859	0.100
				Zirconium-97	1.45E+06	4.84E+05	pCi/g	0	N
880723	1201870089	LCS	06-JUL-09	Americium-241	13.85	0.7615	pCi/g	0.2671	0.200
				Barium-137m	5.378	0.1939	pCi/g	0.06322	N
				Bismuth-211	2.347	0.3131	pCi/g	0.3125	Y
				Bismuth-214	0.7493	0.1256	pCi/g	0.17	0.200
				Cadmium-109	41.67	2.53	pCi/g	1.065	Y
				Cesium-134	0.09152	0.05014	pCi/g	0.08886	0.100
				Cesium-137	5.685	0.2056	pCi/g	0.06683	0.100
				Cobalt-60	6.996	0.3172	pCi/g	0.04596	0.100
				Gross Gamma	27.66	3.85	pCi/g	1.389	N
				Iodine-123	309.5	254.3	pCi/g	0	N
				Krypton-85	20.59	7.374	pCi/g	12.13	N
				Lead-212	0.7908	0.0858	pCi/g	0.09555	0.100

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 13:11:35.81

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:14.
Sample ID         : G232347001           Sample quantity  : 1.26580E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.71  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.01*	181	420	1.24	93.19	88	10	2.52E-02	24.7	
2	0	63.17*	108	562	1.46	127.49	124	9	1.49E-02	42.3	
3	4	74.72*	636	500	1.31	150.59	143	18	8.84E-02	7.7	2.46E+00
4	4	77.06*	883	485	1.35	155.27	143	18	1.23E-01	5.9	
5	2	84.64*	152	445	1.52	170.43	166	27	2.11E-02	26.5	1.67E+00
6	2	87.26	331	335	1.23	175.67	166	27	4.60E-02	10.7	
7	2	89.67	200	324	1.15	180.48	166	27	2.77E-02	17.1	
8	2	92.95*	306	401	1.53	187.04	166	27	4.25E-02	14.1	
9	0	129.07	78	284	1.22	259.25	255	8	1.08E-02	39.3	
10	0	186.04*	205	297	1.48	373.14	368	11	2.84E-02	18.4	
11	0	209.35	91	314	0.82	419.74	413	11	1.27E-02	38.9	
12	6	238.70*	1129	185	1.39	478.40	472	19	1.57E-01	3.7	1.62E+00
13	6	241.30	259	295	2.26	483.60	472	19	3.60E-02	20.2	
14	0	270.50	72	135	1.21	541.97	538	9	1.00E-02	31.6	
15	0	277.56	73	190	1.31	556.07	551	11	1.01E-02	38.6	
16	0	295.35	322	152	1.30	591.63	587	11	4.48E-02	9.3	
17	0	300.26	75	172	1.97	601.45	598	11	1.04E-02	35.4	
18	0	328.19	56	116	1.43	657.29	654	9	7.74E-03	37.2	
19	0	338.31*	208	176	1.33	677.51	671	15	2.89E-02	15.8	
20	0	352.00*	521	157	1.36	704.87	697	16	7.24E-02	7.1	
21	0	463.44	77	81	1.43	927.61	922	13	1.07E-02	26.6	
22	0	583.01*	330	75	1.43	1166.56	1159	16	4.58E-02	8.2	
23	0	609.55*	274	166	1.53	1219.59	1211	18	3.81E-02	12.8	
24	0	728.33	91	84	1.73	1456.95	1448	17	1.27E-02	25.8	
25	0	795.12	53	36	2.58	1590.40	1586	9	7.43E-03	24.4	
26	0	910.95*	217	83	1.56	1821.82	1815	16	3.02E-02	11.7	
27	0	968.79	107	53	1.16	1937.39	1933	9	1.49E-02	14.9	
28	0	1120.86	54	97	1.74	2241.17	2235	15	7.44E-03	43.0	
29	0	1460.43*	1230	26	2.12	2919.38	2909	18	1.71E-01	3.0	
30	0	1592.44	22	4	1.95	3183.01	3179	8	3.10E-03	26.1	
31	0	1764.33*	58	12	1.73	3526.20	3520	13	8.12E-03	19.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 13:11:39

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:14
Sample ID : G232347001 Sample quantity : 126.58 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.71 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.407E+01	2.949E+00	3.717E-01	2.312E-02	91.653
CD-109	+	88.03	*	3.432E+00	7.813E-01	9.319E-01	7.096E-02	3.683
SN-126	+	64.28		4.121E-01	3.538E-01	4.131E-01	6.157E-02	0.998
	+	86.94		1.405E+00	6.520E-01	3.802E-01	1.565E-01	3.695
	+	87.57	*	3.379E-01	7.692E-02	9.162E-02	6.978E-03	3.688
BI-210	+	46.50	*	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PB-210	+	46.50	*	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PO-210	+	46.50	*	1.748E+00	8.722E-01	8.531E-01	5.738E-02	2.049
BI-211		72.87		1.015E+01	2.253E+00	3.897E+00	3.068E-01	2.604
	+	351.07	*	3.397E+00	5.500E-01	3.387E-01	2.684E-02	10.031
PB-212	+	74.81		2.194E+00	4.300E-01	3.481E-01	4.245E-02	6.302
	+	77.11		1.815E+00	2.565E-01	2.079E-01	1.618E-02	8.727
	+	87.30		1.563E+00	3.886E-01	4.234E-01	5.323E-02	3.691
	+	238.63	*	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
	+	300.09		1.634E+00	1.169E+00	1.079E+00	1.147E-01	1.514
PO-212	+	74.81		2.194E+00	4.300E-01	3.481E-01	4.245E-02	6.302
	+	77.11		1.815E+00	2.565E-01	2.079E-01	1.618E-02	8.727
	+	87.30		1.563E+00	3.886E-01	4.234E-01	5.323E-02	3.691
		115.19		1.982E+00	3.405E+00	5.741E+00	7.305E-01	0.345
	+	238.63	*	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
	+	300.09		1.634E+00	1.169E+00	1.079E+00	1.147E-01	1.514
BI-214	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.778E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
PB-214	+	74.81		3.781E+00	7.090E-01	5.999E-01	6.466E-02	6.302
	+	77.11		3.111E+00	4.995E-01	3.565E-01	3.883E-02	8.727
	+	87.30		2.677E+00	6.434E-01	7.253E-01	7.862E-02	3.691
	+	241.98		2.170E+00	9.097E-01	5.645E-01	6.362E-02	3.844
	+	295.21		1.228E+00	2.647E-01	2.288E-01	2.502E-02	5.367
	+	351.92	*	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.781E+00	7.090E-01	5.999E-01	6.466E-02	6.302
	+	77.11		3.111E+00	4.995E-01	3.565E-01	3.883E-02	8.727
	+	87.30		2.677E+00	6.434E-01	7.253E-01	7.862E-02	3.691
	+	241.98		2.170E+00	9.097E-01	5.645E-01	6.362E-02	3.844
	+	295.21		1.228E+00	2.647E-01	2.288E-01	2.502E-02	5.367
	+	351.92	*	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
PO-216	+	74.81		2.194E+00	4.300E-01	3.481E-01	4.245E-02	6.302
	+	77.11		1.815E+00	2.565E-01	2.079E-01	1.618E-02	8.727
	+	87.30		1.563E+00	3.886E-01	4.234E-01	5.323E-02	3.691
	+	238.63	*	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
	+	300.09		1.634E+00	1.169E+00	1.079E+00	1.147E-01	1.514
PO-218	+	74.81		3.781E+00	7.090E-01	5.999E-01	6.466E-02	6.302
	+	77.11		3.111E+00	4.995E-01	3.565E-01	3.883E-02	8.727
	+	87.30		2.677E+00	6.434E-01	7.253E-01	7.862E-02	3.691
	+	241.98		2.170E+00	9.097E-01	5.645E-01	6.362E-02	3.844
	+	295.21		1.228E+00	2.647E-01	2.288E-01	2.502E-02	5.367
	+	351.92	*	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
RA-224	+	240.98	*	4.114E+00	1.709E+00	1.067E+00	1.044E-01	3.857
RA-226	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.778E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
AC-228	+	338.32		1.492E+00	7.731E-01	3.838E-01	1.578E-01	3.888
	+	911.07	*	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
	+	969.11		1.342E+00	5.103E-01	5.903E-01	1.394E-01	2.273
RA-228	+	338.32		1.492E+00	7.731E-01	3.838E-01	1.578E-01	3.888
	+	911.07	*	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
	+	969.11		1.342E+00	5.103E-01	5.903E-01	1.394E-01	2.273
TH-228	+	84.40		4.715E+00	2.572E+00	2.776E+00	3.478E-01	1.699
	+	238.60	*	1.573E+00	2.052E-01	9.371E-02	1.010E-02	16.783
	+	300.10		1.634E+00	1.509E+00	1.079E+00	6.403E-01	1.514
TH-230	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.777E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
TH-232	+	338.32		1.492E+00	4.848E-01	3.838E-01	3.009E-02	3.888
	+	911.07	*	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
	+	969.11		1.342E+00	5.103E-01	5.903E-01	1.394E-01	2.273
TH-234	+	63.29	*	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
	+	92.38		2.165E+00	7.244E-01	6.363E-01	1.143E-01	3.403
U-234	+	609.31	*	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
		768.36		1.337E+00	8.689E-01	1.589E+00	1.601E-01	0.842
		934.06		1.765E+00	1.269E+00	2.337E+00	2.713E-01	0.755

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1120.29		8.365E-01	7.241E-01	5.871E-01	5.608E-02	1.425
		1238.11		5.222E-01	1.176E+00	1.969E+00	1.607E-01	0.265
		1377.67		2.625E-01	9.777E-01	1.690E+00	1.453E-01	0.155
	+	1764.49		1.274E+00	4.909E-01	3.214E-01	1.858E-02	3.965
NP-237	+	86.50	*	9.922E-01	3.049E-01	2.682E-01	5.900E-02	3.700
		95.87		-1.776E-01	9.002E-01	1.302E+00	3.224E-01	-0.136
U-238	+	63.29	*	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
	+	92.38		2.165E+00	6.374E-01	6.363E-01	5.323E-02	3.403
AM-243	+	74.67	*	3.557E-01	6.128E-02	5.643E-02	4.420E-03	6.304
	+	86.72		3.721E+01	8.471E+00	1.006E+01	7.676E-01	3.697
		117.66		-4.117E+00	3.679E+00	5.731E+00	7.588E-01	-0.718
		142.18		-1.443E+01	1.857E+01	2.939E+01	3.652E+00	-0.491

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.166E-01	3.652E-01	6.126E-01	4.389E-02	0.190
NA-22		1274.54	*	-1.266E-02	5.865E-02	9.281E-02	5.406E-03	-0.136
NA-24		1368.53	*	1.296E-01	5.865E-02	Half-Life too short		
AL-26		1129.67		1.522E+00	2.382E+00	3.832E+00	2.567E-01	0.397
		1808.65	*	1.366E-02	3.320E-02	5.901E-02	3.386E-03	0.232
TI-44		67.85		2.338E-02	3.792E-02	4.268E-02	3.416E-03	0.548
	+	78.38	*	3.349E-01	4.733E-02	6.027E-02	4.676E-03	5.556
SC-46		889.25	*	-4.500E-03	4.602E-02	7.568E-02	7.601E-03	-0.059
	+	1120.51		1.418E-01	1.224E-01	1.448E-01	9.961E-03	0.980
V-48		944.10		8.416E-01	1.025E+00	1.810E+00	1.751E-01	0.465
		983.50	*	-3.767E-02	8.857E-02	1.402E-01	1.284E-02	-0.269
		1312.09		7.784E-02	1.020E-01	1.774E-01	1.029E-02	0.439
CR-51		320.08	*	-1.964E-01	3.835E-01	6.237E-01	5.516E-02	-0.315
MN-52		744.21		1.451E-01	2.227E-01	3.928E-01	3.050E-02	0.369
		848.13		-1.111E+00	6.911E+00	1.132E+01	1.061E+00	-0.098
		935.52		1.479E-01	2.443E-01	4.258E-01	4.163E-02	0.347
		1246.25		5.166E+00	8.621E+00	1.465E+01	8.520E-01	0.353
		1333.61		-6.294E-01	4.879E+00	7.722E+00	4.469E-01	-0.082
		1434.06	*	-2.205E-01	2.191E-01	3.074E-01	1.800E-02	-0.717
MN-54		834.83	*	-1.537E-02	4.423E-02	7.142E-02	6.543E-03	-0.215
CO-56		846.75	*	3.326E-02	4.446E-02	7.849E-02	7.340E-03	0.424
		977.42		-8.115E-01	3.739E+00	6.036E+00	5.579E-01	-0.134
		1037.82		-1.731E-01	3.966E-01	6.236E-01	5.501E-02	-0.278
		1175.09		-3.591E-01	2.995E+00	4.819E+00	2.796E-01	-0.075
		1238.25		5.116E-02	1.179E-01	1.972E-01	1.219E-02	0.259
		1360.21		-2.827E-01	1.059E+00	1.709E+00	9.930E-02	-0.165
		1771.40		-8.690E-01	4.140E-01	4.663E-01	2.693E-02	-1.864
CO-57		122.06	*	1.160E-02	2.400E-02	4.030E-02	5.718E-03	0.288
		136.48		-3.949E-02	2.196E-01	3.582E-01	4.798E-02	-0.110
CO-58		810.76	*	-2.535E-02	4.128E-02	6.458E-02	5.684E-03	-0.393
FE-59		142.65		-1.086E+00	2.871E+00	4.532E+00	5.612E-01	-0.240
		192.34		7.156E-01	9.900E-01	1.599E+00	2.292E-01	0.448

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1099.22	*	-3.860E-02	1.243E-01	1.976E-01	1.600E-02	-0.195
		1291.56		-3.454E-02	1.664E-01	2.632E-01	1.954E-02	-0.131
CO-60		1173.22		-5.301E-02	6.077E-02	9.108E-02	5.283E-03	-0.582
		1332.49	*	2.061E-02	4.156E-02	7.154E-02	4.140E-03	0.288
ZN-65		1115.52	*	-1.882E-02	1.337E-01	1.829E-01	1.278E-02	-0.103
GE-68		1077.35	*	-2.018E-01	1.534E+00	2.477E+00	1.903E-01	-0.081
AS-73		53.44	*	-6.348E-02	2.244E-01	3.711E-01	2.793E-02	-0.171
AS-74		595.88	*	5.351E-02	1.051E-01	1.770E-01	1.164E-02	0.302
		634.78		1.666E-01	4.150E-01	6.918E-01	4.560E-02	0.241
SE-75		66.05		5.713E-02	2.727E+00	4.046E+00	4.036E-01	0.014
		96.73		-5.441E-01	7.414E-01	1.037E+00	1.448E-01	-0.525
		121.11		5.556E-02	1.285E-01	2.153E-01	3.384E-02	0.258
		136.00		-5.990E-04	4.073E-02	6.691E-02	8.725E-03	-0.009
		198.60		2.418E-01	1.982E+00	3.133E+00	3.387E-01	0.077
		264.65	*	3.660E-04	4.848E-02	7.150E-02	6.826E-03	0.005
		279.53		8.697E-02	1.334E-01	2.041E-01	1.955E-02	0.426
		303.91		3.505E-01	2.515E+00	3.716E+00	4.309E-01	0.094
		400.65		1.648E-02	2.830E-01	4.707E-01	4.307E-02	0.035
BR-77	+	87.88		5.309E+02	1.209E+02	2.104E+02	1.601E+01	2.523
		200.40		-6.693E+01	1.280E+02	2.019E+02	2.016E+01	-0.331
	+	239.00		1.805E+02	2.211E+01	2.828E+01	2.772E+00	6.382
		249.79		-4.866E+01	5.100E+01	7.690E+01	7.457E+00	-0.633
		281.68		1.505E+01	7.591E+01	1.131E+02	1.044E+01	0.133
		297.23		2.639E+02	6.680E+01	9.333E+01	8.332E+00	2.827
		303.76		2.375E+01	1.543E+02	2.282E+02	2.004E+01	0.104
		439.47		-8.551E+00	1.178E+02	1.933E+02	1.178E+01	-0.044
		484.57		-1.259E+02	1.879E+02	2.930E+02	1.847E+01	-0.430
		520.65	*	4.895E+00	8.481E+00	1.445E+01	9.290E-01	0.339
		574.64		-1.565E+02	1.831E+02	2.565E+02	1.681E+01	-0.610
		578.91		5.746E+01	7.323E+01	1.122E+02	7.359E+00	0.512
		585.48		7.986E+02	2.045E+02	3.630E+02	2.384E+01	2.200
		755.35		1.685E+01	1.283E+02	2.170E+02	1.721E+01	0.078
		817.79		-4.075E+00	1.088E+02	1.805E+02	1.605E+01	-0.023
SR-82		698.33		-3.420E+01	4.027E+01	5.983E+01	4.244E+00	-0.572
		776.49	*	-1.139E-01	4.179E-01	6.819E-01	5.626E-02	-0.167
		1395.20		-9.591E+00	1.124E+01	1.640E+01	9.570E-01	-0.585
RB-83		520.41	*	4.089E-02	7.697E-02	1.307E-01	8.407E-03	0.313
		529.64		-3.054E-02	1.203E-01	1.925E-01	1.243E-02	-0.159
		552.65		1.645E-01	2.372E-01	4.055E-01	2.641E-02	0.406
RB-84		881.50	*	1.099E-02	7.781E-02	1.307E-01	1.296E-02	0.084
KR-85		513.99	*	-3.149E+01	1.093E+01	1.468E+01	9.408E-01	-2.145
SR-85		513.99	*	-1.595E-01	5.536E-02	7.435E-02	4.766E-03	-2.145
RB-86		1076.63	*	2.558E-01	9.194E-01	1.544E+00	1.188E-01	0.166
Y-88		898.02		-2.818E-02	5.028E-02	7.888E-02	8.066E-03	-0.357
		1836.01	*	-7.554E-03	3.378E-02	5.229E-02	2.992E-03	-0.144
ZR-88		392.90	*	-4.081E-03	3.419E-02	5.630E-02	3.279E-03	-0.072
Y-91		1204.90	*	5.022E+00	2.293E+01	3.794E+01	2.205E+00	0.132
NB-94		702.63	*	1.758E-02	4.270E-02	7.073E-02	5.061E-03	0.249
		871.10		-7.471E-03	4.055E-02	6.613E-02	6.445E-03	-0.113

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95		765.79	*	3.799E-02	5.188E-02	9.095E-02	7.356E-03	0.418
NB-95M		235.69	*	3.344E-01	1.528E-01	2.376E-01	2.599E-02	1.407
ZR-95		724.18		7.882E-02	1.210E-01	1.872E-01	1.557E-02	0.421
		756.15	*	-2.823E-02	7.706E-02	1.248E-01	1.109E-02	-0.226
NB-97		657.90	*	-8.863E-03	7.706E-02	Half-Life too short		
		1024.50		-4.105E+00	7.706E-02	Half-Life too short		
ZR-97		254.15		-7.037E-01	7.706E-02	Half-Life too short		
		355.39		-6.429E-02	7.706E-02	Half-Life too short		
		507.63	*	-1.043E+00	7.706E-02	Half-Life too short		
		602.52		-1.997E+00	7.706E-02	Half-Life too short		
		1021.30		-5.591E-01	7.706E-02	Half-Life too short		
		1147.95		-4.155E-01	7.706E-02	Half-Life too short		
		1362.66		-2.525E+00	7.706E-02	Half-Life too short		
		1750.46		-8.649E-03	7.706E-02	Half-Life too short		
MO-99		140.51		-6.496E+00	2.045E+01	3.300E+01	9.626E+00	-0.197
		181.06		5.847E+00	1.427E+01	2.077E+01	3.939E+00	0.281
		366.43		-4.658E+01	7.336E+01	1.176E+02	8.066E+00	-0.396
		739.58	*	5.567E-01	9.674E+00	1.628E+01	2.390E+00	0.034
		778.00		1.092E+01	2.865E+01	4.935E+01	4.083E+00	0.221
TC-99M		140.51	*	-5.238E+08	2.865E+01	Half-Life too short		
RH-101		127.23		3.195E-02	3.591E-02	5.406E-02	7.442E-03	0.591
		198.01	*	-2.218E-04	3.652E-02	5.741E-02	5.733E-03	-0.004
		325.23		1.229E-01	2.554E-01	3.861E-01	3.178E-02	0.318
RH-102		418.52		6.526E-02	3.213E-01	5.381E-01	3.218E-02	0.121
		475.06	*	-1.788E-02	3.381E-02	5.345E-02	3.348E-03	-0.335
		631.29		-7.775E-02	6.752E-02	9.812E-02	6.468E-03	-0.792
		697.49		-6.894E-02	9.399E-02	1.413E-01	1.001E-02	-0.488
		766.84		1.453E-01	1.314E-01	2.355E-01	1.909E-02	0.617
		1046.59		-1.813E-01	1.507E-01	2.177E-01	1.787E-02	-0.833
		1112.84		-1.577E-01	3.019E-01	4.277E-01	3.005E-02	-0.369
RU-103		497.08	*	-1.763E-02	4.507E-02	7.159E-02	9.240E-03	-0.246
	+	610.33		8.563E+00	2.577E+00	2.853E+00	4.488E-01	3.002
RH-106		511.85		1.198E-01	2.483E-01	4.584E-01	2.935E-02	0.261
		621.84	*	-1.311E-01	3.991E-01	6.282E-01	7.631E-02	-0.209
		1050.47		3.084E+00	2.849E+00	5.105E+00	4.156E-01	0.604
RU-106		511.85		1.198E-01	2.483E-01	4.584E-01	2.935E-02	0.261
		621.84	*	-1.311E-01	3.988E-01	6.282E-01	4.141E-02	-0.209
		1050.47		3.084E+00	2.849E+00	5.105E+00	4.156E-01	0.604
AG-108M		433.93	*	-3.015E-02	3.851E-02	6.024E-02	3.942E-03	-0.501
		614.37		3.991E-02	4.879E-02	7.451E-02	5.236E-03	0.536
		722.95		-1.029E-02	5.185E-02	7.327E-02	5.743E-03	-0.140
AG-110M		657.75	*	-5.589E-03	4.086E-02	6.509E-02	4.499E-03	-0.086
		677.61		-1.912E-01	3.728E-01	5.724E-01	4.066E-02	-0.334
		706.67		6.406E-02	2.709E-01	4.426E-01	3.318E-02	0.145
		763.93		-8.142E-02	1.964E-01	3.179E-01	2.645E-02	-0.256
		884.67		2.672E-02	5.623E-02	9.716E-02	9.919E-03	0.275
		937.48		-1.835E-01	1.345E-01	1.905E-01	1.911E-02	-0.963
		1384.27		-5.925E-02	1.576E-01	2.485E-01	1.536E-02	-0.238
IN-111		171.28		6.527E-02	7.873E-01	1.287E+00	1.280E-01	0.051

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		245.39	*	6.398E-01	9.370E-01	1.376E+00	1.341E-01	0.465
IN-113M		391.69	*	1.485E-02	4.951E-02	8.361E-02	5.187E-03	0.178
SN-113		391.69	*	1.485E-02	4.951E-02	8.361E-02	5.187E-03	0.178
IN-114M		190.27	*	-4.063E-02	2.100E-01	2.940E-01	2.936E-02	-0.138
CD-115		260.90		-9.056E+01	9.745E+01	1.466E+02	1.402E+01	-0.618
		492.35		-7.692E+00	2.844E+01	4.567E+01	2.893E+00	-0.168
		527.90	*	1.871E-01	8.643E+00	1.414E+01	9.120E-01	0.013
SN-117M		156.02		-3.693E-01	2.211E+00	3.590E+00	3.958E-01	-0.103
		158.56	*	-2.087E-02	5.247E-02	8.414E-02	9.046E-03	-0.248
SB-122		563.90	*	3.036E-01	1.771E+00	2.919E+00	1.908E-01	0.104
		692.80		4.298E+01	3.712E+01	6.533E+01	4.582E+00	0.658
I-123		159.00	*	1.907E-01	3.712E+01	Half-Life too short		
		528.96		-2.939E+01	3.712E+01	Half-Life too short		
TE-123M		159.00	*	4.026E-03	2.822E-02	4.640E-02	4.985E-03	0.087
I-124		602.71	*	-6.136E-01	7.920E-01	1.013E+00	6.666E-02	-0.606
		722.78		1.848E-01	4.295E+00	6.250E+00	4.655E-01	0.030
		1325.50		5.853E+00	3.277E+01	5.405E+01	3.130E+00	0.108
		1376.25		2.005E+01	2.491E+01	4.583E+01	2.669E+00	0.438
		1509.49		1.395E+01	1.308E+01	2.505E+01	1.472E+00	0.557
		1691.02		1.789E+00	3.867E+00	6.857E+00	4.002E-01	0.261
SB-124		602.71		-4.260E-02	5.498E-02	7.030E-02	4.629E-03	-0.606
		645.85		-2.950E-03	5.866E-01	9.462E-01	6.861E-02	-0.003
		709.31		-4.589E-01	3.386E+00	5.632E+00	4.084E-01	-0.081
		713.82		7.439E-01	1.922E+00	3.315E+00	3.694E-01	0.224
		722.78		1.859E-02	4.322E-01	6.290E-01	4.820E-02	0.030
	+	968.20		1.363E+01	4.259E+00	7.973E+00	7.469E-01	1.709
		1045.16		-1.898E+00	3.085E+00	4.755E+00	3.913E-01	-0.399
		1325.50		6.290E-01	3.522E+00	5.809E+00	3.364E-01	0.108
		1368.21		1.004E+00	1.702E+00	3.071E+00	3.648E-01	0.327
		1436.60		1.311E+00	3.498E+00	6.172E+00	3.615E-01	0.212
		1691.02	*	4.247E-02	9.180E-02	1.628E-01	1.030E-02	0.261
SB-125		427.89	*	7.741E-02	1.035E-01	1.788E-01	1.121E-02	0.433
	+	463.38		8.052E-01	4.324E-01	5.794E-01	4.126E-02	1.390
		600.56		2.364E-04	2.321E-01	3.541E-01	2.619E-02	0.001
		635.90		1.800E-01	3.280E-01	5.529E-01	4.135E-02	0.325
TE-125M		109.28	*	-5.255E+00	8.683E+00	1.400E+01	1.800E+00	-0.375
I-126		388.63		7.190E-02	2.131E-01	3.607E-01	2.147E-02	0.199
		666.33	*	1.864E-01	2.057E-01	3.546E-01	2.354E-02	0.526
		753.82		7.180E-01	1.520E+00	2.641E+00	2.088E-01	0.272
SB-126		223.80		-4.365E-01	4.067E+00	6.516E+00	6.457E-01	-0.067
	+	278.60		4.610E+00	3.582E+00	4.498E+00	4.179E-01	1.025
	+	296.50		1.146E+01	2.365E+00	3.475E+00	3.108E-01	3.299
		414.70		-9.483E-03	8.189E-02	1.345E-01	8.015E-03	-0.070
		415.30		8.791E-01	6.653E+00	1.110E+01	6.615E-01	0.079
		555.20		-6.839E-01	4.339E+00	6.977E+00	4.548E-01	-0.098
		573.80		-1.054E+00	1.138E+00	1.707E+00	1.119E-01	-0.617
		593.00		-1.597E-01	1.025E+00	1.641E+00	1.079E-01	-0.097
		656.30		-1.150E+00	3.674E+00	5.760E+00	3.790E-01	-0.200
		666.33		7.770E-02	8.573E-02	1.478E-01	9.813E-03	0.526

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		1.052E+00	2.090E+00	3.514E+00	2.376E-01	0.299
		695.00		-4.019E-02	8.740E-02	1.347E-01	9.493E-03	-0.298
		697.00		-1.667E-01	3.031E-01	4.634E-01	3.278E-02	-0.360
		720.50	*	-5.278E-03	1.706E-01	2.461E-01	1.825E-02	-0.021
		856.80		-4.997E-01	5.569E-01	8.523E-01	8.108E-02	-0.586
		989.30		9.833E-02	1.508E+00	2.495E+00	2.266E-01	0.039
		1034.80		3.593E+00	1.032E+01	1.747E+01	1.467E+00	0.206
		1213.00		-2.253E+00	5.422E+00	8.459E+00	4.917E-01	-0.266
SB-127		61.10		1.175E+01	2.241E+01	3.397E+01	3.574E+00	0.346
		252.40		-1.725E+00	3.798E+00	5.812E+00	2.451E+00	-0.297
		290.80		-1.173E+00	2.017E+01	2.944E+01	3.292E+00	-0.040
		411.60		-3.953E+00	1.150E+01	1.861E+01	2.638E+00	-0.212
		444.90		-8.337E+00	9.148E+00	1.407E+01	1.495E+00	-0.593
		473.00		3.707E-01	1.548E+00	2.585E+00	2.867E-01	0.143
		543.00		9.595E+00	1.510E+01	2.575E+01	3.334E+00	0.373
		603.60		-7.668E+00	1.349E+01	1.768E+01	1.922E+00	-0.434
		685.20	*	2.940E-02	1.312E+00	2.114E+00	2.067E-01	0.014
		698.50		-1.279E+01	1.514E+01	2.236E+01	3.308E+00	-0.572
		722.20		-5.752E+00	2.991E+01	4.229E+01	4.191E+00	-0.136
		783.80		-7.198E-01	3.359E+00	5.507E+00	6.573E-01	-0.131
XE-127		57.60		4.715E-01	2.142E+00	3.524E+00	2.837E-01	0.134
		145.22		1.113E+00	7.272E-01	1.216E+00	1.475E-01	0.915
		172.10		-1.032E-01	1.220E-01	1.903E-01	1.893E-02	-0.542
		202.84	*	1.312E-02	5.682E-02	8.147E-02	8.132E-03	0.161
		374.96		-8.530E-02	2.138E-01	3.468E-01	2.263E-02	-0.246
I-131		80.18		1.894E+00	4.196E+00	4.649E+00	3.617E-01	0.407
		284.30		1.115E-02	1.498E+00	2.386E+00	2.291E-01	0.005
		364.48	*	4.219E-02	1.167E-01	1.982E-01	1.487E-02	0.213
		636.97		1.626E+00	1.686E+00	2.928E+00	2.108E-01	0.555
		722.89		-1.817E+00	7.889E+00	1.110E+01	8.330E-01	-0.164
TE-132		49.72		-9.107E-01	3.436E+00	5.071E+00	4.740E-01	-0.180
		111.76		-1.814E+01	2.246E+01	3.579E+01	4.825E+00	-0.507
		116.30		1.091E+01	2.078E+01	3.495E+01	5.005E+00	0.312
		228.16	*	3.969E-01	5.712E-01	9.457E-01	1.537E-01	0.420
BA-133		53.15		2.422E-01	9.584E-01	1.613E+00	1.209E-01	0.150
		79.62		1.906E+00	1.331E+00	1.552E+00	2.289E-01	1.228
		81.00		2.235E-02	9.819E-02	1.068E-01	1.646E-02	0.209
	+	276.40		7.348E-01	5.773E-01	6.867E-01	1.022E-01	1.070
		302.84		1.863E-01	1.752E-01	2.731E-01	3.661E-02	0.682
		356.01	*	-3.234E-03	4.777E-02	6.877E-02	8.493E-03	-0.047
		383.85		-3.846E-02	3.297E-01	5.436E-01	6.016E-02	-0.071
I-133		510.53		9.306E-02	3.297E-01	Half-Life too short		
		529.87	*	-1.122E-03	3.297E-01	Half-Life too short		
		706.58		4.504E-02	3.297E-01	Half-Life too short		
		856.28		-3.508E-01	3.297E-01	Half-Life too short		
		875.33		1.606E-02	3.297E-01	Half-Life too short		
		1236.41		6.005E-02	3.297E-01	Half-Life too short		
		1298.22		7.860E-03	3.297E-01	Half-Life too short		
CS-134		475.35		-9.485E-01	2.224E+00	3.544E+00	2.221E-01	-0.268

---- Non-Identified Nuclides ----

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		563.23		2.002E-01	4.069E-01	6.868E-01	4.562E-02	0.292
		569.32		2.673E-01	2.318E-01	4.075E-01	2.729E-02	0.656
		604.70		-1.454E-02	4.526E-02	6.099E-02	4.034E-03	-0.238
	+	795.84	*	1.225E-01	6.064E-02	1.047E-01	9.020E-03	1.169
		801.93		2.311E-01	4.501E-01	7.350E-01	6.388E-02	0.314
		1038.57		-4.615E-02	4.970E+00	8.144E+00	6.788E-01	-0.006
		1167.94		1.610E+00	3.465E+00	5.777E+00	3.416E-01	0.279
		1365.15		1.813E-01	1.277E+00	2.176E+00	1.389E-01	0.083
CS-135		268.24	*	2.232E-01	1.858E-01	2.809E-01	3.005E-02	0.795
I-135		288.45		-6.154E+08	1.858E-01	Half-Life too short		
		417.63		8.830E+08	1.858E-01	Half-Life too short		
		546.56		-1.204E+09	1.858E-01	Half-Life too short		
		836.80		1.314E+09	1.858E-01	Half-Life too short		
		1038.76		5.303E+07	1.858E-01	Half-Life too short		
		1124.00		1.049E+09	1.858E-01	Half-Life too short		
		1131.51		1.588E+08	1.858E-01	Half-Life too short		
		1260.41	*	-1.841E+08	1.858E-01	Half-Life too short		
		1457.56		6.030E+10	1.858E-01	Half-Life too short		
		1678.03		1.517E+08	1.858E-01	Half-Life too short		
		1706.46		-6.926E+08	1.858E-01	Half-Life too short		
		1791.20		4.795E+08	1.858E-01	Half-Life too short		
CS-136		66.91		-1.077E-01	4.716E-01	6.445E-01	9.741E-02	-0.167
	+	86.29		4.150E+00	1.024E+00	1.623E+00	1.982E-01	2.557
		153.22		1.279E+00	6.627E-01	1.138E+00	1.378E-01	1.124
		163.89		-2.404E-02	1.024E+00	1.669E+00	1.844E-01	-0.014
		176.55		2.610E-01	3.395E-01	5.707E-01	5.931E-02	0.457
		273.65		3.953E-02	6.604E-01	6.612E-01	6.544E-02	0.060
		340.57		2.503E-01	1.568E-01	2.504E-01	2.015E-02	0.999
		818.51		-5.757E-03	8.094E-02	1.339E-01	1.193E-02	-0.043
		1048.07	*	1.656E-02	1.286E-01	2.132E-01	1.826E-02	0.078
		1235.34		2.354E-01	7.461E-01	1.238E+00	1.237E-01	0.190
BA-137M		661.65	*	-4.364E-02	4.544E-02	6.735E-02	4.429E-03	-0.648
CS-137		661.65	*	-4.613E-02	4.803E-02	7.119E-02	4.697E-03	-0.648
CE-139		165.85	*	3.217E-03	3.063E-02	5.018E-02	4.983E-03	0.064
BA-140		162.64		2.633E-01	7.203E-01	1.194E+00	1.280E-01	0.221
		304.84		4.658E-02	1.457E+00	2.135E+00	5.992E-01	0.022
		423.70		-1.296E+00	2.012E+00	3.111E+00	9.900E-01	-0.416
		537.32	*	-2.289E-01	3.012E-01	4.476E-01	1.461E-01	-0.511
LA-140	+	328.77		4.621E-01	3.465E-01	5.142E-01	4.442E-02	0.899
		432.53		-1.322E-01	2.267E+00	3.728E+00	2.476E-01	-0.035
		487.03		2.153E-02	1.417E-01	2.351E-01	1.651E-02	0.092
		751.79		-2.308E-01	1.819E+00	2.920E+00	2.592E-01	-0.079
		815.85		2.991E-01	3.391E-01	6.061E-01	5.958E-02	0.494
		867.82		1.764E-01	1.550E+00	2.597E+00	2.623E-01	0.068
		919.63		-6.083E-01	3.349E+00	4.838E+00	5.688E-01	-0.126
		925.24		1.218E+00	1.158E+00	2.098E+00	2.176E-01	0.581
		1596.49	*	1.362E-01	8.765E-02	1.686E-01	9.907E-03	0.808
CE-141		145.44	*	1.070E-01	6.555E-02	1.097E-01	1.342E-02	0.975
CE-143		57.37		-2.268E-05	6.555E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		231.56		-5.234E-04	6.555E-02	Half-Life too short		
		293.26	*	4.164E-04	6.555E-02	Half-Life too short		
	+	350.59		1.507E-02	6.555E-02	Half-Life too short		
		490.36		-3.408E-04	6.555E-02	Half-Life too short		
		664.57		6.209E-04	6.555E-02	Half-Life too short		
		721.93		-1.061E-04	6.555E-02	Half-Life too short		
CE-144		80.11		1.030E+00	2.127E+00	2.362E+00	1.825E-01	0.436
		133.54	*	1.556E-01	2.383E-01	3.537E-01	6.549E-02	0.440
PM-144		476.78		-4.761E-02	7.958E-02	1.251E-01	9.187E-03	-0.380
		618.01		-3.279E-03	4.047E-02	5.873E-02	4.052E-03	-0.056
		696.49	*	-2.516E-02	4.211E-02	6.413E-02	4.534E-03	-0.392
		778.57		8.863E-01	2.526E+00	4.343E+00	3.598E-01	0.204
PR-144		696.49	*	-1.704E+00	2.852E+00	4.343E+00	3.069E-01	-0.392
		1489.15		-1.311E+00	1.369E+01	2.244E+01	1.318E+00	-0.058
PM-146		453.90	*	1.290E-02	4.516E-02	7.590E-02	6.735E-03	0.170
		633.02		-2.949E-01	1.679E+00	2.668E+00	9.860E-01	-0.111
		735.90		1.982E-01	1.875E-01	3.014E-01	8.538E-02	0.657
		747.13		-6.491E-02	1.035E-01	1.635E-01	2.216E-02	-0.397
ND-147	+	91.11		6.550E-01	2.308E-01	4.169E-01	3.708E-02	1.571
		319.41		-7.412E-01	3.235E+00	5.350E+00	4.490E-01	-0.139
		439.89		-1.598E+00	6.325E+00	1.026E+01	6.258E-01	-0.156
		531.02	*	1.279E-01	6.039E-01	1.001E+00	1.383E-01	0.128
PM-149		285.90	*	4.600E+00	6.543E+01	1.106E+02	1.752E+01	0.042
EU-152		121.78		3.784E-02	7.002E-02	1.177E-01	1.761E-02	0.321
		244.69		3.952E-01	3.981E-01	5.946E-01	5.796E-02	0.665
		344.27	*	8.536E-02	1.428E-01	1.761E-01	1.448E-02	0.485
		443.98		-2.637E-01	1.097E+00	1.779E+00	1.088E-01	-0.148
		778.89		4.474E-02	2.935E-01	4.966E-01	4.115E-02	0.090
		867.32		-2.547E-01	1.005E+00	1.629E+00	1.578E-01	-0.156
		964.01		5.184E-01	4.150E-01	6.645E-01	6.261E-02	0.780
		1085.78		8.819E-02	4.851E-01	8.069E-01	6.076E-02	0.109
		1112.02		-1.777E-01	4.162E-01	6.173E-01	4.348E-02	-0.288
		1407.95		1.745E-01	2.186E-01	3.977E-01	2.324E-02	0.439
GD-153		69.67		-2.915E-01	1.068E+00	1.562E+00	1.242E-01	-0.187
	+	83.37		2.700E+01	1.448E+01	1.859E+01	1.427E+00	1.452
		97.43	*	-8.118E-03	7.631E-02	1.109E-01	1.028E-02	-0.073
		103.18		-1.449E-01	9.662E-02	1.491E-01	1.542E-02	-0.972
EU-154		123.07		8.112E-03	5.118E-02	8.214E-02	1.309E-02	0.099
		247.94		3.738E-01	4.184E-01	6.230E-01	7.676E-02	0.600
		591.81		-3.608E-01	7.427E-01	1.120E+00	1.148E-01	-0.322
		723.30		-3.240E-03	2.197E-01	3.175E-01	2.695E-02	-0.010
		756.87		-2.331E-01	8.372E-01	1.366E+00	1.572E-01	-0.171
		873.19		2.389E-02	3.423E-01	5.713E-01	7.476E-02	0.042
		996.32		-1.625E-01	4.590E-01	7.196E-01	1.291E-01	-0.226
		1004.76		4.566E-01	2.772E-01	5.089E-01	6.013E-02	0.897
		1274.45	*	-2.240E-02	1.636E-01	2.609E-01	2.440E-02	-0.086
EU-155		48.70		3.426E-01	5.056E-01	7.793E-01	5.431E-02	0.440
		60.01		6.222E-01	2.200E+00	3.310E+00	2.741E-01	0.188
	+	86.54		4.068E-01	9.274E-02	1.567E-01	1.211E-02	2.597

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		105.31	*	1.489E-01	1.001E-01	1.728E-01	1.872E-02	0.862
TB-160	+	86.79		1.075E+00	2.447E-01	4.096E-01	3.124E-02	2.625
		197.04		-3.937E-01	6.219E-01	9.476E-01	9.463E-02	-0.416
		215.65		-1.173E-01	7.782E-01	1.246E+00	1.239E-01	-0.094
		298.57		2.710E-01	1.691E-01	2.053E-01	1.827E-02	1.320
		879.36	*	-7.617E-02	1.624E-01	2.501E-01	2.472E-02	-0.305
		962.29		8.289E-01	7.202E-01	1.181E+00	1.116E-01	0.702
		966.15		1.180E+00	3.462E-01	6.104E-01	5.734E-02	1.934
		1177.93		-1.680E-01	4.920E-01	7.767E-01	4.507E-02	-0.216
		1271.85		8.195E-01	9.100E-01	1.598E+00	9.285E-02	0.513
HO-166M		80.57		1.134E-01	2.708E-01	2.994E-01	2.312E-02	0.379
		184.41		1.127E-01	4.468E-02	7.010E-02	6.995E-03	1.608
		280.46		-5.856E-03	1.022E-01	1.496E-01	1.385E-02	-0.039
		410.95		5.395E-02	2.851E-01	4.771E-01	2.832E-02	0.113
		711.68	*	3.307E-02	7.377E-02	1.277E-01	9.306E-03	0.259
		752.31		4.393E-02	3.014E-01	5.106E-01	4.026E-02	0.086
		810.29		-3.268E-02	6.168E-02	9.731E-02	8.537E-03	-0.336
TM-171		51.35		1.363E+00	7.590E+00	1.203E+01	8.750E-01	0.113
		52.39		1.228E+00	3.982E+00	6.718E+00	4.971E-01	0.183
		59.40		1.149E+01	1.126E+01	1.744E+01	1.446E+00	0.658
		66.72	*	3.895E-01	1.667E+01	2.472E+01	1.987E+00	0.016
LU-176	+	88.36		8.014E-01	1.824E-01	3.239E-01	2.484E-02	2.475
		201.83		-1.796E-02	3.282E-02	4.977E-02	4.968E-03	-0.361
		306.84	*	1.648E-02	2.950E-02	4.491E-02	3.911E-03	0.367
		401.10		-1.212E+00	7.569E+00	1.242E+01	7.298E-01	-0.098
LU-177		112.95		4.393E-01	1.368E+00	2.288E+00	2.806E-01	0.192
	+	208.36	*	2.001E+00	1.571E+00	1.861E+00	1.855E-01	1.075
LU-177M		52.97		1.697E-01	4.288E-01	7.252E-01	5.417E-02	0.234
		54.07		-1.334E-01	2.434E-01	3.985E-01	3.030E-02	-0.335
		61.30		6.882E-01	7.248E-01	1.115E+00	9.172E-02	0.617
		121.62		1.541E-01	3.588E-01	6.014E-01	8.471E-02	0.256
		147.16		-3.929E-01	6.730E-01	1.074E+00	1.282E-01	-0.366
		171.86		-3.710E-01	5.019E-01	7.877E-01	7.834E-02	-0.471
		218.09		-2.664E-01	9.219E-01	1.465E+00	1.456E-01	-0.182
		268.79		9.504E-01	9.627E-01	1.435E+00	1.356E-01	0.662
		319.02		-3.892E-02	2.660E-01	4.421E-01	3.714E-02	-0.088
		367.43		3.846E-02	1.026E+00	1.711E+00	1.167E-01	0.022
		413.65	*	-9.151E-02	2.033E-01	3.270E-01	1.946E-02	-0.280
HF-181		56.28		-1.861E-01	2.992E-01	4.941E-01	3.894E-02	-0.377
		57.53		4.053E-02	1.802E-01	2.965E-01	2.385E-02	0.137
		65.20		2.043E-01	5.195E-01	7.823E-01	6.324E-02	0.261
		133.02		4.715E-02	7.391E-02	1.101E-01	1.460E-02	0.428
		136.25		-1.149E-01	4.722E-01	7.682E-01	9.970E-02	-0.150
		345.85		1.195E-01	2.819E-01	3.403E-01	2.585E-02	0.351
		482.03	*	1.024E-02	4.851E-02	8.078E-02	5.084E-03	0.127
W-181		56.28		-7.364E-02	1.186E-01	1.958E-01	1.544E-02	-0.376
		57.53		1.608E-02	7.145E-02	1.176E-01	9.456E-03	0.137
		65.20	*	8.038E-02	2.044E-01	3.078E-01	2.488E-02	0.261
TA-182		67.75		3.195E-02	7.846E-02	1.006E-01	8.055E-03	0.318

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		100.10		1.372E-01	1.542E-01	2.635E-01	2.572E-02	0.521
		152.43		8.287E-01	3.606E-01	6.232E-01	7.108E-02	1.330
		222.10		-1.285E-01	3.734E-01	5.910E-01	5.861E-02	-0.217
		1001.68		1.510E-01	2.590E+00	4.279E+00	3.809E-01	0.035
	+	1121.28		3.927E-01	3.390E-01	4.000E-01	2.746E-02	0.982
		1189.05		-1.982E-01	4.106E-01	6.390E-01	3.710E-02	-0.310
		1221.42	*	-3.087E-02	2.379E-01	3.812E-01	2.216E-02	-0.081
		1230.97		1.410E-01	6.215E-01	1.026E+00	5.965E-02	0.137
RE-183		57.98		2.768E-02	7.484E-02	1.190E-01	9.639E-03	0.233
		59.32		5.610E-02	4.533E-02	7.078E-02	5.859E-03	0.793
		67.20		-2.887E-02	1.280E-01	1.750E-01	1.404E-02	-0.165
		162.32	*	1.926E-02	1.098E-01	1.806E-01	1.866E-02	0.107
	+	208.81		2.003E+00	1.573E+00	1.880E+00	1.874E-01	1.066
		291.72		-1.460E-01	1.058E+00	1.534E+00	1.387E-01	-0.095
RE-184		57.98		1.027E-01	2.776E-01	4.414E-01	3.576E-02	0.233
		59.32		2.079E-01	1.680E-01	2.623E-01	2.172E-02	0.793
		67.20		-1.070E-01	4.747E-01	6.490E-01	5.206E-02	-0.165
		161.27		-1.960E-01	3.632E-01	5.780E-01	6.040E-02	-0.339
		216.55		5.611E-02	2.781E-01	4.529E-01	4.504E-02	0.124
		252.85	*	-4.696E-02	2.434E-01	3.854E-01	3.724E-02	-0.122
		318.01		-2.385E-01	4.680E-01	7.613E-01	6.416E-02	-0.313
		792.07		9.288E-01	1.409E+00	2.167E+00	1.840E-01	0.429
		903.28		-2.651E-01	1.322E+00	1.912E+00	1.938E-01	-0.139
		920.93		2.020E-02	5.336E-01	8.661E-01	8.612E-02	0.023
OS-185		59.72		7.002E-02	1.269E-01	1.931E-01	1.601E-02	0.363
		61.14		4.768E-02	7.807E-02	1.188E-01	9.778E-03	0.401
		69.30		-3.813E-02	2.019E-01	2.762E-01	2.199E-02	-0.138
		592.07		-1.568E+00	2.997E+00	4.504E+00	2.961E-01	-0.348
		646.12	*	-5.625E-03	4.973E-02	7.945E-02	5.234E-03	-0.071
		717.42		-5.016E-01	1.020E+00	1.644E+00	1.211E-01	-0.305
		874.81		2.496E-01	6.575E-01	1.128E+00	1.106E-01	0.221
		880.27		-7.825E-02	9.012E-01	1.444E+00	1.429E-01	-0.054
RE-188		155.03	*	-8.114E-02	1.822E-01	2.922E-01	3.253E-02	-0.278
		477.96		1.552E+00	3.508E+00	5.933E+00	3.724E-01	0.262
		633.10		-5.070E-01	3.356E+00	5.354E+00	3.530E-01	-0.095
W-188	+	63.58		4.137E+01	3.514E+01	4.433E+01	3.608E+00	0.933
		227.08		5.435E+00	1.348E+01	2.212E+01	2.187E+00	0.246
		290.67	*	-5.825E-02	8.516E+00	1.248E+01	1.131E+00	-0.005
IR-192	+	295.96		9.264E-01	1.914E-01	2.837E-01	2.557E-02	3.266
		308.46		1.247E-02	1.044E-01	1.719E-01	1.498E-02	0.073
		316.51	*	1.827E-02	3.609E-02	6.208E-02	5.269E-03	0.294
		468.07		-5.614E-02	8.505E-02	1.126E-01	7.959E-03	-0.498
		604.41		-1.228E-01	5.991E-01	8.180E-01	9.628E-02	-0.150
		612.46		2.219E+00	9.748E-01	1.639E+00	1.343E-01	1.353
AU-195		65.12		4.103E-02	9.476E-02	1.429E-01	1.156E-02	0.287
		66.83		1.455E-03	5.513E-02	8.177E-02	6.568E-03	0.018
	+	75.70		1.146E+00	1.974E-01	3.519E-01	2.749E-02	3.257
		98.88	*	3.245E-01	2.036E-01	3.331E-01	3.176E-02	0.974
	+	129.76		4.343E+00	3.461E+00	5.067E+00	6.867E-01	0.857

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-200		367.94	*	1.324E-05	3.461E+00	Half-Life too short		
		579.30		2.705E-03	3.461E+00	Half-Life too short		
		828.27		1.905E-03	3.461E+00	Half-Life too short		
		1205.75		-4.093E-04	3.461E+00	Half-Life too short		
TL-201		68.90		1.182E+00	2.702E+00	3.469E+00	2.765E-01	0.341
		70.82		-1.580E-01	1.414E+00	2.081E+00	1.649E-01	-0.076
		80.30		1.535E+00	3.887E+00	4.288E+00	3.312E-01	0.358
		135.34		2.302E+00	2.038E+01	3.365E+01	4.395E+00	0.068
		167.43	*	6.535E-01	5.542E+00	9.083E+00	9.017E-01	0.072
TL-202		68.90		1.294E-01	2.959E-01	3.799E-01	3.029E-02	0.341
		70.82		-1.725E-02	1.544E-01	2.273E-01	1.801E-02	-0.076
		80.30		1.677E-01	4.246E-01	4.684E-01	3.619E-02	0.358
		439.56	*	-5.862E-03	7.468E-02	1.225E-01	7.470E-03	-0.048
HG-203		70.83		-7.467E-02	7.024E-01	1.034E+00	1.362E-01	-0.072
		72.87		1.984E+00	4.831E-01	7.619E-01	9.697E-02	2.604
		82.60		7.662E-01	9.978E-01	1.295E+00	1.706E-01	0.592
		279.20	*	4.274E-02	4.912E-02	7.612E-02	7.237E-03	0.561
BI-207		72.80		5.398E-01	1.286E-01	2.230E-01	1.756E-02	2.421
	+	74.97		6.385E-01	1.100E-01	1.743E-01	1.364E-02	3.664
	+	84.90		3.503E-01	1.879E-01	2.617E-01	2.003E-02	1.339
		569.67		5.192E-02	3.553E-02	6.374E-02	4.171E-03	0.815
		1063.62	*	4.937E-02	6.961E-02	1.207E-01	9.558E-03	0.409
		1770.23		-1.395E-01	6.471E-01	8.499E-01	4.909E-02	-0.164
TL-207		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
TL-208	+	277.35		7.437E-01	5.816E-01	7.213E-01	9.253E-02	1.031
		510.84		1.098E-01	2.339E-01	4.301E-01	4.519E-02	0.255
	+	583.14	*	5.139E-01	9.278E-02	1.408E-01	1.036E-02	3.650
		860.37		5.904E-01	3.771E-01	6.896E-01	6.998E-02	0.856
PO-209		260.50		-9.244E+00	1.037E+01	1.566E+01	1.498E+00	-0.590
		262.80		-1.256E+01	2.755E+01	4.277E+01	4.079E+00	-0.294
		896.60	*	1.204E+00	9.165E+00	1.535E+01	1.560E+00	0.078
PB-211		404.84	*	-4.830E-01	1.107E+00	1.716E+00	1.070E+00	-0.281
		427.08		1.838E-01	2.314E+00	3.838E+00	2.373E+00	0.048
		831.96		-9.104E-02	1.469E+00	2.429E+00	1.524E+00	-0.037
BI-212	+	727.18	*	1.242E+00	6.504E-01	7.468E-01	6.774E-02	1.663
		785.46		9.706E-01	2.057E+00	3.558E+00	2.985E-01	0.273
		1620.62		6.641E-01	1.419E+00	2.515E+00	1.476E-01	0.264
PO-215		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
RN-219	+	271.23		4.635E-01	2.969E-01	4.345E-01	4.772E-02	1.067
		401.81	*	8.609E-02	4.595E-01	7.698E-01	1.050E-01	0.112
RN-220		549.76	*	1.630E+01	3.238E+01	5.461E+01	3.553E+00	0.298
RA-223		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
AC-227		79.80		1.838E+00	1.688E+00	1.914E+00	4.052E-01	0.960
		236.00		1.216E+00	3.433E-01	5.209E-01	6.835E-02	2.334
		256.20	*	3.798E-01	4.187E-01	6.962E-01	1.109E-01	0.546
		286.10		-1.837E-01	1.574E+00	2.635E+00	3.572E-01	-0.070
	+	299.80		3.028E+00	2.208E+00	2.688E+00	4.735E-01	1.126
		304.40		1.412E-01	2.273E+00	3.339E+00	6.179E-01	0.042
		334.20		-2.957E-01	3.245E+00	3.675E+00	7.029E-01	-0.080
TH-227		79.80		1.838E+00	1.689E+00	1.914E+00	4.105E-01	0.960
	+	94.00		8.366E+00	2.978E+00	3.310E+00	7.213E-01	2.527
		236.00		1.216E+00	3.374E-01	5.209E-01	6.272E-02	2.334
		256.20	*	3.798E-01	4.203E-01	6.962E-01	1.292E-01	0.546
		286.10		-1.837E-01	1.585E+00	2.635E+00	2.646E+00	-0.070
	+	299.80		3.028E+00	2.208E+00	2.688E+00	4.735E-01	1.126
		304.40		1.412E-01	2.273E+00	3.339E+00	6.179E-01	0.042
		334.20		-2.957E-01	3.245E+00	3.675E+00	7.029E-01	-0.080
TH-229	+	85.43		3.458E-01	1.855E-01	2.799E-01	2.140E-02	1.236
	+	88.47		2.795E-01	9.799E-02	1.863E-01	1.432E-02	1.501
		100.00		1.415E-01	1.616E-01	2.761E-01	2.690E-02	0.512
		193.63	*	-3.027E-01	5.410E-01	8.527E-01	8.516E-02	-0.355
		210.97		1.635E+00	9.375E-01	1.444E+00	1.439E-01	1.132
PA-231		283.67	*	1.936E-01	1.734E+00	2.682E+00	4.162E-01	0.072
	+	301.29		1.211E+00	8.703E-01	1.109E+00	1.375E-01	1.092
TH-231		81.07		4.125E-02	2.167E-01	2.352E-01	1.814E-02	0.175
	+	83.78		2.310E-01	1.239E-01	1.600E-01	1.227E-02	1.444
		94.90		5.963E-01	2.261E-01	3.609E-01	3.181E-02	1.652
		122.32		5.539E-01	1.674E+00	2.796E+00	4.073E-01	0.198
		144.24		4.533E-01	7.287E-01	1.194E+00	1.548E-01	0.380
		154.21		8.222E-02	4.224E-01	6.962E-01	8.279E-02	0.118
	+	269.46		3.612E-01	2.306E-01	3.355E-01	3.221E-02	1.077

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		323.87	*	6.861E-01	7.461E-01	1.155E+00	2.025E-01	0.594
	+	338.28		6.231E+00	2.097E+00	2.503E+00	2.948E-01	2.490
		445.03		-2.101E+00	2.615E+00	4.059E+00	4.244E-01	-0.518
U-231	+	84.21		8.225E+00	4.411E+00	5.743E+00	4.401E-01	1.432
	+	92.29		6.832E+00	2.011E+00	2.840E+00	2.372E-01	2.406
		95.87	*	-1.664E-01	8.426E-01	1.220E+00	1.096E-01	-0.136
		108.00		-1.520E+00	1.616E+00	2.567E+00	2.894E-01	-0.592
PA-233	+	75.28		1.863E+01	3.988E+00	5.390E+00	8.037E-01	3.457
	+	86.59		6.615E+00	2.256E+00	2.541E+00	6.738E-01	2.603
	+	300.12		8.442E-01	6.107E-01	7.511E-01	1.128E-01	1.124
		311.98	*	-3.097E-02	6.751E-02	1.103E-01	9.741E-03	-0.281
		340.50		1.455E+00	8.784E-01	1.315E+00	3.097E-01	1.106
		398.62		3.781E-01	2.294E+00	3.839E+00	9.931E-01	0.098
		415.76		1.450E-01	1.887E+00	3.137E+00	6.472E-01	0.046
PA-234	+	63.00		1.214E+00	1.043E+00	1.301E+00	1.985E-01	0.933
		94.67		5.993E-01	1.765E-01	2.718E-01	3.399E-02	2.205
		98.44		1.270E-01	1.112E-01	1.347E-01	7.536E-02	0.942
		99.86		3.826E-01	4.100E-01	7.015E-01	6.816E-02	0.545
		111.00		-1.396E-03	1.754E-01	2.902E-01	4.232E-02	-0.005
		131.20		-4.701E-02	1.250E-01	1.766E-01	2.371E-02	-0.266
		152.70		8.097E-01	3.740E-01	6.120E-01	1.138E-01	1.323
	+	186.00		5.365E+00	2.601E+00	2.625E+00	8.298E-01	2.044
		226.40		6.260E-02	4.379E-01	7.097E-01	9.984E-02	0.088
		227.20		1.933E-01	4.610E-01	7.569E-01	7.485E-02	0.255
		248.90		-2.340E-01	8.986E-01	1.364E+00	3.117E-01	-0.172
		293.70		5.084E+00	1.287E+00	1.751E+00	3.063E-01	2.904
		369.80		-1.571E-02	9.716E-01	1.615E+00	3.409E-01	-0.010
		568.70		1.072E+00	1.180E+00	2.043E+00	1.337E-01	0.525
		569.50		4.199E-01	3.176E-01	5.647E-01	3.695E-02	0.744
		574.00		-1.775E+00	1.806E+00	2.605E+00	1.706E-01	-0.682
		699.00		-6.843E-01	8.843E-01	1.312E+00	2.419E-01	-0.522
		706.10		-2.334E-02	1.364E+00	2.186E+00	9.694E-01	-0.011
		733.00		-3.118E-01	4.964E-01	6.556E-01	1.431E-01	-0.476
		742.81		-6.274E-01	1.578E+00	2.459E+00	1.650E+00	-0.255
	+	796.30		2.383E+00	1.328E+00	2.045E+00	5.529E-01	1.165
		805.60		-3.318E-01	1.078E+00	1.738E+00	5.331E-01	-0.191
		819.60		4.286E-01	1.433E+00	2.432E+00	9.266E-01	0.176
		826.30		-5.309E-01	1.011E+00	1.559E+00	6.986E-01	-0.341
		831.60		-1.637E-01	7.463E-01	1.216E+00	3.646E-01	-0.135
		876.40		5.389E-02	9.613E-01	1.599E+00	1.646E+00	0.034
		880.51		-6.138E-03	3.308E-01	5.337E-01	5.284E-02	-0.011
		883.24		1.513E-01	3.329E-01	5.490E-01	3.700E-01	0.276
		899.00		1.472E-01	9.909E-01	1.659E+00	7.306E-01	0.089
		925.00		8.616E-01	1.306E+00	2.291E+00	2.267E-01	0.376
		926.50		3.323E-02	1.980E-01	3.321E-01	8.547E-02	0.100
		946.00	*	-3.621E-02	3.874E-01	6.339E-01	1.221E-01	-0.057
		949.00		8.393E-02	5.445E-01	9.106E-01	8.753E-02	0.092
		980.50		1.233E-01	9.189E-01	1.531E+00	1.409E-01	0.081
		1394.10		-8.524E-01	1.306E+00	1.758E+00	1.139E+00	-0.485

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234M		766.41		2.380E+01	2.792E+01	3.805E+01	2.915E+01	0.626
		1001.03	*	-6.815E+00	8.578E+00	1.306E+01	1.489E+00	-0.522
U-235	+	89.95		2.805E+00	1.288E+00	1.603E+00	4.918E-01	1.750
	+	93.35		2.603E+00	1.034E+00	1.060E+00	2.968E-01	2.455
		105.00		1.432E+00	1.055E+00	1.680E+00	5.125E-01	0.852
		143.76	*	4.600E-02	2.239E-01	3.617E-01	7.078E-02	0.127
		163.35		2.424E-01	4.786E-01	7.947E-01	1.578E-01	0.305
	+	185.71		1.987E-01	7.568E-02	9.680E-02	9.661E-03	2.053
		205.31		7.530E-04	6.413E-01	9.061E-01	1.788E-01	0.001
NP-236		94.67		4.569E-01	1.277E-01	2.063E-01	1.810E-02	2.214
		98.44		9.597E-02	6.529E-02	1.019E-01	9.630E-03	0.942
		111.00		-1.056E-03	1.327E-01	2.195E-01	2.605E-02	-0.005
		160.31	*	-3.885E-02	8.125E-02	1.297E-01	1.370E-02	-0.299
NP-239		99.55		2.155E-01	1.386E-01	2.342E-01	2.262E-02	0.920
		117.00	*	-1.434E-02	1.800E-01	2.965E-01	3.885E-02	-0.048
	+	209.75		1.599E+00	1.255E+00	1.504E+00	1.499E-01	1.063
		228.18		1.643E-01	2.376E-01	3.950E-01	3.903E-02	0.416
	+	277.60		3.587E-01	2.787E-01	3.501E-01	3.258E-02	1.024
		334.30		-1.596E-01	1.839E+00	2.084E+00	1.660E-01	-0.077
AM-241		59.54	*	3.767E-02	6.697E-02	1.019E-01	9.119E-03	0.370
CM-243		99.55		2.217E-01	1.426E-01	2.410E-01	2.328E-02	0.920
		103.76	*	2.693E-02	8.766E-02	1.470E-01	1.537E-02	0.183
		117.00		-1.476E-02	1.852E-01	3.050E-01	3.996E-02	-0.048
	+	209.75		1.576E+00	1.237E+00	1.482E+00	1.477E-01	1.063
		228.18		1.660E-01	2.401E-01	3.990E-01	3.944E-02	0.416
	+	277.60		3.615E-01	2.809E-01	3.529E-01	3.285E-02	1.024
CM-247	+	278.00		1.487E+00	1.156E+00	1.441E+00	1.340E-01	1.032
		287.40		-4.939E-01	1.287E+00	2.124E+00	1.939E-01	-0.233
		402.60	*	4.753E-03	4.086E-02	6.818E-02	4.012E-03	0.070
CF-249		252.85		-1.770E-01	9.176E-01	1.453E+00	1.404E-01	-0.122
		333.44		7.567E-03	2.731E-01	2.681E-01	2.142E-02	0.028
		387.95	*	7.755E-03	4.413E-02	7.403E-02	4.428E-03	0.105
CF-251		176.60	*	9.421E-02	1.243E-01	2.089E-01	2.081E-02	0.451
		227.00		1.383E-01	4.098E-01	6.704E-01	6.631E-02	0.206
		285.00		1.150E+00	1.880E+00	3.182E+00	2.919E-01	0.361
ANH-511		511.00	*	3.056E-02	5.027E-02	9.305E-02	5.955E-03	0.328

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001      *
* Acquisition date :  6-JUL-2009 11:10:14 Detector SN#    :                 *
* Detector ID        : GAM05               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.71      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232347001          Analyst initials: MXR1          *
* Batch Number       : 880723              Sample Quantity : 1.2658E+02 GRAM *
* Recovery           :    1.00000          Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.407E+01	2.890E+00	3.715E-01	0.000E+00
CD-109	3.432E+00	7.656E-01	9.704E-01	0.000E+00
SN-126	3.379E-01	7.538E-02	9.541E-02	0.000E+00
BI-210	1.748E+00	8.574E-01	8.962E-01	0.000E+00
PB-210	1.748E+00	8.574E-01	8.962E-01	0.000E+00
PO-210	1.748E+00	8.547E-01	8.962E-01	0.000E+00
BI-211	3.397E+00	5.390E-01	3.458E-01	0.000E+00
PB-212	1.573E+00	2.011E-01	9.622E-02	0.000E+00
PO-212	1.573E+00	2.011E-01	9.622E-02	0.000E+00
BI-214	8.092E-01	2.140E-01	1.264E-01	0.000E+00
PB-214	1.182E+00	1.970E-01	1.206E-01	0.000E+00
PO-214	1.182E+00	1.970E-01	1.206E-01	0.000E+00
PO-216	1.573E+00	2.011E-01	9.622E-02	0.000E+00
PO-218	1.182E+00	1.970E-01	1.206E-01	0.000E+00
RA-224	4.114E+00	1.675E+00	1.095E+00	0.000E+00
RA-226	8.092E-01	2.140E-01	1.264E-01	0.000E+00
AC-228	1.541E+00	3.999E-01	2.519E-01	0.000E+00
RA-228	1.541E+00	3.999E-01	2.519E-01	0.000E+00
TH-228	1.573E+00	2.011E-01	9.621E-02	0.000E+00
TH-230	8.092E-01	2.140E-01	1.264E-01	0.000E+00
TH-232	1.541E+00	3.999E-01	2.519E-01	0.000E+00
TH-234	1.041E+00	8.815E-01	1.041E+00	0.000E+00
U-234	8.092E-01	2.140E-01	1.264E-01	0.000E+00
NP-237	9.922E-01	2.988E-01	2.793E-01	0.000E+00
U-238	1.041E+00	8.815E-01	1.041E+00	0.000E+00
AM-243	3.557E-01	6.006E-02	5.889E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.166E-01	3.579E-01	6.227E-01	0.000E+00	NOT IDENT.

NA-22	-1.266E-02	5.748E-02	9.296E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.001E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.366E-02	3.254E-02	5.879E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.638E-02	6.286E-02	0.000E+00	FAIL ABUN
SC-46	-4.500E-03	4.510E-02	7.621E-02	0.000E+00	FAIL ABUN
V-48	-3.767E-02	8.680E-02	1.409E-01	0.000E+00	NOT IDENT.
CR-51	-1.964E-01	3.758E-01	6.376E-01	0.000E+00	NOT IDENT.
MN-52	-2.205E-01	2.147E-01	3.074E-01	0.000E+00	NOT IDENT.
MN-54	-1.537E-02	4.335E-02	7.199E-02	0.000E+00	NOT IDENT.
CO-56	3.326E-02	4.357E-02	7.911E-02	0.000E+00	NOT IDENT.
CO-57	1.160E-02	2.352E-02	4.177E-02	0.000E+00	NOT IDENT.
CO-58	-2.535E-02	4.045E-02	6.513E-02	0.000E+00	NOT IDENT.
FE-59	-3.860E-02	1.218E-01	1.983E-01	0.000E+00	NOT IDENT.
CO-60	2.061E-02	4.072E-02	7.161E-02	0.000E+00	NOT IDENT.
ZN-65	-1.882E-02	1.310E-01	1.836E-01	0.000E+00	NOT IDENT.
GE-68	-2.018E-01	1.503E+00	2.488E+00	0.000E+00	NOT IDENT.
AS-73	-6.348E-02	2.200E-01	3.891E-01	0.000E+00	NOT IDENT.
AS-74	5.351E-02	1.030E-01	1.793E-01	0.000E+00	NOT IDENT.
SE-75	3.660E-04	4.751E-02	7.330E-02	0.000E+00	NOT IDENT.
BR-77	4.895E+00	8.312E+00	1.466E+01	0.000E+00	FAIL ABUN
SR-82	-1.139E-01	4.096E-01	6.881E-01	0.000E+00	NOT IDENT.
RB-83	4.089E-02	7.543E-02	1.327E-01	0.000E+00	NOT IDENT.
RB-84	1.099E-02	7.626E-02	1.316E-01	0.000E+00	NOT IDENT.
KR-85	-3.149E+01	1.071E+01	1.490E+01	0.000E+00	NOT IDENT.
SR-85	-1.595E-01	5.425E-02	7.548E-02	0.000E+00	NOT IDENT.
RB-86	2.558E-01	9.010E-01	1.550E+00	0.000E+00	NOT IDENT.
Y-88	-7.554E-03	3.310E-02	5.208E-02	0.000E+00	NOT IDENT.
ZR-88	-4.081E-03	3.350E-02	5.739E-02	0.000E+00	NOT IDENT.
Y-91	5.022E+00	2.247E+01	3.804E+01	0.000E+00	NOT IDENT.
NB-94	1.758E-02	4.185E-02	7.148E-02	0.000E+00	NOT IDENT.
NB-95	3.799E-02	5.084E-02	9.180E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.498E-01	2.440E-01	0.000E+00	NOT IDENT.
ZR-95	-2.823E-02	7.551E-02	1.260E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.652E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.004E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.567E-01	9.480E+00	1.644E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.616E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.218E-04	3.579E-02	5.909E-02	0.000E+00	NOT IDENT.
RH-102	-1.788E-02	3.314E-02	5.433E-02	0.000E+00	NOT IDENT.
RU-103	-1.763E-02	4.417E-02	7.272E-02	0.000E+00	FAIL ABUN
RH-106	-1.311E-01	3.911E-01	6.360E-01	0.000E+00	NOT IDENT.
RU-106	-1.311E-01	3.909E-01	6.360E-01	0.000E+00	NOT IDENT.
AG-108M	-3.015E-02	3.774E-02	6.131E-02	0.000E+00	NOT IDENT.
AG-110M	-5.589E-03	4.005E-02	6.585E-02	0.000E+00	NOT IDENT.
IN-111	6.398E-01	9.182E-01	1.413E+00	0.000E+00	NOT IDENT.
IN-113M	1.485E-02	4.852E-02	8.523E-02	0.000E+00	NOT IDENT.
SN-113	1.485E-02	4.852E-02	8.523E-02	0.000E+00	NOT IDENT.
IN-114M	-4.063E-02	2.058E-01	3.028E-01	0.000E+00	NOT IDENT.
CD-115	1.871E-01	8.470E+00	1.435E+01	0.000E+00	NOT IDENT.
SN-117M	-2.087E-02	5.142E-02	8.689E-02	0.000E+00	NOT IDENT.
SB-122	3.036E-01	1.736E+00	2.960E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.310E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	4.026E-03	2.766E-02	4.791E-02	0.000E+00	NOT IDENT.
I-124	-6.136E-01	7.762E-01	1.026E+00	0.000E+00	NOT IDENT.
SB-124	4.247E-02	8.997E-02	1.623E-01	0.000E+00	FAIL ABUN
SB-125	7.741E-02	1.014E-01	1.821E-01	0.000E+00	FAIL ABUN
TE-125M	-5.255E+00	8.509E+00	1.454E+01	0.000E+00	NOT IDENT.
I-126	1.864E-01	2.016E-01	3.586E-01	0.000E+00	NOT IDENT.
SB-126	-5.278E-03	1.672E-01	2.486E-01	0.000E+00	FAIL ABUN
SB-127	2.940E-02	1.286E+00	2.137E+00	0.000E+00	NOT IDENT.
XE-127	1.312E-02	5.568E-02	8.384E-02	0.000E+00	NOT IDENT.
I-131	4.219E-02	1.143E-01	2.023E-01	0.000E+00	NOT IDENT.
TE-132	3.969E-01	5.598E-01	9.716E-01	0.000E+00	NOT IDENT.
BA-133	-3.234E-03	4.682E-02	7.020E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.747E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.943E-02	1.057E-01	0.000E+00	FAIL ABUN
CS-135	2.232E-01	1.821E-01	2.879E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.769E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.656E-02	1.260E-01	2.142E-01	0.000E+00	FAIL ABUN
BA-137M	-4.364E-02	4.453E-02	6.813E-02	0.000E+00	NOT IDENT.
CS-137	-4.613E-02	4.707E-02	7.202E-02	0.000E+00	NOT IDENT.
CE-139	3.217E-03	3.001E-02	5.179E-02	0.000E+00	NOT IDENT.
BA-140	-2.289E-01	2.951E-01	4.541E-01	0.000E+00	NOT IDENT.
LA-140	1.362E-01	8.590E-02	1.683E-01	0.000E+00	FAIL ABUN
CE-141	1.070E-01	6.423E-02	1.135E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.346E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.556E-01	2.336E-01	3.662E-01	0.000E+00	NOT IDENT.
PM-144	-2.516E-02	4.127E-02	6.482E-02	0.000E+00	NOT IDENT.

PR-144	-1.704E+00	2.795E+00	4.390E+00	0.000E+00	NOT IDENT.
PM-146	1.290E-02	4.426E-02	7.720E-02	0.000E+00	NOT IDENT.
ND-147	1.279E-01	5.918E-01	1.016E+00	0.000E+00	FAIL ABUN
PM-149	4.600E+00	6.412E+01	1.132E+02	0.000E+00	NOT IDENT.
EU-152	8.536E-02	1.399E-01	1.798E-01	0.000E+00	NOT IDENT.
GD-153	-8.118E-03	7.478E-02	1.153E-01	0.000E+00	FAIL ABUN
EU-154	-2.240E-02	1.603E-01	2.614E-01	0.000E+00	NOT IDENT.
EU-155	1.489E-01	9.805E-02	1.795E-01	0.000E+00	FAIL ABUN
TB-160	-7.617E-02	1.591E-01	2.520E-01	0.000E+00	FAIL ABUN
HO-166M	3.307E-02	7.229E-02	1.291E-01	0.000E+00	NOT IDENT.
TM-171	3.895E-01	1.634E+01	2.584E+01	0.000E+00	NOT IDENT.
LU-176	1.648E-02	2.891E-02	4.594E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.540E+00	1.914E+00	0.000E+00	FAIL ABUN
LU-177M	-9.151E-02	1.992E-01	3.331E-01	0.000E+00	NOT IDENT.
HF-181	1.024E-02	4.754E-02	8.209E-02	0.000E+00	NOT IDENT.
W-181	8.038E-02	2.003E-01	3.218E-01	0.000E+00	NOT IDENT.
TA-182	-3.087E-02	2.331E-01	3.820E-01	0.000E+00	FAIL ABUN
RE-183	1.926E-02	1.076E-01	1.864E-01	0.000E+00	FAIL ABUN
RE-184	-4.696E-02	2.385E-01	3.954E-01	0.000E+00	NOT IDENT.
OS-185	-5.625E-03	4.873E-02	8.040E-02	0.000E+00	NOT IDENT.
RE-188	-8.114E-02	1.786E-01	3.019E-01	0.000E+00	NOT IDENT.
W-188	-5.825E-02	8.345E+00	1.278E+01	0.000E+00	FAIL ABUN
IR-192	1.827E-02	3.536E-02	6.348E-02	0.000E+00	FAIL ABUN
AU-195	3.245E-01	1.996E-01	3.463E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.423E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	6.535E-01	5.431E+00	9.373E+00	0.000E+00	NOT IDENT.
TL-202	-5.862E-03	7.319E-02	1.247E-01	0.000E+00	NOT IDENT.
HG-203	4.274E-02	4.814E-02	7.797E-02	0.000E+00	NOT IDENT.
BI-207	4.937E-02	6.822E-02	1.212E-01	0.000E+00	FAIL ABUN
TL-207	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
TL-208	0.000E+00	9.093E-02	1.427E-01	0.000E+00	FAIL ABUN
PO-209	1.204E+00	8.982E+00	1.545E+01	0.000E+00	NOT IDENT.
PB-211	-4.830E-01	1.085E+00	1.749E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.374E-01	7.543E-01	0.000E+00	FAIL ABUN
PO-215	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
RN-219	8.609E-02	4.503E-01	7.844E-01	0.000E+00	FAIL ABUN
RN-220	1.630E+01	3.173E+01	5.540E+01	0.000E+00	NOT IDENT.
RA-223	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
AC-227	3.798E-01	4.104E-01	7.141E-01	0.000E+00	FAIL ABUN
TH-227	3.798E-01	4.119E-01	7.141E-01	0.000E+00	FAIL ABUN
TH-229	-3.027E-01	5.302E-01	8.781E-01	0.000E+00	FAIL ABUN
PA-231	1.936E-01	1.699E+00	2.747E+00	0.000E+00	FAIL ABUN
TH-231	6.861E-01	7.312E-01	1.181E+00	0.000E+00	FAIL ABUN
U-231	-1.664E-01	8.258E-01	1.269E+00	0.000E+00	FAIL ABUN
PA-233	-3.097E-02	6.616E-02	1.128E-01	0.000E+00	FAIL ABUN
PA-234	-3.621E-02	3.796E-01	6.378E-01	0.000E+00	FAIL ABUN
PA-234M	-6.815E+00	8.406E+00	1.313E+01	0.000E+00	NOT IDENT.
U-235	4.600E-02	2.195E-01	3.741E-01	0.000E+00	FAIL ABUN
NP-236	-3.885E-02	7.962E-02	1.339E-01	0.000E+00	NOT IDENT.
NP-239	-1.434E-02	1.764E-01	3.075E-01	0.000E+00	FAIL ABUN
AM-241	3.767E-02	6.563E-02	1.067E-01	0.000E+00	NOT IDENT.
CM-243	2.693E-02	8.591E-02	1.527E-01	0.000E+00	FAIL ABUN
CM-247	4.753E-03	4.004E-02	6.947E-02	0.000E+00	FAIL ABUN
CF-249	7.755E-03	4.325E-02	7.548E-02	0.000E+00	NOT IDENT.
CF-251	9.421E-02	1.218E-01	2.154E-01	0.000E+00	NOT IDENT.
ANH-511	3.056E-02	4.927E-02	9.448E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 13:11:37.02

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:10:14.
Sample ID         : G232347001           Sample quantity  : 1.26580E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.71  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1230	10.67*	1.004E+00	3.407E+01	3.407E+01	8.66
CD-109	88.03	331	3.72*	7.858E+00	3.361E+00	3.432E+00	22.76
SN-126	64.28	108	9.60	8.064E+00	4.121E-01	4.121E-01	85.86
	86.94	331	8.90	7.858E+00	1.405E+00	1.405E+00	46.42
	87.57	331	37.00*	7.858E+00	3.379E-01	3.379E-01	22.76
BI-210	46.50	181	4.05*	7.605E+00	1.746E+00	1.748E+00	50.06
PB-210	46.50	181	4.05*	7.605E+00	1.746E+00	1.748E+00	50.06
PO-210	46.50	181	4.05*	7.605E+00	1.746E+00	1.748E+00	49.90
BI-211	72.87	------	1.27	8.052E+00	------ Line Not Found		------
	351.07	521	12.94*	3.515E+00	3.397E+00	3.397E+00	16.19
PB-212	74.81	636	10.70	8.037E+00	2.194E+00	2.194E+00	19.60
	77.11	883	18.00	8.012E+00	1.815E+00	1.815E+00	14.13
	87.30	331	8.00	7.858E+00	1.563E+00	1.563E+00	24.86
	238.63	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.09	75	3.41	4.003E+00	1.634E+00	1.634E+00	71.57
PO-212	74.81	636	10.70	8.037E+00	2.194E+00	2.194E+00	19.60
	77.11	883	18.00	8.012E+00	1.815E+00	1.815E+00	14.13
	87.30	331	8.00	7.858E+00	1.563E+00	1.563E+00	24.86
	115.19	------	0.60	7.241E+00	------ Line Not Found		------
	238.63	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.09	75	3.41	4.003E+00	1.634E+00	1.634E+00	71.57
BI-214	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98
	768.36	------	5.04	1.760E+00	------ Line Not Found		------
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	------	4.11	1.054E+00	------ Line Not Found		------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
PB-214	74.81	636	6.21	8.037E+00	3.781E+00	3.781E+00	18.75
	77.11	883	10.50	8.012E+00	3.111E+00	3.111E+00	16.06
	87.30	331	4.67	7.858E+00	2.677E+00	2.677E+00	24.03
	241.98	259	7.49	4.734E+00	2.170E+00	2.170E+00	41.92

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	322	19.20	4.056E+00	1.228E+00	1.228E+00	21.56
	351.92	521	37.20*	3.515E+00	1.182E+00	1.182E+00	17.01
PO-214	74.81	636	6.21	8.037E+00	3.781E+00	3.781E+00	18.75
	77.11	883	10.50	8.012E+00	3.111E+00	3.111E+00	16.06
	87.30	331	4.67	7.858E+00	2.677E+00	2.677E+00	24.03
	241.98	259	7.49	4.734E+00	2.170E+00	2.170E+00	41.92
	295.21	322	19.20	4.056E+00	1.228E+00	1.228E+00	21.56
	351.92	521	37.20*	3.515E+00	1.182E+00	1.182E+00	17.01
PO-216	74.81	636	10.70	8.037E+00	2.194E+00	2.194E+00	19.60
	77.11	883	18.00	8.012E+00	1.815E+00	1.815E+00	14.13
	87.30	331	8.00	7.858E+00	1.563E+00	1.563E+00	24.86
	238.63	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.09	75	3.41	4.003E+00	1.634E+00	1.634E+00	71.57
PO-218	74.81	636	6.21	8.037E+00	3.781E+00	3.781E+00	18.75
	77.11	883	10.50	8.012E+00	3.111E+00	3.111E+00	16.06
	87.30	331	4.67	7.858E+00	2.677E+00	2.677E+00	24.03
	241.98	259	7.49	4.734E+00	2.170E+00	2.170E+00	41.92
	295.21	322	19.20	4.056E+00	1.228E+00	1.228E+00	21.56
	351.92	521	37.20*	3.515E+00	1.182E+00	1.182E+00	17.01
RA-224	240.98	259	3.95*	4.734E+00	4.114E+00	4.114E+00	41.55
RA-226	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98
	768.36	------	5.04	1.760E+00	------	Line Not Found	------
	934.06	------	3.21	1.477E+00	------	Line Not Found	------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------	Line Not Found	------
	1377.67	------	4.11	1.054E+00	------	Line Not Found	------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
AC-228	338.32	208	11.40	3.633E+00	1.492E+00	1.492E+00	51.81
	911.07	217	27.70*	1.510E+00	1.541E+00	1.541E+00	26.47
	969.11	107	16.60	1.430E+00	1.342E+00	1.342E+00	38.04
RA-228	338.32	208	11.40	3.633E+00	1.492E+00	1.492E+00	51.81
	911.07	217	27.70*	1.510E+00	1.541E+00	1.541E+00	26.47
	969.11	107	16.60	1.430E+00	1.342E+00	1.342E+00	38.04
TH-228	84.40	152	1.21	7.904E+00	4.715E+00	4.715E+00	54.54
	238.60	1129	44.60*	4.772E+00	1.573E+00	1.573E+00	13.04
	300.10	75	3.41	4.003E+00	1.634E+00	1.634E+00	92.34
TH-230	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98
	768.36	------	5.04	1.760E+00	------	Line Not Found	------
	934.06	------	3.21	1.477E+00	------	Line Not Found	------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------	Line Not Found	------
	1377.67	------	4.11	1.054E+00	------	Line Not Found	------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
TH-232	338.32	208	11.40	3.633E+00	1.492E+00	1.492E+00	32.49
	911.07	217	27.70*	1.510E+00	1.541E+00	1.541E+00	26.47
	969.11	107	16.60	1.430E+00	1.342E+00	1.342E+00	38.04
TH-234	63.29	108	3.80*	8.064E+00	1.041E+00	1.041E+00	86.40
	92.38	306	5.41	7.748E+00	2.165E+00	2.165E+00	33.46
U-234	609.31	274	46.30*	2.171E+00	8.092E-01	8.092E-01	26.98

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	768.36	------	5.04	1.760E+00	------	Line Not Found	------
	934.06	------	3.21	1.477E+00	------	Line Not Found	------
	1120.29	54	15.10	1.257E+00	8.365E-01	8.365E-01	86.57
	1238.11	------	5.94	1.154E+00	------	Line Not Found	------
	1377.67	------	4.11	1.054E+00	------	Line Not Found	------
	1764.49	58	15.80	8.612E-01	1.274E+00	1.274E+00	38.52
NP-237	86.50	331	12.60*	7.858E+00	9.922E-01	9.922E-01	30.73
	95.87	------	2.60	7.687E+00	------	Line Not Found	------
U-238	63.29	108	3.80*	8.064E+00	1.041E+00	1.041E+00	86.40
	92.38	306	5.41	7.748E+00	2.165E+00	2.165E+00	29.44
AM-243	74.67	636	66.00*	8.037E+00	3.557E-01	3.557E-01	17.23
	86.72	331	0.34	7.858E+00	3.721E+01	3.721E+01	22.76
	117.66	------	0.55	7.181E+00	------	Line Not Found	------
	142.18	------	0.13	6.593E+00	------	Line Not Found	------

Flag: "*" = Keyline

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

Total number of lines in spectrum 31
Number of unidentified lines 1
Number of lines tentatively identified by NID 30 96.77%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.407E+01	3.407E+01	0.295E+01	8.66	
CD-109	464.00D	1.02	3.361E+00	3.432E+00	0.781E+00	22.76	
SN-126	1.00E+05Y	1.00	3.379E-01	3.379E-01	0.769E-01	22.76	
BI-210	22.26Y	1.00	1.746E+00	1.748E+00	0.875E+00	50.06	
PB-210	22.26Y	1.00	1.746E+00	1.748E+00	0.875E+00	50.06	
PO-210	22.26Y	1.00	1.746E+00	1.748E+00	0.872E+00	49.90	
BI-211	7.04E+08Y	1.00	3.397E+00	3.397E+00	0.550E+00	16.19	
PB-212	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
PO-212	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
BI-214	1600.00Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
PB-214	1600.00Y	1.00	1.182E+00	1.182E+00	0.201E+00	17.01	
PO-214	1600.00Y	1.00	1.182E+00	1.182E+00	0.201E+00	17.01	
PO-216	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
PO-218	1600.00Y	1.00	1.182E+00	1.182E+00	0.201E+00	17.01	
RA-224	1.41E+10Y	1.00	4.114E+00	4.114E+00	1.709E+00	41.55	
RA-226	1600.00Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
AC-228	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.408E+00	26.47	
RA-228	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.408E+00	26.47	
TH-228	1.41E+10Y	1.00	1.573E+00	1.573E+00	0.205E+00	13.04	
TH-230	4.47E+09Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
TH-232	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.408E+00	26.47	
TH-234	4.47E+09Y	1.00	1.041E+00	1.041E+00	0.900E+00	86.40	
U-234	4.47E+09Y	1.00	8.092E-01	8.092E-01	2.184E-01	26.98	
NP-237	2.14E+06Y	1.00	9.922E-01	9.922E-01	3.049E-01	30.73	
U-238	4.47E+09Y	1.00	1.041E+00	1.041E+00	0.900E+00	86.40	
AM-243	7380.00Y	1.00	3.557E-01	3.557E-01	0.613E-01	17.23	
	Total Activity :		7.164E+01	7.172E+01			

Grand Total Activity : 7.164E+01 7.172E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.67	200	324	1.15	180.48	166	27	2.77E-02	34.2	7.81E+00	T
0	129.07	78	284	1.22	259.25	255	8	1.08E-02	78.5	6.90E+00	T
0	186.04	205	297	1.48	373.14	368	11	2.84E-02	36.8	5.66E+00	T
0	209.35	91	314	0.82	419.74	413	11	1.27E-02	77.9	5.23E+00	T
0	270.50	72	135	1.21	541.97	538	9	1.00E-02	63.1	4.34E+00	T
0	277.56	73	190	1.31	556.07	551	11	1.01E-02	77.1	4.26E+00	T
0	328.19	56	116	1.43	657.29	654	9	7.74E-03	74.5	3.72E+00	T
0	463.44	77	81	1.43	927.61	922	13	1.07E-02	53.2	2.77E+00	T
0	583.01	330	75	1.43	1166.56	1159	16	4.58E-02	16.5	2.26E+00	T
0	728.33	91	84	1.73	1456.95	1448	17	1.27E-02	51.6	1.85E+00	T
0	795.12	53	36	2.58	1590.40	1586	9	7.43E-03	48.8	1.71E+00	T
0	1592.44	22	4	1.95	3183.01	3179	8	3.10E-03	52.3	9.35E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 13:11:42.52

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232347001.CNF;1  *
* Acquisition date : 6-JUL-2009 11:10:14.  Detector SN#     :               *
* Detector ID      : GAM05                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:01.71         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      : 22-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232347001            Analyst initials: MXR1           *
* Batch Number     : 880723                Sample Quantity : 1.26580E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00.5MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.407E+01	2.949E+00	3.717E-01	2.312E-02	91.653
CD-109	3.432E+00	7.813E-01	9.319E-01	7.096E-02	3.683
SN-126	3.379E-01	7.692E-02	9.162E-02	6.978E-03	3.688
BI-210	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PB-210	1.748E+00	8.749E-01	8.531E-01	6.655E-02	2.049
PO-210	1.748E+00	8.722E-01	8.531E-01	5.738E-02	2.049
BI-211	3.397E+00	5.500E-01	3.387E-01	2.684E-02	10.031
PB-212	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
PO-212	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
BI-214	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
PB-214	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
PO-214	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
PO-216	1.573E+00	2.052E-01	9.372E-02	1.011E-02	16.781
PO-218	1.182E+00	2.010E-01	1.181E-01	1.118E-02	10.008
RA-224	4.114E+00	1.709E+00	1.067E+00	1.044E-01	3.857
RA-226	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
AC-228	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
RA-228	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.573E+00	2.052E-01	9.371E-02	1.010E-02	16.783
TH-230	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
TH-232	1.541E+00	4.080E-01	2.502E-01	3.096E-02	6.161
TH-234	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
U-234	8.092E-01	2.184E-01	1.248E-01	1.046E-02	6.484
NP-237	9.922E-01	3.049E-01	2.682E-01	5.900E-02	3.700
U-238	1.041E+00	8.995E-01	9.948E-01	1.768E-01	1.047
AM-243	3.557E-01	6.128E-02	5.643E-02	4.420E-03	6.304

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.166E-01		3.652E-01	6.126E-01	4.389E-02	0.190
NA-22	-1.266E-02		5.865E-02	9.281E-02	5.406E-03	-0.136
NA-24	1.296E-01		1.021E-01	Half-Life too short		
AL-26	1.366E-02		3.320E-02	5.901E-02	3.386E-03	0.232
TI-44	3.349E-01	+	4.733E-02	6.027E-02	4.676E-03	5.556
SC-46	-4.500E-03		4.602E-02	7.568E-02	7.601E-03	-0.059
V-48	-3.767E-02		8.857E-02	1.402E-01	1.284E-02	-0.269
CR-51	-1.964E-01		3.835E-01	6.237E-01	5.516E-02	-0.315
MN-52	-2.205E-01		2.191E-01	3.074E-01	1.800E-02	-0.717
MN-54	-1.537E-02		4.423E-02	7.142E-02	6.543E-03	-0.215
CO-56	3.326E-02		4.446E-02	7.849E-02	7.340E-03	0.424
CO-57	1.160E-02		2.400E-02	4.030E-02	5.718E-03	0.288
CO-58	-2.535E-02		4.128E-02	6.458E-02	5.684E-03	-0.393
FE-59	-3.860E-02		1.243E-01	1.976E-01	1.600E-02	-0.195
CO-60	2.061E-02		4.156E-02	7.154E-02	4.140E-03	0.288
ZN-65	-1.882E-02		1.337E-01	1.829E-01	1.278E-02	-0.103
GE-68	-2.018E-01		1.534E+00	2.477E+00	1.903E-01	-0.081
AS-73	-6.348E-02		2.244E-01	3.711E-01	2.793E-02	-0.171
AS-74	5.351E-02		1.051E-01	1.770E-01	1.164E-02	0.302
SE-75	3.660E-04		4.848E-02	7.150E-02	6.826E-03	0.005
BR-77	4.895E+00		8.481E+00	1.445E+01	9.290E-01	0.339
SR-82	-1.139E-01		4.179E-01	6.819E-01	5.626E-02	-0.167
RB-83	4.089E-02		7.697E-02	1.307E-01	8.407E-03	0.313
RB-84	1.099E-02		7.781E-02	1.307E-01	1.296E-02	0.084
KR-85	-3.149E+01		1.093E+01	1.468E+01	9.408E-01	-2.145
SR-85	-1.595E-01		5.536E-02	7.435E-02	4.766E-03	-2.145
RB-86	2.558E-01		9.194E-01	1.544E+00	1.188E-01	0.166
Y-88	-7.554E-03		3.378E-02	5.229E-02	2.992E-03	-0.144
ZR-88	-4.081E-03		3.419E-02	5.630E-02	3.279E-03	-0.072
Y-91	5.022E+00		2.293E+01	3.794E+01	2.205E+00	0.132
NB-94	1.758E-02		4.270E-02	7.073E-02	5.061E-03	0.249
NB-95	3.799E-02		5.188E-02	9.095E-02	7.356E-03	0.418
NB-95M	3.344E-01		1.528E-01	2.376E-01	2.599E-02	1.407
ZR-95	-2.823E-02		7.706E-02	1.248E-01	1.109E-02	-0.226
NB-97	-8.863E-03		1.863E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	-1.043E+00		4.084E-01	Half-Life too short		
MO-99	5.567E-01		9.674E+00	1.628E+01	2.390E+00	0.034
TC-99M	-5.238E+08		8.243E+08	Half-Life too short		
RH-101	-2.218E-04		3.652E-02	5.741E-02	5.733E-03	-0.004
RH-102	-1.788E-02		3.381E-02	5.345E-02	3.348E-03	-0.335
RU-103	-1.763E-02		4.507E-02	7.159E-02	9.240E-03	-0.246
RH-106	-1.311E-01		3.991E-01	6.282E-01	7.631E-02	-0.209
RU-106	-1.311E-01		3.988E-01	6.282E-01	4.141E-02	-0.209
AG-108M	-3.015E-02		3.851E-02	6.024E-02	3.942E-03	-0.501
AG-110M	-5.589E-03		4.086E-02	6.509E-02	4.499E-03	-0.086
IN-111	6.398E-01		9.370E-01	1.376E+00	1.341E-01	0.465
IN-113M	1.485E-02		4.951E-02	8.361E-02	5.187E-03	0.178
SN-113	1.485E-02		4.951E-02	8.361E-02	5.187E-03	0.178
IN-114M	-4.063E-02		2.100E-01	2.940E-01	2.936E-02	-0.138
CD-115	1.871E-01		8.643E+00	1.414E+01	9.120E-01	0.013
SN-117M	-2.087E-02		5.247E-02	8.414E-02	9.046E-03	-0.248
SB-122	3.036E-01		1.771E+00	2.919E+00	1.908E-01	0.104
I-123	1.907E-01		6.685E-01	Half-Life too short		
TE-123M	4.026E-03		2.822E-02	4.640E-02	4.985E-03	0.087
I-124	-6.136E-01		7.920E-01	1.013E+00	6.666E-02	-0.606
SB-124	4.247E-02		9.180E-02	1.628E-01	1.030E-02	0.261
SB-125	7.741E-02		1.035E-01	1.788E-01	1.121E-02	0.433
TE-125M	-5.255E+00		8.683E+00	1.400E+01	1.800E+00	-0.375
I-126	1.864E-01		2.057E-01	3.546E-01	2.354E-02	0.526
SB-126	-5.278E-03		1.706E-01	2.461E-01	1.825E-02	-0.021
SB-127	2.940E-02		1.312E+00	2.114E+00	2.067E-01	0.014
XE-127	1.312E-02		5.682E-02	8.147E-02	8.132E-03	0.161
I-131	4.219E-02		1.167E-01	1.982E-01	1.487E-02	0.213
TE-132	3.969E-01		5.712E-01	9.457E-01	1.537E-01	0.420
BA-133	-3.234E-03		4.777E-02	6.877E-02	8.493E-03	-0.047
I-133	-1.122E-03		1.401E-03	Half-Life too short		
CS-134	1.225E-01	+	6.064E-02	1.047E-01	9.020E-03	1.169
CS-135	2.232E-01		1.858E-01	2.809E-01	3.005E-02	0.795
I-135	-1.841E+08		1.923E+08	Half-Life too short		
CS-136	1.656E-02		1.286E-01	2.132E-01	1.826E-02	0.078
BA-137M	-4.364E-02		4.544E-02	6.735E-02	4.429E-03	-0.648
CS-137	-4.613E-02		4.803E-02	7.119E-02	4.697E-03	-0.648
CE-139	3.217E-03		3.063E-02	5.018E-02	4.983E-03	0.064
BA-140	-2.289E-01		3.012E-01	4.476E-01	1.461E-01	-0.511
LA-140	1.362E-01		8.765E-02	1.686E-01	9.907E-03	0.808
CE-141	1.070E-01		6.555E-02	1.097E-01	1.342E-02	0.975
CE-143	4.164E-04		6.866E-05	Half-Life too short		
CE-144	1.556E-01		2.383E-01	3.537E-01	6.549E-02	0.440
PM-144	-2.516E-02		4.211E-02	6.413E-02	4.534E-03	-0.392
PR-144	-1.704E+00		2.852E+00	4.343E+00	3.069E-01	-0.392
PM-146	1.290E-02		4.516E-02	7.590E-02	6.735E-03	0.170
ND-147	1.279E-01		6.039E-01	1.001E+00	1.383E-01	0.128
PM-149	4.600E+00		6.543E+01	1.106E+02	1.752E+01	0.042

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	8.536E-02		1.428E-01	1.761E-01	1.448E-02	0.485
GD-153	-8.118E-03		7.631E-02	1.109E-01	1.028E-02	-0.073
EU-154	-2.240E-02		1.636E-01	2.609E-01	2.440E-02	-0.086
EU-155	1.489E-01		1.001E-01	1.728E-01	1.872E-02	0.862
TB-160	-7.617E-02		1.624E-01	2.501E-01	2.472E-02	-0.305
HO-166M	3.307E-02		7.377E-02	1.277E-01	9.306E-03	0.259
TM-171	3.895E-01		1.667E+01	2.472E+01	1.987E+00	0.016
LU-176	1.648E-02		2.950E-02	4.491E-02	3.911E-03	0.367
LU-177	2.001E+00	+	1.571E+00	1.861E+00	1.855E-01	1.075
LU-177M	-9.151E-02		2.033E-01	3.270E-01	1.946E-02	-0.280
HF-181	1.024E-02		4.851E-02	8.078E-02	5.084E-03	0.127
W-181	8.038E-02		2.044E-01	3.078E-01	2.488E-02	0.261
TA-182	-3.087E-02		2.379E-01	3.812E-01	2.216E-02	-0.081
RE-183	1.926E-02		1.098E-01	1.806E-01	1.866E-02	0.107
RE-184	-4.696E-02		2.434E-01	3.854E-01	3.724E-02	-0.122
OS-185	-5.625E-03		4.973E-02	7.945E-02	5.234E-03	-0.071
RE-188	-8.114E-02		1.822E-01	2.922E-01	3.253E-02	-0.278
W-188	-5.825E-02		8.516E+00	1.248E+01	1.131E+00	-0.005
IR-192	1.827E-02		3.609E-02	6.208E-02	5.269E-03	0.294
AU-195	3.245E-01		2.036E-01	3.331E-01	3.176E-02	0.974
TL-200	1.324E-05		1.236E-04	Half-Life too short		
TL-201	6.535E-01		5.542E+00	9.083E+00	9.017E-01	0.072
TL-202	-5.862E-03		7.468E-02	1.225E-01	7.470E-03	-0.048
HG-203	4.274E-02		4.912E-02	7.612E-02	7.237E-03	0.561
BI-207	4.937E-02		6.961E-02	1.207E-01	9.558E-03	0.409
TL-207	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
TL-208	5.139E-01	+	9.278E-02	1.408E-01	1.036E-02	3.650
PO-209	1.204E+00		9.165E+00	1.535E+01	1.560E+00	0.078
PB-211	-4.830E-01		1.107E+00	1.716E+00	1.070E+00	-0.281
BI-212	1.242E+00	+	6.504E-01	7.468E-01	6.774E-02	1.663
PO-215	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
RN-219	8.609E-02		4.595E-01	7.698E-01	1.050E-01	0.112
RN-220	1.630E+01		3.238E+01	5.461E+01	3.553E+00	0.298
RA-223	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
AC-227	3.798E-01		4.187E-01	6.962E-01	1.109E-01	0.546
TH-227	3.798E-01		4.203E-01	6.962E-01	1.292E-01	0.546
TH-229	-3.027E-01		5.410E-01	8.527E-01	8.516E-02	-0.355
PA-231	1.936E-01		1.734E+00	2.682E+00	4.162E-01	0.072
TH-231	6.861E-01		7.461E-01	1.155E+00	2.025E-01	0.594
U-231	-1.664E-01		8.426E-01	1.220E+00	1.096E-01	-0.136
PA-233	-3.097E-02		6.751E-02	1.103E-01	9.741E-03	-0.281
PA-234	-3.621E-02		3.874E-01	6.339E-01	1.221E-01	-0.057
PA-234M	-6.815E+00		8.578E+00	1.306E+01	1.489E+00	-0.522
U-235	4.600E-02		2.239E-01	3.617E-01	7.078E-02	0.127
NP-236	-3.885E-02		8.125E-02	1.297E-01	1.370E-02	-0.299
NP-239	-1.434E-02		1.800E-01	2.965E-01	3.885E-02	-0.048
AM-241	3.767E-02		6.697E-02	1.019E-01	9.119E-03	0.370
CM-243	2.693E-02		8.766E-02	1.470E-01	1.537E-02	0.183

Sample ID : G232347001 Acquisition date : 6-JUL-2009 11:10:14

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-247	4.753E-03		4.086E-02	6.818E-02	4.012E-03	0.070
CF-249	7.755E-03		4.413E-02	7.403E-02	4.428E-03	0.105
CF-251	9.421E-02		1.243E-01	2.089E-01	2.081E-02	0.451
ANH-511	3.056E-02		5.027E-02	9.305E-02	5.955E-03	0.328

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232347001           *
* Acquisition date  :  6-JUL-2009 11:10:14 Detector SN#     :               *
* Detector ID       : GAM05                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.71      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232347001           Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.407E+01	2.890E+00	1.859E-01	1.474E+00
CD-109	3.432E+00	7.656E-01	4.855E-01	3.906E-01
SN-126	3.379E-01	7.538E-02	4.773E-02	3.846E-02
BI-210	1.748E+00	8.574E-01	4.484E-01	4.374E-01
PB-210	1.748E+00	8.574E-01	4.484E-01	4.374E-01
PO-210	1.748E+00	8.547E-01	4.484E-01	4.361E-01
BI-211	3.397E+00	5.390E-01	1.730E-01	2.750E-01
PB-212	1.573E+00	2.011E-01	4.814E-02	1.026E-01
PO-212	1.573E+00	2.011E-01	4.814E-02	1.026E-01
BI-214	8.092E-01	2.140E-01	6.324E-02	1.092E-01
PB-214	1.182E+00	1.970E-01	6.031E-02	1.005E-01
PO-214	1.182E+00	1.970E-01	6.031E-02	1.005E-01
PO-216	1.573E+00	2.011E-01	4.814E-02	1.026E-01
PO-218	1.182E+00	1.970E-01	6.031E-02	1.005E-01
RA-224	4.114E+00	1.675E+00	5.479E-01	8.547E-01
RA-226	8.092E-01	2.140E-01	6.324E-02	1.092E-01
AC-228	1.541E+00	3.999E-01	1.260E-01	2.040E-01
RA-228	1.541E+00	3.999E-01	1.260E-01	2.040E-01
TH-228	1.573E+00	2.011E-01	4.814E-02	1.026E-01
TH-230	8.092E-01	2.140E-01	6.324E-02	1.092E-01
TH-232	1.541E+00	3.999E-01	1.260E-01	2.040E-01
TH-234	1.041E+00	8.815E-01	5.206E-01	4.498E-01
U-234	8.092E-01	2.140E-01	6.324E-02	1.092E-01
NP-237	9.922E-01	2.988E-01	1.397E-01	1.524E-01
U-238	1.041E+00	8.815E-01	5.206E-01	4.498E-01
AM-243	3.557E-01	6.006E-02	2.946E-02	3.064E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	1.166E-01	3.579E-01	3.115E-01	1.826E-01	NOT IDENT.

NA-22	-1.266E-02	5.748E-02	4.651E-02	2.933E-02	NOT IDENT.
NA-24	1.296E+05	2.001E+05	0.000E+00	1.021E+05	SHORT HLIF
AL-26	1.366E-02	3.254E-02	2.941E-02	1.660E-02	NOT IDENT.
TI-44	3.349E-01	4.638E-02	3.145E-02	2.366E-02	FAIL ABUN
SC-46	-4.500E-03	4.510E-02	3.813E-02	2.301E-02	FAIL ABUN
V-48	-3.767E-02	8.680E-02	7.051E-02	4.428E-02	NOT IDENT.
CR-51	-1.964E-01	3.758E-01	3.190E-01	1.917E-01	NOT IDENT.
MN-52	-2.205E-01	2.147E-01	1.538E-01	1.095E-01	NOT IDENT.
MN-54	-1.537E-02	4.335E-02	3.602E-02	2.212E-02	NOT IDENT.
CO-56	3.326E-02	4.357E-02	3.958E-02	2.223E-02	NOT IDENT.
CO-57	1.160E-02	2.352E-02	2.090E-02	1.200E-02	NOT IDENT.
CO-58	-2.535E-02	4.045E-02	3.259E-02	2.064E-02	NOT IDENT.
FE-59	-3.860E-02	1.218E-01	9.923E-02	6.214E-02	NOT IDENT.
CO-60	2.061E-02	4.072E-02	3.583E-02	2.078E-02	NOT IDENT.
ZN-65	-1.882E-02	1.310E-01	9.185E-02	6.684E-02	NOT IDENT.
GE-68	-2.018E-01	1.503E+00	1.245E+00	7.670E-01	NOT IDENT.
AS-73	-6.348E-02	2.200E-01	1.946E-01	1.122E-01	NOT IDENT.
AS-74	5.351E-02	1.030E-01	8.971E-02	5.257E-02	NOT IDENT.
SE-75	3.660E-04	4.751E-02	3.667E-02	2.424E-02	NOT IDENT.
BR-77	4.895E+00	8.312E+00	7.337E+00	4.241E+00	FAIL ABUN
SR-82	-1.139E-01	4.096E-01	3.442E-01	2.090E-01	NOT IDENT.
RB-83	4.089E-02	7.543E-02	6.640E-02	3.848E-02	NOT IDENT.
RB-84	1.099E-02	7.626E-02	6.584E-02	3.891E-02	NOT IDENT.
KR-85	-3.149E+01	1.071E+01	7.455E+00	5.464E+00	NOT IDENT.
SR-85	-1.595E-01	5.425E-02	3.776E-02	2.768E-02	NOT IDENT.
RB-86	2.558E-01	9.010E-01	7.756E-01	4.597E-01	NOT IDENT.
Y-88	-7.554E-03	3.310E-02	2.606E-02	1.689E-02	NOT IDENT.
ZR-88	-4.081E-03	3.350E-02	2.871E-02	1.709E-02	NOT IDENT.
Y-91	5.022E+00	2.247E+01	1.903E+01	1.146E+01	NOT IDENT.
NB-94	1.758E-02	4.185E-02	3.576E-02	2.135E-02	NOT IDENT.
NB-95	3.799E-02	5.084E-02	4.593E-02	2.594E-02	NOT IDENT.
NB-95M	3.344E-01	1.498E-01	1.221E-01	7.641E-02	NOT IDENT.
ZR-95	-2.823E-02	7.551E-02	6.303E-02	3.853E-02	NOT IDENT.
NB-97	-8.863E+03	3.652E+04	0.000E+00	1.863E+04	SHORT HLIF
ZR-97	-1.043E+06	8.004E+05	0.000E+00	4.084E+05	SHORT HLIF
MO-99	5.567E-01	9.480E+00	8.226E+00	4.837E+00	NOT IDENT.
TC-99M	-5.238E+14	1.616E+15	0.000E+00	8.243E+14	SHORT HLIF
RH-101	-2.218E-04	3.579E-02	2.957E-02	1.826E-02	NOT IDENT.
RH-102	-1.788E-02	3.314E-02	2.718E-02	1.691E-02	NOT IDENT.
RU-103	-1.763E-02	4.417E-02	3.638E-02	2.253E-02	FAIL ABUN
RH-106	-1.311E-01	3.911E-01	3.182E-01	1.995E-01	NOT IDENT.
RU-106	-1.311E-01	3.909E-01	3.182E-01	1.994E-01	NOT IDENT.
AG-108M	-3.015E-02	3.774E-02	3.067E-02	1.925E-02	NOT IDENT.
AG-110M	-5.589E-03	4.005E-02	3.294E-02	2.043E-02	NOT IDENT.
IN-111	6.398E-01	9.182E-01	7.067E-01	4.685E-01	NOT IDENT.
IN-113M	1.485E-02	4.852E-02	4.264E-02	2.476E-02	NOT IDENT.
SN-113	1.485E-02	4.852E-02	4.264E-02	2.476E-02	NOT IDENT.
IN-114M	-4.063E-02	2.058E-01	1.515E-01	1.050E-01	NOT IDENT.
CD-115	1.871E-01	8.470E+00	7.178E+00	4.321E+00	NOT IDENT.
SN-117M	-2.087E-02	5.142E-02	4.347E-02	2.623E-02	NOT IDENT.
SB-122	3.036E-01	1.736E+00	1.481E+00	8.856E-01	NOT IDENT.
I-123	1.907E+05	1.310E+06	0.000E+00	6.685E+05	SHORT HLIF
TE-123M	4.026E-03	2.766E-02	2.397E-02	1.411E-02	NOT IDENT.
I-124	-6.136E-01	7.762E-01	5.132E-01	3.960E-01	NOT IDENT.
SB-124	4.247E-02	8.997E-02	8.122E-02	4.590E-02	FAIL ABUN
SB-125	7.741E-02	1.014E-01	9.109E-02	5.173E-02	FAIL ABUN
TE-125M	-5.255E+00	8.509E+00	7.274E+00	4.342E+00	NOT IDENT.
I-126	1.864E-01	2.016E-01	1.794E-01	1.028E-01	NOT IDENT.
SB-126	-5.278E-03	1.672E-01	1.244E-01	8.529E-02	FAIL ABUN
SB-127	2.940E-02	1.286E+00	1.069E+00	6.562E-01	NOT IDENT.
XE-127	1.312E-02	5.568E-02	4.194E-02	2.841E-02	NOT IDENT.
I-131	4.219E-02	1.143E-01	1.012E-01	5.833E-02	NOT IDENT.
TE-132	3.969E-01	5.598E-01	4.861E-01	2.856E-01	NOT IDENT.
BA-133	-3.234E-03	4.682E-02	3.512E-02	2.389E-02	FAIL ABUN
I-133	-1.122E+03	2.747E+03	0.000E+00	1.401E+03	SHORT HLIF
CS-134	1.225E-01	5.943E-02	5.286E-02	3.032E-02	FAIL ABUN
CS-135	2.232E-01	1.821E-01	1.440E-01	9.289E-02	NOT IDENT.
I-135	-1.841E+14	3.769E+14	0.000E+00	1.923E+14	SHORT HLIF
CS-136	1.656E-02	1.260E-01	1.071E-01	6.428E-02	FAIL ABUN
BA-137M	-4.364E-02	4.453E-02	3.408E-02	2.272E-02	NOT IDENT.
CS-137	-4.613E-02	4.707E-02	3.603E-02	2.402E-02	NOT IDENT.
CE-139	3.217E-03	3.001E-02	2.591E-02	1.531E-02	NOT IDENT.
BA-140	-2.289E-01	2.951E-01	2.272E-01	1.506E-01	NOT IDENT.
LA-140	1.362E-01	8.590E-02	8.418E-02	4.383E-02	FAIL ABUN
CE-141	1.070E-01	6.423E-02	5.677E-02	3.277E-02	NOT IDENT.
CE-143	4.164E+02	1.346E+02	0.000E+00	6.866E+01	SHORT HLIF
CE-144	1.556E-01	2.336E-01	1.832E-01	1.192E-01	NOT IDENT.
PM-144	-2.516E-02	4.127E-02	3.243E-02	2.105E-02	NOT IDENT.

PR-144	-1.704E+00	2.795E+00	2.196E+00	1.426E+00	NOT IDENT.
PM-146	1.290E-02	4.426E-02	3.862E-02	2.258E-02	NOT IDENT.
ND-147	1.279E-01	5.918E-01	5.082E-01	3.019E-01	FAIL ABUN
PM-149	4.600E+00	6.412E+01	5.665E+01	3.272E+01	NOT IDENT.
EU-152	8.536E-02	1.399E-01	8.995E-02	7.138E-02	NOT IDENT.
GD-153	-8.118E-03	7.478E-02	5.770E-02	3.815E-02	FAIL ABUN
EU-154	-2.240E-02	1.603E-01	1.308E-01	8.180E-02	NOT IDENT.
EU-155	1.489E-01	9.805E-02	8.979E-02	5.003E-02	FAIL ABUN
TB-160	-7.617E-02	1.591E-01	1.261E-01	8.118E-02	FAIL ABUN
HO-166M	3.307E-02	7.229E-02	6.457E-02	3.688E-02	NOT IDENT.
TM-171	3.895E-01	1.634E+01	1.293E+01	8.335E+00	NOT IDENT.
LU-176	1.648E-02	2.891E-02	2.298E-02	1.475E-02	FAIL ABUN
LU-177	2.001E+00	1.540E+00	9.576E-01	7.856E-01	FAIL ABUN
LU-177M	-9.151E-02	1.992E-01	1.666E-01	1.016E-01	NOT IDENT.
HF-181	1.024E-02	4.754E-02	4.107E-02	2.426E-02	NOT IDENT.
W-181	8.038E-02	2.003E-01	1.610E-01	1.022E-01	NOT IDENT.
TA-182	-3.087E-02	2.331E-01	1.911E-01	1.189E-01	FAIL ABUN
RE-183	1.926E-02	1.076E-01	9.326E-02	5.488E-02	FAIL ABUN
RE-184	-4.696E-02	2.385E-01	1.978E-01	1.217E-01	NOT IDENT.
OS-185	-5.625E-03	4.873E-02	4.022E-02	2.486E-02	NOT IDENT.
RE-188	-8.114E-02	1.786E-01	1.510E-01	9.111E-02	NOT IDENT.
W-188	-5.825E-02	8.345E+00	6.392E+00	4.258E+00	FAIL ABUN
IR-192	1.827E-02	3.536E-02	3.176E-02	1.804E-02	FAIL ABUN
AU-195	3.245E-01	1.996E-01	1.732E-01	1.018E-01	FAIL ABUN
TL-200	1.324E+01	2.423E+02	0.000E+00	1.236E+02	SHORT HLIF
TL-201	6.535E-01	5.431E+00	4.689E+00	2.771E+00	NOT IDENT.
TL-202	-5.862E-03	7.319E-02	6.239E-02	3.734E-02	NOT IDENT.
HG-203	4.274E-02	4.814E-02	3.901E-02	2.456E-02	NOT IDENT.
BI-207	4.937E-02	6.822E-02	6.065E-02	3.480E-02	FAIL ABUN
TL-207	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
TL-208	5.139E-01	9.093E-02	7.138E-02	4.639E-02	FAIL ABUN
PO-209	1.204E+00	8.982E+00	7.731E+00	4.583E+00	NOT IDENT.
PB-211	-4.830E-01	1.085E+00	8.749E-01	5.536E-01	NOT IDENT.
BI-212	1.242E+00	6.374E-01	3.774E-01	3.252E-01	FAIL ABUN
PO-215	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
RN-219	8.609E-02	4.503E-01	3.924E-01	2.297E-01	FAIL ABUN
RN-220	1.630E+01	3.173E+01	2.771E+01	1.619E+01	NOT IDENT.
RA-223	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
AC-227	3.798E-01	4.104E-01	3.573E-01	2.094E-01	FAIL ABUN
TH-227	3.798E-01	4.119E-01	3.573E-01	2.101E-01	FAIL ABUN
TH-229	-3.027E-01	5.302E-01	4.393E-01	2.705E-01	FAIL ABUN
PA-231	1.936E-01	1.699E+00	1.374E+00	8.670E-01	FAIL ABUN
TH-231	6.861E-01	7.312E-01	5.907E-01	3.731E-01	FAIL ABUN
U-231	-1.664E-01	8.258E-01	6.347E-01	4.213E-01	FAIL ABUN
PA-233	-3.097E-02	6.616E-02	5.644E-02	3.376E-02	FAIL ABUN
PA-234	-3.621E-02	3.796E-01	3.191E-01	1.937E-01	FAIL ABUN
PA-234M	-6.815E+00	8.406E+00	6.568E+00	4.289E+00	NOT IDENT.
U-235	4.600E-02	2.195E-01	1.871E-01	1.120E-01	FAIL ABUN
NP-236	-3.885E-02	7.962E-02	6.701E-02	4.062E-02	NOT IDENT.
NP-239	-1.434E-02	1.764E-01	1.538E-01	9.002E-02	FAIL ABUN
AM-241	3.767E-02	6.563E-02	5.339E-02	3.348E-02	NOT IDENT.
CM-243	2.693E-02	8.591E-02	7.642E-02	4.383E-02	FAIL ABUN
CM-247	4.753E-03	4.004E-02	3.476E-02	2.043E-02	FAIL ABUN
CF-249	7.755E-03	4.325E-02	3.776E-02	2.207E-02	NOT IDENT.
CF-251	9.421E-02	1.218E-01	1.078E-01	6.214E-02	NOT IDENT.
ANH-511	3.056E-02	4.927E-02	4.727E-02	2.514E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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```

ENERGY	MDA COUNTS
46.50	364.7112
46.50	364.7112
46.50	364.7112
48.70	359.2905
49.72	378.4559
51.35	372.0956
52.39	355.3373
52.97	360.1935
53.15	360.3180
53.44	377.4742
54.07	391.3302
56.28	416.2829
56.28	416.2856
57.37	0.0000
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57.53	407.9991
57.60	408.0493
57.98	400.7905
57.98	400.7905
59.32	376.7447
59.32	376.7447
59.40	389.7919
59.54	417.3267
59.72	417.4616
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61.10	474.9614
61.14	474.9954
61.30	475.1295
63.00	488.5307
63.29	488.7759
63.29	488.7759
63.58	489.0201
64.28	538.7521
65.12	498.6966
65.20	498.7639
65.20	498.7639
66.05	495.1006
66.72	507.3520
66.83	507.4473
66.91	526.5286
67.20	526.7845
67.20	526.7845
67.75	490.6511
67.85	468.7598
68.90	489.1378
68.90	489.1378
69.30	524.9429
69.67	528.9368
70.82	552.0035
70.82	552.0035
70.83	552.0104
72.80	469.7683
72.87	469.8208
72.87	469.8208
74.67	471.1547
74.81	471.2576
74.81	471.2576
74.81	471.2576
74.81	471.2576
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74.97	471.3760
75.28	471.6032
75.70	471.9100
77.11	472.9372
77.11	472.9372
77.11	472.9372

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77.11	472.9372
77.11	472.9372
78.38	409.6181
79.62	391.7313
79.80	391.8370
79.80	391.8370
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80.18	403.2614
80.30	403.3339
80.30	403.3339
80.57	392.2888
81.00	392.5388
81.07	392.5804
81.07	392.5804
81.07	392.5804
81.07	392.5804
82.60	402.2118
83.37	427.6740
83.78	414.4178
83.78	414.4178
83.78	414.4178
83.78	414.4178
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84.90	371.2889
85.43	371.5722
86.29	372.0303
86.50	372.1418
86.54	372.1629
86.59	372.1900
86.72	372.2593
86.79	372.2955
86.94	372.3753
87.30	372.5652
87.30	372.5652
87.30	372.5652
87.30	372.5652
87.30	372.5652
87.30	372.5652
87.57	372.7083
87.88	372.8711
88.03	372.9509
88.36	373.1242
88.47	373.1815
89.95	373.9560
91.11	374.5572
92.29	375.1659
92.38	375.2126
92.38	375.2126
93.35	375.7099
94.00	322.9196
94.67	324.7340
94.67	324.7366
94.90	337.0371
94.90	337.0371
94.90	337.0371
94.90	337.0371
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95.87	368.0178
96.73	373.0278
97.43	348.8898
98.44	275.8063
98.44	275.8063
98.88	275.9656
99.55	279.4966
99.55	279.4966
99.86	310.8593
100.00	310.9161
100.10	308.0789
103.18	379.6434
103.76	323.0323
105.00	290.7039
105.31	294.6823
108.00	370.3204
109.28	353.4304
111.00	332.7698
111.00	332.7698

111.76	361.3211
112.95	316.0021
115.19	300.2263
116.30	298.6637
117.00	298.9103
117.00	298.9103
117.66	328.5669
121.11	270.8049
121.62	273.9193
121.78	268.0571
122.06	268.1432
122.32	275.1259
122.32	275.1259
122.32	275.1259
122.32	275.1259
123.07	279.7330
127.23	287.1701
129.76	324.5722
131.20	342.6169
133.02	289.0079
133.54	293.9643
135.34	318.1456
136.00	319.3724
136.25	328.4705
136.48	328.5505
140.51	328.9485
140.51	0.0000
142.18	348.6714
142.65	332.7090
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144.24	295.8926
144.24	295.8926
144.24	295.8926
145.22	260.8089
145.44	253.7901
147.16	321.0873
152.43	241.3315
152.70	249.5440
153.22	250.6921
154.21	307.0420
154.21	307.0420
154.21	307.0420
154.21	307.0420
155.03	325.6661
156.02	293.2821
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159.00	256.2141
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161.27	284.5066
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162.64	260.1959
163.35	251.1112
163.89	266.6847
165.85	268.2103
167.43	262.4084
171.28	259.2010
171.86	279.0501
172.10	279.1117
176.55	212.5275
176.60	212.5368
181.06	227.6141
184.41	241.7168
185.71	258.3758
186.00	258.4415
190.27	251.3848
192.34	224.5467
193.63	270.7188
197.04	266.1973
198.01	246.2469
198.60	243.1815
200.40	282.8990
201.83	287.1888
202.84	259.1719
205.31	268.2415
208.36	264.4105
208.81	264.5067

209.75	231.4858
209.75	231.4858
210.97	223.1296
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216.55	223.0455
218.09	245.9708
222.10	241.3304
223.80	229.7271
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227.00	215.0836
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227.20	212.9439
228.16	198.9653
228.18	198.9695
228.18	198.9695
231.56	0.0000
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236.00	209.9868
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238.63	209.2997
238.63	209.2997
239.00	209.3580
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241.98	209.8163
241.98	209.8163
241.98	209.8163
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247.94	151.8102
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252.85	180.4662
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264.65	159.2613
268.24	150.4043
268.79	166.5804
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269.46	157.6975
269.46	157.6975
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273.65	152.7531
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277.60	159.1639
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284.30	170.8035
285.00	158.9365
285.90	162.1510
286.10	165.7968
286.10	165.7968
287.40	176.8163
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290.80	166.6046
291.72	163.6721
293.26	0.0000
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295.21	167.0768
295.21	167.0768
295.96	167.1574

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297.23	114.0625
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300.09	114.2700
300.09	114.2700
300.10	114.2708
300.12	114.2715
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303.91	163.4171
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304.40	164.9949
304.84	165.0410
306.84	142.2946
308.46	157.2438
311.98	159.3260
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319.41	150.7969
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323.87	115.9531
323.87	115.9531
323.87	115.9531
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334.20	130.6655
334.30	130.6724
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338.28	132.8477
338.28	132.8477
338.28	132.8477
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338.32	132.8511
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351.92	125.4051
351.92	125.4051
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367.94	0.0000
369.80	140.9415
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383.85	128.5791
387.95	125.9740
388.63	124.0948
391.69	125.2583
391.69	125.2583
392.90	132.0866
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439.56	116.4674
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445.03	123.7015
445.03	123.7015
445.03	123.7015
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513.99	252.2177
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569.50	72.1047
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602.71	112.9297
603.60	111.2010
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604.70	97.1228
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609.31	82.7874
609.31	82.7874

609.31	82.7874
610.33	82.8198
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614.37	67.3504
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621.84	94.9123
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633.10	83.5320
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636.97	67.5650
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661.65	104.9689
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696.49	90.9292
697.00	87.6582
697.49	93.1514
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698.50	94.2809
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722.78	63.1655
722.89	71.0643
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733.00	76.0580
735.90	49.9614
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747.13	73.3633
751.79	62.3150
752.31	61.3943
753.82	57.7024
755.35	59.5938
756.15	67.0605
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763.93	86.8375
765.79	80.3503
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768.36	64.5204
768.36	64.5204
768.36	64.5204
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778.57	57.2260
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795.84	69.8011
796.30	63.0730
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805.60	58.6611
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884.67	48.4406
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896.60	61.2453
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899.00	56.4235
903.28	62.8229
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911.07	57.5932
911.07	57.5932
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934.06	36.3511
934.06	36.3511
934.06	36.3511
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944.10	48.2743
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949.00	58.2042
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964.01	62.8298
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969.11	103.1600
969.11	103.1600
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1038.57	61.6230

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1050.47	45.5969
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1076.63	52.0168
1077.35	58.1481
1085.78	53.1574
1099.22	76.9257
1112.02	66.6721
1112.84	67.2341
1115.52	67.0805
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1120.29	65.3901
1120.29	65.3901
1120.29	65.3901
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1124.00	0.0000
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1147.95	0.0000
1167.94	65.6891
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1175.09	75.1992
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1189.05	80.6814
1204.90	63.0981
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1213.00	71.6413
1221.42	67.5573
1230.97	77.2239
1235.34	86.8280
1236.41	0.0000
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1238.11	83.7028
1238.11	83.7028
1238.11	83.7028
1238.25	83.7061
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1271.85	44.8335
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1274.54	60.8826
1291.56	58.9634
1298.22	0.0000
1312.09	40.9177
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1325.50	31.3164
1332.49	23.7922
1333.61	31.3706
1360.21	28.9036
1362.66	0.0000
1365.15	23.3337
1368.21	17.7442
1368.53	0.0000
1376.25	19.6450
1377.67	24.3297
1377.67	24.3297
1377.67	24.3297
1377.67	24.3297
1384.27	24.3623
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1395.20	30.0513
1407.95	25.4217
1434.06	29.3414
1436.60	15.1518
1457.56	0.0000
1460.81	8.3258
1489.15	22.9629
1509.49	12.4872
1596.49	6.8342
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1691.02	13.9014
1691.02	13.9014

1706.46	0.0000
1750.46	0.0000
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1764.49	10.0558
1764.49	10.0558
1764.49	10.0558
1770.23	15.8533
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1791.20	0.0000
1808.65	9.1174
1836.01	10.1765

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232347001

Total Uranium Activity	3.1186E+00	ug/g
Total Uranium Counting Unc.	2.6245E+00	ug/g
Total Uranium Tpu	1.3390E-06	ug/g
Total Uranium Mda	1.5512E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232347001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM05            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:10:14.06    SAMPLE ALQT:  126.580 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.961E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.367E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.346E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.628E+00
```

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:49:54.22

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232357001.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:13:00.
Sample ID         : G232357001           Sample quantity  : 1.12850E+02 GRAM
Detector name     : GAM15                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.14  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.05*	36	296	0.70	126.61	122	9	5.00E-03	91.4	
2	2	74.93*	162	372	1.26	150.35	146	21	2.25E-02	22.6	1.59E+00
3	2	77.28*	369	280	1.21	155.04	146	21	5.13E-02	9.8	
4	2	87.38	175	244	1.27	175.24	172	27	2.44E-02	15.5	1.32E+00
5	2	89.90	82	269	1.21	180.28	172	27	1.13E-02	35.3	
6	2	92.88*	139	361	1.62	186.22	172	27	1.93E-02	29.2	
7	0	185.56*	132	358	1.23	371.51	367	12	1.83E-02	31.0	
8	3	238.71*	810	163	1.30	477.77	469	20	1.12E-01	4.8	1.23E+00
9	3	241.47	204	230	2.00	483.27	469	20	2.84E-02	21.7	
10	0	295.22*	169	212	0.93	590.74	587	11	2.35E-02	18.7	
11	0	299.80	54	149	1.63	599.89	597	9	7.46E-03	43.5	
12	0	338.60*	133	173	1.30	677.46	671	12	1.85E-02	22.2	
13	0	351.95*	402	151	1.39	704.15	698	13	5.59E-02	8.3	
14	0	511.05*	143	113	2.37	1022.23	1013	21	1.99E-02	23.1	
15	0	583.22*	261	99	1.27	1166.53	1160	14	3.62E-02	10.5	
16	0	609.16*	306	91	1.65	1218.38	1212	13	4.25E-02	8.9	
17	0	727.36	66	57	1.17	1454.71	1449	11	9.13E-03	25.5	
18	0	911.07*	192	49	1.49	1822.05	1815	15	2.67E-02	11.1	
19	0	969.16*	98	38	2.02	1938.19	1932	12	1.36E-02	17.1	
20	0	1121.51*	49	59	1.62	2242.83	2235	17	6.86E-03	40.1	
21	0	1460.51*	1152	26	2.31	2920.75	2912	16	1.60E-01	3.1	
22	0	1587.13	26	3	0.76	3173.97	3167	12	3.57E-03	24.0	
23	0	1764.55	74	6	2.80	3528.80	3520	21	1.03E-02	14.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 13-JUL-2009 18:49:56

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232357001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:13:00
Sample ID : G232357001 Sample quantity : 112.85 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA15 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.14 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.595E+01	3.547E+00	4.169E-01	3.187E-02	86.222
CD-109	+	88.03	*	3.584E+00	1.187E+00	1.773E+00	2.050E-01	2.021
SN-126	+	64.28		7.019E-01	1.289E+00	1.416E+00	2.428E-01	0.496
	+	86.94		1.467E+00	7.669E-01	7.468E-01	3.140E-01	1.964
	+	87.57	*	3.529E-01	1.169E-01	1.760E-01	2.030E-02	2.005
TL-208		277.35		3.611E-01	4.940E-01	8.530E-01	9.558E-02	0.423
	+	510.84		8.968E-01	4.248E-01	2.701E-01	2.719E-02	3.320
	+	583.14	*	4.620E-01	1.018E-01	7.465E-02	4.753E-03	6.188
		860.37		4.573E-01	4.228E-01	7.498E-01	6.445E-02	0.610
BI-211		72.87		1.252E+01	5.541E+00	8.663E+00	9.659E-01	1.445
	+	351.07	*	3.228E+00	5.791E-01	4.533E-01	3.115E-02	7.121
PB-212	+	74.81		1.556E+00	7.377E-01	8.596E-01	1.248E-01	1.810
	+	77.11		1.950E+00	4.389E-01	4.735E-01	5.258E-02	4.119
	+	87.30		1.632E+00	5.647E-01	8.444E-01	1.288E-01	1.933
	+	238.63	*	1.433E+00	1.813E-01	1.145E-01	9.475E-03	12.523
	+	300.09		1.462E+00	1.280E+00	1.488E+00	1.335E-01	0.983
PO-212	+	74.81		1.556E+00	7.377E-01	8.596E-01	1.248E-01	1.810
	+	77.11		1.950E+00	4.389E-01	4.735E-01	5.258E-02	4.119
	+	87.30		1.632E+00	5.647E-01	8.444E-01	1.288E-01	1.933
		115.19		2.804E+00	4.545E+00	7.611E+00	5.824E-01	0.368
	+	238.63	*	1.433E+00	1.813E-01	1.145E-01	9.475E-03	12.523
	+	300.09		1.462E+00	1.280E+00	1.488E+00	1.335E-01	0.983
BI-214	+	609.31	*	1.020E+00	1.962E-01	1.429E-01	1.061E-02	7.139
		768.36		5.564E-01	8.408E-01	1.476E+00	1.299E-01	0.377
		934.06		4.382E-01	1.528E+00	2.584E+00	2.681E-01	0.170
	+	1120.29		8.629E-01	6.964E-01	5.275E-01	4.867E-02	1.636
		1238.11		3.672E-02	1.330E+00	2.162E+00	1.861E-01	0.017
		1377.67		1.108E+00	1.391E+00	2.490E+00	2.444E-01	0.445
	+	1764.49		1.768E+00	5.075E-01	3.318E-01	2.065E-02	5.329
PB-214	+	74.81		2.681E+00	1.262E+00	1.481E+00	1.978E-01	1.810
	+	77.11		3.343E+00	7.943E-01	8.117E-01	1.093E-01	4.119
	+	87.30		2.796E+00	9.508E-01	1.447E+00	2.005E-01	1.933
	+	241.98		2.173E+00	9.614E-01	6.508E-01	5.817E-02	3.339
	+	295.21		8.090E-01	3.118E-01	2.836E-01	2.623E-02	2.852

Sample ID : G232357001 Acquisition date : 6-JUL-2009 11:13:00

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.123E+00	2.098E-01	1.580E-01	1.362E-02	7.107
PO-214	+	74.81		2.681E+00	1.262E+00	1.481E+00	1.978E-01	1.810
	+	77.11		3.343E+00	7.943E-01	8.117E-01	1.093E-01	4.119
	+	87.30		2.796E+00	9.508E-01	1.447E+00	2.005E-01	1.933
	+	241.98		2.173E+00	9.614E-01	6.508E-01	5.817E-02	3.339
	+	295.21		8.090E-01	3.118E-01	2.836E-01	2.623E-02	2.852
	+	351.92	*	1.123E+00	2.098E-01	1.580E-01	1.362E-02	7.107
PO-216	+	74.81		1.556E+00	7.377E-01	8.596E-01	1.248E-01	1.810
	+	77.11		1.950E+00	4.389E-01	4.735E-01	5.258E-02	4.119
	+	87.30		1.632E+00	5.647E-01	8.444E-01	1.288E-01	1.933
	+	238.63	*	1.433E+00	1.813E-01	1.145E-01	9.475E-03	12.523
	+	300.09		1.462E+00	1.280E+00	1.488E+00	1.335E-01	0.983
PO-218	+	74.81		2.681E+00	1.262E+00	1.481E+00	1.978E-01	1.810
	+	77.11		3.343E+00	7.943E-01	8.117E-01	1.093E-01	4.119
	+	87.30		2.796E+00	9.508E-01	1.447E+00	2.005E-01	1.933
	+	241.98		2.173E+00	9.614E-01	6.508E-01	5.817E-02	3.339
	+	295.21		8.090E-01	3.118E-01	2.836E-01	2.623E-02	2.852
	+	351.92	*	1.123E+00	2.098E-01	1.580E-01	1.362E-02	7.107
RA-224	+	240.98	*	4.120E+00	1.808E+00	1.302E+00	9.064E-02	3.163
RA-226	+	609.31	*	1.020E+00	1.962E-01	1.429E-01	1.061E-02	7.139
		768.36		5.564E-01	8.408E-01	1.476E+00	1.299E-01	0.377
		934.06		4.382E-01	1.528E+00	2.584E+00	2.681E-01	0.170
	+	1120.29		8.629E-01	6.964E-01	5.275E-01	4.867E-02	1.636
		1238.11		3.672E-02	1.330E+00	2.162E+00	1.861E-01	0.017
		1377.67		1.108E+00	1.391E+00	2.490E+00	2.444E-01	0.445
	+	1764.49		1.768E+00	5.075E-01	3.318E-01	2.065E-02	5.329
AC-228	+	338.32		1.181E+00	7.123E-01	4.948E-01	2.022E-01	2.387
	+	911.07	*	1.509E+00	3.751E-01	2.627E-01	2.920E-02	5.744
	+	969.11		1.358E+00	5.597E-01	5.848E-01	1.352E-01	2.323
RA-228	+	338.32		1.181E+00	7.123E-01	4.948E-01	2.022E-01	2.387
	+	911.07	*	1.509E+00	3.751E-01	2.627E-01	2.920E-02	5.744
	+	969.11		1.358E+00	5.597E-01	5.848E-01	1.352E-01	2.323
TH-228		84.40		1.111E+00	5.237E+00	5.602E+00	8.437E-01	0.198
	+	238.60	*	1.433E+00	1.813E-01	1.145E-01	9.474E-03	12.524
	+	300.10		1.462E+00	1.538E+00	1.488E+00	8.786E-01	0.982
TH-230	+	609.31	*	1.020E+00	1.962E-01	1.429E-01	1.061E-02	7.139
		768.36		5.564E-01	8.408E-01	1.476E+00	1.299E-01	0.377
		934.06		4.381E-01	1.528E+00	2.584E+00	2.681E-01	0.170
	+	1120.29		8.629E-01	6.964E-01	5.275E-01	4.867E-02	1.636
		1238.11		3.672E-02	1.330E+00	2.162E+00	1.861E-01	0.017
		1377.67		1.108E+00	1.391E+00	2.490E+00	2.444E-01	0.445
	+	1764.49		1.768E+00	5.075E-01	3.318E-01	2.065E-02	5.329
TH-232	+	338.32		1.181E+00	5.293E-01	4.948E-01	3.185E-02	2.387
	+	911.07	*	1.509E+00	3.751E-01	2.627E-01	2.920E-02	5.744
	+	969.11		1.358E+00	5.597E-01	5.848E-01	1.352E-01	2.323
TH-234	+	63.29	*	1.773E+00	3.261E+00	3.878E+00	7.653E-01	0.457
	+	92.38		1.761E+00	1.081E+00	1.120E+00	2.134E-01	1.573
U-234	+	609.31	*	1.020E+00	1.962E-01	1.429E-01	1.061E-02	7.139
		768.36		5.564E-01	8.408E-01	1.476E+00	1.299E-01	0.377

Sample ID : G232357001 Acquisition date : 6-JUL-2009 11:13:00

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		4.381E-01	1.528E+00	2.584E+00	2.681E-01	0.170
	+	1120.29		8.629E-01	6.964E-01	5.275E-01	4.867E-02	1.636
		1238.11		3.672E-02	1.330E+00	2.162E+00	1.861E-01	0.017
		1377.67		1.108E+00	1.391E+00	2.490E+00	2.444E-01	0.445
	+	1764.49		1.768E+00	5.075E-01	3.318E-01	2.065E-02	5.329
NP-237	+	86.50	*	1.036E+00	4.044E-01	5.169E-01	1.220E-01	2.005
		95.87		-1.480E+00	1.359E+00	2.048E+00	5.139E-01	-0.723
U-238	+	63.29	*	1.773E+00	3.261E+00	3.878E+00	7.653E-01	0.457
	+	92.38		1.761E+00	1.044E+00	1.120E+00	1.178E-01	1.573
AM-243	+	74.67	*	2.523E-01	1.173E-01	1.401E-01	1.556E-02	1.801
	+	86.72		3.886E+01	1.287E+01	1.986E+01	2.280E+00	1.956
		117.66		-6.180E-01	4.884E+00	7.923E+00	5.918E-01	-0.078
		142.18		4.369E+00	2.283E+01	3.659E+01	2.493E+00	0.119
ANH-511	+	511.00	*	1.937E-01	9.032E-02	5.836E-02	3.295E-03	3.319

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.285E-02	4.165E-01	6.779E-01	4.517E-02	-0.034
NA-22		1274.54	*	-3.956E-02	6.022E-02	9.037E-02	6.202E-03	-0.438
NA-24		1368.53	*	-1.400E-01	6.022E-02	Half-Life too short		
AL-26		1129.67		8.890E-01	2.381E+00	3.518E+00	2.216E-01	0.253
		1808.65	*	1.532E-02	2.421E-02	4.707E-02	2.817E-03	0.325
TI-44		67.85		-5.095E-02	8.561E-02	1.201E-01	1.370E-02	-0.424
	+	78.38	*	3.599E-01	8.098E-02	1.162E-01	1.292E-02	3.097
SC-46		889.25	*	5.651E-03	5.218E-02	8.718E-02	7.313E-03	0.065
	+	1120.51		1.463E-01	1.177E-01	1.333E-01	8.555E-03	1.098
V-48		944.10		-1.138E+00	1.138E+00	1.688E+00	1.388E-01	-0.674
		983.50	*	1.771E-02	8.465E-02	1.422E-01	1.123E-02	0.125
		1312.09		1.591E-02	9.386E-02	1.550E-01	1.131E-02	0.103
CR-51		320.08	*	-1.241E-02	4.648E-01	7.723E-01	5.570E-02	-0.016
MN-52		744.21		-4.567E-02	2.576E-01	4.242E-01	2.602E-02	-0.108
		848.13		3.647E+00	7.012E+00	1.219E+01	9.398E-01	0.299
		935.52		2.521E-01	2.847E-01	5.058E-01	4.189E-02	0.498
		1246.25		-1.684E-01	9.512E+00	1.540E+01	1.004E+00	-0.011
		1333.61		3.166E+00	5.380E+00	9.356E+00	7.061E-01	0.338
		1434.06	*	6.943E-02	2.361E-01	4.110E-01	3.047E-02	0.169
MN-54		834.83	*	-1.400E-03	4.423E-02	7.326E-02	5.491E-03	-0.019
CO-56		846.75	*	5.575E-03	4.744E-02	7.960E-02	6.118E-03	0.070
		977.42		-1.363E+00	3.677E+00	5.672E+00	4.511E-01	-0.240
		1037.82		-5.445E-02	3.967E-01	6.416E-01	5.077E-02	-0.085
		1175.09		-1.994E-01	3.092E+00	5.002E+00	2.859E-01	-0.040
		1238.25		4.015E-02	1.315E-01	2.182E-01	1.475E-02	0.184
		1360.21		-9.824E-02	1.370E+00	2.188E+00	1.646E-01	-0.045
		1771.40		-2.732E-02	3.357E-01	4.607E-01	2.850E-02	-0.059
CO-57		122.06	*	2.826E-03	3.226E-02	5.278E-02	3.794E-03	0.054
		136.48		-1.281E-01	2.651E-01	4.207E-01	3.229E-02	-0.304
CO-58		810.76	*	-7.719E-02	4.708E-02	6.490E-02	4.636E-03	-1.189

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		-9.927E-01	3.527E+00	5.537E+00	3.770E-01	-0.179
		192.34		-7.825E-01	1.341E+00	1.909E+00	2.354E-01	-0.410
		1099.22	*	5.572E-02	1.202E-01	2.049E-01	1.551E-02	0.272
		1291.56		1.014E-01	1.727E-01	2.961E-01	2.498E-02	0.343
CO-60		1173.22		-3.295E-02	6.412E-02	9.940E-02	5.661E-03	-0.332
		1332.49	*	8.721E-03	5.007E-02	8.267E-02	6.240E-03	0.105
ZN-65		1115.52	*	-1.720E-01	1.416E-01	1.620E-01	1.053E-02	-1.062
GE-68		1077.35	*	-4.039E-01	1.796E+00	2.878E+00	2.000E-01	-0.140
AS-73		53.44	*	6.874E-01	2.190E+00	3.690E+00	5.043E-01	0.186
AS-74		595.88	*	4.579E-02	1.134E-01	1.892E-01	1.017E-02	0.242
		634.78		-3.977E-01	4.342E-01	6.331E-01	3.284E-02	-0.628
SE-75		66.05		-7.803E-01	8.778E+00	1.269E+01	1.645E+00	-0.061
		96.73		-1.480E+00	1.082E+00	1.642E+00	2.356E-01	-0.901
		121.11		1.511E-02	1.718E-01	2.811E-01	2.867E-02	0.054
		136.00		-4.577E-03	5.002E-02	8.090E-02	5.634E-03	-0.057
		198.60		-1.006E+00	2.230E+00	3.487E+00	2.783E-01	-0.288
		264.65	*	-2.103E-02	5.527E-02	9.081E-02	6.351E-03	-0.232
		279.53		-1.595E-02	1.436E-01	2.390E-01	1.744E-02	-0.067
		303.91		-1.893E+00	3.086E+00	4.243E+00	4.308E-01	-0.446
		400.65		1.238E-02	3.166E-01	5.231E-01	4.724E-02	0.024
BR-77	+	87.88		5.547E+02	1.837E+02	3.338E+02	3.859E+01	1.662
		200.40		-1.069E+02	1.514E+02	2.334E+02	1.595E+01	-0.458
	+	239.00		1.646E+02	1.947E+01	3.236E+01	2.252E+00	5.087
		249.79		6.794E+00	6.019E+01	1.017E+02	7.081E+00	0.067
		281.68		-4.977E+01	8.672E+01	1.407E+02	9.694E+00	-0.354
		297.23		1.663E+02	9.596E+01	1.119E+02	7.613E+00	1.486
		303.76		-1.217E+02	1.888E+02	2.591E+02	1.752E+01	-0.470
		439.47		-1.221E+02	1.271E+02	1.930E+02	1.103E+01	-0.632
		484.57		3.815E+01	2.146E+02	3.551E+02	2.020E+01	0.107
		520.65	*	-6.155E-01	1.125E+01	1.650E+01	9.284E-01	-0.037
		574.64		1.836E+02	1.950E+02	3.314E+02	1.810E+01	0.554
		578.91		3.504E+01	8.814E+01	1.288E+02	7.013E+00	0.272
		585.48		1.309E+03	2.439E+02	4.569E+02	2.476E+01	2.865
		755.35		4.236E+01	1.526E+02	2.604E+02	1.639E+01	0.163
		817.79		2.283E+01	1.154E+02	1.955E+02	1.413E+01	0.117
SR-82		698.33		-1.359E+01	4.217E+01	6.900E+01	3.799E+00	-0.197
		776.49	*	-7.439E-01	4.462E-01	6.215E-01	4.102E-02	-1.197
		1395.20		1.098E+00	1.355E+01	2.291E+01	1.713E+00	0.048
RB-83		520.41	*	1.353E-03	1.027E-01	1.516E-01	8.531E-03	0.009
		529.64		-6.227E-02	1.409E-01	2.213E-01	1.240E-02	-0.281
		552.65		-2.998E-01	2.544E-01	3.703E-01	2.051E-02	-0.810
RB-84		881.50	*	-3.815E-02	9.568E-02	1.529E-01	1.262E-02	-0.250
KR-85		513.99	*	2.141E+01	9.875E+00	1.813E+01	1.023E+00	1.181
SR-85		513.99	*	1.085E-01	5.002E-02	9.184E-02	5.181E-03	1.181
RB-86		1076.63	*	4.817E-01	1.079E+00	1.836E+00	1.277E-01	0.262
Y-88		898.02		4.534E-02	5.162E-02	9.201E-02	7.894E-03	0.493
		1836.01	*	-2.558E-02	4.158E-02	5.906E-02	3.450E-03	-0.433
ZR-88		392.90	*	-2.691E-02	4.193E-02	6.634E-02	3.763E-03	-0.406
Y-91		1204.90	*	3.054E+00	2.703E+01	4.434E+01	2.682E+00	0.069

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	7.850E-03	4.366E-02	7.415E-02	4.125E-03	0.106
		871.10		-3.702E-02	4.643E-02	7.122E-02	5.757E-03	-0.520
NB-95		765.79	*	2.411E-02	4.843E-02	8.411E-02	5.420E-03	0.287
NB-95M		235.69	*	2.654E-01	1.854E-01	2.924E-01	2.471E-02	0.908
ZR-95		724.18		9.484E-02	1.303E-01	2.031E-01	1.403E-02	0.467
		756.15	*	8.172E-03	9.001E-02	1.514E-01	1.129E-02	0.054
NB-97		657.90	*	2.229E-02	9.001E-02	Half-Life too short		
		1024.50		-2.563E+00	9.001E-02	Half-Life too short		
ZR-97		254.15		-1.707E+00	9.001E-02	Half-Life too short		
		355.39		1.307E+00	9.001E-02	Half-Life too short		
		507.63	*	2.179E+00	9.001E-02	Half-Life too short		
		602.52		-2.070E+00	9.001E-02	Half-Life too short		
		1021.30		-1.422E-02	9.001E-02	Half-Life too short		
		1147.95		1.198E+00	9.001E-02	Half-Life too short		
		1362.66		4.753E-01	9.001E-02	Half-Life too short		
		1750.46		7.880E-01	9.001E-02	Half-Life too short		
MO-99		140.51		-1.400E+01	2.649E+01	4.083E+01	1.110E+01	-0.343
		181.06		-5.969E+00	1.901E+01	2.609E+01	4.559E+00	-0.229
		366.43		-8.785E+01	7.966E+01	1.216E+02	7.387E+00	-0.722
		739.58	*	1.446E+00	1.088E+01	1.839E+01	2.556E+00	0.079
		778.00		-1.777E+01	2.987E+01	4.700E+01	3.113E+00	-0.378
TC-99M		140.51	*	-1.134E+09	2.987E+01	Half-Life too short		
RH-101		127.23		3.856E-02	4.219E-02	7.114E-02	5.012E-03	0.542
		198.01	*	7.980E-03	4.094E-02	6.628E-02	4.522E-03	0.120
		325.23		1.975E-02	2.876E-01	4.802E-01	3.158E-02	0.041
RH-102		418.52		-1.001E-02	3.671E-01	5.901E-01	3.366E-02	-0.017
		475.06	*	6.578E-03	3.808E-02	6.303E-02	3.593E-03	0.104
		631.29		-1.206E-02	7.499E-02	1.192E-01	6.203E-03	-0.101
		697.49		-9.113E-02	9.525E-02	1.474E-01	8.096E-03	-0.618
		766.84		2.062E-02	1.243E-01	2.102E-01	1.358E-02	0.098
		1046.59		1.043E-01	1.451E-01	2.545E-01	1.855E-02	0.410
		1112.84		-1.045E-01	3.211E-01	4.475E-01	2.917E-02	-0.233
RU-103		497.08	*	-2.552E-02	5.028E-02	7.851E-02	9.881E-03	-0.325
	+	610.33		1.080E+01	2.525E+00	3.277E+00	4.995E-01	3.294
RH-106	+	511.85		9.655E-01	4.501E-01	5.613E-01	3.169E-02	1.720
		621.84	*	-4.260E-01	4.104E-01	5.942E-01	6.819E-02	-0.717
		1050.47		-1.121E+00	2.889E+00	4.539E+00	3.291E-01	-0.247
RU-106	+	511.85		9.655E-01	4.501E-01	5.613E-01	3.169E-02	1.720
		621.84	*	-4.260E-01	4.081E-01	5.942E-01	3.122E-02	-0.717
		1050.47		-1.121E+00	2.889E+00	4.539E+00	3.291E-01	-0.247
AG-108M		433.93	*	5.465E-03	4.208E-02	6.972E-02	4.335E-03	0.078
		614.37		6.033E-03	5.479E-02	7.723E-02	4.500E-03	0.078
		722.95		3.386E-02	5.472E-02	8.489E-02	5.370E-03	0.399
AG-110M		657.75	*	2.145E-02	4.204E-02	7.071E-02	3.876E-03	0.303
		677.61		-8.363E-02	3.811E-01	5.986E-01	3.367E-02	-0.140
		706.67		-1.073E-01	2.689E-01	4.370E-01	2.611E-02	-0.246
		763.93		2.579E-03	1.890E-01	3.159E-01	2.129E-02	0.008
		884.67		1.033E-02	6.646E-02	1.115E-01	9.588E-03	0.093
		937.48		8.530E-02	1.439E-01	2.499E-01	2.147E-02	0.341

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1384.27		-5.282E-02	2.065E-01	3.345E-01	2.600E-02	-0.158
IN-111		171.28		-1.629E-01	1.024E+00	1.638E+00	1.093E-01	-0.099
		245.39	*	-2.347E-01	1.105E+00	1.593E+00	1.109E-01	-0.147
IN-113M		391.69	*	3.416E-02	5.978E-02	1.020E-01	6.187E-03	0.335
SN-113		391.69	*	3.416E-02	5.978E-02	1.020E-01	6.187E-03	0.335
IN-114M		190.27	*	1.891E-01	2.661E-01	3.900E-01	2.645E-02	0.485
CD-115		260.90		-1.647E+01	1.152E+02	1.918E+02	1.333E+01	-0.086
		492.35		1.629E+01	3.350E+01	5.659E+01	3.214E+00	0.288
		527.90	*	2.438E-01	1.034E+01	1.670E+01	9.369E-01	0.015
SN-117M		156.02		-1.034E+00	2.724E+00	4.325E+00	2.898E-01	-0.239
		158.56	*	-5.795E-03	6.766E-02	1.089E-01	7.282E-03	-0.053
SB-122		563.90	*	2.370E+00	1.969E+00	3.481E+00	1.915E-01	0.681
		692.80		2.398E+00	3.800E+01	6.408E+01	3.481E+00	0.037
I-123		159.00	*	3.930E-01	3.800E+01	Half-Life too short		
		528.96		1.989E+01	3.800E+01	Half-Life too short		
TE-123M		159.00	*	8.275E-03	3.648E-02	5.956E-02	4.021E-03	0.139
I-124		602.71	*	-4.483E-01	8.580E-01	1.123E+00	6.005E-02	-0.399
		722.78		2.860E+00	4.719E+00	7.311E+00	4.266E-01	0.391
		1325.50		-3.703E+00	3.791E+01	6.046E+01	4.512E+00	-0.061
		1376.25		3.552E+01	3.643E+01	6.485E+01	4.866E+00	0.548
		1509.49		3.452E+00	1.551E+01	2.664E+01	1.929E+00	0.130
		1691.02		1.661E-01	3.322E+00	5.548E+00	3.652E-01	0.030
SB-124		602.71		-3.111E-02	5.954E-02	7.795E-02	4.169E-03	-0.399
		645.85		-1.329E-01	6.541E-01	1.034E+00	6.154E-02	-0.129
		709.31		7.624E-01	3.468E+00	5.908E+00	3.339E-01	0.129
		713.82		7.064E-01	2.013E+00	3.462E+00	3.518E-01	0.204
		722.78		2.878E-01	4.747E-01	7.355E-01	4.492E-02	0.391
	+	968.20		1.380E+01	4.835E+00	8.073E+00	6.482E-01	1.709
		1045.16		8.827E-01	3.169E+00	5.337E+00	3.899E-01	0.165
		1325.50		-3.979E-01	4.074E+00	6.497E+00	4.848E-01	-0.061
		1368.21		-1.077E+00	2.119E+00	3.135E+00	4.011E-01	-0.344
		1436.60		5.252E-01	4.464E+00	7.577E+00	5.615E-01	0.069
		1691.02	*	3.941E-03	7.883E-02	1.317E-01	9.247E-03	0.030
SB-125		427.89	*	6.392E-02	1.201E-01	2.043E-01	1.218E-02	0.313
		463.38		2.466E-01	3.506E-01	6.014E-01	4.020E-02	0.410
		600.56		1.278E-01	2.419E-01	3.964E-01	2.509E-02	0.322
		635.90		-2.795E-01	3.410E-01	5.015E-01	3.145E-02	-0.557
TE-125M		109.28	*	-3.031E+00	1.214E+01	1.964E+01	1.951E+00	-0.154
I-126		388.63		1.622E-01	2.609E-01	4.464E-01	2.554E-02	0.363
		666.33	*	1.733E-01	2.163E-01	3.710E-01	1.888E-02	0.467
		753.82		1.798E+00	1.820E+00	3.262E+00	2.046E-01	0.551
SB-126		223.80		-2.008E-01	5.093E+00	8.108E+00	5.617E-01	-0.025
		278.60		1.616E+00	3.033E+00	5.203E+00	3.590E-01	0.311
	+	296.50		7.553E+00	2.873E+00	3.915E+00	2.666E-01	1.929
		414.70		-2.845E-02	8.653E-02	1.390E-01	7.924E-03	-0.205
		415.30		-5.252E-01	7.345E+00	1.202E+01	6.855E-01	-0.044
		555.20		1.980E+00	4.746E+00	7.958E+00	4.401E-01	0.249
		573.80		1.849E-01	1.265E+00	2.072E+00	1.132E-01	0.089
		593.00		-5.405E-01	1.094E+00	1.690E+00	9.109E-02	-0.320

---- Non-Identified Nuclides ----

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		656.30		-1.137E+00	3.924E+00	6.139E+00	3.108E-01	-0.185
		666.33		7.224E-02	9.015E-02	1.546E-01	7.869E-03	0.467
		675.00		-1.389E+00	2.406E+00	3.652E+00	1.899E-01	-0.380
		695.00		1.284E-02	8.909E-02	1.511E-01	8.252E-03	0.085
		697.00		-2.283E-01	3.112E-01	4.912E-01	2.695E-02	-0.465
		720.50	*	8.560E-02	1.845E-01	2.813E-01	1.633E-02	0.304
		856.80		-3.354E-01	6.020E-01	9.508E-01	7.463E-02	-0.353
		989.30		-6.570E-02	1.574E+00	2.578E+00	2.023E-01	-0.025
		1034.80		4.657E-01	1.092E+01	1.799E+01	1.334E+00	0.026
		1213.00		-3.251E+00	6.513E+00	1.012E+01	6.215E-01	-0.321
SB-127		61.10		1.058E+01	1.037E+02	1.522E+02	2.093E+01	0.070
		252.40		1.497E+00	4.599E+00	7.776E+00	3.238E+00	0.192
		290.80		-1.025E+01	2.572E+01	3.619E+01	3.428E+00	-0.283
		411.60		5.226E+00	1.219E+01	2.062E+01	2.902E+00	0.253
		444.90		-3.513E+00	1.024E+01	1.636E+01	1.701E+00	-0.215
		473.00		1.589E+00	1.737E+00	3.016E+00	3.254E-01	0.527
		543.00		-3.336E+00	1.726E+01	2.758E+01	3.451E+00	-0.121
		603.60		-1.251E+01	1.499E+01	1.883E+01	1.914E+00	-0.664
		685.20	*	-1.888E-01	1.334E+00	2.214E+00	1.935E-01	-0.085
		698.50		-4.683E+00	1.590E+01	2.605E+01	3.674E+00	-0.180
		722.20		2.157E+01	3.169E+01	4.948E+01	4.338E+00	0.436
		783.80		3.791E+00	3.457E+00	6.256E+00	6.783E-01	0.606
XE-127		57.60		-2.586E+00	1.552E+01	2.246E+01	2.861E+00	-0.115
		145.22		5.368E-01	8.582E-01	1.428E+00	9.689E-02	0.376
		172.10		1.944E-02	1.587E-01	2.572E-01	1.718E-02	0.076
		202.84	*	1.240E-02	6.041E-02	9.772E-02	6.690E-03	0.127
		374.96		-1.196E-01	2.510E-01	4.020E-01	2.389E-02	-0.297
I-131		80.18		-3.686E+00	5.923E+00	9.514E+00	1.065E+00	-0.387
		284.30		7.489E-01	1.774E+00	3.030E+00	2.249E-01	0.247
		364.48	*	2.637E-02	1.282E-01	2.151E-01	1.449E-02	0.123
		636.97		-5.477E-01	1.727E+00	2.698E+00	1.600E-01	-0.203
		722.89		5.126E+00	8.343E+00	1.294E+01	7.641E-01	0.396
TE-132		49.72		1.841E+00	4.829E+01	8.064E+01	1.192E+01	0.023
		111.76		7.978E-02	3.026E+01	4.945E+01	4.946E+00	0.002
		116.30		8.251E+00	2.765E+01	4.569E+01	4.441E+00	0.181
		228.16	*	2.175E-02	7.043E-01	1.189E+00	1.741E-01	0.018
BA-133		53.15		3.648E-01	9.655E+00	1.610E+01	2.207E+00	0.023
		79.62		1.547E+00	1.962E+00	3.297E+00	5.534E-01	0.469
		81.00		-1.423E-01	1.378E-01	2.143E-01	3.730E-02	-0.664
		276.40		2.384E-01	4.884E-01	8.348E-01	1.127E-01	0.286
		302.84		-6.537E-02	2.118E-01	2.993E-01	3.641E-02	-0.218
		356.01	*	3.426E-02	6.188E-02	9.315E-02	1.097E-02	0.368
		383.85		-1.250E-01	3.924E-01	6.342E-01	6.896E-02	-0.197
I-133	+	510.53		7.858E-01	3.924E-01	Half-Life too short		
		529.87	*	-2.098E-04	3.924E-01	Half-Life too short		
		706.58		-7.866E-02	3.924E-01	Half-Life too short		
		856.28		-4.112E-01	3.924E-01	Half-Life too short		
		875.33		6.405E-02	3.924E-01	Half-Life too short		
		1236.41		3.426E-01	3.924E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		1298.22		-6.000E-02	3.924E-01	Half-Life too short		
CS-134		475.35		-5.757E-01	2.535E+00	4.075E+00	2.323E-01	-0.141
		563.23		4.126E-01	4.608E-01	7.982E-01	4.495E-02	0.517
		569.32		-3.862E-01	2.594E-01	3.660E-01	2.073E-02	-1.055
		604.70		-1.005E-02	5.019E-02	6.826E-02	3.667E-03	-0.147
		795.84	*	1.066E-01	6.127E-02	1.145E-01	7.977E-03	0.931
		801.93		-2.531E-01	4.822E-01	7.638E-01	5.379E-02	-0.331
		1038.57		4.862E-01	5.054E+00	8.368E+00	6.171E-01	0.058
		1167.94		1.106E+00	3.486E+00	5.838E+00	3.369E-01	0.189
		1365.15		2.144E-01	1.507E+00	2.480E+00	1.975E-01	0.086
CS-135		268.24	*	2.000E-01	2.137E-01	3.723E-01	3.183E-02	0.537
I-135		288.45		4.487E+08	2.137E-01	Half-Life too short		
		417.63		-4.455E+08	2.137E-01	Half-Life too short		
		546.56		2.139E+08	2.137E-01	Half-Life too short		
		836.80		3.137E+08	2.137E-01	Half-Life too short		
		1038.76		1.727E+08	2.137E-01	Half-Life too short		
		1124.00		1.697E+09	2.137E-01	Half-Life too short		
		1131.51		-2.719E+08	2.137E-01	Half-Life too short		
		1260.41	*	-6.855E+07	2.137E-01	Half-Life too short		
		1457.56		6.038E+10	2.137E-01	Half-Life too short		
		1678.03		-1.044E+08	2.137E-01	Half-Life too short		
		1706.46		-1.289E+09	2.137E-01	Half-Life too short		
		1791.20		1.428E+08	2.137E-01	Half-Life too short		
CS-136		66.91		-1.586E-01	1.355E+00	1.955E+00	3.363E-01	-0.081
	+	86.29		4.334E+00	1.494E+00	2.634E+00	3.923E-01	1.646
		153.22		6.087E-01	7.803E-01	1.305E+00	1.041E-01	0.467
		163.89		6.519E-01	1.330E+00	2.193E+00	1.744E-01	0.297
		176.55		4.948E-02	4.648E-01	7.520E-01	5.513E-02	0.066
		273.65		-9.398E-01	5.902E-01	9.066E-01	6.903E-02	-1.037
		340.57		4.579E-01	1.885E-01	3.138E-01	2.116E-02	1.459
		818.51		1.938E-02	8.351E-02	1.419E-01	1.028E-02	0.137
		1048.07	*	3.266E-02	1.292E-01	2.171E-01	1.672E-02	0.150
		1235.34		2.703E-01	8.310E-01	1.381E+00	1.428E-01	0.196
BA-137M		661.65	*	-1.480E-02	4.525E-02	7.055E-02	3.549E-03	-0.210
CS-137		661.65	*	-1.565E-02	4.783E-02	7.458E-02	3.773E-03	-0.210
CE-139		165.85	*	7.932E-03	3.988E-02	6.491E-02	4.317E-03	0.122
BA-140		162.64		-6.030E-01	9.498E-01	1.487E+00	1.086E-01	-0.405
		304.84		-7.024E-01	1.823E+00	2.548E+00	7.008E-01	-0.276
		423.70		-9.160E-01	2.279E+00	3.608E+00	1.146E+00	-0.254
		537.32	*	-1.364E-01	3.029E-01	4.678E-01	1.520E-01	-0.292
LA-140		328.77		8.660E-03	3.708E-01	6.171E-01	4.422E-02	0.014
		432.53		9.760E-02	2.544E+00	4.188E+00	2.650E-01	0.023
		487.03		3.447E-02	1.696E-01	2.810E-01	1.817E-02	0.123
		751.79		1.194E+00	2.097E+00	3.656E+00	2.728E-01	0.327
		815.85		3.674E-01	3.636E-01	6.576E-01	5.498E-02	0.559
		867.82		-9.235E-01	1.728E+00	2.722E+00	2.318E-01	-0.339
		919.63		-8.232E-01	3.511E+00	4.980E+00	5.212E-01	-0.165
		925.24		3.274E-01	1.305E+00	2.207E+00	1.967E-01	0.148
		1596.49	*	3.325E-02	9.095E-02	1.598E-01	1.114E-02	0.208

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	4.571E-02	7.694E-02	1.279E-01	8.928E-03	0.357
CE-143		57.37		2.964E-04	7.694E-02	Half-Life too short		
		231.56		3.632E-04	7.694E-02	Half-Life too short		
		293.26	*	3.458E-04	7.694E-02	Half-Life too short		
	+	350.59		1.433E-02	7.694E-02	Half-Life too short		
		490.36		-4.483E-04	7.694E-02	Half-Life too short		
		664.57		7.830E-04	7.694E-02	Half-Life too short		
		721.93		9.798E-04	7.694E-02	Half-Life too short		
CE-144		80.11		-1.688E+00	3.010E+00	4.850E+00	5.410E-01	-0.348
		133.54	*	-1.551E-01	2.619E-01	4.126E-01	6.064E-02	-0.376
PM-144		476.78		-2.643E-02	8.824E-02	1.410E-01	9.669E-03	-0.187
		618.01		-1.957E-02	3.946E-02	6.074E-02	3.434E-03	-0.322
		696.49	*	5.973E-03	4.141E-02	7.024E-02	3.852E-03	0.085
		778.57		1.445E-02	2.652E+00	4.425E+00	2.936E-01	0.003
PR-144		696.49	*	4.045E-01	2.804E+00	4.757E+00	2.607E-01	0.085
		1489.15		-1.577E+01	1.480E+01	2.026E+01	1.478E+00	-0.779
PM-146		453.90	*	5.245E-02	5.731E-02	9.949E-02	8.521E-03	0.527
		633.02		-8.480E-01	1.851E+00	2.819E+00	1.035E+00	-0.301
		735.90		-5.315E-02	1.858E-01	3.022E-01	8.441E-02	-0.176
		747.13		-7.941E-02	1.166E-01	1.829E-01	2.321E-02	-0.434
ND-147	+	91.11		5.035E-01	3.599E-01	6.453E-01	7.339E-02	0.780
		319.41		1.655E+00	3.915E+00	6.671E+00	4.425E-01	0.248
		439.89		-4.870E+00	6.701E+00	1.038E+01	5.934E-01	-0.469
		531.02	*	-2.035E-01	6.702E-01	1.062E+00	1.427E-01	-0.192
PM-149		285.90	*	1.262E+01	8.564E+01	1.442E+02	2.111E+01	0.088
EU-152		121.78		2.017E-02	9.348E-02	1.538E-01	1.342E-02	0.131
		244.69		2.160E-01	4.595E-01	6.949E-01	4.838E-02	0.311
		344.27	*	-7.653E-02	1.741E-01	2.085E-01	1.469E-02	-0.367
		443.98		9.378E-01	1.177E+00	2.040E+00	1.166E-01	0.460
		778.89		-4.007E-03	3.141E-01	5.231E-01	3.471E-02	-0.008
		867.32		-6.183E-01	1.084E+00	1.701E+00	1.364E-01	-0.364
		964.01		6.059E-01	4.516E-01	7.313E-01	5.897E-02	0.828
		1085.78		-1.272E-01	5.438E-01	8.692E-01	5.954E-02	-0.146
		1112.02		-1.275E-02	4.322E-01	6.705E-01	4.377E-02	-0.019
		1407.95		1.209E-01	2.464E-01	4.350E-01	3.245E-02	0.278
GD-153		69.67		-1.681E+00	2.952E+00	4.145E+00	4.679E-01	-0.406
		83.37		2.974E+01	2.829E+01	3.266E+01	3.685E+00	0.911
		97.43	*	1.088E-02	1.181E-01	1.707E-01	1.638E-02	0.064
		103.18		-6.118E-03	1.416E-01	2.315E-01	2.037E-02	-0.026
EU-154		123.07		-3.532E-02	6.751E-02	1.073E-01	1.104E-02	-0.329
		247.94		-3.636E-02	4.811E-01	7.610E-01	7.830E-02	-0.048
		591.81		-4.961E-01	8.216E-01	1.217E+00	1.160E-01	-0.408
		723.30		1.514E-01	2.267E-01	3.536E-01	2.516E-02	0.428
		756.87		4.693E-01	9.650E-01	1.673E+00	1.747E-01	0.280
		873.19		1.430E-01	4.068E-01	6.937E-01	8.252E-02	0.206
		996.32		-1.388E-01	4.868E-01	7.775E-01	1.351E-01	-0.178
		1004.76		-1.485E-02	3.006E-01	4.918E-01	5.401E-02	-0.030
		1274.45	*	-1.076E-01	1.688E-01	2.536E-01	2.544E-02	-0.424
EU-155		48.70		4.759E-01	8.307E+00	1.389E+01	1.787E+00	0.034

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		60.01		4.910E+00	1.135E+01	1.696E+01	2.073E+00	0.290
	+	86.54		4.248E-01	1.408E-01	2.582E-01	2.978E-02	1.645
		105.31	*	2.574E-02	1.443E-01	2.379E-01	2.060E-02	0.108
TB-160	+	86.79		1.123E+00	3.719E-01	6.742E-01	7.742E-02	1.665
		197.04		3.005E-01	6.852E-01	1.123E+00	7.654E-02	0.268
		215.65		-6.763E-01	9.920E-01	1.527E+00	1.054E-01	-0.443
	+	298.57		2.104E-01	1.838E-01	2.746E-01	1.866E-02	0.766
		879.36	*	2.086E-02	1.930E-01	3.225E-01	2.652E-02	0.065
		962.29		6.729E-01	8.179E-01	1.265E+00	1.022E-01	0.532
		966.15		7.479E-01	3.590E-01	6.009E-01	4.835E-02	1.245
		1177.93		9.963E-02	4.915E-01	8.147E-01	4.682E-02	0.122
		1271.85		4.522E-01	9.197E-01	1.568E+00	1.069E-01	0.288
HO-166M		80.57		-3.439E-01	3.806E-01	6.026E-01	6.731E-02	-0.571
	+	184.41		1.222E-01	7.618E-02	8.851E-02	5.972E-03	1.380
		280.46		-6.751E-02	1.146E-01	1.860E-01	1.282E-02	-0.363
		410.95		1.265E-01	3.059E-01	5.171E-01	2.946E-02	0.245
		711.68	*	2.300E-02	7.530E-02	1.292E-01	7.342E-03	0.178
		752.31		2.332E-01	3.550E-01	6.230E-01	3.893E-02	0.374
		810.29		-1.131E-01	7.143E-02	9.921E-02	7.055E-03	-1.140
TM-171		51.35		-7.484E+01	9.118E+01	1.454E+02	2.009E+01	-0.515
		52.39		-1.103E+01	4.376E+01	7.203E+01	9.937E+00	-0.153
		59.40		2.691E+01	6.254E+01	9.343E+01	1.150E+01	0.288
		66.72	*	-1.237E+01	5.231E+01	7.493E+01	8.616E+00	-0.165
LU-176	+	88.36		8.369E-01	2.772E-01	5.094E-01	5.845E-02	1.643
		201.83		3.433E-03	3.704E-02	5.960E-02	4.077E-03	0.058
		306.84	*	2.664E-02	3.418E-02	5.639E-02	3.799E-03	0.472
		401.10		1.911E+00	8.361E+00	1.399E+01	7.951E-01	0.137
LU-177		112.95		-7.995E-01	1.874E+00	3.003E+00	2.351E-01	-0.266
		208.36	*	1.233E+00	1.339E+00	2.227E+00	1.530E-01	0.554
LU-177M		52.97		-4.541E-01	4.394E+00	7.283E+00	1.000E+00	-0.062
		54.07		2.932E-01	2.235E+00	3.739E+00	5.068E-01	0.078
		61.30		4.994E-01	3.264E+00	4.801E+00	5.796E-01	0.104
		121.62		1.130E-01	4.776E-01	7.866E-01	5.668E-02	0.144
		147.16		-3.525E-01	8.322E-01	1.322E+00	8.943E-02	-0.267
		171.86		9.493E-02	6.499E-01	1.054E+00	7.039E-02	0.090
		218.09		3.886E-01	1.140E+00	1.852E+00	1.279E-01	0.210
		268.79		1.841E+00	1.071E+00	1.921E+00	1.332E-01	0.959
		319.02		1.784E-01	3.291E-01	5.643E-01	3.744E-02	0.316
		367.43		-8.861E-01	1.134E+00	1.776E+00	1.076E-01	-0.499
		413.65	*	-1.354E-01	2.220E-01	3.497E-01	1.993E-02	-0.387
HF-181		56.28		8.262E-02	2.235E+00	3.722E+00	4.861E-01	0.022
		57.53		-1.235E-01	1.239E+00	1.899E+00	2.422E-01	-0.065
		65.20		7.897E-01	1.783E+00	2.653E+00	3.088E-01	0.298
		133.02		-8.487E-02	8.296E-02	1.282E-01	8.892E-03	-0.662
		136.25		-2.032E-01	5.746E-01	9.180E-01	6.321E-02	-0.221
		345.85		-2.597E-02	3.077E-01	4.146E-01	2.632E-02	-0.063
		482.03	*	-9.582E-03	5.434E-02	8.759E-02	4.987E-03	-0.109
W-181		56.28		3.204E-02	8.854E-01	1.474E+00	1.926E-01	0.022
		57.53		-4.924E-02	4.912E-01	7.531E-01	9.604E-02	-0.065

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		65.20	*	3.107E-01	7.015E-01	1.044E+00	1.215E-01	0.298
TA-182		67.75		-1.687E-01	2.068E-01	2.853E-01	3.257E-02	-0.591
		100.10		2.240E-02	2.695E-01	3.890E-01	3.578E-02	0.058
		152.43		4.531E-01	4.192E-01	7.099E-01	4.774E-02	0.638
		222.10		7.253E-02	4.682E-01	7.531E-01	5.214E-02	0.096
		1001.68		2.411E-01	2.794E+00	4.683E+00	3.623E-01	0.051
	+	1121.28		4.051E-01	3.259E-01	3.655E-01	2.343E-02	1.109
		1189.05		1.009E-01	4.527E-01	7.502E-01	4.404E-02	0.135
		1221.42	*	1.275E-01	2.878E-01	4.842E-01	3.019E-02	0.263
		1230.97		4.122E-02	7.048E-01	1.149E+00	7.290E-02	0.036
RE-183		57.98		-3.696E-02	5.029E-01	7.316E-01	9.250E-02	-0.051
		59.32		1.137E-01	2.555E-01	3.820E-01	4.709E-02	0.298
		67.20		-7.341E-02	3.638E-01	5.222E-01	5.985E-02	-0.141
		162.32	*	-8.541E-02	1.455E-01	2.284E-01	1.522E-02	-0.374
		208.81		1.079E+00	1.337E+00	2.215E+00	1.522E-01	0.487
		291.72		-1.558E-01	1.389E+00	2.001E+00	1.368E-01	-0.078
RE-184		57.98		-1.371E-01	1.865E+00	2.714E+00	3.431E-01	-0.051
		59.32		4.214E-01	9.472E-01	1.416E+00	1.745E-01	0.298
		67.20		-2.722E-01	1.349E+00	1.937E+00	2.219E-01	-0.141
		161.27		-6.196E-02	4.676E-01	7.505E-01	5.006E-02	-0.083
		216.55		1.811E-01	3.515E-01	5.760E-01	3.977E-02	0.314
		252.85	*	1.120E-01	2.973E-01	5.083E-01	3.538E-02	0.220
		318.01		1.639E-01	5.699E-01	9.642E-01	6.406E-02	0.170
		792.07		1.745E+00	1.278E+00	2.341E+00	1.599E-01	0.746
		903.28		-4.612E-01	1.283E+00	1.803E+00	1.533E-01	-0.256
		920.93		-2.428E-01	5.885E-01	8.832E-01	7.407E-02	-0.275
OS-185		59.72		3.539E-01	6.713E-01	1.008E+00	1.235E-01	0.351
		61.14		4.034E-02	3.594E-01	5.276E-01	6.380E-02	0.076
		69.30		-3.138E-01	4.984E-01	7.387E-01	8.354E-02	-0.425
		592.07		-1.951E+00	3.249E+00	4.979E+00	2.685E-01	-0.392
		646.12	*	-2.320E-02	5.701E-02	8.845E-02	4.532E-03	-0.262
		717.42		-1.033E+00	1.095E+00	1.685E+00	9.710E-02	-0.613
		874.81		6.830E-01	7.997E-01	1.416E+00	1.153E-01	0.482
		880.27		-2.767E-01	1.076E+00	1.742E+00	1.435E-01	-0.159
RE-188		155.03	*	-2.999E-02	2.177E-01	3.499E-01	2.347E-02	-0.086
		477.96		3.326E-01	3.960E+00	6.511E+00	3.709E-01	0.051
		633.10		-1.834E+00	3.638E+00	5.595E+00	2.907E-01	-0.328
W-188	+	63.58		7.045E+01	1.291E+02	1.564E+02	1.847E+01	0.450
		227.08		8.017E-01	1.621E+01	2.739E+01	1.900E+00	0.029
		290.67	*	-2.727E+00	1.070E+01	1.523E+01	1.042E+00	-0.179
IR-192	+	295.96		6.103E-01	2.322E-01	3.190E-01	2.198E-02	1.913
		308.46		3.869E-02	1.260E-01	2.134E-01	1.447E-02	0.181
		316.51	*	-3.332E-02	4.392E-02	6.977E-02	4.662E-03	-0.478
		468.07		-1.236E-01	8.505E-02	1.230E-01	8.121E-03	-1.006
		604.41		-2.386E-01	6.660E-01	8.875E-01	9.870E-02	-0.269
		612.46		2.398E+00	1.097E+00	1.837E+00	1.322E-01	1.306
AU-195		65.12		1.550E-01	3.269E-01	4.871E-01	5.673E-02	0.318
		66.83		-2.872E-02	1.723E-01	2.479E-01	2.848E-02	-0.116
	+	75.70		8.129E-01	3.778E-01	6.543E-01	7.265E-02	1.242

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		98.88	*	-1.984E-02	3.449E-01	4.941E-01	4.631E-02	-0.040
		129.76		1.088E+00	3.699E+00	6.091E+00	4.259E-01	0.179
TL-200		367.94	*	-1.976E-04	3.699E+00	Half-Life too short		
		579.30		1.482E-03	3.699E+00	Half-Life too short		
		828.27		8.931E-05	3.699E+00	Half-Life too short		
		1205.75		-5.924E-05	3.699E+00	Half-Life too short		
TL-201		68.90		-5.715E+00	6.335E+00	9.232E+00	1.046E+00	-0.619
		70.82		5.398E-01	3.645E+00	5.336E+00	5.992E-01	0.101
		80.30		-3.976E+00	5.460E+00	8.724E+00	9.738E-01	-0.456
		135.34		-2.733E+00	2.477E+01	4.004E+01	2.762E+00	-0.068
		167.43	*	2.287E+00	7.214E+00	1.180E+01	7.852E-01	0.194
TL-202		68.90		-6.257E-01	6.936E-01	1.011E+00	1.146E-01	-0.619
		70.82		5.894E-02	3.979E-01	5.826E-01	6.541E-02	0.101
		80.30		-4.343E-01	5.963E-01	9.528E-01	1.063E-01	-0.456
		439.56	*	-7.848E-02	8.055E-02	1.221E-01	6.980E-03	-0.643
HG-203		70.83		2.761E-01	1.809E+00	2.650E+00	4.078E-01	0.104
		72.87		2.448E+00	1.111E+00	1.694E+00	2.537E-01	1.445
		82.60		8.005E-02	2.236E+00	2.342E+00	3.636E-01	0.034
		279.20	*	1.047E-02	5.292E-02	8.940E-02	6.439E-03	0.117
BI-207		72.80		6.781E-01	3.208E-01	5.006E-01	5.582E-02	1.355
	+	74.97		4.528E-01	2.105E-01	3.291E-01	3.656E-02	1.376
		84.90		2.632E-01	3.907E-01	4.342E-01	4.934E-02	0.606
		569.67		-4.876E-02	3.983E-02	5.769E-02	3.162E-03	-0.845
		1063.62	*	-3.178E-02	6.877E-02	1.073E-01	7.623E-03	-0.296
		1770.23		1.954E-01	6.712E-01	1.019E+00	6.309E-02	0.192
TL-207		81.07		-3.669E-01	3.477E-01	4.708E-01	5.266E-02	-0.779
		83.78		4.888E-02	2.596E-01	2.772E-01	3.134E-02	0.176
		94.90		2.557E-01	3.301E-01	5.553E-01	5.568E-02	0.460
		122.32		3.464E-01	2.247E+00	3.687E+00	2.920E-01	0.094
		144.24		2.524E-02	8.829E-01	1.404E+00	1.130E-01	0.018
		154.21		2.260E-02	5.063E-01	8.206E-01	6.388E-02	0.028
		269.46		4.109E-01	2.525E-01	4.511E-01	3.227E-02	0.911
		323.87	*	-5.499E-01	8.914E-01	1.424E+00	2.394E-01	-0.386
	+	338.28		4.933E+00	2.252E+00	2.871E+00	3.128E-01	1.718
		445.03		-1.306E+00	2.913E+00	4.615E+00	4.718E-01	-0.283
PO-209		260.50		1.710E+00	1.208E+01	2.042E+01	1.420E+00	0.084
		262.80		-2.035E+01	3.355E+01	5.443E+01	3.782E+00	-0.374
		896.60	*	7.282E+00	1.000E+01	1.755E+01	1.494E+00	0.415
BI-210		46.50	*	-7.757E-01	1.420E+01	2.311E+01	2.400E+00	-0.034
PB-210		46.50	*	-7.757E-01	1.420E+01	2.311E+01	2.400E+00	-0.034
PO-210		46.50	*	-7.757E-01	1.420E+01	2.311E+01	2.220E+00	-0.034
PB-211		404.84	*	-2.162E-01	1.190E+00	1.924E+00	1.199E+00	-0.112
		427.08		1.768E+00	2.797E+00	4.433E+00	2.740E+00	0.399
		831.96		-1.895E-01	1.439E+00	2.354E+00	1.472E+00	-0.081
BI-212	+	727.18	*	9.923E-01	5.128E-01	7.770E-01	6.050E-02	1.277
		785.46		-2.383E+00	2.193E+00	3.296E+00	2.220E-01	-0.723
		1620.62		1.641E+00	1.474E+00	2.865E+00	1.971E-01	0.573
PO-215		81.07		-3.669E-01	3.477E-01	4.708E-01	5.266E-02	-0.779
		83.78		4.888E-02	2.596E-01	2.772E-01	3.134E-02	0.176

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		2.557E-01	3.301E-01	5.553E-01	5.568E-02	0.460
		122.32		3.464E-01	2.247E+00	3.687E+00	2.920E-01	0.094
		144.24		2.524E-02	8.829E-01	1.404E+00	1.130E-01	0.018
		154.21		2.260E-02	5.063E-01	8.206E-01	6.388E-02	0.028
		269.46		4.109E-01	2.525E-01	4.511E-01	3.227E-02	0.911
		323.87	*	-5.499E-01	8.914E-01	1.424E+00	2.394E-01	-0.386
	+	338.28		4.933E+00	2.252E+00	2.871E+00	3.128E-01	1.718
		445.03		-1.306E+00	2.913E+00	4.615E+00	4.718E-01	-0.283
RN-219		271.23		5.730E-01	3.332E-01	5.939E-01	5.313E-02	0.965
		401.81	*	7.320E-02	5.147E-01	8.560E-01	1.160E-01	0.086
RN-220		549.76	*	1.470E+01	3.266E+01	5.494E+01	3.048E+00	0.267
RA-223		81.07		-3.669E-01	3.477E-01	4.708E-01	5.266E-02	-0.779
		83.78		4.888E-02	2.596E-01	2.772E-01	3.134E-02	0.176
		94.90		2.557E-01	3.301E-01	5.553E-01	5.568E-02	0.460
		122.32		3.464E-01	2.247E+00	3.687E+00	2.920E-01	0.094
		144.24		2.524E-02	8.829E-01	1.404E+00	1.130E-01	0.018
		154.21		2.260E-02	5.063E-01	8.206E-01	6.388E-02	0.028
		269.46		4.109E-01	2.525E-01	4.511E-01	3.227E-02	0.911
		323.87	*	-5.499E-01	8.914E-01	1.424E+00	2.394E-01	-0.386
	+	338.28		4.933E+00	2.252E+00	2.871E+00	3.128E-01	1.718
		445.03		-1.306E+00	2.913E+00	4.615E+00	4.718E-01	-0.283
AC-227		79.80		4.532E-01	2.410E+00	3.997E+00	9.048E-01	0.113
		236.00		1.230E+00	4.009E-01	6.439E-01	7.170E-02	1.911
		256.20	*	-2.543E-01	5.008E-01	8.175E-01	1.184E-01	-0.311
		286.10		1.163E-01	2.064E+00	3.460E+00	4.197E-01	0.034
	+	299.80		2.710E+00	2.402E+00	3.403E+00	5.669E-01	0.796
		304.40		-1.417E+00	2.821E+00	3.909E+00	6.895E-01	-0.362
		334.20		1.415E-01	3.394E+00	4.912E+00	9.118E-01	0.029
TH-227		79.80		4.532E-01	2.410E+00	3.997E+00	9.153E-01	0.113
	+	94.00		6.806E+00	4.257E+00	4.986E+00	1.119E+00	1.365
		236.00		1.230E+00	3.957E-01	6.439E-01	6.334E-02	1.911
		256.20	*	-2.543E-01	5.014E-01	8.175E-01	1.417E-01	-0.311
		286.10		1.163E-01	2.067E+00	3.460E+00	3.468E+00	0.034
	+	299.80		2.710E+00	2.402E+00	3.403E+00	5.669E-01	0.796
		304.40		-1.417E+00	2.821E+00	3.909E+00	6.895E-01	-0.362
		334.20		1.415E-01	3.394E+00	4.912E+00	9.118E-01	0.029
TH-229		85.43		6.166E-01	3.956E-01	4.650E-01	5.299E-02	1.326
	+	88.47		4.818E-01	1.596E-01	2.937E-01	3.361E-02	1.640
		100.00		2.852E-02	2.819E-01	4.075E-01	3.754E-02	0.070
		193.63	*	-3.087E-01	6.617E-01	1.036E+00	7.045E-02	-0.298
		210.97		1.656E+00	1.026E+00	1.755E+00	1.208E-01	0.944
PA-231		283.67	*	6.796E-01	2.049E+00	3.480E+00	4.966E-01	0.195
	+	301.29		1.084E+00	9.512E-01	1.334E+00	1.471E-01	0.812
TH-231		81.07		-3.669E-01	3.477E-01	4.708E-01	5.266E-02	-0.779
		83.78		4.888E-02	2.596E-01	2.772E-01	3.134E-02	0.176
		94.90		2.557E-01	3.301E-01	5.553E-01	5.568E-02	0.460
		122.32		3.464E-01	2.247E+00	3.687E+00	2.920E-01	0.094
		144.24		2.524E-02	8.829E-01	1.404E+00	1.130E-01	0.018
		154.21		2.260E-02	5.063E-01	8.206E-01	6.388E-02	0.028

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		4.109E-01	2.525E-01	4.511E-01	3.227E-02	0.911
		323.87	*	-5.499E-01	8.914E-01	1.424E+00	2.394E-01	-0.386
	+	338.28		4.933E+00	2.252E+00	2.871E+00	3.128E-01	1.718
		445.03		-1.306E+00	2.913E+00	4.615E+00	4.718E-01	-0.283
U-231		84.21		1.599E+00	9.162E+00	9.770E+00	1.106E+00	0.164
	+	92.29		5.560E+00	3.295E+00	4.393E+00	4.630E-01	1.266
		95.87	*	-1.387E+00	1.233E+00	1.920E+00	1.892E-01	-0.723
		108.00		-3.110E-01	2.225E+00	3.617E+00	2.992E-01	-0.086
PA-233	+	75.28		1.322E+01	6.367E+00	1.010E+01	1.703E+00	1.309
	+	86.59		6.908E+00	2.883E+00	4.189E+00	1.167E+00	1.649
	+	300.12		7.554E-01	6.660E-01	9.479E-01	1.317E-01	0.797
		311.98	*	-2.504E-03	8.405E-02	1.398E-01	9.797E-03	-0.018
		340.50		2.520E+00	1.128E+00	1.641E+00	3.795E-01	1.536
		398.62		-2.439E+00	2.760E+00	4.156E+00	1.074E+00	-0.587
		415.76		-1.016E-01	2.126E+00	3.415E+00	7.020E-01	-0.030
PA-234	+	63.00		2.067E+00	3.797E+00	4.797E+00	8.405E-01	0.431
		94.67		2.924E-01	2.425E-01	4.097E-01	5.510E-02	0.714
		98.44		2.935E-02	1.413E-01	2.041E-01	1.141E-01	0.144
		99.86		-2.870E-02	7.185E-01	1.030E+00	9.508E-02	-0.028
		111.00		1.146E-01	2.387E-01	3.976E-01	4.631E-02	0.288
		131.20		-1.014E-01	1.379E-01	2.166E-01	1.509E-02	-0.468
		152.70		2.943E-01	4.104E-01	6.812E-01	1.102E-01	0.432
	+	186.00		4.397E+00	3.043E+00	3.339E+00	1.027E+00	1.317
		226.40		2.416E-02	5.175E-01	8.746E-01	1.064E-01	0.028
		227.20		2.740E-02	5.538E-01	9.359E-01	6.493E-02	0.029
		248.90		9.053E-02	1.038E+00	1.752E+00	3.825E-01	0.052
		293.70		3.626E+00	1.276E+00	1.942E+00	3.201E-01	1.867
		369.80		5.509E-01	1.088E+00	1.847E+00	3.857E-01	0.298
		568.70		-1.890E+00	1.344E+00	1.919E+00	1.053E-01	-0.985
		569.50		-5.083E-01	3.568E-01	5.065E-01	2.777E-02	-1.004
		574.00		2.932E-01	1.950E+00	3.194E+00	1.746E-01	0.092
		699.00		-2.051E-01	9.056E-01	1.491E+00	2.668E-01	-0.138
		706.10		-4.560E-01	1.368E+00	2.211E+00	9.753E-01	-0.206
		733.00		1.431E-01	5.240E-01	7.799E-01	1.662E-01	0.184
		742.81		1.118E+00	1.803E+00	2.899E+00	1.941E+00	0.386
		796.30		1.800E+00	1.263E+00	2.173E+00	5.770E-01	0.828
		805.60		2.020E+00	1.326E+00	2.249E+00	6.802E-01	0.898
		819.60		-1.385E+00	1.669E+00	2.424E+00	9.150E-01	-0.571
		826.30		7.586E-01	1.094E+00	1.838E+00	8.181E-01	0.413
		831.60		-5.099E-01	7.755E-01	1.185E+00	3.499E-01	-0.430
		876.40		6.021E-01	1.329E+00	2.030E+00	2.086E+00	0.297
		880.51		-1.202E-01	3.908E-01	6.297E-01	5.189E-02	-0.191
		883.24		-8.629E-02	3.924E-01	6.298E-01	4.231E-01	-0.137
		899.00		4.457E-01	1.084E+00	1.832E+00	8.006E-01	0.243
		925.00		2.565E-01	1.432E+00	2.406E+00	2.011E-01	0.107
		926.50		6.193E-02	2.138E-01	3.622E-01	9.123E-02	0.171
		946.00	*	1.029E-01	3.784E-01	6.396E-01	1.188E-01	0.161
		949.00		1.916E-01	6.030E-01	1.022E+00	8.364E-02	0.187
		980.50		-6.496E-02	9.016E-01	1.473E+00	1.167E-01	-0.044

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		1.301E+00	1.671E+00	2.686E+00	1.745E+00	0.484
PA-234M		766.41		2.021E+00	2.001E+01	3.358E+01	2.567E+01	0.060
		1001.03	*	-3.134E-01	8.917E+00	1.480E+01	1.556E+00	-0.021
U-235	+	89.95		2.156E+00	1.667E+00	2.559E+00	8.095E-01	0.843
	+	93.35		2.117E+00	1.376E+00	1.617E+00	4.623E-01	1.310
		105.00		4.884E-01	1.422E+00	2.349E+00	7.007E-01	0.208
		143.76	*	-2.154E-02	2.744E-01	4.344E-01	7.248E-02	-0.050
		163.35		2.036E-02	6.289E-01	1.017E+00	1.858E-01	0.020
	+	185.71		1.629E-01	1.016E-01	1.238E-01	8.366E-03	1.315
		205.31		-5.577E-01	7.531E-01	1.133E+00	2.079E-01	-0.492
NP-236		94.67		2.236E-01	1.829E-01	3.109E-01	3.131E-02	0.719
		98.44		2.217E-02	1.061E-01	1.543E-01	1.457E-02	0.144
		111.00		8.672E-02	1.804E-01	3.007E-01	2.404E-02	0.288
		160.31	*	1.400E-02	1.034E-01	1.681E-01	1.122E-02	0.083
NP-239		99.55		-2.308E-02	2.396E-01	3.423E-01	3.175E-02	-0.067
		117.00	*	-5.963E-03	2.483E-01	4.047E-01	3.042E-02	-0.015
		209.75		1.356E+00	1.050E+00	1.773E+00	1.219E-01	0.765
		228.18		9.372E-03	2.942E-01	4.967E-01	3.447E-02	0.019
		277.60		2.306E-01	2.352E-01	4.114E-01	2.841E-02	0.560
		334.30		-2.093E-02	1.918E+00	2.764E+00	1.792E-01	-0.008
AM-241		59.54	*	1.896E-01	3.593E-01	5.393E-01	6.864E-02	0.351
CM-243		99.55		-2.375E-02	2.465E-01	3.522E-01	3.267E-02	-0.067
		103.76	*	8.319E-02	1.294E-01	2.173E-01	1.896E-02	0.383
		117.00		-6.135E-03	2.554E-01	4.164E-01	3.130E-02	-0.015
		209.75		1.337E+00	1.035E+00	1.747E+00	1.202E-01	0.765
		228.18		9.470E-03	2.973E-01	5.019E-01	3.483E-02	0.019
		277.60		2.324E-01	2.371E-01	4.147E-01	2.864E-02	0.560
CM-247		278.00		8.110E-01	9.781E-01	1.700E+00	1.173E-01	0.477
		287.40		-2.222E-01	1.618E+00	2.684E+00	1.841E-01	-0.083
		402.60	*	9.402E-03	4.655E-02	7.772E-02	4.420E-03	0.121
CF-249		252.85		4.222E-01	1.121E+00	1.916E+00	1.334E-01	0.220
		333.44		-6.351E-02	2.651E-01	3.752E-01	2.435E-02	-0.169
		387.95	*	7.124E-02	5.338E-02	9.489E-02	5.440E-03	0.751
CF-251		176.60	*	1.703E-02	1.703E-01	2.753E-01	1.846E-02	0.062
		227.00		2.433E-02	4.920E-01	8.314E-01	5.767E-02	0.029
		285.00		6.093E-01	2.321E+00	3.931E+00	2.702E-01	0.155

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232357001 *
* Acquisition date :  6-JUL-2009 11:13:00 Detector SN#    :            *
* Detector ID        : GAM15               Sensitivity     : 5.000     *
* Geometry           : CAN                 Energy tolerance: 1.500     *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000    *
* Elapsed real time:    0 02:00:01.14      Half life ratio :  8.000    *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID    *
* Sample ID          : G232357001           Analyst initials: MXR1     *
* Batch Number       : 880723               Sample Quantity : 1.1285E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
* Standard Weight  :   0.00000                                          *
* CALIB. DATE/TIME : 16-FEB-2009 10:54:12 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.595E+01	3.476E+00	4.150E-01	0.000E+00
CD-109	3.584E+00	1.163E+00	1.808E+00	0.000E+00
SN-126	3.529E-01	1.145E-01	1.794E-01	0.000E+00
TL-208	4.620E-01	9.975E-02	7.490E-02	0.000E+00
BI-211	3.228E+00	5.676E-01	4.568E-01	0.000E+00
PB-212	1.433E+00	1.777E-01	1.157E-01	0.000E+00
PO-212	1.433E+00	1.777E-01	1.157E-01	0.000E+00
BI-214	1.020E+00	1.923E-01	1.433E-01	0.000E+00
PB-214	1.123E+00	2.056E-01	1.592E-01	0.000E+00
PO-214	1.123E+00	2.056E-01	1.592E-01	0.000E+00
PO-216	1.433E+00	1.777E-01	1.157E-01	0.000E+00
PO-218	1.123E+00	2.056E-01	1.592E-01	0.000E+00
RA-224	4.120E+00	1.772E+00	1.316E+00	0.000E+00
RA-226	1.020E+00	1.923E-01	1.433E-01	0.000E+00
AC-228	1.509E+00	3.676E-01	2.625E-01	0.000E+00
RA-228	1.509E+00	3.676E-01	2.625E-01	0.000E+00
TH-228	1.433E+00	1.777E-01	1.157E-01	0.000E+00
TH-230	1.020E+00	1.923E-01	1.433E-01	0.000E+00
TH-232	1.509E+00	3.676E-01	2.625E-01	0.000E+00
TH-234	1.773E+00	3.196E+00	3.964E+00	0.000E+00
U-234	1.020E+00	1.923E-01	1.433E-01	0.000E+00
NP-237	1.036E+00	3.963E-01	5.270E-01	0.000E+00
U-238	1.773E+00	3.196E+00	3.964E+00	0.000E+00
AM-243	2.523E-01	1.149E-01	1.430E-01	0.000E+00
ANH-511	1.937E-01	8.851E-02	5.861E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
BE-7	-2.285E-02		4.082E-01	6.813E-01	0.000E+00	NOT IDENT.
NA-22	-3.956E-02		5.901E-02	9.005E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	2.464E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.532E-02	2.372E-02	4.677E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.936E-02	1.186E-01	0.000E+00	FAIL ABUN
SC-46	5.651E-03	5.114E-02	8.715E-02	0.000E+00	FAIL ABUN
V-48	1.771E-02	8.296E-02	1.420E-01	0.000E+00	NOT IDENT.
CR-51	-1.241E-02	4.555E-01	7.788E-01	0.000E+00	NOT IDENT.
MN-52	6.943E-02	2.314E-01	4.091E-01	0.000E+00	NOT IDENT.
MN-54	-1.400E-03	4.335E-02	7.327E-02	0.000E+00	NOT IDENT.
CO-56	5.575E-03	4.650E-02	7.960E-02	0.000E+00	NOT IDENT.
CO-57	2.826E-03	3.161E-02	5.365E-02	0.000E+00	NOT IDENT.
CO-58	-7.719E-02	4.614E-02	6.493E-02	0.000E+00	NOT IDENT.
FE-59	5.572E-02	1.178E-01	2.045E-01	0.000E+00	NOT IDENT.
CO-60	8.721E-03	4.906E-02	8.235E-02	0.000E+00	NOT IDENT.
ZN-65	-1.720E-01	1.388E-01	1.617E-01	0.000E+00	NOT IDENT.
GE-68	-4.039E-01	1.760E+00	2.872E+00	0.000E+00	NOT IDENT.
AS-73	6.874E-01	2.146E+00	3.778E+00	0.000E+00	NOT IDENT.
AS-74	4.579E-02	1.111E-01	1.897E-01	0.000E+00	NOT IDENT.
SE-75	-2.103E-02	5.416E-02	9.172E-02	0.000E+00	NOT IDENT.
BR-77	-6.155E-01	1.103E+01	1.657E+01	0.000E+00	FAIL ABUN
SR-82	-7.439E-01	4.373E-01	6.220E-01	0.000E+00	NOT IDENT.
RB-83	1.353E-03	1.007E-01	1.523E-01	0.000E+00	NOT IDENT.
RB-84	-3.815E-02	9.376E-02	1.528E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.678E+00	1.821E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.902E-02	9.224E-02	0.000E+00	NOT IDENT.
RB-86	4.817E-01	1.057E+00	1.832E+00	0.000E+00	NOT IDENT.
Y-88	-2.558E-02	4.075E-02	5.867E-02	0.000E+00	NOT IDENT.
ZR-88	-2.691E-02	4.109E-02	6.679E-02	0.000E+00	NOT IDENT.
Y-91	3.054E+00	2.649E+01	4.421E+01	0.000E+00	NOT IDENT.
NB-94	7.850E-03	4.279E-02	7.427E-02	0.000E+00	NOT IDENT.
NB-95	2.411E-02	4.746E-02	8.418E-02	0.000E+00	NOT IDENT.
NB-95M	2.654E-01	1.817E-01	2.956E-01	0.000E+00	NOT IDENT.
ZR-95	8.172E-03	8.821E-02	1.516E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.742E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.153E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.446E+00	1.067E+01	1.842E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.102E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	7.980E-03	4.012E-02	6.711E-02	0.000E+00	NOT IDENT.
RH-102	6.578E-03	3.732E-02	6.335E-02	0.000E+00	NOT IDENT.
RU-103	-2.552E-02	4.927E-02	7.887E-02	0.000E+00	FAIL ABUN
RH-106	-4.260E-01	4.022E-01	5.958E-01	0.000E+00	FAIL ABUN
RU-106	-4.260E-01	3.999E-01	5.958E-01	0.000E+00	FAIL ABUN
AG-108M	5.465E-03	4.124E-02	7.012E-02	0.000E+00	NOT IDENT.
AG-110M	2.145E-02	4.120E-02	7.087E-02	0.000E+00	NOT IDENT.
IN-111	-2.347E-01	1.083E+00	1.610E+00	0.000E+00	NOT IDENT.
IN-113M	3.416E-02	5.859E-02	1.027E-01	0.000E+00	NOT IDENT.
SN-113	3.416E-02	5.859E-02	1.027E-01	0.000E+00	NOT IDENT.
IN-114M	1.891E-01	2.608E-01	3.951E-01	0.000E+00	NOT IDENT.
CD-115	2.438E-01	1.013E+01	1.677E+01	0.000E+00	NOT IDENT.
SN-117M	-5.795E-03	6.631E-02	1.105E-01	0.000E+00	NOT IDENT.
SB-122	2.370E+00	1.930E+00	3.494E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.698E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	8.275E-03	3.575E-02	6.042E-02	0.000E+00	NOT IDENT.
I-124	-4.483E-01	8.408E-01	1.127E+00	0.000E+00	NOT IDENT.
SB-124	3.941E-03	7.725E-02	1.309E-01	0.000E+00	FAIL ABUN
SB-125	6.392E-02	1.177E-01	2.056E-01	0.000E+00	NOT IDENT.
TE-125M	-3.031E+00	1.190E+01	1.999E+01	0.000E+00	NOT IDENT.
I-126	1.733E-01	2.120E-01	3.718E-01	0.000E+00	NOT IDENT.
SB-126	8.560E-02	1.808E-01	2.817E-01	0.000E+00	FAIL ABUN
SB-127	-1.888E-01	1.308E+00	2.218E+00	0.000E+00	NOT IDENT.
XE-127	1.240E-02	5.920E-02	9.892E-02	0.000E+00	NOT IDENT.
I-131	2.637E-02	1.257E-01	2.166E-01	0.000E+00	NOT IDENT.
TE-132	2.175E-02	6.903E-01	1.203E+00	0.000E+00	NOT IDENT.
BA-133	3.426E-02	6.064E-02	9.385E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.106E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.066E-01	6.005E-02	1.145E-01	0.000E+00	NOT IDENT.
CS-135	2.000E-01	2.095E-01	3.760E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.148E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.266E-02	1.266E-01	2.167E-01	0.000E+00	FAIL ABUN
BA-137M	-1.480E-02	4.434E-02	7.070E-02	0.000E+00	NOT IDENT.
CS-137	-1.565E-02	4.687E-02	7.474E-02	0.000E+00	NOT IDENT.
CE-139	7.932E-03	3.908E-02	6.582E-02	0.000E+00	NOT IDENT.
BA-140	-1.364E-01	2.968E-01	4.697E-01	0.000E+00	NOT IDENT.
LA-140	3.325E-02	8.913E-02	1.590E-01	0.000E+00	NOT IDENT.
CE-141	4.571E-02	7.540E-02	1.298E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.408E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.551E-01	2.567E-01	4.191E-01	0.000E+00	NOT IDENT.
PM-144	5.973E-03	4.058E-02	7.036E-02	0.000E+00	NOT IDENT.
PR-144	4.045E-01	2.748E+00	4.765E+00	0.000E+00	NOT IDENT.

PM-146	5.245E-02	5.617E-02	1.000E-01	0.000E+00	NOT IDENT.
ND-147	-2.035E-01	6.568E-01	1.066E+00	0.000E+00	FAIL ABUN
PM-149	1.262E+01	8.393E+01	1.456E+02	0.000E+00	NOT IDENT.
EU-152	-7.653E-02	1.706E-01	2.101E-01	0.000E+00	NOT IDENT.
GD-153	1.088E-02	1.157E-01	1.739E-01	0.000E+00	NOT IDENT.
EU-154	-1.076E-01	1.654E-01	2.528E-01	0.000E+00	NOT IDENT.
EU-155	2.574E-02	1.414E-01	2.422E-01	0.000E+00	FAIL ABUN
TB-160	2.086E-02	1.891E-01	3.224E-01	0.000E+00	FAIL ABUN
HO-166M	2.300E-02	7.380E-02	1.294E-01	0.000E+00	FAIL ABUN
TM-171	-1.237E+01	5.126E+01	7.656E+01	0.000E+00	NOT IDENT.
LU-176	2.664E-02	3.349E-02	5.689E-02	0.000E+00	FAIL ABUN
LU-177	1.233E+00	1.312E+00	2.253E+00	0.000E+00	NOT IDENT.
LU-177M	-1.354E-01	2.176E-01	3.519E-01	0.000E+00	NOT IDENT.
HF-181	-9.582E-03	5.325E-02	8.803E-02	0.000E+00	NOT IDENT.
W-181	3.107E-01	6.875E-01	1.067E+00	0.000E+00	NOT IDENT.
TA-182	1.275E-01	2.821E-01	4.827E-01	0.000E+00	FAIL ABUN
RE-183	-8.541E-02	1.425E-01	2.316E-01	0.000E+00	NOT IDENT.
RE-184	1.120E-01	2.913E-01	5.136E-01	0.000E+00	NOT IDENT.
OS-185	-2.320E-02	5.587E-02	8.867E-02	0.000E+00	NOT IDENT.
RE-188	-2.999E-02	2.134E-01	3.550E-01	0.000E+00	NOT IDENT.
W-188	-2.727E+00	1.048E+01	1.537E+01	0.000E+00	FAIL ABUN
IR-192	-3.332E-02	4.304E-02	7.036E-02	0.000E+00	FAIL ABUN
AU-195	-1.984E-02	3.380E-01	5.032E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.716E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.287E+00	7.069E+00	1.196E+01	0.000E+00	NOT IDENT.
TL-202	-7.848E-02	7.894E-02	1.228E-01	0.000E+00	NOT IDENT.
HG-203	1.047E-02	5.186E-02	9.026E-02	0.000E+00	NOT IDENT.
BI-207	-3.178E-02	6.740E-02	1.071E-01	0.000E+00	FAIL ABUN
TL-207	-5.499E-01	8.736E-01	1.436E+00	0.000E+00	FAIL ABUN
PO-209	7.282E+00	9.801E+00	1.754E+01	0.000E+00	NOT IDENT.
BI-210	-7.757E-01	1.392E+01	2.368E+01	0.000E+00	NOT IDENT.
PB-210	-7.757E-01	1.392E+01	2.368E+01	0.000E+00	NOT IDENT.
PO-210	-7.757E-01	1.392E+01	2.368E+01	0.000E+00	NOT IDENT.
PB-211	-2.162E-01	1.166E+00	1.936E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.025E-01	7.781E-01	0.000E+00	FAIL ABUN
PO-215	-5.499E-01	8.736E-01	1.436E+00	0.000E+00	FAIL ABUN
RN-219	7.320E-02	5.044E-01	8.615E-01	0.000E+00	NOT IDENT.
RN-220	1.470E+01	3.201E+01	5.515E+01	0.000E+00	NOT IDENT.
RA-223	-5.499E-01	8.736E-01	1.436E+00	0.000E+00	FAIL ABUN
AC-227	-2.543E-01	4.908E-01	8.260E-01	0.000E+00	FAIL ABUN
TH-227	-2.543E-01	4.914E-01	8.260E-01	0.000E+00	FAIL ABUN
TH-229	-3.087E-01	6.485E-01	1.049E+00	0.000E+00	FAIL ABUN
PA-231	6.796E-01	2.008E+00	3.513E+00	0.000E+00	FAIL ABUN
TH-231	-5.499E-01	8.736E-01	1.436E+00	0.000E+00	FAIL ABUN
U-231	-1.387E+00	1.208E+00	1.955E+00	0.000E+00	FAIL ABUN
PA-233	-2.504E-03	8.237E-02	1.410E-01	0.000E+00	FAIL ABUN
PA-234	1.029E-01	3.708E-01	6.390E-01	0.000E+00	FAIL ABUN
PA-234M	-3.134E-01	8.738E+00	1.478E+01	0.000E+00	NOT IDENT.
U-235	-2.154E-02	2.689E-01	4.410E-01	0.000E+00	FAIL ABUN
NP-236	1.400E-02	1.014E-01	1.705E-01	0.000E+00	NOT IDENT.
NP-239	-5.963E-03	2.433E-01	4.116E-01	0.000E+00	NOT IDENT.
AM-241	1.896E-01	3.522E-01	5.516E-01	0.000E+00	NOT IDENT.
CM-243	8.319E-02	1.268E-01	2.212E-01	0.000E+00	NOT IDENT.
CM-247	9.402E-03	4.562E-02	7.822E-02	0.000E+00	NOT IDENT.
CF-249	7.124E-02	5.232E-02	9.553E-02	0.000E+00	NOT IDENT.
CF-251	1.703E-02	1.669E-01	2.791E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:49:55.15

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232357001.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:13:00.
Sample ID         : G232357001           Sample quantity  : 1.12850E+02 GRAM
Detector name     : GAM15                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.14  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1152	10.67*	9.989E-01	3.595E+01	3.595E+01	9.87
CD-109	88.03	175	3.72*	4.468E+00	3.510E+00	3.584E+00	33.12
SN-126	64.28	36	9.60	1.779E+00	7.019E-01	7.019E-01	183.67
	86.94	175	8.90	4.468E+00	1.467E+00	1.467E+00	52.28
	87.57	175	37.00*	4.468E+00	3.529E-01	3.529E-01	33.12
TL-208	277.35	------	6.80	3.788E+00	------ Line Not Found		------
	510.84	143	21.60	2.459E+00	8.968E-01	8.968E-01	47.36
	583.14	261	84.20*	2.228E+00	4.620E-01	4.620E-01	22.03
	860.37	------	12.46	1.613E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	2.992E+00	------ Line Not Found		------
	351.07	402	12.94*	3.202E+00	3.228E+00	3.228E+00	17.94
PB-212	74.81	162	10.70	3.235E+00	1.556E+00	1.556E+00	47.40
	77.11	369	18.00	3.500E+00	1.950E+00	1.950E+00	22.50
	87.30	175	8.00	4.468E+00	1.632E+00	1.632E+00	34.60
	238.63	810	44.60*	4.212E+00	1.433E+00	1.433E+00	12.65
	300.09	54	3.41	3.585E+00	1.462E+00	1.462E+00	87.53
PO-212	74.81	162	10.70	3.235E+00	1.556E+00	1.556E+00	47.40
	77.11	369	18.00	3.500E+00	1.950E+00	1.950E+00	22.50
	87.30	175	8.00	4.468E+00	1.632E+00	1.632E+00	34.60
	115.19	------	0.60	5.666E+00	------ Line Not Found		------
	238.63	810	44.60*	4.212E+00	1.433E+00	1.433E+00	12.65
	300.09	54	3.41	3.585E+00	1.462E+00	1.462E+00	87.53
BI-214	609.31	306	46.30*	2.155E+00	1.020E+00	1.020E+00	19.23
	768.36	------	5.04	1.782E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	49	15.10	1.262E+00	8.629E-01	8.629E-01	80.71
	1238.11	------	5.94	1.152E+00	------ Line Not Found		------
	1377.67	------	4.11	1.048E+00	------ Line Not Found		------
	1764.49	74	15.80	8.815E-01	1.768E+00	1.768E+00	28.70
PB-214	74.81	162	6.21	3.235E+00	2.681E+00	2.681E+00	47.06
	77.11	369	10.50	3.500E+00	3.343E+00	3.343E+00	23.76
	87.30	175	4.67	4.468E+00	2.796E+00	2.796E+00	34.01

Sample ID : G232357001 Acquisition date : 6-JUL-2009 11:13:00

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	204	7.49	4.179E+00	2.173E+00	2.173E+00	44.25
	295.21	169	19.20	3.624E+00	8.090E-01	8.090E-01	38.54
	351.92	402	37.20*	3.202E+00	1.123E+00	1.123E+00	18.69
PO-214	74.81	162	6.21	3.235E+00	2.681E+00	2.681E+00	47.06
	77.11	369	10.50	3.500E+00	3.343E+00	3.343E+00	23.76
	87.30	175	4.67	4.468E+00	2.796E+00	2.796E+00	34.01
	241.98	204	7.49	4.179E+00	2.173E+00	2.173E+00	44.25
	295.21	169	19.20	3.624E+00	8.090E-01	8.090E-01	38.54
	351.92	402	37.20*	3.202E+00	1.123E+00	1.123E+00	18.69
PO-216	74.81	162	10.70	3.235E+00	1.556E+00	1.556E+00	47.40
	77.11	369	18.00	3.500E+00	1.950E+00	1.950E+00	22.50
	87.30	175	8.00	4.468E+00	1.632E+00	1.632E+00	34.60
	238.63	810	44.60*	4.212E+00	1.433E+00	1.433E+00	12.65
	300.09	54	3.41	3.585E+00	1.462E+00	1.462E+00	87.53
PO-218	74.81	162	6.21	3.235E+00	2.681E+00	2.681E+00	47.06
	77.11	369	10.50	3.500E+00	3.343E+00	3.343E+00	23.76
	87.30	175	4.67	4.468E+00	2.796E+00	2.796E+00	34.01
	241.98	204	7.49	4.179E+00	2.173E+00	2.173E+00	44.25
	295.21	169	19.20	3.624E+00	8.090E-01	8.090E-01	38.54
	351.92	402	37.20*	3.202E+00	1.123E+00	1.123E+00	18.69
RA-224	240.98	204	3.95*	4.179E+00	4.120E+00	4.120E+00	43.89
RA-226	609.31	306	46.30*	2.155E+00	1.020E+00	1.020E+00	19.23
	768.36	------	5.04	1.782E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	49	15.10	1.262E+00	8.629E-01	8.629E-01	80.71
	1238.11	------	5.94	1.152E+00	------ Line Not Found		------
	1377.67	------	4.11	1.048E+00	------ Line Not Found		------
	1764.49	74	15.80	8.815E-01	1.768E+00	1.768E+00	28.70
AC-228	338.32	133	11.40	3.290E+00	1.181E+00	1.181E+00	60.30
	911.07	192	27.70*	1.531E+00	1.509E+00	1.509E+00	24.86
	969.11	98	16.60	1.446E+00	1.358E+00	1.358E+00	41.20
RA-228	338.32	133	11.40	3.290E+00	1.181E+00	1.181E+00	60.30
	911.07	192	27.70*	1.531E+00	1.509E+00	1.509E+00	24.86
	969.11	98	16.60	1.446E+00	1.358E+00	1.358E+00	41.20
TH-228	84.40	------	1.21	4.214E+00	------ Line Not Found		------
	238.60	810	44.60*	4.212E+00	1.433E+00	1.433E+00	12.65
	300.10	54	3.41	3.585E+00	1.462E+00	1.462E+00	105.20
TH-230	609.31	306	46.30*	2.155E+00	1.020E+00	1.020E+00	19.23
	768.36	------	5.04	1.782E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	49	15.10	1.262E+00	8.629E-01	8.629E-01	80.71
	1238.11	------	5.94	1.152E+00	------ Line Not Found		------
	1377.67	------	4.11	1.048E+00	------ Line Not Found		------
	1764.49	74	15.80	8.815E-01	1.768E+00	1.768E+00	28.70
TH-232	338.32	133	11.40	3.290E+00	1.181E+00	1.181E+00	44.81
	911.07	192	27.70*	1.531E+00	1.509E+00	1.509E+00	24.86
	969.11	98	16.60	1.446E+00	1.358E+00	1.358E+00	41.20
TH-234	63.29	36	3.80*	1.779E+00	1.773E+00	1.773E+00	183.92
	92.38	139	5.41	4.863E+00	1.761E+00	1.761E+00	61.35

Sample ID : G232357001 Acquisition date : 6-JUL-2009 11:13:00

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	306	46.30*	2.155E+00	1.020E+00	1.020E+00	19.23
	768.36	------	5.04	1.782E+00	------	Line Not Found	------
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	49	15.10	1.262E+00	8.629E-01	8.629E-01	80.71
	1238.11	------	5.94	1.152E+00	------	Line Not Found	------
	1377.67	------	4.11	1.048E+00	------	Line Not Found	------
	1764.49	74	15.80	8.815E-01	1.768E+00	1.768E+00	28.70
NP-237	86.50	175	12.60*	4.468E+00	1.036E+00	1.036E+00	39.03
	95.87	------	2.60	5.041E+00	------	Line Not Found	------
U-238	63.29	36	3.80*	1.779E+00	1.773E+00	1.773E+00	183.92
	92.38	139	5.41	4.863E+00	1.761E+00	1.761E+00	59.26
AM-243	74.67	162	66.00*	3.235E+00	2.523E-01	2.523E-01	46.47
	86.72	175	0.34	4.468E+00	3.886E+01	3.886E+01	33.12
	117.66	------	0.55	5.694E+00	------	Line Not Found	------
	142.18	------	0.13	5.637E+00	------	Line Not Found	------
ANH-511	511.00	143	100.00*	2.459E+00	1.937E-01	1.937E-01	46.62

Flag: "*" = Keyline

Sample ID : G232357001 Acquisition date : 6-JUL-2009 11:13:00

Total number of lines in spectrum	23	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	22	95.65%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.595E+01	3.595E+01	0.355E+01	9.87	
CD-109	464.00D	1.02	3.510E+00	3.584E+00	1.187E+00	33.12	
SN-126	1.00E+05Y	1.00	3.529E-01	3.529E-01	1.169E-01	33.12	
TL-208	1.41E+10Y	1.00	4.620E-01	4.620E-01	1.018E-01	22.03	
BI-211	7.04E+08Y	1.00	3.228E+00	3.228E+00	0.579E+00	17.94	
PB-212	1.41E+10Y	1.00	1.433E+00	1.433E+00	0.181E+00	12.65	
PO-212	1.41E+10Y	1.00	1.433E+00	1.433E+00	0.181E+00	12.65	
BI-214	1600.00Y	1.00	1.020E+00	1.020E+00	0.196E+00	19.23	
PB-214	1600.00Y	1.00	1.123E+00	1.123E+00	0.210E+00	18.69	
PO-214	1600.00Y	1.00	1.123E+00	1.123E+00	0.210E+00	18.69	
PO-216	1.41E+10Y	1.00	1.433E+00	1.433E+00	0.181E+00	12.65	
PO-218	1600.00Y	1.00	1.123E+00	1.123E+00	0.210E+00	18.69	
RA-224	1.41E+10Y	1.00	4.120E+00	4.120E+00	1.808E+00	43.89	
RA-226	1600.00Y	1.00	1.020E+00	1.020E+00	0.196E+00	19.23	
AC-228	1.41E+10Y	1.00	1.509E+00	1.509E+00	0.375E+00	24.86	
RA-228	1.41E+10Y	1.00	1.509E+00	1.509E+00	0.375E+00	24.86	
TH-228	1.41E+10Y	1.00	1.433E+00	1.433E+00	0.181E+00	12.65	
TH-230	4.47E+09Y	1.00	1.020E+00	1.020E+00	0.196E+00	19.23	
TH-232	1.41E+10Y	1.00	1.509E+00	1.509E+00	0.375E+00	24.86	
TH-234	4.47E+09Y	1.00	1.773E+00	1.773E+00	3.261E+00	183.92	
U-234	4.47E+09Y	1.00	1.020E+00	1.020E+00	0.196E+00	19.23	
NP-237	2.14E+06Y	1.00	1.036E+00	1.036E+00	0.404E+00	39.03	
U-238	4.47E+09Y	1.00	1.773E+00	1.773E+00	3.261E+00	183.92	
AM-243	7380.00Y	1.00	2.523E-01	2.523E-01	1.173E-01	46.47	
ANH-511	1.00E+09Y	1.00	1.937E-01	1.937E-01	0.903E-01	46.62	
	Total Activity :		7.036E+01	7.043E+01			

Grand Total Activity : 7.036E+01 7.043E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232357001 Acquisition date : 6-JUL-2009 11:13:00

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.90	82	269	1.21	180.28	172	27	1.13E-02	70.5	4.66E+00	T
0	185.56	132	358	1.23	371.51	367	12	1.83E-02	62.0	4.98E+00	T
0	727.36	66	57	1.17	1454.71	1449	11	9.13E-03	51.1	1.87E+00	T
0	1587.13	26	3	0.76	3173.97	3167	12	3.57E-03	47.9	9.39E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:50:00.02

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232357001.CNF;1  *
* Acquisition date : 6-JUL-2009 11:13:00.  Detector SN#     :               *
* Detector ID      : GAM15                 Sensitivity      : 5.00000       *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:01.14         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 22-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232357001            Analyst initials: MXR1           *
* Batch Number     : 880723                Sample Quantity : 1.12850E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-FEB-2009 10:54:12.9MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.595E+01	3.547E+00	4.169E-01	3.187E-02	86.222
CD-109	3.584E+00	1.187E+00	1.773E+00	2.050E-01	2.021
SN-126	3.529E-01	1.169E-01	1.760E-01	2.030E-02	2.005
TL-208	4.620E-01	1.018E-01	7.465E-02	4.753E-03	6.188
BI-211	3.228E+00	5.791E-01	4.533E-01	3.115E-02	7.121
PB-212	1.433E+00	1.813E-01	1.145E-01	9.475E-03	12.523
PO-212	1.433E+00	1.813E-01	1.145E-01	9.475E-03	12.523
BI-214	1.020E+00	1.962E-01	1.429E-01	1.061E-02	7.139
PB-214	1.123E+00	2.098E-01	1.580E-01	1.362E-02	7.107
PO-214	1.123E+00	2.098E-01	1.580E-01	1.362E-02	7.107
PO-216	1.433E+00	1.813E-01	1.145E-01	9.475E-03	12.523
PO-218	1.123E+00	2.098E-01	1.580E-01	1.362E-02	7.107
RA-224	4.120E+00	1.808E+00	1.302E+00	9.064E-02	3.163
RA-226	1.020E+00	1.962E-01	1.429E-01	1.061E-02	7.139
AC-228	1.509E+00	3.751E-01	2.627E-01	2.920E-02	5.744
RA-228	1.509E+00	3.751E-01	2.627E-01	2.920E-02	5.744
TH-228	1.433E+00	1.813E-01	1.145E-01	9.474E-03	12.524
TH-230	1.020E+00	1.962E-01	1.429E-01	1.061E-02	7.139

Sample ID : G232357001 Acquisition date : 6-JUL-2009 11:13:00

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.509E+00	3.751E-01	2.627E-01	2.920E-02	5.744
TH-234	1.773E+00	3.261E+00	3.878E+00	7.653E-01	0.457
U-234	1.020E+00	1.962E-01	1.429E-01	1.061E-02	7.139
NP-237	1.036E+00	4.044E-01	5.169E-01	1.220E-01	2.005
U-238	1.773E+00	3.261E+00	3.878E+00	7.653E-01	0.457
AM-243	2.523E-01	1.173E-01	1.401E-01	1.556E-02	1.801
ANH-511	1.937E-01	9.032E-02	5.836E-02	3.295E-03	3.319

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.285E-02		4.165E-01	6.779E-01	4.517E-02	-0.034
NA-22	-3.956E-02		6.022E-02	9.037E-02	6.202E-03	-0.438
NA-24	-1.400E-01		1.257E-01	Half-Life too short		
AL-26	1.532E-02		2.421E-02	4.707E-02	2.817E-03	0.325
TI-44	3.599E-01	+	8.098E-02	1.162E-01	1.292E-02	3.097
SC-46	5.651E-03		5.218E-02	8.718E-02	7.313E-03	0.065
V-48	1.771E-02		8.465E-02	1.422E-01	1.123E-02	0.125
CR-51	-1.241E-02		4.648E-01	7.723E-01	5.570E-02	-0.016
MN-52	6.943E-02		2.361E-01	4.110E-01	3.047E-02	0.169
MN-54	-1.400E-03		4.423E-02	7.326E-02	5.491E-03	-0.019
CO-56	5.575E-03		4.744E-02	7.960E-02	6.118E-03	0.070
CO-57	2.826E-03		3.226E-02	5.278E-02	3.794E-03	0.054
CO-58	-7.719E-02		4.708E-02	6.490E-02	4.636E-03	-1.189
FE-59	5.572E-02		1.202E-01	2.049E-01	1.551E-02	0.272
CO-60	8.721E-03		5.007E-02	8.267E-02	6.240E-03	0.105
ZN-65	-1.720E-01		1.416E-01	1.620E-01	1.053E-02	-1.062
GE-68	-4.039E-01		1.796E+00	2.878E+00	2.000E-01	-0.140
AS-73	6.874E-01		2.190E+00	3.690E+00	5.043E-01	0.186
AS-74	4.579E-02		1.134E-01	1.892E-01	1.017E-02	0.242
SE-75	-2.103E-02		5.527E-02	9.081E-02	6.351E-03	-0.232
BR-77	-6.155E-01		1.125E+01	1.650E+01	9.284E-01	-0.037
SR-82	-7.439E-01		4.462E-01	6.215E-01	4.102E-02	-1.197
RB-83	1.353E-03		1.027E-01	1.516E-01	8.531E-03	0.009
RB-84	-3.815E-02		9.568E-02	1.529E-01	1.262E-02	-0.250
KR-85	2.141E+01		9.875E+00	1.813E+01	1.023E+00	1.181
SR-85	1.085E-01		5.002E-02	9.184E-02	5.181E-03	1.181
RB-86	4.817E-01		1.079E+00	1.836E+00	1.277E-01	0.262
Y-88	-2.558E-02		4.158E-02	5.906E-02	3.450E-03	-0.433
ZR-88	-2.691E-02		4.193E-02	6.634E-02	3.763E-03	-0.406
Y-91	3.054E+00		2.703E+01	4.434E+01	2.682E+00	0.069
NB-94	7.850E-03		4.366E-02	7.415E-02	4.125E-03	0.106
NB-95	2.411E-02		4.843E-02	8.411E-02	5.420E-03	0.287
NB-95M	2.654E-01		1.854E-01	2.924E-01	2.471E-02	0.908
ZR-95	8.172E-03		9.001E-02	1.514E-01	1.129E-02	0.054
NB-97	2.229E-02		1.909E-02	Half-Life too short		
ZR-97	2.179E+00		4.160E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	1.446E+00		1.088E+01	1.839E+01	2.556E+00	0.079
TC-99M	-1.134E+09		1.073E+09	Half-Life too short		
RH-101	7.980E-03		4.094E-02	6.628E-02	4.522E-03	0.120
RH-102	6.578E-03		3.808E-02	6.303E-02	3.593E-03	0.104
RU-103	-2.552E-02		5.028E-02	7.851E-02	9.881E-03	-0.325
RH-106	-4.260E-01		4.104E-01	5.942E-01	6.819E-02	-0.717
RU-106	-4.260E-01		4.081E-01	5.942E-01	3.122E-02	-0.717
AG-108M	5.465E-03		4.208E-02	6.972E-02	4.335E-03	0.078
AG-110M	2.145E-02		4.204E-02	7.071E-02	3.876E-03	0.303
IN-111	-2.347E-01		1.105E+00	1.593E+00	1.109E-01	-0.147
IN-113M	3.416E-02		5.978E-02	1.020E-01	6.187E-03	0.335
SN-113	3.416E-02		5.978E-02	1.020E-01	6.187E-03	0.335
IN-114M	1.891E-01		2.661E-01	3.900E-01	2.645E-02	0.485
CD-115	2.438E-01		1.034E+01	1.670E+01	9.369E-01	0.015
SN-117M	-5.795E-03		6.766E-02	1.089E-01	7.282E-03	-0.053
SB-122	2.370E+00		1.969E+00	3.481E+00	1.915E-01	0.681
I-123	3.930E-01		8.663E-01	Half-Life too short		
TE-123M	8.275E-03		3.648E-02	5.956E-02	4.021E-03	0.139
I-124	-4.483E-01		8.580E-01	1.123E+00	6.005E-02	-0.399
SB-124	3.941E-03		7.883E-02	1.317E-01	9.247E-03	0.030
SB-125	6.392E-02		1.201E-01	2.043E-01	1.218E-02	0.313
TE-125M	-3.031E+00		1.214E+01	1.964E+01	1.951E+00	-0.154
I-126	1.733E-01		2.163E-01	3.710E-01	1.888E-02	0.467
SB-126	8.560E-02		1.845E-01	2.813E-01	1.633E-02	0.304
SB-127	-1.888E-01		1.334E+00	2.214E+00	1.935E-01	-0.085
XE-127	1.240E-02		6.041E-02	9.772E-02	6.690E-03	0.127
I-131	2.637E-02		1.282E-01	2.151E-01	1.449E-02	0.123
TE-132	2.175E-02		7.043E-01	1.189E+00	1.741E-01	0.018
BA-133	3.426E-02		6.188E-02	9.315E-02	1.097E-02	0.368
I-133	-2.098E-04		1.585E-03	Half-Life too short		
CS-134	1.066E-01		6.127E-02	1.145E-01	7.977E-03	0.931
CS-135	2.000E-01		2.137E-01	3.723E-01	3.183E-02	0.537
I-135	-6.855E+07		2.116E+08	Half-Life too short		
CS-136	3.266E-02		1.292E-01	2.171E-01	1.672E-02	0.150
BA-137M	-1.480E-02		4.525E-02	7.055E-02	3.549E-03	-0.210
CS-137	-1.565E-02		4.783E-02	7.458E-02	3.773E-03	-0.210
CE-139	7.932E-03		3.988E-02	6.491E-02	4.317E-03	0.122
BA-140	-1.364E-01		3.029E-01	4.678E-01	1.520E-01	-0.292
LA-140	3.325E-02		9.095E-02	1.598E-01	1.114E-02	0.208
CE-141	4.571E-02		7.694E-02	1.279E-01	8.928E-03	0.357
CE-143	3.458E-04		7.184E-05	Half-Life too short		
CE-144	-1.551E-01		2.619E-01	4.126E-01	6.064E-02	-0.376
PM-144	5.973E-03		4.141E-02	7.024E-02	3.852E-03	0.085
PR-144	4.045E-01		2.804E+00	4.757E+00	2.607E-01	0.085
PM-146	5.245E-02		5.731E-02	9.949E-02	8.521E-03	0.527
ND-147	-2.035E-01		6.702E-01	1.062E+00	1.427E-01	-0.192
PM-149	1.262E+01		8.564E+01	1.442E+02	2.111E+01	0.088
EU-152	-7.653E-02		1.741E-01	2.085E-01	1.469E-02	-0.367

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	1.088E-02		1.181E-01	1.707E-01	1.638E-02	0.064
EU-154	-1.076E-01		1.688E-01	2.536E-01	2.544E-02	-0.424
EU-155	2.574E-02		1.443E-01	2.379E-01	2.060E-02	0.108
TB-160	2.086E-02		1.930E-01	3.225E-01	2.652E-02	0.065
HO-166M	2.300E-02		7.530E-02	1.292E-01	7.342E-03	0.178
TM-171	-1.237E+01		5.231E+01	7.493E+01	8.616E+00	-0.165
LU-176	2.664E-02		3.418E-02	5.639E-02	3.799E-03	0.472
LU-177	1.233E+00		1.339E+00	2.227E+00	1.530E-01	0.554
LU-177M	-1.354E-01		2.220E-01	3.497E-01	1.993E-02	-0.387
HF-181	-9.582E-03		5.434E-02	8.759E-02	4.987E-03	-0.109
W-181	3.107E-01		7.015E-01	1.044E+00	1.215E-01	0.298
TA-182	1.275E-01		2.878E-01	4.842E-01	3.019E-02	0.263
RE-183	-8.541E-02		1.455E-01	2.284E-01	1.522E-02	-0.374
RE-184	1.120E-01		2.973E-01	5.083E-01	3.538E-02	0.220
OS-185	-2.320E-02		5.701E-02	8.845E-02	4.532E-03	-0.262
RE-188	-2.999E-02		2.177E-01	3.499E-01	2.347E-02	-0.086
W-188	-2.727E+00		1.070E+01	1.523E+01	1.042E+00	-0.179
IR-192	-3.332E-02		4.392E-02	6.977E-02	4.662E-03	-0.478
AU-195	-1.984E-02		3.449E-01	4.941E-01	4.631E-02	-0.040
TL-200	-1.976E-04		1.386E-04	Half-Life too short		
TL-201	2.287E+00		7.214E+00	1.180E+01	7.852E-01	0.194
TL-202	-7.848E-02		8.055E-02	1.221E-01	6.980E-03	-0.643
HG-203	1.047E-02		5.292E-02	8.940E-02	6.439E-03	0.117
BI-207	-3.178E-02		6.877E-02	1.073E-01	7.623E-03	-0.296
TL-207	-5.499E-01		8.914E-01	1.424E+00	2.394E-01	-0.386
PO-209	7.282E+00		1.000E+01	1.755E+01	1.494E+00	0.415
BI-210	-7.757E-01		1.420E+01	2.311E+01	2.400E+00	-0.034
PB-210	-7.757E-01		1.420E+01	2.311E+01	2.400E+00	-0.034
PO-210	-7.757E-01		1.420E+01	2.311E+01	2.220E+00	-0.034
PB-211	-2.162E-01		1.190E+00	1.924E+00	1.199E+00	-0.112
BI-212	9.923E-01	+	5.128E-01	7.770E-01	6.050E-02	1.277
PO-215	-5.499E-01		8.914E-01	1.424E+00	2.394E-01	-0.386
RN-219	7.320E-02		5.147E-01	8.560E-01	1.160E-01	0.086
RN-220	1.470E+01		3.266E+01	5.494E+01	3.048E+00	0.267
RA-223	-5.499E-01		8.914E-01	1.424E+00	2.394E-01	-0.386
AC-227	-2.543E-01		5.008E-01	8.175E-01	1.184E-01	-0.311
TH-227	-2.543E-01		5.014E-01	8.175E-01	1.417E-01	-0.311
TH-229	-3.087E-01		6.617E-01	1.036E+00	7.045E-02	-0.298
PA-231	6.796E-01		2.049E+00	3.480E+00	4.966E-01	0.195
TH-231	-5.499E-01		8.914E-01	1.424E+00	2.394E-01	-0.386
U-231	-1.387E+00		1.233E+00	1.920E+00	1.892E-01	-0.723
PA-233	-2.504E-03		8.405E-02	1.398E-01	9.797E-03	-0.018
PA-234	1.029E-01		3.784E-01	6.396E-01	1.188E-01	0.161
PA-234M	-3.134E-01		8.917E+00	1.480E+01	1.556E+00	-0.021
U-235	-2.154E-02		2.744E-01	4.344E-01	7.248E-02	-0.050
NP-236	1.400E-02		1.034E-01	1.681E-01	1.122E-02	0.083
NP-239	-5.963E-03		2.483E-01	4.047E-01	3.042E-02	-0.015
AM-241	1.896E-01		3.593E-01	5.393E-01	6.864E-02	0.351

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	8.319E-02		1.294E-01	2.173E-01	1.896E-02	0.383
CM-247	9.402E-03		4.655E-02	7.772E-02	4.420E-03	0.121
CF-249	7.124E-02		5.338E-02	9.489E-02	5.440E-03	0.751
CF-251	1.703E-02		1.703E-01	2.753E-01	1.846E-02	0.062

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232357001       *
* Acquisition date  :  6-JUL-2009 11:13:00 Detector SN#     :           *
* Detector ID       : GAM15                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:01.14      Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       : 22-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232357001           Analyst initials: MXR1       *
* Batch Number      : 880723               Sample Quantity : 1.1285E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
*                                                                       *
* CALIB. DATE/TIME : 16-FEB-2009 10:54:12 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.595E+01	3.476E+00	2.076E-01	1.773E+00
CD-109	3.584E+00	1.163E+00	9.043E-01	5.935E-01
SN-126	3.529E-01	1.145E-01	8.974E-02	5.844E-02
TL-208	4.620E-01	9.975E-02	3.747E-02	5.090E-02
BI-211	3.228E+00	5.676E-01	2.285E-01	2.896E-01
PB-212	1.433E+00	1.777E-01	5.789E-02	9.065E-02
PO-212	1.433E+00	1.777E-01	5.789E-02	9.065E-02
BI-214	1.020E+00	1.923E-01	7.170E-02	9.811E-02
PB-214	1.123E+00	2.056E-01	7.964E-02	1.049E-01
PO-214	1.123E+00	2.056E-01	7.964E-02	1.049E-01
PO-216	1.433E+00	1.777E-01	5.789E-02	9.065E-02
PO-218	1.123E+00	2.056E-01	7.964E-02	1.049E-01
RA-224	4.120E+00	1.772E+00	6.586E-01	9.041E-01
RA-226	1.020E+00	1.923E-01	7.170E-02	9.811E-02
AC-228	1.509E+00	3.676E-01	1.313E-01	1.876E-01
RA-228	1.509E+00	3.676E-01	1.313E-01	1.876E-01
TH-228	1.433E+00	1.777E-01	5.789E-02	9.065E-02
TH-230	1.020E+00	1.923E-01	7.170E-02	9.811E-02
TH-232	1.509E+00	3.676E-01	1.313E-01	1.876E-01
TH-234	1.773E+00	3.196E+00	1.983E+00	1.631E+00
U-234	1.020E+00	1.923E-01	7.170E-02	9.811E-02
NP-237	1.036E+00	3.963E-01	2.637E-01	2.022E-01
U-238	1.773E+00	3.196E+00	1.983E+00	1.631E+00
AM-243	2.523E-01	1.149E-01	7.153E-02	5.863E-02
ANH-511	1.937E-01	8.851E-02	2.932E-02	4.516E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-2.285E-02	4.082E-01	3.409E-01	2.082E-01 NOT IDENT.
NA-22	-3.956E-02	5.901E-02	4.505E-02	3.011E-02 NOT IDENT.

NA-24	-1.400E+05	2.464E+05	0.000E+00	1.257E+05	SHORT HLIF
AL-26	1.532E-02	2.372E-02	2.340E-02	1.210E-02	NOT IDENT.
TI-44	3.599E-01	7.936E-02	5.932E-02	4.049E-02	FAIL ABUN
SC-46	5.651E-03	5.114E-02	4.360E-02	2.609E-02	FAIL ABUN
V-48	1.771E-02	8.296E-02	7.104E-02	4.232E-02	NOT IDENT.
CR-51	-1.241E-02	4.555E-01	3.896E-01	2.324E-01	NOT IDENT.
MN-52	6.943E-02	2.314E-01	2.047E-01	1.180E-01	NOT IDENT.
MN-54	-1.400E-03	4.335E-02	3.666E-02	2.212E-02	NOT IDENT.
CO-56	5.575E-03	4.650E-02	3.982E-02	2.372E-02	NOT IDENT.
CO-57	2.826E-03	3.161E-02	2.684E-02	1.613E-02	NOT IDENT.
CO-58	-7.719E-02	4.614E-02	3.248E-02	2.354E-02	NOT IDENT.
FE-59	5.572E-02	1.178E-01	1.023E-01	6.008E-02	NOT IDENT.
CO-60	8.721E-03	4.906E-02	4.120E-02	2.503E-02	NOT IDENT.
ZN-65	-1.720E-01	1.388E-01	8.088E-02	7.080E-02	NOT IDENT.
GE-68	-4.039E-01	1.760E+00	1.437E+00	8.980E-01	NOT IDENT.
AS-73	6.874E-01	2.146E+00	1.890E+00	1.095E+00	NOT IDENT.
AS-74	4.579E-02	1.111E-01	9.493E-02	5.668E-02	NOT IDENT.
SE-75	-2.103E-02	5.416E-02	4.589E-02	2.763E-02	NOT IDENT.
BR-77	-6.155E-01	1.103E+01	8.291E+00	5.627E+00	FAIL ABUN
SR-82	-7.439E-01	4.373E-01	3.112E-01	2.231E-01	NOT IDENT.
RB-83	1.353E-03	1.007E-01	7.618E-02	5.136E-02	NOT IDENT.
RB-84	-3.815E-02	9.376E-02	7.647E-02	4.784E-02	NOT IDENT.
KR-85	2.141E+01	9.678E+00	9.110E+00	4.938E+00	NOT IDENT.
SR-85	1.085E-01	4.902E-02	4.615E-02	2.501E-02	NOT IDENT.
RB-86	4.817E-01	1.057E+00	9.166E-01	5.395E-01	NOT IDENT.
Y-88	-2.558E-02	4.075E-02	2.935E-02	2.079E-02	NOT IDENT.
ZR-88	-2.691E-02	4.109E-02	3.341E-02	2.096E-02	NOT IDENT.
Y-91	3.054E+00	2.649E+01	2.212E+01	1.351E+01	NOT IDENT.
NB-94	7.850E-03	4.279E-02	3.716E-02	2.183E-02	NOT IDENT.
NB-95	2.411E-02	4.746E-02	4.212E-02	2.421E-02	NOT IDENT.
NB-95M	2.654E-01	1.817E-01	1.479E-01	9.269E-02	NOT IDENT.
ZR-95	8.172E-03	8.821E-02	7.583E-02	4.500E-02	NOT IDENT.
NB-97	2.229E+04	3.742E+04	0.000E+00	1.909E+04	SHORT HLIF
ZR-97	2.179E+06	8.153E+05	0.000E+00	4.160E+05	SHORT HLIF
MO-99	1.446E+00	1.067E+01	9.213E+00	5.442E+00	NOT IDENT.
TC-99M	-1.134E+15	2.102E+15	0.000E+00	1.073E+15	SHORT HLIF
RH-101	7.980E-03	4.012E-02	3.358E-02	2.047E-02	NOT IDENT.
RH-102	6.578E-03	3.732E-02	3.169E-02	1.904E-02	NOT IDENT.
RU-103	-2.552E-02	4.927E-02	3.946E-02	2.514E-02	FAIL ABUN
RH-106	-4.260E-01	4.022E-01	2.981E-01	2.052E-01	FAIL ABUN
RU-106	-4.260E-01	3.999E-01	2.981E-01	2.041E-01	FAIL ABUN
AG-108M	5.465E-03	4.124E-02	3.508E-02	2.104E-02	NOT IDENT.
AG-110M	2.145E-02	4.120E-02	3.546E-02	2.102E-02	NOT IDENT.
IN-111	-2.347E-01	1.083E+00	8.056E-01	5.525E-01	NOT IDENT.
IN-113M	3.416E-02	5.859E-02	5.137E-02	2.989E-02	NOT IDENT.
SN-113	3.416E-02	5.859E-02	5.137E-02	2.989E-02	NOT IDENT.
IN-114M	1.891E-01	2.608E-01	1.976E-01	1.331E-01	NOT IDENT.
CD-115	2.438E-01	1.013E+01	8.391E+00	5.169E+00	NOT IDENT.
SN-117M	-5.795E-03	6.631E-02	5.527E-02	3.383E-02	NOT IDENT.
SB-122	2.370E+00	1.930E+00	1.748E+00	9.846E-01	NOT IDENT.
I-123	3.930E+05	1.698E+06	0.000E+00	8.663E+05	SHORT HLIF
TE-123M	8.275E-03	3.575E-02	3.023E-02	1.824E-02	NOT IDENT.
I-124	-4.483E-01	8.408E-01	5.636E-01	4.290E-01	NOT IDENT.
SB-124	3.941E-03	7.725E-02	6.548E-02	3.941E-02	FAIL ABUN
SB-125	6.392E-02	1.177E-01	1.028E-01	6.007E-02	NOT IDENT.
TE-125M	-3.031E+00	1.190E+01	9.999E+00	6.072E+00	NOT IDENT.
I-126	1.733E-01	2.120E-01	1.860E-01	1.082E-01	NOT IDENT.
SB-126	8.560E-02	1.808E-01	1.409E-01	9.225E-02	FAIL ABUN
SB-127	-1.888E-01	1.308E+00	1.110E+00	6.672E-01	NOT IDENT.
XE-127	1.240E-02	5.920E-02	4.949E-02	3.020E-02	NOT IDENT.
I-131	2.637E-02	1.257E-01	1.084E-01	6.411E-02	NOT IDENT.
TE-132	2.175E-02	6.903E-01	6.016E-01	3.522E-01	NOT IDENT.
BA-133	3.426E-02	6.064E-02	4.695E-02	3.094E-02	NOT IDENT.
I-133	-2.098E+02	3.106E+03	0.000E+00	1.585E+03	SHORT HLIF
CS-134	1.066E-01	6.005E-02	5.731E-02	3.064E-02	NOT IDENT.
CS-135	2.000E-01	2.095E-01	1.881E-01	1.069E-01	NOT IDENT.
I-135	-6.855E+13	4.148E+14	0.000E+00	2.116E+14	SHORT HLIF
CS-136	3.266E-02	1.266E-01	1.084E-01	6.458E-02	FAIL ABUN
BA-137M	-1.480E-02	4.434E-02	3.537E-02	2.262E-02	NOT IDENT.
CS-137	-1.565E-02	4.687E-02	3.739E-02	2.391E-02	NOT IDENT.
CE-139	7.932E-03	3.908E-02	3.293E-02	1.994E-02	NOT IDENT.
BA-140	-1.364E-01	2.968E-01	2.350E-01	1.514E-01	NOT IDENT.
LA-140	3.325E-02	8.913E-02	7.953E-02	4.548E-02	NOT IDENT.
CE-141	4.571E-02	7.540E-02	6.496E-02	3.847E-02	NOT IDENT.
CE-143	3.458E+02	1.408E+02	0.000E+00	7.184E+01	SHORT HLIF
CE-144	-1.551E-01	2.567E-01	2.097E-01	1.310E-01	NOT IDENT.
PM-144	5.973E-03	4.058E-02	3.520E-02	2.070E-02	NOT IDENT.
PR-144	4.045E-01	2.748E+00	2.384E+00	1.402E+00	NOT IDENT.

PM-146	5.245E-02	5.617E-02	5.005E-02	2.866E-02	NOT IDENT.
ND-147	-2.035E-01	6.568E-01	5.334E-01	3.351E-01	FAIL ABUN
PM-149	1.262E+01	8.393E+01	7.282E+01	4.282E+01	NOT IDENT.
EU-152	-7.653E-02	1.706E-01	1.051E-01	8.705E-02	NOT IDENT.
GD-153	1.088E-02	1.157E-01	8.699E-02	5.903E-02	NOT IDENT.
EU-154	-1.076E-01	1.654E-01	1.265E-01	8.439E-02	NOT IDENT.
EU-155	2.574E-02	1.414E-01	1.212E-01	7.216E-02	FAIL ABUN
TB-160	2.086E-02	1.891E-01	1.613E-01	9.649E-02	FAIL ABUN
HO-166M	2.300E-02	7.380E-02	6.472E-02	3.765E-02	FAIL ABUN
TM-171	-1.237E+01	5.126E+01	3.830E+01	2.615E+01	NOT IDENT.
LU-176	2.664E-02	3.349E-02	2.846E-02	1.709E-02	FAIL ABUN
LU-177	1.233E+00	1.312E+00	1.127E+00	6.693E-01	NOT IDENT.
LU-177M	-1.354E-01	2.176E-01	1.761E-01	1.110E-01	NOT IDENT.
HF-181	-9.582E-03	5.325E-02	4.404E-02	2.717E-02	NOT IDENT.
W-181	3.107E-01	6.875E-01	5.337E-01	3.508E-01	NOT IDENT.
TA-182	1.275E-01	2.821E-01	2.415E-01	1.439E-01	FAIL ABUN
RE-183	-8.541E-02	1.425E-01	1.159E-01	7.273E-02	NOT IDENT.
RE-184	1.120E-01	2.913E-01	2.570E-01	1.486E-01	NOT IDENT.
OS-185	-2.320E-02	5.587E-02	4.436E-02	2.850E-02	NOT IDENT.
RE-188	-2.999E-02	2.134E-01	1.776E-01	1.089E-01	NOT IDENT.
W-188	-2.727E+00	1.048E+01	7.690E+00	5.348E+00	FAIL ABUN
IR-192	-3.332E-02	4.304E-02	3.520E-02	2.196E-02	FAIL ABUN
AU-195	-1.984E-02	3.380E-01	2.517E-01	1.725E-01	FAIL ABUN
TL-200	-1.976E+02	2.716E+02	0.000E+00	1.386E+02	SHORT HLIF
TL-201	2.287E+00	7.069E+00	5.986E+00	3.607E+00	NOT IDENT.
TL-202	-7.848E-02	7.894E-02	6.145E-02	4.028E-02	NOT IDENT.
HG-203	1.047E-02	5.186E-02	4.516E-02	2.646E-02	NOT IDENT.
BI-207	-3.178E-02	6.740E-02	5.357E-02	3.439E-02	FAIL ABUN
TL-207	-5.499E-01	8.736E-01	7.184E-01	4.457E-01	FAIL ABUN
PO-209	7.282E+00	9.801E+00	8.778E+00	5.000E+00	NOT IDENT.
BI-210	-7.757E-01	1.392E+01	1.185E+01	7.102E+00	NOT IDENT.
PB-210	-7.757E-01	1.392E+01	1.185E+01	7.102E+00	NOT IDENT.
PO-210	-7.757E-01	1.392E+01	1.185E+01	7.102E+00	NOT IDENT.
PB-211	-2.162E-01	1.166E+00	9.686E-01	5.950E-01	NOT IDENT.
BI-212	9.923E-01	5.025E-01	3.893E-01	2.564E-01	FAIL ABUN
PO-215	-5.499E-01	8.736E-01	7.184E-01	4.457E-01	FAIL ABUN
RN-219	7.320E-02	5.044E-01	4.310E-01	2.573E-01	NOT IDENT.
RN-220	1.470E+01	3.201E+01	2.759E+01	1.633E+01	NOT IDENT.
RA-223	-5.499E-01	8.736E-01	7.184E-01	4.457E-01	FAIL ABUN
AC-227	-2.543E-01	4.908E-01	4.132E-01	2.504E-01	FAIL ABUN
TH-227	-2.543E-01	4.914E-01	4.132E-01	2.507E-01	FAIL ABUN
TH-229	-3.087E-01	6.485E-01	5.250E-01	3.309E-01	FAIL ABUN
PA-231	6.796E-01	2.008E+00	1.758E+00	1.025E+00	FAIL ABUN
TH-231	-5.499E-01	8.736E-01	7.184E-01	4.457E-01	FAIL ABUN
U-231	-1.387E+00	1.208E+00	9.783E-01	6.163E-01	FAIL ABUN
PA-233	-2.504E-03	8.237E-02	7.053E-02	4.202E-02	FAIL ABUN
PA-234	1.029E-01	3.708E-01	3.197E-01	1.892E-01	FAIL ABUN
PA-234M	-3.134E-01	8.738E+00	7.393E+00	4.458E+00	NOT IDENT.
U-235	-2.154E-02	2.689E-01	2.207E-01	1.372E-01	FAIL ABUN
NP-236	1.400E-02	1.014E-01	8.530E-02	5.171E-02	NOT IDENT.
NP-239	-5.963E-03	2.433E-01	2.059E-01	1.241E-01	NOT IDENT.
AM-241	1.896E-01	3.522E-01	2.760E-01	1.797E-01	NOT IDENT.
CM-243	8.319E-02	1.268E-01	1.107E-01	6.471E-02	NOT IDENT.
CM-247	9.402E-03	4.562E-02	3.914E-02	2.328E-02	NOT IDENT.
CF-249	7.124E-02	5.232E-02	4.779E-02	2.669E-02	NOT IDENT.
CF-251	1.703E-02	1.669E-01	1.396E-01	8.513E-02	NOT IDENT.

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                           CHARLESTON ,SC 29417                        *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                *
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```

ENERGY	MDA COUNTS
46.50	239.6262
46.50	239.6262
46.50	239.6262
48.70	242.4331
49.72	238.1308
51.35	266.2636
52.39	249.6370
52.97	251.7750
53.15	248.0478
53.44	243.4106
54.07	257.9366
56.28	273.1747
56.28	273.1758
57.37	0.0000
57.53	283.2824
57.53	283.2835
57.60	287.9077
57.98	283.4806
57.98	283.4806
59.32	268.7116
59.32	268.7116
59.40	268.7448
59.54	262.6578
59.72	262.7304
60.01	270.5318
61.10	294.0728
61.14	294.0903
61.30	294.1609
63.00	302.0477
63.29	296.5770
63.29	296.5770
63.58	301.3398
64.28	287.7267
65.12	271.0414
65.20	271.0727
65.20	271.0727
66.05	266.7522
66.72	284.0834
66.83	284.1292
66.91	284.1616
67.20	288.9391
67.20	288.9391
67.75	320.2568
67.85	320.3021
68.90	333.4930
68.90	333.4930
69.30	324.5913
69.67	328.9161
70.82	320.0710
70.82	320.0710
70.83	320.0760
72.80	309.9792
72.87	310.0082
72.87	310.0082
74.67	366.8694
74.81	366.9379
74.81	366.9379
74.81	366.9379
74.81	366.9379
74.81	366.9379
74.81	366.9379
74.97	367.0163
75.28	367.1675
75.70	367.3716
77.11	368.0535
77.11	368.0535
77.11	368.0535

77.11	368.0535
77.11	368.0535
77.11	368.0535
78.38	368.6627
79.62	369.2534
79.80	369.3390
79.80	369.3390
80.11	369.4859
80.18	369.5187
80.30	369.5758
80.30	369.5758
80.57	369.7028
81.00	369.9054
81.07	376.6643
81.07	376.6643
81.07	376.6643
81.07	376.6643
82.60	309.2078
83.37	246.0171
83.78	309.6649
83.78	309.6649
83.78	309.6649
83.78	309.6649
84.21	309.8303
84.40	309.9029
84.90	310.0957
85.43	310.2980
86.29	342.4843
86.50	342.5723
86.54	362.5073
86.59	362.5295
86.72	362.5865
86.79	362.6170
86.94	362.6837
87.30	379.5899
87.30	379.5899
87.30	379.5899
87.30	379.5899
87.30	379.5899
87.30	379.5899
87.57	355.9814
87.88	356.1148
88.03	356.1802
88.36	356.3218
88.47	356.3695
89.95	357.0014
91.11	357.4944
92.29	357.9914
92.38	358.0296
92.38	358.0296
93.35	358.4354
94.00	358.7078
94.67	358.9842
94.67	358.9856
94.90	359.0809
94.90	359.0809
94.90	359.0809
94.90	359.0809
95.87	359.4826
95.87	359.4826
96.73	359.8374
97.43	284.0632
98.44	289.2362
98.44	289.2362
98.88	297.4626
99.55	294.4514
99.55	294.4514
99.86	294.5536
100.00	288.1245
100.10	288.1581
103.18	296.4511
103.76	272.2581
105.00	283.8159
105.31	288.9987
108.00	287.7950
109.28	297.3841
111.00	265.1622
111.00	265.1622

111.76	283.8166
112.95	291.3485
115.19	252.9490
116.30	259.4126
117.00	274.0197
117.00	274.0197
117.66	266.9871
121.11	252.3957
121.62	250.4543
121.78	250.4940
122.06	255.7401
122.32	256.8408
122.32	256.8408
122.32	256.8408
122.32	256.8408
123.07	281.9049
127.23	271.6025
129.76	285.8231
131.20	302.9256
133.02	295.0746
133.54	280.5625
135.34	264.2547
136.00	268.6133
136.25	272.8738
136.48	272.9314
140.51	285.5288
140.51	0.0000
142.18	263.7997
142.65	288.1911
143.76	273.6837
144.24	266.4003
144.24	266.4003
144.24	266.4003
144.24	266.4003
145.22	252.8781
145.44	248.6942
147.16	280.8690
152.43	227.8566
152.70	238.5605
153.22	237.6010
154.21	261.2621
154.21	261.2621
154.21	261.2621
154.21	261.2621
155.03	266.7809
156.02	265.9379
158.56	264.3691
159.00	0.0000
159.00	250.5460
160.31	255.1084
161.27	270.3301
162.32	287.7434
162.64	291.0430
163.35	270.7954
163.89	254.7906
165.85	268.1207
167.43	259.8401
171.28	267.1355
171.86	260.7677
172.10	261.8996
176.55	256.3065
176.60	256.3155
181.06	256.3348
184.41	251.7486
185.71	269.0606
186.00	269.1188
190.27	224.7688
192.34	255.0138
193.63	243.1545
197.04	204.0558
198.01	211.9277
198.60	226.3724
200.40	243.2552
201.83	225.7958
202.84	231.4974
205.31	280.7298
208.36	252.4239
208.81	253.6159

209.75	231.5228
209.75	231.5228
210.97	213.8950
215.65	239.1810
216.55	209.1324
218.09	214.9512
222.10	220.0290
223.80	216.9100
226.40	217.9640
227.00	216.2490
227.08	216.2607
227.20	216.2769
228.16	221.8264
228.18	221.8294
228.18	221.8294
231.56	0.0000
235.69	225.0415
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236.00	232.6402
238.60	193.3862
238.63	193.3901
238.63	193.3901
238.63	193.3901
239.00	193.4356
240.98	193.6826
241.98	172.8787
241.98	172.8787
241.98	172.8787
244.69	173.1779
245.39	176.2939
247.94	179.2422
248.90	177.2938
249.79	176.4789
252.40	175.8504
252.85	173.1512
252.85	173.1512
254.15	0.0000
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256.20	197.3790
260.50	165.6837
260.90	172.1692
262.80	176.9766
264.65	174.4051
268.24	185.8784
268.79	168.3633
269.46	170.2831
269.46	170.2831
269.46	170.2831
269.46	170.2831
271.23	175.0926
273.65	249.5638
276.40	180.2741
277.35	173.8653
277.60	164.5914
277.60	164.5914
278.00	168.3508
278.60	173.9931
279.20	179.6394
279.53	187.1199
280.46	198.3978
281.68	193.8777
283.67	167.9722
284.30	158.6985
285.00	165.3001
285.90	170.9906
286.10	173.8142
286.10	173.8142
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290.80	173.3427
291.72	174.9954
293.26	0.0000
293.70	175.1914
295.21	162.8153
295.21	162.8153
295.21	162.8153
295.96	151.9197

296.50	206.8005
297.23	206.8838
298.57	207.0396
299.80	142.8281
299.80	142.8281
300.09	138.1427
300.09	138.1427
300.09	138.1427
300.10	138.1427
300.12	138.1445
301.29	147.6591
302.84	161.9350
303.76	165.1627
303.91	165.1776
304.40	166.7939
304.40	166.7939
304.84	166.8348
306.84	137.0809
308.46	148.5559
311.98	148.8395
316.51	153.0050
318.01	133.1538
319.02	129.4191
319.41	129.4457
320.08	140.9180
323.87	168.8695
323.87	168.8695
323.87	168.8695
323.87	168.8695
325.23	148.9408
328.77	164.5212
333.44	166.1986
334.20	145.4811
334.20	145.4811
334.30	145.4886
338.28	144.1846
338.28	144.1846
338.28	144.1846
338.28	144.1846
338.32	144.1882
338.32	144.1882
338.32	144.1882
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340.57	133.1256
344.27	154.2656
345.85	144.7394
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351.07	148.0226
351.92	148.0843
351.92	148.0843
351.92	148.0843
355.39	0.0000
356.01	111.5312
364.48	105.1787
366.43	129.6490
367.43	124.8359
367.94	0.0000
369.80	107.4031
374.96	127.2451
383.85	124.8342
387.95	104.3916
388.63	120.1876
391.69	118.3857
391.69	118.3857
392.90	142.1420
398.62	127.6709
400.65	106.9862
401.10	105.0270
401.81	106.0517
402.60	107.0824
404.84	115.1306
410.95	103.5061
411.60	98.5577
413.65	117.5808
414.70	104.6757
415.30	104.7039
415.76	100.7362
417.63	0.0000

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423.70	108.0962
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427.89	99.2707
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433.93	99.5305
439.47	106.8230
439.56	106.8268
439.89	102.8106
443.98	79.7667
444.90	104.0398
445.03	104.0461
445.03	104.0461
445.03	104.0461
445.03	104.0461
453.90	89.2268
463.38	90.5970
468.07	118.3095
473.00	78.6919
475.06	94.1001
475.35	103.3179
476.78	101.3312
477.59	98.2922
477.96	94.2113
482.03	96.4165
484.57	92.4082
487.03	91.4716
490.36	0.0000
492.35	87.5452
497.08	91.8367
507.63	0.0000
510.53	0.0000
510.84	86.1054
511.00	86.1110
511.85	86.1394
511.85	86.1394
513.99	86.2098
513.99	86.2098
520.41	95.1987
520.65	96.6952
527.90	88.7561
528.96	0.0000
529.64	98.2181
529.87	0.0000
531.02	86.7690
537.32	81.7343
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546.56	0.0000
549.76	71.5843
552.65	96.9526
555.20	73.8367
563.23	71.9362
563.90	67.7203
568.70	110.2359
569.32	107.0807
569.50	104.9651
569.67	100.7311
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574.00	82.8331
574.64	68.4533
578.91	74.4673
579.30	0.0000
583.14	82.0362
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591.81	85.4922
592.07	86.5668
593.00	80.1819
595.88	75.9800
600.56	82.1771
602.52	0.0000
602.71	100.1169
602.71	100.1169
603.60	109.0881
604.41	91.2308
604.70	91.2401
609.31	84.9327
609.31	84.9327
609.31	84.9327

609.31	84.9327
610.33	80.6616
612.46	69.9559
614.37	73.5918
618.01	76.5573
621.84	86.3730
621.84	86.3730
631.29	84.4803
633.02	81.2787
633.10	81.2805
634.78	76.9889
635.90	73.7624
636.97	69.4484
645.85	77.2697
646.12	82.7187
656.30	72.0731
657.75	58.9966
657.90	0.0000
661.65	76.5728
661.65	76.5728
664.57	0.0000
666.33	63.5409
666.33	63.5409
675.00	76.8992
677.61	67.0687
685.20	67.9628
692.80	65.3636
695.00	70.9358
696.49	69.1254
696.49	69.1254
697.00	83.8851
697.49	87.5859
698.33	84.8406
698.50	85.7684
699.00	82.0921
702.63	80.3376
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706.58	0.0000
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713.82	65.7868
717.42	78.8453
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721.93	0.0000
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722.78	55.7458
722.78	55.7458
722.89	55.7483
722.95	55.7495
723.30	54.1626
724.18	65.3309
727.18	68.8450
733.00	60.7109
735.90	69.0242
739.58	64.4320
742.81	53.2775
744.21	67.3257
747.13	75.8057
751.79	64.6636
752.31	62.7989
753.82	60.9520
755.35	66.6073
756.15	68.4999
756.87	60.0677
763.93	61.1319
765.79	58.3420
766.41	63.9990
766.84	63.0660
768.36	58.3848
768.36	58.3848
768.36	58.3848
768.36	58.3848
776.49	78.3444
778.00	62.3248
778.57	54.7786
778.89	57.6181
783.80	46.3482

785.46	78.5454
792.07	54.9898
795.84	52.2003
796.30	53.1563
801.93	64.6492
805.60	36.1646
810.29	71.4706
810.76	72.4344
815.85	41.9948
817.79	51.5665
818.51	49.6662
819.60	69.7445
826.30	50.7302
828.27	0.0000
831.60	65.1819
831.96	56.5609
834.83	58.5241
836.80	0.0000
846.75	52.9377
848.13	46.2178
856.28	0.0000
856.80	77.2087
860.37	59.8935
867.32	65.8100
867.82	66.7876
871.10	71.6890
873.19	59.1273
874.81	54.3035
875.33	0.0000
876.40	61.1171
879.36	65.0480
880.27	68.9488
880.51	68.9531
881.50	70.9133
883.24	64.1429
884.67	59.3060
889.25	59.3767
896.60	52.6630
898.02	43.9014
899.00	50.7442
903.28	49.8223
911.07	51.8797
911.07	51.8797
911.07	51.8797
919.63	45.7799
920.93	52.0101
925.00	46.1700
925.24	46.1729
926.50	45.2045
934.06	58.0901
934.06	58.0901
934.06	58.0901
934.06	58.0901
935.52	47.2773
937.48	50.2560
944.10	68.1058
946.00	48.3879
949.00	56.3297
962.29	64.5889
964.01	59.5142
966.15	73.1564
968.20	102.1289
969.11	82.4309
969.11	82.4309
969.11	82.4309
977.42	51.0245
980.50	47.8027
983.50	46.8413
989.30	54.8903
996.32	58.9820
1001.03	53.0431
1001.68	54.0527
1004.76	64.1094
1021.30	0.0000
1024.50	0.0000
1034.80	51.4482
1037.82	51.4856
1038.57	50.4842

1038.76	0.0000
1045.16	48.5391
1046.59	41.4738
1048.07	46.5465
1050.47	51.6350
1050.47	51.6350
1063.62	56.8682
1076.63	56.0183
1077.35	65.1953
1085.78	58.1736
1099.22	50.1604
1112.02	54.2029
1112.84	55.4458
1115.52	73.9688
1120.29	42.3131
1120.29	42.3131
1120.29	42.3131
1120.29	42.3131
1120.51	46.2817
1121.28	46.2891
1124.00	0.0000
1129.67	42.4001
1131.51	0.0000
1147.95	0.0000
1167.94	59.2266
1173.22	71.7767
1175.09	63.4796
1177.93	59.3518
1189.05	69.9280
1204.90	71.2069
1205.75	0.0000
1213.00	82.8639
1221.42	71.4504
1230.97	81.0637
1235.34	85.3506
1236.41	0.0000
1238.11	90.6716
1238.11	90.6716
1238.11	90.6716
1238.11	90.6716
1238.25	84.3490
1246.25	71.8128
1260.41	0.0000
1271.85	39.2764
1274.45	55.2267
1274.54	55.2267
1291.56	42.6270
1298.22	0.0000
1312.09	31.0284
1325.50	35.3995
1325.50	35.3995
1332.49	30.0770
1333.61	24.7117
1360.21	33.4761
1362.66	0.0000
1365.15	23.7796
1368.21	28.1191
1368.53	0.0000
1376.25	25.9951
1377.67	28.7879
1377.67	28.7879
1377.67	28.7879
1377.67	28.7879
1384.27	31.6129
1394.10	18.6300
1395.20	27.0196
1407.95	28.0172
1434.06	18.7674
1436.60	21.5930
1457.56	0.0000
1460.81	8.2504
1489.15	27.4828
1509.49	19.9731
1596.49	14.4805
1620.62	9.6924
1678.03	0.0000
1691.02	9.8043
1691.02	9.8043

1706.46	0.0000
1750.46	0.0000
1764.49	8.9269
1764.49	8.9269
1764.49	8.9269
1764.49	8.9269
1770.23	12.1611
1771.40	13.9009
1791.20	0.0000
1808.65	2.9958
1836.01	15.0413

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232357001

Total Uranium Activity	5.2652E+00	ug/g
Total Uranium Counting Unc.	9.5090E+00	ug/g
Total Uranium Tpu	4.8515E-06	ug/g
Total Uranium Mda	5.9011E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232357001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM15            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:13:00.77    SAMPLE ALQT:  112.850 GRAM    *
*                                                                           *
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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.668E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.478E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.728E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.316E+00
```

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:50:46.52

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232357002.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:13:34.
Sample ID         : G232357002           Sample quantity  : 1.23920E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.34  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.79*	68	332	0.90	94.79	91	8	9.47E-03	50.8	
2	0	63.42*	112	544	0.90	128.03	123	10	1.55E-02	41.2	
3	2	75.01*	569	452	1.52	151.18	144	20	7.90E-02	8.2	1.06E+01
4	2	77.40*	796	290	1.02	155.97	144	20	1.11E-01	4.9	
5	2	84.67*	124	319	1.54	170.48	167	27	1.72E-02	25.3	1.69E+00
6	2	87.48*	296	258	1.04	176.10	167	27	4.11E-02	10.5	
7	2	90.21*	174	244	1.04	181.56	167	27	2.41E-02	16.4	
8	2	93.05*	191	303	1.31	187.24	167	27	2.65E-02	19.0	
9	0	128.90	105	242	0.92	258.88	255	9	1.45E-02	28.6	
10	0	186.30*	149	292	1.17	373.60	367	14	2.07E-02	26.6	
11	0	209.42	129	169	1.20	419.80	415	10	1.80E-02	20.8	
12	5	238.81*	799	107	0.97	478.55	470	23	1.11E-01	4.2	1.31E+00
13	5	241.78*	199	169	1.75	484.48	470	23	2.76E-02	17.9	
14	0	270.38	83	131	1.55	541.65	538	9	1.15E-02	27.2	
15	0	295.70*	222	171	1.06	592.25	586	12	3.08E-02	13.8	
16	0	299.41	55	232	1.41	599.67	598	16	7.69E-03	62.1	
17	0	338.58*	158	92	1.12	677.95	673	9	2.19E-02	13.9	
18	0	352.02*	324	127	1.15	704.82	699	11	4.50E-02	9.0	
19	0	464.15	24	87	1.45	928.95	924	11	3.35E-03	77.9	
20	0	510.72*	87	109	1.61	1022.04	1014	15	1.20E-02	32.4	
21	0	582.85*	255	71	1.37	1166.21	1158	16	3.54E-02	10.1	
22	0	609.20*	257	49	1.48	1218.88	1211	13	3.57E-02	8.6	
23	0	727.34*	57	75	2.31	1455.04	1448	20	7.95E-03	39.1	
24	0	911.29*	173	65	1.34	1822.79	1815	16	2.40E-02	13.3	
25	0	968.85*	101	27	1.45	1937.86	1933	12	1.40E-02	15.0	
26	0	1120.54	58	67	2.18	2241.15	2235	15	8.02E-03	34.3	
27	0	1460.14*	920	21	2.03	2920.20	2909	19	1.28E-01	3.5	
28	0	1588.87	41	5	5.89	3177.63	3167	21	5.69E-03	20.9	
29	0	1763.73	38	7	0.97	3527.33	3521	13	5.21E-03	21.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 13-JUL-2009 18:50:49

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232357002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:13:34
Sample ID : G232357002 Sample quantity : 123.92 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.34 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.272E+01	3.053E+00	6.728E-01	4.136E-02	48.633
CD-109	+	88.03	*	3.743E+00	8.387E-01	1.079E+00	8.690E-02	3.469
SN-126	+	64.28		5.298E-01	4.440E-01	4.612E-01	7.076E-02	1.149
	+	86.94		1.532E+00	7.085E-01	4.407E-01	1.818E-01	3.477
	+	87.57	*	3.686E-01	8.257E-02	1.061E-01	8.559E-03	3.473
TL-208		277.35		3.595E-01	4.497E-01	7.486E-01	8.641E-02	0.480
	+	510.84		5.856E-01	3.844E-01	2.641E-01	2.833E-02	2.217
	+	583.14	*	5.023E-01	1.091E-01	7.102E-02	5.630E-03	7.074
		860.37		2.884E-01	3.993E-01	7.077E-01	5.774E-02	0.408
BI-210	+	46.50	*	7.787E-01	7.936E-01	9.821E-01	7.860E-02	0.793
PB-210	+	46.50	*	7.787E-01	7.936E-01	9.821E-01	7.860E-02	0.793
PO-210	+	46.50	*	7.787E-01	7.930E-01	9.821E-01	6.835E-02	0.793
BI-211		72.87		4.774E+00	2.545E+00	3.979E+00	3.402E-01	1.200
	+	351.07	*	2.565E+00	4.962E-01	4.427E-01	3.180E-02	5.794
PB-212	+	74.81		2.422E+00	5.030E-01	4.081E-01	5.150E-02	5.935
	+	77.11		2.017E+00	2.612E-01	2.433E-01	2.043E-02	8.290
	+	87.30		1.705E+00	4.182E-01	4.906E-01	6.305E-02	3.475
	+	238.63	*	1.314E+00	1.605E-01	9.899E-02	8.687E-03	13.276
	+	300.09		1.438E+00	1.791E+00	1.506E+00	1.408E-01	0.955
PO-212	+	74.81		2.422E+00	5.030E-01	4.081E-01	5.150E-02	5.935
	+	77.11		2.017E+00	2.612E-01	2.433E-01	2.043E-02	8.290
	+	87.30		1.705E+00	4.182E-01	4.906E-01	6.305E-02	3.475
		115.19		-1.360E-01	3.709E+00	6.103E+00	6.350E-01	-0.022
	+	238.63	*	1.314E+00	1.605E-01	9.899E-02	8.687E-03	13.276
	+	300.09		1.438E+00	1.791E+00	1.506E+00	1.408E-01	0.955
BI-214	+	609.31	*	9.603E-01	1.862E-01	1.376E-01	1.235E-02	6.977
		768.36		-1.023E-01	1.038E+00	1.651E+00	1.595E-01	-0.062
		934.06		-5.014E-01	1.668E+00	2.693E+00	2.556E-01	-0.186
	+	1120.29		1.156E+00	7.990E-01	6.711E-01	5.992E-02	1.722
		1238.11		1.158E+00	1.478E+00	2.562E+00	2.054E-01	0.452
		1377.67		1.590E+00	1.384E+00	2.557E+00	2.185E-01	0.622
	+	1764.49		1.063E+00	4.615E-01	3.837E-01	2.206E-02	2.770
PB-214	+	74.81		4.173E+00	8.335E-01	7.032E-01	7.917E-02	5.935
	+	77.11		3.457E+00	5.195E-01	4.171E-01	4.729E-02	8.290

Sample ID : G232357002 Acquisition date : 6-JUL-2009 11:13:34

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.920E+00	6.919E-01	8.404E-01	9.381E-02	3.475
	+	241.98		1.966E+00	7.280E-01	5.966E-01	5.607E-02	3.295
	+	295.21		1.012E+00	2.958E-01	2.302E-01	2.216E-02	4.397
	+	351.92	*	8.922E-01	1.788E-01	1.472E-01	1.306E-02	6.060
PO-214	+	74.81		4.173E+00	8.335E-01	7.032E-01	7.917E-02	5.935
	+	77.11		3.457E+00	5.195E-01	4.171E-01	4.729E-02	8.290
	+	87.30		2.920E+00	6.919E-01	8.404E-01	9.381E-02	3.475
	+	241.98		1.966E+00	7.280E-01	5.966E-01	5.607E-02	3.295
	+	295.21		1.012E+00	2.958E-01	2.302E-01	2.216E-02	4.397
	+	351.92	*	8.922E-01	1.788E-01	1.472E-01	1.306E-02	6.060
PO-216	+	74.81		2.422E+00	5.030E-01	4.081E-01	5.150E-02	5.935
	+	77.11		2.017E+00	2.612E-01	2.433E-01	2.043E-02	8.290
	+	87.30		1.705E+00	4.182E-01	4.906E-01	6.305E-02	3.475
	+	238.63	*	1.314E+00	1.605E-01	9.899E-02	8.687E-03	13.276
	+	300.09		1.438E+00	1.791E+00	1.506E+00	1.408E-01	0.955
PO-218	+	74.81		4.173E+00	8.335E-01	7.032E-01	7.917E-02	5.935
	+	77.11		3.457E+00	5.195E-01	4.171E-01	4.729E-02	8.290
	+	87.30		2.920E+00	6.919E-01	8.404E-01	9.381E-02	3.475
	+	241.98		1.966E+00	7.280E-01	5.966E-01	5.607E-02	3.295
	+	295.21		1.012E+00	2.958E-01	2.302E-01	2.216E-02	4.397
	+	351.92	*	8.922E-01	1.788E-01	1.472E-01	1.306E-02	6.060
RA-224	+	240.98	*	3.727E+00	1.364E+00	1.127E+00	8.502E-02	3.307
RA-226	+	609.31	*	9.603E-01	1.862E-01	1.376E-01	1.235E-02	6.977
		768.36		-1.023E-01	1.038E+00	1.651E+00	1.595E-01	-0.062
		934.06		-5.014E-01	1.668E+00	2.693E+00	2.556E-01	-0.186
	+	1120.29		1.156E+00	7.990E-01	6.711E-01	5.992E-02	1.722
		1238.11		1.158E+00	1.478E+00	2.562E+00	2.054E-01	0.452
		1377.67		1.590E+00	1.384E+00	2.557E+00	2.185E-01	0.622
	+	1764.49		1.063E+00	4.615E-01	3.837E-01	2.206E-02	2.770
AC-228	+	338.32		1.366E+00	6.757E-01	4.169E-01	1.706E-01	3.277
	+	911.07	*	1.569E+00	4.462E-01	3.140E-01	3.212E-02	4.996
	+	969.11		1.615E+00	6.084E-01	5.904E-01	1.345E-01	2.735
RA-228	+	338.32		1.366E+00	6.757E-01	4.169E-01	1.706E-01	3.277
	+	911.07	*	1.569E+00	4.462E-01	3.140E-01	3.212E-02	4.996
	+	969.11		1.615E+00	6.084E-01	5.904E-01	1.345E-01	2.735
TH-228	+	84.40		4.696E+00	2.448E+00	3.574E+00	4.590E-01	1.314
	+	238.60	*	1.314E+00	1.605E-01	9.898E-02	8.686E-03	13.277
	+	300.10		1.438E+00	1.978E+00	1.506E+00	8.900E-01	0.955
TH-230	+	609.31	*	9.603E-01	1.862E-01	1.376E-01	1.235E-02	6.977
		768.36		-1.023E-01	1.038E+00	1.651E+00	1.595E-01	-0.062
		934.06		-5.014E-01	1.668E+00	2.693E+00	2.556E-01	-0.186
	+	1120.29		1.155E+00	7.990E-01	6.711E-01	5.992E-02	1.722
		1238.11		1.158E+00	1.478E+00	2.562E+00	2.054E-01	0.452
		1377.67		1.590E+00	1.384E+00	2.557E+00	2.185E-01	0.622
	+	1764.49		1.063E+00	4.615E-01	3.837E-01	2.206E-02	2.770
TH-232	+	338.32		1.366E+00	3.906E-01	4.169E-01	2.847E-02	3.277
	+	911.07	*	1.569E+00	4.462E-01	3.140E-01	3.212E-02	4.996
	+	969.11		1.615E+00	6.084E-01	5.904E-01	1.345E-01	2.735
TH-234	+	63.29	*	1.338E+00	1.129E+00	1.133E+00	2.056E-01	1.181

Sample ID : G232357002 Acquisition date : 6-JUL-2009 11:13:34

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		1.640E+00	6.907E-01	7.334E-01	1.318E-01	2.237
U-234	+	609.31	*	9.603E-01	1.862E-01	1.376E-01	1.235E-02	6.977
		768.36		-1.023E-01	1.038E+00	1.651E+00	1.595E-01	-0.062
		934.06		-5.014E-01	1.668E+00	2.693E+00	2.556E-01	-0.186
	+	1120.29		1.155E+00	7.990E-01	6.711E-01	5.992E-02	1.722
		1238.11		1.158E+00	1.478E+00	2.562E+00	2.054E-01	0.452
		1377.67		1.590E+00	1.384E+00	2.557E+00	2.185E-01	0.622
	+	1764.49		1.063E+00	4.615E-01	3.837E-01	2.206E-02	2.770
NP-237	+	86.50	*	1.082E+00	3.297E-01	3.110E-01	6.894E-02	3.480
		95.87		-1.526E-02	1.026E+00	1.492E+00	3.678E-01	-0.010
U-238	+	63.29	*	1.338E+00	1.129E+00	1.133E+00	2.056E-01	1.181
	+	92.38		1.640E+00	6.395E-01	7.334E-01	6.156E-02	2.237
AM-243	+	74.67	*	3.927E-01	7.283E-02	6.615E-02	5.612E-03	5.936
	+	86.72		4.059E+01	9.093E+00	1.167E+01	9.439E-01	3.478
		117.66		6.726E-01	4.017E+00	6.663E+00	7.093E-01	0.101
		142.18		6.498E+00	1.970E+01	3.269E+01	3.099E+00	0.199
ANH-511	+	511.00	*	1.265E-01	8.235E-02	5.706E-02	3.856E-03	2.217

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.596E-02	4.116E-01	6.824E-01	5.032E-02	0.053
NA-22		1274.54	*	7.822E-02	7.147E-02	1.283E-01	7.270E-03	0.610
NA-24		1368.53	*	2.008E-01	7.147E-02	Half-Life too short		
AL-26		1129.67		-2.975E+00	3.049E+00	4.102E+00	2.424E-01	-0.725
		1808.65	*	-4.009E-03	2.717E-02	4.271E-02	2.442E-03	-0.094
TI-44		67.85		1.665E-02	3.811E-02	4.870E-02	4.259E-03	0.342
	+	78.38	*	3.721E-01	4.820E-02	7.292E-02	6.092E-03	5.103
SC-46		889.25	*	-2.263E-02	5.235E-02	8.333E-02	6.107E-03	-0.272
	+	1120.51		1.959E-01	1.349E-01	1.711E-01	1.024E-02	1.145
V-48		944.10		2.735E-02	1.299E+00	2.161E+00	1.538E-01	0.013
		983.50	*	-3.273E-02	1.020E-01	1.637E-01	1.133E-02	-0.200
		1312.09		7.146E-03	9.982E-02	1.640E-01	9.332E-03	0.044
CR-51		320.08	*	2.010E-01	4.297E-01	7.397E-01	5.642E-02	0.272
MN-52		744.21		-3.841E-02	2.811E-01	4.456E-01	3.395E-02	-0.086
		848.13		-4.267E+00	8.150E+00	1.293E+01	9.655E-01	-0.330
		935.52		1.158E-02	3.158E-01	5.265E-01	3.766E-02	0.022
		1246.25		-8.910E+00	9.963E+00	1.484E+01	8.339E-01	-0.601
		1333.61		3.324E+00	7.093E+00	1.213E+01	6.930E-01	0.274
		1434.06	*	2.117E-01	2.486E-01	4.597E-01	2.657E-02	0.460
MN-54		834.83	*	2.199E-03	5.095E-02	8.552E-02	6.416E-03	0.026
CO-56		846.75	*	-4.076E-02	5.261E-02	8.104E-02	6.054E-03	-0.503
		977.42		-8.129E-01	4.462E+00	6.911E+00	4.807E-01	-0.118
		1037.82		-2.821E-01	4.529E-01	6.996E-01	5.030E-02	-0.403
		1175.09		1.126E+00	3.612E+00	6.077E+00	3.356E-01	0.185
		1238.25		1.846E-01	1.439E-01	2.571E-01	1.539E-02	0.718
		1360.21		2.399E-01	1.332E+00	2.219E+00	1.272E-01	0.108
		1771.40		-3.212E-01	3.378E-01	4.475E-01	2.571E-02	-0.718

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-6.087E-03	2.731E-02	4.446E-02	4.933E-03	-0.137
		136.48		-1.757E-01	2.290E-01	3.601E-01	3.787E-02	-0.488
CO-58		810.76	*	-3.269E-02	5.322E-02	8.391E-02	6.359E-03	-0.390
FE-59		142.65		-1.508E+00	3.121E+00	4.935E+00	4.659E-01	-0.305
		192.34		-6.725E-02	1.239E+00	1.747E+00	2.218E-01	-0.038
		1099.22	*	-1.356E-02	1.290E-01	2.100E-01	1.492E-02	-0.065
		1291.56		-2.566E-02	1.780E-01	2.850E-01	2.087E-02	-0.090
CO-60		1173.22		1.950E-02	7.332E-02	1.229E-01	6.783E-03	0.159
		1332.49	*	3.742E-02	6.360E-02	1.101E-01	6.290E-03	0.340
ZN-65		1115.52	*	-1.273E-02	1.547E-01	2.202E-01	1.330E-02	-0.058
GE-68		1077.35	*	-4.620E-01	1.886E+00	3.032E+00	1.918E-01	-0.152
AS-73		53.44	*	1.708E-02	2.626E-01	4.424E-01	3.590E-02	0.039
AS-74		595.88	*	-6.919E-02	1.185E-01	1.830E-01	1.328E-02	-0.378
		634.78		8.218E-02	4.359E-01	7.203E-01	5.354E-02	0.114
SE-75		66.05		-2.278E+00	3.244E+00	4.603E+00	4.880E-01	-0.495
		96.73		-5.317E-01	8.433E-01	1.179E+00	1.617E-01	-0.451
		121.11		-5.994E-02	1.464E-01	2.362E-01	3.102E-02	-0.254
		136.00		-5.132E-02	4.336E-02	6.657E-02	6.687E-03	-0.771
		198.60		1.313E+00	2.046E+00	3.410E+00	2.910E-01	0.385
		264.65	*	6.040E-03	5.533E-02	8.226E-02	6.206E-03	0.073
		279.53		3.175E-02	1.233E-01	2.106E-01	1.643E-02	0.151
		303.91		3.003E-01	2.710E+00	4.004E+00	4.198E-01	0.075
		400.65		2.412E-01	3.324E-01	5.758E-01	5.264E-02	0.419
BR-77	+	87.88		5.795E+02	1.298E+02	2.343E+02	1.888E+01	2.473
		200.40		-1.807E+00	1.344E+02	2.172E+02	1.622E+01	-0.008
	+	239.00		1.509E+02	1.714E+01	2.865E+01	2.162E+00	5.267
		249.79		-4.071E+01	5.475E+01	7.996E+01	6.025E+00	-0.509
		281.68		-5.169E+01	7.440E+01	1.206E+02	8.944E+00	-0.429
		297.23		2.666E+02	7.222E+01	1.033E+02	7.545E+00	2.582
		303.76		3.061E+01	1.669E+02	2.480E+02	1.798E+01	0.123
		439.47		5.752E+01	1.115E+02	1.922E+02	1.192E+01	0.299
		484.57		-1.350E+02	2.121E+02	3.311E+02	2.174E+01	-0.408
		520.65	*	6.072E+00	9.540E+00	1.644E+01	1.122E+00	0.369
		574.64		2.655E+01	2.162E+02	3.240E+02	2.317E+01	0.082
		578.91		-3.883E+01	9.130E+01	1.216E+02	8.725E+00	-0.319
		585.48		8.144E+02	2.465E+02	4.291E+02	3.093E+01	1.898
		755.35		1.240E+02	1.654E+02	2.846E+02	2.168E+01	0.436
		817.79		8.228E+01	1.309E+02	2.313E+02	1.744E+01	0.356
SR-82		698.33		-2.635E+01	4.558E+01	6.950E+01	5.277E+00	-0.379
		776.49	*	-6.064E-01	5.084E-01	7.573E-01	5.757E-02	-0.801
		1395.20		9.233E+00	1.248E+01	2.273E+01	1.309E+00	0.406
RB-83		520.41	*	3.427E-02	8.858E-02	1.498E-01	1.022E-02	0.229
		529.64		-6.134E-02	1.444E-01	2.284E-01	1.572E-02	-0.269
		552.65		-1.509E-01	2.323E-01	3.553E-01	2.496E-02	-0.425
RB-84		881.50	*	-5.575E-02	9.907E-02	1.562E-01	1.149E-02	-0.357
KR-85		513.99	*	1.801E+01	1.044E+01	1.731E+01	1.174E+00	1.040
SR-85		513.99	*	9.123E-02	5.288E-02	8.771E-02	5.946E-03	1.040
RB-86		1076.63	*	-8.079E-01	1.194E+00	1.838E+00	1.164E-01	-0.439
Y-88		898.02		-2.048E-02	5.889E-02	9.480E-02	6.962E-03	-0.216

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	1.574E-02	4.176E-02	7.499E-02	4.281E-03	0.210
ZR-88		392.90	*	-1.515E-03	3.863E-02	6.297E-02	3.644E-03	-0.024
Y-91		1204.90	*	3.221E+00	3.001E+01	4.955E+01	2.758E+00	0.065
NB-94		702.63	*	1.048E-02	4.451E-02	7.341E-02	5.577E-03	0.143
		871.10		-1.599E-03	4.607E-02	7.660E-02	5.665E-03	-0.021
NB-95		765.79	*	-1.198E-02	5.704E-02	8.985E-02	6.838E-03	-0.133
NB-95M		235.69	*	5.462E-02	1.545E-01	2.222E-01	1.987E-02	0.246
ZR-95		724.18		1.517E-01	1.312E-01	2.105E-01	1.778E-02	0.720
		756.15	*	5.972E-02	9.938E-02	1.686E-01	1.449E-02	0.354
NB-97		657.90	*	-2.081E-02	9.938E-02	Half-Life too short		
		1024.50		-1.035E+00	9.938E-02	Half-Life too short		
ZR-97		254.15		8.588E-01	9.938E-02	Half-Life too short		
		355.39		8.303E-01	9.938E-02	Half-Life too short		
		507.63	*	1.258E+00	9.938E-02	Half-Life too short		
		602.52		-3.707E-01	9.938E-02	Half-Life too short		
		1021.30		-1.251E+00	9.938E-02	Half-Life too short		
		1147.95		-7.699E-01	9.938E-02	Half-Life too short		
		1362.66		-2.022E-01	9.938E-02	Half-Life too short		
		1750.46		-6.909E-01	9.938E-02	Half-Life too short		
MO-99		140.51		2.587E+00	2.283E+01	3.717E+01	1.041E+01	0.070
		181.06		1.068E+00	1.613E+01	2.300E+01	4.080E+00	0.046
		366.43		-4.514E+01	7.139E+01	1.136E+02	7.197E+00	-0.397
		739.58	*	4.908E+00	1.147E+01	1.924E+01	2.816E+00	0.255
		778.00		-3.892E+01	3.428E+01	5.120E+01	3.892E+00	-0.760
TC-99M		140.51	*	2.098E+08	3.428E+01	Half-Life too short		
RH-101		127.23		1.919E-02	3.999E-02	5.917E-02	6.328E-03	0.324
		198.01	*	2.107E-02	3.762E-02	6.249E-02	4.662E-03	0.337
		325.23		-1.002E-01	2.661E-01	4.364E-01	3.059E-02	-0.230
RH-102		418.52		-6.892E-02	3.649E-01	5.969E-01	3.595E-02	-0.115
		475.06	*	-1.965E-02	3.843E-02	6.082E-02	3.950E-03	-0.323
		631.29		3.537E-02	7.170E-02	1.216E-01	9.024E-03	0.291
		697.49		8.763E-03	1.061E-01	1.725E-01	1.310E-02	0.051
		766.84		6.099E-02	1.478E-01	2.463E-01	1.874E-02	0.248
		1046.59		-5.409E-03	1.648E-01	2.710E-01	1.773E-02	-0.020
		1112.84		-4.865E-01	3.958E-01	4.861E-01	2.941E-02	-1.001
RU-103		497.08	*	4.794E-02	5.177E-02	9.054E-02	1.183E-02	0.529
	+	610.33		1.016E+01	2.390E+00	3.193E+00	5.127E-01	3.183
RH-106	+	511.85		6.304E-01	4.105E-01	5.577E-01	3.773E-02	1.130
		621.84	*	-1.983E-01	4.412E-01	6.866E-01	8.647E-02	-0.289
		1050.47		-1.840E+00	3.369E+00	5.246E+00	3.419E-01	-0.351
RU-106	+	511.85		6.304E-01	4.105E-01	5.577E-01	3.773E-02	1.130
		621.84	*	-1.983E-01	4.407E-01	6.866E-01	5.067E-02	-0.289
		1050.47		-1.840E+00	3.369E+00	5.246E+00	3.419E-01	-0.351
AG-108M		433.93	*	-8.433E-03	3.684E-02	5.981E-02	3.965E-03	-0.141
		614.37		3.455E-02	5.699E-02	8.602E-02	6.660E-03	0.402
		722.95		1.351E-04	5.804E-02	8.060E-02	6.443E-03	0.002
AG-110M		657.75	*	-2.997E-02	4.833E-02	7.368E-02	5.755E-03	-0.407
		677.61		3.849E-01	3.866E-01	6.844E-01	5.364E-02	0.562
		706.67		2.712E-04	2.783E-01	4.489E-01	3.533E-02	0.001

---- Non-Identified Nuclides ----

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		763.93		-1.335E-01	2.244E-01	3.389E-01	2.673E-02	-0.394
		884.67		4.400E-02	6.728E-02	1.190E-01	9.131E-03	0.370
		937.48		-6.667E-02	1.603E-01	2.555E-01	1.921E-02	-0.261
		1384.27		-1.071E-03	2.289E-01	3.708E-01	2.265E-02	-0.003
IN-111		171.28		1.778E-01	8.624E-01	1.416E+00	1.039E-01	0.126
		245.39	*	6.270E-01	9.753E-01	1.439E+00	1.085E-01	0.436
IN-113M		391.69	*	-6.467E-03	5.596E-02	9.235E-02	5.694E-03	-0.070
SN-113		391.69	*	-6.467E-03	5.596E-02	9.235E-02	5.694E-03	-0.070
IN-114M		190.27	*	1.071E-01	2.241E-01	3.279E-01	2.436E-02	0.327
CD-115		260.90		-3.333E+01	1.046E+02	1.639E+02	1.231E+01	-0.203
		492.35		1.223E+01	3.337E+01	5.640E+01	3.736E+00	0.217
		527.90	*	4.555E+00	9.866E+00	1.677E+01	1.152E+00	0.272
SN-117M		156.02		-7.947E-01	2.361E+00	3.791E+00	3.129E-01	-0.210
		158.56	*	2.596E-03	5.607E-02	9.164E-02	7.347E-03	0.028
SB-122		563.90	*	1.219E+00	2.092E+00	3.572E+00	2.533E-01	0.341
		692.80		-9.806E+00	4.734E+01	7.504E+01	5.692E+00	-0.131
I-123		159.00	*	9.467E-01	4.734E+01	Half-Life too short		
		528.96		-5.265E+00	4.734E+01	Half-Life too short		
TE-123M		159.00	*	1.992E-02	2.991E-02	5.029E-02	4.040E-03	0.396
I-124		602.71	*	-7.348E-04	8.667E-01	1.218E+00	8.886E-02	-0.001
		722.78		-3.660E-01	4.978E+00	6.832E+00	5.201E-01	-0.054
		1325.50		-3.737E+01	4.225E+01	6.045E+01	3.449E+00	-0.618
		1376.25		3.938E+01	3.286E+01	6.180E+01	3.551E+00	0.637
		1509.49		-3.000E+00	1.426E+01	2.195E+01	1.274E+00	-0.137
		1691.02		2.387E+00	3.566E+00	6.788E+00	3.929E-01	0.352
SB-124		602.71		-5.099E-05	6.014E-02	8.454E-02	6.168E-03	-0.001
		645.85		-1.490E-01	6.751E-01	1.072E+00	8.644E-02	-0.139
		709.31		-1.403E+00	3.718E+00	5.772E+00	4.389E-01	-0.243
		713.82		-4.930E-01	2.245E+00	3.541E+00	4.014E-01	-0.139
		722.78		-3.682E-02	5.008E-01	6.872E-01	5.377E-02	-0.054
	+	968.20		1.641E+01	5.054E+00	8.626E+00	6.040E-01	1.902
		1045.16		1.431E+00	3.553E+00	6.093E+00	3.993E-01	0.235
		1325.50		-4.015E+00	4.539E+00	6.495E+00	3.705E-01	-0.618
		1368.21		1.634E+00	2.134E+00	3.865E+00	4.577E-01	0.423
		1436.60		-2.239E+00	4.638E+00	6.823E+00	3.944E-01	-0.328
		1691.02	*	5.665E-02	8.462E-02	1.611E-01	1.012E-02	0.352
SB-125		427.89	*	-4.775E-03	1.098E-01	1.812E-01	1.149E-02	-0.026
	+	463.38		3.135E-01	4.890E-01	6.395E-01	4.660E-02	0.490
		600.56		2.120E-01	2.543E-01	4.200E-01	3.371E-02	0.505
		635.90		-1.933E-01	3.527E-01	5.407E-01	4.452E-02	-0.357
TE-125M		109.28	*	-2.575E-01	9.404E+00	1.550E+01	1.763E+00	-0.017
I-126		388.63		4.348E-02	2.323E-01	3.911E-01	2.288E-02	0.111
		666.33	*	-9.881E-02	2.421E-01	3.774E-01	2.846E-02	-0.262
		753.82		1.653E-01	1.916E+00	3.106E+00	2.365E-01	0.053
SB-126		223.80		-1.019E+00	4.102E+00	6.507E+00	4.902E-01	-0.157
		278.60		2.346E+00	2.790E+00	4.665E+00	3.468E-01	0.503
	+	296.50		9.451E+00	2.697E+00	3.692E+00	2.700E-01	2.560
		414.70		-1.902E-02	8.991E-02	1.469E-01	8.799E-03	-0.129
		415.30		2.231E+00	7.385E+00	1.250E+01	7.489E-01	0.179

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		555.20		1.039E+00	4.552E+00	7.594E+00	5.347E-01	0.137
		573.80		1.380E+00	1.273E+00	2.216E+00	1.584E-01	0.623
		593.00		-2.647E-01	1.176E+00	1.878E+00	1.361E-01	-0.141
		656.30		-3.091E+00	4.378E+00	6.614E+00	4.969E-01	-0.467
		666.33		-4.118E-02	1.009E-01	1.573E-01	1.186E-02	-0.262
		675.00		-1.911E+00	2.543E+00	3.801E+00	2.873E-01	-0.503
		695.00		9.194E-02	9.955E-02	1.736E-01	1.318E-02	0.529
		697.00		1.653E-01	3.407E-01	5.741E-01	4.358E-02	0.288
		720.50	*	-8.175E-02	2.070E-01	2.704E-01	2.059E-02	-0.302
		856.80		-8.983E-01	6.390E-01	9.207E-01	6.852E-02	-0.976
		989.30		8.742E-01	1.761E+00	3.050E+00	2.102E-01	0.287
		1034.80		4.379E+00	1.225E+01	2.092E+01	1.385E+00	0.209
		1213.00		3.666E-01	6.682E+00	1.098E+01	6.124E-01	0.033
SB-127		61.10		4.766E+00	2.581E+01	3.841E+01	4.288E+00	0.124
		252.40		-4.730E-01	3.893E+00	6.179E+00	2.579E+00	-0.077
		290.80		-8.325E+00	2.317E+01	3.302E+01	3.253E+00	-0.252
		411.60		-1.018E+00	1.227E+01	2.023E+01	2.870E+00	-0.050
		444.90		-2.813E+00	9.614E+00	1.552E+01	1.661E+00	-0.181
		473.00		8.671E-01	1.675E+00	2.867E+00	3.217E-01	0.302
		543.00		-1.643E+01	1.794E+01	2.681E+01	3.537E+00	-0.613
		603.60		-5.012E+00	1.486E+01	2.003E+01	2.267E+00	-0.250
		685.20	*	-5.918E-01	1.560E+00	2.428E+00	2.492E-01	-0.244
		698.50		-7.518E+00	1.699E+01	2.622E+01	3.943E+00	-0.287
		722.20		-1.984E+01	3.592E+01	4.560E+01	4.579E+00	-0.435
		783.80		2.578E+00	3.704E+00	6.586E+00	7.515E-01	0.391
XE-127		57.60		1.229E+00	2.645E+00	4.198E+00	3.694E-01	0.293
		145.22		-2.324E-01	7.978E-01	1.272E+00	1.173E-01	-0.183
		172.10		-3.127E-02	1.310E-01	2.105E-01	1.545E-02	-0.149
		202.84	*	-4.554E-02	5.500E-02	8.157E-02	6.101E-03	-0.558
		374.96		5.159E-02	2.372E-01	4.006E-01	2.468E-02	0.129
I-131		80.18		-1.003E+00	5.212E+00	5.437E+00	4.536E-01	-0.185
		284.30		-5.642E-01	1.577E+00	2.606E+00	2.061E-01	-0.217
		364.48	*	-5.437E-02	1.159E-01	1.867E-01	1.304E-02	-0.291
		636.97		-2.165E+00	1.873E+00	2.676E+00	2.137E-01	-0.809
		722.89		-2.972E-01	8.826E+00	1.219E+01	9.344E-01	-0.024
TE-132		49.72		-2.594E+00	4.053E+00	5.811E+00	5.617E-01	-0.446
		111.76		-2.046E+01	2.421E+01	3.828E+01	4.509E+00	-0.535
		116.30		1.463E+01	2.277E+01	3.843E+01	4.670E+00	0.381
		228.16	*	2.132E-01	6.109E-01	1.001E+00	1.495E-01	0.213
BA-133		53.15		-2.497E-01	1.125E+00	1.876E+00	1.513E-01	-0.133
		79.62		1.790E+00	1.436E+00	1.882E+00	2.833E-01	0.951
		81.00		-5.110E-02	1.238E-01	1.263E-01	1.982E-02	-0.405
		276.40		6.853E-01	4.745E-01	7.581E-01	1.045E-01	0.904
		302.84		1.081E-01	1.903E-01	2.905E-01	3.616E-02	0.372
		356.01	*	2.831E-03	5.390E-02	7.866E-02	9.396E-03	0.036
		383.85		-1.594E-01	3.704E-01	5.980E-01	6.554E-02	-0.267
I-133	+	510.53		5.133E-01	3.704E-01	Half-Life too short		
		529.87	*	-1.177E-03	3.704E-01	Half-Life too short		
		706.58		5.514E-03	3.704E-01	Half-Life too short		

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		856.28		-5.395E-01	3.704E-01	Half-Life too short		
		875.33		-3.055E-02	3.704E-01	Half-Life too short		
		1236.41		2.630E-01	3.704E-01	Half-Life too short		
		1298.22		-6.242E-02	3.704E-01	Half-Life too short		
CS-134		475.35		-1.668E+00	2.484E+00	3.875E+00	2.517E-01	-0.431
		563.23		5.925E-03	4.918E-01	8.041E-01	5.780E-02	0.007
		569.32		2.749E-03	2.650E-01	4.330E-01	3.145E-02	0.006
		604.70		-3.802E-03	5.134E-02	7.152E-02	5.242E-03	-0.053
		795.84	*	1.012E-01	6.742E-02	1.253E-01	9.583E-03	0.808
		801.93		-2.543E-01	5.487E-01	8.894E-01	6.782E-02	-0.286
		1038.57		-2.630E+00	5.672E+00	8.919E+00	5.883E-01	-0.295
		1167.94		-1.369E+00	4.091E+00	6.507E+00	3.623E-01	-0.210
		1365.15		1.257E-01	1.701E+00	2.790E+00	1.761E-01	0.045
CS-135		268.24	*	1.304E-01	2.174E-01	3.170E-01	2.853E-02	0.411
I-135		288.45		1.611E+09	2.174E-01	Half-Life too short		
		417.63		7.056E+08	2.174E-01	Half-Life too short		
		546.56		-3.110E+06	2.174E-01	Half-Life too short		
		836.80		7.223E+08	2.174E-01	Half-Life too short		
		1038.76		-6.158E+08	2.174E-01	Half-Life too short		
		1124.00		2.117E+09	2.174E-01	Half-Life too short		
		1131.51		2.958E+08	2.174E-01	Half-Life too short		
		1260.41	*	-2.757E+08	2.174E-01	Half-Life too short		
		1457.56		6.455E+10	2.174E-01	Half-Life too short		
		1678.03		4.158E+08	2.174E-01	Half-Life too short		
		1706.46		6.811E+08	2.174E-01	Half-Life too short		
		1791.20		-3.717E+08	2.174E-01	Half-Life too short		
CS-136		66.91		-1.630E-02	5.080E-01	7.452E-01	1.157E-01	-0.022
	+	86.29		4.527E+00	1.102E+00	1.901E+00	2.378E-01	2.382
		153.22		5.743E-01	6.956E-01	1.174E+00	1.120E-01	0.489
		163.89		-4.135E-01	1.099E+00	1.756E+00	1.523E-01	-0.236
		176.55		-1.014E-02	3.819E-01	6.196E-01	4.919E-02	-0.016
		273.65		-9.028E-01	6.216E-01	7.534E-01	6.109E-02	-1.198
		340.57		3.716E-01	1.735E-01	2.884E-01	2.050E-02	1.288
		818.51		6.458E-02	9.653E-02	1.711E-01	1.291E-02	0.377
		1048.07	*	-8.886E-02	1.510E-01	2.342E-01	1.641E-02	-0.379
		1235.34		9.204E-01	9.360E-01	1.640E+00	1.620E-01	0.561
BA-137M		661.65	*	3.672E-03	5.041E-02	8.214E-02	6.186E-03	0.045
CS-137		661.65	*	3.882E-03	5.329E-02	8.683E-02	6.555E-03	0.045
CE-139		165.85	*	-2.579E-03	3.304E-02	5.359E-02	3.919E-03	-0.048
BA-140		162.64		-4.943E-01	7.684E-01	1.210E+00	9.913E-02	-0.408
		304.84		5.398E-01	1.526E+00	2.290E+00	6.328E-01	0.236
		423.70		2.432E-01	2.204E+00	3.678E+00	1.171E+00	0.066
		537.32	*	9.699E-03	3.470E-01	5.694E-01	1.864E-01	0.017
LA-140		328.77		2.370E-01	3.365E-01	5.845E-01	4.416E-02	0.406
		432.53		7.277E-01	2.247E+00	3.811E+00	2.562E-01	0.191
		487.03		-3.886E-02	1.644E-01	2.653E-01	1.929E-02	-0.146
		751.79		-1.376E+00	2.285E+00	3.443E+00	2.977E-01	-0.400
		815.85		-5.884E-03	4.248E-01	7.105E-01	6.154E-02	-0.008
		867.82		9.009E-01	1.756E+00	3.072E+00	2.437E-01	0.293

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		-4.905E-01	3.952E+00	6.003E+00	5.731E-01	-0.082
		925.24		7.417E-01	1.618E+00	2.799E+00	2.193E-01	0.265
		1596.49	*	-9.695E-03	8.359E-02	1.143E-01	6.645E-03	-0.085
CE-141		145.44	*	2.774E-03	7.128E-02	1.153E-01	1.078E-02	0.024
CE-143		57.37		6.877E-06	7.128E-02	Half-Life too short		
		231.56		8.344E-04	7.128E-02	Half-Life too short		
		293.26	*	2.451E-04	7.128E-02	Half-Life too short		
	+	350.59		1.139E-02	7.128E-02	Half-Life too short		
		490.36		8.990E-04	7.128E-02	Half-Life too short		
		664.57		2.117E-04	7.128E-02	Half-Life too short		
		721.93		-6.877E-04	7.128E-02	Half-Life too short		
CE-144		80.11		-4.543E-01	2.640E+00	2.759E+00	2.289E-01	-0.165
		133.54	*	-1.829E-02	2.408E-01	3.445E-01	5.681E-02	-0.053
PM-144		476.78		-3.648E-02	8.900E-02	1.420E-01	1.071E-02	-0.257
		618.01		2.332E-02	4.318E-02	7.340E-02	5.609E-03	0.318
		696.49	*	3.469E-02	4.689E-02	8.062E-02	6.122E-03	0.430
		778.57		-1.274E+00	2.925E+00	4.704E+00	3.576E-01	-0.271
PR-144		696.49	*	2.350E+00	3.175E+00	5.460E+00	4.144E-01	0.430
		1489.15		-4.323E+00	1.520E+01	2.316E+01	1.343E+00	-0.187
PM-146		453.90	*	-5.123E-02	5.253E-02	7.948E-02	7.141E-03	-0.645
		633.02		4.953E-01	1.761E+00	2.921E+00	1.084E+00	0.170
		735.90		1.073E-01	2.289E-01	3.362E-01	9.520E-02	0.319
		747.13		4.432E-02	1.254E-01	2.085E-01	2.804E-02	0.213
ND-147	+	91.11		6.945E-01	2.365E-01	4.626E-01	4.178E-02	1.501
		319.41		-3.863E-02	3.632E+00	6.089E+00	4.314E-01	-0.006
		439.89		6.529E-02	5.986E+00	9.907E+00	6.153E-01	0.007
		531.02	*	-4.655E-01	7.239E-01	1.119E+00	1.570E-01	-0.416
PM-149		285.90	*	-6.980E+00	7.420E+01	1.244E+02	1.852E+01	-0.056
EU-152		121.78		-2.459E-02	7.913E-02	1.283E-01	1.553E-02	-0.192
		244.69		3.216E-01	4.207E-01	6.242E-01	4.707E-02	0.515
		344.27	*	-1.785E-01	1.338E-01	1.809E-01	1.335E-02	-0.987
		443.98		-5.063E-01	1.163E+00	1.857E+00	1.159E-01	-0.273
		778.89		-3.954E-02	3.337E-01	5.540E-01	4.210E-02	-0.071
		867.32		5.993E-02	1.136E+00	1.906E+00	1.412E-01	0.031
		964.01		3.910E-01	4.564E-01	7.209E-01	5.063E-02	0.542
		1085.78		-5.676E-01	5.710E-01	8.369E-01	5.241E-02	-0.678
		1112.02		-3.133E-01	4.970E-01	7.230E-01	4.379E-02	-0.433
		1407.95		2.083E-01	2.548E-01	4.595E-01	2.649E-02	0.453
GD-153		69.67		5.054E-01	1.210E+00	1.812E+00	1.572E-01	0.279
	+	83.37		2.689E+01	1.376E+01	2.181E+01	1.787E+00	1.233
		97.43	*	3.252E-03	8.481E-02	1.237E-01	1.089E-02	0.026
		103.18		-6.450E-02	1.075E-01	1.730E-01	1.609E-02	-0.373
EU-154		123.07		3.752E-03	5.774E-02	9.203E-02	1.222E-02	0.041
		247.94		6.467E-02	4.486E-01	6.352E-01	6.789E-02	0.102
		591.81		-6.477E-02	8.205E-01	1.327E+00	1.419E-01	-0.049
		723.30		1.252E-01	2.355E-01	3.531E-01	3.047E-02	0.355
		756.87		6.378E-01	1.084E+00	1.837E+00	2.071E-01	0.347
		873.19		-2.917E-01	4.075E-01	6.280E-01	7.166E-02	-0.464
		996.32		2.796E-01	5.142E-01	8.931E-01	1.516E-01	0.313

---- Non-Identified Nuclides ----

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		1004.76		7.590E-02	2.547E-01	4.358E-01	4.518E-02	0.174
		1274.45	*	2.117E-01	1.997E-01	3.565E-01	3.298E-02	0.594
EU-155		48.70		9.029E-01	5.839E-01	9.268E-01	6.793E-02	0.974
		60.01		-4.320E-01	2.620E+00	3.828E+00	3.479E-01	-0.113
	+	86.54		4.437E-01	9.956E-02	1.828E-01	1.496E-02	2.428
		105.31	*	-2.950E-02	1.110E-01	1.814E-01	1.738E-02	-0.163
TB-160	+	86.79		1.173E+00	2.627E-01	4.761E-01	3.851E-02	2.463
		197.04		4.031E-02	6.426E-01	1.043E+00	7.777E-02	0.039
		215.65		8.804E-01	8.049E-01	1.333E+00	1.002E-01	0.660
	+	298.57		2.070E-01	2.575E-01	2.379E-01	1.735E-02	0.870
		879.36	*	1.417E-01	1.857E-01	3.318E-01	2.444E-02	0.427
		962.29		4.387E-01	8.327E-01	1.269E+00	8.920E-02	0.346
		966.15		8.478E-01	3.704E-01	6.445E-01	4.519E-02	1.315
		1177.93		-3.174E-01	5.855E-01	9.125E-01	5.043E-02	-0.348
		1271.85		-3.505E-01	1.173E+00	1.856E+00	1.049E-01	-0.189
HO-166M		80.57		-1.940E-02	3.327E-01	3.511E-01	2.908E-02	-0.055
		184.41		3.343E-02	4.632E-02	7.066E-02	5.230E-03	0.473
		280.46		-1.009E-01	9.647E-02	1.528E-01	1.135E-02	-0.660
		410.95		4.232E-02	2.944E-01	4.933E-01	2.937E-02	0.086
		711.68	*	2.238E-03	8.262E-02	1.336E-01	1.016E-02	0.017
		752.31		-2.818E-01	3.957E-01	5.896E-01	4.491E-02	-0.478
		810.29		-3.212E-02	8.198E-02	1.323E-01	9.998E-03	-0.243
TM-171		51.35		-3.700E-01	9.195E+00	1.361E+01	1.057E+00	-0.027
		52.39		-4.191E-02	4.791E+00	7.791E+00	6.187E-01	-0.005
		59.40		1.002E+00	1.377E+01	2.035E+01	1.851E+00	0.049
		66.72	*	-5.754E+00	1.966E+01	2.849E+01	2.505E+00	-0.202
LU-176	+	88.36		8.742E-01	1.958E-01	3.652E-01	2.951E-02	2.394
		201.83		-2.698E-02	3.303E-02	5.105E-02	3.816E-03	-0.529
		306.84	*	1.145E-02	3.182E-02	4.798E-02	3.464E-03	0.239
		401.10		9.669E+00	8.640E+00	1.532E+01	8.983E-01	0.631
LU-177		112.95		-1.133E+00	1.493E+00	2.373E+00	2.418E-01	-0.478
	+	208.36	*	3.324E+00	1.404E+00	1.910E+00	1.432E-01	1.740
LU-177M		52.97		-1.609E-01	5.004E-01	8.314E-01	6.681E-02	-0.194
		54.07		7.312E-02	2.852E-01	4.833E-01	3.972E-02	0.151
		61.30		2.491E-01	8.259E-01	1.235E+00	1.115E-01	0.202
		121.62		-2.400E-01	4.086E-01	6.533E-01	7.214E-02	-0.367
		147.16		-5.742E-01	7.481E-01	1.179E+00	1.067E-01	-0.487
		171.86		-8.567E-02	5.389E-01	8.693E-01	6.379E-02	-0.099
		218.09		-8.389E-01	9.383E-01	1.431E+00	1.076E-01	-0.586
		268.79		1.266E+00	1.126E+00	1.697E+00	1.270E-01	0.746
		319.02		-3.593E-02	3.030E-01	5.047E-01	3.577E-02	-0.071
		367.43		-2.160E-01	1.023E+00	1.681E+00	1.062E-01	-0.128
		413.65	*	-1.014E-01	2.215E-01	3.556E-01	2.126E-02	-0.285
HF-181		56.28		-1.380E-01	3.622E-01	5.998E-01	5.146E-02	-0.230
		57.53		1.018E-01	2.224E-01	3.529E-01	3.101E-02	0.288
		65.20		5.739E-01	6.373E-01	9.696E-01	8.586E-02	0.592
		133.02		4.376E-03	7.552E-02	1.090E-01	1.116E-02	0.040
		136.25		-4.039E-01	4.925E-01	7.724E-01	7.704E-02	-0.523
		345.85		8.988E-02	2.583E-01	3.869E-01	2.596E-02	0.232

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		482.03	*	3.467E-02	5.270E-02	9.110E-02	5.965E-03	0.381
W-181		56.28		-5.423E-02	1.436E-01	2.378E-01	2.040E-02	-0.228
		57.53		4.034E-02	8.819E-02	1.399E-01	1.230E-02	0.288
		65.20	*	2.258E-01	2.507E-01	3.814E-01	3.378E-02	0.592
TA-182		67.75		7.167E-03	8.346E-02	1.150E-01	1.007E-02	0.062
		100.10		1.770E-01	1.788E-01	2.973E-01	2.685E-02	0.595
		152.43		3.063E-01	3.788E-01	6.393E-01	5.488E-02	0.479
		222.10		2.248E-01	3.711E-01	6.177E-01	4.652E-02	0.364
		1001.68		-3.191E+00	2.583E+00	3.645E+00	2.487E-01	-0.875
	+	1121.28		5.425E-01	3.734E-01	4.661E-01	2.788E-02	1.164
		1189.05		-3.319E-02	4.718E-01	7.675E-01	4.254E-02	-0.043
		1221.42	*	2.102E-01	2.934E-01	5.096E-01	2.848E-02	0.412
		1230.97		-1.738E-01	7.652E-01	1.226E+00	6.868E-02	-0.142
RE-183		57.98		3.886E-02	9.383E-02	1.414E-01	1.253E-02	0.275
		59.32		2.944E-03	5.581E-02	8.241E-02	7.484E-03	0.036
		67.20		-1.340E-03	1.380E-01	2.026E-01	1.777E-02	-0.007
		162.32	*	-6.359E-02	1.187E-01	1.881E-01	1.440E-02	-0.338
	+	208.81		3.327E+00	1.405E+00	1.944E+00	1.458E-01	1.711
		291.72		-1.126E+00	1.240E+00	1.684E+00	1.238E-01	-0.669
RE-184		57.98		1.441E-01	3.480E-01	5.244E-01	4.646E-02	0.275
		59.32		1.091E-02	2.069E-01	3.055E-01	2.774E-02	0.036
		67.20		-4.970E-03	5.117E-01	7.513E-01	6.591E-02	-0.007
		161.27		1.060E-01	3.709E-01	6.131E-01	4.757E-02	0.173
		216.55		-1.377E-02	2.851E-01	4.583E-01	3.446E-02	-0.030
		252.85	*	-7.790E-02	2.522E-01	3.956E-01	2.979E-02	-0.197
		318.01		3.304E-02	5.145E-01	8.665E-01	6.152E-02	0.038
		792.07		3.864E-01	1.431E+00	2.450E+00	1.858E-01	0.158
		903.28		4.017E-01	1.622E+00	2.493E+00	1.814E-01	0.161
		920.93		-3.256E-01	6.775E-01	1.048E+00	7.555E-02	-0.311
OS-185		59.72		3.077E-02	1.507E-01	2.240E-01	2.038E-02	0.137
		61.14		1.868E-02	8.972E-02	1.337E-01	1.208E-02	0.140
		69.30		1.142E-01	2.281E-01	3.208E-01	2.787E-02	0.356
		592.07		-9.884E-01	3.363E+00	5.334E+00	3.863E-01	-0.185
		646.12	*	-2.975E-02	5.961E-02	9.214E-02	6.889E-03	-0.323
		717.42		-4.020E-02	1.231E+00	1.977E+00	1.504E-01	-0.020
		874.81		-4.209E-01	7.759E-01	1.221E+00	9.013E-02	-0.345
		880.27		2.463E-01	1.073E+00	1.829E+00	1.347E-01	0.135
RE-188		155.03	*	8.355E-02	1.882E-01	3.132E-01	2.615E-02	0.267
		477.96		1.353E+00	3.922E+00	6.626E+00	4.318E-01	0.204
		633.10		1.043E+00	3.507E+00	5.855E+00	4.349E-01	0.178
W-188	+	63.58		5.318E+01	4.407E+01	5.384E+01	4.806E+00	0.988
		227.08		-9.646E+00	1.419E+01	2.191E+01	1.651E+00	-0.440
		290.67	*	-2.723E+00	9.790E+00	1.405E+01	1.034E+00	-0.194
IR-192	+	295.96		7.636E-01	2.181E-01	3.006E-01	2.221E-02	2.540
		308.46		-1.886E-02	1.216E-01	1.754E-01	1.273E-02	-0.108
		316.51	*	8.753E-03	3.877E-02	6.594E-02	4.709E-03	0.133
		468.07		-4.811E-02	8.885E-02	1.185E-01	8.586E-03	-0.406
		604.41		-2.638E-02	6.892E-01	9.642E-01	1.175E-01	-0.027
		612.46		9.646E-01	1.110E+00	1.705E+00	1.502E-01	0.566

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		1.278E-01	1.169E-01	1.790E-01	1.586E-02	0.714
		66.83		-2.374E-03	6.440E-02	9.446E-02	8.300E-03	-0.025
	+	75.70		1.265E+00	2.346E-01	3.863E-01	3.263E-02	3.275
		98.88	*	9.933E-02	2.518E-01	3.740E-01	3.339E-02	0.266
	+	129.76		6.909E+00	4.018E+00	5.453E+00	5.723E-01	1.267
TL-200		367.94	*	6.285E-05	4.018E+00	Half-Life too short		
		579.30		-1.052E-03	4.018E+00	Half-Life too short		
		828.27		1.921E-03	4.018E+00	Half-Life too short		
		1205.75		5.453E-04	4.018E+00	Half-Life too short		
TL-201		68.90		1.276E+00	3.150E+00	4.015E+00	3.494E-01	0.318
		70.82		5.035E-02	1.586E+00	2.335E+00	2.015E-01	0.022
		80.30		1.334E-01	4.725E+00	5.025E+00	4.165E-01	0.027
		135.34		-1.950E+01	2.091E+01	3.263E+01	3.278E+00	-0.598
		167.43	*	-2.130E+00	6.189E+00	9.907E+00	7.246E-01	-0.215
TL-202		68.90		1.397E-01	3.448E-01	4.395E-01	3.825E-02	0.318
		70.82		5.497E-03	1.732E-01	2.549E-01	2.199E-02	0.022
		80.30		1.457E-02	5.160E-01	5.487E-01	4.549E-02	0.027
		439.56	*	2.177E-02	7.144E-02	1.211E-01	7.515E-03	0.180
HG-203		70.83		2.736E-02	7.877E-01	1.160E+00	1.578E-01	0.024
		72.87		9.335E-01	5.062E-01	7.780E-01	1.024E-01	1.200
		82.60		-8.785E-02	1.427E+00	1.504E+00	2.030E-01	-0.058
		279.20	*	2.567E-02	4.643E-02	8.044E-02	6.205E-03	0.319
BI-207		72.80		2.168E-01	1.458E-01	2.259E-01	1.932E-02	0.960
	+	74.97		7.048E-01	1.307E-01	1.798E-01	1.523E-02	3.921
	+	84.90		3.489E-01	1.785E-01	2.936E-01	2.391E-02	1.188
		569.67		2.034E-02	4.047E-02	6.877E-02	4.900E-03	0.296
		1063.62	*	3.467E-02	7.770E-02	1.335E-01	8.581E-03	0.260
		1770.23		-1.732E+00	8.417E-01	8.407E-01	4.830E-02	-2.060
TL-207		81.07		-1.185E-01	2.731E-01	2.784E-01	2.301E-02	-0.426
	+	83.78		2.301E-01	1.177E-01	1.860E-01	1.521E-02	1.237
		94.90		7.333E-01	2.607E-01	4.193E-01	3.605E-02	1.749
		122.32		-2.008E-01	1.897E+00	3.105E+00	3.594E-01	-0.065
		144.24		-6.176E-01	8.038E-01	1.251E+00	1.284E-01	-0.494
		154.21		3.455E-01	4.424E-01	7.458E-01	6.935E-02	0.463
	+	269.46		4.945E-01	2.714E-01	4.089E-01	3.142E-02	1.209
		323.87	*	-4.016E-01	8.091E-01	1.313E+00	2.231E-01	-0.306
	+	338.28		5.706E+00	1.707E+00	2.728E+00	3.037E-01	2.091
		445.03		-1.191E+00	2.792E+00	4.457E+00	4.694E-01	-0.267
PO-209		260.50		-5.718E+00	1.102E+01	1.702E+01	1.278E+00	-0.336
		262.80		1.473E+01	3.036E+01	5.002E+01	3.753E+00	0.294
		896.60	*	-6.260E+00	1.032E+01	1.613E+01	1.177E+00	-0.388
PB-211		404.84	*	-1.255E+00	1.428E+00	1.844E+00	1.149E+00	-0.681
		427.08		-2.253E-01	2.443E+00	4.011E+00	2.480E+00	-0.056
		831.96		5.282E-02	1.639E+00	2.750E+00	1.719E+00	0.019
BI-212	+	727.18	*	9.936E-01	7.825E-01	8.010E-01	7.335E-02	1.240
		785.46		-8.286E-01	2.237E+00	3.622E+00	2.750E-01	-0.229
		1620.62		3.273E-01	1.747E+00	3.000E+00	1.742E-01	0.109
PO-215		81.07		-1.185E-01	2.731E-01	2.784E-01	2.301E-02	-0.426
	+	83.78		2.301E-01	1.177E-01	1.860E-01	1.521E-02	1.237

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		7.333E-01	2.607E-01	4.193E-01	3.605E-02	1.749
		122.32		-2.008E-01	1.897E+00	3.105E+00	3.594E-01	-0.065
		144.24		-6.176E-01	8.038E-01	1.251E+00	1.284E-01	-0.494
		154.21		3.455E-01	4.424E-01	7.458E-01	6.935E-02	0.463
	+	269.46		4.945E-01	2.714E-01	4.089E-01	3.142E-02	1.209
		323.87	*	-4.016E-01	8.091E-01	1.313E+00	2.231E-01	-0.306
	+	338.28		5.706E+00	1.707E+00	2.728E+00	3.037E-01	2.091
		445.03		-1.191E+00	2.792E+00	4.457E+00	4.694E-01	-0.267
RN-219	+	271.23		6.344E-01	3.499E-01	5.260E-01	4.930E-02	1.206
		401.81	*	3.893E-01	5.248E-01	9.085E-01	1.239E-01	0.429
RN-220		549.76	*	2.832E+00	2.983E+01	4.923E+01	3.451E+00	0.058
RA-223		81.07		-1.185E-01	2.731E-01	2.784E-01	2.301E-02	-0.426
	+	83.78		2.301E-01	1.177E-01	1.860E-01	1.521E-02	1.237
		94.90		7.333E-01	2.607E-01	4.193E-01	3.605E-02	1.749
		122.32		-2.008E-01	1.897E+00	3.105E+00	3.594E-01	-0.065
		144.24		-6.176E-01	8.038E-01	1.251E+00	1.284E-01	-0.494
		154.21		3.455E-01	4.424E-01	7.458E-01	6.935E-02	0.463
	+	269.46		4.945E-01	2.714E-01	4.089E-01	3.142E-02	1.209
		323.87	*	-4.016E-01	8.091E-01	1.313E+00	2.231E-01	-0.306
	+	338.28		5.706E+00	1.707E+00	2.728E+00	3.037E-01	2.091
		445.03		-1.191E+00	2.792E+00	4.457E+00	4.694E-01	-0.267
AC-227		79.80		1.140E+00	2.087E+00	2.299E+00	4.914E-01	0.496
		236.00		4.442E-01	2.988E-01	4.570E-01	5.261E-02	0.972
		256.20	*	1.715E-01	4.202E-01	6.891E-01	1.017E-01	0.249
		286.10		2.699E-01	1.765E+00	2.999E+00	3.729E-01	0.090
	+	299.80		2.666E+00	3.341E+00	3.067E+00	5.175E-01	0.869
		304.40		1.054E+00	2.385E+00	3.611E+00	6.439E-01	0.292
		334.20		-4.631E-01	3.012E+00	4.326E+00	8.093E-01	-0.107
TH-227		79.80		1.140E+00	2.087E+00	2.299E+00	4.978E-01	0.496
	+	94.00		6.339E+00	2.778E+00	3.771E+00	8.197E-01	1.681
		236.00		4.442E-01	2.979E-01	4.570E-01	4.690E-02	0.972
		256.20	*	1.715E-01	4.205E-01	6.891E-01	1.210E-01	0.249
		286.10		2.699E-01	1.786E+00	2.999E+00	3.007E+00	0.090
	+	299.80		2.666E+00	3.341E+00	3.067E+00	5.175E-01	0.869
		304.40		1.054E+00	2.385E+00	3.611E+00	6.439E-01	0.292
		334.20		-4.631E-01	3.012E+00	4.326E+00	8.093E-01	-0.107
TH-229	+	85.43		3.444E-01	1.762E-01	3.121E-01	2.537E-02	1.103
	+	88.47		5.032E-01	1.127E-01	2.118E-01	1.713E-02	2.376
		100.00		1.880E-01	1.869E-01	3.110E-01	2.806E-02	0.605
		193.63	*	2.360E-01	6.045E-01	9.642E-01	7.177E-02	0.245
		210.97		1.639E+00	9.463E-01	1.486E+00	1.115E-01	1.103
PA-231		283.67	*	-6.478E-01	1.741E+00	2.870E+00	4.170E-01	-0.226
		301.29		1.210E+00	7.821E-01	1.256E+00	1.424E-01	0.964
TH-231		81.07		-1.185E-01	2.731E-01	2.784E-01	2.301E-02	-0.426
	+	83.78		2.301E-01	1.177E-01	1.860E-01	1.521E-02	1.237
		94.90		7.333E-01	2.607E-01	4.193E-01	3.605E-02	1.749
		122.32		-2.008E-01	1.897E+00	3.105E+00	3.594E-01	-0.065
		144.24		-6.176E-01	8.038E-01	1.251E+00	1.284E-01	-0.494
		154.21		3.455E-01	4.424E-01	7.458E-01	6.935E-02	0.463

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.945E-01	2.714E-01	4.089E-01	3.142E-02	1.209
		323.87	*	-4.016E-01	8.091E-01	1.313E+00	2.231E-01	-0.306
	+	338.28		5.706E+00	1.707E+00	2.728E+00	3.037E-01	2.091
		445.03		-1.191E+00	2.792E+00	4.457E+00	4.694E-01	-0.267
U-231	+	84.21		8.195E+00	4.194E+00	6.644E+00	5.426E-01	1.233
	+	92.29		5.179E+00	2.019E+00	3.221E+00	2.701E-01	1.608
		95.87	*	-1.430E-02	9.614E-01	1.398E+00	1.213E-01	-0.010
		108.00		9.084E-02	1.740E+00	2.878E+00	2.800E-01	0.032
PA-233	+	75.28		2.057E+01	4.623E+00	5.481E+00	8.364E-01	3.752
	+	86.59		7.215E+00	2.444E+00	2.960E+00	7.891E-01	2.437
	+	300.12		7.432E-01	9.289E-01	8.610E-01	1.218E-01	0.863
		311.98	*	5.625E-03	6.922E-02	1.168E-01	8.716E-03	0.048
		340.50		2.297E+00	1.030E+00	1.520E+00	3.531E-01	1.512
		398.62		7.125E-01	2.731E+00	4.602E+00	1.190E+00	0.155
		415.76		1.587E+00	2.049E+00	3.535E+00	7.297E-01	0.449
PA-234	+	63.00		1.560E+00	1.308E+00	1.576E+00	2.472E-01	0.990
		94.67		6.945E-01	2.021E-01	3.131E-01	3.874E-02	2.218
		98.44		5.584E-02	1.057E-01	1.514E-01	8.453E-02	0.369
		99.86		4.864E-01	4.732E-01	7.881E-01	7.102E-02	0.617
		111.00		5.108E-02	1.861E-01	3.104E-01	4.070E-02	0.165
		131.20		1.780E-01	1.268E-01	1.962E-01	2.037E-02	0.907
		152.70		4.276E-01	3.706E-01	6.244E-01	1.062E-01	0.685
	+	186.00		4.585E+00	2.823E+00	2.729E+00	8.434E-01	1.680
		226.40		-1.586E-01	4.421E-01	6.958E-01	8.712E-02	-0.228
		227.20		-8.837E-02	4.775E-01	7.600E-01	5.729E-02	-0.116
		248.90		6.404E-01	9.838E-01	1.443E+00	3.178E-01	0.444
		293.70		3.886E+00	1.202E+00	1.817E+00	3.034E-01	2.139
		369.80		4.949E-01	9.974E-01	1.709E+00	3.582E-01	0.290
		568.70		2.396E-01	1.326E+00	2.197E+00	1.564E-01	0.109
		569.50		6.037E-02	3.667E-01	6.067E-01	4.322E-02	0.100
		574.00		1.910E+00	2.008E+00	3.375E+00	2.412E-01	0.566
		699.00		-6.245E-01	1.005E+00	1.517E+00	2.827E-01	-0.412
		706.10		-9.171E-02	1.435E+00	2.300E+00	1.022E+00	-0.040
		733.00		-1.505E-01	5.992E-01	7.970E-01	1.740E-01	-0.189
		742.81		-1.205E+00	2.058E+00	2.842E+00	1.907E+00	-0.424
		796.30		1.705E+00	1.367E+00	2.384E+00	6.374E-01	0.715
		805.60		1.315E+00	1.460E+00	2.538E+00	7.708E-01	0.518
		819.60		1.324E-01	1.725E+00	2.908E+00	1.099E+00	0.046
		826.30		-1.852E-01	1.122E+00	1.843E+00	8.209E-01	-0.100
		831.60		-2.132E-01	8.563E-01	1.396E+00	4.124E-01	-0.153
		876.40		1.538E-02	1.137E+00	1.898E+00	1.950E+00	0.008
		880.51		-1.265E-01	4.065E-01	6.578E-01	4.843E-02	-0.192
		883.24		-1.233E-02	4.053E-01	6.735E-01	4.517E-01	-0.018
		899.00		-1.203E+00	1.324E+00	1.831E+00	7.959E-01	-0.657
		925.00		6.864E-01	1.791E+00	3.079E+00	2.216E-01	0.223
		926.50		-2.586E-02	2.633E-01	4.336E-01	1.077E-01	-0.060
		946.00	*	7.048E-02	4.486E-01	7.554E-01	1.369E-01	0.093
		949.00		4.966E-01	6.420E-01	1.141E+00	8.090E-02	0.435
		980.50		8.030E-01	1.091E+00	1.928E+00	1.338E-01	0.416

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		1.862E+00	1.881E+00	2.811E+00	1.821E+00	0.662
PA-234M		766.41		7.580E+00	2.409E+01	3.874E+01	2.966E+01	0.196
		1001.03	*	-5.739E+00	8.312E+00	1.265E+01	1.247E+00	-0.454
U-235	+	89.95		2.974E+00	1.338E+00	1.797E+00	5.526E-01	1.655
	+	93.35		1.972E+00	9.315E-01	1.180E+00	3.302E-01	1.671
		105.00		-4.521E-02	1.077E+00	1.777E+00	5.348E-01	-0.025
		143.76	*	-2.250E-01	2.507E-01	3.841E-01	6.867E-02	-0.586
		163.35		-4.101E-01	5.225E-01	8.091E-01	1.507E-01	-0.507
	+	185.71		1.698E-01	9.131E-02	1.010E-01	7.480E-03	1.682
		205.31		8.321E-01	6.536E-01	9.671E-01	1.798E-01	0.860
NP-236		94.67		5.289E-01	1.460E-01	2.377E-01	2.039E-02	2.225
		98.44		4.220E-02	7.642E-02	1.144E-01	1.018E-02	0.369
		111.00		3.864E-02	1.407E-01	2.348E-01	2.349E-02	0.165
		160.31	*	1.575E-02	8.529E-02	1.403E-01	1.101E-02	0.112
NP-239		99.55		1.222E-01	1.658E-01	2.630E-01	2.363E-02	0.465
		117.00	*	8.974E-02	2.027E-01	3.399E-01	3.596E-02	0.264
	+	209.75		2.654E+00	1.121E+00	1.542E+00	1.157E-01	1.721
		228.18		8.850E-02	2.548E-01	4.178E-01	3.150E-02	0.212
		277.60		2.230E-01	2.156E-01	3.642E-01	2.710E-02	0.612
		334.30		-3.491E-01	1.701E+00	2.433E+00	1.676E-01	-0.143
AM-241		59.54	*	2.490E-02	7.975E-02	1.191E-01	1.156E-02	0.209
CM-243		99.55		1.258E-01	1.706E-01	2.706E-01	2.431E-02	0.465
		103.76	*	1.330E-03	9.847E-02	1.629E-01	1.523E-02	0.008
		117.00		9.232E-02	2.085E-01	3.496E-01	3.699E-02	0.264
	+	209.75		2.617E+00	1.105E+00	1.520E+00	1.141E-01	1.721
		228.18		8.942E-02	2.575E-01	4.221E-01	3.182E-02	0.212
		277.60		2.248E-01	2.174E-01	3.672E-01	2.732E-02	0.612
CM-247		278.00		7.696E-01	8.861E-01	1.485E+00	1.104E-01	0.518
		287.40		7.088E-01	1.449E+00	2.502E+00	1.847E-01	0.283
		402.60	*	5.396E-02	4.639E-02	8.260E-02	4.855E-03	0.653
CF-249		252.85		-2.937E-01	9.508E-01	1.491E+00	1.123E-01	-0.197
		333.44		-1.432E-02	2.267E-01	3.285E-01	2.267E-02	-0.044
		387.95	*	-4.616E-03	4.883E-02	8.071E-02	4.735E-03	-0.057
CF-251		176.60	*	-3.383E-03	1.399E-01	2.271E-01	1.672E-02	-0.015
		227.00		-3.056E-01	4.302E-01	6.627E-01	4.995E-02	-0.461
		285.00		-1.036E-01	2.022E+00	3.399E+00	2.514E-01	-0.030

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232357002      *
* Acquisition date :  6-JUL-2009 11:13:34 Detector SN#     :                *
* Detector ID        : GAM17               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:08.34      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232357002           Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.2392E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.272E+01	2.992E+00	6.720E-01	0.000E+00
CD-109	3.743E+00	8.219E-01	1.119E+00	0.000E+00
SN-126	3.686E-01	8.092E-02	1.101E-01	0.000E+00
TL-208	5.023E-01	1.069E-01	7.183E-02	0.000E+00
BI-210	7.787E-01	7.777E-01	1.027E+00	0.000E+00
PB-210	7.787E-01	7.777E-01	1.027E+00	0.000E+00
PO-210	7.787E-01	7.772E-01	1.027E+00	0.000E+00
BI-211	2.565E+00	4.862E-01	4.508E-01	0.000E+00
PB-212	1.314E+00	1.573E-01	1.013E-01	0.000E+00
PO-212	1.314E+00	1.573E-01	1.013E-01	0.000E+00
BI-214	9.603E-01	1.825E-01	1.391E-01	0.000E+00
PB-214	8.922E-01	1.752E-01	1.499E-01	0.000E+00
PO-214	8.922E-01	1.752E-01	1.499E-01	0.000E+00
PO-216	1.314E+00	1.573E-01	1.013E-01	0.000E+00
PO-218	8.922E-01	1.752E-01	1.499E-01	0.000E+00
RA-224	3.727E+00	1.337E+00	1.154E+00	0.000E+00
RA-226	9.603E-01	1.825E-01	1.391E-01	0.000E+00
AC-228	1.569E+00	4.373E-01	3.156E-01	0.000E+00
RA-228	1.569E+00	4.373E-01	3.156E-01	0.000E+00
TH-228	1.314E+00	1.573E-01	1.013E-01	0.000E+00
TH-230	9.603E-01	1.825E-01	1.391E-01	0.000E+00
TH-232	1.569E+00	4.373E-01	3.156E-01	0.000E+00
TH-234	1.338E+00	1.106E+00	1.180E+00	0.000E+00
U-234	9.603E-01	1.825E-01	1.391E-01	0.000E+00
NP-237	1.082E+00	3.231E-01	3.226E-01	0.000E+00
U-238	1.338E+00	1.106E+00	1.180E+00	0.000E+00
AM-243	3.927E-01	7.137E-02	6.875E-02	0.000E+00
ANH-511	1.265E-01	8.071E-02	5.782E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	3.596E-02	4.034E-01	6.921E-01	0.000E+00	NOT IDENT.
NA-22	7.822E-02	7.004E-02	1.284E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.505E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-4.009E-03	2.663E-02	4.253E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.724E-02	7.574E-02	0.000E+00	FAIL ABUN
SC-46	-2.263E-02	5.130E-02	8.380E-02	0.000E+00	FAIL ABUN
V-48	-3.273E-02	9.993E-02	1.644E-01	0.000E+00	NOT IDENT.
CR-51	2.010E-01	4.211E-01	7.542E-01	0.000E+00	NOT IDENT.
MN-52	2.117E-01	2.436E-01	4.593E-01	0.000E+00	NOT IDENT.
MN-54	2.199E-03	4.993E-02	8.608E-02	0.000E+00	NOT IDENT.
CO-56	-4.076E-02	5.156E-02	8.155E-02	0.000E+00	NOT IDENT.
CO-57	-6.087E-03	2.676E-02	4.591E-02	0.000E+00	NOT IDENT.
CO-58	-3.269E-02	5.215E-02	8.449E-02	0.000E+00	NOT IDENT.
FE-59	-1.356E-02	1.264E-01	2.106E-01	0.000E+00	NOT IDENT.
CO-60	3.742E-02	6.233E-02	1.101E-01	0.000E+00	NOT IDENT.
ZN-65	-1.273E-02	1.516E-01	2.207E-01	0.000E+00	NOT IDENT.
GE-68	-4.620E-01	1.848E+00	3.041E+00	0.000E+00	NOT IDENT.
AS-73	1.708E-02	2.574E-01	4.618E-01	0.000E+00	NOT IDENT.
AS-74	-6.919E-02	1.162E-01	1.850E-01	0.000E+00	NOT IDENT.
SE-75	6.040E-03	5.422E-02	8.409E-02	0.000E+00	NOT IDENT.
BR-77	6.072E+00	9.350E+00	1.666E+01	0.000E+00	FAIL ABUN
SR-82	-6.064E-01	4.982E-01	7.630E-01	0.000E+00	NOT IDENT.
RB-83	3.427E-02	8.681E-02	1.517E-01	0.000E+00	NOT IDENT.
RB-84	-5.575E-02	9.709E-02	1.571E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.023E+01	1.754E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.182E-02	8.886E-02	0.000E+00	NOT IDENT.
RB-86	-8.079E-01	1.171E+00	1.844E+00	0.000E+00	NOT IDENT.
Y-88	1.574E-02	4.093E-02	7.466E-02	0.000E+00	NOT IDENT.
ZR-88	-1.515E-03	3.786E-02	6.403E-02	0.000E+00	NOT IDENT.
Y-91	3.221E+00	2.941E+01	4.962E+01	0.000E+00	NOT IDENT.
NB-94	1.048E-02	4.362E-02	7.406E-02	0.000E+00	NOT IDENT.
NB-95	-1.198E-02	5.590E-02	9.054E-02	0.000E+00	NOT IDENT.
NB-95M	5.462E-02	1.514E-01	2.275E-01	0.000E+00	NOT IDENT.
ZR-95	5.972E-02	9.739E-02	1.700E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.223E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.591E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.908E+00	1.124E+01	1.940E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.815E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.107E-02	3.687E-02	6.412E-02	0.000E+00	NOT IDENT.
RH-102	-1.965E-02	3.767E-02	6.169E-02	0.000E+00	NOT IDENT.
RU-103	4.794E-02	5.074E-02	9.178E-02	0.000E+00	FAIL ABUN
RH-106	-1.983E-01	4.323E-01	6.939E-01	0.000E+00	FAIL ABUN
RU-106	-1.983E-01	4.319E-01	6.939E-01	0.000E+00	FAIL ABUN
AG-108M	-8.433E-03	3.610E-02	6.074E-02	0.000E+00	NOT IDENT.
AG-110M	-2.997E-02	4.736E-02	7.440E-02	0.000E+00	NOT IDENT.
IN-111	6.270E-01	9.558E-01	1.472E+00	0.000E+00	NOT IDENT.
IN-113M	-6.467E-03	5.485E-02	9.391E-02	0.000E+00	NOT IDENT.
SN-113	-6.467E-03	5.485E-02	9.391E-02	0.000E+00	NOT IDENT.
IN-114M	1.071E-01	2.196E-01	3.366E-01	0.000E+00	NOT IDENT.
CD-115	4.555E+00	9.668E+00	1.698E+01	0.000E+00	NOT IDENT.
SN-117M	2.596E-03	5.495E-02	9.432E-02	0.000E+00	NOT IDENT.
SB-122	1.219E+00	2.050E+00	3.614E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.393E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.992E-02	2.931E-02	5.176E-02	0.000E+00	NOT IDENT.
I-124	-7.348E-04	8.493E-01	1.232E+00	0.000E+00	NOT IDENT.
SB-124	5.665E-02	8.293E-02	1.605E-01	0.000E+00	FAIL ABUN
SB-125	-4.775E-03	1.076E-01	1.840E-01	0.000E+00	FAIL ABUN
TE-125M	-2.575E-01	9.216E+00	1.603E+01	0.000E+00	NOT IDENT.
I-126	-9.881E-02	2.373E-01	3.810E-01	0.000E+00	NOT IDENT.
SB-126	-8.175E-02	2.028E-01	2.728E-01	0.000E+00	FAIL ABUN
SB-127	-5.918E-01	1.529E+00	2.451E+00	0.000E+00	NOT IDENT.
XE-127	-4.554E-02	5.390E-02	8.368E-02	0.000E+00	NOT IDENT.
I-131	-5.437E-02	1.136E-01	1.900E-01	0.000E+00	NOT IDENT.
TE-132	2.132E-01	5.986E-01	1.025E+00	0.000E+00	NOT IDENT.
BA-133	2.831E-03	5.282E-02	8.009E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.282E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.012E-01	6.607E-02	1.262E-01	0.000E+00	NOT IDENT.
CS-135	1.304E-01	2.131E-01	3.240E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.648E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-8.886E-02	1.480E-01	2.350E-01	0.000E+00	FAIL ABUN
BA-137M	3.672E-03	4.940E-02	8.294E-02	0.000E+00	NOT IDENT.
CS-137	3.882E-03	5.223E-02	8.767E-02	0.000E+00	NOT IDENT.
CE-139	-2.579E-03	3.238E-02	5.512E-02	0.000E+00	NOT IDENT.
BA-140	9.699E-03	3.401E-01	5.766E-01	0.000E+00	NOT IDENT.
LA-140	-9.695E-03	8.192E-02	1.140E-01	0.000E+00	NOT IDENT.
CE-141	2.774E-03	6.985E-02	1.188E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.178E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-1.829E-02	2.360E-01	3.553E-01	0.000E+00	NOT IDENT.
PM-144	3.469E-02	4.595E-02	8.135E-02	0.000E+00	NOT IDENT.
PR-144	2.350E+00	3.112E+00	5.509E+00	0.000E+00	NOT IDENT.
PM-146	-5.123E-02	5.148E-02	8.067E-02	0.000E+00	NOT IDENT.
ND-147	-4.655E-01	7.094E-01	1.134E+00	0.000E+00	FAIL ABUN
PM-149	-6.980E+00	7.271E+01	1.270E+02	0.000E+00	NOT IDENT.
EU-152	-1.785E-01	1.312E-01	1.843E-01	0.000E+00	NOT IDENT.
GD-153	3.252E-03	8.311E-02	1.281E-01	0.000E+00	FAIL ABUN
EU-154	2.117E-01	1.957E-01	3.567E-01	0.000E+00	NOT IDENT.
EU-155	-2.950E-02	1.088E-01	1.877E-01	0.000E+00	FAIL ABUN
TB-160	1.417E-01	1.819E-01	3.337E-01	0.000E+00	FAIL ABUN
HO-166M	2.238E-03	8.096E-02	1.347E-01	0.000E+00	NOT IDENT.
TM-171	-5.754E+00	1.926E+01	2.965E+01	0.000E+00	NOT IDENT.
LU-176	1.145E-02	3.118E-02	4.895E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.376E+00	1.959E+00	0.000E+00	FAIL ABUN
LU-177M	-1.014E-01	2.170E-01	3.614E-01	0.000E+00	NOT IDENT.
HF-181	3.467E-02	5.165E-02	9.238E-02	0.000E+00	NOT IDENT.
W-181	2.258E-01	2.457E-01	3.971E-01	0.000E+00	NOT IDENT.
TA-182	2.102E-01	2.876E-01	5.103E-01	0.000E+00	FAIL ABUN
RE-183	-6.359E-02	1.163E-01	1.935E-01	0.000E+00	FAIL ABUN
RE-184	-7.790E-02	2.472E-01	4.046E-01	0.000E+00	NOT IDENT.
OS-185	-2.975E-02	5.842E-02	9.306E-02	0.000E+00	NOT IDENT.
RE-188	8.355E-02	1.845E-01	3.225E-01	0.000E+00	NOT IDENT.
W-188	-2.723E+00	9.595E+00	1.435E+01	0.000E+00	FAIL ABUN
IR-192	8.753E-03	3.800E-02	6.725E-02	0.000E+00	FAIL ABUN
AU-195	9.933E-02	2.468E-01	3.872E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.438E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.130E+00	6.066E+00	1.019E+01	0.000E+00	NOT IDENT.
TL-202	2.177E-02	7.002E-02	1.230E-01	0.000E+00	NOT IDENT.
HG-203	2.567E-02	4.550E-02	8.217E-02	0.000E+00	NOT IDENT.
BI-207	3.467E-02	7.614E-02	1.340E-01	0.000E+00	FAIL ABUN
TL-207	-4.016E-01	7.930E-01	1.339E+00	0.000E+00	FAIL ABUN
PO-209	-6.260E+00	1.011E+01	1.622E+01	0.000E+00	NOT IDENT.
PB-211	-1.255E+00	1.400E+00	1.874E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	7.669E-01	8.078E-01	0.000E+00	FAIL ABUN
PO-215	-4.016E-01	7.930E-01	1.339E+00	0.000E+00	FAIL ABUN
RN-219	3.893E-01	5.143E-01	9.235E-01	0.000E+00	FAIL ABUN
RN-220	2.832E+00	2.923E+01	4.984E+01	0.000E+00	NOT IDENT.
RA-223	-4.016E-01	7.930E-01	1.339E+00	0.000E+00	FAIL ABUN
AC-227	1.715E-01	4.118E-01	7.047E-01	0.000E+00	FAIL ABUN
TH-227	1.715E-01	4.121E-01	7.047E-01	0.000E+00	FAIL ABUN
TH-229	2.360E-01	5.924E-01	9.898E-01	0.000E+00	FAIL ABUN
PA-231	-6.478E-01	1.706E+00	2.932E+00	0.000E+00	NOT IDENT.
TH-231	-4.016E-01	7.930E-01	1.339E+00	0.000E+00	FAIL ABUN
U-231	-1.430E-02	9.422E-01	1.449E+00	0.000E+00	FAIL ABUN
PA-233	5.625E-03	6.784E-02	1.192E-01	0.000E+00	FAIL ABUN
PA-234	7.048E-02	4.396E-01	7.590E-01	0.000E+00	FAIL ABUN
PA-234M	-5.739E+00	8.146E+00	1.270E+01	0.000E+00	NOT IDENT.
U-235	-2.250E-01	2.457E-01	3.959E-01	0.000E+00	FAIL ABUN
NP-236	1.575E-02	8.359E-02	1.444E-01	0.000E+00	NOT IDENT.
NP-239	8.974E-02	1.987E-01	3.512E-01	0.000E+00	FAIL ABUN
AM-241	2.490E-02	7.815E-02	1.242E-01	0.000E+00	NOT IDENT.
CM-243	1.330E-03	9.650E-02	1.685E-01	0.000E+00	FAIL ABUN
CM-247	5.396E-02	4.547E-02	8.397E-02	0.000E+00	NOT IDENT.
CF-249	-4.616E-03	4.785E-02	8.208E-02	0.000E+00	NOT IDENT.
CF-251	-3.383E-03	1.371E-01	2.333E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:50:47.47

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232357002.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 11:13:34.
Sample ID         : G232357002           Sample quantity  : 1.23920E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.34  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	920	10.67*	7.984E-01	3.272E+01	3.272E+01	9.33
CD-109	88.03	296	3.72*	6.572E+00	3.666E+00	3.743E+00	22.40
SN-126	64.28	112	9.60	6.650E+00	5.298E-01	5.298E-01	83.80
	86.94	296	8.90	6.572E+00	1.532E+00	1.532E+00	46.24
	87.57	296	37.00*	6.572E+00	3.686E-01	3.686E-01	22.40
TL-208	277.35	------	6.80	3.655E+00	------ Line Not Found		------
	510.84	87	21.60	2.073E+00	5.856E-01	5.856E-01	65.64
	583.14	255	84.20*	1.825E+00	5.023E-01	5.023E-01	21.72
	860.37	------	12.46	1.267E+00	------ Line Not Found		------
BI-210	46.50	68	4.05*	6.560E+00	7.778E-01	7.787E-01	101.91
PB-210	46.50	68	4.05*	6.560E+00	7.778E-01	7.787E-01	101.91
PO-210	46.50	68	4.05*	6.560E+00	7.778E-01	7.787E-01	101.84
BI-211	72.87	------	1.27	6.655E+00	------ Line Not Found		------
	351.07	324	12.94*	2.955E+00	2.565E+00	2.565E+00	19.34
PB-212	74.81	569	10.70	6.650E+00	2.422E+00	2.422E+00	20.77
	77.11	796	18.00	6.640E+00	2.017E+00	2.017E+00	12.95
	87.30	296	8.00	6.572E+00	1.705E+00	1.705E+00	24.53
	238.63	799	44.60*	4.131E+00	1.314E+00	1.314E+00	12.21
	300.09	55	3.41	3.421E+00	1.438E+00	1.438E+00	124.54
PO-212	74.81	569	10.70	6.650E+00	2.422E+00	2.422E+00	20.77
	77.11	796	18.00	6.640E+00	2.017E+00	2.017E+00	12.95
	87.30	296	8.00	6.572E+00	1.705E+00	1.705E+00	24.53
	115.19	------	0.60	6.204E+00	------ Line Not Found		------
	238.63	799	44.60*	4.131E+00	1.314E+00	1.314E+00	12.21
	300.09	55	3.41	3.421E+00	1.438E+00	1.438E+00	124.54
BI-214	609.31	257	46.30*	1.749E+00	9.603E-01	9.603E-01	19.39
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	58	15.10	1.003E+00	1.155E+00	1.156E+00	69.15
	1238.11	------	5.94	9.200E-01	------ Line Not Found		------
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	38	15.80	6.764E-01	1.063E+00	1.063E+00	43.42

Sample ID : G232357002 Acquisition date : 6-JUL-2009 11:13:34

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	569	6.21	6.650E+00	4.173E+00	4.173E+00	19.97
	77.11	796	10.50	6.640E+00	3.457E+00	3.457E+00	15.03
	87.30	296	4.67	6.572E+00	2.920E+00	2.920E+00	23.69
	241.98	199	7.49	4.091E+00	1.966E+00	1.966E+00	37.03
	295.21	222	19.20	3.458E+00	1.012E+00	1.012E+00	29.22
	351.92	324	37.20*	2.955E+00	8.922E-01	8.922E-01	20.04
PO-214	74.81	569	6.21	6.650E+00	4.173E+00	4.173E+00	19.97
	77.11	796	10.50	6.640E+00	3.457E+00	3.457E+00	15.03
	87.30	296	4.67	6.572E+00	2.920E+00	2.920E+00	23.69
	241.98	199	7.49	4.091E+00	1.966E+00	1.966E+00	37.03
	295.21	222	19.20	3.458E+00	1.012E+00	1.012E+00	29.22
	351.92	324	37.20*	2.955E+00	8.922E-01	8.922E-01	20.04
PO-216	74.81	569	10.70	6.650E+00	2.422E+00	2.422E+00	20.77
	77.11	796	18.00	6.640E+00	2.017E+00	2.017E+00	12.95
	87.30	296	8.00	6.572E+00	1.705E+00	1.705E+00	24.53
	238.63	799	44.60*	4.131E+00	1.314E+00	1.314E+00	12.21
	300.09	55	3.41	3.421E+00	1.438E+00	1.438E+00	124.54
PO-218	74.81	569	6.21	6.650E+00	4.173E+00	4.173E+00	19.97
	77.11	796	10.50	6.640E+00	3.457E+00	3.457E+00	15.03
	87.30	296	4.67	6.572E+00	2.920E+00	2.920E+00	23.69
	241.98	199	7.49	4.091E+00	1.966E+00	1.966E+00	37.03
	295.21	222	19.20	3.458E+00	1.012E+00	1.012E+00	29.22
	351.92	324	37.20*	2.955E+00	8.922E-01	8.922E-01	20.04
RA-224	240.98	199	3.95*	4.091E+00	3.727E+00	3.727E+00	36.61
RA-226	609.31	257	46.30*	1.749E+00	9.603E-01	9.603E-01	19.39
	768.36	------	5.04	1.406E+00	------	Line Not Found	------
	934.06	------	3.21	1.177E+00	------	Line Not Found	------
	1120.29	58	15.10	1.003E+00	1.155E+00	1.156E+00	69.15
	1238.11	------	5.94	9.200E-01	------	Line Not Found	------
	1377.67	------	4.11	8.394E-01	------	Line Not Found	------
	1764.49	38	15.80	6.764E-01	1.063E+00	1.063E+00	43.42
AC-228	338.32	158	11.40	3.063E+00	1.366E+00	1.366E+00	49.45
	911.07	173	27.70*	1.203E+00	1.569E+00	1.569E+00	28.45
	969.11	101	16.60	1.139E+00	1.615E+00	1.615E+00	37.68
RA-228	338.32	158	11.40	3.063E+00	1.366E+00	1.366E+00	49.45
	911.07	173	27.70*	1.203E+00	1.569E+00	1.569E+00	28.45
	969.11	101	16.60	1.139E+00	1.615E+00	1.615E+00	37.68
TH-228	84.40	124	1.21	6.596E+00	4.696E+00	4.696E+00	52.13
	238.60	799	44.60*	4.131E+00	1.314E+00	1.314E+00	12.21
	300.10	55	3.41	3.421E+00	1.438E+00	1.438E+00	137.54
TH-230	609.31	257	46.30*	1.749E+00	9.603E-01	9.603E-01	19.39
	768.36	------	5.04	1.406E+00	------	Line Not Found	------
	934.06	------	3.21	1.177E+00	------	Line Not Found	------
	1120.29	58	15.10	1.003E+00	1.155E+00	1.155E+00	69.15
	1238.11	------	5.94	9.200E-01	------	Line Not Found	------
	1377.67	------	4.11	8.394E-01	------	Line Not Found	------
	1764.49	38	15.80	6.764E-01	1.063E+00	1.063E+00	43.42
TH-232	338.32	158	11.40	3.063E+00	1.366E+00	1.366E+00	28.59
	911.07	173	27.70*	1.203E+00	1.569E+00	1.569E+00	28.45

Sample ID : G232357002 Acquisition date : 6-JUL-2009 11:13:34

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	101	16.60	1.139E+00	1.615E+00	1.615E+00	37.68
TH-234	63.29	112	3.80*	6.650E+00	1.338E+00	1.338E+00	84.35
	92.38	191	5.41	6.516E+00	1.640E+00	1.640E+00	42.10
U-234	609.31	257	46.30*	1.749E+00	9.603E-01	9.603E-01	19.39
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	58	15.10	1.003E+00	1.155E+00	1.155E+00	69.15
	1238.11	------	5.94	9.200E-01	------ Line Not Found		------
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	38	15.80	6.764E-01	1.063E+00	1.063E+00	43.42
NP-237	86.50	296	12.60*	6.572E+00	1.082E+00	1.082E+00	30.46
	95.87	------	2.60	6.484E+00	------ Line Not Found		------
U-238	63.29	112	3.80*	6.650E+00	1.338E+00	1.338E+00	84.35
	92.38	191	5.41	6.516E+00	1.640E+00	1.640E+00	38.99
AM-243	74.67	569	66.00*	6.650E+00	3.927E-01	3.927E-01	18.55
	86.72	296	0.34	6.572E+00	4.059E+01	4.059E+01	22.40
	117.66	------	0.55	6.163E+00	------ Line Not Found		------
	142.18	------	0.13	5.726E+00	------ Line Not Found		------
ANH-511	511.00	87	100.00*	2.073E+00	1.265E-01	1.265E-01	65.11

Flag: "*" = Keyline

Sample ID : G232357002 Acquisition date : 6-JUL-2009 11:13:34

Total number of lines in spectrum 29
Number of unidentified lines 1
Number of lines tentatively identified by NID 28 96.55%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.272E+01	3.272E+01	0.305E+01	9.33	
CD-109	464.00D	1.02	3.666E+00	3.743E+00	0.839E+00	22.40	
SN-126	1.00E+05Y	1.00	3.686E-01	3.686E-01	0.826E-01	22.40	
TL-208	1.41E+10Y	1.00	5.023E-01	5.023E-01	1.091E-01	21.72	
BI-210	22.26Y	1.00	7.778E-01	7.787E-01	7.936E-01	101.91	
PB-210	22.26Y	1.00	7.778E-01	7.787E-01	7.936E-01	101.91	
PO-210	22.26Y	1.00	7.778E-01	7.787E-01	7.930E-01	101.84	
BI-211	7.04E+08Y	1.00	2.565E+00	2.565E+00	0.496E+00	19.34	
PB-212	1.41E+10Y	1.00	1.314E+00	1.314E+00	0.160E+00	12.21	
PO-212	1.41E+10Y	1.00	1.314E+00	1.314E+00	0.160E+00	12.21	
BI-214	1600.00Y	1.00	9.603E-01	9.603E-01	1.862E-01	19.39	
PB-214	1600.00Y	1.00	8.922E-01	8.922E-01	1.788E-01	20.04	
PO-214	1600.00Y	1.00	8.922E-01	8.922E-01	1.788E-01	20.04	
PO-216	1.41E+10Y	1.00	1.314E+00	1.314E+00	0.160E+00	12.21	
PO-218	1600.00Y	1.00	8.922E-01	8.922E-01	1.788E-01	20.04	
RA-224	1.41E+10Y	1.00	3.727E+00	3.727E+00	1.364E+00	36.61	
RA-226	1600.00Y	1.00	9.603E-01	9.603E-01	1.862E-01	19.39	
AC-228	1.41E+10Y	1.00	1.569E+00	1.569E+00	0.446E+00	28.45	
RA-228	1.41E+10Y	1.00	1.569E+00	1.569E+00	0.446E+00	28.45	
TH-228	1.41E+10Y	1.00	1.314E+00	1.314E+00	0.160E+00	12.21	
TH-230	4.47E+09Y	1.00	9.603E-01	9.603E-01	1.862E-01	19.39	
TH-232	1.41E+10Y	1.00	1.569E+00	1.569E+00	0.446E+00	28.45	
TH-234	4.47E+09Y	1.00	1.338E+00	1.338E+00	1.129E+00	84.35	
U-234	4.47E+09Y	1.00	9.603E-01	9.603E-01	1.862E-01	19.39	
NP-237	2.14E+06Y	1.00	1.082E+00	1.082E+00	0.330E+00	30.46	
U-238	4.47E+09Y	1.00	1.338E+00	1.338E+00	1.129E+00	84.35	
AM-243	7380.00Y	1.00	3.927E-01	3.927E-01	0.728E-01	18.55	
ANH-511	1.00E+09Y	1.00	1.265E-01	1.265E-01	0.824E-01	65.11	
			---	---			
	Total Activity :		6.664E+01	6.672E+01			

Grand Total Activity : 6.664E+01 6.672E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232357002 Acquisition date : 6-JUL-2009 11:13:34

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	90.21	174	244	1.04	181.56	167	27	2.41E-02	32.9	6.55E+00	T
0	128.90	105	242	0.92	258.88	255	9	1.45E-02	57.2	5.97E+00	T
0	186.30	149	292	1.17	373.60	367	14	2.07E-02	53.3	4.93E+00	T
0	209.42	129	169	1.20	419.80	415	10	1.80E-02	41.6	4.56E+00	T
0	270.38	83	131	1.55	541.65	538	9	1.15E-02	54.4	3.73E+00	T
0	464.15	24	87	1.45	928.95	924	11	3.35E-03	****	2.27E+00	T
0	727.34	57	75	2.31	1455.04	1448	20	7.95E-03	78.2	1.48E+00	T
0	1588.87	41	5	5.89	3177.63	3167	21	5.69E-03	41.9	7.42E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 13-JUL-2009 18:50:52.20

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232357002.CNF;1  *
* Acquisition date : 6-JUL-2009 11:13:34.  Detector SN#     :               *
* Detector ID      : GAM17                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:08.34         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      : 22-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232357002            Analyst initials: MXR1           *
* Batch Number     : 880723                Sample Quantity : 1.23920E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14.8MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.272E+01	3.053E+00	6.728E-01	4.136E-02	48.633
CD-109	3.743E+00	8.387E-01	1.079E+00	8.690E-02	3.469
SN-126	3.686E-01	8.257E-02	1.061E-01	8.559E-03	3.473
TL-208	5.023E-01	1.091E-01	7.102E-02	5.630E-03	7.074
BI-210	7.787E-01	7.936E-01	9.821E-01	7.860E-02	0.793
PB-210	7.787E-01	7.936E-01	9.821E-01	7.860E-02	0.793
PO-210	7.787E-01	7.930E-01	9.821E-01	6.835E-02	0.793
BI-211	2.565E+00	4.962E-01	4.427E-01	3.180E-02	5.794
PB-212	1.314E+00	1.605E-01	9.899E-02	8.687E-03	13.276
PO-212	1.314E+00	1.605E-01	9.899E-02	8.687E-03	13.276
BI-214	9.603E-01	1.862E-01	1.376E-01	1.235E-02	6.977
PB-214	8.922E-01	1.788E-01	1.472E-01	1.306E-02	6.060
PO-214	8.922E-01	1.788E-01	1.472E-01	1.306E-02	6.060
PO-216	1.314E+00	1.605E-01	9.899E-02	8.687E-03	13.276
PO-218	8.922E-01	1.788E-01	1.472E-01	1.306E-02	6.060
RA-224	3.727E+00	1.364E+00	1.127E+00	8.502E-02	3.307
RA-226	9.603E-01	1.862E-01	1.376E-01	1.235E-02	6.977
AC-228	1.569E+00	4.462E-01	3.140E-01	3.212E-02	4.996

Sample ID : G232357002 Acquisition date : 6-JUL-2009 11:13:34

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.569E+00	4.462E-01	3.140E-01	3.212E-02	4.996
TH-228	1.314E+00	1.605E-01	9.898E-02	8.686E-03	13.277
TH-230	9.603E-01	1.862E-01	1.376E-01	1.235E-02	6.977
TH-232	1.569E+00	4.462E-01	3.140E-01	3.212E-02	4.996
TH-234	1.338E+00	1.129E+00	1.133E+00	2.056E-01	1.181
U-234	9.603E-01	1.862E-01	1.376E-01	1.235E-02	6.977
NP-237	1.082E+00	3.297E-01	3.110E-01	6.894E-02	3.480
U-238	1.338E+00	1.129E+00	1.133E+00	2.056E-01	1.181
AM-243	3.927E-01	7.283E-02	6.615E-02	5.612E-03	5.936
ANH-511	1.265E-01	8.235E-02	5.706E-02	3.856E-03	2.217

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.596E-02		4.116E-01	6.824E-01	5.032E-02	0.053
NA-22	7.822E-02		7.147E-02	1.283E-01	7.270E-03	0.610
NA-24	2.008E-01		1.278E-01	Half-Life too short		
AL-26	-4.009E-03		2.717E-02	4.271E-02	2.442E-03	-0.094
TI-44	3.721E-01	+	4.820E-02	7.292E-02	6.092E-03	5.103
SC-46	-2.263E-02		5.235E-02	8.333E-02	6.107E-03	-0.272
V-48	-3.273E-02		1.020E-01	1.637E-01	1.133E-02	-0.200
CR-51	2.010E-01		4.297E-01	7.397E-01	5.642E-02	0.272
MN-52	2.117E-01		2.486E-01	4.597E-01	2.657E-02	0.460
MN-54	2.199E-03		5.095E-02	8.552E-02	6.416E-03	0.026
CO-56	-4.076E-02		5.261E-02	8.104E-02	6.054E-03	-0.503
CO-57	-6.087E-03		2.731E-02	4.446E-02	4.933E-03	-0.137
CO-58	-3.269E-02		5.322E-02	8.391E-02	6.359E-03	-0.390
FE-59	-1.356E-02		1.290E-01	2.100E-01	1.492E-02	-0.065
CO-60	3.742E-02		6.360E-02	1.101E-01	6.290E-03	0.340
ZN-65	-1.273E-02		1.547E-01	2.202E-01	1.330E-02	-0.058
GE-68	-4.620E-01		1.886E+00	3.032E+00	1.918E-01	-0.152
AS-73	1.708E-02		2.626E-01	4.424E-01	3.590E-02	0.039
AS-74	-6.919E-02		1.185E-01	1.830E-01	1.328E-02	-0.378
SE-75	6.040E-03		5.533E-02	8.226E-02	6.206E-03	0.073
BR-77	6.072E+00		9.540E+00	1.644E+01	1.122E+00	0.369
SR-82	-6.064E-01		5.084E-01	7.573E-01	5.757E-02	-0.801
RB-83	3.427E-02		8.858E-02	1.498E-01	1.022E-02	0.229
RB-84	-5.575E-02		9.907E-02	1.562E-01	1.149E-02	-0.357
KR-85	1.801E+01		1.044E+01	1.731E+01	1.174E+00	1.040
SR-85	9.123E-02		5.288E-02	8.771E-02	5.946E-03	1.040
RB-86	-8.079E-01		1.194E+00	1.838E+00	1.164E-01	-0.439
Y-88	1.574E-02		4.176E-02	7.499E-02	4.281E-03	0.210
ZR-88	-1.515E-03		3.863E-02	6.297E-02	3.644E-03	-0.024
Y-91	3.221E+00		3.001E+01	4.955E+01	2.758E+00	0.065
NB-94	1.048E-02		4.451E-02	7.341E-02	5.577E-03	0.143
NB-95	-1.198E-02		5.704E-02	8.985E-02	6.838E-03	-0.133
NB-95M	5.462E-02		1.545E-01	2.222E-01	1.987E-02	0.246

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	5.972E-02		9.938E-02	1.686E-01	1.449E-02	0.354
NB-97	-2.081E-02		2.155E-02	Half-Life too short		
ZR-97	1.258E+00		4.383E-01	Half-Life too short		
MO-99	4.908E+00		1.147E+01	1.924E+01	2.816E+00	0.255
TC-99M	2.098E+08		9.258E+08	Half-Life too short		
RH-101	2.107E-02		3.762E-02	6.249E-02	4.662E-03	0.337
RH-102	-1.965E-02		3.843E-02	6.082E-02	3.950E-03	-0.323
RU-103	4.794E-02		5.177E-02	9.054E-02	1.183E-02	0.529
RH-106	-1.983E-01		4.412E-01	6.866E-01	8.647E-02	-0.289
RU-106	-1.983E-01		4.407E-01	6.866E-01	5.067E-02	-0.289
AG-108M	-8.433E-03		3.684E-02	5.981E-02	3.965E-03	-0.141
AG-110M	-2.997E-02		4.833E-02	7.368E-02	5.755E-03	-0.407
IN-111	6.270E-01		9.753E-01	1.439E+00	1.085E-01	0.436
IN-113M	-6.467E-03		5.596E-02	9.235E-02	5.694E-03	-0.070
SN-113	-6.467E-03		5.596E-02	9.235E-02	5.694E-03	-0.070
IN-114M	1.071E-01		2.241E-01	3.279E-01	2.436E-02	0.327
CD-115	4.555E+00		9.866E+00	1.677E+01	1.152E+00	0.272
SN-117M	2.596E-03		5.607E-02	9.164E-02	7.347E-03	0.028
SB-122	1.219E+00		2.092E+00	3.572E+00	2.533E-01	0.341
I-123	9.467E-01		7.105E-01	Half-Life too short		
TE-123M	1.992E-02		2.991E-02	5.029E-02	4.040E-03	0.396
I-124	-7.348E-04		8.667E-01	1.218E+00	8.886E-02	-0.001
SB-124	5.665E-02		8.462E-02	1.611E-01	1.012E-02	0.352
SB-125	-4.775E-03		1.098E-01	1.812E-01	1.149E-02	-0.026
TE-125M	-2.575E-01		9.404E+00	1.550E+01	1.763E+00	-0.017
I-126	-9.881E-02		2.421E-01	3.774E-01	2.846E-02	-0.262
SB-126	-8.175E-02		2.070E-01	2.704E-01	2.059E-02	-0.302
SB-127	-5.918E-01		1.560E+00	2.428E+00	2.492E-01	-0.244
XE-127	-4.554E-02		5.500E-02	8.157E-02	6.101E-03	-0.558
I-131	-5.437E-02		1.159E-01	1.867E-01	1.304E-02	-0.291
TE-132	2.132E-01		6.109E-01	1.001E+00	1.495E-01	0.213
BA-133	2.831E-03		5.390E-02	7.866E-02	9.396E-03	0.036
I-133	-1.177E-03		1.674E-03	Half-Life too short		
CS-134	1.012E-01		6.742E-02	1.253E-01	9.583E-03	0.808
CS-135	1.304E-01		2.174E-01	3.170E-01	2.853E-02	0.411
I-135	-2.757E+08		2.371E+08	Half-Life too short		
CS-136	-8.886E-02		1.510E-01	2.342E-01	1.641E-02	-0.379
BA-137M	3.672E-03		5.041E-02	8.214E-02	6.186E-03	0.045
CS-137	3.882E-03		5.329E-02	8.683E-02	6.555E-03	0.045
CE-139	-2.579E-03		3.304E-02	5.359E-02	3.919E-03	-0.048
BA-140	9.699E-03		3.470E-01	5.694E-01	1.864E-01	0.017
LA-140	-9.695E-03		8.359E-02	1.143E-01	6.645E-03	-0.085
CE-141	2.774E-03		7.128E-02	1.153E-01	1.078E-02	0.024
CE-143	2.451E-04		6.011E-05	Half-Life too short		
CE-144	-1.829E-02		2.408E-01	3.445E-01	5.681E-02	-0.053
PM-144	3.469E-02		4.689E-02	8.062E-02	6.122E-03	0.430
PR-144	2.350E+00		3.175E+00	5.460E+00	4.144E-01	0.430
PM-146	-5.123E-02		5.253E-02	7.948E-02	7.141E-03	-0.645

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-4.655E-01		7.239E-01	1.119E+00	1.570E-01	-0.416
PM-149	-6.980E+00		7.420E+01	1.244E+02	1.852E+01	-0.056
EU-152	-1.785E-01		1.338E-01	1.809E-01	1.335E-02	-0.987
GD-153	3.252E-03		8.481E-02	1.237E-01	1.089E-02	0.026
EU-154	2.117E-01		1.997E-01	3.565E-01	3.298E-02	0.594
EU-155	-2.950E-02		1.110E-01	1.814E-01	1.738E-02	-0.163
TB-160	1.417E-01		1.857E-01	3.318E-01	2.444E-02	0.427
HO-166M	2.238E-03		8.262E-02	1.336E-01	1.016E-02	0.017
TM-171	-5.754E+00		1.966E+01	2.849E+01	2.505E+00	-0.202
LU-176	1.145E-02		3.182E-02	4.798E-02	3.464E-03	0.239
LU-177	3.324E+00	+	1.404E+00	1.910E+00	1.432E-01	1.740
LU-177M	-1.014E-01		2.215E-01	3.556E-01	2.126E-02	-0.285
HF-181	3.467E-02		5.270E-02	9.110E-02	5.965E-03	0.381
W-181	2.258E-01		2.507E-01	3.814E-01	3.378E-02	0.592
TA-182	2.102E-01		2.934E-01	5.096E-01	2.848E-02	0.412
RE-183	-6.359E-02		1.187E-01	1.881E-01	1.440E-02	-0.338
RE-184	-7.790E-02		2.522E-01	3.956E-01	2.979E-02	-0.197
OS-185	-2.975E-02		5.961E-02	9.214E-02	6.889E-03	-0.323
RE-188	8.355E-02		1.882E-01	3.132E-01	2.615E-02	0.267
W-188	-2.723E+00		9.790E+00	1.405E+01	1.034E+00	-0.194
IR-192	8.753E-03		3.877E-02	6.594E-02	4.709E-03	0.133
AU-195	9.933E-02		2.518E-01	3.740E-01	3.339E-02	0.266
TL-200	6.285E-05		1.244E-04	Half-Life too short		
TL-201	-2.130E+00		6.189E+00	9.907E+00	7.246E-01	-0.215
TL-202	2.177E-02		7.144E-02	1.211E-01	7.515E-03	0.180
HG-203	2.567E-02		4.643E-02	8.044E-02	6.205E-03	0.319
BI-207	3.467E-02		7.770E-02	1.335E-01	8.581E-03	0.260
TL-207	-4.016E-01		8.091E-01	1.313E+00	2.231E-01	-0.306
PO-209	-6.260E+00		1.032E+01	1.613E+01	1.177E+00	-0.388
PB-211	-1.255E+00		1.428E+00	1.844E+00	1.149E+00	-0.681
BI-212	9.936E-01	+	7.825E-01	8.010E-01	7.335E-02	1.240
PO-215	-4.016E-01		8.091E-01	1.313E+00	2.231E-01	-0.306
RN-219	3.893E-01		5.248E-01	9.085E-01	1.239E-01	0.429
RN-220	2.832E+00		2.983E+01	4.923E+01	3.451E+00	0.058
RA-223	-4.016E-01		8.091E-01	1.313E+00	2.231E-01	-0.306
AC-227	1.715E-01		4.202E-01	6.891E-01	1.017E-01	0.249
TH-227	1.715E-01		4.205E-01	6.891E-01	1.210E-01	0.249
TH-229	2.360E-01		6.045E-01	9.642E-01	7.177E-02	0.245
PA-231	-6.478E-01		1.741E+00	2.870E+00	4.170E-01	-0.226
TH-231	-4.016E-01		8.091E-01	1.313E+00	2.231E-01	-0.306
U-231	-1.430E-02		9.614E-01	1.398E+00	1.213E-01	-0.010
PA-233	5.625E-03		6.922E-02	1.168E-01	8.716E-03	0.048
PA-234	7.048E-02		4.486E-01	7.554E-01	1.369E-01	0.093
PA-234M	-5.739E+00		8.312E+00	1.265E+01	1.247E+00	-0.454
U-235	-2.250E-01		2.507E-01	3.841E-01	6.867E-02	-0.586
NP-236	1.575E-02		8.529E-02	1.403E-01	1.101E-02	0.112
NP-239	8.974E-02		2.027E-01	3.399E-01	3.596E-02	0.264
AM-241	2.490E-02		7.975E-02	1.191E-01	1.156E-02	0.209

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.330E-03		9.847E-02	1.629E-01	1.523E-02	0.008
CM-247	5.396E-02		4.639E-02	8.260E-02	4.855E-03	0.653
CF-249	-4.616E-03		4.883E-02	8.071E-02	4.735E-03	-0.057
CF-251	-3.383E-03		1.399E-01	2.271E-01	1.672E-02	-0.015

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232357002            *
* Acquisition date :  6-JUL-2009 11:13:34 Detector SN#    :                 *
* Detector ID      : GAM17                Sensitivity     : 5.000           *
* Geometry         : CAN                  Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:08.34     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      : 22-JUN-2009 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G232357002           Analyst initials: MXR1            *
* Batch Number     : 880723               Sample Quantity : 1.2392E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.272E+01	2.992E+00	3.362E-01	1.527E+00
CD-109	3.743E+00	8.219E-01	5.598E-01	4.193E-01
SN-126	3.686E-01	8.092E-02	5.507E-02	4.129E-02
TL-208	5.023E-01	1.069E-01	3.594E-02	5.455E-02
BI-210	7.787E-01	7.777E-01	5.137E-01	3.968E-01
PB-210	7.787E-01	7.777E-01	5.137E-01	3.968E-01
PO-210	7.787E-01	7.772E-01	5.137E-01	3.965E-01
BI-211	2.565E+00	4.862E-01	2.255E-01	2.481E-01
PB-212	1.314E+00	1.573E-01	5.069E-02	8.024E-02
PO-212	1.314E+00	1.573E-01	5.069E-02	8.024E-02
BI-214	9.603E-01	1.825E-01	6.961E-02	9.312E-02
PB-214	8.922E-01	1.752E-01	7.501E-02	8.938E-02
PO-214	8.922E-01	1.752E-01	7.501E-02	8.938E-02
PO-216	1.314E+00	1.573E-01	5.069E-02	8.024E-02
PO-218	8.922E-01	1.752E-01	7.501E-02	8.938E-02
RA-224	3.727E+00	1.337E+00	5.772E-01	6.822E-01
RA-226	9.603E-01	1.825E-01	6.961E-02	9.312E-02
AC-228	1.569E+00	4.373E-01	1.579E-01	2.231E-01
RA-228	1.569E+00	4.373E-01	1.579E-01	2.231E-01
TH-228	1.314E+00	1.573E-01	5.069E-02	8.024E-02
TH-230	9.603E-01	1.825E-01	6.961E-02	9.312E-02
TH-232	1.569E+00	4.373E-01	1.579E-01	2.231E-01
TH-234	1.338E+00	1.106E+00	5.903E-01	5.645E-01
U-234	9.603E-01	1.825E-01	6.961E-02	9.312E-02
NP-237	1.082E+00	3.231E-01	1.614E-01	1.648E-01
U-238	1.338E+00	1.106E+00	5.903E-01	5.645E-01
AM-243	3.927E-01	7.137E-02	3.439E-02	3.641E-02
ANH-511	1.265E-01	8.071E-02	2.893E-02	4.118E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	3.596E-02	4.034E-01	3.463E-01	2.058E-01	NOT IDENT.
NA-22	7.822E-02	7.004E-02	6.422E-02	3.573E-02	NOT IDENT.
NA-24	2.008E+05	2.505E+05	0.000E+00	1.278E+05	SHORT HLIF
AL-26	-4.009E-03	2.663E-02	2.128E-02	1.358E-02	NOT IDENT.
TI-44	3.721E-01	4.724E-02	3.789E-02	2.410E-02	FAIL ABUN
SC-46	-2.263E-02	5.130E-02	4.192E-02	2.617E-02	FAIL ABUN
V-48	-3.273E-02	9.993E-02	8.225E-02	5.099E-02	NOT IDENT.
CR-51	2.010E-01	4.211E-01	3.773E-01	2.149E-01	NOT IDENT.
MN-52	2.117E-01	2.436E-01	2.298E-01	1.243E-01	NOT IDENT.
MN-54	2.199E-03	4.993E-02	4.307E-02	2.547E-02	NOT IDENT.
CO-56	-4.076E-02	5.156E-02	4.080E-02	2.630E-02	NOT IDENT.
CO-57	-6.087E-03	2.676E-02	2.297E-02	1.365E-02	NOT IDENT.
CO-58	-3.269E-02	5.215E-02	4.227E-02	2.661E-02	NOT IDENT.
FE-59	-1.356E-02	1.264E-01	1.054E-01	6.451E-02	NOT IDENT.
CO-60	3.742E-02	6.233E-02	5.511E-02	3.180E-02	NOT IDENT.
ZN-65	-1.273E-02	1.516E-01	1.104E-01	7.733E-02	NOT IDENT.
GE-68	-4.620E-01	1.848E+00	1.522E+00	9.430E-01	NOT IDENT.
AS-73	1.708E-02	2.574E-01	2.310E-01	1.313E-01	NOT IDENT.
AS-74	-6.919E-02	1.162E-01	9.255E-02	5.927E-02	NOT IDENT.
SE-75	6.040E-03	5.422E-02	4.207E-02	2.767E-02	NOT IDENT.
BR-77	6.072E+00	9.350E+00	8.334E+00	4.770E+00	FAIL ABUN
SR-82	-6.064E-01	4.982E-01	3.817E-01	2.542E-01	NOT IDENT.
RB-83	3.427E-02	8.681E-02	7.592E-02	4.429E-02	NOT IDENT.
RB-84	-5.575E-02	9.709E-02	7.860E-02	4.954E-02	NOT IDENT.
KR-85	1.801E+01	1.023E+01	8.776E+00	5.220E+00	NOT IDENT.
SR-85	9.123E-02	5.182E-02	4.446E-02	2.644E-02	NOT IDENT.
RB-86	-8.079E-01	1.171E+00	9.225E-01	5.972E-01	NOT IDENT.
Y-88	1.574E-02	4.093E-02	3.735E-02	2.088E-02	NOT IDENT.
ZR-88	-1.515E-03	3.786E-02	3.203E-02	1.932E-02	NOT IDENT.
Y-91	3.221E+00	2.941E+01	2.482E+01	1.501E+01	NOT IDENT.
NB-94	1.048E-02	4.362E-02	3.705E-02	2.225E-02	NOT IDENT.
NB-95	-1.198E-02	5.590E-02	4.530E-02	2.852E-02	NOT IDENT.
NB-95M	5.462E-02	1.514E-01	1.138E-01	7.725E-02	NOT IDENT.
ZR-95	5.972E-02	9.739E-02	8.504E-02	4.969E-02	NOT IDENT.
NB-97	-2.081E+04	4.223E+04	0.000E+00	2.155E+04	SHORT HLIF
ZR-97	1.258E+06	8.591E+05	0.000E+00	4.383E+05	SHORT HLIF
MO-99	4.908E+00	1.124E+01	9.703E+00	5.737E+00	NOT IDENT.
TC-99M	2.098E+14	1.815E+15	0.000E+00	9.258E+14	SHORT HLIF
RH-101	2.107E-02	3.687E-02	3.208E-02	1.881E-02	NOT IDENT.
RH-102	-1.965E-02	3.767E-02	3.086E-02	1.922E-02	NOT IDENT.
RU-103	4.794E-02	5.074E-02	4.592E-02	2.589E-02	FAIL ABUN
RH-106	-1.983E-01	4.323E-01	3.471E-01	2.206E-01	FAIL ABUN
RU-106	-1.983E-01	4.319E-01	3.471E-01	2.203E-01	FAIL ABUN
AG-108M	-8.433E-03	3.610E-02	3.039E-02	1.842E-02	NOT IDENT.
AG-110M	-2.997E-02	4.736E-02	3.722E-02	2.417E-02	NOT IDENT.
IN-111	6.270E-01	9.558E-01	7.365E-01	4.876E-01	NOT IDENT.
IN-113M	-6.467E-03	5.485E-02	4.698E-02	2.798E-02	NOT IDENT.
SN-113	-6.467E-03	5.485E-02	4.698E-02	2.798E-02	NOT IDENT.
IN-114M	1.071E-01	2.196E-01	1.684E-01	1.120E-01	NOT IDENT.
CD-115	4.555E+00	9.668E+00	8.498E+00	4.933E+00	NOT IDENT.
SN-117M	2.596E-03	5.495E-02	4.719E-02	2.803E-02	NOT IDENT.
SB-122	1.219E+00	2.050E+00	1.808E+00	1.046E+00	NOT IDENT.
I-123	9.467E+05	1.393E+06	0.000E+00	7.105E+05	SHORT HLIF
TE-123M	1.992E-02	2.931E-02	2.590E-02	1.495E-02	NOT IDENT.
I-124	-7.348E-04	8.493E-01	6.162E-01	4.333E-01	NOT IDENT.
SB-124	5.665E-02	8.293E-02	8.032E-02	4.231E-02	FAIL ABUN
SB-125	-4.775E-03	1.076E-01	9.208E-02	5.490E-02	FAIL ABUN
TE-125M	-2.575E-01	9.216E+00	8.021E+00	4.702E+00	NOT IDENT.
I-126	-9.881E-02	2.373E-01	1.906E-01	1.211E-01	NOT IDENT.
SB-126	-8.175E-02	2.028E-01	1.365E-01	1.035E-01	FAIL ABUN
SB-127	-5.918E-01	1.529E+00	1.226E+00	7.799E-01	NOT IDENT.
XE-127	-4.554E-02	5.390E-02	4.186E-02	2.750E-02	NOT IDENT.
I-131	-5.437E-02	1.136E-01	9.505E-02	5.795E-02	NOT IDENT.
TE-132	2.132E-01	5.986E-01	5.127E-01	3.054E-01	NOT IDENT.
BA-133	2.831E-03	5.282E-02	4.007E-02	2.695E-02	NOT IDENT.
I-133	-1.177E+03	3.282E+03	0.000E+00	1.674E+03	SHORT HLIF
CS-134	1.012E-01	6.607E-02	6.312E-02	3.371E-02	NOT IDENT.
CS-135	1.304E-01	2.131E-01	1.621E-01	1.087E-01	NOT IDENT.
I-135	-2.757E+14	4.648E+14	0.000E+00	2.371E+14	SHORT HLIF
CS-136	-8.886E-02	1.480E-01	1.176E-01	7.550E-02	FAIL ABUN
BA-137M	3.672E-03	4.940E-02	4.149E-02	2.521E-02	NOT IDENT.
CS-137	3.882E-03	5.223E-02	4.386E-02	2.665E-02	NOT IDENT.
CE-139	-2.579E-03	3.238E-02	2.758E-02	1.652E-02	NOT IDENT.
BA-140	9.699E-03	3.401E-01	2.884E-01	1.735E-01	NOT IDENT.
LA-140	-9.695E-03	8.192E-02	5.705E-02	4.179E-02	NOT IDENT.
CE-141	2.774E-03	6.985E-02	5.943E-02	3.564E-02	NOT IDENT.
CE-143	2.451E+02	1.178E+02	0.000E+00	6.011E+01	SHORT HLIF

CE-144	-1.829E-02	2.360E-01	1.778E-01	1.204E-01	NOT IDENT.
PM-144	3.469E-02	4.595E-02	4.070E-02	2.344E-02	NOT IDENT.
PR-144	2.350E+00	3.112E+00	2.756E+00	1.588E+00	NOT IDENT.
PM-146	-5.123E-02	5.148E-02	4.036E-02	2.627E-02	NOT IDENT.
ND-147	-4.655E-01	7.094E-01	5.672E-01	3.620E-01	FAIL ABUN
PM-149	-6.980E+00	7.271E+01	6.355E+01	3.710E+01	NOT IDENT.
EU-152	-1.785E-01	1.312E-01	9.218E-02	6.691E-02	NOT IDENT.
GD-153	3.252E-03	8.311E-02	6.407E-02	4.241E-02	FAIL ABUN
EU-154	2.117E-01	1.957E-01	1.785E-01	9.983E-02	NOT IDENT.
EU-155	-2.950E-02	1.088E-01	9.391E-02	5.552E-02	FAIL ABUN
TB-160	1.417E-01	1.819E-01	1.670E-01	9.283E-02	FAIL ABUN
HO-166M	2.238E-03	8.096E-02	6.740E-02	4.131E-02	NOT IDENT.
TM-171	-5.754E+00	1.926E+01	1.484E+01	9.828E+00	NOT IDENT.
LU-176	1.145E-02	3.118E-02	2.449E-02	1.591E-02	FAIL ABUN
LU-177	3.324E+00	1.376E+00	9.800E-01	7.019E-01	FAIL ABUN
LU-177M	-1.014E-01	2.170E-01	1.808E-01	1.107E-01	NOT IDENT.
HF-181	3.467E-02	5.165E-02	4.622E-02	2.635E-02	NOT IDENT.
W-181	2.258E-01	2.457E-01	1.987E-01	1.254E-01	NOT IDENT.
TA-182	2.102E-01	2.876E-01	2.553E-01	1.467E-01	FAIL ABUN
RE-183	-6.359E-02	1.163E-01	9.682E-02	5.933E-02	FAIL ABUN
RE-184	-7.790E-02	2.472E-01	2.024E-01	1.261E-01	NOT IDENT.
OS-185	-2.975E-02	5.842E-02	4.656E-02	2.981E-02	NOT IDENT.
RE-188	8.355E-02	1.845E-01	1.613E-01	9.411E-02	NOT IDENT.
W-188	-2.723E+00	9.595E+00	7.179E+00	4.895E+00	FAIL ABUN
IR-192	8.753E-03	3.800E-02	3.364E-02	1.939E-02	FAIL ABUN
AU-195	9.933E-02	2.468E-01	1.937E-01	1.259E-01	FAIL ABUN
TL-200	6.285E+01	2.438E+02	0.000E+00	1.244E+02	SHORT HLIF
TL-201	-2.130E+00	6.066E+00	5.097E+00	3.095E+00	NOT IDENT.
TL-202	2.177E-02	7.002E-02	6.151E-02	3.572E-02	NOT IDENT.
HG-203	2.567E-02	4.550E-02	4.111E-02	2.321E-02	NOT IDENT.
BI-207	3.467E-02	7.614E-02	6.703E-02	3.885E-02	FAIL ABUN
TL-207	-4.016E-01	7.930E-01	6.699E-01	4.046E-01	FAIL ABUN
PO-209	-6.260E+00	1.011E+01	8.114E+00	5.160E+00	NOT IDENT.
PB-211	-1.255E+00	1.400E+00	9.375E-01	7.141E-01	NOT IDENT.
BI-212	9.936E-01	7.669E-01	4.041E-01	3.913E-01	FAIL ABUN
PO-215	-4.016E-01	7.930E-01	6.699E-01	4.046E-01	FAIL ABUN
RN-219	3.893E-01	5.143E-01	4.620E-01	2.624E-01	FAIL ABUN
RN-220	2.832E+00	2.923E+01	2.493E+01	1.491E+01	NOT IDENT.
RA-223	-4.016E-01	7.930E-01	6.699E-01	4.046E-01	FAIL ABUN
AC-227	1.715E-01	4.118E-01	3.526E-01	2.101E-01	FAIL ABUN
TH-227	1.715E-01	4.121E-01	3.526E-01	2.102E-01	FAIL ABUN
TH-229	2.360E-01	5.924E-01	4.952E-01	3.022E-01	FAIL ABUN
PA-231	-6.478E-01	1.706E+00	1.467E+00	8.706E-01	NOT IDENT.
TH-231	-4.016E-01	7.930E-01	6.699E-01	4.046E-01	FAIL ABUN
U-231	-1.430E-02	9.422E-01	7.247E-01	4.807E-01	FAIL ABUN
PA-233	5.625E-03	6.784E-02	5.962E-02	3.461E-02	FAIL ABUN
PA-234	7.048E-02	4.396E-01	3.797E-01	2.243E-01	FAIL ABUN
PA-234M	-5.739E+00	8.146E+00	6.352E+00	4.156E+00	NOT IDENT.
U-235	-2.250E-01	2.457E-01	1.980E-01	1.254E-01	FAIL ABUN
NP-236	1.575E-02	8.359E-02	7.222E-02	4.265E-02	NOT IDENT.
NP-239	8.974E-02	1.987E-01	1.757E-01	1.014E-01	FAIL ABUN
AM-241	2.490E-02	7.815E-02	6.212E-02	3.987E-02	NOT IDENT.
CM-243	1.330E-03	9.650E-02	8.432E-02	4.924E-02	FAIL ABUN
CM-247	5.396E-02	4.547E-02	4.201E-02	2.320E-02	NOT IDENT.
CF-249	-4.616E-03	4.785E-02	4.107E-02	2.442E-02	NOT IDENT.
CF-251	-3.383E-03	1.371E-01	1.167E-01	6.997E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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46.50	342.1303
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52.97	366.1276
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53.44	354.5393
54.07	354.9145
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56.28	392.0166
57.37	0.0000
57.53	365.5209
57.53	365.5217
57.60	365.5619
57.98	366.7674
57.98	366.7674
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59.32	394.1208
59.40	394.1705
59.54	379.4915
59.72	379.5997
60.01	400.4602
61.10	414.4655
61.14	414.4911
61.30	414.5945
63.00	412.8961
63.29	413.0790
63.29	413.0790
63.58	413.2611
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65.20	452.8123
65.20	452.8123
66.05	454.8770
66.72	449.3560
66.83	434.4983
66.91	434.5498
67.20	434.7345
67.20	434.7345
67.75	429.8515
67.85	413.7158
68.90	426.8286
68.90	426.8286
69.30	413.9619
69.67	419.8069
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70.82	444.5257
70.83	444.5312
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72.87	436.7753
72.87	436.7753
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74.81	425.0097
74.81	425.0097
74.81	425.0097
74.81	425.0097
74.81	425.0097
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74.97	425.1024
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75.70	425.5284
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77.11	426.3444
77.11	426.3444

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77.11	426.3444
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81.07	418.8094
81.07	418.8094
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83.78	420.2847
83.78	420.2847
83.78	420.2847
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84.40	410.4219
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85.43	334.7502
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86.50	335.2038
86.54	335.2211
86.59	335.2411
86.72	335.2972
86.79	335.3252
86.94	335.3892
87.30	335.5413
87.30	335.5413
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87.57	335.6547
87.88	335.7841
88.03	335.8481
88.36	335.9855
88.47	336.0322
89.95	336.6472
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92.29	337.6118
92.38	337.6478
92.38	337.6478
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94.00	338.3081
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94.67	280.3788
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94.90	292.8519
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98.44	280.0712
98.44	280.0723
98.88	291.1124
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99.55	273.9417
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100.10	260.5690
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105.00	286.0975
105.31	296.9780
108.00	278.2035
109.28	276.6255
111.00	253.4726
111.00	253.4726

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116.30	246.9740
117.00	253.1109
117.00	253.1109
117.66	253.2860
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121.62	273.2736
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122.32	259.4952
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122.32	259.4952
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144.24	286.4583
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167.43	247.5965
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171.86	224.4909
172.10	224.5352
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176.60	212.7805
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184.41	221.0673
185.71	218.5477
186.00	218.5983
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209.75	168.5619
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218.09	195.7386
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236.00	171.6627
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238.63	167.7967
238.63	167.7967
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241.98	168.1679
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248.90	116.5933
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256.20	130.8936
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268.79	159.2027
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269.46	152.1118
269.46	152.1118
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277.60	139.3751
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445.03	89.0849
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609.31	62.6104
609.31	62.6104

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621.84	74.4113
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696.49	55.8581
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722.78	48.7386
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756.87	51.4338
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768.36	71.3746
768.36	71.3746
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911.07	55.2164
911.07	55.2164
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966.15	54.6183
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969.11	62.8034
969.11	62.8034
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1076.63	64.4419
1077.35	55.5283
1085.78	56.6289
1099.22	49.8271
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1112.84	73.4701
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1120.29	52.0656
1120.29	52.0656
1120.29	52.0656
1120.51	52.0677
1121.28	52.0783
1124.00	0.0000
1129.67	74.9188
1131.51	0.0000
1147.95	0.0000
1167.94	70.8289
1173.22	63.8177
1175.09	62.8300
1177.93	74.0218
1189.05	62.0028
1204.90	68.3304
1205.75	0.0000
1213.00	62.3180
1221.42	54.2422
1230.97	77.9359
1235.34	71.8486
1236.41	0.0000
1238.11	73.9424
1238.11	73.9424
1238.11	73.9424
1238.11	73.9424
1238.25	65.7292
1246.25	70.9822
1260.41	0.0000
1271.85	58.9459
1274.45	42.4214
1274.54	42.4231
1291.56	41.5299
1298.22	0.0000
1312.09	28.1481
1325.50	40.7662
1325.50	40.7662
1332.49	34.5415
1333.61	35.5965
1360.21	23.1521
1362.66	0.0000
1365.15	24.2279
1368.21	14.7559
1368.53	0.0000
1376.25	16.8900
1377.67	21.1182
1377.67	21.1182
1377.67	21.1182
1377.67	21.1182
1384.27	26.4313
1394.10	10.5924
1395.20	12.7134
1407.95	19.1162
1434.06	11.7390
1436.60	20.2865
1457.56	0.0000
1460.81	16.5467
1489.15	17.2480
1509.49	14.0653
1596.49	8.2385
1620.62	16.0721
1678.03	0.0000
1691.02	5.7393
1691.02	5.7393

1706.46	0.0000
1750.46	0.0000
1764.49	8.4689
1764.49	8.4689
1764.49	8.4689
1764.49	8.4689
1770.23	33.9063
1771.40	18.4096
1791.20	0.0000
1808.65	4.8730
1836.01	6.8511

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232357002

Total Uranium Activity	3.8778E+00	ug/g
Total Uranium Counting Unc.	3.2937E+00	ug/g
Total Uranium Tpu	1.6805E-06	ug/g
Total Uranium Mda	1.7586E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G232357002       *
*   ANALYST       : MXR1                      DETECTOR   : GAM17            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 11:13:34.91    SAMPLE ALQT:  123.920 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.676E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.471E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.737E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.815E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:26:52.49

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:25:36.
Sample ID         : G1201870087          Sample quantity  : 1.45000E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.74  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	185.67*	10	132	1.22	370.37	364	12	1.39E-03	258.2	
2	0	353.37*	19	87	1.68	705.66	698	13	2.65E-03	112.1	
3	0	912.73*	23	31	3.43	1824.11	1812	21	3.14E-03	71.0	
4	0	1463.28	12	21	1.16	2925.04	2913	14	1.67E-03	86.0	
5	0	1765.60	15	5	1.02	3529.65	3524	10	2.10E-03	37.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 15:26:55

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:25:36
Sample ID : G1201870087 Sample quantity : 145.00 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.74 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	477.59	*	5.849E-03	1.175E-01	1.947E-01	1.411E-02	0.030
NA-22	1274.54	*	4.793E-03	1.406E-02	2.444E-02	1.663E-03	0.196
NA-24	1368.53	*	1.158E-05	1.406E-02	Half-Life too short		
AL-26	1129.67		-2.289E-01	6.162E-01	9.688E-01	6.469E-02	-0.236
	1808.65	*	7.324E-03	1.548E-02	2.770E-02	1.617E-03	0.264
K-40	1460.81	*	4.765E-02	1.996E-01	3.567E-01	2.707E-02	0.134
TI-44	67.85		1.245E-03	2.167E-02	3.614E-02	2.906E-03	0.034
	78.38	*	-9.543E-03	1.567E-02	2.431E-02	2.079E-03	-0.393
SC-46	889.25	*	1.634E-02	1.596E-02	2.908E-02	3.243E-03	0.562
	1120.51		1.695E-02	1.879E-02	3.440E-02	2.377E-03	0.493
V-48	944.10		-7.753E-03	2.748E-01	4.450E-01	4.710E-02	-0.017
	983.50	*	-1.186E-02	2.093E-02	3.101E-02	3.067E-03	-0.383
	1312.09		-5.485E-03	2.552E-02	4.048E-02	2.949E-03	-0.136
CR-51	320.08	*	3.410E-02	1.206E-01	1.996E-01	1.285E-02	0.171
MN-52	744.21		1.422E-02	3.777E-02	6.535E-02	5.763E-03	0.218
	848.13		-9.007E-01	1.214E+00	1.812E+00	1.896E-01	-0.497
	935.52		3.763E-02	4.074E-02	7.364E-02	7.898E-03	0.511
	1246.25		1.126E-01	9.937E-01	1.662E+00	1.069E-01	0.068
	1333.61		-2.617E-01	6.976E-01	1.056E+00	7.976E-02	-0.248
	1434.06	*	2.970E-02	4.073E-02	7.415E-02	5.464E-03	0.401
MN-54	834.83	*	-1.559E-04	1.595E-02	2.619E-02	2.683E-03	-0.006
CO-56	846.75	*	-9.019E-03	1.691E-02	2.602E-02	2.716E-03	-0.347
	977.42		-5.071E-02	1.070E+00	1.722E+00	1.722E-01	-0.029
	1037.82		-5.117E-02	1.070E-01	1.668E-01	1.545E-02	-0.307
	1175.09		7.870E-03	7.812E-01	1.294E+00	7.183E-02	0.006
	1238.25		-4.571E-03	2.409E-02	3.846E-02	2.563E-03	-0.119
	1360.21		-4.343E-01	3.588E-01	4.310E-01	3.239E-02	-1.008
	1771.40		-7.089E-02	1.209E-01	1.344E-01	8.122E-03	-0.527
CO-57	122.06	*	3.359E-03	9.650E-03	1.594E-02	9.440E-04	0.211
	136.48		-1.000E-02	8.721E-02	1.376E-01	9.008E-03	-0.073
CO-58	810.76	*	2.264E-03	1.550E-02	2.597E-02	2.564E-03	0.087
FE-59	142.65		-8.678E-01	1.160E+00	1.687E+00	9.279E-02	-0.515
	192.34		-1.595E-01	2.889E-01	4.604E-01	5.340E-02	-0.346
	1099.22	*	-2.510E-02	3.288E-02	4.910E-02	4.042E-03	-0.511

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1291.56		-4.716E-02	4.536E-02	6.187E-02	5.199E-03	-0.762
CO-60		1173.22		-9.742E-03	1.774E-02	2.722E-02	1.504E-03	-0.358
		1332.49	*	-5.181E-03	1.381E-02	2.090E-02	1.579E-03	-0.248
ZN-65		1115.52	*	7.632E-03	3.377E-02	5.773E-02	4.066E-03	0.132
GE-68		1077.35	*	-3.328E-01	5.075E-01	7.143E-01	5.675E-02	-0.466
AS-73		53.44	*	-5.026E-01	5.357E-01	7.856E-01	6.228E-02	-0.640
AS-74		595.88	*	2.658E-04	3.333E-02	5.397E-02	3.878E-03	0.005
		634.78		-4.546E-02	1.233E-01	1.902E-01	1.416E-02	-0.239
SE-75		66.05		-2.332E+00	2.504E+00	3.768E+00	3.731E-01	-0.619
		96.73		1.082E-01	2.971E-01	4.966E-01	6.549E-02	0.218
		121.11		1.538E-02	5.119E-02	8.422E-02	7.862E-03	0.183
		136.00		-1.204E-03	1.594E-02	2.524E-02	1.437E-03	-0.048
		198.60		4.340E-01	7.905E-01	1.337E+00	9.073E-02	0.325
		264.65	*	1.434E-03	1.682E-02	2.770E-02	1.584E-03	0.052
		279.53		3.911E-02	4.105E-02	7.206E-02	4.452E-03	0.543
		303.91		-3.048E-02	8.168E-01	1.317E+00	1.252E-01	-0.023
		400.65		-4.454E-02	9.610E-02	1.537E-01	1.400E-02	-0.290
BR-77		87.88		1.001E+00	7.421E+00	1.227E+01	1.134E+00	0.082
		200.40		2.991E+00	7.567E+00	1.295E+01	6.973E-01	0.231
		239.00		2.247E-01	4.796E-01	8.061E-01	4.484E-02	0.279
		249.79		-2.301E-01	3.130E+00	5.110E+00	2.864E-01	-0.045
		281.68		-1.637E+00	4.094E+00	6.429E+00	3.669E-01	-0.255
		297.23		2.187E+00	2.408E+00	4.182E+00	2.401E-01	0.523
		303.76		-2.706E+00	8.135E+00	1.276E+01	7.340E-01	-0.212
		439.47		2.875E+00	6.683E+00	1.152E+01	7.025E-01	0.249
		484.57		-6.580E+00	1.002E+01	1.530E+01	9.823E-01	-0.430
		520.65	*	-1.810E-01	4.970E-01	7.827E-01	5.222E-02	-0.231
		574.64		4.712E+00	9.831E+00	1.675E+01	1.180E+00	0.281
		578.91		-4.789E+00	4.114E+00	5.784E+00	4.090E-01	-0.828
		585.48		1.796E+00	8.224E+00	1.361E+01	9.684E-01	0.132
		755.35		-3.588E+00	7.131E+00	1.109E+01	9.963E-01	-0.324
		817.79		2.434E-01	5.426E+00	8.992E+00	8.962E-01	0.027
SR-82		698.33		7.431E+00	1.332E+01	2.206E+01	1.796E+00	0.337
		776.49	*	-2.623E-02	1.281E-01	2.069E-01	1.927E-02	-0.127
		1395.20		-1.989E+00	4.079E+00	6.083E+00	4.533E-01	-0.327
RB-83		520.41	*	-6.830E-03	2.835E-02	4.527E-02	3.020E-03	-0.151
		529.64		6.479E-03	3.998E-02	6.653E-02	4.480E-03	0.097
		552.65		3.005E-02	7.215E-02	1.231E-01	8.485E-03	0.244
RB-84		881.50	*	-1.078E-03	2.971E-02	4.173E-02	4.600E-03	-0.026
KR-85		513.99	*	-4.327E+00	5.120E+00	7.980E+00	5.287E-01	-0.542
SR-85		513.99	*	-2.049E-02	2.425E-02	3.779E-02	2.504E-03	-0.542
RB-86		1076.63	*	-1.104E-01	2.502E-01	3.663E-01	2.916E-02	-0.301
Y-88		898.02		6.938E-03	1.473E-02	2.560E-02	2.902E-03	0.271
		1836.01	*	-1.689E-03	1.963E-02	3.168E-02	1.805E-03	-0.053
ZR-88		392.90	*	6.353E-03	1.105E-02	1.947E-02	1.120E-03	0.326
Y-91		1204.90	*	3.738E+00	5.820E+00	1.046E+01	6.184E-01	0.357
NB-94		702.63	*	3.242E-03	1.448E-02	2.469E-02	2.026E-03	0.131
		871.10		8.961E-03	1.685E-02	2.909E-02	3.154E-03	0.308
NB-95		765.79	*	-8.236E-03	1.400E-02	2.142E-02	1.960E-03	-0.384

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M		235.69	*	-7.354E-02	4.598E-02	6.612E-02	4.851E-03	-1.112
ZR-95		724.18		-2.867E-02	3.317E-02	4.949E-02	4.589E-03	-0.579
		756.15	*	-5.545E-03	2.601E-02	4.205E-02	4.137E-03	-0.132
NB-97		657.90	*	-1.029E-06	2.601E-02	Half-Life too short		
		1024.50		2.976E-03	2.601E-02	Half-Life too short		
ZR-97		254.15		-5.904E-04	2.601E-02	Half-Life too short		
		355.39		1.552E-04	2.601E-02	Half-Life too short		
		507.63	*	-2.713E-03	2.601E-02	Half-Life too short		
		602.52		-1.600E-03	2.601E-02	Half-Life too short		
		1021.30		-4.666E-04	2.601E-02	Half-Life too short		
		1147.95		4.666E-04	2.601E-02	Half-Life too short		
		1362.66		2.980E-04	2.601E-02	Half-Life too short		
		1750.46		7.791E-04	2.601E-02	Half-Life too short		
MO-99		140.51		3.485E-01	1.894E+00	2.946E+00	7.922E-01	0.118
		181.06		-2.284E-01	1.127E+00	1.635E+00	2.776E-01	-0.140
		366.43		-3.660E-01	5.264E+00	8.816E+00	5.092E-01	-0.042
		739.58	*	2.998E-01	6.557E-01	1.146E+00	1.749E-01	0.262
		778.00		1.318E+00	2.131E+00	3.758E+00	3.508E-01	0.351
TC-99M		140.51	*	2.895E+00	2.131E+00	Half-Life too short		
RH-101		127.23		-2.542E-03	1.179E-02	1.850E-02	1.069E-03	-0.137
		198.01	*	7.049E-03	1.493E-02	2.515E-02	1.352E-03	0.280
		325.23		-4.264E-03	8.828E-02	1.413E-01	8.167E-03	-0.030
RH-102		418.52		-1.121E-02	1.204E-01	1.991E-01	1.183E-02	-0.056
		475.06	*	-7.315E-03	1.232E-02	1.911E-02	1.214E-03	-0.383
		631.29		1.091E-02	2.495E-02	4.201E-02	3.118E-03	0.260
		697.49		1.782E-02	3.723E-02	6.129E-02	4.983E-03	0.291
		766.84		-5.395E-03	3.729E-02	6.065E-02	5.557E-03	-0.089
		1046.59		-1.905E-02	4.522E-02	7.140E-02	6.161E-03	-0.267
		1112.84		-8.093E-02	8.681E-02	1.256E-01	8.916E-03	-0.644
RU-103		497.08	*	1.062E-02	1.567E-02	2.730E-02	3.544E-03	0.389
		610.33		-1.263E-01	4.105E-01	6.261E-01	1.004E-01	-0.202
RH-106		511.85		-1.314E-01	1.286E-01	2.304E-01	1.523E-02	-0.570
		621.84	*	-4.287E-03	1.366E-01	2.193E-01	2.759E-02	-0.020
		1050.47		4.398E-01	9.364E-01	1.652E+00	1.412E-01	0.266
RU-106		511.85		-1.314E-01	1.286E-01	2.304E-01	1.523E-02	-0.570
		621.84	*	-4.287E-03	1.366E-01	2.193E-01	1.614E-02	-0.020
		1050.47		4.398E-01	9.364E-01	1.652E+00	1.412E-01	0.266
AG-108M		433.93	*	-5.067E-03	1.391E-02	2.234E-02	1.460E-03	-0.227
		614.37		-3.525E-03	2.101E-02	3.341E-02	2.574E-03	-0.106
		722.95		-2.560E-03	1.650E-02	2.701E-02	2.389E-03	-0.095
CD-109		88.03	*	3.169E-02	3.065E-01	5.056E-01	4.674E-02	0.063
AG-110M		657.75	*	-3.820E-04	1.380E-02	2.310E-02	1.822E-03	-0.017
		677.61		1.700E-02	1.194E-01	2.030E-01	1.647E-02	0.084
		706.67		-5.221E-02	8.614E-02	1.344E-01	1.143E-02	-0.389
		763.93		-1.027E-02	5.914E-02	9.590E-02	8.966E-03	-0.107
		884.67		-2.819E-02	2.114E-02	2.781E-02	3.141E-03	-1.014
		937.48		2.966E-02	4.711E-02	8.231E-02	9.010E-03	0.360
		1384.27		-7.019E-03	6.906E-02	1.106E-01	8.572E-03	-0.063
IN-111		171.28		1.772E-02	6.299E-02	1.082E-01	5.691E-03	0.164

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		245.39	*	-2.479E-02	7.775E-02	1.111E-01	6.211E-03	-0.223
IN-113M		391.69	*	1.257E-02	1.614E-02	2.892E-02	1.774E-03	0.435
SN-113		391.69	*	1.257E-02	1.614E-02	2.892E-02	1.774E-03	0.435
IN-114M		190.27	*	4.414E-02	5.960E-02	9.526E-02	5.086E-03	0.463
CD-115		260.90		-1.247E+00	5.133E+00	8.231E+00	4.646E-01	-0.152
		492.35		5.163E-01	1.502E+00	2.552E+00	1.652E-01	0.202
		527.90	*	-2.113E-01	4.307E-01	6.661E-01	4.477E-02	-0.317
SN-117M		156.02		-3.436E-01	5.787E-01	9.406E-01	5.024E-02	-0.365
		158.56	*	7.000E-03	1.488E-02	2.435E-02	1.294E-03	0.287
SB-122		563.90	*	2.531E-03	1.172E-01	1.911E-01	1.332E-02	0.013
		692.80		-1.931E+00	2.668E+00	4.117E+00	3.319E-01	-0.469
I-123		159.00	*	-1.512E-05	2.668E+00	Half-Life too short		
		528.96		5.673E-04	2.668E+00	Half-Life too short		
TE-123M		159.00	*	-1.030E-03	1.113E-02	1.756E-02	9.474E-04	-0.059
I-124		602.71	*	-8.954E-02	9.298E-02	1.358E-01	9.822E-03	-0.659
		722.78		-4.773E-02	4.956E-01	8.166E-01	6.940E-02	-0.058
		1325.50		-1.283E-01	4.096E+00	6.666E+00	4.974E-01	-0.019
		1376.25		-8.131E-01	3.274E+00	5.090E+00	3.812E-01	-0.160
		1509.49		5.573E-02	2.055E+00	3.446E+00	2.469E-01	0.016
		1691.02		3.726E-01	4.768E-01	9.095E-01	5.866E-02	0.410
SB-124		602.71		-1.670E-02	1.735E-02	2.534E-02	1.833E-03	-0.659
		645.85		8.261E-02	2.077E-01	3.481E-01	2.822E-02	0.237
		709.31		-3.443E-01	1.048E+00	1.686E+00	1.400E-01	-0.204
		713.82		8.928E-02	6.548E-01	1.106E+00	1.312E-01	0.081
		722.78		-1.291E-02	1.340E-01	2.208E-01	1.919E-02	-0.058
		968.20		-9.412E-01	1.116E+00	1.539E+00	1.565E-01	-0.612
		1045.16		-5.969E-02	8.940E-01	1.483E+00	1.284E-01	-0.040
		1325.50		-3.707E-02	1.183E+00	1.925E+00	1.437E-01	-0.019
		1368.21		2.410E-01	5.937E-01	1.042E+00	1.332E-01	0.231
		1436.60		1.158E-01	1.541E+00	2.534E+00	1.866E-01	0.046
		1691.02	*	2.377E-02	3.042E-02	5.802E-02	4.003E-03	0.410
SB-125		427.89	*	-3.940E-02	3.698E-02	5.486E-02	3.428E-03	-0.718
		463.38		-1.126E-01	1.145E-01	1.704E-01	1.222E-02	-0.661
		600.56		6.395E-02	8.724E-02	1.501E-01	1.196E-02	0.426
		635.90		-9.405E-02	1.308E-01	1.936E-01	1.597E-02	-0.486
TE-125M		109.28	*	-1.166E-01	3.498E+00	5.639E+00	4.948E-01	-0.021
I-126		388.63		-5.564E-02	5.425E-02	8.212E-02	4.720E-03	-0.678
		666.33	*	-3.616E-03	4.806E-02	7.996E-02	6.147E-03	-0.045
		753.82		-1.066E-01	3.808E-01	6.102E-01	5.470E-02	-0.175
SB-126		223.80		-4.617E-01	1.108E+00	1.778E+00	9.770E-02	-0.260
		278.60		4.958E-01	6.387E-01	1.106E+00	6.305E-02	0.448
		296.50		-1.580E-01	4.278E-01	6.410E-01	3.679E-02	-0.247
		414.70		-1.871E-03	2.019E-02	3.339E-02	1.975E-03	-0.056
		415.30		4.625E-03	1.699E+00	2.835E+00	1.678E-01	0.002
		555.20		-1.128E-01	1.034E+00	1.661E+00	1.148E-01	-0.068
		573.80		1.217E-01	2.952E-01	4.996E-01	3.515E-02	0.244
		593.00		-4.436E-01	3.056E-01	4.183E-01	2.997E-02	-1.061
		656.30		9.526E-02	8.924E-01	1.515E+00	1.149E-01	0.063
		666.33		-1.485E-03	1.974E-02	3.284E-02	2.525E-03	-0.045

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		-1.896E-01	5.278E-01	8.493E-01	6.632E-02	-0.223
		695.00		2.976E-03	2.200E-02	3.724E-02	3.014E-03	0.080
		697.00		3.113E-02	8.427E-02	1.372E-01	1.115E-02	0.227
		720.50	*	7.886E-04	3.913E-02	6.531E-02	5.528E-03	0.012
		856.80		-5.382E-02	1.464E-01	2.303E-01	2.443E-02	-0.234
		989.30		3.798E-01	3.330E-01	6.179E-01	6.045E-02	0.615
		1034.80		1.356E-01	2.203E+00	3.583E+00	3.181E-01	0.038
		1213.00		4.541E-01	9.971E-01	1.753E+00	1.054E-01	0.259
SN-126		64.28		-2.722E-02	2.681E-01	4.290E-01	6.342E-02	-0.063
		86.94		-7.483E-02	1.375E-01	2.109E-01	8.748E-02	-0.355
		87.57	*	-1.707E-02	3.218E-02	5.072E-02	4.673E-03	-0.337
SB-127		61.10		-9.811E+00	7.510E+00	1.133E+01	9.626E-01	-0.866
		252.40		-6.260E-02	4.696E-01	7.613E-01	3.126E-01	-0.082
		290.80		-1.338E-01	2.340E+00	3.779E+00	2.548E-01	-0.035
		411.60		1.641E-01	1.236E+00	2.089E+00	2.724E-01	0.079
		444.90		-2.704E-01	9.891E-01	1.595E+00	1.451E-01	-0.170
		473.00		7.859E-02	1.765E-01	3.038E-01	2.942E-02	0.259
		543.00		-5.903E-01	1.770E+00	2.778E+00	3.309E-01	-0.213
		603.60		-1.932E+00	1.462E+00	2.035E+00	2.003E-01	-0.950
		685.20	*	1.158E-02	1.481E-01	2.497E-01	2.246E-02	0.046
		698.50		1.364E+00	1.748E+00	3.108E+00	4.446E-01	0.439
		722.20		8.369E-01	3.042E+00	5.212E+00	4.797E-01	0.161
		783.80		-7.033E-02	3.427E-01	5.516E-01	6.316E-02	-0.127
XE-127		57.60		6.358E-01	2.899E+00	4.929E+00	3.799E-01	0.129
		145.22		-1.112E-02	2.787E-01	4.268E-01	2.333E-02	-0.026
		172.10		1.521E-02	4.129E-02	7.129E-02	3.753E-03	0.213
		202.84	*	-1.718E-02	1.664E-02	2.567E-02	1.386E-03	-0.669
		374.96		4.929E-02	6.799E-02	1.213E-01	6.996E-03	0.406
I-131		80.18		-9.429E-01	1.026E+00	1.579E+00	1.370E-01	-0.597
		284.30		6.389E-02	3.177E-01	5.255E-01	3.318E-02	0.122
		364.48	*	-2.756E-02	2.495E-02	3.787E-02	2.424E-03	-0.728
		636.97		-7.507E-02	3.693E-01	5.805E-01	4.625E-02	-0.129
		722.89		-1.950E-01	1.452E+00	2.383E+00	2.029E-01	-0.082
TE-132		49.72		5.768E-02	2.690E+00	4.547E+00	3.845E-01	0.013
		111.76		-3.323E-02	2.393E+00	3.857E+00	2.821E-01	-0.009
		116.30		-1.265E+00	2.273E+00	3.490E+00	2.462E-01	-0.363
		228.16	*	3.152E-02	5.503E-02	9.459E-02	1.235E-02	0.333
BA-133		53.15		-2.274E+00	2.487E+00	3.656E+00	2.901E-01	-0.622
		79.62		-5.490E-01	5.493E-01	8.317E-01	1.267E-01	-0.660
		81.00		-1.030E-02	4.073E-02	6.582E-02	1.048E-02	-0.156
		276.40		-5.617E-02	1.443E-01	2.268E-01	2.929E-02	-0.248
		302.84		-1.425E-02	5.824E-02	9.210E-02	1.071E-02	-0.155
		356.01	*	-8.799E-03	2.170E-02	2.849E-02	3.291E-03	-0.309
		383.85		8.930E-02	1.157E-01	2.068E-01	2.243E-02	0.432
I-133		510.53		-5.960E-04	1.157E-01	Half-Life too short		
		529.87	*	1.945E-06	1.157E-01	Half-Life too short		
		706.58		-2.458E-04	1.157E-01	Half-Life too short		
		856.28		-3.233E-04	1.157E-01	Half-Life too short		
		875.33		-6.268E-05	1.157E-01	Half-Life too short		

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		1236.41		7.128E-05	1.157E-01	Half-Life too short		
		1298.22		3.614E-05	1.157E-01	Half-Life too short		
CS-134		475.35		-2.491E-01	7.877E-01	1.258E+00	7.994E-02	-0.198
		563.23		-3.036E-03	1.441E-01	2.337E-01	1.651E-02	-0.013
		569.32		-4.406E-02	9.345E-02	1.411E-01	1.009E-02	-0.312
		604.70		-2.754E-02	1.724E-02	2.348E-02	1.707E-03	-1.173
		795.84	*	3.434E-04	1.647E-02	2.726E-02	2.636E-03	0.013
		801.93		7.199E-02	1.938E-01	3.288E-01	3.208E-02	0.219
		1038.57		-3.995E-01	1.400E+00	2.248E+00	1.978E-01	-0.178
		1167.94		4.595E-01	9.372E-01	1.649E+00	9.353E-02	0.279
		1365.15		3.363E-01	4.283E-01	8.033E-01	6.390E-02	0.419
CS-135		268.24	*	-2.412E-02	6.014E-02	9.469E-02	7.158E-03	-0.255
I-135		288.45		-3.085E+01	6.014E-02	Half-Life too short		
		417.63		2.533E+01	6.014E-02	Half-Life too short		
		546.56		-3.047E+00	6.014E-02	Half-Life too short		
		836.80		2.025E+01	6.014E-02	Half-Life too short		
		1038.76		-1.153E+01	6.014E-02	Half-Life too short		
		1124.00		-3.000E+01	6.014E-02	Half-Life too short		
		1131.51		1.090E-02	6.014E-02	Half-Life too short		
		1260.41	*	-1.341E+00	6.014E-02	Half-Life too short		
		1457.56		2.214E+00	6.014E-02	Half-Life too short		
		1678.03		-9.541E+00	6.014E-02	Half-Life too short		
		1706.46		5.545E+00	6.014E-02	Half-Life too short		
		1791.20		-2.458E+01	6.014E-02	Half-Life too short		
CS-136		66.91		-1.773E-01	2.729E-01	4.167E-01	6.291E-02	-0.426
		86.29		-2.012E-01	2.900E-01	4.506E-01	5.938E-02	-0.447
		153.22		7.114E-03	1.677E-01	2.855E-01	1.963E-02	0.025
		163.89		6.118E-02	3.005E-01	4.864E-01	3.319E-02	0.126
		176.55		-3.306E-02	9.759E-02	1.603E-01	9.703E-03	-0.206
		273.65		-7.379E-03	1.176E-01	1.907E-01	1.241E-02	-0.039
		340.57		4.550E-03	3.667E-02	5.939E-02	3.649E-03	0.077
		818.51		-3.558E-03	1.954E-02	3.140E-02	3.134E-03	-0.113
		1048.07	*	5.109E-03	2.960E-02	5.055E-02	4.528E-03	0.101
		1235.34		4.347E-03	1.033E-01	1.714E-01	1.761E-02	0.025
BA-137M		661.65	*	1.064E-03	1.395E-02	2.359E-02	1.798E-03	0.045
CS-137		661.65	*	1.124E-03	1.475E-02	2.494E-02	1.906E-03	0.045
CE-139		165.85	*	-8.876E-03	1.113E-02	1.775E-02	9.319E-04	-0.500
BA-140		162.64		7.511E-02	2.056E-01	3.361E-01	2.037E-02	0.224
		304.84		9.827E-02	3.546E-01	5.857E-01	1.598E-01	0.168
		423.70		4.436E-01	5.236E-01	9.069E-01	2.885E-01	0.489
		537.32	*	4.370E-02	7.132E-02	1.217E-01	3.982E-02	0.359
LA-140		328.77		2.866E-02	8.178E-02	1.355E-01	8.777E-03	0.212
		432.53		1.270E-01	5.532E-01	9.397E-01	6.229E-02	0.135
		487.03		-4.992E-03	3.593E-02	5.828E-02	4.157E-03	-0.086
		751.79		-1.693E-02	4.424E-01	7.308E-01	7.181E-02	-0.023
		815.85		-3.291E-02	8.412E-02	1.313E-01	1.419E-02	-0.251
		867.82		-3.121E-01	4.646E-01	7.032E-01	7.847E-02	-0.444
		919.63		3.099E-01	7.976E-01	1.203E+00	1.519E-01	0.258
		925.24		-5.248E-02	2.911E-01	4.615E-01	5.226E-02	-0.114

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		1596.49	*	-5.106E-03	2.500E-02	4.000E-02	2.744E-03	-0.128
CE-141		145.44	*	1.119E-02	2.337E-02	3.835E-02	2.189E-03	0.292
CE-143		57.37		5.440E+00	1.295E+01	2.230E+01	2.009E+00	0.244
		231.56		-4.191E+00	2.145E+01	3.479E+01	1.074E+01	-0.120
		293.26	*	3.604E-01	1.226E+00	2.032E+00	4.150E-01	0.177
		350.59		2.245E+01	2.000E+01	2.978E+01	9.032E+00	0.754
		490.36		-1.580E+01	2.709E+01	4.115E+01	1.277E+01	-0.384
		664.57		-1.072E+01	1.180E+01	1.694E+01	5.430E+00	-0.633
		721.93		5.583E+00	1.217E+01	2.107E+01	6.134E+00	0.265
CE-144		80.11		-8.383E-01	8.888E-01	1.365E+00	1.182E-01	-0.614
		133.54	*	-1.194E-02	8.547E-02	1.348E-01	1.906E-02	-0.089
PM-144		476.78		-1.218E-02	2.787E-02	4.394E-02	3.259E-03	-0.277
		618.01		-1.057E-02	1.603E-02	2.315E-02	1.762E-03	-0.456
		696.49	*	2.451E-03	1.607E-02	2.561E-02	2.079E-03	0.096
		778.57		6.457E-01	9.321E-01	1.657E+00	1.549E-01	0.390
PR-144		696.49	*	1.655E-01	1.085E+00	1.729E+00	1.403E-01	0.096
		1489.15		4.925E-01	5.845E+00	9.587E+00	6.927E-01	0.051
PM-146		453.90	*	1.586E-03	1.822E-02	3.043E-02	2.707E-03	0.052
		633.02		-7.905E-02	6.504E-01	1.032E+00	3.830E-01	-0.077
		735.90		-1.588E-02	5.148E-02	8.167E-02	2.338E-02	-0.194
		747.13		8.803E-03	3.733E-02	6.357E-02	9.020E-03	0.138
ND-147		91.11		4.691E-03	7.207E-02	1.183E-01	1.112E-02	0.040
		319.41		3.865E-01	7.829E-01	1.323E+00	7.638E-02	0.292
		439.89		5.699E-01	1.509E+00	2.591E+00	1.581E-01	0.220
		531.02	*	4.044E-02	1.378E-01	2.324E-01	3.242E-02	0.174
PM-149		285.90	*	7.595E-01	3.481E+00	5.763E+00	8.138E-01	0.132
EU-152		121.78		5.025E-03	2.894E-02	4.712E-02	3.631E-03	0.107
		244.69		-1.174E-01	1.573E-01	2.187E-01	1.222E-02	-0.537
		344.27	*	-2.461E-02	4.304E-02	6.516E-02	4.252E-03	-0.378
		443.98		-2.004E-01	3.821E-01	6.000E-01	3.677E-02	-0.334
		778.89		2.358E-02	1.100E-01	1.864E-01	1.742E-02	0.127
		867.32		-1.556E-01	4.105E-01	6.442E-01	6.945E-02	-0.242
		964.01		5.673E-02	1.147E-01	1.970E-01	2.018E-02	0.288
		1085.78		3.497E-02	1.600E-01	2.741E-01	2.124E-02	0.128
		1112.02		-1.213E-01	1.205E-01	1.713E-01	1.220E-02	-0.708
		1407.95		3.353E-02	8.513E-02	1.467E-01	1.090E-02	0.228
GD-153		69.67		-1.143E+00	8.282E-01	1.199E+00	9.729E-02	-0.954
		83.37		2.714E+00	6.550E+00	1.050E+01	9.327E-01	0.259
		97.43	*	-7.752E-03	3.168E-02	5.059E-02	3.955E-03	-0.153
		103.18		1.653E-02	4.218E-02	7.045E-02	5.081E-03	0.235
EU-154		123.07		-9.019E-03	2.088E-02	3.224E-02	3.049E-03	-0.280
		247.94		4.551E-02	1.505E-01	2.529E-01	2.382E-02	0.180
		591.81		-2.030E-01	2.931E-01	4.391E-01	4.671E-02	-0.462
		723.30		-1.825E-02	6.721E-02	1.084E-01	1.022E-02	-0.168
		756.87		-8.322E-03	3.008E-01	4.972E-01	6.096E-02	-0.017
		873.19		5.821E-02	1.414E-01	2.417E-01	3.366E-02	0.241
		996.32		-2.293E-01	1.704E-01	2.152E-01	3.935E-02	-1.066
		1004.76		-4.639E-02	1.018E-01	1.549E-01	1.905E-02	-0.299
		1274.45	*	1.756E-02	3.894E-02	6.887E-02	6.879E-03	0.255

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EU-155		48.70		-1.173E+00	1.741E+00	2.808E+00	2.130E-01	-0.418
		60.01		-3.436E-01	2.524E+00	4.181E+00	3.191E-01	-0.082
		86.54		-2.616E-02	3.959E-02	6.181E-02	5.693E-03	-0.423
		105.31	*	-1.426E-02	4.477E-02	7.071E-02	5.055E-03	-0.202
TB-160		86.79		-4.901E-02	9.705E-02	1.533E-01	1.403E-02	-0.320
		197.04		-1.990E-02	2.315E-01	3.767E-01	2.023E-02	-0.053
		215.65		6.290E-02	2.614E-01	4.419E-01	2.412E-02	0.142
		298.57		4.919E-03	4.334E-02	7.086E-02	4.070E-03	0.069
		879.36	*	6.929E-03	5.540E-02	9.204E-02	1.011E-02	0.075
		962.29		2.146E-02	1.874E-01	3.086E-01	3.170E-02	0.070
		966.15		2.646E-02	7.232E-02	1.225E-01	1.250E-02	0.216
		1177.93		9.834E-02	1.198E-01	2.197E-01	1.227E-02	0.448
		1271.85		-9.499E-02	2.182E-01	3.299E-01	2.229E-02	-0.288
HO-166M		80.57		-3.991E-02	1.133E-01	1.820E-01	1.581E-02	-0.219
	+	184.41		4.711E-03	2.433E-02	2.688E-02	1.428E-03	0.175
		280.46		7.589E-03	3.470E-02	5.751E-02	3.280E-03	0.132
		410.95		-1.558E-02	9.676E-02	1.592E-01	9.370E-03	-0.098
		711.68	*	-1.284E-03	2.550E-02	4.229E-02	3.525E-03	-0.030
		752.31		-1.744E-02	1.050E-01	1.707E-01	1.526E-02	-0.102
		810.29		3.606E-04	2.541E-02	4.195E-02	4.130E-03	0.009
TM-171		51.35		1.172E+01	2.023E+01	3.556E+01	2.818E+00	0.330
		52.39		-6.615E-01	1.023E+01	1.727E+01	1.372E+00	-0.038
		59.40		4.912E+00	1.350E+01	2.315E+01	1.758E+00	0.212
		66.72	*	-9.000E+00	1.468E+01	2.256E+01	1.804E+00	-0.399
LU-176		88.36		1.793E-02	7.124E-02	1.187E-01	1.090E-02	0.151
		201.83		-1.647E-02	1.214E-02	1.830E-02	9.871E-04	-0.900
		306.84	*	4.282E-03	1.039E-02	1.739E-02	1.001E-03	0.246
		401.10		-1.027E+00	2.595E+00	4.178E+00	2.428E-01	-0.246
LU-177		112.95		1.861E-01	2.999E-01	5.067E-01	3.265E-02	0.367
		208.36	*	-7.215E-02	1.883E-01	3.044E-01	1.651E-02	-0.237
LU-177M		52.97		-9.091E-01	1.097E+00	1.625E+00	1.290E-01	-0.560
		54.07		-2.883E-01	5.410E-01	8.144E-01	6.438E-02	-0.354
		61.30		-7.570E-01	7.217E-01	1.114E+00	8.608E-02	-0.679
		121.62		2.499E-02	1.438E-01	2.342E-01	1.389E-02	0.107
		147.16		2.055E-02	2.801E-01	4.461E-01	2.427E-02	0.046
		171.86		3.529E-02	1.879E-01	3.207E-01	1.688E-02	0.110
		218.09		-7.721E-02	3.365E-01	5.262E-01	2.878E-02	-0.147
		268.79		-8.021E-02	3.023E-01	4.825E-01	2.736E-02	-0.166
		319.02		1.401E-02	9.681E-02	1.582E-01	9.134E-03	0.089
		367.43		8.000E-02	3.551E-01	6.094E-01	3.519E-02	0.131
		413.65	*	-2.536E-02	7.021E-02	1.133E-01	6.693E-03	-0.224
HF-181		56.28		-3.050E-02	4.694E-01	7.839E-01	6.107E-02	-0.039
		57.53		9.791E-02	2.465E-01	4.240E-01	3.270E-02	0.231
		65.20		-3.131E-01	4.499E-01	6.892E-01	5.467E-02	-0.454
		133.02		6.166E-03	2.369E-02	3.857E-02	2.182E-03	0.160
		136.25		-4.668E-02	1.743E-01	2.718E-01	1.522E-02	-0.172
		345.85		-6.622E-02	8.326E-02	1.115E-01	6.450E-03	-0.594
		482.03	*	3.258E-03	1.490E-02	2.512E-02	1.608E-03	0.130
W-181		56.28		-1.276E-02	1.991E-01	3.325E-01	2.590E-02	-0.038

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		57.53		4.159E-02	1.046E-01	1.800E-01	1.388E-02	0.231
		65.20	*	-1.319E-01	1.894E-01	2.902E-01	2.302E-02	-0.454
TA-182		67.75		-3.358E-02	5.398E-02	8.276E-02	6.652E-03	-0.406
		100.10		-1.599E-02	6.587E-02	1.049E-01	7.885E-03	-0.152
		152.43		-2.978E-02	1.290E-01	1.998E-01	1.075E-02	-0.149
		222.10		8.062E-02	1.286E-01	2.228E-01	1.223E-02	0.362
		1001.68		2.941E-01	9.864E-01	1.606E+00	1.533E-01	0.183
		1121.28		1.434E-02	5.085E-02	8.744E-02	6.024E-03	0.164
		1189.05		1.072E-01	9.880E-02	1.875E-01	1.072E-02	0.572
		1221.42	*	-1.774E-02	5.923E-02	9.304E-02	5.692E-03	-0.191
		1230.97		-2.247E-02	1.226E-01	1.953E-01	1.218E-02	-0.115
RE-183		57.98		4.197E-02	1.009E-01	1.736E-01	1.334E-02	0.242
		59.32		1.983E-02	5.207E-02	8.936E-02	6.789E-03	0.222
		67.20		-6.669E-02	9.566E-02	1.460E-01	1.170E-02	-0.457
		162.32	*	8.563E-03	4.204E-02	6.800E-02	3.589E-03	0.126
		208.81		-1.473E-01	3.386E-01	5.449E-01	2.957E-02	-0.270
		291.72		-1.148E-02	3.727E-01	6.032E-01	3.456E-02	-0.019
RE-184		57.98		1.616E-01	3.884E-01	6.685E-01	5.136E-02	0.242
		59.32		7.629E-02	2.003E-01	3.437E-01	2.612E-02	0.222
		67.20		-2.567E-01	3.682E-01	5.619E-01	4.504E-02	-0.457
		161.27		-8.452E-02	1.330E-01	2.151E-01	1.138E-02	-0.393
		216.55		-3.418E-02	1.008E-01	1.629E-01	8.901E-03	-0.210
		252.85	*	-1.427E-02	9.478E-02	1.536E-01	8.628E-03	-0.093
		318.01		-5.987E-02	1.703E-01	2.646E-01	1.527E-02	-0.226
		792.07		6.723E-03	3.362E-01	5.567E-01	5.320E-02	0.012
		903.28		-1.278E-01	3.974E-01	5.141E-01	5.771E-02	-0.249
		920.93		5.584E-02	1.942E-01	2.869E-01	3.144E-02	0.195
OS-185		59.72		1.489E-02	1.424E-01	2.398E-01	1.824E-02	0.062
		61.14		-1.017E-01	7.868E-02	1.190E-01	9.185E-03	-0.854
		69.30		-2.112E-01	1.450E-01	2.087E-01	1.690E-02	-1.012
		592.07		-1.089E+00	1.137E+00	1.652E+00	1.182E-01	-0.659
		646.12	*	6.745E-03	1.818E-02	3.039E-02	2.285E-03	0.222
		717.42		8.870E-02	3.723E-01	6.350E-01	5.347E-02	0.140
		874.81		6.899E-03	2.680E-01	4.400E-01	4.799E-02	0.016
		880.27		-5.520E-02	3.656E-01	5.047E-01	5.552E-02	-0.109
RE-188		155.03	*	-2.745E-03	5.842E-02	9.880E-02	5.287E-03	-0.028
		477.96		1.338E-01	1.147E+00	1.914E+00	1.220E-01	0.070
		633.10		-9.871E-02	1.212E+00	1.934E+00	1.438E-01	-0.051
W-188		63.58		-1.134E+01	2.636E+01	4.132E+01	3.247E+00	-0.274
		227.08		2.068E+00	4.693E+00	8.012E+00	4.416E-01	0.258
		290.67	*	-1.670E-01	2.929E+00	4.732E+00	2.710E-01	-0.035
IR-192		295.96		-1.636E-02	4.633E-02	6.948E-02	4.052E-03	-0.235
		308.46		2.165E-02	3.706E-02	6.298E-02	3.669E-03	0.344
		316.51	*	-2.837E-03	1.296E-02	1.930E-02	1.119E-03	-0.147
		468.07		2.603E-03	2.594E-02	4.326E-02	3.083E-03	0.060
		604.41		-2.939E-01	2.183E-01	3.035E-01	3.688E-02	-0.968
		612.46		1.808E-01	3.427E-01	5.771E-01	5.062E-02	0.313
AU-195		65.12		-6.165E-02	8.918E-02	1.367E-01	1.084E-02	-0.451
		66.83		-3.017E-02	4.738E-02	7.268E-02	5.815E-03	-0.415

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		75.70		-8.813E-02	9.688E-02	1.310E-01	1.100E-02	-0.673
		98.88	*	-5.052E-02	8.761E-02	1.357E-01	1.038E-02	-0.372
		129.76		-4.767E-02	1.107E+00	1.763E+00	1.009E-01	-0.027
TL-200		367.94	*	4.063E-01	1.508E+00	2.597E+00	1.500E-01	0.156
		579.30		-1.674E+01	1.264E+01	1.745E+01	1.234E+00	-0.959
		828.27		-3.189E+00	1.551E+01	2.482E+01	2.515E+00	-0.129
		1205.75		1.866E+00	6.837E+00	1.172E+01	6.942E-01	0.159
TL-201		68.90		-1.794E-01	4.040E-01	6.513E-01	5.265E-02	-0.275
		70.82		-3.909E-01	2.522E-01	3.621E-01	2.956E-02	-1.080
		80.30		-1.732E-01	3.728E-01	5.938E-01	5.148E-02	-0.292
		135.34		-4.419E-02	1.895E+00	3.014E+00	1.692E-01	-0.015
		167.43	*	-2.991E-01	4.997E-01	8.092E-01	4.248E-02	-0.370
TL-202		68.90		-5.876E-02	1.323E-01	2.133E-01	1.725E-02	-0.275
		70.82		-1.277E-01	8.239E-02	1.183E-01	9.656E-03	-1.080
		80.30		-5.659E-02	1.218E-01	1.940E-01	1.682E-02	-0.292
		439.56	*	7.722E-03	1.905E-02	3.279E-02	1.999E-03	0.235
HG-203		70.83		-7.594E-01	4.961E-01	7.027E-01	9.362E-02	-1.081
		72.87		1.313E-01	2.470E-01	4.212E-01	5.462E-02	0.312
		82.60		1.626E-01	4.198E-01	7.063E-01	9.800E-02	0.230
		279.20	*	1.255E-02	1.465E-02	2.551E-02	1.547E-03	0.492
BI-207		72.80		4.567E-02	8.122E-02	1.389E-01	1.146E-02	0.329
		74.97		-3.821E-02	5.642E-02	7.777E-02	6.502E-03	-0.491
		84.90		-8.778E-03	8.415E-02	1.303E-01	1.172E-02	-0.067
		569.67		-5.057E-03	1.483E-02	2.274E-02	1.594E-03	-0.222
		1063.62	*	1.256E-03	2.111E-02	3.552E-02	2.932E-03	0.035
		1770.23		-4.798E-01	4.463E-01	3.049E-01	1.845E-02	-1.574
TL-207		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
TL-208		277.35		1.527E-02	1.460E-01	2.400E-01	2.520E-02	0.064
		510.84		-8.136E-02	1.212E-01	2.198E-01	2.337E-02	-0.370
		583.14	*	-3.275E-03	1.825E-02	2.891E-02	2.266E-03	-0.113
		860.37		4.862E-02	1.441E-01	2.342E-01	2.620E-02	0.208
PO-209		260.50		-8.814E-01	4.001E+00	6.430E+00	3.629E-01	-0.137
		262.80		5.182E+00	1.077E+01	1.831E+01	1.035E+00	0.283
		896.60	*	-9.936E-01	3.070E+00	4.793E+00	5.406E-01	-0.207
BI-210		46.50	*	-1.172E+01	3.494E+00	4.627E+00	3.580E-01	-2.534
PB-210		46.50	*	-1.172E+01	3.494E+00	4.627E+00	3.580E-01	-2.534
PO-210		46.50	*	-1.172E+01	3.464E+00	4.627E+00	3.078E-01	-2.534
BI-211		72.87		7.389E-01	1.388E+00	2.369E+00	1.956E-01	0.312
		351.07	*	2.839E-02	1.199E-01	1.791E-01	1.149E-02	0.159
PB-211		404.84	*	5.489E-02	3.752E-01	6.327E-01	3.945E-01	0.087

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		427.08		-5.250E-01	8.931E-01	1.300E+00	8.039E-01	-0.404
		831.96		-2.146E-02	4.886E-01	7.988E-01	5.024E-01	-0.027
BI-212		727.18	*	1.833E-02	9.898E-02	1.685E-01	1.678E-02	0.109
		785.46		-2.205E-01	6.621E-01	1.048E+00	9.904E-02	-0.210
		1620.62		2.942E-02	5.914E-01	9.892E-01	6.689E-02	0.030
PB-212		74.81		-1.209E-01	1.957E-01	2.707E-01	3.393E-02	-0.447
		77.11		-4.447E-03	8.876E-02	1.434E-01	1.215E-02	-0.031
		87.30		-9.547E-02	1.487E-01	2.317E-01	3.147E-02	-0.412
		238.63	*	1.196E-02	2.678E-02	4.495E-02	3.212E-03	0.266
		300.09		-5.351E-02	3.121E-01	4.978E-01	4.087E-02	-0.107
PO-212		74.81		-1.209E-01	1.957E-01	2.707E-01	3.393E-02	-0.447
		77.11		-4.447E-03	8.876E-02	1.434E-01	1.215E-02	-0.031
		87.30		-9.547E-02	1.487E-01	2.317E-01	3.147E-02	-0.412
		115.19		2.597E-01	1.409E+00	2.303E+00	1.451E-01	0.113
		238.63	*	1.196E-02	2.678E-02	4.495E-02	3.212E-03	0.266
		300.09		-5.351E-02	3.121E-01	4.978E-01	4.087E-02	-0.107
BI-214		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.213E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
PB-214		74.81		-2.084E-01	3.369E-01	4.665E-01	5.208E-02	-0.447
		77.11		-7.624E-03	1.522E-01	2.458E-01	2.801E-02	-0.031
		87.30		-1.636E-01	2.545E-01	3.969E-01	4.761E-02	-0.412
		241.98		-1.417E-01	1.527E-01	2.345E-01	1.854E-02	-0.604
		295.21		-3.297E-02	6.611E-02	9.808E-02	8.321E-03	-0.336
	+	351.92	*	2.440E-02	5.476E-02	6.300E-02	5.211E-03	0.387
PO-214		74.81		-2.084E-01	3.369E-01	4.665E-01	5.208E-02	-0.447
		77.11		-7.624E-03	1.522E-01	2.458E-01	2.801E-02	-0.031
		87.30		-1.636E-01	2.545E-01	3.969E-01	4.761E-02	-0.412
		241.98		-1.417E-01	1.527E-01	2.345E-01	1.854E-02	-0.604
		295.21		-3.297E-02	6.611E-02	9.808E-02	8.321E-03	-0.336
	+	351.92	*	2.440E-02	5.476E-02	6.300E-02	5.211E-03	0.387
PO-215		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
PO-216		74.81		-1.209E-01	1.957E-01	2.707E-01	3.393E-02	-0.447
		77.11		-4.447E-03	8.876E-02	1.434E-01	1.215E-02	-0.031
		87.30		-9.547E-02	1.487E-01	2.317E-01	3.147E-02	-0.412
		238.63	*	1.196E-02	2.678E-02	4.495E-02	3.212E-03	0.266

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		300.09		-5.351E-02	3.121E-01	4.978E-01	4.087E-02	-0.107
PO-218		74.81		-2.084E-01	3.369E-01	4.665E-01	5.208E-02	-0.447
		77.11		-7.624E-03	1.522E-01	2.458E-01	2.801E-02	-0.031
		87.30		-1.636E-01	2.545E-01	3.969E-01	4.761E-02	-0.412
		241.98		-1.417E-01	1.527E-01	2.345E-01	1.854E-02	-0.604
		295.21		-3.297E-02	6.611E-02	9.808E-02	8.321E-03	-0.336
	+	351.92	*	2.440E-02	5.476E-02	6.300E-02	5.211E-03	0.387
RN-219		271.23		5.414E-02	9.316E-02	1.592E-01	1.277E-02	0.340
		401.81	*	-2.799E-02	1.634E-01	2.689E-01	3.661E-02	-0.104
RN-220		549.76	*	-4.851E+00	1.041E+01	1.603E+01	1.102E+00	-0.303
RA-223		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
RA-224		240.98	*	-2.880E-02	2.845E-01	4.651E-01	2.591E-02	-0.062
RA-226		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.213E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
AC-227		79.80		-7.341E-01	7.130E-01	1.062E+00	2.285E-01	-0.691
		236.00		-1.079E-01	8.990E-02	1.335E-01	1.377E-02	-0.808
		256.20	*	-8.167E-03	1.547E-01	2.524E-01	3.506E-02	-0.032
		286.10		1.045E-01	6.204E-01	1.023E+00	1.178E-01	0.102
		299.80		-8.357E-02	5.836E-01	9.329E-01	1.518E-01	-0.090
		304.40		2.355E-01	7.706E-01	1.278E+00	2.209E-01	0.184
		334.20		-4.592E-01	1.064E+00	1.640E+00	3.005E-01	-0.280
TH-227		79.80		-7.341E-01	7.135E-01	1.062E+00	2.314E-01	-0.691
		94.00		-8.578E-01	9.602E-01	1.479E+00	3.201E-01	-0.580
		236.00		-1.079E-01	8.973E-02	1.335E-01	1.188E-02	-0.808
		256.20	*	-8.167E-03	1.547E-01	2.524E-01	4.251E-02	-0.032
		286.10		1.045E-01	6.291E-01	1.023E+00	1.025E+00	0.102
		299.80		-8.357E-02	5.836E-01	9.329E-01	1.518E-01	-0.090
		304.40		2.355E-01	7.706E-01	1.278E+00	2.209E-01	0.184
		334.20		-4.592E-01	1.064E+00	1.640E+00	3.005E-01	-0.280
AC-228		338.32		-6.784E-02	1.184E-01	1.700E-01	6.930E-02	-0.399
		911.07	*	3.833E-02	6.724E-02	1.194E-01	1.581E-02	0.321
		969.11		-7.795E-02	1.151E-01	1.595E-01	3.820E-02	-0.489
RA-228		338.32		-6.784E-02	1.184E-01	1.700E-01	6.930E-02	-0.399
		911.07	*	3.833E-02	6.724E-02	1.194E-01	1.581E-02	0.321
		969.11		-7.795E-02	1.151E-01	1.595E-01	3.820E-02	-0.489

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228		84.40		2.319E-01	1.151E+00	1.821E+00	2.433E-01	0.127
		238.60	*	1.134E-02	2.674E-02	4.482E-02	3.202E-03	0.253
		300.10		-5.402E-02	3.137E-01	4.976E-01	2.933E-01	-0.109
TH-229		85.43		-2.728E-02	8.161E-02	1.241E-01	1.122E-02	-0.220
		88.47		1.127E-02	4.102E-02	6.846E-02	6.272E-03	0.165
		100.00		-1.740E-02	7.159E-02	1.140E-01	8.581E-03	-0.153
		193.63	*	-5.297E-02	1.781E-01	2.907E-01	1.557E-02	-0.182
		210.97		-4.687E-02	2.730E-01	4.477E-01	2.434E-02	-0.105
TH-230		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.212E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
PA-231		283.67	*	2.127E-02	6.326E-01	1.032E+00	1.418E-01	0.021
		301.29		-7.533E-03	2.245E-01	3.623E-01	3.777E-02	-0.021
TH-231		81.07		-2.318E-02	8.987E-02	1.453E-01	1.267E-02	-0.160
		83.78		6.885E-03	5.690E-02	8.955E-02	7.982E-03	0.077
		94.90		-1.394E-01	1.075E-01	1.594E-01	1.297E-02	-0.875
		122.32		2.780E-01	6.834E-01	1.133E+00	7.697E-02	0.245
		144.24		-2.889E-01	3.236E-01	4.632E-01	3.232E-02	-0.624
		154.21		2.741E-02	1.435E-01	2.467E-01	1.642E-02	0.111
		269.46		2.455E-02	7.331E-02	1.230E-01	7.307E-03	0.200
		323.87	*	-8.040E-02	2.700E-01	4.216E-01	6.961E-02	-0.191
		338.28		-2.887E-01	4.813E-01	7.085E-01	7.456E-02	-0.407
		445.03		-2.696E-01	8.960E-01	1.440E+00	1.507E-01	-0.187
U-231		84.21		2.055E-01	7.037E-01	1.120E+00	1.002E-01	0.183
		92.29		-2.009E-01	2.829E-01	4.494E-01	3.826E-02	-0.447
		95.87	*	-8.062E-02	1.368E-01	2.134E-01	1.710E-02	-0.378
		108.00		1.748E-01	2.380E-01	4.062E-01	2.762E-02	0.430
TH-232		338.32		-6.784E-02	1.152E-01	1.700E-01	9.835E-03	-0.399
		911.07	*	3.833E-02	6.724E-02	1.194E-01	1.581E-02	0.321
		969.11		-7.795E-02	1.151E-01	1.595E-01	3.820E-02	-0.489
PA-233		75.28		-9.569E-01	1.612E+00	2.216E+00	3.371E-01	-0.432
		86.59		-4.218E-01	6.539E-01	1.008E+00	2.720E-01	-0.419
		300.12		-2.844E-02	1.613E-01	2.570E-01	3.447E-02	-0.111
		311.98	*	-1.502E-02	2.497E-02	3.781E-02	2.316E-03	-0.397
		340.50		4.010E-02	2.655E-01	4.308E-01	9.891E-02	0.093
		398.62		1.118E-01	7.839E-01	1.329E+00	3.435E-01	0.084
		415.76		-7.390E-02	6.736E-01	1.112E+00	2.293E-01	-0.066
PA-234		63.00		-4.662E-01	8.370E-01	1.295E+00	1.952E-01	-0.360
		94.67		-3.033E-02	7.291E-02	1.154E-01	1.396E-02	-0.263
		98.44		-3.407E-02	4.174E-02	5.601E-02	3.117E-02	-0.608
		99.86		-4.412E-02	1.813E-01	2.887E-01	2.178E-02	-0.153
		111.00		-6.155E-02	7.762E-02	1.170E-01	1.255E-02	-0.526
		131.20		2.572E-02	4.135E-02	6.932E-02	3.946E-03	0.371
		152.70		1.676E-02	1.299E-01	2.075E-01	3.249E-02	0.081
	+	186.00		1.696E-01	8.772E-01	1.010E+00	3.077E-01	0.168

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		226.40		8.680E-02	1.625E-01	2.788E-01	3.182E-02	0.311
		227.20		6.108E-02	1.708E-01	2.899E-01	1.598E-02	0.211
		248.90		6.156E-02	3.563E-01	5.925E-01	1.270E-01	0.104
		293.70		-4.231E-02	3.047E-01	4.641E-01	7.453E-02	-0.091
		369.80		9.575E-02	3.555E-01	6.108E-01	1.271E-01	0.157
		568.70		-2.133E-01	4.652E-01	7.017E-01	4.913E-02	-0.304
		569.50		-5.291E-02	1.310E-01	1.994E-01	1.397E-02	-0.265
		574.00		4.918E-01	6.276E-01	1.101E+00	7.748E-02	0.447
		699.00		1.982E-01	3.189E-01	5.594E-01	1.056E-01	0.354
		706.10		-7.831E-02	4.226E-01	6.887E-01	3.066E-01	-0.114
		733.00		-1.232E-01	1.323E-01	1.866E-01	4.144E-02	-0.660
		742.81		6.725E-03	5.488E-01	9.130E-01	6.139E-01	0.007
		796.30		5.860E-02	3.186E-01	5.380E-01	1.473E-01	0.109
		805.60		5.405E-01	4.951E-01	8.568E-01	2.655E-01	0.631
		819.60		-9.402E-02	4.594E-01	7.327E-01	2.811E-01	-0.128
		826.30		-3.796E-03	3.233E-01	5.312E-01	2.393E-01	-0.007
		831.60		-3.451E-02	2.501E-01	4.039E-01	1.225E-01	-0.085
		876.40		-2.721E-02	3.763E-01	6.087E-01	6.271E-01	-0.045
		880.51		-3.579E-02	1.415E-01	1.931E-01	2.125E-02	-0.185
		883.24		-7.757E-02	1.283E-01	1.740E-01	1.176E-01	-0.446
		899.00		1.037E-03	3.039E-01	4.963E-01	2.200E-01	0.002
		925.00		-1.684E-02	4.460E-01	7.222E-01	7.868E-02	-0.023
		926.50		-3.256E-02	7.089E-02	1.070E-01	2.796E-02	-0.304
		946.00	*	-3.346E-02	1.266E-01	1.982E-01	3.909E-02	-0.169
		949.00		5.238E-02	1.868E-01	3.143E-01	3.301E-02	0.167
		980.50		5.873E-02	2.710E-01	4.533E-01	4.508E-02	0.130
		1394.10		-3.585E-01	5.769E-01	7.547E-01	4.902E-01	-0.475
PA-234M		766.41		-2.869E+00	6.507E+00	9.546E+00	7.326E+00	-0.301
		1001.03	*	2.319E+00	3.207E+00	5.445E+00	6.489E-01	0.426
TH-234		63.29	*	-4.240E-01	7.143E-01	1.101E+00	1.941E-01	-0.385
		92.38		-1.769E-01	2.596E-01	4.106E-01	7.402E-02	-0.431
U-234		609.31	*	-3.772E-03	4.195E-02	6.503E-02	5.809E-03	-0.058
		768.36		1.067E-01	2.457E-01	4.284E-01	4.689E-02	0.249
		934.06		1.878E-01	4.818E-01	8.212E-01	1.020E-01	0.229
		1120.29		1.358E-01	1.160E-01	2.173E-01	2.081E-02	0.625
		1238.11		-5.389E-02	2.533E-01	4.026E-01	3.435E-02	-0.134
		1377.67		4.431E-02	3.891E-01	6.462E-01	6.333E-02	0.069
	+	1764.49		1.465E-01	1.106E-01	2.335E-01	1.420E-02	0.627
U-235		89.95		-1.017E+00	5.638E-01	6.528E-01	2.020E-01	-1.558
		93.35		-9.441E-02	3.038E-01	4.926E-01	1.377E-01	-0.192
		105.00		-5.537E-02	4.393E-01	7.044E-01	2.073E-01	-0.079
		143.76	*	-7.464E-02	9.983E-02	1.437E-01	2.328E-02	-0.519
		163.35		8.933E-02	1.964E-01	3.221E-01	5.740E-02	0.277
	+	185.71		6.281E-03	3.243E-02	3.777E-02	2.009E-03	0.166
		205.31		9.044E-02	2.037E-01	3.486E-01	6.225E-02	0.259
NP-236		94.67		-2.271E-02	5.528E-02	8.762E-02	7.159E-03	-0.259
		98.44		-2.576E-02	2.818E-02	4.234E-02	3.261E-03	-0.608
		111.00		-4.656E-02	5.858E-02	8.850E-02	5.821E-03	-0.526
		160.31	*	-3.406E-02	3.371E-02	4.980E-02	2.638E-03	-0.684

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237		86.50	*	-6.451E-02	9.773E-02	1.511E-01	3.409E-02	-0.427
		95.87		-2.477E-01	4.240E-01	6.556E-01	1.601E-01	-0.378
U-238		63.29	*	-4.240E-01	7.143E-01	1.101E+00	1.941E-01	-0.385
		92.38		-1.769E-01	2.581E-01	4.106E-01	3.490E-02	-0.431
NP-239		99.55		-3.971E-02	6.260E-02	9.639E-02	7.304E-03	-0.412
		117.00	*	-3.486E-04	7.464E-02	1.201E-01	7.431E-03	-0.003
		209.75		-1.438E-01	2.826E-01	4.516E-01	2.453E-02	-0.318
		228.18		5.173E-02	8.966E-02	1.545E-01	8.522E-03	0.335
		277.60		1.472E-02	7.108E-02	1.178E-01	6.710E-03	0.125
		334.30		-2.602E-01	6.011E-01	9.291E-01	5.373E-02	-0.280
AM-241		59.54	*	2.624E-02	7.863E-02	1.345E-01	1.116E-02	0.195
AM-243		74.67	*	-1.768E-02	3.181E-02	4.431E-02	3.697E-03	-0.399
		86.72		-1.724E+00	3.580E+00	5.666E+00	5.181E-01	-0.304
		117.66		-3.464E-01	1.509E+00	2.380E+00	1.464E-01	-0.146
		142.18		-4.187E+00	7.969E+00	1.216E+01	6.697E-01	-0.344
CM-243		99.55		-4.084E-02	6.438E-02	9.914E-02	7.512E-03	-0.412
		103.76	*	-2.085E-03	3.984E-02	6.433E-02	4.605E-03	-0.032
		117.00		-3.584E-04	7.675E-02	1.235E-01	7.641E-03	-0.003
		209.75		-1.417E-01	2.785E-01	4.450E-01	2.417E-02	-0.318
		228.18		5.225E-02	9.055E-02	1.560E-01	8.607E-03	0.335
		277.60		1.483E-02	7.162E-02	1.187E-01	6.762E-03	0.125
CM-247		278.00		1.289E-01	2.944E-01	4.970E-01	2.832E-02	0.259
		287.40		-3.303E-01	5.240E-01	8.042E-01	4.600E-02	-0.411
		402.60	*	3.112E-03	1.470E-02	2.504E-02	1.459E-03	0.124
CF-249		252.85		-5.522E-02	3.668E-01	5.945E-01	3.339E-02	-0.093
		333.44		1.197E-02	7.359E-02	1.198E-01	6.929E-03	0.100
		387.95	*	-7.719E-03	1.591E-02	2.551E-02	1.466E-03	-0.303
CF-251		176.60	*	-1.604E-02	5.017E-02	8.255E-02	4.360E-03	-0.194
		227.00		7.175E-02	1.522E-01	2.605E-01	1.435E-02	0.275
		285.00		4.240E-01	7.113E-01	1.215E+00	6.943E-02	0.349
ANH-511		511.00	*	-1.871E-02	2.620E-02	4.750E-02	3.137E-03	-0.394

VAX/VMS Nuclide Identification Report Generated

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*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087      *
* Acquisition date :  6-JUL-2009 13:25:36 Detector SN#    :                 *
* Detector ID       : GAM18               Sensitivity     : 5.000           *
* Geometry          : CAN                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:00.74     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201870087         Analyst initials: MXR1            *
* Batch Number      : 880723              Sample Quantity : 1.4500E+02 GRAM *
* Recovery          :    1.00000          Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
```

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)	
BE-7	5.849E-03	1.151E-01	2.008E-01	0.000E+00 NOT IDENT.
NA-22	4.793E-03	1.378E-02	2.465E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	6.098E+01	0.000E+00	0.000E+00 SHORT HLIF
AL-26	7.324E-03	1.517E-02	2.770E-02	0.000E+00 NOT IDENT.
K-40	4.765E-02	1.956E-01	3.586E-01	0.000E+00 NOT IDENT.
TI-44	-9.543E-03	1.536E-02	2.607E-02	0.000E+00 NOT IDENT.
SC-46	1.634E-02	1.564E-02	2.958E-02	0.000E+00 NOT IDENT.
V-48	-1.186E-02	2.051E-02	3.146E-02	0.000E+00 NOT IDENT.
CR-51	3.410E-02	1.182E-01	2.077E-01	0.000E+00 NOT IDENT.
MN-52	2.970E-02	3.992E-02	7.458E-02	0.000E+00 NOT IDENT.
MN-54	-1.559E-04	1.563E-02	2.667E-02	0.000E+00 NOT IDENT.
CO-56	-9.019E-03	1.658E-02	2.649E-02	0.000E+00 NOT IDENT.
CO-57	3.359E-03	9.457E-03	1.693E-02	0.000E+00 NOT IDENT.
CO-58	2.264E-03	1.519E-02	2.647E-02	0.000E+00 NOT IDENT.
FE-59	-2.510E-02	3.222E-02	4.969E-02	0.000E+00 NOT IDENT.
CO-60	-5.181E-03	1.353E-02	2.106E-02	0.000E+00 NOT IDENT.
ZN-65	7.632E-03	3.310E-02	5.840E-02	0.000E+00 NOT IDENT.
GE-68	-3.328E-01	4.973E-01	7.233E-01	0.000E+00 NOT IDENT.
AS-73	-5.026E-01	5.249E-01	8.492E-01	0.000E+00 NOT IDENT.
AS-74	2.658E-04	3.266E-02	5.539E-02	0.000E+00 NOT IDENT.
SE-75	1.434E-03	1.648E-02	2.895E-02	0.000E+00 NOT IDENT.
BR-77	-1.810E-01	4.871E-01	8.058E-01	0.000E+00 NOT IDENT.
SR-82	-2.623E-02	1.255E-01	2.111E-01	0.000E+00 NOT IDENT.
RB-83	-6.830E-03	2.778E-02	4.661E-02	0.000E+00 NOT IDENT.
RB-84	-1.078E-03	2.912E-02	4.245E-02	0.000E+00 NOT IDENT.
KR-85	-4.327E+00	5.018E+00	8.218E+00	0.000E+00 NOT IDENT.

SR-85	-2.049E-02	2.376E-02	3.892E-02	0.000E+00	NOT IDENT.
RB-86	-1.104E-01	2.452E-01	3.709E-01	0.000E+00	NOT IDENT.
Y-88	-1.689E-03	1.924E-02	3.168E-02	0.000E+00	NOT IDENT.
ZR-88	6.353E-03	1.083E-02	2.017E-02	0.000E+00	NOT IDENT.
Y-91	3.738E+00	5.703E+00	1.056E+01	0.000E+00	NOT IDENT.
NB-94	3.242E-03	1.419E-02	2.525E-02	0.000E+00	NOT IDENT.
NB-95	-8.236E-03	1.372E-02	2.186E-02	0.000E+00	NOT IDENT.
NB-95M	-7.354E-02	4.506E-02	6.927E-02	0.000E+00	NOT IDENT.
ZR-95	-5.545E-03	2.549E-02	4.292E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.259E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.388E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.998E-01	6.426E-01	1.171E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.541E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	7.049E-03	1.463E-02	2.644E-02	0.000E+00	NOT IDENT.
RH-102	-7.315E-03	1.208E-02	1.972E-02	0.000E+00	NOT IDENT.
RU-103	1.062E-02	1.536E-02	2.813E-02	0.000E+00	NOT IDENT.
RH-106	-4.287E-03	1.338E-01	2.249E-01	0.000E+00	NOT IDENT.
RU-106	-4.287E-03	1.338E-01	2.249E-01	0.000E+00	NOT IDENT.
AG-108M	-5.067E-03	1.363E-02	2.309E-02	0.000E+00	NOT IDENT.
CD-109	3.169E-02	3.004E-01	5.409E-01	0.000E+00	NOT IDENT.
AG-110M	-3.820E-04	1.352E-02	2.365E-02	0.000E+00	NOT IDENT.
IN-111	-2.479E-02	7.620E-02	1.163E-01	0.000E+00	NOT IDENT.
IN-113M	1.257E-02	1.582E-02	2.997E-02	0.000E+00	NOT IDENT.
SN-113	1.257E-02	1.582E-02	2.997E-02	0.000E+00	NOT IDENT.
IN-114M	4.414E-02	5.840E-02	1.003E-01	0.000E+00	NOT IDENT.
CD-115	-2.113E-01	4.220E-01	6.855E-01	0.000E+00	NOT IDENT.
SN-117M	7.000E-03	1.458E-02	2.573E-02	0.000E+00	NOT IDENT.
SB-122	2.531E-03	1.149E-01	1.964E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.601E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.030E-03	1.091E-02	1.855E-02	0.000E+00	NOT IDENT.
I-124	-8.954E-02	9.112E-02	1.394E-01	0.000E+00	NOT IDENT.
SB-124	2.377E-02	2.981E-02	5.812E-02	0.000E+00	NOT IDENT.
SB-125	-3.940E-02	3.624E-02	5.672E-02	0.000E+00	NOT IDENT.
TE-125M	-1.166E-01	3.428E+00	6.006E+00	0.000E+00	NOT IDENT.
I-126	-3.616E-03	4.710E-02	8.186E-02	0.000E+00	NOT IDENT.
SB-126	7.886E-04	3.834E-02	6.674E-02	0.000E+00	NOT IDENT.
SN-126	-1.707E-02	3.154E-02	5.427E-02	0.000E+00	NOT IDENT.
SB-127	1.158E-02	1.451E-01	2.555E-01	0.000E+00	NOT IDENT.
XE-127	-1.718E-02	1.630E-02	2.698E-02	0.000E+00	NOT IDENT.
I-131	-2.756E-02	2.445E-02	3.930E-02	0.000E+00	NOT IDENT.
TE-132	3.152E-02	5.393E-02	9.917E-02	0.000E+00	NOT IDENT.
BA-133	-8.799E-03	2.126E-02	2.958E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.557E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.434E-04	1.614E-02	2.779E-02	0.000E+00	NOT IDENT.
CS-135	-2.412E-02	5.893E-02	9.893E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.027E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.109E-03	2.901E-02	5.121E-02	0.000E+00	NOT IDENT.
BA-137M	1.064E-03	1.367E-02	2.416E-02	0.000E+00	NOT IDENT.
CS-137	1.124E-03	1.445E-02	2.554E-02	0.000E+00	NOT IDENT.
CE-139	-8.876E-03	1.091E-02	1.874E-02	0.000E+00	NOT IDENT.
BA-140	4.370E-02	6.990E-02	1.252E-01	0.000E+00	NOT IDENT.
LA-140	-5.106E-03	2.450E-02	4.013E-02	0.000E+00	NOT IDENT.
CE-141	1.119E-02	2.290E-02	4.060E-02	0.000E+00	NOT IDENT.
CE-143	3.604E-01	1.202E+00	2.119E+00	0.000E+00	NOT IDENT.
CE-144	-1.194E-02	8.376E-02	1.430E-01	0.000E+00	NOT IDENT.
PM-144	2.451E-03	1.575E-02	2.620E-02	0.000E+00	NOT IDENT.
PR-144	1.655E-01	1.063E+00	1.768E+00	0.000E+00	NOT IDENT.
PM-146	1.586E-03	1.786E-02	3.142E-02	0.000E+00	NOT IDENT.
ND-147	4.044E-02	1.350E-01	2.391E-01	0.000E+00	NOT IDENT.
PM-149	7.595E-01	3.412E+00	6.013E+00	0.000E+00	NOT IDENT.
EU-152	-2.461E-02	4.218E-02	6.770E-02	0.000E+00	NOT IDENT.
GD-153	-7.752E-03	3.105E-02	5.401E-02	0.000E+00	NOT IDENT.
EU-154	1.756E-02	3.816E-02	6.946E-02	0.000E+00	NOT IDENT.
EU-155	-1.426E-02	4.388E-02	7.537E-02	0.000E+00	NOT IDENT.
TB-160	6.929E-03	5.429E-02	9.363E-02	0.000E+00	NOT IDENT.
HO-166M	-1.284E-03	2.499E-02	4.323E-02	0.000E+00	FAIL ABUN
TM-171	-9.000E+00	1.439E+01	2.428E+01	0.000E+00	NOT IDENT.
LU-176	4.282E-03	1.018E-02	1.812E-02	0.000E+00	NOT IDENT.
LU-177	-7.215E-02	1.845E-01	3.198E-01	0.000E+00	NOT IDENT.
LU-177M	-2.536E-02	6.880E-02	1.173E-01	0.000E+00	NOT IDENT.
HF-181	3.258E-03	1.461E-02	2.590E-02	0.000E+00	NOT IDENT.
W-181	-1.319E-01	1.857E-01	3.125E-01	0.000E+00	NOT IDENT.
TA-182	-1.774E-02	5.805E-02	9.393E-02	0.000E+00	NOT IDENT.
RE-183	8.563E-03	4.120E-02	7.182E-02	0.000E+00	NOT IDENT.
RE-184	-1.427E-02	9.288E-02	1.607E-01	0.000E+00	NOT IDENT.
OS-185	6.745E-03	1.782E-02	3.113E-02	0.000E+00	NOT IDENT.
RE-188	-2.745E-03	5.725E-02	1.044E-01	0.000E+00	NOT IDENT.
W-188	-1.670E-01	2.870E+00	4.935E+00	0.000E+00	NOT IDENT.

IR-192	-2.837E-03	1.271E-02	2.009E-02	0.000E+00	NOT IDENT.
AU-195	-5.052E-02	8.586E-02	1.448E-01	0.000E+00	NOT IDENT.
TL-200	4.063E-01	1.478E+00	2.695E+00	0.000E+00	NOT IDENT.
TL-201	-2.991E-01	4.897E-01	8.540E-01	0.000E+00	NOT IDENT.
TL-202	7.722E-03	1.867E-02	3.389E-02	0.000E+00	NOT IDENT.
HG-203	1.255E-02	1.436E-02	2.663E-02	0.000E+00	NOT IDENT.
BI-207	1.256E-03	2.069E-02	3.598E-02	0.000E+00	NOT IDENT.
TL-207	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
TL-208	-3.275E-03	1.788E-02	2.969E-02	0.000E+00	NOT IDENT.
PO-209	-9.936E-01	3.009E+00	4.874E+00	0.000E+00	NOT IDENT.
BI-210	-1.172E+01	3.425E+00	5.016E+00	0.000E+00	NOT IDENT.
PB-210	-1.172E+01	3.425E+00	5.016E+00	0.000E+00	NOT IDENT.
PO-210	-1.172E+01	3.394E+00	5.016E+00	0.000E+00	NOT IDENT.
BI-211	2.839E-02	1.175E-01	1.860E-01	0.000E+00	NOT IDENT.
PB-211	5.489E-02	3.677E-01	6.551E-01	0.000E+00	NOT IDENT.
BI-212	1.833E-02	9.700E-02	1.722E-01	0.000E+00	NOT IDENT.
PB-212	1.196E-02	2.625E-02	4.709E-02	0.000E+00	NOT IDENT.
PO-212	1.196E-02	2.625E-02	4.709E-02	0.000E+00	NOT IDENT.
BI-214	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
PB-214	2.440E-02	5.367E-02	6.542E-02	0.000E+00	FAIL ABUN
PO-214	2.440E-02	5.367E-02	6.542E-02	0.000E+00	FAIL ABUN
PO-215	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
PO-216	1.196E-02	2.625E-02	4.709E-02	0.000E+00	NOT IDENT.
PO-218	2.440E-02	5.367E-02	6.542E-02	0.000E+00	FAIL ABUN
RN-219	-2.799E-02	1.601E-01	2.785E-01	0.000E+00	NOT IDENT.
RN-220	-4.851E+00	1.021E+01	1.649E+01	0.000E+00	NOT IDENT.
RA-223	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
RA-224	-2.880E-02	2.788E-01	4.871E-01	0.000E+00	NOT IDENT.
RA-226	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
AC-227	-8.167E-03	1.516E-01	2.640E-01	0.000E+00	NOT IDENT.
TH-227	-8.167E-03	1.516E-01	2.640E-01	0.000E+00	NOT IDENT.
AC-228	3.833E-02	6.589E-02	1.213E-01	0.000E+00	NOT IDENT.
RA-228	3.833E-02	6.589E-02	1.213E-01	0.000E+00	NOT IDENT.
TH-228	1.134E-02	2.620E-02	4.695E-02	0.000E+00	NOT IDENT.
TH-229	-5.297E-02	1.745E-01	3.059E-01	0.000E+00	NOT IDENT.
TH-230	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
PA-231	2.127E-02	6.200E-01	1.077E+00	0.000E+00	NOT IDENT.
TH-231	-8.040E-02	2.646E-01	4.387E-01	0.000E+00	NOT IDENT.
U-231	-8.062E-02	1.340E-01	2.279E-01	0.000E+00	NOT IDENT.
TH-232	3.833E-02	6.589E-02	1.213E-01	0.000E+00	NOT IDENT.
PA-233	-1.502E-02	2.447E-02	3.937E-02	0.000E+00	NOT IDENT.
PA-234	-3.346E-02	1.241E-01	2.012E-01	0.000E+00	FAIL ABUN
PA-234M	2.319E+00	3.143E+00	5.522E+00	0.000E+00	NOT IDENT.
TH-234	-4.240E-01	7.001E-01	1.186E+00	0.000E+00	NOT IDENT.
U-234	-3.772E-03	4.111E-02	6.671E-02	0.000E+00	FAIL ABUN
U-235	-7.464E-02	9.783E-02	1.522E-01	0.000E+00	FAIL ABUN
NP-236	-3.406E-02	3.304E-02	5.261E-02	0.000E+00	NOT IDENT.
NP-237	-6.451E-02	9.577E-02	1.617E-01	0.000E+00	NOT IDENT.
U-238	-4.240E-01	7.001E-01	1.186E+00	0.000E+00	NOT IDENT.
NP-239	-3.486E-04	7.315E-02	1.277E-01	0.000E+00	NOT IDENT.
AM-241	2.624E-02	7.706E-02	1.451E-01	0.000E+00	NOT IDENT.
AM-243	-1.768E-02	3.117E-02	4.757E-02	0.000E+00	NOT IDENT.
CM-243	-2.085E-03	3.904E-02	6.859E-02	0.000E+00	NOT IDENT.
CM-247	3.112E-03	1.441E-02	2.593E-02	0.000E+00	NOT IDENT.
CF-249	-7.719E-03	1.559E-02	2.643E-02	0.000E+00	NOT IDENT.
CF-251	-1.604E-02	4.917E-02	8.703E-02	0.000E+00	NOT IDENT.
ANH-511	-1.871E-02	2.568E-02	4.892E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:26:53.54

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:25:36.
Sample ID         : G1201870087          Sample quantity  : 1.45000E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.74  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Flag: "*" = Keyline

Sample ID : G1201870087 Acquisition date : 6-JUL-2009 13:25:36

Total number of lines in spectrum	5	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	3	60.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201870087 Acquisition date : 6-JUL-2009 13:25:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.67	10	132	1.22	370.37	364	12	1.39E-03	****	7.65E+00	T
0	353.37	19	87	1.68	705.66	698	13	2.65E-03	****	5.44E+00	T
0	912.73	23	31	3.43	1824.11	1812	21	3.14E-03	****	2.78E+00	
0	1463.28	12	21	1.16	2925.04	2913	14	1.67E-03	****	1.89E+00	
0	1765.60	15	5	1.02	3529.65	3524	10	2.10E-03	75.3	1.69E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:26:58.57

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870087.CNF;1 *
* Acquisition date : 6-JUL-2009 13:25:36.  Detector SN#     :              *
* Detector ID      : GAM18                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:00.74         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 29-JUN-2009 00:00:00  Nuclide Library : SOLID          *
* Sample ID        : G1201870087           Analyst initials: MXR1          *
* Batch Number     : 880723                Sample Quantity : 1.45000E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	5.849E-03		1.175E-01	1.947E-01	1.411E-02	0.030
NA-22	4.793E-03		1.406E-02	2.444E-02	1.663E-03	0.196
NA-24	1.158E-05		3.111E-05	Half-Life too short		
AL-26	7.324E-03		1.548E-02	2.770E-02	1.617E-03	0.264
K-40	4.765E-02		1.996E-01	3.567E-01	2.707E-02	0.134
TI-44	-9.543E-03		1.567E-02	2.431E-02	2.079E-03	-0.393
SC-46	1.634E-02		1.596E-02	2.908E-02	3.243E-03	0.562
V-48	-1.186E-02		2.093E-02	3.101E-02	3.067E-03	-0.383
CR-51	3.410E-02		1.206E-01	1.996E-01	1.285E-02	0.171
MN-52	2.970E-02		4.073E-02	7.415E-02	5.464E-03	0.401
MN-54	-1.559E-04		1.595E-02	2.619E-02	2.683E-03	-0.006
CO-56	-9.019E-03		1.691E-02	2.602E-02	2.716E-03	-0.347
CO-57	3.359E-03		9.650E-03	1.594E-02	9.440E-04	0.211
CO-58	2.264E-03		1.550E-02	2.597E-02	2.564E-03	0.087
FE-59	-2.510E-02		3.288E-02	4.910E-02	4.042E-03	-0.511
CO-60	-5.181E-03		1.381E-02	2.090E-02	1.579E-03	-0.248
ZN-65	7.632E-03		3.377E-02	5.773E-02	4.066E-03	0.132

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	-3.328E-01		5.075E-01	7.143E-01	5.675E-02	-0.466
AS-73	-5.026E-01		5.357E-01	7.856E-01	6.228E-02	-0.640
AS-74	2.658E-04		3.333E-02	5.397E-02	3.878E-03	0.005
SE-75	1.434E-03		1.682E-02	2.770E-02	1.584E-03	0.052
BR-77	-1.810E-01		4.970E-01	7.827E-01	5.222E-02	-0.231
SR-82	-2.623E-02		1.281E-01	2.069E-01	1.927E-02	-0.127
RB-83	-6.830E-03		2.835E-02	4.527E-02	3.020E-03	-0.151
RB-84	-1.078E-03		2.971E-02	4.173E-02	4.600E-03	-0.026
KR-85	-4.327E+00		5.120E+00	7.980E+00	5.287E-01	-0.542
SR-85	-2.049E-02		2.425E-02	3.779E-02	2.504E-03	-0.542
RB-86	-1.104E-01		2.502E-01	3.663E-01	2.916E-02	-0.301
Y-88	-1.689E-03		1.963E-02	3.168E-02	1.805E-03	-0.053
ZR-88	6.353E-03		1.105E-02	1.947E-02	1.120E-03	0.326
Y-91	3.738E+00		5.820E+00	1.046E+01	6.184E-01	0.357
NB-94	3.242E-03		1.448E-02	2.469E-02	2.026E-03	0.131
NB-95	-8.236E-03		1.400E-02	2.142E-02	1.960E-03	-0.384
NB-95M	-7.354E-02		4.598E-02	6.612E-02	4.851E-03	-1.112
ZR-95	-5.545E-03		2.601E-02	4.205E-02	4.137E-03	-0.132
NB-97	-1.029E-06		1.153E-05	Half-Life too short		
ZR-97	-2.713E-03		3.769E-04	Half-Life too short		
MO-99	2.998E-01		6.557E-01	1.146E+00	1.749E-01	0.262
TC-99M	2.895E+00		7.860E+00	Half-Life too short		
RH-101	7.049E-03		1.493E-02	2.515E-02	1.352E-03	0.280
RH-102	-7.315E-03		1.232E-02	1.911E-02	1.214E-03	-0.383
RU-103	1.062E-02		1.567E-02	2.730E-02	3.544E-03	0.389
RH-106	-4.287E-03		1.366E-01	2.193E-01	2.759E-02	-0.020
RU-106	-4.287E-03		1.366E-01	2.193E-01	1.614E-02	-0.020
AG-108M	-5.067E-03		1.391E-02	2.234E-02	1.460E-03	-0.227
CD-109	3.169E-02		3.065E-01	5.056E-01	4.674E-02	0.063
AG-110M	-3.820E-04		1.380E-02	2.310E-02	1.822E-03	-0.017
IN-111	-2.479E-02		7.775E-02	1.111E-01	6.211E-03	-0.223
IN-113M	1.257E-02		1.614E-02	2.892E-02	1.774E-03	0.435
SN-113	1.257E-02		1.614E-02	2.892E-02	1.774E-03	0.435
IN-114M	4.414E-02		5.960E-02	9.526E-02	5.086E-03	0.463
CD-115	-2.113E-01		4.307E-01	6.661E-01	4.477E-02	-0.317
SN-117M	7.000E-03		1.488E-02	2.435E-02	1.294E-03	0.287
SB-122	2.531E-03		1.172E-01	1.911E-01	1.332E-02	0.013
I-123	-1.512E-05		8.169E-05	Half-Life too short		
TE-123M	-1.030E-03		1.113E-02	1.756E-02	9.474E-04	-0.059
I-124	-8.954E-02		9.298E-02	1.358E-01	9.822E-03	-0.659
SB-124	2.377E-02		3.042E-02	5.802E-02	4.003E-03	0.410
SB-125	-3.940E-02		3.698E-02	5.486E-02	3.428E-03	-0.718
TE-125M	-1.166E-01		3.498E+00	5.639E+00	4.948E-01	-0.021
I-126	-3.616E-03		4.806E-02	7.996E-02	6.147E-03	-0.045
SB-126	7.886E-04		3.913E-02	6.531E-02	5.528E-03	0.012
SN-126	-1.707E-02		3.218E-02	5.072E-02	4.673E-03	-0.337
SB-127	1.158E-02		1.481E-01	2.497E-01	2.246E-02	0.046
XE-127	-1.718E-02		1.664E-02	2.567E-02	1.386E-03	-0.669

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	-2.756E-02		2.495E-02	3.787E-02	2.424E-03	-0.728
TE-132	3.152E-02		5.503E-02	9.459E-02	1.235E-02	0.333
BA-133	-8.799E-03		2.170E-02	2.849E-02	3.291E-03	-0.309
I-133	1.945E-06		2.835E-06	Half-Life too short		
CS-134	3.434E-04		1.647E-02	2.726E-02	2.636E-03	0.013
CS-135	-2.412E-02		6.014E-02	9.469E-02	7.158E-03	-0.255
I-135	-1.341E+00		5.238E+00	Half-Life too short		
CS-136	5.109E-03		2.960E-02	5.055E-02	4.528E-03	0.101
BA-137M	1.064E-03		1.395E-02	2.359E-02	1.798E-03	0.045
CS-137	1.124E-03		1.475E-02	2.494E-02	1.906E-03	0.045
CE-139	-8.876E-03		1.113E-02	1.775E-02	9.319E-04	-0.500
BA-140	4.370E-02		7.132E-02	1.217E-01	3.982E-02	0.359
LA-140	-5.106E-03		2.500E-02	4.000E-02	2.744E-03	-0.128
CE-141	1.119E-02		2.337E-02	3.835E-02	2.189E-03	0.292
CE-143	3.604E-01		1.226E+00	2.032E+00	4.150E-01	0.177
CE-144	-1.194E-02		8.547E-02	1.348E-01	1.906E-02	-0.089
PM-144	2.451E-03		1.607E-02	2.561E-02	2.079E-03	0.096
PR-144	1.655E-01		1.085E+00	1.729E+00	1.403E-01	0.096
PM-146	1.586E-03		1.822E-02	3.043E-02	2.707E-03	0.052
ND-147	4.044E-02		1.378E-01	2.324E-01	3.242E-02	0.174
PM-149	7.595E-01		3.481E+00	5.763E+00	8.138E-01	0.132
EU-152	-2.461E-02		4.304E-02	6.516E-02	4.252E-03	-0.378
GD-153	-7.752E-03		3.168E-02	5.059E-02	3.955E-03	-0.153
EU-154	1.756E-02		3.894E-02	6.887E-02	6.879E-03	0.255
EU-155	-1.426E-02		4.477E-02	7.071E-02	5.055E-03	-0.202
TB-160	6.929E-03		5.540E-02	9.204E-02	1.011E-02	0.075
HO-166M	-1.284E-03		2.550E-02	4.229E-02	3.525E-03	-0.030
TM-171	-9.000E+00		1.468E+01	2.256E+01	1.804E+00	-0.399
LU-176	4.282E-03		1.039E-02	1.739E-02	1.001E-03	0.246
LU-177	-7.215E-02		1.883E-01	3.044E-01	1.651E-02	-0.237
LU-177M	-2.536E-02		7.021E-02	1.133E-01	6.693E-03	-0.224
HF-181	3.258E-03		1.490E-02	2.512E-02	1.608E-03	0.130
W-181	-1.319E-01		1.894E-01	2.902E-01	2.302E-02	-0.454
TA-182	-1.774E-02		5.923E-02	9.304E-02	5.692E-03	-0.191
RE-183	8.563E-03		4.204E-02	6.800E-02	3.589E-03	0.126
RE-184	-1.427E-02		9.478E-02	1.536E-01	8.628E-03	-0.093
OS-185	6.745E-03		1.818E-02	3.039E-02	2.285E-03	0.222
RE-188	-2.745E-03		5.842E-02	9.880E-02	5.287E-03	-0.028
W-188	-1.670E-01		2.929E+00	4.732E+00	2.710E-01	-0.035
IR-192	-2.837E-03		1.296E-02	1.930E-02	1.119E-03	-0.147
AU-195	-5.052E-02		8.761E-02	1.357E-01	1.038E-02	-0.372
TL-200	4.063E-01		1.508E+00	2.597E+00	1.500E-01	0.156
TL-201	-2.991E-01		4.997E-01	8.092E-01	4.248E-02	-0.370
TL-202	7.722E-03		1.905E-02	3.279E-02	1.999E-03	0.235
HG-203	1.255E-02		1.465E-02	2.551E-02	1.547E-03	0.492
BI-207	1.256E-03		2.111E-02	3.552E-02	2.932E-03	0.035
TL-207	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
TL-208	-3.275E-03		1.825E-02	2.891E-02	2.266E-03	-0.113

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	-9.936E-01		3.070E+00	4.793E+00	5.406E-01	-0.207
BI-210	-1.172E+01		3.494E+00	4.627E+00	3.580E-01	-2.534
PB-210	-1.172E+01		3.494E+00	4.627E+00	3.580E-01	-2.534
PO-210	-1.172E+01		3.464E+00	4.627E+00	3.078E-01	-2.534
BI-211	2.839E-02		1.199E-01	1.791E-01	1.149E-02	0.159
PB-211	5.489E-02		3.752E-01	6.327E-01	3.945E-01	0.087
BI-212	1.833E-02		9.898E-02	1.685E-01	1.678E-02	0.109
PB-212	1.196E-02		2.678E-02	4.495E-02	3.212E-03	0.266
PO-212	1.196E-02		2.678E-02	4.495E-02	3.212E-03	0.266
BI-214	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
PB-214	2.440E-02	+	5.476E-02	6.300E-02	5.211E-03	0.387
PO-214	2.440E-02	+	5.476E-02	6.300E-02	5.211E-03	0.387
PO-215	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
PO-216	1.196E-02		2.678E-02	4.495E-02	3.212E-03	0.266
PO-218	2.440E-02	+	5.476E-02	6.300E-02	5.211E-03	0.387
RN-219	-2.799E-02		1.634E-01	2.689E-01	3.661E-02	-0.104
RN-220	-4.851E+00		1.041E+01	1.603E+01	1.102E+00	-0.303
RA-223	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
RA-224	-2.880E-02		2.845E-01	4.651E-01	2.591E-02	-0.062
RA-226	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
AC-227	-8.167E-03		1.547E-01	2.524E-01	3.506E-02	-0.032
TH-227	-8.167E-03		1.547E-01	2.524E-01	4.251E-02	-0.032
AC-228	3.833E-02		6.724E-02	1.194E-01	1.581E-02	0.321
RA-228	3.833E-02		6.724E-02	1.194E-01	1.581E-02	0.321
TH-228	1.134E-02		2.674E-02	4.482E-02	3.202E-03	0.253
TH-229	-5.297E-02		1.781E-01	2.907E-01	1.557E-02	-0.182
TH-230	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
PA-231	2.127E-02		6.326E-01	1.032E+00	1.418E-01	0.021
TH-231	-8.040E-02		2.700E-01	4.216E-01	6.961E-02	-0.191
U-231	-8.062E-02		1.368E-01	2.134E-01	1.710E-02	-0.378
TH-232	3.833E-02		6.724E-02	1.194E-01	1.581E-02	0.321
PA-233	-1.502E-02		2.497E-02	3.781E-02	2.316E-03	-0.397
PA-234	-3.346E-02		1.266E-01	1.982E-01	3.909E-02	-0.169
PA-234M	2.319E+00		3.207E+00	5.445E+00	6.489E-01	0.426
TH-234	-4.240E-01		7.143E-01	1.101E+00	1.941E-01	-0.385
U-234	-3.772E-03		4.195E-02	6.503E-02	5.809E-03	-0.058
U-235	-7.464E-02		9.983E-02	1.437E-01	2.328E-02	-0.519
NP-236	-3.406E-02		3.371E-02	4.980E-02	2.638E-03	-0.684
NP-237	-6.451E-02		9.773E-02	1.511E-01	3.409E-02	-0.427
U-238	-4.240E-01		7.143E-01	1.101E+00	1.941E-01	-0.385
NP-239	-3.486E-04		7.464E-02	1.201E-01	7.431E-03	-0.003
AM-241	2.624E-02		7.863E-02	1.345E-01	1.116E-02	0.195
AM-243	-1.768E-02		3.181E-02	4.431E-02	3.697E-03	-0.399
CM-243	-2.085E-03		3.984E-02	6.433E-02	4.605E-03	-0.032
CM-247	3.112E-03		1.470E-02	2.504E-02	1.459E-03	0.124
CF-249	-7.719E-03		1.591E-02	2.551E-02	1.466E-03	-0.303
CF-251	-1.604E-02		5.017E-02	8.255E-02	4.360E-03	-0.194
ANH-511	-1.871E-02		2.620E-02	4.750E-02	3.137E-03	-0.394

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
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*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201870087          *
* Acquisition date  :  6-JUL-2009 13:25:36 Detector SN#     :               *
* Detector ID       : GAM18                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:00.74      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201870087          Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.4500E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	5.849E-03	1.151E-01	1.005E-01	5.873E-02 NOT IDENT.
NA-22	4.793E-03	1.378E-02	1.233E-02	7.030E-03 NOT IDENT.
NA-24	1.158E+01	6.098E+01	0.000E+00	3.111E+01 SHORT HLIF
AL-26	7.324E-03	1.517E-02	1.386E-02	7.738E-03 NOT IDENT.
K-40	4.765E-02	1.956E-01	1.794E-01	9.980E-02 NOT IDENT.
TI-44	-9.543E-03	1.536E-02	1.304E-02	7.835E-03 NOT IDENT.
SC-46	1.634E-02	1.564E-02	1.480E-02	7.982E-03 NOT IDENT.
V-48	-1.186E-02	2.051E-02	1.574E-02	1.046E-02 NOT IDENT.
CR-51	3.410E-02	1.182E-01	1.039E-01	6.031E-02 NOT IDENT.
MN-52	2.970E-02	3.992E-02	3.731E-02	2.036E-02 NOT IDENT.
MN-54	-1.559E-04	1.563E-02	1.334E-02	7.974E-03 NOT IDENT.
CO-56	-9.019E-03	1.658E-02	1.326E-02	8.457E-03 NOT IDENT.
CO-57	3.359E-03	9.457E-03	8.472E-03	4.825E-03 NOT IDENT.
CO-58	2.264E-03	1.519E-02	1.324E-02	7.748E-03 NOT IDENT.
FE-59	-2.510E-02	3.222E-02	2.486E-02	1.644E-02 NOT IDENT.
CO-60	-5.181E-03	1.353E-02	1.054E-02	6.905E-03 NOT IDENT.
ZN-65	7.632E-03	3.310E-02	2.922E-02	1.689E-02 NOT IDENT.
GE-68	-3.328E-01	4.973E-01	3.618E-01	2.537E-01 NOT IDENT.
AS-73	-5.026E-01	5.249E-01	4.249E-01	2.678E-01 NOT IDENT.
AS-74	2.658E-04	3.266E-02	2.771E-02	1.666E-02 NOT IDENT.
SE-75	1.434E-03	1.648E-02	1.448E-02	8.410E-03 NOT IDENT.
BR-77	-1.810E-01	4.871E-01	4.031E-01	2.485E-01 NOT IDENT.
SR-82	-2.623E-02	1.255E-01	1.056E-01	6.404E-02 NOT IDENT.
RB-83	-6.830E-03	2.778E-02	2.332E-02	1.418E-02 NOT IDENT.
RB-84	-1.078E-03	2.912E-02	2.124E-02	1.485E-02 NOT IDENT.
KR-85	-4.327E+00	5.018E+00	4.111E+00	2.560E+00 NOT IDENT.

SR-85	-2.049E-02	2.376E-02	1.947E-02	1.212E-02	NOT IDENT.
RB-86	-1.104E-01	2.452E-01	1.855E-01	1.251E-01	NOT IDENT.
Y-88	-1.689E-03	1.924E-02	1.585E-02	9.815E-03	NOT IDENT.
ZR-88	6.353E-03	1.083E-02	1.009E-02	5.525E-03	NOT IDENT.
Y-91	3.738E+00	5.703E+00	5.285E+00	2.910E+00	NOT IDENT.
NB-94	3.242E-03	1.419E-02	1.263E-02	7.240E-03	NOT IDENT.
NB-95	-8.236E-03	1.372E-02	1.094E-02	6.998E-03	NOT IDENT.
NB-95M	-7.354E-02	4.506E-02	3.466E-02	2.299E-02	NOT IDENT.
ZR-95	-5.545E-03	2.549E-02	2.147E-02	1.301E-02	NOT IDENT.
NB-97	-1.029E+00	2.259E+01	0.000E+00	1.153E+01	SHORT HLIF
ZR-97	-2.713E+03	7.388E+02	0.000E+00	3.769E+02	SHORT HLIF
MO-99	2.998E-01	6.426E-01	5.857E-01	3.279E-01	NOT IDENT.
TC-99M	2.895E+06	1.541E+07	0.000E+00	7.860E+06	SHORT HLIF
RH-101	7.049E-03	1.463E-02	1.323E-02	7.463E-03	NOT IDENT.
RH-102	-7.315E-03	1.208E-02	9.864E-03	6.161E-03	NOT IDENT.
RU-103	1.062E-02	1.536E-02	1.407E-02	7.834E-03	NOT IDENT.
RH-106	-4.287E-03	1.338E-01	1.125E-01	6.828E-02	NOT IDENT.
RU-106	-4.287E-03	1.338E-01	1.125E-01	6.828E-02	NOT IDENT.
AG-108M	-5.067E-03	1.363E-02	1.155E-02	6.956E-03	NOT IDENT.
CD-109	3.169E-02	3.004E-01	2.706E-01	1.532E-01	NOT IDENT.
AG-110M	-3.820E-04	1.352E-02	1.183E-02	6.900E-03	NOT IDENT.
IN-111	-2.479E-02	7.620E-02	5.820E-02	3.888E-02	NOT IDENT.
IN-113M	1.257E-02	1.582E-02	1.499E-02	8.069E-03	NOT IDENT.
SN-113	1.257E-02	1.582E-02	1.499E-02	8.069E-03	NOT IDENT.
IN-114M	4.414E-02	5.840E-02	5.016E-02	2.980E-02	NOT IDENT.
CD-115	-2.113E-01	4.220E-01	3.429E-01	2.153E-01	NOT IDENT.
SN-117M	7.000E-03	1.458E-02	1.288E-02	7.438E-03	NOT IDENT.
SB-122	2.531E-03	1.149E-01	9.824E-02	5.861E-02	NOT IDENT.
I-123	-1.512E+01	1.601E+02	0.000E+00	8.169E+01	SHORT HLIF
TE-123M	-1.030E-03	1.091E-02	9.282E-03	5.564E-03	NOT IDENT.
I-124	-8.954E-02	9.112E-02	6.973E-02	4.649E-02	NOT IDENT.
SB-124	2.377E-02	2.981E-02	2.908E-02	1.521E-02	NOT IDENT.
SB-125	-3.940E-02	3.624E-02	2.838E-02	1.849E-02	NOT IDENT.
TE-125M	-1.166E-01	3.428E+00	3.005E+00	1.749E+00	NOT IDENT.
I-126	-3.616E-03	4.710E-02	4.095E-02	2.403E-02	NOT IDENT.
SB-126	7.886E-04	3.834E-02	3.339E-02	1.956E-02	NOT IDENT.
SN-126	-1.707E-02	3.154E-02	2.715E-02	1.609E-02	NOT IDENT.
SB-127	1.158E-02	1.451E-01	1.278E-01	7.404E-02	NOT IDENT.
XE-127	-1.718E-02	1.630E-02	1.350E-02	8.318E-03	NOT IDENT.
I-131	-2.756E-02	2.445E-02	1.966E-02	1.248E-02	NOT IDENT.
TE-132	3.152E-02	5.393E-02	4.961E-02	2.752E-02	NOT IDENT.
BA-133	-8.799E-03	2.126E-02	1.480E-02	1.085E-02	NOT IDENT.
I-133	1.945E+00	5.557E+00	0.000E+00	2.835E+00	SHORT HLIF
CS-134	3.434E-04	1.614E-02	1.390E-02	8.233E-03	NOT IDENT.
CS-135	-2.412E-02	5.893E-02	4.949E-02	3.007E-02	NOT IDENT.
I-135	-1.341E+06	1.027E+07	0.000E+00	5.238E+06	SHORT HLIF
CS-136	5.109E-03	2.901E-02	2.562E-02	1.480E-02	NOT IDENT.
BA-137M	1.064E-03	1.367E-02	1.209E-02	6.975E-03	NOT IDENT.
CS-137	1.124E-03	1.445E-02	1.278E-02	7.373E-03	NOT IDENT.
CE-139	-8.876E-03	1.091E-02	9.376E-03	5.567E-03	NOT IDENT.
BA-140	4.370E-02	6.990E-02	6.265E-02	3.566E-02	NOT IDENT.
LA-140	-5.106E-03	2.450E-02	2.008E-02	1.250E-02	NOT IDENT.
CE-141	1.119E-02	2.290E-02	2.031E-02	1.168E-02	NOT IDENT.
CE-143	3.604E-01	1.202E+00	1.060E+00	6.131E-01	NOT IDENT.
CE-144	-1.194E-02	8.376E-02	7.152E-02	4.274E-02	NOT IDENT.
PM-144	2.451E-03	1.575E-02	1.311E-02	8.036E-03	NOT IDENT.
PR-144	1.655E-01	1.063E+00	8.846E-01	5.424E-01	NOT IDENT.
PM-146	1.586E-03	1.786E-02	1.572E-02	9.110E-03	NOT IDENT.
ND-147	4.044E-02	1.350E-01	1.196E-01	6.889E-02	NOT IDENT.
PM-149	7.595E-01	3.412E+00	3.008E+00	1.741E+00	NOT IDENT.
EU-152	-2.461E-02	4.218E-02	3.387E-02	2.152E-02	NOT IDENT.
GD-153	-7.752E-03	3.105E-02	2.702E-02	1.584E-02	NOT IDENT.
EU-154	1.756E-02	3.816E-02	3.475E-02	1.947E-02	NOT IDENT.
EU-155	-1.426E-02	4.388E-02	3.771E-02	2.239E-02	NOT IDENT.
TB-160	6.929E-03	5.429E-02	4.684E-02	2.770E-02	NOT IDENT.
HO-166M	-1.284E-03	2.499E-02	2.163E-02	1.275E-02	FAIL ABUN
TM-171	-9.000E+00	1.439E+01	1.215E+01	7.340E+00	NOT IDENT.
LU-176	4.282E-03	1.018E-02	9.065E-03	5.193E-03	NOT IDENT.
LU-177	-7.215E-02	1.845E-01	1.600E-01	9.414E-02	NOT IDENT.
LU-177M	-2.536E-02	6.880E-02	5.867E-02	3.510E-02	NOT IDENT.
HF-181	3.258E-03	1.461E-02	1.296E-02	7.452E-03	NOT IDENT.
W-181	-1.319E-01	1.857E-01	1.563E-01	9.472E-02	NOT IDENT.
TA-182	-1.774E-02	5.805E-02	4.699E-02	2.962E-02	NOT IDENT.
RE-183	8.563E-03	4.120E-02	3.593E-02	2.102E-02	NOT IDENT.
RE-184	-1.427E-02	9.288E-02	8.039E-02	4.739E-02	NOT IDENT.
OS-185	6.745E-03	1.782E-02	1.558E-02	9.090E-03	NOT IDENT.
RE-188	-2.745E-03	5.725E-02	5.225E-02	2.921E-02	NOT IDENT.
W-188	-1.670E-01	2.870E+00	2.469E+00	1.465E+00	NOT IDENT.

IR-192	-2.837E-03	1.271E-02	1.005E-02	6.482E-03	NOT IDENT.
AU-195	-5.052E-02	8.586E-02	7.246E-02	4.381E-02	NOT IDENT.
TL-200	4.063E-01	1.478E+00	1.348E+00	7.542E-01	NOT IDENT.
TL-201	-2.991E-01	4.897E-01	4.273E-01	2.498E-01	NOT IDENT.
TL-202	7.722E-03	1.867E-02	1.695E-02	9.527E-03	NOT IDENT.
HG-203	1.255E-02	1.436E-02	1.332E-02	7.326E-03	NOT IDENT.
BI-207	1.256E-03	2.069E-02	1.800E-02	1.056E-02	NOT IDENT.
TL-207	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
TL-208	-3.275E-03	1.788E-02	1.485E-02	9.124E-03	NOT IDENT.
PO-209	-9.936E-01	3.009E+00	2.438E+00	1.535E+00	NOT IDENT.
BI-210	-1.172E+01	3.425E+00	2.509E+00	1.747E+00	NOT IDENT.
PB-210	-1.172E+01	3.425E+00	2.509E+00	1.747E+00	NOT IDENT.
PO-210	-1.172E+01	3.394E+00	2.509E+00	1.732E+00	NOT IDENT.
BI-211	2.839E-02	1.175E-01	9.304E-02	5.996E-02	NOT IDENT.
PB-211	5.489E-02	3.677E-01	3.277E-01	1.876E-01	NOT IDENT.
BI-212	1.833E-02	9.700E-02	8.614E-02	4.949E-02	NOT IDENT.
PB-212	1.196E-02	2.625E-02	2.356E-02	1.339E-02	NOT IDENT.
PO-212	1.196E-02	2.625E-02	2.356E-02	1.339E-02	NOT IDENT.
BI-214	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
PB-214	2.440E-02	5.367E-02	3.273E-02	2.738E-02	FAIL ABUN
PO-214	2.440E-02	5.367E-02	3.273E-02	2.738E-02	FAIL ABUN
PO-215	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
PO-216	1.196E-02	2.625E-02	2.356E-02	1.339E-02	NOT IDENT.
PO-218	2.440E-02	5.367E-02	3.273E-02	2.738E-02	FAIL ABUN
RN-219	-2.799E-02	1.601E-01	1.393E-01	8.170E-02	NOT IDENT.
RN-220	-4.851E+00	1.021E+01	8.248E+00	5.207E+00	NOT IDENT.
RA-223	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
RA-224	-2.880E-02	2.788E-01	2.437E-01	1.422E-01	NOT IDENT.
RA-226	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
AC-227	-8.167E-03	1.516E-01	1.321E-01	7.735E-02	NOT IDENT.
TH-227	-8.167E-03	1.516E-01	1.321E-01	7.735E-02	NOT IDENT.
AC-228	3.833E-02	6.589E-02	6.070E-02	3.362E-02	NOT IDENT.
RA-228	3.833E-02	6.589E-02	6.070E-02	3.362E-02	NOT IDENT.
TH-228	1.134E-02	2.620E-02	2.349E-02	1.337E-02	NOT IDENT.
TH-229	-5.297E-02	1.745E-01	1.530E-01	8.904E-02	NOT IDENT.
TH-230	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
PA-231	2.127E-02	6.200E-01	5.386E-01	3.163E-01	NOT IDENT.
TH-231	-8.040E-02	2.646E-01	2.195E-01	1.350E-01	NOT IDENT.
U-231	-8.062E-02	1.340E-01	1.140E-01	6.839E-02	NOT IDENT.
TH-232	3.833E-02	6.589E-02	6.070E-02	3.362E-02	NOT IDENT.
PA-233	-1.502E-02	2.447E-02	1.970E-02	1.249E-02	NOT IDENT.
PA-234	-3.346E-02	1.241E-01	1.007E-01	6.332E-02	FAIL ABUN
PA-234M	2.319E+00	3.143E+00	2.763E+00	1.603E+00	NOT IDENT.
TH-234	-4.240E-01	7.001E-01	5.933E-01	3.572E-01	NOT IDENT.
U-234	-3.772E-03	4.111E-02	3.338E-02	2.097E-02	FAIL ABUN
U-235	-7.464E-02	9.783E-02	7.614E-02	4.991E-02	FAIL ABUN
NP-236	-3.406E-02	3.304E-02	2.632E-02	1.686E-02	NOT IDENT.
NP-237	-6.451E-02	9.577E-02	8.091E-02	4.886E-02	NOT IDENT.
U-238	-4.240E-01	7.001E-01	5.933E-01	3.572E-01	NOT IDENT.
NP-239	-3.486E-04	7.315E-02	6.388E-02	3.732E-02	NOT IDENT.
AM-241	2.624E-02	7.706E-02	7.258E-02	3.932E-02	NOT IDENT.
AM-243	-1.768E-02	3.117E-02	2.380E-02	1.590E-02	NOT IDENT.
CM-243	-2.085E-03	3.904E-02	3.432E-02	1.992E-02	NOT IDENT.
CM-247	3.112E-03	1.441E-02	1.297E-02	7.350E-03	NOT IDENT.
CF-249	-7.719E-03	1.559E-02	1.322E-02	7.956E-03	NOT IDENT.
CF-251	-1.604E-02	4.917E-02	4.354E-02	2.509E-02	NOT IDENT.
ANH-511	-1.871E-02	2.568E-02	2.448E-02	1.310E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	235.6872
46.50	235.6872
46.50	235.6872
48.70	113.5499
49.72	101.4476
51.35	84.0305
52.39	95.2561
52.97	107.2877
53.15	108.2711
53.44	108.3906
54.07	94.0405
56.28	93.8927
56.28	93.8938
57.37	88.7209
57.53	88.7722
57.53	88.7727
57.60	93.4191
57.98	90.7682
57.98	90.7682
59.32	88.4092
59.32	88.4092
59.40	88.4341
59.54	88.4776
59.72	94.1250
60.01	98.8849
61.10	122.6702
61.14	122.6872
61.30	117.1325
63.00	103.6755
63.29	106.6071
63.29	106.6071
63.58	106.7108
64.28	99.3884
65.12	117.6998
65.20	117.7309
65.20	117.7309
66.05	125.6762
66.72	112.5912
66.83	112.6320
66.91	112.6608
67.20	112.7664
67.20	112.7664
67.75	110.0937
67.85	110.1294
68.90	123.9498
68.90	123.9498
69.30	118.3342
69.67	115.5835
70.82	130.4977
70.82	130.4977
70.83	130.5018
72.80	116.7059
72.87	116.7310
72.87	116.7310
74.67	125.1901
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.81	126.2210
74.97	126.2810
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75.70	130.4795
77.11	115.2588
77.11	115.2588
77.11	115.2588

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77.11	115.2588
77.11	115.2588
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79.62	126.0194
79.80	129.0624
79.80	129.0624
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80.18	129.2019
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80.30	116.3210
80.57	116.4103
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81.07	114.5818
81.07	114.5818
81.07	114.5818
81.07	114.5818
82.60	110.0694
83.37	101.2784
83.78	107.4174
83.78	107.4174
83.78	107.4174
83.78	107.4174
84.21	106.5391
84.40	106.5941
84.90	109.7606
85.43	110.9271
86.29	121.2927
86.50	121.3611
86.54	121.3739
86.59	121.3904
86.72	116.3728
86.79	116.3939
86.94	116.4412
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.30	117.5671
87.57	117.6514
87.88	98.4618
88.03	98.5013
88.36	94.5217
88.47	94.5491
89.95	167.3808
91.11	132.0562
92.29	111.9217
92.38	111.9478
92.38	111.9478
93.35	100.8990
94.00	103.1280
94.67	127.0596
94.67	127.0615
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94.90	154.0087
94.90	154.0087
94.90	154.0087
95.87	121.2263
95.87	121.2263
96.73	85.1443
97.43	94.6519
98.44	100.0996
98.44	100.0996
98.88	92.9003
99.55	93.0515
99.55	93.0515
99.86	82.6581
100.00	82.6862
100.10	82.7067
103.18	83.3155
103.76	89.7656
105.00	93.2032
105.31	96.4505
108.00	77.8521
109.28	91.9830
111.00	105.2236
111.00	105.2236

111.76	88.1931
112.95	79.7986
115.19	81.2740
116.30	96.6772
117.00	80.5043
117.00	80.5043
117.66	84.9761
121.11	75.7211
121.62	77.9990
121.78	78.0250
122.06	73.6721
122.32	73.7117
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122.32	73.7117
122.32	73.7117
123.07	90.3548
127.23	78.9005
129.76	91.5866
131.20	77.2867
133.02	87.6794
133.54	100.1449
135.34	94.8486
136.00	98.3600
136.25	104.0625
136.48	99.5819
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140.51	0.0000
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142.65	122.4942
143.76	117.0089
144.24	120.5560
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144.24	120.5560
144.24	120.5560
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145.44	101.2594
147.16	109.6543
152.43	92.0453
152.70	87.4260
153.22	91.8814
154.21	81.5212
154.21	81.5212
154.21	81.5212
154.21	81.5212
155.03	86.9045
156.02	97.6052
158.56	70.6531
159.00	0.0000
159.00	83.9629
160.31	105.4079
161.27	101.1425
162.32	82.6564
162.64	80.0327
163.35	80.1274
163.89	85.5461
165.85	103.7037
167.43	105.7654
171.28	91.0936
171.86	93.8866
172.10	89.4068
176.55	98.2244
176.60	98.2318
181.06	98.1813
184.41	87.4535
185.71	87.6252
186.00	87.6637
190.27	54.9774
192.34	76.3833
193.63	76.5278
197.04	81.5957
198.01	78.8916
198.60	79.8983
200.40	98.9518
201.83	126.5369
202.84	114.4234
205.31	87.3008
208.36	95.2942
208.81	93.4459

209.75	90.7020
209.75	90.7020
210.97	81.2899
215.65	76.0310
216.55	89.6127
218.09	78.2104
222.10	73.7717
223.80	100.2017
226.40	80.0412
227.00	78.1494
227.08	78.1573
227.20	79.1467
228.16	76.3093
228.18	76.3111
228.18	76.3111
231.56	79.5879
235.69	119.5100
236.00	108.6874
236.00	108.6874
238.60	73.3536
238.63	73.3564
238.63	73.3564
238.63	73.3564
239.00	75.3732
240.98	109.3588
241.98	124.4240
241.98	124.4240
241.98	124.4240
244.69	99.8680
245.39	84.9598
247.94	77.2003
248.90	85.3191
249.79	85.4099
252.40	82.6513
252.85	82.6951
252.85	82.6951
254.15	0.0000
256.20	75.9341
256.20	75.9341
260.50	80.3839
260.90	79.4032
262.80	66.3142
264.65	69.5211
268.24	73.9105
268.79	77.0382
269.46	69.8998
269.46	69.8998
269.46	69.8998
269.46	69.8998
271.23	64.8890
273.65	73.3260
276.40	75.6210
277.35	69.4781
277.60	69.4966
277.60	69.4966
278.00	66.4141
278.60	62.3044
279.20	62.3447
279.53	58.2089
280.46	70.7548
281.68	78.1414
283.67	71.0007
284.30	66.8691
285.00	61.6918
285.90	65.9377
286.10	65.9512
286.10	65.9512
287.40	82.8164
288.45	0.0000
290.67	79.9475
290.80	79.9591
291.72	81.0899
293.26	79.1113
293.70	72.8156
295.21	85.6151
295.21	85.6151
295.21	85.6151
295.96	80.3928

296.50	81.4964
297.23	66.7289
298.57	76.3682
299.80	76.4648
299.80	76.4648
300.09	75.4256
300.09	75.4256
300.09	75.4256
300.10	75.4256
300.12	75.4277
301.29	69.1359
302.84	71.3766
303.76	73.5768
303.91	68.2549
304.40	65.0880
304.40	65.0880
304.84	67.2528
306.84	63.1097
308.46	58.9276
311.98	63.4365
316.51	48.6015
318.01	60.5715
319.02	54.1351
319.41	48.7402
320.08	54.1908
323.87	67.4454
323.87	67.4454
323.87	67.4454
323.87	67.4454
325.23	63.1764
328.77	66.6703
333.44	71.3586
334.20	88.9868
334.20	88.9868
334.30	88.9954
338.28	79.4026
338.28	79.4026
338.28	79.4026
338.28	79.4026
338.32	79.4059
338.32	79.4059
338.32	79.4059
340.50	76.2521
340.57	76.2573
344.27	76.5184
345.85	81.4415
350.59	64.2463
351.07	69.6297
351.92	60.3034
351.92	60.3034
351.92	60.3034
355.39	0.0000
356.01	69.9401
364.48	74.0813
366.43	63.3486
367.43	56.1580
367.94	56.1830
369.80	58.9967
374.96	48.3198
383.85	44.0930
387.95	61.7583
388.63	67.3272
391.69	42.5332
391.69	42.5332
392.90	45.3525
398.62	47.4259
400.65	58.6811
401.10	56.8398
401.81	56.8722
402.60	53.1766
404.84	55.1425
410.95	57.2910
411.60	53.5620
413.65	62.1199
414.70	57.4615
415.30	57.4891
415.76	56.5671
417.63	0.0000

418.52	59.5239
423.70	42.6896
427.08	58.9704
427.89	62.8144
432.53	48.7108
433.93	60.2368
439.47	50.8883
439.56	50.8915
439.89	49.9440
443.98	53.9506
444.90	50.1312
445.03	50.1363
445.03	50.1363
445.03	50.1363
445.03	50.1363
453.90	52.4068
463.38	65.4722
468.07	51.9661
473.00	44.2771
475.06	58.1365
475.35	53.2209
476.78	55.2474
477.59	46.3947
477.96	45.4194
482.03	42.5785
484.57	50.5891
487.03	44.7138
490.36	54.7758
492.35	48.8666
497.08	46.0230
507.63	0.0000
510.53	0.0000
510.84	63.6168
511.00	65.6431
511.85	69.7223
511.85	69.7223
513.99	183.1520
513.99	183.1520
520.41	52.8404
520.65	52.8493
527.90	50.0348
528.96	0.0000
529.64	40.8906
529.87	0.0000
531.02	37.8573
537.32	36.9835
543.00	47.4263
546.56	0.0000
549.76	44.5222
552.65	34.2294
555.20	40.5168
563.23	42.8058
563.90	40.7339
568.70	46.0915
569.32	49.2525
569.50	49.2571
569.67	49.2628
573.80	44.1318
574.00	37.8316
574.64	42.0518
578.91	61.1308
579.30	66.4161
583.14	41.2090
585.48	52.9053
591.81	61.5995
592.07	64.7961
593.00	76.5211
595.88	59.6176
600.56	55.5090
602.52	0.0000
602.71	74.8176
602.71	74.8176
603.60	80.2020
604.41	87.7296
604.70	92.0238
609.31	55.7895
609.31	55.7895
609.31	55.7895

609.31	55.7895
610.33	65.4842
612.46	68.7875
614.37	78.5463
618.01	60.3791
621.84	44.3012
621.84	44.3012
631.29	43.4502
633.02	51.1022
633.10	50.0171
634.78	52.2410
635.90	59.8958
636.97	49.0353
645.85	41.6089
646.12	41.6154
656.30	40.3763
657.75	41.3260
657.90	0.0000
661.65	38.6521
661.65	38.6521
664.57	48.8507
666.33	41.5155
666.33	41.5155
675.00	42.6327
677.61	36.1943
685.20	41.9284
692.80	52.3815
695.00	45.8857
696.49	44.9834
696.49	44.9834
697.00	44.0577
697.49	45.0068
698.33	43.1493
698.50	43.1531
699.00	44.1027
702.63	45.1240
706.10	42.3779
706.58	0.0000
706.67	49.9269
709.31	44.3331
711.68	42.4969
713.82	43.4881
717.42	42.6196
720.50	40.7875
721.93	34.1719
722.20	37.0243
722.78	40.8339
722.78	40.8339
722.89	40.8357
722.95	40.8365
723.30	39.8945
724.18	45.6133
727.18	27.5987
733.00	34.3586
735.90	28.6725
739.58	27.7663
742.81	35.4817
744.21	32.6262
747.13	34.5945
751.79	33.7083
752.31	33.7168
753.82	35.6691
755.35	37.6249
756.15	36.6741
756.87	33.7902
763.93	33.9034
765.79	36.8419
766.41	35.8829
766.84	32.0097
768.36	26.2084
768.36	26.2084
768.36	26.2084
768.36	26.2084
776.49	38.9754
778.00	32.1769
778.57	30.2350
778.89	35.1167
783.80	32.2635

785.46	34.2452
792.07	27.4793
795.84	28.5097
796.30	26.5490
801.93	28.5888
805.60	33.5732
810.29	36.6123
810.76	34.6411
815.85	32.7355
817.79	25.8143
818.51	30.7881
819.60	27.8223
826.30	29.8981
828.27	30.9212
831.60	33.9633
831.96	33.9689
834.83	41.0133
836.80	0.0000
846.75	45.2481
848.13	46.2817
856.28	0.0000
856.80	48.4736
860.37	36.4109
867.32	48.6904
867.82	52.7596
871.10	38.6084
873.19	36.6086
874.81	41.7215
875.33	0.0000
876.40	36.6577
879.36	31.6055
880.27	27.5378
880.51	29.5806
881.50	26.5316
883.24	34.7201
884.67	43.9370
889.25	24.5698
896.60	32.8587
898.02	21.5764
899.00	23.6406
903.28	24.7114
911.07	24.7900
911.07	24.7900
911.07	24.7900
919.63	21.3218
920.93	23.1109
925.00	24.9292
925.24	27.0093
926.50	31.1804
934.06	29.1889
934.06	29.1889
934.06	29.1889
934.06	29.1889
935.52	22.9476
937.48	28.1849
944.10	31.3983
946.00	32.4689
949.00	28.3129
962.29	30.5671
964.01	30.5877
966.15	30.6131
968.20	34.8624
969.11	29.5911
969.11	29.5911
969.11	29.5911
977.42	25.4443
980.50	21.2284
983.50	31.8787
989.30	18.1043
996.32	45.9141
1001.03	21.3932
1001.68	28.8875
1004.76	42.8459
1021.30	0.0000
1024.50	0.0000
1034.80	22.7432
1037.82	26.9498
1038.57	25.0978

1038.76	0.0000
1045.16	27.9534
1046.59	30.7649
1048.07	27.9827
1050.47	26.1396
1050.47	26.1396
1063.62	28.1376
1076.63	26.3828
1077.35	27.3311
1085.78	26.4668
1099.22	35.1366
1112.02	34.3364
1112.84	35.3005
1115.52	27.6932
1120.29	21.9989
1120.29	21.9989
1120.29	21.9989
1120.29	21.9989
1120.51	24.8701
1121.28	27.7468
1124.00	0.0000
1129.67	26.8662
1131.51	0.0000
1147.95	0.0000
1167.94	23.3211
1173.22	34.0686
1175.09	26.2975
1177.93	18.5229
1189.05	14.6756
1204.90	18.6832
1205.75	21.6394
1213.00	18.7316
1221.42	22.7345
1230.97	16.8541
1235.34	15.8845
1236.41	0.0000
1238.11	20.8660
1238.11	20.8660
1238.11	20.8660
1238.11	20.8660
1238.25	20.8667
1246.25	21.9148
1260.41	0.0000
1271.85	19.0749
1274.45	13.0612
1274.54	14.0664
1291.56	31.3060
1298.22	0.0000
1312.09	26.4171
1325.50	20.4004
1325.50	20.4004
1332.49	16.3538
1333.61	16.3588
1360.21	21.6357
1362.66	0.0000
1365.15	8.2539
1368.21	11.3587
1368.53	0.0000
1376.25	17.5947
1377.67	17.6018
1377.67	17.6018
1377.67	17.6018
1377.67	17.6018
1384.27	19.7091
1394.10	22.8839
1395.20	22.8908
1407.95	18.7948
1434.06	12.6198
1436.60	16.8382
1457.56	0.0000
1460.81	13.7703
1489.15	18.1431
1509.49	18.7762
1596.49	16.3152
1620.62	15.4468
1678.03	0.0000
1691.02	6.8727
1691.02	6.8727

1706.46	0.0000
1750.46	0.0000
1764.49	12.9810
1764.49	12.9810
1764.49	12.9810
1764.49	12.9810
1770.23	15.9971
1771.40	14.2235
1791.20	0.0000
1808.65	10.0842
1836.01	18.2609

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201870087

Total Uranium Activity	-1.2958E+00	ug/g
Total Uranium Counting Unc.	2.0832E+00	ug/g
Total Uranium Tpu	1.0628E-06	ug/g
Total Uranium Mda	1.7653E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID   : G1201870087     *
*   ANALYST       : MXR1                      DETECTOR    : GAM18           *
*   SAMPLE DATE   : 29-JUN-2009 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 13:25:36.18    SAMPLE ALQT:  145.000 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.313E-02
GROSS GAMMA ERROR   (pCi/GRAM  )  : 8.763E-02
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.767E-01
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.322E-01
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:27:50.13

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:26:00.
Sample ID         : G1201870088          Sample quantity  : 1.26580E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.58  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.38	81	457	1.63	91.94	87	10	1.12E-02	50.8	
2	3	74.92*	606	672	1.86	148.92	140	21	8.41E-02	10.1	2.85E+00
3	3	77.18*	890	471	1.40	153.42	140	21	1.24E-01	5.9	
4	0	87.37*	181	643	1.18	173.78	168	9	2.52E-02	26.6	
5	0	90.14	91	374	0.97	179.31	176	6	1.26E-02	35.6	
6	0	92.80*	245	561	1.54	184.63	182	12	3.40E-02	20.8	
7	0	186.06*	222	323	1.18	370.87	365	13	3.09E-02	18.3	
8	0	209.21	93	266	1.04	417.10	412	11	1.29E-02	35.5	
9	0	238.67*	844	372	1.30	475.95	471	9	1.17E-01	5.4	
10	0	241.94	111	261	1.75	482.48	480	8	1.54E-02	28.0	
11	0	270.02	81	181	1.43	538.60	534	11	1.13E-02	33.8	
12	0	295.45*	261	195	1.43	589.39	582	13	3.63E-02	12.8	
13	0	299.99	66	140	1.32	598.47	595	10	9.19E-03	35.5	
14	1	338.23	227	91	1.82	674.87	668	44	3.15E-02	11.1	1.72E+00
15	1	351.94*	451	94	1.73	702.28	668	44	6.27E-02	6.2	
16	0	408.77	24	68	1.41	815.86	814	7	3.39E-03	58.8	
17	0	510.91*	116	101	1.99	1020.04	1012	17	1.62E-02	24.4	
18	0	562.03	44	51	3.79	1122.24	1116	12	6.10E-03	35.9	
19	0	583.47*	285	75	1.49	1165.11	1157	15	3.96E-02	9.1	
20	0	609.47*	299	72	1.55	1217.10	1208	15	4.16E-02	8.5	
21	0	728.43	64	65	0.94	1455.06	1448	17	8.95E-03	31.0	
22	0	768.27	25	39	0.64	1534.77	1530	9	3.53E-03	48.2	
23	0	861.58	44	49	1.91	1721.49	1716	13	6.07E-03	37.8	
24	0	911.26	199	30	1.87	1820.93	1813	15	2.76E-02	9.3	
25	0	969.10	113	36	1.73	1936.71	1932	11	1.58E-02	14.1	
26	0	1120.81	44	49	2.31	2240.52	2234	13	6.05E-03	37.2	
27	0	1460.72	968	26	2.25	2921.67	2913	17	1.35E-01	3.4	
28	0	1763.87*	45	7	1.94	3529.77	3523	14	6.27E-03	20.0	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 15:27:53

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:26:00
Sample ID : G1201870088 Sample quantity : 126.58 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:09.58 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.695E+01	3.457E+00	6.906E-01	4.395E-02	53.508
CD-109	+	88.03	*	1.776E+00	9.556E-01	9.947E-01	8.243E-02	1.786
SN-126		64.28		6.646E-02	2.592E-01	4.254E-01	6.128E-02	0.156
	+	86.94		7.270E-01	4.893E-01	4.942E-01	2.040E-01	1.471
	+	87.57	*	1.749E-01	9.407E-02	9.780E-02	8.076E-03	1.788
TL-208		277.35		2.235E-01	4.555E-01	7.330E-01	7.764E-02	0.305
	+	510.84		7.652E-01	3.817E-01	2.771E-01	2.908E-02	2.761
	+	583.14	*	5.532E-01	1.090E-01	7.485E-02	5.678E-03	7.390
	+	860.37		8.542E-01	6.494E-01	6.612E-01	5.287E-02	1.292
BI-210	+	46.50	*	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PB-210	+	46.50	*	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PO-210	+	46.50	*	7.869E-01	8.012E-01	8.779E-01	5.674E-02	0.896
BI-211		72.87		1.221E+01	2.284E+00	3.913E+00	2.924E-01	3.119
	+	351.07	*	3.351E+00	4.695E-01	3.811E-01	2.425E-02	8.794
PB-212	+	74.81		1.986E+00	4.651E-01	3.367E-01	4.047E-02	5.897
	+	77.11		1.737E+00	2.436E-01	2.007E-01	1.539E-02	8.657
	+	87.30		8.088E-01	4.425E-01	5.825E-01	7.548E-02	1.388
	+	238.63	*	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
	+	300.09		1.586E+00	1.132E+00	1.384E+00	1.148E-01	1.146
PO-212	+	74.81		1.986E+00	4.651E-01	3.367E-01	4.047E-02	5.897
	+	77.11		1.737E+00	2.436E-01	2.007E-01	1.539E-02	8.657
	+	87.30		8.088E-01	4.425E-01	5.825E-01	7.548E-02	1.388
		115.19		9.035E-01	3.464E+00	5.632E+00	6.058E-01	0.160
	+	238.63	*	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
	+	300.09		1.586E+00	1.132E+00	1.384E+00	1.148E-01	1.146
BI-214	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.656E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
PB-214	+	74.81		3.421E+00	7.773E-01	5.802E-01	6.140E-02	5.897
	+	77.11		2.978E+00	4.753E-01	3.440E-01	3.719E-02	8.657

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		1.386E+00	7.529E-01	9.979E-01	1.126E-01	1.388
	+	241.98		9.855E-01	5.574E-01	9.667E-01	8.042E-02	1.019
	+	295.21		1.096E+00	2.962E-01	2.600E-01	2.228E-02	4.216
	+	351.92	*	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-214	+	74.81		3.421E+00	7.773E-01	5.802E-01	6.140E-02	5.897
	+	77.11		2.978E+00	4.753E-01	3.440E-01	3.719E-02	8.657
	+	87.30		1.386E+00	7.529E-01	9.979E-01	1.126E-01	1.388
	+	241.98		9.855E-01	5.574E-01	9.667E-01	8.042E-02	1.019
	+	295.21		1.096E+00	2.962E-01	2.600E-01	2.228E-02	4.216
	+	351.92	*	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-216	+	74.81		1.986E+00	4.651E-01	3.367E-01	4.047E-02	5.897
	+	77.11		1.737E+00	2.436E-01	2.007E-01	1.539E-02	8.657
	+	87.30		8.088E-01	4.425E-01	5.825E-01	7.548E-02	1.388
	+	238.63	*	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
	+	300.09		1.586E+00	1.132E+00	1.384E+00	1.148E-01	1.146
PO-218	+	74.81		3.421E+00	7.773E-01	5.802E-01	6.140E-02	5.897
	+	77.11		2.978E+00	4.753E-01	3.440E-01	3.719E-02	8.657
	+	87.30		1.386E+00	7.529E-01	9.979E-01	1.126E-01	1.388
	+	241.98		9.855E-01	5.574E-01	9.667E-01	8.042E-02	1.019
	+	295.21		1.096E+00	2.962E-01	2.600E-01	2.228E-02	4.216
	+	351.92	*	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
RA-224	+	240.98	*	1.869E+00	1.052E+00	1.720E+00	1.058E-01	1.086
RA-226	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.656E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
AC-228	+	338.32		1.838E+00	8.524E-01	4.153E-01	1.693E-01	4.425
	+	911.07	*	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
	+	969.11		1.872E+00	6.778E-01	6.388E-01	1.455E-01	2.931
RA-228	+	338.32		1.838E+00	8.524E-01	4.153E-01	1.693E-01	4.425
	+	911.07	*	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
	+	969.11		1.872E+00	6.778E-01	6.388E-01	1.455E-01	2.931
TH-228		84.40		2.878E+00	2.340E+00	3.242E+00	4.144E-01	0.888
	+	238.60	*	1.242E+00	1.652E-01	1.167E-01	8.895E-03	10.641
	+	300.10		1.586E+00	1.462E+00	1.384E+00	8.159E-01	1.146
TH-230	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.655E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
TH-232	+	338.32		1.838E+00	4.201E-01	4.153E-01	2.404E-02	4.425
	+	911.07	*	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
	+	969.11		1.872E+00	6.778E-01	6.388E-01	1.455E-01	2.931
U-234	+	609.31	*	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	768.36		1.095E+00	1.060E+00	1.708E+00	1.613E-01	0.641
		934.06		2.440E-01	1.584E+00	2.655E+00	2.500E-01	0.092
	+	1120.29		9.114E-01	6.822E-01	7.415E-01	6.670E-02	1.229
		1238.11		9.226E-01	1.524E+00	2.594E+00	2.118E-01	0.356
		1377.67		8.182E-01	1.500E+00	2.593E+00	2.266E-01	0.316
	+	1764.49		1.392E+00	5.634E-01	4.575E-01	2.590E-02	3.043
NP-237	+	86.50	*	5.135E-01	2.959E-01	3.023E-01	6.712E-02	1.699
		95.87		-5.696E-01	9.699E-01	1.314E+00	3.252E-01	-0.433
AM-243	+	74.67	*	3.219E-01	6.914E-02	5.458E-02	4.122E-03	5.898
	+	86.72		1.926E+01	1.036E+01	1.163E+01	9.542E-01	1.656
		117.66		7.535E-01	3.724E+00	6.039E+00	6.654E-01	0.125
		142.18		-2.529E+00	1.827E+01	2.907E+01	2.699E+00	-0.087
ANH-511	+	511.00	*	1.653E-01	8.129E-02	5.988E-02	3.820E-03	2.760

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.641E-01	4.302E-01	6.562E-01	4.619E-02	-0.403
NA-22		1274.54	*	6.557E-02	7.311E-02	1.292E-01	7.638E-03	0.508
NA-24		1368.53	*	-3.166E-01	7.311E-02	Half-Life too short		
AL-26		1129.67		-6.877E-01	2.495E+00	3.862E+00	2.324E-01	-0.178
		1808.65	*	-1.051E-02	3.649E-02	5.552E-02	3.091E-03	-0.189
TI-44		67.85		1.219E-02	3.007E-02	4.355E-02	3.169E-03	0.280
	+	78.38	*	3.206E-01	4.496E-02	6.169E-02	4.771E-03	5.196
SC-46		889.25	*	-1.588E-02	5.375E-02	8.622E-02	6.190E-03	-0.184
	+	1120.51		1.547E-01	1.153E-01	1.564E-01	9.521E-03	0.989
V-48		944.10		-2.187E-01	1.206E+00	1.953E+00	1.372E-01	-0.112
		983.50	*	5.992E-02	9.991E-02	1.742E-01	1.198E-02	0.344
		1312.09		-1.081E-01	1.262E-01	1.828E-01	1.092E-02	-0.591
CR-51		320.08	*	-4.038E-02	3.992E-01	6.552E-01	4.261E-02	-0.062
MN-52		744.21		4.735E-02	2.872E-01	4.863E-01	3.557E-02	0.097
		848.13		4.625E+00	8.389E+00	1.462E+01	1.063E+00	0.316
		935.52		-1.984E-01	3.239E-01	4.971E-01	3.507E-02	-0.399
		1246.25		-1.209E+01	1.038E+01	1.483E+01	8.660E-01	-0.815
		1333.61		3.150E-01	7.218E+00	1.176E+01	7.072E-01	0.027
		1434.06	*	-3.840E-02	2.686E-01	4.216E-01	2.541E-02	-0.091
MN-54		834.83	*	-1.488E-02	5.587E-02	9.065E-02	6.613E-03	-0.164
CO-56		846.75	*	3.235E-02	5.503E-02	9.619E-02	6.999E-03	0.336
		977.42		-2.161E+00	4.513E+00	6.681E+00	4.614E-01	-0.324
		1037.82		-7.076E-02	4.476E-01	7.227E-01	5.207E-02	-0.098
		1175.09		-7.305E-01	3.583E+00	5.732E+00	3.251E-01	-0.127
		1238.25		9.062E-02	1.518E-01	2.584E-01	1.598E-02	0.351
		1360.21		4.502E-01	1.398E+00	2.370E+00	1.428E-01	0.190
		1771.40		-5.249E-01	3.998E-01	4.864E-01	2.747E-02	-1.079
CO-57		122.06	*	-6.008E-03	2.436E-02	3.871E-02	4.455E-03	-0.155
		136.48		6.559E-02	2.184E-01	3.541E-01	3.725E-02	0.185
CO-58		810.76	*	-3.180E-02	5.495E-02	8.627E-02	6.337E-03	-0.369
FE-59		142.65		1.353E+00	2.787E+00	4.503E+00	4.156E-01	0.300

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		192.34		-4.383E-01	1.119E+00	1.595E+00	1.914E-01	-0.275
		1099.22	*	-8.393E-02	1.356E-01	2.072E-01	1.486E-02	-0.405
		1291.56		1.329E-01	1.814E-01	3.191E-01	2.402E-02	0.417
CO-60		1173.22		1.193E-02	7.294E-02	1.208E-01	6.846E-03	0.099
		1332.49	*	4.829E-02	6.165E-02	1.094E-01	6.580E-03	0.441
ZN-65		1115.52	*	1.213E-02	1.657E-01	2.348E-01	1.440E-02	0.052
GE-68		1077.35	*	-1.613E+00	1.887E+00	2.804E+00	1.789E-01	-0.575
AS-73		53.44	*	1.299E-01	2.351E-01	3.917E-01	2.632E-02	0.332
AS-74		595.88	*	4.065E-02	1.220E-01	2.020E-01	1.390E-02	0.201
		634.78		1.891E-01	4.714E-01	7.847E-01	5.532E-02	0.241
SE-75		66.05		-1.125E+00	2.664E+00	4.243E+00	3.950E-01	-0.265
		96.73		-2.737E-01	7.630E-01	1.056E+00	1.464E-01	-0.259
		121.11		-3.874E-02	1.293E-01	2.049E-01	2.760E-02	-0.189
		136.00		1.976E-02	4.058E-02	6.628E-02	6.671E-03	0.298
		198.60		-4.780E-01	1.862E+00	3.089E+00	2.300E-01	-0.155
		264.65	*	4.877E-02	5.346E-02	8.239E-02	4.984E-03	0.592
		279.53		6.237E-02	1.252E-01	2.129E-01	1.343E-02	0.293
		303.91		1.354E+00	2.544E+00	3.812E+00	3.652E-01	0.355
		400.65		3.381E-01	2.989E-01	5.252E-01	4.672E-02	0.644
BR-77	+	87.88		2.824E+02	1.519E+02	2.123E+02	1.757E+01	1.330
		200.40		-1.093E+02	1.264E+02	2.038E+02	1.262E+01	-0.536
	+	239.00		1.466E+02	1.835E+01	2.915E+01	1.795E+00	5.028
		249.79		1.275E+01	5.153E+01	8.691E+01	5.304E+00	0.147
		281.68		-5.589E+01	7.860E+01	1.255E+02	7.338E+00	-0.445
		297.23		2.896E+02	7.440E+01	1.050E+02	6.159E+00	2.758
		303.76		8.525E+01	1.600E+02	2.400E+02	1.408E+01	0.355
		439.47		1.220E+02	1.254E+02	2.193E+02	1.276E+01	0.556
		484.57		-1.725E+02	2.204E+02	3.353E+02	2.074E+01	-0.514
		520.65	*	3.035E+00	9.724E+00	1.617E+01	1.042E+00	0.188
		574.64		-5.127E+02	2.583E+02	3.139E+02	2.126E+01	-1.633
		578.91		4.588E+01	8.958E+01	1.328E+02	9.022E+00	0.346
		585.48		1.335E+03	2.710E+02	4.940E+02	3.374E+01	2.701
		755.35		3.379E+01	1.600E+02	2.719E+02	1.991E+01	0.124
		817.79		-6.687E+01	1.325E+02	2.089E+02	1.528E+01	-0.320
SR-82		698.33		-3.284E+01	4.636E+01	7.310E+01	5.293E+00	-0.449
		776.49	*	-1.496E-01	5.124E-01	8.311E-01	6.093E-02	-0.180
		1395.20		-1.254E+01	1.543E+01	2.149E+01	1.296E+00	-0.583
RB-83		520.41	*	4.499E-02	8.573E-02	1.451E-01	9.348E-03	0.310
		529.64		-8.516E-02	1.349E-01	2.060E-01	1.340E-02	-0.413
		552.65		3.275E-02	2.533E-01	4.141E-01	2.753E-02	0.079
RB-84		881.50	*	-3.621E-03	1.014E-01	1.673E-01	1.205E-02	-0.022
KR-85		513.99	*	1.758E+01	1.132E+01	1.812E+01	1.160E+00	0.970
SR-85		513.99	*	8.913E-02	5.739E-02	9.189E-02	5.881E-03	0.970
RB-86		1076.63	*	-9.767E-01	1.154E+00	1.717E+00	1.096E-01	-0.569
Y-88		898.02		3.973E-02	5.489E-02	9.741E-02	7.019E-03	0.408
		1836.01	*	4.953E-02	5.518E-02	1.061E-01	5.854E-03	0.467
ZR-88		392.90	*	3.692E-02	3.619E-02	6.331E-02	3.415E-03	0.583
Y-91		1204.90	*	7.631E+00	3.021E+01	5.035E+01	2.892E+00	0.152
NB-94		702.63	*	2.511E-02	4.630E-02	8.070E-02	5.851E-03	0.311

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		871.10		-3.763E-02	4.366E-02	6.501E-02	4.698E-03	-0.579
NB-95		765.79	*	7.909E-02	6.715E-02	1.091E-01	7.996E-03	0.725
NB-95M		235.69	*	3.978E-01	1.693E-01	2.723E-01	2.129E-02	1.461
ZR-95		724.18		9.015E-02	1.390E-01	2.158E-01	1.760E-02	0.418
		756.15	*	2.710E-02	9.296E-02	1.591E-01	1.326E-02	0.170
NB-97		657.90	*	-3.414E-02	9.296E-02	Half-Life too short		
		1024.50		1.468E+00	9.296E-02	Half-Life too short		
ZR-97		254.15		-2.325E+00	9.296E-02	Half-Life too short		
		355.39		1.203E+00	9.296E-02	Half-Life too short		
		507.63	*	1.450E+00	9.296E-02	Half-Life too short		
		602.52		-3.840E+00	9.296E-02	Half-Life too short		
		1021.30		1.151E-01	9.296E-02	Half-Life too short		
		1147.95		6.764E-01	9.296E-02	Half-Life too short		
		1362.66		1.565E+00	9.296E-02	Half-Life too short		
		1750.46		2.543E+00	9.296E-02	Half-Life too short		
MO-99		140.51		-1.404E+01	2.126E+01	3.248E+01	9.086E+00	-0.432
		181.06		1.600E+01	1.527E+01	2.333E+01	4.026E+00	0.686
		366.43		3.043E+01	7.787E+01	1.312E+02	7.373E+00	0.232
		739.58	*	6.249E+00	1.174E+01	2.047E+01	2.965E+00	0.305
		778.00		-2.414E+01	3.605E+01	5.625E+01	4.125E+00	-0.429
TC-99M		140.51	*	-1.435E+09	3.605E+01	Half-Life too short		
RH-101		127.23		3.104E-02	3.210E-02	5.328E-02	5.847E-03	0.583
		198.01	*	1.570E-02	3.341E-02	5.712E-02	3.534E-03	0.275
		325.23		-1.339E-01	2.619E-01	4.193E-01	2.447E-02	-0.319
RH-102		418.52		-1.837E-01	3.549E-01	5.583E-01	3.145E-02	-0.329
		475.06	*	-1.124E-02	3.807E-02	6.051E-02	3.699E-03	-0.186
		631.29		1.230E-02	7.896E-02	1.286E-01	9.048E-03	0.096
		697.49		-2.079E-02	1.075E-01	1.773E-01	1.283E-02	-0.117
	+	766.84		1.638E-01	1.583E-01	2.639E-01	1.934E-02	0.621
		1046.59		-2.026E-03	1.632E-01	2.675E-01	1.757E-02	-0.008
		1112.84		2.049E-01	3.718E-01	5.830E-01	3.581E-02	0.351
RU-103		497.08	*	-2.277E-02	5.178E-02	8.092E-02	1.042E-02	-0.281
	+	610.33		1.171E+01	2.733E+00	3.418E+00	5.431E-01	3.425
RH-106	+	511.85		8.239E-01	4.052E-01	5.381E-01	3.436E-02	1.531
		621.84	*	2.491E-01	4.594E-01	7.489E-01	9.266E-02	0.333
		1050.47		-1.151E+00	3.311E+00	5.227E+00	3.421E-01	-0.220
RU-106	+	511.85		8.239E-01	4.052E-01	5.381E-01	3.436E-02	1.531
		621.84	*	2.491E-01	4.587E-01	7.489E-01	5.241E-02	0.333
		1050.47		-1.151E+00	3.311E+00	5.227E+00	3.421E-01	-0.220
AG-108M		433.93	*	-2.350E-02	3.795E-02	5.879E-02	3.687E-03	-0.400
		614.37		4.115E-02	5.614E-02	8.510E-02	6.281E-03	0.484
		722.95		2.742E-02	6.062E-02	9.237E-02	7.097E-03	0.297
AG-110M		657.75	*	-3.334E-02	4.682E-02	7.386E-02	5.495E-03	-0.451
		677.61		-2.414E-01	4.077E-01	6.477E-01	4.845E-02	-0.373
		706.67		-1.019E-01	2.987E-01	4.862E-01	3.665E-02	-0.210
		763.93		1.472E-01	2.540E-01	3.908E-01	2.975E-02	0.377
		884.67		7.074E-02	7.264E-02	1.307E-01	9.834E-03	0.541
		937.48		-1.040E-01	1.535E-01	2.347E-01	1.743E-02	-0.443
		1384.27		-2.837E-01	2.444E-01	3.226E-01	2.055E-02	-0.880

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-111		171.28		-1.453E-02	7.618E-01	1.282E+00	7.792E-02	-0.011
		245.39	*	4.262E-01	9.961E-01	1.486E+00	9.104E-02	0.287
IN-113M		391.69	*	6.374E-02	5.410E-02	9.528E-02	5.524E-03	0.669
SN-113		391.69	*	6.374E-02	5.410E-02	9.528E-02	5.524E-03	0.669
IN-114M		190.27	*	6.853E-02	2.027E-01	3.024E-01	1.864E-02	0.227
CD-115		260.90		-9.402E+01	1.048E+02	1.660E+02	9.997E+00	-0.566
		492.35		-2.128E+01	3.269E+01	5.011E+01	3.130E+00	-0.425
		527.90	*	6.255E+00	9.846E+00	1.680E+01	1.091E+00	0.372
SN-117M		156.02		1.699E+00	2.272E+00	3.741E+00	2.802E-01	0.454
		158.56	*	-1.392E-03	5.565E-02	8.869E-02	6.325E-03	-0.016
SB-122		563.90	*	-3.890E+00	3.114E+00	3.766E+00	2.528E-01	-1.033
		692.80		2.494E+01	4.505E+01	7.871E+01	5.690E+00	0.317
I-123		159.00	*	1.559E-01	4.505E+01	Half-Life too short		
		528.96		-6.317E+00	4.505E+01	Half-Life too short		
TE-123M		159.00	*	2.922E-03	3.016E-02	4.832E-02	3.447E-03	0.060
I-124		602.71	*	-9.016E-01	8.791E-01	1.052E+00	7.276E-02	-0.857
		722.78		2.581E+00	5.329E+00	8.148E+00	5.937E-01	0.317
		1325.50		1.446E+00	4.815E+01	7.832E+01	4.701E+00	0.018
		1376.25		4.338E+01	3.808E+01	7.046E+01	4.247E+00	0.616
		1509.49		9.829E+00	1.737E+01	3.156E+01	1.893E+00	0.311
		1691.02		1.744E-01	3.993E+00	6.698E+00	3.881E-01	0.026
SB-124		602.71		-6.169E-02	6.015E-02	7.200E-02	4.980E-03	-0.857
		645.85		-1.568E-01	6.604E-01	1.035E+00	7.979E-02	-0.152
		709.31		1.180E+00	3.847E+00	6.591E+00	4.788E-01	0.179
		713.82		-9.601E-01	2.145E+00	3.438E+00	3.821E-01	-0.279
		722.78		2.560E-01	5.285E-01	8.081E-01	6.066E-02	0.317
	+	968.20		1.904E+01	5.520E+00	9.965E+00	6.917E-01	1.911
		1045.16		9.851E-02	3.566E+00	5.871E+00	3.861E-01	0.017
		1325.50		1.532E-01	5.101E+00	8.296E+00	4.979E-01	0.018
		1368.21		-2.281E+00	2.633E+00	3.658E+00	4.384E-01	-0.623
		1436.60		5.798E+00	4.520E+00	8.929E+00	5.382E-01	0.649
		1691.02	*	4.079E-03	9.340E-02	1.567E-01	9.858E-03	0.026
SB-125		427.89	*	-9.888E-02	1.165E-01	1.783E-01	1.064E-02	-0.555
		463.38		5.514E-01	3.777E-01	6.711E-01	4.666E-02	0.822
		600.56		-1.336E-01	2.669E-01	3.662E-01	2.813E-02	-0.365
		635.90		-4.112E-02	3.608E-01	5.730E-01	4.521E-02	-0.072
TE-125M		109.28	*	-1.305E+01	8.998E+00	1.345E+01	1.565E+00	-0.970
I-126		388.63		-4.061E-02	2.437E-01	3.954E-01	2.141E-02	-0.103
		666.33	*	1.801E-01	2.369E-01	4.196E-01	3.004E-02	0.429
		753.82		1.594E+00	1.816E+00	3.260E+00	2.387E-01	0.489
SB-126		223.80		2.978E+00	4.039E+00	6.965E+00	4.319E-01	0.428
		278.60		2.619E+00	2.672E+00	4.640E+00	2.713E-01	0.564
	+	296.50		1.029E+01	2.704E+00	3.689E+00	2.164E-01	2.788
		414.70		9.066E-03	9.787E-02	1.464E-01	8.194E-03	0.062
		415.30		2.095E-01	7.759E+00	1.199E+01	6.717E-01	0.017
		555.20		-3.515E+00	5.860E+00	7.535E+00	5.021E-01	-0.467
		573.80		-2.870E+00	1.535E+00	2.084E+00	1.411E-01	-1.377
		593.00		-3.392E-01	1.248E+00	1.964E+00	1.349E-01	-0.173
		656.30		-1.573E+00	4.209E+00	6.847E+00	4.879E-01	-0.230

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		666.33		7.509E-02	9.878E-02	1.749E-01	1.252E-02	0.429
		675.00		1.253E+00	2.505E+00	4.369E+00	3.138E-01	0.287
		695.00		7.136E-02	1.011E-01	1.783E-01	1.290E-02	0.400
		697.00		-1.182E-02	3.555E-01	5.936E-01	4.297E-02	-0.020
		720.50	*	6.013E-02	1.979E-01	3.073E-01	2.238E-02	0.196
		856.80		2.761E-01	6.731E-01	1.017E+00	7.381E-02	0.271
		989.30		-1.727E-01	1.801E+00	2.937E+00	2.014E-01	-0.059
		1034.80		-1.164E+00	1.210E+01	1.968E+01	1.305E+00	-0.059
		1213.00		6.938E-01	7.361E+00	1.209E+01	6.967E-01	0.057
SB-127		61.10		7.656E+00	2.134E+01	3.518E+01	3.405E+00	0.218
		252.40		-2.717E+00	4.007E+00	6.164E+00	2.558E+00	-0.441
		290.80		1.467E+01	2.205E+01	3.331E+01	2.939E+00	0.440
		411.60		1.962E+00	1.528E+01	2.188E+01	3.072E+00	0.090
		444.90		-5.481E-01	9.868E+00	1.603E+01	1.684E+00	-0.034
		473.00		-2.059E-01	1.840E+00	2.968E+00	3.274E-01	-0.069
		543.00		-1.128E+00	1.891E+01	3.038E+01	3.956E+00	-0.037
		603.60		-2.457E+00	1.383E+01	1.873E+01	2.079E+00	-0.131
		685.20	*	-4.788E-01	1.429E+00	2.320E+00	2.326E-01	-0.206
		698.50		-1.541E+01	1.789E+01	2.765E+01	4.116E+00	-0.557
		722.20		1.204E+01	3.661E+01	5.493E+01	5.398E+00	0.219
		783.80		1.802E+00	4.062E+00	7.019E+00	7.905E-01	0.257
XE-127		57.60		-1.594E+00	2.220E+00	3.533E+00	2.452E-01	-0.451
		145.22		5.596E-01	7.126E-01	1.175E+00	1.047E-01	0.476
		172.10		4.363E-02	1.160E-01	1.982E-01	1.206E-02	0.220
		202.84	*	1.058E-02	5.262E-02	8.118E-02	5.032E-03	0.130
		374.96		-2.907E-01	2.416E-01	3.639E-01	2.019E-02	-0.799
I-131		80.18		-1.790E-02	3.660E+00	4.828E+00	3.805E-01	-0.004
		284.30		8.648E-02	1.516E+00	2.522E+00	1.636E-01	0.034
		364.48	*	-6.412E-02	1.224E-01	1.939E-01	1.225E-02	-0.331
		636.97		-7.261E-01	1.889E+00	2.918E+00	2.226E-01	-0.249
		722.89		4.400E+00	9.335E+00	1.425E+01	1.047E+00	0.309
TE-132		49.72		-3.503E+00	3.898E+00	5.324E+00	4.784E-01	-0.658
		111.76		-7.485E+00	2.272E+01	3.608E+01	4.357E+00	-0.207
		116.30		8.062E+00	2.191E+01	3.573E+01	4.461E+00	0.226
		228.16	*	-3.365E-01	5.814E-01	9.411E-01	1.348E-01	-0.358
BA-133		53.15		5.117E-01	1.008E+00	1.677E+00	1.125E-01	0.305
		79.62		3.010E+00	1.177E+00	1.720E+00	2.542E-01	1.749
		81.00		-1.227E-01	9.928E-02	1.062E-01	1.645E-02	-1.155
		276.40		3.398E-01	4.630E-01	7.283E-01	9.465E-02	0.467
		302.84		2.436E-01	1.753E-01	2.772E-01	3.241E-02	0.879
		356.01	*	-1.100E-02	5.778E-02	8.086E-02	9.304E-03	-0.136
		383.85		-8.380E-02	3.723E-01	6.016E-01	6.435E-02	-0.139
I-133	+	510.53		7.219E-01	3.723E-01	Half-Life too short		
		529.87	*	-3.176E-03	3.723E-01	Half-Life too short		
		706.58		-7.914E-02	3.723E-01	Half-Life too short		
		856.28		2.350E-01	3.723E-01	Half-Life too short		
		875.33		6.783E-02	3.723E-01	Half-Life too short		
		1236.41		7.037E-02	3.723E-01	Half-Life too short		
		1298.22		-2.446E-02	3.723E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		475.35		3.777E-01	2.441E+00	4.018E+00	2.457E-01	0.094
	+	563.23		8.327E-01	6.002E-01	8.245E-01	5.619E-02	1.010
		569.32		9.463E-01	3.291E-01	6.021E-01	4.151E-02	1.572
		604.70		3.563E-03	4.719E-02	6.611E-02	4.595E-03	0.054
		795.84	*	7.015E-02	6.573E-02	1.187E-01	8.785E-03	0.591
		801.93		-4.385E-01	5.479E-01	8.402E-01	6.204E-02	-0.522
		1038.57		-3.781E+00	5.640E+00	8.571E+00	5.667E-01	-0.441
		1167.94		1.668E-01	3.873E+00	6.347E+00	3.625E-01	0.026
		1365.15		-6.143E-01	1.680E+00	2.552E+00	1.678E-01	-0.241
CS-135		268.24	*	2.359E-01	2.021E-01	3.142E-01	2.444E-02	0.751
I-135		288.45		9.895E+08	2.021E-01	Half-Life too short		
		417.63		-2.908E+08	2.021E-01	Half-Life too short		
		546.56		-1.462E+09	2.021E-01	Half-Life too short		
		836.80		3.321E+08	2.021E-01	Half-Life too short		
		1038.76		-1.184E+09	2.021E-01	Half-Life too short		
		1124.00		7.294E+09	2.021E-01	Half-Life too short		
		1131.51		-2.839E+08	2.021E-01	Half-Life too short		
		1260.41	*	-9.902E+07	2.021E-01	Half-Life too short		
		1457.56		6.462E+10	2.021E-01	Half-Life too short		
		1678.03		1.112E+08	2.021E-01	Half-Life too short		
		1706.46		-4.992E+08	2.021E-01	Half-Life too short		
		1791.20		1.665E+09	2.021E-01	Half-Life too short		
CS-136		66.91		-2.036E-01	4.572E-01	6.713E-01	9.876E-02	-0.303
	+	86.29		2.158E+00	1.179E+00	1.574E+00	1.977E-01	1.371
		153.22		-1.148E-02	6.578E-01	1.050E+00	9.418E-02	-0.011
		163.89		2.852E-01	9.883E-01	1.685E+00	1.297E-01	0.169
		176.55		-2.927E-01	3.638E-01	5.914E-01	4.016E-02	-0.495
		273.65		-9.046E-01	5.879E-01	7.493E-01	5.023E-02	-1.207
		340.57		6.387E-01	1.660E-01	3.136E-01	1.927E-02	2.037
		818.51		-1.770E-02	9.542E-02	1.557E-01	1.140E-02	-0.114
		1048.07	*	7.705E-03	1.481E-01	2.444E-01	1.719E-02	0.032
		1235.34		3.363E-01	9.621E-01	1.608E+00	1.607E-01	0.209
BA-137M		661.65	*	6.488E-03	4.788E-02	8.120E-02	5.800E-03	0.080
CS-137		661.65	*	6.859E-03	5.061E-02	8.584E-02	6.149E-03	0.080
CE-139		165.85	*	2.732E-03	2.858E-02	4.835E-02	2.930E-03	0.057
BA-140		162.64		1.116E-01	6.935E-01	1.177E+00	8.459E-02	0.095
		304.84		-2.757E-01	1.506E+00	2.124E+00	5.800E-01	-0.130
		423.70		1.528E+00	2.308E+00	3.861E+00	1.226E+00	0.396
		537.32	*	-1.941E-02	3.457E-01	5.569E-01	1.819E-01	-0.035
LA-140		328.77		5.420E-01	3.377E-01	6.015E-01	3.921E-02	0.901
		432.53		8.823E-01	2.258E+00	3.799E+00	2.420E-01	0.232
		487.03		3.207E-02	1.618E-01	2.673E-01	1.851E-02	0.120
		751.79		-4.885E-01	2.141E+00	3.497E+00	2.933E-01	-0.140
		815.85		-1.926E-01	4.205E-01	6.671E-01	5.646E-02	-0.289
		867.82		-1.108E+00	2.020E+00	2.622E+00	2.038E-01	-0.423
		919.63		-2.022E+00	3.617E+00	5.276E+00	4.991E-01	-0.383
		925.24		1.019E+00	1.478E+00	2.609E+00	2.018E-01	0.391
		1596.49	*	9.722E-03	1.225E-01	2.067E-01	1.225E-02	0.047
CE-141		145.44	*	5.502E-02	6.474E-02	1.069E-01	9.664E-03	0.515

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-143		57.37		-1.880E-04	6.474E-02	Half-Life too short		
		231.56		-4.067E-04	6.474E-02	Half-Life too short		
		293.26	*	4.048E-04	6.474E-02	Half-Life too short		
	+	350.59		1.559E-02	6.474E-02	Half-Life too short		
		490.36		5.722E-04	6.474E-02	Half-Life too short		
		664.57		4.569E-04	6.474E-02	Half-Life too short		
		721.93		3.782E-04	6.474E-02	Half-Life too short		
CE-144		80.11		9.476E-01	1.692E+00	2.459E+00	1.924E-01	0.385
		133.54	*	-1.026E-01	2.179E-01	3.415E-01	5.652E-02	-0.300
PM-144		476.78		-7.000E-02	9.067E-02	1.363E-01	9.837E-03	-0.514
		618.01		-1.493E-04	4.494E-02	7.225E-02	5.256E-03	-0.002
		696.49	*	2.872E-02	4.759E-02	8.333E-02	6.033E-03	0.345
		778.57		-1.330E+00	3.077E+00	4.914E+00	3.604E-01	-0.271
PR-144		696.49	*	1.945E+00	3.223E+00	5.643E+00	4.084E-01	0.345
		1489.15		-3.899E+00	1.558E+01	2.492E+01	1.498E+00	-0.156
PM-146		453.90	*	2.317E-02	5.392E-02	9.069E-02	7.907E-03	0.255
		633.02		7.861E-01	1.961E+00	3.229E+00	1.196E+00	0.243
		735.90		-2.602E-01	2.548E-01	3.008E-01	8.493E-02	-0.865
		747.13		6.989E-03	1.194E-01	2.003E-01	2.660E-02	0.035
ND-147	+	91.11		2.832E-01	2.033E-01	4.016E-01	3.713E-02	0.705
		319.41		-2.159E+00	3.439E+00	5.452E+00	3.190E-01	-0.396
		439.89		7.107E+00	6.527E+00	1.150E+01	6.698E-01	0.618
		531.02	*	-4.697E-01	7.083E-01	1.077E+00	1.491E-01	-0.436
PM-149		285.90	*	-1.116E+02	7.627E+01	1.132E+02	1.607E+01	-0.986
EU-152		121.78		-3.555E-02	7.174E-02	1.126E-01	1.405E-02	-0.316
		244.69		5.291E-01	4.216E-01	6.585E-01	4.038E-02	0.804
		344.27	*	-3.407E-03	1.105E-01	1.818E-01	1.182E-02	-0.019
		443.98		-4.443E-01	1.220E+00	1.935E+00	1.134E-01	-0.230
		778.89		-1.085E-01	3.601E-01	5.831E-01	4.275E-02	-0.186
		867.32		-4.481E-01	1.224E+00	1.638E+00	1.185E-01	-0.274
		964.01		6.849E-01	4.948E-01	8.143E-01	5.666E-02	0.841
		1085.78		-6.019E-01	6.418E-01	9.492E-01	6.006E-02	-0.634
		1112.02		2.092E-02	5.065E-01	7.936E-01	4.879E-02	0.026
		1407.95		2.550E-01	2.668E-01	4.892E-01	2.950E-02	0.521
GD-153		69.67		9.291E-02	1.109E+00	1.585E+00	1.164E-01	0.059
		83.37		-7.838E+00	1.789E+01	1.754E+01	1.404E+00	-0.447
		97.43	*	1.592E-02	7.918E-02	1.129E-01	1.022E-02	0.141
		103.18		-1.104E-01	9.988E-02	1.533E-01	1.467E-02	-0.720
EU-154		123.07		-3.178E-02	4.976E-02	7.736E-02	1.052E-02	-0.411
		247.94		-6.253E-02	4.276E-01	6.417E-01	6.247E-02	-0.097
		591.81		3.479E-01	8.808E-01	1.429E+00	1.492E-01	0.243
		723.30		2.376E-02	2.634E-01	3.839E-01	3.203E-02	0.062
		756.87		-9.209E-02	1.055E+00	1.746E+00	1.935E-01	-0.053
		873.19		9.637E-02	3.782E-01	6.438E-01	7.277E-02	0.150
		996.32		-1.228E-01	5.723E-01	9.217E-01	1.564E-01	-0.133
		1004.76		4.374E-02	3.219E-01	5.366E-01	5.556E-02	0.082
		1274.45	*	1.814E-01	2.046E-01	3.604E-01	3.390E-02	0.503
EU-155		48.70		-1.001E-01	5.599E-01	7.968E-01	5.201E-02	-0.126
		60.01		-1.867E-01	2.133E+00	3.472E+00	2.452E-01	-0.054

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.54		2.105E-01	1.133E-01	1.525E-01	1.263E-02	1.381
		105.31	*	1.413E-01	9.937E-02	1.676E-01	1.652E-02	0.843
TB-160	+	86.79		5.569E-01	2.996E-01	4.019E-01	3.299E-02	1.386
		197.04		3.260E-01	5.646E-01	9.692E-01	5.995E-02	0.336
		215.65		3.593E-01	8.201E-01	1.281E+00	7.952E-02	0.281
	+	298.57		2.285E-01	1.625E-01	2.402E-01	1.409E-02	0.951
		879.36	*	-7.121E-02	2.036E-01	3.258E-01	2.348E-02	-0.219
		962.29		9.747E-01	8.597E-01	1.426E+00	9.934E-02	0.683
		966.15		9.756E-01	4.245E-01	7.236E-01	5.029E-02	1.348
		1177.93		-2.487E-01	5.785E-01	9.045E-01	5.137E-02	-0.275
		1271.85		-4.907E-01	1.162E+00	1.800E+00	1.061E-01	-0.273
HO-166M		80.57		-1.766E-01	2.383E-01	2.991E-01	2.348E-02	-0.590
		184.41		6.549E-02	4.478E-02	6.941E-02	4.264E-03	0.943
		280.46		1.188E-02	9.895E-02	1.652E-01	9.651E-03	0.072
		410.95		1.767E-01	3.683E-01	5.439E-01	3.026E-02	0.325
		711.68	*	3.563E-02	8.049E-02	1.396E-01	1.015E-02	0.255
		752.31		7.761E-02	3.470E-01	5.911E-01	4.327E-02	0.131
		810.29		-3.099E-02	8.079E-02	1.293E-01	9.465E-03	-0.240
TM-171		51.35		3.463E+00	8.610E+00	1.259E+01	8.341E-01	0.275
		52.39		3.694E+00	4.313E+00	7.030E+00	4.690E-01	0.525
		59.40		-2.722E+00	1.109E+01	1.796E+01	1.266E+00	-0.152
		66.72	*	-1.118E+01	1.754E+01	2.560E+01	1.853E+00	-0.437
LU-176	+	88.36		4.148E-01	2.231E-01	3.172E-01	2.637E-02	1.307
		201.83		5.912E-03	3.047E-02	5.020E-02	3.110E-03	0.118
		306.84	*	-1.033E-02	2.983E-02	4.359E-02	2.557E-03	-0.237
		401.10		6.970E+00	7.894E+00	1.370E+01	7.496E-01	0.509
LU-177		112.95		2.878E-01	1.399E+00	2.271E+00	2.389E-01	0.127
	+	208.36	*	2.120E+00	1.512E+00	1.890E+00	1.173E-01	1.122
LU-177M		52.97		2.461E-01	4.475E-01	7.456E-01	4.994E-02	0.330
		54.07		-6.653E-02	2.550E-01	4.131E-01	2.789E-02	-0.161
		61.30		6.084E-01	6.667E-01	1.116E+00	7.908E-02	0.545
		121.62		-1.837E-01	3.659E-01	5.741E-01	6.574E-02	-0.320
		147.16		-3.585E-01	6.937E-01	1.083E+00	9.390E-02	-0.331
		171.86		-1.070E-02	4.778E-01	8.037E-01	4.888E-02	-0.013
		218.09		-2.848E-01	8.902E-01	1.467E+00	9.105E-02	-0.194
	+	268.79		1.876E+00	1.271E+00	1.598E+00	9.514E-02	1.173
		319.02		-1.099E-01	2.850E-01	4.594E-01	2.687E-02	-0.239
		367.43		9.572E-01	1.089E+00	1.888E+00	1.059E-01	0.507
		413.65	*	2.090E-01	2.368E-01	3.647E-01	2.038E-02	0.573
HF-181		56.28		-4.989E-01	3.258E-01	5.012E-01	3.441E-02	-0.995
		57.53		-1.395E-01	1.865E-01	2.966E-01	2.057E-02	-0.470
		65.20		1.236E-01	4.958E-01	8.064E-01	5.797E-02	0.153
		133.02		-7.285E-02	6.991E-02	1.066E-01	1.103E-02	-0.683
		136.25		1.457E-01	4.714E-01	7.647E-01	7.635E-02	0.190
		345.85		-8.924E-02	2.099E-01	3.358E-01	1.932E-02	-0.266
		482.03	*	1.406E-02	5.384E-02	8.931E-02	5.508E-03	0.157
W-181		56.28		-1.973E-01	1.290E-01	1.985E-01	1.362E-02	-0.994
		57.53		-5.531E-02	7.389E-02	1.175E-01	8.147E-03	-0.471
		65.20	*	4.856E-02	1.949E-01	3.169E-01	2.278E-02	0.153

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		67.75		-7.823E-03	7.277E-02	1.032E-01	7.507E-03	-0.076
		100.10		2.207E-01	1.776E-01	2.655E-01	2.466E-02	0.831
		152.43		3.638E-02	3.510E-01	5.632E-01	4.494E-02	0.065
		222.10		1.238E-01	3.580E-01	6.077E-01	3.770E-02	0.204
		1001.68		1.475E+00	3.031E+00	5.215E+00	3.546E-01	0.283
	+	1121.28		4.282E-01	3.192E-01	4.234E-01	2.574E-02	1.011
		1189.05		-4.274E-01	4.935E-01	7.355E-01	4.197E-02	-0.581
		1221.42	*	1.225E-01	3.574E-01	5.976E-01	3.456E-02	0.205
		1230.97		-1.275E-01	8.387E-01	1.348E+00	7.824E-02	-0.095
RE-183		57.98		-3.688E-02	7.522E-02	1.208E-01	8.406E-03	-0.305
		59.32		-1.182E-02	4.501E-02	7.286E-02	5.130E-03	-0.162
		67.20		-5.281E-02	1.305E-01	1.818E-01	1.319E-02	-0.290
		162.32	*	-1.156E-02	1.081E-01	1.815E-01	1.195E-02	-0.064
	+	208.81		2.104E+00	1.500E+00	1.880E+00	1.167E-01	1.119
		291.72		1.062E+00	1.162E+00	1.786E+00	1.047E-01	0.595
RE-184		57.98		-1.367E-01	2.789E-01	4.477E-01	3.117E-02	-0.305
		59.32		-4.380E-02	1.667E-01	2.699E-01	1.901E-02	-0.162
		67.20		-1.957E-01	4.835E-01	6.738E-01	4.887E-02	-0.290
		161.27		-6.276E-02	3.536E-01	5.922E-01	3.992E-02	-0.106
		216.55		-3.732E-02	2.790E-01	4.517E-01	2.804E-02	-0.083
		252.85	*	-2.406E-01	2.517E-01	3.974E-01	2.418E-02	-0.605
		318.01		-9.380E-02	4.983E-01	8.137E-01	4.761E-02	-0.115
		792.07		-5.158E-01	1.461E+00	2.359E+00	1.729E-01	-0.219
		903.28		-4.895E-01	1.512E+00	2.038E+00	1.456E-01	-0.240
		920.93		-7.494E-01	6.052E-01	8.519E-01	6.047E-02	-0.880
OS-185		59.72		-2.504E-02	1.237E-01	2.006E-01	1.415E-02	-0.125
		61.14		5.752E-02	7.221E-02	1.205E-01	8.538E-03	0.477
		69.30		3.752E-02	1.966E-01	2.823E-01	2.069E-02	0.133
		592.07		9.538E-02	3.581E+00	5.784E+00	3.970E-01	0.016
		646.12	*	5.061E-03	5.549E-02	8.986E-02	6.373E-03	0.056
		717.42		-3.119E-01	1.173E+00	1.914E+00	1.393E-01	-0.163
		874.81		5.289E-01	7.586E-01	1.346E+00	9.715E-02	0.393
		880.27		2.005E-01	1.123E+00	1.892E+00	1.363E-01	0.106
RE-188		155.03	*	5.642E-02	1.796E-01	2.906E-01	2.216E-02	0.194
		477.96		-1.577E+00	4.113E+00	6.397E+00	3.925E-01	-0.247
		633.10		1.651E+00	3.888E+00	6.481E+00	4.565E-01	0.255
W-188		63.58		1.121E+01	2.579E+01	4.256E+01	3.040E+00	0.263
		227.08		2.726E-01	1.335E+01	2.232E+01	1.383E+00	0.012
		290.67	*	6.439E+00	9.148E+00	1.387E+01	8.130E-01	0.464
IR-192	+	295.96		8.276E-01	2.177E-01	2.991E-01	1.781E-02	2.767
		308.46		-6.701E-02	1.026E-01	1.625E-01	9.638E-03	-0.412
		316.51	*	9.225E-03	3.775E-02	6.330E-02	3.724E-03	0.146
		468.07		-8.653E-02	9.085E-02	1.373E-01	9.488E-03	-0.630
		604.41		6.138E-02	6.334E-01	8.899E-01	1.064E-01	0.069
		612.46		4.017E+00	1.354E+00	2.313E+00	1.965E-01	1.736
AU-195		65.12		1.417E-02	9.045E-02	1.467E-01	1.054E-02	0.097
		66.83		-2.606E-02	5.761E-02	8.472E-02	6.134E-03	-0.308
	+	75.70		1.038E+00	2.229E-01	3.463E-01	2.632E-02	2.996
		98.88	*	1.931E-01	2.281E-01	3.352E-01	3.077E-02	0.576

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		129.76		3.464E+00	2.958E+00	4.927E+00	5.275E-01	0.703
TL-200		367.94	*	2.176E-04	2.958E+00	Half-Life too short		
		579.30		1.998E-03	2.958E+00	Half-Life too short		
		828.27		1.364E-03	2.958E+00	Half-Life too short		
		1205.75		4.168E-04	2.958E+00	Half-Life too short		
TL-201		68.90		9.584E-01	2.476E+00	3.584E+00	2.621E-01	0.267
		70.82		8.955E-02	1.500E+00	2.140E+00	1.581E-01	0.042
		80.30		-1.088E+00	3.415E+00	4.428E+00	3.469E-01	-0.246
		135.34		1.085E+01	2.072E+01	3.390E+01	3.419E+00	0.320
		167.43	*	-1.682E+00	5.313E+00	8.833E+00	5.350E-01	-0.190
TL-202		68.90		1.033E-01	2.669E-01	3.862E-01	2.824E-02	0.267
		70.82		9.623E-03	1.612E-01	2.300E-01	1.699E-02	0.042
		80.30		-1.170E-01	3.671E-01	4.760E-01	3.729E-02	-0.246
		439.56	*	8.995E-02	7.708E-02	1.366E-01	7.950E-03	0.659
HG-203		70.83		4.578E-02	7.303E-01	1.042E+00	1.340E-01	0.044
		72.87		2.390E+00	5.070E-01	7.662E-01	9.565E-02	3.119
		82.60		-9.077E-01	1.323E+00	1.267E+00	1.690E-01	-0.717
		279.20	*	4.967E-02	4.589E-02	8.009E-02	4.962E-03	0.620
BI-207		72.80		6.677E-01	1.308E-01	2.248E-01	1.679E-02	2.970
	+	74.97		5.778E-01	1.241E-01	1.736E-01	1.313E-02	3.329
		84.90		4.004E-01	1.689E-01	2.586E-01	2.093E-02	1.548
		569.67		1.221E-01	5.090E-02	9.251E-02	6.241E-03	1.320
		1063.62	*	1.401E-02	8.373E-02	1.395E-01	9.025E-03	0.100
		1770.23		-2.064E-01	7.727E-01	9.976E-01	5.637E-02	-0.207
TL-207		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022
PO-209		260.50		-8.929E+00	1.067E+01	1.695E+01	1.021E+00	-0.527
		262.80		-1.546E+01	3.029E+01	4.761E+01	2.860E+00	-0.325
		896.60	*	6.425E+00	9.736E+00	1.720E+01	1.231E+00	0.373
PB-211		404.84	*	2.169E-01	1.339E+00	1.917E+00	1.195E+00	0.113
		427.08		-1.796E+00	2.884E+00	4.140E+00	2.559E+00	-0.434
		831.96		-6.086E-01	1.752E+00	2.746E+00	1.716E+00	-0.222
BI-212	+	727.18	*	1.122E+00	7.036E-01	8.218E-01	7.307E-02	1.366
		785.46		6.702E-01	2.418E+00	4.124E+00	3.023E-01	0.163
		1620.62		1.096E+00	1.971E+00	3.556E+00	2.097E-01	0.308
PO-215		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022
RN-219	+	271.23		5.660E-01	3.849E-01	5.100E-01	4.180E-02	1.110
		401.81	*	4.753E-01	5.006E-01	8.656E-01	1.166E-01	0.549
RN-220		549.76	*	1.556E+01	3.317E+01	5.582E+01	3.702E+00	0.279
RA-223		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022
AC-227		79.80		1.971E+00	1.402E+00	2.020E+00	4.281E-01	0.976
		236.00		1.652E+00	3.804E-01	6.020E-01	6.419E-02	2.744
		256.20	*	2.854E-01	4.113E-01	7.054E-01	9.925E-02	0.405
		286.10		-2.704E+00	1.780E+00	2.653E+00	3.074E-01	-1.019
	+	299.80		2.939E+00	2.138E+00	2.929E+00	4.777E-01	1.004
		304.40		5.228E-01	2.300E+00	3.363E+00	5.824E-01	0.155
		334.20		-1.609E+00	3.193E+00	4.351E+00	7.978E-01	-0.370
TH-227		79.80		1.971E+00	1.404E+00	2.020E+00	4.338E-01	0.976
	+	94.00		6.319E+00	2.965E+00	3.071E+00	6.705E-01	2.058
		236.00		1.652E+00	3.705E-01	6.020E-01	5.598E-02	2.744
		256.20	*	2.854E-01	4.122E-01	7.054E-01	1.199E-01	0.405
		286.10		-2.704E+00	3.226E+00	2.653E+00	2.657E+00	-1.019
	+	299.80		2.939E+00	2.138E+00	2.929E+00	4.777E-01	1.004
		304.40		5.228E-01	2.300E+00	3.363E+00	5.824E-01	0.155
		334.20		-1.609E+00	3.193E+00	4.351E+00	7.978E-01	-0.370
TH-229		85.43		6.579E-01	1.771E-01	2.763E-01	2.246E-02	2.381
	+	88.47		2.388E-01	1.284E-01	1.819E-01	1.514E-02	1.312
		100.00		2.366E-01	1.856E-01	2.779E-01	2.578E-02	0.851
		193.63	*	-8.417E-02	5.510E-01	8.672E-01	5.356E-02	-0.097
		210.97		1.321E+00	9.138E-01	1.439E+00	8.930E-02	0.918
PA-231		283.67	*	7.009E-01	1.681E+00	2.847E+00	3.929E-01	0.246
	+	301.29		1.176E+00	8.427E-01	1.192E+00	1.250E-01	0.987
TH-231		81.07		-2.784E-01	2.163E-01	2.339E-01	1.842E-02	-1.190
		83.78		-4.790E-02	1.535E-01	1.521E-01	1.222E-02	-0.315
		94.90		3.505E-01	2.348E-01	3.516E-01	3.107E-02	0.997
		122.32		-2.647E-01	1.684E+00	2.687E+00	3.215E-01	-0.099
		144.24		4.826E-01	7.220E-01	1.174E+00	1.175E-01	0.411
		154.21		-1.020E-01	4.238E-01	6.694E-01	5.814E-02	-0.152
	+	269.46		4.411E-01	2.990E-01	3.861E-01	2.395E-02	1.143
		323.87	*	-9.351E-01	7.959E-01	1.197E+00	1.979E-01	-0.781
	+	338.28		7.675E+00	1.880E+00	2.905E+00	3.058E-01	2.642
		445.03		-9.974E-02	2.785E+00	4.531E+00	4.670E-01	-0.022

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		3.421E+00	4.517E+00	5.622E+00	4.528E-01	0.608
	+	92.29		5.242E+00	2.225E+00	2.677E+00	2.308E-01	1.958
		95.87	*	-5.421E-01	9.145E-01	1.251E+00	1.116E-01	-0.433
		108.00		-8.187E-01	1.633E+00	2.576E+00	2.583E-01	-0.318
PA-233	+	75.28		1.686E+01	4.207E+00	5.337E+00	7.894E-01	3.159
	+	86.59		3.423E+00	2.037E+00	2.476E+00	6.606E-01	1.383
	+	300.12		8.195E-01	5.914E-01	8.182E-01	1.102E-01	1.001
		311.98	*	-1.614E-02	7.073E-02	1.153E-01	7.166E-03	-0.140
		340.50		3.419E+00	1.145E+00	1.628E+00	3.737E-01	2.101
		398.62		-2.653E+00	2.600E+00	3.795E+00	9.783E-01	-0.699
		415.76		-2.750E-01	2.099E+00	3.306E+00	6.787E-01	-0.083
PA-234		63.00		4.015E-01	7.507E-01	1.240E+00	1.826E-01	0.324
		94.67		3.309E-01	1.732E-01	2.586E-01	3.243E-02	1.279
		98.44		1.208E-01	1.132E-01	1.373E-01	7.671E-02	0.880
		99.86		8.146E-01	4.622E-01	7.054E-01	6.536E-02	1.155
		111.00		8.226E-02	1.735E-01	2.842E-01	3.796E-02	0.289
		131.20		3.468E-02	1.117E-01	1.813E-01	1.913E-02	0.191
		152.70		2.137E-02	3.404E-01	5.452E-01	9.113E-02	0.039
	+	186.00		5.891E+00	2.809E+00	2.599E+00	7.960E-01	2.267
		226.40		9.539E-03	4.277E-01	7.153E-01	8.415E-02	0.013
		227.20		-1.117E-01	4.580E-01	7.563E-01	4.685E-02	-0.148
		248.90		6.481E-01	8.973E-01	1.496E+00	3.227E-01	0.433
		293.70		4.227E+00	1.249E+00	1.843E+00	2.969E-01	2.293
		369.80		7.289E-02	1.077E+00	1.777E+00	3.690E-01	0.041
		568.70		4.898E+00	1.764E+00	3.130E+00	2.110E-01	1.565
		569.50		1.118E+00	4.542E-01	8.274E-01	5.581E-02	1.351
		574.00		-4.461E+00	2.427E+00	3.172E+00	2.147E-01	-1.406
		699.00		-1.082E+00	1.045E+00	1.574E+00	2.911E-01	-0.687
		706.10		-1.965E-01	1.468E+00	2.426E+00	1.076E+00	-0.081
		733.00		-1.756E-01	5.472E-01	7.503E-01	1.630E-01	-0.234
		742.81		5.519E-01	1.900E+00	3.192E+00	2.141E+00	0.173
		796.30		1.262E+00	1.320E+00	2.297E+00	6.126E-01	0.550
		805.60		1.177E+00	1.419E+00	2.461E+00	7.458E-01	0.478
		819.60		2.814E-01	1.644E+00	2.773E+00	1.047E+00	0.101
		826.30		-1.196E+00	1.244E+00	1.664E+00	7.404E-01	-0.719
		831.60		-4.253E-01	8.909E-01	1.399E+00	4.125E-01	-0.304
		876.40		1.256E-01	1.142E+00	1.901E+00	1.952E+00	0.066
		880.51		5.680E-02	4.077E-01	6.843E-01	4.929E-02	0.083
		883.24		1.761E-01	4.486E-01	7.434E-01	4.985E-01	0.237
		899.00		2.967E-01	1.116E+00	1.886E+00	8.194E-01	0.157
		925.00		1.038E+00	1.616E+00	2.843E+00	2.015E-01	0.365
		926.50		1.465E-01	2.527E-01	4.370E-01	1.084E-01	0.335
		946.00	*	5.747E-02	4.379E-01	7.319E-01	1.324E-01	0.079
		949.00		2.292E-02	6.594E-01	1.092E+00	7.654E-02	0.021
		980.50		-4.979E-02	1.086E+00	1.781E+00	1.227E-01	-0.028
		1394.10		-7.066E-01	1.713E+00	2.473E+00	1.603E+00	-0.286
PA-234M		766.41		1.860E+01	3.135E+01	4.320E+01	3.306E+01	0.431
		1001.03	*	5.272E+00	9.816E+00	1.695E+01	1.669E+00	0.311
TH-234		63.29	*	2.337E-01	6.483E-01	1.066E+00	1.848E-01	0.219

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		1.635E+00	7.411E-01	8.305E-01	1.502E-01	1.969
U-235	+	89.95		1.206E+00	9.353E-01	1.585E+00	4.882E-01	0.761
	+	93.35		1.966E+00	9.854E-01	9.723E-01	2.728E-01	2.022
		105.00		1.194E+00	1.037E+00	1.643E+00	4.961E-01	0.726
		143.76	*	1.439E-01	2.238E-01	3.619E-01	6.422E-02	0.398
		163.35		1.196E-01	4.637E-01	7.889E-01	1.435E-01	0.152
	+	185.71		2.182E-01	8.085E-02	9.583E-02	5.892E-03	2.277
		205.31		3.097E-01	6.105E-01	9.139E-01	1.656E-01	0.339
NP-236		94.67		2.522E-01	1.295E-01	1.963E-01	1.730E-02	1.285
		98.44		9.135E-02	6.924E-02	1.038E-01	9.487E-03	0.880
		111.00		6.222E-02	1.311E-01	2.150E-01	2.220E-02	0.289
		160.31	*	-2.803E-02	8.495E-02	1.334E-01	9.179E-03	-0.210
U-238		63.29	*	2.337E-01	6.483E-01	1.066E+00	1.848E-01	0.219
	+	92.38		1.635E+00	6.940E-01	8.305E-01	7.167E-02	1.969
NP-239		99.55		2.491E-01	1.562E-01	2.368E-01	2.188E-02	1.052
		117.00	*	5.651E-02	1.891E-01	3.078E-01	3.370E-02	0.184
	+	209.75		1.677E+00	1.196E+00	1.492E+00	9.262E-02	1.124
		228.18		-1.369E-01	2.375E-01	3.856E-01	2.388E-02	-0.355
		277.60		5.914E-02	2.157E-01	3.536E-01	2.072E-02	0.167
		334.30		-9.298E-01	1.802E+00	2.462E+00	1.429E-01	-0.378
AM-241		59.54	*	-1.397E-02	6.493E-02	1.053E-01	8.216E-03	-0.133
CM-243		99.55		2.563E-01	1.608E-01	2.436E-01	2.251E-02	1.052
		103.76	*	1.010E-02	9.030E-02	1.463E-01	1.408E-02	0.069
		117.00		5.814E-02	1.946E-01	3.166E-01	3.466E-02	0.184
	+	209.75		1.653E+00	1.179E+00	1.471E+00	9.130E-02	1.124
		228.18		-1.383E-01	2.400E-01	3.896E-01	2.413E-02	-0.355
		277.60		5.962E-02	2.174E-01	3.565E-01	2.088E-02	0.167
CM-247		278.00		3.099E-01	8.662E-01	1.463E+00	8.563E-02	0.212
		287.40		-9.128E-01	1.496E+00	2.246E+00	1.315E-01	-0.406
		402.60	*	3.260E-02	4.501E-02	7.554E-02	4.144E-03	0.432
CF-249		252.85		-9.067E-01	9.486E-01	1.498E+00	9.111E-02	-0.605
		333.44		-2.440E-01	2.396E-01	3.125E-01	1.815E-02	-0.781
		387.95	*	-1.479E-02	4.996E-02	8.033E-02	4.355E-03	-0.184
CF-251		176.60	*	-1.370E-01	1.340E-01	2.158E-01	1.318E-02	-0.635
		227.00		2.783E-02	4.058E-01	6.800E-01	4.213E-02	0.041
		285.00		-7.496E-01	1.959E+00	3.180E+00	1.861E-01	-0.236

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088    *
* Acquisition date :  6-JUL-2009 13:26:00 Detector SN#     :               *
* Detector ID        : GAM21               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:09.58      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 22-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201870088          Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.695E+01	3.388E+00	6.903E-01	0.000E+00
CD-109	1.776E+00	9.365E-01	1.036E+00	0.000E+00
SN-126	1.749E-01	9.219E-02	1.018E-01	0.000E+00
TL-208	5.532E-01	1.068E-01	7.586E-02	0.000E+00
BI-210	7.869E-01	7.857E-01	9.223E-01	0.000E+00
PB-210	7.869E-01	7.857E-01	9.223E-01	0.000E+00
PO-210	7.869E-01	7.851E-01	9.223E-01	0.000E+00
BI-211	3.351E+00	4.601E-01	3.891E-01	0.000E+00
PB-212	1.242E+00	1.619E-01	1.199E-01	0.000E+00
PO-212	1.242E+00	1.619E-01	1.199E-01	0.000E+00
BI-214	1.105E+00	2.075E-01	1.460E-01	0.000E+00
PB-214	1.166E+00	1.708E-01	1.357E-01	0.000E+00
PO-214	1.166E+00	1.708E-01	1.357E-01	0.000E+00
PO-216	1.242E+00	1.619E-01	1.199E-01	0.000E+00
PO-218	1.166E+00	1.708E-01	1.357E-01	0.000E+00
RA-224	1.869E+00	1.031E+00	1.766E+00	0.000E+00
RA-226	1.105E+00	2.075E-01	1.460E-01	0.000E+00
AC-228	1.852E+00	3.840E-01	2.983E-01	0.000E+00
RA-228	1.852E+00	3.840E-01	2.983E-01	0.000E+00
TH-228	1.242E+00	1.619E-01	1.199E-01	0.000E+00
TH-230	1.105E+00	2.075E-01	1.460E-01	0.000E+00
TH-232	1.852E+00	3.840E-01	2.983E-01	0.000E+00
U-234	1.105E+00	2.075E-01	1.460E-01	0.000E+00
NP-237	5.135E-01	2.899E-01	3.149E-01	0.000E+00
AM-243	3.219E-01	6.776E-02	5.697E-02	0.000E+00
ANH-511	1.653E-01	7.966E-02	6.081E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-2.641E-01	4.215E-01	6.669E-01	0.000E+00	NOT IDENT.

NA-22	6.557E-02	7.164E-02	1.294E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	3.386E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.051E-02	3.576E-02	5.532E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.406E-02	6.434E-02	0.000E+00	FAIL ABUN
SC-46	-1.588E-02	5.267E-02	8.683E-02	0.000E+00	FAIL ABUN
V-48	5.992E-02	9.791E-02	1.752E-01	0.000E+00	NOT IDENT.
CR-51	-4.038E-02	3.912E-01	6.698E-01	0.000E+00	NOT IDENT.
MN-52	-3.840E-02	2.632E-01	4.216E-01	0.000E+00	NOT IDENT.
MN-54	-1.488E-02	5.475E-02	9.138E-02	0.000E+00	NOT IDENT.
CO-56	3.235E-02	5.393E-02	9.694E-02	0.000E+00	NOT IDENT.
CO-57	-6.008E-03	2.388E-02	4.012E-02	0.000E+00	NOT IDENT.
CO-58	-3.180E-02	5.385E-02	8.700E-02	0.000E+00	NOT IDENT.
FE-59	-8.393E-02	1.329E-01	2.080E-01	0.000E+00	NOT IDENT.
CO-60	4.829E-02	6.042E-02	1.095E-01	0.000E+00	NOT IDENT.
ZN-65	1.213E-02	1.624E-01	2.356E-01	0.000E+00	NOT IDENT.
GE-68	-1.613E+00	1.849E+00	2.815E+00	0.000E+00	NOT IDENT.
AS-73	1.299E-01	2.304E-01	4.107E-01	0.000E+00	NOT IDENT.
AS-74	4.065E-02	1.196E-01	2.047E-01	0.000E+00	NOT IDENT.
SE-75	4.877E-02	5.239E-02	8.447E-02	0.000E+00	NOT IDENT.
BR-77	3.035E+00	9.529E+00	1.642E+01	0.000E+00	FAIL ABUN
SR-82	-1.496E-01	5.021E-01	8.387E-01	0.000E+00	NOT IDENT.
RB-83	4.499E-02	8.402E-02	1.473E-01	0.000E+00	NOT IDENT.
RB-84	-3.621E-03	9.934E-02	1.685E-01	0.000E+00	NOT IDENT.
KR-85	1.758E+01	1.109E+01	1.840E+01	0.000E+00	NOT IDENT.
SR-85	8.913E-02	5.625E-02	9.330E-02	0.000E+00	NOT IDENT.
RB-86	-9.767E-01	1.131E+00	1.724E+00	0.000E+00	NOT IDENT.
Y-88	4.953E-02	5.407E-02	1.057E-01	0.000E+00	NOT IDENT.
ZR-88	3.692E-02	3.547E-02	6.454E-02	0.000E+00	NOT IDENT.
Y-91	7.631E+00	2.961E+01	5.047E+01	0.000E+00	NOT IDENT.
NB-94	2.511E-02	4.537E-02	8.156E-02	0.000E+00	NOT IDENT.
NB-95	7.909E-02	6.581E-02	1.101E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.659E-01	2.796E-01	0.000E+00	NOT IDENT.
ZR-95	2.710E-02	9.110E-02	1.606E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.522E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	9.490E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	6.249E+00	1.150E+01	2.068E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.128E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.570E-02	3.274E-02	5.880E-02	0.000E+00	NOT IDENT.
RH-102	-1.124E-02	3.731E-02	6.151E-02	0.000E+00	FAIL ABUN
RU-103	-2.277E-02	5.075E-02	8.219E-02	0.000E+00	FAIL ABUN
RH-106	2.491E-01	4.503E-01	7.582E-01	0.000E+00	FAIL ABUN
RU-106	2.491E-01	4.496E-01	7.582E-01	0.000E+00	FAIL ABUN
AG-108M	-2.350E-02	3.719E-02	5.984E-02	0.000E+00	NOT IDENT.
AG-110M	-3.334E-02	4.588E-02	7.472E-02	0.000E+00	NOT IDENT.
IN-111	4.262E-01	9.761E-01	1.525E+00	0.000E+00	NOT IDENT.
IN-113M	6.374E-02	5.302E-02	9.712E-02	0.000E+00	NOT IDENT.
SN-113	6.374E-02	5.302E-02	9.712E-02	0.000E+00	NOT IDENT.
IN-114M	6.853E-02	1.986E-01	3.115E-01	0.000E+00	NOT IDENT.
CD-115	6.255E+00	9.649E+00	1.705E+01	0.000E+00	NOT IDENT.
SN-117M	-1.392E-03	5.454E-02	9.159E-02	0.000E+00	NOT IDENT.
SB-122	-3.890E+00	3.052E+00	3.818E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.577E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.922E-03	2.955E-02	4.990E-02	0.000E+00	NOT IDENT.
I-124	-9.016E-01	8.615E-01	1.066E+00	0.000E+00	NOT IDENT.
SB-124	4.079E-03	9.153E-02	1.563E-01	0.000E+00	FAIL ABUN
SB-125	-9.888E-02	1.142E-01	1.815E-01	0.000E+00	NOT IDENT.
TE-125M	-1.305E+01	8.818E+00	1.396E+01	0.000E+00	NOT IDENT.
I-126	1.801E-01	2.322E-01	4.244E-01	0.000E+00	NOT IDENT.
SB-126	6.013E-02	1.939E-01	3.104E-01	0.000E+00	FAIL ABUN
SB-127	-4.788E-01	1.400E+00	2.346E+00	0.000E+00	NOT IDENT.
XE-127	1.058E-02	5.157E-02	8.354E-02	0.000E+00	NOT IDENT.
I-131	-6.412E-02	1.200E-01	1.979E-01	0.000E+00	NOT IDENT.
TE-132	-3.365E-01	5.698E-01	9.669E-01	0.000E+00	NOT IDENT.
BA-133	-1.100E-02	5.663E-02	8.254E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.353E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.015E-02	6.441E-02	1.197E-01	0.000E+00	FAIL ABUN
CS-135	2.359E-01	1.981E-01	3.220E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	6.048E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.705E-03	1.451E-01	2.455E-01	0.000E+00	FAIL ABUN
BA-137M	6.488E-03	4.692E-02	8.214E-02	0.000E+00	NOT IDENT.
CS-137	6.859E-03	4.960E-02	8.683E-02	0.000E+00	NOT IDENT.
CE-139	2.732E-03	2.801E-02	4.990E-02	0.000E+00	NOT IDENT.
BA-140	-1.941E-02	3.388E-01	5.651E-01	0.000E+00	NOT IDENT.
LA-140	9.722E-03	1.201E-01	2.063E-01	0.000E+00	NOT IDENT.
CE-141	5.502E-02	6.345E-02	1.106E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.439E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.026E-01	2.136E-01	3.535E-01	0.000E+00	NOT IDENT.
PM-144	2.872E-02	4.664E-02	8.422E-02	0.000E+00	NOT IDENT.

PR-144	1.945E+00	3.159E+00	5.704E+00	0.000E+00	NOT IDENT.
PM-146	2.317E-02	5.284E-02	9.225E-02	0.000E+00	NOT IDENT.
ND-147	-4.697E-01	6.941E-01	1.093E+00	0.000E+00	FAIL ABUN
PM-149	-1.116E+02	7.474E+01	1.160E+02	0.000E+00	NOT IDENT.
EU-152	-3.407E-03	1.083E-01	1.856E-01	0.000E+00	NOT IDENT.
GD-153	1.592E-02	7.760E-02	1.174E-01	0.000E+00	NOT IDENT.
EU-154	1.814E-01	2.005E-01	3.610E-01	0.000E+00	NOT IDENT.
EU-155	1.413E-01	9.739E-02	1.740E-01	0.000E+00	FAIL ABUN
TB-160	-7.121E-02	1.996E-01	3.281E-01	0.000E+00	FAIL ABUN
HO-166M	3.563E-02	7.888E-02	1.410E-01	0.000E+00	NOT IDENT.
TM-171	-1.118E+01	1.719E+01	2.676E+01	0.000E+00	NOT IDENT.
LU-176	-1.033E-02	2.923E-02	4.459E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.482E+00	1.944E+00	0.000E+00	FAIL ABUN
LU-177M	2.090E-01	2.321E-01	3.715E-01	0.000E+00	FAIL ABUN
HF-181	1.406E-02	5.276E-02	9.076E-02	0.000E+00	NOT IDENT.
W-181	4.856E-02	1.910E-01	3.314E-01	0.000E+00	NOT IDENT.
TA-182	1.225E-01	3.503E-01	5.990E-01	0.000E+00	FAIL ABUN
RE-183	-1.156E-02	1.059E-01	1.873E-01	0.000E+00	FAIL ABUN
RE-184	-2.406E-01	2.467E-01	4.077E-01	0.000E+00	NOT IDENT.
OS-185	5.061E-03	5.438E-02	9.093E-02	0.000E+00	NOT IDENT.
RE-188	5.642E-02	1.760E-01	3.001E-01	0.000E+00	NOT IDENT.
W-188	6.439E+00	8.965E+00	1.420E+01	0.000E+00	NOT IDENT.
IR-192	9.225E-03	3.699E-02	6.473E-02	0.000E+00	FAIL ABUN
AU-195	1.931E-01	2.235E-01	3.484E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.758E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.682E+00	5.207E+00	9.114E+00	0.000E+00	NOT IDENT.
TL-202	8.995E-02	7.553E-02	1.390E-01	0.000E+00	NOT IDENT.
HG-203	4.967E-02	4.497E-02	8.204E-02	0.000E+00	NOT IDENT.
BI-207	1.401E-02	8.205E-02	1.402E-01	0.000E+00	FAIL ABUN
TL-207	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
PO-209	6.425E+00	9.541E+00	1.732E+01	0.000E+00	NOT IDENT.
PB-211	2.169E-01	1.313E+00	1.953E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.895E-01	8.301E-01	0.000E+00	FAIL ABUN
PO-215	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
RN-219	4.753E-01	4.906E-01	8.820E-01	0.000E+00	FAIL ABUN
RN-220	1.556E+01	3.251E+01	5.662E+01	0.000E+00	NOT IDENT.
RA-223	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
AC-227	2.854E-01	4.031E-01	7.235E-01	0.000E+00	FAIL ABUN
TH-227	2.854E-01	4.040E-01	7.235E-01	0.000E+00	FAIL ABUN
TH-229	-8.417E-02	5.400E-01	8.930E-01	0.000E+00	FAIL ABUN
PA-231	7.009E-01	1.647E+00	2.915E+00	0.000E+00	FAIL ABUN
TH-231	-9.351E-01	7.800E-01	1.224E+00	0.000E+00	FAIL ABUN
U-231	-5.421E-01	8.963E-01	1.301E+00	0.000E+00	FAIL ABUN
PA-233	-1.614E-02	6.932E-02	1.179E-01	0.000E+00	FAIL ABUN
PA-234	5.747E-02	4.292E-01	7.364E-01	0.000E+00	FAIL ABUN
PA-234M	5.272E+00	9.619E+00	1.704E+01	0.000E+00	NOT IDENT.
TH-234	2.337E-01	6.353E-01	1.115E+00	0.000E+00	FAIL ABUN
U-235	1.439E-01	2.193E-01	3.743E-01	0.000E+00	FAIL ABUN
NP-236	-2.803E-02	8.325E-02	1.378E-01	0.000E+00	NOT IDENT.
U-238	2.337E-01	6.353E-01	1.115E+00	0.000E+00	FAIL ABUN
NP-239	5.651E-02	1.854E-01	3.192E-01	0.000E+00	FAIL ABUN
AM-241	-1.397E-02	6.363E-02	1.102E-01	0.000E+00	NOT IDENT.
CM-243	1.010E-02	8.849E-02	1.520E-01	0.000E+00	FAIL ABUN
CM-247	3.260E-02	4.411E-02	7.697E-02	0.000E+00	NOT IDENT.
CF-249	-1.479E-02	4.896E-02	8.189E-02	0.000E+00	NOT IDENT.
CF-251	-1.370E-01	1.313E-01	2.225E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:27:51.37

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1
Sample date       : 22-JUN-2009 12:00:00 Acquisition date : 6-JUL-2009 13:26:00.
Sample ID         : G1201870088          Sample quantity  : 1.26580E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.58  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 880723               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	968	10.67*	7.284E-01	3.695E+01	3.695E+01	9.36
CD-109	88.03	181	3.72*	8.310E+00	1.739E+00	1.776E+00	53.79
SN-126	64.28	------	9.60	8.381E+00	------	Line Not Found	------
	86.94	181	8.90	8.310E+00	7.270E-01	7.270E-01	67.31
	87.57	181	37.00*	8.310E+00	1.749E-01	1.749E-01	53.79
TL-208	277.35	------	6.80	3.917E+00	------	Line Not Found	------
	510.84	116	21.60	2.089E+00	7.652E-01	7.652E-01	49.88
	583.14	285	84.20*	1.817E+00	5.532E-01	5.532E-01	19.70
	860.37	44	12.46	1.217E+00	8.542E-01	8.542E-01	76.02
BI-210	46.50	81	4.05*	7.520E+00	7.859E-01	7.869E-01	101.89
PB-210	46.50	81	4.05*	7.520E+00	7.859E-01	7.869E-01	101.89
PO-210	46.50	81	4.05*	7.520E+00	7.859E-01	7.869E-01	101.81
BI-211	72.87	------	1.27	8.456E+00	------	Line Not Found	------
	351.07	451	12.94*	3.085E+00	3.351E+00	3.351E+00	14.01
PB-212	74.81	606	10.70	8.452E+00	1.986E+00	1.986E+00	23.42
	77.11	890	18.00	8.441E+00	1.737E+00	1.737E+00	14.02
	87.30	181	8.00	8.310E+00	8.088E-01	8.088E-01	54.72
	238.63	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.09	66	3.41	3.626E+00	1.586E+00	1.586E+00	71.39
PO-212	74.81	606	10.70	8.452E+00	1.986E+00	1.986E+00	23.42
	77.11	890	18.00	8.441E+00	1.737E+00	1.737E+00	14.02
	87.30	181	8.00	8.310E+00	8.088E-01	8.088E-01	54.72
	115.19	------	0.60	7.596E+00	------	Line Not Found	------
	238.63	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.09	66	3.41	3.626E+00	1.586E+00	1.586E+00	71.39
BI-214	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------	Line Not Found	------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------	Line Not Found	------
	1377.67	------	4.11	7.701E-01	------	Line Not Found	------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	606	6.21	8.452E+00	3.421E+00	3.421E+00	22.72
	77.11	890	10.50	8.441E+00	2.978E+00	2.978E+00	15.96
	87.30	181	4.67	8.310E+00	1.385E+00	1.386E+00	54.34
	241.98	111	7.49	4.459E+00	9.855E-01	9.855E-01	56.56
	295.21	261	19.20	3.682E+00	1.096E+00	1.096E+00	27.02
	351.92	451	37.20*	3.085E+00	1.166E+00	1.166E+00	14.95
PO-214	74.81	606	6.21	8.452E+00	3.421E+00	3.421E+00	22.72
	77.11	890	10.50	8.441E+00	2.978E+00	2.978E+00	15.96
	87.30	181	4.67	8.310E+00	1.385E+00	1.386E+00	54.34
	241.98	111	7.49	4.459E+00	9.855E-01	9.855E-01	56.56
	295.21	261	19.20	3.682E+00	1.096E+00	1.096E+00	27.02
	351.92	451	37.20*	3.085E+00	1.166E+00	1.166E+00	14.95
PO-216	74.81	606	10.70	8.452E+00	1.986E+00	1.986E+00	23.42
	77.11	890	18.00	8.441E+00	1.737E+00	1.737E+00	14.02
	87.30	181	8.00	8.310E+00	8.088E-01	8.088E-01	54.72
	238.63	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.09	66	3.41	3.626E+00	1.586E+00	1.586E+00	71.39
PO-218	74.81	606	6.21	8.452E+00	3.421E+00	3.421E+00	22.72
	77.11	890	10.50	8.441E+00	2.978E+00	2.978E+00	15.96
	87.30	181	4.67	8.310E+00	1.385E+00	1.386E+00	54.34
	241.98	111	7.49	4.459E+00	9.855E-01	9.855E-01	56.56
	295.21	261	19.20	3.682E+00	1.096E+00	1.096E+00	27.02
	351.92	451	37.20*	3.085E+00	1.166E+00	1.166E+00	14.95
RA-224	240.98	111	3.95*	4.459E+00	1.869E+00	1.869E+00	56.28
RA-226	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47
AC-228	338.32	227	11.40	3.213E+00	1.838E+00	1.838E+00	46.38
	911.07	199	27.70*	1.151E+00	1.852E+00	1.852E+00	21.16
	969.11	113	16.60	1.082E+00	1.872E+00	1.872E+00	36.21
RA-228	338.32	227	11.40	3.213E+00	1.838E+00	1.838E+00	46.38
	911.07	199	27.70*	1.151E+00	1.852E+00	1.852E+00	21.16
	969.11	113	16.60	1.082E+00	1.872E+00	1.872E+00	36.21
TH-228	84.40	------	1.21	8.360E+00	------ Line Not Found		------
	238.60	844	44.60*	4.516E+00	1.242E+00	1.242E+00	13.30
	300.10	66	3.41	3.626E+00	1.586E+00	1.586E+00	92.20
TH-230	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47
TH-232	338.32	227	11.40	3.213E+00	1.838E+00	1.838E+00	22.86
	911.07	199	27.70*	1.151E+00	1.852E+00	1.852E+00	21.16

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	113	16.60	1.082E+00	1.872E+00	1.872E+00	36.21
U-234	609.31	299	46.30*	1.736E+00	1.105E+00	1.105E+00	19.17
	768.36	25	5.04	1.367E+00	1.095E+00	1.095E+00	96.78
	934.06	------	3.21	1.123E+00	------	Line Not Found	------
	1120.29	44	15.10	9.388E-01	9.114E-01	9.114E-01	74.85
	1238.11	------	5.94	8.528E-01	------	Line Not Found	------
	1377.67	------	4.11	7.701E-01	------	Line Not Found	------
	1764.49	45	15.80	6.088E-01	1.392E+00	1.392E+00	40.47
NP-237	86.50	181	12.60*	8.310E+00	5.135E-01	5.135E-01	57.62
	95.87	------	2.60	8.129E+00	------	Line Not Found	------
AM-243	74.67	606	66.00*	8.452E+00	3.219E-01	3.219E-01	21.48
	86.72	181	0.34	8.310E+00	1.926E+01	1.926E+01	53.79
	117.66	------	0.55	7.522E+00	------	Line Not Found	------
	142.18	------	0.13	6.781E+00	------	Line Not Found	------
ANH-511	511.00	116	100.00*	2.089E+00	1.653E-01	1.653E-01	49.18

Flag: "*" = Keyline

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

Total number of lines in spectrum 28
Number of unidentified lines 1
Number of lines tentatively identified by NID 27 96.43%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.695E+01	3.695E+01	0.346E+01	9.36	
CD-109	464.00D	1.02	1.739E+00	1.776E+00	0.956E+00	53.79	
SN-126	1.00E+05Y	1.00	1.749E-01	1.749E-01	0.941E-01	53.79	
TL-208	1.41E+10Y	1.00	5.532E-01	5.532E-01	1.090E-01	19.70	
BI-210	22.26Y	1.00	7.859E-01	7.869E-01	8.018E-01	101.89	
PB-210	22.26Y	1.00	7.859E-01	7.869E-01	8.018E-01	101.89	
PO-210	22.26Y	1.00	7.859E-01	7.869E-01	8.012E-01	101.81	
BI-211	7.04E+08Y	1.00	3.351E+00	3.351E+00	0.469E+00	14.01	
PB-212	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
PO-212	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
BI-214	1600.00Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
PB-214	1600.00Y	1.00	1.166E+00	1.166E+00	0.174E+00	14.95	
PO-214	1600.00Y	1.00	1.166E+00	1.166E+00	0.174E+00	14.95	
PO-216	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
PO-218	1600.00Y	1.00	1.166E+00	1.166E+00	0.174E+00	14.95	
RA-224	1.41E+10Y	1.00	1.869E+00	1.869E+00	1.052E+00	56.28	
RA-226	1600.00Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
AC-228	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.392E+00	21.16	
RA-228	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.392E+00	21.16	
TH-228	1.41E+10Y	1.00	1.242E+00	1.242E+00	0.165E+00	13.30	
TH-230	4.47E+09Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
TH-232	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.392E+00	21.16	
U-234	4.47E+09Y	1.00	1.105E+00	1.105E+00	0.212E+00	19.17	
NP-237	2.14E+06Y	1.00	5.135E-01	5.135E-01	2.959E-01	57.62	
AM-243	7380.00Y	1.00	3.219E-01	3.219E-01	0.691E-01	21.48	
ANH-511	1.00E+09Y	1.00	1.653E-01	1.653E-01	0.813E-01	49.18	
			---	---			
	Total Activity :		6.644E+01	6.648E+01			

Grand Total Activity : 6.644E+01 6.648E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	90.14	91	374	0.97	179.31	176	6	1.26E-02	71.2	8.26E+00	T
0	92.80	245	561	1.54	184.63	182	12	3.40E-02	41.5	8.20E+00	T
0	186.06	222	323	1.18	370.87	365	13	3.09E-02	36.5	5.60E+00	T
0	209.21	93	266	1.04	417.10	412	11	1.29E-02	71.1	5.08E+00	T
0	270.02	81	181	1.43	538.60	534	11	1.13E-02	67.5	4.02E+00	T
0	408.77	24	68	1.41	815.86	814	7	3.39E-03	****	2.64E+00	
0	562.03	44	51	3.79	1122.24	1116	12	6.10E-03	71.8	1.89E+00	T
0	728.43	64	65	0.94	1455.06	1448	17	8.95E-03	62.1	1.44E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 15:27:56.67

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870088.CNF;1  *
* Acquisition date  : 6-JUL-2009 13:26:00.  Detector SN#     :              *
* Detector ID       : GAM21                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:09.58          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 22-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201870088           Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.26580E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.695E+01	3.457E+00	6.906E-01	4.395E-02	53.508
CD-109	1.776E+00	9.556E-01	9.947E-01	8.243E-02	1.786
SN-126	1.749E-01	9.407E-02	9.780E-02	8.076E-03	1.788
TL-208	5.532E-01	1.090E-01	7.485E-02	5.678E-03	7.390
BI-210	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PB-210	7.869E-01	8.018E-01	8.779E-01	6.650E-02	0.896
PO-210	7.869E-01	8.012E-01	8.779E-01	5.674E-02	0.896
BI-211	3.351E+00	4.695E-01	3.811E-01	2.425E-02	8.794
PB-212	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
PO-212	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
BI-214	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
PB-214	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-214	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
PO-216	1.242E+00	1.652E-01	1.168E-01	8.896E-03	10.640
PO-218	1.166E+00	1.743E-01	1.329E-01	1.093E-02	8.770
RA-224	1.869E+00	1.052E+00	1.720E+00	1.058E-01	1.086
RA-226	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
AC-228	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
TH-228	1.242E+00	1.652E-01	1.167E-01	8.895E-03	10.641
TH-230	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
TH-232	1.852E+00	3.918E-01	2.963E-01	3.005E-02	6.249
U-234	1.105E+00	2.118E-01	1.442E-01	1.249E-02	7.662
NP-237	5.135E-01	2.959E-01	3.023E-01	6.712E-02	1.699
AM-243	3.219E-01	6.914E-02	5.458E-02	4.122E-03	5.898
ANH-511	1.653E-01	8.129E-02	5.988E-02	3.820E-03	2.760

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.641E-01		4.302E-01	6.562E-01	4.619E-02	-0.403
NA-22	6.557E-02		7.311E-02	1.292E-01	7.638E-03	0.508
NA-24	-3.166E-01		1.728E-01	Half-Life too short		
AL-26	-1.051E-02		3.649E-02	5.552E-02	3.091E-03	-0.189
TI-44	3.206E-01	+	4.496E-02	6.169E-02	4.771E-03	5.196
SC-46	-1.588E-02		5.375E-02	8.622E-02	6.190E-03	-0.184
V-48	5.992E-02		9.991E-02	1.742E-01	1.198E-02	0.344
CR-51	-4.038E-02		3.992E-01	6.552E-01	4.261E-02	-0.062
MN-52	-3.840E-02		2.686E-01	4.216E-01	2.541E-02	-0.091
MN-54	-1.488E-02		5.587E-02	9.065E-02	6.613E-03	-0.164
CO-56	3.235E-02		5.503E-02	9.619E-02	6.999E-03	0.336
CO-57	-6.008E-03		2.436E-02	3.871E-02	4.455E-03	-0.155
CO-58	-3.180E-02		5.495E-02	8.627E-02	6.337E-03	-0.369
FE-59	-8.393E-02		1.356E-01	2.072E-01	1.486E-02	-0.405
CO-60	4.829E-02		6.165E-02	1.094E-01	6.580E-03	0.441
ZN-65	1.213E-02		1.657E-01	2.348E-01	1.440E-02	0.052
GE-68	-1.613E+00		1.887E+00	2.804E+00	1.789E-01	-0.575
AS-73	1.299E-01		2.351E-01	3.917E-01	2.632E-02	0.332
AS-74	4.065E-02		1.220E-01	2.020E-01	1.390E-02	0.201
SE-75	4.877E-02		5.346E-02	8.239E-02	4.984E-03	0.592
BR-77	3.035E+00		9.724E+00	1.617E+01	1.042E+00	0.188
SR-82	-1.496E-01		5.124E-01	8.311E-01	6.093E-02	-0.180
RB-83	4.499E-02		8.573E-02	1.451E-01	9.348E-03	0.310
RB-84	-3.621E-03		1.014E-01	1.673E-01	1.205E-02	-0.022
KR-85	1.758E+01		1.132E+01	1.812E+01	1.160E+00	0.970
SR-85	8.913E-02		5.739E-02	9.189E-02	5.881E-03	0.970
RB-86	-9.767E-01		1.154E+00	1.717E+00	1.096E-01	-0.569
Y-88	4.953E-02		5.518E-02	1.061E-01	5.854E-03	0.467
ZR-88	3.692E-02		3.619E-02	6.331E-02	3.415E-03	0.583
Y-91	7.631E+00		3.021E+01	5.035E+01	2.892E+00	0.152
NB-94	2.511E-02		4.630E-02	8.070E-02	5.851E-03	0.311
NB-95	7.909E-02		6.715E-02	1.091E-01	7.996E-03	0.725
NB-95M	3.978E-01		1.693E-01	2.723E-01	2.129E-02	1.461
ZR-95	2.710E-02		9.296E-02	1.591E-01	1.326E-02	0.170
NB-97	-3.414E-02		2.307E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1.450E+00		4.842E-01	Half-Life too short		
MO-99	6.249E+00		1.174E+01	2.047E+01	2.965E+00	0.305
TC-99M	-1.435E+09		1.086E+09	Half-Life too short		
RH-101	1.570E-02		3.341E-02	5.712E-02	3.534E-03	0.275
RH-102	-1.124E-02		3.807E-02	6.051E-02	3.699E-03	-0.186
RU-103	-2.277E-02		5.178E-02	8.092E-02	1.042E-02	-0.281
RH-106	2.491E-01		4.594E-01	7.489E-01	9.266E-02	0.333
RU-106	2.491E-01		4.587E-01	7.489E-01	5.241E-02	0.333
AG-108M	-2.350E-02		3.795E-02	5.879E-02	3.687E-03	-0.400
AG-110M	-3.334E-02		4.682E-02	7.386E-02	5.495E-03	-0.451
IN-111	4.262E-01		9.961E-01	1.486E+00	9.104E-02	0.287
IN-113M	6.374E-02		5.410E-02	9.528E-02	5.524E-03	0.669
SN-113	6.374E-02		5.410E-02	9.528E-02	5.524E-03	0.669
IN-114M	6.853E-02		2.027E-01	3.024E-01	1.864E-02	0.227
CD-115	6.255E+00		9.846E+00	1.680E+01	1.091E+00	0.372
SN-117M	-1.392E-03		5.565E-02	8.869E-02	6.325E-03	-0.016
SB-122	-3.890E+00		3.114E+00	3.766E+00	2.528E-01	-1.033
I-123	1.559E-01		8.046E-01	Half-Life too short		
TE-123M	2.922E-03		3.016E-02	4.832E-02	3.447E-03	0.060
I-124	-9.016E-01		8.791E-01	1.052E+00	7.276E-02	-0.857
SB-124	4.079E-03		9.340E-02	1.567E-01	9.858E-03	0.026
SB-125	-9.888E-02		1.165E-01	1.783E-01	1.064E-02	-0.555
TE-125M	-1.305E+01		8.998E+00	1.345E+01	1.565E+00	-0.970
I-126	1.801E-01		2.369E-01	4.196E-01	3.004E-02	0.429
SB-126	6.013E-02		1.979E-01	3.073E-01	2.238E-02	0.196
SB-127	-4.788E-01		1.429E+00	2.320E+00	2.326E-01	-0.206
XE-127	1.058E-02		5.262E-02	8.118E-02	5.032E-03	0.130
I-131	-6.412E-02		1.224E-01	1.939E-01	1.225E-02	-0.331
TE-132	-3.365E-01		5.814E-01	9.411E-01	1.348E-01	-0.358
BA-133	-1.100E-02		5.778E-02	8.086E-02	9.304E-03	-0.136
I-133	-3.176E-03		1.711E-03	Half-Life too short		
CS-134	7.015E-02		6.573E-02	1.187E-01	8.785E-03	0.591
CS-135	2.359E-01		2.021E-01	3.142E-01	2.444E-02	0.751
I-135	-9.902E+07		3.086E+08	Half-Life too short		
CS-136	7.705E-03		1.481E-01	2.444E-01	1.719E-02	0.032
BA-137M	6.488E-03		4.788E-02	8.120E-02	5.800E-03	0.080
CS-137	6.859E-03		5.061E-02	8.584E-02	6.149E-03	0.080
CE-139	2.732E-03		2.858E-02	4.835E-02	2.930E-03	0.057
BA-140	-1.941E-02		3.457E-01	5.569E-01	1.819E-01	-0.035
LA-140	9.722E-03		1.225E-01	2.067E-01	1.225E-02	0.047
CE-141	5.502E-02		6.474E-02	1.069E-01	9.664E-03	0.515
CE-143	4.048E-04		7.343E-05	Half-Life too short		
CE-144	-1.026E-01		2.179E-01	3.415E-01	5.652E-02	-0.300
PM-144	2.872E-02		4.759E-02	8.333E-02	6.033E-03	0.345
PR-144	1.945E+00		3.223E+00	5.643E+00	4.084E-01	0.345
PM-146	2.317E-02		5.392E-02	9.069E-02	7.907E-03	0.255
ND-147	-4.697E-01		7.083E-01	1.077E+00	1.491E-01	-0.436
PM-149	-1.116E+02		7.627E+01	1.132E+02	1.607E+01	-0.986

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-3.407E-03		1.105E-01	1.818E-01	1.182E-02	-0.019
GD-153	1.592E-02		7.918E-02	1.129E-01	1.022E-02	0.141
EU-154	1.814E-01		2.046E-01	3.604E-01	3.390E-02	0.503
EU-155	1.413E-01		9.937E-02	1.676E-01	1.652E-02	0.843
TB-160	-7.121E-02		2.036E-01	3.258E-01	2.348E-02	-0.219
HO-166M	3.563E-02		8.049E-02	1.396E-01	1.015E-02	0.255
TM-171	-1.118E+01		1.754E+01	2.560E+01	1.853E+00	-0.437
LU-176	-1.033E-02		2.983E-02	4.359E-02	2.557E-03	-0.237
LU-177	2.120E+00	+	1.512E+00	1.890E+00	1.173E-01	1.122
LU-177M	2.090E-01		2.368E-01	3.647E-01	2.038E-02	0.573
HF-181	1.406E-02		5.384E-02	8.931E-02	5.508E-03	0.157
W-181	4.856E-02		1.949E-01	3.169E-01	2.278E-02	0.153
TA-182	1.225E-01		3.574E-01	5.976E-01	3.456E-02	0.205
RE-183	-1.156E-02		1.081E-01	1.815E-01	1.195E-02	-0.064
RE-184	-2.406E-01		2.517E-01	3.974E-01	2.418E-02	-0.605
OS-185	5.061E-03		5.549E-02	8.986E-02	6.373E-03	0.056
RE-188	5.642E-02		1.796E-01	2.906E-01	2.216E-02	0.194
W-188	6.439E+00		9.148E+00	1.387E+01	8.130E-01	0.464
IR-192	9.225E-03		3.775E-02	6.330E-02	3.724E-03	0.146
AU-195	1.931E-01		2.281E-01	3.352E-01	3.077E-02	0.576
TL-200	2.176E-04		1.407E-04	Half-Life too short		
TL-201	-1.682E+00		5.313E+00	8.833E+00	5.350E-01	-0.190
TL-202	8.995E-02		7.708E-02	1.366E-01	7.950E-03	0.659
HG-203	4.967E-02		4.589E-02	8.009E-02	4.962E-03	0.620
BI-207	1.401E-02		8.373E-02	1.395E-01	9.025E-03	0.100
TL-207	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
PO-209	6.425E+00		9.736E+00	1.720E+01	1.231E+00	0.373
PB-211	2.169E-01		1.339E+00	1.917E+00	1.195E+00	0.113
BI-212	1.122E+00	+	7.036E-01	8.218E-01	7.307E-02	1.366
PO-215	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
RN-219	4.753E-01		5.006E-01	8.656E-01	1.166E-01	0.549
RN-220	1.556E+01		3.317E+01	5.582E+01	3.702E+00	0.279
RA-223	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
AC-227	2.854E-01		4.113E-01	7.054E-01	9.925E-02	0.405
TH-227	2.854E-01		4.122E-01	7.054E-01	1.199E-01	0.405
TH-229	-8.417E-02		5.510E-01	8.672E-01	5.356E-02	-0.097
PA-231	7.009E-01		1.681E+00	2.847E+00	3.929E-01	0.246
TH-231	-9.351E-01		7.959E-01	1.197E+00	1.979E-01	-0.781
U-231	-5.421E-01		9.145E-01	1.251E+00	1.116E-01	-0.433
PA-233	-1.614E-02		7.073E-02	1.153E-01	7.166E-03	-0.140
PA-234	5.747E-02		4.379E-01	7.319E-01	1.324E-01	0.079
PA-234M	5.272E+00		9.816E+00	1.695E+01	1.669E+00	0.311
TH-234	2.337E-01		6.483E-01	1.066E+00	1.848E-01	0.219
U-235	1.439E-01		2.238E-01	3.619E-01	6.422E-02	0.398
NP-236	-2.803E-02		8.495E-02	1.334E-01	9.179E-03	-0.210
U-238	2.337E-01		6.483E-01	1.066E+00	1.848E-01	0.219
NP-239	5.651E-02		1.891E-01	3.078E-01	3.370E-02	0.184
AM-241	-1.397E-02		6.493E-02	1.053E-01	8.216E-03	-0.133

Sample ID : G1201870088 Acquisition date : 6-JUL-2009 13:26:00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.010E-02		9.030E-02	1.463E-01	1.408E-02	0.069
CM-247	3.260E-02		4.501E-02	7.554E-02	4.144E-03	0.432
CF-249	-1.479E-02		4.996E-02	8.033E-02	4.355E-03	-0.184
CF-251	-1.370E-01		1.340E-01	2.158E-01	1.318E-02	-0.635

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201870088          *
* Acquisition date :  6-JUL-2009 13:26:00 Detector SN#    :                *
* Detector ID      : GAM21                Sensitivity     : 5.000          *
* Geometry         : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:09.58     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      : 22-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID        : G1201870088          Analyst initials: MXR1           *
* Batch Number     : 880723               Sample Quantity : 1.2658E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.695E+01	3.388E+00	3.454E-01	1.728E+00
CD-109	1.776E+00	9.365E-01	5.182E-01	4.778E-01
SN-126	1.749E-01	9.219E-02	5.095E-02	4.704E-02
TL-208	5.532E-01	1.068E-01	3.795E-02	5.448E-02
BI-210	7.869E-01	7.857E-01	4.614E-01	4.009E-01
PB-210	7.869E-01	7.857E-01	4.614E-01	4.009E-01
PO-210	7.869E-01	7.851E-01	4.614E-01	4.006E-01
BI-211	3.351E+00	4.601E-01	1.946E-01	2.347E-01
PB-212	1.242E+00	1.619E-01	5.997E-02	8.260E-02
PO-212	1.242E+00	1.619E-01	5.997E-02	8.260E-02
BI-214	1.105E+00	2.075E-01	7.306E-02	1.059E-01
PB-214	1.166E+00	1.708E-01	6.789E-02	8.713E-02
PO-214	1.166E+00	1.708E-01	6.789E-02	8.713E-02
PO-216	1.242E+00	1.619E-01	5.997E-02	8.260E-02
PO-218	1.166E+00	1.708E-01	6.789E-02	8.713E-02
RA-224	1.869E+00	1.031E+00	8.835E-01	5.258E-01
RA-226	1.105E+00	2.075E-01	7.306E-02	1.059E-01
AC-228	1.852E+00	3.840E-01	1.492E-01	1.959E-01
RA-228	1.852E+00	3.840E-01	1.492E-01	1.959E-01
TH-228	1.242E+00	1.619E-01	5.996E-02	8.260E-02
TH-230	1.105E+00	2.075E-01	7.306E-02	1.059E-01
TH-232	1.852E+00	3.840E-01	1.492E-01	1.959E-01
U-234	1.105E+00	2.075E-01	7.306E-02	1.059E-01
NP-237	5.135E-01	2.899E-01	1.575E-01	1.479E-01
AM-243	3.219E-01	6.776E-02	2.850E-02	3.457E-02
ANH-511	1.653E-01	7.966E-02	3.042E-02	4.065E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-2.641E-01	4.215E-01	3.337E-01	2.151E-01 NOT IDENT.

NA-22	6.557E-02	7.164E-02	6.473E-02	3.655E-02	NOT IDENT.
NA-24	-3.166E+05	3.386E+05	0.000E+00	1.728E+05	SHORT HLIF
AL-26	-1.051E-02	3.576E-02	2.768E-02	1.825E-02	NOT IDENT.
TI-44	3.206E-01	4.406E-02	3.219E-02	2.248E-02	FAIL ABUN
SC-46	-1.588E-02	5.267E-02	4.344E-02	2.687E-02	FAIL ABUN
V-48	5.992E-02	9.791E-02	8.763E-02	4.996E-02	NOT IDENT.
CR-51	-4.038E-02	3.912E-01	3.351E-01	1.996E-01	NOT IDENT.
MN-52	-3.840E-02	2.632E-01	2.109E-01	1.343E-01	NOT IDENT.
MN-54	-1.488E-02	5.475E-02	4.572E-02	2.793E-02	NOT IDENT.
CO-56	3.235E-02	5.393E-02	4.850E-02	2.751E-02	NOT IDENT.
CO-57	-6.008E-03	2.388E-02	2.007E-02	1.218E-02	NOT IDENT.
CO-58	-3.180E-02	5.385E-02	4.353E-02	2.747E-02	NOT IDENT.
FE-59	-8.393E-02	1.329E-01	1.041E-01	6.779E-02	NOT IDENT.
CO-60	4.829E-02	6.042E-02	5.478E-02	3.082E-02	NOT IDENT.
ZN-65	1.213E-02	1.624E-01	1.179E-01	8.286E-02	NOT IDENT.
GE-68	-1.613E+00	1.849E+00	1.409E+00	9.434E-01	NOT IDENT.
AS-73	1.299E-01	2.304E-01	2.055E-01	1.175E-01	NOT IDENT.
AS-74	4.065E-02	1.196E-01	1.024E-01	6.100E-02	NOT IDENT.
SE-75	4.877E-02	5.239E-02	4.226E-02	2.673E-02	NOT IDENT.
BR-77	3.035E+00	9.529E+00	8.213E+00	4.862E+00	FAIL ABUN
SR-82	-1.496E-01	5.021E-01	4.196E-01	2.562E-01	NOT IDENT.
RB-83	4.499E-02	8.402E-02	7.367E-02	4.287E-02	NOT IDENT.
RB-84	-3.621E-03	9.934E-02	8.430E-02	5.068E-02	NOT IDENT.
KR-85	1.758E+01	1.109E+01	9.205E+00	5.659E+00	NOT IDENT.
SR-85	8.913E-02	5.625E-02	4.668E-02	2.870E-02	NOT IDENT.
RB-86	-9.767E-01	1.131E+00	8.625E-01	5.769E-01	NOT IDENT.
Y-88	4.953E-02	5.407E-02	5.287E-02	2.759E-02	NOT IDENT.
ZR-88	3.692E-02	3.547E-02	3.229E-02	1.809E-02	NOT IDENT.
Y-91	7.631E+00	2.961E+01	2.525E+01	1.511E+01	NOT IDENT.
NB-94	2.511E-02	4.537E-02	4.080E-02	2.315E-02	NOT IDENT.
NB-95	7.909E-02	6.581E-02	5.510E-02	3.358E-02	NOT IDENT.
NB-95M	3.978E-01	1.659E-01	1.399E-01	8.466E-02	NOT IDENT.
ZR-95	2.710E-02	9.110E-02	8.035E-02	4.648E-02	NOT IDENT.
NB-97	-3.414E+04	4.522E+04	0.000E+00	2.307E+04	SHORT HLIF
ZR-97	1.450E+06	9.490E+05	0.000E+00	4.842E+05	SHORT HLIF
MO-99	6.249E+00	1.150E+01	1.034E+01	5.870E+00	NOT IDENT.
TC-99M	-1.435E+15	2.128E+15	0.000E+00	1.086E+15	SHORT HLIF
RH-101	1.570E-02	3.274E-02	2.942E-02	1.670E-02	NOT IDENT.
RH-102	-1.124E-02	3.731E-02	3.077E-02	1.904E-02	FAIL ABUN
RU-103	-2.277E-02	5.075E-02	4.112E-02	2.589E-02	FAIL ABUN
RH-106	2.491E-01	4.503E-01	3.793E-01	2.297E-01	FAIL ABUN
RU-106	2.491E-01	4.496E-01	3.793E-01	2.294E-01	FAIL ABUN
AG-108M	-2.350E-02	3.719E-02	2.994E-02	1.897E-02	NOT IDENT.
AG-110M	-3.334E-02	4.588E-02	3.738E-02	2.341E-02	NOT IDENT.
IN-111	4.262E-01	9.761E-01	7.627E-01	4.980E-01	NOT IDENT.
IN-113M	6.374E-02	5.302E-02	4.859E-02	2.705E-02	NOT IDENT.
SN-113	6.374E-02	5.302E-02	4.859E-02	2.705E-02	NOT IDENT.
IN-114M	6.853E-02	1.986E-01	1.558E-01	1.013E-01	NOT IDENT.
CD-115	6.255E+00	9.649E+00	8.529E+00	4.923E+00	NOT IDENT.
SN-117M	-1.392E-03	5.454E-02	4.582E-02	2.782E-02	NOT IDENT.
SB-122	-3.890E+00	3.052E+00	1.910E+00	1.557E+00	NOT IDENT.
I-123	1.559E+05	1.577E+06	0.000E+00	8.046E+05	SHORT HLIF
TE-123M	2.922E-03	2.955E-02	2.496E-02	1.508E-02	NOT IDENT.
I-124	-9.016E-01	8.615E-01	5.333E-01	4.395E-01	NOT IDENT.
SB-124	4.079E-03	9.153E-02	7.818E-02	4.670E-02	FAIL ABUN
SB-125	-9.888E-02	1.142E-01	9.079E-02	5.827E-02	NOT IDENT.
TE-125M	-1.305E+01	8.818E+00	6.985E+00	4.499E+00	NOT IDENT.
I-126	1.801E-01	2.322E-01	2.123E-01	1.185E-01	NOT IDENT.
SB-126	6.013E-02	1.939E-01	1.553E-01	9.895E-02	FAIL ABUN
SB-127	-4.788E-01	1.400E+00	1.174E+00	7.144E-01	NOT IDENT.
XE-127	1.058E-02	5.157E-02	4.180E-02	2.631E-02	NOT IDENT.
I-131	-6.412E-02	1.200E-01	9.900E-02	6.122E-02	NOT IDENT.
TE-132	-3.365E-01	5.698E-01	4.837E-01	2.907E-01	NOT IDENT.
BA-133	-1.100E-02	5.663E-02	4.129E-02	2.889E-02	NOT IDENT.
I-133	-3.176E+03	3.353E+03	0.000E+00	1.711E+03	SHORT HLIF
CS-134	7.015E-02	6.441E-02	5.989E-02	3.286E-02	FAIL ABUN
CS-135	2.359E-01	1.981E-01	1.611E-01	1.011E-01	NOT IDENT.
I-135	-9.902E+13	6.048E+14	0.000E+00	3.086E+14	SHORT HLIF
CS-136	7.705E-03	1.451E-01	1.228E-01	7.403E-02	FAIL ABUN
BA-137M	6.488E-03	4.692E-02	4.109E-02	2.394E-02	NOT IDENT.
CS-137	6.859E-03	4.960E-02	4.344E-02	2.531E-02	NOT IDENT.
CE-139	2.732E-03	2.801E-02	2.497E-02	1.429E-02	NOT IDENT.
BA-140	-1.941E-02	3.388E-01	2.827E-01	1.729E-01	NOT IDENT.
LA-140	9.722E-03	1.201E-01	1.032E-01	6.127E-02	NOT IDENT.
CE-141	5.502E-02	6.345E-02	5.532E-02	3.237E-02	NOT IDENT.
CE-143	4.048E+02	1.439E+02	0.000E+00	7.343E+01	SHORT HLIF
CE-144	-1.026E-01	2.136E-01	1.769E-01	1.090E-01	NOT IDENT.
PM-144	2.872E-02	4.664E-02	4.214E-02	2.380E-02	NOT IDENT.

PR-144	1.945E+00	3.159E+00	2.854E+00	1.612E+00	NOT IDENT.
PM-146	2.317E-02	5.284E-02	4.615E-02	2.696E-02	NOT IDENT.
ND-147	-4.697E-01	6.941E-01	5.469E-01	3.541E-01	FAIL ABUN
PM-149	-1.116E+02	7.474E+01	5.802E+01	3.813E+01	NOT IDENT.
EU-152	-3.407E-03	1.083E-01	9.287E-02	5.527E-02	NOT IDENT.
GD-153	1.592E-02	7.760E-02	5.875E-02	3.959E-02	NOT IDENT.
EU-154	1.814E-01	2.005E-01	1.806E-01	1.023E-01	NOT IDENT.
EU-155	1.413E-01	9.739E-02	8.707E-02	4.969E-02	FAIL ABUN
TB-160	-7.121E-02	1.996E-01	1.642E-01	1.018E-01	FAIL ABUN
HO-166M	3.563E-02	7.888E-02	7.057E-02	4.024E-02	NOT IDENT.
TM-171	-1.118E+01	1.719E+01	1.339E+01	8.770E+00	NOT IDENT.
LU-176	-1.033E-02	2.923E-02	2.231E-02	1.492E-02	FAIL ABUN
LU-177	2.120E+00	1.482E+00	9.725E-01	7.561E-01	FAIL ABUN
LU-177M	2.090E-01	2.321E-01	1.858E-01	1.184E-01	FAIL ABUN
HF-181	1.406E-02	5.276E-02	4.541E-02	2.692E-02	NOT IDENT.
W-181	4.856E-02	1.910E-01	1.658E-01	9.744E-02	NOT IDENT.
TA-182	1.225E-01	3.503E-01	2.997E-01	1.787E-01	FAIL ABUN
RE-183	-1.156E-02	1.059E-01	9.373E-02	5.404E-02	FAIL ABUN
RE-184	-2.406E-01	2.467E-01	2.040E-01	1.259E-01	NOT IDENT.
OS-185	5.061E-03	5.438E-02	4.549E-02	2.775E-02	NOT IDENT.
RE-188	5.642E-02	1.760E-01	1.502E-01	8.978E-02	NOT IDENT.
W-188	6.439E+00	8.965E+00	7.105E+00	4.574E+00	NOT IDENT.
IR-192	9.225E-03	3.699E-02	3.238E-02	1.887E-02	FAIL ABUN
AU-195	1.931E-01	2.235E-01	1.743E-01	1.140E-01	FAIL ABUN
TL-200	2.176E+02	2.758E+02	0.000E+00	1.407E+02	SHORT HLIF
TL-201	-1.682E+00	5.207E+00	4.560E+00	2.657E+00	NOT IDENT.
TL-202	8.995E-02	7.553E-02	6.954E-02	3.854E-02	NOT IDENT.
HG-203	4.967E-02	4.497E-02	4.104E-02	2.295E-02	NOT IDENT.
BI-207	1.401E-02	8.205E-02	7.012E-02	4.186E-02	FAIL ABUN
TL-207	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
PO-209	6.425E+00	9.541E+00	8.666E+00	4.868E+00	NOT IDENT.
PB-211	2.169E-01	1.313E+00	9.773E-01	6.697E-01	NOT IDENT.
BI-212	1.122E+00	6.895E-01	4.153E-01	3.518E-01	FAIL ABUN
PO-215	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
RN-219	4.753E-01	4.906E-01	4.413E-01	2.503E-01	FAIL ABUN
RN-220	1.556E+01	3.251E+01	2.833E+01	1.659E+01	NOT IDENT.
RA-223	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
AC-227	2.854E-01	4.031E-01	3.620E-01	2.057E-01	FAIL ABUN
TH-227	2.854E-01	4.040E-01	3.620E-01	2.061E-01	FAIL ABUN
TH-229	-8.417E-02	5.400E-01	4.467E-01	2.755E-01	FAIL ABUN
PA-231	7.009E-01	1.647E+00	1.459E+00	8.403E-01	FAIL ABUN
TH-231	-9.351E-01	7.800E-01	6.123E-01	3.980E-01	FAIL ABUN
U-231	-5.421E-01	8.963E-01	6.509E-01	4.573E-01	FAIL ABUN
PA-233	-1.614E-02	6.932E-02	5.899E-02	3.536E-02	FAIL ABUN
PA-234	5.747E-02	4.292E-01	3.684E-01	2.190E-01	FAIL ABUN
PA-234M	5.272E+00	9.619E+00	8.527E+00	4.908E+00	NOT IDENT.
TH-234	2.337E-01	6.353E-01	5.580E-01	3.241E-01	FAIL ABUN
U-235	1.439E-01	2.193E-01	1.872E-01	1.119E-01	FAIL ABUN
NP-236	-2.803E-02	8.325E-02	6.892E-02	4.248E-02	NOT IDENT.
U-238	2.337E-01	6.353E-01	5.580E-01	3.241E-01	FAIL ABUN
NP-239	5.651E-02	1.854E-01	1.597E-01	9.457E-02	FAIL ABUN
AM-241	-1.397E-02	6.363E-02	5.513E-02	3.247E-02	NOT IDENT.
CM-243	1.010E-02	8.849E-02	7.604E-02	4.515E-02	FAIL ABUN
CM-247	3.260E-02	4.411E-02	3.851E-02	2.251E-02	NOT IDENT.
CF-249	-1.479E-02	4.896E-02	4.097E-02	2.498E-02	NOT IDENT.
CF-251	-1.370E-01	1.313E-01	1.113E-01	6.699E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	376.0986
46.50	376.0986
46.50	376.0986
48.70	426.7433
49.72	443.5883
51.35	397.3392
52.39	380.8830
52.97	396.7646
53.15	400.9389
53.44	398.0293
54.07	431.0414
56.28	501.9162
56.28	501.9185
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57.53	486.2946
57.53	486.2955
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57.98	487.5942
57.98	487.5942
59.32	526.4482
59.32	526.4482
59.40	526.5000
59.54	526.5908
59.72	530.8220
60.01	535.1263
61.10	540.9887
61.14	514.2216
61.30	517.4127
63.00	562.8784
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63.29	578.5692
63.58	578.7684
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65.12	582.9218
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65.20	576.7626
66.05	612.5732
66.72	633.4446
66.83	619.6937
66.91	619.7506
67.20	621.0651
67.20	621.0651
67.75	609.8239
67.85	566.6856
68.90	557.3771
68.90	557.3771
69.30	567.6160
69.67	567.8532
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77.11	488.9495
77.11	488.9495

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80.30	524.2693
80.57	524.4156
81.00	556.2526
81.07	556.2929
81.07	556.2929
81.07	556.2929
81.07	556.2929
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83.37	553.3719
83.78	553.6038
83.78	553.6038
83.78	553.6038
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86.94	703.7244
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.30	788.7914
87.30	788.7914
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88.47	475.5146
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92.29	460.2236
92.38	460.2623
92.38	460.2623
93.35	563.0615
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94.67	433.9239
94.67	433.9254
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96.73	403.9512
97.43	383.6574
98.44	332.5838
98.44	332.5838
98.88	355.0131
99.55	312.3282
99.55	312.3282
99.86	296.9668
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100.10	322.7870
103.18	417.5132
103.76	367.1281
105.00	323.3414
105.31	311.5710
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111.00	327.1962

111.76	362.1005
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115.19	334.8788
116.30	338.4538
117.00	333.2050
117.00	333.2050
117.66	322.4921
121.11	302.6433
121.62	318.0703
121.78	318.1114
122.06	305.0626
122.32	300.7519
122.32	300.7519
122.32	300.7519
122.32	300.7519
123.07	309.6878
127.23	304.1253
129.76	321.2291
131.20	346.9177
133.02	383.8004
133.54	356.3690
135.34	309.3497
136.00	308.4002
136.25	317.3024
136.48	317.3571
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140.51	0.0000
142.18	326.4815
142.65	303.2655
143.76	304.6241
144.24	302.5074
144.24	302.5074
144.24	302.5074
144.24	302.5074
145.22	300.4974
145.44	300.5447
147.16	338.8109
152.43	298.6944
152.70	299.8704
153.22	305.5775
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154.21	315.8709
154.21	315.8709
155.03	293.6366
156.02	279.2587
158.56	293.2327
159.00	0.0000
159.00	287.7031
160.31	295.8349
161.27	286.3495
162.32	281.1466
162.64	264.9840
163.35	264.2097
163.89	259.7959
165.85	252.9126
167.43	259.5087
171.28	251.1057
171.86	256.6432
172.10	243.9848
176.55	297.4495
176.60	308.3754
181.06	240.2290
184.41	318.4431
185.71	273.5656
186.00	273.6168
190.27	230.9115
192.34	267.9527
193.63	251.6916
197.04	233.0938
198.01	234.1516
198.60	263.7453
200.40	276.0312
201.83	243.3101
202.84	245.6576
205.31	233.0098
208.36	265.8893
208.81	232.8675

209.75	216.5953
209.75	216.5953
210.97	221.3937
215.65	202.2514
216.55	219.5135
218.09	229.4479
222.10	205.6605
223.80	203.0481
226.40	216.4596
227.00	212.7820
227.08	212.7917
227.20	220.3053
228.16	221.3595
228.18	221.3624
228.18	221.3624
231.56	0.0000
235.69	243.3038
236.00	232.3551
236.00	232.3551
238.60	290.8484
238.63	290.8541
238.63	290.8541
238.63	290.8541
239.00	485.8992
240.98	486.4116
241.98	548.0972
241.98	548.0972
241.98	548.0972
244.69	189.2688
245.39	179.8715
247.94	184.1754
248.90	159.1267
249.79	167.9512
252.40	187.1813
252.85	196.7283
252.85	196.7283
254.15	0.0000
256.20	159.9384
256.20	159.9384
260.50	194.6367
260.90	197.5395
262.80	183.6130
264.65	145.0072
268.24	166.0208
268.79	178.8395
269.46	182.0934
269.46	182.0934
269.46	182.0934
269.46	182.0934
271.23	164.6676
273.65	241.6946
276.40	173.1006
277.35	180.3955
277.60	189.2388
277.60	189.2388
278.00	184.7836
278.60	167.5090
279.20	159.8540
279.53	175.2883
280.46	181.1497
281.68	200.5377
283.67	145.7227
284.30	155.4204
285.00	165.1281
285.90	189.3510
286.10	192.2687
286.10	192.2687
287.40	175.2275
288.45	0.0000
290.67	142.0135
290.80	142.0207
291.72	140.4688
293.26	0.0000
293.70	181.0020
295.21	177.8951
295.21	177.8951
295.21	177.8951
295.96	116.4814

296.50	116.5107
297.23	116.5503
298.57	116.6235
299.80	116.6895
299.80	116.6895
300.09	153.9865
300.09	153.9865
300.09	153.9865
300.10	153.9865
300.12	153.9884
301.29	136.2317
302.84	111.9846
303.76	125.0200
303.91	125.0294
304.40	129.9300
304.40	129.9300
304.84	139.7028
306.84	137.9723
308.46	137.6557
311.98	133.9638
316.51	123.4591
318.01	132.3649
319.02	133.4068
319.41	137.3528
320.08	127.5800
323.87	169.0815
323.87	169.0815
323.87	169.0815
323.87	169.0815
325.23	159.3461
328.77	132.0093
333.44	172.7505
334.20	159.6419
334.20	159.6419
334.30	159.6478
338.28	121.6727
338.28	121.6727
338.28	121.6727
338.28	121.6727
338.32	121.6742
338.32	121.6742
338.32	121.6742
340.50	121.7883
340.57	121.7913
344.27	121.9835
345.85	122.0646
350.59	0.0000
351.07	122.3334
351.92	122.3769
351.92	122.3769
351.92	122.3769
355.39	0.0000
356.01	121.2560
364.48	117.0114
366.43	110.0994
367.43	103.1345
367.94	0.0000
369.80	126.2861
374.96	140.6084
383.85	120.9492
387.95	124.1726
388.63	124.2057
391.69	94.0240
391.69	94.0240
392.90	90.0223
398.62	120.6342
400.65	84.2047
401.10	89.2934
401.81	92.3619
402.60	92.5036
404.84	110.0829
410.95	117.1282
411.60	122.2500
413.65	84.9620
414.70	106.3658
415.30	104.5670
415.76	105.4361
417.63	0.0000

418.52	109.2897
423.70	93.1262
427.08	116.8096
427.89	113.7696
432.53	78.0290
433.93	90.3955
439.47	73.0792
439.56	68.9645
439.89	72.0610
443.98	101.0338
444.90	88.6917
445.03	88.6959
445.03	88.6959
445.03	88.6959
445.03	88.6959
453.90	82.7686
463.38	89.2733
468.07	120.6105
473.00	95.8195
475.06	94.8457
475.35	85.4734
476.78	101.1585
477.59	100.1438
477.96	95.9834
482.03	82.5344
484.57	98.2904
487.03	76.3951
490.36	0.0000
492.35	85.9679
497.08	88.2031
507.63	0.0000
510.53	0.0000
510.84	82.2756
511.00	82.2799
511.85	82.3028
511.85	82.3028
513.99	86.2325
513.99	86.2325
520.41	65.6025
520.65	69.8398
527.90	63.6387
528.96	0.0000
529.64	81.7166
529.87	0.0000
531.02	88.1227
537.32	88.2990
543.00	74.6023
546.56	0.0000
549.76	63.0116
552.65	68.4125
555.20	82.0180
563.23	139.4167
563.90	141.2331
568.70	69.0585
569.32	63.1233
569.50	74.0202
569.67	74.0253
573.80	126.9566
574.00	127.9188
574.64	129.1406
578.91	59.2660
579.30	0.0000
583.14	69.0516
585.48	68.3802
591.81	69.7104
592.07	78.9705
593.00	82.2399
595.88	72.5615
600.56	82.1119
602.52	0.0000
602.71	88.6231
602.71	88.6231
603.60	68.7467
604.41	63.3335
604.70	63.3392
609.31	70.6732
609.31	70.6732
609.31	70.6732

609.31	70.6732
610.33	74.3192
612.46	74.3659
614.37	56.2581
618.01	74.1210
621.84	57.8342
621.84	57.8342
631.29	71.1207
633.02	63.4927
633.10	63.4941
634.78	61.3334
635.90	62.4481
636.97	65.7554
645.85	62.6235
646.12	57.1340
656.30	71.6190
657.75	77.1589
657.90	0.0000
661.65	68.0471
661.65	68.0471
664.57	0.0000
666.33	64.4515
666.33	64.4515
675.00	52.6060
677.61	69.2673
685.20	60.1546
692.80	61.2036
695.00	62.1677
696.49	64.0488
696.49	64.0488
697.00	74.2692
697.49	76.1359
698.33	82.6535
698.50	86.3720
699.00	91.0276
702.63	64.1526
706.10	73.5176
706.58	0.0000
706.67	79.1116
709.31	66.1277
711.68	55.9167
713.82	62.4758
717.42	61.6011
720.50	56.0461
721.93	0.0000
722.20	56.0706
722.78	52.8746
722.78	52.8746
722.89	52.8757
722.95	52.8769
723.30	60.8938
724.18	56.0986
727.18	68.9752
733.00	54.6203
735.90	73.9526
739.58	48.8114
742.81	55.4277
744.21	57.3265
747.13	52.6663
751.79	57.4370
752.31	48.0273
753.82	44.2767
755.35	51.8333
756.15	51.8445
756.87	59.3958
763.93	55.0484
765.79	55.0733
766.41	63.1819
766.84	74.6652
768.36	72.8032
768.36	72.8032
768.36	72.8032
768.36	72.8032
776.49	61.5802
778.00	64.4459
778.57	58.7683
778.89	58.7734
783.80	53.1494

785.46	56.0195
792.07	73.2277
795.84	50.4488
796.30	51.4072
801.93	63.8689
805.60	44.8428
810.29	55.4004
810.76	61.1380
815.85	55.4736
817.79	53.5858
818.51	50.7237
819.60	44.9929
826.30	60.4058
828.27	0.0000
831.60	61.4414
831.96	60.4865
834.83	70.1336
836.80	0.0000
846.75	46.2441
848.13	46.2588
856.28	0.0000
856.80	43.0398
860.37	53.0156
867.32	43.1441
867.82	48.1273
871.10	47.4717
873.19	36.8318
874.81	34.9065
875.33	0.0000
876.40	43.6487
879.36	56.2961
880.27	49.5121
880.51	49.5142
881.50	53.4099
883.24	50.5168
884.67	41.7866
889.25	48.6389
896.60	35.0779
898.02	36.0636
899.00	39.9707
903.28	45.1670
911.07	46.9199
911.07	46.9199
911.07	46.9199
919.63	44.6583
920.93	52.8992
925.00	37.2586
925.24	37.2605
926.50	41.1942
934.06	45.1914
934.06	45.1914
934.06	45.1914
934.06	45.1914
935.52	51.1018
937.48	52.1072
944.10	47.2578
946.00	47.2773
949.00	50.2643
962.29	50.4075
964.01	49.1539
966.15	69.5250
968.20	93.3055
969.11	69.2865
969.11	69.2865
969.11	69.2865
977.42	52.3531
980.50	48.6162
983.50	41.6975
989.30	50.6939
996.32	56.7402
1001.03	46.8307
1001.68	47.8340
1004.76	49.8586
1021.30	0.0000
1024.50	0.0000
1034.80	45.1483
1037.82	46.1797
1038.57	51.2054

1038.76	0.0000
1045.16	45.2417
1046.59	43.2432
1048.07	44.2614
1050.47	47.3022
1050.47	47.3022
1063.62	52.4718
1076.63	56.6517
1077.35	56.6608
1085.78	63.8459
1099.22	54.8679
1112.02	51.3372
1112.84	44.3160
1115.52	59.4099
1120.29	58.1504
1120.29	58.1504
1120.29	58.1504
1120.29	58.1504
1120.51	60.1932
1121.28	52.4770
1124.00	0.0000
1129.67	47.9417
1131.51	0.0000
1147.95	0.0000
1167.94	53.5256
1173.22	57.6999
1175.09	60.8125
1177.93	63.9375
1189.05	69.2328
1204.90	60.1051
1205.75	0.0000
1213.00	66.4219
1221.42	77.9541
1230.97	82.2531
1235.34	78.1494
1236.41	0.0000
1238.11	75.0586
1238.11	75.0586
1238.11	75.0586
1238.11	75.0586
1238.25	74.0190
1246.25	69.9471
1260.41	0.0000
1271.85	52.4333
1274.45	40.9170
1274.54	40.9170
1291.56	30.5151
1298.22	0.0000
1312.09	47.5177
1325.50	37.0422
1325.50	37.0422
1332.49	26.4893
1333.61	34.9725
1360.21	21.2899
1362.66	0.0000
1365.15	23.4377
1368.21	31.9775
1368.53	0.0000
1376.25	20.2787
1377.67	26.6886
1377.67	26.6886
1377.67	26.6886
1377.67	26.6886
1384.27	28.8556
1394.10	23.5496
1395.20	27.8355
1407.95	17.1654
1434.06	17.2370
1436.60	7.5443
1457.56	0.0000
1460.81	15.1467
1489.15	16.7658
1509.49	14.0154
1596.49	18.9335
1620.62	15.2003
1678.03	0.0000
1691.02	8.6368
1691.02	8.6368

1706.46	0.0000
1750.46	0.0000
1764.49	10.1796
1764.49	10.1796
1764.49	10.1796
1764.49	10.1796
1770.23	11.8856
1771.40	23.2893
1791.20	0.0000
1808.65	7.8025
1836.01	7.8309

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201870088

Total Uranium Activity	7.6191E-01	ug/g
Total Uranium Counting Unc.	1.8928E+00	ug/g
Total Uranium Tpu	9.6570E-07	ug/g
Total Uranium Mda	1.6624E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G1201870088      *
*   ANALYST       : MXR1                      DETECTOR   : GAM21            *
*   SAMPLE DATE   : 22-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*.  ANALYSIS DATE:  6-JUL-2009 13:26:00.29   SAMPLE ALQT:  126.580 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.167E+00
GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.494E+00
GROSS GAMMA MDA    (pCi/GRAM  )   : 4.215E+00
GROSS GAMMA DLC    (pCi/GRAM  )   : 2.054E+00
```

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:27:06.99

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:26:36.
Sample ID         : G1201870089          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:03.12  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.58	2148	499	0.94	119.33	115	10	5.97E-01	2.9	
2	0	77.20*	164	505	1.00	154.57	152	9	4.54E-02	26.2	
3	0	88.10	1679	557	0.97	176.38	172	10	4.66E-01	3.6	
4	0	93.14*	96	296	1.55	186.45	183	9	2.66E-02	35.0	
5	0	122.01	376	232	1.04	244.21	240	8	1.04E-01	8.7	
6	0	135.61	46	395	0.90	271.43	269	11	1.26E-02	85.5	
7	0	185.73*	139	314	1.70	371.70	366	13	3.85E-02	28.0	
8	0	238.69*	338	340	0.95	477.63	473	8	9.40E-02	10.2	
9	0	241.27	27	439	4.91	482.80	482	14	7.64E-03	166.0	
10	0	295.50*	90	229	0.78	591.29	587	9	2.50E-02	32.1	
11	0	338.30	92	180	1.22	676.92	673	10	2.56E-02	29.1	
12	0	352.03*	216	159	1.23	704.38	699	10	6.00E-02	12.9	
13	0	510.79*	42	161	1.89	1022.03	1015	14	1.17E-02	69.6	
14	0	583.23*	154	93	1.19	1166.97	1161	11	4.28E-02	14.7	
15	0	609.65	157	112	1.15	1219.84	1213	14	4.37E-02	16.3	
16	0	661.82	2043	138	1.43	1324.22	1317	15	5.67E-01	2.5	
17	0	911.76	79	153	1.21	1824.36	1817	14	2.19E-02	35.3	
18	0	1173.52	1675	66	1.88	2348.22	2339	16	4.65E-01	2.7	
19	0	1332.81	1554	23	2.29	2667.05	2656	23	4.32E-01	2.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JUL-2009 14:27:10

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:26:36
Sample ID : G1201870089 Sample quantity : 155.44 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA23 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:03.12 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	3.418E-01	6.286E-02	5.645E-02	3.328E-03	6.056
	+	136.48		3.367E-01	5.764E-01	4.411E-01	2.869E-02	0.763
CO-60	+	1173.22		6.730E+00	5.228E-01	1.537E-01	8.668E-03	43.801
	+	1332.49	*	6.996E+00	6.343E-01	9.085E-02	6.670E-03	77.006
CD-109	+	88.03	*	4.167E+01	5.059E+00	1.961E+00	1.915E-01	21.247
SN-126		64.28		-4.689E-02	7.440E-01	1.214E+00	1.847E-01	-0.039
	+	86.94		1.722E+01	7.273E+00	8.214E-01	3.416E-01	20.965
	+	87.57	*	4.142E+00	5.029E-01	1.960E-01	1.908E-02	21.130
BA-137M	+	661.65	*	5.378E+00	3.878E-01	1.226E-01	6.262E-03	43.871
CS-137	+	661.65	*	5.685E+00	4.111E-01	1.296E-01	6.656E-03	43.871
TL-208		277.35		-2.829E-01	5.879E-01	9.716E-01	1.027E-01	-0.291
	+	510.84		3.690E-01	5.149E-01	4.323E-01	4.392E-02	0.853
	+	583.14	*	3.886E-01	1.171E-01	1.210E-01	7.853E-03	3.212
		860.37		4.732E-01	7.113E-01	1.195E+00	1.081E-01	0.396
BI-211		72.87		-3.848E+00	5.053E+00	7.771E+00	6.855E-01	-0.495
	+	351.07	*	2.347E+00	6.263E-01	5.957E-01	3.882E-02	3.940
PB-212		74.81		4.137E-01	6.314E-01	9.568E-01	1.234E-01	0.432
	+	77.11		1.016E+00	5.404E-01	5.053E-01	4.546E-02	2.011
	+	87.30		1.916E+01	3.013E+00	9.097E-01	1.268E-01	21.060
	+	238.63	*	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
		300.09		2.711E+00	1.470E+00	2.435E+00	2.022E-01	1.113
PO-212		74.81		4.137E-01	6.314E-01	9.568E-01	1.234E-01	0.432
	+	77.11		1.016E+00	5.404E-01	5.053E-01	4.546E-02	2.011
	+	87.30		1.916E+01	3.013E+00	9.097E-01	1.268E-01	21.060
		115.19		-2.401E+00	4.663E+00	7.746E+00	4.942E-01	-0.310
	+	238.63	*	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
		300.09		2.711E+00	1.470E+00	2.435E+00	2.022E-01	1.113
PB-214		74.81		7.128E-01	1.087E+00	1.649E+00	1.908E-01	0.432
	+	77.11		1.742E+00	9.359E-01	8.662E-01	1.021E-01	2.011
	+	87.30		3.282E+01	4.720E+00	1.558E+00	1.932E-01	21.060
	+	241.98		3.857E-01	1.281E+00	9.401E-01	7.477E-02	0.410
	+	295.21		5.737E-01	3.718E-01	4.175E-01	3.579E-02	1.374
	+	351.92	*	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-214		74.81		7.128E-01	1.087E+00	1.649E+00	1.908E-01	0.432

Sample ID : G1201870089 Acquisition date : 6-JUL-2009 13:26:36

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		1.742E+00	9.359E-01	8.662E-01	1.021E-01	2.011
	+	87.30		3.282E+01	4.720E+00	1.558E+00	1.932E-01	21.060
	+	241.98		3.857E-01	1.281E+00	9.401E-01	7.477E-02	0.410
	+	295.21		5.737E-01	3.718E-01	4.175E-01	3.579E-02	1.374
	+	351.92	*	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-216		74.81		4.137E-01	6.314E-01	9.568E-01	1.234E-01	0.432
	+	77.11		1.016E+00	5.404E-01	5.053E-01	4.546E-02	2.011
	+	87.30		1.916E+01	3.013E+00	9.097E-01	1.268E-01	21.060
	+	238.63	*	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
		300.09		2.711E+00	1.470E+00	2.435E+00	2.022E-01	1.113
PO-218		74.81		7.128E-01	1.087E+00	1.649E+00	1.908E-01	0.432
	+	77.11		1.742E+00	9.359E-01	8.662E-01	1.021E-01	2.011
	+	87.30		3.282E+01	4.720E+00	1.558E+00	1.932E-01	21.060
	+	241.98		3.857E-01	1.281E+00	9.401E-01	7.477E-02	0.410
	+	295.21		5.737E-01	3.718E-01	4.175E-01	3.579E-02	1.374
	+	351.92	*	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
RA-224	+	240.98	*	7.313E-01	2.428E+00	1.887E+00	1.063E-01	0.388
TH-228		84.40		1.291E+00	4.406E+00	6.505E+00	8.919E-01	0.198
	+	238.60	*	7.908E-01	1.716E-01	1.803E-01	1.297E-02	4.385
		300.10		2.700E+00	2.155E+00	2.433E+00	1.434E+00	1.110
AM-241	+	59.54	*	1.385E+01	1.523E+00	4.871E-01	4.532E-02	28.436
ANH-511	+	511.00	*	7.970E-02	1.110E-01	9.341E-02	5.426E-03	0.853

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.667E-01	6.477E-01	1.071E+00	7.279E-02	0.249
NA-22		1274.54	*	4.085E-03	6.159E-02	1.003E-01	6.737E-03	0.041
NA-24		1368.53	*	4.976E-05	6.159E-02	Half-Life too short		
AL-26		1129.67		-3.055E+00	3.800E+00	5.769E+00	3.675E-01	-0.530
		1808.65	*	2.016E-02	5.029E-02	9.069E-02	5.451E-03	0.222
K-40		1460.81	*	8.824E-01	5.928E-01	1.176E+00	8.796E-02	0.750
TI-44		67.85		-6.432E-02	7.118E-02	1.091E-01	9.504E-03	-0.589
	+	78.38	*	1.874E-01	9.970E-02	9.457E-02	8.572E-03	1.982
SC-46		889.25	*	6.992E-02	9.817E-02	1.713E-01	1.530E-02	0.408
		1120.51		1.486E-01	1.170E-01	2.074E-01	1.352E-02	0.716
V-48		944.10		-6.626E-01	1.914E+00	3.120E+00	2.719E-01	-0.212
		983.50	*	7.630E-02	1.345E-01	2.313E-01	1.924E-02	0.330
		1312.09		-7.490E-03	8.033E-02	1.324E-01	9.418E-03	-0.057
CR-51		320.08	*	6.613E-02	5.314E-01	8.968E-01	5.880E-02	0.074
MN-52		744.21		-9.996E-03	2.047E-01	3.326E-01	2.117E-02	-0.030
		848.13		-2.775E+00	5.958E+00	9.196E+00	7.504E-01	-0.302
		935.52		1.703E-01	2.831E-01	4.876E-01	4.286E-02	0.349
		1246.25		-3.975E+00	4.055E+00	5.603E+00	3.586E-01	-0.709
	+	1333.61		3.522E+02	3.194E+01	4.133E+01	3.034E+00	8.522
		1434.06	*	-2.425E-02	1.219E-01	1.938E-01	1.402E-02	-0.125
MN-54		834.83	*	-2.482E-02	8.379E-02	1.319E-01	1.044E-02	-0.188
CO-56		846.75	*	1.970E-02	8.411E-02	1.379E-01	1.122E-02	0.143

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		977.42		-4.857E+00	7.412E+00	1.175E+01	9.851E-01	-0.413
		1037.82		-2.579E-02	7.711E-01	1.271E+00	1.042E-01	-0.020
		1175.09		2.957E+02	2.286E+01	3.523E+01	1.994E+00	8.394
		1238.25		1.205E-01	1.233E-01	2.205E-01	1.467E-02	0.546
		1360.21		6.114E-02	9.945E-01	1.678E+00	1.228E-01	0.036
		1771.40		-7.557E-01	4.697E-01	4.997E-01	3.091E-02	-1.512
CO-58		810.76	*	4.627E-02	7.822E-02	1.325E-01	9.951E-03	0.349
FE-59		142.65		-4.835E-01	3.226E+00	5.381E+00	2.926E-01	-0.090
		192.34		3.343E-01	1.214E+00	2.013E+00	2.329E-01	0.166
		1099.22	*	4.258E-02	2.121E-01	3.525E-01	2.715E-02	0.121
		1291.56		3.531E-02	1.283E-01	2.243E-01	1.862E-02	0.157
ZN-65		1115.52	*	-2.400E-01	2.278E-01	3.436E-01	2.269E-02	-0.699
GE-68		1077.35	*	6.311E-01	3.247E+00	5.406E+00	3.869E-01	0.117
AS-73		53.44	*	-1.904E+00	1.890E+00	2.941E+00	2.597E-01	-0.647
AS-74		595.88	*	7.119E-02	1.333E-01	2.303E-01	1.270E-02	0.309
		634.78		-7.722E-02	5.711E-01	9.381E-01	4.966E-02	-0.082
SE-75		66.05		1.748E+00	6.768E+00	1.110E+01	1.164E+00	0.158
		96.73		-7.403E-02	1.090E+00	1.554E+00	2.084E-01	-0.048
	+	121.11		1.794E+00	3.541E-01	4.674E-01	4.359E-02	3.837
	+	136.00		6.179E-02	1.057E-01	9.956E-02	5.622E-03	0.621
		198.60		-4.488E-01	2.646E+00	4.293E+00	2.898E-01	-0.105
		264.65	*	3.823E-02	6.883E-02	1.130E-01	6.579E-03	0.338
		279.53		1.746E-02	1.642E-01	2.800E-01	1.761E-02	0.062
		303.91		-4.015E+00	3.406E+00	5.327E+00	5.111E-01	-0.754
		400.65		1.215E-01	4.927E-01	8.199E-01	7.460E-02	0.148
BR-77	+	87.88		9.989E+02	1.213E+02	1.221E+02	1.191E+01	8.182
		200.40		7.703E+00	2.711E+01	4.488E+01	2.401E+00	0.172
	+	239.00		1.393E+01	2.958E+00	4.911E+00	2.761E-01	2.837
		249.79		-2.114E+01	1.424E+01	1.761E+01	1.001E+00	-1.201
		281.68		-4.765E+00	1.621E+01	2.706E+01	1.577E+00	-0.176
		297.23		6.166E+00	1.254E+01	1.922E+01	1.128E+00	0.321
		303.76		-4.337E+01	3.339E+01	5.206E+01	3.064E+00	-0.833
		439.47		6.003E+00	3.523E+01	5.785E+01	3.385E+00	0.104
		484.57		4.368E+01	5.109E+01	8.698E+01	5.085E+00	0.502
		520.65	*	1.047E+00	2.350E+00	3.878E+00	2.245E-01	0.270
		574.64		-6.555E+01	4.323E+01	6.405E+01	3.595E+00	-1.024
		578.91		1.801E+01	1.957E+01	3.103E+01	1.736E+00	0.580
		585.48		1.204E+02	4.498E+01	7.892E+01	4.392E+00	1.525
		755.35		-2.522E+01	3.904E+01	6.025E+01	3.945E+00	-0.419
		817.79		-2.929E-01	3.493E+01	5.638E+01	4.292E+00	-0.005
SR-82		698.33		-1.619E+01	4.959E+01	7.917E+01	4.472E+00	-0.205
		776.49	*	-5.600E-01	6.424E-01	9.639E-01	6.650E-02	-0.581
		1395.20		-1.553E+00	1.212E+01	1.965E+01	1.432E+00	-0.079
RB-83		520.41	*	4.442E-02	1.322E-01	2.166E-01	1.254E-02	0.205
		529.64		-2.313E-02	2.052E-01	3.245E-01	1.871E-02	-0.071
		552.65		8.442E-02	3.659E-01	6.240E-01	3.555E-02	0.135
RB-84		881.50	*	4.110E-02	1.489E-01	2.541E-01	2.232E-02	0.162
KR-85		513.99	*	2.059E+01	1.475E+01	2.337E+01	1.356E+00	0.881
SR-85		513.99	*	9.748E-02	6.983E-02	1.106E-01	6.420E-03	0.881

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86		1076.63	*	-6.610E-01	1.609E+00	2.565E+00	1.838E-01	-0.258
Y-88		898.02		4.217E-02	1.060E-01	1.816E-01	1.660E-02	0.232
		1836.01	*	3.265E-02	5.612E-02	1.038E-01	6.113E-03	0.314
ZR-88		392.90	*	1.777E-02	5.602E-02	9.382E-02	5.416E-03	0.189
Y-91		1204.90	*	-5.611E+00	2.539E+01	4.005E+01	2.389E+00	-0.140
NB-94		702.63	*	-1.939E-02	6.400E-02	1.025E-01	5.855E-03	-0.189
		871.10		-1.240E-02	8.704E-02	1.448E-01	1.243E-02	-0.086
NB-95		765.79	*	-1.190E-02	7.527E-02	1.208E-01	8.118E-03	-0.099
NB-95M		235.69	*	1.358E-01	1.926E-01	2.891E-01	2.133E-02	0.470
ZR-95		724.18		-1.698E-01	1.825E-01	2.773E-01	1.961E-02	-0.612
		756.15	*	-5.953E-03	1.341E-01	2.176E-01	1.669E-02	-0.027
NB-97		657.90	*	1.726E-04	1.341E-01	Half-Life too short		
		1024.50		-9.646E-03	1.341E-01	Half-Life too short		
ZR-97		254.15		-1.059E-03	1.341E-01	Half-Life too short		
		355.39		-1.757E-03	1.341E-01	Half-Life too short		
		507.63	*	1.379E-03	1.341E-01	Half-Life too short		
		602.52		-7.745E-03	1.341E-01	Half-Life too short		
		1021.30		3.640E-03	1.341E-01	Half-Life too short		
		1147.95		7.271E-04	1.341E-01	Half-Life too short		
		1362.66		-1.770E-03	1.341E-01	Half-Life too short		
		1750.46		1.873E-03	1.341E-01	Half-Life too short		
MO-99		140.51		-3.796E+00	5.970E+00	8.511E+00	2.288E+00	-0.446
		181.06		1.067E+00	3.813E+00	5.712E+00	9.680E-01	0.187
		366.43		-2.774E-01	2.498E+01	4.132E+01	2.421E+00	-0.007
		739.58	*	-1.830E+00	3.762E+00	5.896E+00	8.251E-01	-0.310
		778.00		-5.709E+00	1.021E+01	1.576E+01	1.091E+00	-0.362
TC-99M		140.51	*	-3.004E+01	1.021E+01	Half-Life too short		
RH-101		127.23		-2.922E-02	4.215E-02	6.883E-02	3.953E-03	-0.425
		198.01	*	-2.894E-03	4.974E-02	8.119E-02	4.328E-03	-0.036
		325.23		-3.711E-01	3.751E-01	5.909E-01	3.492E-02	-0.628
RH-102		418.52		-4.286E-01	5.925E-01	9.246E-01	5.387E-02	-0.464
		475.06	*	1.541E-02	6.850E-02	1.120E-01	6.555E-03	0.138
		631.29		9.285E-02	1.107E-01	1.941E-01	1.032E-02	0.478
		697.49		3.260E-02	1.391E-01	2.328E-01	1.312E-02	0.140
		766.84		-7.393E-02	2.109E-01	3.332E-01	2.245E-02	-0.222
		1046.59		1.199E-01	3.021E-01	5.111E-01	3.870E-02	0.235
		1112.84		8.624E-02	5.670E-01	9.383E-01	6.225E-02	0.092
RU-103		497.08	*	-2.505E-02	7.564E-02	1.185E-01	1.501E-02	-0.211
	+	610.33		7.081E+00	2.554E+00	3.133E+00	4.789E-01	2.260
RH-106	+	511.85		3.924E-01	5.467E-01	6.114E-01	3.550E-02	0.642
		621.84	*	-5.382E-02	6.388E-01	1.055E+00	1.216E-01	-0.051
		1050.47		1.294E-02	5.755E+00	9.479E+00	7.131E-01	0.001
RU-106	+	511.85		3.924E-01	5.467E-01	6.114E-01	3.550E-02	0.642
		621.84	*	-5.382E-02	6.388E-01	1.055E+00	5.668E-02	-0.051
		1050.47		1.294E-02	5.755E+00	9.479E+00	7.131E-01	0.001
AG-108M		433.93	*	-8.553E-02	6.992E-02	1.047E-01	6.638E-03	-0.817
		614.37		-1.736E-02	8.035E-02	1.133E-01	6.733E-03	-0.153
		722.95		-2.668E-02	8.770E-02	1.402E-01	9.119E-03	-0.190
AG-110M		657.75	*	8.299E-02	8.642E-02	1.346E-01	7.478E-03	0.617

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		677.61		-1.452E-01	6.061E-01	9.799E-01	5.608E-02	-0.148
		706.67		7.677E-02	4.048E-01	6.734E-01	4.124E-02	0.114
		763.93		-1.548E-01	3.226E-01	5.039E-01	3.527E-02	-0.307
		884.67		-1.036E-01	1.245E-01	1.967E-01	1.793E-02	-0.527
		937.48		2.294E-02	3.111E-01	5.206E-01	4.727E-02	0.044
		1384.27		-3.392E-01	2.505E-01	3.185E-01	2.416E-02	-1.065
IN-111		171.28		8.539E-02	2.144E-01	3.614E-01	1.854E-02	0.236
		245.39	*	4.994E-02	3.198E-01	4.599E-01	2.603E-02	0.109
IN-113M		391.69	*	4.546E-02	8.050E-02	1.368E-01	8.429E-03	0.332
SN-113		391.69	*	4.546E-02	8.050E-02	1.368E-01	8.429E-03	0.332
IN-114M		190.27	*	-2.205E-01	2.637E-01	3.609E-01	1.902E-02	-0.611
CD-115		260.90		6.139E+00	2.060E+01	3.333E+01	1.914E+00	0.184
		492.35		6.618E+00	7.064E+00	1.207E+01	7.046E-01	0.548
		527.90	*	-8.663E-01	2.088E+00	3.224E+00	1.861E-01	-0.269
SN-117M		156.02		-7.933E-01	2.026E+00	3.300E+00	1.727E-01	-0.240
		158.56	*	7.476E-03	4.879E-02	8.173E-02	4.247E-03	0.091
SB-122		563.90	*	-1.427E-01	5.727E-01	9.456E-01	5.349E-02	-0.151
		692.80		5.223E+00	1.187E+01	2.016E+01	1.122E+00	0.259
I-123		159.00	*	3.095E-04	1.187E+01	Half-Life too short		
		528.96		-2.784E-02	1.187E+01	Half-Life too short		
TE-123M		159.00	*	2.161E-02	3.552E-02	6.089E-02	3.213E-03	0.355
I-124		602.71	*	-4.403E-01	4.292E-01	5.560E-01	3.047E-02	-0.792
		722.78		1.455E-02	2.555E+00	4.182E+00	2.520E-01	0.003
		1325.50		7.394E+00	1.784E+01	2.759E+01	2.004E+00	0.268
		1376.25		1.566E+01	1.462E+01	2.745E+01	2.006E+00	0.571
		1509.49		5.850E+00	6.545E+00	1.239E+01	8.787E-01	0.472
		1691.02		3.246E-01	1.430E+00	2.466E+00	1.610E-01	0.132
SB-124		602.71		-8.239E-02	8.031E-02	1.040E-01	5.705E-03	-0.792
		645.85		2.704E-01	9.218E-01	1.558E+00	9.403E-02	0.174
		709.31		-2.368E-01	5.191E+00	8.479E+00	4.932E-01	-0.028
		713.82		1.369E+00	3.059E+00	5.176E+00	5.310E-01	0.264
		722.78		3.948E-03	6.932E-01	1.135E+00	7.135E-02	0.003
		968.20		1.202E+01	6.613E+00	1.192E+01	1.010E+00	1.008
		1045.16		1.910E+00	6.097E+00	1.026E+01	7.787E-01	0.186
		1325.50		2.142E+00	5.169E+00	7.995E+00	5.807E-01	0.268
		1368.21		1.648E-01	2.209E+00	3.721E+00	4.719E-01	0.044
		1436.60		7.013E-01	4.538E+00	7.735E+00	5.593E-01	0.091
		1691.02	*	2.077E-02	9.152E-02	1.578E-01	1.100E-02	0.132
SB-125		427.89	*	-4.843E-02	1.895E-01	3.041E-01	1.850E-02	-0.159
		463.38		5.491E-01	6.128E-01	1.041E+00	7.090E-02	0.528
		600.56		1.670E-01	3.375E-01	5.812E-01	3.745E-02	0.287
		635.90		-2.070E-01	5.842E-01	9.447E-01	6.007E-02	-0.219
TE-125M		109.28	*	-7.287E+00	1.034E+01	1.702E+01	1.516E+00	-0.428
I-126		388.63		-1.058E-01	2.674E-01	4.297E-01	2.485E-02	-0.246
		666.33	*	-3.556E-02	2.875E-01	4.059E-01	2.101E-02	-0.088
		753.82		-1.128E+00	2.127E+00	3.318E+00	2.164E-01	-0.340
SB-126		223.80		-2.297E+00	4.288E+00	6.701E+00	3.700E-01	-0.343
		278.60		6.534E-01	2.535E+00	4.356E+00	2.534E-01	0.150
	+	296.50		3.739E+00	2.412E+00	3.269E+00	1.919E-01	1.144

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		414.70		4.601E-02	1.008E-01	1.692E-01	9.846E-03	0.272
		415.30		4.232E+00	8.372E+00	1.409E+01	8.204E-01	0.300
		555.20		3.729E-01	5.233E+00	8.829E+00	5.022E-01	0.042
		573.80		-1.955E+00	1.257E+00	1.850E+00	1.039E-01	-1.057
		593.00		-6.106E-02	1.163E+00	1.933E+00	1.069E-01	-0.032
		656.30		1.528E+00	5.144E+00	7.593E+00	3.908E-01	0.201
		666.33		-1.460E-02	1.181E-01	1.667E-01	8.627E-03	-0.088
		675.00		1.387E-01	2.648E+00	4.379E+00	2.322E-01	0.032
		695.00		-6.268E-02	9.731E-02	1.515E-01	8.479E-03	-0.414
		697.00		1.395E-01	3.217E-01	5.465E-01	3.076E-02	0.255
		720.50	*	-1.172E-02	1.896E-01	3.088E-01	1.850E-02	-0.038
		856.80		-8.235E-02	7.997E-01	1.275E+00	1.061E-01	-0.065
		989.30		-1.621E-01	2.130E+00	3.512E+00	2.899E-01	-0.046
		1034.80		-1.015E+01	1.524E+01	2.389E+01	1.845E+00	-0.425
		1213.00		-1.614E+00	4.203E+00	6.458E+00	3.907E-01	-0.250
SB-127		61.10		1.301E+02	3.334E+01	5.576E+01	5.231E+00	2.334
		252.40		1.855E+00	1.999E+00	3.123E+00	1.283E+00	0.594
		290.80		-3.137E+00	1.068E+01	1.561E+01	1.069E+00	-0.201
		411.60		-1.677E+00	6.456E+00	1.040E+01	1.353E+00	-0.161
		444.90		9.348E-01	5.347E+00	8.776E+00	7.817E-01	0.107
		473.00		4.250E-01	1.007E+00	1.665E+00	1.560E-01	0.255
		543.00		-1.217E-01	8.022E+00	1.349E+01	1.526E+00	-0.009
		603.60		-3.612E+00	6.386E+00	8.697E+00	7.504E-01	-0.415
		685.20	*	4.151E-01	7.287E-01	1.247E+00	8.576E-02	0.333
		698.50		-6.816E+00	7.304E+00	1.098E+01	1.432E+00	-0.621
		722.20		-1.768E-01	1.548E+01	2.531E+01	1.767E+00	-0.007
		783.80		1.068E-01	1.964E+00	3.199E+00	3.060E-01	0.033
XE-127		57.60		-7.139E-01	1.340E+01	2.006E+01	1.758E+00	-0.036
		145.22		-1.621E-02	8.241E-01	1.381E+00	7.452E-02	-0.012
		172.10		1.722E-02	1.434E-01	2.382E-01	1.223E-02	0.072
		202.84	*	-4.111E-02	6.185E-02	9.689E-02	5.201E-03	-0.424
		374.96		7.952E-02	3.170E-01	5.314E-01	3.100E-02	0.150
I-131		80.18		-1.183E+00	3.836E+00	5.487E+00	5.039E-01	-0.216
		284.30		2.171E-02	1.343E+00	2.276E+00	1.463E-01	0.010
		364.48	*	-7.063E-02	1.161E-01	1.853E-01	1.200E-02	-0.381
		636.97		1.089E-01	1.723E+00	2.868E+00	1.714E-01	0.038
		722.89		-2.207E+00	7.695E+00	1.232E+01	7.452E-01	-0.179
TE-132		49.72		-1.563E+00	9.207E+00	1.499E+01	1.352E+00	-0.104
		111.76		3.887E+00	7.343E+00	1.285E+01	9.546E-01	0.302
		116.30		-1.391E+00	7.301E+00	1.232E+01	8.755E-01	-0.113
		228.16	*	7.997E-02	2.251E-01	3.689E-01	4.822E-02	0.217
BA-133		53.15		-1.063E+01	8.757E+00	1.347E+01	1.189E+00	-0.789
		79.62		1.077E-01	2.084E+00	3.052E+00	4.737E-01	0.035
		81.00		-1.079E-01	1.583E-01	2.195E-01	3.559E-02	-0.492
		276.40		-2.018E-01	5.694E-01	9.477E-01	1.229E-01	-0.213
		302.84		-3.877E-01	2.490E-01	3.770E-01	4.410E-02	-1.028
		356.01	*	1.849E-02	9.041E-02	1.338E-01	1.552E-02	0.138
		383.85		4.292E-01	5.829E-01	9.983E-01	1.085E-01	0.430
I-133	+	510.53		1.892E-03	5.829E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		529.87	*	4.574E-06	5.829E-01	Half-Life too short		
		706.58		3.355E-04	5.829E-01	Half-Life too short		
		856.28		9.404E-04	5.829E-01	Half-Life too short		
		875.33		2.397E-04	5.829E-01	Half-Life too short		
		1236.41		1.149E-03	5.829E-01	Half-Life too short		
		1298.22		-6.616E-04	5.829E-01	Half-Life too short		
CS-134		475.35		2.306E+00	4.405E+00	7.325E+00	4.288E-01	0.315
		563.23		-8.726E-02	7.052E-01	1.175E+00	6.793E-02	-0.074
		569.32		2.458E-01	3.746E-01	6.481E-01	3.767E-02	0.379
		604.70		-3.364E-02	6.911E-02	9.482E-02	5.219E-03	-0.355
		795.84	*	9.152E-02	1.003E-01	1.732E-01	1.265E-02	0.528
		801.93		2.109E-01	8.495E-01	1.402E+00	1.036E-01	0.150
		1038.57		1.608E+00	1.024E+01	1.710E+01	1.313E+00	0.094
		1167.94		5.838E+00	6.620E+00	1.015E+01	5.818E-01	0.575
		1365.15		-1.278E+00	1.522E+00	2.084E+00	1.621E-01	-0.613
CS-135		268.24	*	-4.274E-01	2.709E-01	3.824E-01	2.922E-02	-1.118
I-135		288.45		-1.455E+02	2.709E-01	Half-Life too short		
		417.63		-5.456E+01	2.709E-01	Half-Life too short		
		546.56		-6.805E+01	2.709E-01	Half-Life too short		
		836.80		-8.333E+01	2.709E-01	Half-Life too short		
		1038.76		5.566E+01	2.709E-01	Half-Life too short		
		1124.00		-2.235E+02	2.709E-01	Half-Life too short		
		1131.51		-7.818E+00	2.709E-01	Half-Life too short		
		1260.41	*	-1.126E+00	2.709E-01	Half-Life too short		
		1457.56		-6.068E+01	2.709E-01	Half-Life too short		
		1678.03		8.986E+01	2.709E-01	Half-Life too short		
		1706.46		9.017E+00	2.709E-01	Half-Life too short		
		1791.20		4.717E+01	2.709E-01	Half-Life too short		
CS-136		66.91		3.044E-01	7.735E-01	1.273E+00	1.970E-01	0.239
		86.29		2.462E+00	1.409E+00	2.158E+00	2.922E-01	1.141
		153.22		-5.053E-03	5.839E-01	9.725E-01	6.613E-02	-0.005
		163.89		-6.872E-01	9.982E-01	1.592E+00	1.069E-01	-0.432
		176.55		9.530E-02	3.284E-01	5.494E-01	3.271E-02	0.173
		273.65		-2.524E-01	5.279E-01	8.099E-01	5.350E-02	-0.312
		340.57		1.521E-01	1.673E-01	2.614E-01	1.636E-02	0.582
		818.51		8.486E-02	1.180E-01	2.007E-01	1.531E-02	0.423
		1048.07	*	8.966E-02	1.889E-01	3.213E-01	2.559E-02	0.279
		1235.34		-1.425E-01	5.955E-01	9.368E-01	9.622E-02	-0.152
CE-139		165.85	*	2.647E-02	4.083E-02	6.975E-02	3.556E-03	0.380
BA-140		162.64		-4.790E-01	6.716E-01	1.069E+00	6.356E-02	-0.448
		304.84		-6.113E-03	1.382E+00	2.326E+00	6.353E-01	-0.003
		423.70		4.367E-01	2.580E+00	4.248E+00	1.350E+00	0.103
		537.32	*	1.568E-02	3.403E-01	5.749E-01	1.869E-01	0.027
LA-140		328.77		8.750E-02	3.351E-01	5.681E-01	3.746E-02	0.154
		432.53		-3.013E+00	2.912E+00	4.425E+00	2.853E-01	-0.681
		487.03		-1.690E-01	1.955E-01	2.952E-01	1.949E-02	-0.573
		751.79		4.085E-01	2.437E+00	4.022E+00	3.085E-01	0.102
		815.85		-2.203E-01	4.911E-01	7.636E-01	6.637E-02	-0.288
		867.82		9.131E-01	2.350E+00	3.877E+00	3.485E-01	0.235

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		2.022E+00	5.656E+00	8.985E+00	9.794E-01	0.225
		925.24		8.988E-02	2.222E+00	3.716E+00	3.496E-01	0.024
		1596.49	*	-7.876E-03	7.972E-02	1.277E-01	8.763E-03	-0.062
CE-141		145.44	*	4.834E-03	7.331E-02	1.234E-01	6.958E-03	0.039
CE-143		57.37		-7.613E+00	5.959E+01	8.894E+01	8.820E+00	-0.086
		231.56		-2.923E+01	8.924E+01	1.399E+02	4.318E+01	-0.209
		293.26	*	3.456E+00	5.498E+00	8.471E+00	1.733E+00	0.408
	+	350.59		4.081E+02	1.627E+02	1.509E+02	4.581E+01	2.704
		490.36		2.572E+01	1.309E+02	2.131E+02	6.586E+01	0.121
		664.57		1.487E+03	4.866E+02	2.756E+02	8.692E+01	5.397
		721.93		6.649E+00	6.041E+01	9.964E+01	2.838E+01	0.067
CE-144		80.11		-9.807E-01	3.334E+00	4.775E+00	4.377E-01	-0.205
		133.54	*	1.766E-01	2.840E-01	4.480E-01	6.326E-02	0.394
PM-144		476.78		4.942E-02	1.513E-01	2.489E-01	1.738E-02	0.199
		618.01		2.488E-02	6.052E-02	1.035E-01	5.968E-03	0.240
		696.49	*	5.962E-02	6.205E-02	1.095E-01	6.155E-03	0.545
		778.57		-1.837E+00	4.503E+00	7.045E+00	4.886E-01	-0.261
PR-144		696.49	*	4.024E+00	4.188E+00	7.389E+00	4.153E-01	0.545
		1489.15		-1.235E+01	1.770E+01	2.505E+01	1.788E+00	-0.493
PM-146		453.90	*	3.483E-03	9.392E-02	1.526E-01	1.322E-02	0.023
		633.02		1.997E+00	3.010E+00	5.063E+00	1.861E+00	0.394
		735.90		1.120E-01	3.162E-01	5.278E-01	1.477E-01	0.212
		747.13		-4.812E-02	2.092E-01	3.352E-01	4.291E-02	-0.144
ND-147		91.11		1.311E-01	2.580E-01	3.401E-01	3.344E-02	0.385
		319.41		-7.748E-01	3.603E+00	5.967E+00	3.524E-01	-0.130
		439.89		-1.088E+00	7.996E+00	1.290E+01	7.547E-01	-0.084
		531.02	*	4.929E-01	6.687E-01	1.175E+00	1.587E-01	0.419
PM-149		285.90	*	2.004E+01	1.512E+01	2.677E+01	3.794E+00	0.749
EU-152	+	121.78		1.010E+00	1.923E-01	2.874E-01	2.210E-02	3.515
		244.69		4.794E-02	6.234E-01	8.915E-01	5.043E-02	0.054
		344.27	*	-9.306E-02	1.920E-01	2.862E-01	1.897E-02	-0.325
		443.98		-1.000E+00	2.115E+00	3.337E+00	1.953E-01	-0.300
		778.89		-2.588E-01	5.271E-01	8.183E-01	5.678E-02	-0.316
		867.32		5.970E-01	2.116E+00	3.467E+00	2.953E-01	0.172
		964.01		-8.160E-01	7.997E-01	1.246E+00	1.062E-01	-0.655
		1085.78		-3.418E-01	1.005E+00	1.606E+00	1.130E-01	-0.213
		1112.02		4.787E-01	8.069E-01	1.375E+00	9.143E-02	0.348
		1407.95		1.532E-01	2.472E-01	4.526E-01	3.291E-02	0.339
GD-153		69.67		1.772E-01	2.448E+00	3.935E+00	3.438E-01	0.045
		83.37		-7.607E+00	2.271E+01	3.526E+01	3.310E+00	-0.216
		97.43	*	-5.600E-02	1.210E-01	1.673E-01	1.367E-02	-0.335
		103.18		4.165E-02	1.377E-01	2.177E-01	1.627E-02	0.191
EU-154	+	123.07		7.090E-01	1.405E-01	1.877E-01	1.772E-02	3.776
		247.94		2.992E-01	6.531E-01	9.612E-01	9.098E-02	0.311
		591.81		-8.541E-01	1.173E+00	1.848E+00	1.778E-01	-0.462
		723.30		-1.711E-01	3.678E-01	5.807E-01	4.224E-02	-0.295
		756.87		1.074E+00	1.563E+00	2.678E+00	2.838E-01	0.401
		873.19		3.617E-01	7.420E-01	1.282E+00	1.571E-01	0.282
		996.32		6.163E-01	9.534E-01	1.637E+00	2.874E-01	0.376

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		1.727E-01	5.298E-01	8.961E-01	1.008E-01	0.193
		1274.45	*	1.804E-02	1.736E-01	2.844E-01	2.823E-02	0.063
EU-155		48.70		2.024E+00	5.684E+00	9.495E+00	7.659E-01	0.213
	+	60.01		4.492E+02	4.706E+01	4.415E+01	3.835E+00	10.175
		86.54		7.876E-01	2.167E-01	3.433E-01	3.336E-02	2.294
		105.31	*	-9.864E-02	1.346E-01	2.223E-01	1.639E-02	-0.444
TB-160	+	86.79		1.239E+01	1.505E+00	1.104E+00	1.067E-01	11.226
		197.04		-1.478E-01	7.847E-01	1.273E+00	6.775E-02	-0.116
		215.65		2.021E-01	1.169E+00	1.908E+00	1.042E-01	0.106
		298.57		3.146E-01	2.058E-01	3.357E-01	1.972E-02	0.937
		879.36	*	-7.479E-02	3.232E-01	5.336E-01	4.666E-02	-0.140
		962.29		5.513E-02	1.269E+00	2.115E+00	1.806E-01	0.026
		966.15		-1.442E-01	5.118E-01	8.365E-01	7.110E-02	-0.172
		1177.93		3.322E+00	9.685E-01	1.770E+00	1.007E-01	1.877
		1271.85		-1.268E+00	1.078E+00	1.437E+00	9.593E-02	-0.882
HO-166M		80.57		-2.937E-01	4.375E-01	6.101E-01	5.610E-02	-0.481
	+	184.41		1.696E-01	9.526E-02	8.676E-02	4.534E-03	1.954
		280.46		-2.224E-02	1.371E-01	2.304E-01	1.342E-02	-0.097
		410.95		2.011E-01	4.913E-01	8.232E-01	4.785E-02	0.244
		711.68	*	-1.491E-02	1.247E-01	2.024E-01	1.185E-02	-0.074
		752.31		-3.121E-01	6.060E-01	9.477E-01	6.158E-02	-0.329
		810.29		1.094E-01	1.262E-01	2.180E-01	1.630E-02	0.502
TM-171		51.35		1.452E+01	7.226E+01	1.194E+02	1.038E+01	0.122
		52.39		-1.042E+00	3.671E+01	5.996E+01	5.268E+00	-0.017
	+	59.40		2.352E+03	2.464E+02	2.475E+02	2.150E+01	9.504
		66.72	*	1.228E+01	4.186E+01	6.866E+01	5.971E+00	0.179
LU-176	+	88.36		9.824E+00	1.193E+00	1.185E+00	1.149E-01	8.288
		201.83		-1.394E-02	4.358E-02	6.968E-02	3.735E-03	-0.200
		306.84	*	1.864E-02	4.055E-02	6.995E-02	4.121E-03	0.266
		401.10		6.609E+00	1.314E+01	2.219E+01	1.286E+00	0.298
LU-177		112.95		3.060E-01	9.524E-01	1.649E+00	1.082E-01	0.186
		208.36	*	3.360E-01	7.708E-01	1.278E+00	6.914E-02	0.263
LU-177M		52.97		-2.751E+00	3.750E+00	5.919E+00	5.217E-01	-0.465
		54.07		-5.228E-01	1.974E+00	3.184E+00	2.814E-01	-0.164
		61.30		3.598E-01	2.522E+00	3.802E+00	3.302E-01	0.095
	+	121.62		5.021E+00	9.231E-01	1.423E+00	8.414E-02	3.527
		147.16		-1.709E-01	8.555E-01	1.416E+00	7.596E-02	-0.121
		171.86		8.629E-02	6.464E-01	1.074E+00	5.515E-02	0.080
		218.09		4.673E-01	1.416E+00	2.325E+00	1.274E-01	0.201
		268.79		-6.673E-01	1.285E+00	1.968E+00	1.137E-01	-0.339
		319.02		-2.040E-01	4.362E-01	7.118E-01	4.204E-02	-0.287
		367.43		1.360E+00	1.698E+00	2.933E+00	1.718E-01	0.464
		413.65	*	-5.401E-02	3.449E-01	5.589E-01	3.252E-02	-0.097
HF-181		56.28		1.420E+00	2.164E+00	3.355E+00	2.954E-01	0.423
		57.53		-8.660E-02	1.151E+00	1.722E+00	1.509E-01	-0.050
		65.20		-1.230E+00	1.289E+00	1.965E+00	1.707E-01	-0.626
		133.02		5.127E-02	8.070E-02	1.279E-01	7.179E-03	0.401
	+	136.25		6.649E-01	1.138E+00	1.074E+00	5.962E-02	0.619
		345.85		-2.998E-01	3.376E-01	4.875E-01	2.876E-02	-0.615

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	-1.529E-02	7.838E-02	1.246E-01	7.285E-03	-0.123
W-181		56.28		5.992E-01	9.180E-01	1.423E+00	1.253E-01	0.421
		57.53		-3.709E-02	4.886E-01	7.310E-01	6.406E-02	-0.051
		65.20	*	-5.180E-01	5.429E-01	8.279E-01	7.192E-02	-0.626
TA-182		67.75		-9.993E-02	1.600E-01	2.495E-01	2.172E-02	-0.401
		100.10		-1.352E-01	2.355E-01	3.516E-01	2.752E-02	-0.385
		152.43		5.664E-02	4.308E-01	7.229E-01	3.820E-02	0.078
		222.10		-2.203E-01	5.489E-01	8.659E-01	4.771E-02	-0.254
		1001.68		-4.209E-01	4.796E+00	7.889E+00	6.405E-01	-0.053
		1121.28		5.696E-01	3.257E-01	5.929E-01	3.856E-02	0.961
		1189.05		2.724E-01	5.201E-01	8.907E-01	5.168E-02	0.306
		1221.42	*	1.030E-01	2.638E-01	4.483E-01	2.752E-02	0.230
		1230.97		-2.254E-02	6.354E-01	1.024E+00	6.388E-02	-0.022
RE-183		57.98		7.848E-01	5.024E-01	7.989E-01	6.987E-02	0.982
	+	59.32		9.008E+00	9.437E-01	9.539E-01	8.290E-02	9.443
		67.20		-2.842E-02	2.778E-01	4.463E-01	3.883E-02	-0.064
		162.32	*	-5.242E-02	1.345E-01	2.182E-01	1.123E-02	-0.240
		208.81		7.130E-01	1.410E+00	2.346E+00	1.270E-01	0.304
		291.72		4.827E-01	1.665E+00	2.534E+00	1.485E-01	0.190
RE-184		57.98		3.022E+00	1.934E+00	3.076E+00	2.690E-01	0.982
	+	59.32		3.466E+01	3.631E+00	3.670E+00	3.189E-01	9.443
		67.20		-1.094E-01	1.069E+00	1.718E+00	1.495E-01	-0.064
		161.27		1.129E-01	4.569E-01	7.680E-01	3.962E-02	0.147
		216.55		-2.598E-01	4.480E-01	7.026E-01	3.844E-02	-0.370
		252.85	*	4.596E-01	3.823E-01	6.507E-01	3.710E-02	0.706
		318.01		-2.832E-01	7.472E-01	1.226E+00	7.238E-02	-0.231
		792.07		-9.272E-01	2.173E+00	3.406E+00	2.440E-01	-0.272
		903.28		-7.128E-01	2.746E+00	4.176E+00	3.784E-01	-0.171
		920.93		1.321E-01	1.278E+00	2.146E+00	1.914E-01	0.062
OS-185	+	59.72		2.504E+01	2.624E+00	2.565E+00	2.228E-01	9.762
		61.14		9.745E-01	3.224E-01	5.401E-01	4.691E-02	1.804
		69.30		3.074E-02	4.202E-01	6.759E-01	5.900E-02	0.045
		592.07		-2.586E+00	4.580E+00	7.329E+00	4.056E-01	-0.353
		646.12	*	3.382E-02	8.036E-02	1.370E-01	7.151E-03	0.247
		717.42		-3.155E-01	1.737E+00	2.804E+00	1.666E-01	-0.113
		874.81		4.496E-01	1.394E+00	2.387E+00	2.067E-01	0.188
		880.27		-1.936E-01	1.832E+00	3.051E+00	2.673E-01	-0.063
RE-188		155.03	*	-5.458E-02	2.083E-01	3.418E-01	1.794E-02	-0.160
		477.96		3.160E+00	6.309E+00	1.049E+01	6.137E-01	0.301
		633.10		3.044E+00	5.541E+00	9.522E+00	5.051E-01	0.320
W-188		63.58		-2.746E+00	7.775E+01	1.178E+02	1.023E+01	-0.023
		227.08		2.944E+00	1.928E+01	3.130E+01	1.735E+00	0.094
		290.67	*	-3.511E+00	1.344E+01	1.969E+01	1.153E+00	-0.178
IR-192	+	295.96		4.075E-01	2.629E-01	3.582E-01	2.135E-02	1.137
		308.46		-8.754E-02	1.468E-01	2.382E-01	1.419E-02	-0.368
		316.51	*	1.745E-02	5.418E-02	9.252E-02	5.488E-03	0.189
		468.07		-1.445E-01	1.414E-01	2.135E-01	1.438E-02	-0.677
		604.41		-4.552E-01	8.757E-01	1.195E+00	1.337E-01	-0.381
		612.46		6.555E-01	1.394E+00	2.107E+00	1.536E-01	0.311

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		-2.611E-01	2.548E-01	3.867E-01	3.359E-02	-0.675
		66.83		5.457E-02	1.346E-01	2.220E-01	1.931E-02	0.246
	+	75.70		8.714E-01	4.635E-01	4.872E-01	4.351E-02	1.788
		98.88	*	2.264E-01	3.021E-01	4.905E-01	3.914E-02	0.462
		129.76		3.087E+00	3.669E+00	6.431E+00	3.655E-01	0.480
TL-200		367.94	*	6.258E+00	7.082E+00	1.228E+01	7.193E-01	0.509
		579.30		5.818E+01	5.814E+01	9.275E+01	5.188E+00	0.627
		828.27		6.908E+00	9.612E+01	1.558E+02	1.216E+01	0.044
		1205.75		-2.979E+01	3.000E+01	4.233E+01	2.529E+00	-0.704
TL-201		68.90		-4.997E-04	1.276E+00	2.046E+00	1.785E-01	0.000
		70.82		-5.141E-01	7.522E-01	1.161E+00	1.017E-01	-0.443
		80.30		-4.752E-01	1.429E+00	2.040E+00	1.872E-01	-0.233
	+	135.34		7.423E+00	1.270E+01	1.130E+01	6.291E-01	0.657
		167.43	*	1.786E+00	1.731E+00	3.011E+00	1.537E-01	0.593
TL-202		68.90		-1.642E-04	4.194E-01	6.724E-01	5.865E-02	0.000
		70.82		-1.685E-01	2.465E-01	3.804E-01	3.333E-02	-0.443
		80.30		-1.558E-01	4.684E-01	6.688E-01	6.139E-02	-0.233
		439.56	*	1.216E-02	1.009E-01	1.652E-01	9.666E-03	0.074
HG-203		70.83		-9.998E-01	1.470E+00	2.263E+00	3.100E-01	-0.442
		72.87		-6.837E-01	9.005E-01	1.381E+00	1.841E-01	-0.495
		82.60		-4.359E-01	1.502E+00	2.338E+00	3.321E-01	-0.186
		279.20	*	6.799E-03	5.730E-02	9.780E-02	6.041E-03	0.070
BI-207		72.80		-2.271E-01	2.950E-01	4.535E-01	3.999E-02	-0.501
		74.97		1.177E-01	1.825E-01	2.769E-01	2.464E-02	0.425
		84.90		6.815E-02	3.348E-01	4.917E-01	4.674E-02	0.139
		569.67		2.963E-02	5.814E-02	9.968E-02	5.615E-03	0.297
		1063.62	*	3.057E-02	1.368E-01	2.285E-01	1.679E-02	0.134
		1770.23		-1.590E+00	1.076E+00	1.244E+00	7.700E-02	-1.278
TL-207		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
PO-209		260.50		3.998E+00	1.634E+01	2.634E+01	1.512E+00	0.152
		262.80		-1.328E+01	4.546E+01	7.082E+01	4.073E+00	-0.187
		896.60	*	7.944E+00	1.977E+01	3.390E+01	3.077E+00	0.234
BI-210		46.50	*	-7.392E+00	8.147E+00	1.277E+01	9.945E-01	-0.579
PB-210		46.50	*	-7.392E+00	8.147E+00	1.277E+01	9.945E-01	-0.579
PO-210		46.50	*	-7.392E+00	8.142E+00	1.277E+01	8.570E-01	-0.579
PB-211		404.84	*	-2.315E-02	1.865E+00	3.056E+00	1.905E+00	-0.008
		427.08		-1.867E+00	4.384E+00	6.707E+00	4.146E+00	-0.278
		831.96		-6.446E-01	2.822E+00	4.420E+00	2.766E+00	-0.146
BI-212		727.18	*	4.611E-01	6.068E-01	1.044E+00	8.289E-02	0.442
		785.46		1.568E+00	3.854E+00	6.441E+00	4.541E-01	0.244

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1620.62		3.857E-01	2.052E+00	3.470E+00	2.353E-01	0.111
BI-214	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
PO-215		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
RN-219		271.23		2.656E-01	4.224E-01	6.920E-01	5.603E-02	0.384
		401.81	*	3.941E-01	8.252E-01	1.388E+00	1.889E-01	0.284
RN-220		549.76	*	-1.059E+00	4.889E+01	8.208E+01	4.684E+00	-0.013
RA-223		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
RA-226	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
AC-227		79.80		-1.866E-01	2.631E+00	3.824E+00	8.306E-01	-0.049
		236.00		3.966E-01	3.826E-01	5.855E-01	6.057E-02	0.677
		256.20	*	5.621E-01	6.703E-01	1.111E+00	1.547E-01	0.506
		286.10		3.402E+00	2.694E+00	4.788E+00	5.545E-01	0.711
		299.80		4.010E+00	2.879E+00	4.565E+00	7.447E-01	0.878
		304.40		-2.672E+00	3.176E+00	5.043E+00	8.738E-01	-0.530
		334.20		-1.864E-01	4.473E+00	6.550E+00	1.203E+00	-0.028
TH-227		79.80		-1.866E-01	2.631E+00	3.824E+00	8.410E-01	-0.049
	+	94.00		5.894E+00	4.320E+00	4.359E+00	9.503E-01	1.352
		236.00		3.966E-01	3.820E-01	5.855E-01	5.230E-02	0.677
		256.20	*	5.621E-01	6.724E-01	1.111E+00	1.875E-01	0.506

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		286.10		3.402E+00	4.326E+00	4.788E+00	4.796E+00	0.711
		299.80		4.010E+00	2.879E+00	4.565E+00	7.447E-01	0.878
		304.40		-2.672E+00	3.176E+00	5.043E+00	8.738E-01	-0.530
		334.20		-1.864E-01	4.473E+00	6.550E+00	1.203E+00	-0.028
AC-228	+	338.32		1.100E+00	7.808E-01	8.345E-01	3.403E-01	1.318
	+	911.07	*	9.005E-01	6.436E-01	7.509E-01	8.664E-02	1.199
		969.11		1.446E+00	7.658E-01	1.271E+00	2.958E-01	1.138
RA-228	+	338.32		1.100E+00	7.808E-01	8.345E-01	3.403E-01	1.318
	+	911.07	*	9.005E-01	6.436E-01	7.509E-01	8.664E-02	1.199
		969.11		1.446E+00	7.658E-01	1.271E+00	2.958E-01	1.138
TH-229		85.43		9.966E-02	3.295E-01	4.861E-01	4.642E-02	0.205
	+	88.47		5.655E+00	6.867E-01	6.746E-01	6.524E-02	8.383
		100.00		-1.334E-01	2.565E-01	3.846E-01	3.015E-02	-0.347
		193.63	*	1.865E-01	7.561E-01	1.251E+00	6.626E-02	0.149
		210.97		-1.467E-01	1.193E+00	1.921E+00	1.043E-01	-0.076
TH-230	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
PA-231		283.67	*	-8.965E-01	2.654E+00	4.416E+00	6.091E-01	-0.203
		301.29		1.813E-01	1.010E+00	1.664E+00	1.746E-01	0.109
TH-231		81.07		-2.857E-01	3.520E-01	4.858E-01	4.483E-02	-0.588
		83.78		4.356E-03	2.142E-01	3.120E-01	2.939E-02	0.014
		94.90		-8.071E-02	3.244E-01	4.569E-01	3.898E-02	-0.177
	+	122.32		2.409E+01	4.503E+00	6.774E+00	4.583E-01	3.556
		144.24		2.340E-01	9.298E-01	1.579E+00	1.094E-01	0.148
		154.21		2.864E-01	5.174E-01	8.858E-01	5.822E-02	0.323
		269.46		2.796E-01	3.077E-01	5.136E-01	3.105E-02	0.544
		323.87	*	-1.435E-01	1.126E+00	1.870E+00	3.096E-01	-0.077
	+	338.28		4.592E+00	2.713E+00	3.485E+00	3.691E-01	1.318
		445.03		-4.630E-03	4.913E+00	7.980E+00	8.219E-01	-0.001
U-231		84.21		9.459E-01	2.624E+00	3.892E+00	3.679E-01	0.243
	+	92.29		1.667E+00	1.175E+00	1.333E+00	1.193E-01	1.250
		95.87	*	8.139E-02	4.366E-01	6.354E-01	5.330E-02	0.128
		108.00		1.869E-01	7.281E-01	1.262E+00	8.817E-02	0.148
TH-232	+	338.32		1.100E+00	6.424E-01	8.345E-01	4.929E-02	1.318
	+	911.07	*	9.005E-01	6.436E-01	7.509E-01	8.664E-02	1.199
		969.11		1.446E+00	7.658E-01	1.271E+00	2.958E-01	1.138
PA-233		75.28		3.663E+00	5.318E+00	8.051E+00	1.249E+00	0.455
		86.59		1.683E+01	5.711E+00	5.962E+00	1.620E+00	2.824
		300.12		1.384E+00	7.728E-01	1.255E+00	1.691E-01	1.102
		311.98	*	-2.314E-02	1.038E-01	1.720E-01	1.076E-02	-0.135
		340.50		1.151E+00	1.239E+00	1.898E+00	4.365E-01	0.606
		398.62		2.357E+00	4.070E+00	6.838E+00	1.768E+00	0.345
		415.76		1.328E+00	3.374E+00	5.628E+00	1.159E+00	0.236
PA-234		63.00		4.643E-01	2.414E+00	3.718E+00	5.777E-01	0.125

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.67		1.656E-02	2.351E-01	3.395E-01	4.199E-02	0.049
		98.44		1.033E-01	1.389E-01	2.065E-01	1.150E-01	0.500
		99.86		-1.551E-02	6.348E-01	9.842E-01	7.732E-02	-0.016
		111.00		-7.467E-02	2.296E-01	3.858E-01	4.172E-02	-0.194
		131.20		-1.333E-01	1.395E-01	2.240E-01	1.266E-02	-0.595
		152.70		-2.329E-02	4.382E-01	7.284E-01	1.138E-01	-0.032
	+	186.00		6.104E+00	3.888E+00	3.429E+00	1.044E+00	1.780
		226.40		-4.506E-01	6.660E-01	1.029E+00	1.176E-01	-0.438
		227.20		1.666E-01	7.057E-01	1.150E+00	6.380E-02	0.145
		248.90		-5.513E-01	1.473E+00	2.016E+00	4.326E-01	-0.273
		293.70		1.711E+00	1.381E+00	2.173E+00	3.500E-01	0.788
		369.80		-1.317E-01	1.645E+00	2.707E+00	5.640E-01	-0.049
		568.70		1.673E+00	1.925E+00	3.372E+00	1.901E-01	0.496
		569.50		3.016E-01	5.190E-01	8.937E-01	5.036E-02	0.337
		574.00		-4.009E+00	2.777E+00	4.136E+00	2.323E-01	-0.969
		699.00		-1.030E+00	1.359E+00	2.072E+00	3.717E-01	-0.497
		706.10		6.974E-01	2.086E+00	3.470E+00	1.531E+00	0.201
		733.00		-3.798E-01	7.999E-01	1.252E+00	2.676E-01	-0.303
		742.81		-3.673E-01	2.969E+00	4.781E+00	3.201E+00	-0.077
		796.30		1.550E+00	2.008E+00	3.370E+00	8.980E-01	0.460
		805.60		-6.927E-01	2.318E+00	3.681E+00	1.116E+00	-0.188
		819.60		2.818E+00	3.144E+00	5.114E+00	1.934E+00	0.551
		826.30		3.445E-01	2.054E+00	3.347E+00	1.492E+00	0.103
		831.60		-2.624E-01	1.461E+00	2.319E+00	6.872E-01	-0.113
		876.40		-9.872E-01	2.332E+00	3.414E+00	3.510E+00	-0.289
		880.51		-1.103E-01	6.982E-01	1.158E+00	1.016E-01	-0.095
		883.24		-1.610E-01	7.292E-01	1.191E+00	8.010E-01	-0.135
		899.00		-7.266E-02	2.234E+00	3.732E+00	1.635E+00	-0.019
		925.00		-1.899E-01	3.508E+00	5.836E+00	5.185E-01	-0.033
		926.50		1.486E-01	5.165E-01	8.737E-01	2.216E-01	0.170
		946.00	*	-2.227E-01	8.955E-01	1.468E+00	2.759E-01	-0.152
		949.00		5.319E-01	1.301E+00	2.215E+00	1.920E-01	0.240
		980.50		1.059E+00	1.935E+00	3.324E+00	2.776E-01	0.319
		1394.10		2.061E-01	1.479E+00	2.513E+00	1.631E+00	0.082
PA-234M		766.41		-1.051E+01	3.417E+01	5.261E+01	4.024E+01	-0.200
		1001.03	*	2.964E+00	1.621E+01	2.717E+01	2.935E+00	0.109
TH-234		63.29	*	-5.000E-01	2.098E+00	3.135E+00	5.649E-01	-0.159
	+	92.38		1.525E+00	1.102E+00	1.230E+00	2.242E-01	1.240
U-234	+	609.31	*	7.493E-01	2.512E-01	3.289E-01	2.472E-02	2.279
		768.36		-3.092E-01	1.433E+00	2.290E+00	2.063E-01	-0.135
		934.06		9.602E-03	3.228E+00	5.382E+00	5.805E-01	0.002
		1120.29		9.014E-01	7.285E-01	1.285E+00	1.194E-01	0.701
		1238.11		1.271E+00	1.302E+00	2.327E+00	1.983E-01	0.546
		1377.67		1.712E+00	1.639E+00	3.063E+00	2.960E-01	0.559
		1764.49		7.552E-01	4.641E-01	9.234E-01	5.741E-02	0.818
U-235		89.95		1.636E+00	1.817E+00	2.383E+00	7.405E-01	0.687
	+	93.35		1.834E+00	1.382E+00	1.470E+00	4.128E-01	1.247
		105.00		-1.063E+00	1.353E+00	2.169E+00	6.396E-01	-0.490
		143.76	*	1.149E-01	2.830E-01	4.834E-01	7.818E-02	0.238

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		163.35		-5.968E-01	6.762E-01	1.056E+00	1.877E-01	-0.565
	+	185.71		2.261E-01	1.270E-01	1.279E-01	6.697E-03	1.767
		205.31		3.452E-01	7.782E-01	1.290E+00	2.303E-01	0.268
NP-236		94.67		1.391E-02	1.784E-01	2.578E-01	2.208E-02	0.054
		98.44		7.808E-02	9.581E-02	1.561E-01	1.255E-02	0.500
		111.00		-5.648E-02	1.736E-01	2.918E-01	1.961E-02	-0.194
		160.31	*	-1.329E-02	1.061E-01	1.749E-01	9.044E-03	-0.076
NP-237		86.50	*	1.446E+00	5.833E-01	7.927E-01	1.805E-01	1.824
		95.87		2.508E-01	1.347E+00	1.958E+00	4.808E-01	0.128
U-238		63.29	*	-5.000E-01	2.098E+00	3.135E+00	5.649E-01	-0.159
	+	92.38		1.525E+00	1.075E+00	1.230E+00	1.099E-01	1.240
NP-239		99.55		3.278E-02	2.139E-01	3.355E-01	2.648E-02	0.098
		117.00	*	1.726E-01	2.596E-01	4.375E-01	2.731E-02	0.395
		209.75		1.064E+00	1.181E+00	2.001E+00	1.084E-01	0.532
		228.18		1.281E-01	3.686E-01	6.043E-01	3.355E-02	0.212
		277.60		-9.816E-02	2.849E-01	4.749E-01	2.761E-02	-0.207
		334.30		2.927E-01	2.490E+00	3.692E+00	2.181E-01	0.079
AM-243		74.67	*	6.889E-02	1.024E-01	1.555E-01	1.382E-02	0.443
	+	86.72		4.561E+02	5.538E+01	3.835E+01	3.704E+00	11.893
		117.66		3.645E+00	5.553E+00	8.858E+00	5.486E-01	0.411
		142.18		-8.541E+00	2.445E+01	3.837E+01	2.089E+00	-0.223
CM-243		99.55		3.371E-02	2.200E-01	3.450E-01	2.724E-02	0.098
		103.76	*	-3.592E-02	1.162E-01	1.964E-01	1.455E-02	-0.183
		117.00		1.775E-01	2.669E-01	4.499E-01	2.808E-02	0.395
		209.75		1.048E+00	1.163E+00	1.971E+00	1.069E-01	0.532
		228.18		1.294E-01	3.723E-01	6.103E-01	3.389E-02	0.212
		277.60		-9.891E-02	2.871E-01	4.785E-01	2.782E-02	-0.207
CM-247		278.00		4.907E-01	1.156E+00	2.005E+00	1.166E-01	0.245
		287.40		2.205E-01	2.197E+00	3.736E+00	2.184E-01	0.059
		402.60	*	4.620E-03	7.464E-02	1.229E-01	7.122E-03	0.038
CF-249		252.85		1.779E+00	1.480E+00	2.519E+00	1.436E-01	0.706
		333.44		1.365E-01	3.287E-01	4.987E-01	2.946E-02	0.274
		387.95	*	1.321E-02	7.693E-02	1.279E-01	7.401E-03	0.103
CF-251		176.60	*	5.093E-02	1.689E-01	2.828E-01	1.461E-02	0.180
		227.00		5.863E-02	6.221E-01	1.007E+00	5.581E-02	0.058
		285.00		1.391E+00	3.055E+00	5.285E+00	3.086E-01	0.263

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089    *
* Acquisition date :  6-JUL-2009 13:26:36 Detector SN#     :               *
* Detector ID        : GAM23               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 01:00:03.12      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 29-JUN-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201870089          Analyst initials: MXR1          *
* Batch Number       : 880723               Sample Quantity : 1.5544E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	3.418E-01	6.161E-02	6.079E-02	0.000E+00
CO-60	6.996E+00	6.216E-01	9.187E-02	0.000E+00
CD-109	4.167E+01	4.958E+00	2.129E+00	0.000E+00
SN-126	4.142E+00	4.929E-01	2.129E-01	0.000E+00
BA-137M	5.378E+00	3.801E-01	1.264E-01	0.000E+00
CS-137	5.685E+00	4.029E-01	1.336E-01	0.000E+00
TL-208	3.886E-01	1.148E-01	1.251E-01	0.000E+00
BI-211	2.347E+00	6.137E-01	6.246E-01	0.000E+00
PB-212	7.908E-01	1.682E-01	1.910E-01	0.000E+00
PO-212	7.908E-01	1.682E-01	1.910E-01	0.000E+00
PB-214	8.165E-01	2.175E-01	2.178E-01	0.000E+00
PO-214	8.165E-01	2.175E-01	2.178E-01	0.000E+00
PO-216	7.908E-01	1.682E-01	1.910E-01	0.000E+00
PO-218	8.165E-01	2.175E-01	2.178E-01	0.000E+00
RA-224	7.313E-01	2.380E+00	1.998E+00	0.000E+00
TH-228	7.908E-01	1.682E-01	1.910E-01	0.000E+00
AM-241	1.385E+01	1.493E+00	5.338E-01	0.000E+00
ANH-511	7.970E-02	1.088E-01	9.697E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	2.667E-01	6.348E-01	1.114E+00	0.000E+00	NOT IDENT.
NA-22	4.085E-03	6.035E-02	1.016E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.222E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.016E-02	4.929E-02	9.091E-02	0.000E+00	NOT IDENT.
K-40	8.824E-01	5.809E-01	1.186E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	9.771E-02	1.030E-01	0.000E+00	FAIL ABUN
SC-46	6.992E-02	9.621E-02	1.752E-01	0.000E+00	NOT IDENT.
V-48	7.630E-02	1.318E-01	2.359E-01	0.000E+00	NOT IDENT.
CR-51	6.613E-02	5.208E-01	9.425E-01	0.000E+00	NOT IDENT.

MN-52	-2.425E-02	1.195E-01	1.955E-01	0.000E+00	FAIL ABUN
MN-54	-2.482E-02	8.211E-02	1.351E-01	0.000E+00	NOT IDENT.
CO-56	1.970E-02	8.243E-02	1.412E-01	0.000E+00	NOT IDENT.
CO-58	4.627E-02	7.665E-02	1.358E-01	0.000E+00	NOT IDENT.
FE-59	4.258E-02	2.078E-01	3.584E-01	0.000E+00	NOT IDENT.
ZN-65	-2.400E-01	2.232E-01	3.492E-01	0.000E+00	NOT IDENT.
GE-68	6.311E-01	3.182E+00	5.499E+00	0.000E+00	NOT IDENT.
AS-73	-1.904E+00	1.852E+00	3.232E+00	0.000E+00	NOT IDENT.
AS-74	7.119E-02	1.306E-01	2.381E-01	0.000E+00	NOT IDENT.
SE-75	3.823E-02	6.745E-02	1.194E-01	0.000E+00	FAIL ABUN
BR-77	1.047E+00	2.303E+00	4.024E+00	0.000E+00	FAIL ABUN
SR-82	-5.600E-01	6.295E-01	9.894E-01	0.000E+00	NOT IDENT.
RB-83	4.442E-02	1.296E-01	2.247E-01	0.000E+00	NOT IDENT.
RB-84	4.110E-02	1.459E-01	2.599E-01	0.000E+00	NOT IDENT.
KR-85	2.059E+01	1.445E+01	2.425E+01	0.000E+00	NOT IDENT.
SR-85	9.748E-02	6.843E-02	1.148E-01	0.000E+00	NOT IDENT.
RB-86	-6.610E-01	1.577E+00	2.609E+00	0.000E+00	NOT IDENT.
Y-88	3.265E-02	5.500E-02	1.040E-01	0.000E+00	NOT IDENT.
ZR-88	1.777E-02	5.490E-02	9.807E-02	0.000E+00	NOT IDENT.
Y-91	-5.611E+00	2.488E+01	4.061E+01	0.000E+00	NOT IDENT.
NB-94	-1.939E-02	6.272E-02	1.055E-01	0.000E+00	NOT IDENT.
NB-95	-1.190E-02	7.377E-02	1.241E-01	0.000E+00	NOT IDENT.
NB-95M	1.358E-01	1.887E-01	3.062E-01	0.000E+00	NOT IDENT.
ZR-95	-5.953E-03	1.314E-01	2.235E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.412E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.163E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.830E+00	3.687E+00	6.060E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.582E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.894E-03	4.874E-02	8.638E-02	0.000E+00	NOT IDENT.
RH-102	1.541E-02	6.713E-02	1.165E-01	0.000E+00	NOT IDENT.
RU-103	-2.505E-02	7.413E-02	1.232E-01	0.000E+00	FAIL ABUN
RH-106	-5.382E-02	6.260E-01	1.089E+00	0.000E+00	FAIL ABUN
RU-106	-5.382E-02	6.260E-01	1.089E+00	0.000E+00	FAIL ABUN
AG-108M	-8.553E-02	6.852E-02	1.092E-01	0.000E+00	NOT IDENT.
AG-110M	8.299E-02	8.469E-02	1.388E-01	0.000E+00	NOT IDENT.
IN-111	4.994E-02	3.134E-01	4.867E-01	0.000E+00	NOT IDENT.
IN-113M	4.546E-02	7.889E-02	1.430E-01	0.000E+00	NOT IDENT.
SN-113	4.546E-02	7.889E-02	1.430E-01	0.000E+00	NOT IDENT.
IN-114M	-2.205E-01	2.584E-01	3.844E-01	0.000E+00	NOT IDENT.
CD-115	-8.663E-01	2.046E+00	3.344E+00	0.000E+00	NOT IDENT.
SN-117M	7.476E-03	4.781E-02	8.746E-02	0.000E+00	NOT IDENT.
SB-122	-1.427E-01	5.613E-01	9.790E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.984E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.161E-02	3.481E-02	6.515E-02	0.000E+00	NOT IDENT.
I-124	-4.403E-01	4.206E-01	5.746E-01	0.000E+00	NOT IDENT.
SB-124	2.077E-02	8.969E-02	1.585E-01	0.000E+00	NOT IDENT.
SB-125	-4.843E-02	1.857E-01	3.172E-01	0.000E+00	NOT IDENT.
TE-125M	-7.287E+00	1.013E+01	1.838E+01	0.000E+00	NOT IDENT.
I-126	-3.556E-02	2.818E-01	4.184E-01	0.000E+00	NOT IDENT.
SB-126	-1.172E-02	1.858E-01	3.176E-01	0.000E+00	FAIL ABUN
SB-127	4.151E-01	7.141E-01	1.284E+00	0.000E+00	NOT IDENT.
XE-127	-4.111E-02	6.061E-02	1.030E-01	0.000E+00	NOT IDENT.
I-131	-7.063E-02	1.138E-01	1.940E-01	0.000E+00	NOT IDENT.
TE-132	7.997E-02	2.206E-01	3.911E-01	0.000E+00	NOT IDENT.
BA-133	1.849E-02	8.861E-02	1.402E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.815E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	9.152E-02	9.827E-02	1.776E-01	0.000E+00	NOT IDENT.
CS-135	-4.274E-01	2.655E-01	4.037E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.685E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.966E-02	1.852E-01	3.271E-01	0.000E+00	NOT IDENT.
CE-139	2.647E-02	4.002E-02	7.455E-02	0.000E+00	NOT IDENT.
BA-140	1.568E-02	3.335E-01	5.960E-01	0.000E+00	NOT IDENT.
LA-140	-7.876E-03	7.813E-02	1.285E-01	0.000E+00	NOT IDENT.
CE-141	4.834E-03	7.185E-02	1.323E-01	0.000E+00	NOT IDENT.
CE-143	3.456E+00	5.388E+00	8.923E+00	0.000E+00	FAIL ABUN
CE-144	1.766E-01	2.784E-01	4.814E-01	0.000E+00	NOT IDENT.
PM-144	5.962E-02	6.081E-02	1.127E-01	0.000E+00	NOT IDENT.
PR-144	4.024E+00	4.104E+00	7.607E+00	0.000E+00	NOT IDENT.
PM-146	3.483E-03	9.204E-02	1.589E-01	0.000E+00	NOT IDENT.
ND-147	4.929E-01	6.553E-01	1.219E+00	0.000E+00	NOT IDENT.
PM-149	2.004E+01	1.482E+01	2.822E+01	0.000E+00	NOT IDENT.
EU-152	-9.306E-02	1.882E-01	3.002E-01	0.000E+00	FAIL ABUN
GD-153	-5.600E-02	1.186E-01	1.812E-01	0.000E+00	NOT IDENT.
EU-154	1.804E-02	1.701E-01	2.879E-01	0.000E+00	FAIL ABUN
EU-155	-9.864E-02	1.319E-01	2.403E-01	0.000E+00	FAIL ABUN
TB-160	-7.479E-02	3.167E-01	5.458E-01	0.000E+00	FAIL ABUN
HO-166M	-1.491E-02	1.222E-01	2.083E-01	0.000E+00	FAIL ABUN
TM-171	1.228E+01	4.102E+01	7.505E+01	0.000E+00	FAIL ABUN

LU-176	1.864E-02	3.974E-02	7.359E-02	0.000E+00	FAIL ABUN
LU-177	3.360E-01	7.554E-01	1.358E+00	0.000E+00	NOT IDENT.
LU-177M	-5.401E-02	3.380E-01	5.835E-01	0.000E+00	FAIL ABUN
HF-181	-1.529E-02	7.681E-02	1.295E-01	0.000E+00	FAIL ABUN
W-181	-5.180E-01	5.321E-01	9.054E-01	0.000E+00	NOT IDENT.
TA-182	1.030E-01	2.585E-01	4.544E-01	0.000E+00	NOT IDENT.
RE-183	-5.242E-02	1.318E-01	2.334E-01	0.000E+00	FAIL ABUN
RE-184	4.596E-01	3.746E-01	6.880E-01	0.000E+00	FAIL ABUN
OS-185	3.382E-02	7.875E-02	1.414E-01	0.000E+00	FAIL ABUN
RE-188	-5.458E-02	2.041E-01	3.660E-01	0.000E+00	NOT IDENT.
W-188	-3.511E+00	1.317E+01	2.074E+01	0.000E+00	NOT IDENT.
IR-192	1.745E-02	5.309E-02	9.727E-02	0.000E+00	FAIL ABUN
AU-195	2.264E-01	2.961E-01	5.311E-01	0.000E+00	FAIL ABUN
TL-200	6.258E+00	6.941E+00	1.286E+01	0.000E+00	NOT IDENT.
TL-201	1.786E+00	1.696E+00	3.217E+00	0.000E+00	FAIL ABUN
TL-202	1.216E-02	9.887E-02	1.722E-01	0.000E+00	NOT IDENT.
HG-203	6.799E-03	5.616E-02	1.031E-01	0.000E+00	NOT IDENT.
BI-207	3.057E-02	1.340E-01	2.325E-01	0.000E+00	NOT IDENT.
TL-207	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
PO-209	7.944E+00	1.938E+01	3.466E+01	0.000E+00	NOT IDENT.
BI-210	-7.392E+00	7.984E+00	1.408E+01	0.000E+00	NOT IDENT.
PB-210	-7.392E+00	7.984E+00	1.408E+01	0.000E+00	NOT IDENT.
PO-210	-7.392E+00	7.979E+00	1.408E+01	0.000E+00	NOT IDENT.
PB-211	-2.315E-02	1.828E+00	3.192E+00	0.000E+00	NOT IDENT.
BI-212	4.611E-01	5.947E-01	1.074E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
PO-215	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
RN-219	3.941E-01	8.087E-01	1.451E+00	0.000E+00	NOT IDENT.
RN-220	-1.059E+00	4.792E+01	8.503E+01	0.000E+00	NOT IDENT.
RA-223	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
AC-227	5.621E-01	6.569E-01	1.175E+00	0.000E+00	NOT IDENT.
TH-227	5.621E-01	6.590E-01	1.175E+00	0.000E+00	FAIL ABUN
AC-228	0.000E+00	6.307E-01	7.673E-01	0.000E+00	FAIL ABUN
RA-228	0.000E+00	6.307E-01	7.673E-01	0.000E+00	FAIL ABUN
TH-229	1.865E-01	7.410E-01	1.332E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
PA-231	-8.965E-01	2.601E+00	4.655E+00	0.000E+00	NOT IDENT.
TH-231	-1.435E-01	1.103E+00	1.965E+00	0.000E+00	FAIL ABUN
U-231	8.139E-02	4.279E-01	6.884E-01	0.000E+00	FAIL ABUN
TH-232	0.000E+00	6.307E-01	7.673E-01	0.000E+00	FAIL ABUN
PA-233	-2.314E-02	1.017E-01	1.809E-01	0.000E+00	NOT IDENT.
PA-234	-2.227E-01	8.776E-01	1.498E+00	0.000E+00	FAIL ABUN
PA-234M	2.964E+00	1.589E+01	2.769E+01	0.000E+00	NOT IDENT.
TH-234	-5.000E-01	2.056E+00	3.431E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	2.462E-01	3.398E-01	0.000E+00	FAIL ABUN
U-235	1.149E-01	2.773E-01	5.185E-01	0.000E+00	FAIL ABUN
NP-236	-1.329E-02	1.039E-01	1.871E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	5.716E-01	8.610E-01	0.000E+00	NOT IDENT.
U-238	-5.000E-01	2.056E+00	3.431E+00	0.000E+00	FAIL ABUN
NP-239	1.726E-01	2.544E-01	4.717E-01	0.000E+00	NOT IDENT.
AM-243	6.889E-02	1.003E-01	1.696E-01	0.000E+00	FAIL ABUN
CM-243	-3.592E-02	1.139E-01	2.124E-01	0.000E+00	NOT IDENT.
CM-247	4.620E-03	7.314E-02	1.283E-01	0.000E+00	NOT IDENT.
CF-249	1.321E-02	7.539E-02	1.338E-01	0.000E+00	NOT IDENT.
CF-251	5.093E-02	1.655E-01	3.018E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:27:08.17

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1
Sample date       : 29-JUN-2009 00:00:00 Acquisition date : 6-JUL-2009 13:26:36.
Sample ID         : G1201870089          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:03.12  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 880723                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	376	85.51*	6.334E+00	3.352E-01	3.418E-01	18.39
	136.48	46	10.60	6.279E+00	3.303E-01	3.367E-01	171.17
CO-60	1173.22	1675	100.00	1.205E+00	6.712E+00	6.730E+00	7.77
	1332.49	1554	100.00*	1.076E+00	6.977E+00	6.996E+00	9.07
CD-109	88.03	1679	3.72*	5.290E+00	4.120E+01	4.167E+01	12.14
SN-126	64.28	------	9.60	2.723E+00	------ Line Not Found		------
	86.94	1679	8.90	5.290E+00	1.722E+01	1.722E+01	42.23
	87.57	1679	37.00*	5.290E+00	4.142E+00	4.142E+00	12.14
BA-137M	661.65	2043	89.98*	2.040E+00	5.375E+00	5.378E+00	7.21
CS-137	661.65	2043	85.12*	2.040E+00	5.682E+00	5.685E+00	7.23
TL-208	277.35	------	6.80	4.140E+00	------ Line Not Found		------
	510.84	42	21.60	2.544E+00	3.690E-01	3.690E-01	139.55
	583.14	154	84.20*	2.276E+00	3.886E-01	3.886E-01	30.14
	860.37	------	12.46	1.609E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.829E+00	------ Line Not Found		------
	351.07	216	12.94*	3.437E+00	2.347E+00	2.347E+00	26.68
PB-212	74.81	------	10.70	4.056E+00	------ Line Not Found		------
	77.11	164	18.00	4.319E+00	1.016E+00	1.016E+00	53.19
	87.30	1679	8.00	5.290E+00	1.916E+01	1.916E+01	15.73
	238.63	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PO-212	74.81	------	10.70	4.056E+00	------ Line Not Found		------
	77.11	164	18.00	4.319E+00	1.016E+00	1.016E+00	53.19
	87.30	1679	8.00	5.290E+00	1.916E+01	1.916E+01	15.73
	115.19	------	0.60	6.293E+00	------ Line Not Found		------
	238.63	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PB-214	74.81	------	6.21	4.056E+00	------ Line Not Found		------
	77.11	164	10.50	4.319E+00	1.742E+00	1.742E+00	53.73
	87.30	1679	4.67	5.290E+00	3.282E+01	3.282E+01	14.38
	241.98	27	7.49	4.597E+00	3.857E-01	3.857E-01	332.10
	295.21	90	19.20	3.942E+00	5.737E-01	5.737E-01	64.81

Sample ID : G1201870089 Acquisition date : 6-JUL-2009 13:26:36

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	216	37.20*	3.437E+00	8.165E-01	8.165E-01	27.19
PO-214	74.81	------	6.21	4.056E+00	------ Line Not Found		------
	77.11	164	10.50	4.319E+00	1.742E+00	1.742E+00	53.73
	87.30	1679	4.67	5.290E+00	3.282E+01	3.282E+01	14.38
	241.98	27	7.49	4.597E+00	3.857E-01	3.857E-01	332.10
	295.21	90	19.20	3.942E+00	5.737E-01	5.737E-01	64.81
	351.92	216	37.20*	3.437E+00	8.165E-01	8.165E-01	27.19
PO-216	74.81	------	10.70	4.056E+00	------ Line Not Found		------
	77.11	164	18.00	4.319E+00	1.016E+00	1.016E+00	53.19
	87.30	1679	8.00	5.290E+00	1.916E+01	1.916E+01	15.73
	238.63	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PO-218	74.81	------	6.21	4.056E+00	------ Line Not Found		------
	77.11	164	10.50	4.319E+00	1.742E+00	1.742E+00	53.73
	87.30	1679	4.67	5.290E+00	3.282E+01	3.282E+01	14.38
	241.98	27	7.49	4.597E+00	3.857E-01	3.857E-01	332.10
	295.21	90	19.20	3.942E+00	5.737E-01	5.737E-01	64.81
	351.92	216	37.20*	3.437E+00	8.165E-01	8.165E-01	27.19
RA-224	240.98	27	3.95*	4.597E+00	7.313E-01	7.313E-01	332.05
TH-228	84.40	------	1.21	5.004E+00	------ Line Not Found		------
	238.60	338	44.60*	4.633E+00	7.908E-01	7.908E-01	21.70
	300.10	------	3.41	3.895E+00	------ Line Not Found		------
AM-241	59.54	2148	35.90*	2.086E+00	1.385E+01	1.385E+01	11.00
ANH-511	511.00	42	100.00*	2.544E+00	7.970E-02	7.970E-02	139.30

Flag: "*" = Keyline

Sample ID : G1201870089 Acquisition date : 6-JUL-2009 13:26:36

Total number of lines in spectrum 19
Number of unidentified lines 0
Number of lines tentatively identified by NID 19 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	3.352E-01	3.418E-01	0.629E-01	18.39	
CO-60	5.27Y	1.00	6.977E+00	6.996E+00	0.634E+00	9.07	
CD-109	464.00D	1.01	4.120E+01	4.167E+01	0.506E+01	12.14	
SN-126	1.00E+05Y	1.00	4.142E+00	4.142E+00	0.503E+00	12.14	
BA-137M	30.17Y	1.00	5.375E+00	5.378E+00	0.388E+00	7.21	
CS-137	30.17Y	1.00	5.682E+00	5.685E+00	0.411E+00	7.23	
TL-208	1.41E+10Y	1.00	3.886E-01	3.886E-01	1.171E-01	30.14	
BI-211	7.04E+08Y	1.00	2.347E+00	2.347E+00	0.626E+00	26.68	
PB-212	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
PO-212	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
PB-214	1600.00Y	1.00	8.165E-01	8.165E-01	2.220E-01	27.19	
PO-214	1600.00Y	1.00	8.165E-01	8.165E-01	2.220E-01	27.19	
PO-216	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
PO-218	1600.00Y	1.00	8.165E-01	8.165E-01	2.220E-01	27.19	
RA-224	1.41E+10Y	1.00	7.313E-01	7.313E-01	24.28E-01	332.05	
TH-228	1.41E+10Y	1.00	7.908E-01	7.908E-01	1.716E-01	21.70	
AM-241	432.20Y	1.00	1.385E+01	1.385E+01	0.152E+01	11.00	
ANH-511	1.00E+09Y	1.00	7.970E-02	7.970E-02	11.10E-02	139.30	
	Total Activity :		8.672E+01	8.722E+01			

Grand Total Activity : 8.672E+01 8.722E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201870089 Acquisition date : 6-JUL-2009 13:26:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	93.14	96	296	1.55	186.45	183	9	2.66E-02	70.0	5.61E+00	T
0	185.73	139	314	1.70	371.70	366	13	3.85E-02	55.9	5.49E+00	T
0	338.30	92	180	1.22	676.92	673	10	2.56E-02	58.1	3.55E+00	T
0	609.65	157	112	1.15	1219.84	1213	14	4.37E-02	32.7	2.19E+00	T
0	911.76	79	153	1.21	1824.36	1817	14	2.19E-02	70.5	1.52E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JUL-2009 14:27:13.59

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201870089.CNF;1  *
* Acquisition date  : 6-JUL-2009 13:26:36.  Detector SN#     :             *
* Detector ID       : GAM23                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 01:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 01:00:03.12          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201870089           Analyst initials: MXR1         *
* Batch Number      : 880723                Sample Quantity : 1.55440E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 2-JUN-2009 11:17:00.62MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	3.418E-01	6.286E-02	5.645E-02	3.328E-03	6.056
CO-60	6.996E+00	6.343E-01	9.085E-02	6.670E-03	77.006
CD-109	4.167E+01	5.059E+00	1.961E+00	1.915E-01	21.247
SN-126	4.142E+00	5.029E-01	1.960E-01	1.908E-02	21.130
BA-137M	5.378E+00	3.878E-01	1.226E-01	6.262E-03	43.871
CS-137	5.685E+00	4.111E-01	1.296E-01	6.656E-03	43.871
TL-208	3.886E-01	1.171E-01	1.210E-01	7.853E-03	3.212
BI-211	2.347E+00	6.263E-01	5.957E-01	3.882E-02	3.940
PB-212	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
PO-212	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
PB-214	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-214	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
PO-216	7.908E-01	1.716E-01	1.804E-01	1.297E-02	4.384
PO-218	8.165E-01	2.220E-01	2.077E-01	1.734E-02	3.931
RA-224	7.313E-01	2.428E+00	1.887E+00	1.063E-01	0.388
TH-228	7.908E-01	1.716E-01	1.803E-01	1.297E-02	4.385
AM-241	1.385E+01	1.523E+00	4.871E-01	4.532E-02	28.436
ANH-511	7.970E-02	1.110E-01	9.341E-02	5.426E-03	0.853

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.667E-01		6.477E-01	1.071E+00	7.279E-02	0.249
NA-22	4.085E-03		6.159E-02	1.003E-01	6.737E-03	0.041
NA-24	4.976E-05		1.134E-04	Half-Life too short		
AL-26	2.016E-02		5.029E-02	9.069E-02	5.451E-03	0.222
K-40	8.824E-01		5.928E-01	1.176E+00	8.796E-02	0.750
TI-44	1.874E-01	+	9.970E-02	9.457E-02	8.572E-03	1.982
SC-46	6.992E-02		9.817E-02	1.713E-01	1.530E-02	0.408
V-48	7.630E-02		1.345E-01	2.313E-01	1.924E-02	0.330
CR-51	6.613E-02		5.314E-01	8.968E-01	5.880E-02	0.074
MN-52	-2.425E-02		1.219E-01	1.938E-01	1.402E-02	-0.125
MN-54	-2.482E-02		8.379E-02	1.319E-01	1.044E-02	-0.188
CO-56	1.970E-02		8.411E-02	1.379E-01	1.122E-02	0.143
CO-58	4.627E-02		7.822E-02	1.325E-01	9.951E-03	0.349
FE-59	4.258E-02		2.121E-01	3.525E-01	2.715E-02	0.121
ZN-65	-2.400E-01		2.278E-01	3.436E-01	2.269E-02	-0.699
GE-68	6.311E-01		3.247E+00	5.406E+00	3.869E-01	0.117
AS-73	-1.904E+00		1.890E+00	2.941E+00	2.597E-01	-0.647
AS-74	7.119E-02		1.333E-01	2.303E-01	1.270E-02	0.309
SE-75	3.823E-02		6.883E-02	1.130E-01	6.579E-03	0.338
BR-77	1.047E+00		2.350E+00	3.878E+00	2.245E-01	0.270
SR-82	-5.600E-01		6.424E-01	9.639E-01	6.650E-02	-0.581
RB-83	4.442E-02		1.322E-01	2.166E-01	1.254E-02	0.205
RB-84	4.110E-02		1.489E-01	2.541E-01	2.232E-02	0.162
KR-85	2.059E+01		1.475E+01	2.337E+01	1.356E+00	0.881
SR-85	9.748E-02		6.983E-02	1.106E-01	6.420E-03	0.881
RB-86	-6.610E-01		1.609E+00	2.565E+00	1.838E-01	-0.258
Y-88	3.265E-02		5.612E-02	1.038E-01	6.113E-03	0.314
ZR-88	1.777E-02		5.602E-02	9.382E-02	5.416E-03	0.189
Y-91	-5.611E+00		2.539E+01	4.005E+01	2.389E+00	-0.140
NB-94	-1.939E-02		6.400E-02	1.025E-01	5.855E-03	-0.189
NB-95	-1.190E-02		7.527E-02	1.208E-01	8.118E-03	-0.099
NB-95M	1.358E-01		1.926E-01	2.891E-01	2.133E-02	0.470
ZR-95	-5.953E-03		1.341E-01	2.176E-01	1.669E-02	-0.027
NB-97	1.726E-04		7.202E-05	Half-Life too short		
ZR-97	1.379E-03		1.103E-03	Half-Life too short		
MO-99	-1.830E+00		3.762E+00	5.896E+00	8.251E-01	-0.310
TC-99M	-3.004E+01		2.338E+01	Half-Life too short		
RH-101	-2.894E-03		4.974E-02	8.119E-02	4.328E-03	-0.036
RH-102	1.541E-02		6.850E-02	1.120E-01	6.555E-03	0.138
RU-103	-2.505E-02		7.564E-02	1.185E-01	1.501E-02	-0.211
RH-106	-5.382E-02		6.388E-01	1.055E+00	1.216E-01	-0.051
RU-106	-5.382E-02		6.388E-01	1.055E+00	5.668E-02	-0.051
AG-108M	-8.553E-02		6.992E-02	1.047E-01	6.638E-03	-0.817
AG-110M	8.299E-02		8.642E-02	1.346E-01	7.478E-03	0.617
IN-111	4.994E-02		3.198E-01	4.599E-01	2.603E-02	0.109
IN-113M	4.546E-02		8.050E-02	1.368E-01	8.429E-03	0.332
SN-113	4.546E-02		8.050E-02	1.368E-01	8.429E-03	0.332
IN-114M	-2.205E-01		2.637E-01	3.609E-01	1.902E-02	-0.611

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CD-115	-8.663E-01		2.088E+00	3.224E+00	1.861E-01	-0.269
SN-117M	7.476E-03		4.879E-02	8.173E-02	4.247E-03	0.091
SB-122	-1.427E-01		5.727E-01	9.456E-01	5.349E-02	-0.151
I-123	3.095E-04		2.543E-04	Half-Life too short		
TE-123M	2.161E-02		3.552E-02	6.089E-02	3.213E-03	0.355
I-124	-4.403E-01		4.292E-01	5.560E-01	3.047E-02	-0.792
SB-124	2.077E-02		9.152E-02	1.578E-01	1.100E-02	0.132
SB-125	-4.843E-02		1.895E-01	3.041E-01	1.850E-02	-0.159
TE-125M	-7.287E+00		1.034E+01	1.702E+01	1.516E+00	-0.428
I-126	-3.556E-02		2.875E-01	4.059E-01	2.101E-02	-0.088
SB-126	-1.172E-02		1.896E-01	3.088E-01	1.850E-02	-0.038
SB-127	4.151E-01		7.287E-01	1.247E+00	8.576E-02	0.333
XE-127	-4.111E-02		6.185E-02	9.689E-02	5.201E-03	-0.424
I-131	-7.063E-02		1.161E-01	1.853E-01	1.200E-02	-0.381
TE-132	7.997E-02		2.251E-01	3.689E-01	4.822E-02	0.217
BA-133	1.849E-02		9.041E-02	1.338E-01	1.552E-02	0.138
I-133	4.574E-06		1.436E-05	Half-Life too short		
CS-134	9.152E-02		1.003E-01	1.732E-01	1.265E-02	0.528
CS-135	-4.274E-01		2.709E-01	3.824E-01	2.922E-02	-1.118
I-135	-1.126E+00		2.391E+01	Half-Life too short		
CS-136	8.966E-02		1.889E-01	3.213E-01	2.559E-02	0.279
CE-139	2.647E-02		4.083E-02	6.975E-02	3.556E-03	0.380
BA-140	1.568E-02		3.403E-01	5.749E-01	1.869E-01	0.027
LA-140	-7.876E-03		7.972E-02	1.277E-01	8.763E-03	-0.062
CE-141	4.834E-03		7.331E-02	1.234E-01	6.958E-03	0.039
CE-143	3.456E+00		5.498E+00	8.471E+00	1.733E+00	0.408
CE-144	1.766E-01		2.840E-01	4.480E-01	6.326E-02	0.394
PM-144	5.962E-02		6.205E-02	1.095E-01	6.155E-03	0.545
PR-144	4.024E+00		4.188E+00	7.389E+00	4.153E-01	0.545
PM-146	3.483E-03		9.392E-02	1.526E-01	1.322E-02	0.023
ND-147	4.929E-01		6.687E-01	1.175E+00	1.587E-01	0.419
PM-149	2.004E+01		1.512E+01	2.677E+01	3.794E+00	0.749
EU-152	-9.306E-02		1.920E-01	2.862E-01	1.897E-02	-0.325
GD-153	-5.600E-02		1.210E-01	1.673E-01	1.367E-02	-0.335
EU-154	1.804E-02		1.736E-01	2.844E-01	2.823E-02	0.063
EU-155	-9.864E-02		1.346E-01	2.223E-01	1.639E-02	-0.444
TB-160	-7.479E-02		3.232E-01	5.336E-01	4.666E-02	-0.140
HO-166M	-1.491E-02		1.247E-01	2.024E-01	1.185E-02	-0.074
TM-171	1.228E+01		4.186E+01	6.866E+01	5.971E+00	0.179
LU-176	1.864E-02		4.055E-02	6.995E-02	4.121E-03	0.266
LU-177	3.360E-01		7.708E-01	1.278E+00	6.914E-02	0.263
LU-177M	-5.401E-02		3.449E-01	5.589E-01	3.252E-02	-0.097
HF-181	-1.529E-02		7.838E-02	1.246E-01	7.285E-03	-0.123
W-181	-5.180E-01		5.429E-01	8.279E-01	7.192E-02	-0.626
TA-182	1.030E-01		2.638E-01	4.483E-01	2.752E-02	0.230
RE-183	-5.242E-02		1.345E-01	2.182E-01	1.123E-02	-0.240
RE-184	4.596E-01		3.823E-01	6.507E-01	3.710E-02	0.706
OS-185	3.382E-02		8.036E-02	1.370E-01	7.151E-03	0.247

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188	-5.458E-02		2.083E-01	3.418E-01	1.794E-02	-0.160
W-188	-3.511E+00		1.344E+01	1.969E+01	1.153E+00	-0.178
IR-192	1.745E-02		5.418E-02	9.252E-02	5.488E-03	0.189
AU-195	2.264E-01		3.021E-01	4.905E-01	3.914E-02	0.462
TL-200	6.258E+00		7.082E+00	1.228E+01	7.193E-01	0.509
TL-201	1.786E+00		1.731E+00	3.011E+00	1.537E-01	0.593
TL-202	1.216E-02		1.009E-01	1.652E-01	9.666E-03	0.074
HG-203	6.799E-03		5.730E-02	9.780E-02	6.041E-03	0.070
BI-207	3.057E-02		1.368E-01	2.285E-01	1.679E-02	0.134
TL-207	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
PO-209	7.944E+00		1.977E+01	3.390E+01	3.077E+00	0.234
BI-210	-7.392E+00		8.147E+00	1.277E+01	9.945E-01	-0.579
PB-210	-7.392E+00		8.147E+00	1.277E+01	9.945E-01	-0.579
PO-210	-7.392E+00		8.142E+00	1.277E+01	8.570E-01	-0.579
PB-211	-2.315E-02		1.865E+00	3.056E+00	1.905E+00	-0.008
BI-212	4.611E-01		6.068E-01	1.044E+00	8.289E-02	0.442
BI-214	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
PO-215	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
RN-219	3.941E-01		8.252E-01	1.388E+00	1.889E-01	0.284
RN-220	-1.059E+00		4.889E+01	8.208E+01	4.684E+00	-0.013
RA-223	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
RA-226	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
AC-227	5.621E-01		6.703E-01	1.111E+00	1.547E-01	0.506
TH-227	5.621E-01		6.724E-01	1.111E+00	1.875E-01	0.506
AC-228	9.005E-01	+	6.436E-01	7.509E-01	8.664E-02	1.199
RA-228	9.005E-01	+	6.436E-01	7.509E-01	8.664E-02	1.199
TH-229	1.865E-01		7.561E-01	1.251E+00	6.626E-02	0.149
TH-230	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
PA-231	-8.965E-01		2.654E+00	4.416E+00	6.091E-01	-0.203
TH-231	-1.435E-01		1.126E+00	1.870E+00	3.096E-01	-0.077
U-231	8.139E-02		4.366E-01	6.354E-01	5.330E-02	0.128
TH-232	9.005E-01	+	6.436E-01	7.509E-01	8.664E-02	1.199
PA-233	-2.314E-02		1.038E-01	1.720E-01	1.076E-02	-0.135
PA-234	-2.227E-01		8.955E-01	1.468E+00	2.759E-01	-0.152
PA-234M	2.964E+00		1.621E+01	2.717E+01	2.935E+00	0.109
TH-234	-5.000E-01		2.098E+00	3.135E+00	5.649E-01	-0.159
U-234	7.493E-01	+	2.512E-01	3.289E-01	2.472E-02	2.279
U-235	1.149E-01		2.830E-01	4.834E-01	7.818E-02	0.238
NP-236	-1.329E-02		1.061E-01	1.749E-01	9.044E-03	-0.076
NP-237	1.446E+00		5.833E-01	7.927E-01	1.805E-01	1.824
U-238	-5.000E-01		2.098E+00	3.135E+00	5.649E-01	-0.159
NP-239	1.726E-01		2.596E-01	4.375E-01	2.731E-02	0.395
AM-243	6.889E-02		1.024E-01	1.555E-01	1.382E-02	0.443
CM-243	-3.592E-02		1.162E-01	1.964E-01	1.455E-02	-0.183
CM-247	4.620E-03		7.464E-02	1.229E-01	7.122E-03	0.038
CF-249	1.321E-02		7.693E-02	1.279E-01	7.401E-03	0.103
CF-251	5.093E-02		1.689E-01	2.828E-01	1.461E-02	0.180

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201870089          *
* Acquisition date  :  6-JUL-2009 13:26:36 Detector SN#     :               *
* Detector ID       : GAM23                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 01:00:03.12      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201870089          Analyst initials: MXR1           *
* Batch Number      : 880723               Sample Quantity : 1.5544E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	3.418E-01	6.161E-02	3.042E-02	3.143E-02
CO-60	6.996E+00	6.216E-01	4.596E-02	3.172E-01
CD-109	4.167E+01	4.958E+00	1.065E+00	2.530E+00
SN-126	4.142E+00	4.929E-01	1.065E-01	2.515E-01
BA-137M	5.378E+00	3.801E-01	6.322E-02	1.939E-01
CS-137	5.685E+00	4.029E-01	6.683E-02	2.056E-01
TL-208	3.886E-01	1.148E-01	6.260E-02	5.855E-02
BI-211	2.347E+00	6.137E-01	3.125E-01	3.131E-01
PB-212	7.908E-01	1.682E-01	9.555E-02	8.580E-02
PO-212	7.908E-01	1.682E-01	9.555E-02	8.580E-02
PB-214	8.165E-01	2.175E-01	1.089E-01	1.110E-01
PO-214	8.165E-01	2.175E-01	1.089E-01	1.110E-01
PO-216	7.908E-01	1.682E-01	9.555E-02	8.580E-02
PO-218	8.165E-01	2.175E-01	1.089E-01	1.110E-01
RA-224	7.313E-01	2.380E+00	9.995E-01	1.214E+00
TH-228	7.908E-01	1.682E-01	9.554E-02	8.580E-02
AM-241	1.385E+01	1.493E+00	2.671E-01	7.615E-01
ANH-511	7.970E-02	1.088E-01	4.851E-02	5.551E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	2.667E-01	6.348E-01	5.572E-01	3.239E-01	NOT IDENT.
NA-22	4.085E-03	6.035E-02	5.081E-02	3.079E-02	NOT IDENT.
NA-24	4.976E+01	2.222E+02	0.000E+00	1.134E+02	SHORT HLIF
AL-26	2.016E-02	4.929E-02	4.548E-02	2.515E-02	NOT IDENT.
K-40	8.824E-01	5.809E-01	5.933E-01	2.964E-01	NOT IDENT.
TI-44	1.874E-01	9.771E-02	5.151E-02	4.985E-02	FAIL ABUN
SC-46	6.992E-02	9.621E-02	8.763E-02	4.908E-02	NOT IDENT.
V-48	7.630E-02	1.318E-01	1.180E-01	6.727E-02	NOT IDENT.
CR-51	6.613E-02	5.208E-01	4.715E-01	2.657E-01	NOT IDENT.

MN-52	-2.425E-02	1.195E-01	9.783E-02	6.095E-02	FAIL ABUN
MN-54	-2.482E-02	8.211E-02	6.758E-02	4.189E-02	NOT IDENT.
CO-56	1.970E-02	8.243E-02	7.063E-02	4.206E-02	NOT IDENT.
CO-58	4.627E-02	7.665E-02	6.794E-02	3.911E-02	NOT IDENT.
FE-59	4.258E-02	2.078E-01	1.793E-01	1.060E-01	NOT IDENT.
ZN-65	-2.400E-01	2.232E-01	1.747E-01	1.139E-01	NOT IDENT.
GE-68	6.311E-01	3.182E+00	2.751E+00	1.624E+00	NOT IDENT.
AS-73	-1.904E+00	1.852E+00	1.617E+00	9.450E-01	NOT IDENT.
AS-74	7.119E-02	1.306E-01	1.191E-01	6.665E-02	NOT IDENT.
SE-75	3.823E-02	6.745E-02	5.972E-02	3.442E-02	FAIL ABUN
BR-77	1.047E+00	2.303E+00	2.013E+00	1.175E+00	FAIL ABUN
SR-82	-5.600E-01	6.295E-01	4.950E-01	3.212E-01	NOT IDENT.
RB-83	4.442E-02	1.296E-01	1.124E-01	6.611E-02	NOT IDENT.
RB-84	4.110E-02	1.459E-01	1.300E-01	7.444E-02	NOT IDENT.
KR-85	2.059E+01	1.445E+01	1.213E+01	7.374E+00	NOT IDENT.
SR-85	9.748E-02	6.843E-02	5.745E-02	3.491E-02	NOT IDENT.
RB-86	-6.610E-01	1.577E+00	1.305E+00	8.045E-01	NOT IDENT.
Y-88	3.265E-02	5.500E-02	5.205E-02	2.806E-02	NOT IDENT.
ZR-88	1.777E-02	5.490E-02	4.906E-02	2.801E-02	NOT IDENT.
Y-91	-5.611E+00	2.488E+01	2.032E+01	1.269E+01	NOT IDENT.
NB-94	-1.939E-02	6.272E-02	5.276E-02	3.200E-02	NOT IDENT.
NB-95	-1.190E-02	7.377E-02	6.206E-02	3.764E-02	NOT IDENT.
NB-95M	1.358E-01	1.887E-01	1.532E-01	9.628E-02	NOT IDENT.
ZR-95	-5.953E-03	1.314E-01	1.118E-01	6.704E-02	NOT IDENT.
NB-97	1.726E+02	1.412E+02	0.000E+00	7.202E+01	SHORT HLIF
ZR-97	1.379E+03	2.163E+03	0.000E+00	1.103E+03	SHORT HLIF
MO-99	-1.830E+00	3.687E+00	3.032E+00	1.881E+00	NOT IDENT.
TC-99M	-3.004E+07	4.582E+07	0.000E+00	2.338E+07	SHORT HLIF
RH-101	-2.894E-03	4.874E-02	4.322E-02	2.487E-02	NOT IDENT.
RH-102	1.541E-02	6.713E-02	5.827E-02	3.425E-02	NOT IDENT.
RU-103	-2.505E-02	7.413E-02	6.161E-02	3.782E-02	FAIL ABUN
RH-106	-5.382E-02	6.260E-01	5.449E-01	3.194E-01	FAIL ABUN
RU-106	-5.382E-02	6.260E-01	5.449E-01	3.194E-01	FAIL ABUN
AG-108M	-8.553E-02	6.852E-02	5.461E-02	3.496E-02	NOT IDENT.
AG-110M	8.299E-02	8.469E-02	6.942E-02	4.321E-02	NOT IDENT.
IN-111	4.994E-02	3.134E-01	2.435E-01	1.599E-01	NOT IDENT.
IN-113M	4.546E-02	7.889E-02	7.156E-02	4.025E-02	NOT IDENT.
SN-113	4.546E-02	7.889E-02	7.156E-02	4.025E-02	NOT IDENT.
IN-114M	-2.205E-01	2.584E-01	1.923E-01	1.319E-01	NOT IDENT.
CD-115	-8.663E-01	2.046E+00	1.673E+00	1.044E+00	NOT IDENT.
SN-117M	7.476E-03	4.781E-02	4.375E-02	2.440E-02	NOT IDENT.
SB-122	-1.427E-01	5.613E-01	4.898E-01	2.864E-01	NOT IDENT.
I-123	3.095E+02	4.984E+02	0.000E+00	2.543E+02	SHORT HLIF
TE-123M	2.161E-02	3.481E-02	3.259E-02	1.776E-02	NOT IDENT.
I-124	-4.403E-01	4.206E-01	2.875E-01	2.146E-01	NOT IDENT.
SB-124	2.077E-02	8.969E-02	7.927E-02	4.576E-02	NOT IDENT.
SB-125	-4.843E-02	1.857E-01	1.587E-01	9.477E-02	NOT IDENT.
TE-125M	-7.287E+00	1.013E+01	9.197E+00	5.169E+00	NOT IDENT.
I-126	-3.556E-02	2.818E-01	2.093E-01	1.438E-01	NOT IDENT.
SB-126	-1.172E-02	1.858E-01	1.589E-01	9.481E-02	FAIL ABUN
SB-127	4.151E-01	7.141E-01	6.425E-01	3.643E-01	NOT IDENT.
XE-127	-4.111E-02	6.061E-02	5.155E-02	3.092E-02	NOT IDENT.
I-131	-7.063E-02	1.138E-01	9.707E-02	5.804E-02	NOT IDENT.
TE-132	7.997E-02	2.206E-01	1.957E-01	1.126E-01	NOT IDENT.
BA-133	1.849E-02	8.861E-02	7.014E-02	4.521E-02	NOT IDENT.
I-133	4.574E+00	2.815E+01	0.000E+00	1.436E+01	SHORT HLIF
CS-134	9.152E-02	9.827E-02	8.886E-02	5.014E-02	NOT IDENT.
CS-135	-4.274E-01	2.655E-01	2.020E-01	1.354E-01	NOT IDENT.
I-135	-1.126E+06	4.685E+07	0.000E+00	2.391E+07	SHORT HLIF
CS-136	8.966E-02	1.852E-01	1.637E-01	9.447E-02	NOT IDENT.
CE-139	2.647E-02	4.002E-02	3.730E-02	2.042E-02	NOT IDENT.
BA-140	1.568E-02	3.335E-01	2.982E-01	1.701E-01	NOT IDENT.
LA-140	-7.876E-03	7.813E-02	6.428E-02	3.986E-02	NOT IDENT.
CE-141	4.834E-03	7.185E-02	6.619E-02	3.666E-02	NOT IDENT.
CE-143	3.456E+00	5.388E+00	4.464E+00	2.749E+00	FAIL ABUN
CE-144	1.766E-01	2.784E-01	2.408E-01	1.420E-01	NOT IDENT.
PM-144	5.962E-02	6.081E-02	5.639E-02	3.103E-02	NOT IDENT.
PR-144	4.024E+00	4.104E+00	3.806E+00	2.094E+00	NOT IDENT.
PM-146	3.483E-03	9.204E-02	7.950E-02	4.696E-02	NOT IDENT.
ND-147	4.929E-01	6.553E-01	6.098E-01	3.344E-01	NOT IDENT.
PM-149	2.004E+01	1.482E+01	1.412E+01	7.561E+00	NOT IDENT.
EU-152	-9.306E-02	1.882E-01	1.502E-01	9.600E-02	FAIL ABUN
GD-153	-5.600E-02	1.186E-01	9.066E-02	6.052E-02	NOT IDENT.
EU-154	1.804E-02	1.701E-01	1.440E-01	8.681E-02	FAIL ABUN
EU-155	-9.864E-02	1.319E-01	1.202E-01	6.729E-02	FAIL ABUN
TB-160	-7.479E-02	3.167E-01	2.731E-01	1.616E-01	FAIL ABUN
HO-166M	-1.491E-02	1.222E-01	1.042E-01	6.233E-02	FAIL ABUN
TM-171	1.228E+01	4.102E+01	3.755E+01	2.093E+01	FAIL ABUN

LU-176	1.864E-02	3.974E-02	3.682E-02	2.028E-02	FAIL ABUN
LU-177	3.360E-01	7.554E-01	6.794E-01	3.854E-01	NOT IDENT.
LU-177M	-5.401E-02	3.380E-01	2.919E-01	1.725E-01	FAIL ABUN
HF-181	-1.529E-02	7.681E-02	6.479E-02	3.919E-02	FAIL ABUN
W-181	-5.180E-01	5.321E-01	4.530E-01	2.715E-01	NOT IDENT.
TA-182	1.030E-01	2.585E-01	2.274E-01	1.319E-01	NOT IDENT.
RE-183	-5.242E-02	1.318E-01	1.168E-01	6.725E-02	FAIL ABUN
RE-184	4.596E-01	3.746E-01	3.442E-01	1.911E-01	FAIL ABUN
OS-185	3.382E-02	7.875E-02	7.072E-02	4.018E-02	FAIL ABUN
RE-188	-5.458E-02	2.041E-01	1.831E-01	1.041E-01	NOT IDENT.
W-188	-3.511E+00	1.317E+01	1.038E+01	6.720E+00	NOT IDENT.
IR-192	1.745E-02	5.309E-02	4.866E-02	2.709E-02	FAIL ABUN
AU-195	2.264E-01	2.961E-01	2.657E-01	1.511E-01	FAIL ABUN
TL-200	6.258E+00	6.941E+00	6.435E+00	3.541E+00	NOT IDENT.
TL-201	1.786E+00	1.696E+00	1.610E+00	8.656E-01	FAIL ABUN
TL-202	1.216E-02	9.887E-02	8.614E-02	5.045E-02	NOT IDENT.
HG-203	6.799E-03	5.616E-02	5.160E-02	2.865E-02	NOT IDENT.
BI-207	3.057E-02	1.340E-01	1.163E-01	6.839E-02	NOT IDENT.
TL-207	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
PO-209	7.944E+00	1.938E+01	1.734E+01	9.887E+00	NOT IDENT.
BI-210	-7.392E+00	7.984E+00	7.045E+00	4.074E+00	NOT IDENT.
PB-210	-7.392E+00	7.984E+00	7.045E+00	4.074E+00	NOT IDENT.
PO-210	-7.392E+00	7.979E+00	7.045E+00	4.071E+00	NOT IDENT.
PB-211	-2.315E-02	1.828E+00	1.597E+00	9.327E-01	NOT IDENT.
BI-212	4.611E-01	5.947E-01	5.372E-01	3.034E-01	NOT IDENT.
BI-214	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
PO-215	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
RN-219	3.941E-01	8.087E-01	7.257E-01	4.126E-01	NOT IDENT.
RN-220	-1.059E+00	4.792E+01	4.254E+01	2.445E+01	NOT IDENT.
RA-223	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
RA-226	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
AC-227	5.621E-01	6.569E-01	5.876E-01	3.351E-01	NOT IDENT.
TH-227	5.621E-01	6.590E-01	5.876E-01	3.362E-01	FAIL ABUN
AC-228	9.005E-01	6.307E-01	3.839E-01	3.218E-01	FAIL ABUN
RA-228	9.005E-01	6.307E-01	3.839E-01	3.218E-01	FAIL ABUN
TH-229	1.865E-01	7.410E-01	6.663E-01	3.781E-01	FAIL ABUN
TH-230	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
PA-231	-8.965E-01	2.601E+00	2.329E+00	1.327E+00	NOT IDENT.
TH-231	-1.435E-01	1.103E+00	9.831E-01	5.628E-01	FAIL ABUN
U-231	8.139E-02	4.279E-01	3.444E-01	2.183E-01	FAIL ABUN
TH-232	9.005E-01	6.307E-01	3.839E-01	3.218E-01	FAIL ABUN
PA-233	-2.314E-02	1.017E-01	9.052E-02	5.190E-02	NOT IDENT.
PA-234	-2.227E-01	8.776E-01	7.495E-01	4.477E-01	FAIL ABUN
PA-234M	2.964E+00	1.589E+01	1.386E+01	8.105E+00	NOT IDENT.
TH-234	-5.000E-01	2.056E+00	1.717E+00	1.049E+00	FAIL ABUN
U-234	7.493E-01	2.462E-01	1.700E-01	1.256E-01	FAIL ABUN
U-235	1.149E-01	2.773E-01	2.594E-01	1.415E-01	FAIL ABUN
NP-236	-1.329E-02	1.039E-01	9.358E-02	5.303E-02	NOT IDENT.
NP-237	1.446E+00	5.716E-01	4.307E-01	2.916E-01	NOT IDENT.
U-238	-5.000E-01	2.056E+00	1.717E+00	1.049E+00	FAIL ABUN
NP-239	1.726E-01	2.544E-01	2.360E-01	1.298E-01	NOT IDENT.
AM-243	6.889E-02	1.003E-01	8.483E-02	5.118E-02	FAIL ABUN
CM-243	-3.592E-02	1.139E-01	1.062E-01	5.810E-02	NOT IDENT.
CM-247	4.620E-03	7.314E-02	6.421E-02	3.732E-02	NOT IDENT.
CF-249	1.321E-02	7.539E-02	6.691E-02	3.846E-02	NOT IDENT.
CF-251	5.093E-02	1.655E-01	1.510E-01	8.445E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	212.4345
46.50	212.4345
46.50	212.4345
48.70	216.1013
49.72	245.4948
51.35	252.7462
52.39	263.3304
52.97	295.8694
53.15	321.7654
53.44	318.1454
54.07	300.6483
56.28	313.7410
56.28	313.7456
57.37	343.3562
57.53	343.6252
57.53	343.6290
57.60	343.7429
57.98	349.9807
57.98	349.9807
59.32	262.0734
59.32	262.0734
59.40	262.1736
59.54	262.3487
59.72	262.5738
60.01	262.9352
61.10	201.7668
61.14	201.8044
61.30	201.9554
63.00	166.2745
63.29	183.7181
63.29	183.7181
63.58	183.9593
64.28	187.0637
65.12	229.0105
65.20	229.0910
65.20	229.0910
66.05	185.2695
66.72	193.4628
66.83	189.1831
66.91	189.2491
67.20	207.0115
67.20	207.0115
67.75	222.8738
67.85	235.0535
68.90	219.5601
68.90	219.5601
69.30	219.9321
69.67	225.8129
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70.83	265.8390
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72.87	321.9160
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74.81	299.9434
74.81	299.9434
74.81	299.9434
74.97	300.1357
75.28	300.5041
75.70	279.8279
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77.11	304.5693
77.11	304.5693

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77.11	304.5693
77.11	304.5693
78.38	306.0645
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79.80	247.4075
79.80	247.4075
80.11	252.3128
80.18	252.3796
80.30	252.4930
80.30	252.4930
80.57	263.5380
81.00	263.9625
81.07	271.7505
81.07	271.7505
81.07	271.7505
81.07	271.7505
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83.78	282.2730
84.21	274.9033
84.40	286.0343
84.90	306.9060
85.43	307.4902
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86.50	333.8594
86.54	333.9069
86.59	333.9651
86.72	334.1204
86.79	334.2002
86.94	287.0614
87.30	287.4261
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87.30	287.4261
87.30	287.4261
87.30	287.4261
87.30	287.4261
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87.88	288.0112
88.03	288.1611
88.36	288.4925
88.47	288.6036
89.95	191.2634
91.11	182.4204
92.29	200.0189
92.38	178.3832
92.38	178.3832
93.35	178.9636
94.00	179.3497
94.67	179.7438
94.67	179.7472
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98.44	152.4495
98.88	152.6633
99.55	159.1566
99.55	159.1566
99.86	159.3121
100.00	175.4438
100.10	175.5012
103.18	150.9823
103.76	159.1676
105.00	181.5176
105.31	181.6876
108.00	160.3647
109.28	171.9834
111.00	171.1436
111.00	171.1436

111.76	155.3056
112.95	169.5359
115.19	189.5694
116.30	185.8362
117.00	161.0821
117.00	161.0821
117.66	163.9792
121.11	177.7881
121.62	178.0318
121.78	178.1082
122.06	178.2414
122.32	178.3643
122.32	178.3643
122.32	178.3643
122.32	178.3643
123.07	178.2813
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131.20	196.9026
133.02	146.3198
133.54	149.2224
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136.00	163.7769
136.25	163.8776
136.48	163.9691
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140.51	0.0000
142.18	189.4944
142.65	183.9714
143.76	173.3284
144.24	181.8738
144.24	181.8738
144.24	181.8738
144.24	181.8738
145.22	187.8667
145.44	185.1718
147.16	189.6414
152.43	173.9469
152.70	180.6732
153.22	172.3579
154.21	156.5993
154.21	156.5993
154.21	156.5993
154.21	156.5993
155.03	172.0958
156.02	174.3735
158.56	157.1316
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159.00	147.6883
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161.27	159.0045
162.32	169.0168
162.64	181.6947
163.35	203.2602
163.89	191.8608
165.85	172.2124
167.43	154.2278
171.28	155.4413
171.86	164.4858
172.10	164.5656
176.55	148.1300
176.60	148.1451
181.06	157.9582
184.41	162.5035
185.71	162.9015
186.00	162.9915
190.27	189.8012
192.34	166.9646
193.63	177.6231
197.04	185.9491
198.01	186.2714
198.60	193.7169
200.40	177.7093
201.83	193.7841
202.84	200.3887
205.31	176.0938
208.36	194.9290
208.81	194.0251

209.75	178.4915
209.75	178.4915
210.97	204.2615
215.65	205.8655
216.55	233.9462
218.09	206.6940
222.10	202.6588
223.80	194.5642
226.40	201.8860
227.00	180.3501
227.08	180.3737
227.20	180.4075
228.16	176.3273
228.18	176.3322
228.18	176.3322
231.56	179.4568
235.69	161.8848
236.00	152.0465
236.00	152.0465
238.60	275.4340
238.63	275.4466
238.63	275.4466
238.63	275.4466
239.00	232.4347
240.98	233.1311
241.98	206.7979
241.98	206.7979
241.98	206.7979
244.69	179.1698
245.39	179.3559
247.94	143.0147
248.90	151.6415
249.79	195.7022
252.40	138.8667
252.85	140.0865
252.85	140.0865
254.15	0.0000
256.20	155.5193
256.20	155.5193
260.50	153.0428
260.90	146.2734
262.80	160.4138
264.65	133.2565
268.24	193.9492
268.79	168.6788
269.46	139.9235
269.46	139.9235
269.46	139.9235
269.46	139.9235
271.23	164.6035
273.65	182.5885
276.40	157.5824
277.35	164.7955
277.60	163.9731
277.60	163.9731
278.00	143.0055
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279.20	149.3829
279.53	149.4478
280.46	158.4338
281.68	163.0973
283.67	175.8983
284.30	167.1976
285.00	162.0378
285.90	144.4978
286.10	144.5352
286.10	144.5352
287.40	175.8634
288.45	0.0000
290.67	178.3905
290.80	178.4180
291.72	162.9092
293.26	161.7975
293.70	177.6476
295.21	198.2613
295.21	198.2613
295.21	198.2613
295.96	208.3242

296.50	212.7789
297.23	211.5350
298.57	152.7917
299.80	153.0272
299.80	153.0272
300.09	132.8632
300.09	132.8632
300.09	132.8632
300.10	132.8654
300.12	132.8677
301.29	168.3922
302.84	188.3826
303.76	178.6214
303.91	174.1201
304.40	165.1513
304.40	165.1513
304.84	141.6345
306.84	127.4197
308.46	144.0868
311.98	131.8799
316.51	130.7524
318.01	147.5903
319.02	153.3073
319.41	150.6064
320.08	140.5518
323.87	144.8932
323.87	144.8932
323.87	144.8932
323.87	144.8932
325.23	160.9362
328.77	146.6485
333.44	136.7266
334.20	145.8671
334.20	145.8671
334.30	138.3639
338.28	143.5182
338.28	143.5182
338.28	143.5182
338.28	143.5182
338.32	143.5251
338.32	143.5251
338.32	143.5251
340.50	142.3609
340.57	142.3701
344.27	157.1494
345.85	165.0417
350.59	142.4153
351.07	139.8090
351.92	139.9382
351.92	139.9382
351.92	139.9382
355.39	0.0000
356.01	138.6299
364.48	156.3938
366.43	154.7664
367.43	131.5414
367.94	129.6616
369.80	145.5419
374.96	127.6573
383.85	128.8118
387.95	137.2988
388.63	152.3253
391.69	123.8278
391.69	123.8278
392.90	133.9734
398.62	125.6733
400.65	144.0517
401.10	133.0292
401.81	138.1623
402.60	148.3593
404.84	147.6686
410.95	141.4052
411.60	160.8328
413.65	147.8851
414.70	137.8201
415.30	135.8554
415.76	135.9142
417.63	0.0000

418.52	157.7786
423.70	135.8873
427.08	145.5999
427.89	143.6407
432.53	160.8513
433.93	164.1695
439.47	154.5423
439.56	154.5558
439.89	155.6456
443.98	158.3062
444.90	137.4485
445.03	142.7112
445.03	142.7112
445.03	142.7112
445.03	142.7112
453.90	140.6448
463.38	140.7253
468.07	172.3228
473.00	149.3885
475.06	153.9515
475.35	144.2970
476.78	141.2324
477.59	132.6976
477.96	129.4995
482.03	123.4368
484.57	100.9070
487.03	138.0749
490.36	113.3739
492.35	99.3605
497.08	124.9449
507.63	0.0000
510.53	0.0000
510.84	111.9005
511.00	111.9143
511.85	111.7666
511.85	111.7666
513.99	83.5197
513.99	83.5197
520.41	99.3346
520.65	99.3536
527.90	107.7598
528.96	0.0000
529.64	106.7764
529.87	0.0000
531.02	89.1097
537.32	105.8084
543.00	96.2644
546.56	0.0000
549.76	93.0899
552.65	97.8569
555.20	104.4508
563.23	105.0548
563.90	103.2609
568.70	84.1839
569.32	86.0727
569.50	86.0840
569.67	86.0931
573.80	110.4817
574.00	110.4992
574.64	114.2645
578.91	77.6449
579.30	77.6652
583.14	106.5299
585.48	84.2366
591.81	98.7041
592.07	98.7220
593.00	91.2572
595.88	89.5496
600.56	89.8325
602.52	0.0000
602.71	118.3716
602.71	118.3716
603.60	104.2288
604.41	96.3848
604.70	96.4046
609.31	67.5315
609.31	67.5315
609.31	67.5315

609.31	67.5315
610.33	67.5765
612.46	88.9583
614.37	87.4795
618.01	83.2256
621.84	97.8189
621.84	97.8189
631.29	82.0138
633.02	90.7986
633.10	94.6671
634.78	106.3745
635.90	110.3206
636.97	101.6803
645.85	84.7241
646.12	81.8159
656.30	89.8528
657.75	96.4752
657.90	0.0000
661.65	100.3116
661.65	100.3116
664.57	93.5968
666.33	100.2717
666.33	100.2717
675.00	88.2417
677.61	89.3738
685.20	84.7946
692.80	75.1556
695.00	90.3032
696.49	63.2676
696.49	63.2676
697.00	70.3196
697.49	72.3498
698.33	77.4117
698.50	91.4954
699.00	90.5164
702.63	85.6682
706.10	81.8029
706.58	0.0000
706.67	83.8491
709.31	90.0495
711.68	90.1712
713.82	80.1379
717.42	88.4358
720.50	85.5360
721.93	84.5866
722.20	90.7165
722.78	93.8036
722.78	93.8036
722.89	101.9678
722.95	101.9702
723.30	105.0520
724.18	114.2887
727.18	84.8399
733.00	96.3982
735.90	82.1738
739.58	97.7809
742.81	91.7704
744.21	92.8740
747.13	103.3594
751.79	86.0071
752.31	100.5428
753.82	97.5135
755.35	96.5579
756.15	81.0183
756.87	69.6205
763.93	89.7058
765.79	82.4871
766.41	85.6476
766.84	89.8465
768.36	89.9200
768.36	89.9200
768.36	89.9200
768.36	89.9200
776.49	91.3627
778.00	81.9762
778.57	77.7958
778.89	78.8617
783.80	86.4463

785.46	86.5204
792.07	104.8201
795.84	78.5058
796.30	80.6461
801.93	79.8175
805.60	92.7625
810.29	66.2670
810.76	70.5584
815.85	92.1792
817.79	93.3423
818.51	81.5701
819.60	80.5408
826.30	98.0538
828.27	97.0730
831.60	97.2356
831.96	96.1704
834.83	99.5559
836.80	0.0000
846.75	81.6394
848.13	87.1406
856.28	0.0000
856.80	114.8566
860.37	94.2368
867.32	96.7527
867.82	94.5748
871.10	109.2262
873.19	94.6346
874.81	99.3054
875.33	0.0000
876.40	110.4248
879.36	105.0497
880.27	103.2523
880.51	103.2637
881.50	97.7770
883.24	106.1677
884.67	119.1712
889.25	103.6898
896.60	108.6925
898.02	111.5527
899.00	117.1842
903.28	120.5238
911.07	122.5167
911.07	122.5167
911.07	122.5167
919.63	121.4316
920.93	131.5234
925.00	139.2980
925.24	135.5479
926.50	129.9730
934.06	131.3617
934.06	131.3617
934.06	131.3617
934.06	131.3617
935.52	122.9356
937.48	130.6160
944.10	142.3950
946.00	141.5639
949.00	126.5302
962.29	129.1855
964.01	168.5485
966.15	156.2448
968.20	118.0076
969.11	111.3342
969.11	111.3342
969.11	111.3342
977.42	116.5516
980.50	95.4873
983.50	94.6444
989.30	98.7502
996.32	92.2477
1001.03	94.3773
1001.68	98.2958
1004.76	89.6528
1021.30	0.0000
1024.50	0.0000
1034.80	107.5497
1037.82	98.7915
1038.57	96.8436

1038.76	0.0000
1045.16	100.0753
1046.59	95.1758
1048.07	91.2663
1050.47	92.3491
1050.47	92.3491
1063.62	94.8299
1076.63	109.3681
1077.35	97.3552
1085.78	94.6579
1099.22	96.1635
1112.02	89.5182
1112.84	95.6523
1115.52	123.2550
1120.29	82.6578
1120.29	82.6578
1120.29	82.6578
1120.29	82.6578
1120.51	82.6644
1121.28	73.5000
1124.00	0.0000
1129.67	83.9753
1131.51	0.0000
1147.95	0.0000
1167.94	69.4470
1173.22	67.6475
1175.09	49.9883
1177.93	50.0410
1189.05	42.9152
1204.90	36.8429
1205.75	45.2781
1213.00	33.7813
1221.42	29.6463
1230.97	33.9948
1235.34	44.6848
1236.41	0.0000
1238.11	31.9495
1238.11	31.9495
1238.11	31.9495
1238.11	31.9495
1238.25	31.9507
1246.25	37.3783
1260.41	0.0000
1271.85	40.9378
1274.45	23.7214
1274.54	23.7223
1291.56	14.8725
1298.22	0.0000
1312.09	21.5248
1325.50	21.3837
1325.50	21.3837
1332.49	18.8421
1333.61	18.8484
1360.21	9.5047
1362.66	0.0000
1365.15	17.1355
1368.21	15.2461
1368.53	0.0000
1376.25	19.1057
1377.67	19.1148
1377.67	19.1148
1377.67	19.1148
1377.67	19.1148
1384.27	29.6885
1394.10	11.5275
1395.20	15.3756
1407.95	11.5769
1434.06	13.6143
1436.60	11.6782
1457.56	0.0000
1460.81	9.8026
1489.15	17.7922
1509.49	9.9428
1596.49	12.2260
1620.62	13.3319
1678.03	0.0000
1691.02	6.2685
1691.02	6.2685

1706.46	0.0000
1750.46	0.0000
1764.49	10.6438
1764.49	10.6438
1764.49	10.6438
1764.49	10.6438
1770.23	27.7139
1771.40	27.7220
1791.20	0.0000
1808.65	8.4735
1836.01	8.5295

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201870089

Total Uranium Activity	-1.4343E+00	ug/g
Total Uranium Counting Unc.	6.1187E+00	ug/g
Total Uranium Tpu	3.1218E-06	ug/g
Total Uranium Mda	5.1083E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 880723                    SAMPLE ID  : G1201870089      *
*   ANALYST       : MXR1                      DETECTOR   : GAM23            *
*   SAMPLE DATE   : 29-JUN-2009 00:00:00.00   COUNT TIME :    0 01:00:00.00 *
*   ANALYSIS DATE:  6-JUL-2009 13:26:36.56    SAMPLE ALQT:  155.440 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 2.766E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.850E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.868E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.389E+00
```

BACKGROUND AND EFFICIENCY DATA

QA filename : DKA100:[ENV_ALPHA.QA.W]W133.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:19 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.235007 through 0.255007

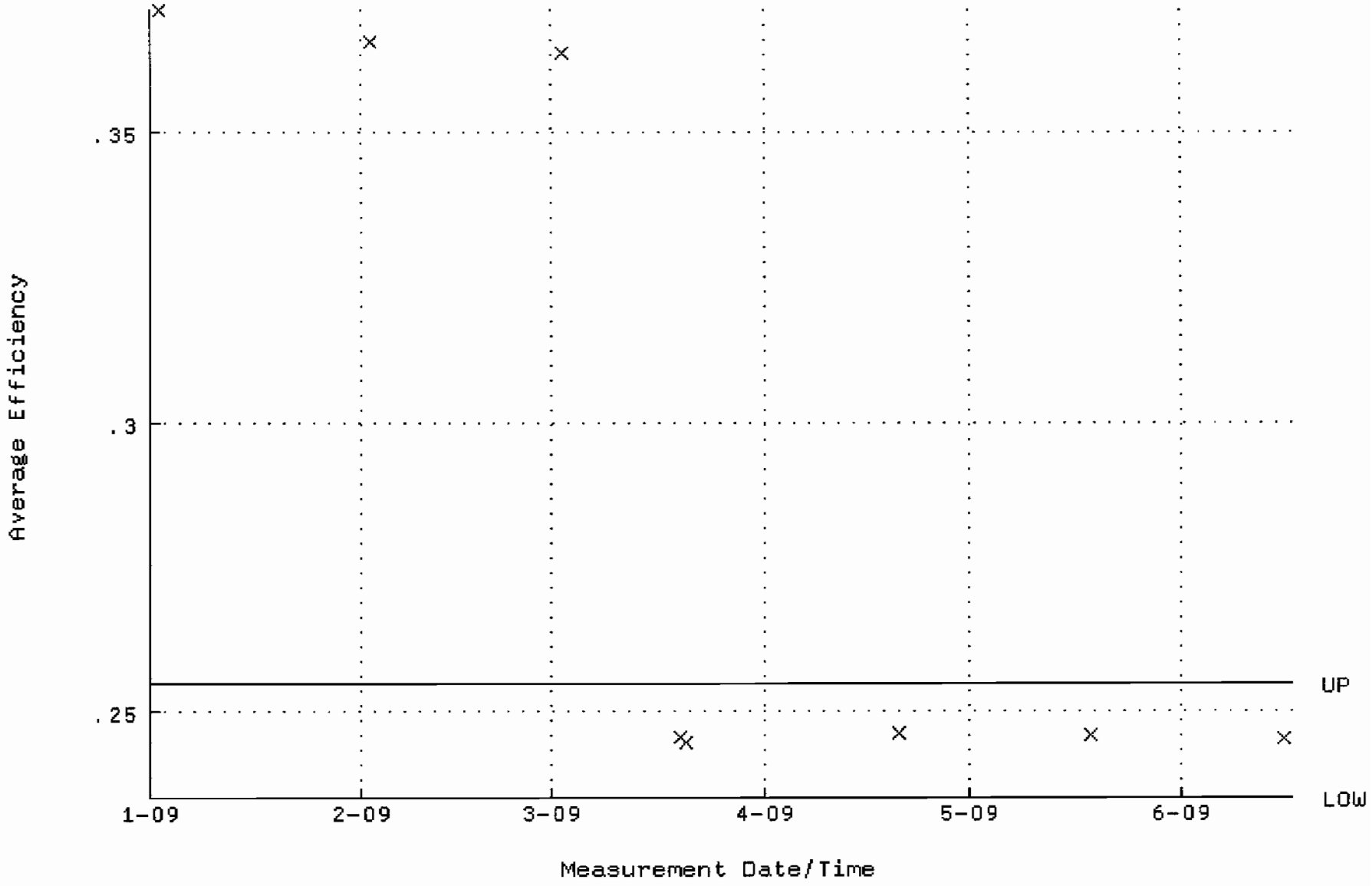

QA filename : DKA100:[ENV_ALPHA.QA.W]W133.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:19 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 90.1899 through 99.6835

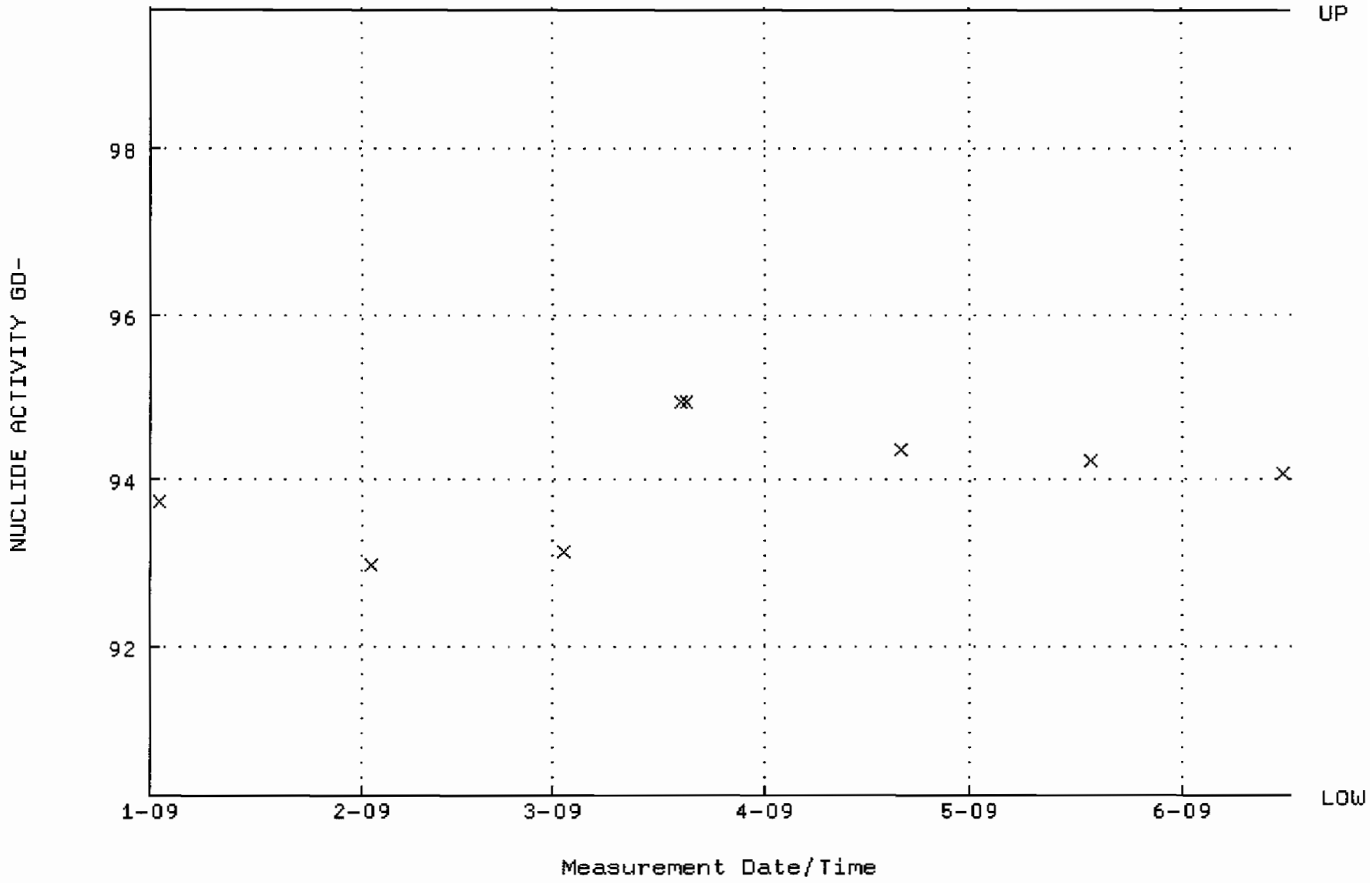

QA filename : DKA100:[ENV_ALPHA.QA.B]B133.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:14 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

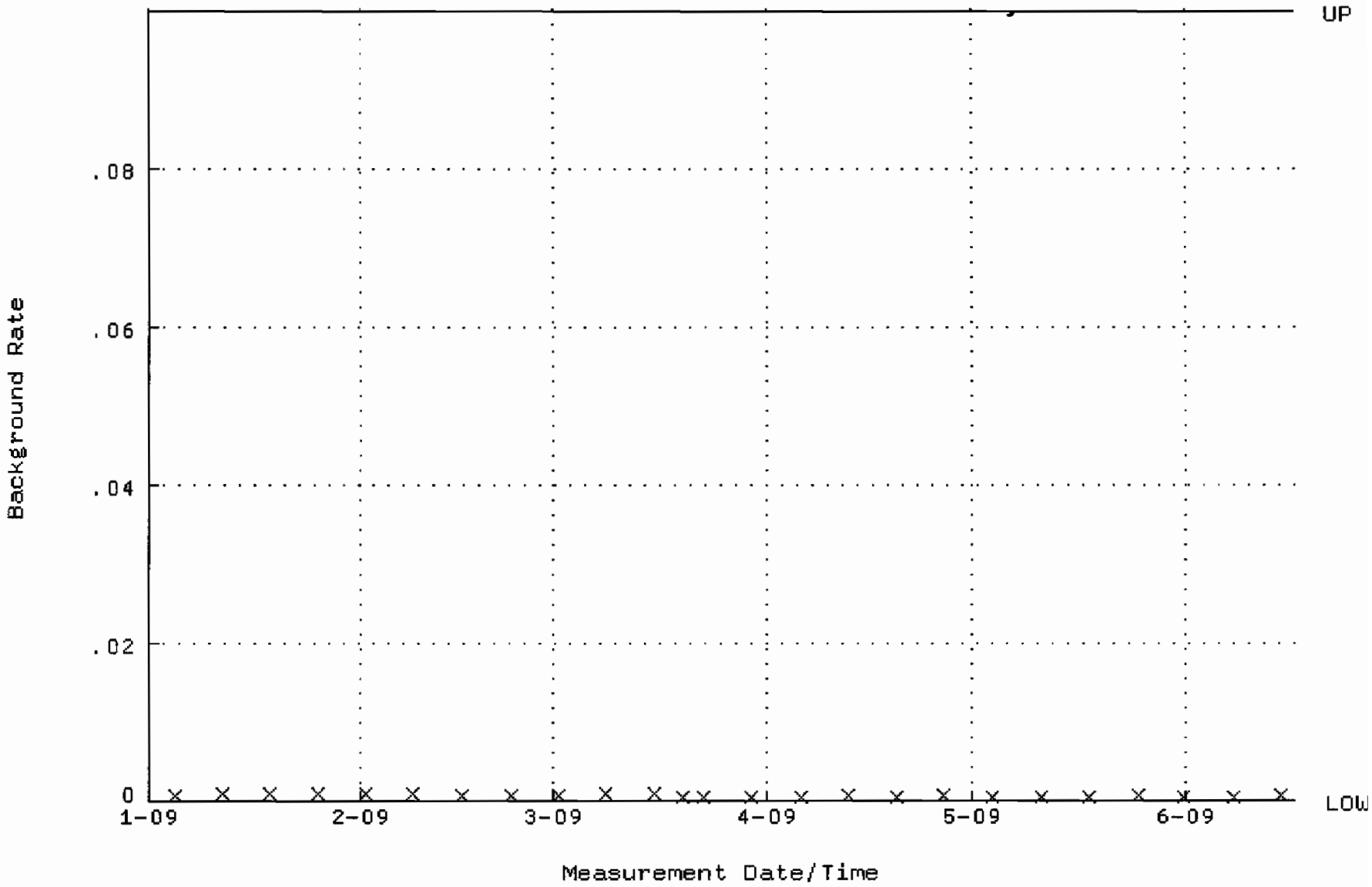

QA filename : DKA100:[ENV_ALPHA.QA.W]W137.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:36 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.244801 through 0.264801

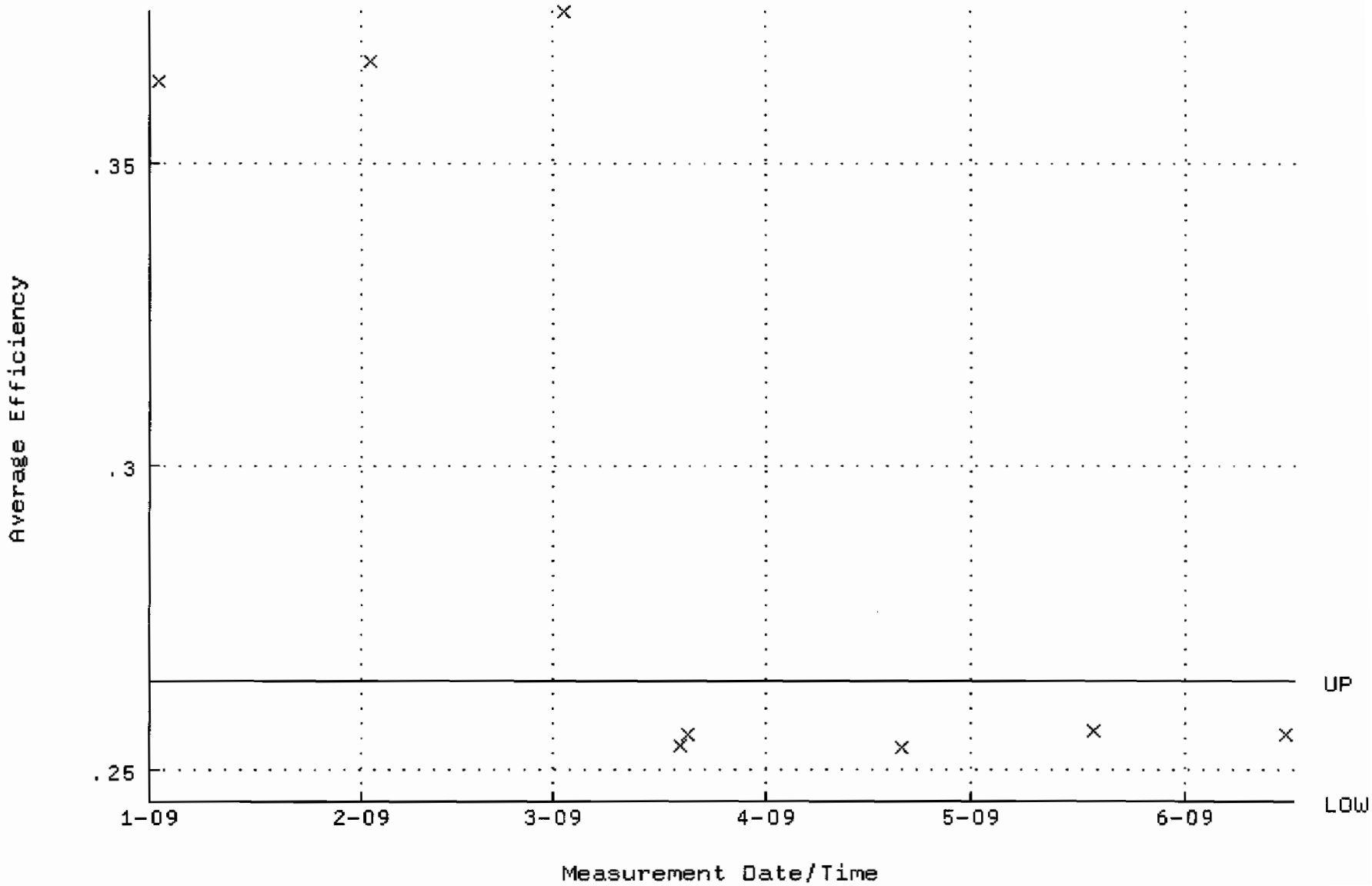

QA filename : DKA100:[ENV_ALPHA.QA.W]W137.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:36 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 85.2880 through 94.2656

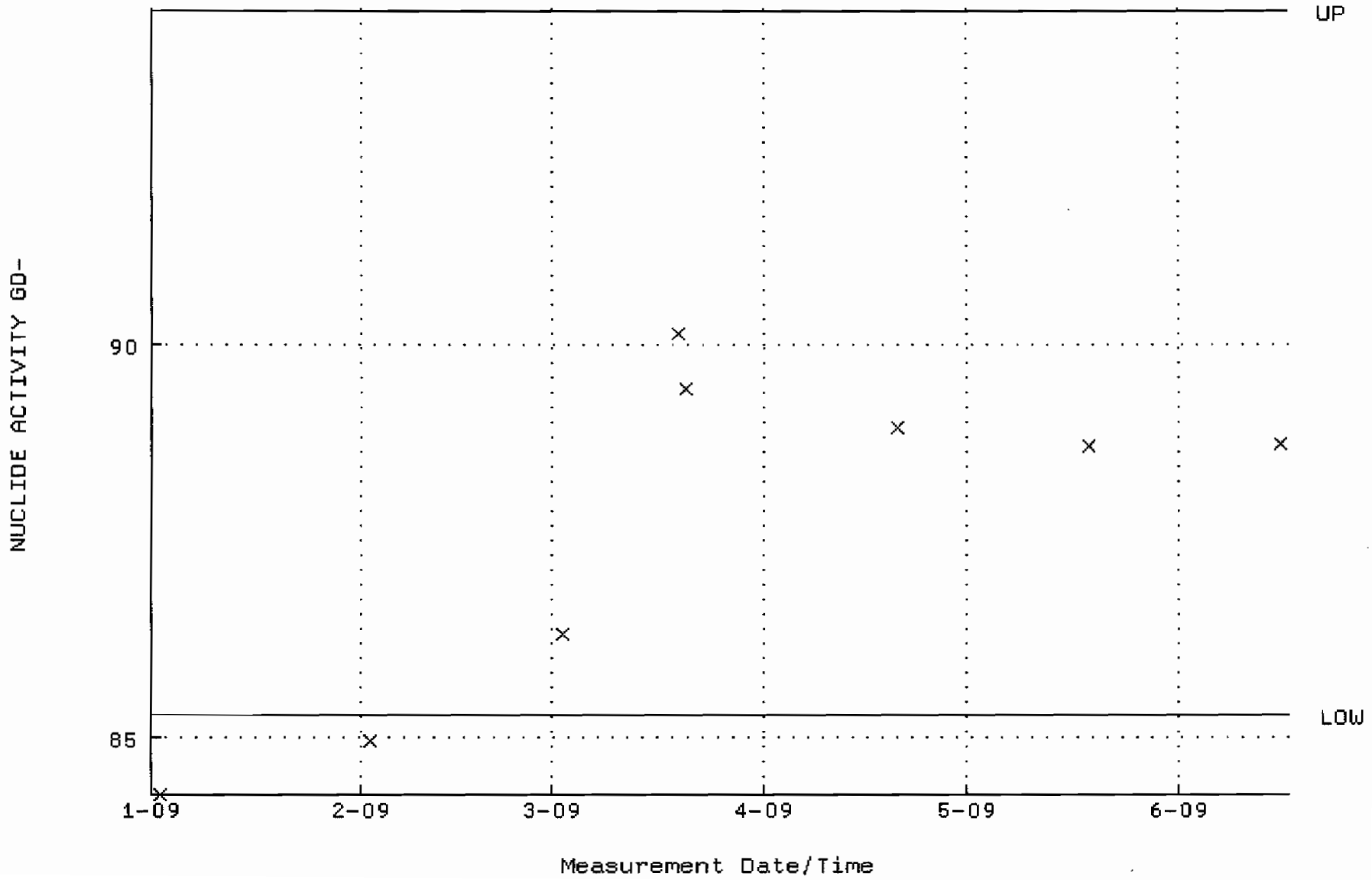

QA filename : DKA100:[ENV_ALPHA.QA.B]B137.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:31 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

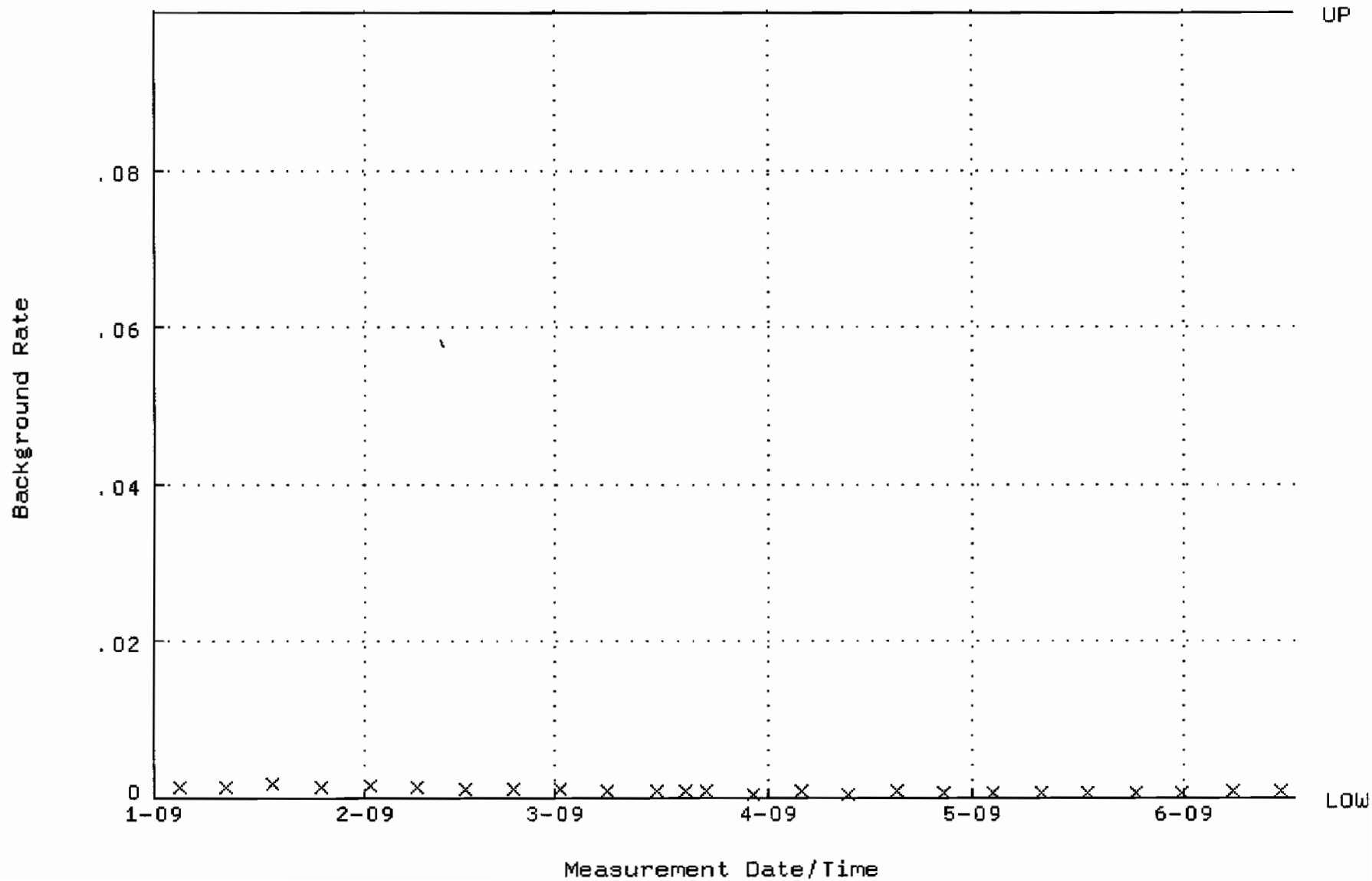

QA filename : DKA100:[ENV_ALPHA.QA.W]W151.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:42 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.233693 through 0.253693

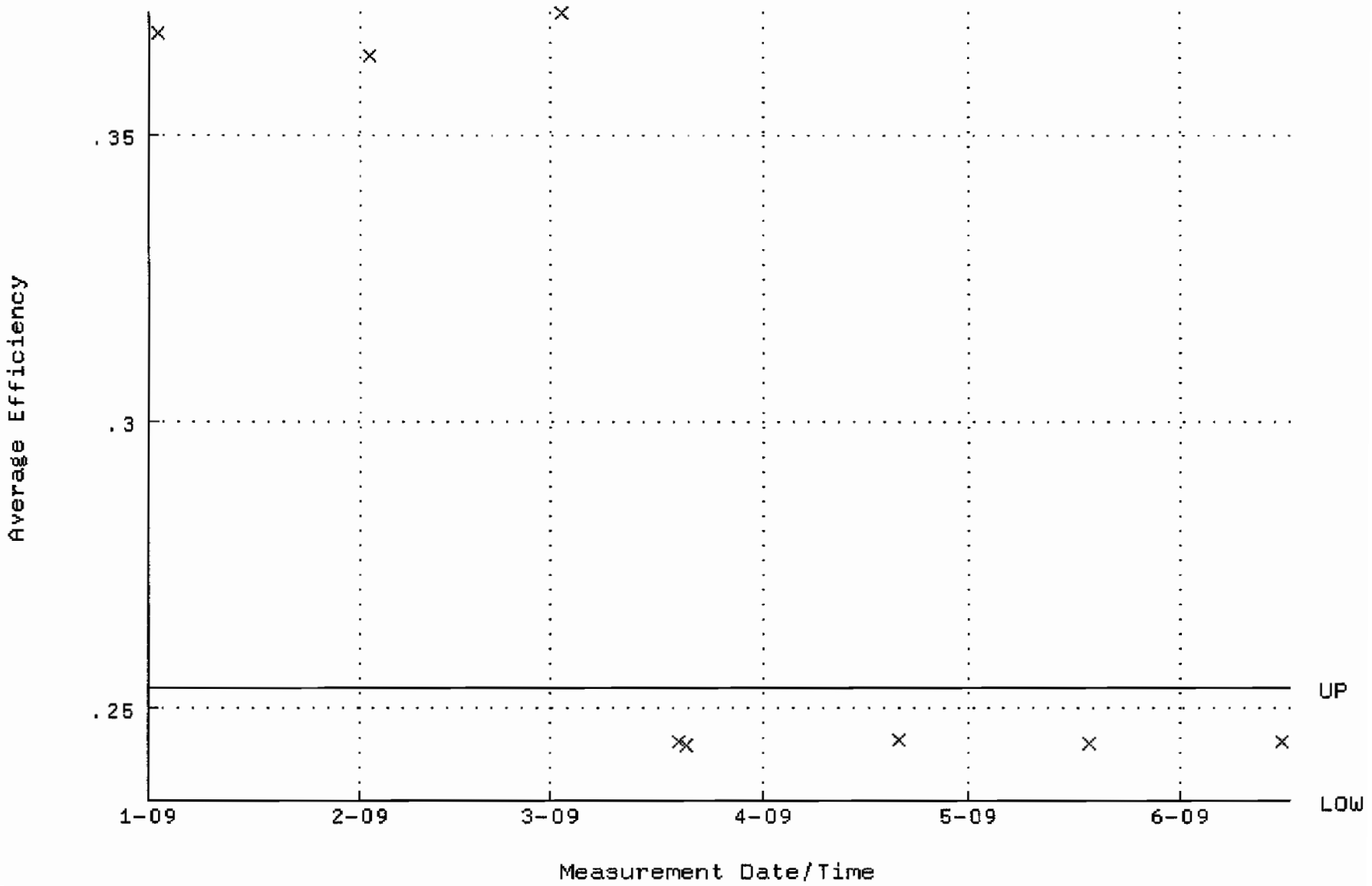

QA filename : DKA100:[ENV_ALPHA.QA.W]W151.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:42 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 86.5749 through 95.6881

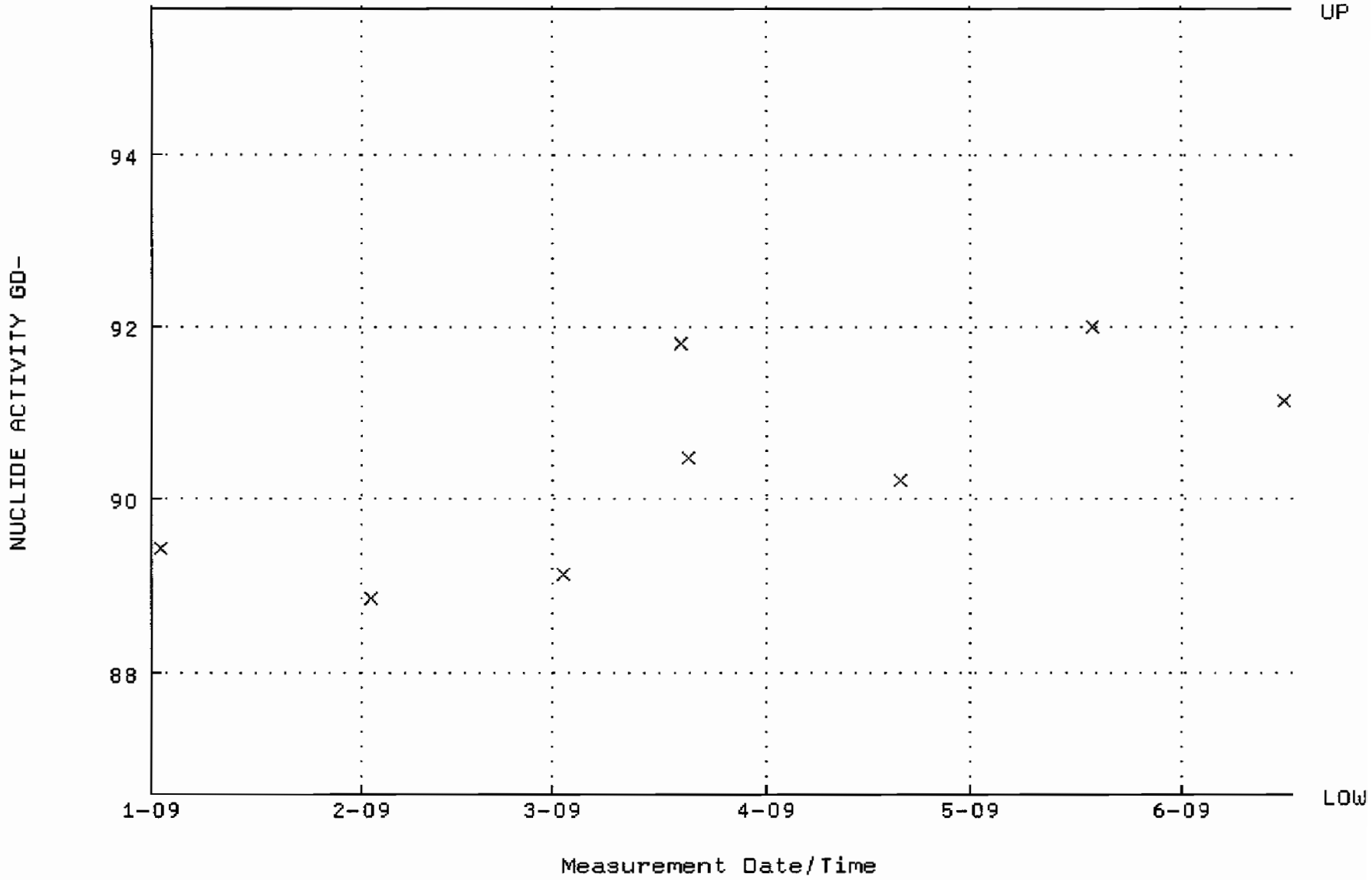

QA filename : DKA100:[ENV_ALPHA.QA.B]B151.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:28 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

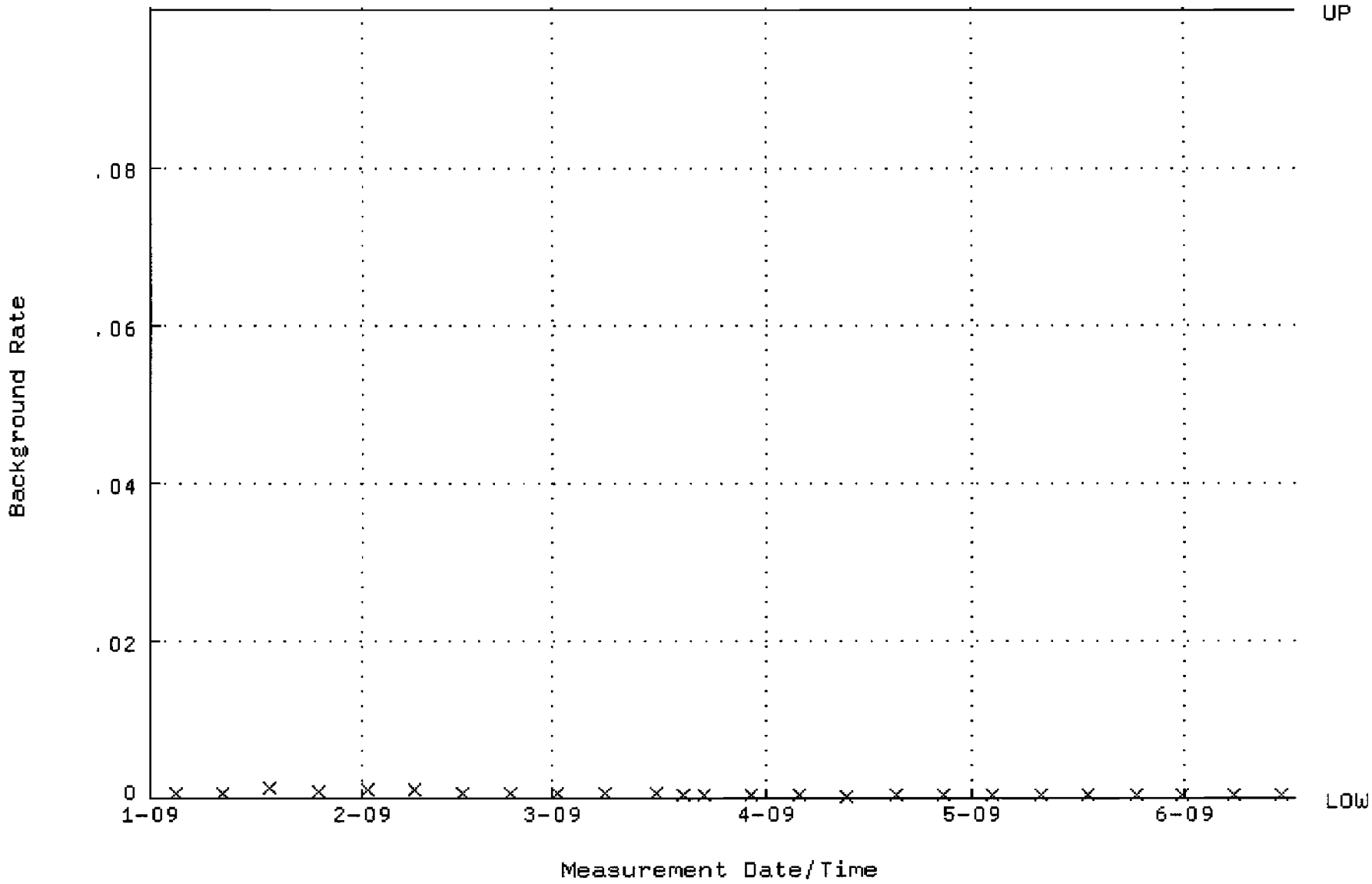

QA filename : DKA100:[ENV_ALPHA.QA.W]W152.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:46 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.238479 through 0.258479

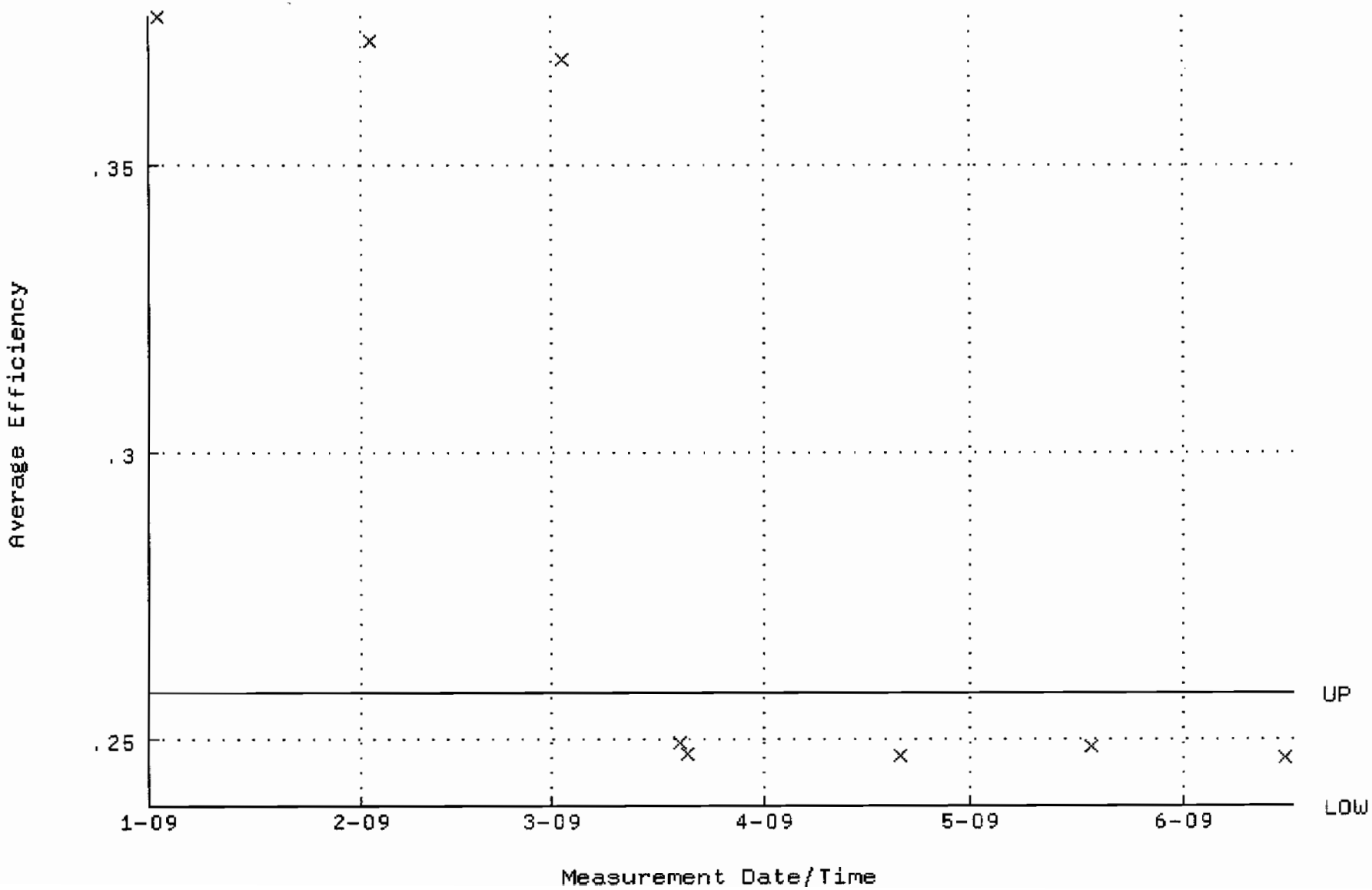

QA filename : DKA100:[ENV_ALPHA.QA.W]W152.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:46 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 83.7180 through 92.5304

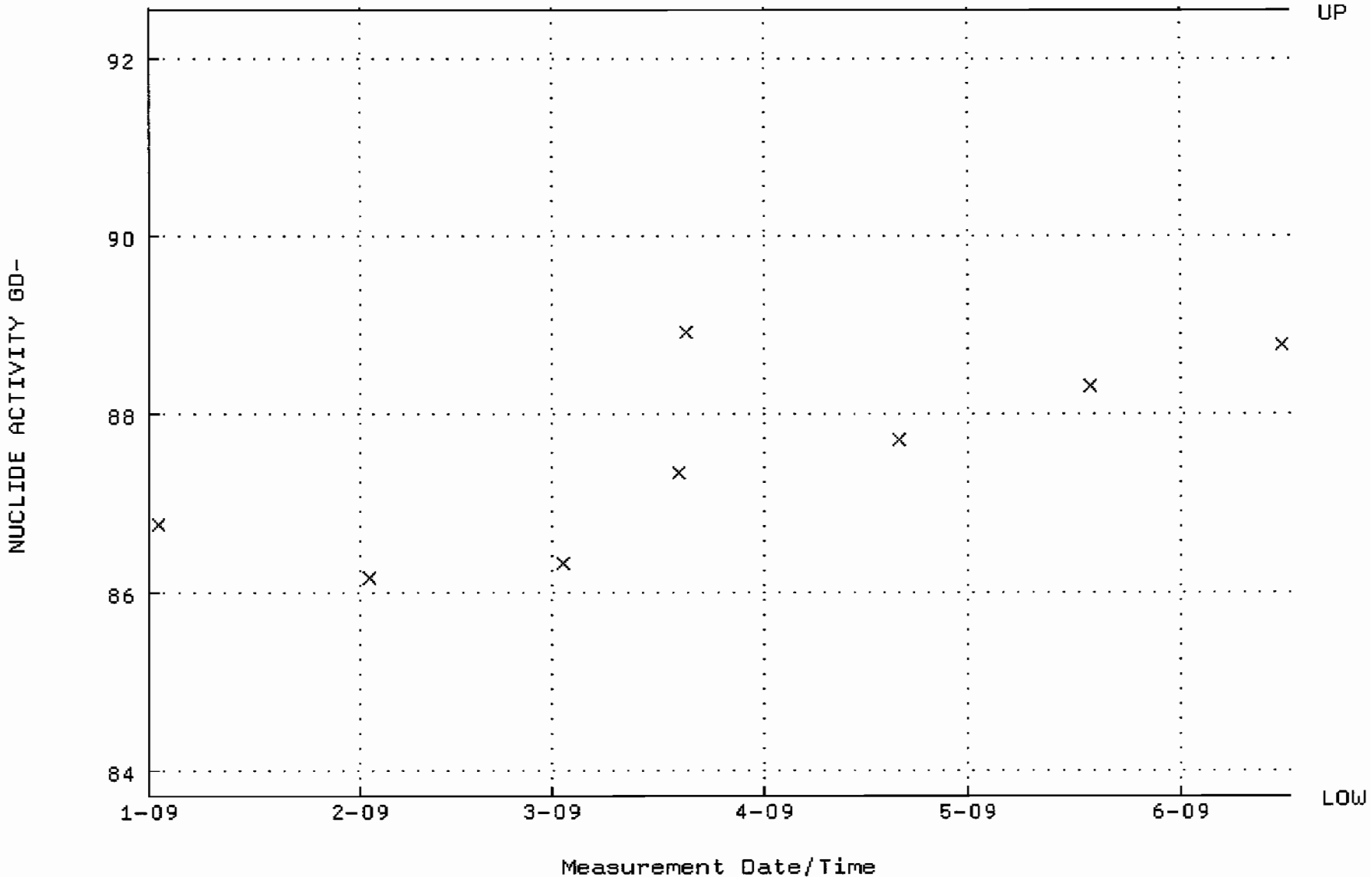

QA filename : DKA100:[ENV_ALPHA.QA.B]B152.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:32 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

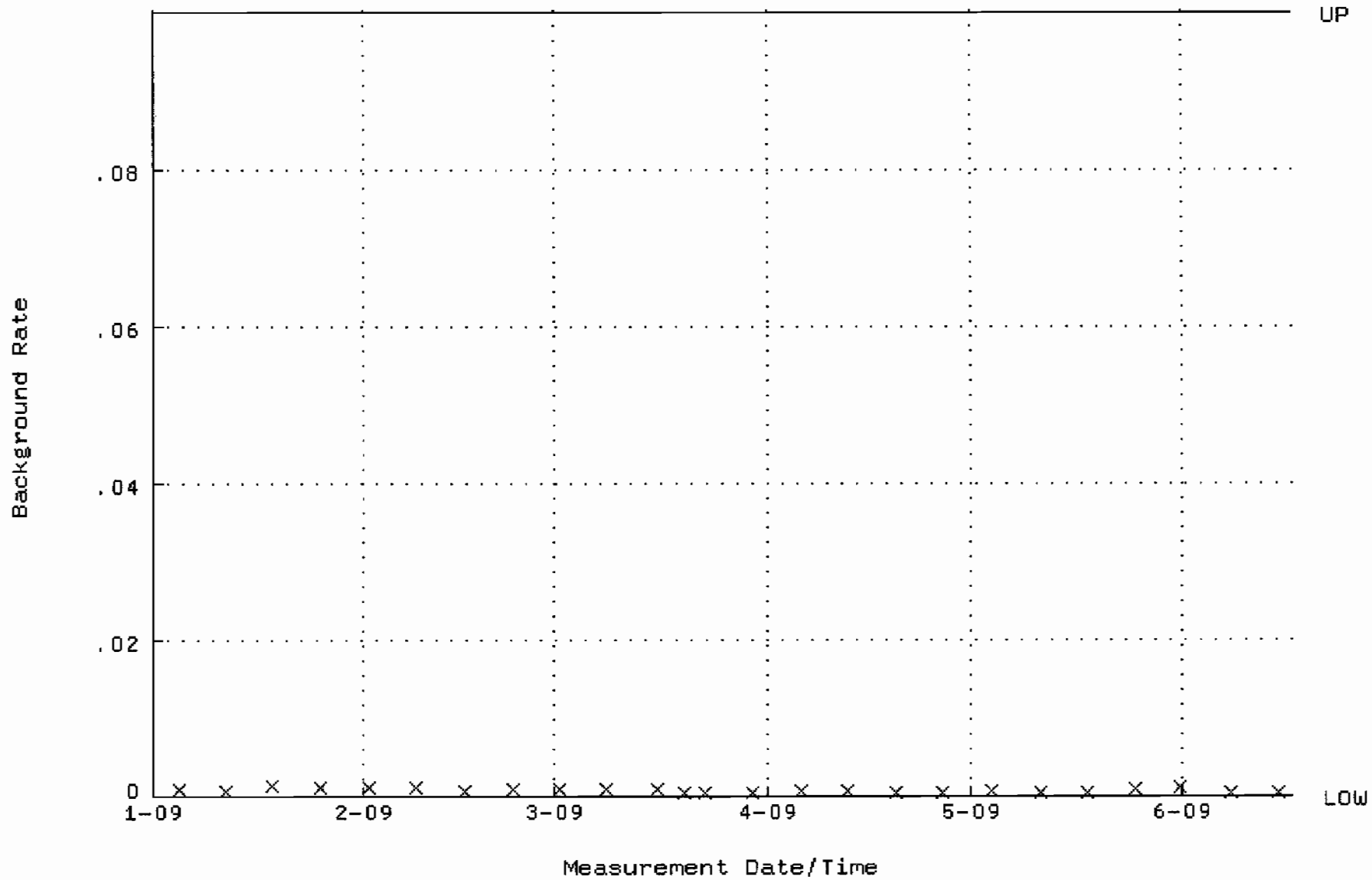

QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.244738 through 0.264738

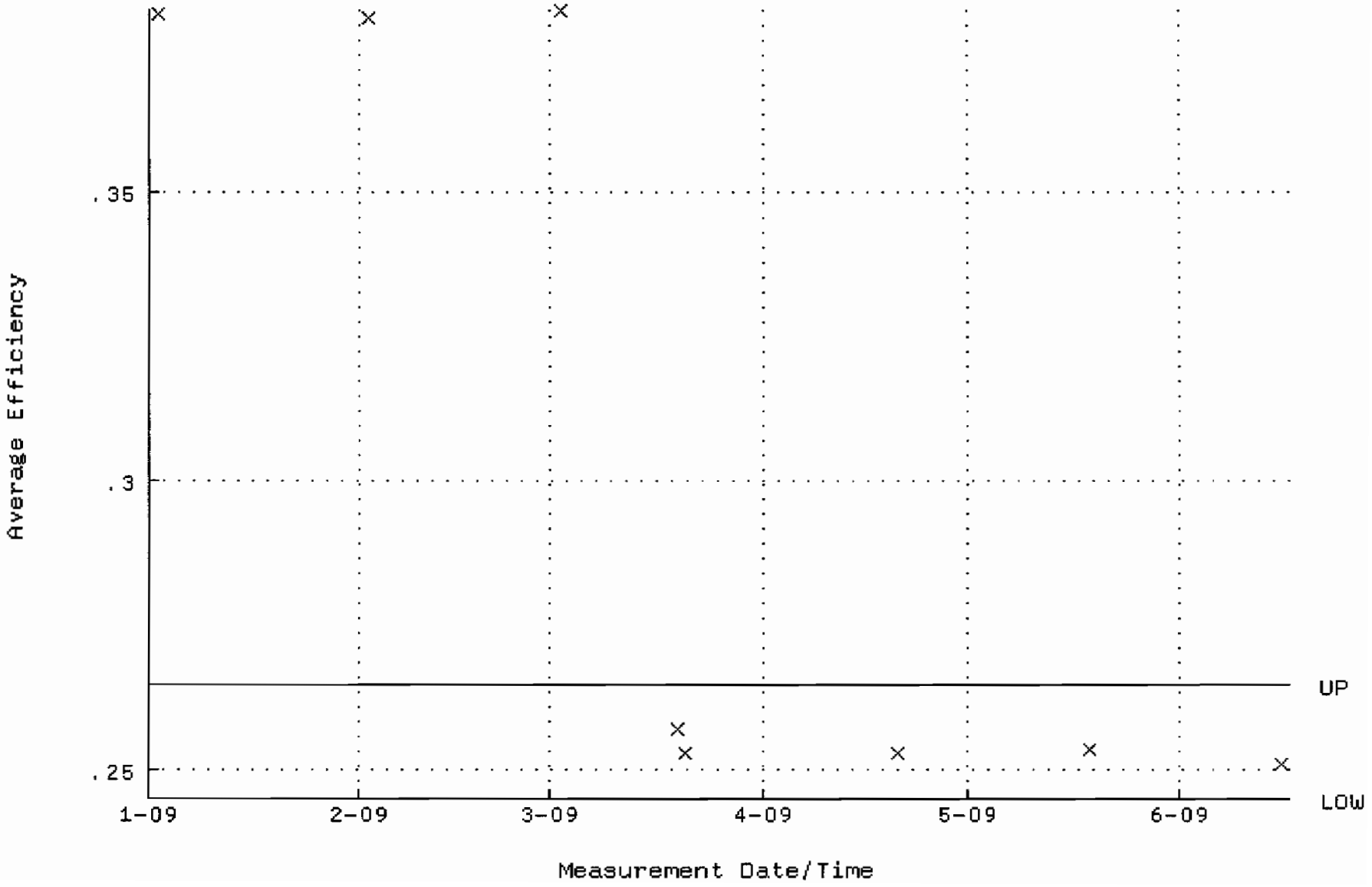

QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 81.3634 through 89.9280

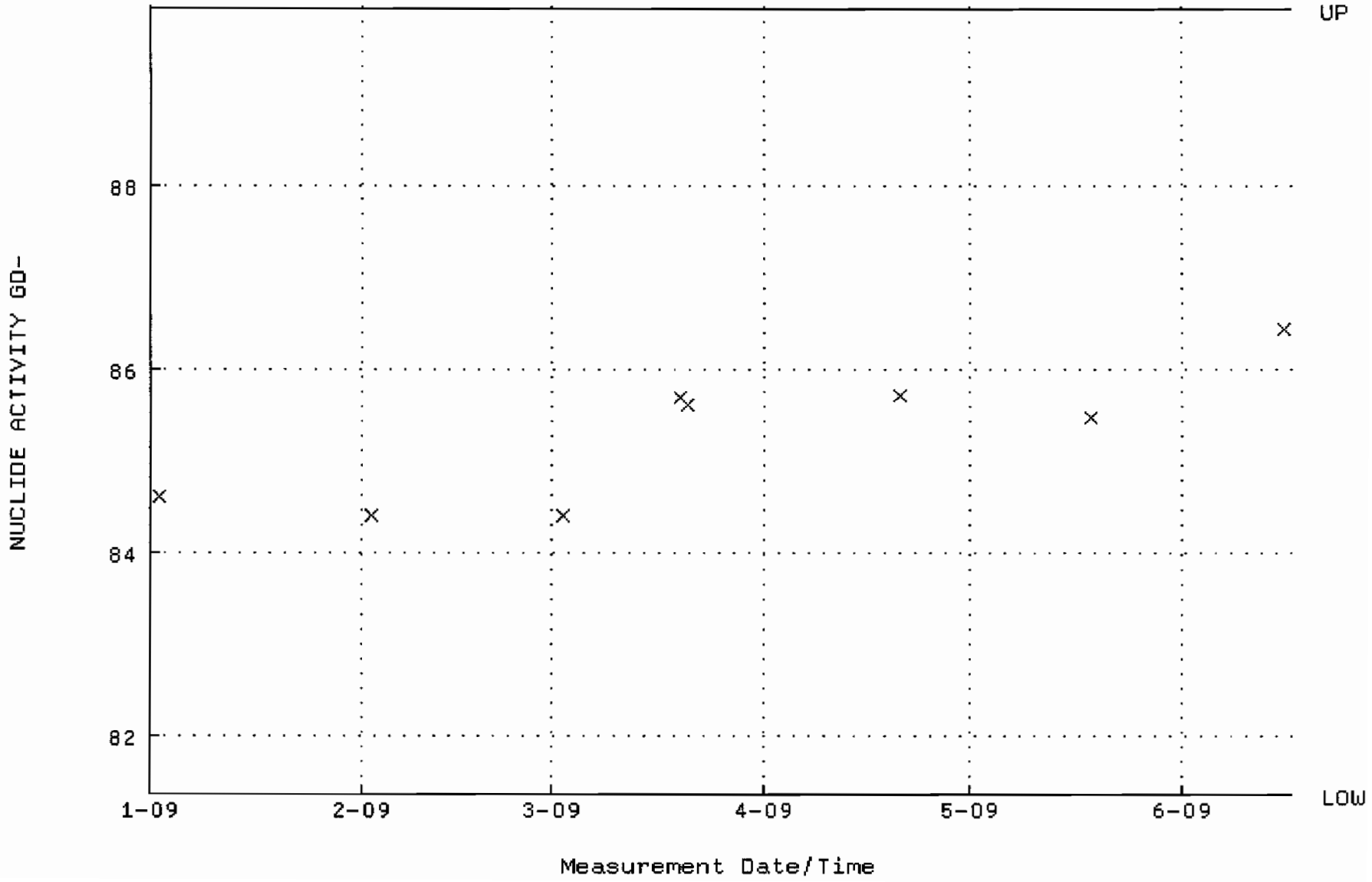

QA filename : DKA100:[ENV_ALPHA.QA.B]B153.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:36 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

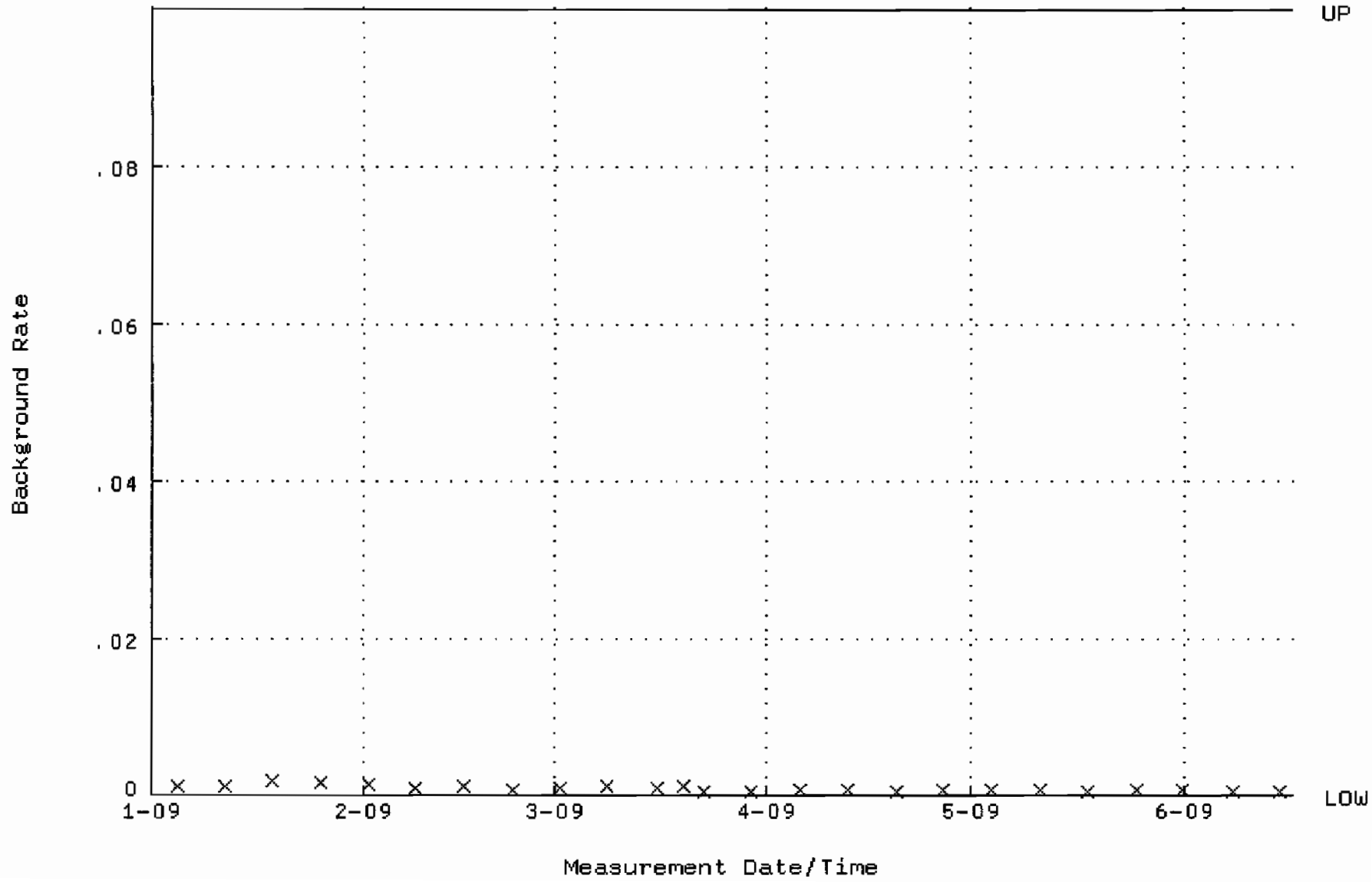

QA filename : DKA100:[ENV_ALPHA.QA.W]W166.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:09:12 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.388604 through 0.408604

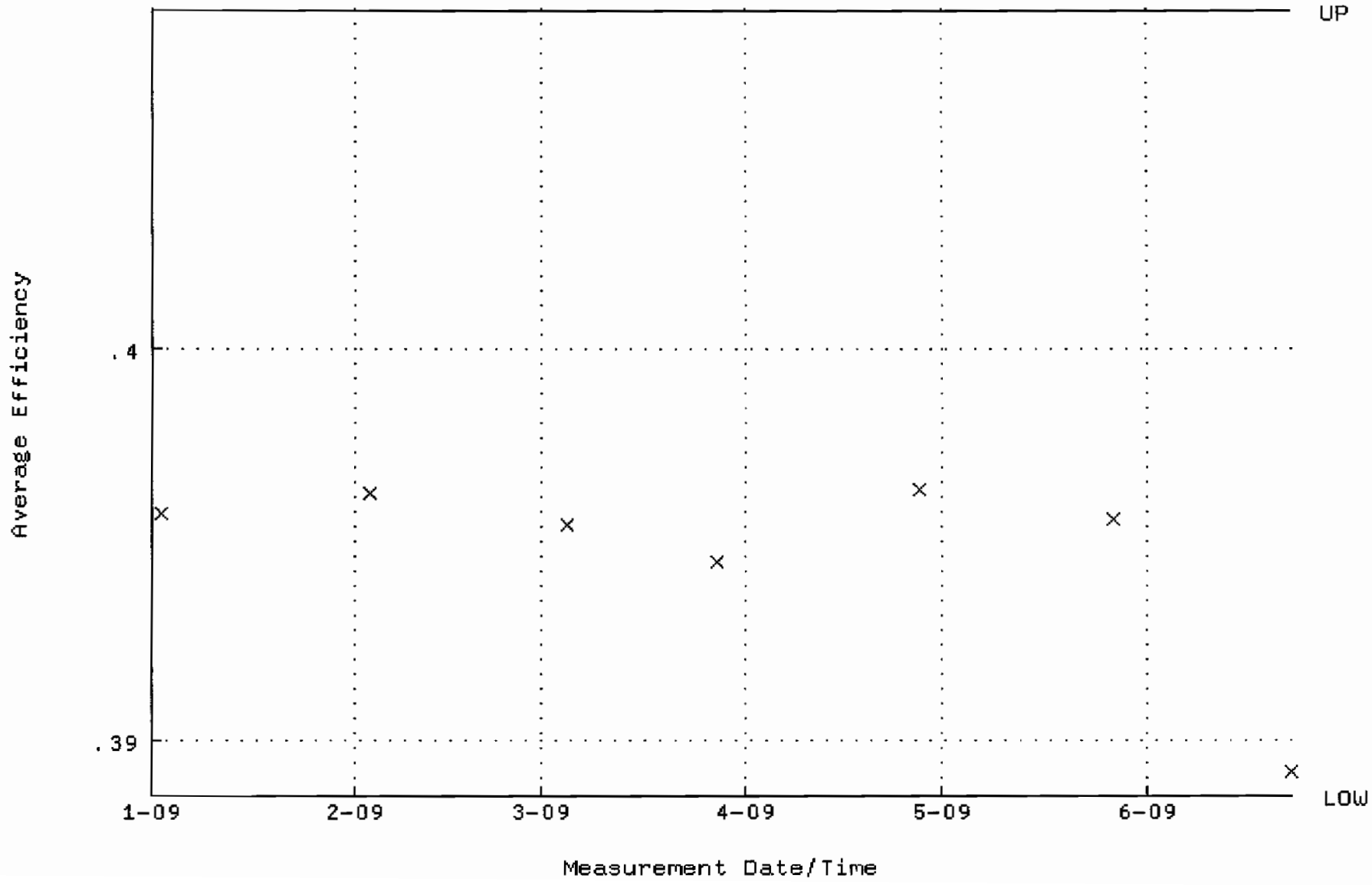

QA filename : DKA100:[ENV_ALPHA.QA.W]W166.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:09:12 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 84.7448 through 93.6654

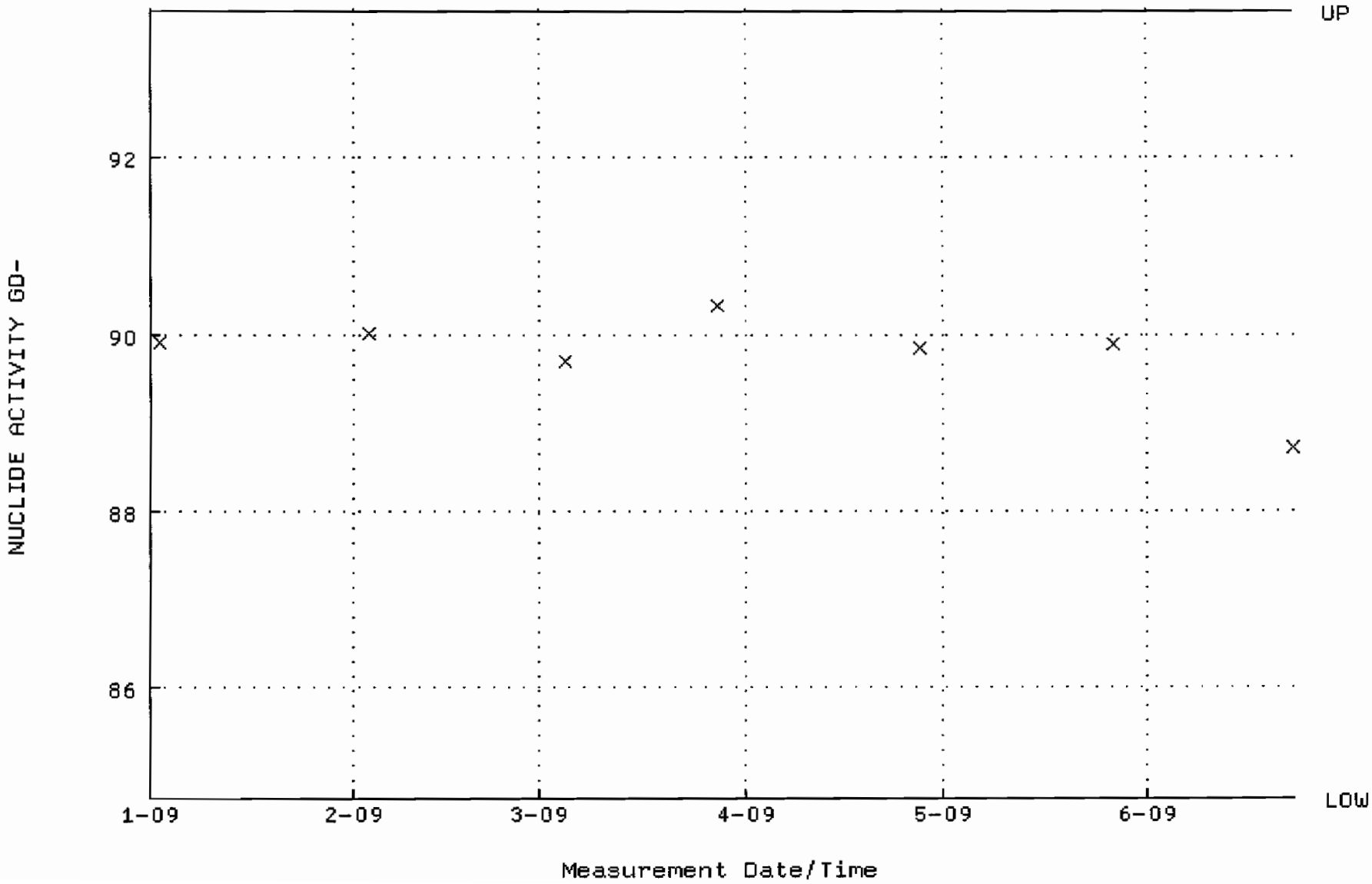

QA filename : DKA100:[ENV_ALPHA.QA.B]B166.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:25:24 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

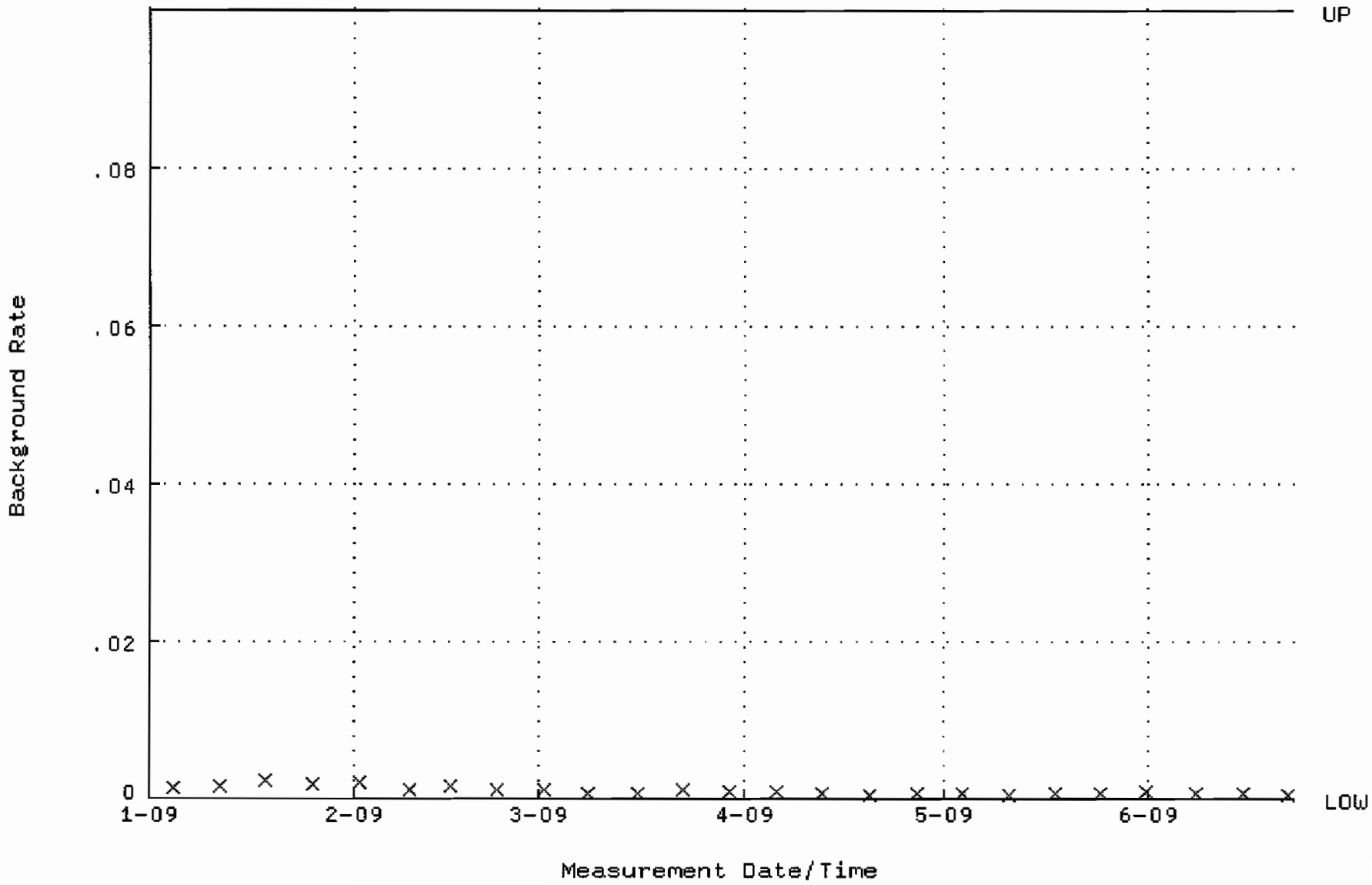

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:01 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

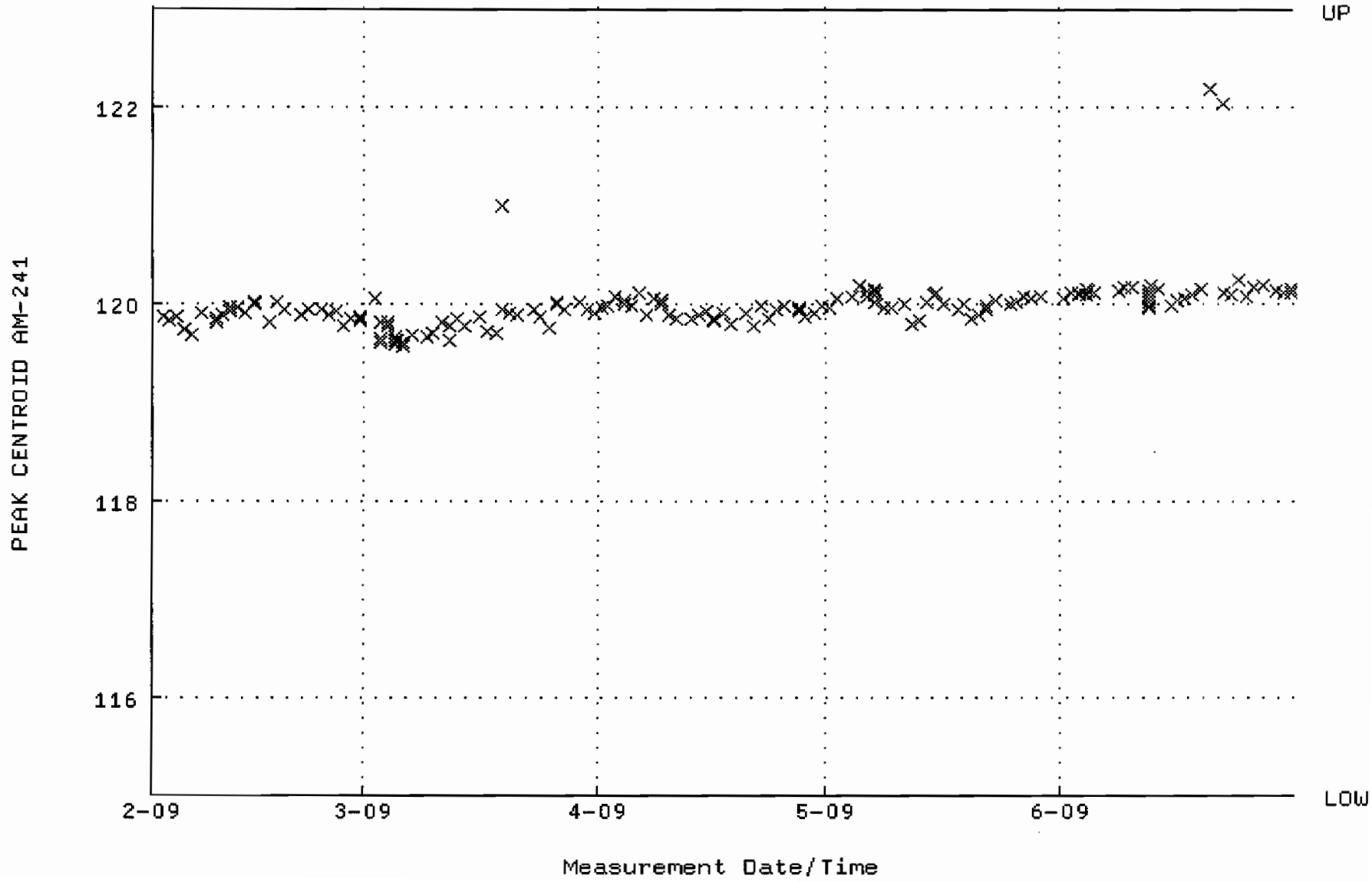

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM05.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.60580 through 1.72440

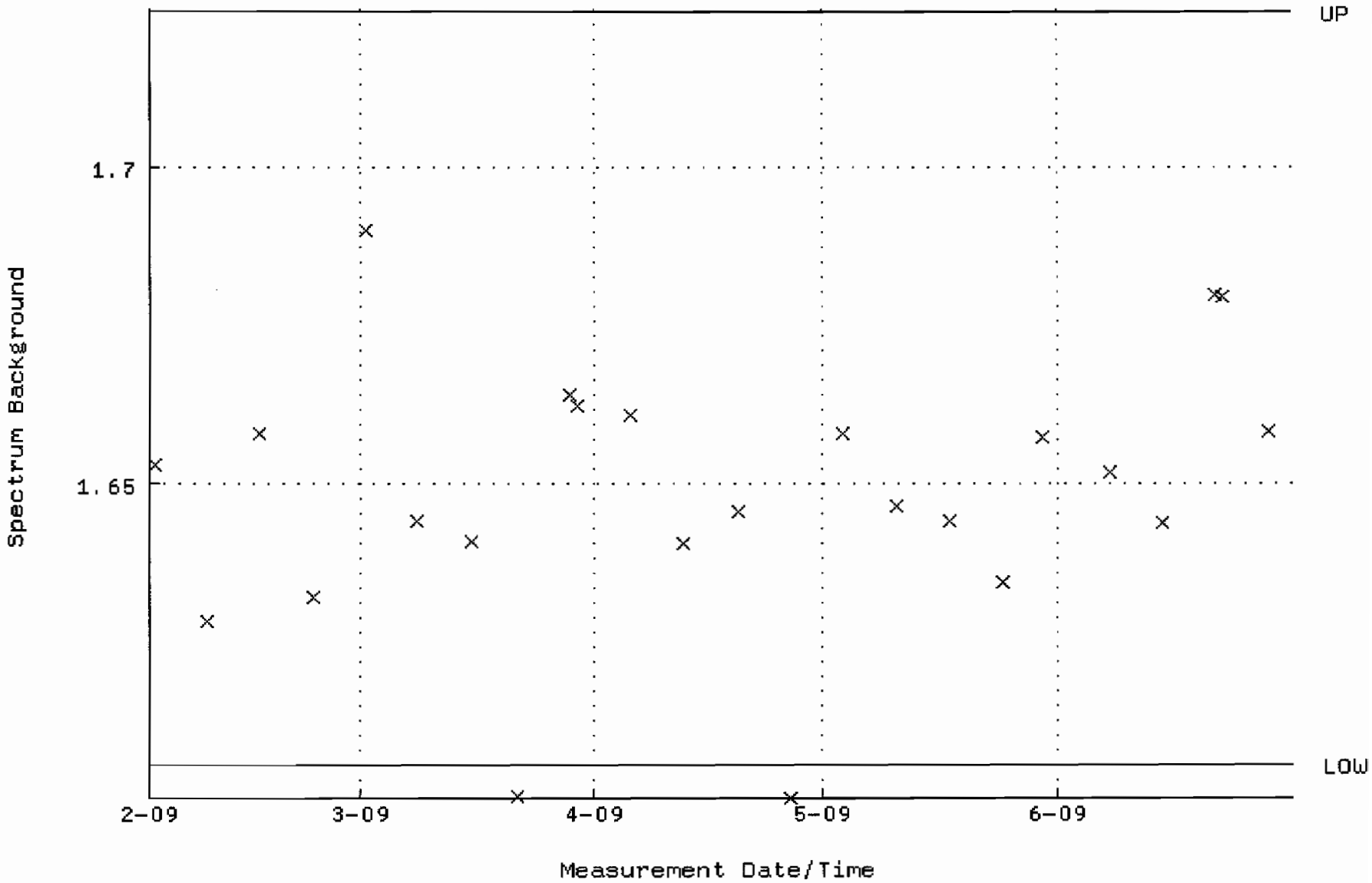

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM15_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:28:58 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

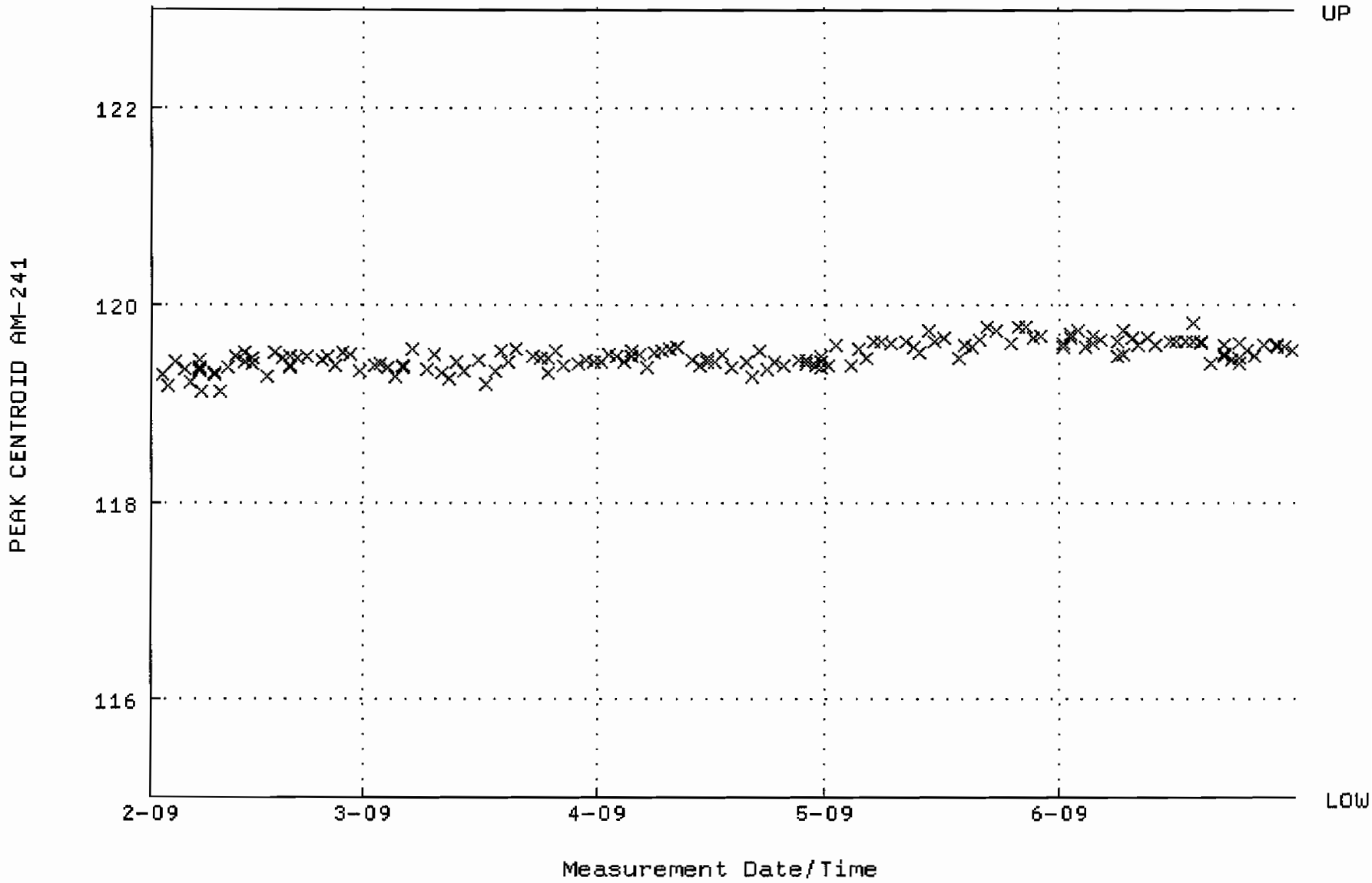

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM15.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:53 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.53342 through 1.87418

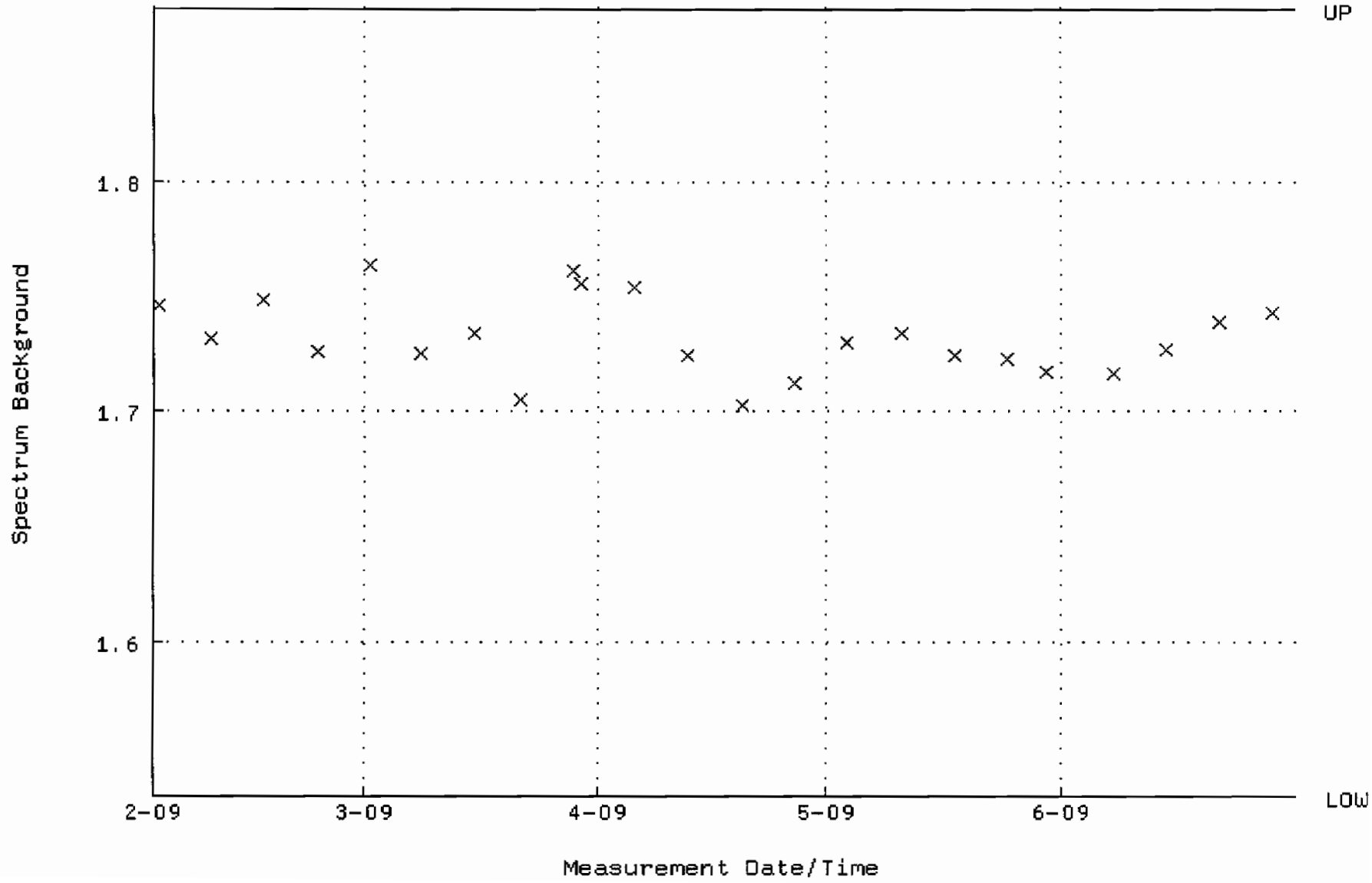

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:14:08 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

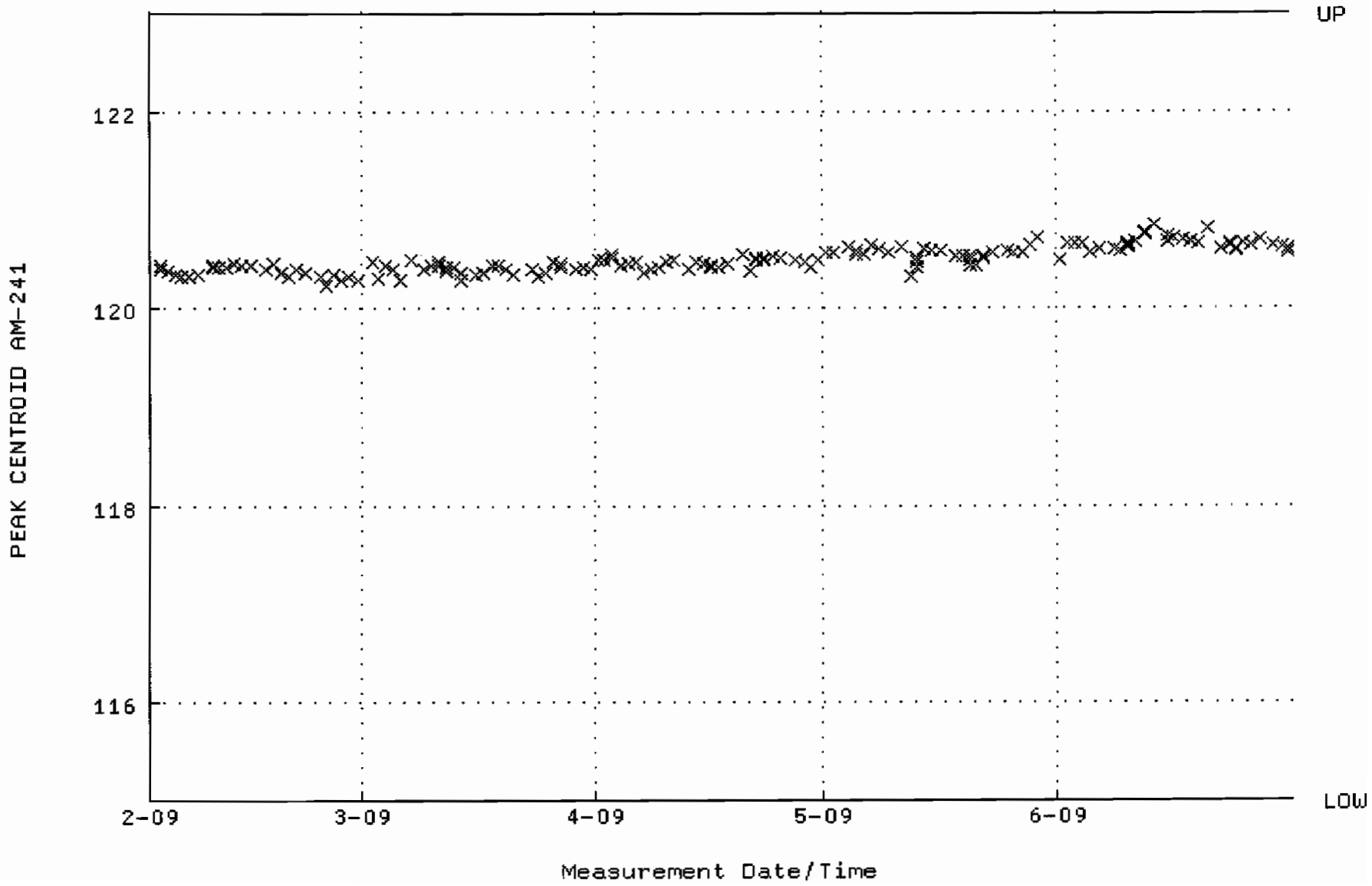

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM17.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.31148 through 1.60292

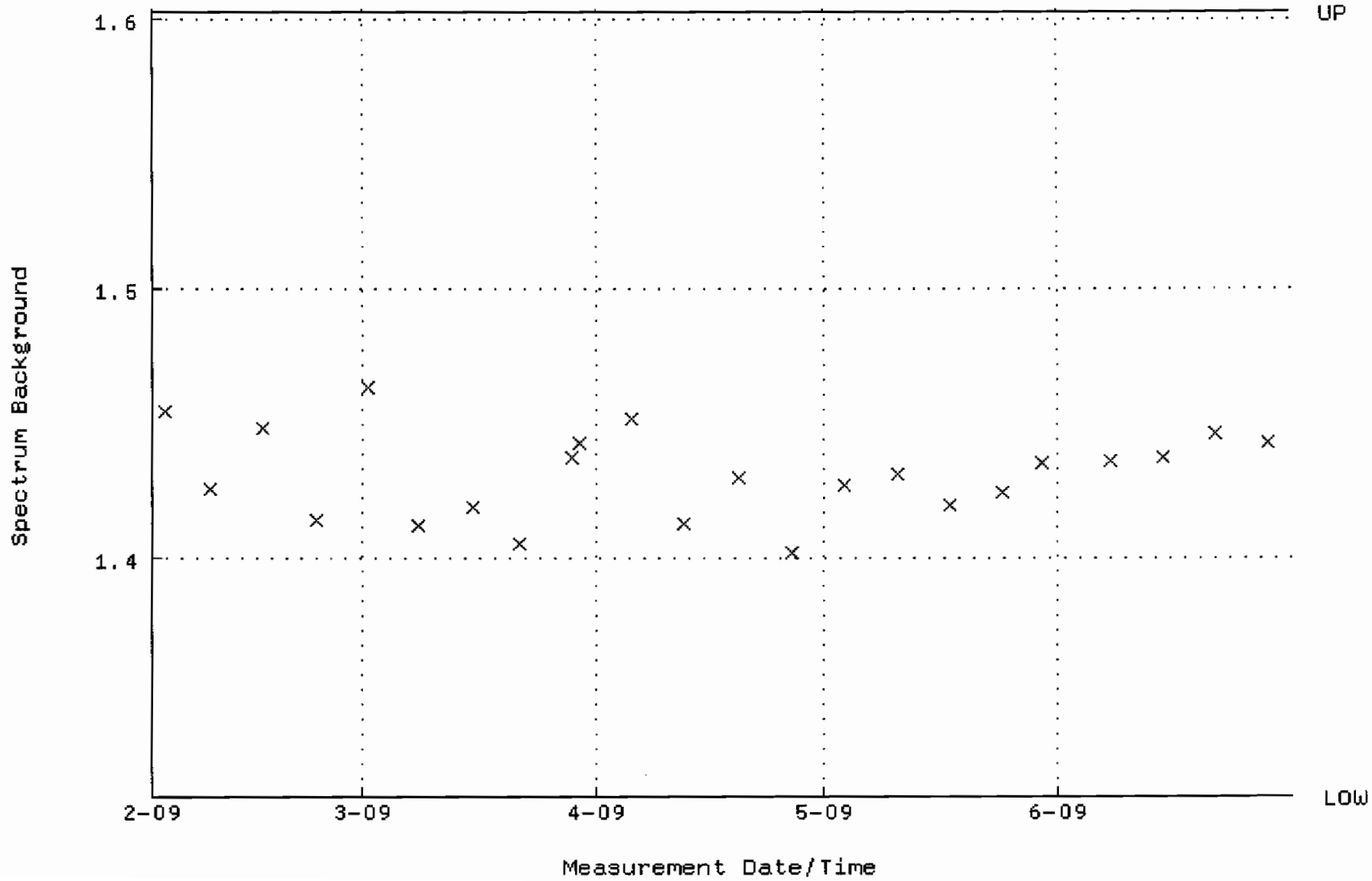

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:24:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

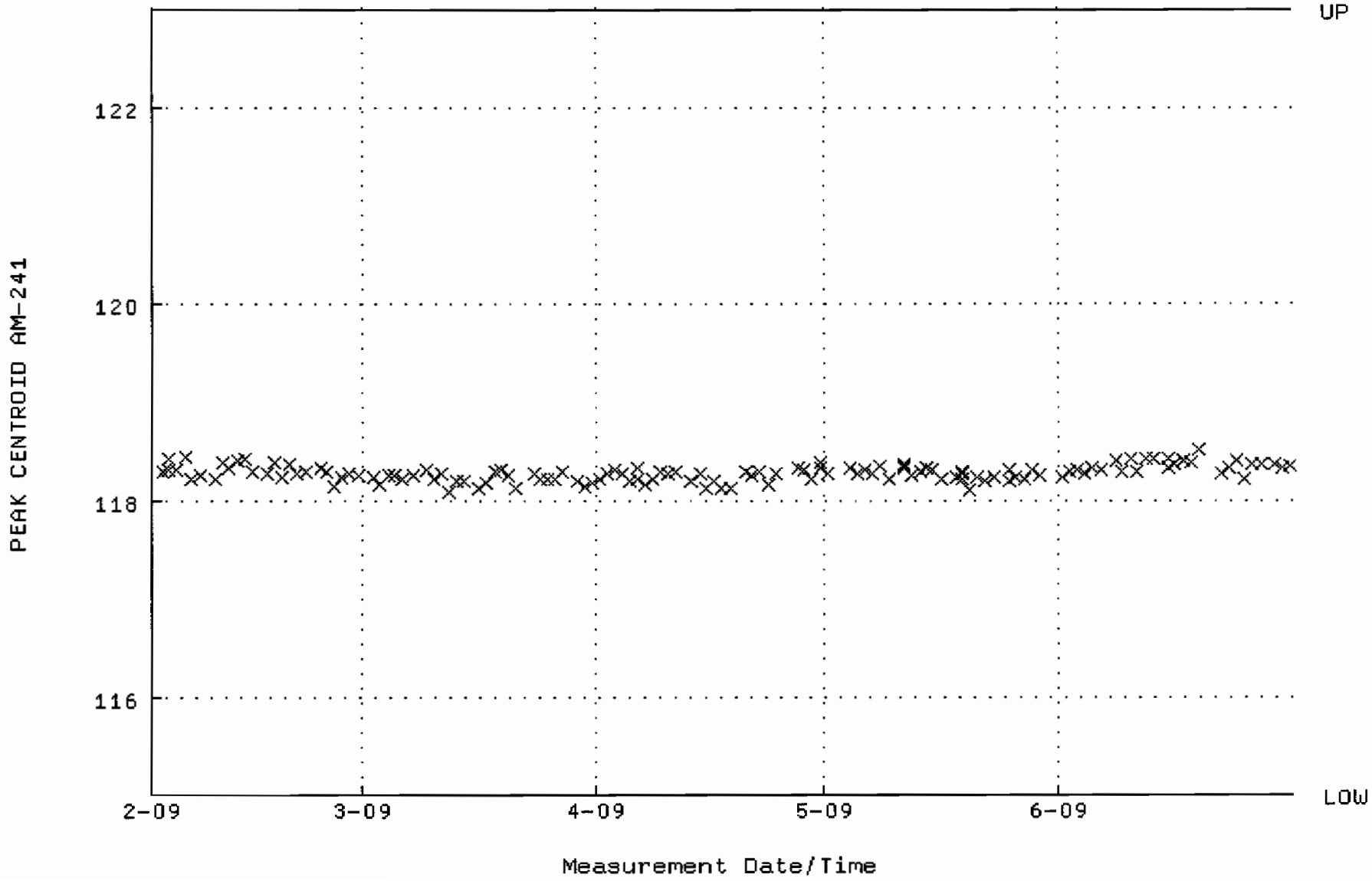

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.22710 through 2.72210

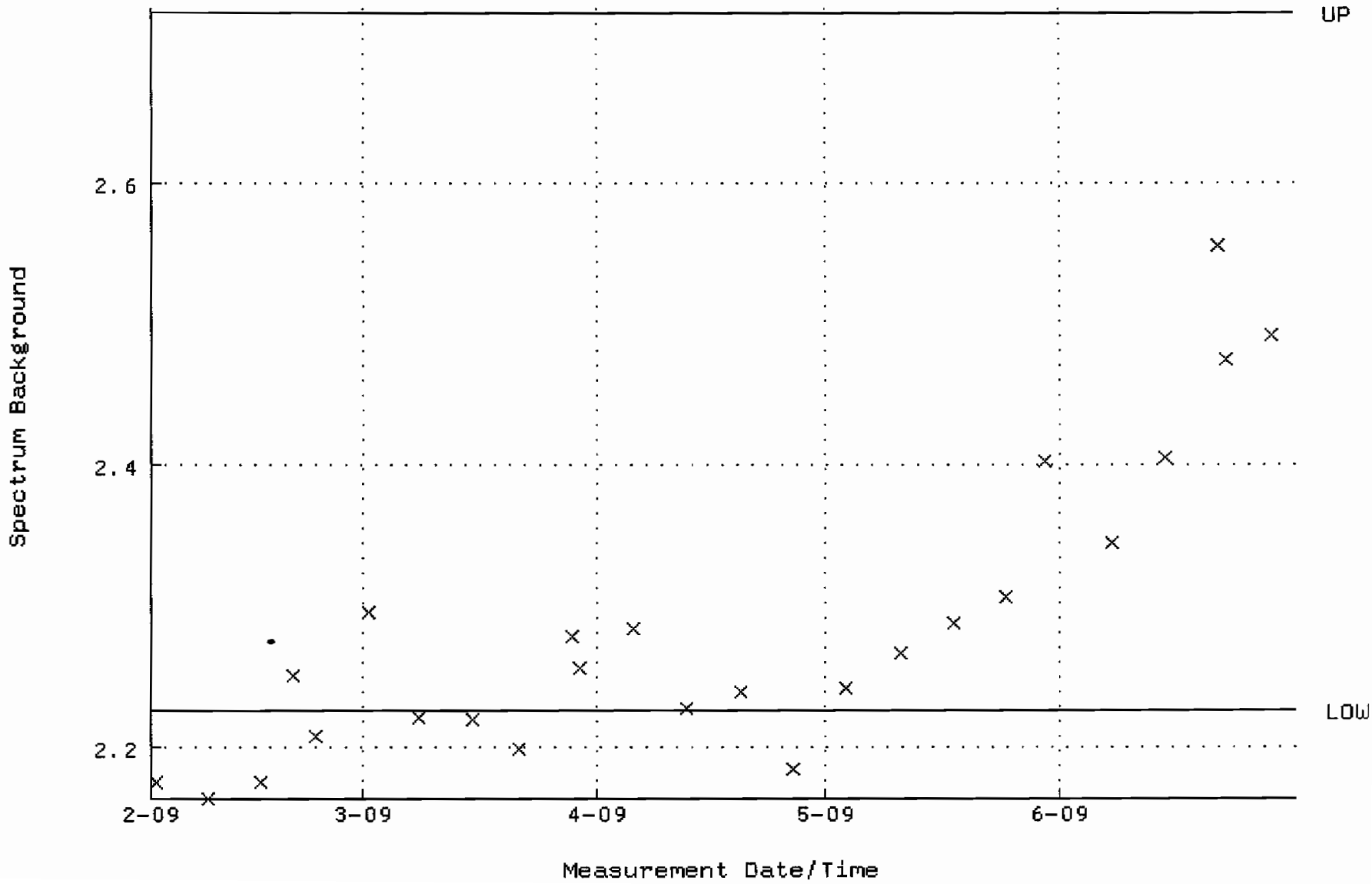

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:33:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

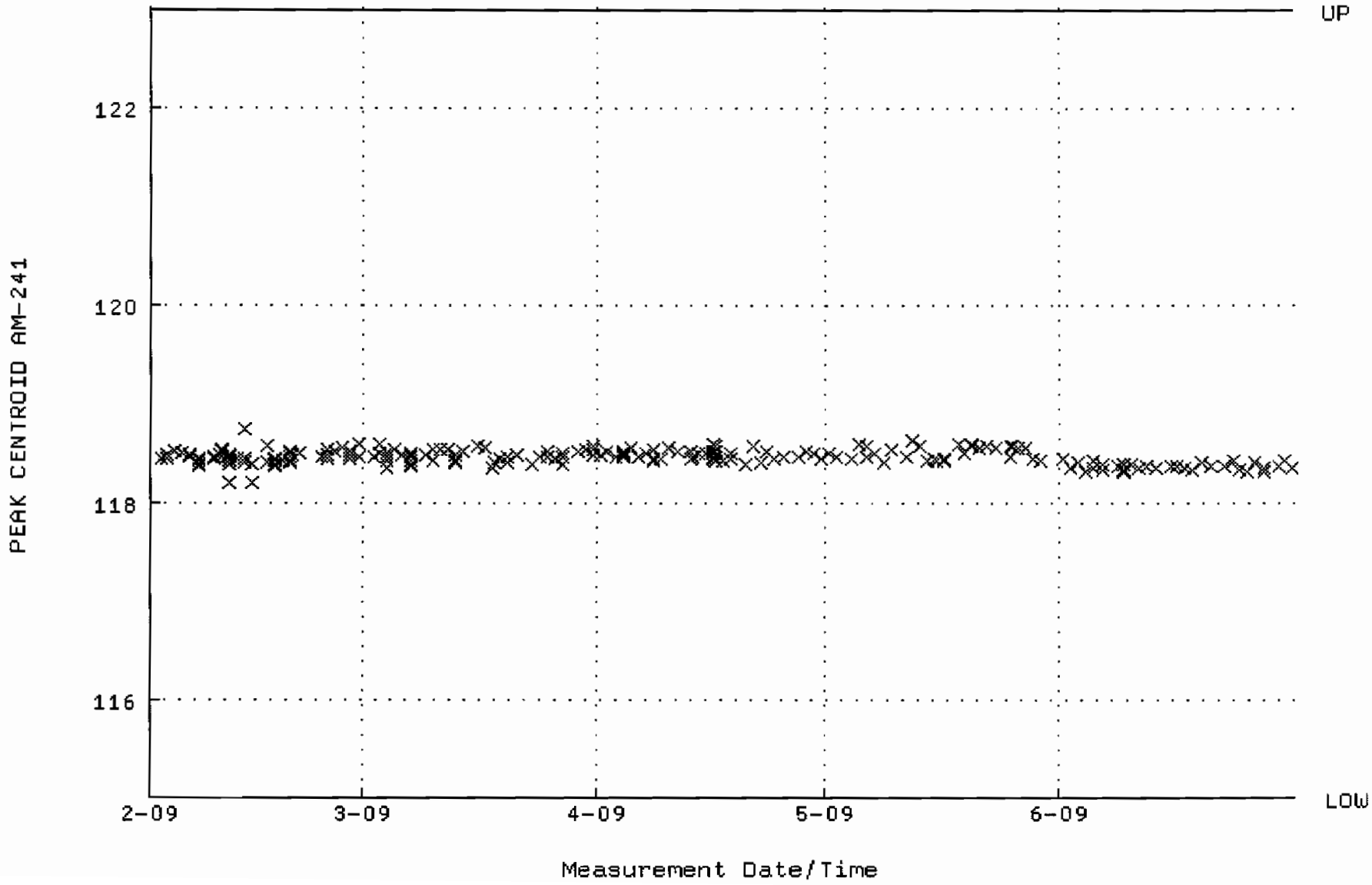

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM21.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:00 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.71450 through 2.09550

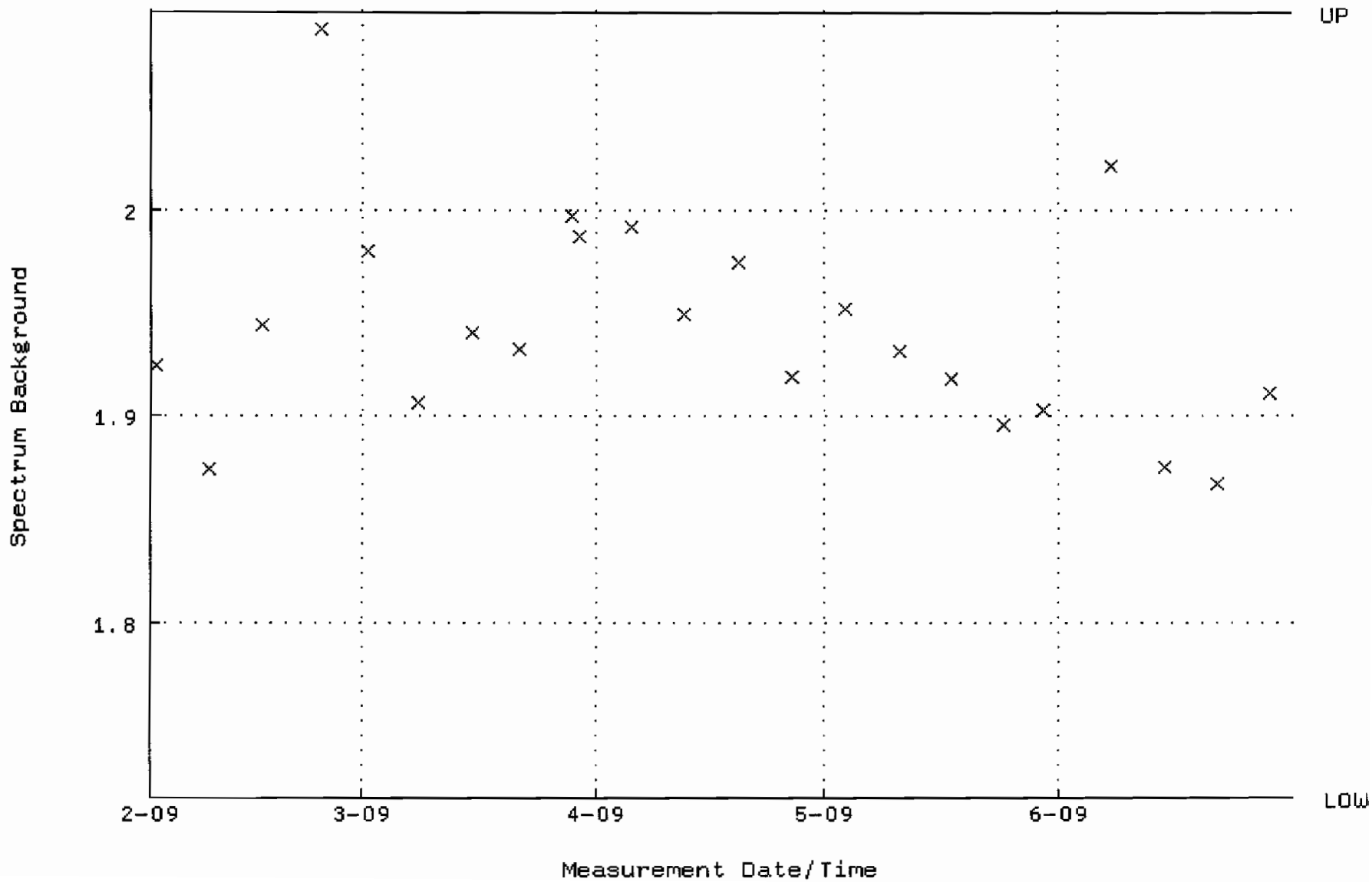

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:29:05 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

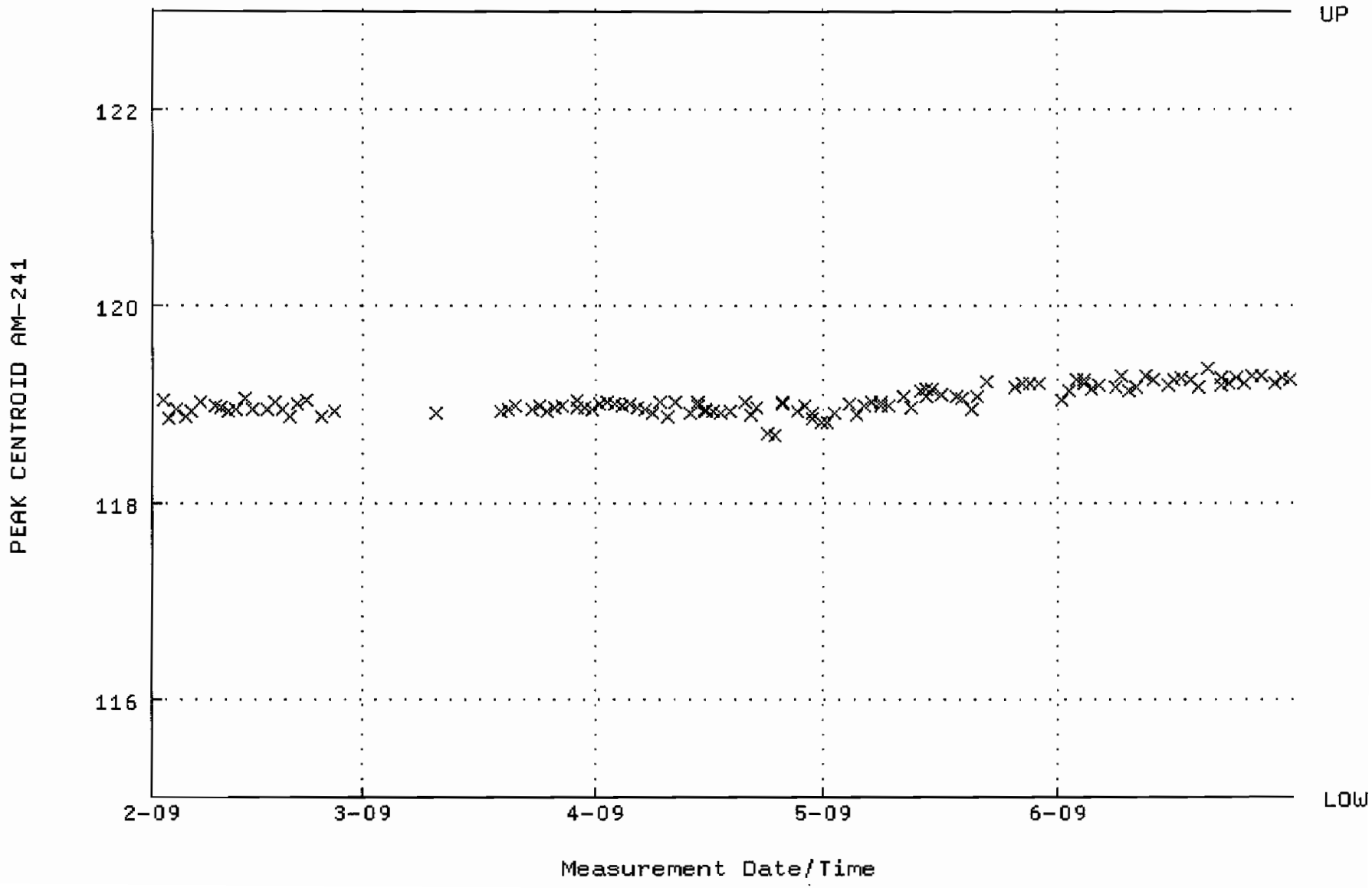

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM23.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.26405 through 1.54495

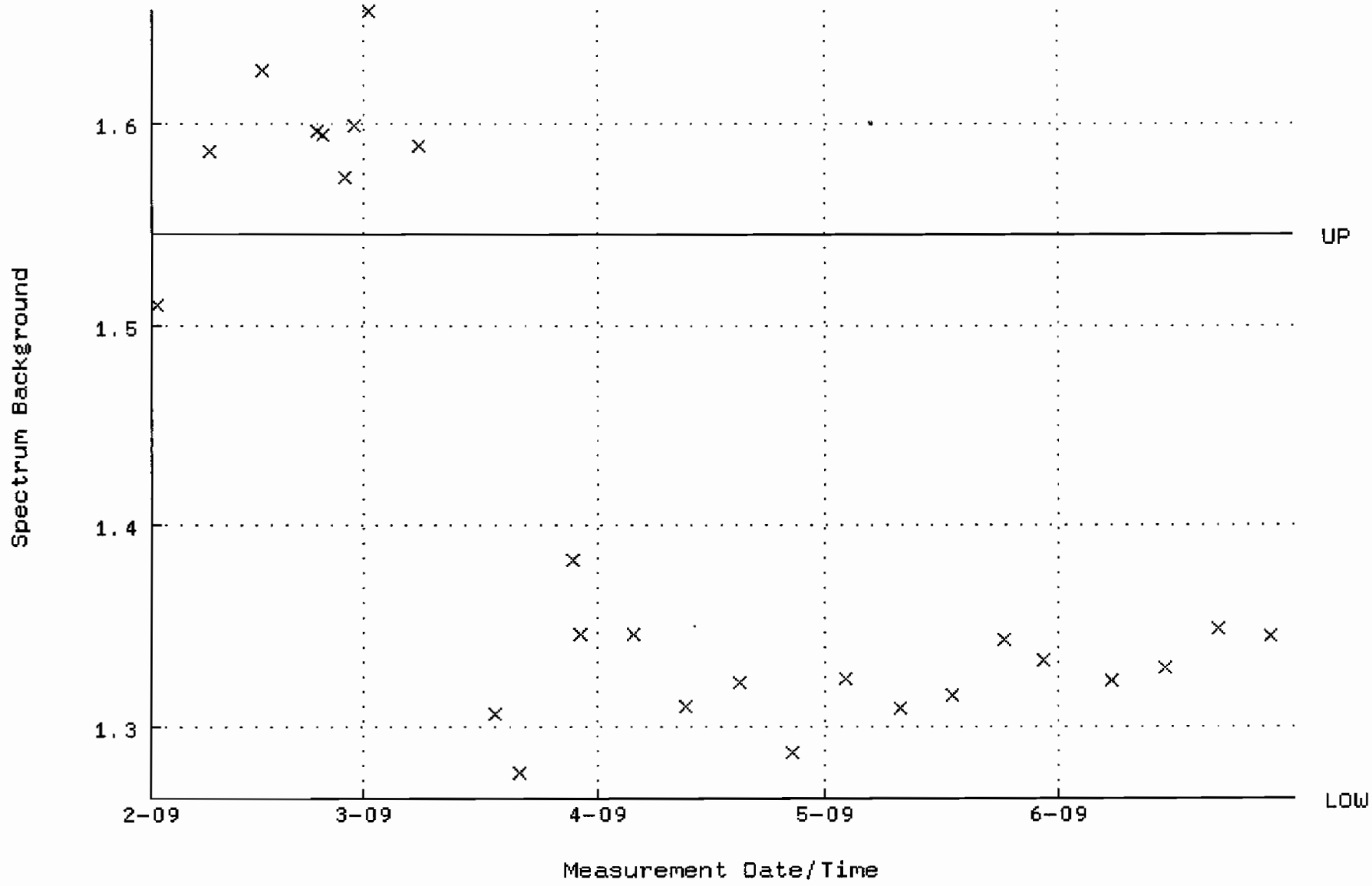

STANDARDS DATA

ANALYTICS
Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318

Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info	
Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David D[illegible] 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

Isotope	Result	
Mixed Gamma N1	440.7	pCi/L
Mixed Gamma N2	461.1	pCi/L
Mixed Gamma N3	467.4	pCi/L

Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**

Certificate Value =	444.3738739	pCi/L
Lower Limit =	428.4865624	pCi/L
Upper Limit =	484.3134376	pCi/L
Rule 1 (Pass/Fail)	**Pass**	
Two sigma =	27.91343762	
10 % of Mean =	45.64000000	
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David D[illegible] 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr 12/4/2008	**Isotope**	**Result** **pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L	**Rule 3 (Pass/Fail)**	
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

12/4/08
Amanda Fehr

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATE 4/14/2005 Scott C Neill 12/1/04

Angela D. Johnson 12/3/04

TRM

Invoice:

5 bottles of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	425 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01 -> 2

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No. [illegible]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location — Tech Area VI — Building N/A — Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

RMMA ☐ Yes ☒ No Ref. No.
Sample Disposal ☐ Return to Client ☒ Disposal by lab

Sample Tracking — SMO USE
Date Entered (mm/dd/yy)
Entered by

Special Instructions/QC Requirements
EDD ☐ Yes ☒ No
Raw data package ☐ Yes ☒ No
These "samples" are well characterized mud materials being sent to GEL on behalf of Hack Miller
Please list as separate report.

Abnormal Conditions on Receipt — LAB USE

Turnaround Time ☒ Normal ☐ Rush Required Report Date
QC Limits

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DEP	Weston / 7577 / 845-0867

1. Relinquished by	[signature] SMO	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original — To Accompany Samples, Laboratory Copy (White)
1st Copy — To Accompany Samples, Return to SMO (Blue)
2nd Copy — SMO Suspense Copy (Yellow)
3rd Copy — Field Copy (Pink)

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

RECEIVED 12/15/08

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

Analyst: D. Roy	**Serial #**	**Value**		**Uncertainty**	
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L
Mean Value (Counting) =	2.407	pCi/L		**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L			**Rule 3 (Pass/Fail)**
Target =	2.397	pCi/L			
Lower Limit =	2.259244371	pCi/L			
Upper Limit =	2.554088963	pCi/L			
Rule 1 Pass/Fail	**Pass**				
Two sigma =	0.147422296				
10 % of Mean =	0.240666667				
Rule 2 (Pass/Fail)	**Pass**				

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 880723**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232278001	SAMPLE	MXR1	GAM01	06-JUL-09 11:09	DONE	CAN	30-JAN-09 00:00
232278002	SAMPLE	MXR1	GAM04	06-JUL-09 11:09	DONE	CAN	05-MAY-09 00:00
232347001	SAMPLE	MXR1	GAM05	06-JUL-09 11:10	DONE	CAN	11-JUN-09 00:00
232347002	SAMPLE	MXR1	GAM08	06-JUL-09 11:10	DONE	CAN	30-JAN-09 00:00
232347003	SAMPLE	MXR1	GAM13	06-JUL-09 11:11	DONE	CAN	02-FEB-09 00:00
232347004	SAMPLE	MXR1	GAM14	06-JUL-09 11:12	DONE	CAN	06-MAR-09 00:00
232357001	SAMPLE	MXR1	GAM15	06-JUL-09 11:13	DONE	CAN	16-FEB-09 00:00
232357002	SAMPLE	MXR1	GAM17	06-JUL-09 11:13	DONE	CAN	27-JAN-09 00:00
232358001	SAMPLE	MXR1	GAM18	06-JUL-09 11:14	DONE	CAN	23-APR-09 00:00
232358002	SAMPLE	MXR1	GAM06	06-JUL-09 11:15	DONE	CAN	04-FEB-09 00:00
232358003	SAMPLE	MXR1	GAM21	06-JUL-09 11:15	DONE	CAN	25-JUL-08 00:00
232358004	SAMPLE	MXR1	GAM22	06-JUL-09 11:16	DONE	CAN	18-FEB-09 00:00
232358005	SAMPLE	MXR1	GAM23	06-JUL-09 11:17	DONE	CAN	02-JUN-09 00:00
232358006	SAMPLE	MXR1	GAM09	06-JUL-09 12:13	DONE	CAN	16-MAR-09 00:00
232358007	SAMPLE	MXR1	GAM10	06-JUL-09 12:13	DONE	CAN	16-MAR-09 00:00
232358008	SAMPLE	MXR1	GAM11	06-JUL-09 12:14	DONE	CAN	01-NOV-08 00:00
232358009	SAMPLE	MXR1	GAM12	06-JUL-09 12:15	DONE	CAN	10-FEB-09 00:00
232358010	SAMPLE	MXR1	GAM16	06-JUL-09 12:15	DONE	CAN	13-NOV-08 00:00
232358011	SAMPLE	MXR1	GAM17	06-JUL-09 13:25	DONE	CAN	27-JAN-09 00:00
1201870087	MB	MXR1	GAM18	06-JUL-09 13:25	DONE	CAN	23-APR-09 00:00
1201870088	DUP	MXR1	GAM21	06-JUL-09 13:26	DONE	CAN	25-JUL-08 00:00
1201870089	LCS	MXR1	GAM23	06-JUL-09 13:26	DONE	CAN	02-JUN-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID:881676**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	AXD2	1133	10-JUL-09 21:19	DONE		
232347002	SAMPLE	AXD2	1134	10-JUL-09 21:19	DONE		
232347003	SAMPLE	AXD2	1135	10-JUL-09 21:19	DONE		
232347004	SAMPLE	AXD2	1136	10-JUL-09 21:19	DUSE		
232357001	SAMPLE	AXD2	1137	10-JUL-09 21:19	DONE		
232357002	SAMPLE	AXD2	1138	10-JUL-09 21:19	DUSE		
232358001	SAMPLE	AXD2	1139	10-JUL-09 21:19	DONE		
232358002	SAMPLE	AXD2	1140	10-JUL-09 21:19	DONE		
232358003	SAMPLE	AXD2	1141	10-JUL-09 21:19	DONE		
232358004	SAMPLE	AXD2	1142	10-JUL-09 21:19	DONE		
232358005	SAMPLE	AXD2	1144	10-JUL-09 21:19	DONE		
232358006	SAMPLE	AXD2	1145	10-JUL-09 21:19	DONE		
232358007	SAMPLE	AXD2	1146	10-JUL-09 21:19	DONE		
232358008	SAMPLE	AXD2	1147	10-JUL-09 21:19	DONE		
232358009	SAMPLE	AXD2	1148	10-JUL-09 21:19	DONE		
232358010	SAMPLE	AXD2	1149	10-JUL-09 21:20	DONE		
232358011	SAMPLE	AXD2	1150	10-JUL-09 21:20	DONE		
1201872427	MB	AXD2	1151	10-JUL-09 21:20	DONE		
1201872428	DUP	AXD2	1152	10-JUL-09 21:20	DONE		
1201872429	LCS	AXD2	1153	10-JUL-09 21:20	DONE		
232347004	SAMPLE	AXD2	1165	14-JUL-09 09:06	DONE		
232357002	SAMPLE	AXD2	1166	14-JUL-09 09:06	DONE		

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2454

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

These Samples are on:

LANL Request Number:09-2454

Per Agreement Number:176450010

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10480	R	6/22/2009	
		2	CAMO-09-10480	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2454

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2454

REQUEST NUMBER: 09-2454

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10480	1	GLASS	8290	Ice	R
CAMO-09-10480	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
Jerry Lewis		6/24/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 886 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-049(b)-00; Mortandad Cyn.

SAMPLE ID: CAMO-09-10479

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	QBT4	OK
TIME COLLECTED (HH:MM)		1000	SUB-MEDIA:	UA	
PRS ID:	03-049(b)-00	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605528	MO-605028	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	J.B 6/22/09 8.0 BH	FIELD PREP:	NA	
TOP DEPTH:	0	8.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	9.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: (YES) / NO / NA BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
	15 day					
1	~~Regular~~ NSG 6-23-09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082+TPH-DRO	500 ML GLASS	Ice	Y	
2		~~8290~~	~~125 ML GLASS~~	Ice J.B 6/22/09	N	
	15 day					
1	~~Regular~~ NSG 6-23-09	GAMMA SPEC+ISOU	500 ML POLY	None	Y	
1		METALS-GEL	125 ML POLY	Ice	J.B 6/22/09	
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice	J	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown / Tan, indurated, dry tuff.

SAMPLE COMMENTS: Tuff Interface @ 3.0' bgs. Sample collected 5.0' below interface.

LOCATION DESC: 03-049(b)-00-05 (SW) corner of bldg. 35

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 0$ dpm

$\beta/\gamma \leq 450$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) Sherri Sherwood	4:20
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 886 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-049(b)-00; Mortandad Cyn.

SAMPLE ID: CAMO-09-10480

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/22/2009	MEDIA:	OBT4	OK
TIME COLLECTED (HH:MM)		1038	SUB-MEDIA:	UA	
PRS ID:	03-049(b)-00	OK	SAMPLE TECH CODE:	CBS	
LOCATION ID:	MO-605528	MO-605034	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	BH	FIELD PREP:	NA	
TOP DEPTH:	0	7.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	8.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA 8/22/09 BOREHOLE DECLINATION: -90° BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 dry ~~Regular~~ 8/23/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082+TPH-DRO	500 ML GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GAMMA SPEC+ISOU	500 ML POLY	None		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Grey, indurated, dry tuff w/ brown lithic fragments.

SAMPLE COMMENTS: Sample collected 5.0' below Tuff interface.

LOCATION DESC: 03-049(b)-00-10 (W) of bldg. 35.

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 26$ dpm

$\beta/\gamma \leq 42$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Nickolas Gallegos

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/22/09	(Printed Name) Sherri Sherwood	6/22/09
(Signature) [signature]	1605	(Signature) Sherri Sherwood	1620
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10479	ARS Sample ID:	ARS2-09-00073-016
Sample Collection Date:	06/22/09 10:00	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:02

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	RPD	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	43.34	74.68	133.72	74.86	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	61.08	18.64	20.15	20.08		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.07	0.14	0.12	0.14	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	31.56	10.01	1.83	10.06		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	11.98	0.12	11.98	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.19	0.16	0.09	0.16	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.00	-0.03	0.08	-0.03	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	63.35	0.14	63.35	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.65	0.60	0.19	0.60		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	1.06	0.82	0.22	0.83		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	-0.07	67.36	0.19	67.36	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	3.49	2.84	1.22	2.95		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.29	0.19	0.05	0.19		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 0.94

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # EB7558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00073	Request or PO Number:	
Client Sample ID:	CAMO-09-10480	ARS Sample ID:	ARS2-09-00073-017
Sample Collection Date:	06/22/09 10:38	Date Received:	06/23/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/23/09 16:03

Analyte Description	Analysis Results	Analyses Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	71.98	87.08	133.66	87.52	U	pCi/g	EPA 900.0M	6/23/2009	LR	N/A
GROSS BETA	56.91	18.19	19.98	19.48		pCi/g	EPA 900.0M	6/23/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
K-40	0.25	8.21	4.48	8.21	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CO-60	0.00	12.16	0.12	12.16	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-134	0.19	0.14	0.10	0.14	SI	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
CS-137	0.04	0.09	0.08	0.09	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
EU-152	0.00	12.64	0.14	12.64	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
PB-212	1.46	0.50	0.10	0.50		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
RA-226	1.54	0.67	0.32	0.67		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-235	1.22	1.03	0.34	1.03		pCi/g	EPA 901.1M	6/23/2009	LR	N/A
U-238	0.29	1.69	1.12	1.69	U	pCi/g	EPA 901.1M	6/23/2009	LR	N/A
AM-241	0.17	0.22	0.09	0.22		pCi/g	EPA 901.1M	6/23/2009	LR	N/A

NOTES: % Moisture: 1.19

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5123-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2454 VALIDATION DATE: 07/24/2009 LAB CODE: ALTC

CONTRACT LABORATORY NAME: Vista Analytical Laboratory

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☒ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the sample was not analyzed within 30 days of the ICAL. No sample data were qualified, based on professional judgment.
2. The ICV %D was >20% with positive bias for 1,2,3,4,7,8-HxCDD. The associated sample result was an ND and, thus, was not qualified.
3. It should be noted that ICV standards are not available for 13C-OCDF and 13C-1,2,3,4-TCDF which are used in the quantitation of OCDF; 13C-2,3,7,8-TCDF; 13C-1,2,3,7,8-PeCDF and 13C-2,3,4,7,8-PeCDF. Thus, ICV %Ds could not be evaluated for these compounds. No sample data were qualified as a result.
4. It should be noted that laboratory ion abundance limits were used for evaluation of the PeCDD compounds since the laboratory uses an alternate ion for these masses due to interferences.
5. It should be noted that MS/MSD analyses were not performed with the sample. No sample data were qualified as a

DATA VALIDATION COVER SHEET

5123-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

result.

Reviewed by: CLL Level: 1 Date: 7/27/09

VALIDATOR'S SIGNATURE: Mary A. Dennison DATE: 07/24/2009

Form 5123-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time and qualitative criteria for target compound identification were not met.	R, DF0	R, DF0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF0b	R, DF0b
☐	☒	☐	3. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF1d	R, DF1d
☐	☒	☐	4. The sample result is ≤5 times the concentration of the related analyte in the method blank.	N/A	U, DF4
☐	☒	☐	5. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, DF4a
☐	☐	☒	6. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	N/A	U, DF4d
☐	☒	☐	7. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF4e	R, DF4e
☐	☒	☐	8. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, DF7	J, DF7
☐	☒	☐	9. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria.	UJ, R, DF7a	J, DF7a
☐	☒	☐	10. The affected analytes were analyzed with an out of range ion abundance in the initial calibration and/or CCV.	R, DF7b	R, DF7b
☒	☐	☐	11. The ICV and/or CCV were recovered outside the method specific limits.	UJ, R, DF7c	J, R, DF7c
☐	☒	☐	12. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DF7d	J, DF7d

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DF7f	R, DF7f
☐	☒	☐	14. The affected analyte is considered rejected because the ion abundances did not meet specifications.	N/A	R, DF8
☐	☒	☐	15. The ion abundance documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF8a	R, DF8a
☐	☒	☐	16. If GC column performance was not evaluated at the required frequency or if method criteria were not met, qualify all associated detects as J and all associated non-detects as UJ.	UJ, DF8b	J, DF8b
☐	☐	☒	17. If 2, 3, 7, 8-TCDF was detected in a sample and the result was not confirmed on a second column with successful analysis of the GC column performance mix, qualify all associated detects as U.	N/A	U, DF8c
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, DF9	J-, DF9
☐	☒	☐	19. The holding time was >2 times the applicable holding time requirement.	R, DF9a	J-, DF9a
☐	☒	☐	20. The LCS percent recovery was <10%.	R, DF12	J-, DF12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, DF12a	J-, DF12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DF12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12c	R, DF12c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	24. The MS/MSD percent recovery was <10%.	R, DF12d	R, DF12d
☐	☐	☒	25. The MS/MSD percent recovery was >10% but <70%.	UJ, DF12e	J, DF12e
☐	☐	☒	26. The MS/MSD percent recovery was >70%	N/A	J+, DF12f
☐	☐	☒	27. The MS/MSD relative percent difference was >30%.	UJ, DF12g	J, DF12g
☐	☒	☐	28. The fortification sample percent recovery was <10%.	R, DF12h	J-, DF12h
☐	☒	☐	29. The fortification sample percent recovery was <40% but >10%	UJ, DF12i	J-, DF12i
☐	☒	☐	30. The fortification sample percent recovery was >135%.	N/A	J+, DF12j
☐	☒	☐	31. The fortification sample documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12k	R, DF12k
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference.	R, DF15	UJ, DF15
☐	☒	☐	33. Sample clean-up was not performed. If run log notations, spectral data and/or internal standard or labeled compound recoveries indicate interferences and extract cleanup was not performed, qualify all associated detects as J and all non-detects as UJ.	RJ, DF15a	J, DF15a
☐	☒	☐	34. The instrument performance sample did not pass method acceptance criteria.	R, DF16	R, DF16
☐	☒	☐	35. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, DF16c	R, DF16c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, DF19	J, R, DR19
☐	☒	☐	37. Duplicate, dilution, or reanalysis.	UJ, DF88	J, DF88

Sample ID: CAMO-09-10480 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31832-001	Date Received:	25-Jun-09
Project:	09-2454	Sample Size:	11.2 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	22-Jun-09	%Solids:	89.7	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1038						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0566		
1,2,3,7,8-PeCDD	ND	0.0580		
1,2,3,4,7,8-HxCDD	ND	0.121		
1,2,3,6,7,8-HxCDD	ND	0.121		
1,2,3,7,8,9-HxCDD	ND	0.116		
1,2,3,4,6,7,8-HpCDD	ND	0.154		
OCDD	0.444			J
2,3,7,8-TCDF	ND	0.0401		
1,2,3,7,8-PeCDF	ND	0.0414		
2,3,4,7,8-PeCDF	ND	0.0431		
1,2,3,4,7,8-HxCDF	ND	0.0460		
1,2,3,6,7,8-HxCDF	ND	0.0529		
2,3,4,6,7,8-HxCDF	ND	0.0645		
1,2,3,7,8,9-HxCDF	ND	0.0766		
1,2,3,4,6,7,8-HpCDF	ND	0.0801		
1,2,3,4,7,8,9-HpCDF	ND	0.0893		
OCDF	ND	0.0896		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	105	40 - 135	
	13C-OCDD	113	40 - 135	
	13C-2,3,7,8-TCDF	96.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	98.3	40 - 135	
	13C-2,3,4,7,8-PeCDF	94.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	92.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	80.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	80.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	96.5	40 - 135	
	13C-OCDF	100	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.1	40 - 135	

Totals		
Total TCDD	ND	0.0566
Total PeCDD	ND	0.0580
Total HxCDD	ND	0.119
Total HpCDD	ND	0.154
Total TCDF	ND	0.0401
Total PeCDF	ND	0.0422
Total HxCDF	ND	0.0600
Total HpCDF	ND	0.0847

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.000444

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:47

MAD
07/24/09

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2454

31832

2.7°C

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2454
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009
TURNAROUND/REPORT DUE: 7/9/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10480	R	6/22/2009	
		2	CAMO-09-10480	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2454

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2454

REQUEST NUMBER: 09-2454

31832

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10480	1	GLASS	8290	Ice	R
CAMO-09-10480	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
Jerylen Y		6/24/09	1400	B. Benedict	Bettina L Benedict	6/25/09	1030
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

Vista
Analytical Laboratory

July 01, 2009

Vista Project I.D.: 31832

Mr. Keith Greene
Los Alamos National Laboratory
ER Sample Management Office
TA-3, Building 271, DP O1-U
Los Alamos, NM 87545

Dear Mr. Greene,

Enclosed are the results for the one soil sample received at Vista Analytical Laboratory on June 25, 2009 under your Project Name "09-2454". This sample was extracted and analyzed using EPA Method 8290 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier

Martha M. Maier
Laboratory Director

ACCREDITED IN ACCORDANCE WITH nelac

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Vista

Section I: Sample Inventory Report

Date Received: **6/25/2009**

Vista Lab. ID	Client Sample ID
31832-001	CAMO-09-10480

SECTION II

Vista

Method Blank | **EPA Method 8290**

Matrix: Soil | QC Batch No.: 2207 | Lab Sample: 0-MB001

Sample Size: 10.0 g | Date Extracted: 27-Jun-09 | Date Analyzed DB-5: 29-Jun-09 | Date Analyzed DB-225: NA

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0620		
1,2,3,7,8-PeCDD	ND	0.0656		
1,2,3,4,7,8-HxCDD	ND	0.104		
1,2,3,6,7,8-HxCDD	ND	0.107		
1,2,3,7,8,9-HxCDD	ND	0.102		
1,2,3,4,6,7,8-HpCDD	ND	0.110		
OCDD	ND		0.581	
2,3,7,8-TCDF	ND	0.0489		
1,2,3,7,8-PeCDF	ND	0.0551		
2,3,4,7,8-PeCDF	ND	0.0576		
1,2,3,4,7,8-HxCDF	ND	0.0437		
1,2,3,6,7,8-HxCDF	ND	0.0480		
2,3,4,6,7,8-HxCDF	ND	0.0560		
1,2,3,7,8,9-HxCDF	ND	0.0699		
1,2,3,4,6,7,8-HpCDF	ND	0.0793		
1,2,3,4,7,8,9-HpCDF	ND	0.0857		
OCDF	ND	0.114		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	97.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	99.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	94.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	94.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	97.7	40 - 135	
	13C-OCDF	97.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.3	40 - 135	

Totals		
Total TCDD	ND	0.0620
Total PeCDD	ND	0.0656
Total HxCDD	ND	0.104
Total HpCDD	ND	0.110
Total TCDF	ND	0.0489
Total PeCDF	ND	0.0564
Total HxCDF	ND	0.0544
Total HpCDF	ND	0.0825

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst JMH

Approved By. William J. Luksemburg 30-Jun-2009 13:47

Vista

OPR Results — **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2207	Lab Sample:	0-OPR001
Sample Size:	10.0 g	Date Extracted:	27-Jun-09	Date Analyzed DB-5: 29-Jun-09	Date Analyzed DB-225: NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits
2,3,7,8-TCDD	10.0	9.72	7 - 13
1,2,3,7,8-PeCDD	50.0	47.6	35 - 65
1,2,3,4,7,8-HxCDD	50.0	47.1	35 - 65
1,2,3,6,7,8-HxCDD	50.0	47.5	35 - 65
1,2,3,7,8,9-HxCDD	50.0	50.3	35 - 65
1,2,3,4,6,7,8-HpCDD	50.0	45.9	35 - 65
OCDD	100	91.7	70 - 130
2,3,7,8-TCDF	10.0	8.93	7 - 13
1,2,3,7,8-PeCDF	50.0	44.8	35 - 65
2,3,4,7,8-PeCDF	50.0	42.9	35 - 65
1,2,3,4,7,8-HxCDF	50.0	45.9	35 - 65
1,2,3,6,7,8-HxCDF	50.0	45.1	35 - 65
2,3,4,6,7,8-HxCDF	50.0	46.1	35 - 65
1,2,3,7,8,9-HxCDF	50.0	46.2	35 - 65
1,2,3,4,6,7,8-HpCDF	50.0	46.6	35 - 65
1,2,3,4,7,8,9-HpCDF	50.0	48.2	35 - 65
OCDF	100	91.2	70 - 130

	Labeled Standard	%R	LCL-UCL	Qualifier
IS	13C-2,3,7,8-TCDD	94.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	89.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	98.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	106	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	85.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.2	40 - 135	
	13C-OCDF	99.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	90.4	40 - 135	

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:47

Vista

Sample ID: **CAMO-09-10480** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31832-001	Date Received:	25-Jun-09
Project:	09-2454	Sample Size:	11.2 g	QC Batch No.:	2207	Date Extracted:	27-Jun-09
Date Collected:	22-Jun-09	%Solids:	89.7	Date Analyzed DB-5:	29-Jun-09	Date Analyzed DB-225:	NA
Time Collected:	1038						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0566		
1,2,3,7,8-PeCDD	ND	0.0580		
1,2,3,4,7,8-HxCDD	ND	0.121		
1,2,3,6,7,8-HxCDD	ND	0.121		
1,2,3,7,8,9-HxCDD	ND	0.116		
1,2,3,4,6,7,8-HpCDD	ND	0.154		
OCDD	0.444			J
2,3,7,8-TCDF	ND	0.0401		
1,2,3,7,8-PeCDF	ND	0.0414		
2,3,4,7,8-PeCDF	ND	0.0431		
1,2,3,4,7,8-HxCDF	ND	0.0460		
1,2,3,6,7,8-HxCDF	ND	0.0529		
2,3,4,6,7,8-HxCDF	ND	0.0645		
1,2,3,7,8,9-HxCDF	ND	0.0766		
1,2,3,4,6,7,8-HpCDF	ND	0.0801		
1,2,3,4,7,8,9-HpCDF	ND	0.0893		
OCDF	ND	0.0896		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	105	40 - 135	
	13C-OCDD	113	40 - 135	
	13C-2,3,7,8-TCDF	96.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	98.3	40 - 135	
	13C-2,3,4,7,8-PeCDF	94.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	92.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	80.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	80.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	96.5	40 - 135	
	13C-OCDF	100	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.1	40 - 135	

Totals		
Total TCDD	ND	0.0566
Total PeCDD	ND	0.0580
Total HxCDD	ND	0.119
Total HpCDD	ND	0.154
Total TCDF	ND	0.0401
Total PeCDF	ND	0.0422
Total HxCDF	ND	0.0600
Total HpCDF	ND	0.0847

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.000444**

a Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 30-Jun-2009 13:47

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The amount detected is above the High Calibration Limit.**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
H	**The signal-to-noise ratio is greater than 10:1.**
I	**Chemical Interference**
J	**The amount detected is below the Low Calibration Limit.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

Wednesday, June 24, 2009

REQUEST NUMBER: 09-2454

31832

2.7°C

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2454
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/24/2009
TURNAROUND/REPORT DUE: 7/9/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10480	R	6/22/2009	
		2	CAMO-09-10480	R	6/22/2009	

Final Page of REQUEST NUMBER 09-2454

Wednesday, June 24, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2454

REQUEST NUMBER: 09-2454

31832

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/9/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10480	1	GLASS	8290	Ice	R
CAMO-09-10480	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
Jeremy W S		6/24/09	1400	B. Benedict	Bettina L Benedict	6/25/09	1020
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31832 TAT 15

Samples Arrival:	Date/Time 6/25/09 0935	Initials: LBB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 6/25/09 1104	Initials: LBB	Location: WR-2 Shelf/Rack: G 3

Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C 2.7°C	Time: 0936	Thermometer ID: IR-1				

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill	Trk # 7209 7847 5480	✓		
Sample Container Intact?		✓		
Sample Custody Seals Intact?		✓		
Chain of Custody / Sample Documentation Present?		✓		
COC Anomaly/Sample Acceptance Form completed?			✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				✓

$Na_2S_2O_3$ Preservation Documented?		COC	Sample Container	None	
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

CAMO-09-10480 6/22/09 1038 A & B jar

Sample Login 3/2007 rmh

EXTRACTION INFORMATION

PROCESS SHEET

Project No.-AR: 31832-1 of 1

RUSH

Prep Due: 7/3/2009 **Project Due:** 7/9/2009

Hold Due: 7/22/2009 **TAT:** 14

Client: Los Alamos National Laboratorv(LOANM01F

Client Manager: Martha M. Maier

Method: EPA Method 8290 | PCDD/F (Tetra - Octa)

Split Type: 2207

Matrix: Soil

LabID	Recon	Client-ID	Description	Date Received	SLoc	Shelf
001	☑	CAMO-09-10480		6/25/2009	WR-2	G-3

% SOLIDS EJ 6/25/09

Instructions:

Report Options

Report Level:

EDD Type:

Report Group: Dioxins NoMDL with %Solid

TEQ Type: EPA(Default) : Min

Samples Reconciled By: EJ 6/26/09

Vial Box ID: MAXI

Date Requested 7/2/2009

Percent Solids

Vista Analytical Laboratory

Project: 31832 - 1 of 1

Sample ID	Chemist/Date		Chemist/Date	Comments
	Boat Wt.	Sample + Boat Wt.	Residue + Boat Wt.	
001	1.33	3.56	3.33	

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

%Solids 3/2007 rmh

Project: 31832

Extraction Set: 2207

Chemist: F. Bishop 6/27/09

Method(s): EPA Method 8290 | PCDD/F (Tetra - Octa)

C	ALTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/ WIT DATE	CRS CHEM/WIT DATE	AP CHEM/Date	ABSG CHEM/Date	AA CHEM/Date	Florisil CHEM/Date	RS CHEM/WIT DATE
☐	0_2207_MB001	10.00	(10.00)	FEB OB 6/27/09	TEH OB 6/28/09	NA	TEH 6/28/09	TEH 6/28/09	TEH 6/28/09	TEH OB 6/28/09
☐	0_2207_OPR001	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	31832_2207_001	11.15	11.15	↓	↓	↓	↓	↓	↓	↓

IS Name	NS Name	CRS Name	RS Name	Cycle Time	APP.: SEFUN SOX SDS	Check Out:
PCDD/F 0809100A, 10ml (V4)	PCDD/F 0809168, 10ml (V4)	PCDD/F 0809100C (V6)	PCDD/F 0809100D (V4)	6/27 Start: 1430	SOLV: TOL	Chemist: FEB 6/27/09
PCB	PCB	PCB	PCB	Stop: 0800 6/28	Other: N/A	Check-In: Chemist: ↓ / /
PAH	PAH	PAH	PAH		Final Volume(s): 20ml CH	

Comments:

hrmsgenprepL.rpt

SAMPLE DATA

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 12:26:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:26:55 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1	2,3,7,8-TCDD			NO	1.08	10.000					0.0620	
2	1,2,3,7,8-PeCDD			NO	1.03	10.000					0.0656	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.104	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.107	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.102	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.110	
7	OCDD	1.71e3	0.73	YES	1.18	10.000	41.69	1.001	~~0.64875~~	NO	0.134	0.58063
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0489	
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.0551	
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0576	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.0437	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.0480	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.0560	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.0699	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.0793	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.0857	
17	OCDF			NO	1.10	10.000					0.114	
18	13C-2,3,7,8-TCDD	1.00e6	0.79	NO	1.01	10.000	26.09	1.023	190.31	95.2	0.347	
19	13C-1,2,3,7,8-PeCDD	7.78e5	0.63	NO	0.827	10.000	30.73	1.205	181.09	90.5	0.293	
20	13C-1,2,3,4,7,8-HxCDD	7.00e5	1.26	NO	0.916	10.000	34.17	0.988	184.79	92.4	0.442	
21	13C-1,2,3,6,7,8-HxCDD	6.42e5	1.24	NO	0.921	10.000	34.28	0.991	168.53	84.3	0.440	
22	13C-1,2,3,4,6,7,8-HpCDD	6.02e5	1.06	NO	0.708	10.000	38.21	1.105	205.61	103	0.764	
23	13C-OCDD	8.95e5	0.89	NO	0.503	10.000	41.66	1.204	430.56	108	0.514	
24	13C-2,3,7,8-TCDF	1.39e6	0.79	NO	0.977	10.000	25.33	0.993	195.62	97.8	0.209	
25	13C-1,2,3,7,8-PeCDF	1.30e6	1.58	NO	0.896	10.000	29.51	1.157	199.16	99.6	0.361	
26	13C-2,3,4,7,8-PeCDF	1.24e6	1.57	NO	0.900	10.000	30.46	1.194	188.73	94.4	0.359	
27	13C-1,2,3,4,7,8-HxCDF	9.06e5	0.52	NO	1.17	10.000	33.25	0.961	187.46	93.7	0.521	
28	13C-1,2,3,6,7,8-HxCDF	1.04e6	0.52	NO	1.52	10.000	33.37	0.965	165.20	82.6	0.401	
29	13C-2,3,4,6,7,8-HxCDF	8.51e5	0.53	NO	1.25	10.000	34.00	0.983	164.84	82.4	0.487	
30	13C-1,2,3,7,8,9-HxCDF	8.19e5	0.52	NO	1.05	10.000	35.00	1.012	188.05	94.0	0.578	

6/30/09

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

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Printed: Tuesday, June 30, 2009 12:26:55 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

31	13C-1,2,3,4,6,7,8-HpCDF	6.24e5	0.44	NO	0.868	10.000	36.87	1.066	173.82	86.9	0.617
32	13C-1,2,3,4,7,8,9-HpCDF	5.87e5	0.45	NO	0.727	10.000	38.78	1.121	195.36	97.7	0.737
33	13C-OCDF	1.22e6	0.91	NO	0.760	10.000	41.90	1.211	389.70	97.4	0.310
34	37Cl-2,3,7,8-TCDD	2.48e5			0.668	10.000	26.12	1.024	71.447	89.3	0.0919
35	13C-1,2,3,4-TCDD	1.04e6	0.80	NO	1.00	10.000	25.51	0.000	200.00	100	0.353
36	13C-1,2,3,4-TCDF	1.46e6	0.78	NO	1.00	10.000	24.10	0.000	200.00	100	0.204
37	13C-1,2,3,7,8,9-HxCDD	8.27e5	1.24	NO	1.00	10.000	34.59	0.000	200.00	100	0.405
38	Total Tetra-Dioxins				1.08	10.000					0.0289
39	Total Penta-Dioxins				1.03	10.000					0.0223
40	Total Hexa-Dioxins				1.13	10.000					0.0402
41	Total Hepta-Dioxins				1.06	10.000					0.0600
42	Total Tetra-Furans				1.09	10.000					0.0189
43	1st Func. Penta-Furans				1.16	10.000					0.0152
44	Total Penta-Furans				1.16	10.000					0.0218
45	Total Hexa-Furans				1.28	10.000					0.0283
46	Total Hepta-Furans				1.69	10.000					0.0395

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

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Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

2,3,7,8-TCDD

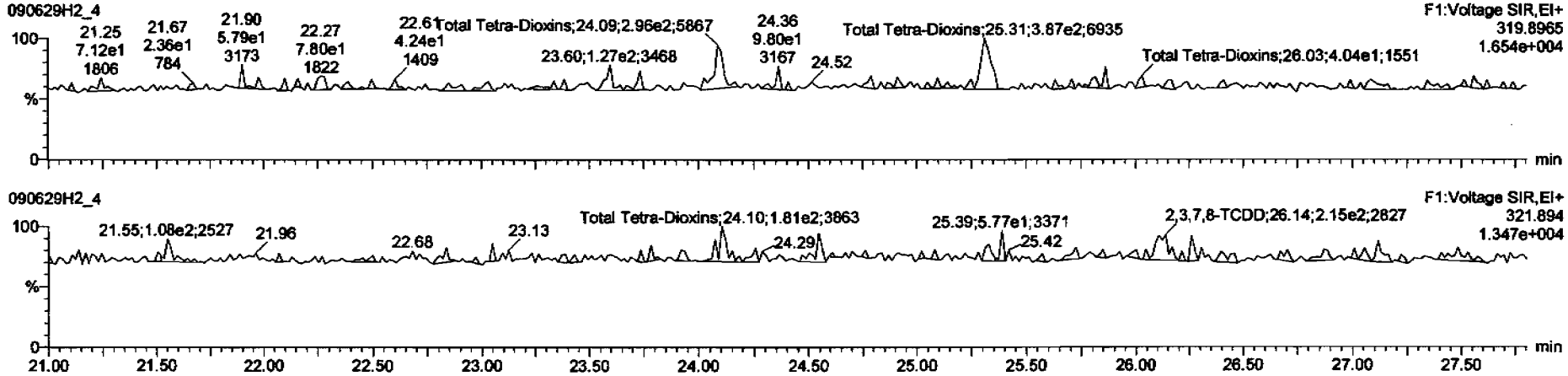

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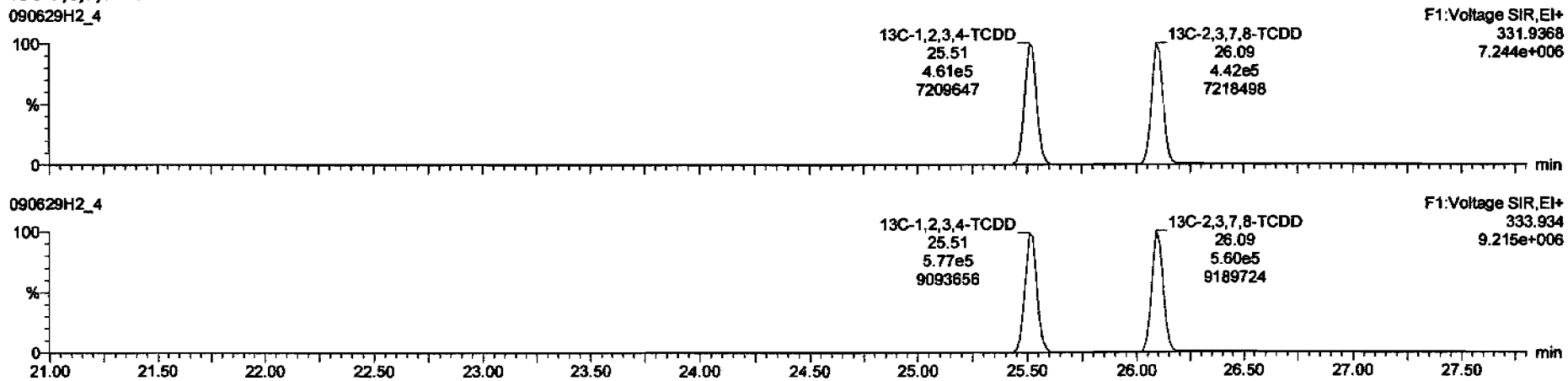

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Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

37Cl-2,3,7,8-TCDD

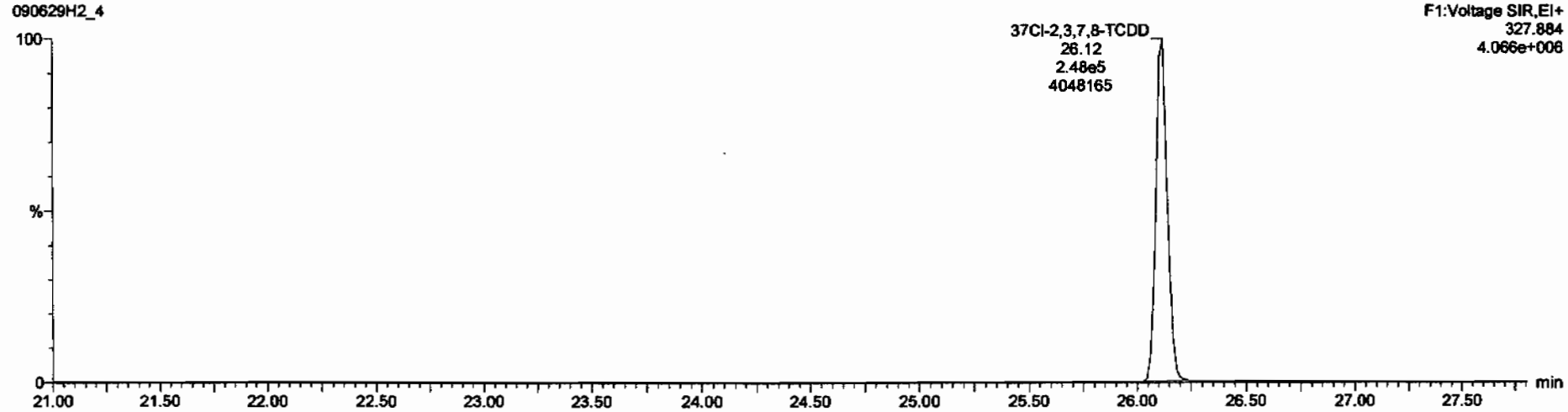

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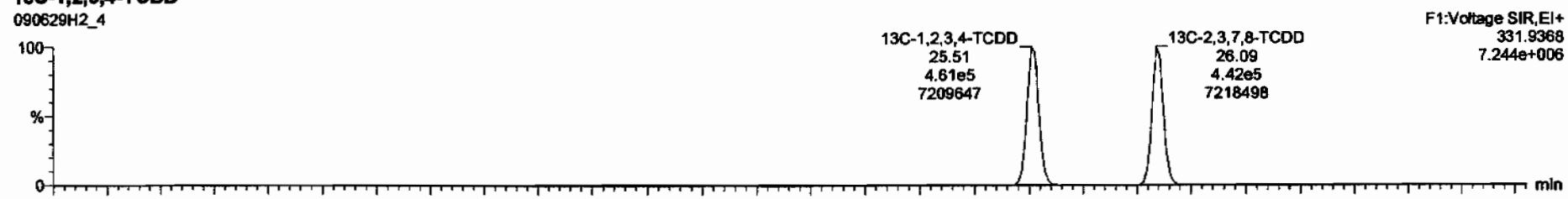

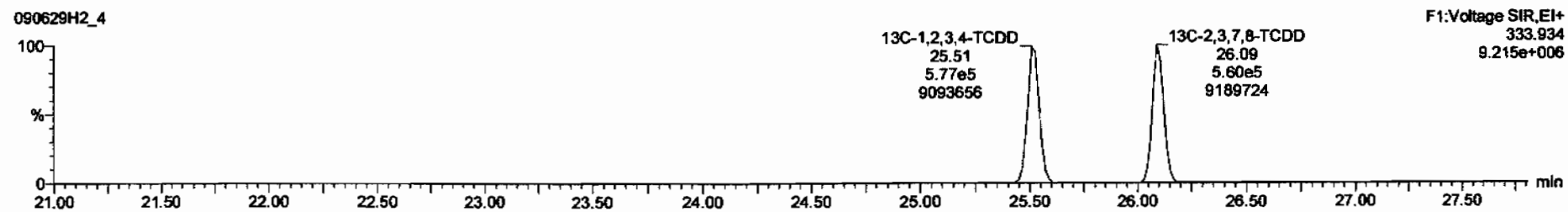

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1,2,3,7,8-PeCDD

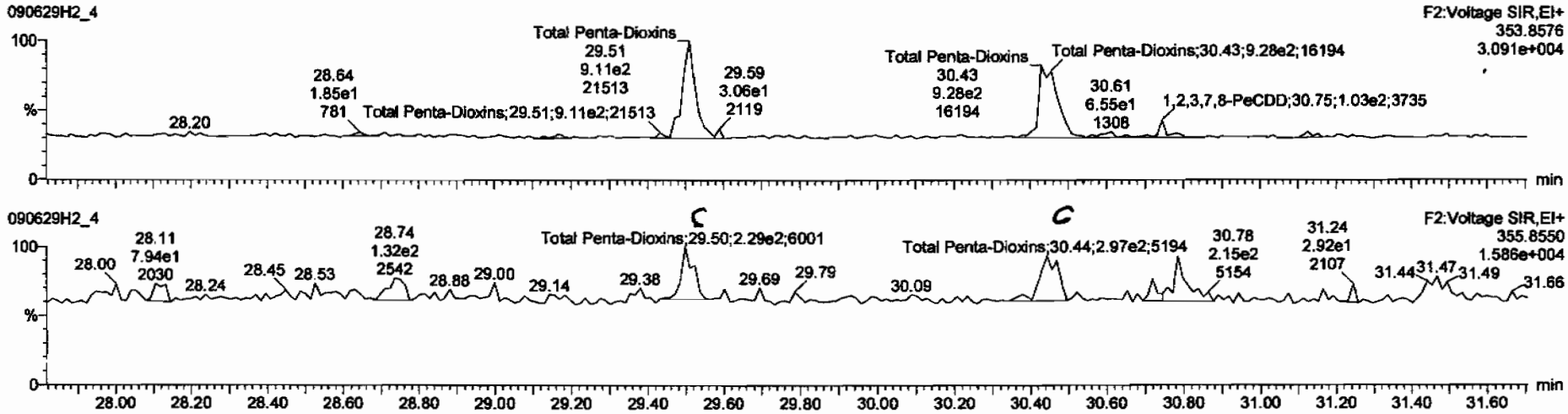

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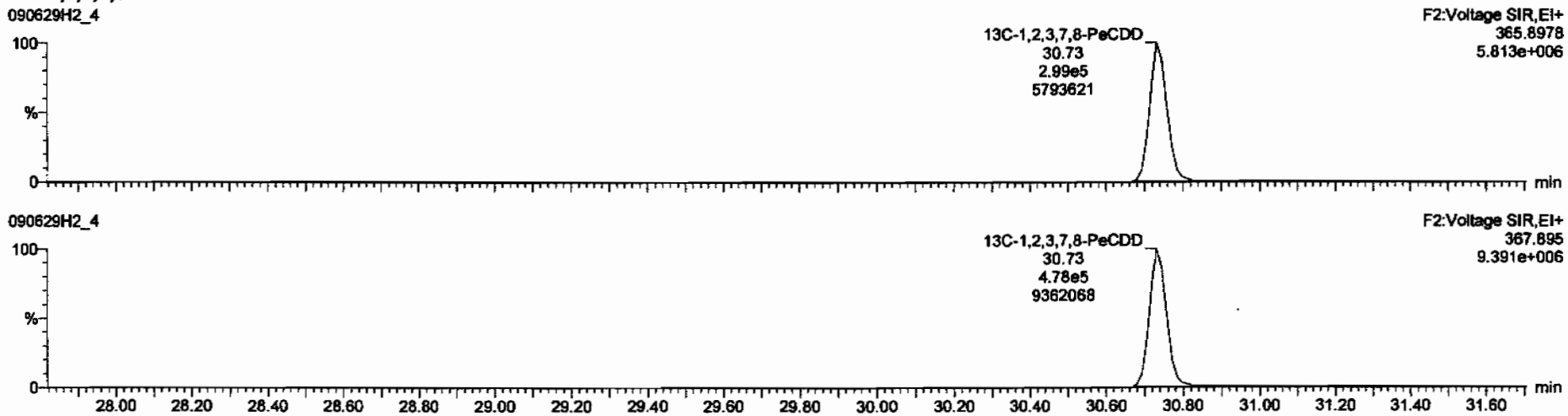

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1,2,3,4,7,8-HxCDD

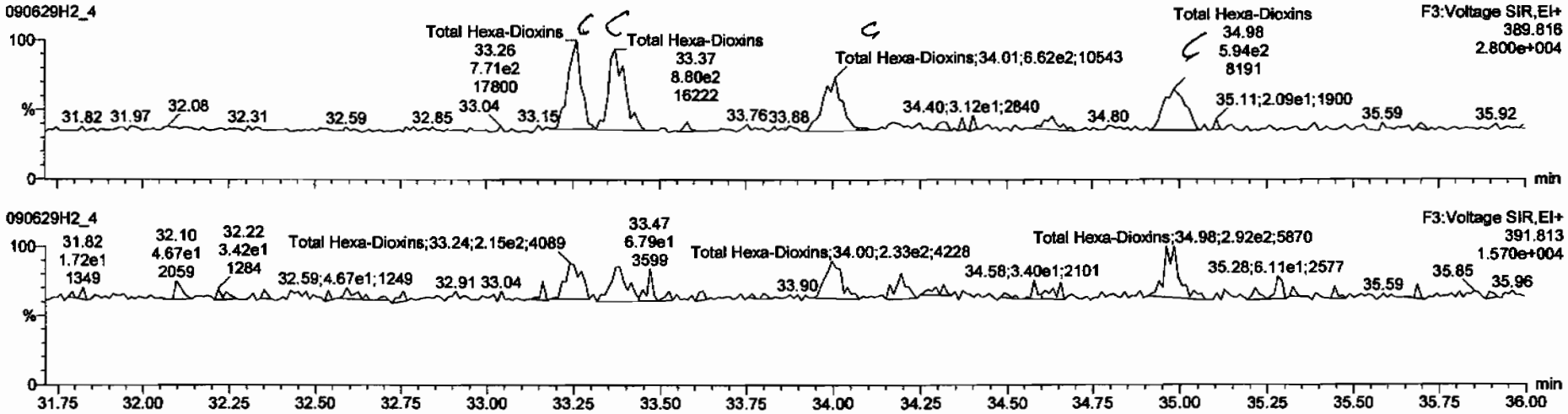

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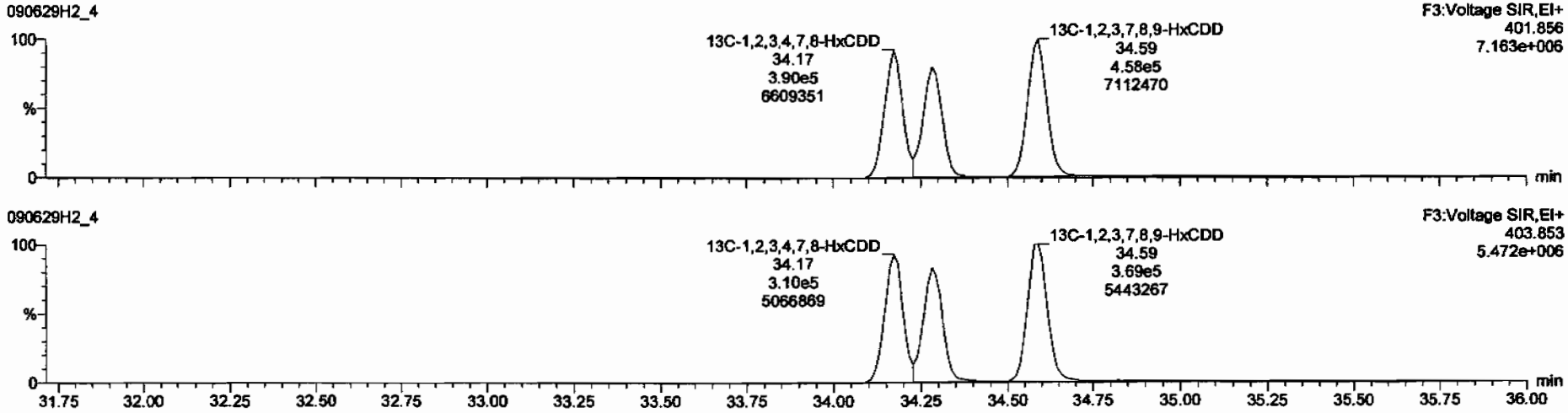

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,6,7,8-HpCDD

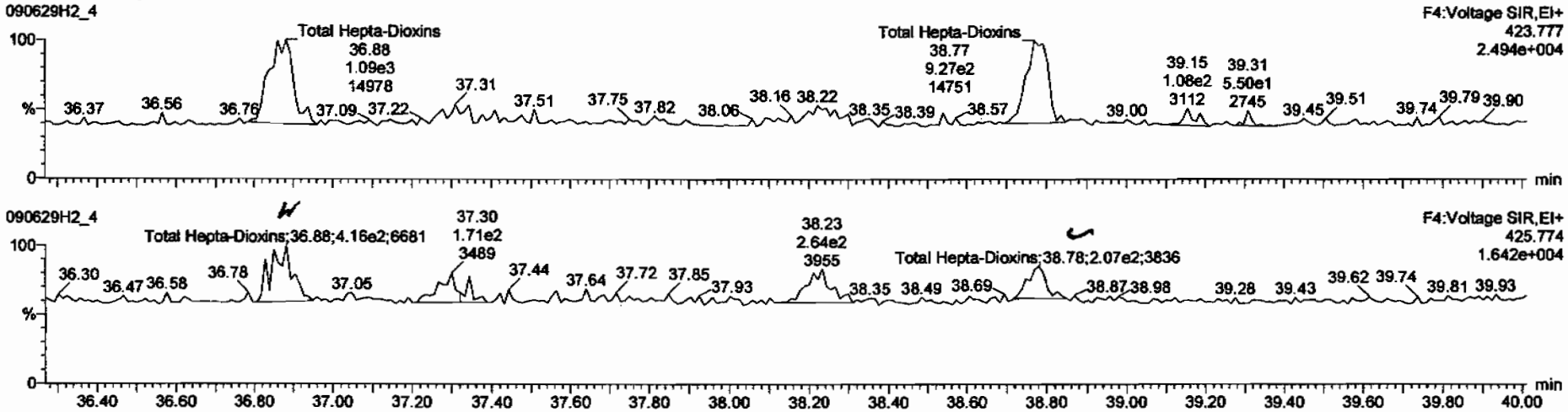

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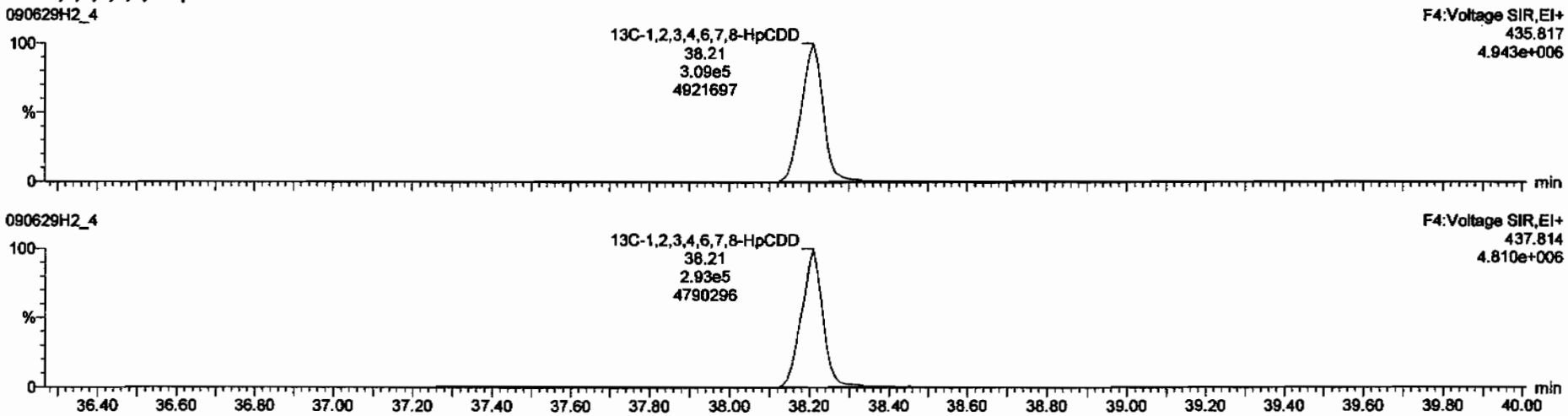

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

OCDD

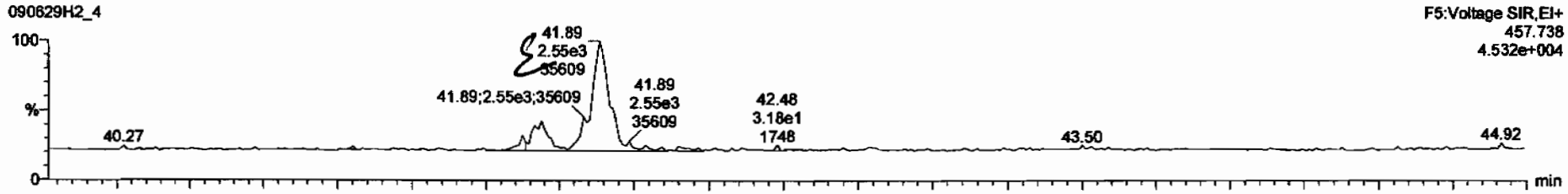

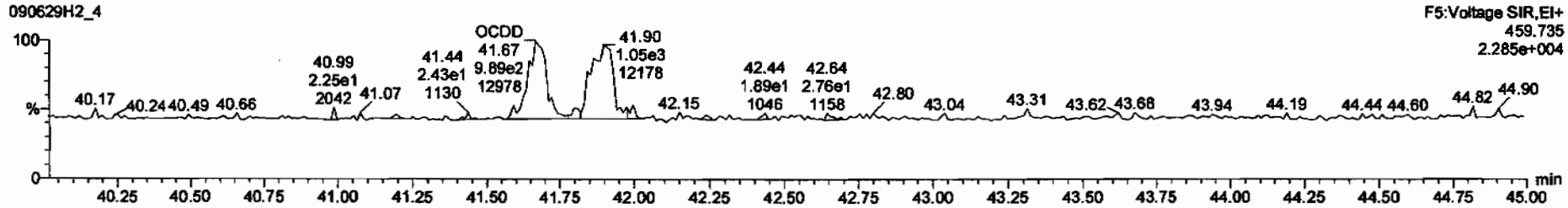

13C-OCDD

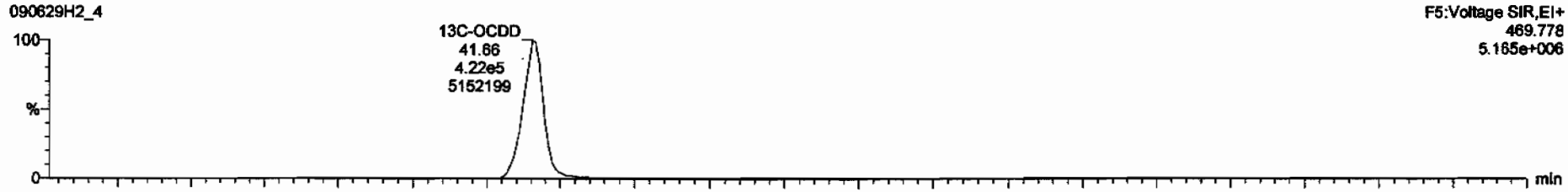

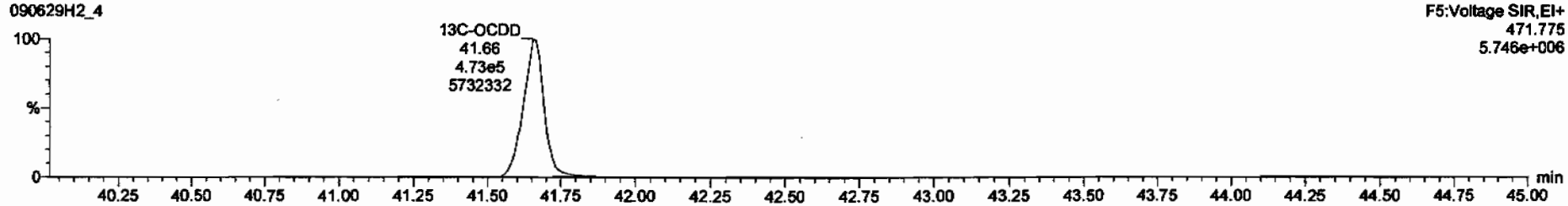

TargetLynx - 09062912-4.qld * - [Chromatogram]

090629H2_4 - 0_2207_MB001 - 0_2207_MB001

4	1,2,3,6,7,8-HxCDD	9.12e1	1.14	NO	1.13	10.000	34.31	1.001	0.0253		0.107	0.0253
5	1,2,3,7,8,9-HxCDD	1.85e2	2.28	YES	1.10	10.000	34.63	1.010	0.0501		0.102	0.0342
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.110	
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0489	

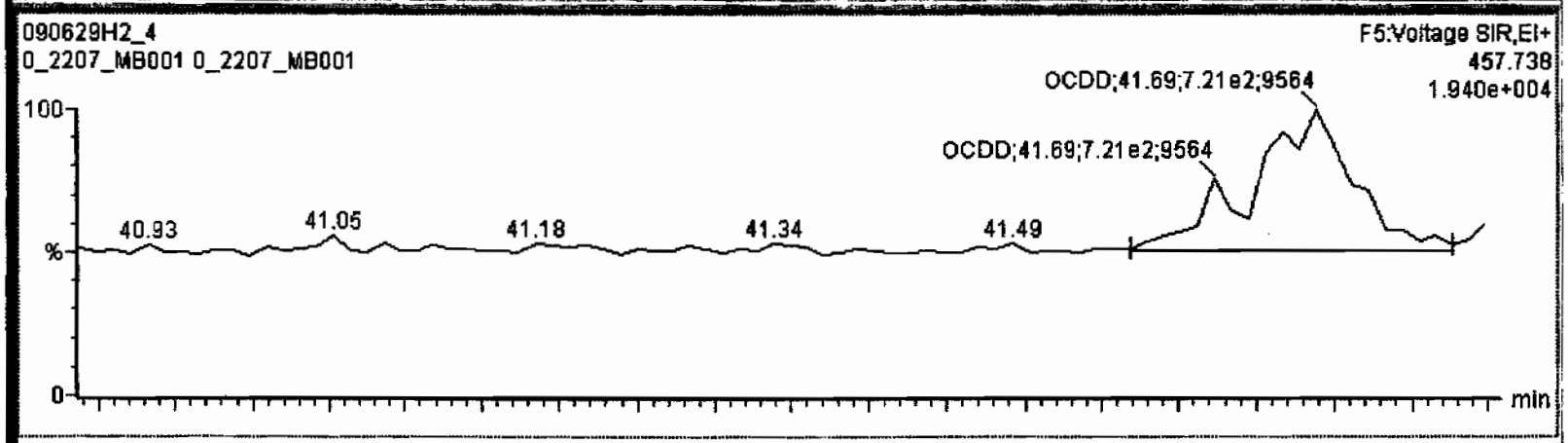

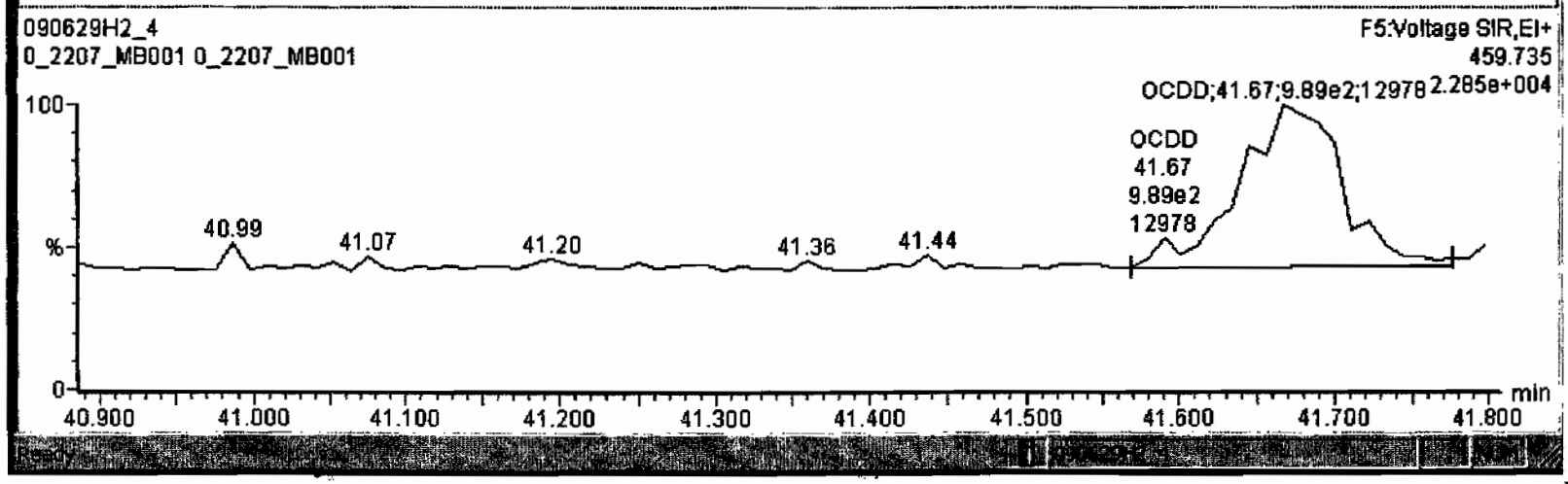

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

2,3,7,8-TCDF

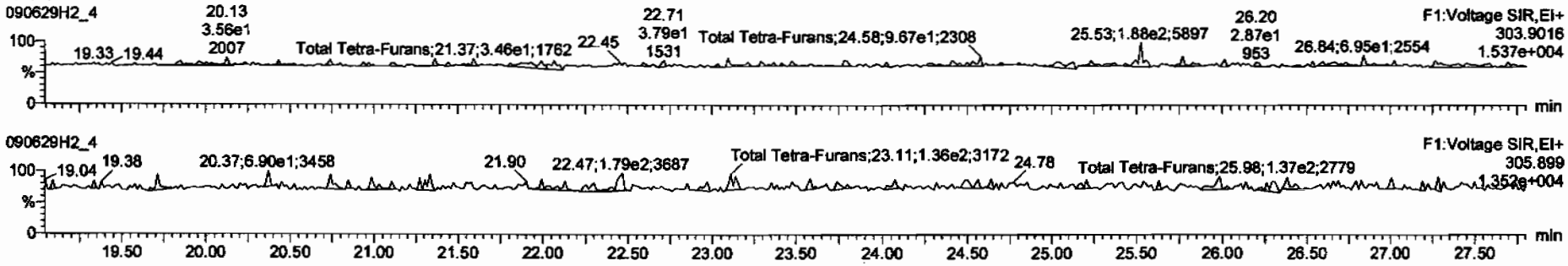

13C-2,3,7,8-TCDF

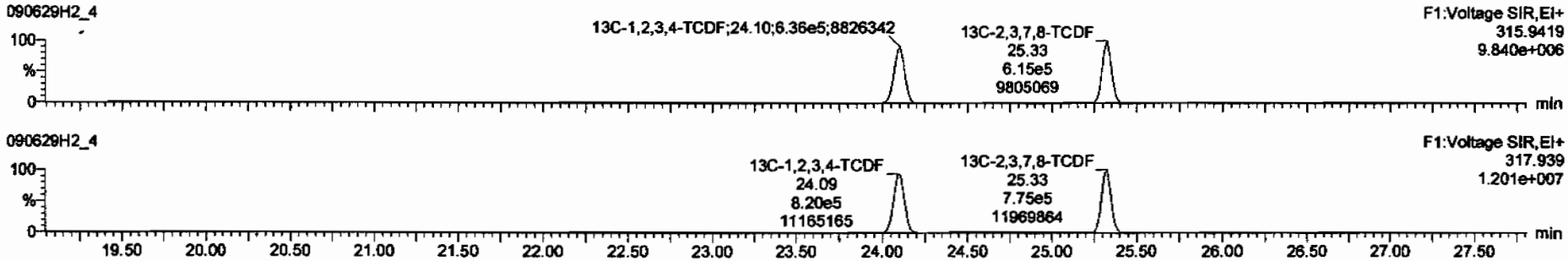

DPE1

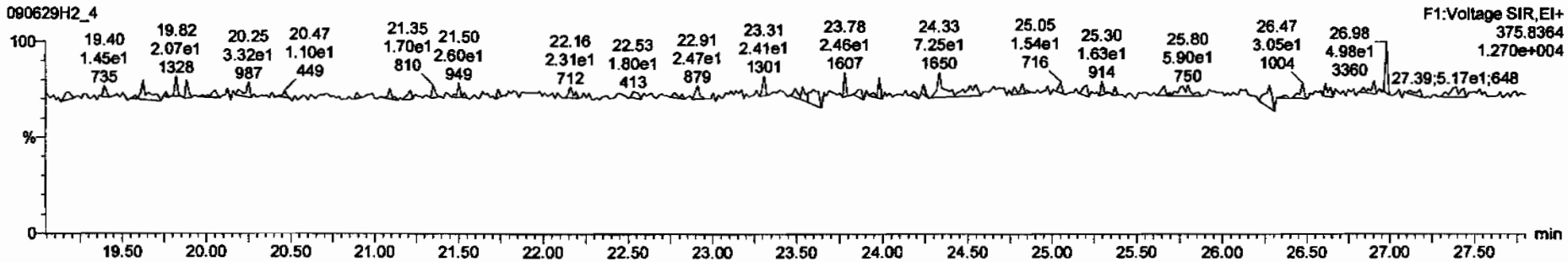

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

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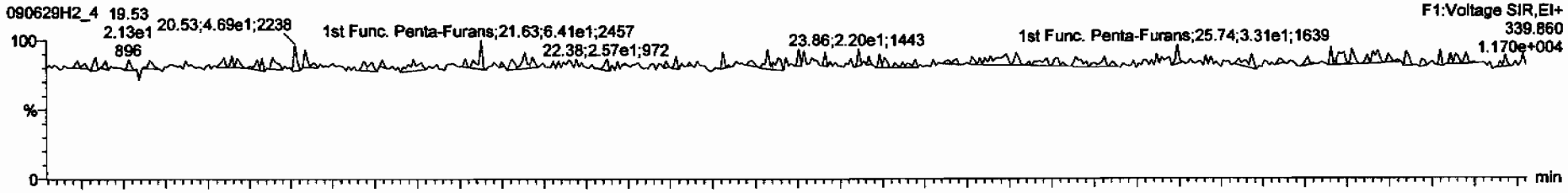

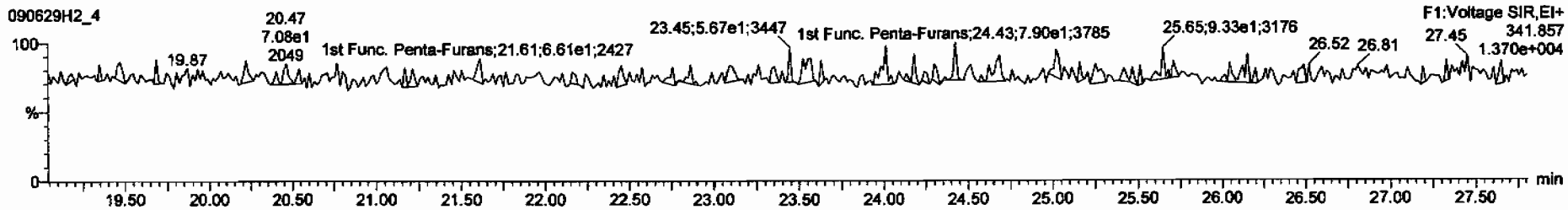

DPE6

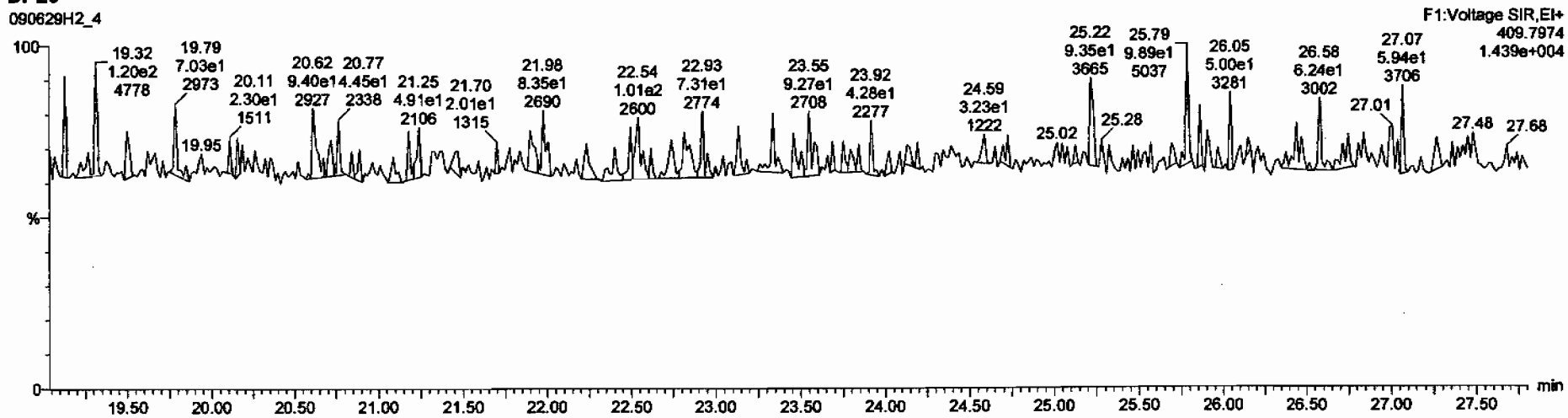

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,7,8-PeCDF

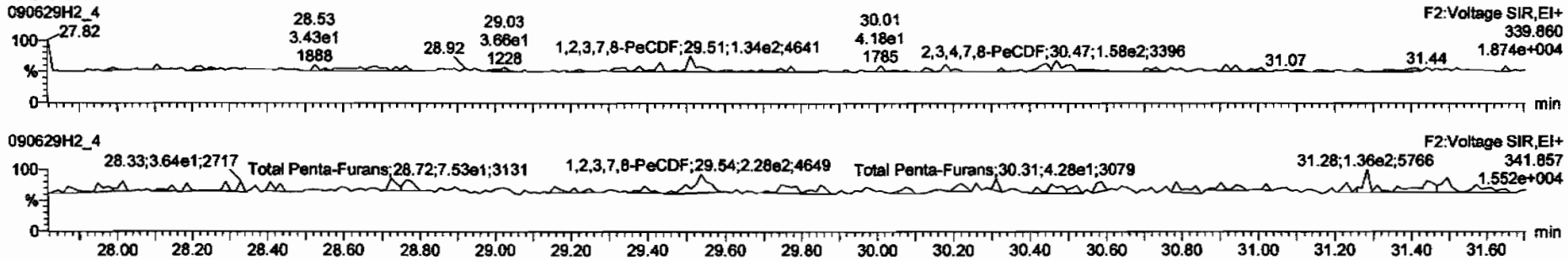

13C-1,2,3,7,8-PeCDF

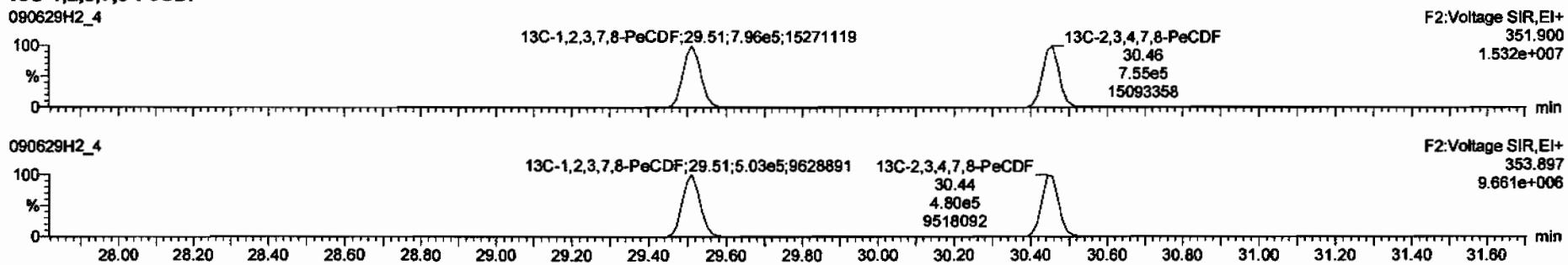

DPE2

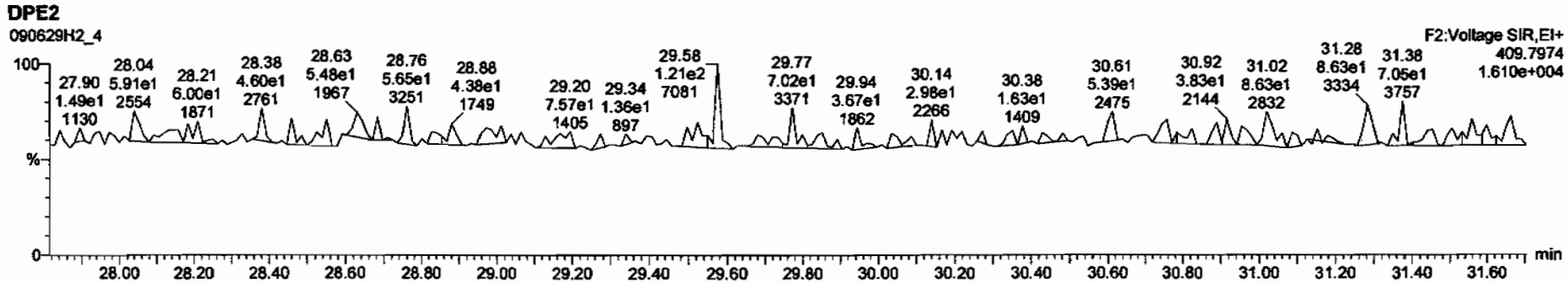

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,7,8-HxCDF

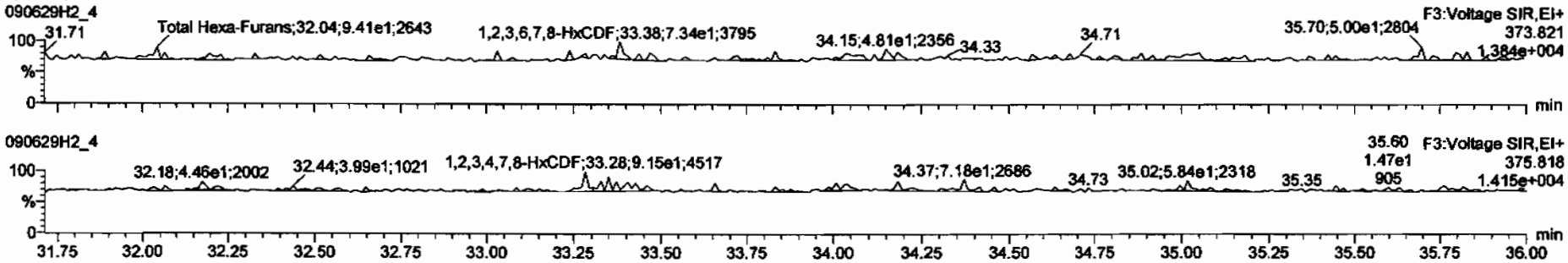

13C-1,2,3,4,7,8-HxCDF

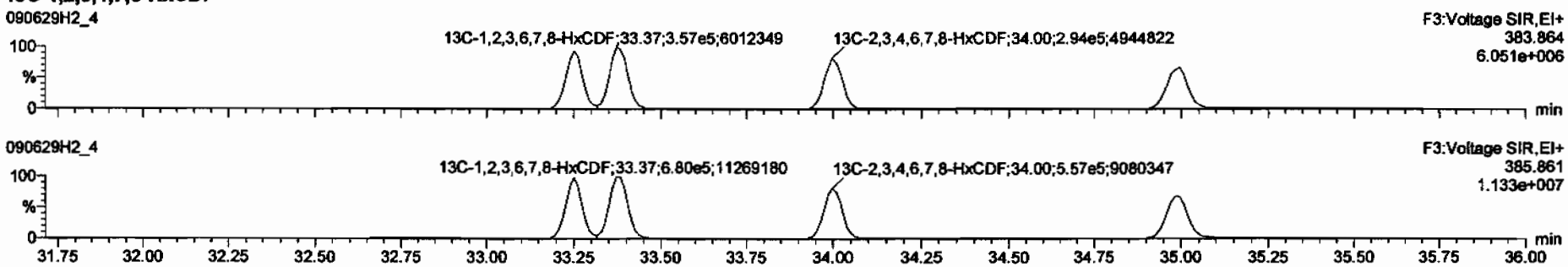

DPE3

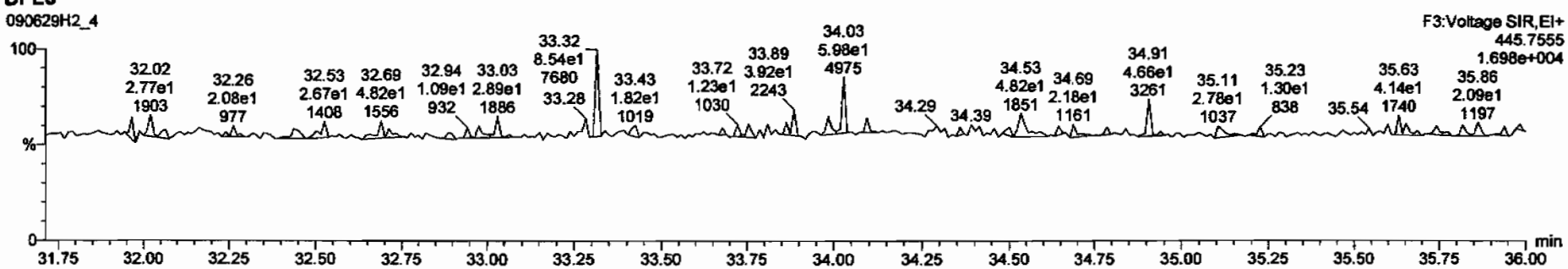

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

1,2,3,4,6,7,8-HpCDF

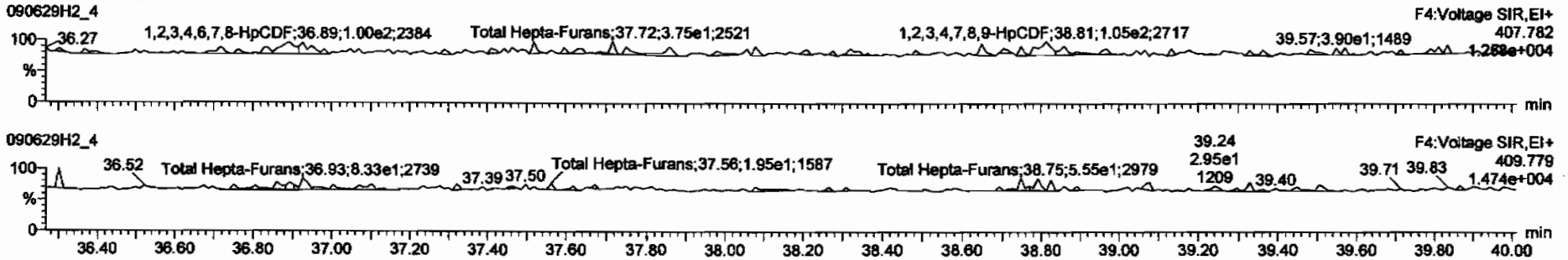

13C-1,2,3,4,6,7,8-HpCDF

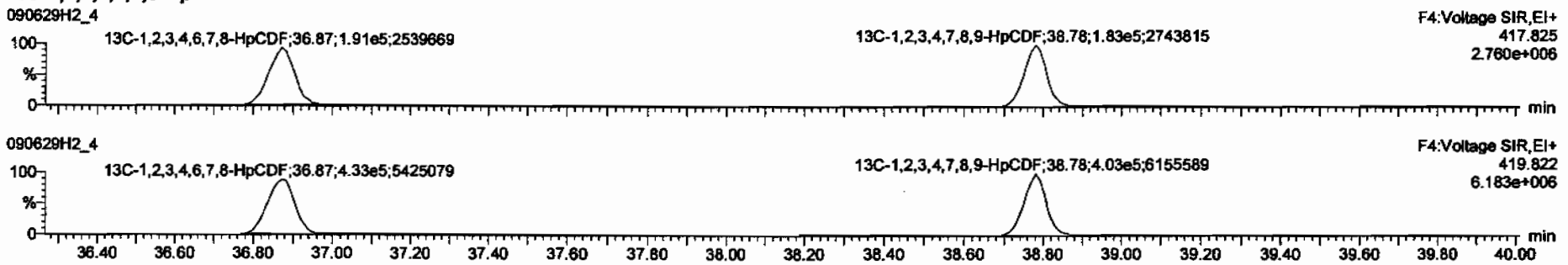

DPE4

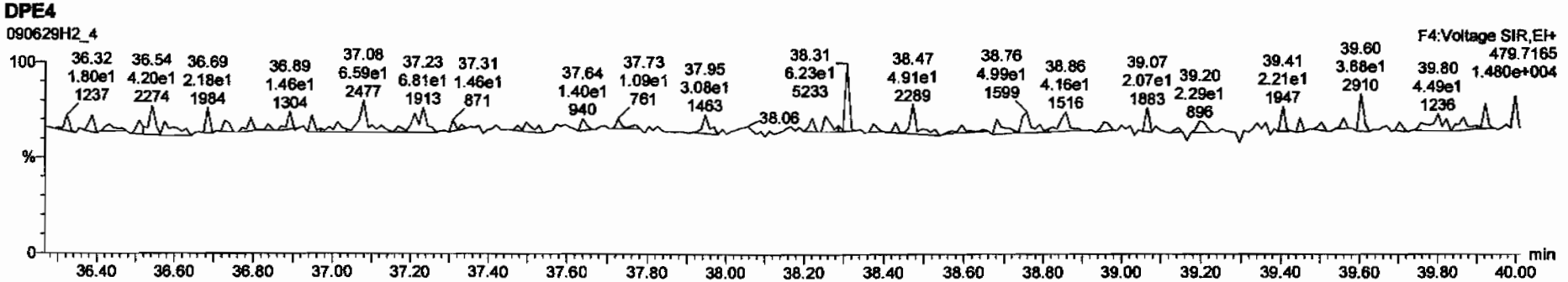

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Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

OCDF

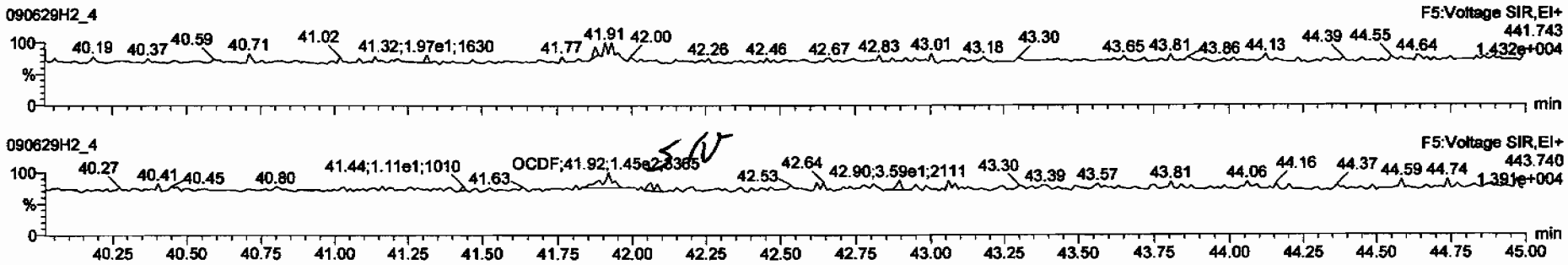

13C-OCDF

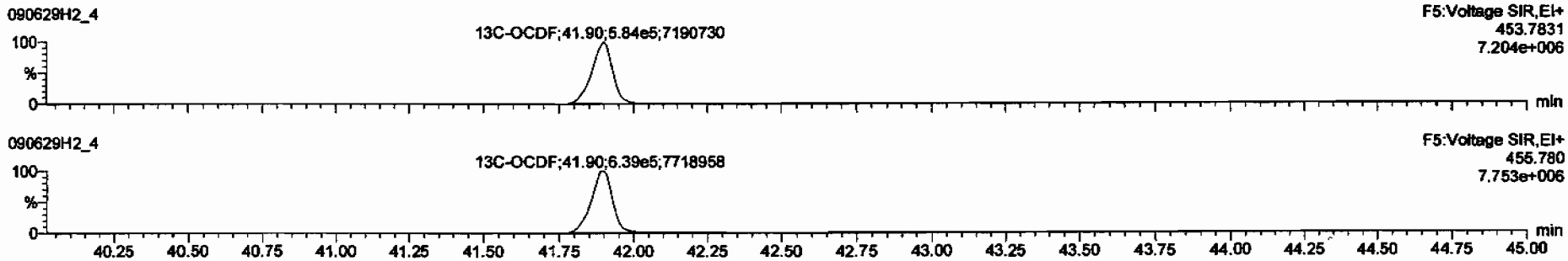

DPE5

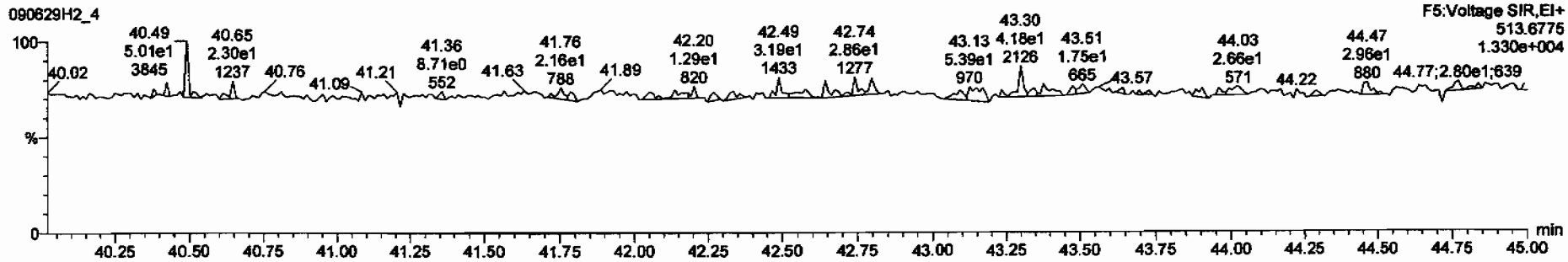

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-4.qld

Last Altered: Tuesday, June 30, 2009 08:10:51 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:11:25 Pacific Daylight Time

Name: 090629H2_4, Date: 29-Jun-2009, Time: 16:31:15, ID: 0_2207_MB001, Description: 0_2207_MB001

PFK1

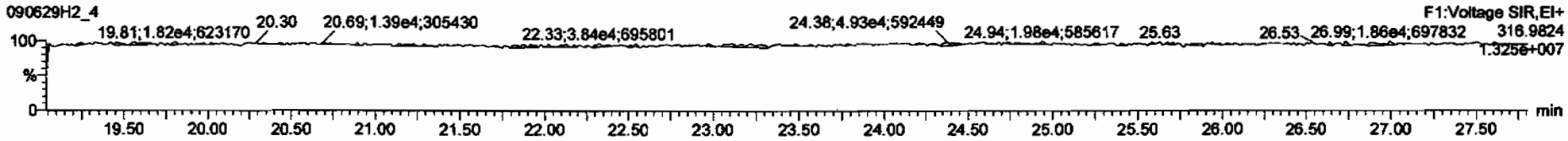

PFK2

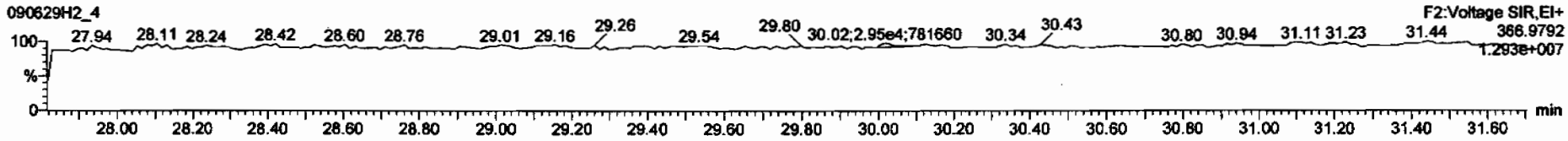

PFK3

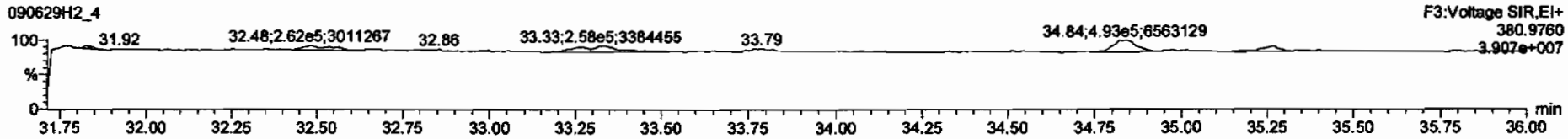

PFK4

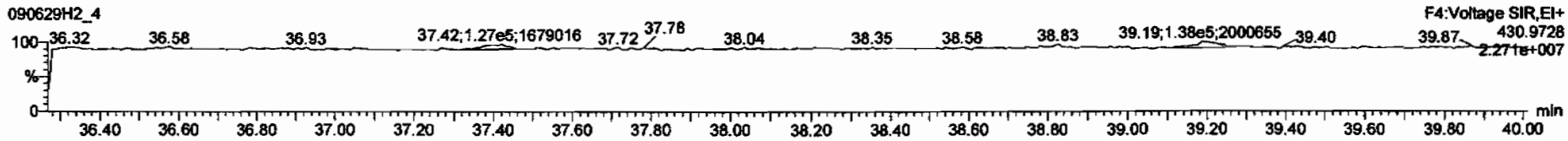

PFK5

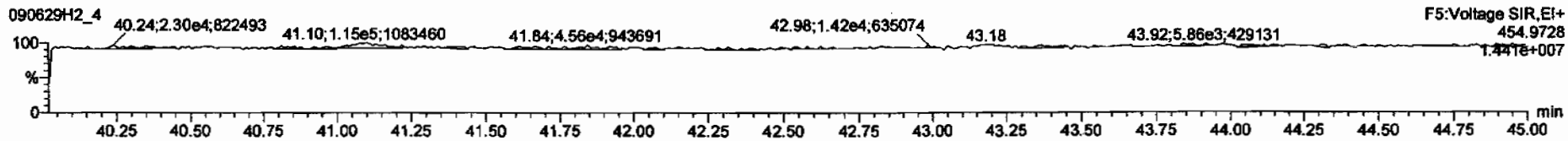

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 12:18:05 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:18:32 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1	2,3,7,8-TCDD	1.02e5	0.78	NO	1.08	1.000	26.11	1.001	9.7213	97.2	0.0303	9.7213
2	1,2,3,7,8-PeCDD	3.71e5	0.62	NO	1.03	1.000	30.75	1.000	47.556	95.1	0.0495	47.556
3	1,2,3,4,7,8-HxCDD	3.18e5	1.25	NO	1.00	1.000	34.18	1.001	47.134	94.3	0.122	47.134
4	1,2,3,6,7,8-HxCDD	3.36e5	1.27	NO	1.13	1.000	34.29	1.001	47.464	94.9	0.119	47.464
5	1,2,3,7,8,9-HxCDD	3.61e5	1.25	NO	1.10	1.000	34.59	1.009	50.262	101	0.116	50.262
6	1,2,3,4,6,7,8-HpCDD	2.93e5	1.04	NO	1.06	1.000	38.22	1.000	45.856	91.7	0.202	45.856
7	OCDD	4.84e5	0.85	NO	1.18	1.000	41.68	1.000	91.654	91.7	0.154	91.654
8	2,3,7,8-TCDF	1.30e5	0.77	NO	1.09	1.000	25.33	1.001	8.9329	89.3	0.0247	8.9329
9	1,2,3,7,8-PeCDF	6.87e5	1.57	NO	1.16	1.000	29.51	1.000	44.778	89.6	0.0478	44.778
10	2,3,4,7,8-PeCDF	5.78e5	1.56	NO	1.12	1.000	30.46	1.000	42.923	85.8	0.0519	42.923
11	1,2,3,4,7,8-HxCDF	5.70e5	1.26	NO	1.41	1.000	33.26	1.001	45.926	91.9	0.0809	45.926
12	1,2,3,6,7,8-HxCDF	5.86e5	1.27	NO	1.22	1.000	33.38	1.000	45.078	90.2	0.0821	45.078
13	2,3,4,6,7,8-HxCDF	4.82e5	1.25	NO	1.28	1.000	34.01	1.001	46.095	92.2	0.107	46.095
14	1,2,3,7,8,9-HxCDF	4.56e5	1.30	NO	1.26	1.000	35.00	1.000	46.233	92.5	0.127	46.233
15	1,2,3,4,6,7,8-HpCDF	4.97e5	1.05	NO	1.69	1.000	36.88	1.001	46.551	93.1	0.146	46.551
16	1,2,3,4,7,8,9-HpCDF	4.06e5	1.03	NO	1.48	1.000	38.79	1.000	48.188	96.4	0.175	48.188
17	OCDF	6.20e5	0.92	NO	1.10	1.000	41.91	1.000	91.187	91.2	0.0934	91.187
18	13C-2,3,7,8-TCDD	9.75e5	0.79	NO	1.01	1.000	26.09	1.023	94.464	94.5	0.185	
19	13C-1,2,3,7,8-PeCDD	7.54e5	0.63	NO	0.827	1.000	30.73	1.205	89.641	89.6	0.0957	
20	13C-1,2,3,4,7,8-HxCDD	6.73e5	1.27	NO	0.916	1.000	34.16	0.988	89.402	89.4	0.284	
21	13C-1,2,3,6,7,8-HxCDD	6.29e5	1.26	NO	0.921	1.000	34.27	0.991	83.057	83.1	0.282	
22	13C-1,2,3,4,6,7,8-HpCDD	6.00e5	1.07	NO	0.708	1.000	38.21	1.105	102.98	103	0.369	
23	13C-OCDD	8.96e5	0.92	NO	0.503	1.000	41.67	1.205	216.81	108	0.300	
24	13C-2,3,7,8-TCDF	1.34e6	0.79	NO	0.977	1.000	25.31	0.992	98.459	98.5	0.111	
25	13C-1,2,3,7,8-PeCDF	1.32e6	1.56	NO	0.896	1.000	29.50	1.156	106.13	106	0.179	
26	13C-2,3,4,7,8-PeCDF	1.21e6	1.58	NO	0.900	1.000	30.44	1.193	96.249	96.2	0.178	
27	13C-1,2,3,4,7,8-HxCDF	8.80e5	0.53	NO	1.17	1.000	33.24	0.961	91.572	91.6	0.293	
28	13C-1,2,3,6,7,8-HxCDF	1.06e6	0.52	NO	1.52	1.000	33.37	0.965	85.133	85.1	0.225	
29	13C-2,3,4,6,7,8-HxCDF	8.17e5	0.52	NO	1.25	1.000	33.99	0.983	79.507	79.5	0.274	
30	13C-1,2,3,7,8,9-HxCDF	7.85e5	0.52	NO	1.05	1.000	34.99	1.012	90.673	90.7	0.325	

6/30/09
6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 12:18:05 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 12:18:32 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

31	13C-1,2,3,4,6,7,8-HpCDF	6.32e5	0.45	NO	0.868	1.000	36.86	1.066	88.541	88.5	0.426
32	13C-1,2,3,4,7,8,9-HpCDF	5.69e5	0.44	NO	0.727	1.000	38.78	1.122	95.182	95.2	0.509
33	13C-OCDF	1.24e6	0.89	NO	0.760	1.000	41.90	1.212	198.73	99.4	0.199
34	37Cl-2,3,7,8-TCDD	2.46e5			0.668	1.000	26.11	1.023	36.149	90.4	0.0332
35	13C-1,2,3,4-TCDD	1.02e6	0.79	NO	1.00	1.000	25.51	0.000	100.00	100	0.188
36	13C-1,2,3,4-TCDF	1.39e6	0.77	NO	1.00	1.000	24.09	0.000	100.00	100	0.108
37	13C-1,2,3,7,8,9-HxCDD	8.22e5	1.23	NO	1.00	1.000	34.58	0.000	100.00	100	0.260

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-2.qld

Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

2,3,7,8-TCDD

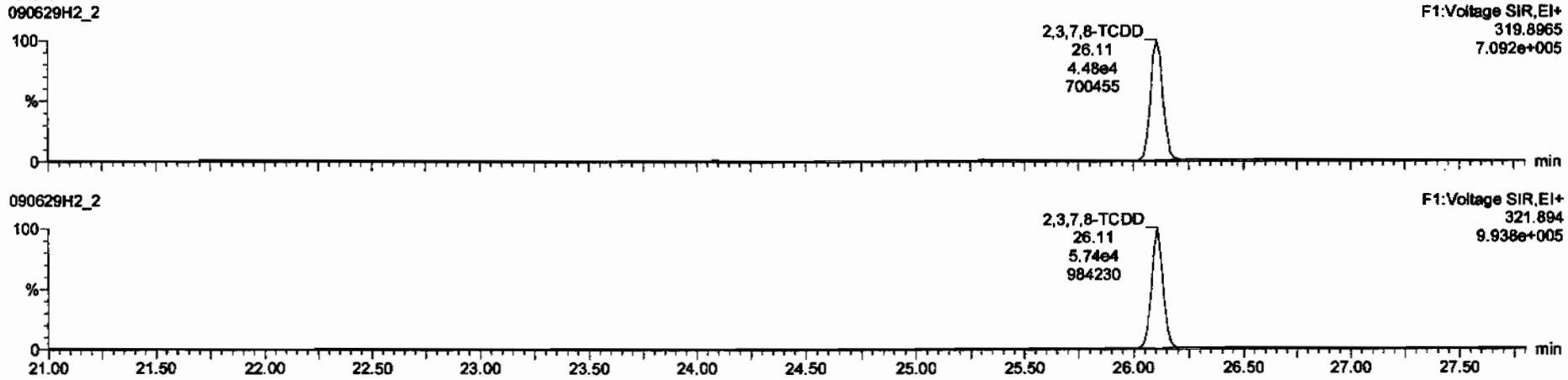

13C-2,3,7,8-TCDD

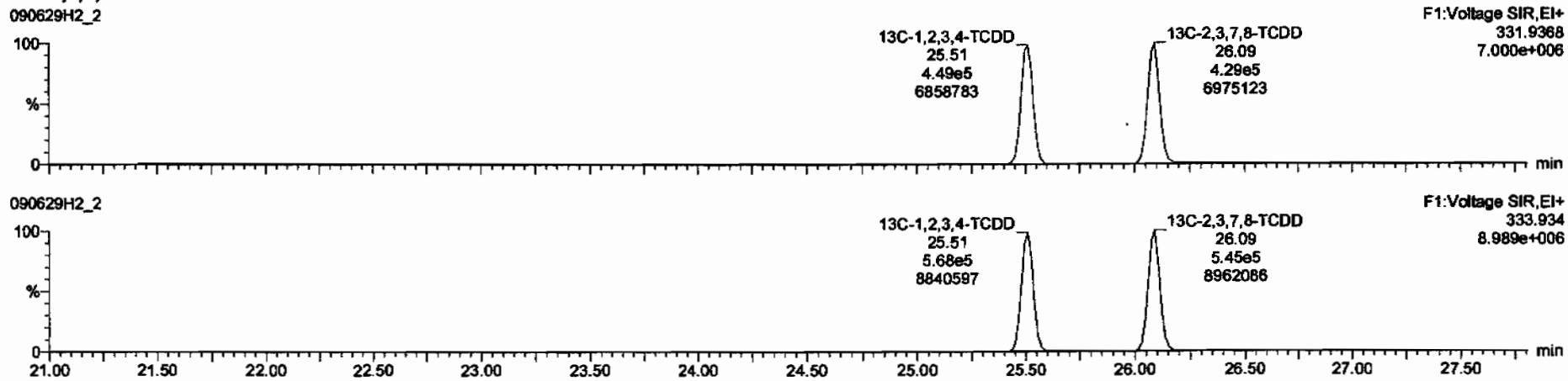

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

37Cl-2,3,7,8-TCDD

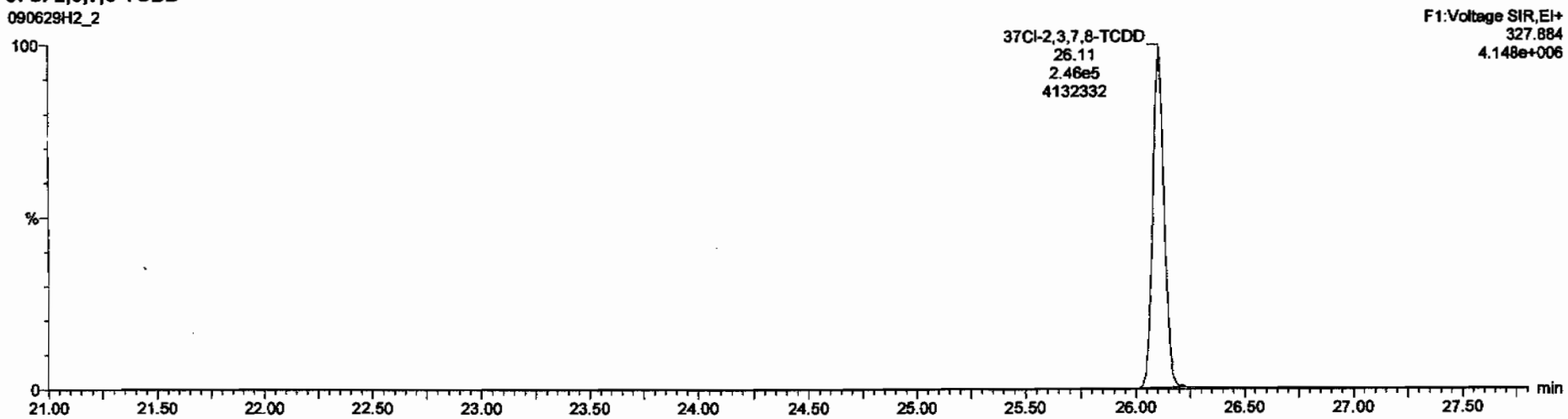

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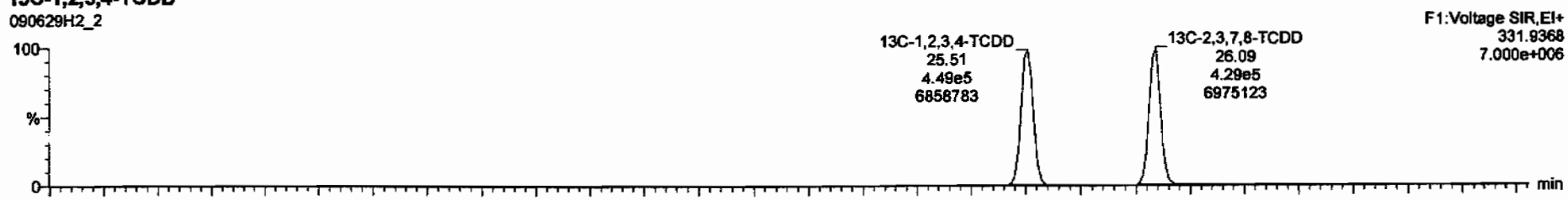

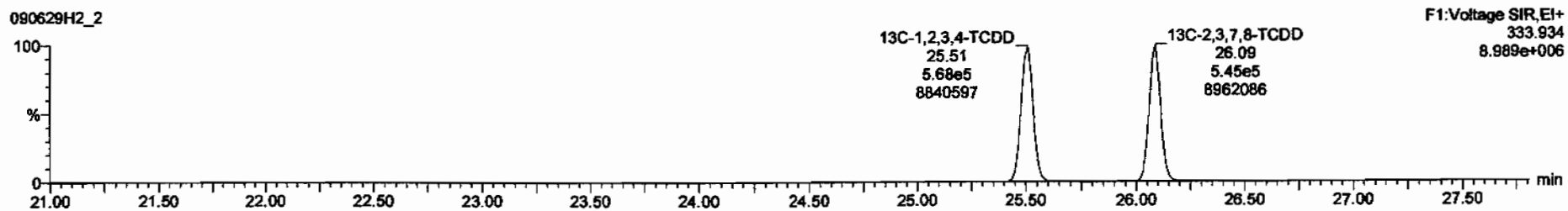

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,7,8-PeCDD

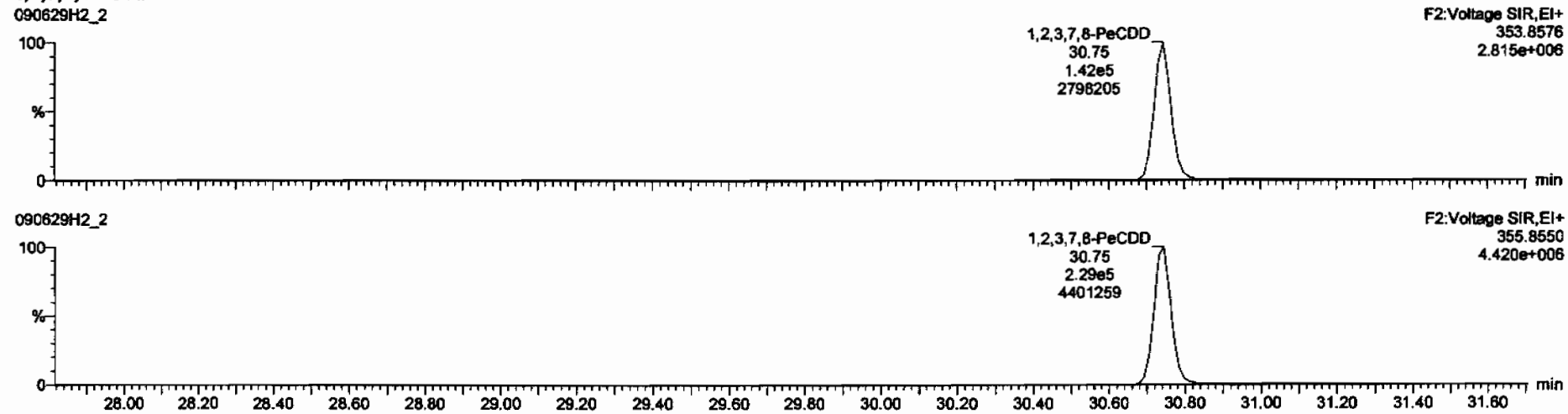

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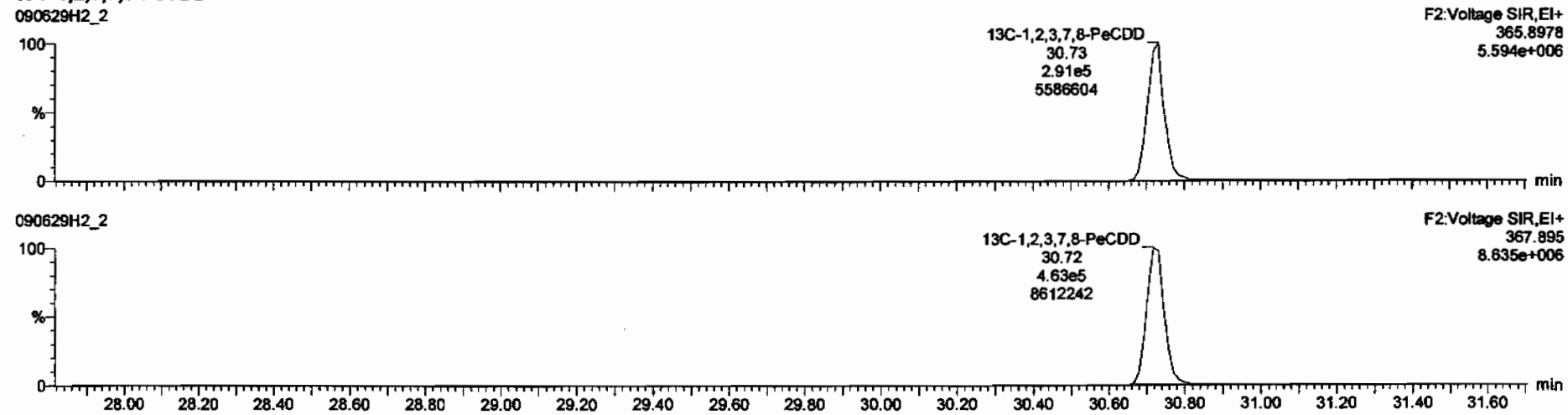

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Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,7,8-HxCDD

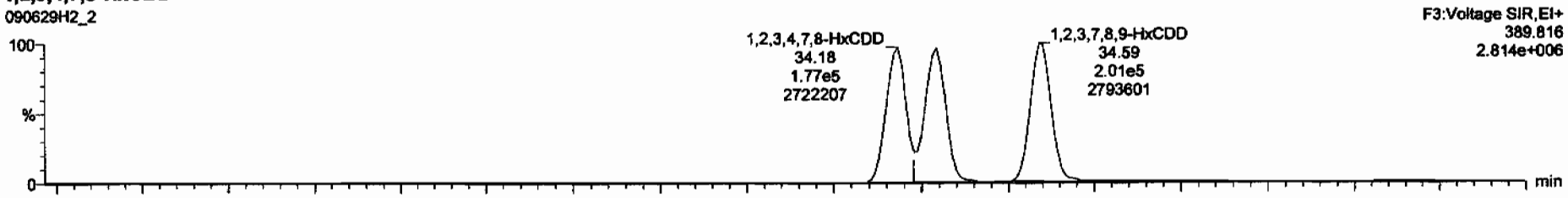

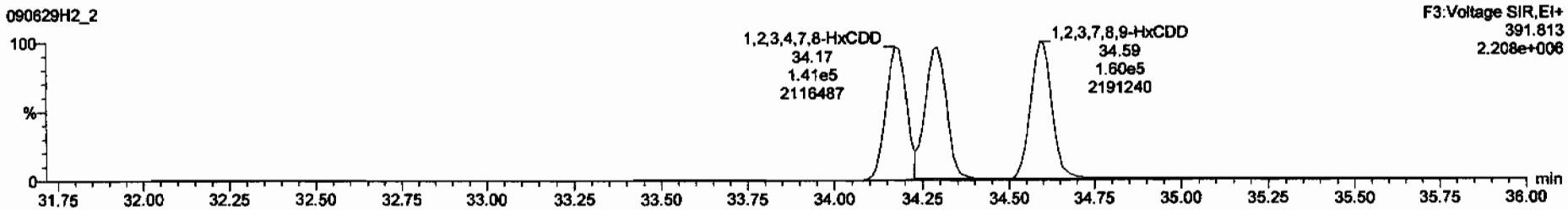

13C-1,2,3,4,7,8-HxCDD

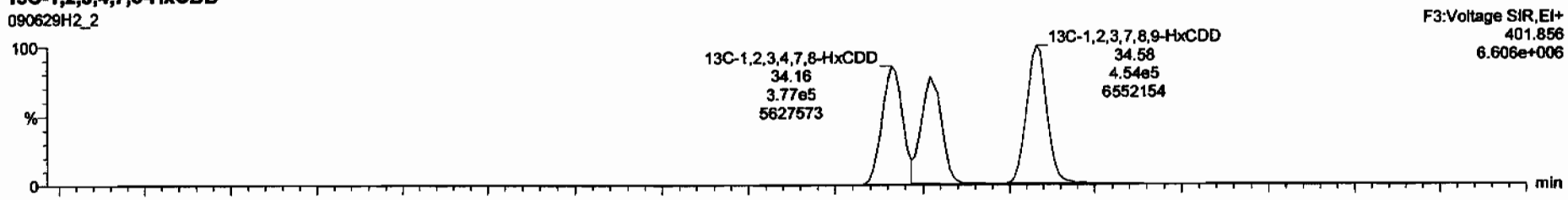

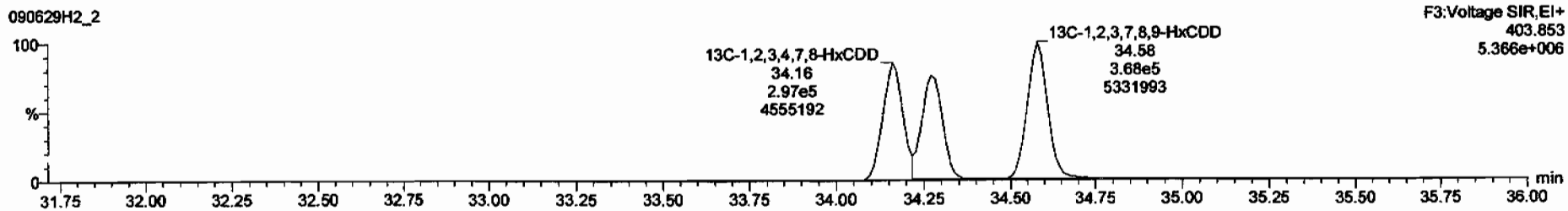

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,6,7,8-HpCDD

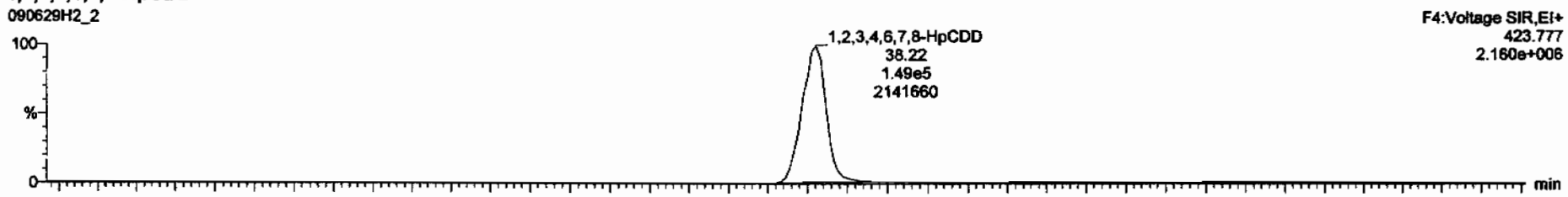

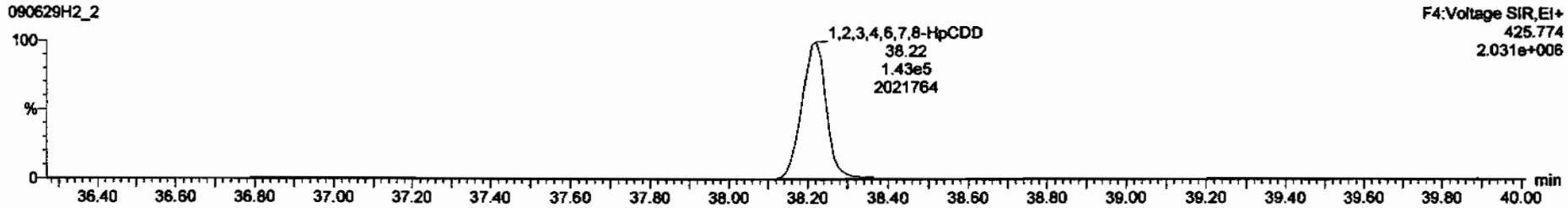

13C-1,2,3,4,6,7,8-HpCDD

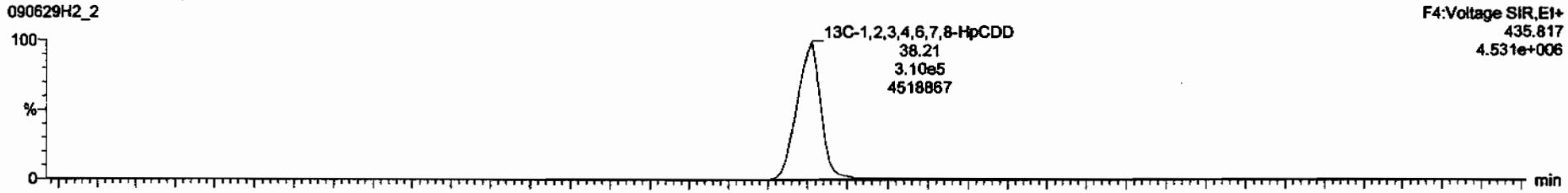

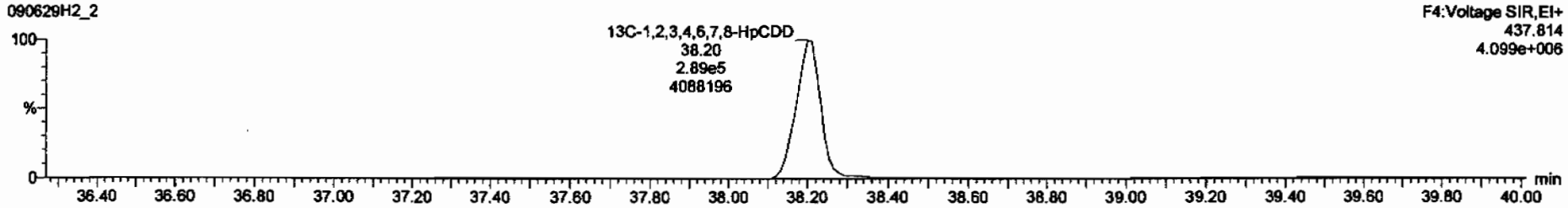

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

OCDD

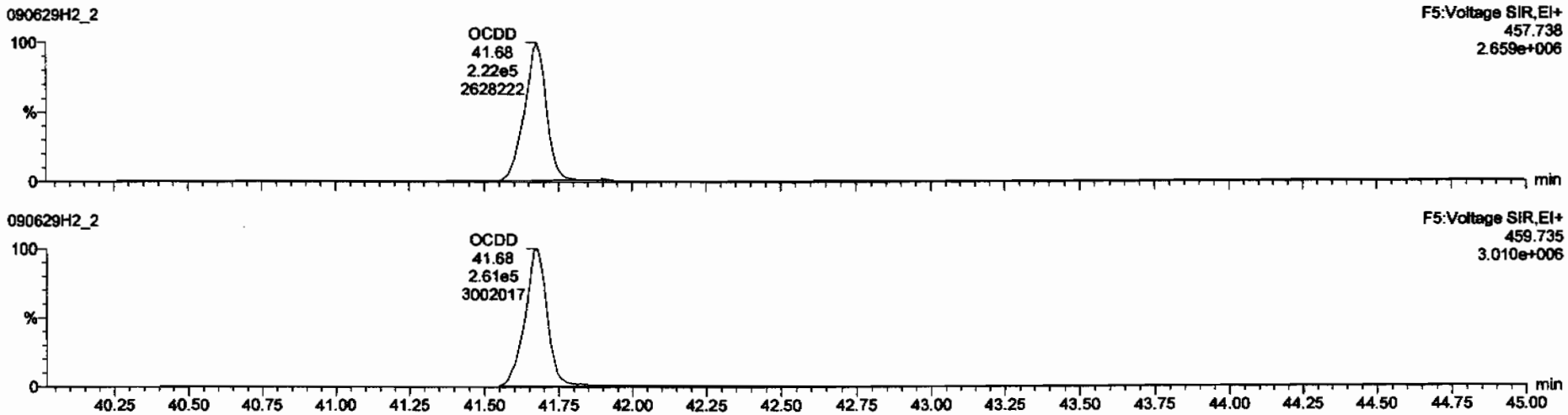

13C-OCDD

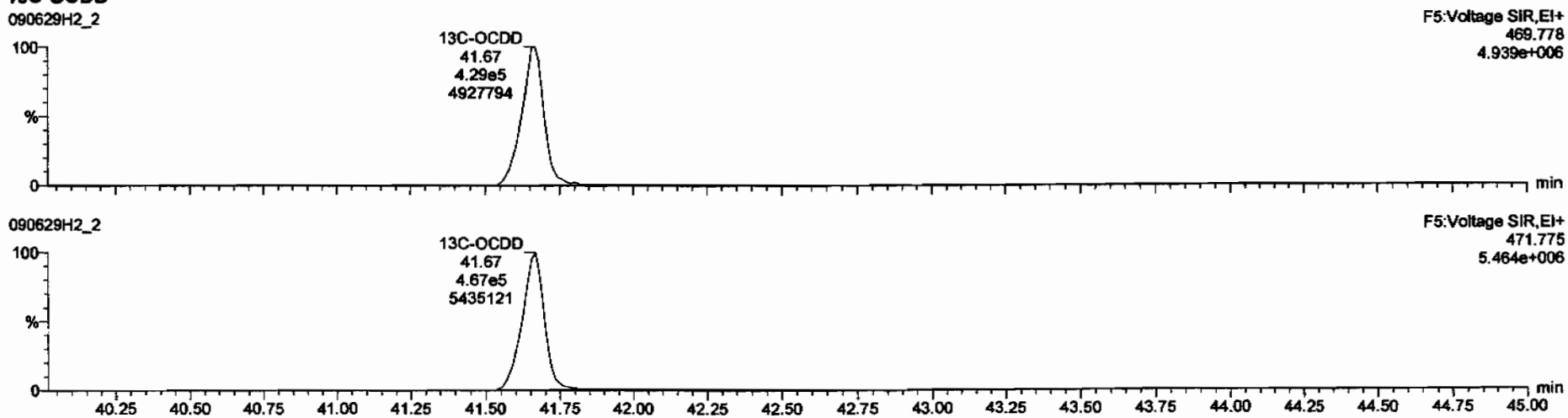

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

2,3,7,8-TCDF

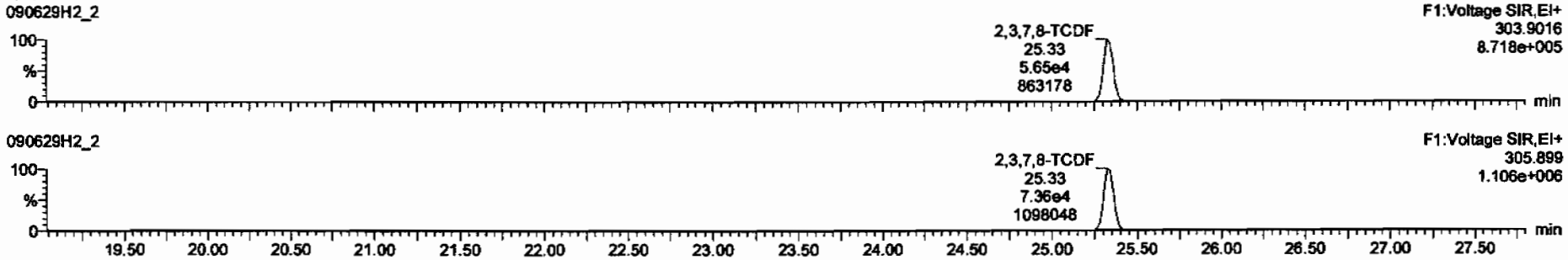

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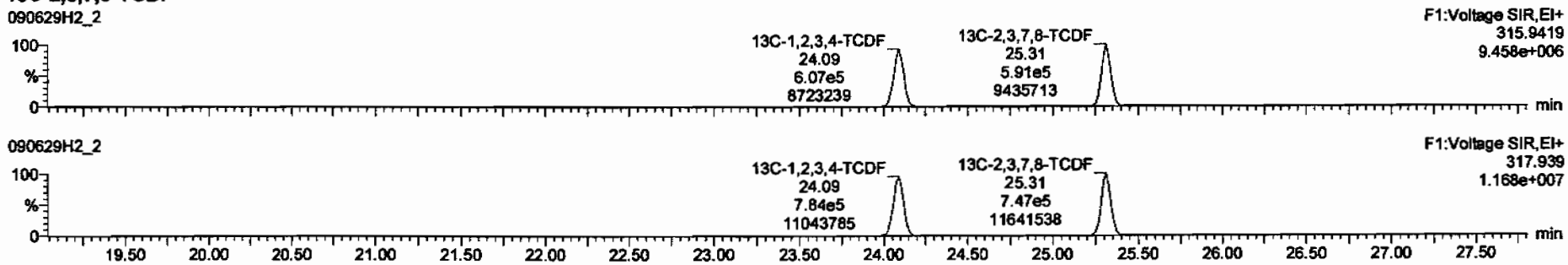

DPE1

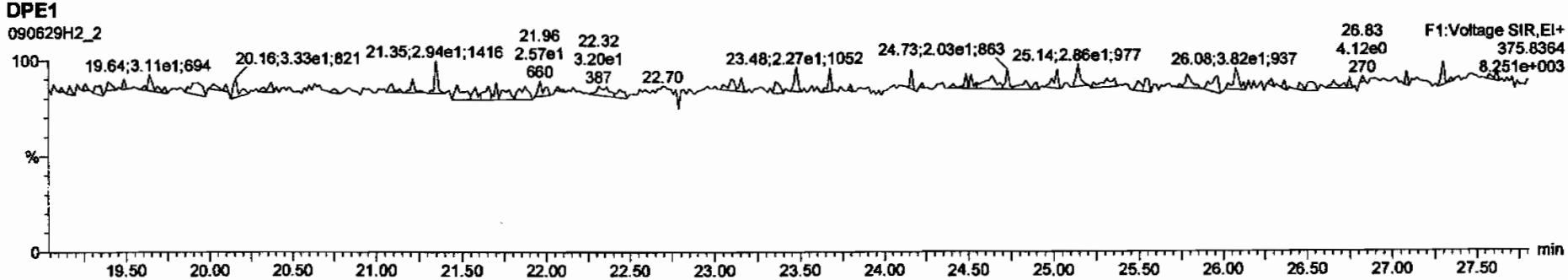

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

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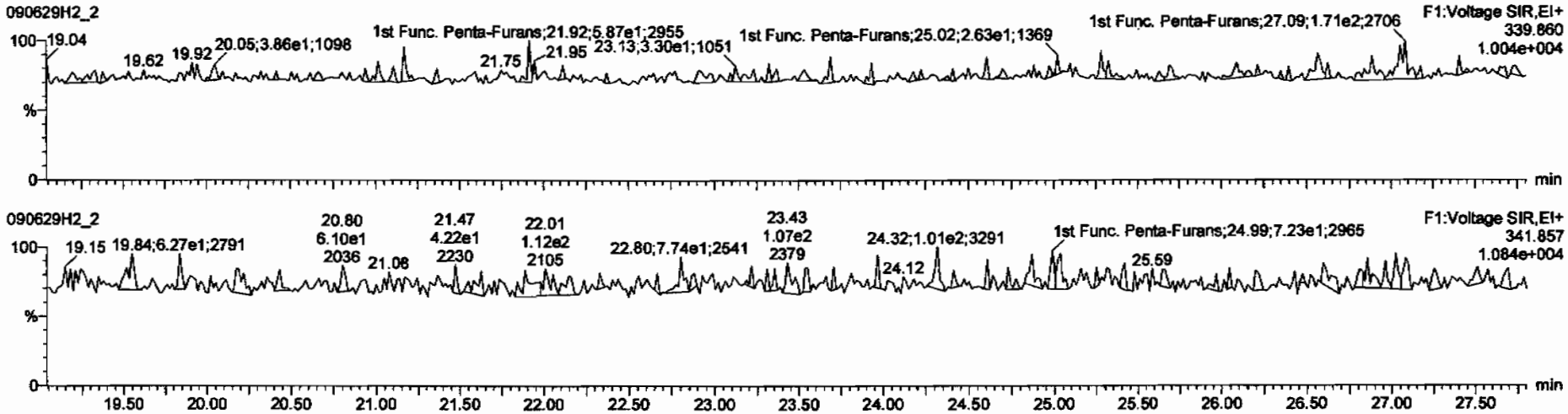

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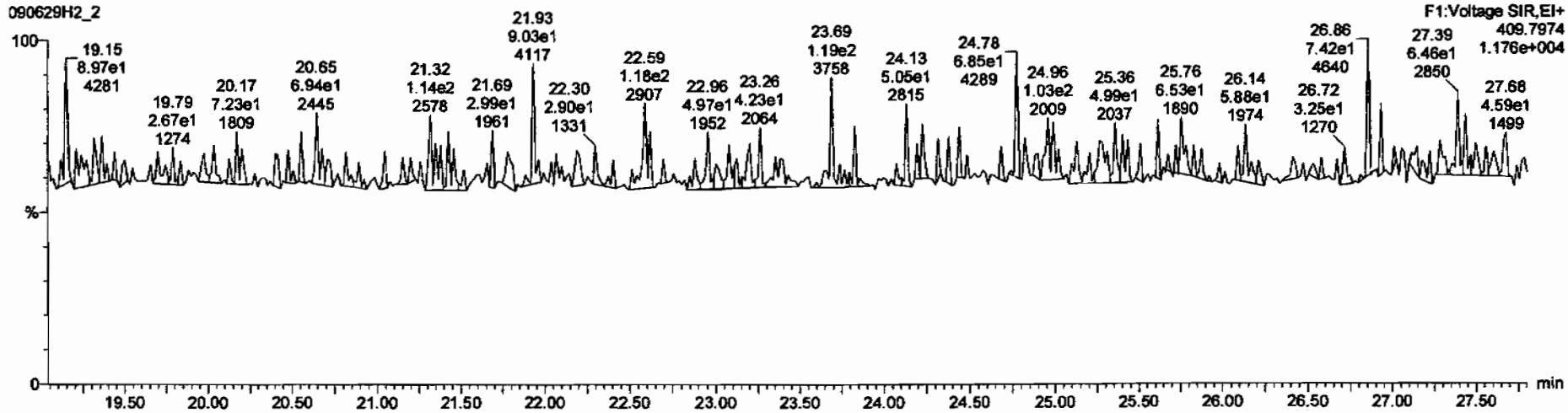

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,7,8-PeCDF

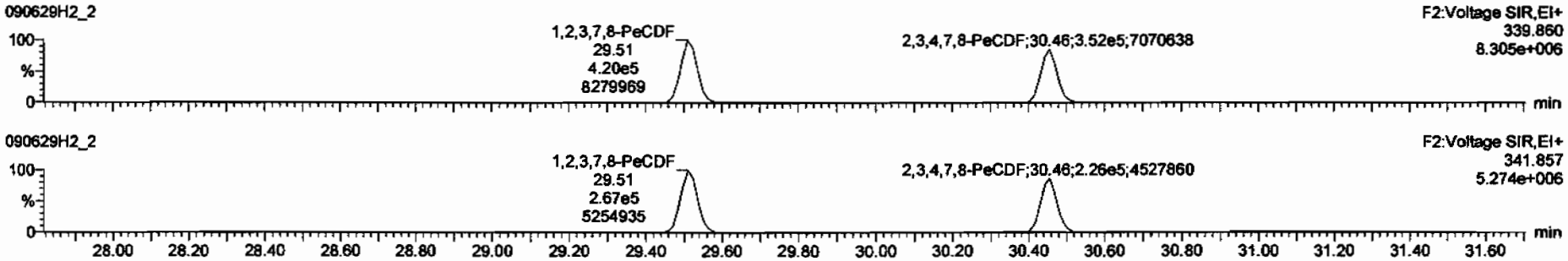

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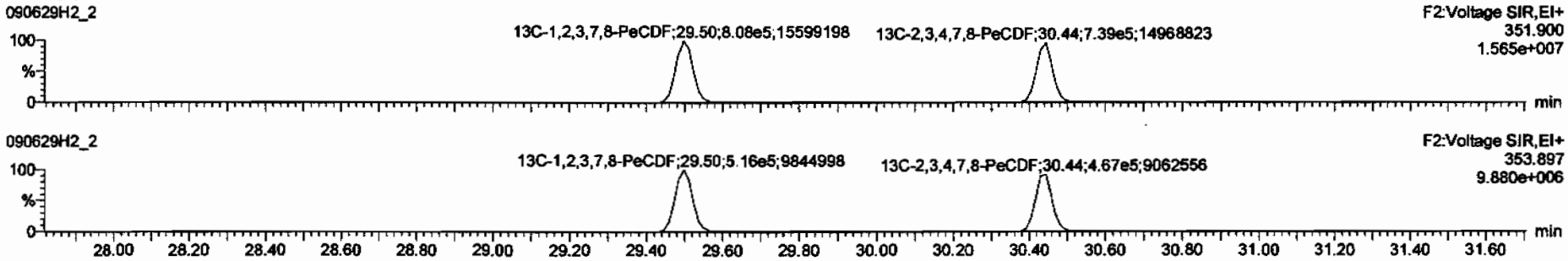

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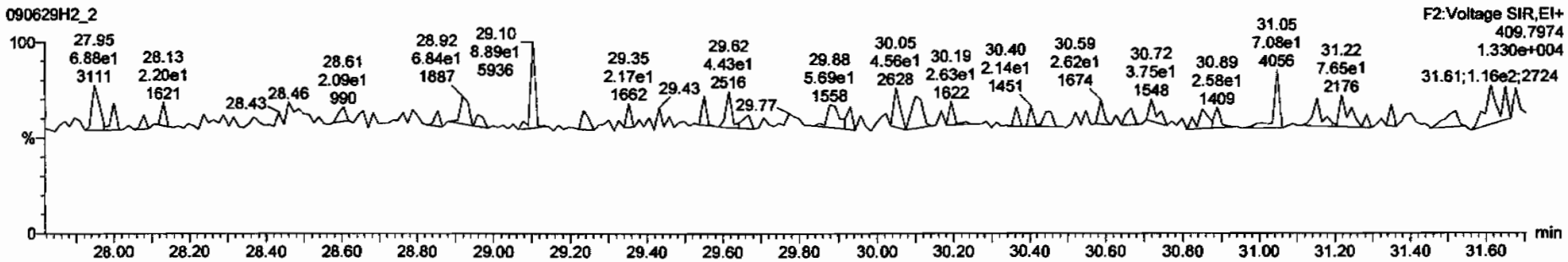

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,7,8-HxCDF

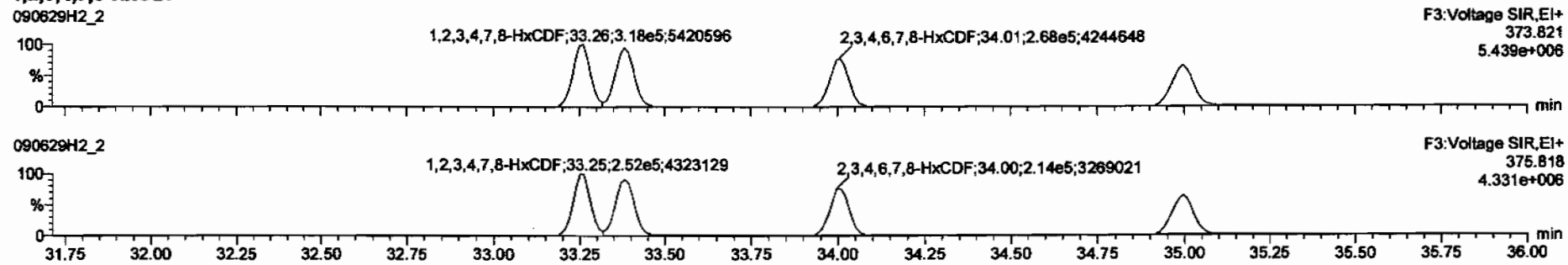

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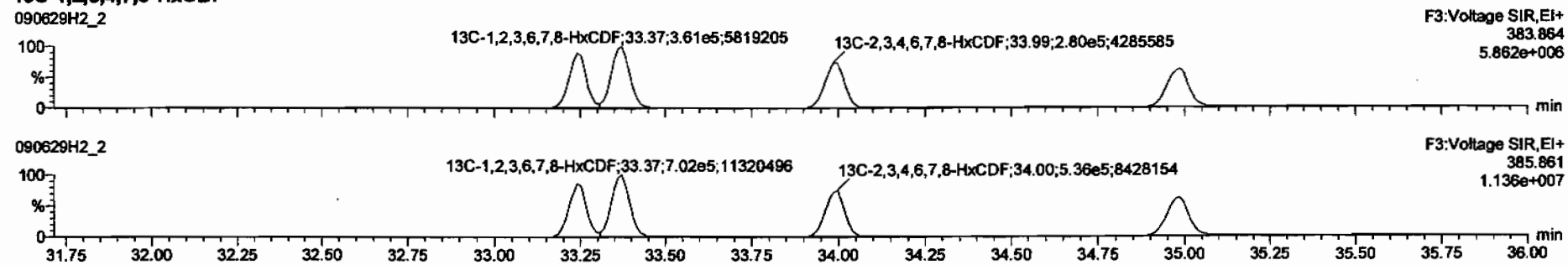

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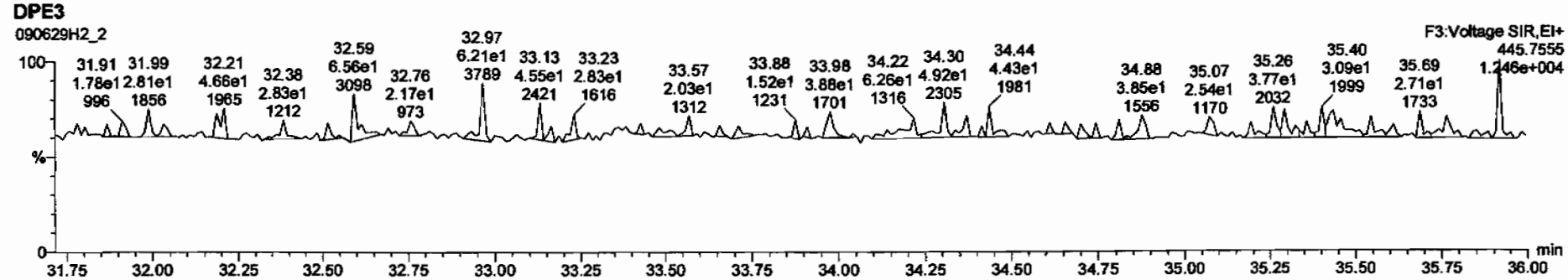

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Last Altered: Tuesday, June 30, 2009 08:10:16 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

1,2,3,4,6,7,8-HpCDF

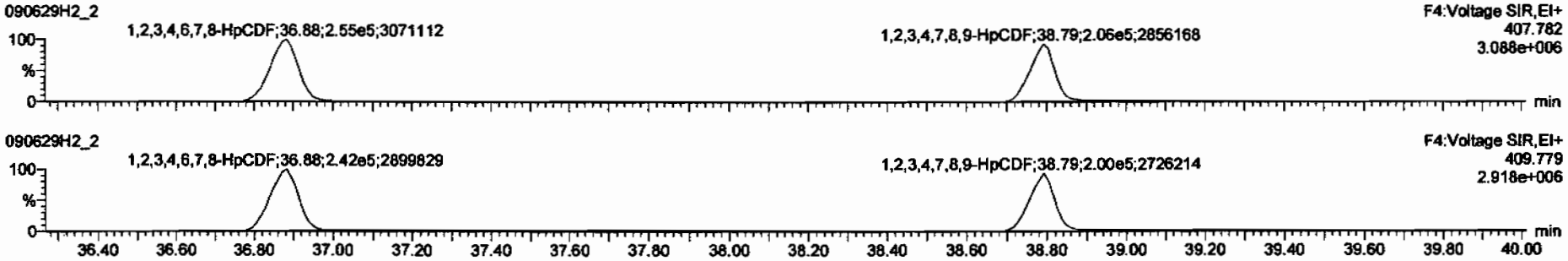

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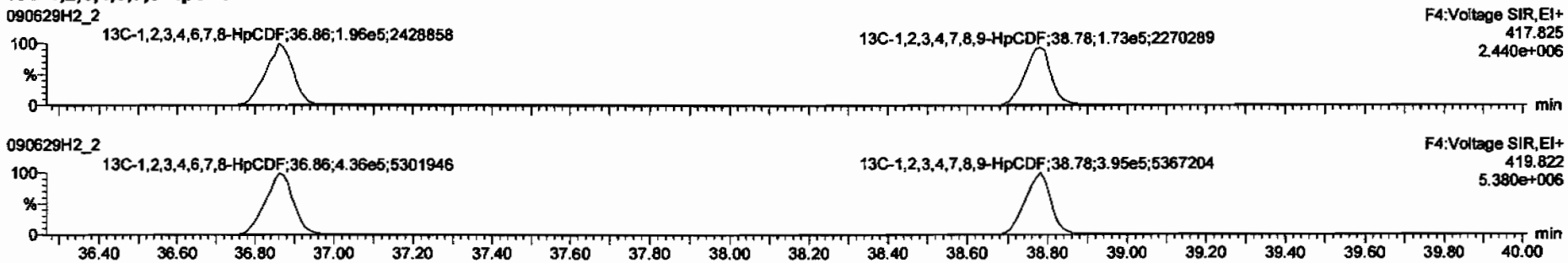

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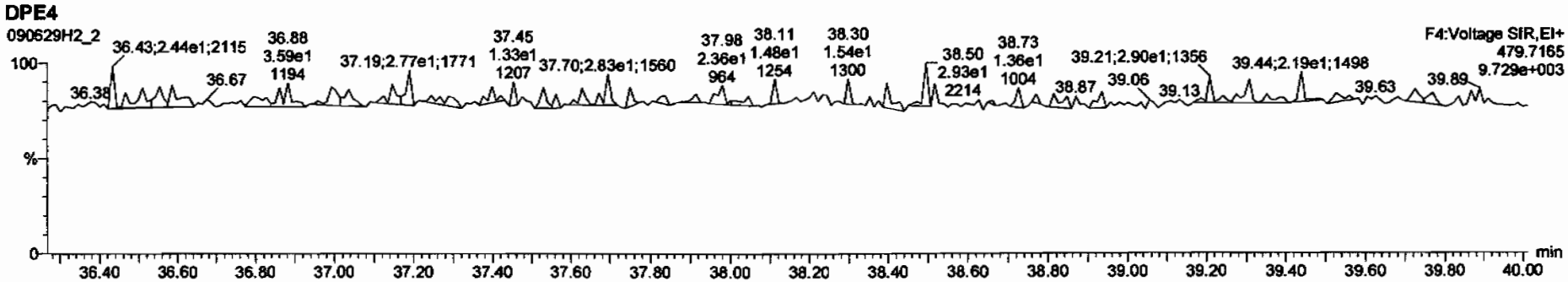

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Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

OCDF

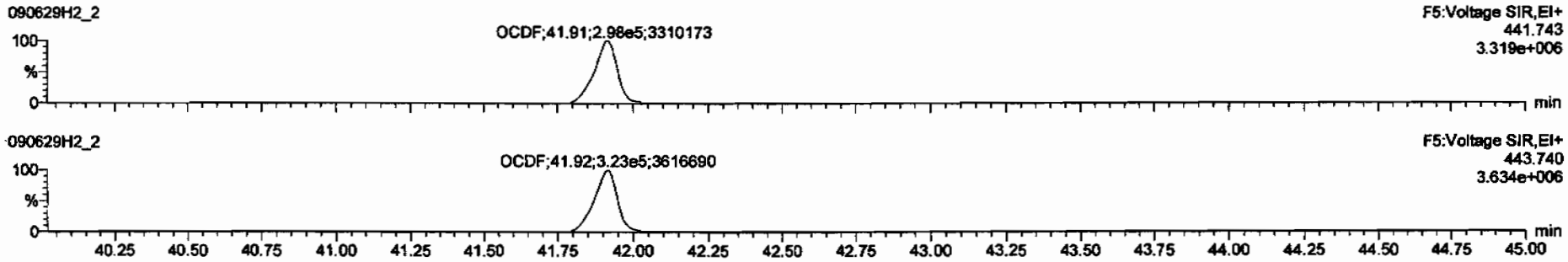

13C-OCDF

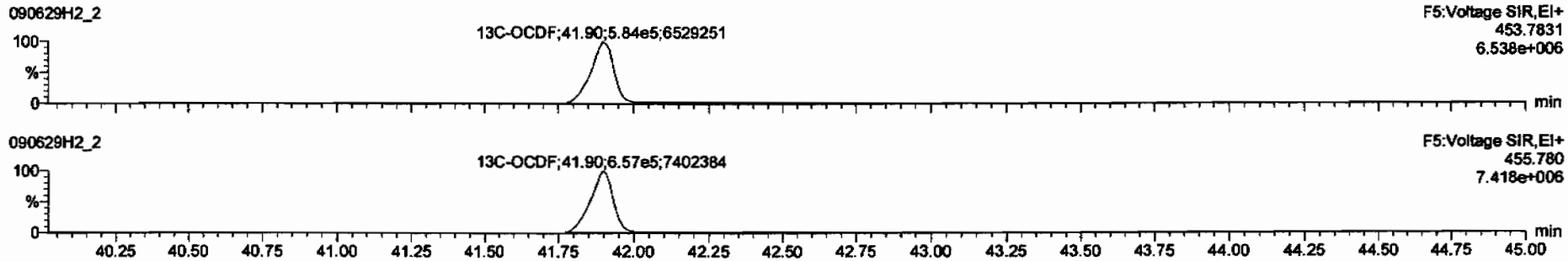

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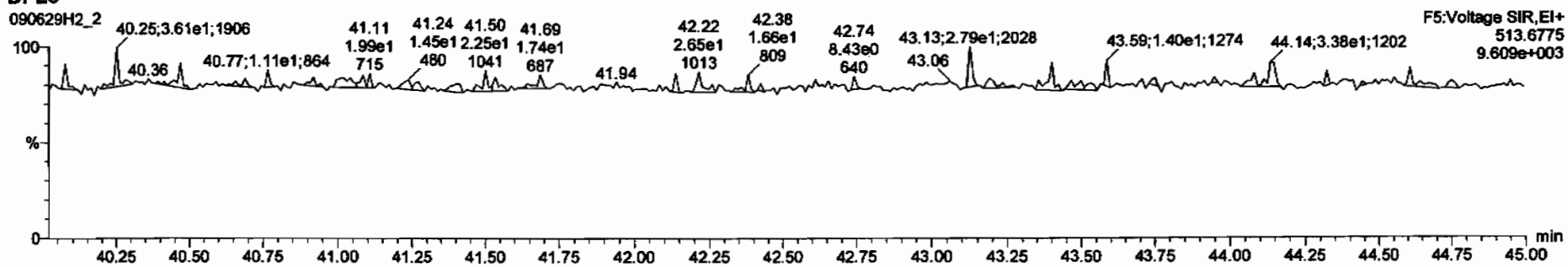

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Printed: Tuesday, June 30, 2009 08:10:41 Pacific Daylight Time

Name: 090629H2_2, Date: 29-Jun-2009, Time: 14:52:10, ID: 0_2207_OPR001, Description: 0_2207_OPR001

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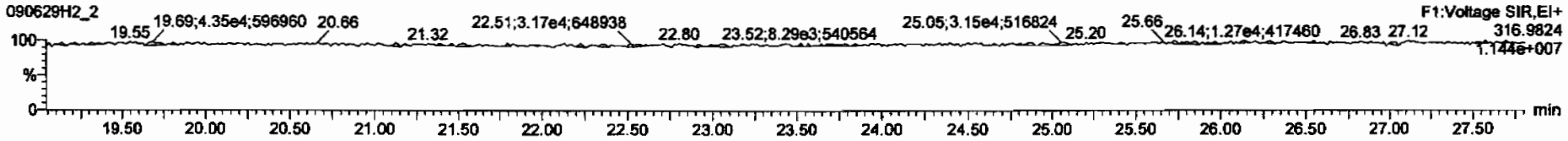

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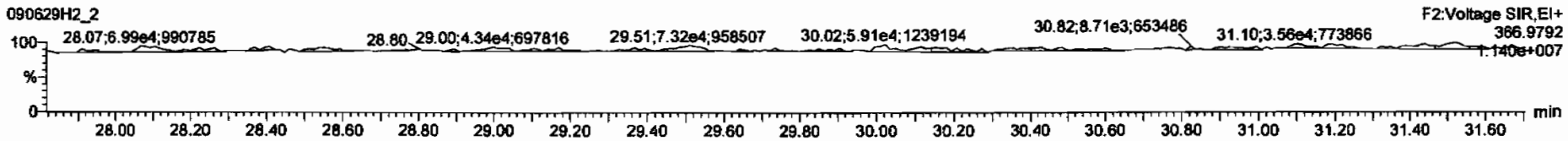

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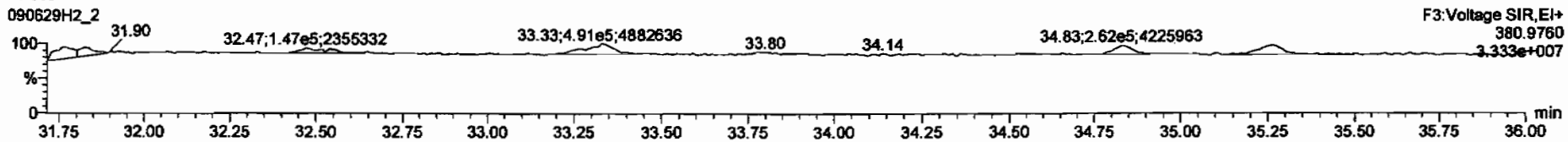

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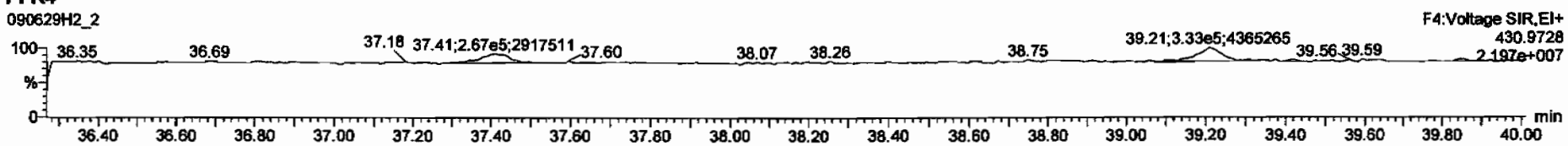

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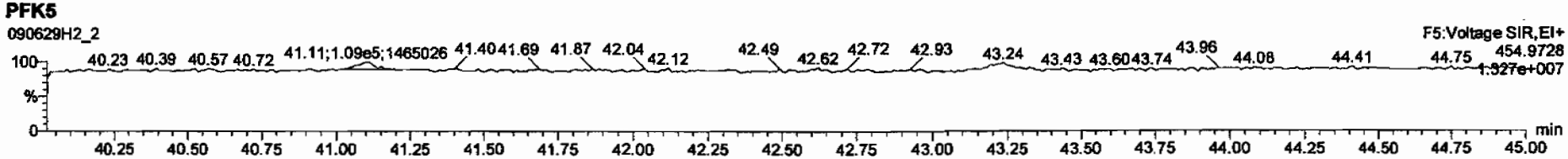

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Printed: Tuesday, June 30, 2009 1:19:53 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

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3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.121	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.121	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.116	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.154	
7	OCDD	1.36e3	0.78	NO	1.18	10.000	41.67	1.000	0.44392		0.113	~~0.44392~~
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0401	
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.0414	
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0431	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.0460	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.0529	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.0645	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.0766	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.0801	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.0893	
17	OCDF			NO	1.10	10.000					0.0896	
18	13C-2,3,7,8-TCDD	1.11e6	0.79	NO	1.01	10.000	26.09	1.023	187.88	93.9	0.310	
19	13C-1,2,3,7,8-PeCDD	8.75e5	0.62	NO	0.827	10.000	30.73	1.205	181.63	90.8	0.228	
20	13C-1,2,3,4,7,8-HxCDD	7.72e5	1.25	NO	0.916	10.000	34.17	0.988	183.53	91.8	0.455	
21	13C-1,2,3,6,7,8-HxCDD	7.23e5	1.27	NO	0.921	10.000	34.28	0.991	171.05	85.5	0.453	
22	13C-1,2,3,4,6,7,8-HpCDD	6.81e5	1.05	NO	0.708	10.000	38.21	1.105	209.42	105	0.672	
23	13C-OCDD	1.04e6	0.88	NO	0.503	10.000	41.67	1.205	450.43	113	0.605	
24	13C-2,3,7,8-TCDF	1.51e6	0.78	NO	0.977	10.000	25.33	0.993	193.51	96.8	0.168	
25	13C-1,2,3,7,8-PeCDF	1.40e6	1.58	NO	0.896	10.000	29.51	1.157	196.53	98.3	0.399	
26	13C-2,3,4,7,8-PeCDF	1.35e6	1.55	NO	0.900	10.000	30.46	1.194	187.99	94.0	0.398	
27	13C-1,2,3,4,7,8-HxCDF	9.90e5	0.52	NO	1.17	10.000	33.25	0.961	184.44	92.2	0.467	
28	13C-1,2,3,6,7,8-HxCDF	1.12e6	0.52	NO	1.52	10.000	33.37	0.965	159.96	80.0	0.359	
29	13C-2,3,4,6,7,8-HxCDF	9.24e5	0.52	NO	1.25	10.000	34.00	0.983	161.06	80.5	0.437	
30	13C-1,2,3,7,8,9-HxCDF	8.61e5	0.51	NO	1.05	10.000	34.99	1.011	178.08	89.0	0.518	

6/30/09

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-9.qld

Last Altered: Tuesday, June 30, 2009 1:19:28 PM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 1:19:53 PM Pacific Daylight Time

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

31	13C-1,2,3,4,6,7,8-HpCDF	7.02e5	0.44	NO	0.868	10.000	36.87	1.066	176.11	88.1	0.664
32	13C-1,2,3,4,7,8,9-HpCDF	6.44e5	0.44	NO	0.727	10.000	38.78	1.121	192.97	96.5	0.794
33	13C-OCDF	1.40e6	0.91	NO	0.760	10.000	41.90	1.211	401.67	100	0.316
34	37Cl-2,3,7,8-TCDD	2.74e5			0.668	10.000	26.12	1.024	70.513	88.1	0.0805
35	13C-1,2,3,4-TCDD	1.16e6	0.80	NO	1.00	10.000	25.51	0.000	200.00	100	0.315
36	13C-1,2,3,4-TCDF	1.60e6	0.78	NO	1.00	10.000	24.10	0.000	200.00	100	0.164
37	13C-1,2,3,7,8,9-HxCDD	9.18e5	1.22	NO	1.00	10.000	34.59	0.000	200.00	100	0.417
38	Total Tetra-Dioxins				1.08	10.000					0.0263
39	Total Penta-Dioxins				1.03	10.000					0.0203
40	Total Hexa-Dioxins				1.13	10.000					0.0650
41	Total Hepta-Dioxins				1.06	10.000					0.0836
42	Total Tetra-Furans				1.09	10.000					0.0160
43	1st Func. Penta-Furans				1.16	10.000					0.0136
44	Total Penta-Furans				1.16	10.000					0.0152
45	Total Hexa-Furans				1.28	10.000					0.0349
46	Total Hepta-Furans				1.69	10.000					0.0471

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090629h2\090629f2-9.qld

Last Altered: Tuesday, June 30, 2009 08:14:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:14:30 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

2,3,7,8-TCDD

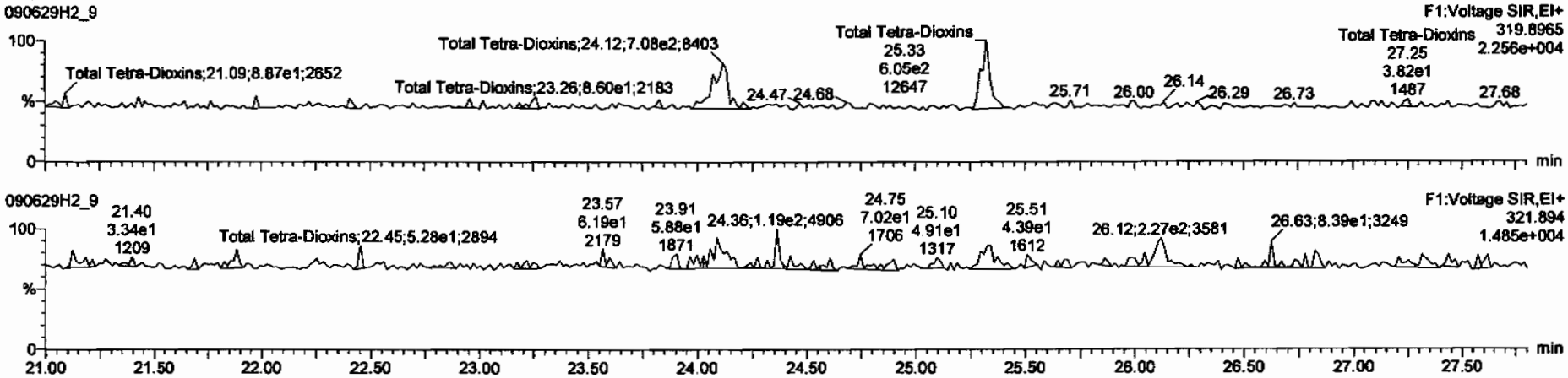

13C-2,3,7,8-TCDD

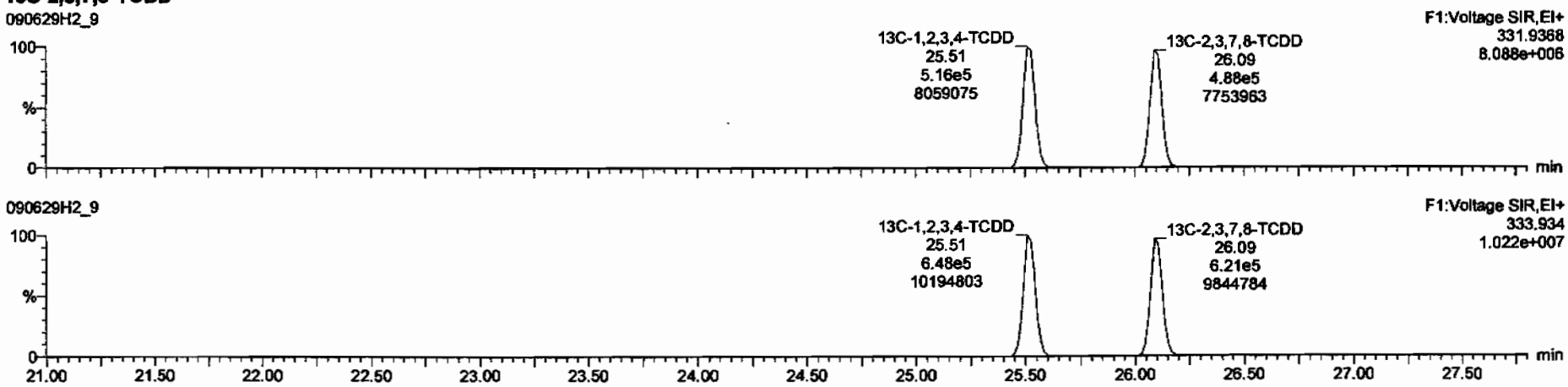

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Last Altered: Tuesday, June 30, 2009 08:14:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:14:30 Pacific Daylight Time

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

37Cl-2,3,7,8-TCDD

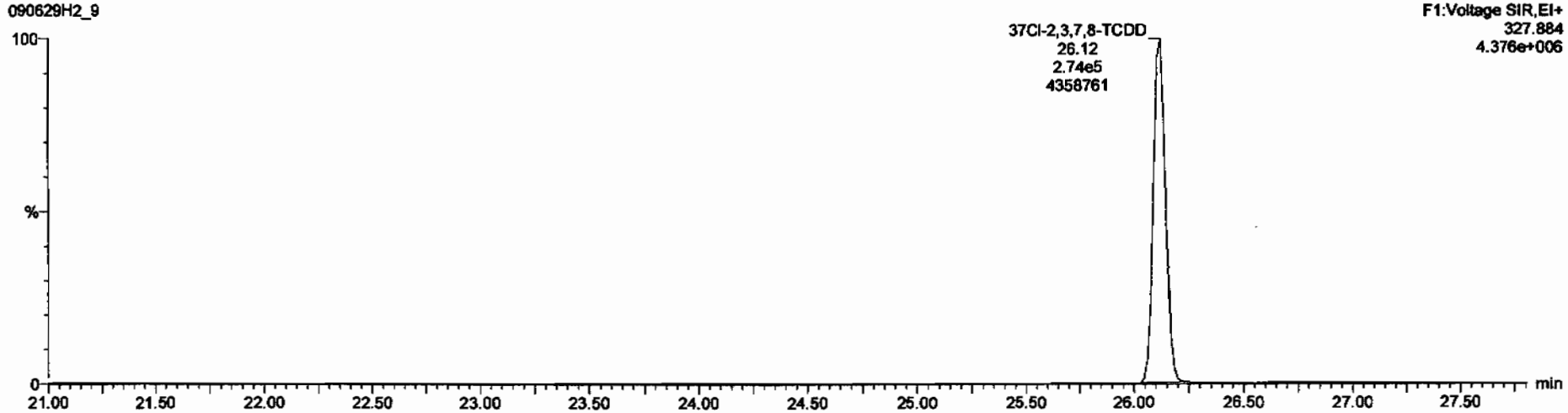

13C-1,2,3,4-TCDD

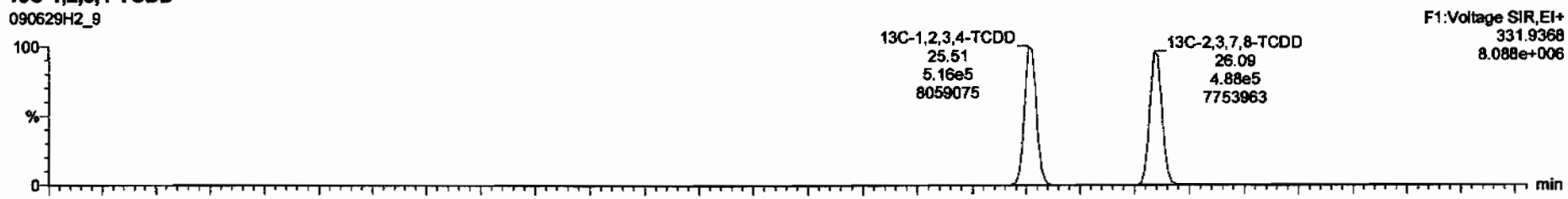

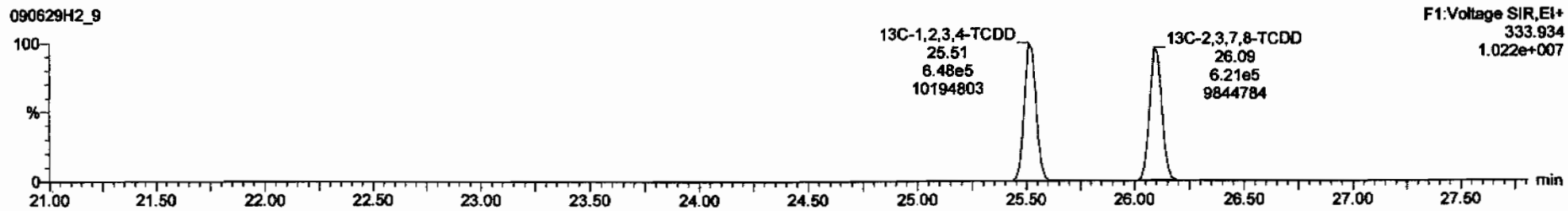

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Printed: Tuesday, June 30, 2009 08:14:30 Pacific Daylight Time

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

1,2,3,7,8-PeCDD

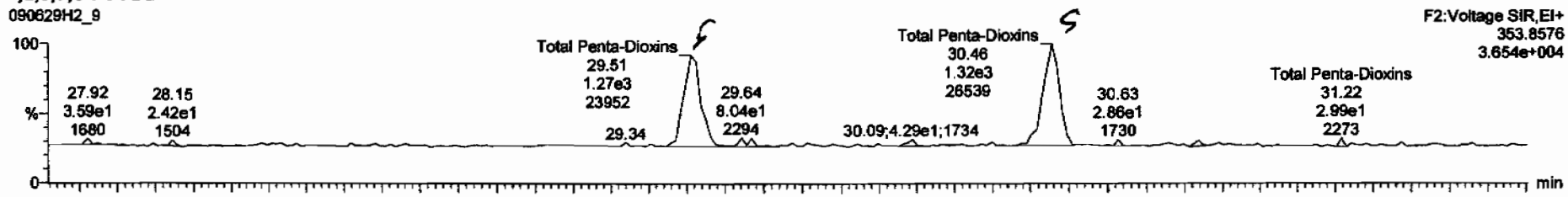

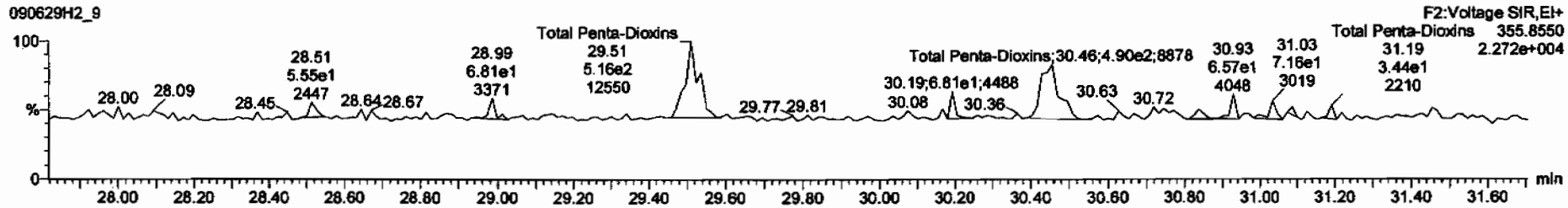

13C-1,2,3,7,8-PeCDD

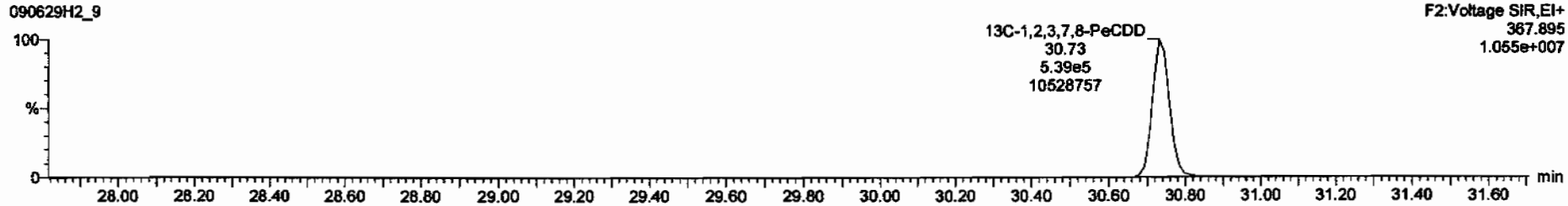

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Last Altered: Tuesday, June 30, 2009 08:14:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:14:30 Pacific Daylight Time

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

1,2,3,4,7,8-HxCDD

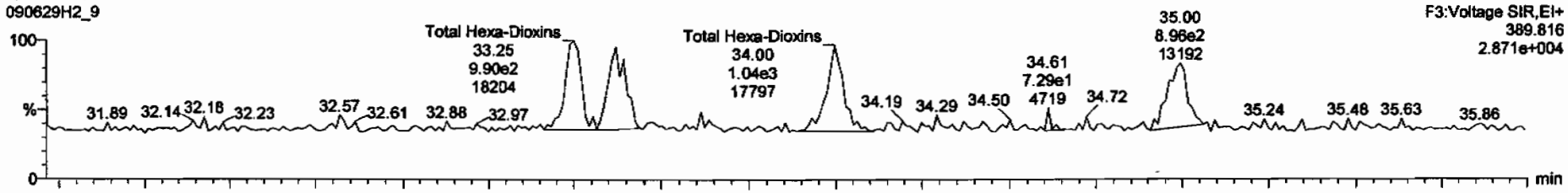

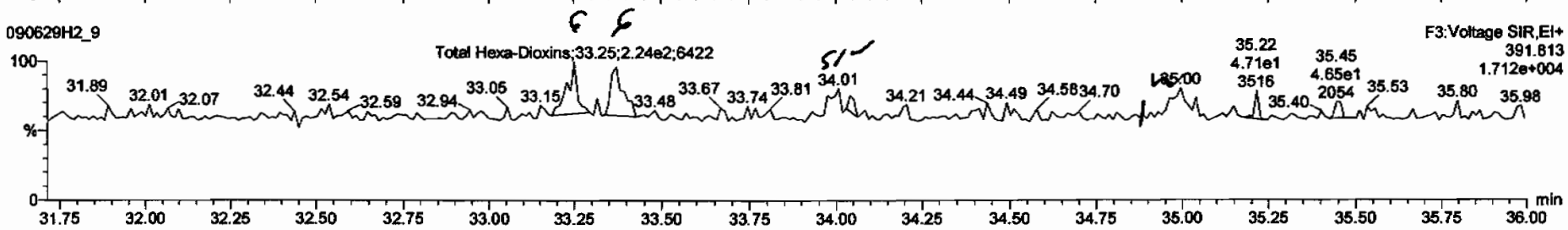

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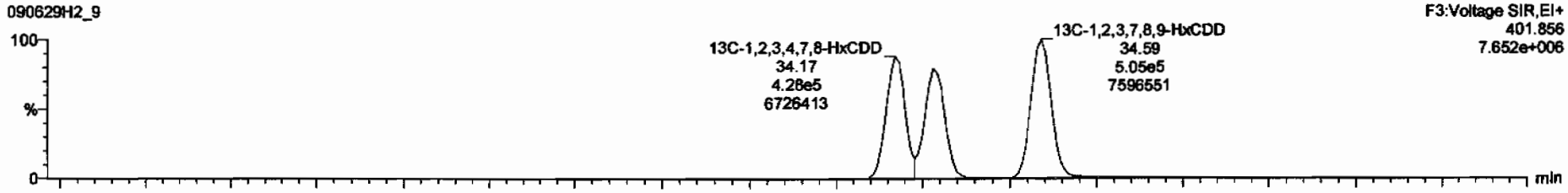

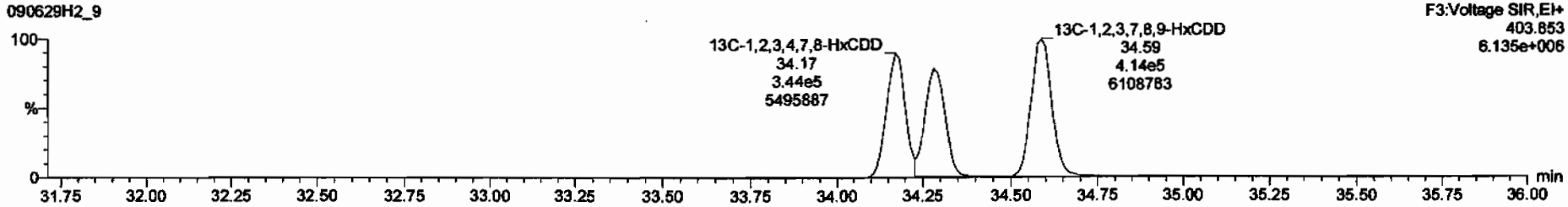

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Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

1,2,3,4,6,7,8-HpCDD

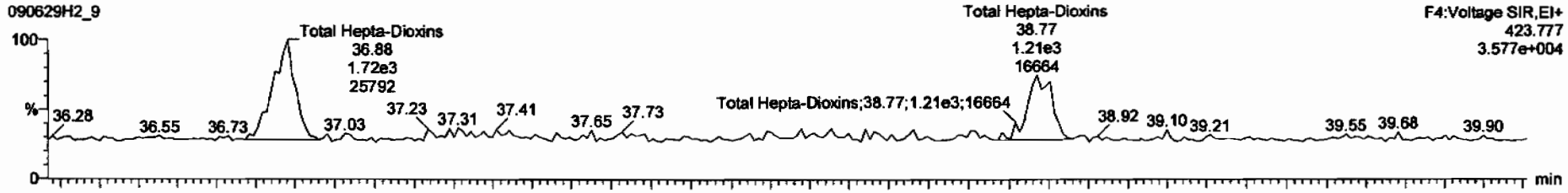

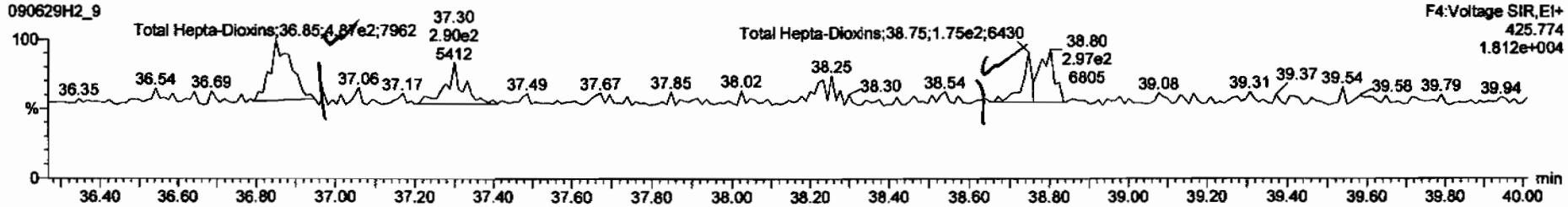

13C-1,2,3,4,6,7,8-HpCDD

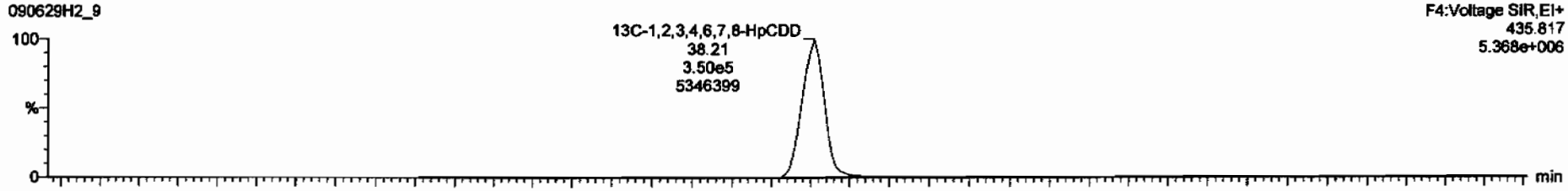

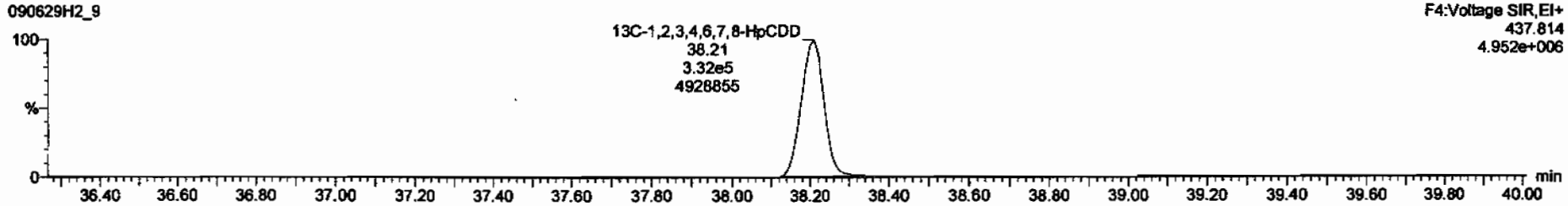

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Last Altered: Tuesday, June 30, 2009 08:14:08 Pacific Daylight Time
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Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

OCDD

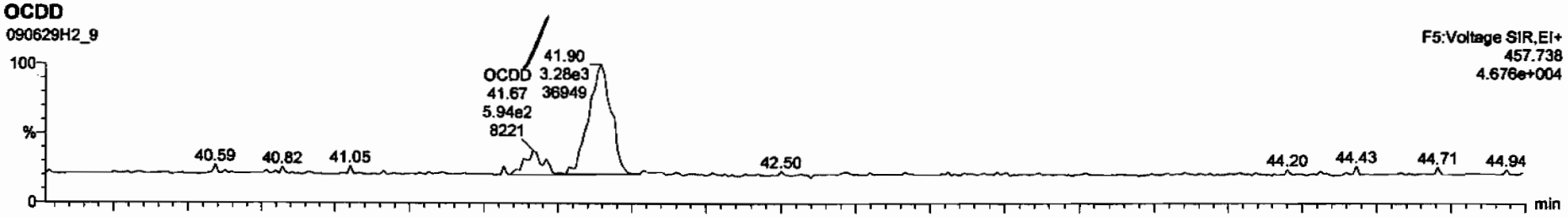

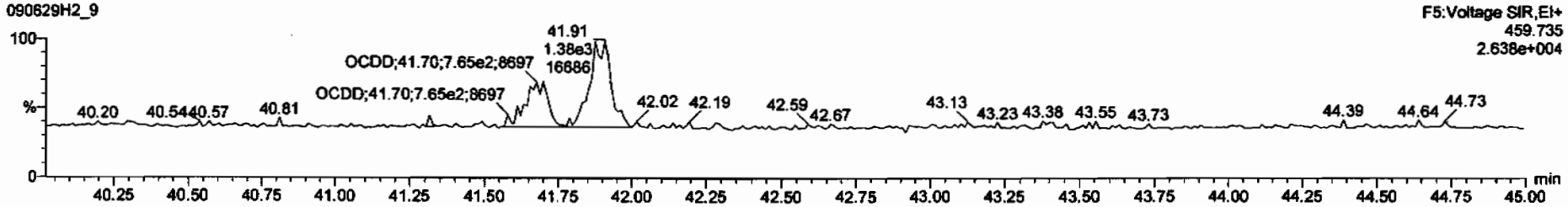

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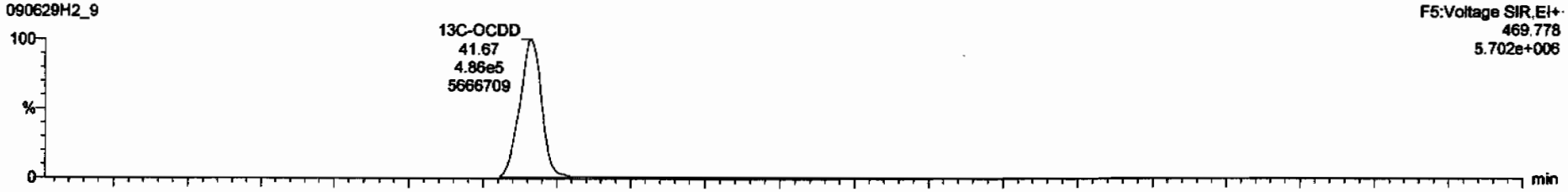

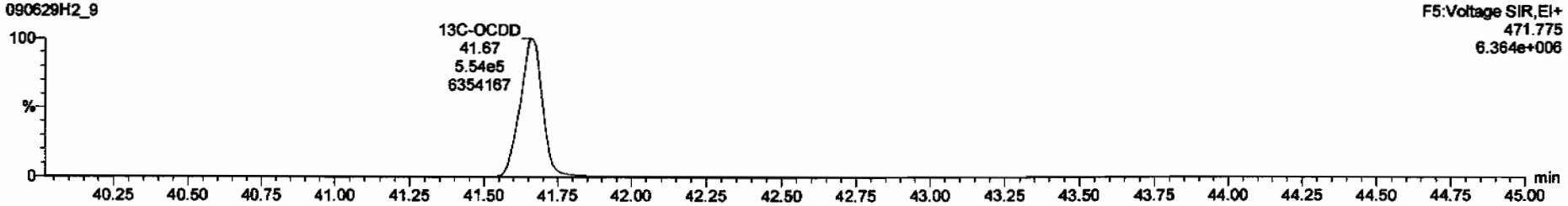

TargetLynx - 090629f2-9.qld - [Chromatogram]

090629H2_9 - 31832_2207_001 CAMO-09-10480 11.15 - CAMO-09-10480

2,3,7,8-TCDF	7.96e1	0.57	YES	1.09	10.000	25.27	0.998	0.00970		0.0401	0.00600
1,2,3,7,8-PeCDF	1.29e2	1.01	YES	1.16	10.000	29.55	1.001	0.0159		0.0414	0.0130
2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0431	
1,2,3,4,7,8-HxCDF	4.48e1	1.58	YES	1.41	10.000	33.20	0.998	0.00639		0.0460	0.00600

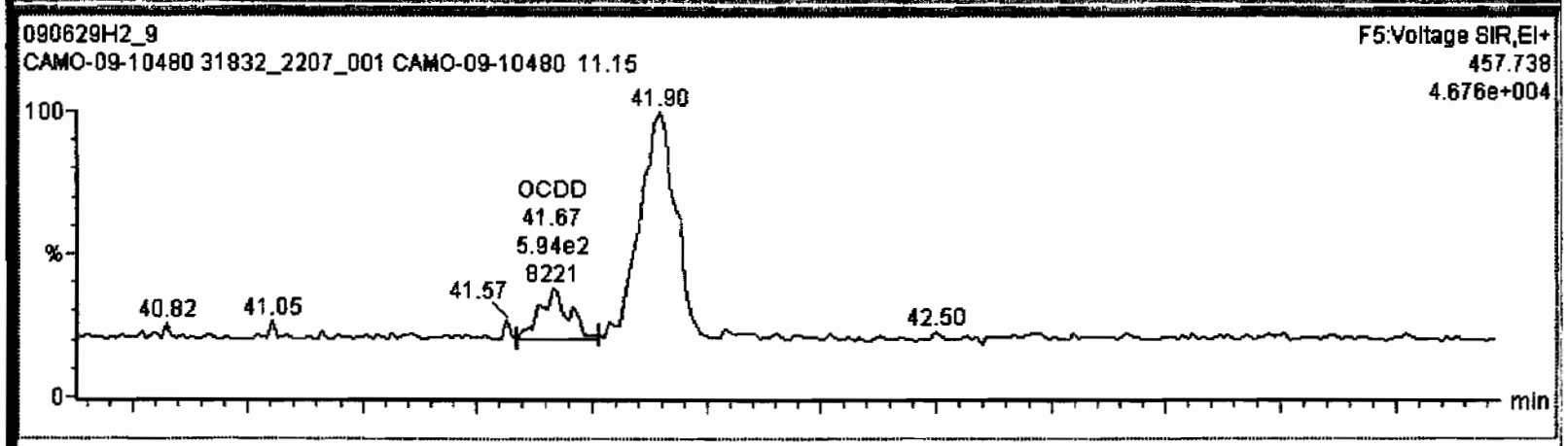

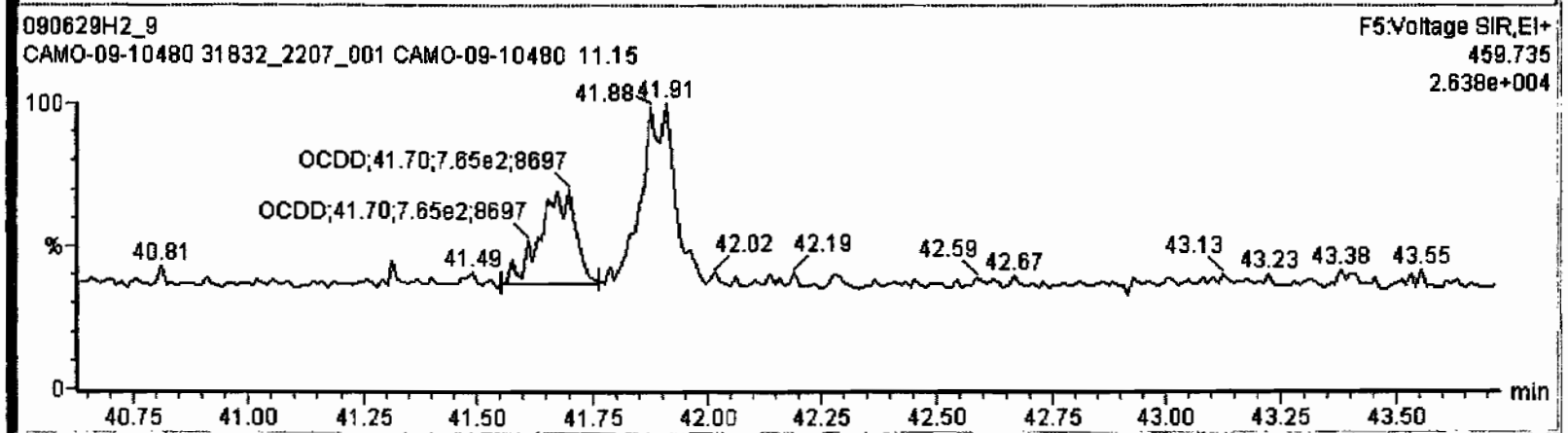

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Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

2,3,7,8-TCDF

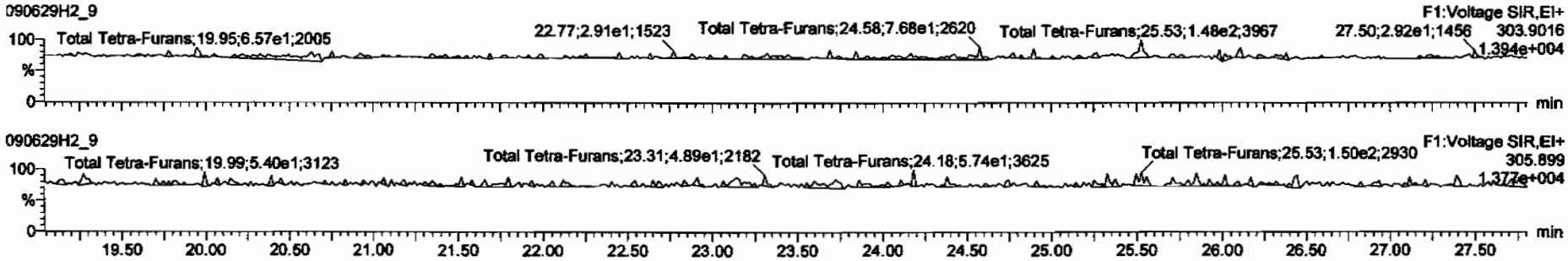

13C-2,3,7,8-TCDF

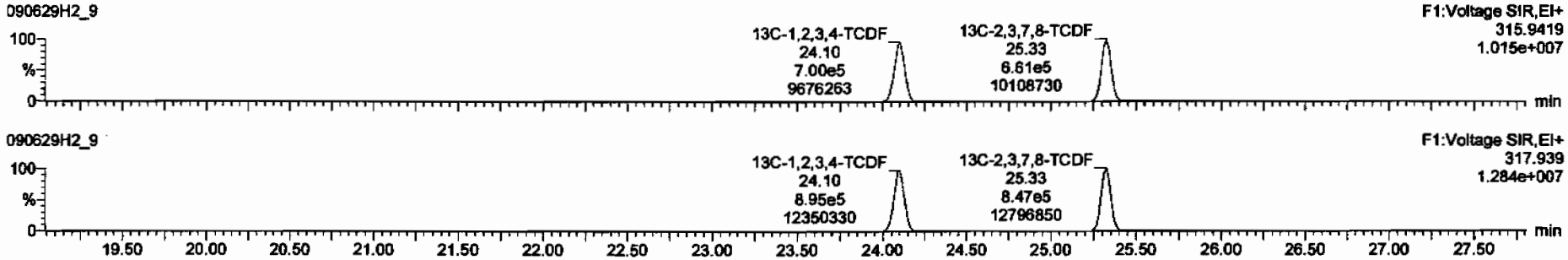

DPE1

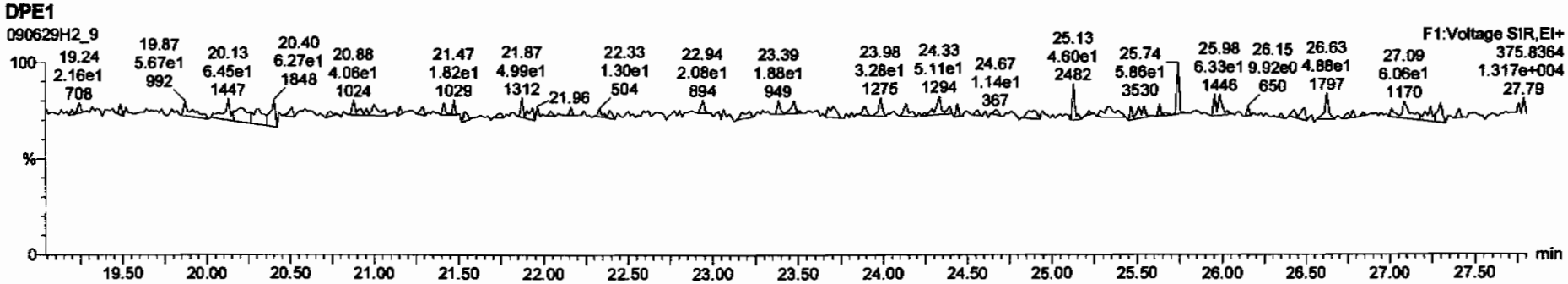

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Last Altered: Tuesday, June 30, 2009 08:14:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:14:30 Pacific Daylight Time

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

1st Func. Penta-Furans

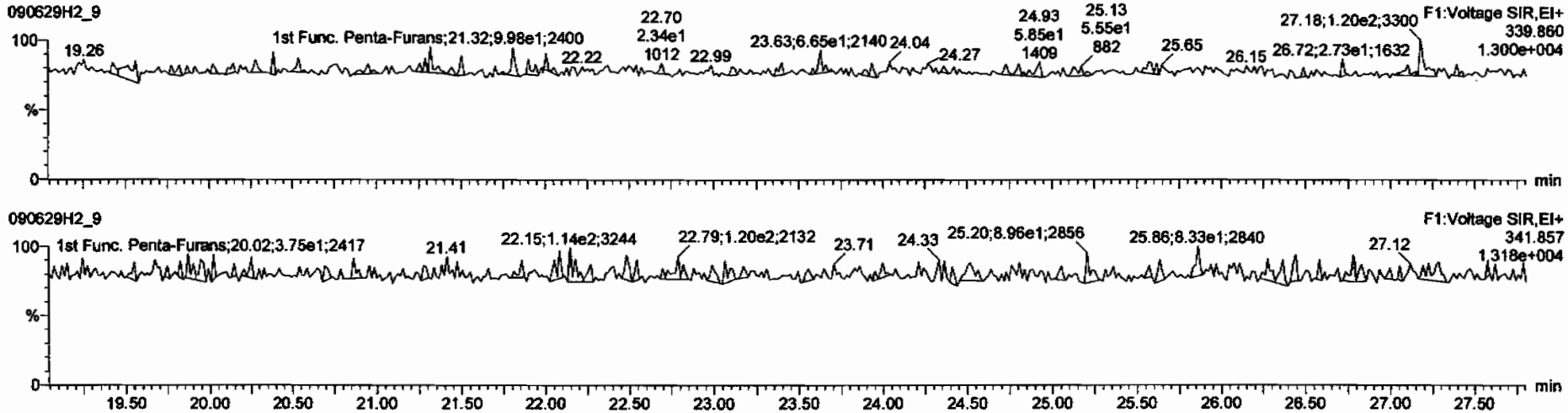

DPE6

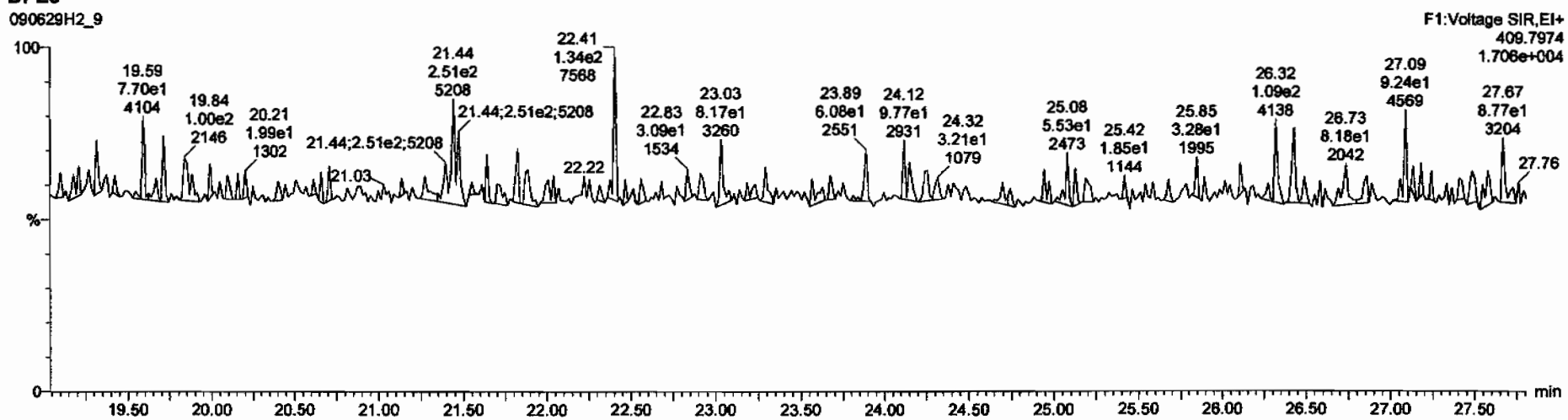

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Last Altered: Tuesday, June 30, 2009 08:14:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:14:30 Pacific Daylight Time

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

1,2,3,7,8-PeCDF

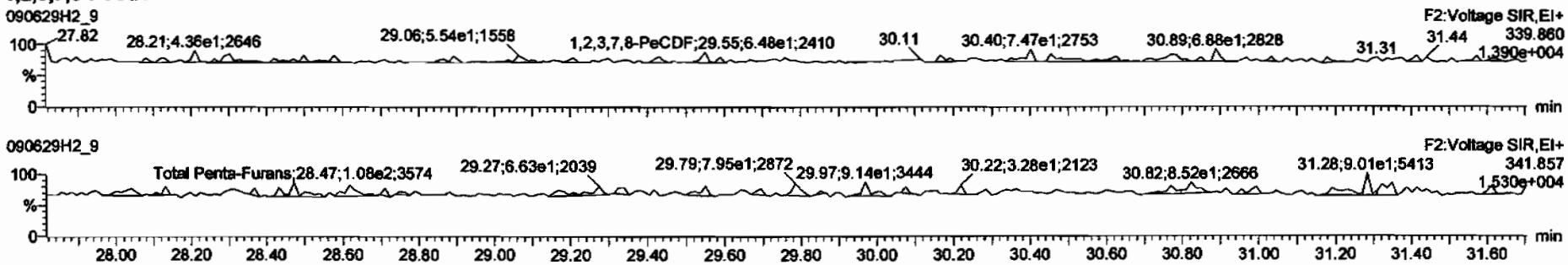

13C-1,2,3,7,8-PeCDF

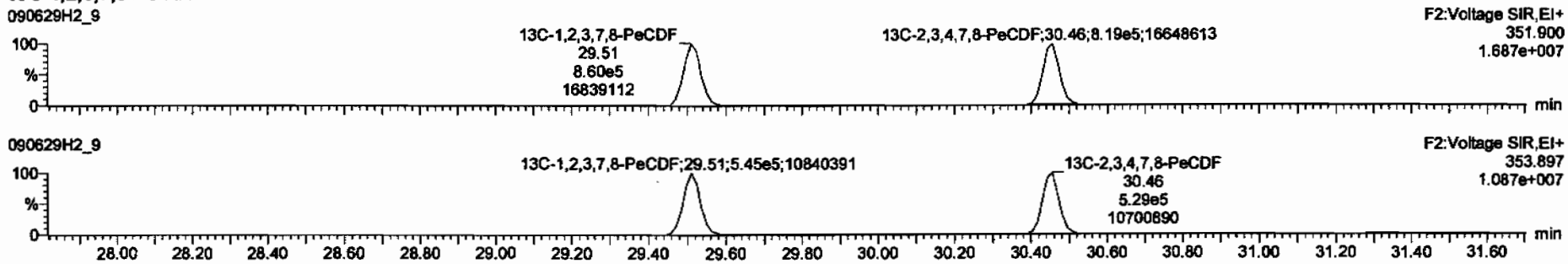

DPE2

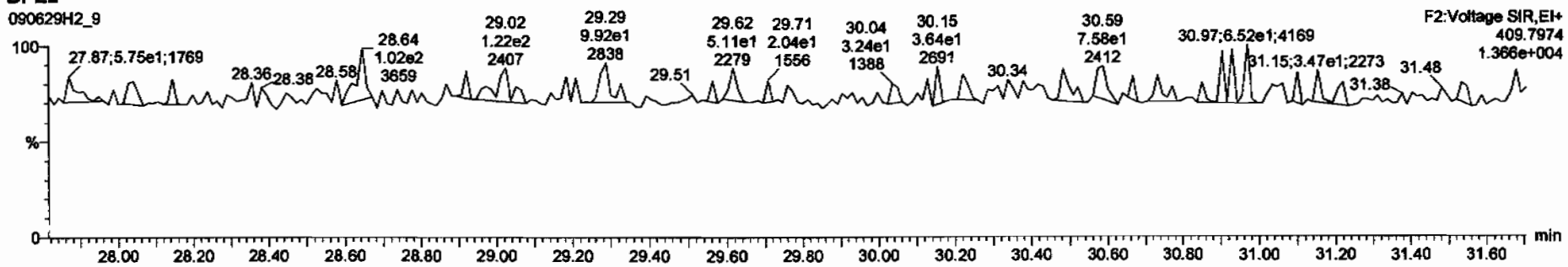

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Last Altered: Tuesday, June 30, 2009 08:14:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:14:30 Pacific Daylight Time

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

1,2,3,4,7,8-HxCDF

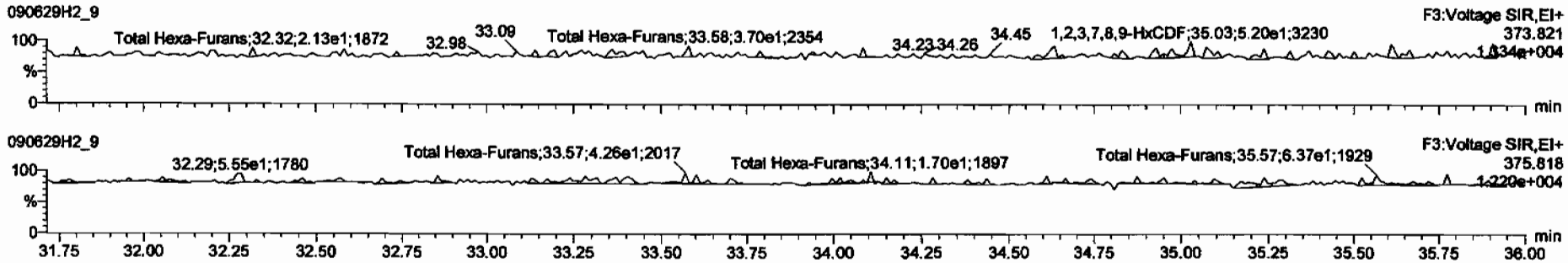

13C-1,2,3,4,7,8-HxCDF

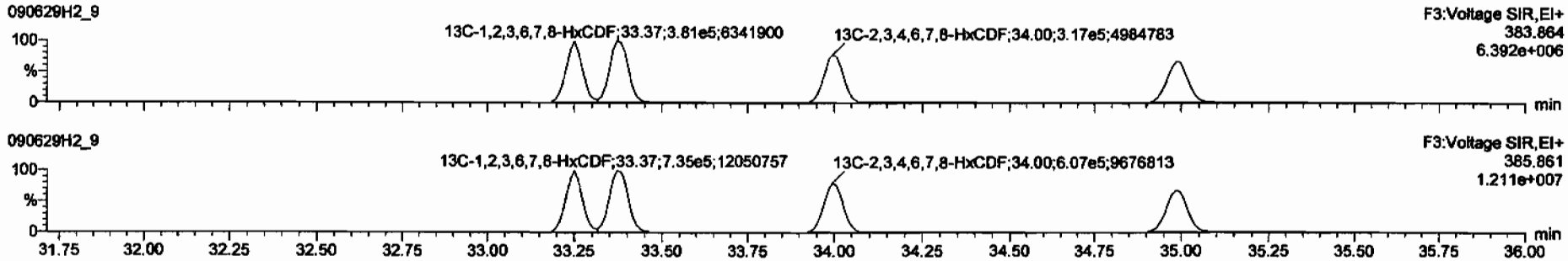

DPE3

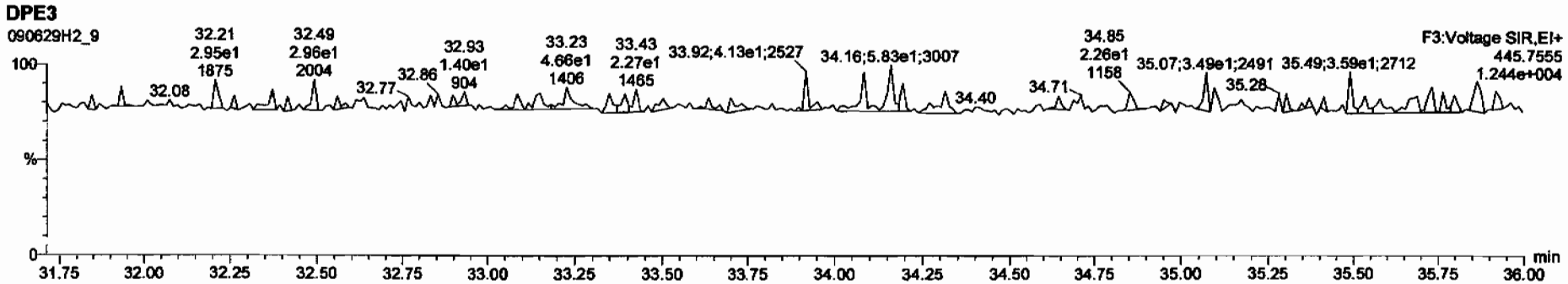

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Printed: Tuesday, June 30, 2009 08:14:30 Pacific Daylight Time

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

1,2,3,4,6,7,8-HpCDF

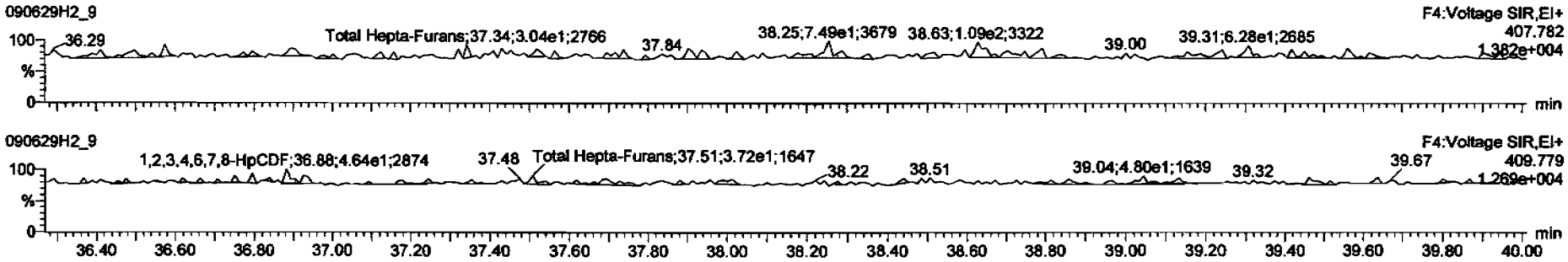

13C-1,2,3,4,6,7,8-HpCDF

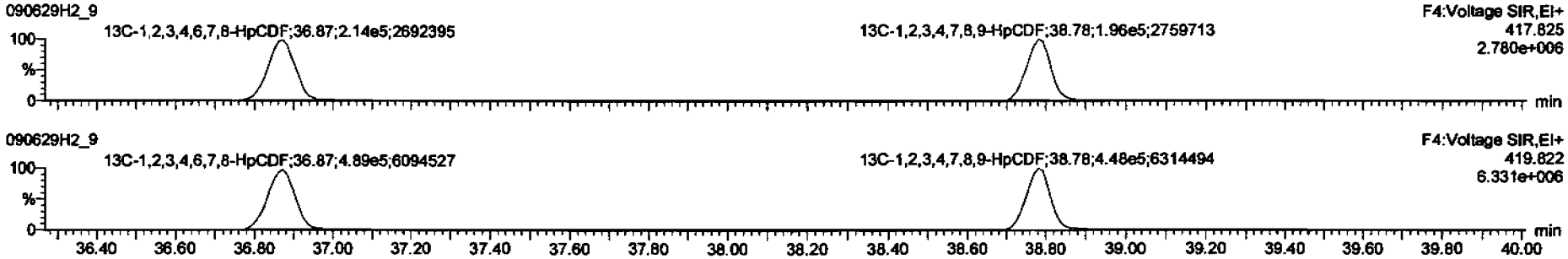

DPE4

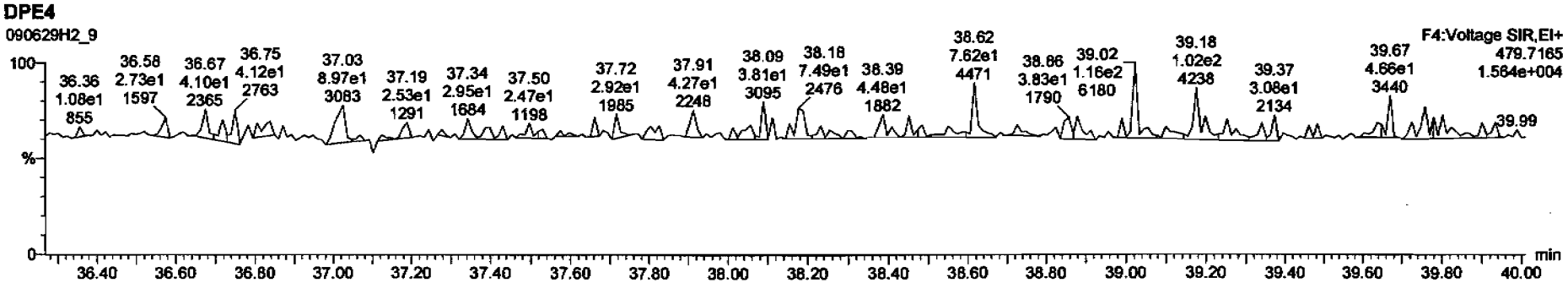

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Last Altered: Tuesday, June 30, 2009 08:14:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:14:30 Pacific Daylight Time

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

OCDF

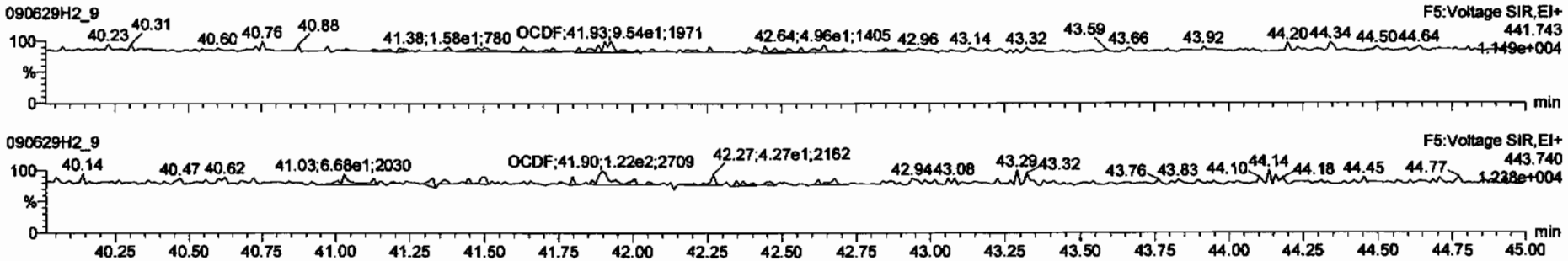

13C-OCDF

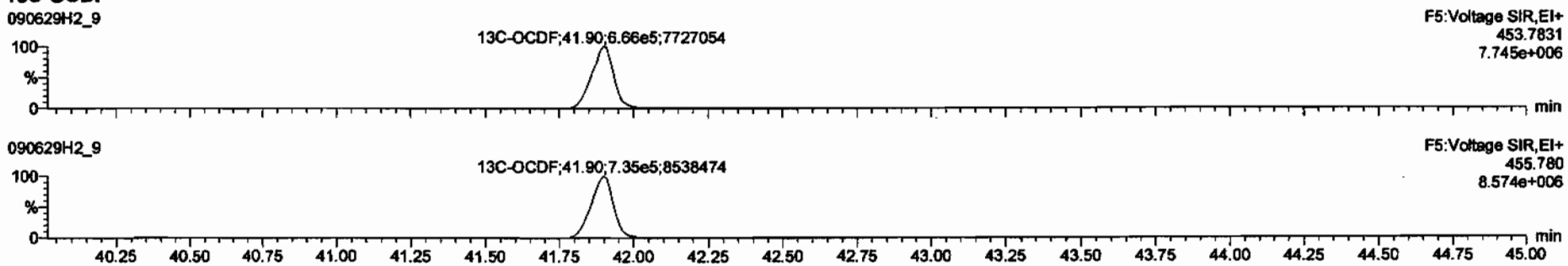

DPE5

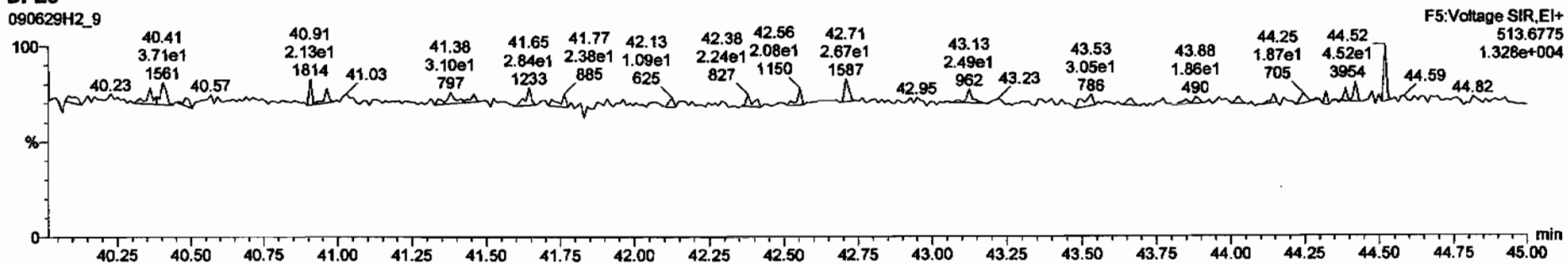

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Last Altered: Tuesday, June 30, 2009 08:14:08 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:14:30 Pacific Daylight Time

Name: 090629H2_9, Date: 29-Jun-2009, Time: 20:38:54, ID: 31832_2207_001 CAMO-09-10480 11.15, Description: CAMO-09-10480

PFK1

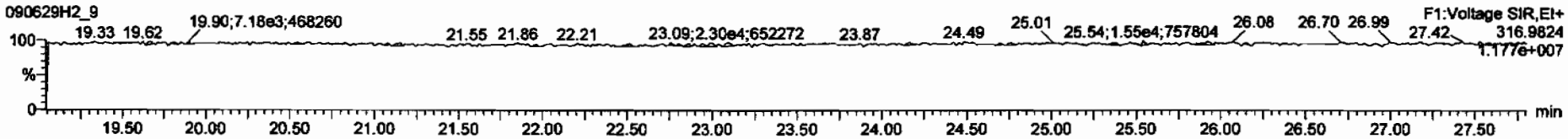

PFK2

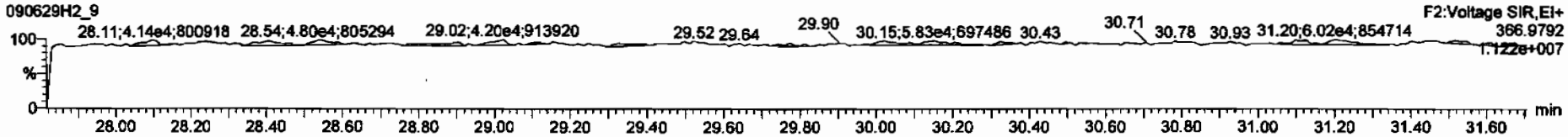

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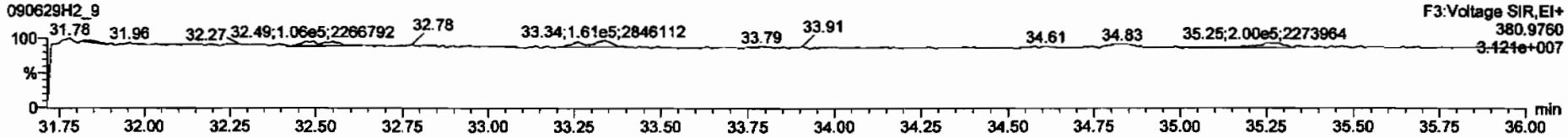

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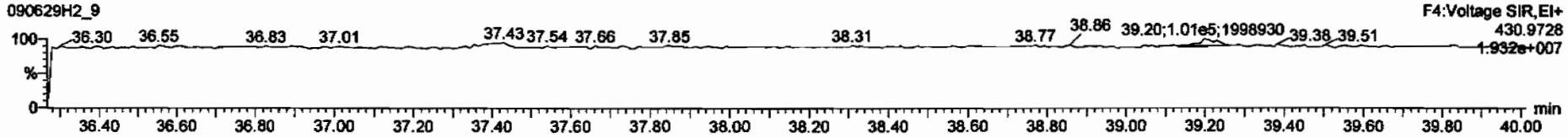

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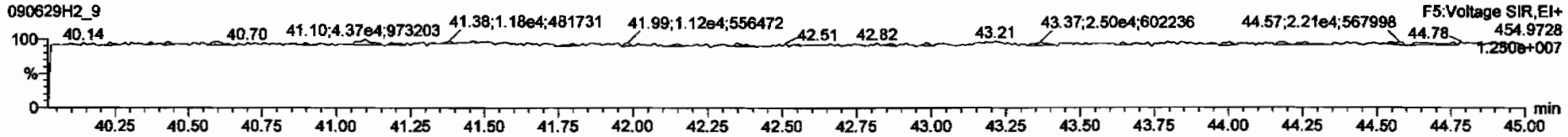

CALIBRATION DATA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1

GC Column ID: DB-5
Analysis Date: 29-Jun-09 Analysis Time: 14:01:48

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	NO	9.71	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	46.2	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	NO	46.2	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	NO	44.8	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	46.5	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	46.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.89	0.76-1.02	NO	88.2	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.74	0.65-0.89	NO	8.51	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	42.8	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	42.3	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.6	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	45.2	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	NO	44.6	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	45.5	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	46.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	87.4	63.0	159.0	Yes	80.0	120.0	Yes

8290 only

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/25/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_1

CCAL ID: ST090629H2-1

GC Column ID: DB-5
Analysis Date: 29-Jun-09 Analysis Time: 14:01:48

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	100	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	97.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	111	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	257	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	108	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	103	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	NO	102	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	98.9	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	92.1	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	92.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	96.1	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	NO	99.7	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	103	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	224	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					10.0	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

8290 only

Analyst: [signature]
Date: 6/29/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, June 29, 2009 14:58:46 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:59:04 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.73
2	1,2,8,9-TCDD (Last)	26.98
3	1,2,4,7,9-PeCDD (First)	28.62
4	1,2,3,8,9-PeCDD (Last)	31.13
5	12,4,6,7,9-HxCDD (First)	32.59
6	1,2,3,7,8,9-HxCDD (Last)	34.60
7	1,2,3,4,6,7,9-HpCDD (First)	37.30
8	1,2,3,4,6,7,8-HpCDD (Last)	38.22
9	1,3,6,8-TCDF (First)	20.65
10	1,2,8,9-TCDF (Last)	27.15
11	1,3,4,6,8-PeCDF (First)	27.07
12	1,2,3,8,9-PeCDF (Last)	31.39
13	1,2,3,4,6,8-HxCDF (First)	32.03
14	1,2,3,4,8,9-HxCDF (Last)	35.00
15	1,2,3,4,6,7,8-HpCDF (First)	36.89
16	1,2,3,4,7,8,9-HpCDF (Last)	38.79

6/29/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090629H2-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090629H2_1

Analysis Date: 29-Jun-09

Analysis Time: 14:01:48

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.024	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 6/29/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090629H2-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090629H2_1

Analysis Date: 29-Jun-09

Analysis Time: 14:01:48

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.121	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.211	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 6/29/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:22 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.17e4	0.81	NO	1.08	1.000	26.12	1.001	9.7118	97.1	0.0460	9.7118
2	1,2,3,7,8-PeCDD	2.60e5	0.61	NO	1.03	1.000	30.76	1.001	46.227	92.5	0.121	46.227
3	1,2,3,4,7,8-HxCDD	2.30e5	1.29	NO	1.00	1.000	34.19	1.001	46.188	92.4	0.161	46.188
4	1,2,3,6,7,8-HxCDD	2.39e5	1.22	NO	1.13	1.000	34.30	1.001	44.764	89.5	0.165	44.764
5	1,2,3,7,8,9-HxCDD	2.49e5	1.23	NO	1.10	1.000	34.60	1.009	46.510	93.0	0.158	46.510
6	1,2,3,4,6,7,8-HpCDD	2.03e5	1.05	NO	1.06	1.000	38.22	1.000	46.004	92.0	0.227	46.004
7	OCDD	3.54e5	0.89	NO	1.18	1.000	41.69	1.000	88.157	88.2	0.122	88.157
8	2,3,7,8-TCDF	9.14e4	0.74	NO	1.09	1.000	25.34	1.001	8.5130	85.1	0.0431	8.5130
9	1,2,3,7,8-PeCDF	4.26e5	1.60	NO	1.16	1.000	29.52	1.000	42.829	85.7	0.0905	42.829
10	2,3,4,7,8-PeCDF	4.04e5	1.56	NO	1.12	1.000	30.47	1.000	42.300	84.6	0.0888	42.300
11	1,2,3,4,7,8-HxCDF	3.75e5	1.27	NO	1.41	1.000	33.26	1.000	43.569	87.1	0.132	43.569
12	1,2,3,6,7,8-HxCDF	4.08e5	1.29	NO	1.22	1.000	33.39	1.000	45.197	90.4	0.132	45.197
13	2,3,4,6,7,8-HxCDF	3.49e5	1.24	NO	1.28	1.000	34.02	1.001	44.630	89.3	0.156	44.630
14	1,2,3,7,8,9-HxCDF	3.01e5	1.27	NO	1.26	1.000	35.00	1.000	44.852	89.7	0.212	44.852
15	1,2,3,4,6,7,8-HpCDF	3.51e5	1.04	NO	1.69	1.000	36.89	1.001	45.504	91.0	0.164	45.504
16	1,2,3,4,7,8,9-HpCDF	2.71e5	1.06	NO	1.48	1.000	38.79	1.000	46.451	92.9	0.194	46.451
17	OCDF	4.29e5	0.91	NO	1.10	1.000	41.92	1.001	87.361	87.4	0.166	87.361
18	13C-2,3,7,8-TCDD	6.85e5	0.79	NO	1.01	1.000	26.09	1.023	102.81	103	0.182	
19	13C-1,2,3,7,8-PeCDD	5.45e5	0.64	NO	0.827	1.000	30.73	1.205	100.32	100	0.177	
20	13C-1,2,3,4,7,8-HxCDD	4.98e5	1.24	NO	0.916	1.000	34.17	0.988	103.08	103	0.348	
21	13C-1,2,3,6,7,8-HxCDD	4.75e5	1.24	NO	0.921	1.000	34.28	0.991	97.757	97.8	0.346	
22	13C-1,2,3,4,6,7,8-HpCDD	4.14e5	1.07	NO	0.708	1.000	38.21	1.105	110.81	111	0.366	
23	13C-OCDD	6.81e5	0.89	NO	0.503	1.000	41.68	1.205	256.92	128	0.308	
24	13C-2,3,7,8-TCDF	9.87e5	0.78	NO	0.977	1.000	25.31	0.992	108.47	108	0.129	
25	13C-1,2,3,7,8-PeCDF	8.58e5	1.56	NO	0.896	1.000	29.51	1.157	102.85	103	0.256	
26	13C-2,3,4,7,8-PeCDF	8.53e5	1.55	NO	0.900	1.000	30.46	1.194	101.87	102	0.255	
27	13C-1,2,3,4,7,8-HxCDF	6.10e5	0.53	NO	1.17	1.000	33.25	0.961	98.948	98.9	0.314	
28	13C-1,2,3,6,7,8-HxCDF	7.38e5	0.53	NO	1.52	1.000	33.38	0.965	92.136	92.1	0.242	
29	13C-2,3,4,6,7,8-HxCDF	6.12e5	0.52	NO	1.25	1.000	34.00	0.983	92.862	92.9	0.294	
30	13C-1,2,3,7,8,9-HxCDF	5.34e5	0.51	NO	1.05	1.000	34.98	1.011	96.148	96.1	0.348	

6/25/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:22 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	4.56e5	0.45	NO	0.868	1.000	36.87	1.066	99.653	99.7	0.432
32	13C-1,2,3,4,7,8,9-HpCDF	3.93e5	0.45	NO	0.727	1.000	38.79	1.121	102.70	103	0.516
33	13C-OCDF	8.97e5	0.88	NO	0.760	1.000	41.90	1.211	223.90	112	0.228
34	37Cl-2,3,7,8-TCDD	4.39e4			0.668	1.000	26.12	1.024	9.9972	100	0.0673
35	13C-1,2,3,4-TCDD	6.56e5	0.78	NO	1.00	1.000	25.51	0.000	100.00	100	0.184
36	13C-1,2,3,4-TCDF	9.31e5	0.78	NO	1.00	1.000	24.09	0.000	100.00	100	0.126
37	13C-1,2,3,7,8,9-HxCDD	5.27e5	1.24	NO	1.00	1.000	34.59	0.000	100.00	100	0.319

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 8:02:11 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:02:26 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

090629H2_1	ST090629H2-1 1613 CS3 080917I	29-Jun-09	14:01:48
090629H2_2	0_2207_OPR001	29-Jun-09	14:52:10
090629H2_3	solvent blank	29-Jun-09	15:41:42
090629H2_4	0_2207_MB001	29-Jun-09	16:31:15
090629H2_5	31831_2207_001 CAMO-09-10460 10.45	29-Jun-09	17:20:45
090629H2_6	31831_2207_002 CAMO-09-10461 11.42	29-Jun-09	18:10:16
090629H2_7	31831_2207_003 CAMO-09-10462 10.55	29-Jun-09	18:59:49
090629H2_8	31831_2207_004 CAMO-09-10467 10.57	29-Jun-09	19:49:21
090629H2_9	31832_2207_001 CAMO-09-10480 11.15	29-Jun-09	20:38:54
090629H2_10	31833_2207_001 CAMO-09-6005 12.18	29-Jun-09	21:28:25
090629H2_11	31833_2207_002 CAMO-09-6047 12.12	29-Jun-09	22:17:56
090629H2_12	31837_2207_001 CAMO-09-6006 11.31	29-Jun-09	23:07:29
090629H2_13	31837_2207_002 CAMO-09-6007 10.42	29-Jun-09	23:56:59
090629H2_14	31837_2207_003 CAMO-09-6008 13.14	30-Jun-09	00:46:29
090629H2_15	31837_2207_004 CAMO-09-6009 12.25	30-Jun-09	01:36:02
090629H2_16	solvent blank	30-Jun-09	02:25:34
090629H2_17	ST090629H2-2 1613 CS3 080917I	30-Jun-09	03:15:05

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090629H2-1 End Calibration ID: ST090629H2-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range? (A)	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits		NA
-S/N > 2.5:1		NA
-CS1 within 12-hour clock		NA

Comments: (A) 8290 only J 6/30/09

Reviewed by: DMS 6/30/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 mh

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, June 29, 2009 13:58:42 Pacific Daylight Time

M 292.9824 R 12499

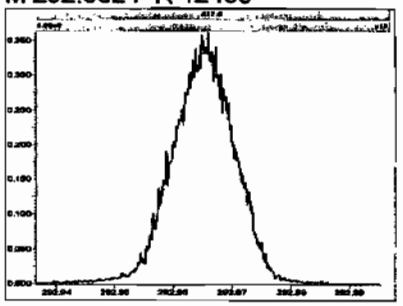

M 304.9824 R 12687

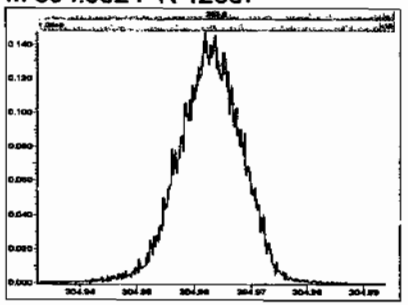

M 318.9792 R 12628

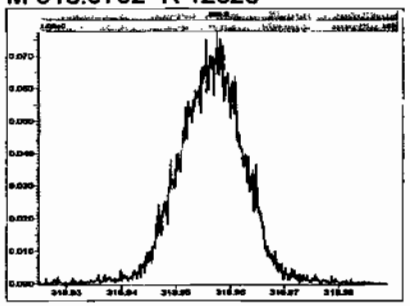

M 330.9792 R 11904

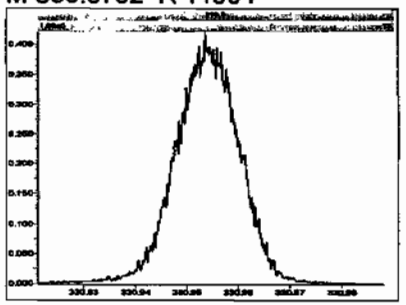

M 342.9792 R 11734

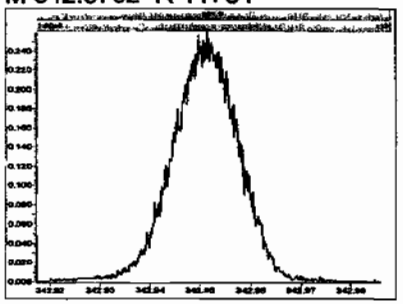

M 354.9792 R 11416

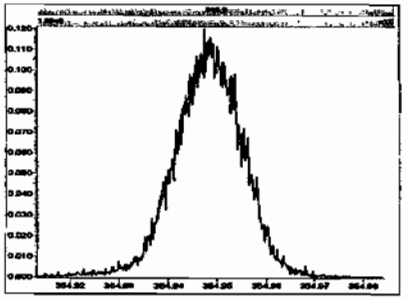

M 366.9792 R 11573

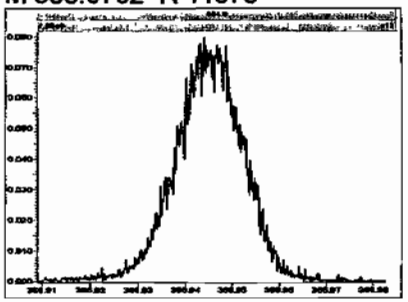

M 380.9760 R 11064

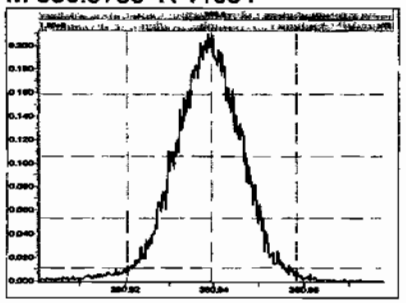

M 392.9760 R 11468

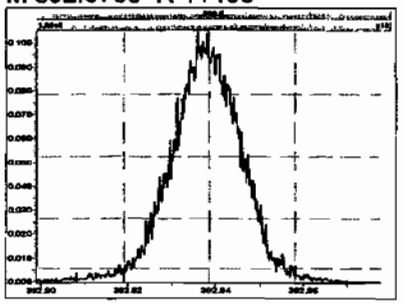

M 404.9760 R 10964

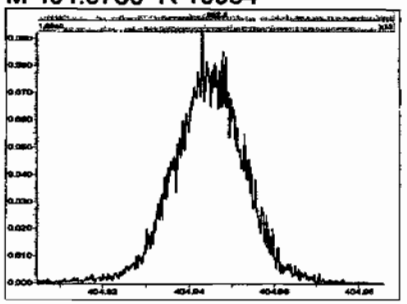

M 416.9760 R 10681

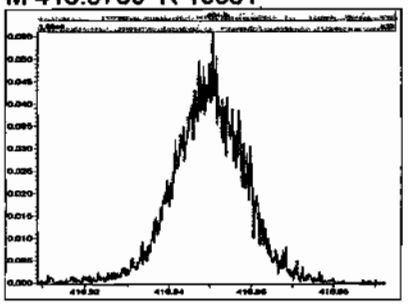

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, June 29, 2009 13:59:22 Pacific Daylight Time

M 330.9792 R 12376

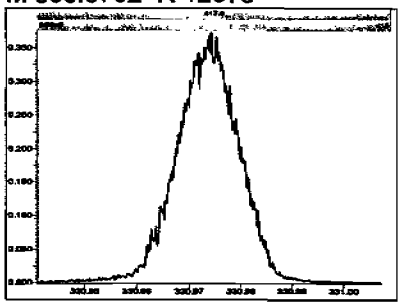

M 342.9792 R 12624

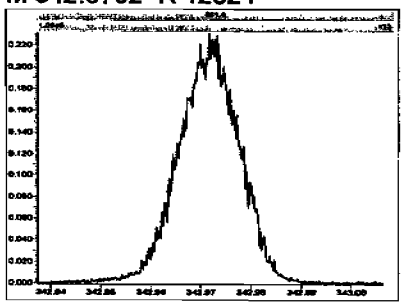

M 354.9792 R 12137

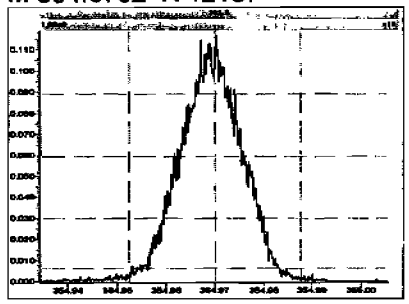

M 366.9792 R 11848

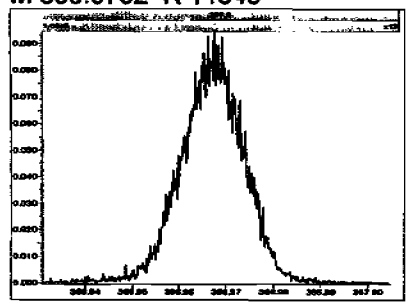

M 380.9760 R 12075

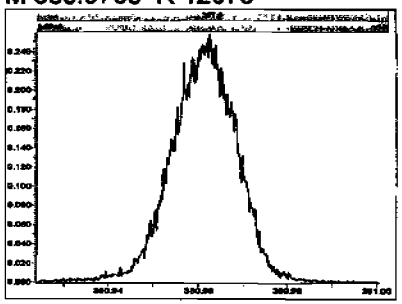

M 392.9760 R 11570

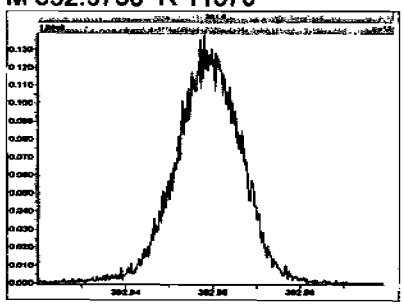

M 404.9760 R 11736

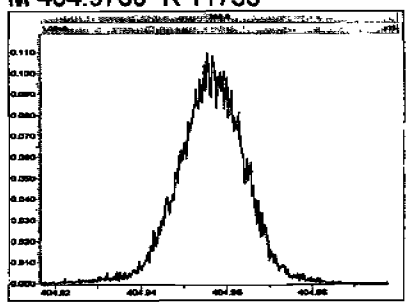

M 416.9760 R 11850

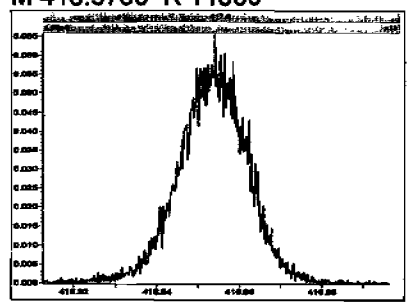

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, June 29, 2009 14:00:04 Pacific Daylight Time

M 366.9792 R 12500

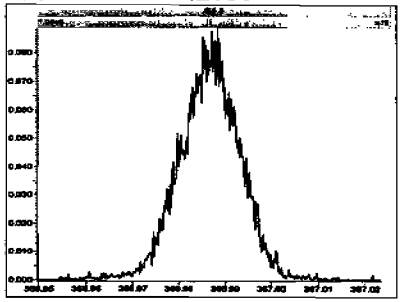

M 380.9760 R 12134

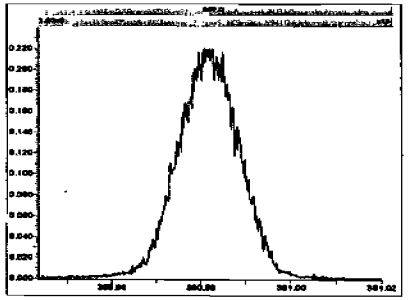

M 392.9760 R 12079

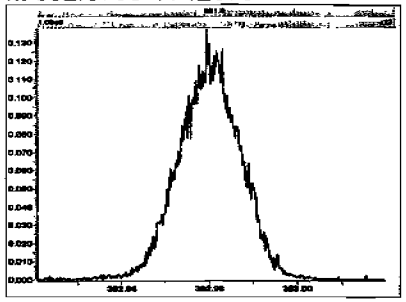

M 404.9760 R 12136

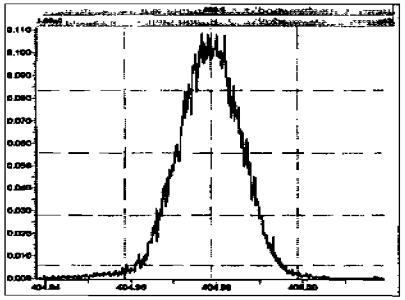

M 416.9760 R 12379

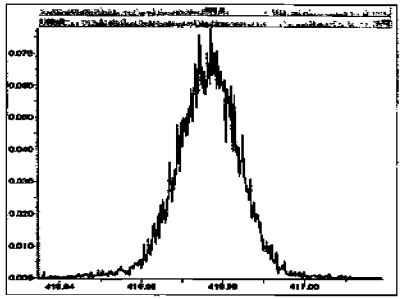

M 430.9728 R 11789

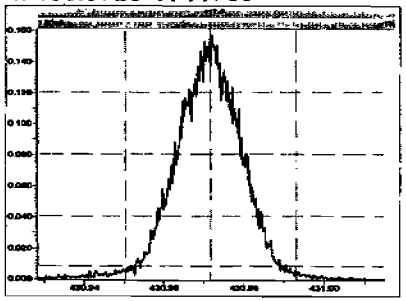

M 442.9728 R 12077

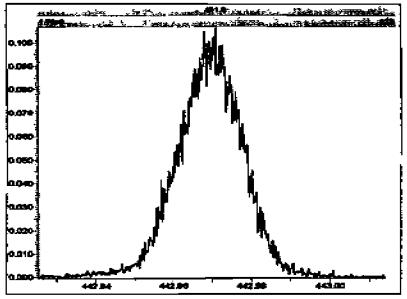

M 454.9728 R 12379

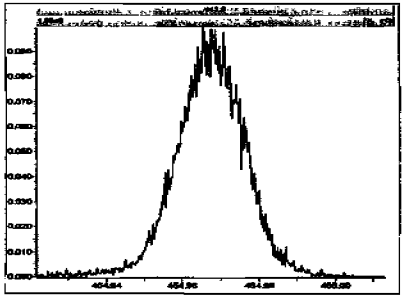

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, June 29, 2009 14:00:39 Pacific Daylight Time

M 404.9760 R 13086

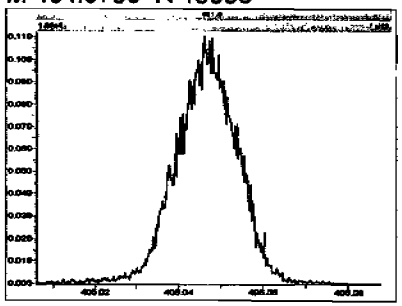

M 416.9760 R 13021

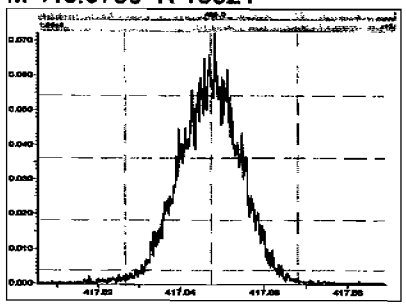

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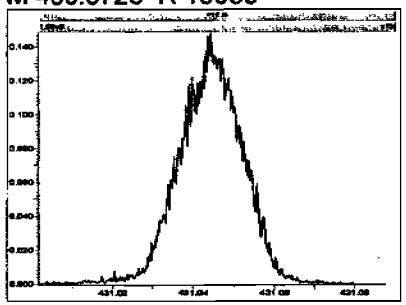

M 442.9728 R 12692

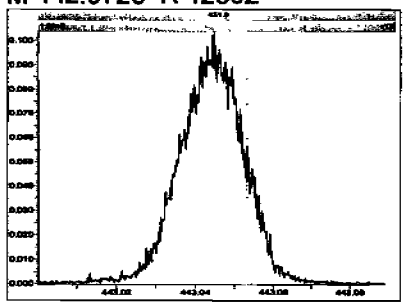

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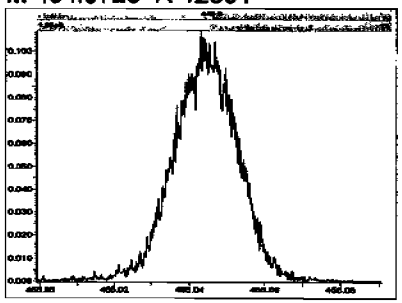

M 466.9728 R 12952

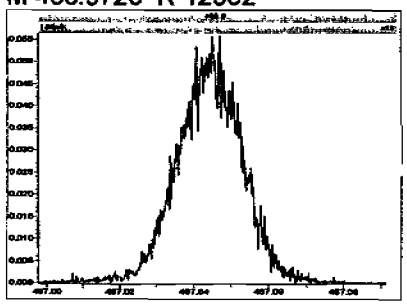

M 480.9696 R 12628

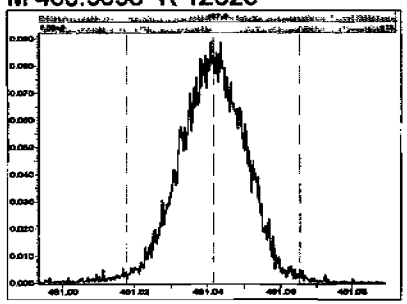

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Printed: Monday, June 29, 2009 14:01:11 Pacific Daylight Time

M 430.9728 R 12132

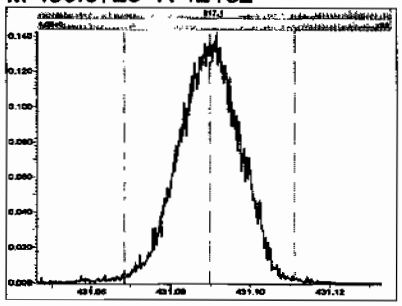

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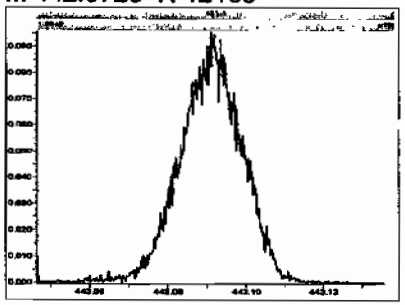

M 454.9728 R 12317

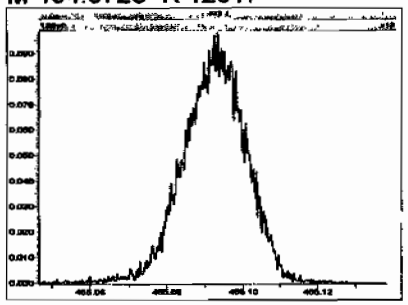

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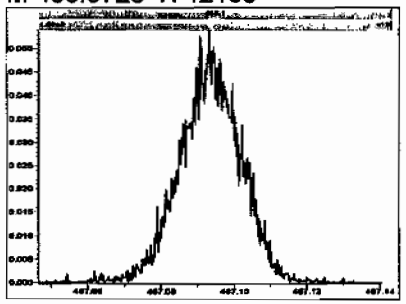

M 480.9696 R 12499

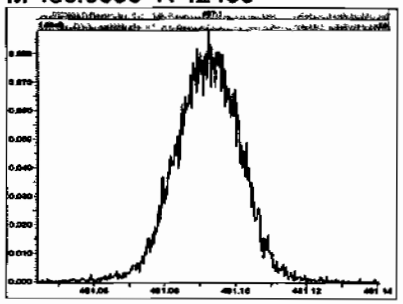

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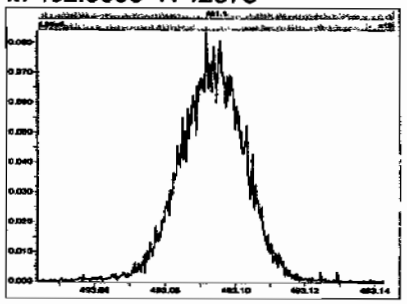

M 504.9696 R 12019

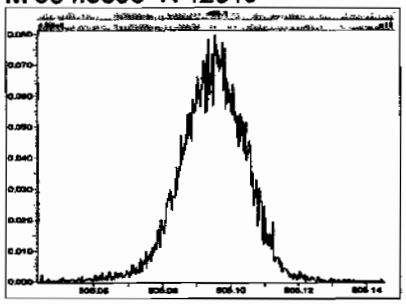

M 516.9697 R 11576

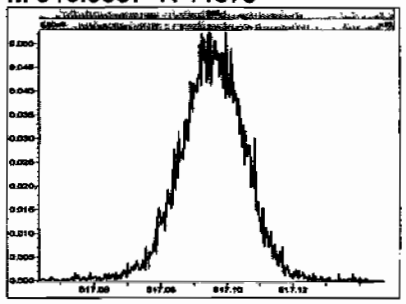

Vista Analytical Laboratory

Dataset: Untitled

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Printed: Monday, June 29, 2009 14:59:04 Pacific Daylight Time

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

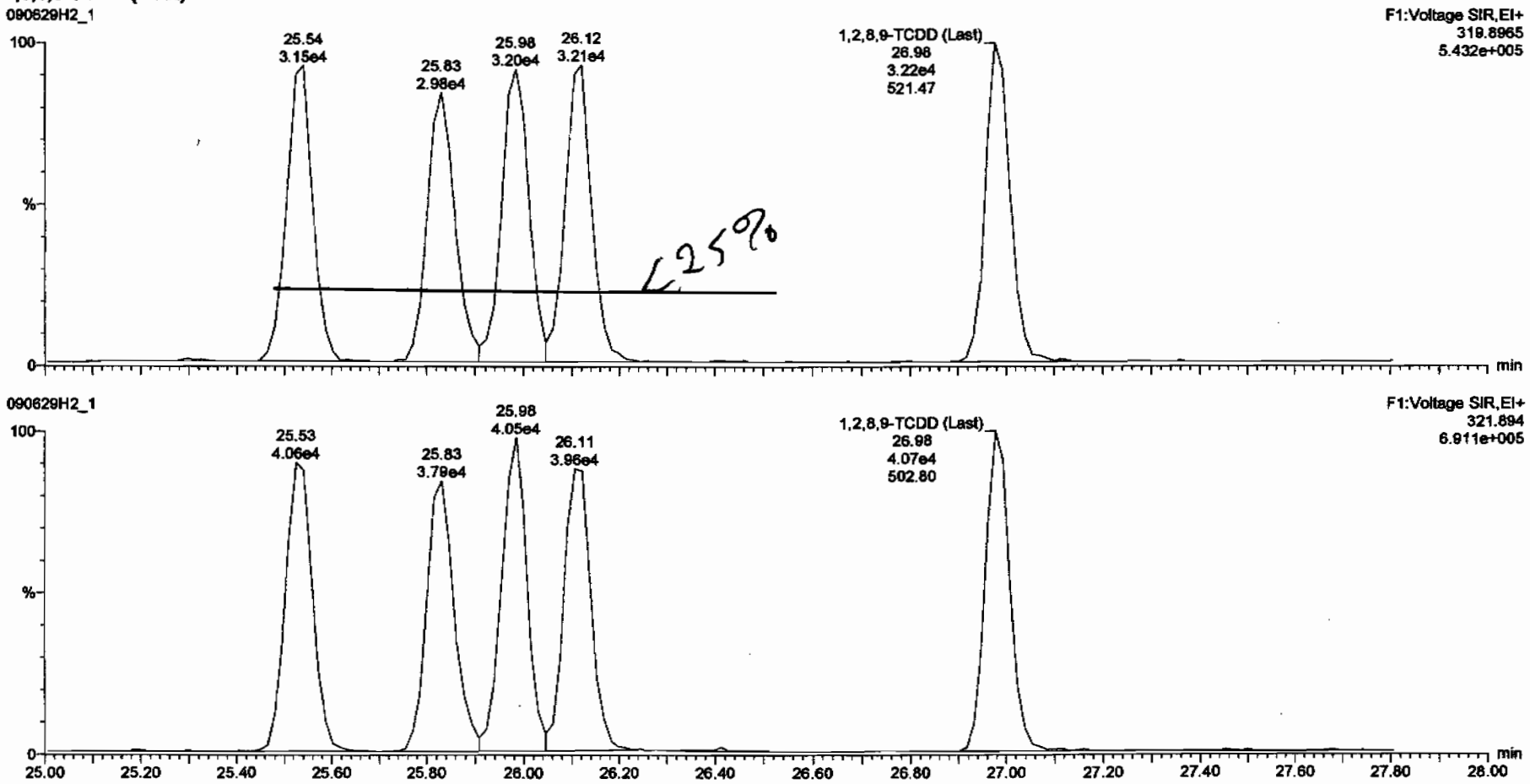

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

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2,3,7,8-TCDD

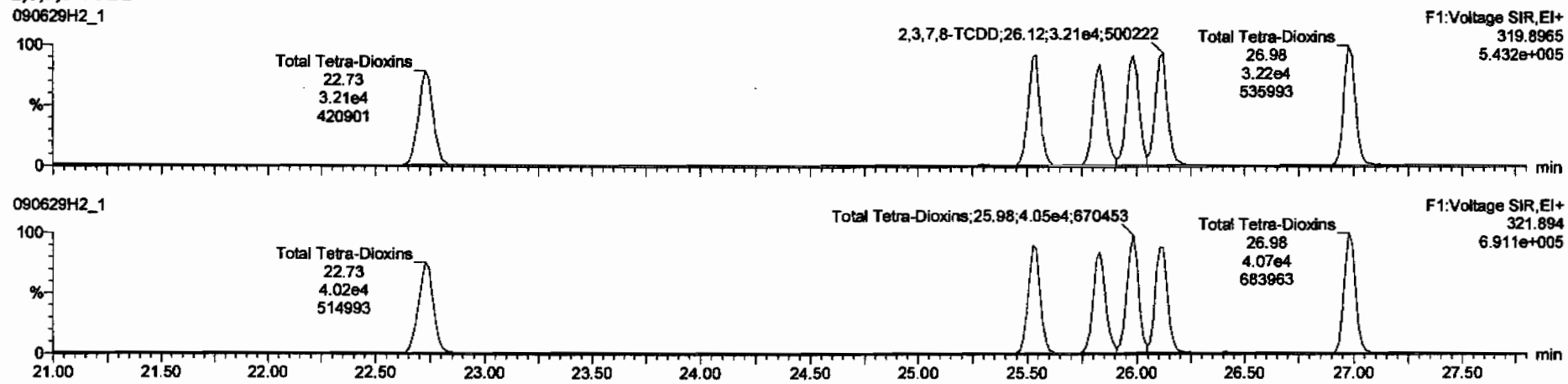

13C-2,3,7,8-TCDD

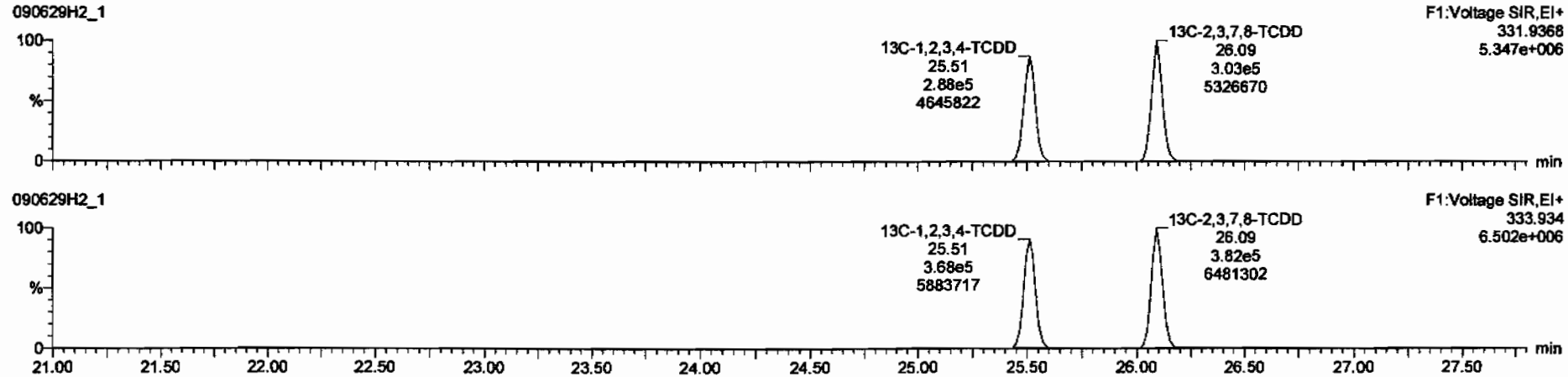

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37Cl-2,3,7,8-TCDD

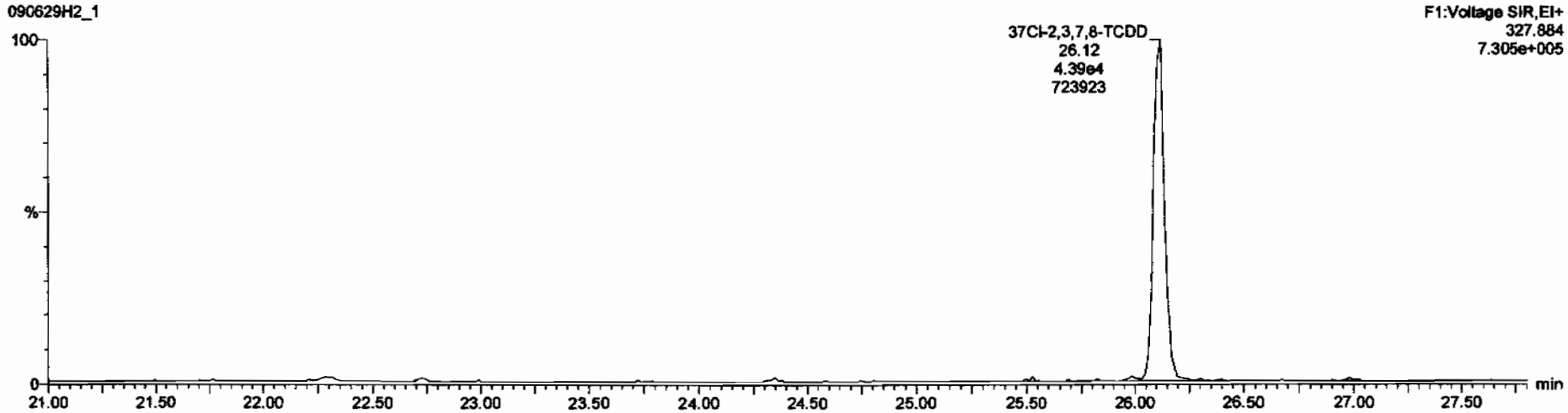

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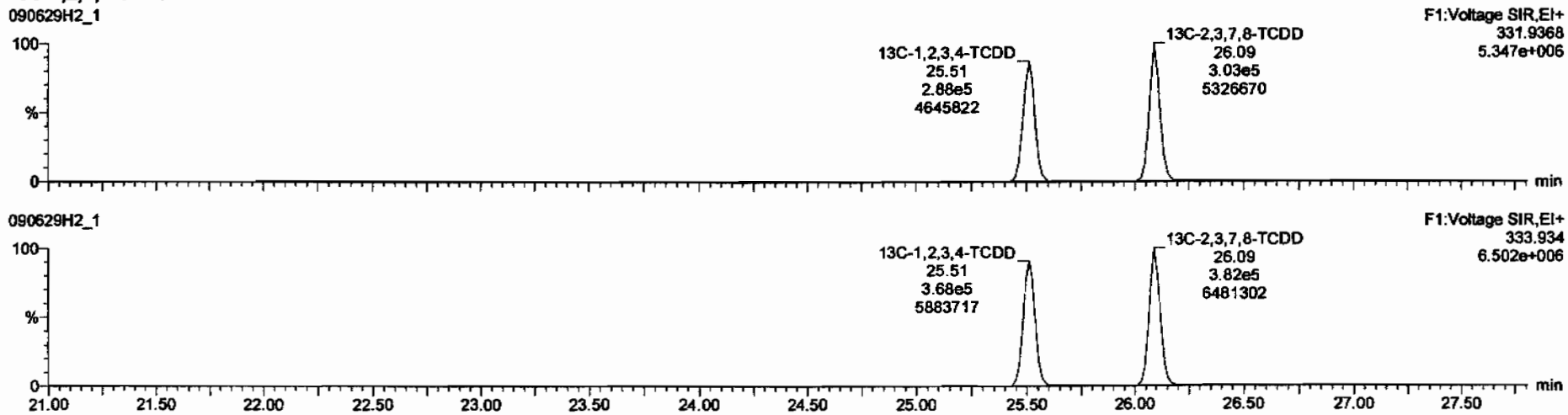

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

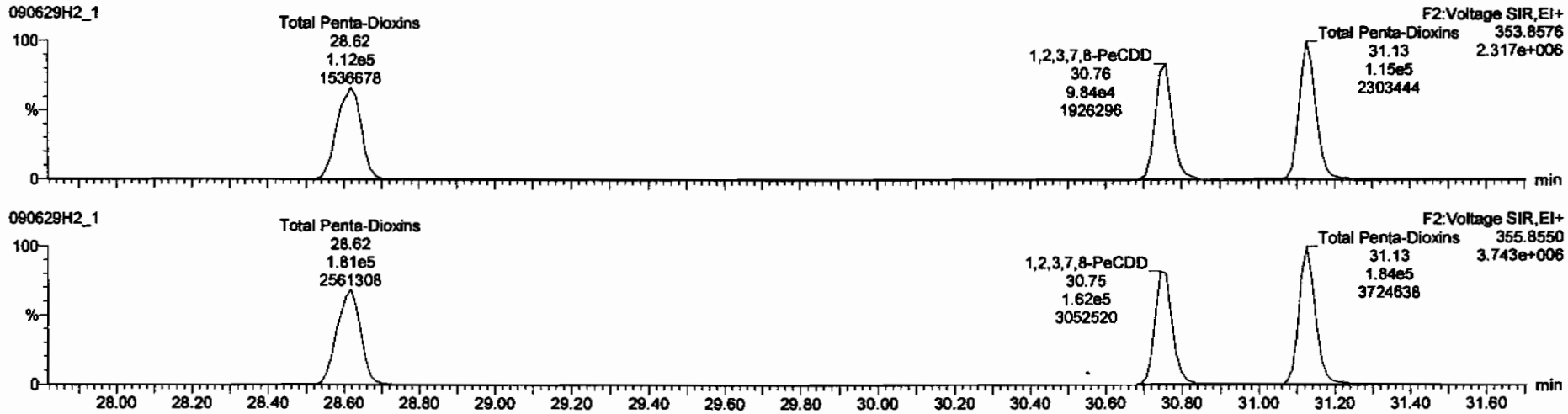

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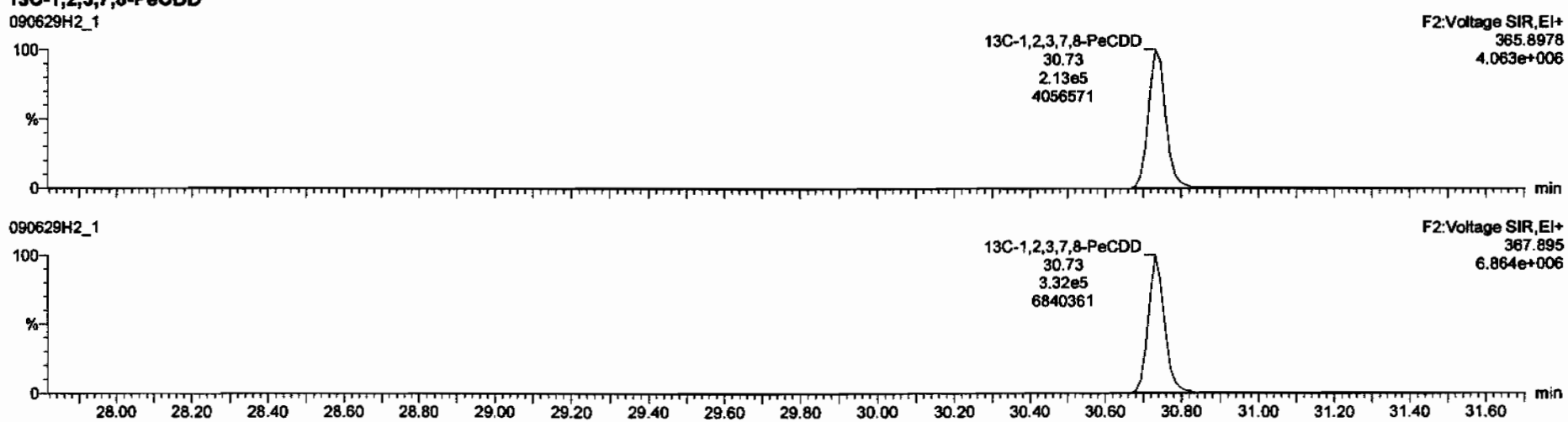

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

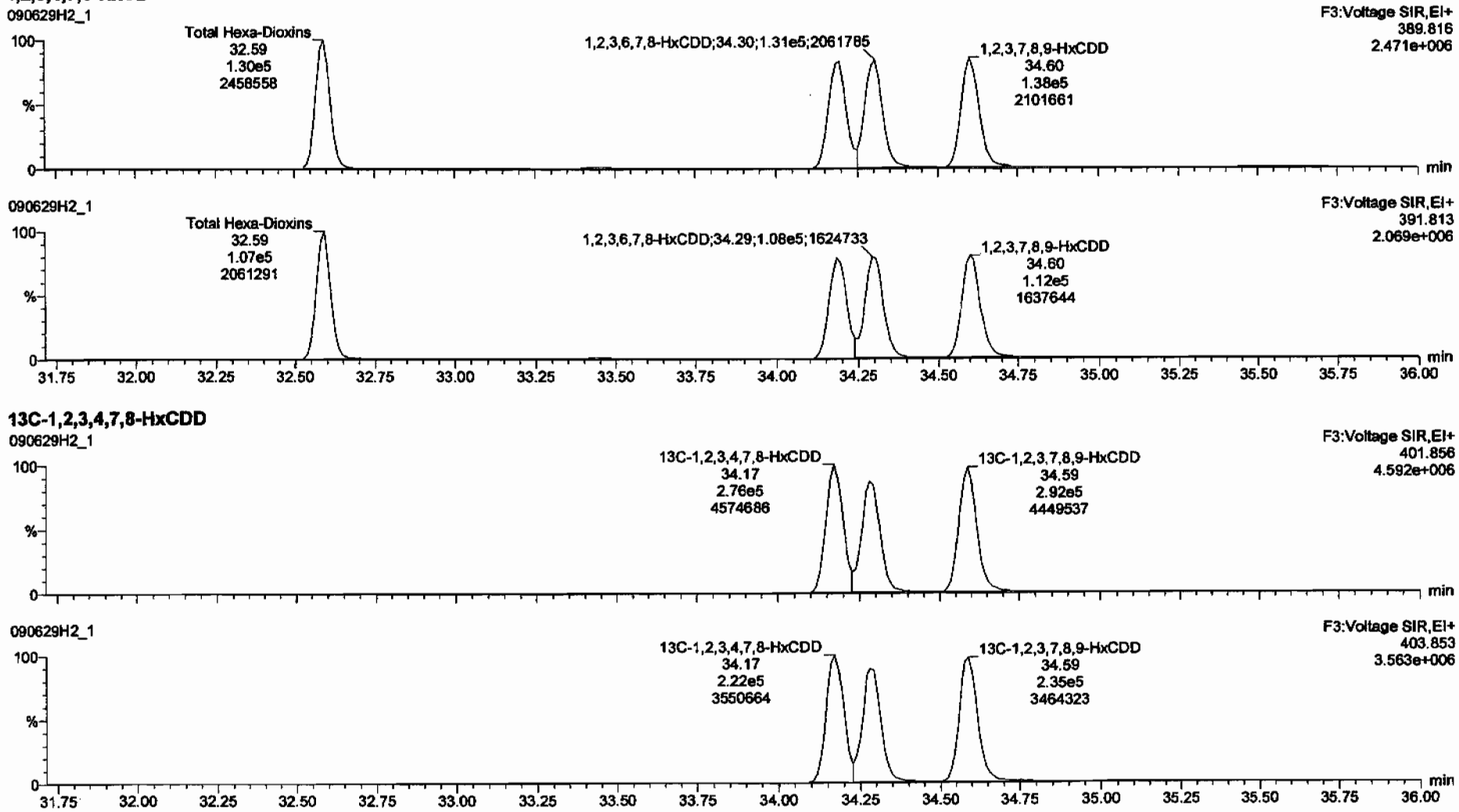

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1,2,3,4,6,7,8-HpCDD

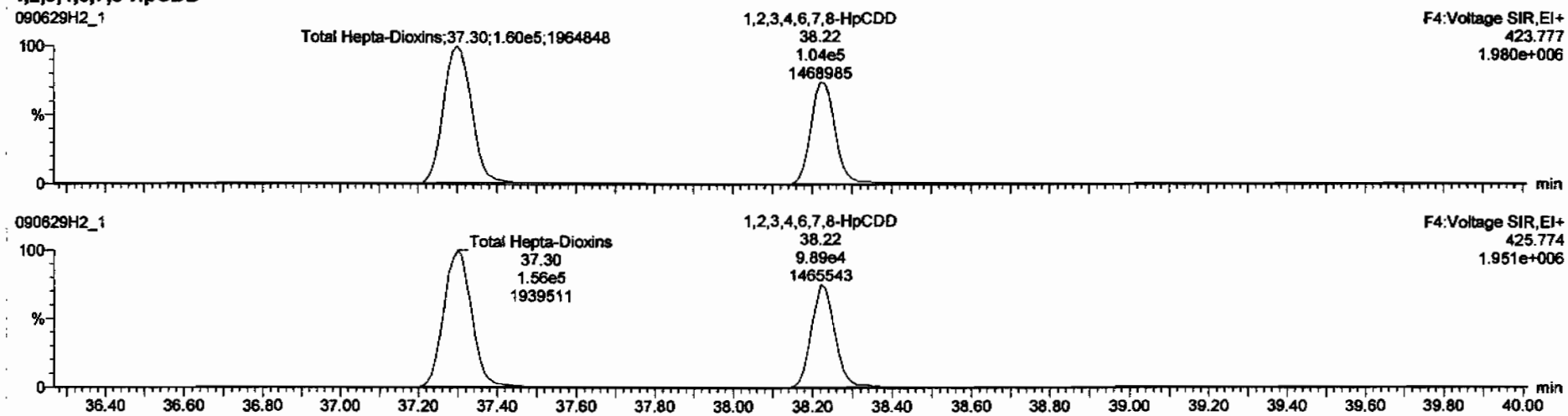

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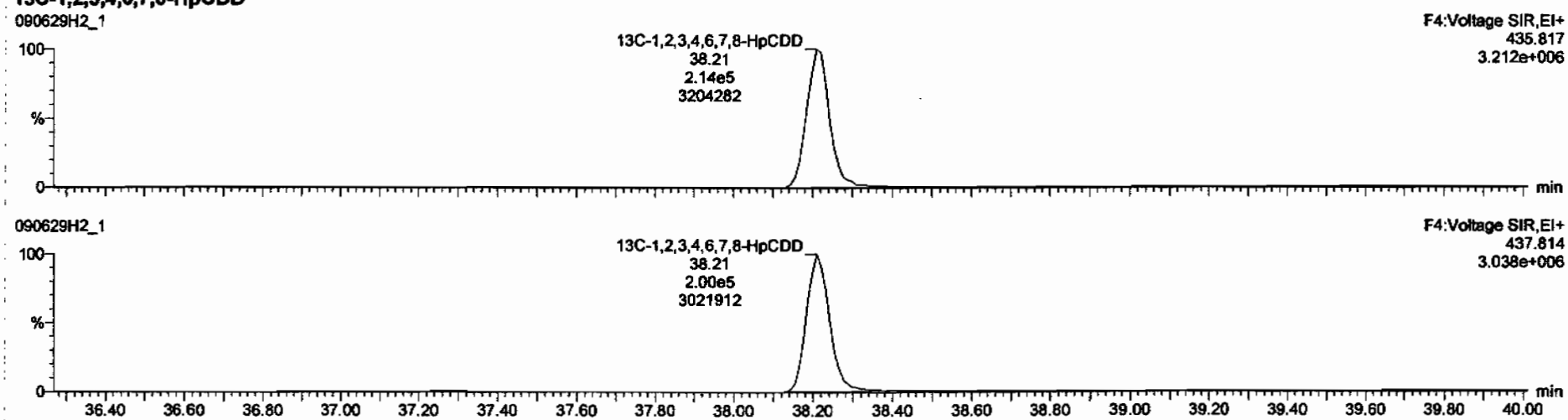

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OCDD

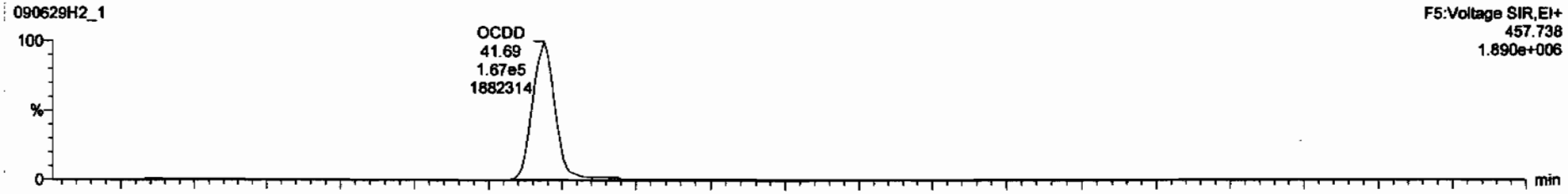

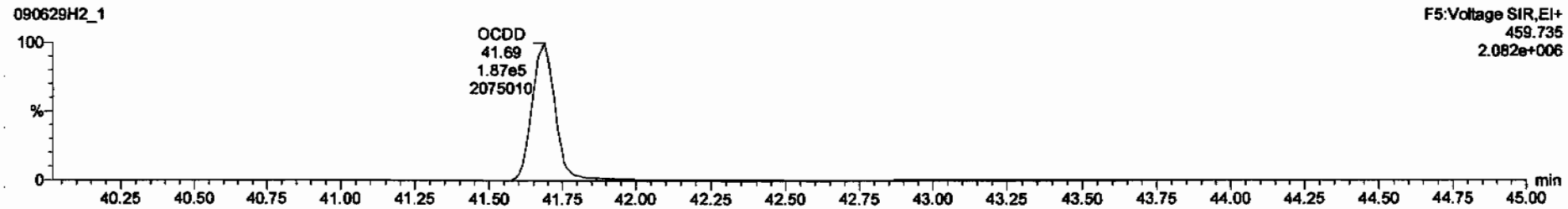

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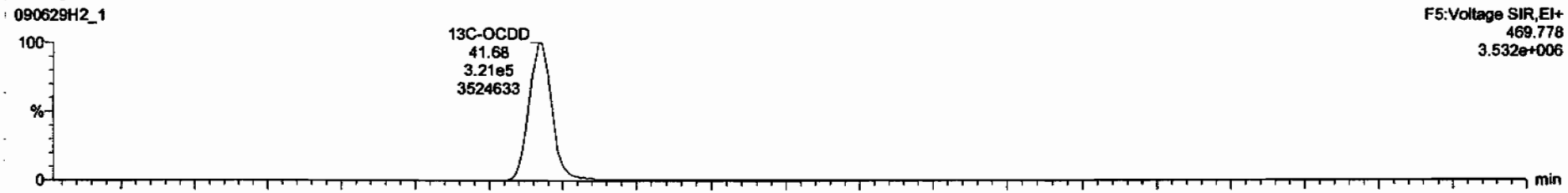

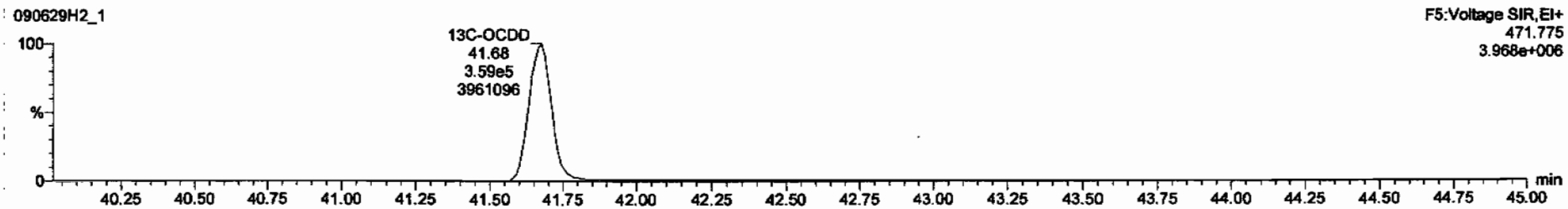

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2,3,7,8-TCDF

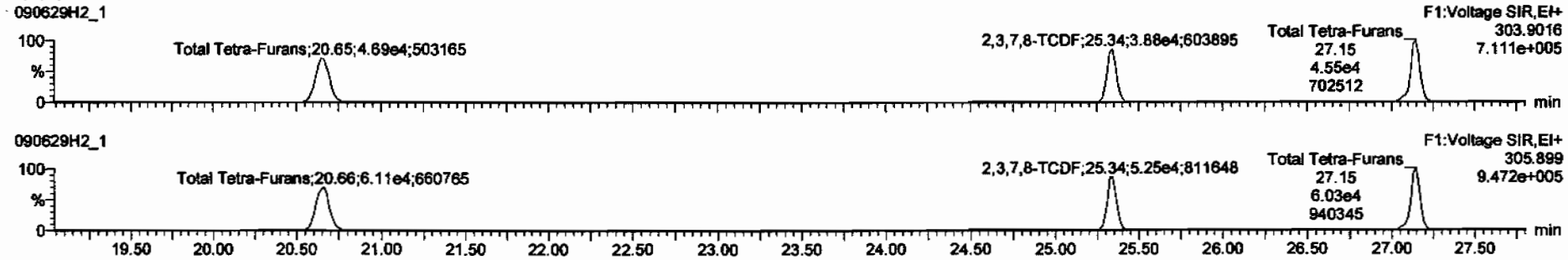

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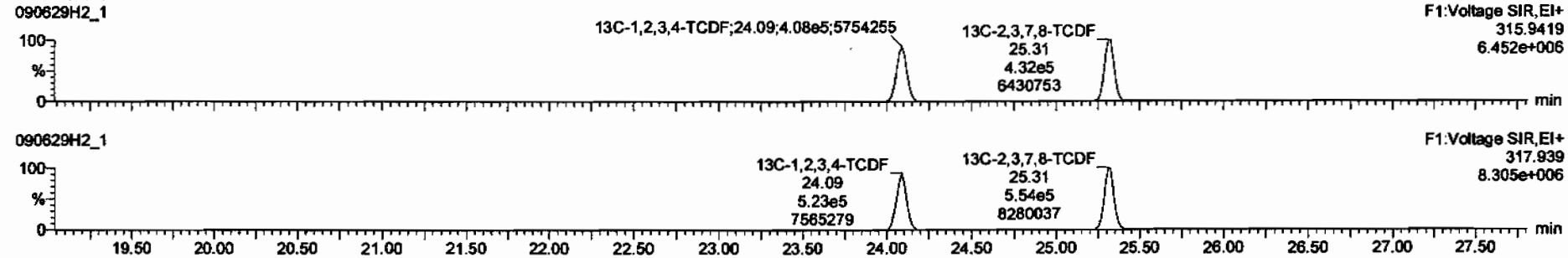

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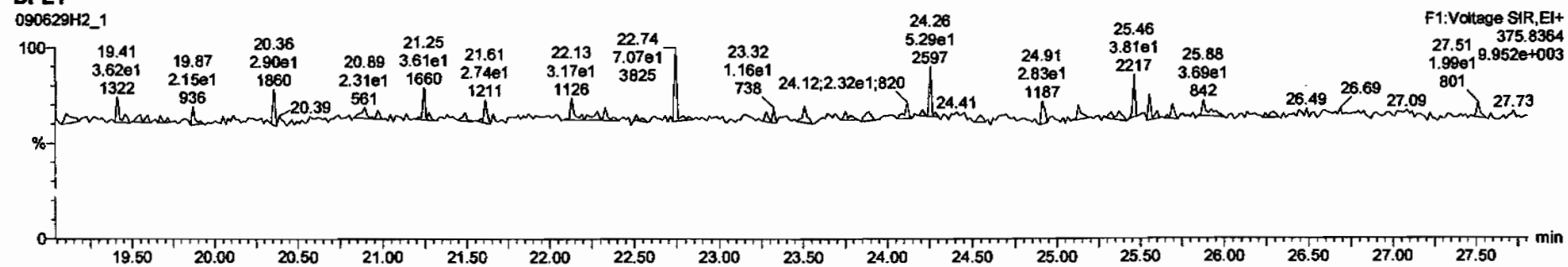

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1st Func. Penta-Furans

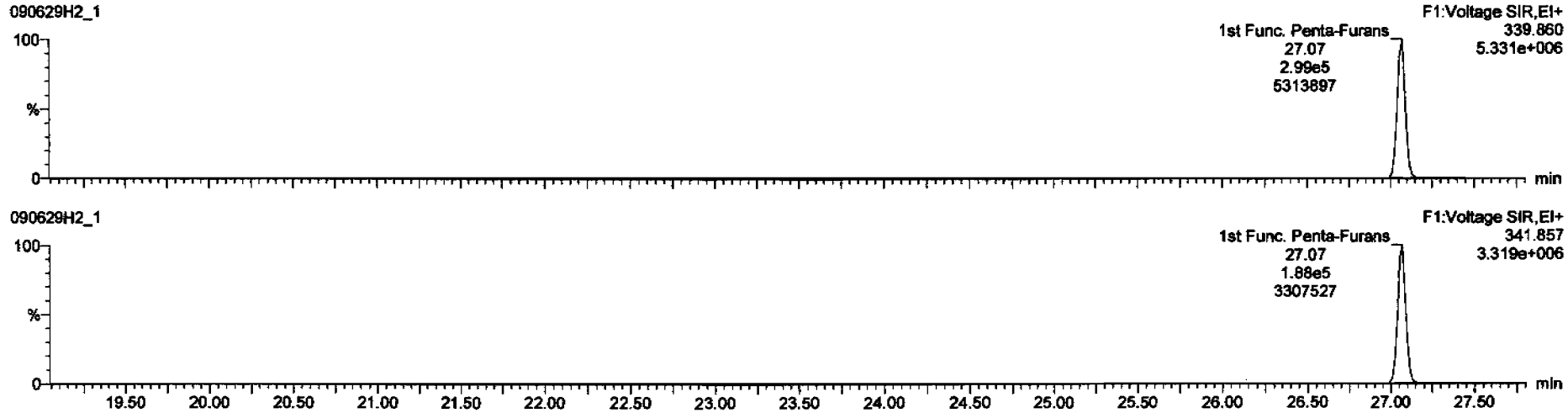

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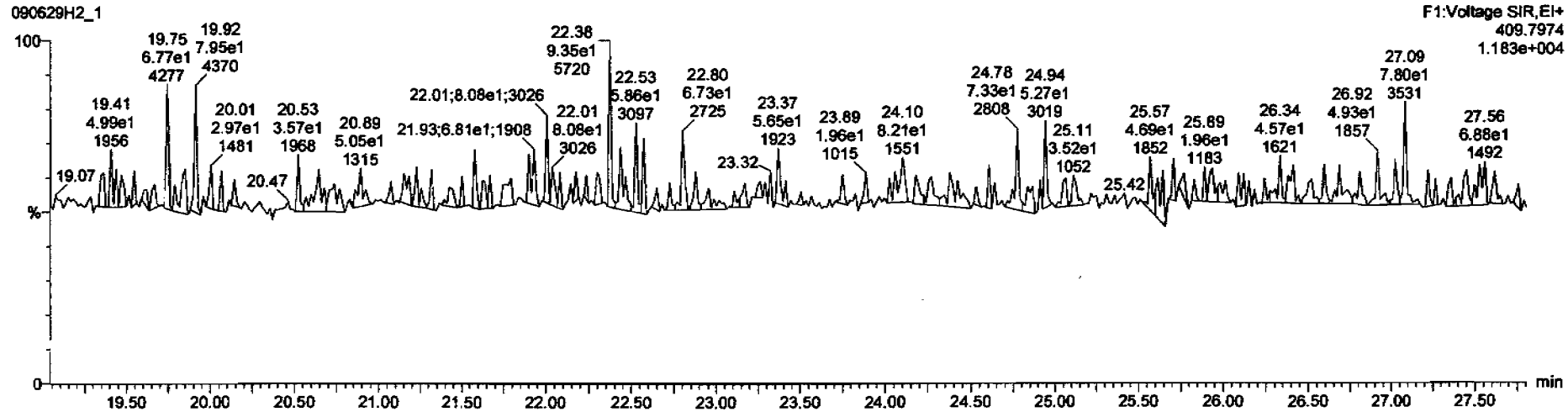

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

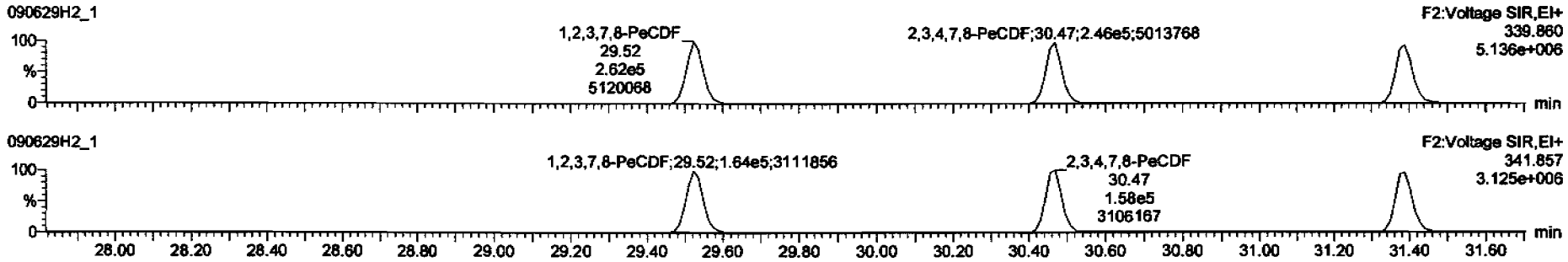

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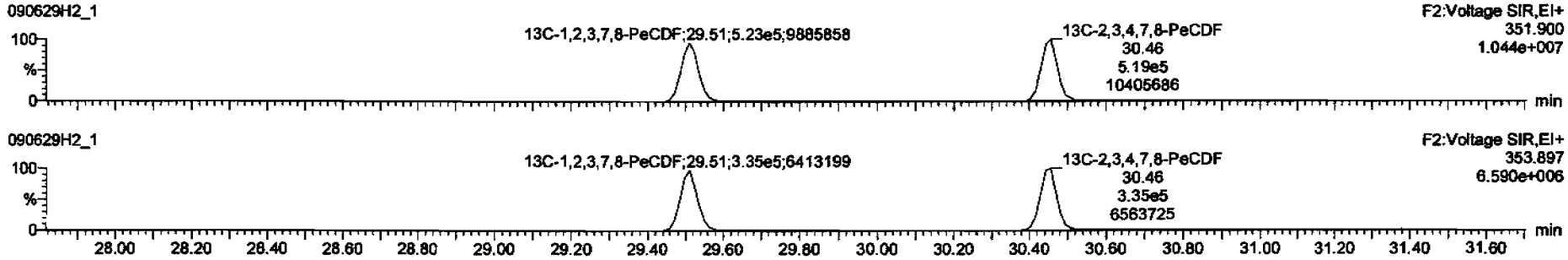

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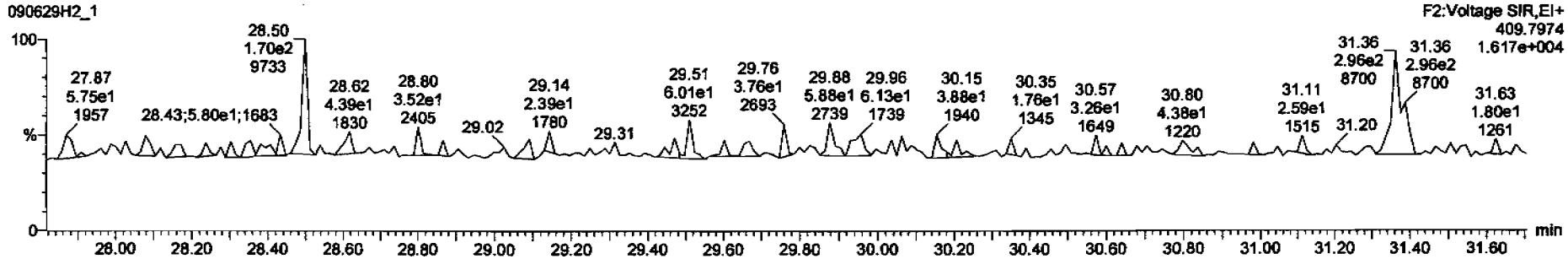

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1,2,3,4,7,8-HxCDF

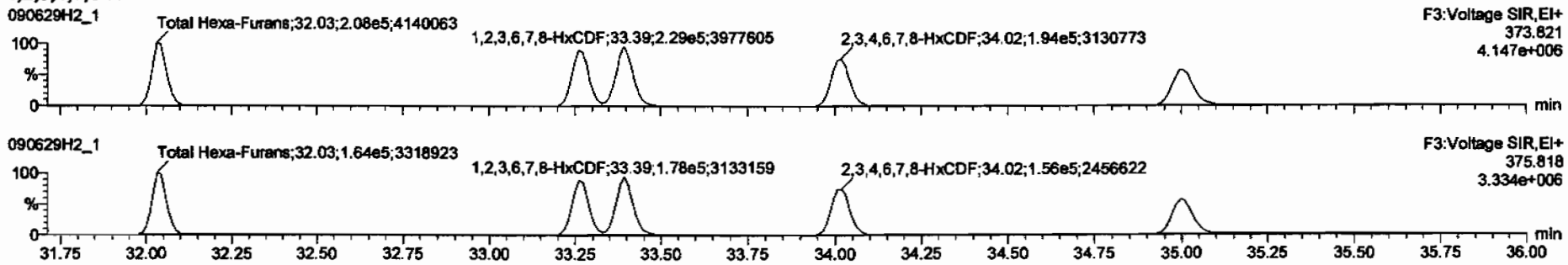

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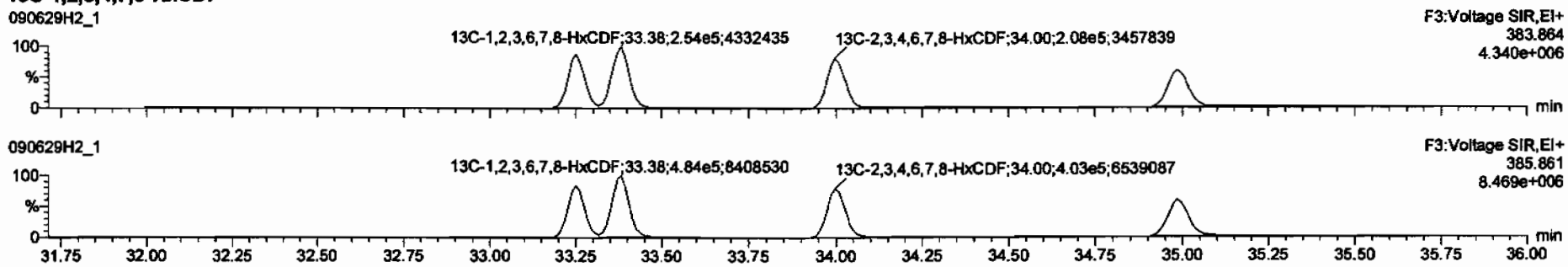

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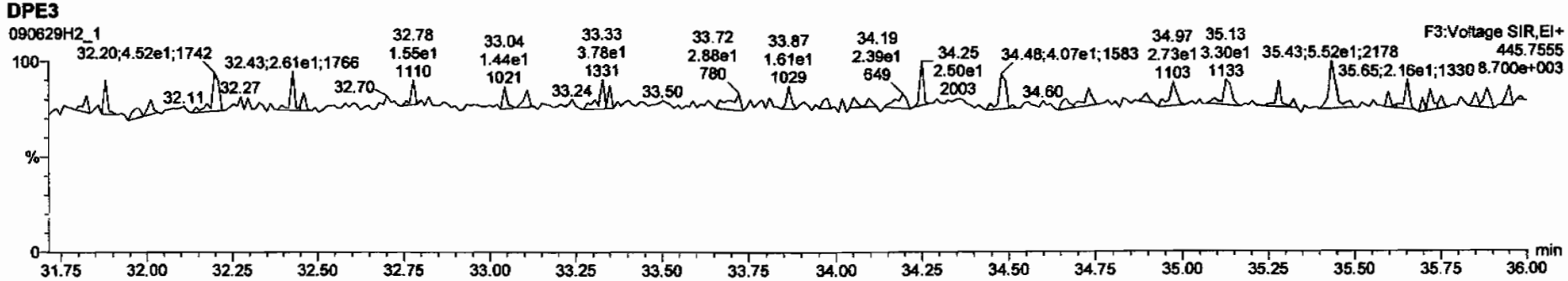

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Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDF

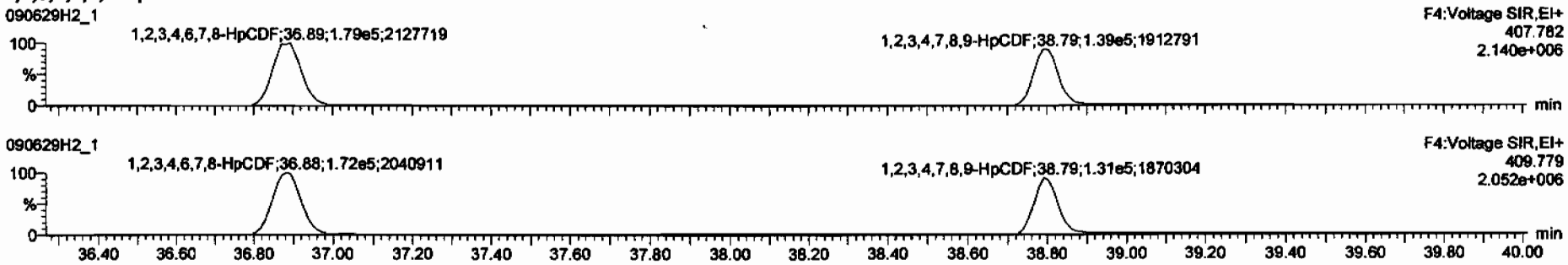

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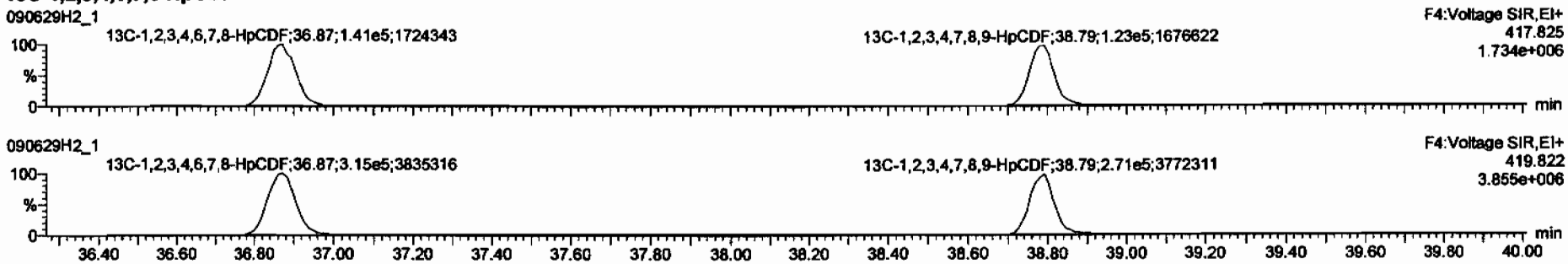

DPE4

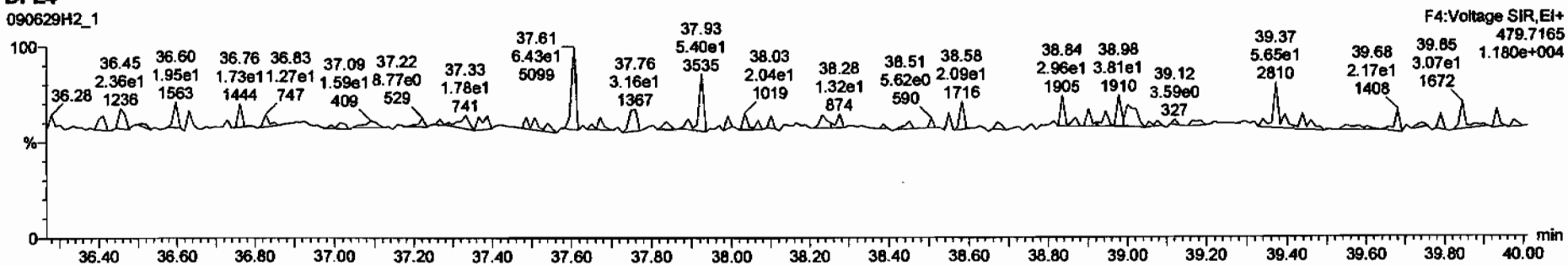

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDF

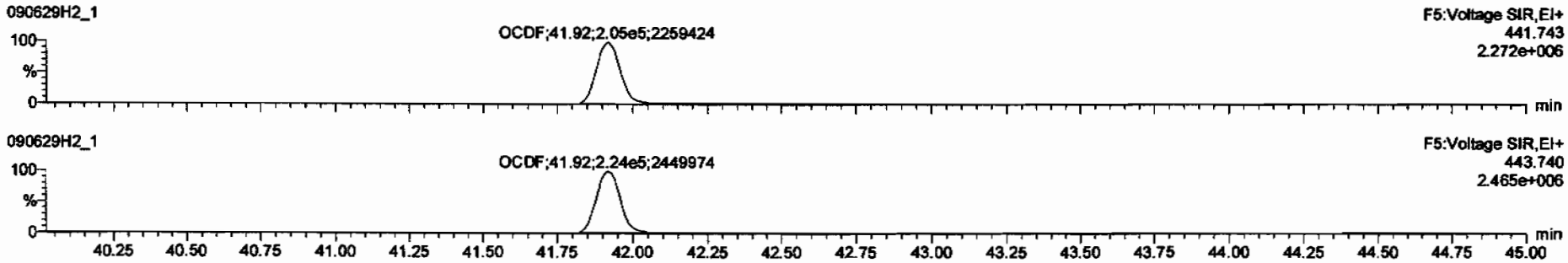

13C-OCDF

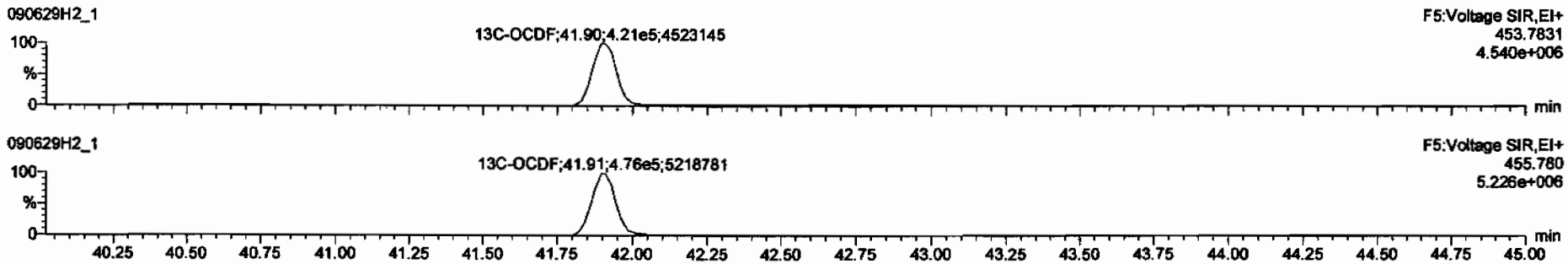

DPE5

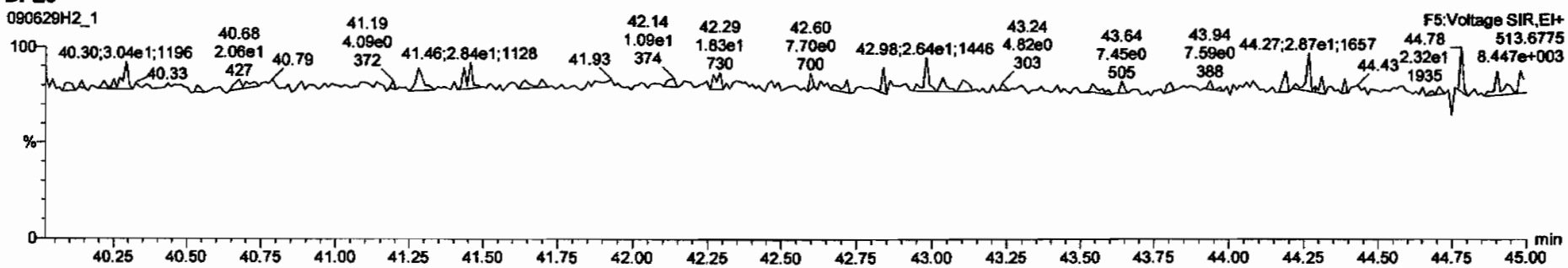

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090629f2-1.qld

Last Altered: Monday, June 29, 2009 14:55:59 Pacific Daylight Time
Printed: Monday, June 29, 2009 14:58:33 Pacific Daylight Time

Name: 090629H2_1, Date: 29-Jun-2009, Time: 14:01:48, ID: ST090629H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

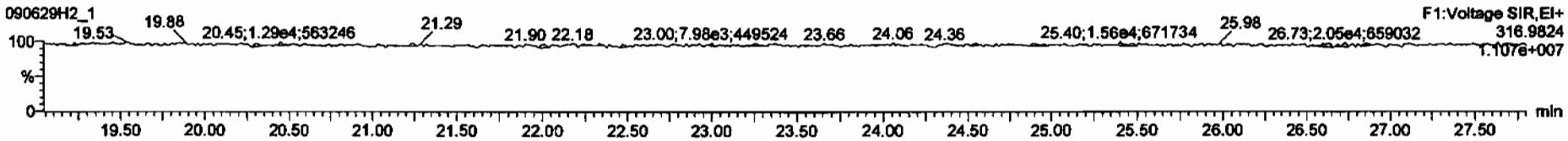

PFK2

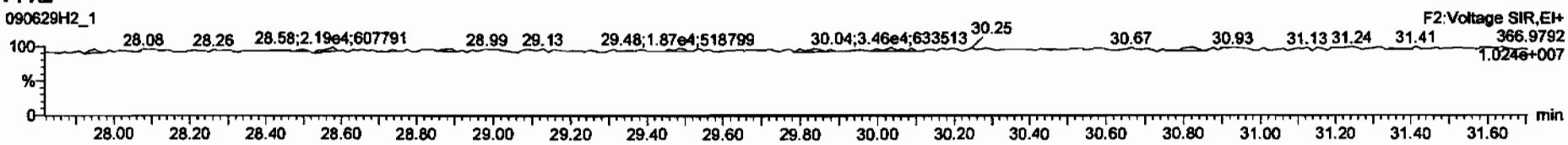

PFK3

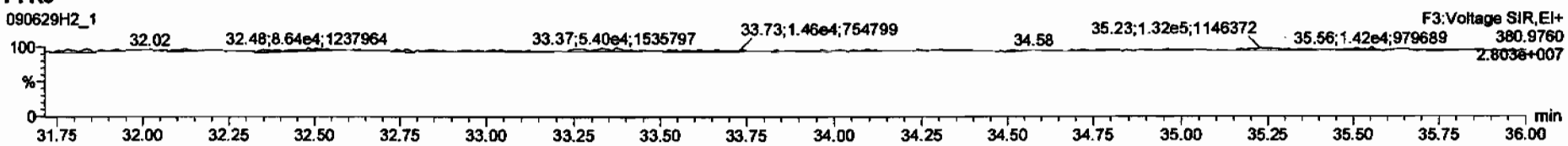

PFK4

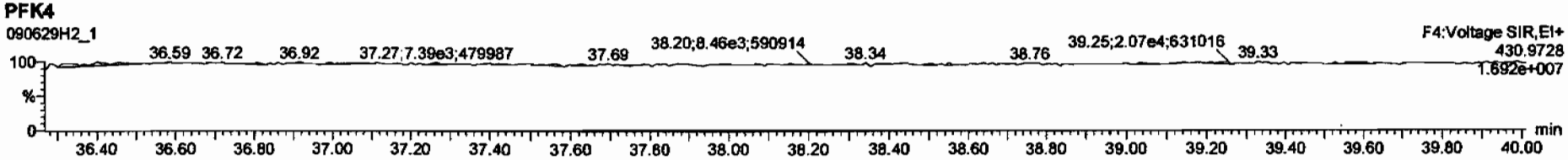

PFK5

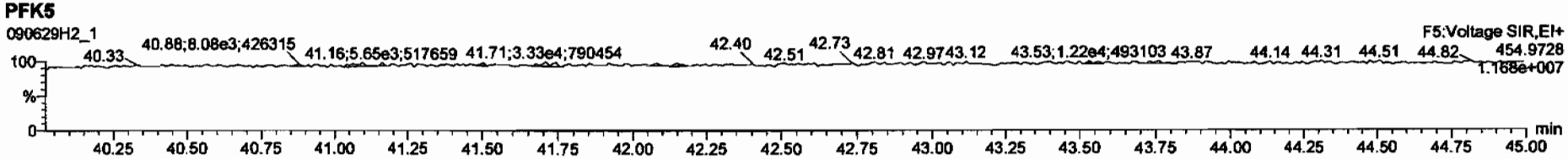

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090629H2-2

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 03:15:05

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	9.31	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	46.1	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	NO	45.9	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	NO	45.8	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	94.5	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	8.56	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	42.0	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	41.9	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.0	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.1	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	NO	45.2	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	NO	46.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	87.9	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

8290 only

Analyst: [signature]
Date: 6/30/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090629H2_17

CCAL ID: ST090629H2-2

GC Column ID: DB-5
Analysis Date: 30-Jun-09 Analysis Time: 03:15:05

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	102	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	98.6	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	95.4	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	111	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	253	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	99.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	99.5	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	104	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	88.2	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	92.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	96.9	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	NO	97.6	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.37-0.51	NO	102	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	220	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.28	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 6/30/09

8290 only

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 07:53:34 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:53:59 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.71
2	1,2,8,9-TCDD (Last)	26.96
3	1,2,4,7,9-PeCDD (First)	28.60
4	1,2,3,8,9-PeCDD (Last)	31.11
5	12,4,6,7,9-HxCDD (First)	32.57
6	1,2,3,7,8,9-HxCDD (Last)	34.59
7	1,2,3,4,6,7,9-HpCDD (First)	37.28
8	1,2,3,4,6,7,8-HpCDD (Last)	38.21
9	1,3,6,8-TCDF (First)	20.65
10	1,2,8,9-TCDF (Last)	27.13
11	1,3,4,6,8-PeCDF (First)	27.05
12	1,2,3,8,9-PeCDF (Last)	31.38
13	1,2,3,4,6,8-HxCDF (First)	32.02
14	1,2,3,4,8,9-HxCDF (Last)	34.98
15	1,2,3,4,6,7,8-HpCDF (First)	36.87
16	1,2,3,4,7,8,9-HpCDF (Last)	38.78

6/30/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory | CCAL ID: ST090629H2-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10 | GC Column ID: DB-5

VER Data file name: 090629H2_17 | Analysis Date: 30-Jun-09 | Analysis Time: 03:15:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.156	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 6/30/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory | CCAL ID: ST090629H2-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10 | GC Column ID: DB-5

VER Data file name: 090629H2_17 | Analysis Date: 30-Jun-09 | Analysis Time: 03:15:05

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:52:16 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.64e4	0.78	NO	1.08	1.000	26.09	1.001	9.3054	93.1	0.0520	9.3054
2	1,2,3,7,8-PeCDD	2.85e5	0.62	NO	1.03	1.000	30.73	1.000	46.057	92.1	0.0816	46.057
3	1,2,3,4,7,8-HxCDD	2.47e5	1.29	NO	1.00	1.000	34.17	1.001	45.946	91.9	0.162	45.946
4	1,2,3,6,7,8-HxCDD	2.55e5	1.22	NO	1.13	1.000	34.28	1.000	45.285	90.6	0.163	45.285
5	1,2,3,7,8,9-HxCDD	2.69e5	1.27	NO	1.10	1.000	34.59	1.009	47.002	94.0	0.156	47.002
6	1,2,3,4,6,7,8-HpCDD	2.18e5	1.02	NO	1.06	1.000	38.21	1.001	45.782	91.6	0.225	45.782
7	OCDD	4.03e5	0.90	NO	1.18	1.000	41.68	1.001	94.461	94.5	0.308	94.461
8	2,3,7,8-TCDF	1.00e5	0.78	NO	1.09	1.000	25.31	1.001	8.5616	85.6	0.0417	8.5616
9	1,2,3,7,8-PeCDF	4.47e5	1.59	NO	1.16	1.000	29.51	1.001	42.017	84.0	0.0688	42.017
10	2,3,4,7,8-PeCDF	4.33e5	1.59	NO	1.12	1.000	30.44	1.000	41.931	83.9	0.0650	41.931
11	1,2,3,4,7,8-HxCDF	4.19e5	1.26	NO	1.41	1.000	33.25	1.001	43.046	86.1	0.106	43.046
12	1,2,3,6,7,8-HxCDF	4.09e5	1.27	NO	1.22	1.000	33.38	1.001	43.960	87.9	0.117	43.960
13	2,3,4,6,7,8-HxCDF	3.72e5	1.26	NO	1.28	1.000	34.00	1.000	44.070	88.1	0.134	44.070
14	1,2,3,7,8,9-HxCDF	3.30e5	1.30	NO	1.26	1.000	34.98	1.001	45.199	90.4	0.175	45.199
15	1,2,3,4,6,7,8-HpCDF	3.65e5	1.05	NO	1.69	1.000	36.87	1.001	44.842	89.7	0.169	44.842
16	1,2,3,4,7,8,9-HpCDF	2.92e5	1.01	NO	1.48	1.000	38.78	1.000	46.704	93.4	0.202	46.704
17	OCDF	4.59e5	0.91	NO	1.10	1.000	41.91	1.000	87.929	87.9	0.141	87.929
18	13C-2,3,7,8-TCDD	7.61e5	0.78	NO	1.01	1.000	26.08	1.023	102.46	102	0.194	
19	13C-1,2,3,7,8-PeCDD	5.98e5	0.62	NO	0.827	1.000	30.72	1.205	98.644	98.6	0.140	
20	13C-1,2,3,4,7,8-HxCDD	5.38e5	1.24	NO	0.916	1.000	34.15	0.988	103.25	103	0.299	
21	13C-1,2,3,6,7,8-HxCDD	4.99e5	1.27	NO	0.921	1.000	34.27	0.991	95.445	95.4	0.297	
22	13C-1,2,3,4,6,7,8-HpCDD	4.48e5	1.06	NO	0.708	1.000	38.19	1.105	111.41	111	0.357	
23	13C-OCDD	7.24e5	0.89	NO	0.503	1.000	41.66	1.205	253.46	127	0.358	
24	13C-2,3,7,8-TCDF	1.08e6	0.80	NO	0.977	1.000	25.30	0.992	106.74	107	0.133	
25	13C-1,2,3,7,8-PeCDF	9.19e5	1.60	NO	0.896	1.000	29.48	1.156	99.409	99.4	0.213	
26	13C-2,3,4,7,8-PeCDF	9.23e5	1.60	NO	0.900	1.000	30.43	1.194	99.514	99.5	0.212	
27	13C-1,2,3,4,7,8-HxCDF	6.90e5	0.51	NO	1.17	1.000	33.23	0.961	103.81	104	0.358	
28	13C-1,2,3,6,7,8-HxCDF	7.61e5	0.54	NO	1.52	1.000	33.36	0.965	88.199	88.2	0.275	
29	13C-2,3,4,6,7,8-HxCDF	6.60e5	0.51	NO	1.25	1.000	33.99	0.983	92.908	92.9	0.335	
30	13C-1,2,3,7,8,9-HxCDF	5.80e5	0.53	NO	1.05	1.000	34.96	1.011	96.898	96.9	0.397	

6/30/09

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:52:16 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

	31 13C-1,2,3,4,6,7,8-HpCDF	4.82e5	0.43	NO	0.868	1.000	36.85	1.066	97.619	97.6	0.442
	32 13C-1,2,3,4,7,8,9-HpCDF	4.22e5	0.43	NO	0.727	1.000	38.77	1.122	102.27	102	0.529
	33 13C-OCDF	9.51e5	0.91	NO	0.760	1.000	41.90	1.212	220.45	110	0.289
	34 37Cl-2,3,7,8-TCDD	4.54e4			0.668	1.000	26.09	1.023	9.2813	92.8	0.0686
	35 13C-1,2,3,4-TCDD	7.32e5	0.79	NO	1.00	1.000	25.50	0.000	100.00	100	0.196
	36 13C-1,2,3,4-TCDF	1.03e6	0.78	NO	1.00	1.000	24.07	0.000	100.00	100	0.130
	37 13C-1,2,3,7,8,9-HxCDD	5.68e5	1.27	NO	1.00	1.000	34.57	0.000	100.00	100	0.274

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 8:02:11 AM Pacific Daylight Time
Printed: Tuesday, June 30, 2009 8:02:26 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

090629H2_1	ST090629H2-1 1613 CS3 080917I		29-Jun-09	14:01:48
090629H2_2	0_2207_OPR001		29-Jun-09	14:52:10
090629H2_3	solvent blank		29-Jun-09	15:41:42
090629H2_4	0_2207_MB001		29-Jun-09	16:31:15
090629H2_5	31831_2207_001 CAMO-09-10460	10.45	29-Jun-09	17:20:45
090629H2_6	31831_2207_002 CAMO-09-10461	11.42	29-Jun-09	18:10:16
090629H2_7	31831_2207_003 CAMO-09-10462	10.55	29-Jun-09	18:59:49
090629H2_8	31831_2207_004 CAMO-09-10467	10.57	29-Jun-09	19:49:21
090629H2_9	31832_2207_001 CAMO-09-10480	11.15	29-Jun-09	20:38:54
090629H2_10	31833_2207_001 CAMO-09-6005	12.18	29-Jun-09	21:28:25
090629H2_11	31833_2207_002 CAMO-09-6047	12.12	29-Jun-09	22:17:56
090629H2_12	31837_2207_001 CAMO-09-6006	11.31	29-Jun-09	23:07:29
090629H2_13	31837_2207_002 CAMO-09-6007	10.42	29-Jun-09	23:56:59
090629H2_14	31837_2207_003 CAMO-09-6008	13.14	30-Jun-09	00:46:29
090629H2_15	31837_2207_004 CAMO-09-6009	12.25	30-Jun-09	01:36:02
090629H2_16	solvent blank		30-Jun-09	02:25:34
090629H2_17	ST090629H2-2 1613 CS3 080917I		30-Jun-09	03:15:05

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, June 30, 2009 08:00:25 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 08:00:29 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

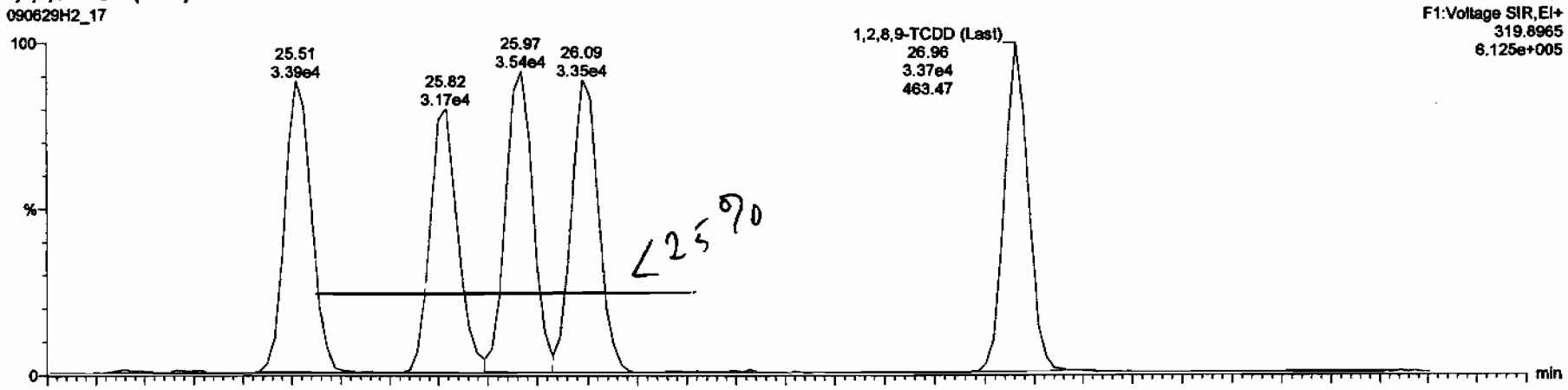

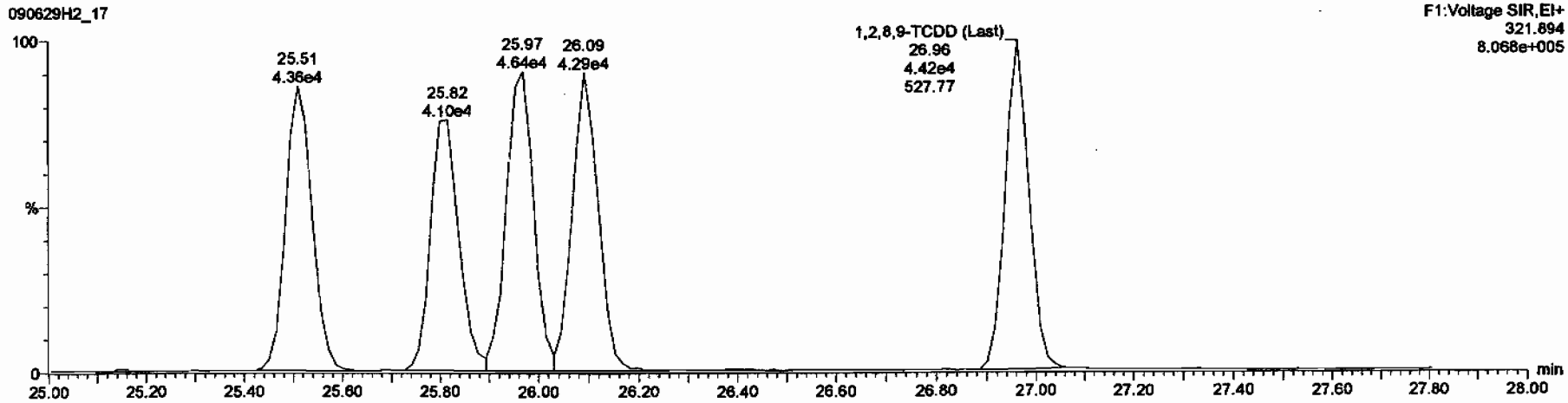

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qld

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

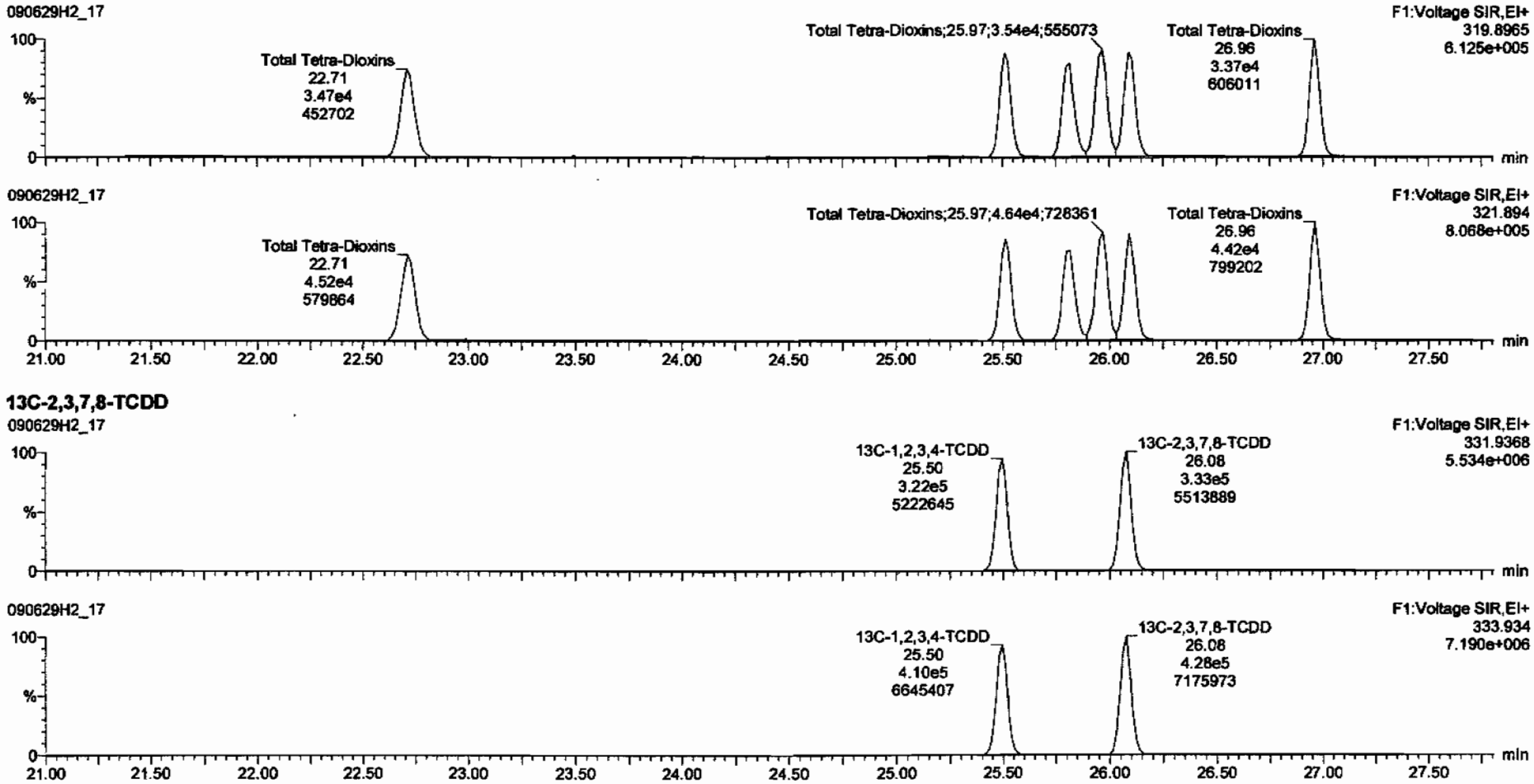

13C-2,3,7,8-TCDD

Dataset: C:\MassLynx\Default.pro\Results\090629f2\090629f2-17.qid

Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

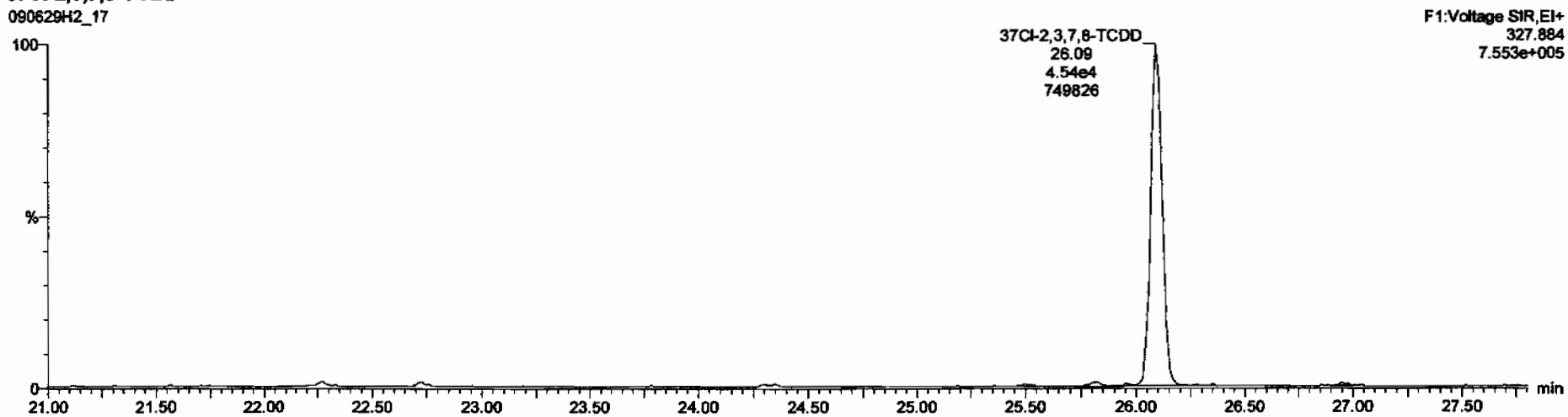

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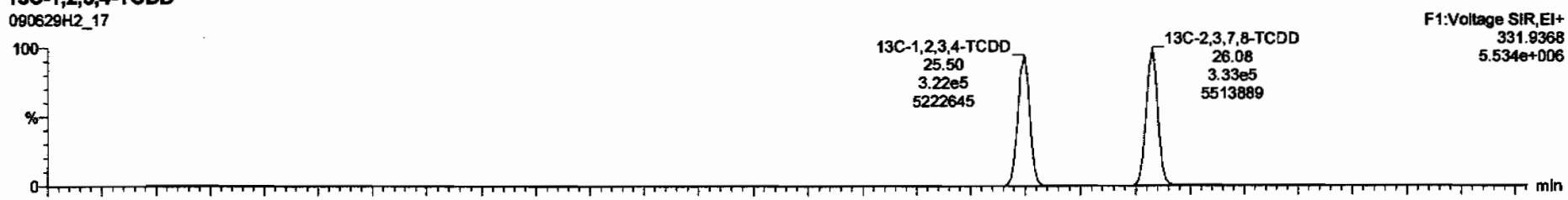

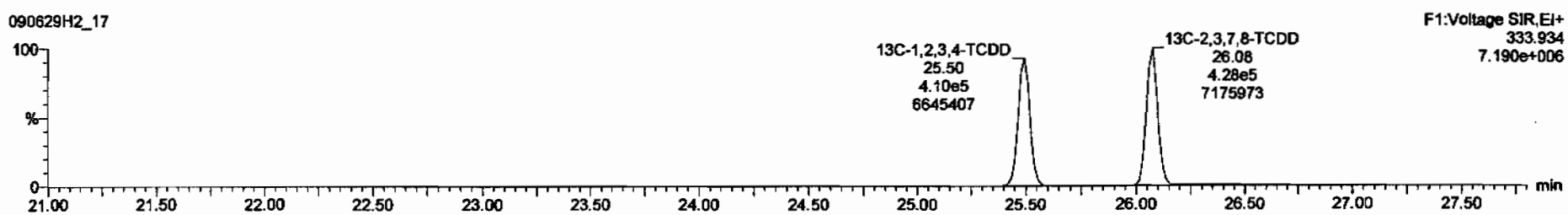

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

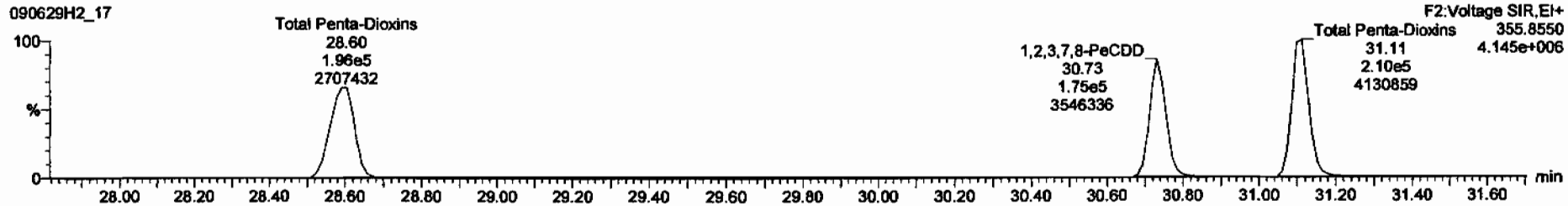

13C-1,2,3,7,8-PeCDD

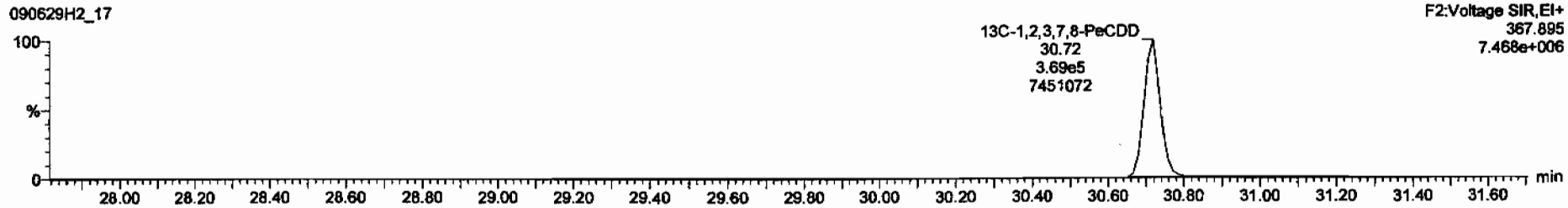

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

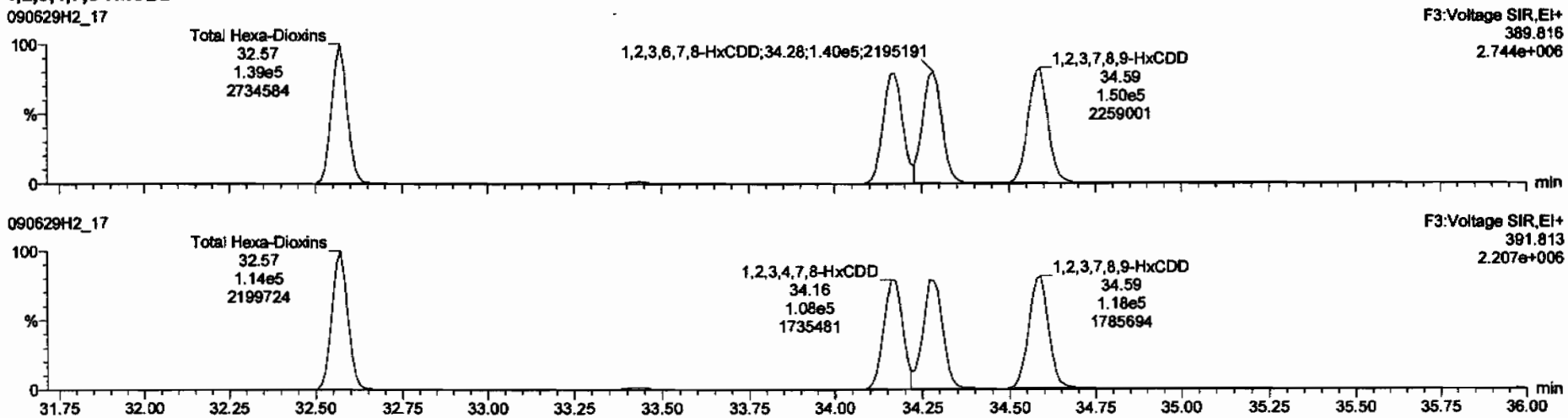

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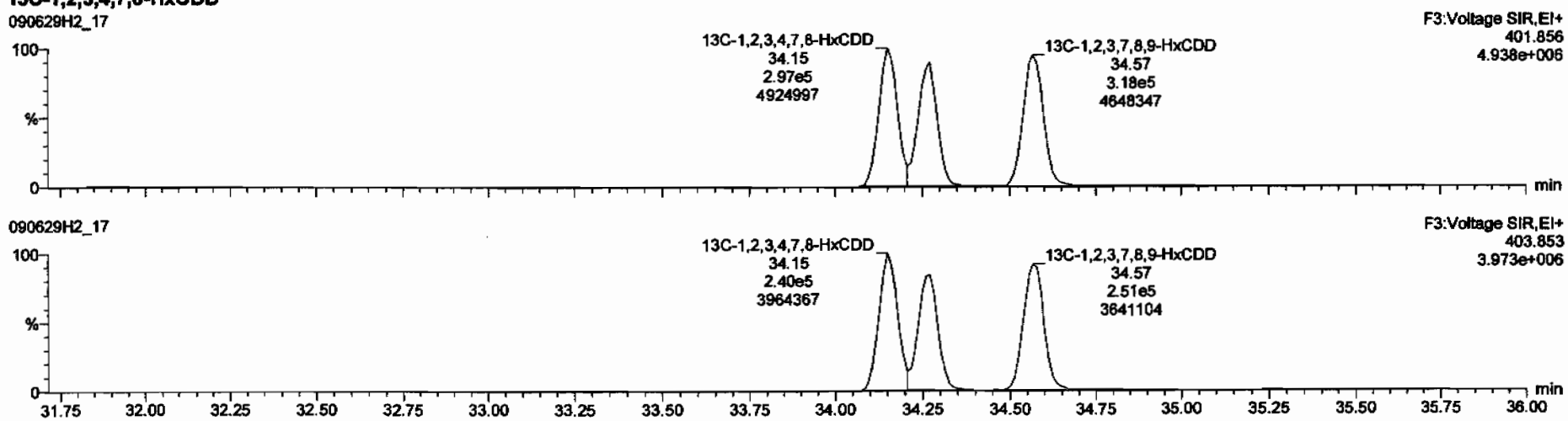

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Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

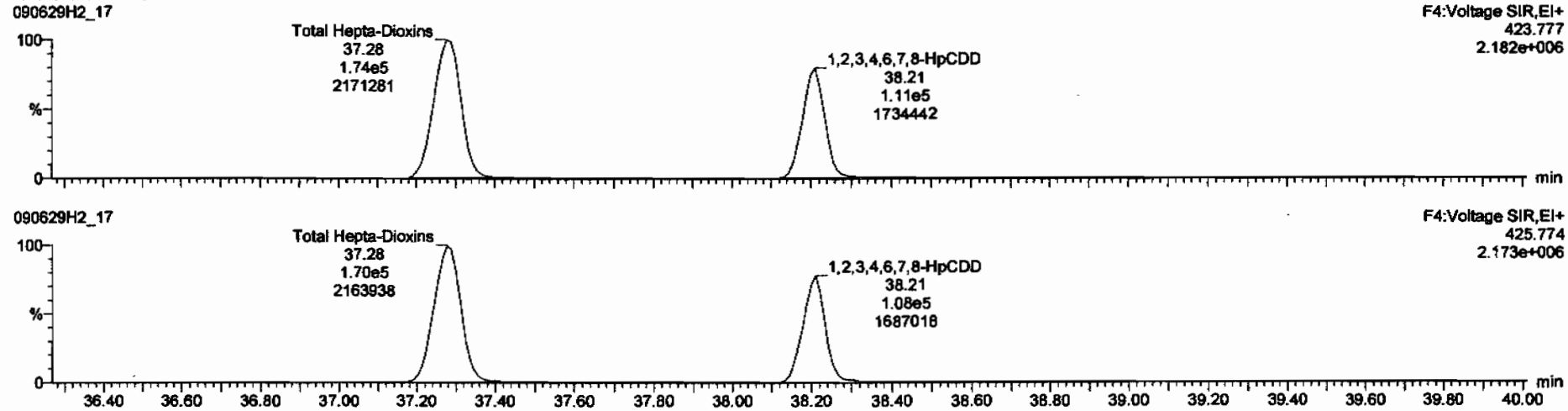

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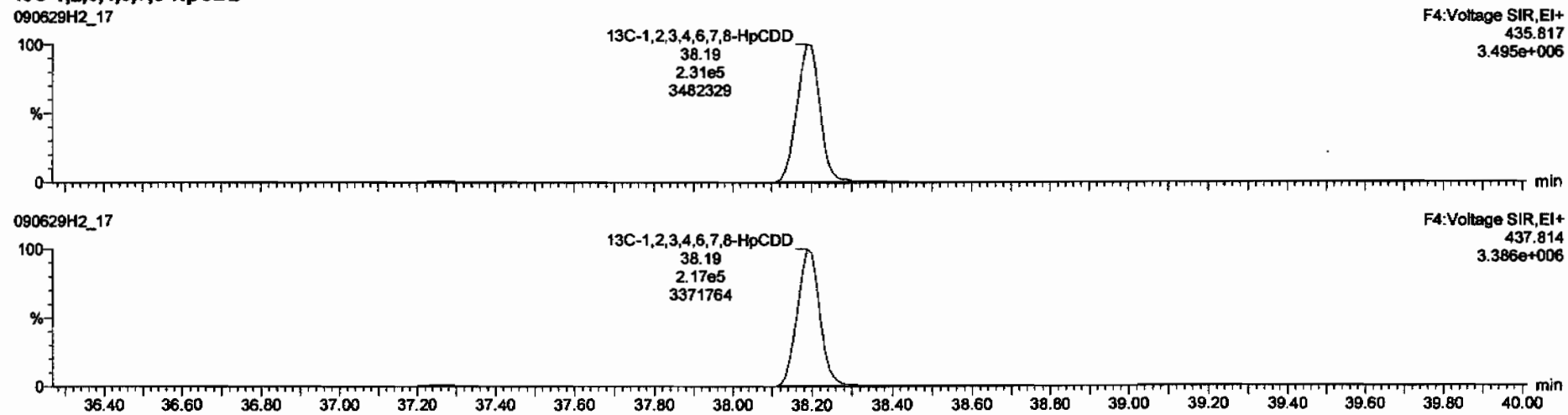

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Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

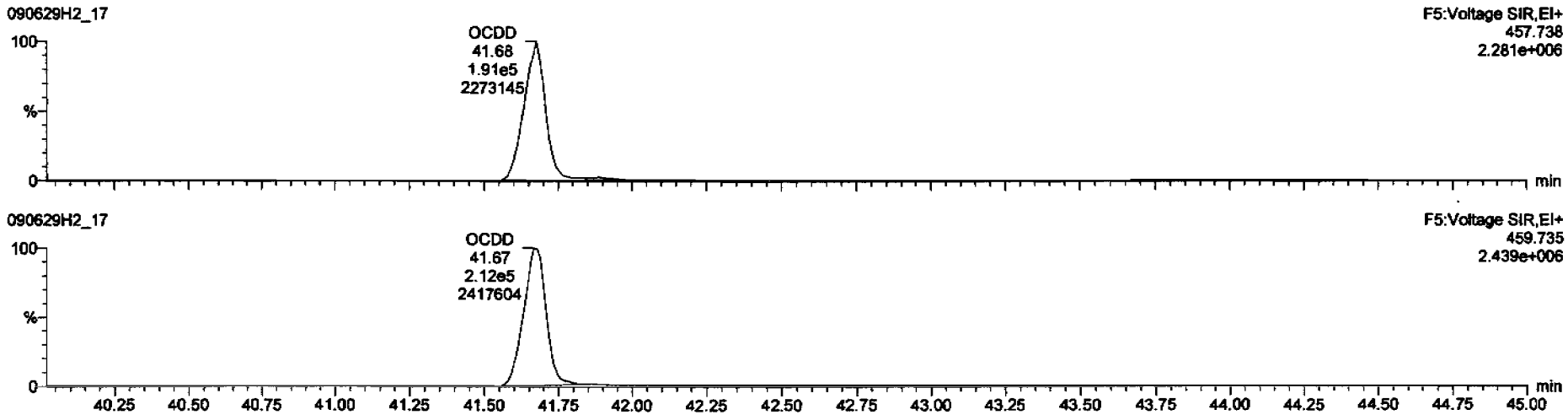

13C-OCDD

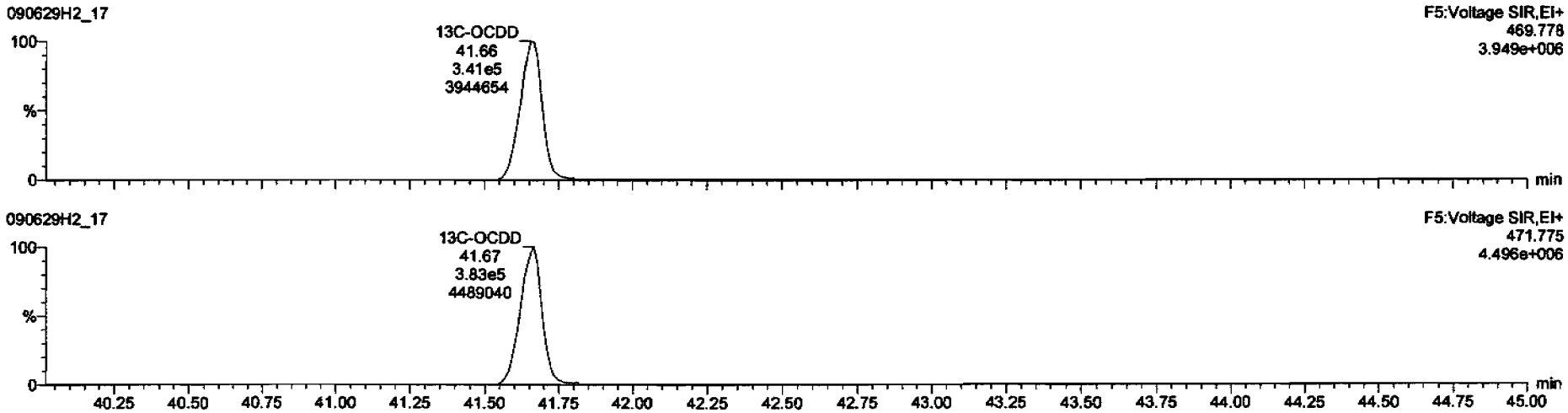

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Last Altered: Tuesday, June 30, 2009 07:48:42 Pacific Daylight Time
Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

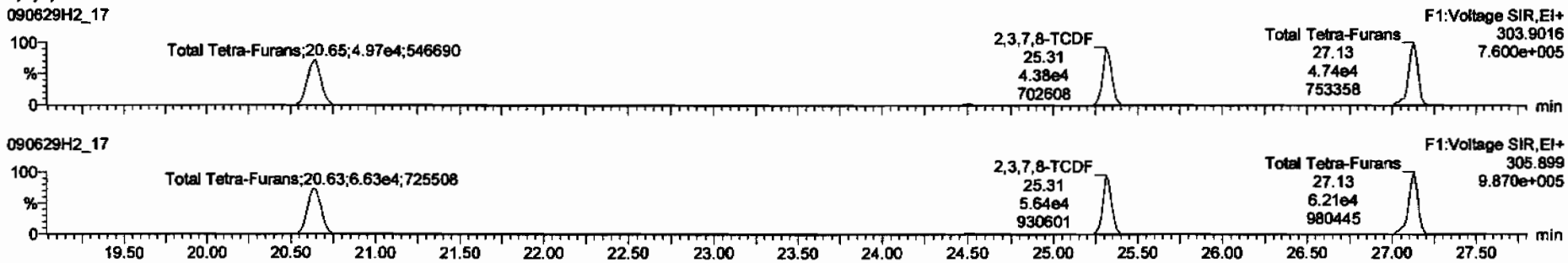

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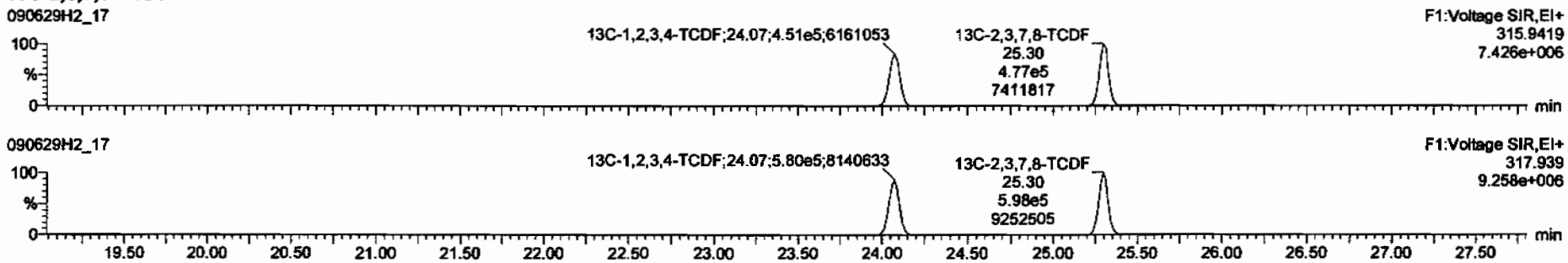

DPE1

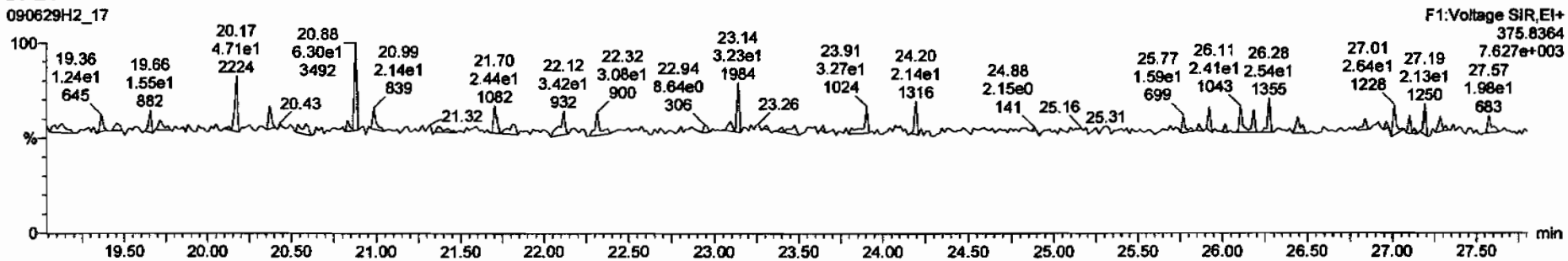

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Printed: Tuesday, June 30, 2009 07:49:49 Pacific Daylight Time

Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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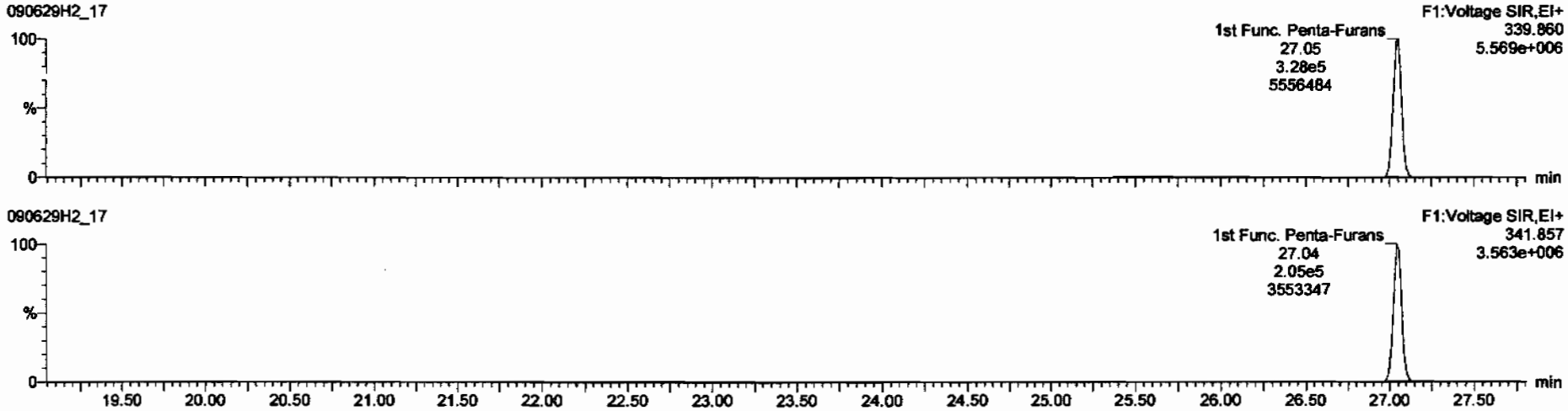

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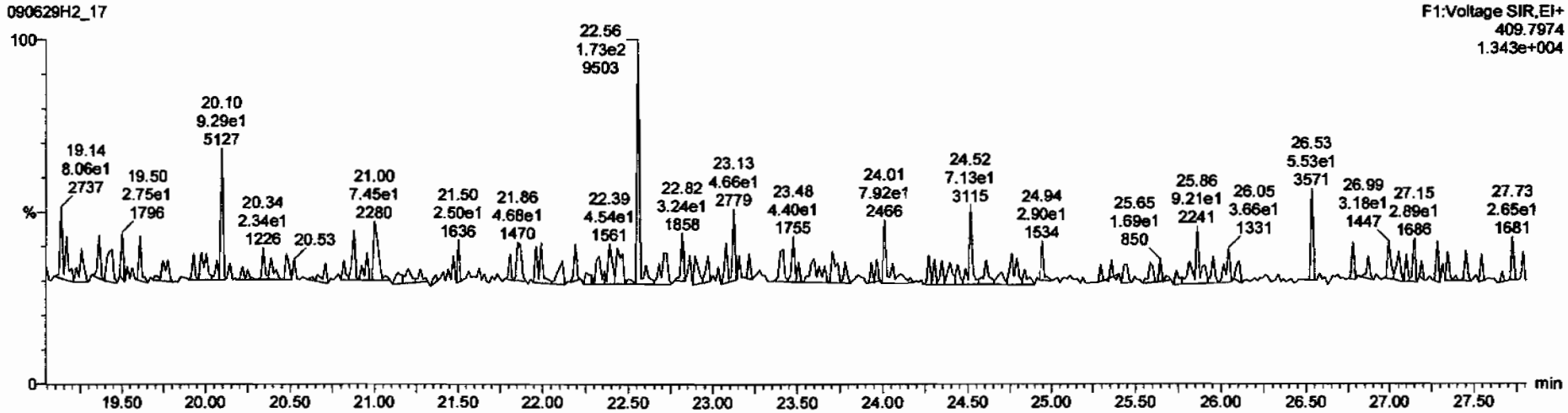

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Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

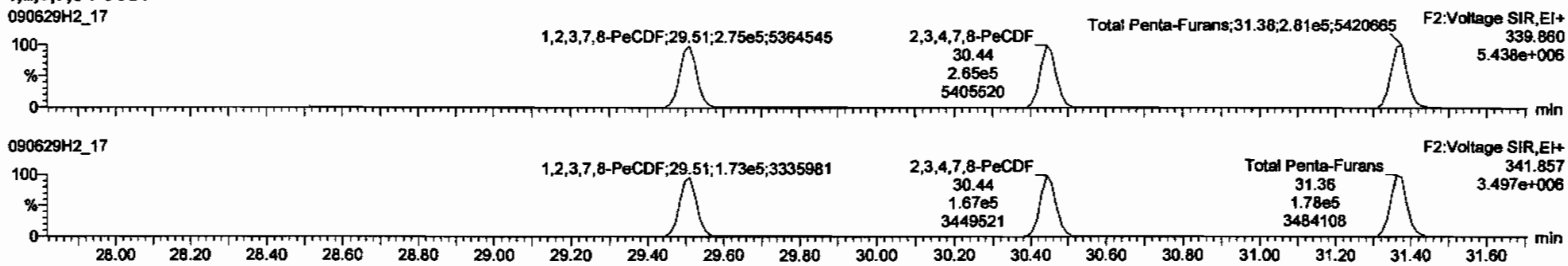

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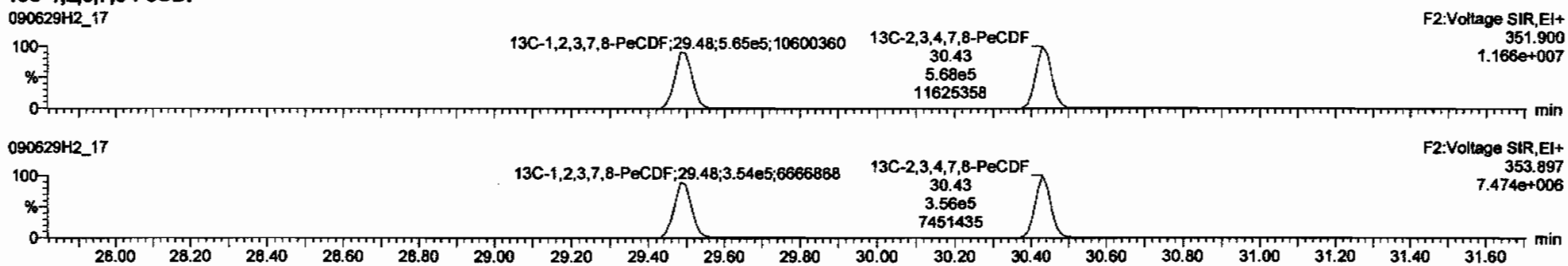

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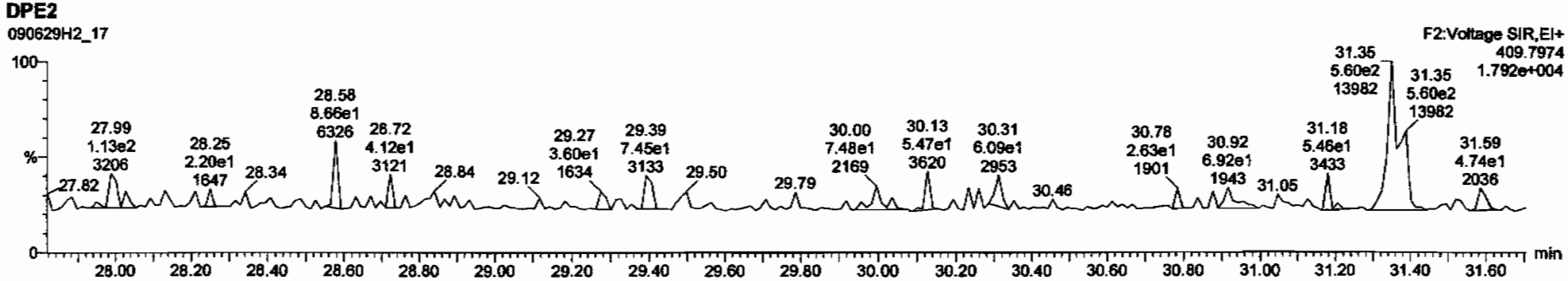

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Name: 090629H2_17, Date: 30-Jun-2009, Time: 03:15:05, ID: ST090629H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDF

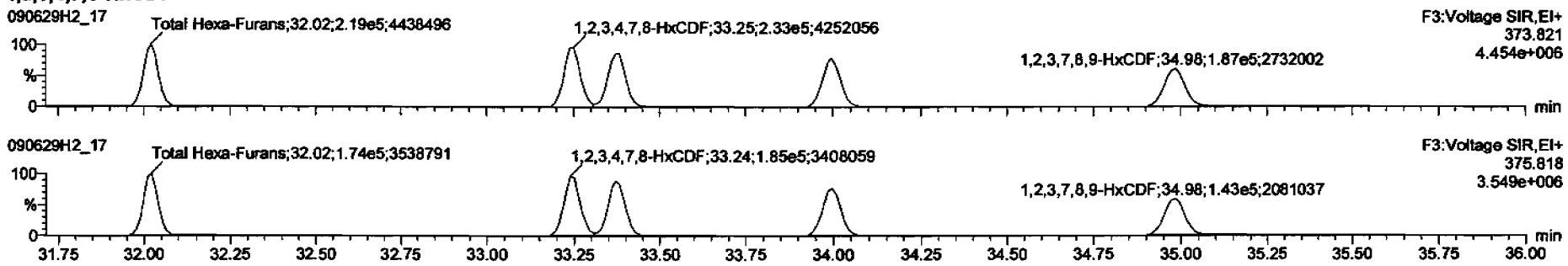

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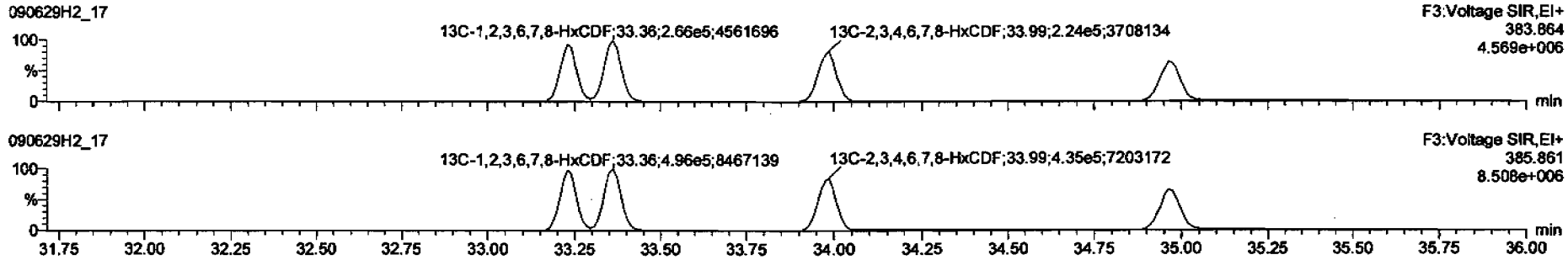

DPE3

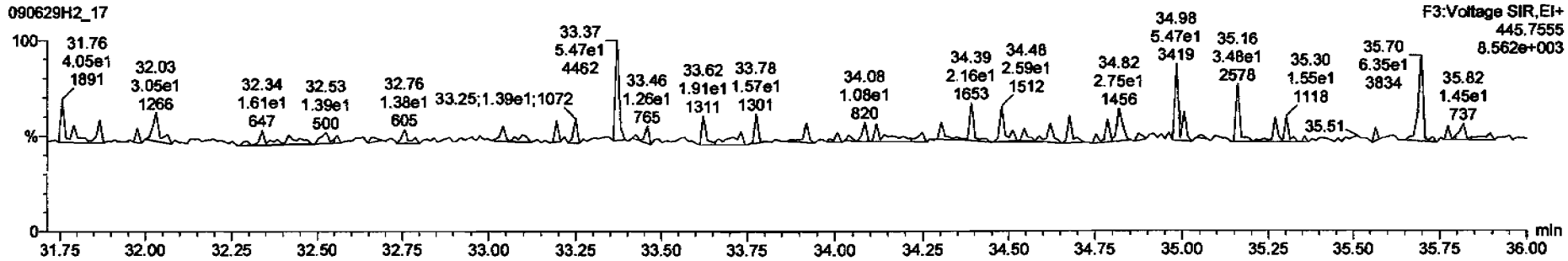

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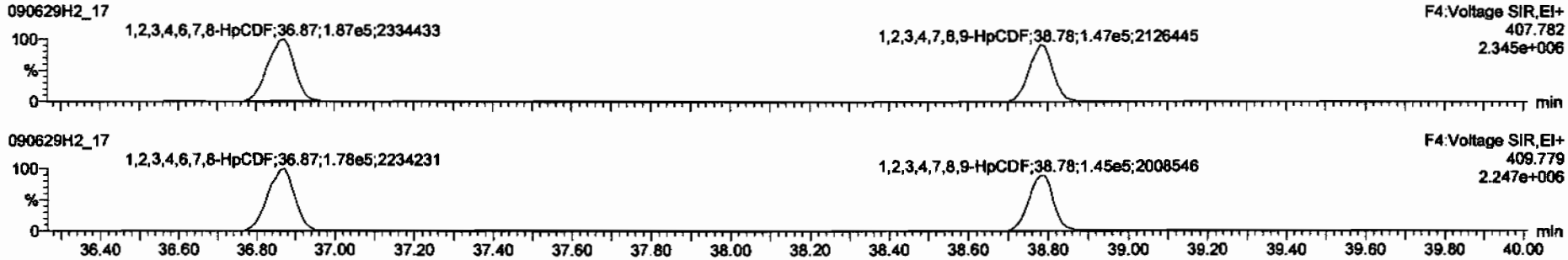

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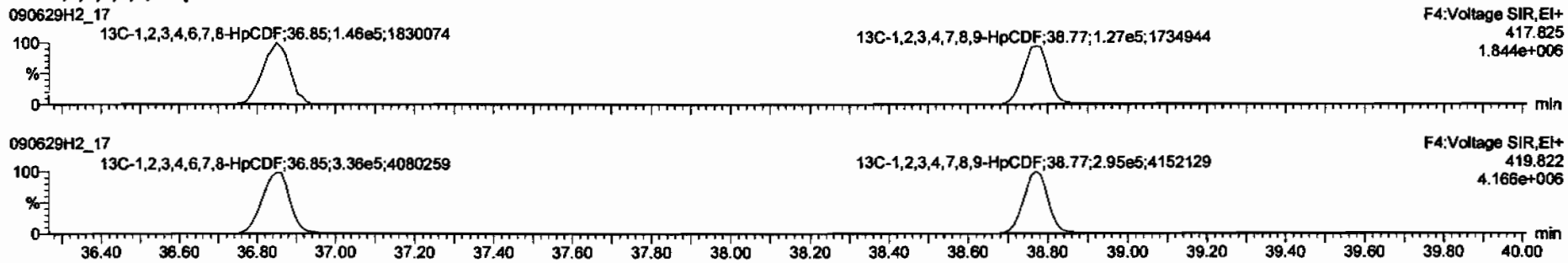

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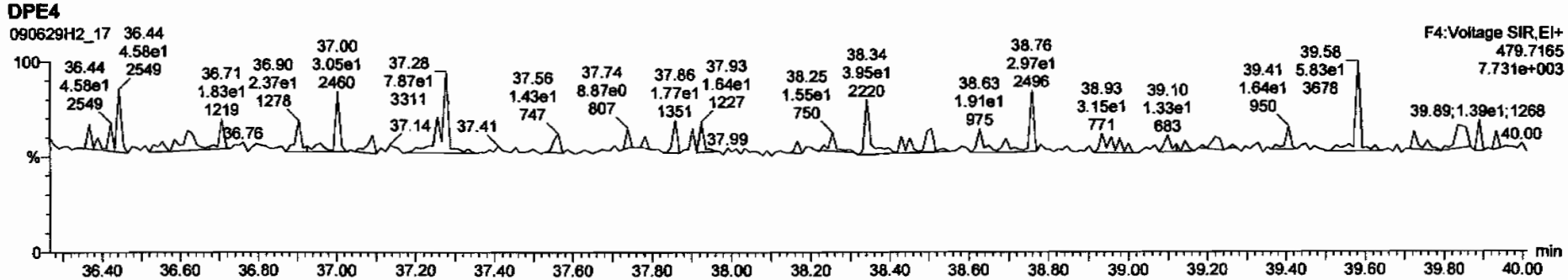

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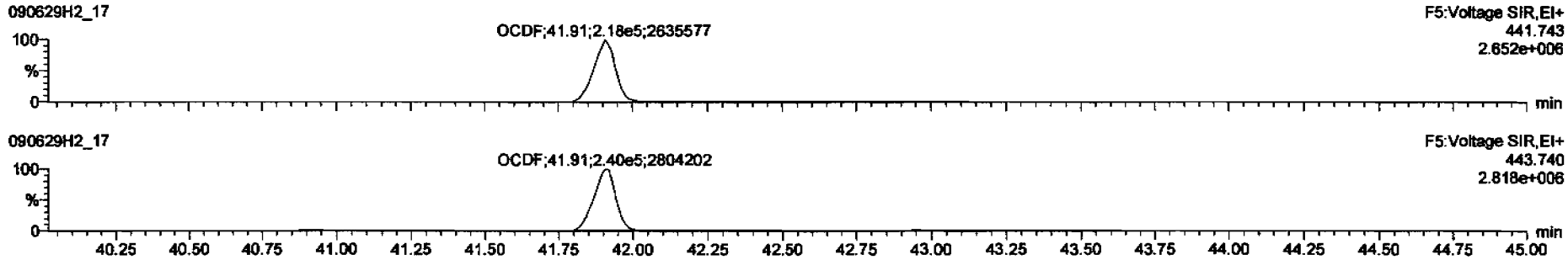

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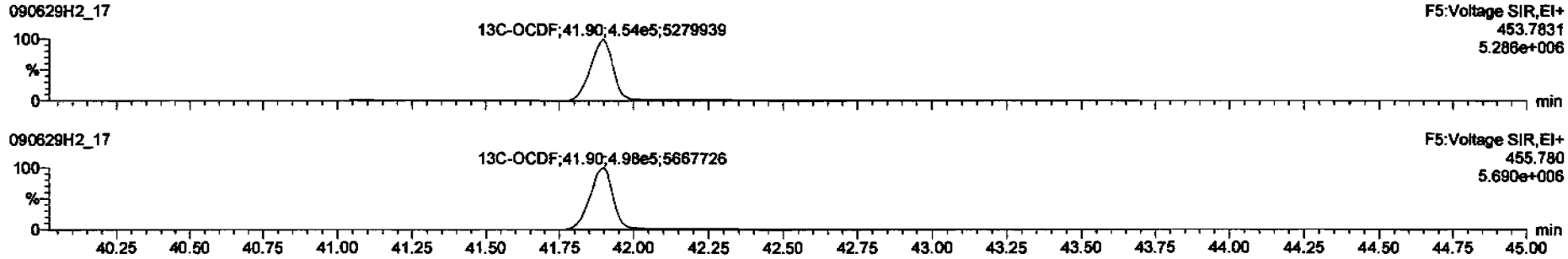

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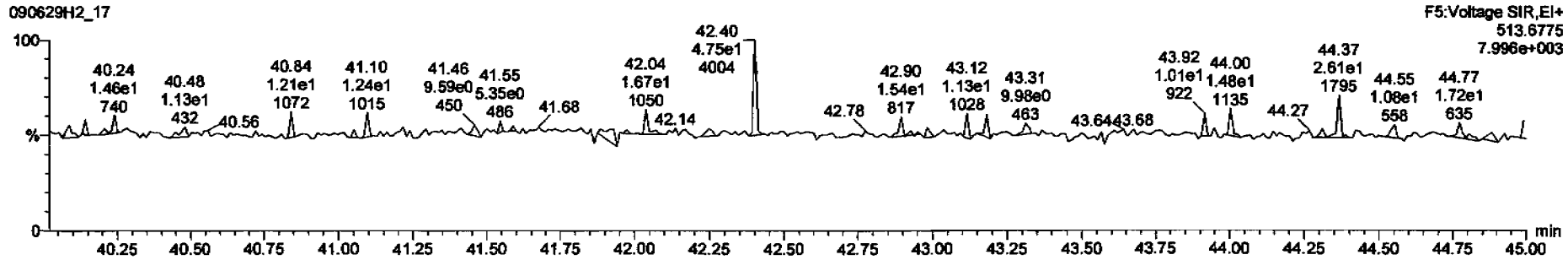

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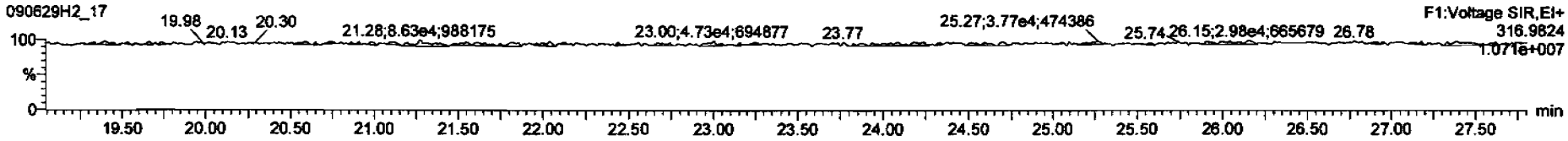

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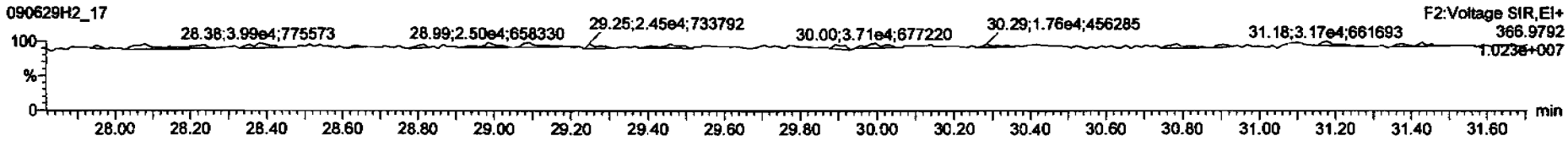

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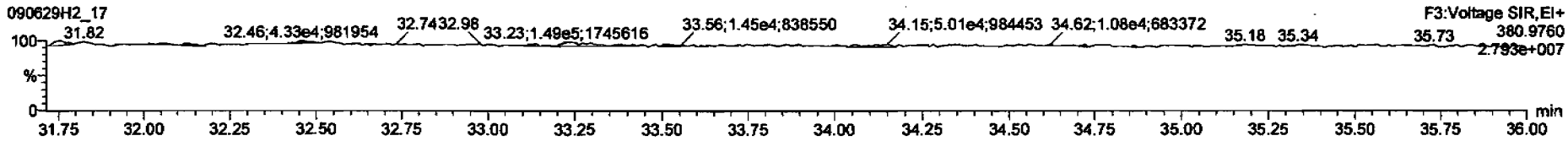

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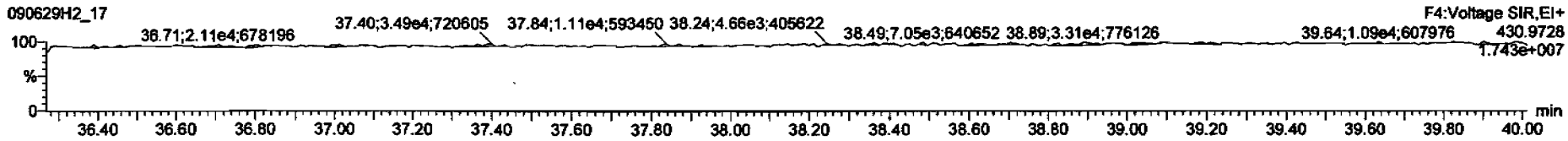

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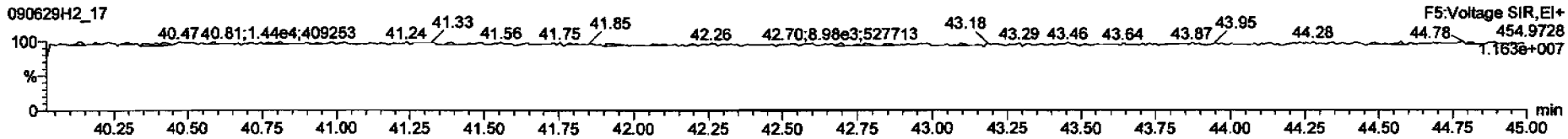

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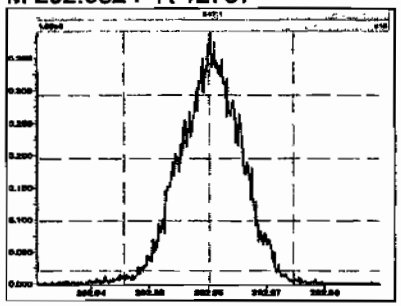

M 304.9824 R 12376

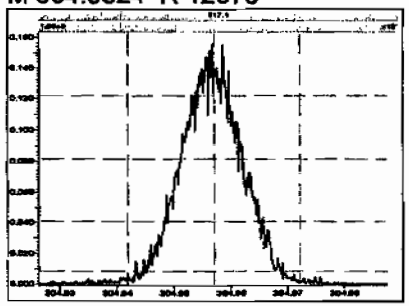

M 318.9792 R 12316

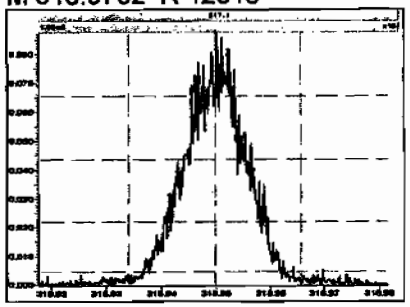

M 330.9792 R 12225

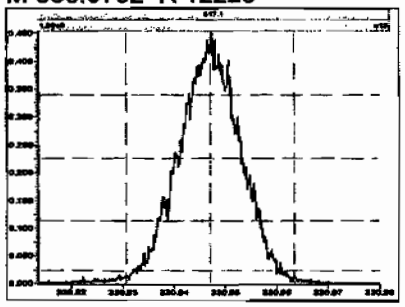

M 342.9792 R 12079

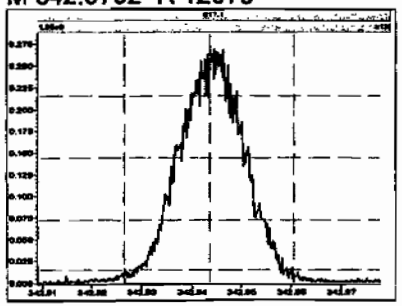

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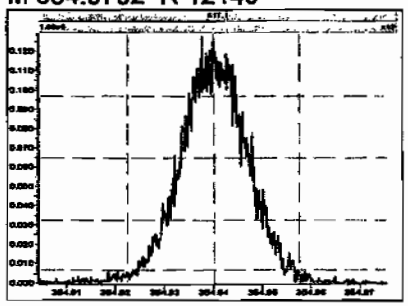

M 366.9792 R 12407

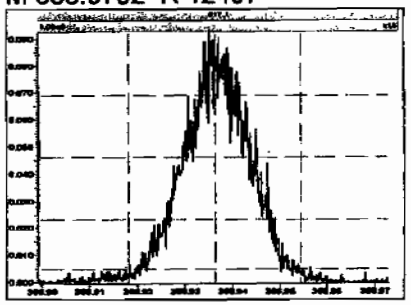

M 380.9760 R 11521

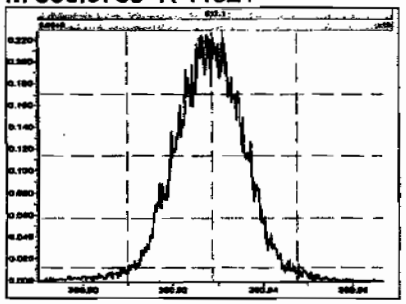

M 392.9760 R 11041

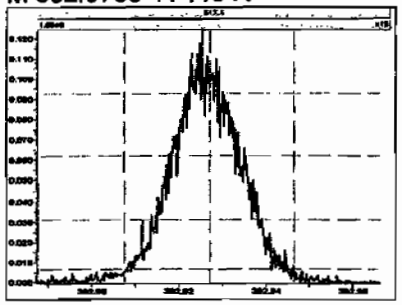

M 404.9760 R 11893

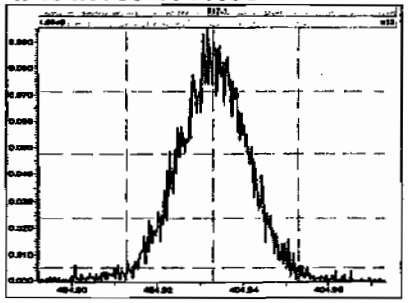

M 416.9760 R 11717

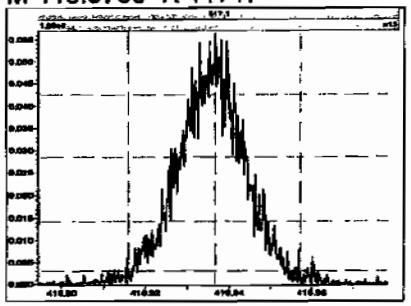

M 330.9792 R 12658

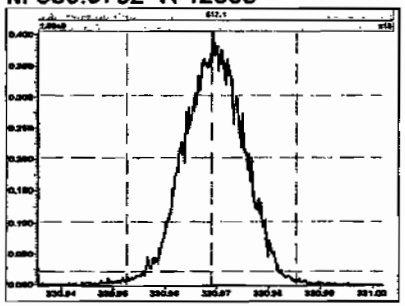

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M 342.9792 R 12531

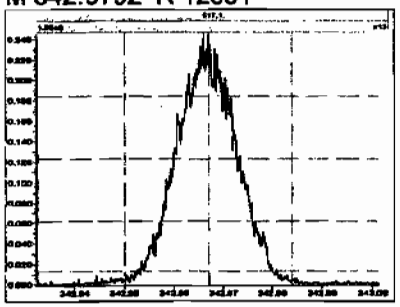

M 354.9792 R 13091

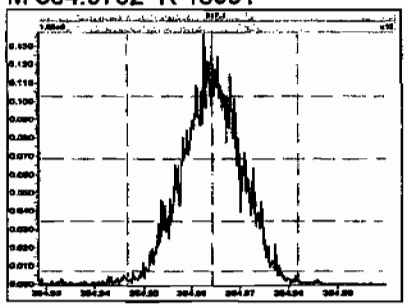

M 366.9792 R 12472

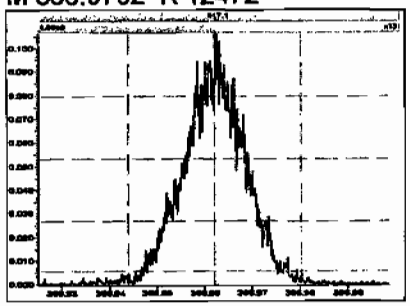

M 380.9760 R 12226

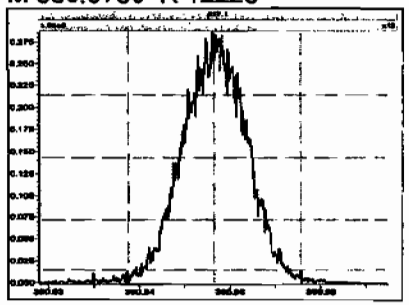

M 392.9760 R 12225

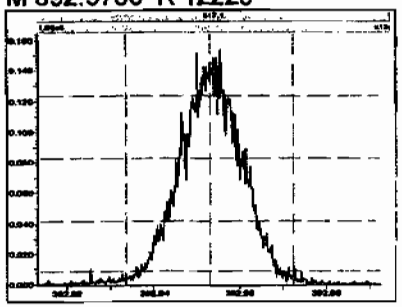

M 404.9760 R 12048

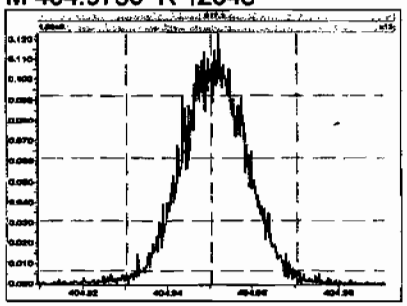

M 416.9760 R 12040

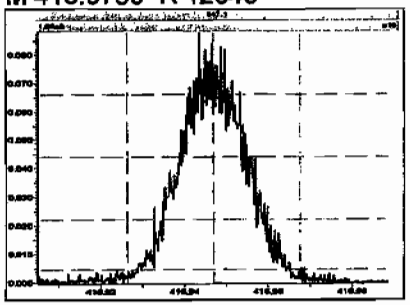

M 366.9792 R 13192

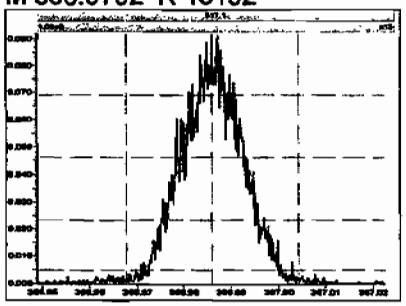

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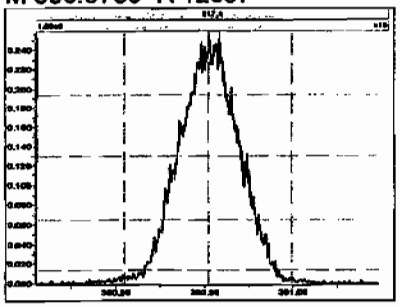

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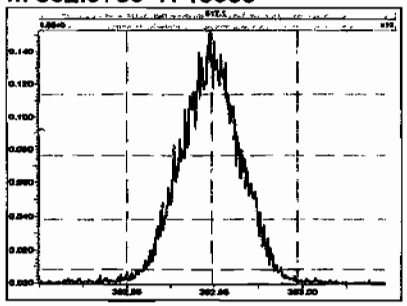

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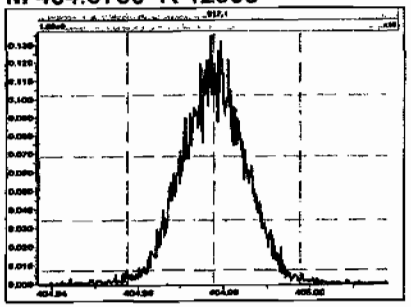

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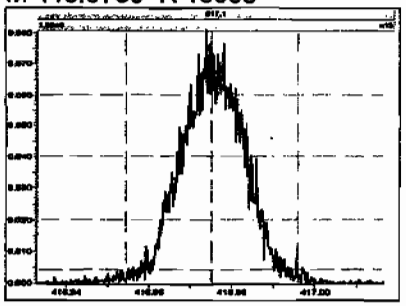

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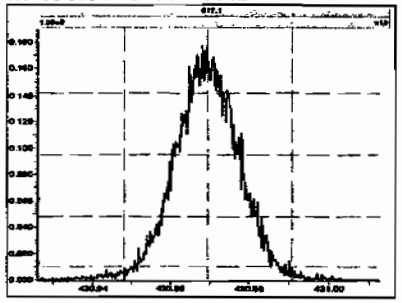

M 442.9728 R 12255

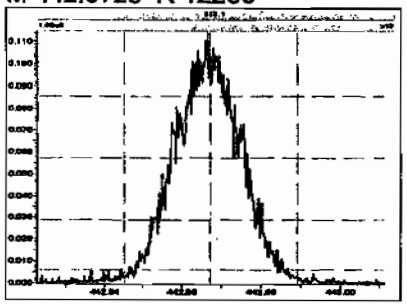

M 454.9728 R 11857

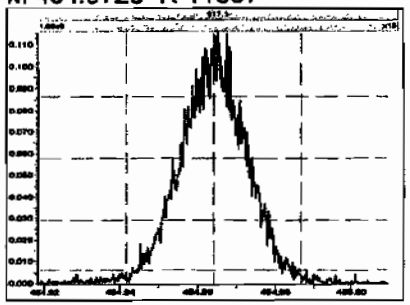

M 404.9760 R 13262

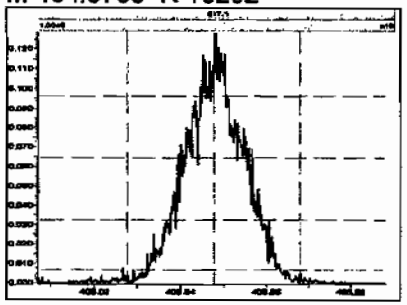

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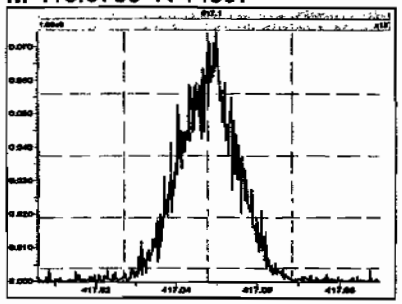

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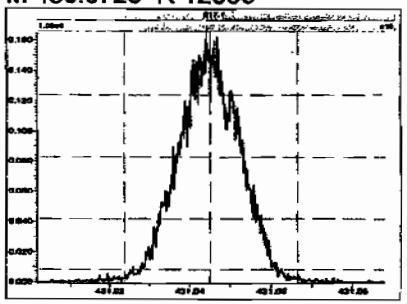

M 442.9728 R 12445

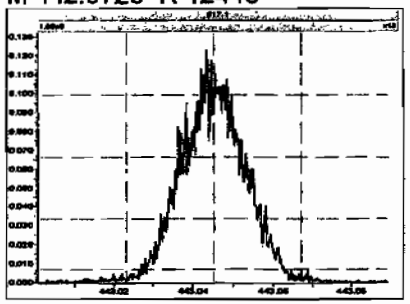

M 454.9728 R 12477

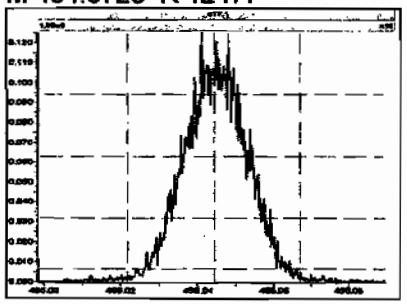

M 466.9728 R 12756

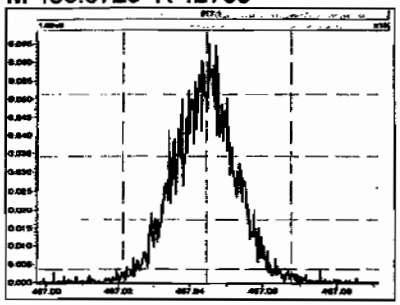

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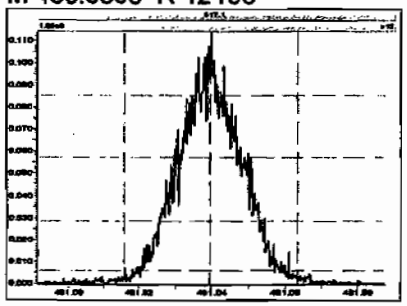

M 430.9728 R 12755

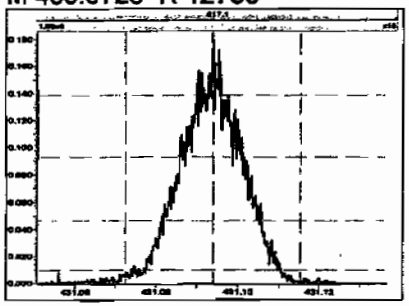

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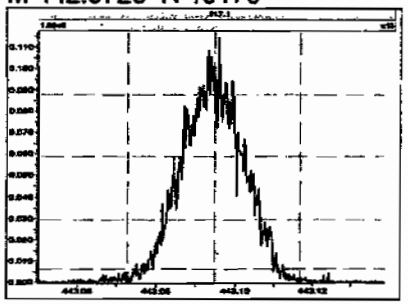

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M 454.9728 R 13440

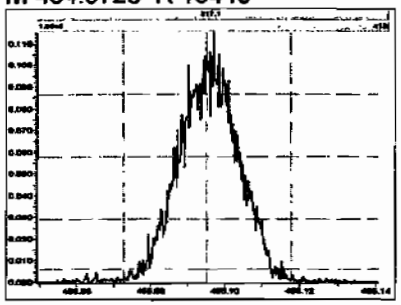

M 466.9728 R 13371

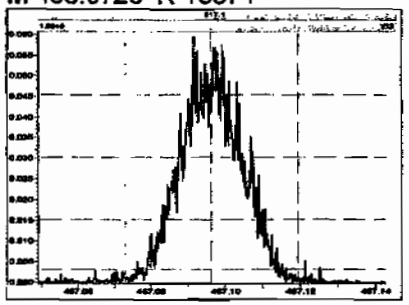

M 480.9696 R 12490

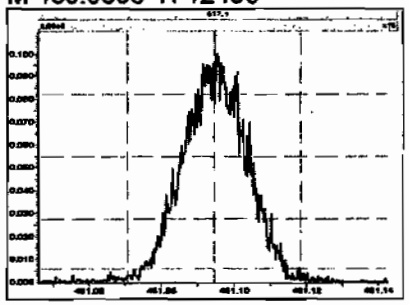

M 492.9696 R 12376

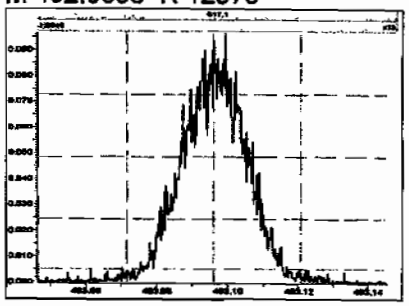

M 504.9696 R 12438

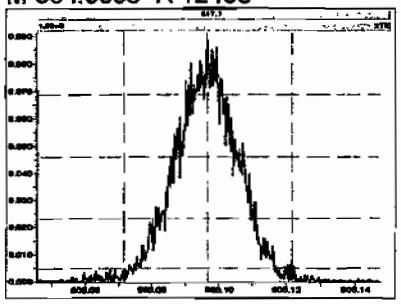

M 516.9697 R 13269

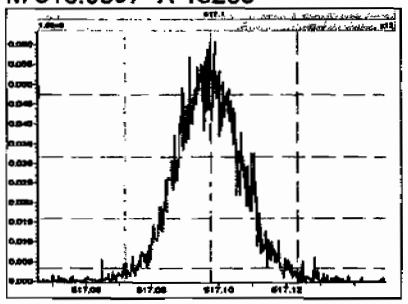

ICAL

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Compound name: 2,3,7,8-TCDD
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0	0.82	NO	25.98	1.001	7.90e4	7.49e5	9.78	-2.2	1.05
090212H1_3	0.250	0.85	NO	26.00	1.001	1.54e3	5.94e5	0.240	-4.1	1.03
090212H1_4	0.500	0.71	NO	25.98	1.001	3.65e3	6.33e5	0.536	7.1	1.16
090212H1_5	2.00	0.72	NO	26.00	1.001	1.40e4	6.64e5	1.95	-2.5	1.05
090212H1_6	40.0	0.77	NO	25.98	1.001	3.33e5	7.81e5	39.5	-1.3	1.06
090212H1_7	200	0.78	NO	26.00	1.001	1.92e6	8.66e5	206	3.0	1.11

Compound name: 1,2,3,7,8-PeCDD
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	0.63	NO	30.65	1.000	3.03e5	6.02e5	48.6	-2.7	1.01
090212H1_3	1.25	0.69	NO	30.67	1.000	6.36e3	4.83e5	1.27	1.9	1.05
090212H1_4	2.50	0.60	NO	30.67	1.000	1.30e4	4.97e5	2.53	1.1	1.04
090212H1_5	10.0	0.61	NO	30.67	1.000	5.28e4	5.23e5	9.77	-2.3	1.01
090212H1_6	200	0.63	NO	30.67	1.000	1.31e6	6.35e5	200	-0.1	1.03
090212H1_7	1000	0.63	NO	30.67	1.000	8.09e6	7.66e5	1020	2.2	1.06

2/13/09
MS 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.00153
RRF SD: 0.0317187, Relative SD: 3.16702
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.26	NO	34.10	1.000	2.54e5	5.27e5	48.0	-3.9	0.962
090212H1_3	1.25	1.42	NO	34.11	1.000	5.16e3	4.08e5	1.26	1.0	1.01
090212H1_4	2.50	1.28	NO	34.11	1.001	1.10e4	4.22e5	2.61	4.2	1.04
090212H1_5	10.0	1.32	NO	34.12	1.000	4.31e4	4.47e5	9.64	-3.6	0.965
090212H1_6	200	1.27	NO	34.11	1.000	1.12e6	5.53e5	203	1.4	1.02
090212H1_7	1000	1.25	NO	34.12	1.000	7.63e6	7.54e5	1010	1.0	1.01

Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.27	NO	34.21	1.000	2.90e5	5.42e5	47.6	-4.8	1.07
090212H1_3	1.25	1.20	NO	34.23	1.001	6.02e3	4.14e5	1.29	3.4	1.16
090212H1_4	2.50	1.24	NO	34.23	1.001	1.23e4	4.20e5	2.60	3.9	1.17
090212H1_5	10.0	1.26	NO	34.24	1.001	4.91e4	4.60e5	9.46	-5.2	1.07
090212H1_6	200	1.30	NO	34.22	1.000	1.29e6	5.59e5	205	2.7	1.16
090212H1_7	1000	1.26	NO	34.23	1.000	8.08e6	7.18e5	1000	0.0	1.13

Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.10201
RRF SD: 0.0447729, Relative SD: 4.06282
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.28	NO	34.51	1.009	2.83e5	0.00e0	48.1	-3.9	1.06
090212H1_3	1.25	1.27	NO	34.53	1.010	5.79e3	0.00e0	1.28	2.4	1.13

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 1,2,3,7,8,9-HxCDD

Name	Std Conc.	RA	IS	RT	RRT	Resp.	S/N Resp.	Conc.	%Dev.	RRF
090212H1_4	2.50	1.28	NO	34.52	1.009	1.21e4	0.00e0	2.60	4.0	1.15
090212H1_5	10.0	1.22	NO	34.53	1.009	4.70e4	0.00e0	9.41	-5.9	1.04
090212H1_6	200	1.32	NO	34.52	1.009	1.26e6	0.00e0	207	3.3	1.14
090212H1_7	1000	1.25	NO	34.53	1.009	8.13e6	0.00e0	1000	0.2	1.10

Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IS	RT	RRT	Resp.	S/N Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0	1.03	NO	38.17	1.000	2.11e5	4.13e5	48.0	-4.0	1.02
090212H1_3	1.25	1.15	NO	38.18	1.000	4.52e3	3.21e5	1.32	5.7	1.12
090212H1_4	2.50	1.07	NO	38.18	1.000	8.68e3	3.21e5	2.54	1.7	1.08
090212H1_5	10.0	1.07	NO	38.19	1.001	3.41e4	3.36e5	9.55	-4.5	1.02
090212H1_6	200	1.07	NO	38.19	1.000	9.19e5	4.29e5	201	0.7	1.07
090212H1_7	1000	1.05	NO	38.19	1.001	6.29e6	5.88e5	1000	0.5	1.07

Compound name: OCDD
Response Factor: 1.17831
RRF SD: 0.0736447, Relative SD: 6.25001
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IS	RT	RRT	Resp.	S/N Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.91	NO	41.63	1.000	3.30e5	5.87e5	95.3	-4.7	1.12
090212H1_3	2.50	0.89	NO	41.67	1.001	7.09e3	4.40e5	2.74	9.5	1.29
090212H1_4	5.00	0.87	NO	41.65	1.000	1.25e4	4.37e5	4.85	-3.0	1.14
090212H1_5	20.0	0.85	NO	41.66	1.000	5.10e4	4.67e5	18.5	-7.3	1.09
090212H1_6	400	0.92	NO	41.68	1.000	1.48e6	6.21e5	404	1.1	1.19
090212H1_7	2000	0.89	NO	41.67	1.001	1.10e7	8.92e5	2090	4.4	1.23

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 2,3,7,8-TCDF
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	10.0	0.78	NO	25.19	1.001	1.14e5	1.07e6	9.75	-2.5	1.06
2	090212H1_3	0.250	0.83	NO	25.19	1.001	2.44e3	8.63e5	0.260	4.1	1.13
3	090212H1_4	0.500	0.84	NO	25.20	1.001	4.98e3	9.06e5	0.506	1.2	1.10
4	090212H1_5	2.00	0.81	NO	25.20	1.001	1.97e4	9.70e5	1.87	-6.4	1.02
5	090212H1_6	40.0	0.79	NO	25.20	1.001	4.71e5	1.08e6	40.1	0.3	1.09
6	090212H1_7	200	0.79	NO	25.20	1.001	2.66e6	1.18e6	207	3.4	1.12

Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0	1.61	NO	29.42	1.000	5.65e5	9.82e5	49.6	-0.7	1.15
2	090212H1_3	1.25	1.63	NO	29.43	1.000	1.11e4	7.63e5	1.25	0.1	1.16
3	090212H1_4	2.50	1.74	NO	29.43	1.000	2.29e4	7.80e5	2.53	1.3	1.17
4	090212H1_5	10.0	1.61	NO	29.43	1.000	9.64e4	8.78e5	9.48	-5.2	1.10
5	090212H1_6	200	1.62	NO	29.43	1.000	2.36e6	9.96e5	204	2.0	1.18
6	090212H1_7	1000	1.60	NO	29.45	1.000	1.42e7	1.20e6	1030	2.5	1.19

Compound name: 2,3,4,7,8-PeCDF
Response Factor: 1.11789
RRF SD: 0.0264655, Relative SD: 2.36745
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0	1.56	NO	30.35	1.000	5.35e5	9.65e5	49.6	-0.8	1.11
2	090212H1_3	1.25	1.51	NO	30.36	1.000	1.08e4	7.68e5	1.25	0.4	1.12

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Compound name: 2,3,4,7,8-PeCDF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	2.50	1.61	NO	30.36	1.000	2.28e4	7.94e5	2.57	2.6	1.15
090212H1_5	10.0	1.64	NO	30.38	1.000	9.28e4	8.67e5	9.58	-4.2	1.07
090212H1_6	200	1.60	NO	30.36	1.000	2.28e6	1.01e6	203	1.5	1.13
090212H1_7	1000	1.59	NO	30.38	1.000	1.37e7	1.22e6	1010	0.5	1.12

Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.41088
RRF SD: 0.0512913, Relative SD: 3.6354
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.27	NO	33.19	1.001	4.59e5	6.74e5	48.3	-3.3	1.36
090212H1_3	1.25	1.35	NO	33.19	1.000	9.88e3	5.28e5	1.33	6.0	1.50
090212H1_4	2.50	1.32	NO	33.19	1.000	1.96e4	5.45e5	2.54	1.8	1.44
090212H1_5	10.0	1.31	NO	33.20	1.000	7.94e4	5.86e5	9.61	-3.9	1.36
090212H1_6	200	1.27	NO	33.20	1.001	1.99e6	7.08e5	199	-0.5	1.40
090212H1_7	1000	1.27	NO	33.20	1.000	1.28e7	9.05e5	1000	-0.0	1.41

Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.22218
RRF SD: 0.0229408, Relative SD: 1.87703
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.25	NO	33.31	1.000	5.49e5	9.02e5	49.8	-0.4	1.22
090212H1_3	1.25	1.21	NO	33.32	1.000	1.07e4	6.79e5	1.29	3.1	1.26
090212H1_4	2.50	1.37	NO	33.31	1.000	2.16e4	6.99e5	2.52	1.0	1.23
090212H1_5	10.0	1.34	NO	33.33	1.000	8.96e4	7.51e5	9.76	-2.4	1.19
090212H1_6	200	1.27	NO	33.32	1.000	2.27e6	9.34e5	199	-0.5	1.22
090212H1_7	1000	1.27	NO	33.33	1.001	1.41e7	1.17e6	992	-0.8	1.21

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Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RF	Flag	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	50.0	1.29	NO	33.92	1.000	4.53e5	7.19e5	49.2	-1.6	1.26
090212H1_3	1.25	1.38	NO	33.93	1.000	9.11e3	5.78e5	1.23	-1.5	1.26
090212H1_4	2.50	1.28	NO	33.93	1.001	1.91e4	5.74e5	2.60	3.9	1.33
090212H1_5	10.0	1.25	NO	33.94	1.000	7.70e4	6.20e5	9.71	-2.9	1.24
090212H1_6	200	1.26	NO	33.93	1.000	1.95e6	7.64e5	200	-0.2	1.28
090212H1_7	1000	1.30	NO	33.94	1.000	1.26e7	9.59e5	1020	2.3	1.31

Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.25756
RRF SD: 0.0204635, Relative SD: 1.62723
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RF	Flag	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	50.0	1.25	NO	34.91	1.000	3.76e5	6.05e5	49.5	-1.0	1.24
090212H1_3	1.25	1.37	NO	34.91	1.000	7.41e3	4.73e5	1.24	-0.4	1.25
090212H1_4	2.50	1.24	NO	34.92	1.001	1.51e4	4.79e5	2.50	0.2	1.26
090212H1_5	10.0	1.28	NO	34.93	1.000	6.29e4	5.10e5	9.81	-1.9	1.23
090212H1_6	200	1.25	NO	34.92	1.001	1.68e6	6.50e5	206	2.9	1.29
090212H1_7	1000	1.28	NO	34.92	1.000	1.08e7	8.57e5	1000	0.3	1.26

Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RF	Flag	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	50.0	1.05	NO	36.81	1.000	4.18e5	5.07e5	48.8	-2.3	1.65
090212H1_3	1.25	1.05	NO	36.84	1.001	8.84e3	3.97e5	1.32	5.5	1.78

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Compound name: 1,2,3,4,6,7,8-HpCDF

Name	Std Conc.	RA	IM	RT	RRT	Resp	ISResp	Conc.	%Dev	RRF
090212H1_4	2.50	1.04	NO	36.82	1.000	1.73e4	3.94e5	2.60	4.0	1.76
090212H1_5	10.0	1.05	NO	36.84	1.001	6.64e4	4.25e5	9.25	-7.5	1.56
090212H1_6	200	1.06	NO	36.83	1.000	1.78e6	5.26e5	200	-0.1	1.69
090212H1_7	1000	1.06	NO	36.83	1.000	1.17e7	6.89e5	1010	0.5	1.70

Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.48054
RRF SD: 0.0286004, Relative SD: 1.93175
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IM	RT	RRT	Resp	ISResp	Conc.	%Dev	RRF
090212H1_1	50.0	1.05	NO	38.73	1.000	3.09e5	4.20e5	49.7	-0.5	1.47
090212H1_3	1.25	0.89	NO	38.75	1.001	6.11e3	3.26e5	1.27	1.3	1.50
090212H1_4	2.50	0.99	NO	38.73	1.000	1.20e4	3.25e5	2.49	-0.4	1.47
090212H1_5	10.0	1.07	NO	38.74	1.000	4.97e4	3.47e5	9.66	-3.4	1.43
090212H1_6	200	1.04	NO	38.75	1.000	1.34e6	4.47e5	202	0.9	1.49
090212H1_7	1000	1.03	NO	38.75	1.000	9.18e6	6.08e5	1020	2.1	1.51

Compound name: OCDF
Response Factor: 1.09622
RRF SD: 0.0644136, Relative SD: 5.87597
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IM	RT	RRT	Resp	ISResp	Conc.	%Dev	RRF
090212H1_1	100	0.93	NO	41.88	1.001	4.66e5	8.78e5	96.7	-3.3	1.06
090212H1_3	2.50	0.90	NO	41.89	1.001	1.01e4	6.65e5	2.76	10.6	1.21
090212H1_4	5.00	0.84	NO	41.88	1.001	1.79e4	6.44e5	5.08	1.6	1.11
090212H1_5	20.0	0.95	NO	41.88	1.000	7.14e4	6.95e5	18.8	-6.2	1.03
090212H1_6	400	0.94	NO	41.90	1.000	2.10e6	9.52e5	402	0.4	1.10
090212H1_7	2000	0.92	NO	41.89	1.000	1.48e7	1.39e6	1940	-3.1	1.06

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 13C-2,3,7,8-TCDD
Response Factor: 1.01489
RRF SD: 0.0275825, Relative SD: 2.71777
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	Int	RT	RRT	Resp.	IS Resp.	Conc.	%Dev	RRF
	090212H1_1	100	0.77	NO	25.95	1.022	7.49e5	7.37e5	100	0.1	1.02
	090212H1_3	100	0.80	NO	25.97	1.022	5.94e5	6.03e5	97.2	-2.8	0.986
	090212H1_4	100	0.78	NO	25.97	1.022	6.33e5	6.33e5	98.5	-1.5	1.00
	090212H1_5	100	0.78	NO	25.97	1.022	6.64e5	6.68e5	97.9	-2.1	0.994
	090212H1_6	100	0.79	NO	25.97	1.022	7.81e5	7.54e5	102	2.0	1.04
	090212H1_7	100	0.79	NO	25.97	1.022	8.66e5	8.18e5	104	4.3	1.06

Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.827461
RRF SD: 0.0577323, Relative SD: 6.97704
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	Int	RT	RRT	Resp.	IS Resp.	Conc.	%Dev	RRF
	090212H1_1	100	0.64	NO	30.64	1.207	6.02e5	7.37e5	98.7	-1.3	0.817
	090212H1_3	100	0.63	NO	30.65	1.207	4.83e5	6.03e5	96.8	-3.2	0.801
	090212H1_4	100	0.61	NO	30.65	1.207	4.97e5	6.33e5	94.9	-5.1	0.786
	090212H1_5	100	0.64	NO	30.65	1.207	5.23e5	6.68e5	94.6	-5.4	0.783
	090212H1_6	100	0.65	NO	30.65	1.207	6.35e5	7.54e5	102	1.7	0.842
	090212H1_7	100	0.64	NO	30.65	1.207	7.66e5	8.18e5	113	13.2	0.937

Compound name: 13C-1,2,3,4,7,8-HxCDD
Response Factor: 0.916247
RRF SD: 0.0122736, Relative SD: 1.33955
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	Int	RT	RRT	Resp.	IS Resp.	Conc.	%Dev	RRF
	090212H1_1	100	1.26	NO	34.08	0.988	5.27e5	5.79e5	99.4	-0.6	0.911
2	090212H1_3	100	1.26	NO	34.10	0.988	4.08e5	4.37e5	102	2.0	0.934

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Compound name: 13C-1,2,3,4,7,8-HxCDD

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	100	1.26	NO	34.08	0.988	4.22e5	4.66e5	98.7	-1.3	0.904
090212H1_5	100	1.24	NO	34.11	0.988	4.47e5	4.90e5	99.6	-0.4	0.913
090212H1_6	100	1.25	NO	34.10	0.988	5.53e5	6.10e5	98.9	-1.1	0.907
090212H1_7	100	1.25	NO	34.11	0.988	7.54e5	8.12e5	101	1.4	0.929

Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.920893
RRF SD: 0.0250009, Relative SD: 2.71486
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.19	0.991	5.42e5	5.79e5	102	1.7	0.936
090212H1_3	100	1.23	NO	34.21	0.991	4.14e5	4.37e5	103	2.9	0.948
090212H1_4	100	1.29	NO	34.21	0.991	4.20e5	4.66e5	97.7	-2.3	0.900
090212H1_5	100	1.25	NO	34.22	0.991	4.60e5	4.90e5	102	2.1	0.940
090212H1_6	100	1.27	NO	34.21	0.991	5.59e5	6.10e5	99.5	-0.5	0.916
090212H1_7	100	1.23	NO	34.22	0.991	7.18e5	8.12e5	96.0	-4.0	0.884

Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.708388
RRF SD: 0.019948, Relative SD: 2.81596
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.07	NO	38.16	1.106	4.13e5	5.79e5	101	0.7	0.713
090212H1_3	100	1.09	NO	38.17	1.106	3.21e5	4.37e5	104	3.9	0.736
090212H1_4	100	1.05	NO	38.17	1.106	3.21e5	4.66e5	97.1	-2.9	0.688
090212H1_5	100	1.06	NO	38.17	1.106	3.36e5	4.90e5	96.8	-3.2	0.686
090212H1_6	100	1.06	NO	38.18	1.106	4.29e5	6.10e5	99.3	-0.7	0.703
090212H1_7	100	1.04	NO	38.17	1.106	5.88e5	8.12e5	102	2.2	0.724

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Compound name: 13C-OCDD
Response Factor: 0.502588
RRF SD: 0.0283515, Relative SD: 5.6411
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	200	0.89	NO	41.62	1.206	5.87e5	5.79e5	202	0.9	0.507
090212H1_3	200	0.92	NO	41.65	1.207	4.40e5	4.37e5	200	0.2	0.504
090212H1_4	200	0.90	NO	41.63	1.206	4.37e5	4.66e5	187	-6.7	0.469
090212H1_5	200	0.89	NO	41.65	1.206	4.67e5	4.90e5	190	-5.0	0.477
090212H1_6	200	0.91	NO	41.67	1.207	6.21e5	6.10e5	203	1.4	0.510
090212H1_7	200	0.93	NO	41.65	1.206	8.92e5	8.12e5	219	9.3	0.549

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.976814
RRF SD: 0.0185774, Relative SD: 1.90184
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.16	0.991	1.07e6	1.11e6	98.8	-1.2	0.965
090212H1_3	100	0.79	NO	25.17	0.991	8.63e5	9.05e5	97.5	-2.5	0.953
090212H1_4	100	0.78	NO	25.17	0.991	9.06e5	9.34e5	99.3	-0.7	0.970
090212H1_5	100	0.79	NO	25.17	0.991	9.70e5	9.83e5	101	1.1	0.987
090212H1_6	100	0.77	NO	25.17	0.991	1.08e6	1.10e6	100	0.4	0.980
090212H1_7	100	0.76	NO	25.17	0.991	1.18e6	1.18e6	103	2.9	1.01

Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 0.896189
RRF SD: 0.0663113, Relative SD: 7.39926
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.58	NO	29.41	1.158	9.82e5	1.11e6	98.4	-1.6	0.882
090212H1_3	100	1.57	NO	29.42	1.158	7.63e5	9.05e5	94.0	-6.0	0.842

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Compound name: 13C-1,2,3,7,8-PeCDF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	100	1.57	NO	29.42	1.158	7.80e5	9.34e5	93.1	-6.9	0.835
090212H1_5	100	1.58	NO	29.42	1.158	8.78e5	9.83e5	99.7	-0.3	0.894
090212H1_6	100	1.56	NO	29.42	1.158	9.96e5	1.10e6	101	1.0	0.905
090212H1_7	100	1.52	NO	29.43	1.159	1.20e6	1.18e6	114	13.7	1.02

Compound name: 13C-2,3,4,7,8-PeCDF
Response Factor: 0.899625
RRF SD: 0.0716088, Relative SD: 7.95986
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	1.57	NO	30.34	1.195	9.65e5	1.11e6	96.3	-3.7	0.866
090212H1_3	100	1.54	NO	30.35	1.195	7.68e5	9.05e5	94.2	-5.8	0.848
090212H1_4	100	1.52	NO	30.35	1.195	7.94e5	9.34e5	94.5	-5.5	0.850
090212H1_5	100	1.59	NO	30.36	1.195	8.67e5	9.83e5	98.1	-1.9	0.882
090212H1_6	100	1.55	NO	30.35	1.195	1.01e6	1.10e6	102	1.6	0.914
090212H1_7	100	1.54	NO	30.36	1.195	1.22e6	1.18e6	115	15.3	1.04

Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.16919
RRF SD: 0.0331609, Relative SD: 2.83622
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.54	NO	33.16	0.961	6.74e5	5.79e5	99.5	-0.5	1.16
090212H1_3	100	0.54	NO	33.17	0.961	5.28e5	4.37e5	104	3.5	1.21
090212H1_4	100	0.52	NO	33.17	0.961	5.45e5	4.66e5	99.9	-0.1	1.17
090212H1_5	100	0.54	NO	33.19	0.961	5.86e5	4.90e5	102	2.3	1.20
090212H1_6	100	0.53	NO	33.17	0.961	7.08e5	6.10e5	99.4	-0.6	1.16
090212H1_7	100	0.53	NO	33.19	0.961	9.05e5	8.12e5	95.3	-4.7	1.11

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Compound name: 13C-1,2,3,6,7,8-HxCDF
Response Factor: 1.51914
RRF SD: 0.0457416, Relative SD: 3.01103
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.55	NO	33.29	0.965	9.02e5	5.79e5	103	2.5	1.56
090212H1_3	100	0.52	NO	33.31	0.965	6.79e5	4.37e5	102	2.4	1.56
090212H1_4	100	0.53	NO	33.29	0.965	6.99e5	4.66e5	98.7	-1.3	1.50
090212H1_5	100	0.53	NO	33.32	0.965	7.51e5	4.90e5	101	1.0	1.53
090212H1_6	100	0.52	NO	33.31	0.965	9.34e5	6.10e5	101	0.8	1.53
090212H1_7	100	0.54	NO	33.31	0.965	1.17e6	8.12e5	94.6	-5.4	1.44

Compound name: 13C-2,3,4,6,7,8-HxCDF
Response Factor: 1.24921
RRF SD: 0.0473005, Relative SD: 3.78643
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.54	NO	33.91	0.983	7.19e5	5.79e5	99.3	-0.7	1.24
090212H1_3	100	0.53	NO	33.92	0.983	5.78e5	4.37e5	106	6.0	1.32
090212H1_4	100	0.55	NO	33.91	0.983	5.74e5	4.66e5	98.4	-1.6	1.23
090212H1_5	100	0.55	NO	33.93	0.983	6.20e5	4.90e5	101	1.3	1.27
090212H1_6	100	0.53	NO	33.92	0.983	7.64e5	6.10e5	100	0.4	1.25
090212H1_7	100	0.53	NO	33.93	0.983	9.59e5	8.12e5	94.5	-5.5	1.18

Compound name: 13C-1,2,3,7,8,9-HxCDF
Response Factor: 1.05297
RRF SD: 0.0198461, Relative SD: 1.88477
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.53	NO	34.90	1.011	6.05e5	5.79e5	99.2	-0.8	1.04
090212H1_3	100	0.52	NO	34.90	1.011	4.73e5	4.37e5	103	2.9	1.08

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Compound name: 13C-1,2,3,7,8,9-HxCDF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Acc	RRF
090212H1_4	100	0.53	NO	34.90	1.011	4.79e5	4.66e5	97.6	-2.4	1.03
090212H1_5	100	0.54	NO	34.92	1.011	5.10e5	4.90e5	98.9	-1.1	1.04
090212H1_6	100	0.52	NO	34.90	1.011	6.50e5	6.10e5	101	1.2	1.07
090212H1_7	100	0.53	NO	34.91	1.011	8.57e5	8.12e5	100	0.2	1.05

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 0.868264
RRF SD: 0.0231201, Relative SD: 2.6628
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Acc	RRF
090212H1_1	100	0.46	NO	36.80	1.066	5.07e5	5.79e5	101	0.8	0.875
090212H1_3	100	0.44	NO	36.81	1.066	3.97e5	4.37e5	105	4.7	0.909
090212H1_4	100	0.44	NO	36.81	1.066	3.94e5	4.66e5	97.3	-2.7	0.845
090212H1_5	100	0.44	NO	36.82	1.066	4.25e5	4.90e5	99.9	-0.1	0.868
090212H1_6	100	0.46	NO	36.82	1.066	5.26e5	6.10e5	99.5	-0.5	0.864
090212H1_7	100	0.45	NO	36.82	1.066	6.89e5	8.12e5	97.7	-2.3	0.849

Compound name: 13C-1,2,3,4,7,8,9-HpCDF
Response Factor: 0.726514
RRF SD: 0.0207066, Relative SD: 2.85014
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Acc	RRF
090212H1_1	100	0.46	NO	38.72	1.122	4.20e5	5.79e5	99.8	-0.2	0.725
090212H1_3	100	0.45	NO	38.73	1.122	3.26e5	4.37e5	103	2.8	0.747
090212H1_4	100	0.45	NO	38.72	1.122	3.25e5	4.66e5	95.9	-4.1	0.696
090212H1_5	100	0.44	NO	38.73	1.122	3.47e5	4.90e5	97.6	-2.4	0.709
090212H1_6	100	0.45	NO	38.74	1.122	4.47e5	6.10e5	101	1.0	0.734
090212H1_7	100	0.44	NO	38.74	1.122	6.08e5	8.12e5	103	3.0	0.748

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Compound name: 13C-OCDF
Response Factor: 0.759527
RRF SD: 0.058777, Relative SD: 7.73863
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IsO	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	200	0.91	NO	41.85	1.213	8.78e5	5.79e5	200	-0.2	0.758
090212H1_3	200	0.88	NO	41.86	1.213	6.65e5	4.37e5	200	0.2	0.761
090212H1_4	200	0.90	NO	41.85	1.213	6.44e5	4.66e5	182	-9.1	0.690
090212H1_5	200	0.90	NO	41.86	1.213	6.95e5	4.90e5	187	-6.6	0.710
090212H1_6	200	0.90	NO	41.89	1.213	9.52e5	6.10e5	206	2.8	0.781
090212H1_7	200	0.90	NO	41.88	1.213	1.39e6	8.12e5	226	12.8	0.857

Compound name: 37Cl-2,3,7,8-TCDD
Response Factor: 0.668396
RRF SD: 0.0327668, Relative SD: 4.90231
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IsO	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	10.0			25.98	1.023	4.66e4	7.37e5	9.46	-5.4	0.632
090212H1_3	0.250			25.97	1.022	1.08e3	6.03e5	0.269	7.5	0.718
090212H1_4	0.500			25.98	1.023	2.17e3	6.33e5	0.512	2.4	0.685
090212H1_5	2.00			25.98	1.023	8.69e3	6.68e5	1.95	-2.7	0.650
090212H1_6	40.0			25.98	1.023	1.93e5	7.54e5	38.4	-4.1	0.641
090212H1_7	200			25.98	1.023	1.12e6	8.18e5	205	2.3	0.684

Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IsO	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	100	0.81	NO	25.39	0.000	7.37e5	7.37e5	100	0.0	1.00
090212H1_3	100	0.79	NO	25.40	0.000	6.03e5	6.03e5	100	0.0	1.00

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 13C-1,2,3,4-TCDD

Name	Std. Conc.	RA	IN	RT	RRT	Response	IS Resp.	Conc.	Dev.	RRF
090212H1_4	100	0.79	NO	25.40	0.000	6.33e5	6.33e5	100	0.0	1.00
090212H1_5	100	0.78	NO	25.40	0.000	6.68e5	6.68e5	100	0.0	1.00
090212H1_6	100	0.78	NO	25.40	0.000	7.54e5	7.54e5	100	0.0	1.00
090212H1_7	100	0.79	NO	25.40	0.000	8.18e5	8.18e5	100	0.0	1.00

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 4.96507e-017, Relative SD: 4.96507e-015
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IN	RT	RRT	Response	IS Resp.	Conc.	Dev.	RRF
090212H1_1	100	0.78	NO	23.95	0.000	1.11e6	1.11e6	100	0.0	1.00
090212H1_3	100	0.77	NO	23.95	0.000	9.05e5	9.05e5	100	0.0	1.00
090212H1_4	100	0.77	NO	23.95	0.000	9.34e5	9.34e5	100	0.0	1.00
090212H1_5	100	0.76	NO	23.97	0.000	9.83e5	9.83e5	100	0.0	1.00
090212H1_6	100	0.77	NO	23.97	0.000	1.10e6	1.10e6	100	-0.0	1.00
090212H1_7	100	0.78	NO	23.97	0.000	1.18e6	1.18e6	100	0.0	1.00

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IN	RT	RRT	Response	IS Resp.	Conc.	Dev.	RRF
090212H1_1	100	1.22	NO	34.50	0.000	5.79e5	5.79e5	100	0.0	1.00
090212H1_3	100	1.23	NO	34.51	0.000	4.37e5	4.37e5	100	0.0	1.00
090212H1_4	100	1.25	NO	34.51	0.000	4.66e5	4.66e5	100	0.0	1.00
090212H1_5	100	1.18	NO	34.52	0.000	4.90e5	4.90e5	100	0.0	1.00
090212H1_6	100	1.26	NO	34.52	0.000	6.10e5	6.10e5	100	0.0	1.00
090212H1_7	100	1.22	NO	34.52	0.000	8.12e5	8.12e5	100	0.0	1.00

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: Total Tetra-Dioxins
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	10.0					7.49e5	60.1		
090212H1_3	0.250					5.94e5	0.240		
090212H1_4	0.500					6.33e5	0.536		
090212H1_5	2.00					6.64e5	1.95		
090212H1_6	40.0					7.81e5	39.5		
090212H1_7	200					8.66e5	206		

Compound name: Total Penta-Dioxins
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	50.0					6.02e5	159		
090212H1_3	1.25					4.83e5	1.30		
090212H1_4	2.50					4.97e5	2.53		
090212H1_5	10.0					5.23e5	9.77		
090212H1_6	200					6.35e5	200		
090212H1_7	1000					7.66e5	1020		

Compound name: Total Hexa-Dioxins
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	50.0					0.00e0	191		
090212H1_3	1.25					0.00e0	3.85		

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: Total Hexa-Dioxins

Name	Std Conc	IS Area	Conc	RRF
090212H1_4	2.50	0.00e0	7.81	
090212H1_5	10.0	0.00e0	28.5	
090212H1_6	200	0.00e0	615	
090212H1_7	1000	0.00e0	3010	

Compound name: Total Hepta-Dioxins
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	IS Area	Conc	RRF
090212H1_1	50.0	4.13e5	127	
090212H1_3	1.25	3.21e5	1.38	
090212H1_4	2.50	3.21e5	2.60	
090212H1_5	10.0	3.36e5	9.55	
090212H1_6	200	4.29e5	203	
090212H1_7	1000	5.88e5	1010	

Compound name: Total Tetra-Furans
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	IS Area	Conc	RRF
090212H1_1	10.0	1.07e6	35.3	
090212H1_3	0.250	8.63e5	0.269	
090212H1_4	0.500	9.06e5	0.506	
090212H1_5	2.00	9.70e5	1.88	
090212H1_6	40.0	1.08e6	40.6	
090212H1_7	200	1.18e6	209	

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1st Func. Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0					0.00e0	46.2		
090212H1_3	1.25					0.00e0	0.00241		
090212H1_4	2.50					0.00e0	0.0270		
090212H1_5	10.0					0.00e0	0.0198		
090212H1_6	200					0.00e0	0.00694		
090212H1_7	1000					0.00e0	0.00731		

Compound name: Total Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0					0.00e0	147		
090212H1_3	1.25					0.00e0	2.51		
090212H1_4	2.50					0.00e0	5.10		
090212H1_5	10.0					0.00e0	19.1		
090212H1_6	200					0.00e0	412		
090212H1_7	1000					0.00e0	2040		

Compound name: Total Hexa-Furans
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0					0.00e0	250		
090212H1_3	1.25					0.00e0	5.09		

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: Total Hexa-Furans

Name	Std Conc	FA	RV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	2.50						0.00e0	10.2		
090212H1_5	10.0						0.00e0	38.9		
090212H1_6	200						0.00e0	804		
090212H1_7	1000						0.00e0	4020		

Compound name: Total Hepta-Furans
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	FA	RV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0						0.00e0	98.6		
090212H1_3	1.25						0.00e0	2.59		
090212H1_4	2.50						0.00e0	5.09		
090212H1_5	10.0						0.00e0	18.9		
090212H1_6	200						0.00e0	403		
090212H1_7	1000						0.00e0	2030		

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	FA	RV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: PFK2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	SC	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	SC	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	SC	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: PFK4

Name	Std Conc	RA	IA	RT	RRT	RF	SRF	Type	Dev	RRF
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: PFK5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	RF	SRF	Type	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	RF	SRF	Type	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	RRT	Resp	S/N Resp	Conc	ID	RRF
090212H1_1	1.00							
090212H1_3	1.00							
090212H1_4	1.00							
090212H1_5	1.00							
090212H1_6	1.00							
090212H1_7	1.00							

Compound name: DPE3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	RRT	Resp	S/N Resp	Conc	ID	RRF
090212H1_1	1.00							
090212H1_3	1.00							
090212H1_4	1.00							
090212H1_5	1.00							
090212H1_6	1.00							
090212H1_7	1.00							

Compound name: DPE4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	RRT	Resp	S/N Resp	Conc	ID	RRF
090212H1_1	1.00							
090212H1_3	1.00							
090212H1_4	1.00							
090212H1_5	1.00							

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE4

Name	Std Conc	RA	RT	RF	RS	IS Resp	Conc	Dev	RRF
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: DPE5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RF	RS	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: DPE6
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RF	RS	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090212H1-1

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	NO	9.78	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	48.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	48.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	48.1	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	48.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.91	0.76-1.02	NO	95.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	9.75	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	48.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	49.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	48.8	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	49.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.93	0.76-1.02	NO	96.7	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	100	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	98.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	99.4	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	102	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	98.8	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.5	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	NO	103	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	99.2	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	101	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	99.8	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	200	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.46	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.58
2	1,2,8,9-TCDD (Last)	26.86
3	1,2,4,7,9-PeCDD (First)	28.51
4	1,2,3,8,9-PeCDD (Last)	31.03
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.01
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.28
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.91
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

2/13/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1
GC Column ID: DB-5
Analysis Date: 12-Feb-09
Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090212H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090212H1_1

Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qid

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	Name	Area	RA	IS	RF	Amt	RT	RRT	Conc	Ak	D	Flag
1	2,3,7,8-TCDD	7.90e4	0.82	NO	1.08	1.000	25.98	1.001	9.7764	97.8	0.0390	9.7764
2	1,2,3,7,8-PeCDD	3.03e5	0.63	NO	1.03	1.000	30.65	1.000	48.635	97.3	0.124	48.635
3	1,2,3,4,7,8-HxCDD	2.54e5	1.26	NO	1.00	1.000	34.10	1.000	48.035	96.1	0.187	48.035
4	1,2,3,6,7,8-HxCDD	2.90e5	1.27	NO	1.13	1.000	34.21	1.000	47.595	95.2	0.184	47.595
5	1,2,3,7,8,9-HxCDD	2.83e5	1.28	NO	1.10	1.000	34.51	1.009	48.051	96.1	0.180	48.051
6	1,2,3,4,6,7,8-HpCDD	2.11e5	1.03	NO	1.06	1.000	38.17	1.000	47.989	96.0	0.341	47.989
7	OCDD	3.30e5	0.91	NO	1.18	1.000	41.63	1.000	95.331	95.3	0.179	95.331
8	2,3,7,8-TCDF	1.14e5	0.78	NO	1.09	1.000	25.19	1.001	9.7515	97.5	0.0409	9.7515
9	1,2,3,7,8-PeCDF	5.65e5	1.61	NO	1.16	1.000	29.42	1.000	49.643	99.3	0.123	49.643
10	2,3,4,7,8-PeCDF	5.35e5	1.56	NO	1.12	1.000	30.35	1.000	49.591	99.2	0.120	49.591
11	1,2,3,4,7,8-HxCDF	4.59e5	1.27	NO	1.41	1.000	33.19	1.001	48.331	96.7	0.150	48.331
12	1,2,3,6,7,8-HxCDF	5.49e5	1.25	NO	1.22	1.000	33.31	1.000	49.809	99.6	0.137	49.809
13	2,3,4,6,7,8-HxCDF	4.53e5	1.29	NO	1.28	1.000	33.92	1.000	49.224	98.4	0.172	49.224
14	1,2,3,7,8,9-HxCDF	3.76e5	1.25	NO	1.26	1.000	34.91	1.000	49.483	99.0	0.252	49.483
15	1,2,3,4,6,7,8-HpCDF	4.18e5	1.05	NO	1.69	1.000	36.81	1.000	48.842	97.7	0.180	48.842
16	1,2,3,4,7,8,9-HpCDF	3.09e5	1.05	NO	1.48	1.000	38.73	1.000	49.738	99.5	0.251	49.738
17	OCDF	4.66e5	0.93	NO	1.10	1.000	41.88	1.001	96.743	96.7	0.177	96.743
18	13C-2,3,7,8-TCDD	7.49e5	0.77	NO	1.01	1.000	25.95	1.022	100.15	100	0.141	
19	13C-1,2,3,7,8-PeCDD	6.02e5	0.64	NO	0.827	1.000	30.64	1.207	98.735	98.7	0.269	
20	13C-1,2,3,4,7,8-HxCDD	5.27e5	1.26	NO	0.916	1.000	34.08	0.988	99.432	99.4	0.335	
21	13C-1,2,3,6,7,8-HxCDD	5.42e5	1.26	NO	0.921	1.000	34.19	0.991	101.67	102	0.334	
22	13C-1,2,3,4,6,7,8-HpCDD	4.13e5	1.07	NO	0.708	1.000	38.16	1.106	100.67	101	0.425	
23	13C-OCDD	5.87e5	0.89	NO	0.503	1.000	41.62	1.206	201.71	101	0.424	
24	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	0.977	1.000	25.16	0.991	98.780	98.8	0.129	
25	13C-1,2,3,7,8-PeCDF	9.82e5	1.58	NO	0.896	1.000	29.41	1.158	98.441	98.4	0.304	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.57	NO	0.900	1.000	30.34	1.195	96.306	96.3	0.303	
27	13C-1,2,3,4,7,8-HxCDF	6.74e5	0.54	NO	1.17	1.000	33.16	0.961	99.512	99.5	0.469	
28	13C-1,2,3,6,7,8-HxCDF	9.02e5	0.55	NO	1.52	1.000	33.29	0.965	102.54	103	0.361	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.54	NO	1.25	1.000	33.91	0.983	99.345	99.3	0.439	
30	13C-1,2,3,7,8,9-HxCDF	6.05e5	0.53	NO	1.05	1.000	34.90	1.011	99.208	99.2	0.521	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.46	NO	0.868	1.000	36.80	1.066	100.83	101	0.602
32	13C-1,2,3,4,7,8,9-HpCDF	4.20e5	0.46	NO	0.727	1.000	38.72	1.122	99.796	99.8	0.719
33	13C-OCDF	8.78e5	0.91	NO	0.760	1.000	41.85	1.213	199.65	99.8	0.296
34	37Cl-2,3,7,8-TCDD	4.66e4			0.668	1.000	25.98	1.023	9.4592	94.6	0.0533
35	13C-1,2,3,4-TCDD	7.37e5	0.81	NO	1.00	1.000	25.39	0.000	100.00	100	0.144
36	13C-1,2,3,4-TCDF	1.11e6	0.78	NO	1.00	1.000	23.95	0.000	100.00	100	0.126
37	13C-1,2,3,7,8,9-HxCDD	5.79e5	1.22	NO	1.00	1.000	34.50	0.000	100.00	100	0.307

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 7:21:09 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:21:55 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Compound name: 1,3,6,8-TCDD (First)

Name	ID	Date	Acq. Time
090212H1_1	ST090212H1-1 1613 CS3 080917I	12-Feb-09	11:10:11
090212H1_2	solvent blank	12-Feb-09	11:59:18
090212H1_3	ST090212H1-2 1613 CS0 080917F	12-Feb-09	12:49:08
090212H1_4	ST090212H1-3 1613 CS1 080917CG	12-Feb-09	13:38:34
090212H1_5	ST090212H1-4 1613 CS2 080917H	12-Feb-09	14:28:11
090212H1_6	ST090212H1-5 1613 CS4 080917J	12-Feb-09	15:17:39
090212H1_7	ST090212H1-6 1613 CS5 080917K	12-Feb-09	16:07:03
090212H1_8	solvent blank	12-Feb-09	16:56:26
090212H1_9	SSS090212H1-1 Sec Src Std L070913A	12-Feb-09	17:45:49

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:13 Pacific Standard Time

M 292.9824 R 13157

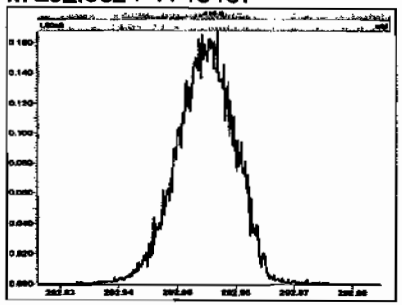

M 304.9824 R 14289

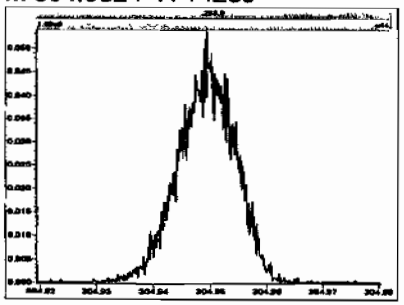

M 318.9792 R 13655

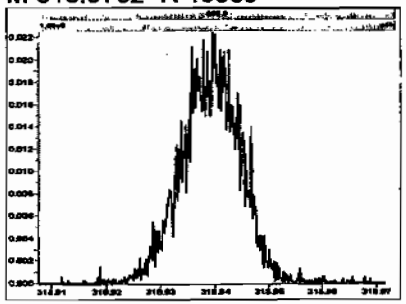

M 330.9792 R 12819

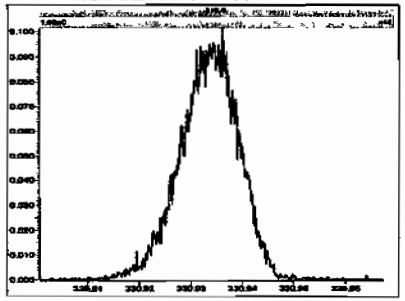

M 342.9792 R 13085

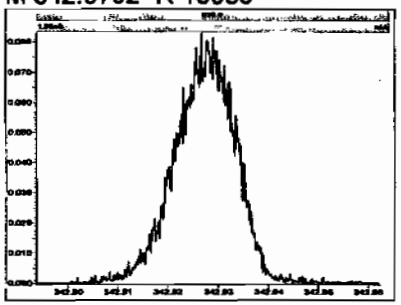

M 354.9792 R 13440

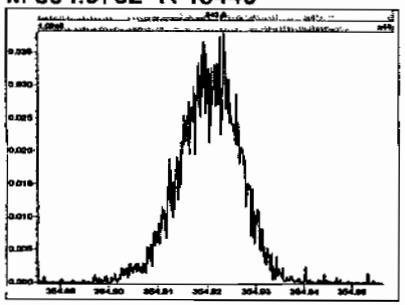

M 366.9792 R 11572

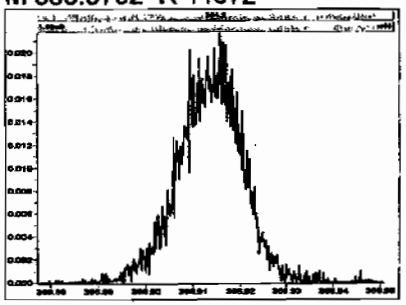

M 380.9760 R 13365

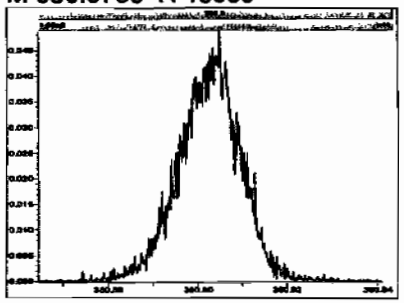

M 392.9760 R 13660

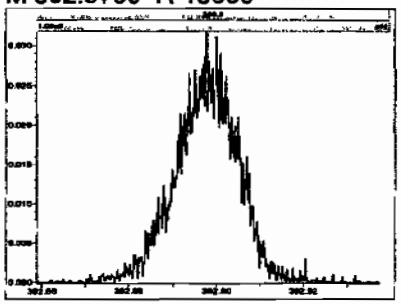

M 404.9760 R 13160

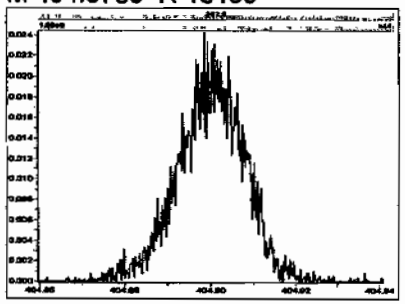

M 416.9760 R 15061

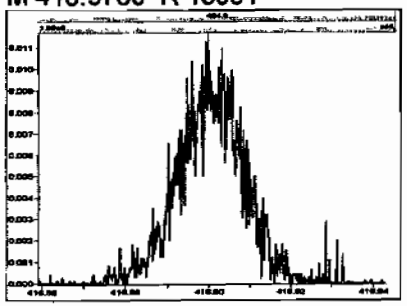

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:36 Pacific Standard Time

M 330.9792 R 13661

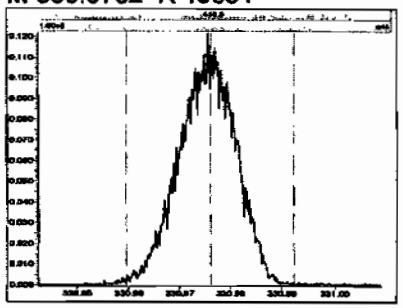

M 342.9792 R 12688

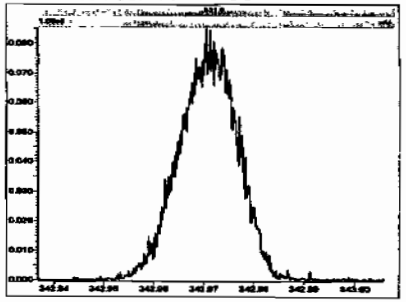

M 354.9792 R 13813

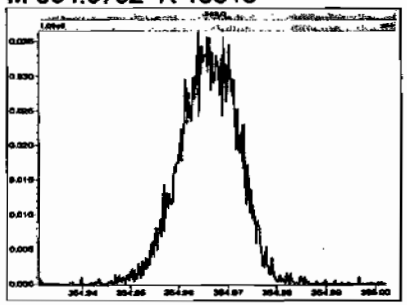

M 366.9792 R 13735

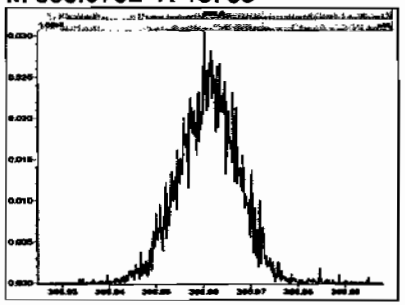

M 380.9760 R 13225

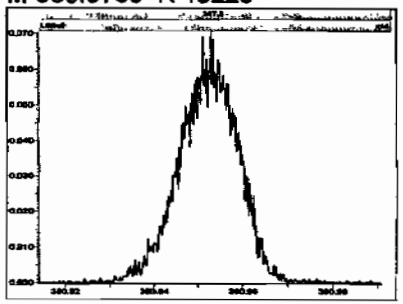

M 392.9760 R 13090

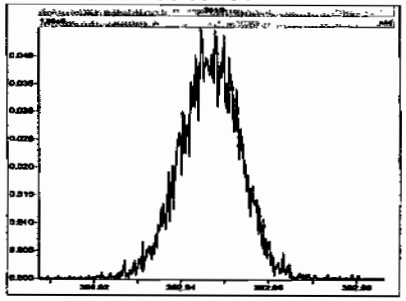

M 404.9760 R 13368

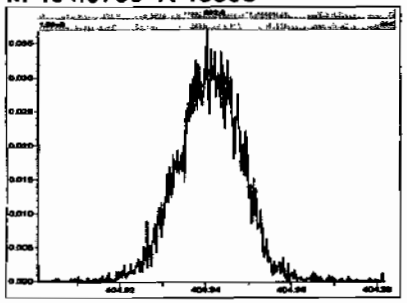

M 416.9760 R 13510

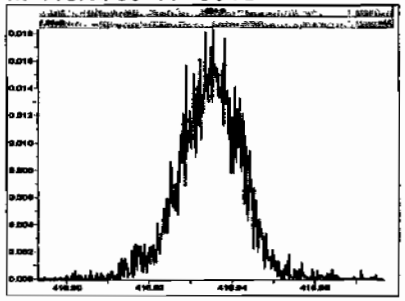

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:57 Pacific Standard Time

M 366.9792 R 13441

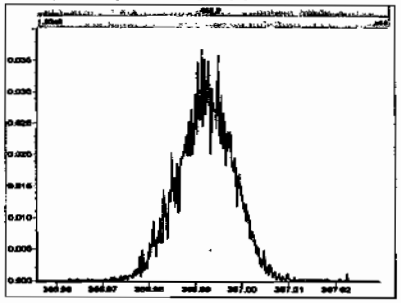

M 380.9760 R 13367

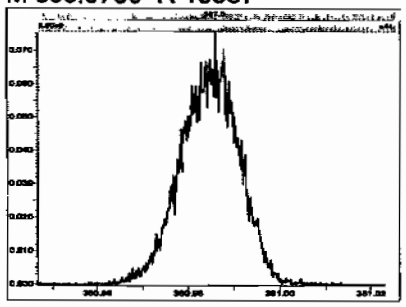

M 392.9760 R 13733

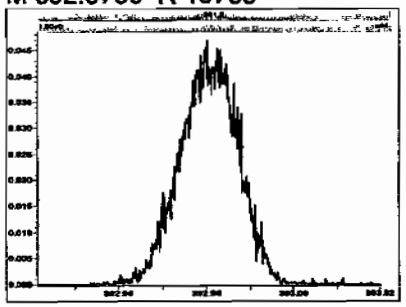

M 404.9760 R 12136

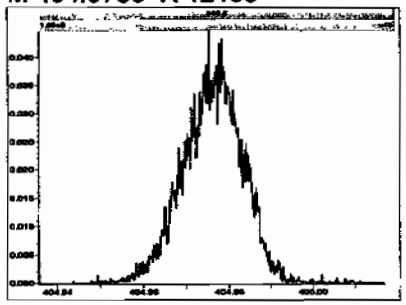

M 416.9760 R 13887

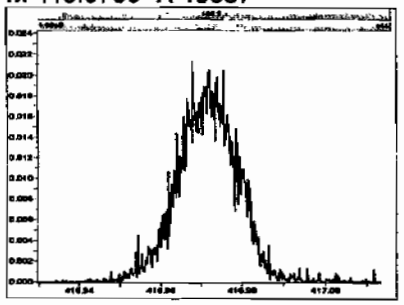

M 430.9728 R 13515

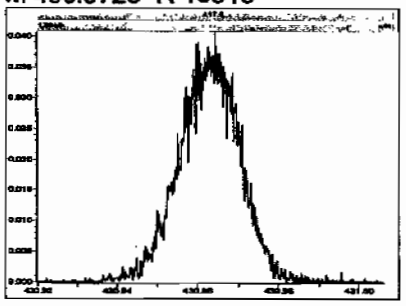

M 442.9728 R 14124

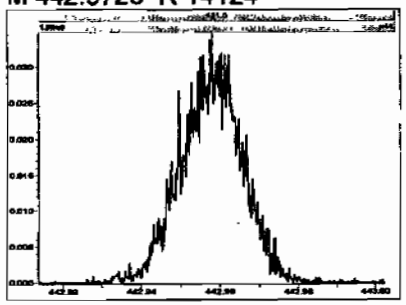

M 454.9728 R 13225

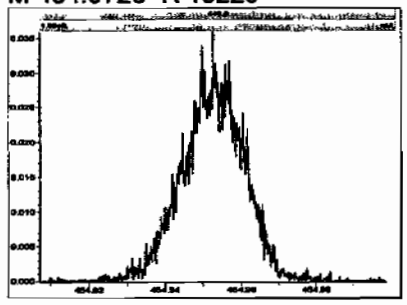

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:16 Pacific Standard Time

M 404.9760 R 13299

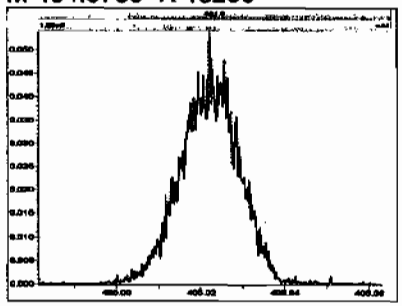

M 416.9760 R 14124

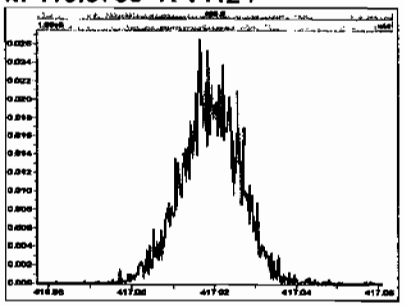

M 430.9728 R 13019

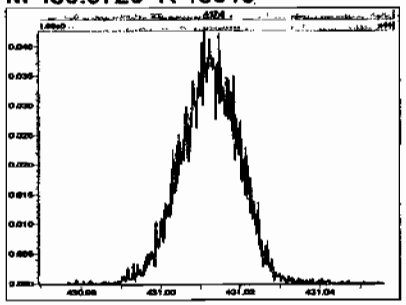

M 442.9728 R 13022

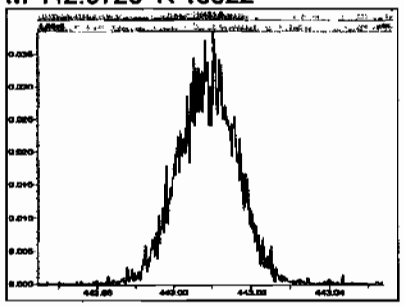

M 454.9728 R 12953

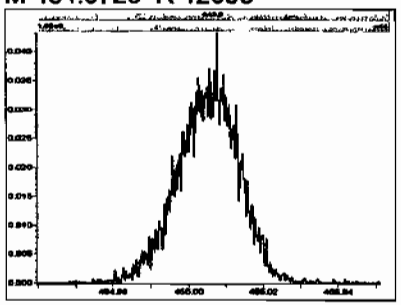

M 466.9728 R 12692

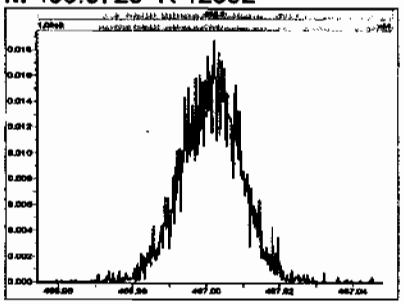

M 480.9696 R 14882

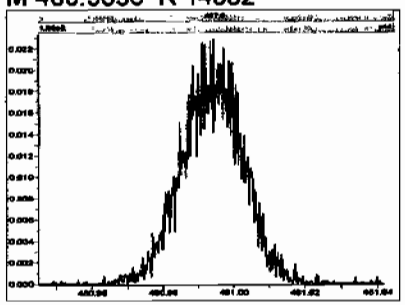

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:41 Pacific Standard Time

M 430.9728 R 12434

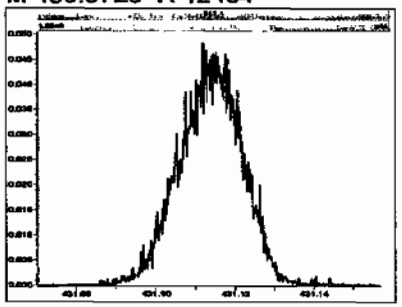

M 442.9728 R 12886

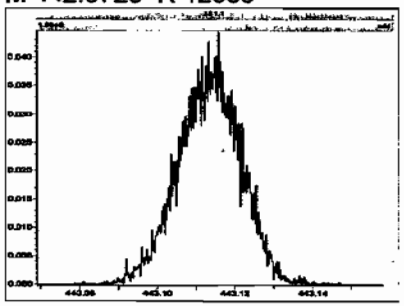

M 454.9728 R 12021

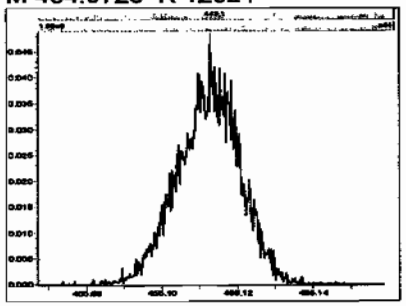

M 466.9728 R 12954

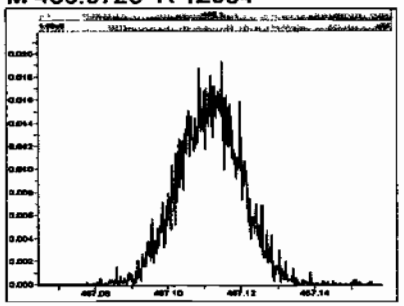

M 480.9696 R 11520

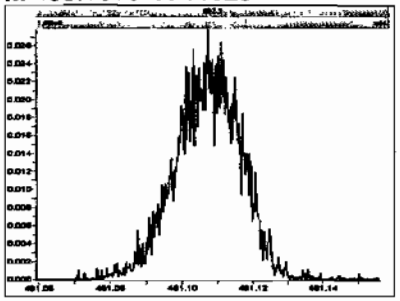

M 492.9696 R 12757

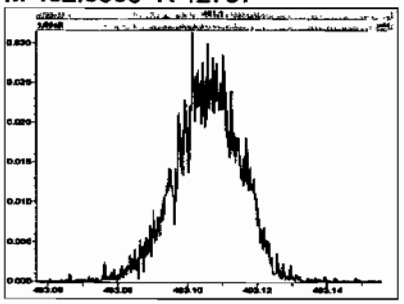

M 504.9696 R 11211

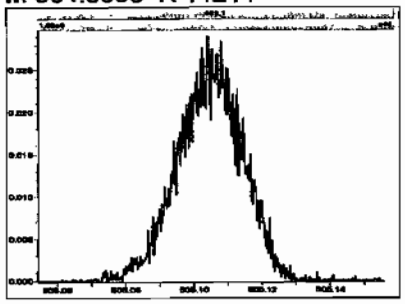

M 516.9697 R 11516

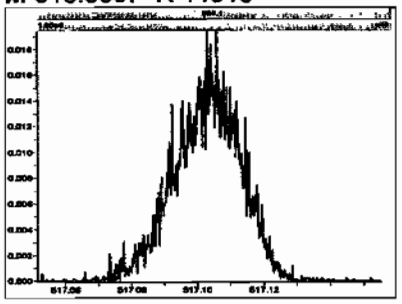

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Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

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Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

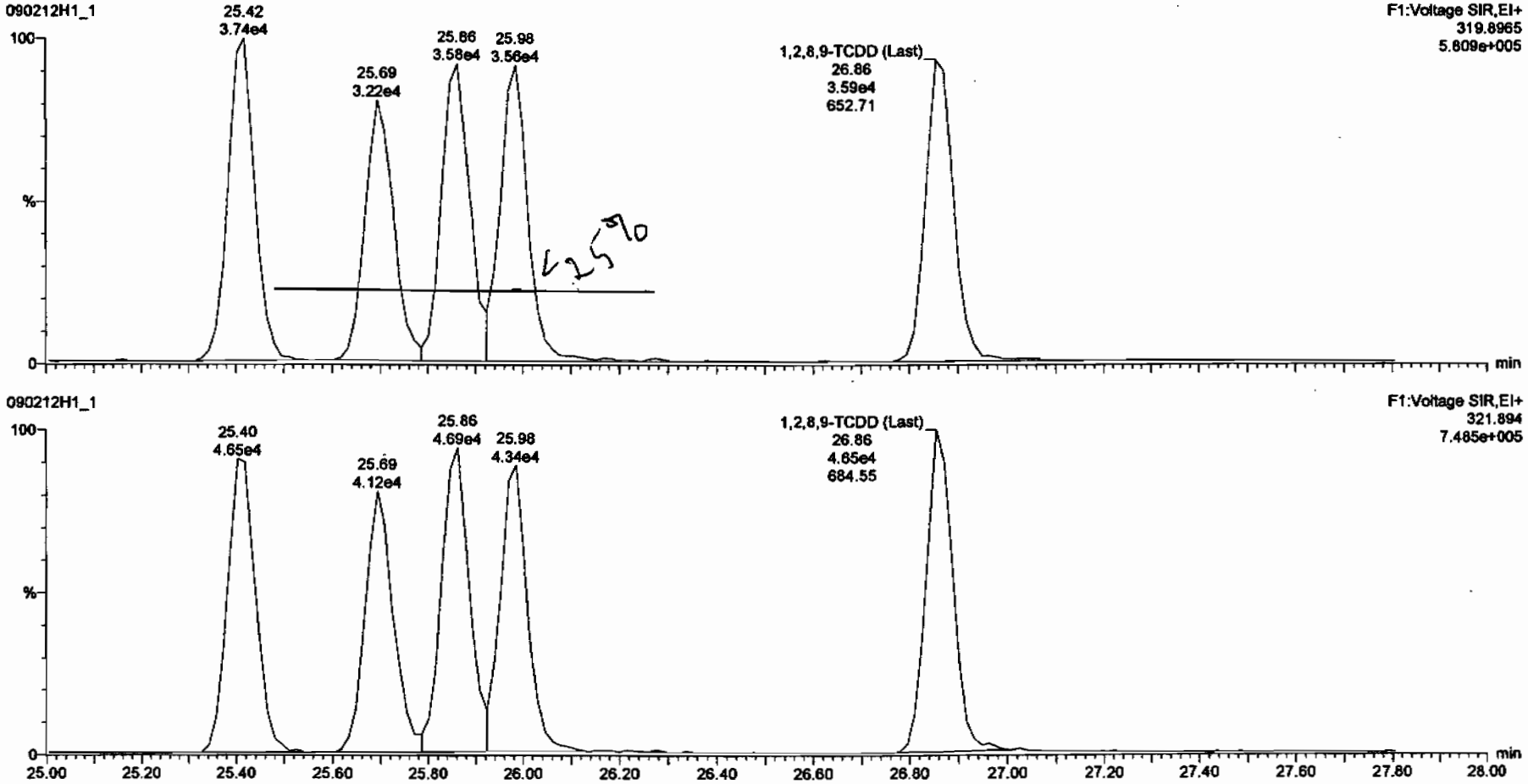

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Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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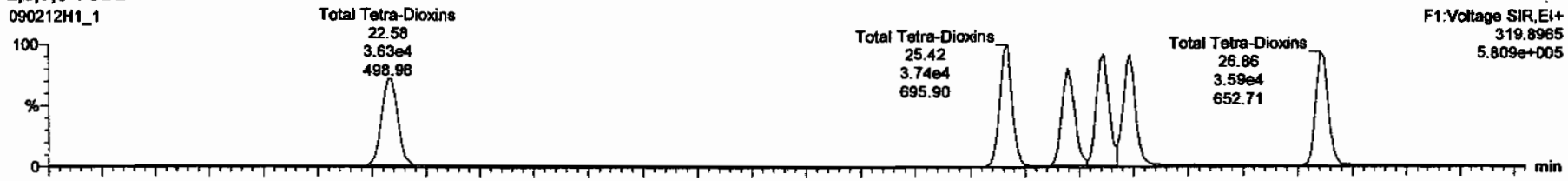

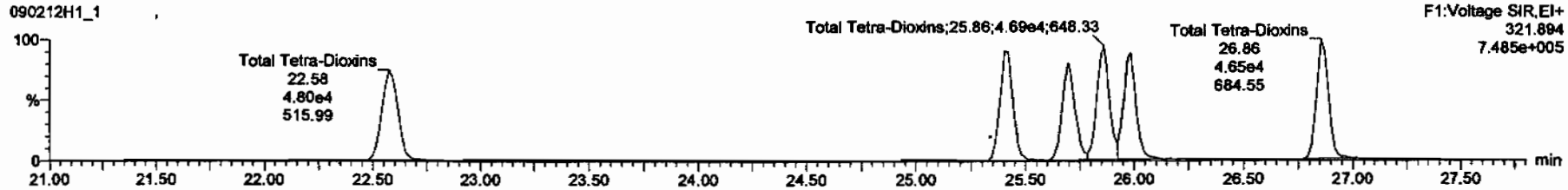

13C-2,3,7,8-TCDD

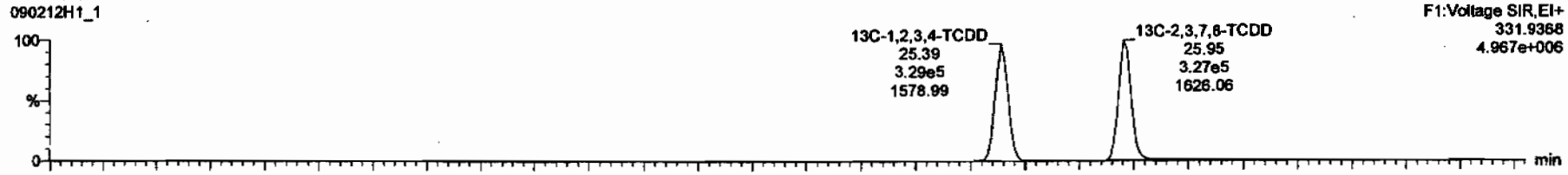

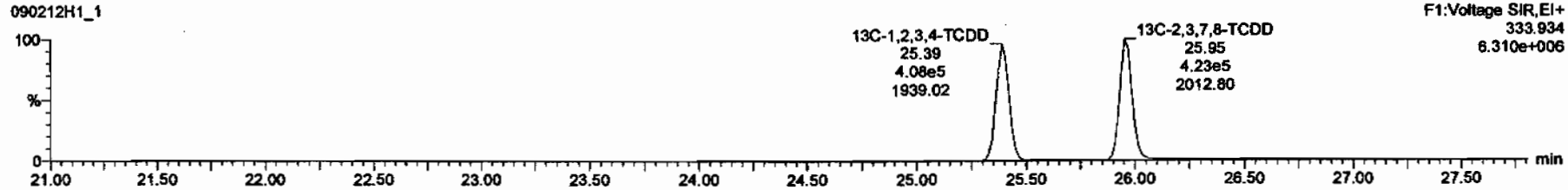

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37Cl-2,3,7,8-TCDD

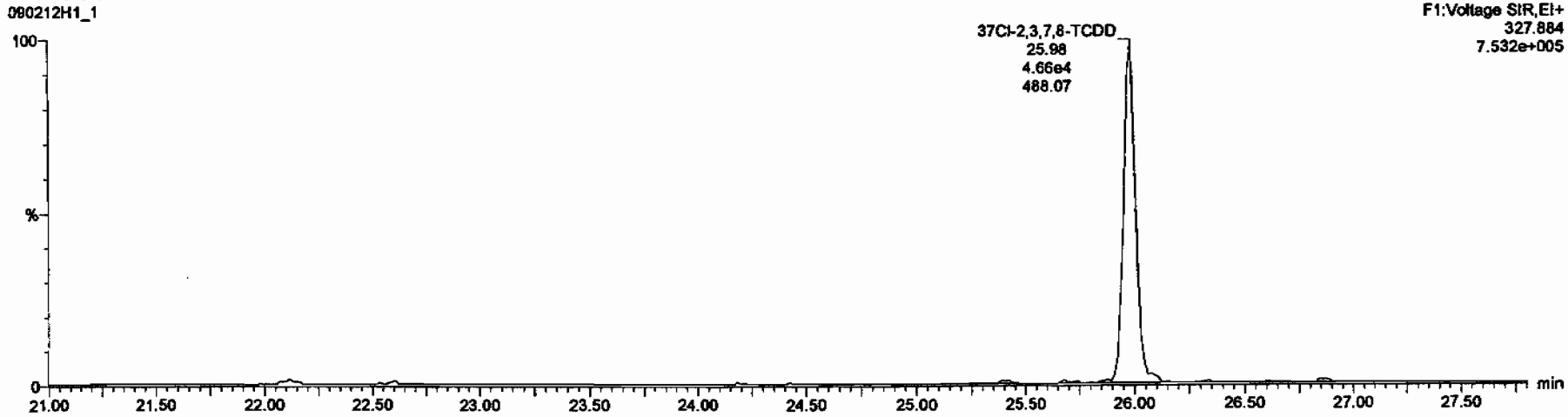

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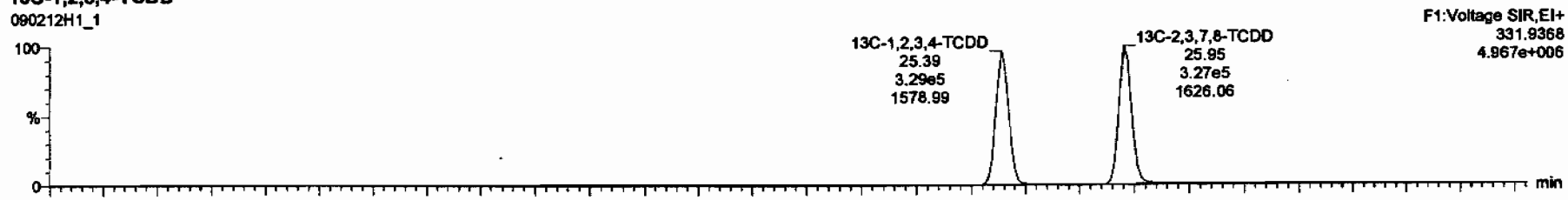

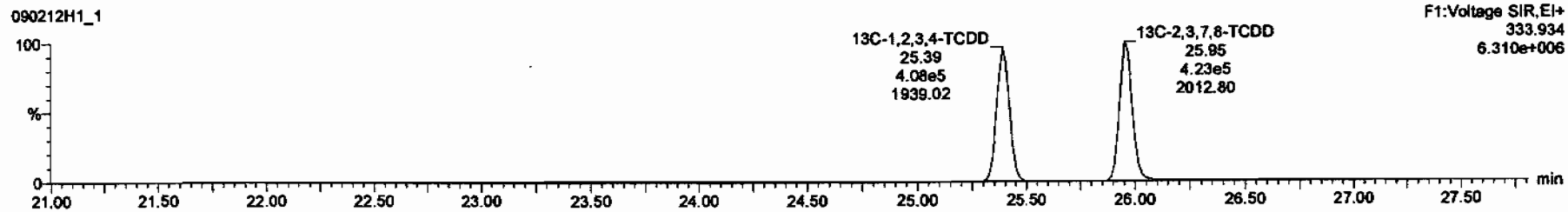

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Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

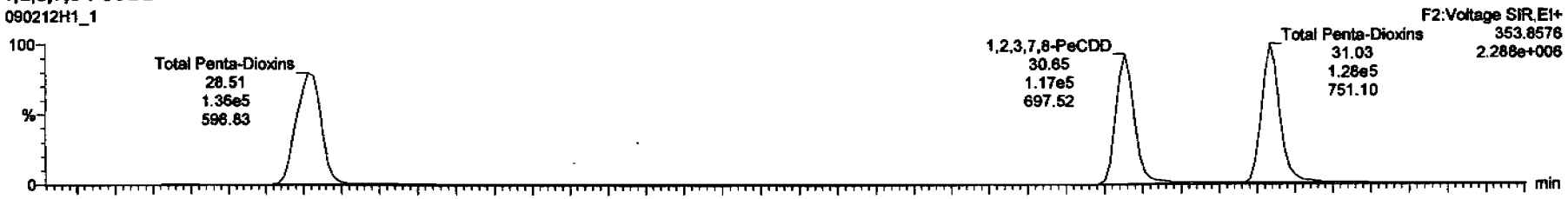

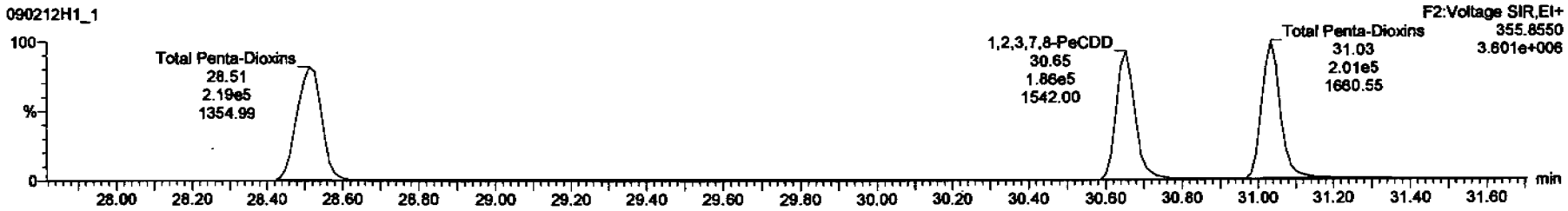

13C-1,2,3,7,8-PeCDD

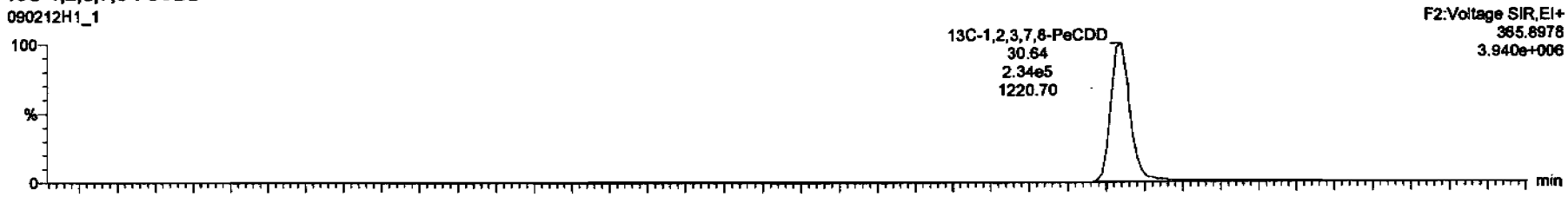

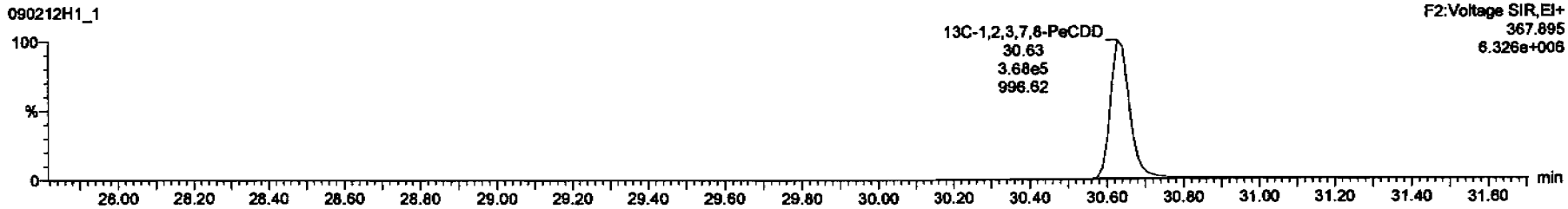

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Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

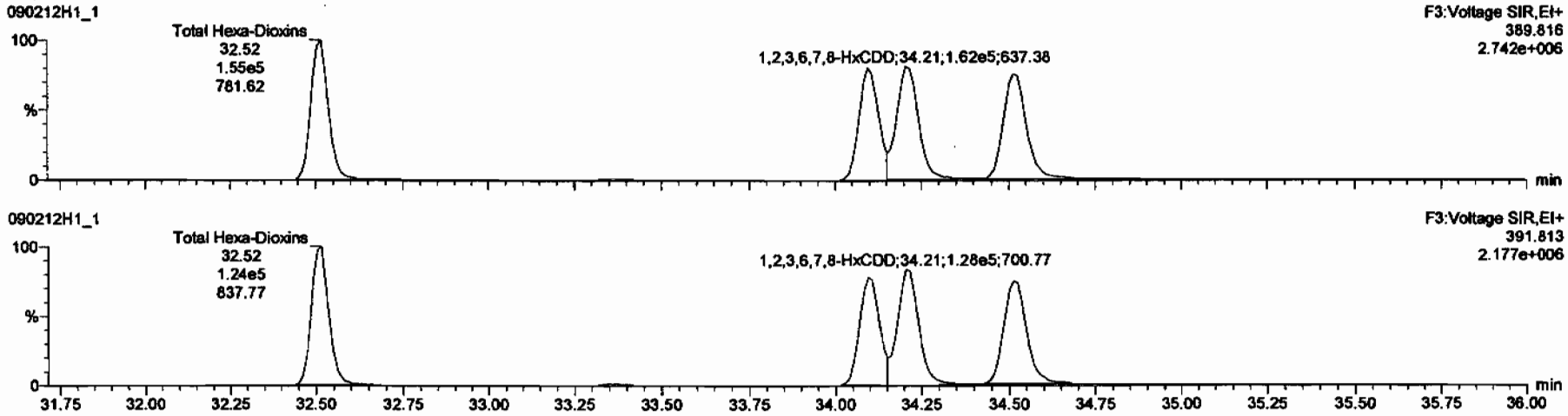

13C-1,2,3,4,7,8-HxCDD

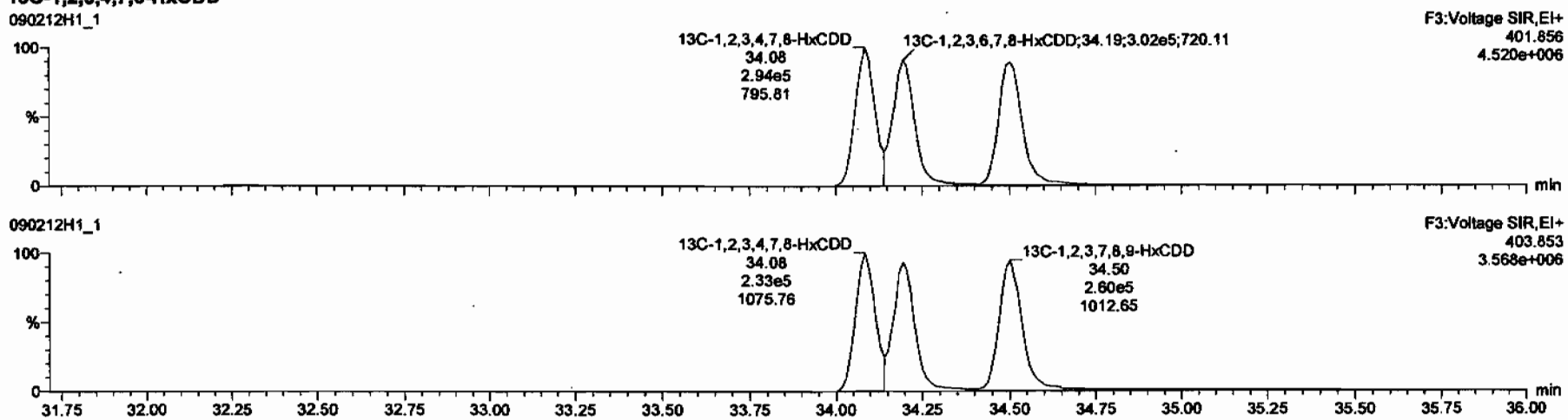

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1,2,3,4,6,7,8-HpCDD

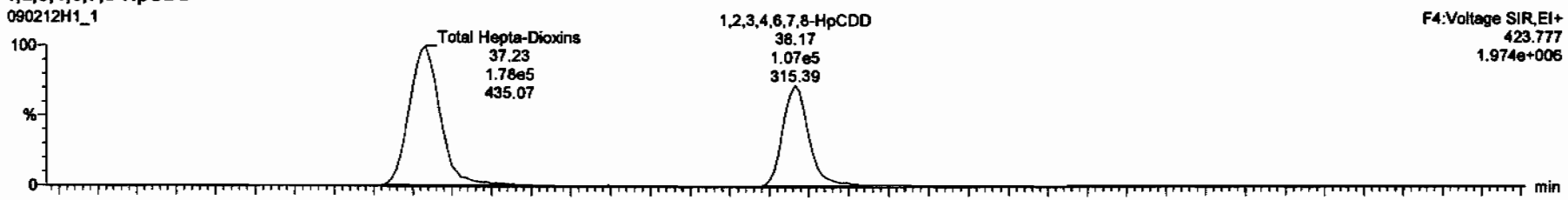

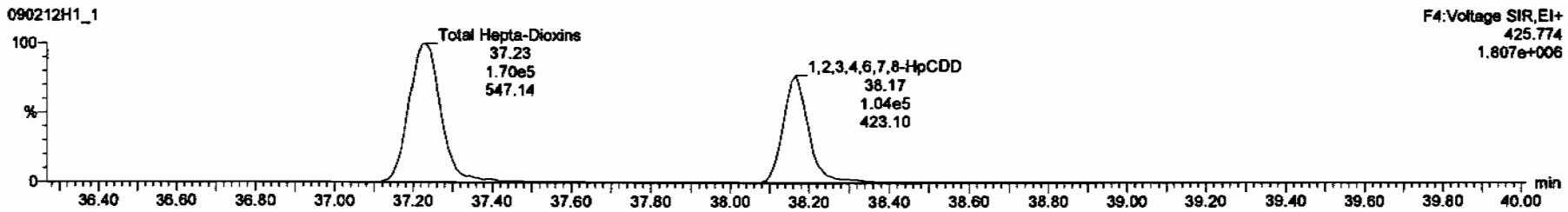

13C-1,2,3,4,6,7,8-HpCDD

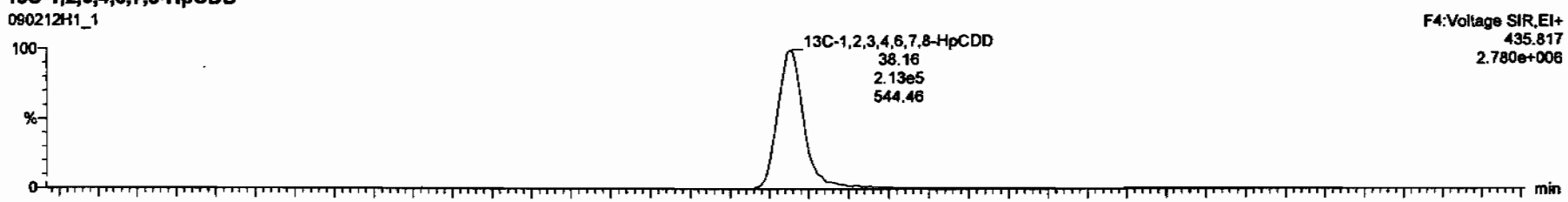

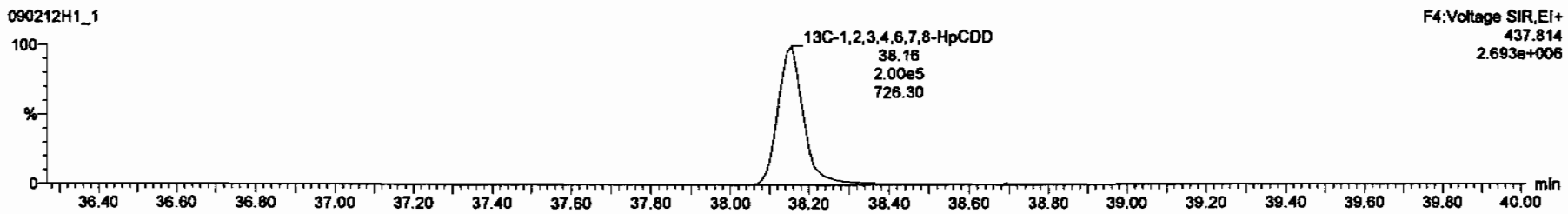

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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OCDD

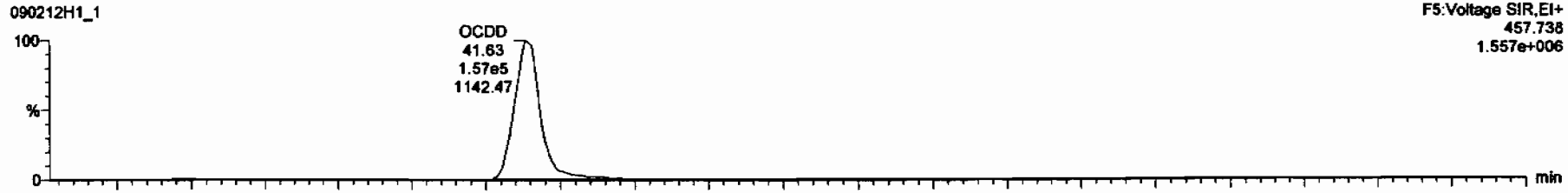

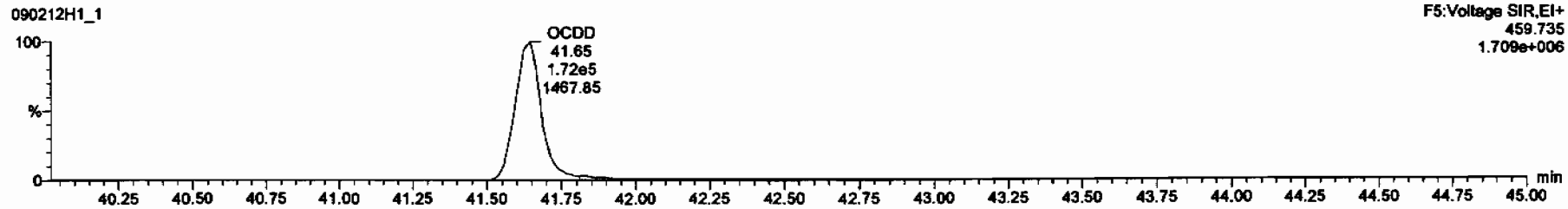

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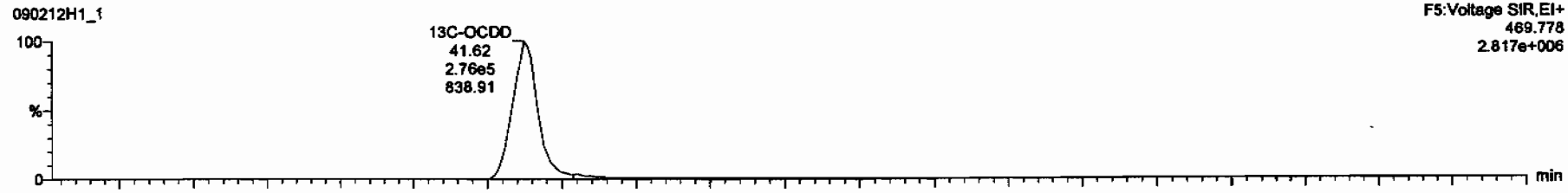

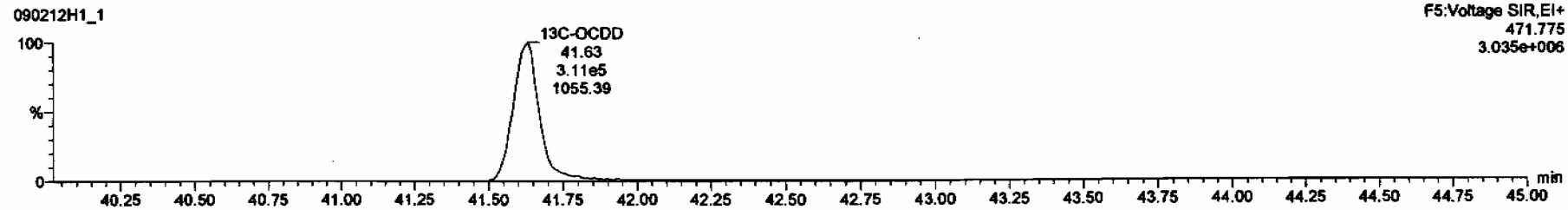

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2,3,7,8-TCDF

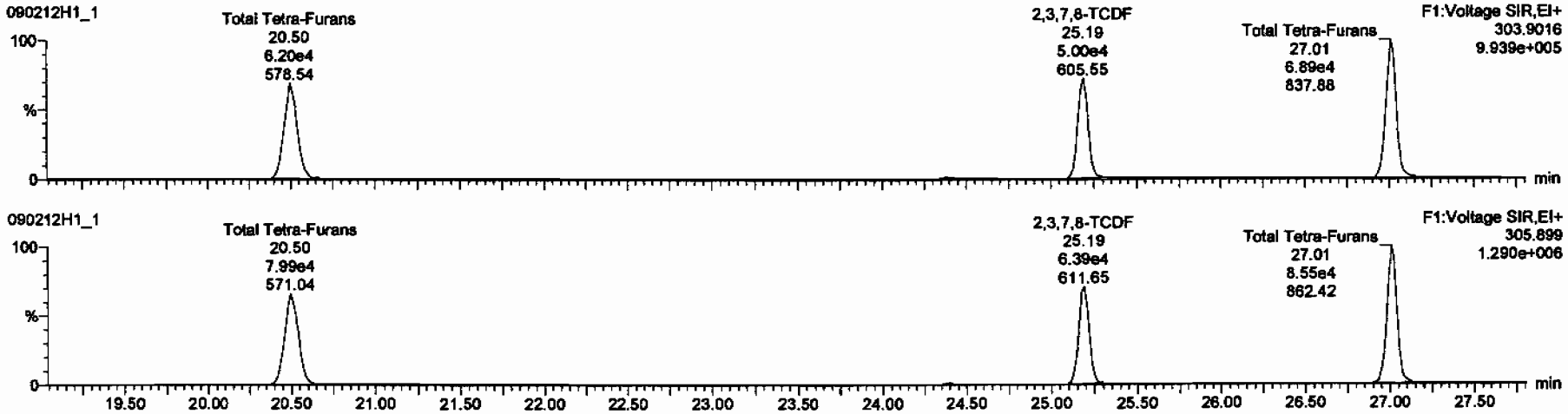

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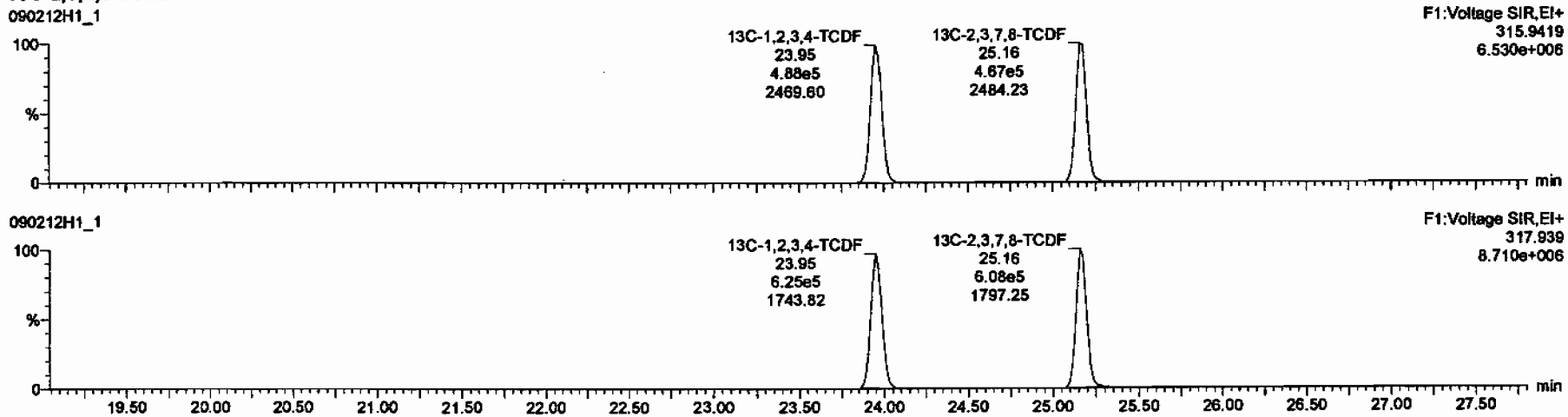

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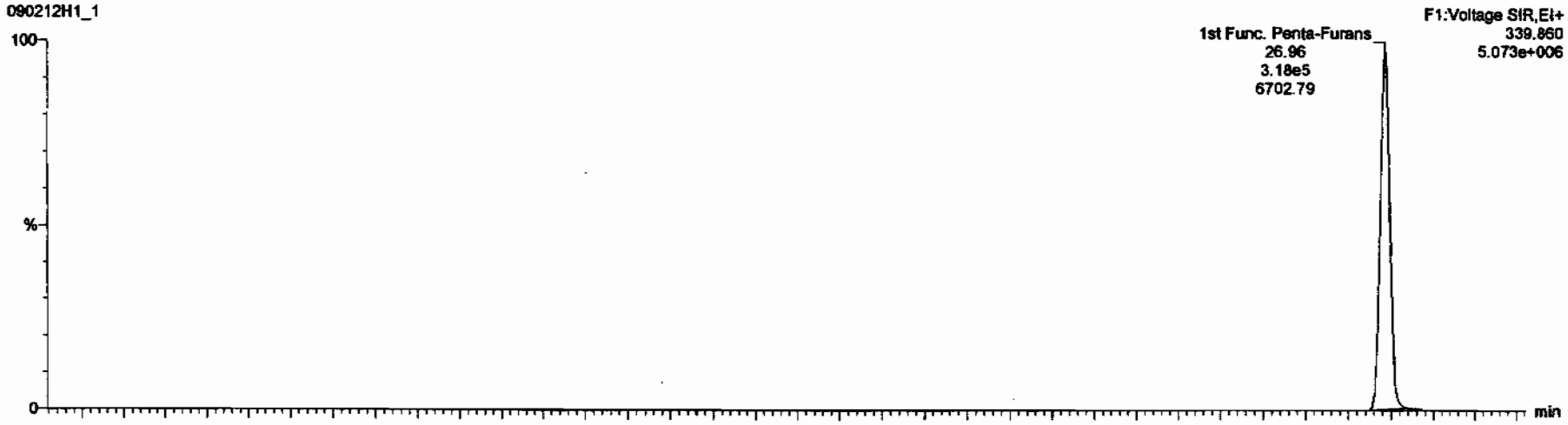

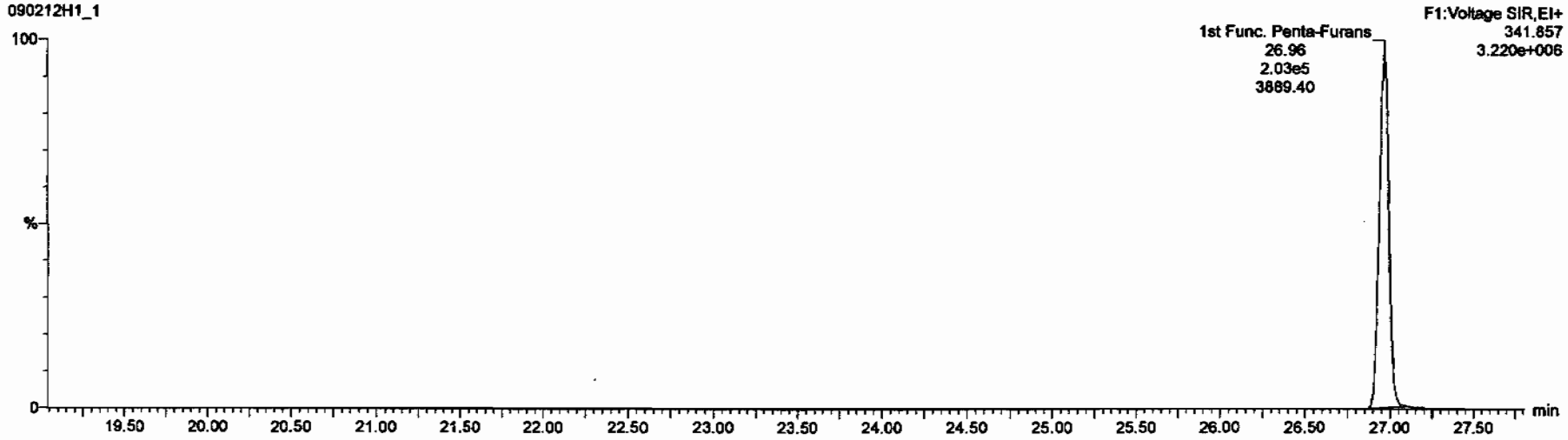

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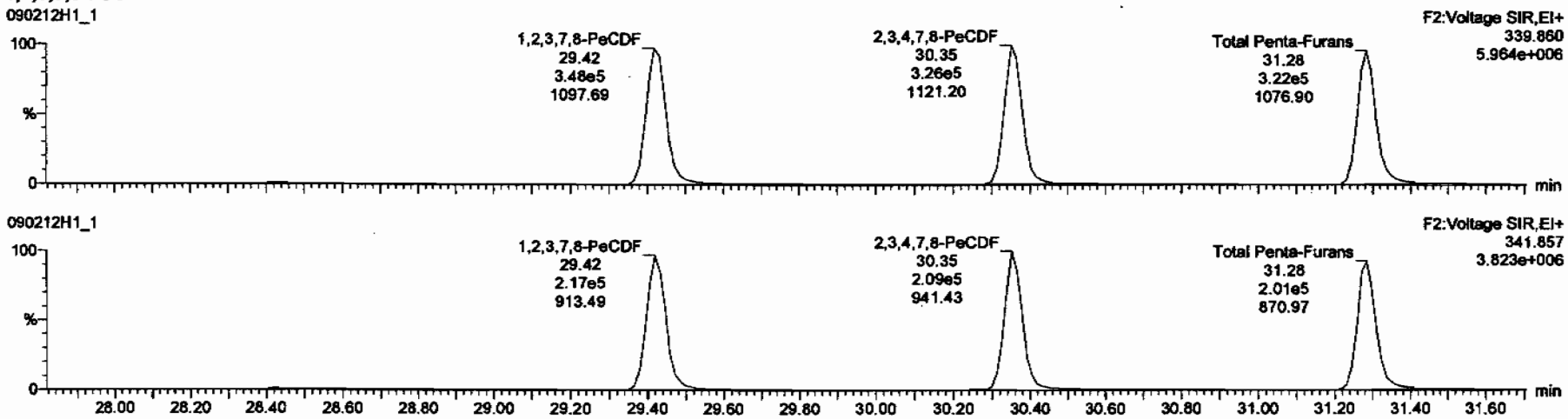

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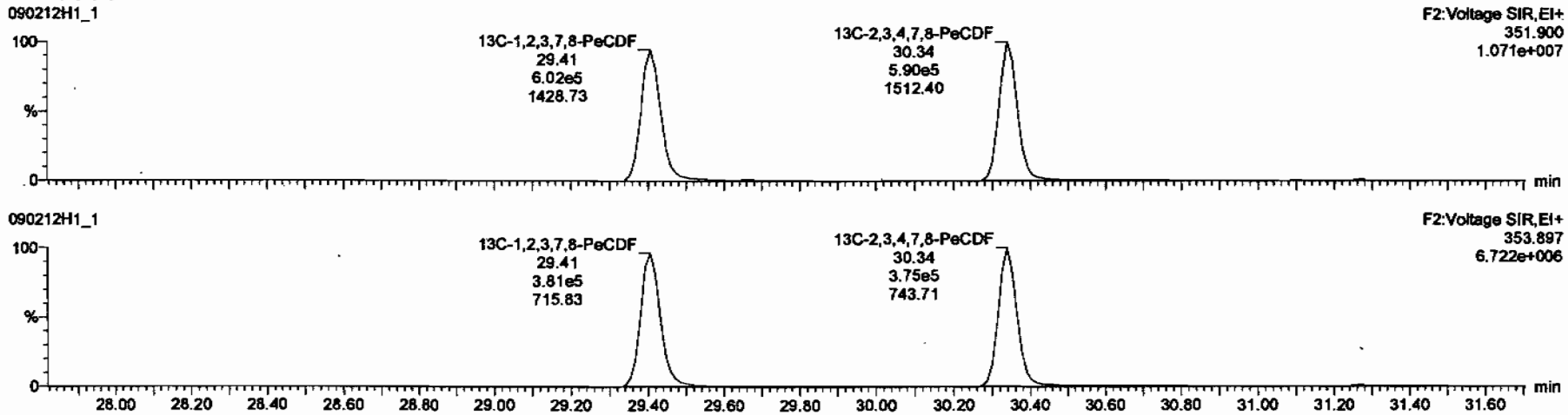

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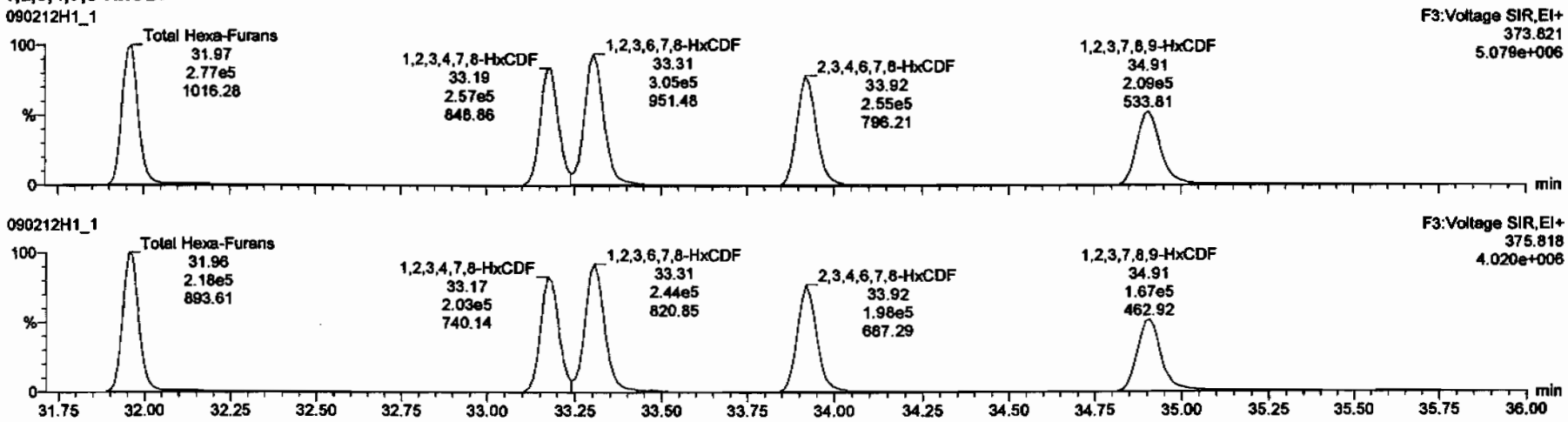

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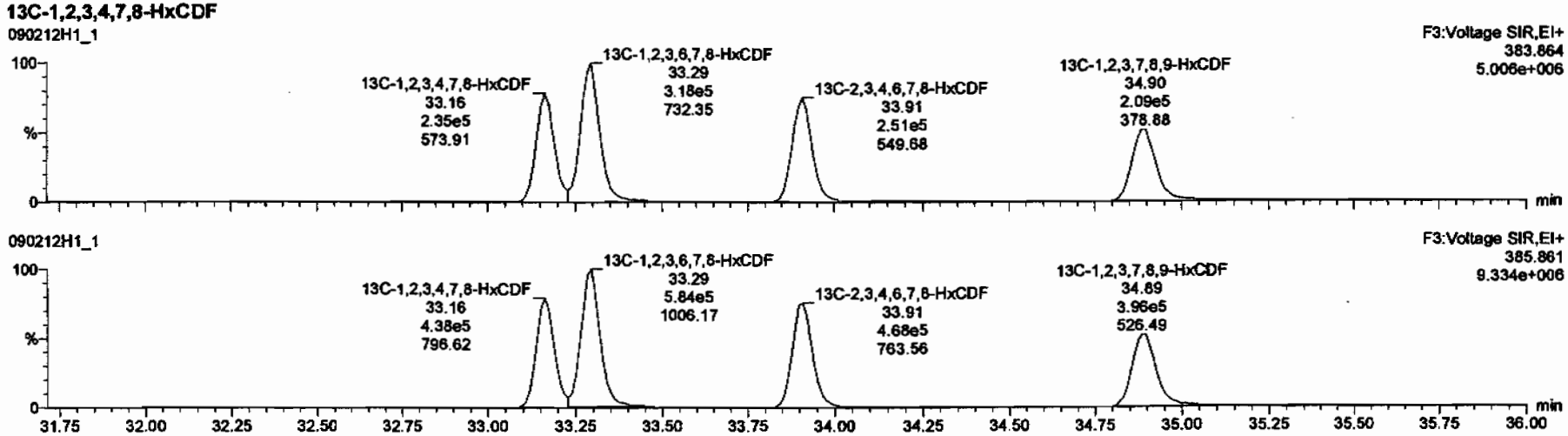

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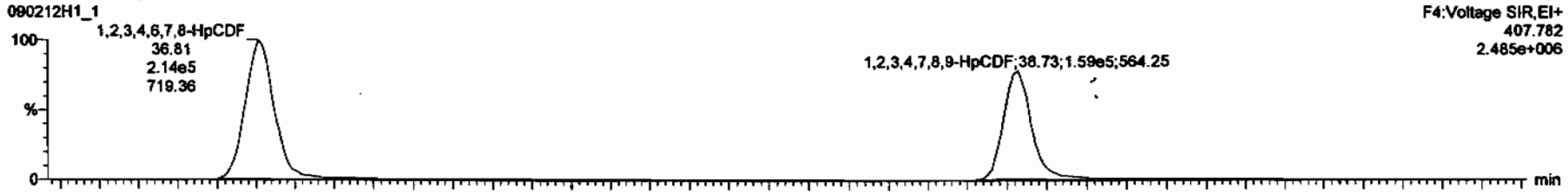

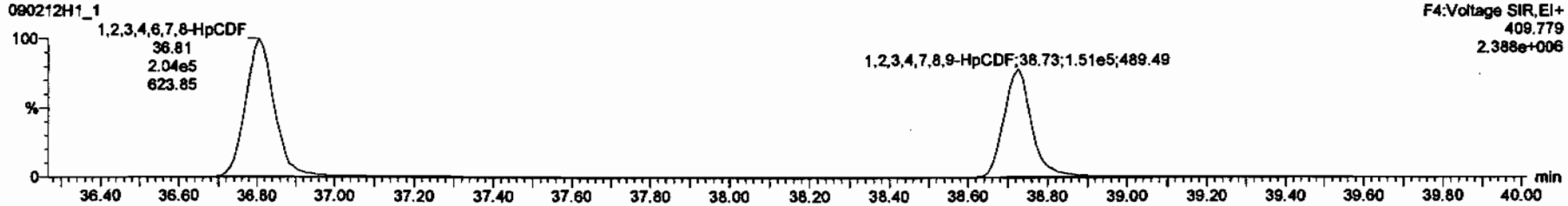

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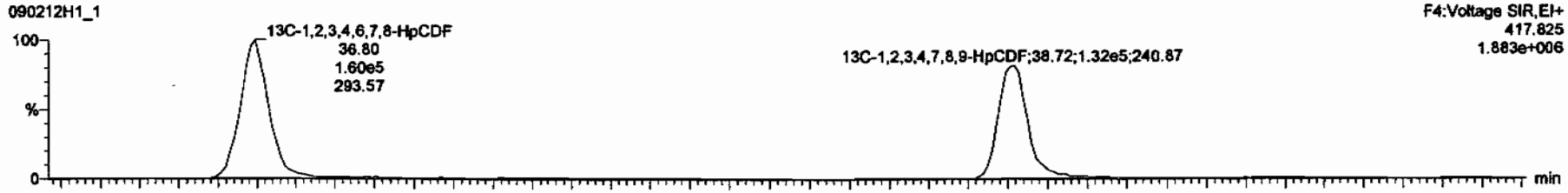

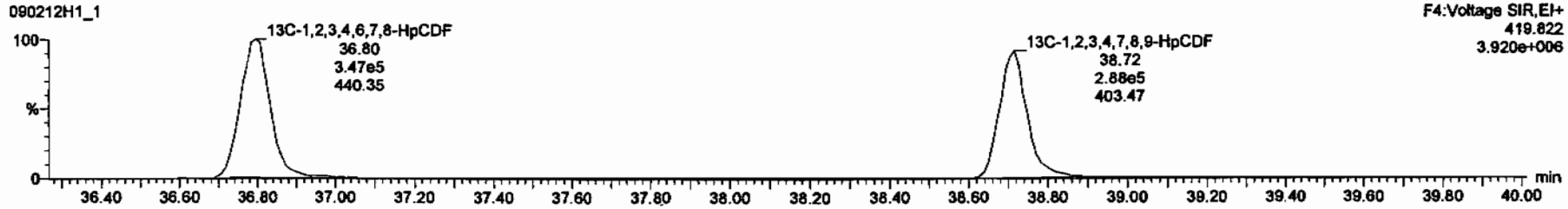

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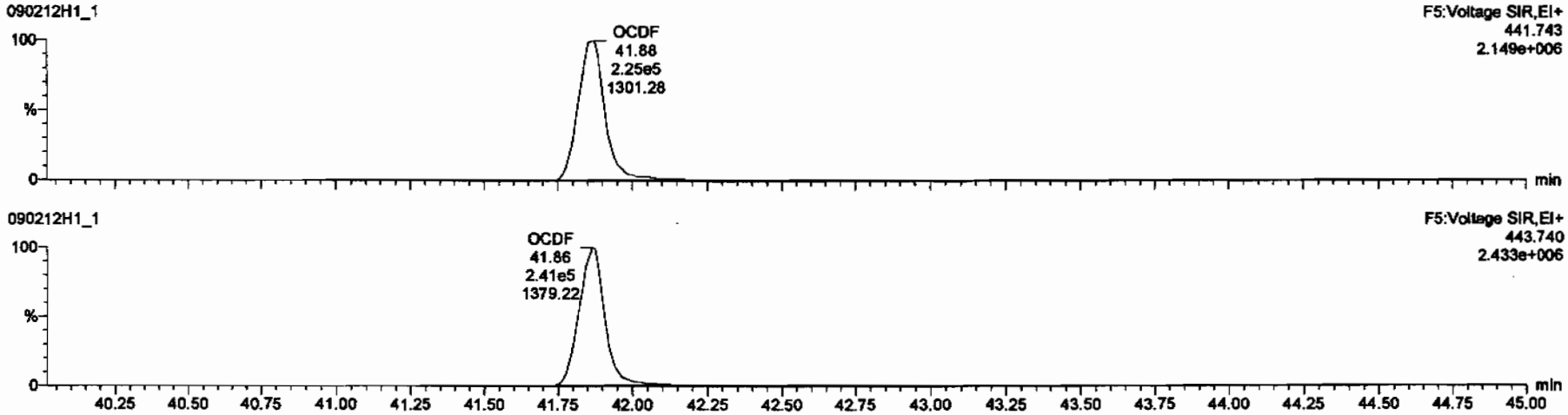

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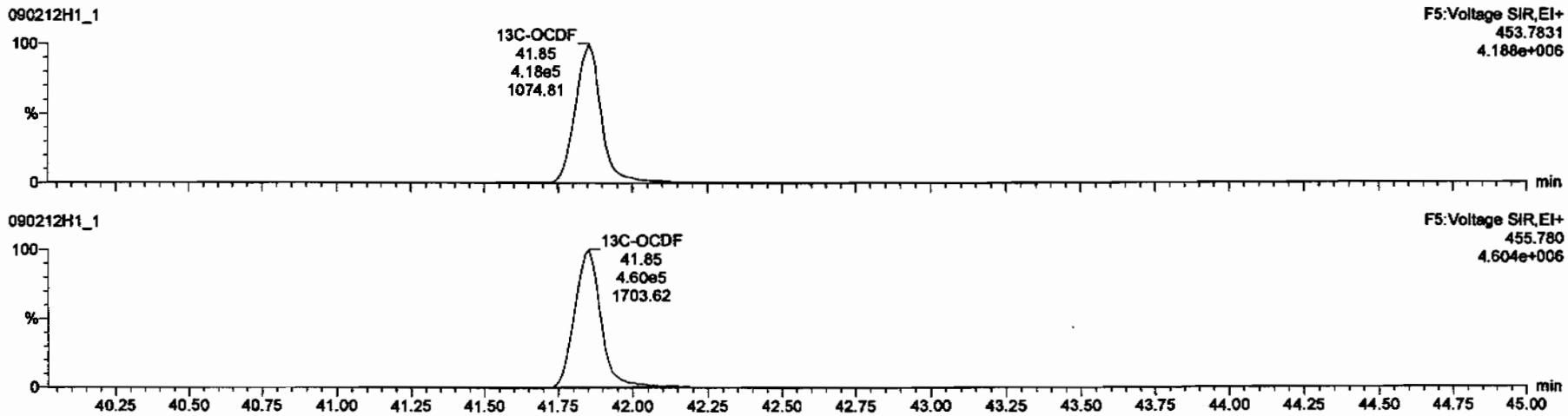

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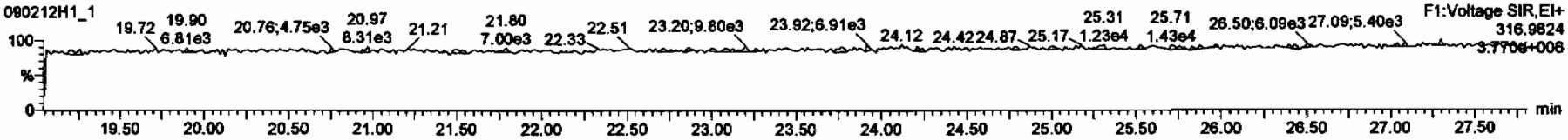

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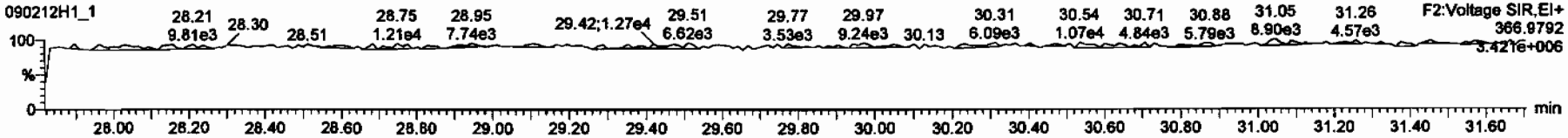

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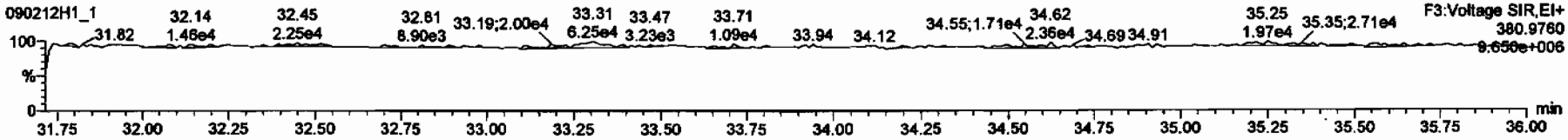

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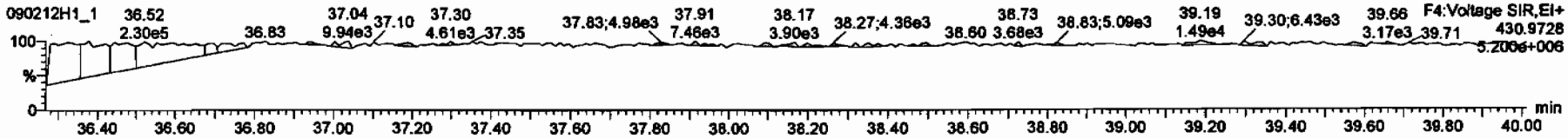

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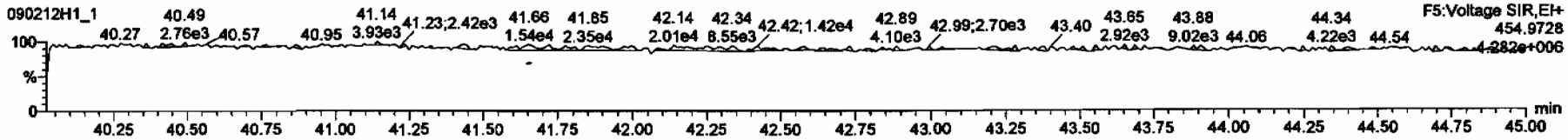

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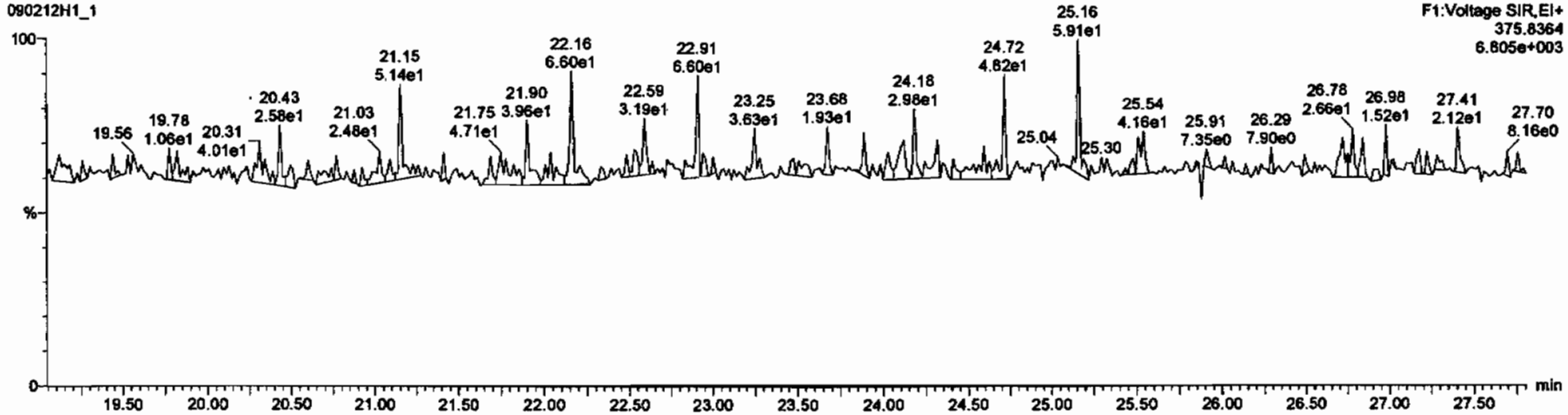

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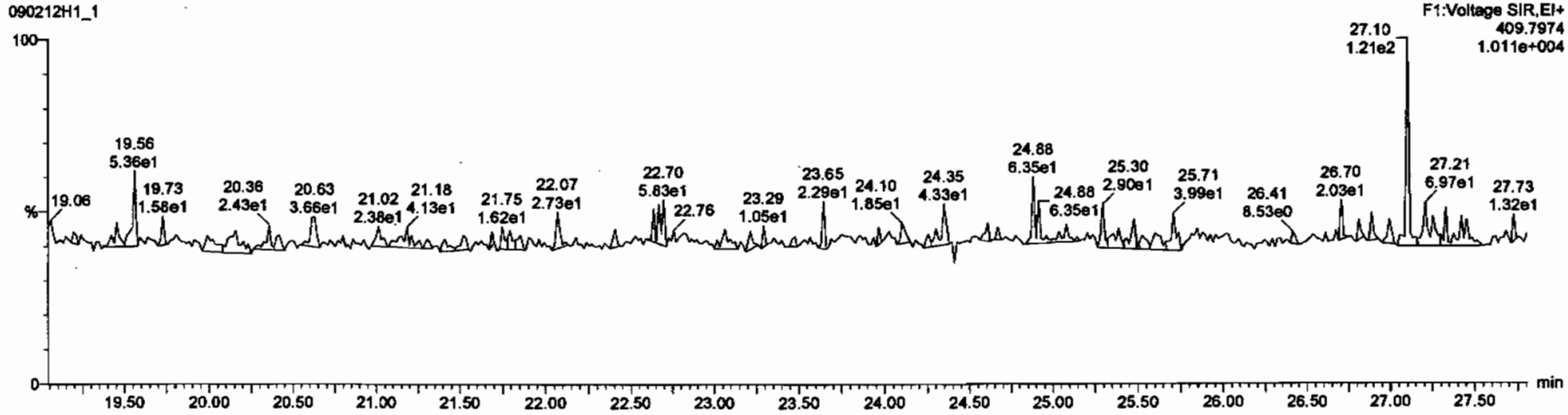

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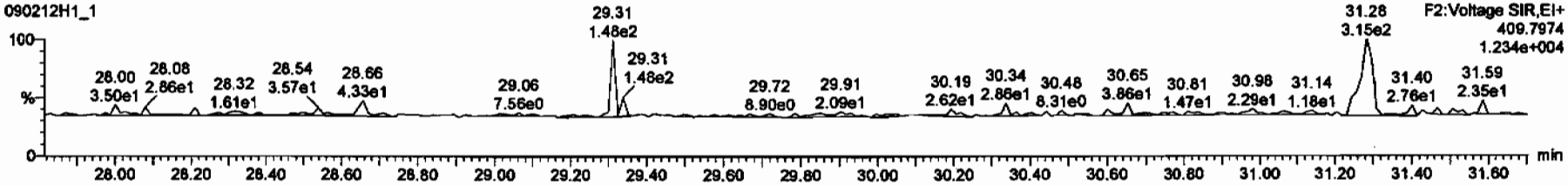

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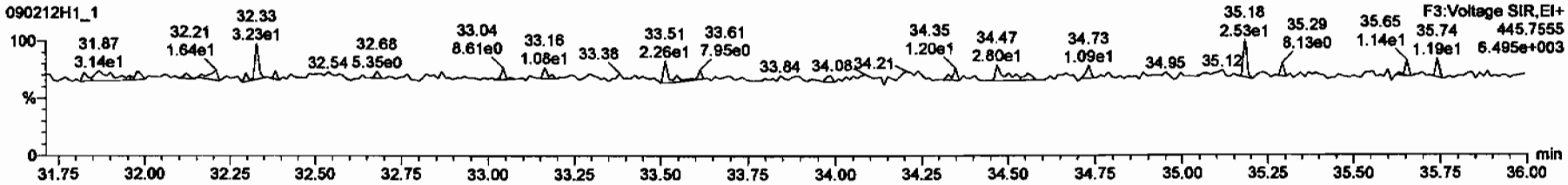

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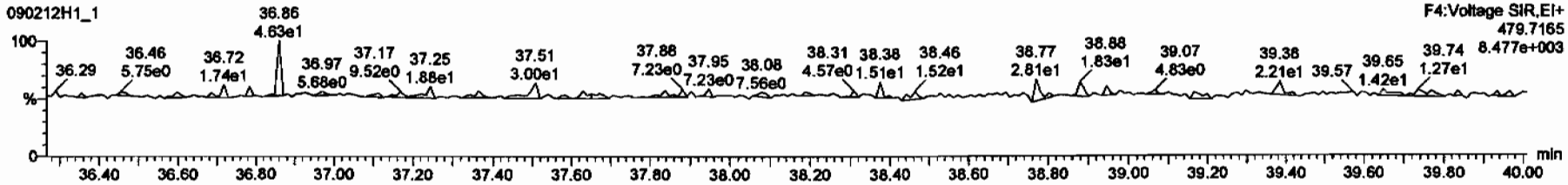

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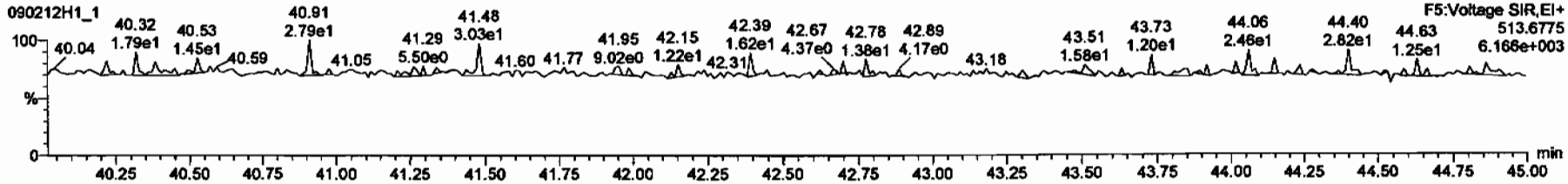

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2,3,7,8-TCDD

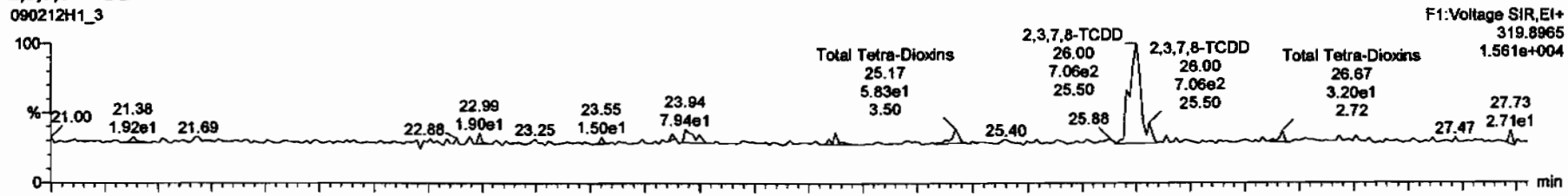

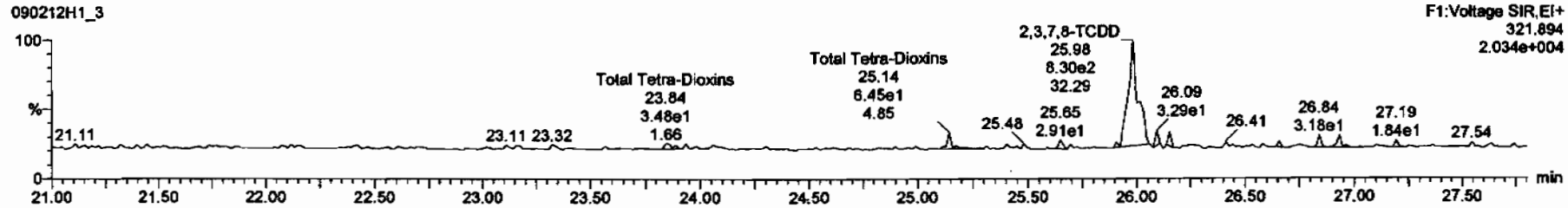

13C-2,3,7,8-TCDD

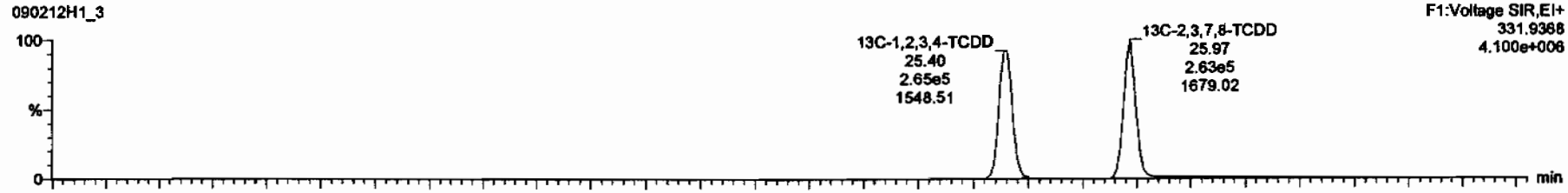

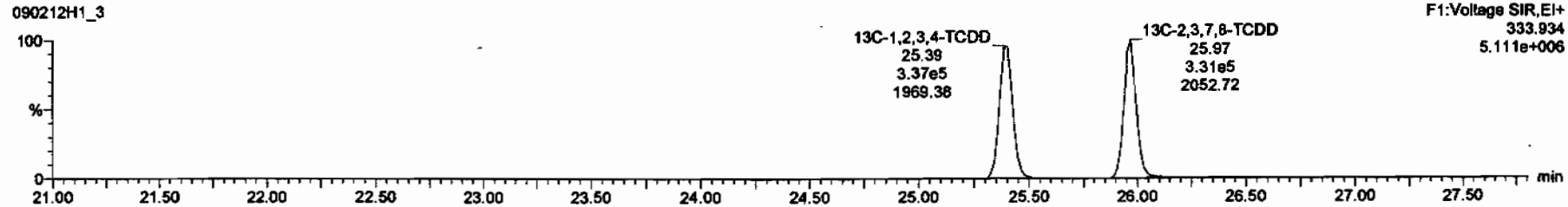

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37Cl-2,3,7,8-TCDD

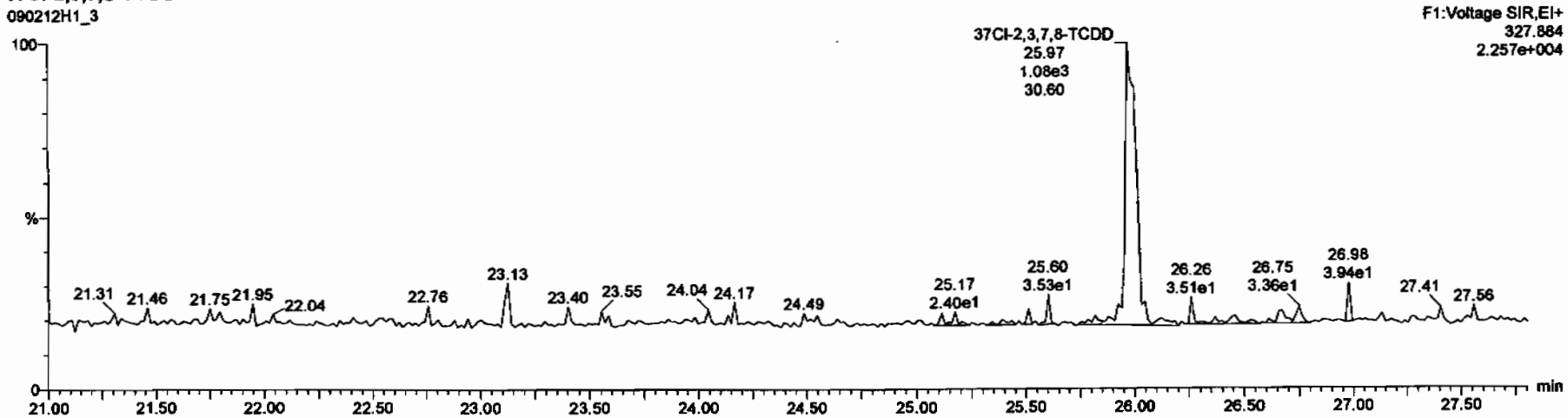

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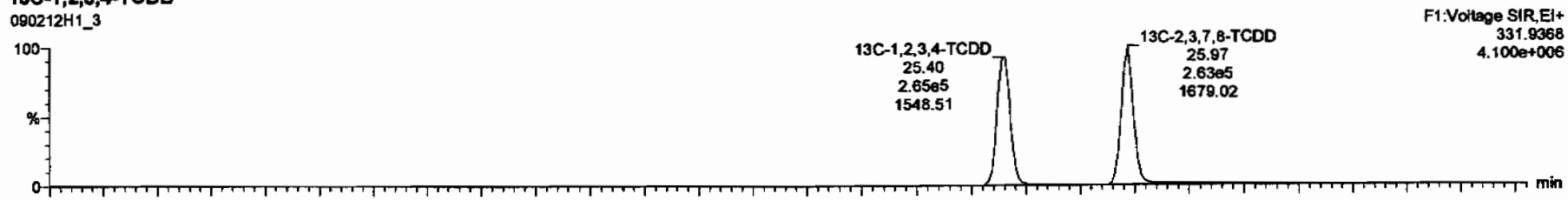

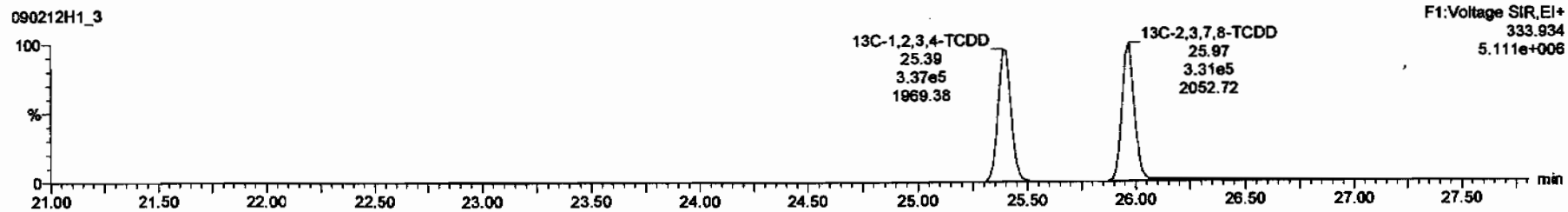

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1,2,3,7,8-PeCDD

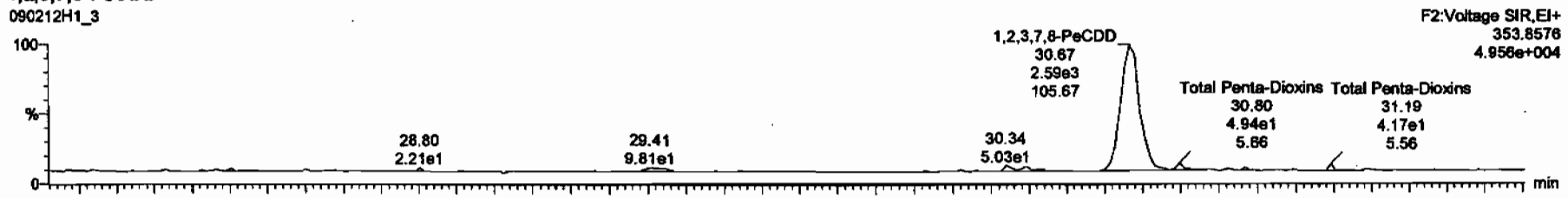

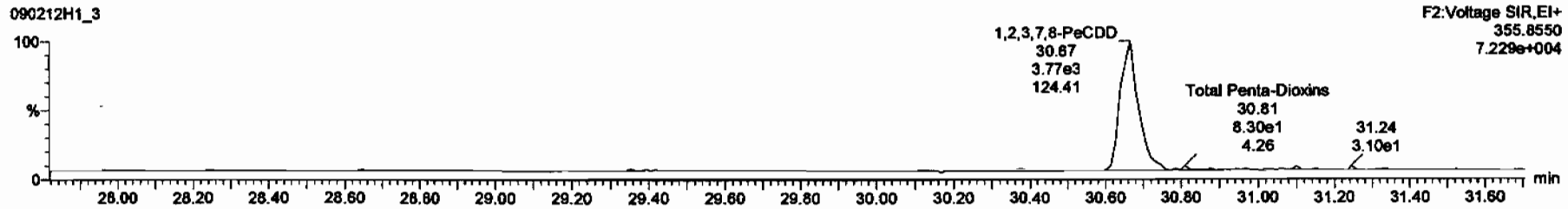

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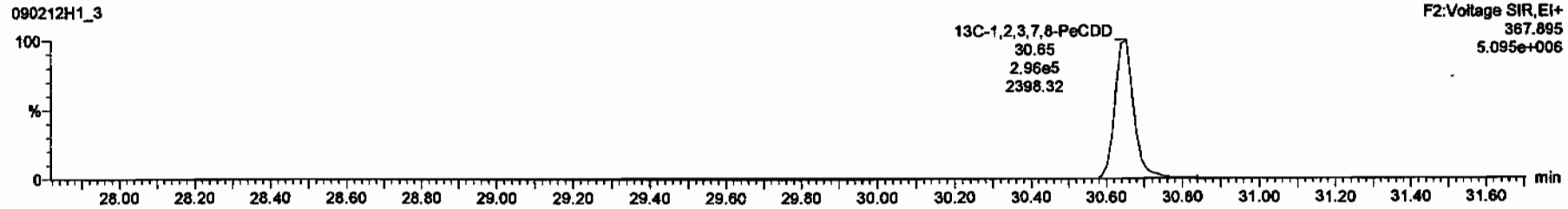

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1,2,3,4,7,8-HxCDD

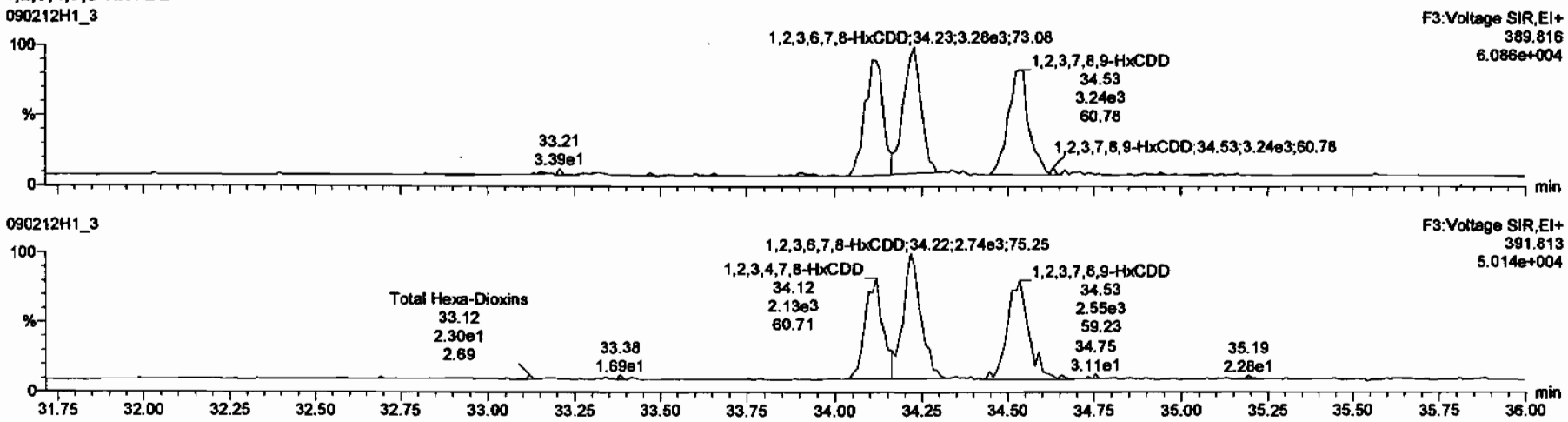

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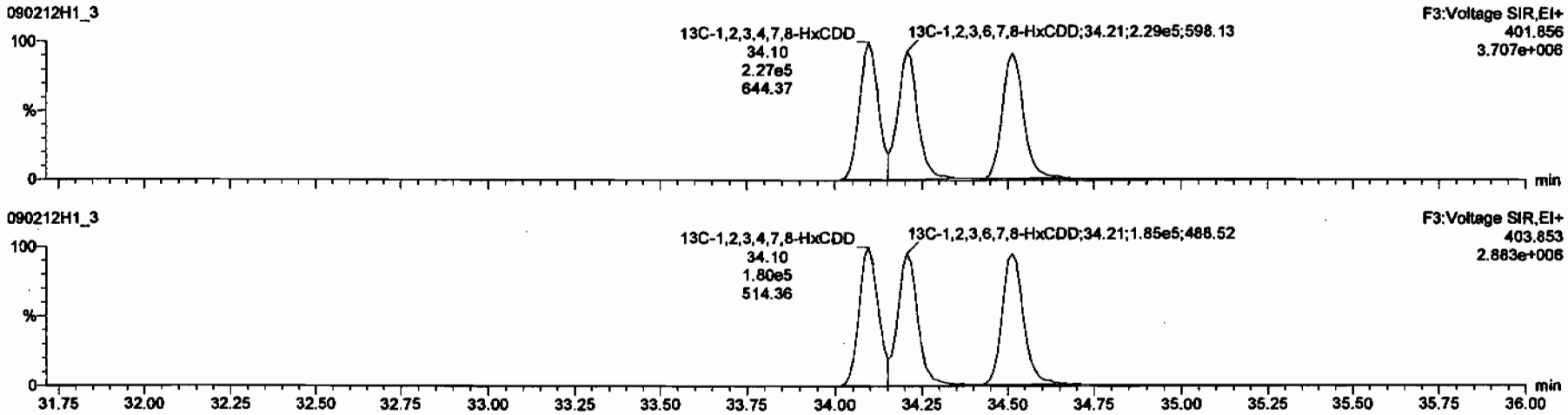

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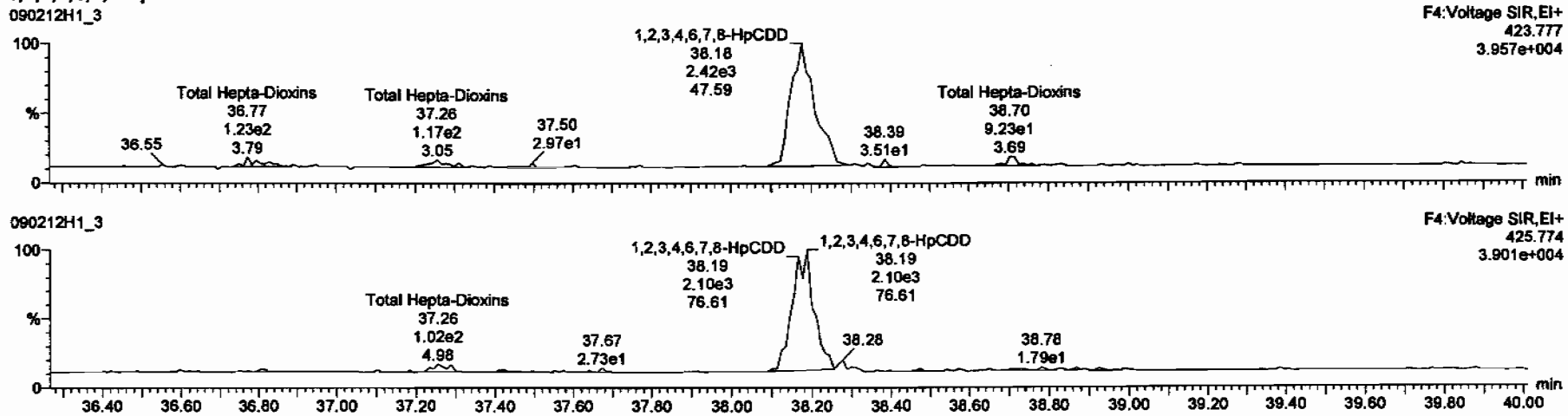

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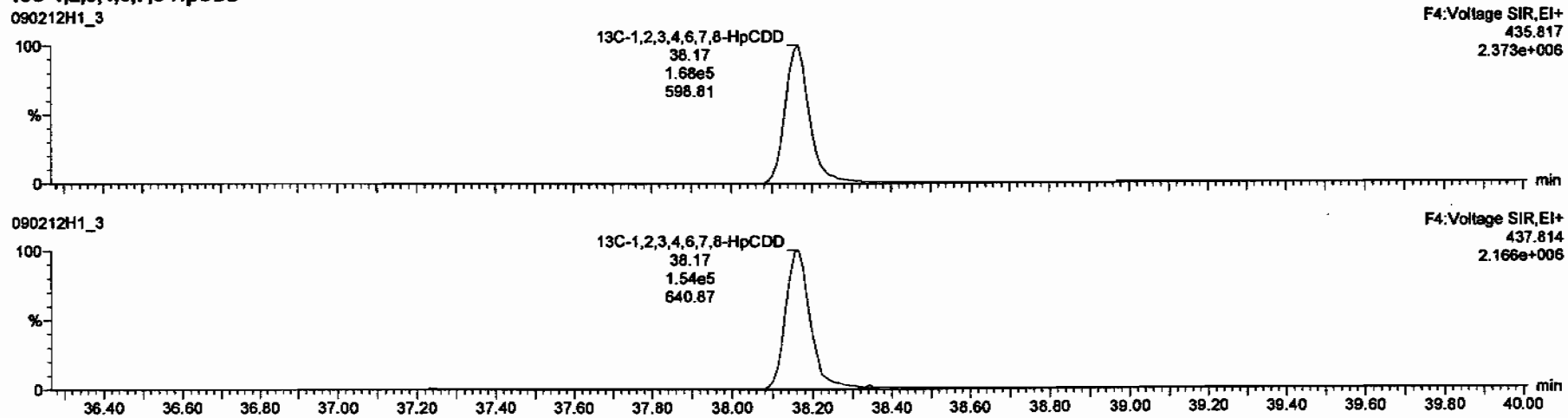

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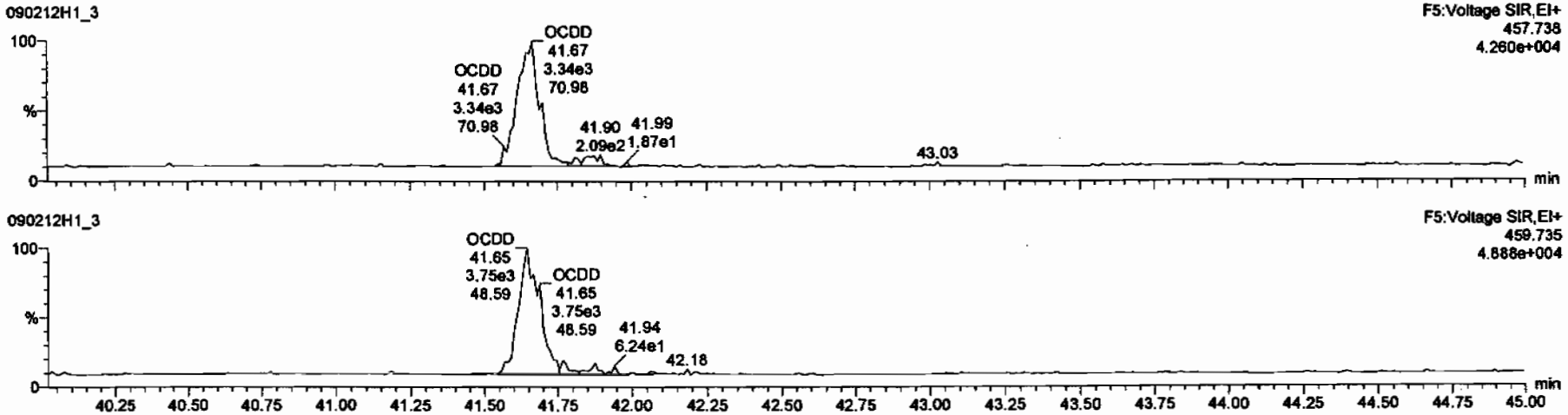

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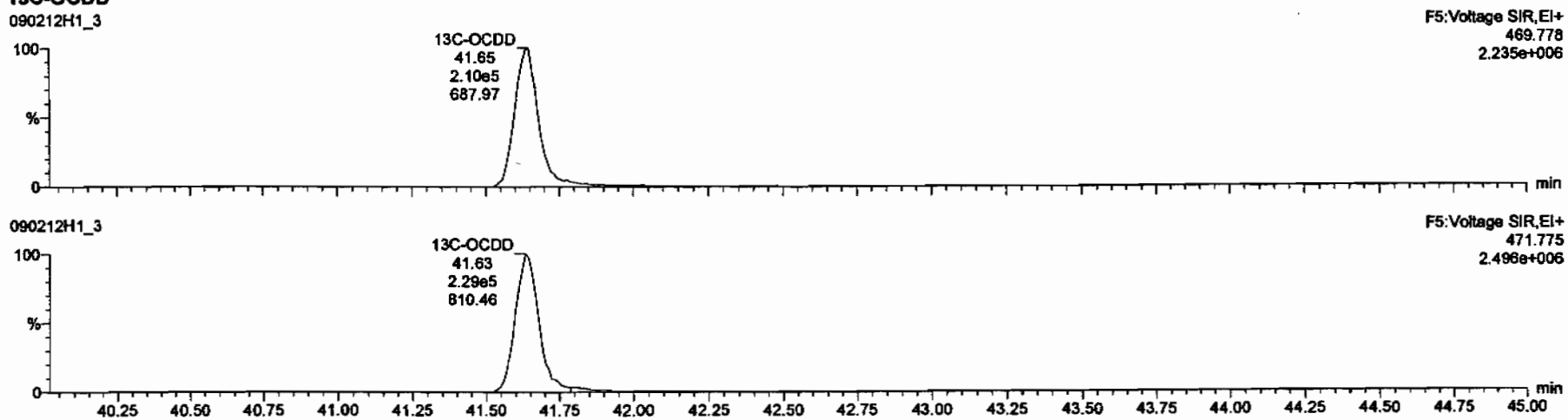

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2,3,7,8-TCDF

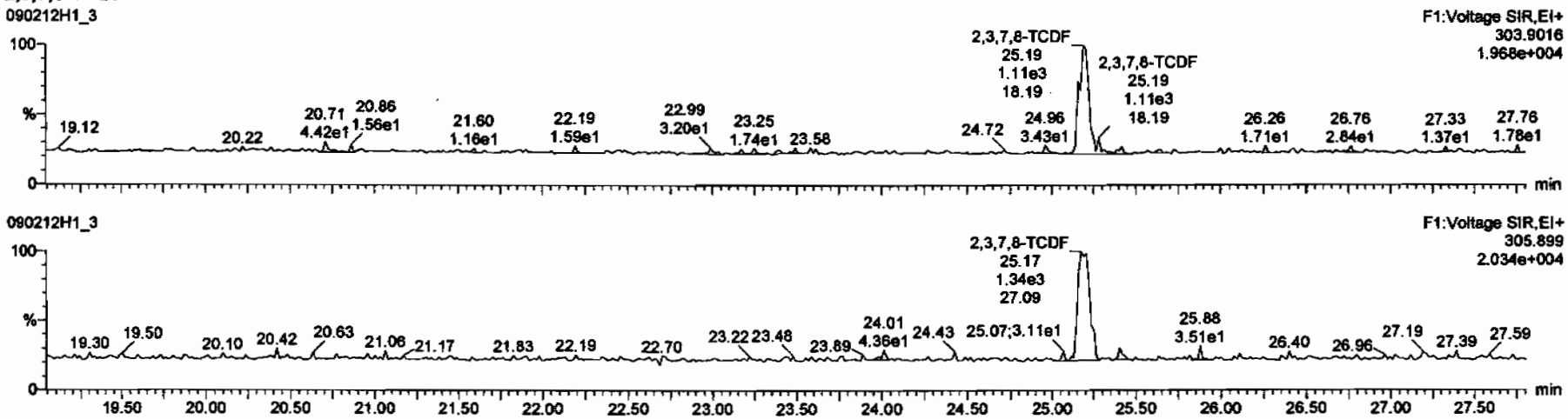

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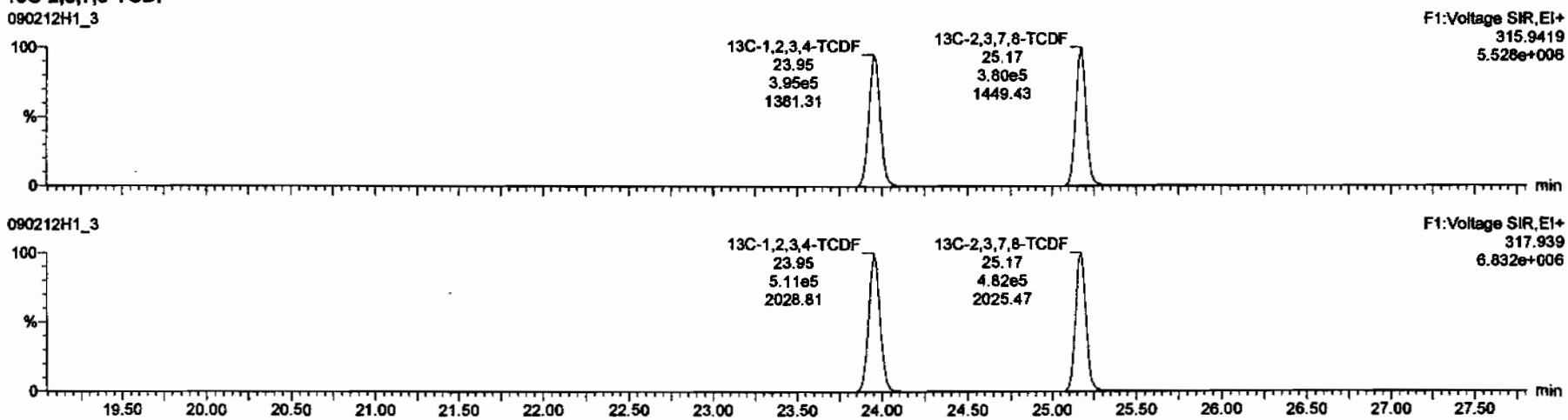

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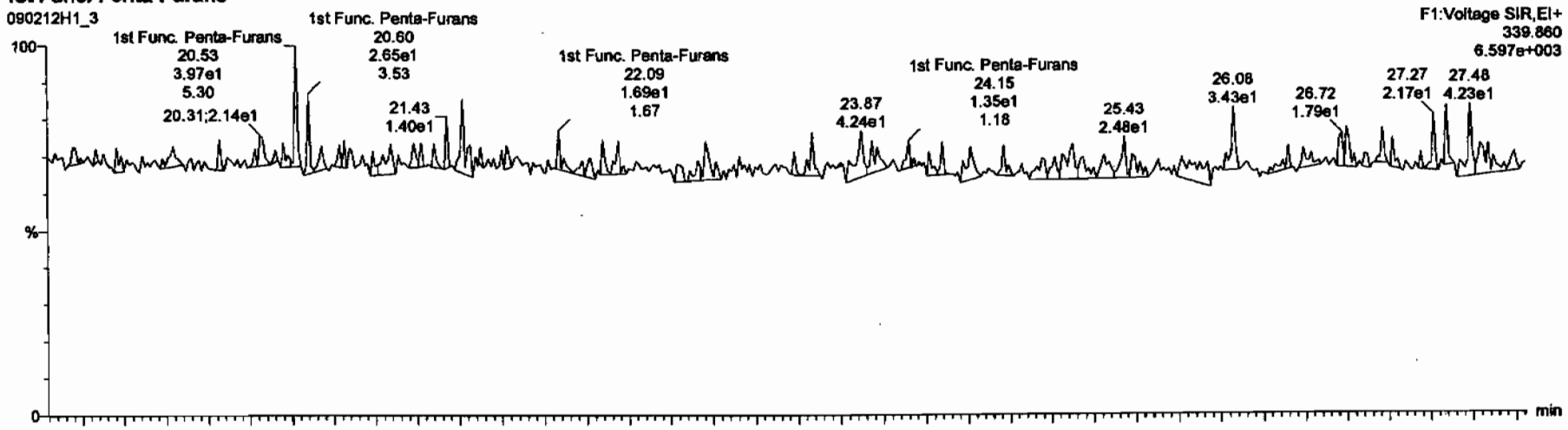

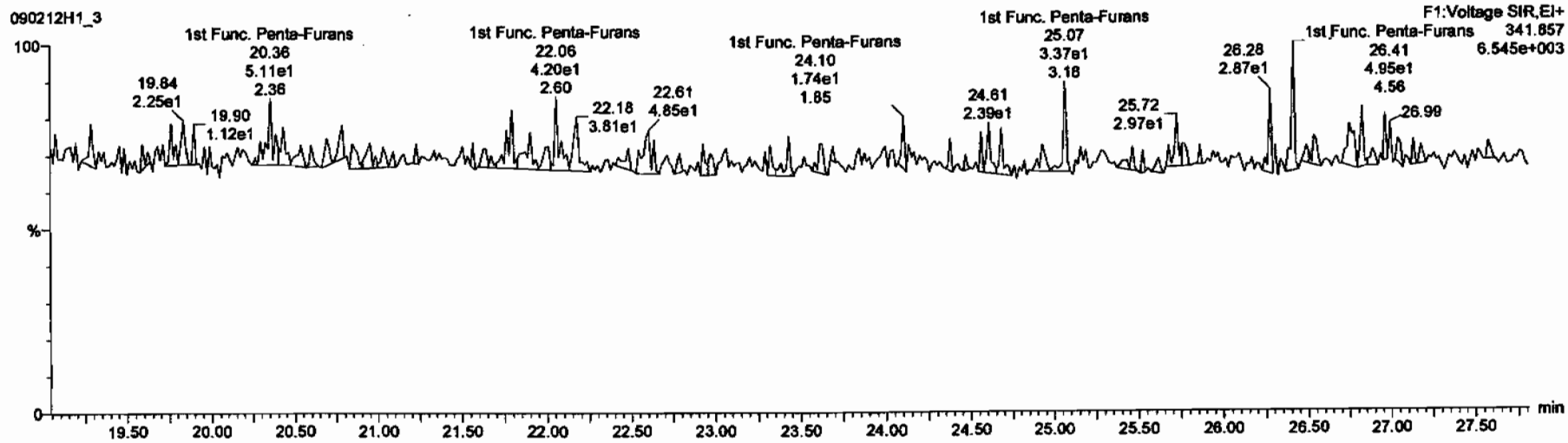

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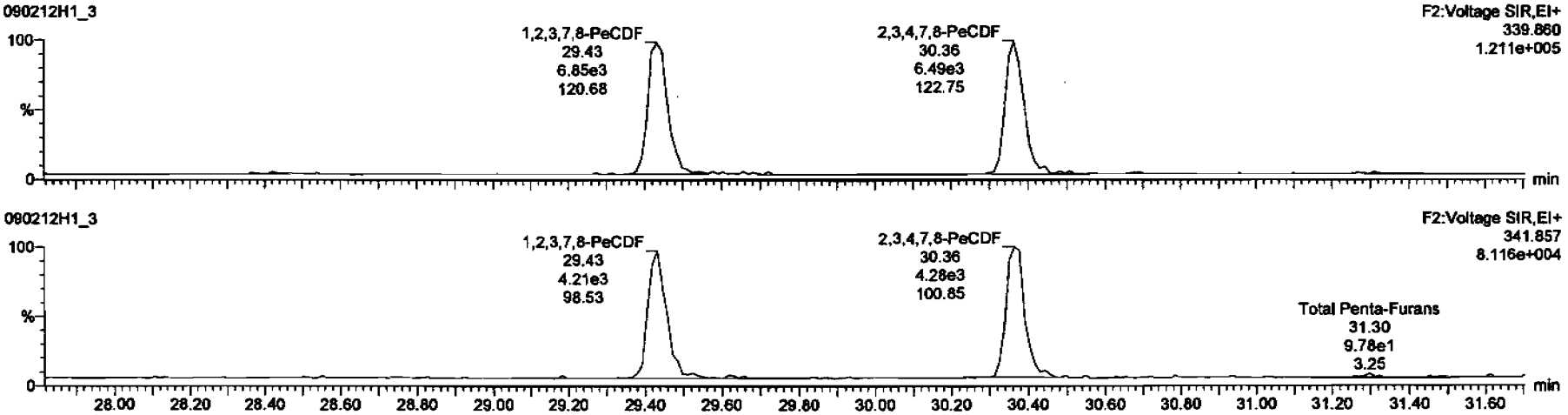

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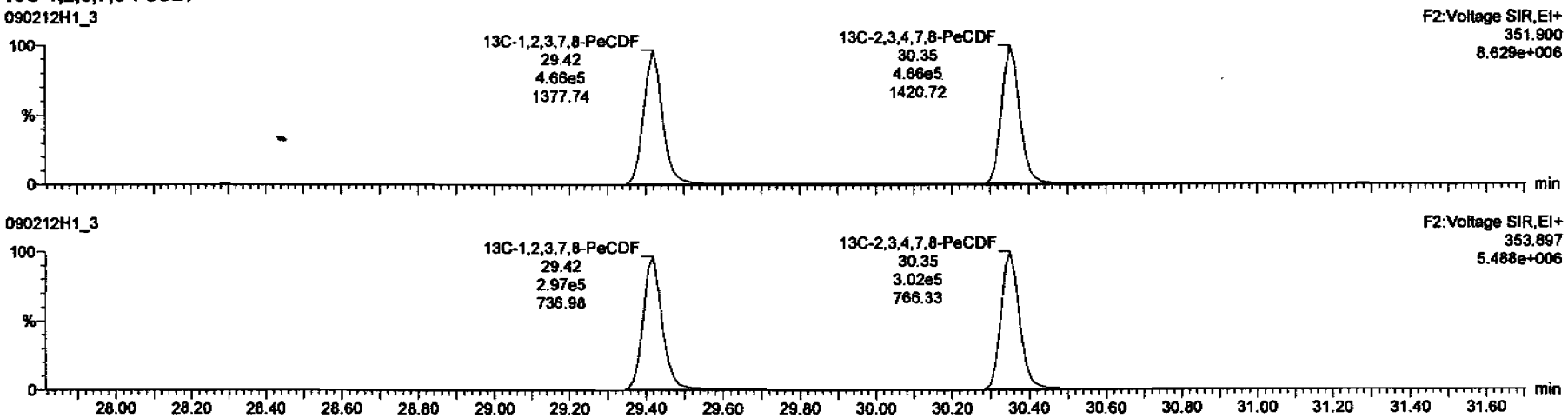

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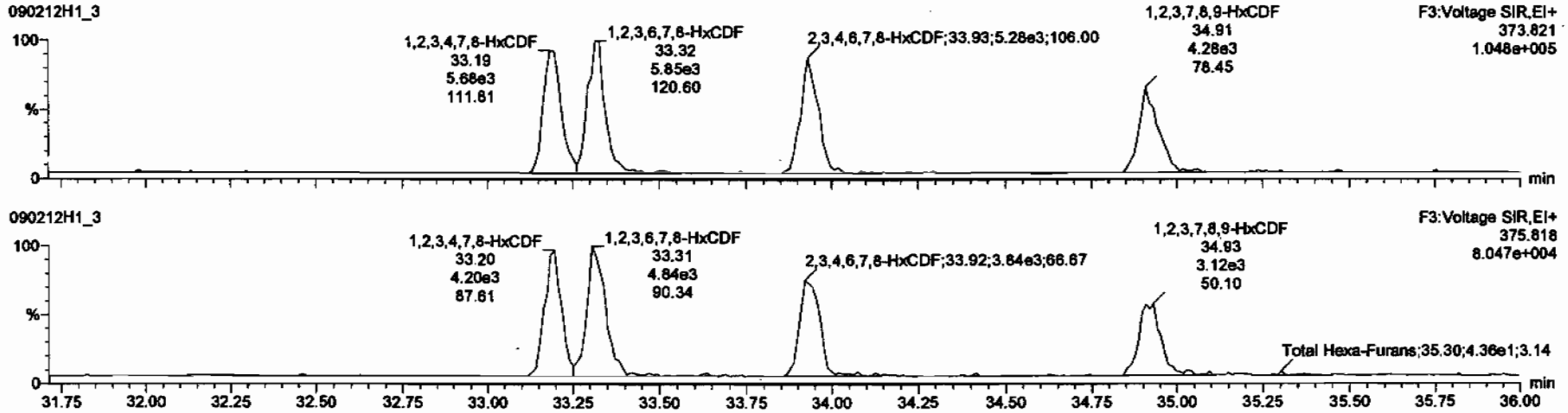

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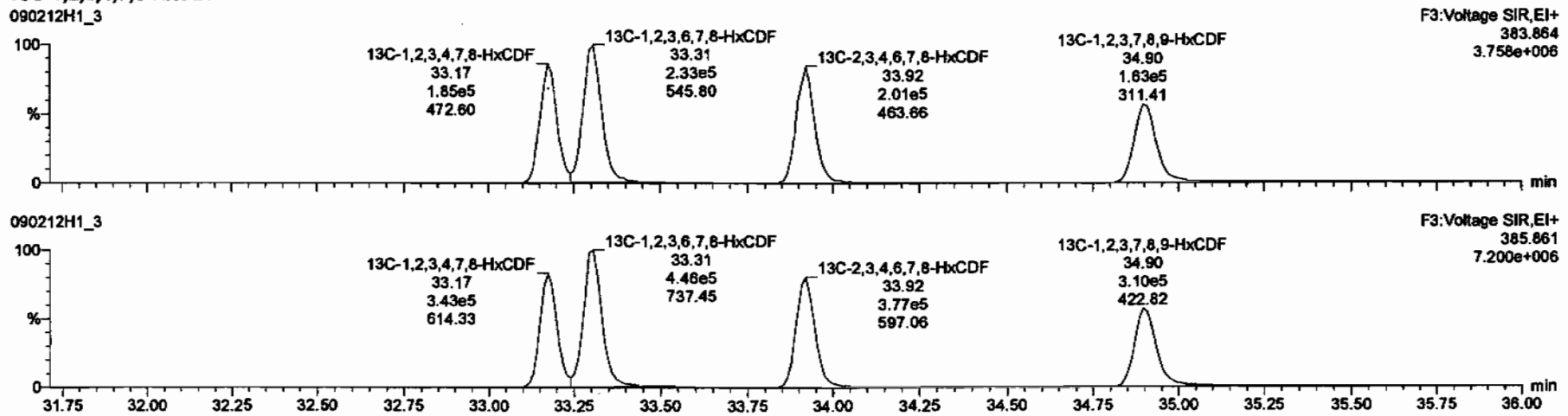

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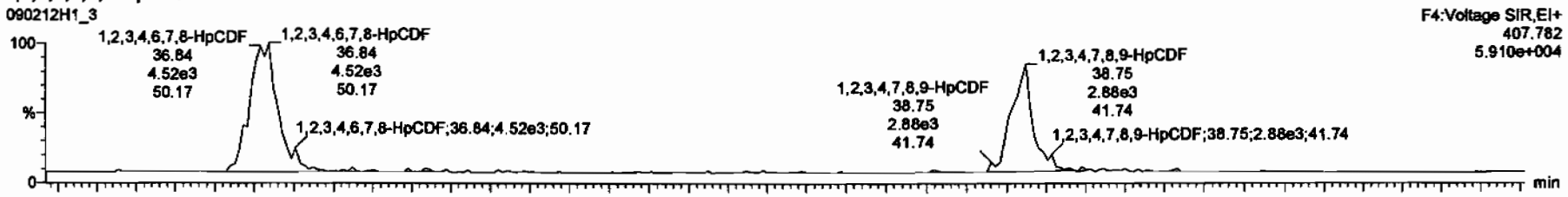

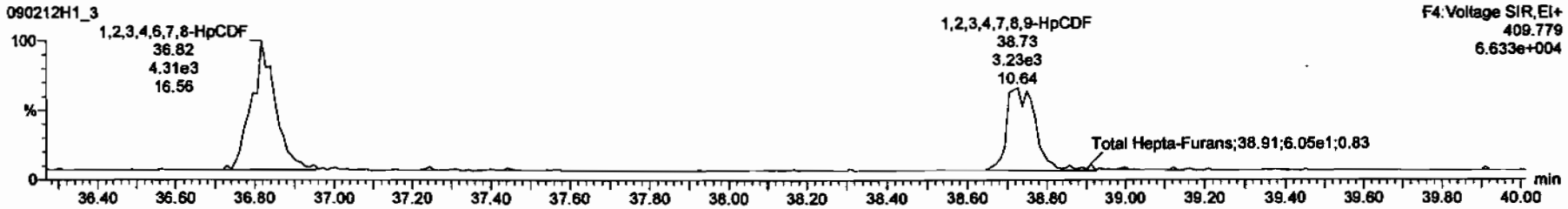

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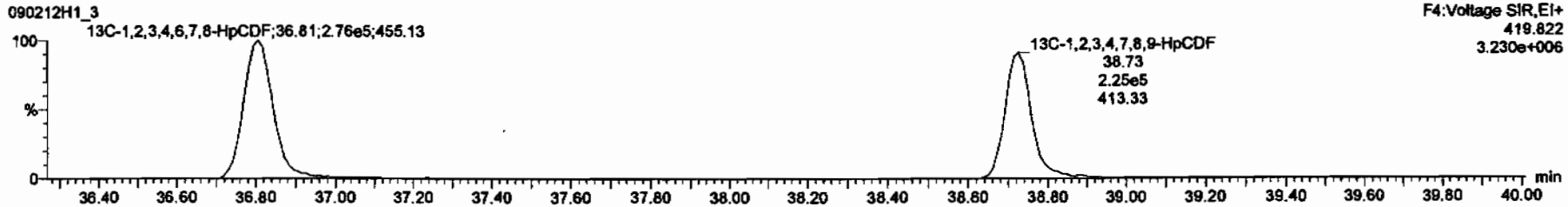

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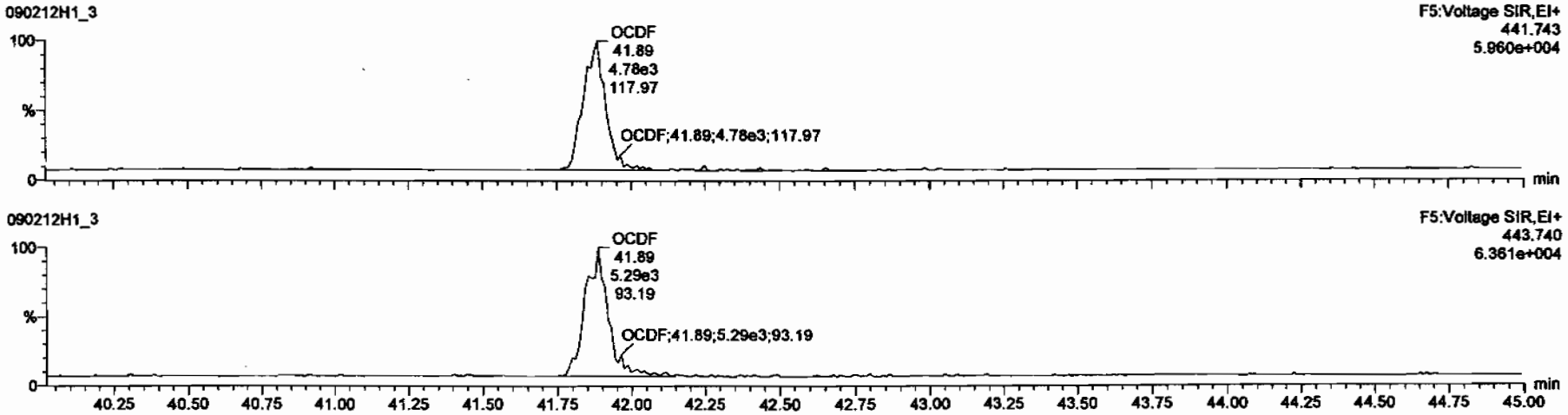

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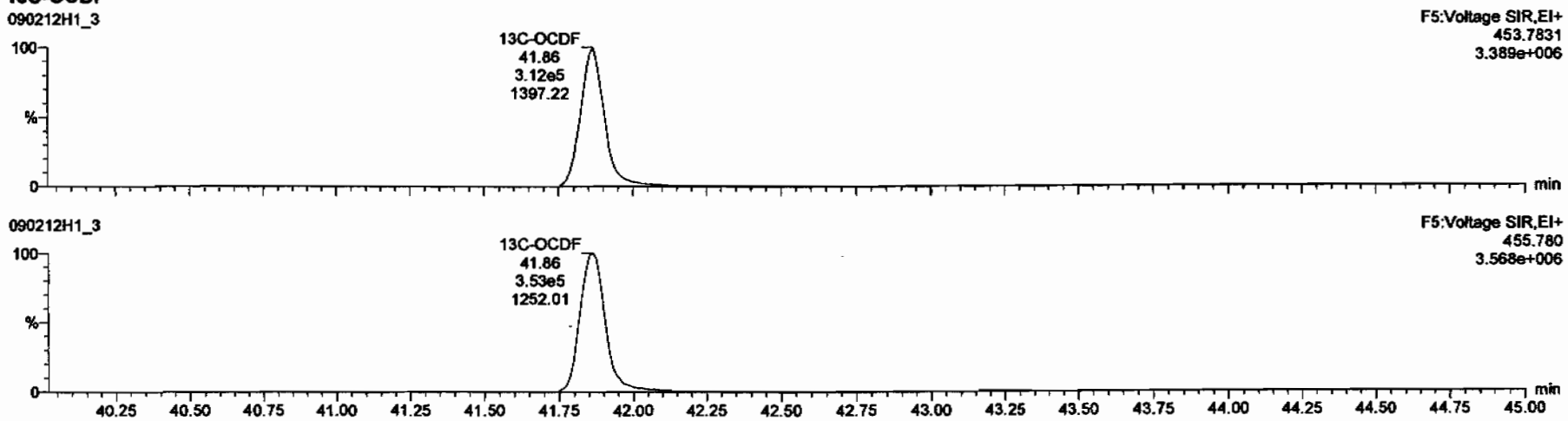

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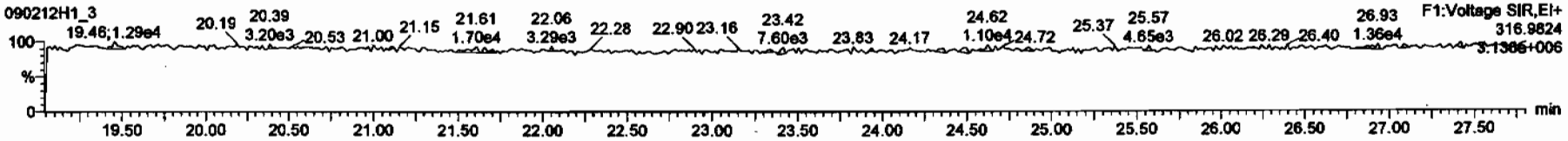

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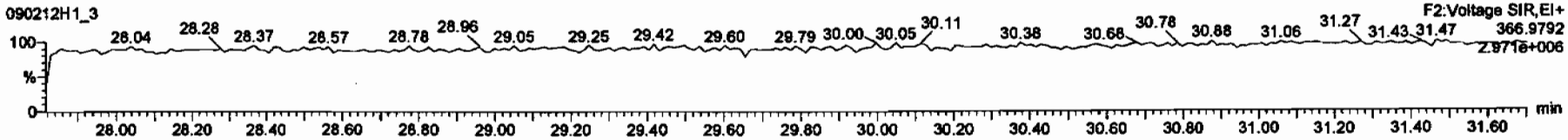

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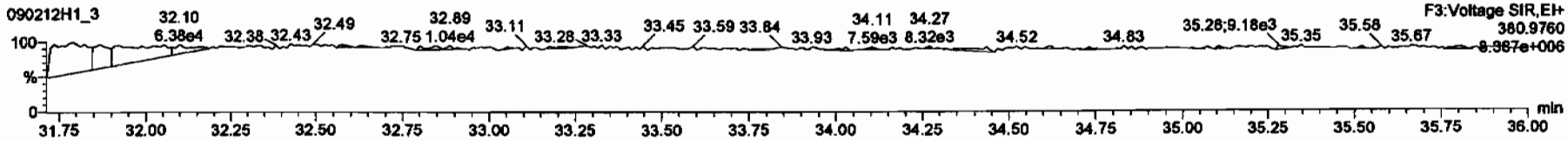

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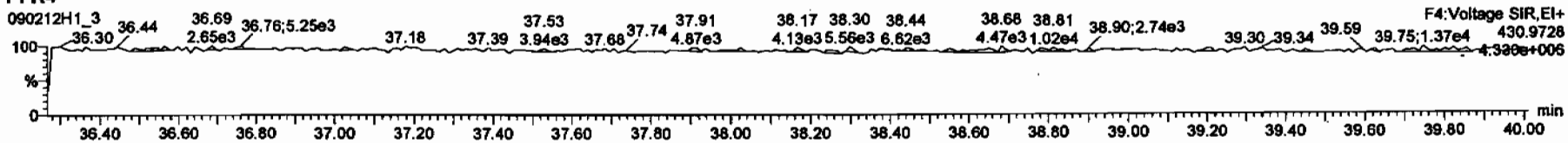

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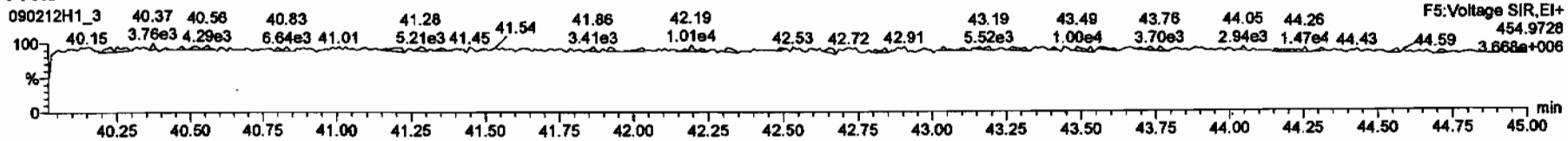

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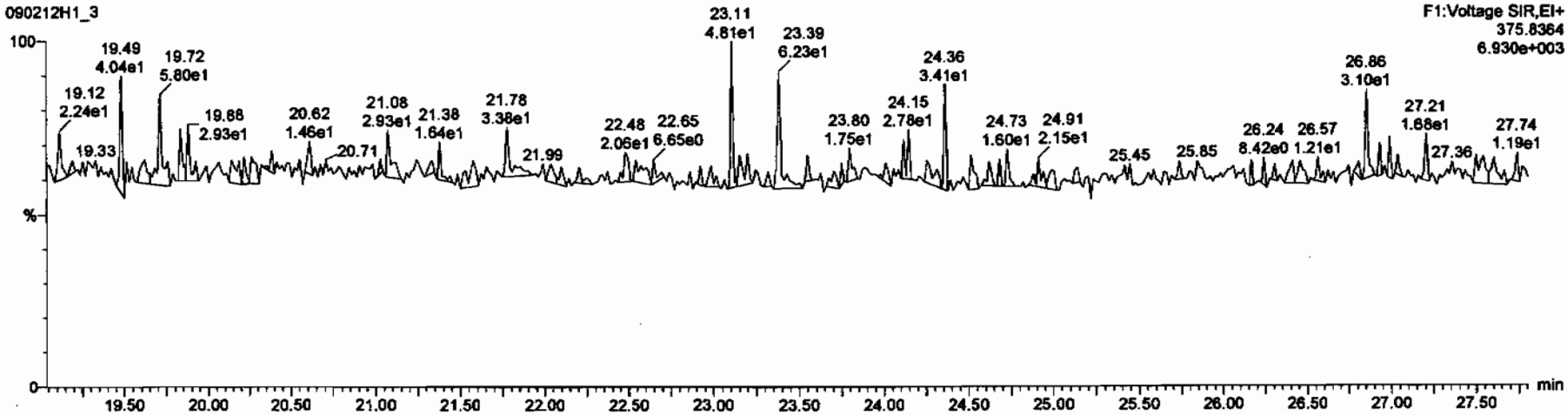

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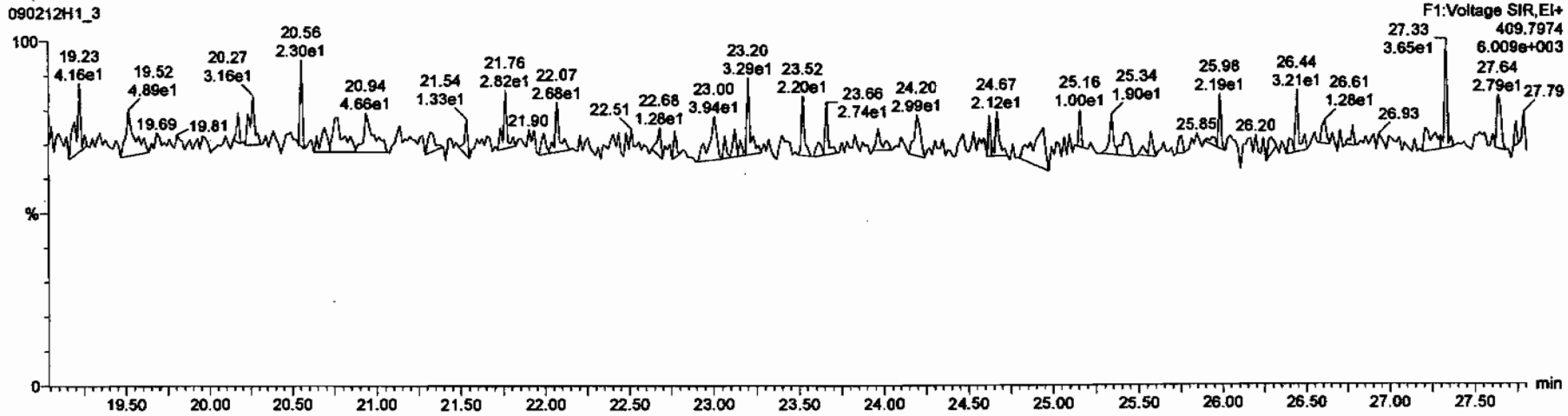

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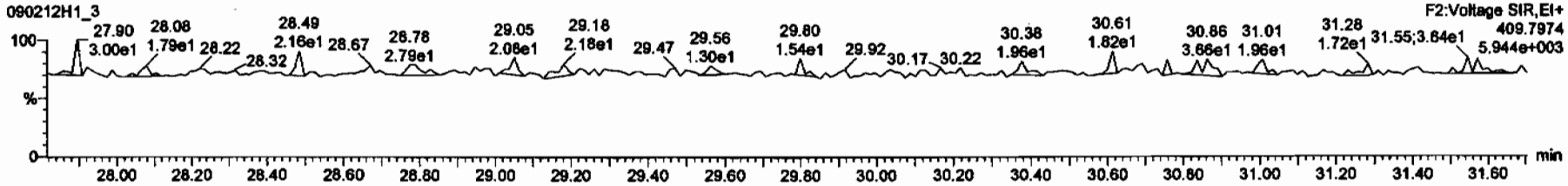

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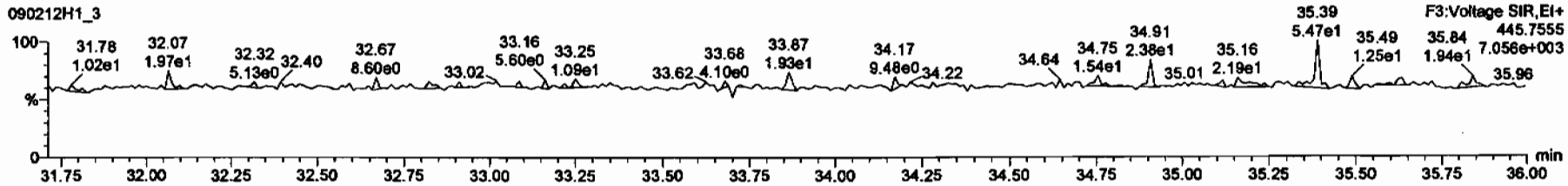

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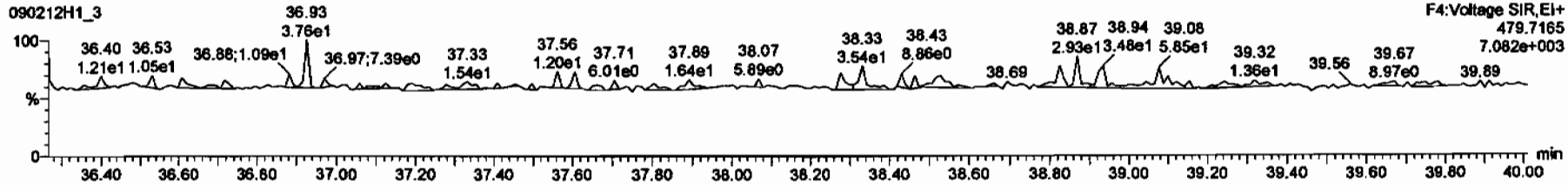

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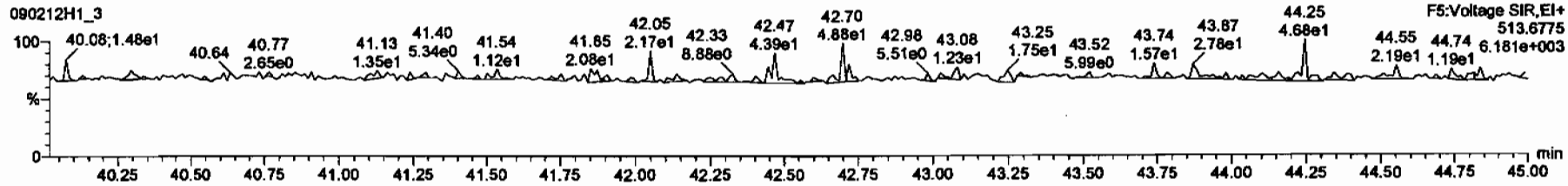

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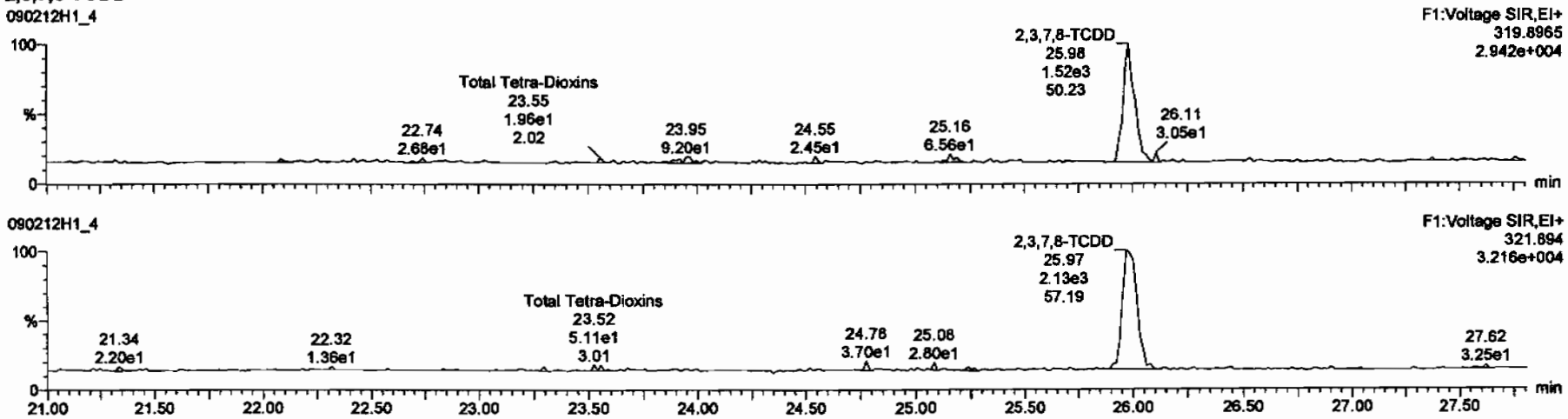

13C-2,3,7,8-TCDD

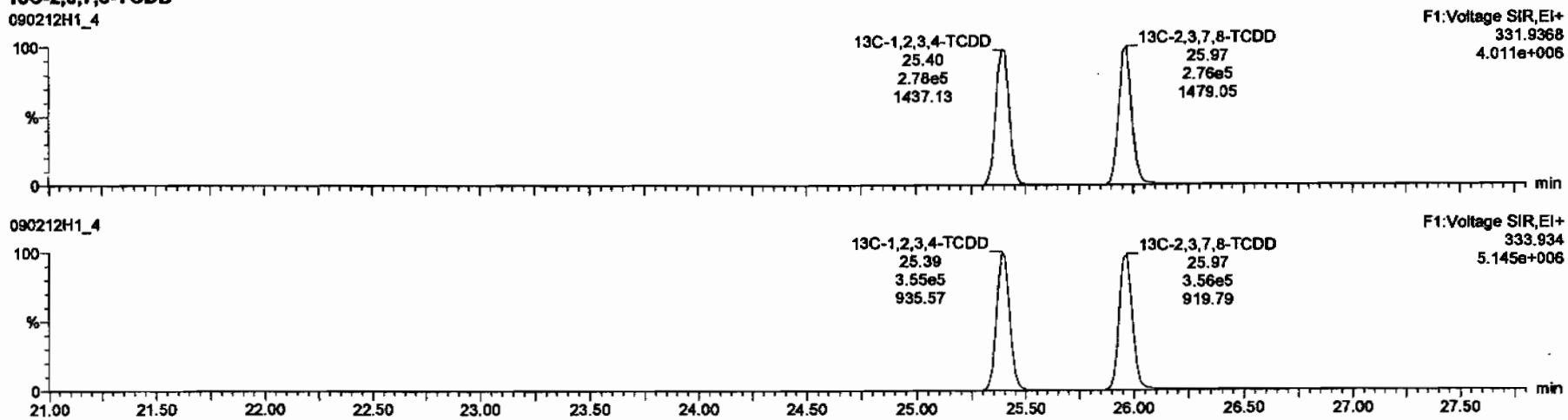

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37Cl-2,3,7,8-TCDD

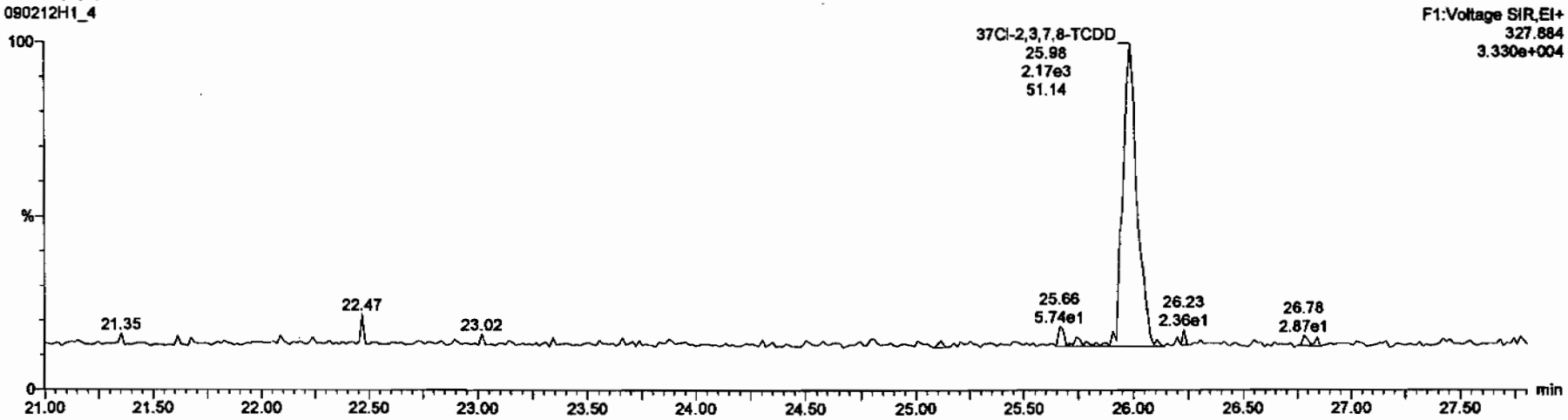

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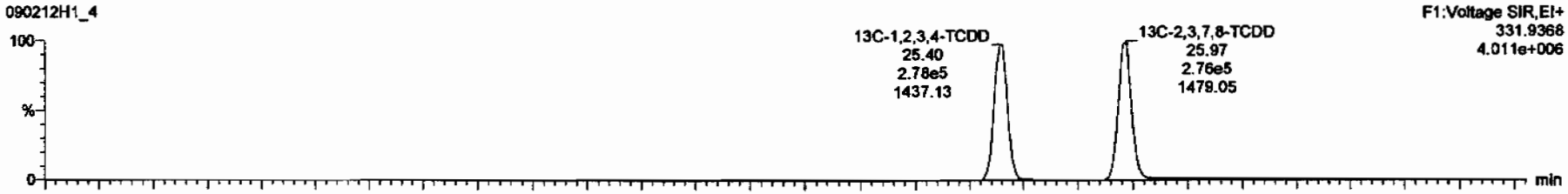

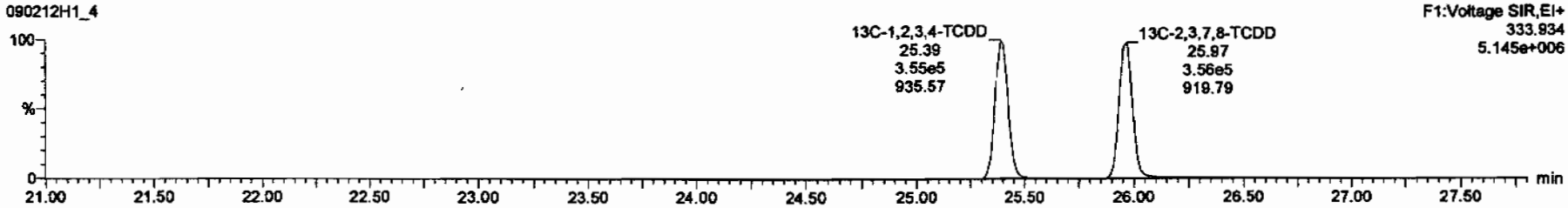

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1,2,3,7,8-PeCDD

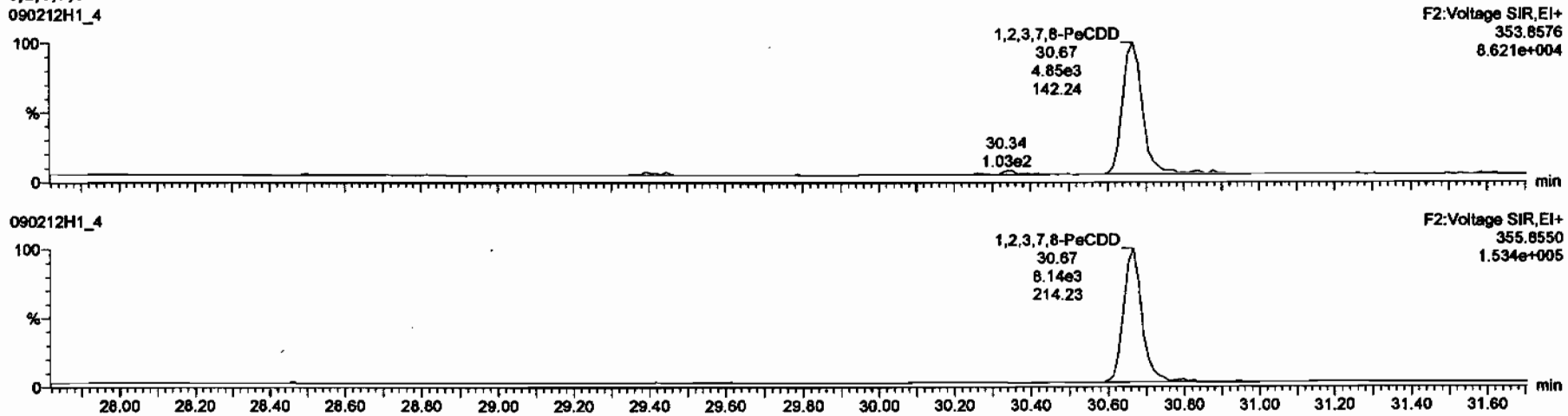

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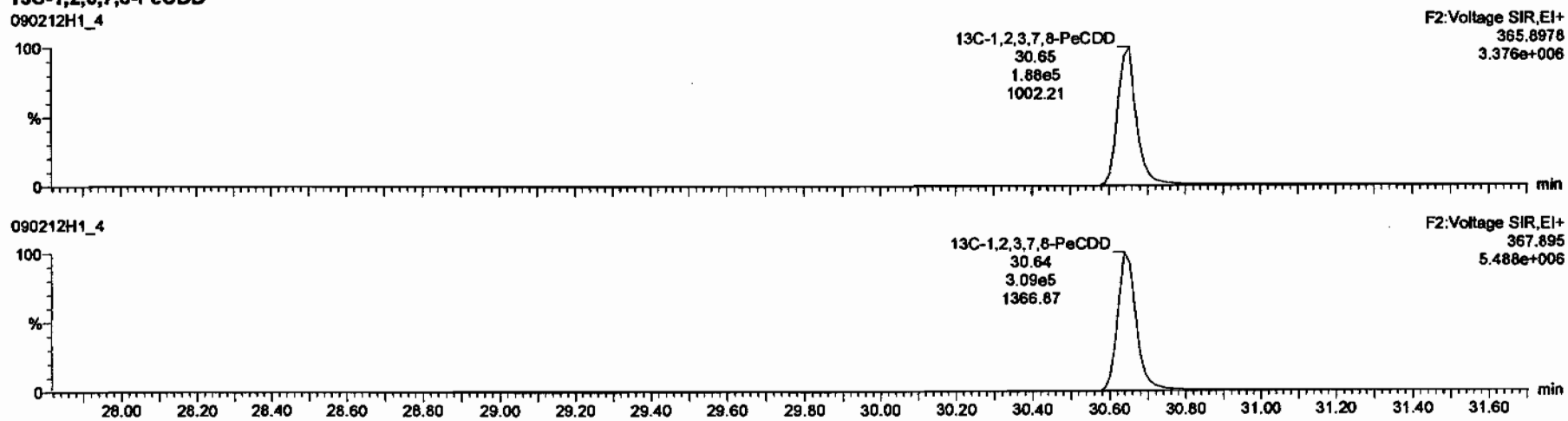

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1,2,3,4,7,8-HxCDD

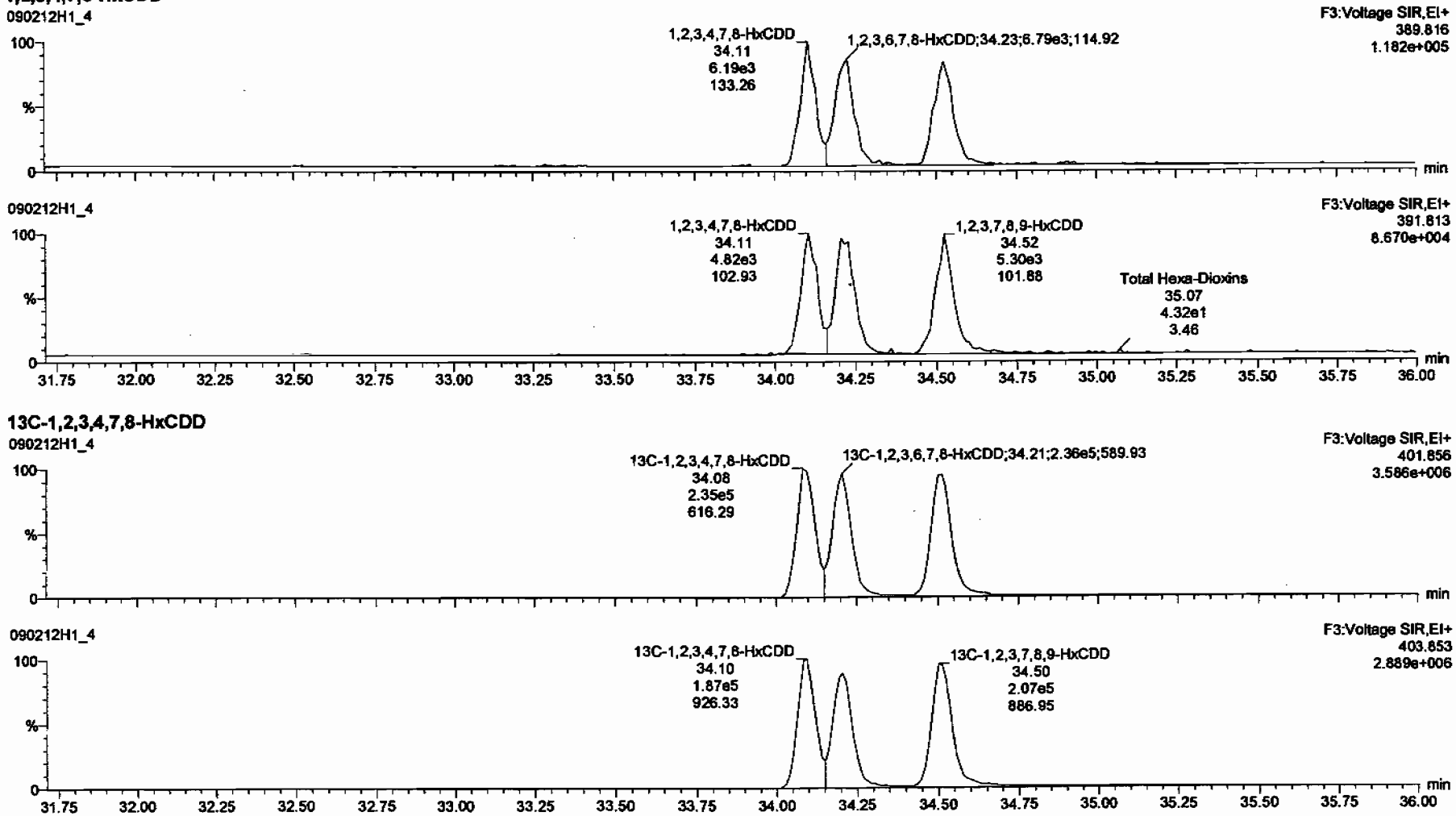

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Name: 090212H1_4, Date: 12-Feb-2009, Time: 13:38:34, ID: ST090212H1-3 1613 CS1 080917CG, Description: 1613 CS1 080917G

1,2,3,4,6,7,8-HpCDD

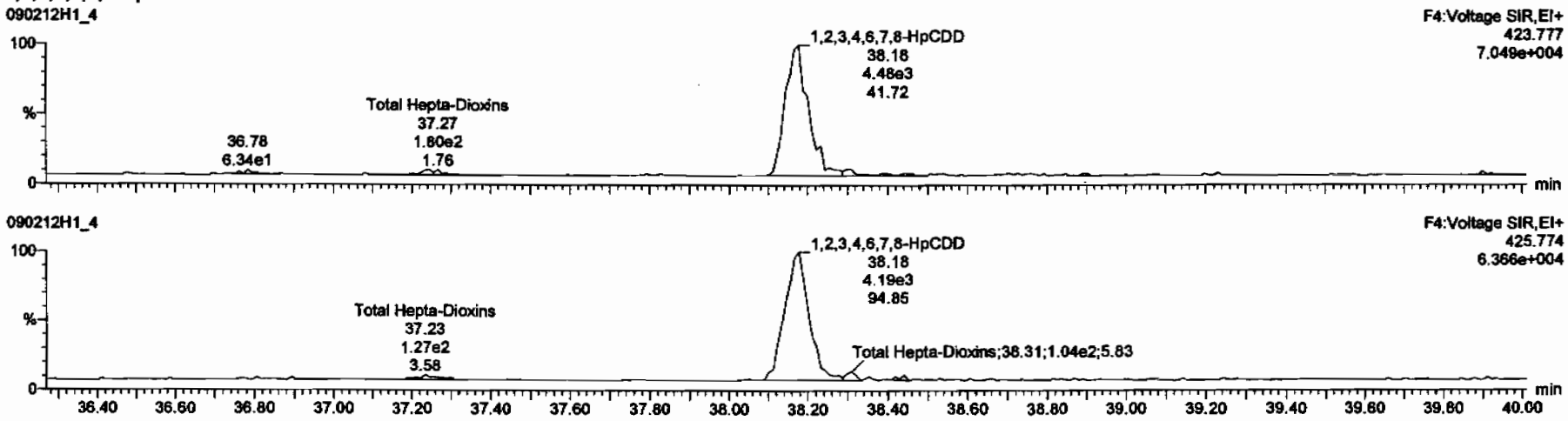

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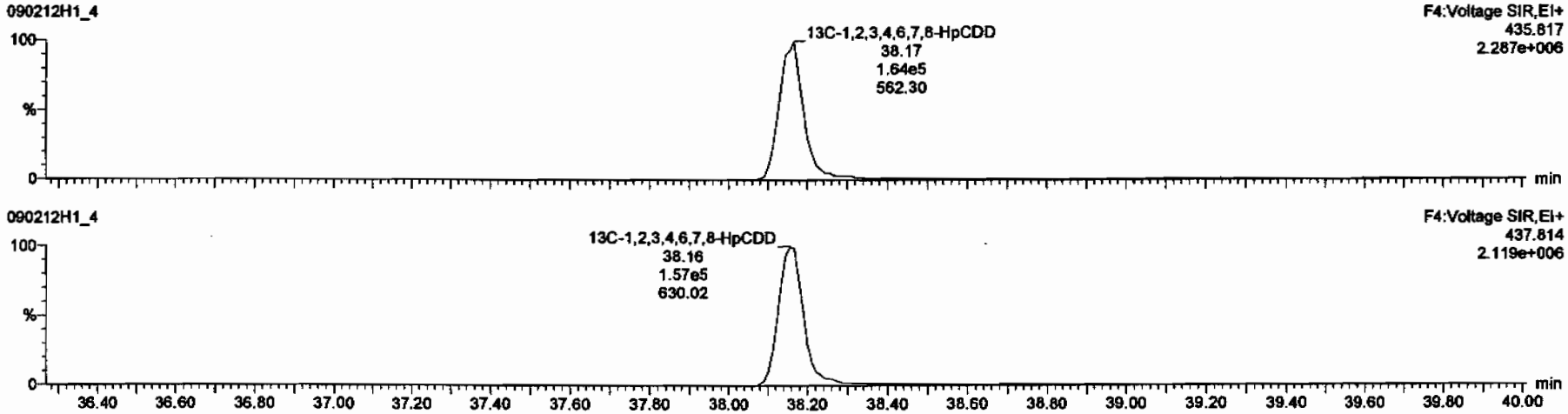

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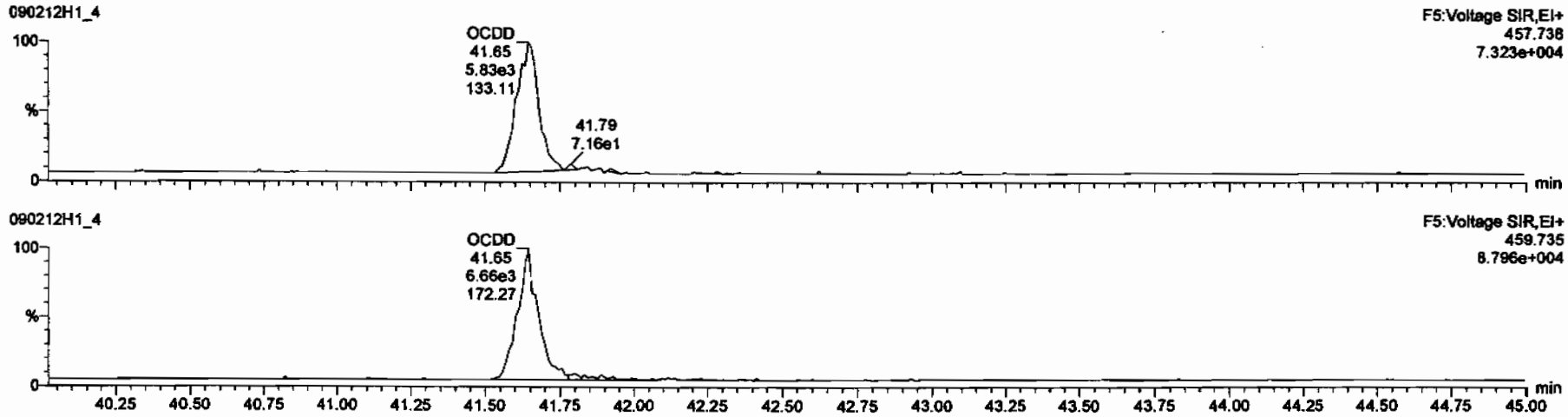

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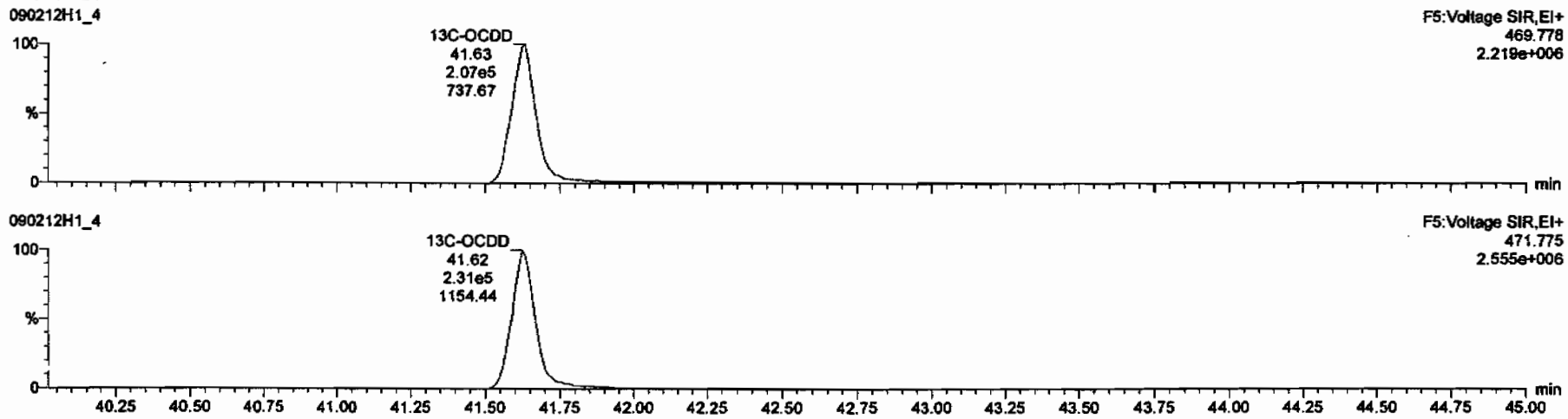

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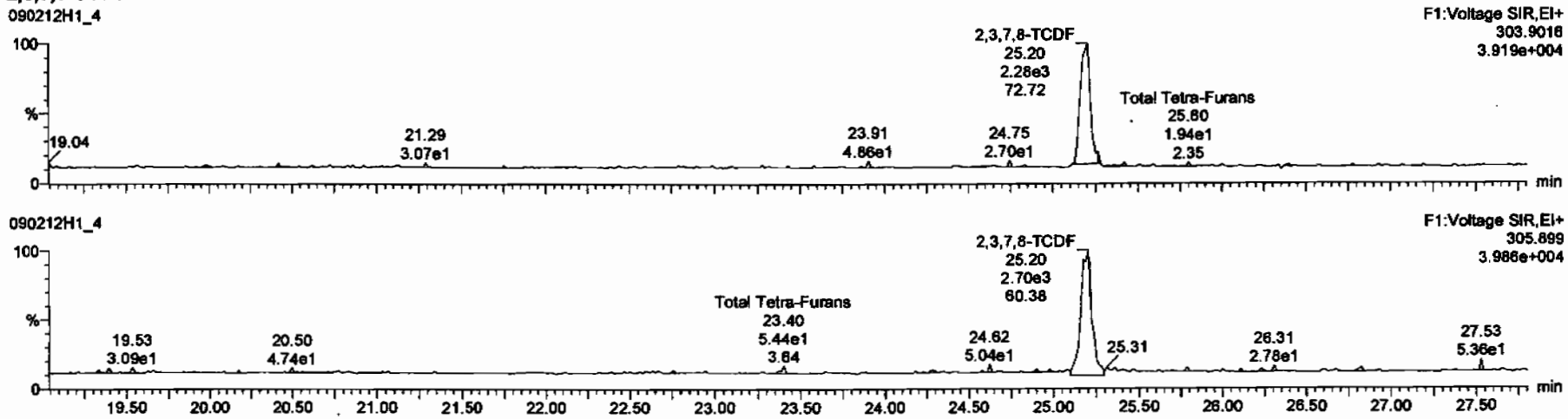

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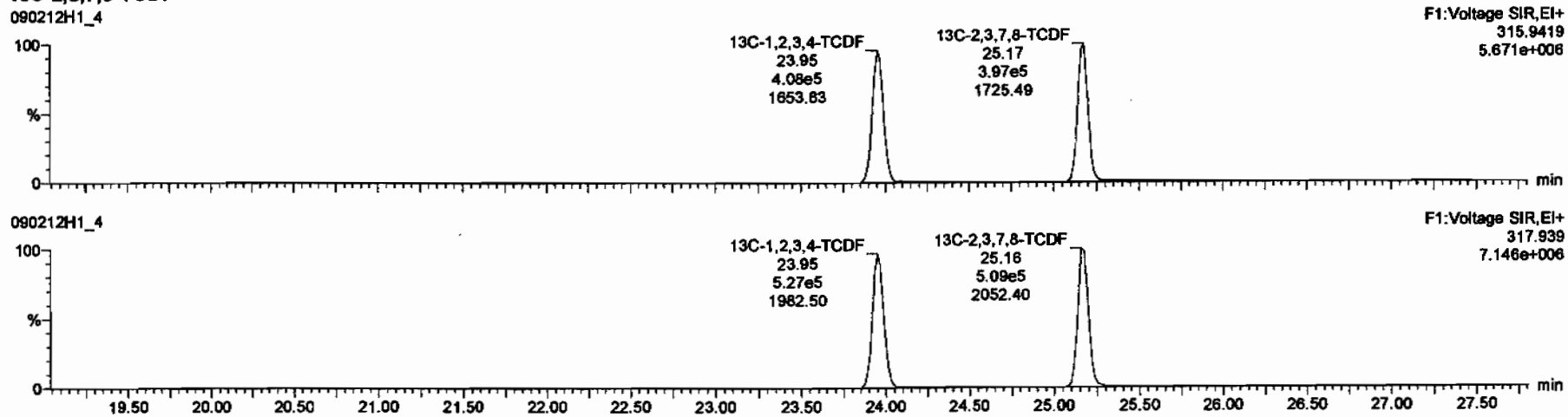

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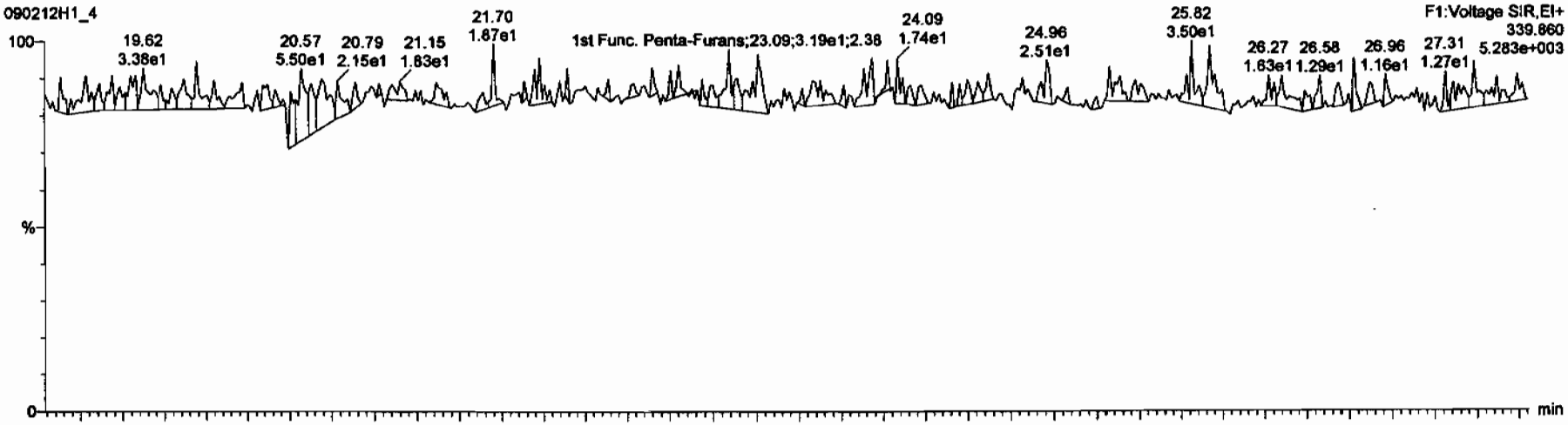

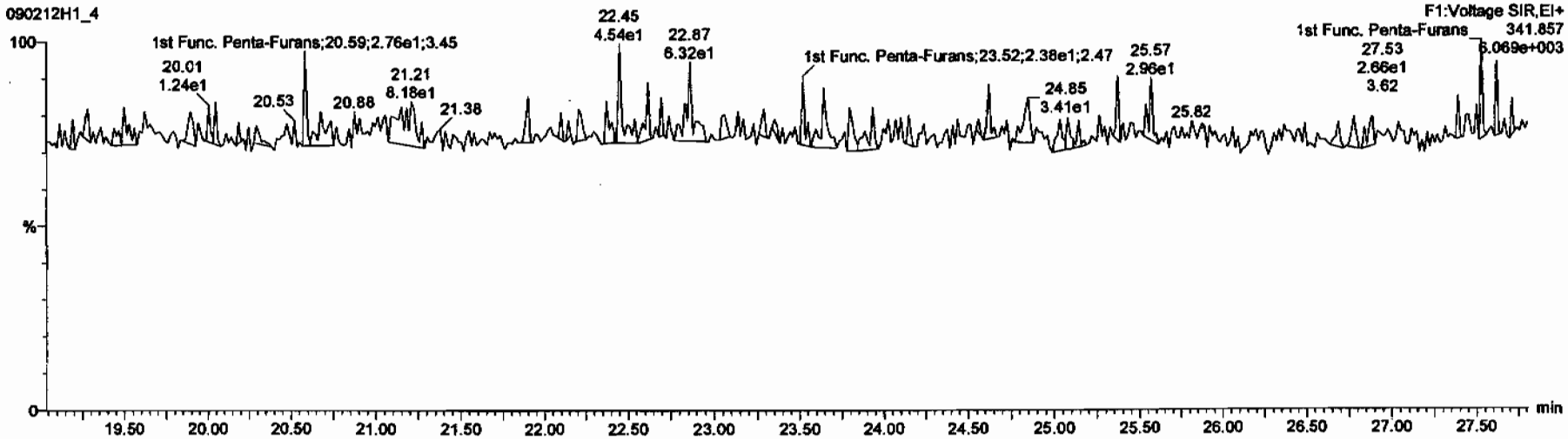

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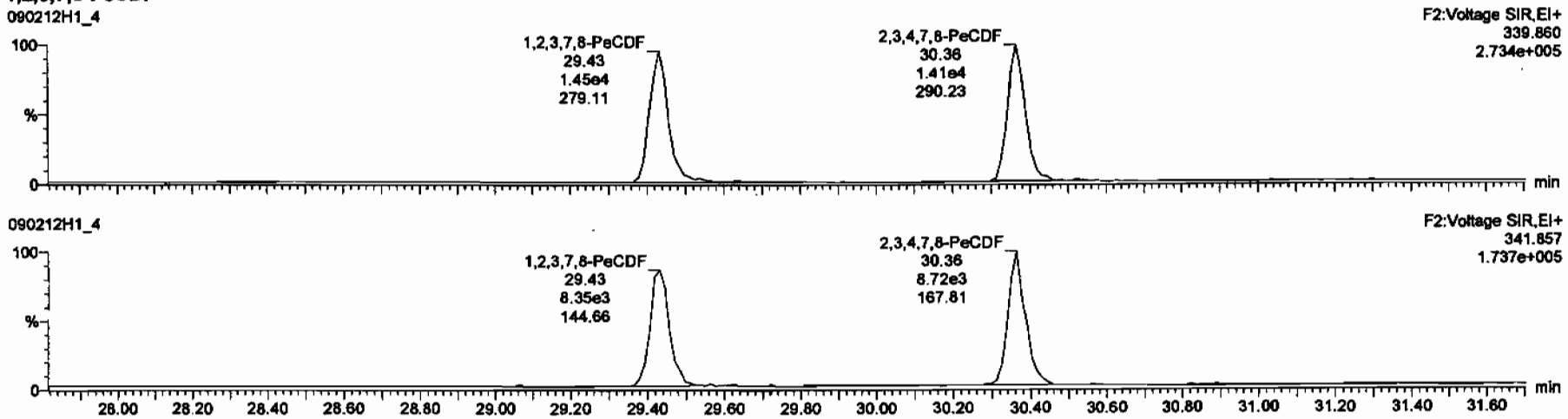

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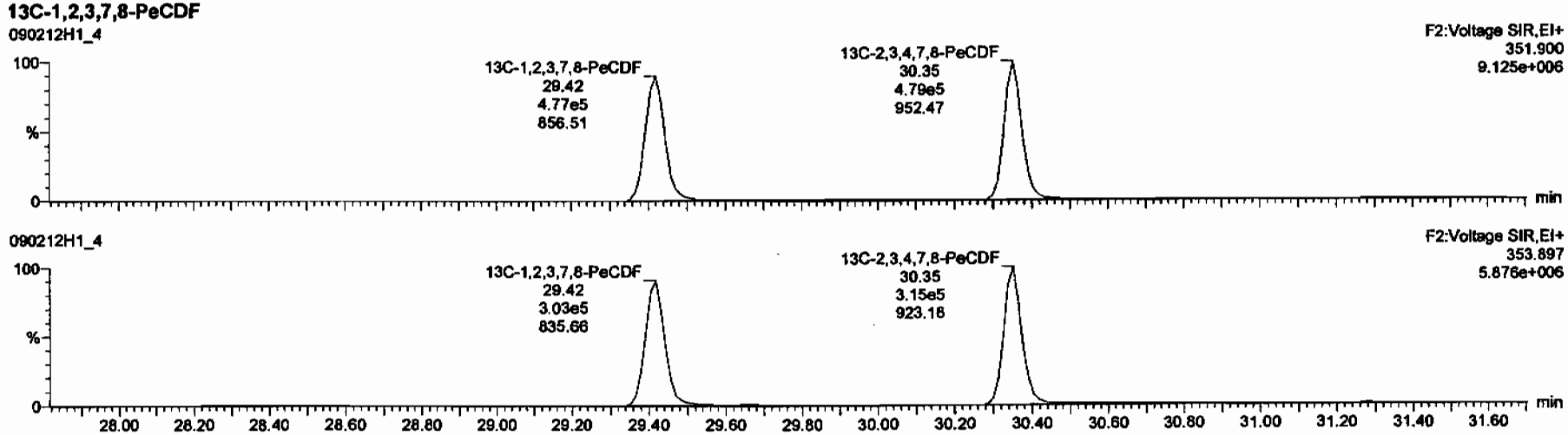

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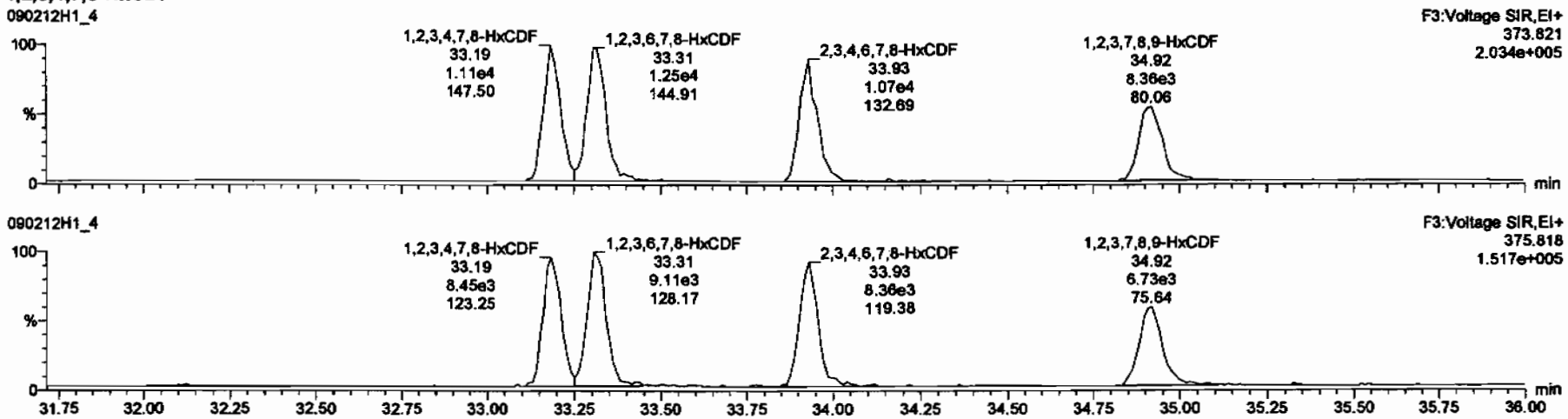

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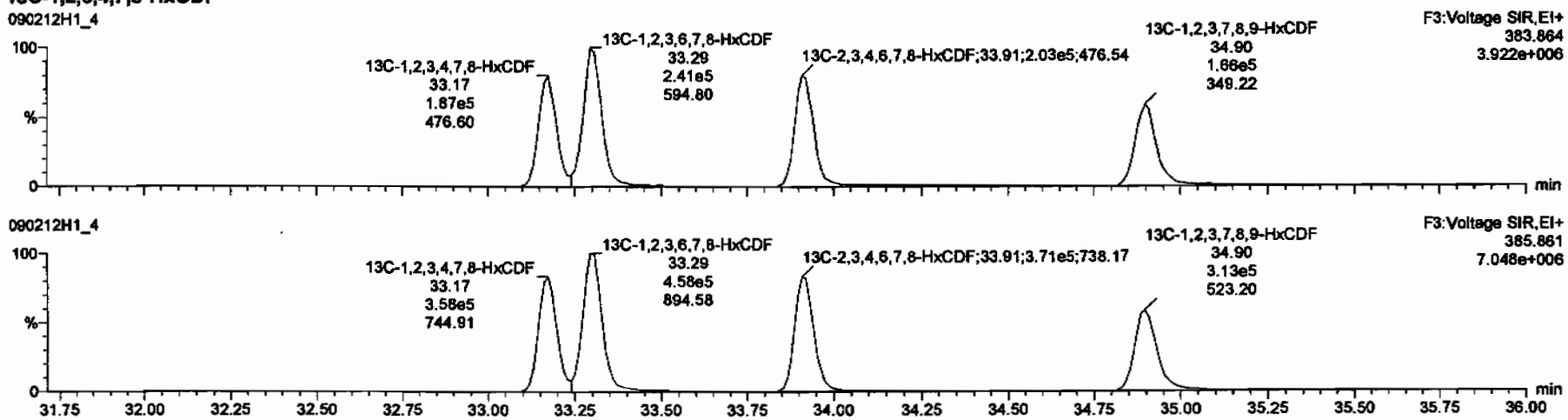

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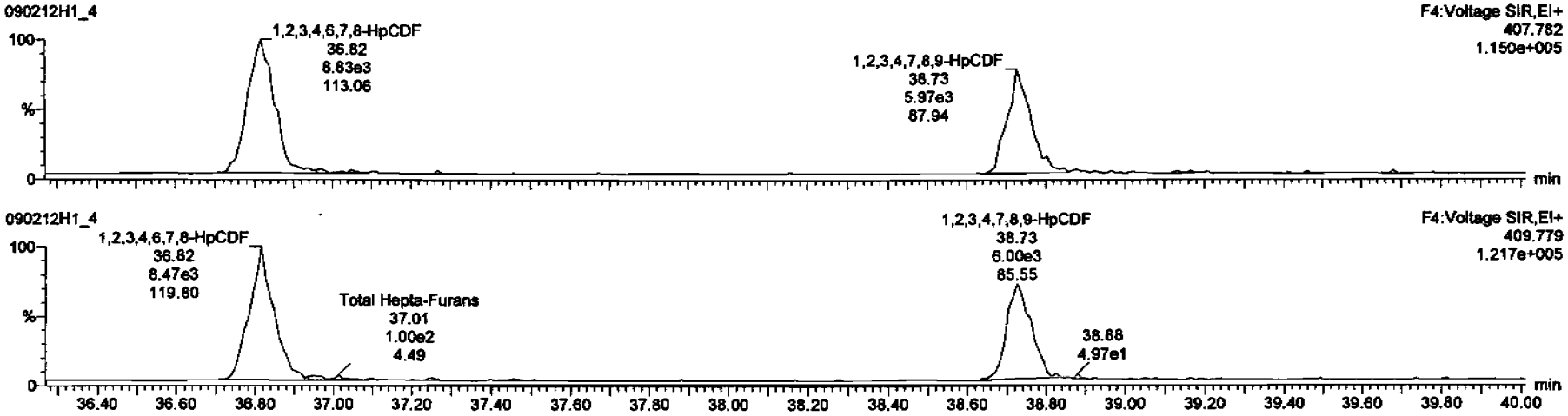

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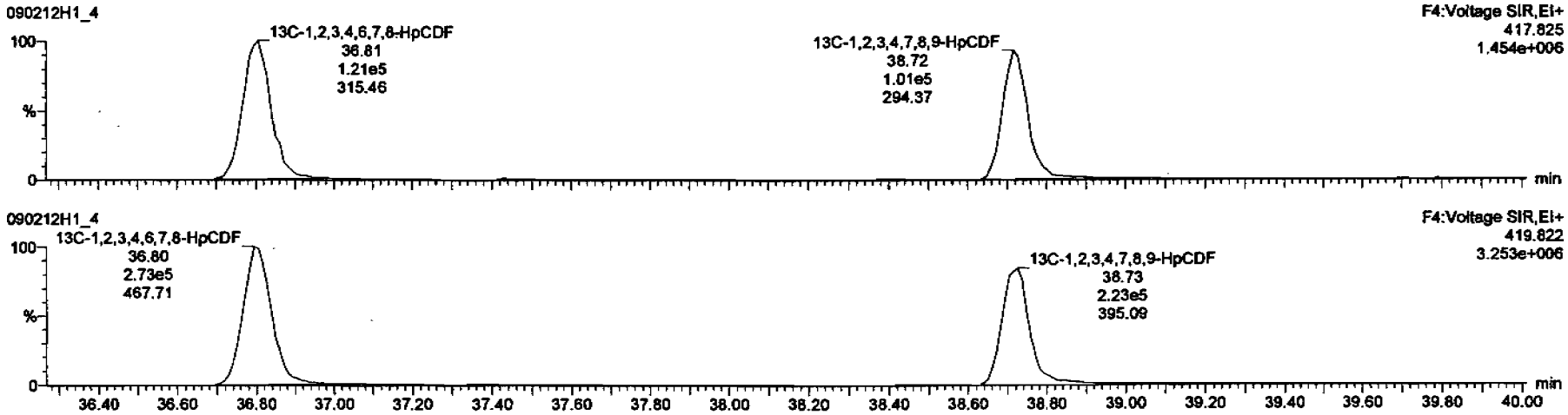

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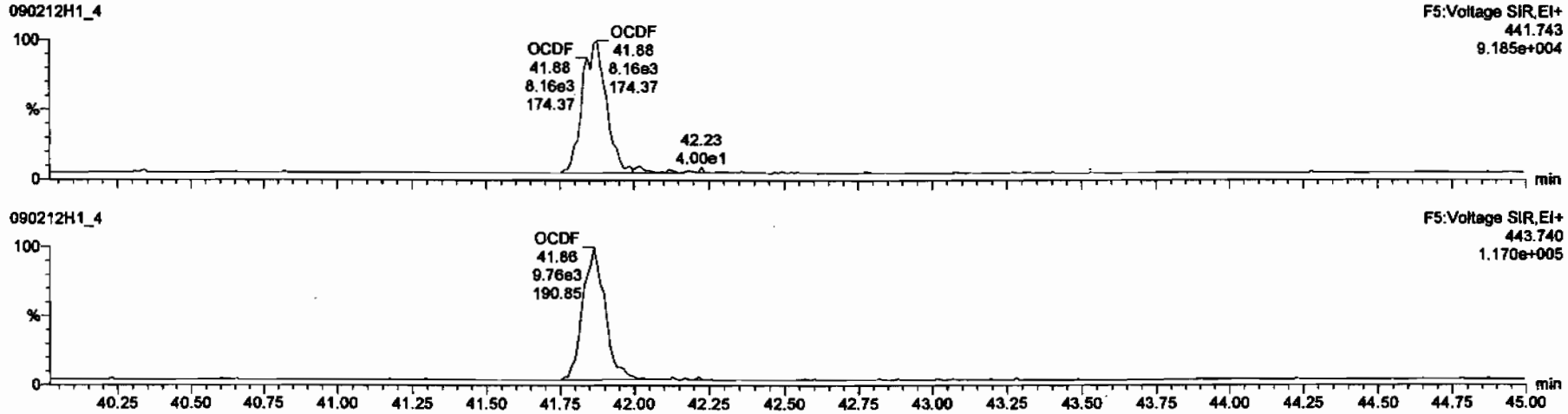

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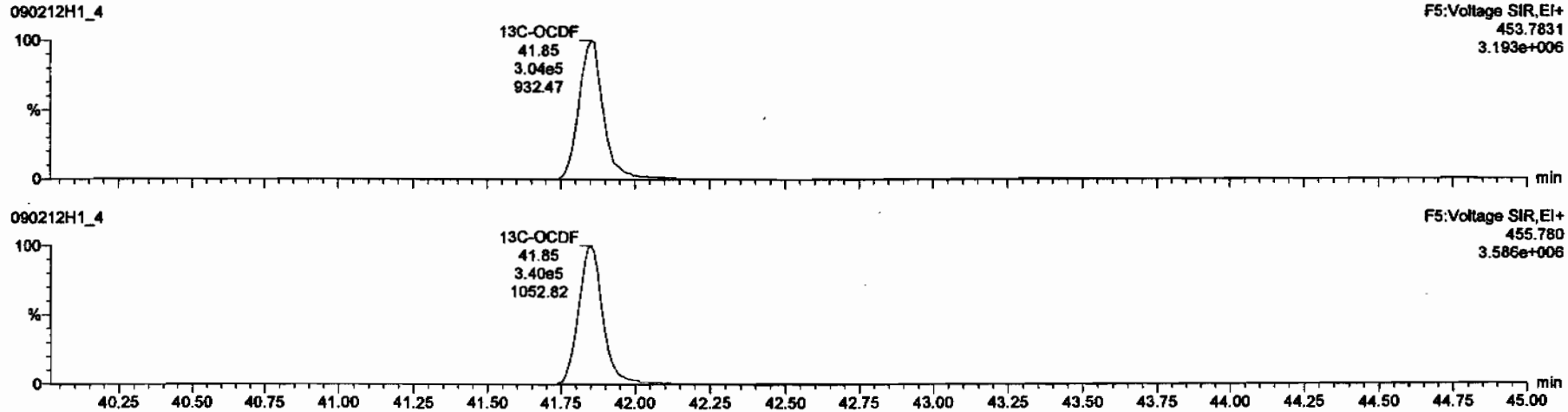

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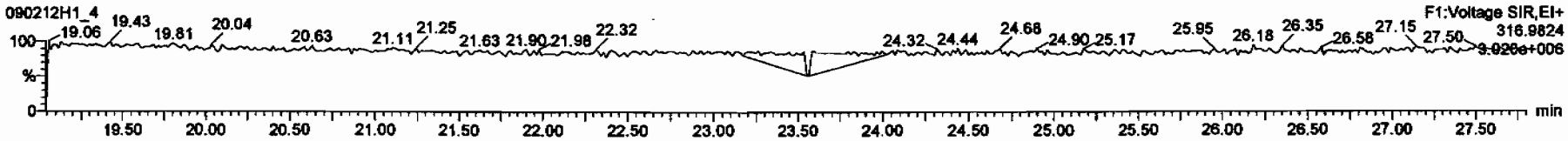

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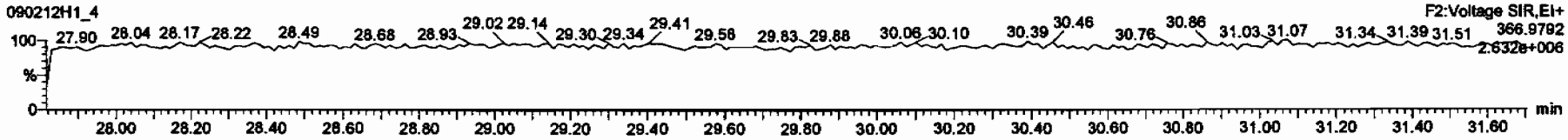

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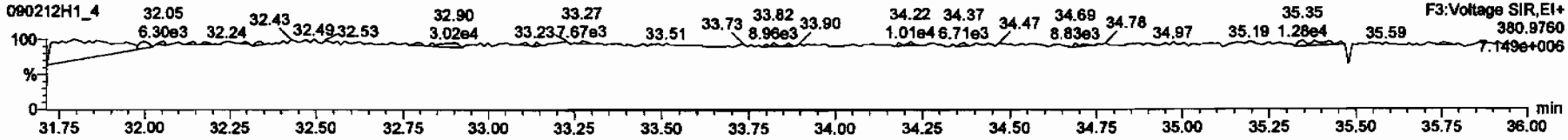

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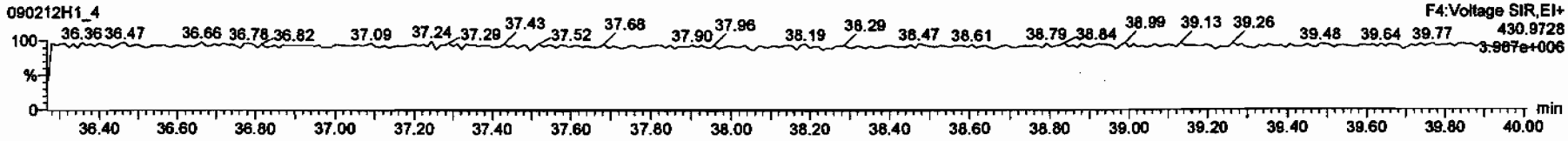

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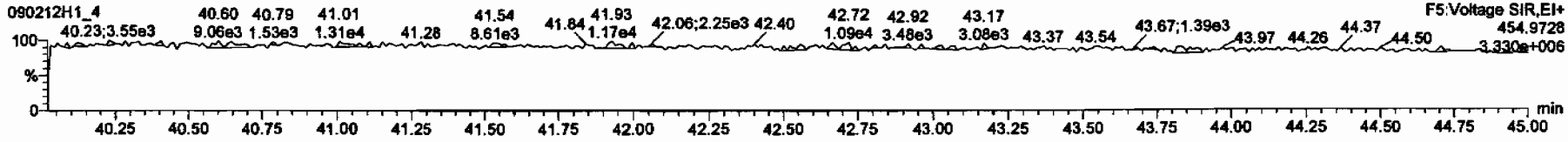

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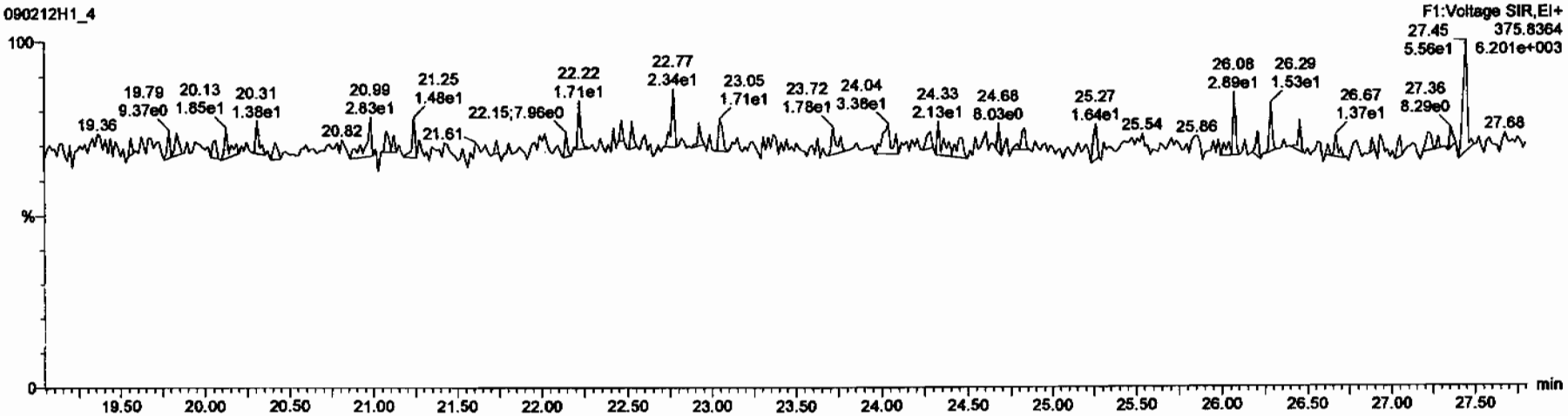

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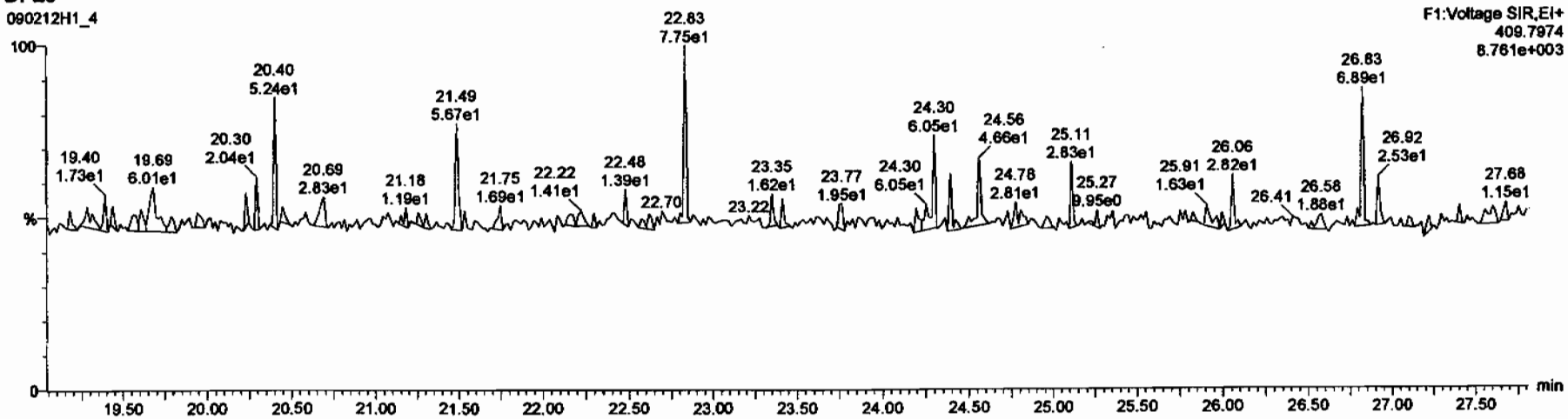

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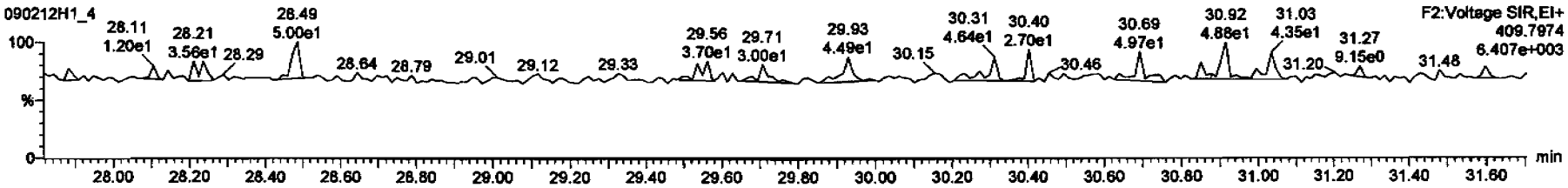

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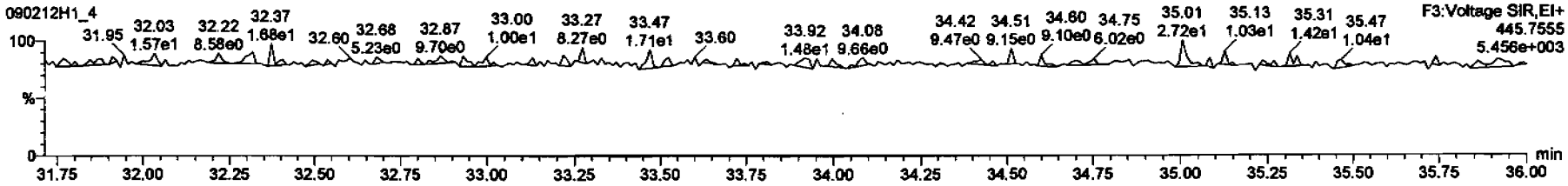

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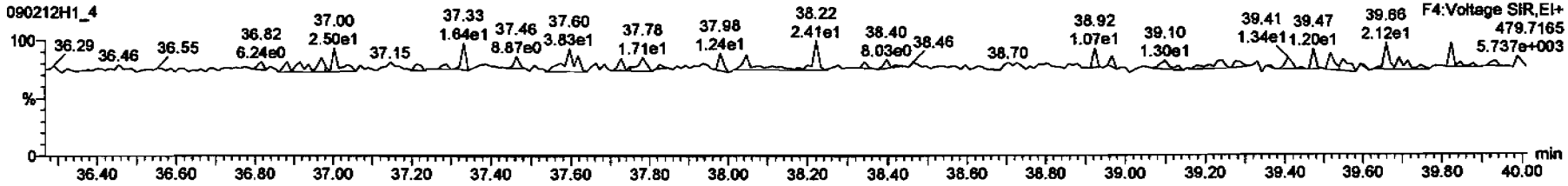

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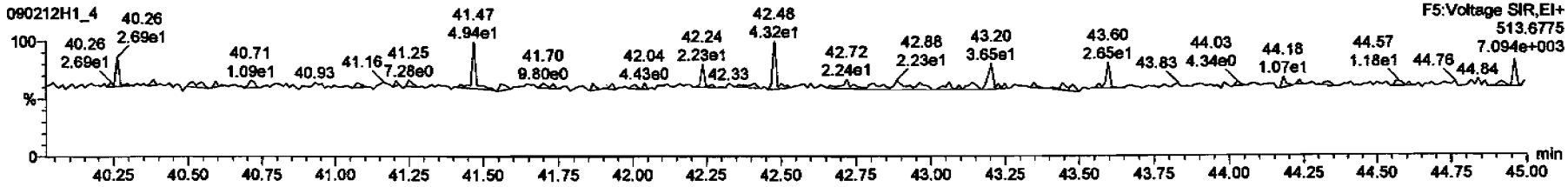

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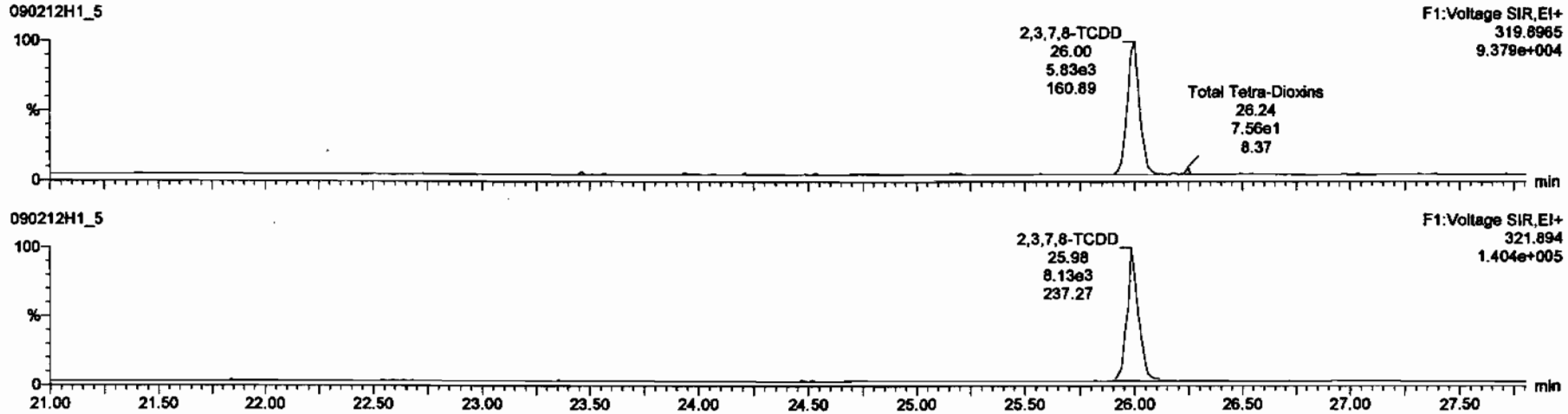

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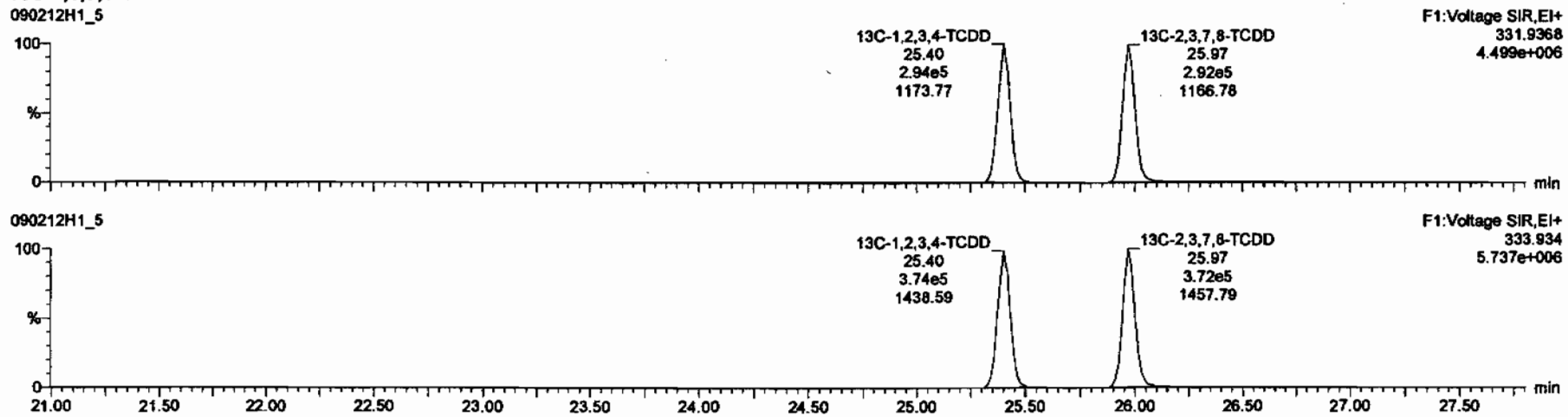

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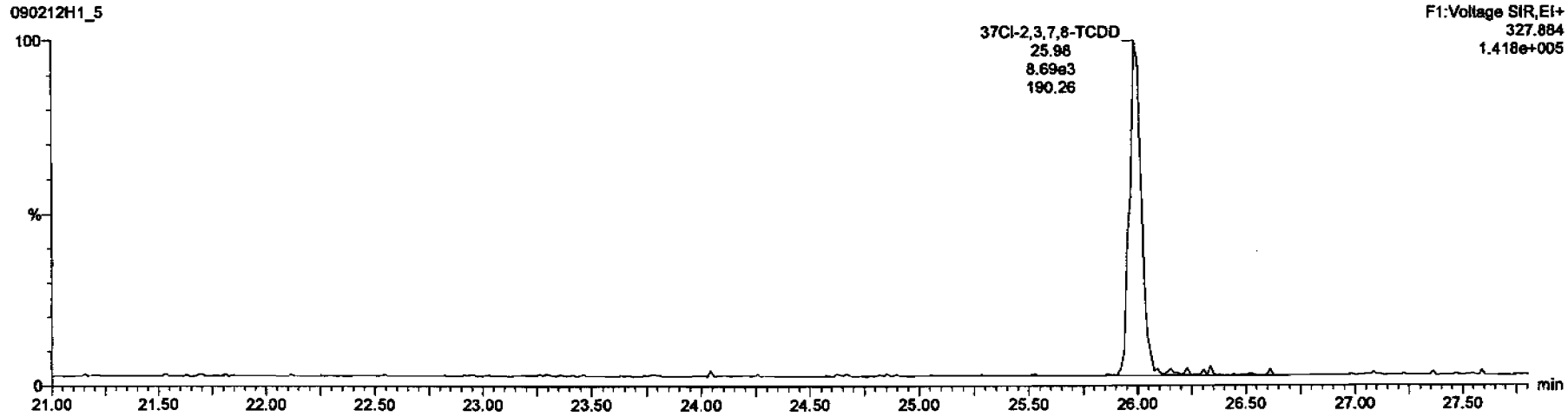

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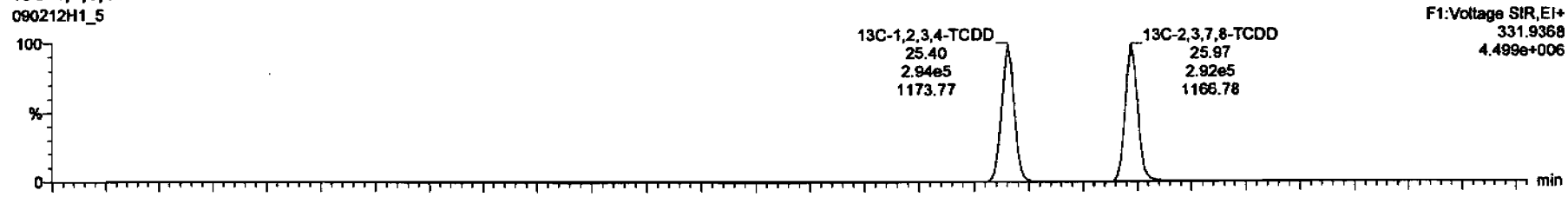

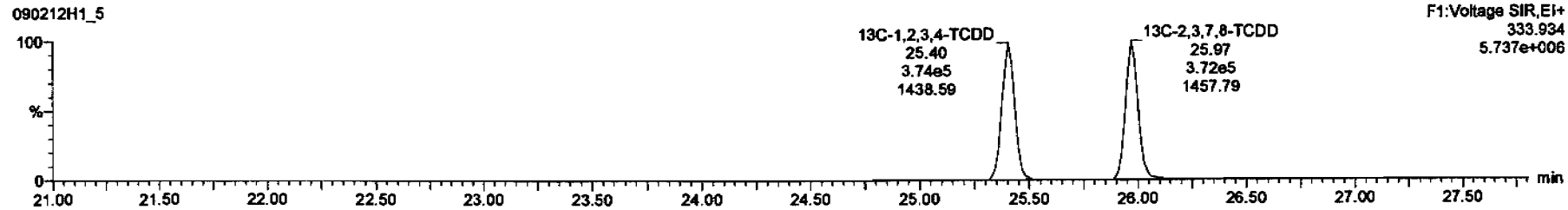

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1,2,3,7,8-PeCDD

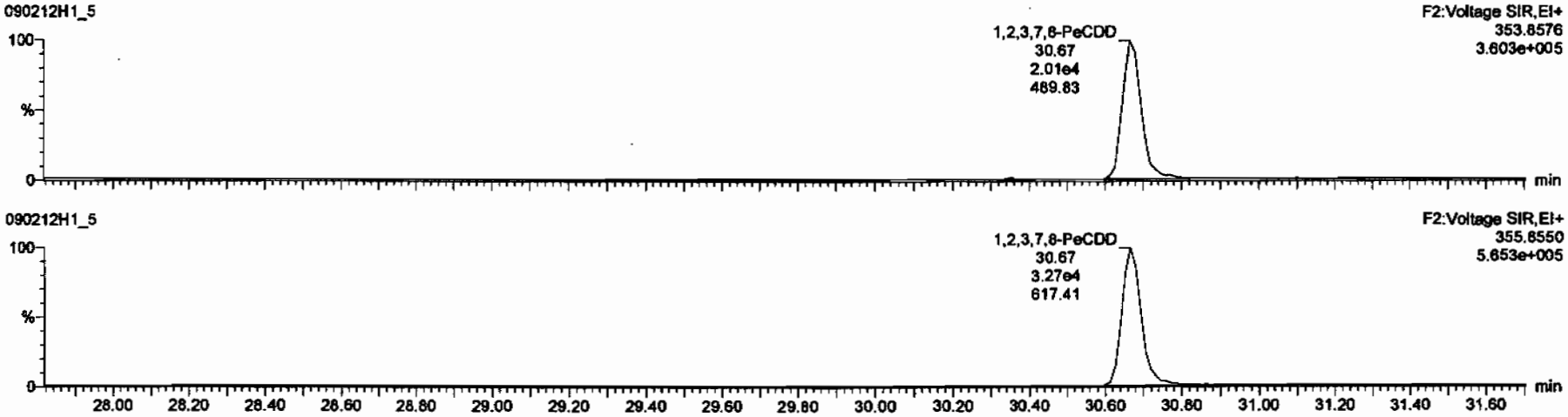

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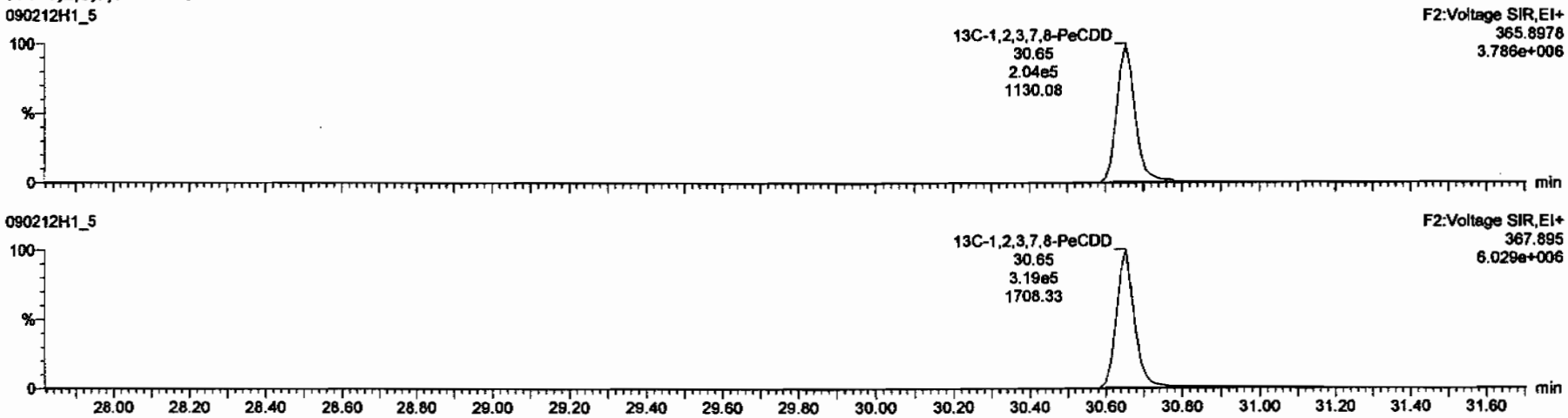

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1,2,3,4,7,8-HxCDD

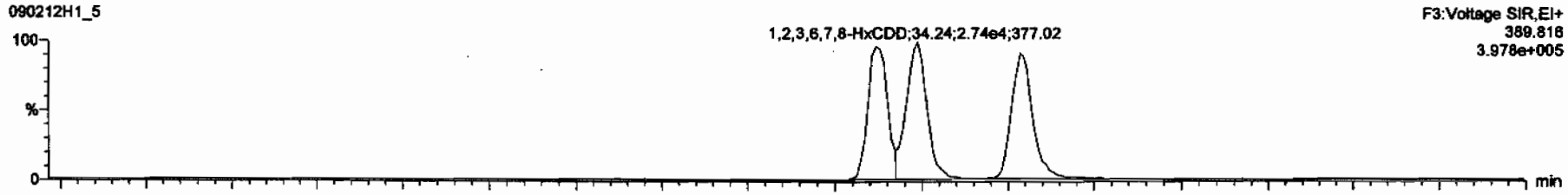

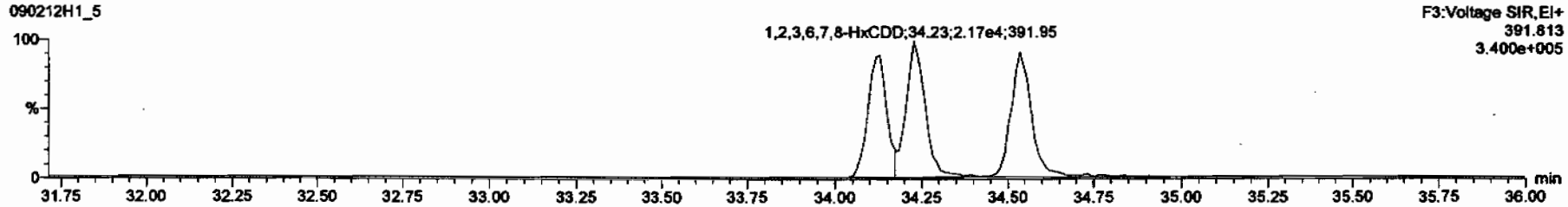

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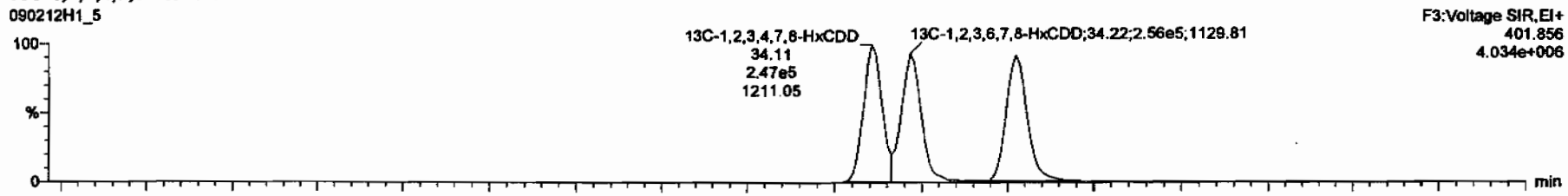

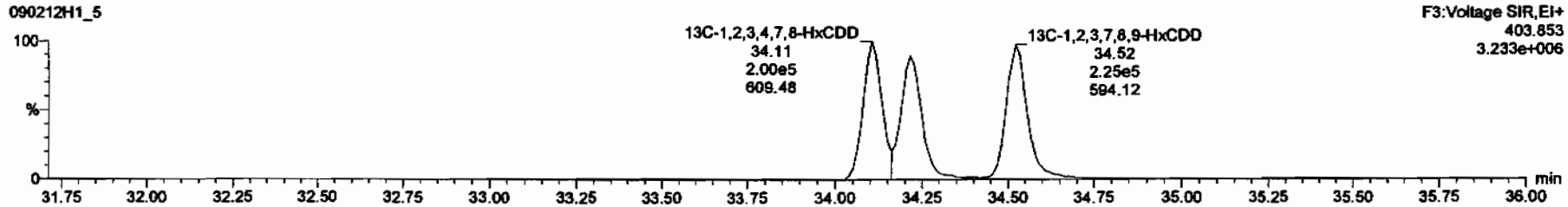

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1,2,3,4,6,7,8-HpCDD

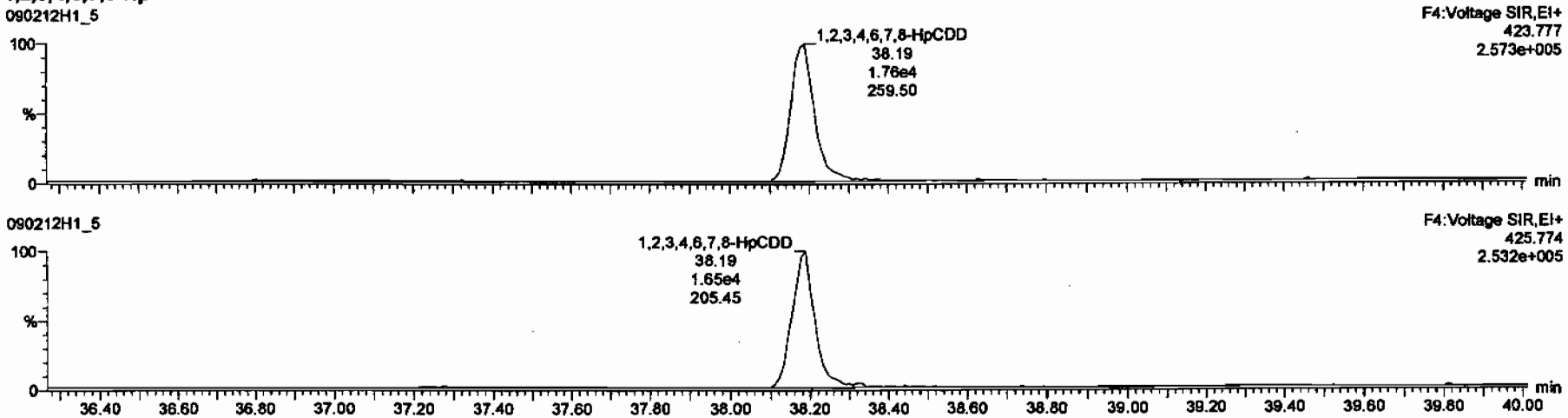

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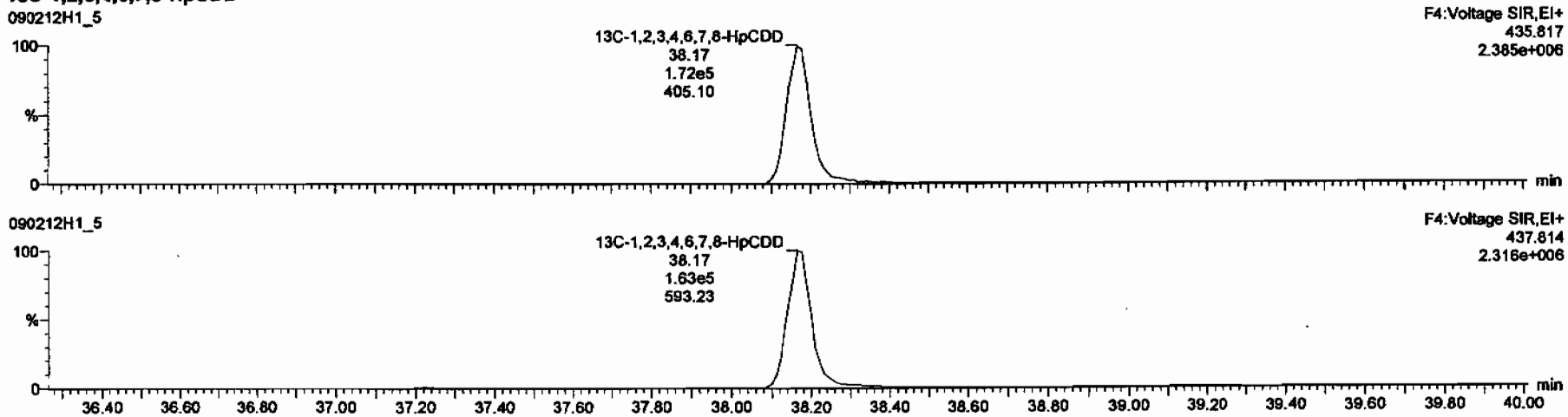

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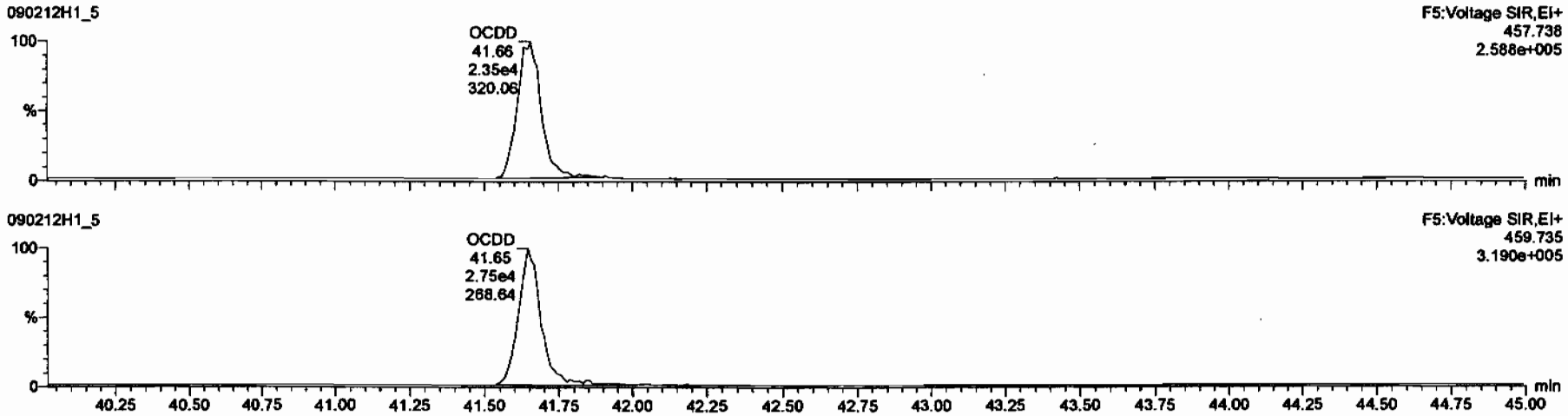

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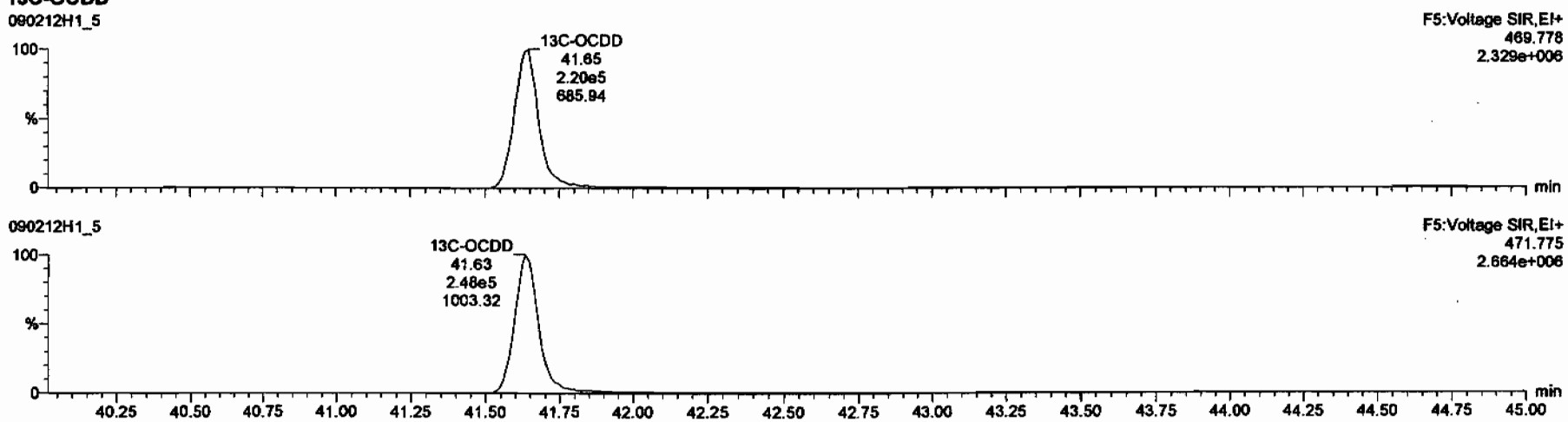

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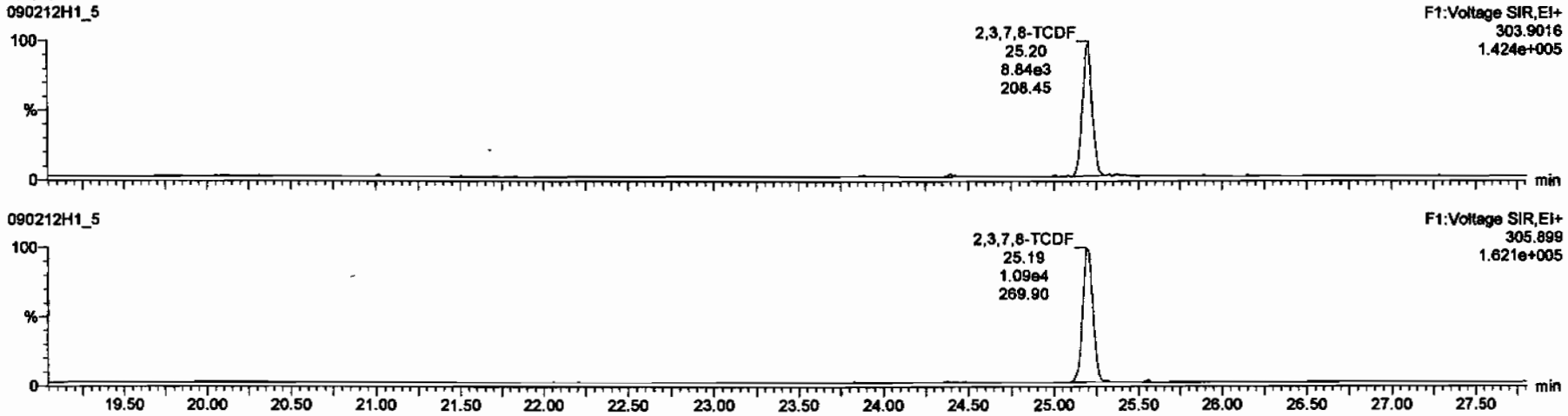

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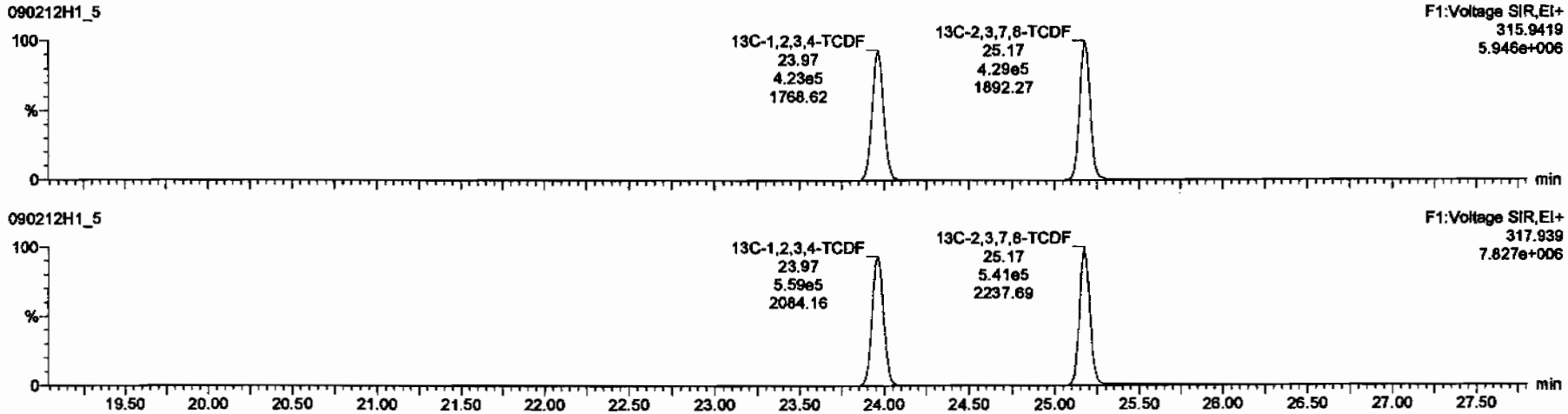

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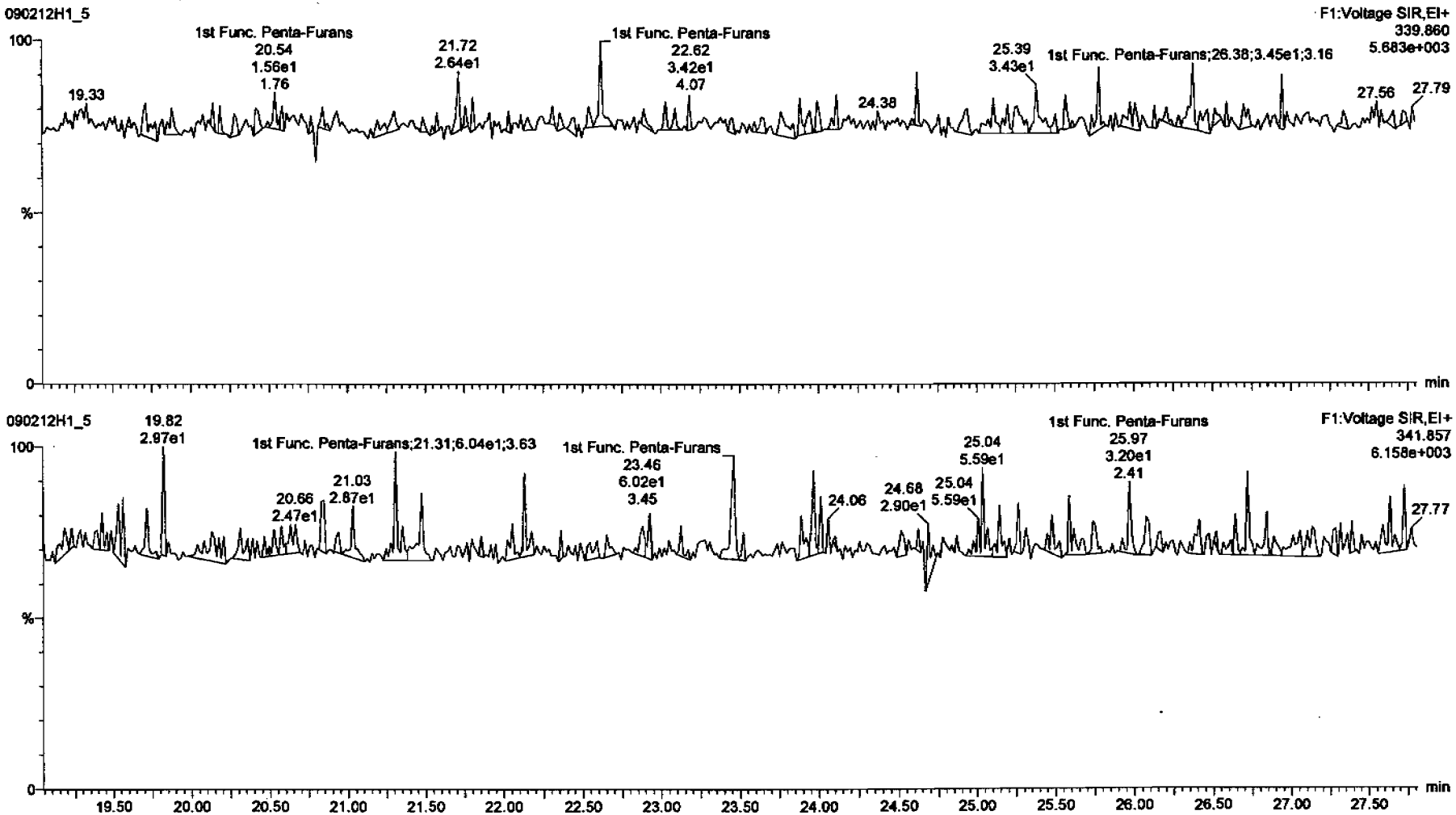

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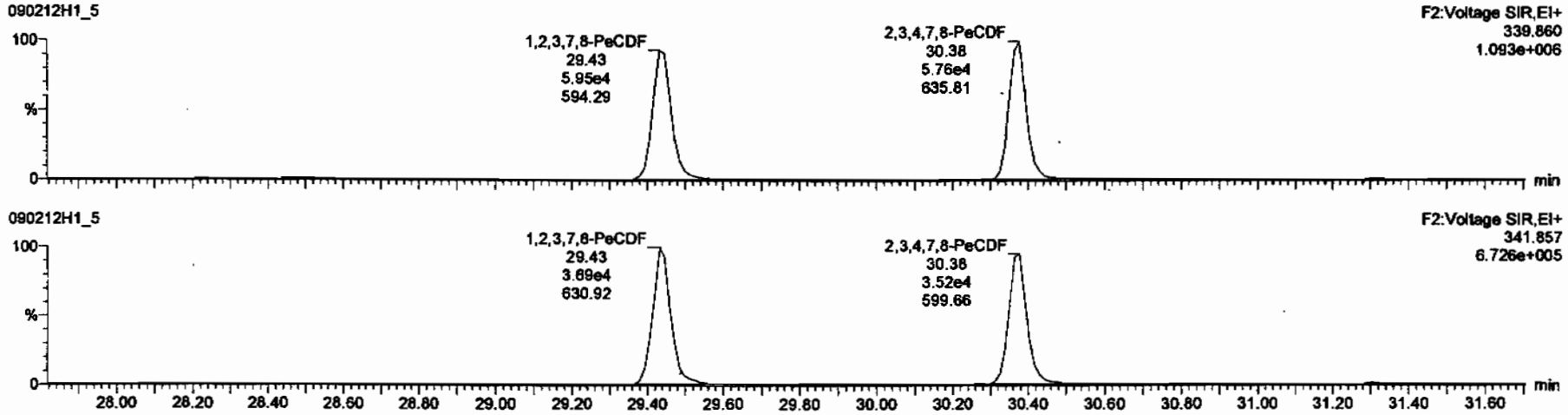

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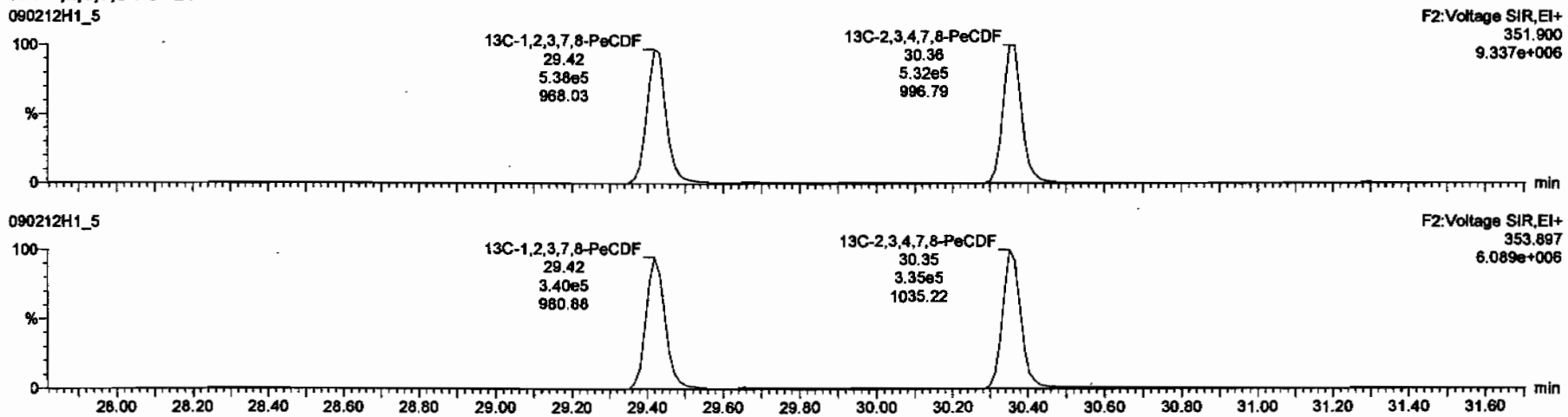

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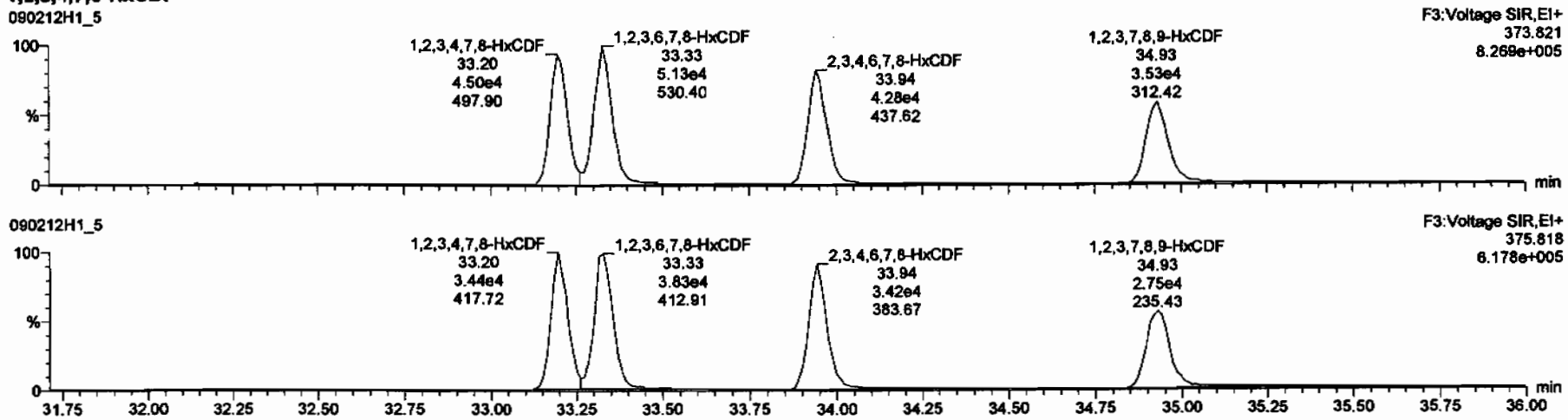

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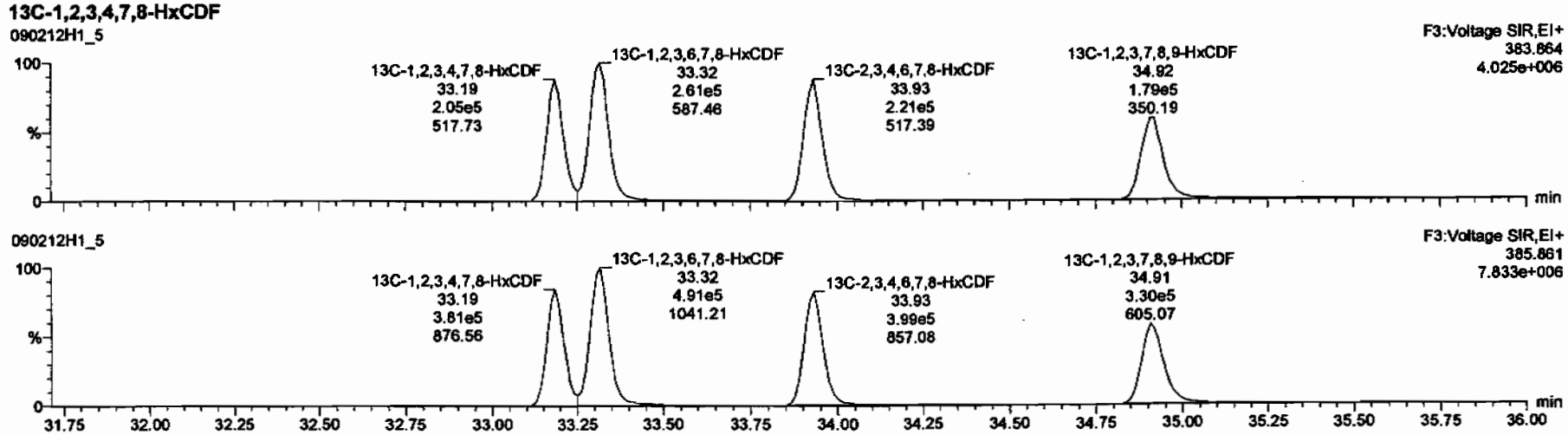

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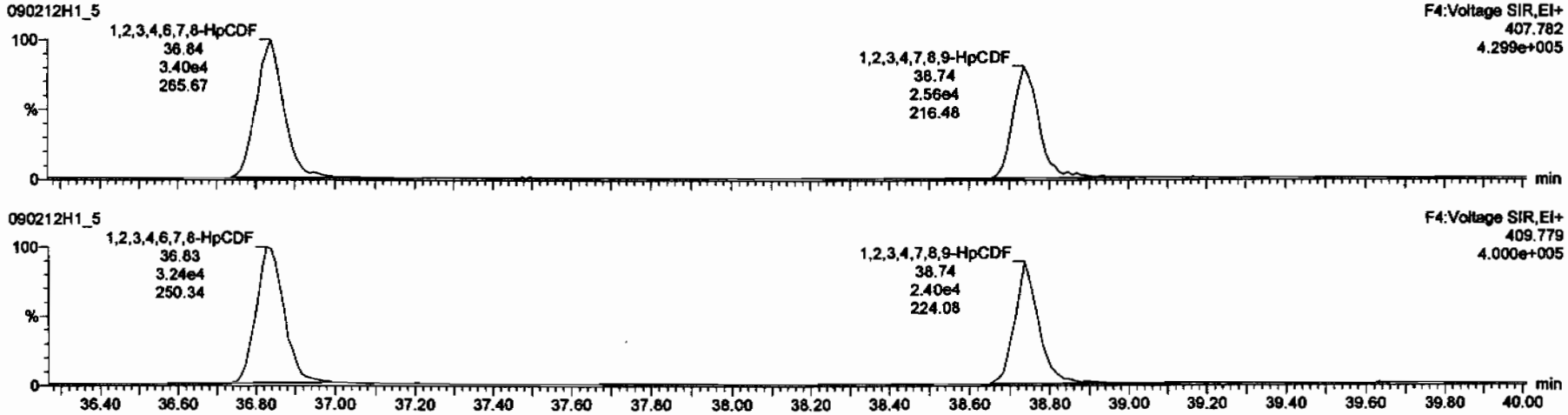

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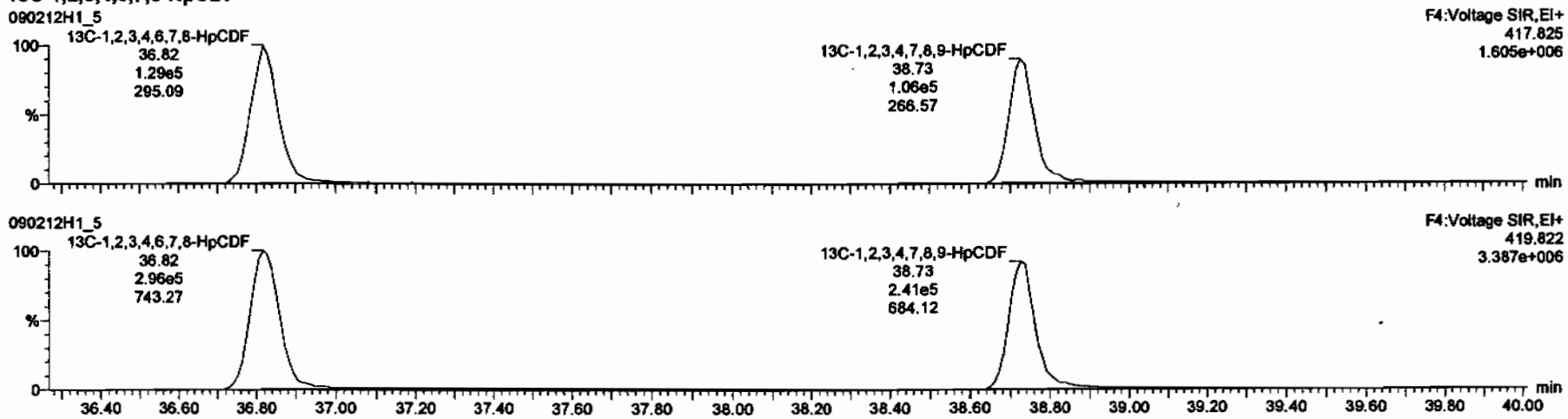

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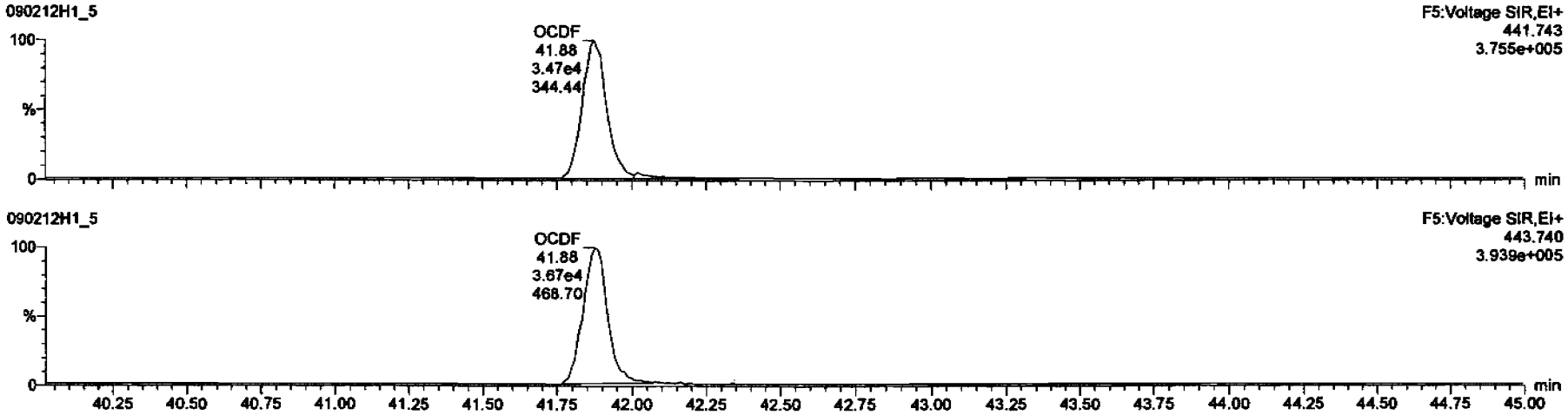

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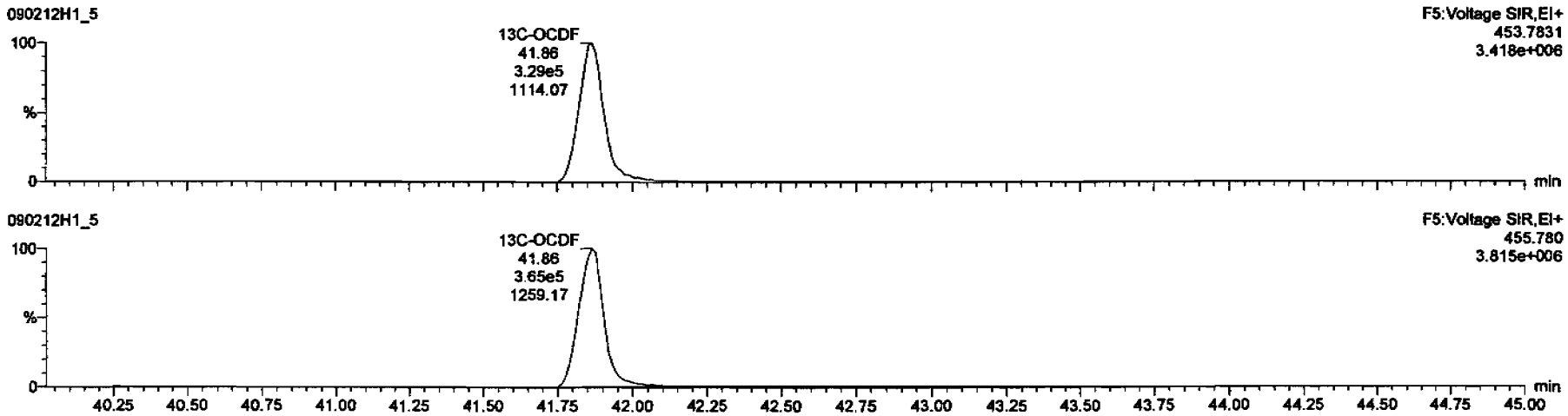

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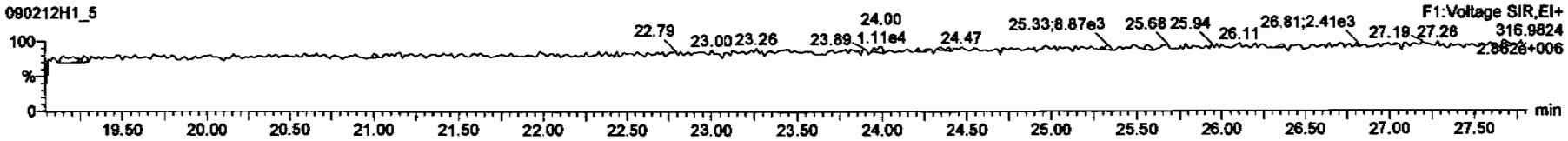

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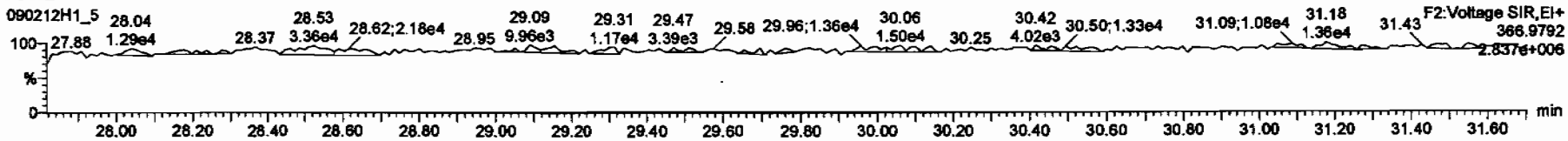

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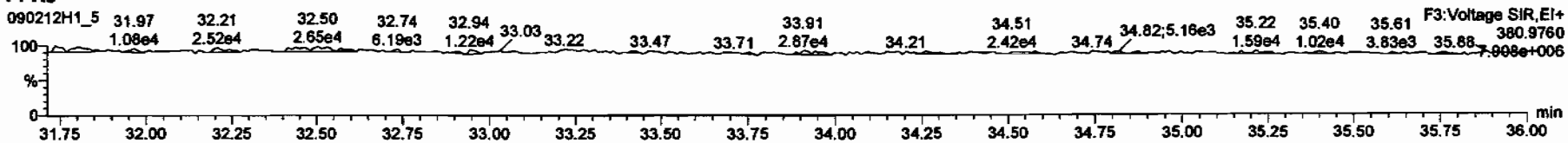

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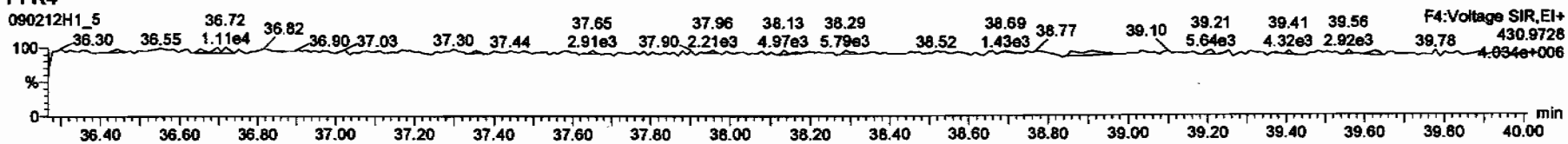

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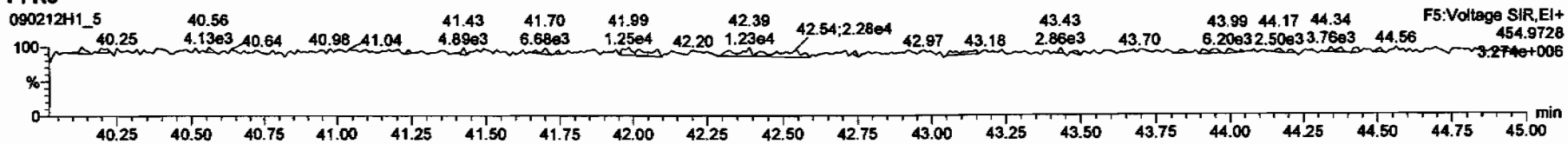

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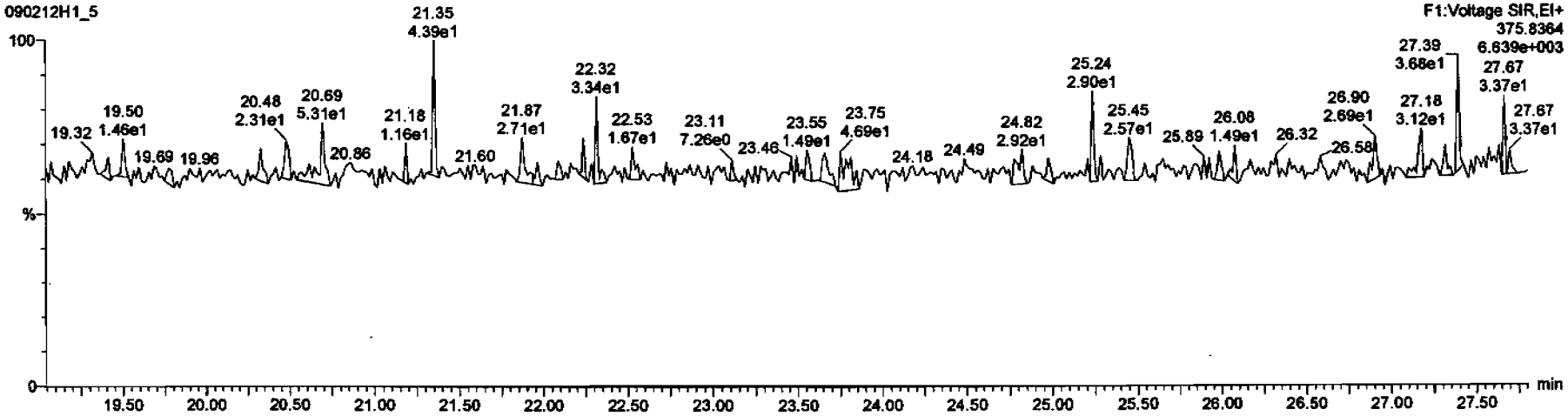

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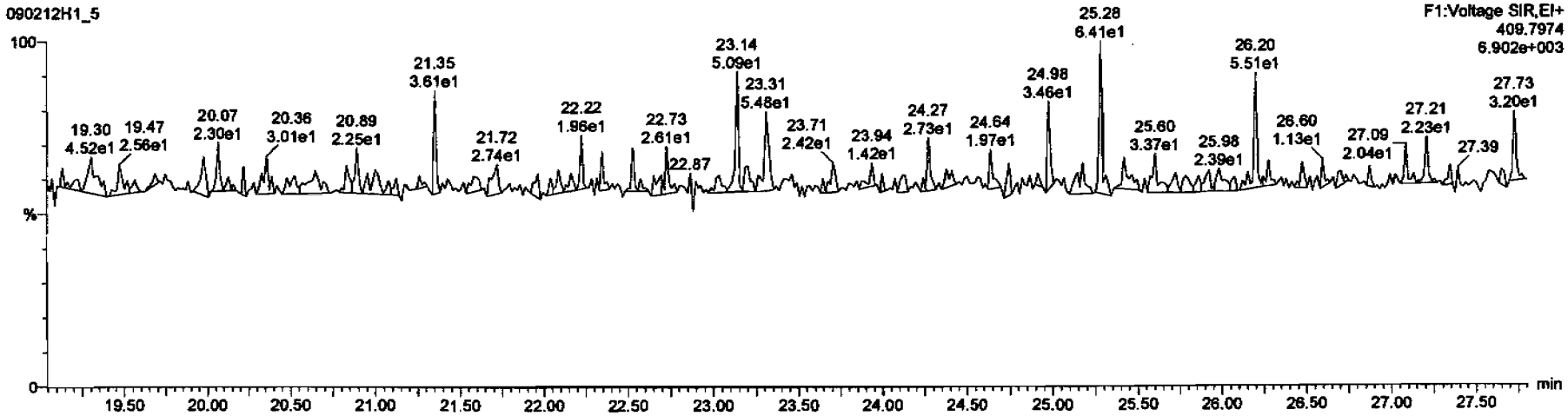

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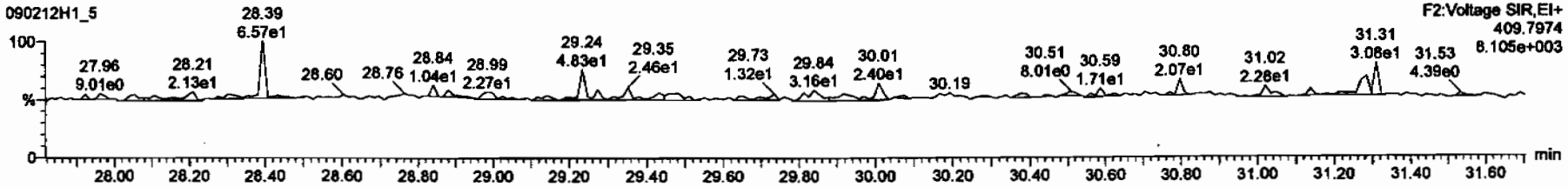

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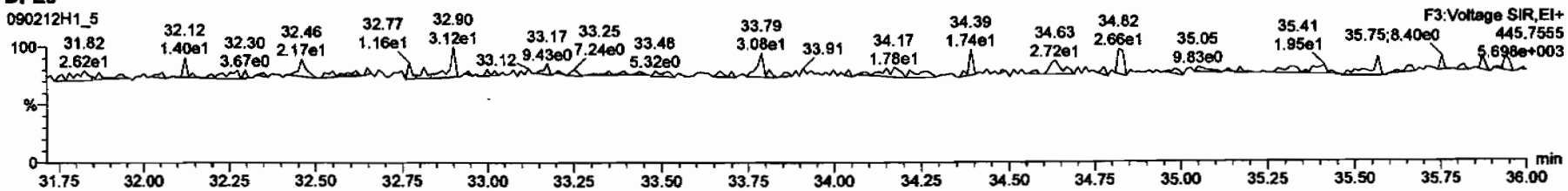

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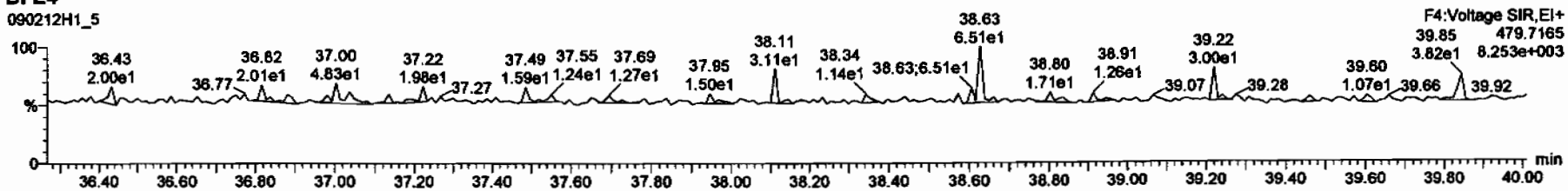

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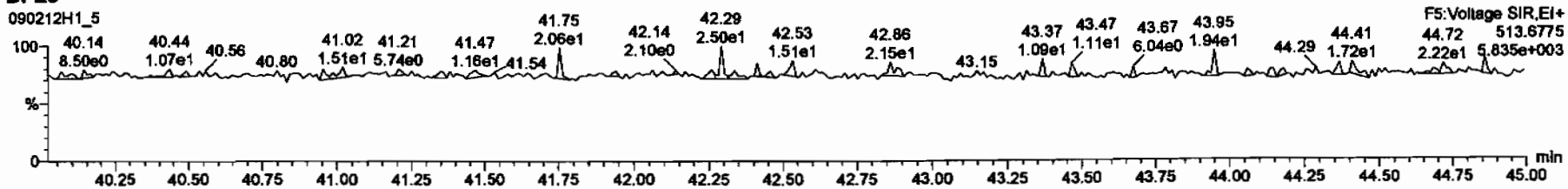

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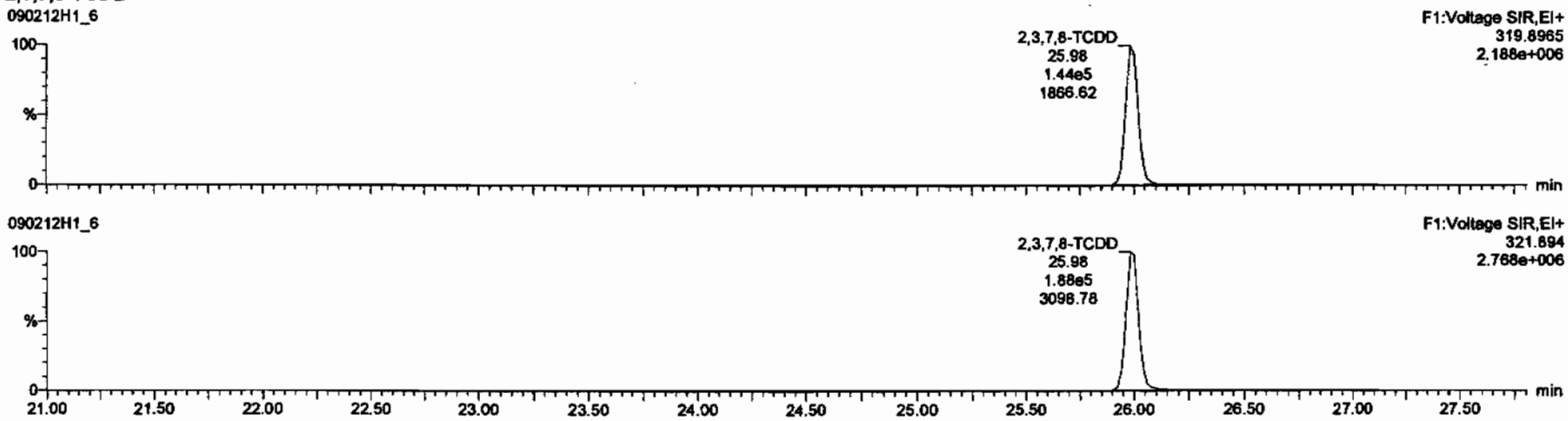

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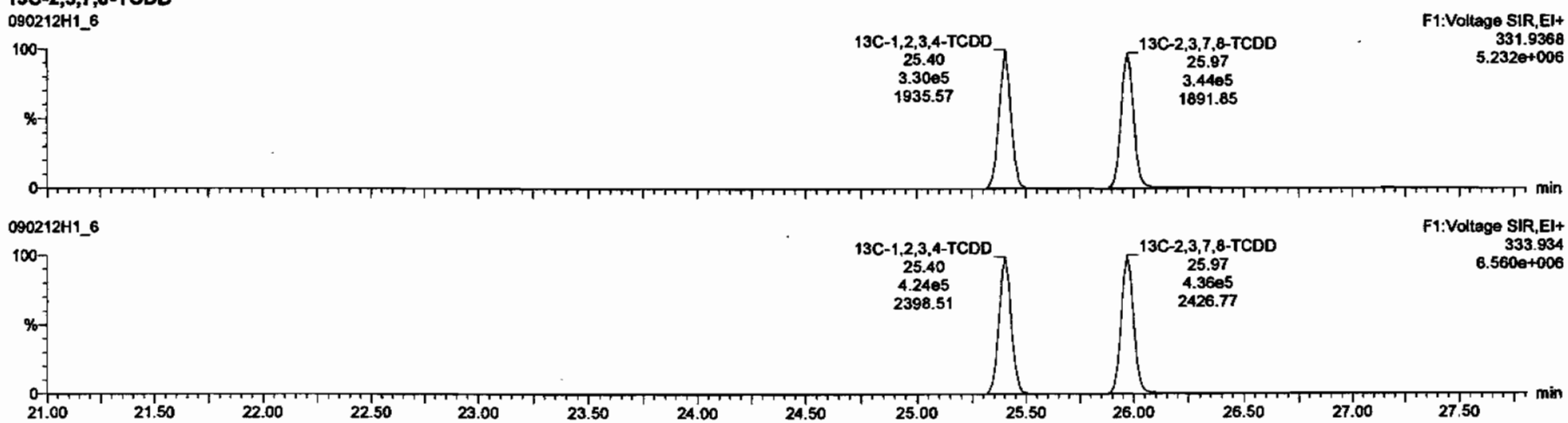

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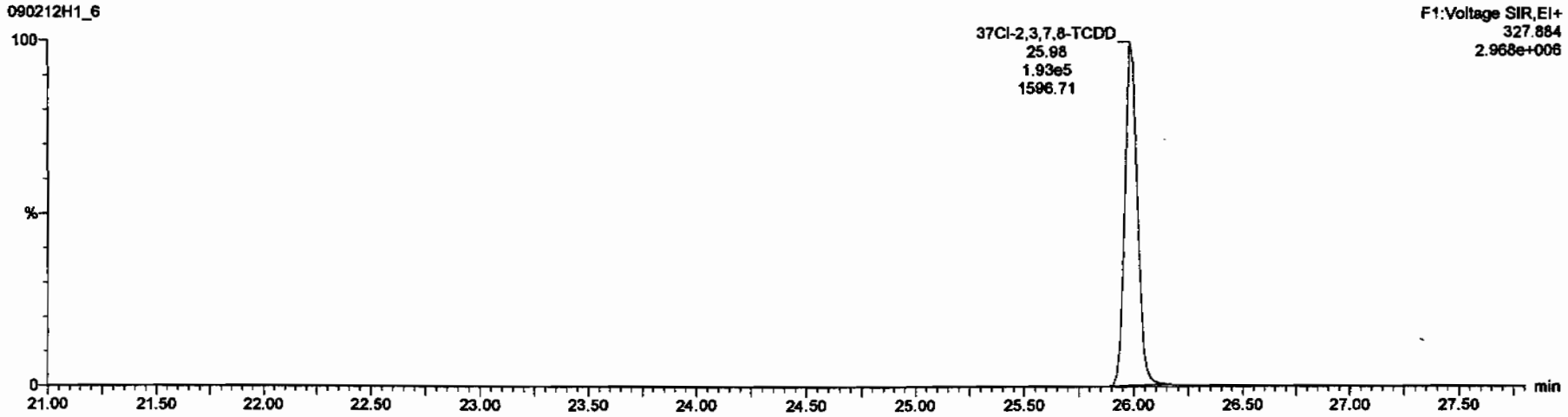

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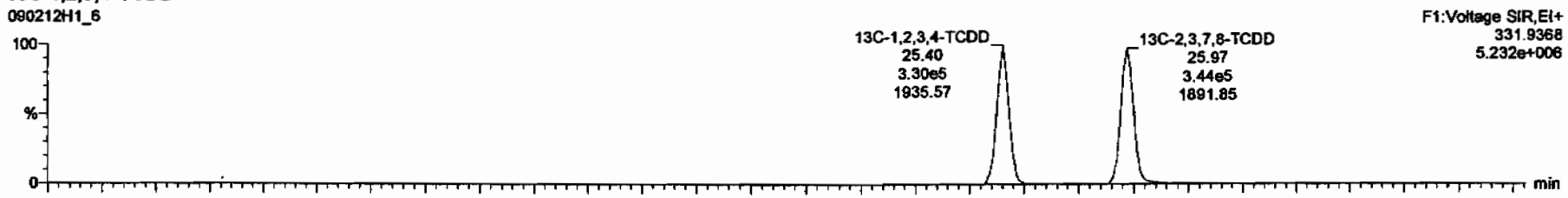

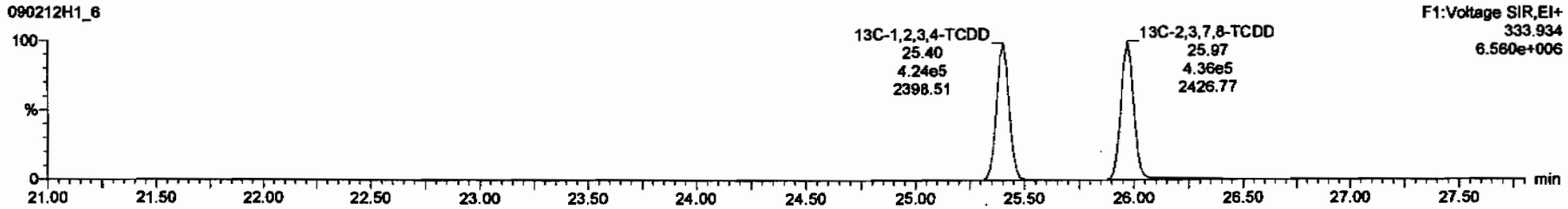

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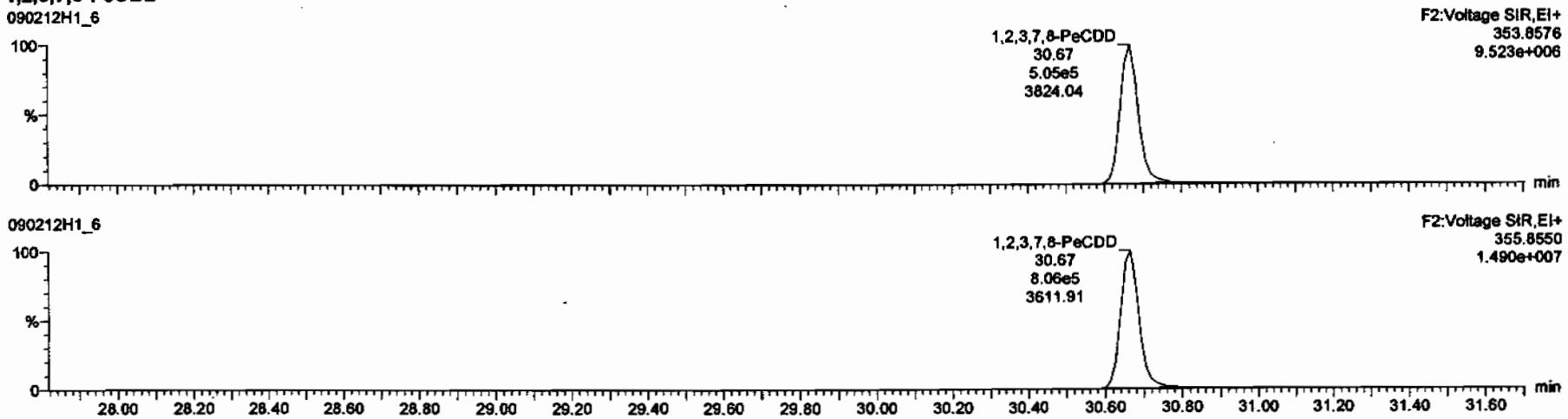

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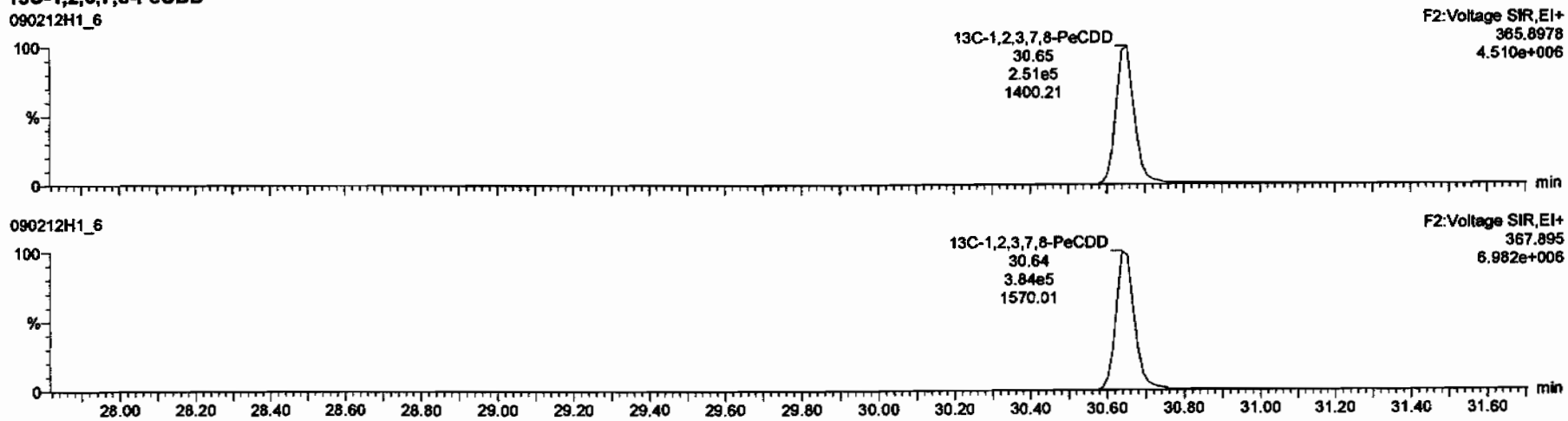

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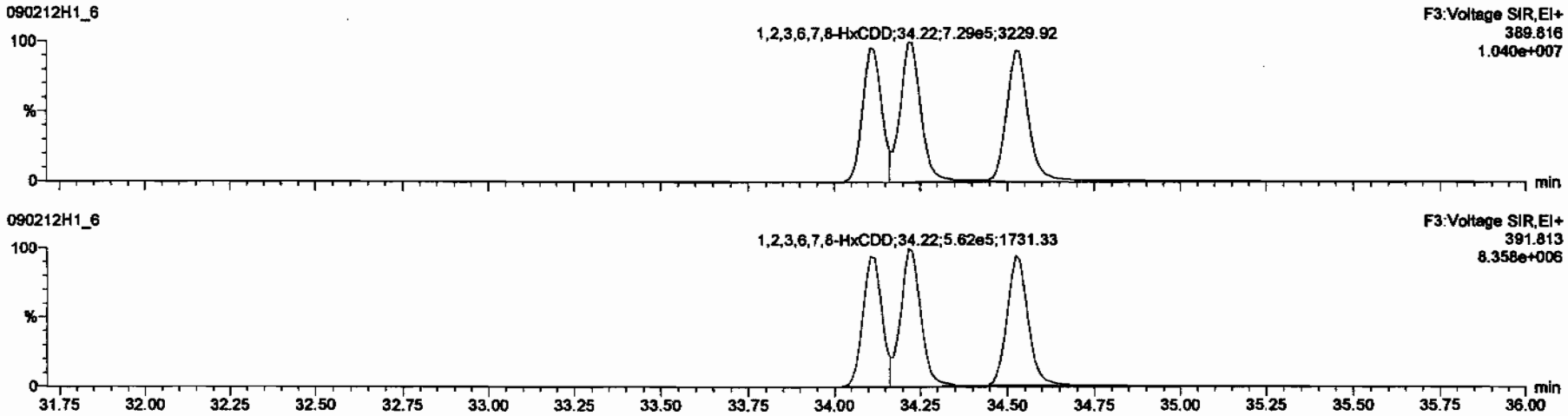

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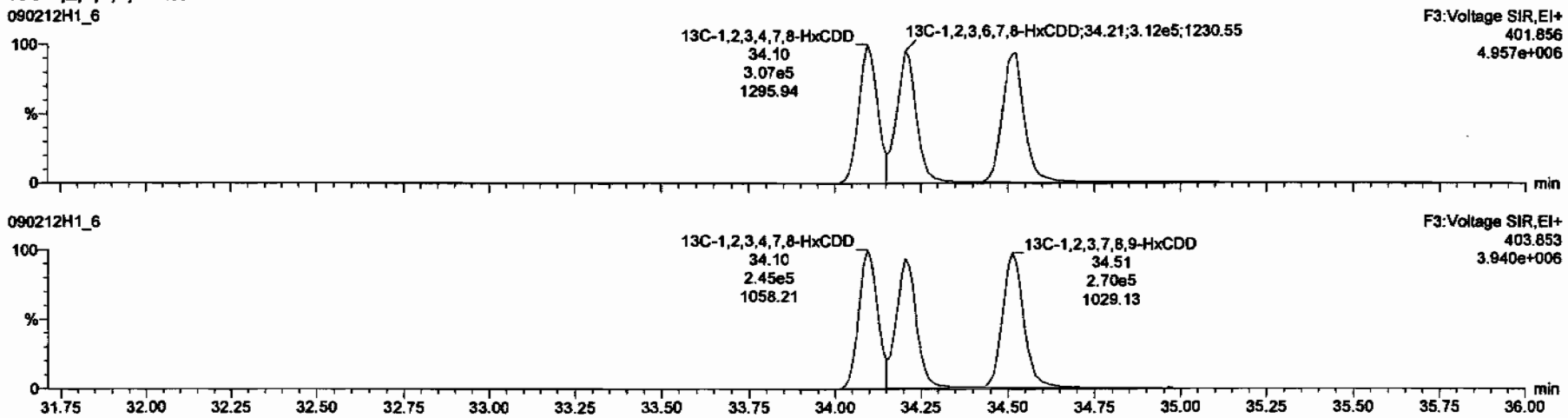

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1,2,3,4,6,7,8-HpCDD

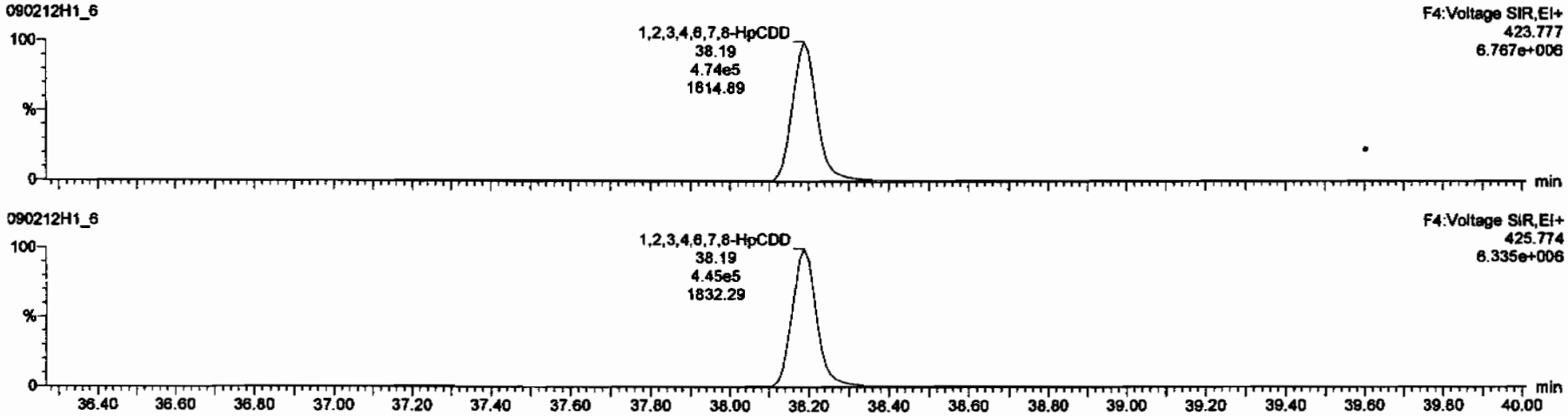

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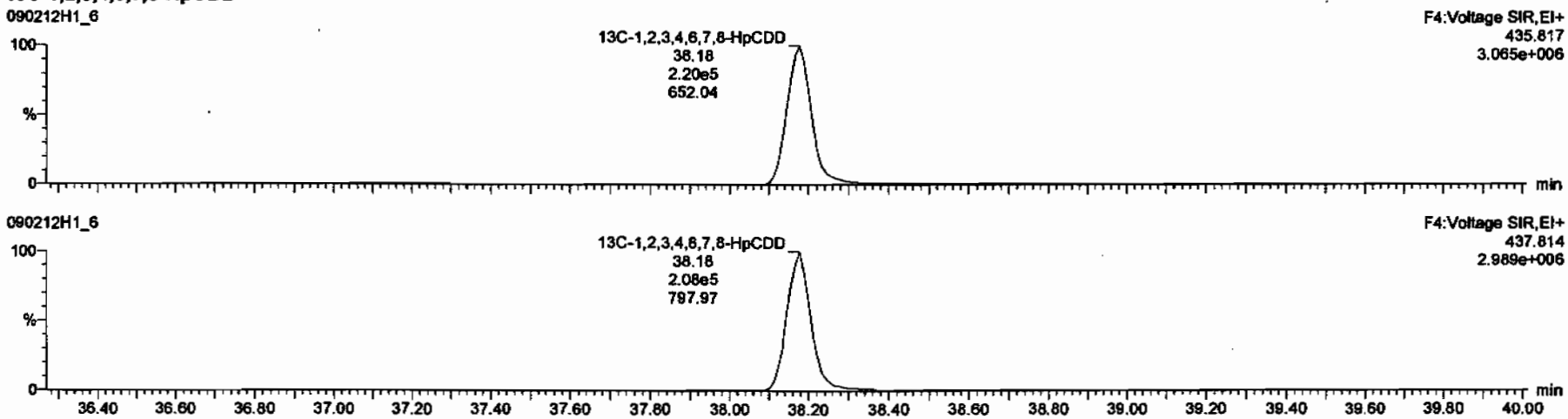

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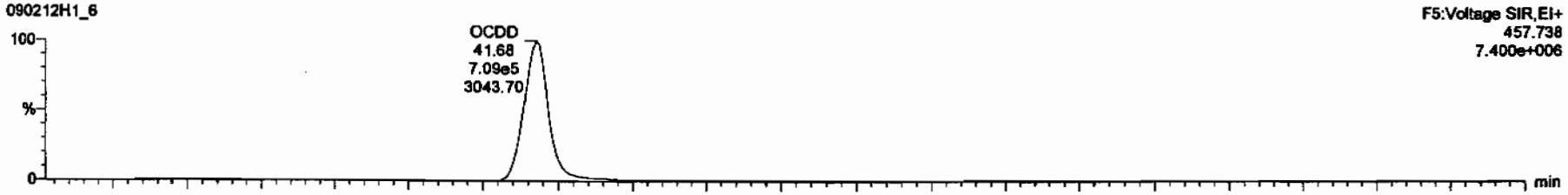

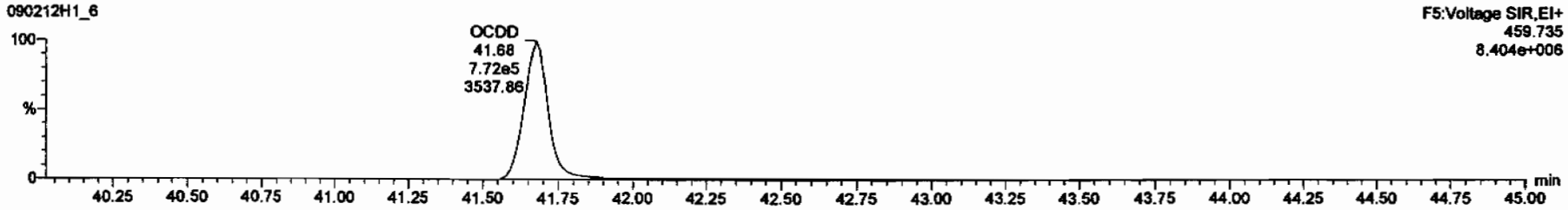

13C-OCDD

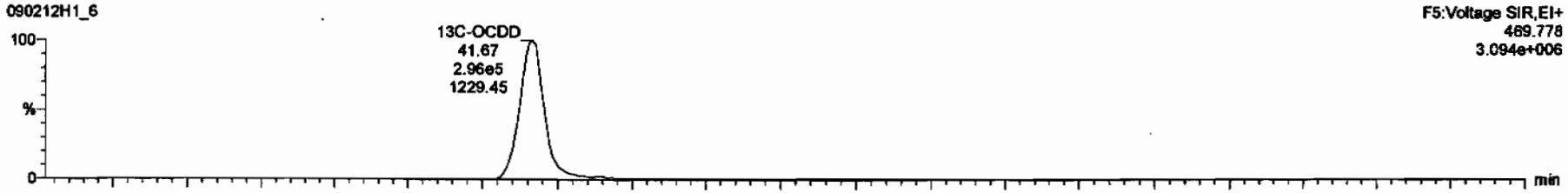

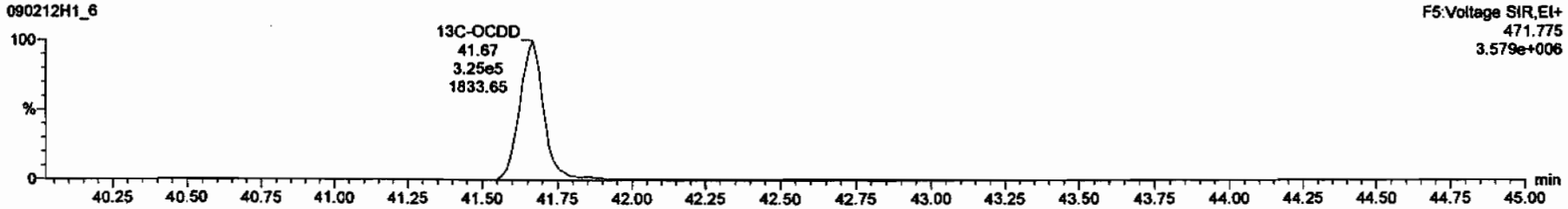

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_6, Date: 12-Feb-2009, Time: 15:17:39, ID: ST090212H1-5 1613 CS4 080917J, Description: 1613 CS4 080917J

2,3,7,8-TCDF

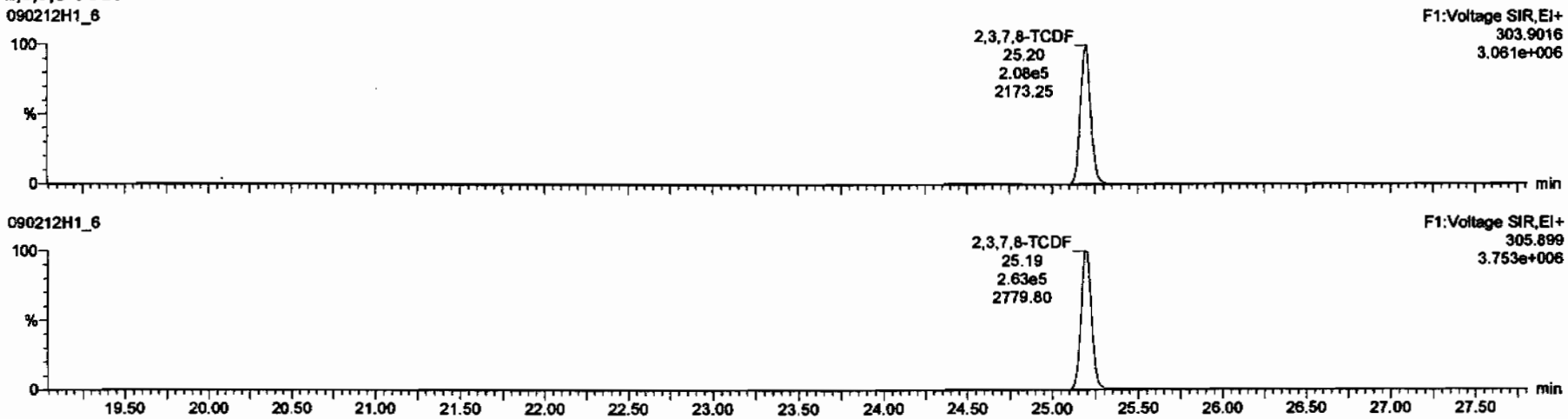

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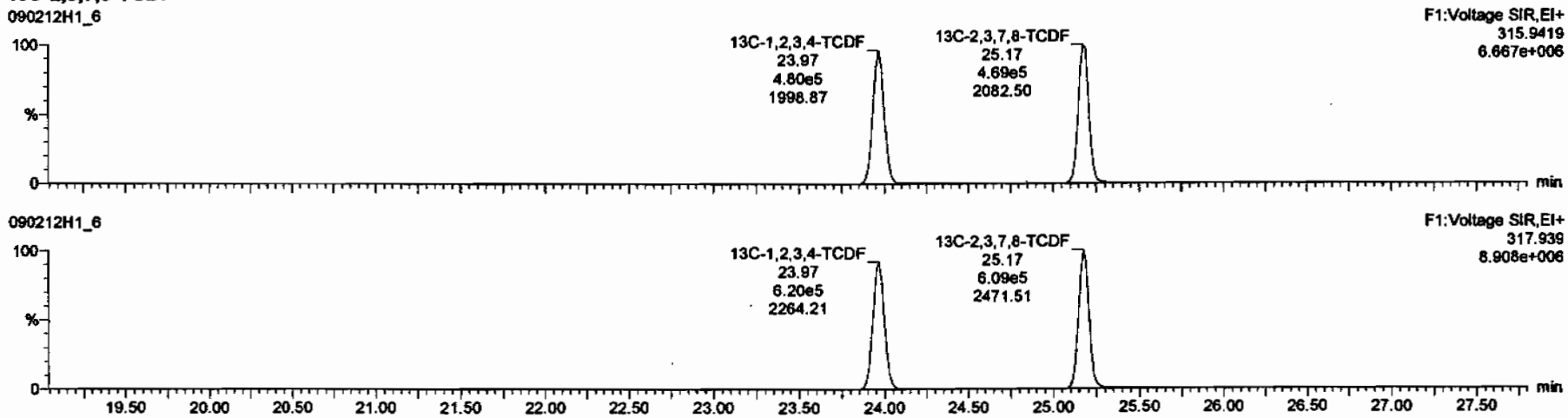

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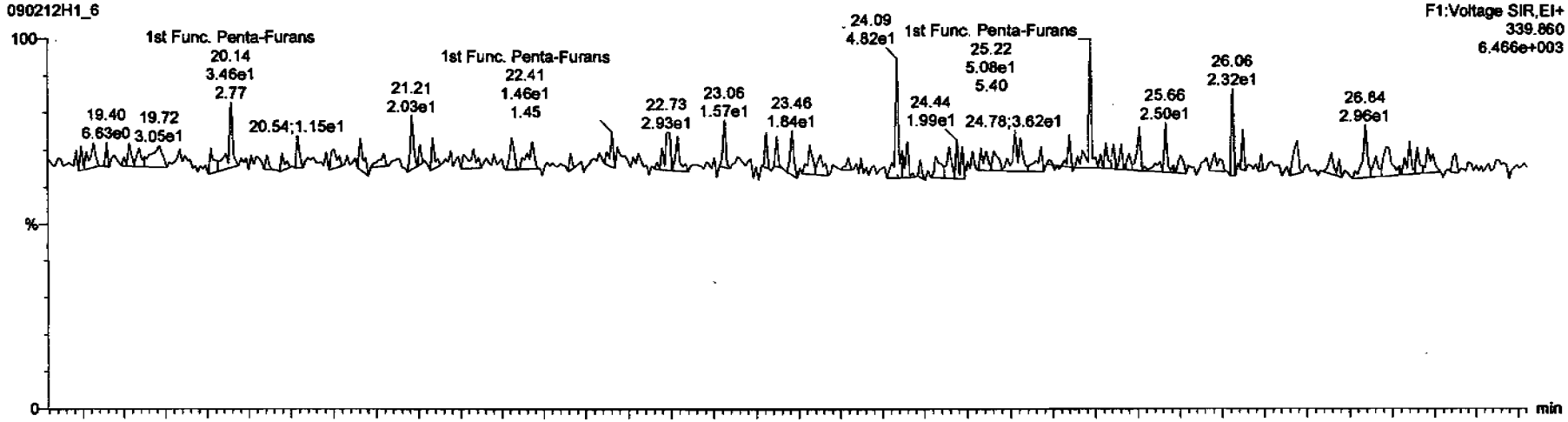

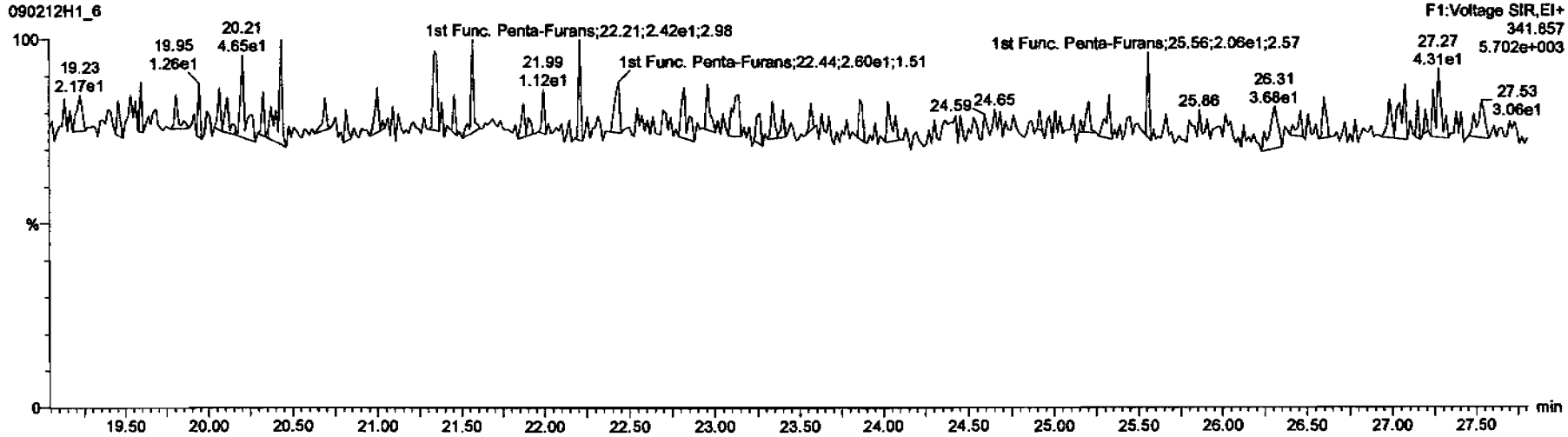

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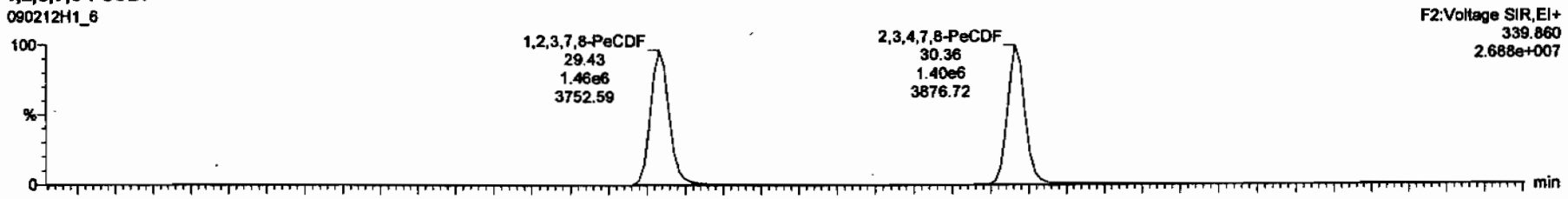

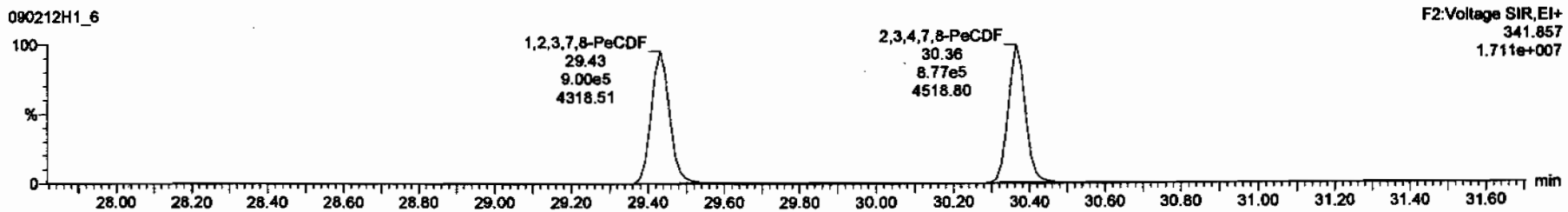

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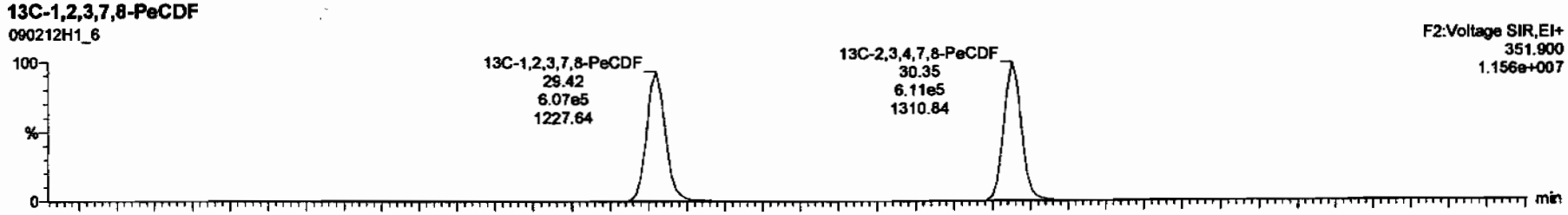

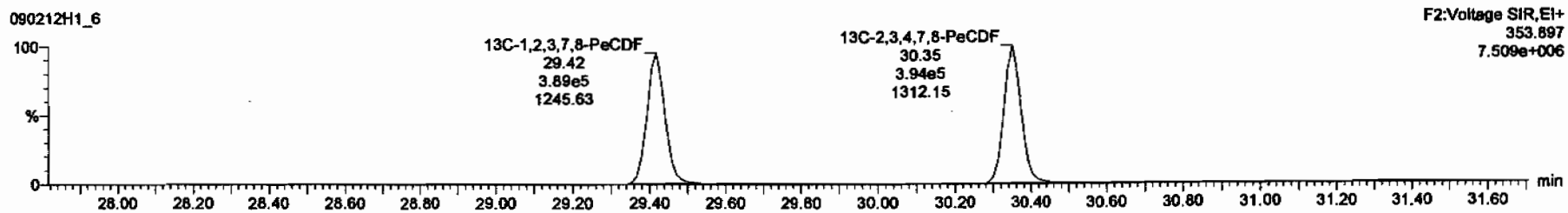

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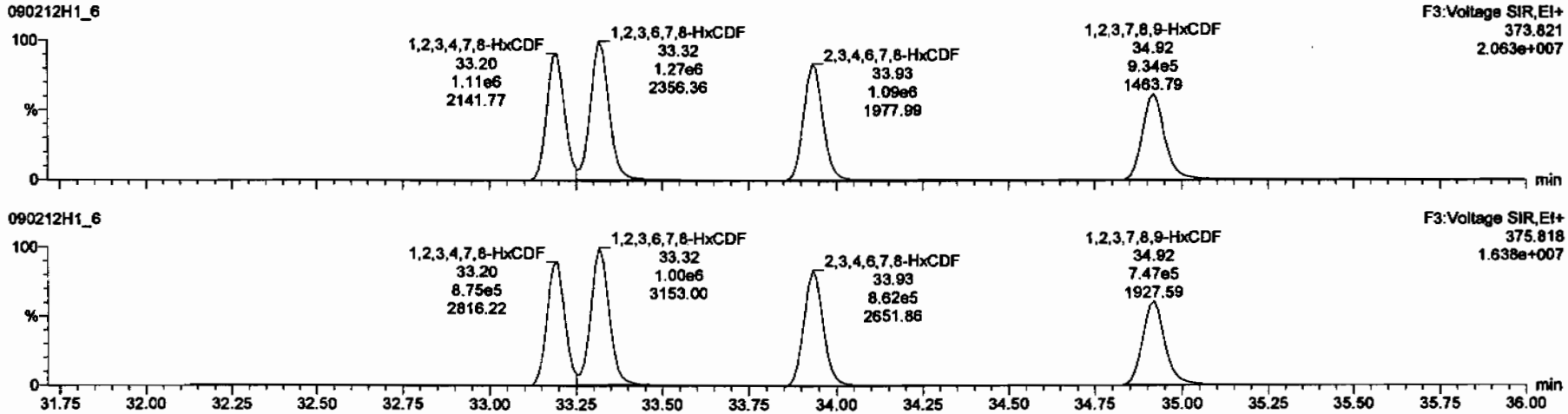

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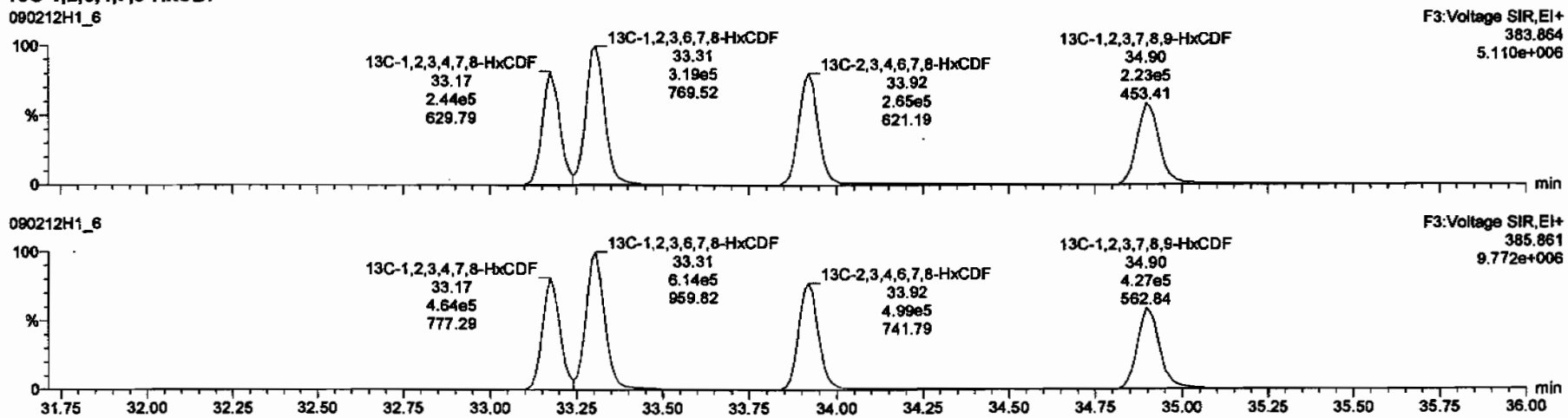

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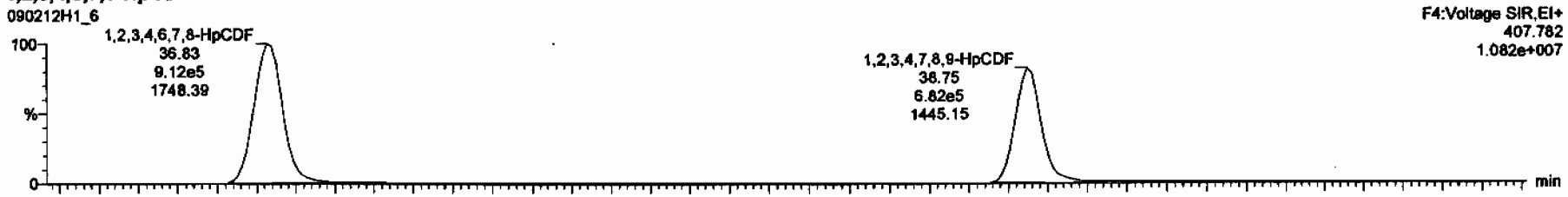

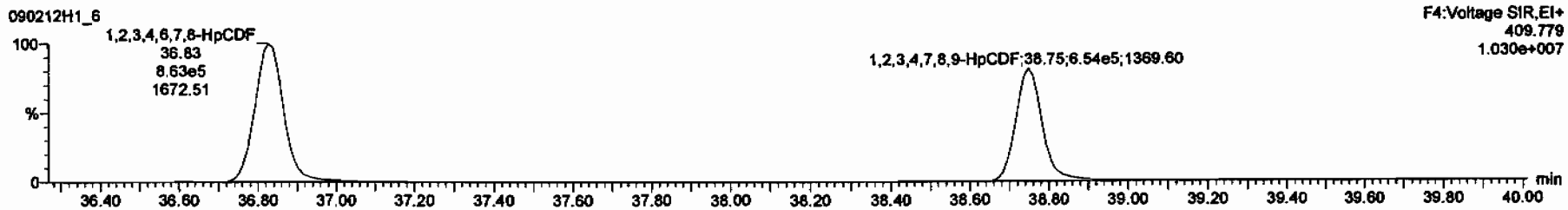

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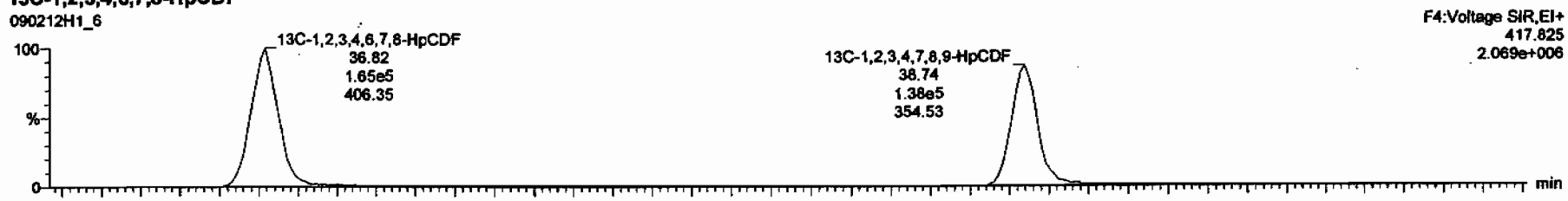

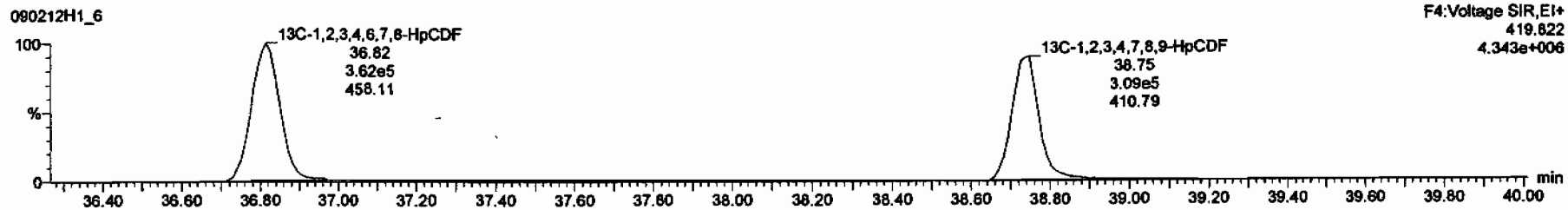

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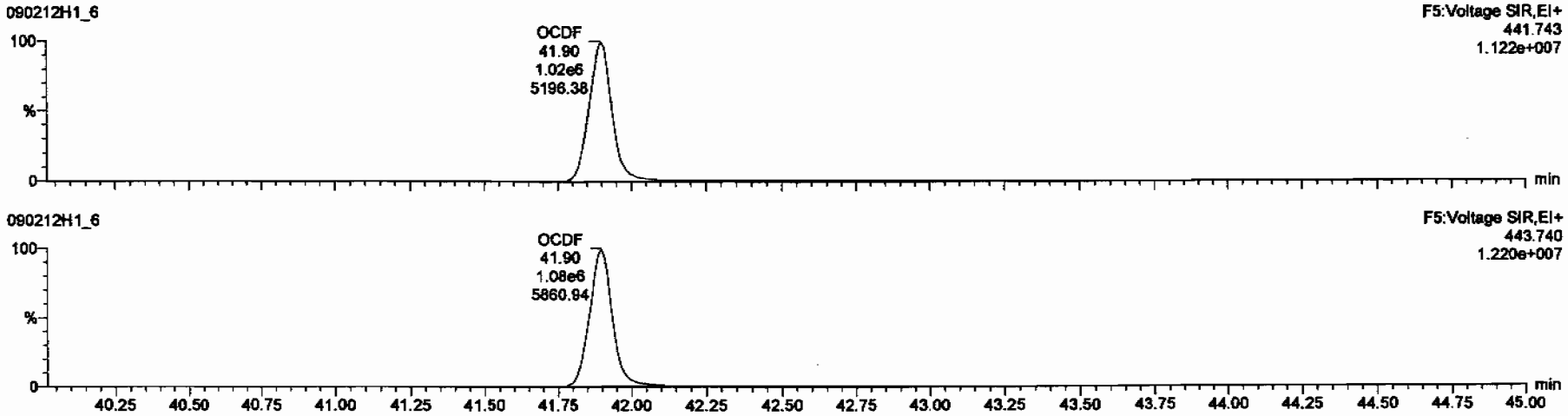

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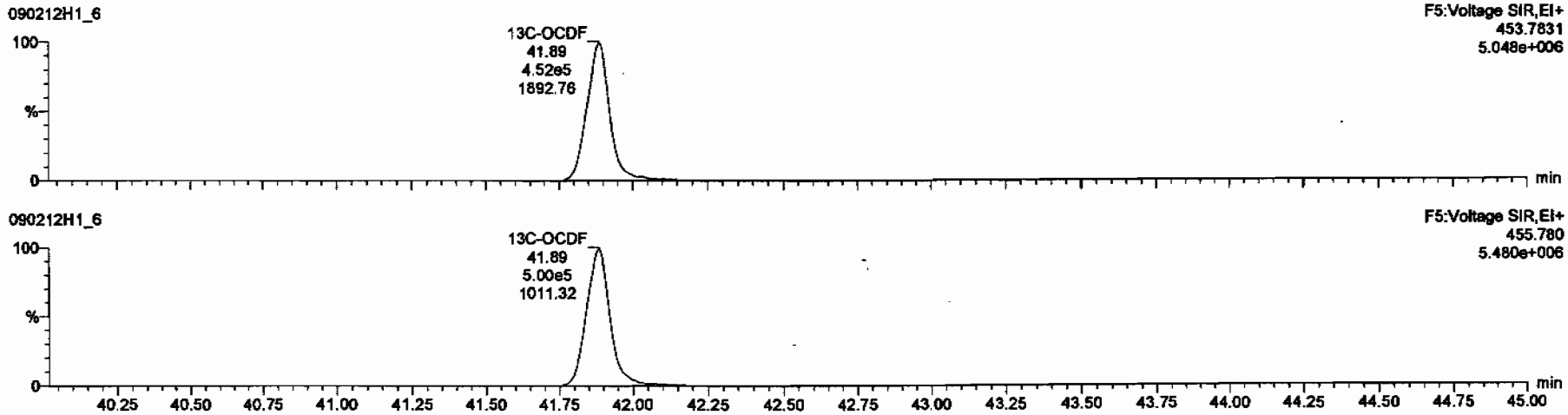

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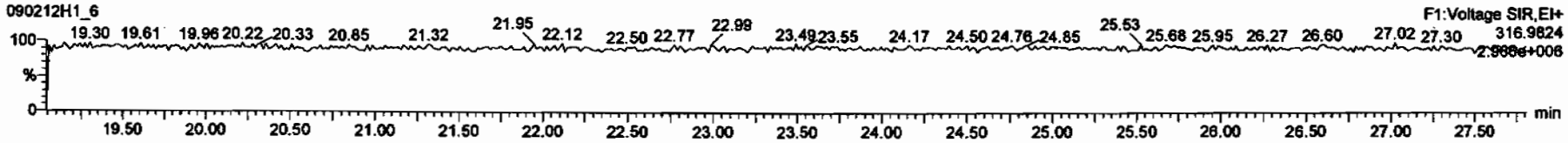

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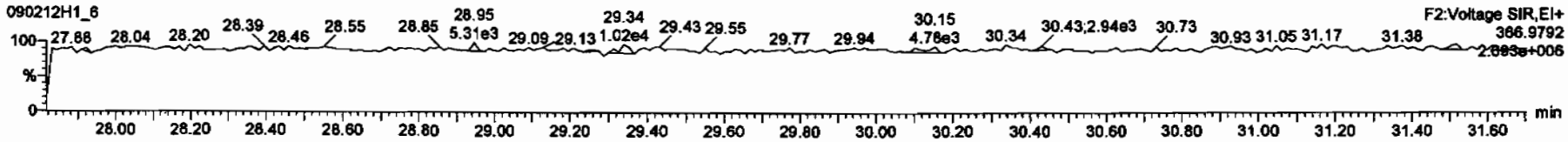

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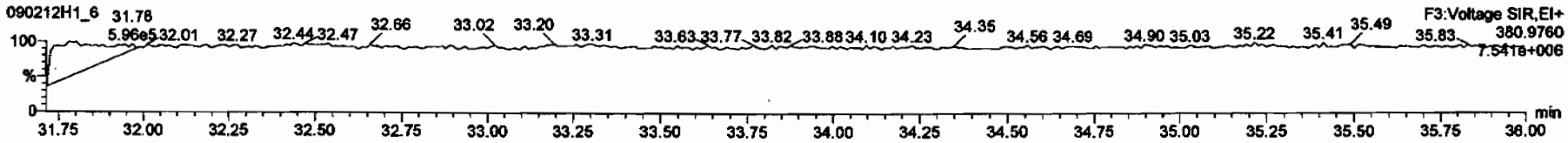

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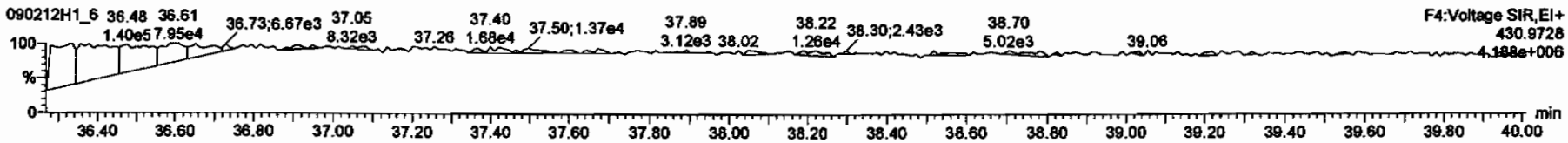

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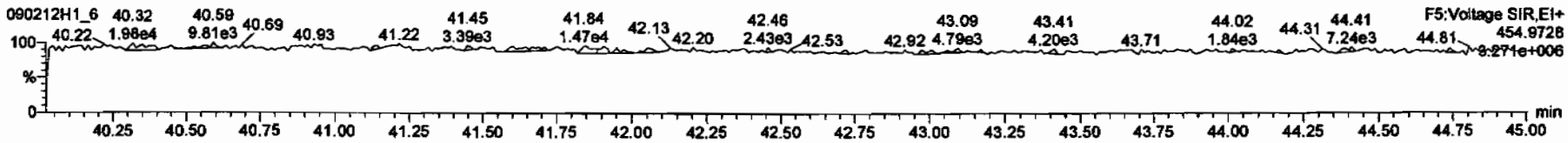

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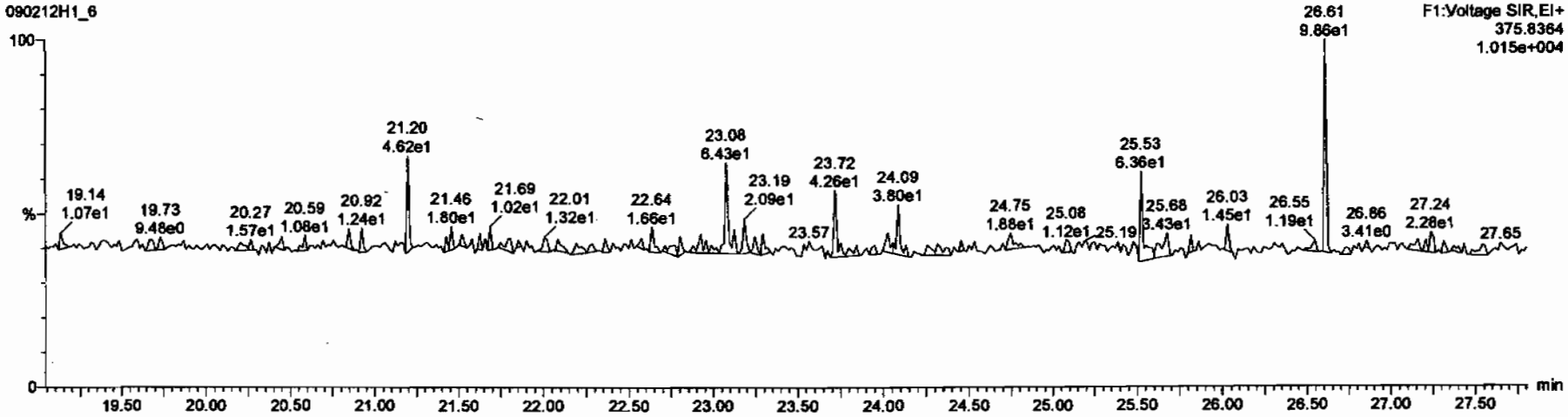

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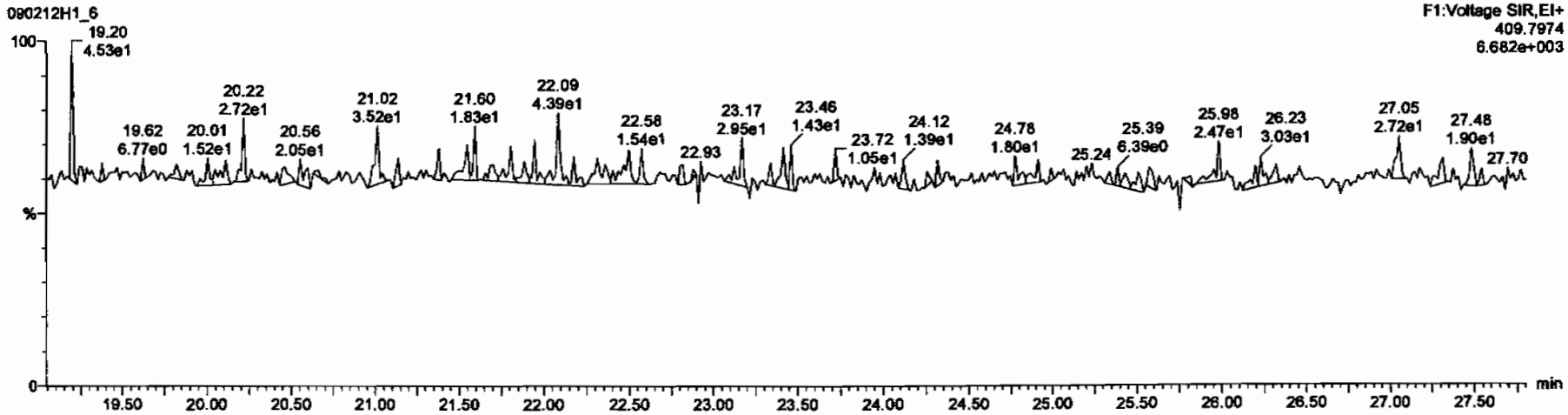

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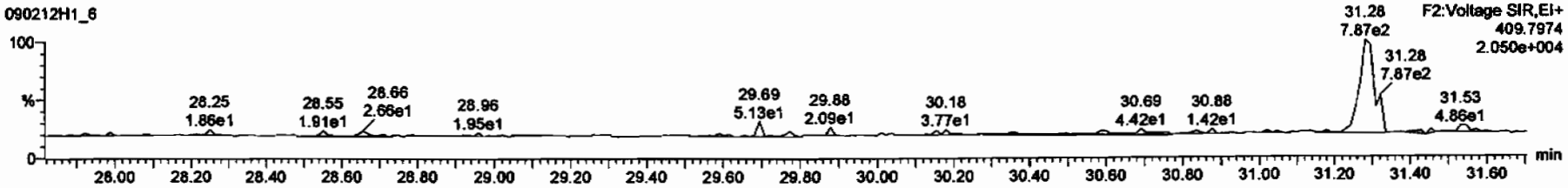

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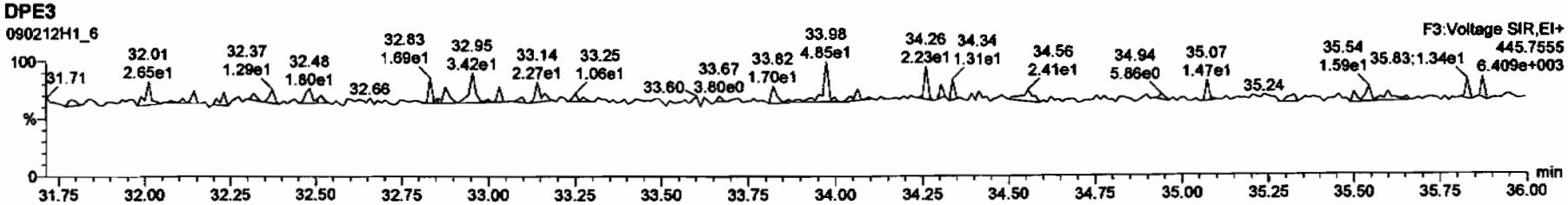

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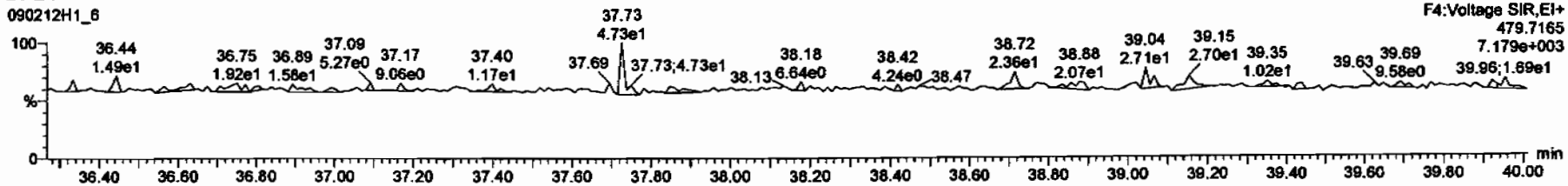

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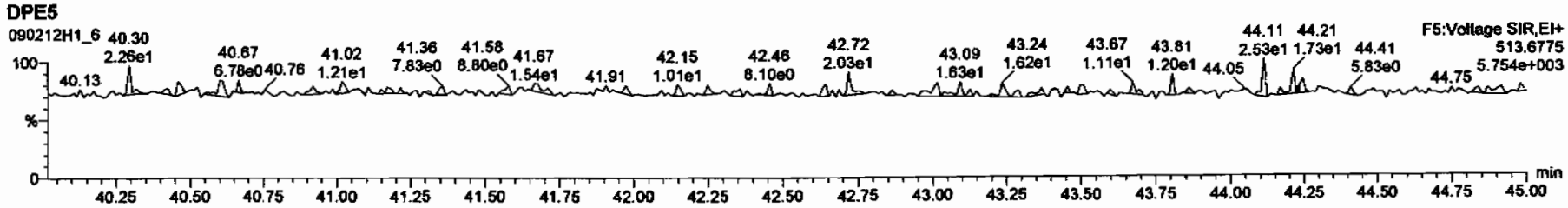

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2,3,7,8-TCDD

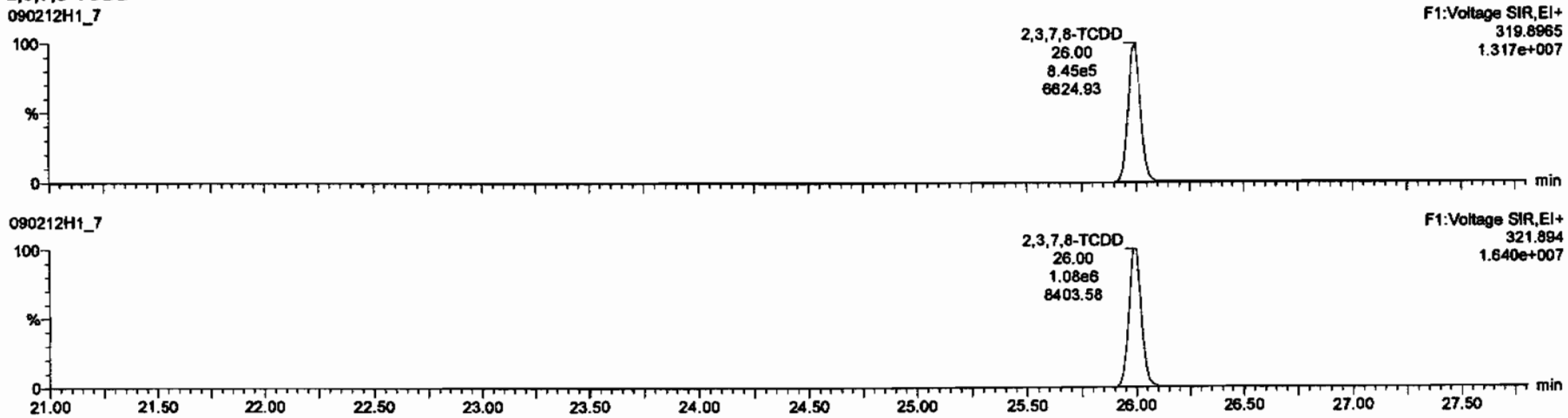

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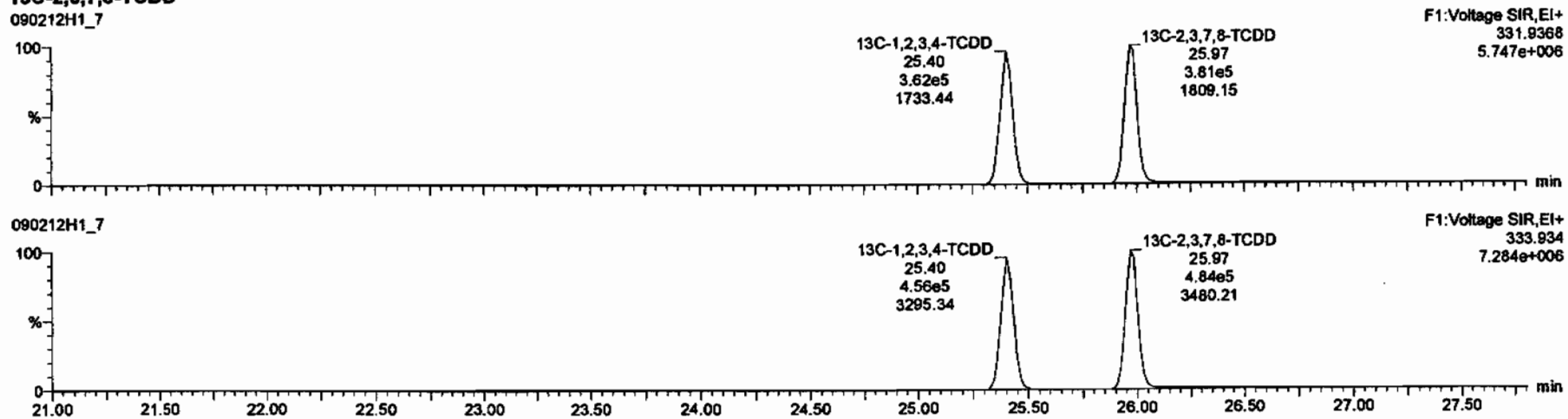

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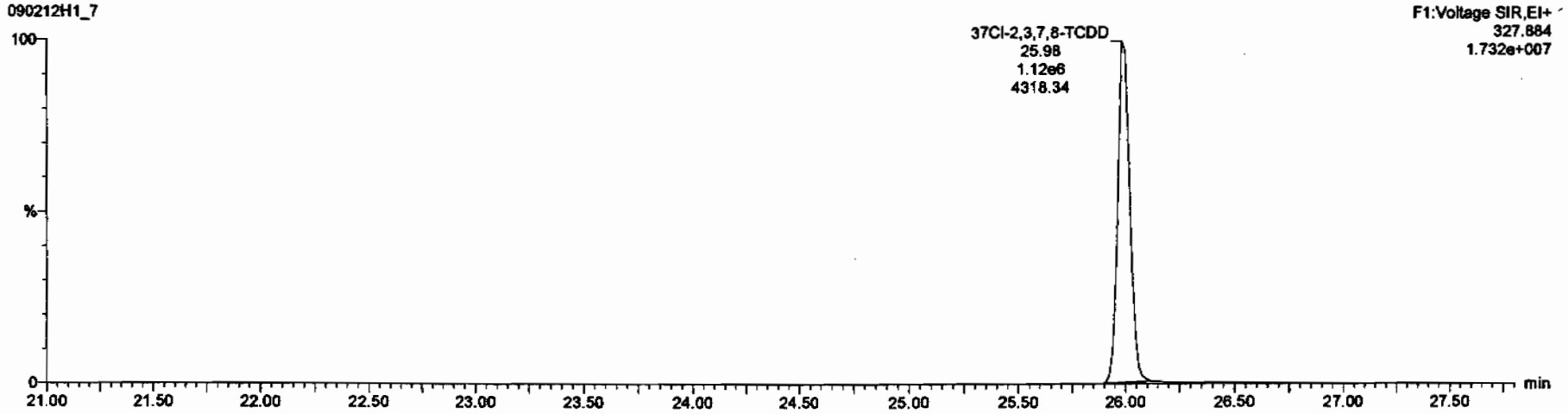

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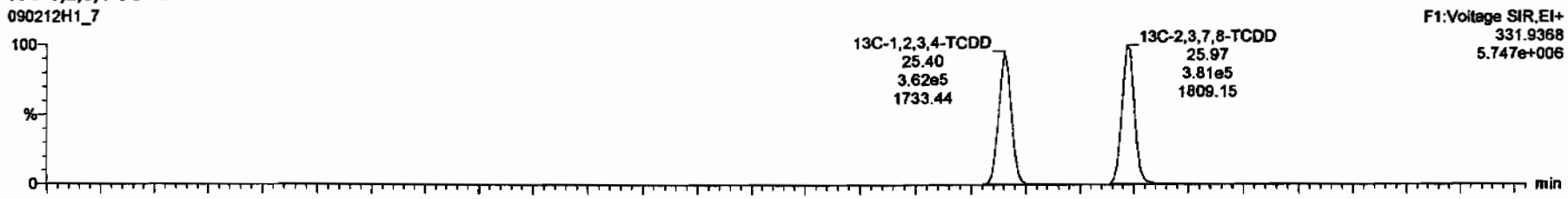

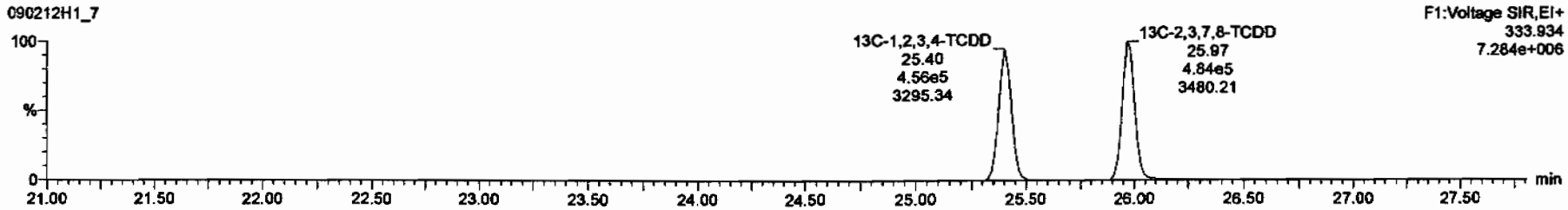

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1,2,3,7,8-PeCDD

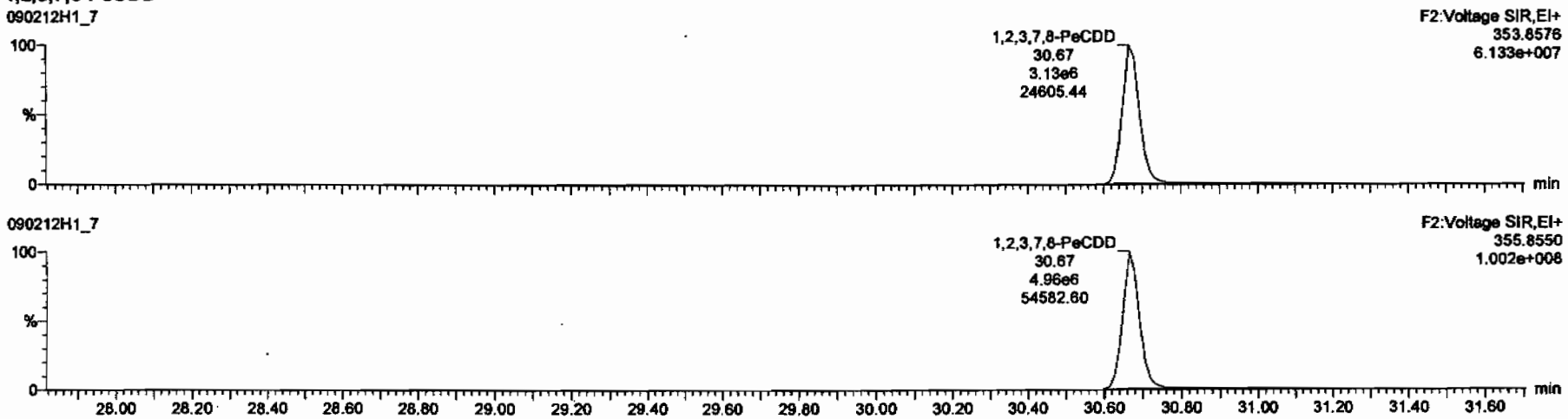

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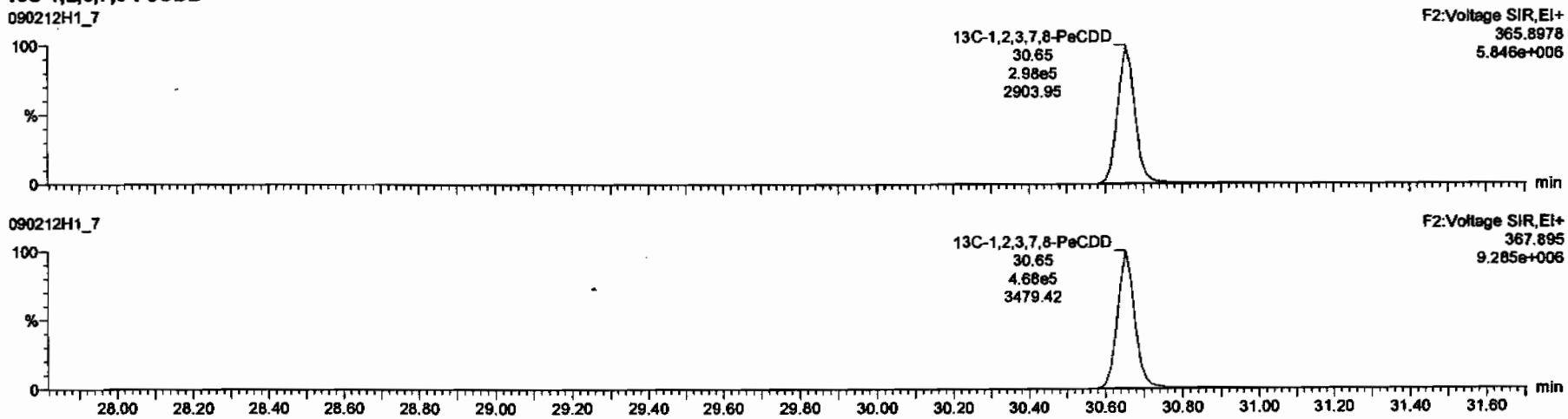

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1,2,3,4,7,8-HxCDD

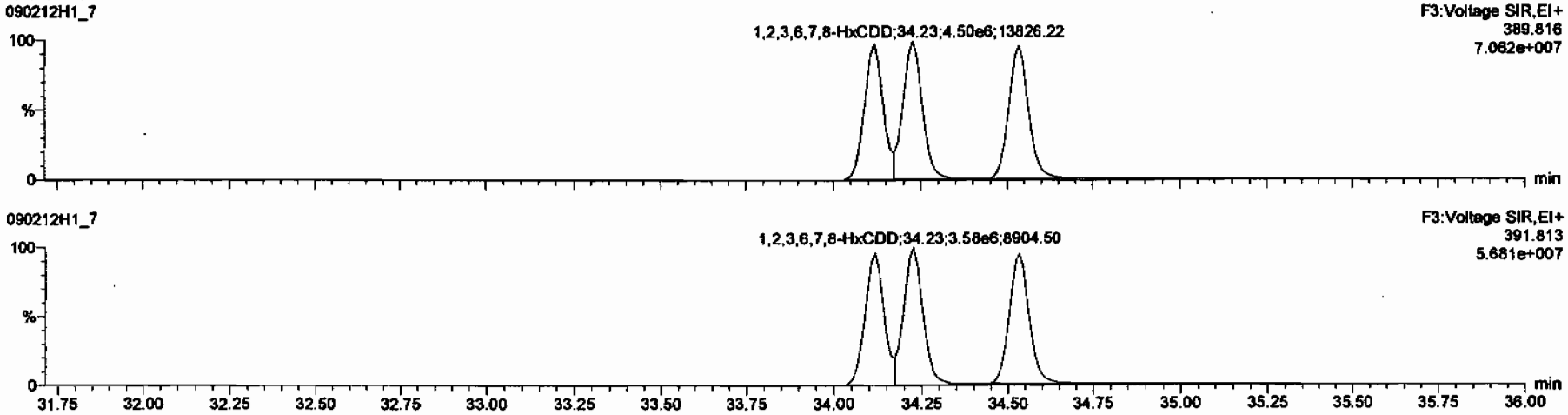

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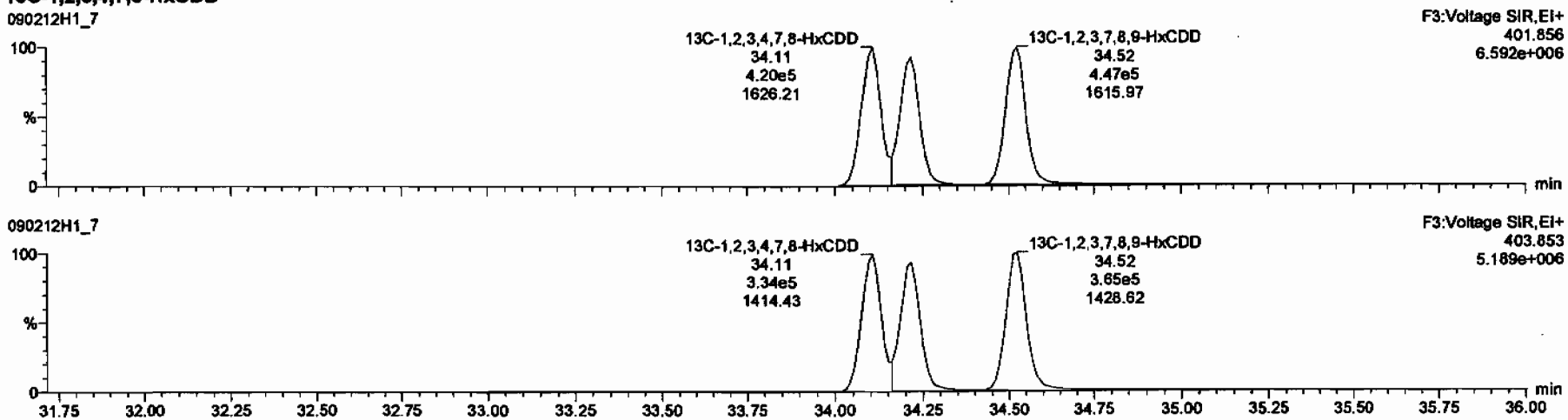

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1,2,3,4,6,7,8-HpCDD

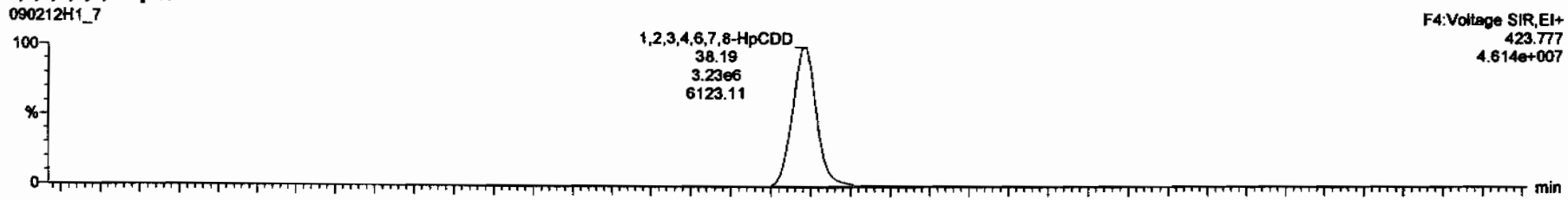

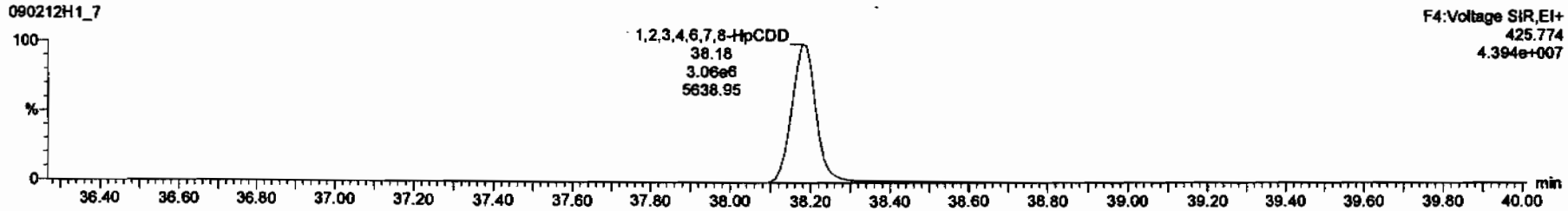

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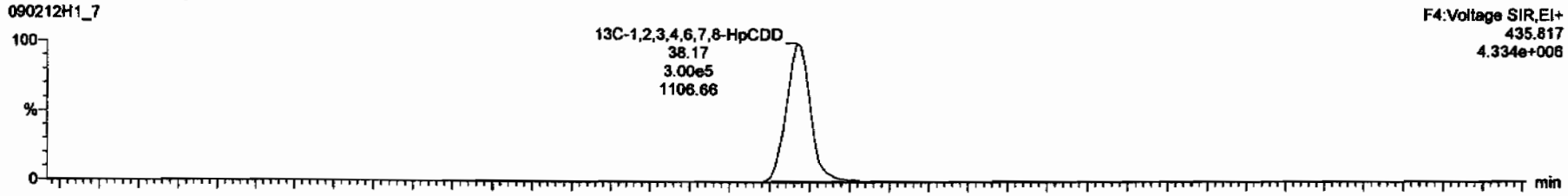

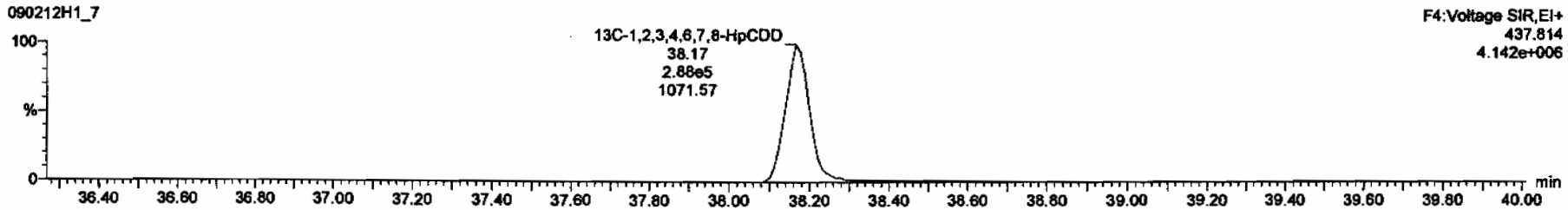

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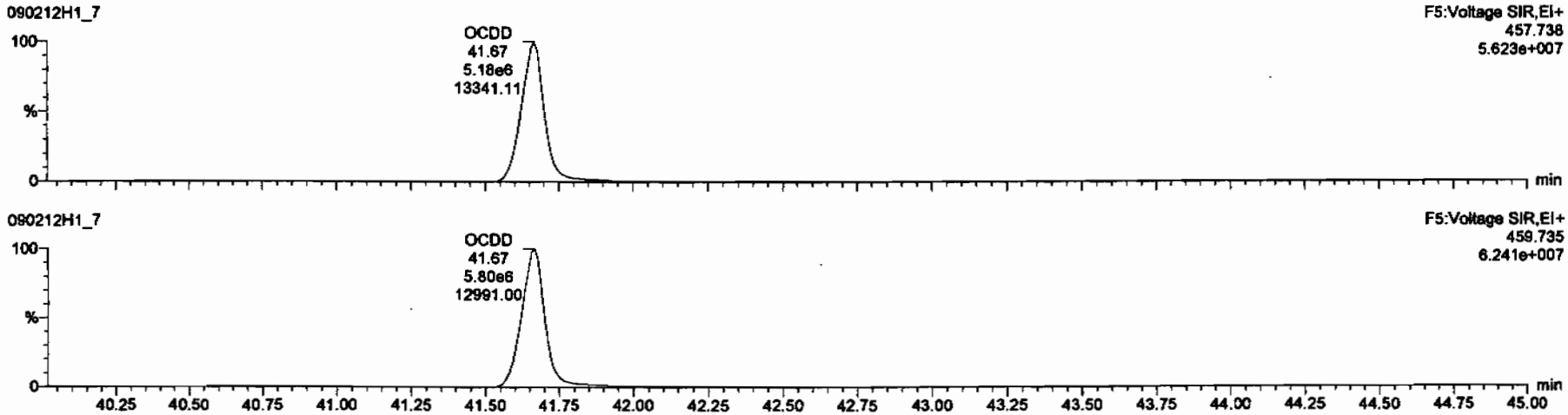

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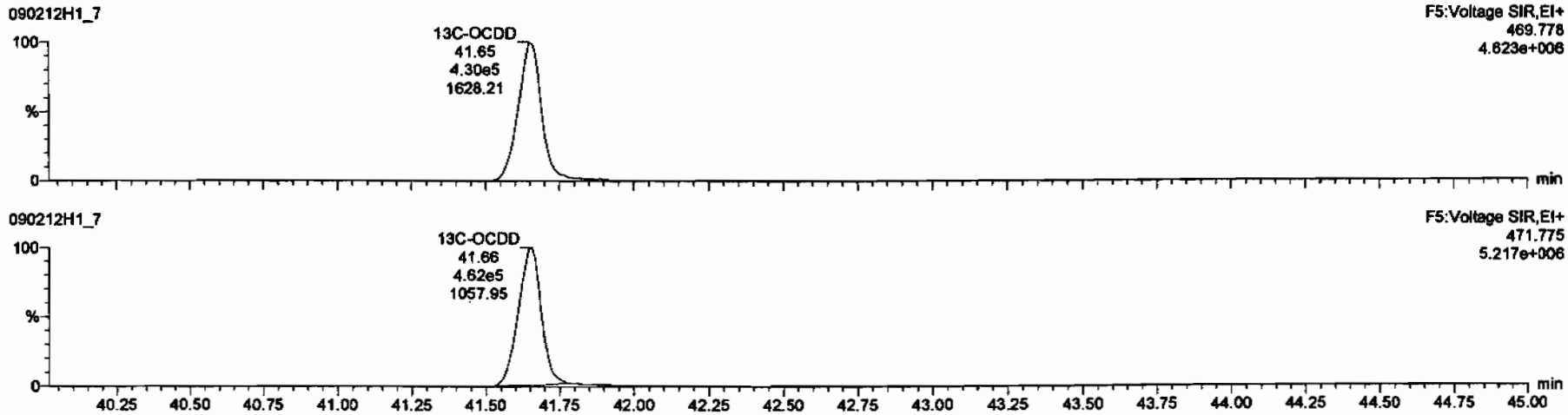

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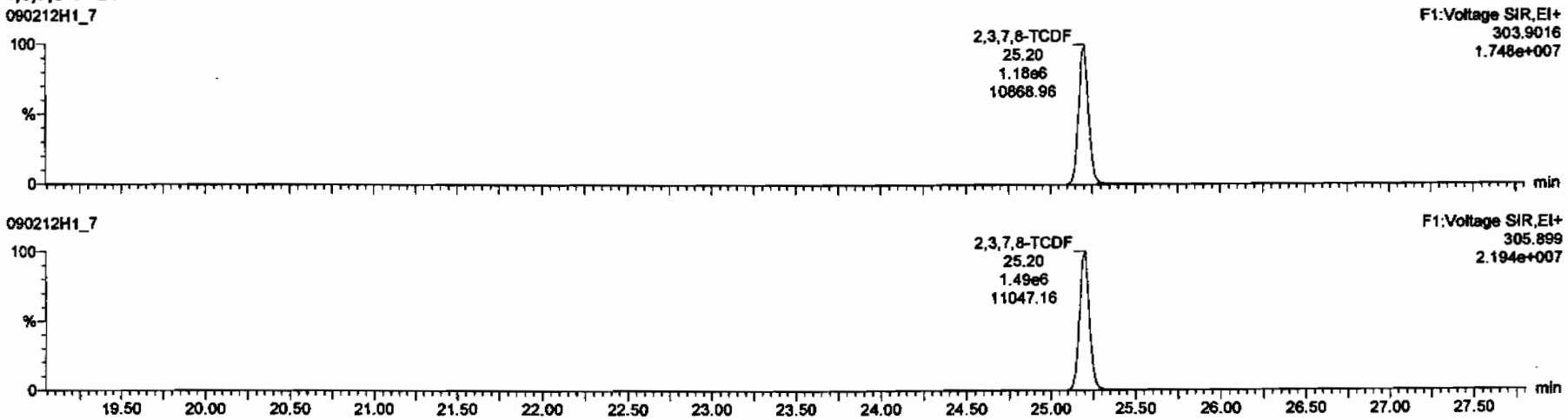

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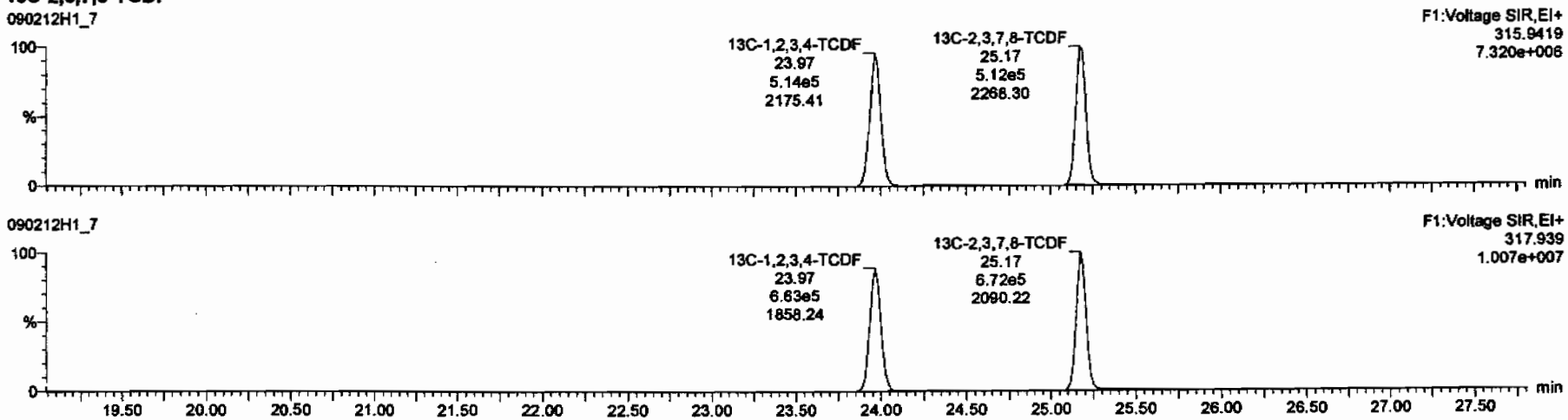

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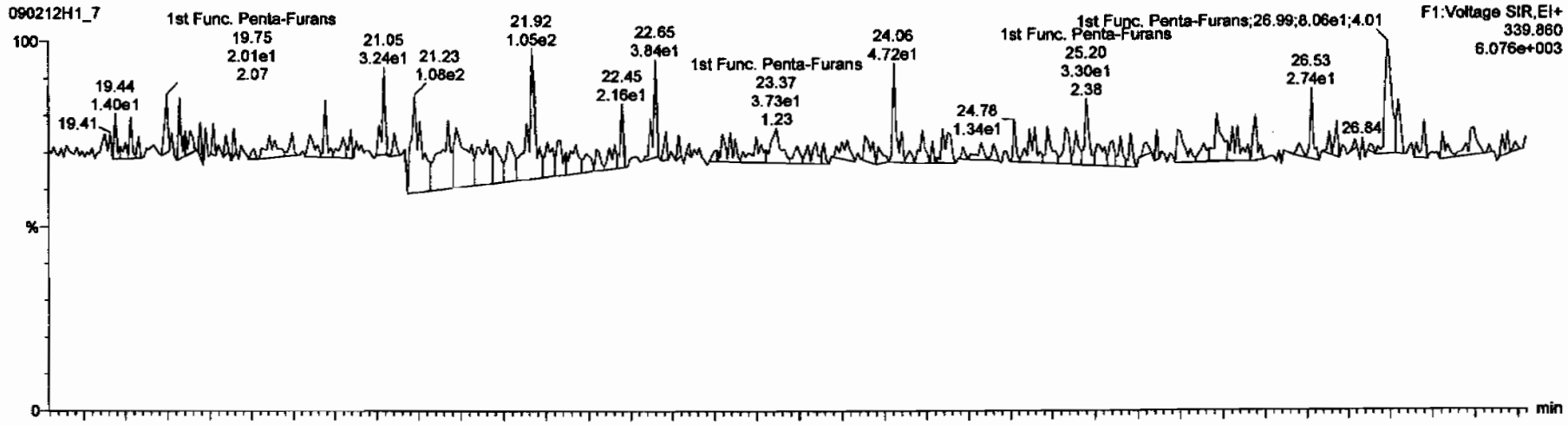

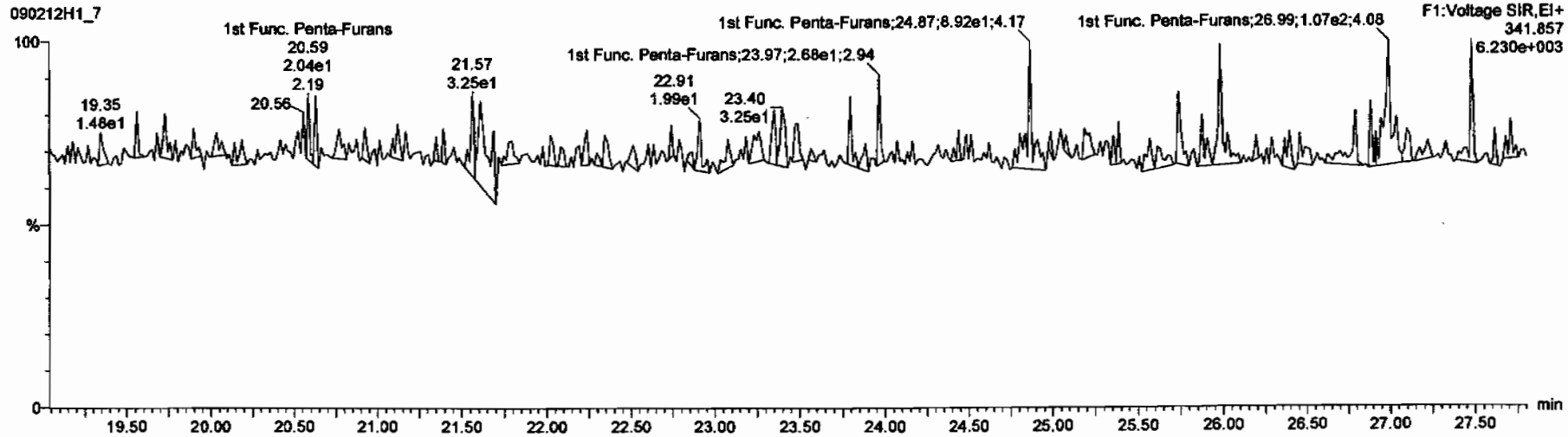

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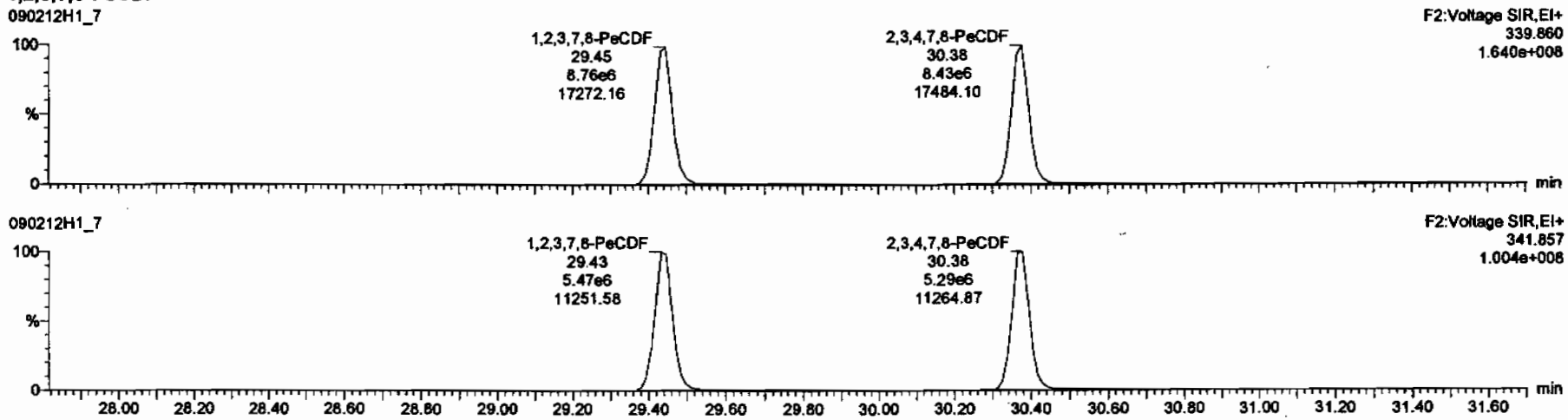

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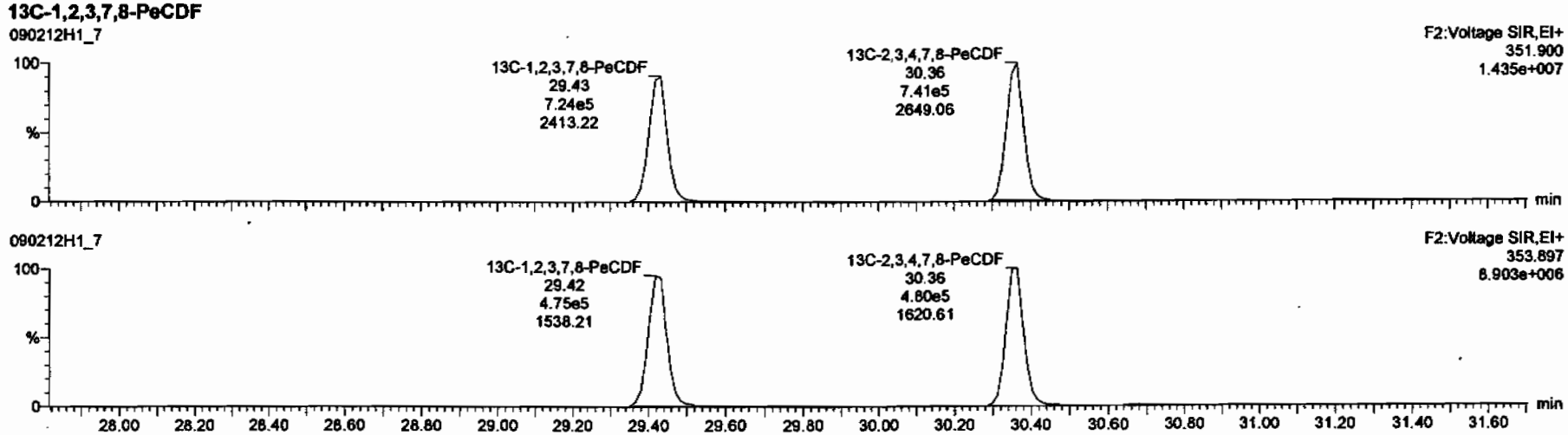

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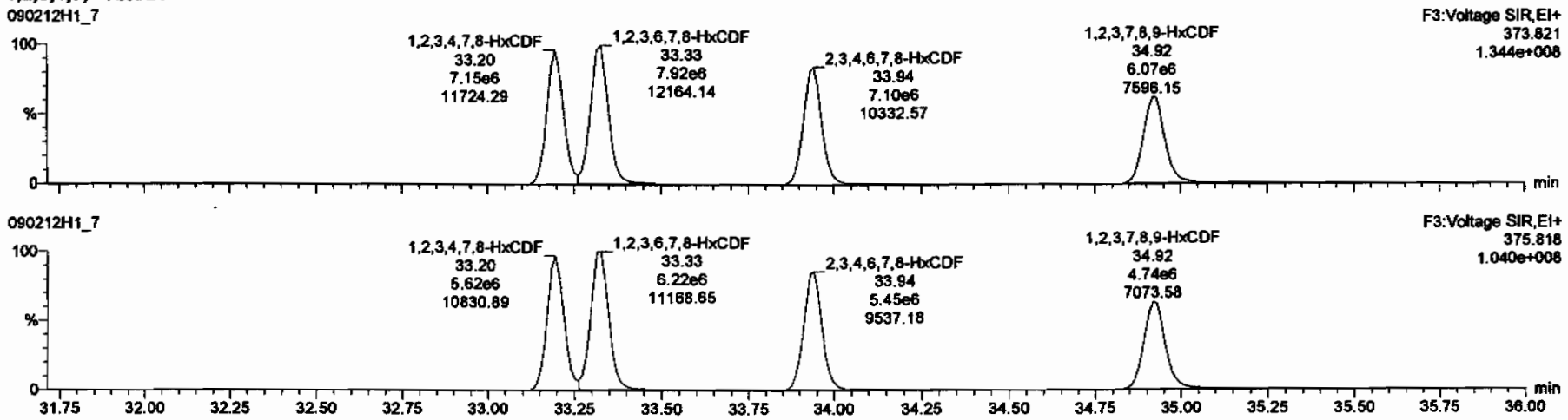

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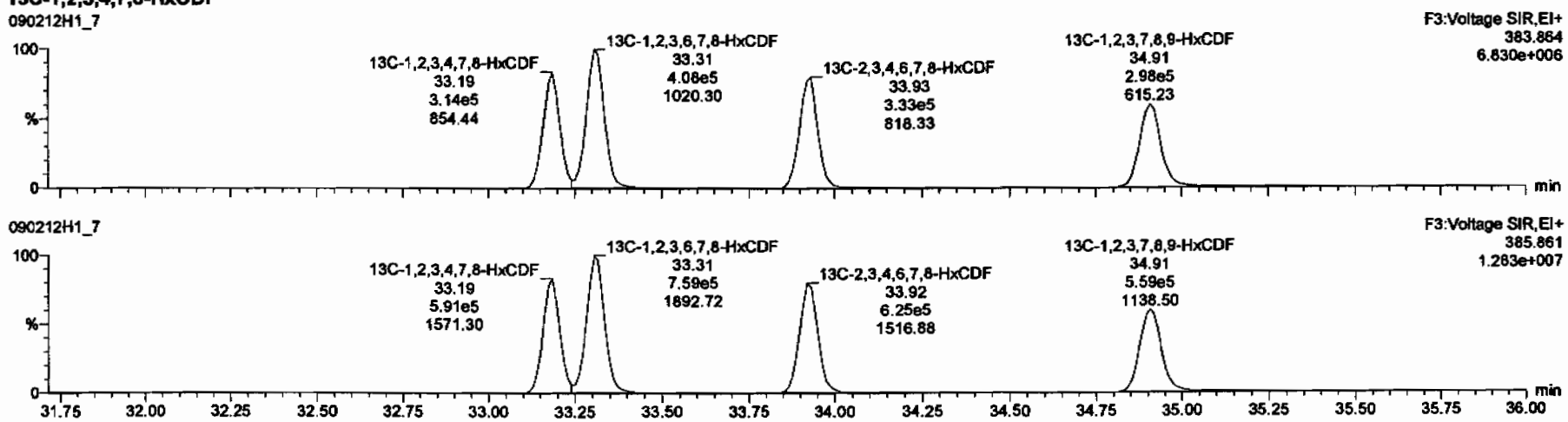

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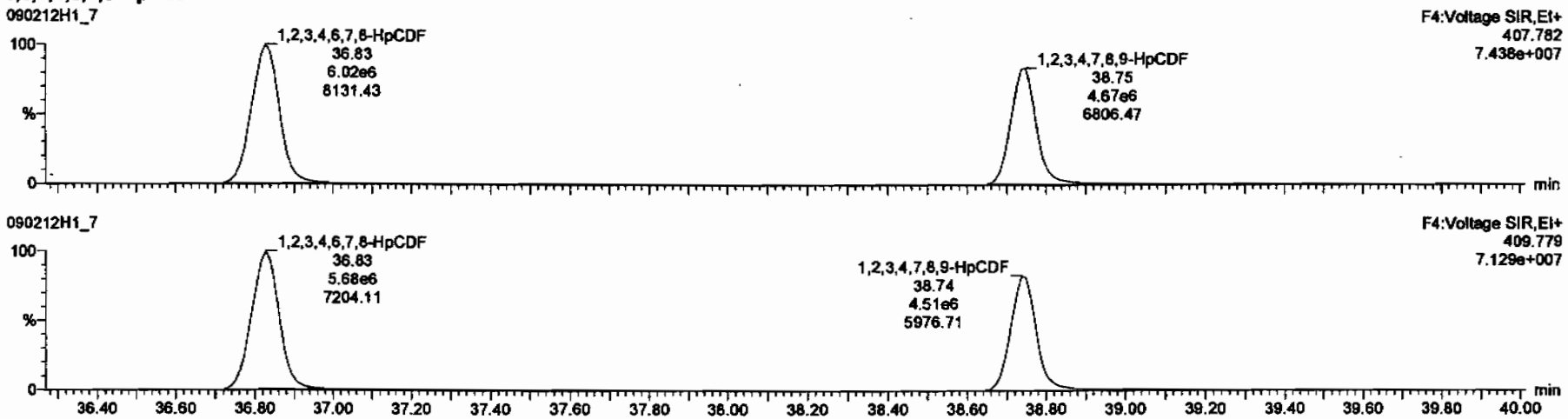

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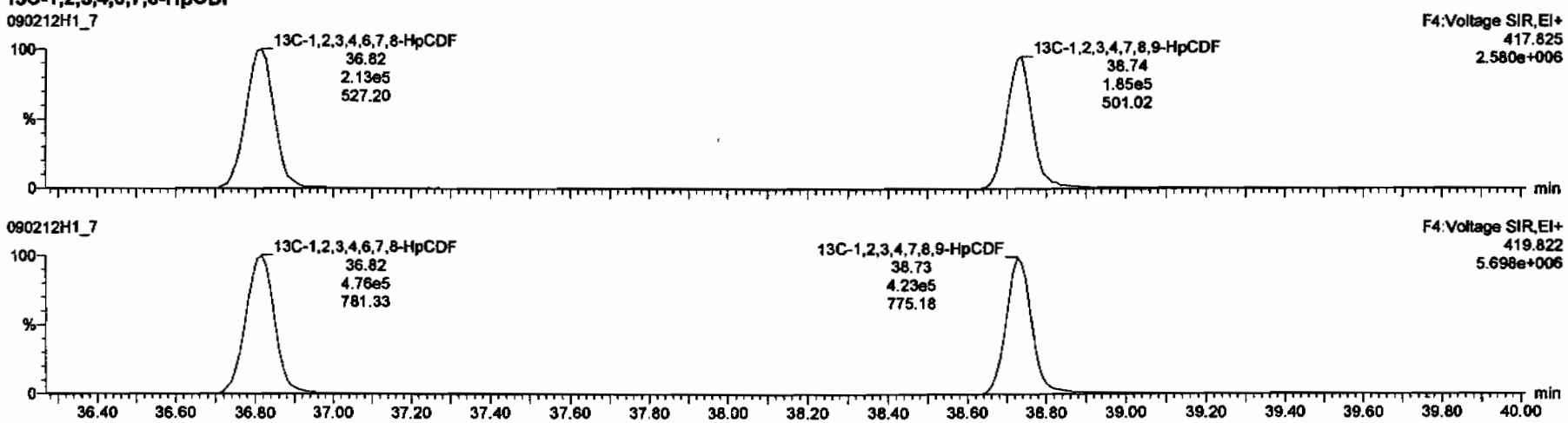

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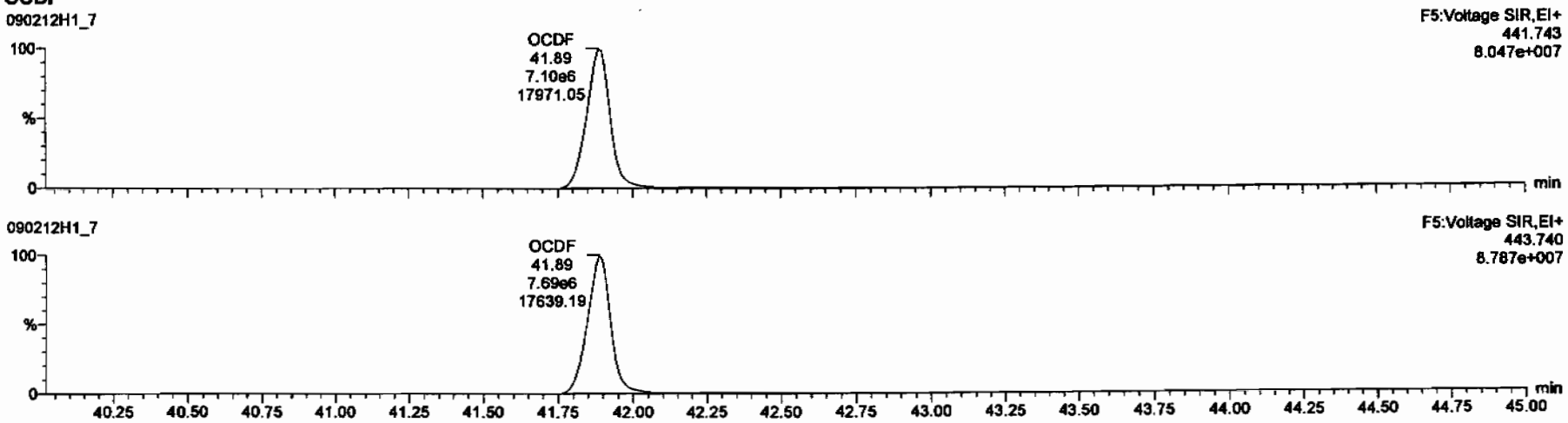

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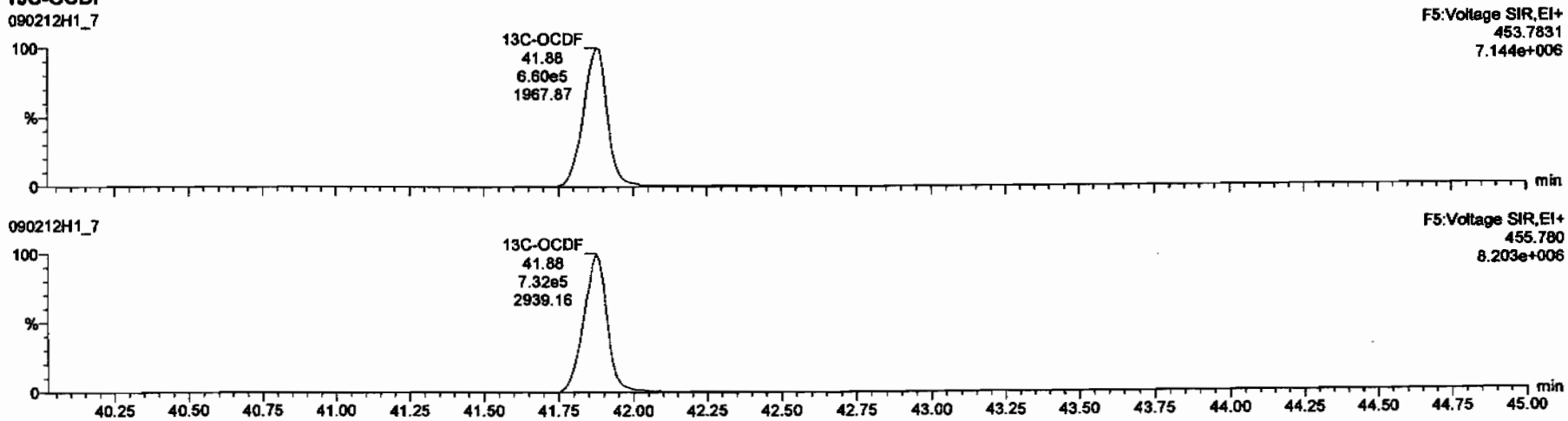

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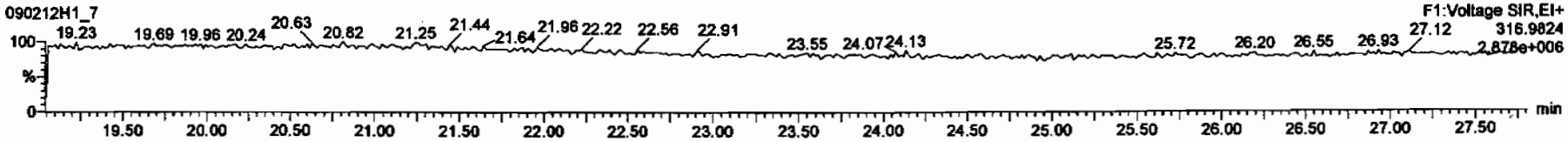

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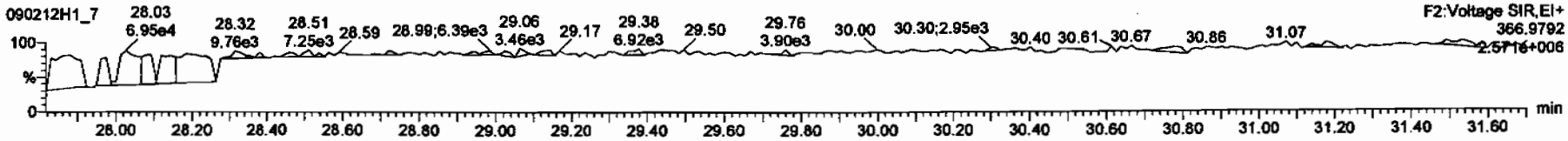

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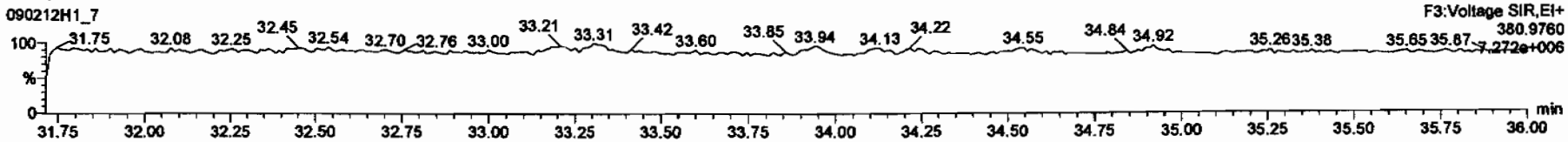

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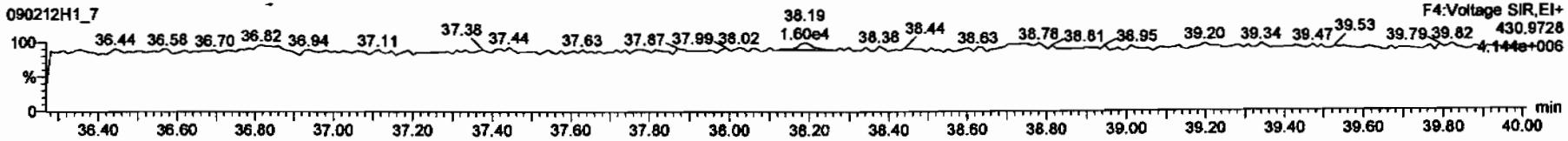

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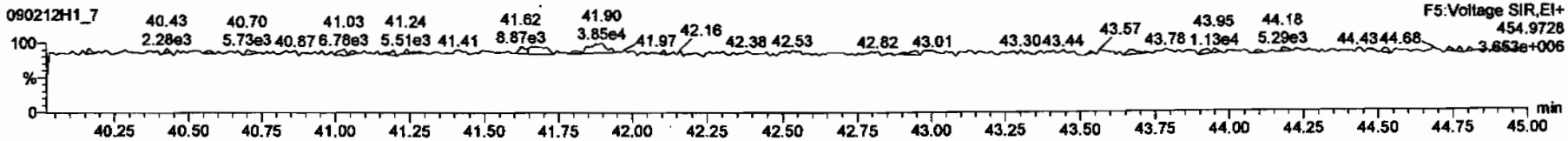

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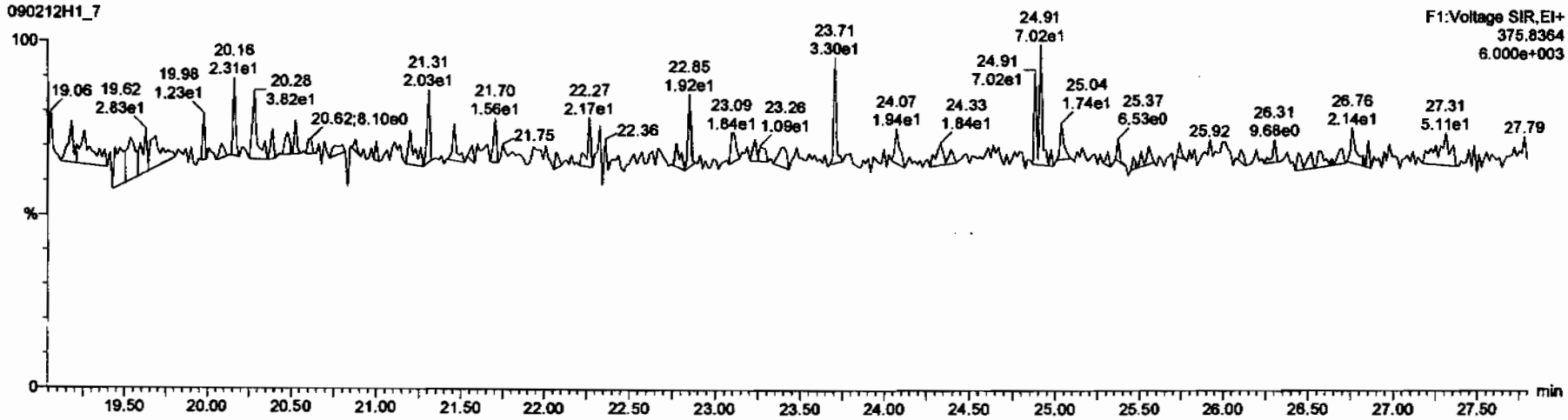

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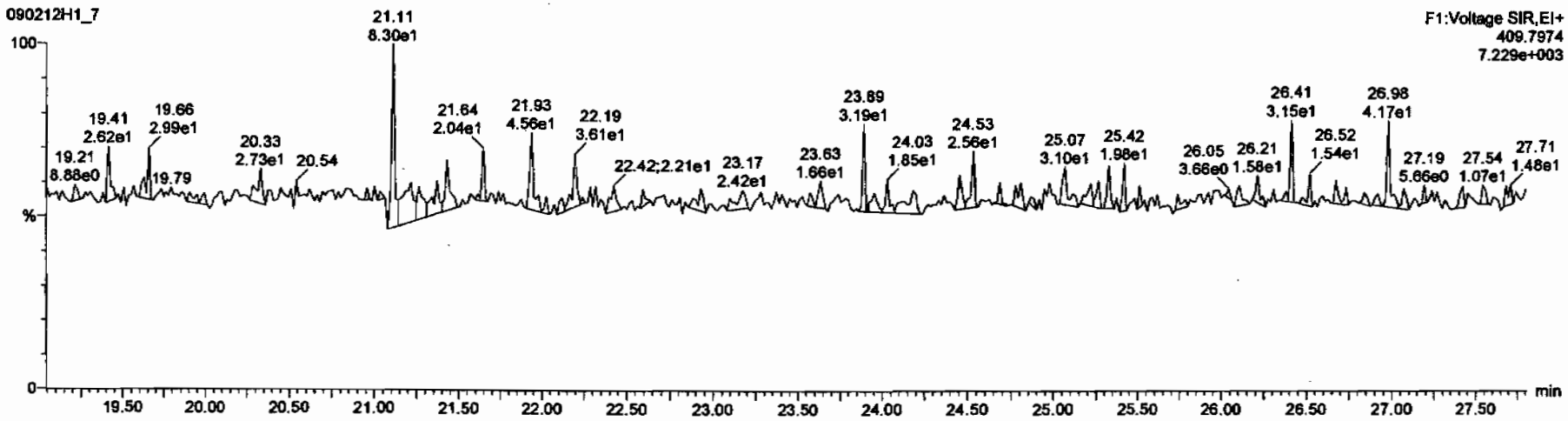

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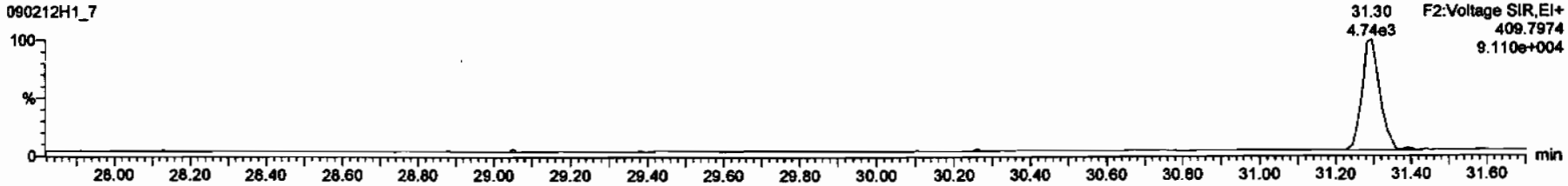

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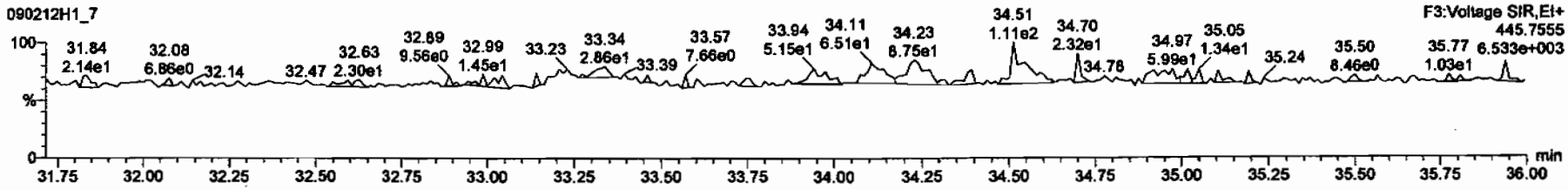

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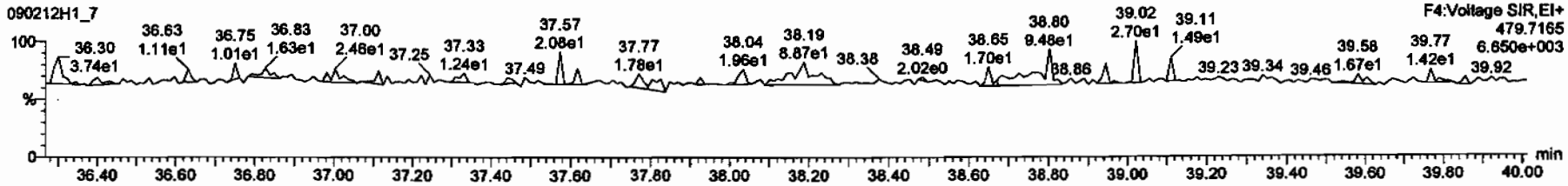

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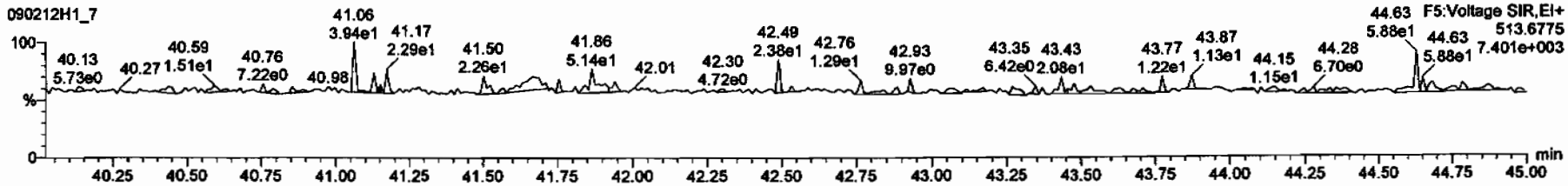

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M 292.9824 R 13769

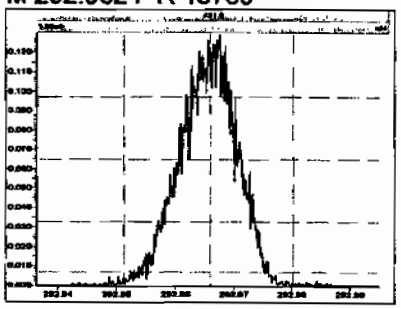

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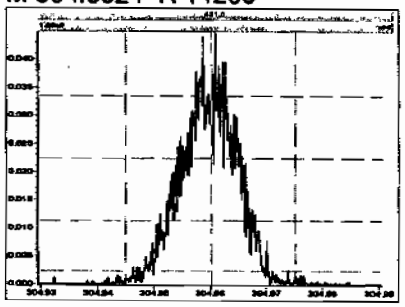

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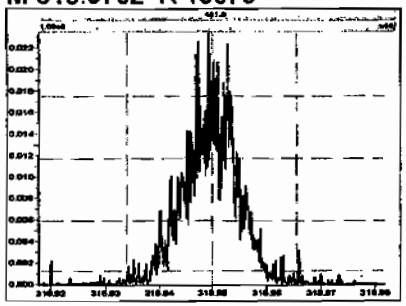

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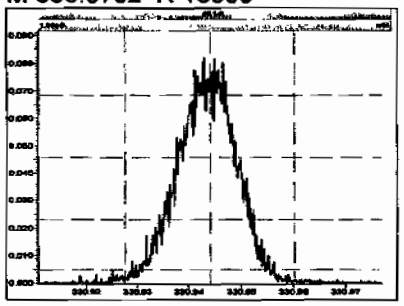

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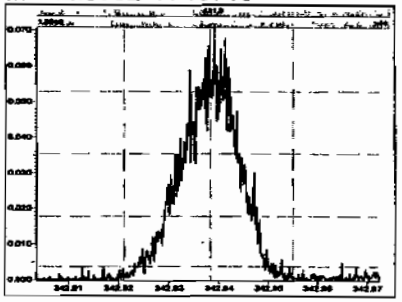

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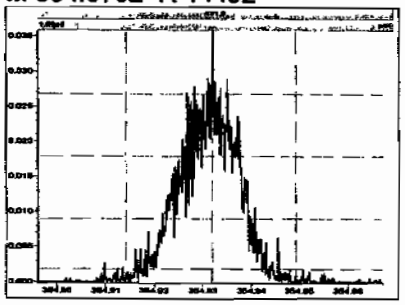

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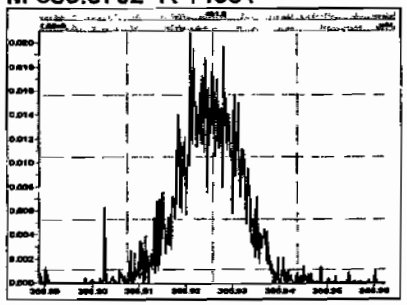

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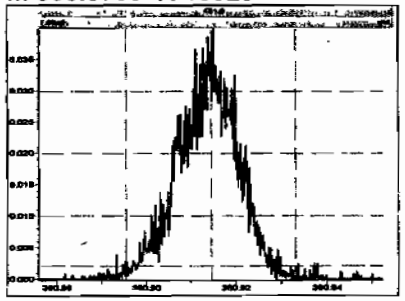

M 392.9760 R 14233

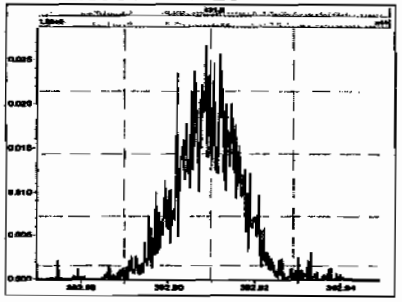

M 404.9760 R 15184

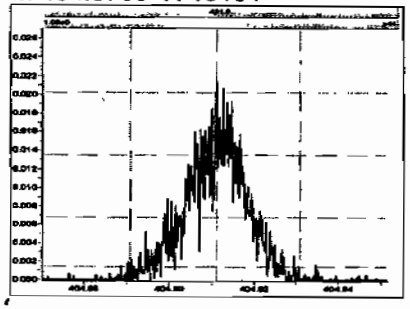

M 416.9760 R 15880

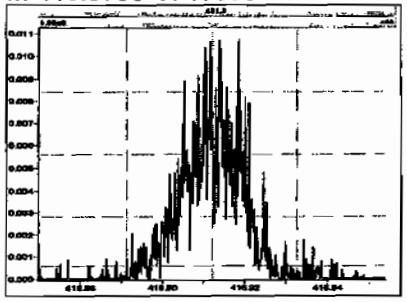

M 330.9792 R 13440

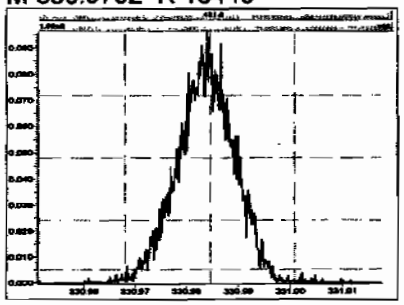

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M 342.9792 R 13880

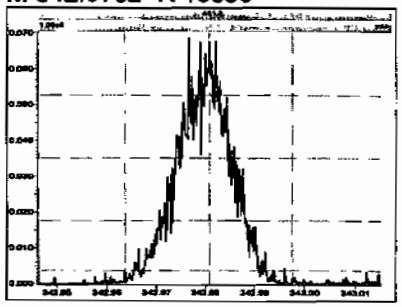

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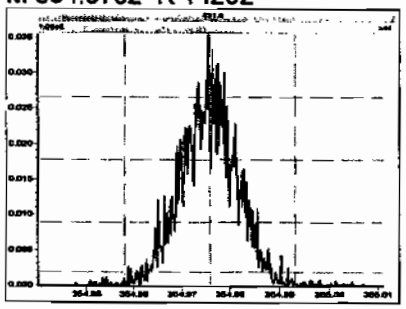

M 366.9792 R 14452

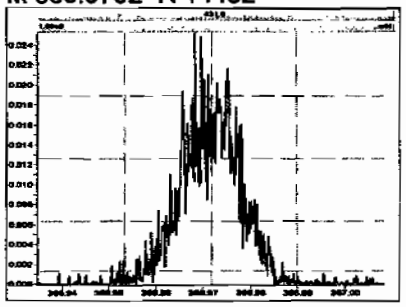

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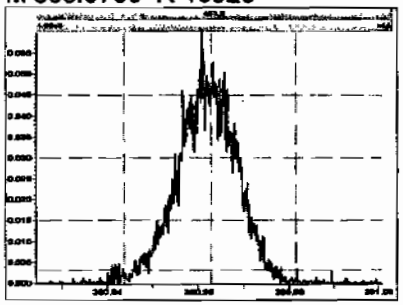

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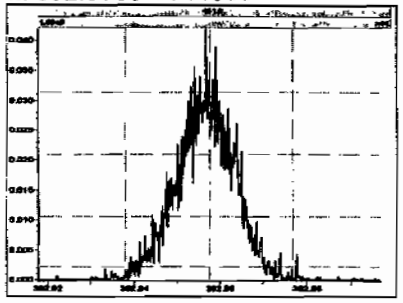

M 404.9760 R 14536

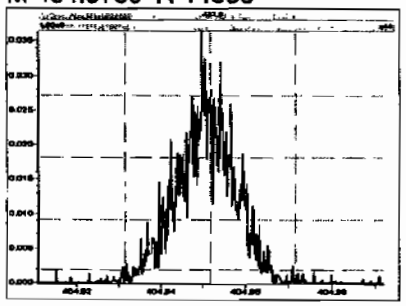

M 416.9760 R 15053

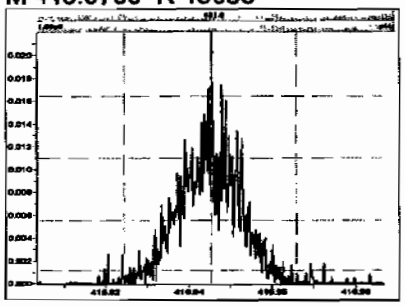

M 366.9792 R 15433

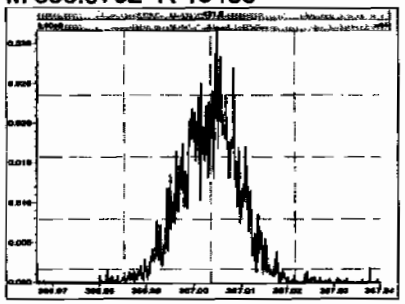

M 380.9760 R 14220

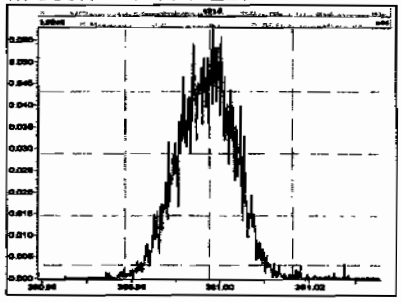

M 392.9760 R 14519

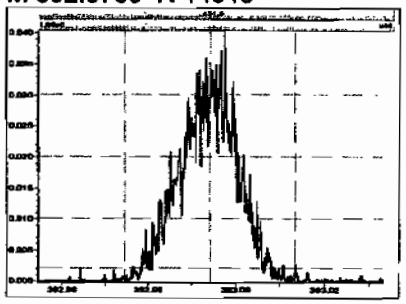

M 404.9760 R 14971

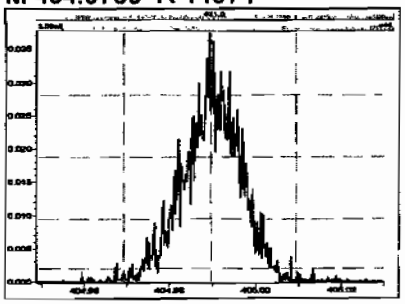

M 416.9760 R 15702

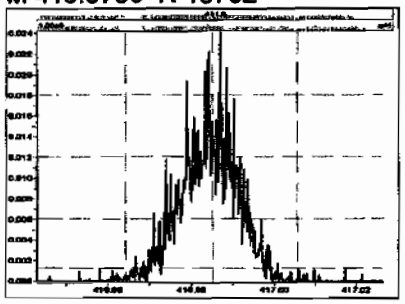

Printed: Thursday, February 12, 2009 18:43:49 Pacific Standard Time

M 430.9728 R 14874

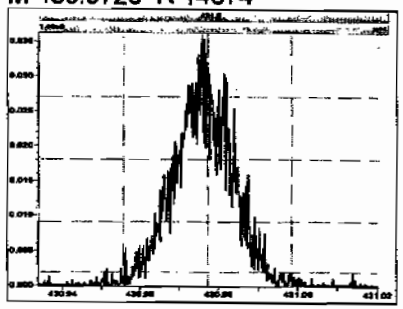

M 442.9728 R 15394

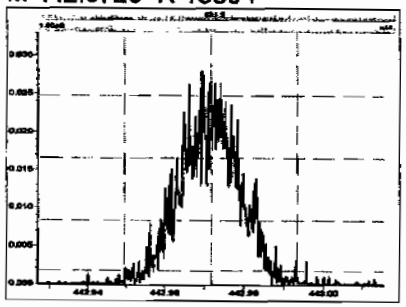

M 454.9728 R 13981

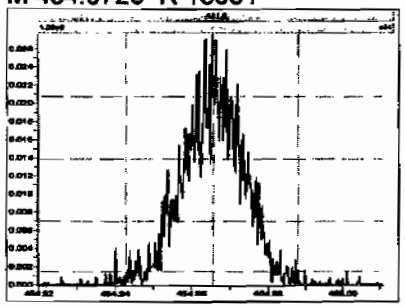

M 404.9760 R 14384

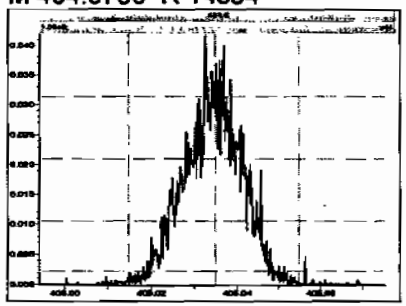

M 416.9760 R 16486

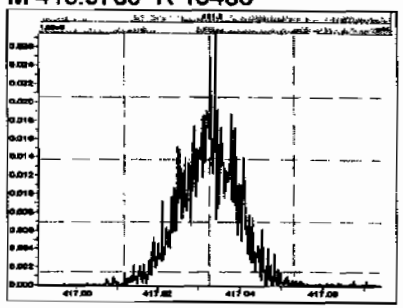

M 430.9728 R 14520

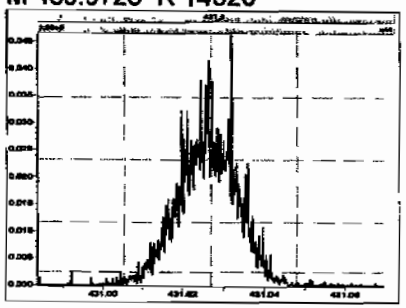

M 442.9728 R 14332

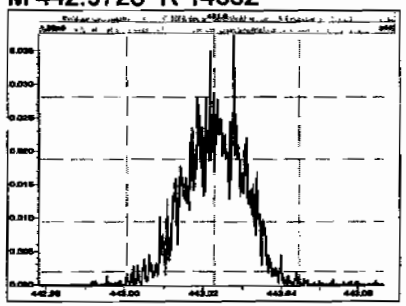

M 454.9728 R 13746

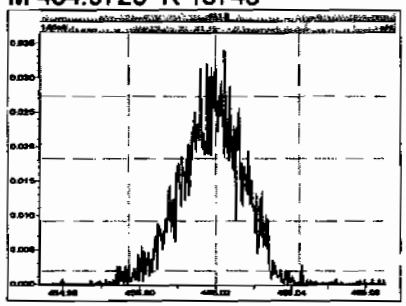

M 466.9728 R 16090

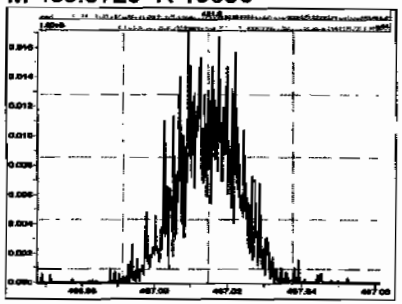

M 480.9696 R 13927

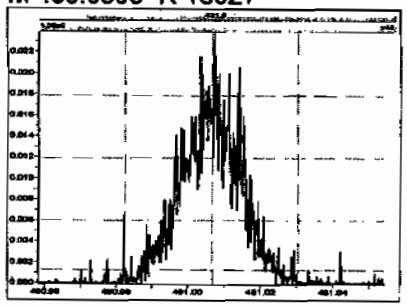

M 430.9728 R 12991

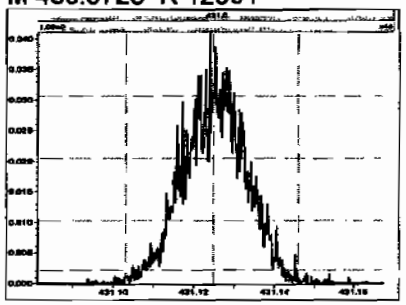

M 442.9728 R 13058

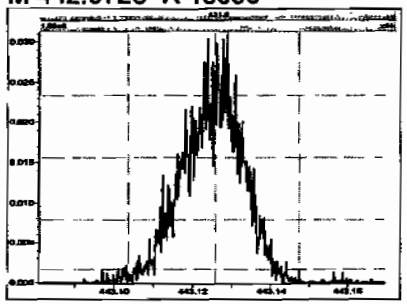

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M 454.9728 R 12791

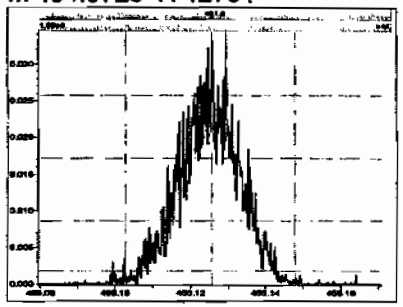

M 466.9728 R 14943

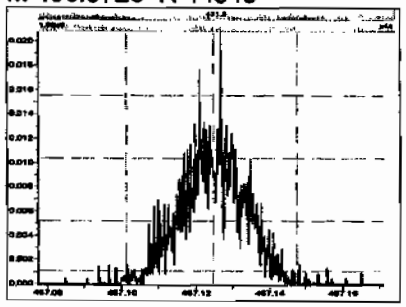

M 480.9696 R 12740

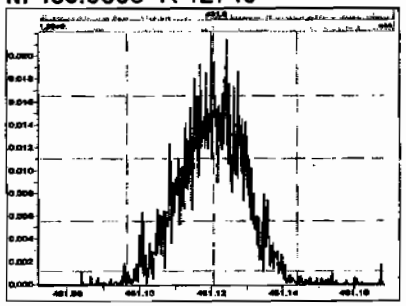

M 492.9696 R 15128

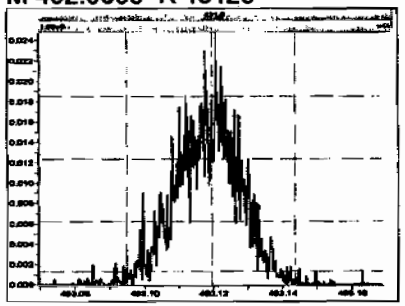

M 504.9696 R 13236

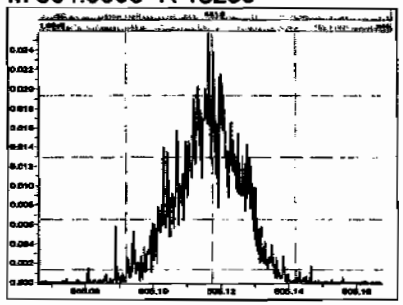

M 516.9697 R 17182

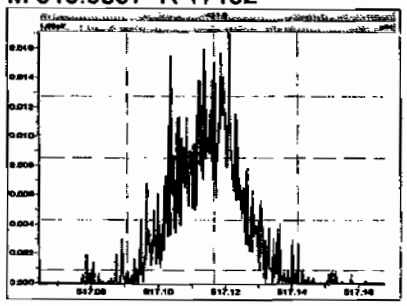

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1	2,3,7,8-TCDD	2.66e4	0.81	NO	1.08	1.000	25.98	1.001	9.5090		0.0723	9.5090
2	1,2,3,7,8-PeCDD	1.01e5	0.61	NO	1.03	1.000	30.65	1.000	47.444		0.172	47.444
3	1,2,3,4,7,8-HxCDD	9.43e4	1.26	NO	1.00	1.000	34.11	1.001	60.533		0.392	60.533
4	1,2,3,6,7,8-HxCDD	8.97e4	1.28	NO	1.13	1.000	34.22	1.000	41.292		0.312	41.292
5	1,2,3,7,8,9-HxCDD	9.40e4	1.29	NO	1.10	1.000	34.52	1.009	48.966		0.335	48.966
6	1,2,3,4,6,7,8-HpCDD	7.06e4	1.02	NO	1.06	1.000	38.18	1.001	47.757		0.360	47.757
7	OCDD	1.05e5	0.91	NO	1.18	1.000	41.66	1.000	87.851		0.375	87.851
8	2,3,7,8-TCDF	3.59e4	0.80	NO	1.09	1.000	25.20	1.001	9.2692		0.0713	9.2692
9	1,2,3,7,8-PeCDF	1.90e5	1.60	NO	1.16	1.000	29.43	1.001	47.569		0.197	47.569
10	2,3,4,7,8-PeCDF	1.76e5	1.60	NO	1.12	1.000	30.36	1.001	49.959		0.207	49.959
11	1,2,3,4,7,8-HxCDF	1.51e5	1.22	NO	1.41	1.000	33.19	1.000	47.242		0.234	47.242
12	1,2,3,6,7,8-HxCDF	1.99e5	1.24	NO	1.22	1.000	33.31	1.000	52.247		0.205	52.247
13	2,3,4,6,7,8-HxCDF	1.49e5	1.26	NO	1.28	1.000	33.93	1.001	48.194		0.285	48.194
14	1,2,3,7,8,9-HxCDF	1.18e5	1.28	NO	1.26	1.000	34.91	1.000	50.089		0.402	50.089
15	1,2,3,4,6,7,8-HpCDF	1.26e5	1.05	NO	1.69	1.000	36.81	1.000	45.609		0.324	45.609
16	1,2,3,4,7,8,9-HpCDF	9.92e4	1.09	NO	1.48	1.000	38.74	1.000	53.044		0.451	53.044
17	OCDF	1.36e5	0.92	NO	1.10	1.000	41.88	1.001	~~77825~~		102	77825
18	13C-2,3,7,8-TCDD	2.60e5	0.79	NO	1.01	1.000	25.97	1.022	100.68	101	0.251	
19	13C-1,2,3,7,8-PeCDD	2.07e5	0.62	NO	0.827	1.000	30.64	1.206	98.194	98.2	0.366	
20	13C-1,2,3,4,7,8-HxCDD	1.56e5	1.23	NO	0.916	1.000	34.08	0.988	96.272	96.3	1.12	
21	13C-1,2,3,6,7,8-HxCDD	1.93e5	1.30	NO	0.921	1.000	34.21	0.991	118.79	119	1.12	
22	13C-1,2,3,4,6,7,8-HpCDD	1.39e5	1.04	NO	0.708	1.000	38.16	1.106	111.12	111	0.936	
23	13C-OCDD	2.03e5	0.90	NO	0.503	1.000	41.65	1.207	229.27	115	1.10	
24	13C-2,3,7,8-TCDF	3.56e5	0.77	NO	0.977	1.000	25.17	0.991	47241	~~47200~~	47.8	
25	13C-1,2,3,7,8-PeCDF	3.45e5	1.53	NO	0.896	1.000	29.41	1.158	49875	~~49900~~	135	
26	13C-2,3,4,7,8-PeCDF	3.15e5	1.57	NO	0.900	1.000	30.34	1.194	45355	~~45400~~	135	
27	13C-1,2,3,4,7,8-HxCDF	2.27e5	0.52	NO	1.17	1.000	33.17	0.962	110.01	110	1.09	
28	13C-1,2,3,6,7,8-HxCDF	3.11e5	0.53	NO	1.52	1.000	33.29	0.965	116.12	116	0.841	
29	13C-2,3,4,6,7,8-HxCDF	2.41e5	0.53	NO	1.25	1.000	33.91	0.983	109.27	109	1.02	
30	13C-1,2,3,7,8,9-HxCDF	1.87e5	0.53	NO	1.05	1.000	34.90	1.011	100.48	100	1.21	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

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31	13C-1,2,3,4,6,7,8-HpCDF	1.64e5	0.42	NO	0.868	1.000	36.80	1.066	107.17	107	0.875
32	13C-1,2,3,4,7,8,9-HpCDF	1.26e5	0.43	NO	0.727	1.000	38.73	1.122	98.571	98.6	1.05
33	13C-OCDF	3.18e2	0.17	YES	0.760	1.000	41.82	1.212	0.23753	~~9.119~~	0.197
34	37Cl-2,3,7,8-TCDD	2.82e4			0.668	1.000	25.98	1.023	16.616	166	0.0976
35	13C-1,2,3,4-TCDD	2.54e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.254
36	13C-1,2,3,4-TCDF	7.72e2	0.44	YES	1.00	1.000	23.92	0.000	100.00	100	46.7
37	13C-1,2,3,7,8,9-HxCDD	1.76e5	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	1.03

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDD

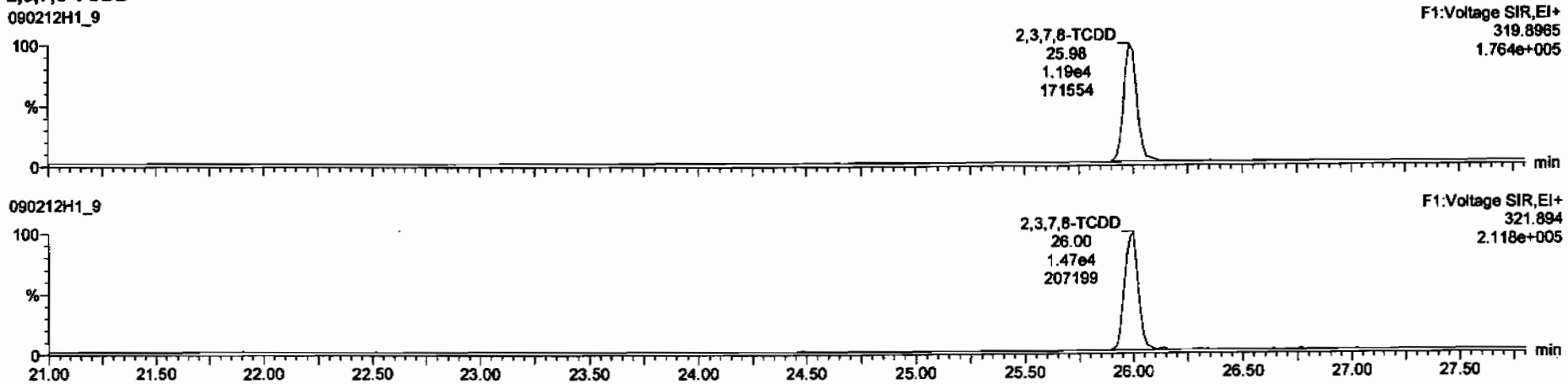

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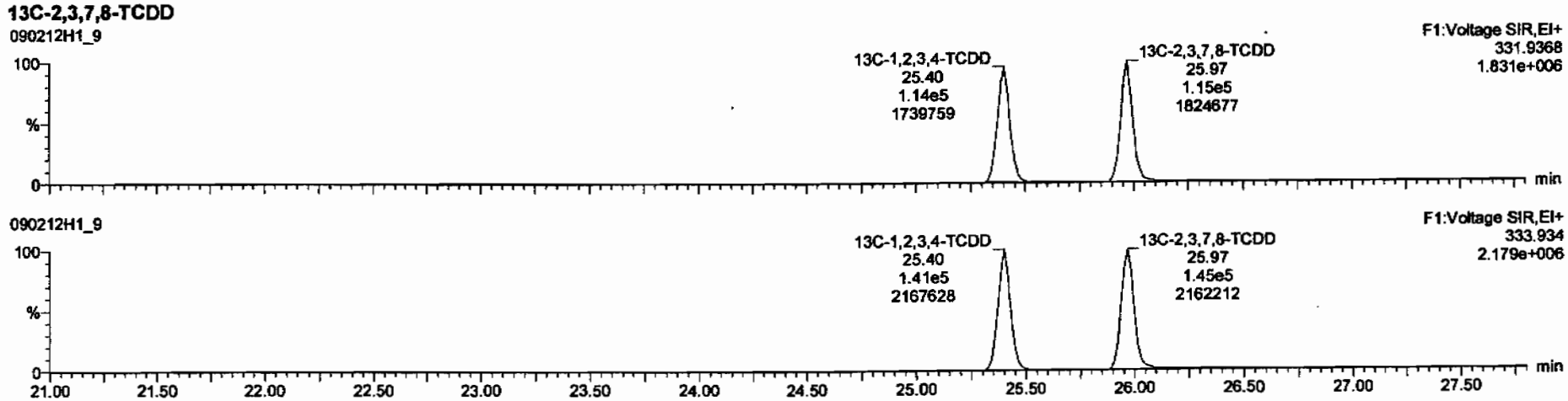

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37Cl-2,3,7,8-TCDD

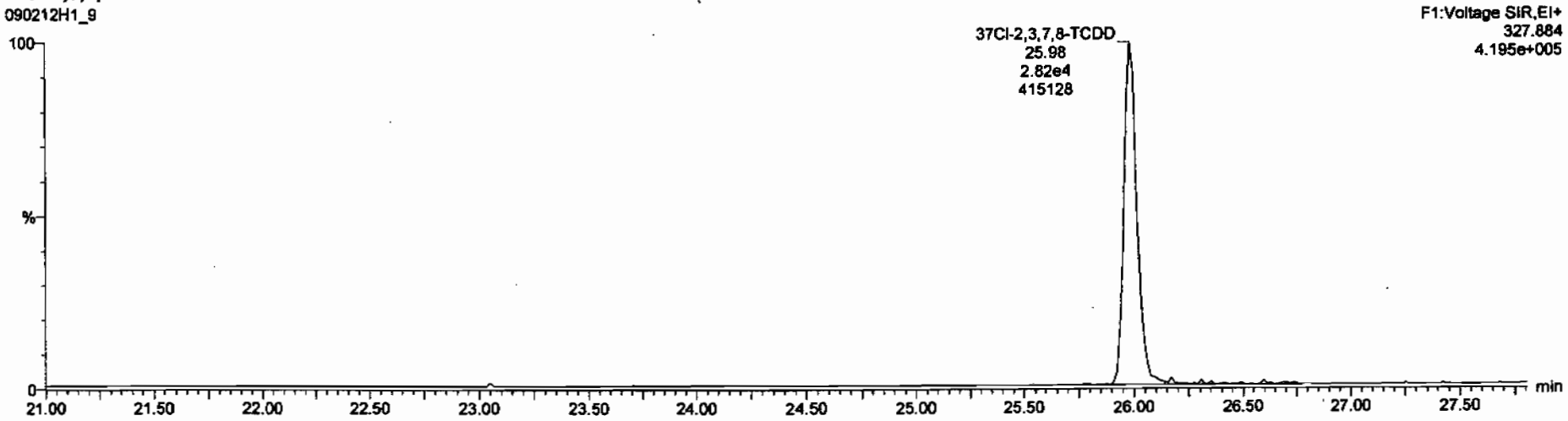

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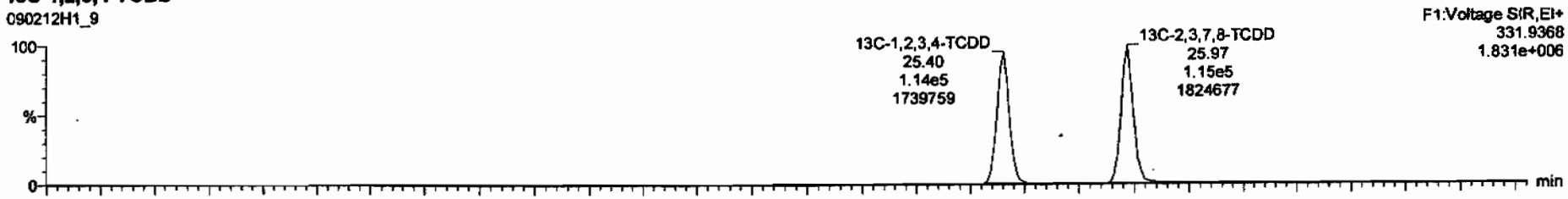

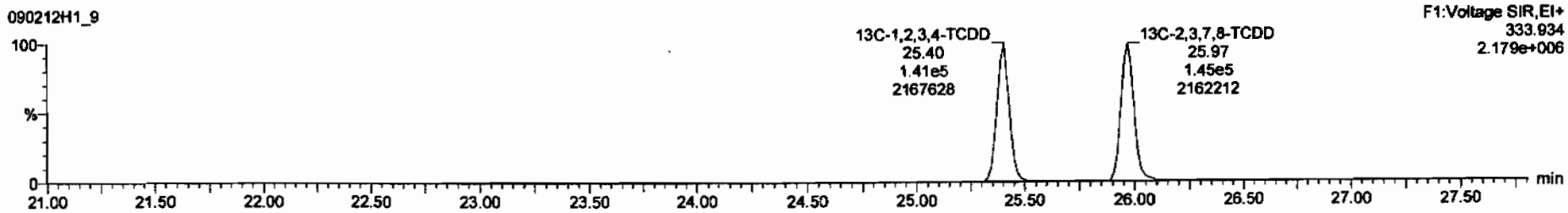

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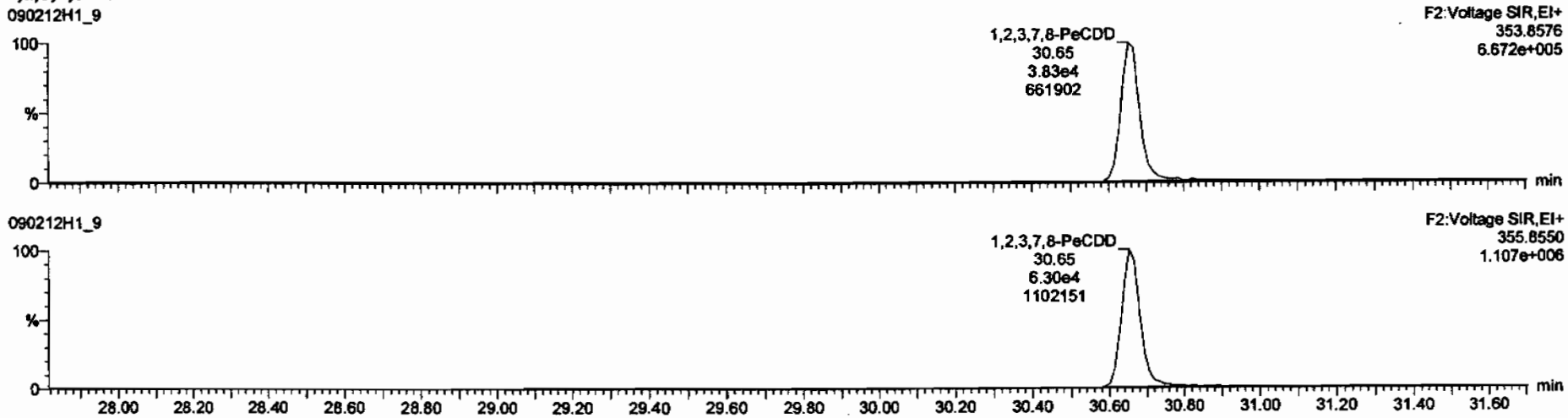

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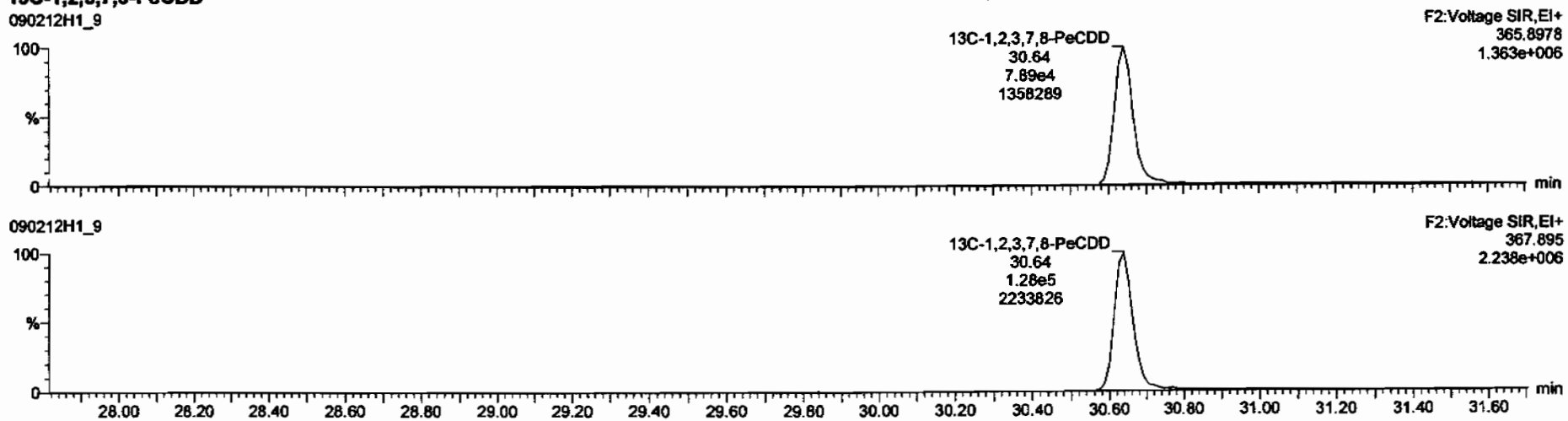

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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1,2,3,4,7,8-HxCDD

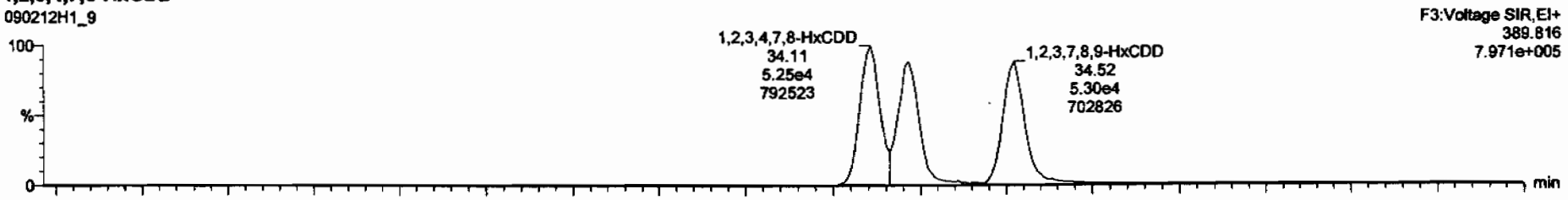

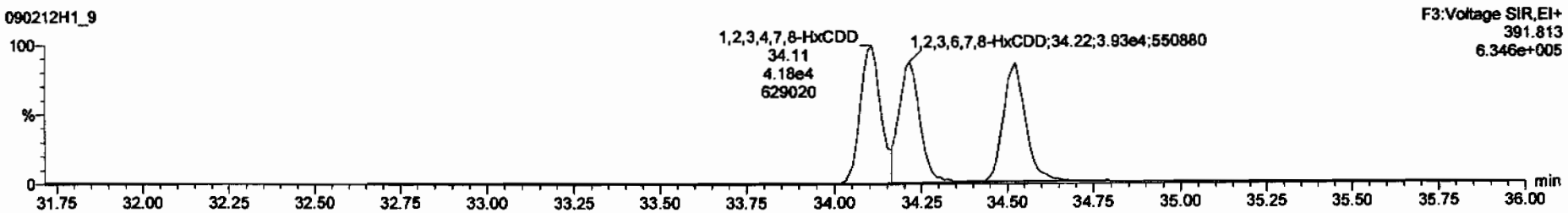

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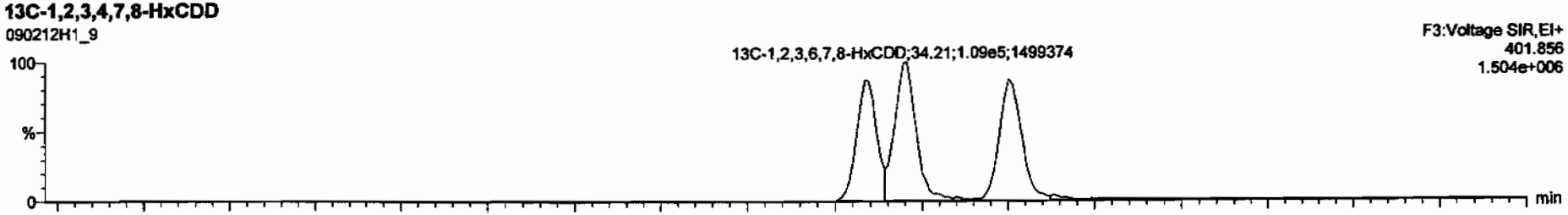

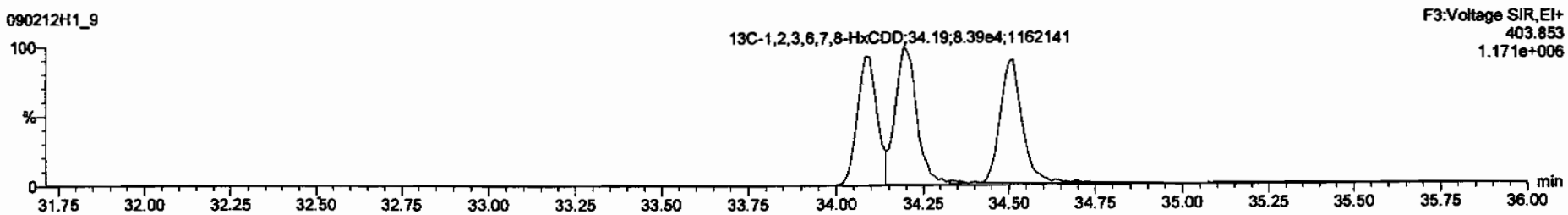

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1,2,3,4,6,7,8-HpCDD

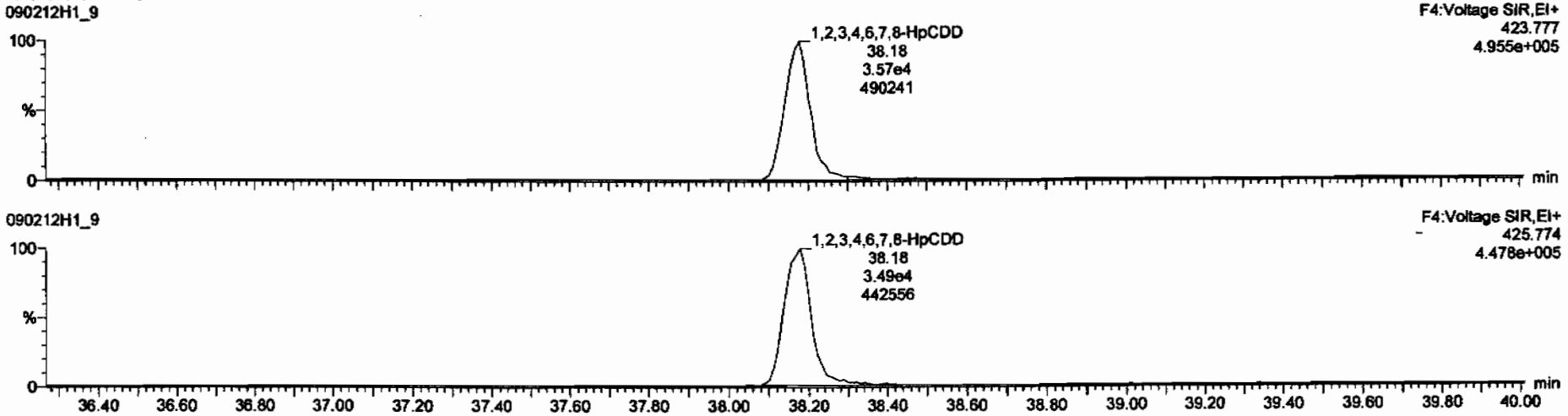

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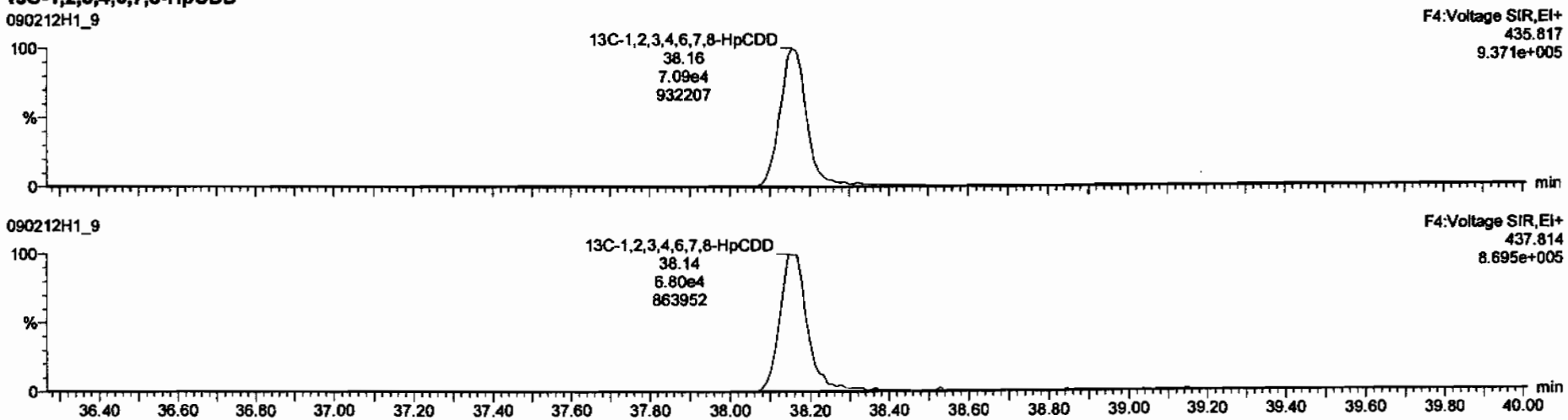

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OCDD

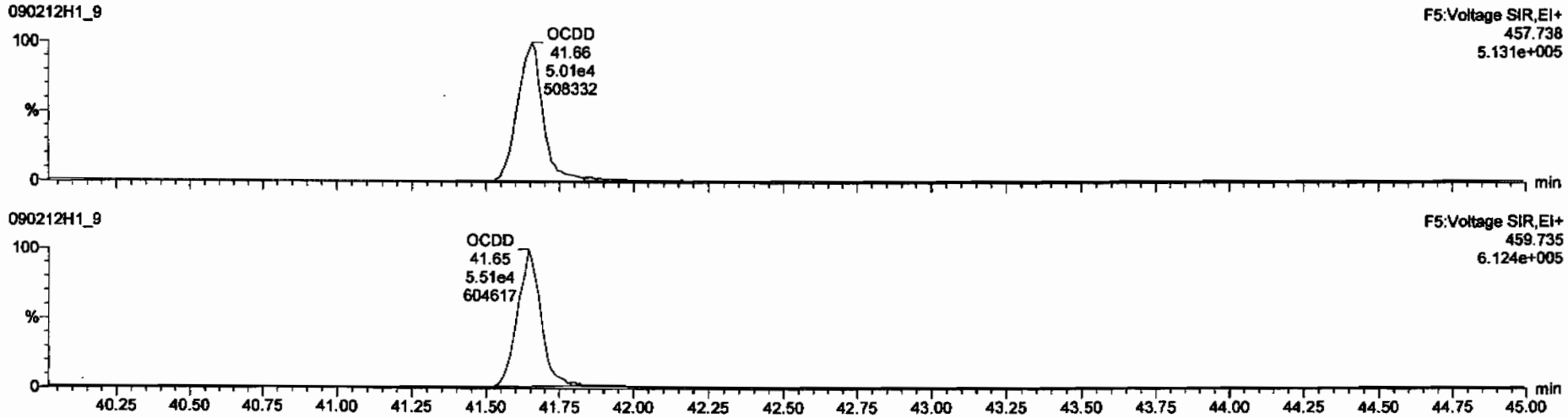

13C-OCDD

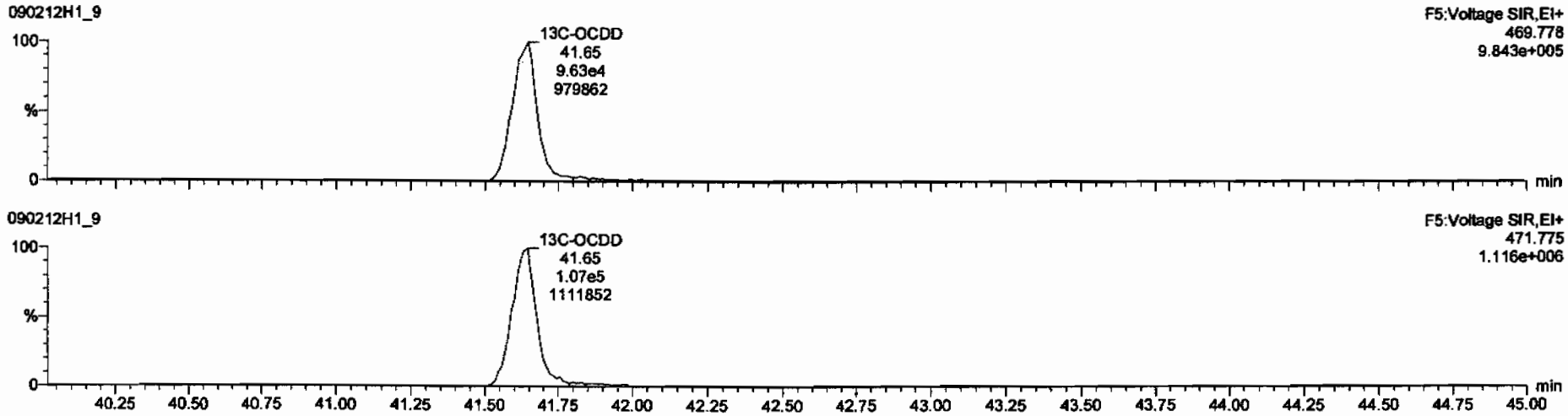

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2,3,7,8-TCDF

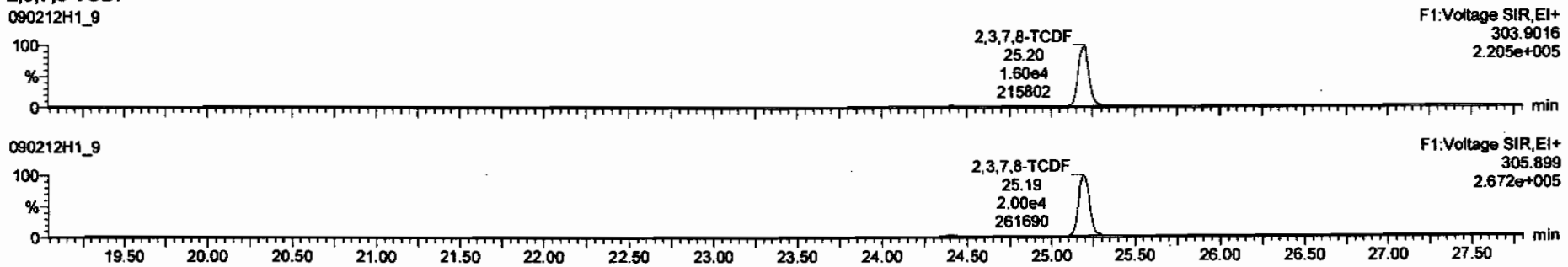

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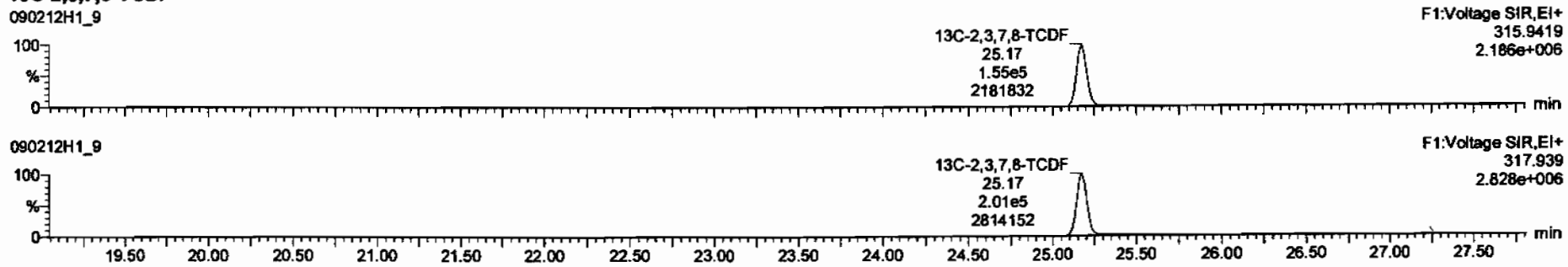

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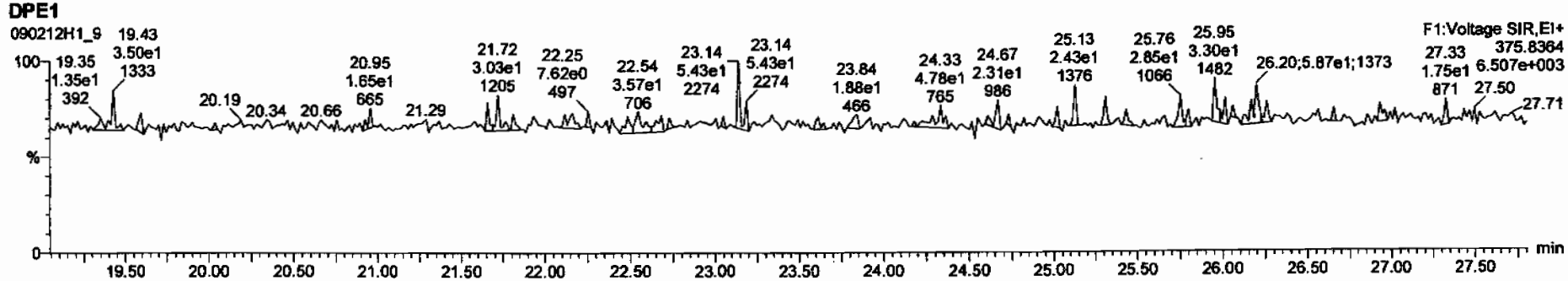

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1st Func. Penta-Furans

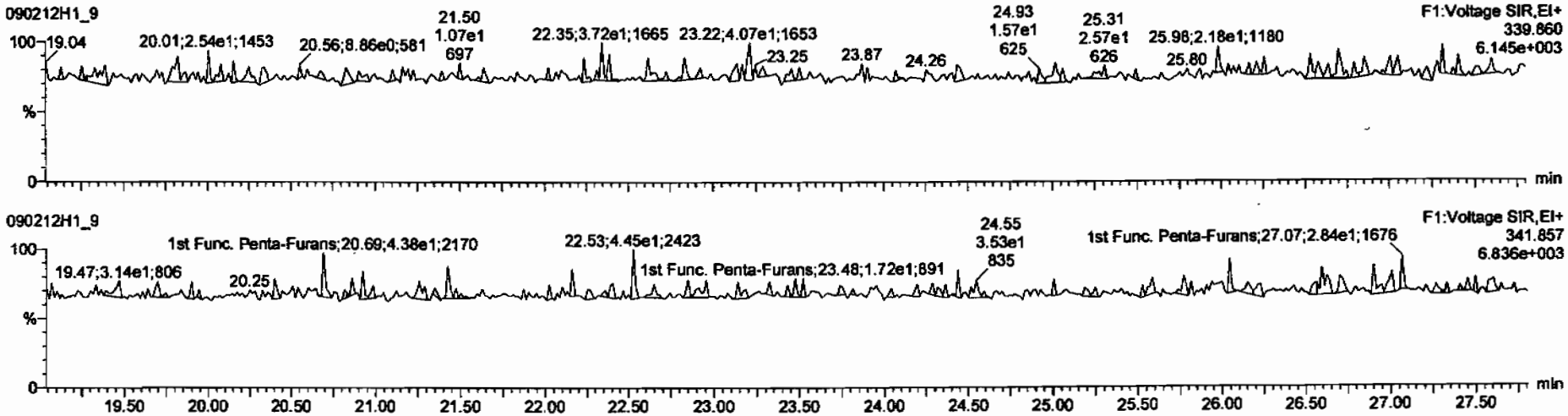

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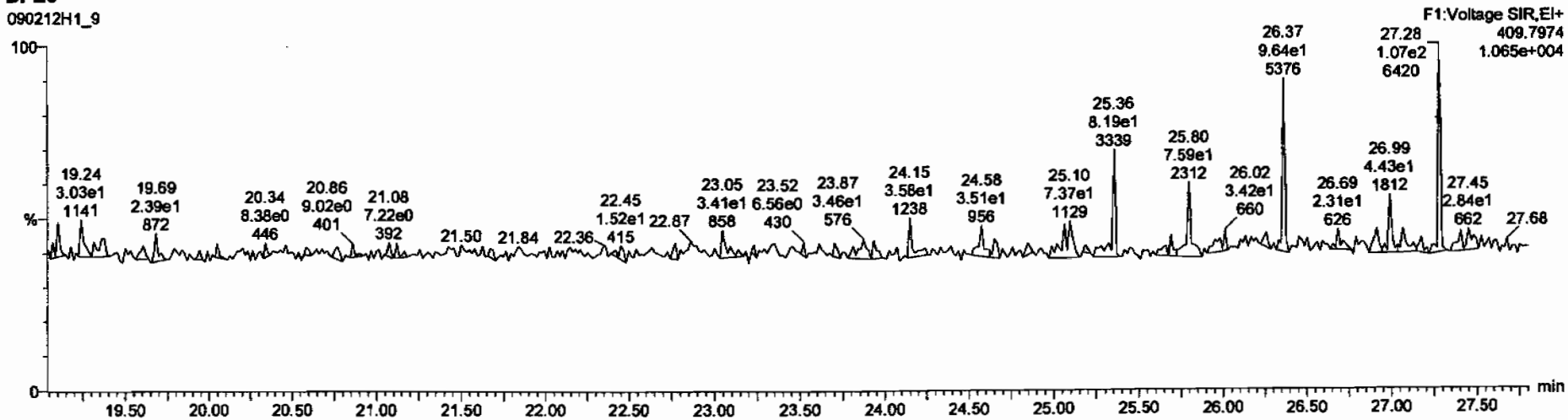

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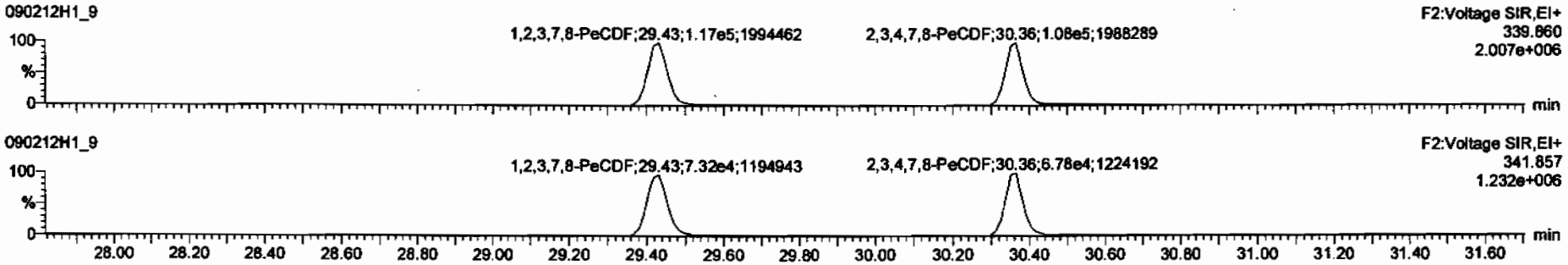

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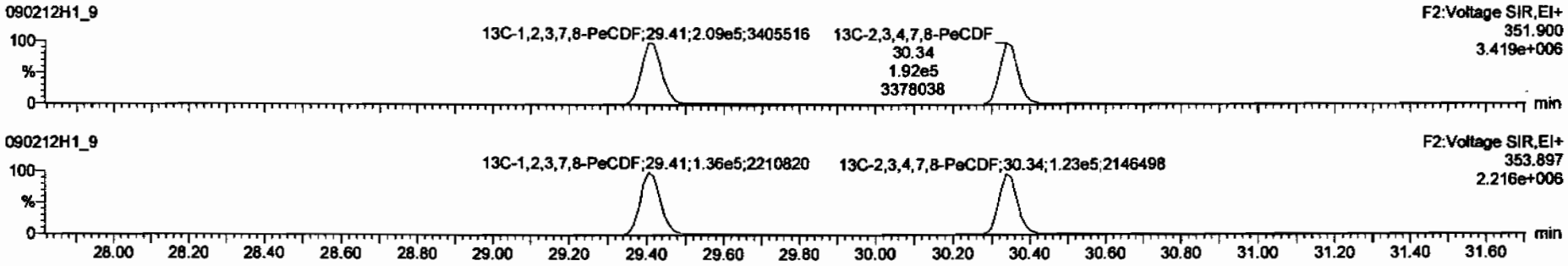

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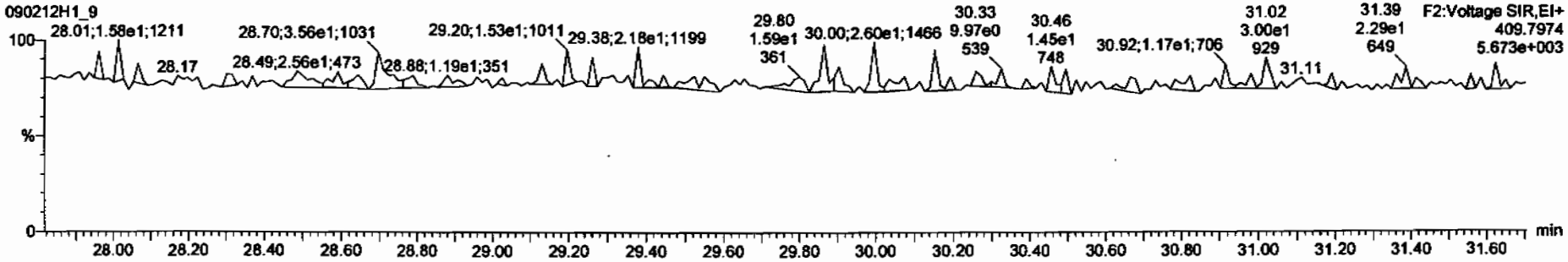

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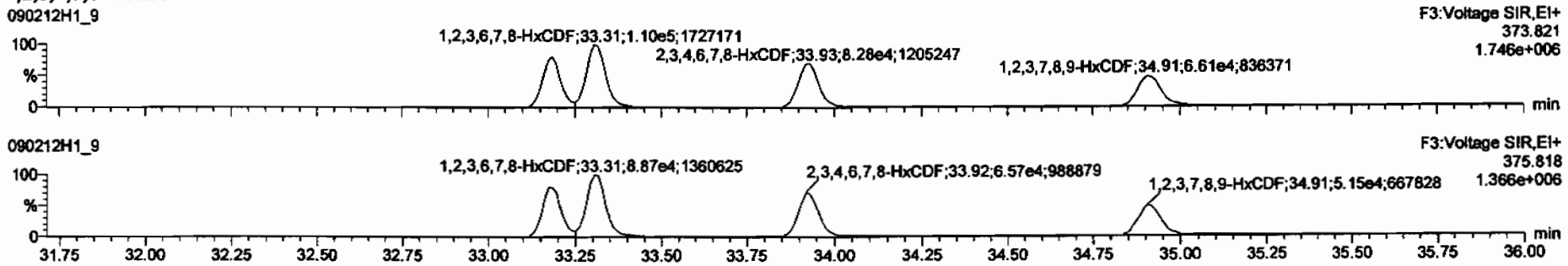

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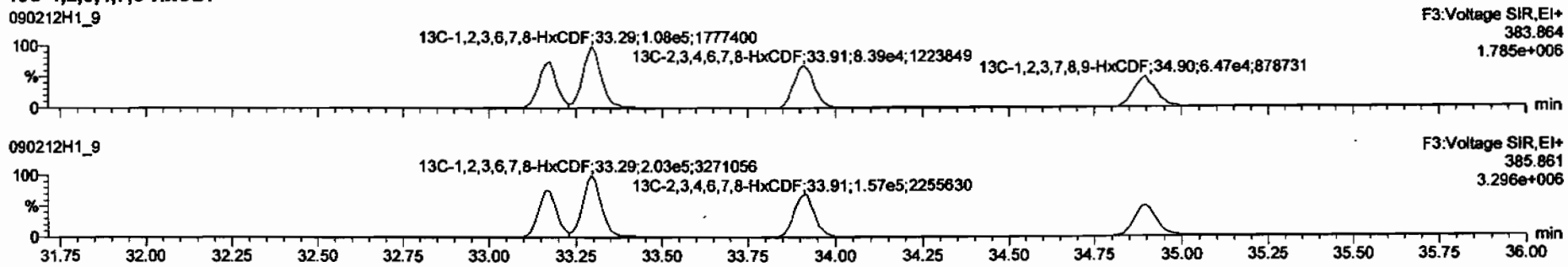

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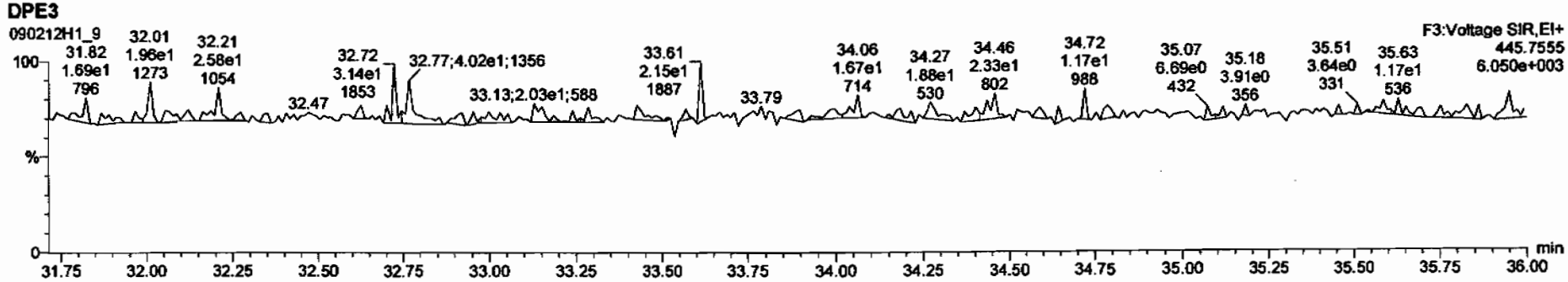

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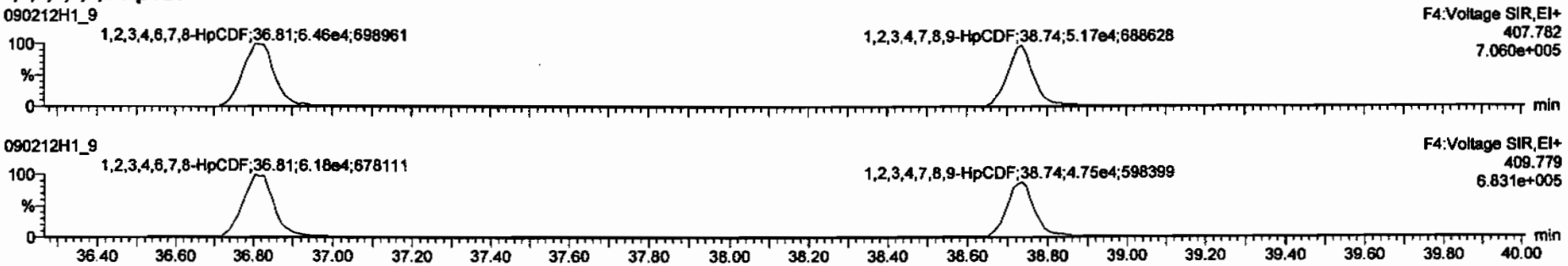

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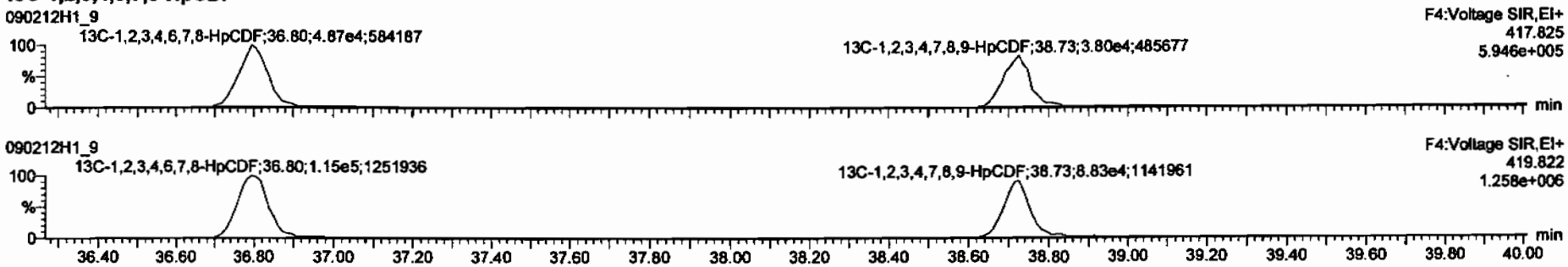

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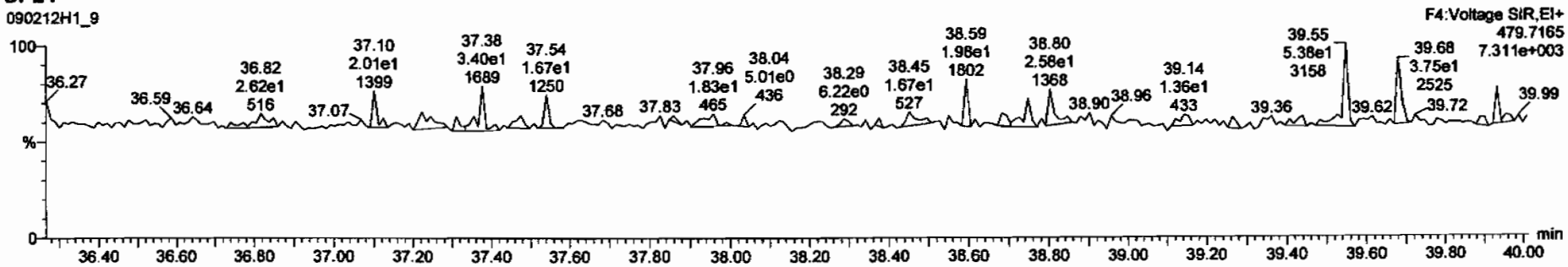

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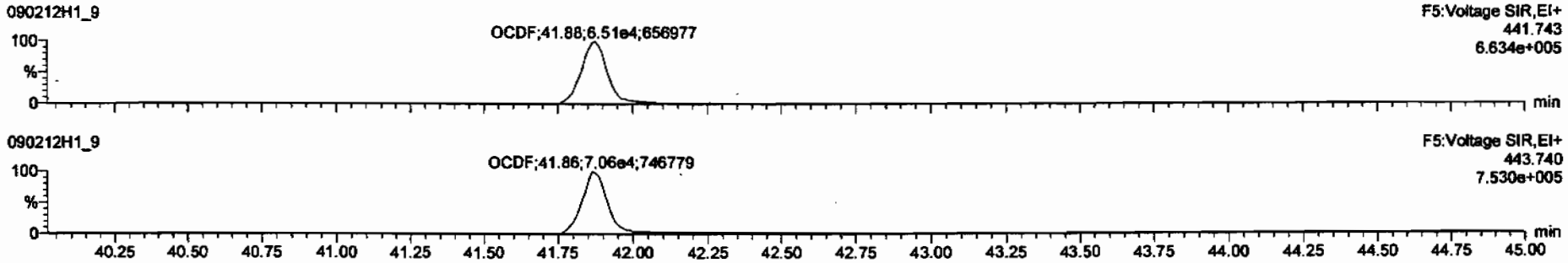

13C-OCDF

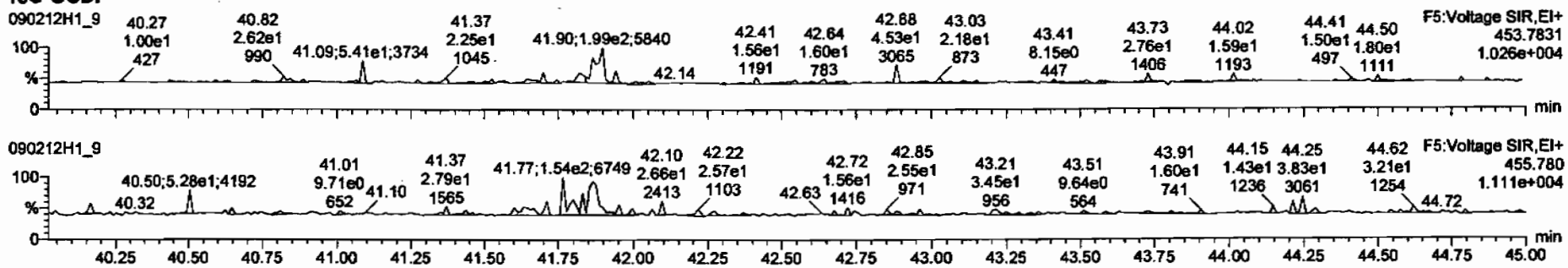

DPE5

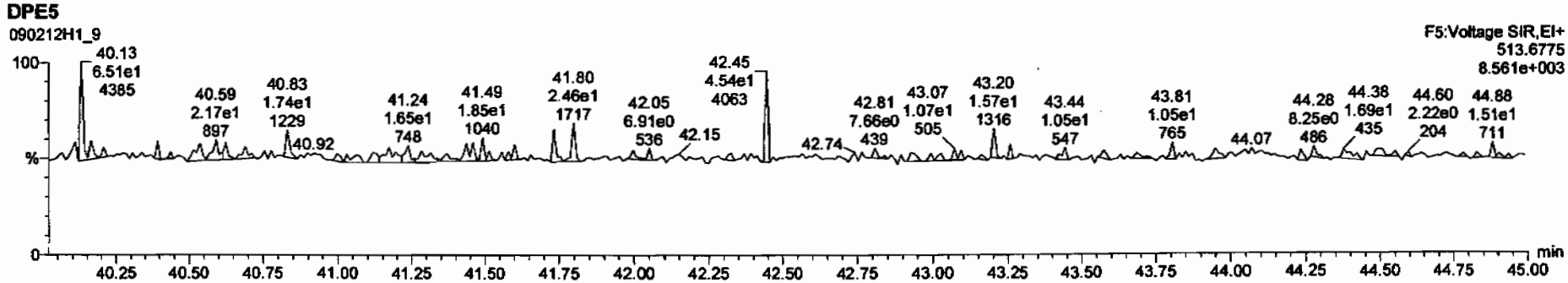

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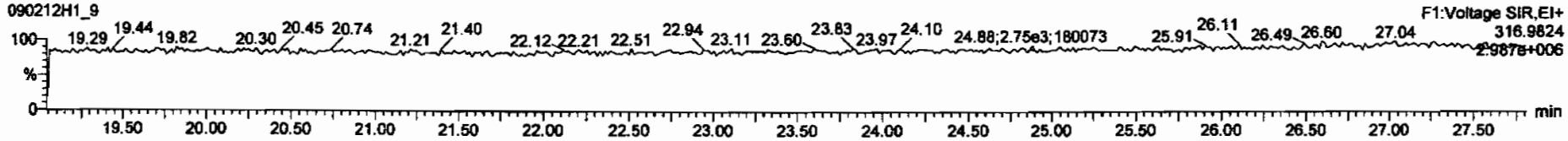

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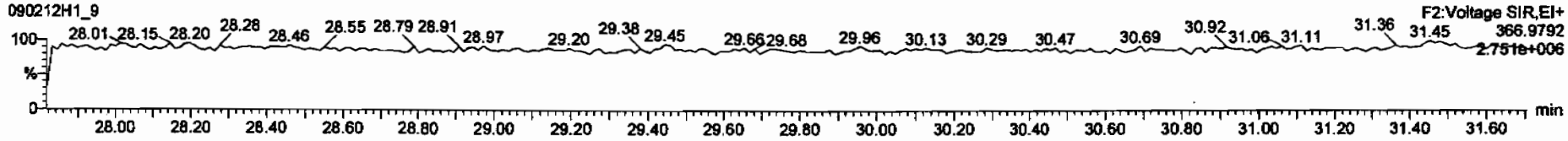

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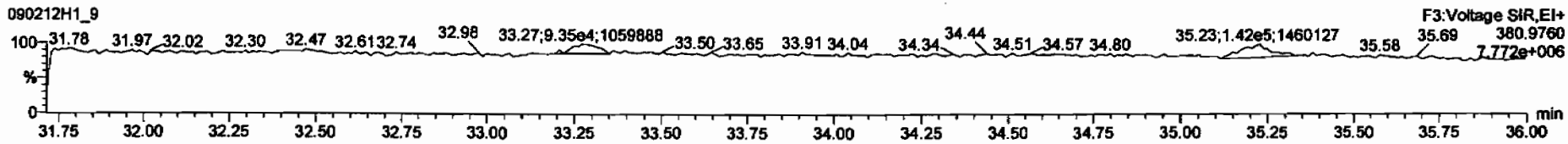

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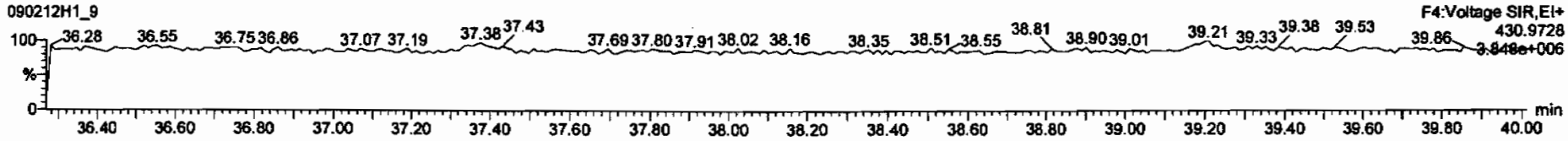

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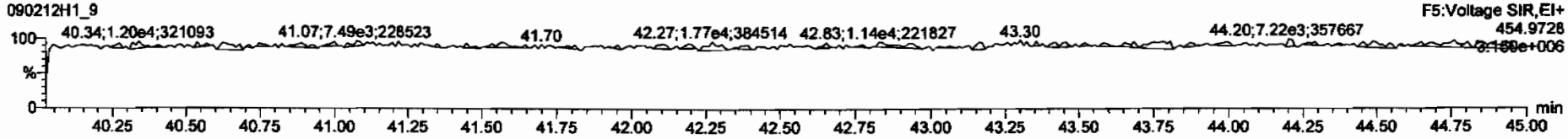

Friday, June 26, 2009

REQUEST NUMBER: 09-2497

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2497
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009
TURNAROUND/REPORT DUE: 7/11/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	
		1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2497

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2497

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2497C

REQUEST NUMBER: 09-2497

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10375	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10376	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10373	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10367	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10377	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10370	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10374	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10371	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10368	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10369	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10366	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10372	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10378	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10379	1	AMBER GLASS	8270C	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		6/26/09	3:00				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10367

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2007	MEDIA:	QBT4	Qbt 3
TIME COLLECTED (HH:MM)		1130	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605515		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Highly indurated pink/gray tuff, moist

FR: ~~FB~~: CAMO-09-10380 AG 6.24.09

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 35-016(h) - 05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

β/γ ≤ 228 dpm

PID Ambient Reading: 0.0 / 1.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10368

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1142	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605516	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sand → silt, with some cobbles, dry/moist sediment

FR: CAMO-09-10381

SAMPLE COMMENTS: None

LOCATION DESC: 35-016(h) 06

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm
β/γ ≤ 3 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sheryl Sherwood (Signature) [signature]	6/24/09 4:57
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10380

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1210	SUB-MEDIA:	OTHER	
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605515	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	

SAMPLE DESC: QC Sample of CAMO-09-10367

SAMPLE COMMENTS: None

LOCATION DESC: 016(h)-05

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10381

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1220	SUB-MEDIA:	OTHER	
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-LOSS16	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	

SAMPLE DESC: QC Sample of CAMO-09-10368

SAMPLE COMMENTS: None

LOCATION DESC: 35-016(h)-06

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gourmos

REVIEWED BY (PRINT) Estevan Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gourmos (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10374

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		0910	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605519	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1	↓	GS+TAL Metals	1 LITER POLY	Ice	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Sand → silt dry sediment w/ cobbles & some organics

SAMPLE COMMENTS: None

LOCATION DESC: AG 6.24.09 ~~03-01~~ 35-016(h) 09

FIELD SCREENING/MEASUREMENT RESULTS:

<= 11 dpm

β/γ <= 854 dpm

PID ambient Reading = 0.0 / 1.3 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.24.09	(Printed Name) Sherri Sherwood	6/24/09
(Signature) [signature]	1640	(Signature) Sherri Sherwood	4:51
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10375

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	qbt 2
TIME COLLECTED (HH:MM)		0917	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	OK	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605519		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	~~0.5~~ 1.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	~~2.5~~ 2.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

J.B. 6/24/09

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown/Tan highly indurated tuff

FD: CAMO-09-10378

SAMPLE COMMENTS: Interface @ ~~0.5'~~ 1.5 bgs

LOCATION DESC: 35-016(h)-09

FIELD SCREENING/MEASUREMENT RESULTS:

<≤ 11 dpm

Bfgs 1215 dpm

PID Ambient Reading = 0.0 / 2.0 ppm

COLLECTED BY (PRINT) A. Gowans

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowans (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 1645
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10372

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1020	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605518		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sand → silt sediment

SAMPLE COMMENTS: In drainage below road cut & culvert of unknown origin

LOCATION DESC: 35-016(h) - OB

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 548 dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) S. MATHOTAN (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10379

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	AG 6.27.09 ~~QBT3~~ Sed
TIME COLLECTED (HH:MM)		1010	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	UNK	MO-605517	FIELD QC TYPE:	FD	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	AG 6/24/09 ~~ok~~ Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Rod~~ 15 Day (AG 6.27.09)	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of Camo-09-10370
Sand → silt sediment

SAMPLE COMMENTS: Moved due to poor location (N) 3'. Drainage off of road cut & below culvert of unknown origin

LOCATION DESC: 35-016(h)-07

FIELD SCREENING/MEASUREMENT RESULTS:

α: 28 dpm
β/γ: 534 dpm

PID Ambient / Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch (Signature)	6/24/09 1640	(Printed Name) S. MARCZAK (Signature)	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10369

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	qbt 3
TIME COLLECTED (HH:MM)		1155	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605516		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Moist purple/gray tuff, indurated

SAMPLE COMMENTS: In drainage below parking lot

LOCATION DESC: 35-016(h) 06 (N) of parking between building 213 (TA-55

FIELD SCREENING/MEASUREMENT RESULTS:

α: 17 dpm
β/γ: 105 dpm

PID Ambient Reading: 0.0 / 1.2 ppm

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature) [signature]	6.24.09 1646	(Printed Name) S. MARCRAY (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY** (Printed Name) (Signature)	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10371

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Qbt 3
TIME COLLECTED (HH:MM)		1025	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605517		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	2.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	3.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: moist weathered purple/pink tuff w/ some pumice

SAMPLE COMMENTS: Interface @ 2.0' bgs

LOCATION DESC: 35 - 016(h) - 07

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 575 dpm

PID Ambient Reading = 0.0 / 0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature)	6.24.09 1640	(Printed Name) S. MARCZAK (Signature)	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10370

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1010	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605517	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1	↓	GS+TAL Metals	1 LITER POLY	Ice	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Sand → Silt sediment

FD:CAMO-09-10379

SAMPLE COMMENTS: Moved due to poor location moved (N) 3'. Drainage off of Road cut & below culvert from unknown source

LOCATION DESC: 35-016(h) - 07

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 28 dpm

β/γ ≤ 534 dpm

PID ambient / Reading : 0.0 / 0.0

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature)	6.24.09 1640	(Printed Name) S. MARCIAN (Signature)	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10378

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	Qbt2
TIME COLLECTED (HH:MM)		0917	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	UNK	MO-605519	FIELD QC TYPE:	FD	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	2.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-10375

Brown/Tan highly indurated tuff

SAMPLE COMMENTS: Interface @ 1.5' bgs

LOCATION DESC: 35-016(h)-09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 1215 dpm

PID Ambient Reading = 0.0 / 2.0 ppm

COLLECTED BY (PRINT) A. Gurmao

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gurmao (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARCAN (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10373

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	obt3
TIME COLLECTED (HH:MM)		1028	SUB-MEDIA:	UA	ok
PBS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605518		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/gray indurated tuff

SAMPLE COMMENTS: In drainage below road cut & culvert of unknown origin Interface @ 0.5'bgs

LOCATION DESC: 35-016(h) - 08

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 17$ dpm

$\beta/\gamma \leq 745$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARCZAK (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10377

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Qbt2
TIME COLLECTED (HH:MM)		0910	SUB-MEDIA:	UA	OK
TPS ID:	35-016(h)	OK	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605520		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: highly Indurated tan tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs, cutrite bucket required w/ breaker bar

LOCATION DESC: 35-016(h)-10

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq$ AG 6.24.09 ~~11~~ 23 dpm

$\beta/\gamma \leq$ AG 6.24.09 ~~1215~~ 1215 dpm

PID Ambient Reading: 0.0 / 11.3 ppm

COLLECTED BY (PRINT) A. Gomras REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomras (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARTIN (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10376

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		0905	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605520	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1 HA	15-Day	7196A	250 ML POLY	Ice	Y	
1 TIM	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1 HDS	↓	GS+TAL Metals	1 LITER POLY	Ice	↓	
1 HX	↓	H3	500 ML POLY	Ice	↓	
1 HG	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Brown dry/moist sand → silt, w/ organics

SAMPLE COMMENTS: None

LOCATION DESC: 35-016(h) – 10

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 34 dpm

β/γ ≤ 950 dpm

PID Ambient Reading = 0.0 / 0.8 ppm

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARQUEZ (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY** (Printed Name) (Signature)	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10366

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1120	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605515	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1	↓	GS+TAL Metals	1 LITER POLY	Ice	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Sand → silt sediment w/ some small cobbles

SAMPLE COMMENTS: In drainage below parking lot

LOCATION DESC: 35-016(h) - 05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ ∅ dpm

β/γ ≤ 30 dpm

PID Ambient Reading = 0.0 / 0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Estevan Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.24.09 1640	(Printed Name) S. MARCIAL	6/24/09 1640
(Signature)		(Signature)	
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CAMO-09-10366	ARS Sample ID:	ARS2-09-00075-001
Sample Collection Date:	06/24/09 11:20	Date Received:	06/25/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:44

Analyte Description	Analyte Results	Analyte Error +/- 2 s	MDC	TPU	Qual	Analyte Units	Analyte Test Method	Analyte Date/Time	Analyte Technician	Tracer/Chem Recovery
GROSS ALPHA	0.46	51.64	153.66	51.64	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	57.33	17.77	19.98	19.11		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.02	0.05	0.10	0.05	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	25.37	8.37	1.59	8.40		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	10.38	0.11	10.38	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.23	0.21	0.08	0.21	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	-0.01	13.58	0.07	13.58	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.07	0.15	0.12	0.15	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	0.94	0.41	0.13	0.41		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-226	0.48	0.32	0.34	0.32		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	0.75	0.48	0.20	0.48		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	1.49	2.28	1.13	2.30		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.15	0.28	0.12	0.28		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.80

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00075
Client Sample ID: CAMO-09-10367
Sample Collection Date: 06/24/09 11:30
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00075-002
Date Received: 06/25/09 00:00
Report Date: 06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	57.92	78.80	127.53	79.12	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	51.05	17.81	20.61	18.88		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.07	0.14	0.11	0.14	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	0.85	6.38	3.59	6.38	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	11.66	0.12	11.66	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.19	0.16	0.09	0.16	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	0.04	0.09	0.07	0.09	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.83	0.60	0.24	0.60	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.73	0.54	0.11	0.54		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-226	3.44	1.36	0.31	1.36		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	2.34	1.09	0.35	1.09		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	5.42	4.86	1.75	5.01		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.04	0.16	0.09	0.16	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 1.05

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CAMO-09-10368	ARS Sample ID:	ARS2-09-00075-003
Sample Collection Date:	06/24/09 11:42	Date Received:	06/25/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:44

Analyte Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	53.28	77.58	128.32	77.85	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	46.63	18.00	21.30	18.89		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	15.47	6.47	1.51	6.49		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	9.89	0.10	9.89	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.00	0.00	0.07	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	0.03	0.08	0.06	0.06	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.49	0.49	0.12	0.49	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.24	0.42	0.08	0.42		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-226	0.63	0.47	0.26	0.47		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	0.68	0.53	0.15	0.53		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	2.55	2.77	1.23	2.83		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.02	0.11	0.06	0.11	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.70

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate # 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00075
Client Sample ID: CAMO-09-10369
Sample Collection Date: 06/24/09 11:55
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00075-004
Date Received: 06/25/09 00:00
Report Date: 06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	9.90	58.53	133.72	58.53	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	56.30	17.94	20.15	19.21		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	15.21	5.81	1.76	5.84		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	11.50	0.12	11.50	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.13	0.13	0.08	0.13	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	0.17	0.18	0.07	0.18		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.00	11.96	0.13	11.96	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.38	0.55	0.19	0.55		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-228	1.50	0.88	0.31	0.88		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	1.58	0.81	0.31	0.82		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	1.89	2.39	1.19	2.40		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.23	0.26	0.11	0.26		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 1.19

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CAMO-09-10370	ARS Sample ID:	ARS2-09-00075-005
Sample Collection Date:	06/24/09 10:10	Date Received:	06/25/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-35.03	13.80	133.66	14.45	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	21.66	13.34	19.98	13.61		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	-2.11	-31.18	3.90	-31.18	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.19	0.13	0.10	0.13		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.09	0.08	0.07	0.08	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	-0.01	12.51	0.06	12.51	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.43	0.34	0.15	0.34	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	0.84	0.38	0.12	0.36		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-228	1.15	0.62	0.26	0.61		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	1.71	0.80	0.27	0.80		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	1.06	1.74	0.92	1.76		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.19	0.33	0.13	0.33		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.53

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00075
Client Sample ID: CAMO-09-10371
Sample Collection Date: 06/24/09 10:25
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00075-006
Date Received: 06/25/09 00:00
Report Date: 06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	22.47	61.57	127.53	61.64	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	45.57	16.98	20.61	17.87		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	-0.84	-19.16	3.36	-19.16	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	11.55	0.12	11.55	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.09	0.11	0.08	0.11	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	-0.01	14.84	0.07	14.84	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.40	0.36	0.13	0.36	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.42	0.50	0.13	0.50		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-226	1.66	0.86	0.30	0.86		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	1.71	0.94	0.16	0.95		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	2.16	2.26	1.09	2.31		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.42	0.28	0.08	0.28		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 1.51

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CAMO-09-10372	ARS Sample ID:	ARS2-09-00075-007
Sample Collection Date:	06/24/09 10:20	Date Received:	06/25/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Cham Recovery
GROSS ALPHA	53.29	77.58	128.32	77.58	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	42.47	17.54	21.30	18.29		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	-0.82	-22.61	3.83	-22.61	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	11.05	0.11	11.05	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.32	0.28	0.08	0.28	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	0.13	0.37	0.15	0.37	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	1.05	0.64	0.13	0.64	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.22	0.49	0.16	0.49		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-228	1.92	0.82	0.29	0.82		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	0.91	0.75	0.31	0.75		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	3.14	3.83	1.49	3.70		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.07	0.16	0.08	0.16	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.98

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00075
Client Sample ID: CAMO-09-10373
Sample Collection Date: 06/24/09 10:28
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00075-008
Date Received: 06/25/09 00:00
Report Date: 06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-8.83	48.50	133.72	48.50	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	60.72	18.28	20.18	19.74		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	-1.83	-33.79	3.88	-33.79	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	9.67	0.10	9.67	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.10	0.10	0.07	0.10	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	-0.01	12.65	0.06	12.65	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.00	10.05	0.11	10.05	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.51	0.45	0.06	0.45		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-228	2.24	1.21	0.26	1.22		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	0.85	0.84	0.37	0.84		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	1.68	2.20	1.12	2.23		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.22	0.33	0.14	0.33		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 1.25

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00075
Client Sample ID: CAMO-09-10374
Sample Collection Date: 06/24/09 09:10
Sample Matrix: Soil/Solid
Request or PO Number:
ARS Sample ID: ARS2-09-00075-009
Date Received: 06/25/09 00:00
Report Date: 06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-35.19	14.18	133.66	14.82	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	42.43	15.92	19.98	16.74		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	27.29	8.35	1.48	8.39		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	0.07	0.10	0.07	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.00	0.00	0.07	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	-0.01	12.65	0.06	12.65	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.00	10.05	0.11	10.05	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	0.75	0.39	0.15	0.39		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-226	1.00	0.69	0.32	0.69		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	-0.06	86.23	0.19	86.23	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	3.56	3.86	1.58	3.95		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.00	0.05	0.07	0.05	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.31

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CAMO-09-10375	ARS Sample ID:	ARS2-09-00075-010
Sample Collection Date:	06/24/09 09:17	Date Received:	06/25/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	111.12	99.18	127.33	100.10	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	32.09	18.29	20.61	19.37		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	21.62	8.86	2.03	8.88		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	13.30	0.13	13.30	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.32	0.29	0.10	0.29	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	0.01	0.04	0.08	0.04	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.69	0.53	0.15	0.53	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	2.41	0.67	0.11	0.67		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA 226	2.37	1.24	0.82	1.24		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	2.02	1.02	0.21	1.02		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	2.71	4.38	1.95	4.42		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.58	0.51	0.17	0.51		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.35

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00075
Client Sample ID: CAMO-09-10376
Sample Collection Date: 06/24/09 09:05
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00075-011
Date Received: 06/25/09 00:00
Report Date: 06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.84	86.53	128.32	86.99	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	31.31	16.40	21.30	16.85		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.60	0.09	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	-0.11	-5.87	3.00	-5.87	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	0.30	0.10	0.30	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.21	0.18	0.07	0.18	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	0.02	0.11	0.07	0.11	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.76	0.54	0.11	0.54	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.08	0.43	0.14	0.43		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-226	1.69	0.82	0.26	0.83		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	1.47	0.82	0.29	0.83		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	4.70	2.74	1.02	2.94		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.38	0.33	0.12	0.33		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.35

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CANO-09-10377	ARS Sample ID:	ARS2-09-00075-012
Sample Collection Date:	06/24/09 09:10	Date Received:	06/25/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	76.85	87.88	133.72	88.38	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	37.64	16.36	20.15	17.00		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	29.68	8.59	1.44	8.63		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	9.45	0.10	9.45	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.25	0.20	0.07	0.20	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	-0.01	12.37	0.06	12.37	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.38	0.44	0.14	0.44	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.80	0.51	0.13	0.52		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-226	0.67	0.69	0.28	0.69		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	2.14	1.12	0.31	1.13		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	3.57	3.11	1.25	3.21		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.19	0.18	0.07	0.18		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.67

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CAMO-09-10378	ARS Sample ID:	ARS2-09-00075-013
Sample Collection Date:	06/24/09 09:17	Date Received:	06/25/09 08:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.13	87.02	133.66	87.47	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	37.08	16.10	19.98	16.72		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	-2.67	-53.86	5.48	-53.86	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	12.70	0.13	12.70	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.24	0.24	0.09	0.24	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	-0.01	16.62	0.08	16.62	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.73	0.65	0.15	0.65	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.53	0.57	0.17	0.57		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-226	1.66	0.63	0.44	0.63		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	2.09	0.97	0.48	0.97		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	1.40	2.70	1.42	2.72	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.59	0.53	0.17	0.53		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.25

Quality Assurance Review

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LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CAMO-09-10379	ARS Sample ID:	ARS2-09-00075-014
Sample Collection Date:	06/24/09 10:10	Date Received:	06/25/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	4.79	50.79	127.53	50.79	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	28.97	14.93	20.61	15.34		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	-1.67	-31.27	3.65	-31.27	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	0.09	0.10	0.09	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.00	0.00	0.07	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	-0.01	12.94	0.08	12.94	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.70	0.44	0.12	0.44	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.21	0.45	0.14	0.45		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-228	-0.06	-0.42	0.51	-0.42	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	0.41	0.58	0.42	0.58	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	3.71	2.97	1.19	3.09		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.02	0.15	0.08	0.15	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.37

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-10366 → 10379
6518 → 6519
6527 → 6529
6531

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10380
10381
6533
6535

Reason: QC of Samples

Print Last Name Gomas Signature [signature] Date 6.24.07

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2497 VALIDATION DATE: 07/23/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Kevin A. Lambert ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): SVOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that several samples had mass spectra that contained contamination from co-eluting target analytes. No sample data were qualified as a result, based on professional judgment.
2. The ICAL r^2 values for 4-chloroaniline, hexachlorocyclopentadiene, and 2,4-dinitrophenol were <0.995. All associated sample results were NDs and, thus, were qualified UJ,SV7a.

   The ICV/CCV %Ds for benzoic acid and 2-methyl-4,6-dinitrophenol were >20%. The benzoic acid result for sample CAMO-09-10375 was a detect and, thus was qualified J,SV7c. All other associated sample results were NDs and, thus, were qualified UJ,SV7c.
3. The IS6 (perylene-d_{12}) areas for samples CAMO-09-10370, -10371, -10366, and -10379 were <50% but ≥10% of the daily CCV IS area. The benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene and benzo(ghi)perylene results for sample -10366 were detects and, thus, were qualified J,SV1b. All other

DATA VALIDATION COVER SHEET

5115-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

associated sample results were NDs and, thus, were qualified UJ,SV1b.

4. The LCS %Rs for 3-nitroaniline and 4-nitroaniline were > the laboratory's UALs. All associated sample results were NDs and, thus, were not qualified.
5. The MS/MSD RPD for 2,4-dinitrophenol was not within the laboratory QC limit. However, MS/MSD analyses are not required for SVOCs and, thus, no sample data were qualified.

Reviewed by: JEJ Level: I Date: 7/24/09

VALIDATOR'S SIGNATURE: Kevin A Lambert DATE: 07/23/09

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☒	☐	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

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Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

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Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☒	☐	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5115-2 **Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☒	☐	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☒	☐	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☒	☐	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5115-2 **Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503011	**Date Received:**	06/27/2009 09:05	**%Moisture:**	8.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10366	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:57	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0219.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	364	ug/kg	72.8	364	
108-95-2	Phenol	U	364	ug/kg	72.8	364	
95-57-8	2-Chlorophenol	U	364	ug/kg	72.8	364	
106-46-7	1,4-Dichlorobenzene	U	364	ug/kg	72.8	364	
621-64-7	N-Nitrosodipropylamine	U	364	ug/kg	72.8	364	
59-50-7	4-Chloro-3-methylphenol	U	364	ug/kg	72.8	364	
83-32-9	Acenaphthene	U	36.4	ug/kg	12.0	36.4	
121-14-2	2,4-Dinitrotoluene	U	364	ug/kg	36.4	364	
100-02-7	4-Nitrophenol	U	364	ug/kg	120	364	
87-86-5	Pentachlorophenol	U	364	ug/kg	90.9	364	
129-00-0	Pyrene		119	ug/kg	10.9	36.4	
110-86-1	Pyridine	U	364	ug/kg	72.8	364	
62-53-3	Aniline	U	364	ug/kg	109	364	
111-44-4	bis(2-Chloroethyl) ether	U	364	ug/kg	72.8	364	
541-73-1	1,3-Dichlorobenzene	U	364	ug/kg	72.8	364	
100-51-6	Benzyl alcohol	U	364	ug/kg	109	364	
95-50-1	1,2-Dichlorobenzene	U	364	ug/kg	72.8	364	
108-60-1	bis(2-Chloroisopropyl)ether	U	364	ug/kg	72.8	364	
95-48-7	o-Cresol	U	364	ug/kg	72.8	364	
65794-96-9	m,p-Cresols	U	364	ug/kg	109	364	
67-72-1	Hexachloroethane	U	364	ug/kg	72.8	364	
98-95-3	Nitrobenzene	U	364	ug/kg	72.8	364	
78-59-1	Isophorone	U	364	ug/kg	72.8	364	
88-75-5	2-Nitrophenol	U	364	ug/kg	72.8	364	
105-67-9	2,4-Dimethylphenol	U	364	ug/kg	127	364	
111-91-1	bis(2-Chloroethoxy)methane	U	364	ug/kg	72.8	364	
120-83-2	2,4-Dichlorophenol	U	364	ug/kg	72.8	364	
65-85-0	Benzoic acid	U	728	ug/kg	182	728	UJ,SV7c
91-20-3	Naphthalene	U	36.4	ug/kg	10.9	36.4	
106-47-8	4-Chloroaniline	U	364	ug/kg	72.8	364	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	364	ug/kg	72.8	364	
91-57-6	2-Methylnaphthalene	U	36.4	ug/kg	7.28	36.4	
77-47-4	Hexachlorocyclopentadiene	U	364	ug/kg	72.8	364	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	364	ug/kg	72.8	364	
95-95-4	2,4,5-Trichlorophenol	U	364	ug/kg	72.8	364	
91-58-7	2-Chloronaphthalene	U	36.4	ug/kg	12.0	36.4	
88-74-4	2-Nitroaniline	U	364	ug/kg	72.8	364	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	364	ug/kg	72.8	364	

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07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503011	Date Received:	06/27/2009 09:05	%Moisture:	8.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10366	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 14:57	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5g0219.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	364	ug/kg	72.8	364	
606-20-2	2,6-Dinitrotoluene	U	364	ug/kg	36.4	364	
208-96-8	Acenaphthylene	U	36.4	ug/kg	10.9	36.4	
51-28-5	2,4-Dinitrophenol	U	728	ug/kg	138	728	UJ,SV7a
132-64-9	Dibenzofuran	U	364	ug/kg	72.8	364	
84-66-2	Diethylphthalate	U	364	ug/kg	72.8	364	
86-73-7	Fluorene	U	36.4	ug/kg	10.9	36.4	
7005-72-3	4-Chlorophenylphenylether	U	364	ug/kg	72.8	364	
534-52-1	2-Methyl-4,6-dinitrophenol	U	364	ug/kg	72.8	364	UJ,SV7c
100-01-6	4-Nitroaniline	U	364	ug/kg	109	364	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	364	ug/kg	72.8	364	
122-66-7	Azobenzene	U	364	ug/kg	72.8	364	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	364	ug/kg	72.8	364	
118-74-1	Hexachlorobenzene	U	364	ug/kg	72.8	364	
85-01-8	Phenanthrene		72.1	ug/kg	10.9	36.4	
120-12-7	Anthracene	J	13.0	ug/kg	7.28	36.4	
84-74-2	Di-n-butylphthalate	U	364	ug/kg	72.8	364	
206-44-0	Fluoranthene		106	ug/kg	10.9	36.4	
85-68-7	Butylbenzylphthalate	U	364	ug/kg	72.8	364	
56-55-3	Benzo(a)anthracene		44.7	ug/kg	10.9	36.4	
91-94-1	3,3'-Dichlorobenzidine	U	364	ug/kg	109	364	
218-01-9	Chrysene		73.4	ug/kg	10.9	36.4	
117-81-7	bis(2-Ethylhexyl)phthalate	U	364	ug/kg	72.8	364	
117-84-0	Di-n-octylphthalate	U	364	ug/kg	72.8	364	UJ,SV1b
205-99-2	Benzo(b)fluoranthene		90.3	ug/kg	10.9	36.4	J,SV1b
207-08-9	Benzo(k)fluoranthene	J	34.8	ug/kg	10.9	36.4	
50-32-8	Benzo(a)pyrene		58.1	ug/kg	10.9	36.4	
193-39-5	Indeno(1,2,3-cd)pyrene	J	33.2	ug/kg	10.9	36.4	
53-70-3	Dibenzo(a,h)anthracene	U	36.4	ug/kg	10.9	36.4	UJ,SV1b
191-24-2	Benzo(ghi)perylene		38.9	ug/kg	10.9	36.4	J,SV1b
120-82-1	1,2,4-Trichlorobenzene	U	364	ug/kg	72.8	364	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
13466-78-9	3-Carene	3.97	533	ug/kg	96	NJ
	Unknown	9.2	223	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503011	Date Received:	06/27/2009 09:05	%Moisture:	8.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10366	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 14:57	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5g0219.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
17974-57-1	(3E,5E,7E)-6-Methyl-8-(2,6,6-trimethyl-1	9.25	333	ug/kg	89	NJ
	Unknown	9.35	270	ug/kg		J
	Unknown	9.44	491	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.52	780	ug/kg	95	NJ
	Unknown	9.54	465	ug/kg		J
112-04-9	Silane, trichlorooctadecyl-	10.16	410	ug/kg	96	NJ
1599-67-3	1-Docosene	10.21	641	ug/kg	97	NJ
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	10.42	706	ug/kg	91	NJ
593-49-7	Heptacosane	11.97	420	ug/kg	98	NJ
	Unknown	12.07	698	ug/kg		J
	Unknown	12.43	1110	ug/kg		J
	Unknown	13.22	972	ug/kg		J
	Unknown	14.11	535	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2497**	**Date Collected:**	**06/24/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232503004**	**Date Received:**	**06/27/2009 09:05**	**%Moisture:**	**14.6**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10367**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881878**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/02/2009 12:19**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/01/2009 22:14**	**Aliquot:**	**30.06 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0212.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	390	ug/kg	77.9	390	
108-95-2	Phenol	U	390	ug/kg	77.9	390	
95-57-8	2-Chlorophenol	U	390	ug/kg	77.9	390	
106-46-7	1,4-Dichlorobenzene	U	390	ug/kg	77.9	390	
621-64-7	N-Nitrosodipropylamine	U	390	ug/kg	77.9	390	
59-50-7	4-Chloro-3-methylphenol	U	390	ug/kg	77.9	390	
83-32-9	Acenaphthene	U	39.0	ug/kg	12.9	39.0	
121-14-2	2,4-Dinitrotoluene	U	390	ug/kg	39.0	390	
100-02-7	4-Nitrophenol	U	390	ug/kg	129	390	
87-86-5	Pentachlorophenol	U	390	ug/kg	97.4	390	
129-00-0	Pyrene	J	23.4	ug/kg	11.7	39.0	
110-86-1	Pyridine	U	390	ug/kg	77.9	390	
62-53-3	Aniline	U	390	ug/kg	117	390	
111-44-4	bis(2-Chloroethyl) ether	U	390	ug/kg	77.9	390	
541-73-1	1,3-Dichlorobenzene	U	390	ug/kg	77.9	390	
100-51-6	Benzyl alcohol	U	390	ug/kg	117	390	
95-50-1	1,2-Dichlorobenzene	U	390	ug/kg	77.9	390	
108-60-1	bis(2-Chloroisopropyl)ether	U	390	ug/kg	77.9	390	
95-48-7	o-Cresol	U	390	ug/kg	77.9	390	
65794-96-9	m,p-Cresols	U	390	ug/kg	117	390	
67-72-1	Hexachloroethane	U	390	ug/kg	77.9	390	
98-95-3	Nitrobenzene	U	390	ug/kg	77.9	390	
78-59-1	Isophorone	U	390	ug/kg	77.9	390	
88-75-5	2-Nitrophenol	U	390	ug/kg	77.9	390	
105-67-9	2,4-Dimethylphenol	U	390	ug/kg	136	390	
111-91-1	bis(2-Chloroethoxy)methane	U	390	ug/kg	77.9	390	
120-83-2	2,4-Dichlorophenol	U	390	ug/kg	77.9	390	
65-85-0	Benzoic acid	U	779	ug/kg	195	779	UJ,SV7c
91-20-3	Naphthalene	U	39.0	ug/kg	11.7	39.0	
106-47-8	4-Chloroaniline	U	390	ug/kg	77.9	390	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	390	ug/kg	77.9	390	
91-57-6	2-Methylnaphthalene	U	39.0	ug/kg	7.79	39.0	
77-47-4	Hexachlorocyclopentadiene	U	390	ug/kg	77.9	390	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	390	ug/kg	77.9	390	
95-95-4	2,4,5-Trichlorophenol	U	390	ug/kg	77.9	390	
91-58-7	2-Chloronaphthalene	U	39.0	ug/kg	12.9	39.0	
88-74-4	2-Nitroaniline	U	390	ug/kg	77.9	390	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	390	ug/kg	77.9	390	

KAL
07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	14.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10367	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 12:19	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0212.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	390	ug/kg	77.9	390	
606-20-2	2,6-Dinitrotoluene	U	390	ug/kg	39.0	390	
208-96-8	Acenaphthylene	U	39.0	ug/kg	11.7	39.0	
51-28-5	2,4-Dinitrophenol	U	779	ug/kg	148	779	UJ,SV7a
132-64-9	Dibenzofuran	U	390	ug/kg	77.9	390	
84-66-2	Diethylphthalate	U	390	ug/kg	77.9	390	
86-73-7	Fluorene	U	39.0	ug/kg	11.7	39.0	
7005-72-3	4-Chlorophenylphenylether	U	390	ug/kg	77.9	390	
534-52-1	2-Methyl-4,6-dinitrophenol	U	390	ug/kg	77.9	390	UJ,SV7c
100-01-6	4-Nitroaniline	U	390	ug/kg	117	390	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	390	ug/kg	77.9	390	
122-66-7	Azobenzene	U	390	ug/kg	77.9	390	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	390	ug/kg	77.9	390	
118-74-1	Hexachlorobenzene	U	390	ug/kg	77.9	390	
85-01-8	Phenanthrene	U	39.0	ug/kg	11.7	39.0	
120-12-7	Anthracene	U	39.0	ug/kg	7.79	39.0	
84-74-2	Di-n-butylphthalate	U	390	ug/kg	77.9	390	
206-44-0	Fluoranthene	J	24.2	ug/kg	11.7	39.0	
85-68-7	Butylbenzylphthalate	U	390	ug/kg	77.9	390	
56-55-3	Benzo(a)anthracene	J	16.5	ug/kg	11.7	39.0	
91-94-1	3,3'-Dichlorobenzidine	U	390	ug/kg	117	390	
218-01-9	Chrysene	J	15.3	ug/kg	11.7	39.0	
117-81-7	bis(2-Ethylhexyl)phthalate	U	390	ug/kg	77.9	390	
117-84-0	Di-n-octylphthalate	U	390	ug/kg	77.9	390	
205-99-2	Benzo(b)fluoranthene	U	39.0	ug/kg	11.7	39.0	
207-08-9	Benzo(k)fluoranthene	U	39.0	ug/kg	11.7	39.0	
50-32-8	Benzo(a)pyrene	J	17.1	ug/kg	11.7	39.0	
193-39-5	Indeno(1,2,3-cd)pyrene	U	39.0	ug/kg	11.7	39.0	
53-70-3	Dibenzo(a,h)anthracene	U	39.0	ug/kg	11.7	39.0	
191-24-2	Benzo(ghi)perylene	U	39.0	ug/kg	11.7	39.0	
120-82-1	1,2,4-Trichlorobenzene	U	390	ug/kg	77.9	390	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	208	ug/kg		JA

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503009	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10368	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:12	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0217.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	352	ug/kg	70.4	352	
108-95-2	Phenol	U	352	ug/kg	70.4	352	
95-57-8	2-Chlorophenol	U	352	ug/kg	70.4	352	
106-46-7	1,4-Dichlorobenzene	U	352	ug/kg	70.4	352	
621-64-7	N-Nitrosodipropylamine	U	352	ug/kg	70.4	352	
59-50-7	4-Chloro-3-methylphenol	U	352	ug/kg	70.4	352	
83-32-9	Acenaphthene	U	35.2	ug/kg	11.6	35.2	
121-14-2	2,4-Dinitrotoluene	U	352	ug/kg	35.2	352	
100-02-7	4-Nitrophenol	U	352	ug/kg	116	352	
87-86-5	Pentachlorophenol	U	352	ug/kg	88.0	352	
129-00-0	Pyrene		172	ug/kg	10.6	35.2	
110-86-1	Pyridine	U	352	ug/kg	70.4	352	
62-53-3	Aniline	U	352	ug/kg	106	352	
111-44-4	bis(2-Chloroethyl) ether	U	352	ug/kg	70.4	352	
541-73-1	1,3-Dichlorobenzene	U	352	ug/kg	70.4	352	
100-51-6	Benzyl alcohol	U	352	ug/kg	106	352	
95-50-1	1,2-Dichlorobenzene	U	352	ug/kg	70.4	352	
108-60-1	bis(2-Chloroisopropyl)ether	U	352	ug/kg	70.4	352	
95-48-7	o-Cresol	U	352	ug/kg	70.4	352	
65794-96-9	m,p-Cresols	U	352	ug/kg	106	352	
67-72-1	Hexachloroethane	U	352	ug/kg	70.4	352	
98-95-3	Nitrobenzene	U	352	ug/kg	70.4	352	
78-59-1	Isophorone	U	352	ug/kg	70.4	352	
88-75-5	2-Nitrophenol	U	352	ug/kg	70.4	352	
105-67-9	2,4-Dimethylphenol	U	352	ug/kg	123	352	
111-91-1	bis(2-Chloroethoxy)methane	U	352	ug/kg	70.4	352	
120-83-2	2,4-Dichlorophenol	U	352	ug/kg	70.4	352	
65-85-0	Benzoic acid	U	704	ug/kg	176	704	UJ,SV7c
91-20-3	Naphthalene	U	35.2	ug/kg	10.6	35.2	
106-47-8	4-Chloroaniline	U	352	ug/kg	70.4	352	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	352	ug/kg	70.4	352	
91-57-6	2-Methylnaphthalene	U	35.2	ug/kg	7.04	35.2	
77-47-4	Hexachlorocyclopentadiene	U	352	ug/kg	70.4	352	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	352	ug/kg	70.4	352	
95-95-4	2,4,5-Trichlorophenol	U	352	ug/kg	70.4	352	
91-58-7	2-Chloronaphthalene	U	35.2	ug/kg	11.6	35.2	
88-74-4	2-Nitroaniline	U	352	ug/kg	70.4	352	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	352	ug/kg	70.4	352	

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Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503009	Date Received:	06/27/2009 09:05	%Moisture:	5.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10368	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 14:12	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0217.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	352	ug/kg	70.4	352	
606-20-2	2,6-Dinitrotoluene	U	352	ug/kg	35.2	352	
208-96-8	Acenaphthylene	U	35.2	ug/kg	10.6	35.2	
51-28-5	2,4-Dinitrophenol	U	704	ug/kg	134	704	UJ,SV7a
132-64-9	Dibenzofuran	U	352	ug/kg	70.4	352	
84-66-2	Diethylphthalate	U	352	ug/kg	70.4	352	
86-73-7	Fluorene	U	35.2	ug/kg	10.6	35.2	
7005-72-3	4-Chlorophenylphenylether	U	352	ug/kg	70.4	352	
534-52-1	2-Methyl-4,6-dinitrophenol	U	352	ug/kg	70.4	352	UJ,SV7c
100-01-6	4-Nitroaniline	U	352	ug/kg	106	352	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	352	ug/kg	70.4	352	
122-66-7	Azobenzene	U	352	ug/kg	70.4	352	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	352	ug/kg	70.4	352	
118-74-1	Hexachlorobenzene	U	352	ug/kg	70.4	352	
85-01-8	Phenanthrene		46.6	ug/kg	10.6	35.2	
120-12-7	Anthracene	U	35.2	ug/kg	7.04	35.2	
84-74-2	Di-n-butylphthalate	U	352	ug/kg	70.4	352	
206-44-0	Fluoranthene		154	ug/kg	10.6	35.2	
85-68-7	Butylbenzylphthalate	U	352	ug/kg	70.4	352	
56-55-3	Benzo(a)anthracene		58.6	ug/kg	10.6	35.2	
91-94-1	3,3'-Dichlorobenzidine	U	352	ug/kg	106	352	
218-01-9	Chrysene		95.9	ug/kg	10.6	35.2	
117-81-7	bis(2-Ethylhexyl)phthalate	U	352	ug/kg	70.4	352	
117-84-0	Di-n-octylphthalate	U	352	ug/kg	70.4	352	
205-99-2	Benzo(b)fluoranthene		140	ug/kg	10.6	35.2	
207-08-9	Benzo(k)fluoranthene		60.7	ug/kg	10.6	35.2	
50-32-8	Benzo(a)pyrene		83.9	ug/kg	10.6	35.2	
193-39-5	Indeno(1,2,3-cd)pyrene		55.8	ug/kg	10.6	35.2	
53-70-3	Dibenzo(a,h)anthracene	U	35.2	ug/kg	10.6	35.2	
191-24-2	Benzo(ghi)perylene		68.0	ug/kg	10.6	35.2	
120-82-1	1,2,4-Trichlorobenzene	U	352	ug/kg	70.4	352	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503010	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10369	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0218.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.2	376	
108-95-2	Phenol	U	376	ug/kg	75.2	376	
95-57-8	2-Chlorophenol	U	376	ug/kg	75.2	376	
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.2	376	
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.2	376	
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	75.2	376	
83-32-9	Acenaphthene	U	37.6	ug/kg	12.4	37.6	
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376	
100-02-7	4-Nitrophenol	U	376	ug/kg	124	376	
87-86-5	Pentachlorophenol	U	376	ug/kg	94.0	376	
129-00-0	Pyrene	U	37.6	ug/kg	11.3	37.6	
110-86-1	Pyridine	U	376	ug/kg	75.2	376	
62-53-3	Aniline	U	376	ug/kg	113	376	
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.2	376	
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.2	376	
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376	
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.2	376	
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.2	376	
95-48-7	o-Cresol	U	376	ug/kg	75.2	376	
65794-96-9	m,p-Cresols	U	376	ug/kg	113	376	
67-72-1	Hexachloroethane	U	376	ug/kg	75.2	376	
98-95-3	Nitrobenzene	U	376	ug/kg	75.2	376	
78-59-1	Isophorone	U	376	ug/kg	75.2	376	
88-75-5	2-Nitrophenol	U	376	ug/kg	75.2	376	
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	132	376	
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.2	376	
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.2	376	
65-85-0	Benzoic acid	U	752	ug/kg	188	752	UJ,SV7c
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6	
106-47-8	4-Chloroaniline	U	376	ug/kg	75.2	376	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.2	376	
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.52	37.6	
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.2	376	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.2	376	
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.2	376	
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	12.4	37.6	
88-74-4	2-Nitroaniline	U	376	ug/kg	75.2	376	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	376	ug/kg	75.2	376	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503010	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10369	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0218.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	376	ug/kg	75.2	376	
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376	
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6	
51-28-5	2,4-Dinitrophenol	U	752	ug/kg	143	752	UJ,SV7a
132-64-9	Dibenzofuran	U	376	ug/kg	75.2	376	
84-66-2	Diethylphthalate	U	376	ug/kg	75.2	376	
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6	
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	75.2	376	
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.2	376	UJ,SV7c
100-01-6	4-Nitroaniline	U	376	ug/kg	113	376	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	376	ug/kg	75.2	376	
122-66-7	Azobenzene	U	376	ug/kg	75.2	376	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	75.2	376	
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.2	376	
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6	
120-12-7	Anthracene	U	37.6	ug/kg	7.52	37.6	
84-74-2	Di-n-butylphthalate	U	376	ug/kg	75.2	376	
206-44-0	Fluoranthene	J	11.3	ug/kg	11.3	37.6	
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.2	376	
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6	
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376	
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6	
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.2	376	
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.2	376	
205-99-2	Benzo(b)fluoranthene	J	13.2	ug/kg	11.3	37.6	
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6	
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6	
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6	
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6	
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.2	376	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	197	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.87	199	ug/kg	99	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503010	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10369	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0218.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.42	185	ug/kg		J
	Unknown	13.22	339	ug/kg		J
83-47-6	.gamma.-Sitosterol	14.12	496	ug/kg	91	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10370	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:05	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	347	ug/kg	69.5	347	
108-95-2	Phenol	U	347	ug/kg	69.5	347	
95-57-8	2-Chlorophenol	U	347	ug/kg	69.5	347	
106-46-7	1,4-Dichlorobenzene	U	347	ug/kg	69.5	347	
621-64-7	N-Nitrosodipropylamine	U	347	ug/kg	69.5	347	
59-50-7	4-Chloro-3-methylphenol	U	347	ug/kg	69.5	347	
83-32-9	Acenaphthene	U	34.7	ug/kg	11.5	34.7	
121-14-2	2,4-Dinitrotoluene	U	347	ug/kg	34.7	347	
100-02-7	4-Nitrophenol	U	347	ug/kg	115	347	
87-86-5	Pentachlorophenol	U	347	ug/kg	86.8	347	
129-00-0	Pyrene	J	11.9	ug/kg	10.4	34.7	
110-86-1	Pyridine	U	347	ug/kg	69.5	347	
62-53-3	Aniline	U	347	ug/kg	104	347	
111-44-4	bis(2-Chloroethyl) ether	U	347	ug/kg	69.5	347	
541-73-1	1,3-Dichlorobenzene	U	347	ug/kg	69.5	347	
100-51-6	Benzyl alcohol	U	347	ug/kg	104	347	
95-50-1	1,2-Dichlorobenzene	U	347	ug/kg	69.5	347	
108-60-1	bis(2-Chloroisopropyl)ether	U	347	ug/kg	69.5	347	
95-48-7	o-Cresol	U	347	ug/kg	69.5	347	
65794-96-9	m,p-Cresols	U	347	ug/kg	104	347	
67-72-1	Hexachloroethane	U	347	ug/kg	69.5	347	
98-95-3	Nitrobenzene	U	347	ug/kg	69.5	347	
78-59-1	Isophorone	U	347	ug/kg	69.5	347	
88-75-5	2-Nitrophenol	U	347	ug/kg	69.5	347	
105-67-9	2,4-Dimethylphenol	U	347	ug/kg	122	347	
111-91-1	bis(2-Chloroethoxy)methane	U	347	ug/kg	69.5	347	
120-83-2	2,4-Dichlorophenol	U	347	ug/kg	69.5	347	
65-85-0	Benzoic acid	U	695	ug/kg	174	695	UJ,SV7c
91-20-3	Naphthalene	U	34.7	ug/kg	10.4	34.7	
106-47-8	4-Chloroaniline	U	347	ug/kg	69.5	347	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	347	ug/kg	69.5	347	
91-57-6	2-Methylnaphthalene	U	34.7	ug/kg	6.95	34.7	
77-47-4	Hexachlorocyclopentadiene	U	347	ug/kg	69.5	347	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	347	ug/kg	69.5	347	
95-95-4	2,4,5-Trichlorophenol	U	347	ug/kg	69.5	347	
91-58-7	2-Chloronaphthalene	U	34.7	ug/kg	11.5	34.7	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	347	ug/kg	69.5	347	
99-09-2	3-Nitroaniline	U	347	ug/kg	69.5	347	

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Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10370	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:05	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	347	ug/kg	69.5	347	
606-20-2	2,6-Dinitrotoluene	U	347	ug/kg	34.7	347	
208-96-8	Acenaphthylene	U	34.7	ug/kg	10.4	34.7	
51-28-5	2,4-Dinitrophenol	U	695	ug/kg	132	695	UJ,SV7a
132-64-9	Dibenzofuran	U	347	ug/kg	69.5	347	
84-66-2	Diethylphthalate	U	347	ug/kg	69.5	347	
86-73-7	Fluorene	U	34.7	ug/kg	10.4	34.7	
7005-72-3	4-Chlorophenylphenylether	U	347	ug/kg	69.5	347	
534-52-1	2-Methyl-4,6-dinitrophenol	U	347	ug/kg	69.5	347	UJ,SV7c
100-01-6	4-Nitroaniline	U	347	ug/kg	104	347	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	347	ug/kg	69.5	347	
122-66-7	Azobenzene	U	347	ug/kg	69.5	347	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	347	ug/kg	69.5	347	
118-74-1	Hexachlorobenzene	U	347	ug/kg	69.5	347	
85-01-8	Phenanthrene	U	34.7	ug/kg	10.4	34.7	
120-12-7	Anthracene	U	34.7	ug/kg	6.95	34.7	
84-74-2	Di-n-butylphthalate	U	347	ug/kg	69.5	347	
206-44-0	Fluoranthene	U	34.7	ug/kg	10.4	34.7	
85-68-7	Butylbenzylphthalate	U	347	ug/kg	69.5	347	
56-55-3	Benzo(a)anthracene	U	34.7	ug/kg	10.4	34.7	
91-94-1	3,3'-Dichlorobenzidine	U	347	ug/kg	104	347	
218-01-9	Chrysene	U	34.7	ug/kg	10.4	34.7	
117-81-7	bis(2-Ethylhexyl)phthalate	U	347	ug/kg	69.5	347	
117-84-0	Di-n-octylphthalate	U	347	ug/kg	69.5	347	UJ,SV1b
205-99-2	Benzo(b)fluoranthene	U	34.7	ug/kg	10.4	34.7	
207-08-9	Benzo(k)fluoranthene	U	34.7	ug/kg	10.4	34.7	
50-32-8	Benzo(a)pyrene	U	34.7	ug/kg	10.4	34.7	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.7	ug/kg	10.4	34.7	
53-70-3	Dibenzo(a,h)anthracene	U	34.7	ug/kg	10.4	34.7	
191-24-2	Benzo(ghi)perylene	U	34.7	ug/kg	10.4	34.7	
120-82-1	1,2,4-Trichlorobenzene	U	347	ug/kg	69.5	347	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Aldol Condensate	3.02	193	ug/kg		JA
	Unknown	12.42	1410	ug/kg		J

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Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10370	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:05	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	13.21	1260	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503008	**Date Received:**	06/27/2009 09:05	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10371	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0216.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	388	ug/kg	77.5	388	
108-95-2	Phenol	U	388	ug/kg	77.5	388	
95-57-8	2-Chlorophenol	U	388	ug/kg	77.5	388	
106-46-7	1,4-Dichlorobenzene	U	388	ug/kg	77.5	388	
621-64-7	N-Nitrosodipropylamine	U	388	ug/kg	77.5	388	
59-50-7	4-Chloro-3-methylphenol	U	388	ug/kg	77.5	388	
83-32-9	Acenaphthene	U	38.8	ug/kg	12.8	38.8	
121-14-2	2,4-Dinitrotoluene	U	388	ug/kg	38.8	388	
100-02-7	4-Nitrophenol	U	388	ug/kg	128	388	
87-86-5	Pentachlorophenol	U	388	ug/kg	96.9	388	
129-00-0	Pyrene	U	38.8	ug/kg	11.6	38.8	
110-86-1	Pyridine	U	388	ug/kg	77.5	388	
62-53-3	Aniline	U	388	ug/kg	116	388	
111-44-4	bis(2-Chloroethyl) ether	U	388	ug/kg	77.5	388	
541-73-1	1,3-Dichlorobenzene	U	388	ug/kg	77.5	388	
100-51-6	Benzyl alcohol	U	388	ug/kg	116	388	
95-50-1	1,2-Dichlorobenzene	U	388	ug/kg	77.5	388	
108-60-1	bis(2-Chloroisopropyl)ether	U	388	ug/kg	77.5	388	
95-48-7	o-Cresol	U	388	ug/kg	77.5	388	
65794-96-9	m,p-Cresols	U	388	ug/kg	116	388	
67-72-1	Hexachloroethane	U	388	ug/kg	77.5	388	
98-95-3	Nitrobenzene	U	388	ug/kg	77.5	388	
78-59-1	Isophorone	U	388	ug/kg	77.5	388	
88-75-5	2-Nitrophenol	U	388	ug/kg	77.5	388	
105-67-9	2,4-Dimethylphenol	U	388	ug/kg	136	388	
111-91-1	bis(2-Chloroethoxy)methane	U	388	ug/kg	77.5	388	
120-83-2	2,4-Dichlorophenol	U	388	ug/kg	77.5	388	
65-85-0	Benzoic acid	U	775	ug/kg	194	775	UJ,SV7c
91-20-3	Naphthalene	U	38.8	ug/kg	11.6	38.8	
106-47-8	4-Chloroaniline	U	388	ug/kg	77.5	388	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	388	ug/kg	77.5	388	
91-57-6	2-Methylnaphthalene	U	38.8	ug/kg	7.75	38.8	
77-47-4	Hexachlorocyclopentadiene	U	388	ug/kg	77.5	388	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	388	ug/kg	77.5	388	
95-95-4	2,4,5-Trichlorophenol	U	388	ug/kg	77.5	388	
91-58-7	2-Chloronaphthalene	U	38.8	ug/kg	12.8	38.8	
88-74-4	2-Nitroaniline	U	388	ug/kg	77.5	388	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	388	ug/kg	77.5	388	

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Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503008	**Date Received:**	06/27/2009 09:05	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10371	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0216.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	388	ug/kg	77.5	388	
606-20-2	2,6-Dinitrotoluene	U	388	ug/kg	38.8	388	
208-96-8	Acenaphthylene	U	38.8	ug/kg	11.6	38.8	
51-28-5	2,4-Dinitrophenol	U	775	ug/kg	147	775	UJ,SV7a
132-64-9	Dibenzofuran	U	388	ug/kg	77.5	388	
84-66-2	Diethylphthalate	U	388	ug/kg	77.5	388	
86-73-7	Fluorene	U	38.8	ug/kg	11.6	38.8	
7005-72-3	4-Chlorophenylphenylether	U	388	ug/kg	77.5	388	
534-52-1	2-Methyl-4,6-dinitrophenol	U	388	ug/kg	77.5	388	UJ,SV7c
100-01-6	4-Nitroaniline	U	388	ug/kg	116	388	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	388	ug/kg	77.5	388	
122-66-7	Azobenzene	U	388	ug/kg	77.5	388	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	388	ug/kg	77.5	388	
118-74-1	Hexachlorobenzene	U	388	ug/kg	77.5	388	
85-01-8	Phenanthrene	U	38.8	ug/kg	11.6	38.8	
120-12-7	Anthracene	U	38.8	ug/kg	7.75	38.8	
84-74-2	Di-n-butylphthalate	U	388	ug/kg	77.5	388	
206-44-0	Fluoranthene	U	38.8	ug/kg	11.6	38.8	
85-68-7	Butylbenzylphthalate	U	388	ug/kg	77.5	388	
56-55-3	Benzo(a)anthracene	U	38.8	ug/kg	11.6	38.8	
91-94-1	3,3'-Dichlorobenzidine	U	388	ug/kg	116	388	
218-01-9	Chrysene	U	38.8	ug/kg	11.6	38.8	
117-81-7	bis(2-Ethylhexyl)phthalate	U	388	ug/kg	77.5	388	
117-84-0	Di-n-octylphthalate	U	388	ug/kg	77.5	388	UJ,SV1b
205-99-2	Benzo(b)fluoranthene	U	38.8	ug/kg	11.6	38.8	
207-08-9	Benzo(k)fluoranthene	U	38.8	ug/kg	11.6	38.8	
50-32-8	Benzo(a)pyrene	U	38.8	ug/kg	11.6	38.8	
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.8	ug/kg	11.6	38.8	
53-70-3	Dibenzo(a,h)anthracene	U	38.8	ug/kg	11.6	38.8	
191-24-2	Benzo(ghi)perylene	U	38.8	ug/kg	11.6	38.8	
120-82-1	1,2,4-Trichlorobenzene	U	388	ug/kg	77.5	388	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	210	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.87	193	ug/kg	99	NJ

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Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503008	Date Received:	06/27/2009 09:05	%Moisture:	14.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10371	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:50	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0216.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.43	169	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503012	Date Received:	06/27/2009 09:05	%Moisture:	9.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10372	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 15:19	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.07 g	Final Volume:	1 mL
Data File:	s5g0220.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	369	ug/kg	73.8	369	
108-95-2	Phenol	U	369	ug/kg	73.8	369	
95-57-8	2-Chlorophenol	U	369	ug/kg	73.8	369	
106-46-7	1,4-Dichlorobenzene	U	369	ug/kg	73.8	369	
621-64-7	N-Nitrosodipropylamine	U	369	ug/kg	73.8	369	
59-50-7	4-Chloro-3-methylphenol	U	369	ug/kg	73.8	369	
83-32-9	Acenaphthene	U	36.9	ug/kg	12.2	36.9	
121-14-2	2,4-Dinitrotoluene	U	369	ug/kg	36.9	369	
100-02-7	4-Nitrophenol	U	369	ug/kg	122	369	
87-86-5	Pentachlorophenol	U	369	ug/kg	92.2	369	
129-00-0	Pyrene		192	ug/kg	11.1	36.9	
110-86-1	Pyridine	U	369	ug/kg	73.8	369	
62-53-3	Aniline	U	369	ug/kg	111	369	
111-44-4	bis(2-Chloroethyl) ether	U	369	ug/kg	73.8	369	
541-73-1	1,3-Dichlorobenzene	U	369	ug/kg	73.8	369	
100-51-6	Benzyl alcohol	U	369	ug/kg	111	369	
95-50-1	1,2-Dichlorobenzene	U	369	ug/kg	73.8	369	
108-60-1	bis(2-Chloroisopropyl)ether	U	369	ug/kg	73.8	369	
95-48-7	o-Cresol	U	369	ug/kg	73.8	369	
65794-96-9	m,p-Cresols	U	369	ug/kg	111	369	
67-72-1	Hexachloroethane	U	369	ug/kg	73.8	369	
98-95-3	Nitrobenzene	U	369	ug/kg	73.8	369	
78-59-1	Isophorone	U	369	ug/kg	73.8	369	
88-75-5	2-Nitrophenol	U	369	ug/kg	73.8	369	
105-67-9	2,4-Dimethylphenol	U	369	ug/kg	129	369	
111-91-1	bis(2-Chloroethoxy)methane	U	369	ug/kg	73.8	369	
120-83-2	2,4-Dichlorophenol	U	369	ug/kg	73.8	369	
65-85-0	Benzoic acid	U	738	ug/kg	184	738	UJ,SV7c
91-20-3	Naphthalene	U	36.9	ug/kg	11.1	36.9	
106-47-8	4-Chloroaniline	U	369	ug/kg	73.8	369	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	369	ug/kg	73.8	369	
91-57-6	2-Methylnaphthalene	U	36.9	ug/kg	7.38	36.9	
77-47-4	Hexachlorocyclopentadiene	U	369	ug/kg	73.8	369	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	369	ug/kg	73.8	369	
95-95-4	2,4,5-Trichlorophenol	U	369	ug/kg	73.8	369	
91-58-7	2-Chloronaphthalene	U	36.9	ug/kg	12.2	36.9	
88-74-4	2-Nitroaniline	U	369	ug/kg	73.8	369	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	369	ug/kg	73.8	369	

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Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503012	**Date Received:**	06/27/2009 09:05	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10372	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 15:19	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.07 g	**Final Volume:**	1 mL
Data File:	s5g0220.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	369	ug/kg	73.8	369	
606-20-2	2,6-Dinitrotoluene	U	369	ug/kg	36.9	369	
208-96-8	Acenaphthylene	U	36.9	ug/kg	11.1	36.9	
51-28-5	2,4-Dinitrophenol	U	738	ug/kg	140	738	UJ,SV7a
132-64-9	Dibenzofuran	U	369	ug/kg	73.8	369	
84-66-2	Diethylphthalate	U	369	ug/kg	73.8	369	
86-73-7	Fluorene	U	36.9	ug/kg	11.1	36.9	
7005-72-3	4-Chlorophenylphenylether	U	369	ug/kg	73.8	369	
534-52-1	2-Methyl-4,6-dinitrophenol	U	369	ug/kg	73.8	369	UJ,SV7c
100-01-6	4-Nitroaniline	U	369	ug/kg	111	369	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	369	ug/kg	73.8	369	
122-66-7	Azobenzene	U	369	ug/kg	73.8	369	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	369	ug/kg	73.8	369	
118-74-1	Hexachlorobenzene	U	369	ug/kg	73.8	369	
85-01-8	Phenanthrene		60.3	ug/kg	11.1	36.9	
120-12-7	Anthracene	U	36.9	ug/kg	7.38	36.9	
84-74-2	Di-n-butylphthalate	U	369	ug/kg	73.8	369	
206-44-0	Fluoranthene		162	ug/kg	11.1	36.9	
85-68-7	Butylbenzylphthalate	U	369	ug/kg	73.8	369	
56-55-3	Benzo(a)anthracene		65.4	ug/kg	11.1	36.9	
91-94-1	3,3'-Dichlorobenzidine	U	369	ug/kg	111	369	
218-01-9	Chrysene		105	ug/kg	11.1	36.9	
117-81-7	bis(2-Ethylhexyl)phthalate	U	369	ug/kg	73.8	369	
117-84-0	Di-n-octylphthalate	U	369	ug/kg	73.8	369	
205-99-2	Benzo(b)fluoranthene		175	ug/kg	11.1	36.9	
207-08-9	Benzo(k)fluoranthene	U	36.9	ug/kg	11.1	36.9	
50-32-8	Benzo(a)pyrene		106	ug/kg	11.1	36.9	
193-39-5	Indeno(1,2,3-cd)pyrene		70.0	ug/kg	11.1	36.9	
53-70-3	Dibenzo(a,h)anthracene	U	36.9	ug/kg	11.1	36.9	
191-24-2	Benzo(ghi)perylene		94.6	ug/kg	11.1	36.9	
120-82-1	1,2,4-Trichlorobenzene	U	369	ug/kg	73.8	369	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	149	ug/kg		JA
1058-61-3	Stigmast-4-en-3-one	8.88	226	ug/kg	91	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503012	**Date Received:**	06/27/2009 09:05	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10372	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 15:19	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.07 g	**Final Volume:**	1 mL
Data File:	s5g0220.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown	10.43	199	ug/kg		J
126848-01-9	3,5,6-Trimethyl-p-quinone, 2-(2,5-dioxot	11.33	189	ug/kg	95	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503003	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10373	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:57	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0211.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.1	376	
108-95-2	Phenol	U	376	ug/kg	75.1	376	
95-57-8	2-Chlorophenol	U	376	ug/kg	75.1	376	
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.1	376	
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.1	376	
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	75.1	376	
83-32-9	Acenaphthene	U	37.6	ug/kg	12.4	37.6	
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376	
100-02-7	4-Nitrophenol	U	376	ug/kg	124	376	
87-86-5	Pentachlorophenol	U	376	ug/kg	93.9	376	
129-00-0	Pyrene	U	37.6	ug/kg	11.3	37.6	
110-86-1	Pyridine	U	376	ug/kg	75.1	376	
62-53-3	Aniline	U	376	ug/kg	113	376	
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.1	376	
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.1	376	
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376	
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.1	376	
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.1	376	
95-48-7	o-Cresol	U	376	ug/kg	75.1	376	
65794-96-9	m,p-Cresols	U	376	ug/kg	113	376	
67-72-1	Hexachloroethane	U	376	ug/kg	75.1	376	
98-95-3	Nitrobenzene	U	376	ug/kg	75.1	376	
78-59-1	Isophorone	U	376	ug/kg	75.1	376	
88-75-5	2-Nitrophenol	U	376	ug/kg	75.1	376	
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	131	376	
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.1	376	
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.1	376	
65-85-0	Benzoic acid	U	751	ug/kg	188	751	UJ,SV7c
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6	
106-47-8	4-Chloroaniline	U	376	ug/kg	75.1	376	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.1	376	
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.51	37.6	
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.1	376	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.1	376	
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.1	376	
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	12.4	37.6	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	376	ug/kg	75.1	376	
99-09-2	3-Nitroaniline	U	376	ug/kg	75.1	376	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503003	Date Received:	06/27/2009 09:05	%Moisture:	11.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10373	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 11:57	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0211.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	376	ug/kg	75.1	376	
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376	
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6	
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751	UJ,SV7a
132-64-9	Dibenzofuran	U	376	ug/kg	75.1	376	
84-66-2	Diethylphthalate	U	376	ug/kg	75.1	376	
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6	
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	75.1	376	
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.1	376	UJ,SV7c
100-01-6	4-Nitroaniline	U	376	ug/kg	113	376	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	376	ug/kg	75.1	376	
122-66-7	Azobenzene	U	376	ug/kg	75.1	376	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	75.1	376	
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.1	376	
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6	
120-12-7	Anthracene	U	37.6	ug/kg	7.51	37.6	
84-74-2	Di-n-butylphthalate	U	376	ug/kg	75.1	376	
206-44-0	Fluoranthene	U	37.6	ug/kg	11.3	37.6	
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.1	376	
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6	
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376	
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6	
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.1	376	
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.1	376	
205-99-2	Benzo(b)fluoranthene	U	37.6	ug/kg	11.3	37.6	
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6	
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6	
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6	
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6	
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.1	376	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	209	ug/kg		JA
	Unknown	12.43	1060	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503003	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10373	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:57	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0211.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	13.22	1350	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503007	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10374	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:27	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0215.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	346	ug/kg	69.2	346	
108-95-2	Phenol	U	346	ug/kg	69.2	346	
95-57-8	2-Chlorophenol	U	346	ug/kg	69.2	346	
106-46-7	1,4-Dichlorobenzene	U	346	ug/kg	69.2	346	
621-64-7	N-Nitrosodipropylamine	U	346	ug/kg	69.2	346	
59-50-7	4-Chloro-3-methylphenol	U	346	ug/kg	69.2	346	
83-32-9	Acenaphthene	U	34.6	ug/kg	11.4	34.6	
121-14-2	2,4-Dinitrotoluene	U	346	ug/kg	34.6	346	
100-02-7	4-Nitrophenol	U	346	ug/kg	114	346	
87-86-5	Pentachlorophenol	U	346	ug/kg	86.5	346	
129-00-0	Pyrene	U	34.6	ug/kg	10.4	34.6	
110-86-1	Pyridine	U	346	ug/kg	69.2	346	
62-53-3	Aniline	U	346	ug/kg	104	346	
111-44-4	bis(2-Chloroethyl) ether	U	346	ug/kg	69.2	346	
541-73-1	1,3-Dichlorobenzene	U	346	ug/kg	69.2	346	
100-51-6	Benzyl alcohol	U	346	ug/kg	104	346	
95-50-1	1,2-Dichlorobenzene	U	346	ug/kg	69.2	346	
108-60-1	bis(2-Chloroisopropyl)ether	U	346	ug/kg	69.2	346	
95-48-7	o-Cresol	U	346	ug/kg	69.2	346	
65794-96-9	m,p-Cresols	U	346	ug/kg	104	346	
67-72-1	Hexachloroethane	U	346	ug/kg	69.2	346	
98-95-3	Nitrobenzene	U	346	ug/kg	69.2	346	
78-59-1	Isophorone	U	346	ug/kg	69.2	346	
88-75-5	2-Nitrophenol	U	346	ug/kg	69.2	346	
105-67-9	2,4-Dimethylphenol	U	346	ug/kg	121	346	
111-91-1	bis(2-Chloroethoxy)methane	U	346	ug/kg	69.2	346	
120-83-2	2,4-Dichlorophenol	U	346	ug/kg	69.2	346	
65-85-0	Benzoic acid	U	692	ug/kg	173	692	UJ,SV7c
91-20-3	Naphthalene	U	34.6	ug/kg	10.4	34.6	
106-47-8	4-Chloroaniline	U	346	ug/kg	69.2	346	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	346	ug/kg	69.2	346	
91-57-6	2-Methylnaphthalene	U	34.6	ug/kg	6.92	34.6	
77-47-4	Hexachlorocyclopentadiene	U	346	ug/kg	69.2	346	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	346	ug/kg	69.2	346	
95-95-4	2,4,5-Trichlorophenol	U	346	ug/kg	69.2	346	
91-58-7	2-Chloronaphthalene	U	34.6	ug/kg	11.4	34.6	
88-74-4	2-Nitroaniline	U	346	ug/kg	69.2	346	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	346	ug/kg	69.2	346	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503007	Date Received:	06/27/2009 09:05	%Moisture:	3.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10374	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:27	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0215.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	346	ug/kg	69.2	346	
606-20-2	2,6-Dinitrotoluene	U	346	ug/kg	34.6	346	
208-96-8	Acenaphthylene	U	34.6	ug/kg	10.4	34.6	
51-28-5	2,4-Dinitrophenol	U	692	ug/kg	131	692	UJ,SV7a
132-64-9	Dibenzofuran	U	346	ug/kg	69.2	346	
84-66-2	Diethylphthalate	U	346	ug/kg	69.2	346	
86-73-7	Fluorene	U	34.6	ug/kg	10.4	34.6	
7005-72-3	4-Chlorophenylphenylether	U	346	ug/kg	69.2	346	
534-52-1	2-Methyl-4,6-dinitrophenol	U	346	ug/kg	69.2	346	UJ,SV7c
100-01-6	4-Nitroaniline	U	346	ug/kg	104	346	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	346	ug/kg	69.2	346	
122-66-7	Azobenzene	U	346	ug/kg	69.2	346	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	346	ug/kg	69.2	346	
118-74-1	Hexachlorobenzene	U	346	ug/kg	69.2	346	
85-01-8	Phenanthrene	U	34.6	ug/kg	10.4	34.6	
120-12-7	Anthracene	U	34.6	ug/kg	6.92	34.6	
84-74-2	Di-n-butylphthalate	U	346	ug/kg	69.2	346	
206-44-0	Fluoranthene	U	34.6	ug/kg	10.4	34.6	
85-68-7	Butylbenzylphthalate	U	346	ug/kg	69.2	346	
56-55-3	Benzo(a)anthracene	U	34.6	ug/kg	10.4	34.6	
91-94-1	3,3'-Dichlorobenzidine	U	346	ug/kg	104	346	
218-01-9	Chrysene	U	34.6	ug/kg	10.4	34.6	
117-81-7	bis(2-Ethylhexyl)phthalate	U	346	ug/kg	69.2	346	
117-84-0	Di-n-octylphthalate	U	346	ug/kg	69.2	346	
205-99-2	Benzo(b)fluoranthene	U	34.6	ug/kg	10.4	34.6	
207-08-9	Benzo(k)fluoranthene	U	34.6	ug/kg	10.4	34.6	
50-32-8	Benzo(a)pyrene	U	34.6	ug/kg	10.4	34.6	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.6	ug/kg	10.4	34.6	
53-70-3	Dibenzo(a,h)anthracene	U	34.6	ug/kg	10.4	34.6	
191-24-2	Benzo(ghi)perylene	U	34.6	ug/kg	10.4	34.6	
120-82-1	1,2,4-Trichlorobenzene	U	346	ug/kg	69.2	346	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	178	ug/kg		JA
25269-17-4	Thunbergol	8.21	263	ug/kg	92	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503001	Date Received:	06/27/2009 09:05	%Moisture:	3.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10375	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 10:27	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0207.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	345	ug/kg	68.9	345	
108-95-2	Phenol	U	345	ug/kg	68.9	345	
95-57-8	2-Chlorophenol	U	345	ug/kg	68.9	345	
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	68.9	345	
621-64-7	N-Nitrosodipropylamine	U	345	ug/kg	68.9	345	
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	68.9	345	
83-32-9	Acenaphthene	U	34.5	ug/kg	11.4	34.5	
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345	
100-02-7	4-Nitrophenol	U	345	ug/kg	114	345	
87-86-5	Pentachlorophenol	U	345	ug/kg	86.1	345	
129-00-0	Pyrene	U	34.5	ug/kg	10.3	34.5	
110-86-1	Pyridine	U	345	ug/kg	68.9	345	
62-53-3	Aniline	U	345	ug/kg	103	345	
111-44-4	bis(2-Chloroethyl) ether	U	345	ug/kg	68.9	345	
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	68.9	345	
100-51-6	Benzyl alcohol	U	345	ug/kg	103	345	
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	68.9	345	
108-60-1	bis(2-Chloroisopropyl)ether	U	345	ug/kg	68.9	345	
95-48-7	o-Cresol	U	345	ug/kg	68.9	345	
65794-96-9	m,p-Cresols	U	345	ug/kg	103	345	
67-72-1	Hexachloroethane	U	345	ug/kg	68.9	345	
98-95-3	Nitrobenzene	U	345	ug/kg	68.9	345	
78-59-1	Isophorone	U	345	ug/kg	68.9	345	
88-75-5	2-Nitrophenol	U	345	ug/kg	68.9	345	
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	121	345	
111-91-1	bis(2-Chloroethoxy)methane	U	345	ug/kg	68.9	345	
120-83-2	2,4-Dichlorophenol	U	345	ug/kg	68.9	345	
65-85-0	Benzoic acid	J	459	ug/kg	172	689	J,SV7c
91-20-3	Naphthalene	U	34.5	ug/kg	10.3	34.5	
106-47-8	4-Chloroaniline	U	345	ug/kg	68.9	345	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	345	ug/kg	68.9	345	
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.89	34.5	
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	68.9	345	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	68.9	345	
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	68.9	345	
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	11.4	34.5	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	345	ug/kg	68.9	345	
99-09-2	3-Nitroaniline	U	345	ug/kg	68.9	345	

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Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10375	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 10:27	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0207.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	345	ug/kg	68.9	345	
606-20-2	2,6-Dinitrotoluene	U	345	ug/kg	34.5	345	
208-96-8	Acenaphthylene	U	34.5	ug/kg	10.3	34.5	
51-28-5	2,4-Dinitrophenol	U	689	ug/kg	131	689	UJ,SV7a
132-64-9	Dibenzofuran	U	345	ug/kg	68.9	345	
84-66-2	Diethylphthalate	U	345	ug/kg	68.9	345	
86-73-7	Fluorene	U	34.5	ug/kg	10.3	34.5	
7005-72-3	4-Chlorophenylphenylether	U	345	ug/kg	68.9	345	
534-52-1	2-Methyl-4,6-dinitrophenol	U	345	ug/kg	68.9	345	UJ,SV7c
100-01-6	4-Nitroaniline	U	345	ug/kg	103	345	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	345	ug/kg	68.9	345	
122-66-7	Azobenzene	U	345	ug/kg	68.9	345	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	345	ug/kg	68.9	345	
118-74-1	Hexachlorobenzene	U	345	ug/kg	68.9	345	
85-01-8	Phenanthrene	U	34.5	ug/kg	10.3	34.5	
120-12-7	Anthracene	U	34.5	ug/kg	6.89	34.5	
84-74-2	Di-n-butylphthalate	U	345	ug/kg	68.9	345	
206-44-0	Fluoranthene	U	34.5	ug/kg	10.3	34.5	
85-68-7	Butylbenzylphthalate	U	345	ug/kg	68.9	345	
56-55-3	Benzo(a)anthracene	U	34.5	ug/kg	10.3	34.5	
91-94-1	3,3'-Dichlorobenzidine	U	345	ug/kg	103	345	
218-01-9	Chrysene	U	34.5	ug/kg	10.3	34.5	
117-81-7	bis(2-Ethylhexyl)phthalate	U	345	ug/kg	68.9	345	
117-84-0	Di-n-octylphthalate	U	345	ug/kg	68.9	345	
205-99-2	Benzo(b)fluoranthene	U	34.5	ug/kg	10.3	34.5	
207-08-9	Benzo(k)fluoranthene	U	34.5	ug/kg	10.3	34.5	
50-32-8	Benzo(a)pyrene	U	34.5	ug/kg	10.3	34.5	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.3	34.5	
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.3	34.5	
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.3	34.5	
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	68.9	345	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	198	ug/kg		JA
4630-07-3	Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	5.87	159	ug/kg	98	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10375	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 10:27	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0207.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
57-10-3	n-Hexadecanoic acid	7.69	189	ug/kg	95	NJ
	Unknown	13.54	195	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10376	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0210.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	348	ug/kg	69.7	348	
108-95-2	Phenol	U	348	ug/kg	69.7	348	
95-57-8	2-Chlorophenol	U	348	ug/kg	69.7	348	
106-46-7	1,4-Dichlorobenzene	U	348	ug/kg	69.7	348	
621-64-7	N-Nitrosodipropylamine	U	348	ug/kg	69.7	348	
59-50-7	4-Chloro-3-methylphenol	U	348	ug/kg	69.7	348	
83-32-9	Acenaphthene	U	34.8	ug/kg	11.5	34.8	
121-14-2	2,4-Dinitrotoluene	U	348	ug/kg	34.8	348	
100-02-7	4-Nitrophenol	U	348	ug/kg	115	348	
87-86-5	Pentachlorophenol	U	348	ug/kg	87.1	348	
129-00-0	Pyrene	J	27.8	ug/kg	10.5	34.8	
110-86-1	Pyridine	U	348	ug/kg	69.7	348	
62-53-3	Aniline	U	348	ug/kg	105	348	
111-44-4	bis(2-Chloroethyl) ether	U	348	ug/kg	69.7	348	
541-73-1	1,3-Dichlorobenzene	U	348	ug/kg	69.7	348	
100-51-6	Benzyl alcohol	U	348	ug/kg	105	348	
95-50-1	1,2-Dichlorobenzene	U	348	ug/kg	69.7	348	
108-60-1	bis(2-Chloroisopropyl)ether	U	348	ug/kg	69.7	348	
95-48-7	o-Cresol	U	348	ug/kg	69.7	348	
65794-96-9	m,p-Cresols	U	348	ug/kg	105	348	
67-72-1	Hexachloroethane	U	348	ug/kg	69.7	348	
98-95-3	Nitrobenzene	U	348	ug/kg	69.7	348	
78-59-1	Isophorone	U	348	ug/kg	69.7	348	
88-75-5	2-Nitrophenol	U	348	ug/kg	69.7	348	
105-67-9	2,4-Dimethylphenol	U	348	ug/kg	122	348	
111-91-1	bis(2-Chloroethoxy)methane	U	348	ug/kg	69.7	348	
120-83-2	2,4-Dichlorophenol	U	348	ug/kg	69.7	348	
65-85-0	Benzoic acid	U	697	ug/kg	174	697	UJ,SV7c
91-20-3	Naphthalene	U	34.8	ug/kg	10.5	34.8	
106-47-8	4-Chloroaniline	U	348	ug/kg	69.7	348	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	348	ug/kg	69.7	348	
91-57-6	2-Methylnaphthalene	U	34.8	ug/kg	6.97	34.8	
77-47-4	Hexachlorocyclopentadiene	U	348	ug/kg	69.7	348	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	348	ug/kg	69.7	348	
95-95-4	2,4,5-Trichlorophenol	U	348	ug/kg	69.7	348	
91-58-7	2-Chloronaphthalene	U	34.8	ug/kg	11.5	34.8	
88-74-4	2-Nitroaniline	U	348	ug/kg	69.7	348	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	348	ug/kg	69.7	348	

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Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10376	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0210.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	348	ug/kg	69.7	348	
606-20-2	2,6-Dinitrotoluene	U	348	ug/kg	34.8	348	
208-96-8	Acenaphthylene	U	34.8	ug/kg	10.5	34.8	
51-28-5	2,4-Dinitrophenol	U	697	ug/kg	132	697	UJ,SV7a
132-64-9	Dibenzofuran	U	348	ug/kg	69.7	348	
84-66-2	Diethylphthalate	U	348	ug/kg	69.7	348	
86-73-7	Fluorene	U	34.8	ug/kg	10.5	34.8	
7005-72-3	4-Chlorophenylphenylether	U	348	ug/kg	69.7	348	
534-52-1	2-Methyl-4,6-dinitrophenol	U	348	ug/kg	69.7	348	UJ,SV7c
100-01-6	4-Nitroaniline	U	348	ug/kg	105	348	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	348	ug/kg	69.7	348	
122-66-7	Azobenzene	U	348	ug/kg	69.7	348	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	348	ug/kg	69.7	348	
118-74-1	Hexachlorobenzene	U	348	ug/kg	69.7	348	
85-01-8	Phenanthrene	J	11.6	ug/kg	10.5	34.8	
120-12-7	Anthracene	U	34.8	ug/kg	6.97	34.8	
84-74-2	Di-n-butylphthalate	U	348	ug/kg	69.7	348	
206-44-0	Fluoranthene	J	25.4	ug/kg	10.5	34.8	
85-68-7	Butylbenzylphthalate	U	348	ug/kg	69.7	348	
56-55-3	Benzo(a)anthracene	J	18.5	ug/kg	10.5	34.8	
91-94-1	3,3'-Dichlorobenzidine	U	348	ug/kg	105	348	
218-01-9	Chrysene	J	14.5	ug/kg	10.5	34.8	
117-81-7	bis(2-Ethylhexyl)phthalate	U	348	ug/kg	69.7	348	
117-84-0	Di-n-octylphthalate	U	348	ug/kg	69.7	348	
205-99-2	Benzo(b)fluoranthene	J	25.9	ug/kg	10.5	34.8	
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.5	34.8	
50-32-8	Benzo(a)pyrene	J	15.6	ug/kg	10.5	34.8	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.5	34.8	
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.5	34.8	
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.5	34.8	
120-82-1	1,2,4-Trichlorobenzene	U	348	ug/kg	69.7	348	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1000197-14-1	4b,8-Dimethyl-2-isopropylphenanthrene, 4	8.11	183	ug/kg	90	NJ
	Unknown	8.52	230	ug/kg		J

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Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10376	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0210.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.86	340	ug/kg		J
	Unknown	8.9	333	ug/kg		J
1686-62-0	1-Phenanthrenecarboxylic acid, 7-ethenyl	9.08	342	ug/kg	89	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.17	244	ug/kg	98	NJ
	Unknown	9.44	657	ug/kg		J
	Unknown	9.52	491	ug/kg		J
629-78-7	Heptadecane	10.16	229	ug/kg	95	NJ
	Unknown	10.21	354	ug/kg		J
	Unknown	12.06	539	ug/kg		J
	Unknown	12.42	346	ug/kg		J
83-46-5	.beta.-Sitosterol	14.08	304	ug/kg	93	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10377	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 12:42	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	357	ug/kg	71.3	357	
108-95-2	Phenol	U	357	ug/kg	71.3	357	
95-57-8	2-Chlorophenol	U	357	ug/kg	71.3	357	
106-46-7	1,4-Dichlorobenzene	U	357	ug/kg	71.3	357	
621-64-7	N-Nitrosodipropylamine	U	357	ug/kg	71.3	357	
59-50-7	4-Chloro-3-methylphenol	U	357	ug/kg	71.3	357	
83-32-9	Acenaphthene	U	35.7	ug/kg	11.8	35.7	
121-14-2	2,4-Dinitrotoluene	U	357	ug/kg	35.7	357	
100-02-7	4-Nitrophenol	U	357	ug/kg	118	357	
87-86-5	Pentachlorophenol	U	357	ug/kg	89.2	357	
129-00-0	Pyrene	U	35.7	ug/kg	10.7	35.7	
110-86-1	Pyridine	U	357	ug/kg	71.3	357	
62-53-3	Aniline	U	357	ug/kg	107	357	
111-44-4	bis(2-Chloroethyl) ether	U	357	ug/kg	71.3	357	
541-73-1	1,3-Dichlorobenzene	U	357	ug/kg	71.3	357	
100-51-6	Benzyl alcohol	U	357	ug/kg	107	357	
95-50-1	1,2-Dichlorobenzene	U	357	ug/kg	71.3	357	
108-60-1	bis(2-Chloroisopropyl)ether	U	357	ug/kg	71.3	357	
95-48-7	o-Cresol	U	357	ug/kg	71.3	357	
65794-96-9	m,p-Cresols	U	357	ug/kg	107	357	
67-72-1	Hexachloroethane	U	357	ug/kg	71.3	357	
98-95-3	Nitrobenzene	U	357	ug/kg	71.3	357	
78-59-1	Isophorone	U	357	ug/kg	71.3	357	
88-75-5	2-Nitrophenol	U	357	ug/kg	71.3	357	
105-67-9	2,4-Dimethylphenol	U	357	ug/kg	125	357	
111-91-1	bis(2-Chloroethoxy)methane	U	357	ug/kg	71.3	357	
120-83-2	2,4-Dichlorophenol	U	357	ug/kg	71.3	357	
65-85-0	Benzoic acid	U	713	ug/kg	178	713	UJ,SV7c
91-20-3	Naphthalene	U	35.7	ug/kg	10.7	35.7	
106-47-8	4-Chloroaniline	U	357	ug/kg	71.3	357	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	357	ug/kg	71.3	357	
91-57-6	2-Methylnaphthalene	U	35.7	ug/kg	7.13	35.7	
77-47-4	Hexachlorocyclopentadiene	U	357	ug/kg	71.3	357	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	357	ug/kg	71.3	357	
95-95-4	2,4,5-Trichlorophenol	U	357	ug/kg	71.3	357	
91-58-7	2-Chloronaphthalene	U	35.7	ug/kg	11.8	35.7	
88-74-4	2-Nitroaniline	U	357	ug/kg	71.3	357	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	357	ug/kg	71.3	357	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10377	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 12:42	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	357	ug/kg	71.3	357	
606-20-2	2,6-Dinitrotoluene	U	357	ug/kg	35.7	357	
208-96-8	Acenaphthylene	U	35.7	ug/kg	10.7	35.7	
51-28-5	2,4-Dinitrophenol	U	713	ug/kg	136	713	UJ,SV7a
132-64-9	Dibenzofuran	U	357	ug/kg	71.3	357	
84-66-2	Diethylphthalate	U	357	ug/kg	71.3	357	
86-73-7	Fluorene	U	35.7	ug/kg	10.7	35.7	
7005-72-3	4-Chlorophenylphenylether	U	357	ug/kg	71.3	357	
534-52-1	2-Methyl-4,6-dinitrophenol	U	357	ug/kg	71.3	357	UJ,SV7c
100-01-6	4-Nitroaniline	U	357	ug/kg	107	357	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	357	ug/kg	71.3	357	
122-66-7	Azobenzene	U	357	ug/kg	71.3	357	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	357	ug/kg	71.3	357	
118-74-1	Hexachlorobenzene	U	357	ug/kg	71.3	357	
85-01-8	Phenanthrene	U	35.7	ug/kg	10.7	35.7	
120-12-7	Anthracene	U	35.7	ug/kg	7.13	35.7	
84-74-2	Di-n-butylphthalate	U	357	ug/kg	71.3	357	
206-44-0	Fluoranthene	U	35.7	ug/kg	10.7	35.7	
85-68-7	Butylbenzylphthalate	U	357	ug/kg	71.3	357	
56-55-3	Benzo(a)anthracene	U	35.7	ug/kg	10.7	35.7	
91-94-1	3,3'-Dichlorobenzidine	U	357	ug/kg	107	357	
218-01-9	Chrysene	U	35.7	ug/kg	10.7	35.7	
117-81-7	bis(2-Ethylhexyl)phthalate	U	357	ug/kg	71.3	357	
117-84-0	Di-n-octylphthalate	U	357	ug/kg	71.3	357	
205-99-2	Benzo(b)fluoranthene	U	35.7	ug/kg	10.7	35.7	
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7	
50-32-8	Benzo(a)pyrene	U	35.7	ug/kg	10.7	35.7	
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.7	ug/kg	10.7	35.7	
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7	
191-24-2	Benzo(ghi)perylene	U	35.7	ug/kg	10.7	35.7	
120-82-1	1,2,4-Trichlorobenzene	U	357	ug/kg	71.3	357	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.1	183	ug/kg		J
	Unknown Aldol Condensate	3.03	218	ug/kg		JA

KAL
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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10377	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 12:42	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
112-79-8	9-Octadecenoic acid, (E)-	8.33	211	ug/kg	99	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.17	143	ug/kg	95	NJ
	Unknown	9.51	164	ug/kg		J
	Unknown	14.1	214	ug/kg		J

KAL
07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503013	Date Received:	06/27/2009 09:05	%Moisture:	3.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10378	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 15:42	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0221.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	345	ug/kg	68.9	345	
108-95-2	Phenol	U	345	ug/kg	68.9	345	
95-57-8	2-Chlorophenol	U	345	ug/kg	68.9	345	
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	68.9	345	
621-64-7	N-Nitrosodipropylamine	U	345	ug/kg	68.9	345	
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	68.9	345	
83-32-9	Acenaphthene	U	34.5	ug/kg	11.4	34.5	
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345	
100-02-7	4-Nitrophenol	U	345	ug/kg	114	345	
87-86-5	Pentachlorophenol	U	345	ug/kg	86.2	345	
129-00-0	Pyrene	U	34.5	ug/kg	10.3	34.5	
110-86-1	Pyridine	U	345	ug/kg	68.9	345	
62-53-3	Aniline	U	345	ug/kg	103	345	
111-44-4	bis(2-Chloroethyl) ether	U	345	ug/kg	68.9	345	
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	68.9	345	
100-51-6	Benzyl alcohol	U	345	ug/kg	103	345	
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	68.9	345	
108-60-1	bis(2-Chloroisopropyl)ether	U	345	ug/kg	68.9	345	
95-48-7	o-Cresol	U	345	ug/kg	68.9	345	
65794-96-9	m,p-Cresols	U	345	ug/kg	103	345	
67-72-1	Hexachloroethane	U	345	ug/kg	68.9	345	
98-95-3	Nitrobenzene	U	345	ug/kg	68.9	345	
78-59-1	Isophorone	U	345	ug/kg	68.9	345	
88-75-5	2-Nitrophenol	U	345	ug/kg	68.9	345	
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	121	345	
111-91-1	bis(2-Chloroethoxy)methane	U	345	ug/kg	68.9	345	
120-83-2	2,4-Dichlorophenol	U	345	ug/kg	68.9	345	
65-85-0	Benzoic acid	U	689	ug/kg	172	689	UJ,SV7c
91-20-3	Naphthalene	U	34.5	ug/kg	10.3	34.5	
106-47-8	4-Chloroaniline	U	345	ug/kg	68.9	345	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	345	ug/kg	68.9	345	
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.89	34.5	
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	68.9	345	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	68.9	345	
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	68.9	345	
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	11.4	34.5	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	345	ug/kg	68.9	345	
99-09-2	3-Nitroaniline	U	345	ug/kg	68.9	345	

KAL
07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503013	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10378	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 15:42	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0221.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	345	ug/kg	68.9	345	
606-20-2	2,6-Dinitrotoluene	U	345	ug/kg	34.5	345	
208-96-8	Acenaphthylene	U	34.5	ug/kg	10.3	34.5	
51-28-5	2,4-Dinitrophenol	U	689	ug/kg	131	689	UJ,SV7a
132-64-9	Dibenzofuran	U	345	ug/kg	68.9	345	
84-66-2	Diethylphthalate	U	345	ug/kg	68.9	345	
86-73-7	Fluorene	U	34.5	ug/kg	10.3	34.5	
7005-72-3	4-Chlorophenylphenylether	U	345	ug/kg	68.9	345	
534-52-1	2-Methyl-4,6-dinitrophenol	U	345	ug/kg	68.9	345	UJ,SV7c
100-01-6	4-Nitroaniline	U	345	ug/kg	103	345	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	345	ug/kg	68.9	345	
122-66-7	Azobenzene	U	345	ug/kg	68.9	345	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	345	ug/kg	68.9	345	
118-74-1	Hexachlorobenzene	U	345	ug/kg	68.9	345	
85-01-8	Phenanthrene	U	34.5	ug/kg	10.3	34.5	
120-12-7	Anthracene	U	34.5	ug/kg	6.89	34.5	
84-74-2	Di-n-butylphthalate	U	345	ug/kg	68.9	345	
206-44-0	Fluoranthene	U	34.5	ug/kg	10.3	34.5	
85-68-7	Butylbenzylphthalate	U	345	ug/kg	68.9	345	
56-55-3	Benzo(a)anthracene	U	34.5	ug/kg	10.3	34.5	
91-94-1	3,3'-Dichlorobenzidine	U	345	ug/kg	103	345	
218-01-9	Chrysene	U	34.5	ug/kg	10.3	34.5	
117-81-7	bis(2-Ethylhexyl)phthalate	U	345	ug/kg	68.9	345	
117-84-0	Di-n-octylphthalate	U	345	ug/kg	68.9	345	
205-99-2	Benzo(b)fluoranthene	U	34.5	ug/kg	10.3	34.5	
207-08-9	Benzo(k)fluoranthene	U	34.5	ug/kg	10.3	34.5	
50-32-8	Benzo(a)pyrene	U	34.5	ug/kg	10.3	34.5	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.3	34.5	
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.3	34.5	
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.3	34.5	
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	68.9	345	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Aldol Condensate	3.03	162	ug/kg		JA
	Unknown	13.54	206	ug/kg		J

KAL
07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503014	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10379	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 16:04	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0222.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	348	ug/kg	69.6	348	
108-95-2	Phenol	U	348	ug/kg	69.6	348	
95-57-8	2-Chlorophenol	U	348	ug/kg	69.6	348	
106-46-7	1,4-Dichlorobenzene	U	348	ug/kg	69.6	348	
621-64-7	N-Nitrosodipropylamine	U	348	ug/kg	69.6	348	
59-50-7	4-Chloro-3-methylphenol	U	348	ug/kg	69.6	348	
83-32-9	Acenaphthene	U	34.8	ug/kg	11.5	34.8	
121-14-2	2,4-Dinitrotoluene	U	348	ug/kg	34.8	348	
100-02-7	4-Nitrophenol	U	348	ug/kg	115	348	
87-86-5	Pentachlorophenol	U	348	ug/kg	87.0	348	
129-00-0	Pyrene	J	19.8	ug/kg	10.4	34.8	
110-86-1	Pyridine	U	348	ug/kg	69.6	348	
62-53-3	Aniline	U	348	ug/kg	104	348	
111-44-4	bis(2-Chloroethyl) ether	U	348	ug/kg	69.6	348	
541-73-1	1,3-Dichlorobenzene	U	348	ug/kg	69.6	348	
100-51-6	Benzyl alcohol	U	348	ug/kg	104	348	
95-50-1	1,2-Dichlorobenzene	U	348	ug/kg	69.6	348	
108-60-1	bis(2-Chloroisopropyl)ether	U	348	ug/kg	69.6	348	
95-48-7	o-Cresol	U	348	ug/kg	69.6	348	
65794-96-9	m,p-Cresols	U	348	ug/kg	104	348	
67-72-1	Hexachloroethane	U	348	ug/kg	69.6	348	
98-95-3	Nitrobenzene	U	348	ug/kg	69.6	348	
78-59-1	Isophorone	U	348	ug/kg	69.6	348	
88-75-5	2-Nitrophenol	U	348	ug/kg	69.6	348	
105-67-9	2,4-Dimethylphenol	U	348	ug/kg	122	348	
111-91-1	bis(2-Chloroethoxy)methane	U	348	ug/kg	69.6	348	
120-83-2	2,4-Dichlorophenol	U	348	ug/kg	69.6	348	
65-85-0	Benzoic acid	U	696	ug/kg	174	696	UJ,SV7c
91-20-3	Naphthalene	U	34.8	ug/kg	10.4	34.8	
106-47-8	4-Chloroaniline	U	348	ug/kg	69.6	348	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	348	ug/kg	69.6	348	
91-57-6	2-Methylnaphthalene	U	34.8	ug/kg	6.96	34.8	
77-47-4	Hexachlorocyclopentadiene	U	348	ug/kg	69.6	348	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	348	ug/kg	69.6	348	
95-95-4	2,4,5-Trichlorophenol	U	348	ug/kg	69.6	348	
91-58-7	2-Chloronaphthalene	U	34.8	ug/kg	11.5	34.8	
88-74-4	2-Nitroaniline	U	348	ug/kg	69.6	348	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	348	ug/kg	69.6	348	

KAL
07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503014	Date Received:	06/27/2009 09:05	%Moisture:	4.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10379	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 16:04	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0222.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	348	ug/kg	69.6	348	
606-20-2	2,6-Dinitrotoluene	U	348	ug/kg	34.8	348	
208-96-8	Acenaphthylene	U	34.8	ug/kg	10.4	34.8	
51-28-5	2,4-Dinitrophenol	U	696	ug/kg	132	696	UJ,SV7a
132-64-9	Dibenzofuran	U	348	ug/kg	69.6	348	
84-66-2	Diethylphthalate	U	348	ug/kg	69.6	348	
86-73-7	Fluorene	U	34.8	ug/kg	10.4	34.8	
7005-72-3	4-Chlorophenylphenylether	U	348	ug/kg	69.6	348	
534-52-1	2-Methyl-4,6-dinitrophenol	U	348	ug/kg	69.6	348	UJ,SV7c
100-01-6	4-Nitroaniline	U	348	ug/kg	104	348	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	348	ug/kg	69.6	348	
122-66-7	Azobenzene	U	348	ug/kg	69.6	348	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	348	ug/kg	69.6	348	
118-74-1	Hexachlorobenzene	U	348	ug/kg	69.6	348	
85-01-8	Phenanthrene	U	34.8	ug/kg	10.4	34.8	
120-12-7	Anthracene	U	34.8	ug/kg	6.96	34.8	
84-74-2	Di-n-butylphthalate	U	348	ug/kg	69.6	348	
206-44-0	Fluoranthene	J	12.1	ug/kg	10.4	34.8	
85-68-7	Butylbenzylphthalate	U	348	ug/kg	69.6	348	
56-55-3	Benzo(a)anthracene	U	34.8	ug/kg	10.4	34.8	
91-94-1	3,3'-Dichlorobenzidine	U	348	ug/kg	104	348	
218-01-9	Chrysene	U	34.8	ug/kg	10.4	34.8	
117-81-7	bis(2-Ethylhexyl)phthalate	J	149	ug/kg	69.6	348	
117-84-0	Di-n-octylphthalate	U	348	ug/kg	69.6	348	UJ,SV1b
205-99-2	Benzo(b)fluoranthene	U	34.8	ug/kg	10.4	34.8	
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.4	34.8	
50-32-8	Benzo(a)pyrene	U	34.8	ug/kg	10.4	34.8	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.4	34.8	
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.4	34.8	
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.4	34.8	
120-82-1	1,2,4-Trichlorobenzene	U	348	ug/kg	69.6	348	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	204	ug/kg		JA
	Unknown	12.43	486	ug/kg		J

KAL
07/23/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503014	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10379	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 16:04	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0222.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.91	202	ug/kg		J
	Unknown	13.24	521	ug/kg		J

KAL
07/23/09

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2497C

REQUEST NUMBER: 09-2497

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 2325037

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10375	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10376	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10373	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10367	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10377	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10370	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10374	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10371	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10368	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10369	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10366	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10372	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10378	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10379	1	AMBER GLASS	8270C	Ice	SED

Relinquished By:	Date	Time	Received By:	Date	Time
Printed Name / Signature	7/1/09	3:00	Patricia Dent / P. Dent	June 27/09	09:05
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: Date Time **Remarks:**

Printed Name Signature

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2497

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2497
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009
TURNAROUND/REPORT DUE: 7/11/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10366	SED	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	SED	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	SED	6/24/2009	
		1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	SED	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	SED	6/24/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2497

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	SED	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	SED	6/24/2009	

Final Page of REQUEST NUMBER 09-2497

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www.gel.com

July 02, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232503
SDG: 09-2497

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 27, 2009, and analyzed for GC/MS Semivolatile. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for
Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2497
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232503
SDG: 09-2497

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232503
SDG # : 09-2497

July 02, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 27, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232503001	CAMO-09-10375
232503002	CAMO-09-10376
232503003	CAMO-09-10373
232503004	CAMO-09-10367
232503005	CAMO-09-10377
232503006	CAMO-09-10370
232503007	CAMO-09-10374
232503008	CAMO-09-10371
232503009	CAMO-09-10368
232503010	CAMO-09-10369
232503011	CAMO-09-10366
232503012	CAMO-09-10372
232503013	CAMO-09-10378
232503014	CAMO-09-10379

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC/MS Semivolatile.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for

Valerie Davis

Project Manager

GEL Laboratories LLC PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178 www.gel.com

List of current GEL Certifications as of 02 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2497C

REQUEST NUMBER: 09-2497

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 2325037.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10375	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10376	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10373	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10367	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10377	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10370	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10374	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10371	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10368	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10369	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10366	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10372	1	AMBER GLASS	8270C	Ice	SED
CAMO-09-10378	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10379	1	AMBER GLASS	8270C	Ice	SED

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00	Patricia Dent P. Dent	June 27, 09	09:05
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name / Signature

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2497

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2497
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009
TURNAROUND/REPORT DUE: 7/11/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10366	SED	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	SED	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	SED	6/24/2009	
		1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	SED	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	SED	6/24/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2497

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	SED	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	SED	6/24/2009	

Final Page of REQUEST NUMBER 09-2497

Friday, June 26, 2009

REQUEST NUMBER: 09-2497

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2497
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009
TURNAROUND/REPORT DUE: 7/11/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	
		1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2497

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2497

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2497**
Received By: Patricia Dent	**Date Received: JUNE 27, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **20 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,6,24C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5723 6C
7209 7847 5701 2C
7209 7847 5712 24C
7209 7847 5734 2C

PM (or PMA) review: Initials PCC Date 27 JUN 09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 69.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B818MN2R8512BGD0

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7288 7847 5723 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

Part # 156148-434 NRT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 56.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B818MN2R8512BGD0

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7288 7847 5701 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

Part # 156148-434 NRT V3 04-09

ORIGIN ID: SAFA (505) 665-9958
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA60 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 56.0 LB MAN
System#: 9014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 68810MW2A8512BGD0

[redacted]

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7288 7847 5712 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

156148-434 MPIT V3 04-09

ORIGIN ID: SAFA (505) 665-9958
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA60 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 52.0 LB MAN
System#: 9014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 68810MW2A8512BGD0

[redacted]

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7288 7847 5734 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

156148-434 MPIT V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2497

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	881878
Prep Batch Number:	881877

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232503001	CAMO-09-10375
232503002	CAMO-09-10376
232503003	CAMO-09-10373
232503004	CAMO-09-10367
232503005	CAMO-09-10377
232503006	CAMO-09-10370
232503007	CAMO-09-10374
232503008	CAMO-09-10371
232503009	CAMO-09-10368
232503010	CAMO-09-10369
232503011	CAMO-09-10366
232503012	CAMO-09-10372
232503013	CAMO-09-10378
232503014	CAMO-09-10379
1201872923	Method Blank (MB)
1201872924	Laboratory Control Sample (LCS)
1201872925	232503001(CAMO-09-10375) Matrix Spike (MS)
1201872926	232503001(CAMO-09-10375) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements

All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS did not meet spike recovery acceptance criteria for all target analytes. Please see the spike recovery report for the specific failures. The failures represented less than 5% of requested spike analyte list. That satisfied the clients acceptance criteria and the data were reported.

QC Sample Designation

Sample 232503001 (CAMO-09-10375) was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent differences (RPD) were not within the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses were outside of the acceptance criteria for the following samples: 232503006 (CAMO-09-10370), 232503008 (CAMO-09-10371), 232503011 (CAMO-09-10366) and 232503014 (CAMO-09-10379). The samples were re-analyzed and the failures were confirmed. The first analysis data are reported. The re-analysis raw data are in the Miscellaneous Section.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
Sample 1201872924 (LCS) was diluted due to the presence of an over-range target analytes.

Sample Re-extraction/Re-analysis
The internal standard responses were outside of the acceptance criteria for the following samples: 232503006 (CAMO-09-10370), 232503008 (CAMO-09-10371), 232503011 (CAMO-09-10366) and 232503014 (CAMO-09-10379). The samples were re-analyzed and the failures were confirmed. The first analysis data are reported. The re-analysis raw data are in the Miscellaneous Section.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 708228. It is located in the Miscellaneous Section of the data report.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Additional Comments
Additional comments were not required for this SDG.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration

The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD5.I	HP Mass Spectrometer	HP6890/HP5973	DB-5MS	25m x 0.2mm, 0.33um (5% Phenylmethylpolysiloxane)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: [signature] **Date:** 7-17-09

Roadmap for LANL 09-2497 SVOA

This roadmap was analyzed by rmb on 07-06-2009, 08:32.
This roadmap was reviewed by dan01134 on 07-07-2009, 10:03.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD5.i/s070209.b/s5g0207.d	232503001	02-JUL-2009	10:27	09-2497.sub	CAMO-09-10375	1	881878	
☐	N	/chem/MSD5.i/s070209.b/s5g0210.d	232503002	02-JUL-2009	11:34	09-2497.sub	CAMO-09-10376	1	881878	
☐	N	/chem/MSD5.i/s070209.b/s5g0211.d	232503003	02-JUL-2009	11:57	09-2497.sub	CAMO-09-10373	1	881878	
☐	N	/chem/MSD5.i/s070209.b/s5g0212.d	232503004	02-JUL-2009	12:19	09-2497.sub	CAMO-09-10367	1	881878	
☐	N	/chem/MSD5.i/s070209.b/s5g0213.d	232503005	02-JUL-2009	12:42	09-2497.sub	CAMO-09-10377	1	881878	
☐	N	/chem/MSD5.i/s070209.b/s5g0214.d	232503006	02-JUL-2009	13:05	09-2497.sub	CAMO-09-10370	1	881878	fail istd confirmed by s5g0223
☐	N	/chem/MSD5.i/s070209.b/s5g0215.d	232503007	02-JUL-2009	13:27	09-2497.sub	CAMO-09-10374	1	881878	
☐	N	/chem/MSD5.i/s070209.b/s5g0216.d	232503008	02-JUL-2009	13:50	09-2497.sub	CAMO-09-10371	1	881878	fail istd confirmed by s5g0224
☐	N	/chem/MSD5.i/s070209.b/s5g0217.d	232503009	02-JUL-2009	14:12	09-2497.sub	CAMO-09-10368	1	881878	
☐	N	/chem/MSD5.i/s070209.b/s5g0218.d	232503010	02-JUL-2009	14:34	09-2497.sub	CAMO-09-10369	1	881878	
☐	N	/chem/MSD5.i/s070209.b/s5g0219.d	232503011	02-JUL-2009	14:57	09-2497.sub	CAMO-09-10366	1	881878	fail istd confirmed by s5g0225
☐	N	/chem/MSD5.i/s070209.b/s5g0220.d	232503012	02-JUL-2009	15:19	09-2497.sub	CAMO-09-10372	1	881878	
☐	N	/chem/MSD5.i/s070209.b/s5g0221.d	232503013	02-JUL-2009	15:42	09-2497.sub	CAMO-09-10378	1	881878	
☐	N	/chem/MSD5.i/s070209.b/s5g0222.d	232503014	02-JUL-2009	16:04	09-2497.sub	CAMO-09-10379	1	881878	fail istd confirmed by s5g0226
■	N	/chem/MSD5.i/s070209.b/s5g0223.d	232503006	02-JUL-2009	16:27	09-2497.sub	CAMO-09-10370	1	881878	DUSE-fail istd confirms s5g0214
■	N	/chem/MSD5.i/s070209.b/s5g0224.d	232503008	02-JUL-2009	16:49	09-2497.sub	CAMO-09-10371	1	881878	DUSE-fail istd confirms s5g0216
■	N	/chem/MSD5.i/s070209.b/s5g0225.d	232503011	02-JUL-2009	17:12	09-2497.sub	CAMO-09-10366	1	881878	DUSE-fail istd confirms s5g0219
■	N	/chem/MSD5.i/s070209.b/s5g0226.d	232503014	02-JUL-2009	17:34	09-2497.sub	CAMO-09-10379	1	881878	DUSE-fail istd confirms s5g0222

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	Y	/chem/MSD5.i/s070209.b/s5g0204.d	1201872923	mb	02-JUL-2009	09:19	09-2497.sub	SBLK01	1.00000	881878	
☐	Y	/chem/MSD5.i/s070209.b/s5g0206.d	1201872924	lcs	02-JUL-2009	10:04	09-2497.sub	SBLK01LCS	2.00000	881878	

☐	Y	/chem/MSD5.i/s070209.b/s5g0208.d	1201872925	ms	02-JUL 2009	10:49	09-2497.sub	CAMO-09-10375MS	1.00000	881878	
☐	Y	/chem/MSD5.i/s070209.b/s5g0209.d	1201872926	msd	02-JUL-2009	11:12	09-2497.sub	CAMO-09-10375MSD	1.00000	881878	

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503011	Date Received:	06/27/2009 09:05	%Moisture:	8.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10366	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 14:57	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5g0219.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	364	ug/kg	72.8	364
108-95-2	Phenol	U	364	ug/kg	72.8	364
95-57-8	2-Chlorophenol	U	364	ug/kg	72.8	364
106-46-7	1,4-Dichlorobenzene	U	364	ug/kg	72.8	364
621-64-7	N-Nitrosodipropylamine	U	364	ug/kg	72.8	364
59-50-7	4-Chloro-3-methylphenol	U	364	ug/kg	72.8	364
83-32-9	Acenaphthene	U	36.4	ug/kg	12.0	36.4
121-14-2	2,4-Dinitrotoluene	U	364	ug/kg	36.4	364
100-02-7	4-Nitrophenol	U	364	ug/kg	120	364
87-86-5	Pentachlorophenol	U	364	ug/kg	90.9	364
129-00-0	Pyrene		119	ug/kg	10.9	36.4
110-86-1	Pyridine	U	364	ug/kg	72.8	364
62-53-3	Aniline	U	364	ug/kg	109	364
111-44-4	bis(2-Chloroethyl) ether	U	364	ug/kg	72.8	364
541-73-1	1,3-Dichlorobenzene	U	364	ug/kg	72.8	364
100-51-6	Benzyl alcohol	U	364	ug/kg	109	364
95-50-1	1,2-Dichlorobenzene	U	364	ug/kg	72.8	364
108-60-1	bis(2-Chloroisopropyl)ether	U	364	ug/kg	72.8	364
95-48-7	o-Cresol	U	364	ug/kg	72.8	364
65794-96-9	m,p-Cresols	U	364	ug/kg	109	364
67-72-1	Hexachloroethane	U	364	ug/kg	72.8	364
98-95-3	Nitrobenzene	U	364	ug/kg	72.8	364
78-59-1	Isophorone	U	364	ug/kg	72.8	364
88-75-5	2-Nitrophenol	U	364	ug/kg	72.8	364
105-67-9	2,4-Dimethylphenol	U	364	ug/kg	127	364
111-91-1	bis(2-Chloroethoxy)methane	U	364	ug/kg	72.8	364
120-83-2	2,4-Dichlorophenol	U	364	ug/kg	72.8	364
65-85-0	Benzoic acid	U	728	ug/kg	182	728
91-20-3	Naphthalene	U	36.4	ug/kg	10.9	36.4
106-47-8	4-Chloroaniline	U	364	ug/kg	72.8	364
87-68-3	Hexachlorobutadiene	U	364	ug/kg	72.8	364
91-57-6	2-Methylnaphthalene	U	36.4	ug/kg	7.28	36.4
77-47-4	Hexachlorocyclopentadiene	U	364	ug/kg	72.8	364
88-06-2	2,4,6-Trichlorophenol	U	364	ug/kg	72.8	364
95-95-4	2,4,5-Trichlorophenol	U	364	ug/kg	72.8	364
91-58-7	2-Chloronaphthalene	U	36.4	ug/kg	12.0	36.4
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	364	ug/kg	72.8	364
99-09-2	3-Nitroaniline	U	364	ug/kg	72.8	364

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503011	**Date Received:**	06/27/2009 09:05	**%Moisture:**	8.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10366	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:57	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0219.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	364	ug/kg	72.8	364
606-20-2	2,6-Dinitrotoluene	U	364	ug/kg	36.4	364
208-96-8	Acenaphthylene	U	36.4	ug/kg	10.9	36.4
51-28-5	2,4-Dinitrophenol	U	728	ug/kg	138	728
132-64-9	Dibenzofuran	U	364	ug/kg	72.8	364
84-66-2	Diethylphthalate	U	364	ug/kg	72.8	364
86-73-7	Fluorene	U	36.4	ug/kg	10.9	36.4
7005-72-3	4-Chlorophenylphenylether	U	364	ug/kg	72.8	364
534-52-1	2-Methyl-4,6-dinitrophenol	U	364	ug/kg	72.8	364
100-01-6	4-Nitroaniline	U	364	ug/kg	109	364
	p-Nitroaniline					
122-39-4	Diphenylamine	U	364	ug/kg	72.8	364
122-66-7	Azobenzene	U	364	ug/kg	72.8	364
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	364	ug/kg	72.8	364
118-74-1	Hexachlorobenzene	U	364	ug/kg	72.8	364
85-01-8	Phenanthrene		72.1	ug/kg	10.9	36.4
120-12-7	Anthracene	J	13.0	ug/kg	7.28	36.4
84-74-2	Di-n-butylphthalate	U	364	ug/kg	72.8	364
206-44-0	Fluoranthene		106	ug/kg	10.9	36.4
85-68-7	Butylbenzylphthalate	U	364	ug/kg	72.8	364
56-55-3	Benzo(a)anthracene		44.7	ug/kg	10.9	36.4
91-94-1	3,3'-Dichlorobenzidine	U	364	ug/kg	109	364
218-01-9	Chrysene		73.4	ug/kg	10.9	36.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	364	ug/kg	72.8	364
117-84-0	Di-n-octylphthalate	U	364	ug/kg	72.8	364
205-99-2	Benzo(b)fluoranthene		90.3	ug/kg	10.9	36.4
207-08-9	Benzo(k)fluoranthene	J	34.8	ug/kg	10.9	36.4
50-32-8	Benzo(a)pyrene		58.1	ug/kg	10.9	36.4
193-39-5	Indeno(1,2,3-cd)pyrene	J	33.2	ug/kg	10.9	36.4
53-70-3	Dibenzo(a,h)anthracene	U	36.4	ug/kg	10.9	36.4
191-24-2	Benzo(ghi)perylene		38.9	ug/kg	10.9	36.4
120-82-1	1,2,4-Trichlorobenzene	U	364	ug/kg	72.8	364

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
13466-78-9	3-Carene	3.97	533	ug/kg	96	NJ
	Unknown	9.2	223	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503011	**Date Received:**	06/27/2009 09:05	**%Moisture:**	8.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10366	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.1	**Dilution:**	1
Run Date:	07/02/2009 14:57	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0219.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
17974-57-1	(3E,5E,7E)-6-Methyl-8-(2,6,6-trimethyl-1	9.25	333	ug/kg	89	NJ
	Unknown	9.35	270	ug/kg		J
	Unknown	9.44	491	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.52	780	ug/kg	95	NJ
	Unknown	9.54	465	ug/kg		J
112-04-9	Silane, trichlorooctadecyl-	10.16	410	ug/kg	96	NJ
1599-67-3	1-Docosene	10.21	641	ug/kg	97	NJ
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	10.42	706	ug/kg	91	NJ
593-49-7	Heptacosane	11.97	420	ug/kg	98	NJ
	Unknown	12.07	698	ug/kg		J
	Unknown	12.43	1110	ug/kg		J
	Unknown	13.22	972	ug/kg		J
	Unknown	14.11	535	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503004	Date Received:	06/27/2009 09:05	%Moisture:	14.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10367	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 12:19	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.06 g	Final Volume:	1 mL
Data File:	s5g0212.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	390	ug/kg	77.9	390
108-95-2	Phenol	U	390	ug/kg	77.9	390
95-57-8	2-Chlorophenol	U	390	ug/kg	77.9	390
106-46-7	1,4-Dichlorobenzene	U	390	ug/kg	77.9	390
621-64-7	N-Nitrosodipropylamine	U	390	ug/kg	77.9	390
59-50-7	4-Chloro-3-methylphenol	U	390	ug/kg	77.9	390
83-32-9	Acenaphthene	U	39.0	ug/kg	12.9	39.0
121-14-2	2,4-Dinitrotoluene	U	390	ug/kg	39.0	390
100-02-7	4-Nitrophenol	U	390	ug/kg	129	390
87-86-5	Pentachlorophenol	U	390	ug/kg	97.4	390
129-00-0	Pyrene	J	23.4	ug/kg	11.7	39.0
110-86-1	Pyridine	U	390	ug/kg	77.9	390
62-53-3	Aniline	U	390	ug/kg	117	390
111-44-4	bis(2-Chloroethyl) ether	U	390	ug/kg	77.9	390
541-73-1	1,3-Dichlorobenzene	U	390	ug/kg	77.9	390
100-51-6	Benzyl alcohol	U	390	ug/kg	117	390
95-50-1	1,2-Dichlorobenzene	U	390	ug/kg	77.9	390
108-60-1	bis(2-Chloroisopropyl)ether	U	390	ug/kg	77.9	390
95-48-7	o-Cresol	U	390	ug/kg	77.9	390
65794-96-9	m,p-Cresols	U	390	ug/kg	117	390
67-72-1	Hexachloroethane	U	390	ug/kg	77.9	390
98-95-3	Nitrobenzene	U	390	ug/kg	77.9	390
78-59-1	Isophorone	U	390	ug/kg	77.9	390
88-75-5	2-Nitrophenol	U	390	ug/kg	77.9	390
105-67-9	2,4-Dimethylphenol	U	390	ug/kg	136	390
111-91-1	bis(2-Chloroethoxy)methane	U	390	ug/kg	77.9	390
120-83-2	2,4-Dichlorophenol	U	390	ug/kg	77.9	390
65-85-0	Benzoic acid	U	779	ug/kg	195	779
91-20-3	Naphthalene	U	39.0	ug/kg	11.7	39.0
106-47-8	4-Chloroaniline	U	390	ug/kg	77.9	390
87-68-3	Hexachlorobutadiene	U	390	ug/kg	77.9	390
91-57-6	2-Methylnaphthalene	U	39.0	ug/kg	7.79	39.0
77-47-4	Hexachlorocyclopentadiene	U	390	ug/kg	77.9	390
88-06-2	2,4,6-Trichlorophenol	U	390	ug/kg	77.9	390
95-95-4	2,4,5-Trichlorophenol	U	390	ug/kg	77.9	390
91-58-7	2-Chloronaphthalene	U	39.0	ug/kg	12.9	39.0
88-74-4	2-Nitroaniline	U	390	ug/kg	77.9	390
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	390	ug/kg	77.9	390

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	14.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10367	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 12:19	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0212.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	390	ug/kg	77.9	390
606-20-2	2,6-Dinitrotoluene	U	390	ug/kg	39.0	390
208-96-8	Acenaphthylene	U	39.0	ug/kg	11.7	39.0
51-28-5	2,4-Dinitrophenol	U	779	ug/kg	148	779
132-64-9	Dibenzofuran	U	390	ug/kg	77.9	390
84-66-2	Diethylphthalate	U	390	ug/kg	77.9	390
86-73-7	Fluorene	U	39.0	ug/kg	11.7	39.0
7005-72-3	4-Chlorophenylphenylether	U	390	ug/kg	77.9	390
534-52-1	2-Methyl-4,6-dinitrophenol	U	390	ug/kg	77.9	390
100-01-6	4-Nitroaniline	U	390	ug/kg	117	390
	p-Nitroaniline					
122-39-4	Diphenylamine	U	390	ug/kg	77.9	390
122-66-7	Azobenzene	U	390	ug/kg	77.9	390
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	390	ug/kg	77.9	390
118-74-1	Hexachlorobenzene	U	390	ug/kg	77.9	390
85-01-8	Phenanthrene	U	39.0	ug/kg	11.7	39.0
120-12-7	Anthracene	U	39.0	ug/kg	7.79	39.0
84-74-2	Di-n-butylphthalate	U	390	ug/kg	77.9	390
206-44-0	Fluoranthene	J	24.2	ug/kg	11.7	39.0
85-68-7	Butylbenzylphthalate	U	390	ug/kg	77.9	390
56-55-3	Benzo(a)anthracene	J	16.5	ug/kg	11.7	39.0
91-94-1	3,3'-Dichlorobenzidine	U	390	ug/kg	117	390
218-01-9	Chrysene	J	15.3	ug/kg	11.7	39.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	390	ug/kg	77.9	390
117-84-0	Di-n-octylphthalate	U	390	ug/kg	77.9	390
205-99-2	Benzo(b)fluoranthene	U	39.0	ug/kg	11.7	39.0
207-08-9	Benzo(k)fluoranthene	U	39.0	ug/kg	11.7	39.0
50-32-8	Benzo(a)pyrene	J	17.1	ug/kg	11.7	39.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	39.0	ug/kg	11.7	39.0
53-70-3	Dibenzo(a,h)anthracene	U	39.0	ug/kg	11.7	39.0
191-24-2	Benzo(ghi)perylene	U	39.0	ug/kg	11.7	39.0
120-82-1	1,2,4-Trichlorobenzene	U	390	ug/kg	77.9	390

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	208	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503009	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10368	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:12	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0217.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	352	ug/kg	70.4	352
108-95-2	Phenol	U	352	ug/kg	70.4	352
95-57-8	2-Chlorophenol	U	352	ug/kg	70.4	352
106-46-7	1,4-Dichlorobenzene	U	352	ug/kg	70.4	352
621-64-7	N-Nitrosodipropylamine	U	352	ug/kg	70.4	352
59-50-7	4-Chloro-3-methylphenol	U	352	ug/kg	70.4	352
83-32-9	Acenaphthene	U	35.2	ug/kg	11.6	35.2
121-14-2	2,4-Dinitrotoluene	U	352	ug/kg	35.2	352
100-02-7	4-Nitrophenol	U	352	ug/kg	116	352
87-86-5	Pentachlorophenol	U	352	ug/kg	88.0	352
129-00-0	Pyrene		172	ug/kg	10.6	35.2
110-86-1	Pyridine	U	352	ug/kg	70.4	352
62-53-3	Aniline	U	352	ug/kg	106	352
111-44-4	bis(2-Chloroethyl) ether	U	352	ug/kg	70.4	352
541-73-1	1,3-Dichlorobenzene	U	352	ug/kg	70.4	352
100-51-6	Benzyl alcohol	U	352	ug/kg	106	352
95-50-1	1,2-Dichlorobenzene	U	352	ug/kg	70.4	352
108-60-1	bis(2-Chloroisopropyl)ether	U	352	ug/kg	70.4	352
95-48-7	o-Cresol	U	352	ug/kg	70.4	352
65794-96-9	m,p-Cresols	U	352	ug/kg	106	352
67-72-1	Hexachloroethane	U	352	ug/kg	70.4	352
98-95-3	Nitrobenzene	U	352	ug/kg	70.4	352
78-59-1	Isophorone	U	352	ug/kg	70.4	352
88-75-5	2-Nitrophenol	U	352	ug/kg	70.4	352
105-67-9	2,4-Dimethylphenol	U	352	ug/kg	123	352
111-91-1	bis(2-Chloroethoxy)methane	U	352	ug/kg	70.4	352
120-83-2	2,4-Dichlorophenol	U	352	ug/kg	70.4	352
65-85-0	Benzoic acid	U	704	ug/kg	176	704
91-20-3	Naphthalene	U	35.2	ug/kg	10.6	35.2
106-47-8	4-Chloroaniline	U	352	ug/kg	70.4	352
87-68-3	Hexachlorobutadiene	U	352	ug/kg	70.4	352
91-57-6	2-Methylnaphthalene	U	35.2	ug/kg	7.04	35.2
77-47-4	Hexachlorocyclopentadiene	U	352	ug/kg	70.4	352
88-06-2	2,4,6-Trichlorophenol	U	352	ug/kg	70.4	352
95-95-4	2,4,5-Trichlorophenol	U	352	ug/kg	70.4	352
91-58-7	2-Chloronaphthalene	U	35.2	ug/kg	11.6	35.2
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	352	ug/kg	70.4	352
99-09-2	3-Nitroaniline	U	352	ug/kg	70.4	352

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503009	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10368	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:12	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0217.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	352	ug/kg	70.4	352
606-20-2	2,6-Dinitrotoluene	U	352	ug/kg	35.2	352
208-96-8	Acenaphthylene	U	35.2	ug/kg	10.6	35.2
51-28-5	2,4-Dinitrophenol	U	704	ug/kg	134	704
132-64-9	Dibenzofuran	U	352	ug/kg	70.4	352
84-66-2	Diethylphthalate	U	352	ug/kg	70.4	352
86-73-7	Fluorene	U	35.2	ug/kg	10.6	35.2
7005-72-3	4-Chlorophenylphenylether	U	352	ug/kg	70.4	352
534-52-1	2-Methyl-4,6-dinitrophenol	U	352	ug/kg	70.4	352
100-01-6	4-Nitroaniline	U	352	ug/kg	106	352
	p-Nitroaniline					
122-39-4	Diphenylamine	U	352	ug/kg	70.4	352
122-66-7	Azobenzene	U	352	ug/kg	70.4	352
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	352	ug/kg	70.4	352
118-74-1	Hexachlorobenzene	U	352	ug/kg	70.4	352
85-01-8	Phenanthrene		46.6	ug/kg	10.6	35.2
120-12-7	Anthracene	U	35.2	ug/kg	7.04	35.2
84-74-2	Di-n-butylphthalate	U	352	ug/kg	70.4	352
206-44-0	Fluoranthene		154	ug/kg	10.6	35.2
85-68-7	Butylbenzylphthalate	U	352	ug/kg	70.4	352
56-55-3	Benzo(a)anthracene		58.6	ug/kg	10.6	35.2
91-94-1	3,3'-Dichlorobenzidine	U	352	ug/kg	106	352
218-01-9	Chrysene		95.9	ug/kg	10.6	35.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	352	ug/kg	70.4	352
117-84-0	Di-n-octylphthalate	U	352	ug/kg	70.4	352
205-99-2	Benzo(b)fluoranthene		140	ug/kg	10.6	35.2
207-08-9	Benzo(k)fluoranthene		60.7	ug/kg	10.6	35.2
50-32-8	Benzo(a)pyrene		83.9	ug/kg	10.6	35.2
193-39-5	Indeno(1,2,3-cd)pyrene		55.8	ug/kg	10.6	35.2
53-70-3	Dibenzo(a,h)anthracene	U	35.2	ug/kg	10.6	35.2
191-24-2	Benzo(ghi)perylene		68.0	ug/kg	10.6	35.2
120-82-1	1,2,4-Trichlorobenzene	U	352	ug/kg	70.4	352

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503010	Date Received:	06/27/2009 09:05	%Moisture:	11.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10369	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.1	Dilution:	1
Run Date:	07/02/2009 14:34	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.06 g	Final Volume:	1 mL
Data File:	s5g0218.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.2	376
108-95-2	Phenol	U	376	ug/kg	75.2	376
95-57-8	2-Chlorophenol	U	376	ug/kg	75.2	376
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.2	376
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.2	376
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	75.2	376
83-32-9	Acenaphthene	U	37.6	ug/kg	12.4	37.6
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376
100-02-7	4-Nitrophenol	U	376	ug/kg	124	376
87-86-5	Pentachlorophenol	U	376	ug/kg	94.0	376
129-00-0	Pyrene	U	37.6	ug/kg	11.3	37.6
110-86-1	Pyridine	U	376	ug/kg	75.2	376
62-53-3	Aniline	U	376	ug/kg	113	376
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.2	376
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.2	376
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.2	376
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.2	376
95-48-7	o-Cresol	U	376	ug/kg	75.2	376
65794-96-9	m,p-Cresols	U	376	ug/kg	113	376
67-72-1	Hexachloroethane	U	376	ug/kg	75.2	376
98-95-3	Nitrobenzene	U	376	ug/kg	75.2	376
78-59-1	Isophorone	U	376	ug/kg	75.2	376
88-75-5	2-Nitrophenol	U	376	ug/kg	75.2	376
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	132	376
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.2	376
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.2	376
65-85-0	Benzoic acid	U	752	ug/kg	188	752
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6
106-47-8	4-Chloroaniline	U	376	ug/kg	75.2	376
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.2	376
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.52	37.6
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.2	376
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.2	376
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.2	376
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	12.4	37.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	376	ug/kg	75.2	376
99-09-2	3-Nitroaniline	U	376	ug/kg	75.2	376

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503010	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10369	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.1	**Dilution:**	1
Run Date:	07/02/2009 14:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0218.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	376	ug/kg	75.2	376
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
51-28-5	2,4-Dinitrophenol	U	752	ug/kg	143	752
132-64-9	Dibenzofuran	U	376	ug/kg	75.2	376
84-66-2	Diethylphthalate	U	376	ug/kg	75.2	376
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	75.2	376
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.2	376
100-01-6	4-Nitroaniline	U	376	ug/kg	113	376
	p-Nitroaniline					
122-39-4	Diphenylamine	U	376	ug/kg	75.2	376
122-66-7	Azobenzene	U	376	ug/kg	75.2	376
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	75.2	376
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.2	376
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6
120-12-7	Anthracene	U	37.6	ug/kg	7.52	37.6
84-74-2	Di-n-butylphthalate	U	376	ug/kg	75.2	376
206-44-0	Fluoranthene	J	11.3	ug/kg	11.3	37.6
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.2	376
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.2	376
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.2	376
205-99-2	Benzo(b)fluoranthene	J	13.2	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.2	376

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	197	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.87	199	ug/kg	99	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503010	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10369	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0218.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.42	185	ug/kg		J
	Unknown	13.22	339	ug/kg		J
83-47-6	.gamma.-Sitosterol	14.12	496	ug/kg	91	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503006	Date Received:	06/27/2009 09:05	%Moisture:	4.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10370	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:05	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0214.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	347	ug/kg	69.5	347
108-95-2	Phenol	U	347	ug/kg	69.5	347
95-57-8	2-Chlorophenol	U	347	ug/kg	69.5	347
106-46-7	1,4-Dichlorobenzene	U	347	ug/kg	69.5	347
621-64-7	N-Nitrosodipropylamine	U	347	ug/kg	69.5	347
59-50-7	4-Chloro-3-methylphenol	U	347	ug/kg	69.5	347
83-32-9	Acenaphthene	U	34.7	ug/kg	11.5	34.7
121-14-2	2,4-Dinitrotoluene	U	347	ug/kg	34.7	347
100-02-7	4-Nitrophenol	U	347	ug/kg	115	347
87-86-5	Pentachlorophenol	U	347	ug/kg	86.8	347
129-00-0	Pyrene	J	11.9	ug/kg	10.4	34.7
110-86-1	Pyridine	U	347	ug/kg	69.5	347
62-53-3	Aniline	U	347	ug/kg	104	347
111-44-4	bis(2-Chloroethyl) ether	U	347	ug/kg	69.5	347
541-73-1	1,3-Dichlorobenzene	U	347	ug/kg	69.5	347
100-51-6	Benzyl alcohol	U	347	ug/kg	104	347
95-50-1	1,2-Dichlorobenzene	U	347	ug/kg	69.5	347
108-60-1	bis(2-Chloroisopropyl)ether	U	347	ug/kg	69.5	347
95-48-7	o-Cresol	U	347	ug/kg	69.5	347
65794-96-9	m,p-Cresols	U	347	ug/kg	104	347
67-72-1	Hexachloroethane	U	347	ug/kg	69.5	347
98-95-3	Nitrobenzene	U	347	ug/kg	69.5	347
78-59-1	Isophorone	U	347	ug/kg	69.5	347
88-75-5	2-Nitrophenol	U	347	ug/kg	69.5	347
105-67-9	2,4-Dimethylphenol	U	347	ug/kg	122	347
111-91-1	bis(2-Chloroethoxy)methane	U	347	ug/kg	69.5	347
120-83-2	2,4-Dichlorophenol	U	347	ug/kg	69.5	347
65-85-0	Benzoic acid	U	695	ug/kg	174	695
91-20-3	Naphthalene	U	34.7	ug/kg	10.4	34.7
106-47-8	4-Chloroaniline	U	347	ug/kg	69.5	347
87-68-3	Hexachlorobutadiene	U	347	ug/kg	69.5	347
91-57-6	2-Methylnaphthalene	U	34.7	ug/kg	6.95	34.7
77-47-4	Hexachlorocyclopentadiene	U	347	ug/kg	69.5	347
88-06-2	2,4,6-Trichlorophenol	U	347	ug/kg	69.5	347
95-95-4	2,4,5-Trichlorophenol	U	347	ug/kg	69.5	347
91-58-7	2-Chloronaphthalene	U	34.7	ug/kg	11.5	34.7
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	347	ug/kg	69.5	347
99-09-2	3-Nitroaniline	U	347	ug/kg	69.5	347

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10370	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:05	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	347	ug/kg	69.5	347
606-20-2	2,6-Dinitrotoluene	U	347	ug/kg	34.7	347
208-96-8	Acenaphthylene	U	34.7	ug/kg	10.4	34.7
51-28-5	2,4-Dinitrophenol	U	695	ug/kg	132	695
132-64-9	Dibenzofuran	U	347	ug/kg	69.5	347
84-66-2	Diethylphthalate	U	347	ug/kg	69.5	347
86-73-7	Fluorene	U	34.7	ug/kg	10.4	34.7
7005-72-3	4-Chlorophenylphenylether	U	347	ug/kg	69.5	347
534-52-1	2-Methyl-4,6-dinitrophenol	U	347	ug/kg	69.5	347
100-01-6	4-Nitroaniline	U	347	ug/kg	104	347
	p-Nitroaniline					
122-39-4	Diphenylamine	U	347	ug/kg	69.5	347
122-66-7	Azobenzene	U	347	ug/kg	69.5	347
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	347	ug/kg	69.5	347
118-74-1	Hexachlorobenzene	U	347	ug/kg	69.5	347
85-01-8	Phenanthrene	U	34.7	ug/kg	10.4	34.7
120-12-7	Anthracene	U	34.7	ug/kg	6.95	34.7
84-74-2	Di-n-butylphthalate	U	347	ug/kg	69.5	347
206-44-0	Fluoranthene	U	34.7	ug/kg	10.4	34.7
85-68-7	Butylbenzylphthalate	U	347	ug/kg	69.5	347
56-55-3	Benzo(a)anthracene	U	34.7	ug/kg	10.4	34.7
91-94-1	3,3'-Dichlorobenzidine	U	347	ug/kg	104	347
218-01-9	Chrysene	U	34.7	ug/kg	10.4	34.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	347	ug/kg	69.5	347
117-84-0	Di-n-octylphthalate	U	347	ug/kg	69.5	347
205-99-2	Benzo(b)fluoranthene	U	34.7	ug/kg	10.4	34.7
207-08-9	Benzo(k)fluoranthene	U	34.7	ug/kg	10.4	34.7
50-32-8	Benzo(a)pyrene	U	34.7	ug/kg	10.4	34.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.7	ug/kg	10.4	34.7
53-70-3	Dibenzo(a,h)anthracene	U	34.7	ug/kg	10.4	34.7
191-24-2	Benzo(ghi)perylene	U	34.7	ug/kg	10.4	34.7
120-82-1	1,2,4-Trichlorobenzene	U	347	ug/kg	69.5	347

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	193	ug/kg		JA
	Unknown	12.42	1410	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10370	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:05	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	13.21	1260	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503008	Date Received:	06/27/2009 09:05	%Moisture:	14.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10371	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:50	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0216.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	388	ug/kg	77.5	388
108-95-2	Phenol	U	388	ug/kg	77.5	388
95-57-8	2-Chlorophenol	U	388	ug/kg	77.5	388
106-46-7	1,4-Dichlorobenzene	U	388	ug/kg	77.5	388
621-64-7	N-Nitrosodipropylamine	U	388	ug/kg	77.5	388
59-50-7	4-Chloro-3-methylphenol	U	388	ug/kg	77.5	388
83-32-9	Acenaphthene	U	38.8	ug/kg	12.8	38.8
121-14-2	2,4-Dinitrotoluene	U	388	ug/kg	38.8	388
100-02-7	4-Nitrophenol	U	388	ug/kg	128	388
87-86-5	Pentachlorophenol	U	388	ug/kg	96.9	388
129-00-0	Pyrene	U	38.8	ug/kg	11.6	38.8
110-86-1	Pyridine	U	388	ug/kg	77.5	388
62-53-3	Aniline	U	388	ug/kg	116	388
111-44-4	bis(2-Chloroethyl) ether	U	388	ug/kg	77.5	388
541-73-1	1,3-Dichlorobenzene	U	388	ug/kg	77.5	388
100-51-6	Benzyl alcohol	U	388	ug/kg	116	388
95-50-1	1,2-Dichlorobenzene	U	388	ug/kg	77.5	388
108-60-1	bis(2-Chloroisopropyl)ether	U	388	ug/kg	77.5	388
95-48-7	o-Cresol	U	388	ug/kg	77.5	388
65794-96-9	m,p-Cresols	U	388	ug/kg	116	388
67-72-1	Hexachloroethane	U	388	ug/kg	77.5	388
98-95-3	Nitrobenzene	U	388	ug/kg	77.5	388
78-59-1	Isophorone	U	388	ug/kg	77.5	388
88-75-5	2-Nitrophenol	U	388	ug/kg	77.5	388
105-67-9	2,4-Dimethylphenol	U	388	ug/kg	136	388
111-91-1	bis(2-Chloroethoxy)methane	U	388	ug/kg	77.5	388
120-83-2	2,4-Dichlorophenol	U	388	ug/kg	77.5	388
65-85-0	Benzoic acid	U	775	ug/kg	194	775
91-20-3	Naphthalene	U	38.8	ug/kg	11.6	38.8
106-47-8	4-Chloroaniline	U	388	ug/kg	77.5	388
87-68-3	Hexachlorobutadiene	U	388	ug/kg	77.5	388
91-57-6	2-Methylnaphthalene	U	38.8	ug/kg	7.75	38.8
77-47-4	Hexachlorocyclopentadiene	U	388	ug/kg	77.5	388
88-06-2	2,4,6-Trichlorophenol	U	388	ug/kg	77.5	388
95-95-4	2,4,5-Trichlorophenol	U	388	ug/kg	77.5	388
91-58-7	2-Chloronaphthalene	U	38.8	ug/kg	12.8	38.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	388	ug/kg	77.5	388
99-09-2	3-Nitroaniline	U	388	ug/kg	77.5	388

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503008	Date Received:	06/27/2009 09:05	%Moisture:	14.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10371	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:50	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0216.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	388	ug/kg	77.5	388
606-20-2	2,6-Dinitrotoluene	U	388	ug/kg	38.8	388
208-96-8	Acenaphthylene	U	38.8	ug/kg	11.6	38.8
51-28-5	2,4-Dinitrophenol	U	775	ug/kg	147	775
132-64-9	Dibenzofuran	U	388	ug/kg	77.5	388
84-66-2	Diethylphthalate	U	388	ug/kg	77.5	388
86-73-7	Fluorene	U	38.8	ug/kg	11.6	38.8
7005-72-3	4-Chlorophenylphenylether	U	388	ug/kg	77.5	388
534-52-1	2-Methyl-4,6-dinitrophenol	U	388	ug/kg	77.5	388
100-01-6	4-Nitroaniline	U	388	ug/kg	116	388
	p-Nitroaniline					
122-39-4	Diphenylamine	U	388	ug/kg	77.5	388
122-66-7	Azobenzene	U	388	ug/kg	77.5	388
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	388	ug/kg	77.5	388
118-74-1	Hexachlorobenzene	U	388	ug/kg	77.5	388
85-01-8	Phenanthrene	U	38.8	ug/kg	11.6	38.8
120-12-7	Anthracene	U	38.8	ug/kg	7.75	38.8
84-74-2	Di-n-butylphthalate	U	388	ug/kg	77.5	388
206-44-0	Fluoranthene	U	38.8	ug/kg	11.6	38.8
85-68-7	Butylbenzylphthalate	U	388	ug/kg	77.5	388
56-55-3	Benzo(a)anthracene	U	38.8	ug/kg	11.6	38.8
91-94-1	3,3'-Dichlorobenzidine	U	388	ug/kg	116	388
218-01-9	Chrysene	U	38.8	ug/kg	11.6	38.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	388	ug/kg	77.5	388
117-84-0	Di-n-octylphthalate	U	388	ug/kg	77.5	388
205-99-2	Benzo(b)fluoranthene	U	38.8	ug/kg	11.6	38.8
207-08-9	Benzo(k)fluoranthene	U	38.8	ug/kg	11.6	38.8
50-32-8	Benzo(a)pyrene	U	38.8	ug/kg	11.6	38.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.8	ug/kg	11.6	38.8
53-70-3	Dibenzo(a,h)anthracene	U	38.8	ug/kg	11.6	38.8
191-24-2	Benzo(ghi)perylene	U	38.8	ug/kg	11.6	38.8
120-82-1	1,2,4-Trichlorobenzene	U	388	ug/kg	77.5	388

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Aldol Condensate	3.03	210	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.87	193	ug/kg	99	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503008	**Date Received:**	06/27/2009 09:05	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10371	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0216.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.43	169	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503012	**Date Received:**	06/27/2009 09:05	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10372	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 15:19	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.07 g	**Final Volume:**	1 mL
Data File:	s5g0220.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	369	ug/kg	73.8	369
108-95-2	Phenol	U	369	ug/kg	73.8	369
95-57-8	2-Chlorophenol	U	369	ug/kg	73.8	369
106-46-7	1,4-Dichlorobenzene	U	369	ug/kg	73.8	369
621-64-7	N-Nitrosodipropylamine	U	369	ug/kg	73.8	369
59-50-7	4-Chloro-3-methylphenol	U	369	ug/kg	73.8	369
83-32-9	Acenaphthene	U	36.9	ug/kg	12.2	36.9
121-14-2	2,4-Dinitrotoluene	U	369	ug/kg	36.9	369
100-02-7	4-Nitrophenol	U	369	ug/kg	122	369
87-86-5	Pentachlorophenol	U	369	ug/kg	92.2	369
129-00-0	Pyrene		192	ug/kg	11.1	36.9
110-86-1	Pyridine	U	369	ug/kg	73.8	369
62-53-3	Aniline	U	369	ug/kg	111	369
111-44-4	bis(2-Chloroethyl) ether	U	369	ug/kg	73.8	369
541-73-1	1,3-Dichlorobenzene	U	369	ug/kg	73.8	369
100-51-6	Benzyl alcohol	U	369	ug/kg	111	369
95-50-1	1,2-Dichlorobenzene	U	369	ug/kg	73.8	369
108-60-1	bis(2-Chloroisopropyl)ether	U	369	ug/kg	73.8	369
95-48-7	o-Cresol	U	369	ug/kg	73.8	369
65794-96-9	m,p-Cresols	U	369	ug/kg	111	369
67-72-1	Hexachloroethane	U	369	ug/kg	73.8	369
98-95-3	Nitrobenzene	U	369	ug/kg	73.8	369
78-59-1	Isophorone	U	369	ug/kg	73.8	369
88-75-5	2-Nitrophenol	U	369	ug/kg	73.8	369
105-67-9	2,4-Dimethylphenol	U	369	ug/kg	129	369
111-91-1	bis(2-Chloroethoxy)methane	U	369	ug/kg	73.8	369
120-83-2	2,4-Dichlorophenol	U	369	ug/kg	73.8	369
65-85-0	Benzoic acid	U	738	ug/kg	184	738
91-20-3	Naphthalene	U	36.9	ug/kg	11.1	36.9
106-47-8	4-Chloroaniline	U	369	ug/kg	73.8	369
87-68-3	Hexachlorobutadiene	U	369	ug/kg	73.8	369
91-57-6	2-Methylnaphthalene	U	36.9	ug/kg	7.38	36.9
77-47-4	Hexachlorocyclopentadiene	U	369	ug/kg	73.8	369
88-06-2	2,4,6-Trichlorophenol	U	369	ug/kg	73.8	369
95-95-4	2,4,5-Trichlorophenol	U	369	ug/kg	73.8	369
91-58-7	2-Chloronaphthalene	U	36.9	ug/kg	12.2	36.9
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	369	ug/kg	73.8	369
99-09-2	3-Nitroaniline	U	369	ug/kg	73.8	369

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503012	Date Received:	06/27/2009 09:05	%Moisture:	9.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10372	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 15:19	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.07 g	Final Volume:	1 mL
Data File:	s5g0220.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	369	ug/kg	73.8	369
606-20-2	2,6-Dinitrotoluene	U	369	ug/kg	36.9	369
208-96-8	Acenaphthylene	U	36.9	ug/kg	11.1	36.9
51-28-5	2,4-Dinitrophenol	U	738	ug/kg	140	738
132-64-9	Dibenzofuran	U	369	ug/kg	73.8	369
84-66-2	Diethylphthalate	U	369	ug/kg	73.8	369
86-73-7	Fluorene	U	36.9	ug/kg	11.1	36.9
7005-72-3	4-Chlorophenylphenylether	U	369	ug/kg	73.8	369
534-52-1	2-Methyl-4,6-dinitrophenol	U	369	ug/kg	73.8	369
100-01-6	4-Nitroaniline	U	369	ug/kg	111	369
	p-Nitroaniline					
122-39-4	Diphenylamine	U	369	ug/kg	73.8	369
122-66-7	Azobenzene	U	369	ug/kg	73.8	369
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	369	ug/kg	73.8	369
118-74-1	Hexachlorobenzene	U	369	ug/kg	73.8	369
85-01-8	Phenanthrene		60.3	ug/kg	11.1	36.9
120-12-7	Anthracene	U	36.9	ug/kg	7.38	36.9
84-74-2	Di-n-butylphthalate	U	369	ug/kg	73.8	369
206-44-0	Fluoranthene		162	ug/kg	11.1	36.9
85-68-7	Butylbenzylphthalate	U	369	ug/kg	73.8	369
56-55-3	Benzo(a)anthracene		65.4	ug/kg	11.1	36.9
91-94-1	3,3'-Dichlorobenzidine	U	369	ug/kg	111	369
218-01-9	Chrysene		105	ug/kg	11.1	36.9
117-81-7	bis(2-Ethylhexyl)phthalate	U	369	ug/kg	73.8	369
117-84-0	Di-n-octylphthalate	U	369	ug/kg	73.8	369
205-99-2	Benzo(b)fluoranthene		175	ug/kg	11.1	36.9
207-08-9	Benzo(k)fluoranthene	U	36.9	ug/kg	11.1	36.9
50-32-8	Benzo(a)pyrene		106	ug/kg	11.1	36.9
193-39-5	Indeno(1,2,3-cd)pyrene		70.0	ug/kg	11.1	36.9
53-70-3	Dibenzo(a,h)anthracene	U	36.9	ug/kg	11.1	36.9
191-24-2	Benzo(ghi)perylene		94.6	ug/kg	11.1	36.9
120-82-1	1,2,4-Trichlorobenzene	U	369	ug/kg	73.8	369

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	149	ug/kg		JA
1058-61-3	Stigmast-4-en-3-one	8.88	226	ug/kg	91	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503012	**Date Received:**	06/27/2009 09:05	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10372	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 15:19	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.07 g	**Final Volume:**	1 mL
Data File:	s5g0220.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	10.43	199	ug/kg		J
126848-01-9	3,5,6-Trimethyl-p-quinone, 2-(2,5-dioxot	11.33	189	ug/kg	95	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503003	Date Received:	06/27/2009 09:05	%Moisture:	11.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10373	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 11:57	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0211.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.1	376
108-95-2	Phenol	U	376	ug/kg	75.1	376
95-57-8	2-Chlorophenol	U	376	ug/kg	75.1	376
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.1	376
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.1	376
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	75.1	376
83-32-9	Acenaphthene	U	37.6	ug/kg	12.4	37.6
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376
100-02-7	4-Nitrophenol	U	376	ug/kg	124	376
87-86-5	Pentachlorophenol	U	376	ug/kg	93.9	376
129-00-0	Pyrene	U	37.6	ug/kg	11.3	37.6
110-86-1	Pyridine	U	376	ug/kg	75.1	376
62-53-3	Aniline	U	376	ug/kg	113	376
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.1	376
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.1	376
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.1	376
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.1	376
95-48-7	o-Cresol	U	376	ug/kg	75.1	376
65794-96-9	m,p-Cresols	U	376	ug/kg	113	376
67-72-1	Hexachloroethane	U	376	ug/kg	75.1	376
98-95-3	Nitrobenzene	U	376	ug/kg	75.1	376
78-59-1	Isophorone	U	376	ug/kg	75.1	376
88-75-5	2-Nitrophenol	U	376	ug/kg	75.1	376
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	131	376
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.1	376
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.1	376
65-85-0	Benzoic acid	U	751	ug/kg	188	751
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6
106-47-8	4-Chloroaniline	U	376	ug/kg	75.1	376
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.1	376
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.51	37.6
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.1	376
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.1	376
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.1	376
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	12.4	37.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	376	ug/kg	75.1	376
99-09-2	3-Nitroaniline	U	376	ug/kg	75.1	376

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503003	Date Received:	06/27/2009 09:05	%Moisture:	11.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10373	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.1	Dilution:	1
Run Date:	07/02/2009 11:57	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0211.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	376	ug/kg	75.1	376
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751
132-64-9	Dibenzofuran	U	376	ug/kg	75.1	376
84-66-2	Diethylphthalate	U	376	ug/kg	75.1	376
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	75.1	376
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.1	376
100-01-6	4-Nitroaniline	U	376	ug/kg	113	376
	p-Nitroaniline					
122-39-4	Diphenylamine	U	376	ug/kg	75.1	376
122-66-7	Azobenzene	U	376	ug/kg	75.1	376
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	75.1	376
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.1	376
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6
120-12-7	Anthracene	U	37.6	ug/kg	7.51	37.6
84-74-2	Di-n-butylphthalate	U	376	ug/kg	75.1	376
206-44-0	Fluoranthene	U	37.6	ug/kg	11.3	37.6
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.1	376
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.1	376
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.1	376
205-99-2	Benzo(b)fluoranthene	U	37.6	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.1	376

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	209	ug/kg		JA
	Unknown	12.43	1060	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503003	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10373	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:57	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0211.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	13.22	1350	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503007	Date Received:	06/27/2009 09:05	%Moisture:	3.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10374	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:27	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0215.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	346	ug/kg	69.2	346
108-95-2	Phenol	U	346	ug/kg	69.2	346
95-57-8	2-Chlorophenol	U	346	ug/kg	69.2	346
106-46-7	1,4-Dichlorobenzene	U	346	ug/kg	69.2	346
621-64-7	N-Nitrosodipropylamine	U	346	ug/kg	69.2	346
59-50-7	4-Chloro-3-methylphenol	U	346	ug/kg	69.2	346
83-32-9	Acenaphthene	U	34.6	ug/kg	11.4	34.6
121-14-2	2,4-Dinitrotoluene	U	346	ug/kg	34.6	346
100-02-7	4-Nitrophenol	U	346	ug/kg	114	346
87-86-5	Pentachlorophenol	U	346	ug/kg	86.5	346
129-00-0	Pyrene	U	34.6	ug/kg	10.4	34.6
110-86-1	Pyridine	U	346	ug/kg	69.2	346
62-53-3	Aniline	U	346	ug/kg	104	346
111-44-4	bis(2-Chloroethyl) ether	U	346	ug/kg	69.2	346
541-73-1	1,3-Dichlorobenzene	U	346	ug/kg	69.2	346
100-51-6	Benzyl alcohol	U	346	ug/kg	104	346
95-50-1	1,2-Dichlorobenzene	U	346	ug/kg	69.2	346
108-60-1	bis(2-Chloroisopropyl)ether	U	346	ug/kg	69.2	346
95-48-7	o-Cresol	U	346	ug/kg	69.2	346
65794-96-9	m,p-Cresols	U	346	ug/kg	104	346
67-72-1	Hexachloroethane	U	346	ug/kg	69.2	346
98-95-3	Nitrobenzene	U	346	ug/kg	69.2	346
78-59-1	Isophorone	U	346	ug/kg	69.2	346
88-75-5	2-Nitrophenol	U	346	ug/kg	69.2	346
105-67-9	2,4-Dimethylphenol	U	346	ug/kg	121	346
111-91-1	bis(2-Chloroethoxy)methane	U	346	ug/kg	69.2	346
120-83-2	2,4-Dichlorophenol	U	346	ug/kg	69.2	346
65-85-0	Benzoic acid	U	692	ug/kg	173	692
91-20-3	Naphthalene	U	34.6	ug/kg	10.4	34.6
106-47-8	4-Chloroaniline	U	346	ug/kg	69.2	346
87-68-3	Hexachlorobutadiene	U	346	ug/kg	69.2	346
91-57-6	2-Methylnaphthalene	U	34.6	ug/kg	6.92	34.6
77-47-4	Hexachlorocyclopentadiene	U	346	ug/kg	69.2	346
88-06-2	2,4,6-Trichlorophenol	U	346	ug/kg	69.2	346
95-95-4	2,4,5-Trichlorophenol	U	346	ug/kg	69.2	346
91-58-7	2-Chloronaphthalene	U	34.6	ug/kg	11.4	34.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	346	ug/kg	69.2	346
99-09-2	3-Nitroaniline	U	346	ug/kg	69.2	346

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503007	Date Received:	06/27/2009 09:05	%Moisture:	3.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10374	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:27	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0215.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	346	ug/kg	69.2	346
606-20-2	2,6-Dinitrotoluene	U	346	ug/kg	34.6	346
208-96-8	Acenaphthylene	U	34.6	ug/kg	10.4	34.6
51-28-5	2,4-Dinitrophenol	U	692	ug/kg	131	692
132-64-9	Dibenzofuran	U	346	ug/kg	69.2	346
84-66-2	Diethylphthalate	U	346	ug/kg	69.2	346
86-73-7	Fluorene	U	34.6	ug/kg	10.4	34.6
7005-72-3	4-Chlorophenylphenylether	U	346	ug/kg	69.2	346
534-52-1	2-Methyl-4,6-dinitrophenol	U	346	ug/kg	69.2	346
100-01-6	4-Nitroaniline	U	346	ug/kg	104	346
	p-Nitroaniline					
122-39-4	Diphenylamine	U	346	ug/kg	69.2	346
122-66-7	Azobenzene	U	346	ug/kg	69.2	346
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	346	ug/kg	69.2	346
118-74-1	Hexachlorobenzene	U	346	ug/kg	69.2	346
85-01-8	Phenanthrene	U	34.6	ug/kg	10.4	34.6
120-12-7	Anthracene	U	34.6	ug/kg	6.92	34.6
84-74-2	Di-n-butylphthalate	U	346	ug/kg	69.2	346
206-44-0	Fluoranthene	U	34.6	ug/kg	10.4	34.6
85-68-7	Butylbenzylphthalate	U	346	ug/kg	69.2	346
56-55-3	Benzo(a)anthracene	U	34.6	ug/kg	10.4	34.6
91-94-1	3,3'-Dichlorobenzidine	U	346	ug/kg	104	346
218-01-9	Chrysene	U	34.6	ug/kg	10.4	34.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	346	ug/kg	69.2	346
117-84-0	Di-n-octylphthalate	U	346	ug/kg	69.2	346
205-99-2	Benzo(b)fluoranthene	U	34.6	ug/kg	10.4	34.6
207-08-9	Benzo(k)fluoranthene	U	34.6	ug/kg	10.4	34.6
50-32-8	Benzo(a)pyrene	U	34.6	ug/kg	10.4	34.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.6	ug/kg	10.4	34.6
53-70-3	Dibenzo(a,h)anthracene	U	34.6	ug/kg	10.4	34.6
191-24-2	Benzo(ghi)perylene	U	34.6	ug/kg	10.4	34.6
120-82-1	1,2,4-Trichlorobenzene	U	346	ug/kg	69.2	346

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	178	ug/kg		JA
25269-17-4	Thunbergol	8.21	263	ug/kg	92	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503001	Date Received:	06/27/2009 09:05	%Moisture:	3.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10375	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 10:27	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0207.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	345	ug/kg	68.9	345
108-95-2	Phenol	U	345	ug/kg	68.9	345
95-57-8	2-Chlorophenol	U	345	ug/kg	68.9	345
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	68.9	345
621-64-7	N-Nitrosodipropylamine	U	345	ug/kg	68.9	345
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	68.9	345
83-32-9	Acenaphthene	U	34.5	ug/kg	11.4	34.5
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345
100-02-7	4-Nitrophenol	U	345	ug/kg	114	345
87-86-5	Pentachlorophenol	U	345	ug/kg	86.1	345
129-00-0	Pyrene	U	34.5	ug/kg	10.3	34.5
110-86-1	Pyridine	U	345	ug/kg	68.9	345
62-53-3	Aniline	U	345	ug/kg	103	345
111-44-4	bis(2-Chloroethyl) ether	U	345	ug/kg	68.9	345
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	68.9	345
100-51-6	Benzyl alcohol	U	345	ug/kg	103	345
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	68.9	345
108-60-1	bis(2-Chloroisopropyl)ether	U	345	ug/kg	68.9	345
95-48-7	o-Cresol	U	345	ug/kg	68.9	345
65794-96-9	m,p-Cresols	U	345	ug/kg	103	345
67-72-1	Hexachloroethane	U	345	ug/kg	68.9	345
98-95-3	Nitrobenzene	U	345	ug/kg	68.9	345
78-59-1	Isophorone	U	345	ug/kg	68.9	345
88-75-5	2-Nitrophenol	U	345	ug/kg	68.9	345
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	121	345
111-91-1	bis(2-Chloroethoxy)methane	U	345	ug/kg	68.9	345
120-83-2	2,4-Dichlorophenol	U	345	ug/kg	68.9	345
65-85-0	Benzoic acid	J	459	ug/kg	172	689
91-20-3	Naphthalene	U	34.5	ug/kg	10.3	34.5
106-47-8	4-Chloroaniline	U	345	ug/kg	68.9	345
87-68-3	Hexachlorobutadiene	U	345	ug/kg	68.9	345
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.89	34.5
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	68.9	345
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	68.9	345
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	68.9	345
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	11.4	34.5
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	345	ug/kg	68.9	345
99-09-2	3-Nitroaniline	U	345	ug/kg	68.9	345

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503001	Date Received:	06/27/2009 09:05	%Moisture:	3.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10375	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 10:27	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0207.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	345	ug/kg	68.9	345
606-20-2	2,6-Dinitrotoluene	U	345	ug/kg	34.5	345
208-96-8	Acenaphthylene	U	34.5	ug/kg	10.3	34.5
51-28-5	2,4-Dinitrophenol	U	689	ug/kg	131	689
132-64-9	Dibenzofuran	U	345	ug/kg	68.9	345
84-66-2	Diethylphthalate	U	345	ug/kg	68.9	345
86-73-7	Fluorene	U	34.5	ug/kg	10.3	34.5
7005-72-3	4-Chlorophenylphenylether	U	345	ug/kg	68.9	345
534-52-1	2-Methyl-4,6-dinitrophenol	U	345	ug/kg	68.9	345
100-01-6	4-Nitroaniline	U	345	ug/kg	103	345
	p-Nitroaniline					
122-39-4	Diphenylamine	U	345	ug/kg	68.9	345
122-66-7	Azobenzene	U	345	ug/kg	68.9	345
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	345	ug/kg	68.9	345
118-74-1	Hexachlorobenzene	U	345	ug/kg	68.9	345
85-01-8	Phenanthrene	U	34.5	ug/kg	10.3	34.5
120-12-7	Anthracene	U	34.5	ug/kg	6.89	34.5
84-74-2	Di-n-butylphthalate	U	345	ug/kg	68.9	345
206-44-0	Fluoranthene	U	34.5	ug/kg	10.3	34.5
85-68-7	Butylbenzylphthalate	U	345	ug/kg	68.9	345
56-55-3	Benzo(a)anthracene	U	34.5	ug/kg	10.3	34.5
91-94-1	3,3'-Dichlorobenzidine	U	345	ug/kg	103	345
218-01-9	Chrysene	U	34.5	ug/kg	10.3	34.5
117-81-7	bis(2-Ethylhexyl)phthalate	U	345	ug/kg	68.9	345
117-84-0	Di-n-octylphthalate	U	345	ug/kg	68.9	345
205-99-2	Benzo(b)fluoranthene	U	34.5	ug/kg	10.3	34.5
207-08-9	Benzo(k)fluoranthene	U	34.5	ug/kg	10.3	34.5
50-32-8	Benzo(a)pyrene	U	34.5	ug/kg	10.3	34.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.3	34.5
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.3	34.5
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.3	34.5
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	68.9	345

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	198	ug/kg		JA
4630-07-3	Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	5.87	159	ug/kg	98	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10375	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 10:27	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0207.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
57-10-3	n-Hexadecanoic acid	7.69	189	ug/kg	95	NJ
	Unknown	13.54	195	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503002	Date Received:	06/27/2009 09:05	%Moisture:	4.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10376	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 11:34	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.06 g	Final Volume:	1 mL
Data File:	s5g0210.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	348	ug/kg	69.7	348
108-95-2	Phenol	U	348	ug/kg	69.7	348
95-57-8	2-Chlorophenol	U	348	ug/kg	69.7	348
106-46-7	1,4-Dichlorobenzene	U	348	ug/kg	69.7	348
621-64-7	N-Nitrosodipropylamine	U	348	ug/kg	69.7	348
59-50-7	4-Chloro-3-methylphenol	U	348	ug/kg	69.7	348
83-32-9	Acenaphthene	U	34.8	ug/kg	11.5	34.8
121-14-2	2,4-Dinitrotoluene	U	348	ug/kg	34.8	348
100-02-7	4-Nitrophenol	U	348	ug/kg	115	348
87-86-5	Pentachlorophenol	U	348	ug/kg	87.1	348
129-00-0	Pyrene	J	27.8	ug/kg	10.5	34.8
110-86-1	Pyridine	U	348	ug/kg	69.7	348
62-53-3	Aniline	U	348	ug/kg	105	348
111-44-4	bis(2-Chloroethyl) ether	U	348	ug/kg	69.7	348
541-73-1	1,3-Dichlorobenzene	U	348	ug/kg	69.7	348
100-51-6	Benzyl alcohol	U	348	ug/kg	105	348
95-50-1	1,2-Dichlorobenzene	U	348	ug/kg	69.7	348
108-60-1	bis(2-Chloroisopropyl)ether	U	348	ug/kg	69.7	348
95-48-7	o-Cresol	U	348	ug/kg	69.7	348
65794-96-9	m,p-Cresols	U	348	ug/kg	105	348
67-72-1	Hexachloroethane	U	348	ug/kg	69.7	348
98-95-3	Nitrobenzene	U	348	ug/kg	69.7	348
78-59-1	Isophorone	U	348	ug/kg	69.7	348
88-75-5	2-Nitrophenol	U	348	ug/kg	69.7	348
105-67-9	2,4-Dimethylphenol	U	348	ug/kg	122	348
111-91-1	bis(2-Chloroethoxy)methane	U	348	ug/kg	69.7	348
120-83-2	2,4-Dichlorophenol	U	348	ug/kg	69.7	348
65-85-0	Benzoic acid	U	697	ug/kg	174	697
91-20-3	Naphthalene	U	34.8	ug/kg	10.5	34.8
106-47-8	4-Chloroaniline	U	348	ug/kg	69.7	348
87-68-3	Hexachlorobutadiene	U	348	ug/kg	69.7	348
91-57-6	2-Methylnaphthalene	U	34.8	ug/kg	6.97	34.8
77-47-4	Hexachlorocyclopentadiene	U	348	ug/kg	69.7	348
88-06-2	2,4,6-Trichlorophenol	U	348	ug/kg	69.7	348
95-95-4	2,4,5-Trichlorophenol	U	348	ug/kg	69.7	348
91-58-7	2-Chloronaphthalene	U	34.8	ug/kg	11.5	34.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	348	ug/kg	69.7	348
99-09-2	3-Nitroaniline	U	348	ug/kg	69.7	348

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10376	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0210.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	348	ug/kg	69.7	348
606-20-2	2,6-Dinitrotoluene	U	348	ug/kg	34.8	348
208-96-8	Acenaphthylene	U	34.8	ug/kg	10.5	34.8
51-28-5	2,4-Dinitrophenol	U	697	ug/kg	132	697
132-64-9	Dibenzofuran	U	348	ug/kg	69.7	348
84-66-2	Diethylphthalate	U	348	ug/kg	69.7	348
86-73-7	Fluorene	U	34.8	ug/kg	10.5	34.8
7005-72-3	4-Chlorophenylphenylether	U	348	ug/kg	69.7	348
534-52-1	2-Methyl-4,6-dinitrophenol	U	348	ug/kg	69.7	348
100-01-6	4-Nitroaniline	U	348	ug/kg	105	348
	p-Nitroaniline					
122-39-4	Diphenylamine	U	348	ug/kg	69.7	348
122-66-7	Azobenzene	U	348	ug/kg	69.7	348
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	348	ug/kg	69.7	348
118-74-1	Hexachlorobenzene	U	348	ug/kg	69.7	348
85-01-8	Phenanthrene	J	11.6	ug/kg	10.5	34.8
120-12-7	Anthracene	U	34.8	ug/kg	6.97	34.8
84-74-2	Di-n-butylphthalate	U	348	ug/kg	69.7	348
206-44-0	Fluoranthene	J	25.4	ug/kg	10.5	34.8
85-68-7	Butylbenzylphthalate	U	348	ug/kg	69.7	348
56-55-3	Benzo(a)anthracene	J	18.5	ug/kg	10.5	34.8
91-94-1	3,3'-Dichlorobenzidine	U	348	ug/kg	105	348
218-01-9	Chrysene	J	14.5	ug/kg	10.5	34.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	348	ug/kg	69.7	348
117-84-0	Di-n-octylphthalate	U	348	ug/kg	69.7	348
205-99-2	Benzo(b)fluoranthene	J	25.9	ug/kg	10.5	34.8
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.5	34.8
50-32-8	Benzo(a)pyrene	J	15.6	ug/kg	10.5	34.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.5	34.8
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.5	34.8
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.5	34.8
120-82-1	1,2,4-Trichlorobenzene	U	348	ug/kg	69.7	348

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1000197-14-1	4b,8-Dimethyl-2-isopropylphenanthrene, 4	8.11	183	ug/kg	90	NJ
	Unknown	8.52	230	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10376	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0210.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.86	340	ug/kg		J
	Unknown	8.9	333	ug/kg		J
1686-62-0	1-Phenanthrenecarboxylic acid, 7-ethenyl	9.08	342	ug/kg	89	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.17	244	ug/kg	98	NJ
	Unknown	9.44	657	ug/kg		J
	Unknown	9.52	491	ug/kg		J
629-78-7	Heptadecane	10.16	229	ug/kg	95	NJ
	Unknown	10.21	354	ug/kg		J
	Unknown	12.06	539	ug/kg		J
	Unknown	12.42	346	ug/kg		J
83-46-5	.beta.-Sitosterol	14.08	304	ug/kg	93	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503005	Date Received:	06/27/2009 09:05	%Moisture:	6.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10377	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 12:42	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0213.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	357	ug/kg	71.3	357
108-95-2	Phenol	U	357	ug/kg	71.3	357
95-57-8	2-Chlorophenol	U	357	ug/kg	71.3	357
106-46-7	1,4-Dichlorobenzene	U	357	ug/kg	71.3	357
621-64-7	N-Nitrosodipropylamine	U	357	ug/kg	71.3	357
59-50-7	4-Chloro-3-methylphenol	U	357	ug/kg	71.3	357
83-32-9	Acenaphthene	U	35.7	ug/kg	11.8	35.7
121-14-2	2,4-Dinitrotoluene	U	357	ug/kg	35.7	357
100-02-7	4-Nitrophenol	U	357	ug/kg	118	357
87-86-5	Pentachlorophenol	U	357	ug/kg	89.2	357
129-00-0	Pyrene	U	35.7	ug/kg	10.7	35.7
110-86-1	Pyridine	U	357	ug/kg	71.3	357
62-53-3	Aniline	U	357	ug/kg	107	357
111-44-4	bis(2-Chloroethyl) ether	U	357	ug/kg	71.3	357
541-73-1	1,3-Dichlorobenzene	U	357	ug/kg	71.3	357
100-51-6	Benzyl alcohol	U	357	ug/kg	107	357
95-50-1	1,2-Dichlorobenzene	U	357	ug/kg	71.3	357
108-60-1	bis(2-Chloroisopropyl)ether	U	357	ug/kg	71.3	357
95-48-7	o-Cresol	U	357	ug/kg	71.3	357
65794-96-9	m,p-Cresols	U	357	ug/kg	107	357
67-72-1	Hexachloroethane	U	357	ug/kg	71.3	357
98-95-3	Nitrobenzene	U	357	ug/kg	71.3	357
78-59-1	Isophorone	U	357	ug/kg	71.3	357
88-75-5	2-Nitrophenol	U	357	ug/kg	71.3	357
105-67-9	2,4-Dimethylphenol	U	357	ug/kg	125	357
111-91-1	bis(2-Chloroethoxy)methane	U	357	ug/kg	71.3	357
120-83-2	2,4-Dichlorophenol	U	357	ug/kg	71.3	357
65-85-0	Benzoic acid	U	713	ug/kg	178	713
91-20-3	Naphthalene	U	35.7	ug/kg	10.7	35.7
106-47-8	4-Chloroaniline	U	357	ug/kg	71.3	357
87-68-3	Hexachlorobutadiene	U	357	ug/kg	71.3	357
91-57-6	2-Methylnaphthalene	U	35.7	ug/kg	7.13	35.7
77-47-4	Hexachlorocyclopentadiene	U	357	ug/kg	71.3	357
88-06-2	2,4,6-Trichlorophenol	U	357	ug/kg	71.3	357
95-95-4	2,4,5-Trichlorophenol	U	357	ug/kg	71.3	357
91-58-7	2-Chloronaphthalene	U	35.7	ug/kg	11.8	35.7
88-74-4	2-Nitroaniline	U	357	ug/kg	71.3	357
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	357	ug/kg	71.3	357

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503005	Date Received:	06/27/2009 09:05	%Moisture:	6.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10377	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 12:42	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0213.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	357	ug/kg	71.3	357
606-20-2	2,6-Dinitrotoluene	U	357	ug/kg	35.7	357
208-96-8	Acenaphthylene	U	35.7	ug/kg	10.7	35.7
51-28-5	2,4-Dinitrophenol	U	713	ug/kg	136	713
132-64-9	Dibenzofuran	U	357	ug/kg	71.3	357
84-66-2	Diethylphthalate	U	357	ug/kg	71.3	357
86-73-7	Fluorene	U	35.7	ug/kg	10.7	35.7
7005-72-3	4-Chlorophenylphenylether	U	357	ug/kg	71.3	357
534-52-1	2-Methyl-4,6-dinitrophenol	U	357	ug/kg	71.3	357
100-01-6	4-Nitroaniline	U	357	ug/kg	107	357
	p-Nitroaniline					
122-39-4	Diphenylamine	U	357	ug/kg	71.3	357
122-66-7	Azobenzene	U	357	ug/kg	71.3	357
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	357	ug/kg	71.3	357
118-74-1	Hexachlorobenzene	U	357	ug/kg	71.3	357
85-01-8	Phenanthrene	U	35.7	ug/kg	10.7	35.7
120-12-7	Anthracene	U	35.7	ug/kg	7.13	35.7
84-74-2	Di-n-butylphthalate	U	357	ug/kg	71.3	357
206-44-0	Fluoranthene	U	35.7	ug/kg	10.7	35.7
85-68-7	Butylbenzylphthalate	U	357	ug/kg	71.3	357
56-55-3	Benzo(a)anthracene	U	35.7	ug/kg	10.7	35.7
91-94-1	3,3'-Dichlorobenzidine	U	357	ug/kg	107	357
218-01-9	Chrysene	U	35.7	ug/kg	10.7	35.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	357	ug/kg	71.3	357
117-84-0	Di-n-octylphthalate	U	357	ug/kg	71.3	357
205-99-2	Benzo(b)fluoranthene	U	35.7	ug/kg	10.7	35.7
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7
50-32-8	Benzo(a)pyrene	U	35.7	ug/kg	10.7	35.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.7	ug/kg	10.7	35.7
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7
191-24-2	Benzo(ghi)perylene	U	35.7	ug/kg	10.7	35.7
120-82-1	1,2,4-Trichlorobenzene	U	357	ug/kg	71.3	357

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.1	183	ug/kg		J
	Unknown Aldol Condensate	3.03	218	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10377	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 12:42	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
112-79-8	9-Octadecenoic acid, (E)-	8.33	211	ug/kg	99	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.17	143	ug/kg	95	NJ
	Unknown	9.51	164	ug/kg		J
	Unknown	14.1	214	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503013	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10378	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 15:42	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0221.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	345	ug/kg	68.9	345
108-95-2	Phenol	U	345	ug/kg	68.9	345
95-57-8	2-Chlorophenol	U	345	ug/kg	68.9	345
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	68.9	345
621-64-7	N-Nitrosodipropylamine	U	345	ug/kg	68.9	345
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	68.9	345
83-32-9	Acenaphthene	U	34.5	ug/kg	11.4	34.5
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345
100-02-7	4-Nitrophenol	U	345	ug/kg	114	345
87-86-5	Pentachlorophenol	U	345	ug/kg	86.2	345
129-00-0	Pyrene	U	34.5	ug/kg	10.3	34.5
110-86-1	Pyridine	U	345	ug/kg	68.9	345
62-53-3	Aniline	U	345	ug/kg	103	345
111-44-4	bis(2-Chloroethyl) ether	U	345	ug/kg	68.9	345
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	68.9	345
100-51-6	Benzyl alcohol	U	345	ug/kg	103	345
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	68.9	345
108-60-1	bis(2-Chloroisopropyl)ether	U	345	ug/kg	68.9	345
95-48-7	o-Cresol	U	345	ug/kg	68.9	345
65794-96-9	m,p-Cresols	U	345	ug/kg	103	345
67-72-1	Hexachloroethane	U	345	ug/kg	68.9	345
98-95-3	Nitrobenzene	U	345	ug/kg	68.9	345
78-59-1	Isophorone	U	345	ug/kg	68.9	345
88-75-5	2-Nitrophenol	U	345	ug/kg	68.9	345
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	121	345
111-91-1	bis(2-Chloroethoxy)methane	U	345	ug/kg	68.9	345
120-83-2	2,4-Dichlorophenol	U	345	ug/kg	68.9	345
65-85-0	Benzoic acid	U	689	ug/kg	172	689
91-20-3	Naphthalene	U	34.5	ug/kg	10.3	34.5
106-47-8	4-Chloroaniline	U	345	ug/kg	68.9	345
87-68-3	Hexachlorobutadiene	U	345	ug/kg	68.9	345
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.89	34.5
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	68.9	345
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	68.9	345
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	68.9	345
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	11.4	34.5
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	345	ug/kg	68.9	345
99-09-2	3-Nitroaniline	U	345	ug/kg	68.9	345

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503013	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10378	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 15:42	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0221.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	345	ug/kg	68.9	345
606-20-2	2,6-Dinitrotoluene	U	345	ug/kg	34.5	345
208-96-8	Acenaphthylene	U	34.5	ug/kg	10.3	34.5
51-28-5	2,4-Dinitrophenol	U	689	ug/kg	131	689
132-64-9	Dibenzofuran	U	345	ug/kg	68.9	345
84-66-2	Diethylphthalate	U	345	ug/kg	68.9	345
86-73-7	Fluorene	U	34.5	ug/kg	10.3	34.5
7005-72-3	4-Chlorophenylphenylether	U	345	ug/kg	68.9	345
534-52-1	2-Methyl-4,6-dinitrophenol	U	345	ug/kg	68.9	345
100-01-6	4-Nitroaniline	U	345	ug/kg	103	345
	p-Nitroaniline					
122-39-4	Diphenylamine	U	345	ug/kg	68.9	345
122-66-7	Azobenzene	U	345	ug/kg	68.9	345
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	345	ug/kg	68.9	345
118-74-1	Hexachlorobenzene	U	345	ug/kg	68.9	345
85-01-8	Phenanthrene	U	34.5	ug/kg	10.3	34.5
120-12-7	Anthracene	U	34.5	ug/kg	6.89	34.5
84-74-2	Di-n-butylphthalate	U	345	ug/kg	68.9	345
206-44-0	Fluoranthene	U	34.5	ug/kg	10.3	34.5
85-68-7	Butylbenzylphthalate	U	345	ug/kg	68.9	345
56-55-3	Benzo(a)anthracene	U	34.5	ug/kg	10.3	34.5
91-94-1	3,3'-Dichlorobenzidine	U	345	ug/kg	103	345
218-01-9	Chrysene	U	34.5	ug/kg	10.3	34.5
117-81-7	bis(2-Ethylhexyl)phthalate	U	345	ug/kg	68.9	345
117-84-0	Di-n-octylphthalate	U	345	ug/kg	68.9	345
205-99-2	Benzo(b)fluoranthene	U	34.5	ug/kg	10.3	34.5
207-08-9	Benzo(k)fluoranthene	U	34.5	ug/kg	10.3	34.5
50-32-8	Benzo(a)pyrene	U	34.5	ug/kg	10.3	34.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.3	34.5
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.3	34.5
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.3	34.5
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	68.9	345

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	162	ug/kg		JA
	Unknown	13.54	206	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503014	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10379	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 16:04	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0222.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	348	ug/kg	69.6	348
108-95-2	Phenol	U	348	ug/kg	69.6	348
95-57-8	2-Chlorophenol	U	348	ug/kg	69.6	348
106-46-7	1,4-Dichlorobenzene	U	348	ug/kg	69.6	348
621-64-7	N-Nitrosodipropylamine	U	348	ug/kg	69.6	348
59-50-7	4-Chloro-3-methylphenol	U	348	ug/kg	69.6	348
83-32-9	Acenaphthene	U	34.8	ug/kg	11.5	34.8
121-14-2	2,4-Dinitrotoluene	U	348	ug/kg	34.8	348
100-02-7	4-Nitrophenol	U	348	ug/kg	115	348
87-86-5	Pentachlorophenol	U	348	ug/kg	87.0	348
129-00-0	Pyrene	J	19.8	ug/kg	10.4	34.8
110-86-1	Pyridine	U	348	ug/kg	69.6	348
62-53-3	Aniline	U	348	ug/kg	104	348
111-44-4	bis(2-Chloroethyl) ether	U	348	ug/kg	69.6	348
541-73-1	1,3-Dichlorobenzene	U	348	ug/kg	69.6	348
100-51-6	Benzyl alcohol	U	348	ug/kg	104	348
95-50-1	1,2-Dichlorobenzene	U	348	ug/kg	69.6	348
108-60-1	bis(2-Chloroisopropyl)ether	U	348	ug/kg	69.6	348
95-48-7	o-Cresol	U	348	ug/kg	69.6	348
65794-96-9	m,p-Cresols	U	348	ug/kg	104	348
67-72-1	Hexachloroethane	U	348	ug/kg	69.6	348
98-95-3	Nitrobenzene	U	348	ug/kg	69.6	348
78-59-1	Isophorone	U	348	ug/kg	69.6	348
88-75-5	2-Nitrophenol	U	348	ug/kg	69.6	348
105-67-9	2,4-Dimethylphenol	U	348	ug/kg	122	348
111-91-1	bis(2-Chloroethoxy)methane	U	348	ug/kg	69.6	348
120-83-2	2,4-Dichlorophenol	U	348	ug/kg	69.6	348
65-85-0	Benzoic acid	U	696	ug/kg	174	696
91-20-3	Naphthalene	U	34.8	ug/kg	10.4	34.8
106-47-8	4-Chloroaniline	U	348	ug/kg	69.6	348
87-68-3	Hexachlorobutadiene	U	348	ug/kg	69.6	348
91-57-6	2-Methylnaphthalene	U	34.8	ug/kg	6.96	34.8
77-47-4	Hexachlorocyclopentadiene	U	348	ug/kg	69.6	348
88-06-2	2,4,6-Trichlorophenol	U	348	ug/kg	69.6	348
95-95-4	2,4,5-Trichlorophenol	U	348	ug/kg	69.6	348
91-58-7	2-Chloronaphthalene	U	34.8	ug/kg	11.5	34.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	348	ug/kg	69.6	348
99-09-2	3-Nitroaniline	U	348	ug/kg	69.6	348

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503014	Date Received:	06/27/2009 09:05	%Moisture:	4.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10379	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 16:04	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0222.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	348	ug/kg	69.6	348
606-20-2	2,6-Dinitrotoluene	U	348	ug/kg	34.8	348
208-96-8	Acenaphthylene	U	34.8	ug/kg	10.4	34.8
51-28-5	2,4-Dinitrophenol	U	696	ug/kg	132	696
132-64-9	Dibenzofuran	U	348	ug/kg	69.6	348
84-66-2	Diethylphthalate	U	348	ug/kg	69.6	348
86-73-7	Fluorene	U	34.8	ug/kg	10.4	34.8
7005-72-3	4-Chlorophenylphenylether	U	348	ug/kg	69.6	348
534-52-1	2-Methyl-4,6-dinitrophenol	U	348	ug/kg	69.6	348
100-01-6	4-Nitroaniline	U	348	ug/kg	104	348
	p-Nitroaniline					
122-39-4	Diphenylamine	U	348	ug/kg	69.6	348
122-66-7	Azobenzene	U	348	ug/kg	69.6	348
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	348	ug/kg	69.6	348
118-74-1	Hexachlorobenzene	U	348	ug/kg	69.6	348
85-01-8	Phenanthrene	U	34.8	ug/kg	10.4	34.8
120-12-7	Anthracene	U	34.8	ug/kg	6.96	34.8
84-74-2	Di-n-butylphthalate	U	348	ug/kg	69.6	348
206-44-0	Fluoranthene	J	12.1	ug/kg	10.4	34.8
85-68-7	Butylbenzylphthalate	U	348	ug/kg	69.6	348
56-55-3	Benzo(a)anthracene	U	34.8	ug/kg	10.4	34.8
91-94-1	3,3'-Dichlorobenzidine	U	348	ug/kg	104	348
218-01-9	Chrysene	U	34.8	ug/kg	10.4	34.8
117-81-7	bis(2-Ethylhexyl)phthalate	J	149	ug/kg	69.6	348
117-84-0	Di-n-octylphthalate	U	348	ug/kg	69.6	348
205-99-2	Benzo(b)fluoranthene	U	34.8	ug/kg	10.4	34.8
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.4	34.8
50-32-8	Benzo(a)pyrene	U	34.8	ug/kg	10.4	34.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.4	34.8
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.4	34.8
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.4	34.8
120-82-1	1,2,4-Trichlorobenzene	U	348	ug/kg	69.6	348

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	204	ug/kg		JA
	Unknown	12.43	486	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503014	Date Received:	06/27/2009 09:05	%Moisture:	4.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10379	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 16:04	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0222.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.91	202	ug/kg		J
	Unknown	13.24	521	ug/kg		J

QC Summary

Surrogate Recovery Report

SDG Number: 09-2497

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201872923	MB for batch 881877	75	75	78	83	79	101
1201872924	LCS for batch 881877	75 D	71 D	82 D	83 D	84 D	99 D
232503001	CAMO-09-10375	65	66	68	72	70	83
1201872925	CAMO-09-10375MS	67	67	75	76	84	99
1201872926	CAMO-09-10375MSD	66	65	73	70	71	80
232503002	CAMO-09-10376	68	68	71	74	76	96
232503003	CAMO-09-10373	69	69	73	74	78	90
232503004	CAMO-09-10367	69	72	76	80	82	100
232503005	CAMO-09-10377	73	72	75	76	81	94
232503006	CAMO-09-10370	68	69	68	73	73	101
232503007	CAMO-09-10374	63	62	67	70	72	86
232503008	CAMO-09-10371	69	70	73	75	74	115
232503009	CAMO-09-10368	41	43	45	51	65	89
232503010	CAMO-09-10369	67	66	70	72	78	102
232503011	CAMO-09-10366	74	75	75	80	79	108
232503012	CAMO-09-10372	48	49	50	55	58	82
232503013	CAMO-09-10378	69	68	73	73	72	100
232503014	CAMO-09-10379	72	73	74	79	71	114

Surrogate		Acceptance Limits
2FP	= 2-Fluorophenol	(35%-96%)
PHL	= Phenol-d5	(36%-96%)
NBZ	= Nitrobenzene-d5	(34%-104%)
FBP	= 2-Fluorobiphenyl	(36%-100%)
TBP	= 2,4,6-Tribromophenol	(37%-106%)
TPH	= p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2497

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 881877

Matrix: SOIL

Lab Sample ID: 1201872924

Instrument: MSD5.I

Analysis Date: 07/02/2009 10:04

Dilution: 2

Analyst: RMB

Prep Batch ID: 881877

Inj. Vol: .5 uL

Batch ID: 881878

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1300	78	31-95
108-95-2	LCS	Phenol	1670	0.0	1280	77	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1300	78	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	1250	75	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1420	85	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1460	88	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1330	80	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1370	82	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1400	84	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	1500	90	38-116
129-00-0	LCS	Pyrene	1670	0.0	1570	94	43-108
110-86-1	LCS	Pyridine	1670	0.0	1340	80	13-129
62-53-3	LCS	Aniline	1670	0.0	1450	87	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1220	73	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	1270	76	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	1210	73	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	1320	79	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1260	76	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1350	81	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1420	85	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	1210	73	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1370	82	37-110

Semi-Volatile
Quality Control Summary
Spike Recovery Report

SDG Number: 09-2497 **Sample Type:** Laboratory Control Sample
Client ID: LCS for batch 881877 **Matrix:** SOIL
Lab Sample ID: 1201872924
Instrument: MSD5.I **Analysis Date:** 07/02/2009 10:04 **Dilution:** 2
Analyst: RMB **Prep Batch ID:** 881877
Inj. Vol: .5 uL **Batch ID:** 881878

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1380	83	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1400	84	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1410	85	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1370	82	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1440	86	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	1290	78	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1280	77	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1970	118	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1420	85	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1480	89	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1170	70	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1450	87	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1510	91	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1440	86	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1420	85	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	2150	129 *	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1470	88	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1400	84	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1500	90	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	1400	84	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1520	91	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1490	89	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2497
Client ID: LCS for batch 881877
Lab Sample ID: 1201872924
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 10:04
Dilution: 2
Prep Batch ID: 881877
Batch ID: 881878

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1420	85	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1440	86	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	1300	78	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	2330	140 *	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1770	106	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1560	94	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1510	90	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1550	93	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1500	90	45-107
120-12-7	LCS	Anthracene	1670	0.0	1570	94	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1580	95	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1550	93	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1530	92	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1520	91	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1360	81	45-98
218-01-9	LCS	Chrysene	1670	0.0	1500	90	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1610	97	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1560	93	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1530	92	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1510	90	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1520	91	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1580	95	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2497
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 881877
Matrix: SOIL
Lab Sample ID: 1201872924
Instrument: MSD5.I
Analysis Date: 07/02/2009 10:04
Dilution: 2
Analyst: RMB
Prep Batch ID: 881877
Inj. Vol: .5 uL
Batch ID: 881878

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1610	96	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1570	94	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1390	84	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2497
Client ID: CAMO-09-10375MS
Lab Sample ID: 1201872925
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 3.3
Analysis Date: 07/02/2009 10:49
Prep Batch ID: 881877
Batch ID: 881878
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	1720	0.00	U	1280	74	32-90
108-95-2	MS	Phenol	1720	0.00	U	1240	72	32-105
95-57-8	MS	2-Chlorophenol	1720	0.00	U	1260	73	33-106
106-46-7	MS	1,4-Dichlorobenzene	1720	0.00	U	1170	68	33-95
621-64-7	MS	N-Nitrosodipropylamine	1720	0.00	U	1350	78	31-109
59-50-7	MS	4-Chloro-3-methylphenol	1720	0.00	U	1480	86	38-119
83-32-9	MS	Acenaphthene	1720	0.00	U	1370	79	39-100
121-14-2	MS	2,4-Dinitrotoluene	1720	0.00	U	1440	83	42-107
100-02-7	MS	4-Nitrophenol	1720	0.00	U	1640	95	24-120
87-86-5	MS	Pentachlorophenol	1720	0.00	U	1680	97	26-121
129-00-0	MS	Pyrene	1720	0.00	U	1590	92	34-120
110-86-1	MS	Pyridine	1720	0.00	U	1220	71	30-95
62-53-3	MS	Aniline	1720	0.00	U	1380	80	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	1720	0.00	U	1140	66	34-101
541-73-1	MS	1,3-Dichlorobenzene	1720	0.00	U	1190	69	31-97
100-51-6	MS	Benzyl alcohol	1720	0.00	U	1180	68	17-120
95-50-1	MS	1,2-Dichlorobenzene	1720	0.00	U	1210	70	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	1720	0.00	U	1190	69	32-113
95-48-7	MS	o-Cresol	1720	0.00	U	1250	72	31-119
65794-96-9	MS	m,p-Cresols	1720	0.00	U	1440	83	35-125
67-72-1	MS	Hexachloroethane	1720	0.00	U	1170	68	30-100
98-95-3	MS	Nitrobenzene	1720	0.00	U	1320	76	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2497
Client ID: CAMO-09-10375MS
Lab Sample ID: 1201872925
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 3.3
Analysis Date: 07/02/2009 10:49
Prep Batch ID: 881877
Batch ID: 881878

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	1720	0.00	U	1330	78	34-110
88-75-5	MS	2-Nitrophenol	1720	0.00	U	1310	76	32-108
105-67-9	MS	2,4-Dimethylphenol	1720	0.00	U	1420	82	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	1720	0.00	U	1290	75	35-108
120-83-2	MS	2,4-Dichlorophenol	1720	0.00	U	1430	83	38-110
65-85-0	MS	Benzoic acid	1720	459	J	1510	61	18-134
91-20-3	MS	Naphthalene	1720	0.00	U	1190	69	31-105
106-47-8	MS	4-Chloroaniline	1720	0.00	U	1350	79	29-123
87-68-3	MS	Hexachlorobutadiene	1720	0.00	U	1320	76	31-109
91-57-6	MS	2-Methylnaphthalene	1720	0.00	U	1420	83	32-110
77-47-4	MS	Hexachlorocyclopentadiene	1720	0.00	U	1520	88	21-122
88-06-2	MS	2,4,6-Trichlorophenol	1720	0.00	U	1510	88	37-108
95-95-4	MS	2,4,5-Trichlorophenol	1720	0.00	U	1590	92	37-116
91-58-7	MS	2-Chloronaphthalene	1720	0.00	U	1420	83	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	1720	0.00	U	1510	88	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	1720	0.00	U	1800	105	39-117
131-11-3	MS	Dimethylphthalate	1720	0.00	U	1410	82	41-105
606-20-2	MS	2,6-Dinitrotoluene	1720	0.00	U	1410	82	41-103
208-96-8	MS	Acenaphthylene	1720	0.00	U	1460	85	41-103
51-28-5	MS	2,4-Dinitrophenol	1720	0.00	U	1330	77	25-104
132-64-9	MS	Dibenzofuran	1720	0.00	U	1480	86	40-114
84-66-2	MS	Diethylphthalate	1720	0.00	U	1450	84	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	09-2497	**Sample Type:**	Matrix Spike
Client ID:	CAMO-09-10375MS	**Matrix:**	R
Lab Sample ID:	1201872925	**%Moisture:**	3.3
Instrument:	MSD5.I	**Analysis Date:**	07/02/2009 10:49
Analyst:	RMB	**Prep Batch ID:**	881877
Inj. Vol:	.5 uL	**Batch ID:**	881878

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	1720	0.00	U	1380	80	48-99
7005-72-3	MS	4-Chlorophenylphenylether	1720	0.00	U	1420	82	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	1720	0.00	U	1430	83	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	1720	0.00	U	2280	132	35-139
122-39-4	MS	Diphenylamine	1720	0.00	U	1700	99	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	1720	0.00	U	1540	90	37-118
101-55-3	MS	4-Bromophenylphenylether	1720	0.00	U	1440	84	39-112
118-74-1	MS	Hexachlorobenzene	1720	0.00	U	1470	85	38-113
85-01-8	MS	Phenanthrene	1720	0.00	U	1440	84	38-110
120-12-7	MS	Anthracene	1720	0.00	U	1510	88	38-112
84-74-2	MS	Di-n-butylphthalate	1720	0.00	U	1540	89	42-119
206-44-0	MS	Fluoranthene	1720	0.00	U	1500	87	38-119
85-68-7	MS	Butylbenzylphthalate	1720	0.00	U	1630	94	39-126
56-55-3	MS	Benzo(a)anthracene	1720	0.00	U	1460	85	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	1720	0.00	U	1090	63	35-106
218-01-9	MS	Chrysene	1720	0.00	U	1460	85	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	1720	0.00	U	1620	94	40-125
117-84-0	MS	Di-n-octylphthalate	1720	0.00	U	1980	115	30-147
205-99-2	MS	Benzo(b)fluoranthene	1720	0.00	U	1550	90	38-117
207-08-9	MS	Benzo(k)fluoranthene	1720	0.00	U	1700	99	39-120
50-32-8	MS	Benzo(a)pyrene	1720	0.00	U	1530	89	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	1720	0.00	U	1180	68	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2497
Client ID: CAMO-09-10375MS
Lab Sample ID: 1201872925
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 3.3
Analysis Date: 07/02/2009 10:49
Prep Batch ID: 881877
Batch ID: 881878
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	1720	0.00	U	1210	70	32-124
191-24-2	MS	Benzo(ghi)perylene	1720	0.00	U	1100	64	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	1720	0.00	U	1300	76	31-105

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2497
Client ID: CAMO-09-10375MSD
Lab Sample ID: 1201872926
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 3.3
Analysis Date: 07/02/2009 11:12
Dilution: 1
Prep Batch ID: 881877
Batch ID: 881878

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD	N-Methyl-N-nitrosomethylam	1720	0.00	U	1280	75	32-90	0	0-30
108-95-2	MSD	Phenol	1720	0.00	U	1200	70	32-105	4	0-30
95-57-8	MSD	2-Chlorophenol	1720	0.00	U	1210	70	33-106	4	0-30
106-46-7	MSD	1,4-Dichlorobenzene	1720	0.00	U	1140	66	33-95	3	0-30
621-64-7	MSD	N-Nitrosodipropylamine	1720	0.00	U	1340	78	31-109	1	0-30
59-50-7	MSD	4-Chloro-3-methylphenol	1720	0.00	U	1270	74	38-119	15	0-30
83-32-9	MSD	Acenaphthene	1720	0.00	U	1170	68	39-100	15	0-30
121-14-2	MSD	2,4-Dinitrotoluene	1720	0.00	U	1190	69	42-107	19	0-30
100-02-7	MSD	4-Nitrophenol	1720	0.00	U	1310	76	24-120	23	0-30
87-86-5	MSD	Pentachlorophenol	1720	0.00	U	1390	81	26-121	19	0-30
129-00-0	MSD	Pyrene	1720	0.00	U	1280	74	34-120	22	0-30
110-86-1	MSD	Pyridine	1720	0.00	U	1220	71	30-95	0	0-30
62-53-3	MSD	Aniline	1720	0.00	U	1320	77	34-111	4	0-30
111-44-4	MSD	bis(2-Chloroethyl) ether	1720	0.00	U	1130	66	34-101	1	0-30
541-73-1	MSD	1,3-Dichlorobenzene	1720	0.00	U	1150	67	31-97	4	0-30
100-51-6	MSD	Benzyl alcohol	1720	0.00	U	1160	67	17-120	2	0-30
95-50-1	MSD	1,2-Dichlorobenzene	1720	0.00	U	1180	68	32-102	3	0-30
108-60-1	MSD	bis(2-Chloroisopropyl)ether	1720	0.00	U	1150	67	32-113	3	0-30
95-48-7	MSD	o-Cresol	1720	0.00	U	1150	67	31-119	8	0-30
65794-96-9	MSD	m,p-Cresols	1720	0.00	U	1320	77	35-125	9	0-30
67-72-1	MSD	Hexachloroethane	1720	0.00	U	1160	67	30-100	1	0-30
98-95-3	MSD	Nitrobenzene	1720	0.00	U	1250	73	33-108	5	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	**09-2497**	**Sample Type:**	**Matrix Spike Duplicate**
Client ID:	**CAMO-09-10375MSD**	**Matrix:**	**R**
Lab Sample ID:	**1201872926**	**%Moisture:**	**3.3**
Instrument:	**MSD5.I**	**Analysis Date:**	**07/02/2009 11:12**
Analyst:	**RMB**	**Prep Batch ID:**	**881877**
Inj. Vol:	**.5 uL**	**Batch ID:**	**881878**

Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD Isophorone	1720	0.00	U	1250	73	34-110	7	0-30
88-75-5	MSD 2-Nitrophenol	1720	0.00	U	1280	74	32-108	3	0-30
105-67-9	MSD 2,4-Dimethylphenol	1720	0.00	U	1270	74	32-115	11	0-30
111-91-1	MSD bis(2-Chloroethoxy)methane	1720	0.00	U	1220	71	35-108	5	0-30
120-83-2	MSD 2,4-Dichlorophenol	1720	0.00	U	1270	74	38-110	12	0-30
65-85-0	MSD Benzoic acid	1720	459	J	1400	55	18-134	7	0-30
91-20-3	MSD Naphthalene	1720	0.00	U	1120	65	31-105	6	0-30
106-47-8	MSD 4-Chloroaniline	1720	0.00	U	1270	74	29-123	6	0-30
87-68-3	MSD Hexachlorobutadiene	1720	0.00	U	1270	74	31-109	4	0-30
91-57-6	MSD 2-Methylnaphthalene	1720	0.00	U	1310	76	32-110	8	0-30
77-47-4	MSD Hexachlorocyclopentadiene	1720	0.00	U	1240	72	21-122	21	0-30
88-06-2	MSD 2,4,6-Trichlorophenol	1720	0.00	U	1300	76	37-108	15	0-30
95-95-4	MSD 2,4,5-Trichlorophenol	1720	0.00	U	1320	77	37-116	18	0-30
91-58-7	MSD 2-Chloronaphthalene	1720	0.00	U	1280	74	37-103	11	0-30
88-74-4	MSD 2-Nitroaniline *o-Nitroaniline*	1720	0.00	U	1300	75	36-115	15	0-30
99-09-2	MSD 3-Nitroaniline *m-Nitroaniline*	1720	0.00	U	1620	94	39-117	11	0-30
131-11-3	MSD Dimethylphthalate	1720	0.00	U	1210	70	41-105	15	0-30
606-20-2	MSD 2,6-Dinitrotoluene	1720	0.00	U	1200	70	41-103	16	0-30
208-96-8	MSD Acenaphthylene	1720	0.00	U	1280	75	41-103	13	0-30
51-28-5	MSD 2,4-Dinitrophenol	1720	0.00	U	963	56	25-104	32 *	0-30
132-64-9	MSD Dibenzofuran	1720	0.00	U	1280	74	40-114	15	0-30
84-66-2	MSD Diethylphthalate	1720	0.00	U	1220	71	43-110	18	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2497
Client ID: CAMO-09-10375MSD
Lab Sample ID: 1201872926
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 3.3
Analysis Date: 07/02/2009 11:12
Dilution: 1
Prep Batch ID: 881877
Batch ID: 881878

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	1720	0.00	U	1190	69	48-99	15	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	1720	0.00	U	1220	71	42-111	15	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	1720	0.00	U	1050	61	19-118	30	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	1720	0.00	U	1950	114	35-139	15	0-30
122-39-4	MSD	Diphenylamine	1720	0.00	U	1410	82	41-112	19	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	1720	0.00	U	1280	74	37-118	19	0-30
101-55-3	MSD	4-Bromophenylphenylether	1720	0.00	U	1210	70	39-112	18	0-30
118-74-1	MSD	Hexachlorobenzene	1720	0.00	U	1220	71	38-113	19	0-30
85-01-8	MSD	Phenanthrene	1720	0.00	U	1190	69	38-110	19	0-30
120-12-7	MSD	Anthracene	1720	0.00	U	1230	71	38-112	21	0-30
84-74-2	MSD	Di-n-butylphthalate	1720	0.00	U	1250	72	42-119	21	0-30
206-44-0	MSD	Fluoranthene	1720	0.00	U	1240	72	38-119	19	0-30
85-68-7	MSD	Butylbenzylphthalate	1720	0.00	U	1290	75	39-126	23	0-30
56-55-3	MSD	Benzo(a)anthracene	1720	0.00	U	1180	69	39-110	21	0-30
91-94-1	MSD	3,3'-Dichlorobenzidine	1720	0.00	U	965	56	35-106	12	0-30
218-01-9	MSD	Chrysene	1720	0.00	U	1180	69	39-109	21	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	1720	0.00	U	1310	76	40-125	21	0-30
117-84-0	MSD	Di-n-octylphthalate	1720	0.00	U	1530	89	30-147	26	0-30
205-99-2	MSD	Benzo(b)fluoranthene	1720	0.00	U	1320	77	38-117	16	0-30
207-08-9	MSD	Benzo(k)fluoranthene	1720	0.00	U	1260	73	39-120	30	0-30
50-32-8	MSD	Benzo(a)pyrene	1720	0.00	U	1230	71	40-115	22	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	1720	0.00	U	971	56	32-120	19	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2497
Client ID: CAMO-09-10375MSD
Lab Sample ID: 1201872926
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 3.3
Analysis Date: 07/02/2009 11:12
Dilution: 1
Prep Batch ID: 881877
Batch ID: 881878

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD Dibenzo(a,h)anthracene	1720	0.00	U	1030	60	32-124	16	0-30
191-24-2	MSD Benzo(ghi)perylene	1720	0.00	U	886	52	28-119	21	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	1720	0.00	U	1240	72	31-105	5	0-30

Method Blank Summary

SDG Number:	09-2497	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881877	Instrument ID:	MSD5.I	Data File:	s5g0204.d
Lab Sample ID:	1201872923	Prep Date:	07/01/2009 22:14	Analyzed:	07/02/09 09:19
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 881877	1201872924	s5g0206.d	07/02/09	1004
02	CAMO-09-10375	232503001	s5g0207.d	07/02/09	1027
03	CAMO-09-10375MS	1201872925	s5g0208.d	07/02/09	1049
04	CAMO-09-10375MSD	1201872926	s5g0209.d	07/02/09	1112
05	CAMO-09-10376	232503002	s5g0210.d	07/02/09	1134
06	CAMO-09-10373	232503003	s5g0211.d	07/02/09	1157
07	CAMO-09-10367	232503004	s5g0212.d	07/02/09	1219
08	CAMO-09-10377	232503005	s5g0213.d	07/02/09	1242
09	CAMO-09-10370	232503006	s5g0214.d	07/02/09	1305
10	CAMO-09-10374	232503007	s5g0215.d	07/02/09	1327
11	CAMO-09-10371	232503008	s5g0216.d	07/02/09	1350
12	CAMO-09-10368	232503009	s5g0217.d	07/02/09	1412
13	CAMO-09-10369	232503010	s5g0218.d	07/02/09	1434
14	CAMO-09-10366	232503011	s5g0219.d	07/02/09	1457
15	CAMO-09-10372	232503012	s5g0220.d	07/02/09	1519
16	CAMO-09-10378	232503013	s5g0221.d	07/02/09	1542
17	CAMO-09-10379	232503014	s5g0222.d	07/02/09	1604

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2497

Instrument ID: MSD5.I **Injection Date/Time:** 02-JUL-09 08:16

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s070209.b/s5g0201.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	41.5
68	Less than 2% of mass 69	1.9
69	Mass 69 Relative Abundance	37.8
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	42.5
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	28
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	74.3
442	Greater than 40% of mass 198	84.2
443	17 - 23% of mass 442	19.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090617-02.4	/chem/MSD5.i/s070209.b/s5g020	02-JUL-09 08:28
AP12CVS	WBN090619-01.4	/chem/MSD5.i/s070209.b/s5g020	02-JUL-09 08:56
SBLK01	1201872923	/chem/MSD5.i/s070209.b/s5g020	02-JUL-09 09:19
SBLK01LCS	1201872924	/chem/MSD5.i/s070209.b/s5g020	02-JUL-09 10:04
CAMO-09-10375	232503001	/chem/MSD5.i/s070209.b/s5g020	02-JUL-09 10:27
CAMO-09-10375MS	1201872925	/chem/MSD5.i/s070209.b/s5g020	02-JUL-09 10:49
CAMO-09-10375MSD	1201872926	/chem/MSD5.i/s070209.b/s5g020	02-JUL-09 11:12
CAMO-09-10376	232503002	/chem/MSD5.i/s070209.b/s5g021	02-JUL-09 11:34
CAMO-09-10373	232503003	/chem/MSD5.i/s070209.b/s5g021	02-JUL-09 11:57
CAMO-09-10367	232503004	/chem/MSD5.i/s070209.b/s5g021	02-JUL-09 12:19
CAMO-09-10377	232503005	/chem/MSD5.i/s070209.b/s5g021	02-JUL-09 12:42
CAMO-09-10370	232503006	/chem/MSD5.i/s070209.b/s5g021	02-JUL-09 13:05
CAMO-09-10374	232503007	/chem/MSD5.i/s070209.b/s5g021	02-JUL-09 13:27
CAMO-09-10371	232503008	/chem/MSD5.i/s070209.b/s5g021	02-JUL-09 13:50
CAMO-09-10368	232503009	/chem/MSD5.i/s070209.b/s5g021	02-JUL-09 14:12
CAMO-09-10369	232503010	/chem/MSD5.i/s070209.b/s5g021	02-JUL-09 14:34

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2497

Instrument ID: MSD5.I **Injection Date/Time:** 02-JUL-09 08:16

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s070209.b/s5g0201.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	41.5
68	Less than 2% of mass 69	1.9
69	Mass 69 Relative Abundance	37.8
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	42.5
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	28
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	74.3
442	Greater than 40% of mass 198	84.2
443	17 - 23% of mass 442	19.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CAMO-09-10366	232503011	/chem/MSD5.i/s070209.b/s5g021	02-JUL-09 14:57
CAMO-09-10372	232503012	/chem/MSD5.i/s070209.b/s5g022	02-JUL-09 15:19
CAMO-09-10378	232503013	/chem/MSD5.i/s070209.b/s5g022	02-JUL-09 15:42
CAMO-09-10379	232503014	/chem/MSD5.i/s070209.b/s5g022	02-JUL-09 16:04

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2497

Instrument ID: MSD5.I **Injection Date/Time:** 25-JUN-09 14:07

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s062509.b/s5f2510.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40.6
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	37.2
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	42.2
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.7
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	72.4
442	Greater than 40% of mass 198	88.9
443	17 - 23% of mass 442	20

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICAL001	WBN090602-08	/chem/MSD5.i/s062509.b/s5f2512	25-JUN-09 14:42
MEGAICAL010	WBN090602-07	/chem/MSD5.i/s062509.b/s5f2513	25-JUN-09 15:10
MEGAICAL020	WBN090602-06	/chem/MSD5.i/s062509.b/s5f2514	25-JUN-09 15:38
MEGAICAL040	WBN090602-05.1	/chem/MSD5.i/s062509.b/s5f2515	25-JUN-09 16:05
MEGAICAL050	WBN090602-04	/chem/MSD5.i/s062509.b/s5f2516	25-JUN-09 16:33
MEGAICAL080	WBN090602-03	/chem/MSD5.i/s062509.b/s5f2517	25-JUN-09 17:02
MEGAICAL100	WBN090602-02	/chem/MSD5.i/s062509.b/s5f2518	25-JUN-09 17:29
MEGAICAL120	WBN090602-01	/chem/MSD5.i/s062509.b/s5f2519	25-JUN-09 17:57
AP12ICAL010	WBN090528-07	/chem/MSD5.i/s062509.b/s5f2522	25-JUN-09 19:10
AP12ICAL020	WBN090528-06	/chem/MSD5.i/s062509.b/s5f2523	25-JUN-09 19:32
AP12ICAL040	WBN090528-05.1	/chem/MSD5.i/s062509.b/s5f2524	25-JUN-09 19:55
AP12ICAL050	WBN090528-04	/chem/MSD5.i/s062509.b/s5f2525	25-JUN-09 20:18
AP12ICAL080	WBN090528-03	/chem/MSD5.i/s062509.b/s5f2526	25-JUN-09 20:41
AP12ICAL100	WBN090528-02	/chem/MSD5.i/s062509.b/s5f2527	25-JUN-09 21:03
AP12ICAL120	WBN090528-01	/chem/MSD5.i/s062509.b/s5f2528	25-JUN-09 21:25
AP12ICV	WBN090528-08.5	/chem/MSD5.i/s062509.b/s5f2530	25-JUN-09 22:11

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2497

Instrument ID: MSD5.I **Injection Date/Time:** 26-JUN-09 08:28

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s062509.b/s5f2531.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	42.2
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	38.3
70	Less than 2% of mass 69	0.4
127	40 - 60% of mass 198	42.2
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.7
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	77.7
442	Greater than 40% of mass 198	87.4
443	17 - 23% of mass 442	18.9

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICV	WBN090602-09.1	/chem/MSD5.i/s062509.b/s5f2533	26-JUN-09 09:03

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 09-2497

Instrument: MSD5.I

STD Analysis Time: 02-JUL-09 08:28

GC Column: J&W DB-5MS

Data File: s5g0202.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	505671		4.02	1799104		4.89	1045429		6.15	1951994		7.33	1933079		9.75	1746260		11.5
Upper Limit	1011342		4.52	3598208		5.39	2090858		6.65	3903988		7.83	3866158		10.3	3492520		12
Lower Limit	252836		3.52	899552		4.39	522715		5.65	975997		6.83	966540		9.25	873130		11
Sample ID																		
BLK01	527349		4.01	1812552		4.88	1118143		6.14	2076628		7.32	2005705		9.74	1740324		11.5
BLK01LCS	495137		4.01	1743824		4.88	1047277		6.14	1934111		7.32	1935708		9.74	1767460		11.5
CAMO-09-10375	509299		4.01	1729641		4.88	1071153		6.14	1960587		7.32	1908619		9.74	1498664		11.5
CAMO-09-10375MS	486878		4.01	1749255		4.88	1027903		6.14	1941373		7.32	1835656		9.74	1264512		11.5
CAMO-09-10375MSD	548711		4.01	1992055		4.88	1172920		6.14	2221833		7.32	2158940		9.74	1582614		11.5
CAMO-09-10376	545846		4.01	1879309		4.88	1177774		6.14	2155208		7.32	1771802		9.74	1162506		11.5
CAMO-09-10373	500392		4.01	1715766		4.88	1058886		6.14	2004932		7.32	1906260		9.74	1393079		11.5
CAMO-09-10367	472296		4.01	1598297		4.88	994701		6.14	1872851		7.32	1710629		9.74	1149592		11.5
CAMO-09-10377	483118		4.01	1679633		4.88	1048468		6.14	1988919		7.32	1860172		9.74	1428713		11.5
CAMO-09-10370	435176		4.01	1520266		4.88	936810		6.14	1750730		7.32	1297946		9.74	837874	*	11.5
CAMO-09-10374	477544		4.01	1624209		4.88	1008643		6.14	1912619		7.32	1687276		9.74	1009349		11.5
CAMO-09-10371	535492		4.01	1796169		4.88	1117973		6.14	1942837		7.32	1315877		9.74	828207	*	11.5
CAMO-09-10368	550882		4.01	1864724		4.88	1160049		6.14	2074960		7.32	1492257		9.74	955362		11.5
CAMO-09-10369	521397		4.01	1788416		4.88	1125804		6.14	2040831		7.32	1568783		9.74	1092526		11.5
CAMO-09-10366	428105		4.01	1502681		4.88	945031		6.14	1685462		7.32	1243093		9.74	842530	*	11.5
CAMO-09-10372	530057		4.01	1810439		4.88	1140038		6.14	2032211		7.32	1369809		9.74	877559		11.5
CAMO-09-10378	544188		4.01	1867698		4.88	1188468		6.14	2139680		7.32	1471554		9.74	974405		11.5
CAMO-09-10379	513235		4.01	1763383		4.88	1072045		6.14	1785717		7.32	1041782		9.74	590377	*	11.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503011	Date Received:	06/27/2009 09:05	%Moisture:	8.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10366	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 14:57	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5g0219.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	364	ug/kg	72.8	364
108-95-2	Phenol	U	364	ug/kg	72.8	364
95-57-8	2-Chlorophenol	U	364	ug/kg	72.8	364
106-46-7	1,4-Dichlorobenzene	U	364	ug/kg	72.8	364
621-64-7	N-Nitrosodipropylamine	U	364	ug/kg	72.8	364
59-50-7	4-Chloro-3-methylphenol	U	364	ug/kg	72.8	364
83-32-9	Acenaphthene	U	36.4	ug/kg	12.0	36.4
121-14-2	2,4-Dinitrotoluene	U	364	ug/kg	36.4	364
100-02-7	4-Nitrophenol	U	364	ug/kg	120	364
87-86-5	Pentachlorophenol	U	364	ug/kg	90.9	364
129-00-0	Pyrene		119	ug/kg	10.9	36.4
110-86-1	Pyridine	U	364	ug/kg	72.8	364
62-53-3	Aniline	U	364	ug/kg	109	364
111-44-4	bis(2-Chloroethyl) ether	U	364	ug/kg	72.8	364
541-73-1	1,3-Dichlorobenzene	U	364	ug/kg	72.8	364
100-51-6	Benzyl alcohol	U	364	ug/kg	109	364
95-50-1	1,2-Dichlorobenzene	U	364	ug/kg	72.8	364
108-60-1	bis(2-Chloroisopropyl)ether	U	364	ug/kg	72.8	364
95-48-7	o-Cresol	U	364	ug/kg	72.8	364
65794-96-9	m,p-Cresols	U	364	ug/kg	109	364
67-72-1	Hexachloroethane	U	364	ug/kg	72.8	364
98-95-3	Nitrobenzene	U	364	ug/kg	72.8	364
78-59-1	Isophorone	U	364	ug/kg	72.8	364
88-75-5	2-Nitrophenol	U	364	ug/kg	72.8	364
105-67-9	2,4-Dimethylphenol	U	364	ug/kg	127	364
111-91-1	bis(2-Chloroethoxy)methane	U	364	ug/kg	72.8	364
120-83-2	2,4-Dichlorophenol	U	364	ug/kg	72.8	364
65-85-0	Benzoic acid	U	728	ug/kg	182	728
91-20-3	Naphthalene	U	36.4	ug/kg	10.9	36.4
106-47-8	4-Chloroaniline	U	364	ug/kg	72.8	364
87-68-3	Hexachlorobutadiene	U	364	ug/kg	72.8	364
91-57-6	2-Methylnaphthalene	U	36.4	ug/kg	7.28	36.4
77-47-4	Hexachlorocyclopentadiene	U	364	ug/kg	72.8	364
88-06-2	2,4,6-Trichlorophenol	U	364	ug/kg	72.8	364
95-95-4	2,4,5-Trichlorophenol	U	364	ug/kg	72.8	364
91-58-7	2-Chloronaphthalene	U	36.4	ug/kg	12.0	36.4
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	364	ug/kg	72.8	364
99-09-2	3-Nitroaniline	U	364	ug/kg	72.8	364

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503011	**Date Received:**	06/27/2009 09:05	**%Moisture:**	8.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10366	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:57	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0219.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	364	ug/kg	72.8	364
606-20-2	2,6-Dinitrotoluene	U	364	ug/kg	36.4	364
208-96-8	Acenaphthylene	U	36.4	ug/kg	10.9	36.4
51-28-5	2,4-Dinitrophenol	U	728	ug/kg	138	728
132-64-9	Dibenzofuran	U	364	ug/kg	72.8	364
84-66-2	Diethylphthalate	U	364	ug/kg	72.8	364
86-73-7	Fluorene	U	36.4	ug/kg	10.9	36.4
7005-72-3	4-Chlorophenylphenylether	U	364	ug/kg	72.8	364
534-52-1	2-Methyl-4,6-dinitrophenol	U	364	ug/kg	72.8	364
100-01-6	4-Nitroaniline	U	364	ug/kg	109	364
	p-Nitroaniline					
122-39-4	Diphenylamine	U	364	ug/kg	72.8	364
122-66-7	Azobenzene	U	364	ug/kg	72.8	364
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	364	ug/kg	72.8	364
118-74-1	Hexachlorobenzene	U	364	ug/kg	72.8	364
85-01-8	Phenanthrene		72.1	ug/kg	10.9	36.4
120-12-7	Anthracene	J	13.0	ug/kg	7.28	36.4
84-74-2	Di-n-butylphthalate	U	364	ug/kg	72.8	364
206-44-0	Fluoranthene		106	ug/kg	10.9	36.4
85-68-7	Butylbenzylphthalate	U	364	ug/kg	72.8	364
56-55-3	Benzo(a)anthracene		44.7	ug/kg	10.9	36.4
91-94-1	3,3'-Dichlorobenzidine	U	364	ug/kg	109	364
218-01-9	Chrysene		73.4	ug/kg	10.9	36.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	364	ug/kg	72.8	364
117-84-0	Di-n-octylphthalate	U	364	ug/kg	72.8	364
205-99-2	Benzo(b)fluoranthene		90.3	ug/kg	10.9	36.4
207-08-9	Benzo(k)fluoranthene	J	34.8	ug/kg	10.9	36.4
50-32-8	Benzo(a)pyrene		58.1	ug/kg	10.9	36.4
193-39-5	Indeno(1,2,3-cd)pyrene	J	33.2	ug/kg	10.9	36.4
53-70-3	Dibenzo(a,h)anthracene	U	36.4	ug/kg	10.9	36.4
191-24-2	Benzo(ghi)perylene		38.9	ug/kg	10.9	36.4
120-82-1	1,2,4-Trichlorobenzene	U	364	ug/kg	72.8	364

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
13466-78-9	3-Carene	3.97	533	ug/kg	96	NJ
	Unknown	9.2	223	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503011	**Date Received:**	06/27/2009 09:05	**%Moisture:**	8.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10366	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:57	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0219.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
17974-57-1	(3E,5E,7E)-6-Methyl-8-(2,6,6-trimethyl-1	9.25	333	ug/kg	89	NJ
	Unknown	9.35	270	ug/kg		J
	Unknown	9.44	491	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.52	780	ug/kg	95	NJ
	Unknown	9.54	465	ug/kg		J
112-04-9	Silane, trichlorooctadecyl-	10.16	410	ug/kg	96	NJ
1599-67-3	1-Docosene	10.21	641	ug/kg	97	NJ
288246-53-7	Pyridine-3-carboxamide, oxime, N-(2-trif	10.42	706	ug/kg	91	NJ
593-49-7	Heptacosane	11.97	420	ug/kg	98	NJ
	Unknown	12.07	698	ug/kg		J
	Unknown	12.43	1110	ug/kg		J
	Unknown	13.22	972	ug/kg		J
	Unknown	14.11	535	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0219.d
Lab Smp Id: 232503011 Client Smp ID: CAMO-09-10366
Inj Date : 02-JUL-2009 14:57
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503011|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	8.40410	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	428105	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1502681	40.0000	
* 46 Acenaphthene-d10	164	6.143	6.145	(1.000)	945031	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	1685462	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1243093	40.0000	
* 98 Perylene-d12	264	11.489	11.495	(1.000)	842530	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.796)	695801	74.0229	2690
$ 5 Phenol-d5	99	3.725	3.728	(0.928)	927123	74.8054	2720
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	416272	37.3843	1360
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	981454	40.1566	1460
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	304288	78.9149	2870
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	1030380	54.1615	1970

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.607	8.611	(0.883)	88412	3.26020	119
68 Phenanthrene	178	7.343	7.344	(1.002)	62555	1.98120	72.1
69 Anthracene	178	7.384	7.388	(1.008)	11175	0.35859	13.0(a)
76 Fluoranthene	202	8.389	8.394	(1.145)	104902	2.91653	106
89 Benzo(a)anthracene	228	9.731	9.733	(0.999)	32749	1.22780	44.7
92 Chrysene	228	9.766	9.771	(1.002)	49269	2.01645	73.4
95 Benzo(b)fluoranthene	252	10.948	10.951	(0.953)	46205	2.48316	90.3
96 Benzo(k)fluoranthene	252	10.978	10.990	(0.955)	17462	0.95538	34.8(a)
97 Benzo(a)pyrene	252	11.407	11.413	(0.993)	26285	1.59577	58.0
99 Indeno(1,2,3-cd)pyrene	276	13.342	13.354	(1.161)	15091	0.91173	33.2(a)
101 Benzo(ghi)perylene	276	13.907	13.922	(1.210)	15078	1.06852	38.9

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0219.d
Report Date: 07/02/2009 15:12
Lab. ID: 232503011 SampleType: SAMPLE
Injection Date: 02-JUL-2009 14:57
Operator: RMB Instrument: MSD5.i
Sample Info: |232503011|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	56415	3.73	3.80	80-120	100	(T)
93	8953	3.69	3.80	190-250	16	(QT)
6 Phenol		CAS#: 108-95-2				
94	43640	3.58	3.74	80-120	100	(T)
66	9093	3.58	3.74	24- 84	21	(QT)
65	36506	3.58	3.74	0- 30	84	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	60813	4.37	4.25	80-120	100	(T)
42	41003	4.37	4.25	55-115	67	(T)
22 Isophorone			CAS#: 78-59-1			
82	413671	4.37	4.55	80-120	100	(T)
138	327	4.43	4.55	0- 49	0	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	6193	4.67	4.64	80-120	100	( )
122	1065	4.66	4.64	54-114	17	(Q)
77	8232	4.66	4.64	50-110	133	(Q)
31 4-Chloroaniline			CAS#: 106-47-8			
127	362	4.92	4.92	80-120	100	( )
65	1393	4.91	4.92	0- 55	384	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	8215	5.87	5.74	80-120	100	(T)
164	583	5.87	5.74	3- 63	7	(T)
127	759	5.87	5.74	7- 67	9	(T)
41 m-Nitroaniline				CAS#: 99-09-2		
138	350	6.14	6.09	80-120	100	( )
92	5804	6.14	6.09	84-144	1657	(Q)
108	20640	6.14	6.09	0- 40	5894	(Q)
43 Dimethylphthalate				CAS#: 131-11-3		
163	209477	6.14	5.90	80-120	100	(T)
164	945031	6.14	5.90	0- 40	451	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	124940	6.14	5.96	80-120	100	(T)
63	1473	6.14	5.96	55-115	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	124940	6.14	6.26	80-120	100	(T)
89	2612	6.14	6.26	38- 98	2	(QT)
63	1246	6.14	6.26	19- 79	1	(QT)
53 Fluorene				CAS#: 86-73-7		
166	12831	6.74	6.56	80-120	100	(T)
165	14335	6.74	6.56	61-121	112	(T)
167	4552	6.74	6.56	0- 44	35	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	1103	6.74	6.57	80-120	100	(T)
105	1893	6.74	6.57	2- 62	172	(QT)
51	2266	6.74	6.57	46-106	205	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	22837	6.75	6.93	80-120	100	(T)
141	113421	6.74	6.93	34- 94	497	(QT)
250	44752	6.75	6.93	68-128	196	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	62555	7.34	7.34	80-120	100	( )
179	9600	7.34	7.34	0- 46	15	( )
176	11649	7.34	7.34	0- 49	19	( )
69 Anthracene				CAS#: 120-12-7		
178	11175	7.38	7.39	80-120	100	( )
179	2299	7.38	7.39	0- 46	21	( )
176	2443	7.38	7.39	0- 49	22	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
76 Fluoranthene			CAS#: 206-44-0			
202	104902	8.39	8.39	80-120	100	( )
203	17423	8.39	8.39	0- 48	17	( )
101	8846	8.39	8.39	0- 39	8	( )
79 Pyrene			CAS#: 129-00-0			
202	88412	8.61	8.61	80-120	100	( )
200	19239	8.61	8.61	0- 51	22	( )
101	9610	8.61	8.61	0- 41	11	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	32749	9.73	9.73	80-120	100	( )
226	8592	9.73	9.73	0- 56	26	( )
229	10655	9.73	9.73	0- 50	33	( )
92 Chrysene			CAS#: 218-01-9			
228	49269	9.77	9.77	80-120	100	( )
229	8795	9.77	9.77	0- 50	18	( )
226	14576	9.77	9.77	0- 60	30	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	46205	10.95	10.95	80-120	100	( )
253	10194	10.95	10.95	0- 52	22	( )
125	5583	10.95	10.95	0- 38	12	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	17462	10.98	10.99	80-120	100	( )
253	5154	10.97	10.98	0- 52	30	( )
125	2458	10.97	10.98	0- 38	14	( )
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	26285	11.41	11.41	80-120	100	( )
253	6380	11.41	11.41	0- 52	24	( )
125	1728	11.41	11.41	0- 30	7	( )
99 Indeno(1,2,3-cd)pyrene			CAS#: 193-39-5			
276	15091	13.34	13.35	80-120	100	( )
138	4872	13.32	13.35	0- 51	32	( )
100 Dibenzo(a,h)anthracene			CAS#: 53-70-3			
278	5466	13.35	13.37	80-120	100	( )
139	3033	13.36	13.37	0- 30	56	(Q)
101 Benzo(ghi)perylene			CAS#: 191-24-2			
276	15078	13.91	13.92	80-120	100	( )
138	2582	13.89	13.92	0- 30	17	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0219.d
Lab Smp Id: 232503011 Client Smp ID: CAMO-09-10366
Inj Date : 02-JUL-2009 14:57
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503011|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	8.40410	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.013	2787648	40.000
* 91 Chrysene-d12	9.742	3909612	40.000
* 98 Perylene-d12	11.489	2399331	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
3-Carene				CAS #: 13466-78-9			
8.972	1020217	14.6391008	532	96	NIST05.L	15156	10
Unknown				CAS #:			
9.201	598180	6.12009885	223	0		0	91
(3E,5E,7E)-6-Methyl-8-(2,6,6-trimethyl-1				CAS #: 17974-57-1			
9.248	894741	9.15426748	333	89	NIST05.L	97615	91
Unknown				CAS #:			
9.348	724108	7.40849240	270	0		0	91
Unknown				CAS #:			
9.436	1319518	13.5002410	491	0		0	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1740-19-8			
9.519	2095542	21.4398949	780	95	NIST05.L	125034	91
Unknown				CAS #:			
9.542	1250304	12.7920980	465	0		0	91
Silane, trichlorooctadecyl-				CAS #: 112-04-9			
10.160	1101330	11.2679170	410	96	NIST05.L	166992	91
1-Docosene				CAS #: 1599-67-3			
10.207	1721981	17.6179181	641	97	NIST05.L	129889	91
Pyridine-3-carboxamide, oxime, N-(2-trif				CAS #: 288246-53-7			
10.419	1898053	19.4193468	706	91	NIST05.L	112295	91
Heptacosane				CAS #: 593-49-7			
11.972	691796	11.5331440	420	98	NIST05.L	165299	98
Unknown				CAS #:			
12.066	1151549	19.1978259	698	0		0	98
Unknown				CAS #:			
12.430	1836967	30.6246482	1110	0		0	98
Unknown				CAS #:			
13.219	1602544	26.7165081	972	0		0	98
Unknown				CAS #:			
14.113	882712	14.7159730	535	0		0	98

Data File: /chem/MSD5.i/s070209.b/s5g0219.d
Date : 02-JUL-2009 14:57
Client ID: CAMO-09-10366
Sample Info: 1232503011188187811SVMFI1LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

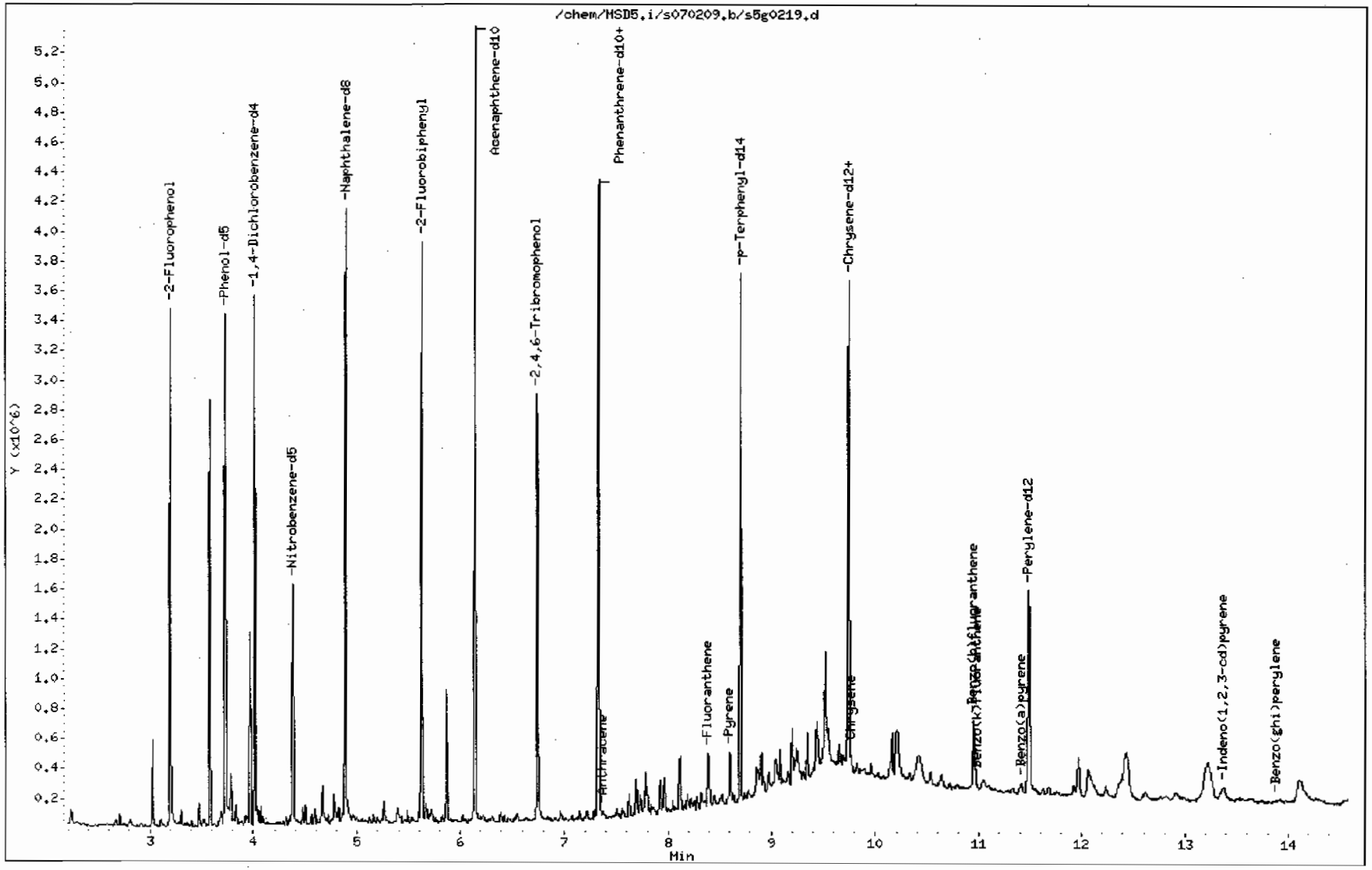

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 119 ug/Kg

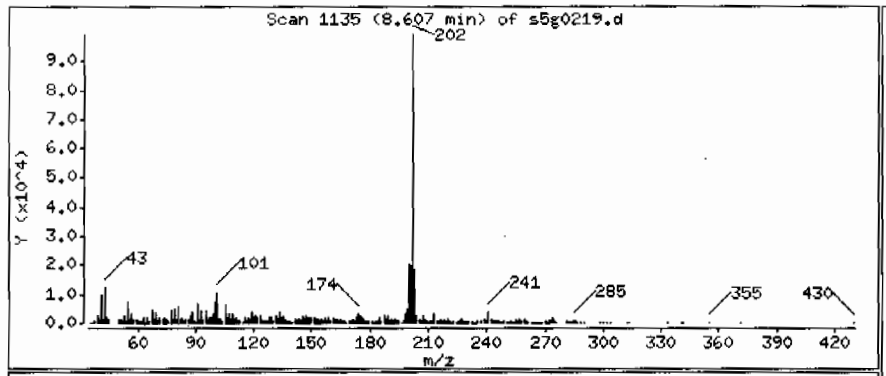

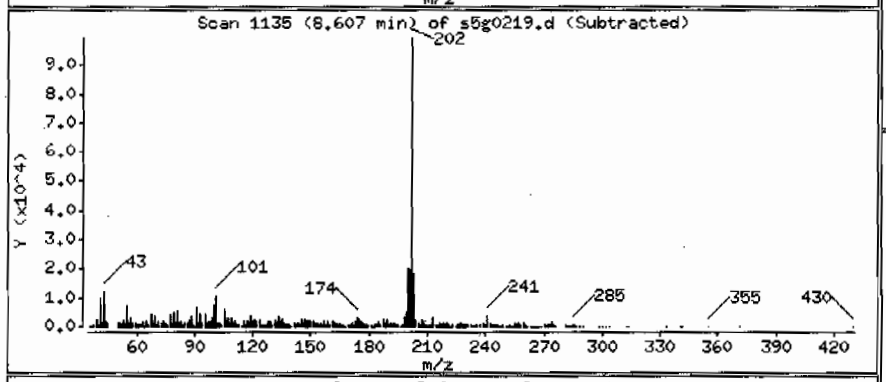

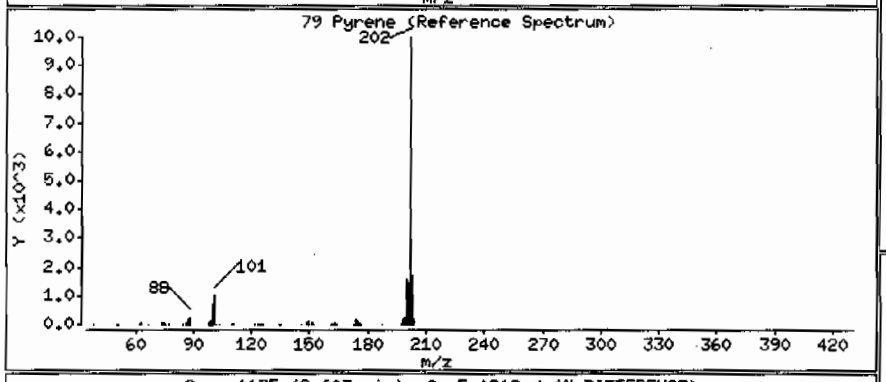

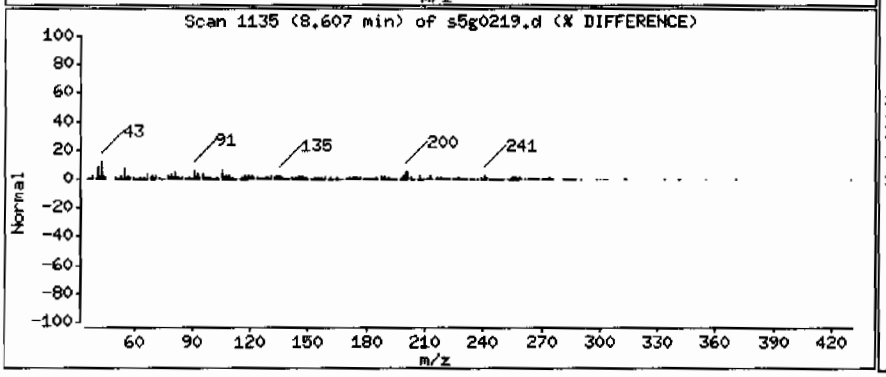

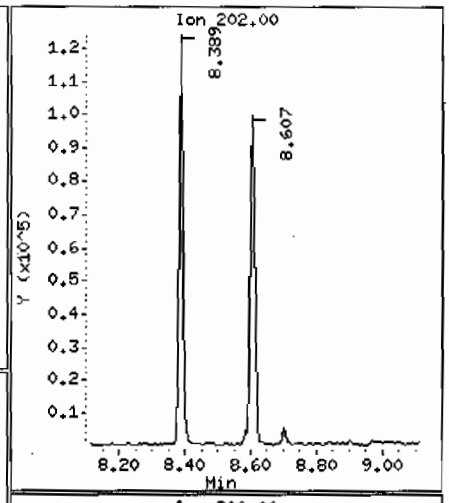

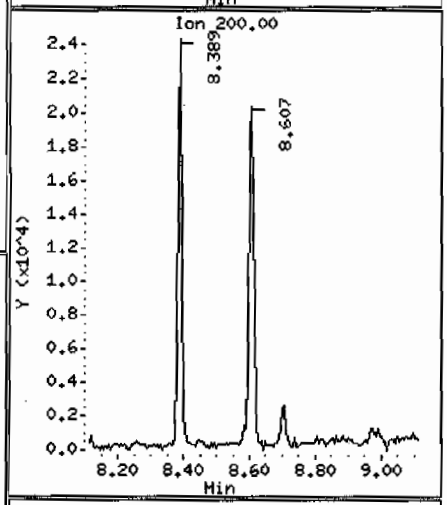

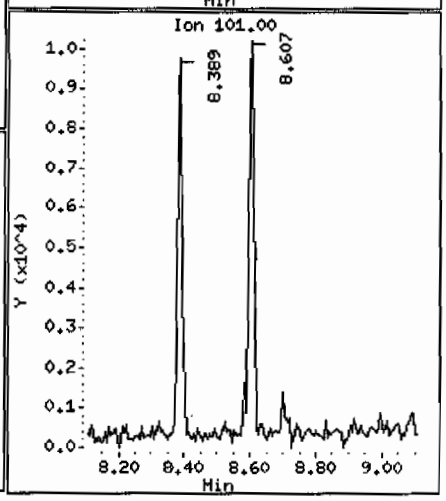

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 72.1 ug/Kg

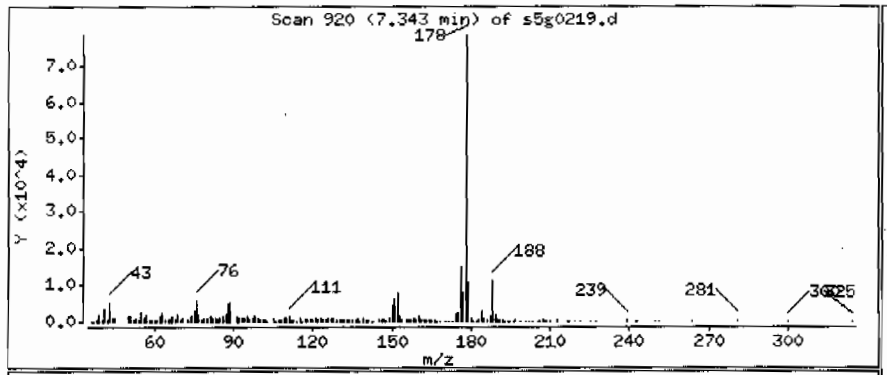

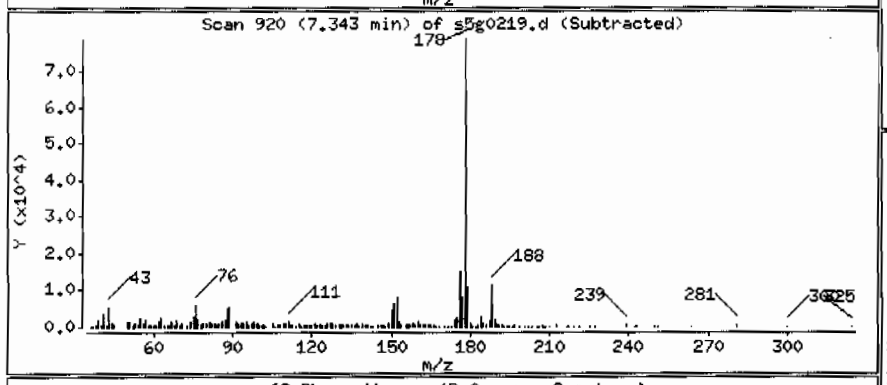

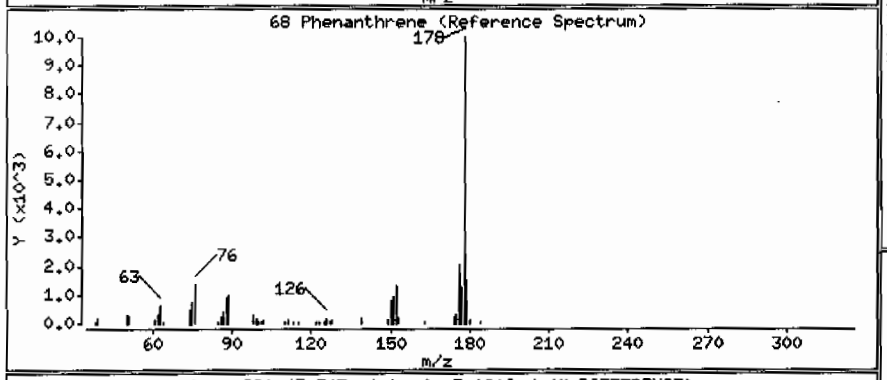

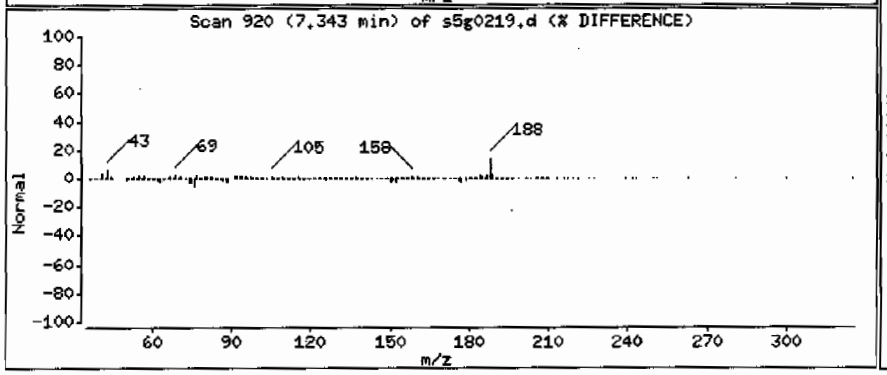

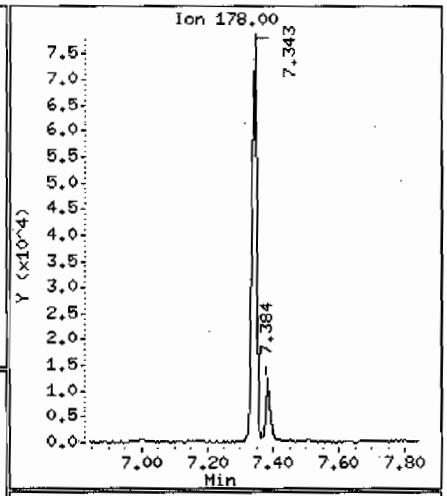

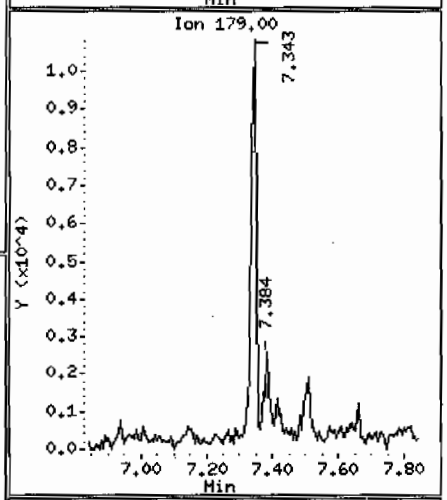

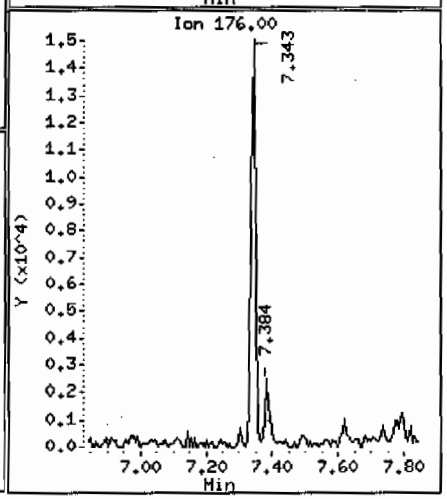

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

69 Anthracene

Concentration: 13.0 ug/Kg

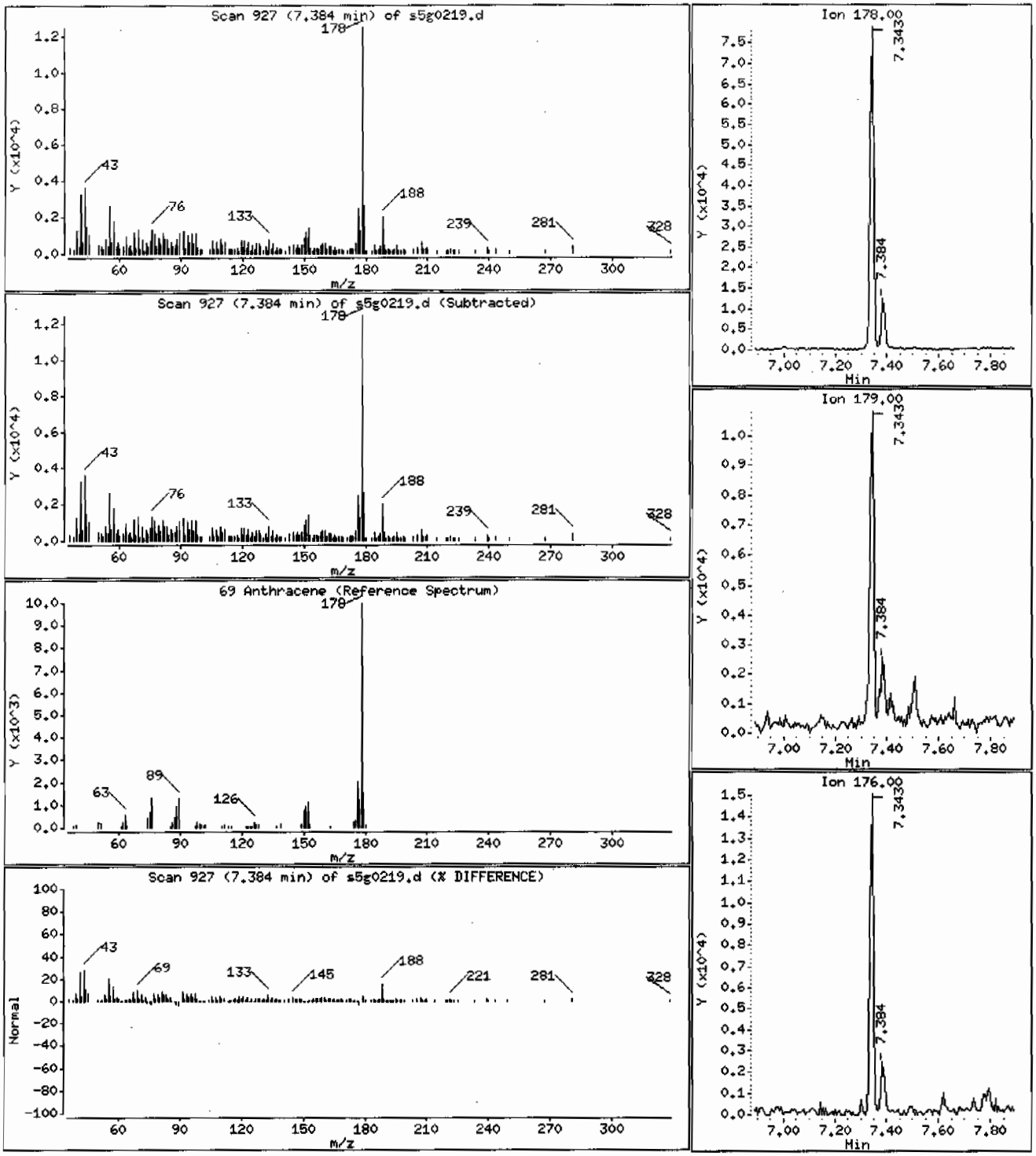

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 106 ug/Kg

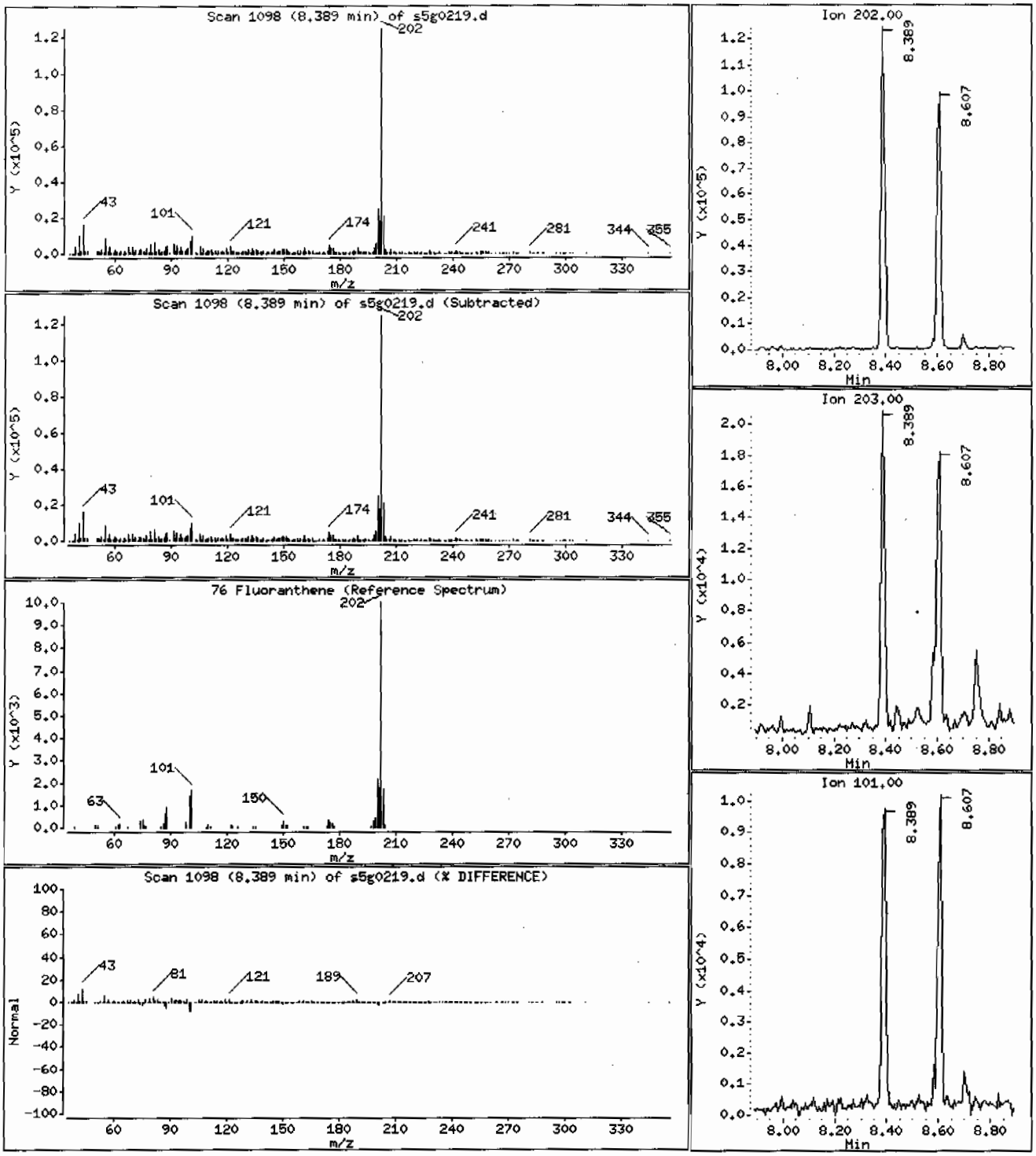

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |232503011|881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 44.7 ug/Kg

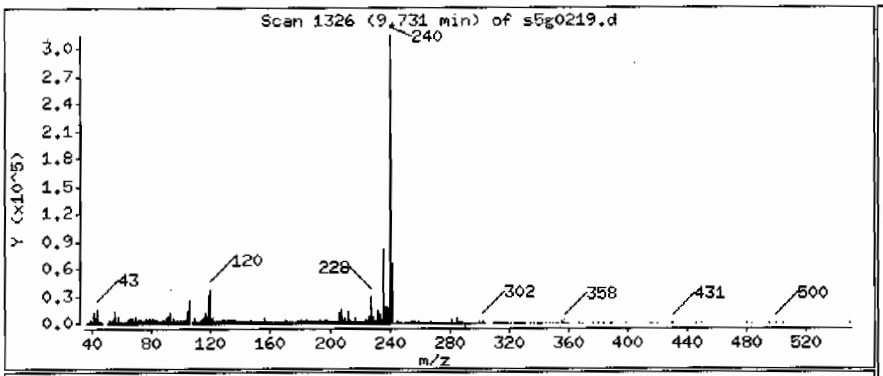

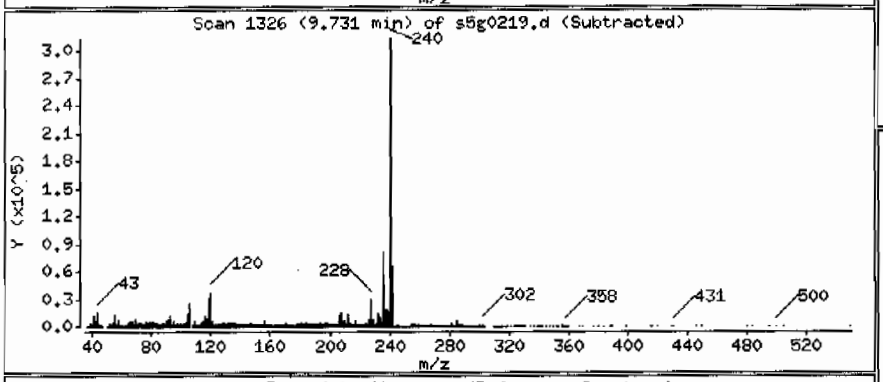

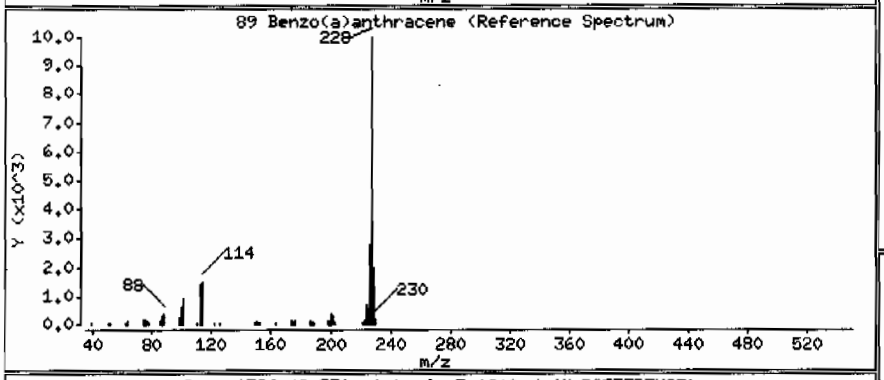

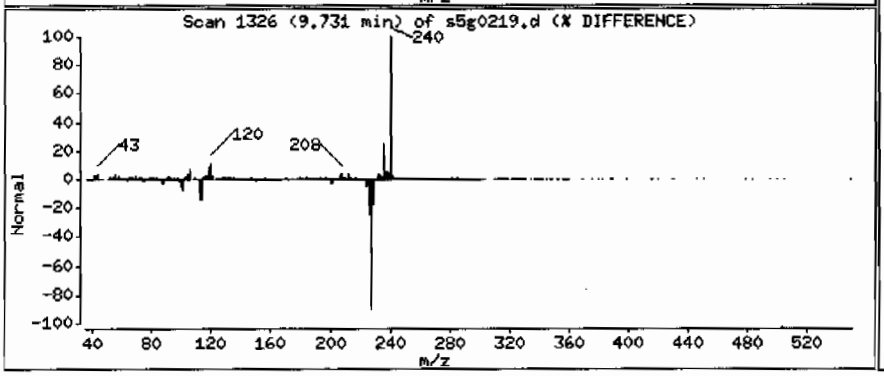

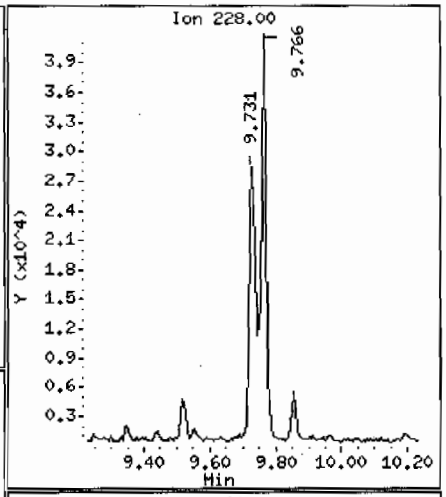

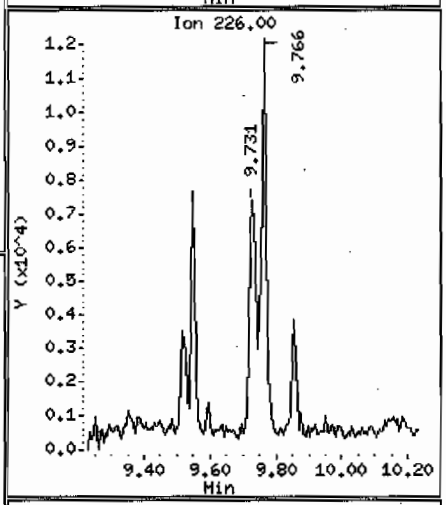

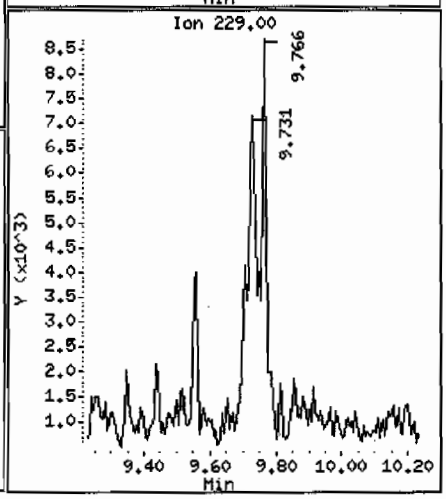

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 73.4 ug/Kg

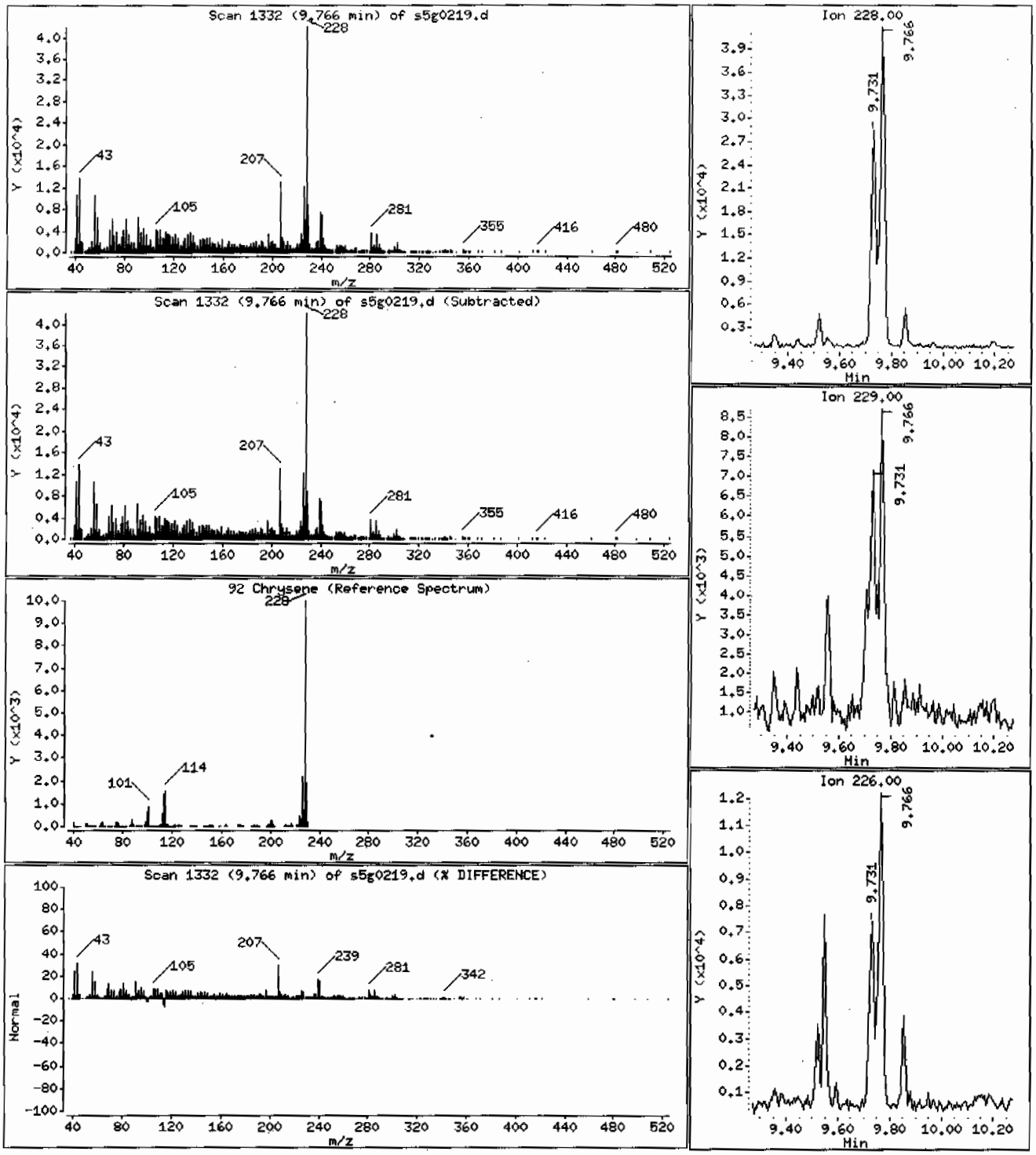

Data File: /chem/HSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: HSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 90.3 ug/Kg

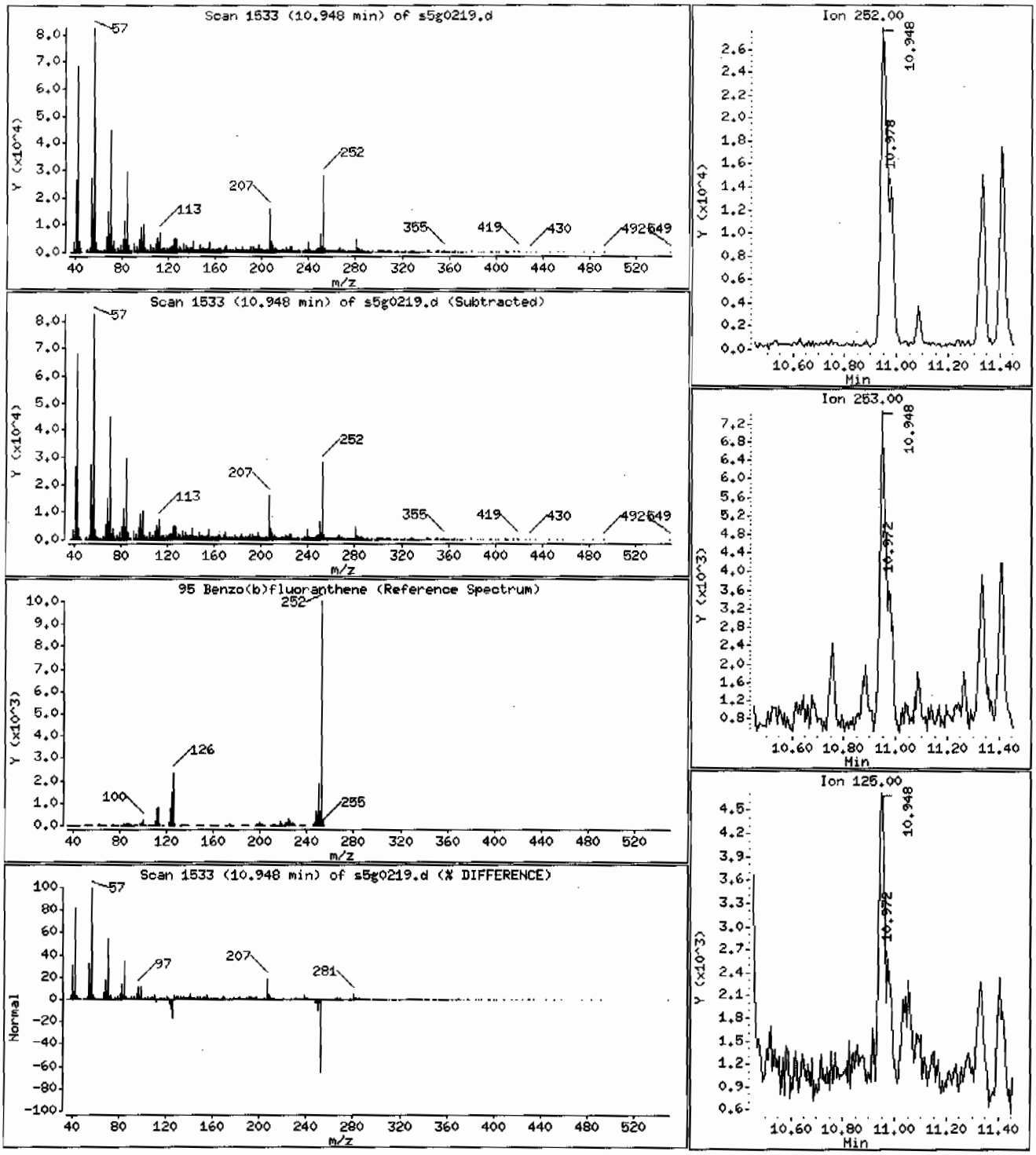

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

96 Benzo(k)fluoranthene

Concentration: 34.8 ug/Kg

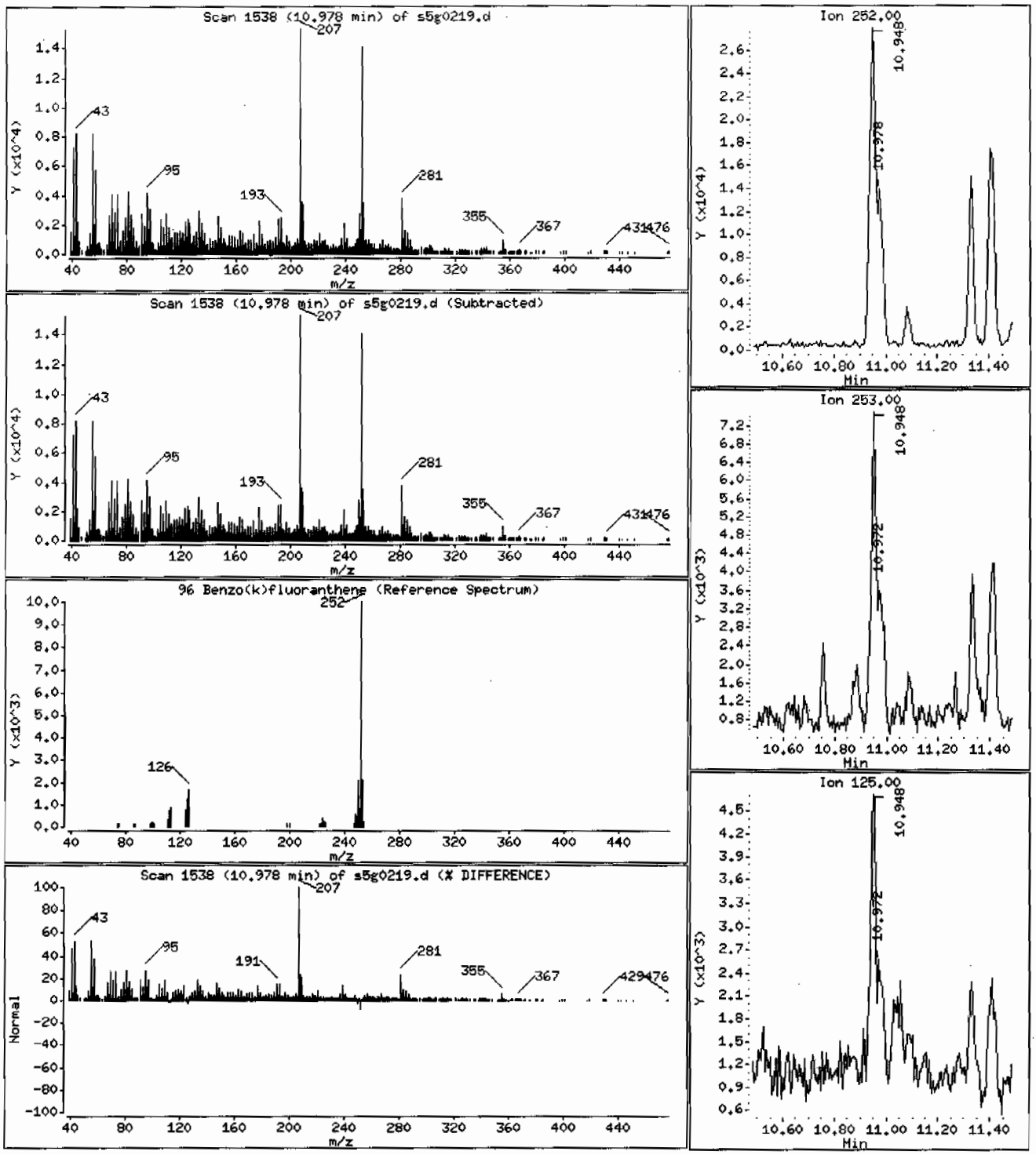

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 58.0 ug/Kg

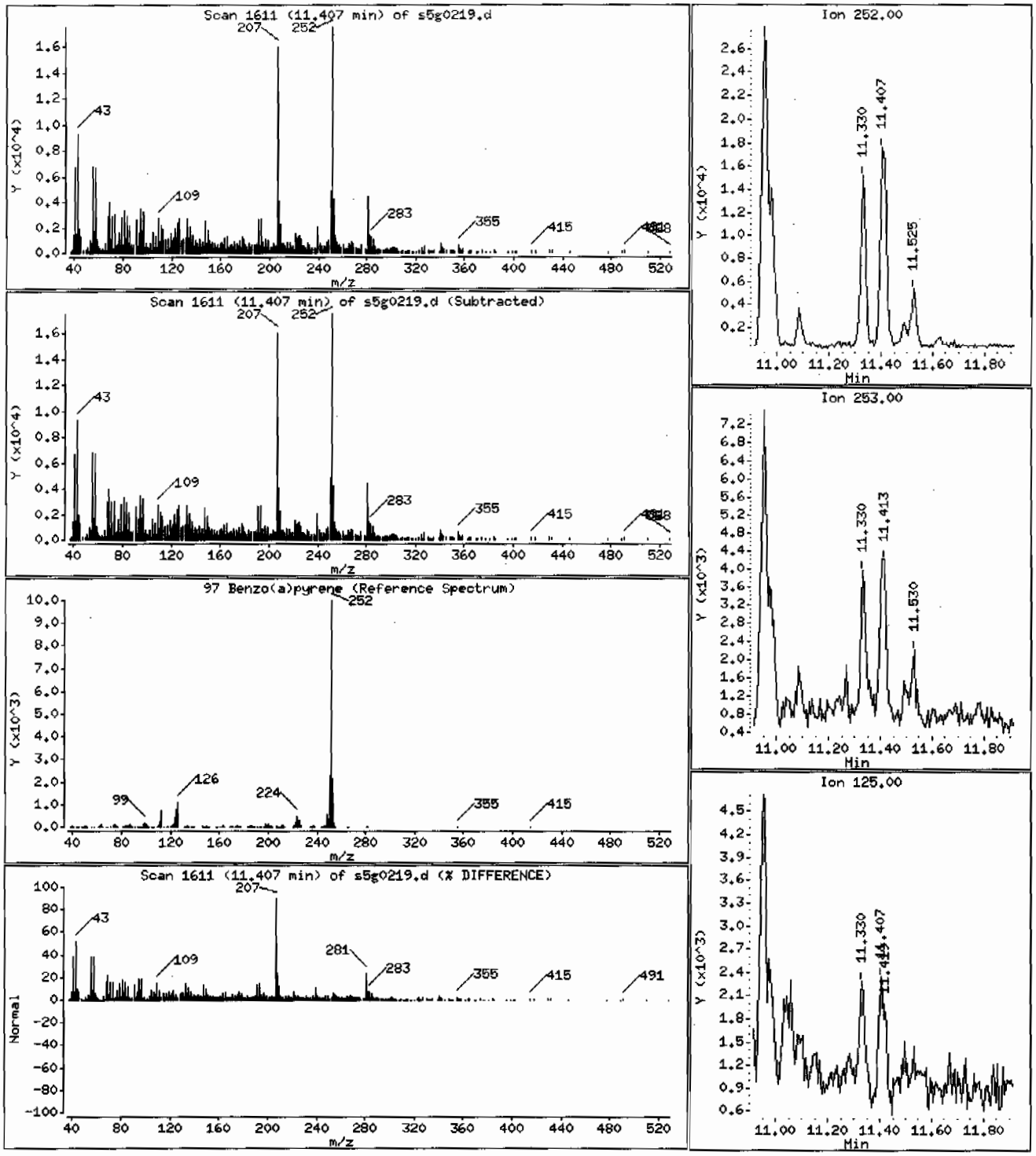

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 33.2 ug/Kg

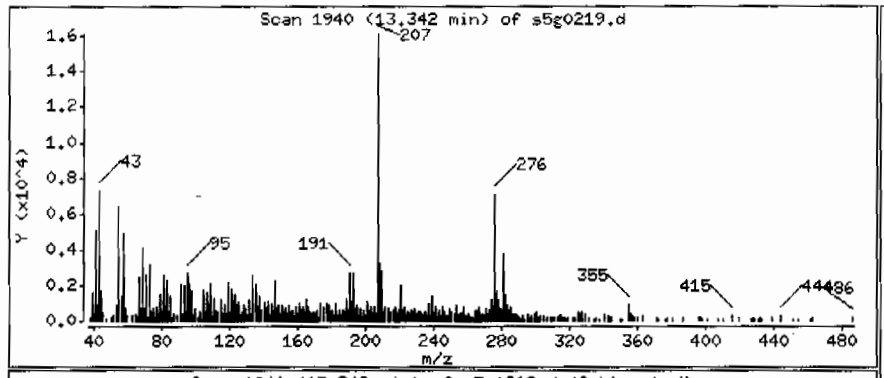

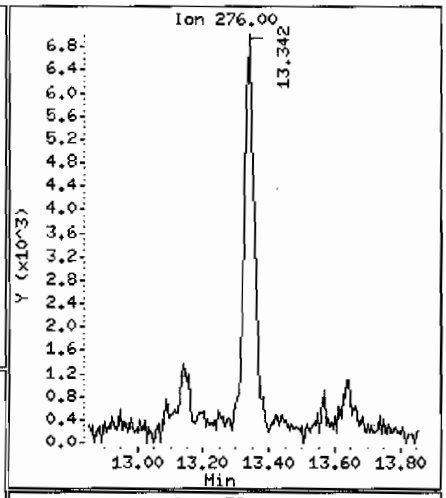

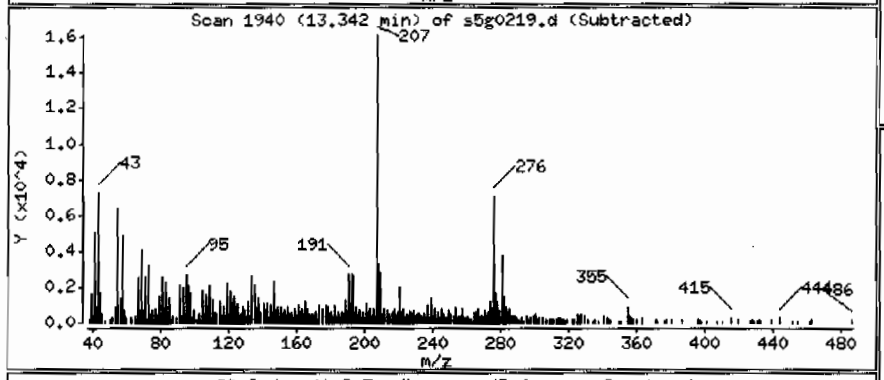

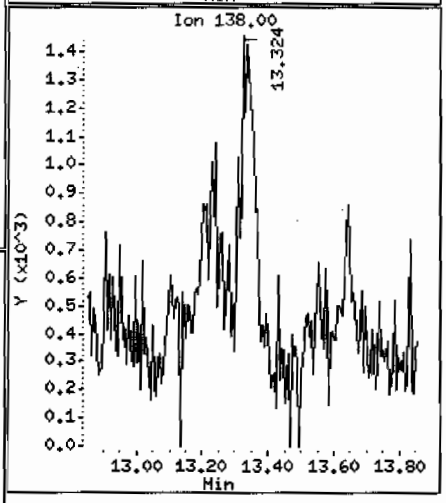

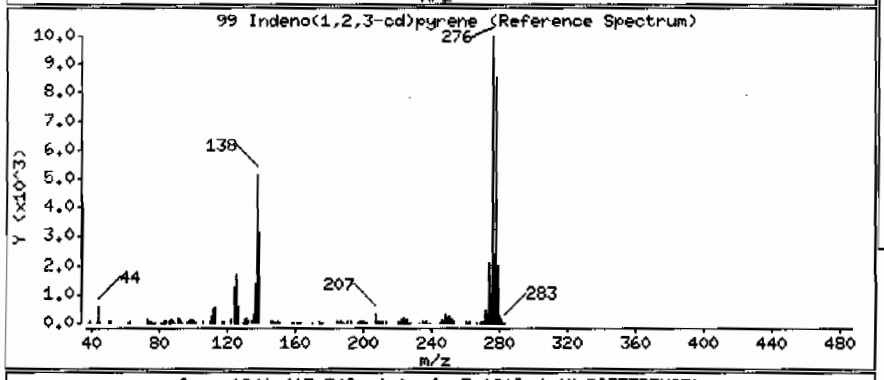

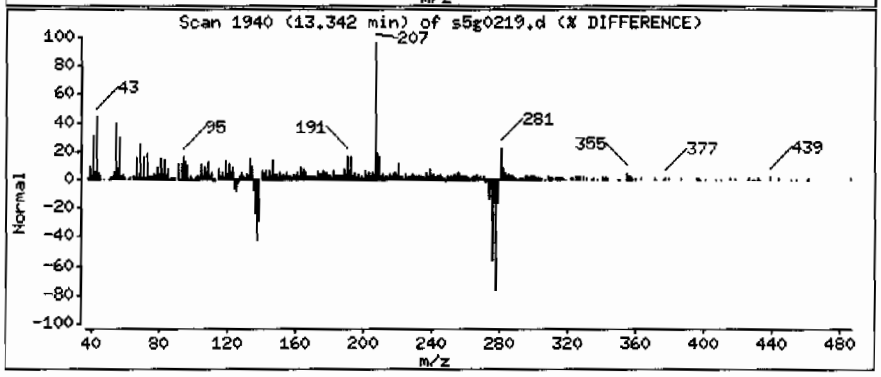

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

101 Benzo(ghi)perylene Concentration: 38.9 ug/Kg

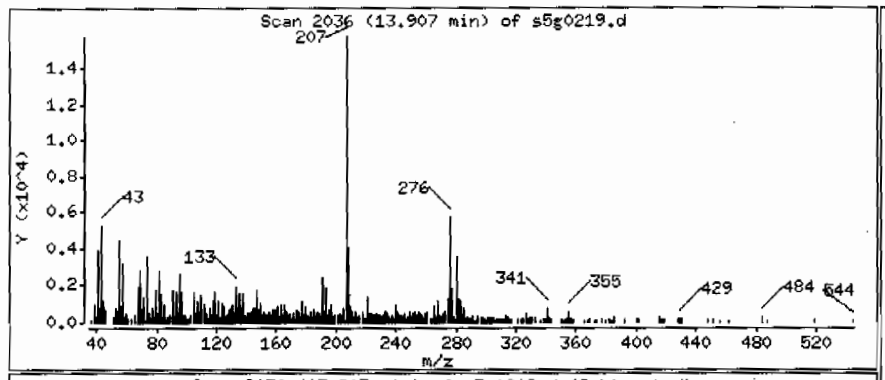

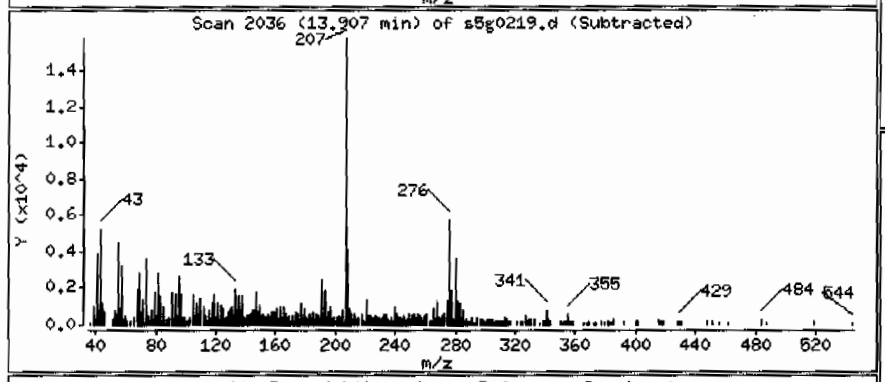

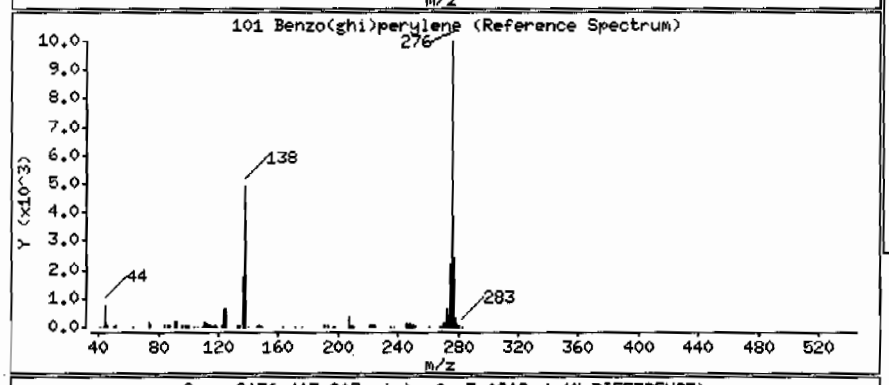

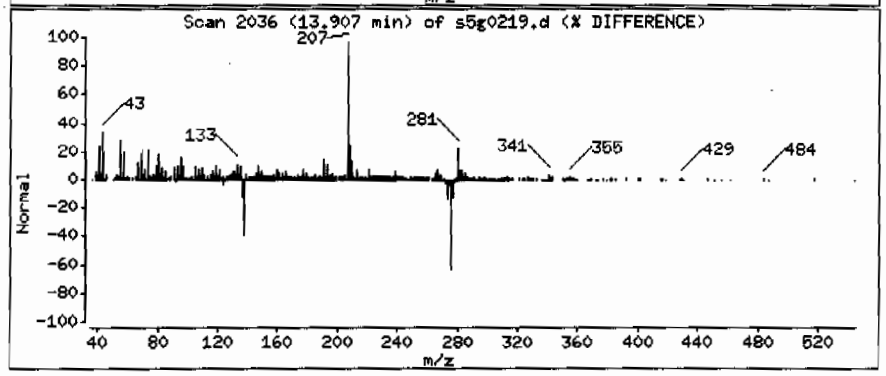

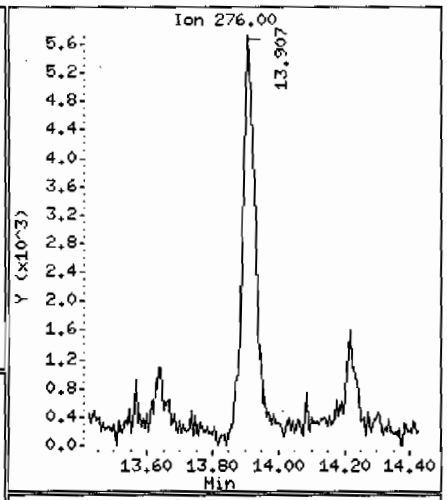

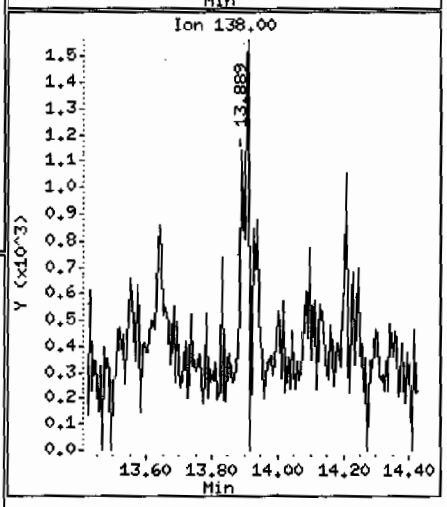

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
3-Carene	13466-78-9	NIST05.L	15156	96	C10H16	136
3-Carene	13466-78-9	NIST05.L	15157	95	C10H16	136
1R-.alpha.-Pinene	7785-70-8	NIST05.L	15186	94	C10H16	136

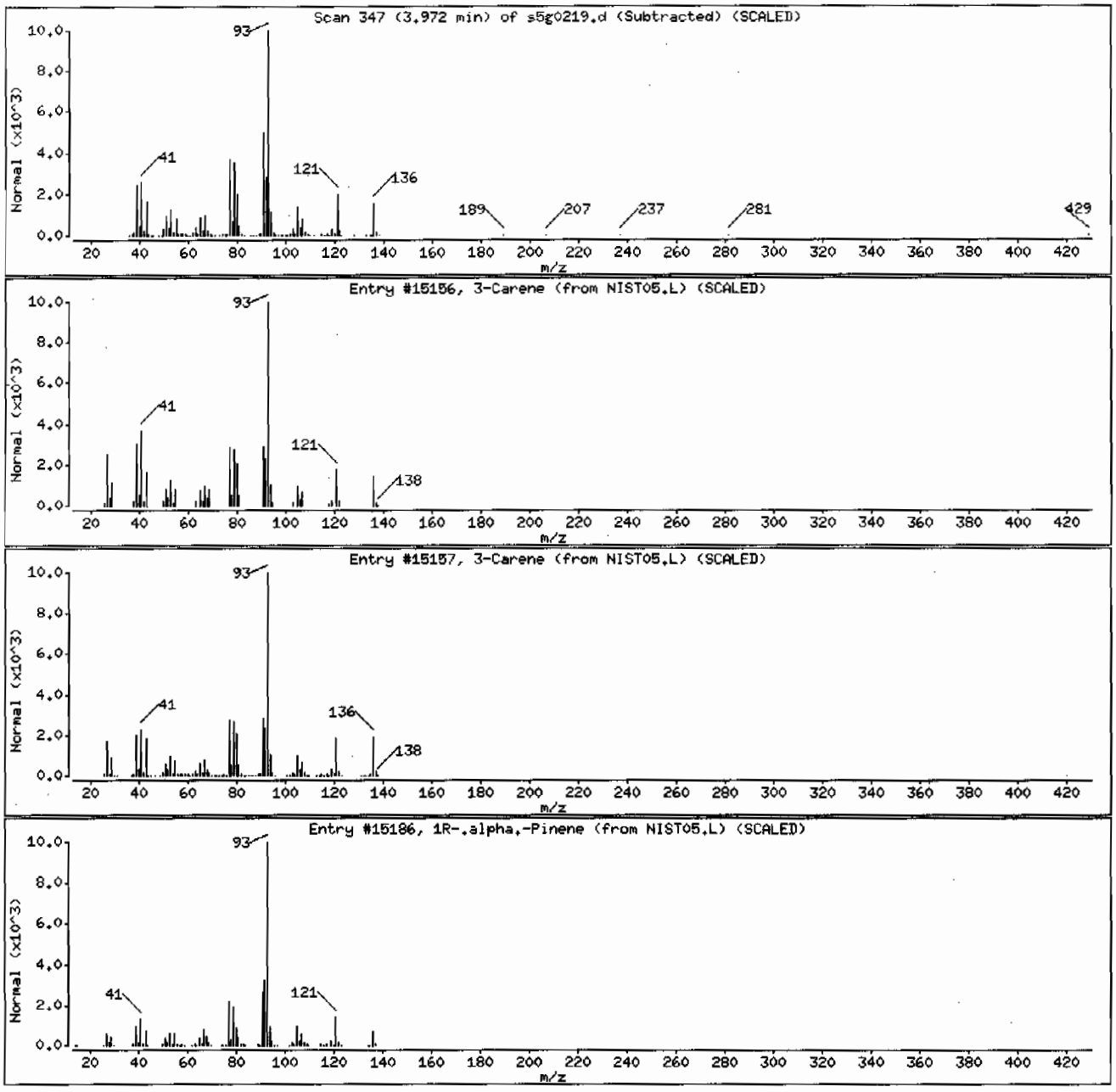

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	35	C15H26O2	238
Dispiro[2.1.2.4]undecane, 8-methylene-	51567-08-9	NIST05.L	30873	35	C12H18	162
Dichloroacetic acid, 2-(1-adamantyl)ethy	1000282-97-8	NIST05.L	118237	27	C14H20Cl2O2	290

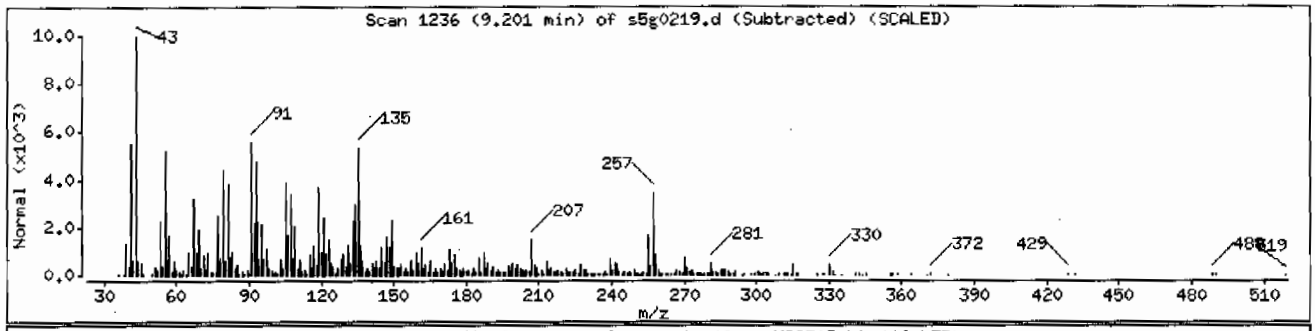

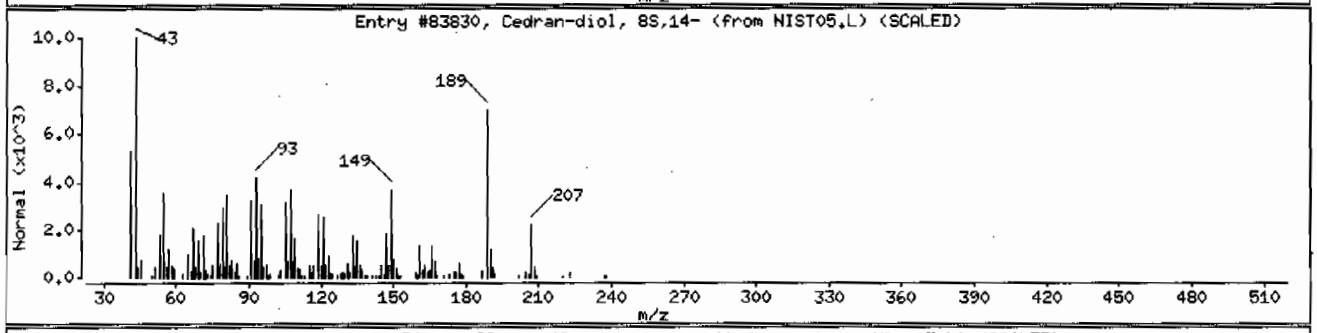

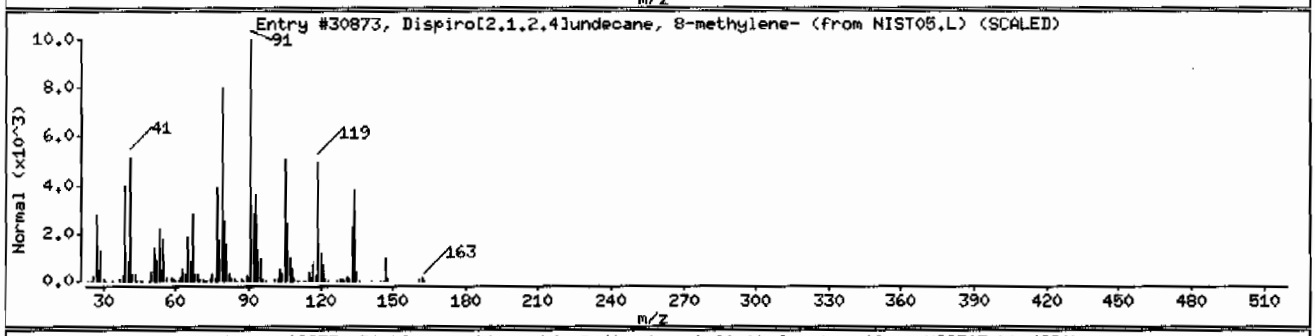

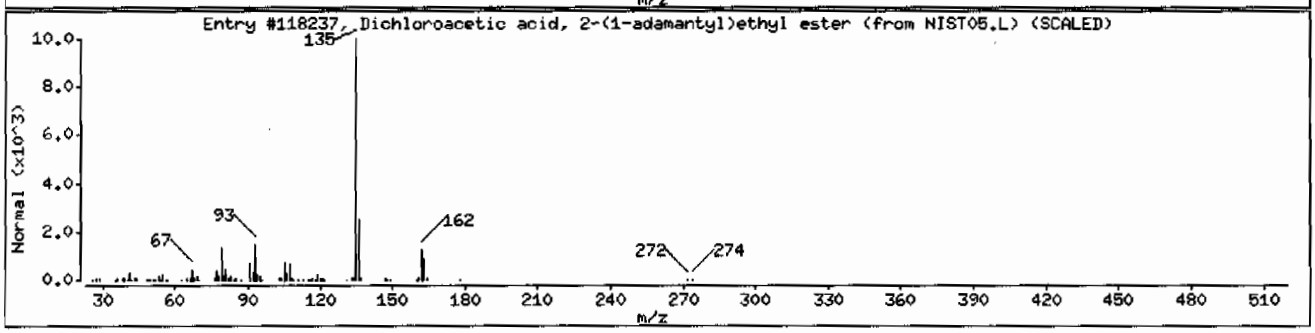

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |23250301|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
(3E,5E,7E)-6-Methyl-8-(2,6,6-trimethyl-1	17974-57-1	NIST05.L	97615	89	C18H26O	258
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	46	C15H26O2	238
Naphthalene, decahydro-1,1,4a-trimethyl-	5957-33-5	NIST05.L	107102	43	C20H32	272

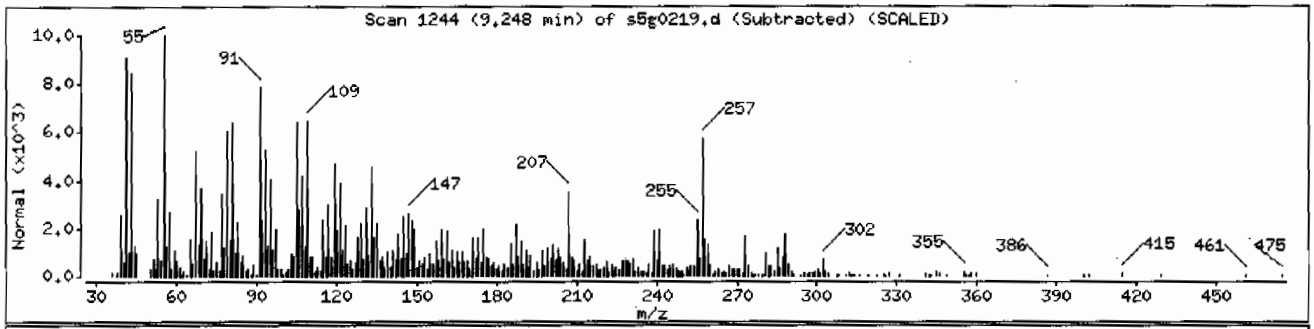

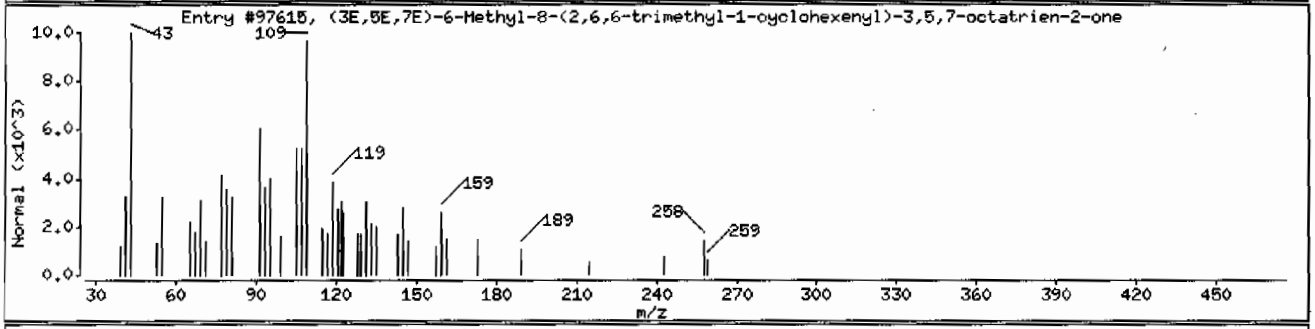

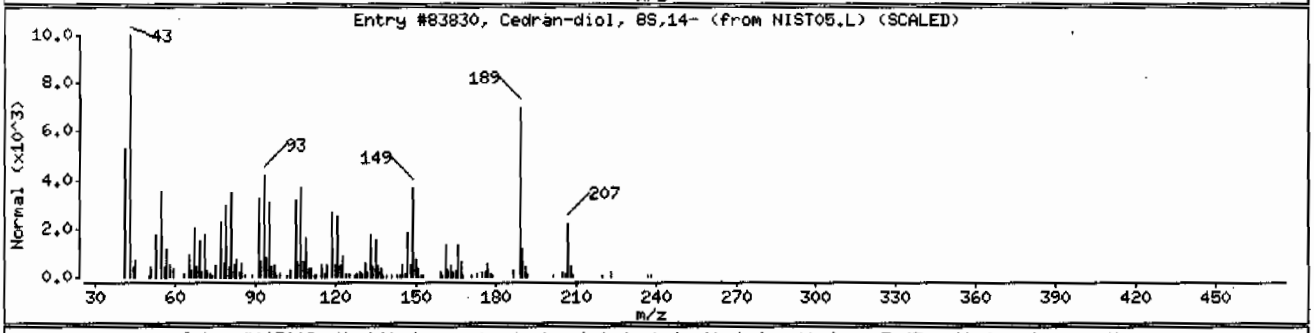

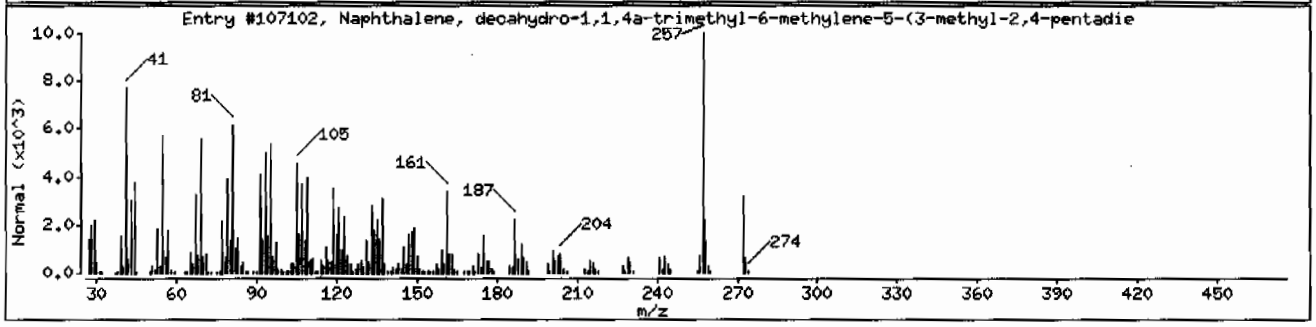

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Acetic acid, 7-hydroxy-10,13-dimethyl-3-	1000190-77-5	NIST05.L	151838	20	C21H32O4	348
Androst-5-en-17-one, 3-(acetyloxy)-19-hy	2857-42-3	NIST05.L	150844	12	C21H30O4	346
Androst-5-ene-3,19-diol, 3-acetate, (3.b	55320-48-4	NIST05.L	143734	9	C21H32O3	332

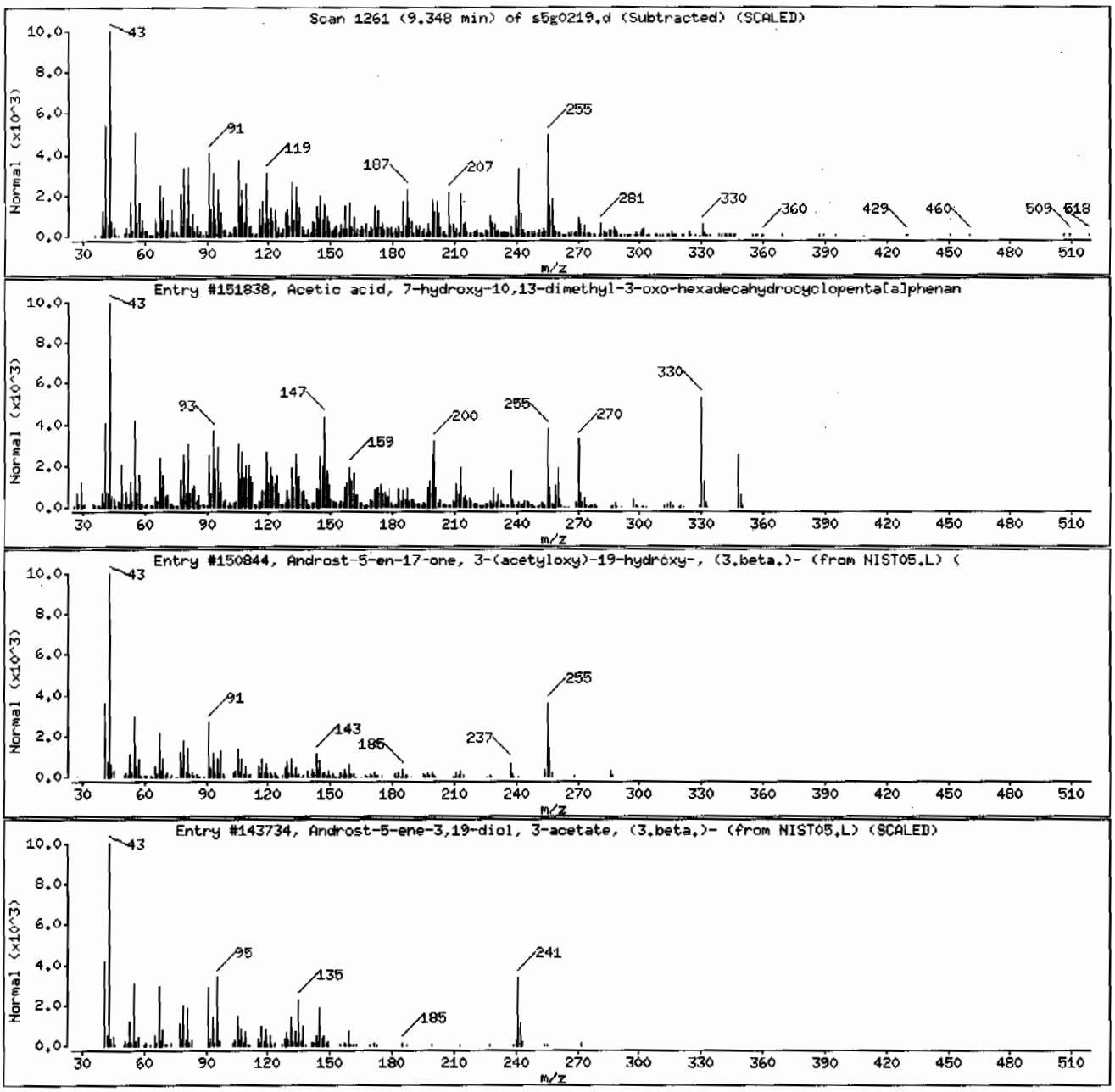

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
17.alpha.-Methyltestosterone	58-18-4	NIST05.L	126151	15	C20H30O2	302
1-Phenanthrenecarboxylic acid, 7-ethenyl	1686-62-0	NIST05.L	134785	12	C21H32O2	316
7H-Imidazo[4,5-c]1,2,4-triazolo[4,3-a]py	115792-11-5	NIST05.L	86157	11	C9H6F3N5	241

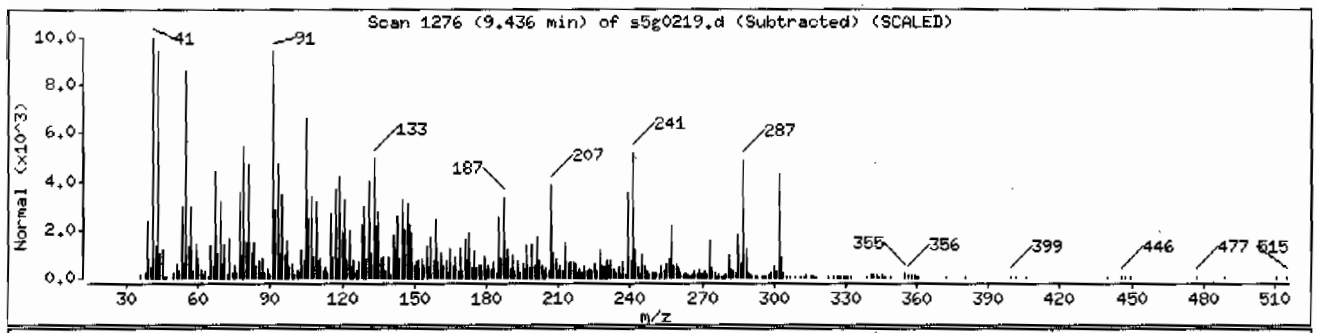

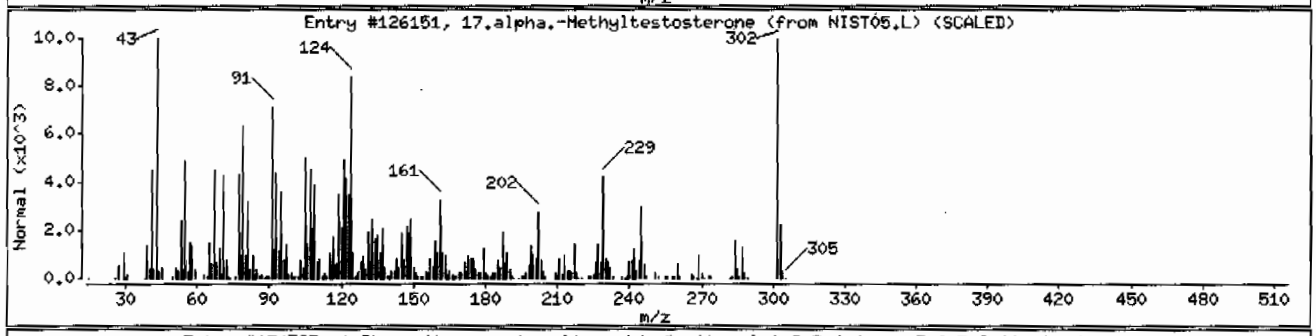

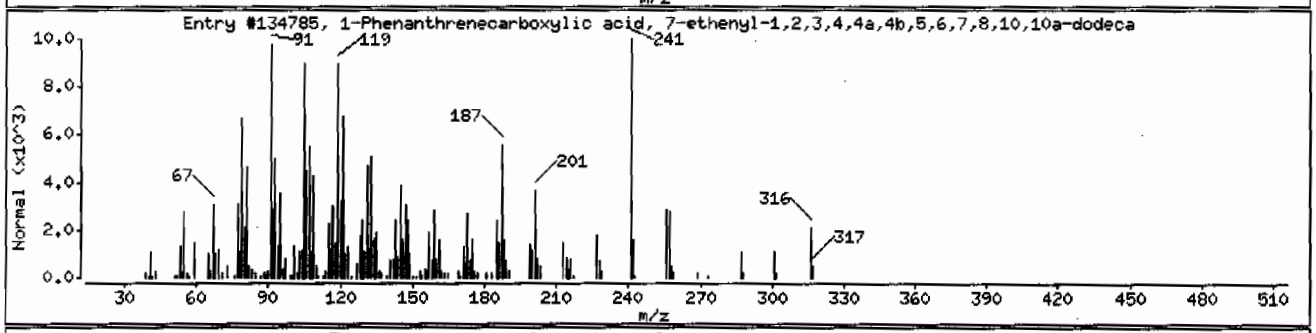

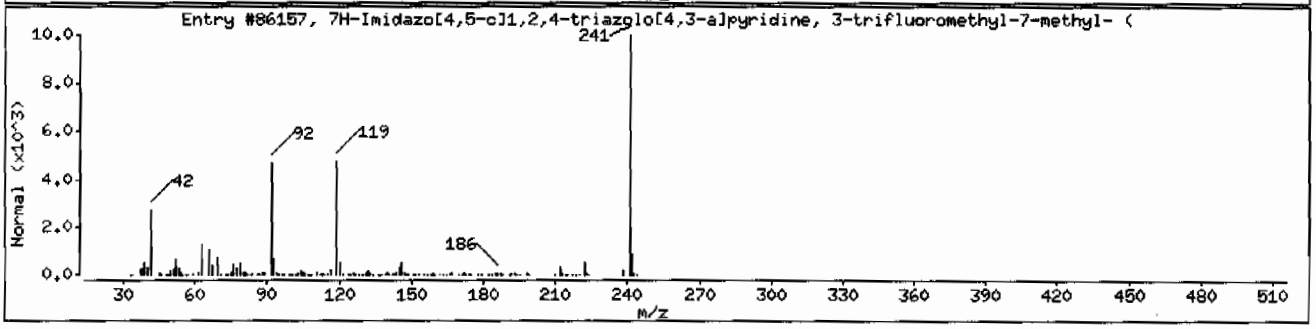

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	95	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125037	94	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	5155-70-4	NIST05.L	125035	90	C20H28O2	300

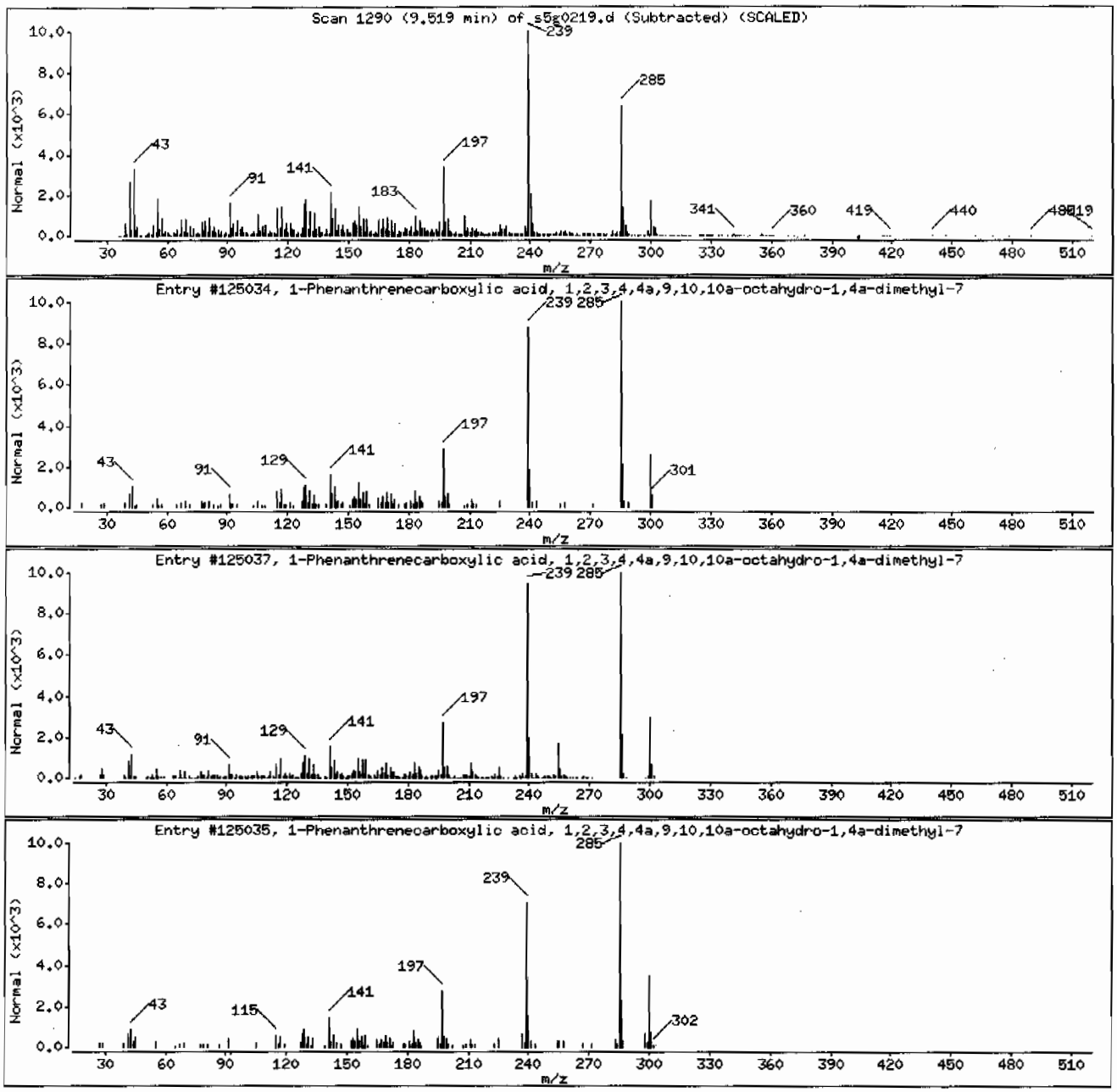

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Butanoic acid, 2-(cyano)(2,4,6-trimethyl	1000267-71-7	NIST05.L	124759	41	C17H20N2O3	300
Ethyl 4-hydroxy-7-trifluoromethyl-3-quin	391-02-6	NIST05.L	115118	38	C13H10F3NO3	285
4-Amino-3-(N,N-dimethylamino)-9-methylca	94127-27-2	NIST05.L	84580	35	C15H17N3	239

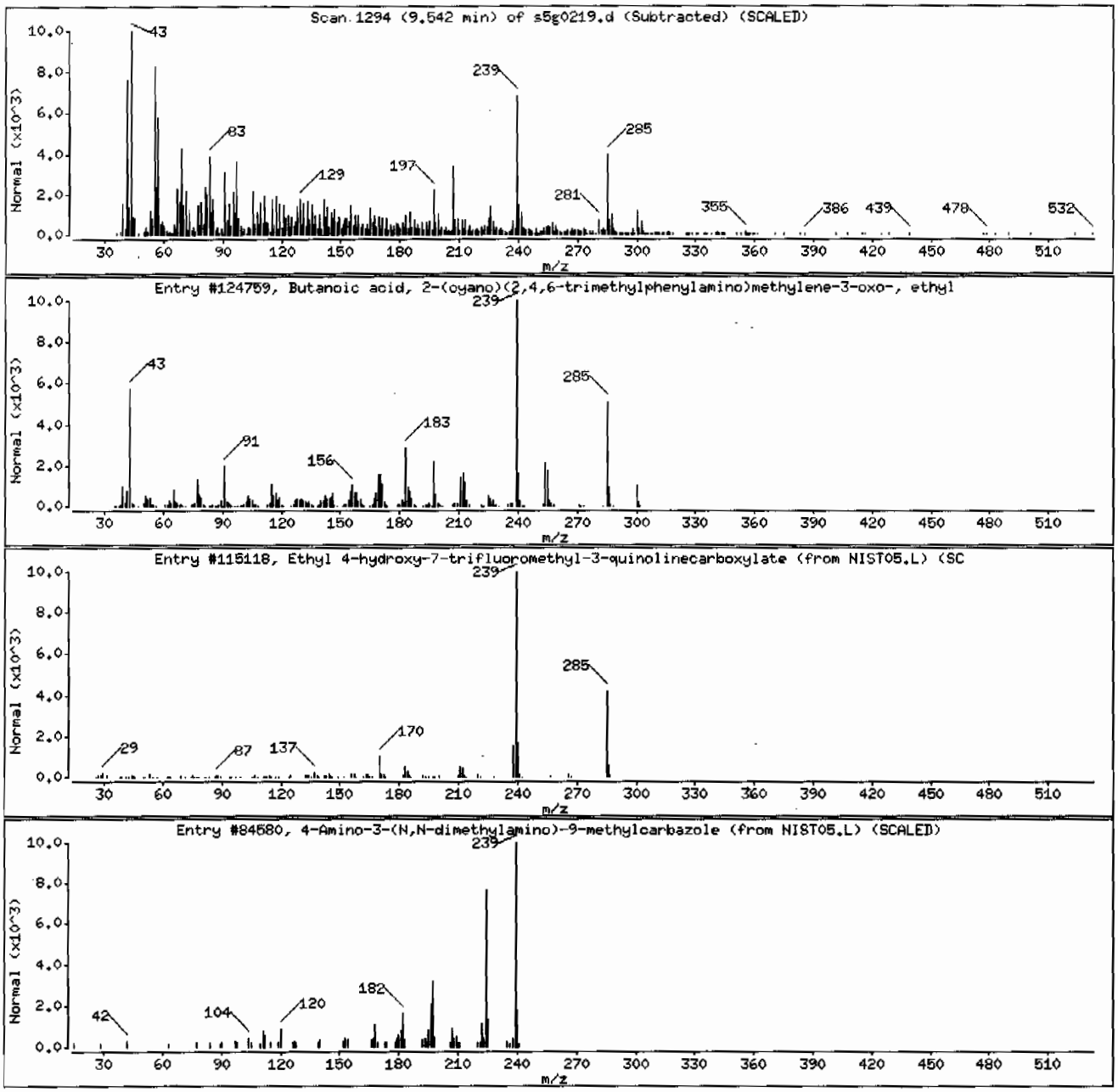

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Silane, trichlorooctadecyl-	112-04-9	NIST05.L	166992	96	C18H37Cl3Si	386
Heptadecane	629-78-7	NIST05.L	85525	95	C17H36	240
Octadecane	593-45-3	NIST05.L	94929	91	C18H38	254

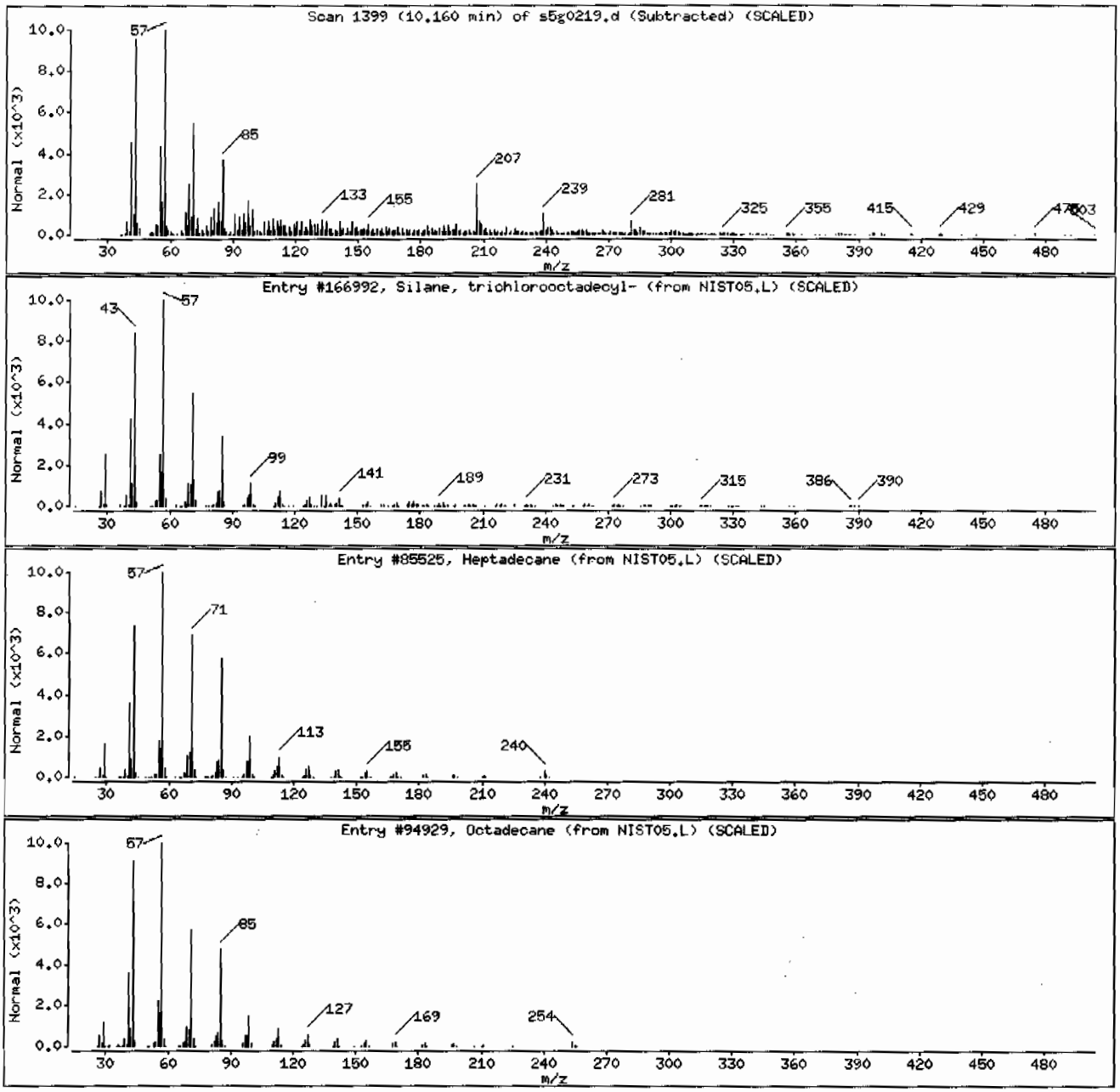

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Docosene	1599-67-3	NIST05.L	129889	97	C22H44	308
Octadecane, 1-(ethenyloxy)-	930-02-9	NIST05.L	122415	90	C20H40O	296
1-Nonadecene	18435-45-5	NIST05.L	102859	83	C19H38	266

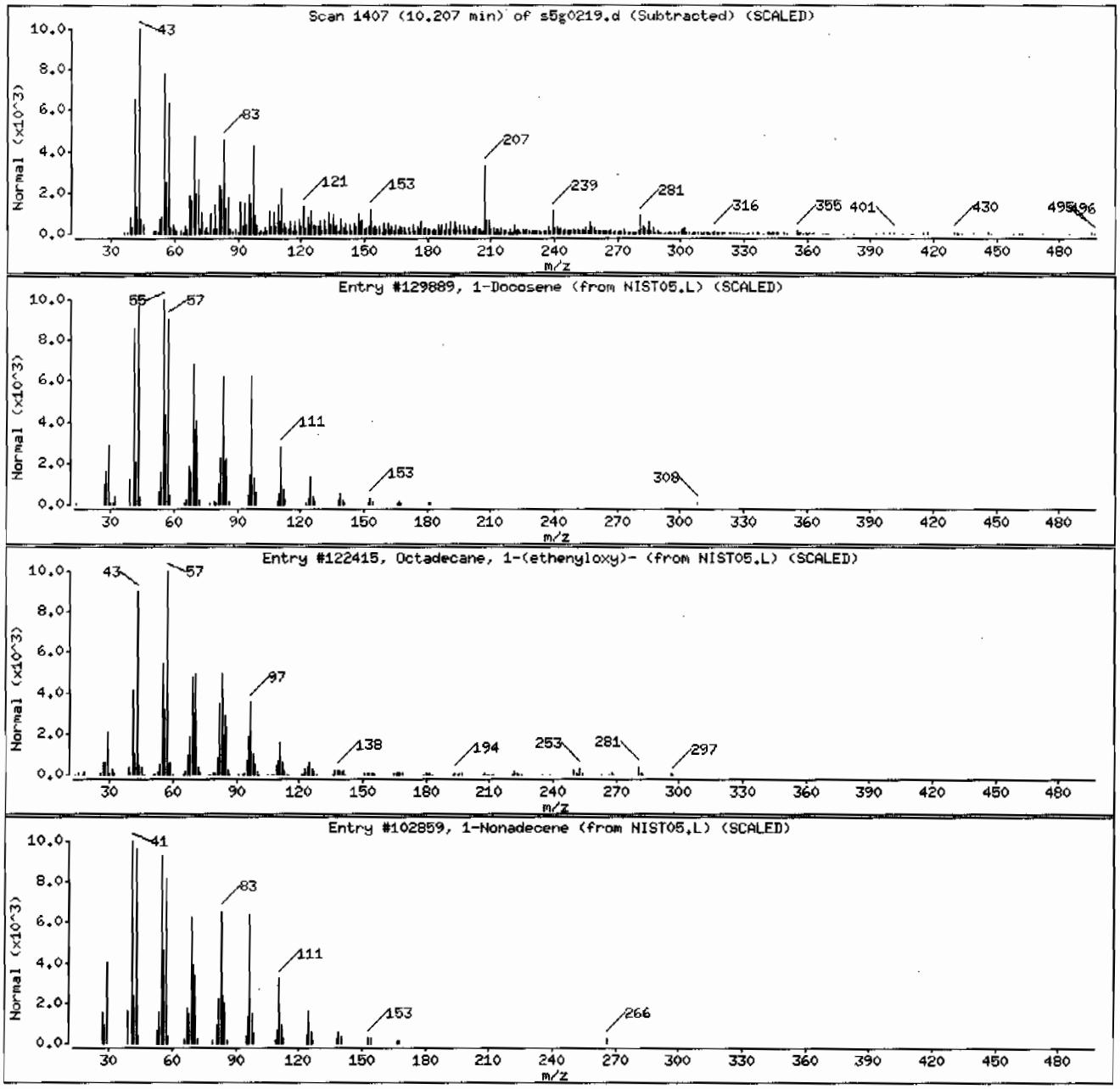

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Date : 02-JUL-2009 14:57

Client ID: CAHO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Pyridine-3-carboxamide, oxime, N-(2-trif	288246-53-7	NIST05.L	112295	91	C13H10F3N3O	281
Friedelan-3-one	559-74-0	NIST05.L	176566	62	C30H50O	426
1H-Indene, 5-butyl-6-hexyloctahydro-	55044-36-5	NIST05.L	101522	38	C19H36	264

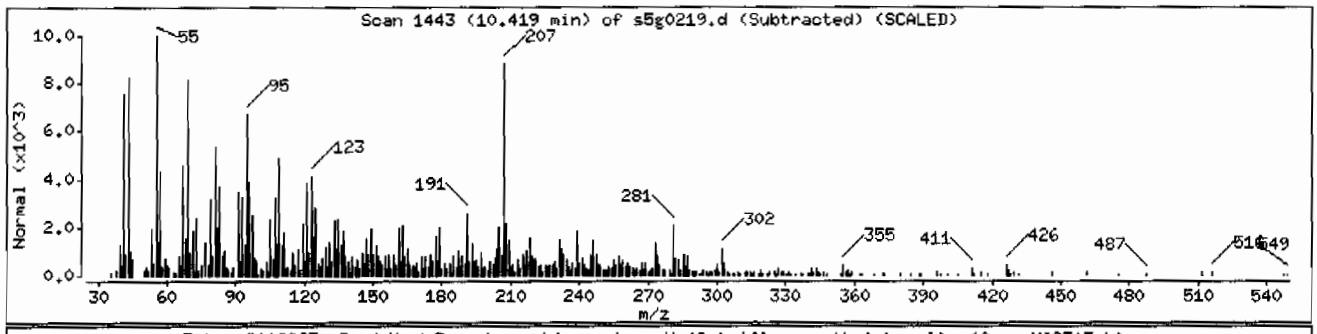

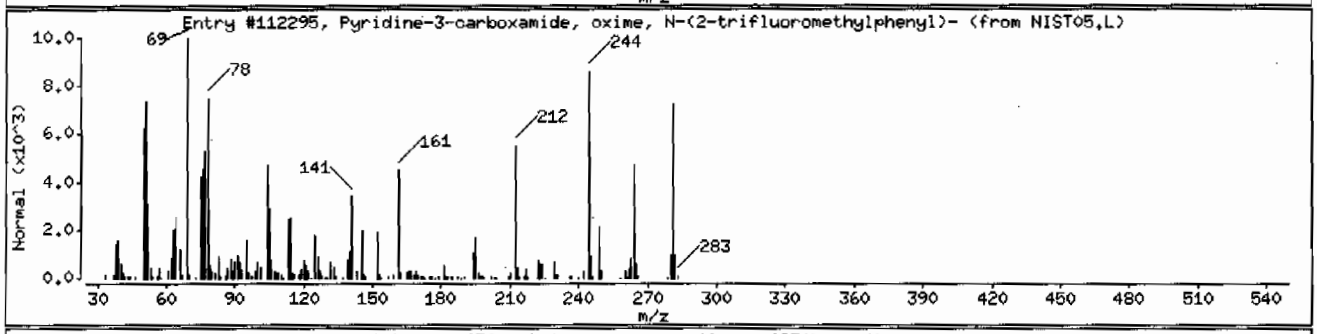

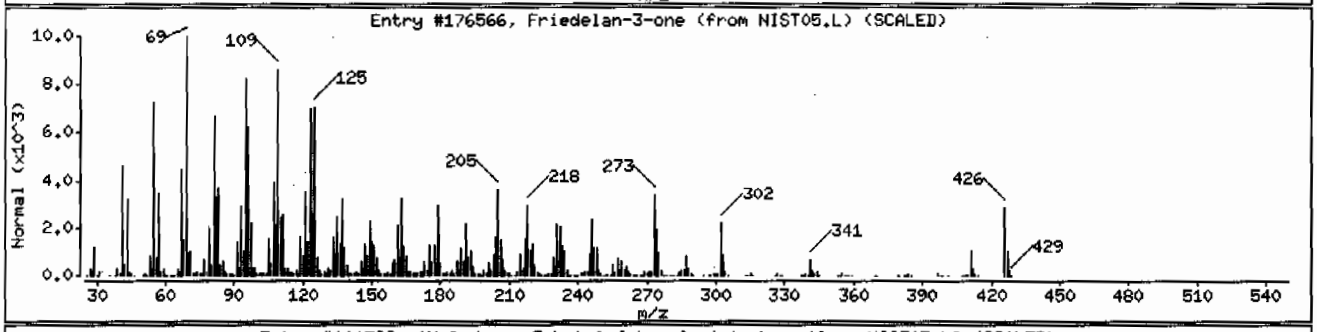

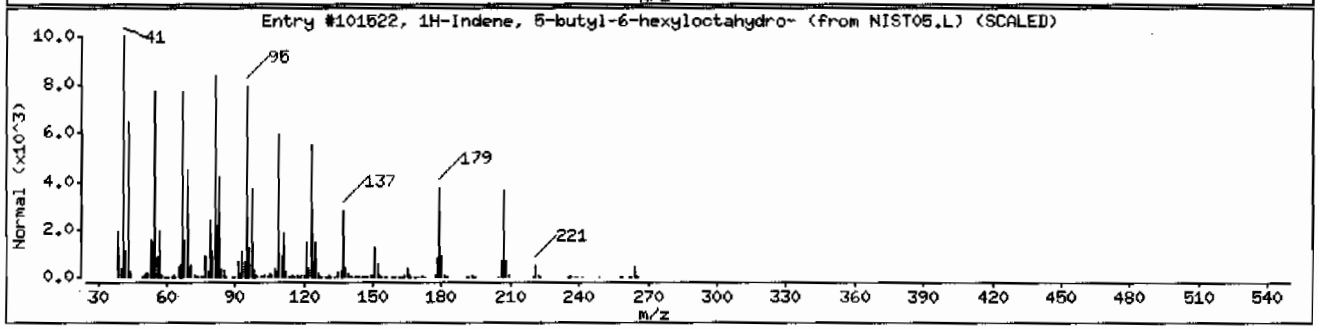

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Heptacosane	593-49-7	NIST05.L	165299	98	C27H56	380
Eicosane	112-95-8	NIST05.L	113489	97	C20H42	282
Eicosane	112-95-8	NIST05.L	113492	96	C20H42	282

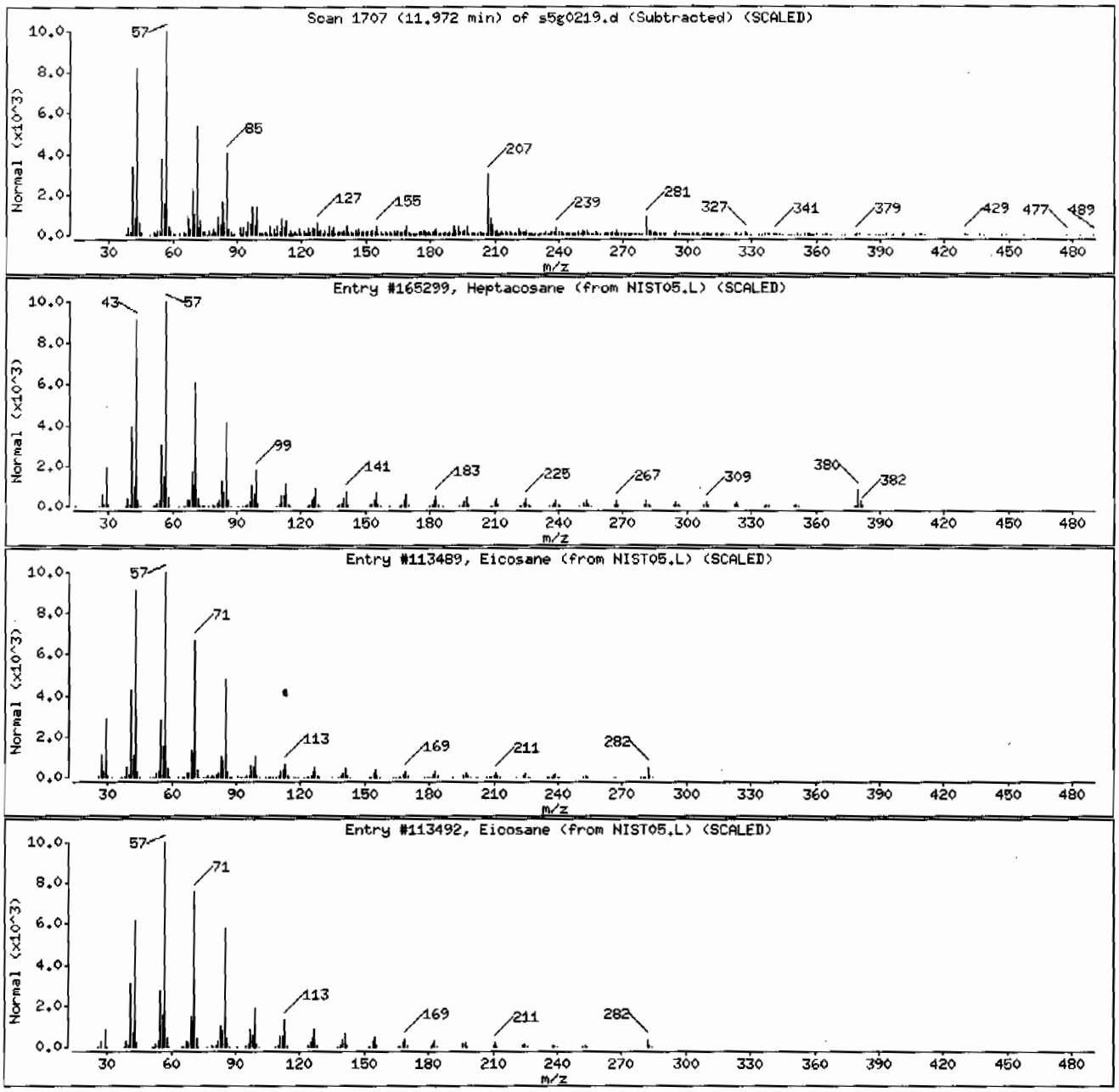

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclohexane, 1,1'-(2-propyl-1,3-propaned	55030-21-2	NIST05.L	92245	50	C18H34	250
Cyclohexane, 1,1'-(2-ethyl-1,3-propanedi	54833-34-0	NIST05.L	82661	43	C17H32	236
Cyclohexane, 1,1'-(2-methyl-1,3-propaned	2883-08-1	NIST05.L	73082	41	C16H30	222

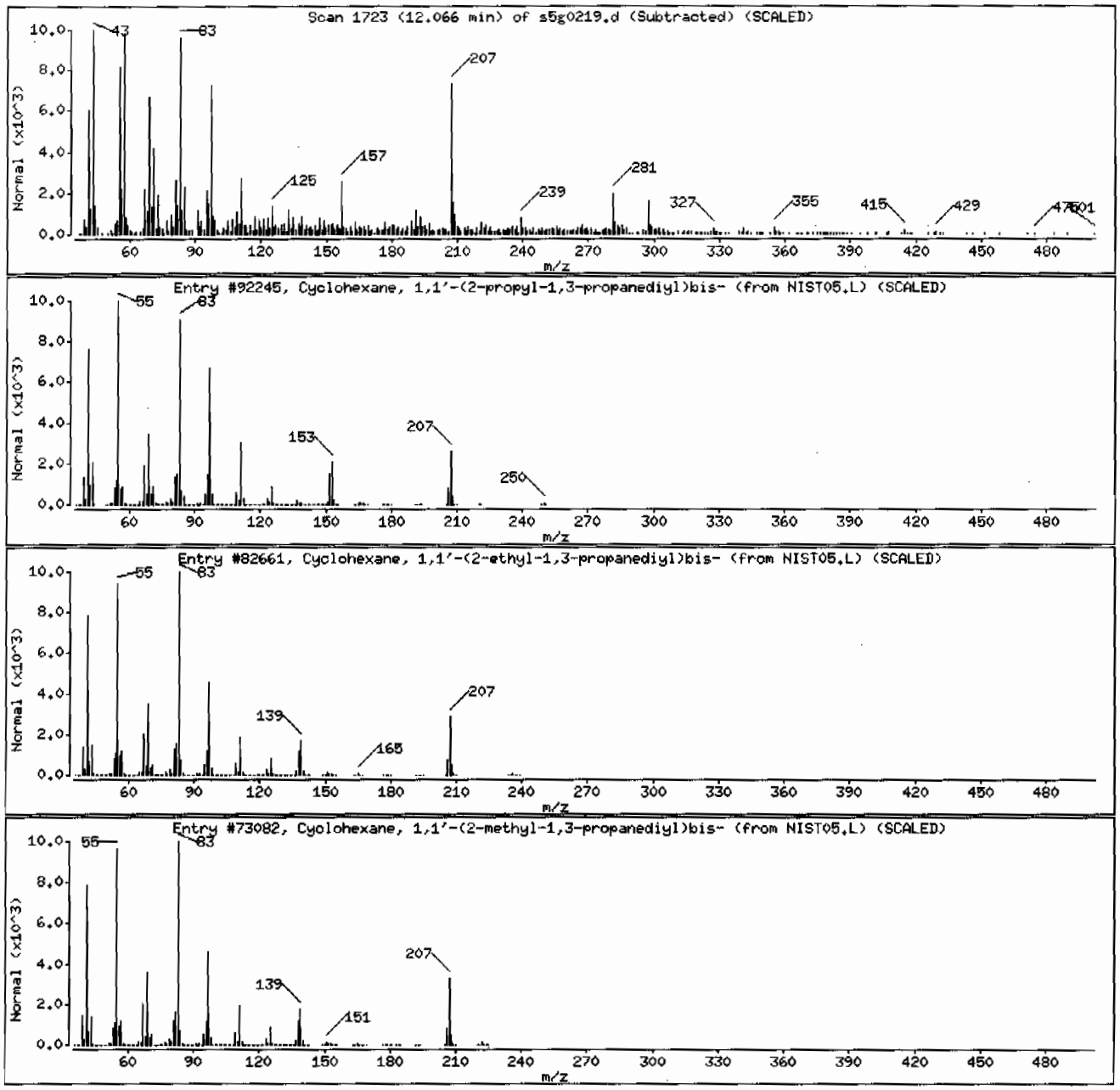

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |2325030111881878111SVMF111LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
3-Methoxymethyl-2,5,5,8a-tetramethyl-6,7	64201-73-6	NIST05.L	82517	38	C15H2402	236
2-[2-[2-(4-Chloro-phenoxy)-ethylsulfanyl	1000296-99-3	NIST05.L	157480	20	C17H16ClN3O2S	361
3,5-di-tert-Butyl-4-hydroxybenzyl alcoho	88-26-6	NIST05.L	82483	20	C15H2402	236

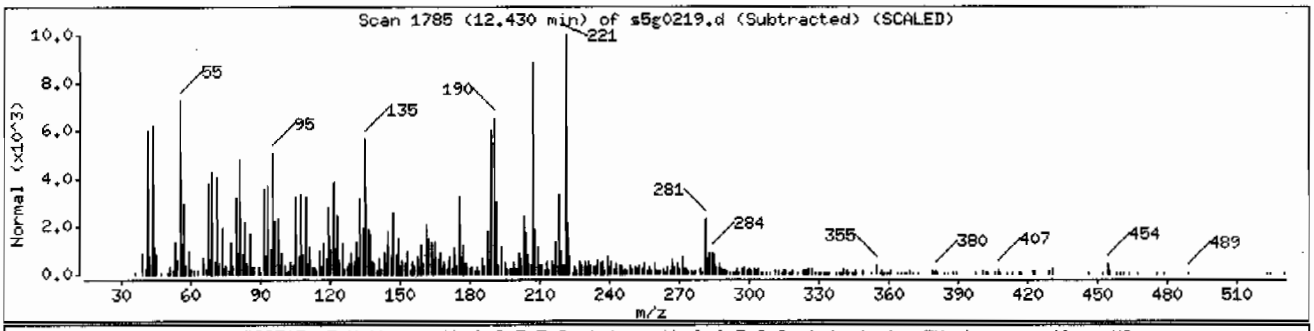

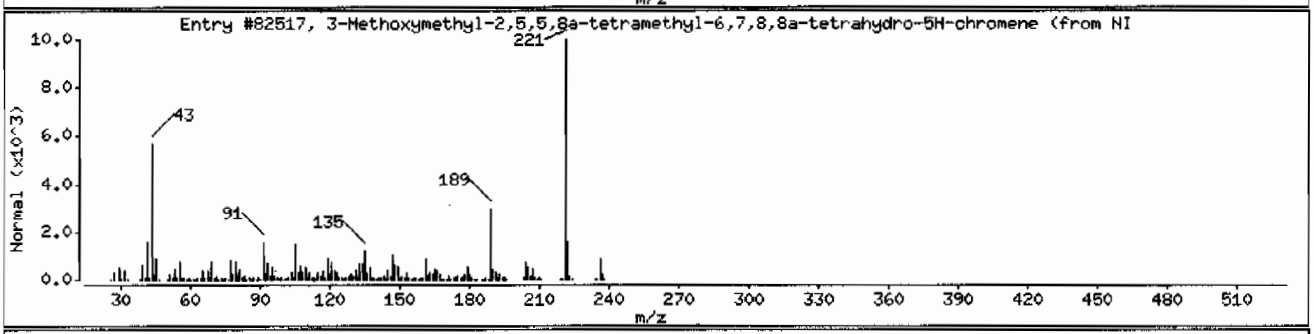

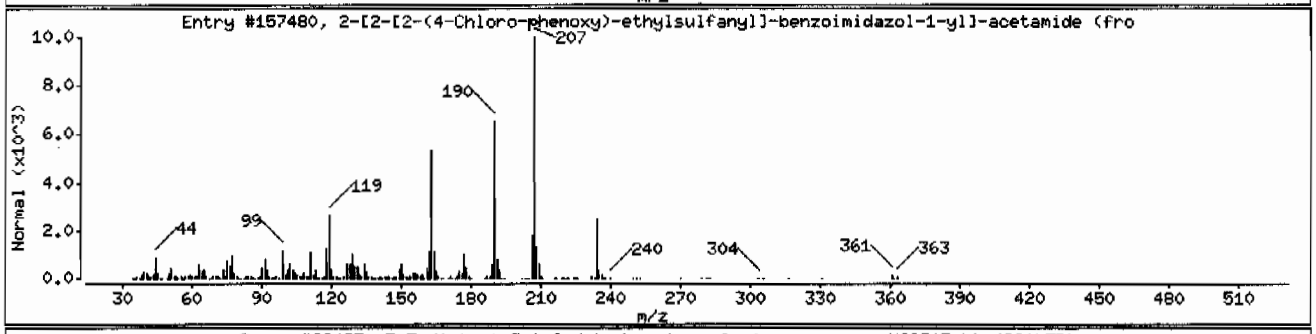

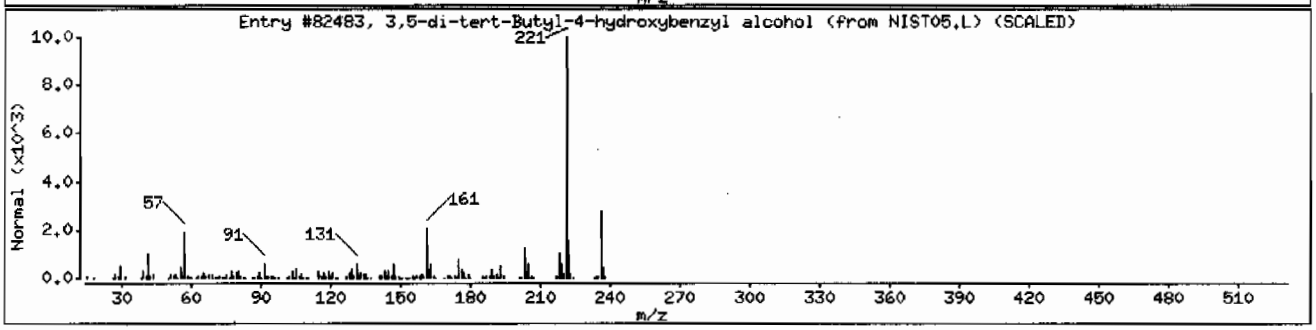

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
N,N-Dimethyl-4-nitroso-3-(trimethylsilyl	17993-84-9	NIST05.L	72386	30	C11H18N2OSi	222
3,3,7,11-Tetramethyltricyclo[5.4.0.0(4,1	117591-80-7	NIST05.L	72963	27	C15H26O	222
9,10-Methanoanthracen-11-ol, 9,10-dihydr	126615-74-5	NIST05.L	92233	25	C18H18O	250

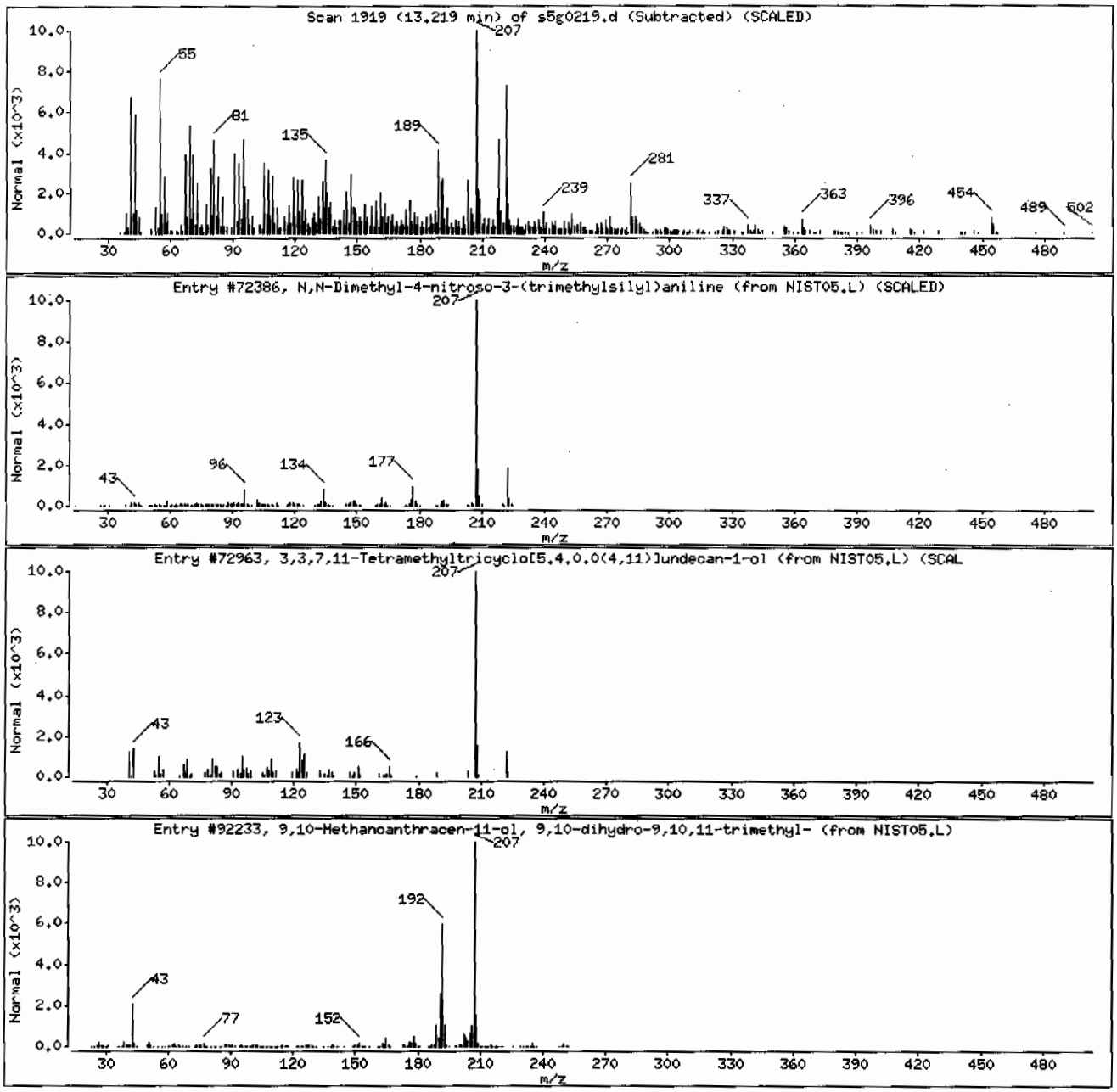

Data File: /chem/MSD5.i/s070209.b/s5g0219.d

Date : 02-JUL-2009 14:57

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
.beta.-Sitosterol	83-46-5	NIST05.L	174399	56	C29H50O	414
1-Propene, 3-(2-cyclopentenyl)-2-methyl-	1000154-23-3	NIST05.L	108380	46	C21H22	274
5-Methyl-2-phenylindolizine	36944-99-7	NIST05.L	62231	43	C15H13N	207

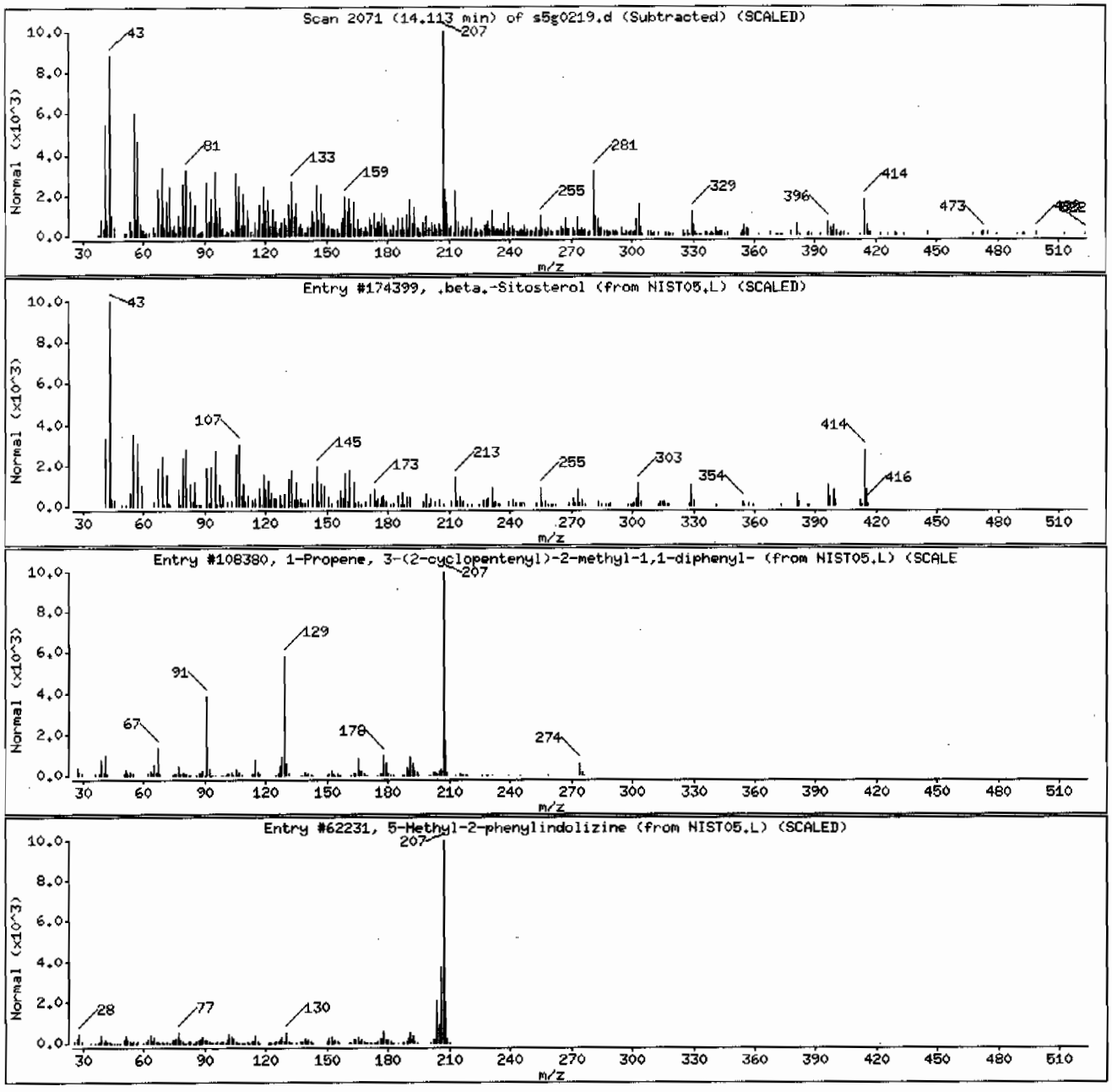

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503004	Date Received:	06/27/2009 09:05	%Moisture:	14.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10367	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 12:19	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.06 g	Final Volume:	1 mL
Data File:	s5g0212.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	390	ug/kg	77.9	390
108-95-2	Phenol	U	390	ug/kg	77.9	390
95-57-8	2-Chlorophenol	U	390	ug/kg	77.9	390
106-46-7	1,4-Dichlorobenzene	U	390	ug/kg	77.9	390
621-64-7	N-Nitrosodipropylamine	U	390	ug/kg	77.9	390
59-50-7	4-Chloro-3-methylphenol	U	390	ug/kg	77.9	390
83-32-9	Acenaphthene	U	39.0	ug/kg	12.9	39.0
121-14-2	2,4-Dinitrotoluene	U	390	ug/kg	39.0	390
100-02-7	4-Nitrophenol	U	390	ug/kg	129	390
87-86-5	Pentachlorophenol	U	390	ug/kg	97.4	390
129-00-0	Pyrene	J	23.4	ug/kg	11.7	39.0
110-86-1	Pyridine	U	390	ug/kg	77.9	390
62-53-3	Aniline	U	390	ug/kg	117	390
111-44-4	bis(2-Chloroethyl) ether	U	390	ug/kg	77.9	390
541-73-1	1,3-Dichlorobenzene	U	390	ug/kg	77.9	390
100-51-6	Benzyl alcohol	U	390	ug/kg	117	390
95-50-1	1,2-Dichlorobenzene	U	390	ug/kg	77.9	390
108-60-1	bis(2-Chloroisopropyl)ether	U	390	ug/kg	77.9	390
95-48-7	o-Cresol	U	390	ug/kg	77.9	390
65794-96-9	m,p-Cresols	U	390	ug/kg	117	390
67-72-1	Hexachloroethane	U	390	ug/kg	77.9	390
98-95-3	Nitrobenzene	U	390	ug/kg	77.9	390
78-59-1	Isophorone	U	390	ug/kg	77.9	390
88-75-5	2-Nitrophenol	U	390	ug/kg	77.9	390
105-67-9	2,4-Dimethylphenol	U	390	ug/kg	136	390
111-91-1	bis(2-Chloroethoxy)methane	U	390	ug/kg	77.9	390
120-83-2	2,4-Dichlorophenol	U	390	ug/kg	77.9	390
65-85-0	Benzoic acid	U	779	ug/kg	195	779
91-20-3	Naphthalene	U	39.0	ug/kg	11.7	39.0
106-47-8	4-Chloroaniline	U	390	ug/kg	77.9	390
87-68-3	Hexachlorobutadiene	U	390	ug/kg	77.9	390
91-57-6	2-Methylnaphthalene	U	39.0	ug/kg	7.79	39.0
77-47-4	Hexachlorocyclopentadiene	U	390	ug/kg	77.9	390
88-06-2	2,4,6-Trichlorophenol	U	390	ug/kg	77.9	390
95-95-4	2,4,5-Trichlorophenol	U	390	ug/kg	77.9	390
91-58-7	2-Chloronaphthalene	U	39.0	ug/kg	12.9	39.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	390	ug/kg	77.9	390
99-09-2	3-Nitroaniline	U	390	ug/kg	77.9	390

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503004	Date Received:	06/27/2009 09:05	%Moisture:	14.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10367	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 12:19	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.06 g	Final Volume:	1 mL
Data File:	s5g0212.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	390	ug/kg	77.9	390
606-20-2	2,6-Dinitrotoluene	U	390	ug/kg	39.0	390
208-96-8	Acenaphthylene	U	39.0	ug/kg	11.7	39.0
51-28-5	2,4-Dinitrophenol	U	779	ug/kg	148	779
132-64-9	Dibenzofuran	U	390	ug/kg	77.9	390
84-66-2	Diethylphthalate	U	390	ug/kg	77.9	390
86-73-7	Fluorene	U	39.0	ug/kg	11.7	39.0
7005-72-3	4-Chlorophenylphenylether	U	390	ug/kg	77.9	390
534-52-1	2-Methyl-4,6-dinitrophenol	U	390	ug/kg	77.9	390
100-01-6	4-Nitroaniline	U	390	ug/kg	117	390
	p-Nitroaniline					
122-39-4	Diphenylamine	U	390	ug/kg	77.9	390
122-66-7	Azobenzene	U	390	ug/kg	77.9	390
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	390	ug/kg	77.9	390
118-74-1	Hexachlorobenzene	U	390	ug/kg	77.9	390
85-01-8	Phenanthrene	U	39.0	ug/kg	11.7	39.0
120-12-7	Anthracene	U	39.0	ug/kg	7.79	39.0
84-74-2	Di-n-butylphthalate	U	390	ug/kg	77.9	390
206-44-0	Fluoranthene	J	24.2	ug/kg	11.7	39.0
85-68-7	Butylbenzylphthalate	U	390	ug/kg	77.9	390
56-55-3	Benzo(a)anthracene	J	16.5	ug/kg	11.7	39.0
91-94-1	3,3'-Dichlorobenzidine	U	390	ug/kg	117	390
218-01-9	Chrysene	J	15.3	ug/kg	11.7	39.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	390	ug/kg	77.9	390
117-84-0	Di-n-octylphthalate	U	390	ug/kg	77.9	390
205-99-2	Benzo(b)fluoranthene	U	39.0	ug/kg	11.7	39.0
207-08-9	Benzo(k)fluoranthene	U	39.0	ug/kg	11.7	39.0
50-32-8	Benzo(a)pyrene	J	17.1	ug/kg	11.7	39.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	39.0	ug/kg	11.7	39.0
53-70-3	Dibenzo(a,h)anthracene	U	39.0	ug/kg	11.7	39.0
191-24-2	Benzo(ghi)perylene	U	39.0	ug/kg	11.7	39.0
120-82-1	1,2,4-Trichlorobenzene	U	390	ug/kg	77.9	390

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	208	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0212.d
Lab Smp Id: 232503004 Client Smp ID: CAMO-09-10367
Inj Date : 02-JUL-2009 12:19
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503004|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.06000	weight of sample
M	14.62670	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	472296	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1598297	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	994701	40.0000	
* 67 Phenanthrene-d10	188	7.319	7.325	(1.000)	1872851	40.0000	
* 91 Chrysene-d12	240	9.736	9.747	(1.000)	1710629	40.0000	
* 98 Perylene-d12	264	11.483	11.495	(1.000)	1149592	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.797)	717312	69.1712	2700
$ 5 Phenol-d5	99	3.725	3.728	(0.930)	984175	71.9787	2800
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	451451	38.1181	1480
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1023766	39.7962	1550
$ 60 2,4,6-Tribromophenol	329	6.742	6.747	(1.098)	331575	81.6977	3180
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.894)	1307246	49.9342	1940

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.601	8.611	(0.883)	22423	0.60086	23.4(a)
76 Fluoranthene	202	8.384	8.394	(1.145)	24795	0.62039	24.2(a)
89 Benzo(a)anthracene	228	9.725	9.733	(0.999)	15546	0.42354	16.5(a)
92 Chrysene	228	9.760	9.771	(1.002)	13235	0.39363	15.3(a)
97 Benzo(a)pyrene	252	11.401	11.413	(0.993)	9877	0.43947	17.1(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0212.d
Report Date: 07/02/2009 12:43
Lab. ID: 232503004 SampleType: SAMPLE
Injection Date: 02-JUL-2009 12:19
Operator: RMB Instrument: MSD5.i
Sample Info: |232503004|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	61805	3.72	3.80	80-120	100	(T)
93	129	3.74	3.80	190-250	0	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	64298	4.37	4.25	80-120	100	(T)
42	45791	4.37	4.25	55-115	71	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	382	4.72	4.64	80-120	100	(T)
122	236	4.77	4.64	54-114	62	(T)
77	554	4.72	4.64	50-110	145	(QT)
31 4-Chloroaniline			CAS#: 106-47-8			
127	165	4.91	4.92	80-120	100	( )
65	297	4.91	4.92	0- 55	180	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	126	6.14	6.09	80-120	100	( )
92	5764	6.14	6.09	84-144	4561	(Q)
108	20967	6.14	6.09	0- 40	16592	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	215540	6.14	5.90	80-120	100	(T)
164	994701	6.14	5.90	0- 40	461	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	129729	6.14	5.96	80-120	100	(T)
63	2025	6.14	5.96	55-115	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	129729	6.14	6.26	80-120	100	(T)
89	2133	6.14	6.26	38- 98	2	(QT)
63	2025	6.14	6.26	19- 79	2	(QT)
53 Fluorene				CAS#: 86-73-7		
166	14340	6.74	6.56	80-120	100	(T)
165	14758	6.74	6.56	61-121	103	(T)
167	5244	6.74	6.56	0- 44	37	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	1137	6.74	6.57	80-120	100	(T)
105	2167	6.74	6.57	2- 62	191	(QT)
51	2038	6.74	6.57	46-106	179	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	24189	6.74	6.93	80-120	100	(T)
141	121798	6.74	6.93	34- 94	504	(QT)
250	47909	6.74	6.93	68-128	198	(QT)
76 Fluoranthene				CAS#: 206-44-0		
202	24795	8.38	8.39	80-120	100	( )
203	4336	8.38	8.39	0- 48	17	( )
101	2480	8.38	8.39	0- 39	10	( )
79 Pyrene				CAS#: 129-00-0		
202	22423	8.60	8.61	80-120	100	( )
200	4947	8.60	8.61	0- 51	22	( )
101	2545	8.60	8.61	0- 41	11	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	15546	9.72	9.73	80-120	100	( )
226	2872	9.72	9.73	0- 56	18	( )
229	3827	9.72	9.73	0- 50	25	( )
92 Chrysene				CAS#: 218-01-9		
228	13235	9.76	9.77	80-120	100	( )
229	2460	9.77	9.77	0- 50	19	( )
226	4811	9.77	9.77	0- 60	36	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	17028	10.94	10.95	80-120	100	( )
253	5812	10.94	10.95	0- 52	34	( )
125	2877	10.94	10.95	0- 38	17	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	8197	10.97	10.99	80-120	100	( )
253	5812	10.94	10.98	0- 52	71	(Q)
125	2870	10.94	10.98	0- 38	35	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	9877	11.40	11.41	80-120	100	( )
253	2432	11.40	11.41	0- 52	25	( )
125	1114	11.40	11.41	0- 30	11	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	6800	13.90	13.92	80-120	100	( )
138	966	13.89	13.92	0- 30	14	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0212.d
Lab Smp Id: 232503004 Client Smp ID: CAMO-09-10367
Inj Date : 02-JUL-2009 12:19
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503004|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.06000	weight of sample
M	14.62670	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.007	3025282	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.031	404596	5.34953185	208	0		0	10

Data File: /chem/MSD5.i/s070209.b/s5g0212.d
Date : 02-JUL-2009 12:19
Client ID: CAMO-09-10367
Sample Info: 1232503004188187811SVMF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

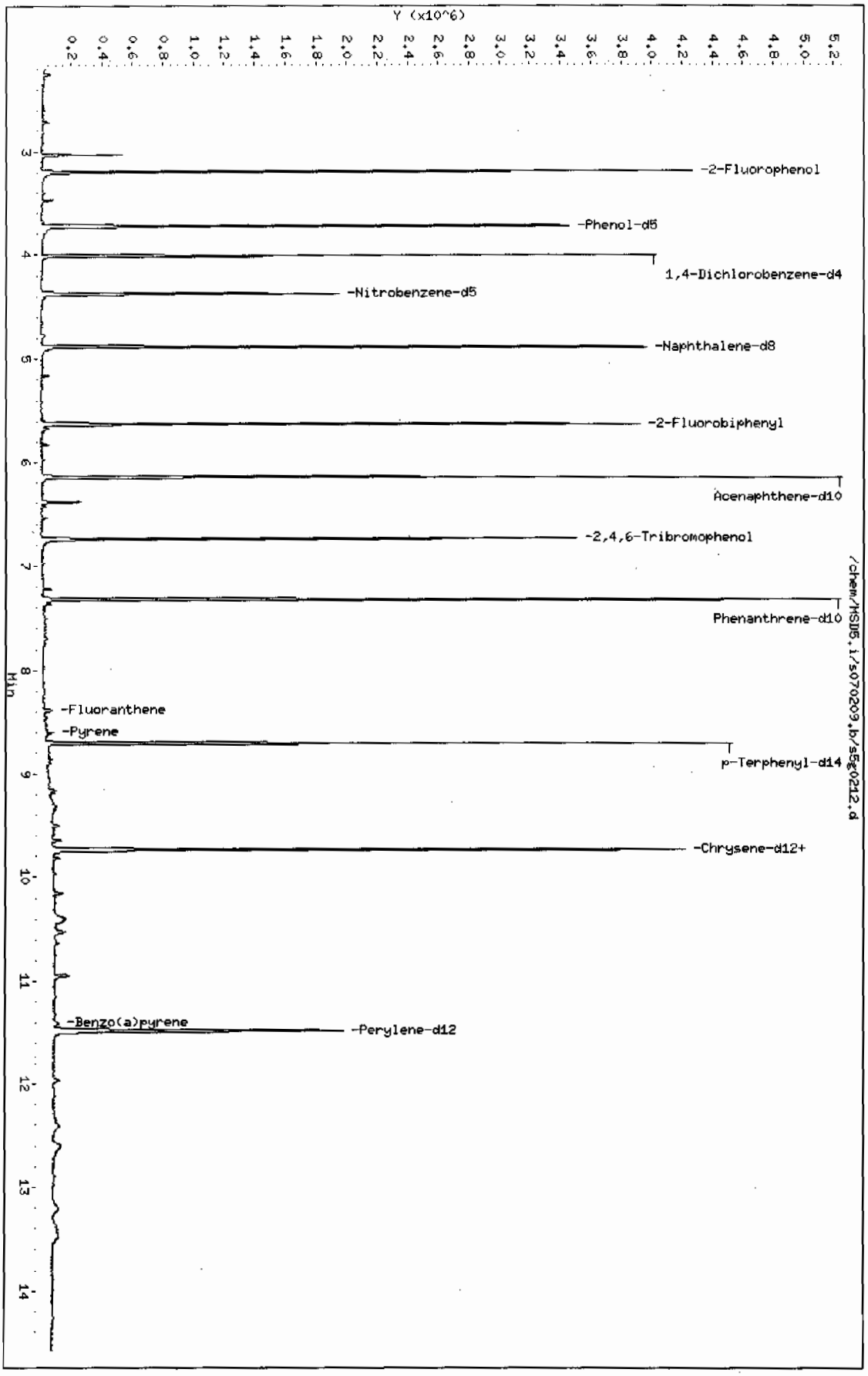

Page 1

Data File: /chem/MSD5.i/s070209.b/s5g0212.d

Date : 02-JUL-2009 12:19

Client ID: CAMO-09-10367

Instrument: MSD5.i

Sample Info: 1232503004188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 23.4 ug/Kg

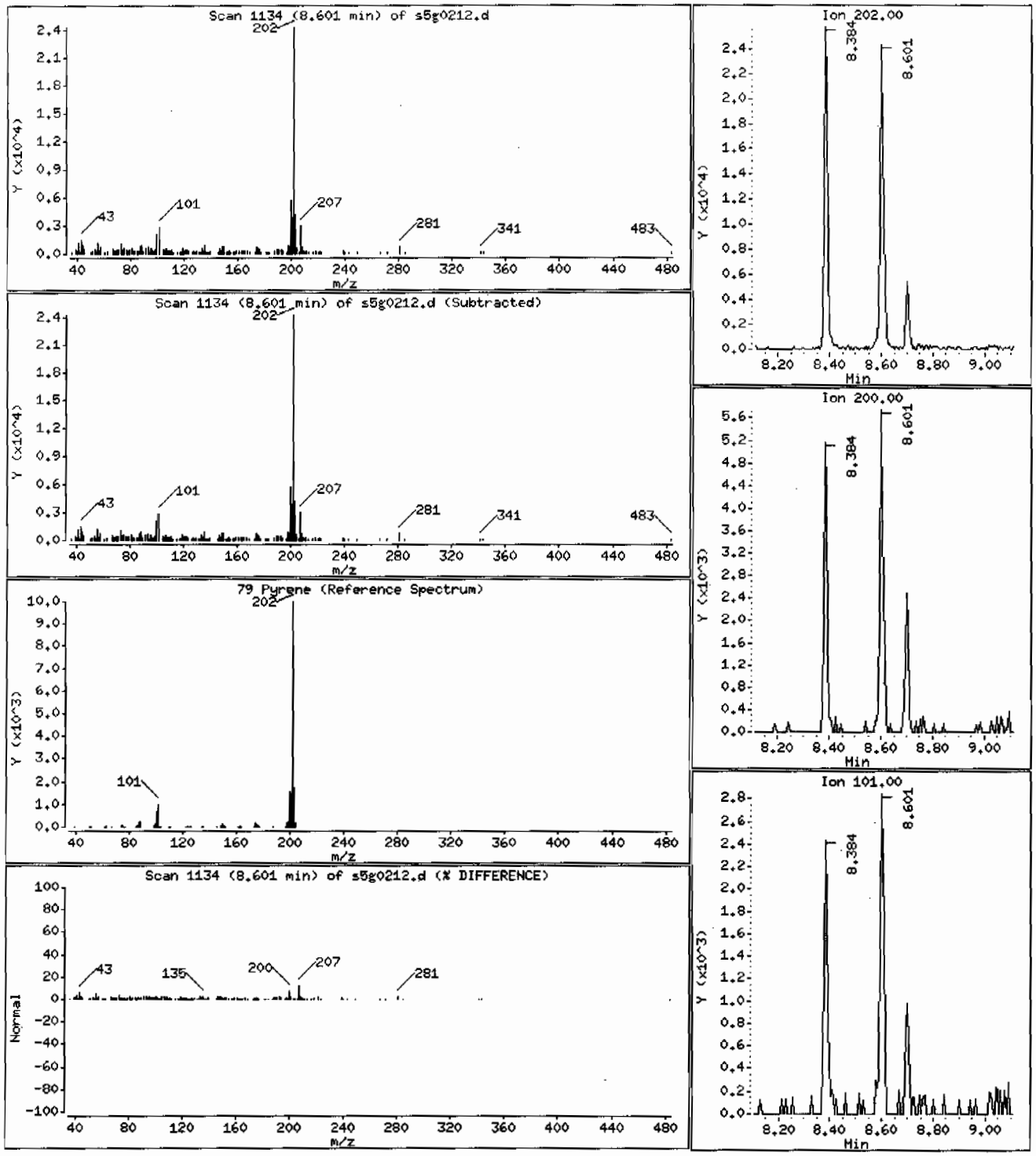

Data File: /chem/MSD5.i/s070209.b/s5g0212.d

Date : 02-JUL-2009 12:19

Client ID: CAMO-09-10367

Instrument: MSD5.i

Sample Info: |2325030041881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 24.2 ug/Kg

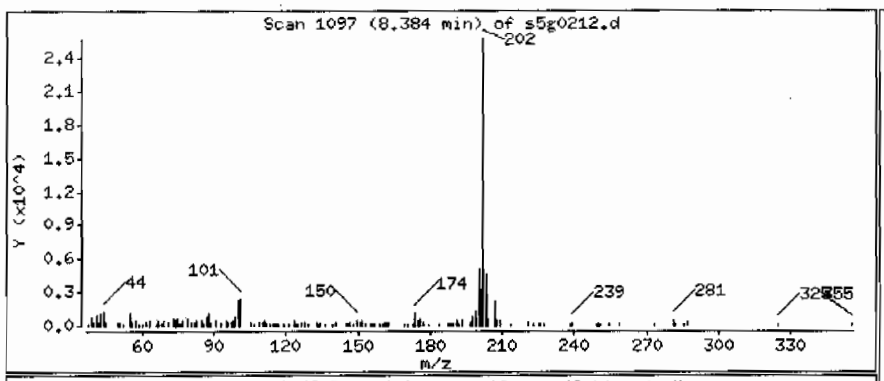

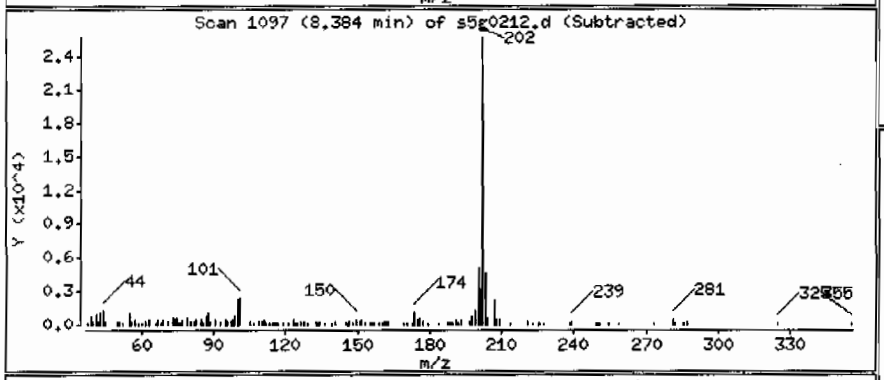

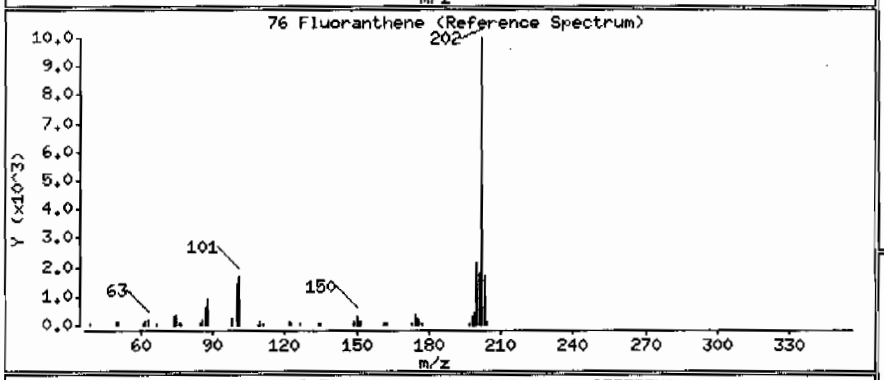

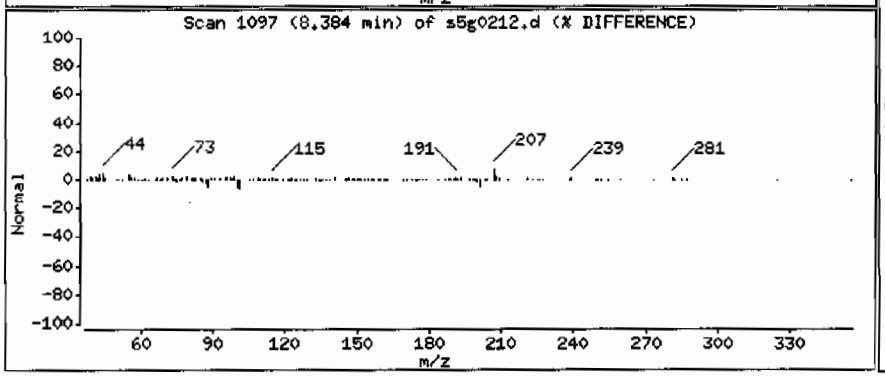

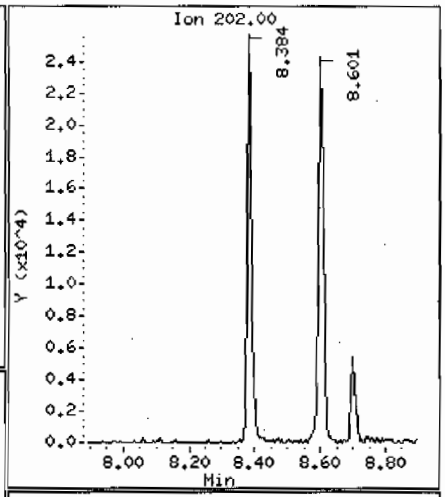

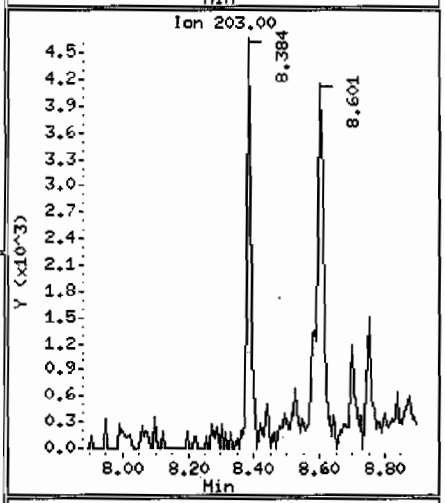

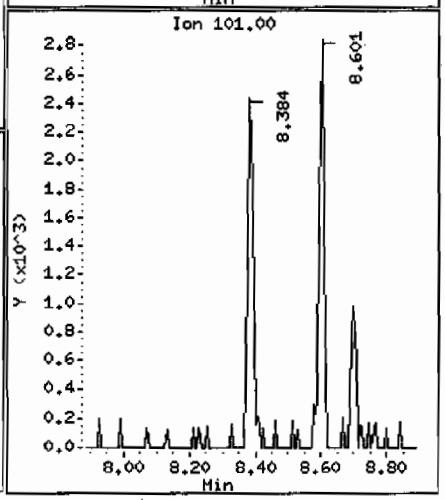

Data File: /chem/MSD5.i/s070209.b/s5g0212.d

Date : 02-JUL-2009 12:19

Client ID: CAMO-09-10367

Instrument: MSD5.i

Sample Info: |2325030041881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 16.5 ug/Kg

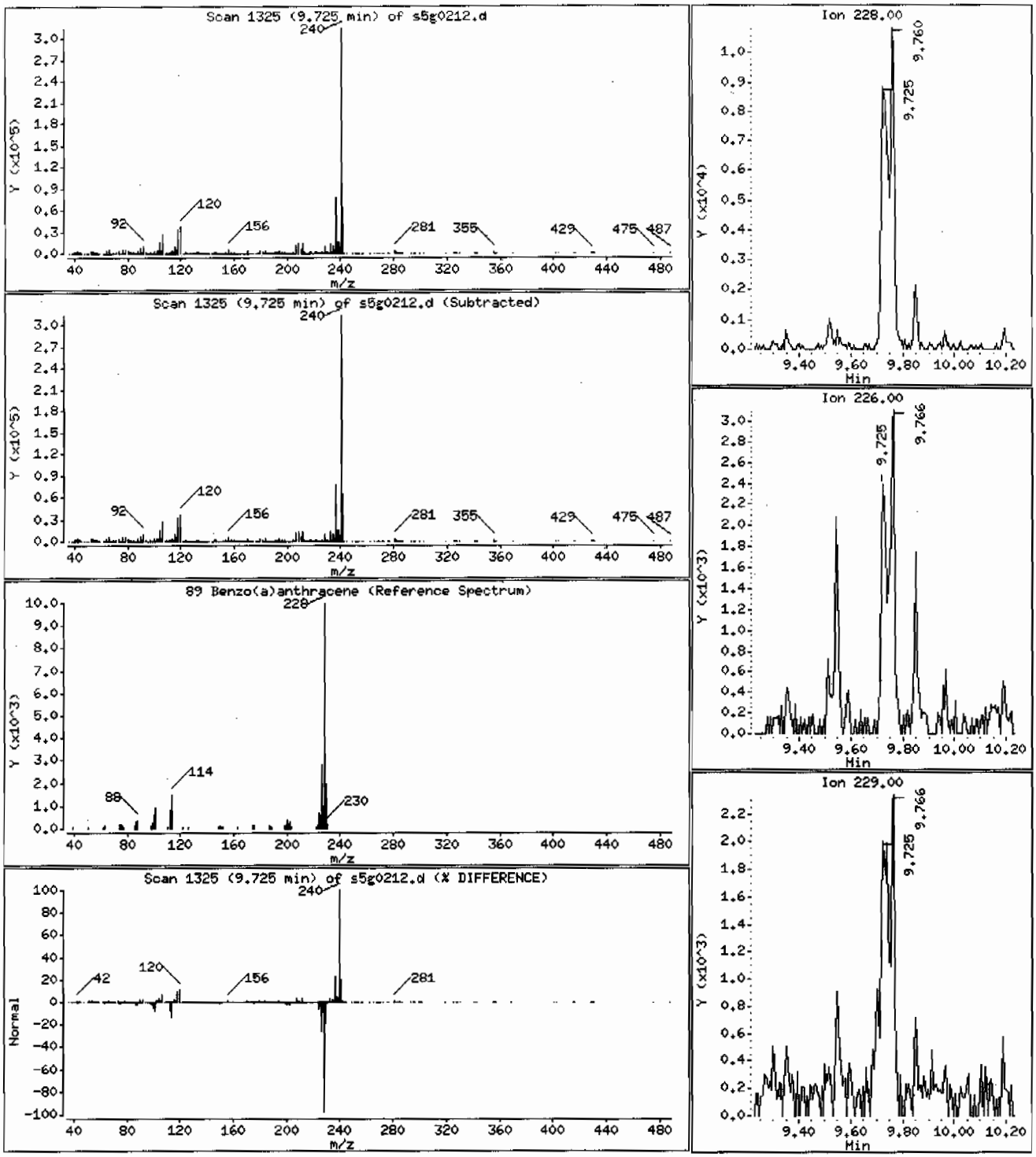

Data File: /chem/MSD5.i/s070209.b/s5g0212.d

Date : 02-JUL-2009 12:19

Client ID: CAMO-09-10367

Instrument: MSD5.i

Sample Info: 1232503004188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 15.3 ug/Kg

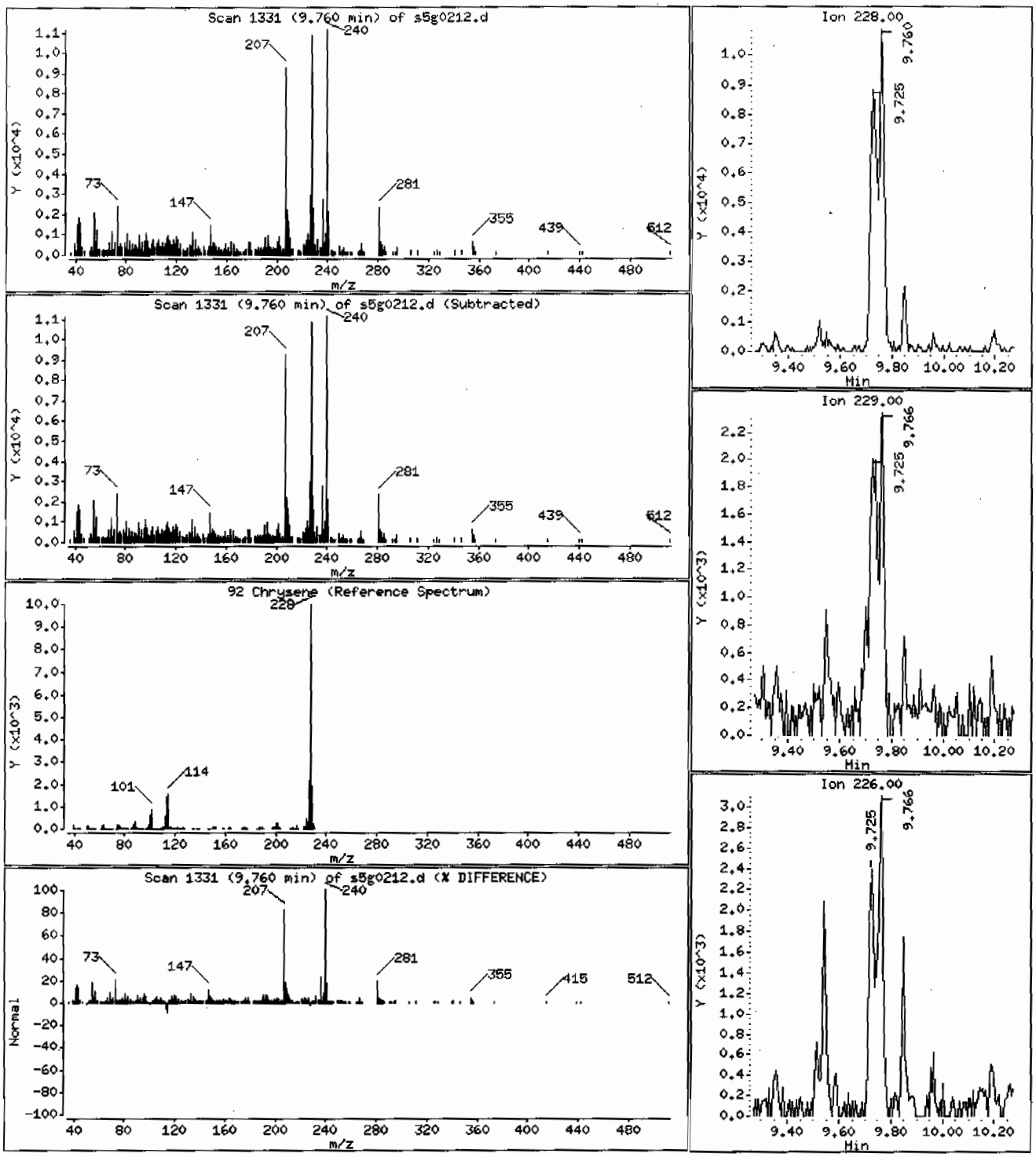

Data File: /chem/MSD5.i/s070209.b/s5g0212.d

Date : 02-JUL-2009 12:19

Client ID: CAMO-09-10367

Instrument: MSD5.i

Sample Info: 1232503004188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 17.1 ug/Kg

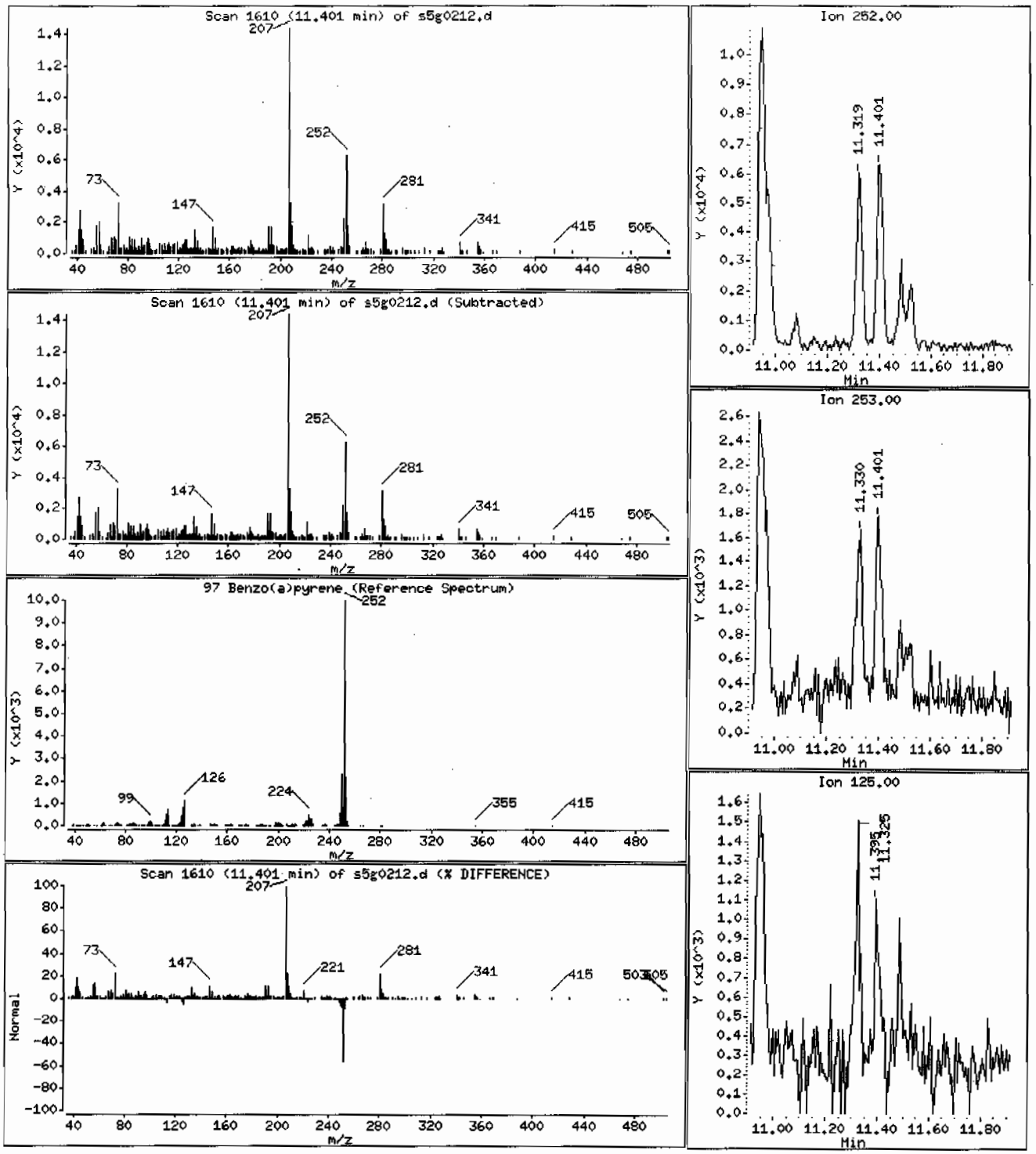

Data File: /chem/MSD5.i/s070209.b/s5g0212.d

Date : 02-JUL-2009 12:19

Client ID: CAMO-09-10367

Instrument: MSD5.i

Sample Info: |2325030041881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	28	C6H12O2	116

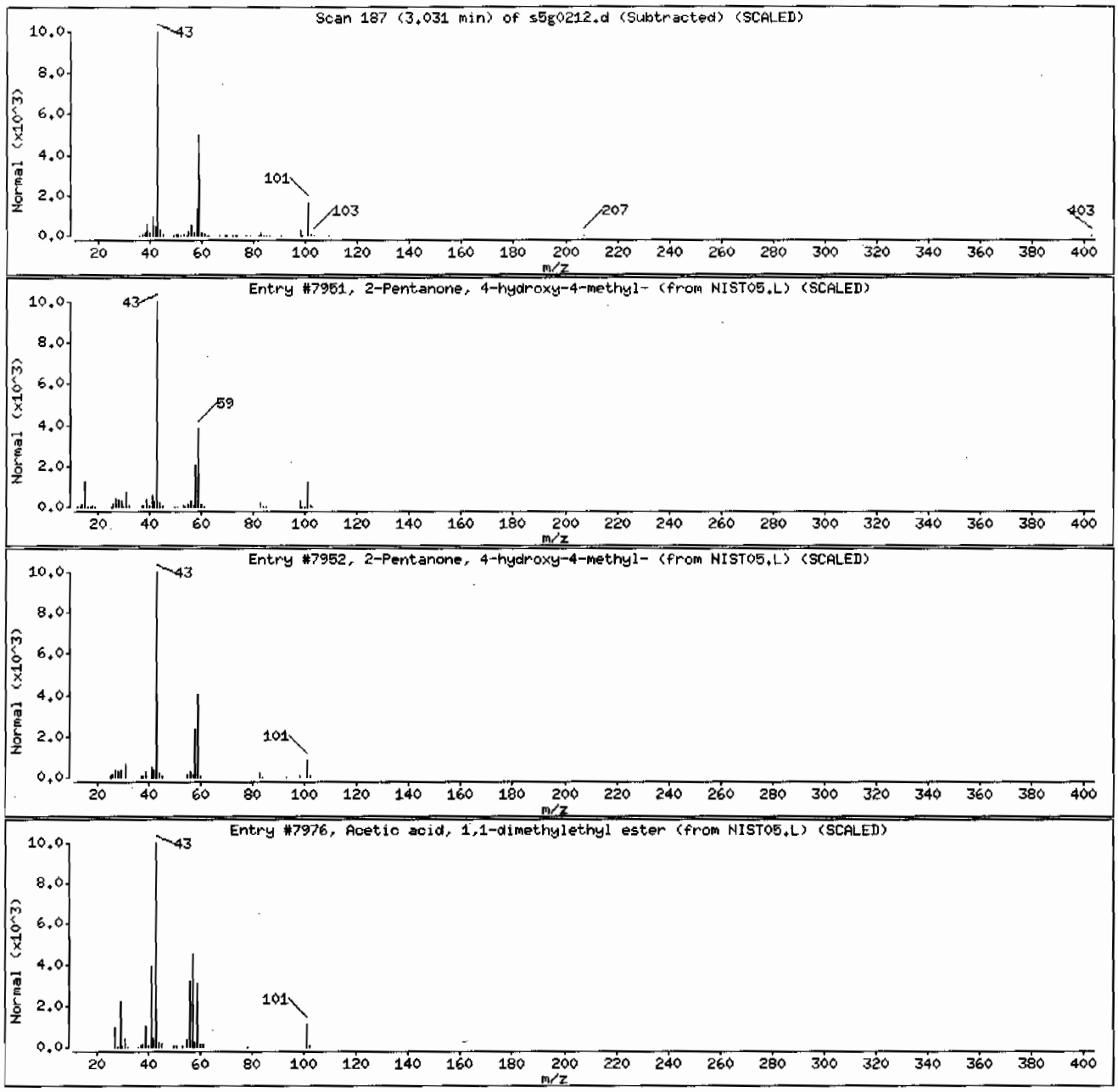

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503009	Date Received:	06/27/2009 09:05	%Moisture:	5.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10368	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 14:12	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0217.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	352	ug/kg	70.4	352
108-95-2	Phenol	U	352	ug/kg	70.4	352
95-57-8	2-Chlorophenol	U	352	ug/kg	70.4	352
106-46-7	1,4-Dichlorobenzene	U	352	ug/kg	70.4	352
621-64-7	N-Nitrosodipropylamine	U	352	ug/kg	70.4	352
59-50-7	4-Chloro-3-methylphenol	U	352	ug/kg	70.4	352
83-32-9	Acenaphthene	U	35.2	ug/kg	11.6	35.2
121-14-2	2,4-Dinitrotoluene	U	352	ug/kg	35.2	352
100-02-7	4-Nitrophenol	U	352	ug/kg	116	352
87-86-5	Pentachlorophenol	U	352	ug/kg	88.0	352
129-00-0	Pyrene		172	ug/kg	10.6	35.2
110-86-1	Pyridine	U	352	ug/kg	70.4	352
62-53-3	Aniline	U	352	ug/kg	106	352
111-44-4	bis(2-Chloroethyl) ether	U	352	ug/kg	70.4	352
541-73-1	1,3-Dichlorobenzene	U	352	ug/kg	70.4	352
100-51-6	Benzyl alcohol	U	352	ug/kg	106	352
95-50-1	1,2-Dichlorobenzene	U	352	ug/kg	70.4	352
108-60-1	bis(2-Chloroisopropyl)ether	U	352	ug/kg	70.4	352
95-48-7	o-Cresol	U	352	ug/kg	70.4	352
65794-96-9	m,p-Cresols	U	352	ug/kg	106	352
67-72-1	Hexachloroethane	U	352	ug/kg	70.4	352
98-95-3	Nitrobenzene	U	352	ug/kg	70.4	352
78-59-1	Isophorone	U	352	ug/kg	70.4	352
88-75-5	2-Nitrophenol	U	352	ug/kg	70.4	352
105-67-9	2,4-Dimethylphenol	U	352	ug/kg	123	352
111-91-1	bis(2-Chloroethoxy)methane	U	352	ug/kg	70.4	352
120-83-2	2,4-Dichlorophenol	U	352	ug/kg	70.4	352
65-85-0	Benzoic acid	U	704	ug/kg	176	704
91-20-3	Naphthalene	U	35.2	ug/kg	10.6	35.2
106-47-8	4-Chloroaniline	U	352	ug/kg	70.4	352
87-68-3	Hexachlorobutadiene	U	352	ug/kg	70.4	352
91-57-6	2-Methylnaphthalene	U	35.2	ug/kg	7.04	35.2
77-47-4	Hexachlorocyclopentadiene	U	352	ug/kg	70.4	352
88-06-2	2,4,6-Trichlorophenol	U	352	ug/kg	70.4	352
95-95-4	2,4,5-Trichlorophenol	U	352	ug/kg	70.4	352
91-58-7	2-Chloronaphthalene	U	35.2	ug/kg	11.6	35.2
88-74-4	2-Nitroaniline	U	352	ug/kg	70.4	352
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	352	ug/kg	70.4	352

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503009	Date Received:	06/27/2009 09:05	%Moisture:	5.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10368	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 14:12	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0217.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	352	ug/kg	70.4	352
606-20-2	2,6-Dinitrotoluene	U	352	ug/kg	35.2	352
208-96-8	Acenaphthylene	U	35.2	ug/kg	10.6	35.2
51-28-5	2,4-Dinitrophenol	U	704	ug/kg	134	704
132-64-9	Dibenzofuran	U	352	ug/kg	70.4	352
84-66-2	Diethylphthalate	U	352	ug/kg	70.4	352
86-73-7	Fluorene	U	35.2	ug/kg	10.6	35.2
7005-72-3	4-Chlorophenylphenylether	U	352	ug/kg	70.4	352
534-52-1	2-Methyl-4,6-dinitrophenol	U	352	ug/kg	70.4	352
100-01-6	4-Nitroaniline	U	352	ug/kg	106	352
	p-Nitroaniline					
122-39-4	Diphenylamine	U	352	ug/kg	70.4	352
122-66-7	Azobenzene	U	352	ug/kg	70.4	352
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	352	ug/kg	70.4	352
118-74-1	Hexachlorobenzene	U	352	ug/kg	70.4	352
85-01-8	Phenanthrene		46.6	ug/kg	10.6	35.2
120-12-7	Anthracene	U	35.2	ug/kg	7.04	35.2
84-74-2	Di-n-butylphthalate	U	352	ug/kg	70.4	352
206-44-0	Fluoranthene		154	ug/kg	10.6	35.2
85-68-7	Butylbenzylphthalate	U	352	ug/kg	70.4	352
56-55-3	Benzo(a)anthracene		58.6	ug/kg	10.6	35.2
91-94-1	3,3'-Dichlorobenzidine	U	352	ug/kg	106	352
218-01-9	Chrysene		95.9	ug/kg	10.6	35.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	352	ug/kg	70.4	352
117-84-0	Di-n-octylphthalate	U	352	ug/kg	70.4	352
205-99-2	Benzo(b)fluoranthene		140	ug/kg	10.6	35.2
207-08-9	Benzo(k)fluoranthene		60.7	ug/kg	10.6	35.2
50-32-8	Benzo(a)pyrene		83.9	ug/kg	10.6	35.2
193-39-5	Indeno(1,2,3-cd)pyrene		55.8	ug/kg	10.6	35.2
53-70-3	Dibenzo(a,h)anthracene	U	35.2	ug/kg	10.6	35.2
191-24-2	Benzo(ghi)perylene		68.0	ug/kg	10.6	35.2
120-82-1	1,2,4-Trichlorobenzene	U	352	ug/kg	70.4	352

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0217.d
Lab Smp Id: 232503009 Client Smp ID: CAMO-09-10368
Inj Date : 02-JUL-2009 14:12
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503009|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.04000	weight of sample
M	5.47210	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	550882	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1864724	40.0000	
* 46 Acenaphthene-d10	164	6.143	6.145	(1.000)	1160049	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	2074960	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1492257	40.0000	
* 98 Perylene-d12	264	11.489	11.495	(1.000)	955362	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.797)	492889	40.7495	1440
$ 5 Phenol-d5	99	3.725	3.728	(0.930)	681868	42.7551	1500
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	312054	22.5836	795
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	764355	25.4772	897
$ 60 2,4,6-Tribromophenol	329	6.743	6.747	(1.098)	305730	64.5925	2270
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	1015940	44.4858	1570

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.601	8.611	(0.883)	159200	4.89031	172
68 Phenanthrene	178	7.343	7.344	(1.002)	51405	1.32246	46.6
76 Fluoranthene	202	8.389	8.394	(1.145)	193727	4.37504	154
89 Benzo(a)anthracene	228	9.731	9.733	(0.999)	53325	1.66541	58.6
92 Chrysene	228	9.766	9.771	(1.002)	79834	2.72183	95.8
95 Benzo(b)fluoranthene	252	10.942	10.951	(0.952)	83646	3.96441	140
96 Benzo(k)fluoranthene	252	10.978	10.990	(0.955)	35734	1.72418	60.7
97 Benzo(a)pyrene	252	11.407	11.413	(0.993)	44522	2.38372	83.9
99 Indeno(1,2,3-cd)pyrene	276	13.330	13.354	(1.160)	29752	1.58519	55.8
101 Benzo(ghi)perylene	276	13.907	13.922	(1.210)	30877	1.92970	68.0

ION RATIO REPORT

SV REPORT

Data file: s5g0217.d
Report Date: 07/02/2009 14:39
Lab. ID: 232503009 SampleType: SAMPLE
Injection Date: 02-JUL-2009 14:12
Operator: RMB Instrument: MSD5.i
Sample Info: |232503009|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	42185	3.73	3.80	80-120	100	(T)
93	221	3.68	3.80	190-250	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	44351	4.37	4.25	80-120	100	(T)
42	29905	4.37	4.25	55-115	67	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	1784	4.65	4.64	80-120	100	( )
122	409	4.64	4.64	54-114	23	(Q)
77	2357	4.67	4.64	50-110	132	(Q)
31 4-Chloroaniline			CAS#: 106-47-8			
127	494	4.91	4.92	80-120	100	( )
65	4660	4.88	4.92	0- 55	942	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	254985	6.14	5.90	80-120	100	(T)
164	1160049	6.14	5.90	0- 40	455	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	154370	6.14	5.96	80-120	100	(T)
63	2098	6.14	5.96	55-115	1	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	154370	6.14	6.26	80-120	100	(T)
89	3408	6.14	6.26	38- 98	2	(QT)
63	2098	6.14	6.26	19- 79	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	13002	6.74	6.56	80-120	100	(T)
165	12798	6.74	6.56	61-121	98	(T)
167	4506	6.74	6.56	0- 44	35	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1262	6.74	6.57	80-120	100	(T)
105	1731	6.74	6.57	2- 62	137	(QT)
51	1661	6.74	6.57	46-106	132	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	21415	6.74	6.93	80-120	100	(T)
141	106663	6.74	6.93	34- 94	498	(QT)
250	41826	6.74	6.93	68-128	195	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	51405	7.34	7.34	80-120	100	( )
179	9044	7.34	7.34	0- 46	18	( )
176	10003	7.34	7.34	0- 49	19	( )
69 Anthracene			CAS#: 120-12-7			
178	51405	7.34	7.39	80-120	100	( )
179	9044	7.34	7.39	0- 46	18	( )
176	10003	7.34	7.39	0- 49	19	( )
76 Fluoranthene			CAS#: 206-44-0			
202	193727	8.39	8.39	80-120	100	( )
203	34598	8.39	8.39	0- 48	18	( )
101	16661	8.38	8.39	0- 39	9	( )
79 Pyrene			CAS#: 129-00-0			
202	159200	8.60	8.61	80-120	100	( )
200	31202	8.60	8.61	0- 51	20	( )
101	15634	8.60	8.61	0- 41	10	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	53325	9.73	9.73	80-120	100	( )
226	14094	9.72	9.73	0- 56	26	( )
229	11637	9.73	9.73	0- 50	22	( )
92 Chrysene			CAS#: 218-01-9			
228	79834	9.77	9.77	80-120	100	( )
229	17180	9.77	9.77	0- 50	22	( )
226	22039	9.77	9.77	0- 60	28	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	83646	10.94	10.95	80-120	100	( )
253	19422	10.94	10.95	0- 52	23	( )
125	7567	10.94	10.95	0- 38	9	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	35734	10.98	10.99	80-120	100	( )
253	7814	10.98	10.98	0- 52	22	( )
125	3155	10.98	10.98	0- 38	9	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	44522	11.41	11.41	80-120	100	( )
253	11278	11.41	11.41	0- 52	25	( )
125	4017	11.41	11.41	0- 30	9	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	29752	13.33	13.35	80-120	100	( )
138	7657	13.34	13.35	0- 51	26	( )
100 Dibenzo(a,h)anthracene				CAS#: 53-70-3		
278	7271	13.34	13.37	80-120	100	( )
139	1374	13.33	13.37	0- 30	19	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	30877	13.91	13.92	80-120	100	( )
138	7338	13.90	13.92	0- 30	24	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0217.d
Lab Smp Id: 232503009 Client Smp ID: CAMO-09-10368
Inj Date : 02-JUL-2009 14:12
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503009|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/MSD5.i/s070209.b/s5g0217.d
Date : 02-JUL-2009 14:12
Client ID: CAND-09-10368
Sample Info: 1232503009|881878|1|SVMF11|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RHB
Column diameter: 0.20

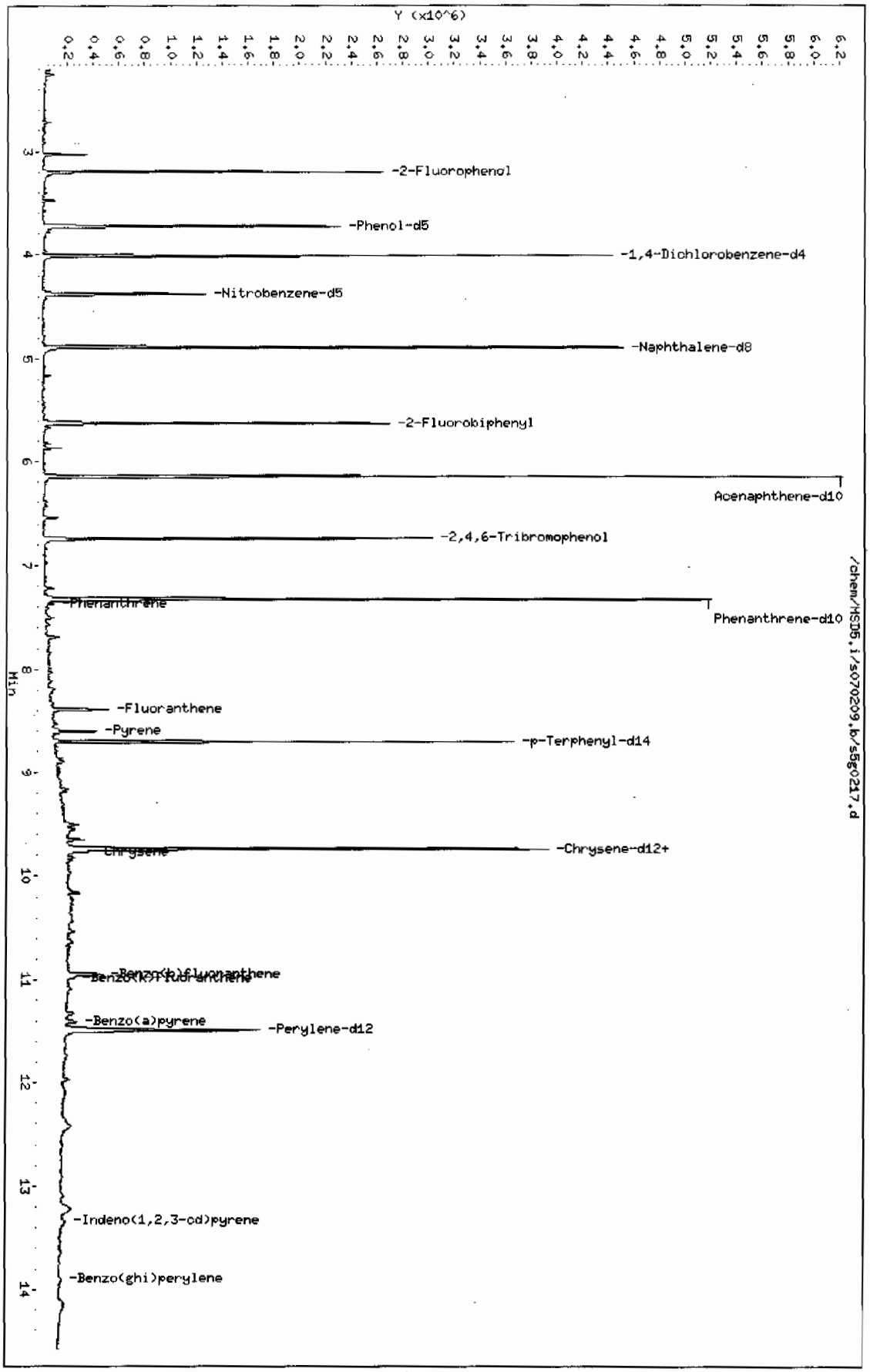

Page 1

Data File: /chem/MSD5.i/s070209.b/s5g0217.d

Date : 02-JUL-2009 14:12

Client ID: CAMO-09-10368

Instrument: MSD5.i

Sample Info: 1232503009188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 172 ug/Kg

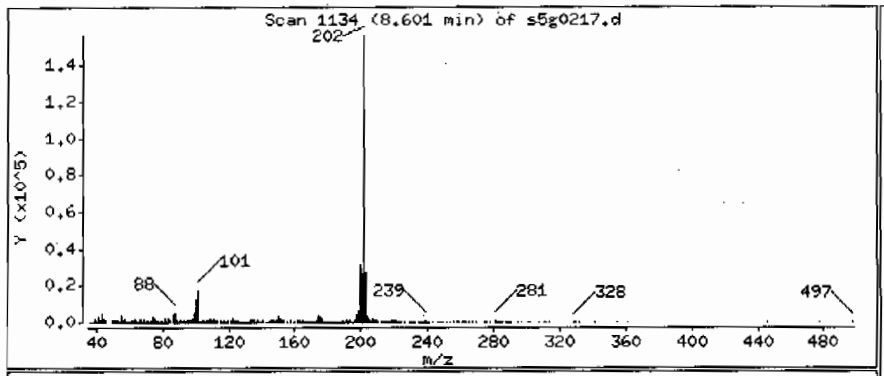

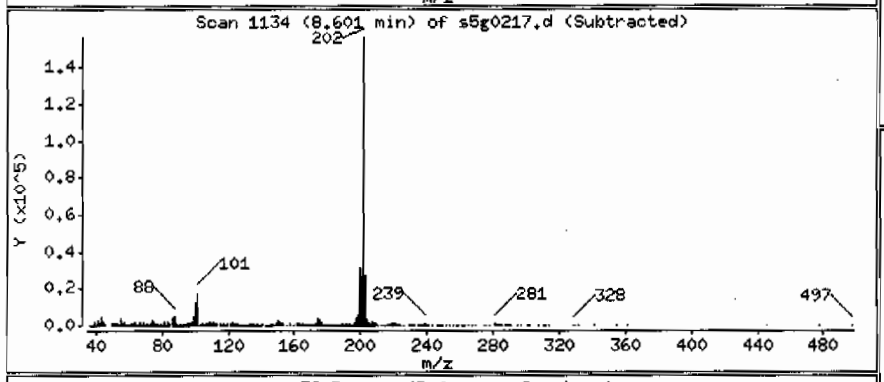

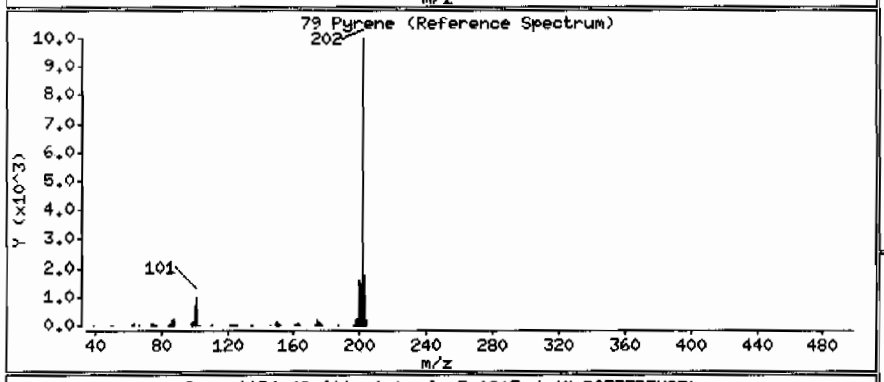

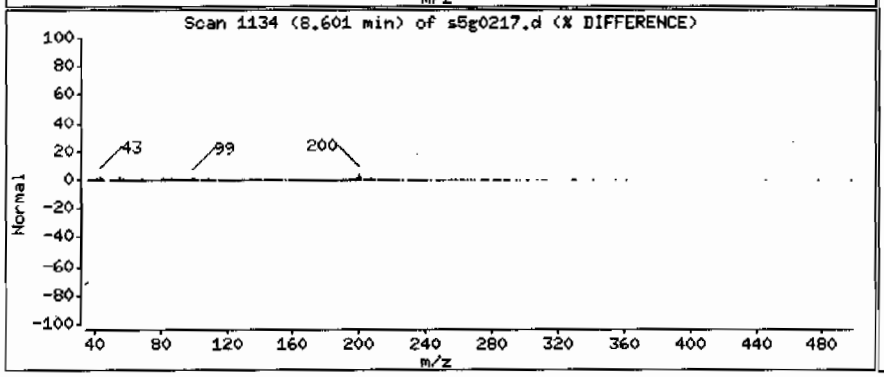

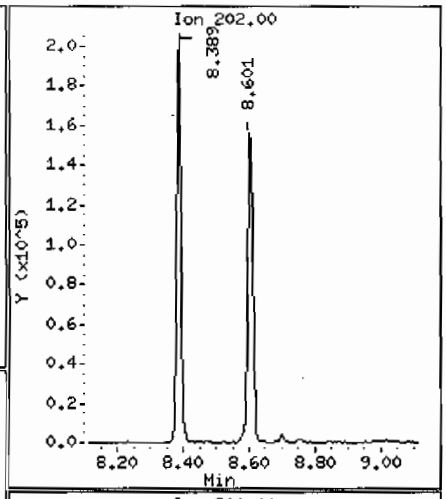

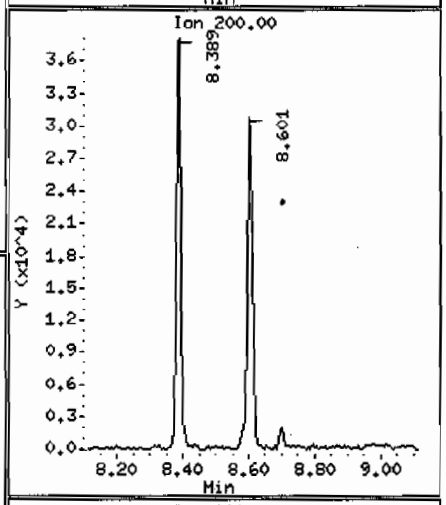

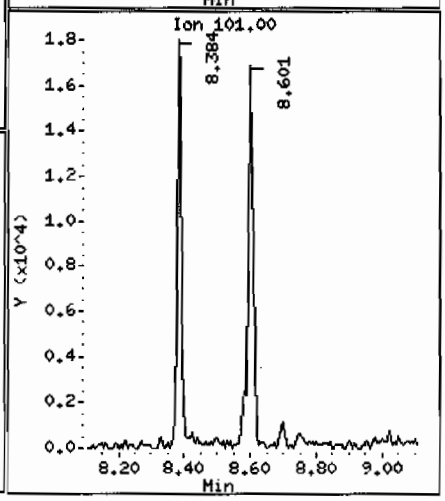

Data File: /chem/MSD5.i/s070209.b/s5g0217.d

Date : 02-JUL-2009 14:12

Client ID: CAMO-09-10368

Instrument: MSD5.i

Sample Info: |2325030091881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 46.6 ug/Kg

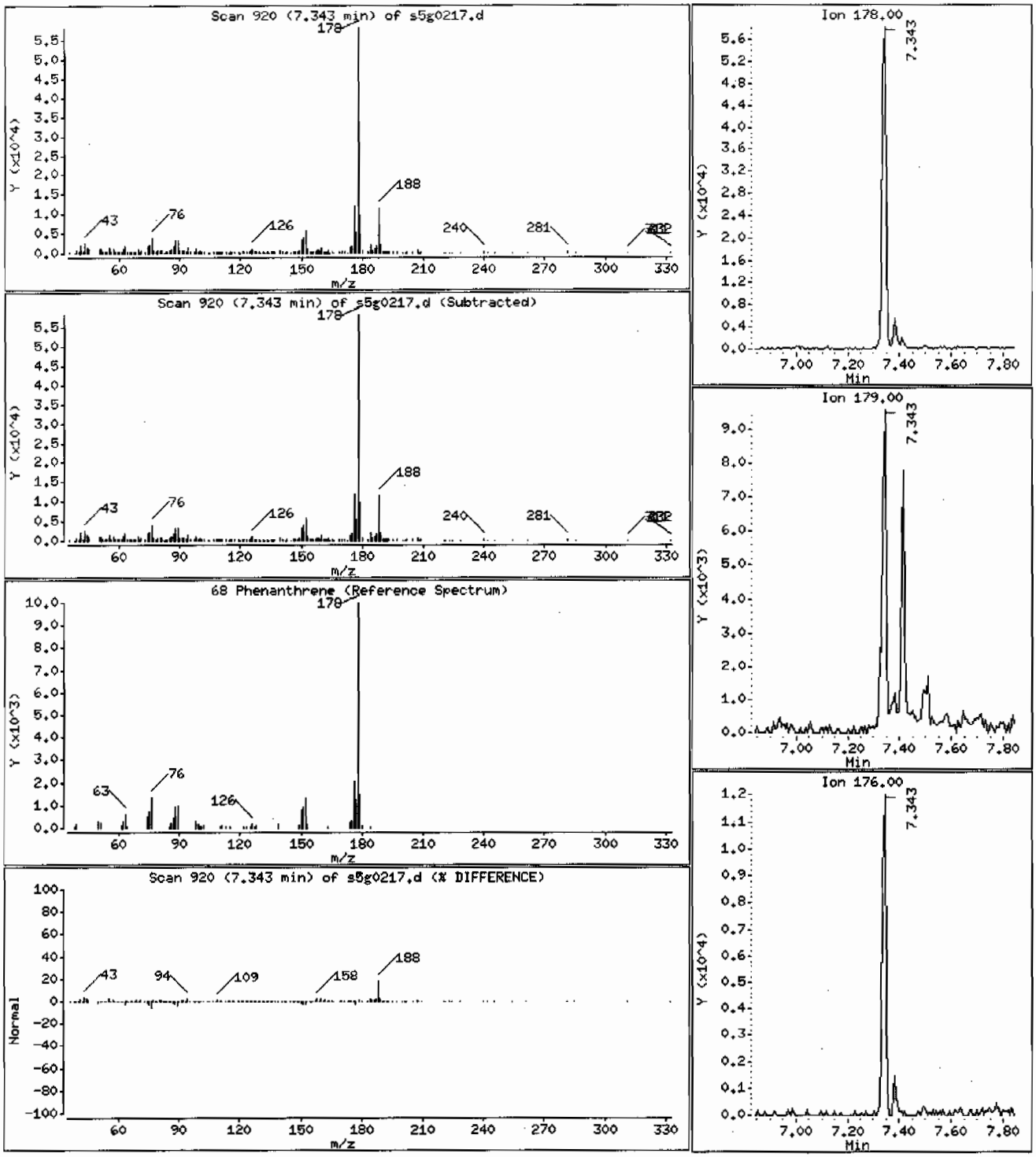

Data File: /chem/MSD5.i/s070209.b/s5g0217.d

Date : 02-JUL-2009 14:12

Client ID: CAMO-09-10368

Instrument: MSD5.i

Sample Info: |232503009|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 154 ug/Kg

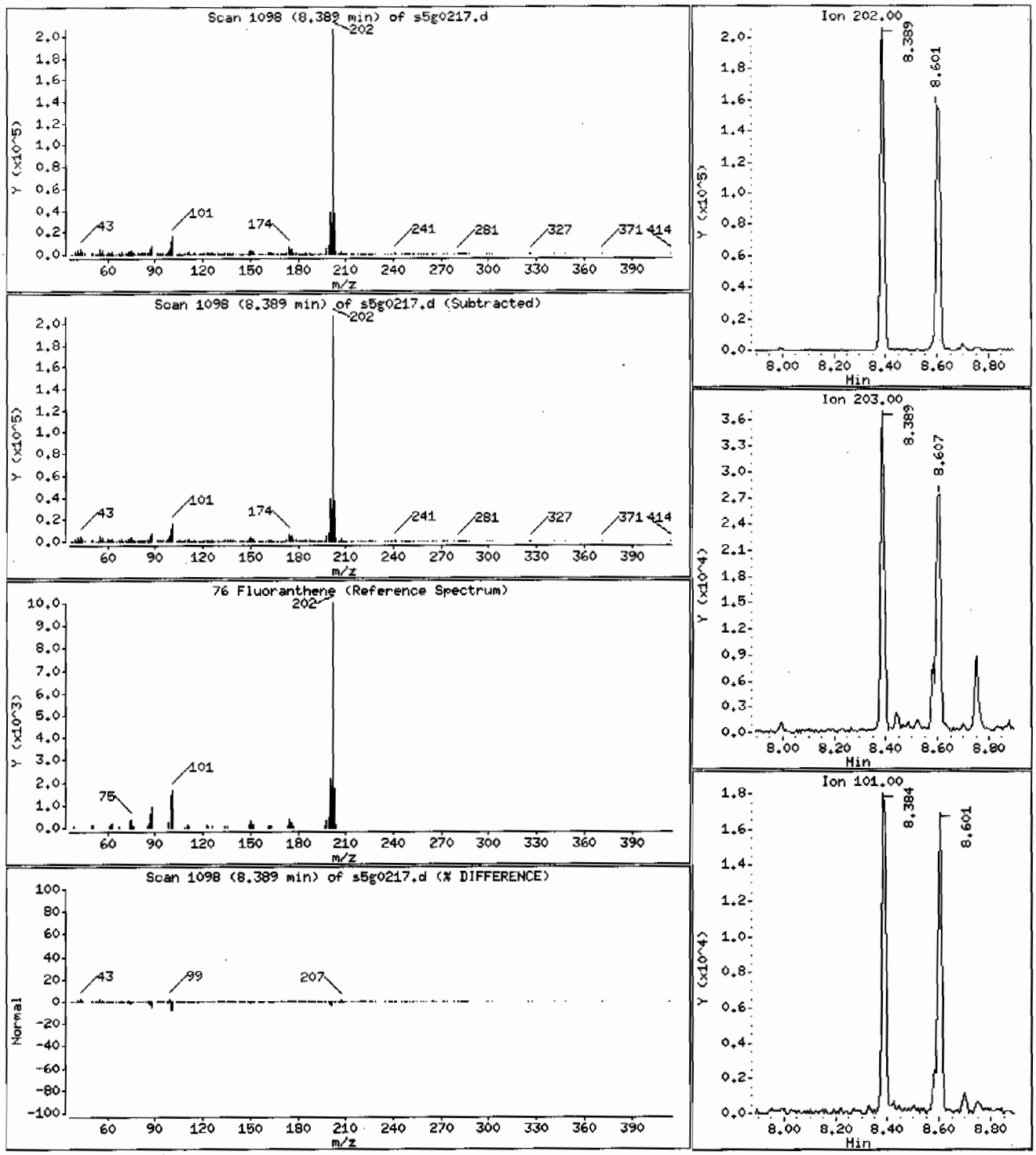

Data File: /chem/MSD5.i/s070209.b/s5g0217.d

Date : 02-JUL-2009 14:12

Client ID: CAMO-09-10368

Instrument: MSD5.i

Sample Info: 1232503009188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 58.6 ug/Kg

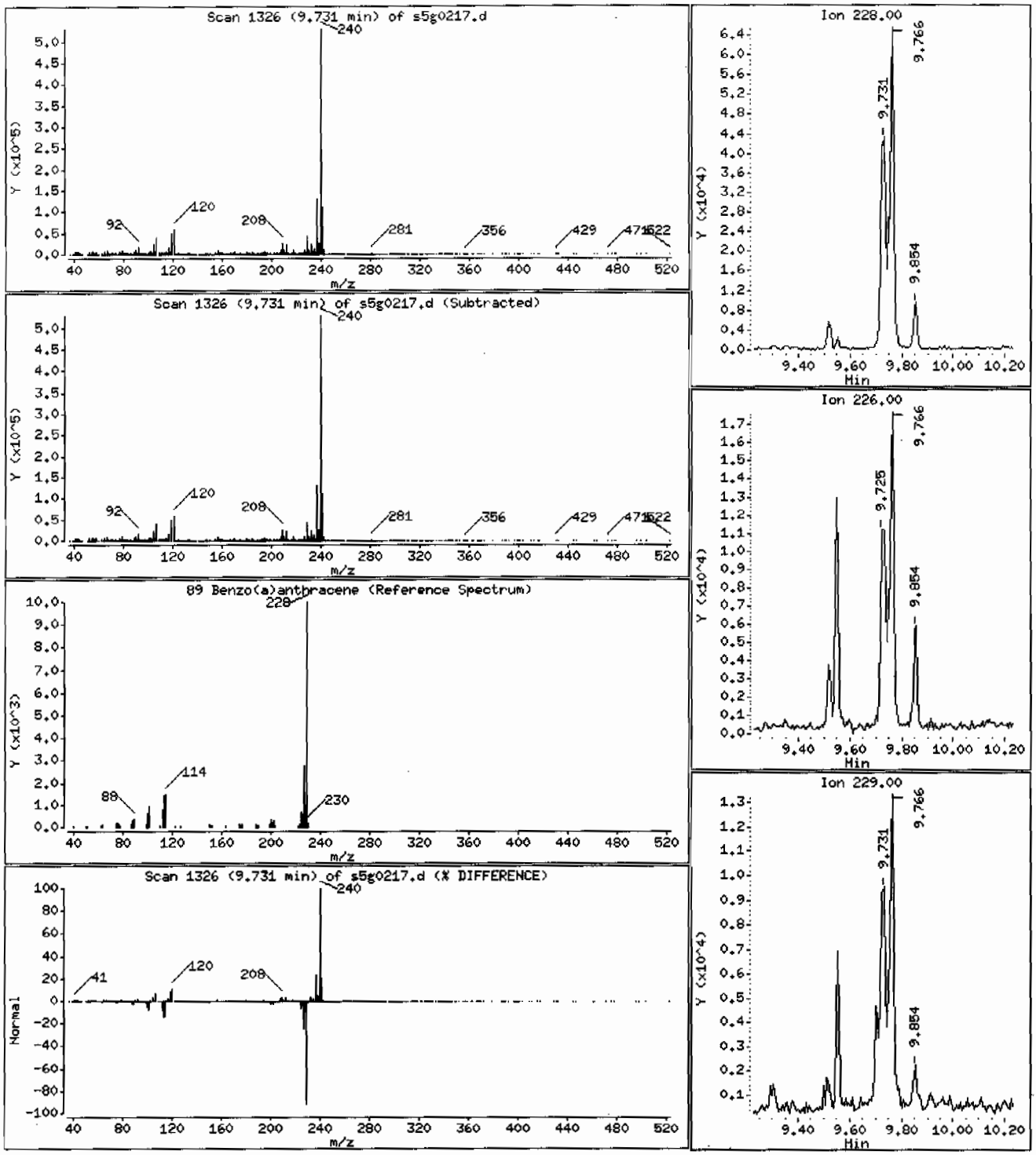

Data File: /chem/MSD5.i/s070209.b/s5g0217.d

Date : 02-JUL-2009 14:12

Client ID: CAMO-09-10368

Instrument: MSD5.i

Sample Info: |2325030091881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 95.8 ug/Kg

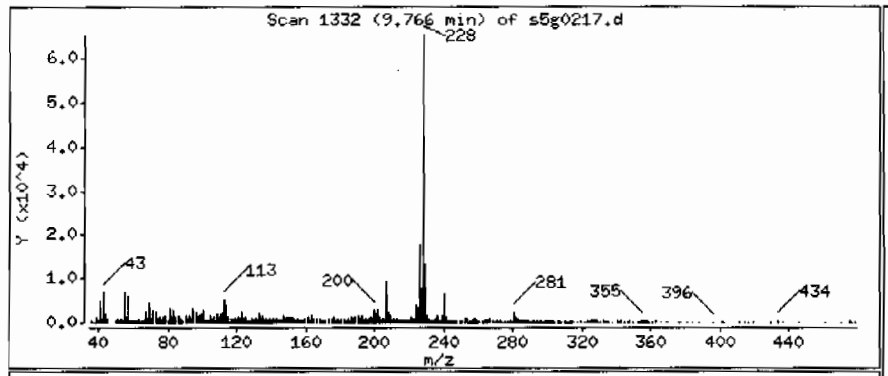

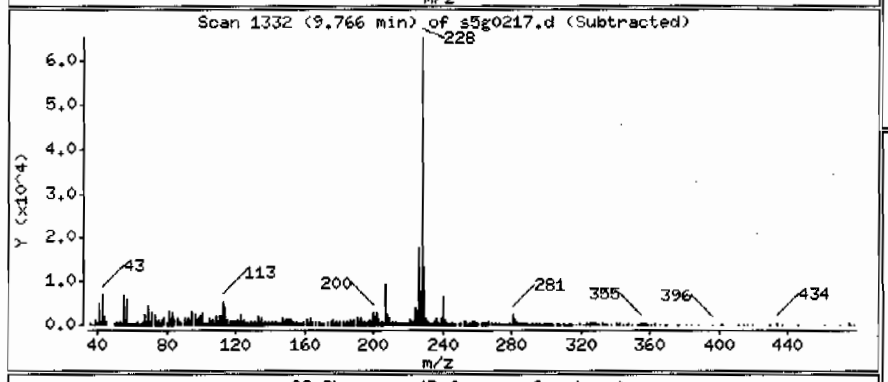

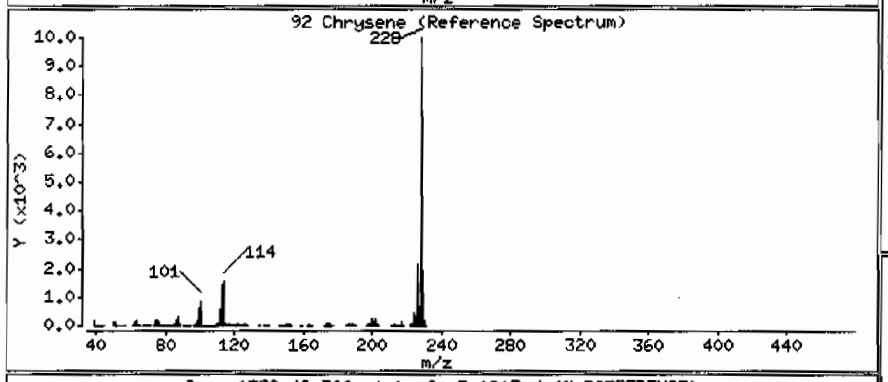

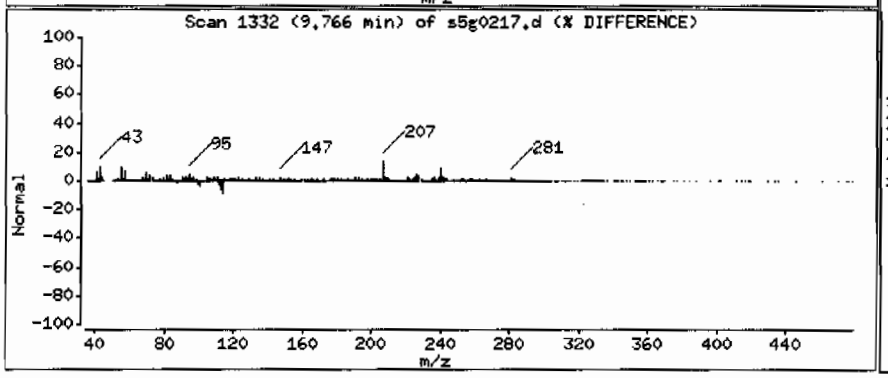

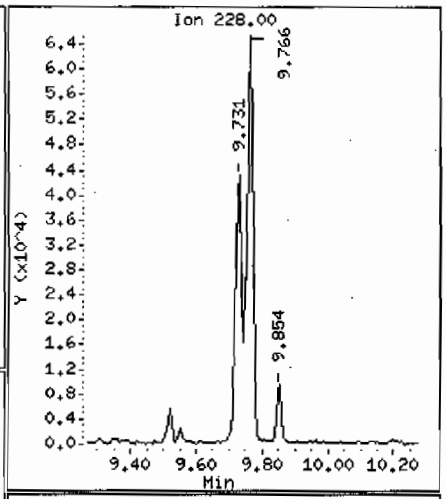

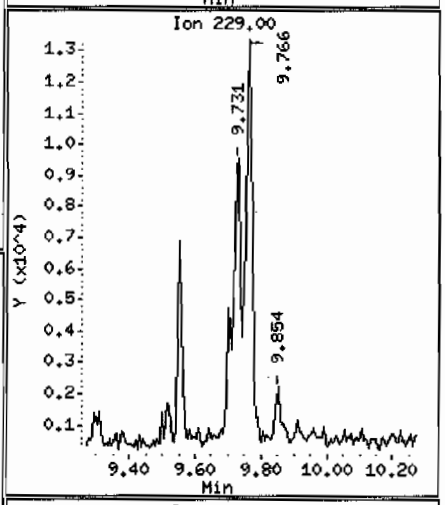

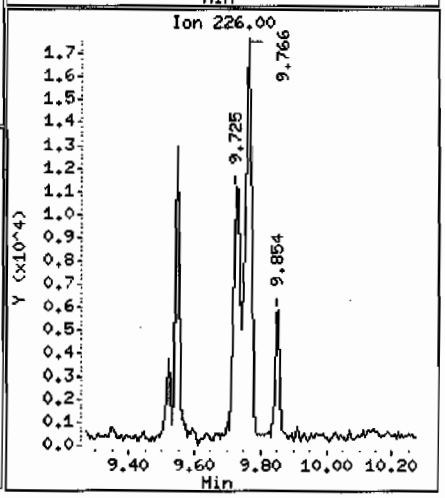

Data File: /chem/MSD5.i/s070209.b/s5g0217.d

Date : 02-JUL-2009 14:12

Client ID: CAMO-09-10368

Instrument: MSD5.i

Sample Info: 1232503009188187811|SVMF11|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 140 ug/Kg

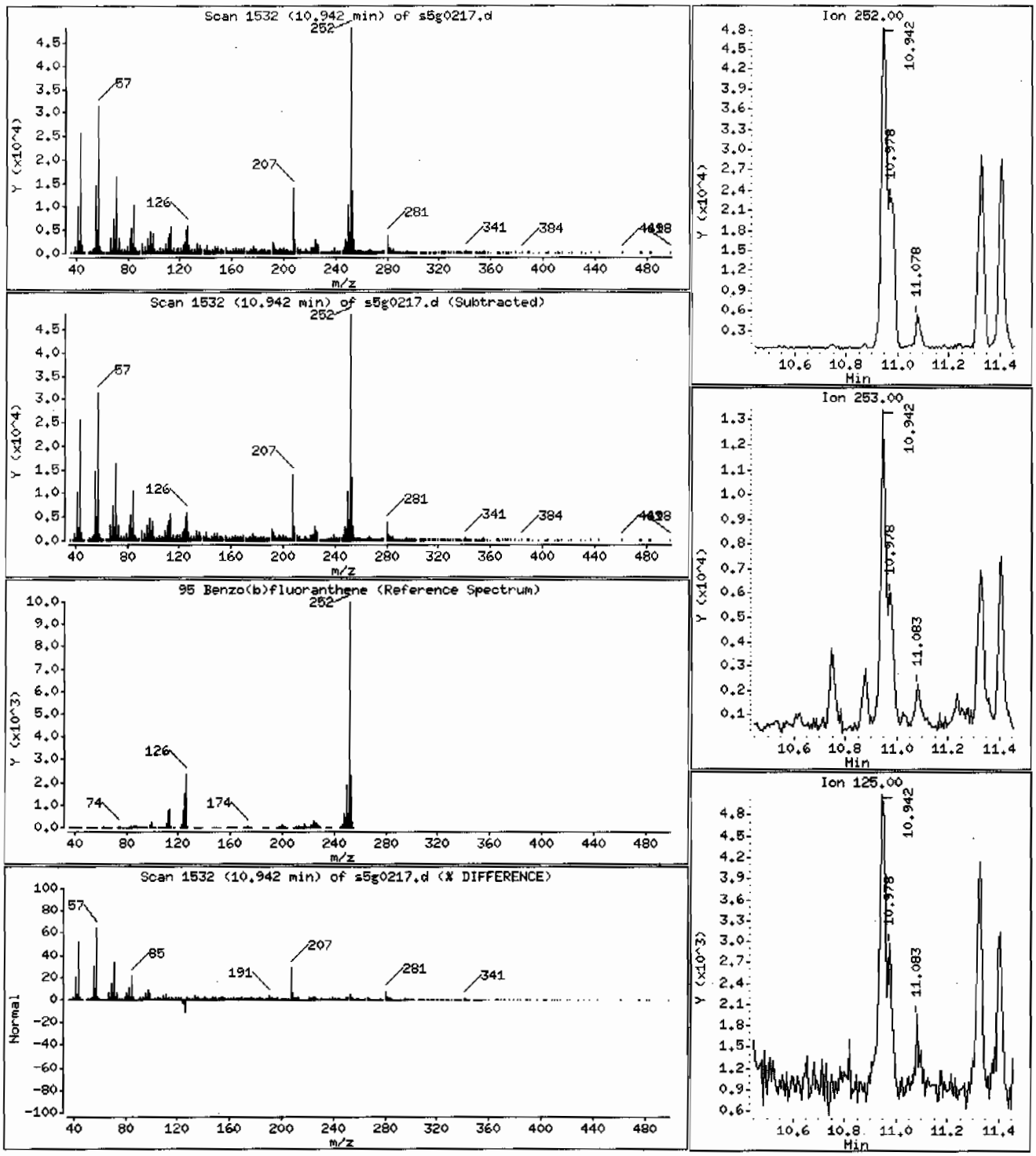

Data File: /chem/MSD5.i/s070209.b/s5g0217.d

Date : 02-JUL-2009 14:12

Client ID: CAMO-09-10368 Instrument: MSD5.i

Sample Info: 1232503009188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

96 Benzo(k)fluoranthene Concentration: 60.7 ug/Kg

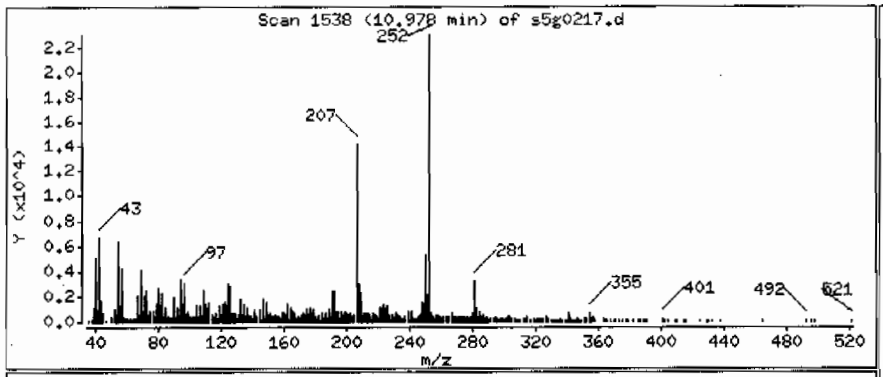

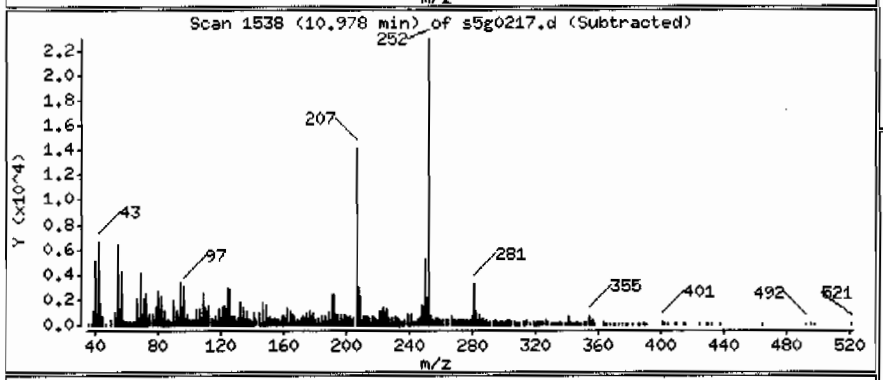

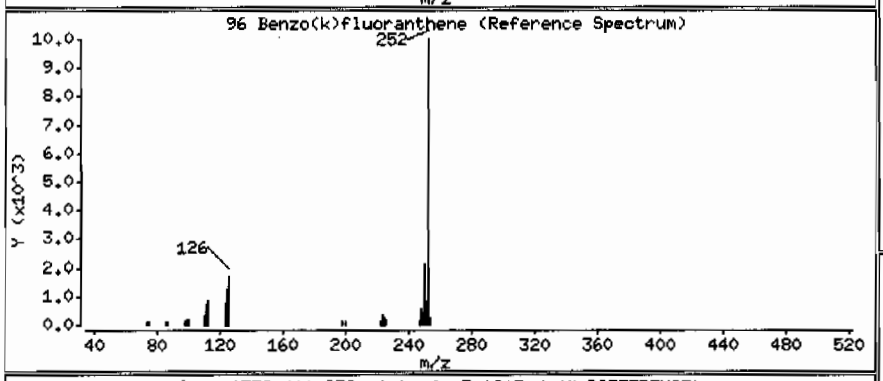

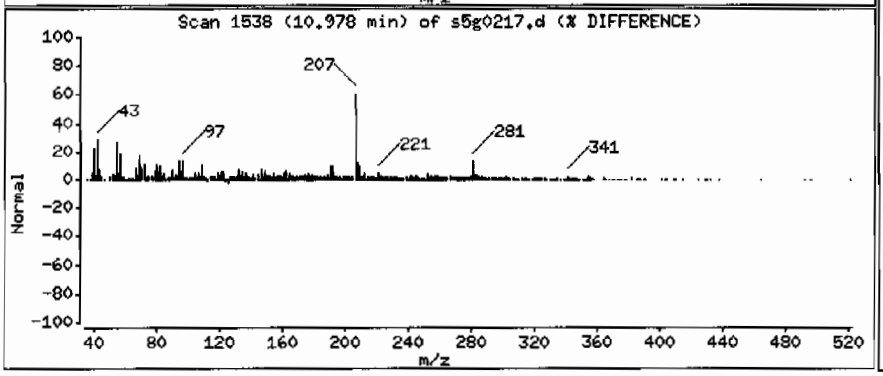

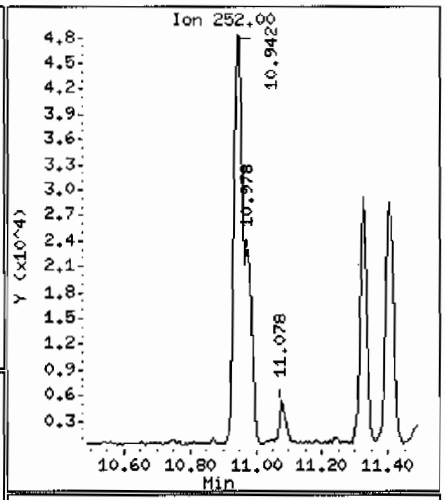

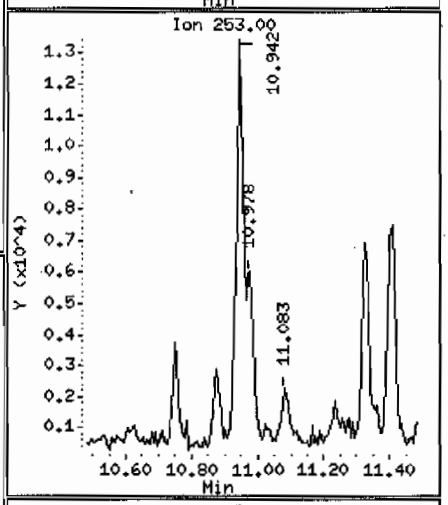

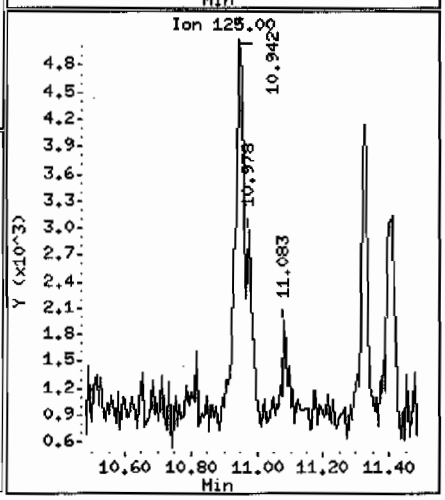

Data File: /chem/MSD5.i/s070209.b/s5g0217.d

Date : 02-JUL-2009 14:12

Client ID: CAMO-09-10368

Instrument: MSD5.i

Sample Info: 1232503009188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 83.9 ug/Kg

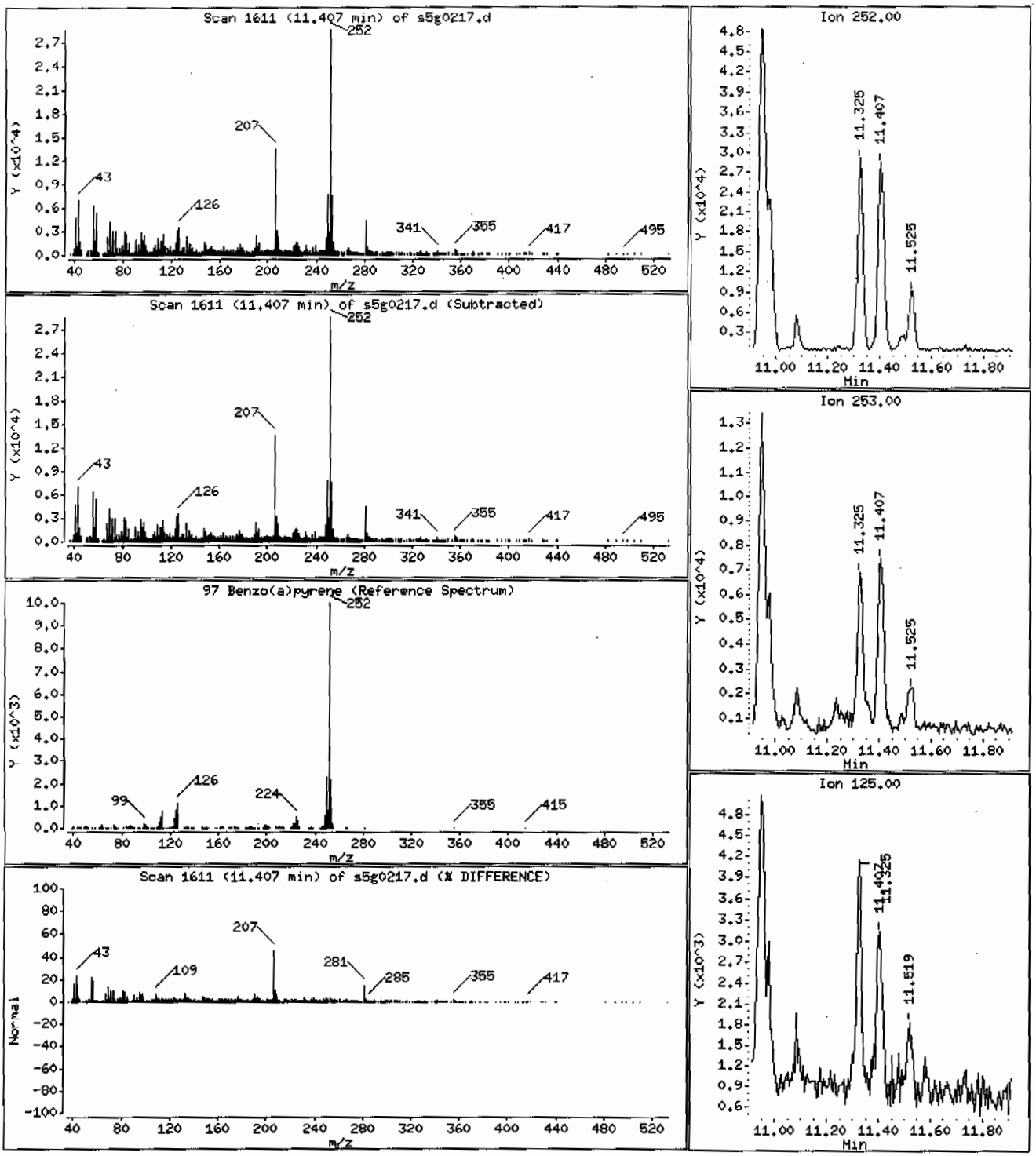

Data File: /chem/MSD5.i/s070209.b/s5g0217.d

Date : 02-JUL-2009 14:12

Client ID: CAMO-09-10368 Instrument: MSD5.i

Sample Info: 1232503009188187811ISVMF11ILANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 55.8 ug/Kg

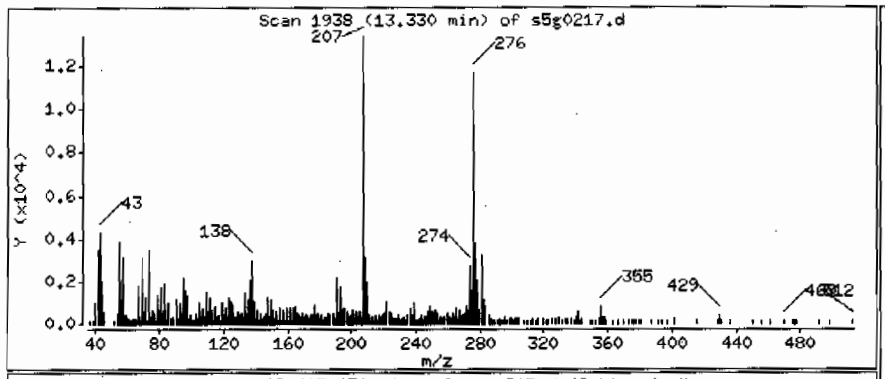

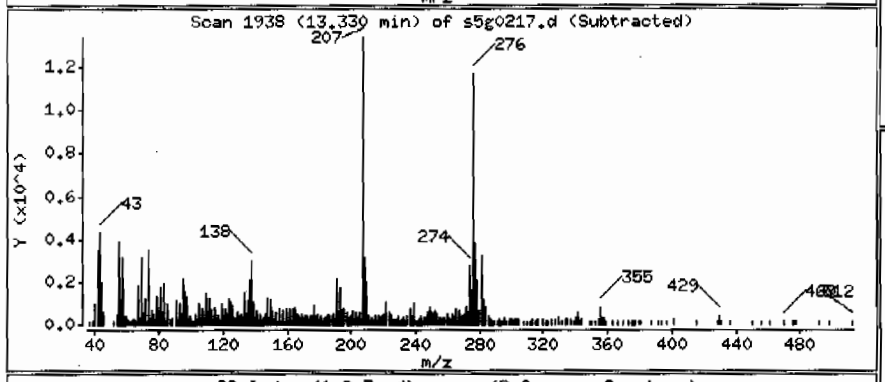

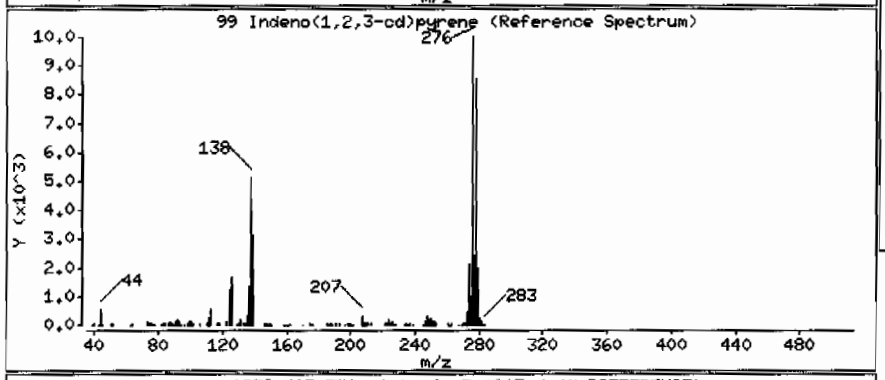

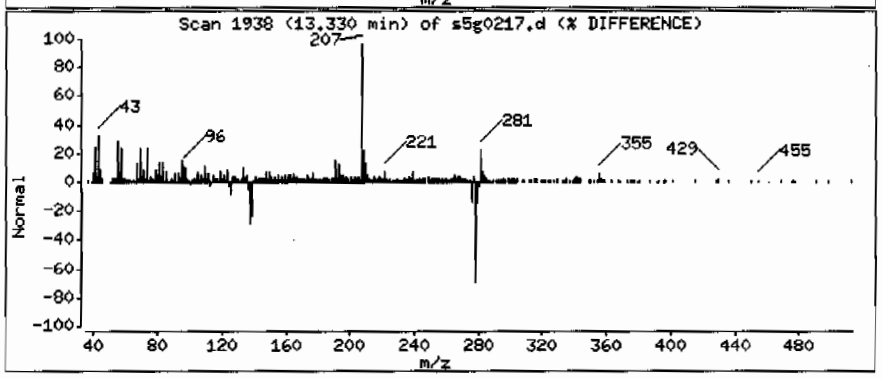

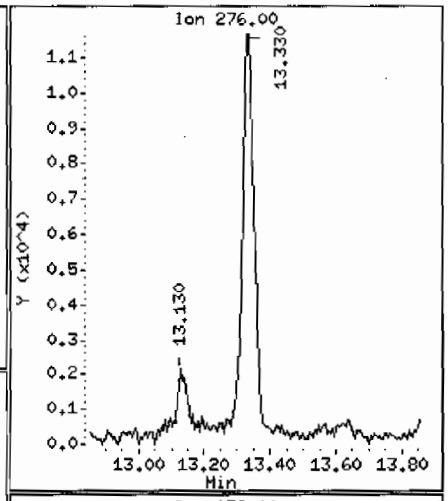

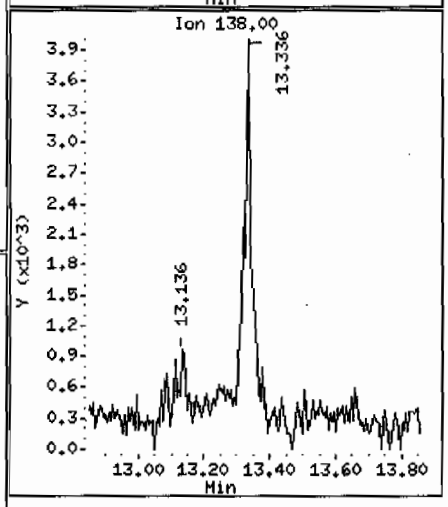

Data File: /chem/MSD5.i/s070209.b/s5g0217.d

Date : 02-JUL-2009 14:12

Client ID: CAMO-09-10368

Instrument: MSD5.i

Sample Info: 1232503009188187811|SVMF11|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 68.0 ug/Kg

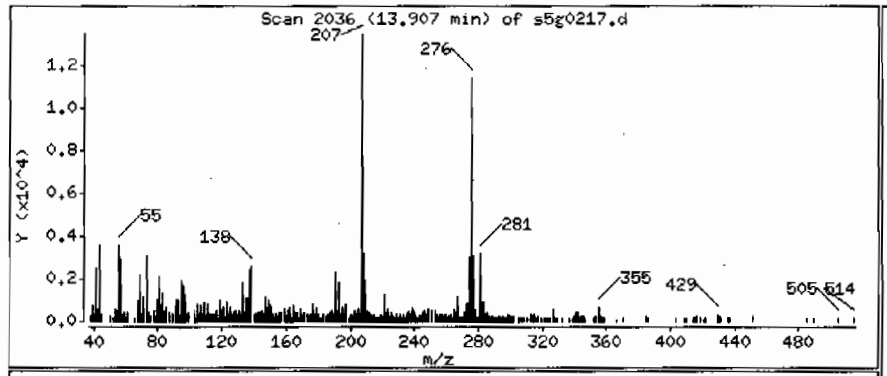

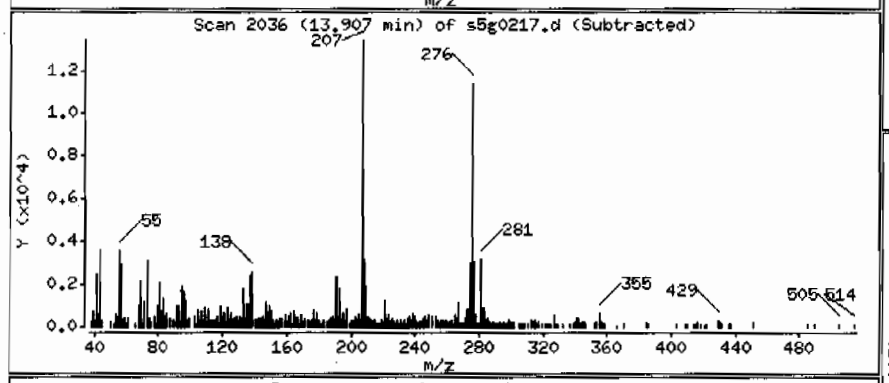

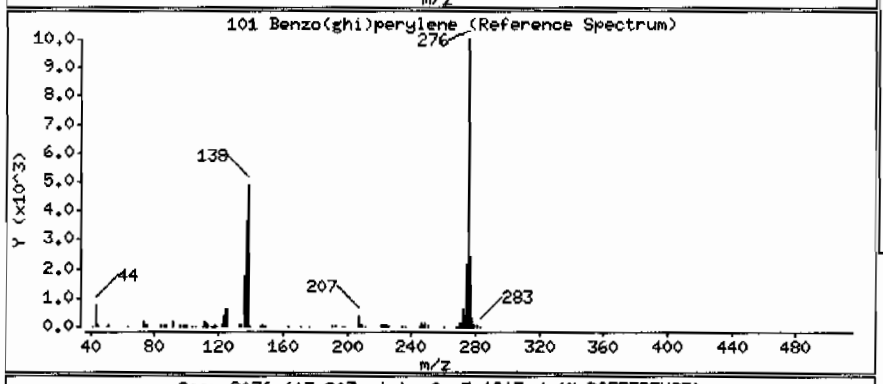

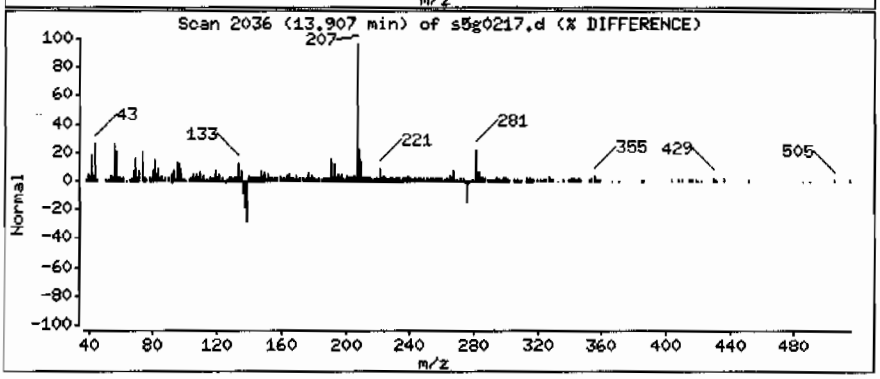

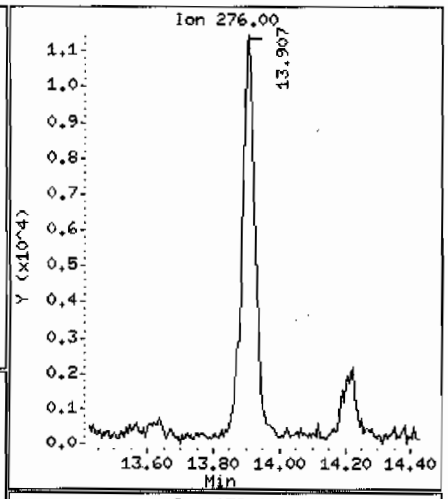

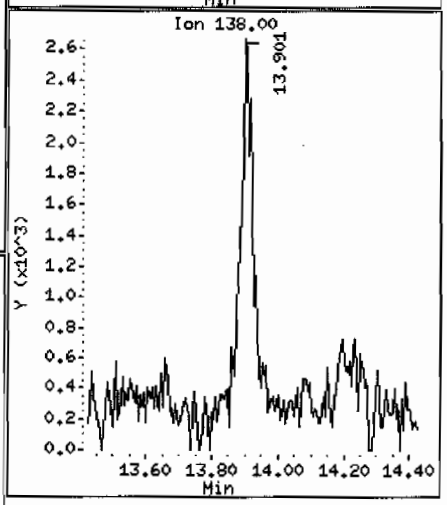

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503010	Date Received:	06/27/2009 09:05	%Moisture:	11.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10369	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 14:34	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.06 g	Final Volume:	1 mL
Data File:	s5g0218.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.2	376
108-95-2	Phenol	U	376	ug/kg	75.2	376
95-57-8	2-Chlorophenol	U	376	ug/kg	75.2	376
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.2	376
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.2	376
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	75.2	376
83-32-9	Acenaphthene	U	37.6	ug/kg	12.4	37.6
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376
100-02-7	4-Nitrophenol	U	376	ug/kg	124	376
87-86-5	Pentachlorophenol	U	376	ug/kg	94.0	376
129-00-0	Pyrene	U	37.6	ug/kg	11.3	37.6
110-86-1	Pyridine	U	376	ug/kg	75.2	376
62-53-3	Aniline	U	376	ug/kg	113	376
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.2	376
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.2	376
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.2	376
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.2	376
95-48-7	o-Cresol	U	376	ug/kg	75.2	376
65794-96-9	m,p-Cresols	U	376	ug/kg	113	376
67-72-1	Hexachloroethane	U	376	ug/kg	75.2	376
98-95-3	Nitrobenzene	U	376	ug/kg	75.2	376
78-59-1	Isophorone	U	376	ug/kg	75.2	376
88-75-5	2-Nitrophenol	U	376	ug/kg	75.2	376
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	132	376
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.2	376
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.2	376
65-85-0	Benzoic acid	U	752	ug/kg	188	752
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6
106-47-8	4-Chloroaniline	U	376	ug/kg	75.2	376
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.2	376
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.52	37.6
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.2	376
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.2	376
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.2	376
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	12.4	37.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	376	ug/kg	75.2	376
99-09-2	3-Nitroaniline	U	376	ug/kg	75.2	376

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503010	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10369	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0218.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	376	ug/kg	75.2	376
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
51-28-5	2,4-Dinitrophenol	U	752	ug/kg	143	752
132-64-9	Dibenzofuran	U	376	ug/kg	75.2	376
84-66-2	Diethylphthalate	U	376	ug/kg	75.2	376
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	75.2	376
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.2	376
100-01-6	4-Nitroaniline	U	376	ug/kg	113	376
	p-Nitroaniline					
122-39-4	Diphenylamine	U	376	ug/kg	75.2	376
122-66-7	Azobenzene	U	376	ug/kg	75.2	376
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	75.2	376
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.2	376
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6
120-12-7	Anthracene	U	37.6	ug/kg	7.52	37.6
84-74-2	Di-n-butylphthalate	U	376	ug/kg	75.2	376
206-44-0	Fluoranthene	J	11.3	ug/kg	11.3	37.6
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.2	376
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.2	376
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.2	376
205-99-2	Benzo(b)fluoranthene	J	13.2	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.2	376

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	197	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.87	199	ug/kg	99	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503010	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10369	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 14:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0218.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.42	185	ug/kg		J
	Unknown	13.22	339	ug/kg		J
83-47-6	.gamma.-Sitosterol	14.12	496	ug/kg	91	NJ

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0218.d
Lab Smp Id: 232503010 Client Smp ID: CAMO-09-10369
Inj Date : 02-JUL-2009 14:34
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503010|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.06000	weight of sample
M	11.53490	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	521397	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1788416	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	1125804	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	2040831	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1568783	40.0000	
* 98 Perylene-d12	264	11.489	11.495	(1.000)	1092526	40.0000	
$ 3 2-Fluorophenol	112	3.201	3.194	(0.798)	765307	66.8496	2510
$ 5 Phenol-d5	99	3.725	3.728	(0.928)	1003731	66.4959	2500
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	461157	34.7984	1310
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1048307	36.0047	1350
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	358595	78.0660	2940
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	1223881	50.9768	1920

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
76 Fluoranthene	202	8.389	8.394	(1.145)	13131	0.30150	11.3(a)
95 Benzo(b)fluoranthene	252	10.942	10.951	(0.952)	8452	0.35029	13.2(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0218.d
Report Date: 07/02/2009 14:51
Lab. ID: 232503010 SampleType: SAMPLE
Injection Date: 02-JUL-2009 14:34
Operator: RMB Instrument: MSD5.i
Sample Info: |232503010|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	61483	3.72	3.80	80-120	100	(T)
93	547	3.68	3.80	190-250	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	69417	4.37	4.25	80-120	100	(T)
42	49369	4.37	4.25	55-115	71	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	2051	4.69	4.64	80-120	100	( )
122	363	4.71	4.64	54-114	18	(QT)
77	1252	4.69	4.64	50-110	61	( )
31 4-Chloroaniline			CAS#: 106-47-8			
127	169	4.91	4.92	80-120	100	( )
65	330	4.91	4.92	0- 55	195	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	109	6.09	6.09	80-120	100	( )
92	353	6.11	6.09	84-144	322	(Q)
108	24517	6.14	6.09	0- 40	22333	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	244498	6.14	5.90	80-120	100	(T)
164	1125804	6.14	5.90	0- 40	460	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	151049	6.14	5.96	80-120	100	(T)
63	2279	6.14	5.96	55-115	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	151049	6.14	6.26	80-120	100	(T)
89	2904	6.14	6.26	38- 98	2	(QT)
63	2279	6.14	6.26	19- 79	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	15303	6.74	6.56	80-120	100	(T)
165	14156	6.74	6.56	61-121	93	(T)
167	5860	6.74	6.56	0- 44	38	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1086	6.74	6.57	80-120	100	(T)
105	2301	6.74	6.57	2- 62	212	(QT)
51	1746	6.74	6.57	46-106	161	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	26084	6.74	6.93	80-120	100	(T)
141	127669	6.74	6.93	34- 94	489	(QT)
250	51233	6.74	6.93	68-128	196	(QT)
76 Fluoranthene			CAS#: 206-44-0			
202	13131	8.39	8.39	80-120	100	( )
203	2502	8.38	8.39	0- 48	19	( )
101	1825	8.38	8.39	0- 39	14	( )
79 Pyrene			CAS#: 129-00-0			
202	13131	8.39	8.61	80-120	100	(T)
200	3247	8.39	8.61	0- 51	25	(T)
101	1858	8.38	8.61	0- 41	14	(T)
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	8452	10.94	10.95	80-120	100	( )
253	1868	10.94	10.95	0- 52	22	( )
125	1646	10.95	10.95	0- 38	19	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	8452	10.94	10.99	80-120	100	( )
253	2592	10.94	10.98	0- 52	31	( )
125	1431	10.95	10.98	0- 38	17	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0218.d
Lab Smp Id: 232503010 Client Smp ID: CAMO-09-10369
Inj Date : 02-JUL-2009 14:34
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503010|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.06000	weight of sample
M	11.53490	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.013	3343986	40.000
* 46 Acenaphthene-d10	6.142	4813319	40.000
* 98 Perylene-d12	11.489	2836171	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.031	437134	5.22890202	197	0		0	10
1,4-Methanoazulene, decahydro-4,8,8-trim					CAS #: 475-20-7		
5.866	638234	5.30390092	199	99	NIST05.L	60024	46
Unknown					CAS #:		
12.424	348695	4.91782680	185	0		0	98
Unknown					CAS #:		
13.224	638972	9.01174923	339	0		0	98
.gamma.-Sitosterol					CAS #: 83-47-6		
14.118	935253	13.1903607	496	91	NIST05.L	174402	98

Data File: /chem/MSD5.i/s070209.b/s5g0218.d
Date : 02-JUL-2009 14:34
Client ID: CAMO-09-10369
Sample Info: |23250301018818781|SVMFI1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

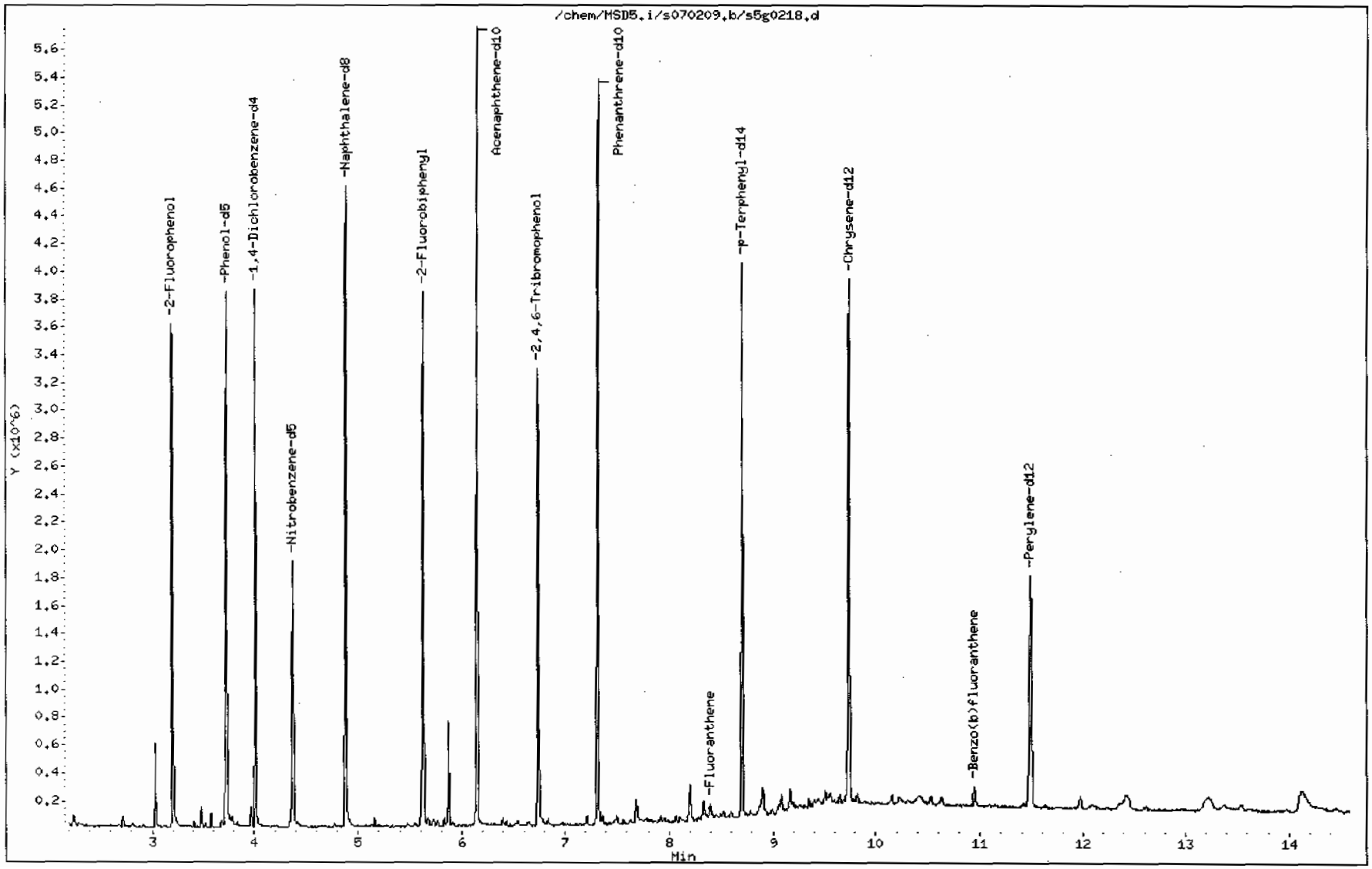

Data File: /chem/MSD5.i/s070209.b/s5g0218.d

Date : 02-JUL-2009 14:34

Client ID: CAMO-09-10369

Instrument: MSD5.i

Sample Info: 1232503010188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 11.3 ug/Kg

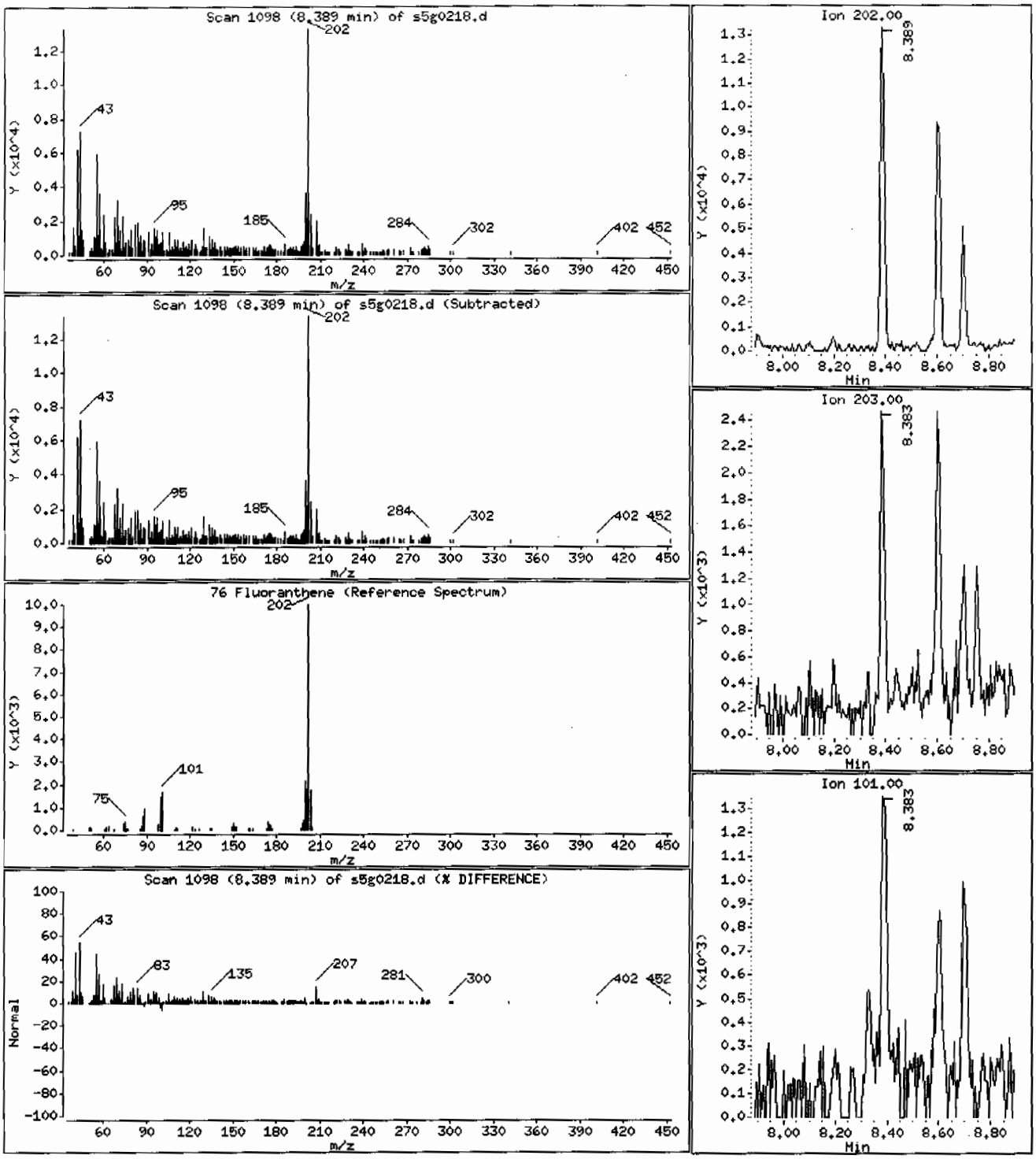

Data File: /chem/MSD5.i/s070209.b/s5g0218.d

Date : 02-JUL-2009 14:34

Client ID: CAMO-09-10369

Instrument: MSD5.i

Sample Info: |2325030101881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 13.2 ug/Kg

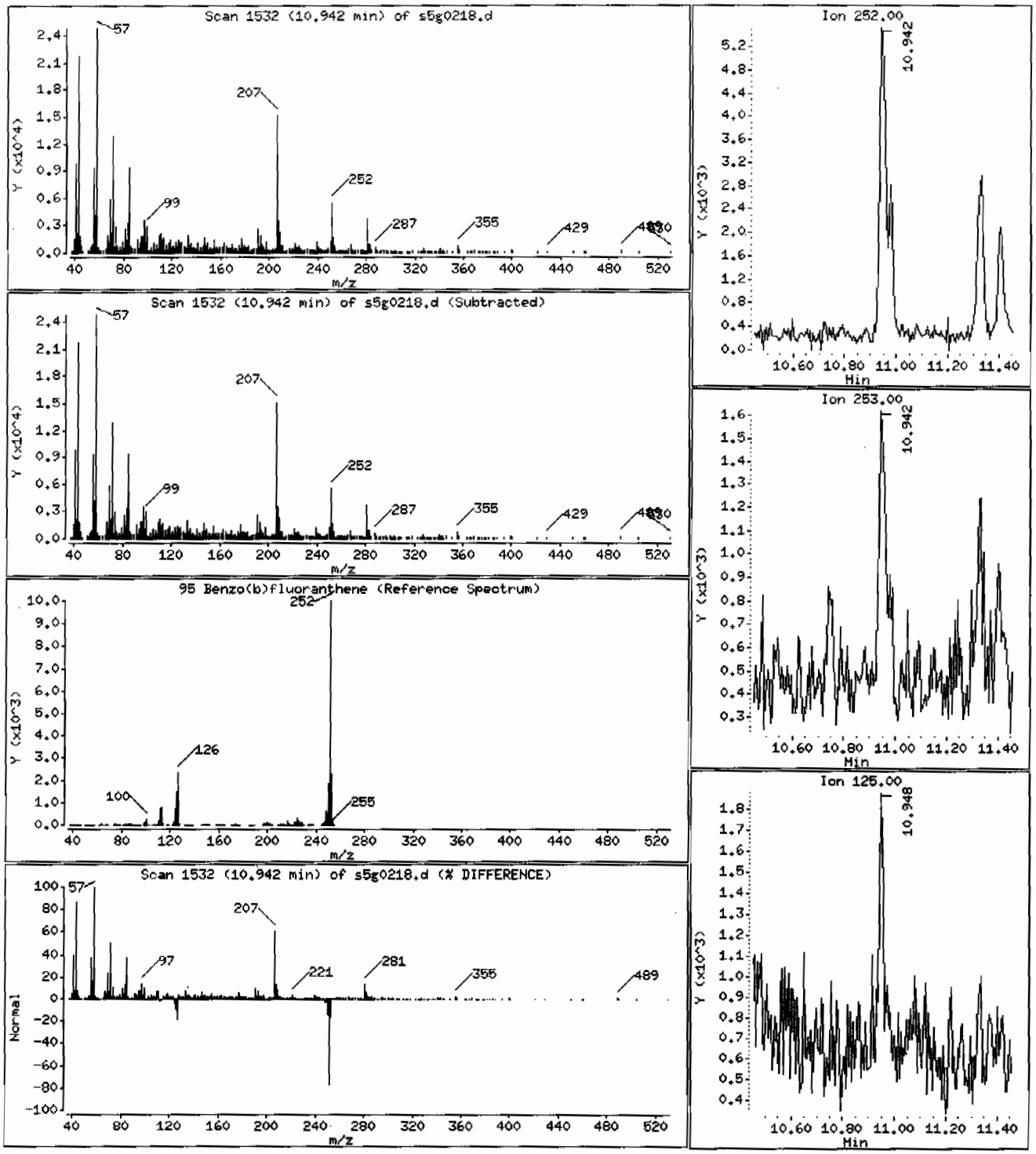

Data File: /chem/MSD5.i/s070209.b/s5g0218.d

Date : 02-JUL-2009 14:34

Client ID: CAMO-09-10369

Instrument: MSD5.i

Sample Info: 1232503010188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	9	C4H7NO2	101

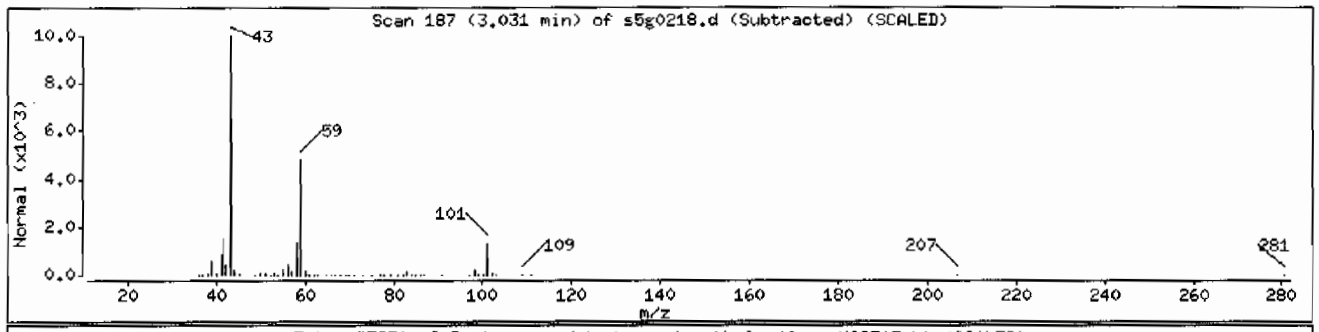

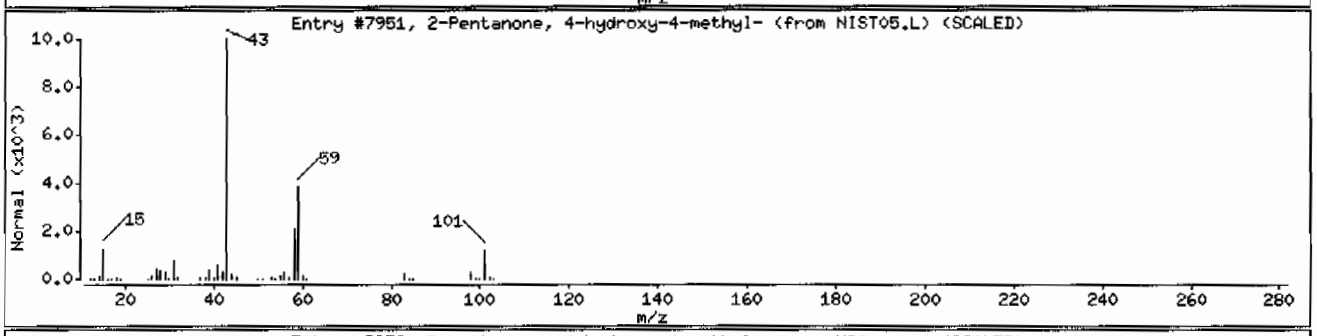

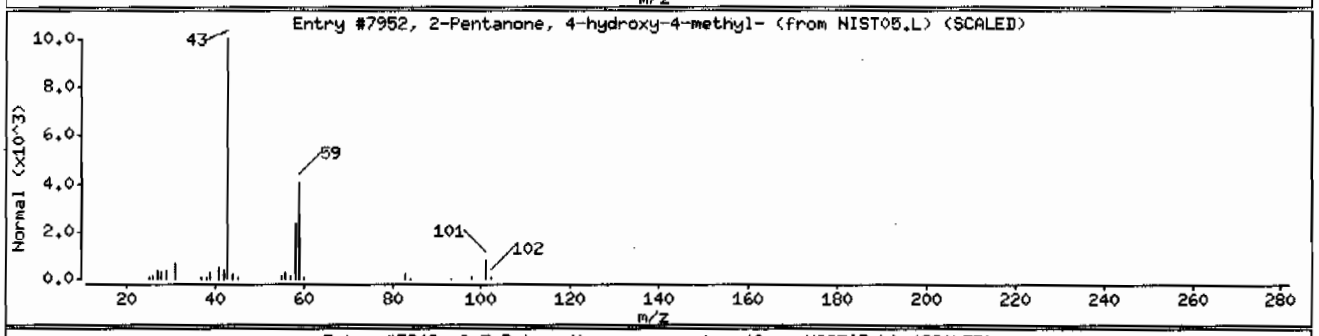

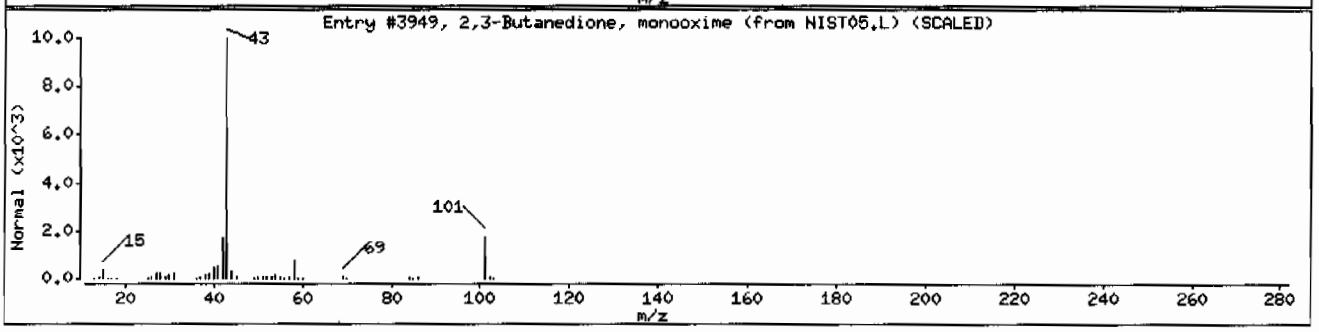

Data File: /chem/MSD5.i/s070209.b/s5g0218.d

Date : 02-JUL-2009 14:34

Client ID: CAMO-09-10369

Instrument: MSD5.i

Sample Info: |2325030101881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60024	99	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60047	99	C15H24	204
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60018	98	C15H24	204

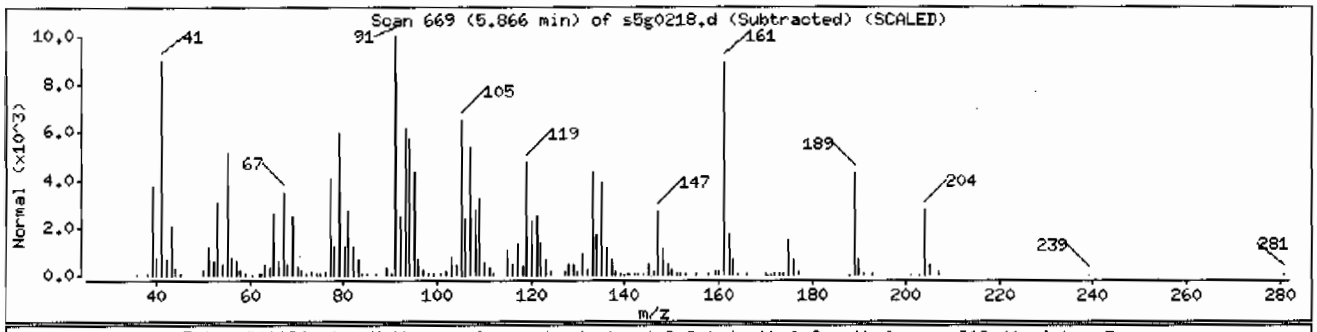

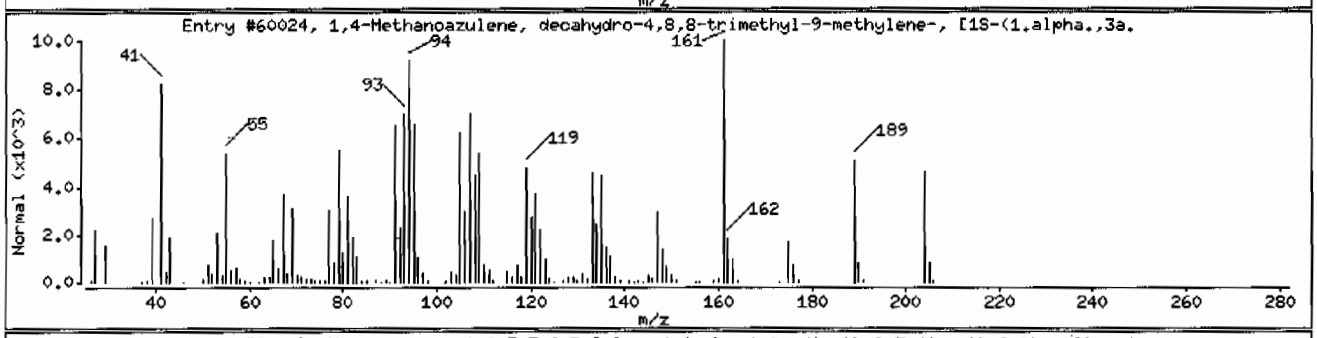

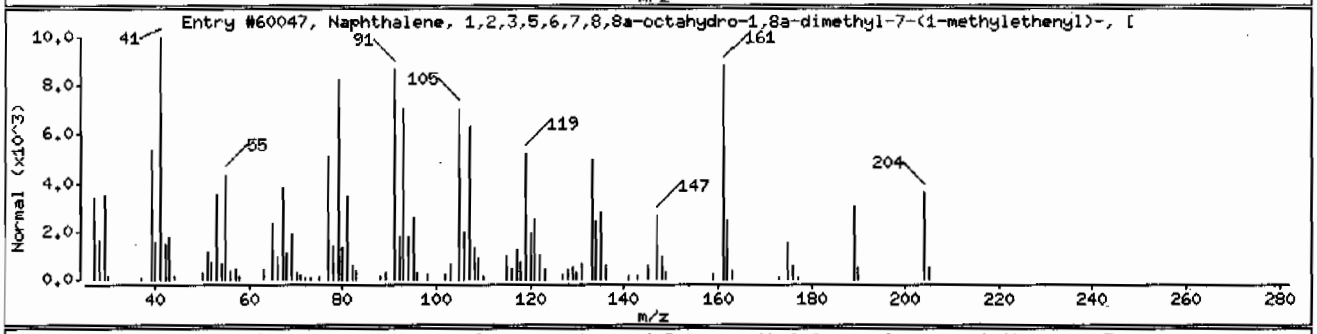

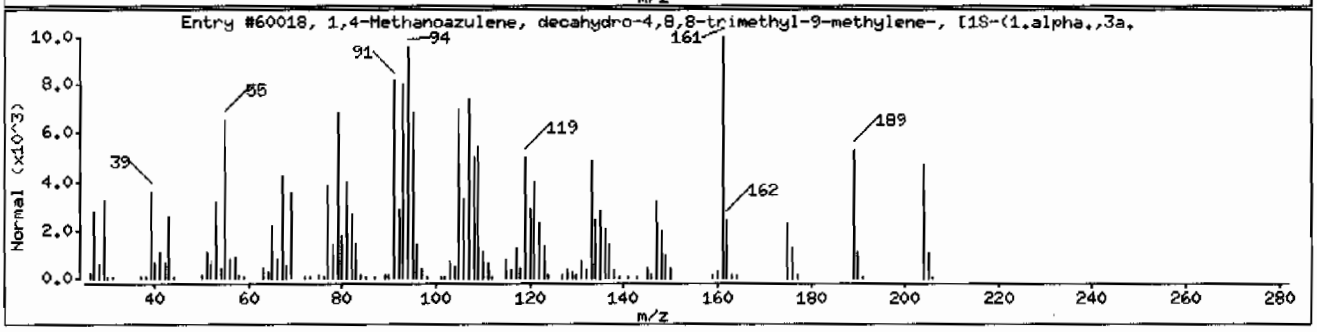

Data File: /chem/MSD5.i/s070209.b/s5g0218.d

Date : 02-JUL-2009 14:34

Client ID: CAMO-09-10369 Instrument: MSD5.i

Sample Info: |2325030101881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
N,N-Dimethyl-4-nitroso-3-(trimethylsilyl	17993-84-9	NIST05.L	72386	46	C11H18N2OSi	222
2-Ethylacridine	55751-83-2	NIST05.L	62222	46	C15H13N	207
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72520	38	C12H22Si2	222

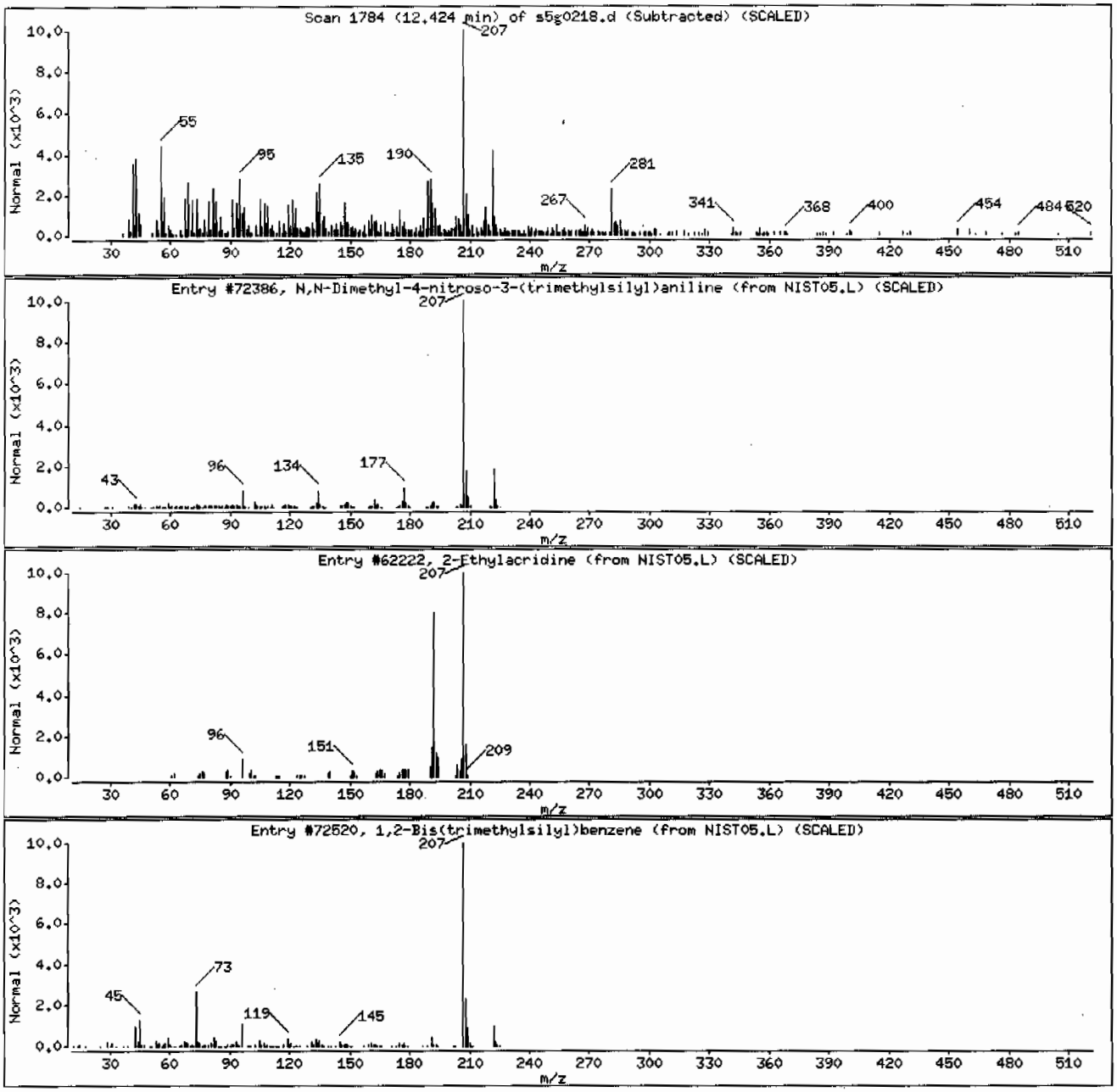

Data File: /chem/MSD5.i/s070209.b/s5g0218.d

Date : 02-JUL-2009 14:34

Client ID: CAMO-09-10369 Instrument: MSD5.i

Sample Info: |2325030101881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Silane, 1,4-phenylenebis[trimethyl-	13183-70-5	NIST05.L	72522	49	C12H22Si2	222
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72520	47	C12H22Si2	222
Silane, trimethyl[5-methyl-2-(1-methylet	55012-80-1	NIST05.L	72681	47	C13H22OSi	222

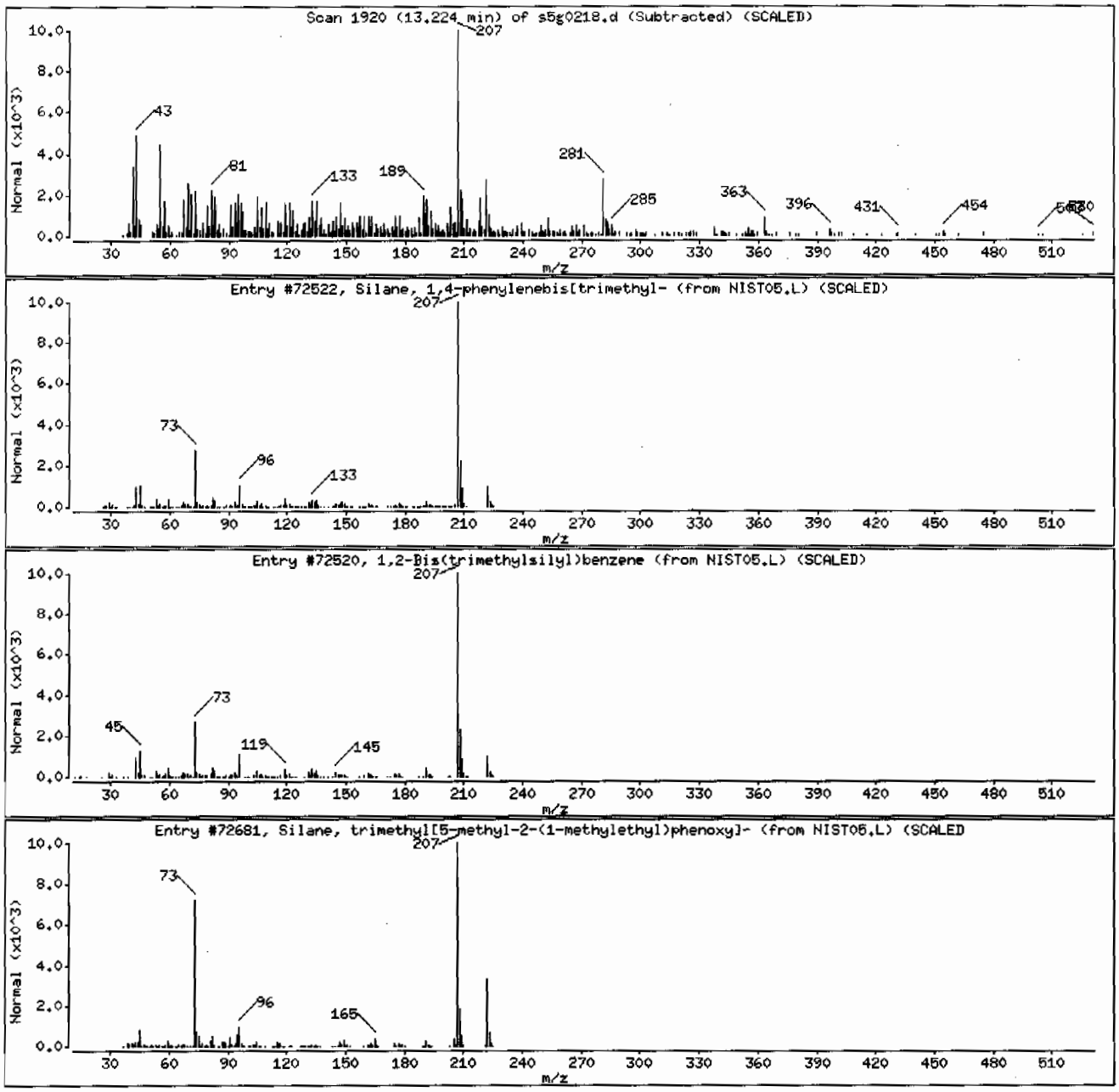

Data File: /chem/MSD5.i/s070209.b/s5g0218.d

Date : 02-JUL-2009 14:34

Client ID: CAMO-09-10369 Instrument: MSD5.i

Sample Info: 1232503010188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
.gamma.-Sitosterol	83-47-6	NIST05.L	174402	91	C29H500	414
5-Methyl-2-phenylindolizine	36944-99-7	NIST05.L	62231	38	C15H13N	207
2-Methyl-7-phenylindole	1140-08-5	NIST05.L	62225	38	C15H13N	207

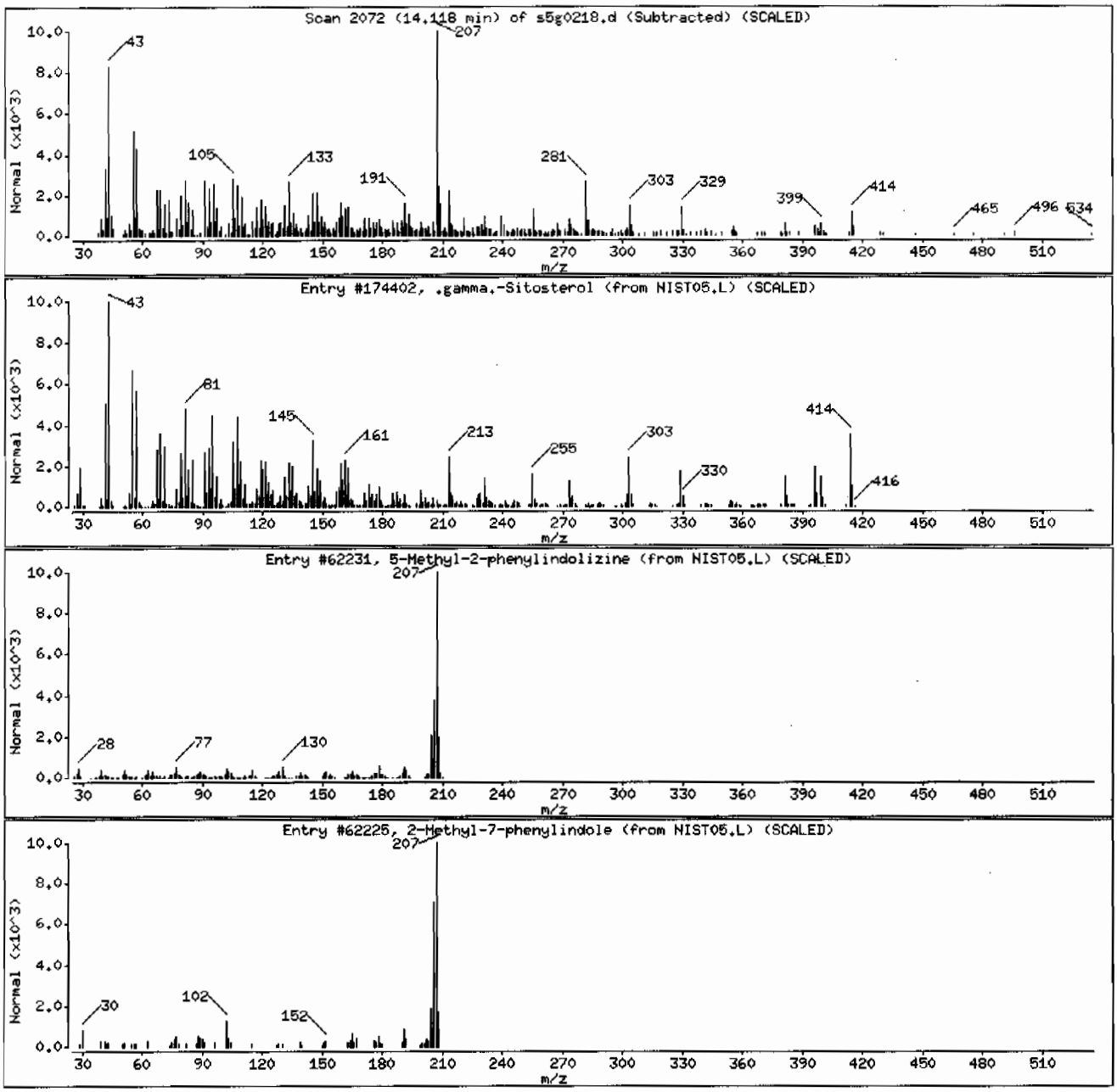

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2497**	**Date Collected:**	**06/24/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232503006**	**Date Received:**	**06/27/2009 09:05**	**%Moisture:**	**4.1**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10370**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881878**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/02/2009 13:05**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/01/2009 22:14**	**Aliquot:**	**30.02 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0214.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	347	ug/kg	69.5	347
108-95-2	Phenol	U	347	ug/kg	69.5	347
95-57-8	2-Chlorophenol	U	347	ug/kg	69.5	347
106-46-7	1,4-Dichlorobenzene	U	347	ug/kg	69.5	347
621-64-7	N-Nitrosodipropylamine	U	347	ug/kg	69.5	347
59-50-7	4-Chloro-3-methylphenol	U	347	ug/kg	69.5	347
83-32-9	Acenaphthene	U	34.7	ug/kg	11.5	34.7
121-14-2	2,4-Dinitrotoluene	U	347	ug/kg	34.7	347
100-02-7	4-Nitrophenol	U	347	ug/kg	115	347
87-86-5	Pentachlorophenol	U	347	ug/kg	86.8	347
129-00-0	Pyrene	J	11.9	ug/kg	10.4	34.7
110-86-1	Pyridine	U	347	ug/kg	69.5	347
62-53-3	Aniline	U	347	ug/kg	104	347
111-44-4	bis(2-Chloroethyl) ether	U	347	ug/kg	69.5	347
541-73-1	1,3-Dichlorobenzene	U	347	ug/kg	69.5	347
100-51-6	Benzyl alcohol	U	347	ug/kg	104	347
95-50-1	1,2-Dichlorobenzene	U	347	ug/kg	69.5	347
108-60-1	bis(2-Chloroisopropyl)ether	U	347	ug/kg	69.5	347
95-48-7	o-Cresol	U	347	ug/kg	69.5	347
65794-96-9	m,p-Cresols	U	347	ug/kg	104	347
67-72-1	Hexachloroethane	U	347	ug/kg	69.5	347
98-95-3	Nitrobenzene	U	347	ug/kg	69.5	347
78-59-1	Isophorone	U	347	ug/kg	69.5	347
88-75-5	2-Nitrophenol	U	347	ug/kg	69.5	347
105-67-9	2,4-Dimethylphenol	U	347	ug/kg	122	347
111-91-1	bis(2-Chloroethoxy)methane	U	347	ug/kg	69.5	347
120-83-2	2,4-Dichlorophenol	U	347	ug/kg	69.5	347
65-85-0	Benzoic acid	U	695	ug/kg	174	695
91-20-3	Naphthalene	U	34.7	ug/kg	10.4	34.7
106-47-8	4-Chloroaniline	U	347	ug/kg	69.5	347
87-68-3	Hexachlorobutadiene	U	347	ug/kg	69.5	347
91-57-6	2-Methylnaphthalene	U	34.7	ug/kg	6.95	34.7
77-47-4	Hexachlorocyclopentadiene	U	347	ug/kg	69.5	347
88-06-2	2,4,6-Trichlorophenol	U	347	ug/kg	69.5	347
95-95-4	2,4,5-Trichlorophenol	U	347	ug/kg	69.5	347
91-58-7	2-Chloronaphthalene	U	34.7	ug/kg	11.5	34.7
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	347	ug/kg	69.5	347
99-09-2	3-Nitroaniline	U	347	ug/kg	69.5	347

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503006	Date Received:	06/27/2009 09:05	%Moisture:	4.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10370	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:05	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0214.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	347	ug/kg	69.5	347
606-20-2	2,6-Dinitrotoluene	U	347	ug/kg	34.7	347
208-96-8	Acenaphthylene	U	34.7	ug/kg	10.4	34.7
51-28-5	2,4-Dinitrophenol	U	695	ug/kg	132	695
132-64-9	Dibenzofuran	U	347	ug/kg	69.5	347
84-66-2	Diethylphthalate	U	347	ug/kg	69.5	347
86-73-7	Fluorene	U	34.7	ug/kg	10.4	34.7
7005-72-3	4-Chlorophenylphenylether	U	347	ug/kg	69.5	347
534-52-1	2-Methyl-4,6-dinitrophenol	U	347	ug/kg	69.5	347
100-01-6	4-Nitroaniline	U	347	ug/kg	104	347
	p-Nitroaniline					
122-39-4	Diphenylamine	U	347	ug/kg	69.5	347
122-66-7	Azobenzene	U	347	ug/kg	69.5	347
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	347	ug/kg	69.5	347
118-74-1	Hexachlorobenzene	U	347	ug/kg	69.5	347
85-01-8	Phenanthrene	U	34.7	ug/kg	10.4	34.7
120-12-7	Anthracene	U	34.7	ug/kg	6.95	34.7
84-74-2	Di-n-butylphthalate	U	347	ug/kg	69.5	347
206-44-0	Fluoranthene	U	34.7	ug/kg	10.4	34.7
85-68-7	Butylbenzylphthalate	U	347	ug/kg	69.5	347
56-55-3	Benzo(a)anthracene	U	34.7	ug/kg	10.4	34.7
91-94-1	3,3'-Dichlorobenzidine	U	347	ug/kg	104	347
218-01-9	Chrysene	U	34.7	ug/kg	10.4	34.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	347	ug/kg	69.5	347
117-84-0	Di-n-octylphthalate	U	347	ug/kg	69.5	347
205-99-2	Benzo(b)fluoranthene	U	34.7	ug/kg	10.4	34.7
207-08-9	Benzo(k)fluoranthene	U	34.7	ug/kg	10.4	34.7
50-32-8	Benzo(a)pyrene	U	34.7	ug/kg	10.4	34.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.7	ug/kg	10.4	34.7
53-70-3	Dibenzo(a,h)anthracene	U	34.7	ug/kg	10.4	34.7
191-24-2	Benzo(ghi)perylene	U	34.7	ug/kg	10.4	34.7
120-82-1	1,2,4-Trichlorobenzene	U	347	ug/kg	69.5	347

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	193	ug/kg		JA
	Unknown	12.42	1410	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503006	Date Received:	06/27/2009 09:05	%Moisture:	4.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10370	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:05	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0214.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	13.21	1260	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0214.d
Lab Smp Id: 232503006 Client Smp ID: CAMO-09-10370
Inj Date : 02-JUL-2009 13:05
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503006|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	4.09300	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	435176	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1520266	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	936810	40.0000	
* 67 Phenanthrene-d10	188	7.319	7.325	(1.000)	1750730	40.0000	
* 91 Chrysene-d12	240	9.736	9.747	(1.000)	1297946	40.0000	
* 98 Perylene-d12	264	11.483	11.495	(1.000)	837874	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.796)	653762	68.4205	2380
$ 5 Phenol-d5	99	3.725	3.728	(0.928)	864975	68.6570	2380
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	385119	34.1864	1190
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	885747	36.5588	1270
$ 60 2,4,6-Tribromophenol	329	6.742	6.747	(1.098)	279461	73.1122	2540
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.894)	998826	50.2840	1750

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.601	8.611	(0.883)	9712	0.34300	11.9(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0214.d
Report Date: 07/02/2009 13:28
Lab. ID: 232503006 SampleType: SAMPLE
Injection Date: 02-JUL-2009 13:05
Operator: RMB Instrument: MSD5.i
Sample Info: |232503006|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	50887	3.72	3.80	80-120	100	(T)
93	240	3.68	3.80	190-250	0	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	54640	4.37	4.25	80-120	100	(T)
42	36129	4.37	4.25	55-115	66	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	696	4.66	4.64	80-120	100	( )
122	886	4.69	4.64	54-114	127	(Q)
77	561	4.65	4.64	50-110	81	( )
31 4-Chloroaniline			CAS#: 106-47-8			
127	483	4.91	4.92	80-120	100	( )
65	272	4.94	4.92	0- 55	56	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	383	6.15	6.09	80-120	100	( )
92	5501	6.14	6.09	84-144	1436	(Q)
108	19984	6.14	6.09	0- 40	5216	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	202729	6.14	5.90	80-120	100	(T)
164	936810	6.14	5.90	0- 40	462	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	124178	6.14	5.96	80-120	100	(T)
63	2421	6.14	5.96	55-115	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	123897	6.14	6.26	80-120	100	(T)
89	1968	6.14	6.26	38- 98	2	(QT)
63	2421	6.14	6.26	19- 79	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	11443	6.74	6.56	80-120	100	(T)
165	11724	6.74	6.56	61-121	102	(T)
167	3924	6.74	6.56	0- 44	34	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	970	6.74	6.57	80-120	100	(T)
105	1638	6.74	6.57	2- 62	169	(QT)
51	1529	6.74	6.57	46-106	158	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	19808	6.74	6.93	80-120	100	(T)
141	99114	6.74	6.93	34- 94	500	(QT)
250	39483	6.74	6.93	68-128	199	(QT)
79 Pyrene			CAS#: 129-00-0			
202	9712	8.60	8.61	80-120	100	( )
200	2233	8.60	8.61	0- 51	23	( )
101	1408	8.60	8.61	0- 41	14	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	10220	9.74	9.73	80-120	100	( )
226	897	9.75	9.73	0- 56	9	( )
229	1492	9.74	9.73	0- 50	15	( )
92 Chrysene			CAS#: 218-01-9			
228	10220	9.74	9.77	80-120	100	( )
229	2742	9.74	9.77	0- 50	27	( )
226	1202	9.75	9.77	0- 60	12	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	7498	10.95	10.95	80-120	100	( )
253	1805	10.95	10.95	0- 52	24	( )
125	890	10.91	10.95	0- 38	12	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	7746	10.95	10.99	80-120	100	( )
253	1422	10.95	10.98	0- 52	18	( )
125	890	10.91	10.98	0- 38	11	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	6808	11.32	11.41	80-120	100	(T)
253	2364	11.33	11.41	0- 52	35	(T)
125	844	11.31	11.41	0- 30	12	(T)
101 Benzo(ghi)perylene			CAS#: 191-24-2			
276	5119	13.89	13.92	80-120	100	( )
138	1140	13.89	13.92	0- 30	22	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0214.d
Lab Smp Id: 232503006 Client Smp ID: CAMO-09-10370
Inj Date : 02-JUL-2009 13:05
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503006|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	4.09300	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.013	2810349	40.000
* 98 Perylene-d12	11.483	2273246	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.025	390678	5.56056497	193	0		0	10

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	========	======
Unknown				CAS #:			
12.424	2509030	40.6296498	1410	0		0	98
Unknown				CAS #:			
13.213	2065786	36.3495269	1260	0		0	98

Data File: /chem/MSD5.i/s070209.b/s5g0214.d
Date : 02-JUL-2009 13:05
Client ID: CAMO-09-10370
Sample Info: !2325030061881878!1!SVMF!1!LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RHB
Column diameter: 0.20

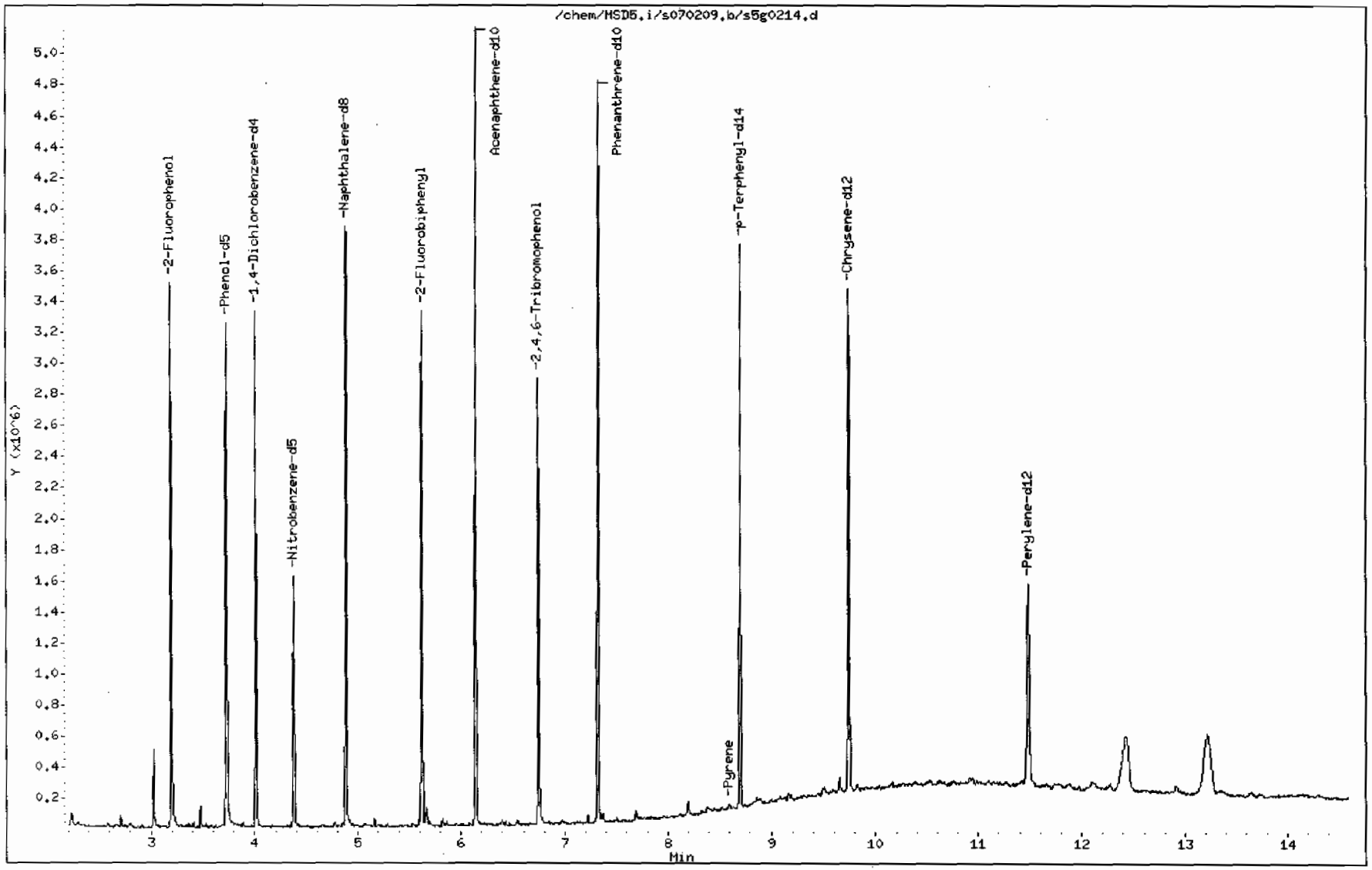

Data File: /chem/MSD5.i/s070209.b/s5g0214.d

Date : 02-JUL-2009 13:05

Client ID: CAMO-09-10370

Instrument: MSD5.i

Sample Info: 1232503006188187811|SVMFI1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 11.9 ug/Kg

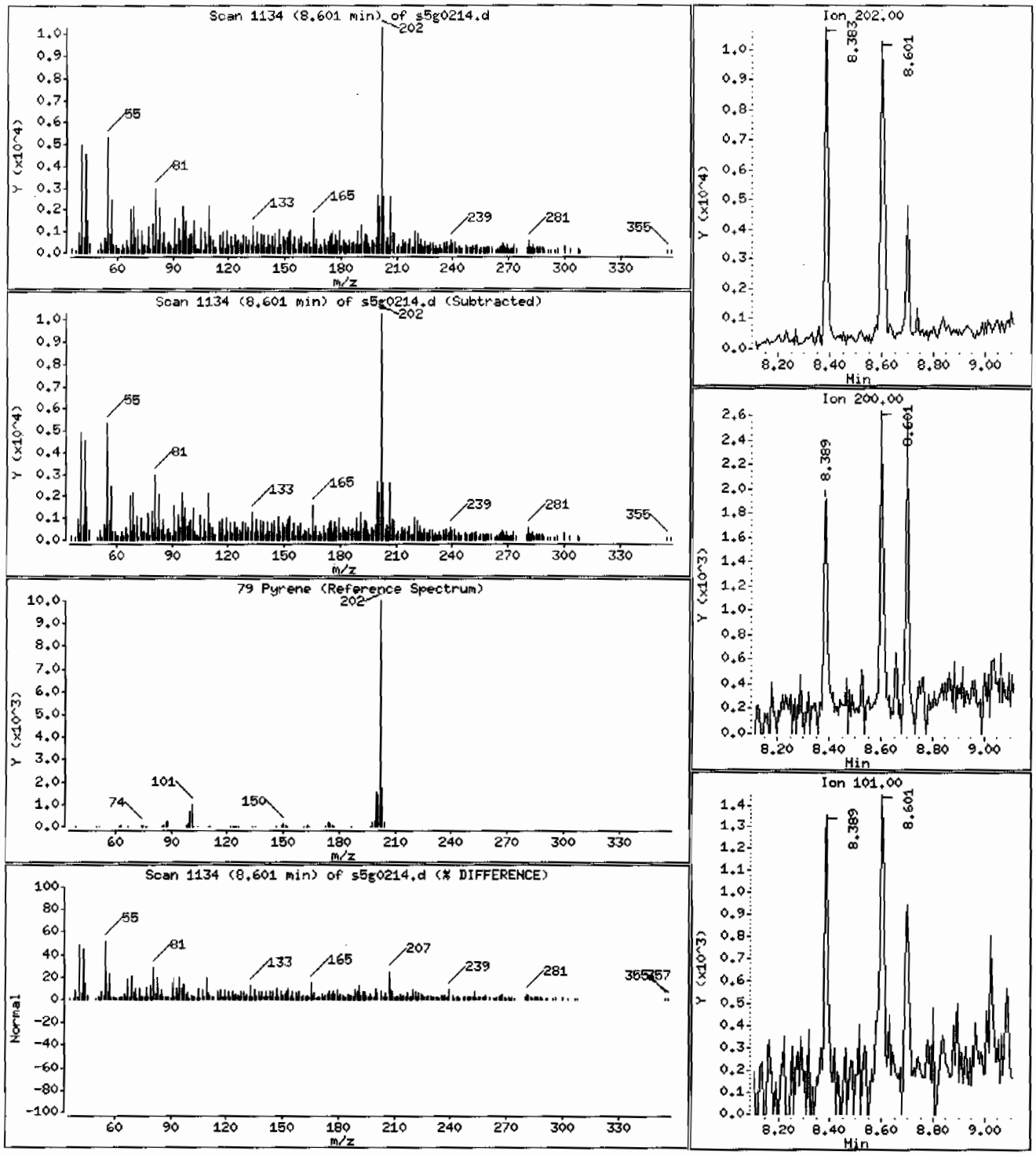

Data File: /chem/MSD5.i/s070209.b/s5g0214.d

Date : 02-JUL-2009 13:05

Client ID: CAMO-09-10370

Instrument: MSD5.i

Sample Info: 1232503006|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
t-Butyl nitrite	540-80-7	NIST05.L	4426	39	C4H9NO2	103

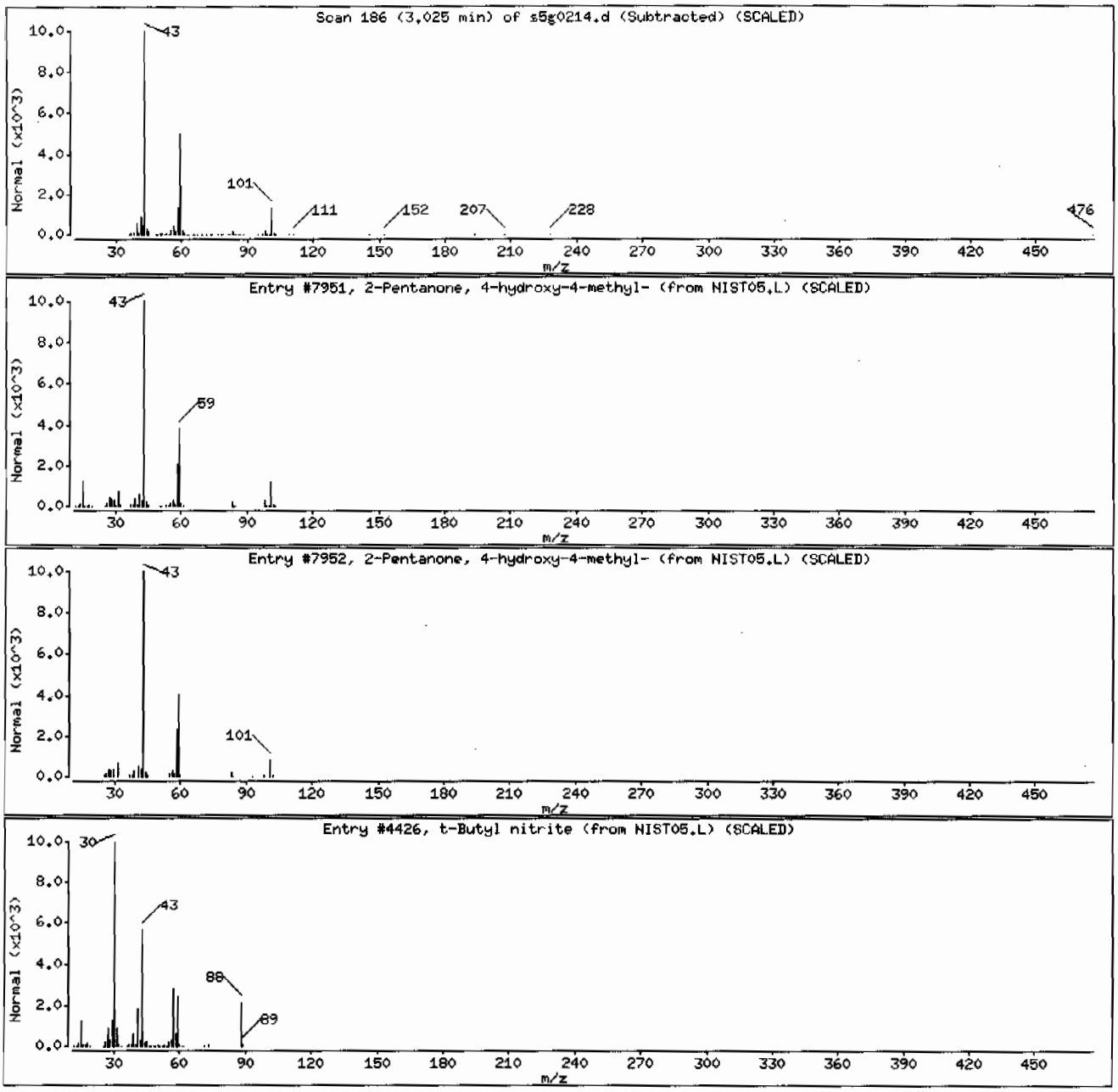

Data File: /chem/MSD5.i/s070209.b/s5g0214.d

Date : 02-JUL-2009 13:05

Client ID: CAMO-09-10370 Instrument: MSD5.i

Sample Info: |2325030061881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,3-Benzodioxole, 5-[3-acetaminopropyl]-	1000124-33-0	NIST05.L	71846	38	C12H15NO3	221
1,4-Naphthalenedione, 2,5-dihydroxy-	4923-55-1	NIST05.L	49682	25	C10H6O4	190
2,8-Dihydroxynaphthoquinone	4923-58-4	NIST05.L	49675	25	C10H6O4	190

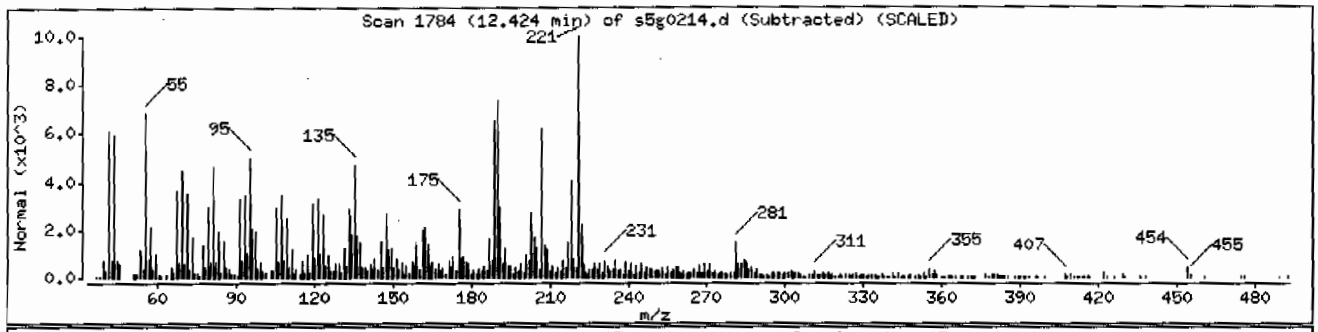

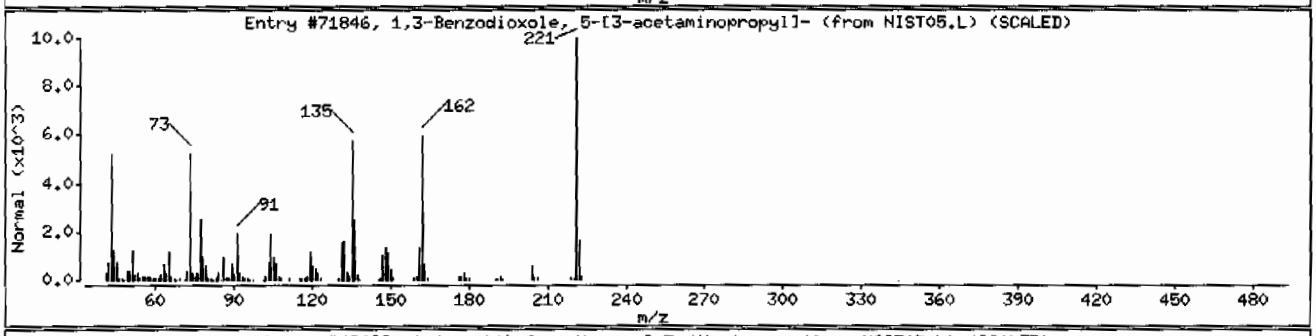

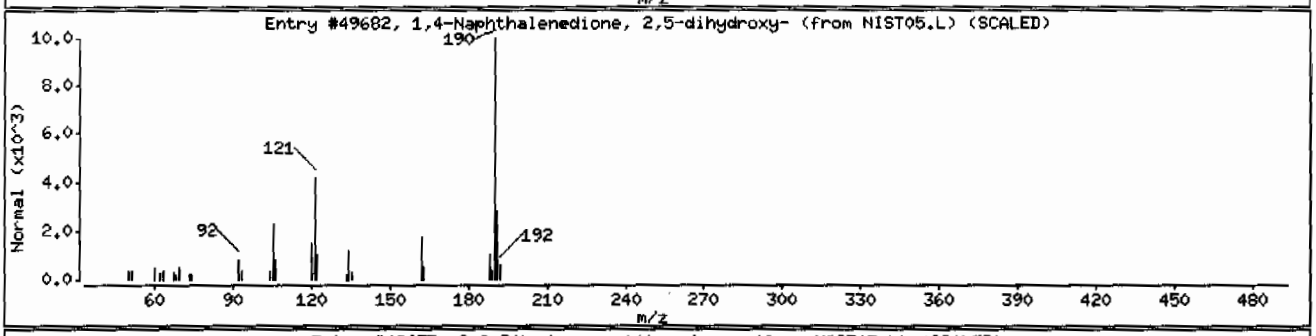

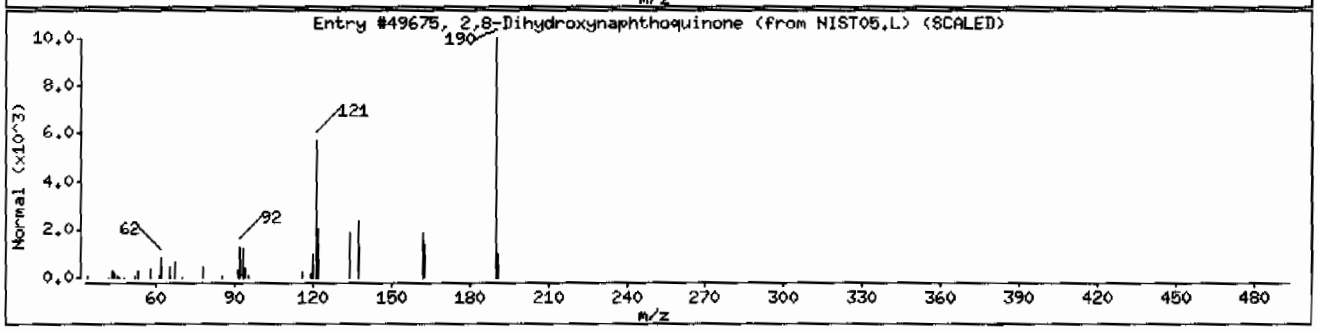

Data File: /chem/MSD5.i/s070209.b/s5g0214.d

Date : 02-JUL-2009 13:05

Client ID: CAMO-09-10370 Instrument: MSD5.i

Sample Info: 1232503006188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2(1H)Naphthalenone, 3,5,6,7,8,8a-hexahyd	1000188-66-5	NIST05.L	69976	45	C15H22O	218
Coumarin, 7-hydroxy-4-methyl-3-propyl-	19491-93-1	NIST05.L	69746	30	C13H14O3	218
1H-Pyrrolo[3,4-c]quinoline-1,3,4(2H,5H)-	181021-85-2	NIST05.L	69501	25	C11H10N2O3	218

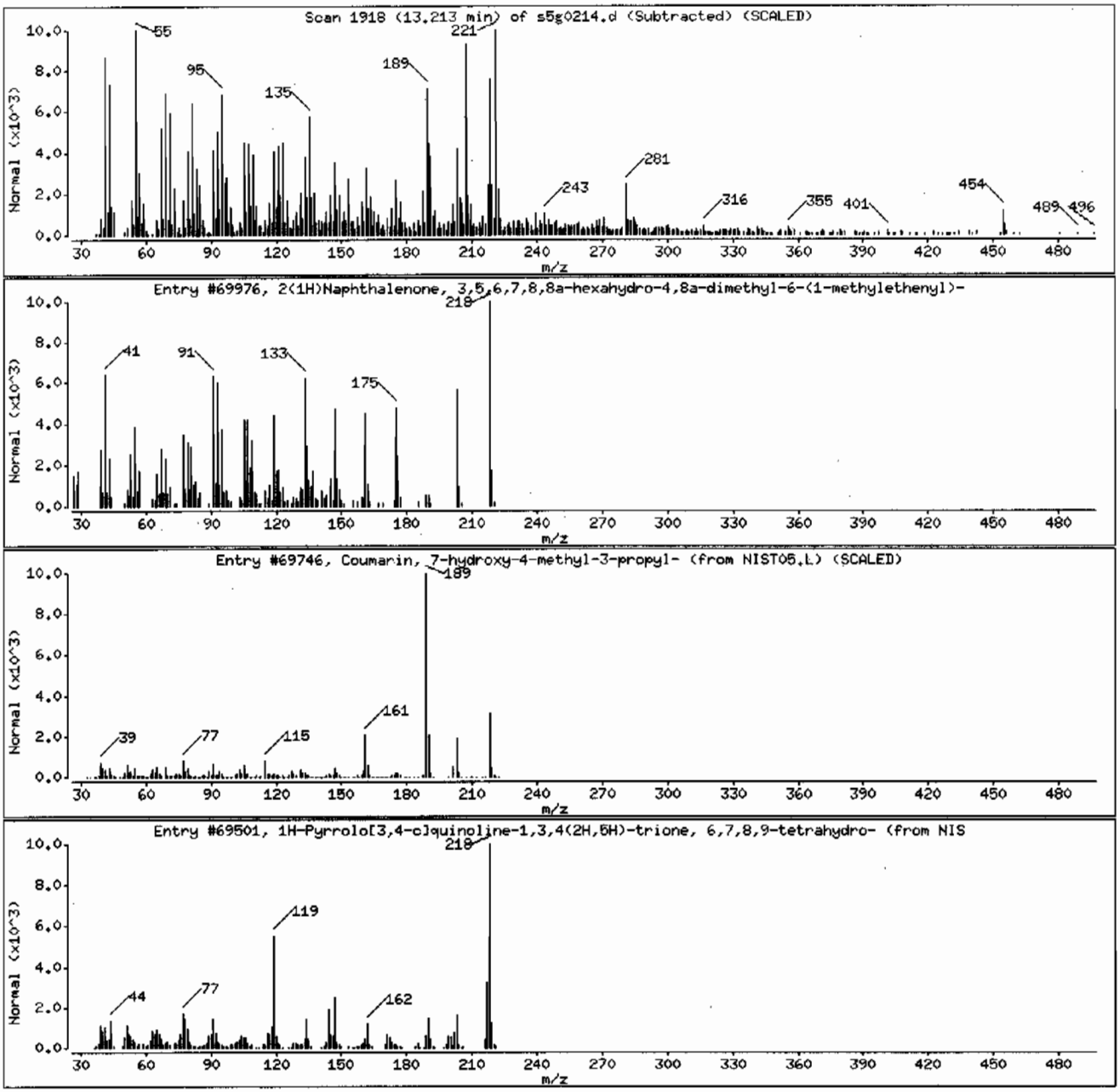

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503008	Date Received:	06/27/2009 09:05	%Moisture:	14.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10371	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.1	Dilution:	1
Run Date:	07/02/2009 13:50	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0216.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	388	ug/kg	77.5	388
108-95-2	Phenol	U	388	ug/kg	77.5	388
95-57-8	2-Chlorophenol	U	388	ug/kg	77.5	388
106-46-7	1,4-Dichlorobenzene	U	388	ug/kg	77.5	388
621-64-7	N-Nitrosodipropylamine	U	388	ug/kg	77.5	388
59-50-7	4-Chloro-3-methylphenol	U	388	ug/kg	77.5	388
83-32-9	Acenaphthene	U	38.8	ug/kg	12.8	38.8
121-14-2	2,4-Dinitrotoluene	U	388	ug/kg	38.8	388
100-02-7	4-Nitrophenol	U	388	ug/kg	128	388
87-86-5	Pentachlorophenol	U	388	ug/kg	96.9	388
129-00-0	Pyrene	U	38.8	ug/kg	11.6	38.8
110-86-1	Pyridine	U	388	ug/kg	77.5	388
62-53-3	Aniline	U	388	ug/kg	116	388
111-44-4	bis(2-Chloroethyl) ether	U	388	ug/kg	77.5	388
541-73-1	1,3-Dichlorobenzene	U	388	ug/kg	77.5	388
100-51-6	Benzyl alcohol	U	388	ug/kg	116	388
95-50-1	1,2-Dichlorobenzene	U	388	ug/kg	77.5	388
108-60-1	bis(2-Chloroisopropyl)ether	U	388	ug/kg	77.5	388
95-48-7	o-Cresol	U	388	ug/kg	77.5	388
65794-96-9	m,p-Cresols	U	388	ug/kg	116	388
67-72-1	Hexachloroethane	U	388	ug/kg	77.5	388
98-95-3	Nitrobenzene	U	388	ug/kg	77.5	388
78-59-1	Isophorone	U	388	ug/kg	77.5	388
88-75-5	2-Nitrophenol	U	388	ug/kg	77.5	388
105-67-9	2,4-Dimethylphenol	U	388	ug/kg	136	388
111-91-1	bis(2-Chloroethoxy)methane	U	388	ug/kg	77.5	388
120-83-2	2,4-Dichlorophenol	U	388	ug/kg	77.5	388
65-85-0	Benzoic acid	U	775	ug/kg	194	775
91-20-3	Naphthalene	U	38.8	ug/kg	11.6	38.8
106-47-8	4-Chloroaniline	U	388	ug/kg	77.5	388
87-68-3	Hexachlorobutadiene	U	388	ug/kg	77.5	388
91-57-6	2-Methylnaphthalene	U	38.8	ug/kg	7.75	38.8
77-47-4	Hexachlorocyclopentadiene	U	388	ug/kg	77.5	388
88-06-2	2,4,6-Trichlorophenol	U	388	ug/kg	77.5	388
95-95-4	2,4,5-Trichlorophenol	U	388	ug/kg	77.5	388
91-58-7	2-Chloronaphthalene	U	38.8	ug/kg	12.8	38.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	388	ug/kg	77.5	388
99-09-2	3-Nitroaniline	U	388	ug/kg	77.5	388

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503008	Date Received:	06/27/2009 09:05	%Moisture:	14.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10371	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:50	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0216.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	388	ug/kg	77.5	388
606-20-2	2,6-Dinitrotoluene	U	388	ug/kg	38.8	388
208-96-8	Acenaphthylene	U	38.8	ug/kg	11.6	38.8
51-28-5	2,4-Dinitrophenol	U	775	ug/kg	147	775
132-64-9	Dibenzofuran	U	388	ug/kg	77.5	388
84-66-2	Diethylphthalate	U	388	ug/kg	77.5	388
86-73-7	Fluorene	U	38.8	ug/kg	11.6	38.8
7005-72-3	4-Chlorophenylphenylether	U	388	ug/kg	77.5	388
534-52-1	2-Methyl-4,6-dinitrophenol	U	388	ug/kg	77.5	388
100-01-6	4-Nitroaniline	U	388	ug/kg	116	388
	p-Nitroaniline					
122-39-4	Diphenylamine	U	388	ug/kg	77.5	388
122-66-7	Azobenzene	U	388	ug/kg	77.5	388
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	388	ug/kg	77.5	388
118-74-1	Hexachlorobenzene	U	388	ug/kg	77.5	388
85-01-8	Phenanthrene	U	38.8	ug/kg	11.6	38.8
120-12-7	Anthracene	U	38.8	ug/kg	7.75	38.8
84-74-2	Di-n-butylphthalate	U	388	ug/kg	77.5	388
206-44-0	Fluoranthene	U	38.8	ug/kg	11.6	38.8
85-68-7	Butylbenzylphthalate	U	388	ug/kg	77.5	388
56-55-3	Benzo(a)anthracene	U	38.8	ug/kg	11.6	38.8
91-94-1	3,3'-Dichlorobenzidine	U	388	ug/kg	116	388
218-01-9	Chrysene	U	38.8	ug/kg	11.6	38.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	388	ug/kg	77.5	388
117-84-0	Di-n-octylphthalate	U	388	ug/kg	77.5	388
205-99-2	Benzo(b)fluoranthene	U	38.8	ug/kg	11.6	38.8
207-08-9	Benzo(k)fluoranthene	U	38.8	ug/kg	11.6	38.8
50-32-8	Benzo(a)pyrene	U	38.8	ug/kg	11.6	38.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.8	ug/kg	11.6	38.8
53-70-3	Dibenzo(a,h)anthracene	U	38.8	ug/kg	11.6	38.8
191-24-2	Benzo(ghi)perylene	U	38.8	ug/kg	11.6	38.8
120-82-1	1,2,4-Trichlorobenzene	U	388	ug/kg	77.5	388

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	210	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.87	193	ug/kg	99	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503008	**Date Received:**	06/27/2009 09:05	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10371	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0216.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.43	169	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0216.d
Lab Smp Id: 232503008 Client Smp ID: CAMO-09-10371
Inj Date : 02-JUL-2009 13:50
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503008|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	14.11360	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	535492	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1796169	40.0000	
* 46 Acenaphthene-d10	164	6.143	6.145	(1.000)	1117973	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	1942837	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1315877	40.0000	
* 98 Perylene-d12	264	11.489	11.495	(1.000)	828207	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.797)	810662	68.9475	2670
$ 5 Phenol-d5	99	3.725	3.728	(0.930)	1089278	70.2638	2720
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	486053	36.5187	1420
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1089434	37.6793	1460
$ 60 2,4,6-Tribromophenol	329	6.742	6.747	(1.098)	337949	74.0867	2870
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	1160100	57.6072	2230

ION RATIO REPORT

SV REPORT

Data file: s5g0216.d
Report Date: 07/02/2009 14:03
Lab. ID: 232503008 SampleType: SAMPLE
Injection Date: 02-JUL-2009 13:50
Operator: RMB Instrument: MSD5.i
Sample Info: |232503008|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	63927	3.73	3.80	80-120	100	(T)
93	640	3.68	3.80	190-250	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	71132	4.37	4.25	80-120	100	(T)
42	50733	4.37	4.25	55-115	71	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	517	4.62	4.64	80-120	100	( )
122	148	4.79	4.64	54-114	29	(QT)
77	369	4.60	4.64	50-110	71	( )
31 4-Chloroaniline			CAS#: 106-47-8			
127	304	4.91	4.92	80-120	100	( )
65	345	4.91	4.92	0- 55	113	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	282	6.15	6.09	80-120	100	( )
92	6245	6.14	6.09	84-144	2209	(Q)
108	24358	6.14	6.09	0- 40	8615	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	241149	6.14	5.90	80-120	100	(T)
164	1117973	6.14	5.90	0- 40	464	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	148313	6.14	5.96	80-120	100	(T)
63	1883	6.14	5.96	55-115	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	148313	6.14	6.26	80-120	100	(T)
89	2535	6.14	6.26	38- 98	2	(QT)
63	1883	6.14	6.26	19- 79	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	14226	6.74	6.56	80-120	100	(T)
165	15299	6.74	6.56	61-121	108	(T)
167	5043	6.74	6.56	0- 44	35	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1240	6.74	6.57	80-120	100	(T)
105	1973	6.74	6.57	2- 62	159	(QT)
51	1924	6.74	6.57	46-106	155	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	23851	6.74	6.93	80-120	100	(T)
141	121294	6.74	6.93	34- 94	509	(QT)
250	46693	6.74	6.93	68-128	196	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0216.d
Lab Smp Id: 232503008 Client Smp ID: CAMO-09-10371
Inj Date : 02-JUL-2009 13:50
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503008|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	14.11360	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.007	3429384	40.000
* 46 Acenaphthene-d10	6.143	4705149	40.000
* 98 Perylene-d12	11.489	1999733	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.031	464809	5.42148580	210	0		0	10
1,4-Methanoazulene, decahydro-4,8,8-trim				CAS #: 475-20-7			
5.866	585206	4.97502220	193	99	NIST05.L	60024	46
Unknown				CAS #:			
12.430	217744	4.35545093	169	0		0	98

Data File: /chem/MSD5.i/s070209.b/s5g0216.d
Date : 02-JUL-2009 13:50
Client ID: CAMO-09-10371
Sample Info: 1232503008|881878|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

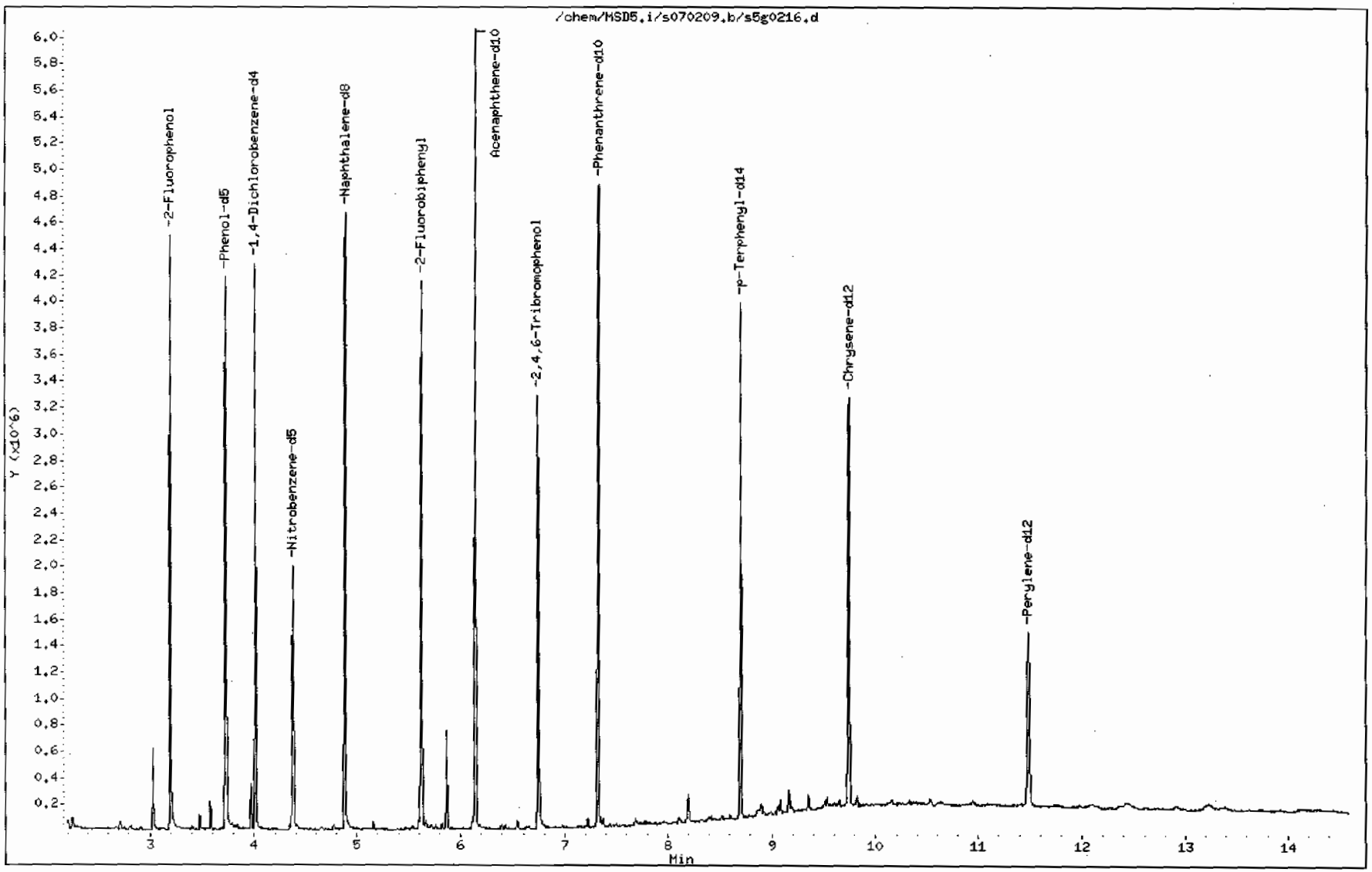

Data File: /chem/MSD5.i/s070209.b/s5g0216.d

Date : 02-JUL-2009 13:50

Client ID: CAHO-09-10371

Instrument: MSD5.i

Sample Info: |2325030008|881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RHB

Column phase: J&W DB-5HS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

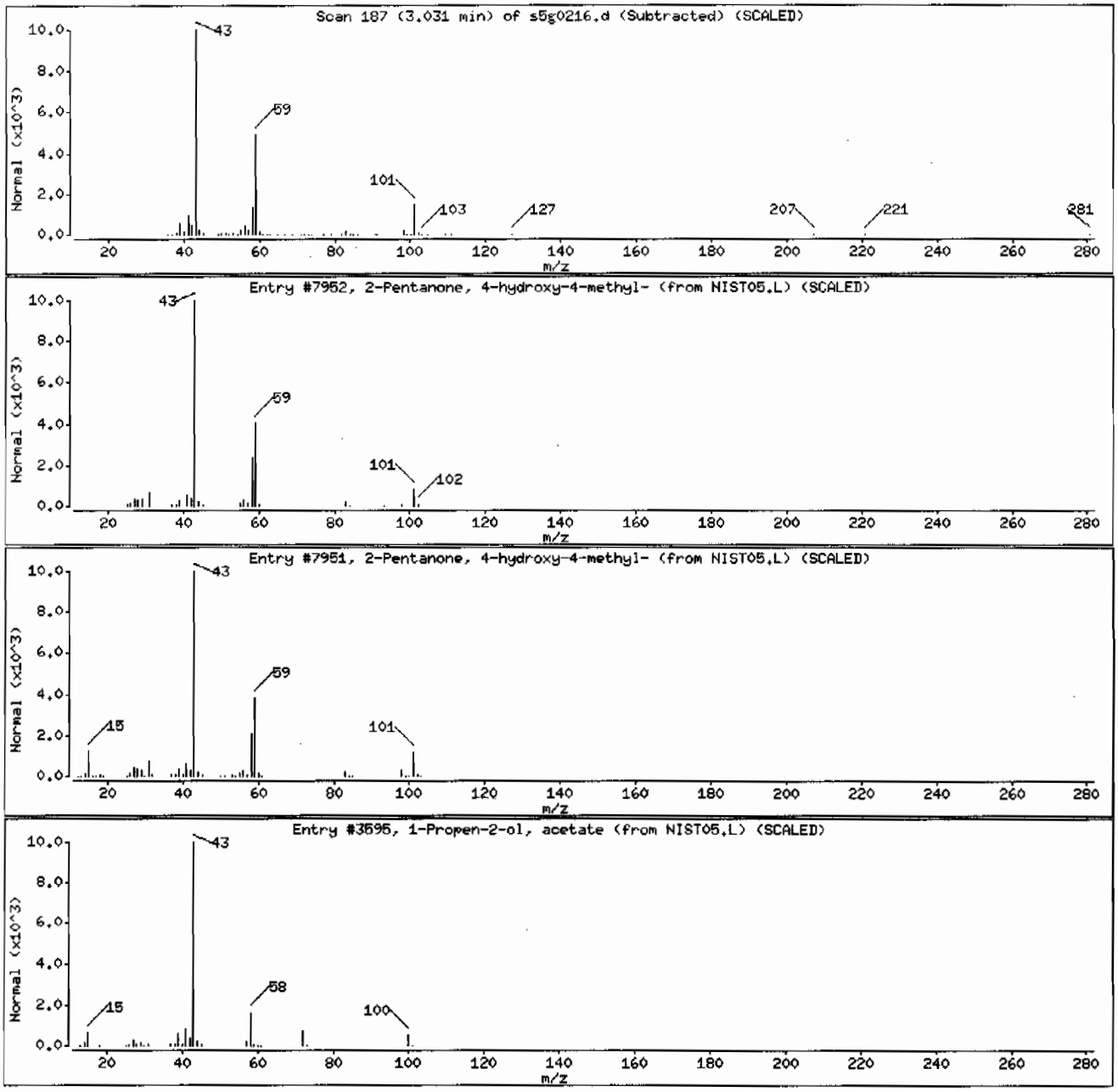

Data File: /chem/MSD5.i/s070209.b/s5g0216.d

Date : 02-JUL-2009 13:50

Client ID: CAMO-09-10371

Instrument: MSD5.i

Sample Info: !2325030008!881878!1!SVMF!1!LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60024	99	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60047	99	C15H24	204
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60018	97	C15H24	204

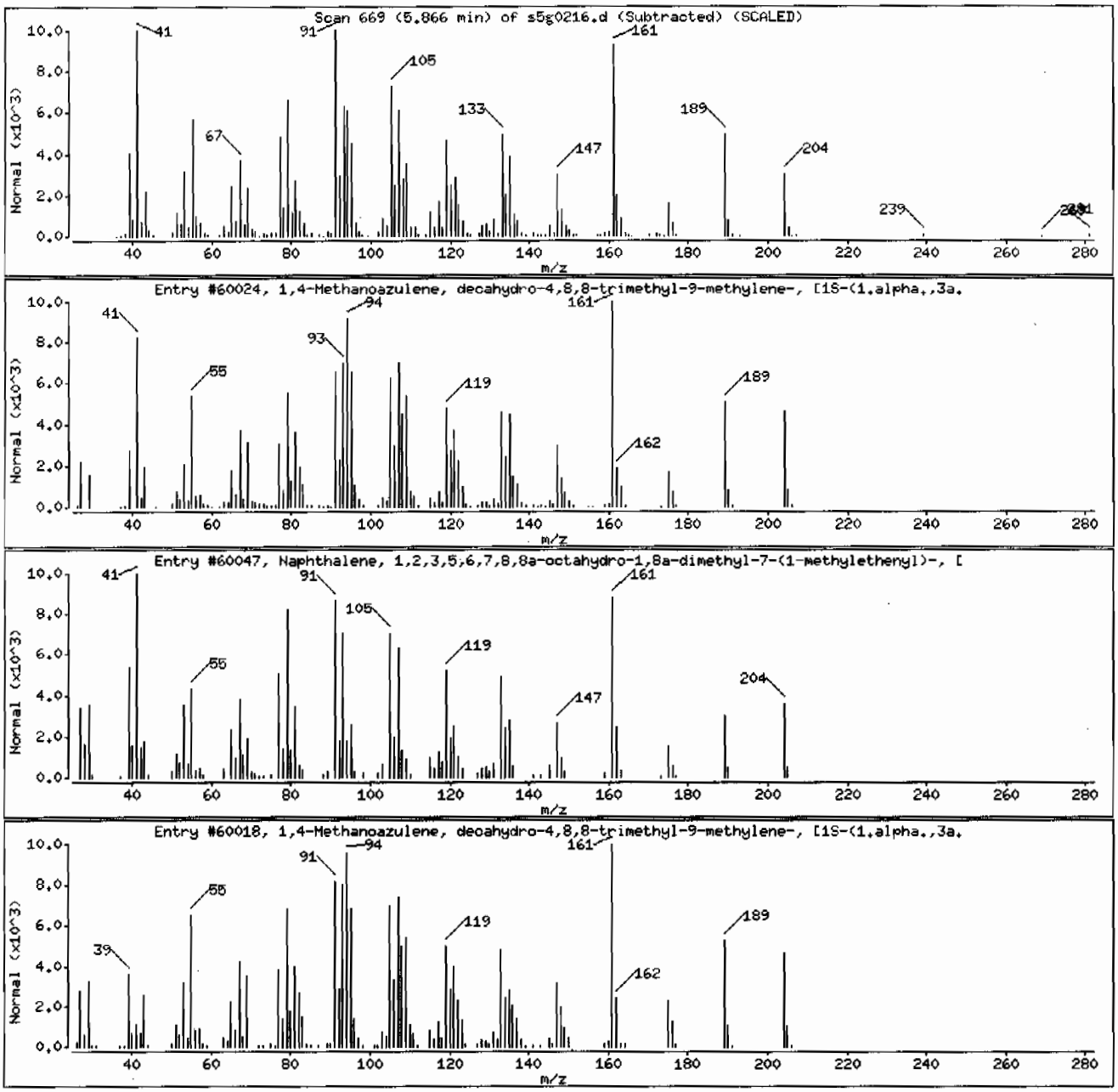

Data File: /chem/MSD5.i/s070209.b/s5g0216.d

Date : 02-JUL-2009 13:50

Client ID: CAMO-09-10371

Instrument: MSD5.i

Sample Info: 1232503008|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propiophenone, 2'-(trimethylsiloxy)-	33342-87-9	NIST05.L	72506	60	C12H18O2Si	222
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72520	47	C12H22Si2	222
Silane, 1,4-phenylenebis[trimethyl-	13183-70-5	NIST05.L	72522	47	C12H22Si2	222

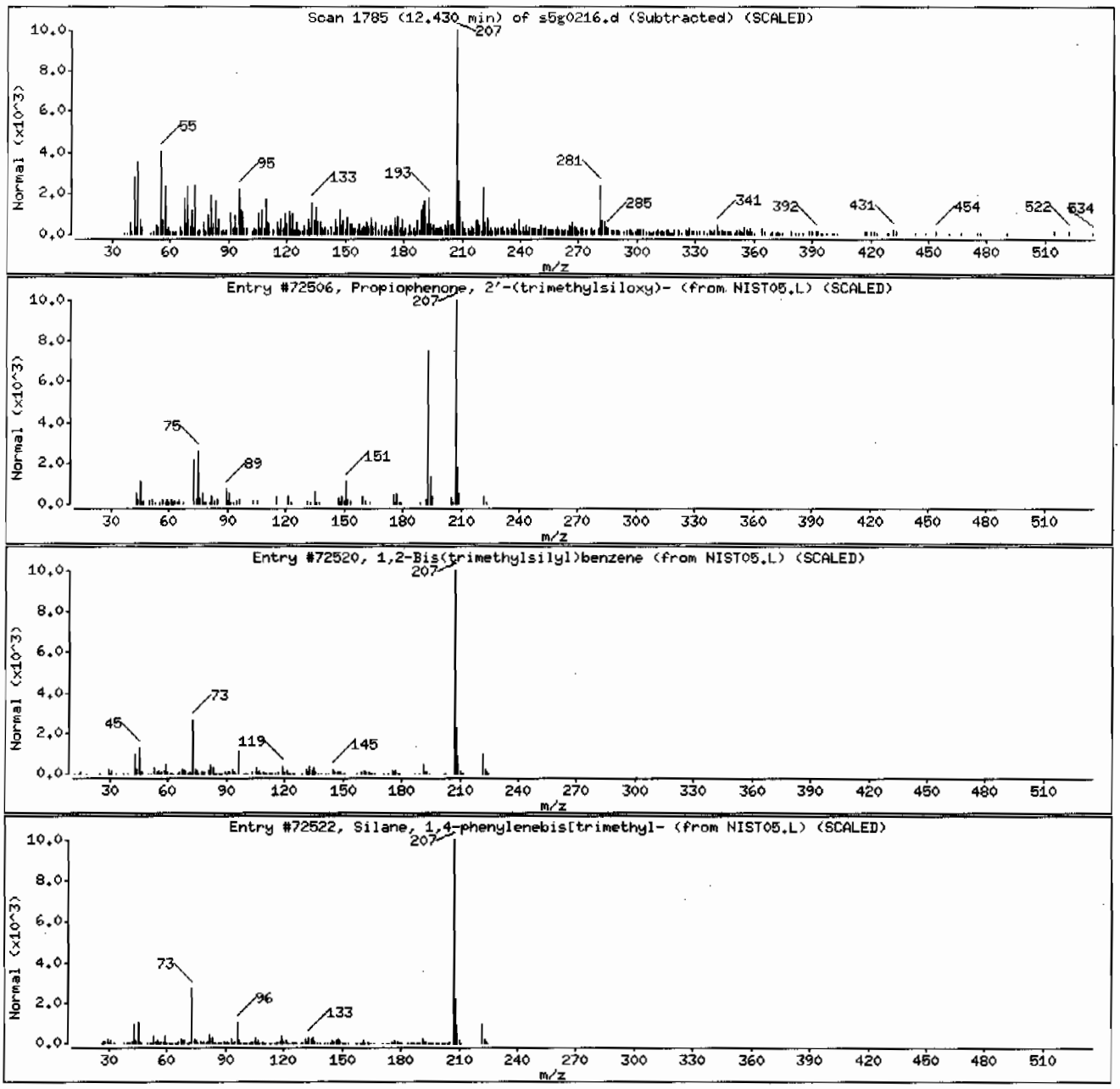

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503012	Date Received:	06/27/2009 09:05	%Moisture:	9.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10372	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 15:19	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.07 g	Final Volume:	1 mL
Data File:	s5g0220.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	369	ug/kg	73.8	369
108-95-2	Phenol	U	369	ug/kg	73.8	369
95-57-8	2-Chlorophenol	U	369	ug/kg	73.8	369
106-46-7	1,4-Dichlorobenzene	U	369	ug/kg	73.8	369
621-64-7	N-Nitrosodipropylamine	U	369	ug/kg	73.8	369
59-50-7	4-Chloro-3-methylphenol	U	369	ug/kg	73.8	369
83-32-9	Acenaphthene	U	36.9	ug/kg	12.2	36.9
121-14-2	2,4-Dinitrotoluene	U	369	ug/kg	36.9	369
100-02-7	4-Nitrophenol	U	369	ug/kg	122	369
87-86-5	Pentachlorophenol	U	369	ug/kg	92.2	369
129-00-0	Pyrene		192	ug/kg	11.1	36.9
110-86-1	Pyridine	U	369	ug/kg	73.8	369
62-53-3	Aniline	U	369	ug/kg	111	369
111-44-4	bis(2-Chloroethyl) ether	U	369	ug/kg	73.8	369
541-73-1	1,3-Dichlorobenzene	U	369	ug/kg	73.8	369
100-51-6	Benzyl alcohol	U	369	ug/kg	111	369
95-50-1	1,2-Dichlorobenzene	U	369	ug/kg	73.8	369
108-60-1	bis(2-Chloroisopropyl)ether	U	369	ug/kg	73.8	369
95-48-7	o-Cresol	U	369	ug/kg	73.8	369
65794-96-9	m,p-Cresols	U	369	ug/kg	111	369
67-72-1	Hexachloroethane	U	369	ug/kg	73.8	369
98-95-3	Nitrobenzene	U	369	ug/kg	73.8	369
78-59-1	Isophorone	U	369	ug/kg	73.8	369
88-75-5	2-Nitrophenol	U	369	ug/kg	73.8	369
105-67-9	2,4-Dimethylphenol	U	369	ug/kg	129	369
111-91-1	bis(2-Chloroethoxy)methane	U	369	ug/kg	73.8	369
120-83-2	2,4-Dichlorophenol	U	369	ug/kg	73.8	369
65-85-0	Benzoic acid	U	738	ug/kg	184	738
91-20-3	Naphthalene	U	36.9	ug/kg	11.1	36.9
106-47-8	4-Chloroaniline	U	369	ug/kg	73.8	369
87-68-3	Hexachlorobutadiene	U	369	ug/kg	73.8	369
91-57-6	2-Methylnaphthalene	U	36.9	ug/kg	7.38	36.9
77-47-4	Hexachlorocyclopentadiene	U	369	ug/kg	73.8	369
88-06-2	2,4,6-Trichlorophenol	U	369	ug/kg	73.8	369
95-95-4	2,4,5-Trichlorophenol	U	369	ug/kg	73.8	369
91-58-7	2-Chloronaphthalene	U	36.9	ug/kg	12.2	36.9
88-74-4	2-Nitroaniline	U	369	ug/kg	73.8	369
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	369	ug/kg	73.8	369

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503012	Date Received:	06/27/2009 09:05	%Moisture:	9.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10372	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 15:19	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.07 g	Final Volume:	1 mL
Data File:	s5g0220.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	369	ug/kg	73.8	369
606-20-2	2,6-Dinitrotoluene	U	369	ug/kg	36.9	369
208-96-8	Acenaphthylene	U	36.9	ug/kg	11.1	36.9
51-28-5	2,4-Dinitrophenol	U	738	ug/kg	140	738
132-64-9	Dibenzofuran	U	369	ug/kg	73.8	369
84-66-2	Diethylphthalate	U	369	ug/kg	73.8	369
86-73-7	Fluorene	U	36.9	ug/kg	11.1	36.9
7005-72-3	4-Chlorophenylphenylether	U	369	ug/kg	73.8	369
534-52-1	2-Methyl-4,6-dinitrophenol	U	369	ug/kg	73.8	369
100-01-6	4-Nitroaniline	U	369	ug/kg	111	369
	p-Nitroaniline					
122-39-4	Diphenylamine	U	369	ug/kg	73.8	369
122-66-7	Azobenzene	U	369	ug/kg	73.8	369
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	369	ug/kg	73.8	369
118-74-1	Hexachlorobenzene	U	369	ug/kg	73.8	369
85-01-8	Phenanthrene		60.3	ug/kg	11.1	36.9
120-12-7	Anthracene	U	36.9	ug/kg	7.38	36.9
84-74-2	Di-n-butylphthalate	U	369	ug/kg	73.8	369
206-44-0	Fluoranthene		162	ug/kg	11.1	36.9
85-68-7	Butylbenzylphthalate	U	369	ug/kg	73.8	369
56-55-3	Benzo(a)anthracene		65.4	ug/kg	11.1	36.9
91-94-1	3,3'-Dichlorobenzidine	U	369	ug/kg	111	369
218-01-9	Chrysene		105	ug/kg	11.1	36.9
117-81-7	bis(2-Ethylhexyl)phthalate	U	369	ug/kg	73.8	369
117-84-0	Di-n-octylphthalate	U	369	ug/kg	73.8	369
205-99-2	Benzo(b)fluoranthene		175	ug/kg	11.1	36.9
207-08-9	Benzo(k)fluoranthene	U	36.9	ug/kg	11.1	36.9
50-32-8	Benzo(a)pyrene		106	ug/kg	11.1	36.9
193-39-5	Indeno(1,2,3-cd)pyrene		70.0	ug/kg	11.1	36.9
53-70-3	Dibenzo(a,h)anthracene	U	36.9	ug/kg	11.1	36.9
191-24-2	Benzo(ghi)perylene		94.6	ug/kg	11.1	36.9
120-82-1	1,2,4-Trichlorobenzene	U	369	ug/kg	73.8	369

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	149	ug/kg		JA
1058-61-3	Stigmast-4-en-3-one	8.88	226	ug/kg	91	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503012	**Date Received:**	06/27/2009 09:05	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10372	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 15:19	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.07 g	**Final Volume:**	1 mL
Data File:	s5g0220.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	10.43	199	ug/kg		J
126848-01-9	3,5,6-Trimethyl-p-quinone, 2-(2,5-dioxot	11.33	189	ug/kg	95	NJ

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0220.d
Lab Smp Id: 232503012 Client Smp ID: CAMO-09-10372
Inj Date : 02-JUL-2009 15:19
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503012|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.07000	weight of sample
M	9.83080	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	530057	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1810439	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	1140038	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	2032211	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1369809	40.0000	
* 98 Perylene-d12	264	11.489	11.495	(1.000)	877559	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.796)	557460	47.8986	1770
$ 5 Phenol-d5	99	3.725	3.728	(0.928)	751349	48.9627	1800
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	336726	25.0999	926
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	818039	27.7452	1020
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	270518	58.1564	2140
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	861569	41.0986	1520

Compounds	QUANT SIC MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.607	8.611	(0.883)	155845	5.21519	192
68 Phenanthrene	178	7.342	7.344	(1.002)	62281	1.63596	60.3
76 Fluoranthene	202	8.389	8.394	(1.145)	190488	4.39239	162
89 Benzo(a)anthracene	228	9.730	9.733	(0.999)	52133	1.77372	65.4
92 Chrysene	228	9.766	9.771	(1.002)	76621	2.84580	105
95 Benzo(b)fluoranthene	252	10.948	10.951	(0.953)	91945	4.74409	175
97 Benzo(a)pyrene	252	11.407	11.413	(0.993)	49262	2.87134	106
99 Indeno(1,2,3-cd)pyrene	276	13.336	13.354	(1.161)	32712	1.89742	70.0
101 Benzo(ghi)perylene	276	13.918	13.922	(1.211)	37689	2.56426	94.6

ION RATIO REPORT

SV REPORT

Data file: s5g0220.d
Report Date: 07/02/2009 16:19
Lab. ID: 232503012 SampleType: SAMPLE
Injection Date: 02-JUL-2009 15:19
Operator: RMB Instrument: MSD5.i
Sample Info: |232503012|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	45709	3.72	3.80	80-120	100	(T)
93	1210	3.69	3.80	190-250	3	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	49612	4.37	4.25	80-120	100	(T)
42	34028	4.37	4.25	55-115	69	(T)
22 Isophorone		CAS#: 78-59-1				
82	329461	4.37	4.55	80-120	100	(T)
138	105	4.42	4.55	0- 49	0	(T)
27 Benzoic acid		CAS#: 65-85-0				
105	426	4.64	4.64	80-120	100	( )
122	747	4.66	4.64	54-114	175	(Q)
77	1299	4.66	4.64	50-110	305	(Q)
31 4-Chloroaniline		CAS#: 106-47-8				
127	234	4.92	4.92	80-120	100	( )
65	594	4.92	4.92	0- 55	253	(Q)
43 Dimethylphthalate		CAS#: 131-11-3				
163	247751	6.14	5.90	80-120	100	(T)
164	1140038	6.14	5.90	0- 40	460	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	151099	6.14	5.96	80-120	100	(T)
63	1997	6.14	5.96	55-115	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	151099	6.14	6.26	80-120	100	(T)
89	2889	6.14	6.26	38- 98	2	(QT)
63	1997	6.14	6.26	19- 79	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	11883	6.74	6.56	80-120	100	(T)
165	11337	6.74	6.56	61-121	95	(T)
167	3862	6.74	6.56	0- 44	32	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	975	6.74	6.57	80-120	100	(T)
105	2124	6.74	6.57	2- 62	218	(QT)
51	1481	6.74	6.57	46-106	152	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	62281	7.34	7.34	80-120	100	( )
179	11024	7.34	7.34	0- 46	18	( )
176	12511	7.34	7.34	0- 49	20	( )
69 Anthracene			CAS#: 120-12-7			
178	62393	7.34	7.39	80-120	100	( )
179	11024	7.34	7.39	0- 46	18	( )
176	12511	7.34	7.39	0- 49	20	( )
76 Fluoranthene			CAS#: 206-44-0			
202	190488	8.39	8.39	80-120	100	( )
203	32997	8.39	8.39	0- 48	17	( )
101	17790	8.39	8.39	0- 39	9	( )
79 Pyrene			CAS#: 129-00-0			
202	155845	8.61	8.61	80-120	100	( )
200	31871	8.61	8.61	0- 51	20	( )
101	16661	8.61	8.61	0- 41	11	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	52133	9.73	9.73	80-120	100	( )
226	13415	9.72	9.73	0- 56	26	( )
229	13441	9.73	9.73	0- 50	26	( )
92 Chrysene			CAS#: 218-01-9			
228	76621	9.77	9.77	80-120	100	( )
229	16168	9.77	9.77	0- 50	21	( )
226	21216	9.77	9.77	0- 60	28	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	91945	10.95	10.95	80-120	100	( )
253	20732	10.95	10.95	0- 52	23	( )
125	9351	10.95	10.95	0- 38	10	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	91945	10.95	10.99	80-120	100	( )
253	20732	10.95	10.98	0- 52	23	( )
125	9351	10.95	10.98	0- 38	10	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	49262	11.41	11.41	80-120	100	( )
253	11976	11.41	11.41	0- 52	24	( )
125	6466	11.41	11.41	0- 30	13	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	32712	13.34	13.35	80-120	100	( )
138	7354	13.34	13.35	0- 51	22	( )
100 Dibenzo(a,h)anthracene				CAS#: 53-70-3		
278	8294	13.35	13.37	80-120	100	( )
139	1804	13.35	13.37	0- 30	22	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	37689	13.92	13.92	80-120	100	( )
138	8515	13.91	13.92	0- 30	23	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0220.d
Lab Smp Id: 232503012 Client Smp ID: CAMO-09-10372
Inj Date : 02-JUL-2009 15:19
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503012|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.07000	weight of sample
M	9.83080	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.013	3392392	40.000
* 91 Chrysene-d12	9.742	3740204	40.000
* 98 Perylene-d12	11.489	2351740	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.031	342102	4.03375207	149	0		0	10
Stigmast-4-en-3-one				CAS #: 1058-61-3			
8.883	571832	6.11551607	226	91	NIST05.L	173936	91
Unknown				CAS #:			
10.430	505614	5.40734144	199	0		0	91
3,5,6-Trimethyl-p-quinone, 2-(2,5-dioxot				CAS #: 126848-01-9			
11.330	301907	5.13503192	189	95	NIST05.L	111516	98

Data File: /chem/MSD5.i/s070209.b/s5g0220.d
Date : 02-JUL-2009 15:19
Client ID: CAMD-09-10372
Sample Info: 1232503012|881878|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RHB
Column diameter: 0.20

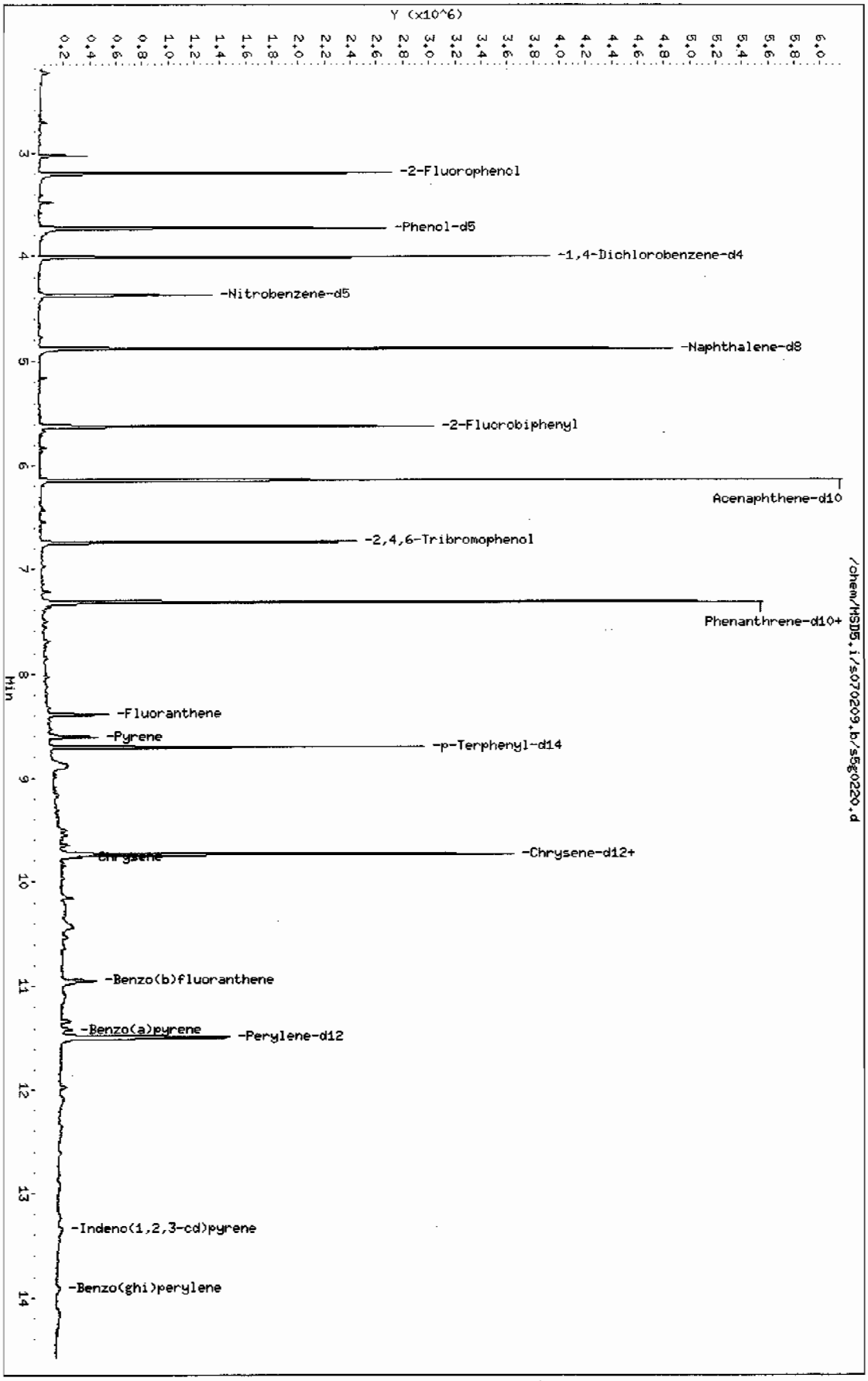

Page 1

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: |2325030121881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 192 ug/Kg

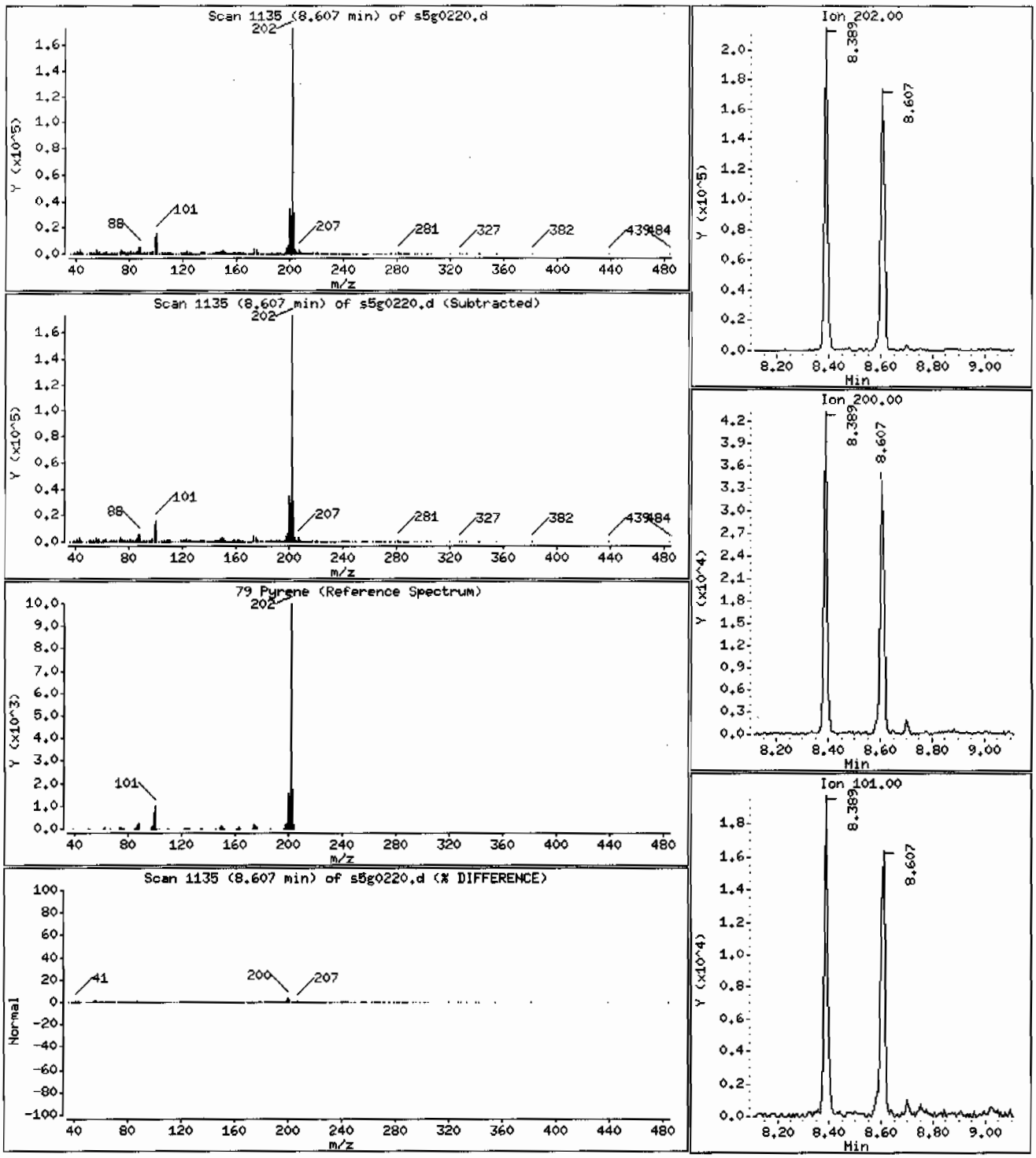

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Page 3

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: |232503012|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 60.3 ug/Kg

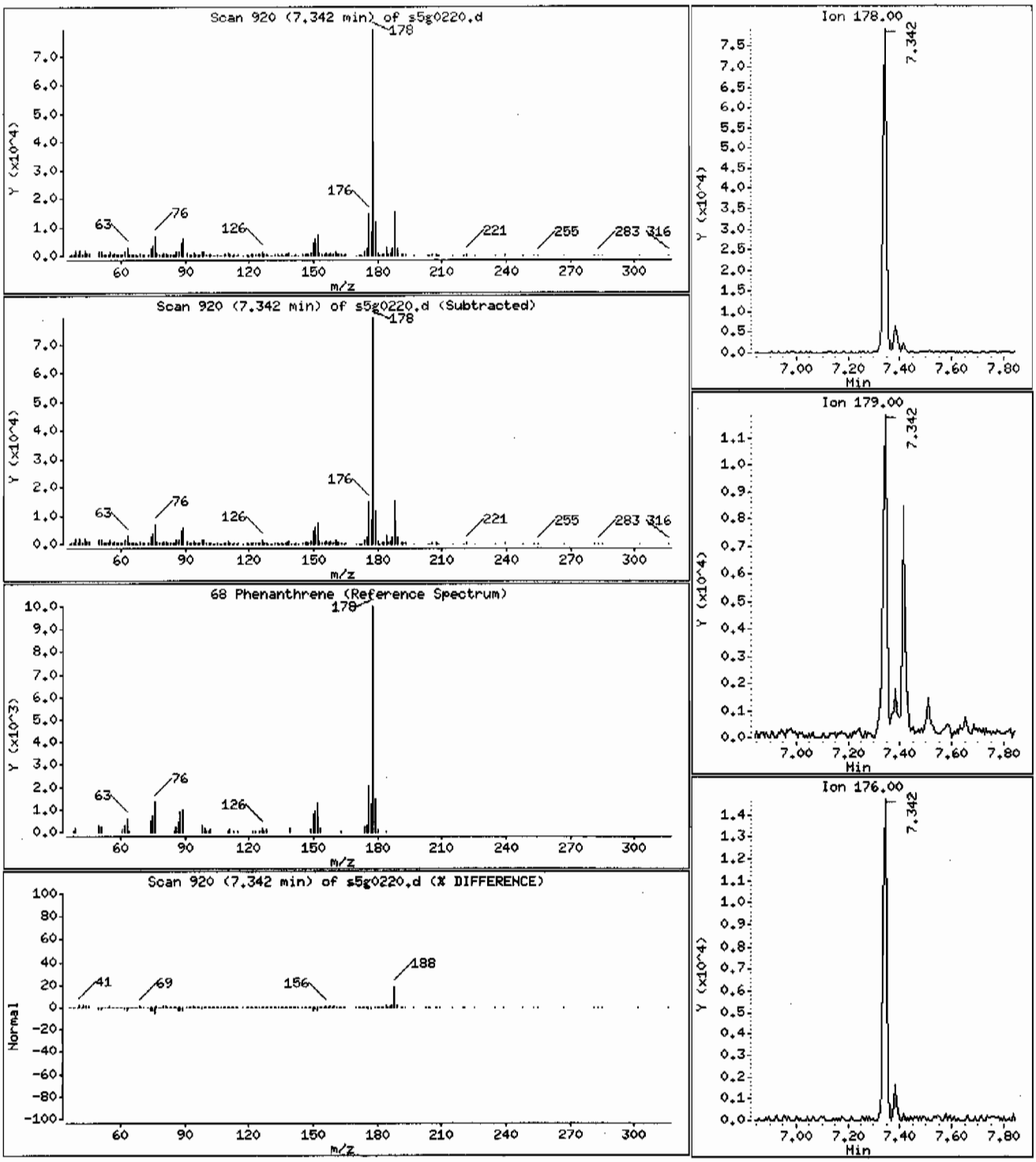

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Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: 1232503012188187811|SVMF11|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 162 ug/Kg

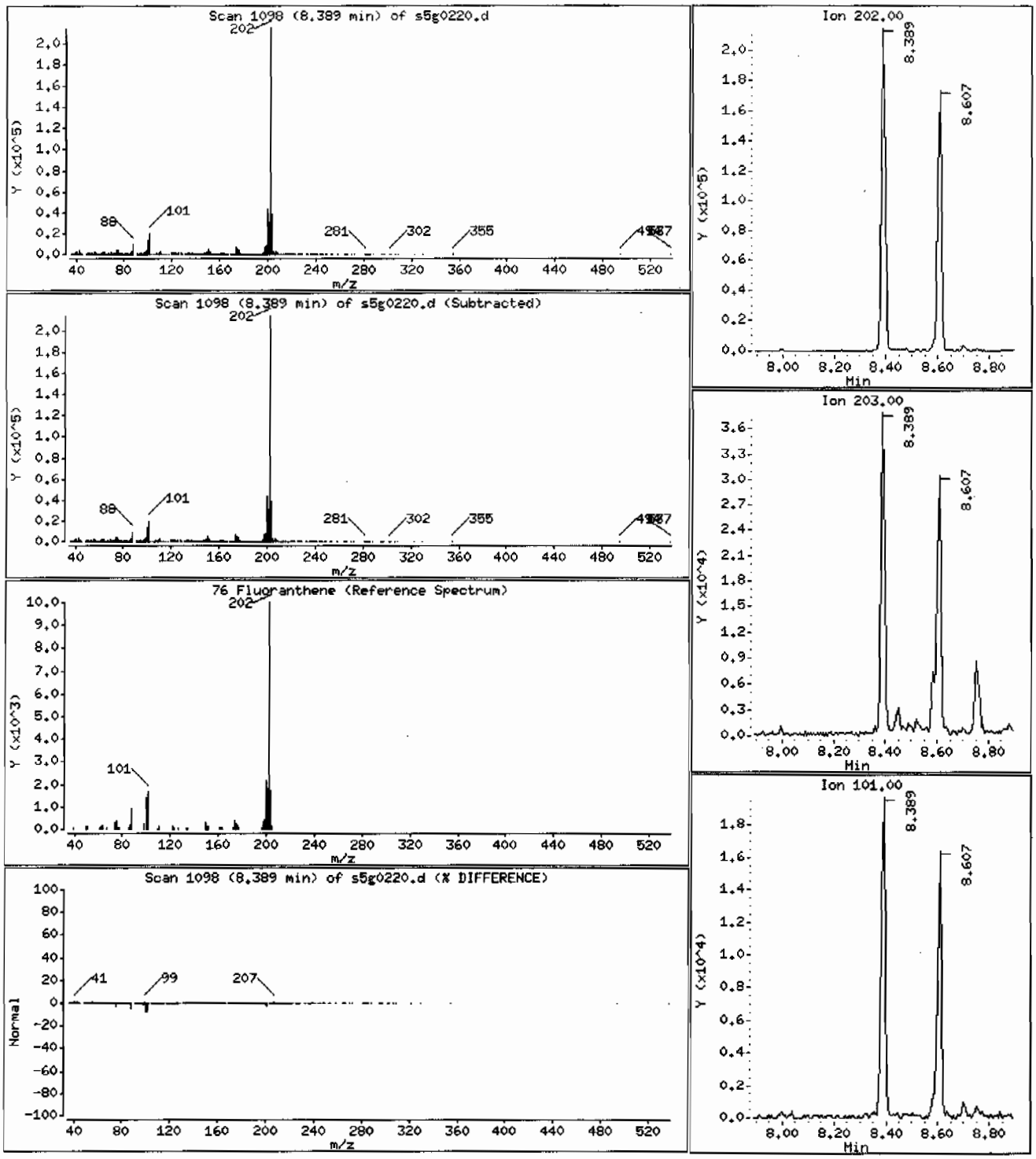

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: |2325030121881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 65.4 ug/Kg

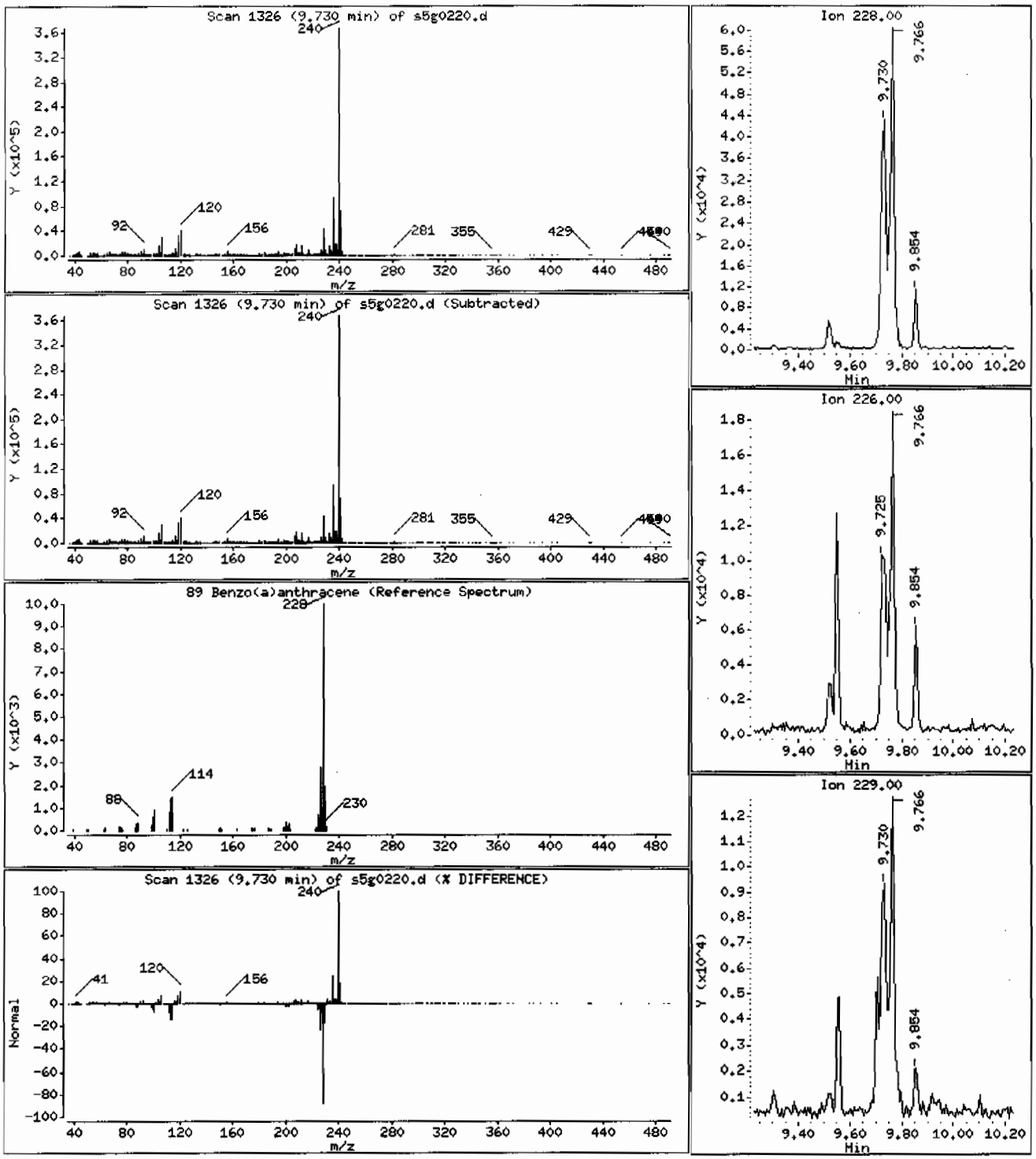

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: |2325030121881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 105 ug/Kg

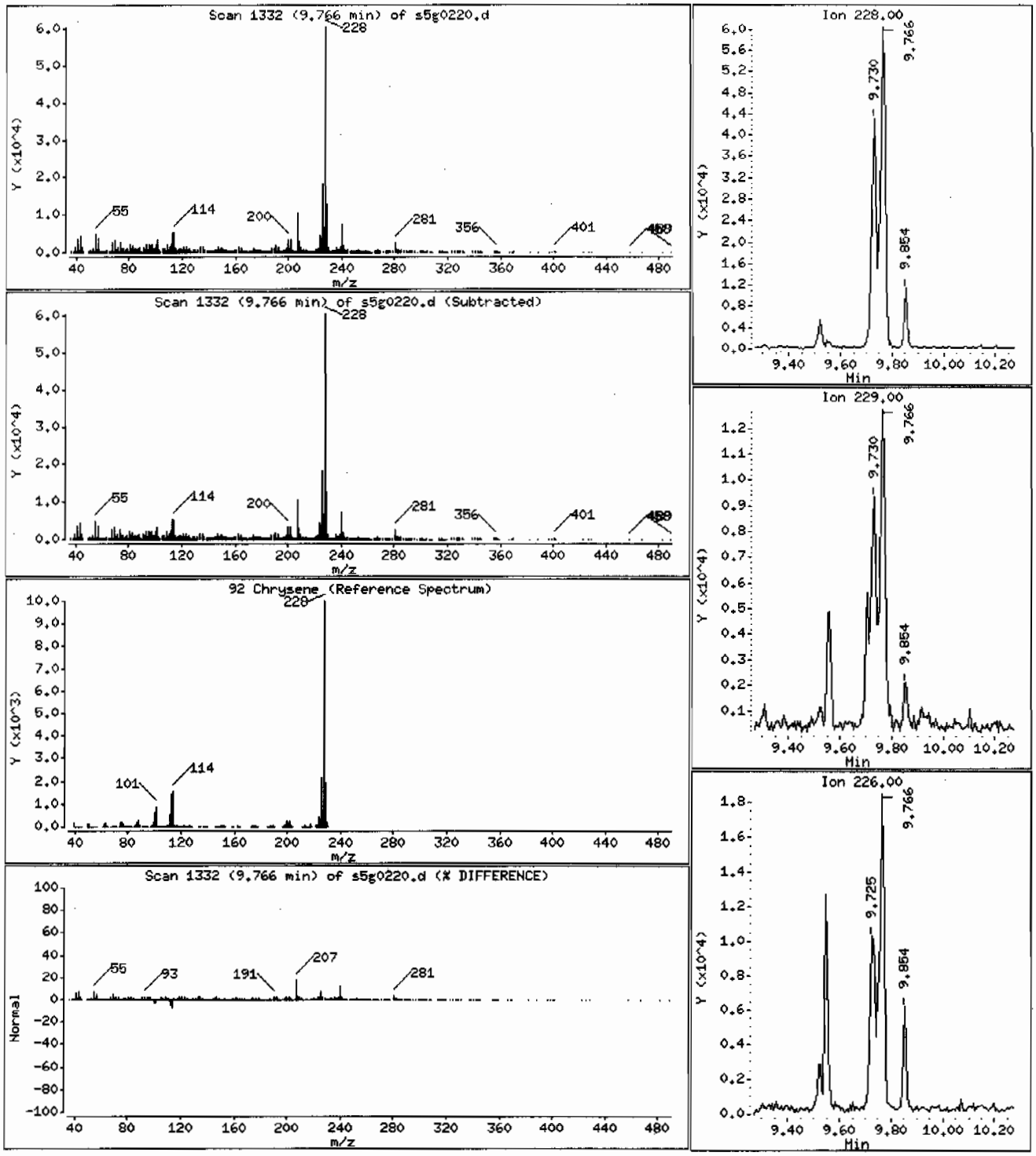

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: |232503012|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 175 ug/Kg

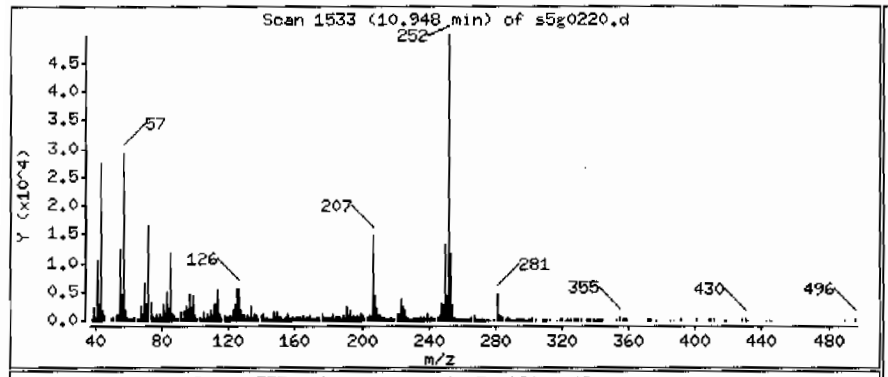

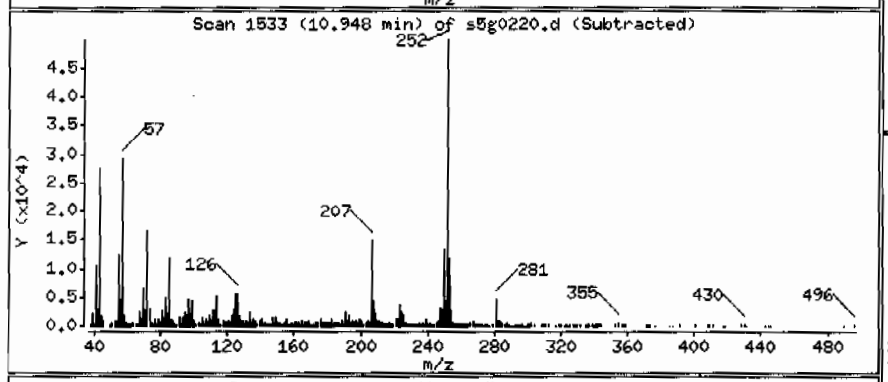

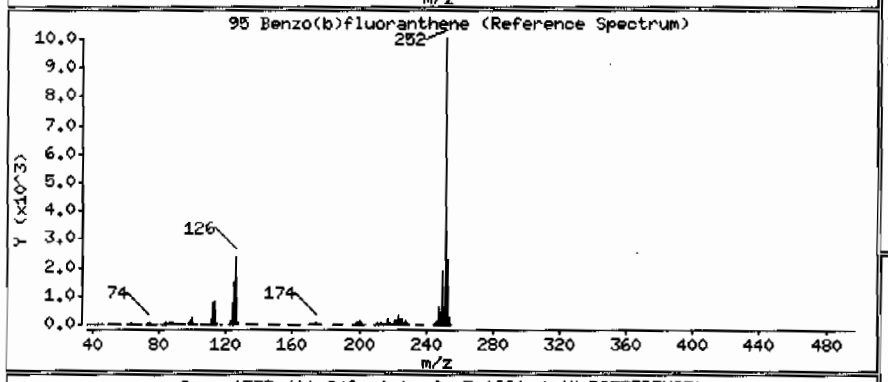

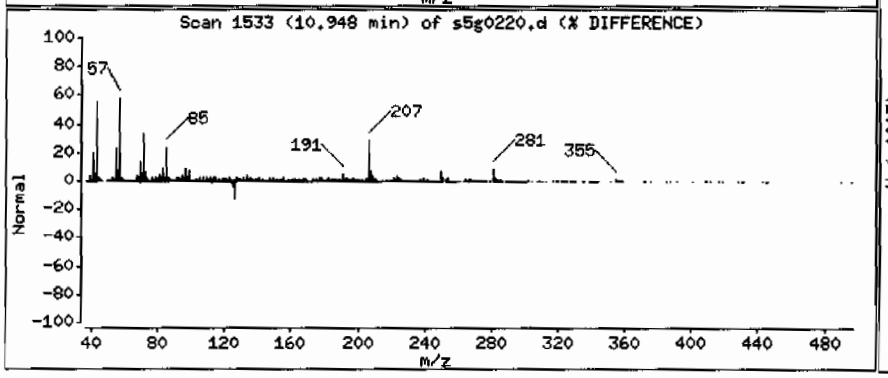

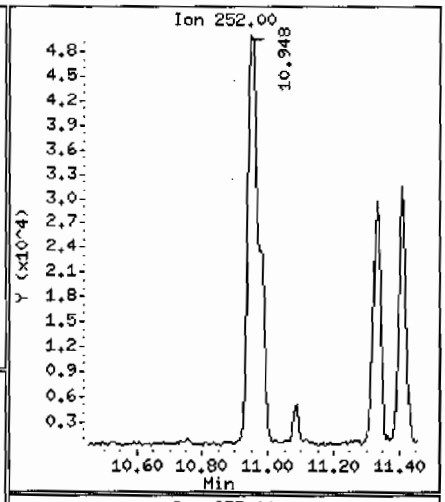

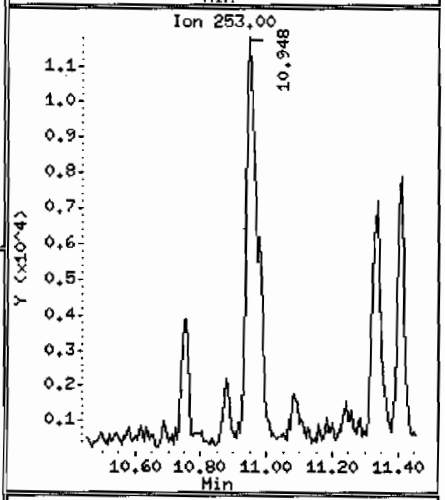

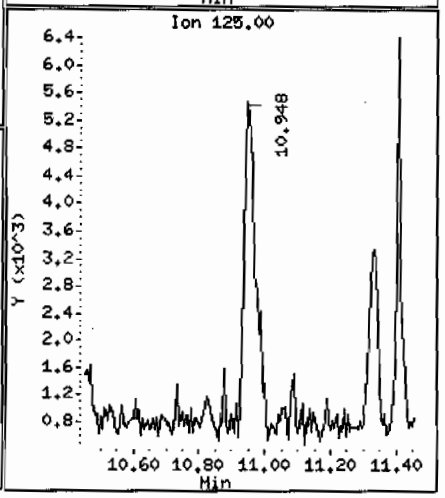

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: 1232503012188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 106 ug/Kg

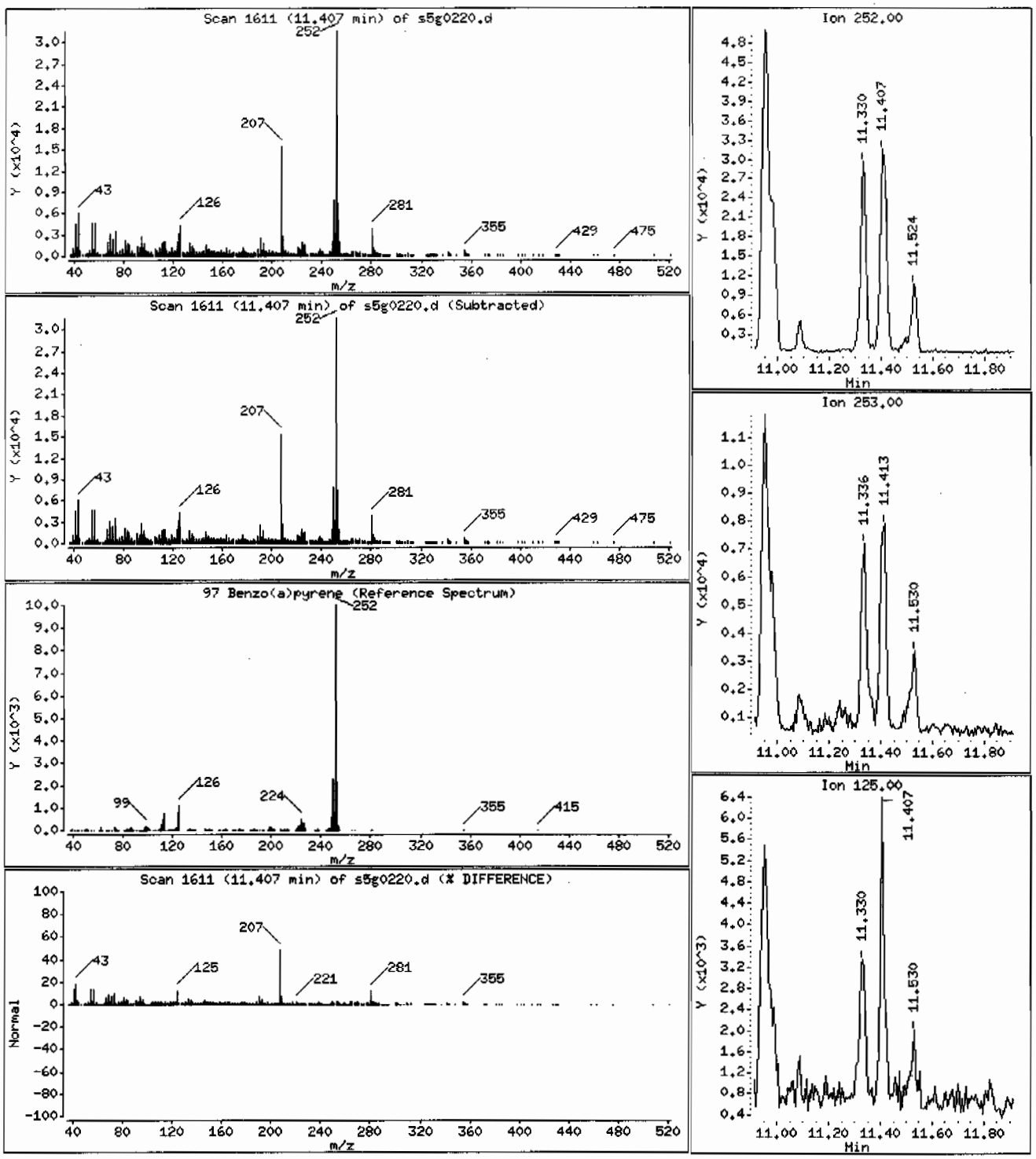

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: |2325030121881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 70.0 ug/Kg

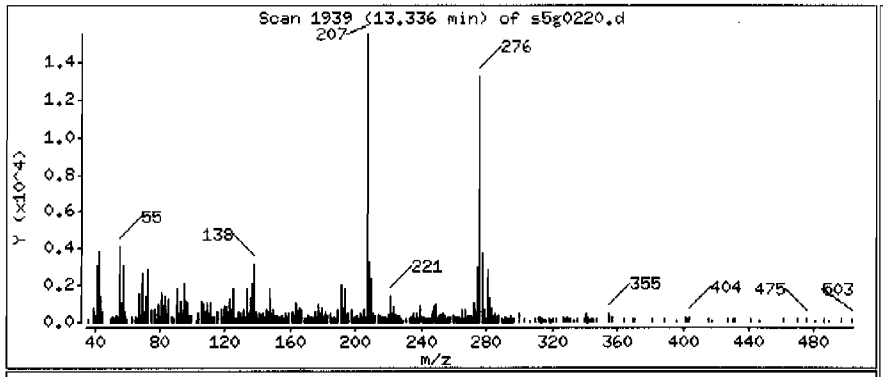

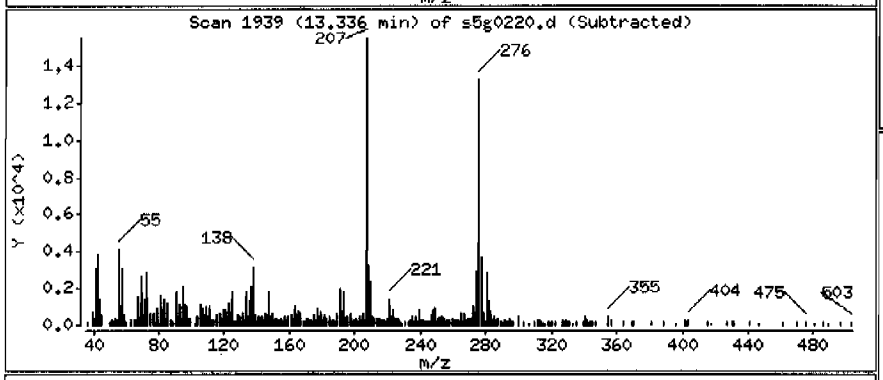

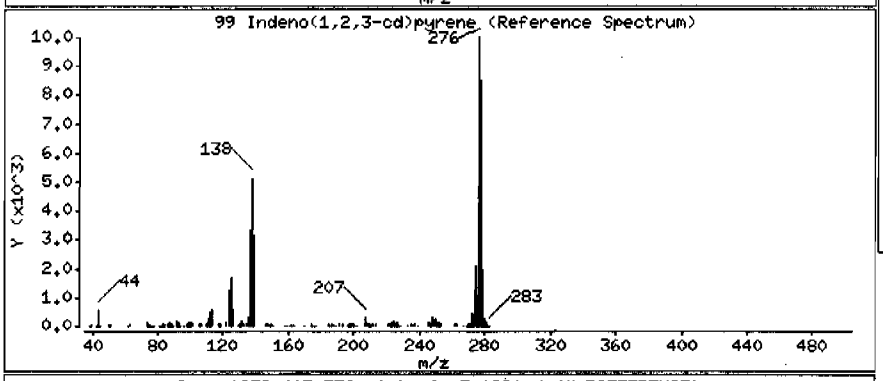

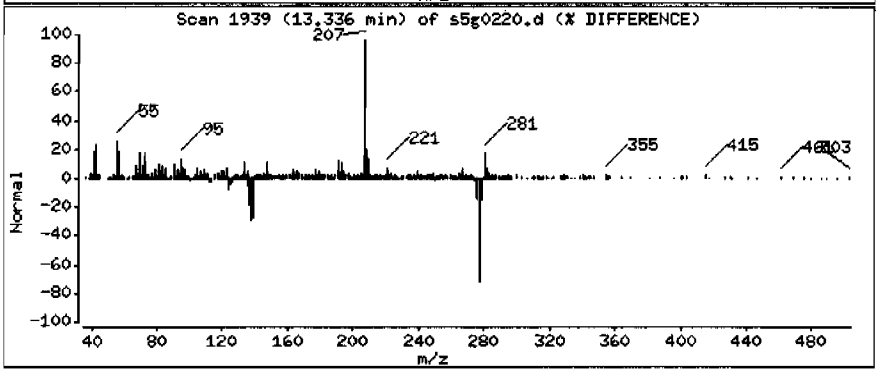

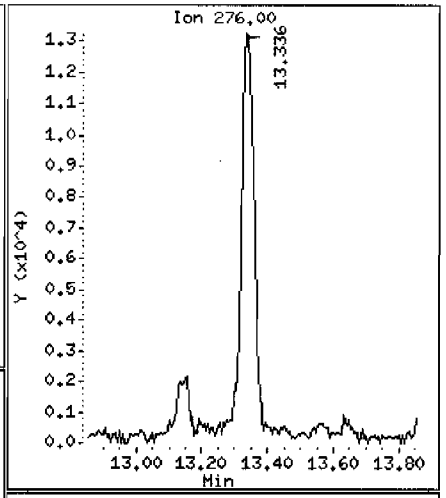

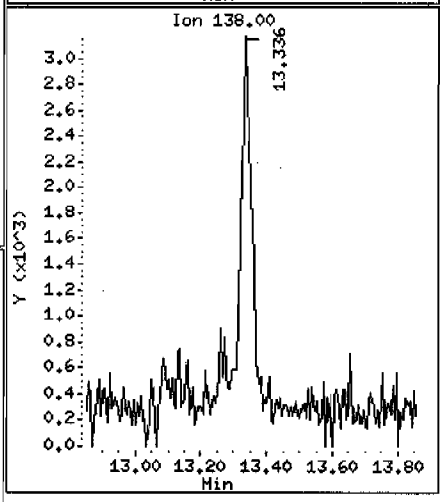

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: |2325030121881878111SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 94.6 ug/Kg

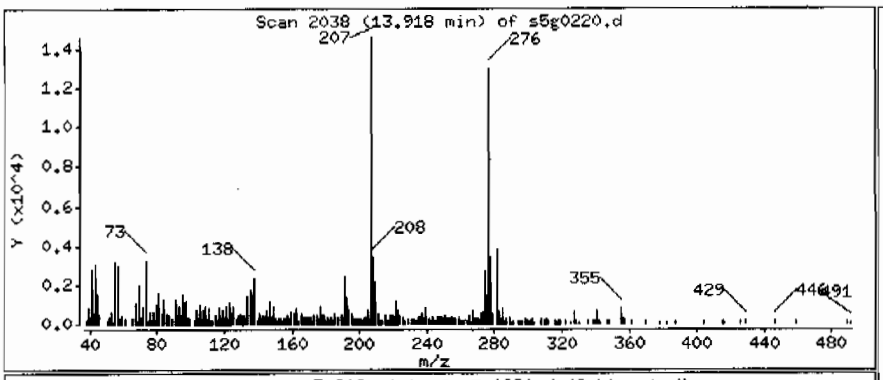

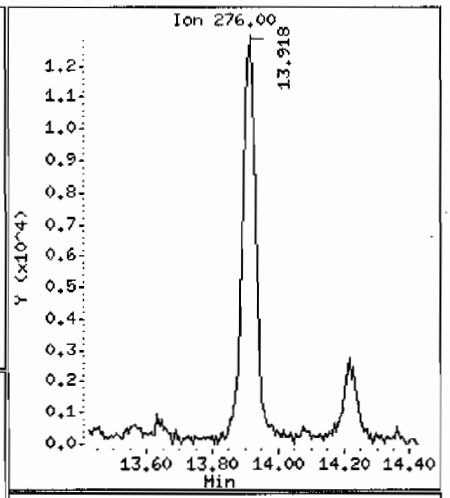

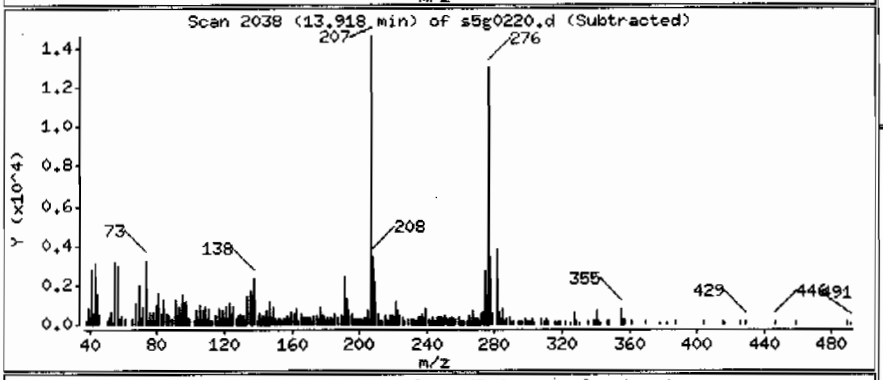

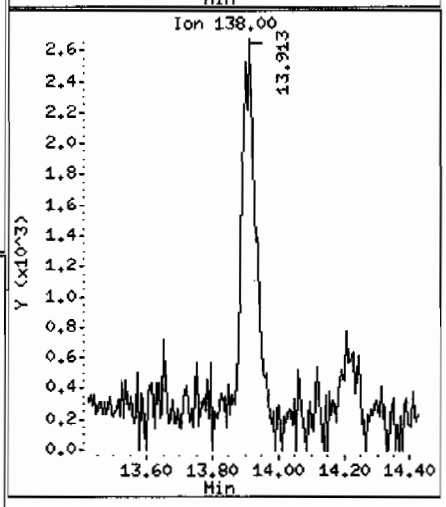

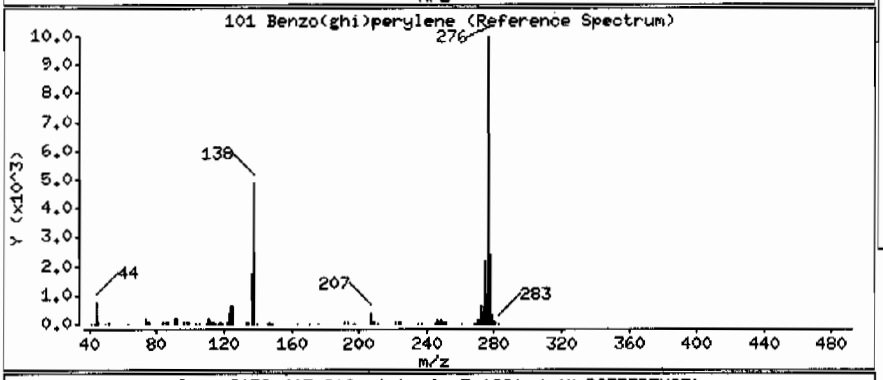

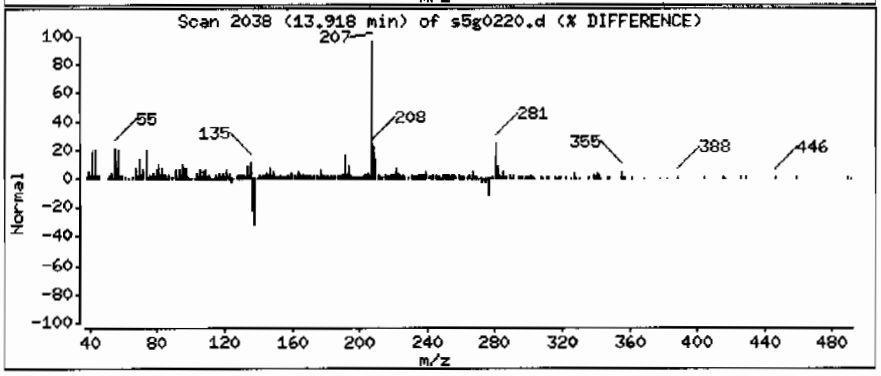

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: 1232503012188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7977	38	C6H12O2	116

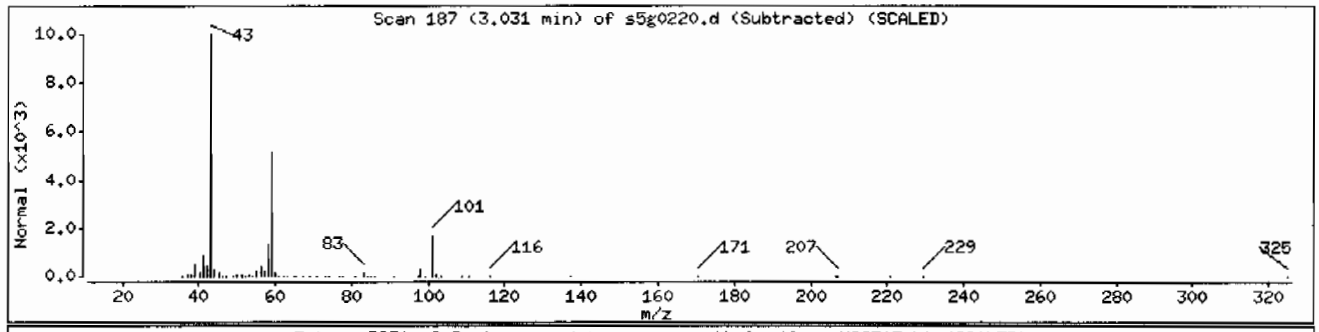

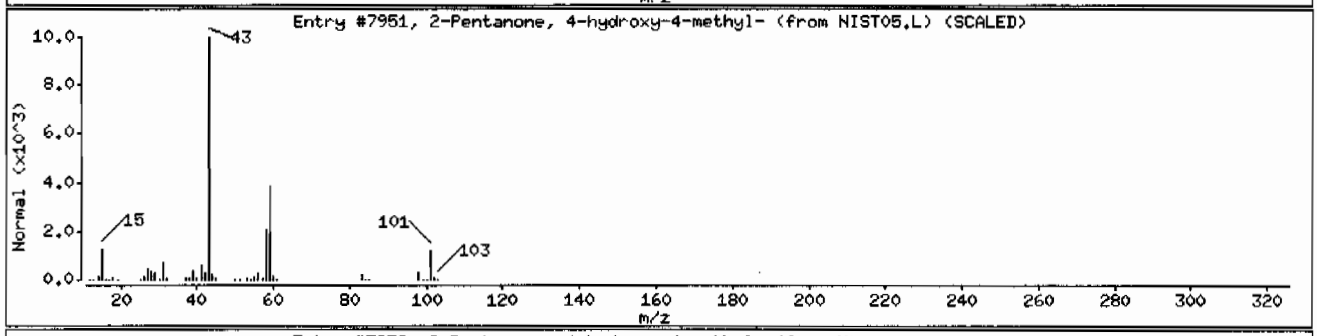

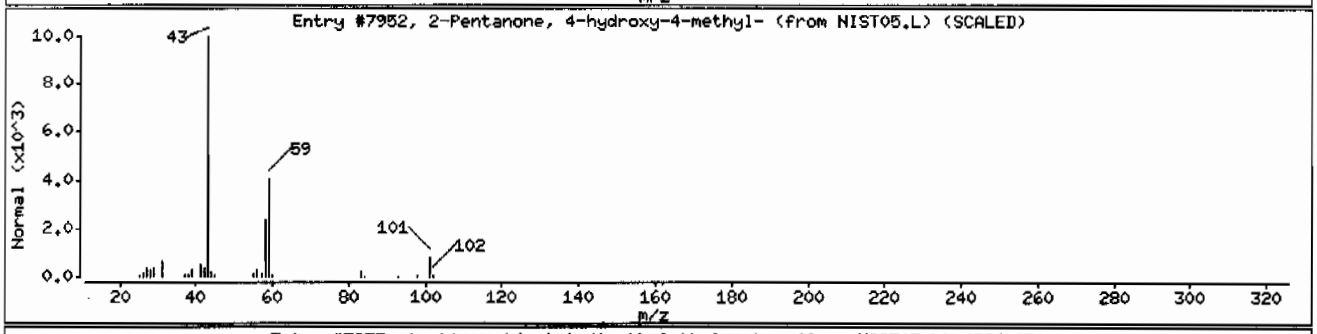

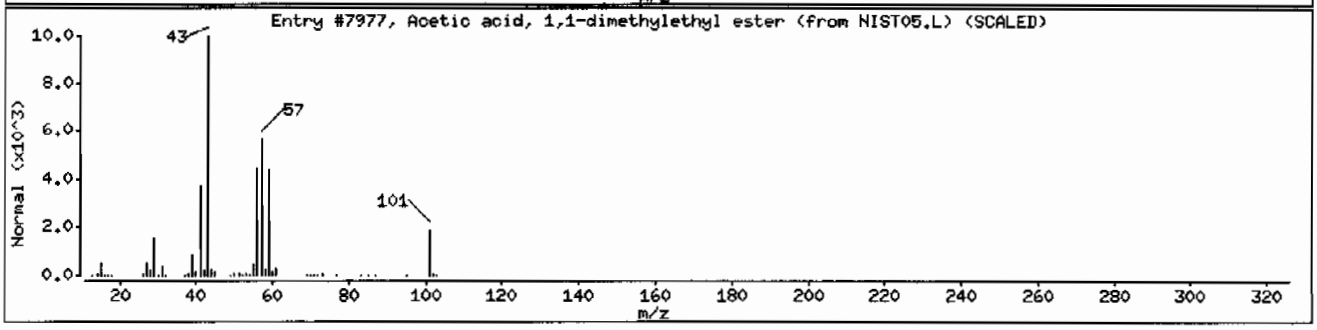

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: |2325030121881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Stigmast-4-en-3-one	1058-61-3	NIST05.L	173936	91	C29H480	412
Androst-4-en-3-one, 17-hydroxy-, (17.bet	58-22-0	NIST05.L	117326	72	C19H2802	288
Androst-4-en-3-one, 17-hydroxy-, (17.bet	58-22-0	NIST05.L	117325	55	C19H2802	288

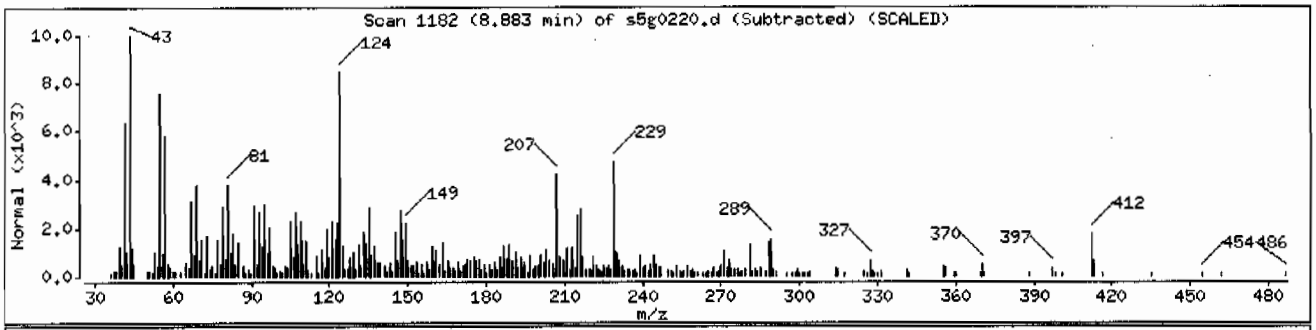

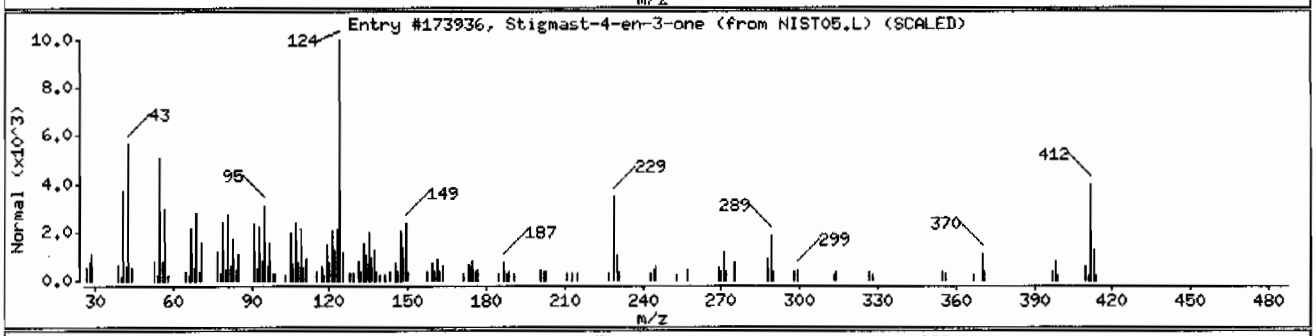

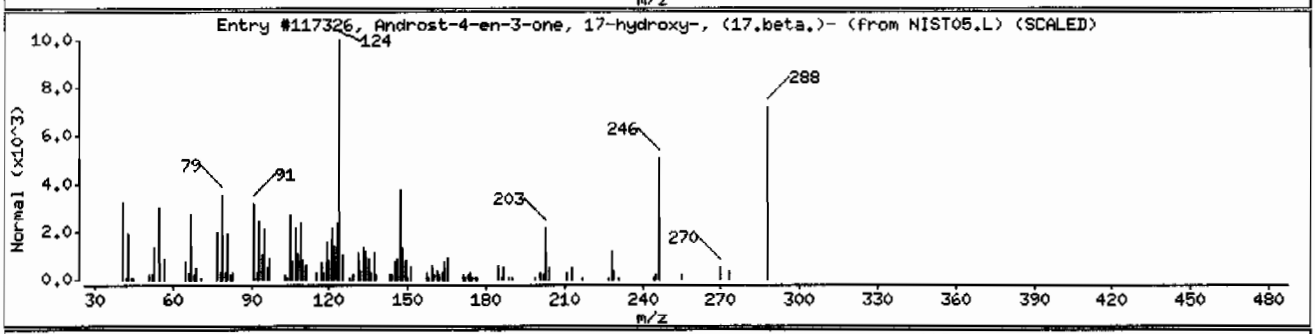

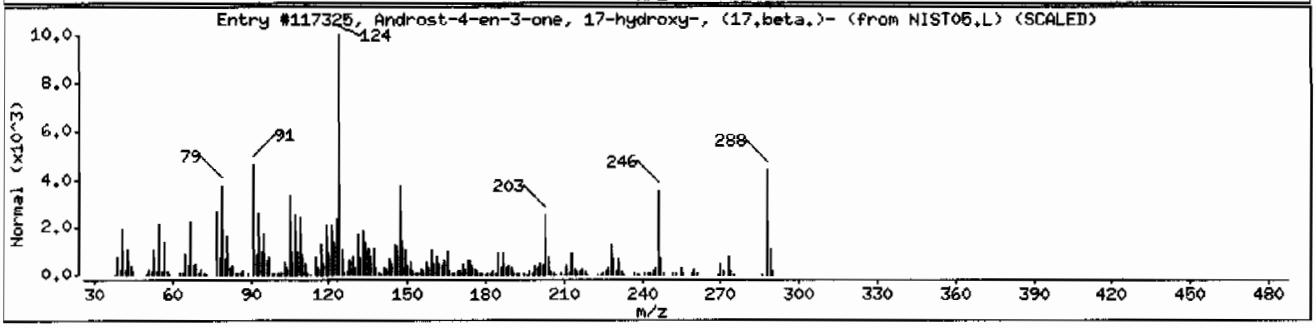

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372

Instrument: MSD5.i

Sample Info: |2325030121881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Pyrrolo[2,3-f]quinoline, 3-acetonitrile-	87361-85-1	NIST05.L	62206	38	C13H9N3	207
3'-Chlorooxanilic acid N'-(3-ethoxy-4-hy	328018-74-2	NIST05.L	157483	38	C17H16ClN3O4	361
Cyclopenteno[4,3-b]tetrahydrofuran, 3-[(	1000211-22-7	NIST05.L	156136	38	C19H18O5S	358

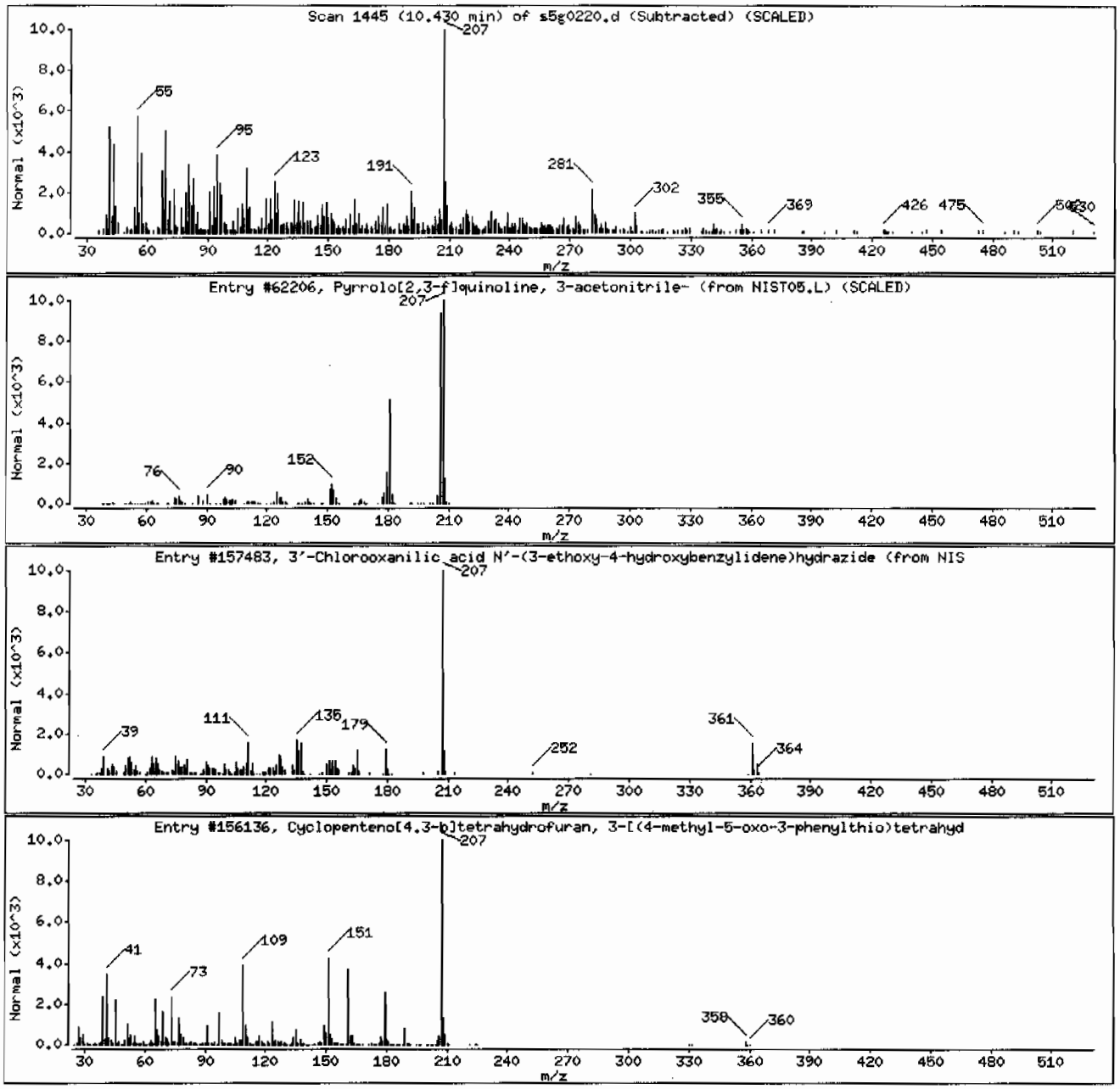

Data File: /chem/MSD5.i/s070209.b/s5g0220.d

Date : 02-JUL-2009 15:19

Client ID: CAMO-09-10372 Instrument: MSD5.i

Sample Info: |2325030121881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
3,5,6-Trimethyl-p-quinone, 2-(2,5-dioxot	126848-01-9	NIST05.L	111516	95	C13H12O5S	280
Benzo[e]pyrene	192-97-2	NIST05.L	93577	95	C20H12	252
Perylene	198-55-0	NIST05.L	93574	89	C20H12	252

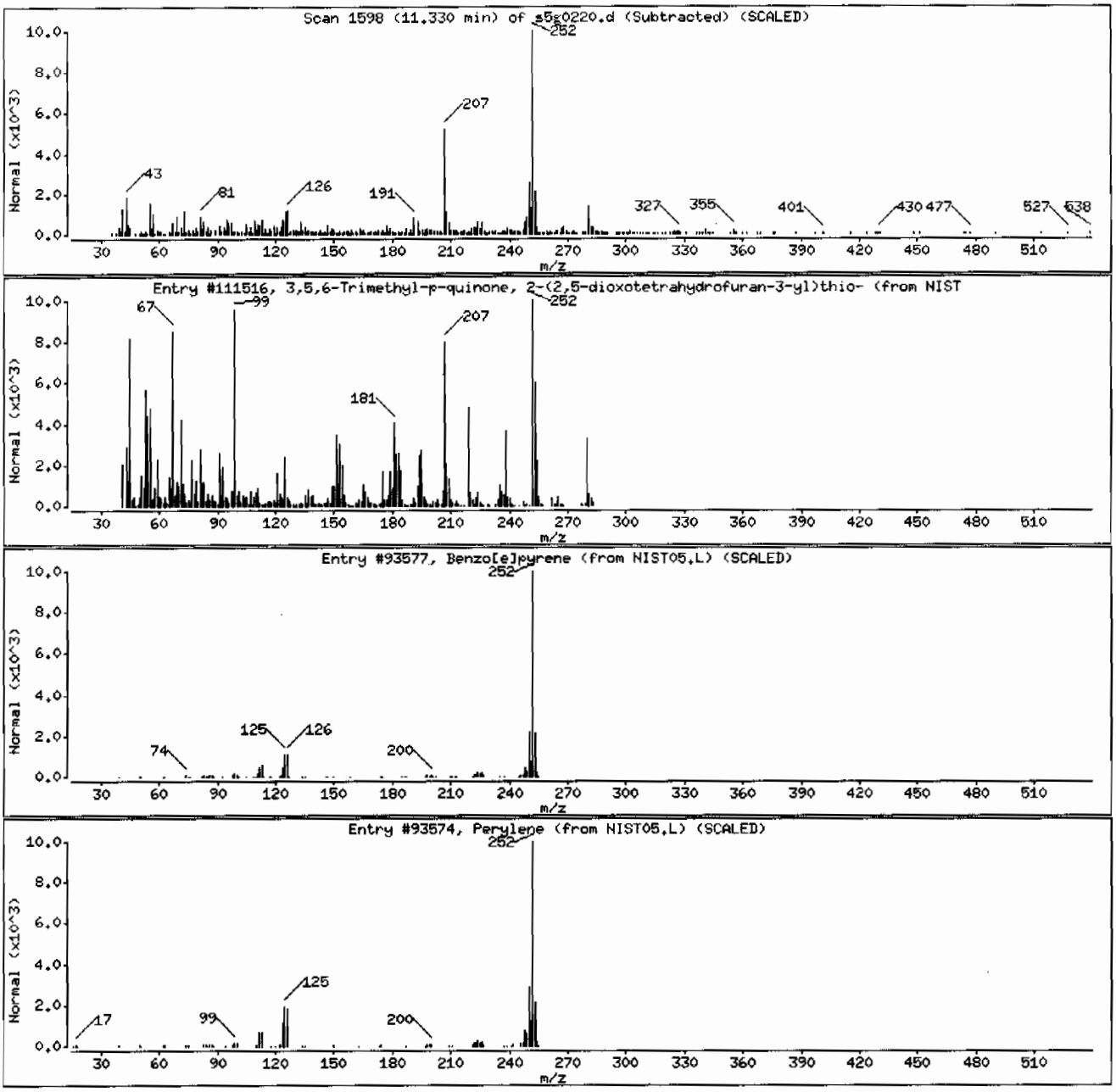

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503003	Date Received:	06/27/2009 09:05	%Moisture:	11.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10373	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 11:57	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0211.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.1	376
108-95-2	Phenol	U	376	ug/kg	75.1	376
95-57-8	2-Chlorophenol	U	376	ug/kg	75.1	376
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.1	376
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.1	376
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	75.1	376
83-32-9	Acenaphthene	U	37.6	ug/kg	12.4	37.6
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376
100-02-7	4-Nitrophenol	U	376	ug/kg	124	376
87-86-5	Pentachlorophenol	U	376	ug/kg	93.9	376
129-00-0	Pyrene	U	37.6	ug/kg	11.3	37.6
110-86-1	Pyridine	U	376	ug/kg	75.1	376
62-53-3	Aniline	U	376	ug/kg	113	376
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.1	376
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.1	376
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.1	376
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.1	376
95-48-7	o-Cresol	U	376	ug/kg	75.1	376
65794-96-9	m,p-Cresols	U	376	ug/kg	113	376
67-72-1	Hexachloroethane	U	376	ug/kg	75.1	376
98-95-3	Nitrobenzene	U	376	ug/kg	75.1	376
78-59-1	Isophorone	U	376	ug/kg	75.1	376
88-75-5	2-Nitrophenol	U	376	ug/kg	75.1	376
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	131	376
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.1	376
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.1	376
65-85-0	Benzoic acid	U	751	ug/kg	188	751
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6
106-47-8	4-Chloroaniline	U	376	ug/kg	75.1	376
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.1	376
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.51	37.6
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.1	376
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.1	376
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.1	376
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	12.4	37.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	376	ug/kg	75.1	376
99-09-2	3-Nitroaniline	U	376	ug/kg	75.1	376

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503003	Date Received:	06/27/2009 09:05	%Moisture:	11.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10373	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 11:57	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0211.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	376	ug/kg	75.1	376
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751
132-64-9	Dibenzofuran	U	376	ug/kg	75.1	376
84-66-2	Diethylphthalate	U	376	ug/kg	75.1	376
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	75.1	376
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.1	376
100-01-6	4-Nitroaniline	U	376	ug/kg	113	376
	p-Nitroaniline					
122-39-4	Diphenylamine	U	376	ug/kg	75.1	376
122-66-7	Azobenzene	U	376	ug/kg	75.1	376
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	75.1	376
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.1	376
85-01-8	Phenanthrene	U	37.6	ug/kg	11.3	37.6
120-12-7	Anthracene	U	37.6	ug/kg	7.51	37.6
84-74-2	Di-n-butylphthalate	U	376	ug/kg	75.1	376
206-44-0	Fluoranthene	U	37.6	ug/kg	11.3	37.6
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.1	376
56-55-3	Benzo(a)anthracene	U	37.6	ug/kg	11.3	37.6
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376
218-01-9	Chrysene	U	37.6	ug/kg	11.3	37.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.1	376
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.1	376
205-99-2	Benzo(b)fluoranthene	U	37.6	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	U	37.6	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene	U	37.6	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.6	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	U	37.6	ug/kg	11.3	37.6
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.1	376

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	209	ug/kg		JA
	Unknown	12.43	1060	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503003	**Date Received:**	06/27/2009 09:05	**%Moisture:**	11.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10373	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:57	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0211.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	13.22	1350	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0211.d
Lab Smp Id: 232503003 Client Smp ID: CAMO-09-10373
Inj Date : 02-JUL-2009 11:57
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503003|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.05000	weight of sample
M	11.37940	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	500392	40.0000	
* 29 Naphthalene-d8	136	4.878	4.889	(1.000)	1715766	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	1058886	40.0000	
* 67 Phenanthrene-d10	188	7.319	7.325	(1.000)	2004932	40.0000	
* 91 Chrysene-d12	240	9.736	9.747	(1.000)	1906260	40.0000	
* 98 Perylene-d12	264	11.489	11.495	(1.000)	1393079	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.797)	757748	68.9677	2590
$ 5 Phenol-d5	99	3.725	3.728	(0.930)	997741	68.8737	2590
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.896)	462458	36.3741	1360
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1016802	37.1296	1390
$ 60 2,4,6-Tribromophenol	329	6.742	6.747	(1.098)	337797	78.1856	2940
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.894)	1315986	45.1093	1690

ION RATIO REPORT

SV REPORT

Data file: s5g0211.d
Report Date: 07/02/2009 12:43
Lab. ID: 232503003 SampleType: SAMPLE
Injection Date: 02-JUL-2009 11:57
Operator: RMB Instrument: MSD5.i
Sample Info: |232503003|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	60431	3.72	3.80	80-120	100	(T)
93	1718	3.78	3.80	190-250	3	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	68108	4.37	4.25	80-120	100	(T)
42	45963	4.37	4.25	55-115	67	(T)
27 Benzoic acid		CAS#: 65-85-0				
105	1463	4.71	4.64	80-120	100	(T)
122	745	4.70	4.64	54-114	51	(Q)
77	685	4.77	4.64	50-110	47	(QT)
31 4-Chloroaniline		CAS#: 106-47-8				
127	316	4.93	4.92	80-120	100	( )
65	179	4.94	4.92	0- 55	57	(Q)
41 m-Nitroaniline		CAS#: 99-09-2				
138	217	5.87	6.09	80-120	100	(T)
92	3747	5.87	6.09	84-144	1720	(QT)
108	3827	5.87	6.09	0- 40	1757	(QT)
43 Dimethylphthalate		CAS#: 131-11-3				
163	230826	6.14	5.90	80-120	100	(T)
164	1058886	6.14	5.90	0- 40	459	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	141498	6.14	5.96	80-120	100	(T)
63	1800	6.14	5.96	55-115	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	141498	6.14	6.26	80-120	100	(T)
89	2567	6.14	6.26	38- 98	2	(QT)
63	1800	6.14	6.26	19- 79	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	13936	6.74	6.56	80-120	100	(T)
165	14724	6.74	6.56	61-121	106	(T)
167	5058	6.74	6.56	0- 44	36	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1365	6.74	6.57	80-120	100	(T)
105	1762	6.74	6.57	2- 62	129	(QT)
51	2113	6.74	6.57	46-106	155	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	23112	6.74	6.93	80-120	100	(T)
141	117839	6.74	6.93	34- 94	510	(QT)
250	47477	6.74	6.93	68-128	205	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0211.d
Lab Smp Id: 232503003 Client Smp ID: CAMO-09-10373
Inj Date : 02-JUL-2009 11:57
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503003|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariabl

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.05000	weight of sample
M	11.37940	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.007	3215786	40.000
* 98 Perylene-d12	11.489	3687332	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.031	447176	5.56225980	209	0		0	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
12.430	2590163	28.0979560	1060	0		0	98
Unknown				CAS #:			
13.224	3308315	35.8884357	1350	0		0	98

Data File: /chem/MSD5.i/s070209.b/s5g0211.d
Date : 02-JUL-2009 11:57
Client ID: CAMO-09-10373
Sample Info: 1232503003|881878|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

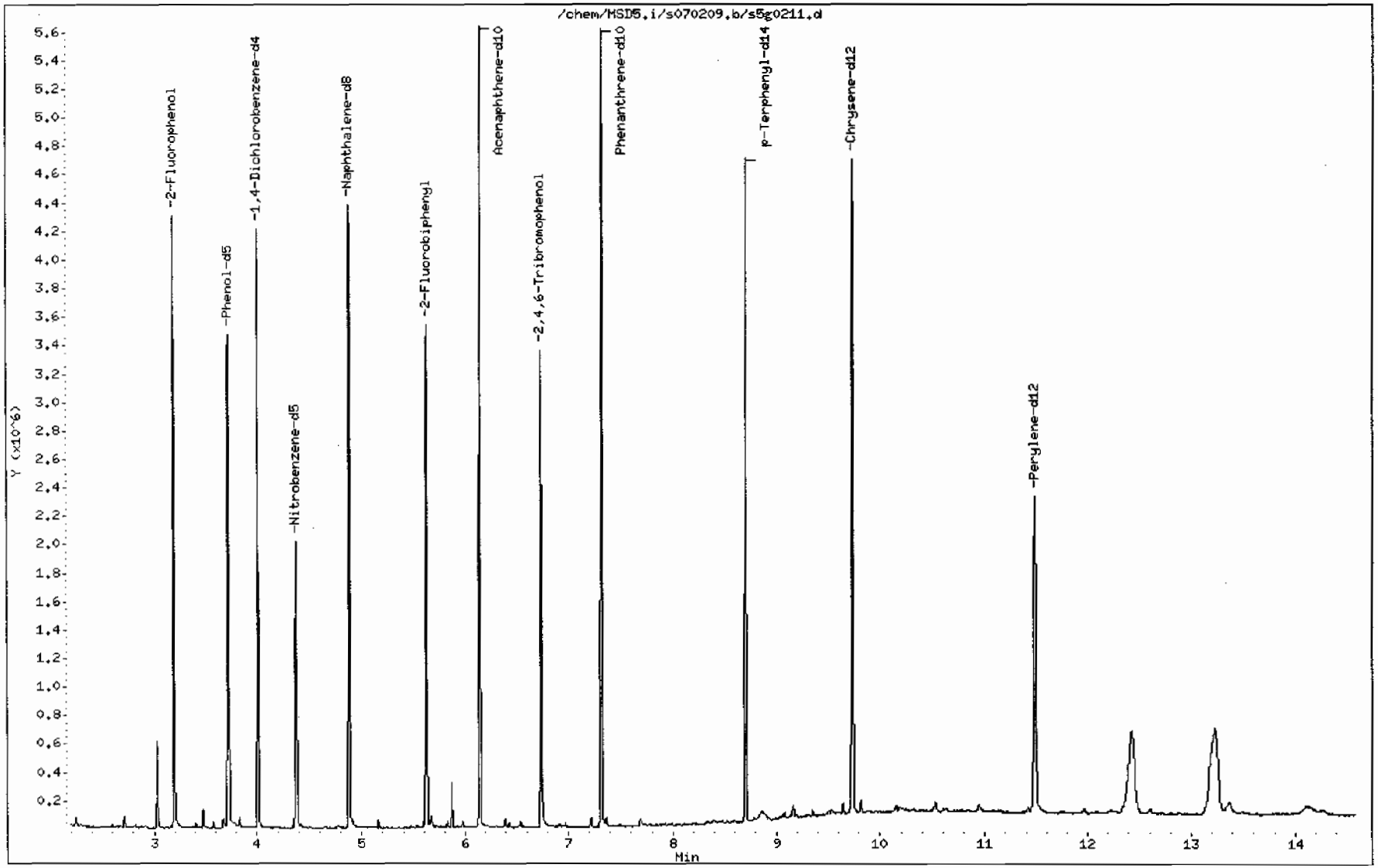

Data File: /chem/MSD5.i/s070209.b/s5g0211.d

Date : 02-JUL-2009 11:57

Client ID: CAMO-09-10373

Instrument: MSD5.i

Sample Info: 1232503003188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	64	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116

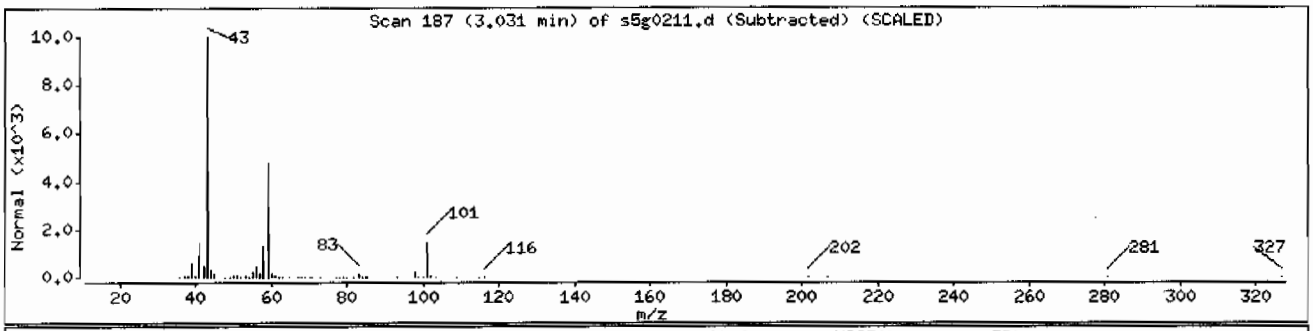

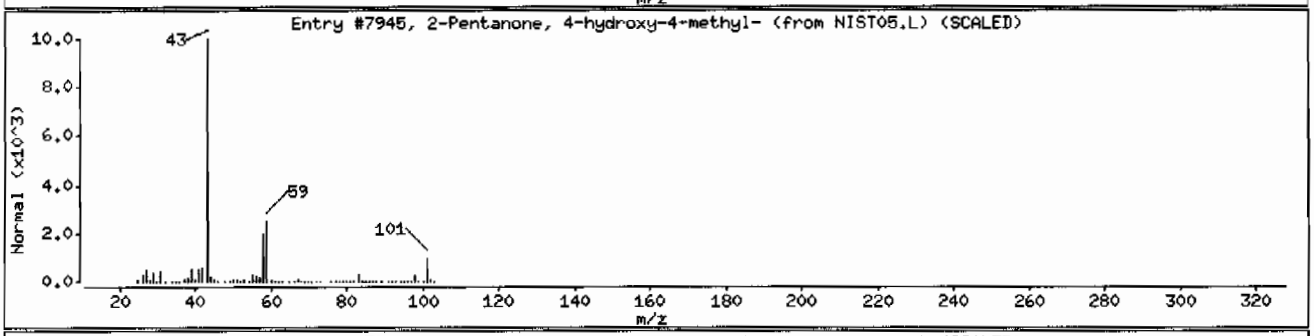

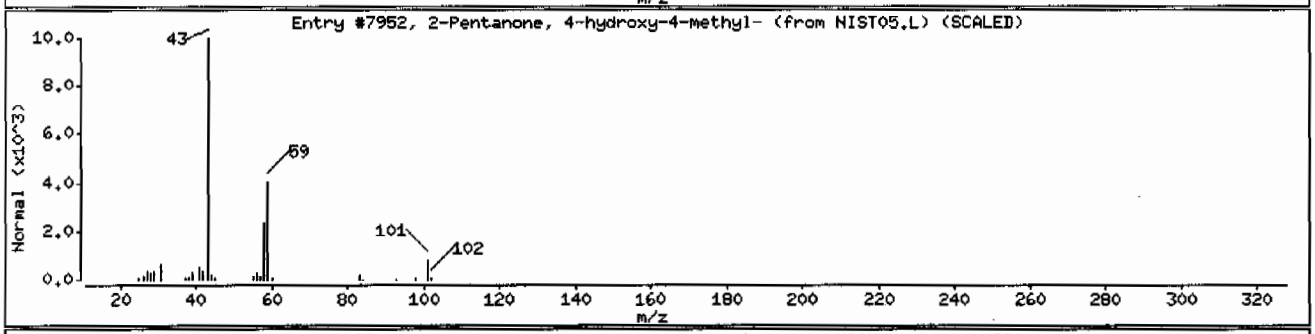

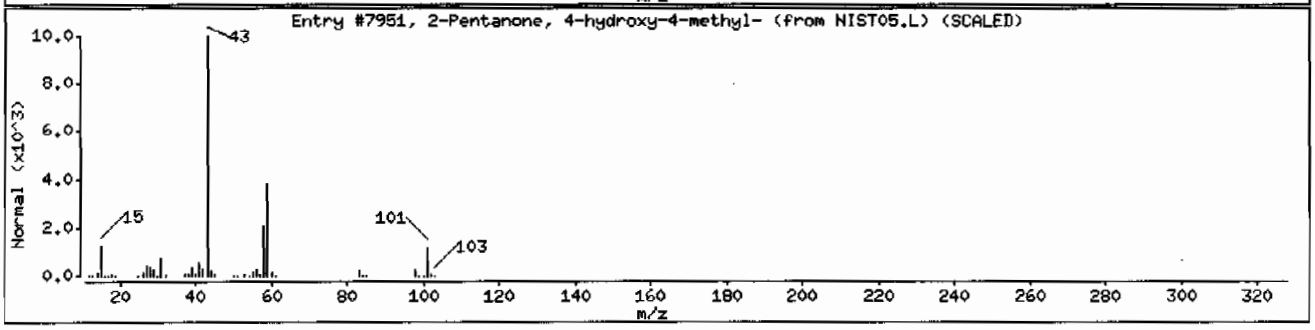

Data File: /chem/MSD5.i/s070209.b/s5g0211.d

Date : 02-JUL-2009 11:57

Client ID: CAMO-09-10373

Instrument: MSD5.i

Sample Info: 1232503003188187811SVMF11ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Acetic acid, 2-(2-propyl-1-benzimidazoly	331736-92-6	NIST05.L	69668	53	C12H14N2O2	218
6-tert-Butyl-2,3-dihydro-benzo[1,4]dioxi	1000318-31-4	NIST05.L	82250	25	C13H16O4	236
1,3-Benzodioxole, 5-[3-acetaminopropyl]-	1000124-33-0	NIST05.L	71846	22	C12H15NO3	221

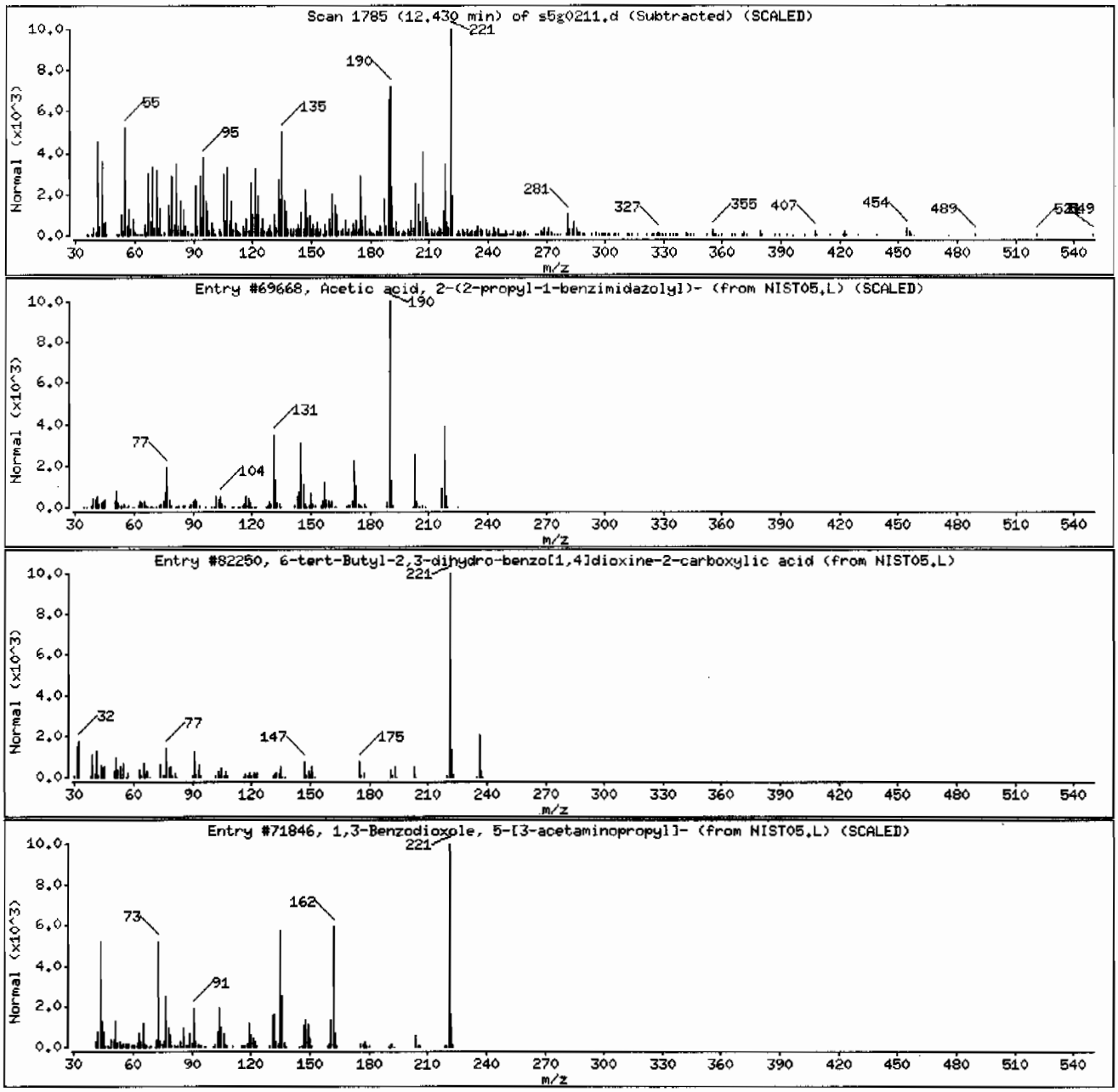

Data File: /chem/MSD5.i/s070209.b/s5g0211.d

Date : 02-JUL-2009 11:57

Client ID: CAMO-09-10373

Instrument: MSD5.i

Sample Info: 1232503003188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
3-Methoxymethyl-2,5,5,8a-tetramethyl-6,7	64201-73-6	NIST05.L	82517	53	C15H2402	236
2H-Cyclopropa[a]naphthalen-2-one, 1,1a,4	6831-17-0	NIST05.L	69993	43	C15H220	218
2(1H)Naphthalenone, 3,5,6,7,8,8a-hexahyd	1000188-66-5	NIST05.L	69976	35	C15H220	218

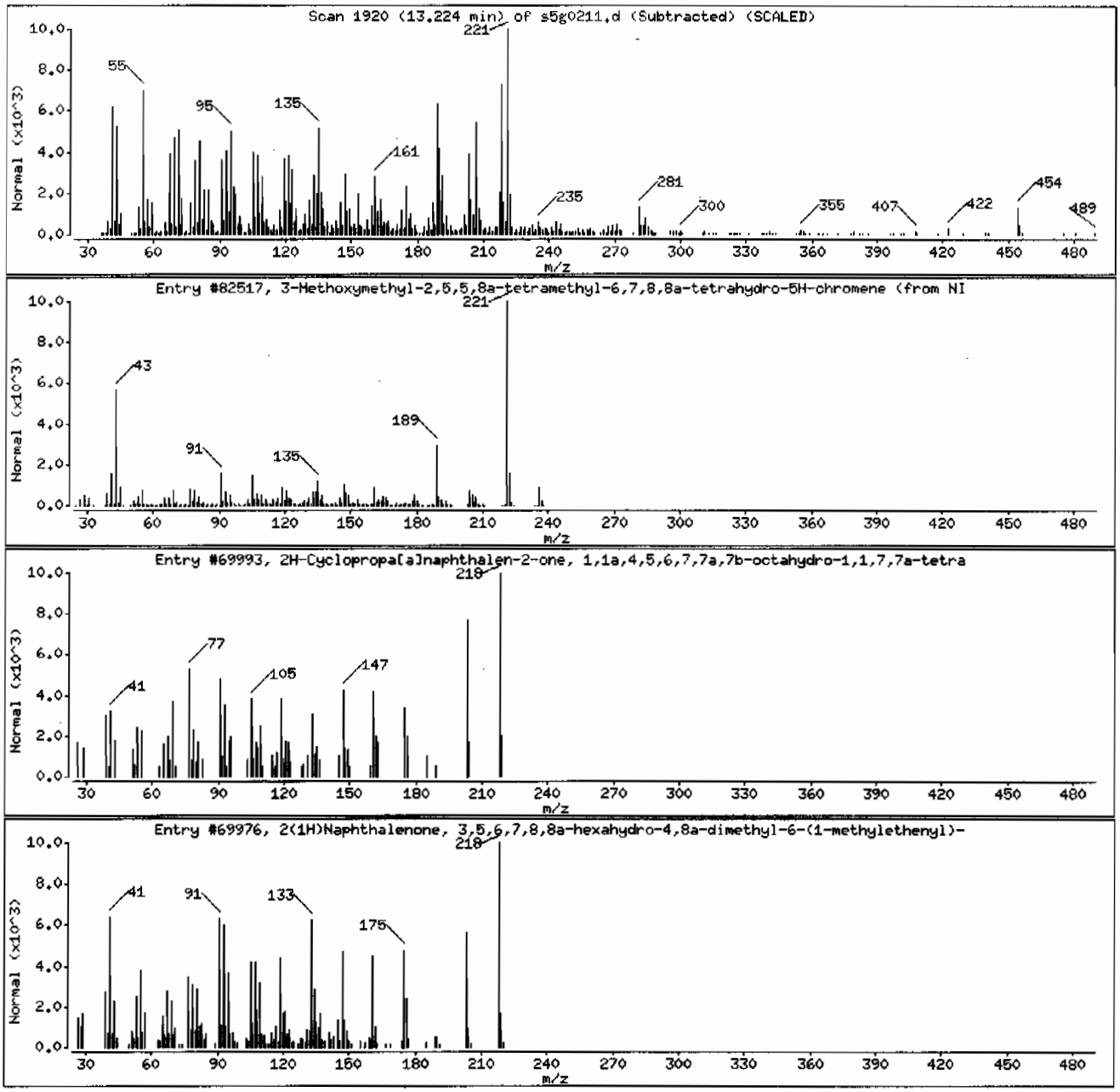

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503007	Date Received:	06/27/2009 09:05	%Moisture:	3.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10374	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 13:27	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0215.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	346	ug/kg	69.2	346
108-95-2	Phenol	U	346	ug/kg	69.2	346
95-57-8	2-Chlorophenol	U	346	ug/kg	69.2	346
106-46-7	1,4-Dichlorobenzene	U	346	ug/kg	69.2	346
621-64-7	N-Nitrosodipropylamine	U	346	ug/kg	69.2	346
59-50-7	4-Chloro-3-methylphenol	U	346	ug/kg	69.2	346
83-32-9	Acenaphthene	U	34.6	ug/kg	11.4	34.6
121-14-2	2,4-Dinitrotoluene	U	346	ug/kg	34.6	346
100-02-7	4-Nitrophenol	U	346	ug/kg	114	346
87-86-5	Pentachlorophenol	U	346	ug/kg	86.5	346
129-00-0	Pyrene	U	34.6	ug/kg	10.4	34.6
110-86-1	Pyridine	U	346	ug/kg	69.2	346
62-53-3	Aniline	U	346	ug/kg	104	346
111-44-4	bis(2-Chloroethyl) ether	U	346	ug/kg	69.2	346
541-73-1	1,3-Dichlorobenzene	U	346	ug/kg	69.2	346
100-51-6	Benzyl alcohol	U	346	ug/kg	104	346
95-50-1	1,2-Dichlorobenzene	U	346	ug/kg	69.2	346
108-60-1	bis(2-Chloroisopropyl)ether	U	346	ug/kg	69.2	346
95-48-7	o-Cresol	U	346	ug/kg	69.2	346
65794-96-9	m,p-Cresols	U	346	ug/kg	104	346
67-72-1	Hexachloroethane	U	346	ug/kg	69.2	346
98-95-3	Nitrobenzene	U	346	ug/kg	69.2	346
78-59-1	Isophorone	U	346	ug/kg	69.2	346
88-75-5	2-Nitrophenol	U	346	ug/kg	69.2	346
105-67-9	2,4-Dimethylphenol	U	346	ug/kg	121	346
111-91-1	bis(2-Chloroethoxy)methane	U	346	ug/kg	69.2	346
120-83-2	2,4-Dichlorophenol	U	346	ug/kg	69.2	346
65-85-0	Benzoic acid	U	692	ug/kg	173	692
91-20-3	Naphthalene	U	34.6	ug/kg	10.4	34.6
106-47-8	4-Chloroaniline	U	346	ug/kg	69.2	346
87-68-3	Hexachlorobutadiene	U	346	ug/kg	69.2	346
91-57-6	2-Methylnaphthalene	U	34.6	ug/kg	6.92	34.6
77-47-4	Hexachlorocyclopentadiene	U	346	ug/kg	69.2	346
88-06-2	2,4,6-Trichlorophenol	U	346	ug/kg	69.2	346
95-95-4	2,4,5-Trichlorophenol	U	346	ug/kg	69.2	346
91-58-7	2-Chloronaphthalene	U	34.6	ug/kg	11.4	34.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	346	ug/kg	69.2	346
99-09-2	3-Nitroaniline	U	346	ug/kg	69.2	346

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503007	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10374	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 13:27	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0215.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	346	ug/kg	69.2	346
606-20-2	2,6-Dinitrotoluene	U	346	ug/kg	34.6	346
208-96-8	Acenaphthylene	U	34.6	ug/kg	10.4	34.6
51-28-5	2,4-Dinitrophenol	U	692	ug/kg	131	692
132-64-9	Dibenzofuran	U	346	ug/kg	69.2	346
84-66-2	Diethylphthalate	U	346	ug/kg	69.2	346
86-73-7	Fluorene	U	34.6	ug/kg	10.4	34.6
7005-72-3	4-Chlorophenylphenylether	U	346	ug/kg	69.2	346
534-52-1	2-Methyl-4,6-dinitrophenol	U	346	ug/kg	69.2	346
100-01-6	4-Nitroaniline	U	346	ug/kg	104	346
	p-Nitroaniline					
122-39-4	Diphenylamine	U	346	ug/kg	69.2	346
122-66-7	Azobenzene	U	346	ug/kg	69.2	346
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	346	ug/kg	69.2	346
118-74-1	Hexachlorobenzene	U	346	ug/kg	69.2	346
85-01-8	Phenanthrene	U	34.6	ug/kg	10.4	34.6
120-12-7	Anthracene	U	34.6	ug/kg	6.92	34.6
84-74-2	Di-n-butylphthalate	U	346	ug/kg	69.2	346
206-44-0	Fluoranthene	U	34.6	ug/kg	10.4	34.6
85-68-7	Butylbenzylphthalate	U	346	ug/kg	69.2	346
56-55-3	Benzo(a)anthracene	U	34.6	ug/kg	10.4	34.6
91-94-1	3,3'-Dichlorobenzidine	U	346	ug/kg	104	346
218-01-9	Chrysene	U	34.6	ug/kg	10.4	34.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	346	ug/kg	69.2	346
117-84-0	Di-n-octylphthalate	U	346	ug/kg	69.2	346
205-99-2	Benzo(b)fluoranthene	U	34.6	ug/kg	10.4	34.6
207-08-9	Benzo(k)fluoranthene	U	34.6	ug/kg	10.4	34.6
50-32-8	Benzo(a)pyrene	U	34.6	ug/kg	10.4	34.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.6	ug/kg	10.4	34.6
53-70-3	Dibenzo(a,h)anthracene	U	34.6	ug/kg	10.4	34.6
191-24-2	Benzo(ghi)perylene	U	34.6	ug/kg	10.4	34.6
120-82-1	1,2,4-Trichlorobenzene	U	346	ug/kg	69.2	346

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	178	ug/kg		JA
25269-17-4	Thunbergol	8.21	263	ug/kg	92	NJ

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0215.d
Lab Smp Id: 232503007 Client Smp ID: CAMO-09-10374
Inj Date : 02-JUL-2009 13:27
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503007|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	3.61370	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	477544	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1624209	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	1008643	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	1912619	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1687276	40.0000	
* 98 Perylene-d12	264	11.489	11.495	(1.000)	1009349	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.797)	664827	63.4055	2190
$ 5 Phenol-d5	99	3.725	3.728	(0.930)	853872	61.7626	2140
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	403165	33.4980	1160
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	906739	34.7599	1200
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	294486	71.5562	2470
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	1109442	42.9650	1480

ION RATIO REPORT

SV REPORT

Data file: s5g0215.d
Report Date: 07/02/2009 13:46
Lab. ID: 232503007 SampleType: SAMPLE
Injection Date: 02-JUL-2009 13:27
Operator: RMB Instrument: MSD5.i
Sample Info: |232503007|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	52049	3.72	3.80	80-120	100	(T)
93	2292	3.68	3.80	190-250	4	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	59303	4.37	4.25	80-120	100	(T)
42	37809	4.37	4.25	55-115	64	(T)
27 Benzoic acid		CAS#: 65-85-0				
105	1575	4.65	4.64	80-120	100	( )
122	821	4.65	4.64	54-114	52	(Q)
77	2163	4.65	4.64	50-110	137	(Q)
31 4-Chloroaniline		CAS#: 106-47-8				
127	109	4.90	4.92	80-120	100	( )
65	5027	4.88	4.92	0- 55	4586	(Q)
41 m-Nitroaniline		CAS#: 99-09-2				
138	266	6.14	6.09	80-120	100	( )
92	6110	6.14	6.09	84-144	2290	(Q)
108	21576	6.14	6.09	0- 40	8085	(Q)
43 Dimethylphthalate		CAS#: 131-11-3				
163	217832	6.14	5.90	80-120	100	(T)
164	1008643	6.14	5.90	0- 40	463	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	134736	6.14	5.96	80-120	100	(T)
63	1694	6.14	5.96	55-115	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	134736	6.14	6.26	80-120	100	(T)
89	2132	6.14	6.26	38- 98	2	(QT)
63	1694	6.14	6.26	19- 79	1	(QT)
53 Fluorene				CAS#: 86-73-7		
166	12346	6.74	6.56	80-120	100	(T)
165	13488	6.74	6.56	61-121	109	(T)
167	4578	6.74	6.56	0- 44	37	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	1251	6.74	6.57	80-120	100	(T)
105	1851	6.74	6.57	2- 62	148	(QT)
51	1718	6.74	6.57	46-106	137	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	20533	6.74	6.93	80-120	100	(T)
141	106511	6.74	6.93	34- 94	519	(QT)
250	41406	6.74	6.93	68-128	202	(QT)
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	10975	9.74	9.73	80-120	100	( )
226	1182	9.72	9.73	0- 56	11	( )
229	1330	9.74	9.73	0- 50	12	( )
92 Chrysene				CAS#: 218-01-9		
228	10975	9.74	9.77	80-120	100	( )
229	1580	9.74	9.77	0- 50	14	( )
226	1198	9.72	9.77	0- 60	11	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0215.d
Lab Smp Id: 232503007 Client Smp ID: CAMO-09-10374
Inj Date : 02-JUL-2009 13:27
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503007|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	3.61370	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.007	3034884	40.000
* 67 Phenanthrene-d10	7.325	4665608	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.031	389672	5.13591124	178	0		0	10

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	========	======
Thunbergol				CAS #: 25269-17-4			
8.207	886781	7.60270161	263	92	NIST05.L	118732	67

Data File: /chem/MSD5.i/s070209.b/s5g0215.d
Date : 02-JUL-2009 13:27
Client ID: CAMO-09-10374
Sample Info: 1232503007188187811|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

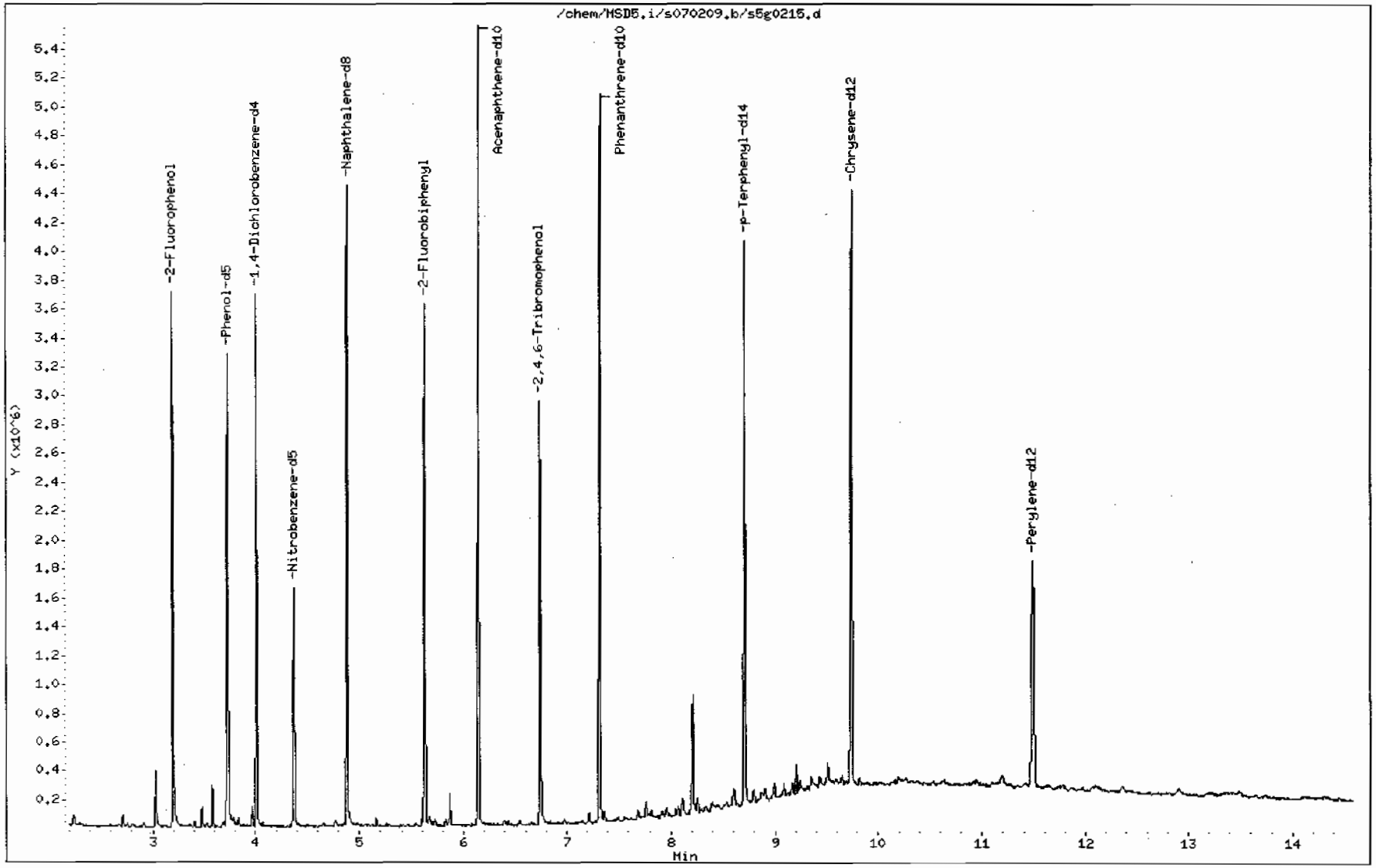

Data File: /chem/MSD5.i/s070209.b/s5g0215.d

Date : 02-JUL-2009 13:27

Client ID: CAMO-09-10374

Instrument: MSD5.i

Sample Info: |232503007|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	23	C6H12O2	116

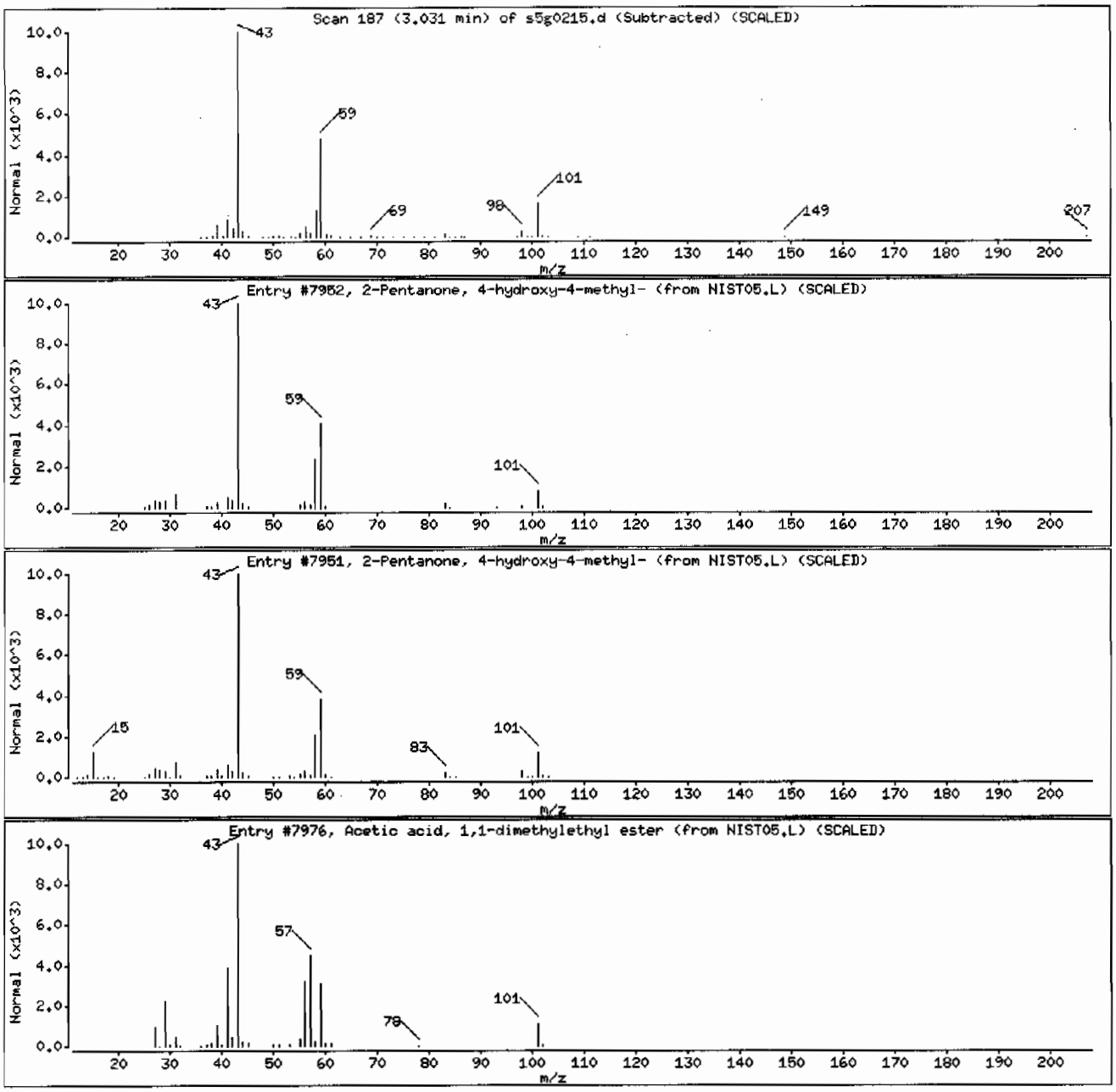

Data File: /chem/MSD5.i/s070209.b/s5g0215.d

Date : 02-JUL-2009 13:27

Client ID: CAMO-09-10374

Instrument: MSD5.i

Sample Info: |232503007|88187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Thunbergol	25269-17-4	NIST05.L	118732	92	C20H340	290
Caryophyllene oxide	1139-30-6	NIST05.L	71352	44	C15H240	220
Ledol	577-27-5	NIST05.L	72883	42	C15H260	222

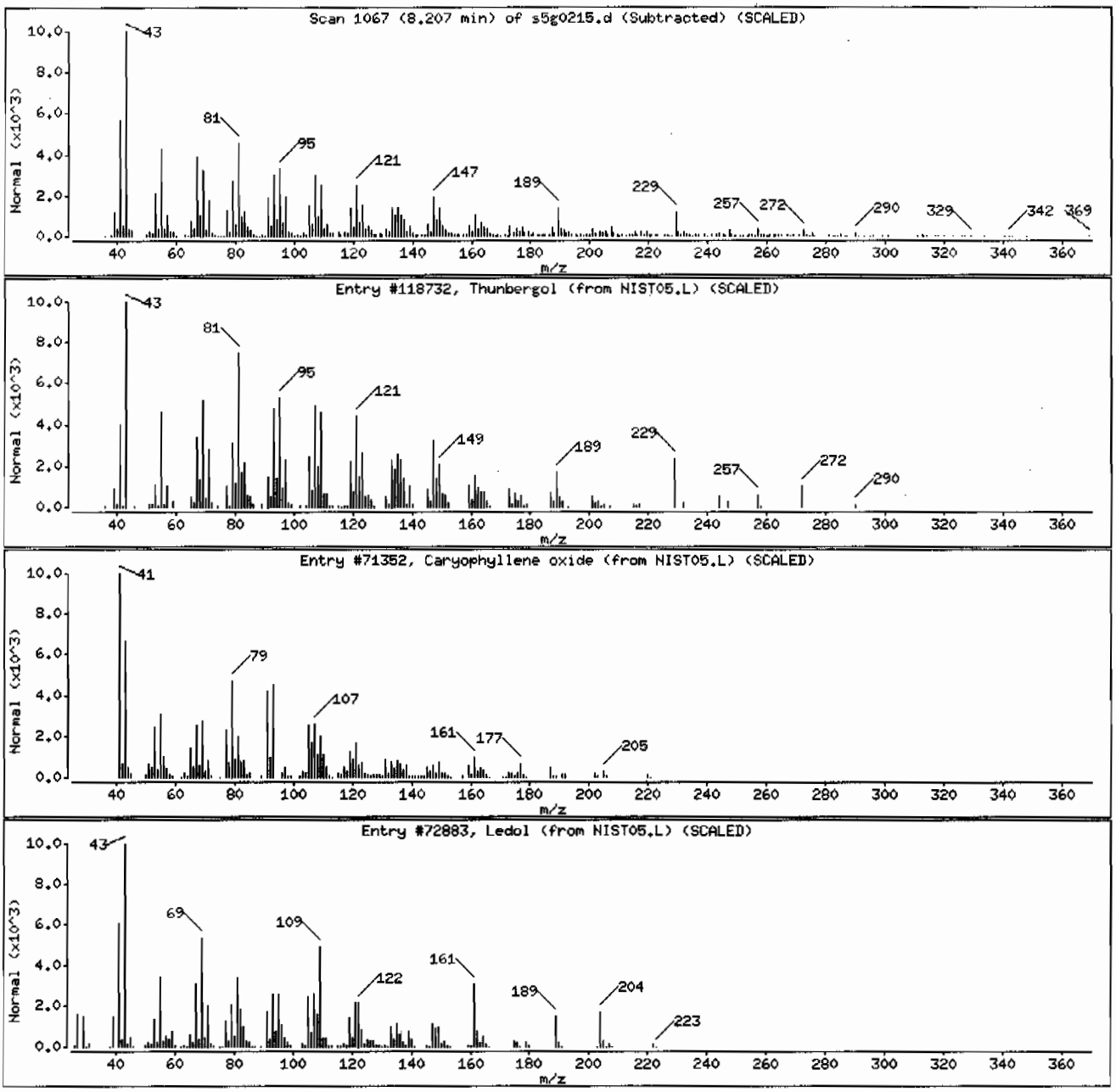

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503001	Date Received:	06/27/2009 09:05	%Moisture:	3.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10375	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 10:27	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0207.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	345	ug/kg	68.9	345
108-95-2	Phenol	U	345	ug/kg	68.9	345
95-57-8	2-Chlorophenol	U	345	ug/kg	68.9	345
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	68.9	345
621-64-7	N-Nitrosodipropylamine	U	345	ug/kg	68.9	345
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	68.9	345
83-32-9	Acenaphthene	U	34.5	ug/kg	11.4	34.5
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345
100-02-7	4-Nitrophenol	U	345	ug/kg	114	345
87-86-5	Pentachlorophenol	U	345	ug/kg	86.1	345
129-00-0	Pyrene	U	34.5	ug/kg	10.3	34.5
110-86-1	Pyridine	U	345	ug/kg	68.9	345
62-53-3	Aniline	U	345	ug/kg	103	345
111-44-4	bis(2-Chloroethyl) ether	U	345	ug/kg	68.9	345
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	68.9	345
100-51-6	Benzyl alcohol	U	345	ug/kg	103	345
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	68.9	345
108-60-1	bis(2-Chloroisopropyl)ether	U	345	ug/kg	68.9	345
95-48-7	o-Cresol	U	345	ug/kg	68.9	345
65794-96-9	m,p-Cresols	U	345	ug/kg	103	345
67-72-1	Hexachloroethane	U	345	ug/kg	68.9	345
98-95-3	Nitrobenzene	U	345	ug/kg	68.9	345
78-59-1	Isophorone	U	345	ug/kg	68.9	345
88-75-5	2-Nitrophenol	U	345	ug/kg	68.9	345
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	121	345
111-91-1	bis(2-Chloroethoxy)methane	U	345	ug/kg	68.9	345
120-83-2	2,4-Dichlorophenol	U	345	ug/kg	68.9	345
65-85-0	Benzoic acid	J	459	ug/kg	172	689
91-20-3	Naphthalene	U	34.5	ug/kg	10.3	34.5
106-47-8	4-Chloroaniline	U	345	ug/kg	68.9	345
87-68-3	Hexachlorobutadiene	U	345	ug/kg	68.9	345
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.89	34.5
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	68.9	345
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	68.9	345
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	68.9	345
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	11.4	34.5
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	345	ug/kg	68.9	345
99-09-2	3-Nitroaniline	U	345	ug/kg	68.9	345

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503001	Date Received:	06/27/2009 09:05	%Moisture:	3.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10375	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 10:27	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0207.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	345	ug/kg	68.9	345
606-20-2	2,6-Dinitrotoluene	U	345	ug/kg	34.5	345
208-96-8	Acenaphthylene	U	34.5	ug/kg	10.3	34.5
51-28-5	2,4-Dinitrophenol	U	689	ug/kg	131	689
132-64-9	Dibenzofuran	U	345	ug/kg	68.9	345
84-66-2	Diethylphthalate	U	345	ug/kg	68.9	345
86-73-7	Fluorene	U	34.5	ug/kg	10.3	34.5
7005-72-3	4-Chlorophenylphenylether	U	345	ug/kg	68.9	345
534-52-1	2-Methyl-4,6-dinitrophenol	U	345	ug/kg	68.9	345
100-01-6	4-Nitroaniline	U	345	ug/kg	103	345
	p-Nitroaniline					
122-39-4	Diphenylamine	U	345	ug/kg	68.9	345
122-66-7	Azobenzene	U	345	ug/kg	68.9	345
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	345	ug/kg	68.9	345
118-74-1	Hexachlorobenzene	U	345	ug/kg	68.9	345
85-01-8	Phenanthrene	U	34.5	ug/kg	10.3	34.5
120-12-7	Anthracene	U	34.5	ug/kg	6.89	34.5
84-74-2	Di-n-butylphthalate	U	345	ug/kg	68.9	345
206-44-0	Fluoranthene	U	34.5	ug/kg	10.3	34.5
85-68-7	Butylbenzylphthalate	U	345	ug/kg	68.9	345
56-55-3	Benzo(a)anthracene	U	34.5	ug/kg	10.3	34.5
91-94-1	3,3'-Dichlorobenzidine	U	345	ug/kg	103	345
218-01-9	Chrysene	U	34.5	ug/kg	10.3	34.5
117-81-7	bis(2-Ethylhexyl)phthalate	U	345	ug/kg	68.9	345
117-84-0	Di-n-octylphthalate	U	345	ug/kg	68.9	345
205-99-2	Benzo(b)fluoranthene	U	34.5	ug/kg	10.3	34.5
207-08-9	Benzo(k)fluoranthene	U	34.5	ug/kg	10.3	34.5
50-32-8	Benzo(a)pyrene	U	34.5	ug/kg	10.3	34.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.3	34.5
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.3	34.5
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.3	34.5
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	68.9	345

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	198	ug/kg		JA
4630-07-3	Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	5.87	159	ug/kg	98	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10375	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 10:27	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0207.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
57-10-3	n-Hexadecanoic acid	7.69	189	ug/kg	95	NJ
	Unknown	13.54	195	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0207.d
Lab Smp Id: 232503001 Client Smp ID: CAMO-09-10375
Inj Date : 02-JUL-2009 10:27
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503001|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	3.33980	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	509299	40.0000	
* 29 Naphthalene-d8	136	4.878	4.889	(1.000)	1729641	40.0000	
* 46 Acenaphthene-d10	164	6.143	6.145	(1.000)	1071153	40.0000	
* 67 Phenanthrene-d10	188	7.319	7.325	(1.000)	1960587	40.0000	
* 91 Chrysene-d12	240	9.736	9.747	(1.000)	1908619	40.0000	
* 98 Perylene-d12	264	11.483	11.495	(1.000)	1498664	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.797)	728351	65.1328	2240
$ 5 Phenol-d5	99	3.719	3.728	(0.928)	966499	65.5503	2260
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.896)	438938	34.2473	1180
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	993549	35.8650	1240
$ 60 2,4,6-Tribromophenol	329	6.742	6.747	(1.098)	304920	69.7678	2400
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.894)	1213844	41.5566	1430

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
27 Benzoic acid	105	4.631	4.643	(0.949)	6532	13.3110	458(aQ)

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

ION RATIO REPORT

SV REPORT

Data file: s5g0207.d
Report Date: 07/02/2009 10:41
Lab. ID: 232503001 SampleType: SAMPLE
Injection Date: 02-JUL-2009 10:27
Operator: RMB Instrument: MSD5.i
Sample Info: |232503001|881878|2|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 2.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	57933	3.72	3.80	80-120	100	(T)
93	781	3.68	3.80	190-250	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	63921	4.37	4.25	80-120	100	(T)
42	43426	4.37	4.25	55-115	68	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	6532	4.63	4.64	80-120	100	( )
122	4860	4.63	4.64	54-114	74	( )
77	2474	4.64	4.64	50-110	38	(Q)
31 4-Chloroaniline			CAS#: 106-47-8			
127	283	4.91	4.92	80-120	100	( )
65	397	4.91	4.92	0- 55	140	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	289	6.14	6.09	80-120	100	( )
92	6452	6.14	6.09	84-144	2232	(Q)
108	22362	6.14	6.09	0- 40	7735	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	229747	6.14	5.90	80-120	100	(T)
164	1071153	6.14	5.90	0- 40	466	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44	2,6-Dinitrotoluene			CAS#: 606-20-2		
165	139803	6.14	5.96	80-120	100	(T)
63	2010	6.14	5.96	55-115	1	(QT)
50	2,4-Dinitrotoluene			CAS#: 121-14-2		
165	139803	6.14	6.26	80-120	100	(T)
89	2218	6.14	6.26	38- 98	2	(QT)
63	2010	6.14	6.26	19- 79	1	(QT)
53	Fluorene		CAS#: 86-73-7			
166	12759	6.74	6.56	80-120	100	(T)
165	12044	6.74	6.56	61-121	94	(T)
167	4036	6.74	6.56	0- 44	32	(T)
55	2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1		
198	1154	6.74	6.57	80-120	100	(T)
105	1668	6.74	6.57	2- 62	145	(QT)
51	2114	6.74	6.57	46-106	183	(QT)
61	4-Bromophenylphenylether			CAS#: 101-55-3		
248	22320	6.74	6.93	80-120	100	(T)
141	108394	6.74	6.93	34- 94	486	(QT)
250	43660	6.74	6.93	68-128	196	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0207.d
Lab Smp Id: 232503001 Client Smp ID: CAMO-09-10375
Inj Date : 02-JUL-2009 10:27
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503001|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	3.33980	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.007	3263934	40.000
* 46 Acenaphthene-d10	6.143	4604970	40.000
* 67 Phenanthrene-d10	7.319	4784813	40.000
* 98 Perylene-d12	11.483	3697537	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUANT QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.031	468470	5.74116472	198	0		0	10
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-				CAS #: 4630-07-3			
5.866	531000	4.61240584	159	98	NIST05.L	60047	46
n-Hexadecanoic acid				CAS #: 57-10-3			
7.689	654880	5.47465273	189	95	NIST05.L	96235	67
Unknown				CAS #:			
13.536	524053	5.66921636	195	0		0	98

Data File: /chem/MSD5.i/s070209.b/s5g0207.d

Date : 02-JUL-2009 10:27

Client ID: CAMO-09-10375

Sample Info: |2325030011881878111SVMF11|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

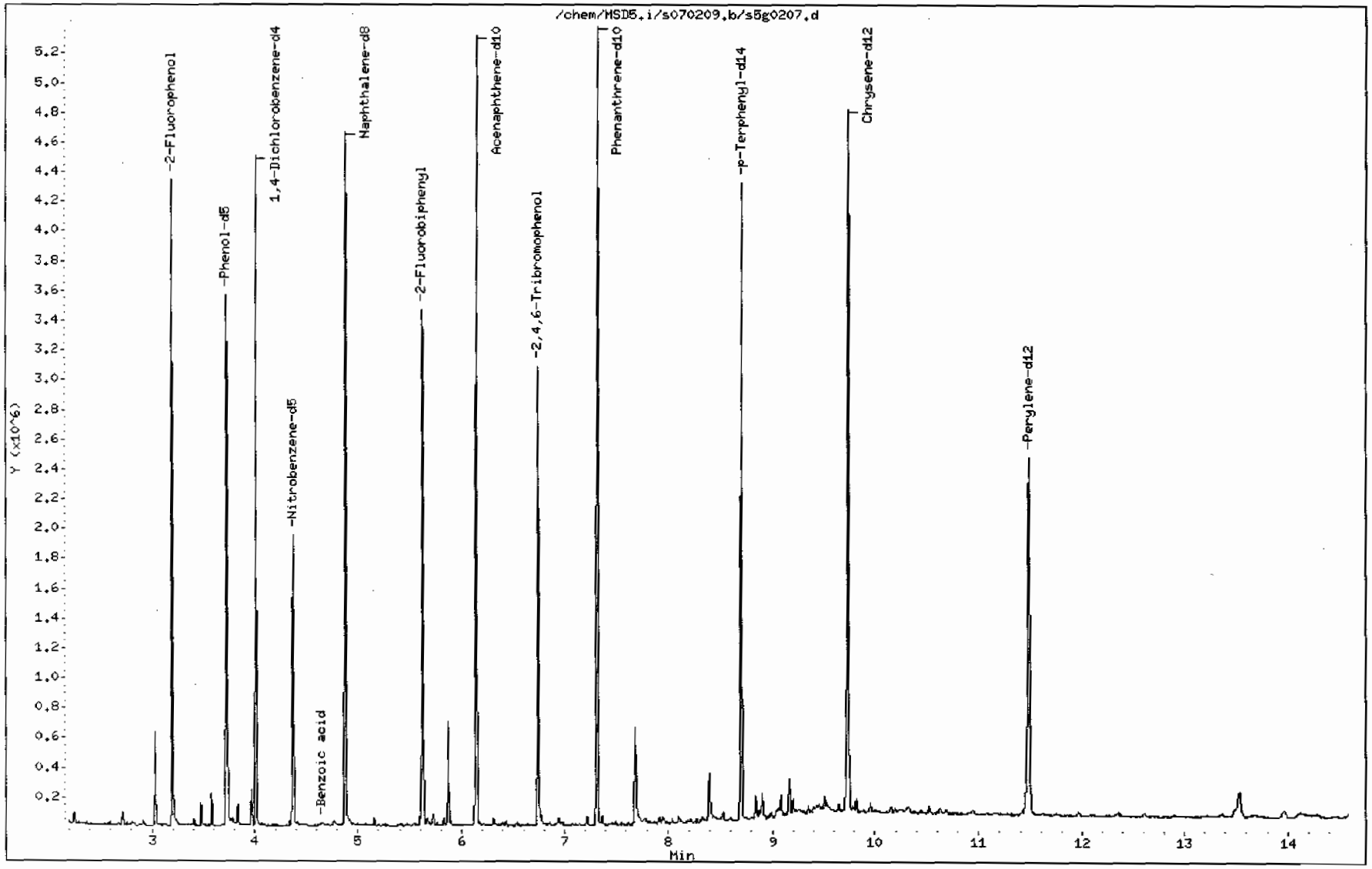

Data File: /chem/MSD5.i/s070209.b/s5g0207.d

Date : 02-JUL-2009 10:27

Client ID: CAMO-09-10375

Instrument: MSD5.i

Sample Info: |2325030001|8818781|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

27 Benzoic acid

Concentration: 458 ug/Kg

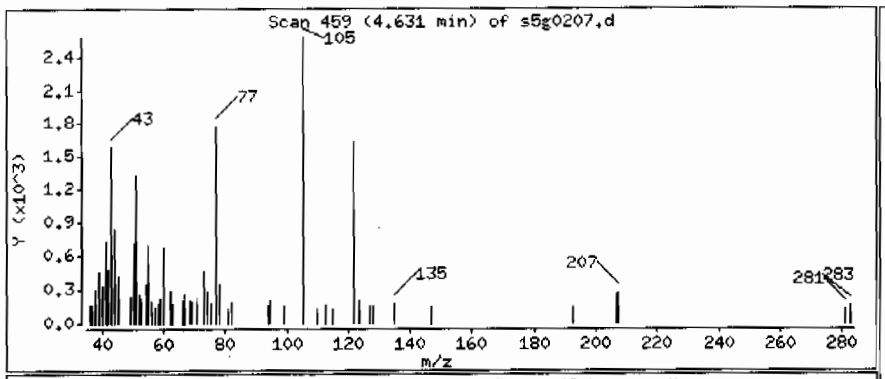

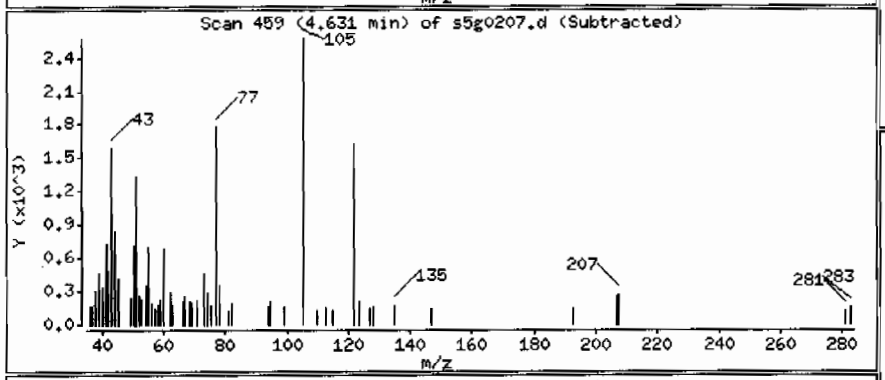

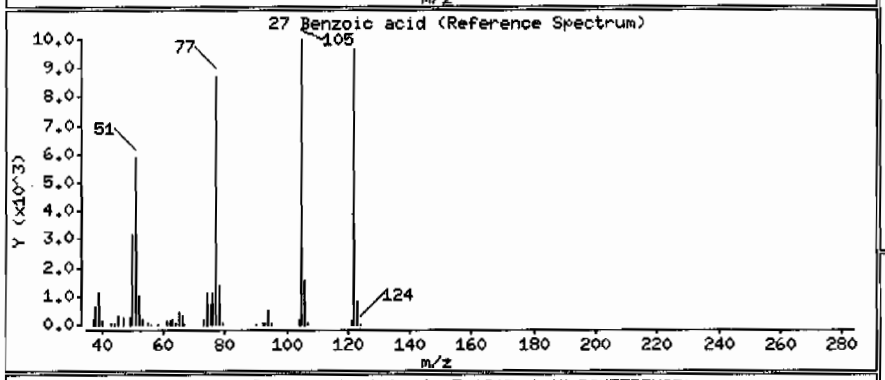

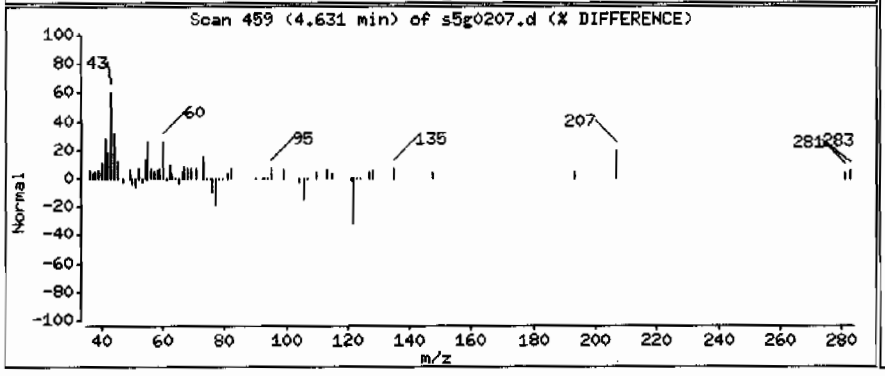

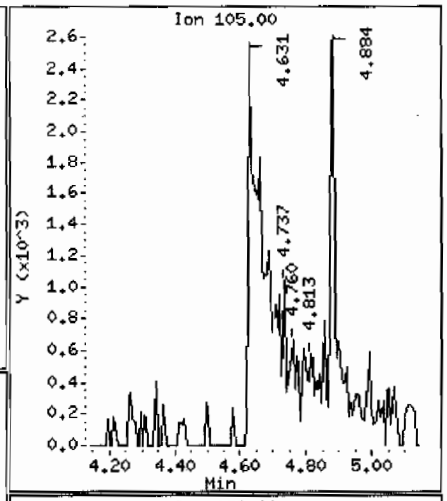

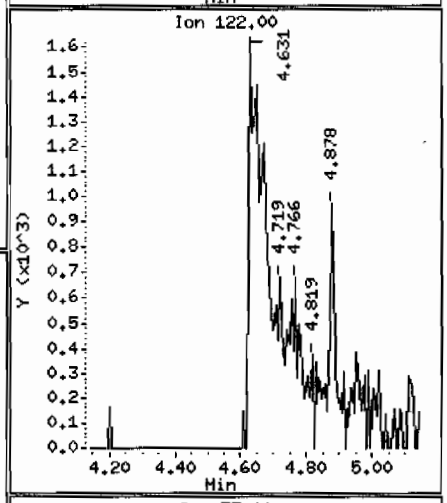

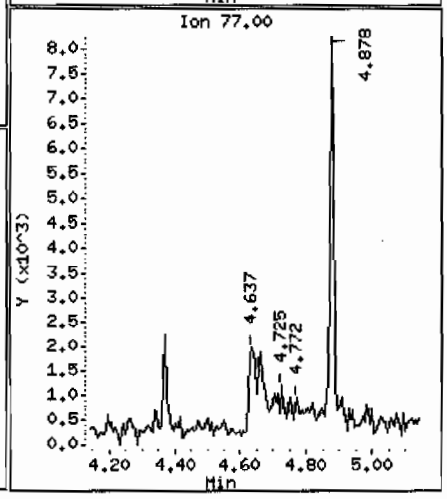

Data File: /chem/MSD5.i/s070209.b/s5g0207.d

Date : 02-JUL-2009 10:27

Client ID: CAMO-09-10375

Instrument: MSD5.i

Sample Info: |2325030011881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7950	17	C6H12O2	116

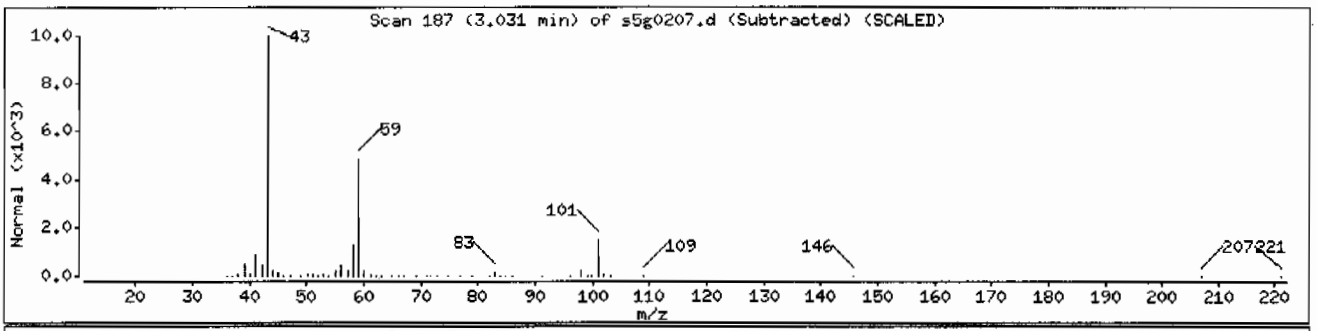

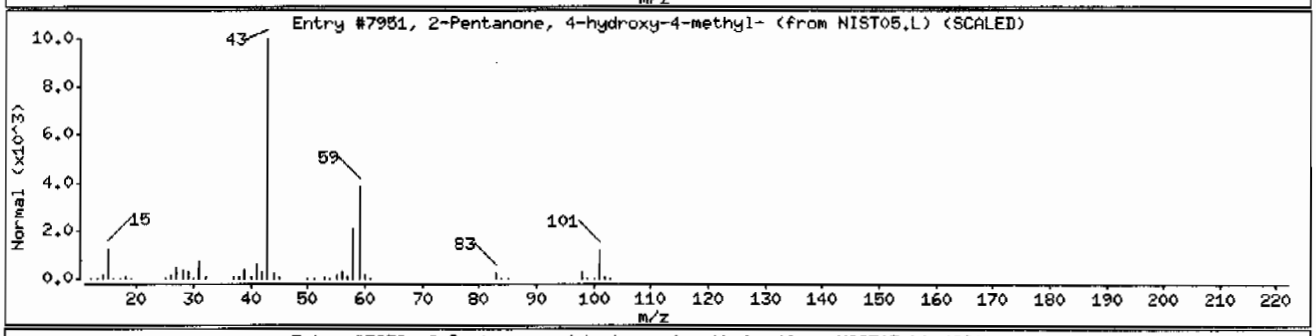

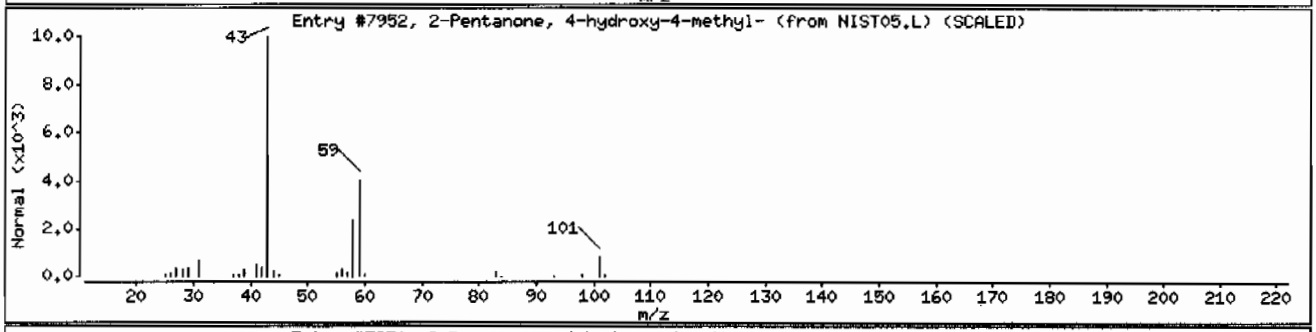

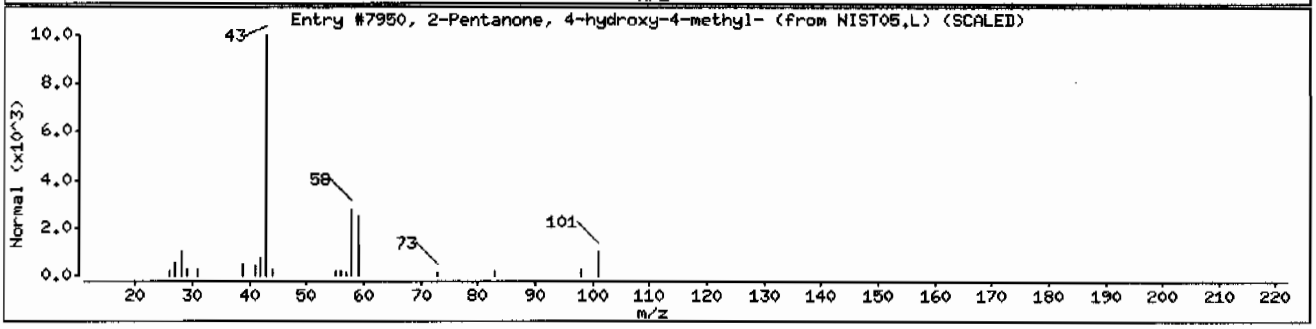

Data File: /chem/MSD5.i/s070209.b/s5g0207.d

Date : 02-JUL-2009 10:27

Client ID: CAMO-09-10375

Instrument: MSD5.i

Sample Info: |2325030001|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60047	98	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	10219-75-7	NIST05.L	60051	97	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60046	96	C15H24	204

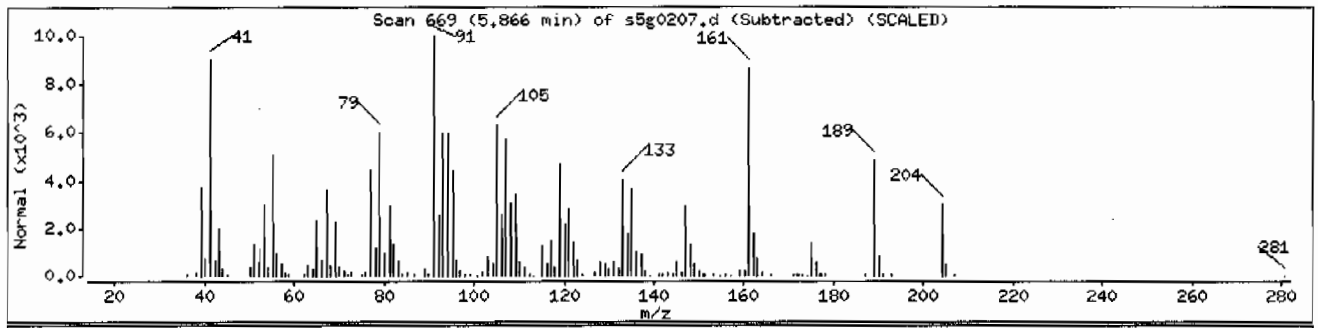

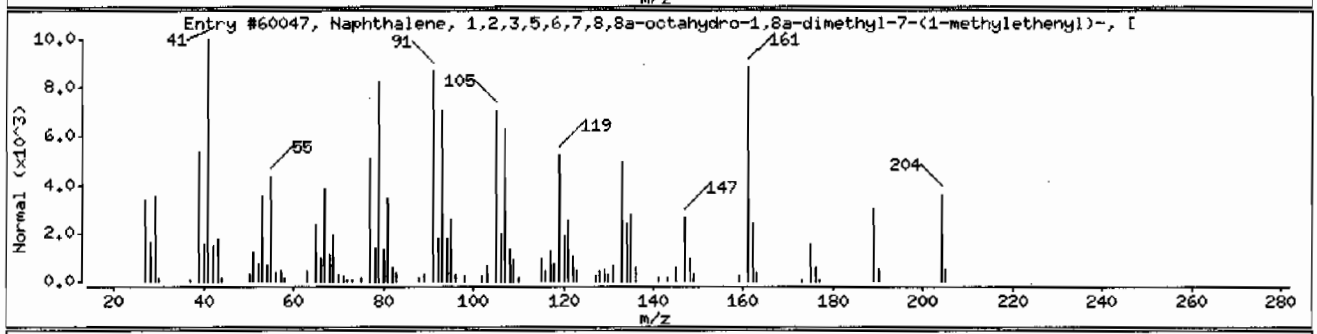

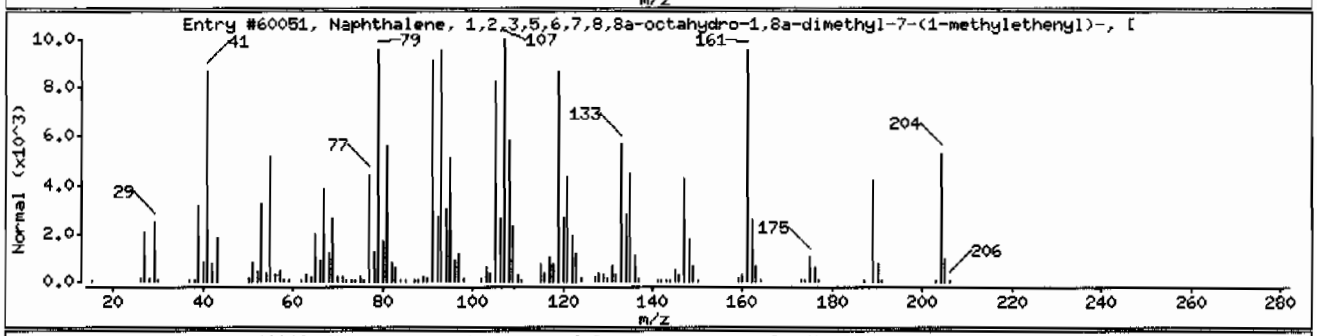

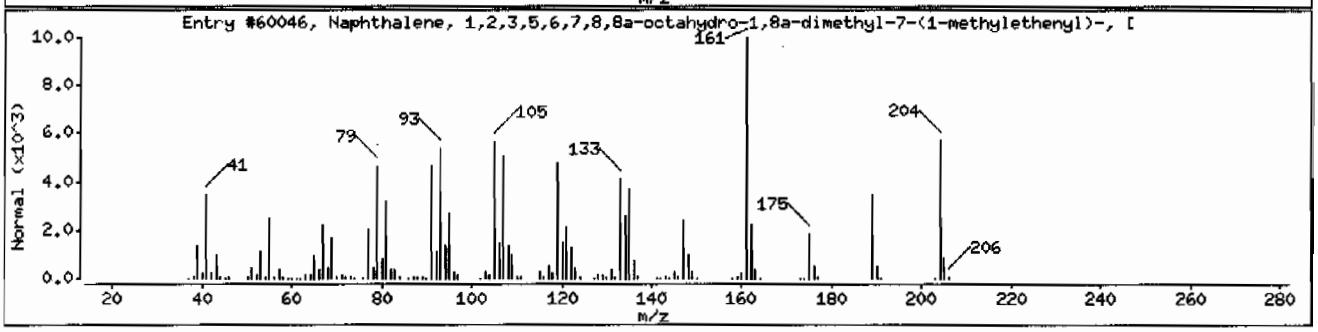

Data File: /chem/MSD5.i/s070209.b/s5g0207.d

Date : 02-JUL-2009 10:27

Client ID: CAMO-09-10375 Instrument: MSD5.i

Sample Info: 1232503001|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
n-Hexadecanoic acid	57-10-3	NIST05.L	96235	95	C16H32O2	256
n-Hexadecanoic acid	57-10-3	NIST05.L	96233	93	C16H32O2	256
n-Hexadecanoic acid	57-10-3	NIST05.L	96234	92	C16H32O2	256

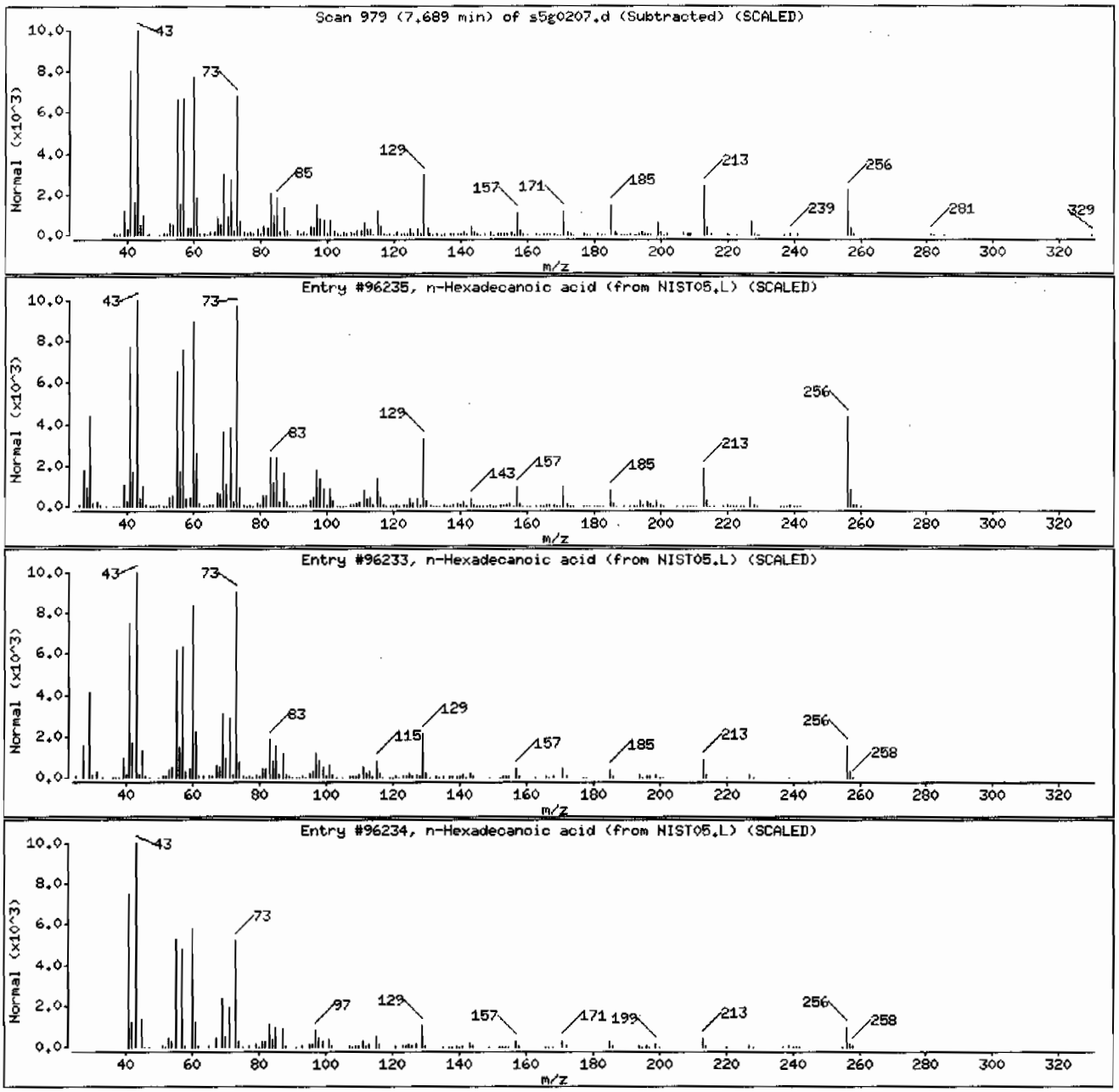

Data File: /chem/MSD5.i/s070209.b/s5g0207.d

Date : 02-JUL-2009 10:27

Client ID: CAMO-09-10375

Instrument: MSD5.i

Sample Info: |2325030011881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Benzazirene-1-carboxylic acid, 2,2,5a-	1000197-90-8	NIST05.L	101889	53	C15H23NO3	265
1H-Cyclopropl[e]azulene, 1a,2,3,4,4a,5,6,	489-40-7	NIST05.L	60089	25	C15H24	204
Anthracene, 9,10-dihydro-9,9,10-trimethy	14923-29-6	NIST05.L	73092	25	C17H18	222

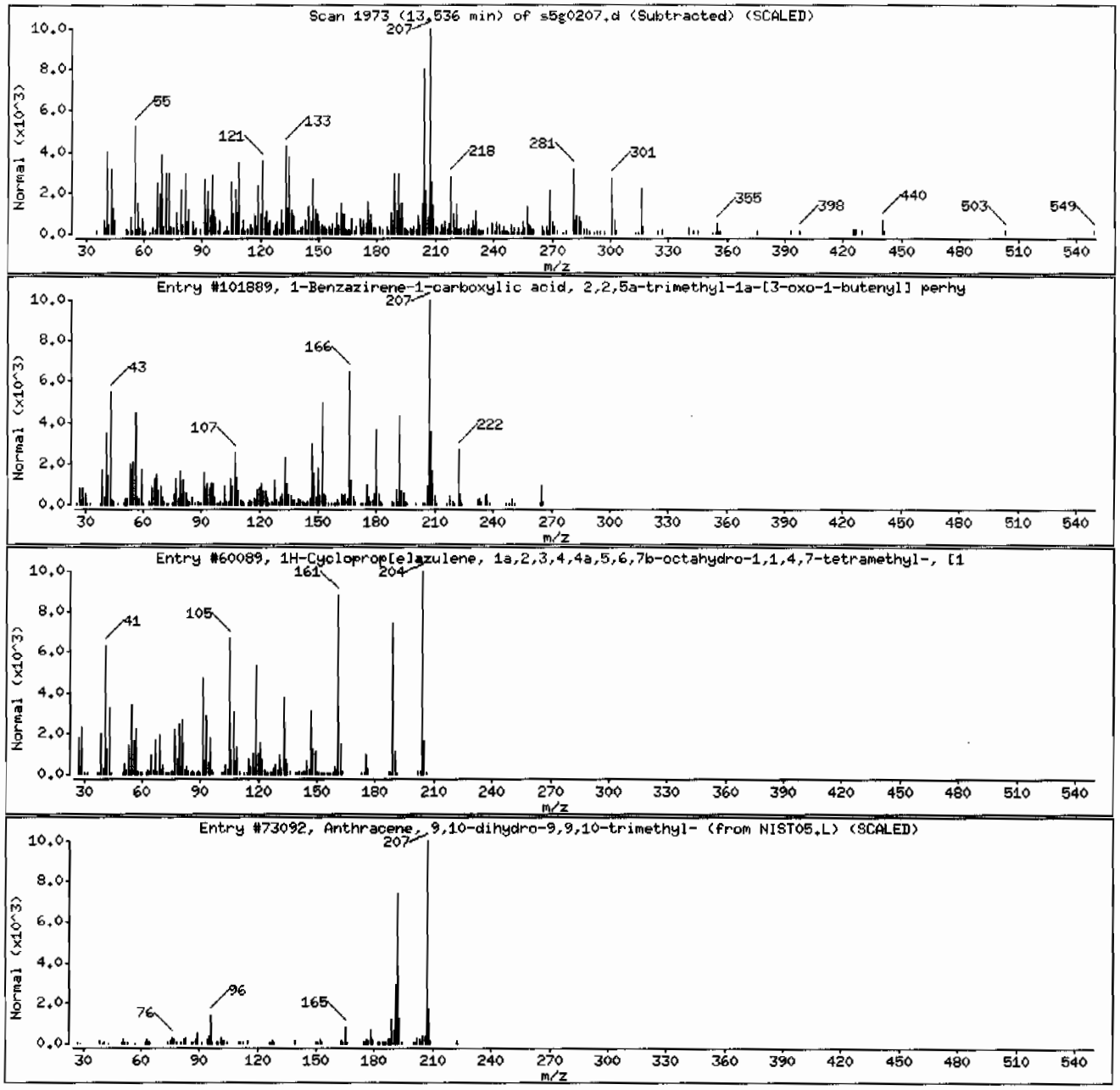

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503002	Date Received:	06/27/2009 09:05	%Moisture:	4.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10376	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 11:34	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.06 g	Final Volume:	1 mL
Data File:	s5g0210.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	348	ug/kg	69.7	348
108-95-2	Phenol	U	348	ug/kg	69.7	348
95-57-8	2-Chlorophenol	U	348	ug/kg	69.7	348
106-46-7	1,4-Dichlorobenzene	U	348	ug/kg	69.7	348
621-64-7	N-Nitrosodipropylamine	U	348	ug/kg	69.7	348
59-50-7	4-Chloro-3-methylphenol	U	348	ug/kg	69.7	348
83-32-9	Acenaphthene	U	34.8	ug/kg	11.5	34.8
121-14-2	2,4-Dinitrotoluene	U	348	ug/kg	34.8	348
100-02-7	4-Nitrophenol	U	348	ug/kg	115	348
87-86-5	Pentachlorophenol	U	348	ug/kg	87.1	348
129-00-0	Pyrene	J	27.8	ug/kg	10.5	34.8
110-86-1	Pyridine	U	348	ug/kg	69.7	348
62-53-3	Aniline	U	348	ug/kg	105	348
111-44-4	bis(2-Chloroethyl) ether	U	348	ug/kg	69.7	348
541-73-1	1,3-Dichlorobenzene	U	348	ug/kg	69.7	348
100-51-6	Benzyl alcohol	U	348	ug/kg	105	348
95-50-1	1,2-Dichlorobenzene	U	348	ug/kg	69.7	348
108-60-1	bis(2-Chloroisopropyl)ether	U	348	ug/kg	69.7	348
95-48-7	o-Cresol	U	348	ug/kg	69.7	348
65794-96-9	m,p-Cresols	U	348	ug/kg	105	348
67-72-1	Hexachloroethane	U	348	ug/kg	69.7	348
98-95-3	Nitrobenzene	U	348	ug/kg	69.7	348
78-59-1	Isophorone	U	348	ug/kg	69.7	348
88-75-5	2-Nitrophenol	U	348	ug/kg	69.7	348
105-67-9	2,4-Dimethylphenol	U	348	ug/kg	122	348
111-91-1	bis(2-Chloroethoxy)methane	U	348	ug/kg	69.7	348
120-83-2	2,4-Dichlorophenol	U	348	ug/kg	69.7	348
65-85-0	Benzoic acid	U	697	ug/kg	174	697
91-20-3	Naphthalene	U	34.8	ug/kg	10.5	34.8
106-47-8	4-Chloroaniline	U	348	ug/kg	69.7	348
87-68-3	Hexachlorobutadiene	U	348	ug/kg	69.7	348
91-57-6	2-Methylnaphthalene	U	34.8	ug/kg	6.97	34.8
77-47-4	Hexachlorocyclopentadiene	U	348	ug/kg	69.7	348
88-06-2	2,4,6-Trichlorophenol	U	348	ug/kg	69.7	348
95-95-4	2,4,5-Trichlorophenol	U	348	ug/kg	69.7	348
91-58-7	2-Chloronaphthalene	U	34.8	ug/kg	11.5	34.8
88-74-4	2-Nitroaniline	U	348	ug/kg	69.7	348
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	348	ug/kg	69.7	348

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10376	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0210.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	348	ug/kg	69.7	348
606-20-2	2,6-Dinitrotoluene	U	348	ug/kg	34.8	348
208-96-8	Acenaphthylene	U	34.8	ug/kg	10.5	34.8
51-28-5	2,4-Dinitrophenol	U	697	ug/kg	132	697
132-64-9	Dibenzofuran	U	348	ug/kg	69.7	348
84-66-2	Diethylphthalate	U	348	ug/kg	69.7	348
86-73-7	Fluorene	U	34.8	ug/kg	10.5	34.8
7005-72-3	4-Chlorophenylphenylether	U	348	ug/kg	69.7	348
534-52-1	2-Methyl-4,6-dinitrophenol	U	348	ug/kg	69.7	348
100-01-6	4-Nitroaniline	U	348	ug/kg	105	348
	p-Nitroaniline					
122-39-4	Diphenylamine	U	348	ug/kg	69.7	348
122-66-7	Azobenzene	U	348	ug/kg	69.7	348
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	348	ug/kg	69.7	348
118-74-1	Hexachlorobenzene	U	348	ug/kg	69.7	348
85-01-8	Phenanthrene	J	11.6	ug/kg	10.5	34.8
120-12-7	Anthracene	U	34.8	ug/kg	6.97	34.8
84-74-2	Di-n-butylphthalate	U	348	ug/kg	69.7	348
206-44-0	Fluoranthene	J	25.4	ug/kg	10.5	34.8
85-68-7	Butylbenzylphthalate	U	348	ug/kg	69.7	348
56-55-3	Benzo(a)anthracene	J	18.5	ug/kg	10.5	34.8
91-94-1	3,3'-Dichlorobenzidine	U	348	ug/kg	105	348
218-01-9	Chrysene	J	14.5	ug/kg	10.5	34.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	348	ug/kg	69.7	348
117-84-0	Di-n-octylphthalate	U	348	ug/kg	69.7	348
205-99-2	Benzo(b)fluoranthene	J	25.9	ug/kg	10.5	34.8
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.5	34.8
50-32-8	Benzo(a)pyrene	J	15.6	ug/kg	10.5	34.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.5	34.8
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.5	34.8
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.5	34.8
120-82-1	1,2,4-Trichlorobenzene	U	348	ug/kg	69.7	348

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1000197-14-1	4b,8-Dimethyl-2-isopropylphenanthrene, 4	8.11	183	ug/kg	90	NJ
	Unknown	8.52	230	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10376	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:34	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.06 g	**Final Volume:**	1 mL
Data File:	s5g0210.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.86	340	ug/kg		J
	Unknown	8.9	333	ug/kg		J
1686-62-0	1-Phenanthrenecarboxylic acid, 7-ethenyl	9.08	342	ug/kg	89	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.17	244	ug/kg	98	NJ
	Unknown	9.44	657	ug/kg		J
	Unknown	9.52	491	ug/kg		J
629-78-7	Heptadecane	10.16	229	ug/kg	95	NJ
	Unknown	10.21	354	ug/kg		J
	Unknown	12.06	539	ug/kg		J
	Unknown	12.42	346	ug/kg		J
83-46-5	.beta.-Sitosterol	14.08	304	ug/kg	93	NJ

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0210.d
Lab Smp Id: 232503002 Client Smp ID: CAMO-09-10376
Inj Date : 02-JUL-2009 11:34
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503002|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.06000	weight of sample
M	4.52910	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	545846	40.0000	
* 29 Naphthalene-d8	136	4.878	4.889	(1.000)	1879309	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	1177774	40.0000	
* 67 Phenanthrene-d10	188	7.319	7.325	(1.000)	2155208	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1771802	40.0000	
* 98 Perylene-d12	264	11.483	11.495	(1.000)	1162506	40.0000	
$ 3 2-Fluorophenol	112	3.195	3.194	(0.797)	818020	68.2536	2380
$ 5 Phenol-d5	99	3.725	3.728	(0.930)	1081280	68.4249	2380
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.896)	495195	35.5596	1240
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1128939	37.0631	1290
$ 60 2,4,6-Tribromophenol	329	6.742	6.747	(1.098)	363445	75.6305	2640
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	1308191	48.2450	1680

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.601	8.611	(0.883)	30875	0.79878	27.8(a)
68 Phenanthrene	178	7.342	7.344	(1.003)	13428	0.33259	11.6(a)
76 Fluoranthene	202	8.383	8.394	(1.145)	33523	0.72888	25.4(a)
89 Benzo(a)anthracene	228	9.730	9.733	(0.999)	20199	0.53131	18.5(a)
92 Chrysene	228	9.766	9.771	(1.002)	14517	0.41685	14.5(a)
95 Benzo(b)fluoranthene	252	10.942	10.951	(0.953)	19092	0.74363	25.9(a)
97 Benzo(a)pyrene	252	11.401	11.413	(0.993)	10181	0.44796	15.6(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0210.d
Report Date: 07/02/2009 12:43
Lab. ID: 232503002 SampleType: SAMPLE
Injection Date: 02-JUL-2009 11:34
Operator: RMB Instrument: MSD5.i
Sample Info: |232503002|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	66475	3.72	3.80	80-120	100	(T)
93	17747	3.68	3.80	190-250	27	(QT)
6 Phenol		CAS#: 108-95-2				
94	42600	3.58	3.74	80-120	100	(T)
66	10183	3.58	3.74	24- 84	24	(T)
65	36162	3.58	3.74	0- 30	85	(QT)
15 o-Cresol		CAS#: 95-48-7				
107	21164	3.97	4.13	80-120	100	(T)
108	4764	3.97	4.13	88-148	23	(QT)
77	103069	3.97	4.13	26- 86	487	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	73088	4.37	4.25	80-120	100	(T)
42	50543	4.37	4.25	55-115	69	(T)
22 Isophorone		CAS#: 78-59-1				
82	500605	4.37	4.55	80-120	100	(T)
138	273	4.54	4.55	0- 49	0	( )
27 Benzoic acid		CAS#: 65-85-0				
105	8378	4.66	4.64	80-120	100	( )
122	9919	4.62	4.64	54-114	118	(Q)
77	17261	4.65	4.64	50-110	206	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
31 4-Chloroaniline			CAS#: 106-47-8			
127	284	4.91	4.92	80-120	100	( )
65	4911	4.88	4.92	0- 55	1726	(Q)
40 2-Chloronaphthalene			CAS#: 91-58-7			
162	9882	5.87	5.74	80-120	100	(T)
164	766	5.87	5.74	3- 63	8	(T)
127	1163	5.87	5.74	7- 67	12	(T)
41 m-Nitroaniline			CAS#: 99-09-2			
138	542	6.14	6.09	80-120	100	( )
92	6573	6.14	6.09	84-144	1211	(Q)
108	26513	6.14	6.09	0- 40	4885	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	255213	6.14	5.90	80-120	100	(T)
164	1177774	6.14	5.90	0- 40	461	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	155952	6.14	5.96	80-120	100	(T)
63	2297	6.14	5.96	55-115	1	(QT)
48 2,4-Dinitrophenol			CAS#: 51-28-5			
184	125	6.02	6.16	80-120	100	(T)
154	5782	6.14	6.17	1088-1148	4616	(Q)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	155879	6.14	6.26	80-120	100	(T)
89	3372	6.14	6.26	38- 98	2	(QT)
63	2350	6.14	6.26	19- 79	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	14887	6.74	6.56	80-120	100	(T)
165	15905	6.74	6.56	61-121	107	(T)
167	5015	6.74	6.56	0- 44	34	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1750	6.74	6.57	80-120	100	(T)
105	1974	6.74	6.57	2- 62	113	(QT)
51	2512	6.74	6.57	46-106	144	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	25751	6.74	6.93	80-120	100	(T)
141	128692	6.74	6.93	34- 94	500	(QT)
250	52526	6.74	6.93	68-128	204	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
68 Phenanthrene			CAS#: 85-01-8			
178	13428	7.34	7.34	80-120	100	( )
179	2194	7.34	7.34	0- 46	16	( )
176	2665	7.34	7.34	0- 49	20	( )
69 Anthracene			CAS#: 120-12-7			
178	13428	7.34	7.39	80-120	100	( )
179	2194	7.34	7.39	0- 46	16	( )
176	2665	7.34	7.39	0- 49	20	( )
76 Fluoranthene			CAS#: 206-44-0			
202	33523	8.38	8.39	80-120	100	( )
203	5552	8.38	8.39	0- 48	17	( )
101	4375	8.38	8.39	0- 39	13	( )
79 Pyrene			CAS#: 129-00-0			
202	30875	8.60	8.61	80-120	100	( )
200	6927	8.60	8.61	0- 51	22	( )
101	3583	8.60	8.61	0- 41	12	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	20199	9.73	9.73	80-120	100	( )
226	3919	9.72	9.73	0- 56	19	( )
229	4047	9.73	9.73	0- 50	20	( )
92 Chrysene			CAS#: 218-01-9			
228	14517	9.77	9.77	80-120	100	( )
229	3224	9.77	9.77	0- 50	22	( )
226	5563	9.77	9.77	0- 60	38	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	19092	10.94	10.95	80-120	100	( )
253	4365	10.95	10.95	0- 52	23	( )
125	3163	10.94	10.95	0- 38	17	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	19092	10.94	10.99	80-120	100	( )
253	4365	10.95	10.98	0- 52	23	( )
125	3163	10.94	10.98	0- 38	17	( )
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	10181	11.40	11.41	80-120	100	( )
253	3269	11.40	11.41	0- 52	32	( )
125	1727	11.41	11.41	0- 30	17	( )
99 Indeno(1,2,3-cd)pyrene			CAS#: 193-39-5			
276	7515	13.33	13.35	80-120	100	( )
138	769	13.31	13.35	0- 51	10	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
101	Benzo(ghi)perylene			CAS#: 191-24-2		
276	7445	13.90	13.92	80-120	100	( )
138	1380	13.92	13.92	0- 30	19	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0210.d
Lab Smp Id: 232503002 Client Smp ID: CAMO-09-10376
Inj Date : 02-JUL-2009 11:34
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503002|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.06000	weight of sample
M	4.52910	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 67 Phenanthrene-d10	7.319	5319741	40.000
* 91 Chrysene-d12	9.742	5904956	40.000
* 98 Perylene-d12	11.483	3239605	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
4b,8-Dimethyl-2-isopropylphenanthrene, 4					CAS #: 1000197-14-1		
8.113	698431	5.25161664	183	90	NIST05.L	96373	67
Unknown					CAS #:		
8.519	878181	6.60318447	230	0		0	67
Unknown					CAS #:		
8.860	1438874	9.74688722	340	0		0	91
Unknown					CAS #:		
8.901	1410702	9.55605420	333	0		0	91
1-Phenanthrenecarboxylic acid, 7-ethenyl					CAS #: 1686-62-0		
9.083	1446895	9.80122166	342	89	NIST05.L	134785	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4					CAS #: 1235-74-1		
9.166	1032378	6.99330065	244	98	NIST05.L	133618	91
Unknown					CAS #:		
9.442	2783633	18.8562514	657	0		0	91
Unknown					CAS #:		
9.519	2082071	14.1038877	491	0		0	91
Heptadecane					CAS #: 629-78-7		
10.160	971385	6.58013150	229	95	NIST05.L	85525	91
Unknown					CAS #:		
10.207	1498806	10.1528672	354	0		0	91
Unknown					CAS #:		
12.060	1253236	15.4739318	539	0		0	98
Unknown					CAS #:		
12.418	803970	9.92675820	346	0		0	98
.beta.-Sitosterol					CAS #: 83-46-5		
14.083	707137	8.73114417	304	93	NIST05.L	174399	98

Data File: /chem/MSD5.i/s070209.b/s5g0210.d
Date : 02-JUL-2009 11:34
Client ID: CAMO-09-10376
Sample Info: |2325030021881878|1|SVMFI1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

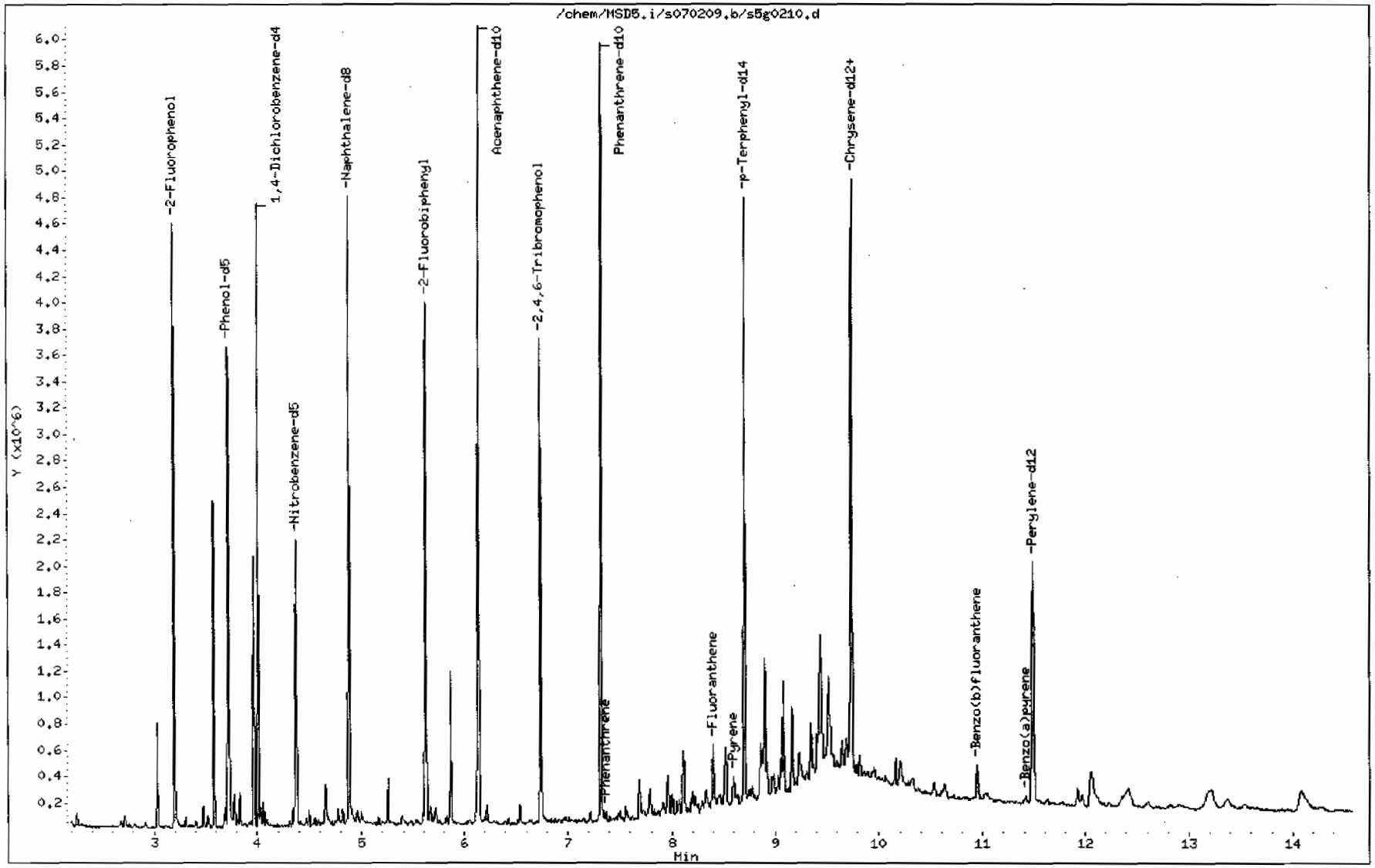

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: |2325030021881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 27.8 ug/Kg

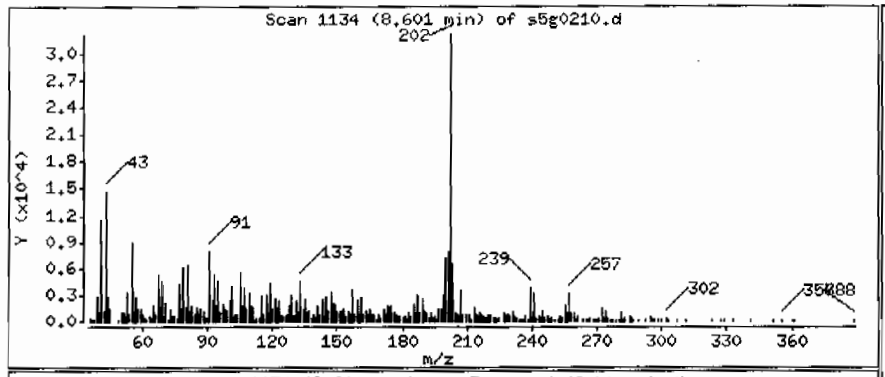

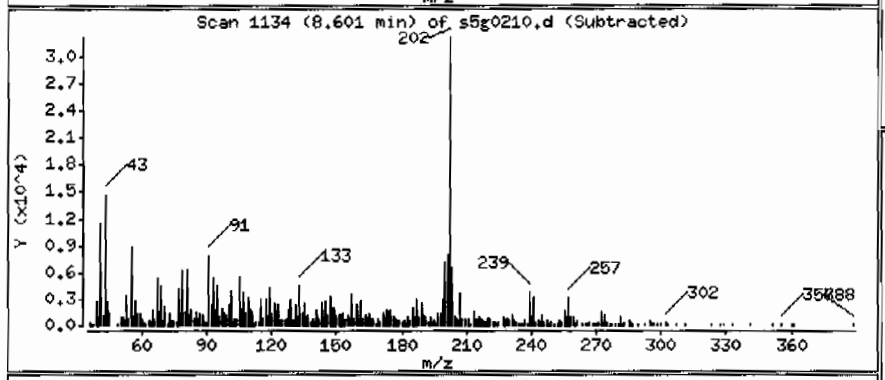

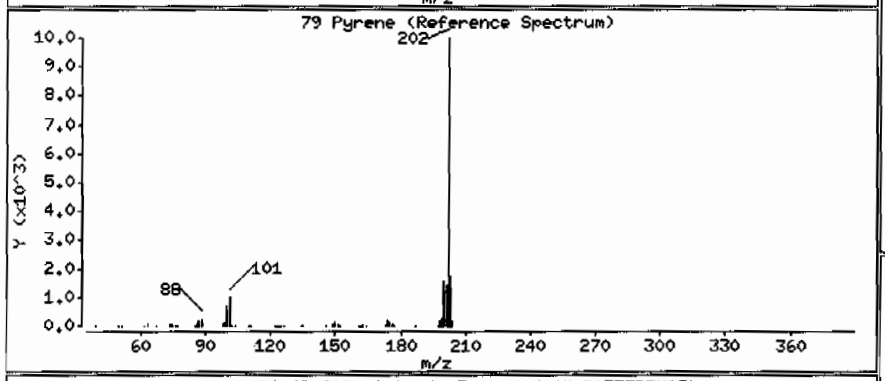

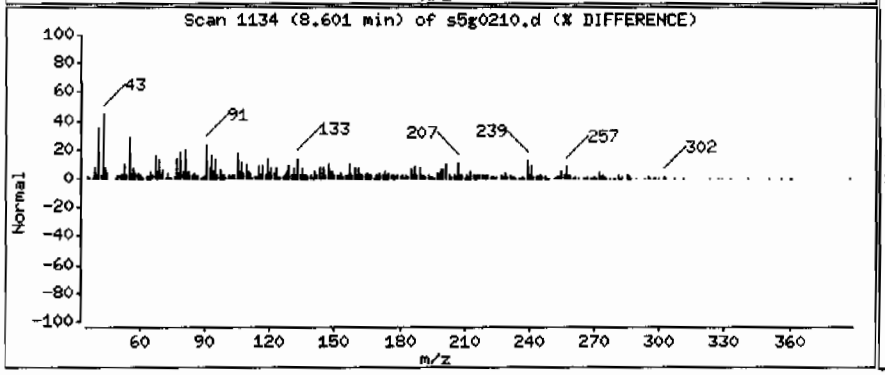

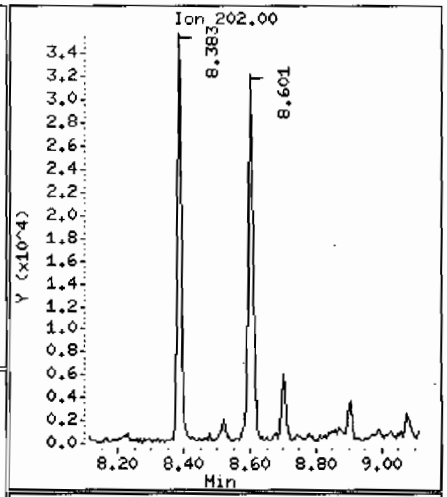

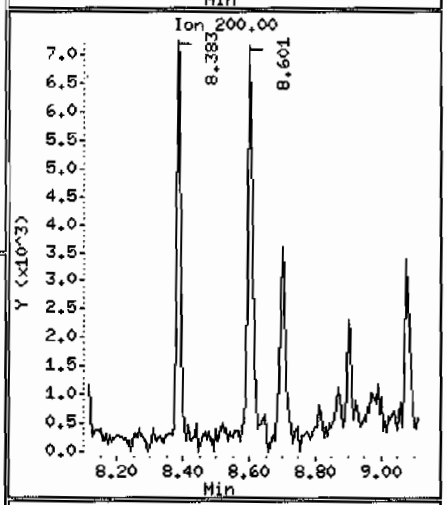

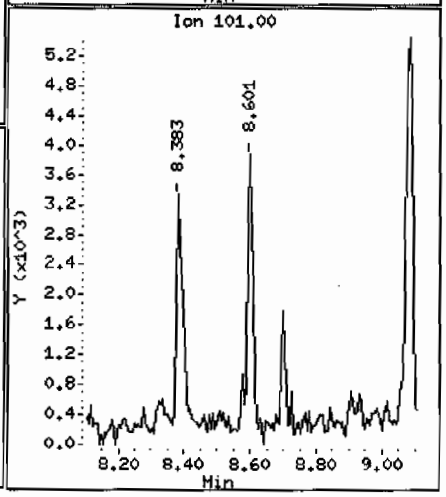

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: 1232503002188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 11.6 ug/Kg

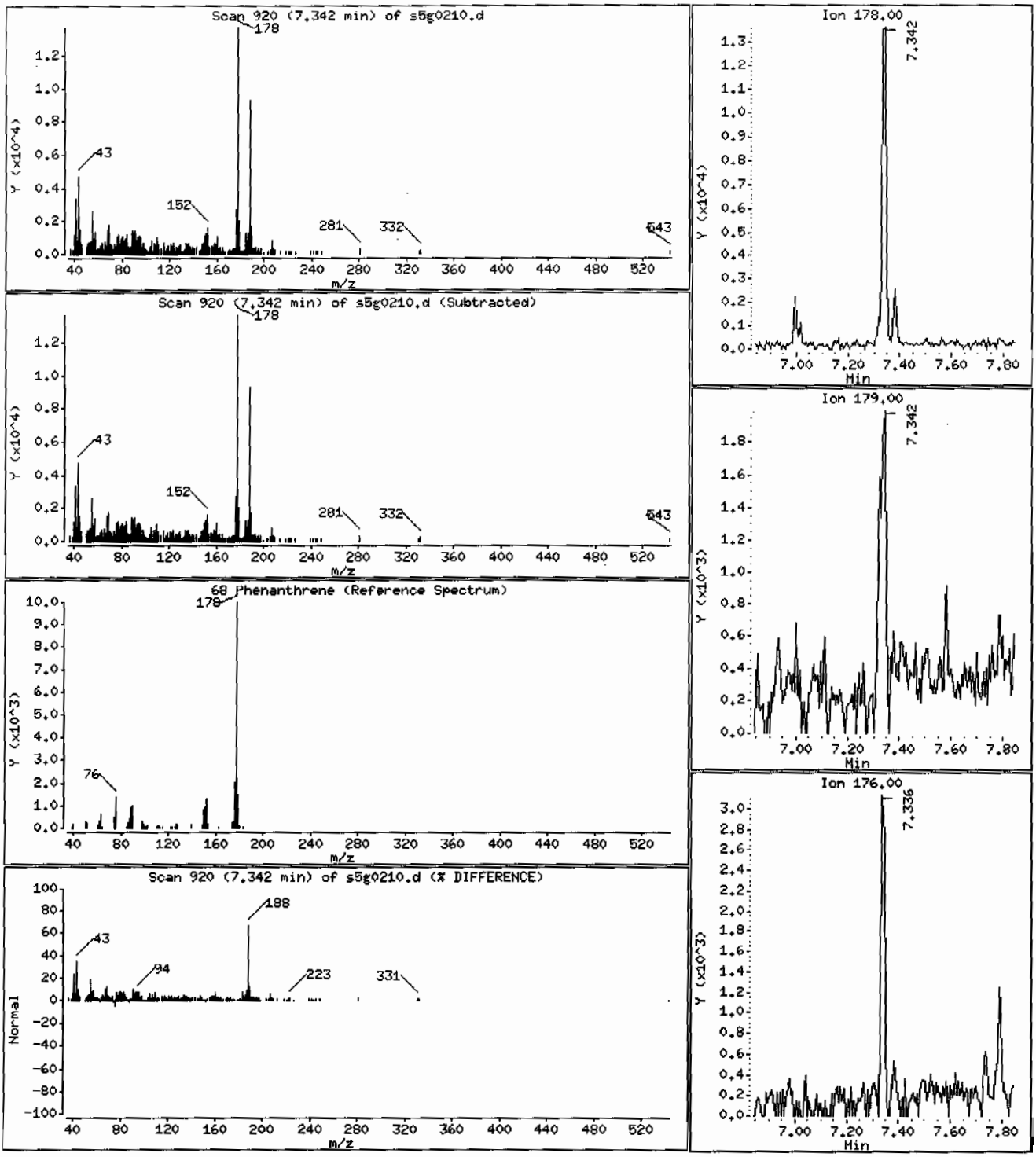

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: 1232503002188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 25.4 ug/Kg

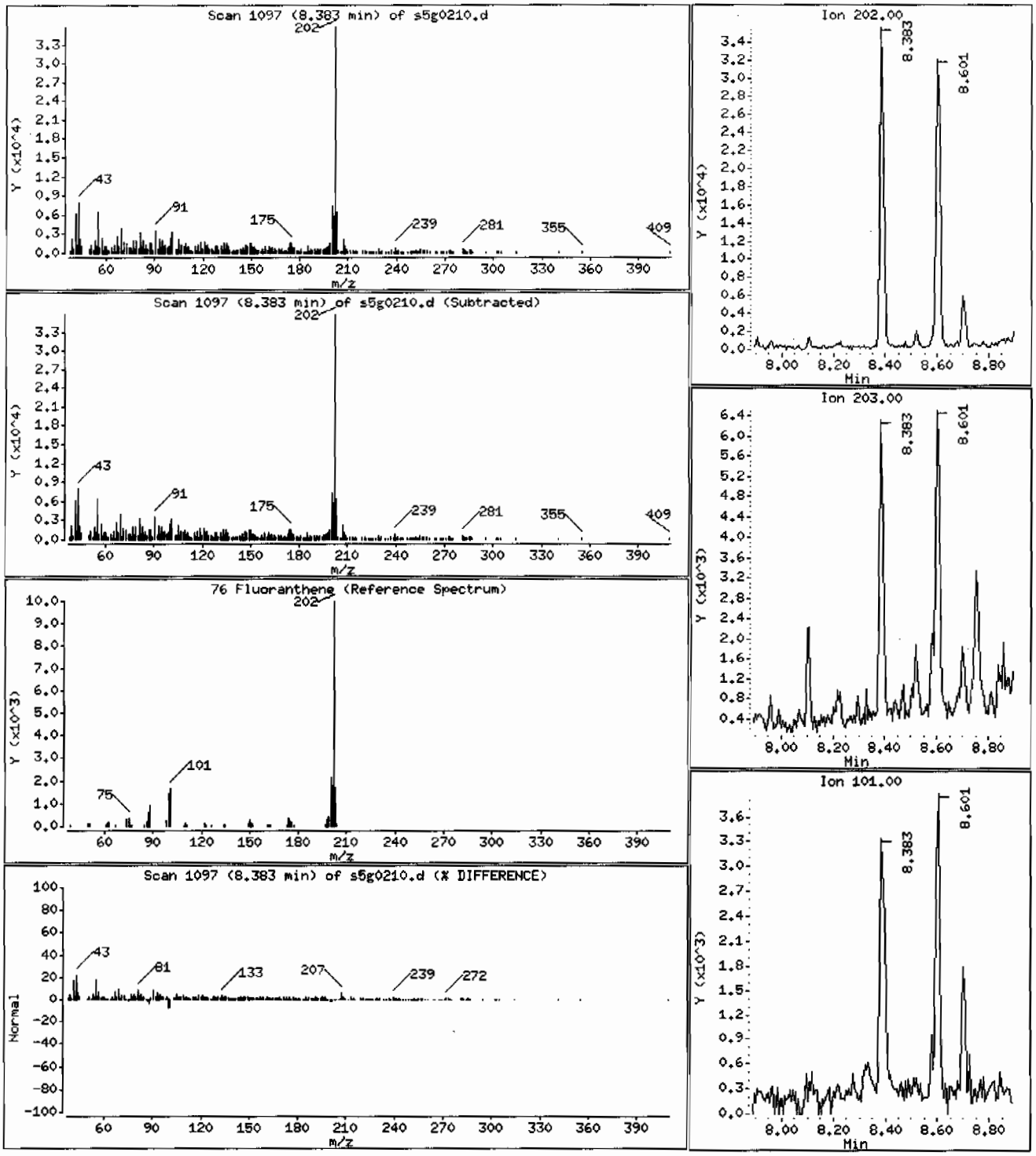

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: 1232503002188187811SVHF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 18.5 ug/Kg

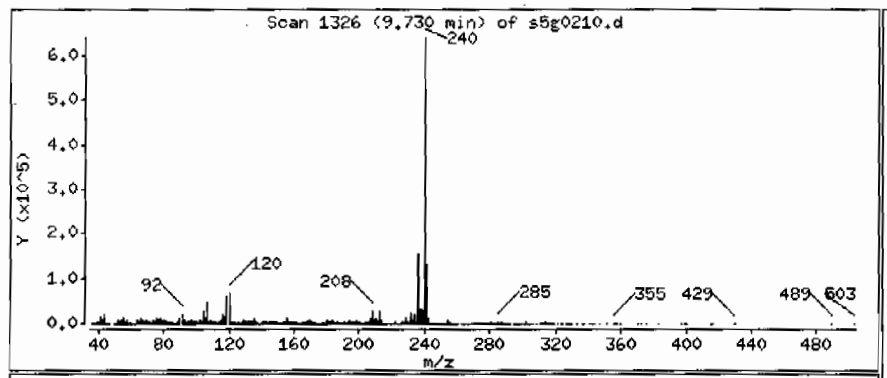

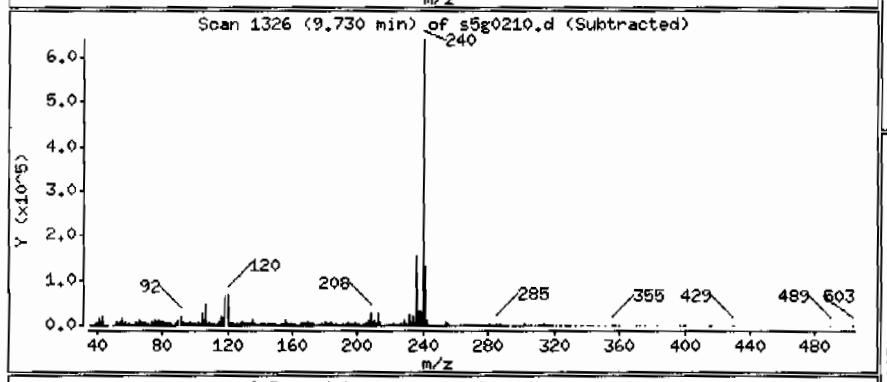

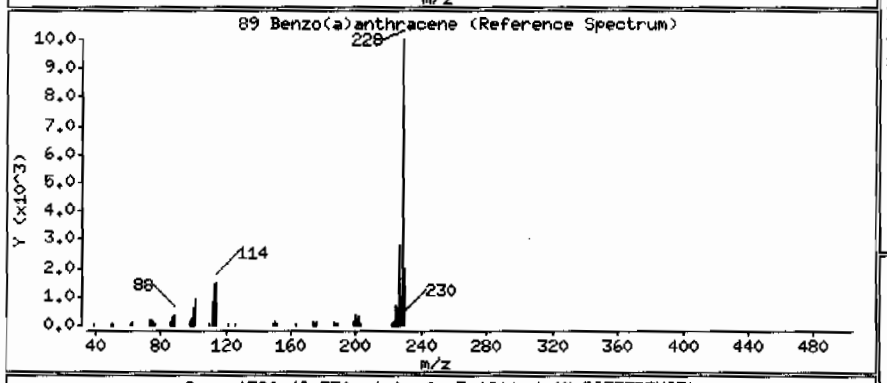

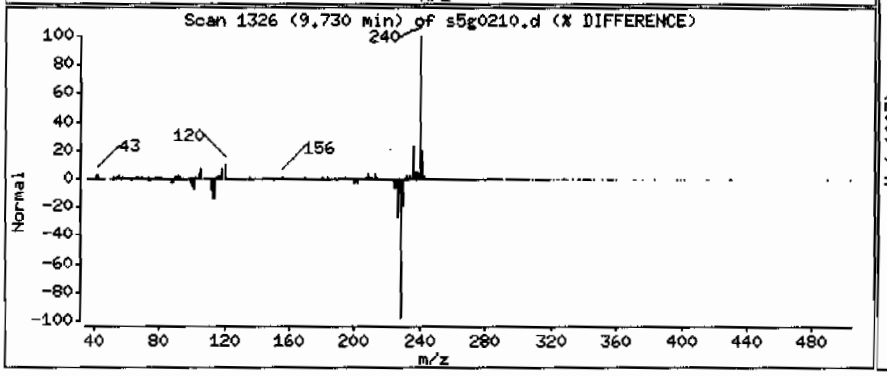

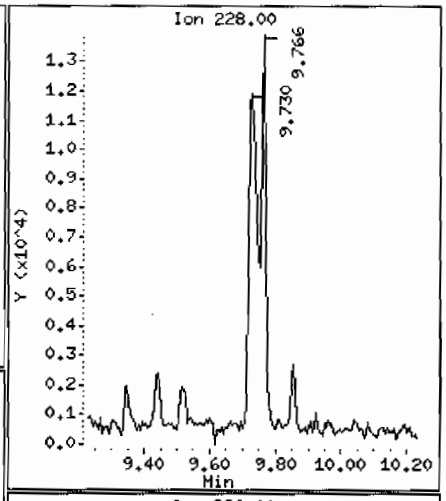

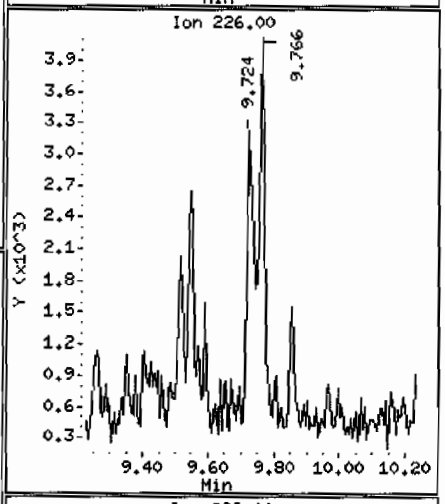

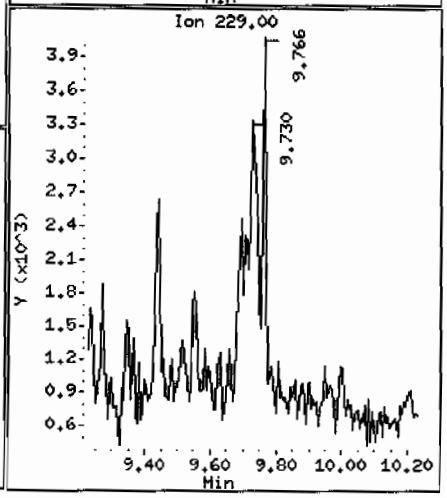

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: |2325030021881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 14.5 ug/Kg

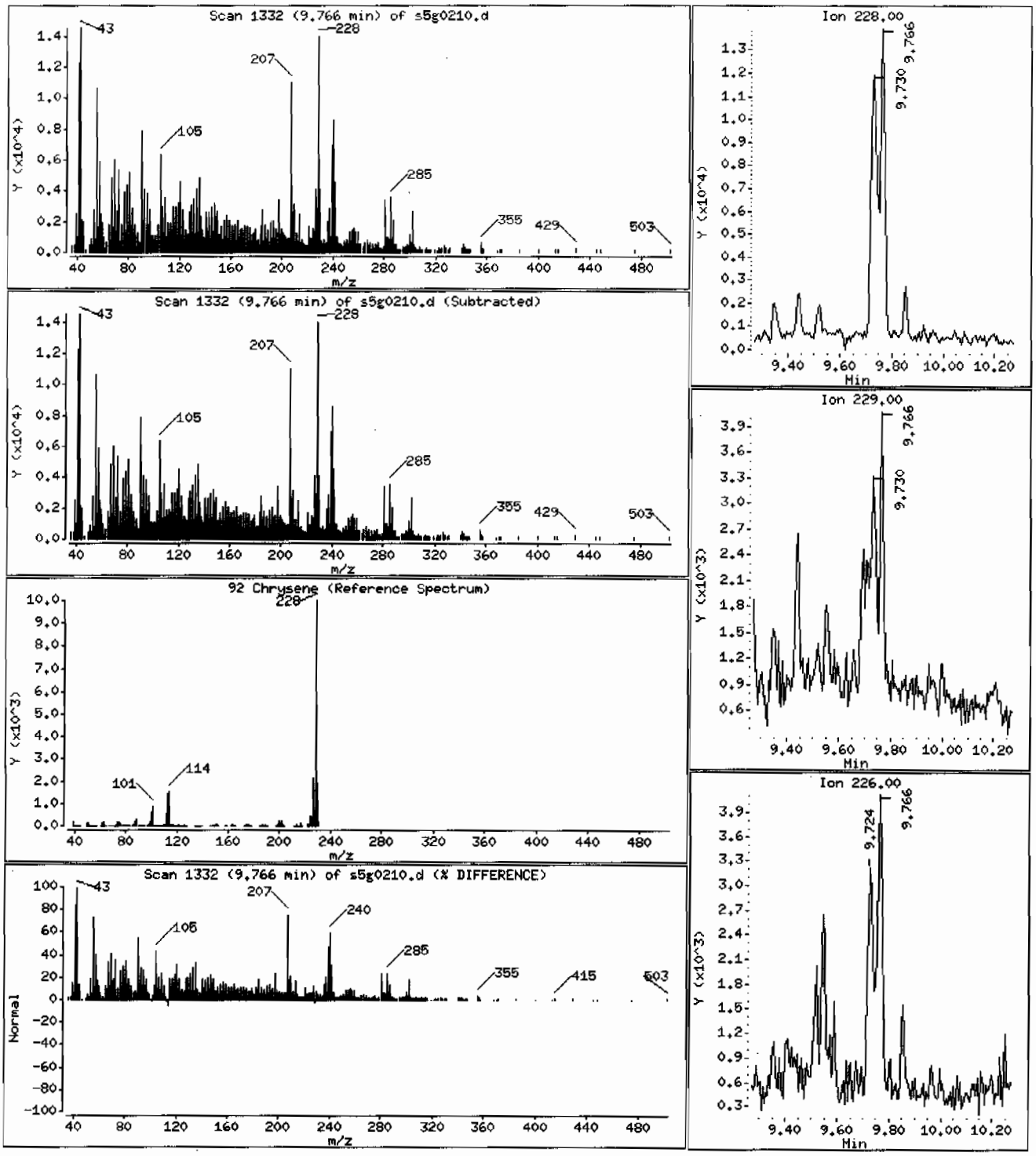

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: 1232503002188187811ISVHF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 25.9 ug/Kg

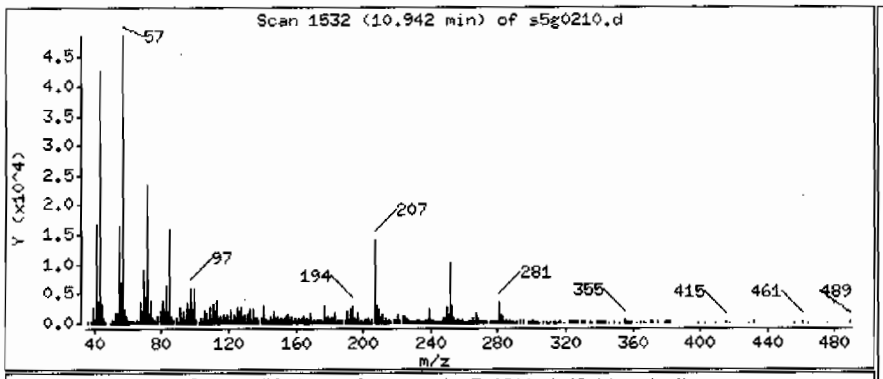

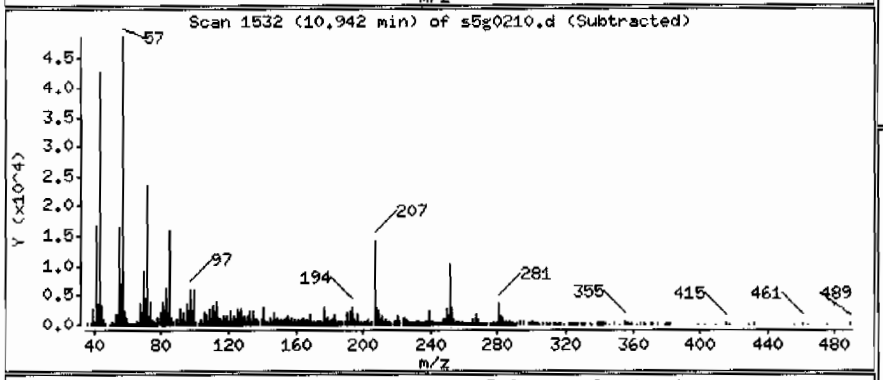

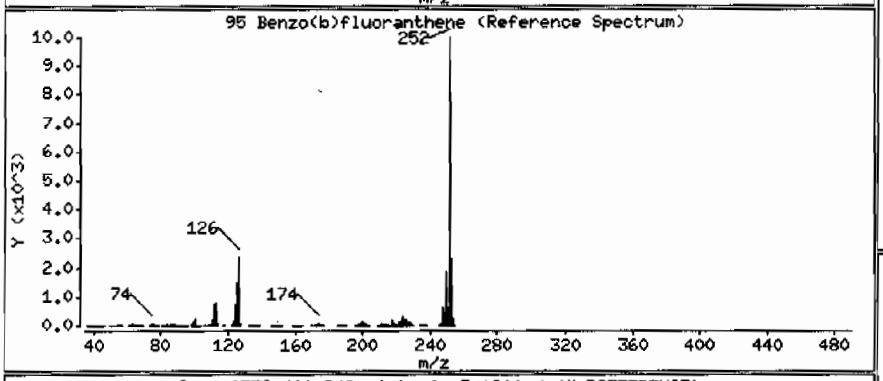

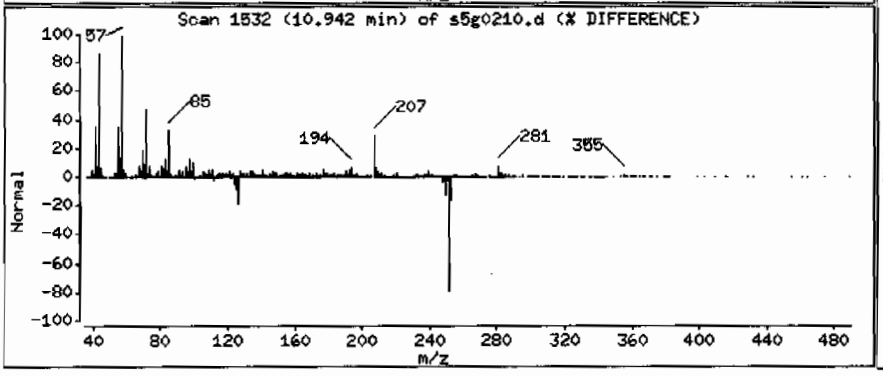

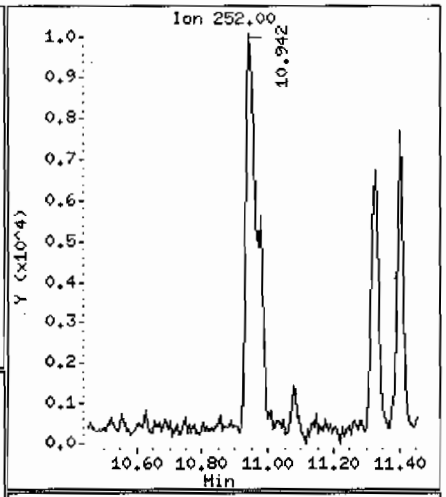

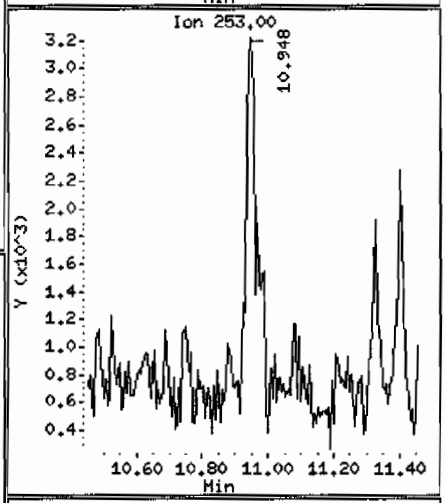

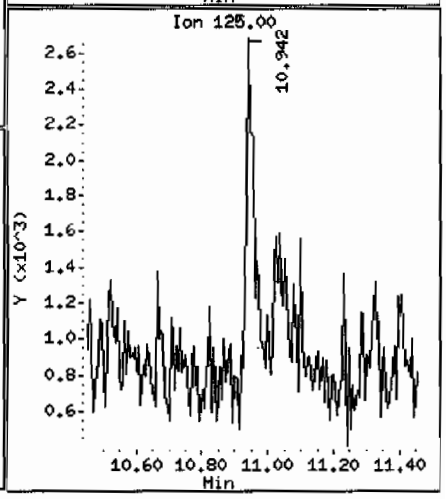

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: 1232503002188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 15.6 ug/Kg

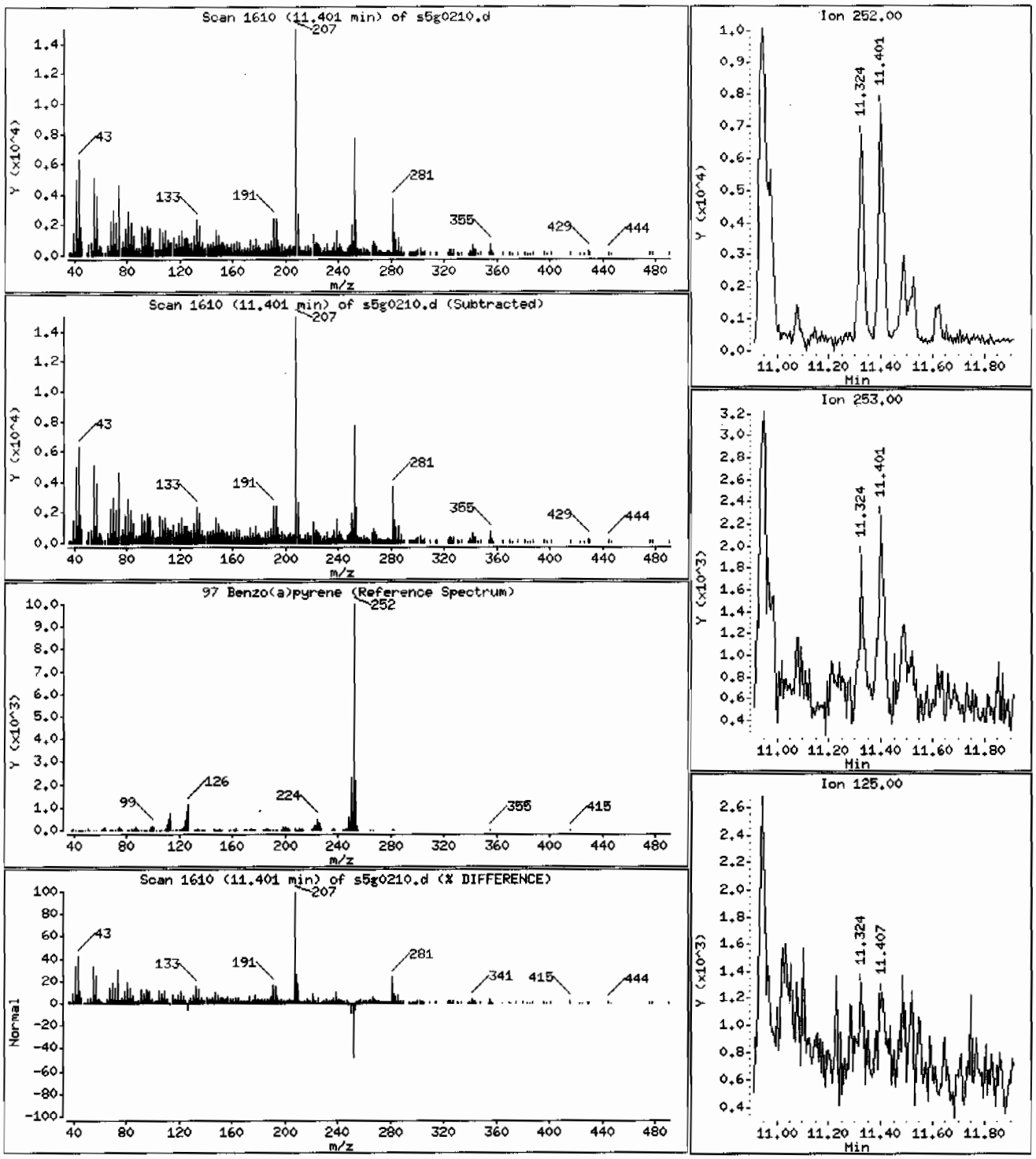

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: |232503002188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
4b,8-Dimethyl-2-isopropylphenanthrene, 4	1000197-14-1	NIST05.L	96373	90	C19H28	256
s-Indacen-1(2H)-one, 3,5,6,7-tetrahydro-	38754-94-8	NIST05.L	96361	70	C18H24O	256
Naphthalene, 6-ethyl-1,2,3,4-tetrahydro-	301643-35-6	NIST05.L	96375	38	C19H28	256

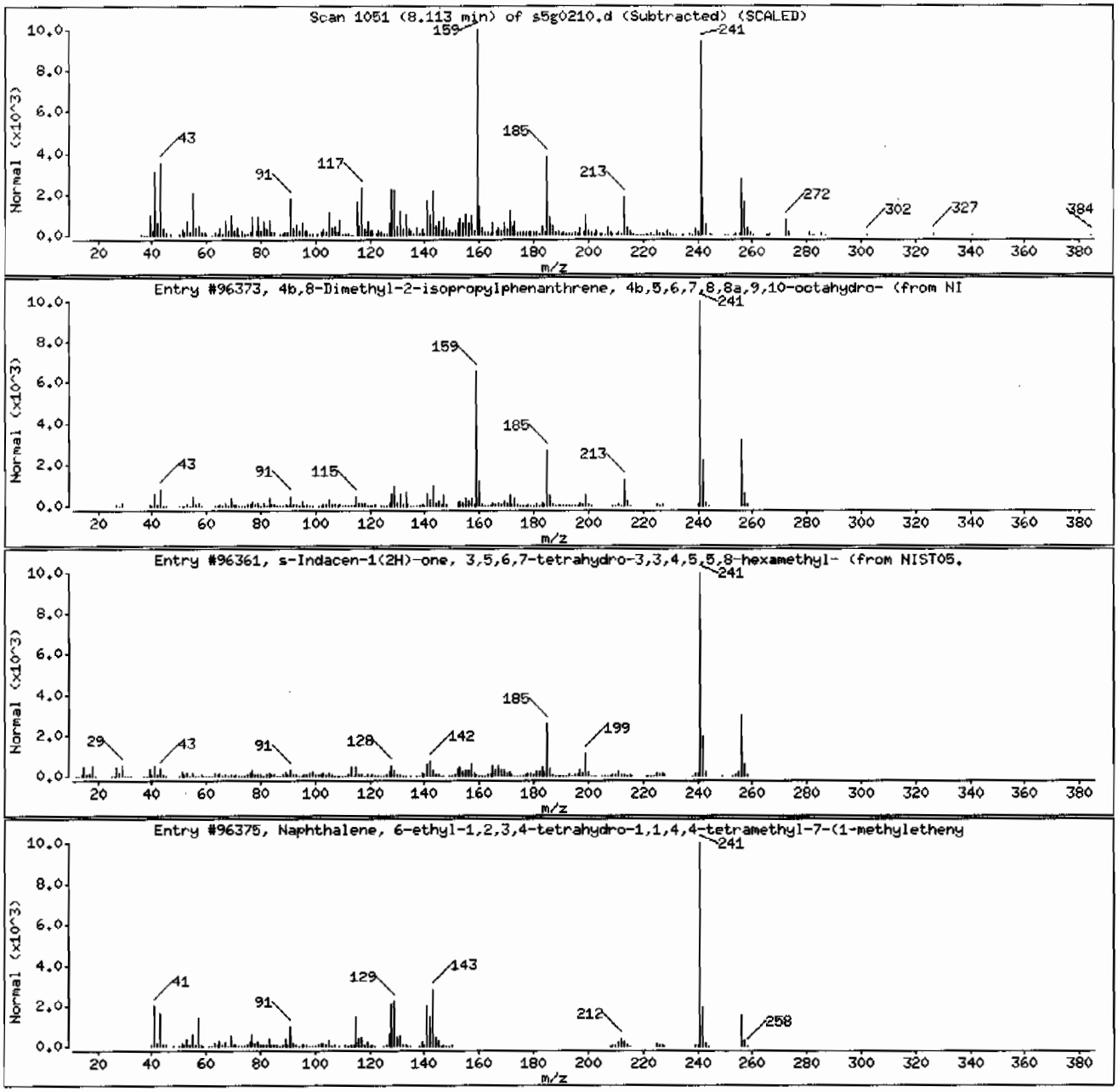

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Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: |232503002|881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1H-Cyclopropl[e]azulene, decahydro-1,1,7-	25246-27-9	NIST05.L	60075	74	C15H24	204
1,3,6,10-Cyclotetradecatetraene, 3,7,11-	1898-13-1	NIST05.L	107098	56	C20H32	272
Cyclopenta[a,d]cyclooctan-5-one, 1,2,3,3	1000197-98-9	NIST05.L	116240	52	C20H300	286

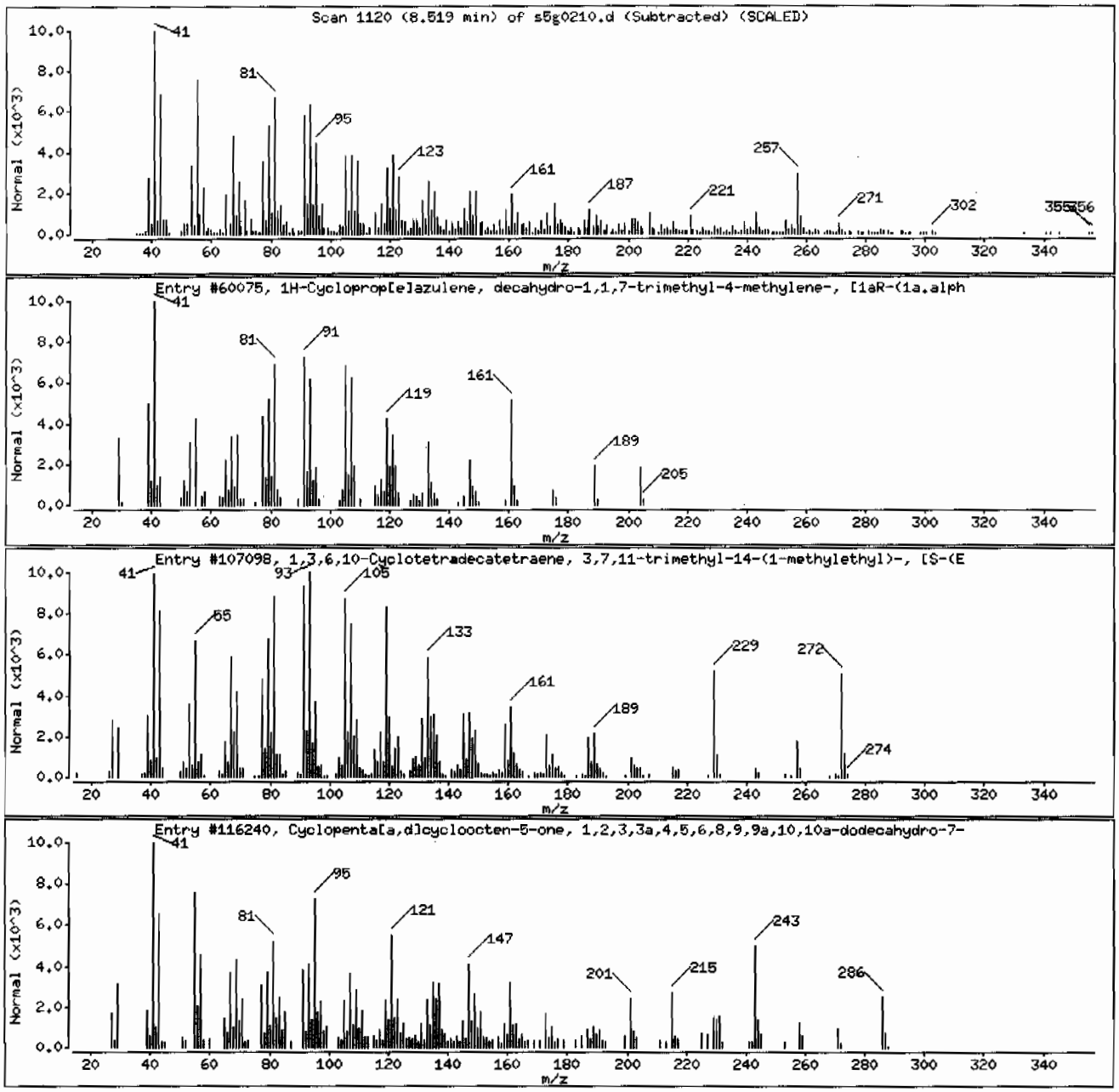

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376 Instrument: MSD5.i

Sample Info: |2325030021881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cholest-7-en-3-one, 4,4-dimethyl-, (5,al	2604-90-2	NIST05.L	173948	38	C29H480	412
Stigmasteryl tosylate	53139-42-7	NIST05.L	187549	27	C36H5403S	566
2,2-Dimethylpropanoic acid, 2,6-dimethyl	1000299-33-6	NIST05.L	92138	16	C16H2602	250

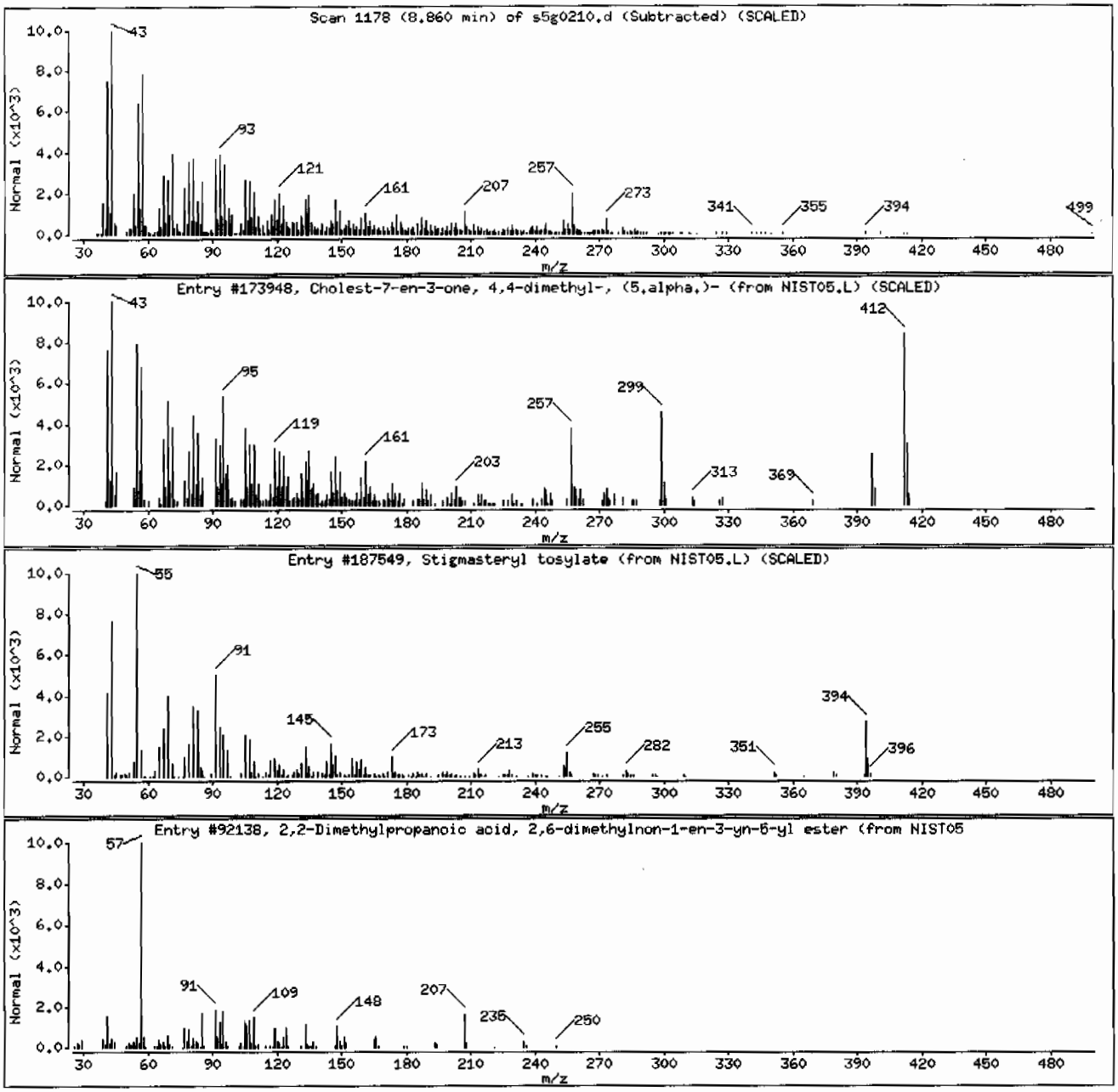

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: 1232503002188187811|SVMF11|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Pentacyclo[7.5.0.0(2,8).0(5,14).0(7,11)]	79772-15-9	NIST05.L	48786	49	C14H20	188
1,3,6,10-Cyclotetradecatetraene, 3,7,11-	1898-13-1	NIST05.L	107098	41	C20H32	272
Humulen-(v1)	1000159-39-4	NIST05.L	59795	40	C15H24	204

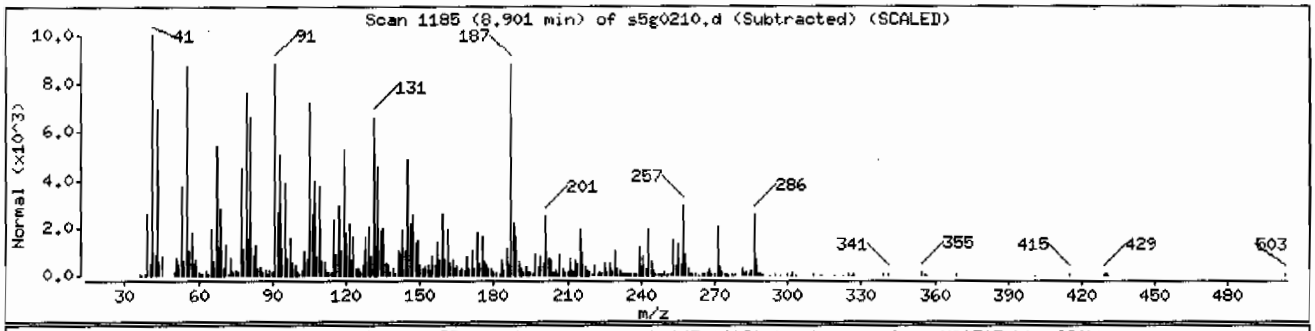

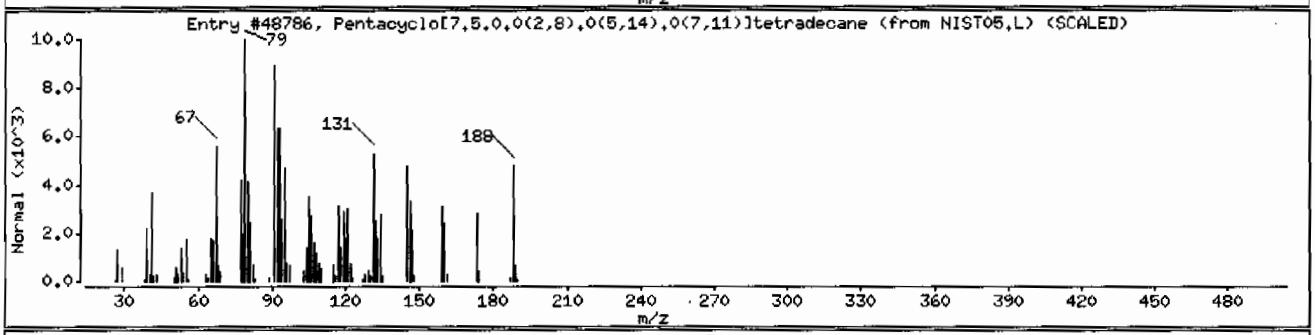

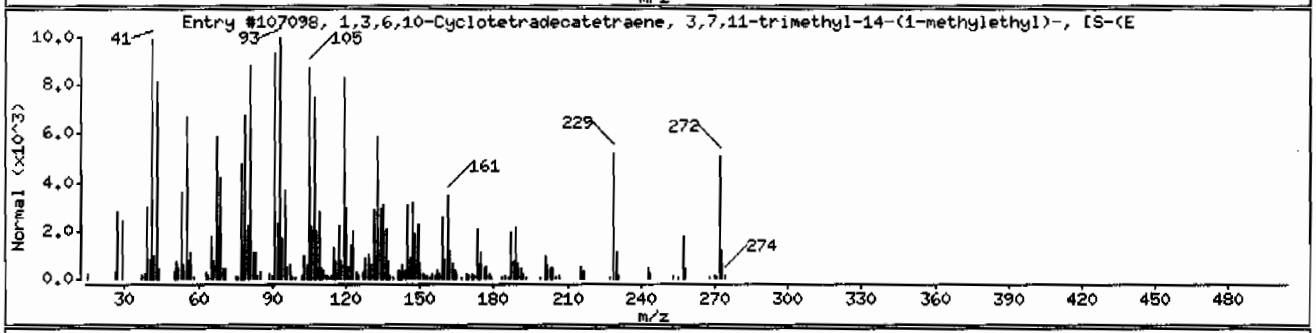

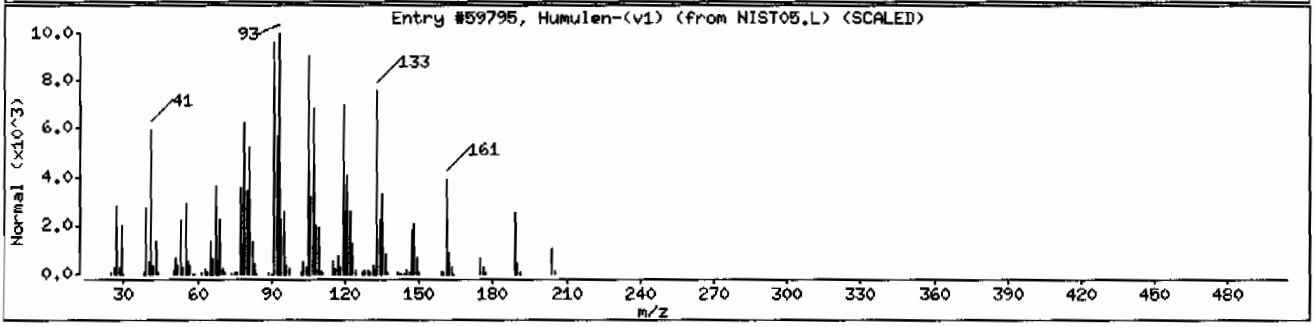

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: |2325030021881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 7-ethenyl	1686-62-0	NIST05.L	134785	89	C21H3202	316
1,1,3,3-Tetramethyl-1,3-disilaphenalane	32538-51-5	NIST05.L	96096	49	C15H20Si2	256
(3E,5E,7E)-6-Methyl-8-(2,6,6-trimethyl-1	17974-57-1	NIST05.L	97615	45	C18H260	258

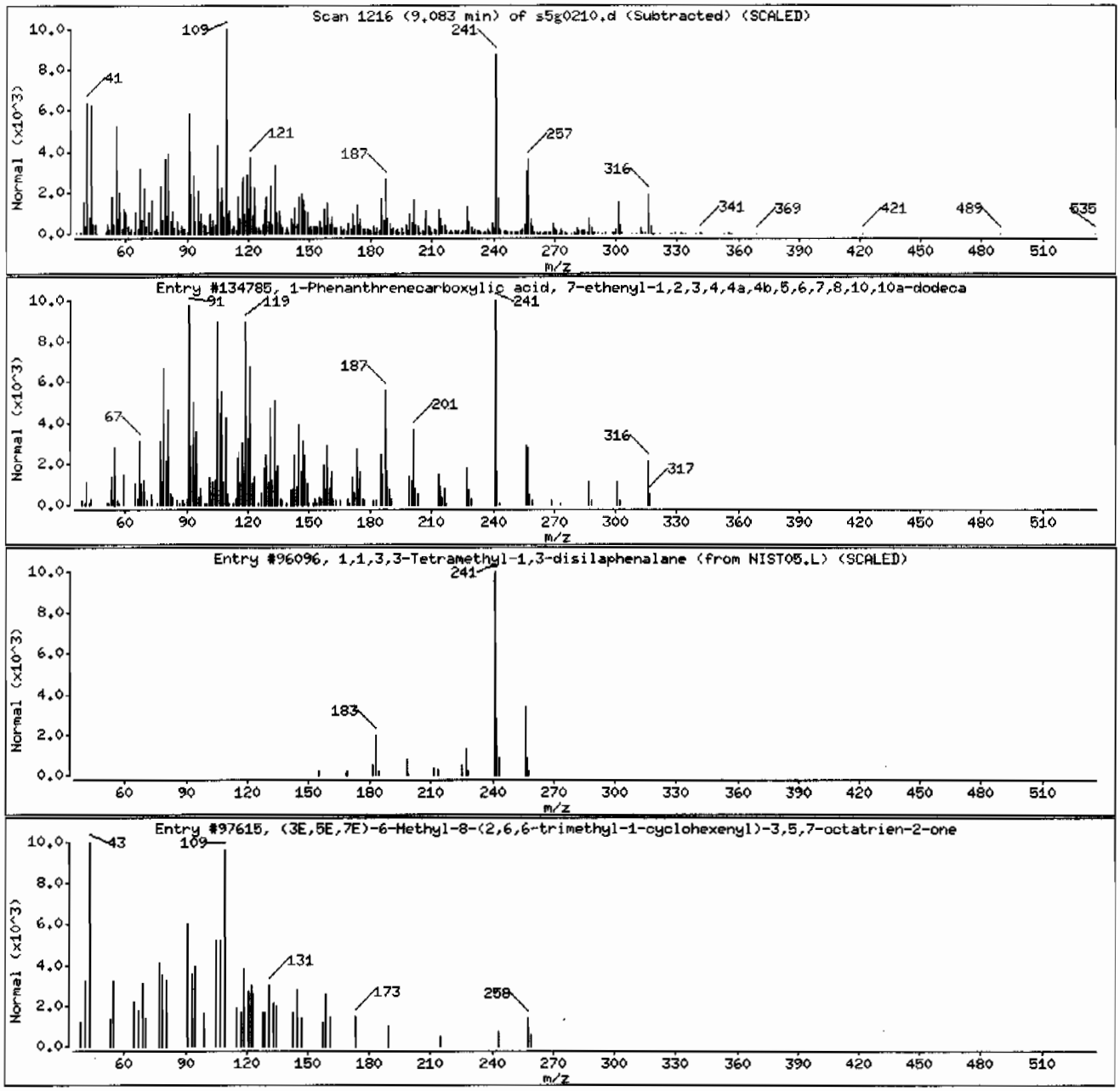

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: |2325030021881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	98	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133620	93	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133621	91	C21H3002	314

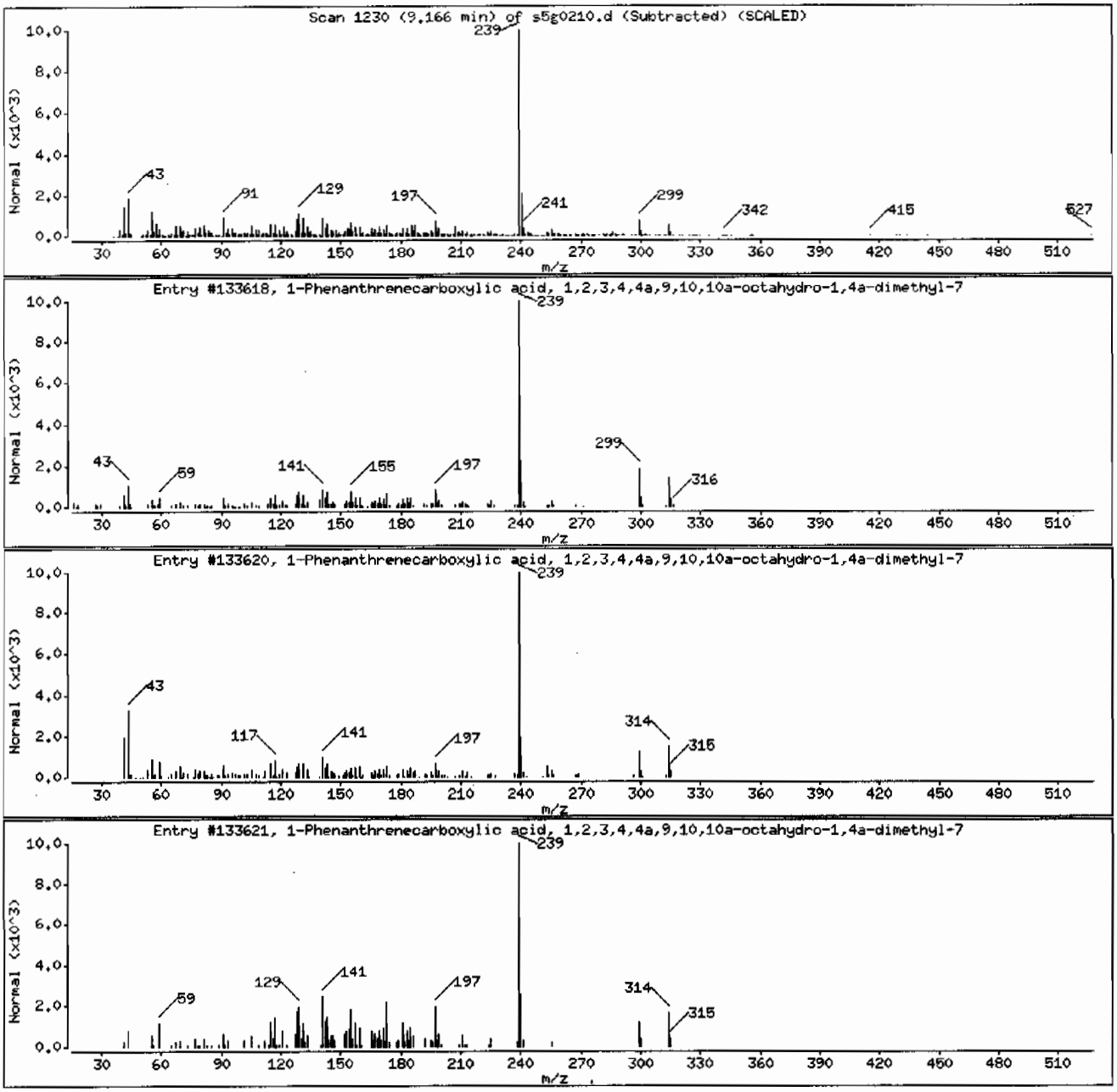

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376 Instrument: MSD5.i

Sample Info: 1232503002188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Pimaric acid	127-27-5	NIST05.L	126142	50	C20H30O2	302
Palustric acid	1945-53-5	NIST05.L	126144	49	C20H30O2	302
1-Phenanthrenecarboxylic acid, 7-ethenyl	1686-62-0	NIST05.L	134785	43	C21H32O2	316

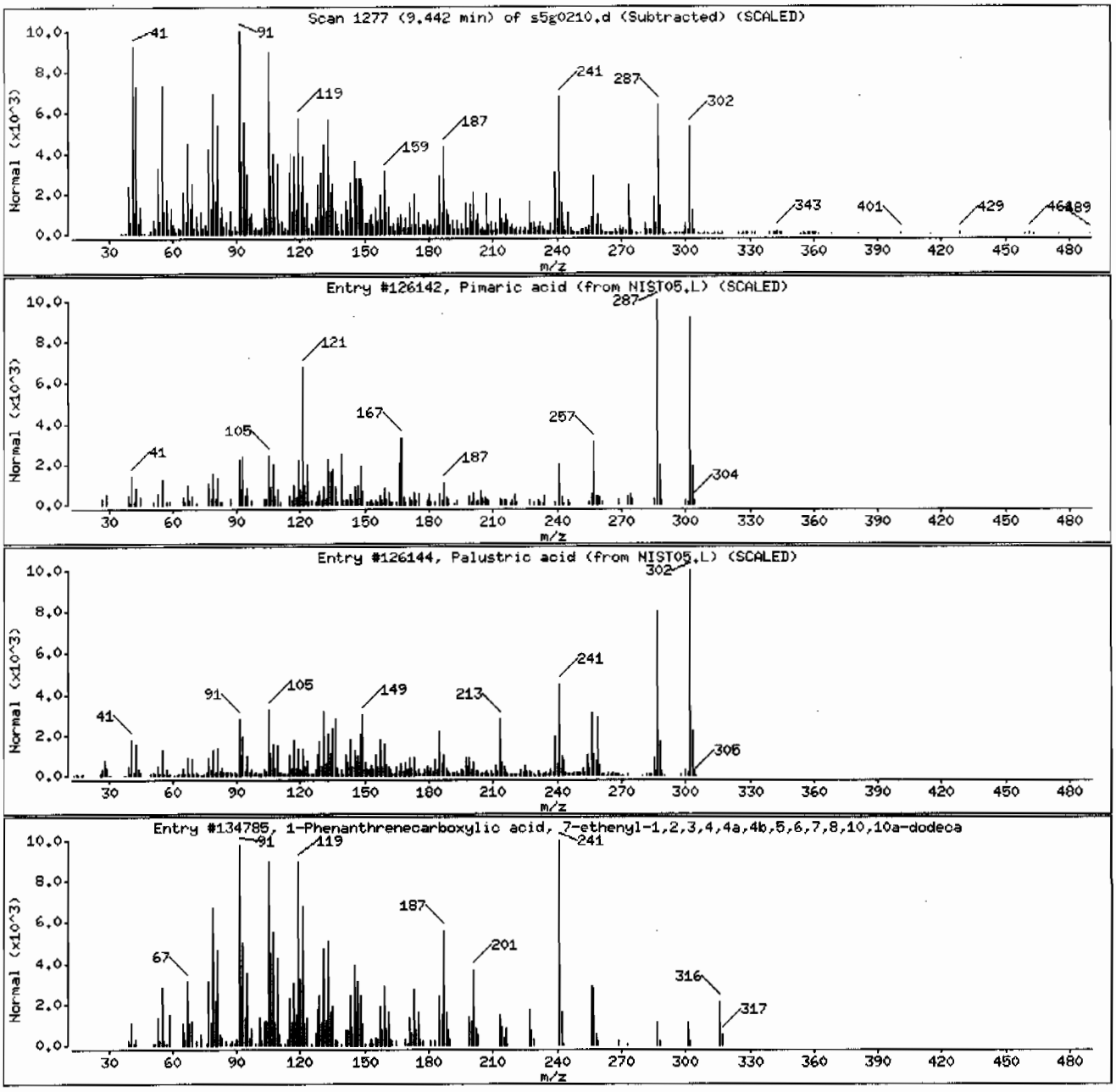

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376 Instrument: MSD5.i

Sample Info: 1232503002188187811|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125037	94	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	91	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	5155-70-4	NIST05.L	125035	86	C20H28O2	300

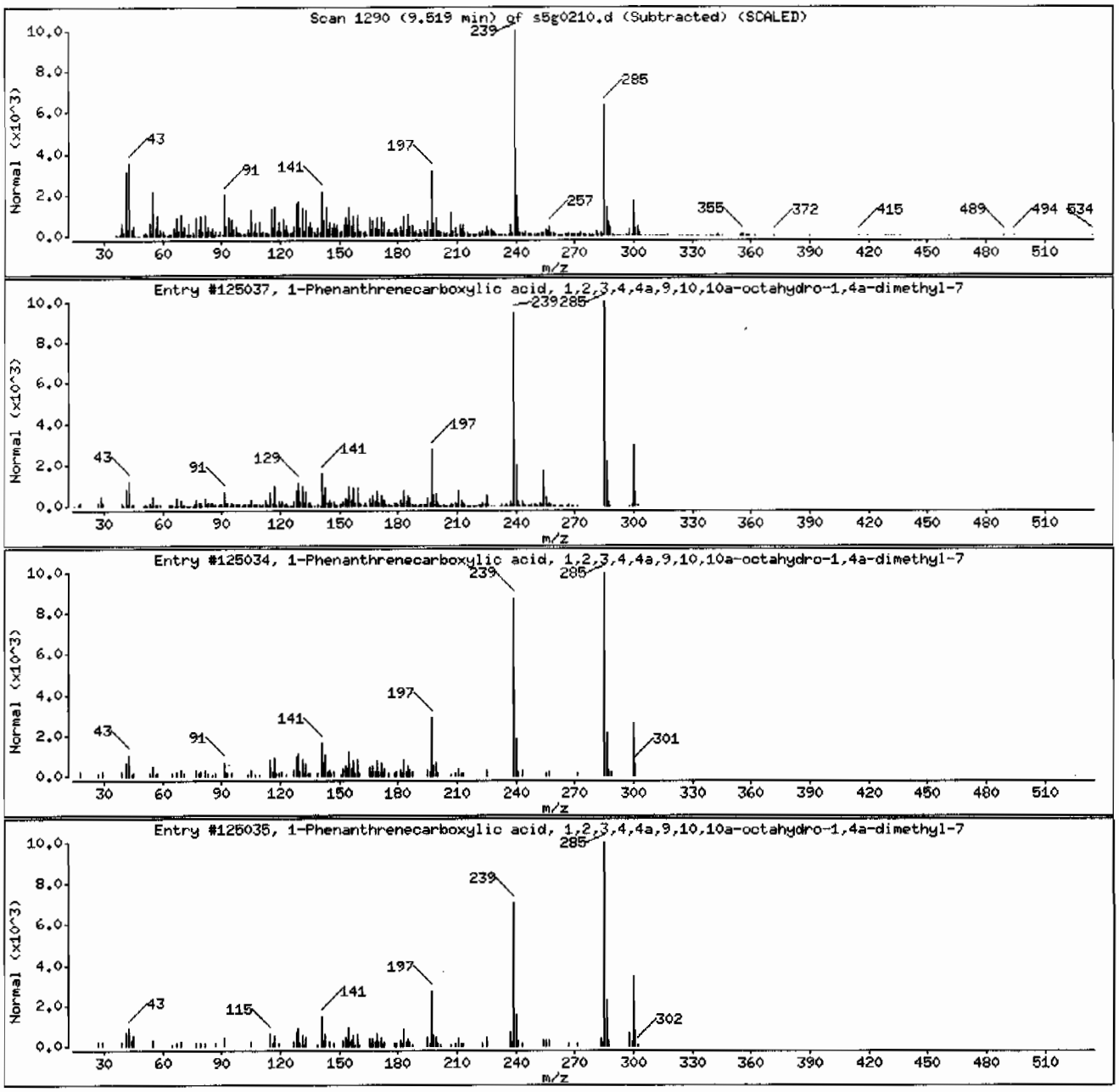

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: |2325030021881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Heptadecane	629-78-7	NIST05.L	85525	95	C17H36	240
Heptadecane	629-78-7	NIST05.L	85524	92	C17H36	240
Heptadecane	629-78-7	NIST05.L	85523	91	C17H36	240

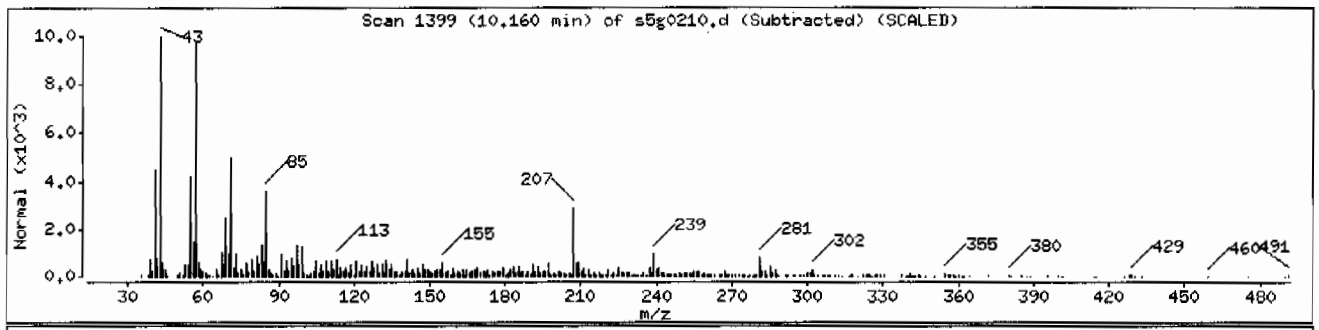

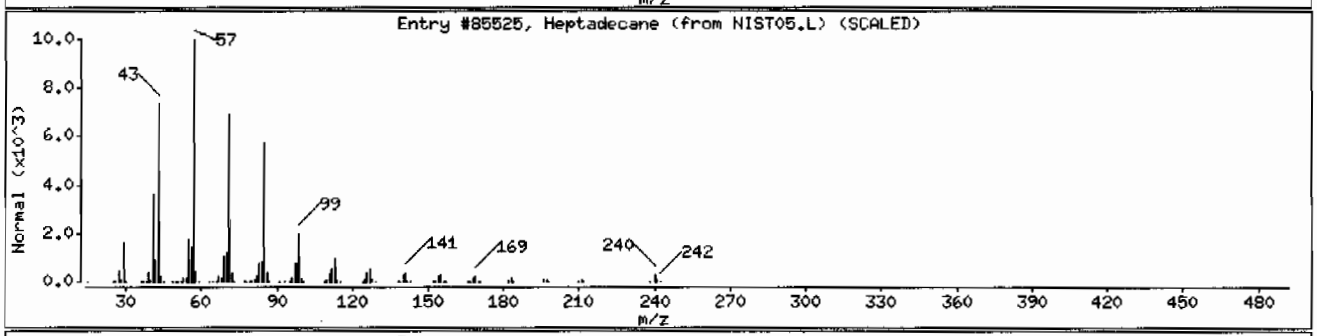

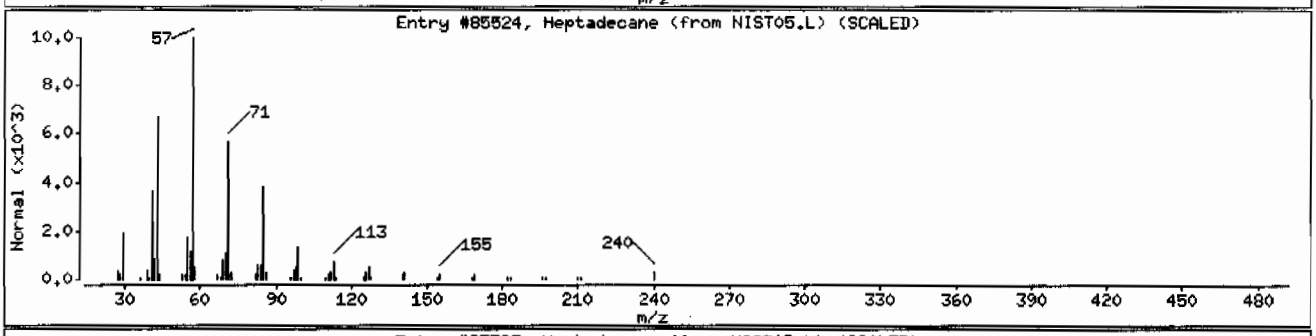

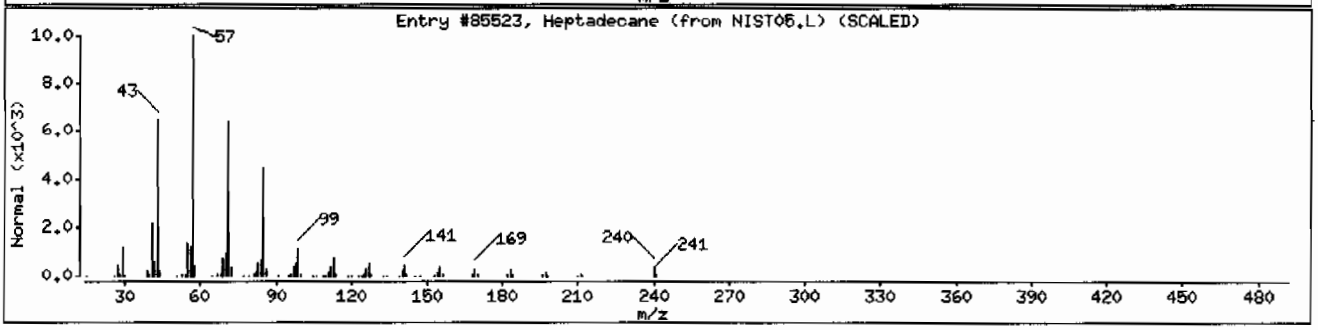

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: |2325030021881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propanamide, N-(3-methoxyphenyl)-2,2-dim	56619-93-3	NIST05.L	62123	30	C12H17NO2	207
Hexanoic acid, 4-(hexanoylamino)phenyl e	89573-91-1	NIST05.L	127878	27	C18H27NO3	305
Hexadecanoic acid, (3-bromoprop-2-ynyl)	157336-02-2	NIST05.L	162086	16	C19H33BrO2	372

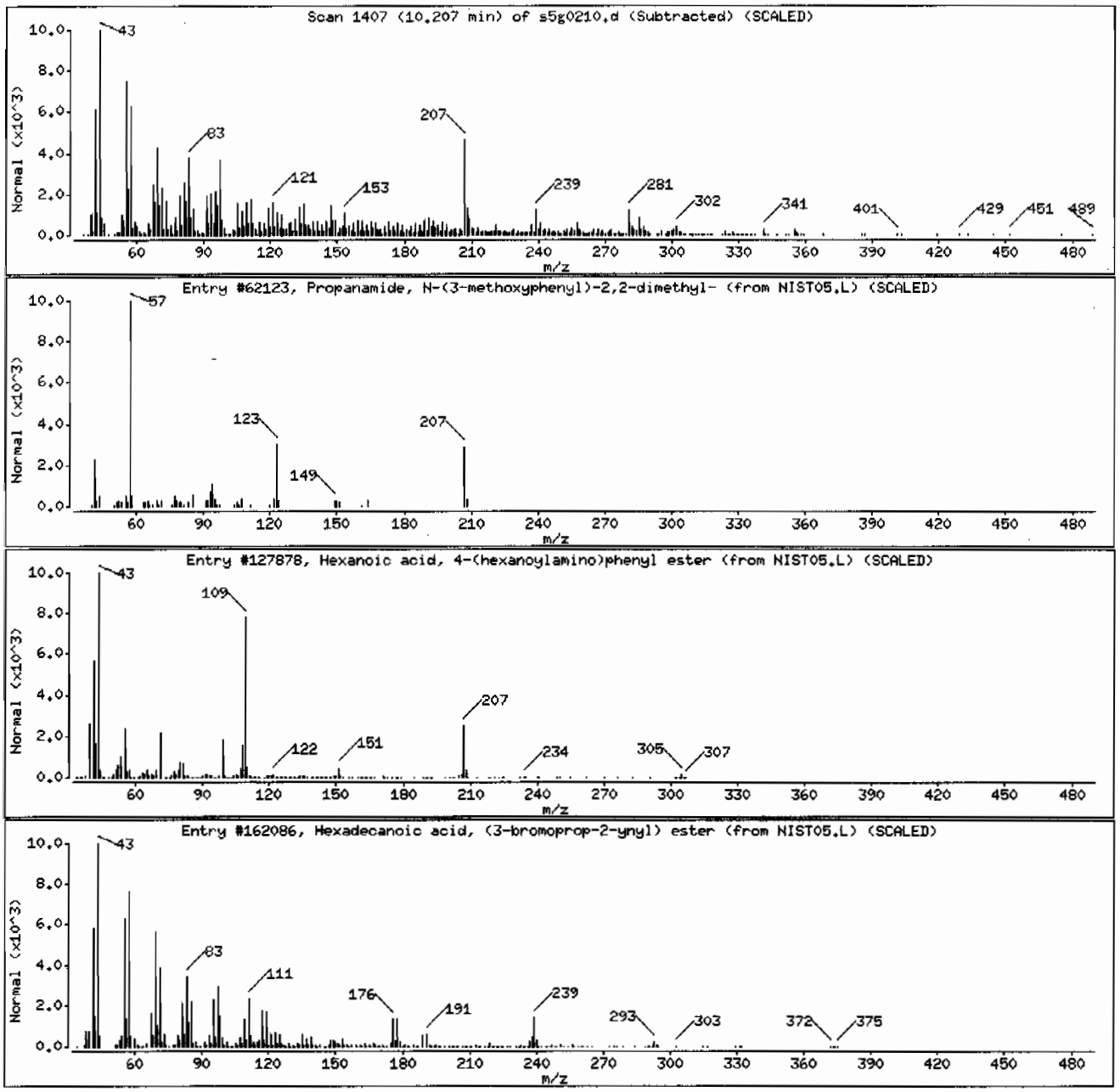

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376 Instrument: MSD5.i

Sample Info: 1232503002188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclohexane, 1,1'-(2-propyl-1,3-propaned	55030-21-2	NIST05.L	92245	78	C18H34	250
Cyclohexane, 1,2-dimethyl-3-pentyl-4-pro	62376-17-4	NIST05.L	74543	56	C16H32	224
Cyclohexane, 1,1'-(2-ethyl-1,3-propanedi	54833-34-0	NIST05.L	82661	46	C17H32	236

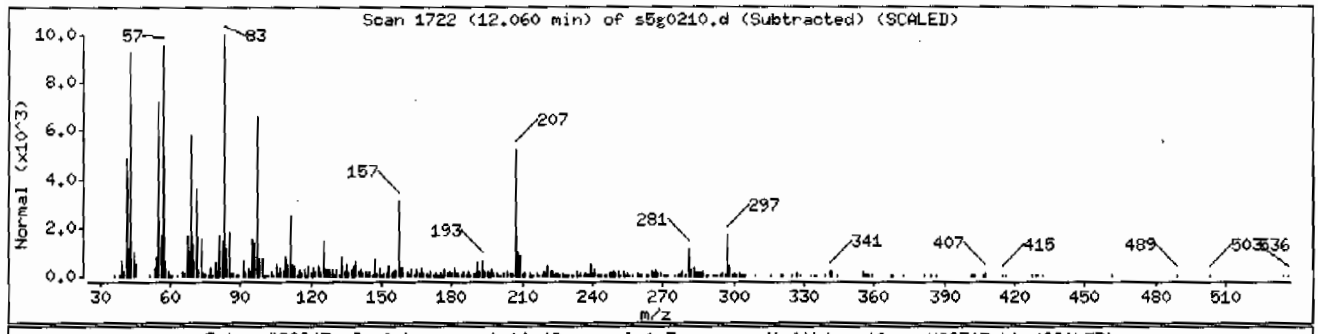

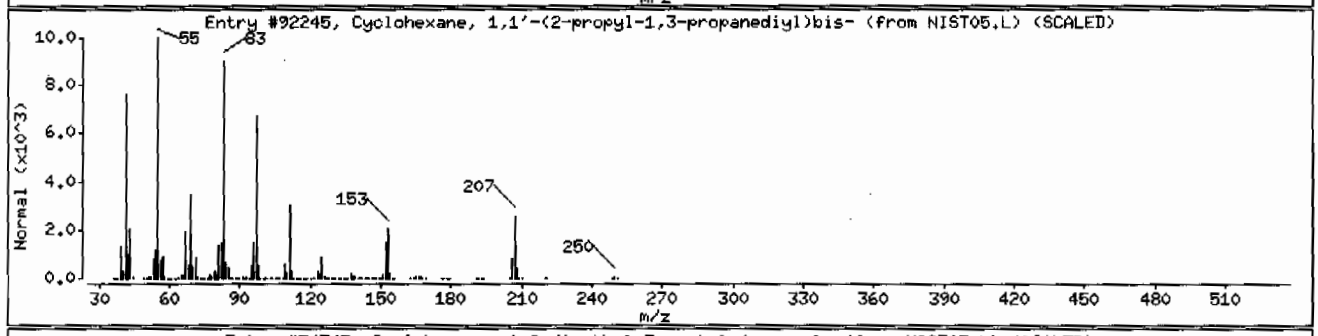

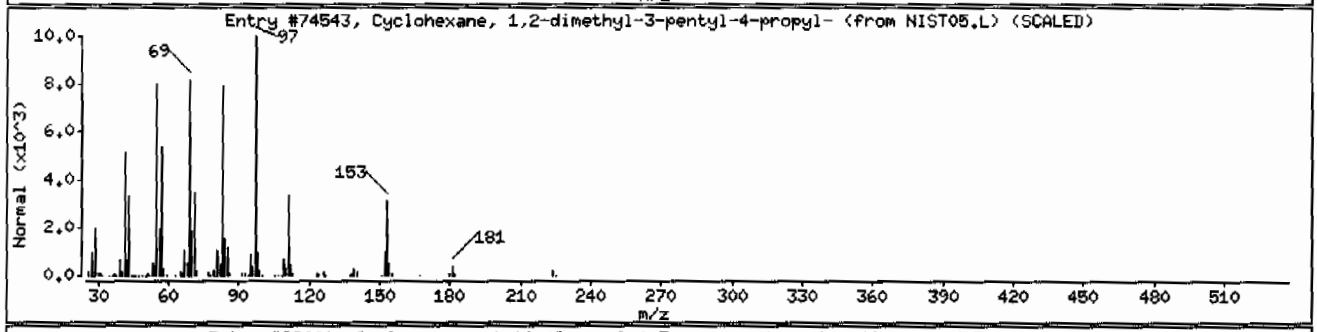

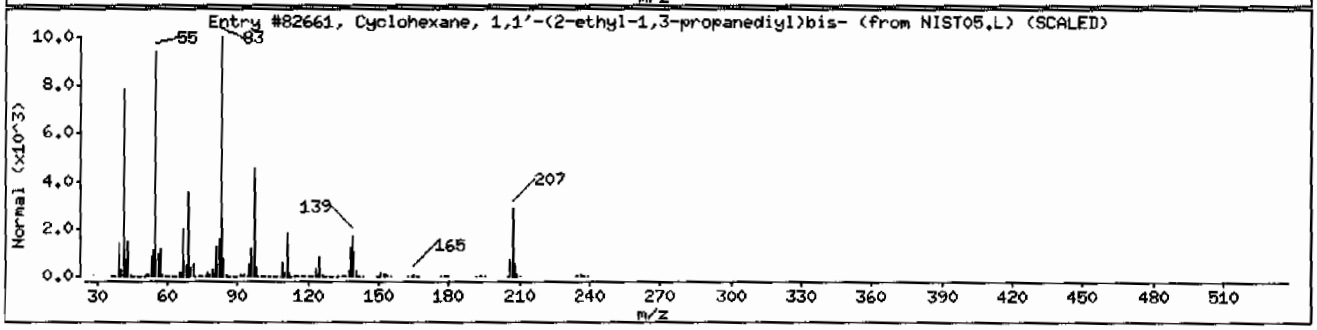

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: |23250300218818781|1SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Benzo[h]quinoline, 2,4-dimethyl-	605-67-4	NIST05.L	62243	41	C15H13N	207
2-Ethylacridine	55751-83-2	NIST05.L	62222	38	C15H13N	207
2,4-Di-tert-butylthiophenol	19728-43-9	NIST05.L	72806	38	C14H22S	222

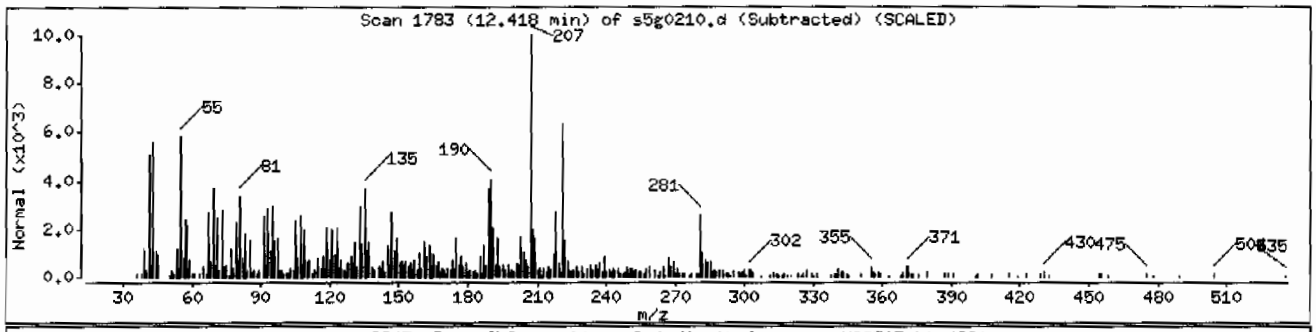

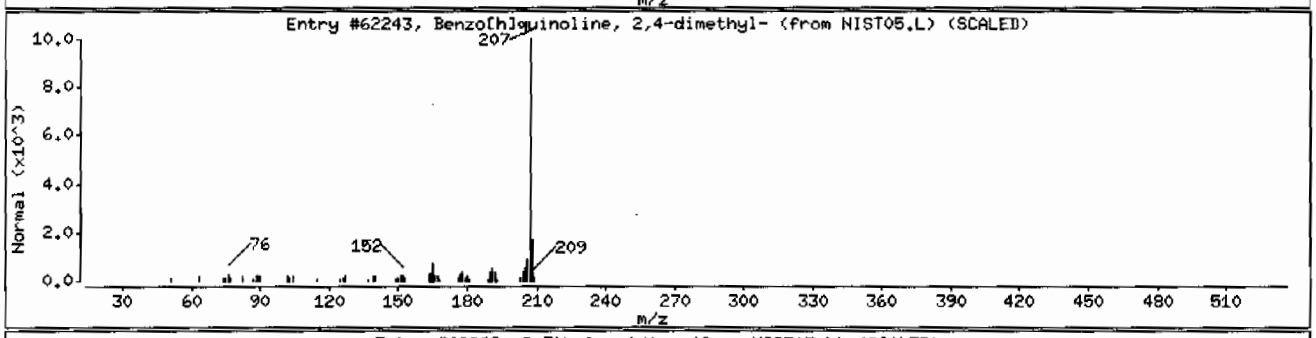

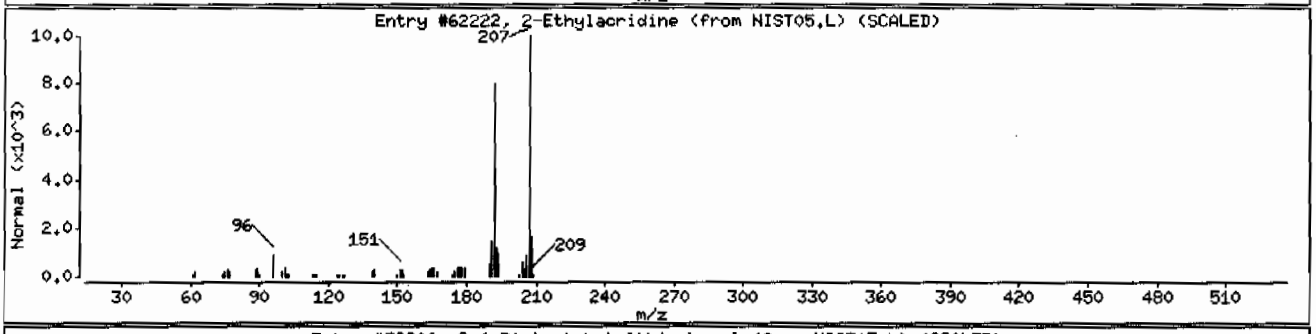

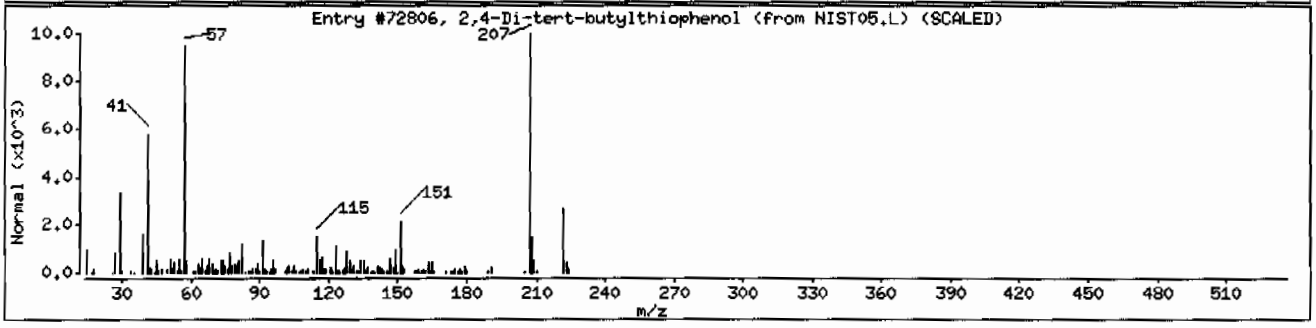

Data File: /chem/MSD5.i/s070209.b/s5g0210.d

Date : 02-JUL-2009 11:34

Client ID: CAMO-09-10376

Instrument: MSD5.i

Sample Info: 1232503002188187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
.beta.-Sitosterol	83-46-5	NIST05.L	174399	93	C29H500	414
.gamma.-Sitosterol	83-47-6	NIST05.L	174402	91	C29H500	414
9,10-Methanoanthracen-11-ol, 9,10-dihydr	126615-74-5	NIST05.L	92233	60	C18H180	250

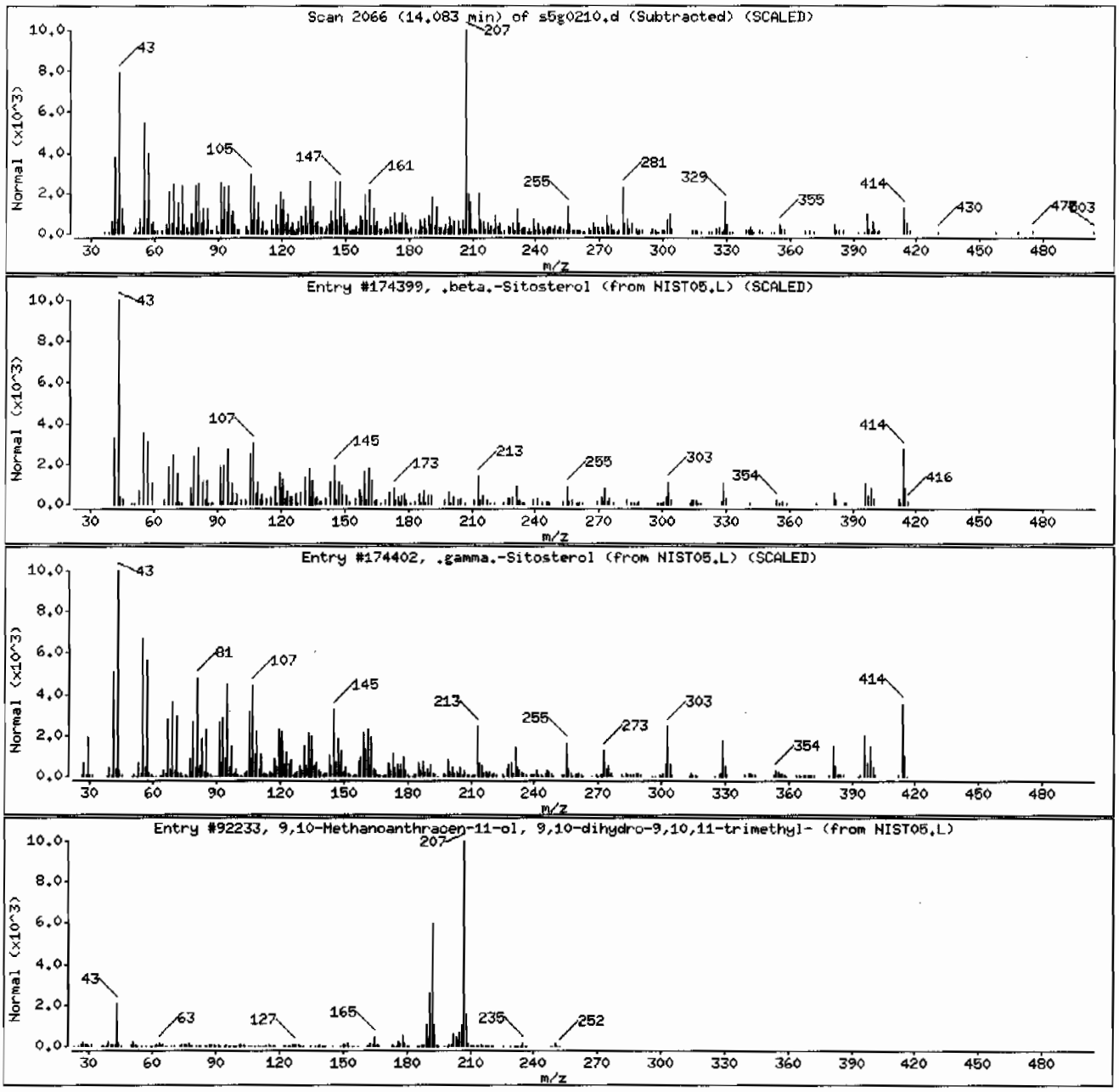

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503005	Date Received:	06/27/2009 09:05	%Moisture:	6.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10377	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 12:42	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0213.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	357	ug/kg	71.3	357
108-95-2	Phenol	U	357	ug/kg	71.3	357
95-57-8	2-Chlorophenol	U	357	ug/kg	71.3	357
106-46-7	1,4-Dichlorobenzene	U	357	ug/kg	71.3	357
621-64-7	N-Nitrosodipropylamine	U	357	ug/kg	71.3	357
59-50-7	4-Chloro-3-methylphenol	U	357	ug/kg	71.3	357
83-32-9	Acenaphthene	U	35.7	ug/kg	11.8	35.7
121-14-2	2,4-Dinitrotoluene	U	357	ug/kg	35.7	357
100-02-7	4-Nitrophenol	U	357	ug/kg	118	357
87-86-5	Pentachlorophenol	U	357	ug/kg	89.2	357
129-00-0	Pyrene	U	35.7	ug/kg	10.7	35.7
110-86-1	Pyridine	U	357	ug/kg	71.3	357
62-53-3	Aniline	U	357	ug/kg	107	357
111-44-4	bis(2-Chloroethyl) ether	U	357	ug/kg	71.3	357
541-73-1	1,3-Dichlorobenzene	U	357	ug/kg	71.3	357
100-51-6	Benzyl alcohol	U	357	ug/kg	107	357
95-50-1	1,2-Dichlorobenzene	U	357	ug/kg	71.3	357
108-60-1	bis(2-Chloroisopropyl)ether	U	357	ug/kg	71.3	357
95-48-7	o-Cresol	U	357	ug/kg	71.3	357
65794-96-9	m,p-Cresols	U	357	ug/kg	107	357
67-72-1	Hexachloroethane	U	357	ug/kg	71.3	357
98-95-3	Nitrobenzene	U	357	ug/kg	71.3	357
78-59-1	Isophorone	U	357	ug/kg	71.3	357
88-75-5	2-Nitrophenol	U	357	ug/kg	71.3	357
105-67-9	2,4-Dimethylphenol	U	357	ug/kg	125	357
111-91-1	bis(2-Chloroethoxy)methane	U	357	ug/kg	71.3	357
120-83-2	2,4-Dichlorophenol	U	357	ug/kg	71.3	357
65-85-0	Benzoic acid	U	713	ug/kg	178	713
91-20-3	Naphthalene	U	35.7	ug/kg	10.7	35.7
106-47-8	4-Chloroaniline	U	357	ug/kg	71.3	357
87-68-3	Hexachlorobutadiene	U	357	ug/kg	71.3	357
91-57-6	2-Methylnaphthalene	U	35.7	ug/kg	7.13	35.7
77-47-4	Hexachlorocyclopentadiene	U	357	ug/kg	71.3	357
88-06-2	2,4,6-Trichlorophenol	U	357	ug/kg	71.3	357
95-95-4	2,4,5-Trichlorophenol	U	357	ug/kg	71.3	357
91-58-7	2-Chloronaphthalene	U	35.7	ug/kg	11.8	35.7
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	357	ug/kg	71.3	357
99-09-2	3-Nitroaniline	U	357	ug/kg	71.3	357

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503005	Date Received:	06/27/2009 09:05	%Moisture:	6.5
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10377	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 12:42	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0213.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	357	ug/kg	71.3	357
606-20-2	2,6-Dinitrotoluene	U	357	ug/kg	35.7	357
208-96-8	Acenaphthylene	U	35.7	ug/kg	10.7	35.7
51-28-5	2,4-Dinitrophenol	U	713	ug/kg	136	713
132-64-9	Dibenzofuran	U	357	ug/kg	71.3	357
84-66-2	Diethylphthalate	U	357	ug/kg	71.3	357
86-73-7	Fluorene	U	35.7	ug/kg	10.7	35.7
7005-72-3	4-Chlorophenylphenylether	U	357	ug/kg	71.3	357
534-52-1	2-Methyl-4,6-dinitrophenol	U	357	ug/kg	71.3	357
100-01-6	4-Nitroaniline	U	357	ug/kg	107	357
	p-Nitroaniline					
122-39-4	Diphenylamine	U	357	ug/kg	71.3	357
122-66-7	Azobenzene	U	357	ug/kg	71.3	357
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	357	ug/kg	71.3	357
118-74-1	Hexachlorobenzene	U	357	ug/kg	71.3	357
85-01-8	Phenanthrene	U	35.7	ug/kg	10.7	35.7
120-12-7	Anthracene	U	35.7	ug/kg	7.13	35.7
84-74-2	Di-n-butylphthalate	U	357	ug/kg	71.3	357
206-44-0	Fluoranthene	U	35.7	ug/kg	10.7	35.7
85-68-7	Butylbenzylphthalate	U	357	ug/kg	71.3	357
56-55-3	Benzo(a)anthracene	U	35.7	ug/kg	10.7	35.7
91-94-1	3,3'-Dichlorobenzidine	U	357	ug/kg	107	357
218-01-9	Chrysene	U	35.7	ug/kg	10.7	35.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	357	ug/kg	71.3	357
117-84-0	Di-n-octylphthalate	U	357	ug/kg	71.3	357
205-99-2	Benzo(b)fluoranthene	U	35.7	ug/kg	10.7	35.7
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7
50-32-8	Benzo(a)pyrene	U	35.7	ug/kg	10.7	35.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.7	ug/kg	10.7	35.7
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7
191-24-2	Benzo(ghi)perylene	U	35.7	ug/kg	10.7	35.7
120-82-1	1,2,4-Trichlorobenzene	U	357	ug/kg	71.3	357

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.1	183	ug/kg		J
	Unknown Aldol Condensate	3.03	218	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	6.5
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10377	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 12:42	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
112-79-8	9-Octadecenoic acid, (E)-	8.33	211	ug/kg	99	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1.2,3,4,4	9.17	143	ug/kg	95	NJ
	Unknown	9.51	164	ug/kg		J
	Unknown	14.1	214	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0213.d
Lab Smp Id: 232503005 Client Smp ID: CAMO-09-10377
Inj Date : 02-JUL-2009 12:42
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503005|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	6.54120	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	483118	40.0000	
* 29 Naphthalene-d8	136	4.878	4.889	(1.000)	1679633	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	1048468	40.0000	
* 67 Phenanthrene-d10	188	7.319	7.325	(1.000)	1988919	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1860172	40.0000	
* 98 Perylene-d12	264	11.489	11.495	(1.000)	1428713	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.797)	775464	73.1038	2610
$ 5 Phenol-d5	99	3.725	3.728	(0.930)	1005798	71.9124	2560
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.896)	466593	37.4889	1340
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1034791	38.1620	1360
$ 60 2,4,6-Tribromophenol	329	6.742	6.747	(1.098)	344832	80.6070	2870
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	1336793	46.9578	1670

ION RATIO REPORT

SV REPORT

Data file: s5g0213.d
Report Date: 07/02/2009 13:04
Lab. ID: 232503005 SampleType: SAMPLE
Injection Date: 02-JUL-2009 12:42
Operator: RMB Instrument: MSD5.i
Sample Info: |232503005|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	60832	3.72	3.80	80-120	100	(T)
93	674	3.68	3.80	190-250	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	67605	4.37	4.25	80-120	100	(T)
42	49548	4.37	4.25	55-115	73	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	331	4.67	4.64	80-120	100	( )
122	248	4.69	4.64	54-114	75	( )
77	1043	4.77	4.64	50-110	315	(QT)
31 4-Chloroaniline			CAS#: 106-47-8			
127	409	4.91	4.92	80-120	100	( )
65	4600	4.88	4.92	0- 55	1122	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	158	6.07	6.09	80-120	100	( )
92	6881	6.14	6.09	84-144	4342	(Q)
108	23190	6.14	6.09	0- 40	14632	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	230435	6.14	5.90	80-120	100	(T)
164	1048468	6.14	5.90	0- 40	455	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	139266	6.14	5.96	80-120	100	(T)
63	2243	6.14	5.96	55-115	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	139168	6.14	6.26	80-120	100	(T)
89	2232	6.14	6.26	38- 98	2	(QT)
63	2243	6.14	6.26	19- 79	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	14903	6.74	6.56	80-120	100	(T)
165	15247	6.74	6.56	61-121	102	(T)
167	5719	6.74	6.56	0- 44	38	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	1230	6.74	6.57	80-120	100	(T)
105	1780	6.74	6.57	2- 62	145	(QT)
51	2172	6.74	6.57	46-106	177	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	25048	6.74	6.93	80-120	100	(T)
141	124044	6.74	6.93	34- 94	495	(QT)
250	50289	6.74	6.93	68-128	201	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0213.d
Lab Smp Id: 232503005 Client Smp ID: CAMO-09-10377
Inj Date : 02-JUL-2009 12:42
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503005|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	6.54120	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.007	3119434	40.000
* 67 Phenanthrene-d10	7.319	4871259	40.000
* 91 Chrysene-d12	9.742	5095706	40.000
* 98 Perylene-d12	11.489	3518674	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.101	399178	5.11859405	182	0		0	10
Unknown Aldol Condensate				CAS #:			
3.031	476190	6.10611305	218	0		0	10
9-Octadecenoic acid, (E)-				CAS #: 112-79-8			
8.330	720341	5.91502536	211	99	NIST05.L	113363	67
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1235-74-1			
9.166	512299	4.02141809	143	95	NIST05.L	133618	91
Unknown				CAS #:			
9.513	584735	4.59002058	164	0		0	91
Unknown				CAS #:			
14.101	528784	6.01117490	214	0		0	98

Data File: /chem/MSD5.i/s070209.b/s5g0213.d

Date : 02-JUL-2009 12:42

Client ID: CAMO-09-10377

Sample Info: |2325030051881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

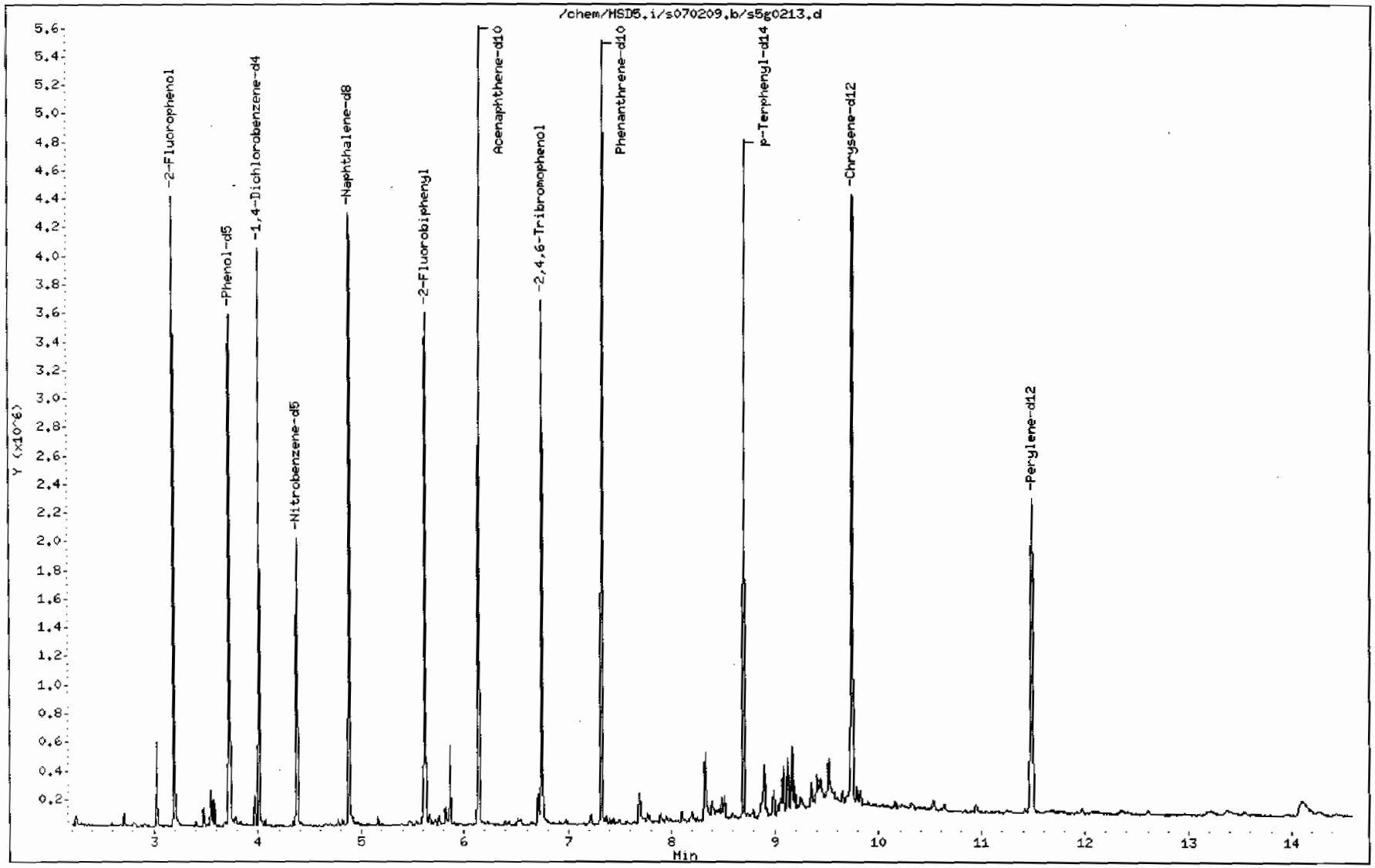

Data File: /chem/MSD5.i/s070209.b/s5g0213.d

Date : 02-JUL-2009 12:42

Client ID: CAMO-09-10377

Instrument: MSD5.i

Sample Info: 1232503005|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Acetamide, N-methyl-	79-16-3	NIST05.L	723	38	C3H7NO	73
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	38	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	36	C5H12O2	104

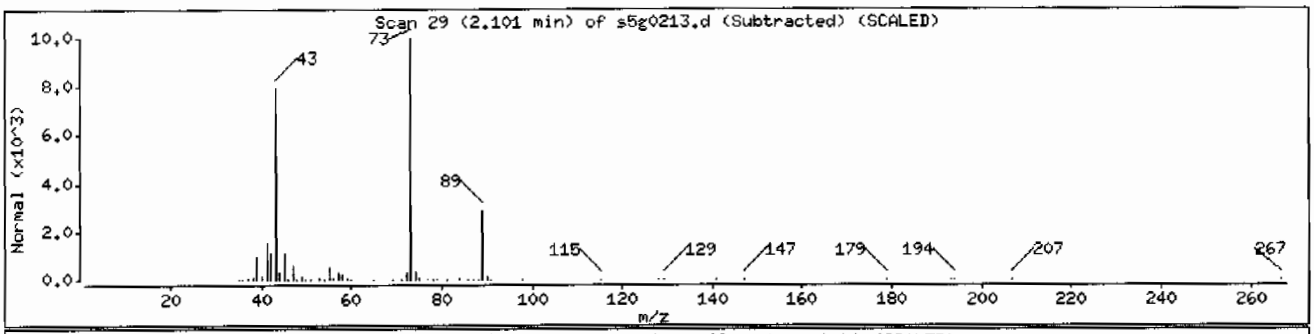

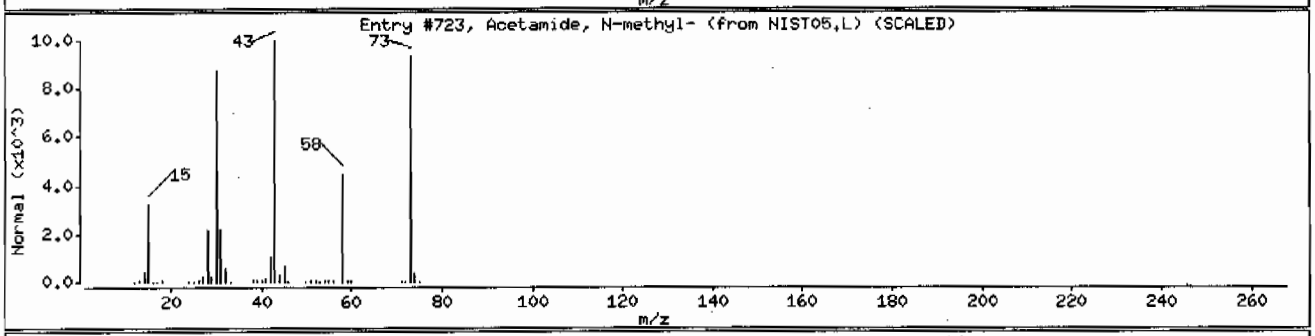

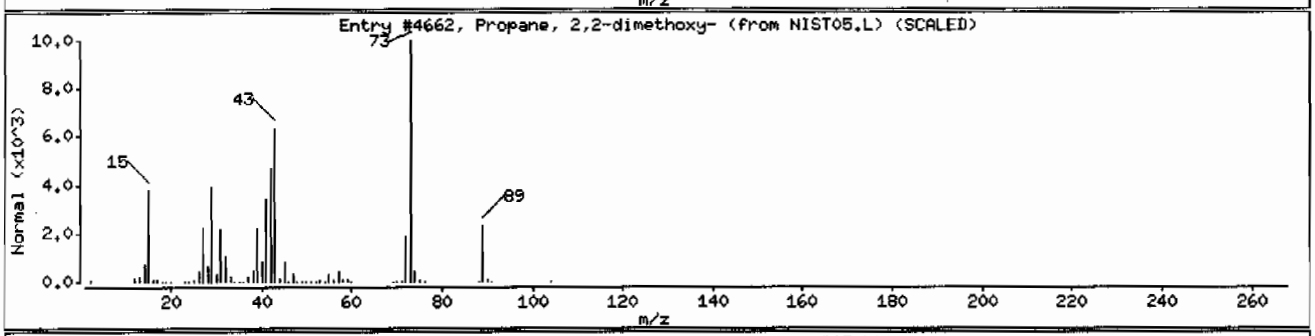

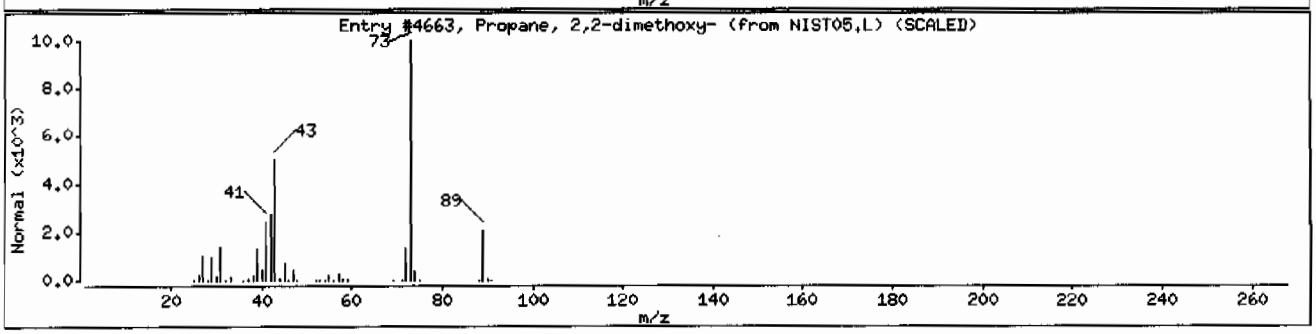

Data File: /chem/MSD5.i/s070209.b/s5g0213.d

Date : 02-JUL-2009 12:42

Client ID: CAMO-09-10377

Instrument: MSD5.i

Sample Info: 1232503005188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	40	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	16	C4H7NO2	101

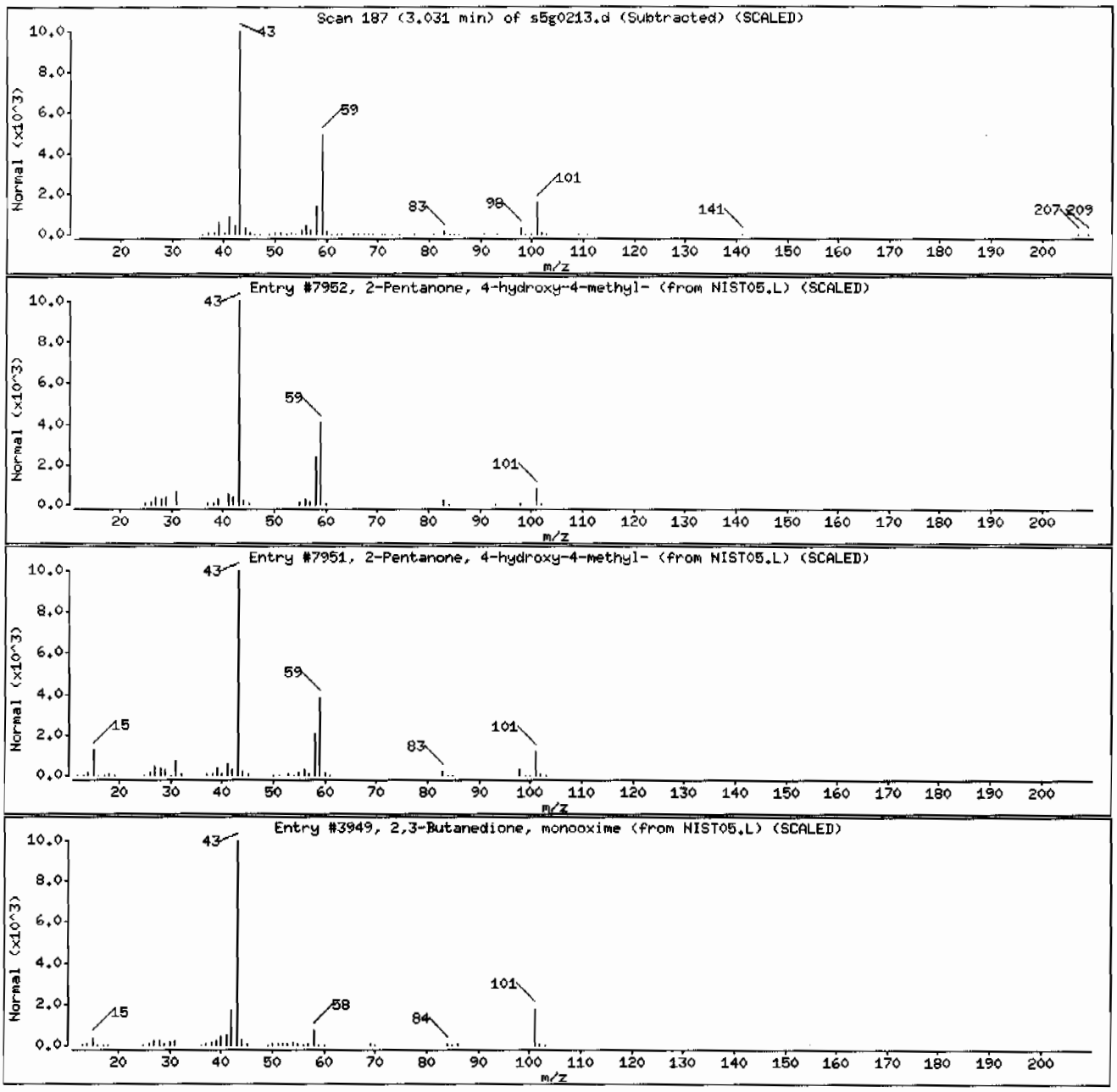

Data File: /chem/MSD5.i/s070209.b/s5g0213.d

Date : 02-JUL-2009 12:42

Client ID: CAMO-09-10377

Instrument: MSD5.i

Sample Info: 1232503005|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
9-Octadecenoic acid, (E)-	112-79-8	NIST05.L	113363	99	C18H3402	282
Oleic Acid	112-80-1	NIST05.L	113353	98	C18H3402	282
Oleic Acid	112-80-1	NIST05.L	113354	95	C18H3402	282

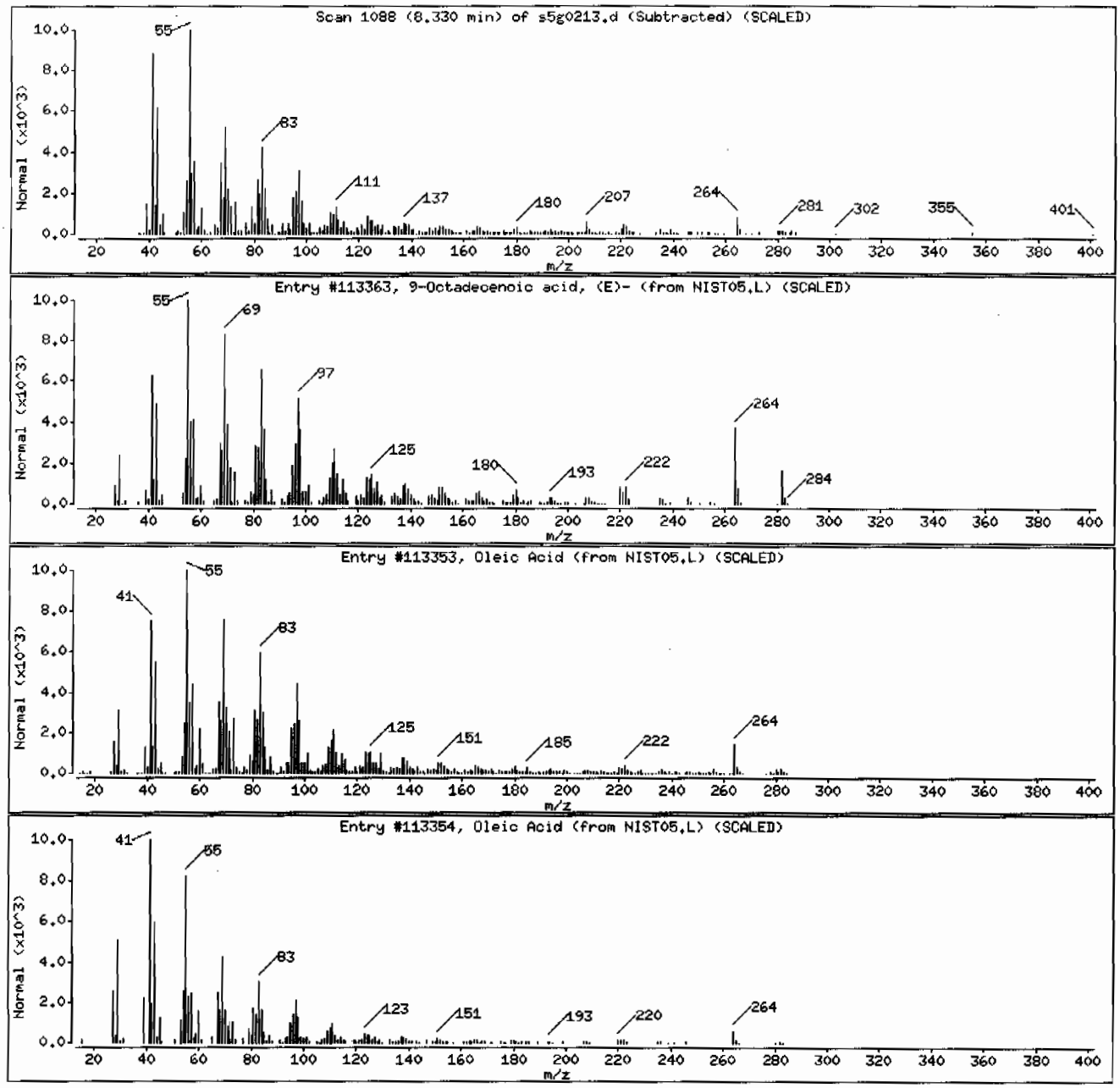

Data File: /chem/MSD5.i/s070209.b/s5g0213.d

Date : 02-JUL-2009 12:42

Client ID: CAMO-09-10377 Instrument: MSD5.i

Sample Info: 1232503005188187811|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	95	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133621	91	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133620	90	C21H3002	314

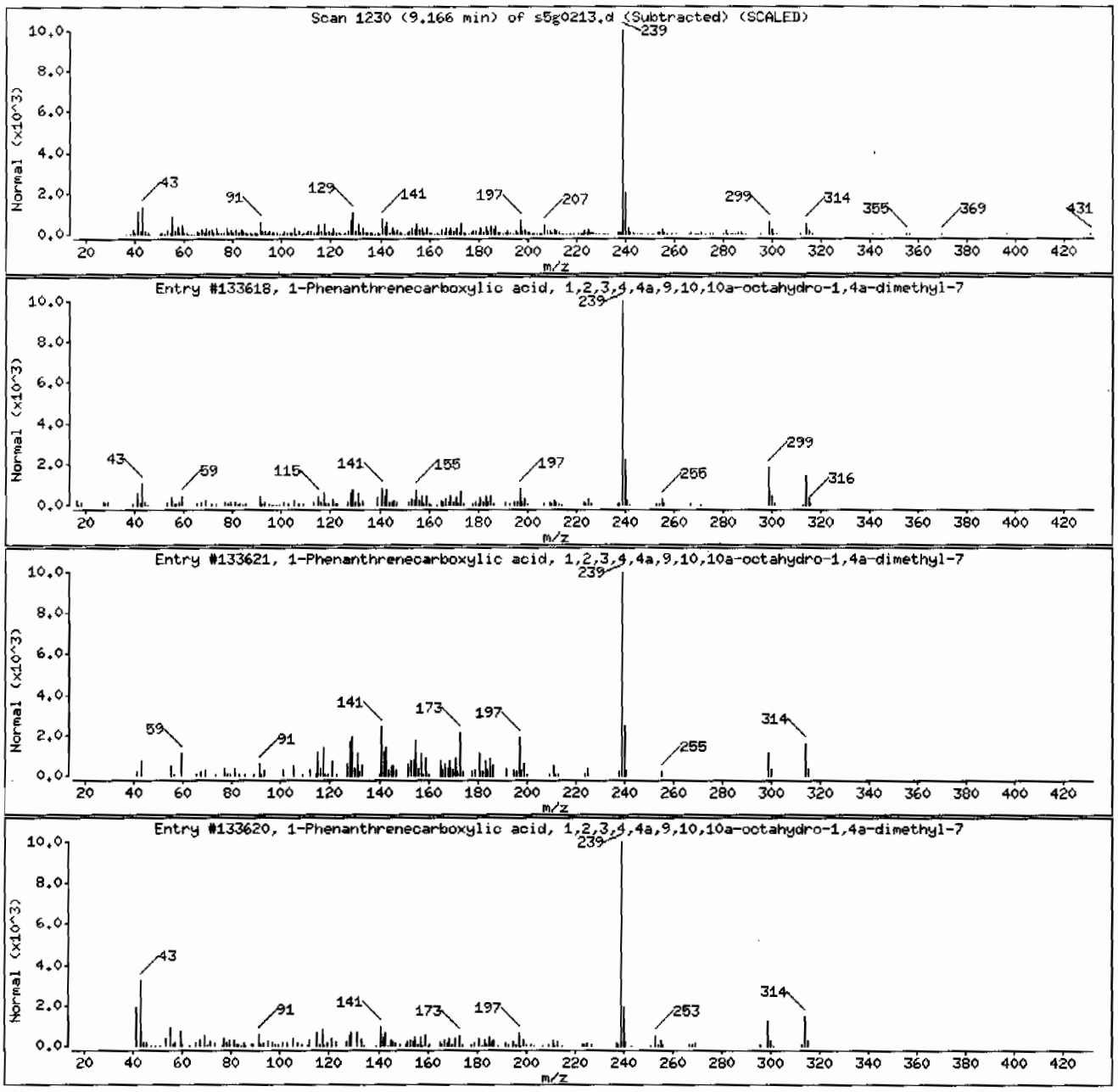

Data File: /chem/MSD5.i/s070209.b/s5g0213.d

Date : 02-JUL-2009 12:42

Client ID: CAMO-09-10377 Instrument: MSD5.i

Sample Info: 1232503005|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125036	94	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125037	93	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	5155-70-4	NIST05.L	125035	86	C20H28O2	300

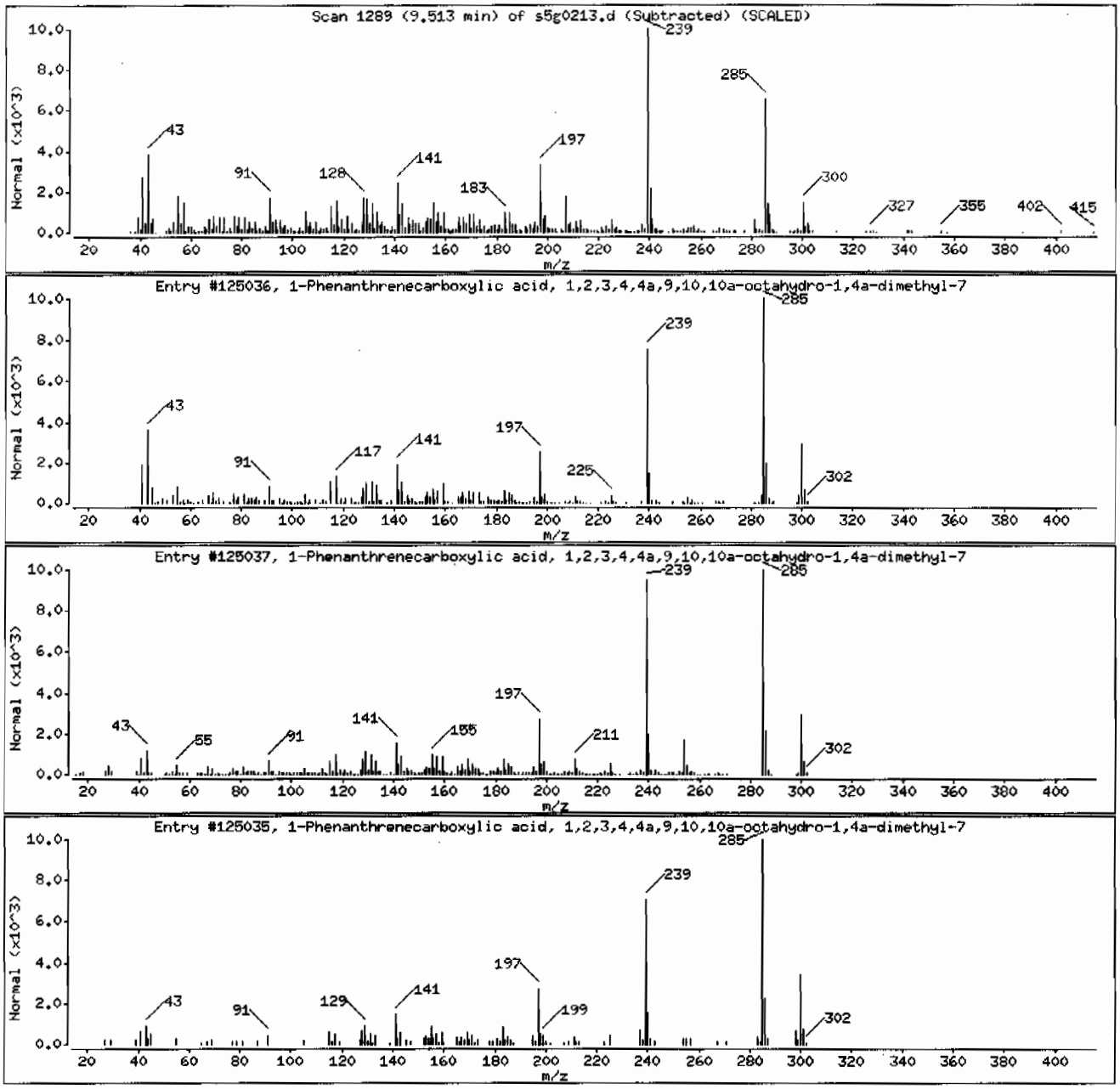

Data File: /chem/MSD5.i/s070209.b/s5g0213.d

Date : 02-JUL-2009 12:42

Client ID: CAMO-09-10377

Instrument: MSD5.i

Sample Info: |2325030005|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Tetrasiloxane, decamethyl-	141-62-8	NIST05.L	130463	50	C10H30O3Si4	310
Trimethyl[4-(1-methyl-1-methoxyethyl)phe	1000283-54-8	NIST05.L	83637	50	C13H22O2Si	238
4-Methyl-2-trimethylsilyloxy-acetophenon	97389-70-3	NIST05.L	72510	50	C12H18O2Si	222

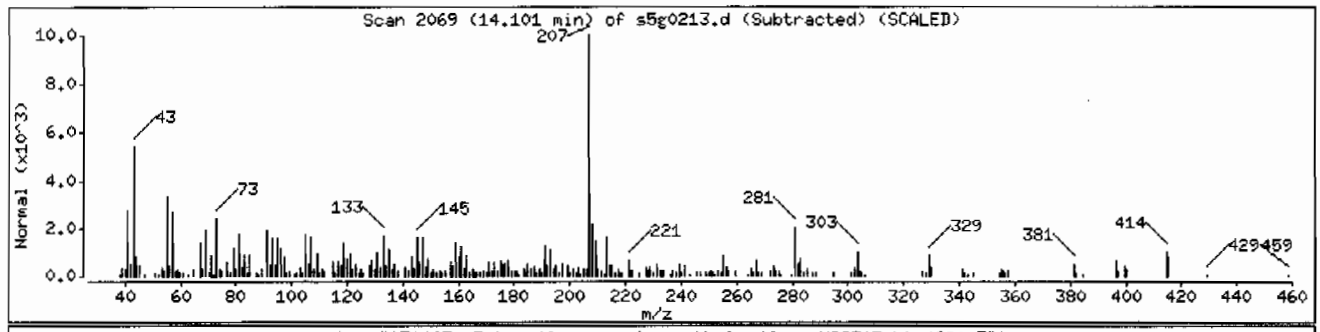

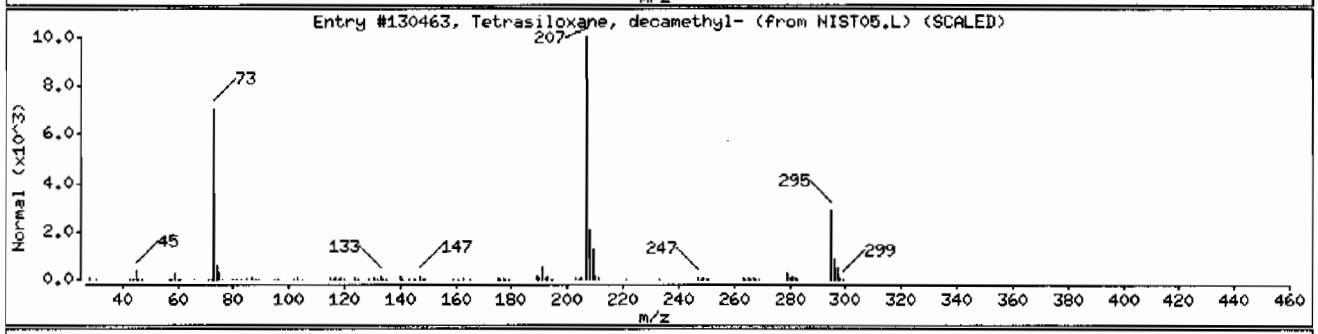

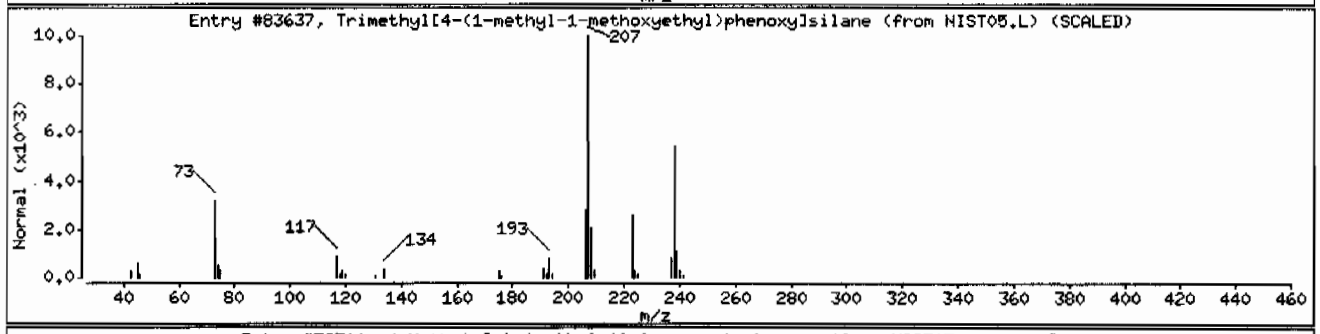

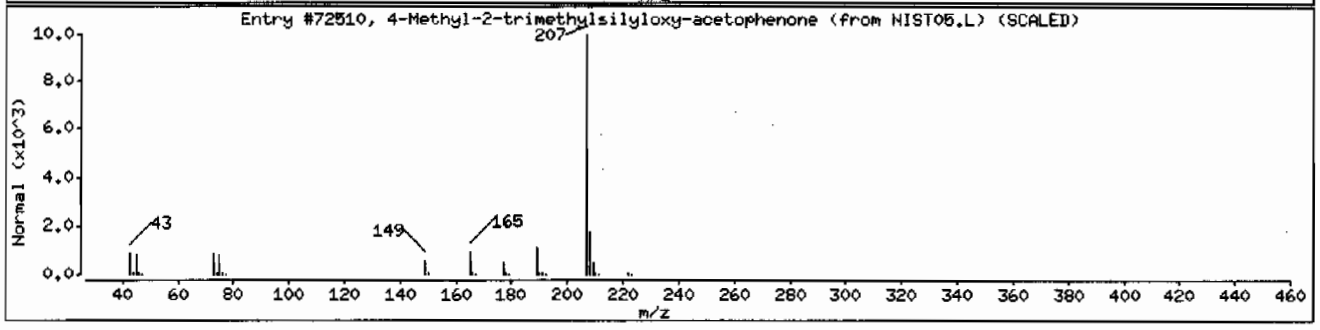

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503013	Date Received:	06/27/2009 09:05	%Moisture:	3.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10378	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 15:42	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0221.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	345	ug/kg	68.9	345
108-95-2	Phenol	U	345	ug/kg	68.9	345
95-57-8	2-Chlorophenol	U	345	ug/kg	68.9	345
106-46-7	1,4-Dichlorobenzene	U	345	ug/kg	68.9	345
621-64-7	N-Nitrosodipropylamine	U	345	ug/kg	68.9	345
59-50-7	4-Chloro-3-methylphenol	U	345	ug/kg	68.9	345
83-32-9	Acenaphthene	U	34.5	ug/kg	11.4	34.5
121-14-2	2,4-Dinitrotoluene	U	345	ug/kg	34.5	345
100-02-7	4-Nitrophenol	U	345	ug/kg	114	345
87-86-5	Pentachlorophenol	U	345	ug/kg	86.2	345
129-00-0	Pyrene	U	34.5	ug/kg	10.3	34.5
110-86-1	Pyridine	U	345	ug/kg	68.9	345
62-53-3	Aniline	U	345	ug/kg	103	345
111-44-4	bis(2-Chloroethyl) ether	U	345	ug/kg	68.9	345
541-73-1	1,3-Dichlorobenzene	U	345	ug/kg	68.9	345
100-51-6	Benzyl alcohol	U	345	ug/kg	103	345
95-50-1	1,2-Dichlorobenzene	U	345	ug/kg	68.9	345
108-60-1	bis(2-Chloroisopropyl)ether	U	345	ug/kg	68.9	345
95-48-7	o-Cresol	U	345	ug/kg	68.9	345
65794-96-9	m,p-Cresols	U	345	ug/kg	103	345
67-72-1	Hexachloroethane	U	345	ug/kg	68.9	345
98-95-3	Nitrobenzene	U	345	ug/kg	68.9	345
78-59-1	Isophorone	U	345	ug/kg	68.9	345
88-75-5	2-Nitrophenol	U	345	ug/kg	68.9	345
105-67-9	2,4-Dimethylphenol	U	345	ug/kg	121	345
111-91-1	bis(2-Chloroethoxy)methane	U	345	ug/kg	68.9	345
120-83-2	2,4-Dichlorophenol	U	345	ug/kg	68.9	345
65-85-0	Benzoic acid	U	689	ug/kg	172	689
91-20-3	Naphthalene	U	34.5	ug/kg	10.3	34.5
106-47-8	4-Chloroaniline	U	345	ug/kg	68.9	345
87-68-3	Hexachlorobutadiene	U	345	ug/kg	68.9	345
91-57-6	2-Methylnaphthalene	U	34.5	ug/kg	6.89	34.5
77-47-4	Hexachlorocyclopentadiene	U	345	ug/kg	68.9	345
88-06-2	2,4,6-Trichlorophenol	U	345	ug/kg	68.9	345
95-95-4	2,4,5-Trichlorophenol	U	345	ug/kg	68.9	345
91-58-7	2-Chloronaphthalene	U	34.5	ug/kg	11.4	34.5
88-74-4	2-Nitroaniline	U	345	ug/kg	68.9	345
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	345	ug/kg	68.9	345

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503013	Date Received:	06/27/2009 09:05	%Moisture:	3.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10378	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.1	Dilution:	1
Run Date:	07/02/2009 15:42	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0221.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	345	ug/kg	68.9	345
606-20-2	2,6-Dinitrotoluene	U	345	ug/kg	34.5	345
208-96-8	Acenaphthylene	U	34.5	ug/kg	10.3	34.5
51-28-5	2,4-Dinitrophenol	U	689	ug/kg	131	689
132-64-9	Dibenzofuran	U	345	ug/kg	68.9	345
84-66-2	Diethylphthalate	U	345	ug/kg	68.9	345
86-73-7	Fluorene	U	34.5	ug/kg	10.3	34.5
7005-72-3	4-Chlorophenylphenylether	U	345	ug/kg	68.9	345
534-52-1	2-Methyl-4,6-dinitrophenol	U	345	ug/kg	68.9	345
100-01-6	4-Nitroaniline	U	345	ug/kg	103	345
	p-Nitroaniline					
122-39-4	Diphenylamine	U	345	ug/kg	68.9	345
122-66-7	Azobenzene	U	345	ug/kg	68.9	345
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	345	ug/kg	68.9	345
118-74-1	Hexachlorobenzene	U	345	ug/kg	68.9	345
85-01-8	Phenanthrene	U	34.5	ug/kg	10.3	34.5
120-12-7	Anthracene	U	34.5	ug/kg	6.89	34.5
84-74-2	Di-n-butylphthalate	U	345	ug/kg	68.9	345
206-44-0	Fluoranthene	U	34.5	ug/kg	10.3	34.5
85-68-7	Butylbenzylphthalate	U	345	ug/kg	68.9	345
56-55-3	Benzo(a)anthracene	U	34.5	ug/kg	10.3	34.5
91-94-1	3,3'-Dichlorobenzidine	U	345	ug/kg	103	345
218-01-9	Chrysene	U	34.5	ug/kg	10.3	34.5
117-81-7	bis(2-Ethylhexyl)phthalate	U	345	ug/kg	68.9	345
117-84-0	Di-n-octylphthalate	U	345	ug/kg	68.9	345
205-99-2	Benzo(b)fluoranthene	U	34.5	ug/kg	10.3	34.5
207-08-9	Benzo(k)fluoranthene	U	34.5	ug/kg	10.3	34.5
50-32-8	Benzo(a)pyrene	U	34.5	ug/kg	10.3	34.5
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.5	ug/kg	10.3	34.5
53-70-3	Dibenzo(a,h)anthracene	U	34.5	ug/kg	10.3	34.5
191-24-2	Benzo(ghi)perylene	U	34.5	ug/kg	10.3	34.5
120-82-1	1,2,4-Trichlorobenzene	U	345	ug/kg	68.9	345

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	162	ug/kg		JA
	Unknown	13.54	206	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0221.d
Lab Smp Id: 232503013 Client Smp ID: CAMO-09-10378
Inj Date : 02-JUL-2009 15:42
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503013|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	3.27270	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	544188	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1867698	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	1188468	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	2139680	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1471554	40.0000	
* 98 Perylene-d12	264	11.495	11.495	(1.000)	974405	40.0000	
$ 3 2-Fluorophenol	112	3.195	3.194	(0.796)	819787	68.6094	2360
$ 5 Phenol-d5	99	3.725	3.728	(0.928)	1077517	68.3945	2360
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	507244	36.6512	1260
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1126339	36.6450	1260
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	346824	71.5224	2460
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	1125584	49.9802	1720

ION RATIO REPORT

SV REPORT

Data file: s5g0221.d
Report Date: 07/02/2009 16:20
Lab. ID: 232503013 SampleType: SAMPLE
Injection Date: 02-JUL-2009 15:42
Operator: RMB Instrument: MSD5.i
Sample Info: |232503013|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	63790	3.72	3.80	80-120	100	(T)
93	854	3.68	3.80	190-250	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	75060	4.37	4.25	80-120	100	(T)
42	49283	4.37	4.25	55-115	66	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	901	4.67	4.64	80-120	100	( )
122	364	4.70	4.64	54-114	40	(Q)
77	1078	4.67	4.64	50-110	120	(Q)
31 4-Chloroaniline			CAS#: 106-47-8			
127	362	4.91	4.92	80-120	100	( )
65	5054	4.88	4.92	0- 55	1393	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	205	5.90	6.09	80-120	100	(T)
92	962	5.89	6.09	84-144	468	(QT)
108	558	5.89	6.09	0- 40	271	(QT)
43 Dimethylphthalate			CAS#: 131-11-3			
163	259497	6.14	5.90	80-120	100	(T)
164	1188468	6.14	5.90	0- 40	458	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	158968	6.14	5.96	80-120	100	(T)
63	2382	6.14	5.96	55-115	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	158968	6.14	6.26	80-120	100	(T)
89	2826	6.14	6.26	38- 98	2	(QT)
63	2382	6.14	6.26	19- 79	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	14079	6.75	6.56	80-120	100	(T)
165	14777	6.75	6.56	61-121	105	(T)
167	5540	6.74	6.56	0- 44	39	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1687	6.74	6.57	80-120	100	(T)
105	2260	6.75	6.57	2- 62	134	(QT)
51	1962	6.74	6.57	46-106	116	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	23165	6.75	6.93	80-120	100	(T)
141	123980	6.74	6.93	34- 94	535	(QT)
250	47763	6.75	6.93	68-128	206	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0221.d
Lab Smp Id: 232503013 Client Smp ID: CAMO-09-10378
Inj Date : 02-JUL-2009 15:42
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503013|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	3.27270	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.013	3487959	40.000
* 98 Perylene-d12	11.495	2695367	40.000

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.031	411128	4.71482754	162	0		0	10

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
13.542	402173	5.96835483	206	0		0	98

Data File: /chem/MSD5.i/s070209.b/s5g0221.d
Date : 02-JUL-2009 15:42
Client ID: CAMO-09-10378
Sample Info: 1232503013188187811|SVMF11|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

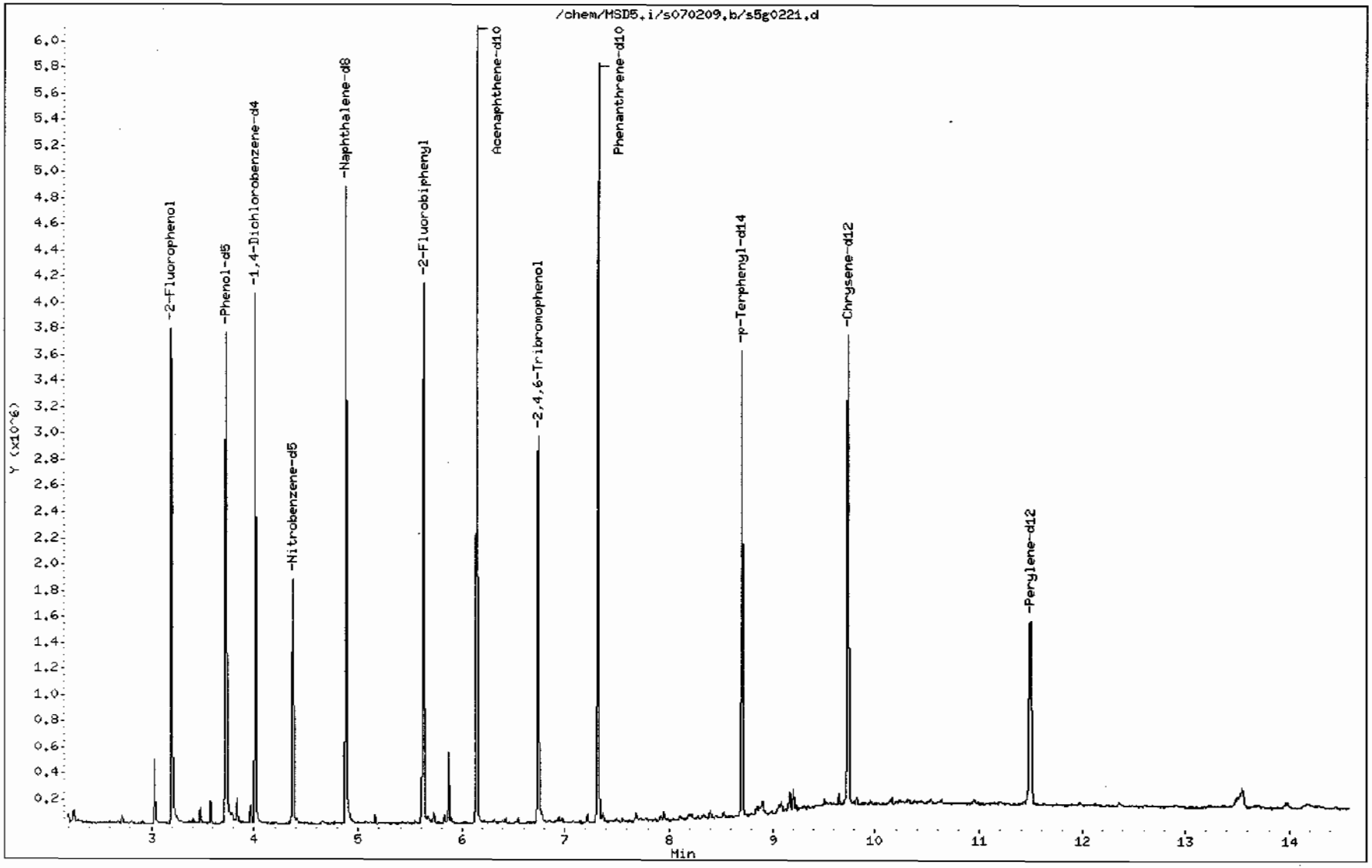

Data File: /chem/MSD5.i/s070209.b/s5g0221.d

Date : 02-JUL-2009 15:42

Client ID: CAMO-09-10378

Instrument: MSD5.i

Sample Info: |2325030131881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116

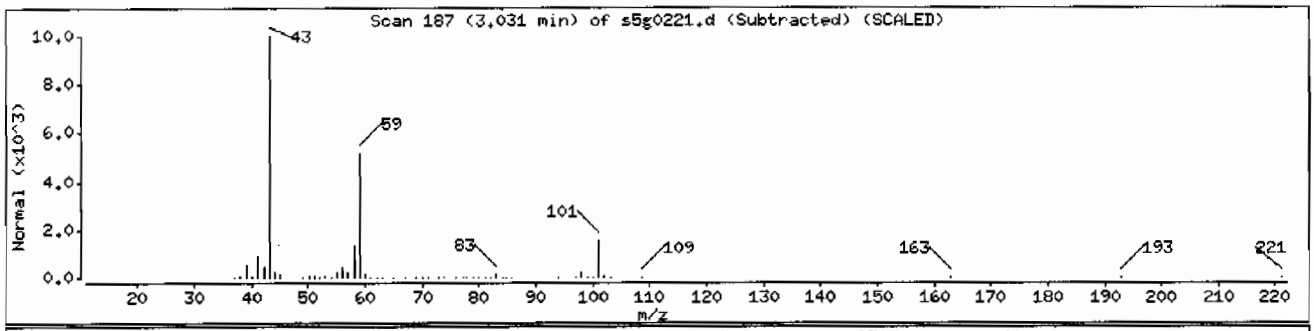

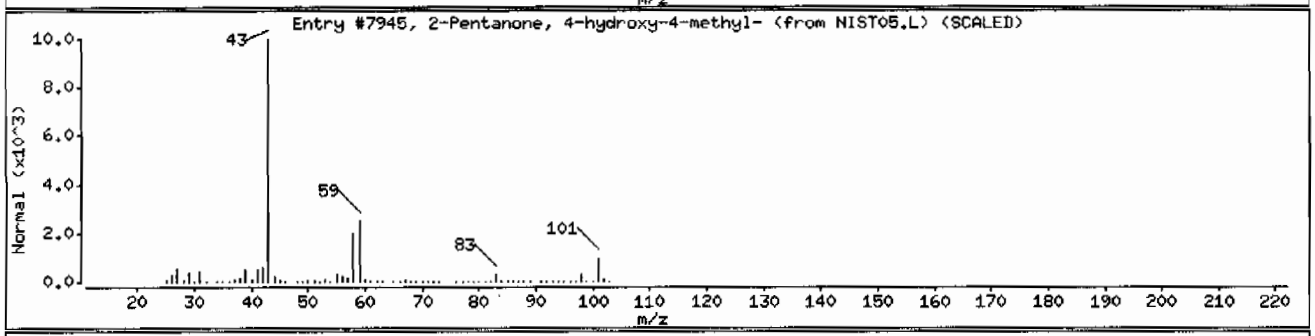

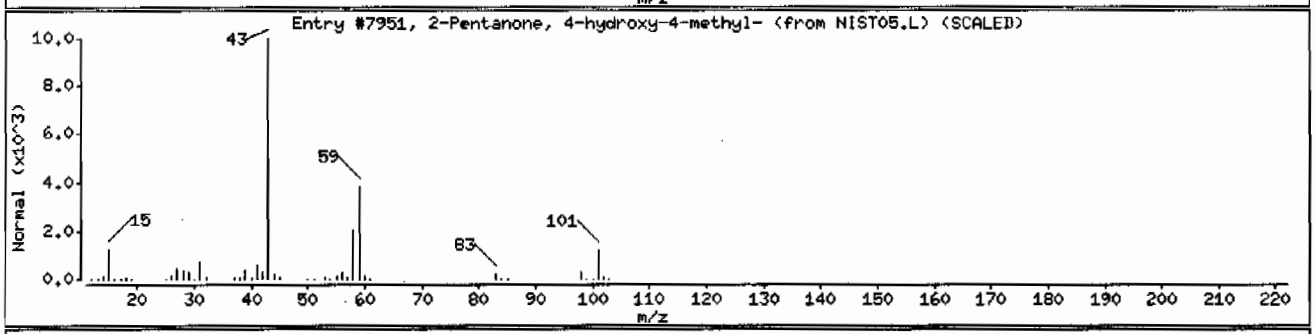

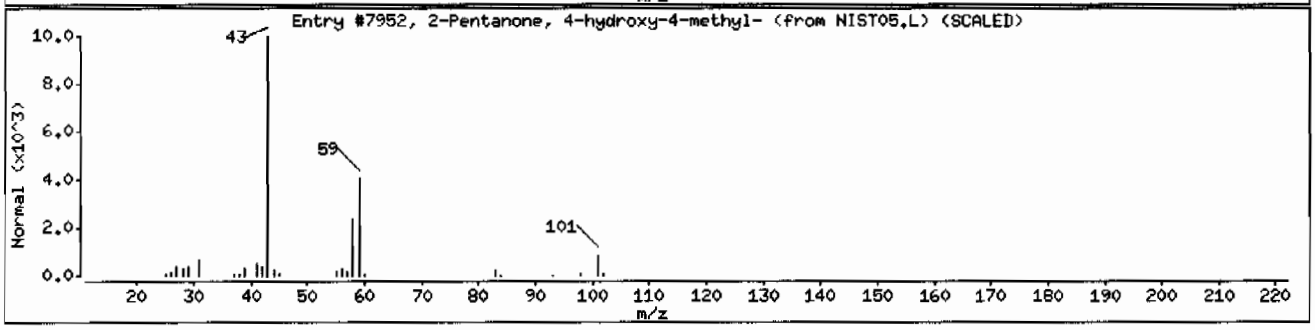

Data File: /chem/MSD5.i/s070209.b/s5g0221.d

Date : 02-JUL-2009 15:42

Client ID: CAMO-09-10378

Instrument: MSD5.i

Sample Info: |2325030131881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
9,10-Methanoanthracen-11-ol, 9,10-dihydr	126615-74-5	NIST05.L	92233	46	C18H18O	250
Anthracene, 9,10-dihydro-9,9,10-trimethy	14923-29-6	NIST05.L	73092	43	C17H18	222
2-Ethylacridine	55751-83-2	NIST05.L	62222	42	C15H13N	207

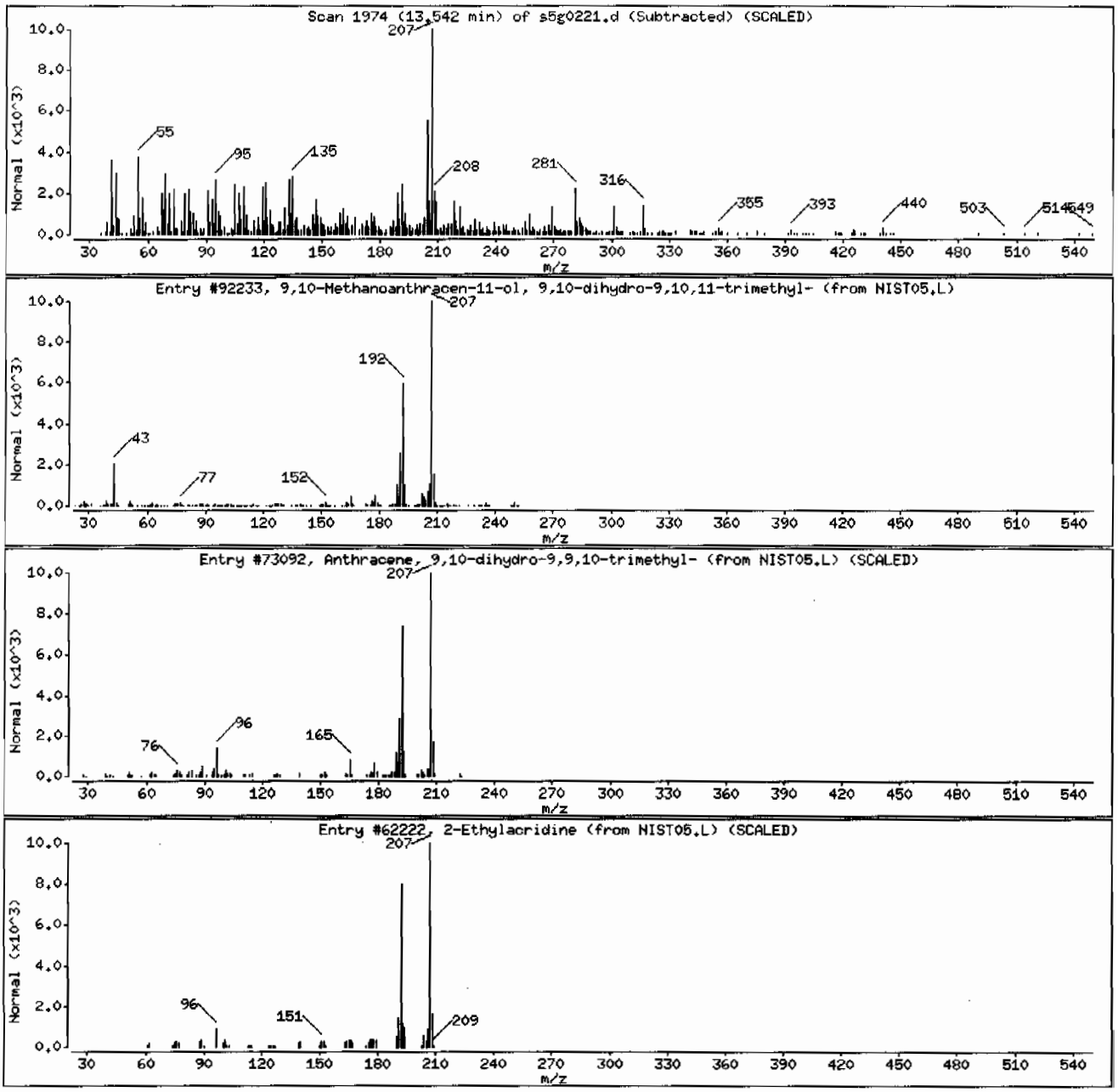

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503014	Date Received:	06/27/2009 09:05	%Moisture:	4.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10379	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 16:04	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0222.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	348	ug/kg	69.6	348
108-95-2	Phenol	U	348	ug/kg	69.6	348
95-57-8	2-Chlorophenol	U	348	ug/kg	69.6	348
106-46-7	1,4-Dichlorobenzene	U	348	ug/kg	69.6	348
621-64-7	N-Nitrosodipropylamine	U	348	ug/kg	69.6	348
59-50-7	4-Chloro-3-methylphenol	U	348	ug/kg	69.6	348
83-32-9	Acenaphthene	U	34.8	ug/kg	11.5	34.8
121-14-2	2,4-Dinitrotoluene	U	348	ug/kg	34.8	348
100-02-7	4-Nitrophenol	U	348	ug/kg	115	348
87-86-5	Pentachlorophenol	U	348	ug/kg	87.0	348
129-00-0	Pyrene	J	19.8	ug/kg	10.4	34.8
110-86-1	Pyridine	U	348	ug/kg	69.6	348
62-53-3	Aniline	U	348	ug/kg	104	348
111-44-4	bis(2-Chloroethyl) ether	U	348	ug/kg	69.6	348
541-73-1	1,3-Dichlorobenzene	U	348	ug/kg	69.6	348
100-51-6	Benzyl alcohol	U	348	ug/kg	104	348
95-50-1	1,2-Dichlorobenzene	U	348	ug/kg	69.6	348
108-60-1	bis(2-Chloroisopropyl)ether	U	348	ug/kg	69.6	348
95-48-7	o-Cresol	U	348	ug/kg	69.6	348
65794-96-9	m,p-Cresols	U	348	ug/kg	104	348
67-72-1	Hexachloroethane	U	348	ug/kg	69.6	348
98-95-3	Nitrobenzene	U	348	ug/kg	69.6	348
78-59-1	Isophorone	U	348	ug/kg	69.6	348
88-75-5	2-Nitrophenol	U	348	ug/kg	69.6	348
105-67-9	2,4-Dimethylphenol	U	348	ug/kg	122	348
111-91-1	bis(2-Chloroethoxy)methane	U	348	ug/kg	69.6	348
120-83-2	2,4-Dichlorophenol	U	348	ug/kg	69.6	348
65-85-0	Benzoic acid	U	696	ug/kg	174	696
91-20-3	Naphthalene	U	34.8	ug/kg	10.4	34.8
106-47-8	4-Chloroaniline	U	348	ug/kg	69.6	348
87-68-3	Hexachlorobutadiene	U	348	ug/kg	69.6	348
91-57-6	2-Methylnaphthalene	U	34.8	ug/kg	6.96	34.8
77-47-4	Hexachlorocyclopentadiene	U	348	ug/kg	69.6	348
88-06-2	2,4,6-Trichlorophenol	U	348	ug/kg	69.6	348
95-95-4	2,4,5-Trichlorophenol	U	348	ug/kg	69.6	348
91-58-7	2-Chloronaphthalene	U	34.8	ug/kg	11.5	34.8
88-74-4	2-Nitroaniline	U	348	ug/kg	69.6	348
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	348	ug/kg	69.6	348

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232503014	Date Received:	06/27/2009 09:05	%Moisture:	4.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10379	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 16:04	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0222.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	348	ug/kg	69.6	348
606-20-2	2,6-Dinitrotoluene	U	348	ug/kg	34.8	348
208-96-8	Acenaphthylene	U	34.8	ug/kg	10.4	34.8
51-28-5	2,4-Dinitrophenol	U	696	ug/kg	132	696
132-64-9	Dibenzofuran	U	348	ug/kg	69.6	348
84-66-2	Diethylphthalate	U	348	ug/kg	69.6	348
86-73-7	Fluorene	U	34.8	ug/kg	10.4	34.8
7005-72-3	4-Chlorophenylphenylether	U	348	ug/kg	69.6	348
534-52-1	2-Methyl-4,6-dinitrophenol	U	348	ug/kg	69.6	348
100-01-6	4-Nitroaniline	U	348	ug/kg	104	348
	p-Nitroaniline					
122-39-4	Diphenylamine	U	348	ug/kg	69.6	348
122-66-7	Azobenzene	U	348	ug/kg	69.6	348
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	348	ug/kg	69.6	348
118-74-1	Hexachlorobenzene	U	348	ug/kg	69.6	348
85-01-8	Phenanthrene	U	34.8	ug/kg	10.4	34.8
120-12-7	Anthracene	U	34.8	ug/kg	6.96	34.8
84-74-2	Di-n-butylphthalate	U	348	ug/kg	69.6	348
206-44-0	Fluoranthene	J	12.1	ug/kg	10.4	34.8
85-68-7	Butylbenzylphthalate	U	348	ug/kg	69.6	348
56-55-3	Benzo(a)anthracene	U	34.8	ug/kg	10.4	34.8
91-94-1	3,3'-Dichlorobenzidine	U	348	ug/kg	104	348
218-01-9	Chrysene	U	34.8	ug/kg	10.4	34.8
117-81-7	bis(2-Ethylhexyl)phthalate	J	149	ug/kg	69.6	348
117-84-0	Di-n-octylphthalate	U	348	ug/kg	69.6	348
205-99-2	Benzo(b)fluoranthene	U	34.8	ug/kg	10.4	34.8
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.4	34.8
50-32-8	Benzo(a)pyrene	U	34.8	ug/kg	10.4	34.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.4	34.8
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.4	34.8
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.4	34.8
120-82-1	1,2,4-Trichlorobenzene	U	348	ug/kg	69.6	348

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	204	ug/kg		JA
	Unknown	12.43	486	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232503014	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10379	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 16:04	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0222.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	12.91	202	ug/kg		J
	Unknown	13.24	521	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0222.d
Lab Smp Id: 232503014 Client Smp ID: CAMO-09-10379
Inj Date : 02-JUL-2009 16:04
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503014|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.05000	weight of sample
M	4.33280	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	513235	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1763383	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	1072045	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	1785717	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1041782	40.0000	
* 98 Perylene-d12	264	11.495	11.495	(1.000)	590377	40.0000	
$ 3 2-Fluorophenol	112	3.201	3.194	(0.798)	816128	72.4225	2520
$ 5 Phenol-d5	99	3.725	3.728	(0.928)	1086289	73.1097	2540
$ 20 Nitrobenzene-d5	82	4.378	4.383	(0.896)	485497	37.1551	1290
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1088921	39.2751	1370
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	311564	71.2286	2480
$ 81 p-Terphenyl-d14	244	8.707	8.702	(0.894)	911026	57.1414	1990

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.607	8.611	(0.883)	12948	0.56972	19.8(a)
76 Fluoranthene	202	8.389	8.394	(1.145)	13303	0.34909	12.1(a)
93 bis(2-Ethylhexyl)phthalate	149	9.648	9.656	(0.990)	57212	4.28000	149(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0222.d
Report Date: 07/02/2009 16:20
Lab. ID: 232503014 SampleType: SAMPLE
Injection Date: 02-JUL-2009 16:04
Operator: RMB Instrument: MSD5.i
Sample Info: |232503014|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	68168	3.72	3.80	80-120	100	(T)
93	298	3.69	3.80	190-250	0	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	70098	4.38	4.25	80-120	100	(T)
42	47120	4.37	4.25	55-115	67	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	822	4.66	4.64	80-120	100	( )
122	840	4.66	4.64	54-114	102	( )
77	1347	4.68	4.64	50-110	164	(Q)
31 4-Chloroaniline			CAS#: 106-47-8			
127	528	4.91	4.92	80-120	100	( )
65	4873	4.88	4.92	0- 55	922	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	130	6.12	6.09	80-120	100	( )
92	6247	6.14	6.09	84-144	4775	(Q)
108	23725	6.14	6.09	0- 40	18133	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	235792	6.14	5.90	80-120	100	(T)
164	1071780	6.14	5.90	0- 40	455	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	144962	6.14	5.96	80-120	100	(T)
63	2320	6.14	5.96	55-115	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	144963	6.14	6.26	80-120	100	(T)
89	2699	6.14	6.26	38- 98	2	(QT)
63	2320	6.14	6.26	19- 79	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	13376	6.75	6.56	80-120	100	(T)
165	14152	6.75	6.56	61-121	106	(T)
167	4640	6.75	6.56	0- 44	35	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1157	6.75	6.57	80-120	100	(T)
105	1708	6.75	6.57	2- 62	148	(QT)
51	1751	6.75	6.57	46-106	151	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	22249	6.75	6.93	80-120	100	(T)
141	110917	6.75	6.93	34- 94	499	(QT)
250	44332	6.75	6.93	68-128	199	(QT)
76 Fluoranthene			CAS#: 206-44-0			
202	13303	8.39	8.39	80-120	100	( )
203	2693	8.39	8.39	0- 48	20	( )
101	2112	8.39	8.39	0- 39	16	( )
79 Pyrene			CAS#: 129-00-0			
202	12948	8.61	8.61	80-120	100	( )
200	2505	8.61	8.61	0- 51	19	( )
101	1744	8.61	8.61	0- 41	13	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	7534	9.75	9.73	80-120	100	( )
226	5326	9.77	9.73	0- 56	71	(Q)
229	4521	9.75	9.73	0- 50	60	(Q)
92 Chrysene			CAS#: 218-01-9			
228	8022	9.77	9.77	80-120	100	( )
229	4523	9.75	9.77	0- 50	56	(Q)
226	5326	9.77	9.77	0- 60	66	(Q)
93 bis(2-Ethylhexyl)phthalate			CAS#: 117-81-7			
149	57212	9.65	9.66	80-120	100	( )
167	18815	9.65	9.66	5- 65	33	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	7055	10.95	10.95	80-120	100	( )
253	2641	10.94	10.95	0- 52	37	( )
125	1017	10.96	10.95	0- 38	14	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	8129	10.95	10.99	80-120	100	( )
253	3394	10.94	10.98	0- 52	42	( )
125	1187	10.96	10.98	0- 38	15	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	3534	11.41	11.41	80-120	100	( )
253	559	11.41	11.41	0- 52	16	( )
125	980	11.42	11.41	0- 30	28	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	3133	13.92	13.92	80-120	100	( )
138	1079	13.91	13.92	0- 30	34	(Q)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0222.d
Lab Smp Id: 232503014 Client Smp ID: CAMO-09-10379
Inj Date : 02-JUL-2009 16:04
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503014|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.05000	weight of sample
M	4.33280	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.013	3280507	40.000
* 98 Perylene-d12	11.495	2225425	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.025	481791	5.87458769	204	0		0	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
12.430	776985	13.9656038	486	0		0	98
Unknown				CAS #:			
12.913	322492	5.79650546	202	0		0	98
Unknown				CAS #:			
13.236	833559	14.9824652	521	0		0	98

Data File: /chem/MSD5.i/s070209.b/s5g0222.d

Page 1

Date : 02-JUL-2009 16:04

Client ID: CAMO-09-10379

Instrument: MSD5.i

Sample Info: |232503014|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

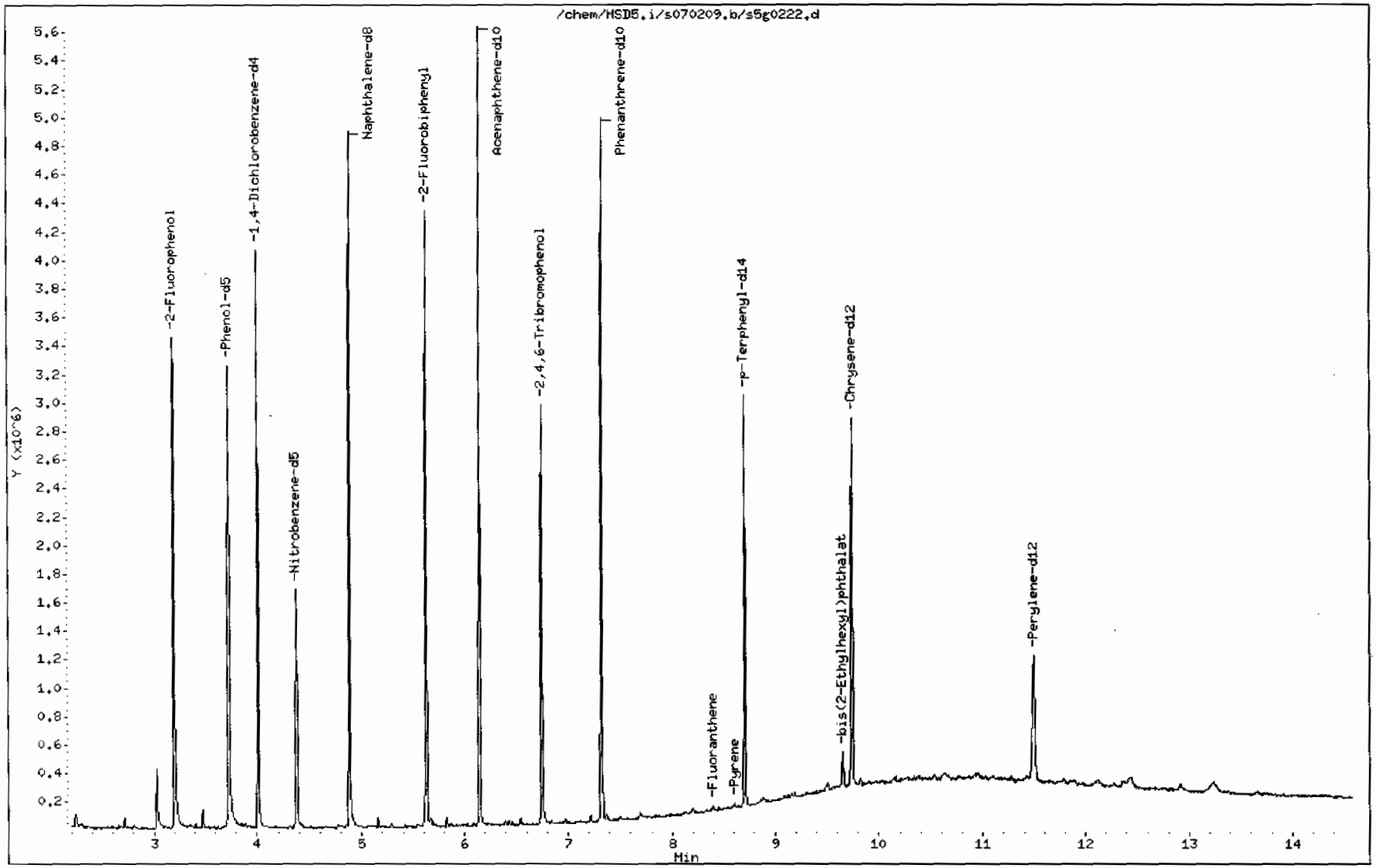

Data File: /chem/MSD5.i/s070209.b/s5g0222.d

Date : 02-JUL-2009 16:04

Client ID: CAMO-09-10379

Instrument: MSD5.i

Sample Info: 1232503014|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 19.8 ug/Kg

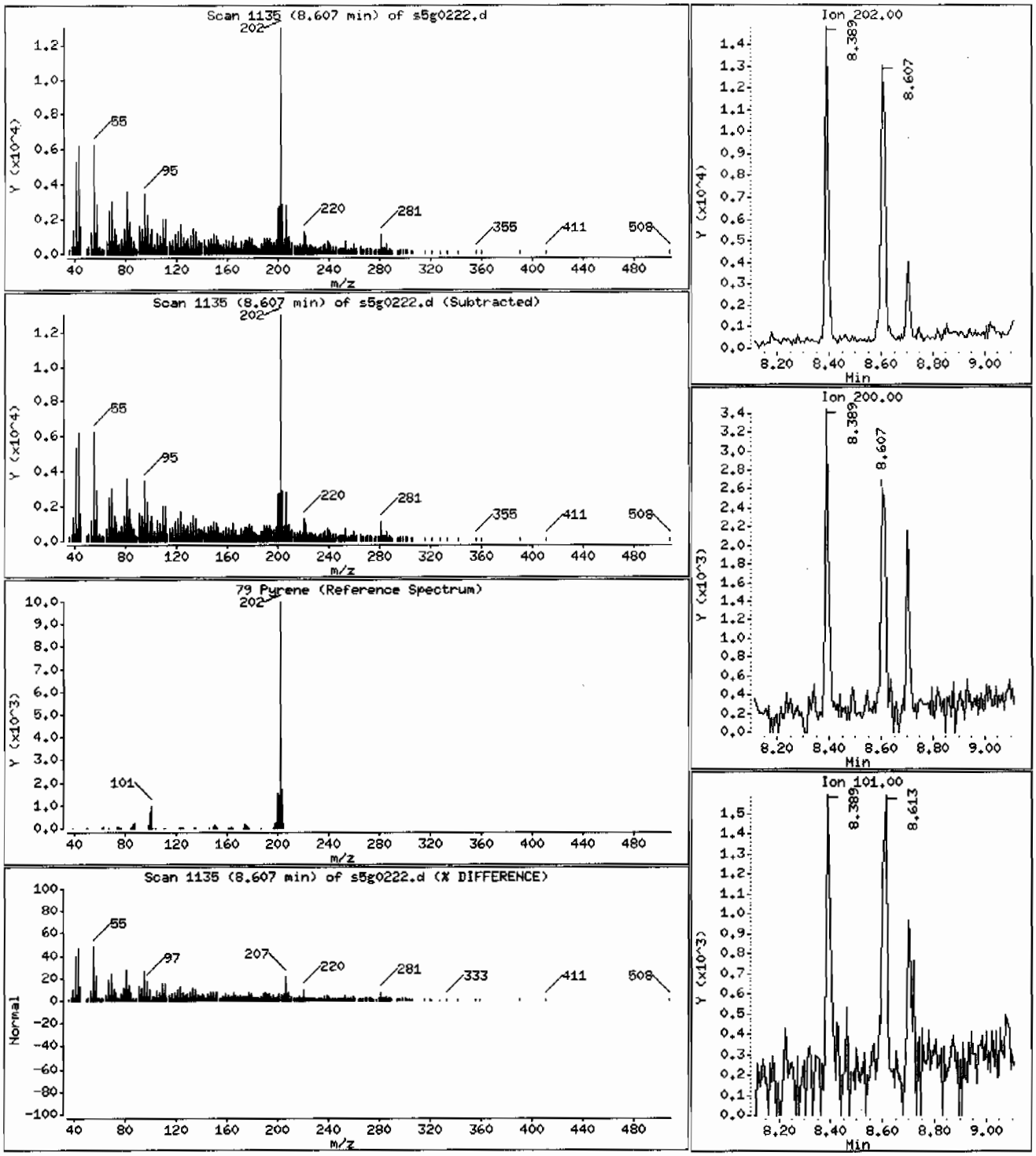

Data File: /chem/MSD5.i/s070209.b/s5g0222.d

Date : 02-JUL-2009 16:04

Client ID: CAMO-09-10379

Instrument: MSD5.i

Sample Info: |2325030141881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 12.1 ug/Kg

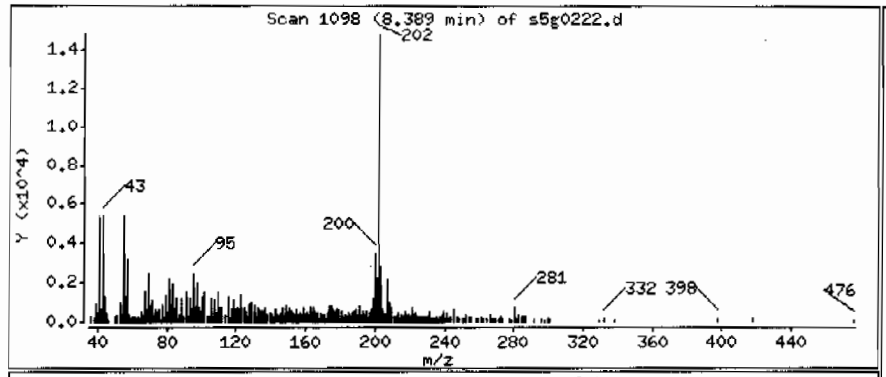

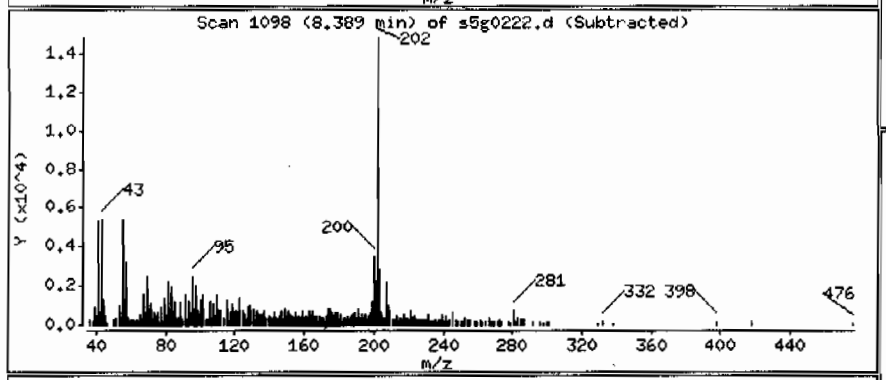

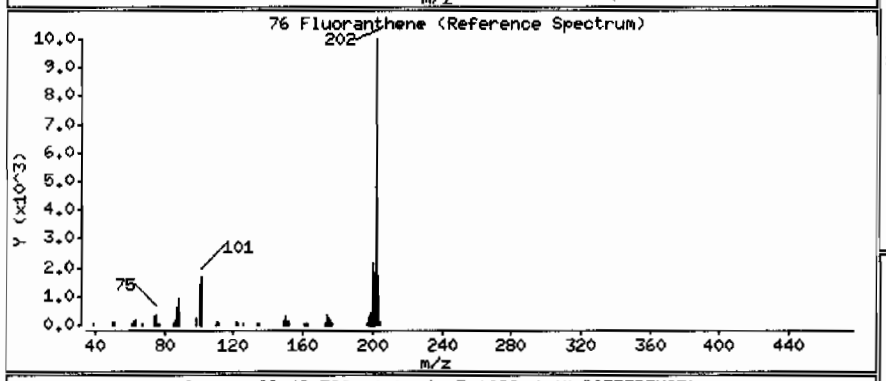

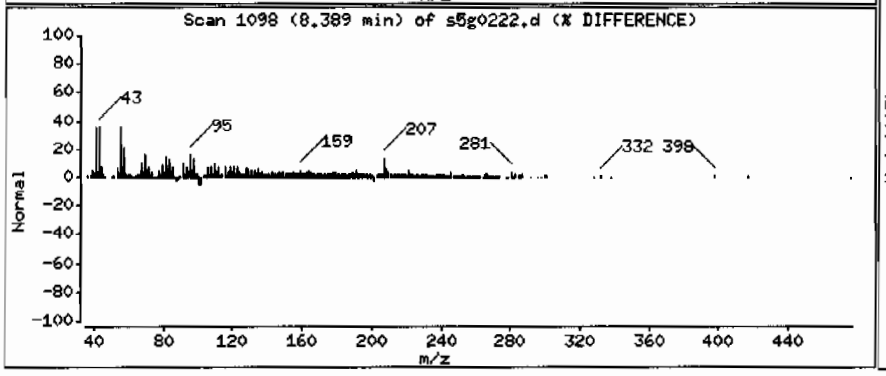

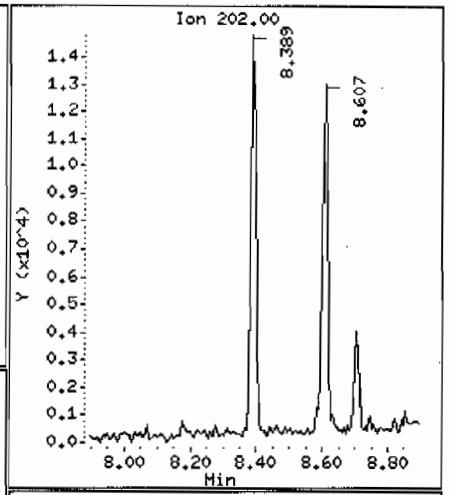

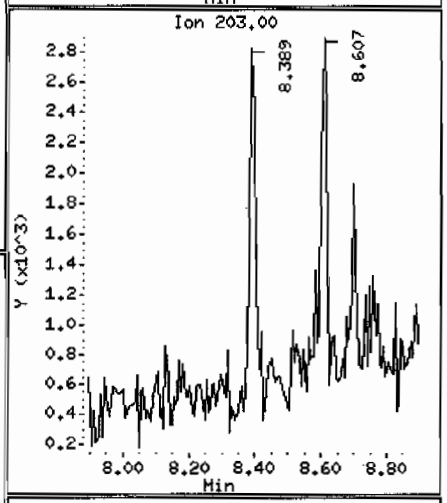

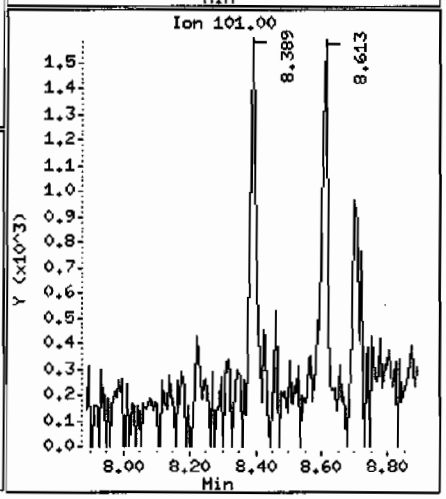

Data File: /chem/MSD5.i/s070209.b/s5g0222.d

Date : 02-JUL-2009 16:04

Client ID: CAHO-09-10379 Instrument: MSD5.i

Sample Info: 1232503014188187811|SVMF11|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate Concentration: 149 ug/Kg

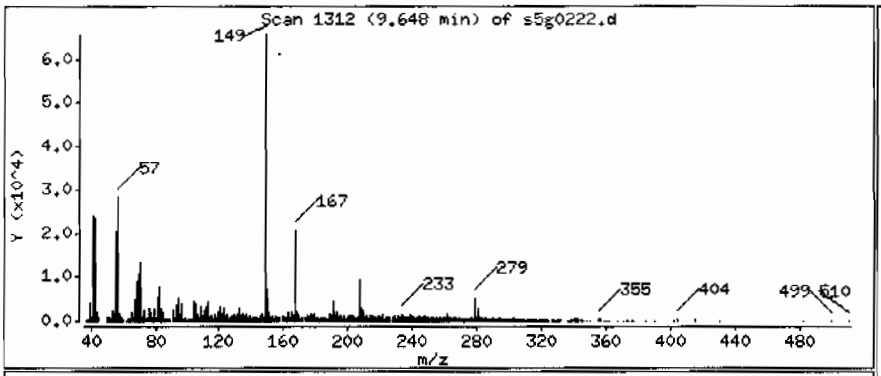

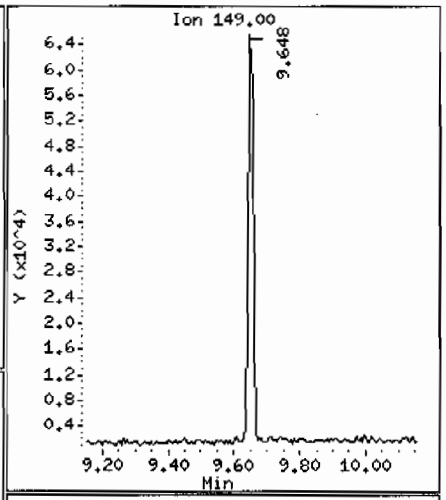

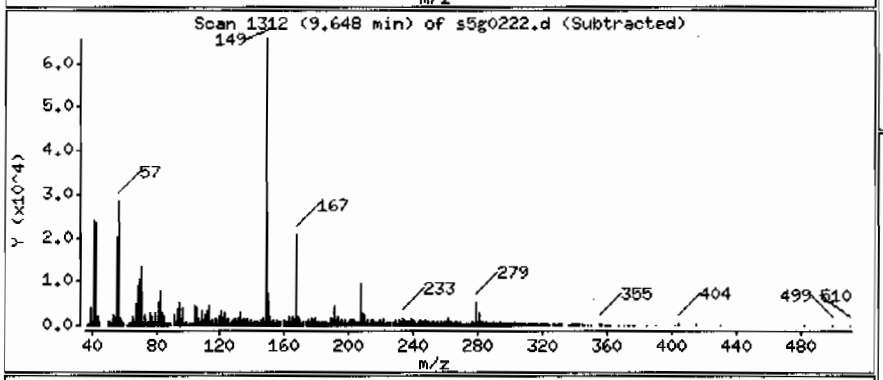

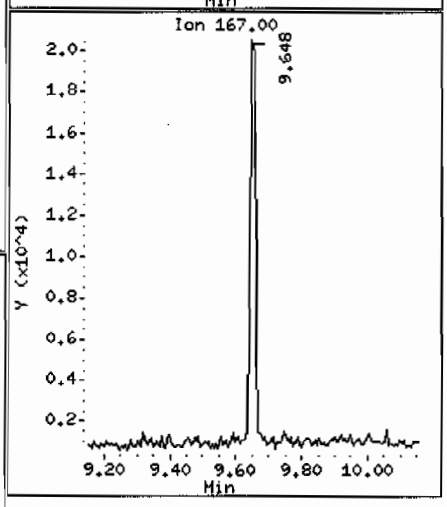

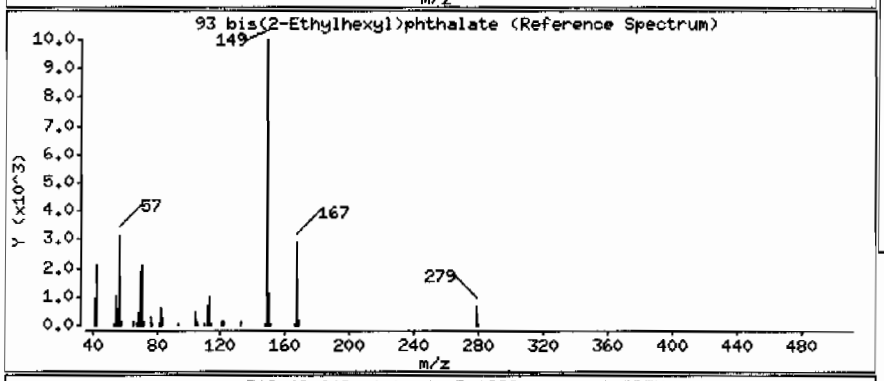

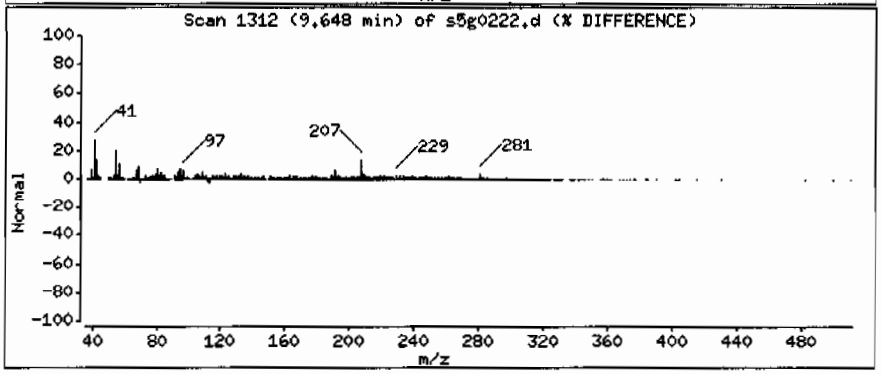

Data File: /chem/MSD5.i/s070209.b/s5g0222.d

Date : 02-JUL-2009 16:04

Client ID: CAMO-09-10379

Instrument: MSD5.i

Sample Info: |2325030141881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	28	C6H12O2	116

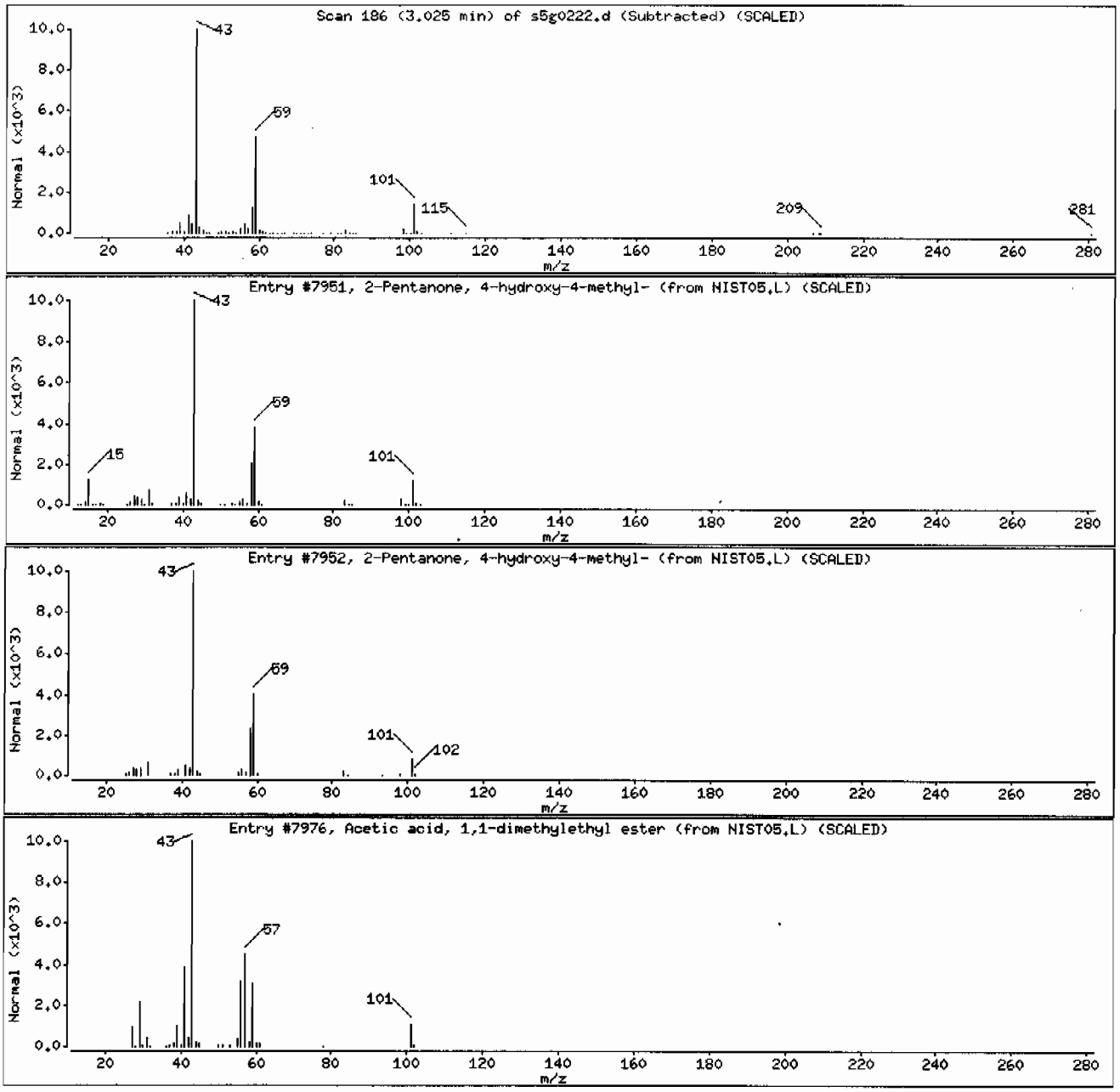

Data File: /chem/MSD5.i/s070209.b/s5g0222.d

Date : 02-JUL-2009 16:04

Client ID: CAHO-09-10379

Instrument: MSD5.i

Sample Info: 1232503014188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,2,4-Benzenetricarboxylic acid, 4-butyl	43049-07-6	NIST05.L	120729	50	C15H1806	294
1,4-Benzenediol, 2,5-bis(1,1-dimethyleth	88-58-4	NIST05.L	72748	46	C14H2202	222
2-[3-(4-tert-Butyl-phenoxy)-2-hydroxy-pr	1000294-86-1	NIST05.L	161331	38	C21H26N2O2S	370

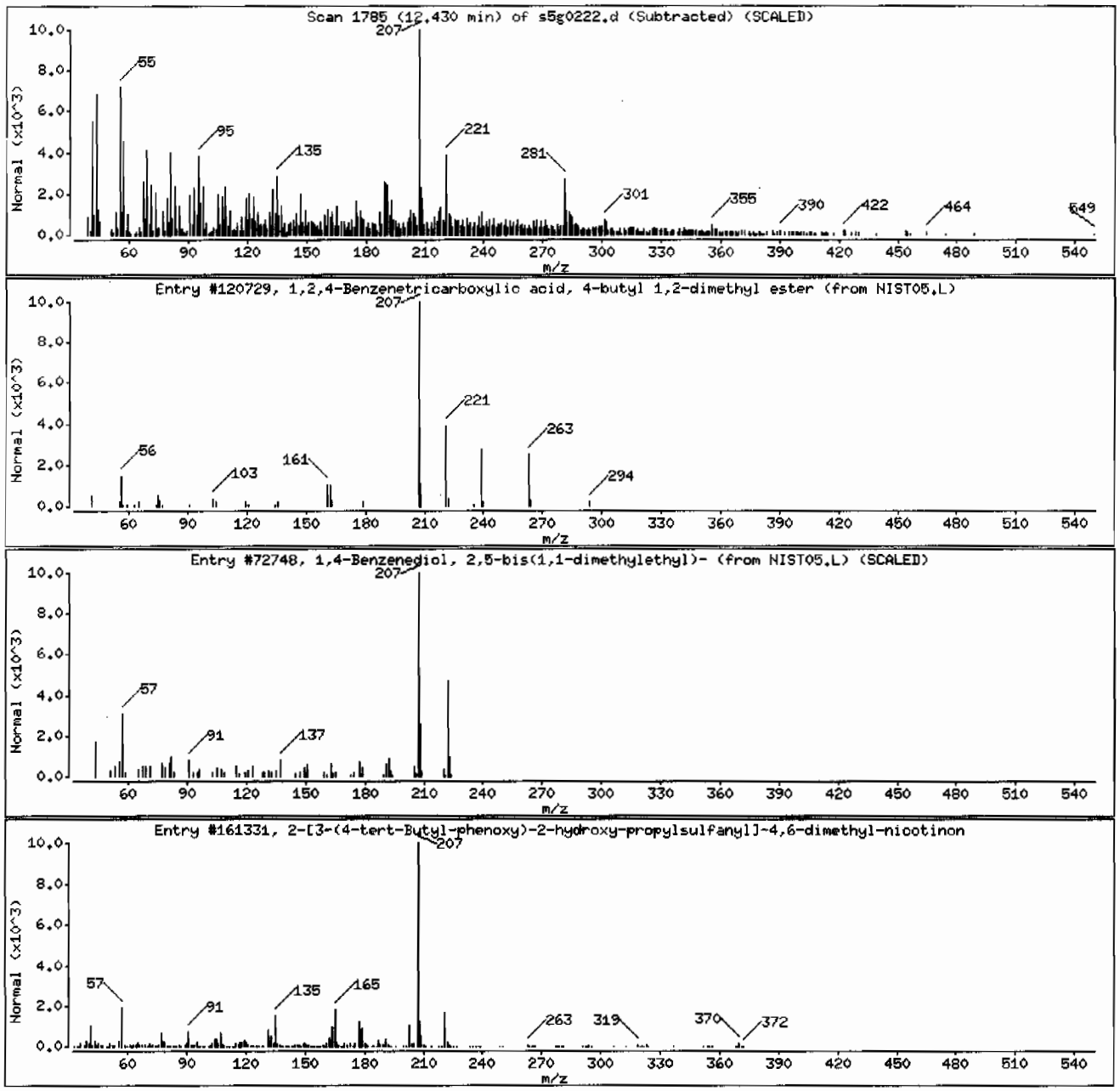

Data File: /chem/MSD5.i/s070209.b/s5g0222.d

Date : 02-JUL-2009 16:04

Client ID: CAMO-09-10379

Instrument: MSD5.i

Sample Info: |232503014|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Benzo[h]quinoline, 2,4-dimethyl-	605-67-4	NIST05.L	62243	38	C15H13N	207
1,1,1,3,5,5,5-Heptamethyltrisiloxane	1873-88-7	NIST05.L	73166	38	C7H22O2Si3	222
1,4-Benzenediol, 2,5-bis(1,1-dimethyleth	88-58-4	NIST05.L	72748	35	C14H22O2	222

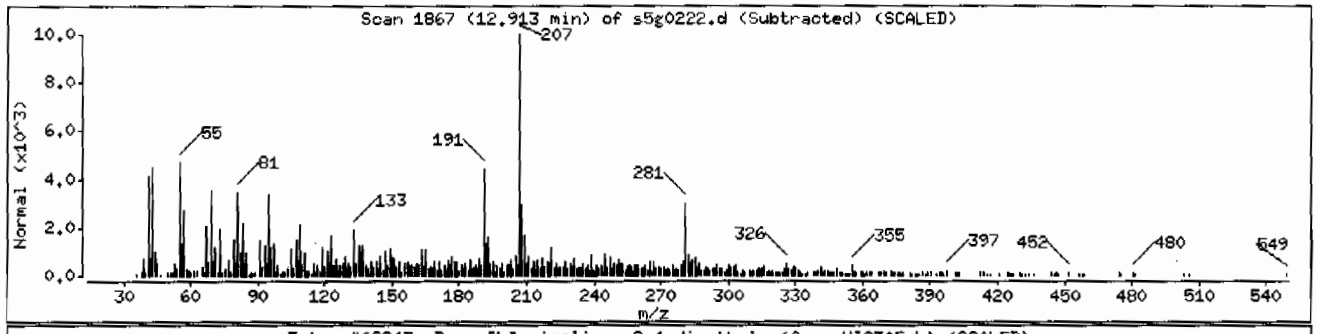

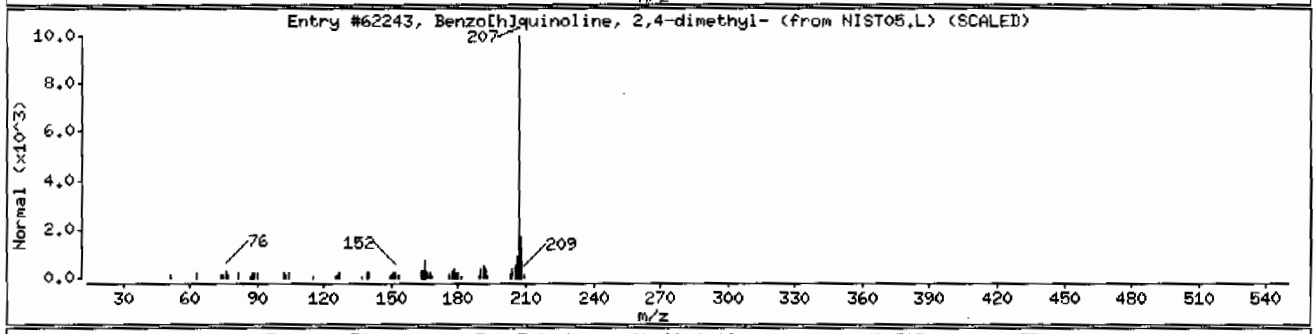

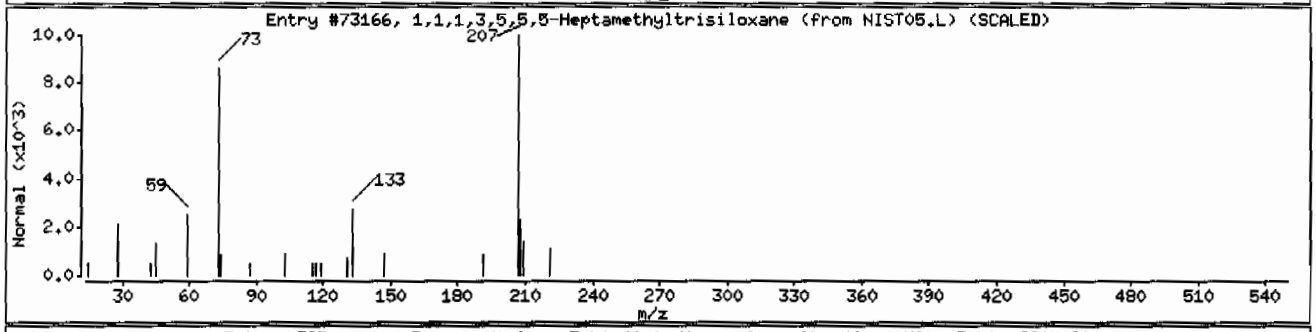

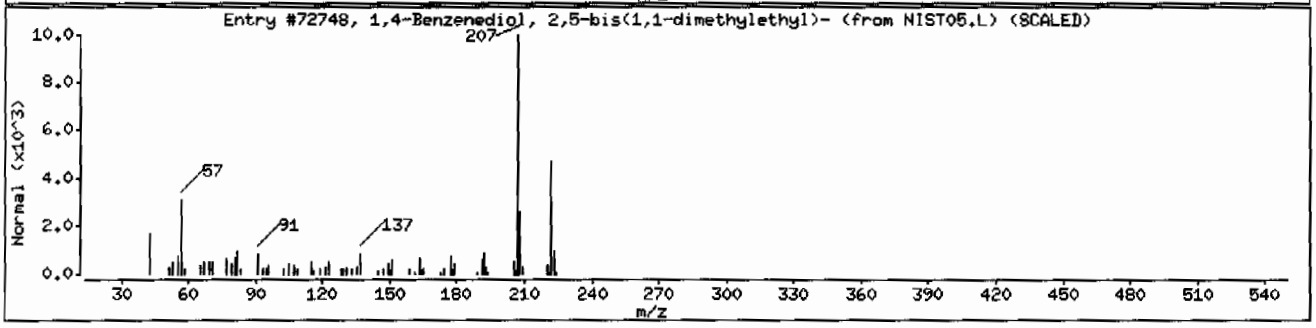

Data File: /chem/MSD5.i/s070209.b/s5g0222.d

Date : 02-JUL-2009 16:04

Client ID: CAMO-09-10379

Instrument: MSD5.i

Sample Info: 1232503014188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclotrisiloxane, hexamethyl-	541-05-9	NIST05.L	73123	47	C6H18O3Si3	222
2-[3-(4-tert-Butyl-phenoxy)-2-hydroxy-pr	1000294-86-1	NIST05.L	161331	45	C21H26N2O2S	370
2-Ethylacridine	55751-83-2	NIST05.L	62222	41	C15H13N	207

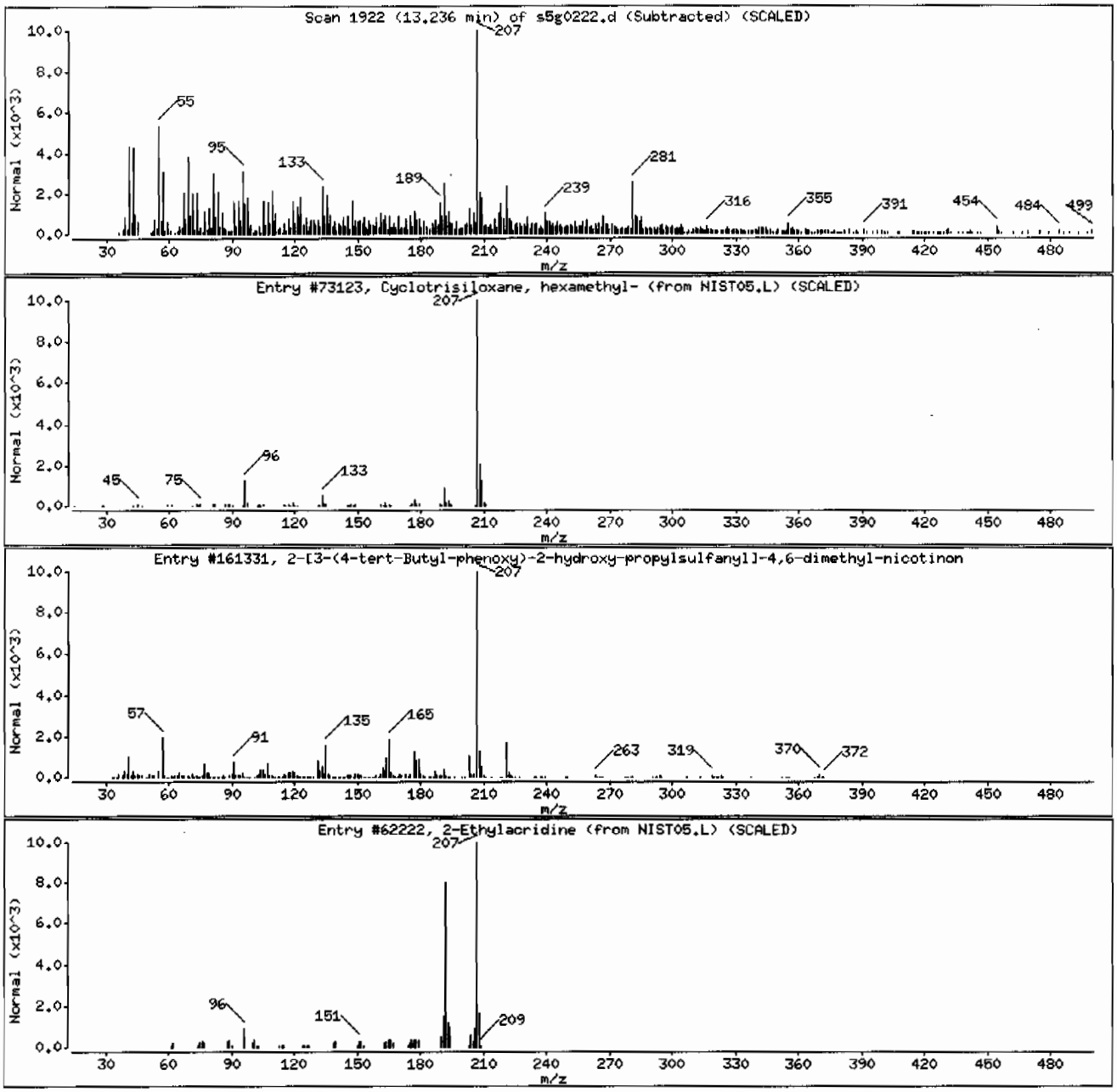

Standard Data

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

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Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 02-Jul-2009 09:06

Calibration History

Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Start Cal Date: 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
25-JUN-2009 14:42	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2512.d

Injection Date	Sublist	Calibration File
Cal Level: 2 , Cal Amount: 10.00000		
26-JUN-2009 15:54	nev	/chem/MSD5.i/s062509.b/s5f2551.d
26-JUN-2009 12:32	hex	/chem/MSD5.i/s062509.b/s5f2542.d
26-JUN-2009 09:31	pest	/chem/MSD5.i/s062509.b/s5f2534.d
25-JUN-2009 19:10	ap12	/chem/MSD5.i/s062509.b/s5f2522.d
25-JUN-2009 15:10	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2513.d

Injection Date	Sublist	Calibration File
Cal Level: 3 , Cal Amount: 20.00000		
26-JUN-2009 16:17	nev	/chem/MSD5.i/s062509.b/s5f2552.d
26-JUN-2009 12:55	hex	/chem/MSD5.i/s062509.b/s5f2543.d
26-JUN-2009 09:53	pest	/chem/MSD5.i/s062509.b/s5f2535.d
25-JUN-2009 19:32	ap12	/chem/MSD5.i/s062509.b/s5f2523.d
25-JUN-2009 15:38	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2514.d

Injection Date	Sublist	Calibration File
Cal Level: 4 , Cal Amount: 40.00000		
26-JUN-2009 16:39	nev	/chem/MSD5.i/s062509.b/s5f2553.d
26-JUN-2009 13:17	hex	/chem/MSD5.i/s062509.b/s5f2544.d
26-JUN-2009 10:16	pest	/chem/MSD5.i/s062509.b/s5f2536.d
25-JUN-2009 19:55	ap12	/chem/MSD5.i/s062509.b/s5f2524.d
25-JUN-2009 16:05	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2515.d

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 50.00000		
26-JUN-2009 17:01	nev	/chem/MSD5.i/s062509.b/s5f2554.d
26-JUN-2009 13:40	hex	/chem/MSD5.i/s062509.b/s5f2545.d
26-JUN-2009 10:39	pest	/chem/MSD5.i/s062509.b/s5f2537.d
25-JUN-2009 20:18	ap12	/chem/MSD5.i/s062509.b/s5f2525.d
25-JUN-2009 16:33	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2516.d

Injection Date	Sublist	Calibration File
Cal Level: 6 , Cal Amount: 80.00000		
26-JUN-2009 17:24	nev	/chem/MSD5.i/s062509.b/s5f2555.d
26-JUN-2009 14:02	hex	/chem/MSD5.i/s062509.b/s5f2546.d
26-JUN-2009 11:02	pest	/chem/MSD5.i/s062509.b/s5f2538.d
25-JUN-2009 20:41	ap12	/chem/MSD5.i/s062509.b/s5f2526.d
25-JUN-2009 17:02	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2517.d

Injection Date	Sublist	Calibration File
Cal Level: 7 , Cal Amount: 100.00000		

26-JUN-2009 17:47	nev	/chem/MSD5.i/s062509.b/s5f2556.d
26-JUN-2009 14:25	hex	/chem/MSD5.i/s062509.b/s5f2547.d
26-JUN-2009 11:25	pest	/chem/MSD5.i/s062509.b/s5f2539.d
25-JUN-2009 21:03	ap12	/chem/MSD5.i/s062509.b/s5f2527.d
25-JUN-2009 17:29	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2518.d

Cal Level: 8 , Cal Amount: 120.00000		
26-JUN-2009 18:09	nev	/chem/MSD5.i/s062509.b/s5f2557.d
26-JUN-2009 11:47	pest	/chem/MSD5.i/s062509.b/s5f2540.d
25-JUN-2009 21:25	ap12	/chem/MSD5.i/s062509.b/s5f2528.d
25-JUN-2009 17:57	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2519.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 08:28	MEGAIICARE	/chem/MSD5.i/s070209.b/s5g0202.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Cal Date : 02-Jul-2009 08:48 rmb

Calibration File Names:
Level 1: /chem/MSD5.i/s062509.b/s5f2512.d
Level 2: /chem/MSD5.i/s062509.b/s5f2551.d
Level 3: /chem/MSD5.i/s062509.b/s5f2552.d
Level 4: /chem/MSD5.i/s062509.b/s5f2553.d
Level 5: /chem/MSD5.i/s062509.b/s5f2554.d
Level 6: /chem/MSD5.i/s062509.b/s5f2555.d
Level 7: /chem/MSD5.i/s062509.b/s5f2556.d
Level 8: /chem/MSD5.i/s062509.b/s5f2557.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.44023	0.49064	0.47716	0.46210	0.46052					
	0.47841	0.46192					AVRG		0.46728		3.49500
2 Pyridine	+++++	0.69279	0.75514	0.74169	0.59556	0.56835					
	0.76016	0.72634					AVRG		0.69143		11.33716
4 Aniline	+++++	0.44415	0.52170	0.51663	0.49970	0.50458					
	0.52141	0.50721					AVRG		0.50220		5.37034
209 Benzaldehyde	+++++	0.85159	0.89015	0.81871	0.79990	0.75839					
	0.74985	0.70918					AVRG		0.79683		7.86449
6 Phenol	+++++	1.14962	1.24888	1.18550	1.14101	1.11147					
	1.12731	1.08172					AVRG		1.14936		4.73589

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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Method file : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Cal Date : 02-Jul-2009 08:48 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
7 bis(2-Chloroethyl) ether	0.90051	0.90959	0.96460	0.91224	0.88038	0.84926					
	0.85216	0.81790					AVRG		0.88583		5.19026
8 2-Chlorophenol	+++++	0.95967	1.04338	0.98839	0.94752	0.92897					
	0.94964	0.90735					AVRG		0.96070		4.60720
203 n-Decane	+++++	1.76533	1.83008	1.65405	1.57800	1.43467					
	1.36362	1.28290					AVRG		1.55838		13.23692
9 1,3-Dichlorobenzene	+++++	1.19264	1.28772	1.18603	1.14421	1.08989					
	1.09658	1.05091					AVRG		1.14971		6.95854
11 1,4-Dichlorobenzene	+++++	1.20398	1.26798	1.17125	1.13840	1.08879					
	1.09132	1.04491					AVRG		1.14381		6.71389
12 Benzyl alcohol	+++++	0.56979	0.63670	0.62573	0.60396	0.60465					
	0.61546	0.58777					AVRG		0.60629		3.73063
13 1,2-Dichlorobenzene	+++++	1.15580	1.17968	1.08323	1.05201	0.99640					
	1.00595	0.96590					AVRG		1.06271		7.67104
14 bis(2-Chloroisopropyl)ether	+++++	2.22903	2.36787	2.18504	2.06888	1.93644					
	1.87607	1.76841					AVRG		2.06168		10.34954
15 o-Cresol	+++++	0.73909	0.77770	0.73149	0.71184	0.68497					
	0.69315	0.66420					AVRG		0.71463		5.34449

GEL Laboratories LLC

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Cal Date : 02-Jul-2009 08:48 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
16 Acetophenone	+++++	1.11152	1.14047	1.10567	1.07838	1.07242					
	1.04402	1.04190					AVRG		1.08491		3.35447
17 N-Nitrosodipropylamine	0.53750	0.60668	0.67952	0.64418	0.62140	0.62312					
	0.64069	0.59864					AVRG		0.61897		6.68884
18 m,p-Cresols	+++++	0.95993	1.03790	0.98085	0.94779	0.92236					
	0.94191	0.89906					AVRG		0.95569		4.67544
19 Hexachloroethane	+++++	0.41401	0.45409	0.43628	0.42388	0.41362					
	0.42132	0.40627					AVRG		0.42421		3.83148
21 Nitrobenzene	+++++	0.30294	0.32276	0.28522	0.28127	0.25509					
	0.25224	0.23551					AVRG		0.27643		11.11561
22 Isophorone	+++++	0.54758	0.58414	0.54133	0.51835	0.48143					
	0.47395	0.43472					AVRG		0.51164		10.00571
23 2-Nitrophenol	+++++	0.14529	0.15968	0.13060	0.12565	0.11851					
	0.11804	0.11062					AVRG		0.12977		13.28936
24 2,4-Dimethylphenol	+++++	0.24006	0.26073	0.23521	0.22763	0.20780					
	0.20628	0.19018					AVRG		0.22398		10.73144
25 bis(2-Chloroethoxy)methane	+++++	0.32945	0.33889	0.30691	0.29506	0.26818					
	0.26319	0.24472					AVRG		0.29234		12.06634

GEL Laboratories LLC

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Method file : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Cal Date : 02-Jul-2009 08:48 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
26 2,4-Dichlorophenol	+++++	0.23679	0.25509	0.23664	0.22756	0.21060					
	0.20430	0.18739					AVRG		0.22262		10.36895
27 Benzoic acid	+++++	+++++	51071	179236	222805	415300					
	636355	696809					LINR	0.30650	0.14372		0.99499
28 1,2,4-Trichlorobenzene	+++++	0.31579	0.32696	0.29301	0.27810	0.25284					
	0.24524	0.22654					AVRG		0.27693		13.50910
30 Naphthalene	0.92630	0.81441	0.84437	0.74175	0.71375	0.63501					
	+++++	+++++					AVRG		0.77927		13.28698
204 alpha-Terpineol	+++++	0.27539	0.29587	0.27412	0.26160	0.23729					
	0.22709	0.21031					AVRG		0.25452		11.98565
31 4-Chloroaniline	+++++	49594	132620	425679	656127	1107368					
	1404474	+++++					LINR	0.18534	0.32589		0.99103
189 Caprolactam	+++++	0.07040	0.08077	0.07795	0.07939	0.08243					
	0.08208	0.08270					AVRG		0.07939		5.44768
32 Hexachlorobutadiene	+++++	0.22957	0.23375	0.21257	0.20237	0.18593					
	0.18127	0.16955					AVRG		0.20215		12.15251
33 4-Chloro-3-methylphenol	+++++	0.22052	0.23942	0.22592	0.22085	0.20102					
	0.19961	0.18500					AVRG		0.21319		8.75387

GEL Laboratories LLC

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Cal Date : 02-Jul-2009 08:48 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.54547	0.51742	0.53737	0.48509	0.46571	0.42309					
	0.40601	0.37515					AVRG		0.46942		13.47765
35 1-Methylnaphthalene	0.61675	0.54291	0.56151	0.50018	0.48099	0.43377					
	0.41494	+++++					AVRG		0.50729		14.13879
36 Hexachlorocyclopentadiene	+++++	27986	82848	201022	230899	383354					
	546120	529744					LINR	0.06768	0.19504		0.99133
208 1,1'-Biphenyl	+++++	1.15705	1.15621	1.07607	1.06999	0.99440					
	0.93860	0.92132					AVRG		1.04481		9.22094
205 2,3-Dichloroaniline	+++++	0.43038	0.47856	0.47126	0.45828	0.43340					
	0.43590	0.41815					AVRG		0.44656		5.11263
37 2,4,6-Trichlorophenol	+++++	0.28676	0.32859	0.32419	0.31870	0.30788					
	0.30664	0.29394					AVRG		0.30953		4.99573
38 2,4,5-Trichlorophenol	+++++	0.31119	0.35383	0.35359	0.34899	0.32750					
	0.32118	0.30897					AVRG		0.33218		5.93452
40 2-Chloronaphthalene	0.90782	0.88976	0.95381	0.88628	0.86190	0.79283					
	0.77800	0.73919					AVRG		0.85120		8.64193
42 o-Nitroaniline	+++++	0.22990	0.27677	0.28660	0.28311	0.27222					
	0.27973	0.26622					AVRG		0.27065		7.09467

GEL Laboratories LLC

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Method file : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Cal Date : 02-Jul-2009 08:48 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
41 m-Nitroaniline	+++++	13390	28329	139268	173437	345778					
	493724	513131					LINR	0.29884	0.19829		0.99453
43 Dimethylphthalate	+++++	1.04940	1.13308	1.04947	1.03679	0.97403					
	0.95746	0.91235					AVRG		1.01609		7.22171
44 2,6-Dinitrotoluene	+++++	0.23053	0.26215	0.25119	0.24633	0.23672					
	0.23773	0.22882					AVRG		0.24192		4.95083
45 Acenaphthylene	1.32250	1.32839	1.43067	1.30894	1.28012	1.15975					
	1.12592	1.07678					AVRG		1.25413		9.61726
47 Acenaphthene	0.86434	0.82293	0.89161	0.84103	0.82730	0.77871					
	0.77201	0.74002					AVRG		0.81724		6.19484
48 2,4-Dinitrophenol	+++++	+++++	27401	92512	114873	206533					
	316209	327495					LINR	0.31618	0.12695		0.99276
49 Dibenzofuran	+++++	1.22775	1.32738	1.22440	1.19116	1.08140					
	1.04556	1.00480					AVRG		1.15749		10.04078
50 2,4-Dinitrotoluene	+++++	0.28811	0.33236	0.33277	0.32207	0.31602					
	0.32001	0.30435					AVRG		0.31653		5.01775
51 Diethylphthalate	+++++	1.02375	1.11667	1.04486	1.01847	0.95382					
	0.93049	0.87854					AVRG		0.99523		8.00568

GEL Laboratories LLC

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Integrator : HP RTE
Method file : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Cal Date : 02-Jul-2009 08:48 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
52 4-Nitrophenol	+++++	0.10237	0.13339	0.15027	0.14627	0.15044					
	0.15471	0.15539					AVRG		0.14183		13.32361
53 Fluorene	1.08263	1.02003	1.09222	1.03146	1.00049	0.93401					
	0.91950	0.87726					AVRG		0.99470		7.82414
54 4-Chlorophenylphenylether	+++++	0.58767	0.63875	0.60550	0.58889	0.55750					
	0.55283	0.52876					AVRG		0.57998		6.33880
55 2-Methyl-4,6-dinitrophenol	+++++	21239	62983	165240	200894	364502					
	508544	531313					LINR	0.16218	0.10002		0.99855
56 p-Nitroaniline	+++++	0.10363	0.09786	0.10787	0.10361	0.11040					
	+++++	+++++					AVRG		0.10468		4.57223
133 Diphenylamine	+++++	0.42588	0.42331	0.39385	0.39040	0.38179					
	0.39613	0.37595					AVRG		0.39819		4.85853
58 1,2-Diphenylhydrazine	+++++	0.52955	0.56955	0.53115	0.51761	0.47792					
	0.46451	0.44849					AVRG		0.50554		8.53737
59 Tributylphosphate	+++++	1.00806	1.18622	1.23669	1.16465	1.10392					
	1.07665	0.99822					AVRG		1.11063		8.12668
61 4-Bromophenylphenylether	+++++	0.19446	0.21087	0.19593	0.19164	0.18443					
	0.18455	0.17645					AVRG		0.19119		5.76073

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
63 Hexachlorobenzene	+++++	0.20663	0.22068	0.20559	0.20389	0.19450						
	0.19301	0.18516					AVRG		0.20135		5.75118	
207 Atrazine	+++++	0.03899	0.03935	0.03659	0.03414	0.02579						
	0.02506	0.01147					AVRG		0.03020		33.49708	<-
65 Pentachlorophenol	+++++	29080	74972	189390	229767	418008						
	576136	593432					LINR	0.13477	0.11155		0.99815	
206 n-Octadecane	+++++	0.47475	0.50082	0.45712	0.43884	0.39852						
	0.38292	0.36185					AVRG		0.43069		11.86963	
68 Phenanthrene	0.88355	0.80072	0.83106	0.77370	0.74248	0.67864						
	0.65899	0.62552					AVRG		0.74933		11.98568	
69 Anthracene	0.80079	0.78389	0.83647	0.77814	0.74916	0.68231						
	0.65679	0.62923					AVRG		0.73960		10.09070	
72 Di-n-butylphthalate	+++++	0.92678	1.00428	0.92303	0.88168	0.79411						
	0.73607	0.69755					AVRG		0.85193		13.15447	
76 Fluoranthene	0.87967	0.89588	0.95145	0.91545	0.88662	0.80387						
	0.76584	0.73008					AVRG		0.85361		9.11643	
77 Benzidine	+++++	0.19760	0.17186	0.13560	0.15750	0.17176						
	+++++	+++++					AVRG		0.16686		13.59632	

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INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Cal Date : 02-Jul-2009 08:48 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
79 Pyrene	0.91265	0.94419	1.00845	0.90726	0.87106	0.79690					
	0.79234	0.74808					AVRG		0.87262		10.07157
85 Butylbenzylphthalate	++++++	0.35330	0.41644	0.38432	0.37612	0.36818					
	0.36866	0.35103					AVRG		0.37401		5.90957
89 Benzo(a)anthracene	0.93687	0.86506	0.93282	0.88495	0.85327	0.81322					
	0.79963	0.78038					AVRG		0.85828		6.82989
90 3,3'-Dichlorobenzidine	++++++	0.27335	0.29372	0.28527	0.28392	0.28609					
	0.29172	0.29334					AVRG		0.28677		2.49370
92 Chrysene	0.89108	0.82456	0.87830	0.80396	0.77658	0.72635					
	0.71171	0.67721					AVRG		0.78622		9.89559
93 bis(2-Ethylhexyl)phthalate	0.36763	0.54183	0.61773	0.55490	0.53303	0.51324					
	0.50377	0.47385					AVRG		0.51325		14.10892
94 Di-n-octylphthalate	++++++	0.87264	1.03338	0.94180	0.92021	0.86905					
	0.90617	0.85721					AVRG		0.91435		6.63445
95 Benzo(b)fluoranthene	0.83575	0.83776	0.94486	0.89597	0.89706	0.88345					
	0.87605	0.89631					AVRG		0.88340		3.99003
96 Benzo(k)fluoranthene	0.83667	0.88573	0.95144	0.92402	0.88042	0.80919					
	0.87047	0.78400					AVRG		0.86774		6.47091

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	0.68279	0.75497	0.84574	0.83044	0.81295	0.78346					
	0.78610	0.75963					AVRG		0.78201		6.56659
99 Indeno(1,2,3-cd)pyrene	0.68768	0.76122	0.82731	0.85825	0.80224	0.83562					
	0.77091	0.74337					AVRG		0.78583		7.13057
100 Dibenzo(a,h)anthracene	0.55928	0.62675	0.66243	0.69649	0.65909	0.67837					
	0.63358	0.60851					AVRG		0.64056		6.79267
101 Benzo(ghi)perylene	0.62928	0.66607	0.71083	0.72801	0.67267	0.69867					
	0.63897	0.61503					AVRG		0.66994		6.05494
102 1,4-Dioxane	+++++	0.27310	0.33649	0.31633	0.31586	0.30752					
	0.30760	0.30009					AVRG		0.30814		6.24756
103 Methyl methacrylate	+++++	0.16571	0.14464	0.16919	0.16853	0.13461					
	0.14912	0.14745					AVRG		0.15418		8.81814
104 Ethyl methacrylate	+++++	0.71311	0.75791	0.73095	0.72426	0.71167					
	0.71385	0.70503					AVRG		0.72240		2.47238
105 2-Picoline	+++++	1.11548	1.17142	1.11300	1.10983	1.09598					
	1.08845	1.07485					AVRG		1.10986		2.77913
106 N-Nitrosomethylethylamine	+++++	0.39956	0.41468	0.41346	0.41221	0.41623					
	0.42662	0.42599					AVRG		0.41554		2.20553

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.47558	0.50132	0.48450	0.48273	0.46970					
	0.48198	0.46348					AVRG		0.47990		2.52987
108 N-Nitrosodiethylamine	+++++	0.39546	0.40809	0.41357	0.41074	0.41897					
	0.41660	0.42103					AVRG		0.41207		2.08747
109 Ethyl Methanesulfonate	+++++	0.55498	0.59813	0.57386	0.57552	0.57488					
	0.58581	0.57709					AVRG		0.57718		2.26529
110 Pentachloroethane	+++++	0.32980	0.34246	0.32767	0.32795	0.32606					
	0.31926	0.32166					AVRG		0.32784		2.27134
111 N-Nitrosopyrrolidine	+++++	0.36971	0.39411	0.42033	0.41585	0.42732					
	0.42989	0.42616					AVRG		0.41191		5.38141
113 N-Nitrosomorpholine	+++++	0.64474	0.66018	0.67778	0.67210	0.67246					
	0.66541	0.65964					AVRG		0.66462		1.66103
114 o-Toluidine	+++++	1.61381	1.49415	1.47472	1.43016	1.39203					
	1.34155	1.32892					AVRG		1.43933		6.87634
115 N-Nitrosopiperidine	+++++	0.12839	0.13413	0.13516	0.13244	0.13401					
	0.13430	0.13333					AVRG		0.13311		1.68824
116 a,a-Dimethylphenethylamine	+++++	0.63521	0.68983	0.83773	0.84651	0.86822					
	0.88737	0.88928					AVRG		0.80774		12.65773

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	100 Level 7	120 Level 8									
117 Triethylphosphorothioate	+++++	0.19064	0.20260	0.20099	0.19502	0.19185					
	0.18753	0.18646					AVRG		0.19358		3.24858
118 2,6-Dichlorophenol	+++++	0.22516	0.23849	0.23337	0.23367	0.23208					
	0.23139	0.22767					AVRG		0.23169		1.86464
119 Hexachloropropene	+++++	0.11814	0.13192	0.13900	0.13353	0.14270					
	0.15051	0.15068					AVRG		0.13807		8.32008
120 p-Phenylenediamine	+++++	43977	99414	308611	373494	696188					
	963689	995859					LINR	0.12820	0.20874		0.99126
121 N-Nitrosodi-n-butylamine	+++++	0.17823	0.17723	0.18484	0.17833	0.17974					
	0.18115	0.17847					AVRG		0.17971		1.43983
122 Safrole	+++++	0.21837	0.22703	0.21735	0.21549	0.21160					
	0.20575	0.20421					AVRG		0.21426		3.67215
123 1,2,4,5-Tetrachlorobenzene	+++++	0.54138	0.55353	0.51470	0.51225	0.49714					
	0.48155	0.47070					AVRG		0.51018		5.89454
124 Isosafrole	+++++	0.32966	0.34665	0.33144	0.33467	0.32864					
	0.32331	0.32007					AVRG		0.33063		2.60072
125 1,4-Naphthoquinone	+++++	0.31987	0.36331	0.33039	0.32211	0.26630					
	+++++	+++++					AVRG		0.32039		10.89181

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
126 m-Dinitrobenzene	+++++	0.14698	0.17243	0.17441	0.16744	0.16475					
	0.17068	0.16207					AVRG		0.16554		5.58667
127 Pentachlorobenzene	+++++	0.50210	0.51268	0.47854	0.47885	0.46376					
	0.45302	0.44508					AVRG		0.47629		5.19583
128 1-Naphthylamine	+++++	0.71576	0.74676	0.71478	0.73564	0.70096					
	0.70170	0.66704					AVRG		0.71181		3.64479
129 2-Naphthylamine	+++++	0.65048	0.67212	0.63289	0.62367	0.60738					
	0.67547	0.62734					AVRG		0.64134		3.98982
130 2,3,4,6-Tetrachlorophenol	+++++	0.26896	0.31335	0.32826	0.31414	0.31017					
	0.32221	0.30193					AVRG		0.30843		6.26838
131 5-Nitro-o-toluidine	+++++	0.22244	0.25484	0.25927	0.26491	0.26382					
	0.26232	0.26458					AVRG		0.25602		5.95016
132 Thionazin	+++++	0.13992	0.16083	0.16656	0.16351	0.16350					
	0.15944	0.15655					AVRG		0.15862		5.58077
134 Sulfotepp	+++++	0.11001	0.12298	0.12668	0.11604	0.11569					
	0.11568	0.11405					AVRG		0.11730		4.80512
135 Phorate	+++++	0.29230	0.33975	0.34982	0.32693	0.31677					
	0.31242	0.30198					AVRG		0.32000		6.36308

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Compound	1 Level 1 / 100 Level 7	10 Level 2 / 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
136 1,3,5-Trinitrobenzene	+++++	0.07807	0.09604	0.10968	0.11316	0.11642					
	0.12063	0.11865					AVRG		0.10752		14.26247
137 Phenacetin	+++++	0.20290	0.22171	0.22556	0.22545	0.22049					
	0.22407	0.22896					AVRG		0.22131		3.87405
138 Diallate	+++++	0.21704	0.21096	0.20865	0.20571	0.20547					
	0.19847	0.19919					AVRG		0.20650		3.15687
139 Dimethoate	+++++	0.14997	0.18004	0.19018	0.19006	0.19876					
	0.19392	0.19159					AVRG		0.18493		8.87531
140 4-Aminobiphenyl	+++++	0.39954	0.37157	0.34033	0.38960	0.38731					
	0.37146	0.32708					AVRG		0.36955		7.22857
141 Pentachloronitrobenzene	+++++	0.09293	0.09496	0.09184	0.09009	0.08786					
	0.08371	0.08367					AVRG		0.08929		4.95202
142 Pronamide	+++++	0.27271	0.27709	0.26759	0.26568	0.25326					
	0.24278	0.24492					AVRG		0.26058		5.22110
143 Dinoseb	+++++	31988	96506	256390	323328	575312					
	818250	840863					LINR	0.17281	0.15992		0.99762
144 Disulfoton	+++++	0.24425	0.29551	0.29849	0.27680	0.27235					
	0.26633	0.25788					AVRG		0.27309		7.12374

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
145 Methyl parathion	+++++	0.10770	0.14875	0.15826	0.16106	0.16736						
	0.16426	0.16189					AVRG		0.15275		13.56103	
146 4-Nitroquinoline-1-oxide	+++++	0.01141	0.01322	0.01133	0.01062	0.00818						
	0.00868	0.00809					AVRG		0.01022		19.09653	<-
147 Methapyrilene	+++++	0.42026	0.44488	0.43856	0.43377	0.40715						
	0.40099	0.37457					AVRG		0.41717		5.94225	
148 Isodrin	+++++	0.10571	0.10794	0.10433	0.10601	0.10397						
	0.10008	0.10248					AVRG		0.10436		2.45344	
149 Aramite	+++++	0.04905	0.05045	0.05167	0.05357	0.05214						
	0.04972	0.04968					AVRG		0.05090		3.18460	
150 Kepone	+++++	0.04990	0.06374	0.06858	0.06953	0.07010						
	0.07444	0.07444					AVRG		0.06725		12.61524	
151 p-(Dimethylamino)azobenzene	+++++	0.20254	0.21029	0.20667	0.20747	0.19714						
	0.19688	0.19360					AVRG		0.20208		3.13600	
152 Chlorobenzilate	+++++	0.29145	0.30146	0.29895	0.30236	0.30552						
	0.29673	0.30007					AVRG		0.29951		1.50134	
153 3,3'-Dimethylbenzidine	+++++	0.46677	0.47630	0.42302	0.43278	0.41562						
	0.43046	0.43922					AVRG		0.44059		5.12372	

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	100 Level 7	120 Level 8										
154 Famphur	+++++	0.28070	0.34471	0.37738	0.35216	0.35407						
	0.35151	0.34312					AVRG		0.34338		8.69120	
155 2-Acetylaminofluorene	+++++	0.21740	0.26283	0.27987	0.28264	0.28876						
	0.29539	0.30354					AVRG		0.27578		10.43001	
157 7,12Dimethylbenz(a)anthracene	+++++	0.45233	0.47142	0.46173	0.47665	0.44445						
	0.44076	0.43541					AVRG		0.45468		3.46334	
158 3-Methylcholanthrene	+++++	0.38164	0.42107	0.41321	0.41394	0.40883						
	0.41065	0.41489					AVRG		0.40918		3.11363	
26 Phthalic anhydride	+++++	34490	64897	175190	219706	434516						
	592574	638483					LINR	0.15802	0.12664		0.99629	
173 Carbazole	30520	150845	307142	743993	923267	1782076						
	2604833	2666301					LINR	0.13905	0.49388		0.99084	
174 Hexachlorophene	+++++	480806	2278613	3488755	6057217	7167289						
	+++++	+++++					LINR	10.43537	0.08980		0.99073	
179 Dibenzo(a,e)pyrene	+++++	0.38443	0.37707	0.43058	0.39017	0.45492						
	0.38756	0.34953					AVRG		0.39632		8.87511	
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

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	100 Level 7	120 Level 8									
184 p-Benzoquinone	+++++	6354	22229	56493	80248	134257					
	176805	204907					LINR	0.21207	0.17005		0.99849
191 Parathion	+++++	0.06241	0.08380	0.09228	0.08665	0.09019					
	0.08792	0.08819					AVRG		0.08449		11.94545
192 Methoxychlor	+++++	0.47987	0.56846	0.54978	0.51458	0.52157					
	0.47918	0.44390					AVRG		0.50819		8.56166
210 m-Toluidine	+++++	82014	176998	423487	569165	1017485					
	1470841	1569700					LINR	0.22355	1.33578		0.99386
211 p-Toluidine	+++++	48655	120805	272230	351988	651296					
	846340	873954					LINR	0.14365	0.74877		0.99481
212 Cis Diallate	+++++	0.19980	0.20241	0.21284	0.20964	0.21416					
	0.21304	0.21632					AVRG		0.20975		2.98917
213 Trans Diallate	+++++	0.25534	0.24819	0.24547	0.24201	0.24173					
	0.23350	0.23435					AVRG		0.24294		3.15687
214 1,4-Dinitrobenzene	+++++	0.17121	0.20381	0.18645	0.17549	0.17568					
	0.18326	0.17442					AVRG		0.18147		6.16594
215 2-Ethoxyethanol	+++++	0.42738	0.64231	0.63531	0.62447	0.60898					
	0.63642	0.61711					AVRG		0.59885		12.77596

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	100 Level 7	120 Level 8									
216 Methylenebis(2-chloroaniline)	+++++	0.08449	0.09509	0.10697	0.10796	0.12155					
	0.12865	0.12373					AVRG		0.10978		14.66692
229 2,2'-Dichlorobenzil	+++++	0.43514	0.47184	0.44898	0.45185	0.43856					
	0.44140	0.43749					AVRG		0.44646		2.85679
230 4-Chlorothioanisole	+++++	0.26856	0.27242	0.26616	0.27394	0.26615					
	0.26741	0.26488					AVRG		0.26850		1.27497
231 4-Chlorothiophenol	+++++	41768	132011	275353	382851	635600					
	848320	930133					LINR	0.16594	0.21026		0.99850
232 bis(p-Chlorophenyl)sulfone	+++++	0.31542	0.31724	0.29112	0.29450	0.28313					
	0.28387	0.28770					AVRG		0.29614		4.84670
233 bis(p-Chlorophenyl)disulfide	+++++	0.08882	0.09796	0.10629	0.09493	0.09841					
	0.10107	0.10018					AVRG		0.09824		5.52014
234 Diphenyl disulfide	+++++	0.17514	0.18495	0.17946	0.18101	0.17947					
	0.17997	0.17866					AVRG		0.17981		1.62468
235 Diphenyl sulfide	+++++	0.85058	0.85814	0.81105	0.81875	0.77524					
	0.75190	0.74816					AVRG		0.80197		5.57629
236 Phenyl sulfone	+++++	0.36602	0.35985	0.34325	0.35342	0.33956					
	0.33842	0.33797					AVRG		0.34836		3.27307

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INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Cal Date : 02-Jul-2009 08:48 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
237 Hydroxymethyl phthalimide	+++++	0.13574	0.15119	0.15892	0.13998	0.12536					
	0.12935	0.12316					AVRG		0.13767		9.72353
238 Phthalic acid	+++++	0.06939	0.07287	0.08292	0.11566	0.12455					
	0.14463	0.15090					AVRG		0.10870		31.11787 <-
239 Thiophenol	+++++	0.60742	0.77250	0.81805	0.90219	0.94227					
	0.93729	0.94386					AVRG		0.84623		14.74711
240 bis(Chloromethyl)ether	+++++	0.85590	0.85616	0.81409	0.81889	0.83526					
	0.80381	0.79901					AVRG		0.82616		2.83945
241 Octachlorostyrene	+++++	0.10243	0.10326	0.09498	0.09677	0.09556					
	0.09562	0.09577					AVRG		0.09777		3.59684
M 225 Trichlorophenols	+++++	0.29897	0.34121	0.33889	0.33385	0.31769					
	0.31391	0.30146					AVRG		0.32085		5.43035
M 226 Tetrachlorophenols	+++++	0.26896	0.31335	0.32826	0.31414	0.31017					
	0.32221	0.30193					AVRG		0.30843		6.26838
M 227 Benzo(b,k)fluoranthene	0.83621	0.86175	0.94815	0.91000	0.88874	0.84632					
	0.87326	0.84016					AVRG		0.87557		4.41963
M 228 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Cal Date : 02-Jul-2009 08:48 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
$ 3 2-Fluorophenol	+++++	0.84209	0.92035	0.89559	0.87122	0.86709					
	0.89027	0.86129					AVRG		0.87827		2.93514
$ 5 Phenol-d5	+++++	1.12824	1.23711	1.20172	1.15464	1.13363					
	1.14808	1.10269					AVRG		1.15801		3.99148
$ 187 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-
$ 20 Nitrobenzene-d5	+++++	0.32326	0.35849	0.32302	0.30818	0.26119					
	0.25859	0.24209					AVRG		0.29640		14.47409
$ 39 2-Fluorobiphenyl	+++++	1.12044	1.19637	1.09339	1.05081	0.95786					
	0.92784	0.89472					AVRG		1.03449		10.74330
$ 60 2,4,6-Tribromophenol	+++++	0.13461	0.16754	0.16952	0.16904	0.16702					
	0.17089	0.16383					AVRG		0.16321		7.84797
$ 81 p-Terphenyl-d14	+++++	0.64272	0.69513	0.63531	0.60706	0.57674					
	0.57751	0.55064					AVRG		0.61216		8.06339

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Cal Date : 02-Jul-2009 08:48 rmb

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

Data File: /chem/MSD5.i/s062509.b/s5f2530.d
Report Date: 26-Jun-2009 10:43

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2530.d
Analysis Type: WATER
Lab Sample ID: WBN090528-08.5
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 25-JUN-2009 22:11
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 10:16
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.79683	0.68969	0.68969	0.000	-13.44538	60.00000	Averaged
16 Acetophenone	1.08491	1.09337	1.09337	0.000	0.78008	60.00000	Averaged
189 Caprolactam	0.07939	0.08623	0.08623	0.000	8.62020	60.00000	Averaged
208 1,1'-Biphenyl	1.04481	1.10113	1.10113	0.000	5.39117	60.00000	Averaged
207 Atrazine	0.03020	0.02623	0.02623	0.000	-13.14245	60.00000	Averaged
77 Benzidine	0.16686	0.16548	0.16548	0.000	-0.82680	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28677	0.30900	0.30900	0.000	7.75178	60.00000	Averaged
102 1,4-Dioxane	0.30814	0.37821	0.37821	0.000	22.74029	60.00000	Averaged
103 Methyl methacrylate	0.15418	0.20577	0.20577	0.000	33.46578	60.00000	Averaged
104 Ethyl methacrylate	0.72240	0.86947	0.86947	0.000	20.35908	60.00000	Averaged
105 2-Picoline	1.10986	1.11145	1.11145	0.000	0.14364	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.41554	0.43916	0.43916	0.000	5.68448	60.00000	Averaged
107 Methyl methanesulfonate	0.47990	0.53510	0.53510	0.000	11.50234	60.00000	Averaged
108 N-Nitrosodiethylamine	0.41207	0.42418	0.42418	0.000	2.93858	60.00000	Averaged
109 Ethyl Methanesulfonate	0.57718	0.71921	0.71921	0.000	24.60806	60.00000	Averaged
110 Pentachloroethane	0.32784	0.45184	0.45184	0.000	37.82372	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.41191	0.43254	0.43254	0.000	5.00958	60.00000	Averaged
113 N-Nitrosomorpholine	0.66462	0.70098	0.70098	0.000	5.47224	60.00000	Averaged
114 o-Toluidine	1.43933	1.46147	1.46147	0.000	1.53771	60.00000	Averaged
115 N-Nitrosopiperidine	0.13311	0.13919	0.13919	0.000	4.57041	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.80774	0.88284	0.88284	0.000	9.29822	60.00000	Averaged
118 2,6-Dichlorophenol	0.23169	0.24346	0.24346	0.000	5.07768	60.00000	Averaged
119 Hexachloropropene	0.13807	0.22200	0.22200	0.000	60.78426	60.00000	Averaged <-
120 p-Phenylenediamine	41.67913	40.00000	0.19074	0.000	4.19784	60.00000	Linear
121 N-Nitrosodi-n-butylamine	0.17971	0.18978	0.18978	0.000	5.59950	60.00000	Averaged
122 Safrole	0.21426	0.25431	0.25431	0.000	18.69392	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.51018	0.55414	0.55414	0.000	8.61659	60.00000	Averaged
124 Isosafrole	0.33063	0.45825	0.45825	0.000	38.59723	60.00000	Averaged
125 1,4-Naphthoquinone	0.32039	0.31743	0.31743	0.000	-0.92461	60.00000	Averaged
127 Pentachlorobenzene	0.47629	0.49731	0.49731	0.000	4.41334	60.00000	Averaged
128 1-Naphthylamine	0.71181	0.74533	0.74533	0.000	4.70975	60.00000	Averaged
129 2-Naphthylamine	0.64134	0.57650	0.57650	0.000	-10.10953	60.00000	Averaged
131 5-Nitro-o-toluidine	0.25602	0.27374	0.27374	0.000	6.92121	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.10752	0.13454	0.13454	0.000	25.12508	60.00000	Averaged
137 Phenacetin	0.22131	0.23937	0.23937	0.000	8.16340	60.00000	Averaged
138 Diallate	0.20650	0.20770	0.20770	0.000	0.58296	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 25-JUN-2009 22:11
Lab File ID: s5f2530.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 10:16
Lab Sample ID: WBN090528-08.5 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20975	0.22776	0.22776	0.000	8.58954	60.00000	Averaged
213 Trans Dialiate	0.24294	0.24436	0.24436	0.000	0.58296	60.00000	Averaged
140 4-Aminobiphenyl	0.36955	0.40991	0.40991	0.000	10.91902	60.00000	Averaged
141 Pentachloronitrobenzene	0.08929	0.09331	0.09331	0.000	4.50272	60.00000	Averaged
142 Pronamide	0.26058	0.26773	0.26773	0.000	2.74451	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01022	0.01223	0.01223	0.000	19.62918	60.00000	Averaged
147 Methapyrilene	0.41717	0.44149	0.44149	0.000	5.82947	60.00000	Averaged
148 Isodrin	0.10436	0.10072	0.10072	0.000	-3.48541	60.00000	Averaged
149 Aramite	0.05090	0.04734	0.04734	0.000	-6.97764	60.00000	Averaged
150 Kepone	0.06725	0.06505	0.06505	0.000	-3.27279	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.20208	0.21351	0.21351	0.000	5.65511	60.00000	Averaged
152 Chlorobenzilate	0.29951	0.30883	0.30883	0.000	3.11302	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.44059	0.46027	0.46027	0.000	4.46551	60.00000	Averaged
155 2-Acetylaminofluorene	0.27578	0.31027	0.31027	0.000	12.50985	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.45468	0.42550	0.42550	0.000	-6.41815	60.00000	Averaged
158 3-Methylcholanthrene	0.40918	0.41886	0.41886	0.000	2.36719	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD5.i/s062509.b/s5f2530.d
Lab Smp Id: WBN090528-08.5 Client Smp ID: AP12ICV
Inj Date : 25-JUN-2009 22:11
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090528-08.5|40 PPM|1|SVM|1|AP12ICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m
Meth Date : 26-Jun-2009 10:43 hnm Quant Type: ISTD
Cal Date : 25-JUN-2009 21:25 Cal File: s5f2528.d
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.031	4.031	(1.000)	513917	40.0000	
* 29 Naphthalene-d8	136	4.901	4.901	(1.000)	1759940	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.160	(1.000)	1124731	40.0000	
* 67 Phenanthrene-d10	188	7.342	7.342	(1.000)	2155121	40.0000	
* 91 Chrysene-d12	240	9.766	9.766	(1.000)	2326057	40.0000	
* 98 Perylene-d12	264	11.524	11.524	(1.000)	2206835	40.0000	
209 Benzaldehyde	77	3.754	3.754	(0.931)	354443	40.0000	34.6
16 Acetophenone	105	4.278	4.278	(1.061)	561903	40.0000	40.3
189 Caprolactam	113	5.172	5.172	(1.055)	151764	40.0000	43.4
208 1,1'-Biphenyl	154	5.719	5.719	(0.928)	1238478	40.0000	42.2
207 Atrazine	173	7.031	7.031	(0.958)	56529	40.0000	34.7
77 Benzidine	184	8.495	8.495	(0.870)	384927	40.0000	39.7
90 3,3'-Dichlorobenzidine	252	9.689	9.689	(0.992)	718760	40.0000	43.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
102 1,4-Dioxane	88	2.337	2.337	(0.580)	194371	40.0000	49.1
103 Methyl methacrylate	100	2.331	2.331	(0.578)	105751	40.0000	53.4
104 Ethyl methacrylate	69	2.713	2.713	(0.673)	446835	40.0000	48.1
105 2-Picoline	93	2.913	2.913	(0.723)	571194	40.0000	40.0
106 N-Nitrosomethylethylamine	88	2.960	2.960	(0.734)	225690	40.0000	42.3
107 Methyl methanesulfonate	80	3.119	3.119	(0.774)	274996	40.0000	44.6
108 N-Nitrosodiethylamine	102	3.354	3.354	(0.832)	217991	40.0000	41.2
109 Ethyl Methanesulfonate	79	3.507	3.507	(0.870)	369616	40.0000	49.8
110 Pentachloroethane	167	3.854	3.854	(0.956)	232206	40.0000	55.1
111 N-Nitrosopyrrolidine	100	4.266	4.266	(1.058)	222292	40.0000	42.0(Q)
113 N-Nitrosomorpholine	56	4.290	4.290	(1.064)	360248	40.0000	42.2
114 o-Toluidine	106	4.307	4.307	(1.069)	751073	40.0000	40.6
115 N-Nitrosopiperidine	114	4.507	4.507	(0.920)	244971	40.0000	41.8
116 a,a-Dimethylphenethylamine	58	4.772	4.772	(0.974)	1553746	40.0000	43.7
118 2,6-Dichlorophenol	162	4.943	4.943	(1.008)	428468	40.0000	42.0
119 Hexachloropropene	213	4.972	4.972	(1.014)	390700	40.0000	64.3
120 p-Phenylenediamine	108	5.178	5.178	(1.056)	335699	40.0000	41.7
121 N-Nitrosodi-n-butylamine	84	5.137	5.137	(1.048)	333995	40.0000	42.2(T)
122 Safrole	162	5.307	5.307	(1.083)	447572	40.0000	47.5
123 1,2,4,5-Tetrachlorobenzene	216	5.513	5.513	(0.895)	623256	40.0000	43.4
124 Isosafrole	162	5.678	5.678	(0.922)	515408	40.0000	55.4
125 1,4-Naphthoquinone	158	5.872	5.872	(0.953)	357026	40.0000	39.6
127 Pentachlorobenzene	250	6.278	6.278	(1.019)	559342	40.0000	41.8
128 1-Naphthylamine	143	6.366	6.366	(1.033)	838296	40.0000	41.9
129 2-Naphthylamine	143	6.425	6.425	(1.043)	648408	40.0000	36.0
131 5-Nitro-o-toluidine	152	6.566	6.566	(1.066)	307889	40.0000	42.8
136 1,3,5-Trinitrobenzene	75	6.819	6.819	(0.929)	289941	40.0000	50.0
137 Phenacetin	108	6.860	6.860	(0.934)	515877	40.0000	43.3(Q)
138 Diallate	86	6.842	6.842	(0.932)	447626	40.0000	40.2
212 Cis Diallate	86	6.925	6.925	(0.943)	73628	6.00000	6.5(a)
213 Trans Diallate	86	6.842	6.842	(0.932)	447626	34.0000	34.2
140 4-Aminobiphenyl	169	7.154	7.154	(0.974)	883396	40.0000	44.4
141 Pentachloronitrobenzene	237	7.178	7.178	(0.978)	201104	40.0000	41.8(Q)
142 Pronamide	173	7.166	7.166	(0.976)	576989	40.0000	41.1
146 4-Nitroquinoline-1-oxide	101	8.013	8.013	(1.091)	26348	40.0000	47.8
147 Methapyrilene	58	8.042	8.042	(1.095)	951461	40.0000	42.3
148 Isodrin	193	8.272	8.272	(1.127)	217072	40.0000	38.6
149 Aramite	185	8.666	8.666	(1.180)	102033	40.0000	37.2
150 Kepone	272	9.260	9.260	(1.261)	140182	40.0000	38.7
151 p-(Dimethylamino)azobenzene	120	8.848	8.848	(0.906)	496641	40.0000	42.3
152 Chlorobenzilate	251	8.878	8.878	(0.909)	718358	40.0000	41.2
153 3,3'-Dimethylbenzidine	212	9.166	9.166	(0.939)	1070613	40.0000	41.8
155 2-Acetylaminofluorene	181	9.413	9.413	(0.964)	721716	40.0000	45.0
157 7,12Dimethylbenz(a)anthracene	256	10.948	10.948	(0.950)	938999	40.0000	37.4
158 3-Methylcholanthrene	268	11.954	11.954	(1.037)	924361	40.0000	40.9(Q)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s062509.b/s5f2530.d
Date : 25-JUN-2009 22:11
Client ID: AP12ICV
Sample Info: IWBN090528-08,5140 PPM11ISWH11|AP12ICV
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

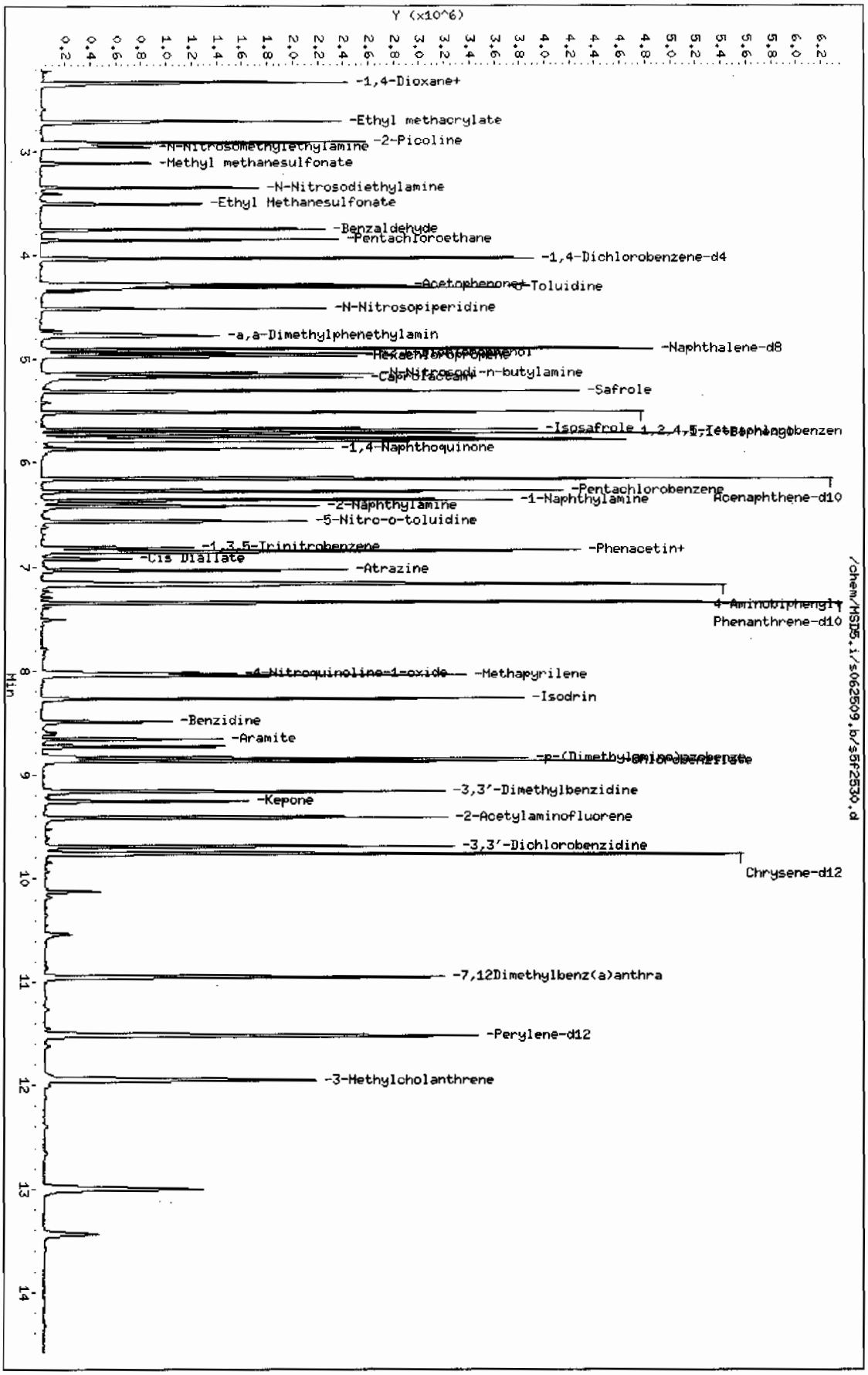

Page 1

Data File: /chem/MSD5.i/s062509.b/s5f2533.d
Report Date: 26-Jun-2009 09:26

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2533.d
Analysis Type: WATER
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 26-JUN-2009 09:03
Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Init. Cal. Times: 14:42 21:25

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$	3 2-Fluorophenol	0.87827	0.92425	0.92425	0.000	5.23547	60.00000	Averaged	
$	5 Phenol-d5	1.15801	1.18114	1.18114	0.000	1.99696	60.00000	Averaged	
$	20 Nitrobenzene-d5	0.29640	0.32886	0.32886	0.000	10.95026	60.00000	Averaged	
$	39 2-Fluorobiphenyl	1.03449	1.12238	1.12238	0.000	8.49584	60.00000	Averaged	
$	60 2,4,6-Tribromophenol	0.16321	0.16963	0.16963	0.000	3.93360	60.00000	Averaged	
$	81 p-Terphenyl-d14	0.61216	0.71476	0.71476	0.000	16.76084	60.00000	Averaged	
	1 N-Methyl-N-nitrosomethylami	0.46728	0.54505	0.54505	0.000	16.64238	60.00000	Averaged	
	2 Pyridine	0.69143	0.70995	0.70995	0.000	2.67819	60.00000	Averaged	
	4 Aniline	0.50220	0.53118	0.53118	0.000	5.77120	60.00000	Averaged	
	6 Phenol	1.14936	1.18675	1.18675	0.001	3.25298	20.00000	Averaged	ccc
	7 bis(2-Chloroethyl) ether	0.88583	0.90830	0.90830	0.000	2.53655	60.00000	Averaged	
	8 2-Chlorophenol	0.96070	1.02584	1.02584	0.000	6.78060	60.00000	Averaged	
	203 n-Decane	1.55838	1.69824	1.69824	0.000	8.97494	60.00000	Averaged	
	9 1,3-Dichlorobenzene	1.14971	1.22756	1.22756	0.000	6.77092	60.00000	Averaged	
	11 1,4-Dichlorobenzene	1.14381	1.19501	1.19501	0.001	4.47626	20.00000	Averaged	ccc
	13 1,2-Dichlorobenzene	1.06271	1.08794	1.08794	0.000	2.37401	60.00000	Averaged	
	14 bis(2-Chloroisopropyl)ether	2.06168	2.20216	2.20216	0.000	6.81386	60.00000	Averaged	
	12 Benzyl alcohol	0.60629	0.63280	0.63280	0.000	4.37103	60.00000	Averaged	
	15 o-Cresol	0.71463	0.71377	0.71377	0.000	-0.12043	60.00000	Averaged	
	18 m,p-Cresols	0.95569	0.97996	0.97996	0.000	2.54026	60.00000	Averaged	
	17 N-Nitrosodipropylamine	0.61897	0.66847	0.66847	0.050	7.99822	60.00000	Averaged	spcc
	19 Hexachloroethane	0.42421	0.45290	0.45290	0.000	6.76415	60.00000	Averaged	
	21 Nitrobenzene	0.27643	0.32316	0.32316	0.000	16.90510	60.00000	Averaged	
	22 Isophorone	0.51164	0.58577	0.58577	0.000	14.48914	60.00000	Averaged	
	23 2-Nitrophenol	0.12977	0.13565	0.13565	0.001	4.53272	20.00000	Averaged	ccc
	24 2,4-Dimethylphenol	0.22398	0.23682	0.23682	0.000	5.73150	60.00000	Averaged	
	25 bis(2-Chloroethoxy)methane	0.29234	0.30563	0.30563	0.000	4.54679	60.00000	Averaged	
	26 2,4-Dichlorophenol	0.22262	0.23707	0.23707	0.001	6.49090	20.00000	Averaged	ccc
	27 Benzoic acid	49.71978	40.00000	0.13459	0.000	24.29945	60.00000	Linear	
	28 1,2,4-Trichlorobenzene	0.27693	0.28464	0.28464	0.000	2.78700	60.00000	Averaged	
	30 Naphthalene	0.77927	0.75380	0.75380	0.000	-3.26722	60.00000	Averaged	
	204 alpha-Terpineol	0.25452	0.26630	0.26630	0.000	4.62601	60.00000	Averaged	
	31 4-Chloroaniline	47.43792	40.00000	0.32609	0.000	18.59479	60.00000	Linear	
	32 Hexachlorobutadiene	0.20215	0.20705	0.20705	0.001	2.42592	20.00000	Averaged	ccc
	33 4-Chloro-3-methylphenol	0.21319	0.22983	0.22983	0.001	7.80207	20.00000	Averaged	ccc
	34 2-Methylnaphthalene	0.46942	0.52808	0.52808	0.000	12.49823	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2533.d
Analysis Type: WATER
Lab Sample ID: WBN090602-09.1
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 26-JUN-2009 09:03
Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Init. Cal. Times: 14:42 21:25
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	0.50729	0.49555	0.49555	0.000	-2.31520	60.00000	Averaged
36 Hexachlorocyclopentadiene	39.64221	40.00000	0.18009	0.050	-0.89448	60.00000	Linear spcc
205 2,3-Dichloroaniline	0.44656	0.49099	0.49099	0.000	9.94845	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.30953	0.32810	0.32810	0.001	6.00118	20.00000	Averaged ccc
38 2,4,5-Trichlorophenol	0.33218	0.36608	0.36608	0.000	10.20698	60.00000	Averaged
40 2-Chloronaphthalene	0.85120	0.90066	0.90066	0.000	5.81012	60.00000	Averaged
42 o-Nitroaniline	0.27065	0.28553	0.28553	0.000	5.49930	60.00000	Averaged
41 m-Nitroaniline	38.41712	40.00000	0.13119	0.000	-3.95720	60.00000	Linear
43 Dimethylphthalate	1.01609	1.07110	1.07110	0.000	5.41428	60.00000	Averaged
44 2,6-Dinitrotoluene	0.24192	0.27930	0.27930	0.000	15.44876	60.00000	Averaged
50 2,4-Dinitrotoluene	0.31653	0.36215	0.36215	0.000	14.41426	60.00000	Averaged
45 Acenaphthylene	1.25413	1.36304	1.36304	0.000	8.68388	60.00000	Averaged
47 Acenaphthene	0.81724	0.84415	0.84415	0.001	3.29259	20.00000	Averaged ccc
48 2,4-Dinitrophenol	41.95216	40.00000	0.09301	0.050	4.88039	60.00000	Linear spcc
49 Dibenzofuran	1.15749	1.23802	1.23802	0.000	6.95699	60.00000	Averaged
51 Diethylphthalate	0.99523	1.06353	1.06353	0.000	6.86293	60.00000	Averaged
52 4-Nitrophenol	0.14183	0.13849	0.13849	0.050	-2.35609	60.00000	Averaged spcc
53 Fluorene	0.99470	1.03686	1.03686	0.000	4.23858	60.00000	Averaged
54 4-Chlorophenylphenylether	0.57998	0.61529	0.61529	0.000	6.08785	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	55.17976	40.00000	0.12176	0.000	37.94939	60.00000	Linear
56 p-Nitroaniline	0.10468	0.10711	0.10711	0.000	2.32364	60.00000	Averaged
133 Diphenylamine	0.39819	0.42143	0.42143	0.001	5.83632	20.00000	Averaged ccc
58 1,2-Diphenylhydrazine	0.50554	0.55423	0.55423	0.000	9.63098	60.00000	Averaged
61 4-Bromophenylphenylether	0.19119	0.20218	0.20218	0.000	5.74963	60.00000	Averaged
63 Hexachlorobenzene	0.20135	0.21304	0.21304	0.000	5.80172	60.00000	Averaged
65 Pentachlorophenol	42.93985	40.00000	0.10471	0.001	7.34962	20.00000	Linear ccc
206 n-Octadecane	0.43069	0.46656	0.46656	0.000	8.32965	60.00000	Averaged
68 Phenanthrene	0.74933	0.76655	0.76655	0.000	2.29763	60.00000	Averaged
69 Anthracene	0.73960	0.78221	0.78221	0.000	5.76128	60.00000	Averaged
72 Di-n-butylphthalate	0.85193	0.94952	0.94952	0.000	11.45527	60.00000	Averaged
76 Fluoranthene	0.85361	0.92888	0.92888	0.001	8.81843	20.00000	Averaged ccc
79 Pyrene	0.87262	0.93192	0.93192	0.000	6.79628	60.00000	Averaged
85 Butylbenzylphthalate	0.37401	0.41884	0.41884	0.000	11.98745	60.00000	Averaged
89 Benzo(a)anthracene	0.85828	0.89070	0.89070	0.000	3.77758	60.00000	Averaged
92 Chrysene	0.78622	0.81917	0.81917	0.000	4.19176	60.00000	Averaged
93 bis(2-Ethylhexyl)phthalate	0.51325	0.58454	0.58454	0.000	13.89072	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 26-JUN-2009 09:03
Lab File ID: s5f2533.d Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 21:25
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	0.91435	1.00400	1.00400	0.001	9.80457	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.88340	0.92115	0.92115	0.000	4.27302	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.86774	0.92327	0.92327	0.000	6.39833	60.00000	Averaged	
	97 Benzo(a)pyrene	0.78201	0.83388	0.83388	0.001	6.63286	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78583	0.79439	0.79439	0.000	1.09020	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	0.64056	0.66834	0.66834	0.000	4.33609	60.00000	Averaged	
	101 Benzo(ghi)perylene	0.66994	0.67440	0.67440	0.000	0.66555	60.00000	Averaged	
	126 m-Dinitrobenzene	0.16554	0.17075	0.17075	0.000	3.14663	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30843	0.31127	0.31127	0.000	0.91990	60.00000	Averaged	
	143 Dinoseb	44.22962	40.00000	0.14919	0.000	10.57406	60.00000	Linear	
	173 Carbazole	41.25747	40.00000	0.44073	0.000	3.14368	60.00000	Linear	
	184 p-Benzoquinone	23.92059	40.00000	0.06563	0.000	-40.19852	60.00000	Linear	
	192 Methoxychlor	0.50819	0.59122	0.59122	0.000	16.33706	60.00000	Averaged	
	211 p-Toluidine	43.31403	40.00000	0.70324	0.000	8.28508	60.00000	Linear	
	210 m-Toluidine	41.09601	40.00000	1.07377	0.000	2.74002	60.00000	Linear	
	26 Phthalic anhydride	43.89917	40.00000	0.11898	0.000	9.74792	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	0.39632	0.23471	0.23471	0.000	-40.77708	60.00000	Averaged	
	214 1,4-Dinitrobenzene	0.18147	0.18811	0.18811	0.000	3.65351	60.00000	Averaged	
	215 2-Ethoxyethanol	0.59885	0.70005	0.70005	0.000	16.89800	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.10978	0.11539	0.11539	0.000	5.11341	60.00000	Averaged	
M	225 Trichlorophenols	0.32085	0.34709	0.34709	0.000	8.17820	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30843	0.31127	0.31127	0.000	0.91990	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.87557	0.92221	0.92221	0.000	5.32615	60.00000	Averaged	

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Data file : /chem/MSD5.i/s062509.b/s5f2533.d
Lab Smp Id: WBN090602-09.1 Client Smp ID: MEGAICV
Inj Date : 26-JUN-2009 09:03
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090602-09.1|40 PPM|1|SVM|1|MEGAICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m
Meth Date : 26-Jun-2009 09:26 rmb Quant Type: ISTD
Cal Date : 25-JUN-2009 19:55 Cal File: s5f2524.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.032	4.032	(1.000)	451724	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1704563	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1006448	40.0000	
* 67 Phenanthrene-d10	188	7.345	7.345	(1.000)	1867078	40.0000	
* 91 Chrysene-d12	240	9.767	9.767	(1.000)	1916495	40.0000	
* 98 Perylene-d12	264	11.529	11.529	(1.000)	1772024	40.0000	
$ 3 2-Fluorophenol	112	3.208	3.208	(0.796)	417507	40.0000	42.1
$ 5 Phenol-d5	99	3.743	3.743	(0.928)	533549	40.0000	40.8
$ 20 Nitrobenzene-d5	82	4.398	4.398	(0.897)	560561	40.0000	44.4
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	1129616	40.0000	43.4
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	170721	40.0000	41.6
$ 81 p-Terphenyl-d14	244	8.727	8.727	(0.894)	1369835	40.0000	46.7
1 N-Methyl-N-nitrosomethylamine	74	2.505	2.505	(0.621)	246213	40.0000	46.6

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
2 Pyridine	79	2.539	2.539	(0.630)	320702	40.0000	41.1
4 Aniline	66	3.815	3.815	(0.946)	239947	40.0000	42.3
6 Phenol	94	3.752	3.752	(0.931)	536083	40.0000	41.3(Q)
7 bis(2-Chloroethyl) ether	63	3.829	3.829	(0.950)	410301	40.0000	41.0
8 2-Chlorophenol	128	3.897	3.897	(0.967)	463398	40.0000	42.7
203 n-Decane	43	3.878	3.878	(0.962)	767136	40.0000	43.6
9 1,3-Dichlorobenzene	146	3.998	3.998	(0.992)	554517	40.0000	42.7
11 1,4-Dichlorobenzene	146	4.046	4.046	(1.004)	539813	40.0000	41.8
13 1,2-Dichlorobenzene	146	4.147	4.147	(1.029)	491448	40.0000	40.9
14 bis(2-Chloroisopropyl)ether	45	4.176	4.176	(1.036)	994767	40.0000	42.7
12 Benzyl alcohol	108	4.099	4.099	(1.017)	285849	40.0000	41.7
15 o-Cresol	107	4.147	4.147	(1.029)	322429	40.0000	40.0
18 m,p-Cresols	107	4.248	4.248	(1.054)	442673	40.0000	41.0
17 N-Nitrosodipropylamine	70	4.268	4.268	(1.059)	301966	40.0000	43.2
19 Hexachloroethane	117	4.378	4.378	(1.086)	204587	40.0000	42.7
21 Nitrobenzene	77	4.412	4.412	(0.900)	550854	40.0000	46.8
22 Isophorone	82	4.561	4.561	(0.930)	998489	40.0000	45.8
23 2-Nitrophenol	139	4.624	4.624	(0.943)	231229	40.0000	41.8
24 2,4-Dimethylphenol	122	4.614	4.614	(0.941)	403677	40.0000	42.3
25 bis(2-Chloroethoxy)methane	93	4.682	4.682	(0.955)	520973	40.0000	41.8
26 2,4-Dichlorophenol	162	4.788	4.788	(0.976)	404106	40.0000	42.6
27 Benzoic acid	105	4.677	4.677	(0.954)	229416	40.0000	49.7
28 1,2,4-Trichlorobenzene	180	4.850	4.850	(0.989)	485193	40.0000	41.1
30 Naphthalene	128	4.918	4.918	(1.003)	1284908	40.0000	38.7(Q)
204 alpha-Terpineol	59	4.889	4.889	(0.997)	453924	40.0000	41.8
31 4-Chloroaniline	127	4.932	4.932	(1.006)	555837	40.0000	47.4
32 Hexachlorobutadiene	225	4.980	4.980	(1.016)	352928	40.0000	41.0
33 4-Chloro-3-methylphenol	107	5.245	5.245	(1.070)	391753	40.0000	43.1
34 2-Methylnaphthalene	142	5.399	5.399	(1.101)	900153	40.0000	45.0
35 1-Methylnaphthalene	142	5.471	5.471	(1.116)	844693	40.0000	39.1
36 Hexachlorocyclopentadiene	237	5.505	5.505	(0.893)	181254	40.0000	39.6
205 2,3-Dichloroaniline	161	5.597	5.597	(0.908)	494154	40.0000	44.0
37 2,4,6-Trichlorophenol	196	5.587	5.587	(0.906)	330218	40.0000	42.4
38 2,4,5-Trichlorophenol	196	5.616	5.616	(0.911)	368445	40.0000	44.1
40 2-Chloronaphthalene	162	5.755	5.755	(0.934)	906463	40.0000	42.3
42 o-Nitroaniline	65	5.808	5.808	(0.942)	287375	40.0000	42.2
41 m-Nitroaniline	138	6.112	6.112	(0.991)	132031	40.0000	38.4
43 Dimethylphthalate	163	5.919	5.919	(0.960)	1078006	40.0000	42.2
44 2,6-Dinitrotoluene	165	5.977	5.977	(0.970)	281098	40.0000	46.2
50 2,4-Dinitrotoluene	165	6.276	6.276	(1.018)	364487	40.0000	45.8
45 Acenaphthylene	152	6.064	6.064	(0.984)	1371830	40.0000	43.5
47 Acenaphthene	154	6.189	6.189	(1.004)	849596	40.0000	41.3
48 2,4-Dinitrophenol	184	6.184	6.184	(1.003)	93607	40.0000	42.0
49 Dibenzofuran	168	6.314	6.314	(1.024)	1246000	40.0000	42.8
51 Diethylphthalate	149	6.430	6.430	(1.043)	1070389	40.0000	42.7
52 4-Nitrophenol	139	6.203	6.203	(1.006)	139386	40.0000	39.0
53 Fluorene	166	6.579	6.579	(1.067)	1043548	40.0000	41.7

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
54 4-Chlorophenylphenylether	204	6.550	6.550	(1.062)	619261	40.0000	42.4
55 2-Methyl-4,6-dinitrophenol	198	6.593	6.593	(0.898)	227338	40.0000	55.2
56 p-Nitroaniline	138	6.574	6.574	(1.066)	107798	40.0000	40.9
133 Diphenylamine	169	6.641	6.641	(0.904)	786838	40.0000	42.3
58 1,2-Diphenylhydrazine	77	6.675	6.675	(0.909)	1034789	40.0000	43.8
61 4-Bromophenylphenylether	248	6.945	6.945	(0.946)	377491	40.0000	42.3
63 Hexachlorobenzene	284	7.017	7.017	(0.955)	397753	40.0000	42.3
65 Pentachlorophenol	266	7.166	7.166	(0.976)	195510	40.0000	42.9
206 n-Octadecane	57	7.147	7.147	(0.973)	871112	40.0000	43.3
68 Phenanthrene	178	7.364	7.364	(1.003)	1431207	40.0000	40.9
69 Anthracene	178	7.407	7.407	(1.009)	1460442	40.0000	42.3
72 Di-n-butylphthalate	149	7.759	7.759	(1.056)	1772829	40.0000	44.6
76 Fluoranthene	202	8.414	8.414	(1.146)	1734295	40.0000	43.5
79 Pyrene	202	8.630	8.630	(0.884)	1786021	40.0000	42.7
85 Butylbenzylphthalate	149	9.150	9.150	(0.937)	802710	40.0000	44.8
89 Benzo(a)anthracene	228	9.752	9.752	(0.999)	1707017	40.0000	41.5
92 Chrysene	228	9.796	9.796	(1.003)	1569944	40.0000	41.7
93 bis(2-Ethylhexyl)phthalate	149	9.675	9.675	(0.991)	1120270	40.0000	45.6
94 Di-n-octylphthalate	149	10.354	10.354	(0.898)	1779108	40.0000	43.9
95 Benzo(b)fluoranthene	252	10.985	10.985	(0.953)	1632300	40.0000	41.7
96 Benzo(k)fluoranthene	252	11.019	11.019	(0.956)	1636049	40.0000	42.6
97 Benzo(a)pyrene	252	11.447	11.447	(0.993)	1477653	40.0000	42.6
99 Indeno(1,2,3-cd)pyrene	276	13.402	13.402	(1.162)	1407684	40.0000	40.4
100 Dibenzo(a,h)anthracene	278	13.412	13.412	(1.163)	1184313	40.0000	41.7
101 Benzo(ghi)perylene	276	13.975	13.975	(1.212)	1195053	40.0000	40.3
126 m-Dinitrobenzene	168	5.963	5.963	(0.967)	171847	40.0000	41.2
130 2,3,4,6-Tetrachlorophenol	232	6.396	6.396	(1.037)	313275	40.0000	40.4
143 Dinoseb	211	7.287	7.287	(0.992)	278552	40.0000	44.2
173 Carbazole	167	7.523	7.523	(1.024)	822880	40.0000	41.2
184 p-Benzoquinone	54	3.516	3.516	(0.872)	29647	40.0000	23.9
192 Methoxychlor	227	9.627	9.627	(0.986)	1133064	40.0000	46.5
211 p-Toluidine	106	4.306	4.306	(1.068)	317671	40.0000	43.3
210 m-Toluidine	106	4.330	4.330	(1.074)	485048	40.0000	41.1
26 Phthalic anhydride	104	5.433	5.433	(1.108)	202802	40.0000	43.9
179 Dibenzo(a,e)pyrene	302	18.343	18.343	(1.591)	415918	40.0000	23.7
214 1,4-Dinitrobenzene	75	5.900	5.900	(0.957)	189318	40.0000	41.5
215 2-Ethoxyethanol	59	2.341	2.341	(0.581)	316229	40.0000	46.8
216 Methylenebis(2-chloroaniline)	231	9.690	9.690	(0.992)	221148	40.0000	42.0(Q)
M 225 Trichlorophenols	196				698663	80.0000	86.5
M 226 Tetrachlorophenols	232				313275	40.0000	40.4
M 227 Benzo(b,k)fluoranthene	252				3268349	80.0000	84.3

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s062509.b/s5f2533.d
Date : 26-JUN-2009 09:03
Client ID: MEGAICV
Sample Info: WBN090602-09,1140 PPM11|SVM11|MEGAICV
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RHB
Column diameter: 0.20

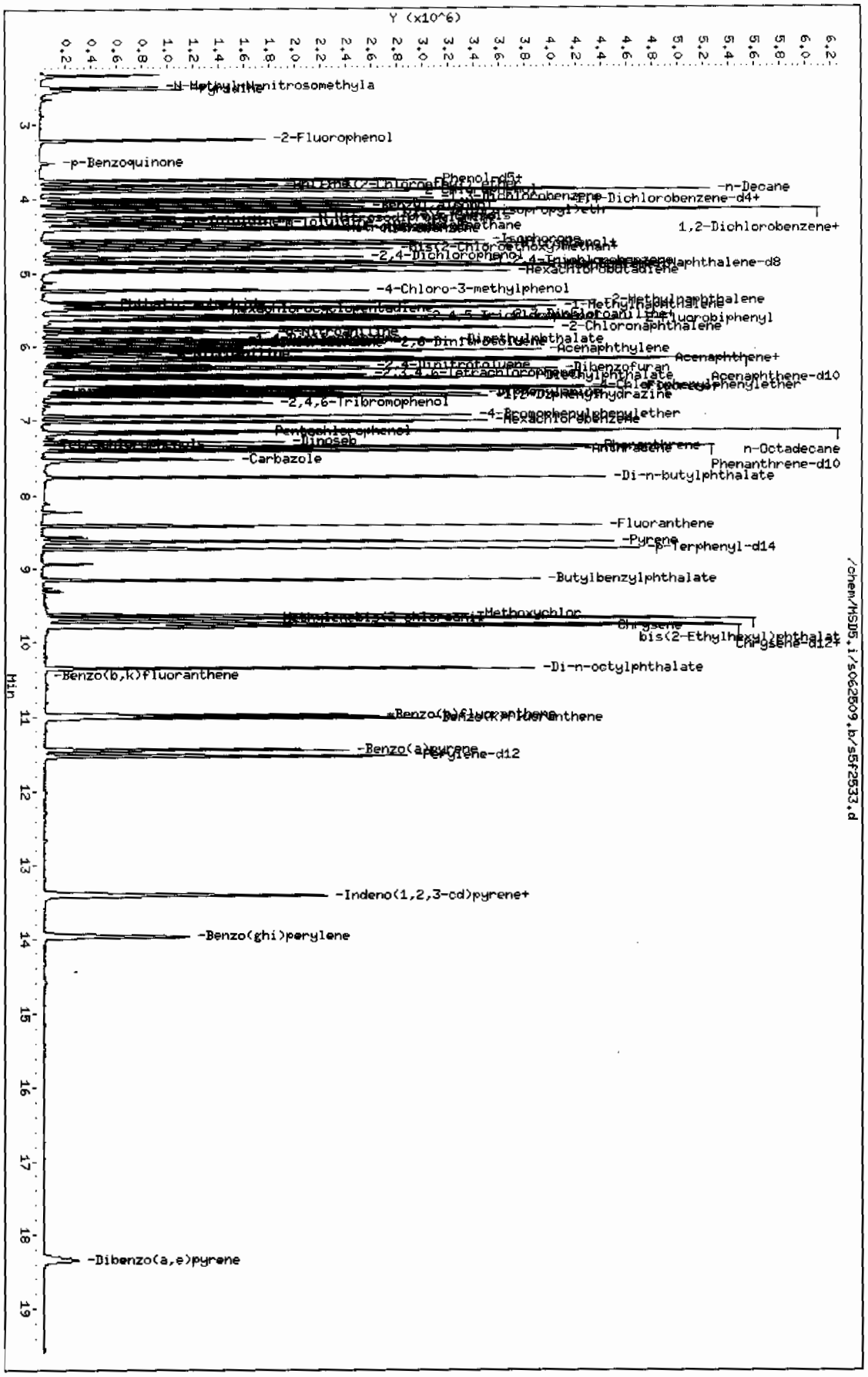

Page 1

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 02-JUL-2009 08:28
Lab File ID: s5g0202.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090617-02.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 3 2-Fluorophenol	0.87827	0.91455	0.91455	0.000	4.13021	60.00000	Averaged
$ 5 Phenol-d5	1.15801	1.19307	1.19307	0.000	3.02724	60.00000	Averaged
$ 20 Nitrobenzene-d5	0.29640	0.31852	0.31852	0.000	7.46346	60.00000	Averaged
$ 39 2-Fluorobiphenyl	1.03449	1.12626	1.12626	0.000	8.87065	60.00000	Averaged
$ 60 2,4,6-Tribromophenol	0.16321	0.17608	0.17608	0.000	7.88782	60.00000	Averaged
$ 81 p-Terphenyl-d14	0.61216	0.68374	0.68374	0.000	11.69373	60.00000	Averaged
1 N-Methyl-N-nitrosomethylami	0.46728	0.49045	0.49045	0.000	4.95646	60.00000	Averaged
2 Pyridine	0.69143	0.64967	0.64967	0.000	-6.04019	60.00000	Averaged
4 Aniline	0.50220	0.49298	0.49298	0.000	-1.83457	60.00000	Averaged
6 Phenol	1.14936	1.17190	1.17190	0.001	1.96141	20.00000	Averaged ccc
7 bis(2-Chloroethyl) ether	0.88583	0.87617	0.87617	0.000	-1.09030	60.00000	Averaged
8 2-Chlorophenol	0.96070	0.99095	0.99095	0.000	3.14820	60.00000	Averaged
203 n-Decane	1.55838	1.59544	1.59544	0.000	2.37808	60.00000	Averaged
9 1,3-Dichlorobenzene	1.14971	1.18241	1.18241	0.000	2.84402	60.00000	Averaged
11 1,4-Dichlorobenzene	1.14381	1.15978	1.15978	0.001	1.39650	20.00000	Averaged ccc
13 1,2-Dichlorobenzene	1.06271	1.08426	1.08426	0.000	2.02788	60.00000	Averaged
14 bis(2-Chloroisopropyl)ether	2.06168	2.04925	2.04925	0.000	-0.60259	60.00000	Averaged
12 Benzyl alcohol	0.60629	0.60382	0.60382	0.000	-0.40755	60.00000	Averaged
15 o-Cresol	0.71463	0.72661	0.72661	0.000	1.67607	60.00000	Averaged
18 m,p-Cresols	0.95569	0.95381	0.95381	0.000	-0.19595	60.00000	Averaged
17 N-Nitrosodipropylamine	0.61897	0.65552	0.65552	0.050	5.90515	60.00000	Averaged spcc
19 Hexachloroethane	0.42421	0.40661	0.40661	0.000	-4.14944	60.00000	Averaged
21 Nitrobenzene	0.27643	0.30002	0.30002	0.000	8.53136	60.00000	Averaged
22 Isophorone	0.51164	0.54579	0.54579	0.000	6.67438	60.00000	Averaged
23 2-Nitrophenol	0.12977	0.13468	0.13468	0.001	3.78241	20.00000	Averaged ccc
24 2,4-Dimethylphenol	0.22398	0.24756	0.24756	0.000	10.52781	60.00000	Averaged
25 bis(2-Chloroethoxy)methane	0.29234	0.31023	0.31023	0.000	6.11804	60.00000	Averaged
26 2,4-Dichlorophenol	0.22262	0.24809	0.24809	0.001	11.43966	20.00000	Averaged ccc
27 Benzoic acid	33.62691	40.00000	0.07677	0.000	-15.93273	60.00000	Linear
28 1,2,4-Trichlorobenzene	0.27693	0.30374	0.30374	0.000	9.68328	60.00000	Averaged
30 Naphthalene	0.77927	0.76435	0.76435	0.000	-1.91374	60.00000	Averaged
204 alpha-Terpineol	0.25452	0.27441	0.27441	0.000	7.81454	60.00000	Averaged
31 4-Chloroaniline	46.57437	40.00000	0.31905	0.000	16.43593	60.00000	Linear
32 Hexachlorobutadiene	0.20215	0.22297	0.22297	0.001	10.30245	20.00000	Averaged ccc
33 4-Chloro-3-methylphenol	0.21319	0.23121	0.23121	0.001	8.45048	20.00000	Averaged ccc
34 2-Methylnaphthalene	0.46942	0.48669	0.48669	0.000	3.67974	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5g0202.d
Analysis Type: WATER
Lab Sample ID: WBN090617-02.4
Method: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m

Injection Date: 02-JUL-2009 08:28
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35	1-Methylnaphthalene	0.50729	0.50449	0.50449	0.000	-0.55330	60.00000	Averaged	
36	Hexachlorocyclopentadiene	38.72152	40.00000	0.17560	0.050	-3.19621	60.00000	Linear	spcc
205	2,3-Dichloroaniline	0.44656	0.48407	0.48407	0.000	8.39844	60.00000	Averaged	
37	2,4,6-Trichlorophenol	0.30953	0.35290	0.35290	0.001	14.01266	20.00000	Averaged	ccc
38	2,4,5-Trichlorophenol	0.33218	0.37974	0.37974	0.000	14.31665	60.00000	Averaged	
40	2-Chloronaphthalene	0.85120	0.92298	0.92298	0.000	8.43259	60.00000	Averaged	
42	o-Nitroaniline	0.27065	0.28539	0.28539	0.000	5.44614	60.00000	Averaged	
41	m-Nitroaniline	33.65545	40.00000	0.10758	0.000	-15.86138	60.00000	Linear	
43	Dimethylphthalate	1.01609	1.07363	1.07363	0.000	5.66286	60.00000	Averaged	
44	2,6-Dinitrotoluene	0.24192	0.25227	0.25227	0.000	4.27525	60.00000	Averaged	
50	2,4-Dinitrotoluene	0.31653	0.32558	0.32558	0.000	2.86022	60.00000	Averaged	
45	Acenaphthylene	1.25413	1.32237	1.32237	0.000	5.44077	60.00000	Averaged	
47	Acenaphthene	0.81724	0.85936	0.85936	0.001	5.15397	20.00000	Averaged	ccc
48	2,4-Dinitrophenol	36.93448	40.00000	0.07708	0.050	-7.66380	60.00000	Linear	spcc
49	Dibenzofuran	1.15749	1.24684	1.24684	0.000	7.71900	60.00000	Averaged	
51	Diethylphthalate	0.99523	1.06119	1.06119	0.000	6.62808	60.00000	Averaged	
52	4-Nitrophenol	0.14183	0.15988	0.15988	0.050	12.72058	60.00000	Averaged	spcc
53	Fluorene	0.99470	1.05713	1.05713	0.000	6.27573	60.00000	Averaged	
54	4-Chlorophenylphenylether	0.57998	0.62266	0.62266	0.000	7.35815	60.00000	Averaged	
55	2-Methyl-4,6-dinitrophenol	37.05093	40.00000	0.07643	0.000	-7.37266	60.00000	Linear	
56	p-Nitroaniline	0.10468	0.10120	0.10120	0.000	-3.31661	60.00000	Averaged	
133	Diphenylamine	0.39819	0.42106	0.42106	0.001	5.74319	20.00000	Averaged	ccc
58	1,2-Diphenylhydrazine	0.50554	0.54365	0.54365	0.000	7.53809	60.00000	Averaged	
61	4-Bromophenylphenylether	0.19119	0.20515	0.20515	0.000	7.30146	60.00000	Averaged	
63	Hexachlorobenzene	0.20135	0.21403	0.21403	0.000	6.29732	60.00000	Averaged	
65	Pentachlorophenol	42.98817	40.00000	0.10485	0.001	7.47044	20.00000	Linear	ccc
206	n-Octadecane	0.43069	0.46344	0.46344	0.000	7.60505	60.00000	Averaged	
68	Phenanthrene	0.74933	0.78839	0.78839	0.000	5.21299	60.00000	Averaged	
69	Anthracene	0.73960	0.79218	0.79218	0.000	7.11019	60.00000	Averaged	
72	Di-n-butylphthalate	0.85193	0.92560	0.92560	0.000	8.64712	60.00000	Averaged	
76	Fluoranthene	0.85361	0.90559	0.90559	0.001	6.09013	20.00000	Averaged	ccc
79	Pyrene	0.87262	0.96471	0.96471	0.000	10.55433	60.00000	Averaged	
85	Butylbenzylphthalate	0.37401	0.41917	0.41917	0.000	12.07374	60.00000	Averaged	
89	Benzo(a)anthracene	0.85828	0.90665	0.90665	0.000	5.63657	60.00000	Averaged	
92	Chrysene	0.78622	0.83152	0.83152	0.000	5.76147	60.00000	Averaged	
93	bis(2-Ethylhexyl)phthalate	0.51325	0.58830	0.58830	0.000	14.62216	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5g0202.d
Analysis Type: WATER
Lab Sample ID: WBN090617-02.4
Method: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m

Injection Date: 02-JUL-2009 08:28
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	0.91435	1.05977	1.05977	0.001	15.90455	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.88340	0.96440	0.96440	0.000	9.16833	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.86774	0.93185	0.93185	0.000	7.38763	60.00000	Averaged	
	97 Benzo(a)pyrene	0.78201	0.85653	0.85653	0.001	9.52927	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78583	0.84972	0.84972	0.000	8.13092	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	0.64056	0.69665	0.69665	0.000	8.75523	60.00000	Averaged	
	101 Benzo(ghi)perylene	0.66994	0.70919	0.70919	0.000	5.85896	60.00000	Averaged	
	126 m-Dinitrobenzene	0.16554	0.16851	0.16851	0.000	1.79803	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30843	0.33710	0.33710	0.000	9.29363	60.00000	Averaged	
	143 Dinoseb	37.41077	40.00000	0.12193	0.000	-6.47307	60.00000	Linear	
	173 Carbazole	25.75765	40.00000	0.24936	0.000	-35.60587	60.00000	Linear	
	184 p-Benzoquinone	24.11104	40.00000	0.06644	0.000	-39.72240	60.00000	Linear	
	192 Methoxychlor	0.50819	0.55586	0.55586	0.000	9.37937	60.00000	Averaged	
	211 p-Toluidine	40.58611	40.00000	0.65218	0.000	1.46527	60.00000	Linear	
	210 m-Toluidine	33.27353	40.00000	0.81254	0.000	-16.81617	60.00000	Linear	
	26 Phthalic anhydride	18.45465	40.00000	0.03842	0.000	-53.86339	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	0.39632	0.41248	0.41248	0.000	4.07662	60.00000	Averaged	
	214 1,4-Dinitrobenzene	0.18147	0.18812	0.18812	0.000	3.66167	60.00000	Averaged	
	215 2-Ethoxyethanol	0.59885	0.64112	0.64112	0.000	7.05842	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.10978	0.11156	0.11156	0.000	1.62222	60.00000	Averaged	
M	225 Trichlorophenols	0.32085	0.36632	0.36632	0.000	14.16991	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30843	0.33710	0.33710	0.000	9.29363	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.87557	0.94812	0.94812	0.000	8.28592	60.00000	Averaged	

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0202.d
Lab Smp Id: WBN090617-02.4 Client Smp ID: MEGACVS
Inj Date : 02-JUL-2009 08:28
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090617-02.4|40 PPM|1|SVM|1|MEGACVS
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)	
* 10 1,4-Dichlorobenzene-d4	152	4.017	4.017	(1.000)	505671	40.0000		
* 29 Naphthalene-d8	136	4.889	4.889	(1.000)	1799104	40.0000		
* 46 Acenaphthene-d10	164	6.145	6.145	(1.000)	1045429	40.0000		
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	1951994	40.0000		
* 91 Chrysene-d12	240	9.747	9.747	(1.000)	1933079	40.0000		(H)
* 98 Perylene-d12	264	11.495	11.495	(1.000)	1746260	40.0000		(H)
$ 3 2-Fluorophenol	112	3.194	3.194	(0.795)	462459	40.0000	41.6	
$ 5 Phenol-d5	99	3.728	3.728	(0.928)	603301	40.0000	41.2	
$ 20 Nitrobenzene-d5	82	4.383	4.383	(0.897)	573058	40.0000	43.0	
$ 39 2-Fluorobiphenyl	172	5.630	5.630	(0.916)	1177421	40.0000	43.5	
$ 60 2,4,6-Tribromophenol	329	6.747	6.747	(1.098)	184080	40.0000	43.2	
$ 81 p-Terphenyl-d14	244	8.702	8.702	(0.890)	1321727	40.0000	44.7	
1 N-Methyl-N-nitrosomethylamine	74	2.495	2.495	(0.621)	248004	40.0000	42.0	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
2 Pyridine	79	2.529	2.529	(0.630)	328519	40.0000	37.6
4 Aniline	66	3.800	3.800	(0.946)	249288	40.0000	39.3
6 Phenol	94	3.738	3.738	(0.930)	592598	40.0000	40.8(Q)
7 bis(2-Chloroethyl) ether	63	3.815	3.815	(0.950)	443055	40.0000	39.6
8 2-Chlorophenol	128	3.882	3.882	(0.966)	501093	40.0000	41.2
203 n-Decane	43	3.863	3.863	(0.962)	806766	40.0000	41.0
9 1,3-Dichlorobenzene	146	3.983	3.983	(0.992)	597910	40.0000	41.1
11 1,4-Dichlorobenzene	146	4.027	4.027	(1.002)	586467	40.0000	40.6
13 1,2-Dichlorobenzene	146	4.133	4.133	(1.029)	548279	40.0000	40.8
14 bis(2-Chloroisopropyl)ether	45	4.157	4.157	(1.035)	1036248	40.0000	39.8
12 Benzyl alcohol	108	4.080	4.080	(1.016)	305336	40.0000	39.8
15 o-Cresol	107	4.133	4.133	(1.029)	367427	40.0000	40.7
18 m,p-Cresols	107	4.234	4.234	(1.054)	482316	40.0000	39.9
17 N-Nitrosodipropylamine	70	4.253	4.253	(1.059)	331477	40.0000	42.4
19 Hexachloroethane	117	4.364	4.364	(1.086)	205609	40.0000	38.3
21 Nitrobenzene	77	4.397	4.397	(0.900)	539761	40.0000	43.4
22 Isophorone	82	4.547	4.547	(0.930)	981934	40.0000	42.7
23 2-Nitrophenol	139	4.609	4.609	(0.943)	242302	40.0000	41.5
24 2,4-Dimethylphenol	122	4.600	4.600	(0.941)	445394	40.0000	44.2
25 bis(2-Chloroethoxy)methane	93	4.667	4.667	(0.955)	558132	40.0000	42.4
26 2,4-Dichlorophenol	162	4.773	4.773	(0.976)	446340	40.0000	44.6
27 Benzoic acid	105	4.643	4.643	(0.950)	138116	40.0000	33.6
28 1,2,4-Trichlorobenzene	180	4.836	4.836	(0.989)	546462	40.0000	43.9
30 Naphthalene	128	4.903	4.903	(1.003)	1375149	40.0000	39.2(Q)
204 alpha-Terpineol	59	4.874	4.874	(0.997)	493701	40.0000	43.1
31 4-Chloroaniline	127	4.918	4.918	(1.006)	574008	40.0000	46.6
32 Hexachlorobutadiene	225	4.966	4.966	(1.016)	401148	40.0000	44.1
33 4-Chloro-3-methylphenol	107	5.226	5.226	(1.069)	415968	40.0000	43.4
34 2-Methylnaphthalene	142	5.385	5.385	(1.101)	875604	40.0000	41.5
35 1-Methylnaphthalene	142	5.457	5.457	(1.116)	907623	40.0000	39.8
36 Hexachlorocyclopentadiene	237	5.486	5.486	(0.893)	183581	40.0000	38.7(H)
205 2,3-Dichloroaniline	161	5.582	5.582	(0.908)	506057	40.0000	43.4
37 2,4,6-Trichlorophenol	196	5.572	5.572	(0.907)	368932	40.0000	45.6(H)
38 2,4,5-Trichlorophenol	196	5.601	5.601	(0.911)	396987	40.0000	45.7
40 2-Chloronaphthalene	162	5.736	5.736	(0.933)	964908	40.0000	43.4(H)
42 o-Nitroaniline	65	5.794	5.794	(0.943)	298355	40.0000	42.2
41 m-Nitroaniline	138	6.092	6.092	(0.991)	112468	40.0000	33.6
43 Dimethylphthalate	163	5.900	5.900	(0.960)	1122399	40.0000	42.3(H)
44 2,6-Dinitrotoluene	165	5.958	5.958	(0.969)	263726	40.0000	41.7
50 2,4-Dinitrotoluene	165	6.261	6.261	(1.019)	340371	40.0000	41.1
45 Acenaphthylene	152	6.044	6.044	(0.984)	1382442	40.0000	42.2
47 Acenaphthene	154	6.174	6.174	(1.005)	898405	40.0000	42.1
48 2,4-Dinitrophenol	184	6.165	6.165	(1.003)	80584	40.0000	36.9
49 Dibenzofuran	168	6.295	6.295	(1.024)	1303480	40.0000	43.1
51 Diethylphthalate	149	6.415	6.415	(1.044)	1109403	40.0000	42.6
52 4-Nitrophenol	139	6.184	6.184	(1.006)	167140	40.0000	45.1
53 Fluorene	166	6.560	6.560	(1.067)	1105150	40.0000	42.5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
54 4-Chlorophenylphenylether	204	6.535	6.535	(1.063)	650948	40.0000	42.9
55 2-Methyl-4,6-dinitrophenol	198	6.574	6.574	(0.897)	149187	40.0000	37.0
56 p-Nitroaniline	138	6.560	6.560	(1.067)	105801	40.0000	38.7
133 Diphenylamine	169	6.622	6.622	(0.904)	821900	40.0000	42.3
58 1,2-Diphenylhydrazine	77	6.661	6.661	(0.909)	1061199	40.0000	43.0
61 4-Bromophenylphenylether	248	6.926	6.926	(0.945)	400451	40.0000	42.9
63 Hexachlorobenzene	284	6.998	6.998	(0.955)	417791	40.0000	42.5
65 Pentachlorophenol	266	7.152	7.152	(0.976)	204665	40.0000	43.0
206 n-Octadecane	57	7.128	7.128	(0.973)	904639	40.0000	43.0
68 Phenanthrene	178	7.344	7.344	(1.003)	1538942	40.0000	42.1
69 Anthracene	178	7.388	7.388	(1.009)	1546338	40.0000	42.8
72 Di-n-butylphthalate	149	7.739	7.739	(1.057)	1806760	40.0000	43.4
76 Fluoranthene	202	8.394	8.394	(1.146)	1767712	40.0000	42.4
79 Pyrene	202	8.611	8.611	(0.880)	1864868	40.0000	44.2
85 Butylbenzylphthalate	149	9.131	9.131	(0.934)	810280	40.0000	44.8(H)
89 Benzo(a)anthracene	228	9.733	9.733	(0.995)	1752631	40.0000	42.2(H)
92 Chrysene	228	9.771	9.771	(0.999)	1607386	40.0000	42.3
93 bis(2-Ethylhexyl)phthalate	149	9.656	9.656	(0.987)	1137221	40.0000	45.8
94 Di-n-octylphthalate	149	10.330	10.330	(0.894)	1850639	40.0000	46.4
95 Benzo(b)fluoranthene	252	10.951	10.951	(0.948)	1684085	40.0000	43.7(H)
96 Benzo(k)fluoranthene	252	10.990	10.990	(0.951)	1627253	40.0000	43.0
97 Benzo(a)pyrene	252	11.413	11.413	(0.988)	1495722	40.0000	43.8(H)
99 Indeno(1,2,3-cd)pyrene	276	13.354	13.354	(1.156)	1483834	40.0000	43.2(H)
100 Dibenzo(a,h)anthracene	278	13.368	13.368	(1.157)	1216526	40.0000	43.5
101 Benzo(ghi)perylene	276	13.922	13.922	(1.205)	1238435	40.0000	42.3
126 m-Dinitrobenzene	168	5.943	5.943	(0.967)	176169	40.0000	40.7
130 2,3,4,6-Tetrachlorophenol	232	6.377	6.377	(1.038)	352409	40.0000	43.7
143 Dinoseb	211	7.267	7.267	(0.992)	238007	40.0000	37.4
173 Carbazole	167	7.503	7.503	(1.024)	486741	40.0000	25.8
184 p-Benzoquinone	54	3.502	3.502	(0.872)	33597	40.0000	24.1
192 Methoxychlor	227	9.608	9.608	(0.982)	1074518	40.0000	43.8
211 p-Toluidine	106	4.292	4.292	(1.068)	329787	40.0000	40.6(H)
210 m-Toluidine	106	4.316	4.316	(1.074)	410879	40.0000	33.3
26 Phthalic anhydride	104	5.418	5.418	(1.108)	69115	40.0000	18.4
179 Dibenzo(a,e)pyrene	302	18.270	18.270	(1.581)	720295	40.0000	41.6(H)
214 1,4-Dinitrobenzene	75	5.885	5.885	(0.958)	196666	40.0000	41.5
215 2-Ethoxyethanol	59	2.337	2.337	(0.582)	324198	40.0000	42.8
216 Methylenebis(2-chloroaniline)	231	9.670	9.670	(0.989)	215653	40.0000	40.6(Q)
M 225 Trichlorophenols	196				765919	80.0000	91.3
M 226 Tetrachlorophenols	232				352409	40.0000	43.7
M 227 Benzo(b,k)fluoranthene	252				3311338	80.0000	86.6

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD5.i/s070209.b/s5g0202.d
Date : 02-JUL-2009 08:28
Client ID: MEGACVS
Sample Info: IWBN090617-02,4140 PPM11SVM11MEGACVS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

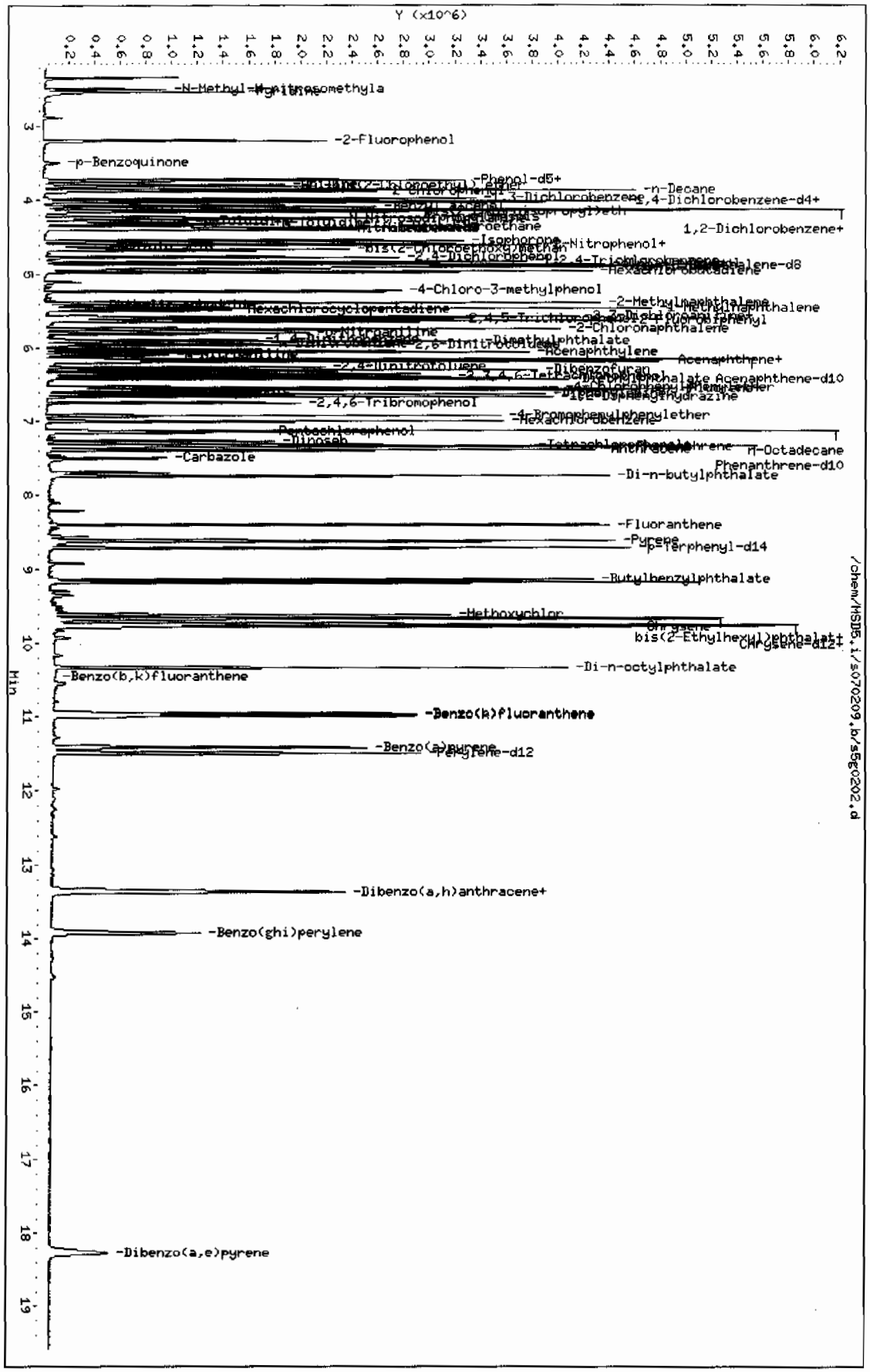

Page 1

Data File: /chem/MSD5.i/s070209.b/s5g0203.d
Report Date: 02-Jul-2009 09:11

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5g0203.d
Analysis Type: WATER
Lab Sample ID: WBN090619-01.4
Method: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m

Injection Date: 02-JUL-2009 08:56
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.79683	0.84473	0.84473	0.000	6.01145	60.00000	Averaged
16 Acetophenone	1.08491	1.07533	1.07533	0.000	-0.88332	60.00000	Averaged
189 Caprolactam	0.07939	0.07994	0.07994	0.000	0.69320	60.00000	Averaged
208 1,1'-Biphenyl	1.04481	1.12682	1.12682	0.000	7.84960	60.00000	Averaged
207 Atrazine	0.03020	0.04609	0.04609	0.000	52.61696	60.00000	Averaged
77 Benzidine	0.16686	0.07663	0.07663	0.000	-54.07450	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28677	0.28904	0.28904	0.000	0.78891	60.00000	Averaged
102 1,4-Dioxane	0.30814	0.31776	0.31776	0.000	3.12045	60.00000	Averaged
103 Methyl methacrylate	0.15418	0.16932	0.16932	0.000	9.81928	60.00000	Averaged
104 Ethyl methacrylate	0.72240	0.73162	0.73162	0.000	1.27706	60.00000	Averaged
105 2-Picoline	1.10986	1.11463	1.11463	0.000	0.42975	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.41554	0.41617	0.41617	0.000	0.15249	60.00000	Averaged
107 Methyl methanesulfonate	0.47990	0.50274	0.50274	0.000	4.76055	60.00000	Averaged
108 N-Nitrosodiethylamine	0.41207	0.42101	0.42101	0.000	2.17024	60.00000	Averaged
109 Ethyl Methanesulfonate	0.57718	0.57142	0.57142	0.000	-0.99834	60.00000	Averaged
110 Pentachloroethane	0.32784	0.33533	0.33533	0.000	2.28682	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.41191	0.42597	0.42597	0.000	3.41234	60.00000	Averaged
113 N-Nitrosomorpholine	0.66462	0.69493	0.69493	0.000	4.56118	60.00000	Averaged
114 o-Toluidine	1.43933	1.41836	1.41836	0.000	-1.45706	60.00000	Averaged
115 N-Nitrosopiperidine	0.13311	0.13729	0.13729	0.000	3.13905	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.80774	0.88804	0.88804	0.000	9.94162	60.00000	Averaged
118 2,6-Dichlorophenol	0.23169	0.24105	0.24105	0.000	4.03756	60.00000	Averaged
119 Hexachloropropene	0.13807	0.12627	0.12627	0.000	-8.54910	60.00000	Averaged
120 p-Phenylenediamine	37.46553	40.00000	0.16876	0.000	-6.33618	60.00000	Linear
121 N-Nitrosodi-n-butylamine	0.17971	0.19023	0.19023	0.000	5.85351	60.00000	Averaged
122 Safrole	0.21426	0.22510	0.22510	0.000	5.06261	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.51018	0.55750	0.55750	0.000	9.27553	60.00000	Averaged
124 Isosafrole	0.33063	0.35618	0.35618	0.000	7.72513	60.00000	Averaged
125 1,4-Naphthoquinone	0.32039	0.36379	0.36379	0.000	13.54526	60.00000	Averaged
127 Pentachlorobenzene	0.47629	0.51027	0.51027	0.000	7.13471	60.00000	Averaged
128 1-Naphthylamine	0.71181	0.68958	0.68958	0.000	-3.12296	60.00000	Averaged
129 2-Naphthylamine	0.64134	0.78989	0.78989	0.000	23.16244	60.00000	Averaged
131 5-Nitro-o-toluidine	0.25602	0.25207	0.25207	0.000	-1.54656	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.10752	0.08814	0.08814	0.000	-18.02151	60.00000	Averaged
137 Phenacetin	0.22131	0.23209	0.23209	0.000	4.87359	60.00000	Averaged
138 Diallate	0.20650	0.21673	0.21673	0.000	4.95306	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5g0203.d
Analysis Type: WATER
Lab Sample ID: WBN090619-01.4
Method: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m

Injection Date: 02-JUL-2009 08:56
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20975	0.22205	0.22205	0.000	5.86712	60.00000	Averaged
213 Trans Diallate	0.24294	0.25497	0.25497	0.000	4.95306	60.00000	Averaged
140 4-Aminobiphenyl	0.36955	0.38429	0.38429	0.000	3.98808	60.00000	Averaged
141 Pentachloronitrobenzene	0.08929	0.09624	0.09624	0.000	7.78025	60.00000	Averaged
142 Pronamide	0.26058	0.27906	0.27906	0.000	7.09158	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01022	0.00973	0.00973	0.000	-4.81974	60.00000	Averaged
147 Methapyrilene	0.41717	0.45712	0.45712	0.000	9.57752	60.00000	Averaged
148 Isodrin	0.10436	0.11180	0.11180	0.000	7.12976	60.00000	Averaged
149 Aramite	0.05090	0.05625	0.05625	0.000	10.52015	60.00000	Averaged
150 Kepone	0.06725	0.07840	0.07840	0.000	16.58965	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.20208	0.22613	0.22613	0.000	11.89908	60.00000	Averaged
152 Chlorobenzilate	0.29951	0.33202	0.33202	0.000	10.85410	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.44059	0.33098	0.33098	0.000	-24.87874	60.00000	Averaged
155 2-Acetylaminofluorene	0.27578	0.29947	0.29947	0.000	8.59109	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.45468	0.48005	0.48005	0.000	5.57967	60.00000	Averaged
158 3-Methylcholanthrene	0.40918	0.42744	0.42744	0.000	4.46356	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0203.d
Lab Smp Id: WBN090619-01.4 Client Smp ID: AP12CVS
Inj Date : 02-JUL-2009 08:56
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090619-01.4|40 PPM|1|SVM|1|AP12CVS
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:11 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.013	(1.000)	527449	40.0000	
* 29 Naphthalene-d8	136	4.884	4.884	(1.000)	1741571	40.0000	
* 46 Acenaphthene-d10	164	6.143	6.143	(1.000)	1075782	40.0000	
* 67 Phenanthrene-d10	188	7.319	7.319	(1.000)	1980744	40.0000	
* 91 Chrysene-d12	240	9.736	9.736	(1.000)	1989161	40.0000	
* 98 Perylene-d12	264	11.483	11.483	(1.000)	1781279	40.0000	
209 Benzaldehyde	77	3.737	3.737	(0.931)	445550	40.0000	42.4
16 Acetophenone	105	4.266	4.266	(1.063)	567180	40.0000	39.6(H)
189 Caprolactam	113	5.154	5.154	(1.055)	139220	40.0000	40.3
208 1,1'-Biphenyl	154	5.701	5.701	(0.928)	1212211	40.0000	43.1(H)
207 Atrazine	173	7.013	7.013	(0.958)	91290	40.0000	61.0
77 Benzidine	184	8.478	8.478	(0.871)	152436	40.0000	18.4
90 3,3'-Dichlorobenzidine	252	9.666	9.666	(0.993)	574939	40.0000	40.3

Compounds	QUANT SIC MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
102 1,4-Dioxane	88	2.337	2.337	(0.582)	167601	40.0000	41.2
103 Methyl methacrylate	100	2.325	2.325	(0.579)	89306	40.0000	43.9
104 Ethyl methacrylate	69	2.702	2.702	(0.673)	385893	40.0000	40.5
105 2-Picoline	93	2.902	2.902	(0.723)	587909	40.0000	40.2
106 N-Nitrosomethylethylamine	88	2.943	2.943	(0.733)	219508	40.0000	40.1
107 Methyl methanesulfonate	80	3.102	3.102	(0.773)	265172	40.0000	41.9
108 N-Nitrosodiethylamine	102	3.337	3.337	(0.831)	222061	40.0000	40.9
109 Ethyl Methanesulfonate	79	3.496	3.496	(0.871)	301394	40.0000	39.6
110 Pentachloroethane	167	3.837	3.837	(0.956)	176871	40.0000	40.9
111 N-Nitrosopyrrolidine	100	4.254	4.254	(1.060)	224675	40.0000	41.4(Q)
113 N-Nitrosomorpholine	56	4.272	4.272	(1.064)	366540	40.0000	41.8
114 o-Toluidine	106	4.290	4.290	(1.069)	748114	40.0000	39.4
115 N-Nitrosopiperidine	114	4.490	4.490	(0.919)	239096	40.0000	41.2
116 a,a-Dimethylphenethylamine	58	4.737	4.737	(0.970)	1546580	40.0000	44.0
118 2,6-Dichlorophenol	162	4.925	4.925	(1.008)	419799	40.0000	41.6
119 Hexachloropropene	213	4.948	4.948	(1.013)	219903	40.0000	36.6
120 p-Phenylenediamine	108	5.160	5.160	(1.057)	293900	40.0000	37.5
121 N-Nitrosodi-n-butylamine	84	5.125	5.125	(1.049)	331304	40.0000	42.3(T)
122 Safrole	162	5.290	5.290	(1.083)	392036	40.0000	42.0
123 1,2,4,5-Tetrachlorobenzene	216	5.495	5.495	(0.895)	599748	40.0000	43.7
124 Isosafrole	162	5.660	5.660	(0.921)	383168	40.0000	43.1
125 1,4-Naphthoquinone	158	5.854	5.854	(0.953)	391362	40.0000	45.4
127 Pentachlorobenzene	250	6.260	6.260	(1.019)	548943	40.0000	42.8
128 1-Naphthylamine	143	6.348	6.348	(1.034)	741834	40.0000	38.8
129 2-Naphthylamine	143	6.407	6.407	(1.043)	849745	40.0000	49.3
131 5-Nitro-o-toluidine	152	6.542	6.542	(1.065)	271167	40.0000	39.4
136 1,3,5-Trinitrobenzene	75	6.801	6.801	(0.929)	174591	40.0000	32.8(H)
137 Phenacetin	108	6.837	6.837	(0.934)	459715	40.0000	41.9(Q)
138 Diallate	86	6.825	6.825	(0.932)	429282	40.0000	42.0
212 Cis Diallate	86	6.907	6.907	(0.944)	65974	6.00000	6.4(a)
213 Trans Diallate	86	6.825	6.825	(0.932)	429282	34.0000	35.7
140 4-Aminobiphenyl	169	7.137	7.137	(0.975)	761184	40.0000	41.6
141 Pentachloronitrobenzene	237	7.154	7.154	(0.977)	190629	40.0000	43.1(Q)
142 Pronamide	173	7.142	7.142	(0.976)	552740	40.0000	42.8(H)
146 4-Nitroquinoline-1-oxide	101	7.989	7.989	(1.092)	19267	40.0000	38.1
147 Methapyrilene	58	8.019	8.019	(1.096)	905446	40.0000	43.8
148 Isodrin	193	8.248	8.248	(1.127)	221451	40.0000	42.8(H)
149 Aramite	185	8.642	8.642	(1.181)	111417	40.0000	44.2
150 Kepone	272	9.236	9.236	(1.262)	155296	40.0000	46.6
151 p-(Dimethylamino)azobenzene	120	8.825	8.825	(0.906)	449809	40.0000	44.8(H)
152 Chlorobenzilate	251	8.854	8.854	(0.909)	660433	40.0000	44.3(H)
153 3,3'-Dimethylbenzidine	212	9.142	9.142	(0.939)	658373	40.0000	30.0
155 2-Acetylaminofluorene	181	9.389	9.389	(0.964)	595689	40.0000	43.4
157 7,12Dimethylbenz(a)anthracene	256	10.913	10.913	(0.950)	855098	40.0000	42.2(H)
158 3-Methylcholanthrene	268	11.907	11.907	(1.037)	761391	40.0000	41.8(QH)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD5.i/s070209.b/s5g0203.d
Date : 02-JUL-2009 08:56
Client ID: AP12CVS
Sample Info: IWBN090619-01,4140 PPM11ISVM11AP12CVS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

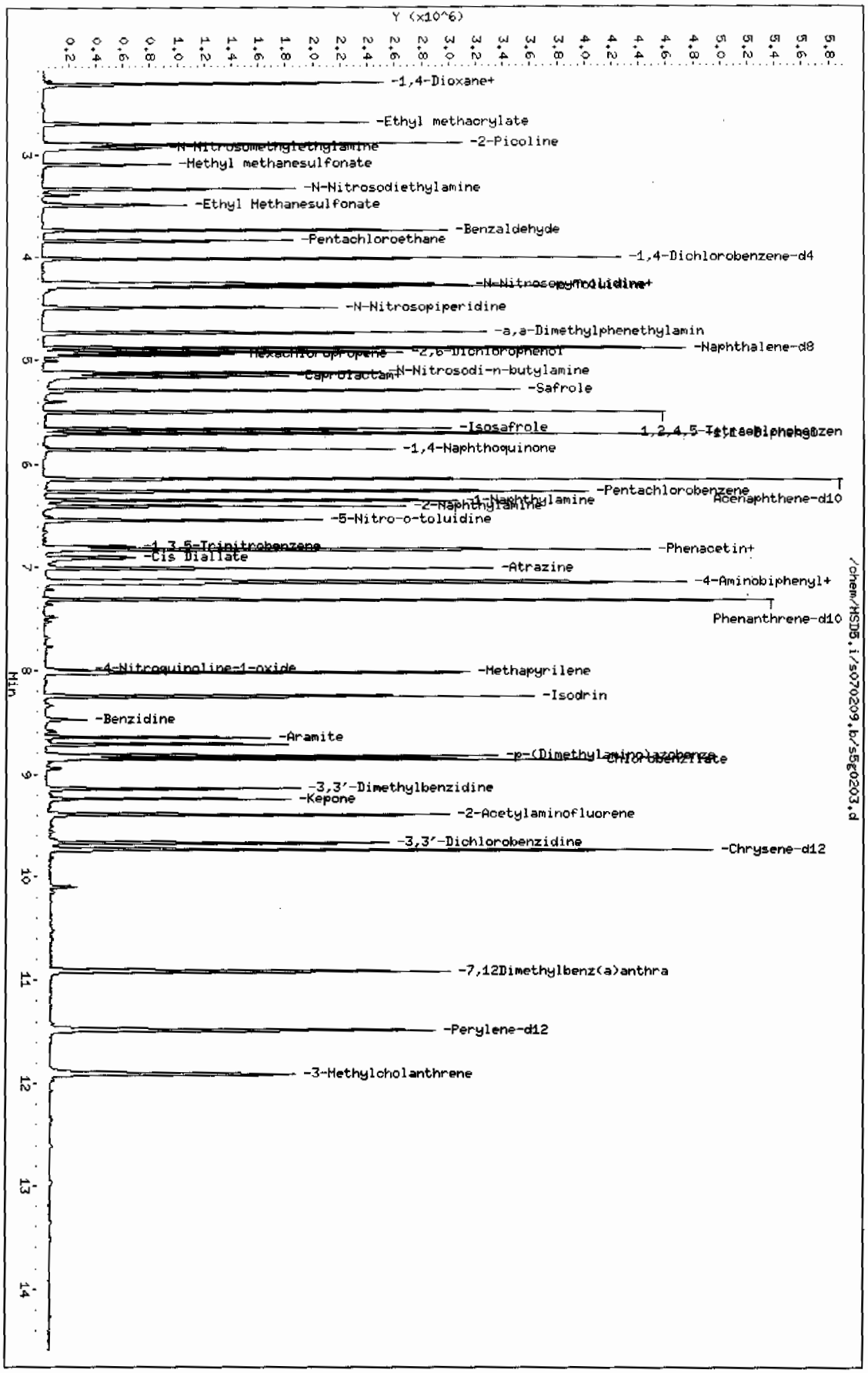

Page 1

QC Data

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

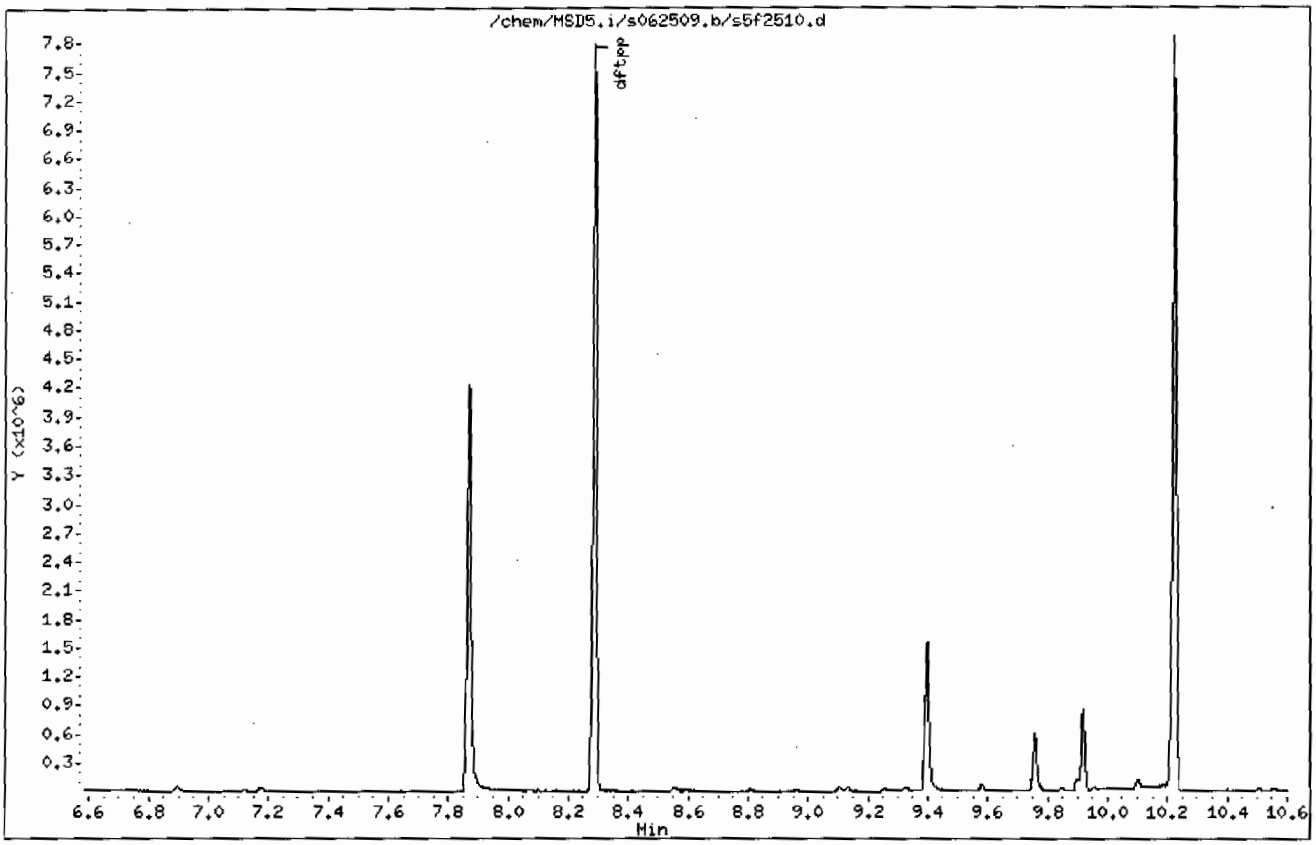

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

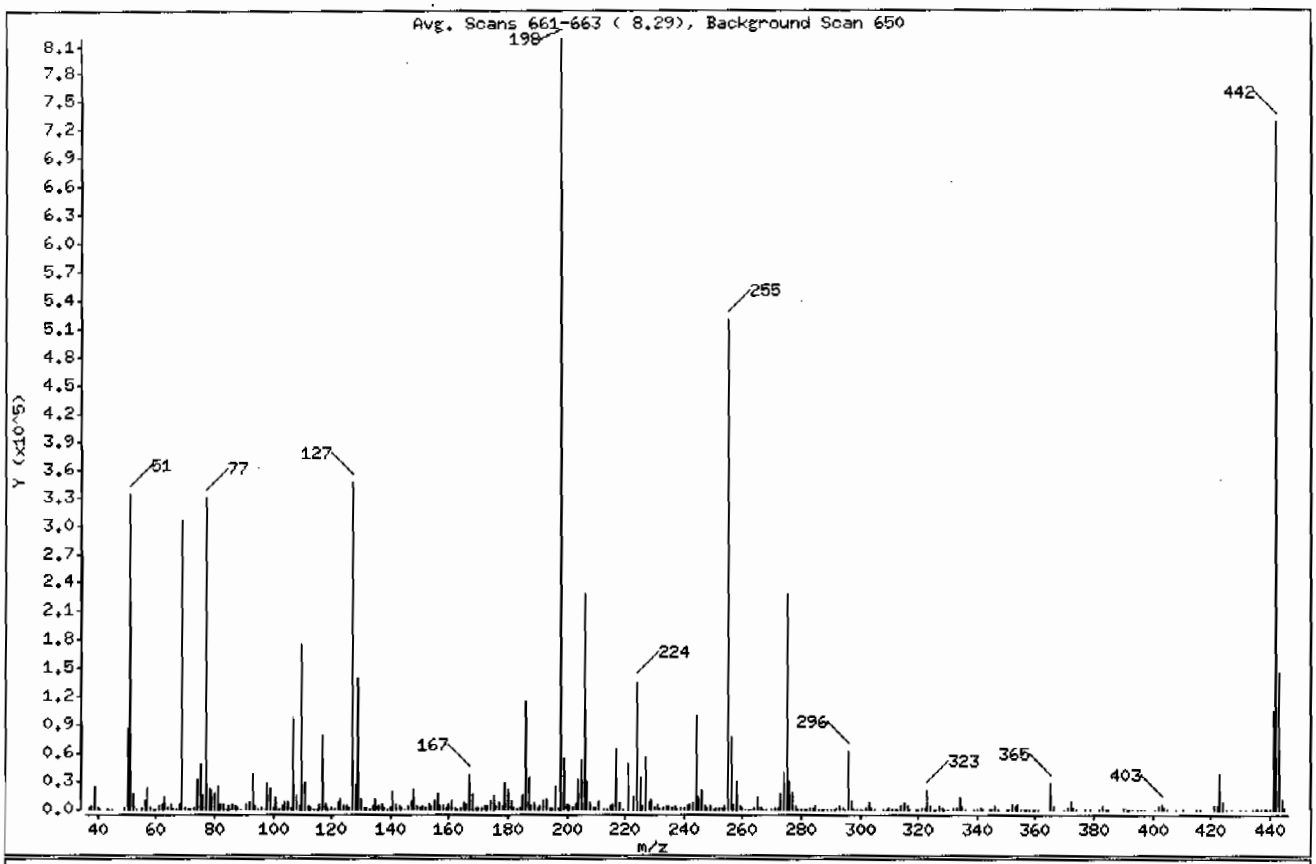

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.61
68	Less than 2.00% of mass 69	0.65 (1.74)
69	Mass 69 relative abundance	37.21
70	Less than 2.00% of mass 69	0.22 (0.59)
127	40.00 - 60.00% of mass 198	42.23
197	Less than 1.00% of mass 198	0.20
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 30.00% of mass 198	27.74
365	Greater than 1.00% of mass 198	3.39
441	Present, but less than mass 443	12.90
442	Greater than 40.00% of mass 198	88.92
443	17.00 - 23.00% of mass 442	17.81 (20.03)

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d

Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650

Location of Maximum: 198.00

Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1138	132.00	1206	224.00	135680	316.00	4346
38.00	4283	133.00	226	225.00	33672	317.00	724
39.00	24376	134.00	3902	226.00	3982	319.00	199
40.00	1095	135.00	10990	227.00	56520	320.00	278
41.00	377	136.00	4516	228.00	8381	321.00	1904
43.00	83	137.00	5167	229.00	11198	322.00	1049
44.00	53	138.00	1139	230.00	1508	323.00	20544
45.00	651	139.00	686	231.00	4747	324.00	3833
49.00	1842	140.00	2033	232.00	906	325.00	443
50.00	85864	141.00	18056	233.00	1144	326.00	441
51.00	332416	142.00	5920	234.00	3535	327.00	3582
52.00	16009	143.00	3898	235.00	4352	328.00	1881
53.00	680	144.00	1153	236.00	2596	329.00	411
55.00	1744	145.00	796	237.00	4493	330.00	67
56.00	10124	146.00	3833	238.00	149	332.00	1501
57.00	22896	147.00	8537	239.00	2028	333.00	2044
58.00	1220	148.00	20240	240.00	1558	334.00	12375
59.00	387	149.00	3724	241.00	3207	335.00	3249
60.00	170	150.00	975	242.00	6476	336.00	306
61.00	4094	151.00	2947	243.00	7666	339.00	390
62.00	4868	152.00	1120	244.00	100592	340.00	156
63.00	13455	153.00	5976	245.00	12760	341.00	2032
64.00	2223	154.00	4578	246.00	19808	342.00	558
65.00	6554	155.00	9784	247.00	4078	344.00	42
66.00	399	156.00	16170	248.00	1014	345.00	49
67.00	136	157.00	3266	249.00	3682	346.00	3814
68.00	5300	158.00	3502	250.00	900	347.00	894
69.00	304576	159.00	2575	251.00	988	350.00	113
70.00	1791	160.00	6522	252.00	1107	351.00	234
71.00	141	161.00	8738	253.00	2216	352.00	6066
72.00	193	162.00	2332	254.00	3272	353.00	3622
73.00	2630	163.00	733	255.00	519616	354.00	5630
74.00	32008	164.00	965	256.00	76312	355.00	936
75.00	49176	165.00	7434	257.00	5701	356.00	159
76.00	15003	166.00	5583	258.00	30480	357.00	134

Data File: /chem/HSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP | Instrument: HSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0 | Operator: rmb

Column phase: Phenomenex ZB-5MS | Column diameter: 0.20

Data File: s5f2510.d

Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650

Location of Maximum: 198.00

Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	329536	167.00	37360	259.00	4688	358.00	50
78.00	21848	168.00	16760	260.00	1050	359.00	514
79.00	21520	169.00	2806	261.00	818	360.00	90
80.00	17208	170.00	1585	262.00	281	361.00	66
81.00	24696	171.00	1950	263.00	357	365.00	27752
82.00	5995	172.00	3353	264.00	1198	366.00	3838
83.00	5784	173.00	4618	265.00	12254	370.00	420
84.00	731	174.00	9069	266.00	2093	371.00	1264
85.00	4077	175.00	15586	267.00	419	372.00	10324
86.00	6050	176.00	4443	268.00	101	373.00	2774
87.00	2825	177.00	6975	270.00	767	374.00	88
88.00	1193	178.00	2852	271.00	964	377.00	347
89.00	527	179.00	28744	272.00	1488	379.00	53
91.00	5217	180.00	20024	273.00	16303	382.00	46
92.00	6689	181.00	9747	274.00	39584	383.00	2936
93.00	36944	182.00	1277	275.00	227072	384.00	811
94.00	3121	183.00	633	276.00	30592	385.00	279
95.00	410	184.00	2511	277.00	19040	390.00	1527
96.00	1703	185.00	14675	278.00	3536	391.00	836
97.00	405	186.00	114752	279.00	847	392.00	606
98.00	27784	187.00	33024	280.00	137	393.00	78
99.00	23016	188.00	3270	281.00	305	395.00	178
100.00	1807	189.00	7565	282.00	573	396.00	60
101.00	12467	190.00	1456	283.00	2171	397.00	44
102.00	633	191.00	3531	284.00	1562	401.00	502
103.00	3694	192.00	9327	285.00	3393	402.00	3711
104.00	8033	193.00	10576	286.00	586	403.00	5371
105.00	8061	194.00	2381	287.00	70	404.00	2149
106.00	2335	195.00	1583	288.00	178	405.00	328
107.00	96840	196.00	24512	289.00	728	408.00	44
108.00	15060	197.00	1668	290.00	735	410.00	195
109.00	3168	198.00	818496	291.00	471	415.00	117
110.00	175616	199.00	55264	292.00	1011	416.00	64
111.00	27672	200.00	4870	293.00	4463	421.00	4380
112.00	3394	201.00	4357	294.00	950	422.00	4373

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d

Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650

Location of Maximum: 198.00

Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	1009	202.00	2129	295.00	722	423.00	37104
114.00	389	203.00	6231	296.00	62712	424.00	6752
115.00	427	204.00	31184	297.00	9287	425.00	610
116.00	5229	205.00	52096	298.00	618	427.00	44
117.00	79808	206.00	227136	299.00	244	430.00	41
118.00	5242	207.00	30208	300.00	51	432.00	68
119.00	641	208.00	7259	301.00	781	434.00	57
120.00	1537	209.00	2346	302.00	1183	435.00	42
121.00	459	210.00	2765	303.00	7108	436.00	46
122.00	6606	211.00	9606	304.00	2260	437.00	88
123.00	11016	213.00	938	305.00	253	438.00	260
124.00	4477	214.00	263	308.00	883	439.00	169
125.00	4654	215.00	2833	309.00	636	440.00	115
126.00	1781	216.00	5142	310.00	1042	441.00	105616
127.00	345664	217.00	63232	311.00	221	442.00	727808
128.00	25848	218.00	7687	312.00	209	443.00	145792
129.00	139648	219.00	590	313.00	595	444.00	12170
130.00	11462	221.00	48472	314.00	3436	445.00	968
131.00	2254	223.00	13920	315.00	7722		

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVHF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

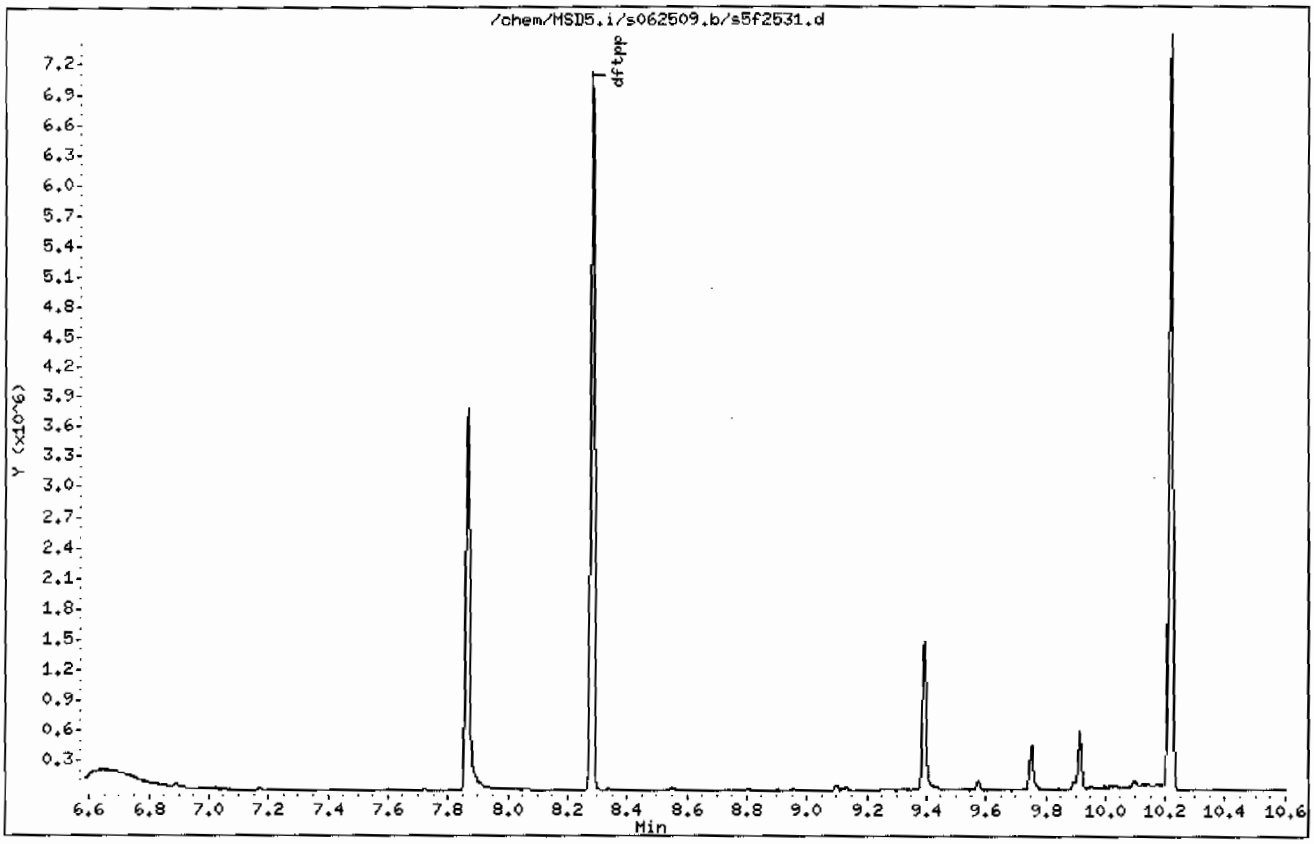

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

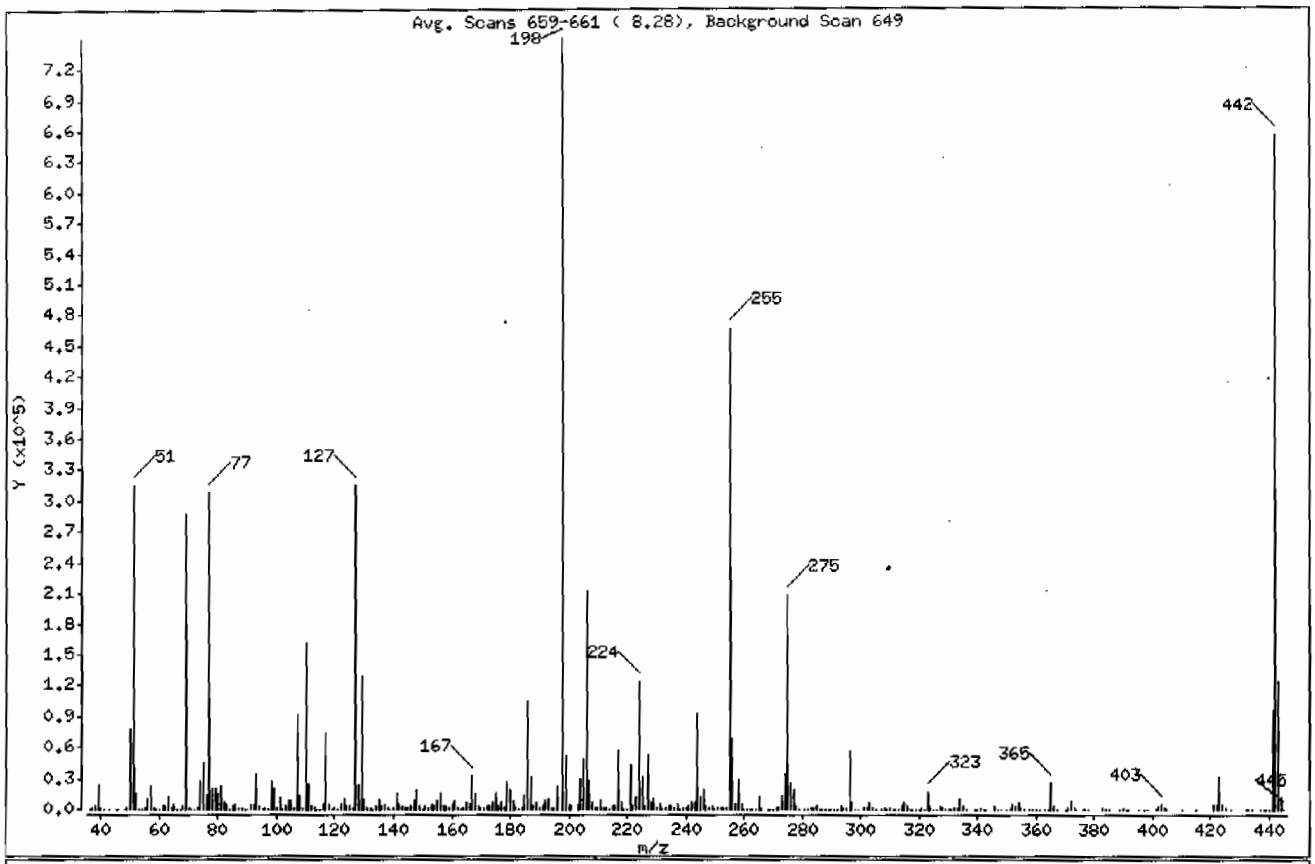

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.16
68	Less than 2.00% of mass 69	0.57 (1.48)
69	Mass 69 relative abundance	38.30
70	Less than 2.00% of mass 69	0.14 (0.37)
127	40.00 - 60.00% of mass 198	42.18
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.81
275	10.00 - 30.00% of mass 198	27.72
365	Greater than 1.00% of mass 198	3.36
441	Present, but less than mass 443	12.82
442	Greater than 40.00% of mass 198	87.41
443	17.00 - 23.00% of mass 442	16.50 (18.88)

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	130	129.00	129144	221.00	43352	315.00	6757
37.00	963	130.00	10379	222.00	3421	316.00	3304
38.00	4111	131.00	2243	223.00	12803	317.00	505
39.00	23600	132.00	1255	224.00	124544	318.00	89
40.00	1272	133.00	555	225.00	30704	319.00	68
41.00	492	134.00	3635	226.00	3391	320.00	212
43.00	105	135.00	10704	227.00	52696	321.00	2199
45.00	749	136.00	4146	228.00	7219	322.00	768
46.00	78	137.00	5330	229.00	10175	323.00	17872
48.00	68	138.00	1404	230.00	1430	324.00	3180
49.00	2390	139.00	748	231.00	4406	325.00	325
50.00	77896	140.00	1839	232.00	746	326.00	448
51.00	316032	141.00	15758	233.00	1331	327.00	3348
52.00	15853	142.00	5118	234.00	3163	328.00	1586
53.00	697	143.00	3702	235.00	3412	329.00	430
54.00	44	144.00	1161	236.00	2372	330.00	62
55.00	1475	145.00	866	237.00	4445	331.00	102
56.00	9953	146.00	3158	238.00	456	332.00	1465
57.00	23072	147.00	8024	239.00	2101	333.00	1384
58.00	898	148.00	18984	240.00	1609	334.00	11134
59.00	336	149.00	3739	241.00	3164	335.00	3143
60.00	225	150.00	774	242.00	6733	336.00	405
61.00	3752	151.00	3382	243.00	6226	339.00	142
62.00	4243	152.00	1243	244.00	92688	340.00	159
63.00	11328	153.00	5283	245.00	12475	341.00	2110
64.00	1836	154.00	3943	246.00	19736	342.00	653
65.00	5514	155.00	9153	247.00	3761	343.00	43
66.00	395	156.00	15309	248.00	881	346.00	4090
67.00	365	157.00	3021	249.00	3370	347.00	606
68.00	4238	158.00	3692	250.00	704	348.00	61
69.00	287104	159.00	2450	251.00	990	350.00	163
70.00	1055	160.00	5815	252.00	1128	351.00	312
71.00	62	161.00	8439	253.00	2364	352.00	5888
72.00	71	162.00	2487	254.00	2478	353.00	3580
73.00	2346	163.00	529	255.00	467136	354.00	6153

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d

Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649

Location of Maximum: 198.00

Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	27560	164.00	872	256.00	68464	355.00	1155
75.00	45608	165.00	7480	257.00	5362	356.00	47
76.00	14580	166.00	4923	258.00	28784	358.00	84
77.00	307648	167.00	33168	259.00	4672	359.00	471
78.00	20952	168.00	15532	260.00	577	360.00	108
79.00	20168	169.00	3430	261.00	840	361.00	199
80.00	15037	170.00	1365	262.00	192	363.00	41
81.00	22200	171.00	1541	263.00	518	364.00	46
82.00	6183	172.00	3329	264.00	441	365.00	25200
83.00	5317	173.00	3966	265.00	11328	366.00	3575
84.00	652	174.00	7529	266.00	1690	367.00	168
85.00	3481	175.00	14827	268.00	443	370.00	679
86.00	5823	176.00	3632	269.00	245	371.00	1446
87.00	2522	177.00	6522	270.00	550	372.00	8793
88.00	1077	178.00	2348	271.00	1149	373.00	1961
89.00	639	179.00	27592	272.00	1211	374.00	221
90.00	270	180.00	18360	273.00	14446	376.00	42
91.00	5249	181.00	8854	274.00	34480	377.00	208
92.00	5425	182.00	1836	275.00	207744	378.00	45
93.00	34864	183.00	697	276.00	26632	383.00	2261
94.00	2727	184.00	2248	277.00	18216	384.00	695
95.00	519	185.00	13594	278.00	2938	385.00	153
96.00	1793	186.00	105608	279.00	721	389.00	48
97.00	255	187.00	30760	281.00	239	390.00	895
98.00	27192	188.00	3410	282.00	488	391.00	683
99.00	20512	189.00	6590	283.00	2542	392.00	588
100.00	1368	190.00	891	284.00	1204	395.00	63
101.00	11329	191.00	3357	285.00	3197	397.00	89
102.00	651	192.00	9407	286.00	509	398.00	57
103.00	4207	193.00	9901	287.00	81	401.00	639
104.00	8219	194.00	2267	288.00	186	402.00	3069
105.00	7766	195.00	1341	289.00	847	403.00	4596
106.00	2422	196.00	23040	290.00	595	404.00	1548
107.00	90816	198.00	749568	291.00	454	405.00	250
108.00	14415	199.00	51080	292.00	743	410.00	207

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d

Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649

Location of Maximum: 198.00

Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
109.00	2528	200.00	4574	293.00	4058	415.00	154
110.00	161600	201.00	3697	294.00	966	421.00	4311
111.00	23872	203.00	5056	295.00	1275	422.00	4609
112.00	3017	204.00	29384	296.00	57624	423.00	31232
113.00	1030	205.00	48440	297.00	7723	424.00	5999
114.00	259	206.00	211840	298.00	524	425.00	887
115.00	204	207.00	27712	299.00	72	427.00	53
116.00	5076	208.00	7647	301.00	883	432.00	79
117.00	74856	209.00	2440	302.00	1121	433.00	51
118.00	5416	210.00	2546	303.00	6834	434.00	102
119.00	663	211.00	8250	304.00	2045	437.00	63
120.00	1188	212.00	1226	305.00	210	438.00	98
121.00	285	213.00	887	307.00	150	439.00	269
122.00	5954	214.00	230	308.00	912	440.00	46
123.00	9965	215.00	2724	309.00	557	441.00	96112
124.00	4154	216.00	3200	310.00	896	442.00	655168
125.00	3951	217.00	57056	311.00	325	443.00	123696
126.00	1734	218.00	6740	312.00	245	444.00	11497
127.00	316160	219.00	408	313.00	389	445.00	757
128.00	23760	220.00	754	314.00	2901		

Data File: /chem/MSD5.i/s070209.b/s5g0201.d

Date : 02-JUL-2009 08:16

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

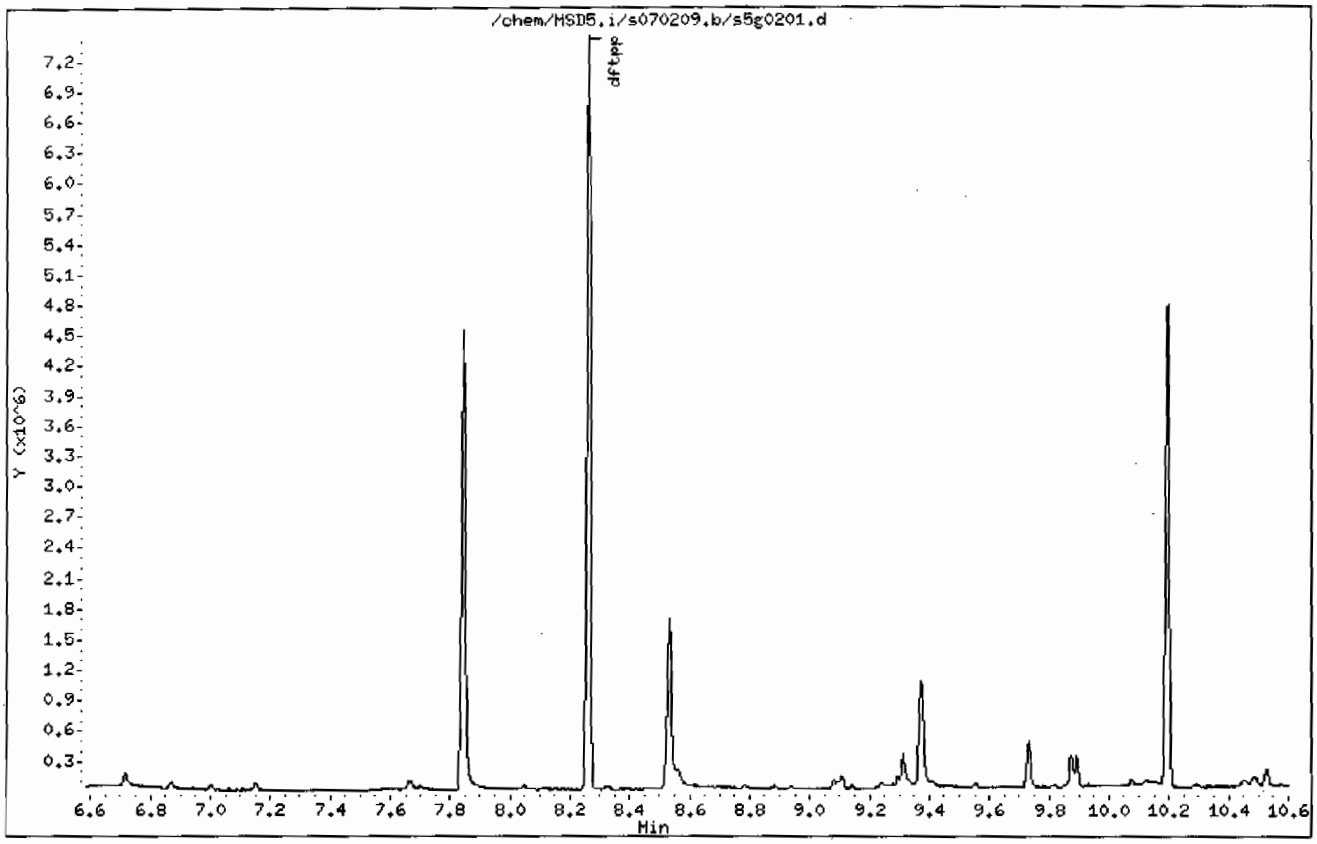

Data File: /chem/MSD5.i/s070209.b/s5g0201.d

Date : 02-JUL-2009 08:16

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

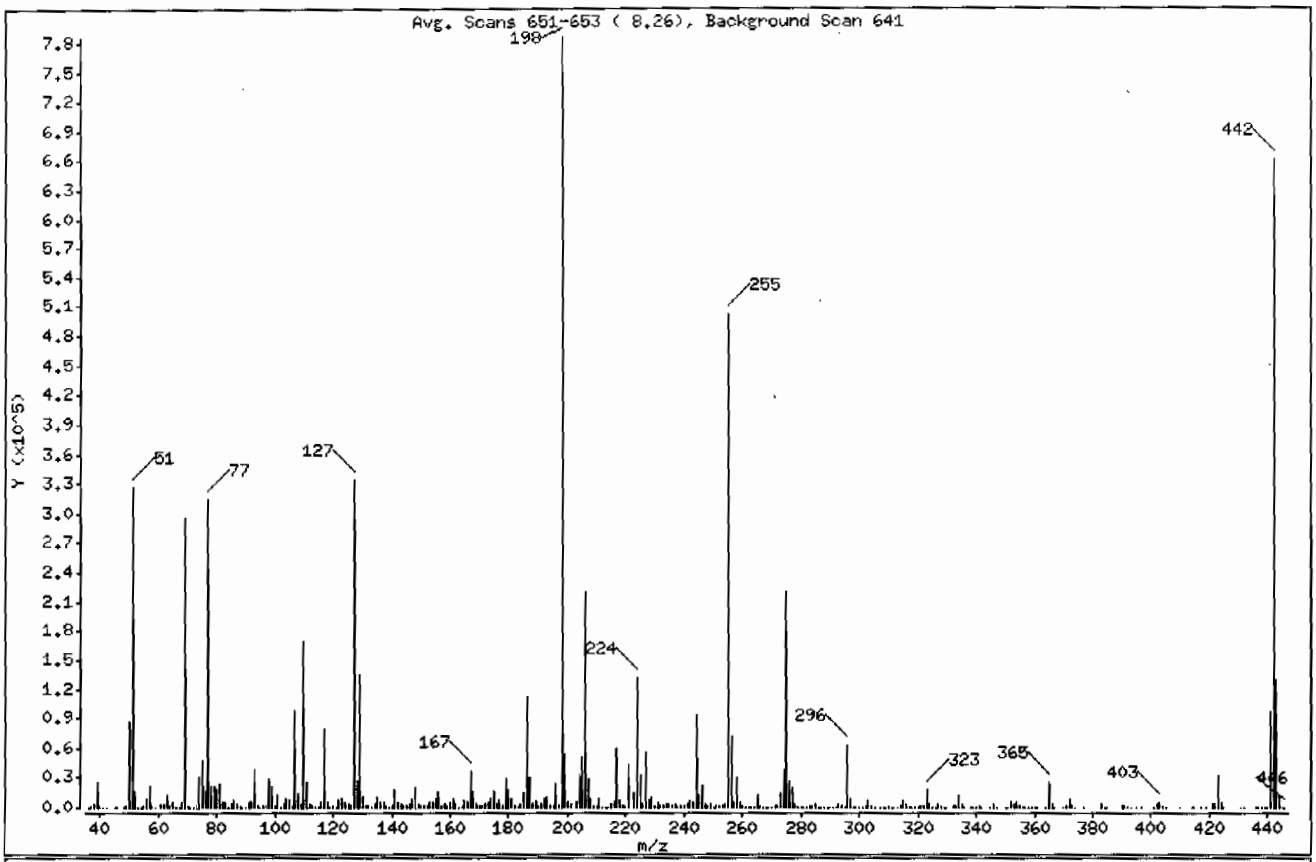

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	41.53
68	Less than 2.00% of mass 69	0.71 (1.88)
69	Mass 69 relative abundance	37.77
70	Less than 2.00% of mass 69	0.20 (0.53)
127	40.00 - 60.00% of mass 198	42.55
197	Less than 1.00% of mass 198	0.16
199	5.00 - 9.00% of mass 198	6.87
275	10.00 - 30.00% of mass 198	27.99
365	Greater than 1.00% of mass 198	3.20
441	Present, but less than mass 443	12.32
442	Greater than 40.00% of mass 198	84.16
443	17.00 - 23.00% of mass 442	16.58 (19.70)

Data File: /chem/MSD5.i/s070209.b/s5g0201.d

Date : 02-JUL-2009 08:16

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0201.d
Spectrum: Avg. Scans 651-653 (8.26), Background Scan 641
Location of Maximum: 198.00
Number of points: 360

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	131	131.00	2037	224.00	132032	316.00	3456
37.00	1031	132.00	1316	225.00	32672	317.00	632
38.00	3754	133.00	476	226.00	3370	318.00	60
39.00	25848	134.00	4206	227.00	56488	319.00	78
40.00	1186	135.00	10670	228.00	6943	320.00	155
41.00	574	136.00	4660	229.00	10658	321.00	2079
42.00	120	137.00	4761	230.00	1216	322.00	931
45.00	684	138.00	1386	231.00	5118	323.00	18952
46.00	54	139.00	704	232.00	910	324.00	3481
48.00	189	140.00	1560	233.00	1073	325.00	286
49.00	2234	141.00	17400	234.00	3424	326.00	286
50.00	85928	142.00	4827	235.00	3697	327.00	3214
51.00	326080	143.00	3740	236.00	2377	328.00	1793
52.00	16584	144.00	1284	237.00	3878	329.00	484
53.00	763	145.00	1047	238.00	518	330.00	112
54.00	112	146.00	3391	239.00	2518	332.00	1510
55.00	1802	147.00	9496	240.00	1892	333.00	2007
56.00	9284	148.00	20192	241.00	3011	334.00	11934
57.00	22128	149.00	4395	242.00	6902	335.00	3540
58.00	1059	150.00	1209	243.00	6276	336.00	421
59.00	23	151.00	2495	244.00	94112	338.00	50
61.00	3934	152.00	1110	245.00	12659	339.00	309
62.00	4173	153.00	5526	246.00	21184	340.00	86
63.00	12644	154.00	4807	247.00	4251	341.00	2182
64.00	2195	155.00	9298	248.00	1052	342.00	608
65.00	6033	156.00	15556	249.00	3644	345.00	129
66.00	504	157.00	2679	250.00	425	346.00	3908
67.00	97	158.00	3080	251.00	1204	347.00	756
68.00	5583	159.00	2488	252.00	1037	350.00	200
69.00	296576	160.00	5731	253.00	2545	351.00	150
70.00	1572	161.00	8815	254.00	3299	352.00	5394
71.00	264	162.00	2887	255.00	501504	353.00	3684
72.00	64	163.00	736	256.00	71304	354.00	5535
73.00	2239	164.00	660	257.00	5642	355.00	1000
74.00	30816	165.00	6553	258.00	30136	356.00	105

Data File: /chem/MSD5.i/s070209.b/s5g0201.d

Date : 02-JUL-2009 08:16

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0201.d
Spectrum: Avg. Scans 651-653 (8.26), Background Scan 641
Location of Maximum: 198.00
Number of points: 360

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	46856	166.00	5968	259.00	4758	357.00	53
76.00	16027	167.00	36520	260.00	914	358.00	159
77.00	313984	168.00	15672	261.00	833	359.00	383
78.00	22048	169.00	2924	262.00	133	360.00	118
79.00	22176	170.00	1406	263.00	311	361.00	150
80.00	17920	171.00	2022	264.00	714	364.00	76
81.00	23112	172.00	2982	265.00	11858	365.00	25104
82.00	5945	173.00	4893	266.00	2111	366.00	3531
83.00	5136	174.00	8333	267.00	174	367.00	277
84.00	701	175.00	16067	268.00	274	370.00	478
85.00	3737	176.00	3955	269.00	59	371.00	1773
86.00	6461	177.00	7956	270.00	747	372.00	9090
87.00	3281	178.00	2442	271.00	1498	373.00	2697
88.00	1066	179.00	28328	272.00	1409	374.00	412
89.00	781	180.00	18608	273.00	15209	377.00	565
90.00	141	181.00	9220	274.00	37744	383.00	2900
91.00	5436	182.00	1721	275.00	219776	384.00	705
92.00	5952	183.00	526	276.00	27744	385.00	229
93.00	37864	184.00	2852	277.00	19104	390.00	1089
94.00	2239	185.00	14824	278.00	2911	391.00	940
95.00	217	186.00	112416	279.00	586	392.00	416
96.00	1549	187.00	31432	280.00	131	393.00	55
97.00	991	188.00	3268	281.00	470	395.00	109
98.00	28760	189.00	7903	282.00	73	397.00	132
99.00	21496	190.00	1212	283.00	2445	401.00	534
100.00	1947	191.00	3262	284.00	1564	402.00	3477
101.00	12103	192.00	9435	285.00	2843	403.00	4563
102.00	724	193.00	10209	286.00	531	404.00	2001
103.00	4145	194.00	2351	287.00	296	405.00	54
104.00	8526	195.00	1590	288.00	59	410.00	108
105.00	6934	196.00	23552	289.00	876	414.00	59
106.00	2148	197.00	1279	290.00	893	415.00	180
107.00	97768	198.00	785216	291.00	490	417.00	48
108.00	15144	199.00	53968	292.00	733	419.00	60
109.00	2805	200.00	4663	293.00	4152	421.00	4424

Data File: /chem/MSD5.i/s070209.b/s5g0201.d

Date : 02-JUL-2009 08:16

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0201.d
Spectrum: Avg. Scans 651-653 (8.26), Background Scan 641
Location of Maximum: 198.00
Number of points: 360

m/z	Y	m/z	Y	m/z	Y	m/z	Y
110.00	169920	201.00	3741	294.00	1366	422.00	4456
111.00	25464	203.00	5845	295.00	535	423.00	31856
112.00	3299	204.00	31304	296.00	62736	424.00	5940
113.00	1152	205.00	51176	297.00	9217	425.00	558
114.00	465	206.00	220800	298.00	620	431.00	112
115.00	456	207.00	29408	299.00	248	432.00	117
116.00	5188	208.00	8172	300.00	62	436.00	69
117.00	79536	209.00	2673	301.00	832	437.00	54
118.00	5916	210.00	2676	302.00	1213	438.00	212
119.00	878	211.00	9231	303.00	6715	439.00	234
120.00	1099	212.00	743	304.00	1950	440.00	43
121.00	446	213.00	580	305.00	127	441.00	96712
122.00	6631	214.00	183	307.00	52	442.00	660864
123.00	9769	215.00	2745	308.00	894	443.00	130208
124.00	4851	216.00	5137	309.00	775	444.00	12268
125.00	3649	217.00	59824	310.00	1015	445.00	697
126.00	1649	218.00	7989	311.00	239	446.00	69
127.00	334080	219.00	979	312.00	192		
128.00	26352	220.00	811	313.00	663		
129.00	134784	221.00	43984	314.00	2679		
130.00	11309	223.00	13935	315.00	7649		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497			**Matrix:**	SOIL
Lab Sample ID:	1201872923				
Client Sample:	QC for batch 881877	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881877	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 09:19	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0204.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	66.7	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	110	333
87-86-5	Pentachlorophenol	U	333	ug/kg	83.3	333
129-00-0	Pyrene	U	33.3	ug/kg	10.0	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	100	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline	U	333	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497			Matrix:	SOIL
Lab Sample ID:	1201872923				
Client Sample:	QC for batch 881877	Client:	LANL010	Project:	QC
Client ID:	MB for batch 881877	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 09:19	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0204.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	66.7	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	66.7	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.03	239	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0204.d
Lab Smp Id: 1201872923 Client Smp ID: SBLK01
Inj Date : 02-JUL-2009 09:19
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201872923|881878|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	527349	40.0000	
* 29 Naphthalene-d8	136	4.878	4.889	(1.000)	1812552	40.0000	
* 46 Acenaphthene-d10	164	6.143	6.145	(1.000)	1118143	40.0000	
* 67 Phenanthrene-d10	188	7.319	7.325	(1.000)	2076628	40.0000	
* 91 Chrysene-d12	240	9.736	9.747	(1.000)	2005705	40.0000	
* 98 Perylene-d12	264	11.483	11.495	(1.000)	1740324	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.797)	870151	75.1498	2500
$ 5 Phenol-d5	99	3.719	3.728	(0.928)	1148979	75.2593	2510
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.896)	521909	38.8582	1300
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1204058	41.6374	1390
$ 60 2,4,6-Tribromophenol	329	6.742	6.747	(1.098)	358236	78.5222	2620
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.894)	1556582	50.7109	1690

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0204.d
Lab Smp Id: 1201872923 Client Smp ID: SBLK01
Inj Date : 02-JUL-2009 09:19
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201872923|881878|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.007	3374138	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.031	603699	7.15677371	238	0		0	10

Data File: /chem/MSD5.i/s070209.b/s5g0204.d

Date : 02-JUL-2009 09:19

Client ID: SBLK01

Sample Info: |1201872923|881878|1|SVMF|1|SBLK01

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

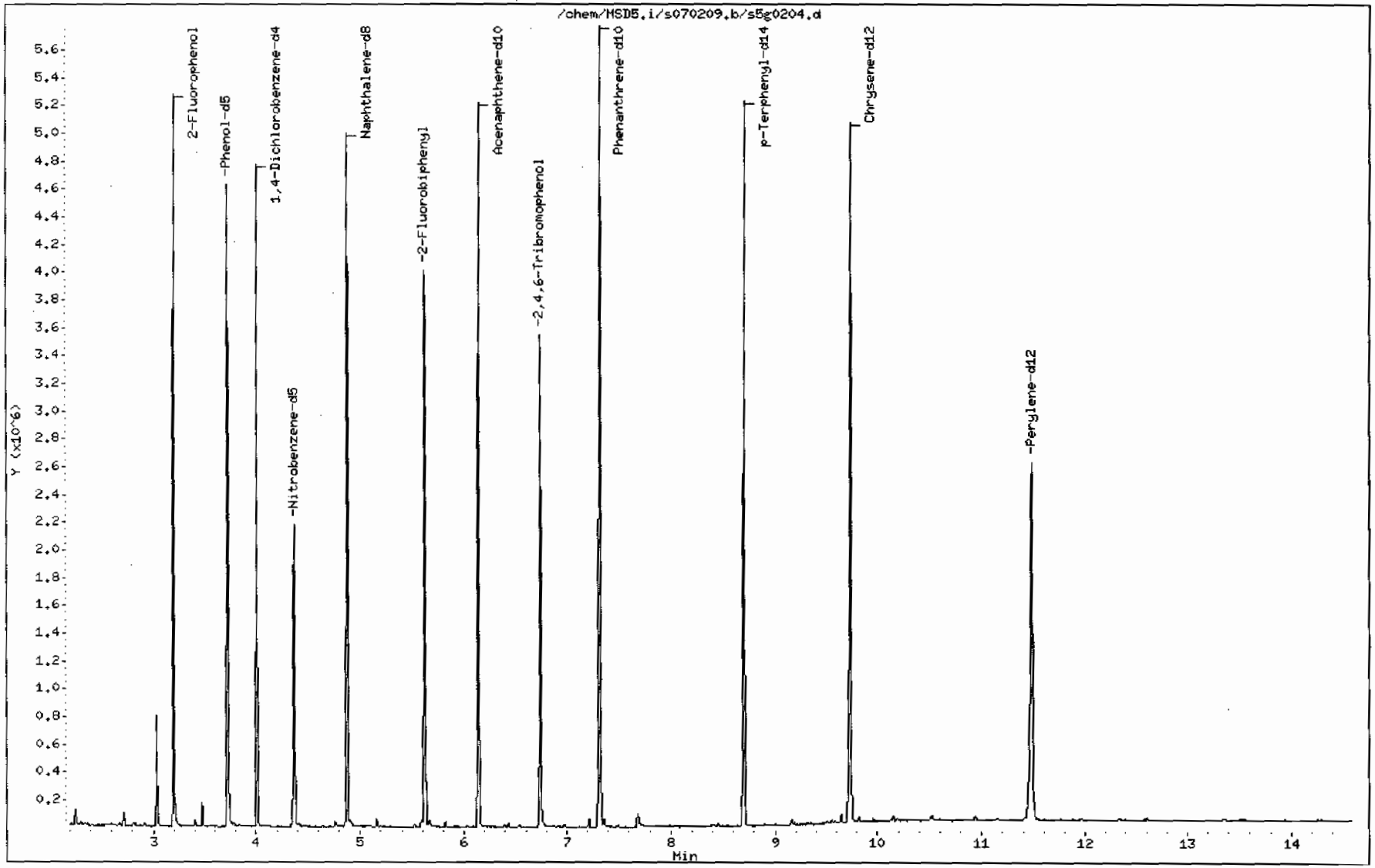

Data File: /chem/MSD5.i/s070209.b/s5g0204.d

Date : 02-JUL-2009 09:19

Client ID: SBLK01

Instrument: MSD5.i

Sample Info: 1120187292318818781|1|SVMF|1|SBLK01

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116

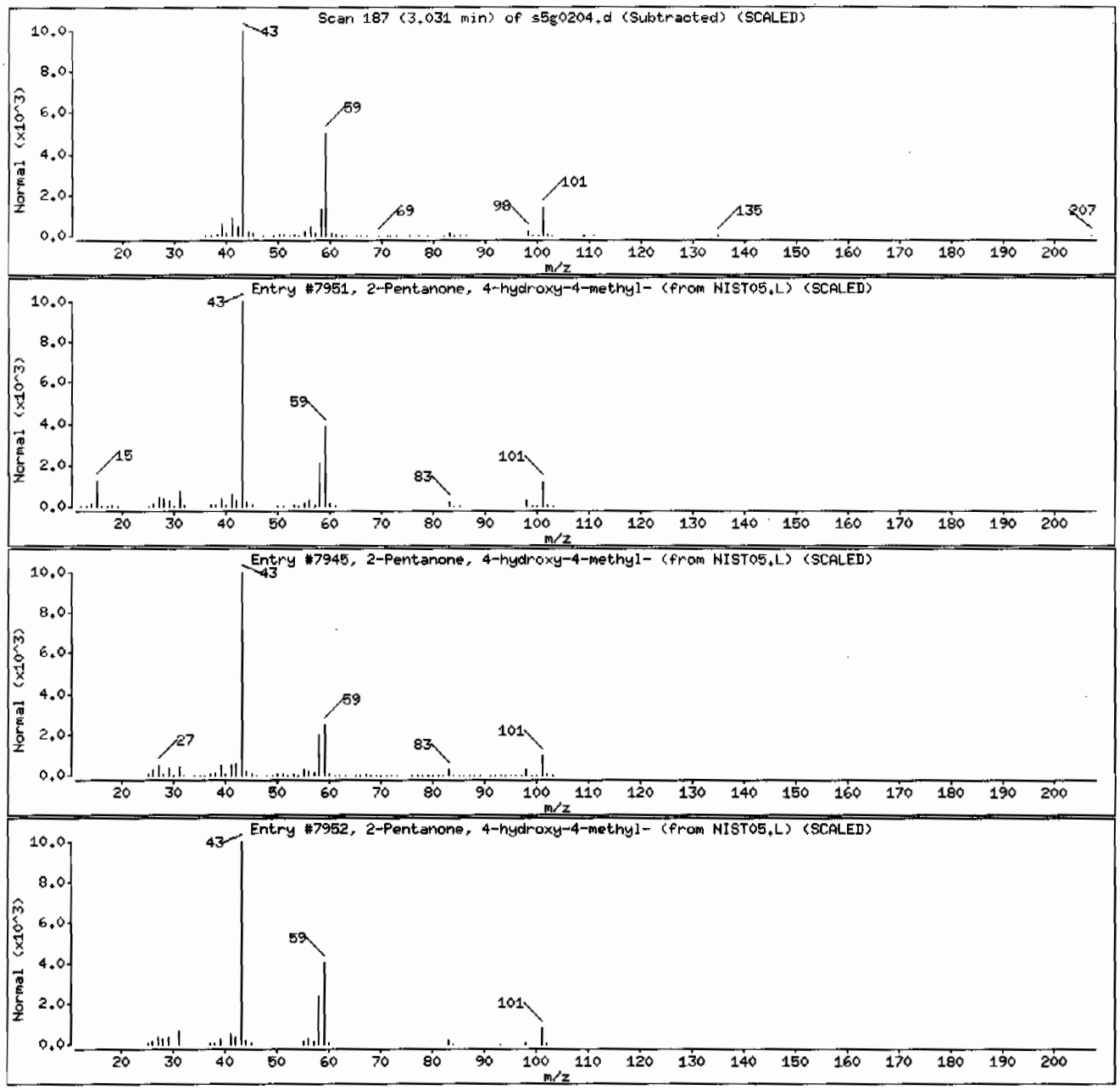

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497			Matrix:	SOIL
Lab Sample ID:	1201872924				
Client Sample:	QC for batch 881877	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 881877	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	2
Run Date:	07/02/2009 10:04	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0206.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1300	ug/kg	133	667
108-95-2	Phenol		1280	ug/kg	133	667
95-57-8	2-Chlorophenol		1300	ug/kg	133	667
106-46-7	1,4-Dichlorobenzene		1250	ug/kg	133	667
621-64-7	N-Nitrosodipropylamine		1420	ug/kg	133	667
59-50-7	4-Chloro-3-methylphenol		1460	ug/kg	133	667
83-32-9	Acenaphthene		1330	ug/kg	22.0	66.7
121-14-2	2,4-Dinitrotoluene		1370	ug/kg	66.7	667
100-02-7	4-Nitrophenol		1400	ug/kg	220	667
87-86-5	Pentachlorophenol		1500	ug/kg	167	667
129-00-0	Pyrene		1570	ug/kg	20.0	66.7
110-86-1	Pyridine		1340	ug/kg	133	667
62-53-3	Aniline		1450	ug/kg	200	667
111-44-4	bis(2-Chloroethyl) ether		1220	ug/kg	133	667
541-73-1	1,3-Dichlorobenzene		1270	ug/kg	133	667
100-51-6	Benzyl alcohol		1210	ug/kg	200	667
95-50-1	1,2-Dichlorobenzene		1320	ug/kg	133	667
108-60-1	bis(2-Chloroisopropyl)ether		1260	ug/kg	133	667
95-48-7	o-Cresol		1350	ug/kg	133	667
65794-96-9	m,p-Cresols		1420	ug/kg	200	667
67-72-1	Hexachloroethane		1210	ug/kg	133	667
98-95-3	Nitrobenzene		1370	ug/kg	133	667
78-59-1	Isophorone		1380	ug/kg	133	667
88-75-5	2-Nitrophenol		1400	ug/kg	133	667
105-67-9	2,4-Dimethylphenol		1410	ug/kg	233	667
111-91-1	bis(2-Chloroethoxy)methane		1370	ug/kg	133	667
120-83-2	2,4-Dichlorophenol		1440	ug/kg	133	667
65-85-0	Benzoic acid	J	1290	ug/kg	333	1330
91-20-3	Naphthalene		1280	ug/kg	20.0	66.7
106-47-8	4-Chloroaniline		1970	ug/kg	133	667
87-68-3	Hexachlorobutadiene		1420	ug/kg	133	667
91-57-6	2-Methylnaphthalene		1480	ug/kg	13.3	66.7
77-47-4	Hexachlorocyclopentadiene		1170	ug/kg	133	667
88-06-2	2,4,6-Trichlorophenol		1450	ug/kg	133	667
95-95-4	2,4,5-Trichlorophenol		1510	ug/kg	133	667
91-58-7	2-Chloronaphthalene		1440	ug/kg	22.0	66.7
88-74-4	2-Nitroaniline		1420	ug/kg	133	667
99-09-2	*o-Nitroaniline* 3-Nitroaniline		2150	ug/kg	133	667

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2497**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201872924**				
Client Sample:	**QC for batch 881877**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 881877**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881878**	**Inst:**	**MSD5.I**	**Dilution:**	**2**
Run Date:	**07/02/2009 10:04**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/01/2009 22:14**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0206.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1470	ug/kg	133	667
606-20-2	2,6-Dinitrotoluene		1400	ug/kg	66.7	667
208-96-8	Acenaphthylene		1500	ug/kg	20.0	66.7
51-28-5	2,4-Dinitrophenol		1400	ug/kg	253	1330
132-64-9	Dibenzofuran		1520	ug/kg	133	667
84-66-2	Diethylphthalate		1490	ug/kg	133	667
86-73-7	Fluorene		1420	ug/kg	20.0	66.7
7005-72-3	4-Chlorophenylphenylether		1440	ug/kg	133	667
534-52-1	2-Methyl-4,6-dinitrophenol		1300	ug/kg	133	667
100-01-6	4-Nitroaniline		2330	ug/kg	200	667
	p-Nitroaniline					
122-39-4	Diphenylamine		1770	ug/kg	133	667
122-66-7	Azobenzene		1560	ug/kg	133	667
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1510	ug/kg	133	667
118-74-1	Hexachlorobenzene		1550	ug/kg	133	667
85-01-8	Phenanthrene		1500	ug/kg	20.0	66.7
120-12-7	Anthracene		1570	ug/kg	13.3	66.7
84-74-2	Di-n-butylphthalate		1580	ug/kg	133	667
206-44-0	Fluoranthene		1550	ug/kg	20.0	66.7
85-68-7	Butylbenzylphthalate		1530	ug/kg	133	667
56-55-3	Benzo(a)anthracene		1520	ug/kg	20.0	66.7
91-94-1	3,3'-Dichlorobenzidine		1360	ug/kg	200	667
218-01-9	Chrysene		1500	ug/kg	20.0	66.7
117-81-7	bis(2-Ethylhexyl)phthalate		1610	ug/kg	133	667
117-84-0	Di-n-octylphthalate		1560	ug/kg	133	667
205-99-2	Benzo(b)fluoranthene		1530	ug/kg	20.0	66.7
207-08-9	Benzo(k)fluoranthene		1510	ug/kg	20.0	66.7
50-32-8	Benzo(a)pyrene		1520	ug/kg	20.0	66.7
193-39-5	Indeno(1,2,3-cd)pyrene		1580	ug/kg	20.0	66.7
53-70-3	Dibenzo(a,h)anthracene		1610	ug/kg	20.0	66.7
191-24-2	Benzo(ghi)perylene		1570	ug/kg	20.0	66.7
120-82-1	1,2,4-Trichlorobenzene		1390	ug/kg	133	667

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0206.d
Lab Smp Id: 1201872924 Client Smp ID: SBLK01LCS
Inj Date : 02-JUL-2009 10:04
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201872924|881878|2|SVMF|1|SBLK01LCS
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 2.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	2.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	495137	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1743824	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	1047277	40.0000	
* 67 Phenanthrene-d10	188	7.319	7.325	(1.000)	1934111	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1935708	40.0000	
* 98 Perylene-d12	264	11.489	11.495	(1.000)	1767460	40.0000	
$ 3 2-Fluorophenol	112	3.195	3.194	(0.796)	409195	37.6389	2510
$ 5 Phenol-d5	99	3.725	3.728	(0.928)	511936	35.7138	2380
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	266502	20.6242	1370
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	560185	20.6825	1380
$ 60 2,4,6-Tribromophenol	329	6.742	6.747	(1.098)	179048	41.9014	2790
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	730983	24.6754	1640

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.731	3.738	(0.930)	273462	19.2209	1280(Q)
8 2-Chlorophenol	128	3.878	3.882	(0.966)	232265	19.5312	1300
11 1,4-Dichlorobenzene	146	4.025	4.027	(1.003)	265832	18.7754	1250
17 N-Nitrosodipropylamine	70	4.242	4.253	(1.057)	163490	21.3382	1420(Q)
28 1,2,4-Trichlorobenzene	180	4.831	4.836	(0.989)	252215	20.8913	1390
33 4-Chloro-3-methylphenol	107	5.225	5.226	(1.070)	203792	21.9267	1460
47 Acenaphthene	154	6.166	6.174	(1.004)	428150	20.0098	1330
50 2,4-Dinitrotoluene	165	6.254	6.261	(1.018)	170183	20.5354	1370
52 4-Nitrophenol	139	6.184	6.184	(1.007)	78087	21.0279	1400
65 Pentachlorophenol	266	7.148	7.152	(0.977)	92647	22.5676	1500
79 Pyrene	202	8.601	8.611	(0.883)	992194	23.4960	1570
2 Pyridine	79	2.537	2.529	(0.632)	171711	20.0624	1340
4 Aniline	66	3.790	3.800	(0.944)	135551	21.8053	1450(Q)
7 bis(2-Chloroethyl) ether	63	3.807	3.815	(0.949)	200765	18.3093	1220
9 1,3-Dichlorobenzene	146	3.978	3.983	(0.991)	271717	19.0925	1270
12 Benzyl alcohol	108	4.078	4.080	(1.016)	136385	18.1727	1210
13 1,2-Dichlorobenzene	146	4.125	4.133	(1.028)	261211	19.8569	1320
14 bis(2-Chloroisopropyl)ether	45	4.154	4.157	(1.035)	483418	18.9425	1260
15 o-Cresol	107	4.131	4.133	(1.029)	178922	20.2262	1350
18 m,p-Cresols	107	4.225	4.234	(1.053)	252742	21.3647	1420
19 Hexachloroethane	117	4.360	4.364	(1.086)	95695	18.2242	1210
21 Nitrobenzene	77	4.390	4.397	(0.899)	247585	20.5443	1370
22 Isophorone	82	4.537	4.547	(0.929)	461499	20.6901	1380
23 2-Nitrophenol	139	4.601	4.609	(0.942)	118491	20.9443	1400
24 2,4-Dimethylphenol	122	4.595	4.600	(0.941)	206363	21.1336	1410
25 bis(2-Chloroethoxy)methane	93	4.660	4.667	(0.954)	261286	20.5013	1370
26 2,4-Dichlorophenol	162	4.766	4.773	(0.976)	209245	21.5597	1440
27 Benzoic acid	105	4.631	4.643	(0.948)	44872	19.4219	1290(aQ)
30 Naphthalene	128	4.895	4.903	(1.002)	654511	19.2659	1280(Q)
31 4-Chloroaniline	127	4.913	4.918	(1.006)	314316	29.5372	1970
32 Hexachlorobutadiene	225	4.960	4.966	(1.016)	188279	21.3647	1420
34 2-Methylnaphthalene	142	5.378	5.385	(1.101)	453346	22.1529	1480
36 Hexachlorocyclopentadiene	237	5.484	5.486	(0.893)	75815	17.5543	1170
37 2,4,6-Trichlorophenol	196	5.566	5.572	(0.906)	175735	21.6850	1440
38 2,4,5-Trichlorophenol	196	5.601	5.601	(0.912)	197010	22.6525	1510
40 2-Chloronaphthalene	162	5.731	5.736	(0.933)	481563	21.6083	1440
42 o-Nitroaniline	65	5.789	5.794	(0.943)	150852	21.2885	1420
41 m-Nitroaniline	138	6.089	6.092	(0.991)	105738	32.3209	2150(R)
43 Dimethylphthalate	163	5.889	5.900	(0.959)	585910	22.0241	1470
44 2,6-Dinitrotoluene	165	5.948	5.958	(0.968)	132820	20.9694	1400
45 Acenaphthylene	152	6.036	6.044	(0.983)	737456	22.4590	1500
48 2,4-Dinitrophenol	184	6.160	6.165	(1.003)	27649	20.9660	1400(Q)
49 Dibenzofuran	168	6.289	6.295	(1.024)	689819	22.7623	1520
51 Diethylphthalate	149	6.407	6.415	(1.043)	582748	22.3644	1490
53 Fluorene	166	6.554	6.560	(1.067)	555477	21.3291	1420
54 4-Chlorophenylphenylether	204	6.525	6.535	(1.062)	327294	21.5537	1440
55 2-Methyl-4,6-dinitrophenol	198	6.566	6.574	(0.897)	62998	19.5131	1300

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.548	6.560	(1.066)	95583	34.8769	2320(R)
133 Diphenylamine	169	6.619	6.622	(0.904)	511578	26.5707	1770
58 1,2-Diphenylhydrazine	77	6.654	6.661	(0.909)	572390	23.4161	1560
61 4-Bromophenylphenylether	248	6.919	6.926	(0.945)	208831	22.5896	1500
63 Hexachlorobenzene	284	6.995	6.998	(0.956)	226728	23.2877	1550
68 Phenanthrene	178	7.342	7.344	(1.003)	815241	22.5004	1500
69 Anthracene	178	7.383	7.388	(1.009)	841023	23.5175	1570
72 Di-n-butylphthalate	149	7.736	7.739	(1.057)	978393	23.7513	1580
76 Fluoranthene	202	8.383	8.394	(1.145)	960128	23.2622	1550
85 Butylbenzylphthalate	149	9.125	9.131	(0.937)	415821	22.9745	1530
89 Benzo(a)anthracene	228	9.724	9.733	(0.998)	946811	22.7959	1520
90 3,3'-Dichlorobenzidine	252	9.666	9.666	(0.992)	282699	20.3707	1360
92 Chrysene	228	9.766	9.771	(1.002)	855263	22.4790	1500
93 bis(2-Ethylhexyl)phthalate	149	9.648	9.656	(0.990)	600142	24.1628	1610
94 Di-n-octylphthalate	149	10.324	10.330	(0.899)	944198	23.3701	1560
95 Benzo(b)fluoranthene	252	10.942	10.951	(0.952)	895629	22.9446	1530
96 Benzo(k)fluoranthene	252	10.977	10.990	(0.955)	865707	22.5782	1500
97 Benzo(a)pyrene	252	11.401	11.413	(0.992)	787209	22.7818	1520
99 Indeno(1,2,3-cd)pyrene	276	13.330	13.354	(1.160)	823288	23.7102	1580
100 Dibenzo(a,h)anthracene	278	13.342	13.368	(1.161)	682334	24.1071	1610
101 Benzo(ghi)perylene	276	13.901	13.922	(1.210)	697383	23.5584	1570
1 N-Methyl-N-nitrosomethylamine	74	2.496	2.495	(0.622)	112563	19.4603	1300

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD5.i/s070209.b/s5g0206.d
Date : 02-JUL-2009 10:04
Client ID: SBLK01LCS
Sample Info: M1201872924|881878|2|SVHF11|SBLK01LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

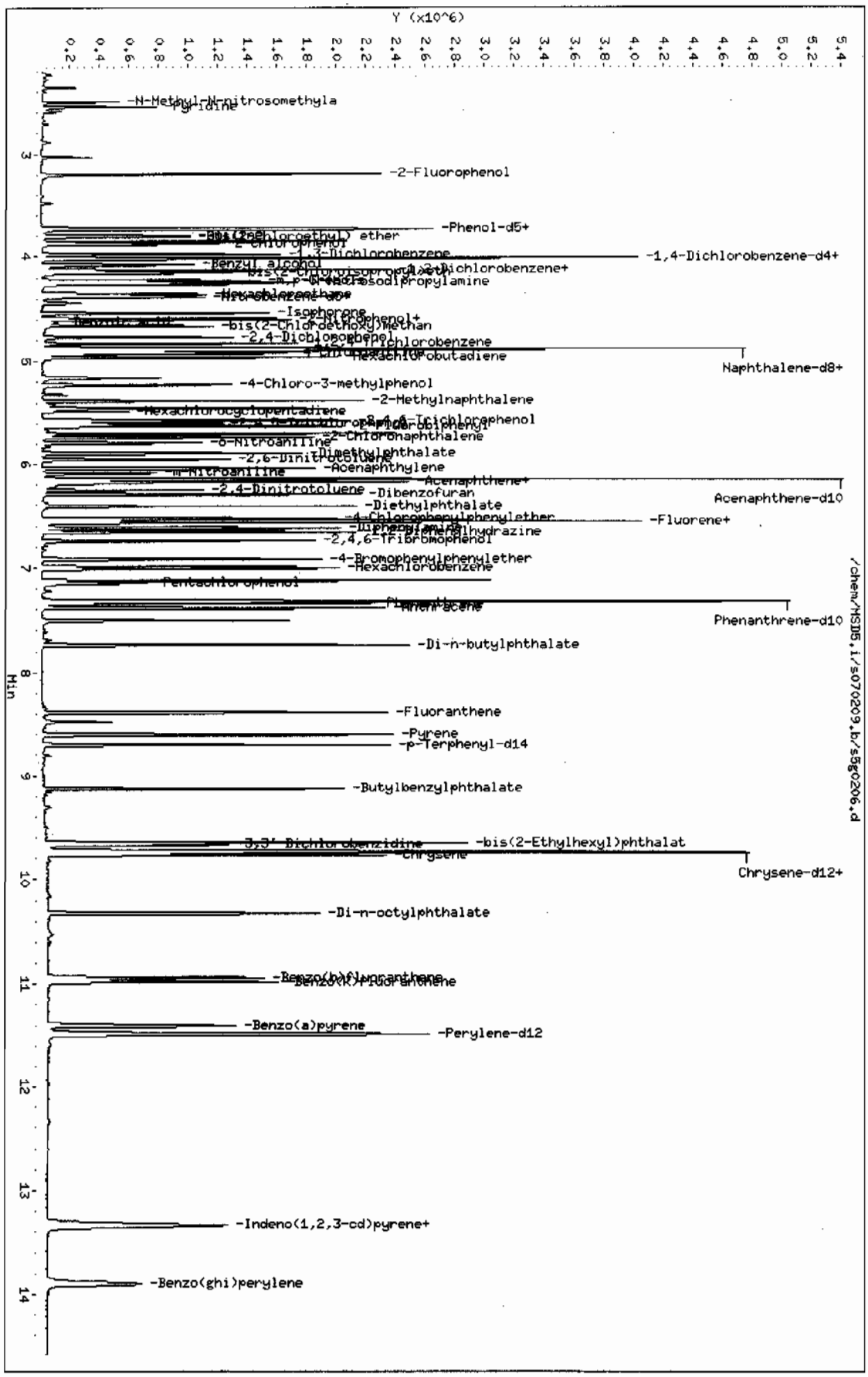

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201872925	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.3
Client Sample:	QC for batch 881877	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10375MS	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 10:49	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0208.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1280	ug/kg	68.9	344
108-95-2	Phenol		1240	ug/kg	68.9	344
95-57-8	2-Chlorophenol		1260	ug/kg	68.9	344
106-46-7	1,4-Dichlorobenzene		1170	ug/kg	68.9	344
621-64-7	N-Nitrosodipropylamine		1350	ug/kg	68.9	344
59-50-7	4-Chloro-3-methylphenol		1480	ug/kg	68.9	344
83-32-9	Acenaphthene		1370	ug/kg	11.4	34.4
121-14-2	2,4-Dinitrotoluene		1440	ug/kg	34.4	344
100-02-7	4-Nitrophenol		1640	ug/kg	114	344
87-86-5	Pentachlorophenol		1680	ug/kg	86.1	344
129-00-0	Pyrene		1590	ug/kg	10.3	34.4
110-86-1	Pyridine		1220	ug/kg	68.9	344
62-53-3	Aniline		1380	ug/kg	103	344
111-44-4	bis(2-Chloroethyl) ether		1140	ug/kg	68.9	344
541-73-1	1,3-Dichlorobenzene		1190	ug/kg	68.9	344
100-51-6	Benzyl alcohol		1180	ug/kg	103	344
95-50-1	1,2-Dichlorobenzene		1210	ug/kg	68.9	344
108-60-1	bis(2-Chloroisopropyl)ether		1190	ug/kg	68.9	344
95-48-7	o-Cresol		1250	ug/kg	68.9	344
65794-96-9	m,p-Cresols		1440	ug/kg	103	344
67-72-1	Hexachloroethane		1170	ug/kg	68.9	344
98-95-3	Nitrobenzene		1320	ug/kg	68.9	344
78-59-1	Isophorone		1330	ug/kg	68.9	344
88-75-5	2-Nitrophenol		1310	ug/kg	68.9	344
105-67-9	2,4-Dimethylphenol		1420	ug/kg	121	344
111-91-1	bis(2-Chloroethoxy)methane		1290	ug/kg	68.9	344
120-83-2	2,4-Dichlorophenol		1430	ug/kg	68.9	344
65-85-0	Benzoic acid		1510	ug/kg	172	689
91-20-3	Naphthalene		1190	ug/kg	10.3	34.4
106-47-8	4-Chloroaniline		1350	ug/kg	68.9	344
87-68-3	Hexachlorobutadiene		1320	ug/kg	68.9	344
91-57-6	2-Methylnaphthalene		1420	ug/kg	6.89	34.4
77-47-4	Hexachlorocyclopentadiene		1520	ug/kg	68.9	344
88-06-2	2,4,6-Trichlorophenol		1510	ug/kg	68.9	344
95-95-4	2,4,5-Trichlorophenol		1590	ug/kg	68.9	344
91-58-7	2-Chloronaphthalene		1420	ug/kg	11.4	34.4
88-74-4	2-Nitroaniline		1510	ug/kg	68.9	344
	o-Nitroaniline					
99-09-2	3-Nitroaniline		1800	ug/kg	68.9	344

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	1201872925	Date Received:	06/27/2009 09:05	%Moisture:	3.3
Client Sample:	QC for batch 881877	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-10375MS	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.1	Dilution:	1
Run Date:	07/02/2009 10:49	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0208.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1410	ug/kg	68.9	344
606-20-2	2,6-Dinitrotoluene		1410	ug/kg	34.4	344
208-96-8	Accnaphthylene		1460	ug/kg	10.3	34.4
51-28-5	2,4-Dinitrophenol		1330	ug/kg	131	689
132-64-9	Dibenzofuran		1480	ug/kg	68.9	344
84-66-2	Diethylphthalate		1450	ug/kg	68.9	344
86-73-7	Fluorene		1380	ug/kg	10.3	34.4
7005-72-3	4-Chlorophenylphenylether		1420	ug/kg	68.9	344
534-52-1	2-Methyl-4,6-dinitrophenol		1430	ug/kg	68.9	344
100-01-6	4-Nitroaniline		2280	ug/kg	103	344
	p-Nitroaniline					
122-39-4	Diphenylamine		1700	ug/kg	68.9	344
122-66-7	Azobenzene		1540	ug/kg	68.9	344
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1440	ug/kg	68.9	344
118-74-1	Hexachlorobenzene		1470	ug/kg	68.9	344
85-01-8	Phenanthrene		1440	ug/kg	10.3	34.4
120-12-7	Anthracene		1510	ug/kg	6.89	34.4
84-74-2	Di-n-butylphthalate		1540	ug/kg	68.9	344
206-44-0	Fluoranthene		1500	ug/kg	10.3	34.4
85-68-7	Butylbenzylphthalate		1630	ug/kg	68.9	344
56-55-3	Benzo(a)anthracene		1460	ug/kg	10.3	34.4
91-94-1	3,3'-Dichlorobenzidine		1090	ug/kg	103	344
218-01-9	Chrysene		1460	ug/kg	10.3	34.4
117-81-7	bis(2-Ethylhexyl)phthalate		1620	ug/kg	68.9	344
117-84-0	Di-n-octylphthalate		1980	ug/kg	68.9	344
205-99-2	Benzo(b)fluoranthene		1550	ug/kg	10.3	34.4
207-08-9	Benzo(k)fluoranthene		1700	ug/kg	10.3	34.4
50-32-8	Benzo(a)pyrene		1530	ug/kg	10.3	34.4
193-39-5	Indeno(1,2,3-cd)pyrene		1180	ug/kg	10.3	34.4
53-70-3	Dibenzo(a,h)anthracene		1210	ug/kg	10.3	34.4
191-24-2	Benzo(ghi)perylene		1100	ug/kg	10.3	34.4
120-82-1	1,2,4-Trichlorobenzene		1300	ug/kg	68.9	344

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0208.d
Lab Smp Id: 1201872925 Client Smp ID: CAMO-09-10375MS
Inj Date : 02-JUL-2009 10:49
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201872925|881878|1|SVMF|1|LANL03001MS
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 8 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.04000	weight of sample
M	3.33980	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	486878	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1749255	40.0000	
* 46 Acenaphthene-d10	164	6.143	6.145	(1.000)	1027903	40.0000	
* 67 Phenanthrene-d10	188	7.319	7.325	(1.000)	1941373	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1835656	40.0000	
* 98 Perylene-d12	264	11.483	11.495	(1.000)	1264512	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.797)	720611	67.4081	2320
$ 5 Phenol-d5	99	3.725	3.728	(0.930)	949718	67.3784	2320
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	482839	37.2502	1280
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1014930	38.1784	1310
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	354349	84.4890	2910
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	1389431	49.4586	1700

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.731	3.738	(0.931)	504749	36.0794	1240(Q)
8 2-Chlorophenol	128	3.878	3.882	(0.968)	427774	36.5819	1260
11 1,4-Dichlorobenzene	146	4.019	4.027	(1.003)	471715	33.8819	1170
17 N-Nitrosodipropylamine	70	4.249	4.253	(1.060)	294859	39.1369	1350(Q)
28 1,2,4-Trichlorobenzene	180	4.831	4.836	(0.989)	457854	37.8069	1300
33 4-Chloro-3-methylphenol	107	5.231	5.226	(1.071)	399334	42.8323	1480
47 Acenaphthene	154	6.166	6.174	(1.004)	834094	39.7165	1370
50 2,4-Dinitrotoluene	165	6.254	6.261	(1.018)	339018	41.6793	1440
52 4-Nitrophenol	139	6.184	6.184	(1.007)	173967	47.7301	1640
65 Pentachlorophenol	266	7.148	7.152	(0.977)	234692	48.7401	1680
79 Pyrene	202	8.607	8.611	(0.883)	1848639	46.1634	1590
2 Pyridine	79	2.549	2.529	(0.636)	297307	35.3260	1220
4 Aniline	66	3.790	3.800	(0.946)	244205	39.9504	1380
7 bis(2-Chloroethyl) ether	63	3.807	3.815	(0.950)	358389	33.2387	1140
9 1,3-Dichlorobenzene	146	3.978	3.983	(0.993)	482557	34.4826	1190
12 Benzyl alcohol	108	4.078	4.080	(1.018)	252121	34.1638	1180
13 1,2-Dichlorobenzene	146	4.125	4.133	(1.029)	454465	35.1339	1210
14 bis(2-Chloroisopropyl)ether	45	4.149	4.157	(1.035)	867237	34.5587	1190
15 o-Cresol	107	4.131	4.133	(1.031)	314983	36.2112	1250
18 m,p-Cresols	107	4.225	4.234	(1.054)	485607	41.7455	1440
19 Hexachloroethane	117	4.354	4.364	(1.087)	175886	34.0638	1170
21 Nitrobenzene	77	4.390	4.397	(0.899)	461593	38.1835	1320
22 Isophorone	82	4.543	4.547	(0.930)	867274	38.7612	1330
23 2-Nitrophenol	139	4.602	4.609	(0.942)	216335	38.1204	1310
24 2,4-Dimethylphenol	122	4.596	4.600	(0.941)	403469	41.1908	1420
25 bis(2-Chloroethoxy)methane	93	4.660	4.667	(0.954)	477436	37.3449	1290
26 2,4-Dichlorophenol	162	4.766	4.773	(0.976)	405336	41.6345	1430
27 Benzoic acid	105	4.649	4.643	(0.952)	197771	43.7277	1500
30 Naphthalene	128	4.896	4.903	(1.002)	1173936	34.4482	1190
31 4-Chloroaniline	127	4.913	4.918	(1.006)	453804	39.2559	1350
32 Hexachlorobutadiene	225	4.960	4.966	(1.016)	337569	38.1863	1320
34 2-Methylnaphthalene	142	5.378	5.385	(1.101)	848952	41.3554	1420
36 Hexachlorocyclopentadiene	237	5.484	5.486	(0.893)	207609	44.1297	1520
37 2,4,6-Trichlorophenol	196	5.572	5.572	(0.907)	348900	43.8642	1510
38 2,4,5-Trichlorophenol	196	5.601	5.601	(0.912)	393092	46.0501	1580
40 2-Chloronaphthalene	162	5.737	5.736	(0.934)	902954	41.2802	1420
42 o-Nitroaniline	65	5.790	5.794	(0.943)	304646	43.8022	1510
41 m-Nitroaniline	138	6.090	6.092	(0.991)	205629	52.3087	1800
43 Dimethylphthalate	163	5.896	5.900	(0.960)	1067380	40.8787	1410
44 2,6-Dinitrotoluene	165	5.954	5.958	(0.969)	254908	41.0028	1410
45 Acenaphthylene	152	6.043	6.044	(0.984)	1363185	42.2979	1460
48 2,4-Dinitrophenol	184	6.166	6.165	(1.004)	85074	38.7249	1330(Q)
49 Dibenzofuran	168	6.296	6.295	(1.025)	1275415	42.8787	1480
51 Diethylphthalate	149	6.413	6.415	(1.044)	1078082	42.1538	1450
53 Fluorene	166	6.554	6.560	(1.067)	1027006	40.1780	1380
54 4-Chlorophenylphenylether	204	6.531	6.535	(1.063)	614154	41.2068	1420
55 2-Methyl-4,6-dinitrophenol	198	6.572	6.574	(0.898)	169511	41.4048	1420

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.554	6.560	(1.067)	177775	66.0900	2280
133 Diphenylamine	169	6.619	6.622	(0.904)	953243	49.3249	1700
58 1,2-Diphenylhydrazine	77	6.654	6.661	(0.909)	1099458	44.8099	1540
61 4-Bromophenylphenylether	248	6.919	6.926	(0.945)	389131	41.9355	1440
63 Hexachlorobenzene	284	6.995	6.998	(0.956)	417163	42.6873	1470
68 Phenanthrene	178	7.343	7.344	(1.003)	1519952	41.7933	1440
69 Anthracene	178	7.384	7.388	(1.009)	1579024	43.9891	1510
72 Di-n-butylphthalate	149	7.737	7.739	(1.057)	1847175	44.6740	1540
76 Fluoranthene	202	8.389	8.394	(1.146)	1804095	43.5464	1500
85 Butylbenzylphthalate	149	9.131	9.131	(0.937)	810030	47.1942	1620
89 Benzo(a)anthracene	228	9.731	9.733	(0.999)	1672410	42.4605	1460
90 3,3'-Dichlorobenzidine	252	9.672	9.666	(0.993)	417281	31.7072	1090
92 Chrysene	228	9.766	9.771	(1.002)	1529429	42.3892	1460
93 bis(2-Ethylhexyl)phthalate	149	9.648	9.656	(0.990)	1108235	47.0515	1620
94 Di-n-octylphthalate	149	10.325	10.330	(0.899)	1663336	57.5446	1980
95 Benzo(b)fluoranthene	252	10.948	10.951	(0.953)	1253283	44.8774	1540
96 Benzo(k)fluoranthene	252	10.983	10.990	(0.956)	1351961	49.2844	1700
97 Benzo(a)pyrene	252	11.407	11.413	(0.993)	1097003	44.3744	1530
99 Indeno(1,2,3-cd)pyrene	276	13.336	13.354	(1.161)	847630	34.1206	1180
100 Dibenzo(a,h)anthracene	278	13.348	13.368	(1.162)	710152	35.0692	1210
101 Benzo(ghi)perylene	276	13.901	13.922	(1.211)	675016	31.8724	1100
1 N-Methyl-N-nitrosomethylamine	74	2.508	2.495	(0.626)	210795	37.0611	1280

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/HSD5.i/s070209.b/s5g0208.d
Date : 02-JUL-2009 10:49
Client ID: CAMO-09-10375MS
Sample Info: 1201872325188187811SVHF11LANL03001MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: HSD5.i
Operator: RMB
Column diameter: 0.20

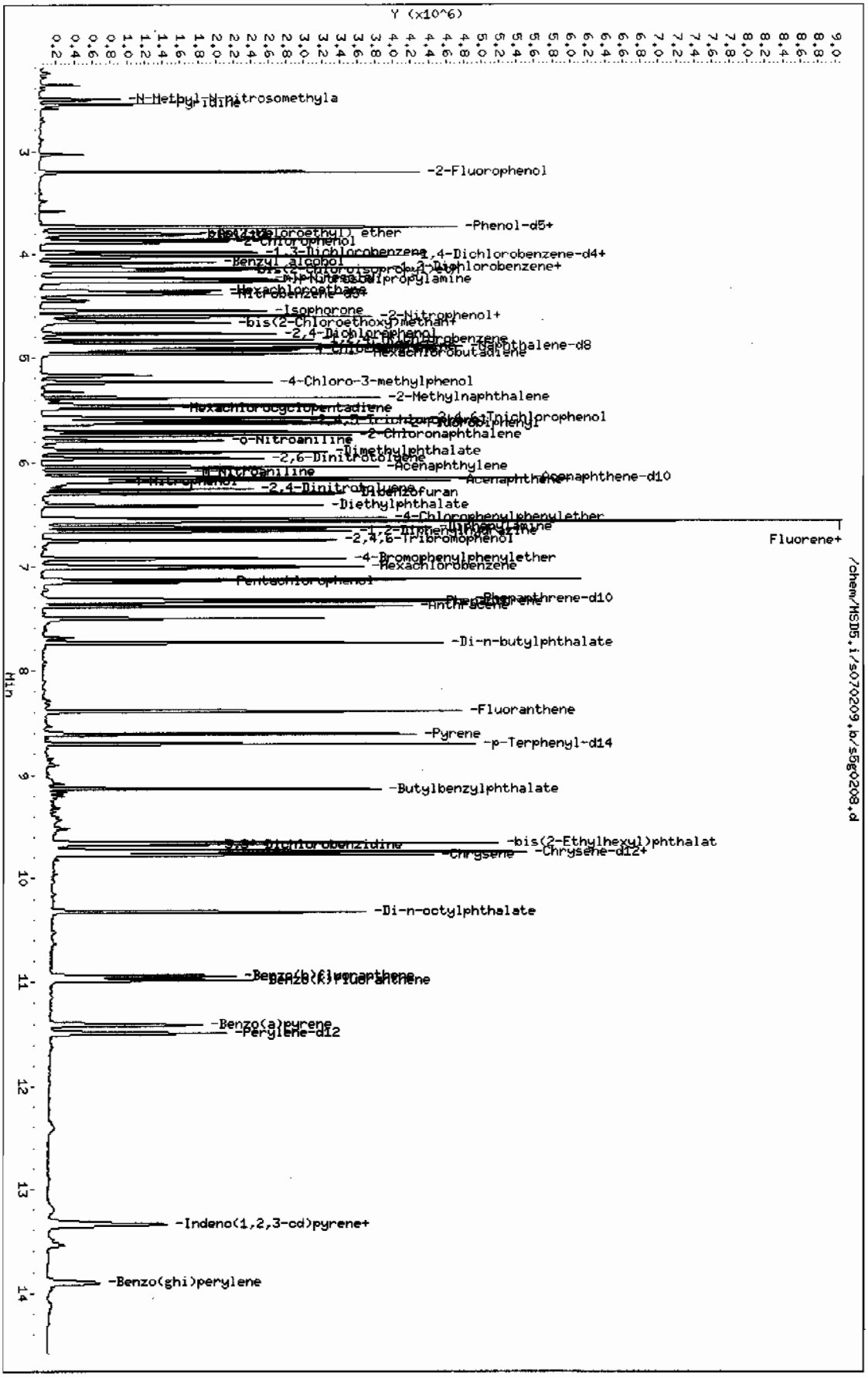

Page 1

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	1201872926	Date Received:	06/27/2009 09:05	%Moisture:	3.3
Client Sample:	QC for batch 881877	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-10375MSD	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881878	Inst:	MSD5.I	Dilution:	1
Run Date:	07/02/2009 11:12	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/01/2009 22:14	Aliquot:	30.07 g	Final Volume:	1 mL
Data File:	s5g0209.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1280	ug/kg	68.8	344
108-95-2	Phenol		1200	ug/kg	68.8	344
95-57-8	2-Chlorophenol		1210	ug/kg	68.8	344
106-46-7	1,4-Dichlorobenzene		1140	ug/kg	68.8	344
621-64-7	N-Nitrosodipropylamine		1340	ug/kg	68.8	344
59-50-7	4-Chloro-3-methylphenol		1270	ug/kg	68.8	344
83-32-9	Acenaphthene		1170	ug/kg	11.4	34.4
121-14-2	2,4-Dinitrotoluene		1190	ug/kg	34.4	344
100-02-7	4-Nitrophenol		1310	ug/kg	114	344
87-86-5	Pentachlorophenol		1390	ug/kg	86.0	344
129-00-0	Pyrene		1280	ug/kg	10.3	34.4
110-86-1	Pyridine		1220	ug/kg	68.8	344
62-53-3	Aniline		1320	ug/kg	103	344
111-44-4	bis(2-Chloroethyl) ether		1130	ug/kg	68.8	344
541-73-1	1,3-Dichlorobenzene		1150	ug/kg	68.8	344
100-51-6	Benzyl alcohol		1160	ug/kg	103	344
95-50-1	1,2-Dichlorobenzene		1180	ug/kg	68.8	344
108-60-1	bis(2-Chloroisopropyl)ether		1150	ug/kg	68.8	344
95-48-7	o-Cresol		1150	ug/kg	68.8	344
65794-96-9	m,p-Cresols		1320	ug/kg	103	344
67-72-1	Hexachloroethane		1160	ug/kg	68.8	344
98-95-3	Nitrobenzene		1250	ug/kg	68.8	344
78-59-1	Isophorone		1250	ug/kg	68.8	344
88-75-5	2-Nitrophenol		1280	ug/kg	68.8	344
105-67-9	2,4-Dimethylphenol		1270	ug/kg	120	344
111-91-1	bis(2-Chloroethoxy)methane		1220	ug/kg	68.8	344
120-83-2	2,4-Dichlorophenol		1270	ug/kg	68.8	344
65-85-0	Benzoic acid		1400	ug/kg	172	688
91-20-3	Naphthalene		1120	ug/kg	10.3	34.4
106-47-8	4-Chloroaniline		1270	ug/kg	68.8	344
87-68-3	Hexachlorobutadiene		1270	ug/kg	68.8	344
91-57-6	2-Methylnaphthalene		1310	ug/kg	6.88	34.4
77-47-4	Hexachlorocyclopentadiene		1240	ug/kg	68.8	344
88-06-2	2,4,6-Trichlorophenol		1300	ug/kg	68.8	344
95-95-4	2,4,5-Trichlorophenol		1320	ug/kg	68.8	344
91-58-7	2-Chloronaphthalene		1280	ug/kg	11.4	34.4
88-74-4	2-Nitroaniline *o-Nitroaniline*		1300	ug/kg	68.8	344
99-09-2	3-Nitroaniline		1620	ug/kg	68.8	344

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2497	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201872926	**Date Received:**	06/27/2009 09:05	**%Moisture:**	3.3
Client Sample:	QC for batch 881877	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10375MSD	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881878	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/02/2009 11:12	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/01/2009 22:14	**Aliquot:**	30.07 g	**Final Volume:**	1 mL
Data File:	s5g0209.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1210	ug/kg	68.8	344
606-20-2	2,6-Dinitrotoluene		1200	ug/kg	34.4	344
208-96-8	Acenaphthylene		1280	ug/kg	10.3	34.4
51-28-5	2,4-Dinitrophenol		963	ug/kg	131	688
132-64-9	Dibenzofuran		1280	ug/kg	68.8	344
84-66-2	Diethylphthalate		1220	ug/kg	68.8	344
86-73-7	Fluorene		1190	ug/kg	10.3	34.4
7005-72-3	4-Chlorophenylphenylether		1220	ug/kg	68.8	344
534-52-1	2-Methyl-4,6-dinitrophenol		1050	ug/kg	68.8	344
100-01-6	4-Nitroaniline		1950	ug/kg	103	344
	p-Nitroaniline					
122-39-4	Diphenylamine		1410	ug/kg	68.8	344
122-66-7	Azobenzene		1280	ug/kg	68.8	344
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1210	ug/kg	68.8	344
118-74-1	Hexachlorobenzene		1220	ug/kg	68.8	344
85-01-8	Phenanthrene		1190	ug/kg	10.3	34.4
120-12-7	Anthracene		1230	ug/kg	6.88	34.4
84-74-2	Di-n-butylphthalate		1250	ug/kg	68.8	344
206-44-0	Fluoranthene		1240	ug/kg	10.3	34.4
85-68-7	Butylbenzylphthalate		1290	ug/kg	68.8	344
56-55-3	Benzo(a)anthracene		1180	ug/kg	10.3	34.4
91-94-1	3,3'-Dichlorobenzidine		965	ug/kg	103	344
218-01-9	Chrysene		1180	ug/kg	10.3	34.4
117-81-7	bis(2-Ethylhexyl)phthalate		1310	ug/kg	68.8	344
117-84-0	Di-n-octylphthalate		1530	ug/kg	68.8	344
205-99-2	Benzo(b)fluoranthene		1320	ug/kg	10.3	34.4
207-08-9	Benzo(k)fluoranthene		1260	ug/kg	10.3	34.4
50-32-8	Benzo(a)pyrene		1230	ug/kg	10.3	34.4
193-39-5	Indeno(1,2,3-cd)pyrene		971	ug/kg	10.3	34.4
53-70-3	Dibenzo(a,h)anthracene		1030	ug/kg	10.3	34.4
191-24-2	Benzo(ghi)perylene		886	ug/kg	10.3	34.4
120-82-1	1,2,4-Trichlorobenzene		1240	ug/kg	68.8	344

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0209.d
Lab Smp Id: 1201872926 Client Smp ID: CAMO-09-10375MSD
Inj Date : 02-JUL-2009 11:12
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201872926|881878|1|SVMF|1|LANL03001MSD
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 9 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.07000	weight of sample
M	3.33980	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.007	4.017	(1.000)	548711	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1992055	40.0000	
* 46 Acenaphthene-d10	164	6.143	6.145	(1.000)	1172920	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	2221833	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	2158940	40.0000	
* 98 Perylene-d12	264	11.489	11.495	(1.000)	1582614	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.797)	797554	66.1985	2280
$ 5 Phenol-d5	99	3.725	3.728	(0.930)	1032233	64.9800	2240
$ 20 Nitrobenzene-d5	82	4.372	4.383	(0.895)	541148	36.6601	1260
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1067666	35.1966	1210
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	340064	71.0580	2440
$ 81 p-Terphenyl-d14	244	8.701	8.702	(0.893)	1317889	39.8873	1370

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.731	3.738	(0.931)	548057	34.7605	1200(Q)
8 2-Chlorophenol	128	3.878	3.882	(0.968)	462703	35.1099	1210
11 1,4-Dichlorobenzene	146	4.019	4.027	(1.003)	517765	32.9987	1140
17 N-Nitrosodipropylamine	70	4.243	4.253	(1.059)	330650	38.9419	1340(Q)
28 1,2,4-Trichlorobenzene	180	4.831	4.836	(0.989)	496669	36.0133	1240
33 4-Chloro-3-methylphenol	107	5.231	5.226	(1.071)	391669	36.8898	1270
47 Acenaphthene	154	6.166	6.174	(1.004)	817546	34.1155	1170
50 2,4-Dinitrotoluene	165	6.254	6.261	(1.018)	319858	34.4618	1180
52 4-Nitrophenol	139	6.190	6.184	(1.008)	157826	37.9480	1300
65 Pentachlorophenol	266	7.148	7.152	(0.976)	217804	40.5426	1390
79 Pyrene	202	8.607	8.611	(0.883)	1748240	37.1191	1280
2 Pyridine	79	2.554	2.529	(0.637)	335728	35.3959	1220
4 Aniline	66	3.790	3.800	(0.946)	263533	38.2540	1320
7 bis(2-Chloroethyl) ether	63	3.801	3.815	(0.949)	398459	32.7906	1130
9 1,3-Dichlorobenzene	146	3.978	3.983	(0.993)	525233	33.3027	1140
12 Benzyl alcohol	108	4.078	4.080	(1.018)	279985	33.6642	1160
13 1,2-Dichlorobenzene	146	4.125	4.133	(1.029)	499059	34.2336	1180
14 bis(2-Chloroisopropyl)ether	45	4.149	4.157	(1.035)	945537	33.4329	1150
15 o-Cresol	107	4.131	4.133	(1.031)	327688	33.4266	1150
18 m,p-Cresols	107	4.225	4.234	(1.054)	502576	38.3356	1320
19 Hexachloroethane	117	4.354	4.364	(1.087)	195588	33.6109	1160
21 Nitrobenzene	77	4.390	4.397	(0.899)	502118	36.4733	1250
22 Isophorone	82	4.537	4.547	(0.929)	925375	36.3171	1250
23 2-Nitrophenol	139	4.601	4.609	(0.942)	240062	37.1455	1280
24 2,4-Dimethylphenol	122	4.596	4.600	(0.941)	411340	36.8760	1270
25 bis(2-Chloroethoxy)methane	93	4.660	4.667	(0.954)	516505	35.4766	1220
26 2,4-Dichlorophenol	162	4.766	4.773	(0.976)	409955	36.9765	1270
27 Benzoic acid	105	4.648	4.643	(0.952)	204110	40.7780	1400
30 Naphthalene	128	4.896	4.903	(1.002)	1265219	32.6016	1120
31 4-Chloroaniline	127	4.913	4.918	(1.006)	478485	36.8956	1270
32 Hexachlorobutadiene	225	4.960	4.966	(1.016)	370759	36.8288	1270
34 2-Methylnaphthalene	142	5.378	5.385	(1.101)	889968	38.0694	1310
36 Hexachlorocyclopentadiene	237	5.484	5.486	(0.893)	189896	35.9111	1240
37 2,4,6-Trichlorophenol	196	5.572	5.572	(0.907)	343229	37.8161	1300
38 2,4,5-Trichlorophenol	196	5.601	5.601	(0.912)	374302	38.4275	1320
40 2-Chloronaphthalene	162	5.737	5.736	(0.934)	926148	37.1057	1280
42 o-Nitroaniline	65	5.790	5.794	(0.943)	299352	37.7195	1300
41 m-Nitroaniline	138	6.090	6.092	(0.991)	203933	47.0275	1620
43 Dimethylphthalate	163	5.895	5.900	(0.960)	1049956	35.2397	1210
44 2,6-Dinitrotoluene	165	5.954	5.958	(0.969)	248011	34.9612	1200
45 Acenaphthylene	152	6.043	6.044	(0.984)	1371298	37.2889	1280
48 2,4-Dinitrophenol	184	6.160	6.165	(1.003)	57126	27.9931	963(Q)
49 Dibenzofuran	168	6.295	6.295	(1.025)	1259404	37.1056	1280
51 Diethylphthalate	149	6.407	6.415	(1.043)	1033217	35.4046	1220
53 Fluorene	166	6.554	6.560	(1.067)	1006273	34.4997	1190
54 4-Chlorophenylphenylether	204	6.531	6.535	(1.063)	600921	35.3340	1220
55 2-Methyl-4,6-dinitrophenol	198	6.572	6.574	(0.897)	133816	30.5725	1050

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.554	6.560	(1.067)	174397	56.8184	1950
133 Diphenylamine	169	6.619	6.622	(0.904)	906510	40.9858	1410
58 1,2-Diphenylhydrazine	77	6.654	6.661	(0.908)	1043179	37.1494	1280
61 4-Bromophenylphenylether	248	6.919	6.926	(0.945)	373263	35.1479	1210
63 Hexachlorobenzene	284	6.995	6.998	(0.955)	395441	35.3567	1220
68 Phenanthrene	178	7.342	7.344	(1.002)	1435545	34.4898	1190
69 Anthracene	178	7.384	7.388	(1.008)	1465879	35.6822	1230
72 Di-n-butylphthalate	149	7.737	7.739	(1.056)	1712748	36.1941	1240
76 Fluoranthene	202	8.389	8.394	(1.145)	1711363	36.0938	1240
85 Butylbenzylphthalate	149	9.131	9.131	(0.937)	758178	37.5586	1290
89 Benzo(a)anthracene	228	9.730	9.733	(0.999)	1588368	34.2882	1180
90 3,3'-Dichlorobenzidine	252	9.672	9.666	(0.993)	434032	28.0416	965
92 Chrysene	228	9.772	9.771	(1.003)	1457116	34.3377	1180
93 bis(2-Ethylhexyl)phthalate	149	9.648	9.656	(0.990)	1053897	38.0444	1310
94 Di-n-octylphthalate	149	10.325	10.330	(0.899)	1610018	44.5044	1530
95 Benzo(b)fluoranthene	252	10.948	10.951	(0.953)	1342123	38.3989	1320
96 Benzo(k)fluoranthene	252	10.983	10.990	(0.956)	1255098	36.5570	1260
97 Benzo(a)pyrene	252	11.407	11.413	(0.993)	1103204	35.6557	1230
99 Indeno(1,2,3-cd)pyrene	276	13.336	13.354	(1.161)	877376	28.2192	971
100 Dibenzo(a,h)anthracene	278	13.348	13.368	(1.162)	755368	29.8044	1020
101 Benzo(ghi)perylene	276	13.907	13.922	(1.210)	682813	25.7602	886
1 N-Methyl-N-nitrosomethylamine	74	2.513	2.495	(0.627)	238817	37.2564	1280

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070209.b/s5g0209.d
Date : 02-JUL-2009 11:12
Client ID: CAHO-09-10375MSD
Sample Info: I120187292618818781ISWHFI1ILANL03001MSD
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

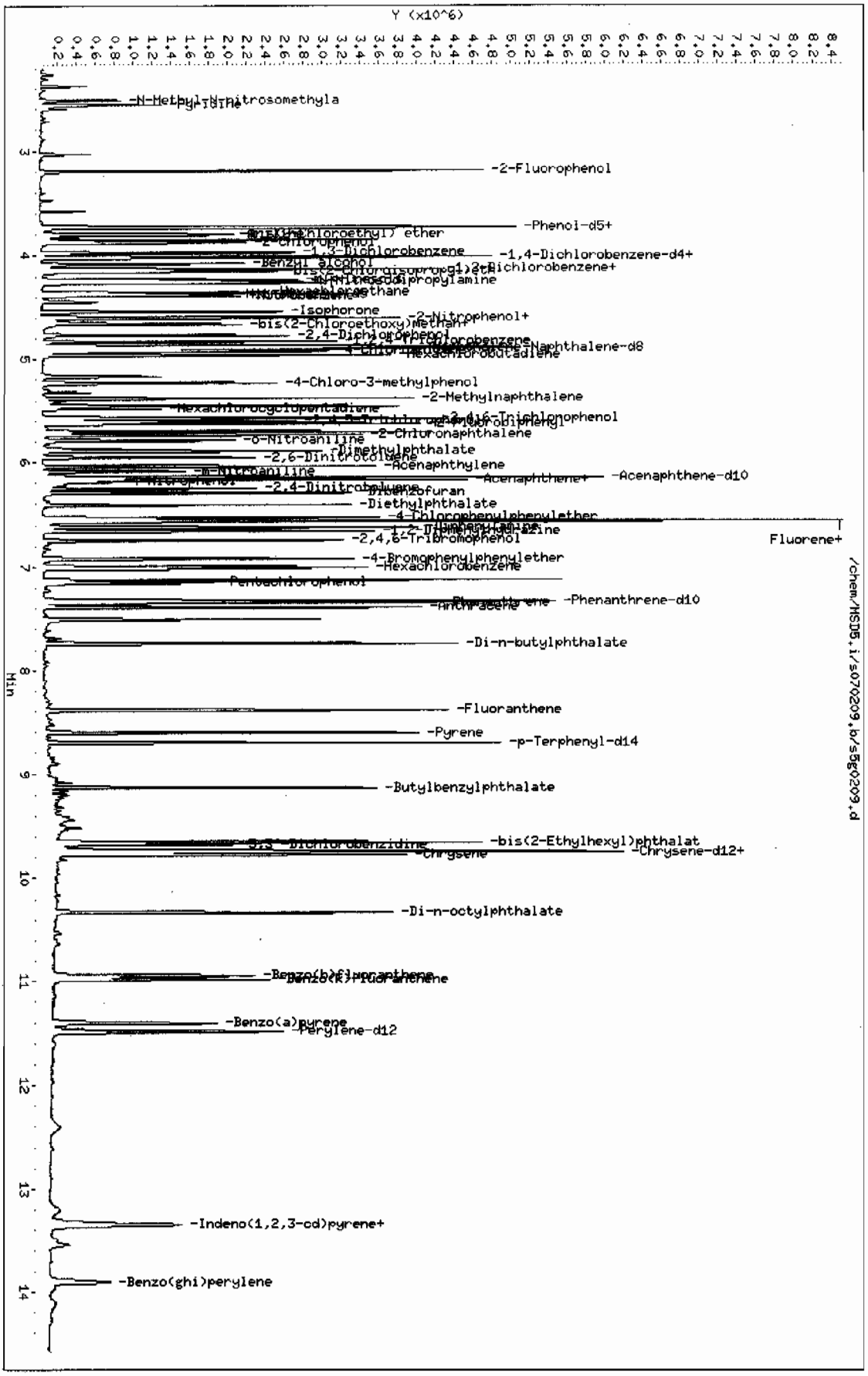

Page 1

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 881877 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201872923 MB	01-JUL-2009 22:14:09	30	1	0.03333
1201872924 LCS	01-JUL-2009 22:14:09	30	1	0.03333
232503001	01-JUL-2009 22:14:09	30.03	1	0.0333
1201872925 MS (232503001)	01-JUL-2009 22:14:09	30.04	1	0.03329
1201872926 MSD (232503001)	01-JUL-2009 22:14:09	30.07	1	0.03326
232503002	01-JUL-2009 22:14:09	30.06	1	0.03327
232503003	01-JUL-2009 22:14:09	30.05	1	0.03328
232503004	01-JUL-2009 22:14:09	30.06	1	0.03327
232503005	01-JUL-2009 22:14:09	30	1	0.03333
232503006	01-JUL-2009 22:14:09	30.02	1	0.03331
232503007	01-JUL-2009 22:14:09	30	1	0.03333
232503008	01-JUL-2009 22:14:09	30.03	1	0.0333
232503009	01-JUL-2009 22:14:09	30.04	1	0.03329
232503010	01-JUL-2009 22:14:09	30.06	1	0.03327
232503011	01-JUL-2009 22:14:09	30.01	1	0.03332
232503012	01-JUL-2009 22:14:09	30.07	1	0.03326
232503013	01-JUL-2009 22:14:09	30	1	0.03333
232503014	01-JUL-2009 22:14:09	30.05	1	0.03328

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201872924	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
LCS	1201872924	BENZIDINE LCS	UE090622-18	1	mL
MS	1201872925	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
MS	1201872925	BENZIDINE LCS	UE090622-18	1	mL
MSD	1201872926	BNA LCS w/o Benzidine 50ppm	UE090622-11	1	mL
MSD	1201872926	BENZIDINE LCS	UE090622-18	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1143854-D	150	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: AAW

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD5

DATE: 07/02/2009 METHOD:8270C MSD5-DFTPPx.m OPERATOR:rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1424 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD5.i/s070209.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s5g0201.d	WBN090624-01	rmb	02-JUL-2009 08:16	50PPM	s070209	1.0	DFTPP	
s5g0202.d	WBN090617-02.4	RMB	02-JUL-2009 08:28	40 PPM	s070209	1.0	MEGACVS	pass 505671
s5g0203.d	WBN090619-01.4	RMB	02-JUL-2009 08:56	40 PPM	s070209	1.0	AP12CVS	
s5g0204.d	1201872923	RMB	02-JUL-2009 09:19	881878	09-2497	1.0	SBLK01	
s5g0205.d	1201872924	RMB	02-JUL-2009 09:41	881878	09-2497	1.0	SBLK01LCS	DUSE - use s5g0206
s5g0206.d	1201872924	RMB	02-JUL-2009 10:04	881878	09-2497	2.0	SBLK01LCS	
s5g0207.d	232503001	RMB	02-JUL-2009 10:27	881878	09-2497	1.0	LANL	
s5g0208.d	1201872925	RMB	02-JUL-2009 10:49	881878	09-2497	1.0	LANL03001MS	
s5g0209.d	1201872926	RMB	02-JUL-2009 11:12	881878	09-2497	1.0	LANL03001MSD	
s5g0210.d	232503002	RMB	02-JUL-2009 11:34	881878	09-2497	1.0	LANL	
s5g0211.d	232503003	RMB	02-JUL-2009 11:57	881878	09-2497	1.0	LANL	
s5g0212.d	232503004	RMB	02-JUL-2009 12:19	881878	09-2497	1.0	LANL	
s5g0213.d	232503005	RMB	02-JUL-2009 12:42	881878	09-2497	1.0	LANL	
s5g0214.d	232503006	RMB	02-JUL-2009 13:05	881878	09-2497	1.0	LANL	fail istd confirmed by s5g0223
s5g0215.d	232503007	RMB	02-JUL-2009 13:27	881878	09-2497	1.0	LANL	
s5g0216.d	232503008	RMB	02-JUL-2009 13:50	881878	09-2497	1.0	LANL	fail istd confirmed by s5g0224
s5g0217.d	232503009	RMB	02-JUL-2009 14:12	881878	09-2497	1.0	LANL	
s5g0218.d	232503010	RMB	02-JUL-2009 14:34	881878	09-2497	1.0	LANL	
s5g0219.d	232503011	RMB	02-JUL-2009 14:57	881878	09-2497	1.0	LANL	fail istd confirmed by s5g0225

s5g0220.d	232503012	RMB	02-JUL-2009 15:19	881878	09-2497	1.0	LANL	
s5g0221.d	232503013	RMB	02-JUL-2009 15:42	881878	09-2497	1.0	LANL	
s5g0222.d	232503014	RMB	02-JUL-2009 16:04	881878	09-2497	1.0	LANL	fail istd confirmed by s5g0226
s5g0223.d	232503006	RMB	02-JUL-2009 16:27	881878	09-2497	1.0	LANL	DUSE-fail istd confirms s5g0214
s5g0224.d	232503008	RMB	02-JUL-2009 16:49	881878	09-2497	1.0	LANL	DUSE-fail istd confirms s5g0216
s5g0225.d	232503011	RMB	02-JUL-2009 17:12	881878	09-2497	1.0	LANL	DUSE-fail istd confirms s5g0219
s5g0226.d	232503014	RMB	02-JUL-2009 17:34	881878	09-2497	1.0	LANL	DUSE-fail istd confirms s5g0222

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD5

DATE: 06/25/2009 METHOD:8270C MSD5-DFTPPx.m OPERATOR:rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1424 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD5.i/s062509.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s5f2501.d	WBN090624-01	rmb	25-JUN-2009 07:16	50PPM	s062509	1.0	DFTPP	DUSE
s5f2502.d	WBN090617-02.4	RMB	25-JUN-2009 07:29	40 PPM	s062509	1.0	MEGACVS	DUSE - fail
s5f2503.d	WBN090617-02.4	RMB	25-JUN-2009 08:12	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - cut column
s5f2504.d	WBN090624-01	rmb	25-JUN-2009 09:17	50PPM	s062509	1.0	DFTPP	DUSE
s5f2505.d	WBN090617-02.4	RMB	25-JUN-2009 09:30	40 PPM	s062509	1.0	MEGACVS	DUSE - fail
s5f2506.d	WBN090619-01.4	RMB	25-JUN-2009 09:58	40 PPM	s062509	1.0	AP12CVS	DUSE
s5f2507.d	WBN090617-02.4	RMB	25-JUN-2009 10:36	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - clean IP
s5f2508.d	WBN090624-01	rmb	25-JUN-2009 12:55	50PPM	s062509	1.0	DFTPP	DUSE
s5f2509.d	WBN090617-02.4	RMB	25-JUN-2009 13:09	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - run ICAL
s5f2510-D.d	WBN090624-01	rmb	25-JUN-2009 14:07	50PPM	s062509	1.0	DFTPP	
s5f2510.d	WBN090624-01	rmb	25-JUN-2009 14:07	50PPM	s062509	1.0	DFTPP	
s5f2511.d	instrument blank	RMB	25-JUN-2009 14:20		s062509	1.0		
s5f2512.d	WBN090602-08	RMB	25-JUN-2009 14:42	1 PPM	s062509	1.0	MEGAICAL001	
s5f2513.d	WBN090602-07	RMB	25-JUN-2009 15:10	10 PPM	s062509	1.0	MEGAICAL010	
s5f2514.d	WBN090602-06	RMB	25-JUN-2009 15:38	20 PPM	s062509	1.0	MEGAICAL020	
s5f2515.d	WBN090602-05.1	RMB	25-JUN-2009 16:05	40 PPM	s062509	1.0	MEGAICAL040	
s5f2516.d	WBN090602-04	RMB	25-JUN-2009 16:33	50 PPM	s062509	1.0	MEGAICAL050	
s5f2517.d	WBN090602-03	RMB	25-JUN-2009 17:02	80 PPM	s062509	1.0	MEGAICAL080	
s5f2518.d	WBN090602-02	RMB	25-JUN-2009 17:29	100 PPM	s062509	1.0	MEGAICAL100	

s5f2519.d	WBN090602-01	RMB	25-JUN-2009 17:57	120 PPM	s062509	1.0	MEGAICAL120	
s5f2520.d	instrument blank	RMB	25-JUN-2009 18:25		s062509	1.0		
s5f2521.d	WBN090602-09.1	RMB	25-JUN-2009 18:48	40 PPM	s062509	1.0	MEGAICV	DUSE - fail
s5f2522.d	WBN090528-07	RMB	25-JUN-2009 19:10	10 PPM	s062509	1.0	AP12ICAL010	
s5f2523.d	WBN090528-06	RMB	25-JUN-2009 19:32	20 PPM	s062509	1.0	AP12ICAL020	
s5f2524.d	WBN090528-05.1	RMB	25-JUN-2009 19:55	40 PPM	s062509	1.0	AP12ICAL040	
s5f2525.d	WBN090528-04	RMB	25-JUN-2009 20:18	50 PPM	s062509	1.0	AP12ICAL050	
s5f2526.d	WBN090528-03	RMB	25-JUN-2009 20:41	80 PPM	s062509	1.0	AP12ICAL080	
s5f2527.d	WBN090528-02	RMB	25-JUN-2009 21:03	100 PPM	s062509	1.0	AP12ICAL100	
s5f2528.d	WBN090528-01	RMB	25-JUN-2009 21:25	120 PPM	s062509	1.0	AP12ICAL120	
s5f2529.d	instrument blank	RMB	25-JUN-2009 21:48		s062509	1.0		
s5f2530-625.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 625 - 062509
s5f2530-D.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 8270D - 062509
s5f2530.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 8270C - 062509
s5f2531-D.d	WBN090624-01	rmb	26-JUN-2009 08:28	50PPM	s062509	1.0	DFTPP	
s5f2531.d	WBN090624-01	rmb	26-JUN-2009 08:28	50PPM	s062509	1.0	DFTPP	
s5f2532.d	instrument blank	RMB	26-JUN-2009 08:41		s062509	1.0		
s5f2533-625.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 625 - 062509
s5f2533-BOE.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - BOE - 062509
s5f2533-D.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 8270D - 062509
s5f2533.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 8270C - 062509
s5f2534.d	WBN090609-24	RMB	26-JUN-2009 09:31	10 PPM	s062509	1.0	PESTICAL010	
s5f2535.d	WBN090609-23	RMB	26-JUN-2009 09:53	20 PPM	s062509	1.0	PESTICAL020	
s5f2536.d	WBN090609-22.1	RMB	26-JUN-2009 10:16	40 PPM	s062509	1.0	PESTICAL040	
s5f2537.d	WBN090609-21	RMB	26-JUN-2009 10:39	50 PPM	s062509	1.0	PESTICAL050	
s5f2538.d	WBN090609-20	RMB	26-JUN-2009 11:02	80 PPM	s062509	1.0	PESTICAL080	
s5f2539.d	WBN090609-19	RMB	26-JUN-2009 11:25	100 PPM	s062509	1.0	PESTICAL100	

s5f2540.d	WBN090609-18	RMB	26-JUN-2009 11:47	120 PPM	s062509		1.0	PESTICAL120	
s5f2541.d	instrument blank	RMB	26-JUN-2009 12:10		s062509		1.0		
s5f2542.d	WBN090624-16	RMB	26-JUN-2009 12:32	500 PPM	s062509		1.0	HEXICAL500	
s5f2543.d	WBN090624-15	RMB	26-JUN-2009 12:55	1000 PPM	s062509		1.0	HEXICAL1000	
s5f2544.d	WBN090624-14	RMB	26-JUN-2009 13:17	1250 PPM	s062509		1.0	HEXICAL1250	
s5f2545.d	WBN090624-13	RMB	26-JUN-2009 13:40	1500 PPM	s062509		1.0	HEXICAL1500	
s5f2546.d	WBN090624-12	RMB	26-JUN-2009 14:02	1750 PPM	s062509		1.0	HEXICAL1750	
s5f2547.d	UBN090317-02.6	RMB	26-JUN-2009 14:25	2000 PPM	s062509		1.0	HEXICAL2000	
s5f2548.d	instrument blank	RMB	26-JUN-2009 14:47		s062509		1.0		
s5f2549-D.d	WBN090609-25.1	RMB	26-JUN-2009 15:10	40 PPM	s062509		1.0	PESTICV	PESTICV - 8270D - 062509
s5f2549.d	WBN090609-25.1	RMB	26-JUN-2009 15:10	40 PPM	s062509		1.0	PESTICV	PESTICV - 8270C - 062509
s5f2550-D.d	WBN090624-10.1	RMB	26-JUN-2009 15:32	1250 PPM	s062509		1.0	HEXICV	HEXICV - 8270D - 062509
s5f2550.d	WBN090624-10.1	RMB	26-JUN-2009 15:32	1250 PPM	s062509		1.0	HEXICV	HEXICV - 8270C - 062509
s5f2551.d	UBN090428-01	RMB	26-JUN-2009 15:54	10 PPM	s062509		1.0	NEVADAICAL010	
s5f2552.d	UBN090428-02	RMB	26-JUN-2009 16:17	20 PPM	s062509		1.0	NEVADAICAL020	
s5f2553.d	UBN090428-03	RMB	26-JUN-2009 16:39	40 PPM	s062509		1.0	NEVADAICAL040	
s5f2554.d	UBN090428-04	RMB	26-JUN-2009 17:01	50 PPM	s062509		1.0	NEVADAICAL050	
s5f2555.d	UBN090428-05	RMB	26-JUN-2009 17:24	80 PPM	s062509		1.0	NEVADAICAL080	
s5f2556.d	UBN090428-06	RMB	26-JUN-2009 17:47	100 PPM	s062509		1.0	NEVADAICAL100	
s5f2557.d	UBN090428-07	RMB	26-JUN-2009 18:09	120 PPM	s062509		1.0	NEVADAICAL120	

NCR Report No.: 708228
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
06-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
SEMIVOA GC/MS	SW846 8270C	Solid	LANL
Batch ID:	**Sample Numbers:**		
881878	See Below		

Potentially affected work order(s)(SDG): 232503(09-2497)

Application Issues:

Failed RPD for MS/MSD, or PS/PSD

Failed Recovery for LCS/LCSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The LCS (1201872924) did not meet spike recovery acceptance criteria for all target analytes. Please see the spike recovery report for the specific failures.	1. The failures represented less than 5% of the requested spike analyte list. That satisfied the clients acceptance criteria and the data were reported.
2. The MS (1201872925)/MSD (1201872926) RPD values did not meet acceptance criteria for all target analytes. Please see the spike recovery report for the specific failures.	2. Because the individual MS and MSD recoveries were within their established recovery acceptance limits, the data were reported unqualified for the RPD value failures.

Originator's Name:

Richard Bomar 06-JUL-09

Data Validator/Group Leader:

Daniel Beacham 07-JUL-09

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0223.d
Lab Smp Id: 232503006 Client Smp ID: CAMO-09-10370
Inj Date : 02-JUL-2009 16:27
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503006|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	4.09300	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	520073	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1810232	40.0000	
* 46 Acenaphthene-d10	164	6.142	6.145	(1.000)	1074573	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	1732167	40.0000	
* 91 Chrysene-d12	240	9.742	9.747	(1.000)	1126601	40.0000	
* 98 Perylene-d12	264	11.495	11.495	(1.000)	636404	40.0000	
$ 3 2-Fluorophenol	112	3.196	3.194	(0.796)	748922	65.5849	2280
$ 5 Phenol-d5	99	3.725	3.728	(0.928)	1024737	68.0604	2360
$ 20 Nitrobenzene-d5	82	4.378	4.383	(0.896)	458674	34.1939	1190
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1019528	36.6857	1270
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	299140	68.2274	2370
$ 81 p-Terphenyl-d14	244	8.707	8.702	(0.894)	866944	50.2826	1750

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.607	8.611	(0.883)	9314	0.37897	13.2(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0223.d
Report Date: 07/02/2009 17:51
Lab. ID: 232503006 SampleType: SAMPLE
Injection Date: 02-JUL-2009 16:27
Operator: RMB Instrument: MSD5.i
Sample Info: |232503006|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	60232	3.72	3.80	80-120	100	(T)
93	234	3.68	3.80	190-250	0	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	67639	4.38	4.25	80-120	100	(T)
42	46426	4.38	4.25	55-115	69	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	1701	4.69	4.64	80-120	100	( )
122	872	4.67	4.64	54-114	51	(Q)
77	950	4.68	4.64	50-110	56	( )
31 4-Chloroaniline			CAS#: 106-47-8			
127	456	4.92	4.92	80-120	100	( )
65	4479	4.88	4.92	0- 55	982	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	186	6.12	6.09	80-120	100	( )
92	339	6.11	6.09	84-144	182	(Q)
108	22806	6.14	6.09	0- 40	12213	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	230540	6.14	5.90	80-120	100	(T)
164	1074573	6.14	5.90	0- 40	466	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	140634	6.14	5.96	80-120	100	(T)
63	2396	6.15	5.96	55-115	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	140634	6.14	6.26	80-120	100	(T)
89	2434	6.14	6.26	38- 98	2	(QT)
63	2396	6.15	6.26	19- 79	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	12445	6.75	6.56	80-120	100	(T)
165	12468	6.75	6.56	61-121	100	(T)
167	4263	6.75	6.56	0- 44	34	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1191	6.75	6.57	80-120	100	(T)
105	2015	6.75	6.57	2- 62	169	(QT)
51	1514	6.75	6.57	46-106	127	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	22002	6.75	6.93	80-120	100	(T)
141	103802	6.75	6.93	34- 94	472	(QT)
250	41882	6.75	6.93	68-128	190	(QT)
79 Pyrene			CAS#: 129-00-0			
202	9314	8.61	8.61	80-120	100	( )
200	1898	8.61	8.61	0- 51	20	( )
101	1490	8.61	8.61	0- 41	16	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	13843	9.75	9.73	80-120	100	( )
226	936	9.75	9.73	0- 56	7	( )
229	934	9.75	9.73	0- 50	7	( )
92 Chrysene			CAS#: 218-01-9			
228	13843	9.75	9.77	80-120	100	( )
229	3038	9.74	9.77	0- 50	22	( )
226	761	9.75	9.77	0- 60	6	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	4647	10.95	10.95	80-120	100	( )
253	860	10.90	10.95	0- 52	19	( )
125	639	10.95	10.95	0- 38	14	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	5090	10.95	10.99	80-120	100	( )
253	860	10.90	10.98	0- 52	17	(T)
125	1231	10.95	10.98	0- 38	24	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	5551	11.34	11.41	80-120	100	(T)
253	2919	11.34	11.41	0- 52	53	(QT)
125	1162	11.34	11.41	0- 30	21	(T)

Q qualifier indicates ion failed ratio requirement
T qualifier indicates RT outside 0.06 minute window of expected RT

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0223.d
Lab Smp Id: 232503006 Client Smp ID: CAMO-09-10370
Inj Date : 02-JUL-2009 16:27
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503006|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariabl

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	4.09300	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.013	3328839	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.031	408017	4.90281139	170	0		0	10

Data File: /chem/MSD5.i/s070209.b/s5g0223.d

Date : 02-JUL-2009 16:27

Client ID: CAMO-09-10370

Sample Info: |2325030061881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

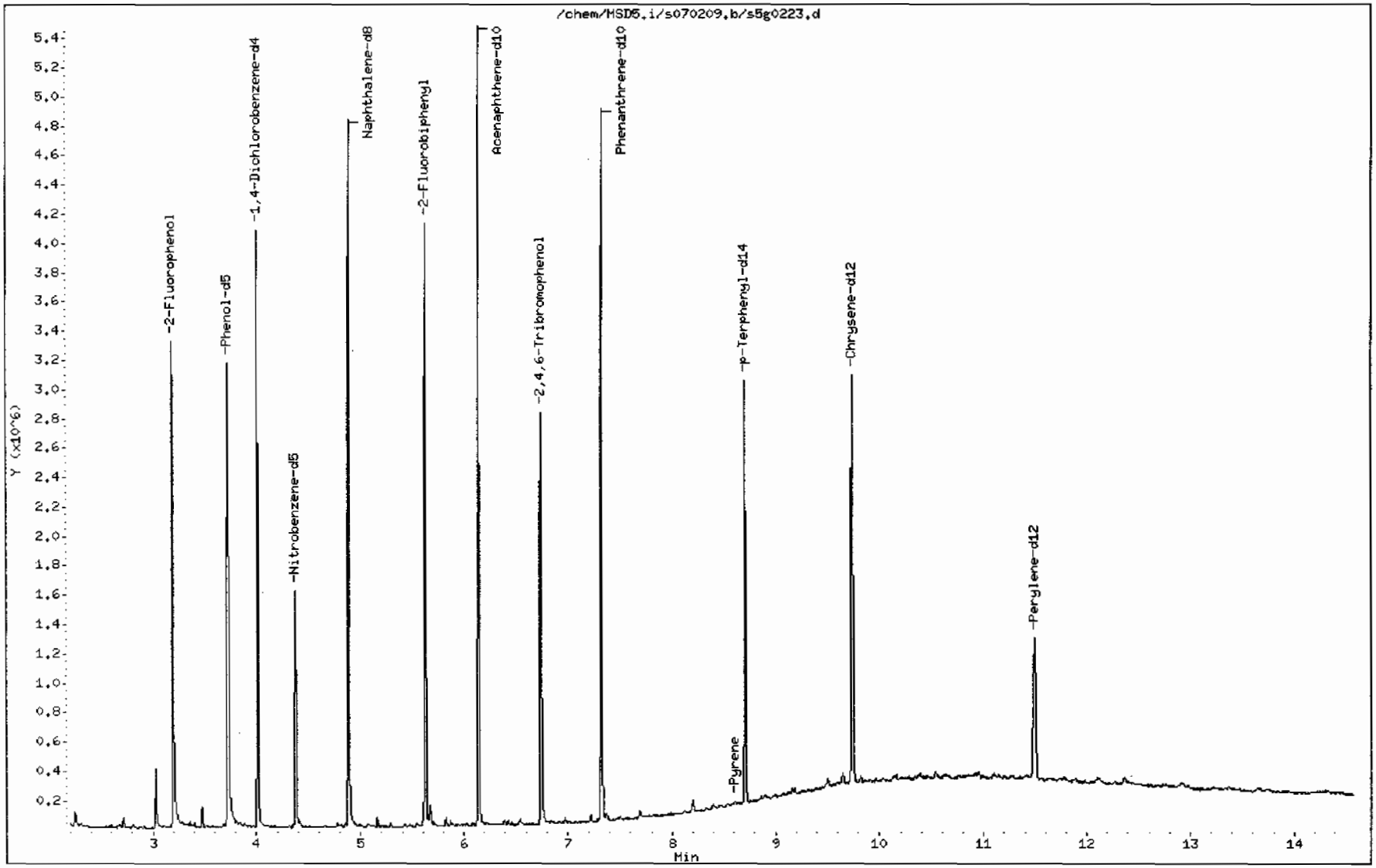

Data File: /chem/MSD5.i/s070209.b/s5g0223.d

Date : 02-JUL-2009 16:27

Client ID: CAMO-09-10370

Instrument: MSD5.i

Sample Info: 1232503006|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 13.2 ug/Kg

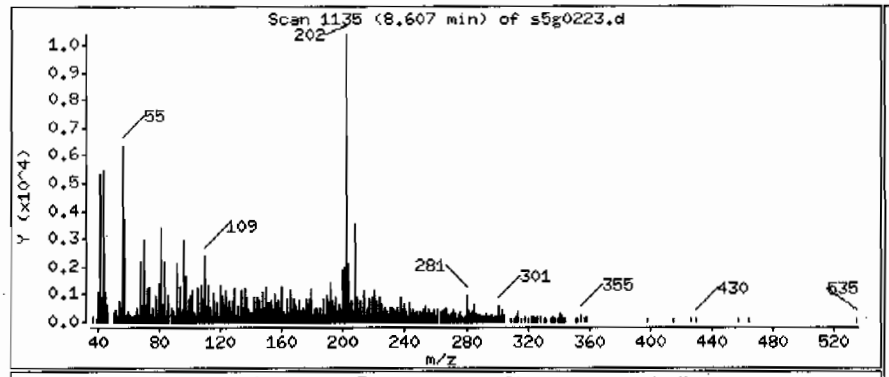

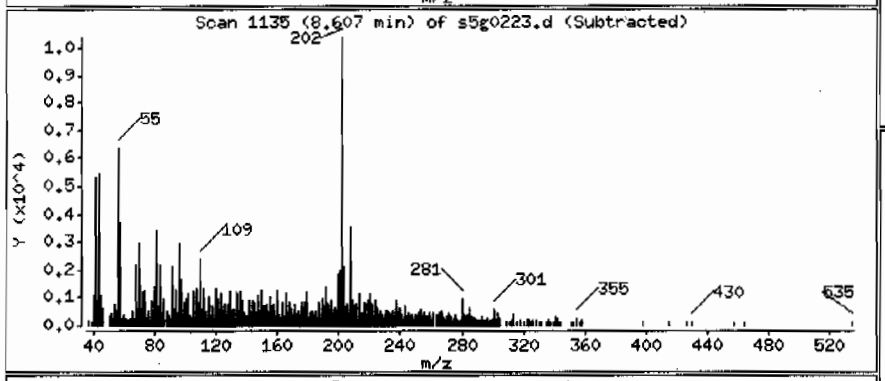

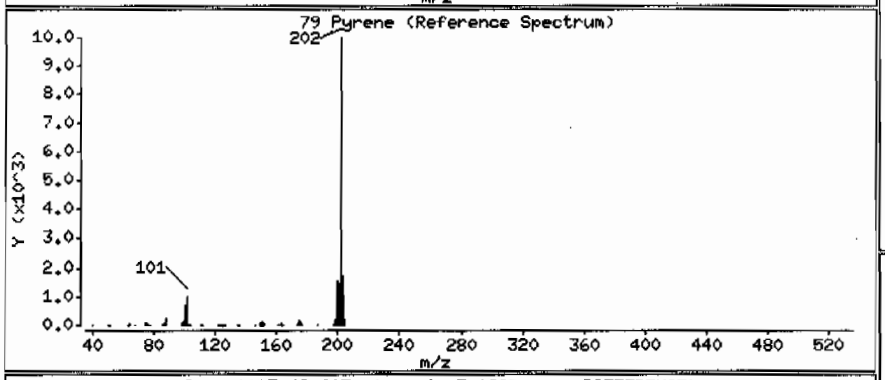

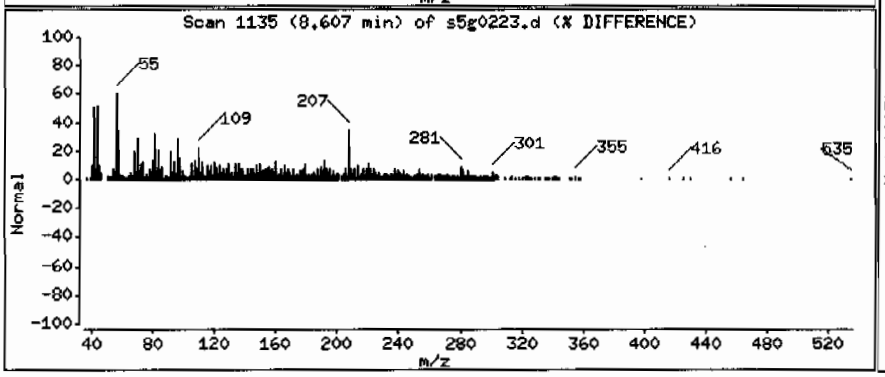

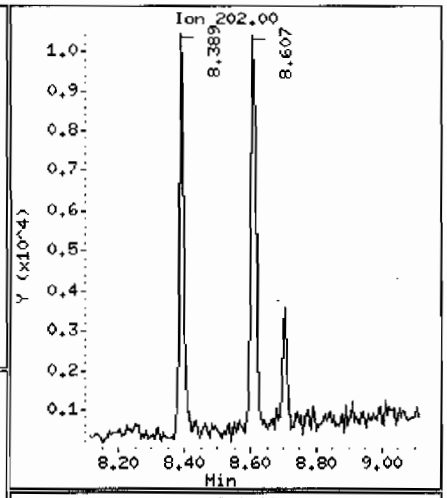

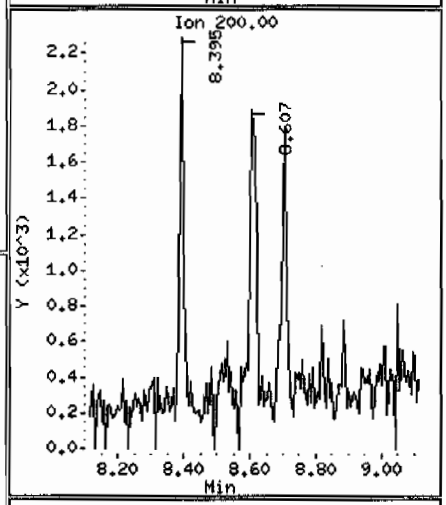

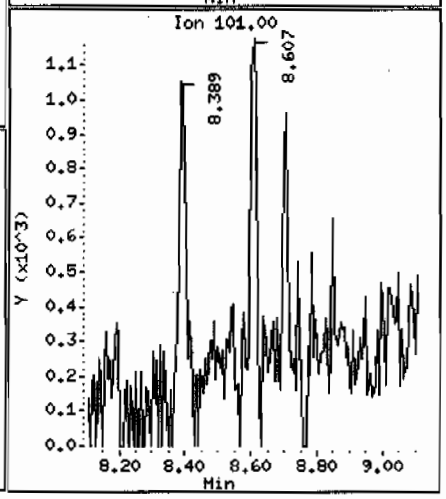

Data File: /chem/MSD5.i/s070209.b/s5g0223.d

Date : 02-JUL-2009 16:27

Client ID: CAMO-09-10370

Instrument: MSD5.i

Sample Info: 1232503006188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	28	C6H12O2	116

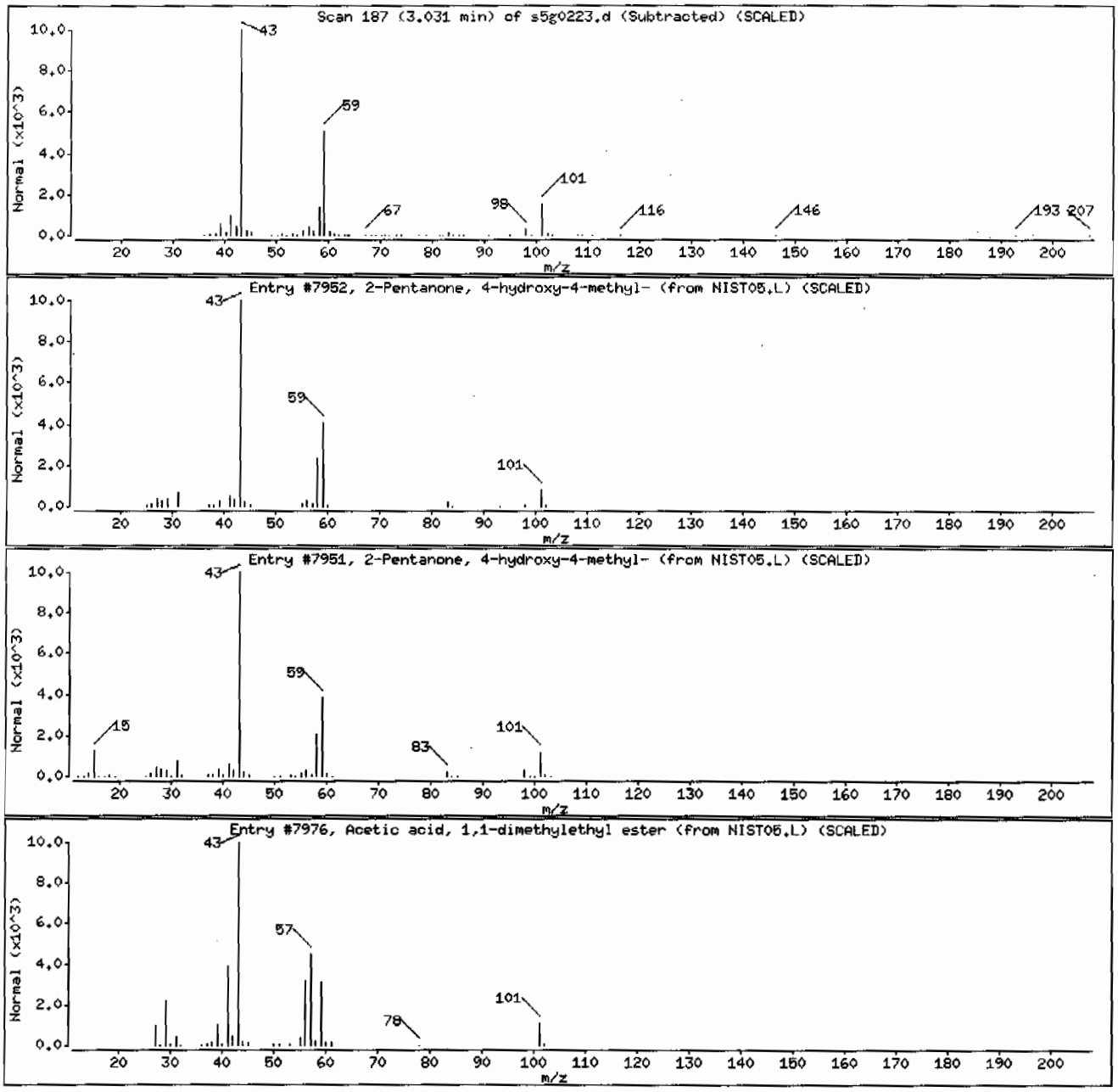

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0224.d
Lab Smp Id: 232503008 Client Smp ID: CAMO-09-10371
Inj Date : 02-JUL-2009 16:49
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503008|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	14.11360	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	610133	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	2128301	40.0000	
* 46 Acenaphthene-d10	164	6.143	6.145	(1.000)	1254579	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	2039544	40.0000	
* 91 Chrysene-d12	240	9.748	9.747	(1.000)	1146292	40.0000	
* 98 Perylene-d12	264	11.501	11.495	(1.000)	709439	40.0000	
$ 3 2-Fluorophenol	112	3.202	3.194	(0.798)	912431	68.1094	2640
$ 5 Phenol-d5	99	3.725	3.728	(0.928)	1248369	70.6748	2740
$ 20 Nitrobenzene-d5	82	4.378	4.383	(0.896)	564728	35.8084	1390
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1256104	38.7134	1500
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	363422	70.9959	2750
$ 81 p-Terphenyl-d14	244	8.707	8.702	(0.893)	1089113	62.0832	2410(R)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
53 Fluorene	166	6.748	6.560	(1.099)	14313	0.45878	17.8(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

ION RATIO REPORT

SV REPORT

Data file: s5g0224.d
Report Date: 07/02/2009 17:52
Lab. ID: 232503008 SampleType: SAMPLE
Injection Date: 02-JUL-2009 16:49
Operator: RMB Instrument: MSD5.i
Sample Info: |232503008|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	75212	3.73	3.80	80-120	100	(T)
93	961	3.68	3.80	190-250	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	82508	4.38	4.25	80-120	100	(T)
42	57955	4.37	4.25	55-115	70	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	452	4.68	4.64	80-120	100	( )
122	392	4.70	4.64	54-114	87	( )
77	1214	4.67	4.64	50-110	268	(Q)
31 4-Chloroaniline			CAS#: 106-47-8			
127	684	4.92	4.92	80-120	100	( )
65	481	4.92	4.92	0- 55	70	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	205	6.15	6.09	80-120	100	( )
92	6997	6.14	6.09	84-144	3412	(Q)
108	27125	6.14	6.09	0- 40	13226	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	275844	6.15	5.90	80-120	100	(T)
164	1254579	6.14	5.90	0- 40	455	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	167906	6.14	5.96	80-120	100	(T)
63	2197	6.14	5.96	55-115	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	167906	6.14	6.26	80-120	100	(T)
89	3034	6.15	6.26	38- 98	2	(QT)
63	2197	6.14	6.26	19- 79	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	14313	6.75	6.56	80-120	100	(T)
165	16428	6.75	6.56	61-121	115	(T)
167	5810	6.75	6.56	0- 44	41	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1237	6.75	6.57	80-120	100	(T)
105	1829	6.75	6.57	2- 62	148	(QT)
51	2409	6.75	6.57	46-106	195	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	26078	6.75	6.93	80-120	100	(T)
141	127170	6.75	6.93	34- 94	488	(QT)
250	50919	6.75	6.93	68-128	195	(QT)

Q qualifier indicates ion failed ratio requirement
T qualifier indicates RT outside 0.06 minute window of expected RT

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0224.d
Lab Smp Id: 232503008 Client Smp ID: CAMO-09-10371
Inj Date : 02-JUL-2009 16:49
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503008|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	14.11360	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.013	3876616	40.000
* 46 Acenaphthene-d10	6.143	5248684	40.000
* 98 Perylene-d12	11.501	1972720	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.031	474441	4.89541169	190	0		0	10
1,4-Methanoazulene, decahydro-4,8,8-trim				CAS #: 475-20-7			
5.872	678226	5.16872964	200	99	NIST05.L	60020	46
Unknown				CAS #:			
10.954	199734	4.04992977	157	0		0	98
Unknown				CAS #:			
11.425	202095	4.09778352	159	0		0	98

Data File: /chem/MSD5.i/s070209.b/s5g0224.d

Date : 02-JUL-2009 16:49

Client ID: CAMO-09-10371

Sample Info: 1232503008|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

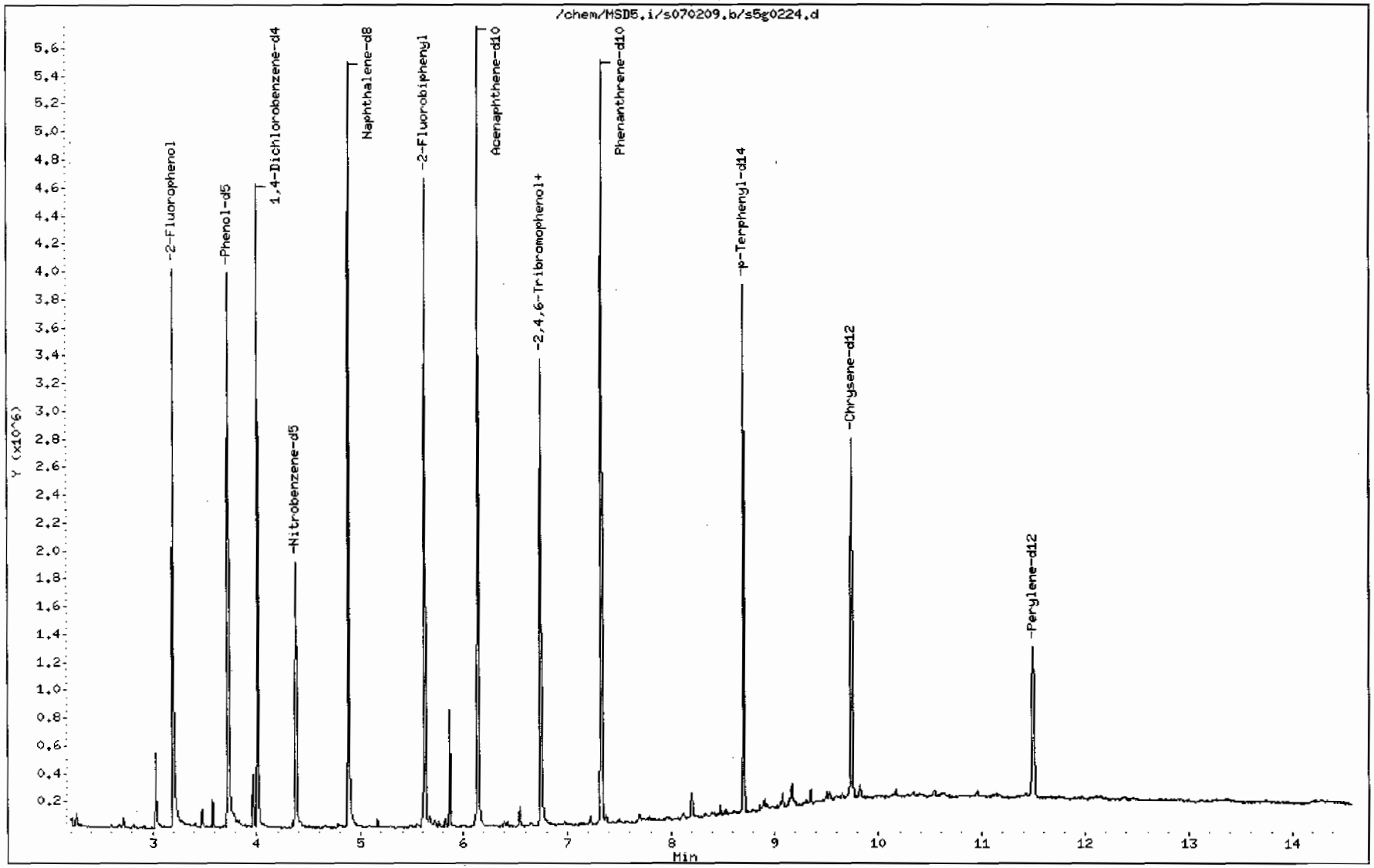

Data File: /chem/MSD5.i/s070209.b/s5g0224.d

Date : 02-JUL-2009 16:49

Client ID: CAMO-09-10371

Instrument: MSD5.i

Sample Info: |2325030008|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

53 Fluorene

Concentration: 17.8 ug/Kg

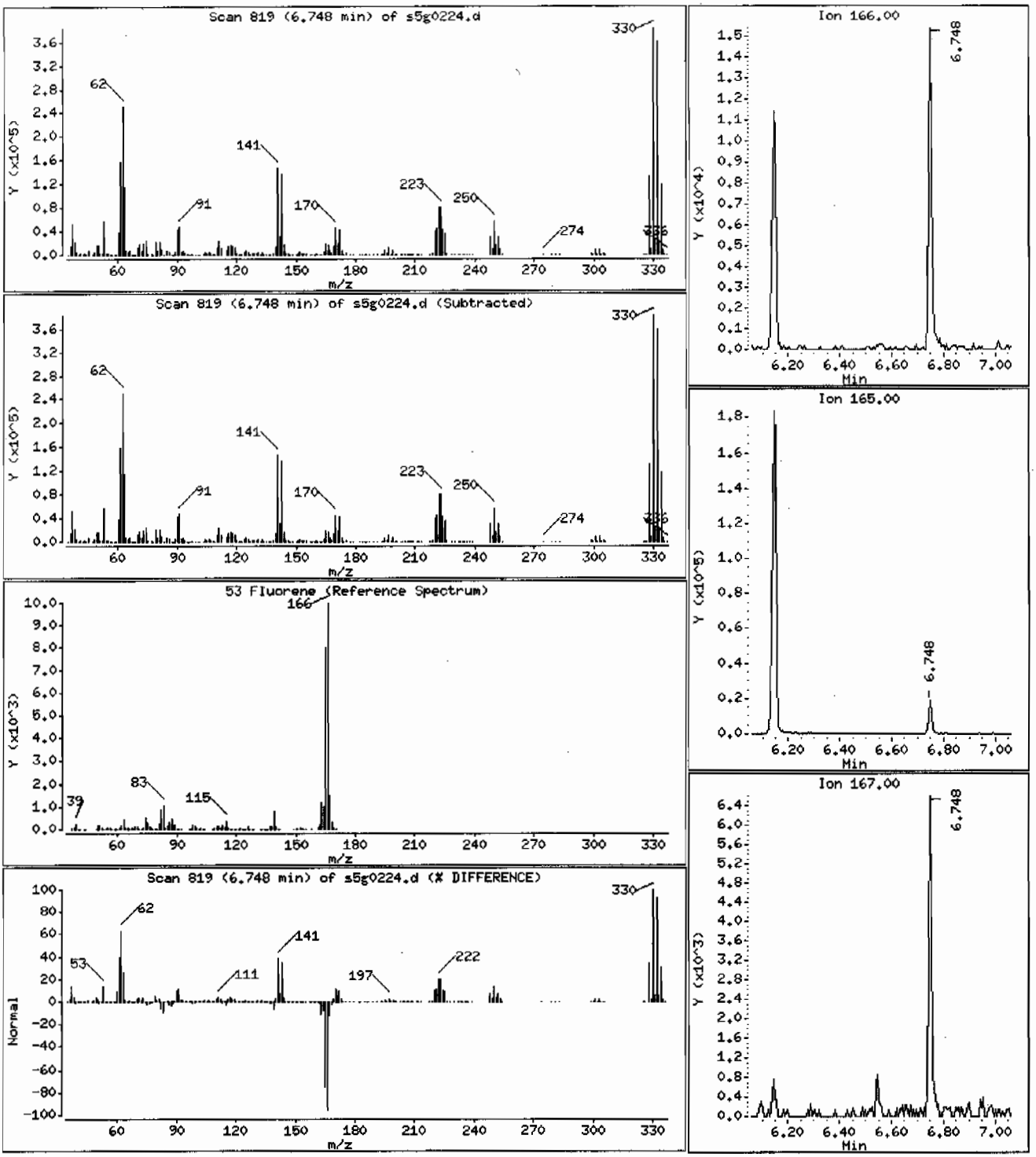

Data File: /chem/MSD5.i/s070209.b/s5g0224.d

Date : 02-JUL-2009 16:49

Client ID: CAMO-09-10371

Instrument: MSD5.i

Sample Info: 1232503008188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	16	C4H7NO2	101

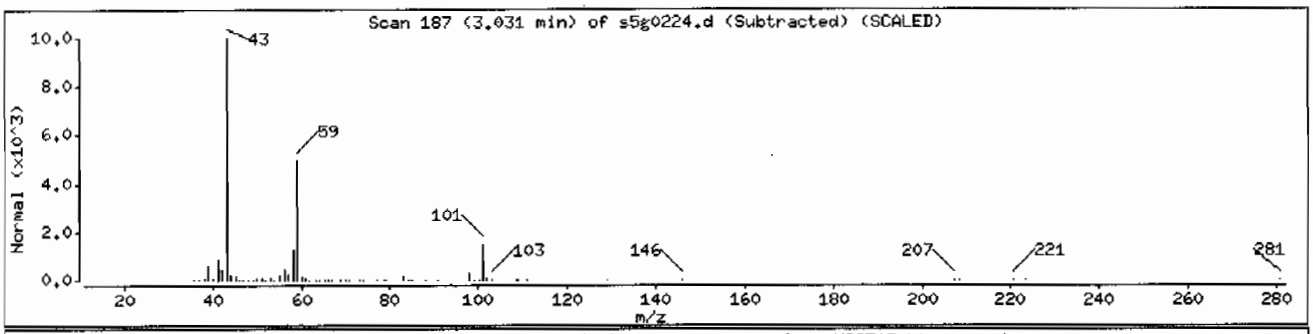

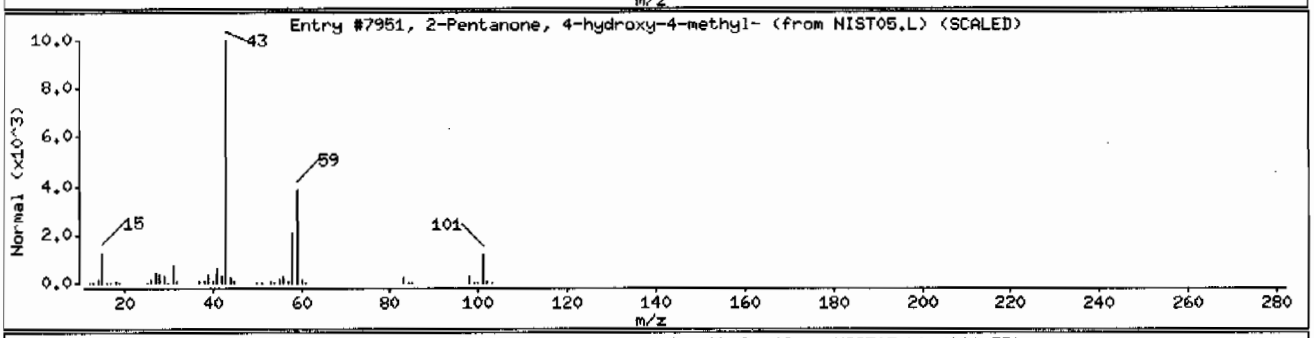

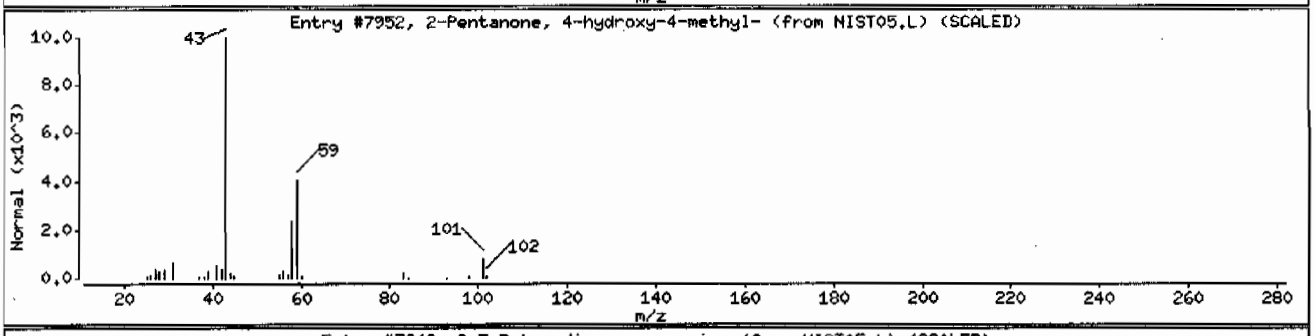

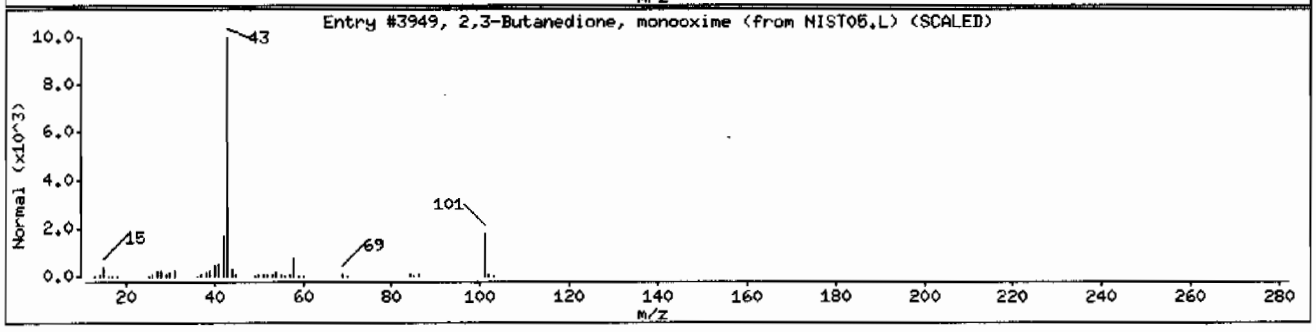

Data File: /chem/MSD5.i/s070209.b/s5g0224.d

Date : 02-JUL-2009 16:49

Client ID: CAMO-09-10371

Instrument: MSD5.i

Sample Info: |2325030081881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60020	99	C15H24	204
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60024	98	C15H24	204
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60018	98	C15H24	204

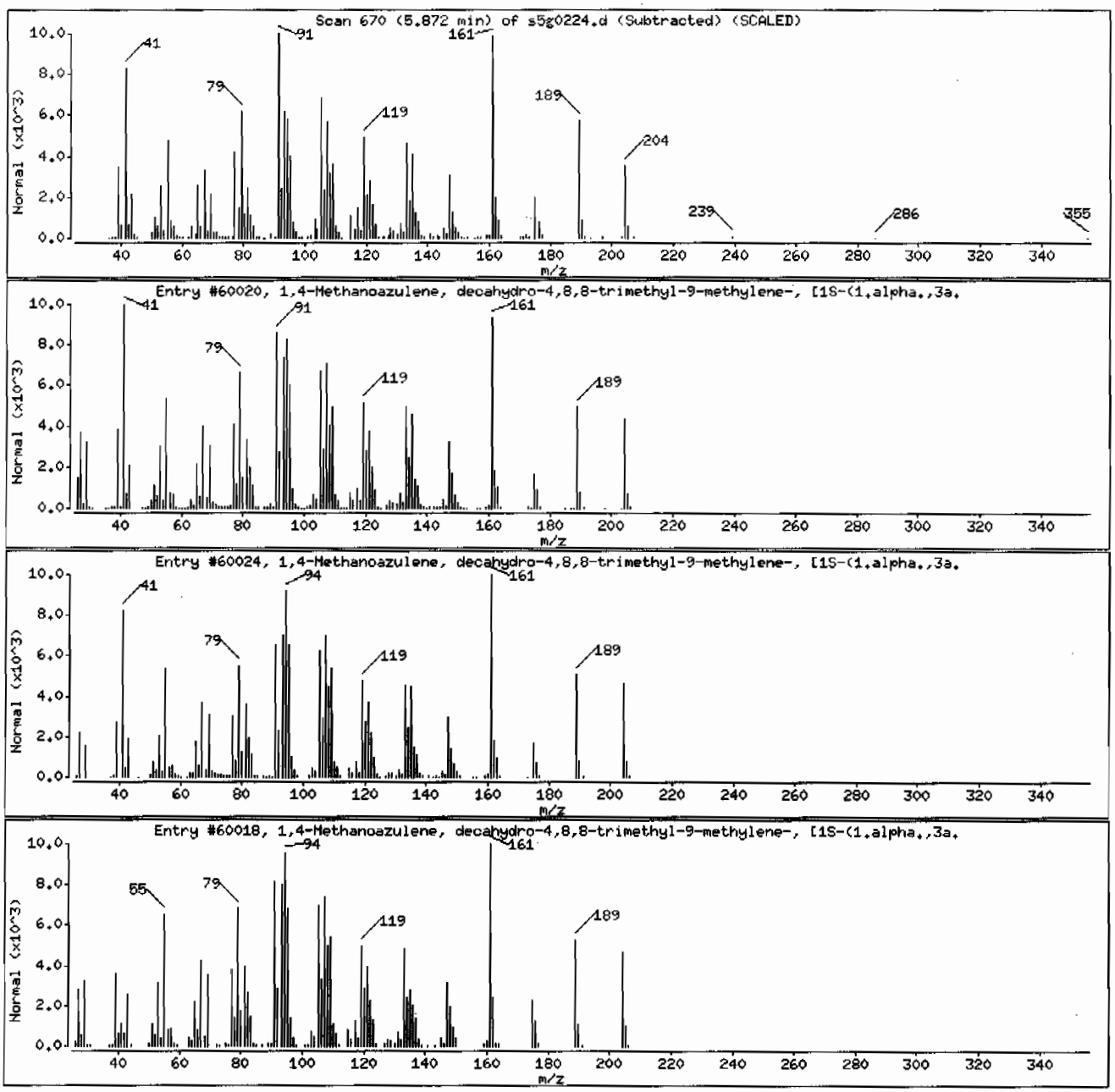

Data File: /chem/MSD5.i/s070209.b/s5g0224.d

Date : 02-JUL-2009 16:49

Client ID: CAMO-09-10371

Instrument: MSD5.i

Sample Info: 1232503008|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
13,17,21-Trimethyltritriacontane	81469-02-5	NIST05.L	182867	59	C34H70	479
5-Methyl-2-trimethylsilyloxy-acetophenon	97389-69-0	NIST05.L	72509	53	C12H18O2Si	222
Propiophenone, 2'-(trimethylsiloxy)-	33342-87-9	NIST05.L	72506	53	C12H18O2Si	222

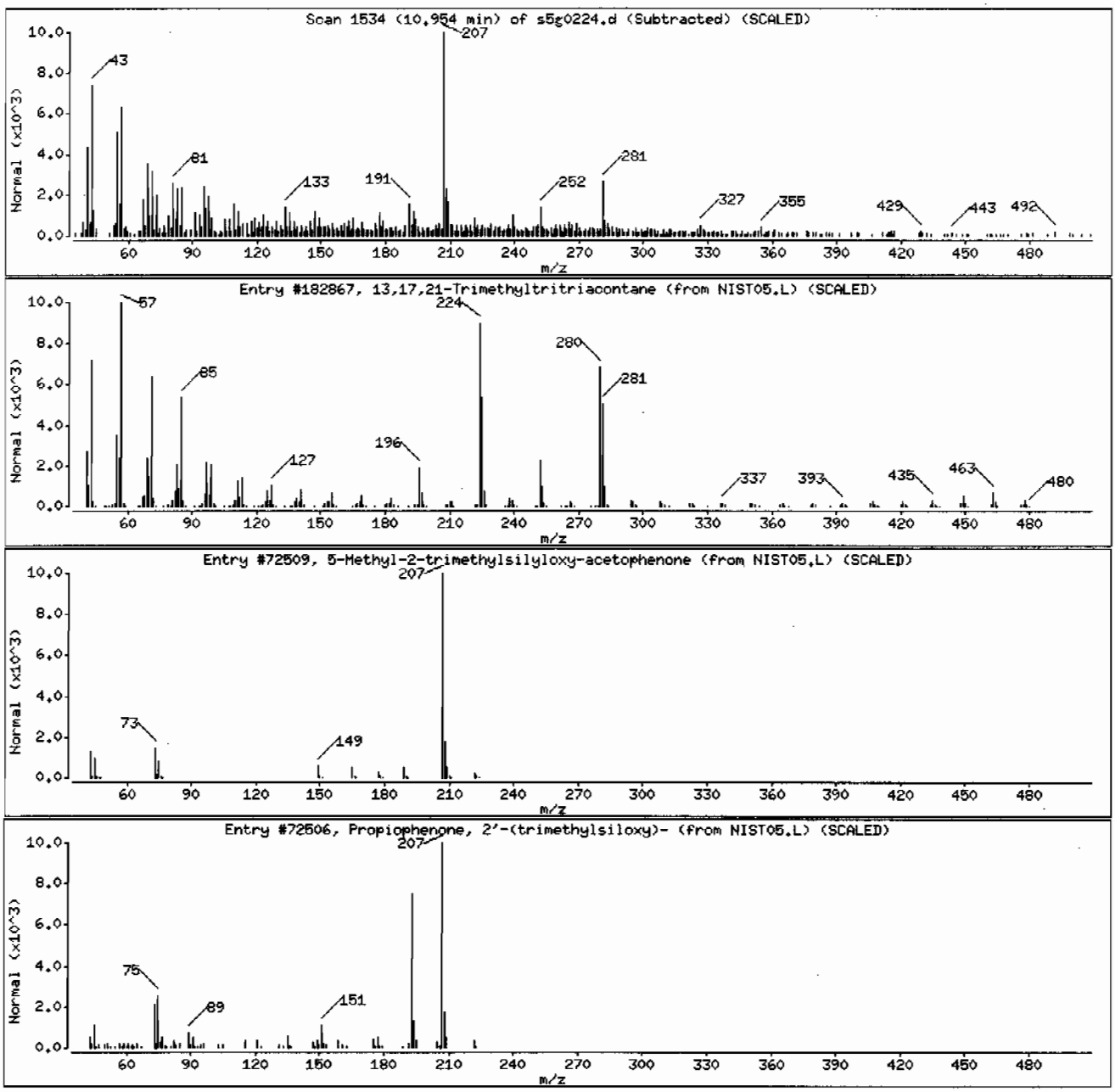

Data File: /chem/MSD5.i/s070209.b/s5g0224.d

Date : 02-JUL-2009 16:49

Client ID: CAMO-09-10371

Instrument: MSD5.i

Sample Info: |2325030008|881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72520	62	C12H22Si2	222
Silane, 1,4-phenylenebis[trimethyl-	13183-70-5	NIST05.L	72522	58	C12H22Si2	222
9H-Fluorene-2-carboxylic acid, 9-oxo-, (	1000316-02-1	NIST05.L	112598	58	C17H15NO3	281

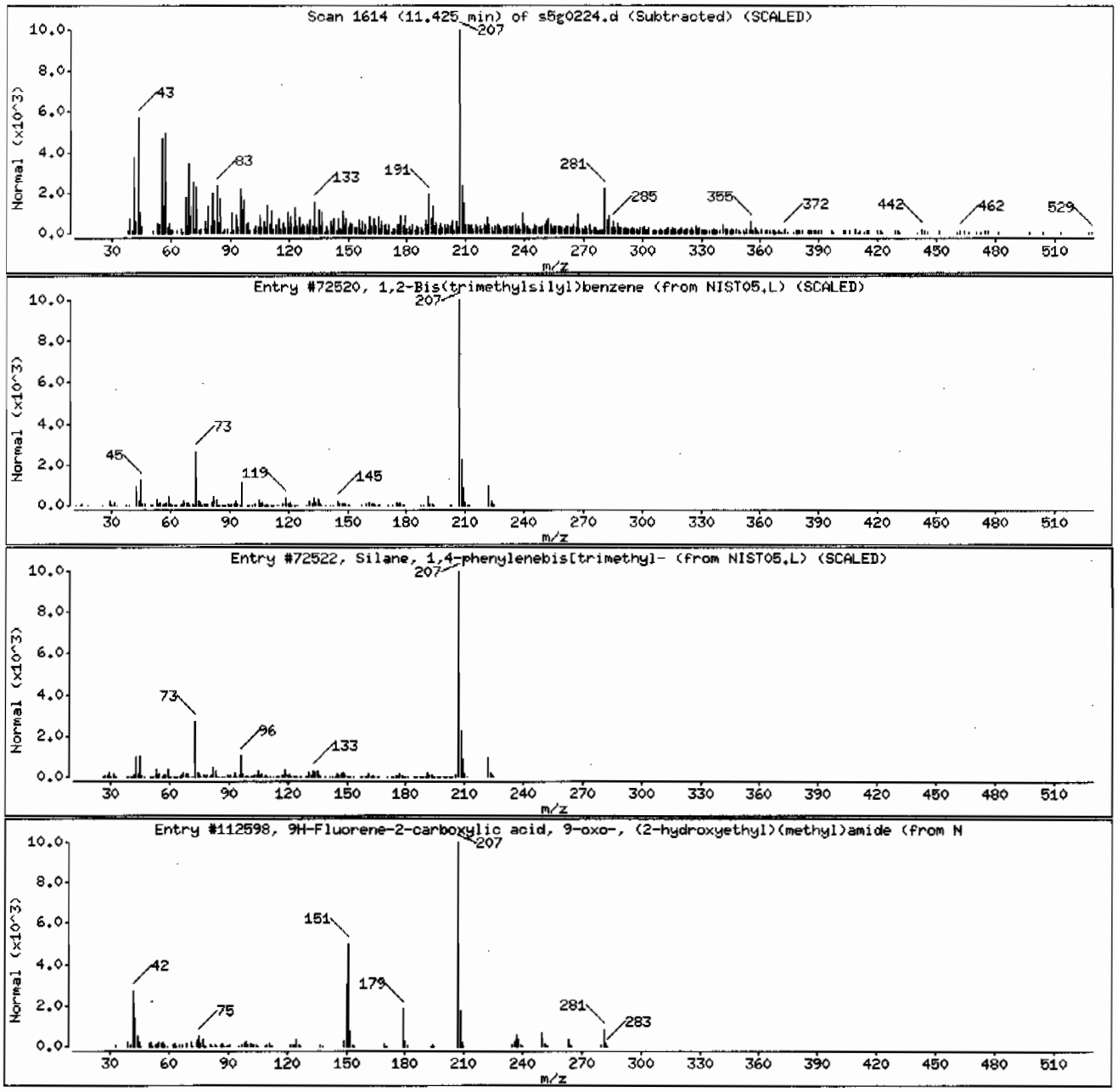

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0225.d
Lab Smp Id: 232503011 Client Smp ID: CAMO-09-10366
Inj Date : 02-JUL-2009 17:12
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503011|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	8.40410	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	491159	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1684858	40.0000	
* 46 Acenaphthene-d10	164	6.143	6.145	(1.000)	1026732	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	1775546	40.0000	
* 91 Chrysene-d12	240	9.748	9.747	(1.000)	1232351	40.0000	
* 98 Perylene-d12	264	11.501	11.495	(1.000)	771354	40.0000	
$ 3 2-Fluorophenol	112	3.202	3.194	(0.798)	772434	71.6260	2600
$ 5 Phenol-d5	99	3.731	3.728	(0.930)	1006094	70.7559	2570
$ 20 Nitrobenzene-d5	82	4.378	4.383	(0.896)	469473	37.6033	1370
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.916)	1070354	40.3092	1470
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.099)	333913	79.7070	2900
$ 81 p-Terphenyl-d14	244	8.707	8.702	(0.893)	1043591	55.3341	2010

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.613	8.611	(0.884)	91196	3.39218	123
68 Phenanthrene	178	7.342	7.344	(1.002)	64505	1.93931	70.6
69 Anthracene	178	7.390	7.388	(1.009)	11933	0.36348	13.2(a)
76 Fluoranthene	202	8.395	8.394	(1.146)	106177	2.80221	102
89 Benzo(a)anthracene	228	9.736	9.733	(0.999)	32078	1.21313	44.1
92 Chrysene	228	9.772	9.771	(1.002)	45836	1.89230	68.8
95 Benzo(b)fluoranthene	252	10.960	10.951	(0.953)	43436	2.54975	92.8
96 Benzo(k)fluoranthene	252	10.989	10.990	(0.956)	16088	0.96143	35.0(a)
97 Benzo(a)pyrene	252	11.419	11.413	(0.993)	23651	1.56835	57.0
99 Indeno(1,2,3-cd)pyrene	276	13.366	13.354	(1.162)	14652	0.96689	35.2(a)
101 Benzo(ghi)perylene	276	13.936	13.922	(1.212)	14942	1.15659	42.1

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0225.d
Report Date: 07/02/2009 17:52
Lab. ID: 232503011 SampleType: SAMPLE
Injection Date: 02-JUL-2009 17:12
Operator: RMB Instrument: MSD5.i
Sample Info: |232503011|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	60410	3.73	3.80	80-120	100	(T)
93	9131	3.68	3.80	190-250	15	(QT)
6 Phenol		CAS#: 108-95-2				
94	45150	3.58	3.74	80-120	100	(T)
66	10422	3.58	3.74	24- 84	23	(QT)
65	38764	3.58	3.74	0- 30	86	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	67010	4.38	4.25	80-120	100	(T)
42	46958	4.38	4.25	55-115	70	(T)
22 Isophorone			CAS#: 78-59-1			
82	457660	4.38	4.55	80-120	100	(T)
138	277	4.40	4.55	0- 49	0	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	6613	4.66	4.64	80-120	100	( )
122	2610	4.65	4.64	54-114	39	(Q)
77	11760	4.67	4.64	50-110	178	(Q)
31 4-Chloroaniline			CAS#: 106-47-8			
127	317	4.92	4.92	80-120	100	( )
65	1752	4.92	4.92	0- 55	551	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	8964	5.87	5.74	80-120	100	(T)
164	752	5.87	5.74	3- 63	8	(T)
127	1323	5.87	5.74	7- 67	15	(T)
41 m-Nitroaniline				CAS#: 99-09-2		
138	372	6.15	6.09	80-120	100	( )
92	5904	6.14	6.09	84-144	1584	(Q)
108	22154	6.14	6.09	0- 40	5943	(Q)
43 Dimethylphthalate				CAS#: 131-11-3		
163	220545	6.15	5.90	80-120	100	(T)
164	1026732	6.14	5.90	0- 40	466	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	135152	6.14	5.96	80-120	100	(T)
63	2509	6.15	5.96	55-115	2	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	135152	6.14	6.26	80-120	100	(T)
89	2559	6.14	6.26	38- 98	2	(QT)
63	2385	6.15	6.26	19- 79	2	(QT)
53 Fluorene				CAS#: 86-73-7		
166	14736	6.75	6.56	80-120	100	(T)
165	13324	6.75	6.56	61-121	90	(T)
167	5225	6.75	6.56	0- 44	35	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	1429	6.75	6.57	80-120	100	(T)
105	2009	6.75	6.57	2- 62	141	(QT)
51	2431	6.75	6.57	46-106	170	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	24160	6.75	6.93	80-120	100	(T)
141	118537	6.75	6.93	34- 94	491	(QT)
250	47911	6.75	6.93	68-128	198	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	64505	7.34	7.34	80-120	100	( )
179	10812	7.35	7.34	0- 46	17	( )
176	11594	7.35	7.34	0- 49	18	( )
69 Anthracene				CAS#: 120-12-7		
178	11933	7.39	7.39	80-120	100	( )
179	2589	7.39	7.39	0- 46	22	( )
176	2843	7.39	7.39	0- 49	24	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
76 Fluoranthene			CAS#: 206-44-0			
202	106177	8.40	8.39	80-120	100	( )
203	18317	8.40	8.39	0- 48	17	( )
101	10107	8.39	8.39	0- 39	10	( )
79 Pyrene			CAS#: 129-00-0			
202	91196	8.61	8.61	80-120	100	( )
200	18508	8.61	8.61	0- 51	20	( )
101	8994	8.61	8.61	0- 41	10	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	32078	9.74	9.73	80-120	100	( )
226	9409	9.74	9.73	0- 56	29	( )
229	7550	9.74	9.73	0- 50	24	( )
92 Chrysene			CAS#: 218-01-9			
228	45836	9.77	9.77	80-120	100	( )
229	10520	9.77	9.77	0- 50	23	( )
226	12358	9.77	9.77	0- 60	27	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	43436	10.96	10.95	80-120	100	( )
253	9821	10.95	10.95	0- 52	23	( )
125	6276	10.95	10.95	0- 38	14	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	16088	10.99	10.99	80-120	100	( )
253	3767	11.00	10.98	0- 52	23	( )
125	1638	10.98	10.98	0- 38	10	( )
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	23651	11.42	11.41	80-120	100	( )
253	6232	11.42	11.41	0- 52	26	( )
125	2605	11.42	11.41	0- 30	11	( )
99 Indeno(1,2,3-cd)pyrene			CAS#: 193-39-5			
276	14652	13.37	13.35	80-120	100	( )
138	2894	13.36	13.35	0- 51	20	( )
100 Dibenzo(a,h)anthracene			CAS#: 53-70-3			
278	4155	13.36	13.37	80-120	100	( )
139	1595	13.37	13.37	0- 30	38	(Q)
101 Benzo(ghi)perylene			CAS#: 191-24-2			
276	14942	13.94	13.92	80-120	100	( )
138	2650	13.94	13.92	0- 30	18	( )

Q qualifier indicates ion failed ratio requirement
T qualifier indicates RT outside 0.06 minute window of expected RT

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0225.d
Lab Smp Id: 232503011 Client Smp ID: CAMO-09-10366
Inj Date : 02-JUL-2009 17:12
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503011|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	8.40410	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.013	3084847	40.000
* 91 Chrysene-d12	9.748	4227037	40.000
* 98 Perylene-d12	11.501	2371083	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
3-Carene				CAS #: 13466-78-9			
3.972	1118232	14.4996742	527	97	NIST05.L	15156	10
Unknown				CAS #:			
8.907	607673	5.75034468	209	0		0	91
Unknown				CAS #:			
9.060	598309	5.66173563	206	0		0	91
5.alpha.,14.beta.-Androstane, 16.alpha.,				CAS #: 24174-25-2			
9.089	760217	7.19385612	262	90	NIST05.L	108339	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1235-74-1			
9.172	575958	5.45022519	198	95	NIST05.L	133618	91
Unknown				CAS #:			
9.207	773732	7.32173881	266	0		0	91
Unknown				CAS #:			
9.266	1046660	9.90443103	360	0		0	91
Unknown				CAS #:			
9.354	806280	7.62973671	278	0		0	91
Unknown				CAS #:			
9.442	1281701	12.1285961	441	0		0	91
Unknown				CAS #:			
9.519	1862341	17.6231346	641	0		0	91
Unknown				CAS #:			
9.560	1104092	10.4479086	380	0		0	91
Unknown				CAS #:			
9.654	1043021	9.87000011	359	0		0	91
Unknown				CAS #:			
9.825	647783	6.12990553	223	0		0	91
Unknown				CAS #:			
9.966	779241	7.37387714	268	0		0	91
Octadecane, 1-chloro-				CAS #: 3386-33-2			
10.160	1088343	10.2988742	375	96	NIST05.L	117264	91

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
2-[4-methyl-6-(2,6,6-trimethylcyclohex-1					CAS #: 1000216-09-2		
10.195	807728	7.64344452	278	83	NIST05.L	139230	91
1-Hexacosanol					CAS #: 506-52-5		
10.231	1813217	17.1582740	624	92	NIST05.L	165910	91
Unknown					CAS #:		
10.536	661126	6.25616478	228	0		0	91
Unknown					CAS #:		
10.636	759132	12.8065011	466	0		0	98
Eicosane					CAS #: 112-95-8		
11.977	761736	12.8504302	467	95	NIST05.L	113492	98
Cyclohexane, 1,1'-(2-ethyl-1,3-propanedi					CAS #: 54833-34-0		
12.089	766377	12.9287177	470	89	NIST05.L	82661	98
Unknown					CAS #:		
13.248	590178	9.95625544	362	0		0	98

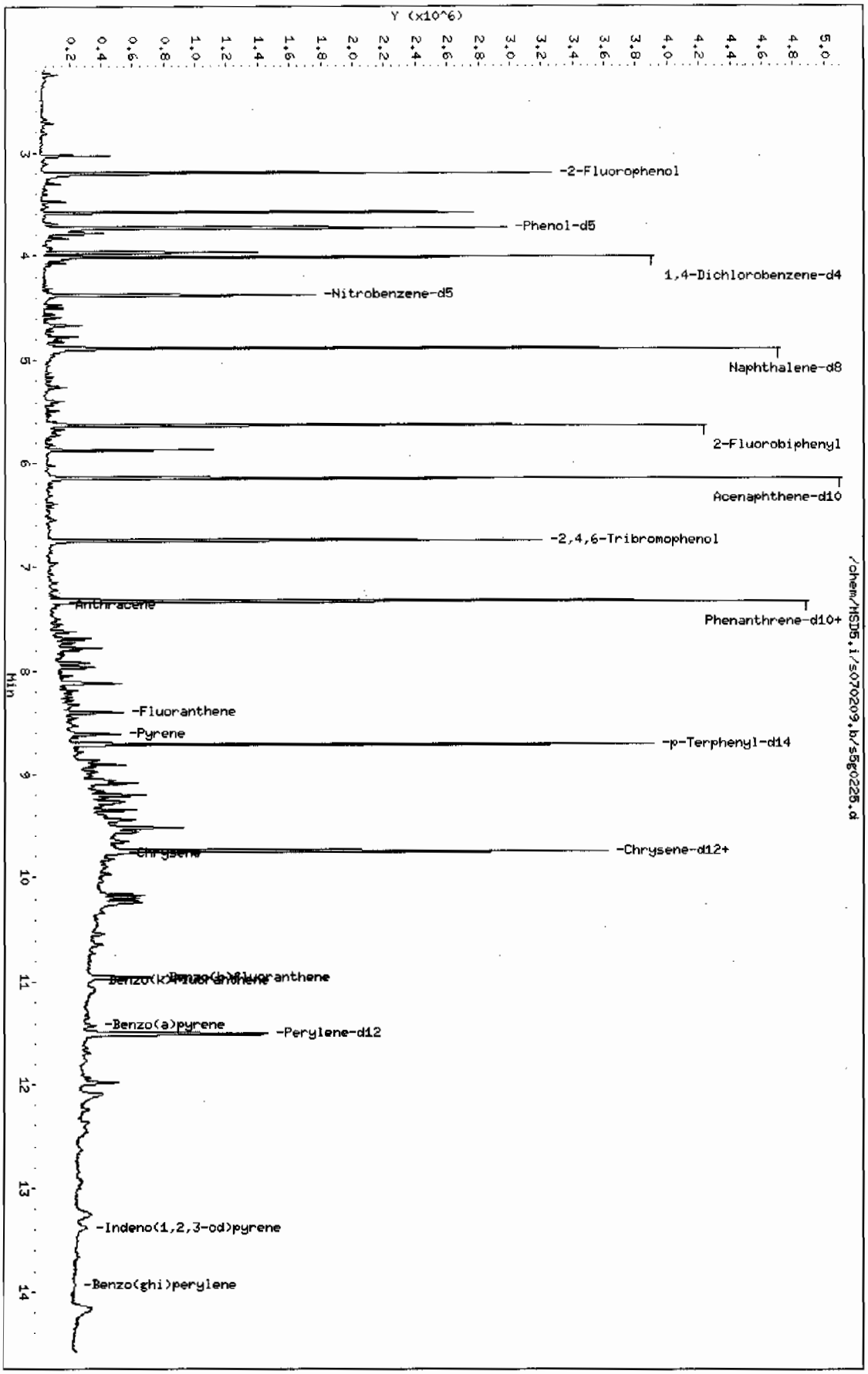
Data File: /chem/MSD5.i/s070209.b/s5g0225.d
Date : 02-JUL-2009 17:12
Client ID: CAMD-09-10366
Sample Info: 123250301118818781 1SVHF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS
Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20
Page 1
Y (x10^6)
Min
-2-Fluorophenol
-Phenol-d5
1,4-Dichlorobenzene-d4
-Nitrobenzene-d5
Naphthalene-d8
2-Fluorobiphenyl
Acenaphthene-d10
-2,4,6-Tribromophenol
Anthracene
Phenanthrene-d10+
-Fluoranthene
-Pyrene
-p-Terphenyl-d14
Chrysene
-Chrysene-d12+
Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-d12
-Indeno(1,2,3-cd)pyrene
-Benzo(ghi)perylene
/chem/MSD5.i/s070209.b/s5g0225.d

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 123 ug/Kg

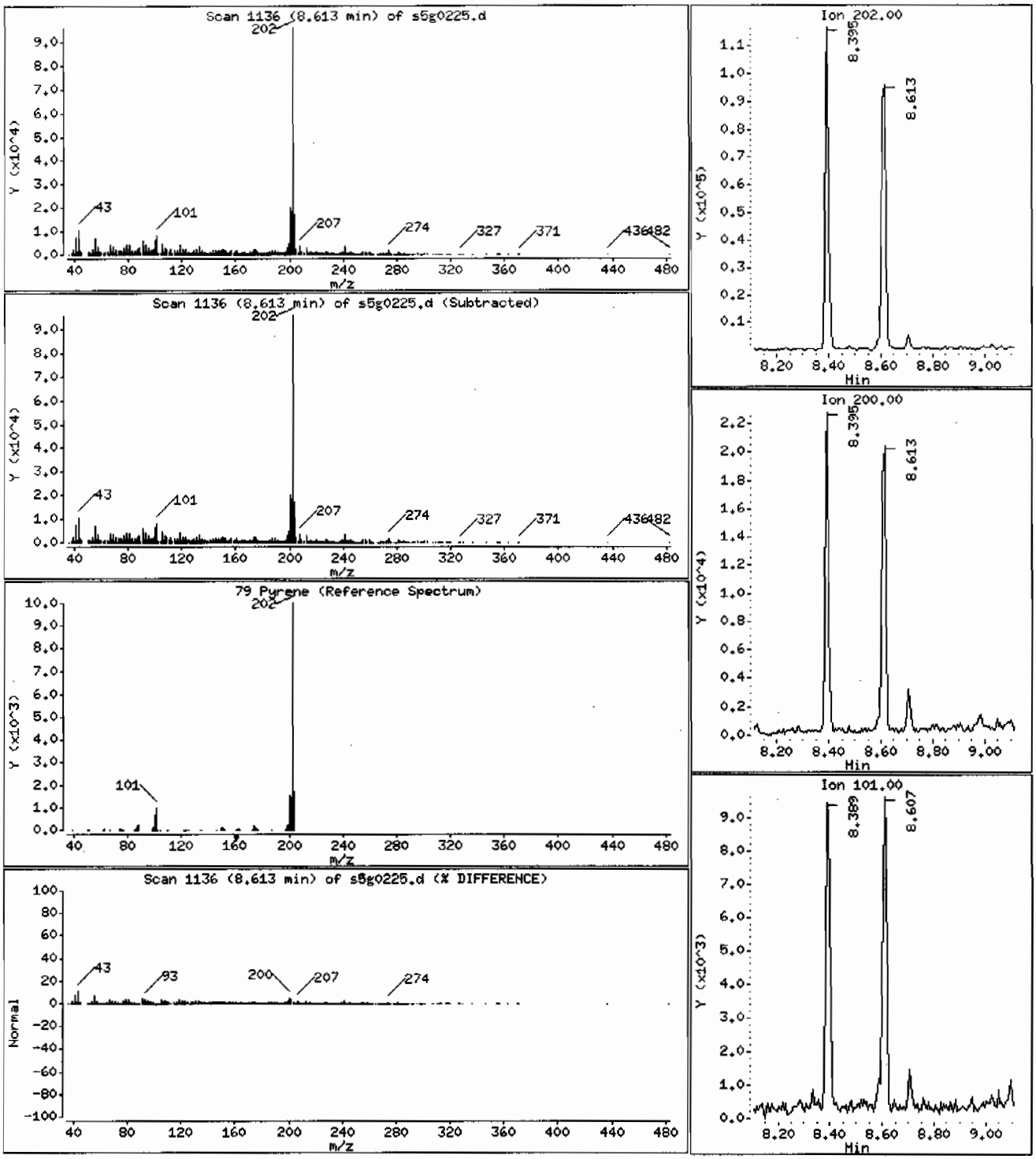

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 70.6 ug/Kg

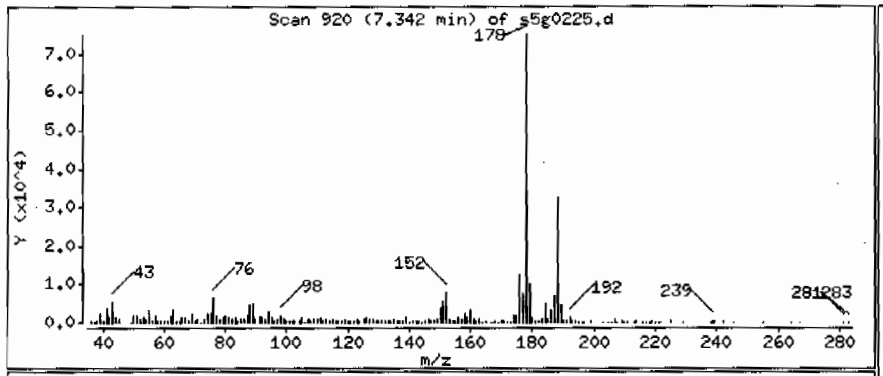

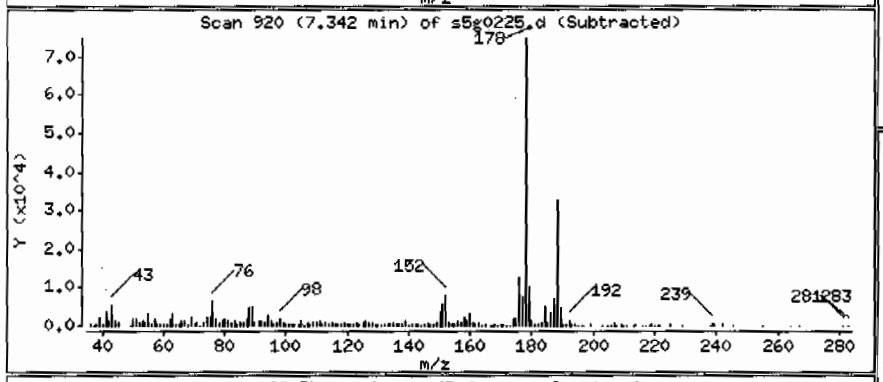

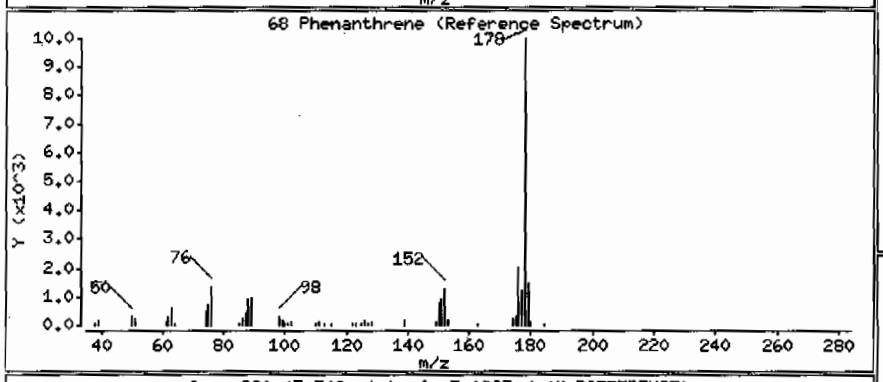

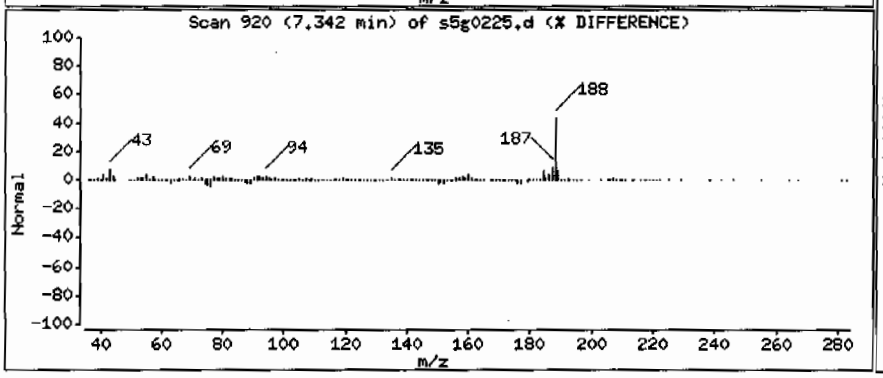

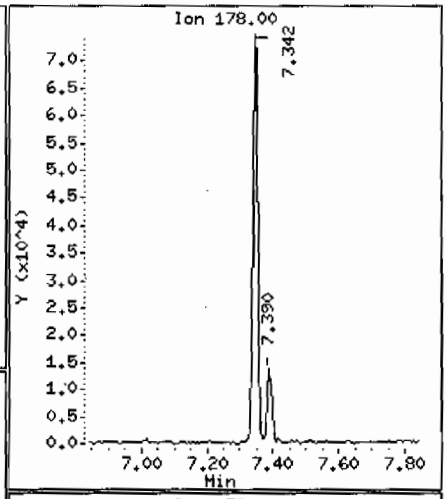

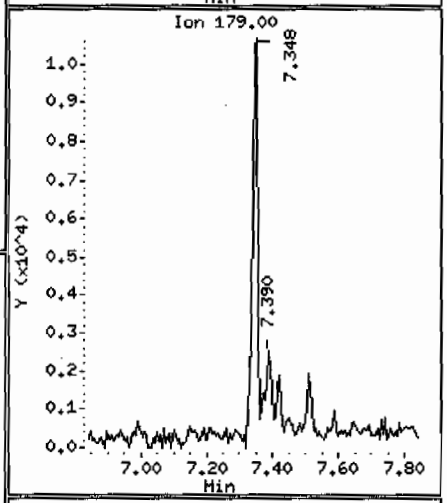

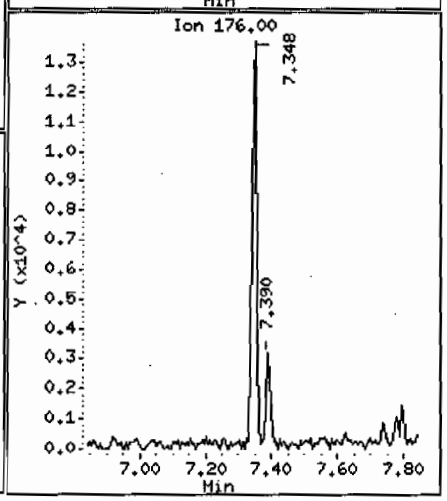

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

69 Anthracene Concentration: 13.2 ug/Kg

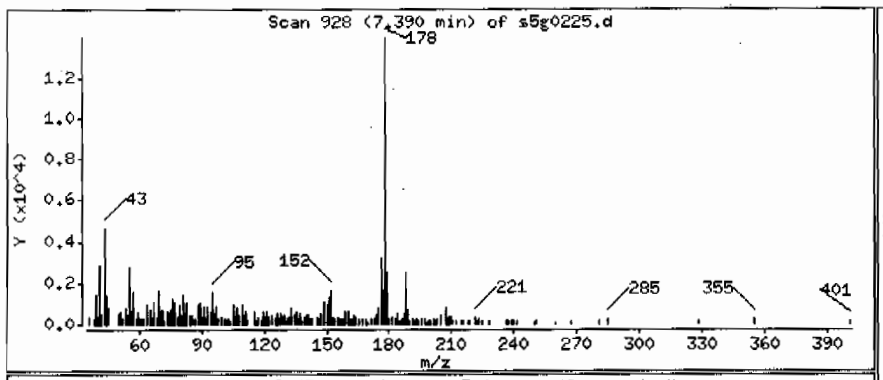

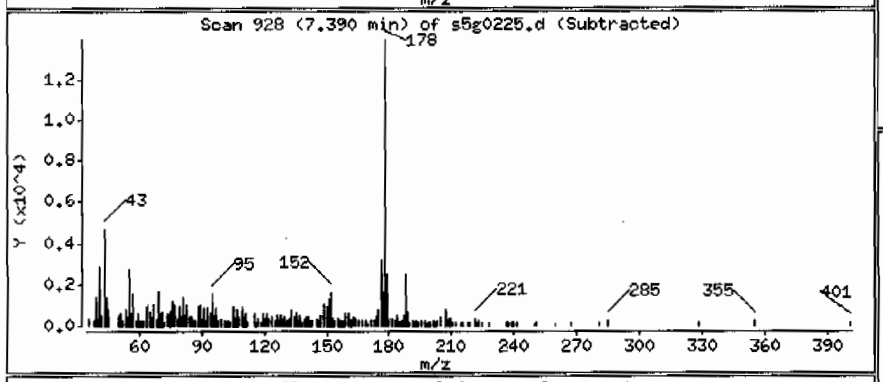

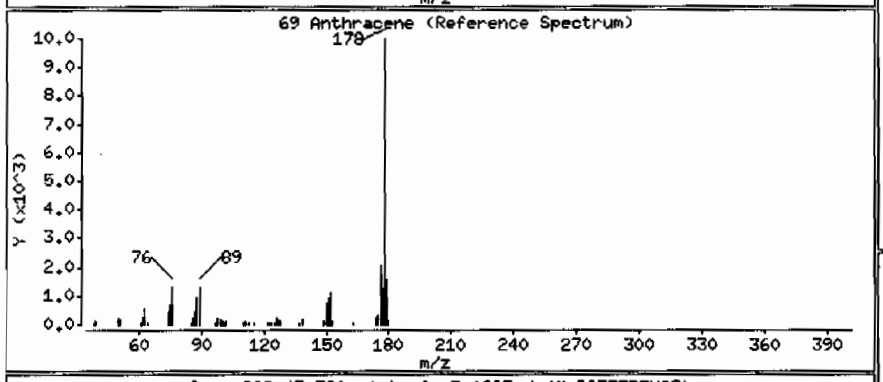

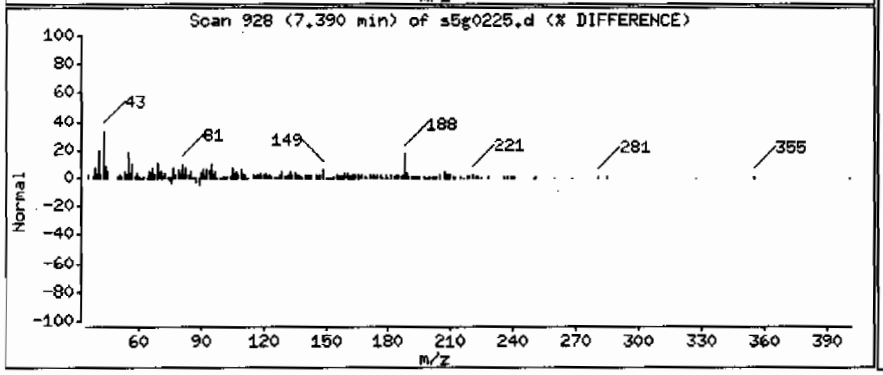

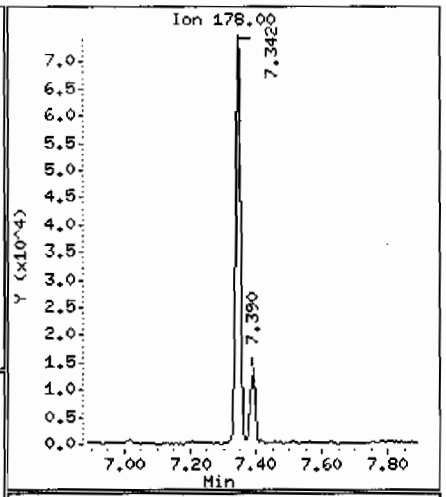

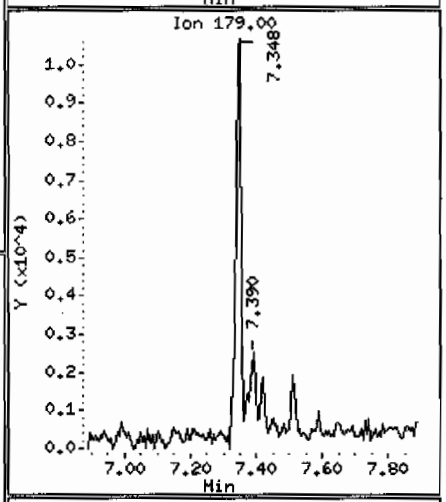

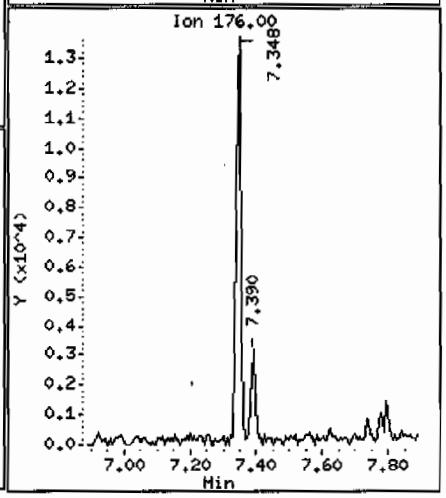

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 102 ug/Kg

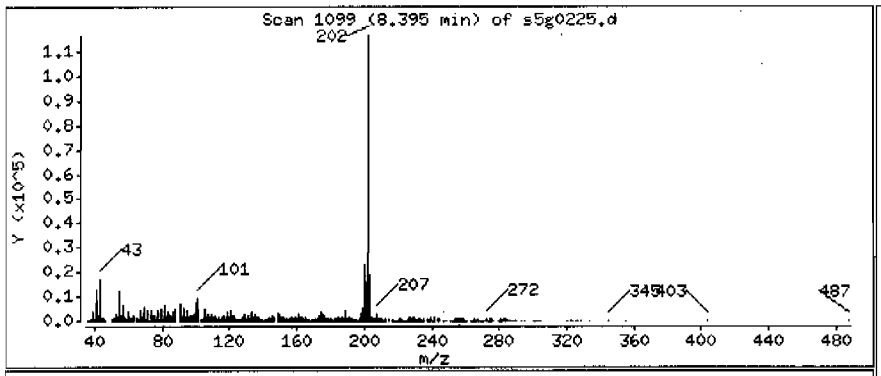

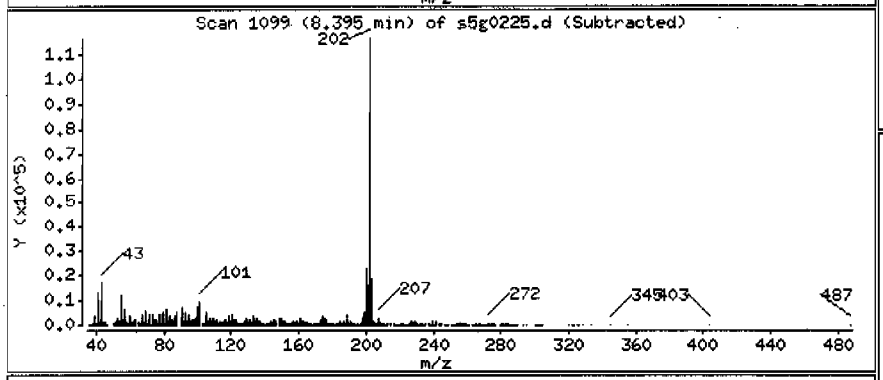

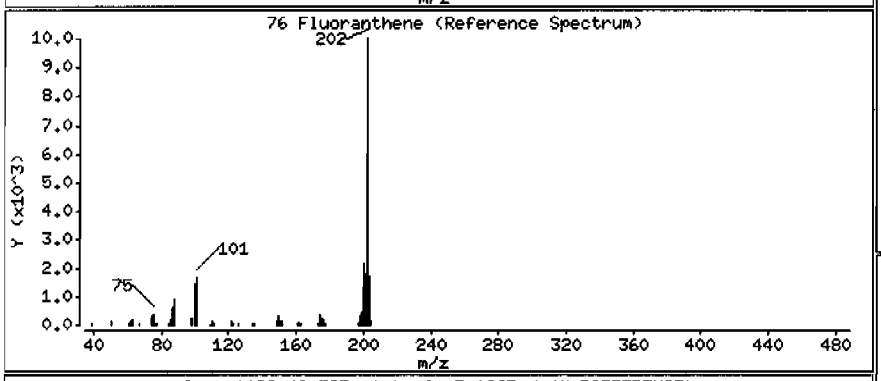

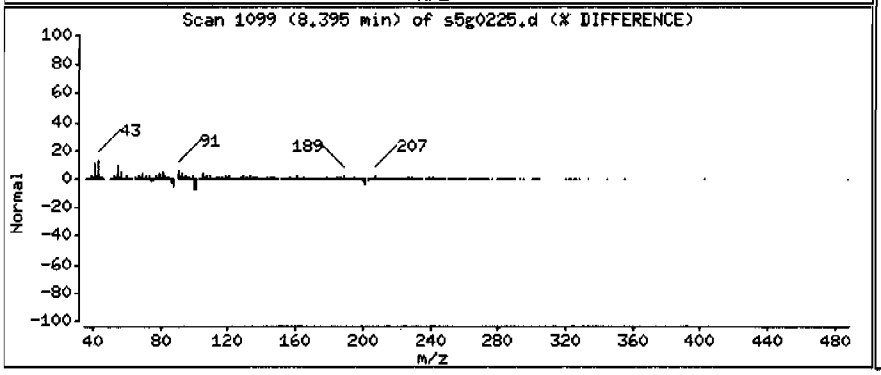

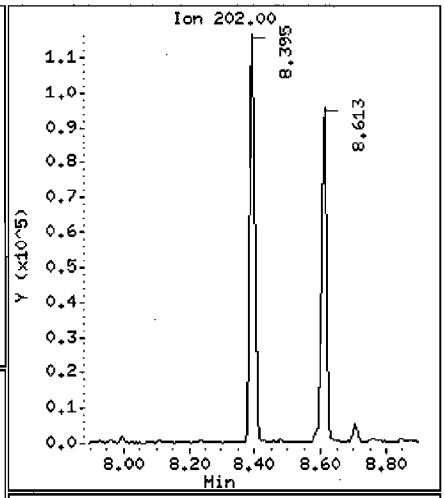

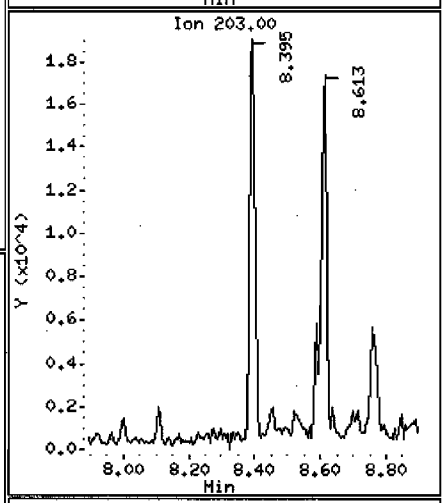

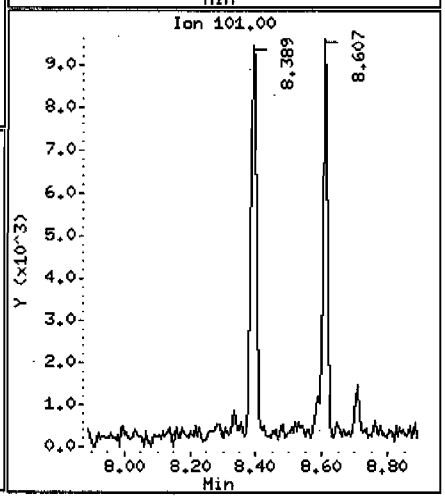

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 44.1 ug/Kg

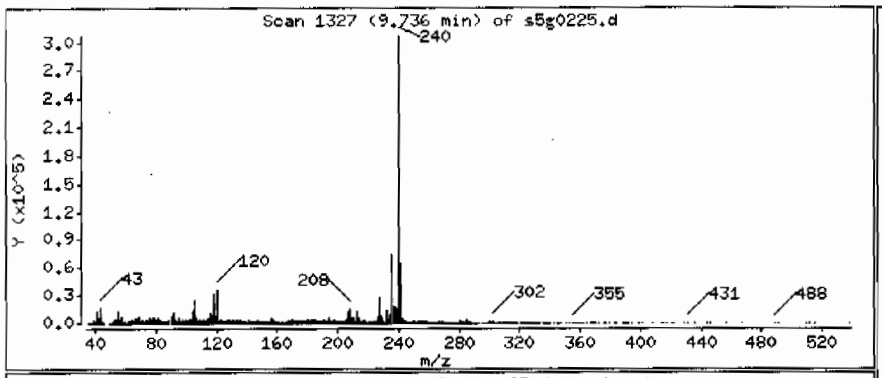

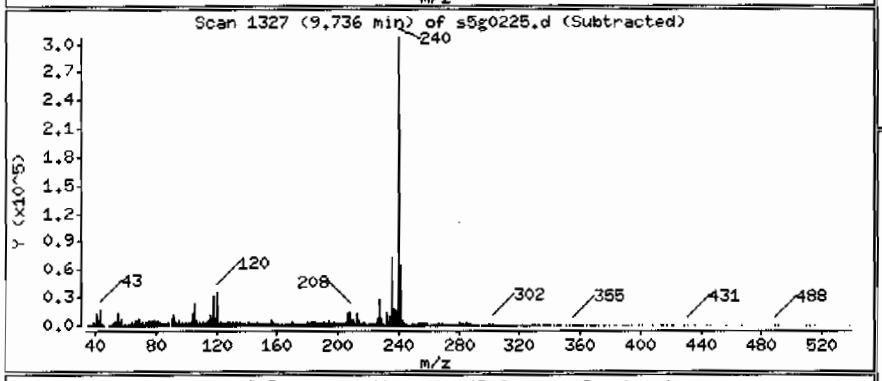

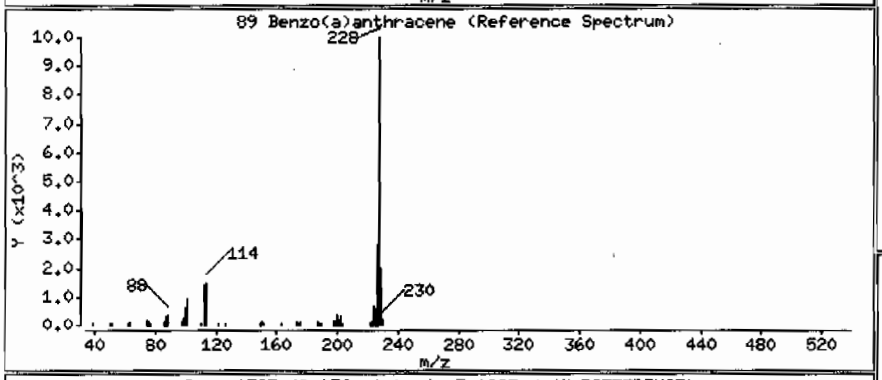

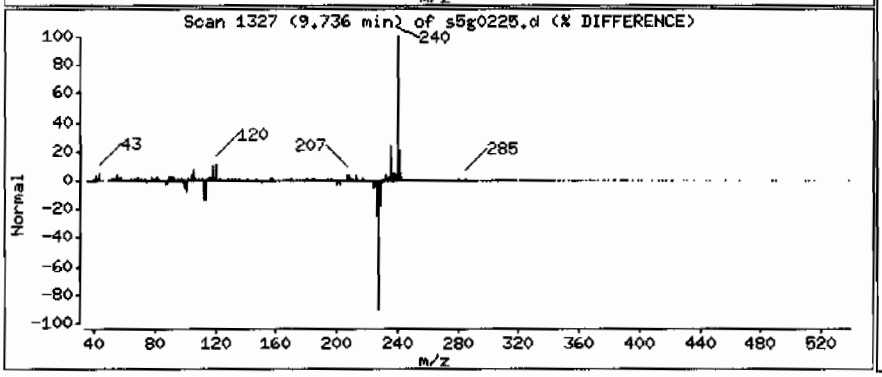

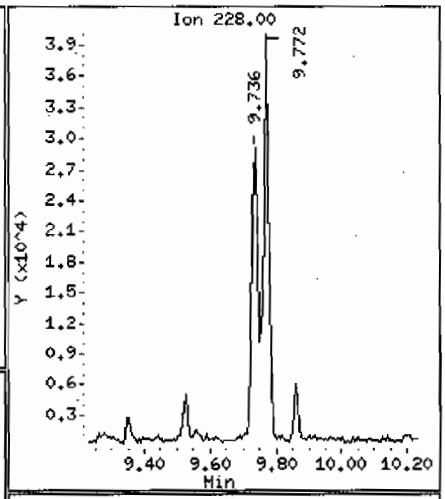

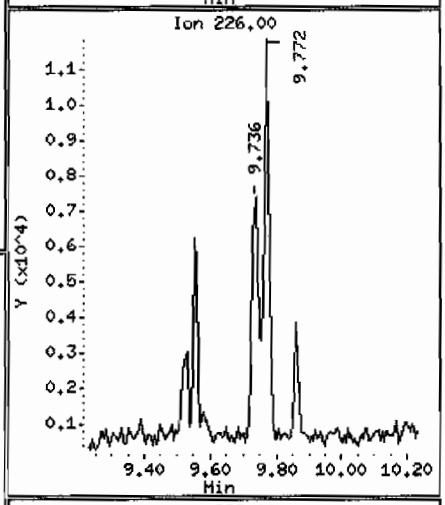

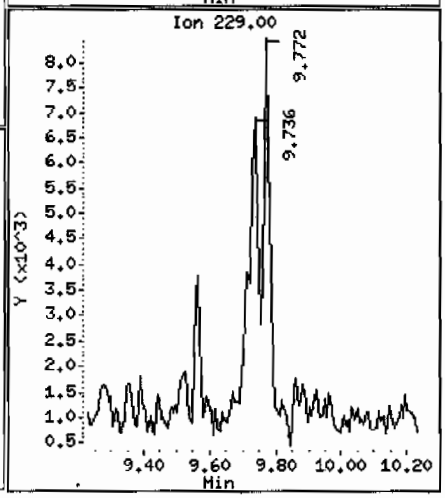

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 68.8 ug/Kg

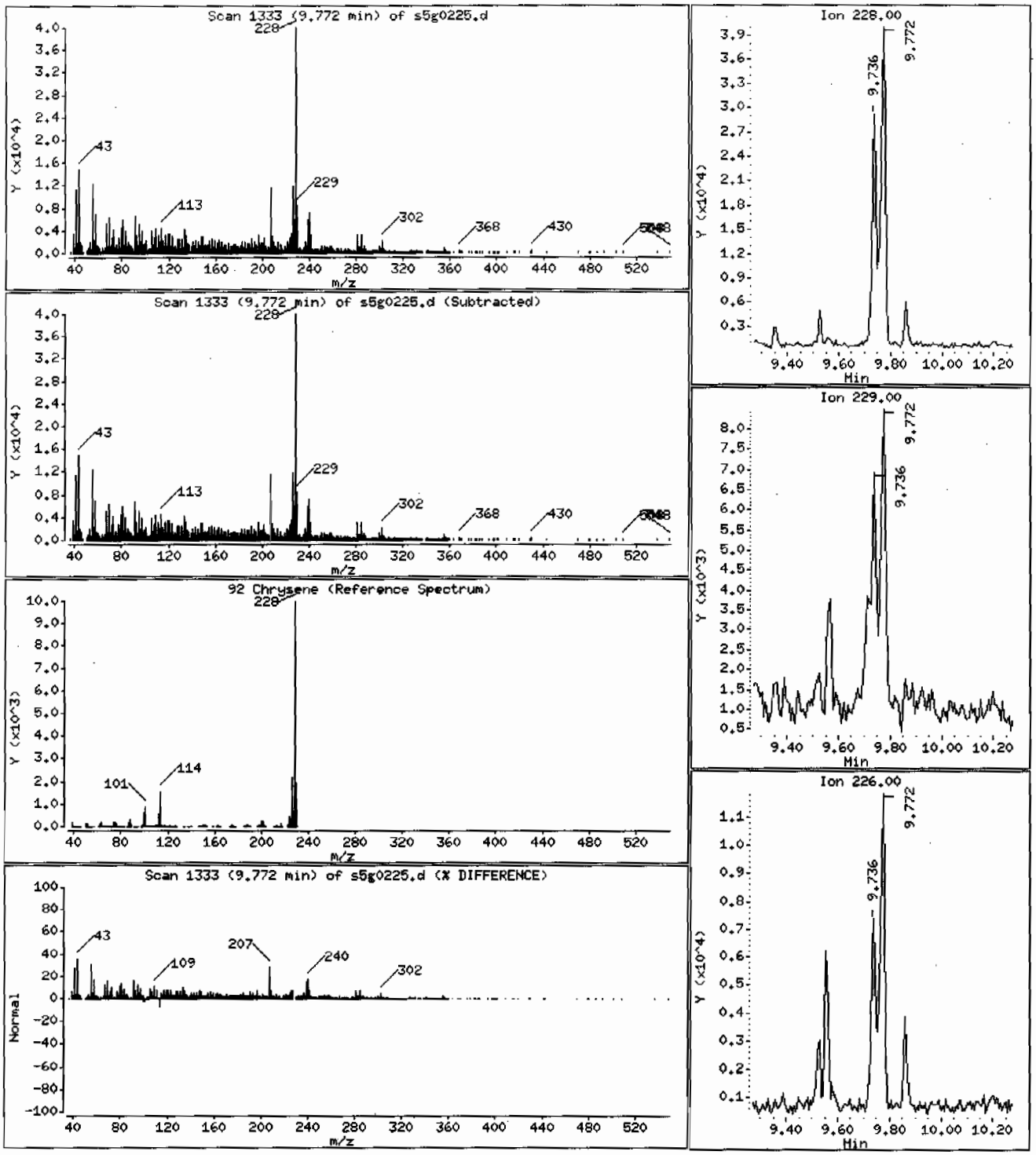

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |232503011|88187811|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 92.8 ug/Kg

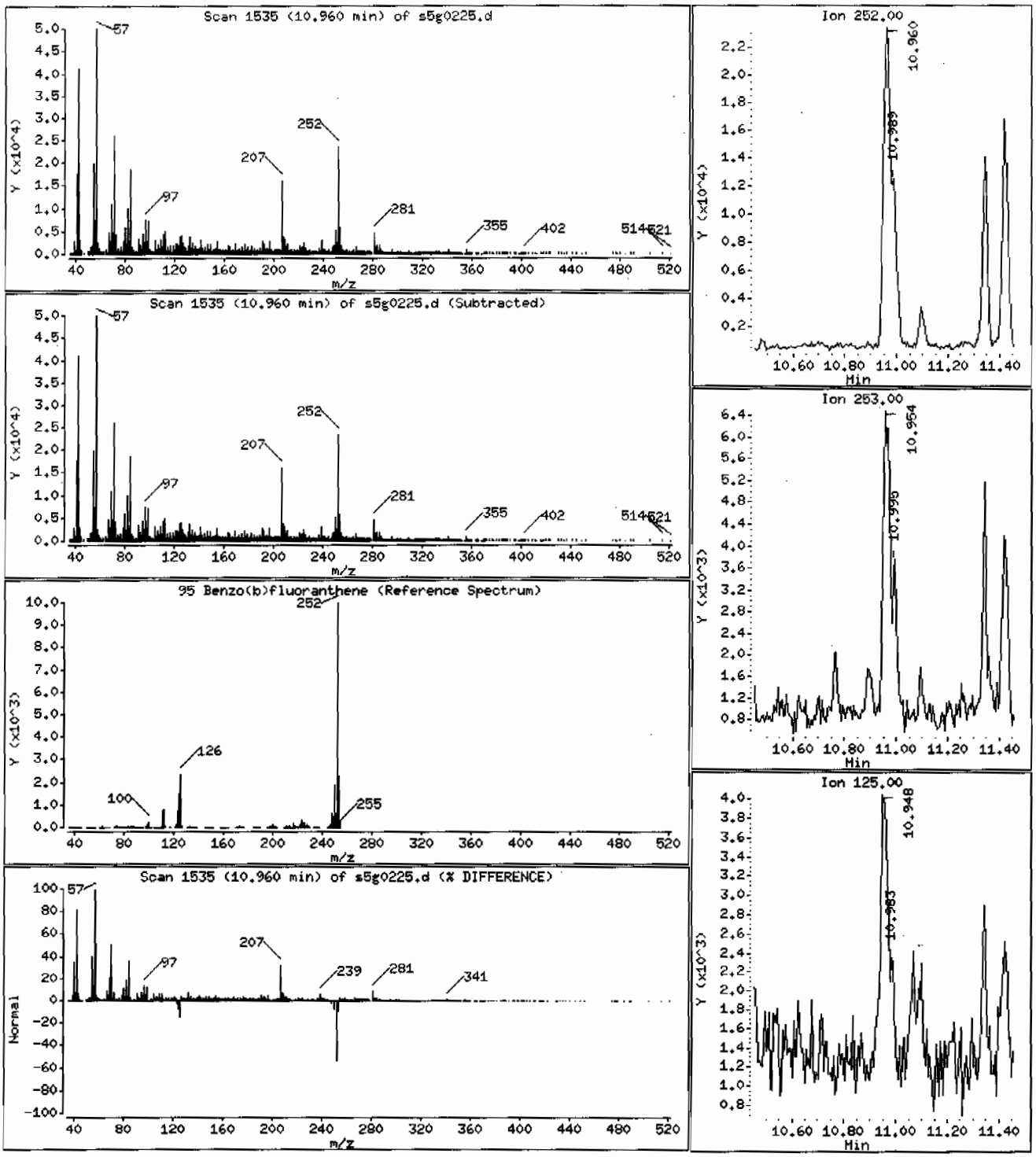

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878111SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

96 Benzo(k)fluoranthene

Concentration: 35.0 ug/Kg

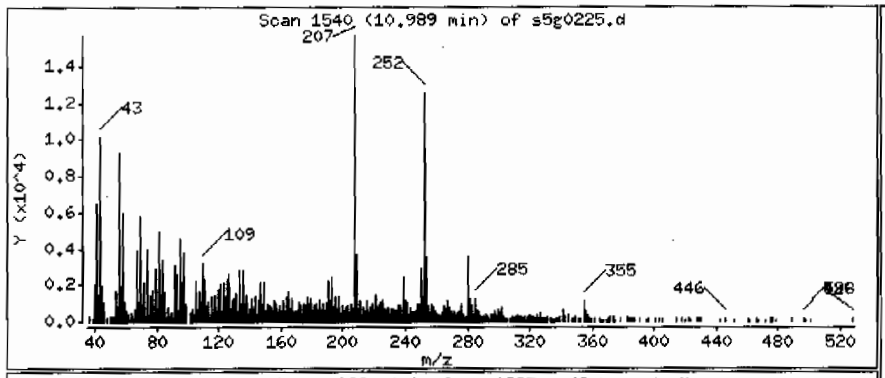

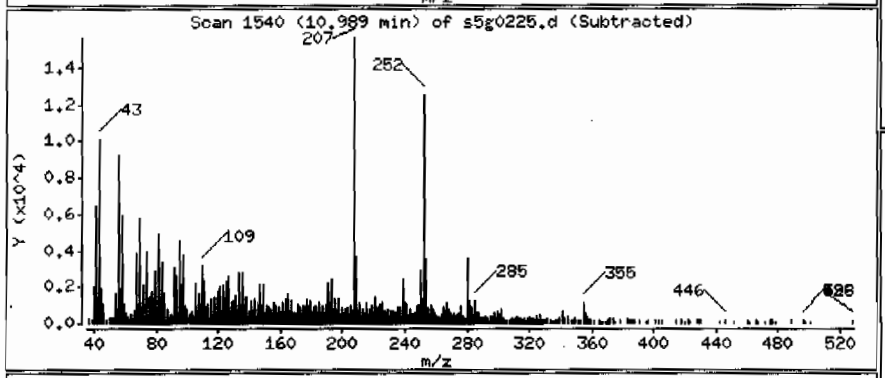

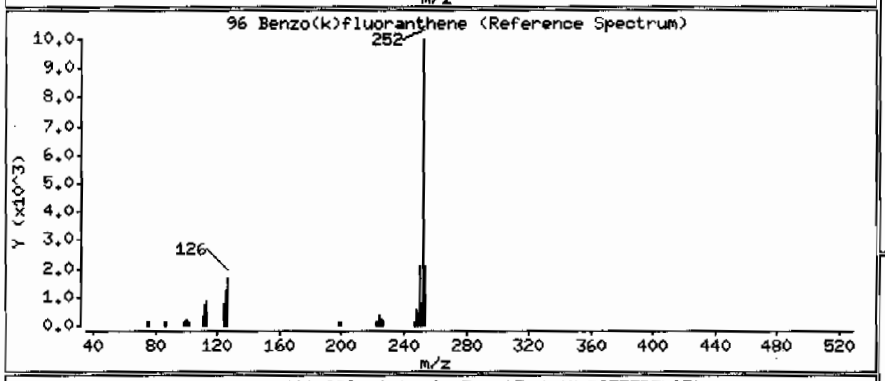

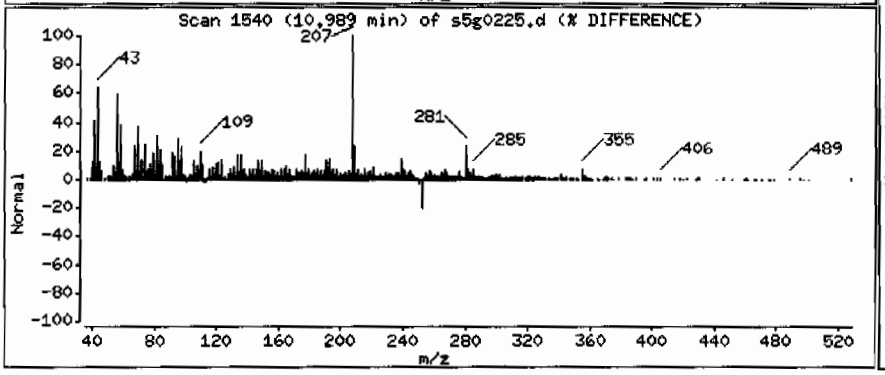

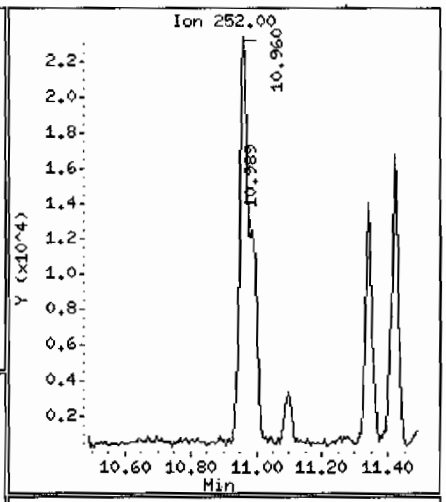

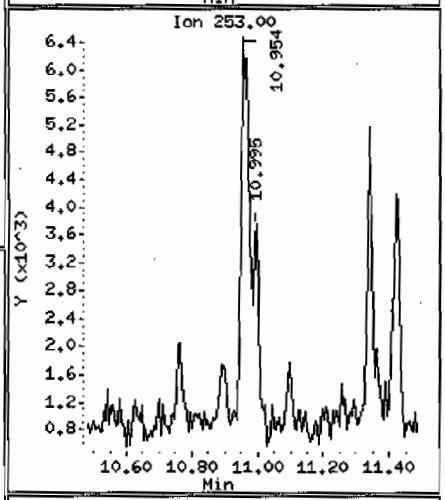

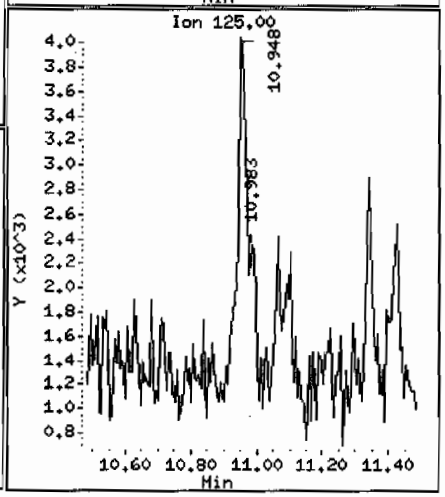

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011188187811|SVMF11|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

97 Benzo(a)pyrene Concentration: 57.0 ug/Kg

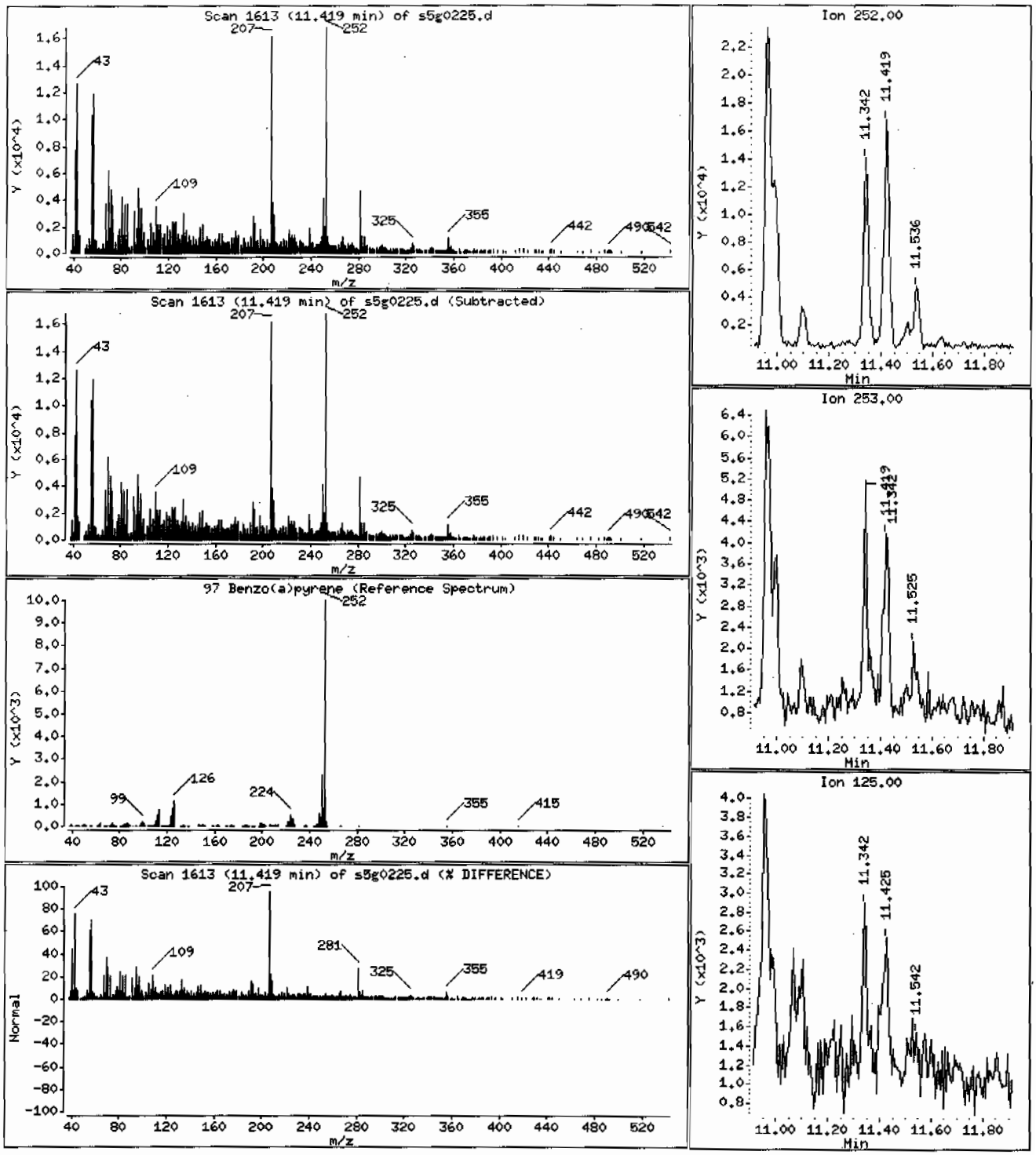

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 35.2 ug/Kg

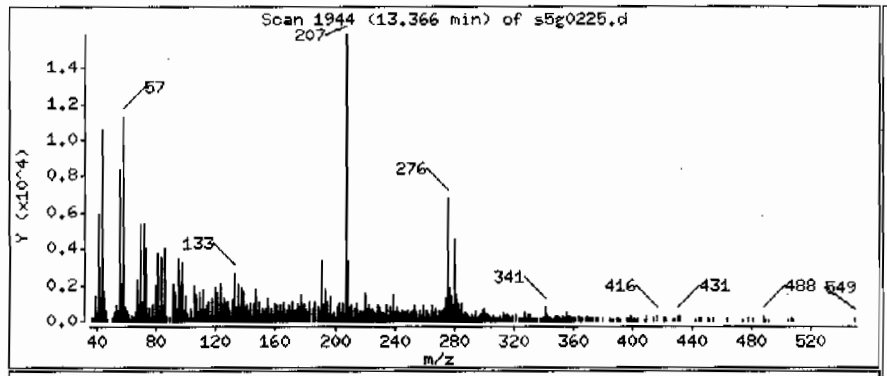

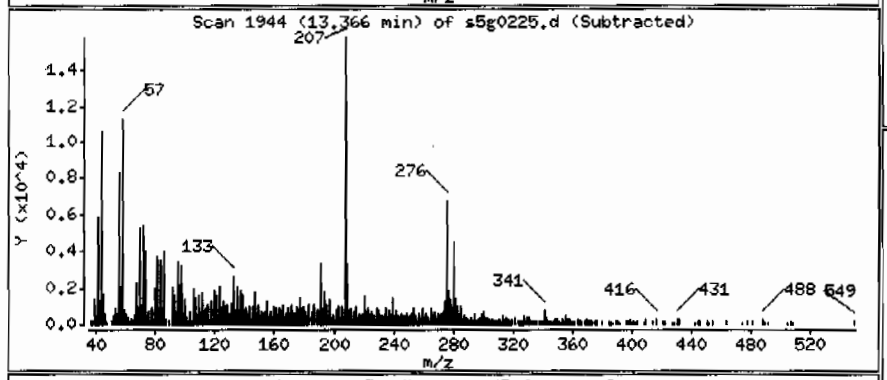

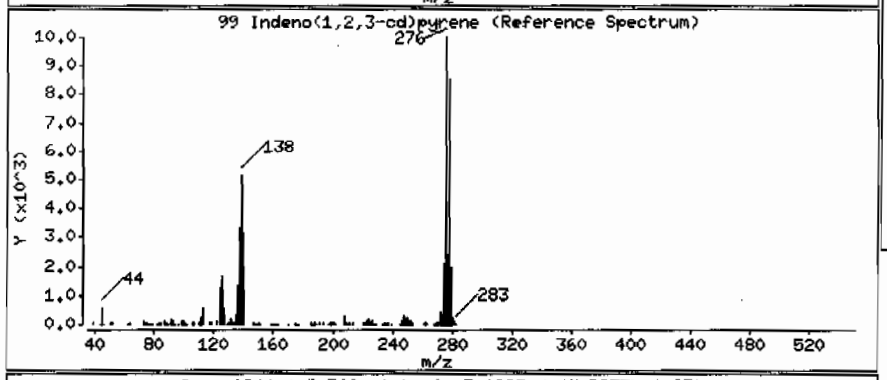

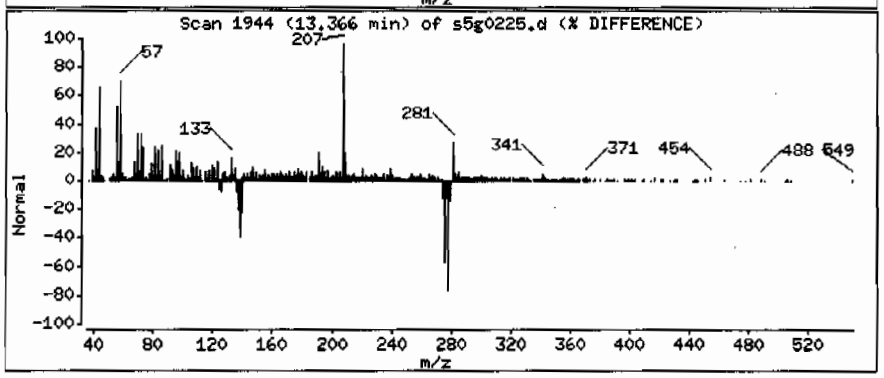

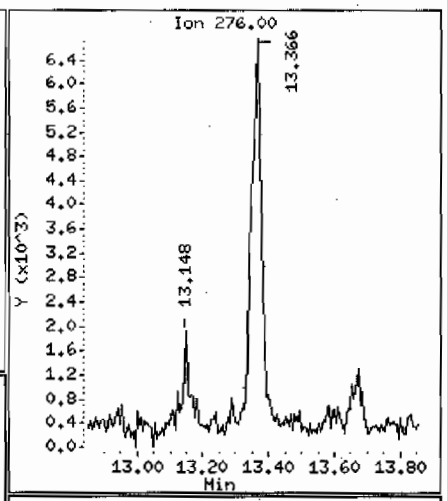

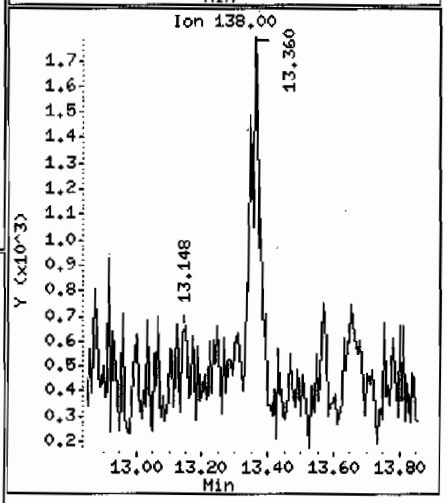

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 42.1 ug/Kg

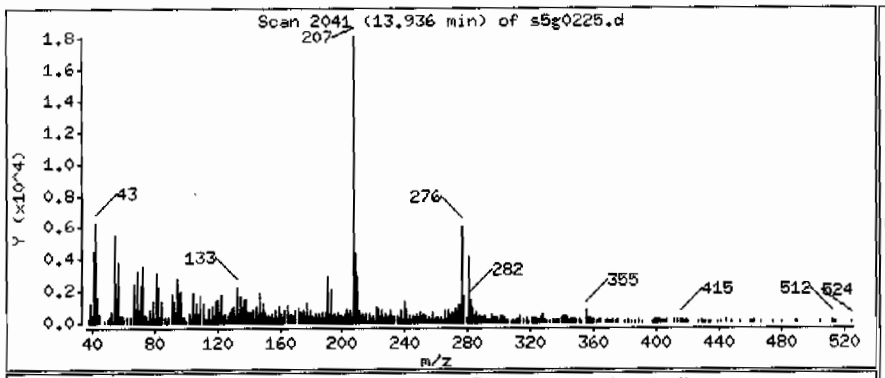

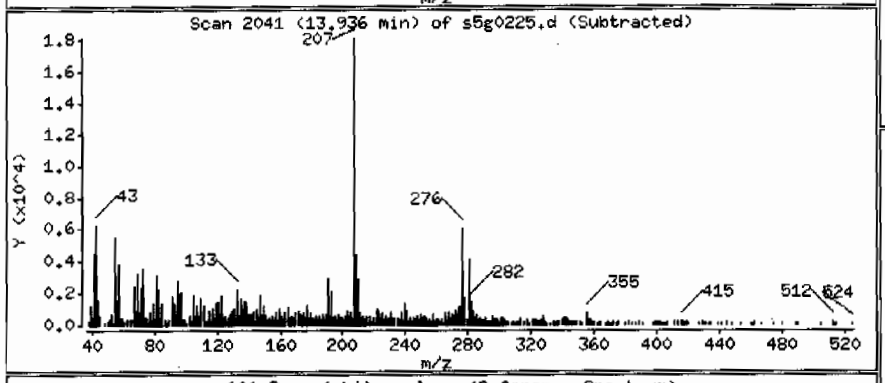

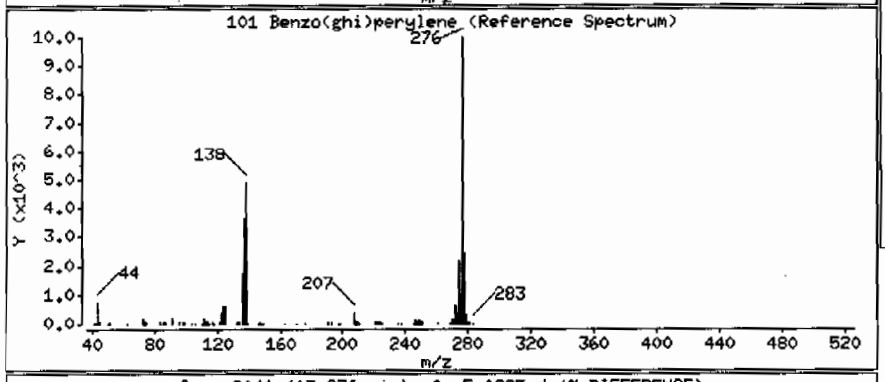

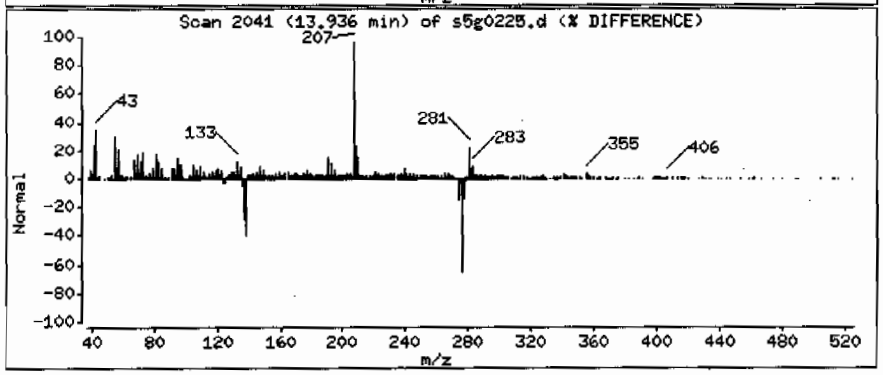

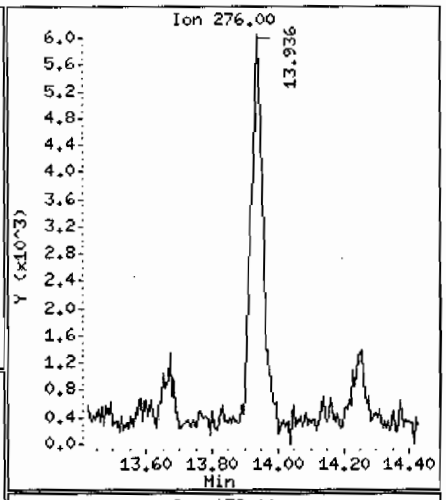

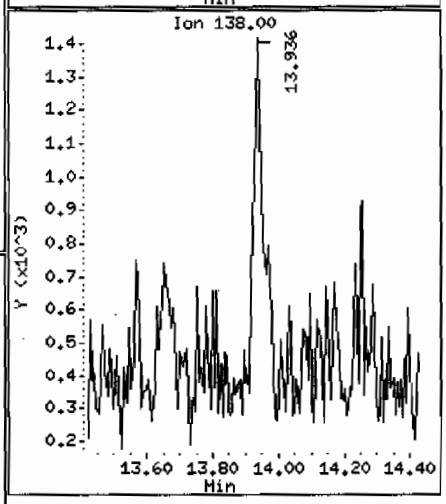

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RHB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
3-Carene	13466-78-9	NIST05.L	15156	97	C10H16	136
Bicyclo[4.1.0]hept-3-ene, 3,7,7-trimethy	498-15-7	NIST05.L	15369	96	C10H16	136
1S-.alpha.-Pinene	7785-26-4	NIST05.L	15185	96	C10H16	136

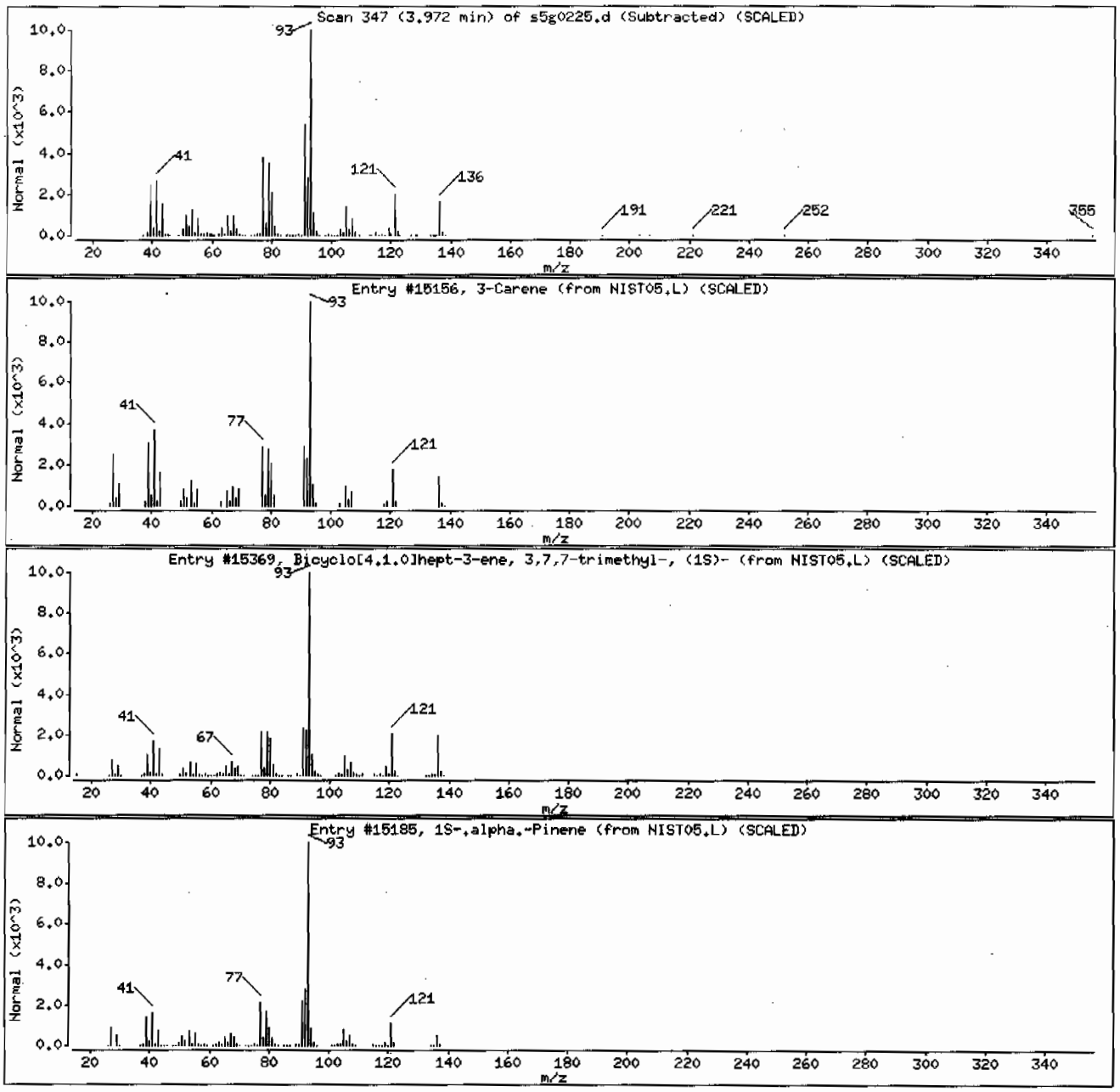

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAHO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Thunbergol	25269-17-4	NIST05.L	118732	25	C20H34O	290
7-Trifluoromethylisatin	391-12-8	NIST05.L	68075	14	C9H4F3NO2	215
1,4-Naphthalenedione, 2-(acetyloxy)-	1785-65-5	NIST05.L	68426	14	C12H8O4	216

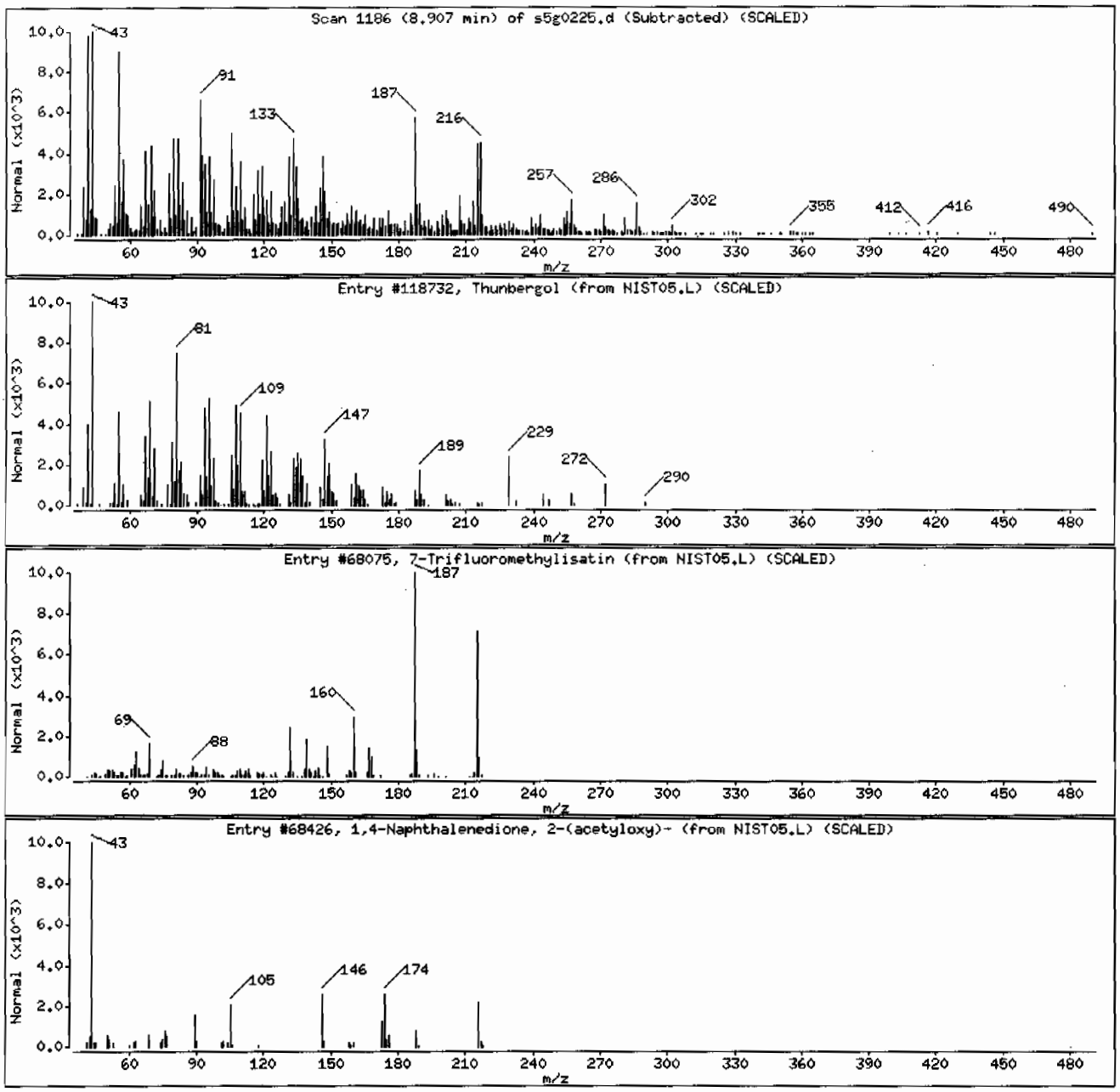

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |2325030111881878111SVMF11|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Benzenamine, 3,4-dimethyl-6-(2,4-dimethy	1000266-21-4	NIST05.L	96855	62	C16H19NS	257
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	51	C15H2602	238
Nordextromethorphan	51195-74-5	NIST05.L	96865	49	C17H23NO	257

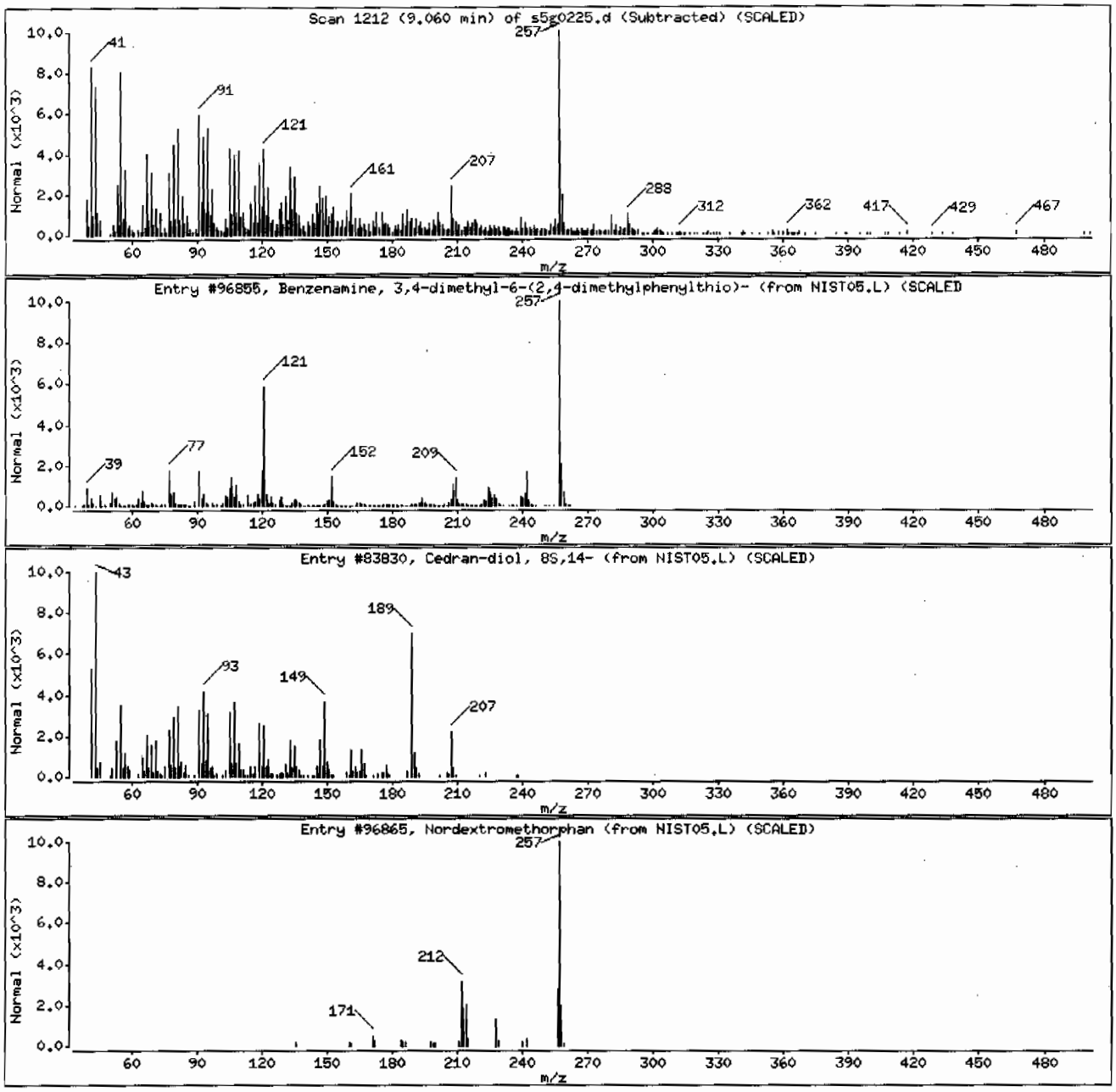

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
5.alpha.,14.beta.-Androstane, 16.alpha.,	24174-25-2	NIST05.L	108339	90	C19H30O	274
1a,2,5,5-Tetramethyl-cis-1a,4a,5,6,7,8-h	1000215-77-7	NIST05.L	52873	64	C13H22O	194
1,5-Dichloro-2-((3-fluorobenzyl)sulfanyl	1000298-20-4	NIST05.L	124463	46	C14H11Cl2FS	300

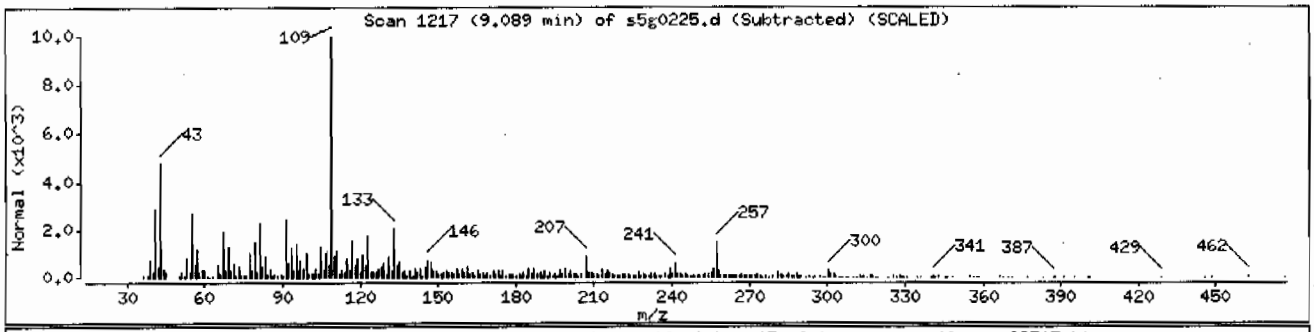

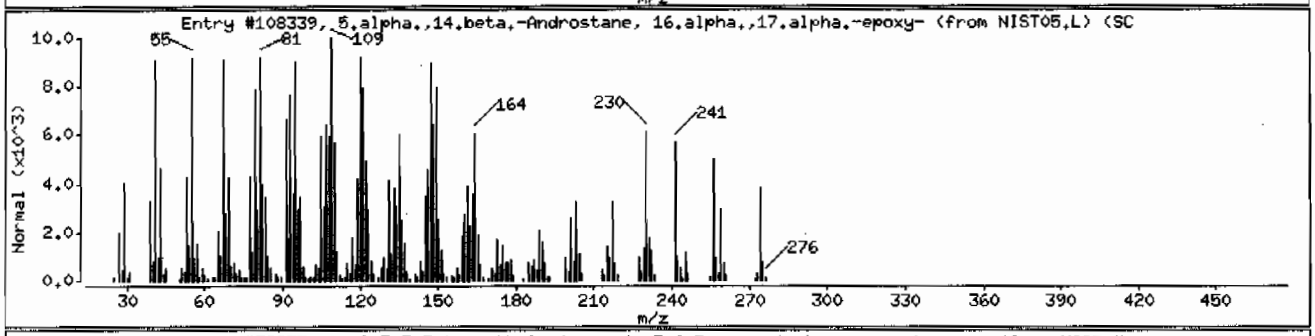

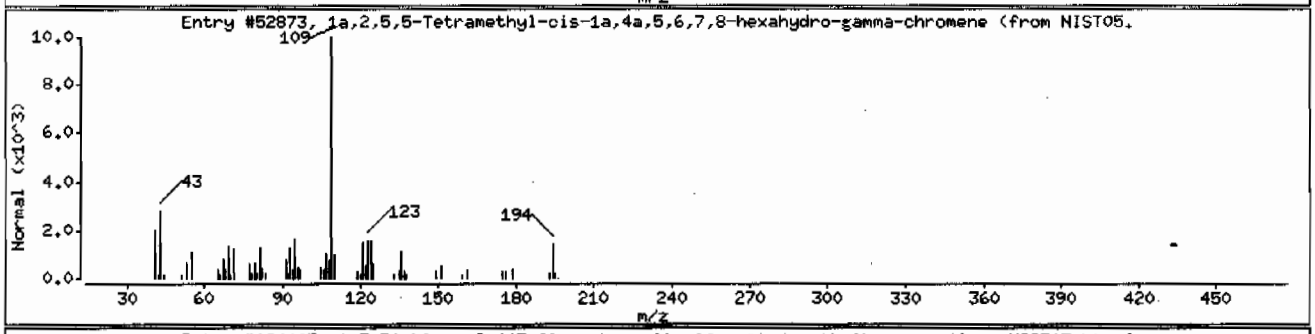

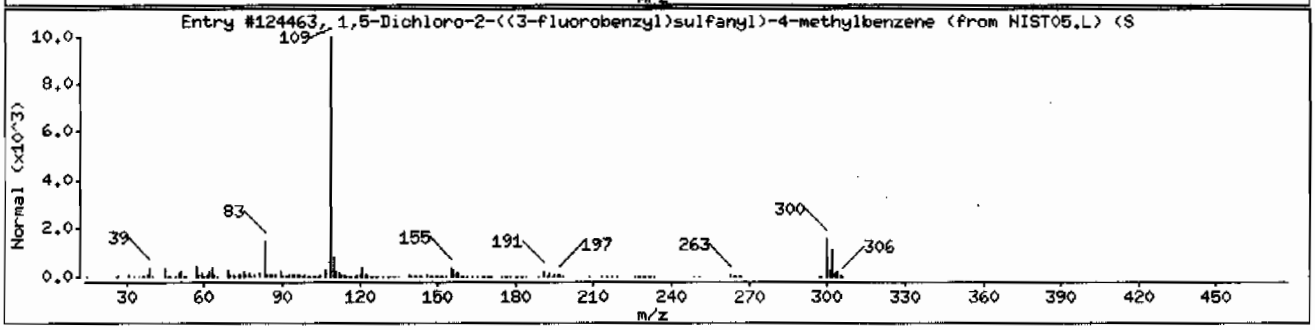

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811ISVMF11ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	95	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133620	95	C21H3002	314
Benzenesulfonamide, 4-tert-butyl-N-(6-me	1000295-47-8	NIST05.L	127097	55	C16H20N2O2S	304

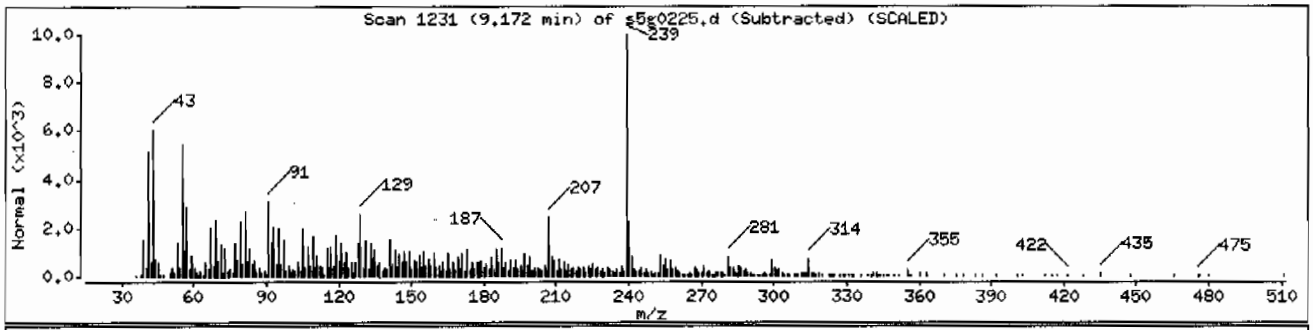

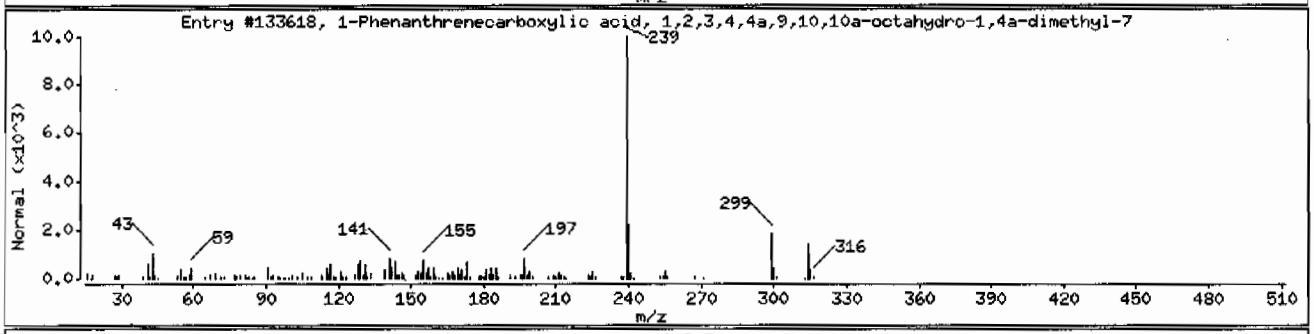

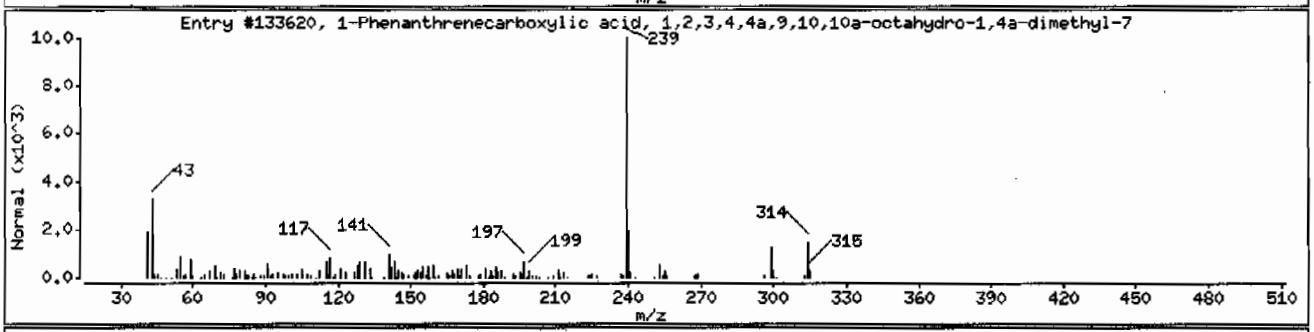

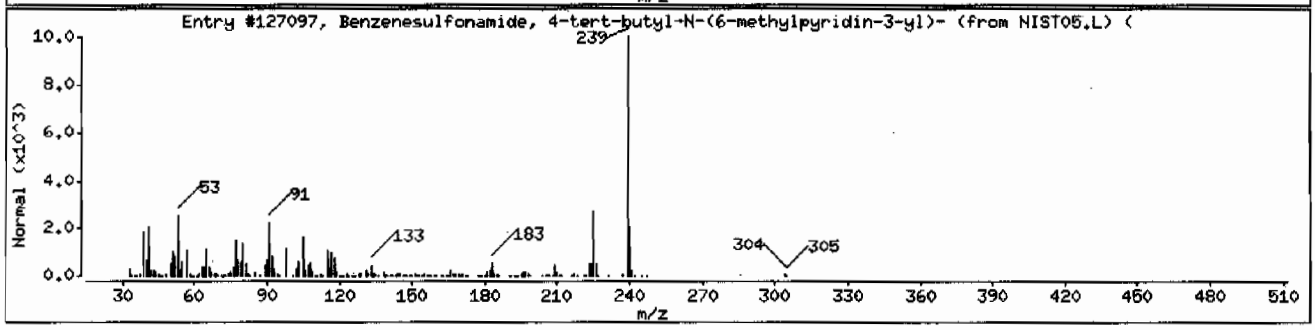

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Dispiro[2.1.2.4]undecane, 8-methylene-	51567-08-9	NIST05.L	30873	56	C12H18	162
10,13-Octadecadiynoic acid, methyl ester	18202-24-9	NIST05.L	118652	27	C19H3002	290
1-Cyclohexene-1-methanol, 4-(1-methyleth	15111-96-3	NIST05.L	52703	25	C12H1802	194

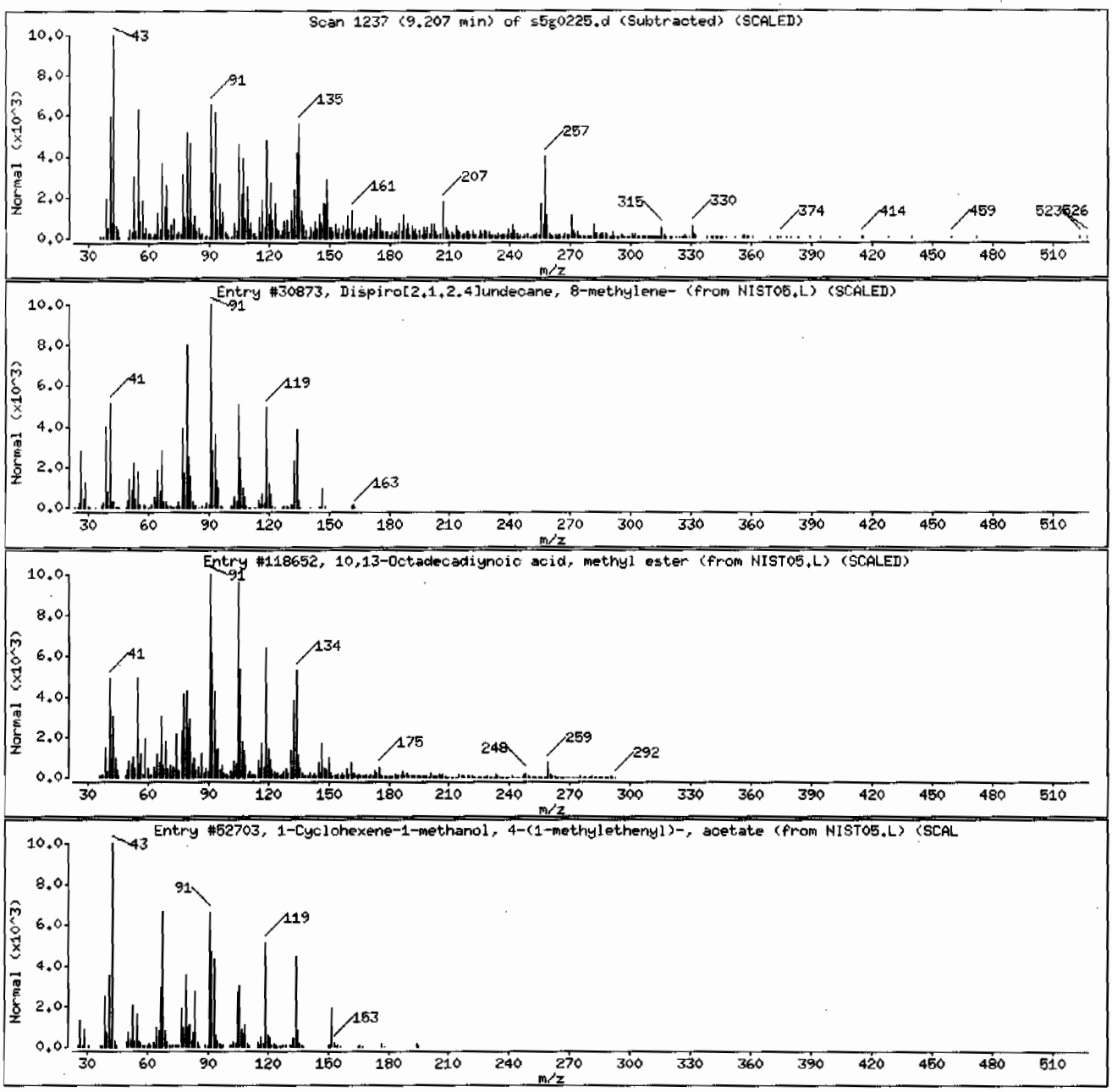

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
(3E,5E,7E)-6-Methyl-8-(2,6,6-trimethyl-1	17974-57-1	NIST05.L	97615	62	C18H26O	258
Andrographolide	5508-58-7	NIST05.L	152634	30	C20H30O5	350
Androstane-3,17-dione	5982-99-0	NIST05.L	117299	25	C19H28O2	288

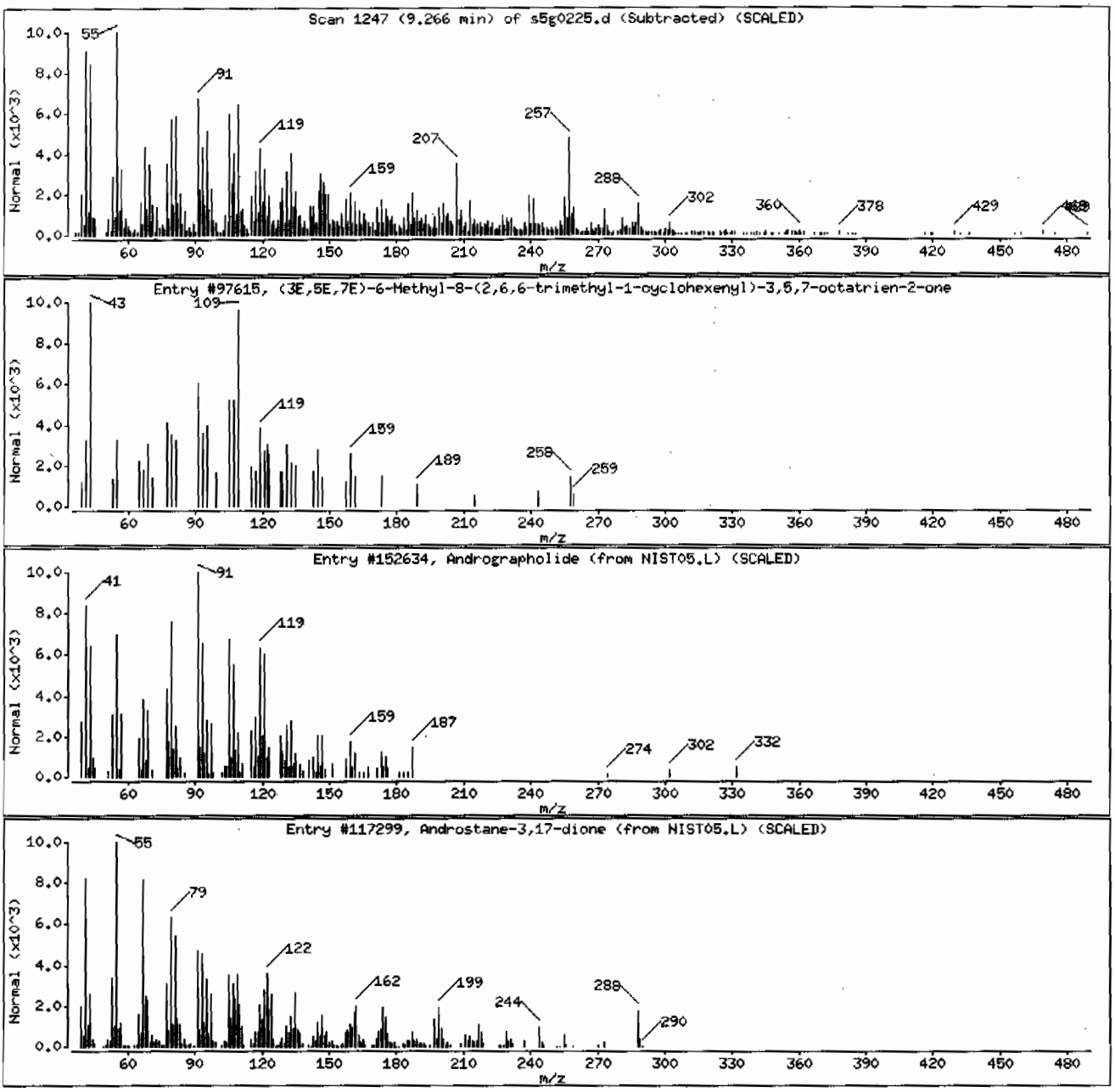

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011188187811SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Iron, (,eta.-5-cyclohexadienyl)(,eta.-5-	1000162-99-3	NIST05.L	105491	25	C16H22Fe	270
3-(2,6-Dichlorophenyl)-1-(4-methylphenyl	146497-07-6	NIST05.L	118380	12	C16H12Cl2O	290
2-Propen-1-one, 3-(2,4-dichlorophenyl)-1	76734-08-2	NIST05.L	118381	12	C16H12Cl2O	290

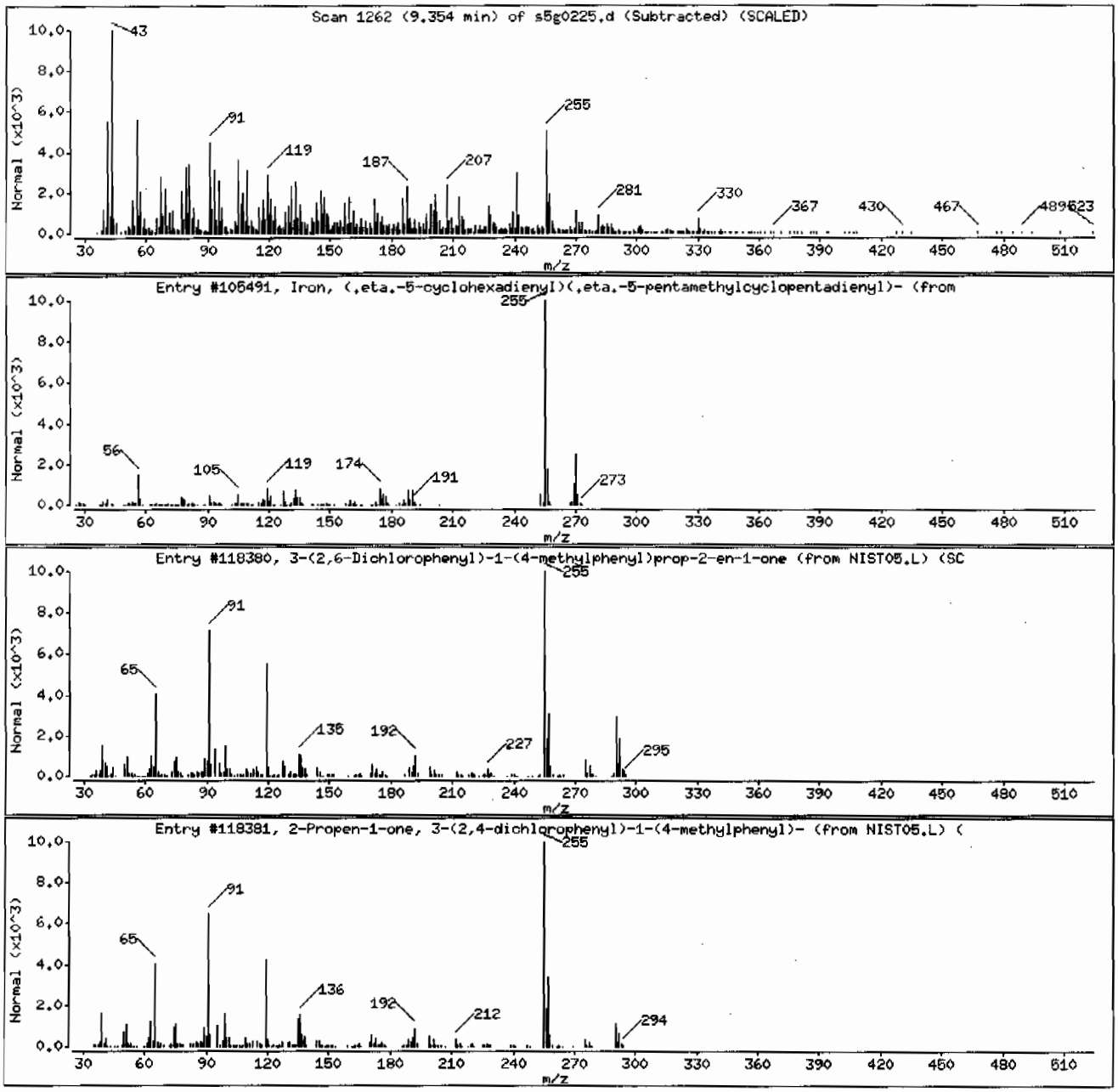

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
3-Phenylpropionic acid, 2,7-dimethyloct-	1000299-17-7	NIST05.L	114924	20	C19H2402	284
Andrographolide	5508-58-7	NIST05.L	152634	15	C20H3005	350
Androst-5-ene-3,19-diol, 3-acetate, (3.b	55320-48-4	NIST05.L	143734	14	C21H3203	332

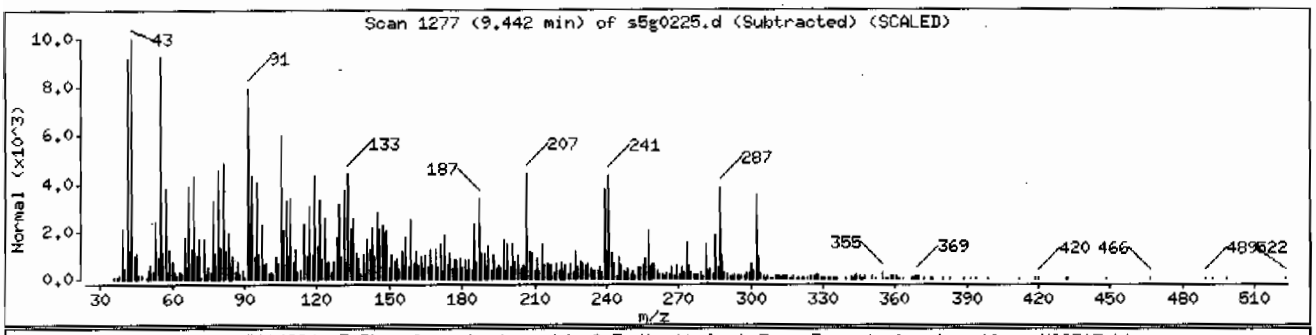

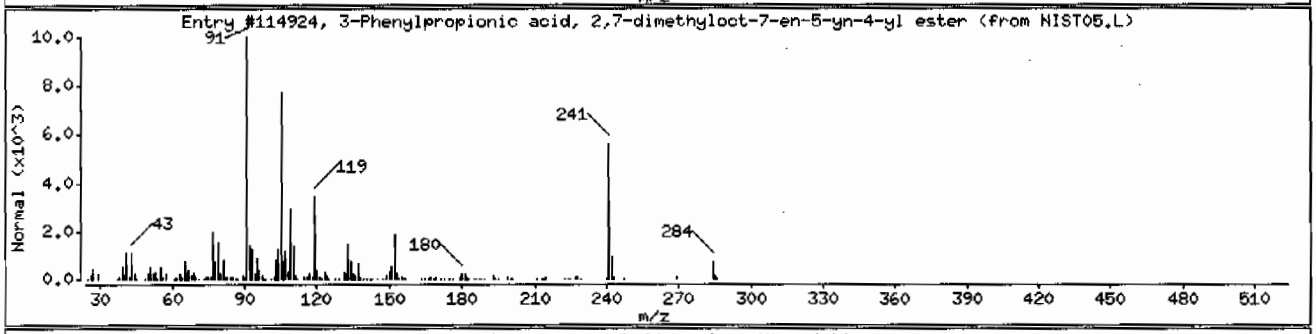

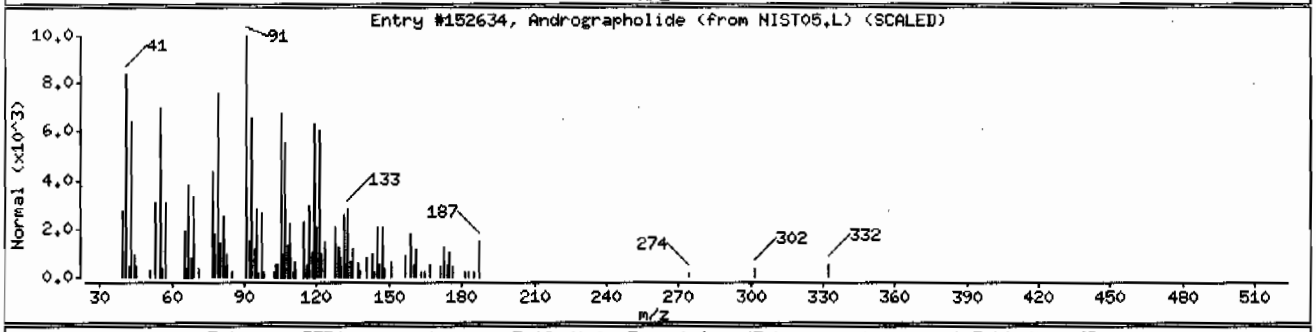

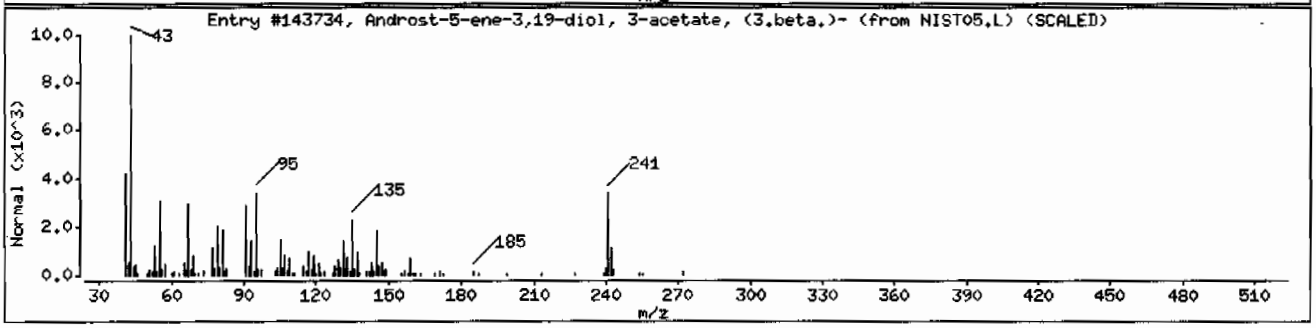

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	99	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125036	94	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	5155-70-4	NIST05.L	125035	91	C20H28O2	300

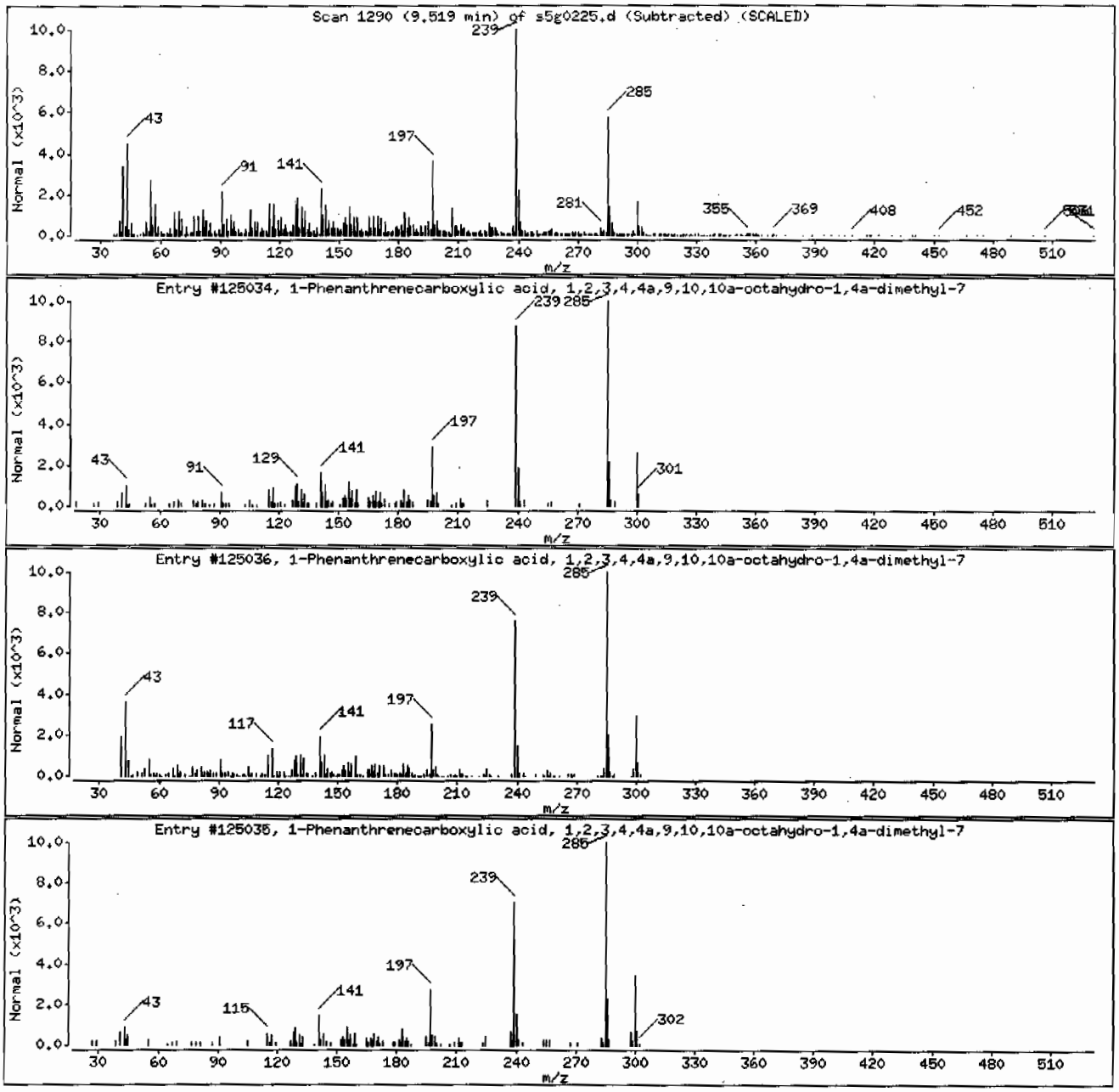

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Octadecanethiol	2885-00-9	NIST05.L	116141	51	C18H38S	286
Octadecane, 1-(methylthio)-	40289-98-3	NIST05.L	124981	49	C19H40S	300
Oxacyclohexadecan-2-one	106-02-5	NIST05.L	85337	49	C15H28O2	240

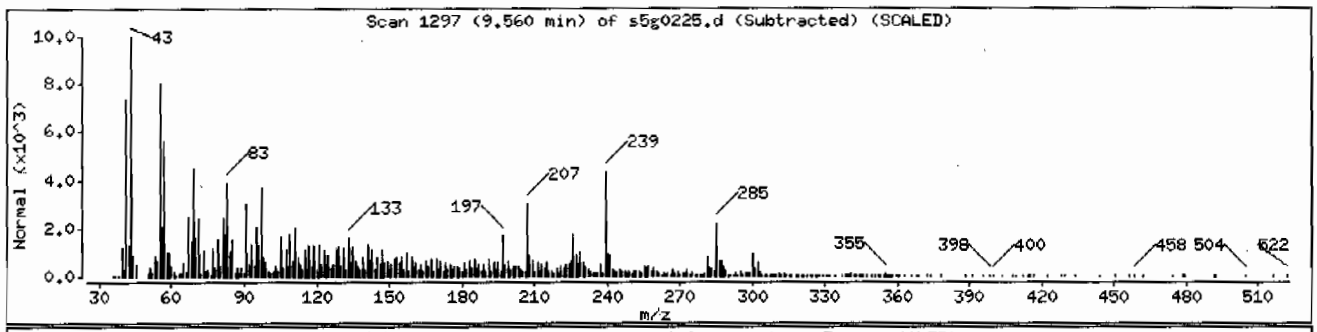

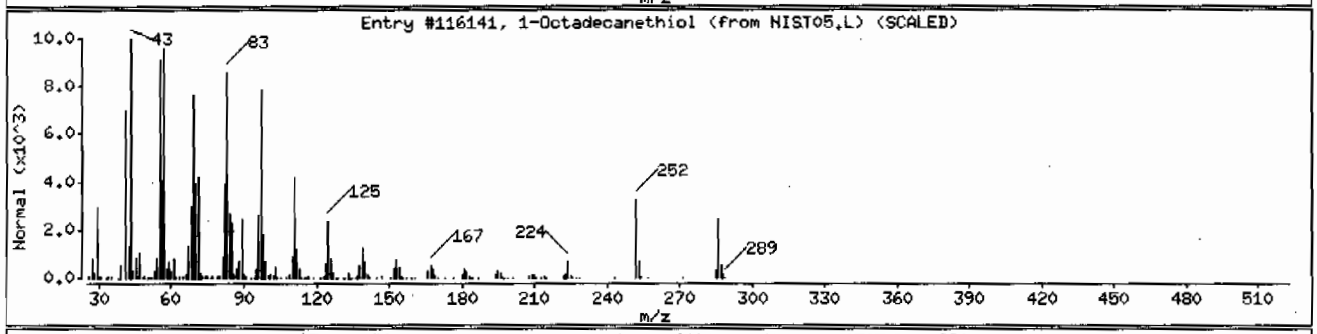

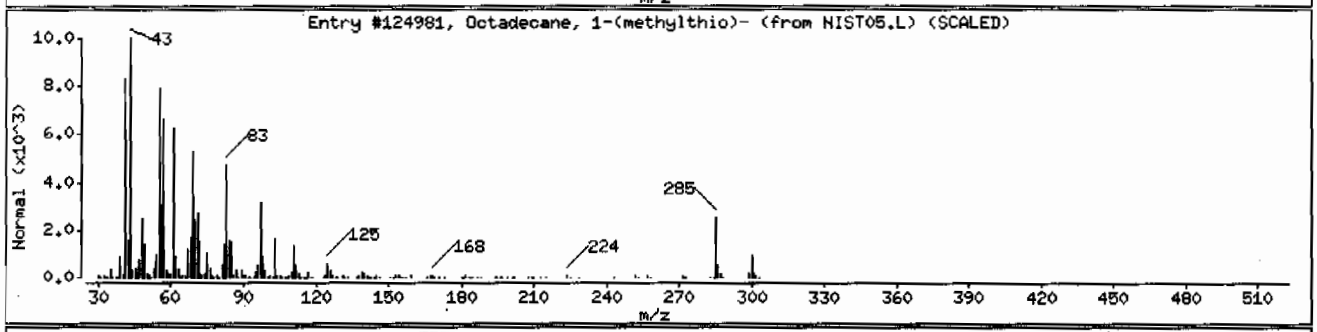

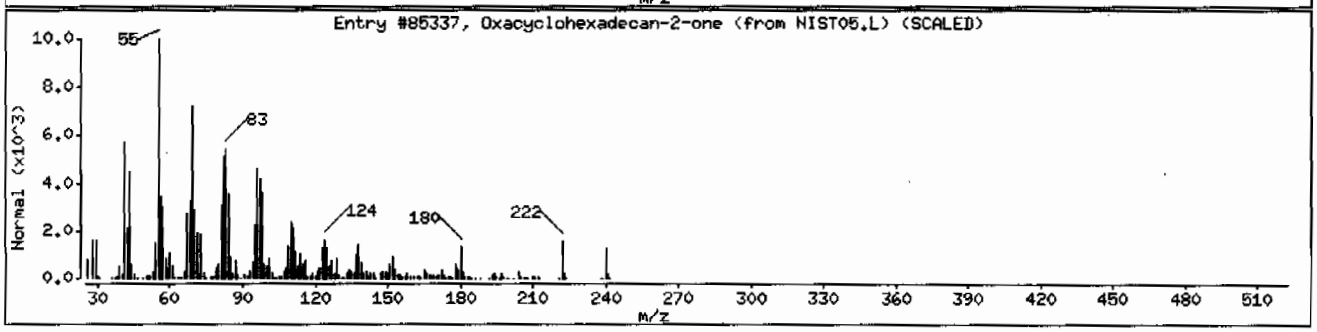

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2,4,7,14-Tetramethyl-4-vinyl-tricyclo[5,	1000193-31-2	NIST05.L	118746	59	C20H340	290
1,2-Benzenedicarboxylic acid, diisooctyl	27554-26-3	NIST05.L	168519	46	C24H3804	390
Bis(2-ethylhexyl) phthalate	117-81-7	NIST05.L	168502	46	C24H3804	390

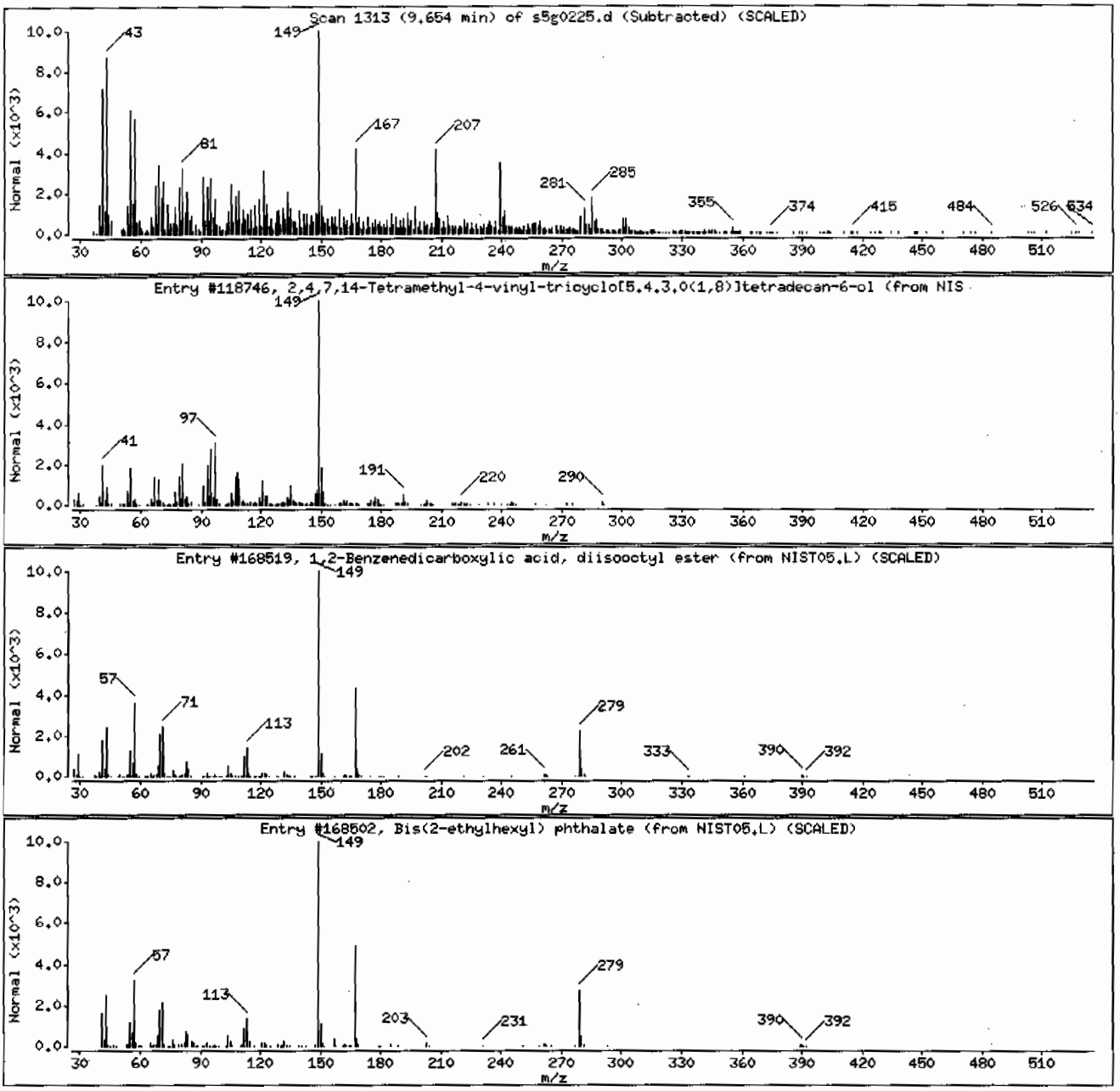

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011188187811SVHF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Pregnan-20-one, (5.alpha.,17.alpha.)-	7704-90-7	NIST05.L	126222	38	C21H34O	302
Heneicosane, 3-methyl-	6418-47-9	NIST05.L	131159	38	C22H46	310
2,2-Dimethylpropanoic acid, 2,6-dimethyl	1000299-33-6	NIST05.L	92138	30	C16H26O2	250

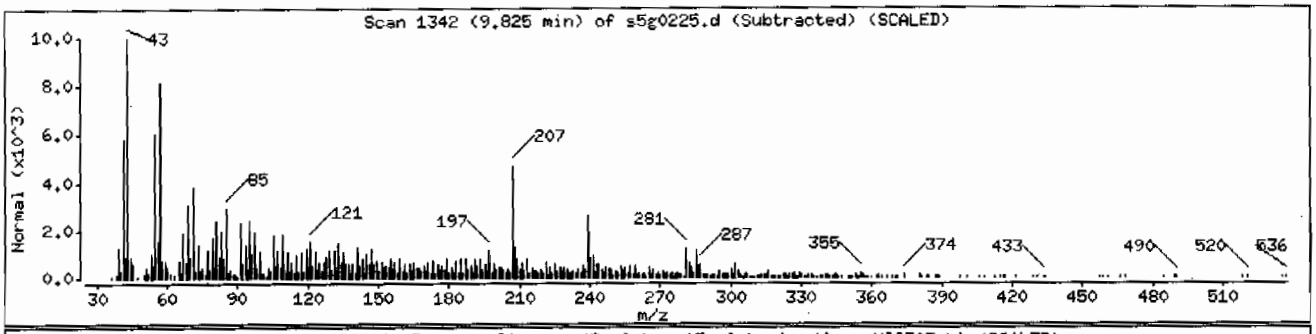

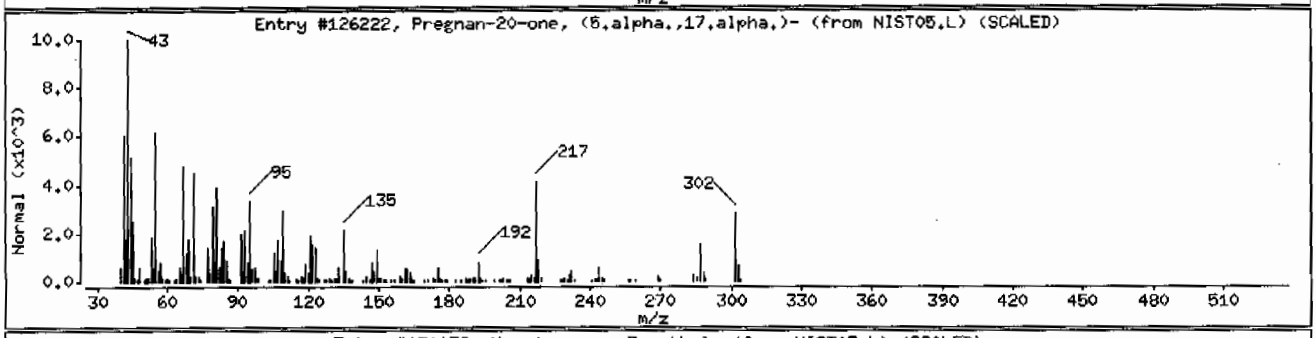

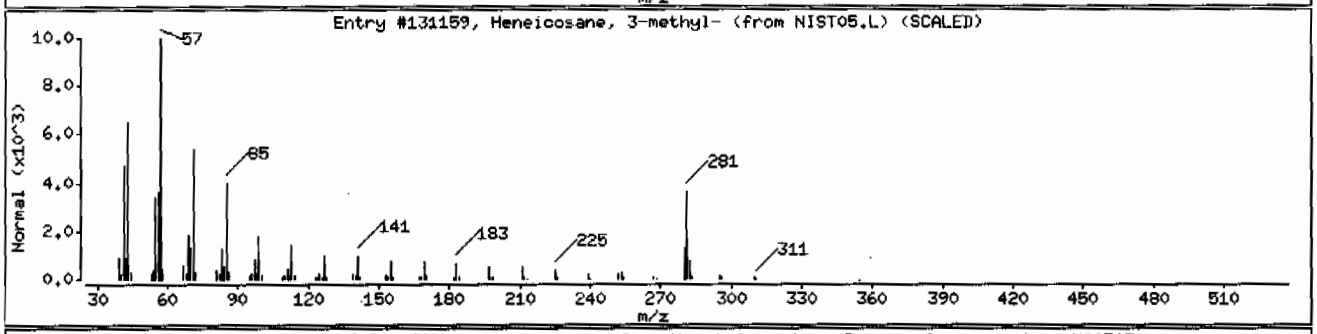

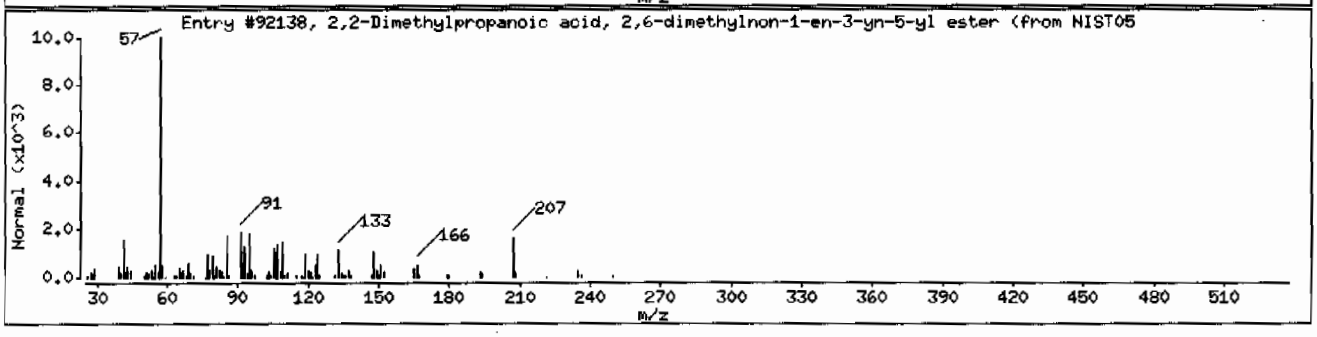

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cholest-8-en-3.beta.-ol, acetate	17137-74-5	NIST05.L	176908	48	C29H4802	428
Cyclopenteno[4,3-b]tetrahydrofuran, 3-[(	1000211-22-7	NIST05.L	156136	30	C19H18O5S	358
Benz[e]azulene-3,8-dione, 5-[(acetyloxy)	25536-74-7	NIST05.L	151695	30	C19H2406	348

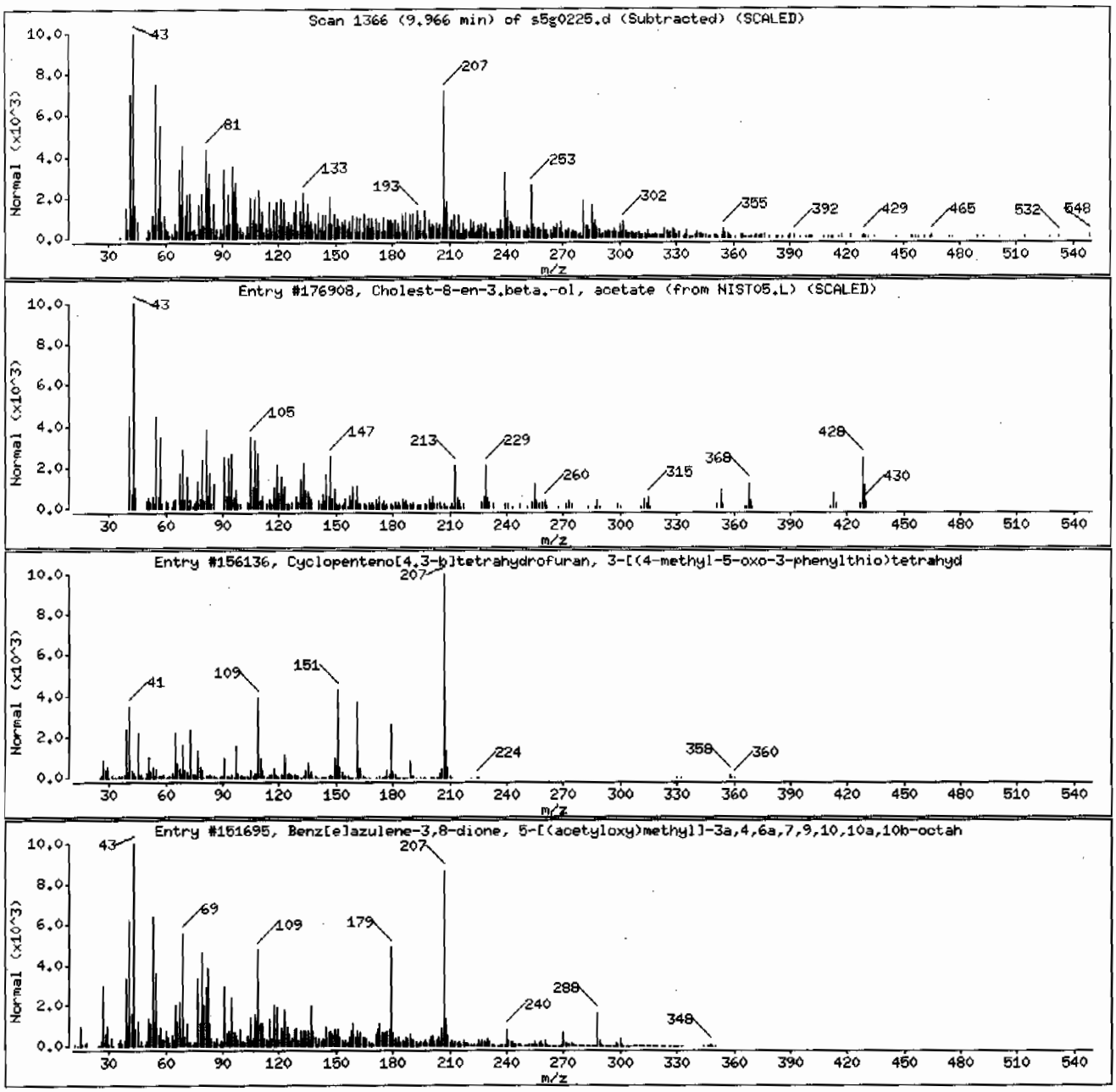

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Octadecane, 1-chloro-	3386-33-2	NIST05.L	117264	96	C18H37Cl	288
Eicosane	112-95-8	NIST05.L	113492	95	C20H42	282
Heptadecane	629-78-7	NIST05.L	85525	95	C17H36	240

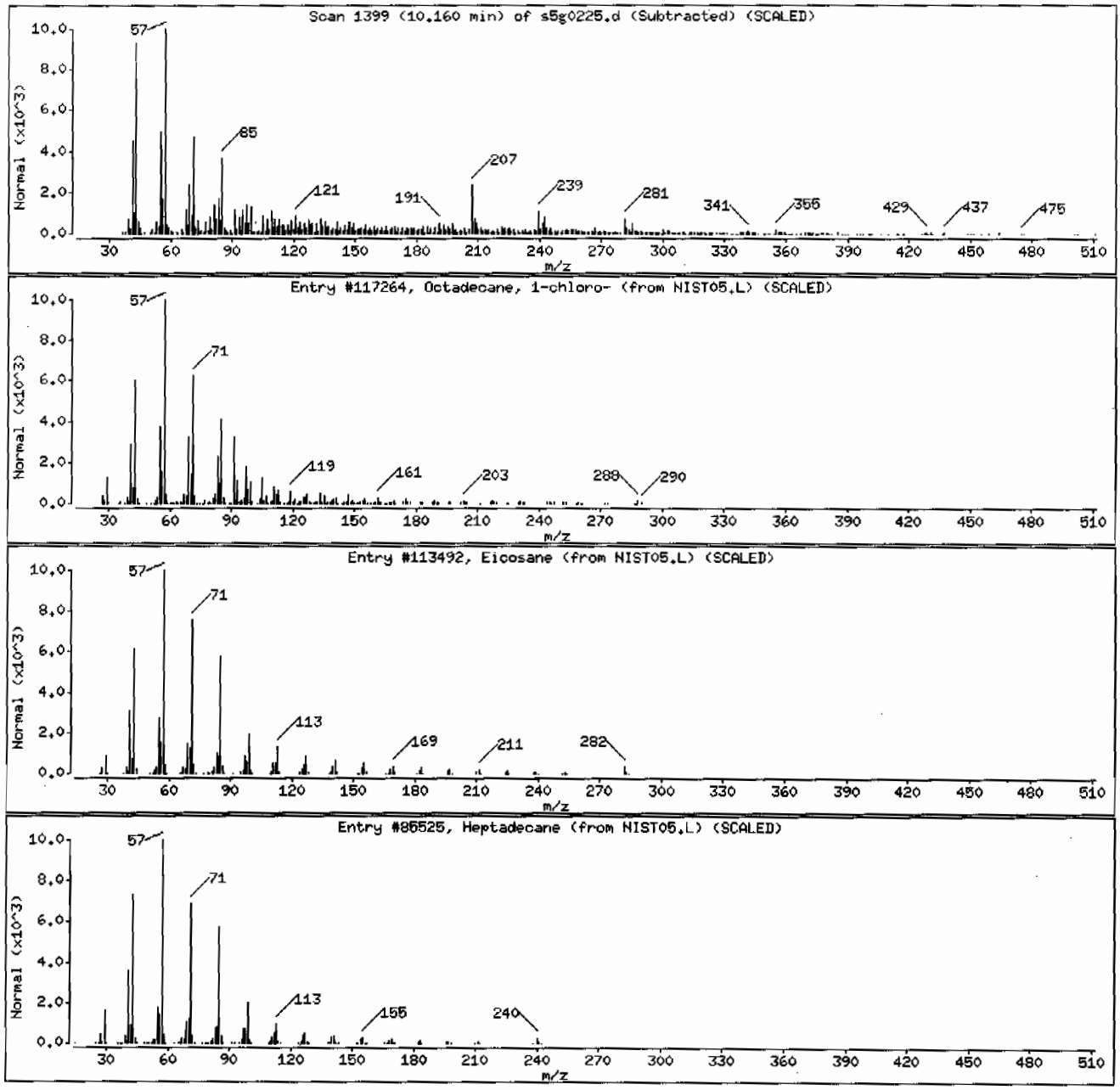

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |232503011|881878|1|SWMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2-[4-methyl-6-(2,6,6-trimethylcyclohex-1	1000216-09-2	NIST05.L	139230	83	C23H320	324
Methyl dihydroisosteviol	202577-02-4	NIST05.L	144891	38	C21H3403	334
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	38	C15H2602	238

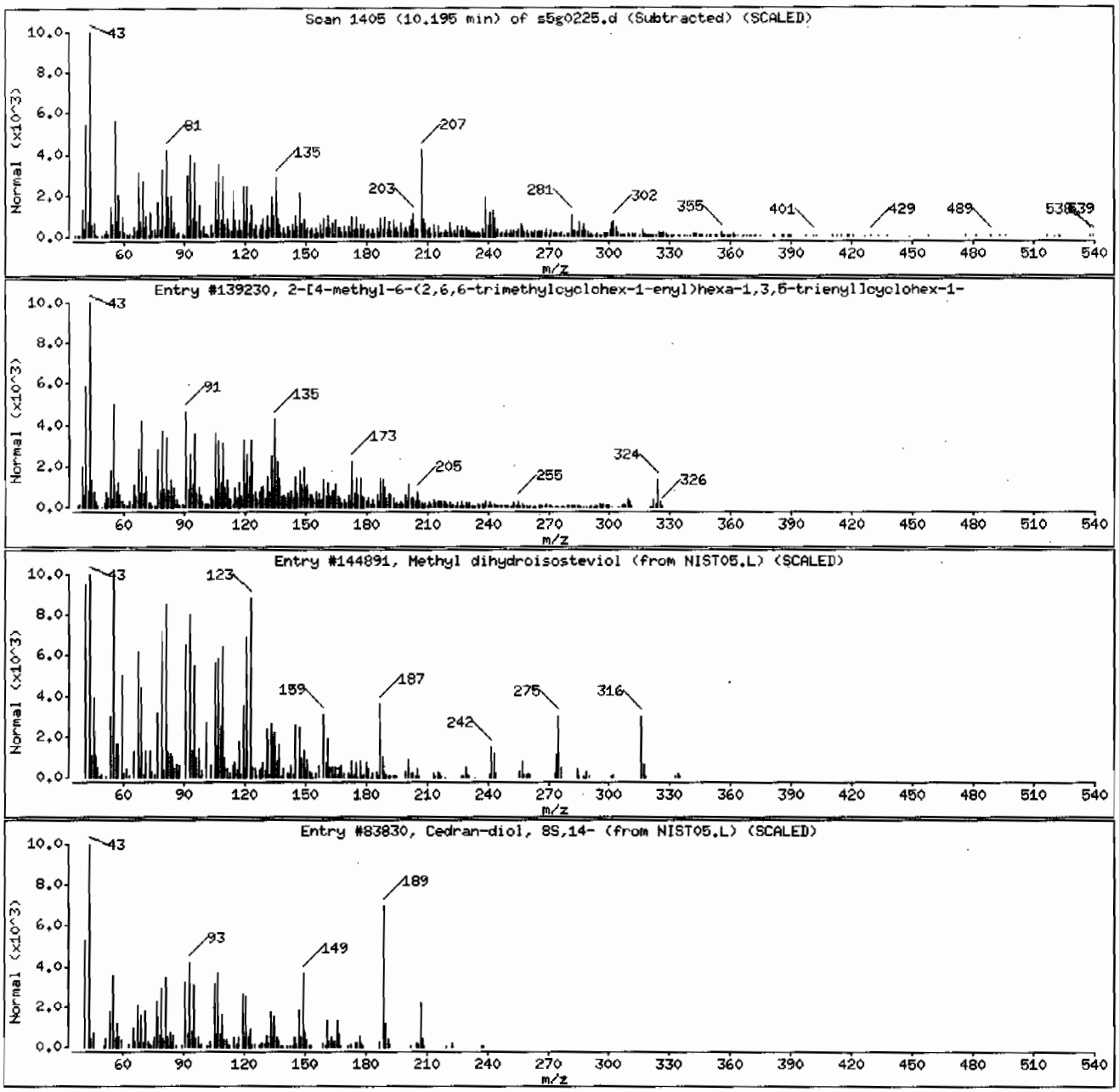

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Hexacosanol	506-52-5	NIST05.L	165910	92	C26H54O	382
1-Docosene	1599-67-3	NIST05.L	129888	90	C22H44	308
1-Hexacosene	18835-33-1	NIST05.L	159039	90	C26H52	364

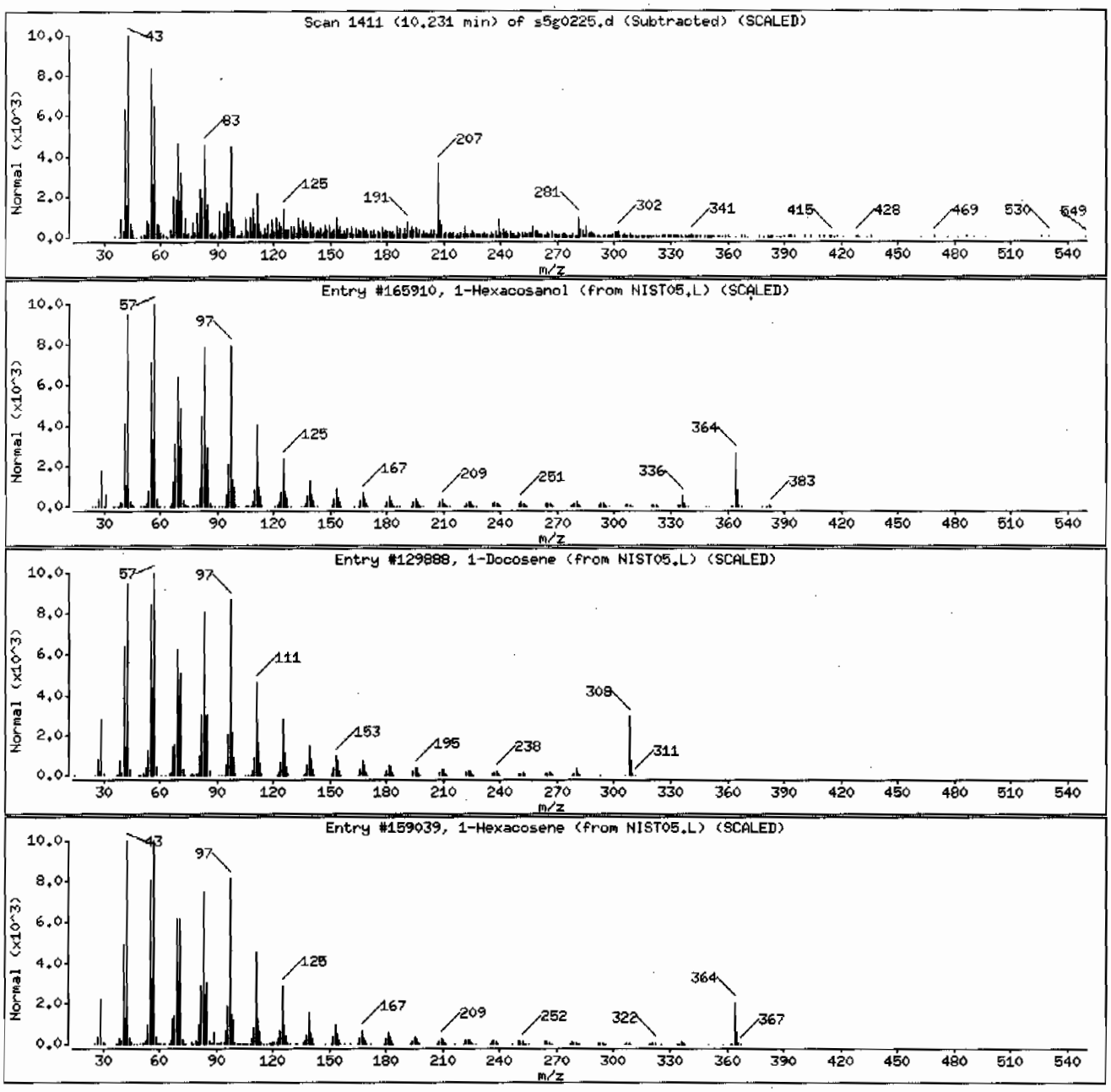

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Silane, 1,4-phenylenebis[trimethyl-	13183-70-5	NIST05.L	72522	38	C12H22Si2	222
4-Dehydroxy-N-(4,5-methylenedioxy-2-nitr	1000111-66-9	NIST05.L	123317	38	C16H14N2O4	298
Silane, trimethyl[5-methyl-2-(1-methylet	55012-80-1	NIST05.L	72681	35	C13H22OSi	222

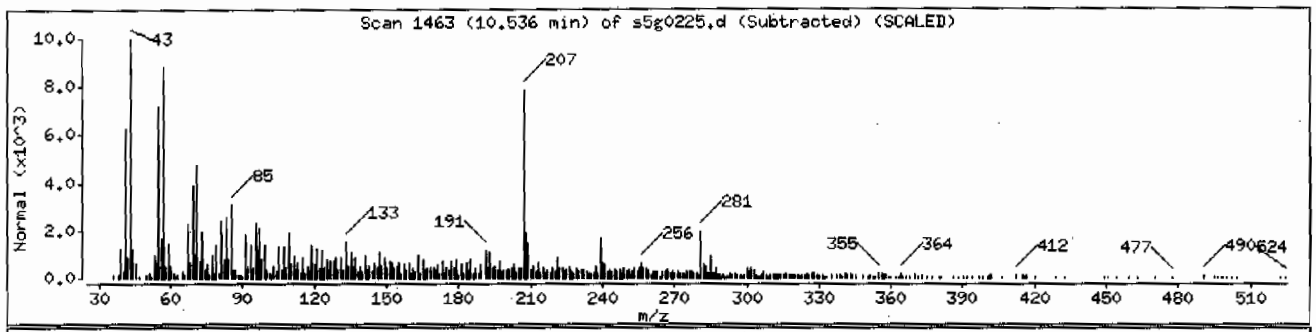

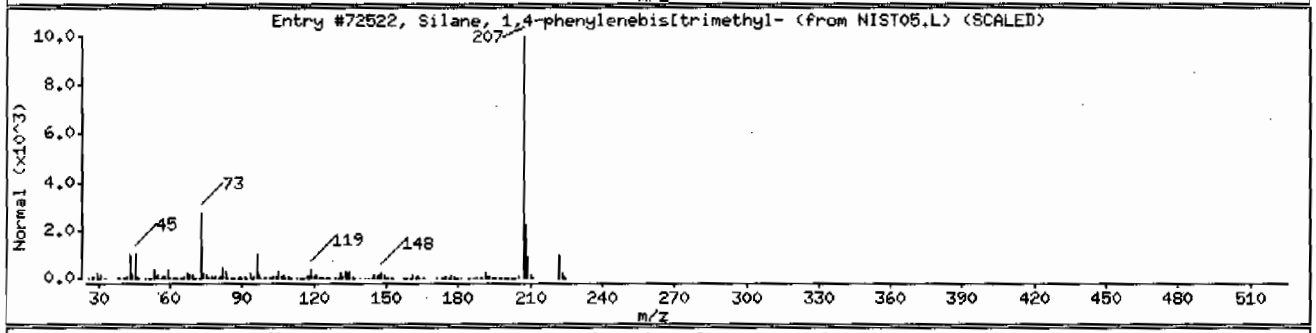

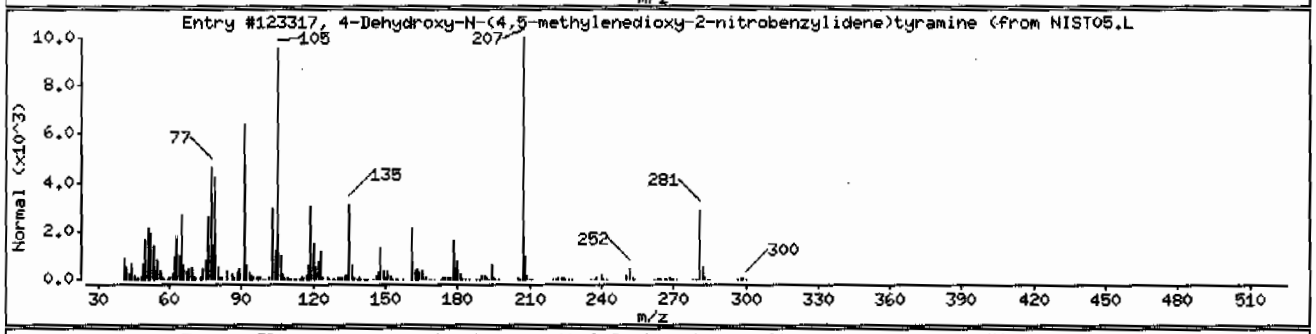

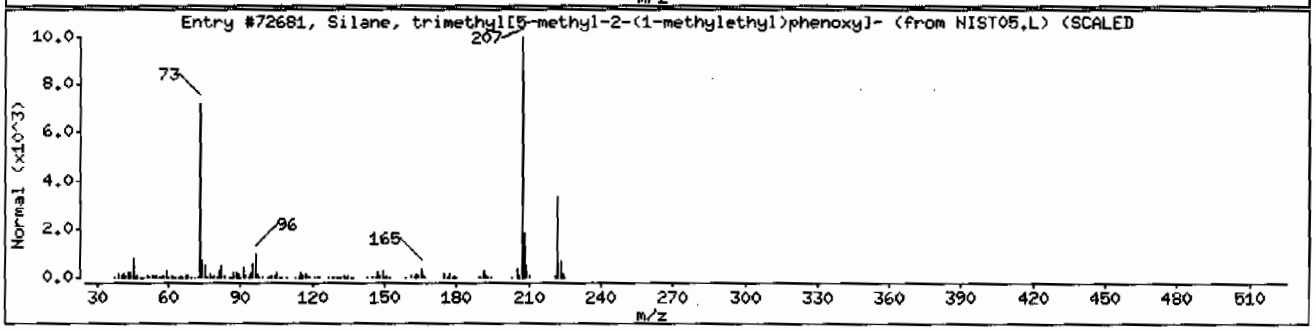

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2,5-Dihydroxy-2-(4-methyl-pent-3-enyl)-2	1000193-26-2	NIST05.L	158799	45	C19H24O7	364
1H-Indole, 5-methyl-2-phenyl-	13228-36-9	NIST05.L	62237	43	C15H13N	207
Benzo[h]quinoline, 2,4-dimethyl-	605-67-4	NIST05.L	62242	25	C15H13N	207

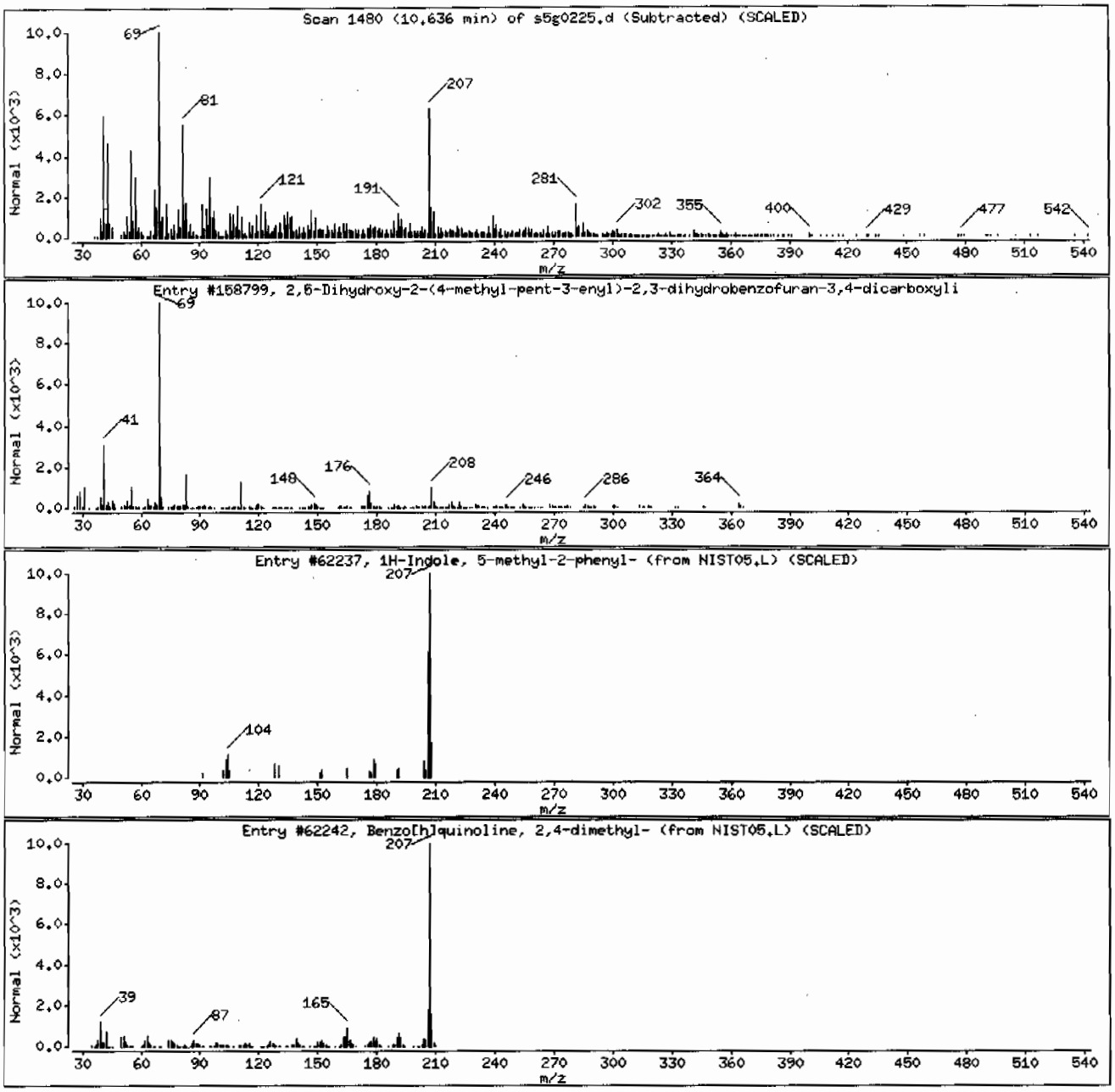

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366

Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosane	112-95-8	NIST05.L	113492	95	C20H42	282
Heptadecane	629-78-7	NIST05.L	85525	90	C17H36	240
Eicosane	112-95-8	NIST05.L	113488	90	C20H42	282

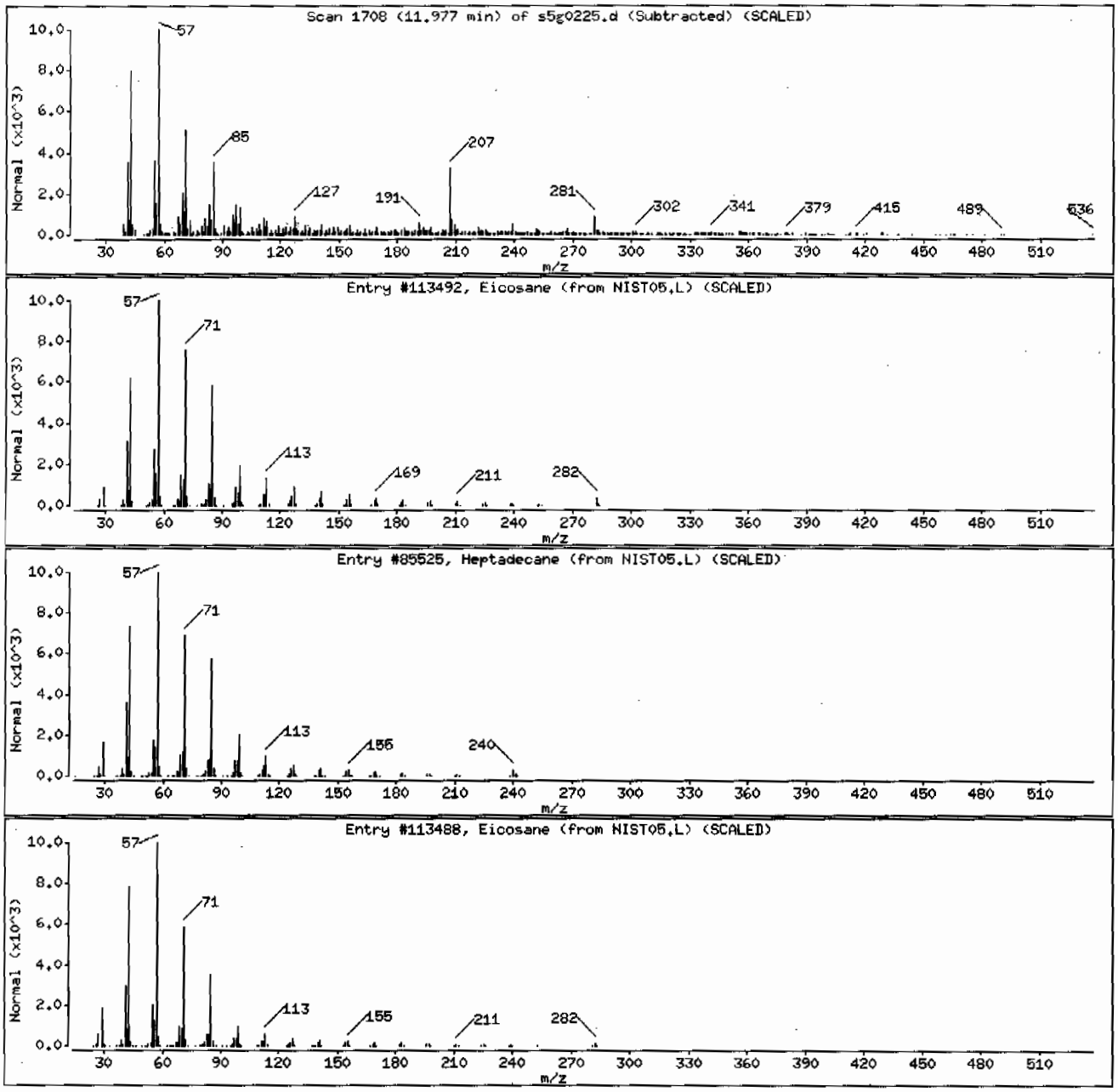

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: |2325030111881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclohexane, 1,1'-(2-ethyl-1,3-propanedi	54833-34-0	NIST05.L	82661	89	C17H32	236
Cyclohexane, 1,1'-(2-methyl-1,3-propaned	2883-08-1	NIST05.L	73082	89	C16H30	222
Cyclohexane, 1,1'-(2-propyl-1,3-propaned	55030-21-2	NIST05.L	92245	68	C18H34	250

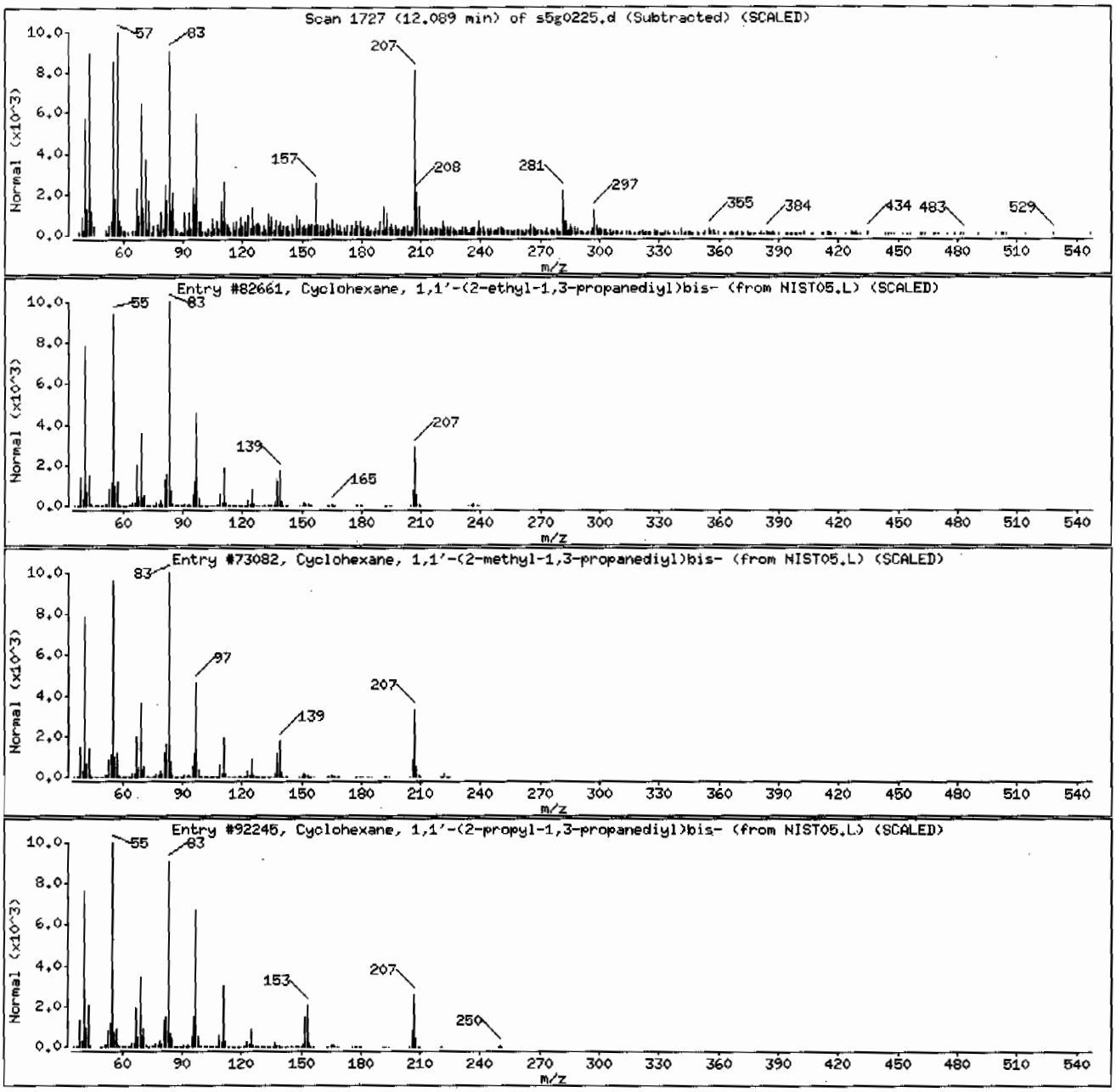

Data File: /chem/MSD5.i/s070209.b/s5g0225.d

Date : 02-JUL-2009 17:12

Client ID: CAMO-09-10366 Instrument: MSD5.i

Sample Info: 1232503011|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,1,1,3,5,5,5-Heptamethyltrisiloxane	1873-88-7	NIST05.L	73166	43	C7H22O2Si3	222
N-Methyl-1-adamantaneacetamide	31897-93-5	NIST05.L	62175	42	C13H21NO	207
2-Methyl-7-phenylindole	1140-08-5	NIST05.L	62225	41	C15H13N	207

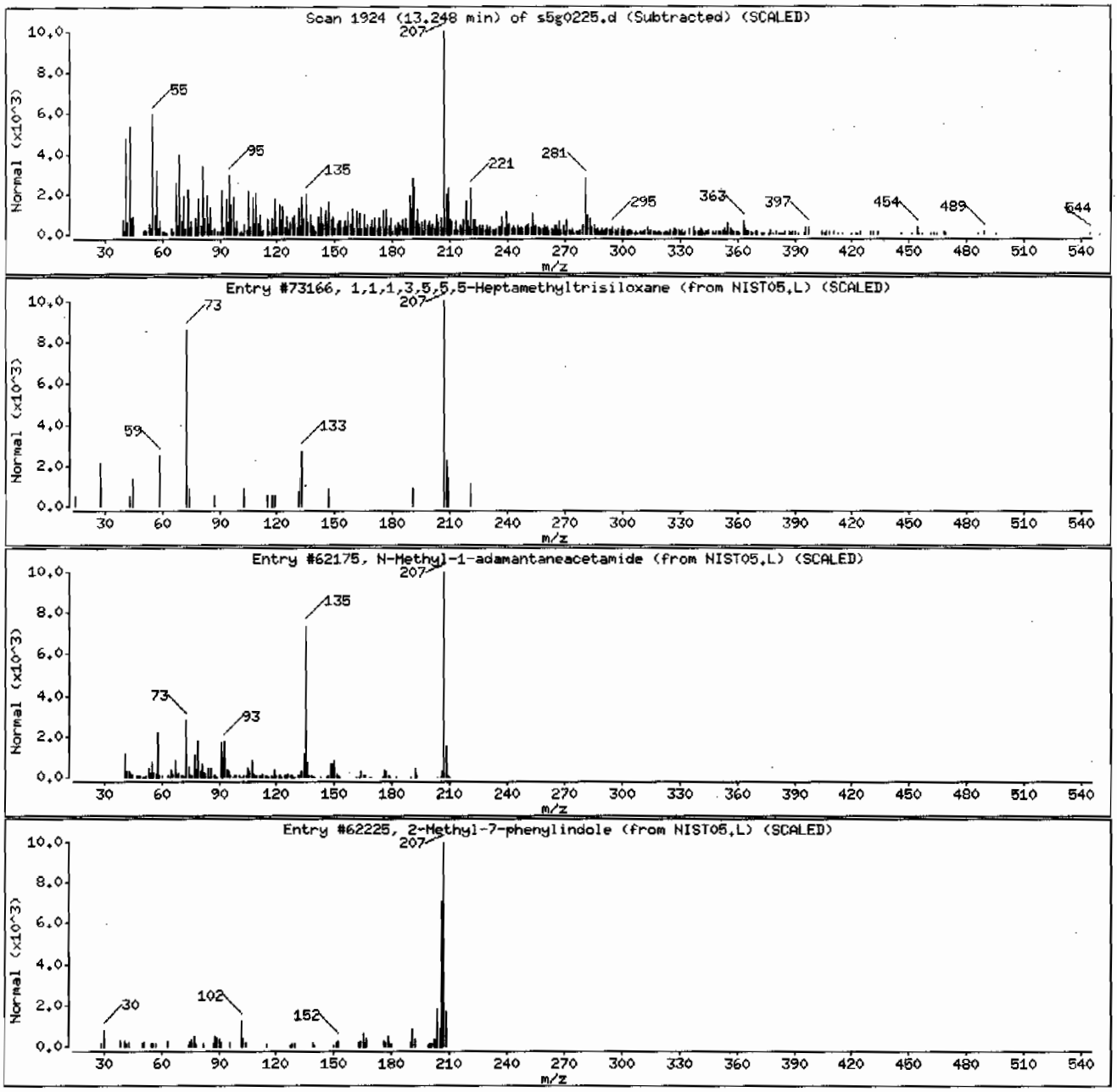

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0226.d
Lab Smp Id: 232503014 Client Smp ID: CAMO-09-10379
Inj Date : 02-JUL-2009 17:34
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503014|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.05000	weight of sample
M	4.33280	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.013	4.017	(1.000)	505159	40.0000	
* 29 Naphthalene-d8	136	4.884	4.889	(1.000)	1769363	40.0000	
* 46 Acenaphthene-d10	164	6.148	6.145	(1.000)	1043326	40.0000	
* 67 Phenanthrene-d10	188	7.325	7.325	(1.000)	1762318	40.0000	
* 91 Chrysene-d12	240	9.748	9.747	(1.000)	1258627	40.0000	
* 98 Perylene-d12	264	11.507	11.495	(1.000)	783954	40.0000	
$ 3 2-Fluorophenol	112	3.201	3.194	(0.798)	786580	70.9163	2470
$ 5 Phenol-d5	99	3.731	3.728	(0.930)	1067342	72.9830	2540
$ 20 Nitrobenzene-d5	82	4.378	4.383	(0.896)	470540	35.8887	1250
$ 39 2-Fluorobiphenyl	172	5.625	5.630	(0.915)	1082614	40.1224	1400
$ 60 2,4,6-Tribromophenol	329	6.748	6.747	(1.098)	309103	72.6112	2520
$ 81 p-Terphenyl-d14	244	8.707	8.702	(0.893)	963618	50.0270	1740

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.613	8.611	(0.884)	13776	0.50172	17.4(a)
76 Fluoranthene	202	8.395	8.394	(1.146)	14297	0.38016	13.2(a)
93 bis(2-Ethylhexyl)phthalate	149	9.654	9.656	(0.990)	63816	3.95154	137(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0226.d
Report Date: 07/02/2009 17:53
Lab. ID: 232503014 SampleType: SAMPLE
Injection Date: 02-JUL-2009 17:34
Operator: RMB Instrument: MSD5.i
Sample Info: |232503014|881878|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2497
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	64390	3.73	3.80	80-120	100	(T)
93	395	3.69	3.80	190-250	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	70096	4.38	4.25	80-120	100	(T)
42	43824	4.38	4.25	55-115	63	(T)
22 Isophorone		CAS#: 78-59-1				
82	459008	4.38	4.55	80-120	100	(T)
138	158	4.42	4.55	0- 49	0	(T)
27 Benzoic acid		CAS#: 65-85-0				
105	1214	4.66	4.64	80-120	100	( )
122	1450	4.65	4.64	54-114	119	(Q)
77	1075	4.67	4.64	50-110	89	( )
31 4-Chloroaniline		CAS#: 106-47-8				
127	581	4.92	4.92	80-120	100	( )
65	479	4.91	4.92	0- 55	82	(Q)
41 m-Nitroaniline		CAS#: 99-09-2				
138	229	6.07	6.09	80-120	100	( )
92	318	6.10	6.09	84-144	138	( )
108	286	6.07	6.09	0- 40	125	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
43 Dimethylphthalate			CAS#: 131-11-3			
163	228512	6.15	5.90	80-120	100	(T)
164	1043326	6.15	5.90	0- 40	457	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	138381	6.15	5.96	80-120	100	(T)
63	2370	6.15	5.96	55-115	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	138381	6.15	6.26	80-120	100	(T)
89	2295	6.14	6.26	38- 98	2	(QT)
63	2370	6.15	6.26	19- 79	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	13398	6.75	6.56	80-120	100	(T)
165	13402	6.75	6.56	61-121	100	(T)
167	5247	6.75	6.56	0- 44	39	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1455	6.75	6.57	80-120	100	(T)
105	1862	6.75	6.57	2- 62	128	(QT)
51	2044	6.75	6.57	46-106	140	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	22623	6.75	6.93	80-120	100	(T)
141	112974	6.75	6.93	34- 94	499	(QT)
250	40166	6.75	6.93	68-128	178	(QT)
69 Anthracene			CAS#: 120-12-7			
178	7324	7.35	7.39	80-120	100	( )
179	816	7.35	7.39	0- 46	11	( )
176	1909	7.35	7.39	0- 49	26	( )
76 Fluoranthene			CAS#: 206-44-0			
202	14297	8.40	8.39	80-120	100	( )
203	2512	8.40	8.39	0- 48	18	( )
101	1767	8.40	8.39	0- 39	12	( )
79 Pyrene			CAS#: 129-00-0			
202	13776	8.61	8.61	80-120	100	( )
200	2946	8.61	8.61	0- 51	21	( )
101	2716	8.61	8.61	0- 41	20	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	14090	9.75	9.73	80-120	100	( )
226	891	9.75	9.73	0- 56	6	( )
229	2821	9.76	9.73	0- 50	20	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
92 Chrysene			CAS#: 218-01-9			
228	14106	9.75	9.77	80-120	100	( )
229	2825	9.76	9.77	0- 50	20	( )
226	1280	9.75	9.77	0- 60	9	( )
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	63816	9.65	9.66	80-120	100	( )
167	21227	9.65	9.66	5- 65	33	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	9558	10.96	10.95	80-120	100	( )
253	1617	10.96	10.95	0- 52	17	( )
125	1078	10.96	10.95	0- 38	11	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	11927	10.96	10.99	80-120	100	( )
253	3527	10.96	10.98	0- 52	30	( )
125	1078	10.96	10.98	0- 38	9	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	5179	11.42	11.41	80-120	100	( )
253	1889	11.42	11.41	0- 52	36	( )
125	1014	11.42	11.41	0- 30	20	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	4125	13.95	13.92	80-120	100	( )
138	1359	13.94	13.92	0- 30	33	(Q)

Q qualifier indicates ion failed ratio requirement
T qualifier indicates RT outside 0.06 minute window of expected RT

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070209.b/s5g0226.d
Lab Smp Id: 232503014 Client Smp ID: CAMO-09-10379
Inj Date : 02-JUL-2009 17:34
Operator : RMB Inst ID: MSD5.i
Smp Info : |232503014|881878|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070209.b/MSD5-M8270C-062509.m
Meth Date : 02-Jul-2009 09:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2497.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.05000	weight of sample
M	4.33280	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.013	3246964	40.000
* 91 Chrysene-d12	9.748	3673734	40.000
* 98 Perylene-d12	11.507	2677418	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.031	406441	5.00702812	174	0		0	10
Pregn-4-ene-3,20-dione, 14-methyl-				CAS #: 55162-96-4			
8.895	449418	4.89331292	170	84	NIST05.L	141520	91
Unknown				CAS #:			
12.918	456344	6.81767330	237	0		0	98

Data File: /chem/MSD5.i/s070209.b/s5g0226.d

Date : 02-JUL-2009 17:34

Client ID: CAMO-09-10379

Sample Info: |232503014|881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

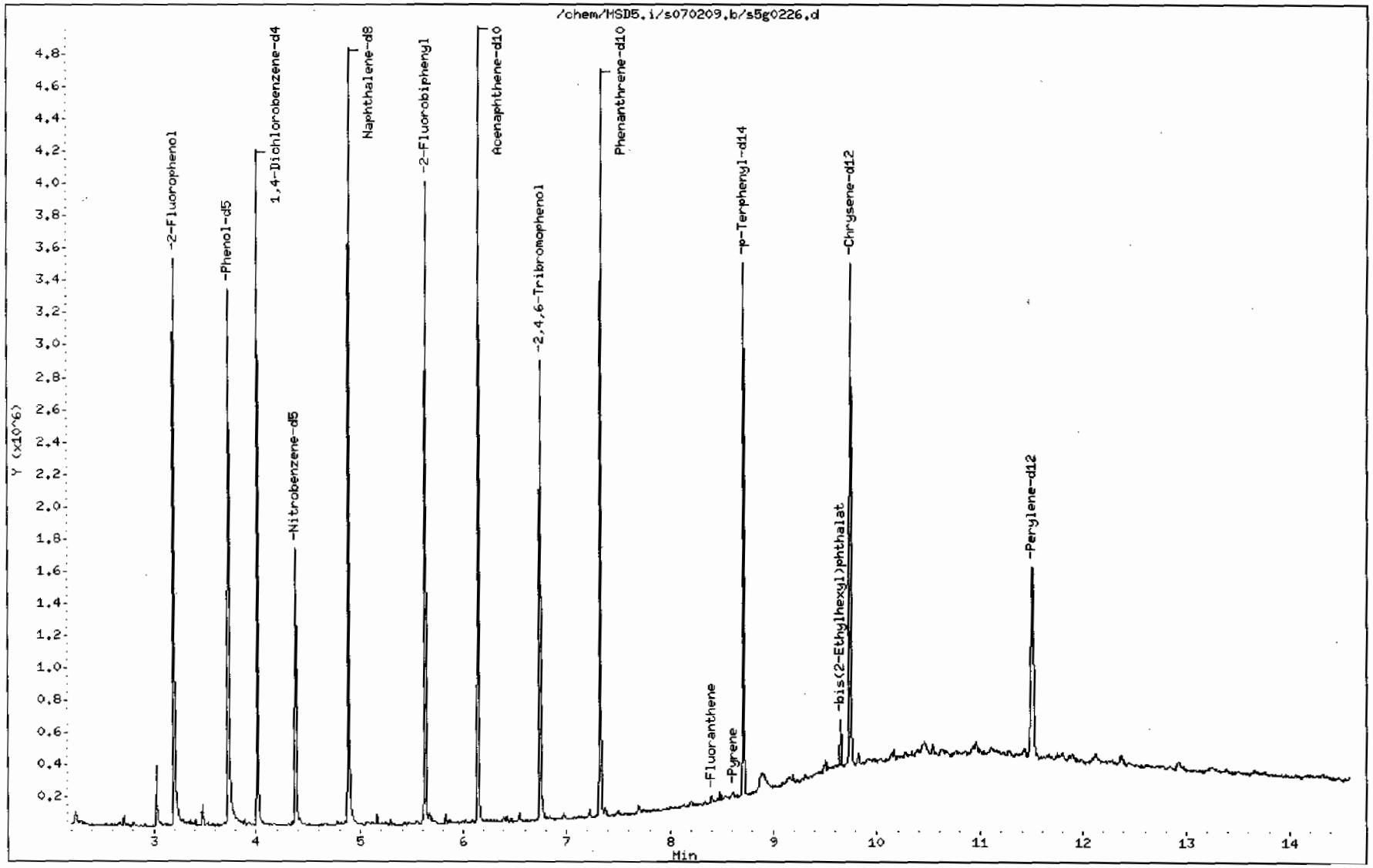

Data File: /chem/MSD5.i/s070209.b/s5g0226.d

Date : 02-JUL-2009 17:34

Client ID: CAMO-09-10379

Instrument: MSD5.i

Sample Info: 1232503014188187811ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 17.4 ug/Kg

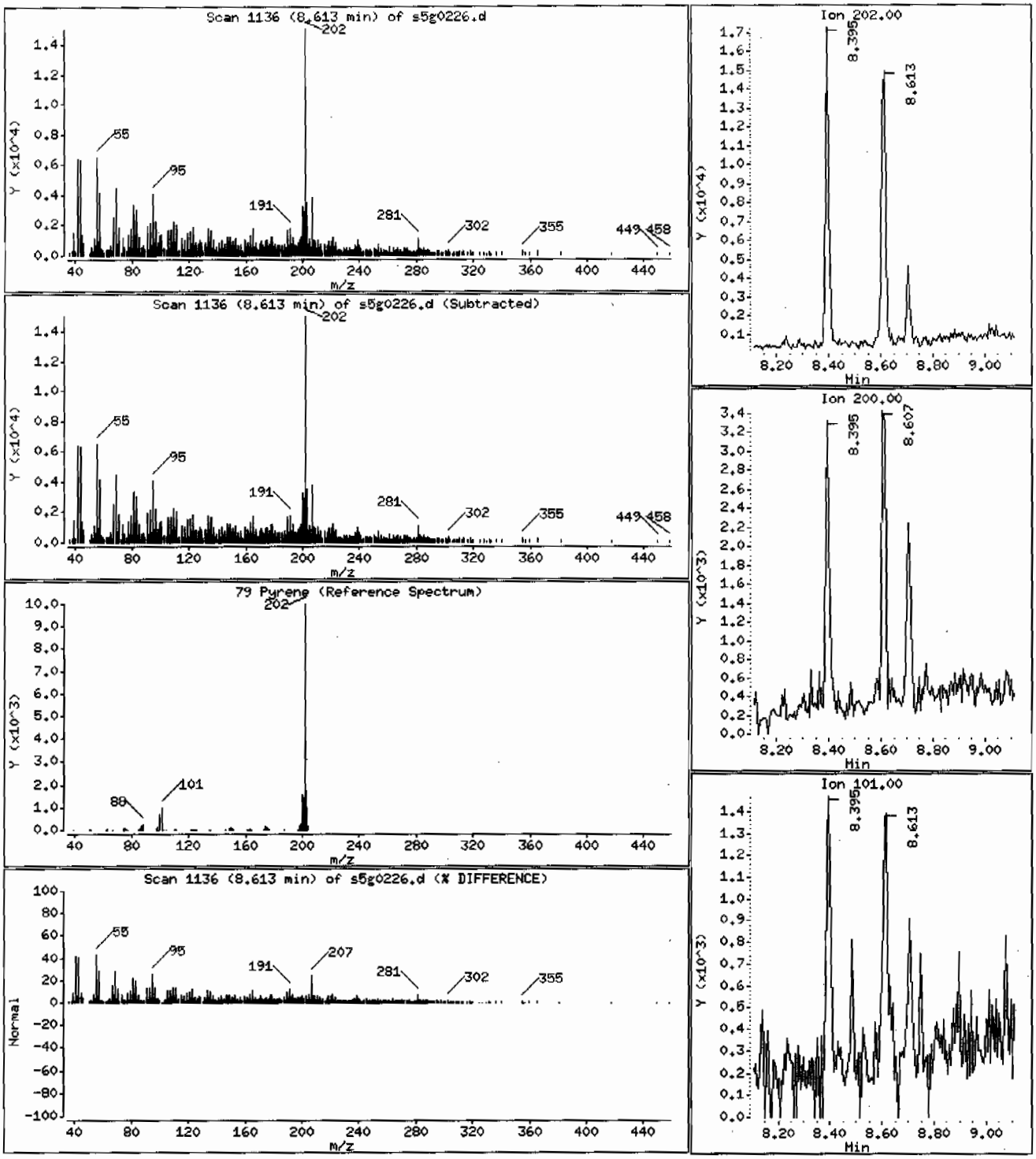

Data File: /chem/MSD5.i/s070209.b/s5g0226.d

Date : 02-JUL-2009 17:34

Client ID: CAMO-09-10379

Instrument: MSD5.i

Sample Info: 1232503014188187811ISVMF11ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 13.2 ug/Kg

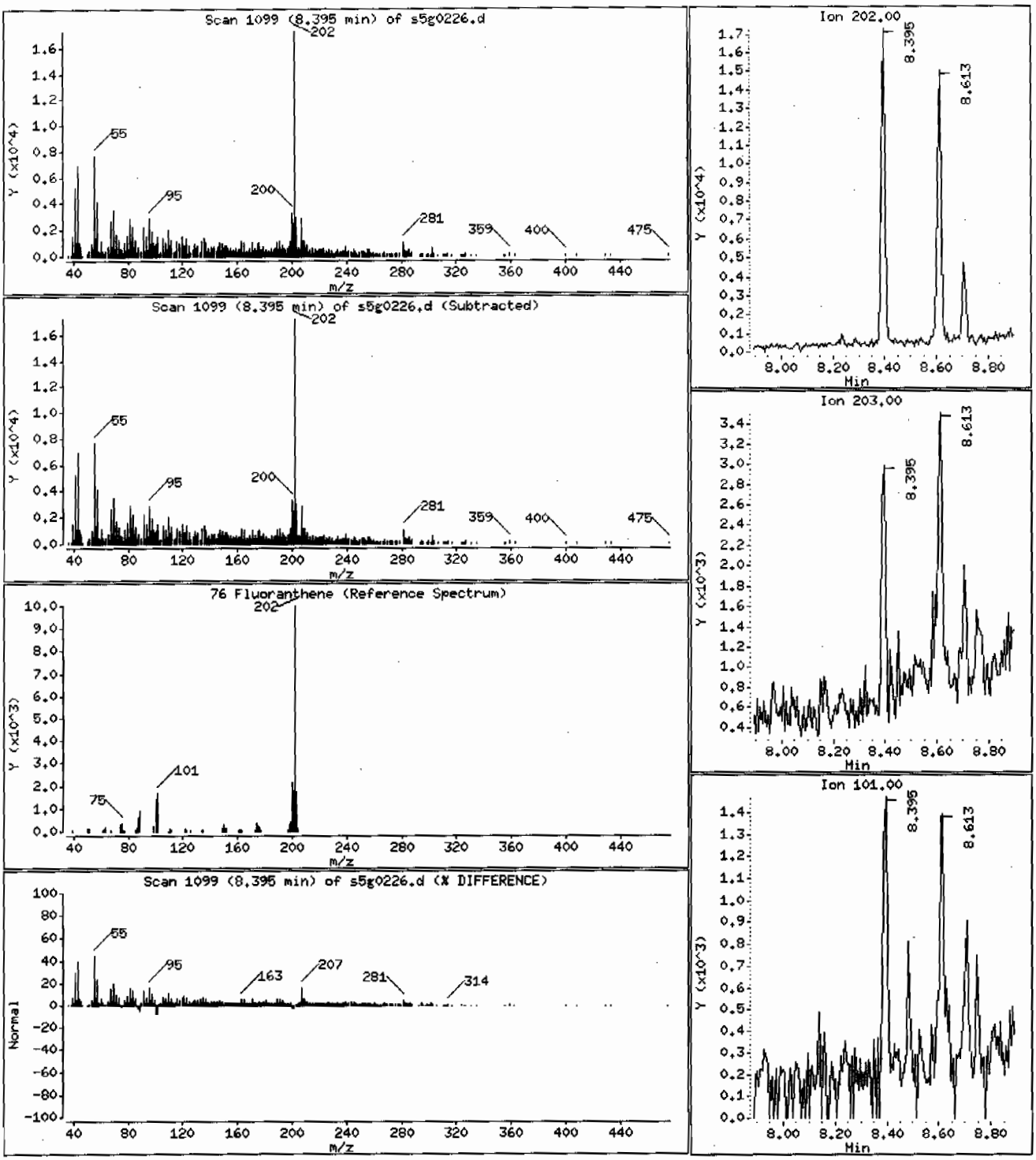

Data File: /chem/MSD5.i/s070209.b/s5g0226.d

Date : 02-JUL-2009 17:34

Client ID: CAMO-09-10379 Instrument: MSD5.i

Sample Info: 1232503014188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate Concentration: 137 ug/Kg

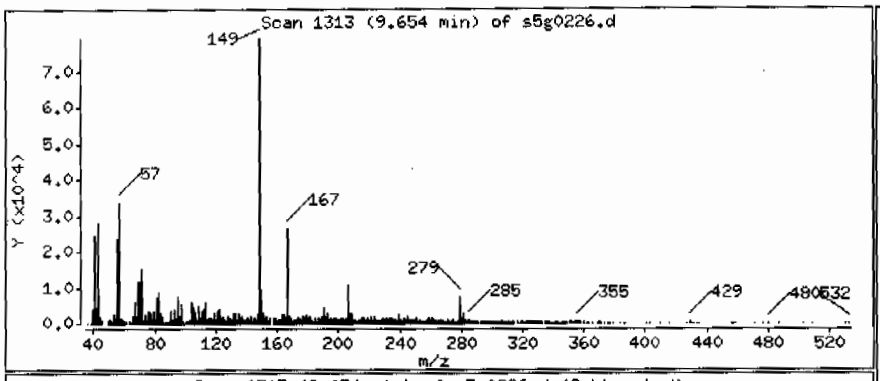

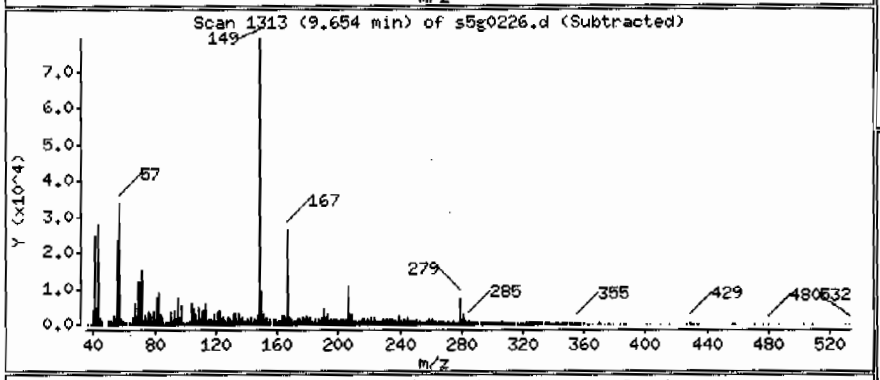

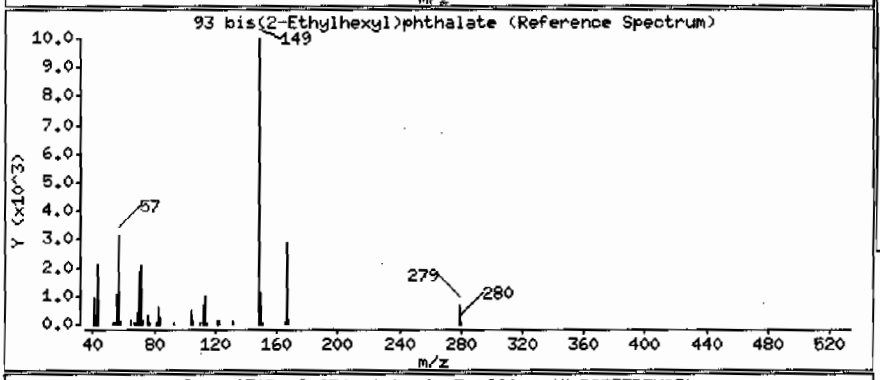

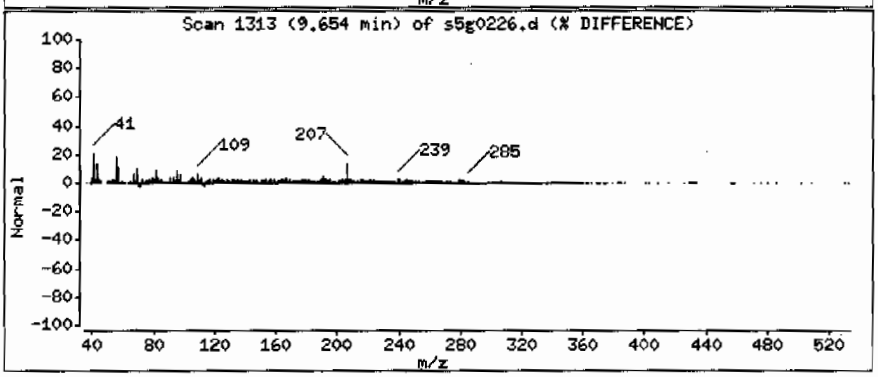

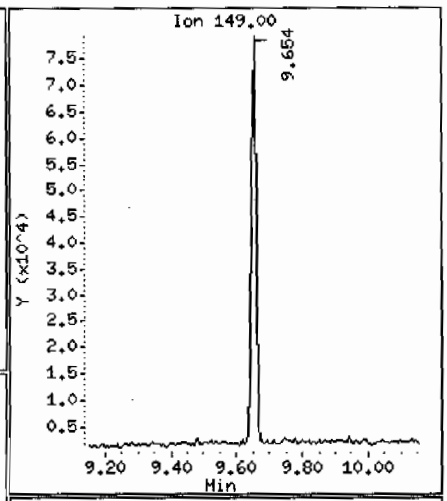

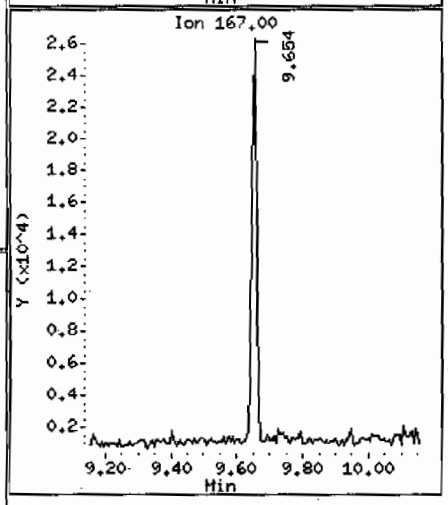

Data File: /chem/MSD5.i/s070209.b/s5g0226.d

Date : 02-JUL-2009 17:34

Client ID: CAMO-09-10379 Instrument: MSD5.i

Sample Info: 1232503014188187811|SVMF1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

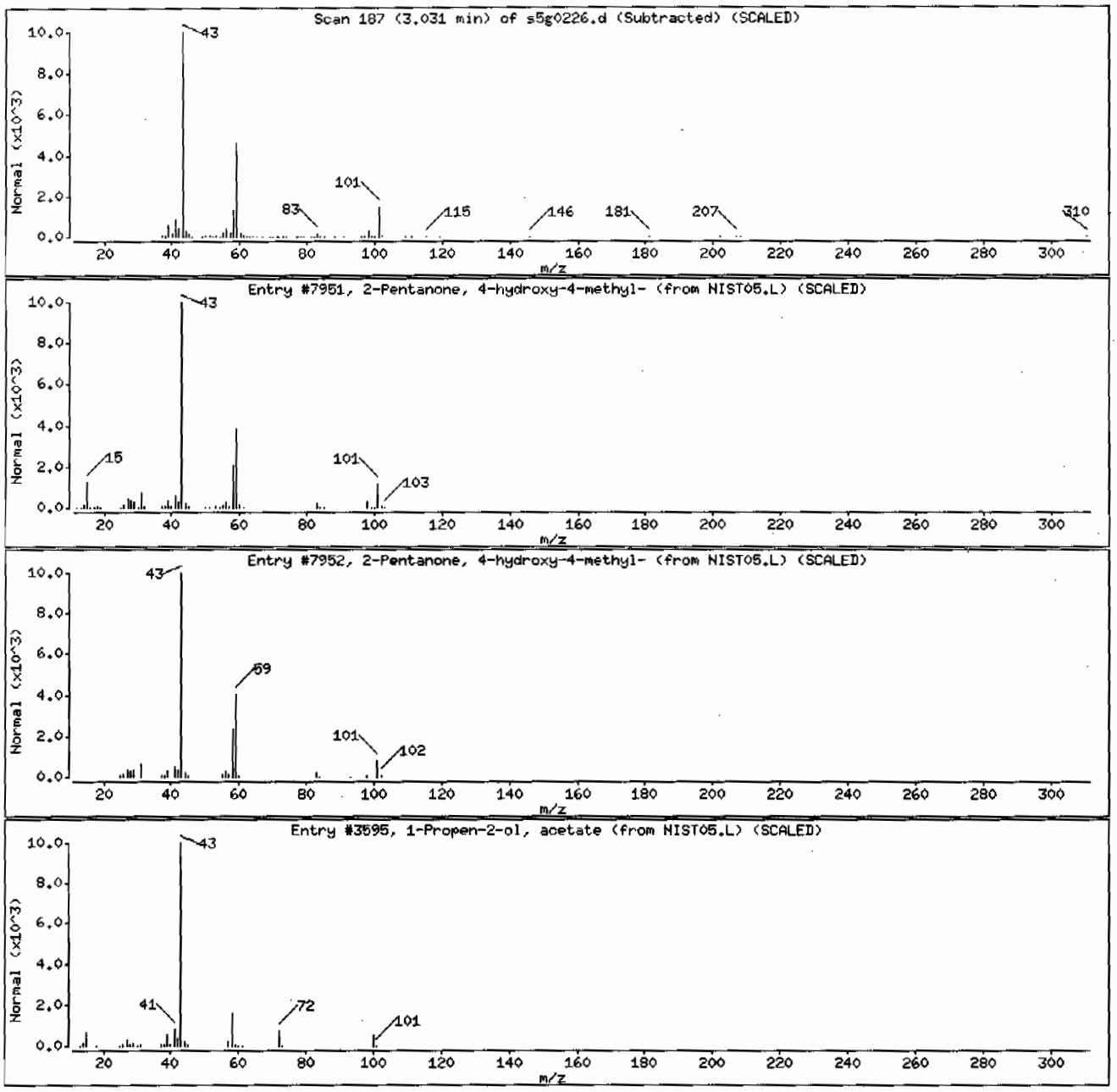

Data File: /chem/MSD5.i/s070209.b/s5g0226.d

Date : 02-JUL-2009 17:34

Client ID: CAMO-09-10379

Instrument: MSD5.i

Sample Info: |2325030141881878|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Pregn-4-ene-3,20-dione, 14-methyl-	55162-96-4	NIST05.L	141520	84	C22H32O2	328
Cholestan-3-ol, methyl carbonodithioate,	5211-17-6	NIST05.L	182833	64	C29H50OS2	478
Androstane-3,11-dione, (5.alpha.)-	3510-00-7	NIST05.L	117311	58	C19H28O2	288

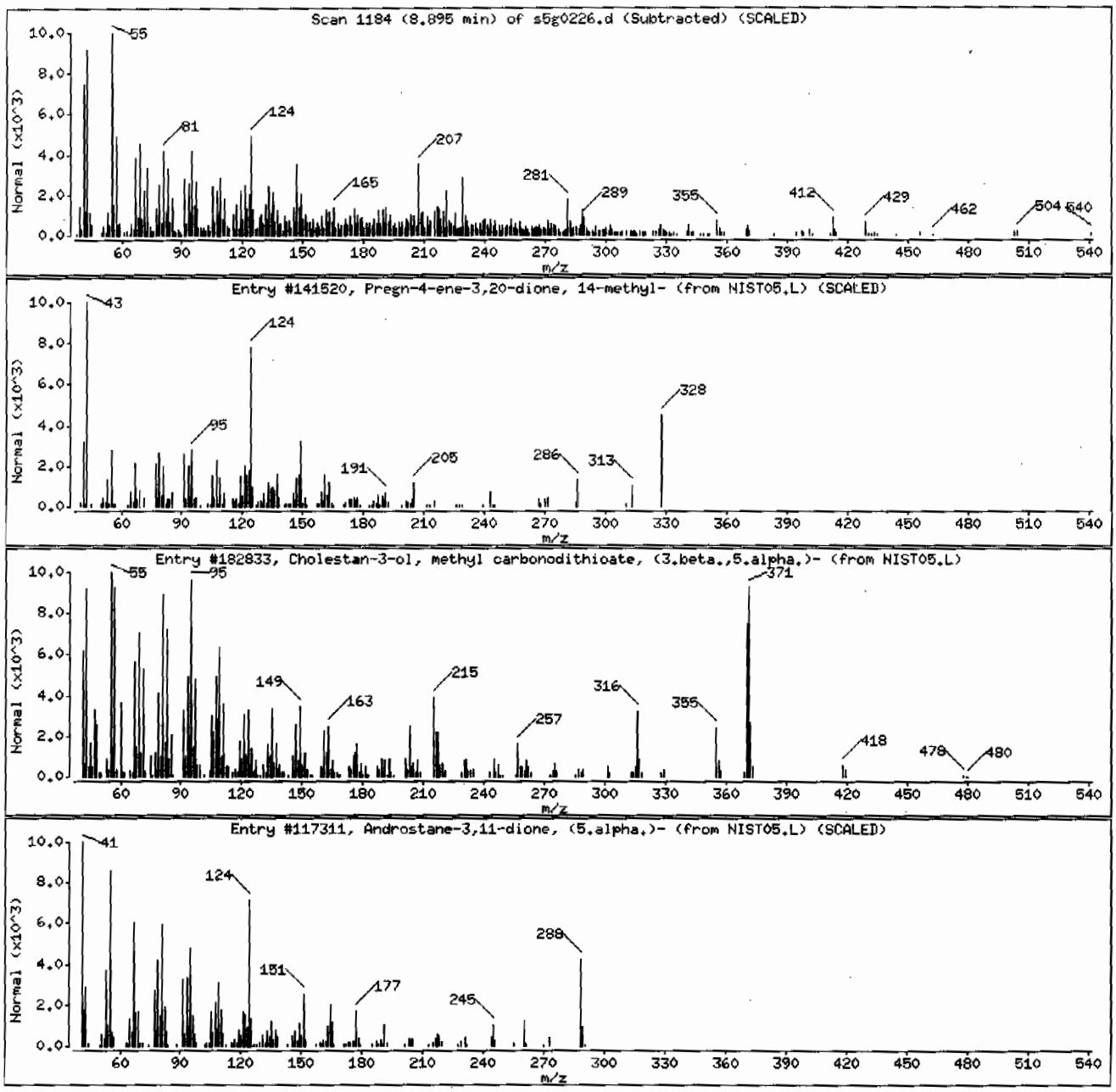

Data File: /chem/HSD5.i/s070209.b/s5g0226.d

Date : 02-JUL-2009 17:34

Client ID: CAMO-09-10379 Instrument: MSD5.i

Sample Info: 1232503014188187811SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1H-Indole, 1-methyl-2-phenyl-	3558-24-5	NIST05.L	62238	42	C15H13N	207
5-Methyl-2-phenylindolizine	36944-99-7	NIST05.L	62231	38	C15H13N	207
1-Methyl-3-phenylindole	30020-98-5	NIST05.L	62224	38	C15H13N	207

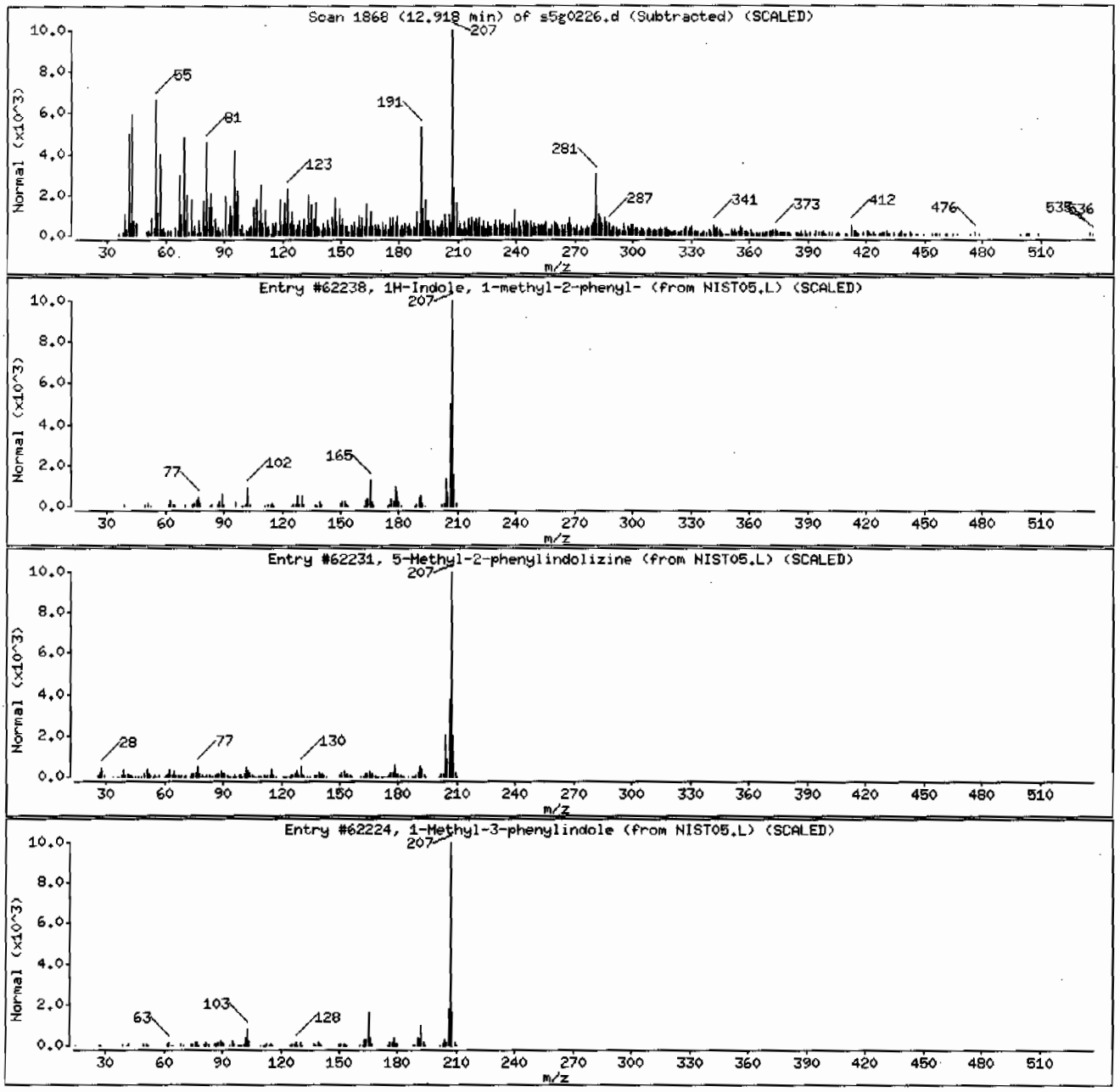

Monday, June 29, 2009

REQUEST NUMBER: 09-2510

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2510

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-9946	R	6/25/2009	
	EPA:901.1	1	CAMO-09-9946	R	6/25/2009	
	EPA:906.0	1	CAMO-09-9946	R	6/25/2009	
	HASL-300:ISOPU	1	CAMO-09-9946	R	6/25/2009	
	HASL-300:ISOU	1	CAMO-09-9946	R	6/25/2009	
	SW-846:6010B	1	CAMO-09-9946	R	6/25/2009	
	SW-846:6850	1	CAMO-09-9946	R	6/25/2009	
	SW-846:8260B	1	CAMO-09-9946	R	6/25/2009	
	SW-846:8270C	1	CAMO-09-9946	R	6/25/2009	

Monday, June 29, 2009

REQUEST NUMBER: 09-2510

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	CAMO-09-9946	R	6/25/2009	
	SW-846:9045C	1	CAMO-09-9946	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2510

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2510

REQUEST NUMBER: 09-2510

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9946	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9946	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9946	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9946	1	POLY	H3	Ice	R
CAMO-09-9946	1	POLY	METALS-GEL	Ice	R
CAMO-09-9946	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		6/29/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9946

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06.26.2009	MEDIA:	OBT4	Qbt3
TIME COLLECTED (HH:MM)		1450	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605458	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	8.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	9.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Packag
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Moist purple/gray tuff

SAMPLE COMMENTS: Used power auger to depth & collected sample w/ hand auger

LOCATION DESC: 50-004(a)-10

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 31 dpm

β/γ ≤ 978 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gomas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomas	6.25.09 1550	(Printed Name) Sherri Sherwood	6/25/09 4:00
(Signature) [signature]		(Signature) [signature]	

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2510 VALIDATION DATE: 8/1/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): VOC

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The ICV and/or CCV %Ds for bromomethane and 1,2-dibromo-3-chloropropane were >20%. All associated sample results were NDs and, thus, were qualified UJ,V7c.
2. It should be noted that the bromofluorobenzene surrogate %Rs for the MS and MSD were < the laboratory's LAL but ≥10%. However, the associated samples are QC samples and, thus, no sample results were qualified.
3. It should be noted that trichlorotrifluoroethane was not spiked into the MS/MSD. No sample data were qualified as a result.
4. It should be noted that the parent sample for the MS/MSD was a LANL sample from a different RN. No sample data were qualified as a result.
5. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data

DATA VALIDATION COVER SHEET

5114-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 08/04/09

VALIDATOR'S SIGNATURE: [signature] DATE: 8/1/09

Form 5114-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☐	☒	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☐	☐	☒	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☐	☒	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☒	☐	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☐	☒	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☒	☐	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☒	☐	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☒	☐	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 15:13	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T119.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.23	ug/kg	0.418	1.23	
74-87-3	Chloromethane	U	1.23	ug/kg	0.369	1.23	
75-01-4	Vinyl chloride	U	1.23	ug/kg	0.369	1.23	
74-83-9	Bromomethane	U	1.23	ug/kg	0.369	1.23	UJ,V7c
75-00-3	Chloroethane	U	1.23	ug/kg	0.369	1.23	
75-69-4	Trichlorofluoromethane	U	1.23	ug/kg	0.369	1.23	
67-64-1	Acetone	U	6.15	ug/kg	2.04	6.15	
75-35-4	1,1-Dichloroethylene	U	1.23	ug/kg	0.369	1.23	
74-88-4	Iodomethane	U	6.15	ug/kg	1.97	6.15	
75-09-2	Methylene chloride	U	6.15	ug/kg	2.46	6.15	
75-15-0	Carbon disulfide	U	6.15	ug/kg	1.54	6.15	
156-60-5	trans-1,2-Dichloroethylene	U	1.23	ug/kg	0.369	1.23	
75-34-3	1,1-Dichloroethane	U	1.23	ug/kg	0.369	1.23	
78-93-3	2-Butanone	U	6.15	ug/kg	1.85	6.15	
156-59-2	cis-1,2-Dichloroethylene	U	1.23	ug/kg	0.369	1.23	
594-20-7	2,2-Dichloropropane	U	1.23	ug/kg	0.369	1.23	
67-66-3	Chloroform	U	1.23	ug/kg	0.369	1.23	
74-97-5	Bromochloromethane	U	1.23	ug/kg	0.406	1.23	
71-55-6	1,1,1-Trichloroethane	U	1.23	ug/kg	0.369	1.23	
563-58-6	1,1-Dichloropropene	U	1.23	ug/kg	0.369	1.23	
56-23-5	Carbon tetrachloride	U	1.23	ug/kg	0.369	1.23	
107-06-2	1,2-Dichloroethane	U	1.23	ug/kg	0.369	1.23	
71-43-2	Benzene	U	1.23	ug/kg	0.369	1.23	
79-01-6	Trichloroethylene	J	0.689	ug/kg	0.406	1.23	
78-87-5	1,2-Dichloropropane	U	1.23	ug/kg	0.369	1.23	
75-27-4	Bromodichloromethane	U	1.23	ug/kg	0.369	1.23	
74-95-3	Dibromomethane	U	1.23	ug/kg	0.369	1.23	
108-10-1	4-Methyl-2-pentanone	U	6.15	ug/kg	1.54	6.15	
10061-01-5	cis-1,3-Dichloropropylene	U	1.23	ug/kg	0.369	1.23	
108-88-3	Toluene	U	1.23	ug/kg	0.369	1.23	
10061-02-6	trans-1,3-Dichloropropylene	U	1.23	ug/kg	0.369	1.23	
79-00-5	1,1,2-Trichloroethane	U	1.23	ug/kg	0.369	1.23	
591-78-6	2-Hexanone	U	6.15	ug/kg	1.85	6.15	
142-28-9	1,3-Dichloropropane	U	1.23	ug/kg	0.369	1.23	
127-18-4	Tetrachloroethylene	U	1.23	ug/kg	0.369	1.23	
124-48-1	Dibromochloromethane	U	1.23	ug/kg	0.369	1.23	
106-93-4	1,2-Dibromoethane	U	1.23	ug/kg	0.369	1.23	
108-90-7	Chlorobenzene	U	1.23	ug/kg	0.369	1.23	

JEJ
8/1/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 15:13	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T119.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.23	ug/kg	0.369	1.23	
179601-23-1	m,p-Xylenes	U	2.46	ug/kg	0.369	2.46	
95-47-6	o-Xylene	U	1.23	ug/kg	0.369	1.23	
100-42-5	Styrene	U	1.23	ug/kg	0.369	1.23	
75-25-2	Bromoform	U	1.23	ug/kg	0.369	1.23	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.23	ug/kg	0.369	1.23	
96-18-4	1,2,3-Trichloropropane	U	1.23	ug/kg	0.369	1.23	
108-86-1	Bromobenzene	U	1.23	ug/kg	0.369	1.23	
103-65-1	n-Propylbenzene	U	1.23	ug/kg	0.369	1.23	
95-49-8	2-Chlorotoluene	U	1.23	ug/kg	0.369	1.23	
98-82-8	Isopropylbenzene	U	1.23	ug/kg	0.369	1.23	
108-67-8	1,3,5-Trimethylbenzene	U	1.23	ug/kg	0.369	1.23	
106-43-4	4-Chlorotoluene	U	1.23	ug/kg	0.369	1.23	
98-06-6	tert-Butylbenzene	U	1.23	ug/kg	0.369	1.23	
95-63-6	1,2,4-Trimethylbenzene	U	1.23	ug/kg	0.369	1.23	
135-98-8	sec-Butylbenzene	U	1.23	ug/kg	0.369	1.23	
99-87-6	4-Isopropyltoluene	U	1.23	ug/kg	0.369	1.23	
541-73-1	1,3-Dichlorobenzene	U	1.23	ug/kg	0.369	1.23	
106-46-7	1,4-Dichlorobenzene	U	1.23	ug/kg	0.369	1.23	
104-51-8	n-Butylbenzene	U	1.23	ug/kg	0.369	1.23	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.23	ug/kg	0.369	1.23	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.15	ug/kg	1.97	6.15	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.23	ug/kg	0.369	1.23	
95-50-1	1,2-Dichlorobenzene	U	1.23	ug/kg	0.369	1.23	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.36	31.8	ug/kg	0	J

JEJ
8/1/09

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2510 VALIDATION DATE: 8/1/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ HIGH EXPLOSIVES
- ☐ DIOXIN FURANS
- ☐ LCMSMS PERCHLORATES
- ☐ TPH-DRO
- ☐ METALS
- ☐ PCB CONGENERS
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ GENERAL CHEMISTRY
- ☐ RADIOCHEMISTRY
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ OTHER (DESCRIBE): SVOC

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The ICV and/or CCV %Ds for benzoic acid; 2-methyl-4,6-dinitrophenol and p-nitroaniline were >20%. All associated sample results were NDs and, thus, were qualified UJ,SV7c.
2. The MS/MSD %Rs for several analytes and the RPDs for benzyl alcohol and 2,4-dinitrophenol were outside the laboratory acceptance limits. Since the analysis of an MS or MSD was not required for this analysis, no sample data were qualified.
3. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 08/04/09

DATA VALIDATION COVER SHEET	
5115-1 **Data Validation Cover Sheet**	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943
VALIDATOR'S SIGNATURE: [signature]	DATE: 8/1/09
Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☐	☒	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☐	☒	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☐	☒	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232591001	Date Received:	06/30/2009 09:15	%Moisture:	18.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9946	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 19:08	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s6g0216.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	410	ug/kg	82.0	410	
108-95-2	Phenol	U	410	ug/kg	82.0	410	
95-57-8	2-Chlorophenol	U	410	ug/kg	82.0	410	
106-46-7	1,4-Dichlorobenzene	U	410	ug/kg	82.0	410	
621-64-7	N-Nitrosodipropylamine	U	410	ug/kg	82.0	410	
59-50-7	4-Chloro-3-methylphenol	U	410	ug/kg	82.0	410	
83-32-9	Acenaphthene	U	41.0	ug/kg	13.5	41.0	
121-14-2	2,4-Dinitrotoluene	U	410	ug/kg	41.0	410	
100-02-7	4-Nitrophenol	U	410	ug/kg	135	410	
87-86-5	Pentachlorophenol	U	410	ug/kg	102	410	
129-00-0	Pyrene	U	41.0	ug/kg	12.3	41.0	
110-86-1	Pyridine	U	410	ug/kg	82.0	410	
62-53-3	Aniline	U	410	ug/kg	123	410	
111-44-4	bis(2-Chloroethyl) ether	U	410	ug/kg	82.0	410	
541-73-1	1,3-Dichlorobenzene	U	410	ug/kg	82.0	410	
100-51-6	Benzyl alcohol	U	410	ug/kg	123	410	
95-50-1	1,2-Dichlorobenzene	U	410	ug/kg	82.0	410	
108-60-1	bis(2-Chloroisopropyl)ether	U	410	ug/kg	82.0	410	
95-48-7	o-Cresol	U	410	ug/kg	82.0	410	
65794-96-9	m,p-Cresols	U	410	ug/kg	123	410	
67-72-1	Hexachloroethane	U	410	ug/kg	82.0	410	
98-95-3	Nitrobenzene	U	410	ug/kg	82.0	410	
78-59-1	Isophorone	U	410	ug/kg	82.0	410	
88-75-5	2-Nitrophenol	U	410	ug/kg	82.0	410	
105-67-9	2,4-Dimethylphenol	U	410	ug/kg	143	410	
111-91-1	bis(2-Chloroethoxy)methane	U	410	ug/kg	82.0	410	
120-83-2	2,4-Dichlorophenol	U	410	ug/kg	82.0	410	
65-85-0	Benzoic acid	U	820	ug/kg	205	820	UJ,SV7c
91-20-3	Naphthalene	U	41.0	ug/kg	12.3	41.0	
106-47-8	4-Chloroaniline	U	410	ug/kg	82.0	410	
87-68-3	Hexachlorobutadiene	U	410	ug/kg	82.0	410	
91-57-6	2-Methylnaphthalene	U	41.0	ug/kg	8.20	41.0	
77-47-4	Hexachlorocyclopentadiene	U	410	ug/kg	82.0	410	
88-06-2	2,4,6-Trichlorophenol	U	410	ug/kg	82.0	410	
95-95-4	2,4,5-Trichlorophenol	U	410	ug/kg	82.0	410	
91-58-7	2-Chloronaphthalene	U	41.0	ug/kg	13.5	41.0	
88-74-4	2-Nitroaniline	U	410	ug/kg	82.0	410	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	410	ug/kg	82.0	410	

JEJ
8/1/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 19:08	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s6g0216.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	410	ug/kg	82.0	410	
606-20-2	2,6-Dinitrotoluene	U	410	ug/kg	41.0	410	
208-96-8	Acenaphthylene	U	41.0	ug/kg	12.3	41.0	
51-28-5	2,4-Dinitrophenol	U	820	ug/kg	156	820	
132-64-9	Dibenzofuran	U	410	ug/kg	82.0	410	
84-66-2	Diethylphthalate	U	410	ug/kg	82.0	410	
86-73-7	Fluorene	U	41.0	ug/kg	12.3	41.0	
7005-72-3	4-Chlorophenylphenylether	U	410	ug/kg	82.0	410	
534-52-1	2-Methyl-4,6-dinitrophenol	U	410	ug/kg	82.0	410	UJ,SV7c
100-01-6	4-Nitroaniline	U	410	ug/kg	123	410	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	410	ug/kg	82.0	410	
122-66-7	Azobenzene	U	410	ug/kg	82.0	410	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	410	ug/kg	82.0	410	
118-74-1	Hexachlorobenzene	U	410	ug/kg	82.0	410	
85-01-8	Phenanthrene	U	41.0	ug/kg	12.3	41.0	
120-12-7	Anthracene	U	41.0	ug/kg	8.20	41.0	
84-74-2	Di-n-butylphthalate	U	410	ug/kg	82.0	410	
206-44-0	Fluoranthene	U	41.0	ug/kg	12.3	41.0	
85-68-7	Butylbenzylphthalate	U	410	ug/kg	82.0	410	
56-55-3	Benzo(a)anthracene	U	41.0	ug/kg	12.3	41.0	
91-94-1	3,3'-Dichlorobenzidine	U	410	ug/kg	123	410	
218-01-9	Chrysene	U	41.0	ug/kg	12.3	41.0	
117-81-7	bis(2-Ethylhexyl)phthalate	U	410	ug/kg	82.0	410	
117-84-0	Di-n-octylphthalate	U	410	ug/kg	82.0	410	
205-99-2	Benzo(b)fluoranthene	U	41.0	ug/kg	12.3	41.0	
207-08-9	Benzo(k)fluoranthene	U	41.0	ug/kg	12.3	41.0	
50-32-8	Benzo(a)pyrene	U	41.0	ug/kg	12.3	41.0	
193-39-5	Indeno(1,2,3-cd)pyrene	U	41.0	ug/kg	12.3	41.0	
53-70-3	Dibenzo(a,h)anthracene	U	41.0	ug/kg	12.3	41.0	
191-24-2	Benzo(ghi)perylene	U	41.0	ug/kg	12.3	41.0	
120-82-1	1,2,4-Trichlorobenzene	U	410	ug/kg	82.0	410	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	467	ug/kg		JA
58-22-0	Androst-4-en-3-one, 17-hydroxy-, (17.bet	9.38	332	ug/kg	86	NJ

JEJ
8/1/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 19:08	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s6g0216.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	10.02	275	ug/kg		J
	Unknown	10.8	209	ug/kg		J
	Unknown	12.84	1450	ug/kg		J
70038-20-9	7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet	13.65	1550	ug/kg	91	NJ

JEJ
8/1/09

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2510 VALIDATION DATE: 8/1/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☒ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the MS/MSD %R calculations were performed incorrectly. The parent sample result was < the MDL and, thus, a result of 0 µg/kg should have been used to calculate the %Rs. The laboratory subtracted the parent sample concentration. The %Rs were within the acceptance limits when calculated correctly. No sample results were qualified.
2. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 08/04/09

VALIDATOR'S SIGNATURE: [signature]	DATE: 8/1/09
Form 5121-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☐	☒	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☐	☒	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☒	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9946

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2510

GEL Sample ID: 232591001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 81

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.615	2.46	0.615	ug/kg	U	1	08-JUL-09 20:29	per0708062a
	Perchlorate-O(18)			6.38	ug/kg		1	08-JUL-09 20:29	per0708062a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

JEJ
8/1/09

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2510 VALIDATION DATE: 8/3/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☒ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB, Tl and Mg were detected. The Tl result for the sample was a detect ≤5X the MB concentration and, thus, was qualified U,I4. The Mg result for the sample was a detect >50X the MB concentration and, thus, was not qualified, based on professional judgment.
2. The MS %R for Ba was < the LAL but ≥10%. The associated sample result was a detect and, thus, was qualified J-,I6a. The MS %Rs for Mg and K were > the laboratory's UAL. The associated sample results were detects and, thus, were qualified J+,I6b. It should be noted that the MS %R for Al was > the laboratory's UAL and the %Rs for Fe and Mn were <10%. However, the associated parent sample concentrations were >4X the spike concentrations. Thus, no sample data were qualified, based on professional judgment.
3. The duplicate RPD values for Ba, Co, Fe and Mn were >35%, and both the parent sample and duplicate results were ≥5X the PQLs. All associated sample results were detects and, thus, were qualified J,I10a.

DATA VALIDATION COVER SHEET

5118-1

Records Use only

Data Validation Cover Sheet

4. All results that were > the MDLs but < the PQLs were "J" flagged by the laboratory and, thus, were not further qualified J,I1.

Reviewed by: Mary Donivan Level: I Date: 08/04/09

VALIDATOR'S SIGNATURE: [illegible] DATE: 8/3/09

Form 5118-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☒	☐	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☐	☒	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☒	☐	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 **Metals Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☒	☐	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2510 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232591001 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-9946 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 81

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4550000	ug/Kg	*	8020	23600	23600	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-36-0	Antimony	1180	ug/Kg	U	389	1180	1180	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-38-2	Arsenic	2020	ug/kg		245	1220	1220	2	MS	RMJ	07/14/09 16:34	090713-2	881838
7440-39-3	Barium J-,I6a	96100	ug/Kg	*N	118	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-41-7	Beryllium	746	ug/kg		24.5	122	122	2	MS	RMJ	07/14/09 16:34	090713-2	881838
7440-43-9	Cadmium	589	ug/Kg	U	118	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-70-2	Calcium	993000	ug/Kg	*N	9430	29500	29500	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-47-3	Chromium	15900	ug/Kg		177	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-48-4	Cobalt J,I10a	6950	ug/Kg	*	177	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-50-8	Copper	12700	ug/Kg		354	1180	1180	1	P	HSC	07/08/09 15:07	070809A-1	881859
7439-89-6	Iron J,I10a	16800000	ug/Kg	*	9430	29500	29500	1	P	HSC	07/08/09 15:07	070809A-1	881859
7439-92-1	Lead	8690	ug/Kg		295	1180	1180	1	P	HSC	07/08/09 15:07	070809A-1	881859
7439-95-4	Magnesium J+,I6b	747000	ug/Kg	*N	10000	35400	35400	1	P	HSC	07/08/09 15:07	070809A-1	881859
7439-96-5	Manganese J,I10a	790000	ug/Kg	*	236	1180	1180	1	P	HSC	07/08/09 15:07	070809A-1	881859
7439-97-6	Mercury	7.77	ug/kg	J	4.56	13.4	13.4	1	AV	JXL1	07/13/09 12:11	071309S2-4	881916
7440-02-0	Nickel	3610	ug/kg		122	489	489	2	MS	RMJ	07/14/09 16:34	090713-2	881838
7440-09-7	Potassium J+,I6b	703000	ug/Kg	*N	7540	29500	29500	1	P	HSC	07/08/09 15:07	070809A-1	881859
7782-49-2	Selenium	1220	ug/kg	U	612	1220	1220	2	MS	RMJ	07/14/09 23:40	090714-3	881838
7440-22-4	Silver	527	ug/Kg	J	118	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-23-5	Sodium	95500	ug/Kg		8250	29500	29500	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-28-0	Thallium U,I4	138	ug/kg	J	73.4	245	245	2	MS	RMJ	07/14/09 16:34	090713-2	881838
7440-62-2	Vanadium	12200	ug/Kg		118	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-66-6	Zinc	57500	ug/Kg		389	1180	1180	1	P	HSC	07/08/09 15:07	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.503	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.522	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.55	g	30	mL	07/10/09	AXG2

JEJ
8/3/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2510 VALIDATION DATE: 8/3/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☒ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB, total cyanide was detected. The associated sample result was an ND and, thus, was not qualified.
2. It should be noted that the parent samples for the matrix QC for all analyses were LANL samples from different RNs. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 08/04/09

VALIDATOR'S SIGNATURE: [signature]	DATE: 8/3/09
Form 5120-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☐	☒	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☐	☒	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2510

Client Sample ID:	CAMO-09-9946	Project:	LANL01004
Sample ID:	232591001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	18.7%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.6C	H	6.68	0.010	0.100	SU	1	TXT1 07/01/09	1304	881740	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	74.7	275	ug/kg	1	AXC2 07/02/09	1005	881270	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.78	0.369	1.23	mg/kg	1	MAR1 07/10/09	2257	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

JEJ
8/3/09

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2510 VALIDATION DATE: 8/4/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☒ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The gamma spec sample results that were rejected by the laboratory due to interference or low abundance were qualified R,R5a. In the QC samples, several results were also rejected by the laboratory. No sample data were qualified as a result.
2. It should be noted that an MS was not analyzed for tritium. However, an LCS was analyzed and passed acceptance criteria. Thus, no sample data were qualified.
3. The duplicate RER for gamma spec Pb-212 was >1.0. The associated sample result was a detect and, thus, was qualified J,R10.
4. The reported results that were ≤ the MDCs were qualified U,R5.
5. It should be noted that the parent samples for the matrix QC for all analyses <u>except</u> for the gamma spec analysis were

DATA VALIDATION COVER SHEET

5119-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

LANL samples from different RNs. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 08/04/09

VALIDATOR'S SIGNATURE: _____ DATE: 8/4/09

Form 5119-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☐	☒	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☒	☐	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-9946	Project:	LANL01004
Sample ID:	232591001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	18.7%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.0119	U,R5	0.0211	+/-0.0038	0.050	pCi/g		KXM4	07/09/09	2052	882671	2
Plutonium-239/240		0.627		0.0257	+/-0.0409	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.840		0.219	+/-0.0897	0.100	pCi/g		KXM4	07/09/09	2053	882673	3
Uranium-235/236	U	0.0494	U,R5	0.101	+/-0.0255	0.100	pCi/g						
Uranium-238		1.03		0.0855	+/-0.103	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.273	U,R5	0.417	+/-0.116	0.200	pCi/g		MXR1	07/09/09	0835	881931	4
Bismuth-211	UI	4.16	R,R5a	0.314	+/-0.282		pCi/g						
Bismuth-214		1.28		0.117	+/-0.0925	0.200	pCi/g						
Cadmium-109	UI	3.01	R,R5a	1.42	+/-0.582		pCi/g						
Cerium-139	U	0.0331	U,R5	0.0507	+/-0.0147	0.050	pCi/g						
Cesium-134	UI	0.127	R,R5a	0.0952	+/-0.0293	0.100	pCi/g						
Cesium-137	U	0.0456	U,R5	0.0728	+/-0.0201	0.100	pCi/g						
Cobalt-60	U	-0.0188		0.0642	+/-0.0205	0.100	pCi/g						
Europium-152	U	-0.029		0.152	+/-0.0478	0.200	pCi/g						
Lanthanum-140	U	0.0338		0.139	+/-0.0399		pCi/g						
Lead-212		1.73	J,R10	0.0953	+/-0.0873	0.100	pCi/g						
Lead-214		1.45		0.109	+/-0.105	0.100	pCi/g						
Mercury-203	U	0.0254	U,R5	0.0754	+/-0.0218	0.100	pCi/g						
Potassium-40		32.8		0.622	+/-1.71	1.00	pCi/g						
Radium-223	U	-0.07	U,R5	1.09	+/-0.369		pCi/g						
Radium-224	UI	4.42	R,R5a	1.09	+/-0.591		pCi/g						
Radium-226		1.28		0.117	+/-0.0925		pCi/g						
Radium-228		1.54		0.219	+/-0.200	0.500	pCi/g						
Ruthenium-106	U	-0.223	U,R5	0.486	+/-0.152	0.800	pCi/g						
Sodium-22	U	-0.0151	U,R5	0.0782	+/-0.0242	0.080	pCi/g						
Strontium-85	UI	0.0887	R,R5a	0.0702	+/-0.0188		pCi/g						
Thallium-208		0.471		0.0525	+/-0.0437	0.080	pCi/g						
Thorium-227	U	0.127	U,R5	0.648	+/-0.186		pCi/g						
Thorium-231	U	-0.07		1.09	+/-0.369		pCi/g						
Thorium-234	U	2.54		3.37	+/-0.968	2.00	pCi/g						

JEJ
8/4/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-9946
Sample ID: 232591001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Tin-113	U	0.018	U,R5	0.0727	+/-0.0212	0.100	pCi/g						
Uranium-235	U	0.179		0.377	+/-0.112	0.500	pCi/g						
Yttrium-88	U	0.0323		0.0565	+/-0.0138	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	91.9		236	+/-71.2	250	pCi/L		KXK2	07/15/09	0946	883020	5

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	81.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	78.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated

JEJ
8/4/09

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2510

REQUEST NUMBER: 09-2510

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232591 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9946	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9946	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9946	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9946	1	POLY	H3	Ice	R
CAMO-09-9946	1	POLY	METALS-GEL	Ice	R
CAMO-09-9946	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/29/09	1400	Patricia Dent	P. Dent	6/30/09	09:15
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Monday, June 29, 2009

REQUEST NUMBER: 09-2510

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2510
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-9946	R	6/25/2009	
	EPA:901.1	1	CAMO-09-9946	R	6/25/2009	
	EPA:906.0	1	CAMO-09-9946	R	6/25/2009	
	HASL-300:ISOPU	1	CAMO-09-9946	R	6/25/2009	
	HASL-300:ISOU	1	CAMO-09-9946	R	6/25/2009	
	SW-846:6010B	1	CAMO-09-9946	R	6/25/2009	
	SW-846:6850	1	CAMO-09-9946	R	6/25/2009	
	SW-846:8260B	1	CAMO-09-9946	R	6/25/2009	
	SW-846:8270C	1	CAMO-09-9946	R	6/25/2009	

Monday, June 29, 2009

REQUEST NUMBER: 09-2510

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	CAMO-09-9946	R	6/25/2009	
	SW-846:9045C	1	CAMO-09-9946	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2510

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 01, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232591
SDG: 09-2510

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 30, 2009, and analyzed for GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2510
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232591
SDG: 09-2510

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232591
SDG # : 09-2510

July 01, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The sample arrived at GEL Laboratories LLC, Charleston, South Carolina on June 30, 2009 for analysis. The sample was prepared/analyzed within the required holding time. Shipping container temperature was checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The sample was delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following sample:

Laboratory ID	Client ID
232591001	CAMO-09-9946

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

List of current GEL Certifications as of 01 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88–0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH–0169
Dept. of Navy	NFESC 413
EPA Region 5	WG–15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C–SC–01
Kansas – NELAP	E–10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M–SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68–00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235–07B–TX
U.S. Dept. of Agriculture	S–52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2510

REQUEST NUMBER: 09-2510

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232591 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9946	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9946	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9946	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9946	1	POLY	H3	Ice	R
CAMO-09-9946	1	POLY	METALS-GEL	Ice	R
CAMO-09-9946	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/29/09	1400	Patricia Dent	P. Dent	6/30/09	09:15
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Monday, June 29, 2009

REQUEST NUMBER: 09-2510

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2510

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-9946	R	6/25/2009	
	EPA:901.1	1	CAMO-09-9946	R	6/25/2009	
	EPA:906.0	1	CAMO-09-9946	R	6/25/2009	
	HASL-300:ISOPU	1	CAMO-09-9946	R	6/25/2009	
	HASL-300:ISOU	1	CAMO-09-9946	R	6/25/2009	
	SW-846:6010B	1	CAMO-09-9946	R	6/25/2009	
	SW-846:6850	1	CAMO-09-9946	R	6/25/2009	
	SW-846:8260B	1	CAMO-09-9946	R	6/25/2009	
	SW-846:8270C	1	CAMO-09-9946	R	6/25/2009	

Monday, June 29, 2009

REQUEST NUMBER: 09-2510

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	CAMO-09-9946	R	6/25/2009	
	SW-846:9045C	1	CAMO-09-9946	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2510

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2510**
Received By: Patricia Dent	**Date Received: JUNE 30, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,23C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5789 3C
7209 7847 5778 23C

PM (or PMA) review: Initials JDC Date 1 JUL 09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 29JUN09
ActWgt: 62.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 566-8171

FedEx Express

Ref: 6B010MHR2A8512BGD0

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7647 5769 Form 0201

TUE
Deliver By:
30JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 29JUN09
ActWgt: 27.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 566-8171

FedEx Express

Ref: 6B010MHR2A8512BGD0

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7647 5769 Form 0201

TUE
Deliver By:
30JUN09

CHS A1

29407 -SC-US XX CHSA

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

Case Narrative

ChemStation Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2510

Method/Analysis Information

Procedure:	**Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method:	SW846 8260B
Prep Method:	SW846 5030
Analytical Batch Number:	882632
Prep Batch Number:	882630

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232591001	CAMO-09-9946
1201874617	Method Blank (MB)
1201874620	Laboratory Control Sample (LCS)
1201874621	Laboratory Control Sample (LCS)
1201874618	232582001(CAMO-09-10464) Post Spike (PS)
1201874619	232582001(CAMO-09-10464) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Chemstation software package. False positives have been removed from the quantitation reports per standard operating procedures (SOP) section 19.1.2. False positive analytes are designated on the quantitation report with a 'd' qualifier.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232582001 (CAMO-09-10464) was designated for spike analysis.

Matrix Spike (PS) Recovery Statement
The spike recoveries were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate recoveries were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-analyses were not required for samples in this SDG.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
NCR # 709074 was generated for samples in this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may have required manual integrations due to software limitations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG. Please note that non-requested target analytes that are reported on the quantitation reports will not be present as TICS on the Form I. These detected analytes are included in the calibrated method and as a result cannot be reported on the TIC quantitation report.

Additional Comments
Additional comments were not required for this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA2.I	Gas Chromatograph/Mass Spectrometer	HP7890N/HP5975C	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2510 GEL Work Order: 232591

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

E Organics--Concentration of the target analyte exceeds the instrument calibration range

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this case narrative:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 21 JUL 2009 **Title: Data Validator**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 15:13	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T119.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.23	ug/kg	0.418	1.23
74-87-3	Chloromethane	U	1.23	ug/kg	0.369	1.23
75-01-4	Vinyl chloride	U	1.23	ug/kg	0.369	1.23
74-83-9	Bromomethane	U	1.23	ug/kg	0.369	1.23
75-00-3	Chloroethane	U	1.23	ug/kg	0.369	1.23
75-69-4	Trichlorofluoromethane	U	1.23	ug/kg	0.369	1.23
67-64-1	Acetone	U	6.15	ug/kg	2.04	6.15
75-35-4	1,1-Dichloroethylene	U	1.23	ug/kg	0.369	1.23
74-88-4	Iodomethane	U	6.15	ug/kg	1.97	6.15
75-09-2	Methylene chloride	U	6.15	ug/kg	2.46	6.15
75-15-0	Carbon disulfide	U	6.15	ug/kg	1.54	6.15
156-60-5	trans-1,2-Dichloroethylene	U	1.23	ug/kg	0.369	1.23
75-34-3	1,1-Dichloroethane	U	1.23	ug/kg	0.369	1.23
78-93-3	2-Butanone	U	6.15	ug/kg	1.85	6.15
156-59-2	cis-1,2-Dichloroethylene	U	1.23	ug/kg	0.369	1.23
594-20-7	2,2-Dichloropropane	U	1.23	ug/kg	0.369	1.23
67-66-3	Chloroform	U	1.23	ug/kg	0.369	1.23
74-97-5	Bromochloromethane	U	1.23	ug/kg	0.406	1.23
71-55-6	1,1,1-Trichloroethane	U	1.23	ug/kg	0.369	1.23
563-58-6	1,1-Dichloropropene	U	1.23	ug/kg	0.369	1.23
56-23-5	Carbon tetrachloride	U	1.23	ug/kg	0.369	1.23
107-06-2	1,2-Dichloroethane	U	1.23	ug/kg	0.369	1.23
71-43-2	Benzene	U	1.23	ug/kg	0.369	1.23
79-01-6	Trichloroethylene	J	0.689	ug/kg	0.406	1.23
78-87-5	1,2-Dichloropropane	U	1.23	ug/kg	0.369	1.23
75-27-4	Bromodichloromethane	U	1.23	ug/kg	0.369	1.23
74-95-3	Dibromomethane	U	1.23	ug/kg	0.369	1.23
108-10-1	4-Methyl-2-pentanone	U	6.15	ug/kg	1.54	6.15
10061-01-5	cis-1,3-Dichloropropylene	U	1.23	ug/kg	0.369	1.23
108-88-3	Toluene	U	1.23	ug/kg	0.369	1.23
10061-02-6	trans-1,3-Dichloropropylene	U	1.23	ug/kg	0.369	1.23
79-00-5	1,1,2-Trichloroethane	U	1.23	ug/kg	0.369	1.23
591-78-6	2-Hexanone	U	6.15	ug/kg	1.85	6.15
142-28-9	1,3-Dichloropropane	U	1.23	ug/kg	0.369	1.23
127-18-4	Tetrachloroethylene	U	1.23	ug/kg	0.369	1.23
124-48-1	Dibromochloromethane	U	1.23	ug/kg	0.369	1.23
106-93-4	1,2-Dibromoethane	U	1.23	ug/kg	0.369	1.23
108-90-7	Chlorobenzene	U	1.23	ug/kg	0.369	1.23

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 15:13	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T119.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.23	ug/kg	0.369	1.23
179601-23-1	m,p-Xylenes	U	2.46	ug/kg	0.369	2.46
95-47-6	o-Xylene	U	1.23	ug/kg	0.369	1.23
100-42-5	Styrene	U	1.23	ug/kg	0.369	1.23
75-25-2	Bromoform	U	1.23	ug/kg	0.369	1.23
79-34-5	1,1,2,2-Tetrachloroethane	U	1.23	ug/kg	0.369	1.23
96-18-4	1,2,3-Trichloropropane	U	1.23	ug/kg	0.369	1.23
108-86-1	Bromobenzene	U	1.23	ug/kg	0.369	1.23
103-65-1	n-Propylbenzene	U	1.23	ug/kg	0.369	1.23
95-49-8	2-Chlorotoluene	U	1.23	ug/kg	0.369	1.23
98-82-8	Isopropylbenzene	U	1.23	ug/kg	0.369	1.23
108-67-8	1,3,5-Trimethylbenzene	U	1.23	ug/kg	0.369	1.23
106-43-4	4-Chlorotoluene	U	1.23	ug/kg	0.369	1.23
98-06-6	tert-Butylbenzene	U	1.23	ug/kg	0.369	1.23
95-63-6	1,2,4-Trimethylbenzene	U	1.23	ug/kg	0.369	1.23
135-98-8	sec-Butylbenzene	U	1.23	ug/kg	0.369	1.23
99-87-6	4-Isopropyltoluene	U	1.23	ug/kg	0.369	1.23
541-73-1	1,3-Dichlorobenzene	U	1.23	ug/kg	0.369	1.23
106-46-7	1,4-Dichlorobenzene	U	1.23	ug/kg	0.369	1.23
104-51-8	n-Butylbenzene	U	1.23	ug/kg	0.369	1.23
96-12-8	1,2-Dibromo-3-chloropropane	U	1.23	ug/kg	0.369	1.23
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.15	ug/kg	1.97	6.15
630-20-6	1,1,1,2-Tetrachloroethane	U	1.23	ug/kg	0.369	1.23
95-50-1	1,2-Dichlorobenzene	U	1.23	ug/kg	0.369	1.23

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.36	31.8	ug/kg	0	J

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2510

Matrix Type: SOLID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201874620	LCS for batch 882630	99	99	98
1201874621	LCS for batch 882630	98	97	97
1201874617	MB for batch 882630	102	102	102
232591001	CAMO-09-9946	98	100	110

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-10464PS
Lab Sample ID: 1201874618
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:09
Prep Batch ID: 882630
Batch ID: 882632
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	38.7	77	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	42.3	85	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	43.1	86	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	40.3	81	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	44.2	88	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	44.1	88	51-151
67-64-1	PS	Acetone	250	1.96	J	186	74	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	45.1	90	61-125
74-88-4	PS	Iodomethane	250	0.00	U	234	93	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	43.2	86	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	230	92	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	43.2	86	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	44.7	89	62-125
78-93-3	PS	2-Butanone	250	0.00	U	183	73	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	44.3	89	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	46.9	94	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	44.3	89	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	43.2	86	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	46.3	93	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	44.1	88	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	46.7	93	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	44.0	88	58-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-10464PS
Lab Sample ID: 1201874618
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:09
Prep Batch ID: 882630
Batch ID: 882632

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	42.2	84	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	43.0	86	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	43.7	87	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	46.1	92	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	44.4	89	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	219	88	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	45.9	92	54-133
108-88-3	PS	Toluene	50.0	0.00	U	41.5	83	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	46.0	92	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	43.7	87	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	220	88	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	43.4	87	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	41.6	83	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	48.1	96	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	45.6	91	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	42.5	85	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	42.6	85	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	83.3	83	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	42.4	85	52-127
100-42-5	PS	Styrene	50.0	0.00	U	46.7	93	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	40.3	81	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	47.1	94	63-127

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-10464PS
Lab Sample ID: 1201874618
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:09
Prep Batch ID: 882630
Batch ID: 882632

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	45.3	91	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	43.5	87	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	42.9	86	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	43.3	87	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	42.8	86	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	42.8	86	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	42.5	85	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	43.2	86	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	42.8	86	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	42.6	85	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	41.4	83	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	41.5	83	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	40.7	81	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	41.1	82	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	54.9	110	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	45.2	90	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	41.6	83	43-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-10464PSD
Lab Sample ID: 1201874619
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:37
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	41.0	82	25-149	6	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	42.6	85	39-140	1	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	43.9	88	47-129	2	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	37.3	75	31-135	8	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	44.4	89	53-128	0	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	46.3	93	51-151	5	0-25
67-64-1	PSD	Acetone	250	1.96	J	190	75	21-153	2	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	45.9	92	61-125	2	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	235	94	53-142	0	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	42.0	84	59-136	3	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	237	95	46-129	3	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	43.3	87	56-126	0	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	44.1	88	62-125	2	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	188	75	26-152	2	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	43.2	86	60-130	3	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	44.2	88	55-135	6	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	43.3	87	60-127	2	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	42.9	86	61-131	1	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	45.8	92	59-131	1	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	45.5	91	57-128	3	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	47.1	94	58-136	1	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	42.9	86	58-126	2	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-10464PSD
Lab Sample ID: 1201874619
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:37
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	41.7	83	56-123	1	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	42.9	86	51-137	0	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	42.7	85	60-126	2	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	45.1	90	55-138	2	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	44.2	88	60-132	0	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	221	88	58-136	1	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	45.2	90	54-133	1	0-25
108-88-3	PSD	Toluene	50.0	0.00	U	41.1	82	52-128	1	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	44.6	89	53-137	3	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	42.9	86	59-130	2	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	222	89	31-148	1	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	42.4	85	57-127	3	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	42.2	84	51-128	1	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	47.1	94	59-139	2	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	45.0	90	57-133	1	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	41.5	83	53-122	2	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	41.7	83	51-125	2	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	81.8	82	50-126	2	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	41.2	82	52-127	3	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	45.4	91	49-135	3	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	40.2	80	57-149	0	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	47.1	94	63-127	0	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-10464PSD
Lab Sample ID: 1201874619
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:37
Prep Batch ID: 882630
Batch ID: 882632
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	45.8	92	57-149	1	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	42.1	84	49-131	3	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	41.8	84	40-136	3	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	41.7	83	44-135	4	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	41.8	84	44-140	2	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	41.8	84	42-140	2	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	40.8	82	44-132	4	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	42.0	84	42-142	3	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	40.6	81	43-137	5	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	41.7	83	39-139	2	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	40.4	81	38-145	2	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	39.7	79	43-129	5	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	38.7	77	44-125	5	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	39.2	78	36-141	5	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	55.7	111	47-151	1	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	44.0	88	59-131	3	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	40.2	80	43-129	3	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: LCS for batch 882630
Lab Sample ID: 1201874620
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/06/2009 07:55
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	46.3	93	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	44.5	89	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	47.7	95	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	41.9	84	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	48.4	97	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	50.1	100	67-151
67-64-1	LCS	Acetone	250	0.0	235	94	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	48.9	98	70-125
74-88-4	LCS	Iodomethane	250	0.0	271	108	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	53.1	106	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	261	104	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	46.7	93	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	47.9	96	75-120
78-93-3	LCS	2-Butanone	250	0.0	226	90	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	47.2	94	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	51.0	102	74-135
67-66-3	LCS	Chloroform	50.0	0.0	47.9	96	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	49.5	99	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	51.1	102	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	49.7	99	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	53.0	106	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	45.9	92	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: LCS for batch 882630
Lab Sample ID: 1201874620
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/06/2009 07:55
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	46.7	93	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	49.0	98	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	47.1	94	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	50.6	101	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	49.2	98	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	239	96	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	51.9	104	80-125
108-88-3	LCS	Toluene	50.0	0.0	46.3	93	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	50.1	100	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	47.2	94	76-120
591-78-6	LCS	2-Hexanone	250	0.0	237	95	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	45.9	92	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	50.5	101	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	54.1	108	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	50.8	102	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	48.9	98	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	47.8	96	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	95.7	96	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	48.2	96	74-120
100-42-5	LCS	Styrene	50.0	0.0	53.5	107	76-125
75-25-2	LCS	Bromoform	50.0	0.0	46.6	93	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	49.0	98	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882630 **Matrix:** SOIL

Lab Sample ID: 1201874620

Instrument: VOA2.I **Analysis Date:** 07/06/2009 07:55 **Dilution:** 1

Analyst: CDS1 **Prep Batch ID:** 882630

Purge Vol: 5 mL **Batch ID:** 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	48.7	97	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	49.4	99	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	47.6	95	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	47.3	95	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	48.7	97	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	48.7	97	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	47.1	94	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	49.3	99	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	48.5	97	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	49.2	98	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	50.6	101	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	49.5	99	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	48.2	96	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	49.2	98	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	64.8	130	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	51.6	103	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	49.1	98	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 882630
Matrix: SOIL
Lab Sample ID: 1201874621
Instrument: VOA2.I
Analysis Date: 07/06/2009 08:53
Dilution: 1
Analyst: CDS1
Prep Batch ID: 882630
Purge Vol: 5 mL
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	237	95	52-139

Method Blank Summary

SDG Number:	09-2510	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882630	Instrument ID:	VOA2.I	Data File:	070609V2.b\2T113.D
Lab Sample ID:	1201874617	Prep Date:	07/06/2009 06:00	Analyzed:	07/06/09 12:19
Column:	DB-624				

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 882630	1201874620	070609V2.b\2T104.D	07/06/09	0755
02 LCS for batch 882630	1201874621	070609V2.b\2T106.D	07/06/09	0853
03 CAMO-09-9946	232591001	070609V2.b\2T119.D	07/06/09	1513

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2510

Instrument ID: VOA2.I **Injection Date/Time:** 01-JUL-09 09:58

Column Description: DB-624 **Lab File ID** 070109V2.b\2S301.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	25.2
75	30.0 - 60.0% of mass 95	47.2
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	71.5
175	5.0 -9.0% of mass 174	7.6
176	95.0 - 101.0% of mass 174	100.6
177	5.0 - 9.0% of mass 176	6.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALVSTD001 5ML MIX [A]	W2VM090701-01	070109V2.b\2S303.D	01-JUL-09 10:53
ICALVSTD002 5ML MIX [A]	W2VM090701-02	070109V2.b\2S304.D	01-JUL-09 11:22
ICALVSTD005 5ML MIX [A]	W2VM090701-03	070109V2.b\2S305.D	01-JUL-09 11:51
ICALVSTD010 5ML MIX [A]	W2VM090701-04	070109V2.b\2S306.D	01-JUL-09 12:21
ICALVSTD020 5ML MIX [A]	W2VM090701-05	070109V2.b\2S307.D	01-JUL-09 12:50
ICALVSTD050 5ML MIX [A]	W2VM090701-06	070109V2.b\2S308.D	01-JUL-09 13:19
ICALVSTD100 5ML MIX [A]	W2VM090701-07	070109V2.b\2S309.D	01-JUL-09 13:48
ICALVSTD0005 5ML MIX [A]	W2VM090701-08	070109V2.b\2S311.D	01-JUL-09 14:45
ICVLCS 5ML MIX [A] ULTRA(	W2VM090701-10	070109V2.b\2S313.D	01-JUL-09 15:44
ICALVSTD005S 5ML MIX [B]	W2VM090701-11	070109V2.b\2S315.D	01-JUL-09 16:41
ICALVSTD010S 5ML MIX [B]	W2VM090701-12	070109V2.b\2S316.D	01-JUL-09 17:10
ICALVSTD025S 5ML MIX [B]	W2VM090701-13	070109V2.b\2S317.D	01-JUL-09 17:39
ICALVSTD050S 5ML MIX [B]	W2VM090701-14	070109V2.b\2S318.D	01-JUL-09 18:08
ICALVSTD100S 5ML MIX [B]	W2VM090701-15	070109V2.b\2S319.D	01-JUL-09 18:37
ICALVSTD250S 5ML MIX [B]	W2VM090701-16	070109V2.b\2S320.D	01-JUL-09 19:07
ICALVSTD500S 5ML MIX [B]	W2VM090701-17	070109V2.b\2S321.D	01-JUL-09 19:36
ICVLCS 5ML MIX [B] 03	W2VM090701-18	070109V2.b\2S323.D	01-JUL-09 20:34

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2510

Instrument ID: VOA2.I **Injection Date/Time:** 06-JUL-09 06:57

Column Description: DB-624 **Lab File ID** 070609V2.b\2T102BFB.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	19.8
75	30.0 - 60.0% of mass 95	45.3
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	89.8
175	5.0 -9.0% of mass 174	7.6
176	95.0 - 101.0% of mass 174	100.8
177	5.0 - 9.0% of mass 176	6.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVVSTD050 5ML MIX [A] UV	W2VM090706-01	070609V2.b\2T102.D	06-JUL-09 06:57
BLK01LCS	1201874620	070609V2.b\2T104.D	06-JUL-09 07:55
CCVVSTD250S LCS 5ML MIX	UVM090701-08A	070609V2.b\2T105.D	06-JUL-09 08:24
BLK01SLCS	1201874621	070609V2.b\2T106.D	06-JUL-09 08:53
BLK01	1201874617	070609V2.b\2T113.D	06-JUL-09 12:19
CAMO-09-9946	232591001	070609V2.b\2T119.D	06-JUL-09 15:13

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA2.I

GC Column: DB-624

Client SDG: 09-2510

STD Analysis Time: 06-JUL-09 06:57

Data File: C:\msdchem\1\DATA\070609V2.b\2T102.D

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	1767232		12.4	1520020		16.0	957984		18.5
Upper Limit	3534464		12.9	3040040		16.5	1915968		19.0
Lower Limit	883616		11.9	760010		15.5	478992		18.0
Sample ID									
BLK01LCS	1717098		12.4	1483018		16.0	935834		18.5
BLK01SLCS	1749528		12.4	1519196		16.0	951777		18.5
BLK01	1648861		12.4	1385774		16.0	844664		18.5
CAMO-09-9946	1667747		12.4	1338912		16.0	675639		18.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 15:13	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T119.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.23	ug/kg	0.418	1.23
74-87-3	Chloromethane	U	1.23	ug/kg	0.369	1.23
75-01-4	Vinyl chloride	U	1.23	ug/kg	0.369	1.23
74-83-9	Bromomethane	U	1.23	ug/kg	0.369	1.23
75-00-3	Chloroethane	U	1.23	ug/kg	0.369	1.23
75-69-4	Trichlorofluoromethane	U	1.23	ug/kg	0.369	1.23
67-64-1	Acetone	U	6.15	ug/kg	2.04	6.15
75-35-4	1,1-Dichloroethylene	U	1.23	ug/kg	0.369	1.23
74-88-4	Iodomethane	U	6.15	ug/kg	1.97	6.15
75-09-2	Methylene chloride	U	6.15	ug/kg	2.46	6.15
75-15-0	Carbon disulfide	U	6.15	ug/kg	1.54	6.15
156-60-5	trans-1,2-Dichloroethylene	U	1.23	ug/kg	0.369	1.23
75-34-3	1,1-Dichloroethane	U	1.23	ug/kg	0.369	1.23
78-93-3	2-Butanone	U	6.15	ug/kg	1.85	6.15
156-59-2	cis-1,2-Dichloroethylene	U	1.23	ug/kg	0.369	1.23
594-20-7	2,2-Dichloropropane	U	1.23	ug/kg	0.369	1.23
67-66-3	Chloroform	U	1.23	ug/kg	0.369	1.23
74-97-5	Bromochloromethane	U	1.23	ug/kg	0.406	1.23
71-55-6	1,1,1-Trichloroethane	U	1.23	ug/kg	0.369	1.23
563-58-6	1,1-Dichloropropene	U	1.23	ug/kg	0.369	1.23
56-23-5	Carbon tetrachloride	U	1.23	ug/kg	0.369	1.23
107-06-2	1,2-Dichloroethane	U	1.23	ug/kg	0.369	1.23
71-43-2	Benzene	U	1.23	ug/kg	0.369	1.23
79-01-6	Trichloroethylene	J	0.689	ug/kg	0.406	1.23
78-87-5	1,2-Dichloropropane	U	1.23	ug/kg	0.369	1.23
75-27-4	Bromodichloromethane	U	1.23	ug/kg	0.369	1.23
74-95-3	Dibromomethane	U	1.23	ug/kg	0.369	1.23
108-10-1	4-Methyl-2-pentanone	U	6.15	ug/kg	1.54	6.15
10061-01-5	cis-1,3-Dichloropropylene	U	1.23	ug/kg	0.369	1.23
108-88-3	Toluene	U	1.23	ug/kg	0.369	1.23
10061-02-6	trans-1,3-Dichloropropylene	U	1.23	ug/kg	0.369	1.23
79-00-5	1,1,2-Trichloroethane	U	1.23	ug/kg	0.369	1.23
591-78-6	2-Hexanone	U	6.15	ug/kg	1.85	6.15
142-28-9	1,3-Dichloropropane	U	1.23	ug/kg	0.369	1.23
127-18-4	Tetrachloroethylene	U	1.23	ug/kg	0.369	1.23
124-48-1	Dibromochloromethane	U	1.23	ug/kg	0.369	1.23
106-93-4	1,2-Dibromoethane	U	1.23	ug/kg	0.369	1.23
108-90-7	Chlorobenzene	U	1.23	ug/kg	0.369	1.23

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 15:13	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T119.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.23	ug/kg	0.369	1.23
179601-23-1	m,p-Xylenes	U	2.46	ug/kg	0.369	2.46
95-47-6	o-Xylene	U	1.23	ug/kg	0.369	1.23
100-42-5	Styrene	U	1.23	ug/kg	0.369	1.23
75-25-2	Bromoform	U	1.23	ug/kg	0.369	1.23
79-34-5	1,1,2,2-Tetrachloroethane	U	1.23	ug/kg	0.369	1.23
96-18-4	1,2,3-Trichloropropane	U	1.23	ug/kg	0.369	1.23
108-86-1	Bromobenzene	U	1.23	ug/kg	0.369	1.23
103-65-1	n-Propylbenzene	U	1.23	ug/kg	0.369	1.23
95-49-8	2-Chlorotoluene	U	1.23	ug/kg	0.369	1.23
98-82-8	Isopropylbenzene	U	1.23	ug/kg	0.369	1.23
108-67-8	1,3,5-Trimethylbenzene	U	1.23	ug/kg	0.369	1.23
106-43-4	4-Chlorotoluene	U	1.23	ug/kg	0.369	1.23
98-06-6	tert-Butylbenzene	U	1.23	ug/kg	0.369	1.23
95-63-6	1,2,4-Trimethylbenzene	U	1.23	ug/kg	0.369	1.23
135-98-8	sec-Butylbenzene	U	1.23	ug/kg	0.369	1.23
99-87-6	4-Isopropyltoluene	U	1.23	ug/kg	0.369	1.23
541-73-1	1,3-Dichlorobenzene	U	1.23	ug/kg	0.369	1.23
106-46-7	1,4-Dichlorobenzene	U	1.23	ug/kg	0.369	1.23
104-51-8	n-Butylbenzene	U	1.23	ug/kg	0.369	1.23
96-12-8	1,2-Dibromo-3-chloropropane	U	1.23	ug/kg	0.369	1.23
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.15	ug/kg	1.97	6.15
630-20-6	1,1,1,2-Tetrachloroethane	U	1.23	ug/kg	0.369	1.23
95-50-1	1,2-Dichlorobenzene	U	1.23	ug/kg	0.369	1.23

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.36	31.8	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T119.D
Acq On : 6 Jul 2009 3:13 pm
Operator : CDS1
InstName : VOA2
Sample : |232591001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 17 06:55:36 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1667747	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1338912	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	675639	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1667747	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1338912	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	675639	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	460346	49.22 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 98.44%		
43) Toluene-d8	14.310	98	1571220	49.94 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 99.88%		
61) Bromofluorobenzene	17.204	95	583553	54.93 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 109.86%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.251	62	319	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.954	43	3943	N.D.	
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	8.108	142	447	N.D.	
12) Acetonitrile	8.440	41	118	N.D.	
13) Methyl acetate	8.559	43	304	N.D.	
14) Carbon disulfide	8.250	76	1371	N.D.	
15) Methylene chloride	8.701	84	8368	Below Cal	97
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	231	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.239	83	1139	N.D.	
25) 1,1,1-Trichloroethane	11.547	97	544	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	396	N.D.	
31) Benzene	12.033	78	589	N.D.	
32) Cyclohexene	12.389	67	376	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	12.852	95	4425	0.56 ug/L	94
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T119.D
Acq On : 6 Jul 2009 3:13 pm
Operator : CDS1
InstName : VOA2
Sample : |232591001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 17 06:55:36 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D.	d
44) Toluene	14.393	91	1317	N.D.	
45) trans-1,3-Dichloroprop...	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.310	43	7447	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	15.034	164	2192	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	134	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.125	91	1679	N.D.	
55) m,p-Xylenes	16.196	106	263	N.D.	
56) o-Xylene	0.000		0	N.D.	
57) Styrene	16.646	104	328	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.204	105	681	N.D.	
62) 1,1,2,2-Tetrachloroethane	17.204	83	112	N.D.	
63) 1,2,3-Trichloropropane	17.204	110	245	N.D.	
64) Bromobenzene	17.215	156	227	N.D.	
65) n-Propylbenzene	17.465	91	248	N.D.	
66) 1,3,5-Trimethylbenzene	0.000		0	N.D.	
67) 2-Chlorotoluene	17.595	91	139	N.D.	
68) 4-Chlorotoluene	17.702	91	608	N.D.	
69) tert-Butylbenzene	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	18.081	105	312	N.D.	
71) sec-Butylbenzene	18.081	105	312	N.D.	
72) 4-Isopropyltoluene	18.366	119	943	N.D.	
73) 1,3-Dichlorobenzene	18.401	146	480	N.D.	
74) 1,4-Dichlorobenzene	18.401	146	480	N.D.	
75) n-Butylbenzene	18.603	91	303	N.D.	
76) 1,2-Dichlorobenzene	18.899	146	159	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	202	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	918	N.D.	
81) 1,2,3-Trichlorobenzene	0.000		0	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.499	41	108	N.D.	
89) tert-Butyl Alcohol	8.879	59	1987	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	10.551	59	110	N.D.	
94) Ethyl acetate	10.800	43	231	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T119.D
Acq On : 6 Jul 2009 3:13 pm
Operator : CDS1
InstName : VOA2
Sample : |232591001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 17 06:55:36 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	0.000		0	N.D.	
96) Methacrylonitrile	11.227	41	472	N.D.	
97) Tetrahydrofuran	11.239	42	1120	N.D.	
98) Isobutyl alcohol	0.000		0	N.D.	
99) Methyl tert-amyl ether	0.000		0m	N.D.	d
100) Methyl methacrylate	0.000		0	N.D.	
101) 1,4-Dioxane	0.000		0	N.D.	
102) 2-Nitropropane	0.000		0	N.D.	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	0.000		0m	N.D.	d
107) cis-1,4-Dichloro-2-butene	0.000		0	N.D.	
108) Cyclohexanone	0.000		0	N.D.	
109) trans-1,4-Dichloro-2-b...	0.000		0	N.D.	
110) Pentachloroethane	0.000		0	N.D.	
111) Benzyl chloride	18.603	91	303	N.D.	
112) bis(2-Chloroisopropyl)...	19.148	45	536	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T119.D
Acq On : 6 Jul 2009 3:13 pm
Operator : CDS1
InstName : VOA2
Sample : |232591001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 17 06:55:36 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

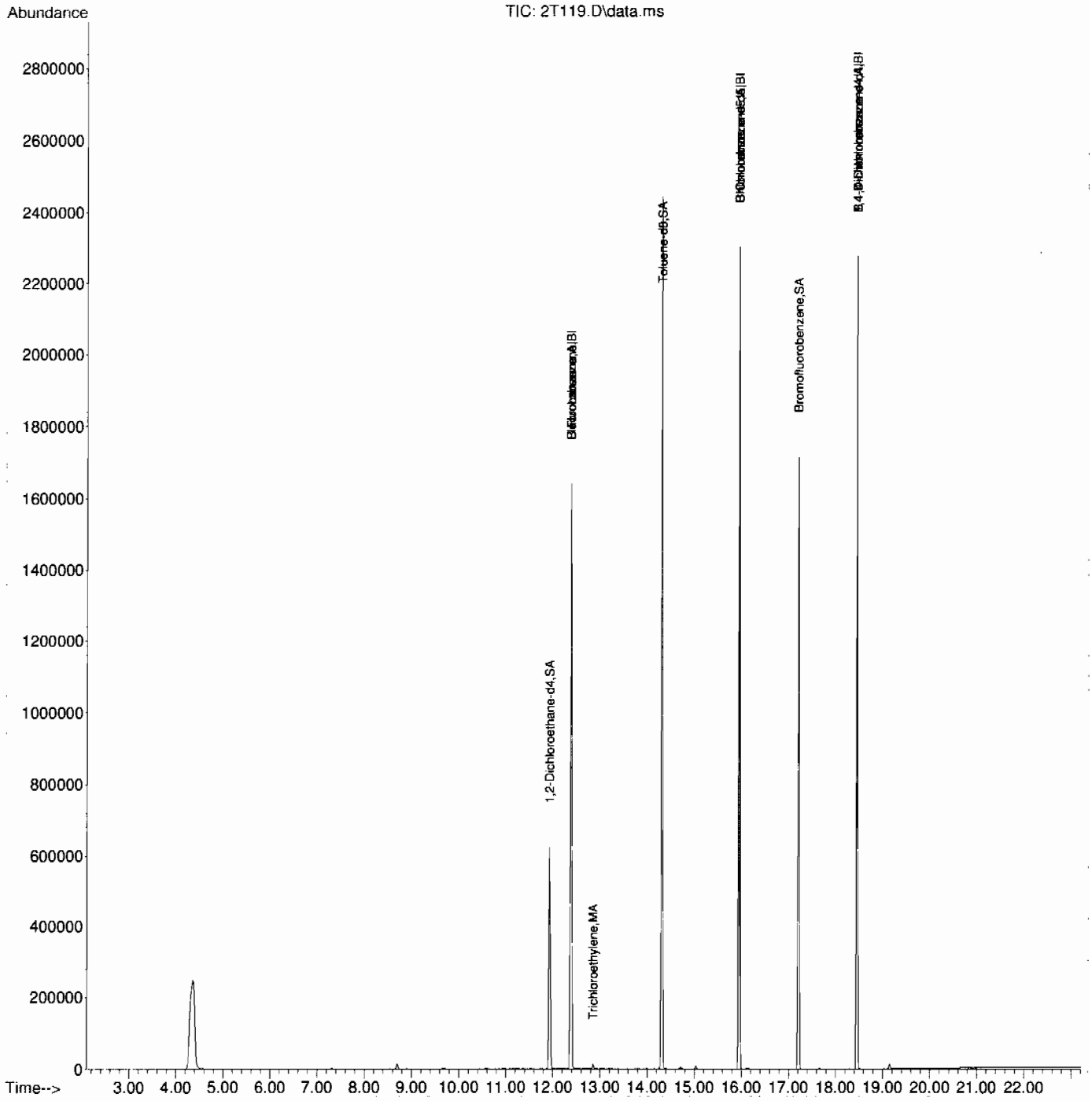

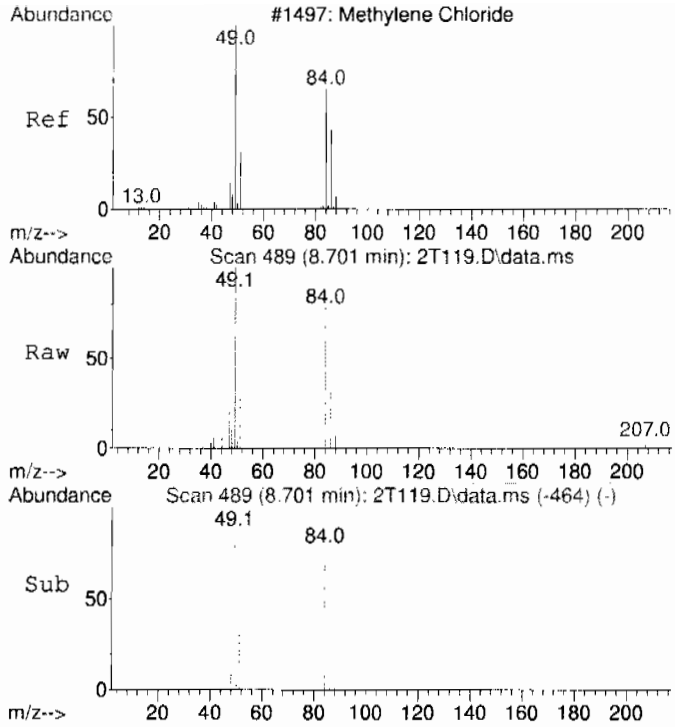

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T119.D
Acq: 6 Jul 2009 3:13 pm

Tgt Ion: 84 Resp: 8368

Ion	Ratio	Lower	Upper
84	100		
86	59.3	33.8	93.8
49	133.1	105.0	165.0

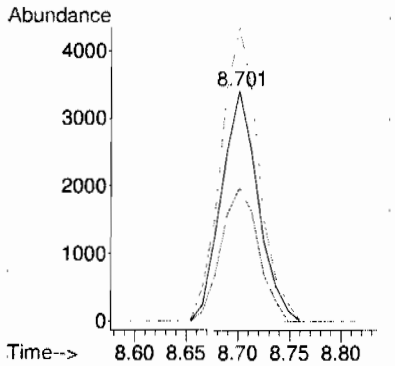

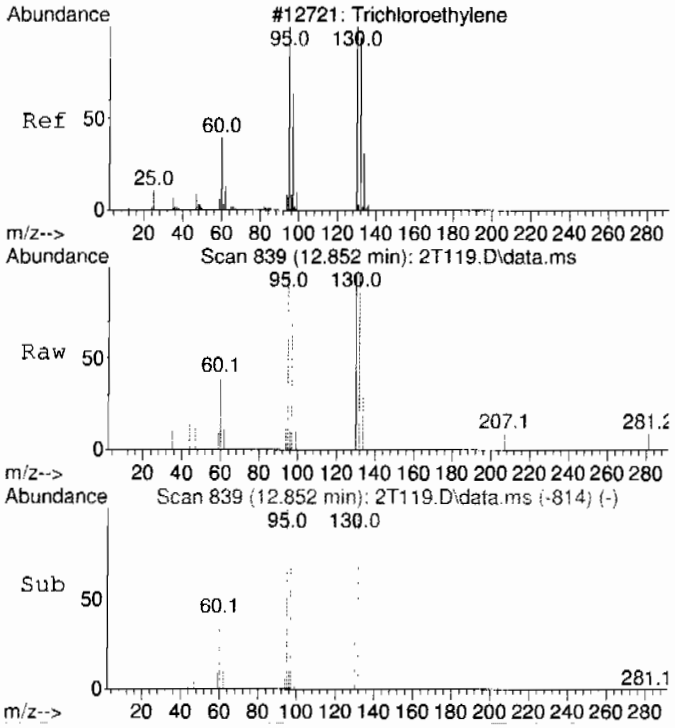

#34
Trichloroethylene
Concen: 0.56 ug/L
RT: 12.852 min Scan# 839
Delta R.T. -0.000 min
Lab File: 2T119.D
Acq: 6 Jul 2009 3:13 pm

Tgt Ion: 95 Resp: 4425

Ion	Ratio	Lower	Upper
95	100		
130	105.3	84.1	144.1
97	67.7	36.7	96.7

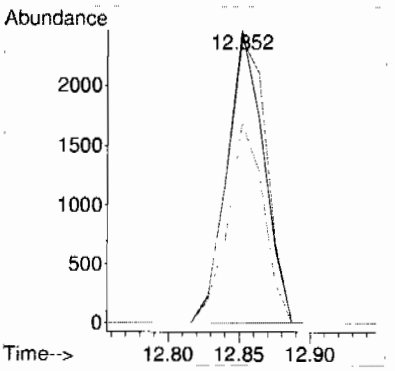

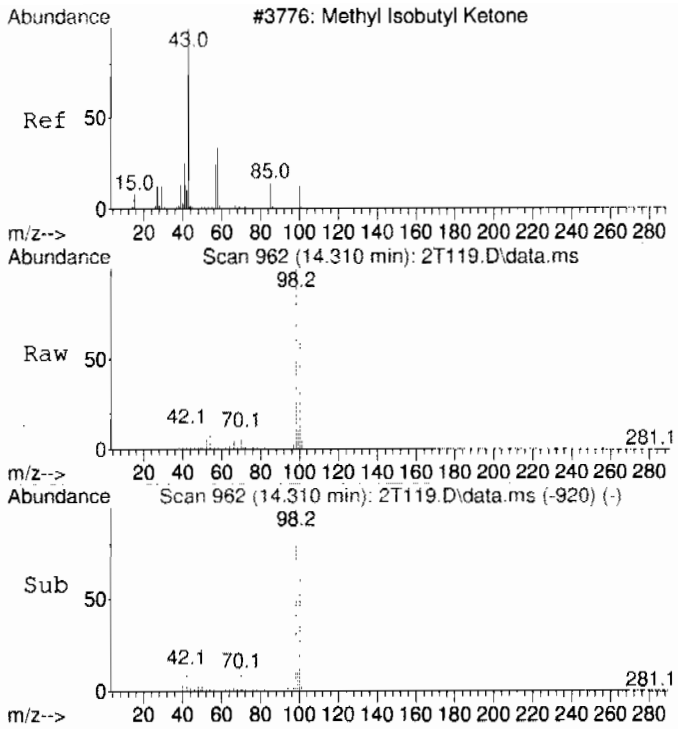

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.45 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T119.D
Acq: 6 Jul 2009 3:13 pm

Tgt Ion: 58 Resp: 13035

Ion	Ratio	Lower	Upper
58	100		
43	57.1	245.2	305.2#
100	8323.8	7.2	67.2#

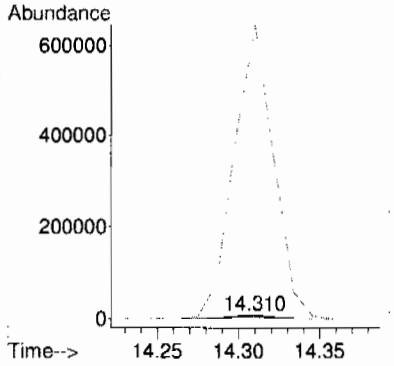

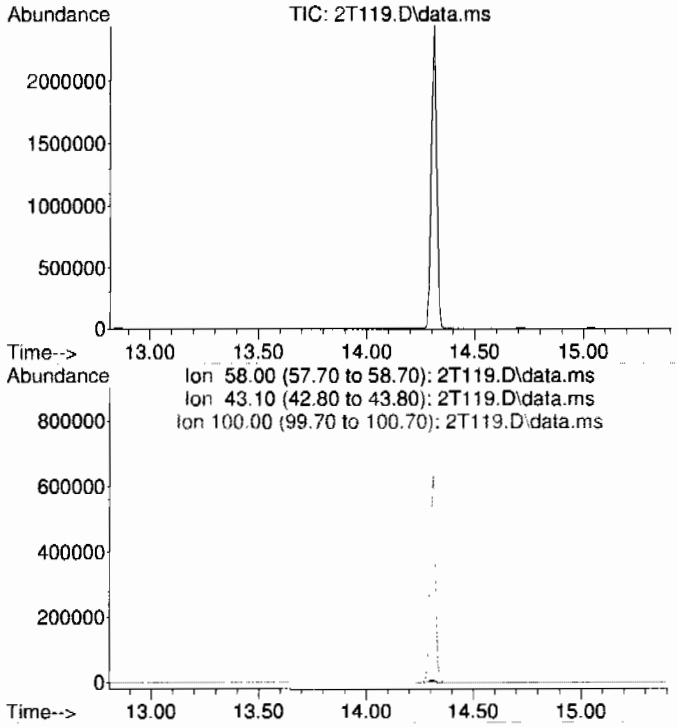

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T119.D
Acq: 6 Jul 2009 3:13 pm

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

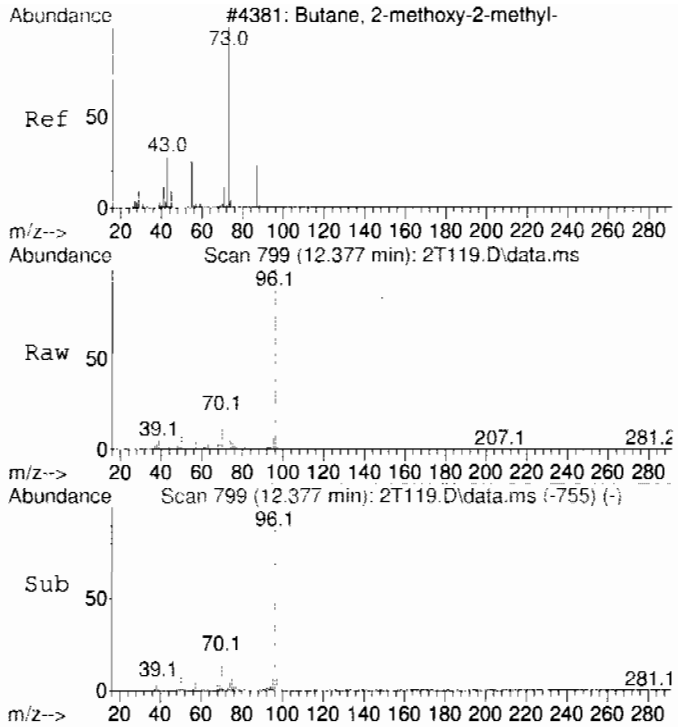

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.96 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T119.D
Acq: 6 Jul 2009 3:13 pm

Tgt Ion: 73 Resp: 17958

Ion	Ratio	Lower	Upper
73	100		
55	7.6	5.2	65.2
87	0.0	0.0	54.7

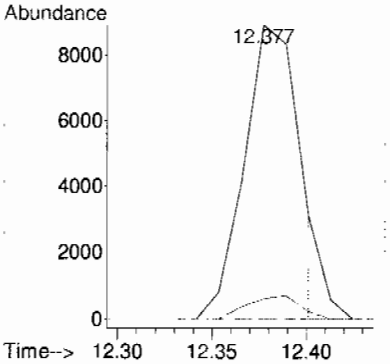

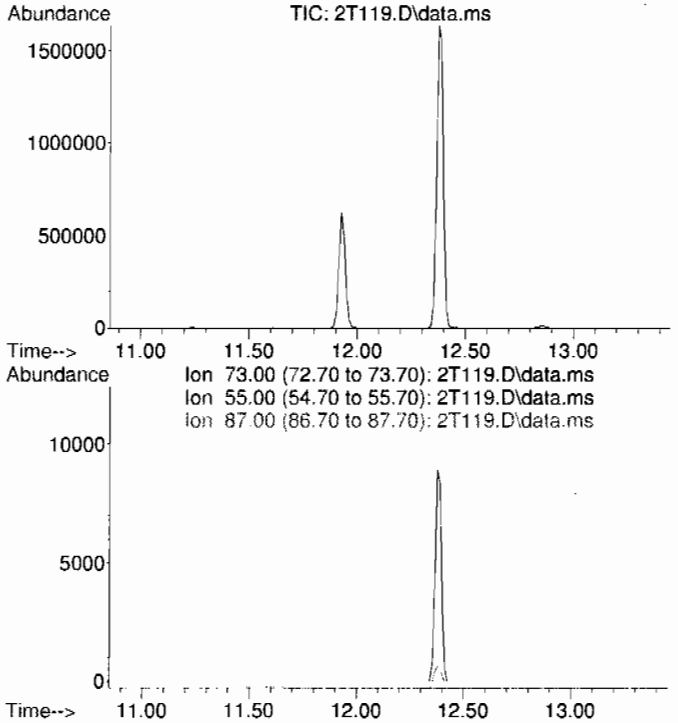

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T119.D
Acq: 6 Jul 2009 3:13 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

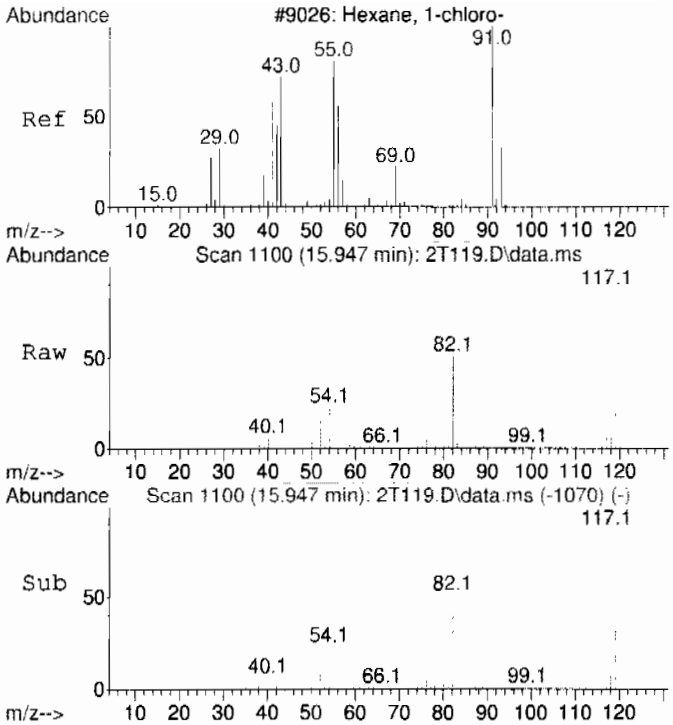

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 2.34 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T119.D
Acq: 6 Jul 2009 3:13 pm

Tgt Ion: 55 Resp: 12443

Ion	Ratio	Lower	Upper
55	100		
91	19.8	113.2	173.2#
56	60.4	30.3	90.3

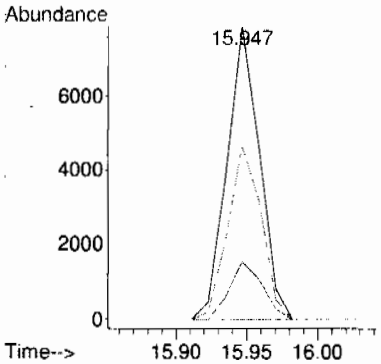

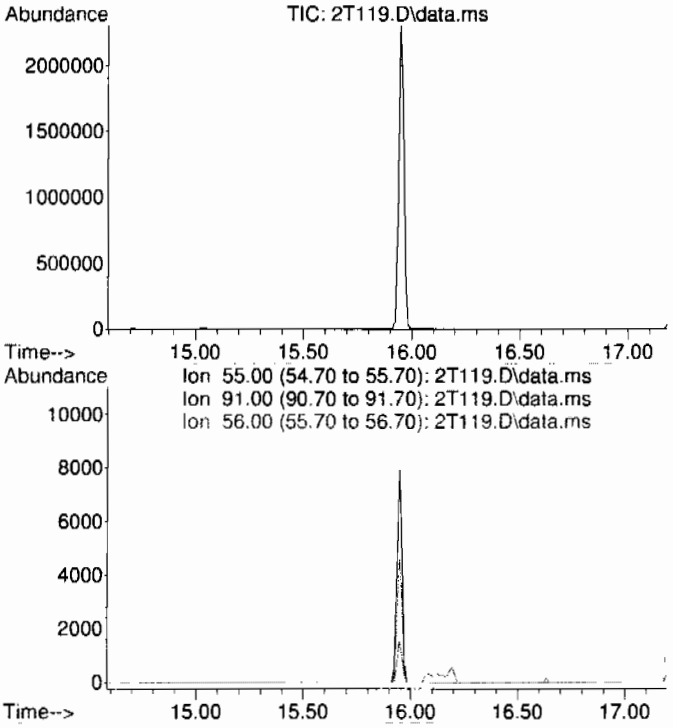

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T119.D
Acq: 6 Jul 2009 3:13 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T119.D
Acq On : 6 Jul 2009 3:13 pm
Operator : CDS1
Sample : |232591001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 18 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T119.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.360	142	153	171	rBB	247561	1778958	42.24%	8.296%
2	4.672	171	174	178	rBB	383	1138	0.03%	0.005%
3	4.969	189	194	210	rBV	354	3704	0.09%	0.017%
4	6.033	261	264	267	rBV2	665	2911	0.07%	0.014%
5	7.314	368	372	378	rBV2	1905	6464	0.15%	0.030%
6	7.954	421	426	446	rBV4	1323	8860	0.21%	0.041%
7	8.701	485	489	495	rVB	13667	34224	0.81%	0.160%
8	9.685	567	572	578	rBV3	3606	9578	0.23%	0.045%
9	11.227	700	702	715	rVB3	2412	6188	0.15%	0.029%
10	11.927	756	761	780	rBV	624218	1281062	30.42%	5.974%
11	12.377	793	799	819	rVB	1638612	3436456	81.59%	16.026%
12	12.852	836	839	847	rVB	12862	24568	0.58%	0.115%
13	14.310	956	962	977	rVB	2443679	4211932	100.00%	19.643%
14	14.713	992	996	1003	rVB	5154	11429	0.27%	0.053%
15	15.034	1020	1023	1032	rVB	8283	14223	0.34%	0.066%
16	15.947	1096	1100	1108	rBV	2303237	3832424	90.99%	17.873%
17	16.646	1156	1159	1165	rBV	783	1522	0.04%	0.007%
18	17.204	1202	1206	1218	rBV	1714570	3047613	72.36%	14.213%
19	17.654	1241	1244	1261	rVB2	4348	9246	0.22%	0.043%
20	18.461	1306	1312	1365	rVB	2275120	3685831	87.51%	17.189%
21	19.148	1366	1370	1392	rBV2	12368	34417	0.82%	0.161%

Sum of corrected areas: 21442748

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T119.D
Acq On    :  6 Jul 2009   3:13 pm
Operator  : CDS1
Sample    : |232591001|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5g - SOIL
ALS Vial  : 18   Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B

TIC Library    : C:\Database\NIST05.L
TIC Integration Parameters: default.P
```

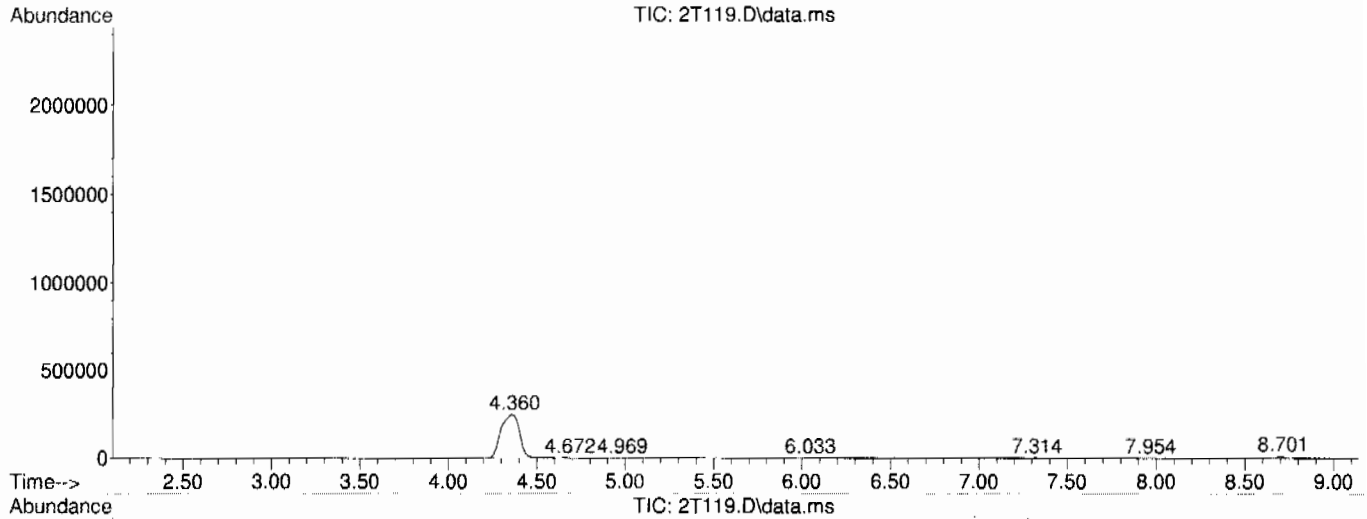

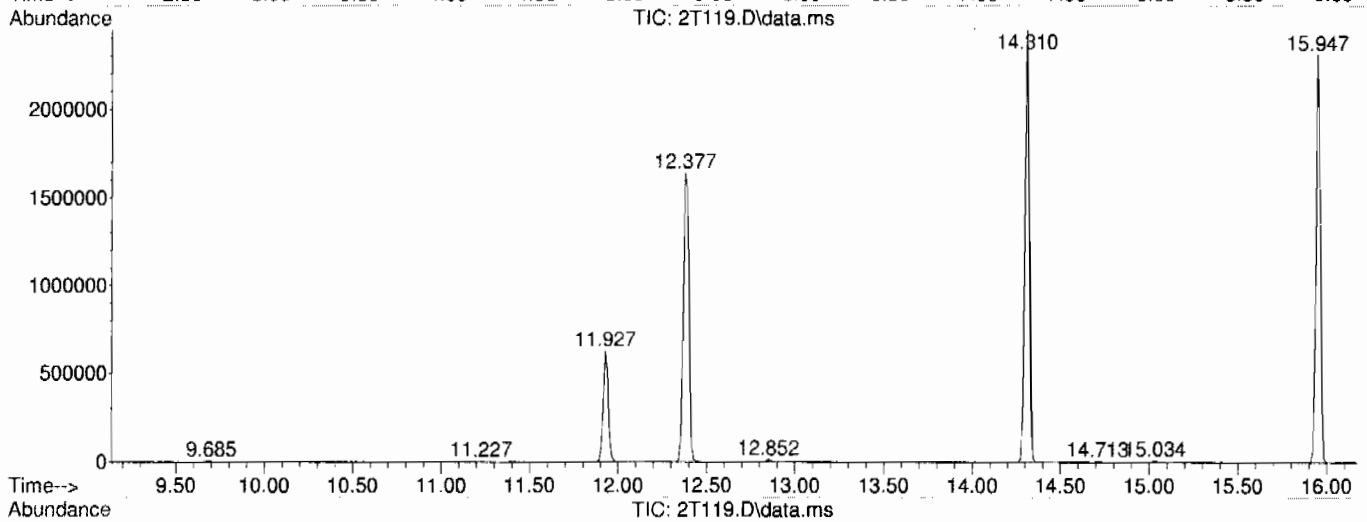

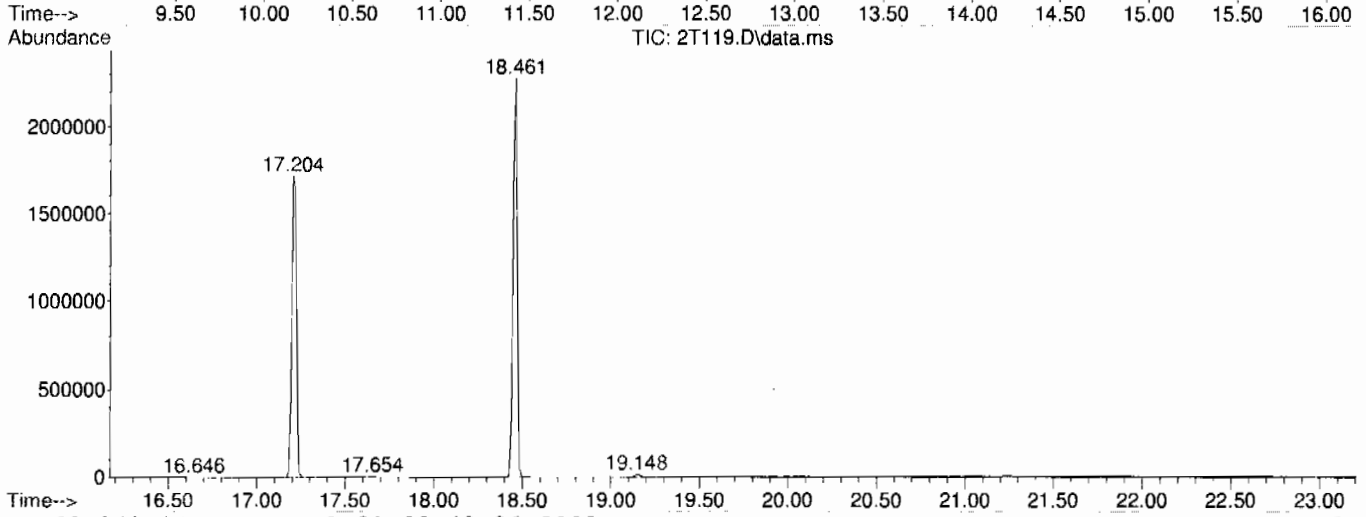

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T119.D
Acq On : 6 Jul 2009 3:13 pm
Operator : CDS1
Sample : |232591001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.360	25.88 ug/L	1778960	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

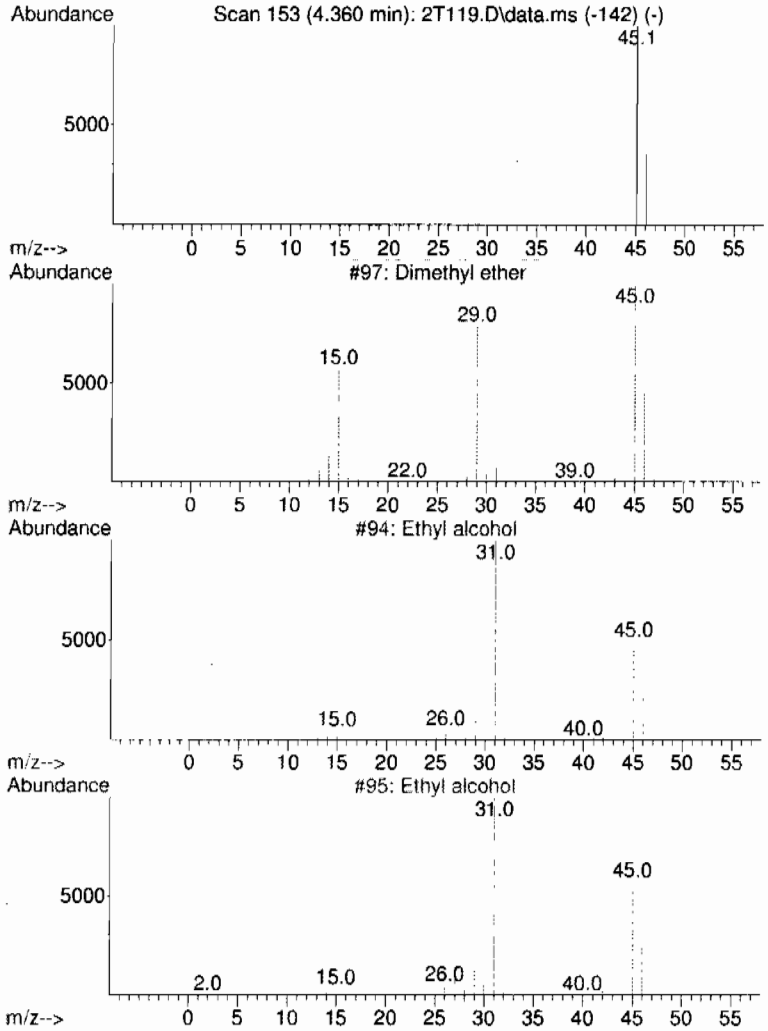

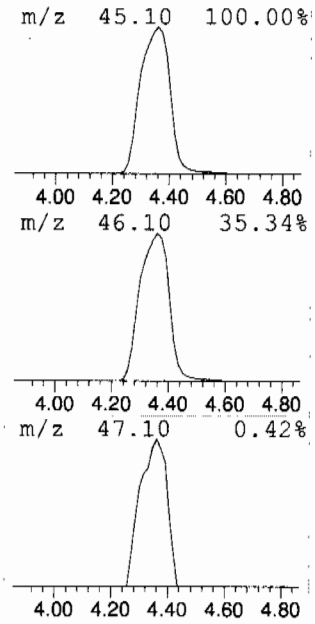

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T119.D
Acq On : 6 Jul 2009 3:13 pm
Operator : CDS1
Sample : |232591001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.360	25.9	ug/L	1778960	1	12.377	3436460	50.0

Standards

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
Fluorobenzene (IS)									
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Chlorobenzene-d5 (IS)									
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
[illegible]									
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Method	PQL	Concentration range
EPA 524.2	Level 1a	Levels 1a -> 7a
SW 846 8260B low level	Level 1a	Levels 1-> 7a
EPA 624	Level 2	Levels 2-> 7a
SW846 8260B	Level 2	Levels 2-> 7a

#: Indicates calibration verification concentration level used for low level analysis

!: Indicates calibration verification concentration level used for regular level analysis

Calibration History Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009 Response via : Initial Calibration
Integrator : (RTE Integrator)

Cal Lvl:8 Amt:-1 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S311.D

Injection Date	Mix	Calibration File
1 Jul 2009 2:45 pm	A	C:\msdchem\1\DATA\070109V2.b\2S311.D

Cal Lvl:1 Amt:1 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S315.D

Injection Date	Mix	Calibration File
1 Jul 2009 10:53 am	A	C:\msdchem\1\DATA\070109V2.b\2S303.D
1 Jul 2009 4:41 pm	B	C:\msdchem\1\DATA\070109V2.b\2S315.D

Cal Lvl:2 Amt:2 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S316.D

Injection Date	Mix	Calibration File
1 Jul 2009 11:22 am	A	C:\msdchem\1\DATA\070109V2.b\2S304.D
1 Jul 2009 5:10 pm	B	C:\msdchem\1\DATA\070109V2.b\2S316.D

Cal Lvl:3 Amt:5 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S317.D

Injection Date	Mix	Calibration File
1 Jul 2009 11:51 am	A	C:\msdchem\1\DATA\070109V2.b\2S305.D
1 Jul 2009 5:39 pm	B	C:\msdchem\1\DATA\070109V2.b\2S317.D

Cal Lvl:4 Amt:10 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S318.D

Injection Date	Mix	Calibration File
1 Jul 2009 12:21 pm	A	C:\msdchem\1\DATA\070109V2.b\2S306.D
1 Jul 2009 6:08 pm	B	C:\msdchem\1\DATA\070109V2.b\2S318.D

Cal Lvl:5 Amt:20 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S319.D

Injection Date	Mix	Calibration File
1 Jul 2009 12:50 pm	A	C:\msdchem\1\DATA\070109V2.b\2S307.D
1 Jul 2009 6:37 pm	B	C:\msdchem\1\DATA\070109V2.b\2S319.D

Cal Lvl:6 Amt:50 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S320.D

Injection Date	Mix	Calibration File
1 Jul 2009 1:19 pm	A	C:\msdchem\1\DATA\070109V2.b\2S308.D
1 Jul 2009 7:07 pm	B	C:\msdchem\1\DATA\070109V2.b\2S320.D

Cal Lvl:7 Amt:100 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S321.D

Injection Date	Mix	Calibration File
1 Jul 2009 1:48 pm	A	C:\msdchem\1\DATA\070109V2.b\2S309.D
1 Jul 2009 7:36 pm	B	C:\msdchem\1\DATA\070109V2.b\2S321.D

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b | m1 | m2	6	7								
2)MA Dichlorodifluoromethane		0.183	0.177	0.171	0.172	0.168				
	0.186	0.195					0.179	AVRG		5.4508
3)MPA Chloromethane		0.182	0.176	0.159	0.151	0.148				
	0.156	0.158					0.161	AVRG		7.8160
4)MCA Vinyl chloride		0.160	0.155	0.141	0.137	0.129				
	0.141	0.139					0.143	AVRG		7.4385
5)MA Bromomethane		0.151	0.168	0.153	0.157	0.135				
	0.124	0.120					0.144	AVRG		12.3745
6)MA Chloroethane		0.149	0.161	0.156	0.150	0.146				
	0.150	0.149					0.152	AVRG		3.3340
7)MA Trichlorofluoromethane		0.307	0.326	0.297	0.291	0.280				
	0.286	0.287					0.296	AVRG		5.2873
8)MA Ethyl ether		0.173	0.185	0.173	0.171	0.174				
	0.170	0.166					0.173	AVRG		3.4582
9)MA Acetone		0.252	0.195	0.174	0.168	0.169				
-0.0027 | 0.1723 | 0.00	0.165	0.174					0.185	LINR		0.9993
10)MCA 1,1-Dichloroethylene		0.314	0.293	0.315	0.306	0.296				
	0.284	0.296					0.301	AVRG		3.8444
11)MA Iodomethane		0.424	0.397	0.422	0.414	0.403				
	0.396	0.411					0.410	AVRG		2.7350
12)MA Acetonitrile		0.032	0.028	0.028	0.027	0.026				
	0.031	0.027					0.029	AVRG		7.6240
13)MA Methyl acetate		0.212	0.188	0.177	0.173	0.173				
	0.158	0.163					0.177	AVRG		10.1937
14)MA Carbon disulfide		0.735	0.683	0.712	0.693	0.659				
	0.623	0.624					0.676	AVRG		6.3069
15)MA Methylene chloride			0.638	0.456	0.261	0.270				
0.0167 | 0.2127 | 0.00	0.217	0.224					0.344	LINR		0.9974
16)MA tert-Butyl methyl ether		0.602	0.617	0.563	0.588	0.528				
	0.519	0.543					0.566	AVRG		6.6778
17)MA trans-1,2-Dichloroethyle		0.341	0.320	0.324	0.315	0.297				
	0.283	0.283					0.309	AVRG		7.0757
18)MA Vinyl acetate		0.298	0.391	0.379	0.388	0.362				
	0.396	0.377					0.370	AVRG		9.1248
19)MPA 1,1-Dichloroethane		0.414	0.389	0.403	0.390	0.371				
	0.361	0.371					0.386	AVRG		4.8799
20)MA 2-Butanone		0.222	0.207	0.198	0.198	0.210				
	0.205	0.209					0.207	AVRG		3.9501
21)MA cis-1,2-Dichloroethylene		0.380	0.357	0.364	0.347	0.330				
	0.309	0.305					0.342	AVRG		8.3485
22)MA 2,2-Dichloropropane		0.308	0.279	0.283	0.276	0.268				

Response Factor Report VOA2
GEL Laboratories, LLC

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Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b m1 m2	6	7								
	0.253	0.267					0.276	AVRG		6.2651
23)MA Bromochloromethane		0.134	0.125	0.129	0.127	0.121				
	0.122	0.130					0.127	AVRG		3.6616
24)MCA Chloroform		0.430	0.400	0.405	0.399	0.376				
	0.371	0.383					0.395	AVRG		5.0591
25)MA 1,1,1-Trichloroethane		0.361	0.334	0.345	0.337	0.332				
	0.325	0.342					0.339	AVRG		3.3499
26)MA Cyclohexane		0.392	0.359	0.373	0.360	0.349				
	0.327	0.330					0.356	AVRG		6.4366
27)MA 1,1-Dichloropropene		0.302	0.283	0.291	0.285	0.275				
	0.263	0.265					0.281	AVRG		4.9125
28)MA Carbon tetrachloride		0.312	0.289	0.311	0.305	0.302				
	0.301	0.317					0.306	AVRG		3.0123
29)SA 1,2-Dichloroethane-d4		0.281	0.286	0.283	0.281	0.283				
	0.276	0.273					0.280	AVRG		1.6885
30)MA 1,2-Dichloroethane		0.337	0.305	0.311	0.305	0.284				
	0.277	0.279					0.300	AVRG		7.2456
31)MA Benzene	0.917	0.965	0.898	0.905	0.888	0.833				
	0.795	0.794					0.874	AVRG		6.9909
32)MA Cyclohexene		0.445	0.453	0.467	0.440	0.443				
	0.412	0.416					0.439	AVRG		4.4961
33)MA n-Butyl alcohol	0.005	0.005	0.005	0.006	0.006	0.006				
	0.006	0.006					0.006	AVRG	#	8.5391
34)MA Trichloroethylene		0.258	0.235	0.249	0.241	0.228				
	0.222	0.231					0.238	AVRG		5.1899
35)MCA 1,2-Dichloropropane		0.237	0.226	0.230	0.228	0.215				
	0.203	0.198					0.219	AVRG		6.6362
36)MA Methylcyclohexane		0.418	0.388	0.400	0.397	0.378				
	0.359	0.354					0.385	AVRG		5.9080
37)MA Dibromomethane		0.143	0.130	0.136	0.134	0.132				
	0.132	0.139					0.135	AVRG		3.3912
38)MA Bromodichloromethane		0.272	0.264	0.278	0.281	0.280				
	0.286	0.301					0.280	AVRG		4.1368
39)MA 2-Chloroethylvinyl ether		0.092	0.106	0.130	0.111	0.112				
	0.109	0.100					0.109	AVRG		10.9581
40)MA cis-1,3-Dichloropropylen		0.328	0.307	0.334	0.333	0.324				
	0.327	0.339					0.327	AVRG		3.1689
42)MA 4-Methyl-2-pentanone		0.109	0.106	0.108	0.114	0.113				
	0.108	0.108					0.109	AVRG		2.6106
43)SA Toluene-d8		1.175	1.190	1.179	1.188	1.178				
	1.157	1.157					1.175	AVRG		1.1311

Response Factor Report VOA2
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For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b | m1 | m2	6	7								
44)MCA Toluene		1.301	1.184	1.190	1.149	1.076				
	1.048	1.053					1.143	AVRG		8.0216
45)MA trans-1,3-Dichloropropyl		0.340	0.330	0.357	0.372	0.353				
	0.361	0.373					0.355	AVRG		4.4458
46)MA 1,1,2-Trichloroethane		0.215	0.192	0.198	0.198	0.187				
	0.185	0.190					0.195	AVRG		5.3262
47)MA 2-Hexanone		0.296	0.291	0.298	0.313	0.306				
	0.296	0.296					0.300	AVRG		2.4725
48)MA 1,3-Dichloropropane		0.424	0.402	0.407	0.407	0.373				
	0.365	0.365					0.392	AVRG		6.0583
49)MA Tetrachloroethylene		0.323	0.302	0.306	0.296	0.283				
	0.277	0.275					0.295	AVRG		5.8638
50)MA Dibromochloromethane		0.236	0.228	0.250	0.268	0.269				
	0.289	0.316					0.265	AVRG		11.5426
51)MA 1,2-Dibromoethane		0.224	0.233	0.243	0.247	0.238				
	0.242	0.257					0.241	AVRG		4.3479
52)MPA Chlorobenzene		0.874	0.822	0.817	0.799	0.751				
	0.736	0.768					0.795	AVRG		5.9751
53)MA 1,1,1,2-Tetrachloroethan		0.280	0.273	0.289	0.297	0.286				
	0.291	0.310					0.289	AVRG		4.1463
54)MCA Ethylbenzene		1.386	1.309	1.349	1.326	1.243				
	1.209	1.214					1.291	AVRG		5.3918
55)MA m,p-Xylenes		0.560	0.529	0.548	0.538	0.504				
	0.483	0.470					0.519	AVRG		6.5331
56)MA o-Xylene		0.538	0.518	0.537	0.531	0.501				
	0.483	0.462					0.510	AVRG		5.7656
57)MA Styrene		0.669	0.659	0.747	0.799	0.795				
	0.801	0.791					0.752	AVRG		8.3323
59)MPA Bromoform		0.258	0.255	0.287	0.319	0.331				
-0.0193 | 0.4250 | 0.00	0.372	0.425					0.321	LINR		0.9960
60)MA Isopropylbenzene		2.237	2.089	2.196	2.185	2.094				
	2.033	2.058					2.127	AVRG		3.6665
61)SA Bromofluorobenzene		0.794	0.789	0.797	0.794	0.790				
	0.772	0.766					0.786	AVRG		1.5297
62)MPA 1,1,2,2-Tetrachloroethan		0.517	0.481	0.511	0.511	0.490				
	0.485	0.508					0.500	AVRG		2.8921
63)MA 1,2,3-Trichloropropane		0.155	0.143	0.140	0.147	0.138				
	0.137	0.145					0.143	AVRG		4.3388
64)MA Bromobenzene		0.711	0.618	0.646	0.638	0.602				
	0.602	0.636					0.636	AVRG		5.8687
65)MA n-Propylbenzene		2.665	2.494	2.631	2.593	2.446				
	2.370	2.378					2.511	AVRG		4.7881

Response Factor Report VOA2
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For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	b	m1	m2	8	6	1	7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
66)MA 1,3,5-Trimethylbenzene					1.698	1.774	1.713	1.731	1.837	1.832	1.751	1.762	AVRG		3.1311
67)MA 2-Chlorotoluene					1.573	1.876	1.577	1.723	1.790	1.755	1.645	1.706	AVRG		6.6254
68)MA 4-Chlorotoluene					1.441	1.718	1.441	1.574	1.622	1.587	1.488	1.553	AVRG		6.5898
69)MA tert-Butylbenzene					1.729	1.885	1.762	1.755	1.853	1.839	1.759	1.797	AVRG		3.3595
70)MA 1,2,4-Trimethylbenzene					1.742	1.903	1.761	1.776	1.910	1.894	1.786	1.825	AVRG		4.0567
71)MA sec-Butylbenzene					2.306	2.433	2.300	2.320	2.481	2.467	2.344	2.379	AVRG		3.3159
72)MA 4-Isopropyltoluene					1.886	1.886	1.911	1.840	1.981	1.993	1.907	1.915	AVRG		2.8469
73)MA 1,3-Dichlorobenzene					1.122	1.303	1.168	1.209	1.227	1.203	1.134	1.195	AVRG		5.1366
74)MA 1,4-Dichlorobenzene					1.142	1.395	1.184	1.299	1.272	1.226	1.157	1.239	AVRG		7.2379
75)MA n-Butylbenzene					1.750	1.881	1.717	1.764	1.907	1.917	1.809	1.821	AVRG		4.4542
76)MA 1,2-Dichlorobenzene					1.077	1.240	1.135	1.140	1.180	1.154	1.088	1.145	AVRG		4.8342
77)MA 1,2-Dibromo-3-chloroprop					0.119	0.084		0.087	0.093	0.104	0.105	0.099	AVRG		13.4369
78)MA 1,2,4-Trichlorobenzene					0.832	0.949	0.876	0.864	0.877	0.882	0.822	0.872	AVRG		4.7419
79)MA Hexachlorobutadiene					0.531	0.566	0.552	0.510	0.529	0.536	0.514	0.534	AVRG		3.7074
80)MA Naphthalene					1.826	1.834	1.940	1.730	1.803	1.853	1.788	1.825	AVRG		3.5381
81)MA 1,2,3-Trichlorobenzene					0.773	0.850	0.817	0.772	0.812	0.811	0.759	0.799	AVRG		4.0158
83)B Chlorotrifluoroethylene					0.195	0.157	0.186	0.133	0.162	0.138	0.160	0.162	AVRG		13.9956
84)B 2-Chloro-1,1,1-trifluoro					0.265	0.275	0.246	0.246	0.258	0.243	0.248	0.254	AVRG		4.7615
85)B Acrolein					0.040	0.030	0.040	0.031	0.032	0.033	0.035	0.034	AVRG		11.6625
86)B Trichlorotrifluoroethane					0.067	0.065	0.058	0.063	0.062	0.062	0.063	0.063	AVRG		4.4089
87)B Isopropyl Alcohol						0.014		0.013	0.015	0.013	0.014				

Response Factor Report VOA2
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For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b m1 m2	6	7								
	0.014	0.015					0.014	AVRG		4.7550
88)B Allyl chloride		0.365	0.356	0.351	0.360	0.352				
	0.342	0.319					0.349	AVRG		4.3977
89)B tert-Butyl Alcohol		0.024	0.022	0.023	0.021	0.022				
	0.022	0.022					0.022	AVRG		4.1724
90)B Acrylonitrile		0.067	0.070	0.069	0.070	0.071				
	0.072	0.073					0.070	AVRG		3.0598
91)B Isopropyl ether		0.780	0.720	0.761	0.717	0.733				
	0.762	0.699					0.739	AVRG		3.9713
92)B 2-Chloro-1,3-butadiene		0.257	0.263	0.268	0.292	0.302				
	0.316	0.320					0.288	AVRG		9.0081
93)B Ethyl tert-butyl ether		0.663	0.613	0.659	0.631	0.650				
	0.668	0.621					0.644	AVRG		3.4033
94)B Ethyl acetate		0.206	0.215	0.209	0.206	0.205				
	0.206	0.205					0.208	AVRG		1.7815
95)B Propionitrile		0.028	0.029	0.028	0.029	0.028				
	0.028	0.028					0.028	AVRG		1.1052
96)B Methacrylonitrile		0.114	0.124	0.126	0.128	0.129				
	0.127	0.126					0.125	AVRG		4.1089
97)B Tetrahydrofuran		0.068	0.070	0.067	0.065	0.065				
	0.065	0.066					0.067	AVRG		2.8567
98)B Isobutyl alcohol		0.007	0.007	0.007	0.007	0.008				
	0.008	0.008					0.007	AVRG	#	2.9321
99)B Methyl tert-amyl ether		0.574	0.543	0.577	0.552	0.566				
	0.577	0.536					0.561	AVRG		3.0128
100)B Methyl methacrylate		0.105	0.113	0.122	0.128	0.132				
	0.129	0.123					0.122	AVRG		8.0488
101)B 1,4-Dioxane		0.001	0.002	0.002	0.002	0.002				
	0.002	0.002					0.002	AVRG	#	9.9647
102)B 2-Nitropropane		0.048	0.050	0.056	0.060	0.064				
	0.068						0.058	AVRG		13.8687
104)B Ethyl methacrylate		0.229	0.256	0.282	0.303	0.305				
	0.292	0.265					0.276	AVRG		10.0550
106)B 1-Chlorohexane		0.394	0.389	0.403	0.382	0.398				
	0.417	0.369					0.393	AVRG		3.9090
107)B cis-1,4-Dichloro-2-buten		0.135	0.150	0.158	0.164	0.169				
	0.167	0.159					0.157	AVRG		7.3579
108)B Cyclohexanone		0.048	0.056	0.062	0.060	0.062				
	0.069	0.059					0.059	AVRG		10.8542
109)B trans-1,4-Dichloro-2-but		0.138	0.152	0.158	0.159	0.161				
	0.157	0.149					0.154	AVRG		5.1007

Response Factor Report VOA2
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For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b / m1 / m2	6	7								
110)B Pentachloroethane		0.123	0.132	0.137	0.143	0.171				
-0.0071 / 0.1758 / 0.00	0.189	0.172					0.152	LINR		0.9970
111)B Benzyl chloride		0.698	0.785	0.823	0.865	0.878				
	0.862	0.823					0.819	AVRG		7.6038
112)B bis(2-Chloroisopropyl)et		0.248	0.261	0.268	0.264	0.275				
	0.273	0.278					0.267	AVRG		3.8659

(#) = Out of Range

Continuing Calibration Summary

Client SDG: 09-2510

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.2804	0.269		.01		-4.06562	60		Averaged	
S	Toluene-d8	1.1749	1.151		.01		-2.03422	60		Averaged	
S	Bromofluorobenzene	0.7862	0.765		.01		-2.69651	60		Averaged	
	Dichlorodifluoromethane	0.179	0.161		.01		-10.05587	60		Averaged	
	Chloromethane	0.1614	0.148		.1		-8.30235	60		Averaged	spcc
	Vinyl chloride	0.1433	0.135		.01		-5.79204	20		Averaged	ccc
	Bromomethane	0.1441	0.126		.01		-12.56072	60		Averaged	
	Chloroethane	0.1518	0.143		.01		-5.7971	60		Averaged	
	Trichlorofluoromethane	0.2964	0.287		.01		-3.17139	60		Averaged	
	Ethyl ether	0.1732	0.163		.01		-5.88915	60		Averaged	
	1,1-Dichloroethylene	0.3007	0.286		.01		-4.88859	20		Averaged	ccc
	Acetone	250	216.96	250			-13.216	60		Linear	
	Iodomethane	0.4096	0.432		.01		5.46875	60		Averaged	
	Carbon disulfide	0.6756	0.674		.01		-0.23683	60		Averaged	
	Acetonitrile	0.0286	0.032		.01		11.88811	60		Averaged	
	Methyl acetate	0.1775	0.214		.01		20.56338	60		Averaged	
	Methylene chloride	50	48.37	50			-3.26	60		Linear	
	trans-1,2-Dichloroethylene	0.3091	0.282		.01		-8.76739	60		Averaged	
	tert-Butyl methyl ether	0.5656	0.52		.01		-8.06223	60		Averaged	
	1,1-Dichloroethane	0.3855	0.367		.1		-4.79896	60		Averaged	spcc
	Vinyl acetate	0.3702	0.203		.01		-45.16478	60		Averaged	
	2-Butanone	0.207	0.172		.01		-16.90821	60		Averaged	
	cis-1,2-Dichloroethylene	0.3417	0.318		.01		-6.93591	60		Averaged	
	2,2-Dichloropropane	0.276	0.269		.01		-2.53623	60		Averaged	
	Bromochloromethane	0.1267	0.124		.01		-2.13102	60		Averaged	
	Chloroform	0.3949	0.375		.01		-5.03925	20		Averaged	ccc
	1,1,1-Trichloroethane	0.3395	0.335		.01		-1.32548	60		Averaged	
	Cyclohexane	0.3556	0.337		.01		-5.2306	60		Averaged	
	1,1-Dichloropropene	0.2806	0.269		.01		-4.134	60		Averaged	
	Carbon tetrachloride	0.3055	0.308		.01		0.81833	60		Averaged	
	1,2-Dichloroethane	0.2997	0.277		.01		-7.57424	60		Averaged	
	Benzene	0.8742	0.802		.01		-8.25898	60		Averaged	
	Cyclohexene	0.4394	0.403		.01		-8.28402	60		Averaged	
	n-Butyl alcohol	0.0058	0.006		.01		3.44828	60		Averaged	
	Trichloroethylene	0.2376	0.231		.01		-2.77778	60		Averaged	
	1,2-Dichloropropane	0.2194	0.206		.01		-6.10757	20		Averaged	ccc
	Methylcyclohexane	0.385	0.37		.01		-3.8961	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.1351	0.132		.01		-2.2946	60		Averaged	
Bromodichloromethane	0.2802	0.283		.01		0.99929	60		Averaged	
2-Chloroethylvinyl ether	0.1086	0.11		.01		1.28913	60		Averaged	
cis-1,3-Dichloropropylene	0.3273	0.333		.01		1.74152	60		Averaged	
4-Methyl-2-pentanone	0.1094	0.101		.01		-7.67824	60		Averaged	
2-Hexanone	0.2996	0.275		.01		-8.21095	60		Averaged	
Toluene	1.1428	1.047		.01		-8.38292	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.3552	0.358		.01		0.78829	60		Averaged	
1,1,2-Trichloroethane	0.1949	0.185		.01		-5.07953	60		Averaged	
1,3-Dichloropropane	0.3918	0.365		.01		-6.84022	60		Averaged	
Tetrachloroethylene	0.2946	0.289		.01		-1.90088	60		Averaged	
Dibromochloromethane	0.265	0.291		.01		9.81132	60		Averaged	
1,2-Dibromoethane	0.2408	0.244		.01		1.3289	60		Averaged	
Chlorobenzene	0.7955	0.772		.3		-2.95412	60		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.2894	0.299		.01		3.31721	60		Averaged	
Ethylbenzene	1.2909	1.221		.01		-5.41483	20		Averaged	ccc
m,p-Xylenes	0.5189	0.487		.01		-6.14762	60		Averaged	
o-Xylene	0.51	0.483		.01		-5.29412	60		Averaged	
Styrene	0.7515	0.8		.01		6.45376	60		Averaged	
Bromoform	50	46.79	50			-6.42	60		Linear	spcc
Isopropylbenzene	2.1274	2.052		.01		-3.54423	60		Averaged	
1,1,2,2-Tetrachloroethane	0.5005	0.481		.3		-3.8961	60		Averaged	spcc
1,2,3-Trichloropropane	0.1435	0.138		.01		-3.83275	60		Averaged	
Bromobenzene	0.6362	0.631		.01		-0.81735	60		Averaged	
n-Propylbenzene	2.5112	2.384		.01		-5.06531	60		Averaged	
2-Chlorotoluene	1.7056	1.621		.01		-4.96013	60		Averaged	
1,3,5-Trimethylbenzene	1.7622	1.713		.01		-2.79196	60		Averaged	
4-Chlorotoluene	1.5531	1.472		.01		-5.22181	60		Averaged	
tert-Butylbenzene	1.7973	1.762		.01		-1.96406	60		Averaged	
1,2,4-Trimethylbenzene	1.8246	1.756		.01		-3.75973	60		Averaged	
sec-Butylbenzene	2.3786	2.335		.01		-1.83301	60		Averaged	
4-Isopropyltoluene	1.9148	1.91		.01		-0.25068	60		Averaged	
1,3-Dichlorobenzene	1.1952	1.173		.01		-1.85743	60		Averaged	
1,4-Dichlorobenzene	1.2391	1.19		.01		-3.96255	60		Averaged	
n-Butylbenzene	1.8207	1.766		.01		-3.00434	60		Averaged	
1,2-Dichlorobenzene	1.1449	1.124		.01		-1.82549	60		Averaged	
1,2-Dibromo-3-chloropropane	0.0988	0.124		.01		25.50607	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	0.8718	0.857		.01		-1.69764	60		Averaged
Hexachlorobutadiene	0.5338	0.551		.01		3.22218	60		Averaged
Naphthalene	1.8249	1.829		.01		0.22467	60		Averaged
1,2,3-Trichlorobenzene	0.799	0.828		.01		3.62954	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1816013	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1540251	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	956988	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1816013	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1540251	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	956988	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	488579	47.98	ug/L	0.00
43) Toluene-d8	14.310	98	1773476	49.00	ug/L	0.00
61) Bromofluorobenzene	17.204	95	731905	48.64	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	292436	44.98	ug/L	100
3) Chloromethane	5.014	50	269572	46.00	ug/L	100
4) Vinyl chloride	5.252	62	245602	47.18	ug/L	100
5) Bromomethane	5.980	94	227963	43.56	ug/L	100
6) Chloroethane	6.199	64	259835	47.12	ug/L	99
7) Trichlorofluoromethane	6.756	101	521083	48.40	ug/L	100
8) Ethyl ether	7.349	59	296707	47.18	ug/L	100
9) Acetone	7.871	43	1352631	216.96	ug/L	100
10) 1,1-Dichloroethylene	7.812	61	518775	47.49	ug/L	98
11) Iodomethane	8.096	142	3920148	263.52	ug/L	100
12) Acetonitrile	8.381	41	1151204	1107.72	ug/L	99
13) Methyl acetate	8.500	43	1941955	301.24	ug/L	100
14) Carbon disulfide	8.251	76	6121756	249.48	ug/L	100
15) Methylene chloride	8.701	84	404082	48.37	ug/L	99
16) tert-Butyl methyl ether	9.199	73	944502	45.98	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	511649	45.58	ug/L	99
18) Vinyl acetate	9.935	43	1842087	137.02	ug/L	96
19) 1,1-Dichloroethane	9.887	63	665904	47.55	ug/L	100
20) 2-Butanone	10.765	43	1561738	207.76	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	578319	46.60	ug/L	98
22) 2,2-Dichloropropane	10.800	77	488266	48.70	ug/L	100
23) Bromochloromethane	11.132	128	226027	49.12	ug/L	99
24) Chloroform	11.227	83	680521	47.44	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	607548	49.27	ug/L	100
26) Cyclohexane	11.642	56	612261	47.41	ug/L	99
27) 1,1-Dichloropropene	11.749	75	488823	47.97	ug/L	100
28) Carbon tetrachloride	11.784	117	560221	50.49	ug/L	100
30) 1,2-Dichloroethane	12.033	62	502499	46.17	ug/L	100
31) Benzene	12.033	78	1455629	45.84	ug/L	100
32) Cyclohexene	12.188	67	732745	45.91	ug/L	99
33) n-Butyl alcohol	12.650	56	1121237	5342.87	ug/L	100
34) Trichloroethylene	12.852	95	419699	48.63	ug/L	99
35) 1,2-Dichloropropane	13.124	63	374518	47.00	ug/L	99
36) Methylcyclohexane	13.136	83	671359	48.01	ug/L	99
37) Dibromomethane	13.267	93	240040	48.92	ug/L	98
38) Bromodichloromethane	13.445	83	513660	50.47	ug/L	100
39) 2-Chloroethylvinyl ether	13.753	63	996561	252.57	ug/L	100
40) cis-1,3-Dichloropropylene	13.966	75	604045	50.81	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
42) 4-Methyl-2-pentanone	14.109	58	776007	230.18 ug/L	99	
44) Toluene	14.381	91	1612719	45.81 ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	552027	50.45 ug/L	100	
46) 1,1,2-Trichloroethane	14.808	83	285261	47.50 ug/L	99	
47) 2-Hexanone	14.109	43	2119224	229.66 ug/L	99	
48) 1,3-Dichloropropane	15.010	76	562287	46.59 ug/L	94	
49) Tetrachloroethylene	15.034	164	444818	49.01 ug/L	99	
50) Dibromochloromethane	15.295	129	447970	54.87 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	375747	50.66 ug/L	100	
52) Chlorobenzene	15.982	112	1188626	48.51 ug/L	99	
53) 1,1,1,2-Tetrachloroethane	16.054	131	460563	51.66 ug/L	100	
54) Ethylbenzene	16.077	91	1881100	47.31 ug/L	99	
55) m,p-Xylenes	16.196	106	1500055	93.84 ug/L	99	
56) o-Xylene	16.635	106	744228	47.37 ug/L	100	
57) Styrene	16.646	104	1232341	53.23 ug/L	99	
59) Bromoform	16.884	173	362113	46.79 ug/L	100	
60) Isopropylbenzene	17.026	105	1963566	48.22 ug/L	99	
62) 1,1,2,2-Tetrachloroethane	17.299	83	459904	48.01 ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	132333	48.18 ug/L	98	
64) Bromobenzene	17.417	156	603554	49.57 ug/L	95	
65) n-Propylbenzene	17.465	91	2281803	47.47 ug/L	99	
66) 1,3,5-Trimethylbenzene	17.631	105	1639584	48.61 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1551197	47.52 ug/L	98	
68) 4-Chlorotoluene	17.702	91	1408248	47.38 ug/L	99	
69) tert-Butylbenzene	17.998	119	1686280	49.02 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1680321	48.12 ug/L	99	
71) sec-Butylbenzene	18.235	105	2234304	49.08 ug/L	99	
72) 4-Isopropyltoluene	18.366	119	1827510	49.87 ug/L	100	
73) 1,3-Dichlorobenzene	18.401	146	1122218	49.06 ug/L	99	
74) 1,4-Dichlorobenzene	18.485	146	1139216	48.03 ug/L	99	
75) n-Butylbenzene	18.805	91	1690481	48.51 ug/L	99	
76) 1,2-Dichlorobenzene	18.900	146	1075319	49.07 ug/L	99	
77) 1,2-Dibromo-3-chloropr...	19.706	157	118302	62.56 ug/L	98	E
78) 1,2,4-Trichlorobenzene	20.690	180	820135	49.15 ug/L	100	
79) Hexachlorobutadiene	20.868	225	527406	51.62 ug/L	100	
80) Naphthalene	21.022	128	1750176	50.11 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	791976	51.79 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.539		0m	N.D. d		
86) Trichlorotrifluoroethane	0.000		0	N.D.		
87) Isopropyl Alcohol	8.239		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.903		0m	N.D. d		
90) Acrylonitrile	9.199		0m	N.D. d		
91) Isopropyl ether	10.053		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.148		0m	N.D. d		
93) Ethyl tert-butyl ether	10.788		0m	N.D. d		
94) Ethyl acetate	10.765		0m	N.D. d		
95) Propionitrile	10.765		0m	N.D. d		
96) Methacrylonitrile	11.061		0m	N.D. d		
97) Tetrahydrofuran	11.227		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
98) Isobutyl alcohol	11.927		0m	N.D. d	
99) Methyl tert-amyl ether	12.188		0m	N.D. d	
100) Methyl methacrylate	13.136		0m	N.D. d	
101) 1,4-Dioxane	13.279		0m	N.D. d	
102) 2-Nitropropane	13.753		0m	N.D. d	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	15.947		0m	N.D. d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D. d	
108) Cyclohexanone	17.026		0m	N.D. d	
109) trans-1,4-Dichloro-2-b...	17.465		0m	N.D. d	
110) Pentachloroethane	18.058		0m	N.D. d	
111) Benzyl chloride	18.805		0m	N.D. d	
112) bis(2-Chloroisopropyl)...	19.149		0m	N.D. d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

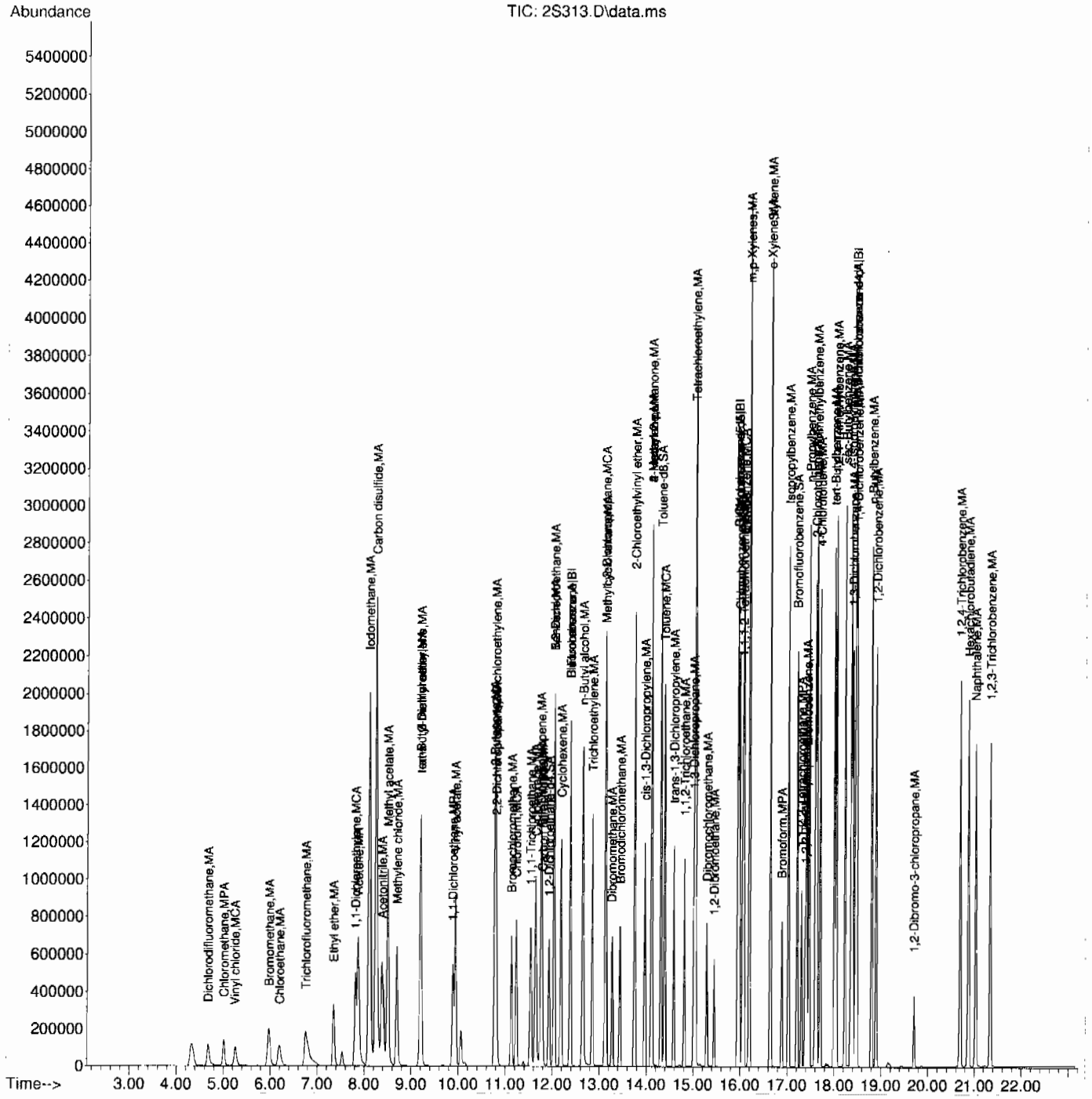

Continuing Calibration Summary

Client SDG: 09-2510

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 20:34

Data File: 070109V2.b\2S323.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090701-18 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.2804	0.272		.01		-2.99572	60		Averaged
S	Toluene-d8	1.1749	1.154		.01		-1.77887	60		Averaged
S	Bromofluorobenzene	0.7862	0.785		.01		-0.15263	60		Averaged
	Chlorotrifluoroethylene	0.1616	0.157		.01		-2.84653	60		Averaged
	2-Chloro-1,1,1-trifluoroethane	0.2543	0.26		.01		2.24145	60		Averaged
	Acrolein	0.0345	0.041		.01		18.84058	60		Averaged
	Trichlorotrifluoroethane	0.0628	0.066		.01		5.09554	60		Averaged
	Isopropyl Alcohol	0.0139	0.016		.01		15.10791	60		Averaged
	Allyl chloride	0.3493	0.311		.01		-10.96479	60		Averaged
	tert-Butyl Alcohol	0.022	0.024		.01		9.09091	60		Averaged
	Acrylonitrile	0.0703	0.077		.01		9.53058	60		Averaged
	Isopropyl ether	0.739	0.747		.01		1.08254	60		Averaged
	2-Chloro-1,3-butadiene	0.2881	0.33		.01		14.54356	60		Averaged
	Ethyl tert-butyl ether	0.6436	0.641		.01		-0.40398	60		Averaged
	Propionitrile	0.0284	0.031		.01		9.15493	60		Averaged
	Ethyl acetate	0.2075	0.22		.01		6.0241	60		Averaged
	Methacrylonitrile	0.1249	0.137		.01		9.68775	60		Averaged
	Tetrahydrofuran	0.0668	0.073		.01		9.28144	60		Averaged
	Isobutyl alcohol	0.0074	0.009		.01		21.62162	60		Averaged
	Methyl tert-amyl ether	0.5609	0.564		.01		0.55268	60		Averaged
	Methyl methacrylate	0.1218	0.139		.01		14.12151	60		Averaged
	1,4-Dioxane	0.0017	0.002		.01		17.64706	60		Averaged
	2-Nitropropane	0.0578	0.074		.01		28.02768	60		Averaged
	Ethyl methacrylate	0.2758	0.298		.01		8.04931	60		Averaged
	1-Chlorohexane	0.3931	0.426		.01		8.36937	60		Averaged
	cis-1,4-Dichloro-2-butene	0.1574	0.174		.01		10.54638	60		Averaged
	Cyclohexanone	0.0593	0.076		.01		28.16189	60		Averaged
	trans-1,4-Dichloro-2-butene	0.1536	0.166		.01		8.07292	60		Averaged
	Pentachloroethane	250	183.53	250			-26.588	60		Linear
	Benzyl chloride	0.8192	0.828		.01		1.07422	60		Averaged
	bis(2-Chloroisopropyl)ether	0.2668	0.3		.01		12.44378	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1776961	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1492904	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	910409	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1776961	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1492904	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	910409	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	483555	48.53	ug/L	0.00
43) Toluene-d8	14.310	98	1723019	49.12	ug/L	0.00
61) Bromofluorobenzene	17.204	95	714881	49.94	ug/L	0.00

Target Compounds				Qvalue
2) Dichlorodifluoromethane	4.613	0m	N.D. d	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.252	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	0.000	0	N.D.	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.859	0m	N.D. d	
10) 1,1-Dichloroethylene	7.871	0m	N.D. d	
11) Iodomethane	0.000	0	N.D.	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.251	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.211	0m	N.D. d	
17) trans-1,2-Dichloroethy...	0.000	0	N.D.	
18) Vinyl acetate	9.994	0m	N.D. d	
19) 1,1-Dichloroethane	10.053	0m	N.D. d	
20) 2-Butanone	10.777	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.860	0m	N.D. d	
22) 2,2-Dichloropropane	0.000	0	N.D.	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.239	0m	N.D. d	
25) 1,1,1-Trichloroethane	0.000	0	N.D.	
26) Cyclohexane	11.654	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	0.000	0	N.D.	
30) 1,2-Dichloroethane	11.939	0m	N.D. d	
31) Benzene	12.034	0m	N.D. d	
32) Cyclohexene	12.152	0m	N.D. d	
33) n-Butyl alcohol	12.662	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	0.000	0	N.D.	
36) Methylcyclohexane	13.196	0m	N.D. d	
37) Dibromomethane	0.000	0	N.D.	
38) Bromodichloromethane	13.196	0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000	0	N.D.	
40) cis-1,3-Dichloropropylene	13.966	0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) 4-Methyl-2-pentanone	14.310		0m	N.D.	d	
44) Toluene	14.382		0m	N.D.	d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D.	d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D.	d	
47) 2-Hexanone	14.073		0m	N.D.	d	
48) 1,3-Dichloropropane	15.057		0m	N.D.	d	
49) Tetrachloroethylene	15.034		0m	N.D.	d	
50) Dibromochloromethane	0.000		0	N.D.		
51) 1,2-Dibromoethane	15.449		0m	N.D.	d	
52) Chlorobenzene	15.982		0m	N.D.	d	
53) 1,1,1,2-Tetrachloroethane	16.054		0m	N.D.	d	
54) Ethylbenzene	16.196		0m	N.D.	d	
55) m,p-Xylenes	16.196		0m	N.D.	d	
56) o-Xylene	0.000		0	N.D.		
57) Styrene	16.646		0m	N.D.	d	
59) Bromoform	0.000		0	N.D.		
60) Isopropylbenzene	17.026		0m	N.D.	d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D.	d	
63) 1,2,3-Trichloropropane	17.204		0m	N.D.	d	
64) Bromobenzene	17.405		0m	N.D.	d	
65) n-Propylbenzene	17.595		0m	N.D.	d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D.	d	
67) 2-Chlorotoluene	17.595		0m	N.D.	d	
68) 4-Chlorotoluene	17.702		0m	N.D.	d	
69) tert-Butylbenzene	18.046		0m	N.D.	d	
70) 1,2,4-Trimethylbenzene	18.070		0m	N.D.	d	
71) sec-Butylbenzene	18.236		0m	N.D.	d	
72) 4-Isopropyltoluene	18.366		0m	N.D.	d	
73) 1,3-Dichlorobenzene	18.402		0m	N.D.	d	
74) 1,4-Dichlorobenzene	18.402		0m	N.D.	d	
75) n-Butylbenzene	18.603		0m	N.D.	d	
76) 1,2-Dichlorobenzene	18.900		0m	N.D.	d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D.	d	
79) Hexachlorobutadiene	20.868		0m	N.D.	d	
80) Naphthalene	21.022		0m	N.D.	d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D.	d	
83) Chlorotrifluoroethylene	4.613	116	839045	146.12	ug/L	100
84) 2-Chloro-1,1,1-trifluo...	5.475	118	1386207	153.41	ug/L	100
85) Acrolein	7.575	56	360031	293.76	ug/L	98
86) Trichlorotrifluoroethane	7.859	85	586254	262.49	ug/L	100
87) Isopropyl Alcohol	8.120	45	1408561	2847.02	ug/L	99
88) Allyl chloride	8.488	41	2760549	222.37	ug/L	99
89) tert-Butyl Alcohol	8.867	59	2117465	2710.98	ug/L	100
90) Acrylonitrile	9.093	53	679988	272.29	ug/L	100
91) Isopropyl ether	9.994	45	1327071	50.53	ug/L	100
92) 2-Chloro-1,3-butadiene	10.053	53	586086	57.25	ug/L	100
93) Ethyl tert-butyl ether	10.563	59	1138335	49.77	ug/L	100
94) Ethyl acetate	10.860	43	1951361	264.60	ug/L	100
95) Propionitrile	10.848	54	273857	271.63	ug/L	100
96) Methacrylonitrile	11.085	41	1215595	273.80	ug/L	100
97) Tetrahydrofuran	11.203	42	651169	274.34	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
98)	Isobutyl alcohol	11.796	41	765122	2899.44	ug/L	100	
99)	Methyl tert-amyl ether	12.152	73	1002023	50.27	ug/L	94	
100)	Methyl methacrylate	13.196	69	1233037	284.92	ug/L	99	
101)	1,4-Dioxane	13.267	88	177152	3018.22	ug/L	99	
102)	2-Nitropropane	13.682	43	659876	321.25	ug/L	100	E
104)	Ethyl methacrylate	14.642	69	2224510	270.12	ug/L	100	
106)	1-Chlorohexane	15.888	55	387744	54.17	ug/L	100	
107)	cis-1,4-Dichloro-2-butene	17.062	53	793463	276.81	ug/L	99	
108)	Cyclohexanone	17.145	42	1719806	1591.54	ug/L	98	
109)	trans-1,4-Dichloro-2-b...	17.358	53	757123	270.77	ug/L	99	
110)	Pentachloroethane	18.058	167	581071	183.53	ug/L	100	
111)	Benzyl chloride	18.603	91	3770433	252.77	ug/L	100	
112)	bis(2-Chloroisopropyl)...	19.006	45	1363411	280.70	ug/L	99	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

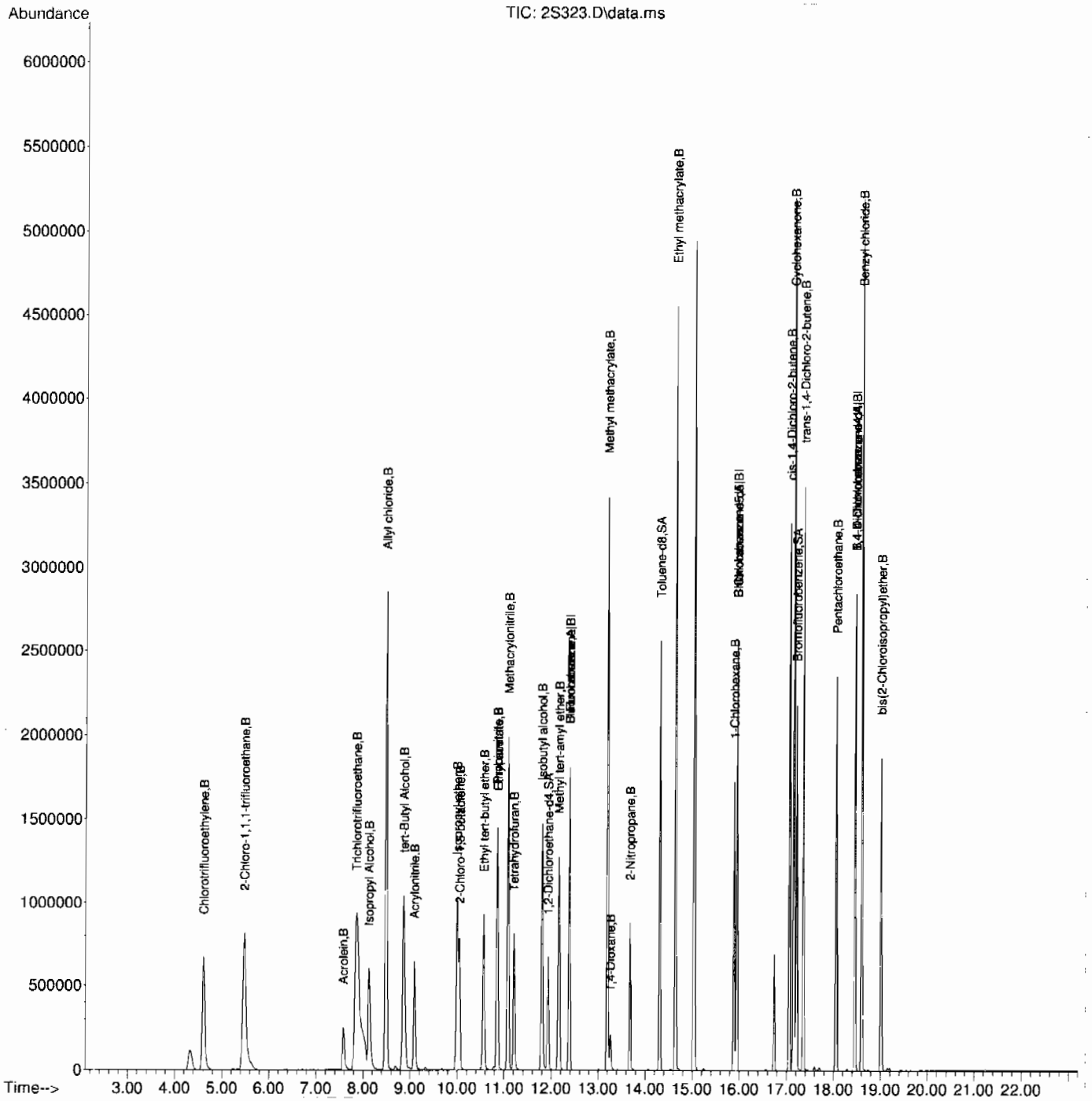

Continuing Calibration Summary

Client SDG: 09-2510

Instrument ID: VOA2.I **Injection Date** 06-JUL-09 06:57

Data File: 070609V2.b\2T102.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090706-01 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.2804	0.28		.01		-0.14265	60		Averaged	
S	Toluene-d8	1.1749	1.187		.01		1.02987	60		Averaged	
S	Bromofluorobenzene	0.7862	0.784		.01		-0.27983	60		Averaged	
	Dichlorodifluoromethane	0.179	0.151		.01		-15.64246	60		Averaged	
	Chloromethane	0.1614	0.15		.1		-7.0632	60		Averaged	spcc
	Vinyl chloride	0.1433	0.165		.01		15.14306	20		Averaged	ccc
	Bromomethane	0.1441	0.111		.01		-22.97016	60		Averaged	
	Chloroethane	0.1518	0.146		.01		-3.82082	60		Averaged	
	Trichlorofluoromethane	0.2964	0.272		.01		-8.23212	60		Averaged	
	Ethyl ether	0.1732	0.177		.01		2.194	60		Averaged	
	1,1-Dichloroethylene	0.3007	0.316		.01		5.08813	20		Averaged	ccc
	Acetone	250	271.93	250			8.772	60		Linear	
	Iodomethane	0.4096	0.443		.01		8.1543	60		Averaged	
	Carbon disulfide	0.6756	0.696		.01		3.01954	60		Averaged	
	Acetonitrile	0.0286	0.034		.01		18.88112	60		Averaged	
	Methyl acetate	0.1775	0.168		.01		-5.35211	60		Averaged	
	Methylene chloride	50	57.63	50			15.26	60		Linear	
	trans-1,2-Dichloroethylene	0.3091	0.313		.01		1.26173	60		Averaged	
	tert-Butyl methyl ether	0.5656	0.56		.01		-0.9901	60		Averaged	
	1,1-Dichloroethane	0.3855	0.398		.1		3.24254	60		Averaged	spcc
	Vinyl acetate	0.3702	0.464		.01		25.33766	60		Averaged	
	2-Butanone	0.207	0.23		.01		11.11111	60		Averaged	
	cis-1,2-Dichloroethylene	0.3417	0.339		.01		-0.79017	60		Averaged	
	2,2-Dichloropropane	0.276	0.292		.01		5.7971	60		Averaged	
	Bromochloromethane	0.1267	0.136		.01		7.34017	60		Averaged	
	Chloroform	0.3949	0.407		.01		3.06407	20		Averaged	ccc
	1,1,1-Trichloroethane	0.3395	0.364		.01		7.21649	60		Averaged	
	Cyclohexane	0.3556	0.363		.01		2.08099	60		Averaged	
	1,1-Dichloropropene	0.2806	0.296		.01		5.48824	60		Averaged	
	Carbon tetrachloride	0.3055	0.339		.01		10.96563	60		Averaged	
	1,2-Dichloroethane	0.2997	0.294		.01		-1.9019	60		Averaged	
	Benzene	0.8742	0.884		.01		1.12102	60		Averaged	
	Cyclohexene	0.4394	0.463		.01		5.37096	60		Averaged	
	n-Butyl alcohol	0.0058	0.007		.01		20.68966	60		Averaged	
	Trichloroethylene	0.2376	0.249		.01		4.79798	60		Averaged	
	1,2-Dichloropropane	0.2194	0.222		.01		1.18505	20		Averaged	ccc
	Methylcyclohexane	0.385	0.409		.01		6.23377	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 06-JUL-09 06:57

Data File: 070609V2.b\2T102.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090706-01 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.1351	0.143		.01		5.84752	60		Averaged	
Bromodichloromethane	0.2802	0.311		.01		10.99215	60		Averaged	
2-Chloroethylvinyl ether	0.1086	0.111		.01		2.20994	60		Averaged	
cis-1,3-Dichloropropylene	0.3273	0.361		.01		10.29636	60		Averaged	
4-Methyl-2-pentanone	0.1094	0.124		.01		13.34552	60		Averaged	
2-Hexanone	0.2996	0.338		.01		12.81709	60		Averaged	
Toluene	1.1428	1.154		.01		0.98005	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.3552	0.391		.01		10.07883	60		Averaged	
1,1,2-Trichloroethane	0.1949	0.197		.01		1.07748	60		Averaged	
1,3-Dichloropropane	0.3918	0.387		.01		-1.22511	60		Averaged	
Tetrachloroethylene	0.2946	0.316		.01		7.26409	60		Averaged	
Dibromochloromethane	0.265	0.315		.01		18.86792	60		Averaged	
1,2-Dibromoethane	0.2408	0.261		.01		8.3887	60		Averaged	
Chlorobenzene	0.7955	0.82		.3		3.07982	60		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.2894	0.321		.01		10.91914	60		Averaged	
Ethylbenzene	1.2909	1.346		.01		4.26834	20		Averaged	ccc
m,p-Xylenes	0.5189	0.541		.01		4.25901	60		Averaged	
o-Xylene	0.51	0.526		.01		3.13725	60		Averaged	
Styrene	0.7515	0.881		.01		17.2322	60		Averaged	
Bromoform	50	49.93	50			-0.14	60		Linear	spcc
Isopropylbenzene	2.1274	2.254		.01		5.95093	60		Averaged	
1,1,2,2-Tetrachloroethane	0.5005	0.524		.3		4.6953	60		Averaged	spcc
1,2,3-Trichloropropane	0.1435	0.145		.01		1.0453	60		Averaged	
Bromobenzene	0.6362	0.666		.01		4.68406	60		Averaged	
n-Propylbenzene	2.5112	2.615		.01		4.13348	60		Averaged	
2-Chlorotoluene	1.7056	1.725		.01		1.13743	60		Averaged	
1,3,5-Trimethylbenzene	1.7622	1.884		.01		6.91181	60		Averaged	
4-Chlorotoluene	1.5531	1.582		.01		1.86079	60		Averaged	
tert-Butylbenzene	1.7973	1.915		.01		6.54871	60		Averaged	
1,2,4-Trimethylbenzene	1.8246	1.92		.01		5.22854	60		Averaged	
sec-Butylbenzene	2.3786	2.551		.01		7.24796	60		Averaged	
4-Isopropyltoluene	1.9148	2.119		.01		10.6643	60		Averaged	
1,3-Dichlorobenzene	1.1952	1.271		.01		6.34203	60		Averaged	
1,4-Dichlorobenzene	1.2391	1.284		.01		3.6236	60		Averaged	
n-Butylbenzene	1.8207	1.971		.01		8.25507	60		Averaged	
1,2-Dichlorobenzene	1.1449	1.196		.01		4.46327	60		Averaged	
1,2-Dibromo-3-chloropropane	0.0988	0.131		.01		32.59109	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 06-JUL-09 06:57

Data File: 070609V2.b\2T102.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090706-01 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	0.8718	0.973		.01		11.60817	60		Averaged
Hexachlorobutadiene	0.5338	0.614		.01		15.02435	60		Averaged
Naphthalene	1.8249	1.948		.01		6.74558	60		Averaged
1,2,3-Trichlorobenzene	0.799	0.87		.01		8.88611	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1767232	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1520020	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	957984	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1767232	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1520020	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	957984	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	495409	49.99 ug/L	0.00
43) Toluene-d8	14.310	98	1804624	50.53 ug/L	0.00
61) Bromofluorobenzene	17.204	95	750704	49.84 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	4.687	85	267359	42.26 ug/L	100
3) Chloromethane	5.029	50	265597	46.57 ug/L	100
4) Vinyl chloride	5.266	62	291194	57.49 ug/L	100
5) Bromomethane	5.980	94	195690	38.43 ug/L	99
6) Chloroethane	6.211	64	258065	48.09 ug/L	100
7) Trichlorofluoromethane	6.756	101	481534	45.96 ug/L	100
8) Ethyl ether	7.349	59	312020	50.98 ug/L	100
9) Acetone	7.871	43	1650991	271.93 ug/L	99
10) 1,1-Dichloroethylene	7.824	61	558761	52.57 ug/L	99
11) Iodomethane	8.108	142	3913746	270.36 ug/L	99
12) Acetonitrile	8.381	41	1217400	1203.75 ug/L	100
13) Methyl acetate	8.511	43	1483053	236.40 ug/L	100
14) Carbon disulfide	8.251	76	6150005	257.55 ug/L	100
15) Methylene chloride	8.701	84	462831	57.63 ug/L	99
16) tert-Butyl methyl ether	9.199	73	989917	49.52 ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	554025	50.72 ug/L	99
18) Vinyl acetate	9.946	43	4101187	313.47 ug/L	97
19) 1,1-Dichloroethane	9.887	63	703074	51.59 ug/L	100
20) 2-Butanone	10.765	43	2030359	277.55 ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	599166	49.61 ug/L	98
22) 2,2-Dichloropropane	10.812	77	516166	52.91 ug/L	99
23) Bromochloromethane	11.132	128	240228	53.65 ug/L	98
24) Chloroform	11.239	83	718477	51.47 ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	642756	53.57 ug/L	100
26) Cyclohexane	11.642	56	642270	51.11 ug/L	99
27) 1,1-Dichloropropene	11.761	75	523015	52.74 ug/L	99
28) Carbon tetrachloride	11.784	117	598978	55.47 ug/L	100
30) 1,2-Dichloroethane	12.033	62	520394	49.13 ug/L	100
31) Benzene	12.045	78	1562960	50.58 ug/L	100
32) Cyclohexene	12.188	67	817575	52.64 ug/L	99
33) n-Butyl alcohol	12.650	56	1171728	5737.59 ug/L	100
34) Trichloroethylene	12.852	95	440233	52.42 ug/L	99
35) 1,2-Dichloropropane	13.124	63	393020	50.69 ug/L	100
36) Methylcyclohexane	13.136	83	723587	53.18 ug/L	99
37) Dibromomethane	13.279	93	252732	52.93 ug/L	98
38) Bromodichloromethane	13.445	83	550300	55.56 ug/L	100
39) 2-Chloroethylvinyl ether	13.753	63	981662	255.66 ug/L	100
40) cis-1,3-Dichloropropylene	13.966	75	637139	55.07 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
42) 4-Methyl-2-pentanone	14.109	58	942739	283.36 ug/L	99	
44) Toluene	14.393	91	1754074	50.49 ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	593684	54.98 ug/L	100	
46) 1,1,2-Trichloroethane	14.808	83	299541	50.55 ug/L	99	
47) 2-Hexanone	14.109	43	2568838	282.09 ug/L	99	
48) 1,3-Dichloropropane	15.010	76	588785	49.44 ug/L	94	
49) Tetrachloroethylene	15.034	164	481023	53.70 ug/L	98	
50) Dibromochloromethane	15.295	129	478986	59.45 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	397003	54.24 ug/L	100	
52) Chlorobenzene	15.982	112	1246441	51.54 ug/L	98	
53) 1,1,1,2-Tetrachloroethane	16.054	131	488055	55.47 ug/L	100	
54) Ethylbenzene	16.077	91	2045873	52.13 ug/L	99	
55) m,p-Xylenes	16.196	106	1644810	104.27 ug/L	98	
56) o-Xylene	16.635	106	799408	51.56 ug/L	99	
57) Styrene	16.646	104	1339655	58.64 ug/L	99	
59) Bromoform	16.884	173	388089	49.93 ug/L	100	
60) Isopropylbenzene	17.026	105	2159227	52.97 ug/L	99	
62) 1,1,2,2-Tetrachloroethane	17.299	83	502180	52.37 ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	138777	50.48 ug/L	98	
64) Bromobenzene	17.417	156	637539	52.30 ug/L	95	
65) n-Propylbenzene	17.465	91	2504912	52.06 ug/L	99	
66) 1,3,5-Trimethylbenzene	17.631	105	1804607	53.45 ug/L	53	
67) 2-Chlorotoluene	17.595	91	1652304	50.56 ug/L	98	
68) 4-Chlorotoluene	17.702	91	1515139	50.92 ug/L	98	
69) tert-Butylbenzene	17.998	119	1834182	53.26 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1839735	52.63 ug/L	99	
71) sec-Butylbenzene	18.235	105	2444244	53.63 ug/L	100	
72) 4-Isopropyltoluene	18.366	119	2029612	55.32 ug/L	100	
73) 1,3-Dichlorobenzene	18.401	146	1217404	53.16 ug/L	99	
74) 1,4-Dichlorobenzene	18.484	146	1230190	51.82 ug/L	99	
75) n-Butylbenzene	18.805	91	1888626	54.14 ug/L	99	
76) 1,2-Dichlorobenzene	18.900	146	1145558	52.22 ug/L	100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	125085	66.08 ug/L	97	E
78) 1,2,4-Trichlorobenzene	20.690	180	932323	55.82 ug/L	100	
79) Hexachlorobutadiene	20.868	225	588678	57.56 ug/L	99	
80) Naphthalene	21.022	128	1865794	53.36 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	833741	54.46 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.539		0m	N.D. d		
86) Trichlorotrifluoroethane	0.000		0	N.D.		
87) Isopropyl Alcohol	8.168		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.915		0m	N.D. d		
90) Acrylonitrile	9.104		0m	N.D. d		
91) Isopropyl ether	9.946		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.148		0m	N.D. d		
93) Ethyl tert-butyl ether	10.788		0m	N.D. d		
94) Ethyl acetate	10.765		0m	N.D. d		
95) Propionitrile	10.859		0m	N.D. d		
96) Methacrylonitrile	11.085		0m	N.D. d		
97) Tetrahydrofuran	11.215		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98)	Isobutyl alcohol	11.642		0m	N.D.	d	
99)	Methyl tert-amyl ether	12.188		0m	N.D.	d	
100)	Methyl methacrylate	13.136		0m	N.D.	d	
101)	1,4-Dioxane	13.279		0m	N.D.	d	
102)	2-Nitropropane	13.753		0m	N.D.	d	
104)	Ethyl methacrylate	0.000		0	N.D.		
106)	1-Chlorohexane	15.947		0m	N.D.	d	
107)	cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108)	Cyclohexanone	17.144		0m	N.D.	d	
109)	trans-1,4-Dichloro-2-b...	17.465		0m	N.D.	d	
110)	Pentachloroethane	18.058		0m	N.D.	d	
111)	Benzyl chloride	18.805		0m	N.D.	d	
112)	bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On    :  6 Jul 2009   6:57 am
Operator  : CDS1
InstName  : VOA2
Sample    : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc      : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
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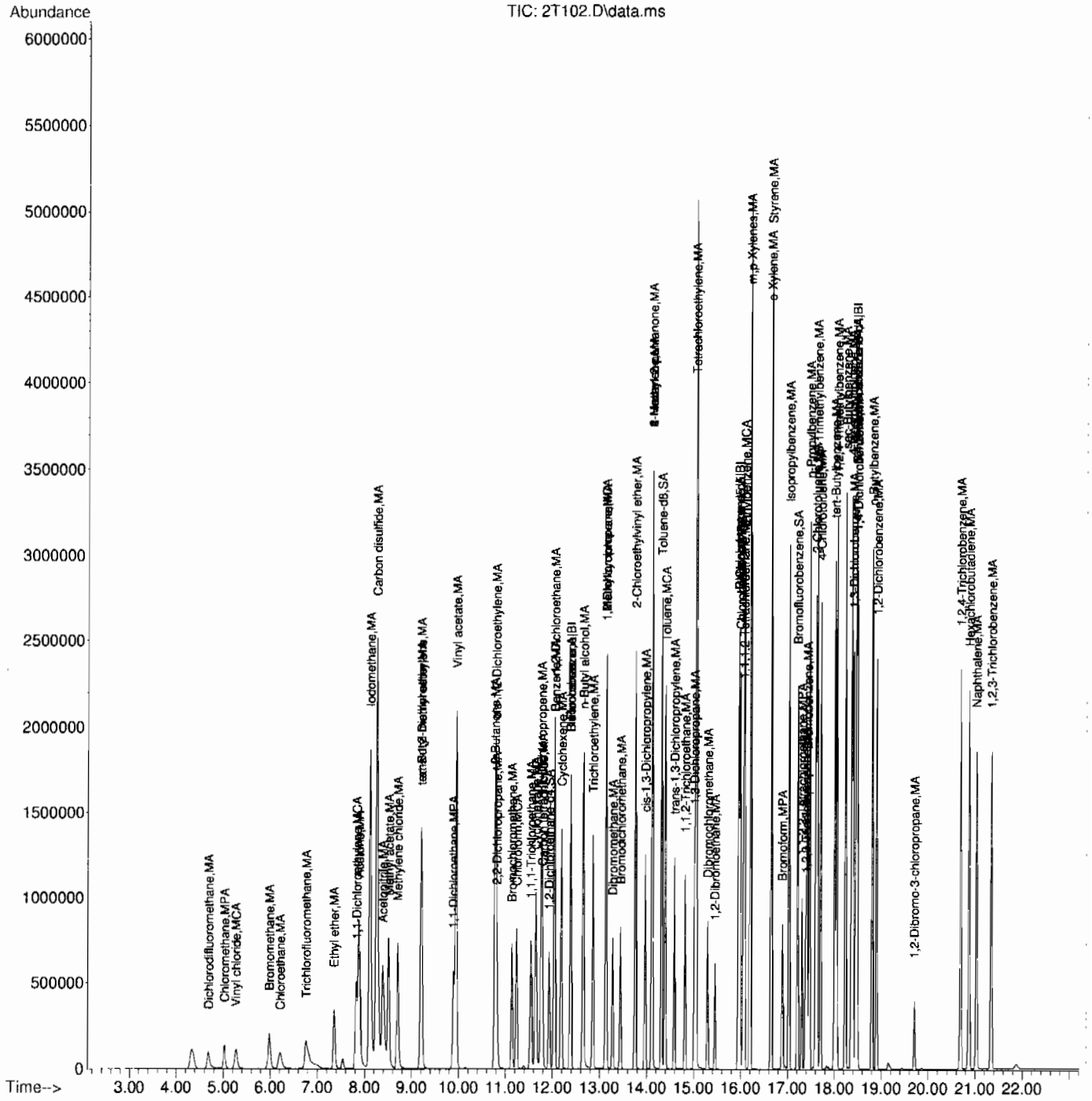

Continuing Calibration Summary

Client SDG: 09-2510

Instrument ID: VOA2.I **Injection Date** 06-JUL-09 08:24

Data File: 070609V2.b\2T105.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID UVM090701-08A **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.2804	0.267		.01		-4.77889	60		Averaged
S	Toluene-d8	1.1749	1.148		.01		-2.28956	60		Averaged
S	Bromofluorobenzene	0.7862	0.76		.01		-3.33249	60		Averaged
	Acrolein	0.0345	0.042		.01		21.73913	60		Averaged
	Trichlorotrifluoroethane	0.0628	0.063		.01		0.31847	60		Averaged
	Allyl chloride	0.3493	0.307		.01		-12.10993	60		Averaged
	Acrylonitrile	0.0703	0.069		.01		-1.84922	60		Averaged
	2-Chloro-1,3-butadiene	0.2881	0.323		.01		12.11385	60		Averaged
	Propionitrile	0.0284	0.027		.01		-4.92958	60		Averaged
	Ethyl acetate	0.2075	0.199		.01		-4.09639	60		Averaged
	Methacrylonitrile	0.1249	0.124		.01		-0.72058	60		Averaged
	Tetrahydrofuran	0.0668	0.067		.01		0.2994	60		Averaged
	Isobutyl alcohol	0.0074	0.008		.01		8.10811	60		Averaged
	Methyl tert-amyl ether	0.5609	0.01		.01		-98.21715	60	*	Averaged
	Methyl methacrylate	0.1218	0.129		.01		5.91133	60		Averaged
	1,4-Dioxane	0.0017	0.002		.01		17.64706	60		Averaged
	2-Nitropropane	0.0578	0.068		.01		17.64706	60		Averaged
	Ethyl methacrylate	0.2758	0.275		.01		-0.29007	60		Averaged
	1-Chlorohexane	0.3931	0.014		.01		-96.43857	60	*	Averaged
	cis-1,4-Dichloro-2-butene	0.1574	0.161		.01		2.28717	60		Averaged
	Cyclohexanone	0.0593	0.07		.01		18.04384	60		Averaged
	trans-1,4-Dichloro-2-butene	0.1536	0.154		.01		0.26042	60		Averaged
	Pentachloroethane	250	401.64	250			60.656	60	*	Linear
	Benzyl chloride	0.8192	0.986		.01		20.36133	60		Averaged
	bis(2-Chloroisopropyl)ether	0.2668	0.256		.01		-4.04798	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On : 6 Jul 2009 8:24 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1766847	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1518709	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	954184	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1766847	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1518709	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	954184	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	471253	47.56	ug/L	0.00
43) Toluene-d8	14.310	98	1743778	48.87	ug/L	0.00
61) Bromofluorobenzene	17.204	95	725005	48.32	ug/L	0.00

Target Compounds				Qvalue
2) Dichlorodifluoromethane	4.687	0m	N.D. d	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.252	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	6.745	0m	N.D. d	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.859	0m	N.D. d	
10) 1,1-Dichloroethylene	7.835	0m	N.D. d	
11) Iodomethane	8.108	0m	N.D. d	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.251	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.211	0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.199	0m	N.D. d	
18) Vinyl acetate	10.053	0m	N.D. d	
19) 1,1-Dichloroethane	10.053	0m	N.D. d	
20) 2-Butanone	10.859	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.859	0m	N.D. d	
22) 2,2-Dichloropropane	0.000	0	N.D.	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.239	0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535	0m	N.D. d	
26) Cyclohexane	11.642	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	0.000	0	N.D.	
30) 1,2-Dichloroethane	12.033	0m	N.D. d	
31) Benzene	12.045	0m	N.D. d	
32) Cyclohexene	12.389	0m	N.D. d	
33) n-Butyl alcohol	12.650	0m	N.D. d	
34) Trichloroethylene	12.864	0m	N.D. d	
35) 1,2-Dichloropropane	13.124	0m	N.D. d	
36) Methylcyclohexane	13.196	0m	N.D. d	
37) Dibromomethane	13.267	0m	N.D. d	
38) Bromodichloromethane	13.196	0m	N.D. d	
39) 2-Chloroethylvinyl ether	13.753	0m	N.D. d	
40) cis-1,3-Dichloropropylene	13.966	0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On : 6 Jul 2009 8:24 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) 4-Methyl-2-pentanone	14.121		0m	N.D.	d	
44) Toluene	14.381		0m	N.D.	d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D.	d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D.	d	
47) 2-Hexanone	14.109		0m	N.D.	d	
48) 1,3-Dichloropropane	15.010		0m	N.D.	d	
49) Tetrachloroethylene	15.034		0m	N.D.	d	
50) Dibromochloromethane	15.294		0m	N.D.	d	
51) 1,2-Dibromoethane	15.449		0m	N.D.	d	
52) Chlorobenzene	15.982		0m	N.D.	d	
53) 1,1,1,2-Tetrachloroethane	16.053		0m	N.D.	d	
54) Ethylbenzene	16.077		0m	N.D.	d	
55) m,p-Xylenes	16.196		0m	N.D.	d	
56) o-Xylene	16.646		0m	N.D.	d	
57) Styrene	16.646		0m	N.D.	d	
59) Bromoform	16.884		0m	N.D.	d	
60) Isopropylbenzene	17.026		0m	N.D.	d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D.	d	
63) 1,2,3-Trichloropropane	17.204		0m	N.D.	d	
64) Bromobenzene	17.417		0m	N.D.	d	
65) n-Propylbenzene	17.465		0m	N.D.	d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D.	d	
67) 2-Chlorotoluene	17.595		0m	N.D.	d	
68) 4-Chlorotoluene	17.702		0m	N.D.	d	
69) tert-Butylbenzene	18.058		0m	N.D.	d	
70) 1,2,4-Trimethylbenzene	18.069		0m	N.D.	d	
71) sec-Butylbenzene	18.235		0m	N.D.	d	
72) 4-Isopropyltoluene	18.366		0m	N.D.	d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D.	d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D.	d	
75) n-Butylbenzene	18.603		0m	N.D.	d	
76) 1,2-Dichlorobenzene	18.899		0m	N.D.	d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D.	d	
79) Hexachlorobutadiene	20.868		0m	N.D.	d	
80) Naphthalene	21.022		0m	N.D.	d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D.	d	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.575	56	375363	308.02	ug/L	99
86) Trichlorotrifluoroethane	7.859	85	553982	249.46	ug/L	97
87) Isopropyl Alcohol	8.156	45	18000	36.59	ug/L	86
88) Allyl chloride	8.488	41	2713975	219.87	ug/L	100
89) tert-Butyl Alcohol	8.879	59	275	N.D.		
90) Acrylonitrile	9.092	53	607922	244.83	ug/L	100
91) Isopropyl ether	10.006	45	113	N.D.		
92) 2-Chloro-1,3-butadiene	10.053	53	570741	56.07	ug/L	97
93) Ethyl tert-butyl ether	0.000		0	N.D.		
94) Ethyl acetate	10.859	43	1761745	240.26	ug/L	100
95) Propionitrile	10.848	54	242542	241.95	ug/L	100
96) Methacrylonitrile	11.085	41	1092483	247.48	ug/L	100
97) Tetrahydrofuran	11.203	42	591447	250.61	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On : 6 Jul 2009 8:24 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
98)	Isobutyl alcohol	11.796	41	678977	2587.72 ug/L	100	
99)	Methyl tert-amyl ether	12.377	73	18254	0.92 ug/L #	52	
100)	Methyl methacrylate	13.196	69	1135317	263.84 ug/L	98	
101)	1,4-Dioxane	13.267	88	169107	2897.65 ug/L	98	
102)	2-Nitropropane	13.682	43	599496	293.52 ug/L	99	E
104)	Ethyl methacrylate	14.642	69	2085233	248.90 ug/L	100	
106)	1-Chlorohexane	15.947	55	13104	1.75 ug/L #	30	
107)	cis-1,4-Dichloro-2-butene	17.061	53	766922	255.28 ug/L	99	
108)	Cyclohexanone	17.144	42	1670142	1474.68 ug/L	98	
109)	trans-1,4-Dichloro-2-b...	17.358	53	733008	250.12 ug/L	98	
110)	Pentachloroethane	18.058	167	1340855	401.64 ug/L	96	
111)	Benzyl chloride	18.603	91	4702849	300.82 ug/L	99	
112)	bis(2-Chloroisopropyl)...	19.006	45	1220622	239.78 ug/L	98	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On    :  6 Jul 2009   8:24 am
Operator  : CDS1
InstName  : VOA2
Sample    : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc      : VSTD250S  LCS 5ML  MIX [B]
ALS Vial  : 4   Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
```

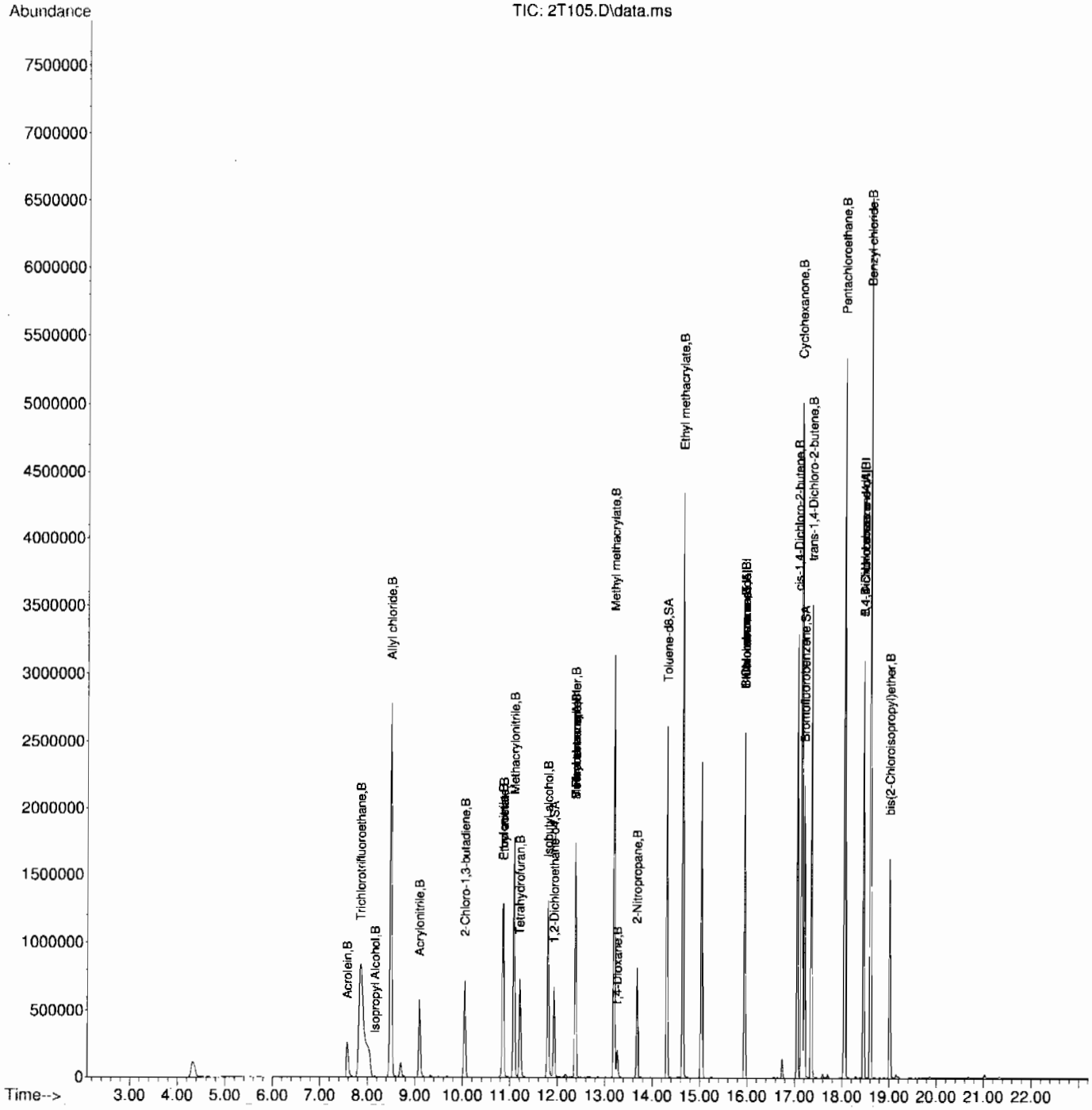

Quality Control Data

Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S301.D
Acq On : 1 Jul 2009 9:58 am
Operator : CDS1
Sample : |UVM090604-02|BFB|1|VOAF|1|
Misc : BFB01
ALS Vial : 1 Sample Multiplier: 1

Integration File: default.P

Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B
Last Update : Tue Jul 14 15:00:31 2009

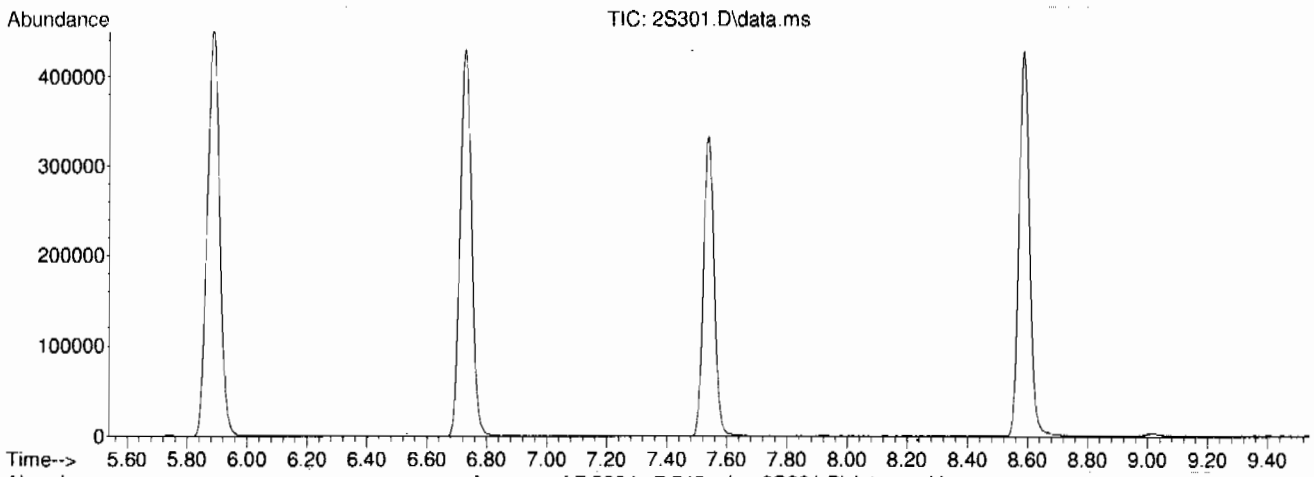

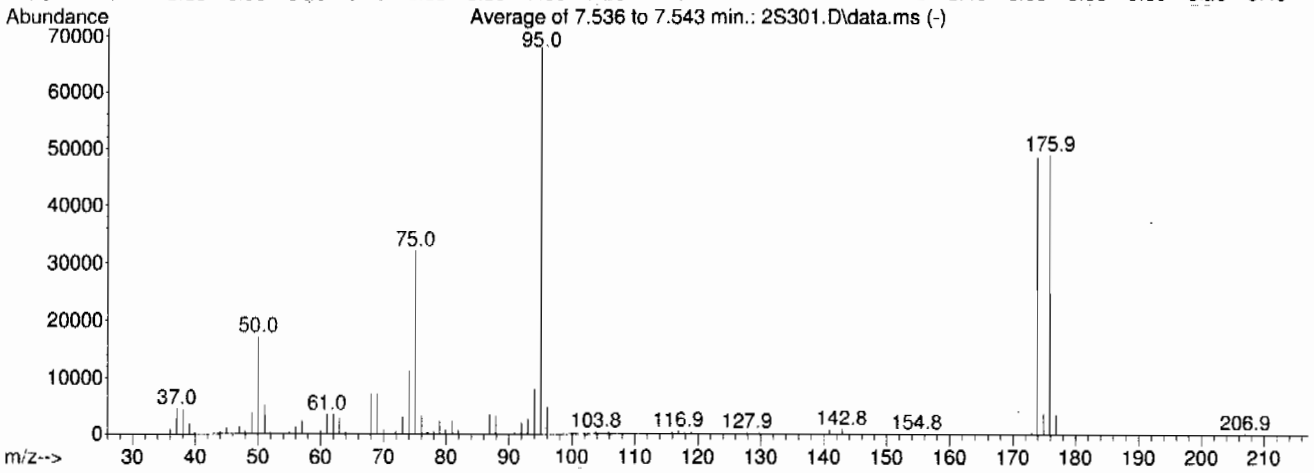

Spectrum Information: Average of 7.536 to 7.543 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.2	17106	PASS
75	95	30	60	47.2	32032	PASS
95	95	100	100	100.0	67893	PASS
96	95	5	9	7.0	4730	PASS
173	174	0.00	2	0.6	275	PASS
174	95	50	100	71.5	48512	PASS
175	174	5	9	7.6	3684	PASS
176	174	95	101	100.6	48792	PASS
177	176	5	9	6.8	3312	PASS

Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102BFB.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
Sample : |W2VM090706-01|BFB|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A]
ALS Vial : 1 Sample Multiplier: 1

Integration File: default.P

Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B
Last Update : Tue Jul 14 15:05:31 2009

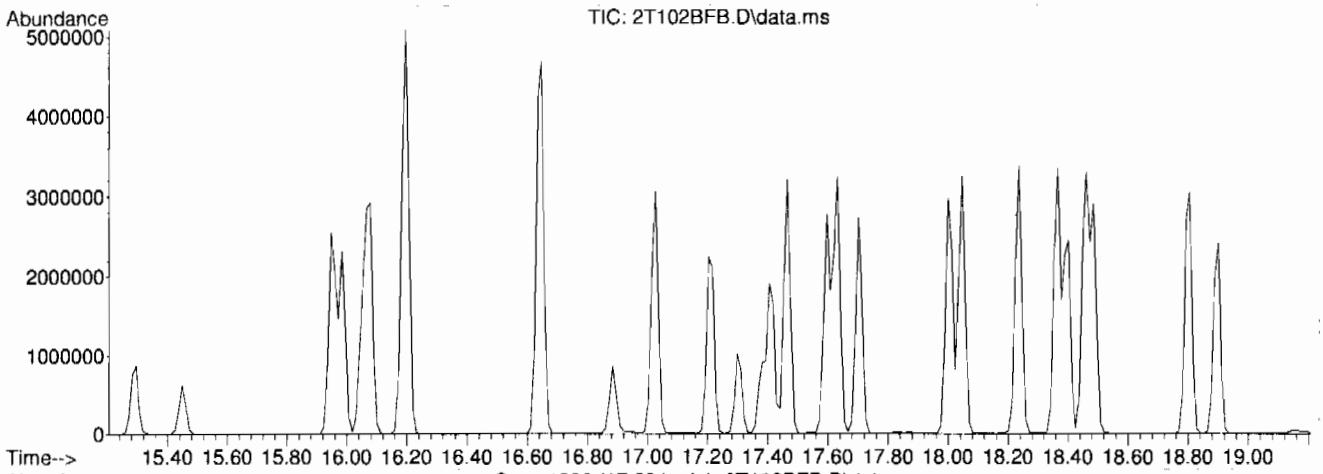

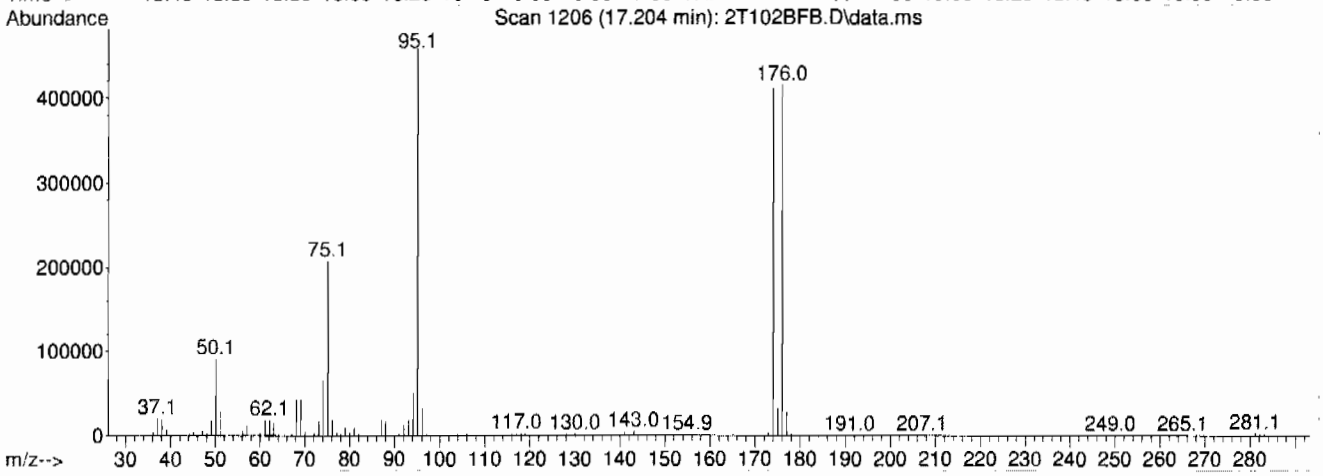

Spectrum Information: Scan 1206

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.8	90632	PASS
75	95	30	60	45.3	207168	PASS
95	95	100	100	100.0	457408	PASS
96	95	5	9	7.0	32048	PASS
173	174	0.00	2	0.7	2844	PASS
174	95	50	100	89.8	410944	PASS
175	174	5	9	7.6	31424	PASS
176	174	95	101	100.8	414208	PASS
177	176	5	9	6.7	27664	PASS

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510			**Matrix:**	SOIL
Lab Sample ID:	1201874617				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 12:19	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T113.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2510**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874617**				
Client Sample:	**QC for batch 882630**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 882630**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 12:19**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 06:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T113.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.32	9.82	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1648861	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1385774	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	844664	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1648861	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1385774	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	844664	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	473118	51.17 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 102.34%		
43) Toluene-d8	14.310	98	1655996	50.86 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 101.72%		
61) Bromofluorobenzene	17.204	95	679038	51.13 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 102.26%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.266	62	528	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.942	43	3820	N.D.	
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.440	41	368	N.D.	
13) Methyl acetate	8.547	43	774	N.D.	
14) Carbon disulfide	8.250	76	1423	N.D.	
15) Methylene chloride	8.701	84	11168	Below Cal	98
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	561	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	574	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	379	N.D.	
31) Benzene	12.033	78	531	N.D.	
32) Cyclohexene	12.389	67	295	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D.	d
44) Toluene	14.381	91	943	N.D.	
45) trans-1,3-Dichloroprop...	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.310	43	7554	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	365	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.196	91	598	N.D.	
55) m,p-Xylenes	16.184	106	282	N.D.	
56) o-Xylene	0.000		0	N.D.	
57) Styrene	16.646	104	418	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.204	105	766	N.D.	
62) 1,1,2,2-Tetrachloroethane	17.204	83	136	N.D.	
63) 1,2,3-Trichloropropane	17.204	110	157	N.D.	
64) Bromobenzene	17.405	156	227	N.D.	
65) n-Propylbenzene	17.595	91	127	N.D.	
66) 1,3,5-Trimethylbenzene	0.000		0	N.D.	
67) 2-Chlorotoluene	17.702	91	709	N.D.	
68) 4-Chlorotoluene	17.702	91	709	N.D.	
69) tert-Butylbenzene	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	18.069	105	450	N.D.	
71) sec-Butylbenzene	18.069	105	450	N.D.	
72) 4-Isopropyltoluene	18.449	119	262	N.D.	
73) 1,3-Dichlorobenzene	18.401	146	675	N.D.	
74) 1,4-Dichlorobenzene	18.484	146	1245	N.D.	
75) n-Butylbenzene	18.603	91	402	N.D.	
76) 1,2-Dichlorobenzene	18.899	146	353	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	342	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	1279	N.D.	
81) 1,2,3-Trichlorobenzene	0.000		0	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.440	41	368	N.D.	
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.800	43	561	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95)	Propionitrile	0.000		0	N.D.	
96)	Methacrylonitrile	11.227	41	671	N.D.	
97)	Tetrahydrofuran	11.227	42	963	N.D.	
98)	Isobutyl alcohol	11.927	41	112	N.D.	
99)	Methyl tert-amyl ether	0.000		0m	N.D.	d
100)	Methyl methacrylate	0.000		0	N.D.	
101)	1,4-Dioxane	0.000		0	N.D.	
102)	2-Nitropropane	0.000		0	N.D.	
104)	Ethyl methacrylate	0.000		0	N.D.	
106)	1-Chlorohexane	0.000		0m	N.D.	d
107)	cis-1,4-Dichloro-2-butene	0.000		0	N.D.	
108)	Cyclohexanone	0.000		0	N.D.	
109)	trans-1,4-Dichloro-2-b...	0.000		0	N.D.	
110)	Pentachloroethane	0.000		0	N.D.	
111)	Benzyl chloride	18.603	91	402	N.D.	
112)	bis(2-Chloroisopropyl)...	0.000		0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

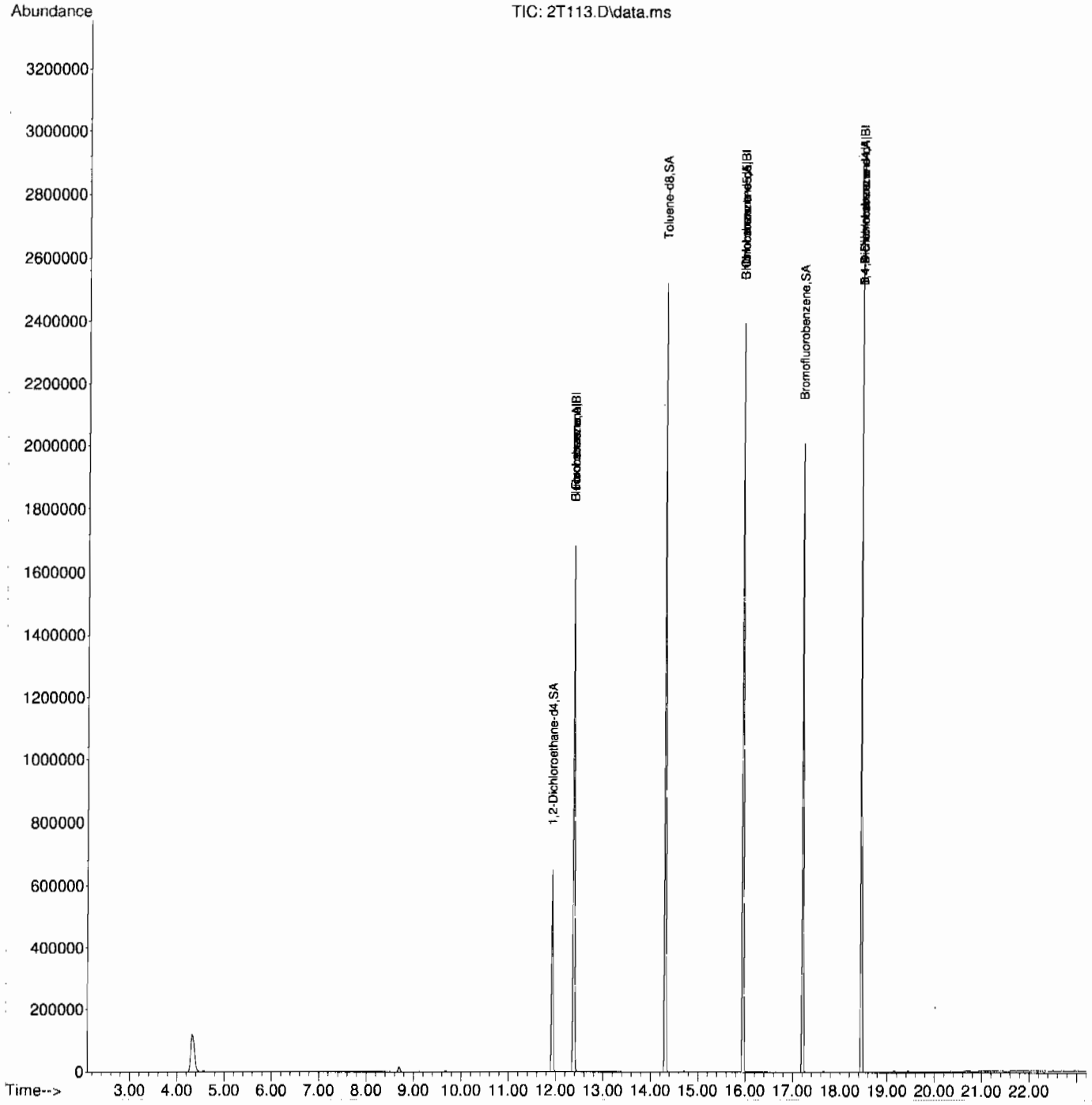

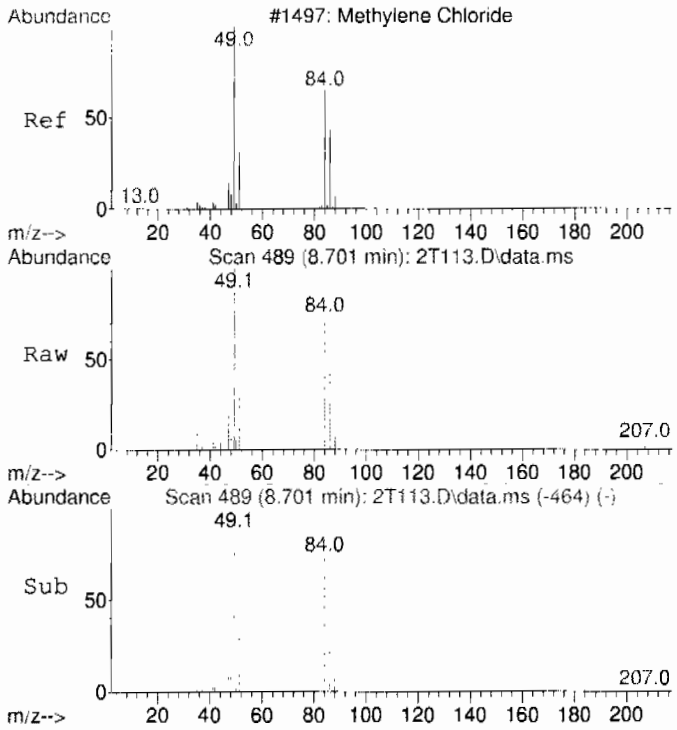

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 84 Resp: 11168

Ion	Ratio	Lower	Upper
84	100		
86	64.6	33.8	93.8
49	138.3	105.0	165.0

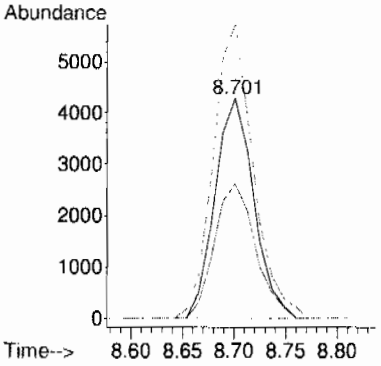

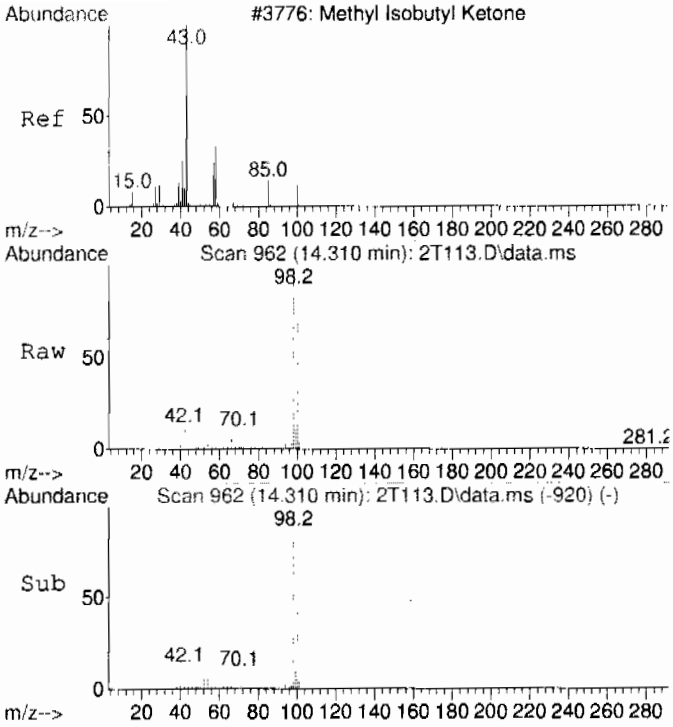

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.42 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 58 Resp: 13415

Ion	Ratio	Lower	Upper
58	100		
43	56.3	245.2	305.2#
100	8481.8	7.2	67.2#

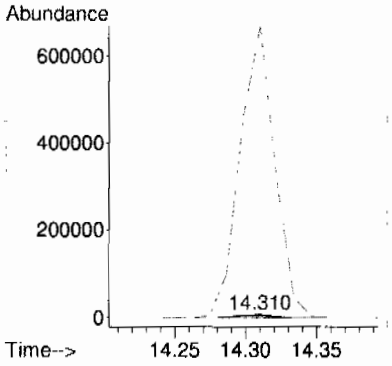

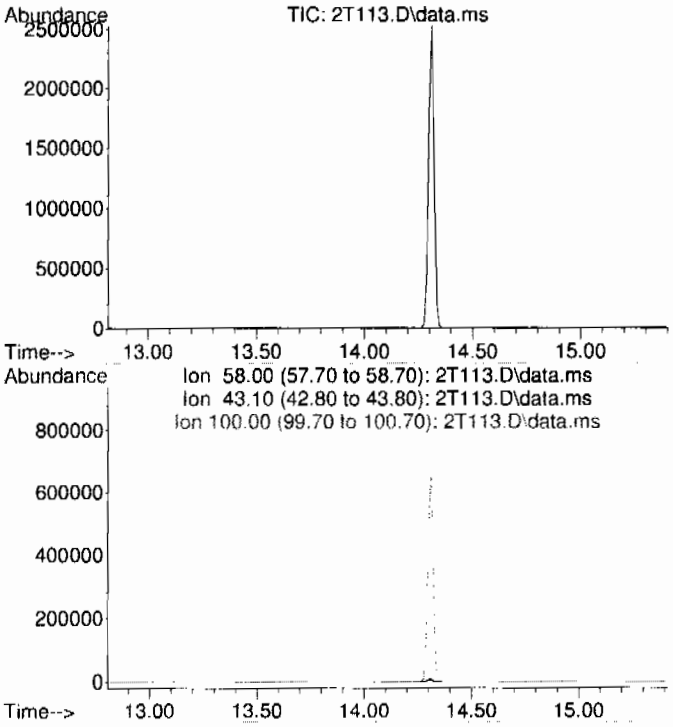

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

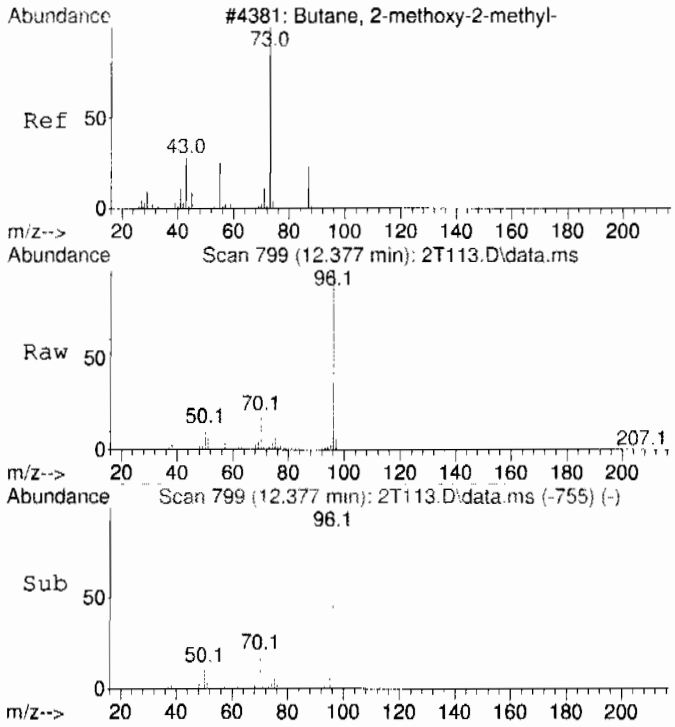

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.96 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 73 Resp: 17694

Ion	Ratio	Lower	Upper
73	100		
55	7.3	5.2	65.2
87	0.0	0.0	54.7

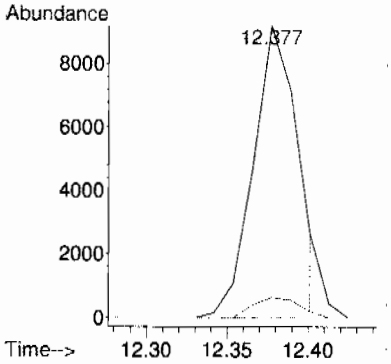

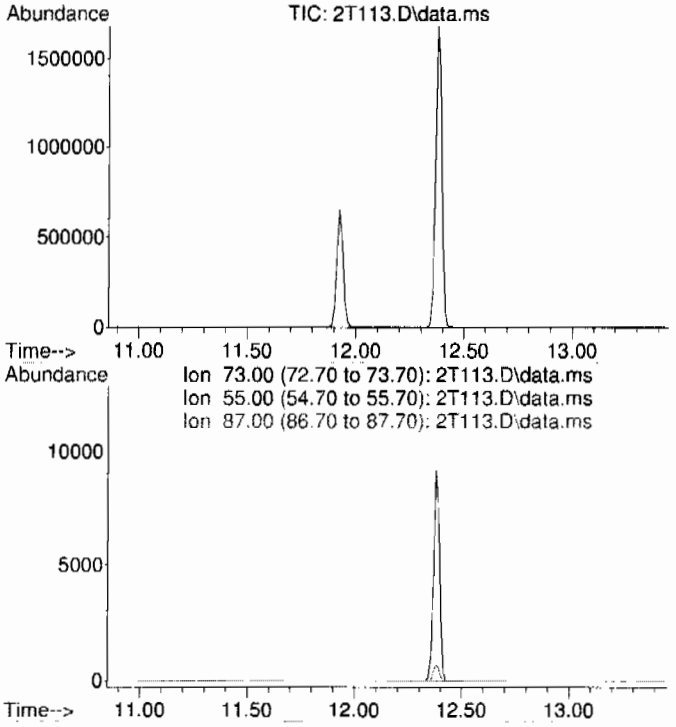

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

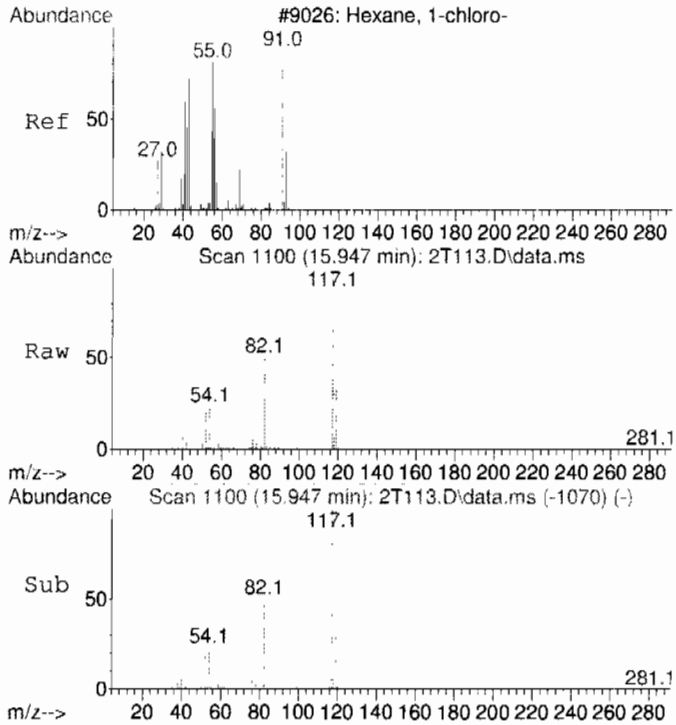

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 1.92 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 55 Resp: 12740

Ion	Ratio	Lower	Upper
55	100		
91	19.4	113.2	173.2#
56	60.3	30.3	90.3

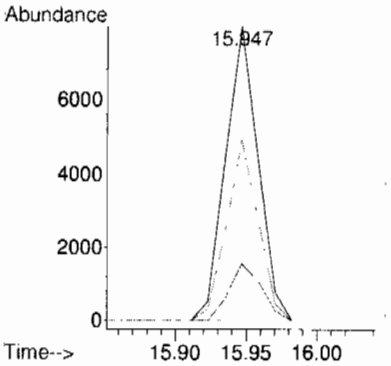

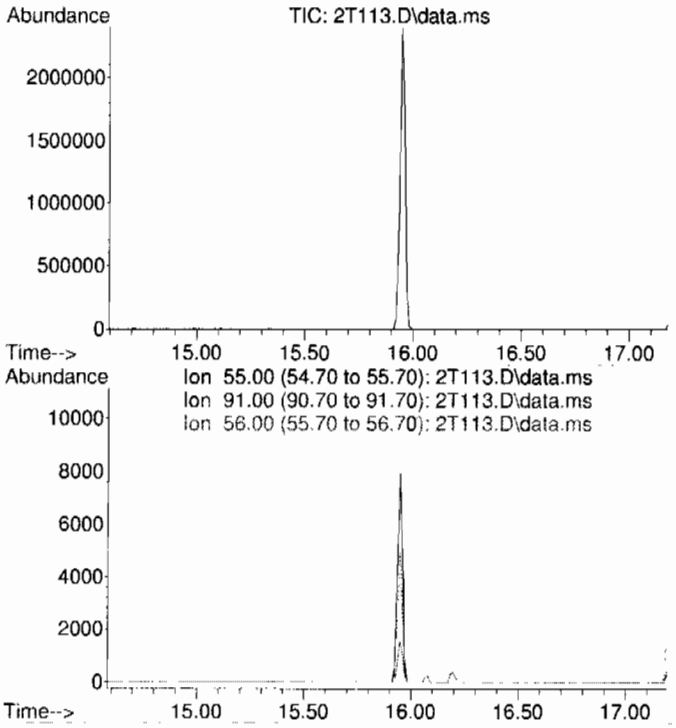

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T113.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.315	143	150	164	rBV	120085	664724	14.60%	3.035%
2	4.568	164	167	173	rVB	4196	11200	0.25%	0.051%
3	4.925	189	191	192	rBB	163	145	0.00%	0.001%
4	5.147	193	206	208	rBB	211	2276	0.05%	0.010%
5	5.727	243	245	247	rBB	153	136	0.00%	0.001%
6	6.045	261	265	268	rBV	564	2909	0.06%	0.013%
7	6.353	289	291	300	rBV3	1160	3647	0.08%	0.017%
8	7.409	378	380	390	rVB2	1006	3281	0.07%	0.015%
9	7.942	422	425	445	rVB3	1413	8746	0.19%	0.040%
10	8.701	483	489	499	rVB	17935	48797	1.07%	0.223%
11	9.685	567	572	587	rVB2	3257	8522	0.19%	0.039%
12	11.227	699	702	717	rVB2	2057	5084	0.11%	0.023%
13	11.927	756	761	777	rVB	653123	1318911	28.97%	6.022%
14	12.377	794	799	817	rBV	1685323	3384745	74.36%	15.453%
15	14.310	956	962	978	rVB	2521093	4403810	96.74%	20.106%
16	14.713	992	996	1002	rVB	3008	6562	0.14%	0.030%
17	15.947	1094	1100	1109	rBV	2394378	3939952	86.55%	17.988%
18	16.196	1119	1121	1125	rVB	772	1269	0.03%	0.006%
19	17.204	1201	1206	1220	rVB	2011376	3513250	77.18%	16.040%
20	17.654	1241	1244	1253	rVB3	5075	9327	0.20%	0.043%
21	18.461	1306	1312	1346	rVB	2796302	4552126	100.00%	20.783%
22	19.148	1367	1370	1392	rBV2	4379	13698	0.30%	0.063%

Sum of corrected areas: 21903117

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

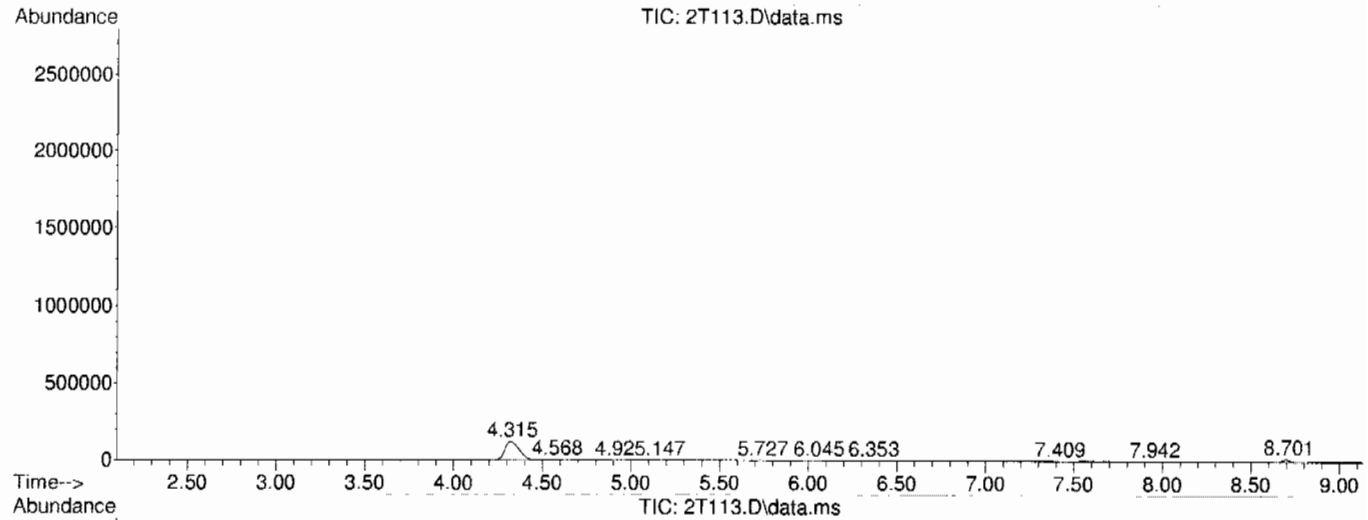

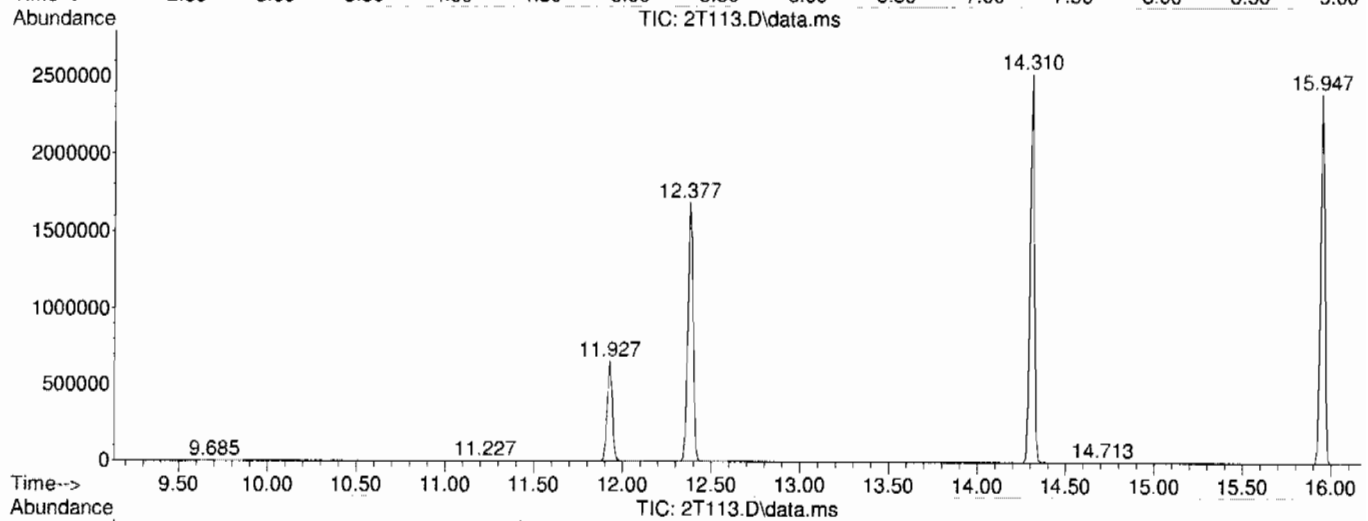

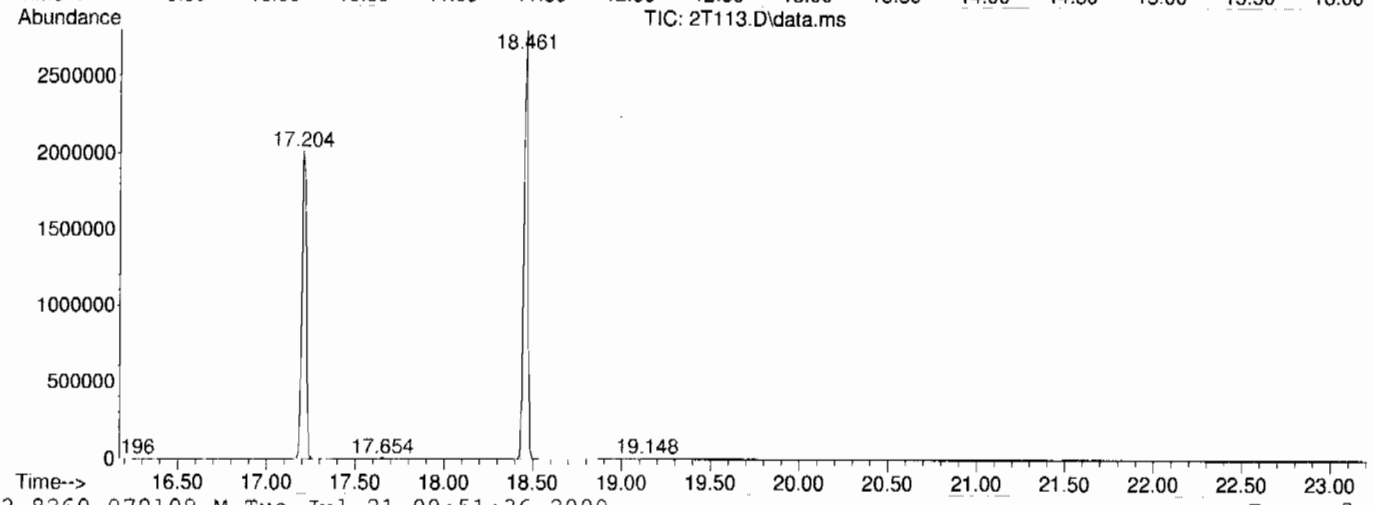

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.315	9.82 ug/L	664724	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

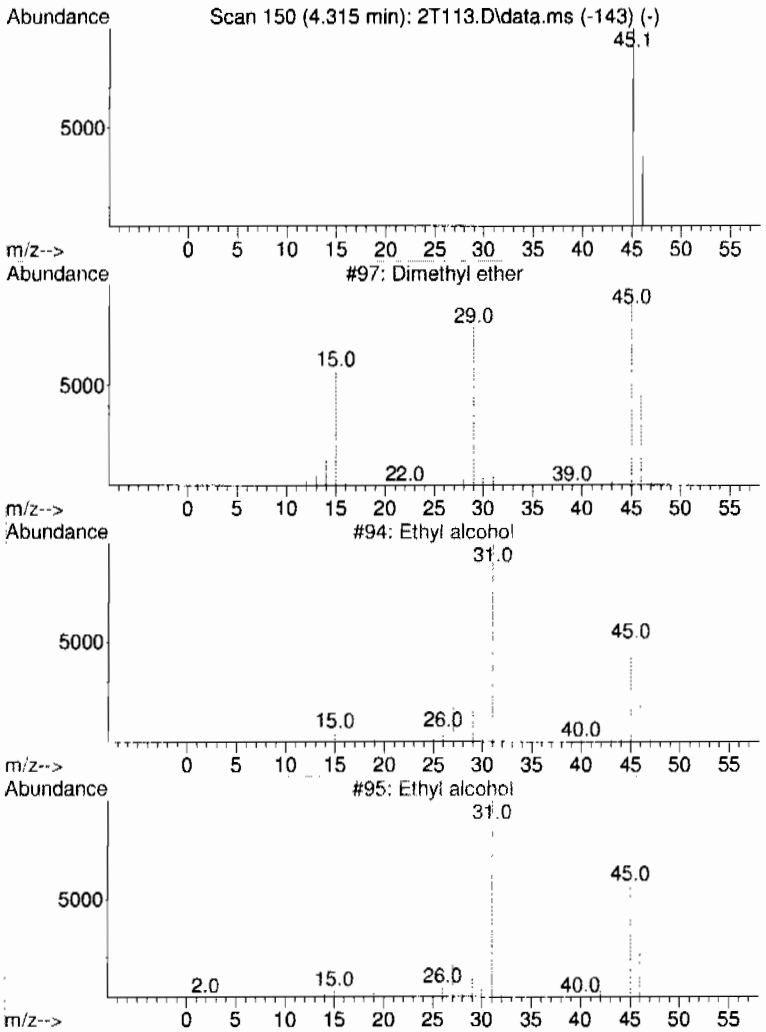

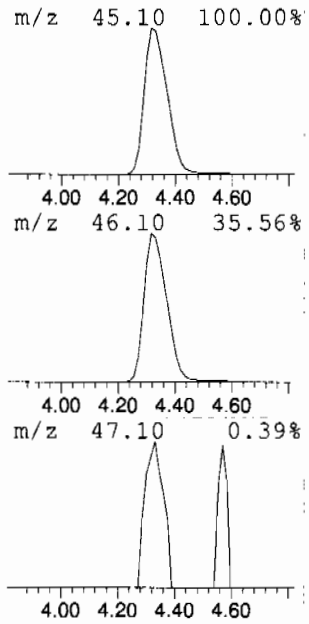

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	|--Internal Standard---| |#	RT	Resp	Conc|
unknown	4.315	9.8	ug/L	664724	1	12.377	3384750	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510			**Matrix:**	SOIL
Lab Sample ID:	1201874620				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 07:55	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T104.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		46.3	ug/kg	0.340	1.00
74-87-3	Chloromethane		44.5	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		47.7	ug/kg	0.300	1.00
74-83-9	Bromomethane		41.9	ug/kg	0.300	1.00
75-00-3	Chloroethane		48.4	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		50.1	ug/kg	0.570	1.00
67-64-1	Acetone		235	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		48.9	ug/kg	0.300	1.00
74-88-4	Iodomethane		271	ug/kg	1.60	5.00
75-09-2	Methylene chloride		53.1	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		261	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		46.7	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		47.9	ug/kg	0.300	1.00
78-93-3	2-Butanone		226	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		47.2	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		51.0	ug/kg	0.300	1.00
67-66-3	Chloroform		47.9	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		49.5	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		51.1	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		49.7	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		53.0	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		45.9	ug/kg	0.300	1.00
71-43-2	Benzene		46.7	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		49.0	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		47.1	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		50.6	ug/kg	0.300	1.00
74-95-3	Dibromomethane		49.2	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		239	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		51.9	ug/kg	0.300	1.00
108-88-3	Toluene		46.3	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		50.1	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		47.2	ug/kg	0.300	1.00
591-78-6	2-Hexanone		237	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		45.9	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		50.5	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		54.1	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		50.8	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		48.9	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2510**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874620**				
Client Sample:	**QC for batch 882630**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882630**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 07:55**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 06:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T104.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		47.8	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		95.7	ug/kg	0.300	2.00
95-47-6	o-Xylene		48.2	ug/kg	0.300	1.00
100-42-5	Styrene		53.5	ug/kg	0.300	1.00
75-25-2	Bromoform		46.6	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		49.0	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		48.7	ug/kg	0.300	1.00
108-86-1	Bromobenzene		49.4	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		47.6	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		47.3	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		48.7	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		48.7	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		47.1	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		49.3	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		48.5	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		49.2	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		50.6	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		49.5	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		48.2	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		49.2	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	E	64.8	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		51.6	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		49.1	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDS1
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1717098	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1483018	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	935834	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1717098	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1483018	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	935834	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	475483	49.38	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 98.76%			
43) Toluene-d8	14.310	98	1718449	49.31	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 98.62%			
61) Bromofluorobenzene	17.204	95	721741	49.05	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 98.10%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.687	85	284282	46.25	ug/L	100
3) Chloromethane	5.014	50	246713	44.52	ug/L	100
4) Vinyl chloride	5.266	62	234852	47.72	ug/L	100
5) Bromomethane	5.979	94	207307	41.90	ug/L	100
6) Chloroethane	6.211	64	252549	48.44	ug/L	99
7) Trichlorofluoromethane	6.756	101	510079	50.11	ug/L	100
8) Ethyl ether	7.349	59	281232	47.29	ug/L	100
9) Acetone	7.871	43	1385912	235.04	ug/L	100
10) 1,1-Dichloroethylene	7.812	61	505461	48.94	ug/L	99
11) Iodomethane	8.096	142	3807971	270.73	ug/L	99
12) Acetonitrile	8.381	41	1141548	1161.71	ug/L	100
13) Methyl acetate	8.499	43	1897415	311.29	ug/L	100
14) Carbon disulfide	8.250	76	6045790	260.57	ug/L	100
15) Methylene chloride	8.701	84	416701	53.12	ug/L	99
16) tert-Butyl methyl ether	9.199	73	865459	44.56	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	495671	46.70	ug/L	98
18) Vinyl acetate	9.934	43	1979542	155.72	ug/L	97
19) 1,1-Dichloroethane	9.887	63	634220	47.90	ug/L	100
20) 2-Butanone	10.764	43	1607187	226.12	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	553952	47.21	ug/L	98
22) 2,2-Dichloropropane	10.800	77	483230	50.98	ug/L	100
23) Bromochloromethane	11.132	128	215565	49.54	ug/L	98
24) Chloroform	11.227	83	649464	47.89	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	595273	51.06	ug/L	100
26) Cyclohexane	11.642	56	600980	49.22	ug/L	98
27) 1,1-Dichloropropene	11.749	75	478710	49.68	ug/L	99
28) Carbon tetrachloride	11.784	117	556373	53.03	ug/L	99
30) 1,2-Dichloroethane	12.021	62	472247	45.89	ug/L	99
31) Benzene	12.033	78	1401308	46.68	ug/L	100
32) Cyclohexene	12.187	67	728491	48.27	ug/L	100
33) n-Butyl alcohol	12.650	56	1126752	5678.45	ug/L	99
34) Trichloroethylene	12.852	95	399865	49.00	ug/L	97
35) 1,2-Dichloropropane	13.124	63	355141	47.14	ug/L	99
36) Methylcyclohexane	13.136	83	653590	49.44	ug/L	99
37) Dibromomethane	13.267	93	228437	49.24	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDS1
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
38) Bromodichloromethane	13.444	83	487122	50.62 ug/L	100	
39) 2-Chloroethylvinyl ether	13.753	63	804686	215.69 ug/L	99	
40) cis-1,3-Dichloropropylene	13.966	75	583118	51.88 ug/L	99	
42) 4-Methyl-2-pentanone	14.109	58	776428	239.19 ug/L	98	
44) Toluene	14.381	91	1570279	46.33 ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	527741	50.09 ug/L	100	
46) 1,1,2-Trichloroethane	14.808	83	272945	47.21 ug/L	100	
47) 2-Hexanone	14.109	43	2109768	237.46 ug/L	99	
48) 1,3-Dichloropropane	15.010	76	533740	45.93 ug/L	97	
49) Tetrachloroethylene	15.034	164	441132	50.48 ug/L	99	
50) Dibromochloromethane	15.294	129	425404	54.12 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	363081	50.84 ug/L	100	
52) Chlorobenzene	15.982	112	1153783	48.90 ug/L	98	
53) 1,1,1,2-Tetrachloroethane	16.053	131	442779	51.58 ug/L	99	
54) Ethylbenzene	16.077	91	1830579	47.81 ug/L	99	
55) m,p-Xylenes	16.196	106	1473198	95.72 ug/L	98	
56) o-Xylene	16.634	106	728875	48.18 ug/L	99	
57) Styrene	16.646	104	1191314	53.45 ug/L	99	
59) Bromoform	16.883	173	352215	46.55 ug/L	100	
60) Isopropylbenzene	17.026	105	1937164	48.65 ug/L	99	
62) 1,1,2,2-Tetrachloroethane	17.298	83	458948	49.00 ug/L	100	
63) 1,2,3-Trichloropropane	17.381	110	130664	48.65 ug/L	93	
64) Bromobenzene	17.417	156	588153	49.39 ug/L	94	
65) n-Propylbenzene	17.464	91	2238818	47.63 ug/L	99	
66) 1,3,5-Trimethylbenzene	17.631	105	1604343	48.64 ug/L	54	
67) 2-Chlorotoluene	17.595	91	1510900	47.33 ug/L	98	
68) 4-Chlorotoluene	17.702	91	1368611	47.08 ug/L	98	
69) tert-Butylbenzene	17.998	119	1658474	49.30 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1657239	48.53 ug/L	99	
71) sec-Butylbenzene	18.235	105	2191471	49.23 ug/L	99	
72) 4-Isopropyltoluene	18.366	119	1814371	50.63 ug/L	99	
73) 1,3-Dichlorobenzene	18.401	146	1107473	49.51 ug/L	99	
74) 1,4-Dichlorobenzene	18.484	146	1118534	48.23 ug/L	99	
75) n-Butylbenzene	18.805	91	1676100	49.19 ug/L	99	
76) 1,2-Dichlorobenzene	18.899	146	1051700	49.08 ug/L	100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	119792	64.78 ug/L	97	E
78) 1,2,4-Trichlorobenzene	20.690	180	839899	51.47 ug/L	100	
79) Hexachlorobutadiene	20.868	225	517696	51.82 ug/L	100	
80) Naphthalene	21.022	128	1749446	51.22 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	782151	52.30 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.622		0m	N.D. d		
86) Trichlorotrifluoroethane	7.824		0m	N.D. d		
87) Isopropyl Alcohol	8.250		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.903		0m	N.D. d		
90) Acrylonitrile	9.104		0m	N.D. d		
91) Isopropyl ether	10.053		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.041		0m	N.D. d		
93) Ethyl tert-butyl ether	10.776		0m	N.D. d		
94) Ethyl acetate	10.764		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDS1
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Propionitrile	10.764		0m	N.D.	d	
96) Methacrylonitrile	11.085		0m	N.D.	d	
97) Tetrahydrofuran	11.215		0m	N.D.	d	
98) Isobutyl alcohol	11.915		0m	N.D.	d	
99) Methyl tert-amyl ether	12.187		0m	N.D.	d	
100) Methyl methacrylate	13.136		0m	N.D.	d	
101) 1,4-Dioxane	13.278		0m	N.D.	d	
102) 2-Nitropropane	13.753		0m	N.D.	d	
104) Ethyl methacrylate	14.642		0m	N.D.	d	
106) 1-Chlorohexane	15.947		0m	N.D.	d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108) Cyclohexanone	17.144		0m	N.D.	d	
109) trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110) Pentachloroethane	18.057		0m	N.D.	d	
111) Benzyl chloride	18.603		0m	N.D.	d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDS1
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

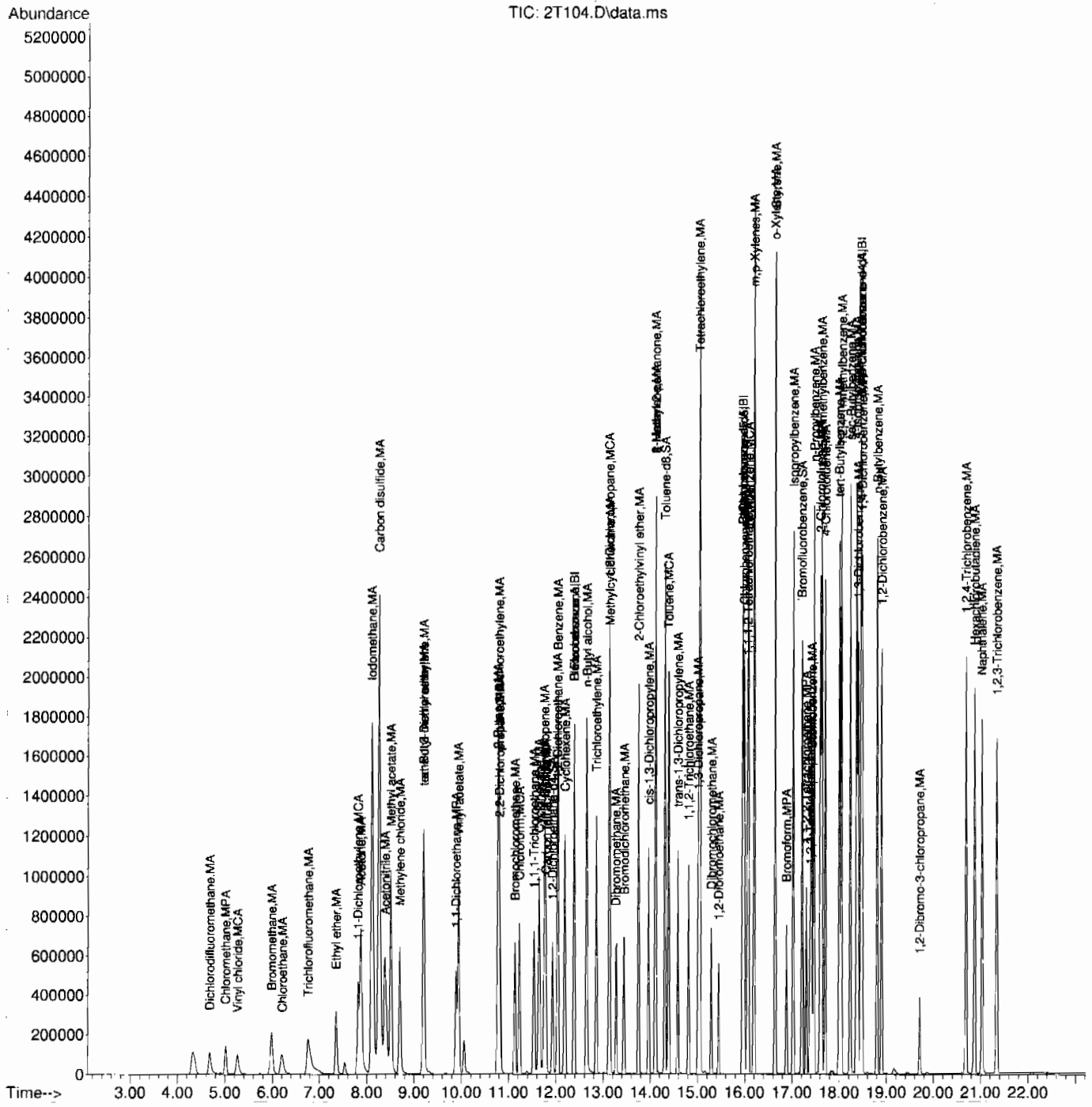

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510			**Matrix:**	SOIL
Lab Sample ID:	1201874621				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 08:53	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T106.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510			**Matrix:**	SOIL
Lab Sample ID:	1201874621				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 08:53	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T106.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		237	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1749528	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1519196	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	951777	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1749528	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1519196	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	951777	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	480979	49.03	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 98.06%			
43) Toluene-d8	14.310	98	1726974	48.38	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 96.76%			
61) Bromofluorobenzene	17.204	95	728289	48.67	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 97.34%			

Target Compounds				Qvalue
2) Dichlorodifluoromethane	4.687	0m	N.D. d	
3) Chloromethane	5.014	0m	N.D. d	
4) Vinyl chloride	5.266	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	6.756	0m	N.D. d	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.859	0m	N.D. d	
10) 1,1-Dichloroethylene	7.824	0m	N.D. d	
11) Iodomethane	8.096	0m	N.D. d	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.250	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.223	0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.187	0m	N.D. d	
18) Vinyl acetate	9.946	0m	N.D. d	
19) 1,1-Dichloroethane	10.041	0m	N.D. d	
20) 2-Butanone	10.859	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.859	0m	N.D. d	
22) 2,2-Dichloropropane	0.000	0	N.D.	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.227	0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535	0m	N.D. d	
26) Cyclohexane	11.642	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	11.772	0m	N.D. d	
30) 1,2-Dichloroethane	12.033	0m	N.D. d	
31) Benzene	12.045	0m	N.D. d	
32) Cyclohexene	12.187	0m	N.D. d	
33) n-Butyl alcohol	12.662	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	0.000	0	N.D.	
36) Methylcyclohexane	13.136	0m	N.D. d	
37) Dibromomethane	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	13.195		0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	13.966		0m	N.D. d	
42) 4-Methyl-2-pentanone	14.310		0m	N.D. d	
44) Toluene	14.393		0m	N.D. d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D. d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D. d	
47) 2-Hexanone	14.168		0m	N.D. d	
48) 1,3-Dichloropropane	15.010		0m	N.D. d	
49) Tetrachloroethylene	15.034		0m	N.D. d	
50) Dibromochloromethane	15.294		0m	N.D. d	
51) 1,2-Dibromoethane	15.449		0m	N.D. d	
52) Chlorobenzene	15.982		0m	N.D. d	
53) 1,1,1,2-Tetrachloroethane	16.053		0m	N.D. d	
54) Ethylbenzene	16.077		0m	N.D. d	
55) m,p-Xylenes	16.196		0m	N.D. d	
56) o-Xylene	16.634		0m	N.D. d	
57) Styrene	16.646		0m	N.D. d	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.026		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.204		0m	N.D. d	
64) Bromobenzene	17.405		0m	N.D. d	
65) n-Propylbenzene	17.465		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D. d	
67) 2-Chlorotoluene	17.595		0m	N.D. d	
68) 4-Chlorotoluene	17.702		0m	N.D. d	
69) tert-Butylbenzene	18.057		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	18.046		0m	N.D. d	
71) sec-Butylbenzene	18.235		0m	N.D. d	
72) 4-Isopropyltoluene	18.366		0m	N.D. d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D. d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D. d	
75) n-Butylbenzene	18.805		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.899		0m	N.D. d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D. d	
79) Hexachlorobutadiene	20.868		0m	N.D. d	
80) Naphthalene	21.022		0m	N.D. d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D. d	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	7.586	56	374377	310.26 ug/L	100
86) Trichlorotrifluoroethane	7.859	85	521229	237.04 ug/L	97
87) Isopropyl Alcohol	0.000		0m	N.D. d	
88) Allyl chloride	8.488	41	2617696	214.17 ug/L	100
89) tert-Butyl Alcohol	8.879	59	110	N.D.	
90) Acrylonitrile	9.092	53	610681	248.37 ug/L	100
91) Isopropyl ether	10.053	45	307	N.D.	
92) 2-Chloro-1,3-butadiene	10.053	53	552832	54.85 ug/L	97
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.859	43	1757936	242.11 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
95) Propionitrile	10.847	54	245689	247.51 ug/L	100	
96) Methacrylonitrile	11.085	41	1088359	248.99 ug/L	100	
97) Tetrahydrofuran	11.203	42	583471	249.67 ug/L	100	
98) Isobutyl alcohol	11.796	41	687491	2646.11 ug/L	100	
99) Methyl tert-amyl ether	0.000		0m	N.D. d		
100) Methyl methacrylate	13.195	69	1109403	260.37 ug/L	99	
101) 1,4-Dioxane	13.267	88	169837	2938.96 ug/L	99	
102) 2-Nitropropane	13.682	43	599585	296.47 ug/L	100	E
104) Ethyl methacrylate	14.642	69	2028431	242.05 ug/L	100	
106) 1-Chlorohexane	0.000		0m	N.D. d		
107) cis-1,4-Dichloro-2-butene	17.061	53	759569	253.47 ug/L	99	
108) Cyclohexanone	17.144	42	1736982	1537.57 ug/L	98	
109) trans-1,4-Dichloro-2-b...	17.358	53	722971	247.32 ug/L	99	
110) Pentachloroethane	18.057	167	1070506	321.88 ug/L	97	
111) Benzyl chloride	18.603	91	4512470	289.37 ug/L	99	
112) bis(2-Chloroisopropyl)...	19.006	45	1241349	244.47 ug/L	98	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

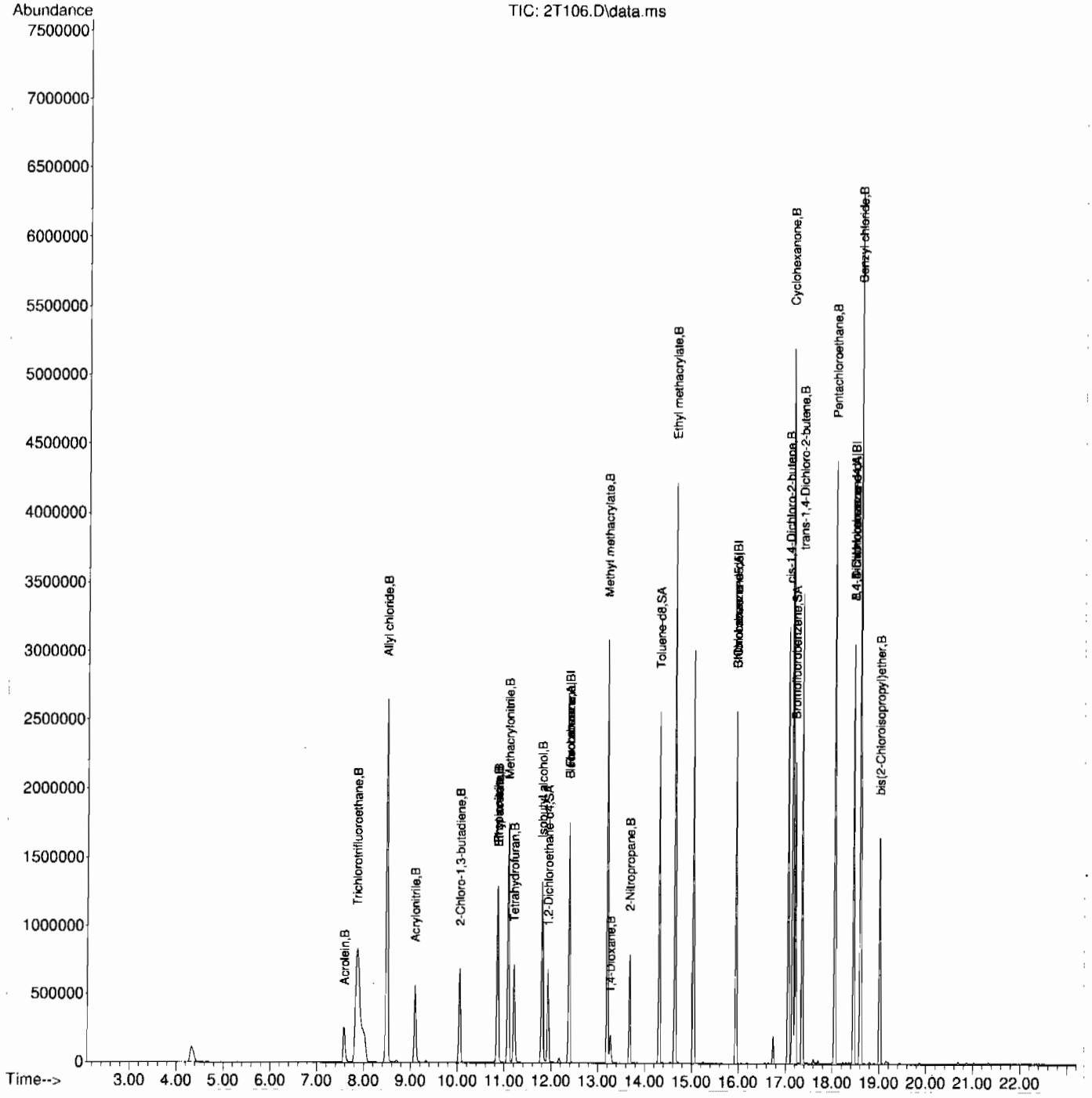

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874618	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10464PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 17:09	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:06	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T123.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		41.5	ug/kg	0.364	1.07
74-87-3	Chloromethane		45.3	ug/kg	0.322	1.07
75-01-4	Vinyl chloride		46.2	ug/kg	0.322	1.07
74-83-9	Bromomethane		43.2	ug/kg	0.322	1.07
75-00-3	Chloroethane		47.3	ug/kg	0.322	1.07
75-69-4	Trichlorofluoromethane		47.3	ug/kg	0.611	1.07
67-64-1	Acetone		200	ug/kg	1.78	5.36
75-35-4	1,1-Dichloroethylene		48.4	ug/kg	0.322	1.07
74-88-4	Iodomethane		250	ug/kg	1.72	5.36
75-09-2	Methylene chloride		46.4	ug/kg	2.14	5.36
75-15-0	Carbon disulfide		246	ug/kg	1.34	5.36
156-60-5	trans-1,2-Dichloroethylene		46.3	ug/kg	0.322	1.07
75-34-3	1,1-Dichloroethane		48.0	ug/kg	0.322	1.07
78-93-3	2-Butanone		196	ug/kg	1.61	5.36
156-59-2	cis-1,2-Dichloroethylene		47.5	ug/kg	0.322	1.07
594-20-7	2,2-Dichloropropane		50.2	ug/kg	0.322	1.07
67-66-3	Chloroform		47.5	ug/kg	0.322	1.07
74-97-5	Bromochloromethane		46.4	ug/kg	0.354	1.07
71-55-6	1,1,1-Trichloroethane		49.7	ug/kg	0.322	1.07
563-58-6	1,1-Dichloropropene		47.3	ug/kg	0.322	1.07
56-23-5	Carbon tetrachloride		50.0	ug/kg	0.322	1.07
107-06-2	1,2-Dichloroethane		47.1	ug/kg	0.322	1.07
71-43-2	Benzene		45.2	ug/kg	0.322	1.07
79-01-6	Trichloroethylene		46.1	ug/kg	0.354	1.07
78-87-5	1,2-Dichloropropane		46.8	ug/kg	0.322	1.07
75-27-4	Bromodichloromethane		49.4	ug/kg	0.322	1.07
74-95-3	Dibromomethane		47.6	ug/kg	0.322	1.07
108-10-1	4-Methyl-2-pentanone		235	ug/kg	1.34	5.36
10061-01-5	cis-1,3-Dichloropropylene		49.2	ug/kg	0.322	1.07
108-88-3	Toluene		44.5	ug/kg	0.322	1.07
10061-02-6	trans-1,3-Dichloropropylene		49.3	ug/kg	0.322	1.07
79-00-5	1,1,2-Trichloroethane		46.9	ug/kg	0.322	1.07
591-78-6	2-Hexanone		236	ug/kg	1.61	5.36
142-28-9	1,3-Dichloropropane		46.6	ug/kg	0.322	1.07
127-18-4	Tetrachloroethylene		44.6	ug/kg	0.322	1.07
124-48-1	Dibromochloromethane		51.6	ug/kg	0.322	1.07
106-93-4	1,2-Dibromoethane		48.9	ug/kg	0.322	1.07
108-90-7	Chlorobenzene		45.5	ug/kg	0.322	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2510**	**Date Collected:**	**06/25/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**1201874618**	**Date Received:**	**06/30/2009 09:15**	**%Moisture:**	**6.7**
Client Sample:	**QC for batch 882630**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**CAMO-09-10464PS**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 17:09**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 11:06**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T123.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		45.7	ug/kg	0.322	1.07
179601-23-1	m,p-Xylenes		89.3	ug/kg	0.322	2.14
95-47-6	o-Xylene		45.4	ug/kg	0.322	1.07
100-42-5	Styrene		50.0	ug/kg	0.322	1.07
75-25-2	Bromoform		43.2	ug/kg	0.322	1.07
79-34-5	1,1,2,2-Tetrachloroethane		50.5	ug/kg	0.322	1.07
96-18-4	1,2,3-Trichloropropane		48.6	ug/kg	0.322	1.07
108-86-1	Bromobenzene		46.6	ug/kg	0.322	1.07
103-65-1	n-Propylbenzene		46.0	ug/kg	0.322	1.07
95-49-8	2-Chlorotoluene		46.4	ug/kg	0.322	1.07
98-82-8	Isopropylbenzene		45.9	ug/kg	0.322	1.07
108-67-8	1,3,5-Trimethylbenzene		45.9	ug/kg	0.322	1.07
106-43-4	4-Chlorotoluene		45.6	ug/kg	0.322	1.07
98-06-6	tert-Butylbenzene		46.3	ug/kg	0.322	1.07
95-63-6	1,2,4-Trimethylbenzene		45.9	ug/kg	0.322	1.07
135-98-8	sec-Butylbenzene		45.7	ug/kg	0.322	1.07
99-87-6	4-Isopropyltoluene		44.4	ug/kg	0.322	1.07
541-73-1	1,3-Dichlorobenzene		44.5	ug/kg	0.322	1.07
106-46-7	1,4-Dichlorobenzene		43.6	ug/kg	0.322	1.07
104-51-8	n-Butylbenzene		44.0	ug/kg	0.322	1.07
96-12-8	1,2-Dibromo-3-chloropropane	E	58.9	ug/kg	0.322	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.36	ug/kg	1.72	5.36
630-20-6	1,1,1,2-Tetrachloroethane		48.5	ug/kg	0.322	1.07
95-50-1	1,2-Dichlorobenzene		44.6	ug/kg	0.322	1.07

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1638626	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1384078	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	861083	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1638626	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1384078	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	861083	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	475621	51.76	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 103.52%			
43) Toluene-d8	14.310	98	1637070	50.34	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 100.68%			
61) Bromofluorobenzene	17.216	95	328864	24.29	ug/L	0.01
Spiked Amount 50.000	Range 68 - 133		Recovery = 48.58%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	227096	38.72	ug/L	100
3) Chloromethane	5.014	50	223513	42.26	ug/L	100
4) Vinyl chloride	5.252	62	202318	43.08	ug/L	100
5) Bromomethane	5.980	94	190183	40.28	ug/L	99
6) Chloroethane	6.199	64	219752	44.16	ug/L	100
7) Trichlorofluoromethane	6.756	101	428804	44.14	ug/L	100
8) Ethyl ether	7.349	59	247415	43.60	ug/L	100
9) Acetone	7.871	43	1047033	186.24	ug/L	99
10) 1,1-Dichloroethylene	7.812	61	444600	45.11	ug/L	99
11) Iodomethane	8.096	142	3134325	233.51	ug/L	98
12) Acetonitrile	8.381	41	977135	1042.01	ug/L	100
13) Methyl acetate	8.500	43	1818963	312.71	ug/L	99
14) Carbon disulfide	8.251	76	5083133	229.58	ug/L	100
15) Methylene chloride	8.701	84	328851	43.24	ug/L	99
16) tert-Butyl methyl ether	9.199	73	771570	41.63	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	437927	43.23	ug/L	98
18) Vinyl acetate	9.946	43	713076	58.78	ug/L	94
19) 1,1-Dichloroethane	9.887	63	565261	44.74	ug/L	100
20) 2-Butanone	10.765	43	1242993	183.26	ug/L	99
21) cis-1,2-Dichloroethylene	10.788	61	496332	44.32	ug/L	99
22) 2,2-Dichloropropane	10.812	77	424012	46.87	ug/L	99
23) Bromochloromethane	11.132	128	179544	43.24	ug/L	97
24) Chloroform	11.239	83	573926	44.34	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	515379	46.32	ug/L	99
26) Cyclohexane	11.642	56	506013	43.42	ug/L	99
27) 1,1-Dichloropropene	11.761	75	405504	44.10	ug/L	99
28) Carbon tetrachloride	11.784	117	467181	46.66	ug/L	99
30) 1,2-Dichloroethane	12.033	62	431614	43.95	ug/L	100
31) Benzene	12.045	78	1208822	42.19	ug/L	99
32) Cyclohexene	12.188	67	615466	42.74	ug/L	99
33) n-Butyl alcohol	12.650	56	873355	4612.19	ug/L	98
34) Trichloroethylene	12.852	95	335094	43.03	ug/L	98
35) 1,2-Dichloropropane	13.124	63	313880	43.66	ug/L	100
36) Methylcyclohexane	13.136	83	527460	41.81	ug/L	99
37) Dibromomethane	13.279	93	196579	44.40	ug/L	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
38) Bromodichloromethane	13.445	83	423059	46.06 ug/L	100	
39) 2-Chloroethylvinyl ether	13.753	63	786595	220.94 ug/L	99	
40) cis-1,3-Dichloropropylene	13.966	75	491926	45.86 ug/L	99	
42) 4-Methyl-2-pentanone	14.109	58	664873	219.47 ug/L	100	
44) Toluene	14.393	91	1313225	41.51 ug/L	100	
45) trans-1,3-Dichloroprop...	14.583	75	451792	45.95 ug/L	99	
46) 1,1,2-Trichloroethane	14.808	83	236047	43.74 ug/L	99	
47) 2-Hexanone	14.109	43	1828262	220.48 ug/L	100	
48) 1,3-Dichloropropane	15.010	76	470942	43.43 ug/L	93	
49) Tetrachloroethylene	15.034	164	339473	41.62 ug/L	99	
50) Dibromochloromethane	15.295	129	352769	48.09 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	304005	45.61 ug/L	99	
52) Chlorobenzene	15.982	112	935169	42.47 ug/L	99	
53) 1,1,1,2-Tetrachloroethane	16.054	131	362311	45.22 ug/L	100	
54) Ethylbenzene	16.077	91	1521868	42.59 ug/L	100	
55) m,p-Xylenes	16.196	106	1196646	83.31 ug/L	99	
56) o-Xylene	16.635	106	598471	42.39 ug/L	98	
57) Styrene	16.646	104	970529	46.65 ug/L	98	
59) Bromoform	16.884	173	278131	40.27 ug/L	100	
60) Isopropylbenzene	17.026	105	1569668	42.84 ug/L	99	
62) 1,1,2,2-Tetrachloroethane	17.299	83	405803	47.08 ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	112024	45.33 ug/L	94	
64) Bromobenzene	17.417	156	476691	43.51 ug/L	99	
65) n-Propylbenzene	17.465	91	1855008	42.89 ug/L	100	
66) 1,3,5-Trimethylbenzene	17.631	105	1317487	43.41 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1270616	43.26 ug/L	100	
68) 4-Chlorotoluene	17.702	91	1137050	42.51 ug/L	100	
69) tert-Butylbenzene	17.998	119	1337684	43.22 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1345651	42.82 ug/L	99	
71) sec-Butylbenzene	18.235	105	1746030	42.62 ug/L	100	
72) 4-Isopropyltoluene	18.366	119	1365024	41.40 ug/L	99	
73) 1,3-Dichlorobenzene	18.401	146	854376	41.51 ug/L	99	
74) 1,4-Dichlorobenzene	18.485	146	867803	40.67 ug/L	99	
75) n-Butylbenzene	18.805	91	1286963	41.05 ug/L	100	
76) 1,2-Dichlorobenzene	18.900	146	820684	41.62 ug/L	99	
77) 1,2-Dibromo-3-chloropr...	19.706	157	93469	54.94 ug/L	100	E
78) 1,2,4-Trichlorobenzene	20.690	180	580397	38.66 ug/L	100	
79) Hexachlorobutadiene	20.868	225	350030	38.08 ug/L	100	
80) Naphthalene	21.022	128	1315650	41.86 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	556571	40.45 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.610		0m	N.D. d		
86) Trichlorotrifluoroethane	7.836		0m	N.D. d		
87) Isopropyl Alcohol	8.251		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.891		0m	N.D. d		
90) Acrylonitrile	9.104		0m	N.D. d		
91) Isopropyl ether	10.053		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.053		0m	N.D. d		
93) Ethyl tert-butyl ether	10.563		0m	N.D. d		
94) Ethyl acetate	10.765		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Propionitrile	10.860		0m	N.D.	d	
96) Methacrylonitrile	11.085		0m	N.D.	d	
97) Tetrahydrofuran	11.239		0m	N.D.	d	
98) Isobutyl alcohol	11.927		0m	N.D.	d	
99) Methyl tert-amyl ether	12.188		0m	N.D.	d	
100) Methyl methacrylate	13.136		0m	N.D.	d	
101) 1,4-Dioxane	13.267		0m	N.D.	d	
102) 2-Nitropropane	13.753		0m	N.D.	d	
104) Ethyl methacrylate	14.642		0m	N.D.	d	
106) 1-Chlorohexane	15.947		0m	N.D.	d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108) Cyclohexanone	17.145		0m	N.D.	d	
109) trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110) Pentachloroethane	18.058		0m	N.D.	d	
111) Benzyl chloride	18.603		0m	N.D.	d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

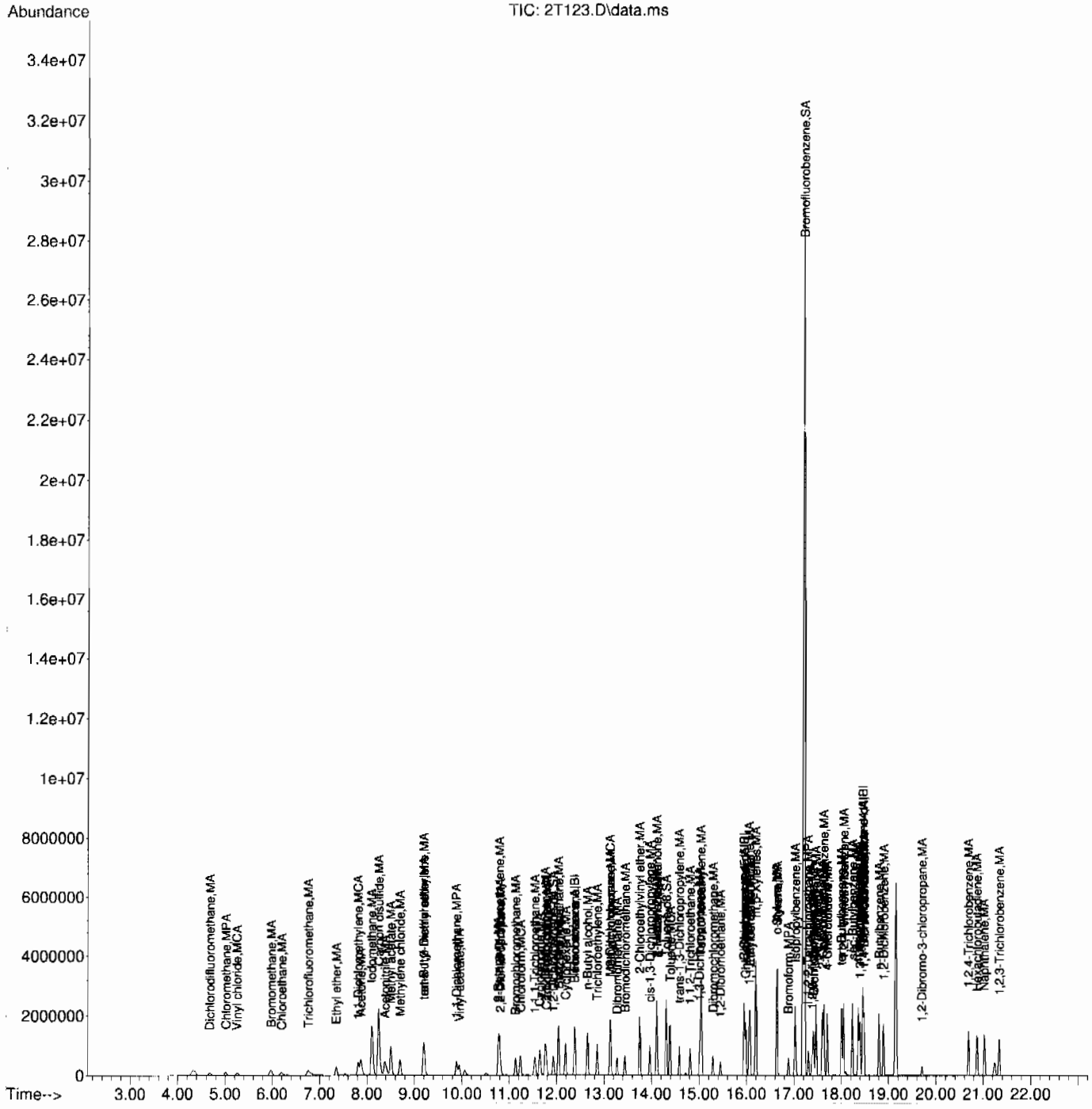

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874619	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10464PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 17:37	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:07	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T124.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		44.0	ug/kg	0.364	1.07
74-87-3	Chloromethane		45.7	ug/kg	0.322	1.07
75-01-4	Vinyl chloride		47.0	ug/kg	0.322	1.07
74-83-9	Bromomethane		40.0	ug/kg	0.322	1.07
75-00-3	Chloroethane		47.6	ug/kg	0.322	1.07
75-69-4	Trichlorofluoromethane		49.6	ug/kg	0.611	1.07
67-64-1	Acetone		203	ug/kg	1.78	5.36
75-35-4	1,1-Dichloroethylene		49.2	ug/kg	0.322	1.07
74-88-4	Iodomethane		251	ug/kg	1.72	5.36
75-09-2	Methylene chloride		45.0	ug/kg	2.14	5.36
75-15-0	Carbon disulfide		254	ug/kg	1.34	5.36
156-60-5	trans-1,2-Dichloroethylene		46.4	ug/kg	0.322	1.07
75-34-3	1,1-Dichloroethane		47.2	ug/kg	0.322	1.07
78-93-3	2-Butanone		201	ug/kg	1.61	5.36
156-59-2	cis-1,2-Dichloroethylene		46.3	ug/kg	0.322	1.07
594-20-7	2,2-Dichloropropane		47.3	ug/kg	0.322	1.07
67-66-3	Chloroform		46.4	ug/kg	0.322	1.07
74-97-5	Bromochloromethane		46.0	ug/kg	0.354	1.07
71-55-6	1,1,1-Trichloroethane		49.1	ug/kg	0.322	1.07
563-58-6	1,1-Dichloropropene		48.8	ug/kg	0.322	1.07
56-23-5	Carbon tetrachloride		50.4	ug/kg	0.322	1.07
107-06-2	1,2-Dichloroethane		46.0	ug/kg	0.322	1.07
71-43-2	Benzene		44.7	ug/kg	0.322	1.07
79-01-6	Trichloroethylene		46.0	ug/kg	0.354	1.07
78-87-5	1,2-Dichloropropane		45.8	ug/kg	0.322	1.07
75-27-4	Bromodichloromethane		48.3	ug/kg	0.322	1.07
74-95-3	Dibromomethane		47.4	ug/kg	0.322	1.07
108-10-1	4-Methyl-2-pentanone		237	ug/kg	1.34	5.36
10061-01-5	cis-1,3-Dichloropropylene		48.4	ug/kg	0.322	1.07
108-88-3	Toluene		44.0	ug/kg	0.322	1.07
10061-02-6	trans-1,3-Dichloropropylene		47.8	ug/kg	0.322	1.07
79-00-5	1,1,2-Trichloroethane		46.0	ug/kg	0.322	1.07
591-78-6	2-Hexanone		238	ug/kg	1.61	5.36
142-28-9	1,3-Dichloropropane		45.4	ug/kg	0.322	1.07
127-18-4	Tetrachloroethylene		45.2	ug/kg	0.322	1.07
124-48-1	Dibromochloromethane		50.4	ug/kg	0.322	1.07
106-93-4	1,2-Dibromoethane		48.2	ug/kg	0.322	1.07
108-90-7	Chlorobenzene		44.4	ug/kg	0.322	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2510**	**Date Collected:**	**06/25/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**1201874619**	**Date Received:**	**06/30/2009 09:15**	**%Moisture:**	**6.7**
Client Sample:	**QC for batch 882630**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**CAMO-09-10464PSD**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.1**	**Dilution:**	**1**
Run Date:	**07/06/2009 17:37**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 11:07**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T124.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		44.7	ug/kg	0.322	1.07
179601-23-1	m,p-Xylenes		87.7	ug/kg	0.322	2.14
95-47-6	o-Xylene		44.1	ug/kg	0.322	1.07
100-42-5	Styrene		48.6	ug/kg	0.322	1.07
75-25-2	Bromoform		43.1	ug/kg	0.322	1.07
79-34-5	1,1,2,2-Tetrachloroethane		50.5	ug/kg	0.322	1.07
96-18-4	1,2,3-Trichloropropane		49.1	ug/kg	0.322	1.07
108-86-1	Bromobenzene		45.2	ug/kg	0.322	1.07
103-65-1	n-Propylbenzene		44.8	ug/kg	0.322	1.07
95-49-8	2-Chlorotoluene		44.7	ug/kg	0.322	1.07
98-82-8	Isopropylbenzene		44.8	ug/kg	0.322	1.07
108-67-8	1,3,5-Trimethylbenzene		44.8	ug/kg	0.322	1.07
106-43-4	4-Chlorotoluene		43.7	ug/kg	0.322	1.07
98-06-6	tert-Butylbenzene		45.1	ug/kg	0.322	1.07
95-63-6	1,2,4-Trimethylbenzene		43.5	ug/kg	0.322	1.07
135-98-8	sec-Butylbenzene		44.7	ug/kg	0.322	1.07
99-87-6	4-Isopropyltoluene		43.3	ug/kg	0.322	1.07
541-73-1	1,3-Dichlorobenzene		42.5	ug/kg	0.322	1.07
106-46-7	1,4-Dichlorobenzene		41.5	ug/kg	0.322	1.07
104-51-8	n-Butylbenzene		42.1	ug/kg	0.322	1.07
96-12-8	1,2-Dibromo-3-chloropropane	E	59.7	ug/kg	0.322	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.36	ug/kg	1.72	5.36
630-20-6	1,1,1,2-Tetrachloroethane		47.2	ug/kg	0.322	1.07
95-50-1	1,2-Dichlorobenzene		43.1	ug/kg	0.322	1.07

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SO1L MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1564606	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1330232	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	819919	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1564606	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1330232	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	819919	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	445440	50.77	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 101.54%			
43) Toluene-d8	14.310	98	1492265	47.74	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 95.48%			
61) Bromofluorobenzene	17.216	95	302924	23.50	ug/L	0.01
Spiked Amount 50.000	Range 68 - 133		Recovery = 47.00%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	229698	41.01	ug/L	100
3) Chloromethane	5.014	50	215134	42.60	ug/L	100
4) Vinyl chloride	5.267	62	196785	43.88	ug/L	100
5) Bromomethane	5.980	94	168248	37.32	ug/L	99
6) Chloroethane	6.211	64	210790	44.37	ug/L	100
7) Trichlorofluoromethane	6.757	101	429399	46.29	ug/L	100
8) Ethyl ether	7.349	59	232038	42.82	ug/L	99
9) Acetone	7.871	43	1018949	189.80	ug/L	100
10) 1,1-Dichloroethylene	7.824	61	432344	45.94	ug/L	99
11) Iodomethane	8.108	142	3006363	234.57	ug/L	99
12) Acetonitrile	8.381	41	1004918	1122.34	ug/L	100
13) Methyl acetate	8.512	43	1810573	325.99	ug/L	99
14) Carbon disulfide	8.251	76	5000825	236.54	ug/L	100
15) Methylene chloride	8.701	84	305751	42.01	ug/L	99
16) tert-Butyl methyl ether	9.211	73	688701	38.91	ug/L	99
17) trans-1,2-Dichloroethy...	9.199	61	418340	43.25	ug/L	99
18) Vinyl acetate	9.946	43	714926	61.72	ug/L	94
19) 1,1-Dichloroethane	9.887	63	531620	44.06	ug/L	100
20) 2-Butanone	10.777	43	1216245	187.79	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	461422	43.16	ug/L	100
22) 2,2-Dichloropropane	10.812	77	381483	44.17	ug/L	98
23) Bromochloromethane	11.132	128	170066	42.90	ug/L	99
24) Chloroform	11.239	83	535531	43.33	ug/L	99
25) 1,1,1-Trichloroethane	11.535	97	486262	45.77	ug/L	100
26) Cyclohexane	11.642	56	491048	44.13	ug/L	100
27) 1,1-Dichloropropene	11.761	75	399280	45.48	ug/L	99
28) Carbon tetrachloride	11.785	117	449852	47.05	ug/L	99
30) 1,2-Dichloroethane	12.034	62	402000	42.87	ug/L	100
31) Benzene	12.045	78	1141648	41.73	ug/L	99
32) Cyclohexene	12.188	67	605950	44.07	ug/L	99
33) n-Butyl alcohol	12.650	56	983273	5438.33	ug/L	98
34) Trichloroethylene	12.852	95	319093	42.92	ug/L	100
35) 1,2-Dichloropropane	13.125	63	292974	42.68	ug/L	100
36) Methylcyclohexane	13.136	83	520734	43.23	ug/L	99
37) Dibromomethane	13.279	93	186866	44.20	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
38) Bromodichloromethane	13.445	83	395098	45.06 ug/L	100	
39) 2-Chloroethylvinyl ether	13.753	63	734693	216.12 ug/L	99	
40) cis-1,3-Dichloropropylene	13.966	75	462762	45.18 ug/L	99	
42) 4-Methyl-2-pentanone	14.109	58	643124	220.88 ug/L	100	
44) Toluene	14.393	91	1248012	41.05 ug/L	100	
45) trans-1,3-Dichloroprop...	14.583	75	421034	44.55 ug/L	99	
46) 1,1,2-Trichloroethane	14.808	83	222374	42.88 ug/L	100	
47) 2-Hexanone	14.109	43	1766306	221.63 ug/L	100	
48) 1,3-Dichloropropane	15.010	76	441428	42.35 ug/L	93	
49) Tetrachloroethylene	15.034	164	330734	42.19 ug/L	100	
50) Dibromochloromethane	15.295	129	331812	47.06 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	288305	45.01 ug/L	100	
52) Chlorobenzene	15.982	112	877415	41.46 ug/L	100	
53) 1,1,1,2-Tetrachloroethane	16.054	131	338784	44.00 ug/L	98	
54) Ethylbenzene	16.077	91	1430952	41.67 ug/L	100	
55) m,p-Xylenes	16.196	106	1129455	81.81 ug/L	100	
56) o-Xylene	16.635	106	558727	41.18 ug/L	99	
57) Styrene	16.647	104	907120	45.37 ug/L	99	
59) Bromoform	16.884	173	264119	40.17 ug/L	99	
60) Isopropylbenzene	17.026	105	1459433	41.83 ug/L	100	
62) 1,1,2,2-Tetrachloroethane	17.299	83	386886	47.14 ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	107851	45.83 ug/L #	90	
64) Bromobenzene	17.417	156	439482	42.13 ug/L	100	
65) n-Propylbenzene	17.465	91	1720256	41.77 ug/L	100	
66) 1,3,5-Trimethylbenzene	17.631	105	1207874	41.80 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1165247	41.66 ug/L	100	
68) 4-Chlorotoluene	17.702	91	1038583	40.78 ug/L	100	
69) tert-Butylbenzene	17.998	119	1239176	42.04 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1214442	40.59 ug/L	99	
71) sec-Butylbenzene	18.236	105	1626745	41.71 ug/L	100	
72) 4-Isopropyltoluene	18.366	119	1268104	40.39 ug/L	99	
73) 1,3-Dichlorobenzene	18.402	146	777753	39.68 ug/L	99	
74) 1,4-Dichlorobenzene	18.485	146	786346	38.70 ug/L	100	
75) n-Butylbenzene	18.805	91	1171446	39.24 ug/L	100	
76) 1,2-Dichlorobenzene	18.900	146	754662	40.20 ug/L	100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	90187	55.67 ug/L	99	E
78) 1,2,4-Trichlorobenzene	20.690	180	509087	35.61 ug/L	100	
79) Hexachlorobutadiene	20.868	225	309728	35.38 ug/L	100	
80) Naphthalene	21.022	128	1224985	40.94 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	493210	37.64 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.622		0m	N.D. d		
86) Trichlorotrifluoroethane	7.847		0m	N.D. d		
87) Isopropyl Alcohol	8.251		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.891		0m	N.D. d		
90) Acrylonitrile	9.116		0m	N.D. d		
91) Isopropyl ether	9.946		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.053		0m	N.D. d		
93) Ethyl tert-butyl ether	10.788		0m	N.D. d		
94) Ethyl acetate	10.777		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95)	Propionitrile	10.860		0m	N.D.	d	
96)	Methacrylonitrile	11.085		0m	N.D.	d	
97)	Tetrahydrofuran	11.239		0m	N.D.	d	
98)	Isobutyl alcohol	11.642		0m	N.D.	d	
99)	Methyl tert-amyl ether	12.188		0m	N.D.	d	
100)	Methyl methacrylate	13.136		0m	N.D.	d	
101)	1,4-Dioxane	13.267		0m	N.D.	d	
102)	2-Nitropropane	13.753		0m	N.D.	d	
104)	Ethyl methacrylate	14.642		0m	N.D.	d	
106)	1-Chlorohexane	15.947		0m	N.D.	d	
107)	cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108)	Cyclohexanone	17.145		0m	N.D.	d	
109)	trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110)	Pentachloroethane	18.058		0m	N.D.	d	
111)	Benzyl chloride	18.603		0m	N.D.	d	
112)	bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On    :  6 Jul 2009   5:37 pm
Operator  : CDS1
InstName  : VOA2
Sample    : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial  : 23   Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
```

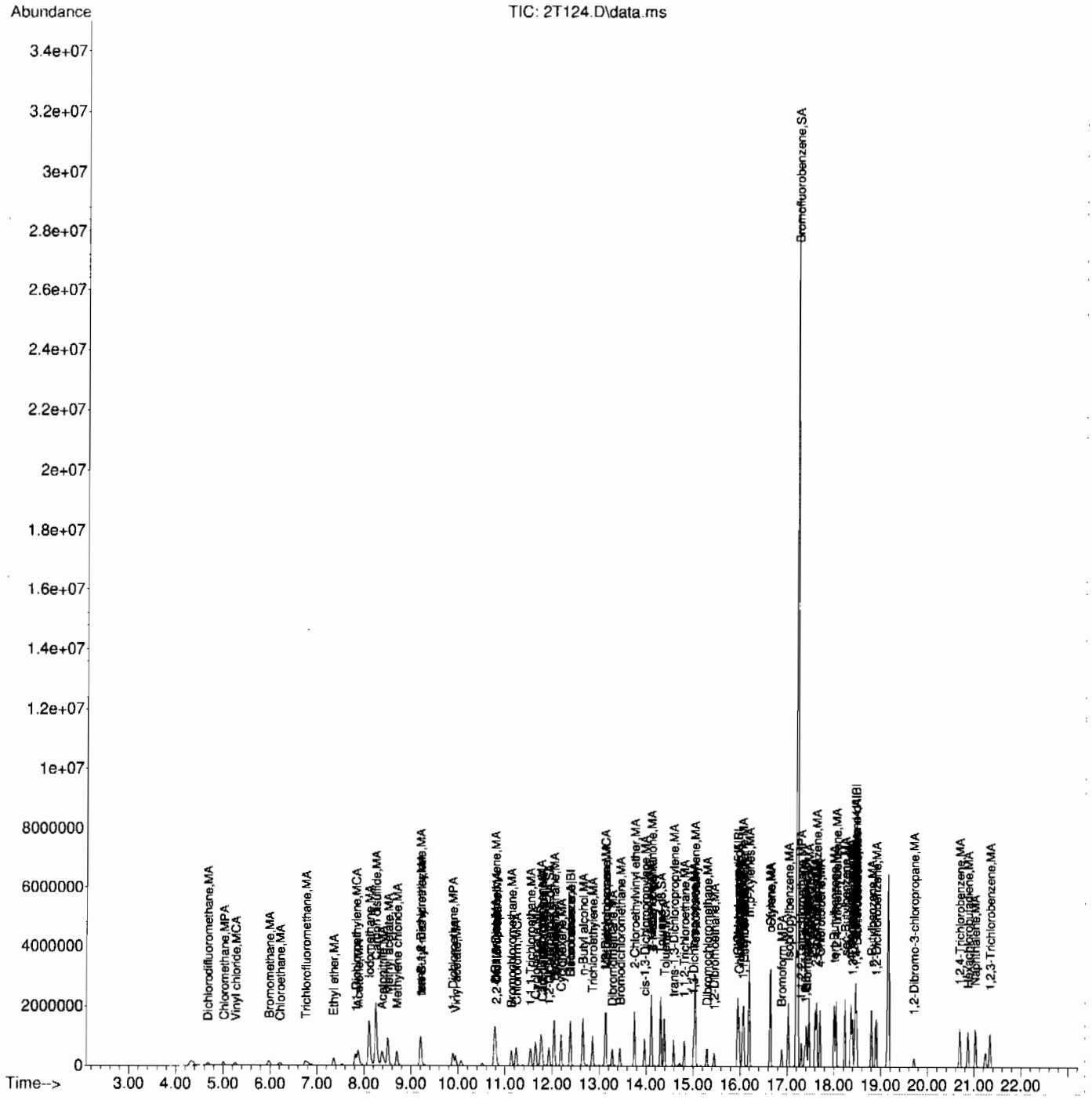

Miscellaneous

Prep LogBook

Analyst: CDS1 Verified by:_____

Batch: 882630

Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201874617		SW846 5030	06-JUL-2009 06:00	5 g	5 mL	1	SOIL
MB	1201876171		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201874620		SW846 5030	06-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201874621		SW846 5030	06-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201876172		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201876173		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
SAMPLE	232582001		SW846 5030	06-JUL-2009 11:00	5 g	5 mL	1	SOIL
PS	1201874618	232582001	SW846 5030	06-JUL-2009 11:06	5 g	5 mL	1	SOIL
PSD	1201874619	232582001	SW846 5030	06-JUL-2009 11:07	5 g	5 mL	1	SOIL
SAMPLE	232582002		SW846 5030	06-JUL-2009 11:01	5 g	5 mL	1	SOIL
SAMPLE	232585001		SW846 5030	06-JUL-2009 11:02	5 g	5 mL	1	SOIL
SAMPLE	232585003		SW846 5030	06-JUL-2009 14:03	5 g	5 mL	1	SOIL
SAMPLE	232585003		SW846 5030	07-JUL-2009 08:31	2 g	5 mL	2.5	SOIL
SAMPLE	232585004		SW846 5030	07-JUL-2009 08:32	5 g	5 mL	1	SOIL
SAMPLE	232591001		SW846 5030	06-JUL-2009 11:05	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/1/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: _____

(See pg. _____ for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 070109V2

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
Long ICV	W2VM090701-10			5+5	
BFB	UVM090604-02				1
Short ICV	W2VM090701-18			5+5	

Purge Amount	
5	Water Purge Vol:
	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
1 Jul 2009 09:58	2S301.D	UVM090604-02	--------	BFB	5ML	1	N/A	1	w	CDS1	N/A	O	
1 Jul 2009 10:25	2S302.D	120189------	--------	BLANK	5ML	1	N/A	2	w	CDS1	N/A	X	instrument blank
1 Jul 2009 10:53	2S303.D	W2VM090701-01	VSTD001	ICAL	5uL ea.	1	N/A	3	w	CDS1	N/A	O	UVM090603-02B+UVM090617-02C
1 Jul 2009 11:22	2S304.D	W2VM090701-02	VSTD002	ICAL	5uL ea.	1	N/A	4	w	CDS1	N/A	O	UVM090603-03B+UVM090617-03C
1 Jul 2009 11:51	2S305.D	W2VM090701-03	VSTD005	ICAL	5uL ea.	1	N/A	5	w	CDS1	N/A	O	UVM090603-04B+UVM090617-04C
1 Jul 2009 12:21	2S306.D	W2VM090701-04	VSTD010	ICAL	5uL ea.	1	N/A	6	w	CDS1	N/A	O	UVM090603-05B+UVM090617-05C
1 Jul 2009 12:50	2S307.D	W2VM090701-05	VSTD020	ICAL	5uL ea.	1	N/A	6	w	CDS1	N/A	O	UVM090603-06B+UVM090617-06C
1 Jul 2009 13:19	2S308.D	W2VM090701-06	VSTD050	ICAL	5uL ea.	1	N/A	7	w	CDS1	N/A	O	UVM090603-07B+UVM090617-07C
1 Jul 2009 13:48	2S309.D	W2VM090701-07	VSTD100	ICAL	5uL ea.	1	N/A	8	w	CDS1	N/A	O	UVM090603-07B+UVM090617-08C
1 Jul 2009 14:17	2S310.D	120146------	--------	BLANK	5ML	1	N/A	9	w	CDS1	N/A	X	instrument blank
1 Jul 2009 14:45	2S311.D	W2VM090701-08	VSTD0005	ICAL	5uL ea.	1	N/A	10	w	CDS1	N/A	O	UVM090603-01B+UVM090617-01C
1 Jul 2009 15:15	2S312.D	W2VM090701-09	LCS	ICV	5uL ea.	1	N/A	11	w	CDS1	N/A	X	UVM090605-01D+IVM090630-01 passes but see 2S313 for ICV
1 Jul 2009 15:44	2S313.D	W2VM090701-10	LCS	ICV	5uL ea.	1	N/A	12	w	CDS1	N/A	O	UVM090527-01E+IVM090630-01
1 Jul 2009 16:12	2S314.D	120146------	--------	BLANK	5ML	1	N/A	13	w	CDS1	N/A	X	instrument blank
1 Jul 2009 16:41	2S315.D	W2VM090701-11	VSTD005S	ICAL	5uL ea.	1	N/A	14	w	CDS1	N/A	O	UVM090701-01+UVM090625-01A
1 Jul 2009 17:10	2S316.D	W2VM090701-12	VSTD010S	ICAL	5uL ea.	1	N/A	15	w	CDS1	N/A	O	UVM090701-02+UVM090625-02A
1 Jul 2009 17:39	2S317.D	W2VM090701-13	VSTD025S	ICAL	5uL ea.	1	N/A	16	w	CDS1	N/A	O	UVM090701-03+UVM090625-03A
1 Jul 2009 18:08	2S318.D	W2VM090701-14	VSTD050S	ICAL	5uL ea.	1	N/A	17	w	CDS1	N/A	O	UVM090701-04+UVM090625-04A
1 Jul 2009 18:37	2S319.D	W2VM090701-15	VSTD100S	ICAL	5uL ea.	1	N/A	18	w	CDS1	N/A	O	UVM090701-05+UVM090625-05A
1 Jul 2009 19:07	2S320.D	W2VM090701-16	VSTD250S	ICAL	5uL ea.	1	N/A	19	w	CDS1	N/A	O	UVM090701-06+UVM090625-06A
1 Jul 2009 19:36	2S321.D	W2VM090701-17	VSTD500S	ICAL	5uL ea.	1	N/A	20	w	CDS1	N/A	O	UVM090701-07+UVM090625-07A
1 Jul 2009 20:05	2S322.D	120146-----	--------	BLANK	5ML	1	N/A	21	w	CDS1	N/A	X	instrument blank
1 Jul 2009 20:34	2S323.D	W2VM090701-18	LCS	ICV	5uL ea.	1	N/A	22	w	CDS1	N/A	O	UVM090701-08A+UVM090624-02A

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/6/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 25 for ICAL Std. Sol. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: _____

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	UVM090701-08A		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
LCS/MS	UVM090701-08A			5+5	
BFB	UVM090604-02				1
SHORT			5		
DHEC				5	

Purge Amount

5	Water Purge Vol:
	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
CV646	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
6 Jul 2009	06:43	2T101.D	UVM090604-02	--------	BFB	5mL	1	N/A	1	w	CDS1	N/A		
6 Jul 2009	06:57	2T102.D	W2VM090706-01	--------	CCV	5mL	1	N/A	1	w	CDS1	N/A		[A] UVM090617-017C+UVM0
6 Jul 2009	06:57	2T102BFB.D	W2VM090706-01	--------	CCV	5mL	1	N/A	1	w	CDS1	N/A		[A]
6 Jul 2009	07:27	2T103.D	W2VM090706-02	--------	LCS	5g	1	N/A	2	s	CDS1	N/A		MIX [A] UVM090527-01E+IVM0906
6 Jul 2009	07:55	2T104.D	W2VM090706-03	--------	LCS	5mL	1	N/A	3	w	CDS1	N/A		MIX [A] SOIL UVM090527-01E+IVM
6 Jul 2009	08:24	2T105.D	UVM090701-08A	--------	CCV	5mL	1	N/A	4	s	CDS1	N/A		5ML MIX [B]
6 Jul 2009	08:24	2T105SL.D	UVM090701-08A	--------	CCV	5mL	1	N/A	4	w	CDS1	N/A		5ML MIX [B]
6 Jul 2009	08:53	2T106.D	UVM090701-08A	--------	LCS	5g	1	N/A	5	s	CDS1	N/A		MIX [B] SOIL
6 Jul 2009	09:23	2T107.D	120182-----		----		1		6					
6 Jul 2009	09:52	2T108.D	120182-----	BLANK	----	5G	1	SOIL	7	s				
6 Jul 2009	10:21	2T109.D	120182-----	GEL	----	5ml	1	-	6	w				Tygon tubing
6 Jul 2009	10:51	2T110.D	120182-----	GEL	----	100uml	50	-	7	w				Fisher methanol lot 091463
6 Jul 2009	11:20	2T111.D	120182-----	GEL	----	100uml	50	-	10	w				B&J lot CY840
6 Jul 2009	11:50	2T112.D	120182-----	BLANK	----	5ml	1		11	w				
6 Jul 2009	12:19	2T113.D	120182-----	BLANK	----	5G	1	SOIL	12	s				
6 Jul 2009	12:47	2T114.D	232582001	LANL	882632	5g	1	-	13	s				SOIL
6 Jul 2009	13:16	2T115.D	232582002	LANL	882632	5g	1	-	14	s				soil
6 Jul 2009	13:45	2T116.D	232585001	LANL	882632	5g	1	-	15	s				soil
6 Jul 2009	14:14	2T117.D	232585003	LANL	882632	5g	1	-	16	s				SOIL
6 Jul 2009	14:43	2T118.D	232585004	LANL	882632	5g	1	-	17	s				SOIL
6 Jul 2009	15:13	2T119.D	232591001	LANL	882632	5g	1	-	18	s				SOIL
6 Jul 2009	15:41	2T120.D	232671001	LANL	882633	5mL	1	pH2	19	w				
6 Jul 2009	16:11	2T121.D	232671002	LANL	882633	5mL	1	pH2	20	w				
6 Jul 2009	16:40	2T122.D	232671005	LANL	882633	5mL	1	pH2	21	w				
6 Jul 2009	17:09	2T123.D	1201874618	LANL	882632	5g	1	-	22	s				ms 232582001 SOIL

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/6/2009 Method 8260/624 Operator: CDS1

REVIEWED BY:
DATE:

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 25 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number:

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	UVM090701-08A		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
LCS/MS	UVM090701-08A			5+5	
BFB	UVM090604-02				1
SHORT			5		
DHEC				5	

Purge Amount

5	Water Purge Vol:
	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
CV646	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
6 Jul 2009	17:37	2T124.D	1201874619	LANL	882632	5g	1	-	23	s				msd 232582001 SOIL
6 Jul 2009	18:06	2T125.D	1201874625	LANL	882633	5mL	1	pH2	24	w				ms 232671002
6 Jul 2009	18:35	2T126.D	1201874626	LANL	882633	5mL	1	pH2	25	w				msd 232671002
6 Jul 2009	19:04	2T127.D	120182-----	BLANK	----	5ml	1		26	w				
6 Jul 2009	19:33	2T128.D	120182-----	GEL	----	5ml	1	-	27	w				ZHE water

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GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2510

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	881964
Prep Batch Number:	881962

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232591001	CAMO-09-9946
1201873125	Method Blank (MB)
1201873126	Laboratory Control Sample (LCS)
1201873127	232591001(CAMO-09-9946) Matrix Spike (MS)
1201873128	232591001(CAMO-09-9946) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C,

Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232591001 (CAMO-09-9946) was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike (MS) Recovery Statement
The MS recoveries were not within the acceptance limits. The failures confirmed in the MSD and were attributed to matrix interference.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were not within the acceptance limits. The failures confirmed in the MS and were attributed to matrix interference.

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent differences (RPD) were not within the acceptance limits. The failures were attributed to matrix interference.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated

methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for confirmations and/or dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 708239. It is located in the Miscellaneous Section of the data report.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Additional Comments
Additional comments were not required for this SDG.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration
The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD6.I	HP Mass Spectrometer	HP6890/HP5973	DB-5MS	25m x 0.20mm x 0.33 um (5% Phenylmethylpolysiloxane)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: Dan Blackburn **Date:** 7-20-09

Roadmap for LANL 09-2510 SVOA

This roadmap was analyzed by jos00786 on 07-06-2009, 08:54.
This roadmap was reviewed by dan01134 on 07-07-2009, 09:09.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD6.i/s070209.b/s6g0216.d	232591001	02-JUL-2009	19:08	09-2510.sub	CAMO-09-9946	1	881964	USE

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD6.i/s070209.b/s6g0209-2.d	1201873125	mb	02-JUL-2009	16:31	09-2510.sub	SBLK01	1	881964	USE
☐	N	/chem/MSD6.i/s070209.b/s6g0210-2.d	1201873126	lcs	02-JUL-2009	16:54	09-2510.sub	SBLK01LCS	1	881964	USE
☐	N	/chem/MSD6.i/s070209.b/s6g0217.d	1201873127	ms	02-JUL-2009	19:30	09-2510.sub	CAMO-09-9946MS	1	881964	USE; SPIKE LOW
☐	N	/chem/MSD6.i/s070209.b/s6g0218.d	1201873128	msd	02-JUL-2009	19:53	09-2510.sub	CAMO-09-9946MSD	1	881964	USE; SPIKE LOW

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232591001	Date Received:	06/30/2009 09:15	%Moisture:	18.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9946	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 19:08	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s6g0216.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	410	ug/kg	82.0	410
108-95-2	Phenol	U	410	ug/kg	82.0	410
95-57-8	2-Chlorophenol	U	410	ug/kg	82.0	410
106-46-7	1,4-Dichlorobenzene	U	410	ug/kg	82.0	410
621-64-7	N-Nitrosodipropylamine	U	410	ug/kg	82.0	410
59-50-7	4-Chloro-3-methylphenol	U	410	ug/kg	82.0	410
83-32-9	Acenaphthene	U	41.0	ug/kg	13.5	41.0
121-14-2	2,4-Dinitrotoluene	U	410	ug/kg	41.0	410
100-02-7	4-Nitrophenol	U	410	ug/kg	135	410
87-86-5	Pentachlorophenol	U	410	ug/kg	102	410
129-00-0	Pyrene	U	41.0	ug/kg	12.3	41.0
110-86-1	Pyridine	U	410	ug/kg	82.0	410
62-53-3	Aniline	U	410	ug/kg	123	410
111-44-4	bis(2-Chloroethyl) ether	U	410	ug/kg	82.0	410
541-73-1	1,3-Dichlorobenzene	U	410	ug/kg	82.0	410
100-51-6	Benzyl alcohol	U	410	ug/kg	123	410
95-50-1	1,2-Dichlorobenzene	U	410	ug/kg	82.0	410
108-60-1	bis(2-Chloroisopropyl)ether	U	410	ug/kg	82.0	410
95-48-7	o-Cresol	U	410	ug/kg	82.0	410
65794-96-9	m,p-Cresols	U	410	ug/kg	123	410
67-72-1	Hexachloroethane	U	410	ug/kg	82.0	410
98-95-3	Nitrobenzene	U	410	ug/kg	82.0	410
78-59-1	Isophorone	U	410	ug/kg	82.0	410
88-75-5	2-Nitrophenol	U	410	ug/kg	82.0	410
105-67-9	2,4-Dimethylphenol	U	410	ug/kg	143	410
111-91-1	bis(2-Chloroethoxy)methane	U	410	ug/kg	82.0	410
120-83-2	2,4-Dichlorophenol	U	410	ug/kg	82.0	410
65-85-0	Benzoic acid	U	820	ug/kg	205	820
91-20-3	Naphthalene	U	41.0	ug/kg	12.3	41.0
106-47-8	4-Chloroaniline	U	410	ug/kg	82.0	410
87-68-3	Hexachlorobutadiene	U	410	ug/kg	82.0	410
91-57-6	2-Methylnaphthalene	U	41.0	ug/kg	8.20	41.0
77-47-4	Hexachlorocyclopentadiene	U	410	ug/kg	82.0	410
88-06-2	2,4,6-Trichlorophenol	U	410	ug/kg	82.0	410
95-95-4	2,4,5-Trichlorophenol	U	410	ug/kg	82.0	410
91-58-7	2-Chloronaphthalene	U	41.0	ug/kg	13.5	41.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	410	ug/kg	82.0	410
99-09-2	3-Nitroaniline	U	410	ug/kg	82.0	410

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232591001	Date Received:	06/30/2009 09:15	%Moisture:	18.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9946	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.1	Dilution:	1
Run Date:	07/02/2009 19:08	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s6g0216.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	410	ug/kg	82.0	410
606-20-2	2,6-Dinitrotoluene	U	410	ug/kg	41.0	410
208-96-8	Acenaphthylene	U	41.0	ug/kg	12.3	41.0
51-28-5	2,4-Dinitrophenol	U	820	ug/kg	156	820
132-64-9	Dibenzofuran	U	410	ug/kg	82.0	410
84-66-2	Diethylphthalate	U	410	ug/kg	82.0	410
86-73-7	Fluorene	U	41.0	ug/kg	12.3	41.0
7005-72-3	4-Chlorophenylphenylether	U	410	ug/kg	82.0	410
534-52-1	2-Methyl-4,6-dinitrophenol	U	410	ug/kg	82.0	410
100-01-6	4-Nitroaniline	U	410	ug/kg	123	410
	p-Nitroaniline					
122-39-4	Diphenylamine	U	410	ug/kg	82.0	410
122-66-7	Azobenzene	U	410	ug/kg	82.0	410
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	410	ug/kg	82.0	410
118-74-1	Hexachlorobenzene	U	410	ug/kg	82.0	410
85-01-8	Phenanthrene	U	41.0	ug/kg	12.3	41.0
120-12-7	Anthracene	U	41.0	ug/kg	8.20	41.0
84-74-2	Di-n-butylphthalate	U	410	ug/kg	82.0	410
206-44-0	Fluoranthene	U	41.0	ug/kg	12.3	41.0
85-68-7	Butylbenzylphthalate	U	410	ug/kg	82.0	410
56-55-3	Benzo(a)anthracene	U	41.0	ug/kg	12.3	41.0
91-94-1	3,3'-Dichlorobenzidine	U	410	ug/kg	123	410
218-01-9	Chrysene	U	41.0	ug/kg	12.3	41.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	410	ug/kg	82.0	410
117-84-0	Di-n-octylphthalate	U	410	ug/kg	82.0	410
205-99-2	Benzo(b)fluoranthene	U	41.0	ug/kg	12.3	41.0
207-08-9	Benzo(k)fluoranthene	U	41.0	ug/kg	12.3	41.0
50-32-8	Benzo(a)pyrene	U	41.0	ug/kg	12.3	41.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	41.0	ug/kg	12.3	41.0
53-70-3	Dibenzo(a,h)anthracene	U	41.0	ug/kg	12.3	41.0
191-24-2	Benzo(ghi)perylene	U	41.0	ug/kg	12.3	41.0
120-82-1	1,2,4-Trichlorobenzene	U	410	ug/kg	82.0	410

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	467	ug/kg		JA
58-22-0	Androst-4-en-3-one, 17-hydroxy-, (17.bet	9.38	332	ug/kg	86	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 19:08	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s6g0216.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	10.02	275	ug/kg		J
	Unknown	10.8	209	ug/kg		J
	Unknown	12.84	1450	ug/kg		J
70038-20-9	7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet	13.65	1550	ug/kg	91	NJ

QC Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 09-2510

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201873125	MB for batch 881962	65	70	65	68	57	90
1201873126	LCS for batch 881962	66	65	70	70	61	81
232591001	CAMO-09-9946	48	54	46	47	51	70
1201873127	CAMO-09-9946MS	43	43	44	44	48	59
1201873128	CAMO-09-9946MSD	52	54	52	52	56	66

Surrogate			Acceptance Limits
2FP	=	2-Fluorophenol	(35%-96%)
PHL	=	Phenol-d5	(36%-96%)
NBZ	=	Nitrobenzene-d5	(34%-104%)
FBP	=	2-Fluorobiphenyl	(36%-100%)
TBP	=	2,4,6-Tribromophenol	(37%-106%)
TPH	=	p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: LCS for batch 881962
Lab Sample ID: 1201873126
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 16:54
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1130	68	31-95
108-95-2	LCS	Phenol	1670	0.0	1090	65	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1160	69	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	1090	65	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1140	68	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1160	70	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1100	66	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1170	70	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1070	64	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	966	58	38-116
129-00-0	LCS	Pyrene	1670	0.0	1220	73	43-108
110-86-1	LCS	Pyridine	1670	0.0	1100	66	13-129
62-53-3	LCS	Aniline	1670	0.0	1300	78	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1130	68	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	1100	66	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	727	44	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	1160	70	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1290	77	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1150	69	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1300	78	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	1080	65	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1210	73	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: LCS for batch 881962
Lab Sample ID: 1201873126
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 16:54
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1190	72	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1200	72	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1180	71	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1200	72	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1160	70	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	1060	64	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1030	62	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1210	72	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1130	68	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1260	76	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1060	64	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1040	62	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1180	71	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1160	69	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1230	74	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1310	79	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1170	70	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1180	71	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1180	71	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	818	49	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1190	71	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1200	72	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 881962 **Matrix:** SOIL

Lab Sample ID: 1201873126

Instrument: MSD6.I **Analysis Date:** 07/02/2009 16:54 **Dilution:** 1

Analyst: JMB3 **Prep Batch ID:** 881962

Inj. Vol: .5 uL **Batch ID:** 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1040	62	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1150	69	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	993	60	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	1390	84	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1200	72	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1280	77	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1130	68	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1150	69	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1120	67	45-107
120-12-7	LCS	Anthracene	1670	0.0	1170	70	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1250	75	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1180	71	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1310	79	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1170	70	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1200	72	45-98
218-01-9	LCS	Chrysene	1670	0.0	1240	74	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1360	81	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1340	81	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1210	73	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1280	77	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1250	75	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1200	72	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 881962
Matrix: SOIL
Lab Sample ID: 1201873126
Instrument: MSD6.I
Analysis Date: 07/02/2009 16:54
Dilution: 1
Analyst: JMB3
Prep Batch ID: 881962
Inj. Vol: .5 uL
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1190	71	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1170	70	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1170	70	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	09-2510	**Sample Type:**	Matrix Spike
Client ID:	CAMO-09-9946MS	**Matrix:**	R
Lab Sample ID:	1201873127	**%Moisture:**	18.7
Instrument:	MSD6.I	**Analysis Date:**	07/02/2009 19:30
Analyst:	JMB3	**Prep Batch ID:**	881962
Inj. Vol:	.5 uL	**Batch ID:**	881964

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	2040	0.00	U	888	44	32-90
108-95-2	MS	Phenol	2040	0.00	U	911	45	32-105
95-57-8	MS	2-Chlorophenol	2040	0.00	U	915	45	33-106
106-46-7	MS	1,4-Dichlorobenzene	2040	0.00	U	457	22 *	33-95
621-64-7	MS	N-Nitrosodipropylamine	2040	0.00	U	881	43	31-109
59-50-7	MS	4-Chloro-3-methylphenol	2040	0.00	U	1120	55	38-119
83-32-9	MS	Acenaphthene	2040	0.00	U	929	46	39-100
121-14-2	MS	2,4-Dinitrotoluene	2040	0.00	U	1130	56	42-107
100-02-7	MS	4-Nitrophenol	2040	0.00	U	1330	65	24-120
87-86-5	MS	Pentachlorophenol	2040	0.00	U	1040	51	26-121
129-00-0	MS	Pyrene	2040	0.00	U	1130	55	34-120
110-86-1	MS	Pyridine	2040	0.00	U	845	41	30-95
62-53-3	MS	Aniline	2040	0.00	U	752	37	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	2040	0.00	U	824	40	34-101
541-73-1	MS	1,3-Dichlorobenzene	2040	0.00	U	427	21 *	31-97
100-51-6	MS	Benzyl alcohol	2040	0.00	U	1900	93	17-120
95-50-1	MS	1,2-Dichlorobenzene	2040	0.00	U	555	27 *	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	2040	0.00	U	882	43	32-113
95-48-7	MS	o-Cresol	2040	0.00	U	1380	68	31-119
65794-96-9	MS	m,p-Cresols	2040	0.00	U	1130	55	35-125
67-72-1	MS	Hexachloroethane	2040	0.00	U	354	17 *	30-100
98-95-3	MS	Nitrobenzene	2040	0.00	U	940	46	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-9946MS
Lab Sample ID: 1201873127
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:30
Prep Batch ID: 881962
Batch ID: 881964

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	2040	0.00	U	1000	49	34-110
88-75-5	MS	2-Nitrophenol	2040	0.00	U	941	46	32-108
105-67-9	MS	2,4-Dimethylphenol	2040	0.00	U	903	44	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	2040	0.00	U	966	47	35-108
120-83-2	MS	2,4-Dichlorophenol	2040	0.00	U	1010	50	38-110
65-85-0	MS	Benzoic acid	2040	0.00	U	913	45	18-134
91-20-3	MS	Naphthalene	2040	0.00	U	729	36	31-105
106-47-8	MS	4-Chloroaniline	2040	0.00	U	975	48	29-123
87-68-3	MS	Hexachlorobutadiene	2040	0.00	U	516	25 *	31-109
91-57-6	MS	2-Methylnaphthalene	2040	0.00	U	935	46	32-110
77-47-4	MS	Hexachlorocyclopentadiene	2040	0.00	U	461	23	21-122
88-06-2	MS	2,4,6-Trichlorophenol	2040	0.00	U	981	48	37-108
95-95-4	MS	2,4,5-Trichlorophenol	2040	0.00	U	1070	52	37-116
91-58-7	MS	2-Chloronaphthalene	2040	0.00	U	922	45	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	2040	0.00	U	1160	57	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	2040	0.00	U	1260	62	39-117
131-11-3	MS	Dimethylphthalate	2040	0.00	U	1080	53	41-105
606-20-2	MS	2,6-Dinitrotoluene	2040	0.00	U	1090	54	41-103
208-96-8	MS	Acenaphthylene	2040	0.00	U	1000	49	41-103
51-28-5	MS	2,4-Dinitrophenol	2040	0.00	U	600	29	25-104
132-64-9	MS	Dibenzofuran	2040	0.00	U	1040	51	40-114
84-66-2	MS	Diethylphthalate	2040	0.00	U	1120	55	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-9946MS
Lab Sample ID: 1201873127
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:30
Prep Batch ID: 881962
Batch ID: 881964
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	2040	0.00	U	946	46 *	48-99
7005-72-3	MS	4-Chlorophenylphenylether	2040	0.00	U	1010	50	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	2040	0.00	U	847	42	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	2040	0.00	U	1390	68	35-139
122-39-4	MS	Diphenylamine	2040	0.00	U	965	47	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	2040	0.00	U	1140	56	37-118
101-55-3	MS	4-Bromophenylphenylether	2040	0.00	U	1020	50	39-112
118-74-1	MS	Hexachlorobenzene	2040	0.00	U	1050	51	38-113
85-01-8	MS	Phenanthrene	2040	0.00	U	1060	52	38-110
120-12-7	MS	Anthracene	2040	0.00	U	1100	54	38-112
84-74-2	MS	Di-n-butylphthalate	2040	0.00	U	1170	58	42-119
206-44-0	MS	Fluoranthene	2040	0.00	U	1130	55	38-119
85-68-7	MS	Butylbenzylphthalate	2040	0.00	U	1200	59	39-126
56-55-3	MS	Benzo(a)anthracene	2040	0.00	U	1100	54	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	2040	0.00	U	533	26 *	35-106
218-01-9	MS	Chrysene	2040	0.00	U	1120	55	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	2040	0.00	U	1230	61	40-125
117-84-0	MS	Di-n-octylphthalate	2040	0.00	U	1210	59	30-147
205-99-2	MS	Benzo(b)fluoranthene	2040	0.00	U	1070	53	38-117
207-08-9	MS	Benzo(k)fluoranthene	2040	0.00	U	1200	59	39-120
50-32-8	MS	Benzo(a)pyrene	2040	0.00	U	1140	56	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	2040	0.00	U	1070	53	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-9946MS
Lab Sample ID: 1201873127
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:30
Prep Batch ID: 881962
Batch ID: 881964
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	2040	0.00	U	1070	52	32-124
191-24-2	MS	Benzo(ghi)perylene	2040	0.00	U	993	49	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	2040	0.00	U	696	34	31-105

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD N-Methyl-N-nitrosomethylam	2040	0.00	U	1130	55	32-90	24	0-30
108-95-2	MSD Phenol	2040	0.00	U	1190	58	32-105	27	0-30
95-57-8	MSD 2-Chlorophenol	2040	0.00	U	1190	58	33-106	26	0-30
106-46-7	MSD 1,4-Dichlorobenzene	2040	0.00	U	513	25 *	33-95	12	0-30
621-64-7	MSD N-Nitrosodipropylamine	2040	0.00	U	1140	56	31-109	25	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	2040	0.00	U	1360	67	38-119	19	0-30
83-32-9	MSD Acenaphthene	2040	0.00	U	1120	55	39-100	19	0-30
121-14-2	MSD 2,4-Dinitrotoluene	2040	0.00	U	1300	64	42-107	14	0-30
100-02-7	MSD 4-Nitrophenol	2040	0.00	U	1520	75	24-120	14	0-30
87-86-5	MSD Pentachlorophenol	2040	0.00	U	1260	62	26-121	19	0-30
129-00-0	MSD Pyrene	2040	0.00	U	1300	64	34-120	14	0-30
110-86-1	MSD Pyridine	2040	0.00	U	982	48	30-95	15	0-30
62-53-3	MSD Aniline	2040	0.00	U	918	45	34-111	20	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	2040	0.00	U	1030	50	34-101	22	0-30
541-73-1	MSD 1,3-Dichlorobenzene	2040	0.00	U	475	23 *	31-97	11	0-30
100-51-6	MSD Benzyl alcohol	2040	0.00	U	315	15 *	17-120	143 *	0-30
95-50-1	MSD 1,2-Dichlorobenzene	2040	0.00	U	627	31 *	32-102	12	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	2040	0.00	U	1070	53	32-113	19	0-30
95-48-7	MSD o-Cresol	2040	0.00	U	1270	62	31-119	8	0-30
65794-96-9	MSD m,p-Cresols	2040	0.00	U	1390	68	35-125	21	0-30
67-72-1	MSD Hexachloroethane	2040	0.00	U	375	18 *	30-100	6	0-30
98-95-3	MSD Nitrobenzene	2040	0.00	U	1170	57	33-108	22	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD Isophorone	2040	0.00	U	1230	60	34-110	21	0-30
88-75-5	MSD 2-Nitrophenol	2040	0.00	U	1150	57	32-108	20	0-30
105-67-9	MSD 2,4-Dimethylphenol	2040	0.00	U	1100	54	32-115	20	0-30
111-91-1	MSD bis(2-Chloroethoxy)methane	2040	0.00	U	1190	59	35-108	21	0-30
120-83-2	MSD 2,4-Dichlorophenol	2040	0.00	U	1270	62	38-110	22	0-30
65-85-0	MSD Benzoic acid	2040	0.00	U	1120	55	18-134	20	0-30
91-20-3	MSD Naphthalene	2040	0.00	U	868	43	31-105	17	0-30
106-47-8	MSD 4-Chloroaniline	2040	0.00	U	1200	59	29-123	21	0-30
87-68-3	MSD Hexachlorobutadiene	2040	0.00	U	576	28 *	31-109	11	0-30
91-57-6	MSD 2-Methylnaphthalene	2040	0.00	U	1120	55	32-110	18	0-30
77-47-4	MSD Hexachlorocyclopentadiene	2040	0.00	U	602	30	21-122	27	0-30
88-06-2	MSD 2,4,6-Trichlorophenol	2040	0.00	U	1210	59	37-108	21	0-30
95-95-4	MSD 2,4,5-Trichlorophenol	2040	0.00	U	1270	62	37-116	17	0-30
91-58-7	MSD 2-Chloronaphthalene	2040	0.00	U	1120	55	37-103	19	0-30
88-74-4	MSD 2-Nitroaniline *o-Nitroaniline*	2040	0.00	U	1400	69	36-115	19	0-30
99-09-2	MSD 3-Nitroaniline *m-Nitroaniline*	2040	0.00	U	1520	74	39-117	19	0-30
131-11-3	MSD Dimethylphthalate	2040	0.00	U	1290	63	41-105	17	0-30
606-20-2	MSD 2,6-Dinitrotoluene	2040	0.00	U	1300	64	41-103	17	0-30
208-96-8	MSD Acenaphthylene	2040	0.00	U	1210	59	41-103	19	0-30
51-28-5	MSD 2,4-Dinitrophenol	2040	0.00	U	869	43	25-104	37 *	0-30
132-64-9	MSD Dibenzofuran	2040	0.00	U	1240	61	40-114	18	0-30
84-66-2	MSD Diethylphthalate	2040	0.00	U	1310	64	43-110	15	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Prep Batch ID: 881962
Batch ID: 881964
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	2040	0.00	U	1110	55	48-99	16	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	2040	0.00	U	1210	59	42-111	18	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	2040	0.00	U	1080	53	19-118	25	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	2040	0.00	U	1620	80	35-139	15	0-30
122-39-4	MSD	Diphenylamine	2040	0.00	U	1130	56	41-112	16	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	2040	0.00	U	1330	65	37-118	16	0-30
101-55-3	MSD	4-Bromophenylphenylether	2040	0.00	U	1220	60	39-112	17	0-30
118-74-1	MSD	Hexachlorobenzene	2040	0.00	U	1240	61	38-113	17	0-30
85-01-8	MSD	Phenanthrene	2040	0.00	U	1260	62	38-110	17	0-30
120-12-7	MSD	Anthracene	2040	0.00	U	1250	61	38-112	13	0-30
84-74-2	MSD	Di-n-butylphthalate	2040	0.00	U	1340	66	42-119	13	0-30
206-44-0	MSD	Fluoranthene	2040	0.00	U	1290	63	38-119	13	0-30
85-68-7	MSD	Butylbenzylphthalate	2040	0.00	U	1380	68	39-126	14	0-30
56-55-3	MSD	Benzo(a)anthracene	2040	0.00	U	1280	63	39-110	15	0-30
91-94-1	MSD	3,3'-Dichlorobenzidine	2040	0.00	U	643	32 *	35-106	19	0-30
218-01-9	MSD	Chrysene	2040	0.00	U	1310	64	39-109	16	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	2040	0.00	U	1430	70	40-125	15	0-30
117-84-0	MSD	Di-n-octylphthalate	2040	0.00	U	1400	69	30-147	15	0-30
205-99-2	MSD	Benzo(b)fluoranthene	2040	0.00	U	1350	66	38-117	23	0-30
207-08-9	MSD	Benzo(k)fluoranthene	2040	0.00	U	1280	63	39-120	7	0-30
50-32-8	MSD	Benzo(a)pyrene	2040	0.00	U	1330	65	40-115	15	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	2040	0.00	U	1330	65	32-120	21	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2510
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Prep Batch ID: 881962
Batch ID: 881964
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD	Dibenzo(a,h)anthracene	2040	0.00	U	1360	67	32-124	25	0-30
191-24-2	MSD	Benzo(ghi)perylene	2040	0.00	U	1260	62	28-119	24	0-30
120-82-1	MSD	1,2,4-Trichlorobenzene	2040	0.00	U	809	40	31-105	15	0-30

Method Blank Summary

SDG Number:	09-2510	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881962	Instrument ID:	MSD6.I	Data File:	s6g0209-1.d
Lab Sample ID:	1201873125	Prep Date:	07/02/2009 13:47	Analyzed:	07/02/09 16:31
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 881962	1201873126	s6g0210-1.d	07/02/09	1654
02	CAMO-09-9946	232591001	s6g0216.d	07/02/09	1908
03	CAMO-09-9946MS	1201873127	s6g0217.d	07/02/09	1930
04	CAMO-09-9946MSD	1201873128	s6g0218.d	07/02/09	1953

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2510

Instrument ID: MSD6.I **Injection Date/Time:** 02-JUL-09 15:10

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD6.i/s070209.b/s6g0205.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	57
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	47.2
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	50.9
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	7
275	10 - 30% of mass 198	24.1
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	74.7
442	Greater than 40% of mass 198	82.6
443	17 - 23% of mass 442	19.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090626-05.3	/chem/MSD6.i/s070209.b/s6g020	02-JUL-09 15:23
APCVS	WBN090619-01.2	/chem/MSD6.i/s070209.b/s6g020	02-JUL-09 15:46
SBLK01	1201873125	/chem/MSD6.i/s070209.b/s6g020	02-JUL-09 16:31
SBLK01LCS	1201873126	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 16:54
CAMO-09-9946	232591001	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 19:08
CAMO-09-9946MS	1201873127	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 19:30
CAMO-09-9946MSD	1201873128	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 19:53

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2510

Instrument ID: MSD6.I **Injection Date/Time:** 25-JUN-09 17:33

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD6.i/s062509.b/s6f2501.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	50.8
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	43.7
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	49.2
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	24.6
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	75.6
442	Greater than 40% of mass 198	95
443	17 - 23% of mass 442	19.1

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICAL	WBN090602-08	/chem/MSD6.i/s062509.b/s6f2503	25-JUN-09 18:09
MEGAICAL	WBN090602-07	/chem/MSD6.i/s062509.b/s6f2504	25-JUN-09 18:37
MEGAICAL	WBN090602-06	/chem/MSD6.i/s062509.b/s6f2505	25-JUN-09 19:04
MEGAICAL	WBN090602-05.1	/chem/MSD6.i/s062509.b/s6f2506	25-JUN-09 19:33
MEGAICAL	WBN090602-04	/chem/MSD6.i/s062509.b/s6f2507	25-JUN-09 20:01
MEGAICAL	WBN090602-03	/chem/MSD6.i/s062509.b/s6f2508	25-JUN-09 20:29
MEGAICAL	WBN090602-02	/chem/MSD6.i/s062509.b/s6f2509	25-JUN-09 20:56
MEGAICAL	WBN090602-01	/chem/MSD6.i/s062509.b/s6f2510	25-JUN-09 21:25
APICAL	WBN090528-07	/chem/MSD6.i/s062509.b/s6f2511	25-JUN-09 21:54
APICAL	WBN090528-06	/chem/MSD6.i/s062509.b/s6f2512	25-JUN-09 22:17
APICAL	WBN090528-05.1	/chem/MSD6.i/s062509.b/s6f2513	25-JUN-09 22:39
APICAL	WBN090528-04	/chem/MSD6.i/s062509.b/s6f2514	25-JUN-09 23:02
APICAL	WBN090528-03	/chem/MSD6.i/s062509.b/s6f2515	25-JUN-09 23:24
APICAL	WBN090528-02	/chem/MSD6.i/s062509.b/s6f2516	25-JUN-09 23:47
APICAL	WBN090528-01	/chem/MSD6.i/s062509.b/s6f2517	26-JUN-09 00:08
MEGAICV	WBN090602-09.1	/chem/MSD6.i/s062509.b/s6f2525	26-JUN-09 03:11

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2510

Instrument ID: MSD6.I **Injection Date/Time:** 25-JUN-09 17:33

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD6.i/s062509.b/s6f2501.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	50.8
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	43.7
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	49.2
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	24.6
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	75.6
442	Greater than 40% of mass 198	95
443	17 - 23% of mass 442	19.1

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
APICV	WBN090528-08.1	/chem/MSD6.i/s062509.b/s6f2526	26-JUN-09 03:39

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 09-2510

Instrument: MSD6.I

STD Analysis Time: 02-JUL-09 15:23

GC Column: J&W DB-5MS

Data File: s6g0206.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	532813		4	1990426		4.88	1102206		6.13	1854401		7.32	1763017		9.75	1624774		11.5
Upper Limit	1065626		4.5	3980852		5.38	2204412		6.63	3708802		7.82	3526034		10.3	3249548		12.0
Lower Limit	266407		3.5	995213		4.38	551103		5.63	927201		6.82	881509		9.25	812387		11.0
Sample ID																		
BLK01	385534		4	1450103		4.87	843657		6.13	1460742		7.31	1292833		9.74	1018273		11.5
BLK01LCS	373584		4	1481824		4.87	843469		6.13	1482578		7.31	1335253		9.74	1213021		11.5
CAMO-09-9946	438598		4	1678879		4.87	973295		6.13	1652065		7.31	1507908		9.74	1264727		11.5
CAMO-09-9946MS	434735		3.99	1644563		4.87	931304		6.13	1661789		7.31	1548770		9.75	1413918		11.5
CAMO-09-9946MSD	440612		3.99	1719388		4.87	968859		6.13	1683763		7.32	1551911		9.75	1427959		11.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 19:08	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s6g0216.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	410	ug/kg	82.0	410
108-95-2	Phenol	U	410	ug/kg	82.0	410
95-57-8	2-Chlorophenol	U	410	ug/kg	82.0	410
106-46-7	1,4-Dichlorobenzene	U	410	ug/kg	82.0	410
621-64-7	N-Nitrosodipropylamine	U	410	ug/kg	82.0	410
59-50-7	4-Chloro-3-methylphenol	U	410	ug/kg	82.0	410
83-32-9	Acenaphthene	U	41.0	ug/kg	13.5	41.0
121-14-2	2,4-Dinitrotoluene	U	410	ug/kg	41.0	410
100-02-7	4-Nitrophenol	U	410	ug/kg	135	410
87-86-5	Pentachlorophenol	U	410	ug/kg	102	410
129-00-0	Pyrene	U	41.0	ug/kg	12.3	41.0
110-86-1	Pyridine	U	410	ug/kg	82.0	410
62-53-3	Aniline	U	410	ug/kg	123	410
111-44-4	bis(2-Chloroethyl) ether	U	410	ug/kg	82.0	410
541-73-1	1,3-Dichlorobenzene	U	410	ug/kg	82.0	410
100-51-6	Benzyl alcohol	U	410	ug/kg	123	410
95-50-1	1,2-Dichlorobenzene	U	410	ug/kg	82.0	410
108-60-1	bis(2-Chloroisopropyl)ether	U	410	ug/kg	82.0	410
95-48-7	o-Cresol	U	410	ug/kg	82.0	410
65794-96-9	m,p-Cresols	U	410	ug/kg	123	410
67-72-1	Hexachloroethane	U	410	ug/kg	82.0	410
98-95-3	Nitrobenzene	U	410	ug/kg	82.0	410
78-59-1	Isophorone	U	410	ug/kg	82.0	410
88-75-5	2-Nitrophenol	U	410	ug/kg	82.0	410
105-67-9	2,4-Dimethylphenol	U	410	ug/kg	143	410
111-91-1	bis(2-Chloroethoxy)methane	U	410	ug/kg	82.0	410
120-83-2	2,4-Dichlorophenol	U	410	ug/kg	82.0	410
65-85-0	Benzoic acid	U	820	ug/kg	205	820
91-20-3	Naphthalene	U	41.0	ug/kg	12.3	41.0
106-47-8	4-Chloroaniline	U	410	ug/kg	82.0	410
87-68-3	Hexachlorobutadiene	U	410	ug/kg	82.0	410
91-57-6	2-Methylnaphthalene	U	41.0	ug/kg	8.20	41.0
77-47-4	Hexachlorocyclopentadiene	U	410	ug/kg	82.0	410
88-06-2	2,4,6-Trichlorophenol	U	410	ug/kg	82.0	410
95-95-4	2,4,5-Trichlorophenol	U	410	ug/kg	82.0	410
91-58-7	2-Chloronaphthalene	U	41.0	ug/kg	13.5	41.0
88-74-4	2-Nitroaniline	U	410	ug/kg	82.0	410
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	410	ug/kg	82.0	410

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232591001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9946	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 19:08	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s6g0216.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	410	ug/kg	82.0	410
606-20-2	2,6-Dinitrotoluene	U	410	ug/kg	41.0	410
208-96-8	Acenaphthylene	U	41.0	ug/kg	12.3	41.0
51-28-5	2,4-Dinitrophenol	U	820	ug/kg	156	820
132-64-9	Dibenzofuran	U	410	ug/kg	82.0	410
84-66-2	Diethylphthalate	U	410	ug/kg	82.0	410
86-73-7	Fluorene	U	41.0	ug/kg	12.3	41.0
7005-72-3	4-Chlorophenylphenylether	U	410	ug/kg	82.0	410
534-52-1	2-Methyl-4,6-dinitrophenol	U	410	ug/kg	82.0	410
100-01-6	4-Nitroaniline	U	410	ug/kg	123	410
	p-Nitroaniline					
122-39-4	Diphenylamine	U	410	ug/kg	82.0	410
122-66-7	Azobenzene	U	410	ug/kg	82.0	410
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	410	ug/kg	82.0	410
118-74-1	Hexachlorobenzene	U	410	ug/kg	82.0	410
85-01-8	Phenanthrene	U	41.0	ug/kg	12.3	41.0
120-12-7	Anthracene	U	41.0	ug/kg	8.20	41.0
84-74-2	Di-n-butylphthalate	U	410	ug/kg	82.0	410
206-44-0	Fluoranthene	U	41.0	ug/kg	12.3	41.0
85-68-7	Butylbenzylphthalate	U	410	ug/kg	82.0	410
56-55-3	Benzo(a)anthracene	U	41.0	ug/kg	12.3	41.0
91-94-1	3,3'-Dichlorobenzidine	U	410	ug/kg	123	410
218-01-9	Chrysene	U	41.0	ug/kg	12.3	41.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	410	ug/kg	82.0	410
117-84-0	Di-n-octylphthalate	U	410	ug/kg	82.0	410
205-99-2	Benzo(b)fluoranthene	U	41.0	ug/kg	12.3	41.0
207-08-9	Benzo(k)fluoranthene	U	41.0	ug/kg	12.3	41.0
50-32-8	Benzo(a)pyrene	U	41.0	ug/kg	12.3	41.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	41.0	ug/kg	12.3	41.0
53-70-3	Dibenzo(a,h)anthracene	U	41.0	ug/kg	12.3	41.0
191-24-2	Benzo(ghi)perylene	U	41.0	ug/kg	12.3	41.0
120-82-1	1,2,4-Trichlorobenzene	U	410	ug/kg	82.0	410

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	467	ug/kg		JA
58-22-0	Androst-4-en-3-one, 17-hydroxy-, (17.bet	9.38	332	ug/kg	86	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232591001	Date Received:	06/30/2009 09:15	%Moisture:	18.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9946	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 19:08	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s6g0216.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	10.02	275	ug/kg		J
	Unknown	10.8	209	ug/kg		J
	Unknown	12.84	1450	ug/kg		J
70038-20-9	7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet	13.65	1550	ug/kg	91	NJ

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0216.d
Lab Smp Id: 232591001 Client Smp ID: CAMO-09-9946
Inj Date : 02-JUL-2009 19:08
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232591001|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	18.74130	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.999	3.999	(1.000)	438598	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1678879	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	973295	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1652065	40.0000	
* 91 Chrysene-d12	240	9.739	9.745	(1.000)	1507908	40.0000	
* 98 Perylene-d12	264	11.486	11.492	(1.000)	1264727	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.796)	571398	47.9511	1960
$ 5 Phenol-d5	99	3.710	3.710	(0.928)	861962	53.9976	2210
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	342906	23.0556	945
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	576322	23.3142	956
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.099)	184554	51.2913	2100
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	841512	34.9445	1430

ION RATIO REPORT

SV REPORT

Data file: s6g0216.d
Report Date: 07/02/2009 19:37
Lab. ID: 232591001 SampleType: SAMPLE
Injection Date: 02-JUL-2009 19:08
Operator: JMB3 Instrument: MSD6.i
Sample Info: |232591001|881964|1|SVM|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2510
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
1 N-Methyl-N-nitrosomethylamine				CAS#: 62-75-9		
74	17464	2.18	2.47	80-120	100	(T)
42	3653	2.18	2.47	87-147	21	(QT)
43	54952	2.13	2.47	22- 82	315	(QT)
4 Aniline				CAS#: 62-53-3		
66	47371	3.71	3.78	80-120	100	(T)
93	202	3.68	3.79	361-421	0	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	47439	4.36	4.24	80-120	100	(T)
42	32063	4.36	4.24	57-117	68	(T)
22 Isophorone				CAS#: 78-59-1		
82	342906	4.36	4.53	80-120	100	(T)
138	9013	4.87	4.53	0- 47	3	(T)
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	905391	6.13	5.72	80-120	100	(T)
164	969466	6.13	5.72	4- 64	107	(QT)
127	2134	5.61	5.72	9- 69	0	(QT)
43 Dimethylphthalate				CAS#: 131-11-3		
163	210464	6.13	5.89	80-120	100	(T)
164	973114	6.13	5.89	0- 41	462	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
45 Acenaphthylene			CAS#: 208-96-8			
152	32471	5.61	6.03	80-120	100	(T)
151	31371	5.61	6.03	0- 50	97	(QT)
153	10403	5.61	6.03	0- 44	32	(T)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	129494	6.13	6.25	80-120	100	(T)
89	2379	6.13	6.25	50-110	2	(QT)
63	2244	6.13	6.25	31- 91	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	11128	6.73	6.55	80-120	100	(T)
165	10575	6.73	6.55	60-120	95	(T)
167	3623	6.73	6.55	0- 44	33	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	616	6.73	6.56	80-120	100	(T)
105	1630	6.73	6.56	15- 75	264	(QT)
51	1402	6.73	6.56	63-123	227	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0216.d
Lab Smp Id: 232591001 Client Smp ID: CAMO-09-9946
Inj Date : 02-JUL-2009 19:08
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232591001|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 11o00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	18.74130	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.999	2952694	40.000
* 91 Chrysene-d12	9.739	4447279	40.000
* 98 Perylene-d12	11.486	3882389	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.010	840565	11.3870917	467	0		0	10
Androst-4-en-3-one, 17-hydroxy-, (17.bet				CAS #: 58-22-0			
9.381	901139	8.10508240	332	86	NIST05.L	117325	93
Unknown				CAS #:			
10.016	746069	6.71033610	275	0		0	93
Unknown				CAS #:			
10.798	495499	5.10508949	209	0		0	98
Unknown				CAS #:			
12.839	3426590	35.3039220	1450	0		0	98
7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet				CAS #: 70038-20-9			
13.645	3671278	37.8249281	1550	91	NIST05.L	69982	98

Data File: /chem/MSD6.i/s070209.b/s6g0216.d

Date : 02-JUL-2009 19:08

Client ID: CAMO-09-9946

Sample Info: 1232591001|881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD6.i

Operator: JMB3

Column diameter: 0.20

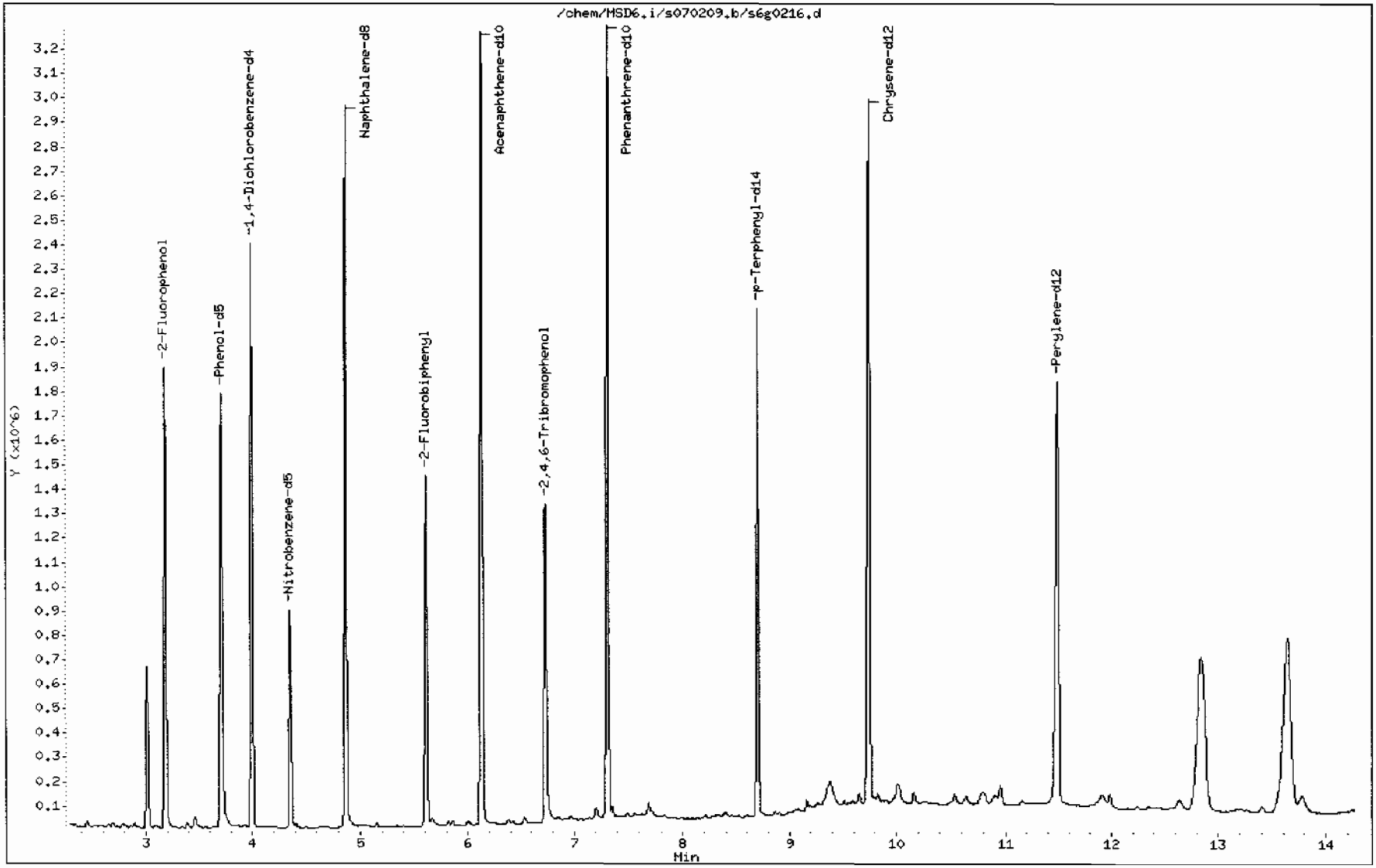

Data File: /chem/MSD6.i/s070209.b/s6g0216.d

Date : 02-JUL-2009 19:08

Client ID: CAMO-09-9946

Instrument: MSD6.i

Sample Info: |2325910011881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7977	38	C6H12O2	116

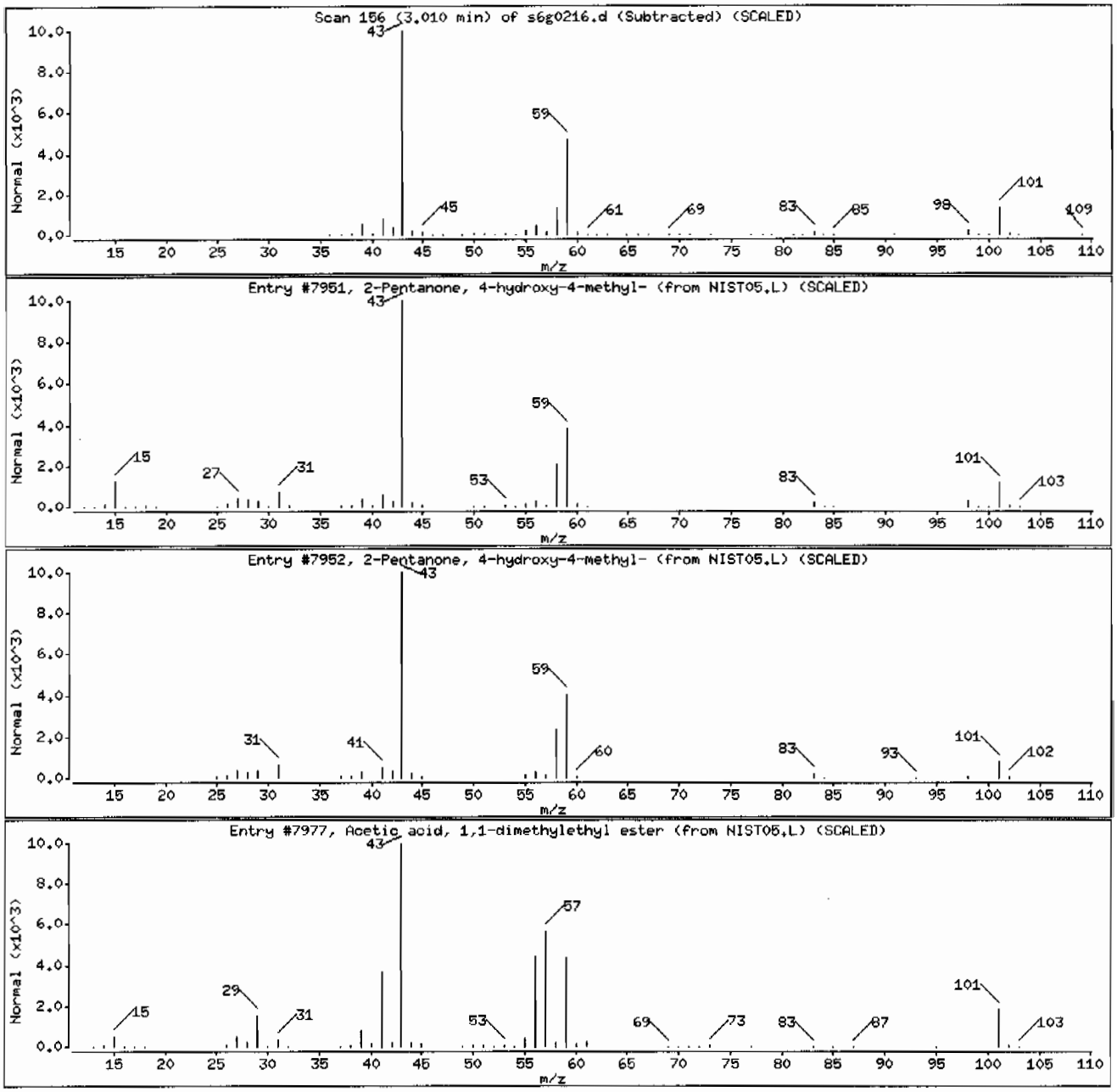

Data File: /chem/MSD6.i/s070209.b/s6g0216.d

Date : 02-JUL-2009 19:08

Client ID: CAMO-09-9946

Instrument: MSD6.i

Sample Info: |2325910011881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Androst-4-en-3-one, 17-hydroxy-, (17.bet	58-22-0	NIST05.L	117325	86	C19H28O2	288
Stigmast-4-en-3-one	1058-61-3	NIST05.L	173936	46	C29H48O	412
2-[4-methyl-6-(2,6,6-trimethylcyclohex-1	1000216-09-2	NIST05.L	139230	45	C23H32O	324

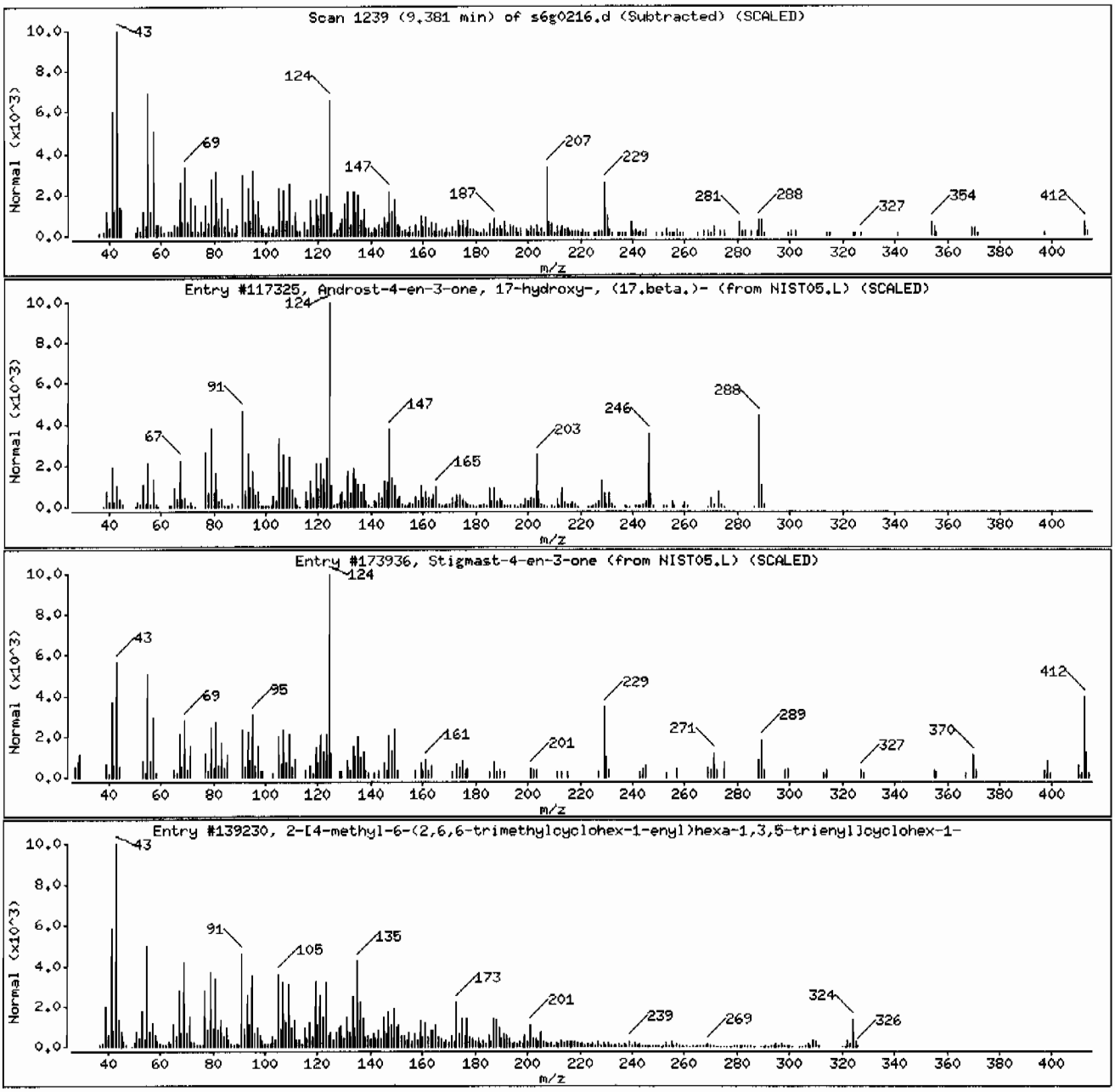

Data File: /chem/MSD6.i/s070209.b/s6g0216.d

Date : 02-JUL-2009 19:08

Client ID: CAMO-09-9946

Instrument: MSD6.i

Sample Info: |2325910011881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Ethylacridine	55751-83-2	NIST05.L	62222	25	C15H13N	207
5-Methyl-3-phenyl-1,3-oxazolidine	73861-82-2	NIST05.L	31375	25	C10H13NO	163
1H-Indole, 5-methyl-2-phenyl-	13228-36-9	NIST05.L	62237	25	C15H13N	207

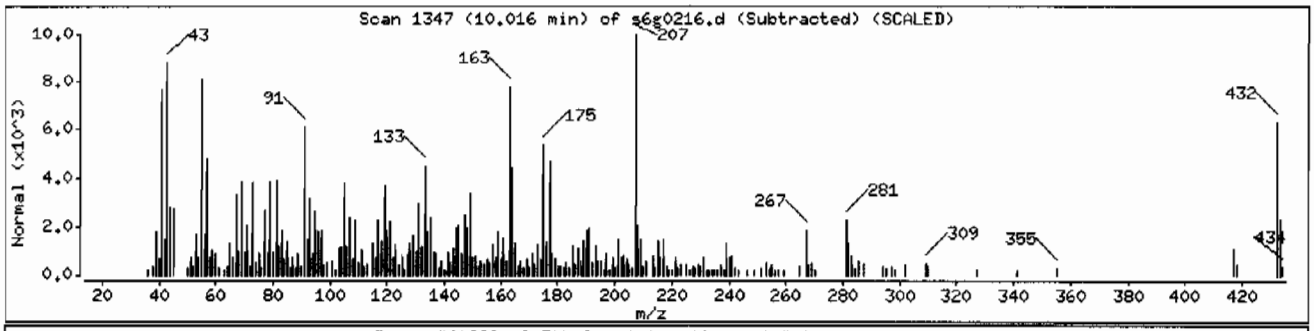

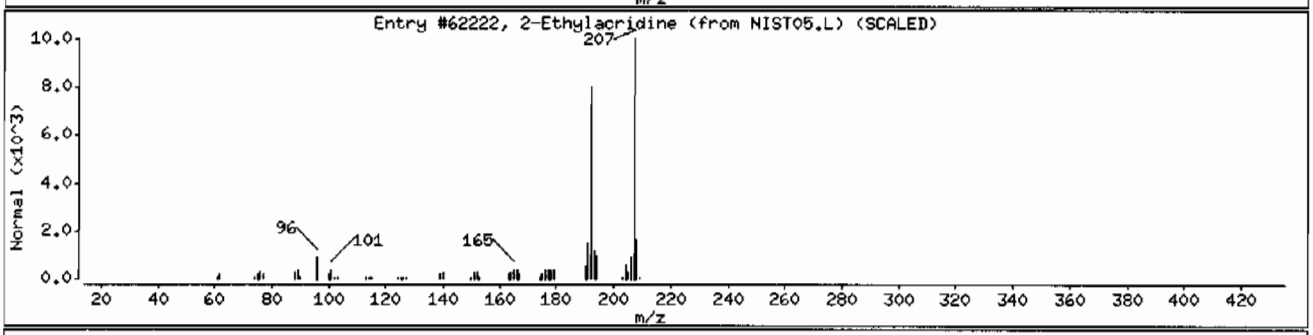

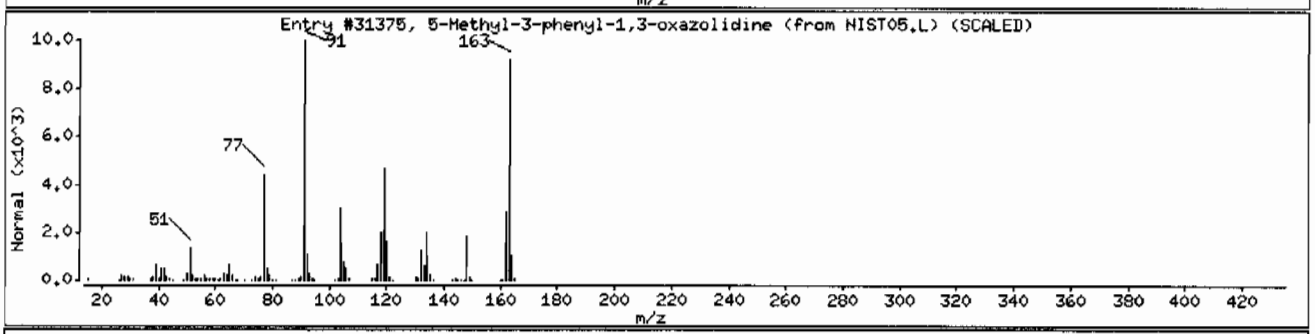

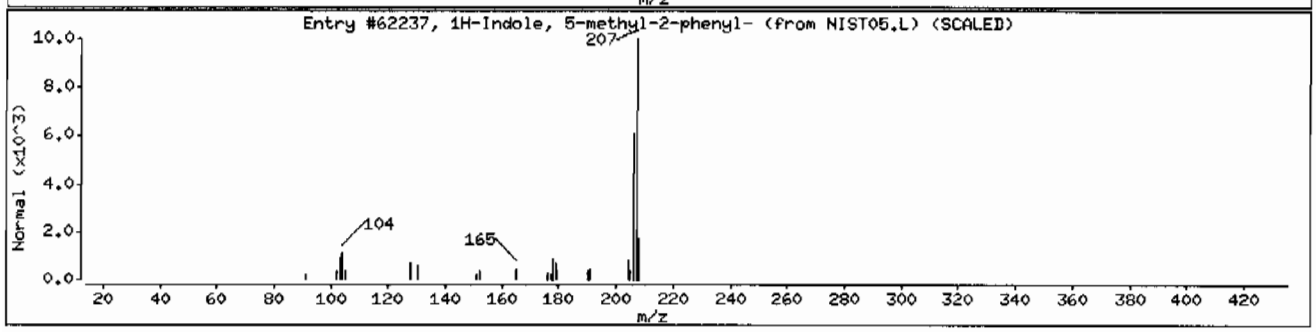

Data File: /chem/MSD6.i/s070209.b/s6g0216.d

Date : 02-JUL-2009 19:08

Client ID: CAMO-09-9946 Instrument: MSD6.i

Sample Info: 1232591001|881964|1|SVMI1|LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
9,10-Methanoanthracen-11-ol, 9,10-dihydr	126615-74-5	NIST05.L	92233	42	C18H180	250
Benzo[h]quinoline, 2,4-dimethyl-	605-67-4	NIST05.L	62243	38	C15H13N	207
3-Methyl-2-phenylindole	10257-92-8	NIST05.L	62223	30	C15H13N	207

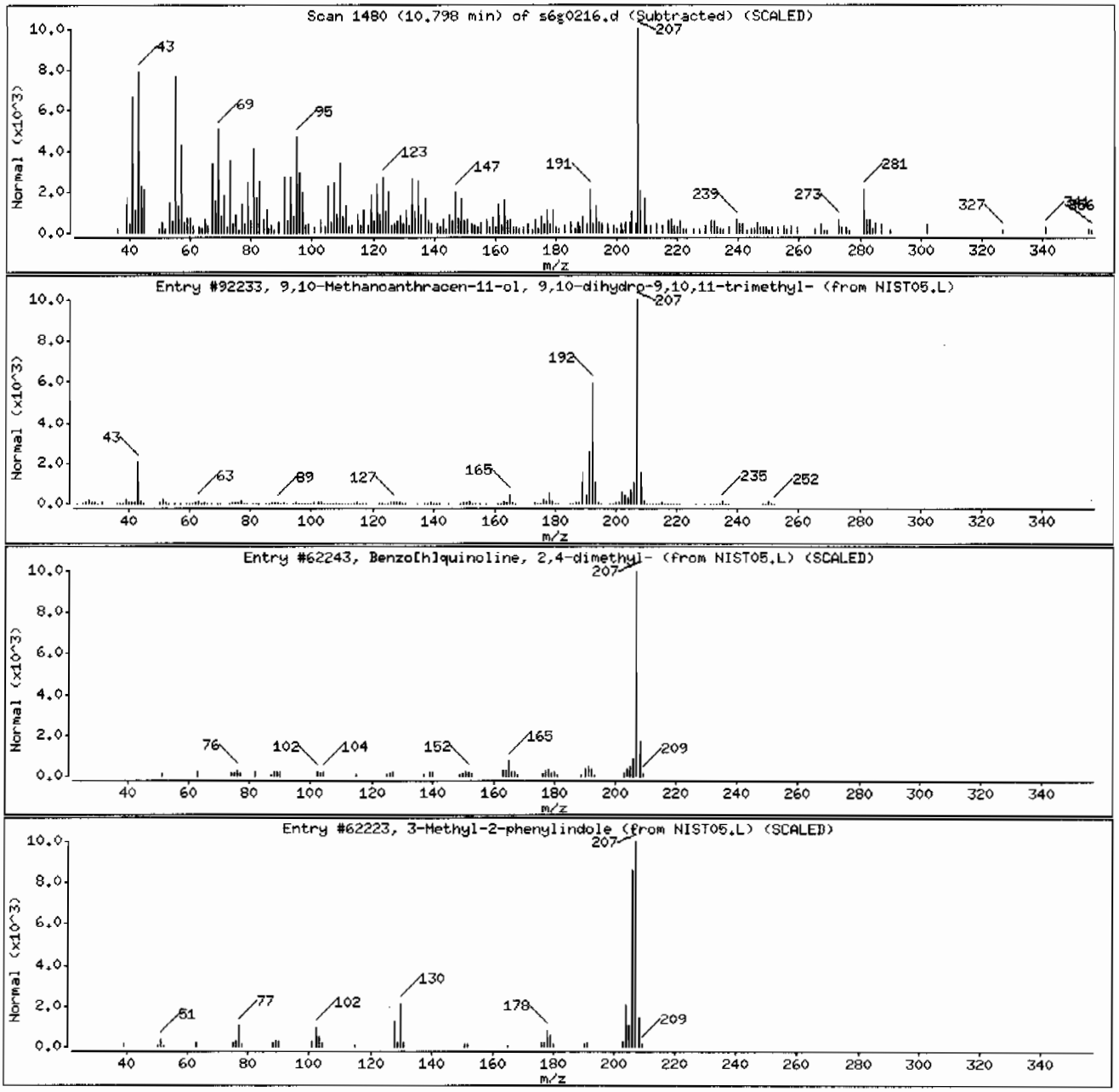

Data File: /chem/MSD6.i/s070209.b/s6g0216.d

Date : 02-JUL-2009 19:08

Client ID: CAMO-09-9946

Instrument: MSD6.i

Sample Info: |232591001|881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Acetic acid, 2-(2-propyl-1-benzimidazoly	331736-92-6	NIST05.L	69668	59	C12H14N2O2	218
4H-Cyclopenta[def]phenanthrene	203-64-5	NIST05.L	50050	42	C15H10	190
4H-Pyrido[1,2-a]pyrimidine-3-carboxamide	33484-45-6	NIST05.L	61881	35	C10H13N3O2	207

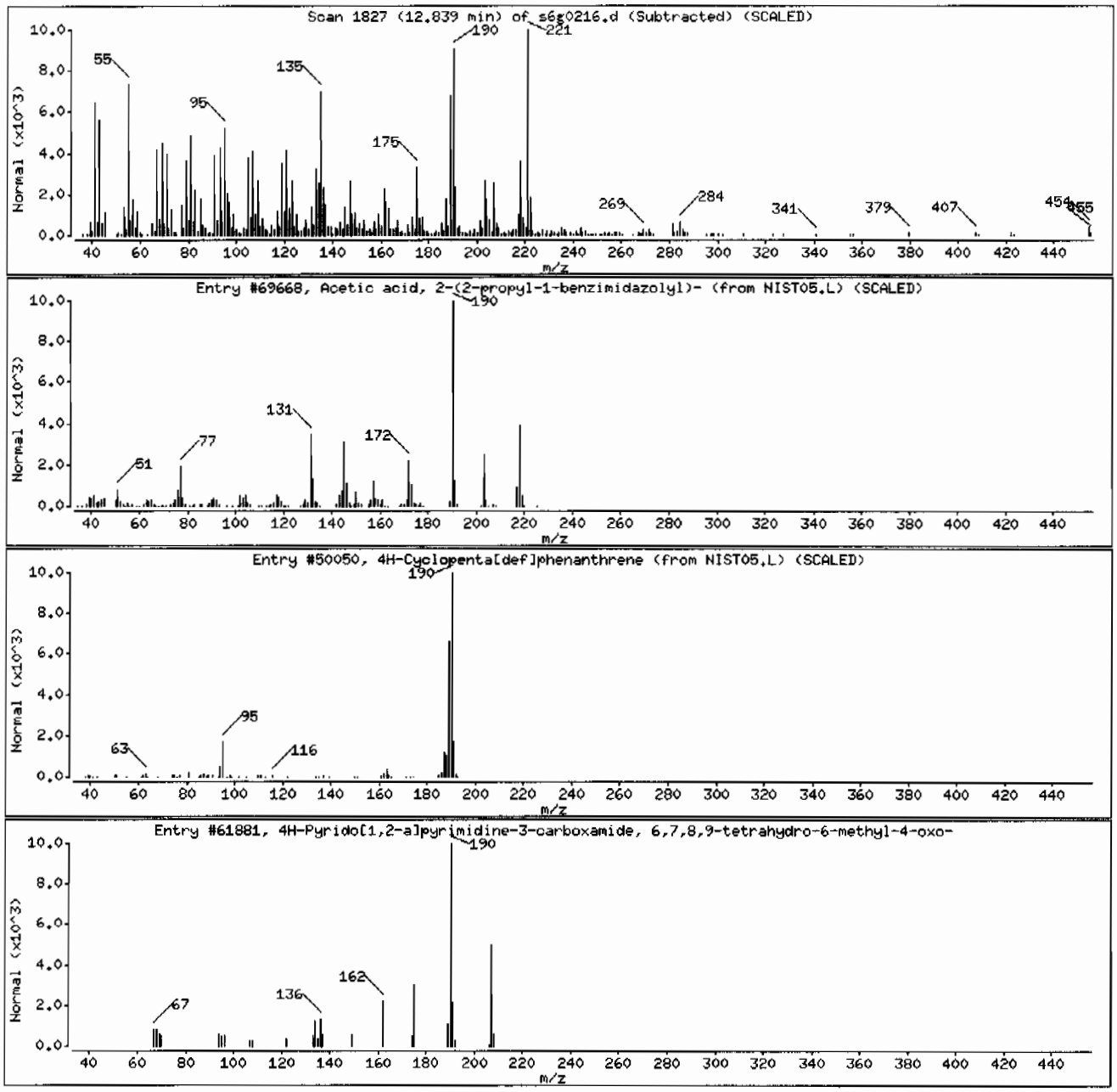

Data File: /chem/MSD6.i/s070209.b/s6g0216.d

Date : 02-JUL-2009 19:08

Client ID: CAMO-09-9946

Instrument: MSD6.i

Sample Info: 1232591001|881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JHB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet	70038-20-9	NIST05.L	69982	91	C15H220	218
2(1H)Naphthalenone, 3,5,6,7,8,8a-hexahyd	1000188-66-5	NIST05.L	69976	25	C15H220	218
3,5-Cyclohexadiene-1,2-dione, 3,4,5,6-te	2435-53-2	NIST05.L	88171	25	C6Cl4O2	244

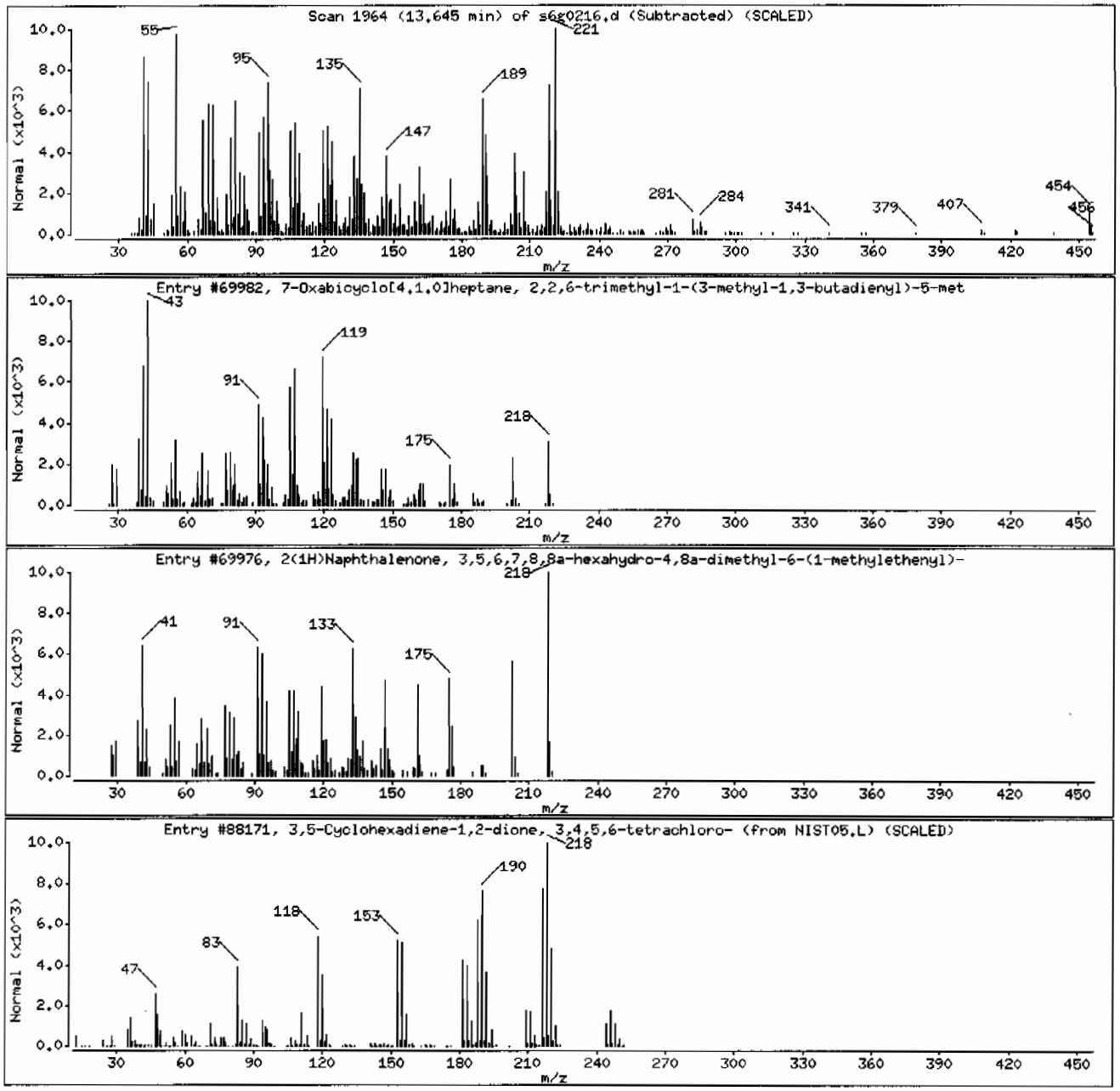

Standard Data

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625
Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 02-Jul-2009 16:06

Calibration History

Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Start Cal Date: 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
25-JUN-2009 18:09	MEGA	/chem/MSD6.i/s062509.b/s6f2503.d
Cal Level: 2 , Cal Amount: 10.00000		
26-JUN-2009 07:24	NEV	/chem/MSD6.i/s062509.b/s6f2536.d
26-JUN-2009 05:09	HEX	/chem/MSD6.i/s062509.b/s6f2530.d
26-JUN-2009 00:31	PEST	/chem/MSD6.i/s062509.b/s6f2518.d
25-JUN-2009 21:54	AP12	/chem/MSD6.i/s062509.b/s6f2511.d
25-JUN-2009 18:37	MEGA	/chem/MSD6.i/s062509.b/s6f2504.d
Cal Level: 3 , Cal Amount: 20.00000		
26-JUN-2009 07:47	NEV	/chem/MSD6.i/s062509.b/s6f2537.d
26-JUN-2009 05:32	HEX	/chem/MSD6.i/s062509.b/s6f2531.d
26-JUN-2009 00:54	PEST	/chem/MSD6.i/s062509.b/s6f2519.d
25-JUN-2009 22:17	AP12	/chem/MSD6.i/s062509.b/s6f2512.d
25-JUN-2009 19:04	MEGA	/chem/MSD6.i/s062509.b/s6f2505.d
Cal Level: 4 , Cal Amount: 40.00000		
26-JUN-2009 08:09	NEV	/chem/MSD6.i/s062509.b/s6f2538.d
26-JUN-2009 05:54	HEX	/chem/MSD6.i/s062509.b/s6f2532.d
26-JUN-2009 01:17	PEST	/chem/MSD6.i/s062509.b/s6f2520.d
25-JUN-2009 22:39	AP12	/chem/MSD6.i/s062509.b/s6f2513.d
25-JUN-2009 19:33	MEGA	/chem/MSD6.i/s062509.b/s6f2506.d
Cal Level: 5 , Cal Amount: 50.00000		
26-JUN-2009 08:31	NEV	/chem/MSD6.i/s062509.b/s6f2539.d
26-JUN-2009 06:18	HEX	/chem/MSD6.i/s062509.b/s6f2533.d
26-JUN-2009 01:40	PEST	/chem/MSD6.i/s062509.b/s6f2521.d
25-JUN-2009 23:02	AP12	/chem/MSD6.i/s062509.b/s6f2514.d
25-JUN-2009 20:01	MEGA	/chem/MSD6.i/s062509.b/s6f2507.d
Cal Level: 6 , Cal Amount: 80.00000		
26-JUN-2009 08:54	NEV	/chem/MSD6.i/s062509.b/s6f2540.d
26-JUN-2009 06:40	HEX	/chem/MSD6.i/s062509.b/s6f2534.d
26-JUN-2009 02:02	PEST	/chem/MSD6.i/s062509.b/s6f2522.d
25-JUN-2009 23:24	AP12	/chem/MSD6.i/s062509.b/s6f2515.d
25-JUN-2009 20:29	MEGA	/chem/MSD6.i/s062509.b/s6f2508.d
Cal Level: 7 , Cal Amount: 100.00000		

26-JUN-2009 09:17	NEV	/chem/MSD6.i/s062509.b/s6f2541.d
26-JUN-2009 07:02	HEX	/chem/MSD6.i/s062509.b/s6f2535.d
26-JUN-2009 02:25	PEST	/chem/MSD6.i/s062509.b/s6f2523.d
25-JUN-2009 23:47	AP12	/chem/MSD6.i/s062509.b/s6f2516.d
25-JUN-2009 20:56	MEGA	/chem/MSD6.i/s062509.b/s6f2509.d

Cal Level: 8 , Cal Amount: 120.00000		
26-JUN-2009 09:39	NEV	/chem/MSD6.i/s062509.b/s6f2542.d
26-JUN-2009 02:48	PEST	/chem/MSD6.i/s062509.b/s6f2524.d
26-JUN-2009 00:08	AP12	/chem/MSD6.i/s062509.b/s6f2517.d
25-JUN-2009 21:25	MEGA	/chem/MSD6.i/s062509.b/s6f2510.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 15:46	AP12	/chem/MSD6.i/s070209.b/s6g0207.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 15:23	MEGA	/chem/MSD6.i/s070209.b/s6g0206.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 08:30	MEGA	/chem/MSD6.i/s070209.b/s6g0202.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 09:21	PEST	/chem/MSD6.i/s070209.b/s6g0204.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 08:58	AP12	/chem/MSD6.i/s070209.b/s6g0203.d

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Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 11o00884

Calibration File Names:
Level 1: /chem/MSD6.i/s062509.b/s6f2503.d
Level 2: /chem/MSD6.i/s062509.b/s6f2536.d
Level 3: /chem/MSD6.i/s062509.b/s6f2537.d
Level 4: /chem/MSD6.i/s062509.b/s6f2538.d
Level 5: /chem/MSD6.i/s062509.b/s6f2539.d
Level 6: /chem/MSD6.i/s062509.b/s6f2540.d
Level 7: /chem/MSD6.i/s062509.b/s6f2541.d
Level 8: /chem/MSD6.i/s062509.b/s6f2542.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.63238	0.73990	0.67318	0.69361	0.63927					
	0.67481	0.66658					AVRG		0.67425		5.32083
2 Pyridine	+++++	0.89908	1.05617	1.04091	0.98502	0.84792					
	0.99774	0.99755					AVRG		0.97491		7.71839
4 Aniline	+-+++	0.61922	0.70141	0.65650	0.65708	0.63524					
	0.64072	0.63526					AVRG		0.64934		4.07488
209 Benzaldehyde	+++++	1.09138	1.13361	0.96812	0.99945	0.93736					
	0.87088	0.82930					AVRG		0.97573		11.29153
6 Phenol	+++++	1.47658	1.62941	1.45952	1.43821	1.36229					
	1.35462	1.37334					AVRG		1.44200		6.66032

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	1.22043	1.12403	1.23954	1.14115	1.13328	1.05431					
	1.03435	1.02016					AVRG		1.12091		7.28122
8 2-Chlorophenol	+++++	1.11737	1.25274	1.13361	1.11969	1.06744					
	1.06241	1.06439					AVRG		1.11681		5.99703
203 n-Decane	+++++	1.96253	2.07733	1.73409	1.66770	1.48844					
	+++++	+++++					AVRG		1.78602		13.16870
9 1,3-Dichlorobenzene	+++++	1.33990	1.45795	1.29316	1.27395	1.18026					
	1.18100	1.14017					AVRG		1.26663		8.73889
11 1,4-Dichlorobenzene	+++++	1.29097	1.40125	1.26310	1.22752	1.16060					
	1.14473	1.12740					AVRG		1.23080		7.90198
12 Benzyl alcohol	+++++	0.70036	0.83012	0.78578	0.79077	0.74765					
	0.74896	0.77876					AVRG		0.76891		5.35051
13 1,2-Dichlorobenzene	+++++	1.25150	1.33180	1.14508	1.11789	1.04037					
	1.00839	0.98256					AVRG		1.12537		11.48739
14 bis(2-Chloroisopropyl)ether	+++++	2.66469	2.89578	2.58397	2.53373	2.34040					
	2.19885	2.08192					AVRG		2.47134		11.41098
15 o-Cresol	+++++	0.89019	0.98604	0.86828	0.85479	0.80508					
	0.79451	0.77266					AVRG		0.85308		8.49227

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
16 Acetophenone	+++++	1.39887	1.44475	1.23553	1.27881	1.20070					
	1.15679	1.12815					AVRG		1.26337		9.46771
17 N-Nitrosodipropylamine	0.79102	0.79932	0.94251	0.88832	0.90450	0.80701					
	0.82176	0.85235					AVRG		0.85085		6.54215
18 m,p-Cresols	+++++	1.13347	1.30237	1.23018	1.22211	1.15366					
	1.16247	1.19084					AVRG		1.19930		4.80697
19 Hexachloroethane	+++++	0.49257	0.55214	0.50513	0.49924	0.46948					
	0.47529	0.47152					AVRG		0.49505		5.82124
21 Nitrobenzene	+++++	0.34673	0.37307	0.33623	0.33251	0.29324					
	0.29158	0.28515					AVRG		0.32264		10.31000
22 Isophorone	+++++	0.63552	0.68160	0.62967	0.62747	0.56153					
	0.56328	0.55319					AVRG		0.60747		8.00399
23 2-Nitrophenol	+++++	0.14310	0.16355	0.14738	0.14434	0.12728					
	0.12352	0.12042					AVRG		0.13851		11.28023
24 2,4-Dimethylphenol	+++++	0.36654	0.45730	0.43271	0.43039	0.39398					
	0.40025	0.39904					AVRG		0.41146		7.36820
25 bis(2-Chloroethoxy)methane	+++++	0.37680	0.39766	0.35155	0.34440	0.30311					
	0.30215	0.29609					AVRG		0.33882		11.77117

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
26 2,4-Dichlorophenol	+++++	0.24243	0.27366	0.24060	0.24186	0.21621					
	0.21044	0.21142					AVRG		0.23380		9.76984
27 Benzoic acid	++-++	+++++	0.20719	0.21760	0.22633	0.20373					
	0.21623	0.23652					AVRG		0.21793		5.56771
28 1,2,4-Trichlorobenzene	-++++	0.29641	0.31292	0.27213	0.26797	0.23908					
	0.23667	0.23062					AVRG		0.26511		11.92681
30 Naphthalene	1.05660	0.91934	0.94767	0.81076	0.78496	+++++					
	+++++	+++++					AVRG		0.90387		12.15635
204 alpha-Terpineol	++-++	0.32829	0.35279	0.30932	0.30322	0.26803					
	0.25451	0.24093					AVRG		0.29387		13.89383
31 4-Chloroaniline	+++++	0.39692	0.43329	0.40027	0.39276	0.35030					
	0.34600	0.33896					AVRG		0.37979		9.26083
189 Caprolactam	+++++	0.09653	0.10516	0.09075	0.09598	0.09109					
	0.09196	0.08872					AVRG		0.09432		5.89285
32 Hexachlorobutadiene	+++++	0.17466	0.18478	0.16639	0.16258	0.14597					
	0.14659	0.14276					AVRG		0.16053		10.00655
33 4-Chloro-3-methylphenol	+++++	0.25394	0.28695	0.26318	0.25814	0.23584					
	0.23011	0.22741					AVRG		0.25080		8.49300

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.59901	0.53117	0.56501	0.49717	0.48140	0.42787					
	0.41481	0.40259					AVRG		0.48988		14.73728
35 1-Methylnaphthalene	0.63482	0.55611	0.58496	0.50370	0.48920	0.43330					
	++++	++++					AVRG		0.53368		13.59333
36 Hexachlorocyclopentadiene	++++	0.15486	0.23705	0.22304	0.22443	0.17556					
	0.22833	0.20920					AVRG		0.20750		14.76227
208 1,1'-Biphenyl	++++	1.34972	1.33011	1.08660	1.13652	1.05329					
	1.02023	0.97836					AVRG		1.13640		12.99693
205 2,3-Dichloroaniline	++++	0.53146	0.58307	0.51668	0.51473	0.46598					
	0.45488	0.44984					AVRG		0.50238		9.63382
37 2,4,6-Trichlorophenol	++++	0.33808	0.38712	0.32436	0.31922	0.28629					
	0.31080	0.29305					AVRG		0.32270		10.39191
38 2,4,5-Trichlorophenol	++++	0.31059	0.36692	0.35695	0.36141	0.34591					
	0.30840	0.32982					AVRG		0.34000		7.07586
40 2-Chloronaphthalene	1.08311	0.96625	1.08309	0.95458	0.95054	0.85459					
	0.83946	0.81611					AVRG		0.94346		10.94370
42 o-Nitroaniline	++++	0.32048	0.39114	0.38026	0.38066	0.35541					
	0.35712	0.35999					AVRG		0.36358		6.45864

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
41 m-Nitroaniline	+++++	0.19621	0.24704	0.24753	0.24746	0.22586					
	0.23559	0.23726					AVRG		0.23385		7.88833
43 Dimethylphthalate	+++++	1.11892	1.22487	1.11340	1.09849	1.00483					
	0.98565	0.98456					AVRG		1.07582		8.27040
44 2,6-Dinitrotoluene	+++++	0.24806	0.29035	0.26917	0.26165	0.24535					
	0.23888	0.23798					AVRG		0.25592		7.44772
45 Acenaphthylene	1.60659	1.53781	1.67432	1.47738	1.44338	1.32386					
	1.28502	1.24642					AVRG		1.44935		10.68612
47 Acenaphthene	1.17616	0.93028	1.03086	0.90765	0.88512	0.80414					
	0.79484	0.78201					AVRG		0.91388		14.75125
48 2,4-Dinitrophenol	+++++	+++++	0.09751	0.12076	0.12130	0.11065					
	0.12950	0.12854					AVRG		0.11804		10.27624
49 Dibenzofuran	+++++	1.34254	1.48066	1.30108	1.27535	1.15363					
	1.12634	1.10565					AVRG		1.25504		10.80137
50 2,4-Dinitrotoluene	+++++	0.30954	0.36989	0.35299	0.35627	0.33300					
	0.33191	0.33687					AVRG		0.34150		5.81138
51 Diethylphthalate	+++++	1.12629	1.23552	1.11421	1.07838	0.99981					
	0.96813	0.96038					AVRG		1.06896		9.34734

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	100 Level 7	120 Level 8										
52 4-Nitrophenol	+++++	0.12172	0.18977	0.18570	0.17891	0.16720						
	0.17999	0.18374					AVRG		0.17244		13.60633	
53 Fluorene	1.23458	1.10959	1.21151	1.04844	1.02561	0.94472						
	0.93277	0.92854					AVRG		1.05447		11.54391	
54 4-Chlorophenylphenylether	+++++	0.52592	0.58667	0.52981	0.52080	0.48188						
	0.47877	0.47522					AVRG		0.51415		7.73736	
55 2-Methyl-4,6-dinitrophenol	+++++	14673	54481	130546	176239	210062						
	323694	446775					LINR	0.06881	0.10874		0.99699	
56 p-Nitroaniline	+++++	0.15417	0.20937	0.22775	0.21681	0.19467						
	0.21378	0.21660					AVRG		0.20474		11.92703	
133 Diphenylamine	+++++	0.50284	0.56842	0.49877	0.50679	0.46297						
	0.47091	0.47387					AVRG		0.49779		7.15126	
58 1,2-Diphenylhydrazine	+++++	0.69277	0.78732	0.68204	0.69087	0.63077						
	0.62255	0.60230					AVRG		0.67266		9.24165	
59 Tributylphosphate	+++++	1.49739	1.49809	1.41024	1.35731	1.27906						
	+++++	1.16092					AVRG		1.36717		9.61235	<-
61 4-Bromophenylphenylether	+++++	0.17001	0.19429	0.17374	0.17586	0.16392						
	0.16534	0.16821					AVRG		0.17305		5.94476	

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	100 Level 7	120 Level 8										
63 Hexachlorobenzene	+++++	0.17966	0.20383	0.18218	0.18753	0.17462						
	0.17443	0.17775					AVRG		0.18286		5.63687	
207 Atrazine	+++-+	0.04948	0.05016	0.04056	0.04359	0.03922						
	0.03784	0.03776					AVRG		0.04266		12.37688	
65 Pentachlorophenol	-+++++	0.08955	0.11829	0.11235	0.11551	0.10833						
	0.11174	0.11017					AVRG		0.10942		8.55946	
206 n-Octadecane	+++++	0.59740	0.64721	0.54596	0.52896	0.47156						
	0.42954	+++++					AVRG		0.53677		14.84979	
68 Phenanthrene	1.10228	0.93626	1.01017	0.87070	0.86565	0.79407						
	0.78281	0.75605					AVRG		0.88975		13.51659	
69 Anthracene	1.03372	0.92010	1.02735	0.89651	0.88820	0.81272						
	0.78841	0.77473					AVRG		0.89272		11.20129	
72 Di-n-butylphthalate	+++++	1.04790	1.18853	1.03601	1.01509	0.92636						
	0.88661	0.83125					AVRG		0.99025		12.05154	
76 Fluoranthene	0.97712	0.94165	1.04211	0.90609	0.89912	0.83116						
	0.80860	0.77399					AVRG		0.89748		10.04012	
77 Benzidine	+++++	0.34155	0.35663	0.31039	0.33428	0.40588						
	0.42170	0.35685					AVRG		0.36104		10.95672	<-

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	100 Level 7	120 Level 8										
79 Pyrene	1.12547	1.05446	1.14289	0.99253	0.99961	0.91613						
	0.87703	0.86376					AVRG		0.99649		10.71467	
85 Butylbenzylphthalate	++++-	0.44811	0.53082	0.48275	0.48534	0.45605						
	0.43387	0.42670					AVRG		0.46624		7.75863	
89 Benzo(a)anthracene	1.06878	0.93271	1.04455	0.95285	0.94970	0.90136						
	0.91962	0.90813					AVRG		0.95971		6.54790	
90 3,3'-Dichlorobenzidine	+++++	0.30276	0.31909	0.28981	0.30002	0.29727						
	0.30592	0.28683					AVRG		0.30024		3.57517	<-
92 Chrysene	1.05133	0.91009	1.03072	0.91463	0.91130	0.86864						
	0.83552	0.81734					AVRG		0.91745		9.20942	
93 bis(2-Ethylhexyl)phthalate	0.49158	0.63811	0.75021	0.66325	0.65721	0.61652						
	0.58257	0.55871					AVRG		0.61977		12.52725	
94 Di-n-octylphthalate	+++++	1.08312	1.31488	1.20254	1.20913	1.12717						
	1.05515	1.07887					AVRG		1.15298		8.10764	
95 Benzo(b)fluoranthene	0.89395	0.87170	1.07203	0.93108	0.99781	0.90434						
	0.98279	0.96748					AVRG		0.95265		6.89667	
96 Benzo(k)fluoranthene	0.98876	0.95294	1.04515	0.98327	0.93287	0.93963						
	0.82454	0.88260					AVRG		0.94372		7.16897	

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	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	0.68623	0.75974	0.91770	0.85651	0.87746	0.83819					
	0.82888	0.82925					AVRG		0.82425		8.70730
99 Indeno(1,2,3-cd)pyrene	0.58566	0.69956	0.88899	0.84947	0.84012	0.81240					
	0.83280	0.75233					AVRG		0.78267		12.69466
100 Dibenzo(a,h)anthracene	9132	108272	345404	788225	974912	1248454					
	1878464	2222689					LINR	-0.02288	0.63862		0.99559
101 Benzo(ghi)perylene	0.58949	0.64245	0.78144	0.73455	0.72810	0.70603					
	0.71181	0.63056					AVRG		0.69055		9.22805
102 1,4-Dioxane	+++++	0.44847	0.46726	0.38659	0.40160	0.37556					
	0.36587	0.35293					AVRG		0.39975		10.72715
103 Methyl methacrylate	+++++	0.23840	0.24200	0.20244	0.20616	0.19137					
	0.18583	0.18163					AVRG		0.20683		11.79096
104 Ethyl methacrylate	+++++	0.94259	0.99321	0.85643	0.86935	0.83614					
	0.80918	0.79053					AVRG		0.87106		8.35594
105 2-Picoline	+++++	1.50203	1.56115	1.34043	1.36793	1.27566					
	1.23483	1.21493					AVRG		1.35671		9.74281
106 N-Nitrosomethylethylamine	+++++	0.56111	0.60482	0.54639	0.56485	0.56666					
	0.56403	0.53265					AVRG		0.56293		3.95047

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End Cal Date : 26-JUN-2009 09:39
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Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 11o00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.64855	0.67082	0.59769	0.61259	0.60332					
	0.59897	0.55969					AVRG		0.61309		5.94648
108 N-Nitrosodiethylamine	++-++	0.56089	0.58157	0.51753	0.53600	0.52499					
	0.51871	0.48195					AVRG		0.53166		6.06915
109 Ethyl Methanesulfonate	++++-	0.75479	0.81335	0.71282	0.74358	0.73772					
	0.72871	0.69036					AVRG		0.74019		5.21699
110 Pentachloroethane	+-+++	0.35241	0.36665	0.32462	0.33602	0.32435					
	0.31917	0.30641					AVRG		0.33280		6.20805
111 N-Nitrosopyrrolidine	+++++	0.56374	0.62352	0.54696	0.57663	0.55625					
	0.52695	0.50737					AVRG		0.55735		6.68229
113 N-Nitrosomorpholine	+++++	0.91613	0.98944	0.84176	0.87856	0.86554					
	0.79892	0.78054					AVRG		0.86727		8.19219
114 o-Toluidine	+++++	2.08041	2.12438	1.80435	1.84634	1.73950					
	1.64321	1.60168					AVRG		1.83427		11.02501
115 N-Nitrosopiperidine	+++++	0.16009	0.17196	0.14921	0.15676	0.15141					
	0.15201	0.14355					AVRG		0.15500		5.90728
116 a,a-Dimethylphenethylamine	+++++	1.04169	1.18296	1.07224	1.15686	1.09722					
	1.09706	1.08056					AVRG		1.10408		4.46213

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	100 Level 7	120 Level 8									
117 Triethylphosphorothioate	+-++++	0.16948	0.16571	0.15341	0.14957	0.14414					
	+++++	0.13241					AVRG		0.15245		9.02058 <-
118 2,6-Dichlorophenol	+++++	0.25500	0.26825	0.23342	0.24444	0.23410					
	0.22873	0.21899					AVRG		0.24042		6.97744
119 Hexachloropropene	+++++	0.11484	0.12831	0.12230	0.12741	0.12792					
	0.13619	0.11809					AVRG		0.12501		5.74024
120 p-Phenylenediamine	+++++	0.25894	0.30780	0.27024	0.28461	0.26455					
	0.24836	0.23651					AVRG		0.26729		8.81751
121 N-Nitrosodi-n-butylamine	+++++	87162	186621	284343	380139	620307					
	847671	+++++					LINR	-0.13918	0.20871		0.99453
122 Safrole	+++++	0.22777	0.23847	0.20280	0.21182	0.19756					
	0.19223	0.18415					AVRG		0.20783		9.39540
123 1,2,4,5-Tetrachlorobenzene	+++++	0.49795	0.49761	0.41805	0.43378	0.41177					
	0.41519	0.38880					AVRG		0.43759		9.86893
124 Isosafrole	+++++	0.38693	0.41188	0.34610	0.36809	0.34872					
	0.34982	0.32815					AVRG		0.36281		7.84845
125 1,4-Naphthoquinone	+++++	0.39078	0.41091	0.32495	0.33865	0.28785					
	+++++	+++++					AVRG		0.35063		14.25240

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
126 m-Dinitrobenzene	+++++	0.16097	0.19752	0.19351	0.19372	0.17999						
	0.18095	0.18444					AVRG		0.18444		6.72107	
127 Pentachlorobenzene	+++++	0.43540	0.43757	0.36606	0.39115	0.36688						
	0.36403	0.35232					AVRG		0.38763		9.11345	
128 1-Naphthylamine	+++++	0.97305	1.01861	0.85254	0.90031	0.85212						
	0.83379	0.80334					AVRG		0.89054		8.82414	
129 2-Naphthylamine	+++++	1.07322	1.14238	0.91698	0.97159	0.93421						
	0.90628	0.87417					AVRG		0.97412		10.05716	
130 2,3,4,6-Tetrachlorophenol	+++++	0.29368	0.34460	0.30483	0.30498	0.29138						
	0.27715	0.29969					AVRG		0.30233		6.93290	
131 5-Nitro-o-toluidine	+++++	0.29432	0.32388	0.28613	0.30788	0.30538						
	0.30976	0.29802					AVRG		0.30362		4.01840	
132 Thionazin	+++++	0.20129	0.20194	0.19423	0.18811	0.18439						
	+++++	0.16980					AVRG		0.18996		6.36401	<-
134 Sulfotepp	+++++	0.10066	0.09687	0.09515	0.09465	0.09522						
	+++++	0.09446					AVRG		0.09617		2.45134	<-
135 Phorate	+++++	0.44875	0.44740	0.42095	0.41385	0.39361						
	+++++	0.36053					AVRG		0.41418		8.11363	<-

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	100 Level 7	120 Level 8										
136 1,3,5-Trinitrobenzene	+++++	0.12191	0.14390	0.13612	0.15261	0.14765						
	0.14546	0.13994					AVRG		0.14108		7.06662	
137 Phenacetin	+++++	0.30142	0.31838	0.27624	0.29648	0.29352						
	0.29487	0.28222					AVRG		0.29473		4.60847	
138 Diallate	++++-	0.28510	0.28840	0.24021	0.25212	0.23986						
	0.23658	0.22590					AVRG		0.25260		9.72911	
139 Dimethoate	+++-+	0.27503	0.28336	0.27756	0.27624	0.27526						
	+++++	0.26264					AVRG		0.27501		2.47074	<-
140 4-Aminobiphenyl	+++++	0.60580	0.59069	0.55478	0.60921	0.56737						
	0.53741	0.51964					AVRG		0.56927		6.03455	
141 Pentachloronitrobenzene	+++++	0.08223	0.08464	0.07383	0.07728	0.07209						
	0.06879	0.06554					AVRG		0.07491		9.25205	
142 Pronamide	+++++	0.29474	0.29145	0.24443	0.25109	0.22669						
	0.21208	0.20918					AVRG		0.24710		14.15492	
143 Dinoseb	+++++	20780	84804	205850	273073	322340						
	491810	679849					LINR	0.05568	0.16509		0.99662	
144 Disulfoton	+++++	0.39188	0.38851	0.36073	0.35401	0.33180						
	+++++	0.30490					AVRG		0.35531		9.38910	<-

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
145 Methyl parathion	+++++	0.18836	0.20650	0.20923	0.20867	0.21162					
	+++++	0.19926					AVRG		0.20394		4.27815 <-
146 4-Nitroquinoline-1-oxide	-++++-	0.02893	0.02787	0.02388	0.02735	0.02367					
	0.02320	0.01981					AVRG		0.02496		12.92664
147 Methapyrilene	+++++	0.69107	0.70459	0.55190	0.58929	0.50570					
	+++++	+++++					AVRG		0.60851		14.27692
148 Isodrin	++-++	0.11695	0.12074	0.10177	0.10473	0.09801					
	0.09618	0.09359					AVRG		0.10457		10.00337
149 Aramite	++++-	0.05314	0.05789	0.05104	0.05438	0.05075					
	0.04902	0.04800					AVRG		0.05203		6.52073
150 Kepone	+++++	0.07997	0.08705	0.07407	0.07973	0.07823					
	0.07875	0.07626					AVRG		0.07915		5.12259
151 p-(Dimethylamino)azobenzene	++++++	0.31526	0.33187	0.27995	0.29674	0.27031					
	0.26417	0.25598					AVRG		0.28775		9.74134
152 Chlorobenzilate	+++++	0.29629	0.31044	0.26389	0.27419	0.25693					
	0.25231	0.24702					AVRG		0.27158		8.73379
153 3,3'-Dimethylbenzidine	++++++	0.57410	0.58403	0.49595	0.50722	0.51863					
	0.52241	0.47909					AVRG		0.52592		7.44714

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	100 Level 7	120 Level 8										
154 Famphur	+++++	0.36885	0.37657	0.37753	0.36804	0.36180						
	+++++	0.33829					AVRG		0.36518		3.94658	<-
155 2-Acetylaminofluorene	+++++	0.29294	0.33610	0.33343	0.34644	0.34833						
	0.36163	0.34690					AVRG		0.33797		6.47209	
157 7,12Dimethylbenz(a)anthracene	+++++	0.47747	0.51000	0.45134	0.47249	0.45022						
	0.43701	0.43448					AVRG		0.46186		5.78794	
158 3-Methylcholanthrene	+++++	0.40088	0.43440	0.40840	0.42321	0.42138						
	0.43256	0.41738					AVRG		0.41975		2.89156	
26 Phthalic anhydride	+++++	23445	60720	197326	265845	337032						
	482099	+++++					LINR	0.07179	0.15263		0.99507	
173 Carbazole	0.81196	0.72552	0.79566	0.73346	0.74862	0.67642						
	0.68473	0.67787					AVRG		0.73178		7.12317	
174 Hexachlorophene	+++++	0.06404	0.06876	+++++	0.06992	0.06842						
	0.06841	+++++					AVRG		0.06791		3.31731	<-
179 Dibenzo(a,e)pyrene	+++++	54048	207036	542567	609541	796137						
	1234418	+++++					LINR	0.04574	0.44281		0.99342	
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e-00		0.000e+00	<-

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	100 Level 7	120 Level 8									
184 p-Benzoquinone	++++++	0.11972	0.13520	0.18226	0.19503	0.24392					
	0.18617	0.20906					AVRG		0.18162		23.38261 <-
191 Parathion	++++++	0.06720	0.07286	0.07495	0.07278	0.07512					
	++++++	0.07143					AVRG		0.07239		4.01730 <-
192 Methoxychlor	++++++	0.48449	0.63447	0.60076	0.57342	0.52057					
	0.52989	0.49268					AVRG		0.54804		10.28990
210 m-Toluidine	++++++	1.27161	1.50282	1.83240	1.62568	1.67827					
	1.76658	1.71497					AVRG		1.62748		11.59788
211 p-Toluidine	++++++	1.26022	1.29823	1.04873	1.26022	1.08002					
	0.96663	0.99825					AVRG		1.13033		12.26753
212 Cis Diallate	++++++	0.28580	0.31986	0.26808	0.29504	0.28492					
	0.29015	0.27596					AVRG		0.28854		5.70060
213 Trans Diallate	++++++	0.33542	0.33930	0.28260	0.29661	0.28219					
	0.27833	0.26577					AVRG		0.29717		9.72911
214 1,4-Dinitrobenzene	++++++	0.20112	0.26188	0.25947	0.26034	0.24600					
	0.24565	0.25711					AVRG		0.24737		8.67601
215 2-Ethoxyethanol	++++++	0.83491	0.96676	0.87277	0.89696	0.84090					
	0.87270	0.83176					AVRG		0.87382		5.43680

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	100 Level 7	120 Level 8										
216 Methylenebis(2-chloroaniline)	+++++	0.12685	0.15239	0.15319	0.15535	0.14874						
	0.15769	0.15392					AVRG		0.14973		6.98291	
229 2,2'-Dichlorobenzil	+++++	0.63573	0.64426	+++++	0.60092	0.57475						
	0.53886	0.54002					AVRG		0.58909		7.77747	<-
230 4-Chlorothioanisole	+++++	0.25846	0.25468	+++++	0.24095	0.23047						
	0.22529	0.21821					AVRG		0.23801		6.81449	<-
231 4-Chlorothiophenol	+++++	38130	81557	+++++	295018	478312						
	546488	749391					LINR	0.12977	0.18954		0.99850	<-
232 bis(p-Chlorophenyl)sulfone	+++++	0.39228	0.38647	+++++	0.34476	0.32622						
	0.31133	0.31226					AVRG		0.34555		10.44268	<-
233 bis(p-Chlorophenyl)disulfide	+++++	0.13457	0.14423	+++++	0.16084	0.14151						
	0.12869	0.13535					AVRG		0.14086		7.96301	<-
234 Diphenyl disulfide	+++++	0.24323	0.25434	+++++	0.24239	0.22501						
	0.21705	0.21291					AVRG		0.23249		7.11578	<-
235 Diphenyl sulfide	+++++	0.80808	0.81365	+++++	0.71378	0.65007						
	0.65795	0.61957					AVRG		0.71052		11.75053	<-
236 Phenyl sulfone	+++++	0.48879	0.48533	+++++	0.43294	0.41526						
	0.41473	0.39582					AVRG		0.43881		8.93060	<-

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	100 Level 7	120 Level 8										
237 Hydroxymethyl phthalimide	+++++	0.20330	0.20564	+++++	0.15263	0.18504						
	0.15200	0.17312					AVRG		0.17862		13.23528	<-
238 Phthalic acid	+++++	0.08556	0.08708	+++++	0.06350	0.08083						
	0.06350	0.07171					AVRG		0.07537		14.11566	<-
239 Thiophenol	+++++	0.80251	0.91225	+++++	1.03227	1.05598						
	1.08387	1.02922					AVRG		0.98602		10.88473	<-
240 bis(Chloromethyl)ether	+++++	0.01688	0.01613	+++++	0.01507	0.01457						
	0.01518	0.01559					AVRG		0.01557		5.32579	<-
241 Octachlorostyrene	+++++	0.07992	0.08243	+++++	0.07682	0.07832						
	0.07523	0.07697					AVRG		0.07828		3.28717	<-
M 225 Trichlorophenols	+++++	0.32433	0.37702	0.34065	0.34032	0.31610						
	0.30960	0.31143					AVRG		0.33135		7.18860	
M 226 Tetrachlorophenols	+++++	0.29368	0.34460	0.30483	0.30498	0.29138						
	0.27715	0.29969					AVRG		0.30233		6.93290	
M 227 Benzo(b,k)fluoranthene	0.94136	0.91232	1.05859	0.95718	0.96534	0.92198						
	0.90366	0.92504					AVRG		0.94818		5.21284	
M 228 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

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	100 Level 7	120 Level 8										
$ 3 2-Fluorophenol	+++++	1.09198	1.23633	1.09570	1.08835	1.02368						
	1.04716	1.02413					AVRG		1.08676		6.71486	
$ 5 Phenol-d5	+++++	1.45254	1.60814	1.48373	1.47158	1.38721						
	1.38525	1.40226					AVRG		1.45582		5.37925	
$ 187 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e-00	<-
$ 20 Nitrobenzene-d5	+++++	0.37314	0.40736	0.36335	0.36220	0.32849						
	0.32847	0.31748					AVRG		0.35436		8.92683	
$ 39 2-Fluorobiphenyl	+++++	1.10264	1.17960	1.05051	1.02767	0.93874						
	0.91574	0.89656					AVRG		1.01592		10.31484	
$ 60 2,4,6-Tribromophenol	+++++	0.12592	0.15525	0.15136	0.15448	0.14416						
	0.14889	0.15506					AVRG		0.14788		7.08436	
$ 81 p-Terphenyl-d14	+++++	0.64037	0.71369	0.64682	0.65851	0.61137						
	0.59847	0.60238					AVRG		0.63880		6.31654	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 llo00884

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:11
Lab File ID: s6f2525.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$	3 2-Fluorophenol	1.08676	1.12507	1.12507	0.000	3.52505	60.00000	Averaged	
$	5 Phenol-d5	1.45582	1.43831	1.43831	0.000	-1.20235	60.00000	Averaged	
$	20 Nitrobenzene-d5	0.35436	0.37614	0.37614	0.000	6.14854	60.00000	Averaged	
$	39 2-Fluorobiphenyl	1.01592	1.04828	1.04828	0.000	3.18501	60.00000	Averaged	
$	60 2,4,6-Tribromophenol	0.14788	0.14760	0.14760	0.000	-0.18414	60.00000	Averaged	
$	81 p-Terphenyl-d14	0.63880	0.68459	0.68459	0.000	7.16687	60.00000	Averaged	
	1 N-Methyl-N-nitrosomethylami	0.67425	0.74773	0.74773	0.000	10.89825	60.00000	Averaged	
	2 Pyridine	0.97491	0.98397	0.98397	0.000	0.92879	60.00000	Averaged	
	4 Aniline	0.64934	0.64911	0.64911	0.000	-0.03594	60.00000	Averaged	
	6 Phenol	1.44200	1.43586	1.43586	0.001	-0.42533	20.00000	Averaged	ccc
	7 bis(2-Chloroethyl) ether	1.12091	1.11791	1.11791	0.000	-0.26752	60.00000	Averaged	
	8 2-Chlorophenol	1.11681	1.13103	1.13103	0.000	1.27363	60.00000	Averaged	
	203 n-Decane	1.78602	1.72523	1.72523	0.000	-3.40342	60.00000	Averaged	
	9 1,3-Dichlorobenzene	1.26663	1.30576	1.30576	0.000	3.08936	60.00000	Averaged	
	11 1,4-Dichlorobenzene	1.23080	1.24134	1.24134	0.001	0.85660	20.00000	Averaged	ccc
	13 1,2-Dichlorobenzene	1.12537	1.10040	1.10040	0.000	-2.21905	60.00000	Averaged	
	14 bis(2-Chloroisopropyl)ether	2.47134	2.67528	2.67528	0.000	8.25224	60.00000	Averaged	
	12 Benzyl alcohol	0.76891	0.79640	0.79640	0.000	3.57469	60.00000	Averaged	
	15 o-Cresol	0.85308	0.80325	0.80325	0.000	-5.84059	60.00000	Averaged	
	18 m,p-Cresols	1.19930	1.21301	1.21301	0.000	1.14345	60.00000	Averaged	
	17 N-Nitrosodipropylamine	0.85085	0.89258	0.89258	0.050	4.90475	60.00000	Averaged	spcc
	19 Hexachloroethane	0.49505	0.50346	0.50346	0.000	1.69837	60.00000	Averaged	
	21 Nitrobenzene	0.32264	0.37193	0.37193	0.000	15.27721	60.00000	Averaged	
	22 Isophorone	0.60747	0.68441	0.68441	0.000	12.66691	60.00000	Averaged	
	23 2-Nitrophenol	0.13851	0.15084	0.15084	0.001	8.89680	20.00000	Averaged	ccc
	24 2,4-Dimethylphenol	0.41146	0.47557	0.47557	0.000	15.58142	60.00000	Averaged	
	25 bis(2-Chloroethoxy)methane	0.33882	0.34977	0.34977	0.000	3.23129	60.00000	Averaged	
	26 2,4-Dichlorophenol	0.23380	0.24920	0.24920	0.001	6.58756	20.00000	Averaged	ccc
	27 Benzoic acid	0.21793	0.26929	0.26929	0.000	23.56667	60.00000	Averaged	
	28 1,2,4-Trichlorobenzene	0.26511	0.26543	0.26543	0.000	0.11934	60.00000	Averaged	
	30 Naphthalene	0.90387	0.79867	0.79867	0.000	-11.63895	60.00000	Averaged	
	204 alpha-Terpineol	0.29387	0.29863	0.29863	0.000	1.62032	60.00000	Averaged	
	31 4-Chloroaniline	0.37979	0.40231	0.40231	0.000	5.93203	60.00000	Averaged	
	32 Hexachlorobutadiene	0.16053	0.16187	0.16187	0.001	0.83340	20.00000	Averaged	ccc
	33 4-Chloro-3-methylphenol	0.25080	0.26631	0.26631	0.001	6.18457	20.00000	Averaged	ccc
	34 2-Methylnaphthalene	0.48988	0.53642	0.53642	0.000	9.50067	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:11
Lab File ID: s6f2525.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35 1-Methylnaphthalene	0.53368	0.49710	0.49710	0.000	-6.85521	60.00000	Averaged	
36 Hexachlorocyclopentadiene	0.20750	0.22408	0.22408	0.050	7.98984	60.00000	Averaged	spcc
205 2,3-Dichloroaniline	0.50238	0.51351	0.51351	0.000	2.21657	60.00000	Averaged	
37 2,4,6-Trichlorophenol	0.32270	0.32519	0.32519	0.001	0.76942	20.00000	Averaged	ccc
38 2,4,5-Trichlorophenol	0.34000	0.36478	0.36478	0.000	7.28927	60.00000	Averaged	
40 2-Chloronaphthalene	0.94346	0.96190	0.96190	0.000	1.95373	60.00000	Averaged	
42 o-Nitroaniline	0.36358	0.37616	0.37616	0.000	3.46181	60.00000	Averaged	
41 m-Nitroaniline	0.23385	0.25713	0.25713	0.000	9.95646	60.00000	Averaged	
43 Dimethylphthalate	1.07582	1.08470	1.08470	0.000	0.82586	60.00000	Averaged	
44 2,6-Dinitrotoluene	0.25592	0.27912	0.27912	0.000	9.06572	60.00000	Averaged	
50 2,4-Dinitrotoluene	0.34150	0.38329	0.38329	0.000	12.23916	60.00000	Averaged	
45 Acenaphthylene	1.44935	1.47434	1.47434	0.000	1.72472	60.00000	Averaged	
47 Acenaphthene	0.91388	0.86637	0.86637	0.001	-5.19856	20.00000	Averaged	ccc
48 2,4-Dinitrophenol	0.11804	0.11708	0.11708	0.050	-0.81658	60.00000	Averaged	spcc
49 Dibenzofuran	1.25504	1.29079	1.29079	0.000	2.84851	60.00000	Averaged	
51 Diethylphthalate	1.06896	1.07295	1.07295	0.000	0.37315	60.00000	Averaged	
52 4-Nitrophenol	0.17244	0.18029	0.18029	0.050	4.55579	60.00000	Averaged	spcc
53 Fluorene	1.05447	1.02093	1.02093	0.000	-3.18079	60.00000	Averaged	
54 4-Chlorophenylphenylether	0.51415	0.52659	0.52659	0.000	2.41880	60.00000	Averaged	
55 2-Methyl-4,6-dinitrophenol	51.22713	40.00000	0.13178	0.000	28.06783	60.00000	Linear	
56 p-Nitroaniline	0.20474	0.23325	0.23325	0.000	13.92997	60.00000	Averaged	
133 Diphenylamine	0.49779	0.51316	0.51316	0.001	3.08663	20.00000	Averaged	ccc
58 1,2-Diphenylhydrazine	0.67266	0.70527	0.70527	0.000	4.84845	60.00000	Averaged	
61 4-Bromophenylphenylether	0.17305	0.17270	0.17270	0.000	-0.20251	60.00000	Averaged	
63 Hexachlorobenzene	0.18286	0.18012	0.18012	0.000	-1.49843	60.00000	Averaged	
65 Pentachlorophenol	0.10942	0.11892	0.11892	0.001	8.68470	20.00000	Averaged	ccc
206 n-Octadecane	0.53677	0.54324	0.54324	0.000	1.20503	60.00000	Averaged	
68 Phenanthrene	0.88975	0.85790	0.85790	0.000	-3.57959	60.00000	Averaged	
69 Anthracene	0.89272	0.89781	0.89781	0.000	0.56971	60.00000	Averaged	
72 Di-n-butylphthalate	0.99025	1.02820	1.02820	0.000	3.83261	60.00000	Averaged	
76 Fluoranthene	0.89748	0.92468	0.92468	0.001	3.03116	20.00000	Averaged	ccc
79 Pyrene	0.99649	0.96249	0.96249	0.000	-3.41158	60.00000	Averaged	
85 Butylbenzylphthalate	0.46624	0.47820	0.47820	0.000	2.56535	60.00000	Averaged	
89 Benzo(a)anthracene	0.95971	0.94279	0.94279	0.000	-1.76323	60.00000	Averaged	
92 Chrysene	0.91745	0.89686	0.89686	0.000	-2.24414	60.00000	Averaged	
93 bis(2-Ethylhexyl)phthalate	0.61977	0.63489	0.63489	0.000	2.43875	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:11
Lab File ID: s6f2525.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	1.15298	1.14240	1.14240	0.001	-0.91773	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.95265	0.91362	0.91362	0.000	-4.09634	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.94372	0.94646	0.94646	0.000	0.28993	60.00000	Averaged	
	97 Benzo(a)pyrene	0.82425	0.86191	0.86191	0.001	4.56914	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78267	0.80771	0.80771	0.000	3.19938	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	41.39676	40.00000	0.67553	0.000	3.49191	60.00000	Linear	
	101 Benzo(ghi)perylene	0.69055	0.71790	0.71790	0.000	3.96077	60.00000	Averaged	
	126 m-Dinitrobenzene	0.18444	0.19364	0.19364	0.000	4.98399	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30233	0.28586	0.28586	0.000	-5.44729	60.00000	Averaged	
	143 Dinoseb	39.55810	40.00000	0.15407	0.000	-1.10476	60.00000	Linear	
	173 Carbazole	0.73178	0.86805	0.86805	0.000	18.62108	60.00000	Averaged	
	184 p-Benzoquinone	0.18162	0.15622	0.15622	0.000	-13.98438	60.00000	Averaged	
	192 Methoxychlor	0.54804	0.60208	0.60208	0.000	9.86094	60.00000	Averaged	
	211 p-Toluidine	1.13033	1.01568	1.01568	0.000	-10.14264	60.00000	Averaged	
	210 m-Toluidine	1.62748	1.75274	1.75274	0.000	7.69678	60.00000	Averaged	
	26 Phthalic anhydride	48.38615	40.00000	0.17367	0.000	20.96537	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	25.73629	40.00000	0.26466	0.000	-35.65928	60.00000	Linear	
	214 1,4-Dinitrobenzene	0.24737	0.26229	0.26229	0.000	6.03366	60.00000	Averaged	
	215 2-Ethoxyethanol	0.87382	0.93917	0.93917	0.000	7.47790	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.14973	0.16493	0.16493	0.000	10.14881	60.00000	Averaged	
M	225 Trichlorophenols	0.33135	0.34498	0.34498	0.000	4.11443	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30233	0.28586	0.28586	0.000	-5.44729	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.94818	0.93004	0.93004	0.000	-1.91352	60.00000	Averaged	

GEL Laboratories LLC

Data file : /chem/MSD6.i/s062509.b/s6f2525.d
Lab Smp Id: WBN090602-09.1 Client Smp ID: MEGAICV
Inj Date : 26-JUN-2009 03:11
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090602-09.1|40 PPM|1|SVM|1|MEGAICV
Misc Info : |MSD8270|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m
Meth Date : 26-Jun-2009 14:49 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 02:48 Cal File: s6f2524.d
Als bottle: 25 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGA.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.087	4.087	(1.000)	354067	40.0000	
* 29 Naphthalene-d8	136	4.957	4.957	(1.000)	1383449	40.0000	
* 46 Acenaphthene-d10	164	6.228	6.228	(1.000)	765412	40.0000	
* 67 Phenanthrene-d10	188	7.422	7.422	(1.000)	1322524	40.0000	
* 91 Chrysene-d12	240	9.875	9.875	(1.000)	1289318	40.0000	
* 98 Perylene-d12	264	11.698	11.698	(1.000)	1228266	40.0000	
$ 3 2-Fluorophenol	112	3.251	3.251	(0.796)	398350	40.0000	41.4
$ 5 Phenol-d5	99	3.787	3.787	(0.927)	509259	40.0000	39.5
$ 20 Nitrobenzene-d5	82	4.451	4.451	(0.898)	520376	40.0000	42.4
$ 39 2-Fluorobiphenyl	172	5.704	5.704	(0.916)	802365	40.0000	41.3
$ 60 2,4,6-Tribromophenol	329	6.834	6.834	(1.097)	112977	40.0000	39.9
$ 81 p-Terphenyl-d14	244	8.810	8.810	(0.892)	882648	40.0000	42.9
1 N-Methyl-N-nitrosomethylamine	74	2.540	2.540	(0.621)	264746	40.0000	44.4
2 Pyridine	79	2.581	2.581	(0.632)	348391	40.0000	40.4
4 Aniline	66	3.863	3.863	(0.945)	229829	40.0000	40.0
6 Phenol	94	3.798	3.798	(0.929)	508392	40.0000	39.8(Q)
7 bis(2-Chloroethyl) ether	63	3.875	3.875	(0.948)	395815	40.0000	39.9
8 2-Chlorophenol	128	3.946	3.946	(0.965)	400461	40.0000	40.5
203 n-Decane	43	3.928	3.928	(0.961)	610847	40.0000	38.6
9 1,3-Dichlorobenzene	146	4.051	4.051	(0.991)	462325	40.0000	41.2
11 1,4-Dichlorobenzene	146	4.098	4.098	(1.003)	439517	40.0000	40.3
13 1,2-Dichlorobenzene	146	4.204	4.204	(1.029)	389615	40.0000	39.1
14 bis(2-Chloroisopropyl)ether	45	4.228	4.228	(1.035)	947227	40.0000	43.3
12 Benzyl alcohol	108	4.145	4.145	(1.014)	281979	40.0000	41.4
15 o-Cresol	107	4.193	4.193	(1.026)	284406	40.0000	37.7
18 m,p-Cresols	107	4.298	4.298	(1.052)	429488	40.0000	40.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.322	4.322	(1.058)	316033	40.0000	42.0
19 Hexachloroethane	117	4.434	4.434	(1.085)	178259	40.0000	40.7
21 Nitrobenzene	77	4.463	4.463	(0.900)	514553	40.0000	46.1
22 Isophorone	82	4.616	4.616	(0.931)	946851	40.0000	45.1
23 2-Nitrophenol	139	4.681	4.681	(0.944)	208674	40.0000	43.6
24 2,4-Dimethylphenol	122	4.663	4.663	(0.941)	657926	40.0000	46.2
25 bis(2-Chloroethoxy)methane	93	4.734	4.734	(0.955)	483889	40.0000	41.3
26 2,4-Dichlorophenol	162	4.840	4.840	(0.976)	344759	40.0000	42.6
27 Benzoic acid	105	4.722	4.722	(0.953)	372552	40.0000	49.4
28 1,2,4-Trichlorobenzene	180	4.904	4.904	(0.989)	367210	40.0000	40.0
30 Naphthalene	128	4.975	4.975	(1.004)	1104913	40.0000	35.3(Q)
204 alpha-Terpineol	59	4.945	4.945	(0.998)	413141	40.0000	40.6
31 4-Chloroaniline	127	4.987	4.987	(1.006)	556582	40.0000	42.4
32 Hexachlorobutadiene	225	5.040	5.040	(1.017)	223939	40.0000	40.3
33 4-Chloro-3-methylphenol	107	5.292	5.292	(1.068)	368422	40.0000	42.5
34 2-Methylnaphthalene	142	5.457	5.457	(1.101)	742112	40.0000	43.8
35 1-Methylnaphthalene	142	5.534	5.534	(1.116)	687710	40.0000	37.2
36 Hexachlorocyclopentadiene	237	5.563	5.563	(0.893)	171510	40.0000	43.2
205 2,3-Dichloroaniline	161	5.651	5.651	(0.907)	393048	40.0000	40.9
37 2,4,6-Trichlorophenol	196	5.645	5.645	(0.906)	248901	40.0000	40.3
38 2,4,5-Trichlorophenol	196	5.669	5.669	(0.910)	279210	40.0000	42.9
40 2-Chloronaphthalene	162	5.816	5.816	(0.934)	736248	40.0000	40.8
42 o-Nitroaniline	65	5.869	5.869	(0.942)	287920	40.0000	41.4
41 m-Nitroaniline	138	6.169	6.169	(0.991)	196814	40.0000	44.0
43 Dimethylphthalate	163	5.975	5.975	(0.959)	830243	40.0000	40.3
44 2,6-Dinitrotoluene	165	6.034	6.034	(0.969)	213643	40.0000	43.6
50 2,4-Dinitrotoluene	165	6.334	6.334	(1.017)	293377	40.0000	44.9
45 Acenaphthylene	152	6.128	6.128	(0.984)	1128481	40.0000	40.7
47 Acenaphthene	154	6.251	6.251	(1.004)	663132	40.0000	37.9
48 2,4-Dinitrophenol	184	6.239	6.239	(1.002)	89613	40.0000	39.7
49 Dibenzofuran	168	6.381	6.381	(1.025)	987984	40.0000	41.1
51 Diethylphthalate	149	6.492	6.492	(1.042)	821249	40.0000	40.1
52 4-Nitrophenol	139	6.251	6.251	(1.004)	137997	40.0000	41.8
53 Fluorene	166	6.645	6.645	(1.067)	781431	40.0000	38.7
54 4-Chlorophenylphenylether	204	6.616	6.616	(1.062)	403058	40.0000	41.0
55 2-Methyl-4,6-dinitrophenol	198	6.657	6.657	(0.897)	174281	40.0000	51.2
56 p-Nitroaniline	138	6.639	6.639	(1.066)	178536	40.0000	45.6
133 Diphenylamine	169	6.704	6.704	(0.903)	678665	40.0000	41.2
58 1,2-Diphenylhydrazine	77	6.745	6.745	(0.909)	932740	40.0000	41.9
61 4-Bromophenylphenylether	248	7.010	7.010	(0.945)	228404	40.0000	39.9
63 Hexachlorobenzene	284	7.086	7.086	(0.955)	238209	40.0000	39.4
65 Pentachlorophenol	266	7.234	7.234	(0.975)	157280	40.0000	43.5
206 n-Octadecane	57	7.216	7.216	(0.972)	718448	40.0000	40.5
68 Phenanthrene	178	7.439	7.439	(1.002)	1134592	40.0000	38.6
69 Anthracene	178	7.486	7.486	(1.009)	1187369	40.0000	40.2
72 Di-n-butylphthalate	149	7.833	7.833	(1.055)	1359822	40.0000	41.5
76 Fluoranthene	202	8.498	8.498	(1.145)	1222916	40.0000	41.2

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	8.716	8.716	(0.883)	1240958	40.0000	38.6
85 Butylbenzylphthalate	149	9.245	9.245	(0.936)	616547	40.0000	41.0
89 Benzo(a)anthracene	228	9.857	9.857	(0.998)	1215558	40.0000	39.3
92 Chrysene	228	9.898	9.898	(1.002)	1156333	40.0000	39.1
93 bis(2-Ethylhexyl)phthalate	149	9.775	9.775	(0.990)	818569	40.0000	41.0
94 Di-n-octylphthalate	149	10.474	10.474	(0.895)	1403169	40.0000	39.6
95 Benzo(b)fluoranthene	252	11.127	11.127	(0.951)	1122171	40.0000	38.4(H)
96 Benzo(k)fluoranthene	252	11.169	11.169	(0.955)	1162499	40.0000	40.1
97 Benzo(a)pyrene	252	11.610	11.610	(0.992)	1058650	40.0000	41.8
99 Indeno(1,2,3-cd)pyrene	276	13.657	13.657	(1.167)	992079	40.0000	41.3
100 Dibenzo(a,h)anthracene	278	13.674	13.674	(1.169)	829731	40.0000	41.4
101 Benzo(ghi)perylene	276	14.257	14.257	(1.219)	881777	40.0000	41.6
126 m-Dinitrobenzene	168	6.016	6.016	(0.966)	148211	40.0000	42.0
130 2,3,4,6-Tetrachlorophenol	232	6.457	6.457	(1.037)	218802	40.0000	37.8
143 Dinoseb	211	7.357	7.357	(0.991)	203767	40.0000	39.6
173 Carbazole	167	7.598	7.598	(1.024)	1148011	40.0000	47.4
184 p-Benzoquinone	54	3.557	3.557	(0.870)	55314	40.0000	34.4
192 Methoxychlor	227	9.727	9.727	(0.985)	776273	40.0000	43.9
211 p-Toluidine	106	4.363	4.363	(1.068)	359620	40.0000	35.9(H)
210 m-Toluidine	106	4.381	4.381	(1.072)	620587	40.0000	43.1
26 Phthalic anhydride	104	5.492	5.492	(1.108)	240268	40.0000	48.4
179 Dibenzo(a,e)pyrene	302	18.845	18.845	(1.611)	325067	40.0000	25.7
214 1,4-Dinitrobenzene	75	5.957	5.957	(0.957)	200762	40.0000	42.4
215 2-Ethoxyethanol	59	2.381	2.381	(0.583)	332528	40.0000	43.0
216 Methylenebis(2-chloroaniline)	231	9.792	9.792	(0.992)	212648	40.0000	44.0(Q)
M 225 Trichlorophenols	196				528111	80.0000	83.3
M 226 Tetrachlorophenols	232				218802	40.0000	37.8
M 227 Benzo(b,k)fluoranthene	252				2284670	80.0000	78.5

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD6.i/s062509.b/s6f2525.d

Date : 26-JUN-2009 03:11

Client ID: MEGAICV

Sample Info: |WBN090602-09.1|40 PPM|1|SVMI1|MEGAICV

Column phase: J&W DB-5MS

Instrument: MSD6.i

Operator: JMB3

Column diameter: 0.20

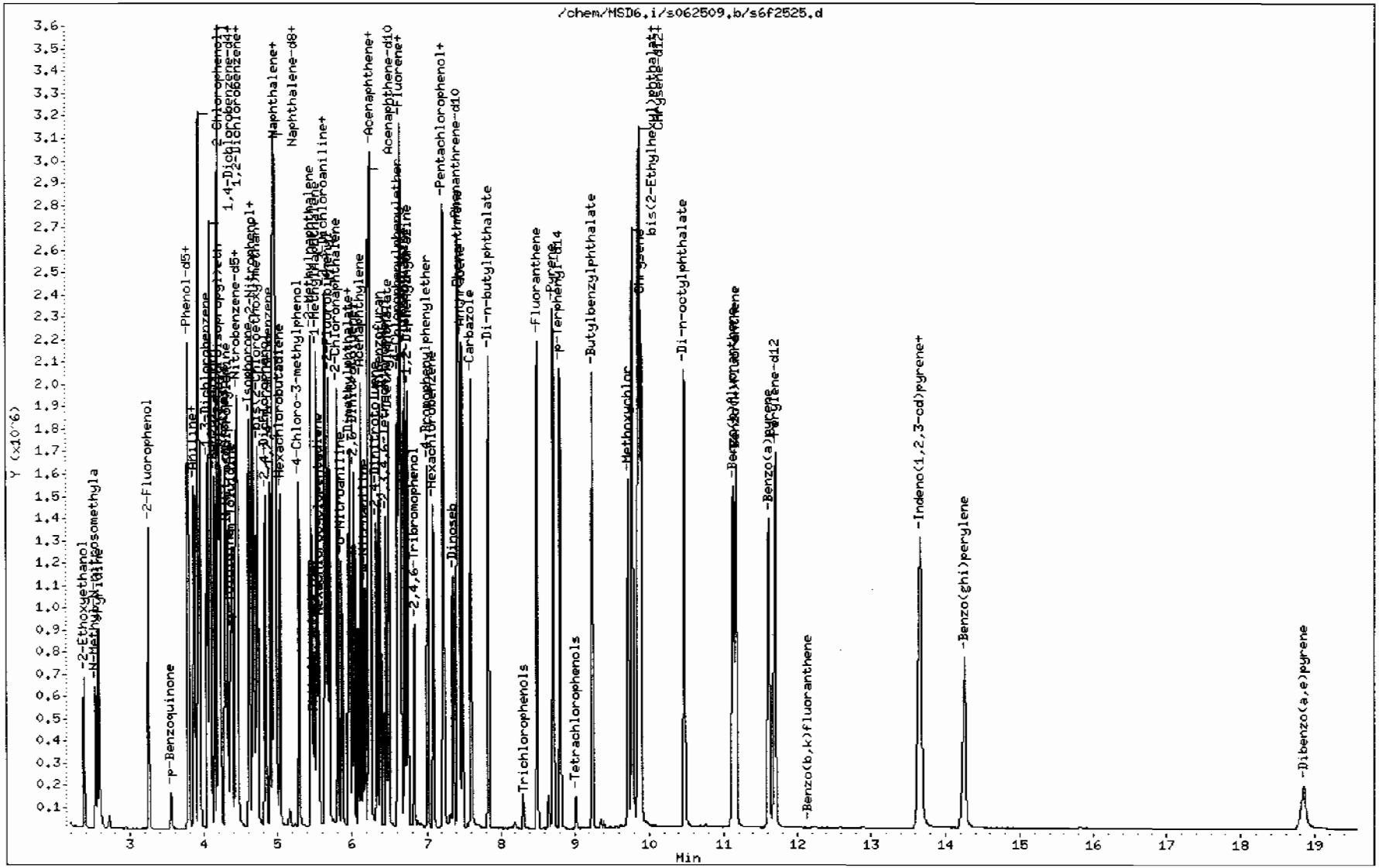

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:39
Lab File ID: s6f2526.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090528-08.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.97573	0.85474	0.85474	0.000	-12.39909	60.00000	Averaged
16 Acetophenone	1.26337	1.26773	1.26773	0.000	0.34482	60.00000	Averaged
189 Caprolactam	0.09432	0.09882	0.09882	0.000	4.78143	60.00000	Averaged
208 1,1'-Biphenyl	1.13640	1.15541	1.15541	0.000	1.67248	60.00000	Averaged
207 Atrazine	0.04266	0.04589	0.04589	0.000	7.56664	60.00000	Averaged
77 Benzidine	0.36104	0.32162	0.32162	0.000	-10.91903	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.30024	0.32436	0.32436	0.000	8.03186	60.00000	Averaged
102 1,4-Dioxane	0.39975	0.51116	0.51116	0.000	27.86716	60.00000	Averaged
103 Methyl methacrylate	0.20683	0.26052	0.26052	0.000	25.95766	60.00000	Averaged
104 Ethyl methacrylate	0.87106	1.06719	1.06719	0.000	22.51586	60.00000	Averaged
105 2-Picoline	1.35671	1.40000	1.40000	0.000	3.19115	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.56293	0.57743	0.57743	0.000	2.57564	60.00000	Averaged
107 Methyl methanesulfonate	0.61309	0.63913	0.63913	0.000	4.24822	60.00000	Averaged
108 N-Nitrosodiethylamine	0.53166	0.53602	0.53602	0.000	0.81888	60.00000	Averaged
109 Ethyl Methanesulfonate	0.74019	0.88027	0.88027	0.000	18.92575	60.00000	Averaged
110 Pentachloroethane	0.33280	0.45452	0.45452	0.000	36.57239	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.55735	0.55511	0.55511	0.000	-0.40075	60.00000	Averaged
113 N-Nitrosomorpholine	0.86727	0.88353	0.88353	0.000	1.87499	60.00000	Averaged
114 o-Toluidine	1.83427	1.88300	1.88300	0.000	2.65656	60.00000	Averaged
115 N-Nitrosopiperidine	0.15500	0.15559	0.15559	0.000	0.38169	60.00000	Averaged
116 a,a-Dimethylphenethylamine	1.10408	1.17215	1.17215	0.000	6.16470	60.00000	Averaged
118 2,6-Dichlorophenol	0.24042	0.24211	0.24211	0.000	0.70381	60.00000	Averaged
119 Hexachloropropene	0.12501	0.18290	0.18290	0.000	46.31422	60.00000	Averaged
120 p-Phenylenediamine	0.26729	0.28686	0.28686	0.000	7.32163	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	39.88942	40.00000	0.23719	0.000	-0.27646	60.00000	Linear
122 Safrole	0.20783	0.24376	0.24376	0.000	17.29032	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.43759	0.46722	0.46722	0.000	6.77091	60.00000	Averaged
124 Isosafrole	0.36281	0.47792	0.47792	0.000	31.72494	60.00000	Averaged
125 1,4-Naphthoquinone	0.35063	0.35471	0.35471	0.000	1.16483	60.00000	Averaged
127 Pentachlorobenzene	0.38763	0.40301	0.40301	0.000	3.96753	60.00000	Averaged
128 1-Naphthylamine	0.89054	0.93465	0.93465	0.000	4.95356	60.00000	Averaged
129 2-Naphthylamine	0.97412	0.97382	0.97382	0.000	-0.03014	60.00000	Averaged
131 5-Nitro-o-toluidine	0.30362	0.31239	0.31239	0.000	2.88681	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.14108	0.18201	0.18201	0.000	29.01178	60.00000	Averaged
137 Phenacetin	0.29473	0.31290	0.31290	0.000	6.16301	60.00000	Averaged
138 Diallate	0.25260	0.25908	0.25908	0.000	2.56483	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:39
Lab File ID: s6f2526.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090528-08.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
140 4-Aminobiphenyl	0.56927	0.63568	0.63568	0.000	11.66505	60.00000	Averaged
141 Pentachloronitrobenzene	0.07491	0.07940	0.07940	0.000	5.98449	60.00000	Averaged
142 Pronamide	0.24710	0.26338	0.26338	0.000	6.59100	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.02496	0.03127	0.03127	0.000	25.30185	60.00000	Averaged
147 Methapyrilene	0.60851	0.60510	0.60510	0.000	-0.55987	60.00000	Averaged
148 Isodrin	0.10457	0.10307	0.10307	0.000	-1.42951	60.00000	Averaged
149 Aramite	0.05203	0.04863	0.04863	0.000	-6.54350	60.00000	Averaged
150 Kepone	0.07915	0.08086	0.08086	0.000	2.16027	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28775	0.29792	0.29792	0.000	3.53436	60.00000	Averaged
152 Chlorobenzilate	0.27158	0.28026	0.28026	0.000	3.19449	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.52592	0.54011	0.54011	0.000	2.69836	60.00000	Averaged
155 2-Acetylaminofluorene	0.33797	0.36567	0.36567	0.000	8.19644	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.46186	0.43514	0.43514	0.000	-5.78438	60.00000	Averaged
158 3-Methylcholanthrene	0.41975	0.42534	0.42534	0.000	1.33299	60.00000	Averaged
212 Cis Diallate	0.28854	0.31803	0.31803	0.000	10.21791	60.00000	Averaged
213 Trans Diallate	0.29717	0.30480	0.30480	0.000	2.56483	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD6.i/s062509.b/s6f2526.d
Lab Smp Id: WBN090528-08.1 Client Smp ID: APICV
Inj Date : 26-JUN-2009 03:39
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090528-08.1|40 PPM|1|SVM|1|APICV
Misc Info : |MSD8270|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m
Meth Date : 26-Jun-2009 14:49 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 02:48 Cal File: s6f2524.d
Als bottle: 26 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.081	4.081	(1.000)	304698	40.0000	
* 29 Naphthalene-d8	136	4.957	4.957	(1.000)	1096680	40.0000	
* 46 Acenaphthene-d10	164	6.222	6.222	(1.000)	642057	40.0000	
* 67 Phenanthrene-d10	188	7.416	7.416	(1.000)	1121204	40.0000	
* 91 Chrysene-d12	240	9.863	9.863	(1.000)	1119311	40.0000	
* 98 Perylene-d12	264	11.686	11.686	(1.000)	997466	40.0000	
209 Benzaldehyde	77	3.805	3.805	(0.932)	260439	40.0000	35.0
16 Acetophenone	105	4.334	4.334	(1.062)	386274	40.0000	40.1
189 Caprolactam	113	5.228	5.228	(1.055)	108379	40.0000	41.9
208 1,1'-Biphenyl	154	5.781	5.781	(0.929)	741838	40.0000	40.7
207 Atrazine	173	7.104	7.104	(0.958)	51448	40.0000	43.0
77 Benzidine	184	8.581	8.581	(0.870)	359991	40.0000	35.6
90 3,3'-Dichlorobenzidine	252	9.792	9.792	(0.993)	363058	40.0000	43.2
102 1,4-Dioxane	88	2.381	2.381	(0.583)	155748	40.0000	51.1
103 Methyl methacrylate	100	2.375	2.375	(0.582)	79380	40.0000	50.4
104 Ethyl methacrylate	69	2.758	2.758	(0.676)	325170	40.0000	49.0
105 2-Picoline	93	2.958	2.958	(0.725)	426578	40.0000	41.3
106 N-Nitrosomethylethylamine	88	2.999	2.999	(0.735)	175941	40.0000	41.0
107 Methyl methanesulfonate	80	3.158	3.158	(0.774)	194743	40.0000	41.7
108 N-Nitrosodiethylamine	102	3.399	3.399	(0.833)	163323	40.0000	40.3
109 Ethyl Methanesulfonate	79	3.558	3.558	(0.872)	268218	40.0000	47.6
110 Pentachloroethane	167	3.905	3.905	(0.957)	138491	40.0000	54.6
111 N-Nitrosopyrrolidine	100	4.322	4.322	(1.059)	169142	40.0000	39.8(Q)
113 N-Nitrosomorpholine	56	4.340	4.340	(1.063)	269211	40.0000	40.7
114 o-Toluidine	106	4.357	4.357	(1.068)	573745	40.0000	41.1
115 N-Nitrosopiperidine	114	4.563	4.563	(0.920)	170631	40.0000	40.2

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.834	4.834	(0.975)	1285469	40.0000	42.5
118 2,6-Dichlorophenol	162	4.999	4.999	(1.008)	265518	40.0000	40.3
119 Hexachloropropene	213	5.028	5.028	(1.014)	200586	40.0000	58.5
120 p-Phenylenediamine	108	5.234	5.234	(1.056)	314590	40.0000	42.9
121 N-Nitrosodi-n-butylamine	84	5.199	5.199	(1.049)	260119	40.0000	39.9(T)
122 Safrole	162	5.369	5.369	(1.083)	267328	40.0000	46.9
123 1,2,4,5-Tetrachlorobenzene	216	5.575	5.575	(0.896)	299983	40.0000	42.7
124 Isosafrole	162	5.740	5.740	(0.922)	306850	40.0000	52.7
125 1,4-Naphthoquinone	158	5.928	5.928	(0.953)	227745	40.0000	40.5
127 Pentachlorobenzene	250	6.340	6.340	(1.019)	258754	40.0000	41.6
128 1-Naphthylamine	143	6.434	6.434	(1.034)	600100	40.0000	42.0
129 2-Naphthylamine	143	6.487	6.487	(1.043)	625251	40.0000	40.0
131 5-Nitro-o-toluidine	152	6.628	6.628	(1.065)	200571	40.0000	41.2
136 1,3,5-Trinitrobenzene	75	6.875	6.875	(0.927)	204074	40.0000	51.6
137 Phenacetin	108	6.922	6.922	(0.933)	350821	40.0000	42.5(Q)
138 Diallate	86	6.916	6.916	(0.933)	290478	40.0000	41.0
140 4-Aminobiphenyl	169	7.222	7.222	(0.974)	712723	40.0000	44.7
141 Pentachloronitrobenzene	237	7.246	7.246	(0.977)	89021	40.0000	42.4(Q)
142 Pronamide	173	7.234	7.234	(0.975)	295305	40.0000	42.6
146 4-Nitroquinoline-1-oxide	101	8.093	8.093	(1.091)	35063	40.0000	50.1
147 Methapyrilene	58	8.128	8.128	(1.096)	678443	40.0000	39.8
148 Isodrin	193	8.363	8.363	(1.128)	115566	40.0000	39.4
149 Aramite	185	8.751	8.751	(1.180)	54521	40.0000	37.4
150 Kepone	272	9.363	9.363	(1.263)	90661	40.0000	40.9
151 p-(Dimethylamino)azobenzene	120	8.940	8.940	(0.906)	333470	40.0000	41.4
152 Chlorobenzilate	251	8.969	8.969	(0.909)	313695	40.0000	41.3
153 3,3'-Dimethylbenzidine	212	9.257	9.257	(0.939)	604549	40.0000	41.1
155 2-Acetylaminofluorene	181	9.504	9.504	(0.964)	409299	40.0000	43.3
157 7,12Dimethylbenz(a)anthracene	256	11.092	11.092	(0.949)	434041	40.0000	37.7
158 3-Methylcholanthrene	268	12.139	12.139	(1.039)	424263	40.0000	40.5(Q)
212 Cis Diallate	86	6.993	6.993	(0.943)	53486	6.00000	6.6
213 Trans Diallate	86	6.916	6.916	(0.933)	290478	34.0000	34.9

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD6.i/s062509.b/s6f2526.d
Date : 26-JUN-2009 03:39
Client ID: APICV
Sample Info: IWBH090528-08.1|40 PPM|1|SWM|1|APICV
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

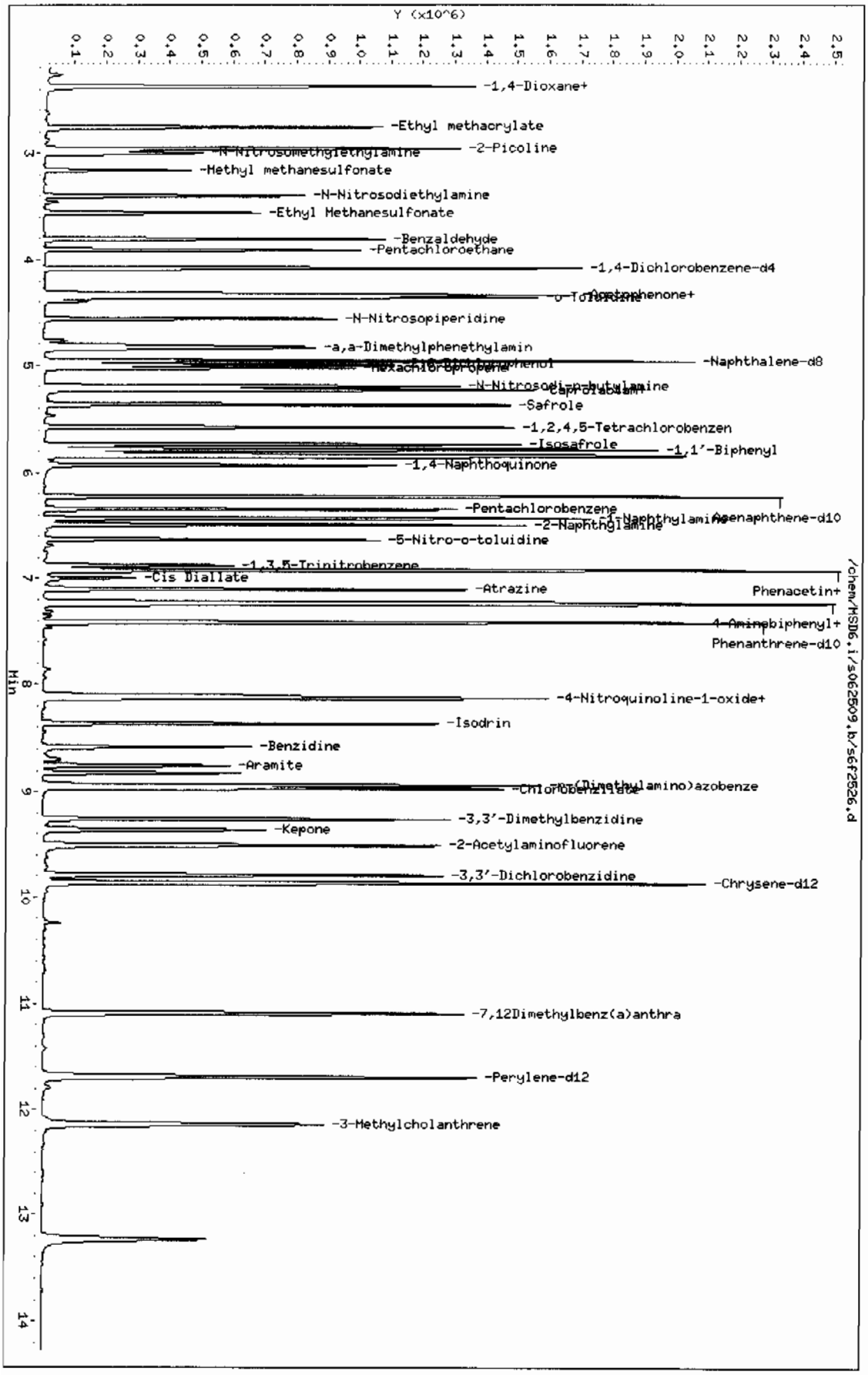

Data File: /chem/MSD6.i/s070209.b/s6g0206.d
Report Date: 03-Jul-2009 09:01

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:23
Lab File ID: s6g0206.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$	3 2-Fluorophenol	1.08676	1.12831	1.12831	0.000	3.82353	60.00000	Averaged
$	5 Phenol-d5	1.45582	1.49227	1.49227	0.000	2.50400	60.00000	Averaged
$	20 Nitrobenzene-d5	0.35436	0.39407	0.39407	0.000	11.20643	60.00000	Averaged
$	39 2-Fluorobiphenyl	1.01592	1.04471	1.04471	0.000	2.83333	60.00000	Averaged
$	60 2,4,6-Tribromophenol	0.14788	0.13810	0.13810	0.000	-6.60896	60.00000	Averaged
$	81 p-Terphenyl-d14	0.63880	0.66247	0.66247	0.000	3.70482	60.00000	Averaged
	1 N-Methyl-N-nitrosomethylami	0.67425	0.73310	0.73310	0.000	8.72858	60.00000	Averaged
	2 Pyridine	0.97491	1.02832	1.02832	0.000	5.47813	60.00000	Averaged
	4 Aniline	0.64934	0.70312	0.70312	0.000	8.28216	60.00000	Averaged
	6 Phenol	1.44200	1.40711	1.40711	0.001	-2.41942	20.00000	Averaged ccc
	7 bis(2-Chloroethyl) ether	1.12091	1.17938	1.17938	0.000	5.21677	60.00000	Averaged
	8 2-Chlorophenol	1.11681	1.13042	1.13042	0.000	1.21929	60.00000	Averaged
	203 n-Decane	1.78602	1.91923	1.91923	0.000	7.45900	60.00000	Averaged
	9 1,3-Dichlorobenzene	1.26663	1.29412	1.29412	0.000	2.17103	60.00000	Averaged
	11 1,4-Dichlorobenzene	1.23080	1.24722	1.24722	0.001	1.33431	20.00000	Averaged ccc
	13 1,2-Dichlorobenzene	1.12537	1.12714	1.12714	0.000	0.15733	60.00000	Averaged
	14 bis(2-Chloroisopropyl)ether	2.47134	2.82765	2.82765	0.000	14.41807	60.00000	Averaged
	12 Benzyl alcohol	0.76891	0.63216	0.63216	0.000	-17.78510	60.00000	Averaged
	15 o-Cresol	0.85308	0.83588	0.83588	0.000	-2.01656	60.00000	Averaged
	18 m,p-Cresols	1.19930	1.15750	1.15750	0.000	-3.48553	60.00000	Averaged
	17 N-Nitrosodipropylamine	0.85085	0.90475	0.90475	0.050	6.33522	60.00000	Averaged spcc
	19 Hexachloroethane	0.49505	0.51342	0.51342	0.000	3.70932	60.00000	Averaged
	21 Nitrobenzene	0.32264	0.36425	0.36425	0.000	12.89478	60.00000	Averaged
	22 Isophorone	0.60747	0.66831	0.66831	0.000	10.01587	60.00000	Averaged
	23 2-Nitrophenol	0.13851	0.15527	0.15527	0.001	12.09447	20.00000	Averaged ccc
	24 2,4-Dimethylphenol	0.41146	0.44124	0.44124	0.000	7.23886	60.00000	Averaged
	25 bis(2-Chloroethoxy)methane	0.33882	0.36971	0.36971	0.000	9.11544	60.00000	Averaged
	26 2,4-Dichlorophenol	0.23380	0.25904	0.25904	0.001	10.79542	20.00000	Averaged ccc
	27 Benzoic acid	0.21793	0.19751	0.19751	0.000	-9.37180	60.00000	Averaged
	28 1,2,4-Trichlorobenzene	0.26511	0.28363	0.28363	0.000	6.98256	60.00000	Averaged
	30 Naphthalene	0.90387	0.82015	0.82015	0.000	-9.26165	60.00000	Averaged
	204 alpha-Terpineol	0.29387	0.31444	0.31444	0.000	7.00079	60.00000	Averaged
	31 4-Chloroaniline	0.37979	0.41570	0.41570	0.000	9.45722	60.00000	Averaged
	32 Hexachlorobutadiene	0.16053	0.17089	0.17089	0.001	6.45345	20.00000	Averaged ccc
	33 4-Chloro-3-methylphenol	0.25080	0.27325	0.27325	0.001	8.95121	20.00000	Averaged ccc
	34 2-Methylnaphthalene	0.48988	0.50965	0.50965	0.000	4.03536	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:23
Lab File ID: s6g0206.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35 1-Methylnaphthalene	0.53368	0.52183	0.52183	0.000	-2.22170	60.00000	Averaged	
36 Hexachlorocyclopentadiene	0.20750	0.23431	0.23431	0.050	12.92275	60.00000	Averaged	spcc
205 2,3-Dichloroaniline	0.50238	0.51906	0.51906	0.000	3.32134	60.00000	Averaged	
37 2,4,6-Trichlorophenol	0.32270	0.32113	0.32113	0.001	-0.48691	20.00000	Averaged	ccc
38 2,4,5-Trichlorophenol	0.34000	0.35213	0.35213	0.000	3.56705	60.00000	Averaged	
40 2-Chloronaphthalene	0.94346	0.97660	0.97660	0.000	3.51231	60.00000	Averaged	
42 o-Nitroaniline	0.36358	0.40457	0.40457	0.000	11.27602	60.00000	Averaged	
41 m-Nitroaniline	0.23385	0.26672	0.26672	0.000	14.05402	60.00000	Averaged	
43 Dimethylphthalate	1.07582	1.11310	1.11310	0.000	3.46535	60.00000	Averaged	
44 2,6-Dinitrotoluene	0.25592	0.27155	0.27155	0.000	6.10537	60.00000	Averaged	
50 2,4-Dinitrotoluene	0.34150	0.36231	0.36231	0.000	6.09442	60.00000	Averaged	
45 Acenaphthylene	1.44935	1.50434	1.50434	0.000	3.79414	60.00000	Averaged	
47 Acenaphthene	0.91388	0.92113	0.92113	0.001	0.79367	20.00000	Averaged	ccc
48 2,4-Dinitrophenol	0.11804	0.11374	0.11374	0.050	-3.64134	60.00000	Averaged	spcc
49 Dibenzofuran	1.25504	1.31103	1.31103	0.000	4.46149	60.00000	Averaged	
51 Diethylphthalate	1.06896	1.10009	1.10009	0.000	2.91189	60.00000	Averaged	
52 4-Nitrophenol	0.17244	0.19304	0.19304	0.050	11.94824	60.00000	Averaged	spcc
53 Fluorene	1.05447	1.05139	1.05139	0.000	-0.29229	60.00000	Averaged	
54 4-Chlorophenylphenylether	0.51415	0.53477	0.53477	0.000	4.00901	60.00000	Averaged	
55 2-Methyl-4,6-dinitrophenol	42.29887	40.00000	0.10751	0.000	5.74716	60.00000	Linear	
56 p-Nitroaniline	0.20474	0.24991	0.24991	0.000	22.06351	60.00000	Averaged	
133 Diphenylamine	0.49779	0.53755	0.53755	0.001	7.98719	20.00000	Averaged	ccc
58 1,2-Diphenylhydrazine	0.67266	0.74729	0.74729	0.000	11.09423	60.00000	Averaged	
61 4-Bromophenylphenylether	0.17305	0.18267	0.18267	0.000	5.55959	60.00000	Averaged	
63 Hexachlorobenzene	0.18286	0.19234	0.19234	0.000	5.18591	60.00000	Averaged	
65 Pentachlorophenol	0.10942	0.10683	0.10683	0.001	-2.37139	20.00000	Averaged	ccc
206 n-Octadecane	0.53677	0.59933	0.59933	0.000	11.65511	60.00000	Averaged	
68 Phenanthrene	0.88975	0.91089	0.91089	0.000	2.37649	60.00000	Averaged	
69 Anthracene	0.89272	0.90931	0.90931	0.000	1.85866	60.00000	Averaged	
72 Di-n-butylphthalate	0.99025	1.06352	1.06352	0.000	7.39958	60.00000	Averaged	
76 Fluoranthene	0.89748	0.92407	0.92407	0.001	2.96243	20.00000	Averaged	ccc
79 Pyrene	0.99649	1.02035	1.02035	0.000	2.39472	60.00000	Averaged	
85 Butylbenzylphthalate	0.46624	0.50215	0.50215	0.000	7.70208	60.00000	Averaged	
89 Benzo(a)anthracene	0.95971	0.99455	0.99455	0.000	3.63016	60.00000	Averaged	
92 Chrysene	0.91745	0.92376	0.92376	0.000	0.68859	60.00000	Averaged	
93 bis(2-Ethylhexyl)phthalate	0.61977	0.67699	0.67699	0.000	9.23263	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:23
Lab File ID: s6g0206.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
94 Di-n-octylphthalate	1.15298	1.28440	1.28440	0.001	11.39792	20.00000	Averaged	ccc
95 Benzo(b)fluoranthene	0.95265	1.03463	1.03463	0.000	8.60609	60.00000	Averaged	
96 Benzo(k)fluoranthene	0.94372	0.94756	0.94756	0.000	0.40705	60.00000	Averaged	
97 Benzo(a)pyrene	0.82425	0.87958	0.87958	0.001	6.71371	20.00000	Averaged	ccc
99 Indeno(1,2,3-cd)pyrene	0.78267	0.80601	0.80601	0.000	2.98287	60.00000	Averaged	
100 Dibenzo(a,h)anthracene	39.72438	40.00000	0.64883	0.000	-0.68905	60.00000	Linear	
101 Benzo(ghi)perylene	0.69055	0.67356	0.67356	0.000	-2.46054	60.00000	Averaged	
126 m-Dinitrobenzene	0.18444	0.20039	0.20039	0.000	8.64357	60.00000	Averaged	
130 2,3,4,6-Tetrachlorophenol	0.30233	0.32744	0.32744	0.000	8.30430	60.00000	Averaged	
143 Dinoseb	42.21911	40.00000	0.16506	0.000	5.54778	60.00000	Linear	
173 Carbazole	0.73178	0.87747	0.87747	0.000	19.90939	60.00000	Averaged	
184 p-Benzoquinone	0.18162	0.15324	0.15324	0.000	-15.62694	60.00000	Averaged	
192 Methoxychlor	0.54804	0.58810	0.58810	0.000	7.31014	60.00000	Averaged	
211 p-Toluidine	1.13033	1.07232	1.07232	0.000	-5.13235	60.00000	Averaged	
210 m-Toluidine	1.62748	1.68076	1.68076	0.000	3.27396	60.00000	Averaged	
26 Phthalic anhydride	29.77353	40.00000	0.10265	0.000	-25.56617	60.00000	Linear	
214 1,4-Dinitrobenzene	0.24737	0.28015	0.28015	0.000	13.25405	60.00000	Averaged	
215 2-Ethoxyethanol	0.87382	0.89123	0.89123	0.000	1.99160	60.00000	Averaged	
216 Methylenebis(2-chloroanilin	0.14973	0.14106	0.14106	0.000	-5.79437	60.00000	Averaged	
M 225 Trichlorophenols	0.33135	0.33663	0.33663	0.000	1.59298	60.00000	Averaged	
M 226 Tetrachlorophenols	0.30233	0.32744	0.32744	0.000	8.30430	60.00000	Averaged	
M 227 Benzo(b,k)fluoranthene	0.94818	0.99110	0.99110	0.000	4.52587	60.00000	Averaged	

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Data file : /chem/MSD6.i/s070209.b/s6g0206.d
Lab Smp Id: WBN090626-05.3 Client Smp ID: MEGACVS
Inj Date : 02-JUL-2009 15:23
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090626-05.3|40 PPM|1|SVM|1|MEGACVS
Misc Info : |MSD8270|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 03-Jul-2009 09:01 jen00986 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGA.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.999	3.999	(1.000)	532813	40.0000	
* 29 Naphthalene-d8	136	4.875	4.875	(1.000)	1990426	40.0000	
* 46 Acenaphthene-d10	164	6.134	6.134	(1.000)	1102206	40.0000	
* 67 Phenanthrene-d10	188	7.316	7.316	(1.000)	1854401	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1763017	40.0000	
* 98 Perylene-d12	264	11.492	11.492	(1.000)	1624774	40.0000	
$ 3 2-Fluorophenol	112	3.175	3.175	(0.794)	601180	40.0000	41.5
$ 5 Phenol-d5	99	3.710	3.710	(0.928)	795101	40.0000	41.0
$ 20 Nitrobenzene-d5	82	4.363	4.363	(0.895)	784361	40.0000	44.5
$ 39 2-Fluorobiphenyl	172	5.616	5.616	(0.916)	1151481	40.0000	41.1
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.098)	152217	40.0000	37.4
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	1167945	40.0000	41.5
1 N-Methyl-N-nitrosomethylamine	74	2.469	2.469	(0.618)	390605	40.0000	43.5
2 Pyridine	79	2.505	2.505	(0.626)	547903	40.0000	42.2
4 Aniline	66	3.781	3.781	(0.946)	374634	40.0000	43.3
6 Phenol	94	3.722	3.722	(0.931)	749726	40.0000	39.0
7 bis(2-Chloroethyl) ether	63	3.799	3.799	(0.950)	628391	40.0000	42.1
8 2-Chlorophenol	128	3.863	3.863	(0.966)	602305	40.0000	40.5
203 n-Decane	43	3.846	3.846	(0.962)	1022593	40.0000	43.0
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.993)	689526	40.0000	40.9
11 1,4-Dichlorobenzene	146	4.010	4.010	(1.003)	664534	40.0000	40.5
13 1,2-Dichlorobenzene	146	4.116	4.116	(1.029)	600556	40.0000	40.1
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.035)	1506611	40.0000	45.8
12 Benzyl alcohol	108	4.069	4.069	(1.018)	336824	40.0000	32.9
15 o-Cresol	107	4.116	4.116	(1.029)	445366	40.0000	39.2
18 m,p-Cresols	107	4.222	4.222	(1.056)	616730	40.0000	38.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.240	4.240	(1.060)	482063	40.0000	42.5
19 Hexachloroethane	117	4.346	4.346	(1.087)	273555	40.0000	41.5
21 Nitrobenzene	77	4.381	4.381	(0.899)	725009	40.0000	45.2
22 Isophorone	82	4.534	4.534	(0.930)	1330220	40.0000	44.0
23 2-Nitrophenol	139	4.593	4.593	(0.942)	309044	40.0000	44.8
24 2,4-Dimethylphenol	122	4.599	4.599	(0.943)	878262	40.0000	42.9
25 bis(2-Chloroethoxy)methane	93	4.652	4.652	(0.954)	735874	40.0000	43.6
26 2,4-Dichlorophenol	162	4.763	4.763	(0.977)	515601	40.0000	44.3
27 Benzoic acid	105	4.640	4.640	(0.952)	393126	40.0000	36.2
28 1,2,4-Trichlorobenzene	180	4.822	4.822	(0.989)	564537	40.0000	42.8
30 Naphthalene	128	4.887	4.887	(1.002)	1632454	40.0000	36.3
204 alpha-Terpineol	59	4.863	4.863	(0.998)	625875	40.0000	42.8
31 4-Chloroaniline	127	4.899	4.899	(1.005)	827426	40.0000	43.8
32 Hexachlorobutadiene	225	4.951	4.951	(1.016)	340148	40.0000	42.6
33 4-Chloro-3-methylphenol	107	5.216	5.216	(1.070)	543875	40.0000	43.6
34 2-Methylnaphthalene	142	5.369	5.369	(1.101)	1014417	40.0000	41.6
35 1-Methylnaphthalene	142	5.446	5.446	(1.117)	1038657	40.0000	39.1
36 Hexachlorocyclopentadiene	237	5.475	5.475	(0.893)	258259	40.0000	45.2
205 2,3-Dichloroaniline	161	5.563	5.563	(0.907)	572113	40.0000	41.3
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.906)	353953	40.0000	39.8
38 2,4,5-Trichlorophenol	196	5.587	5.587	(0.911)	388118	40.0000	41.4
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	1076417	40.0000	41.4
42 o-Nitroaniline	65	5.781	5.781	(0.942)	445924	40.0000	44.5
41 m-Nitroaniline	138	6.081	6.081	(0.991)	293977	40.0000	45.6
43 Dimethylphthalate	163	5.887	5.887	(0.960)	1226862	40.0000	41.4
44 2,6-Dinitrotoluene	165	5.946	5.946	(0.969)	299299	40.0000	42.4
50 2,4-Dinitrotoluene	165	6.245	6.245	(1.018)	399339	40.0000	42.4
45 Acenaphthylene	152	6.034	6.034	(0.984)	1658090	40.0000	41.5
47 Acenaphthene	154	6.157	6.157	(1.004)	1015280	40.0000	40.3
48 2,4-Dinitrophenol	184	6.151	6.151	(1.003)	125369	40.0000	38.5
49 Dibenzofuran	168	6.281	6.281	(1.024)	1445026	40.0000	41.8
51 Diethylphthalate	149	6.398	6.398	(1.043)	1212524	40.0000	41.2
52 4-Nitrophenol	139	6.175	6.175	(1.007)	212768	40.0000	44.8
53 Fluorene	166	6.545	6.545	(1.067)	1158845	40.0000	39.9
54 4-Chlorophenylphenylether	204	6.522	6.522	(1.063)	589422	40.0000	41.6
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.896)	199362	40.0000	42.3
56 p-Nitroaniline	138	6.545	6.545	(1.067)	275449	40.0000	48.8
133 Diphenylamine	169	6.610	6.610	(0.904)	996840	40.0000	43.2
58 1,2-Diphenylhydrazine	77	6.645	6.645	(0.908)	1385767	40.0000	44.4
61 4-Bromophenylphenylether	248	6.910	6.910	(0.945)	338752	40.0000	42.2
63 Hexachlorobenzene	284	6.987	6.987	(0.955)	356675	40.0000	42.1
65 Pentachlorophenol	266	7.140	7.140	(0.976)	198099	40.0000	39.0
206 n-Octadecane	57	7.116	7.116	(0.973)	1111404	40.0000	44.7
68 Phenanthrene	178	7.334	7.334	(1.002)	1689161	40.0000	41.0
69 Anthracene	178	7.375	7.375	(1.008)	1686229	40.0000	40.7
72 Di-n-butylphthalate	149	7.728	7.728	(1.056)	1972200	40.0000	43.0
76 Fluoranthene	202	8.381	8.381	(1.146)	1713590	40.0000	41.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	8.598	8.598	(0.882)	1798896	40.0000	41.0
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	885291	40.0000	43.1
89 Benzo(a)anthracene	228	9.728	9.728	(0.998)	1753413	40.0000	41.4
92 Chrysene	228	9.769	9.769	(1.002)	1628609	40.0000	40.3
93 bis(2-Ethylhexyl)phthalate	149	9.651	9.651	(0.990)	1193548	40.0000	43.7
94 Di-n-octylphthalate	149	10.333	10.333	(0.899)	2086852	40.0000	44.6
95 Benzo(b)fluoranthene	252	10.951	10.951	(0.953)	1681042	40.0000	43.4
96 Benzo(k)fluoranthene	252	10.986	10.986	(0.956)	1539572	40.0000	40.2
97 Benzo(a)pyrene	252	11.410	11.410	(0.993)	1429123	40.0000	42.7
99 Indeno(1,2,3-cd)pyrene	276	13.357	13.357	(1.162)	1309588	40.0000	41.2
100 Dibenzo(a,h)anthracene	278	13.374	13.374	(1.164)	1054202	40.0000	39.7
101 Benzo(ghi)perylene	276	13.927	13.927	(1.212)	1094385	40.0000	39.0
126 m-Dinitrobenzene	168	5.928	5.928	(0.966)	220866	40.0000	43.4
130 2,3,4,6-Tetrachlorophenol	232	6.363	6.363	(1.037)	360903	40.0000	43.3
143 Dinoseb	211	7.257	7.257	(0.992)	306082	40.0000	42.2
173 Carbazole	167	7.492	7.492	(1.024)	1627187	40.0000	48.0
184 p-Benzoquinone	54	3.481	3.481	(0.871)	81649	40.0000	33.7
192 Methoxychlor	227	9.604	9.604	(0.986)	1036832	40.0000	42.9
211 p-Toluidine	106	4.281	4.281	(1.071)	571344	40.0000	37.9
210 m-Toluidine	106	4.299	4.299	(1.075)	895530	40.0000	41.3
26 Phthalic anhydride	104	5.404	5.404	(1.109)	204320	40.0000	29.8
214 1,4-Dinitrobenzene	75	5.869	5.869	(0.957)	308787	40.0000	45.3
215 2-Ethoxyethanol	59	2.310	2.310	(0.578)	474857	40.0000	40.8
216 Methylenebis(2-chloroaniline)	231	9.669	9.669	(0.992)	248688	40.0000	37.7
M 225 Trichlorophenols	196				742071	80.0000	81.3
M 226 Tetrachlorophenols	232				360903	40.0000	43.3
M 227 Benzo(b,k)fluoranthene	252				3220614	80.0000	83.6

Data File: /chem/MSD6.i/s070209.b/s6g0206.d

Date : 02-JUL-2009 15:23

Client ID: MEGACVS

Sample Info: IWBN090626-05.3|40 PPM|1|SVM|1|MEGACVS

Column phase: J&W DB-5MS

Instrument: MSD6.i

Operator: JMB3

Column diameter: 0.20

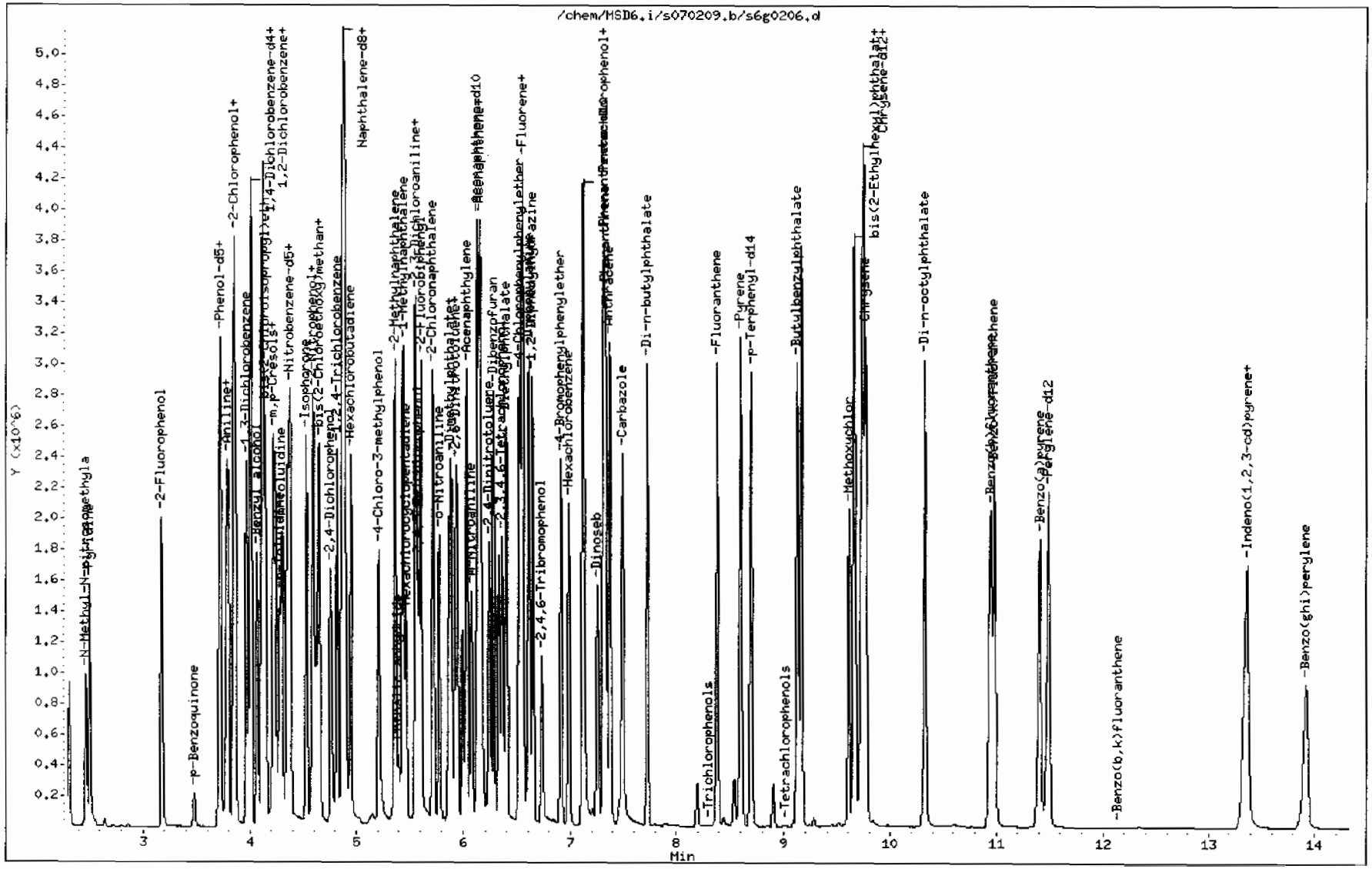

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:46
Lab File ID: s6g0207.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090619-01.2 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.97573	1.03187	1.03187	0.000	5.75443	60.00000	Averaged
16 Acetophenone	1.26337	1.26297	1.26297	0.000	-0.03191	60.00000	Averaged
189 Caprolactam	0.09432	0.09953	0.09953	0.000	5.52832	60.00000	Averaged
208 1,1'-Biphenyl	1.13640	1.18279	1.18279	0.000	4.08182	60.00000	Averaged
207 Atrazine	0.04266	0.04348	0.04348	0.000	1.91761	60.00000	Averaged
77 Benzidine	0.36104	0.33583	0.33583	0.000	-6.98298	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.30024	0.30754	0.30754	0.000	2.43123	60.00000	Averaged
102 1,4-Dioxane	0.39975	0.40522	0.40522	0.000	1.36663	60.00000	Averaged
103 Methyl methacrylate	0.20683	0.20550	0.20550	0.000	-0.64360	60.00000	Averaged
104 Ethyl methacrylate	0.87106	0.89774	0.89774	0.000	3.06323	60.00000	Averaged
105 2-Picoline	1.35671	1.34961	1.34961	0.000	-0.52344	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.56293	0.57673	0.57673	0.000	2.45212	60.00000	Averaged
107 Methyl methanesulfonate	0.61309	0.60978	0.60978	0.000	-0.53948	60.00000	Averaged
108 N-Nitrosodiethylamine	0.53166	0.53462	0.53462	0.000	0.55558	60.00000	Averaged
109 Ethyl Methanesulfonate	0.74019	0.73954	0.73954	0.000	-0.08808	60.00000	Averaged
110 Pentachloroethane	0.33280	0.34067	0.34067	0.000	2.36301	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.55735	0.58087	0.58087	0.000	4.22073	60.00000	Averaged
113 N-Nitrosomorpholine	0.86727	0.89584	0.89584	0.000	3.29424	60.00000	Averaged
114 o-Toluidine	1.83427	1.82655	1.82655	0.000	-0.42090	60.00000	Averaged
115 N-Nitrosopiperidine	0.15500	0.16433	0.16433	0.000	6.02393	60.00000	Averaged
116 a,a-Dimethylphenethylamine	1.10408	1.02914	1.02914	0.000	-6.78737	60.00000	Averaged
118 2,6-Dichlorophenol	0.24042	0.23816	0.23816	0.000	-0.94037	60.00000	Averaged
119 Hexachloropropene	0.12501	0.13512	0.13512	0.000	8.08915	60.00000	Averaged
120 p-Phenylenediamine	0.26729	0.11686	0.11686	0.000	-56.27932	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	40.55536	40.00000	0.24066	0.000	1.38840	60.00000	Linear
122 Safrole	0.20783	0.21373	0.21373	0.000	2.84081	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.43759	0.44987	0.44987	0.000	2.80615	60.00000	Averaged
124 Isosafrole	0.36281	0.37654	0.37654	0.000	3.78265	60.00000	Averaged
125 1,4-Naphthoquinone	0.35063	0.37868	0.37868	0.000	7.99976	60.00000	Averaged
127 Pentachlorobenzene	0.38763	0.39994	0.39994	0.000	3.17578	60.00000	Averaged
128 1-Naphthylamine	0.89054	0.92251	0.92251	0.000	3.59017	60.00000	Averaged
129 2-Naphthylamine	0.97412	1.02369	1.02369	0.000	5.08909	60.00000	Averaged
131 5-Nitro-o-toluidine	0.30362	0.32164	0.32164	0.000	5.93339	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.14108	0.16767	0.16767	0.000	18.84568	60.00000	Averaged
137 Phenacetin	0.29473	0.31778	0.31778	0.000	7.82078	60.00000	Averaged
138 Diallate	0.25260	0.27826	0.27826	0.000	10.15770	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i
Lab File ID: s6g0207.d
Analysis Type:
Lab Sample ID: WBN090619-01.2
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

Injection Date: 02-JUL-2009 15:46
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 18:09 09:39
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
140 4-Aminobiphenyl	0.56927	0.60710	0.60710	0.000	6.64578	60.00000	Averaged
141 Pentachloronitrobenzene	0.07491	0.07646	0.07646	0.000	2.06416	60.00000	Averaged
142 Pronamide	0.24710	0.25909	0.25909	0.000	4.85452	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.02496	0.02193	0.02193	0.000	-12.13855	60.00000	Averaged
147 Methapyrilene	0.60851	0.60164	0.60164	0.000	-1.12915	60.00000	Averaged
148 Isodrin	0.10457	0.10704	0.10704	0.000	2.36022	60.00000	Averaged
149 Aramite	0.05203	0.05543	0.05543	0.000	6.52426	60.00000	Averaged
150 Kepone	0.07915	0.03649	0.03649	0.000	-53.90031	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28775	0.30970	0.30970	0.000	7.62643	60.00000	Averaged
152 Chlorobenzilate	0.27158	0.29308	0.29308	0.000	7.91547	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.52592	0.53622	0.53622	0.000	1.95851	60.00000	Averaged
155 2-Acetylaminofluorene	0.33797	0.35084	0.35084	0.000	3.80702	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.46186	0.50569	0.50569	0.000	9.49022	60.00000	Averaged
158 3-Methylcholanthrene	0.41975	0.42089	0.42089	0.000	0.27175	60.00000	Averaged
212 Cis Diallate	0.28854	0.31206	0.31206	0.000	8.14908	60.00000	Averaged
213 Trans Diallate	0.29717	0.32736	0.32736	0.000	10.15770	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0207.d
Lab Smp Id: WBN090619-01.2 Client Smp ID: APCVS
Inj Date : 02-JUL-2009 15:46
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090619-01.2|40 PPM|1|SVM|1|APCVS
Misc Info : |MSD8270|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 16:07 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpclpl

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.998	3.998	(1.000)	551809	40.0000	
* 29 Naphthalene-d8	136	4.869	4.869	(1.000)	1923187	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.128	(1.000)	1106992	40.0000	
* 67 Phenanthrene-d10	188	7.316	7.316	(1.000)	1902426	40.0000	
* 91 Chrysene-d12	240	9.739	9.739	(1.000)	1761637	40.0000	
* 98 Perylene-d12	264	11.486	11.486	(1.000)	1422731	40.0000	
209 Benzaldehyde	77	3.722	3.722	(0.931)	569397	40.0000	42.3
16 Acetophenone	105	4.251	4.251	(1.063)	696917	40.0000	40.0
189 Caprolactam	113	5.145	5.145	(1.057)	191413	40.0000	42.2
208 1,1'-Biphenyl	154	5.692	5.692	(0.929)	1309337	40.0000	41.6
207 Atrazine	173	7.004	7.004	(0.957)	82711	40.0000	40.8
77 Benzidine	184	8.475	8.475	(0.870)	591609	40.0000	37.2
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	541779	40.0000	41.0
102 1,4-Dioxane	88	2.316	2.316	(0.579)	223603	40.0000	40.5
103 Methyl methacrylate	100	2.310	2.310	(0.578)	113397	40.0000	39.7
104 Ethyl methacrylate	69	2.687	2.687	(0.672)	495383	40.0000	41.2
105 2-Picoline	93	2.887	2.887	(0.722)	744725	40.0000	39.8
106 N-Nitrosomethylethylamine	88	2.922	2.922	(0.731)	318246	40.0000	41.0
107 Methyl methanesulfonate	80	3.081	3.081	(0.770)	336483	40.0000	39.8
108 N-Nitrosodiethylamine	102	3.322	3.322	(0.831)	295006	40.0000	40.2
109 Ethyl Methanesulfonate	79	3.481	3.481	(0.871)	408083	40.0000	40.0
110 Pentachloroethane	167	3.822	3.822	(0.956)	187984	40.0000	40.9
111 N-Nitrosopyrrolidine	100	4.240	4.240	(1.060)	320530	40.0000	41.7(Q)
113 N-Nitrosomorpholine	56	4.257	4.257	(1.065)	494334	40.0000	41.3
114 o-Toluidine	106	4.281	4.281	(1.071)	1007905	40.0000	39.8
115 N-Nitrosopiperidine	114	4.481	4.481	(0.920)	316045	40.0000	42.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.728	4.728	(0.971)	1979237	40.0000	37.3
118 2,6-Dichlorophenol	162	4.916	4.916	(1.010)	458022	40.0000	39.6
119 Hexachloropropene	213	4.940	4.940	(1.014)	259859	40.0000	43.2
120 p-Phenylenediamine	108	4.869	4.869	(1.000)	224743	40.0000	17.5
121 N-Nitrosodi-n-butylamine	84	5.110	5.110	(1.050)	462839	40.0000	40.6(T)
122 Safrole	162	5.281	5.281	(1.085)	411045	40.0000	41.1
123 1,2,4,5-Tetrachlorobenzene	216	5.487	5.487	(0.895)	498005	40.0000	41.1
124 Isosafrole	162	5.651	5.651	(0.922)	416825	40.0000	41.5
125 1,4-Naphthoquinone	158	5.840	5.840	(0.953)	419192	40.0000	43.2
127 Pentachlorobenzene	250	6.251	6.251	(1.020)	442729	40.0000	41.3
128 1-Naphthylamine	143	6.340	6.340	(1.035)	1021212	40.0000	41.4
129 2-Naphthylamine	143	6.398	6.398	(1.044)	1133219	40.0000	42.0
131 5-Nitro-o-toluidine	152	6.534	6.534	(1.066)	356051	40.0000	42.4
136 1,3,5-Trinitrobenzene	75	6.787	6.787	(0.928)	318981	40.0000	47.5
137 Phenacetin	108	6.828	6.828	(0.933)	604558	40.0000	43.1(Q)
138 Diallate	86	6.816	6.816	(0.932)	529362	40.0000	44.1
140 4-Aminobiphenyl	169	7.128	7.128	(0.974)	1154969	40.0000	42.6
141 Pentachloronitrobenzene	237	7.145	7.145	(0.977)	145461	40.0000	40.8(Q)
142 Pronamide	173	7.139	7.139	(0.976)	492902	40.0000	41.9
146 4-Nitroquinoline-1-oxide	101	7.986	7.986	(1.092)	41717	40.0000	35.1
147 Methapyrilene	58	8.016	8.016	(1.096)	1144572	40.0000	39.5
148 Isodrin	193	8.245	8.245	(1.127)	203628	40.0000	40.9
149 Aramite	185	8.639	8.639	(1.181)	105445	40.0000	42.6
150 Kepone	272	9.239	9.239	(1.263)	69416	40.0000	18.4
151 p-(Dimethylamino)azobenzene	120	8.828	8.828	(0.906)	545578	40.0000	43.0
152 Chlorobenzilate	251	8.857	8.857	(0.909)	516298	40.0000	43.2
153 3,3'-Dimethylbenzidine	212	9.145	9.145	(0.939)	944620	40.0000	40.8
155 2-Acetylaminofluorene	181	9.392	9.392	(0.964)	618045	40.0000	41.5
157 7,12Dimethylbenz(a)anthracene	256	10.922	10.922	(0.951)	719462	40.0000	43.8
158 3-Methylcholanthrene	268	11.916	11.916	(1.037)	598808	40.0000	40.1(Q)
212 Cis Diallate	86	6.892	6.892	(0.942)	89050	6.00000	6.5
213 Trans Diallate	86	6.816	6.816	(0.932)	529362	34.0000	37.4

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD6.i/s070209.b/s6g0207.d
Date : 02-JUL-2009 15:46
Client ID: APCVS
Sample Info: IWBN090619-01,2140 PPM|1|SVM|1|APCVS
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JHB3
Column diameter: 0.20

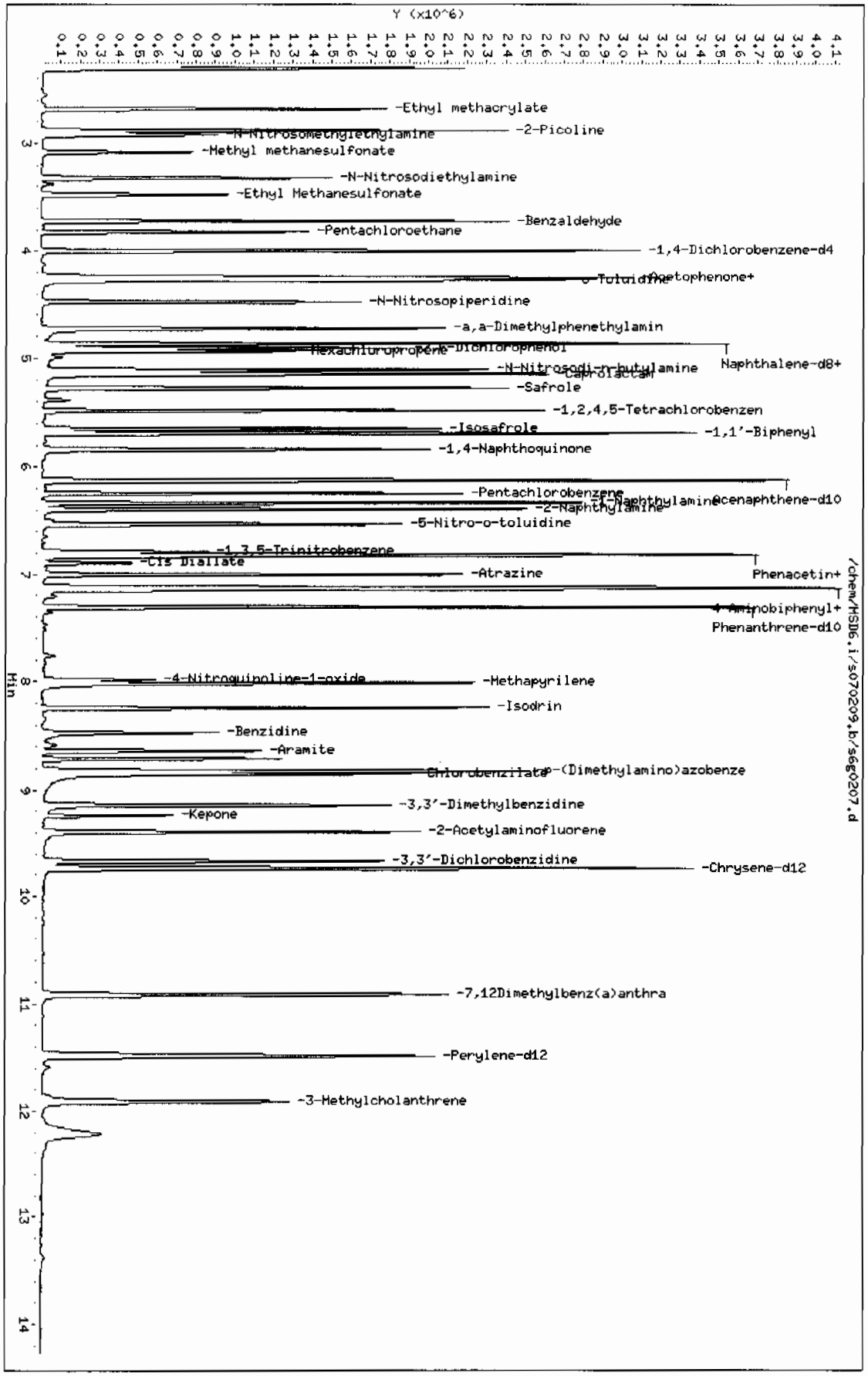

Page 1

QC Data

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Page 1

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

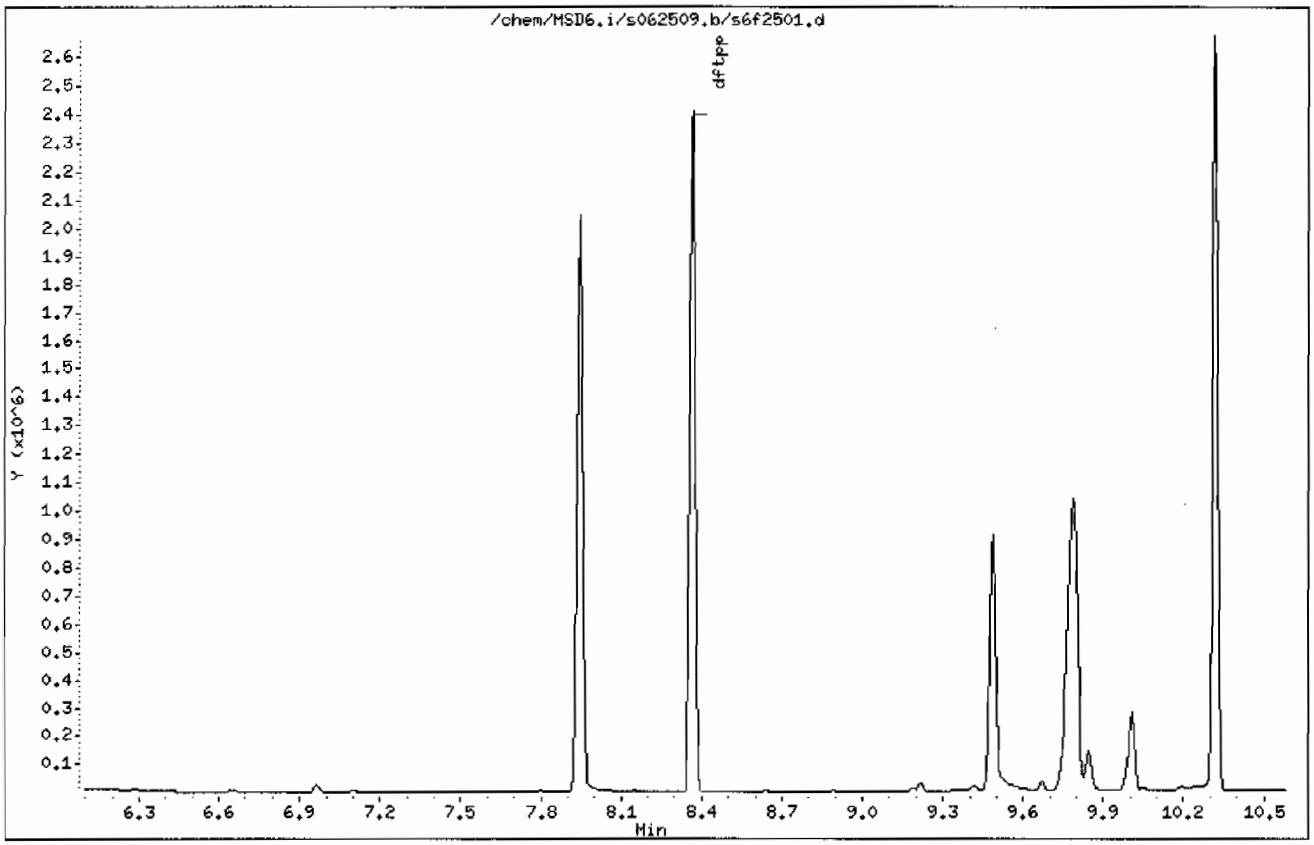

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

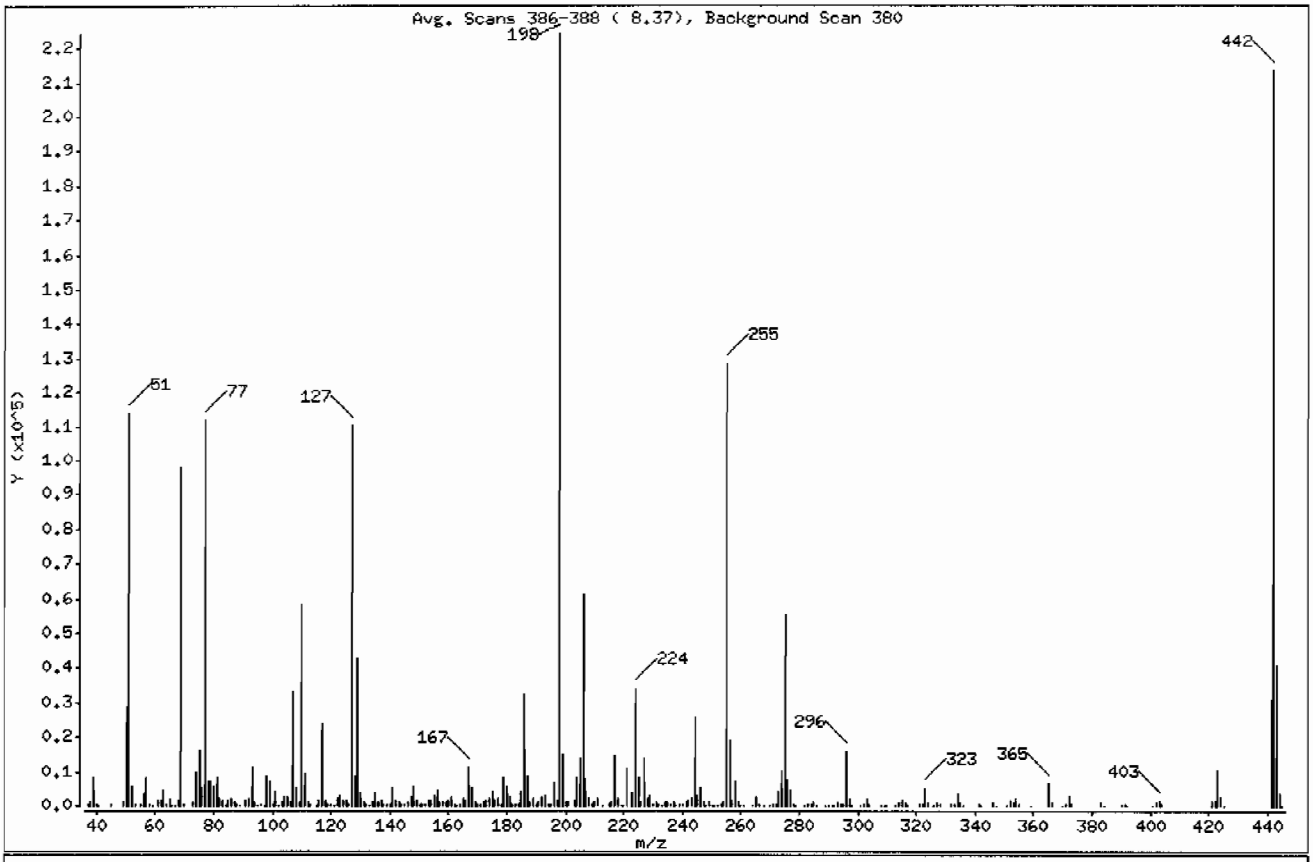

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	50.84
68	Less than 2.00% of mass 69	0.67 (1.54)
69	Mass 69 relative abundance	43.71
70	Less than 2.00% of mass 69	0.23 (0.52)
127	40.00 - 60.00% of mass 198	49.23
197	Less than 1.00% of mass 198	0.63
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 30.00% of mass 198	24.65
365	Greater than 1.00% of mass 198	3.08
441	Present, but less than mass 443	13.75
442	Greater than 40.00% of mass 198	95.04
443	17.00 - 23.00% of mass 442	18.18 (19.13)

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2501.d
Spectrum: Avg. Scans 386-388 (8.37), Background Scan 380
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	380	124.00	1407	199.00	15144	284.00	383
38.00	1194	125.00	1361	200.00	1160	285.00	878
39.00	8314	126.00	524	201.00	948	286.00	208
40.00	384	127.00	110392	203.00	1577	289.00	229
41.00	169	128.00	8539	204.00	8178	290.00	184
45.00	319	129.00	42552	205.00	13970	291.00	113
49.00	818	130.00	3564	206.00	61440	292.00	210
50.00	28640	131.00	777	207.00	7658	293.00	1007
51.00	114008	132.00	427	208.00	2082	294.00	327
52.00	5589	133.00	184	209.00	714	295.00	329
53.00	269	134.00	1125	210.00	964	296.00	15746
55.00	600	135.00	3598	211.00	2306	297.00	2256
56.00	3395	136.00	1287	213.00	140	298.00	102
57.00	8050	137.00	1683	215.00	662	301.00	201
58.00	382	138.00	443	216.00	1197	302.00	291
59.00	88	139.00	273	217.00	14470	303.00	2047
61.00	1368	140.00	528	218.00	2045	304.00	504
62.00	1576	141.00	5154	219.00	209	308.00	241
63.00	4421	142.00	1628	220.00	112	309.00	117
64.00	585	143.00	1204	221.00	11008	310.00	236
65.00	2030	144.00	314	223.00	3513	313.00	103
66.00	106	145.00	276	224.00	34016	314.00	838
67.00	47	146.00	1015	225.00	8500	315.00	1688
68.00	1508	147.00	2825	226.00	936	316.00	908
69.00	98016	148.00	5867	227.00	14012	317.00	147
70.00	508	149.00	1333	228.00	1985	321.00	588
73.00	834	150.00	353	229.00	3012	322.00	306
74.00	10005	151.00	729	230.00	417	323.00	5244
75.00	15723	152.00	303	231.00	1159	324.00	1139
76.00	5327	153.00	1698	232.00	315	326.00	44
77.00	111928	154.00	1345	233.00	210	327.00	881
78.00	7309	155.00	2915	234.00	840	328.00	497
79.00	7052	156.00	4517	235.00	902	332.00	357
80.00	5499	157.00	834	236.00	624	333.00	456
81.00	8440	158.00	964	237.00	1050	334.00	3461

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2501.d
Spectrum: Avg. Scans 386-388 (8.37), Background Scan 380
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	2146	159.00	790	238.00	124	335.00	852
83.00	1796	160.00	1763	239.00	467	336.00	92
84.00	211	161.00	2583	240.00	407	341.00	583
85.00	1335	162.00	743	241.00	794	342.00	104
86.00	2075	163.00	153	242.00	1781	346.00	1054
87.00	1073	164.00	278	243.00	1830	347.00	201
88.00	393	165.00	2121	244.00	25896	351.00	41
89.00	217	166.00	1593	245.00	3280	352.00	1702
91.00	1667	167.00	11253	246.00	4927	353.00	1159
92.00	1971	168.00	5111	247.00	1028	354.00	1868
93.00	11581	169.00	895	248.00	249	355.00	313
94.00	797	170.00	344	249.00	998	359.00	110
95.00	253	171.00	437	250.00	183	365.00	6910
96.00	561	172.00	1023	251.00	251	366.00	1010
97.00	230	173.00	1312	252.00	253	370.00	172
98.00	8937	174.00	2281	253.00	475	371.00	441
99.00	7279	175.00	4324	254.00	922	372.00	3125
100.00	668	176.00	1318	255.00	128088	373.00	714
101.00	4052	177.00	2047	256.00	18968	383.00	855
102.00	250	178.00	673	257.00	1390	384.00	244
103.00	1258	179.00	8395	258.00	7408	390.00	319
104.00	2462	180.00	5434	259.00	1207	391.00	303
105.00	2668	181.00	2410	260.00	171	392.00	169
106.00	834	182.00	477	261.00	241	401.00	159
107.00	32792	183.00	279	264.00	243	402.00	1125
108.00	5081	184.00	657	265.00	2623	403.00	1616
109.00	777	185.00	4121	266.00	496	404.00	580
110.00	58376	186.00	32256	268.00	46	421.00	1682
111.00	9066	187.00	8733	270.00	187	422.00	1471
112.00	1049	188.00	963	271.00	325	423.00	10525
113.00	339	189.00	1896	272.00	365	424.00	2479
115.00	127	190.00	361	273.00	4007	425.00	188
116.00	1669	191.00	974	274.00	10206	441.00	30840
117.00	23752	192.00	2616	275.00	55264	442.00	213120
118.00	1667	193.00	2857	276.00	7518	443.00	40776

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2501.d
Spectrum: Avg. Scans 386-388 (8.37), Background Scan 380
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	261	194.00	630	277.00	4827	444.00	3584
120.00	336	195.00	444	278.00	743	445.00	212
121.00	106	196.00	6470	279.00	105		
122.00	2090	197.00	1406	282.00	122		
123.00	3100	198.00	224192	283.00	497		

Data File: /chem/MSD6.i/s062509.b/s6f2528.d

Page 1

Date : 26-JUN-2009 04:26

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

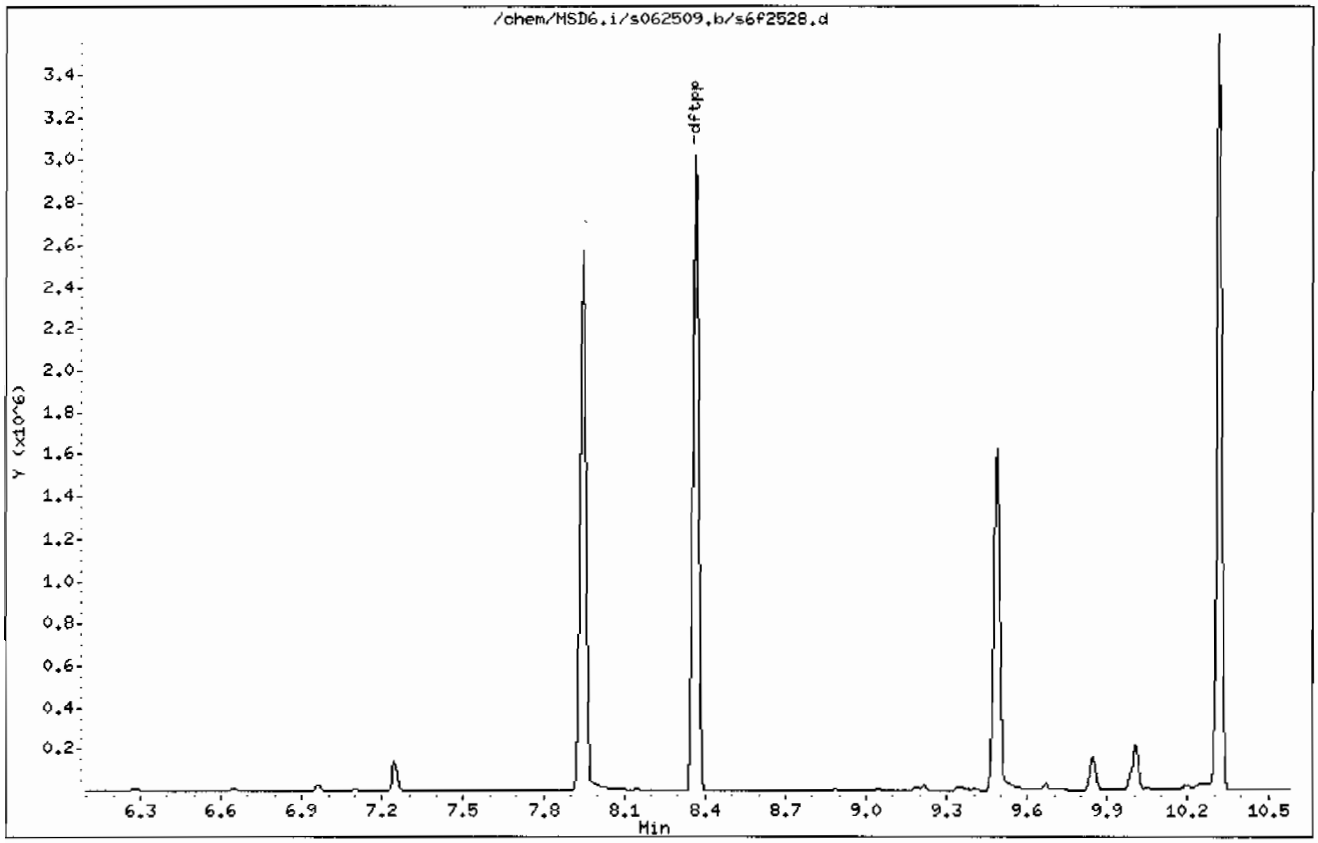

Data File: /chem/MSD6.i/s062509.b/s6f2528.d

Date : 26-JUN-2009 04:26

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

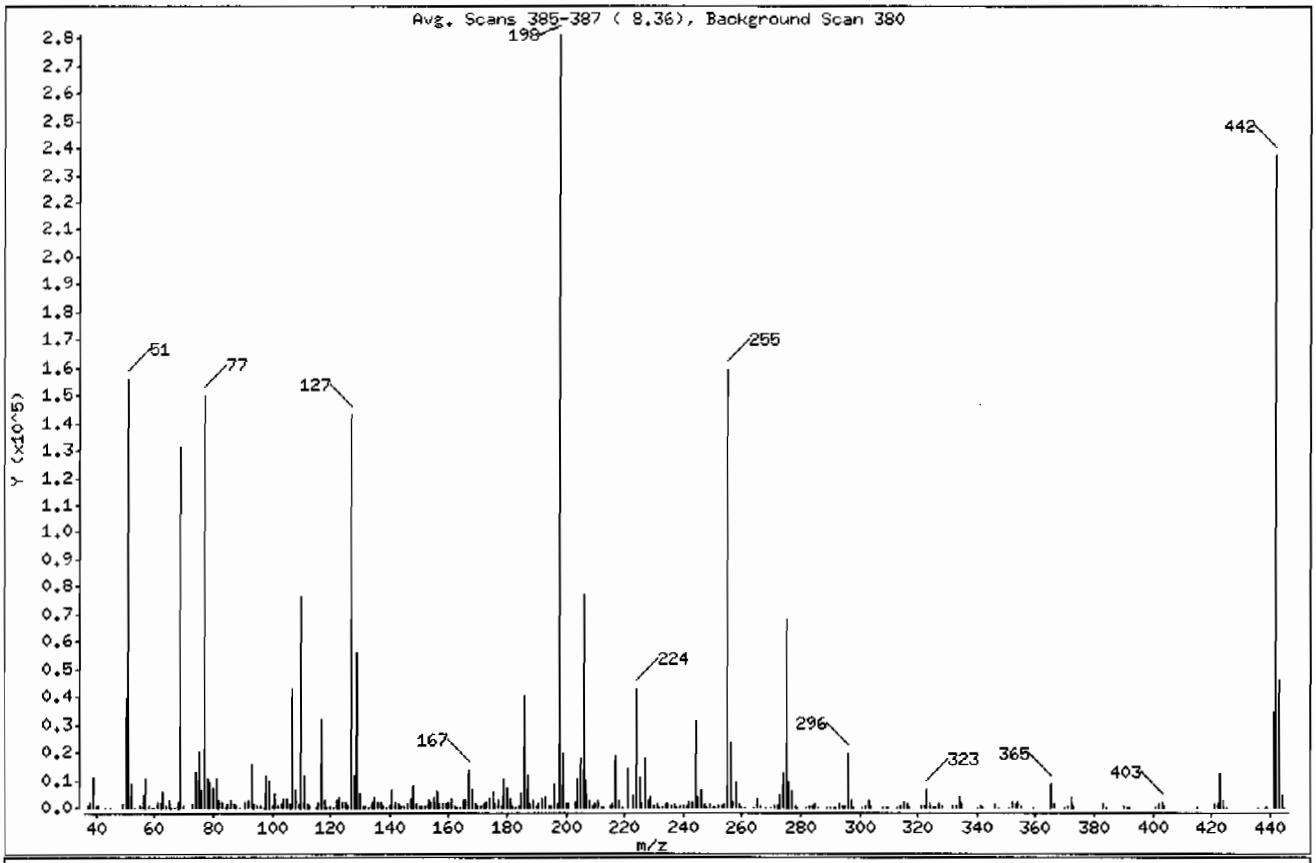

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	55.46
68	Less than 2.00% of mass 69	0.68 (1.46)
69	Mass 69 relative abundance	46.70
70	Less than 2.00% of mass 69	0.22 (0.48)
127	40.00 - 60.00% of mass 198	50.79
197	Less than 1.00% of mass 198	0.57
199	5.00 - 9.00% of mass 198	6.87
275	10.00 - 30.00% of mass 198	24.13
365	Greater than 1.00% of mass 198	2.99
441	Present, but less than mass 443	12.23
442	Greater than 40.00% of mass 198	84.37
443	17.00 - 23.00% of mass 442	16.28 (19.30)

Data File: /chem/MSD6.i/s062509.b/s6f2528.d

Date : 26-JUN-2009 04:26

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2528.d
Spectrum: Avg. Scans 385-387 (8.36), Background Scan 380
Location of Maximum: 198.00
Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	608	124.00	1787	201.00	1221	290.00	216
38.00	1655	125.00	1878	203.00	1963	291.00	110
39.00	11003	126.00	572	204.00	10393	292.00	283
40.00	537	127.00	142976	205.00	17696	293.00	1433
41.00	478	128.00	11628	206.00	76680	294.00	348
43.00	84	129.00	55632	207.00	9764	295.00	400
45.00	275	130.00	5005	208.00	2445	296.00	19120
49.00	1008	131.00	819	209.00	905	297.00	2797
50.00	39600	132.00	467	210.00	1134	298.00	163
51.00	156096	133.00	216	211.00	2881	301.00	209
52.00	8132	134.00	1646	212.00	182	302.00	341
53.00	284	135.00	4125	213.00	203	303.00	2420
55.00	717	136.00	1674	215.00	797	304.00	669
56.00	4292	137.00	2160	216.00	1541	308.00	261
57.00	10353	138.00	537	217.00	18744	309.00	127
58.00	458	139.00	272	218.00	2313	310.00	236
59.00	95	140.00	656	219.00	191	313.00	133
60.00	91	141.00	6483	221.00	14402	314.00	945
61.00	1827	142.00	2179	223.00	4649	315.00	2063
62.00	2089	143.00	1520	224.00	42672	316.00	1212
63.00	5982	144.00	371	225.00	10869	317.00	277
64.00	819	145.00	392	226.00	1218	321.00	730
65.00	2840	146.00	1301	227.00	17488	322.00	356
66.00	172	147.00	3425	228.00	2632	323.00	6693
67.00	95	148.00	7985	229.00	3693	324.00	1137
68.00	1916	149.00	1465	230.00	458	325.00	98
69.00	131456	150.00	469	231.00	1493	326.00	106
70.00	633	151.00	966	232.00	272	327.00	1076
73.00	996	152.00	535	233.00	271	328.00	540
74.00	13045	153.00	2334	234.00	1218	332.00	434
75.00	20224	154.00	1638	235.00	1138	333.00	528
76.00	6793	155.00	3909	236.00	757	334.00	4099
77.00	149888	156.00	5964	237.00	1407	335.00	1038
78.00	10193	157.00	1106	238.00	214	340.00	104
79.00	9220	158.00	1192	239.00	754	341.00	667

Data File: /chem/MSD6.i/s062509.b/s6f2528.d

Date : 26-JUN-2009 04:26

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2528.d
Spectrum: Avg. Scans 385-387 (8.36), Background Scan 380
Location of Maximum: 198.00
Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	7118	159.00	978	240.00	460	342.00	223
81.00	10456	160.00	2181	241.00	957	346.00	1203
82.00	2680	161.00	3304	242.00	2134	347.00	177
83.00	2252	162.00	950	243.00	1984	351.00	46
84.00	189	163.00	238	244.00	31128	352.00	2060
85.00	1594	164.00	291	245.00	4012	353.00	1343
86.00	2545	165.00	2610	246.00	6356	354.00	2134
87.00	1334	166.00	2284	247.00	1274	355.00	407
88.00	545	167.00	13836	248.00	289	359.00	90
89.00	228	168.00	6762	249.00	1267	365.00	8430
91.00	2192	169.00	1232	250.00	249	366.00	1210
92.00	2481	170.00	401	251.00	283	370.00	189
93.00	15494	171.00	567	252.00	381	371.00	521
94.00	1097	172.00	1244	253.00	688	372.00	3624
95.00	352	173.00	1662	254.00	1168	373.00	916
96.00	726	174.00	2975	255.00	159360	383.00	1005
97.00	199	175.00	5735	256.00	23440	384.00	248
98.00	11610	176.00	1566	257.00	2123	390.00	421
99.00	9386	177.00	2682	258.00	8860	391.00	306
100.00	791	178.00	871	259.00	1488	392.00	149
101.00	5364	179.00	10434	260.00	252	401.00	121
102.00	349	180.00	7395	261.00	313	402.00	1396
103.00	1607	181.00	3248	264.00	292	403.00	1928
104.00	3320	182.00	579	265.00	3425	404.00	602
105.00	3191	183.00	278	266.00	566	415.00	44
106.00	997	184.00	849	268.00	124	421.00	1569
107.00	42832	185.00	4871	270.00	148	422.00	1605
108.00	6264	186.00	40072	271.00	374	423.00	12480
109.00	1103	187.00	11443	272.00	434	424.00	2435
110.00	76080	188.00	1127	273.00	4851	425.00	258
111.00	11349	189.00	2382	274.00	12153	436.00	48
112.00	1364	190.00	511	275.00	67928	438.00	43
113.00	405	191.00	1168	276.00	8988	439.00	149
115.00	152	192.00	3311	277.00	6000	441.00	34432
116.00	2052	193.00	3739	278.00	924	442.00	237504

Data File: /chem/MSD6.i/s062509.b/s6f2528.d

Date : 26-JUN-2009 04:26

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2528.d

Spectrum: Avg. Scans 385-387 (8.36), Background Scan 380

Location of Maximum: 198.00

Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	31800	194.00	810	279.00	150	443.00	45832
118.00	2466	195.00	331	282.00	139	444.00	4505
119.00	237	196.00	8267	283.00	619	445.00	181
120.00	493	197.00	1612	284.00	489		
121.00	227	198.00	281472	285.00	1085		
122.00	2588	199.00	19328	286.00	192		
123.00	3926	200.00	1528	289.00	243		

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

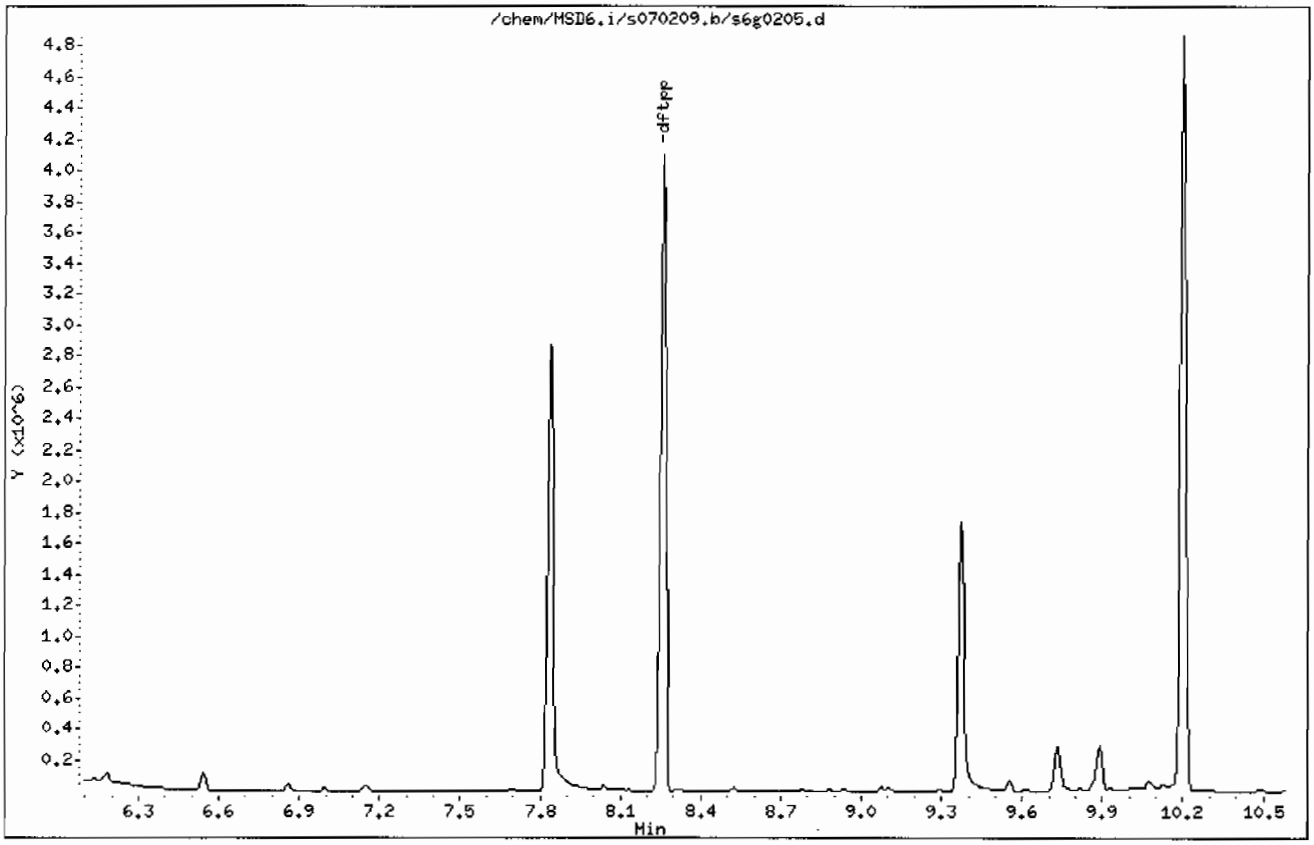

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

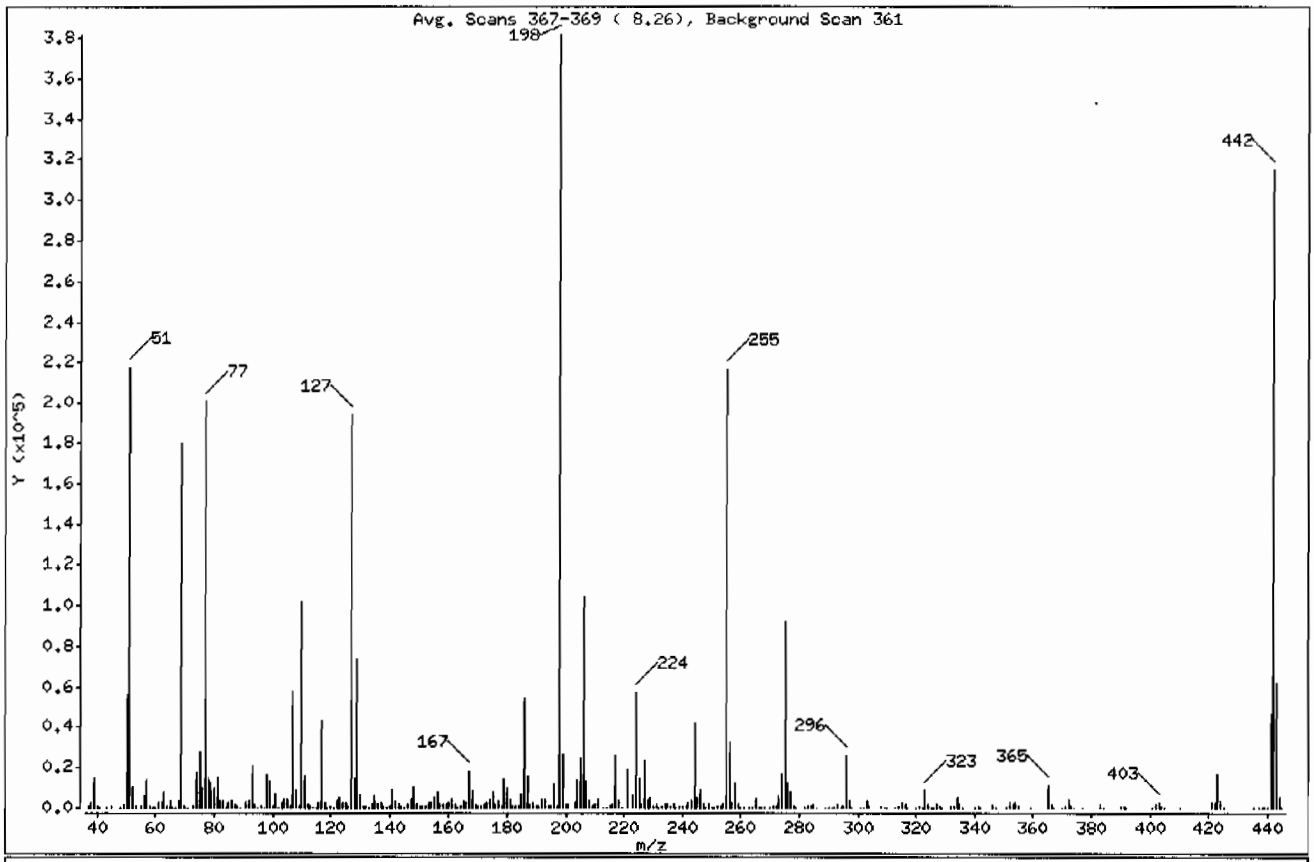

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	57.01
68	Less than 2.00% of mass 69	0.83 (1.76)
69	Mass 69 relative abundance	47.19
70	Less than 2.00% of mass 69	0.25 (0.54)
127	40.00 - 60.00% of mass 198	50.87
197	Less than 1.00% of mass 198	0.16
199	5.00 - 9.00% of mass 198	6.98
275	10.00 - 30.00% of mass 198	24.14
365	Greater than 1.00% of mass 198	3.09
441	Present, but less than mass 443	12.25
442	Greater than 40.00% of mass 198	82.59
443	17.00 - 23.00% of mass 442	16.39 (19.85)

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6g0205.d
Spectrum: Avg. Scans 367-369 (8.26), Background Scan 361
Location of Maximum: 198.00
Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	833	124.00	2365	205.00	24880	294.00	421
38.00	2585	125.00	2415	206.00	104112	295.00	520
39.00	15251	126.00	748	207.00	13523	296.00	26624
40.00	617	127.00	194240	208.00	3480	297.00	3659
41.00	377	128.00	14516	209.00	1072	298.00	313
43.00	22	129.00	74112	210.00	1701	301.00	407
45.00	491	130.00	6290	211.00	4429	302.00	400
48.00	42	131.00	1283	213.00	319	303.00	3155
49.00	1317	132.00	745	214.00	100	304.00	780
50.00	56160	133.00	300	215.00	1105	308.00	440
51.00	217664	134.00	2122	216.00	2186	309.00	304
52.00	10779	135.00	5841	217.00	26072	310.00	313
53.00	530	136.00	2150	218.00	3085	313.00	228
55.00	806	137.00	2930	219.00	355	314.00	1247
56.00	6210	138.00	688	221.00	19424	315.00	2987
57.00	13996	139.00	408	223.00	5905	316.00	1822
58.00	633	140.00	750	224.00	57336	317.00	342
59.00	203	141.00	8565	225.00	15195	320.00	43
60.00	37	142.00	3075	226.00	1554	321.00	763
61.00	2559	143.00	1955	227.00	24032	322.00	437
62.00	2960	144.00	624	228.00	3678	323.00	8545
63.00	7903	145.00	413	229.00	5251	324.00	1624
64.00	975	146.00	1650	230.00	741	325.00	94
65.00	3626	147.00	4705	231.00	1764	326.00	135
66.00	208	148.00	10670	232.00	384	327.00	1541
67.00	195	149.00	2183	233.00	477	328.00	826
68.00	3174	150.00	609	234.00	1466	329.00	168
69.00	180224	151.00	1148	235.00	1769	332.00	633
70.00	973	152.00	684	236.00	1137	333.00	867
71.00	164	153.00	2894	237.00	1902	334.00	5514
73.00	1239	154.00	2267	238.00	277	335.00	1541
74.00	17504	155.00	5143	239.00	960	336.00	179
75.00	28344	156.00	7953	240.00	860	340.00	98
76.00	9392	157.00	1353	241.00	1314	341.00	893
77.00	200704	158.00	1679	242.00	3025	342.00	266

Date : 02-JUL-2009 15:10

Client ID: DFTPP Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS Column diameter: 0.20

Data File: s6g0205.d

Spectrum: Avg. Scans 367-369 (8.26), Background Scan 361

Location of Maximum: 198.00

Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	14191	159.00	1529	243.00	3159	346.00	1658
79.00	12417	160.00	2908	244.00	42168	347.00	332
80.00	9640	161.00	4483	245.00	5477	351.00	180
81.00	14653	162.00	1388	246.00	9025	352.00	2590
82.00	3411	163.00	430	247.00	1746	353.00	1916
83.00	3379	164.00	513	248.00	371	354.00	2863
84.00	333	165.00	3517	249.00	1406	355.00	621
85.00	2547	166.00	2880	250.00	279	359.00	208
86.00	3872	167.00	18640	251.00	297	365.00	11813
87.00	1949	168.00	9033	252.00	477	366.00	1661
88.00	707	169.00	1888	253.00	921	367.00	115
89.00	362	170.00	582	254.00	1562	370.00	291
91.00	2889	171.00	807	255.00	216576	371.00	635
92.00	3122	172.00	1669	256.00	32344	372.00	4691
93.00	21208	173.00	2213	257.00	2322	373.00	1168
94.00	1611	174.00	4321	258.00	12277	374.00	112
95.00	343	175.00	8142	259.00	1840	377.00	152
96.00	1072	176.00	2160	260.00	374	383.00	1318
97.00	431	177.00	3436	261.00	294	384.00	314
98.00	16544	178.00	1195	263.00	91	390.00	584
99.00	13351	179.00	13894	264.00	277	391.00	446
100.00	1116	180.00	9876	265.00	4577	392.00	260
101.00	7374	181.00	4483	266.00	370	401.00	218
102.00	424	182.00	746	267.00	53	402.00	1826
103.00	2426	183.00	506	268.00	83	403.00	2734
104.00	4622	184.00	1083	270.00	245	404.00	994
105.00	4428	185.00	6809	271.00	586	405.00	102
106.00	1283	186.00	54448	272.00	597	410.00	42
107.00	57672	187.00	15438	273.00	6394	421.00	2444
108.00	8936	188.00	1489	274.00	16480	422.00	2400
109.00	1236	189.00	2990	275.00	92208	423.00	16992
110.00	101992	190.00	621	276.00	12593	424.00	3592
111.00	15808	191.00	1309	277.00	8109	425.00	338
112.00	1902	192.00	4496	278.00	1255	435.00	140
113.00	667	193.00	4607	279.00	261	437.00	87

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6g0205.d

Spectrum: Avg. Scans 367-369 (8.26), Background Scan 361

Location of Maximum: 198.00

Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
114.00	172	194.00	905	282.00	191	438.00	134
115.00	220	195.00	564	283.00	935	439.00	135
116.00	2953	196.00	11074	284.00	734	440.00	103
117.00	42760	197.00	592	285.00	1468	441.00	46768
118.00	3037	198.00	381888	286.00	246	442.00	315392
119.00	359	199.00	26656	289.00	295	443.00	62592
120.00	740	200.00	2126	290.00	255	444.00	5690
121.00	244	201.00	1693	291.00	174	445.00	405
122.00	3399	203.00	2743	292.00	414		
123.00	5680	204.00	13914	293.00	2026		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510			Matrix:	SOIL
Lab Sample ID:	1201873125				
Client Sample:	QC for batch 881962	Client:	LANL010	Project:	QC
Client ID:	MB for batch 881962	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 16:31	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s6g0209-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	66.7	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	110	333
87-86-5	Pentachlorophenol	U	333	ug/kg	83.3	333
129-00-0	Pyrene	U	33.3	ug/kg	10.0	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	100	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline	U	333	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510			Matrix:	SOIL
Lab Sample ID:	1201873125				
Client Sample:	QC for batch 881962	Client:	LANL010	Project:	QC
Client ID:	MB for batch 881962	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 16:31	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s6g0209-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	66.7	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	66.7	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	478	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0209-2.d
Lab Smp Id: 1201873125 Client Smp ID: SBLK01
Inj Date : 02-JUL-2009 16:31
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873125|881964|1|SVM|1|SBLK01
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclpl

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	3.999	(1.000)	385534	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1450103	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	843657	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1460742	40.0000	
* 91 Chrysene-d12	240	9.739	9.745	(1.000)	1292833	40.0000	
* 98 Perylene-d12	264	11.480	11.492	(1.000)	1018273	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.796)	679032	64.8267	2160
$ 5 Phenol-d5	99	3.704	3.710	(0.926)	975979	69.5554	2320
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	418240	32.5572	1080
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	723214	33.7521	1120
$ 60 2,4,6-Tribromophenol	329	6.728	6.734	(1.098)	178630	57.2734	1910
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	931989	45.1400	1500

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0209-2.d
Lab Smp Id: 1201873125 Client Smp ID: SBLK01
Inj Date : 02-JUL-2009 16:31
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873125|881964|1|SVM|1|SBLK01
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2610732	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.010	936678	14.3511859	478	0		0	10

Data File: /chem/MSD6.i/s070209.b/s6g0209-2.d

Page 1

Date : 02-JUL-2009 16:31

Client ID: SBLK01

Instrument: MSD6.i

Sample Info: |120187312518819641|SVM|1|SBLK01

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

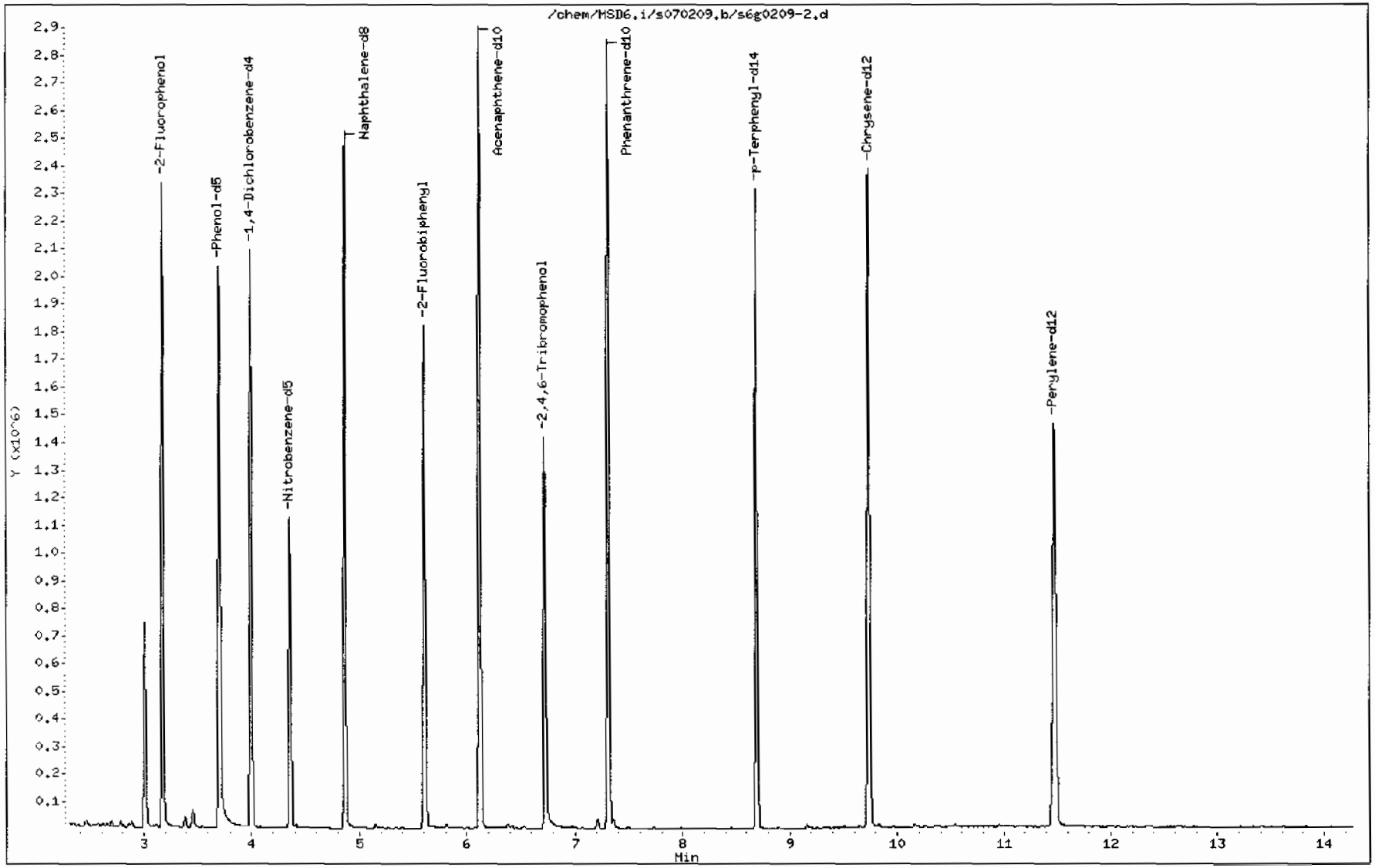

Data File: /chem/MSD6.i/s070209.b/s6g0209-2.d

Date : 02-JUL-2009 16:31

Client ID: SBLK01 Instrument: MSD6.i

Sample Info: 1120187312518819641 1SVMI1SBLK01

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

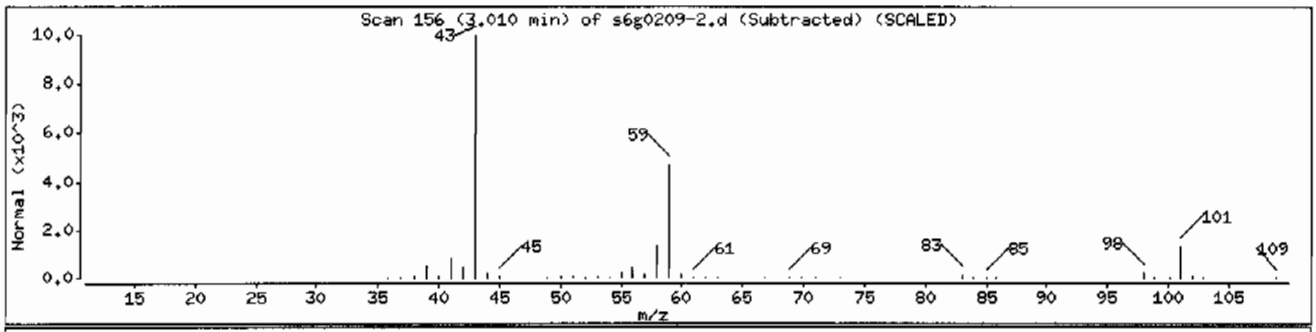

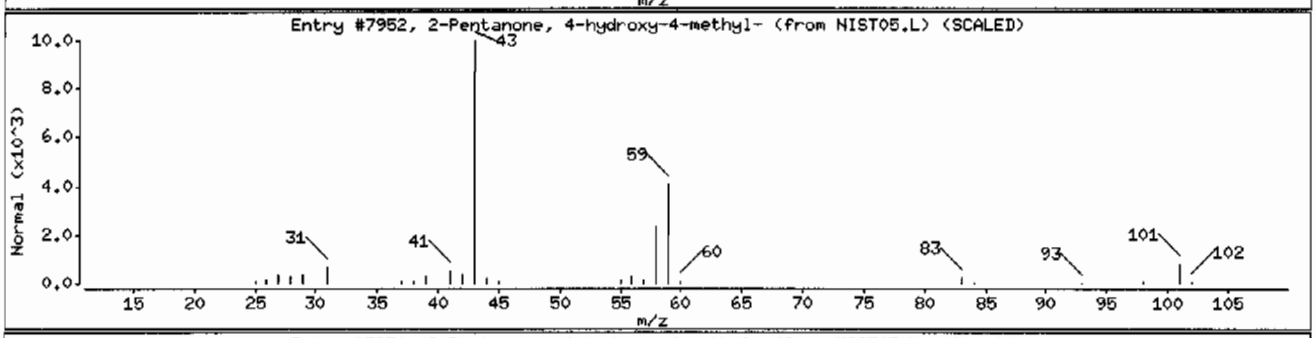

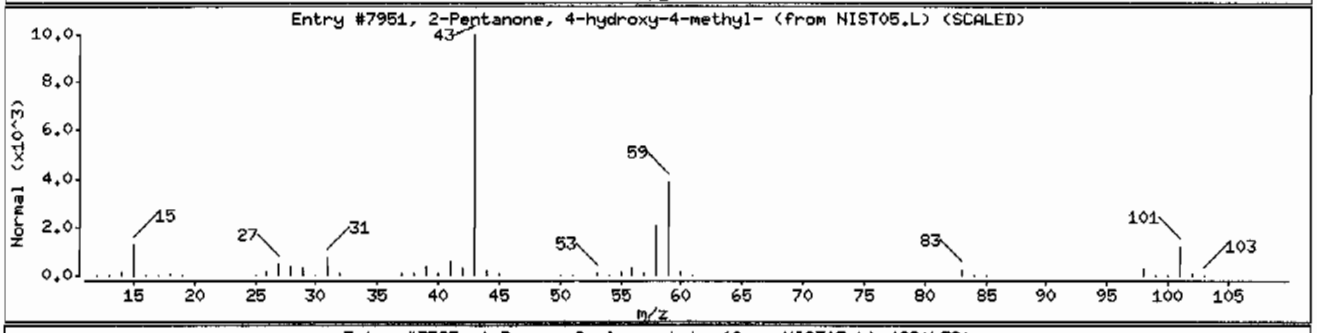

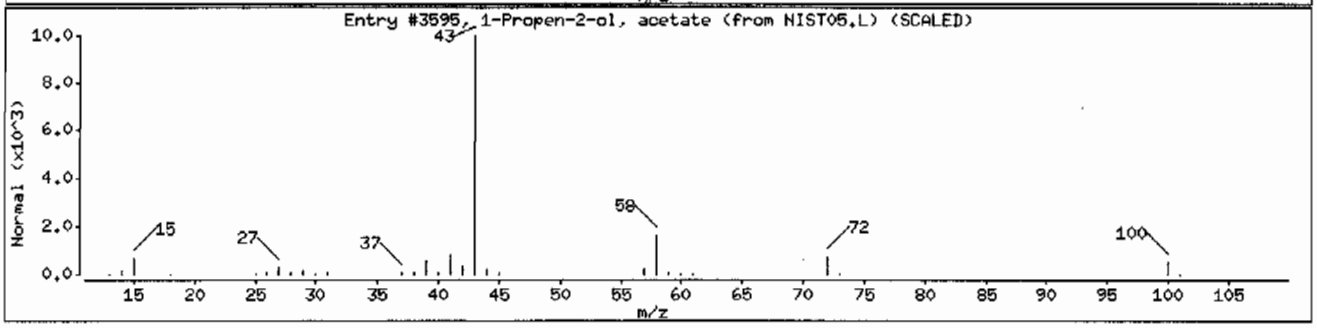

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510			Matrix:	SOIL
Lab Sample ID:	1201873126				
Client Sample:	QC for batch 881962	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 881962	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 16:54	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s6g0210-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1130	ug/kg	66.7	333
108-95-2	Phenol		1090	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1160	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1090	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1140	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1160	ug/kg	66.7	333
83-32-9	Acenaphthene		1100	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene		1170	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1070	ug/kg	110	333
87-86-5	Pentachlorophenol		966	ug/kg	83.3	333
129-00-0	Pyrene		1220	ug/kg	10.0	33.3
110-86-1	Pyridine		1100	ug/kg	66.7	333
62-53-3	Aniline		1300	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether		1130	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1100	ug/kg	66.7	333
100-51-6	Benzyl alcohol		727	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1160	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1290	ug/kg	66.7	333
95-48-7	o-Cresol		1150	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1300	ug/kg	100	333
67-72-1	Hexachloroethane		1080	ug/kg	66.7	333
98-95-3	Nitrobenzene		1210	ug/kg	66.7	333
78-59-1	Isophorone		1190	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1200	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol		1180	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane		1200	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1160	ug/kg	66.7	333
65-85-0	Benzoic acid		1060	ug/kg	167	667
91-20-3	Naphthalene		1030	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1210	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1130	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1260	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1060	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1040	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1180	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1160	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline		1230	ug/kg	66.7	333
	o-Nitroaniline					
99-09-2	3-Nitroaniline		1310	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510			**Matrix:**	SOIL
Lab Sample ID:	1201873126				
Client Sample:	QC for batch 881962	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881962	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 16:54	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s6g0210-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1170	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1180	ug/kg	33.3	333
208-96-8	Acenaphthylene		1180	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		818	ug/kg	127	667
132-64-9	Dibenzofuran		1190	ug/kg	66.7	333
84-66-2	Diethylphthalate		1200	ug/kg	66.7	333
86-73-7	Fluorene		1040	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1150	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol		993	ug/kg	66.7	333
100-01-6	4-Nitroaniline		1390	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1200	ug/kg	66.7	333
122-66-7	Azobenzene		1280	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1130	ug/kg	66.7	333
118-74-1	Hexachlorobenzene		1150	ug/kg	66.7	333
85-01-8	Phenanthrene		1120	ug/kg	10.0	33.3
120-12-7	Anthracene		1170	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1250	ug/kg	66.7	333
206-44-0	Fluoranthene		1180	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1310	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1170	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1200	ug/kg	100	333
218-01-9	Chrysene		1240	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1360	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1340	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1210	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1280	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1250	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1200	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1190	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1170	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1170	ug/kg	66.7	333

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0210-2.d
Lab Smp Id: 1201873126 Client Smp ID: SBLK01LCS
Inj Date : 02-JUL-2009 16:54
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873126|881964|1|SVM|1|SBLK01LCS
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.999	3.999	(1.000)	373584	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1481824	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	843469	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1482578	40.0000	
* 91 Chrysene-d12	240	9.739	9.745	(1.000)	1335253	40.0000	
* 98 Perylene-d12	264	11.486	11.492	(1.000)	1213021	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.796)	672953	66.3014	2210
$ 5 Phenol-d5	99	3.710	3.710	(0.928)	879576	64.6902	2160
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	462432	35.2266	1170
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	746455	34.8445	1160
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.099)	191160	61.3045	2040
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	865727	40.5985	1350

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.722	3.722	(0.931)	440433	32.7030	1090
8 2-Chlorophenol	128	3.863	3.863	(0.966)	362293	34.7272	1160
11 1,4-Dichlorobenzene	146	4.010	4.010	(1.003)	374967	32.6196	1090
17 N-Nitrosodipropylamine	70	4.228	4.240	(1.057)	270640	34.0574	1140(Q)
28 1,2,4-Trichlorobenzene	180	4.816	4.822	(0.989)	344653	35.0923	1170
33 4-Chloro-3-methylphenol	107	5.222	5.216	(1.072)	323922	34.8644	1160
47 Acenaphthene	154	6.151	6.157	(1.004)	635290	32.9665	1100
50 2,4-Dinitrotoluene	165	6.240	6.245	(1.018)	253739	35.2364	1170
52 4-Nitrophenol	139	6.181	6.175	(1.009)	116785	32.1182	1070
65 Pentachlorophenol	266	7.140	7.140	(0.977)	117589	28.9940	966
79 Pyrene	202	8.598	8.598	(0.883)	1220650	36.6957	1220
2 Pyridine	79	2.522	2.505	(0.631)	301745	33.1395	1100
4 Aniline	66	3.775	3.781	(0.944)	236286	38.9614	1300
7 bis(2-Chloroethyl) ether	63	3.787	3.799	(0.947)	353650	33.7812	1130
9 1,3-Dichlorobenzene	146	3.963	3.969	(0.991)	390447	33.0055	1100
12 Benzyl alcohol	108	4.063	4.069	(1.016)	156588	21.8048	727
13 1,2-Dichlorobenzene	146	4.110	4.116	(1.028)	366674	34.8864	1160
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.035)	893275	38.7013	1290
15 o-Cresol	107	4.116	4.116	(1.029)	275745	34.6091	1150
18 m,p-Cresols	107	4.216	4.222	(1.054)	437431	39.0529	1300
19 Hexachloroethane	117	4.346	4.346	(1.087)	150404	32.5296	1080
21 Nitrobenzene	77	4.375	4.381	(0.899)	434041	36.3137	1210
22 Isophorone	82	4.528	4.534	(0.930)	805560	35.7964	1190
23 2-Nitrophenol	139	4.587	4.593	(0.942)	184261	35.9093	1200
24 2,4-Dimethylphenol	122	4.604	4.599	(0.946)	539831	35.4157	1180
25 bis(2-Chloroethoxy)methane	93	4.646	4.652	(0.954)	451898	36.0025	1200
26 2,4-Dichlorophenol	162	4.757	4.763	(0.977)	302661	34.9441	1160
27 Benzoic acid	105	4.628	4.640	(0.950)	257376	31.8793	1060(Q)
30 Naphthalene	128	4.887	4.887	(1.004)	1036183	30.9454	1030
31 4-Chloroaniline	127	4.899	4.899	(1.006)	508737	36.1591	1200
32 Hexachlorobutadiene	225	4.946	4.951	(1.016)	201349	33.8572	1130
34 2-Methylnaphthalene	142	5.369	5.369	(1.103)	686739	37.8413	1260
36 Hexachlorocyclopentadiene	237	5.469	5.475	(0.892)	139368	31.8524	1060
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.907)	211753	31.1184	1040
38 2,4,5-Trichlorophenol	196	5.593	5.587	(0.913)	252929	35.2785	1180
40 2-Chloronaphthalene	162	5.722	5.722	(0.934)	690475	34.7067	1160
42 o-Nitroaniline	65	5.775	5.781	(0.942)	283763	37.0126	1230
41 m-Nitroaniline	138	6.075	6.081	(0.991)	193628	39.2662	1310
43 Dimethylphthalate	163	5.881	5.887	(0.960)	796727	35.1206	1170
44 2,6-Dinitrotoluene	165	5.940	5.946	(0.969)	191347	35.4574	1180
45 Acenaphthylene	152	6.028	6.034	(0.984)	1084481	35.4846	1180
48 2,4-Dinitrophenol	184	6.146	6.151	(1.003)	61109	24.5504	818(Q)
49 Dibenzofuran	168	6.281	6.281	(1.025)	945478	35.7261	1190
51 Diethylphthalate	149	6.398	6.398	(1.044)	812099	36.0278	1200
53 Fluorene	166	6.545	6.545	(1.068)	693761	31.2009	1040
54 4-Chlorophenylphenylether	204	6.516	6.522	(1.063)	373893	34.4862	1150
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.897)	108986	29.7934	993

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.067)	180488	41.8068	1390
133 Diphenylamine	169	6.604	6.610	(0.903)	661574	35.8568	1200
58 1,2-Diphenylhydrazine	77	6.645	6.645	(0.909)	954615	38.2891	1280
61 4-Bromophenylphenylether	248	6.910	6.910	(0.945)	217012	33.8334	1130
63 Hexachlorobenzene	284	6.981	6.987	(0.955)	233612	34.4688	1150
68 Phenanthrene	178	7.334	7.334	(1.003)	1112413	33.7319	1120
69 Anthracene	178	7.375	7.375	(1.009)	1156483	34.9516	1160
72 Di-n-butylphthalate	149	7.728	7.728	(1.057)	1375243	37.4694	1250
76 Fluoranthene	202	8.381	8.381	(1.146)	1178824	35.4378	1180
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	611649	39.3001	1310
89 Benzo(a)anthracene	228	9.728	9.728	(0.999)	1123480	35.0687	1170
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	361776	36.0963	1200
92 Chrysene	228	9.769	9.769	(1.003)	1139459	37.2062	1240
93 bis(2-Ethylhexyl)phthalate	149	9.651	9.651	(0.991)	842499	40.7225	1360
94 Di-n-octylphthalate	149	10.328	10.333	(0.899)	1409923	40.3242	1340
95 Benzo(b)fluoranthene	252	10.945	10.951	(0.953)	1050038	36.3467	1210
96 Benzo(k)fluoranthene	252	10.980	10.986	(0.956)	1097093	38.3347	1280
97 Benzo(a)pyrene	252	11.404	11.410	(0.993)	939400	37.5825	1250
99 Indeno(1,2,3-cd)pyrene	276	13.345	13.357	(1.162)	852868	35.9333	1200
100 Dibenzo(a,h)anthracene	278	13.363	13.374	(1.163)	706208	35.5504	1180
101 Benzo(ghi)perylene	276	13.916	13.927	(1.211)	735940	35.1429	1170
1 N-Methyl-N-nitrosomethylamine	74	2.475	2.469	(0.619)	212737	33.7828	1130

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD6.i/s070209.b/s6g0210-2.d
Date : 02-JUL-2009 16:54
Client ID: SBLK01LCS
Sample Info: 1120187312618819641|SVM11|SBLK01LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

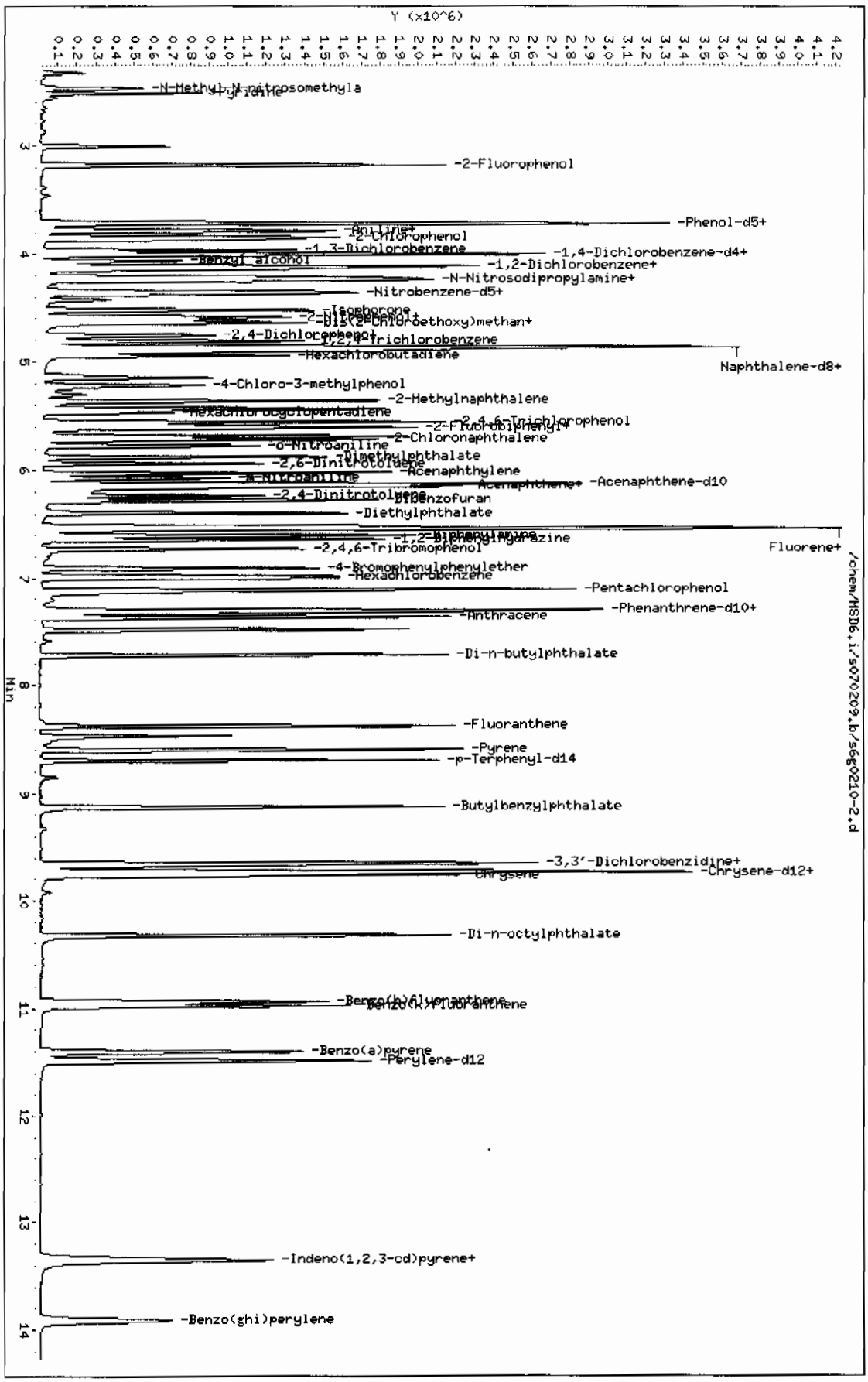

Page 1

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	1201873127	Date Received:	06/30/2009 09:15	%Moisture:	18.7
Client Sample:	QC for batch 881962	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-9946MS	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 19:30	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.19 g	Final Volume:	1 mL
Data File:	s6g0217.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		888	ug/kg	81.5	408
108-95-2	Phenol		911	ug/kg	81.5	408
95-57-8	2-Chlorophenol		915	ug/kg	81.5	408
106-46-7	1,4-Dichlorobenzene		457	ug/kg	81.5	408
621-64-7	N-Nitrosodipropylamine		881	ug/kg	81.5	408
59-50-7	4-Chloro-3-methylphenol		1120	ug/kg	81.5	408
83-32-9	Acenaphthene		929	ug/kg	13.5	40.8
121-14-2	2,4-Dinitrotoluene		1130	ug/kg	40.8	408
100-02-7	4-Nitrophenol		1330	ug/kg	135	408
87-86-5	Pentachlorophenol		1040	ug/kg	102	408
129-00-0	Pyrene		1130	ug/kg	12.2	40.8
110-86-1	Pyridine		845	ug/kg	81.5	408
62-53-3	Aniline		752	ug/kg	122	408
111-44-4	bis(2-Chloroethyl) ether		824	ug/kg	81.5	408
541-73-1	1,3-Dichlorobenzene		427	ug/kg	81.5	408
100-51-6	Benzyl alcohol		1900	ug/kg	122	408
95-50-1	1,2-Dichlorobenzene		555	ug/kg	81.5	408
108-60-1	bis(2-Chloroisopropyl)ether		882	ug/kg	81.5	408
95-48-7	o-Cresol		1380	ug/kg	81.5	408
65794-96-9	m,p-Cresols		1130	ug/kg	122	408
67-72-1	Hexachloroethane	J	354	ug/kg	81.5	408
98-95-3	Nitrobenzene		940	ug/kg	81.5	408
78-59-1	Isophorone		1000	ug/kg	81.5	408
88-75-5	2-Nitrophenol		941	ug/kg	81.5	408
105-67-9	2,4-Dimethylphenol		903	ug/kg	143	408
111-91-1	bis(2-Chloroethoxy)methane		966	ug/kg	81.5	408
120-83-2	2,4-Dichlorophenol		1010	ug/kg	81.5	408
65-85-0	Benzoic acid		913	ug/kg	204	815
91-20-3	Naphthalene		729	ug/kg	12.2	40.8
106-47-8	4-Chloroaniline		975	ug/kg	81.5	408
87-68-3	Hexachlorobutadiene		516	ug/kg	81.5	408
91-57-6	2-Methylnaphthalene		935	ug/kg	8.15	40.8
77-47-4	Hexachlorocyclopentadiene		461	ug/kg	81.5	408
88-06-2	2,4,6-Trichlorophenol		981	ug/kg	81.5	408
95-95-4	2,4,5-Trichlorophenol		1070	ug/kg	81.5	408
91-58-7	2-Chloronaphthalene		922	ug/kg	13.5	40.8
88-74-4	2-Nitroaniline		1160	ug/kg	81.5	408
99-09-2	*o-Nitroaniline* 3-Nitroaniline		1260	ug/kg	81.5	408

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201873127	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
Client Sample:	QC for batch 881962	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9946MS	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 19:30	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.19 g	**Final Volume:**	1 mL
Data File:	s6g0217.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1080	ug/kg	81.5	408
606-20-2	2,6-Dinitrotoluene		1090	ug/kg	40.8	408
208-96-8	Acenaphthylene		1000	ug/kg	12.2	40.8
51-28-5	2,4-Dinitrophenol	J	600	ug/kg	155	815
132-64-9	Dibenzofuran		1040	ug/kg	81.5	408
84-66-2	Diethylphthalate		1120	ug/kg	81.5	408
86-73-7	Fluorene		946	ug/kg	12.2	40.8
7005-72-3	4-Chlorophenylphenylether		1010	ug/kg	81.5	408
534-52-1	2-Methyl-4,6-dinitrophenol		847	ug/kg	81.5	408
100-01-6	4-Nitroaniline		1390	ug/kg	122	408
	p-Nitroaniline					
122-39-4	Diphenylamine		965	ug/kg	81.5	408
122-66-7	Azobenzene		1140	ug/kg	81.5	408
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1020	ug/kg	81.5	408
118-74-1	Hexachlorobenzene		1050	ug/kg	81.5	408
85-01-8	Phenanthrene		1060	ug/kg	12.2	40.8
120-12-7	Anthracene		1100	ug/kg	8.15	40.8
84-74-2	Di-n-butylphthalate		1170	ug/kg	81.5	408
206-44-0	Fluoranthene		1130	ug/kg	12.2	40.8
85-68-7	Butylbenzylphthalate		1200	ug/kg	81.5	408
56-55-3	Benzo(a)anthracene		1100	ug/kg	12.2	40.8
91-94-1	3,3'-Dichlorobenzidine		533	ug/kg	122	408
218-01-9	Chrysene		1120	ug/kg	12.2	40.8
117-81-7	bis(2-Ethylhexyl)phthalate		1230	ug/kg	81.5	408
117-84-0	Di-n-octylphthalate		1210	ug/kg	81.5	408
205-99-2	Benzo(b)fluoranthene		1070	ug/kg	12.2	40.8
207-08-9	Benzo(k)fluoranthene		1200	ug/kg	12.2	40.8
50-32-8	Benzo(a)pyrene		1140	ug/kg	12.2	40.8
193-39-5	Indeno(1,2,3-cd)pyrene		1070	ug/kg	12.2	40.8
53-70-3	Dibenzo(a,h)anthracene		1070	ug/kg	12.2	40.8
191-24-2	Benzo(ghi)perylene		993	ug/kg	12.2	40.8
120-82-1	1,2,4-Trichlorobenzene		696	ug/kg	81.5	408

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0217.d
Lab Smp Id: 1201873127 Client Smp ID: CAMO-09-9946MS
Inj Date : 02-JUL-2009 19:30
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873127|881964|1|SVM|1|MS
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.19000	weight of sample
M	18.74130	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.993	3.999	(1.000)	434735	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1644563	40.0000	
* 46 Acenaphthene-d10	164	6.134	6.134	(1.000)	931304	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1661789	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1548770	40.0000	
* 98 Perylene-d12	264	11.492	11.492	(1.000)	1413918	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.797)	503434	42.6230	1740
$ 5 Phenol-d5	99	3.710	3.710	(0.929)	685412	43.3192	1760
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	318143	21.8369	890
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.915)	516368	21.8307	890
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.098)	166175	48.2657	1970
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	735579	29.7396	1210

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.722	3.722	(0.932)	350212	22.3461	911
8 2-Chlorophenol	128	3.863	3.863	(0.968)	272442	22.4456	915
11 1,4-Dichlorobenzene	146	4.004	4.010	(1.003)	149913	11.2070	457(R)
17 N-Nitrosodipropylamine	70	4.228	4.240	(1.059)	199912	21.6183	881(Q)
28 1,2,4-Trichlorobenzene	180	4.816	4.822	(0.989)	186002	17.0645	696
33 4-Chloro-3-methylphenol	107	5.222	5.216	(1.072)	283882	27.5313	1120
47 Acenaphthene	154	6.157	6.157	(1.004)	484810	22.7851	929
50 2,4-Dinitrotoluene	165	6.240	6.245	(1.017)	220752	27.7643	1130
52 4-Nitrophenol	139	6.187	6.175	(1.009)	131057	32.6439	1330
65 Pentachlorophenol	266	7.139	7.140	(0.977)	115700	25.4516	1040
79 Pyrene	202	8.598	8.598	(0.882)	1069763	27.7261	1130
2 Pyridine	79	2.534	2.505	(0.635)	219702	20.7349	845
4 Aniline	66	3.775	3.781	(0.945)	130146	18.4413	752(Q)
7 bis(2-Chloroethyl) ether	63	3.787	3.799	(0.948)	246317	20.2190	824
9 1,3-Dichlorobenzene	146	3.963	3.969	(0.993)	144211	10.4758	427(R)
12 Benzyl alcohol	108	4.122	4.069	(1.032)	390114	46.6820	1900(Q)
13 1,2-Dichlorobenzene	146	4.110	4.116	(1.029)	166509	13.6137	555(R)
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.037)	581360	21.6446	882(Q)
15 o-Cresol	107	4.122	4.116	(1.032)	313687	33.8331	1380(Q)
18 m,p-Cresols	107	4.216	4.222	(1.056)	361429	27.7288	1130
19 Hexachloroethane	117	4.346	4.346	(1.088)	46764	8.69151	354(aR)
21 Nitrobenzene	77	4.375	4.381	(0.899)	305928	23.0624	940
22 Isophorone	82	4.528	4.534	(0.930)	613310	24.5566	1000
23 2-Nitrophenol	139	4.593	4.593	(0.943)	131409	23.0751	941
24 2,4-Dimethylphenol	122	4.587	4.599	(0.942)	374943	22.1640	903
25 bis(2-Chloroethoxy)methane	93	4.646	4.652	(0.954)	330150	23.7001	966
26 2,4-Dichlorophenol	162	4.757	4.763	(0.977)	239258	24.8903	1010
27 Benzoic acid	105	4.628	4.640	(0.950)	200605	22.3887	913(Q)
30 Naphthalene	128	4.887	4.887	(1.004)	664727	17.8875	729
31 4-Chloroaniline	127	4.898	4.899	(1.006)	373653	23.9298	975
32 Hexachlorobutadiene	225	4.951	4.951	(1.017)	83553	12.6593	516(R)
34 2-Methylnaphthalene	142	5.369	5.369	(1.103)	461985	22.9376	935
36 Hexachlorocyclopentadiene	237	5.469	5.475	(0.892)	54577	11.2971	460
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.906)	180791	24.0626	981
38 2,4,5-Trichlorophenol	196	5.593	5.587	(0.912)	207608	26.2261	1070
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	497011	22.6261	922
42 o-Nitroaniline	65	5.781	5.781	(0.942)	240821	28.4490	1160
41 m-Nitroaniline	138	6.075	6.081	(0.990)	168345	30.9192	1260
43 Dimethylphthalate	163	5.881	5.887	(0.959)	664628	26.5344	1080
44 2,6-Dinitrotoluene	165	5.940	5.946	(0.968)	159762	26.8125	1090
45 Acenaphthylene	152	6.028	6.034	(0.983)	829345	24.5771	1000
48 2,4-Dinitrophenol	184	6.151	6.151	(1.003)	40466	14.7239	600(aQ)
49 Dibenzofuran	168	6.281	6.281	(1.024)	742251	25.4017	1040
51 Diethylphthalate	149	6.398	6.398	(1.043)	684965	27.5217	1120
53 Fluorene	166	6.545	6.545	(1.067)	570057	23.2195	946(R)
54 4-Chlorophenylphenylether	204	6.522	6.522	(1.063)	297596	24.8601	1010
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.897)	81423	20.7759	847

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.066)	162922	34.1787	1390
133 Diphenylamine	169	6.604	6.610	(0.903)	489736	23.6808	965
58 1,2-Diphenylhydrazine	77	6.645	6.645	(0.909)	778161	27.8457	1140
61 4-Bromophenylphenylether	248	6.910	6.910	(0.945)	180454	25.0998	1020
63 Hexachlorobenzene	284	6.987	6.987	(0.956)	195007	25.6698	1050
68 Phenanthrene	178	7.334	7.334	(1.003)	964900	26.1035	1060
69 Anthracene	178	7.375	7.375	(1.009)	1000512	26.9769	1100
72 Di-n-butylphthalate	149	7.734	7.728	(1.058)	1184760	28.7985	1170
76 Fluoranthene	202	8.381	8.381	(1.146)	1032729	27.6978	1130
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	530088	29.3640	1200
89 Benzo(a)anthracene	228	9.728	9.728	(0.998)	1006134	27.0762	1100
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	152141	13.0872	533(R)
92 Chrysene	228	9.769	9.769	(1.002)	973622	27.4084	1120
93 bis(2-Ethylhexyl)phthalate	149	9.657	9.651	(0.991)	726750	30.2850	1230
94 Di-n-octylphthalate	149	10.333	10.333	(0.899)	1206436	29.6018	1210
95 Benzo(b)fluoranthene	252	10.945	10.951	(0.952)	886939	26.3389	1070
96 Benzo(k)fluoranthene	252	10.980	10.986	(0.955)	980391	29.3895	1200
97 Benzo(a)pyrene	252	11.410	11.410	(0.993)	814962	27.9716	1140
99 Indeno(1,2,3-cd)pyrene	276	13.351	13.357	(1.162)	728677	26.3387	1070
100 Dibenzo(a,h)anthracene	278	13.369	13.374	(1.163)	610631	26.1352	1060
101 Benzo(ghi)perylene	276	13.921	13.927	(1.211)	594577	24.3583	993
1 N-Methyl-N-nitrosomethylamine	74	2.499	2.469	(0.626)	159555	21.7734	888

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD6.i/s070209.b/s6g0217.d
Date : 02-JUL-2009 19:30
Client ID: CAMO-09-9946MS
Sample Info: |1201873127188196411|SVHI1|MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

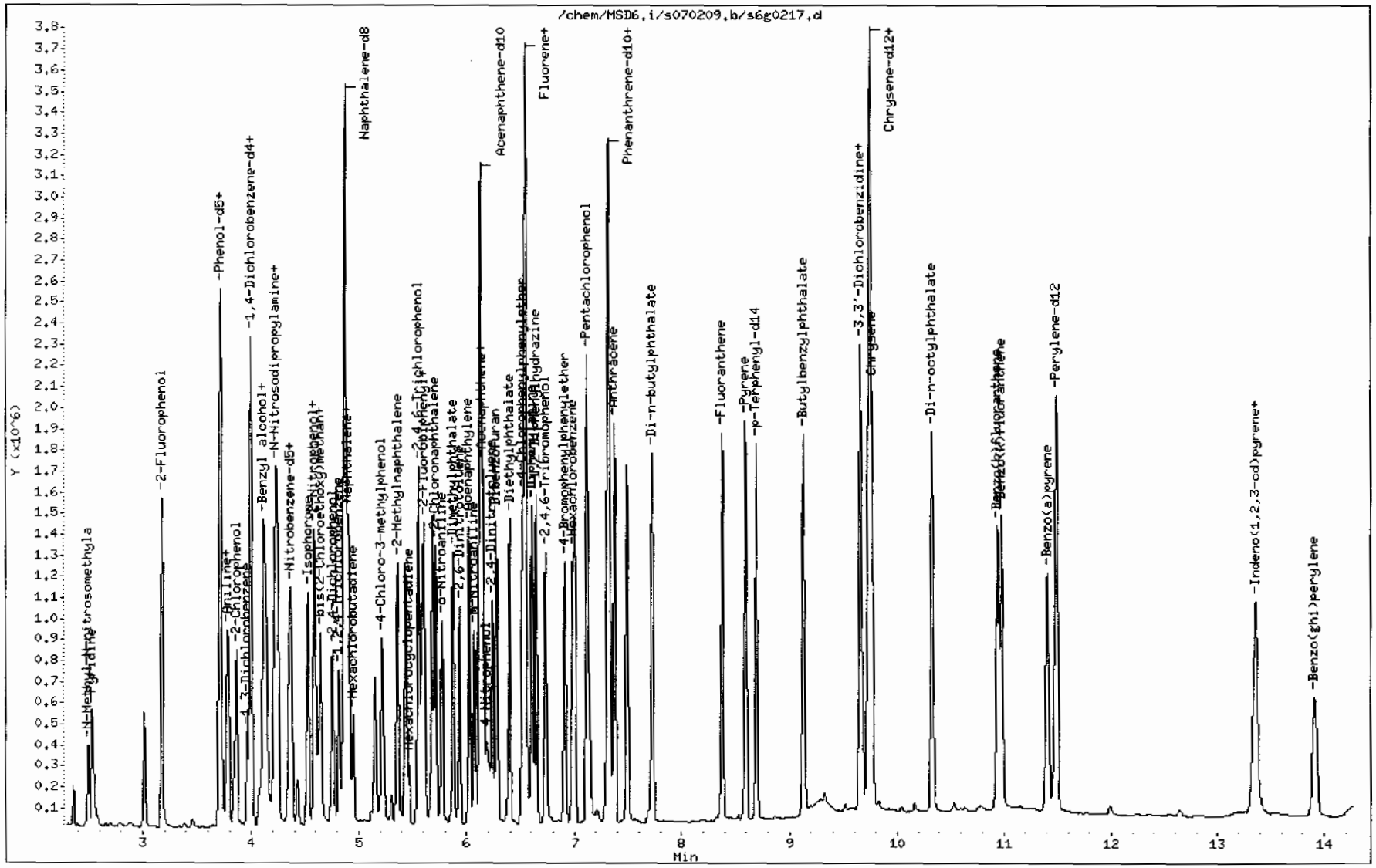

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201873128	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
Client Sample:	QC for batch 881962	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9946MSD	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 19:53	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s6g0218.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1130	ug/kg	81.6	408
108-95-2	Phenol		1190	ug/kg	81.6	408
95-57-8	2-Chlorophenol		1190	ug/kg	81.6	408
106-46-7	1,4-Dichlorobenzene		513	ug/kg	81.6	408
621-64-7	N-Nitrosodipropylamine		1140	ug/kg	81.6	408
59-50-7	4-Chloro-3-methylphenol		1360	ug/kg	81.6	408
83-32-9	Acenaphthene		1120	ug/kg	13.5	40.8
121-14-2	2,4-Dinitrotoluene		1300	ug/kg	40.8	408
100-02-7	4-Nitrophenol		1520	ug/kg	135	408
87-86-5	Pentachlorophenol		1260	ug/kg	102	408
129-00-0	Pyrene		1300	ug/kg	12.2	40.8
110-86-1	Pyridine		982	ug/kg	81.6	408
62-53-3	Aniline		918	ug/kg	122	408
111-44-4	bis(2-Chloroethyl) ether		1030	ug/kg	81.6	408
541-73-1	1,3-Dichlorobenzene		475	ug/kg	81.6	408
100-51-6	Benzyl alcohol	J	315	ug/kg	122	408
95-50-1	1,2-Dichlorobenzene		627	ug/kg	81.6	408
108-60-1	bis(2-Chloroisopropyl)ether		1070	ug/kg	81.6	408
95-48-7	o-Cresol		1270	ug/kg	81.6	408
65794-96-9	m,p-Cresols		1390	ug/kg	122	408
67-72-1	Hexachloroethane	J	375	ug/kg	81.6	408
98-95-3	Nitrobenzene		1170	ug/kg	81.6	408
78-59-1	Isophorone		1230	ug/kg	81.6	408
88-75-5	2-Nitrophenol		1150	ug/kg	81.6	408
105-67-9	2,4-Dimethylphenol		1100	ug/kg	143	408
111-91-1	bis(2-Chloroethoxy)methane		1190	ug/kg	81.6	408
120-83-2	2,4-Dichlorophenol		1270	ug/kg	81.6	408
65-85-0	Benzoic acid		1120	ug/kg	204	816
91-20-3	Naphthalene		868	ug/kg	12.2	40.8
106-47-8	4-Chloroaniline		1200	ug/kg	81.6	408
87-68-3	Hexachlorobutadiene		576	ug/kg	81.6	408
91-57-6	2-Methylnaphthalene		1120	ug/kg	8.16	40.8
77-47-4	Hexachlorocyclopentadiene		602	ug/kg	81.6	408
88-06-2	2,4,6-Trichlorophenol		1210	ug/kg	81.6	408
95-95-4	2,4,5-Trichlorophenol		1270	ug/kg	81.6	408
91-58-7	2-Chloronaphthalene		1120	ug/kg	13.5	40.8
88-74-4	2-Nitroaniline		1400	ug/kg	81.6	408
	o-Nitroaniline					
99-09-2	3-Nitroaniline		1520	ug/kg	81.6	408

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2510	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201873128	**Date Received:**	06/30/2009 09:15	**%Moisture:**	18.7
Client Sample:	QC for batch 881962	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9946MSD	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 19:53	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s6g0218.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1290	ug/kg	81.6	408
606-20-2	2,6-Dinitrotoluene		1300	ug/kg	40.8	408
208-96-8	Acenaphthylene		1210	ug/kg	12.2	40.8
51-28-5	2,4-Dinitrophenol		869	ug/kg	155	816
132-64-9	Dibenzofuran		1240	ug/kg	81.6	408
84-66-2	Diethylphthalate		1310	ug/kg	81.6	408
86-73-7	Fluorene		1110	ug/kg	12.2	40.8
7005-72-3	4-Chlorophenylphenylether		1210	ug/kg	81.6	408
534-52-1	2-Methyl-4,6-dinitrophenol		1080	ug/kg	81.6	408
100-01-6	4-Nitroaniline		1620	ug/kg	122	408
	p-Nitroaniline					
122-39-4	Diphenylamine		1130	ug/kg	81.6	408
122-66-7	Azobenzene		1330	ug/kg	81.6	408
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1220	ug/kg	81.6	408
118-74-1	Hexachlorobenzene		1240	ug/kg	81.6	408
85-01-8	Phenanthrene		1260	ug/kg	12.2	40.8
120-12-7	Anthracene		1250	ug/kg	8.16	40.8
84-74-2	Di-n-butylphthalate		1340	ug/kg	81.6	408
206-44-0	Fluoranthene		1290	ug/kg	12.2	40.8
85-68-7	Butylbenzylphthalate		1380	ug/kg	81.6	408
56-55-3	Benzo(a)anthracene		1280	ug/kg	12.2	40.8
91-94-1	3,3'-Dichlorobenzidine		643	ug/kg	122	408
218-01-9	Chrysene		1310	ug/kg	12.2	40.8
117-81-7	bis(2-Ethylhexyl)phthalate		1430	ug/kg	81.6	408
117-84-0	Di-n-octylphthalate		1400	ug/kg	81.6	408
205-99-2	Benzo(b)fluoranthene		1350	ug/kg	12.2	40.8
207-08-9	Benzo(k)fluoranthene		1280	ug/kg	12.2	40.8
50-32-8	Benzo(a)pyrene		1330	ug/kg	12.2	40.8
193-39-5	Indeno(1,2,3-cd)pyrene		1330	ug/kg	12.2	40.8
53-70-3	Dibenzo(a,h)anthracene		1360	ug/kg	12.2	40.8
191-24-2	Benzo(ghi)perylene		1260	ug/kg	12.2	40.8
120-82-1	1,2,4-Trichlorobenzene		809	ug/kg	81.6	408

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0218.d
Lab Smp Id: 1201873128 Client Smp ID: CAMO-09-9946MSD
Inj Date : 02-JUL-2009 19:53
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873128|881964|1|SVM|1|MSD
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 14 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.17000	weight of sample
M	18.74130	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.993	3.999	(1.000)	440612	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1719388	40.0000	
* 46 Acenaphthene-d10	164	6.134	6.134	(1.000)	968859	40.0000	
* 67 Phenanthrene-d10	188	7.316	7.316	(1.000)	1683763	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1551911	40.0000	
* 98 Perylene-d12	264	11.492	11.492	(1.000)	1427959	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.797)	626183	52.3083	2130
$ 5 Phenol-d5	99	3.710	3.710	(0.929)	867531	54.0981	2210
$ 20 Nitrobenzene-d5	82	4.363	4.363	(0.896)	395059	25.9363	1060
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.915)	645632	26.2376	1070
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.098)	199798	55.7823	2280
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	812600	32.7871	1340

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	CONCENTRATIONS FINAL (ug/Kg)
6 Phenol	94	3.722	3.722	(0.932)	464493	29.2428	1190
8 2-Chlorophenol	128	3.863	3.863	(0.968)	357766	29.0820	1190
11 1,4-Dichlorobenzene	146	4.005	4.010	(1.003)	170417	12.5699	513(R)
17 N-Nitrosodipropylamine	70	4.234	4.240	(1.060)	261225	27.8719	1140(Q)
28 1,2,4-Trichlorobenzene	180	4.816	4.822	(0.989)	225980	19.8301	809
33 4-Chloro-3-methylphenol	107	5.222	5.216	(1.072)	360108	33.4040	1360
47 Acenaphthene	154	6.157	6.157	(1.004)	608077	27.4706	1120
50 2,4-Dinitrotoluene	165	6.240	6.245	(1.017)	264208	31.9418	1300
52 4-Nitrophenol	139	6.187	6.175	(1.009)	156120	37.3794	1520
65 Pentachlorophenol	266	7.140	7.140	(0.976)	141769	30.7795	1260
79 Pyrene	202	8.598	8.598	(0.882)	1235992	31.9696	1300
2 Pyridine	79	2.528	2.505	(0.633)	258463	24.0678	982
4 Aniline	66	3.775	3.781	(0.945)	161036	22.5140	918(Q)
7 bis(2-Chloroethyl) ether	63	3.787	3.799	(0.948)	311170	25.2018	1030
9 1,3-Dichlorobenzene	146	3.957	3.969	(0.991)	162607	11.6545	475(R)
12 Benzyl alcohol	108	4.075	4.069	(1.021)	65344	7.71498	315(aR)
13 1,2-Dichlorobenzene	146	4.110	4.116	(1.029)	190446	15.3631	627(R)
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.037)	714675	26.2531	1070
15 o-Cresol	107	4.122	4.116	(1.032)	291888	31.0620	1270
18 m,p-Cresols	107	4.216	4.222	(1.056)	450029	34.0656	1390(Q)
19 Hexachloroethane	117	4.340	4.346	(1.087)	50141	9.19487	375(aR)
21 Nitrobenzene	77	4.375	4.381	(0.899)	398372	28.7244	1170
22 Isophorone	82	4.528	4.534	(0.930)	788198	30.1856	1230
23 2-Nitrophenol	139	4.593	4.593	(0.943)	168246	28.2581	1150
24 2,4-Dimethylphenol	122	4.587	4.599	(0.942)	477237	26.9833	1100
25 bis(2-Chloroethoxy)methane	93	4.646	4.652	(0.954)	426000	29.2500	1190
26 2,4-Dichlorophenol	162	4.757	4.763	(0.977)	311846	31.0299	1260
27 Benzoic acid	105	4.634	4.640	(0.952)	256949	27.4291	1120(Q)
30 Naphthalene	128	4.887	4.887	(1.004)	827086	21.2879	868
31 4-Chloroaniline	127	4.899	4.899	(1.006)	480825	29.4534	1200
32 Hexachlorobutadiene	225	4.952	4.951	(1.017)	97426	14.1189	576(R)
34 2-Methylnaphthalene	142	5.369	5.369	(1.103)	579247	27.5081	1120
36 Hexachlorocyclopentadiene	237	5.469	5.475	(0.892)	74192	14.7620	602
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.906)	232464	29.7409	1210
38 2,4,5-Trichlorophenol	196	5.593	5.587	(0.912)	257005	31.2078	1270
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	625194	27.3583	1120
42 o-Nitroaniline	65	5.781	5.781	(0.942)	301935	34.2860	1400
41 m-Nitroaniline	138	6.075	6.081	(0.990)	210987	37.2492	1520
43 Dimethylphthalate	163	5.881	5.887	(0.959)	822307	31.5570	1290
44 2,6-Dinitrotoluene	165	5.940	5.946	(0.968)	197723	31.8972	1300
45 Acenaphthylene	152	6.028	6.034	(0.983)	1039101	29.5995	1210
48 2,4-Dinitrophenol	184	6.151	6.151	(1.003)	60890	21.2965	869(Q)
49 Dibenzofuran	168	6.281	6.281	(1.024)	927181	30.5005	1240
51 Diethylphthalate	149	6.399	6.398	(1.043)	830080	32.0596	1310
53 Fluorene	166	6.546	6.545	(1.067)	696531	27.2713	1110
54 4-Chlorophenylphenylether	204	6.522	6.522	(1.063)	369237	29.6491	1210
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.896)	108932	26.5507	1080

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.066)	197361	39.7987	1620
133 Diphenylamine	169	6.610	6.610	(0.904)	582025	27.7761	1130
58 1,2-Diphenylhydrazine	77	6.646	6.645	(0.908)	922442	32.5779	1330
61 4-Bromophenylphenylether	248	6.910	6.910	(0.945)	217115	29.8051	1220
63 Hexachlorobenzene	284	6.987	6.987	(0.955)	234826	30.5080	1240
68 Phenanthrene	178	7.334	7.334	(1.002)	1155886	30.8622	1260
69 Anthracene	178	7.375	7.375	(1.008)	1148339	30.5587	1250
72 Di-n-butylphthalate	149	7.734	7.728	(1.057)	1366437	32.7811	1340
76 Fluoranthene	202	8.381	8.381	(1.146)	1196365	31.6678	1290
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	613373	33.9088	1380
89 Benzo(a)anthracene	228	9.728	9.728	(0.998)	1172607	31.4923	1280
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	183493	15.7522	642(R)
92 Chrysene	228	9.769	9.769	(1.002)	1142038	32.0844	1310
93 bis(2-Ethylhexyl)phthalate	149	9.651	9.651	(0.990)	842887	35.0535	1430
94 Di-n-octylphthalate	149	10.334	10.333	(0.899)	1416717	34.4196	1400
95 Benzo(b)fluoranthene	252	10.945	10.951	(0.952)	1126897	33.1358	1350
96 Benzo(k)fluoranthene	252	10.986	10.986	(0.956)	1060436	31.4765	1280
97 Benzo(a)pyrene	252	11.410	11.410	(0.993)	958190	32.5641	1330
99 Indeno(1,2,3-cd)pyrene	276	13.357	13.357	(1.162)	908384	32.5115	1330
100 Dibenzo(a,h)anthracene	278	13.369	13.374	(1.163)	783404	33.4476	1360
101 Benzo(ghi)perylene	276	13.922	13.927	(1.211)	762176	30.9174	1260
1 N-Methyl-N-nitrosomethylamine	74	2.493	2.469	(0.624)	204994	27.6011	1120

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD6.i/s070209.b/s6g0218.d

Date : 02-JUL-2009 19:53

Client ID: CAMO-09-9946MSD

Sample Info: |1201873128188196411|SVMI1|MSD

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD6.i

Operator: JMB3

Column diameter: 0.20

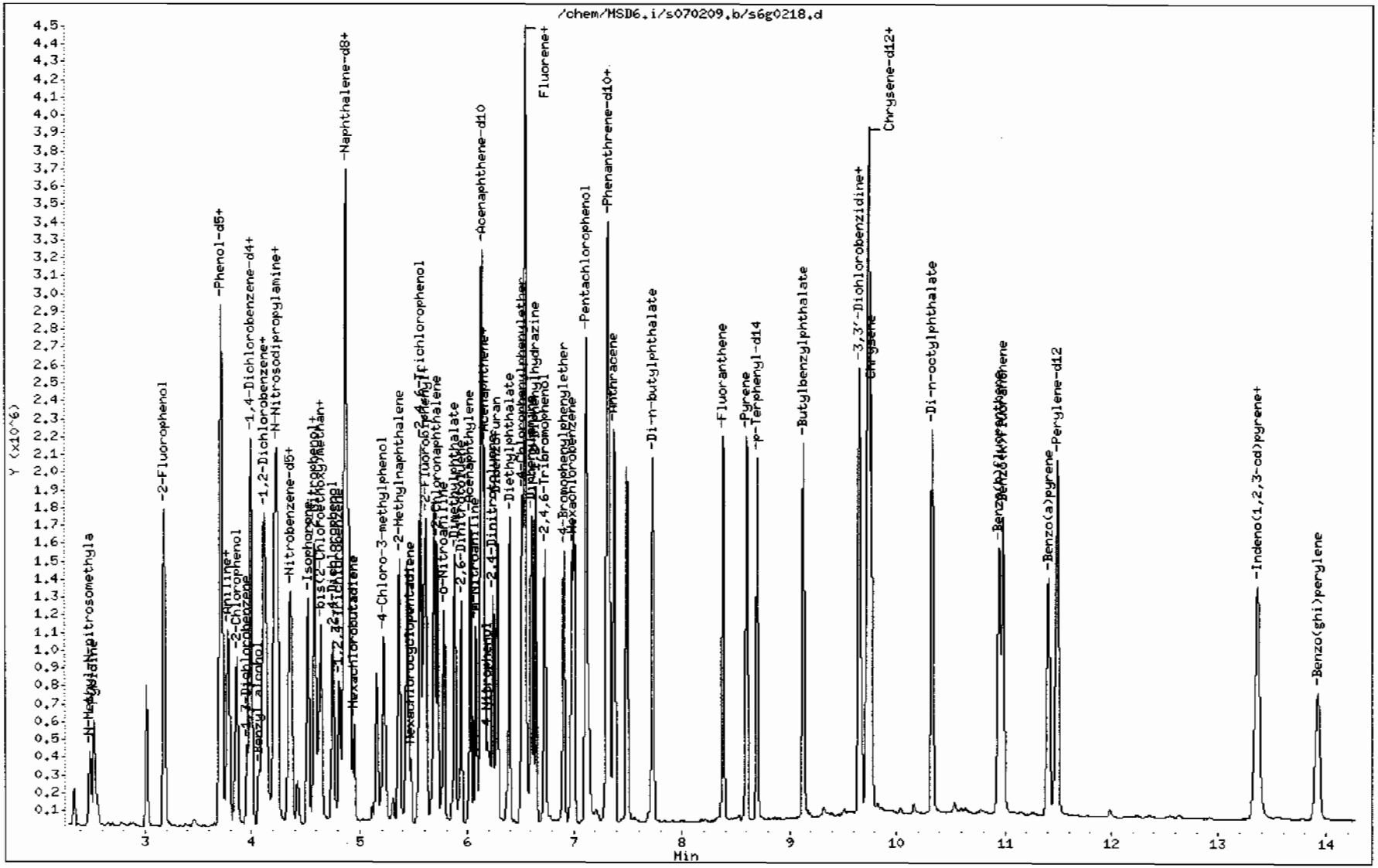

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 881962 **Verified by:** _____

Analyst: Robin Hunt

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201873125 MB	02-JUL-2009 13:47:46	30	1	0.03333
1201873126 LCS	02-JUL-2009 13:47:46	30	1	0.03333
232582001	02-JUL-2009 13:47:46	30.07	1	0.03326
232582002	02-JUL-2009 13:47:46	30.2	1	0.03311
232585001	02-JUL-2009 13:47:46	30.11	1	0.03321
232585002	02-JUL-2009 13:47:46	30.22	1	0.03309
232585003	02-JUL-2009 13:47:46	30.17	1	0.03315
232591001	02-JUL-2009 13:47:46	30.02	1	0.03331
1201873127 MS (232591001)	02-JUL-2009 13:47:46	30.19	1	0.03312
1201873128 MSD (232591001)	02-JUL-2009 13:47:46	30.17	1	0.03315
232634001	02-JUL-2009 13:47:46	30.05	1	0.03328
232634002	02-JUL-2009 13:47:46	30.17	1	0.03315

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201873126	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
LCS	1201873126	BENZIDINE LCS	UE090622-18	1	mL
MS	1201873127	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MS	1201873127	BENZIDINE LCS	UE090622-18	1	mL
MSD	1201873128	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MSD	1201873128	BENZIDINE LCS	UE090622-18	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1143854-D	150	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: RLC

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD6

DATE: 07/02/2009 METHOD: See raw data OPERATOR: JMB3 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:116462-D
Multiplier Voltage: 1482 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090628-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD6.i/s070209.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s6g0201.d	WBN090624-01	JMB3	02-JUL-2009 08:15	50 PPM	s070209	1.0	DFTPP	USE
s6g0202.d	WBN090626-05.3	JMB3	02-JUL-2009 08:30	40 PPM	s070209	1.0	MEGACVS	USE
s6g0203.d	WBN090619-01.2	JMB3	02-JUL-2009 08:58	40 PPM	s070209	1.0	APCVS	USE
s6g0204.d	WBN090609-22.5	JMB3	02-JUL-2009 09:21	40 PPM	s070209	1.0	PESTCVS	USE; **NO SAMPLES TO RUN**RE-STARTING SEQUENCE AT 15:10
s6g0205.d	WBN090624-01	JMB3	02-JUL-2009 15:10	50 PPM	s070209	1.0	DFTPP	USE
s6g0206.d	WBN090626-05.3	JMB3	02-JUL-2009 15:23	40 PPM	s070209	1.0	MEGACVS	USE; 537020
s6g0207.d	WBN090619-01.2	JMB3	02-JUL-2009 15:46	40 PPM	s070209	1.0	APCVS	USE
s6g0208.d	WBN090609-22.5	JMB3	02-JUL-2009 16:08	40 PPM	s070209	1.0	PESTCVS	USE
s6g0209-1.d	1201873125	JMB3	02-JUL-2009 16:31	881964	09-2506	1.0	SBLK01	USE
s6g0209-2.d	1201873125	JMB3	02-JUL-2009 16:31	881964	09-2510	1.0	SBLK01	USE
s6g0209-3.d	1201873125	JMB3	02-JUL-2009 16:31	881964	232634	1.0	SBLK01	USE
s6g0209.d	1201873125	JMB3	02-JUL-2009 16:31	881964	09-2508	1.0	SBLK01	USE
s6g0210-1.d	1201873126	JMB3	02-JUL-2009 16:54	881964	09-2506	1.0	SBLK01LCS	USE
s6g0210-2.d	1201873126	JMB3	02-JUL-2009 16:54	881964	09-2510	1.0	SBLK01LCS	USE
s6g0210-3.d	1201873126	JMB3	02-JUL-2009 16:54	881964	232634	1.0	SBLK01LCS	USE
s6g0210.d	1201873126	JMB3	02-JUL-2009 16:54	881964	09-2508	1.0	SBLK01LCS	USE
s6g0211.d	232582001	JMB3	02-JUL-2009 17:16	881964	09-2508	1.0	LANL	USE
s6g0212.d	232582002	JMB3	02-JUL-2009 17:38	881964	09-2508	1.0	LANL	USE
s6g0213.d	232585001	JMB3	02-JUL-2009 18:00	881964	09-2506	1.0	LANL	USE

s6g0214.d	232585002	JMB3	02-JUL-2009 18:23	881964	09-2506	1.0	LANL	USE
s6g0215.d	232585003	JMB3	02-JUL-2009 18:46	881964	09-2506	1.0	LANL	USE
s6g0216.d	232591001	JMB3	02-JUL-2009 19:08	881964	09-2510	1.0	LANL	USE
s6g0217.d	1201873127	JMB3	02-JUL-2009 19:30	881964	09-2510	1.0	MS	USE; SPIKE LOW
s6g0218.d	1201873128	JMB3	02-JUL-2009 19:53	881964	09-2510	1.0	MSD	USE; SPIKE LOW
s6g0219.d	232634001	JMB3	02-JUL-2009 20:15	881964	232634	4.0	MECP	USE: SURR LOW; RR NEAT - SEE S6G0314
s6g0220.d	232634002	JMB3	02-JUL-2009 20:38	881964	232634	4.0	MECP	USE: SURR LOW; RR NEAT - SEE S6G0315

Instrument Batch: /chem/MSD6.i/s070209.b

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD6

DATE: 06/25/2009 METHOD: See raw data OPERATOR: lof REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1116462-D
Multiplier Voltage: 1482 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD6.i/s062509.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s6f2501-d.d	WBN090624-01	JMB3	25-JUN-2009 17:33	50 PPM	s062509	1.0	DFTPP	8270d TUNE: MEGA - AP - PEST
s6f2501.d	WBN090624-01	JMB3	25-JUN-2009 17:33	50 PPM	s062509	1.0	DFTPP	8270c TUNE: MEGA - AP - PEST
s6f2502.d	INST BLK	JMB3	25-JUN-2009 17:46	-----	s062509	1.0	INST BLK	
s6f2503.d	WBN090602-08	JMB3	25-JUN-2009 18:09	1 PPM	s062509	1.0	MEGAICAL	
s6f2504.d	WBN090602-07	JMB3	25-JUN-2009 18:37	10 PPM	s062509	1.0	MEGAICAL	
s6f2505.d	WBN090602-06	JMB3	25-JUN-2009 19:04	20 PPM	s062509	1.0	MEGAICAL	
s6f2506.d	WBN090602-05.1	JMB3	25-JUN-2009 19:33	40 PPM	s062509	1.0	MEGAICAL	
s6f2507.d	WBN090602-04	JMB3	25-JUN-2009 20:01	50 PPM	s062509	1.0	MEGAICAL	
s6f2508.d	WBN090602-03	JMB3	25-JUN-2009 20:29	80 PPM	s062509	1.0	MEGAICAL	
s6f2509.d	WBN090602-02	JMB3	25-JUN-2009 20:56	100 PPM	s062509	1.0	MEGAICAL	
s6f2510.d	WBN090602-01	JMB3	25-JUN-2009 21:25	120 PPM	s062509	1.0	MEGAICAL	
s6f2511.d	WBN090528-07	JMB3	25-JUN-2009 21:54	10 PPM	s062509	1.0	APICAL	
s6f2512.d	WBN090528-06	JMB3	25-JUN-2009 22:17	20 PPM	s062509	1.0	APICAL	
s6f2513.d	WBN090528-05.1	JMB3	25-JUN-2009 22:39	40 PPM	s062509	1.0	APICAL	
s6f2514.d	WBN090528-04	JMB3	25-JUN-2009 23:02	50 PPM	s062509	1.0	APICAL	
s6f2515.d	WBN090528-03	JMB3	25-JUN-2009 23:24	80 PPM	s062509	1.0	APICAL	
s6f2516.d	WBN090528-02	JMB3	25-JUN-2009 23:47	100 PPM	s062509	1.0	APICAL	
s6f2517.d	WBN090528-01	JMB3	26-JUN-2009 00:08	120 PPM	s062509	1.0	APICAL	
s6f2518.d	WBN090609-24	JMB3	26-JUN-2009 00:31	10 PPM	s062509	1.0	PESTICAL	

s6f2519.d	WBN090609-23	JMB3	26-JUN-2009 00:54	20 PPM	s062509	1.0	PESTICAL	
s6f2520.d	WBN090609-22.1	JMB3	26-JUN-2009 01:17	40 PPM	s062509	1.0	PESTICAL	
s6f2521.d	WBN090609-21	JMB3	26-JUN-2009 01:40	50 PPM	s062509	1.0	PESTICAL	
s6f2522.d	WBN090609-20	JMB3	26-JUN-2009 02:02	80 PPM	s062509	1.0	PESTICAL	
s6f2523.d	WBN090609-19	JMB3	26-JUN-2009 02:25	100 PPM	s062509	1.0	PESTICAL	DUSE bad injection
s6f2524.d	WBN090609-18	JMB3	26-JUN-2009 02:48	120 PPM	s062509	1.0	PESTICAL	
s6f2525-BOE.d	WBN090602-09.1	JMB3	26-JUN-2009 03:11	40 PPM	s062509	1.0	MEGAICV	pass
s6f2525-D.d	WBN090602-09.1	JMB3	26-JUN-2009 03:11	40 PPM	s062509	1.0	MEGAICV	pass except c55,c26,c179 (>30%)
s6f2525.d	WBN090602-09.1	JMB3	26-JUN-2009 03:11	40 PPM	s062509	1.0	MEGAICV	pass 354067
s6f2526-D.d	WBN090528-08.1	JMB3	26-JUN-2009 03:39	40 PPM	s062509	1.0	APICV	pass except c110,c119,c124 (>30%)
s6f2526.d	WBN090528-08.1	JMB3	26-JUN-2009 03:39	40 PPM	s062509	1.0	APICV	pass
s6f2527-D.d	WBN090609-25.1	JMB3	26-JUN-2009 04:02	40 PPM	s062509	1.0	PESTICV	pass
s6f2527.d	WBN090609-25.1	JMB3	26-JUN-2009 04:02	40 PPM	s062509	1.0	PESTICV	pass
s6f2528-d.d	WBN090624-01	JMB3	26-JUN-2009 04:26	50 PPM	s062509	1.0	DFTPP	8270d TUNE: HEX - NEV
s6f2528.d	WBN090624-01	JMB3	26-JUN-2009 04:26	50 PPM	s062509	1.0	DFTPP	8270c TUNE: HEX - NEV
s6f2529.d	INST BLK	JMB3	26-JUN-2009 04:40	-----	s062509	1.0	INST BLK	
s6f2530.d	WBN090624-16	JMB3	26-JUN-2009 05:09	500 PPM	s062509	1.0	HEXICAL	
s6f2531.d	WBN090624-15	JMB3	26-JUN-2009 05:32	1000 PPM	s062509	1.0	HEXICAL	
s6f2532.d	WBN090624-14	JMB3	26-JUN-2009 05:54	1250 PPM	s062509	1.0	HEXICAL	DUSE bad inject
s6f2533.d	WBN090624-13	JMB3	26-JUN-2009 06:18	1500 PPM	s062509	1.0	HEXICAL	
s6f2534.d	WBN090624-12	JMB3	26-JUN-2009 06:40	1750 PPM	s062509	1.0	HEXICAL	
s6f2535.d	UBN090317-02.6	JMB3	26-JUN-2009 07:02	2000 PPM	s062509	1.0	HEXICAL	
s6f2536.d	UBN090428-01	JMB3	26-JUN-2009 07:24	10 PPM	s062509	1.0	NEVICAL	
s6f2537.d	UBN090428-02	JMB3	26-JUN-2009 07:47	20 PPM	s062509	1.0	NEVICAL	
s6f2538.d	UBN090428-03	JMB3	26-JUN-2009 08:09	40 PPM	s062509	1.0	NEVICAL	DUSE bad inject
s6f2539.d	UBN090428-04	JMB3	26-JUN-2009 08:31	50 PPM	s062509	1.0	NEVICAL	
s6f2540.d	UBN090428-05	JMB3	26-JUN-2009 08:54	80 PPM	s062509	1.0	NEVICAL	

s6f2541.d	UBN090428-06	JMB3	26-JUN-2009 09:17	100 PPM	s062509		1.0	NEVICAL	
s6f2542.d	UBN090428-07	JMB3	26-JUN-2009 09:39	120 PPM	s062509		1.0	NEVICAL	
s6f2543-D.d	WBN090624-10.1	JMB3	26-JUN-2009 10:01	1250 PPM	s062509		1.0	HEXICV	pass
s6f2543.d	WBN090624-10.1	JMB3	26-JUN-2009 10:01	1250 PPM	s062509		1.0	HEXICV	pass

Instrument Batch: /chem/MSD6.i/s062509.b

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
06-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
SEMIVOA GC/MS	SW846 8270C	Solid	LANL, MECP
Batch ID:	**Sample Numbers:**		
881964	See Below		

Potentially affected work order(s)(SDG): 232582(09-2508),232585(09-2506),232591(09-2510),232634

Application Issues:

Failed Recovery for MS/PS

Failed RPD for MS/MSD, or PS/PSD

Failed Yield for Surrogates

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1.The MS (1201873127) and MSD (1201873128) each displayed failing spike recoveries. Please see the QC summary report for specific failures.	1. As the MS and MSD failed spike recovery limits in a similar manner, the failures were attributed to matrix interference and the data were reported.
2. Multiple MS (1201873127)/MSD (1201873128) RPD values exceeded their established acceptance limits. Please see the QC summary report for specific failures.	2. The failures were attributed to matrix interference, and the data were reported.
3. Samples 232634001 and 232634002 (MECP) failed surrogate recovery limits. Please see the QC summary report for specific failures.	3. The indicated samples were re-extracted within holding as part of batch 882543. The re-extractions failed surrogate recovery limits in the same manner, therefore the failures are attributed to matrix interference. Data for these samples are reported from the original extractions.

Originator's Name:
Josh Brooks 07-JUL-09

Data Validator/Group Leader:
Cameron Bearden 07-JUL-09

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2510

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881646
Prep Batch Number:	881643

Sample Analysis

Sample ID	Client ID
232591001	CAMO-09-9946
1201872346	Interference Check Sample (ICS)
1201872342	Method Blank (MB)
1201872343	Laboratory Control Sample (LCS)
1201872344	232591001(CAMO-09-9946) Matrix Spike (MS)
1201872345	232591001(CAMO-09-9946) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

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CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232591001 (CAMO-09-9946) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

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Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The sample in this SDG was not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

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Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Heather K Mace **Date:** 07/13/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9946

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2510

GEL Sample ID: 232591001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 81

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.615	2.46	0.615	ug/kg	U	1	08-JUL-09 20:29	per0708062a
	Perchlorate-O(18)			6.38	ug/kg		1	08-JUL-09 20:29	per0708062a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2510

Extract Batch Code: 881643

Date Filtered: 01–JUL–09

Matrix: SOIL

Sample ID: 1201872343

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.04	ug/kg	102		70 – 130
Perchlorate–O(18)		4.78	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09-2510

Extract Batch Code: 881643

Date Filtered: 01-JUL-09

Matrix: SOIL

Sample ID: 1201872346

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.15	ug/kg	108		70 – 130
Perchlorate-O(18)		5.09	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708047a
Date: 08-Jul-2009
Time: 18:32:44
ID: 1201872346
Vial: 2:1,C

|LANL|881646|50020|IC5|1|

07-09-09

Perchlorate

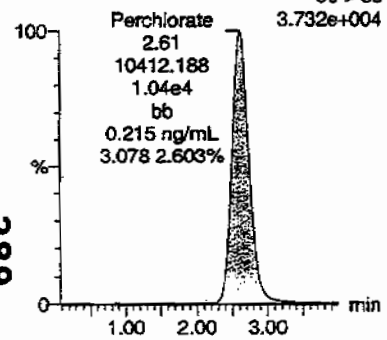

Perchlorate

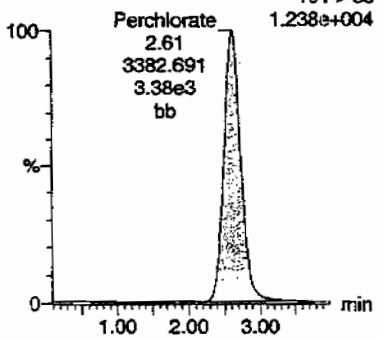

Perchlorate-101

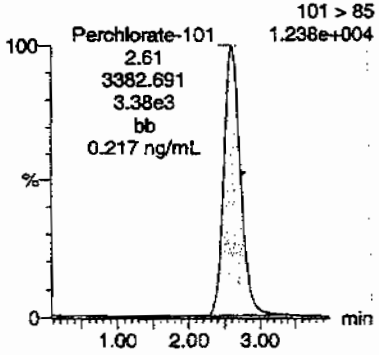

Perchlorate-O(18)

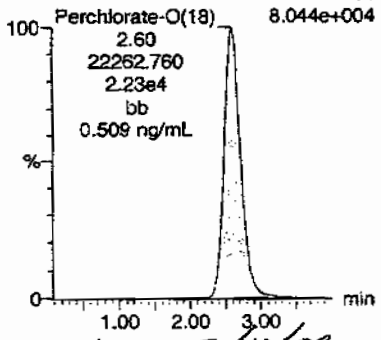

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Hmw 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872346	Perchlorate	99 > 83	2.61	10412.188	10412.188	bb			0.2154	107.71	7.71	2796.1...	3.08
1201872346	Perchlorate-101	101 > 85	2.61	3382.691	3382.691	bb			0.2173	108.63	8.63	1805.9...	
1201872346	Perchlorate-O(18)	107 > 89	2.60	22262.760	22262.760	bb			0.5086	101.72	1.72	10354....	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09-2510

Extract Batch Code: 881643

Date Extracted: 01-JUL-09

GEL MS/PS ID: 1201872344

Client ID: CAMO-09-9946

GEL MSD/PSD ID: 1201872345

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.46	0.218	ug/kg	2.74	102	2.79	105	1.92	30	75 – 125
Perchlorate-O(18)	0	6.38	ug/kg	6.24		6.22		.283		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2510

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08-JUL-09	per0708001a	IPB001
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708001a	IPB001
Perchlorate	0.00	0	NA	08-JUL-09	per0708002a	IPB001
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708002a	IPB001

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qid

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Name: per0708001a
Date: 08-Jul-2009
Time: 12:35:59
ID: IPB001
Vial: 1:1,A

AWW 07-09-09

Perchlorate

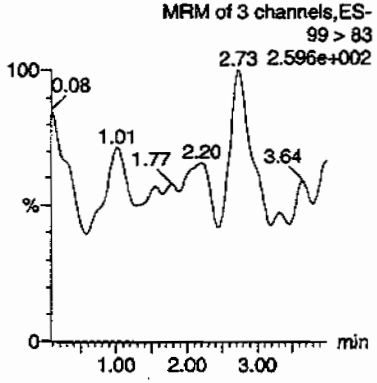

Perchlorate

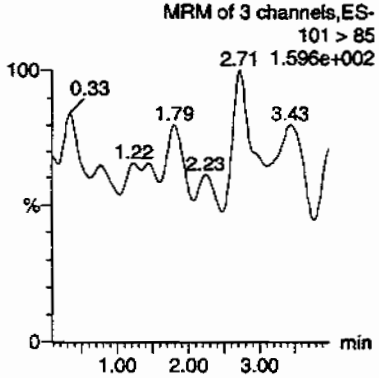

Perchlorate-101

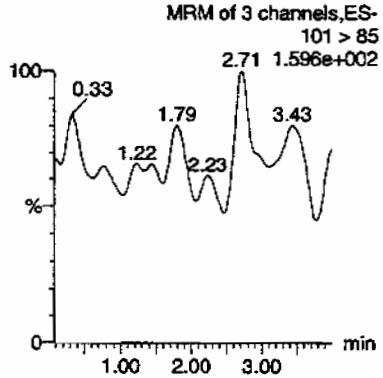

Perchlorate-O(18)

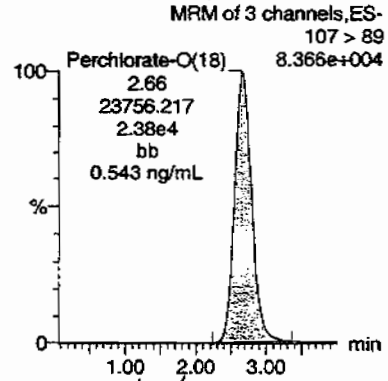

AWW 08/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.66	23756.217	23756.217	bb			0.5427	108.54	8.54	2563.6...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708002a
Date: 08-Jul-2009
Time: 12:43:43
ID: IPB001
Vial: 1:1,A

CWW
07-01-09

Perchlorate

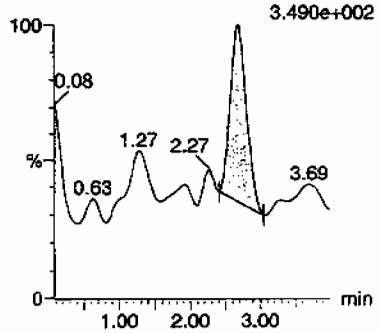

Perchlorate

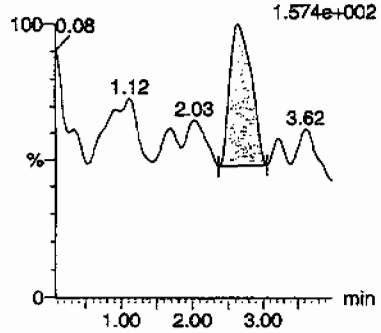

Perchlorate-101

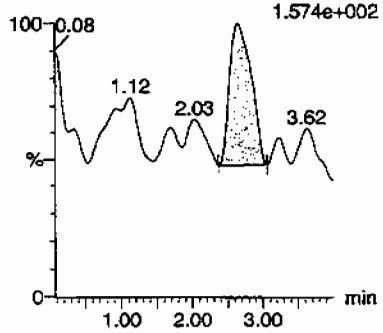

Perchlorate-O(18)

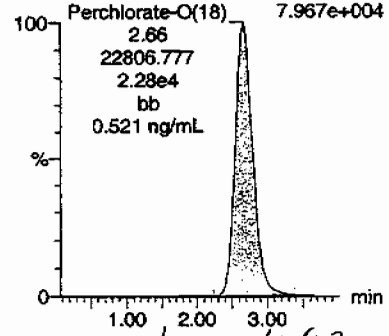

tmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.68	62.756	62.756	bb			0.0013			9.964	2.10
IPB001	Perchlorate-101	101 > 85	2.64	29.952	29.952	bb			0.0019			7.781	
IPB001	Perchlorate-O(18)	107 > 89	2.66	22806.777	22806.777	bb			0.5210	104.21	4.21	7277.3...	

DLM
LQ 0.500

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2510

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08–JUL–09	per0708008a	IPB002
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708008a	IPB002
Perchlorate	0.00	0	NA	08–JUL–09	per0708010a	IPB003
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708010a	IPB003
Perchlorate	0.00	0	NA	08–JUL–09	per0708023a	IPB004
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708023a	IPB004
Perchlorate	0.00	0	NA	08–JUL–09	per0708034a	IPB005
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708034a	IPB005
Perchlorate	0.00	0	NA	08–JUL–09	per0708043a	IPB006
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708043a	IPB006
Perchlorate	0.00	0	NA	08–JUL–09	per0708055a	IPB007
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708055a	IPB007
Perchlorate	0.00	0	NA	08–JUL–09	per0708066a	IPB008

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2510

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708066a	IPB008

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708008a
Date: 08-Jul-2009
Time: 13:30:03
ID: IPB002
Vial: 1:1,A

CWW 07-07-09

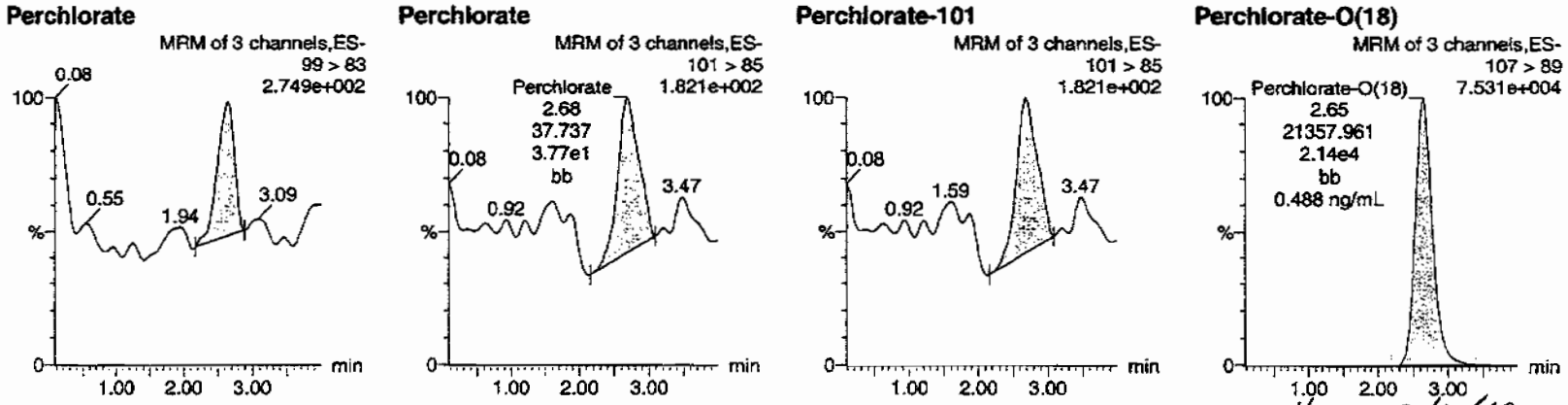

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.64	40.789	40.789	bb			0.0008			16.642	1.08
IPB002	Perchlorate-101	101 > 85	2.68	37.737	37.737	bb			0.0024			9.640	
IPB002	Perchlorate-O(18)	107 > 89	2.65	21357.961	21357.961	bb			0.4879	97.59	-2.41	8484.7...	

OKAY LOD

296

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708010a
Date: 08-Jul-2009
Time: 13:45:31
ID: IPB003
Vial: 1:1,A

CWO
07-09-09

Perchlorate

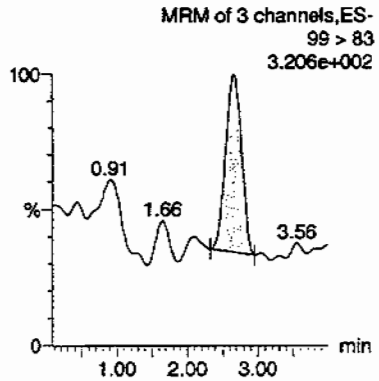

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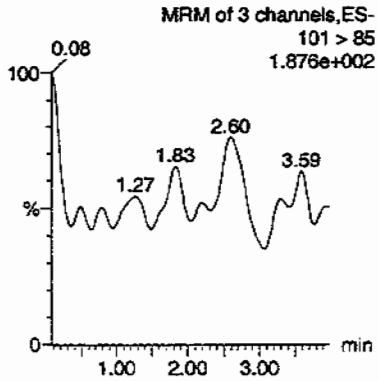

Perchlorate-101

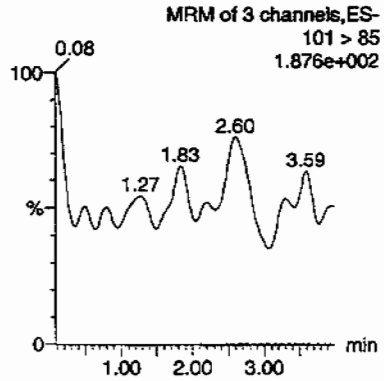

Perchlorate-O(18)

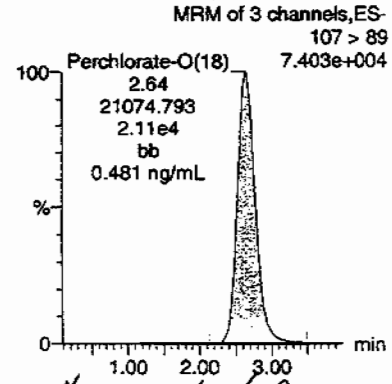

dhm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.66	56.577	56.577	bb			0.0012			14.377	0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	2.64	21074.793	21074.793	bb			0.4815	96.29	-3.71	1018.8...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708023a
Date: 08-Jul-2009
Time: 15:26:24
ID: IPB004
Vial: 1:1,A

CWW 07-09-09

Perchlorate

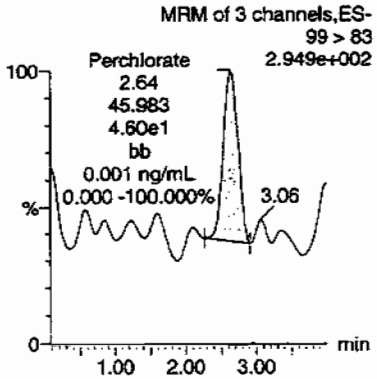

Perchlorate

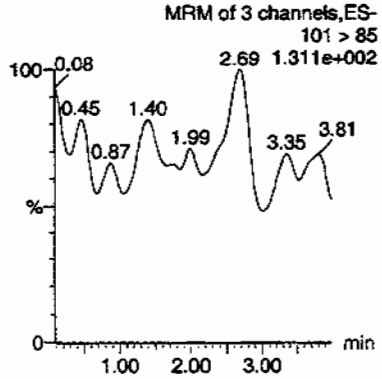

Perchlorate-101

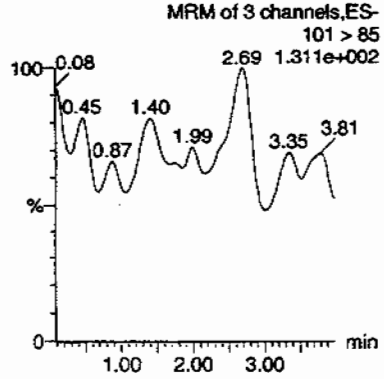

Perchlorate-O(18)

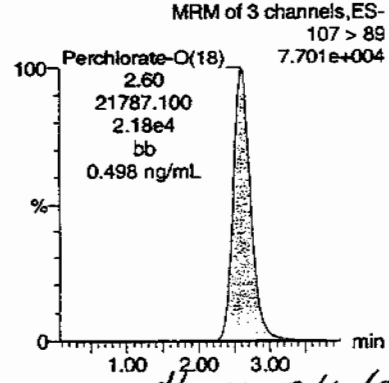

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.64	45.983	45.983	bb			0.0010			14.762	0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	2.60	21787.100	21787.100	bb			0.4977	99.55	-0.45	5673.5...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708034a
Date: 08-Jul-2009
Time: 16:51:46
ID: IPB005
Vial: 1:1,A

CWW 07-09-09

Perchlorate

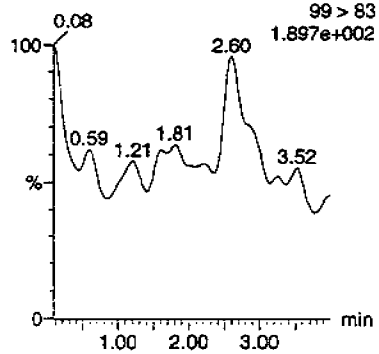

Perchlorate

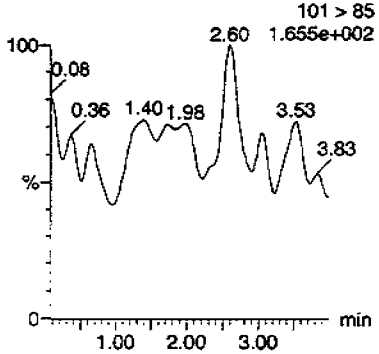

Perchlorate-101

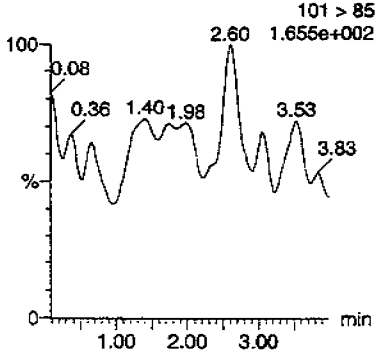

Perchlorate-O(18)

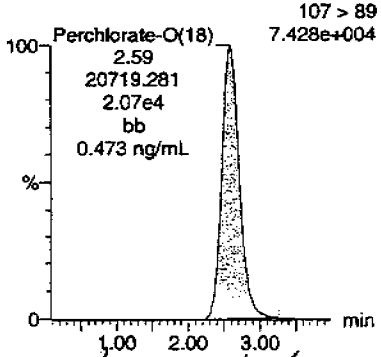

HMK 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.59	20719.281	20719.281	bb			0.4733	94.67	-5.33	6050.7...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708043a
Date: 08-Jul-2009
Time: 18:01:32
ID: IPB006
Vial: 1:1,A

CWW 07-09-09

Perchlorate

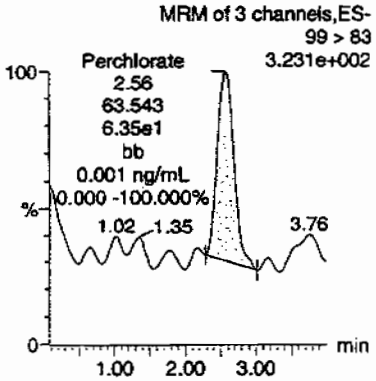

Perchlorate

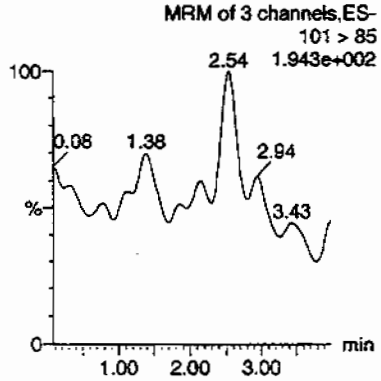

Perchlorate-101

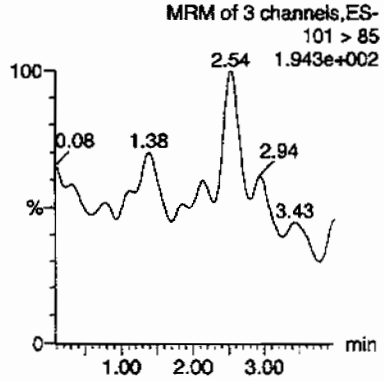

Perchlorate-O(18)

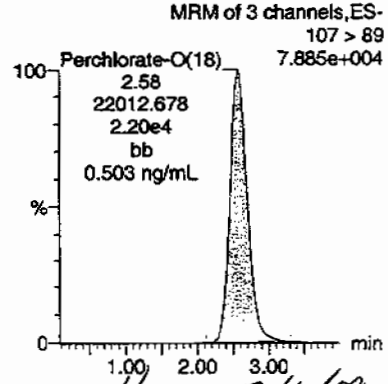

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	2.56	63.543	63.543	bb			0.0013			22.698	0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	2.58	22012.678	22012.678	bb			0.5029	100.58	0.58	3651.4...	

300

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708055a
Date: 08-Jul-2009
Time: 19:34:48
ID: IPB007
Vial: 1:1,A

07-09-09

Perchlorate

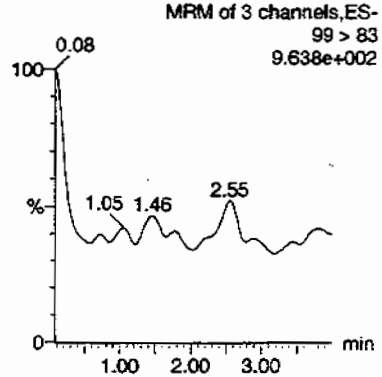

Perchlorate

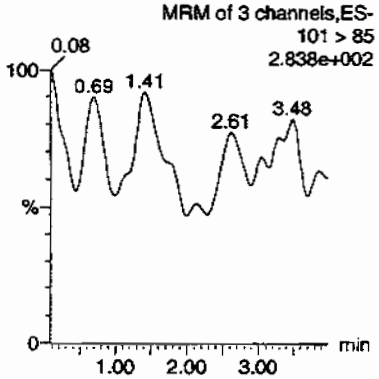

Perchlorate-101

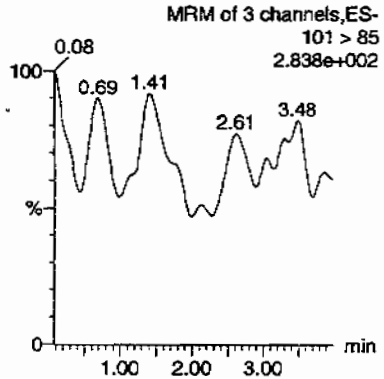

Perchlorate-O(18)

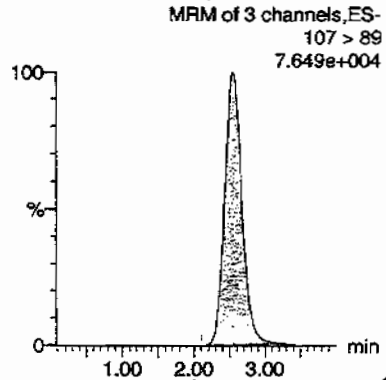

07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83											0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	2.54	21404.643	21404.643	bb			0.4890	97.80	-2.20	2876.2...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708066a
Date: 08-Jul-2009
Time: 21:00:22
ID: IPB008
Vial: 1:1,A

07-09-09

Perchlorate

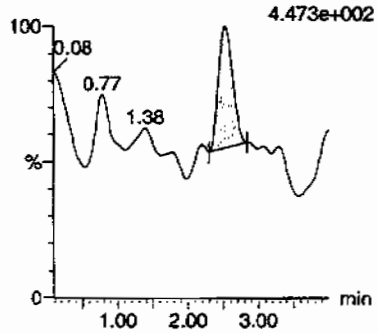

Perchlorate

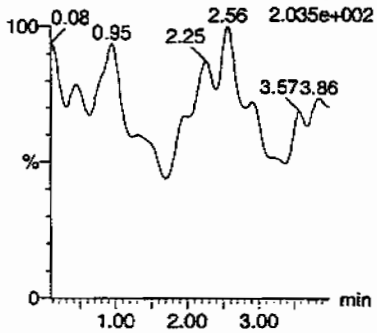

Perchlorate-101

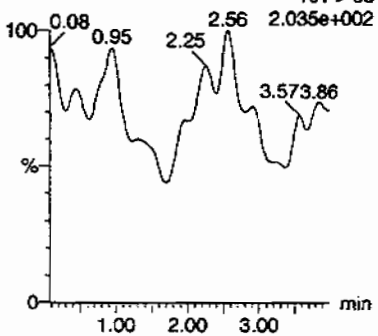

Perchlorate-O(18)

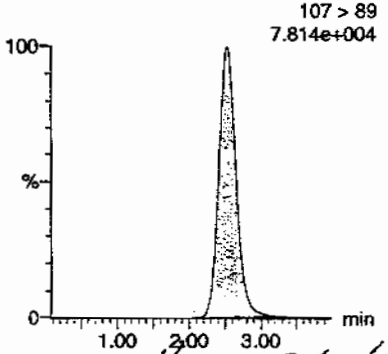

Hnm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83	2.53	48.016	48.016	bb			0.0010			5.114	0.00
IPB008	Perchlorate-101	101 > 85											
IPB008	Perchlorate-O(18)	107 > 89	2.53	21856.988	21856.988	bb			0.4993	99.87	-0.13	4600.7...	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWW 01-09-08

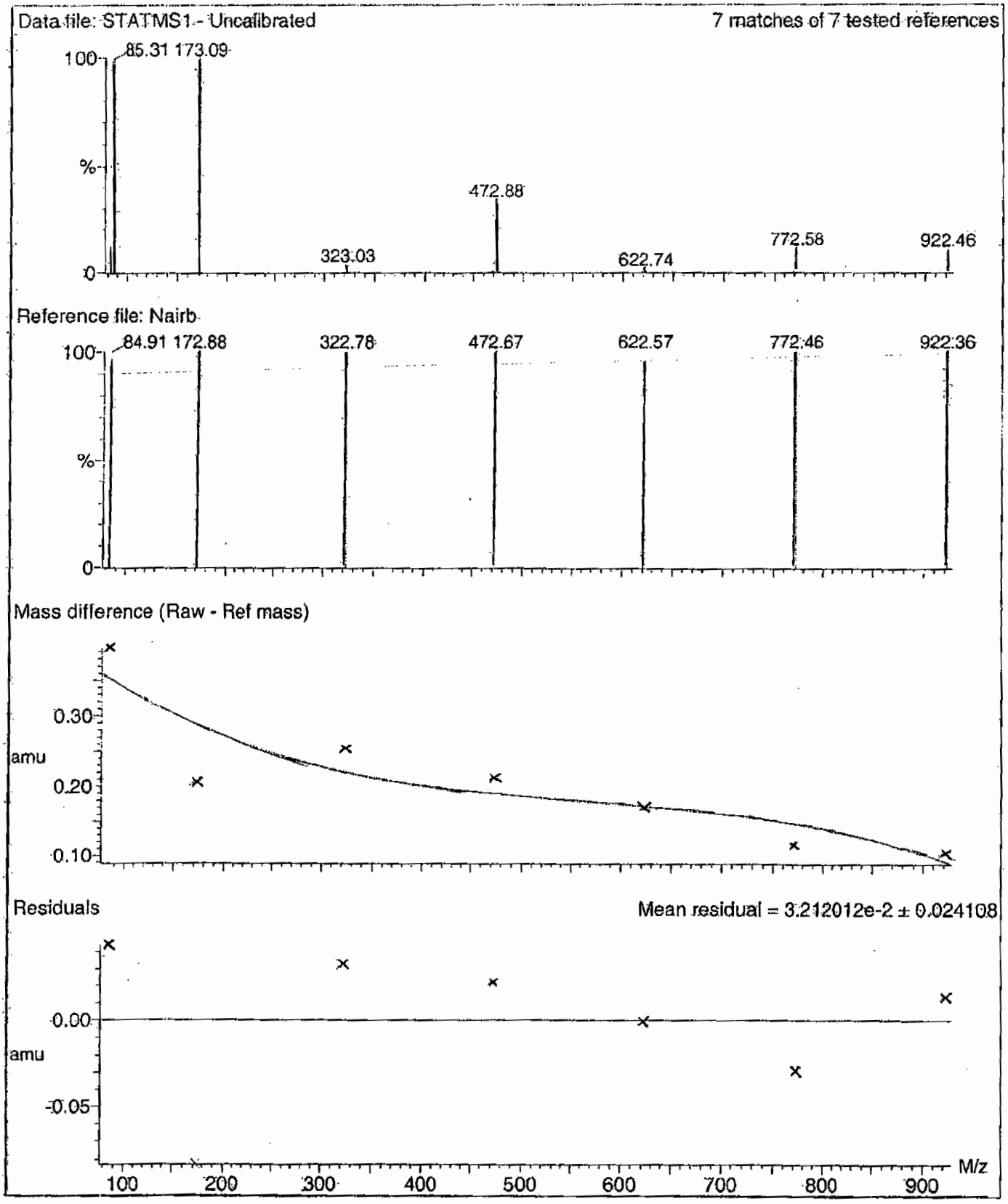

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

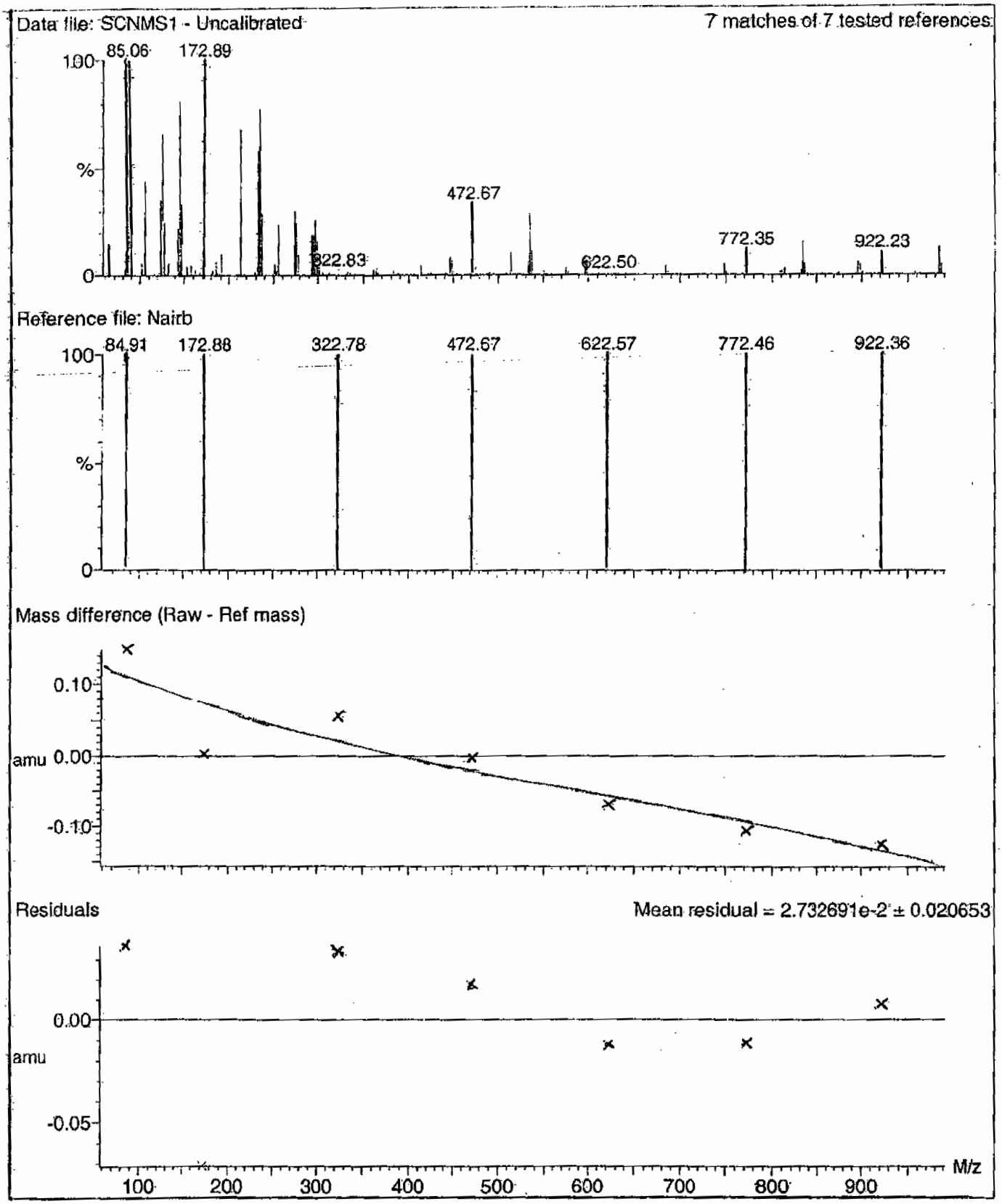

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Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

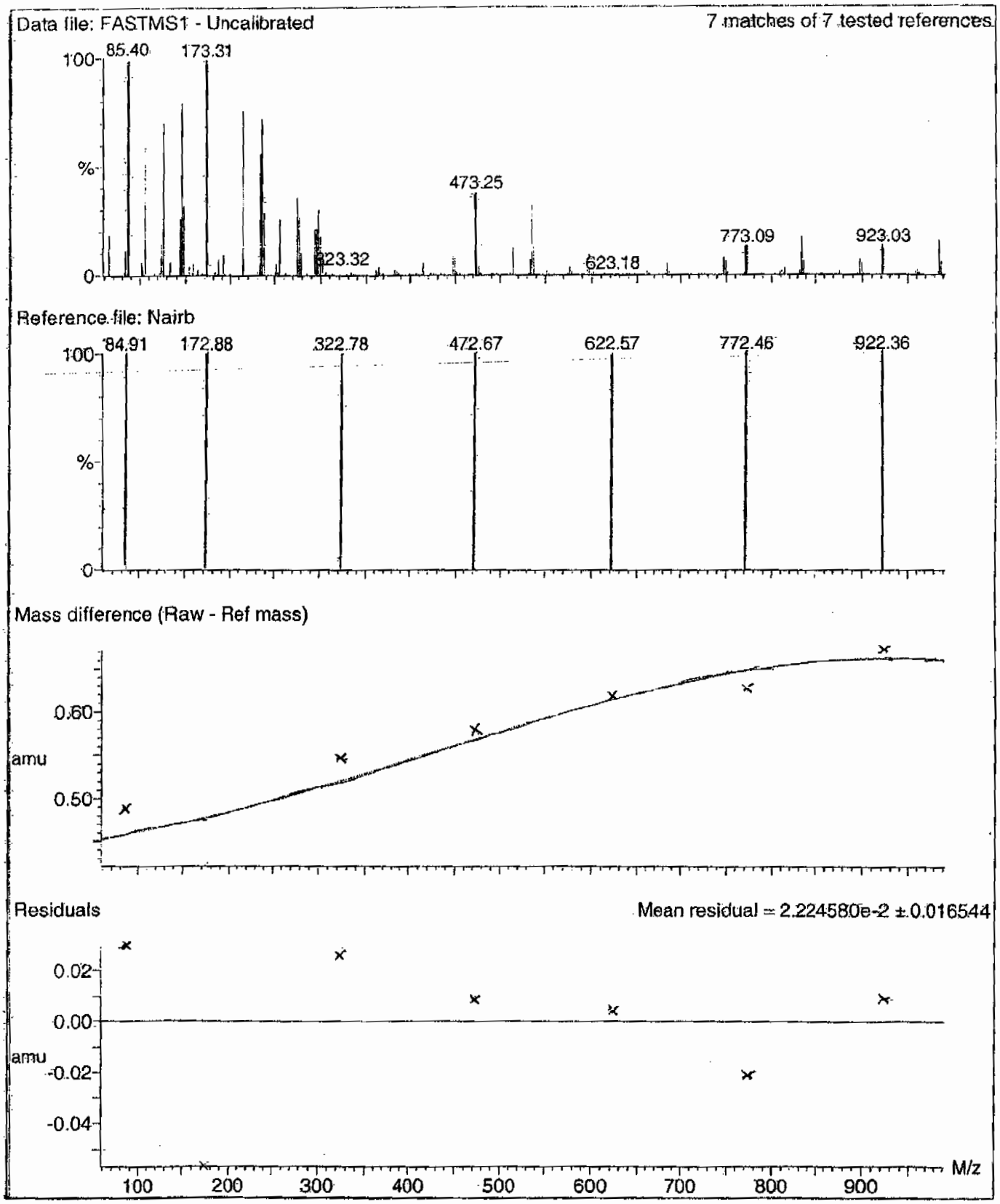

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

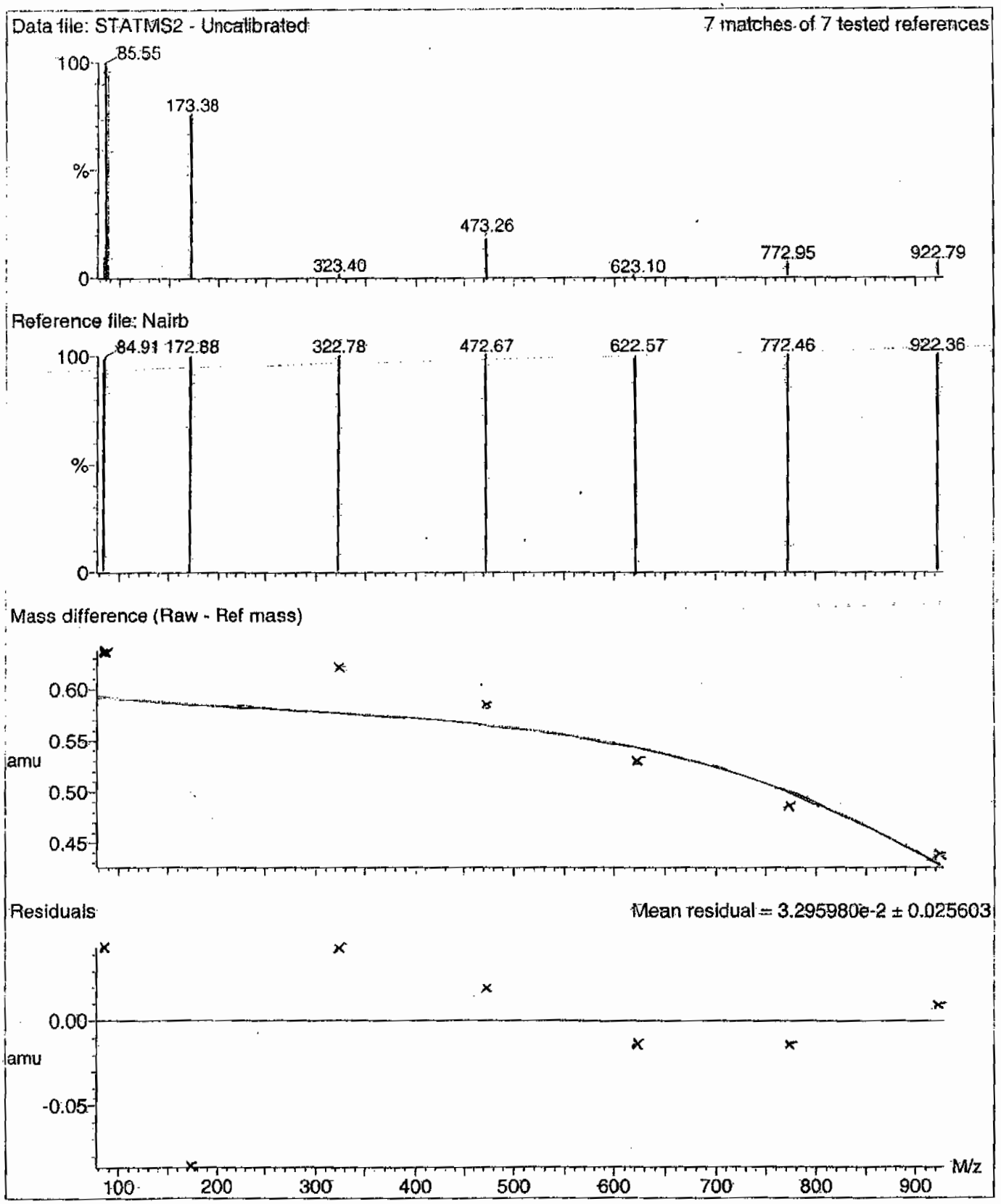

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Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

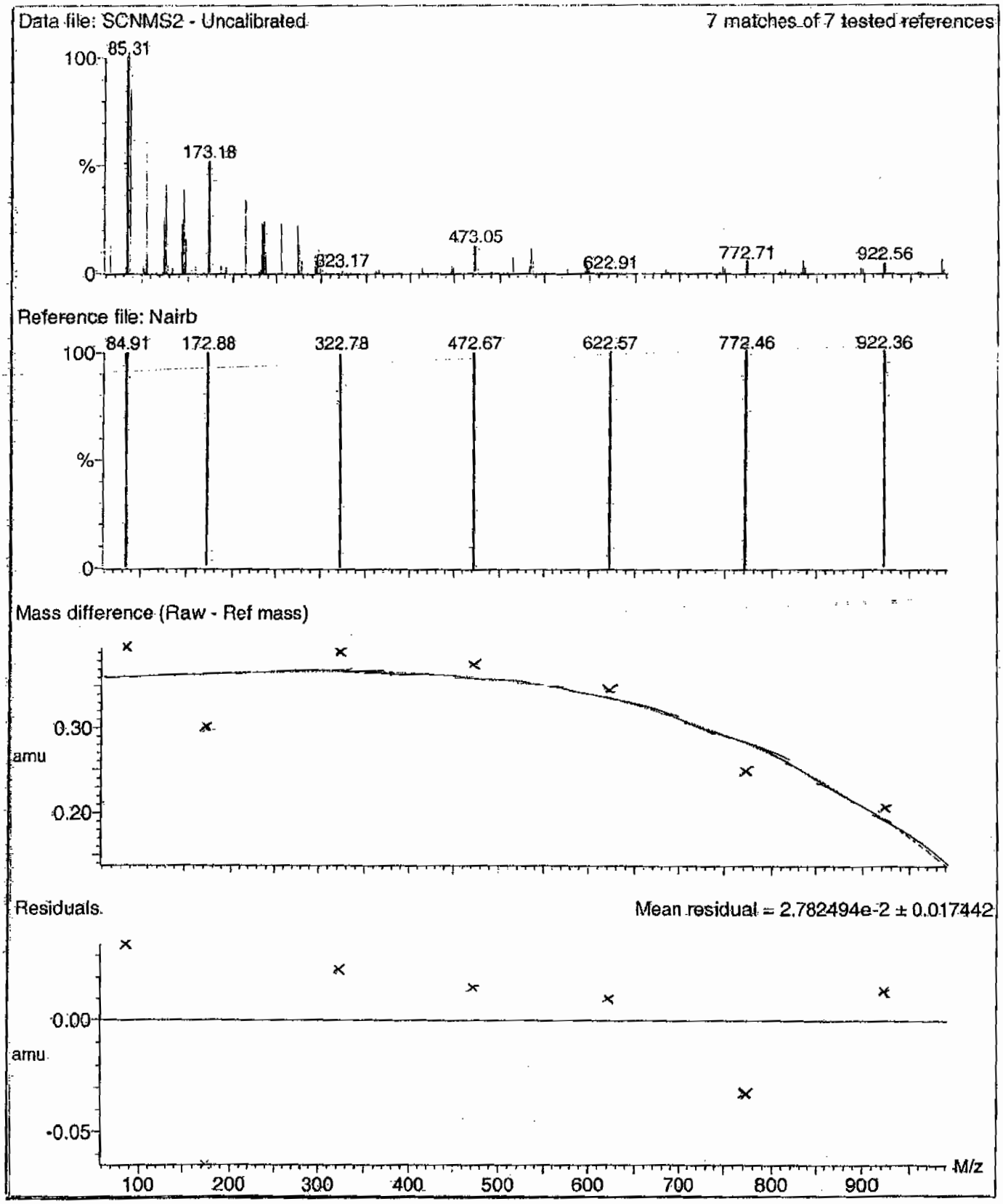

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

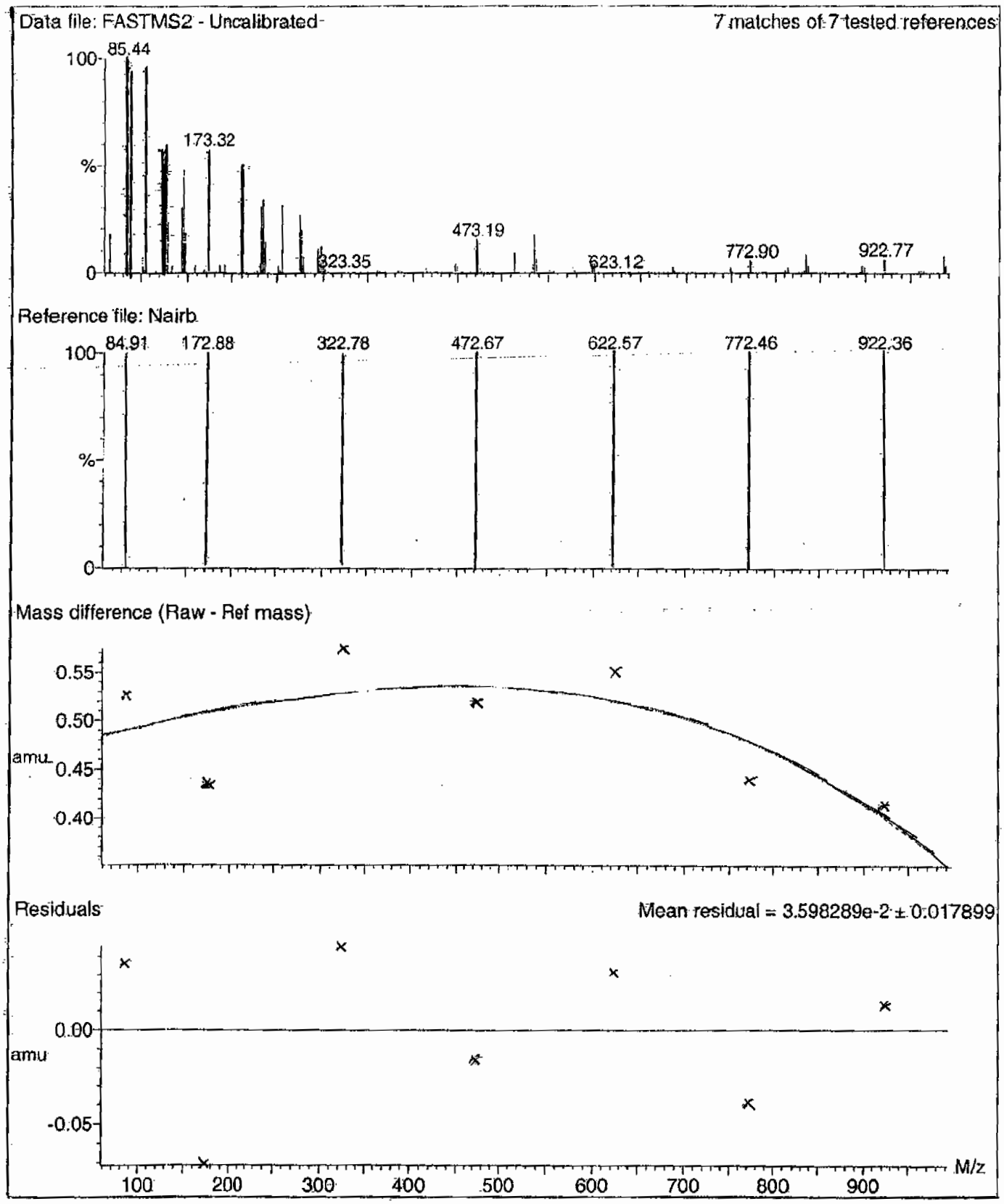

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File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Wednesday, July 08, 2009 11:04:53 Eastern Daylight Time

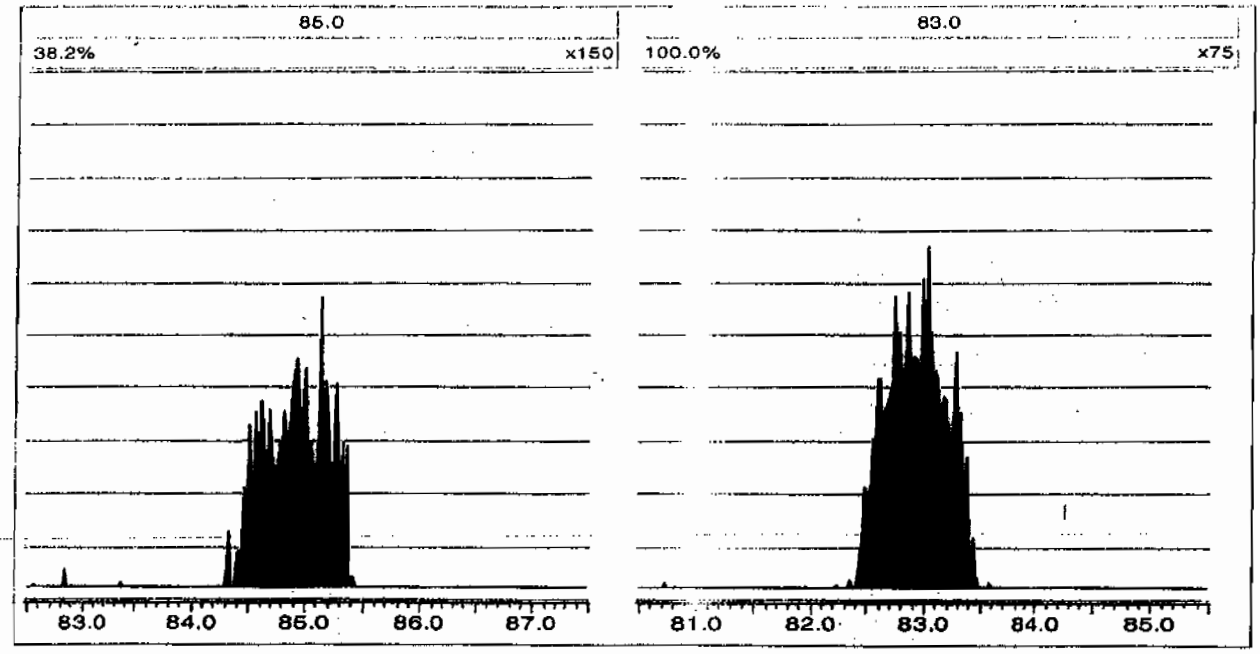

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2510

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0708006a**	**08–JUL–09**	**20767.2**				
Lower Area Limit			**10383.6**				
Upper Area Limit			**41534.4**				
1201872342	per0708045a	08–JUL–09 18:17	20710.1	2.56	2.5884	1.011	
1201872343	per0708046a	08–JUL–09 18:25	20944.1	2.58	2.5884	1.003	
1201872346	per0708047a	08–JUL–09 18:32	22262.8	2.6	2.6134	1.005	
232591001	per0708062a	08–JUL–09 20:29	22706.2	2.53	2.55118	1.008	
1201872344	per0708063a	08–JUL–09 20:36	22184.4	2.53	2.55115	1.008	
1201872345	per0708064a	08–JUL–09 20:44	22121.8	2.53	2.5389	1.004	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9946

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2510

GEL Sample ID: 232591001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 81

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.615	2.46	0.615	ug/kg	U	1	08-JUL-09 20:29	per0708062a
	Perchlorate-O(18)			6.38	ug/kg		1	08-JUL-09 20:29	per0708062a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708062a
Date: 08-Jul-2009
Time: 20:29:10
ID: 232591001
Vial: 2:3,C

|LANL|881646|50020|1|

07-09-09

Perchlorate

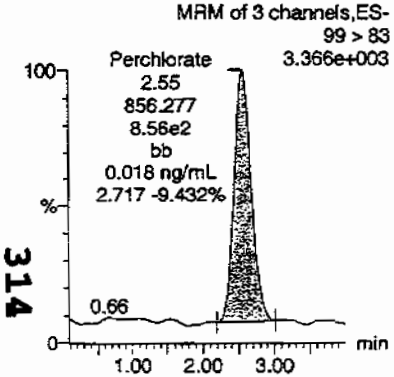

Perchlorate

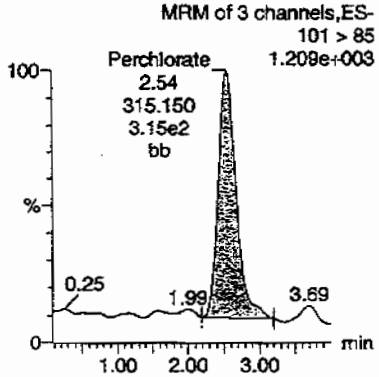

Perchlorate-101

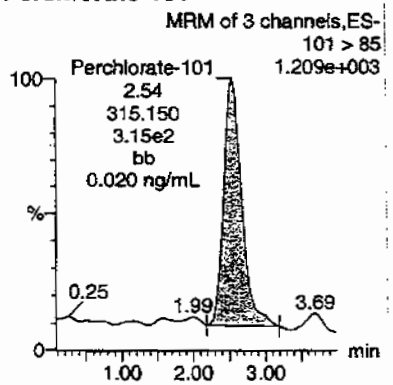

Perchlorate-O(18)

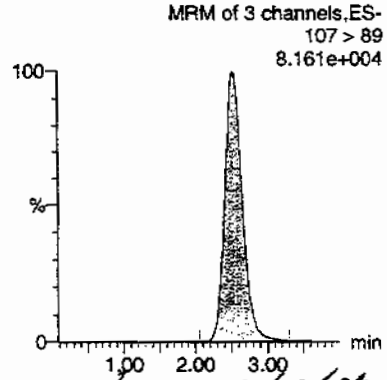

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232591001	Perchlorate	99 > 83	2.55	856.277	856.277	bb			0.0177			150.183	2.72
232591001	Perchlorate-101	101 > 85	2.54	315.150	315.150	bb			0.0202			57.536	
232591001	Perchlorate-O(18)	107 > 89	2.53	22706.225	22706.225	bb			0.5187	103.75	3.75	2683.9...	

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2510

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08-JUL-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 48333.4

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2510

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 15570.4

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Compound name: Perchlorate
Response Factor: 48333.4
RRF SD: 3128.21, % Relative SD: 6.47216
Response type: External Std, Area
Curve type: RF

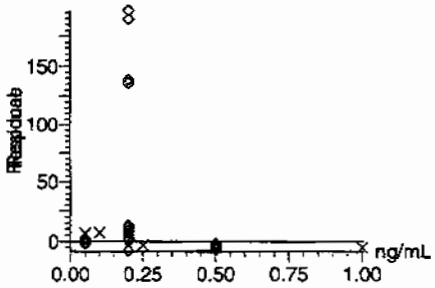

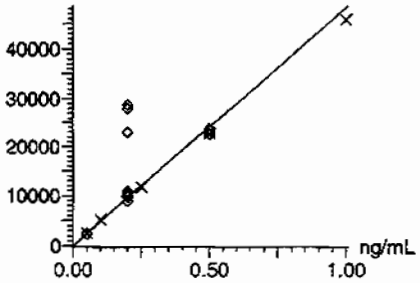

07-09-09

Compound name: Perchlorate-101
Response Factor: 15570.4
RRF SD: 1259.19, % Relative SD: 8.08705
Response type: External Std, Area
Curve type: RF

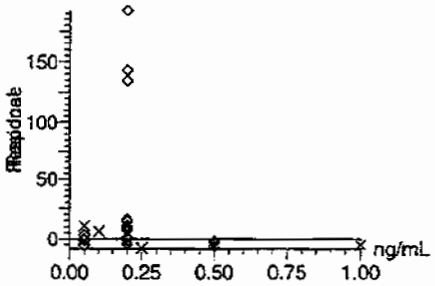

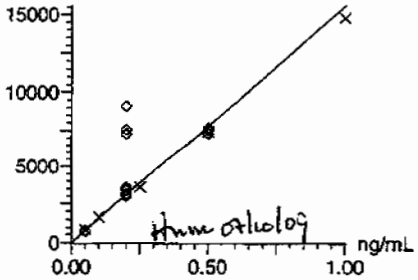

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 43772.6
RRF SD: 1463.7, % Relative SD: 3.34387
Response type: External Std, Area
Curve type: RF

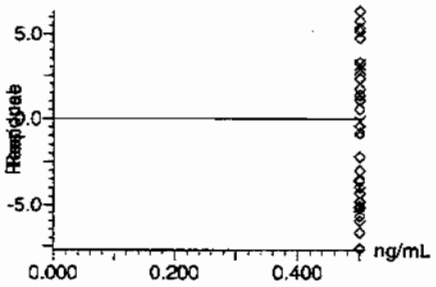

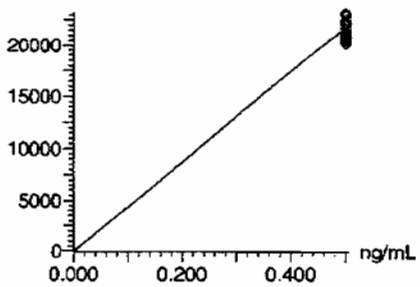

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2510

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	93.91	08–JUL–09 13:37	per0708009a
Perchlorate Isotope Ratio		2.99		08–JUL–09 13:37	per0708009a
Perchlorate–101	.5	.49	97.64	08–JUL–09 13:37	per0708009a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708009a
Date: 08-Jul-2009
Time: 13:37:46
ID: WCL090706-06ICV
Vial: 1:2,A

Pass
CWW
07-09-09

Perchlorate

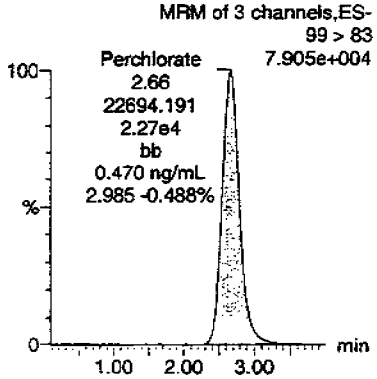

Perchlorate

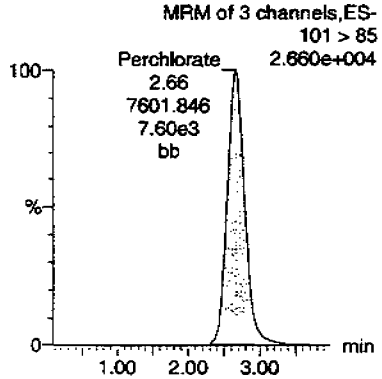

Perchlorate-101

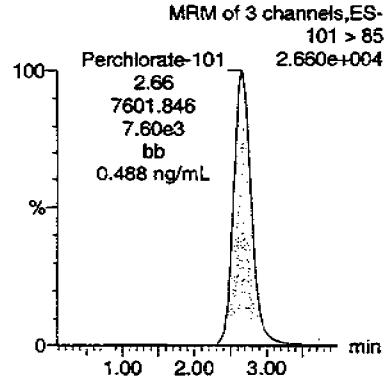

Perchlorate-O(18)

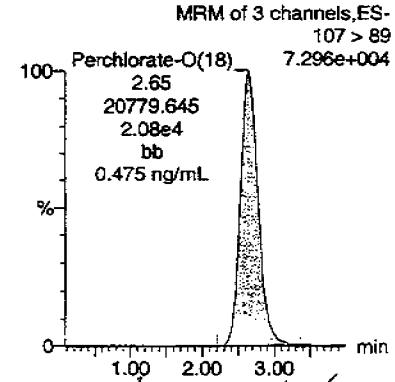

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06ICV	Perchlorate	99 > 83	2.66	22694.191	22694.191	bb			0.4695	93.91	-6.09	2453.8...	2.99
WCL090706-06ICV	Perchlorate-101	101 > 85	2.66	7601.846	7601.846	bb			0.4882	97.64	-2.36	2701.9...	
WCL090706-06ICV	Perchlorate-O(18)	107 > 89	2.65	20779.645	20779.645	bb			0.4747	94.94	-5.06	3233.6...	

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2510

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.46	92.96	08-JUL-09 15:18	per0708022a
Perchlorate Isotope Ratio		3.07		08-JUL-09 15:18	per0708022a
Perchlorate-101	.5	.47	94.1	08-JUL-09 15:18	per0708022a
Perchlorate	.5	.49	97.48	08-JUL-09 16:44	per0708033a
Perchlorate Isotope Ratio		3.09		08-JUL-09 16:44	per0708033a
Perchlorate-101	.5	.49	97.78	08-JUL-09 16:44	per0708033a
Perchlorate	.5	.49	97.63	08-JUL-09 17:53	per0708042a
Perchlorate Isotope Ratio		3.08		08-JUL-09 17:53	per0708042a
Perchlorate-101	.5	.49	98.44	08-JUL-09 17:53	per0708042a
Perchlorate	.5	.49	98.38	08-JUL-09 19:26	per0708054a
Perchlorate Isotope Ratio		3.1		08-JUL-09 19:26	per0708054a
Perchlorate-101	.5	.49	98.62	08-JUL-09 19:26	per0708054a
Perchlorate	.5	.48	95.92	08-JUL-09 20:52	per0708065a

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2510

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate Isotope Ratio		3.08		08-JUL-09 20:52	per0708065a
Perchlorate-101	.5	.48	96.73	08-JUL-09 20:52	per0708065a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708022a
Date: 08-Jul-2009
Time: 15:18:39
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
ano
07-09-09

Perchlorate

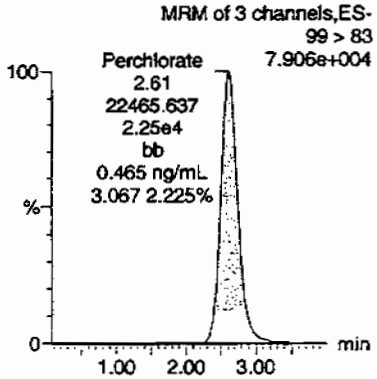

Perchlorate

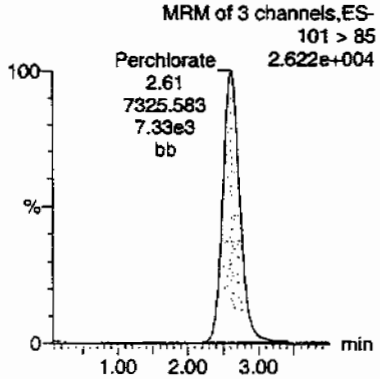

Perchlorate-101

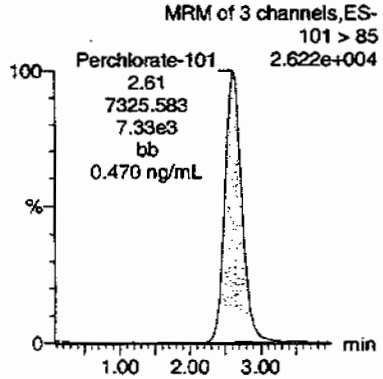

Perchlorate-O(18)

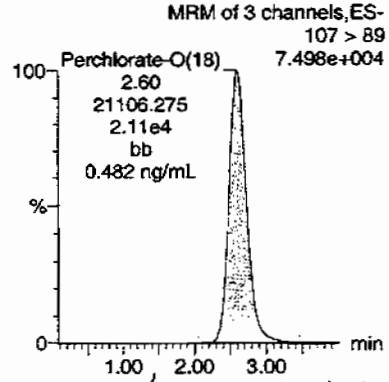

Hmc 09/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.61	22465.637	22465.637	bb			0.4648	92.96	-7.04	5659.4...	3.07
WCL090706-06CCV	Perchlorate-101	101 > 85	2.61	7325.583	7325.583	bb			0.4705	94.10	-5.90	675.146	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.60	21106.275	21106.275	bb			0.4822	96.44	-3.56	2111.2...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708033a
Date: 08-Jul-2009
Time: 16:44:02
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
and
07-09-09

Perchlorate

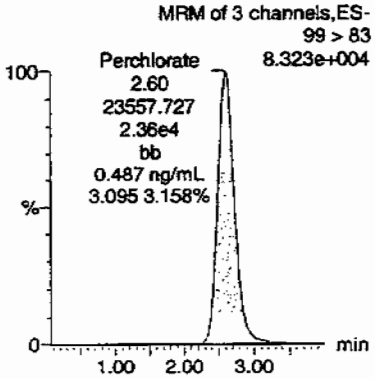

Perchlorate

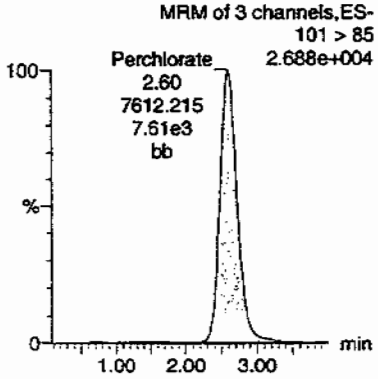

Perchlorate-101

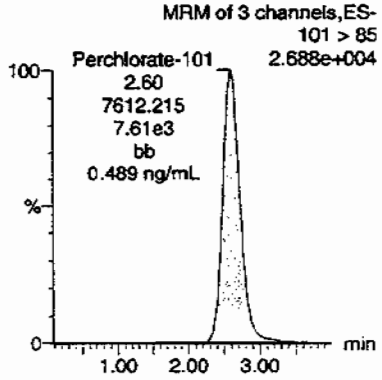

Perchlorate-O(18)

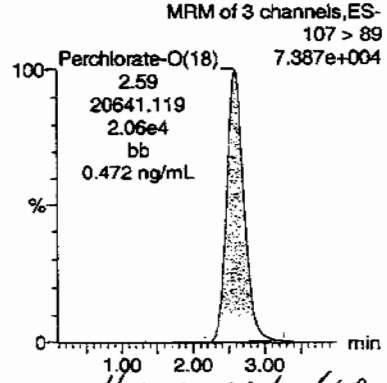

HMK 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.60	23557.727	23557.727	bb		✓	0.4874	97.48	-2.52	5212.1...	3.09
WCL090706-06CCV	Perchlorate-101	101 > 85	2.60	7612.215	7612.215	bb			0.4889	97.78	-2.22	3842.9...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.59	20641.119	20641.119	bb			0.4716	94.31	-5.69	4254.1...	

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Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708042a
Date: 08-Jul-2009
Time: 17:53:47
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
aus
07-09-09

Perchlorate

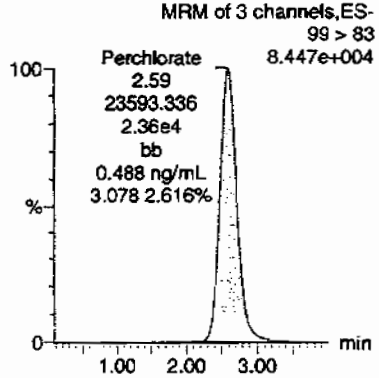

Perchlorate

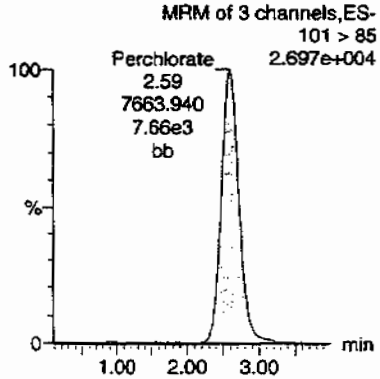

Perchlorate-101

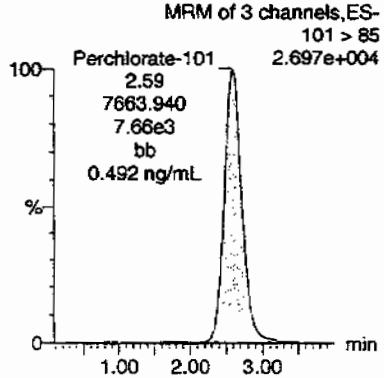

Perchlorate-O(18)

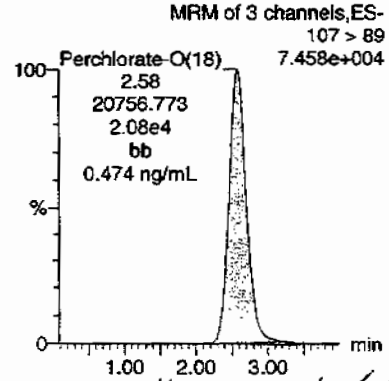

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.59	23593.336	23593.336	bb			0.4881	97.63	-2.37	5344.7...	3.08
WCL090706-06CCV	Perchlorate-101	101 > 85	2.59	7663.940	7663.940	bb			0.4922	98.44	-1.56	1302.8...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.58	20756.773	20756.773	bb			0.4742	94.84	-5.16	6634.2...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qid

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708054a
Date: 08-Jul-2009
Time: 19:26:49
ID: WCL090706-06CCV
Vial: 1:2,A

Pres
GWW
07-09-09

Perchlorate

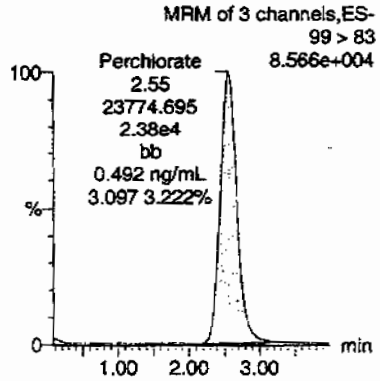

Perchlorate

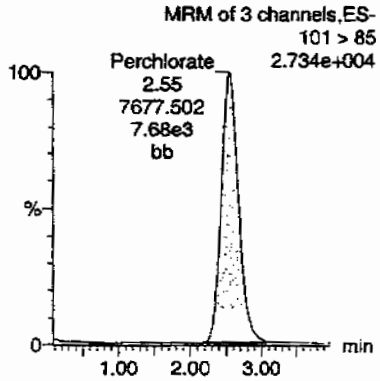

Perchlorate-101

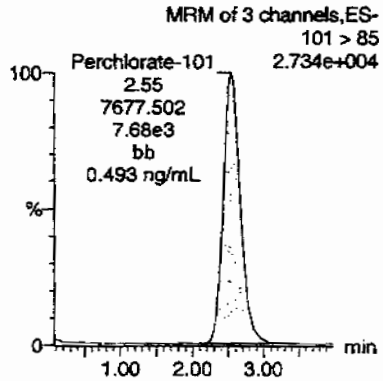

Perchlorate-O(18)

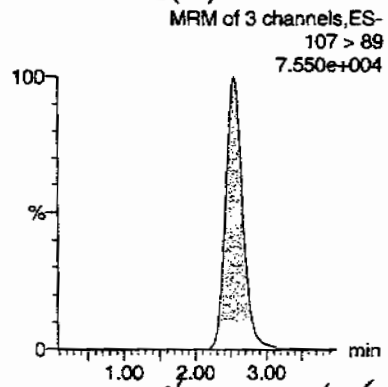

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.55	23774.695	23774.695	bb			0.4919	98.38	-1.62	3999.8...	3.10
WCL090706-06CCV	Perchlorate-101	101 > 85	2.55	7677.502	7677.502	bb			0.4931	98.62	-1.38	1650.2...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.54	21119.523	21119.523	bb			0.4825	96.50	-3.50	4934.7...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708065a
Date: 08-Jul-2009
Time: 20:52:23
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
07-31-09

Perchlorate

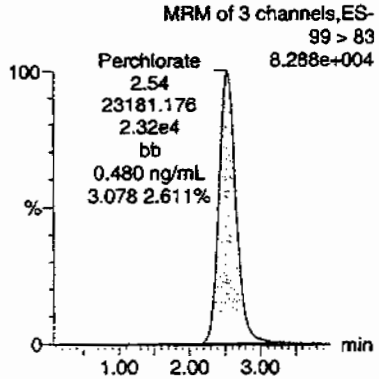

Perchlorate

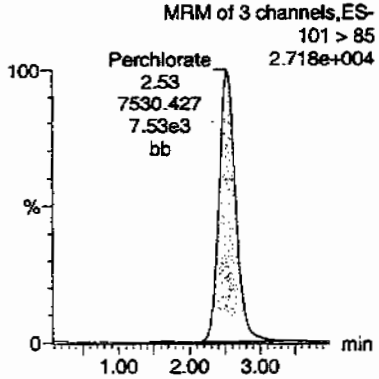

Perchlorate-101

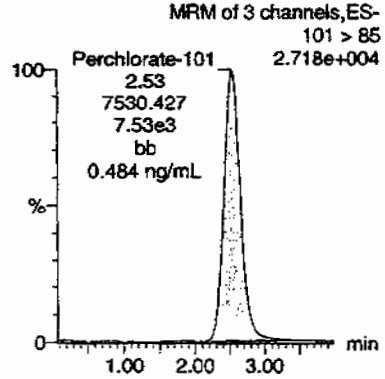

Perchlorate-O(18)

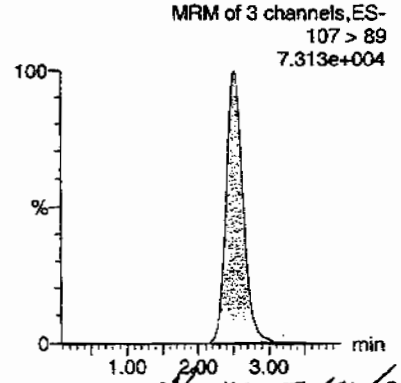

AMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.54	23181.176	23181.176	bb			0.4796	95.92	-4.08	358.773	3.08
WCL090706-06CCV	Perchlorate-101	101 > 85	2.53	7530.427	7530.427	bb			0.4836	96.73	-3.27	1346.6...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.51	20197.914	20197.914	bb			0.4614	92.29	-7.71	7608.4...	

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2510

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	102.31	08–JUL–09 13:53	per0708011a
Perchlorate Isotope Ratio		3.35		08–JUL–09 13:53	per0708011a
Perchlorate–101	.05	.05	94.69	08–JUL–09 13:53	per0708011a
Perchlorate	.05	.05	97.69	08–JUL–09 15:34	per0708024a
Perchlorate Isotope Ratio		3.08		08–JUL–09 15:34	per0708024a
Perchlorate–101	.05	.05	98.51	08–JUL–09 15:34	per0708024a
Perchlorate	.05	.05	99.89	08–JUL–09 16:59	per0708035a
Perchlorate Isotope Ratio		3.25		08–JUL–09 16:59	per0708035a
Perchlorate–101	.05	.05	95.4	08–JUL–09 16:59	per0708035a
Perchlorate	.05	.05	101.76	08–JUL–09 18:09	per0708044a
Perchlorate Isotope Ratio		3.06		08–JUL–09 18:09	per0708044a

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2510

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate-101	.05	.05	103.31	08-JUL-09 18:09	per0708044a
Perchlorate	.05	.05	99.09	08-JUL-09 19:42	per0708056a
Perchlorate Isotope Ratio		3.09		08-JUL-09 19:42	per0708056a
Perchlorate-101	.05	.05	99.47	08-JUL-09 19:42	per0708056a
Perchlorate	.05	.05	99.3	08-JUL-09 21:08	per0708067a
Perchlorate Isotope Ratio		3.07		08-JUL-09 21:08	per0708067a
Perchlorate-101	.05	.05	100.33	08-JUL-09 21:08	per0708067a

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708011a
Date: 08-Jul-2009
Time: 13:53:16
ID: WCL090706-07CRI
Vial: 1:2,B

CWW 07-09-09

Perchlorate

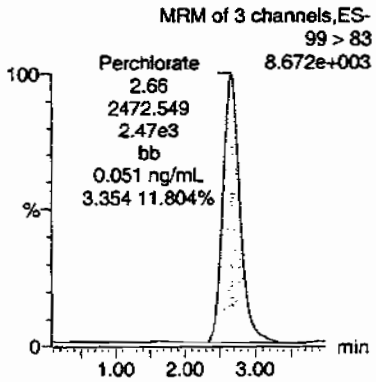

Perchlorate

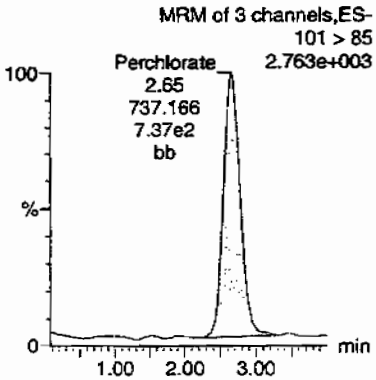

Perchlorate-101

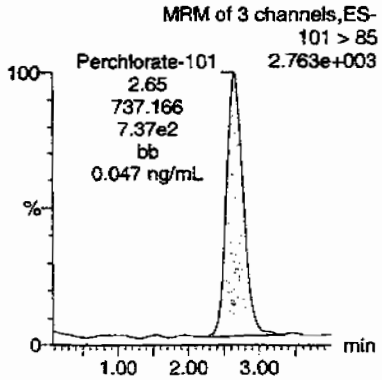

Perchlorate-O(18)

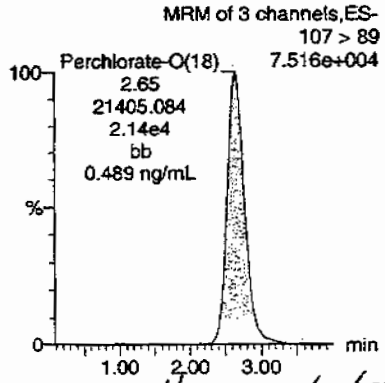

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.66	2472.549	2472.549	bb			0.0512	102.31	2.31	911.588	3.35
WCL090706-07CRI	Perchlorate-101	101 > 85	2.65	737.166	737.166	bb			0.0473	94.69	-5.31	141.523	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.65	21405.084	21405.084	bb			0.4890	97.80	-2.20	1236.3...	

331

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708024a
Date: 08-Jul-2009
Time: 15:34:09
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
AWW
07-09-09

Perchlorate

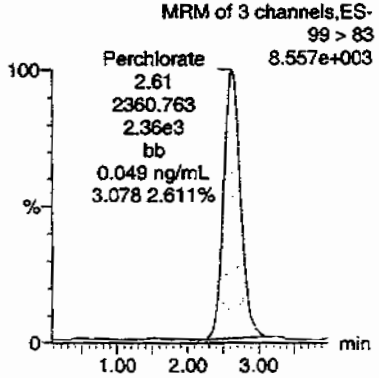

Perchlorate

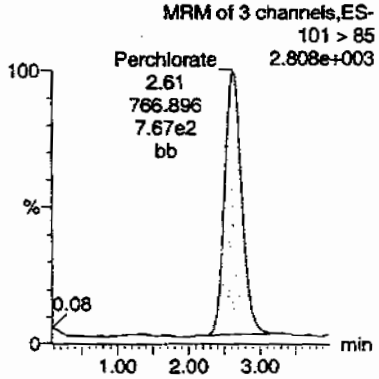

Perchlorate-101

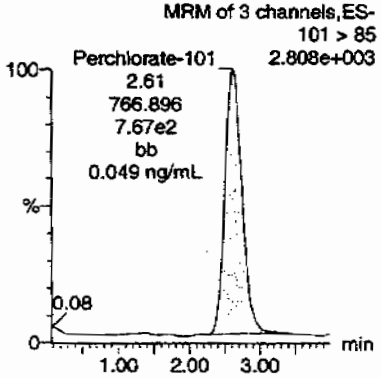

Perchlorate-O(18)

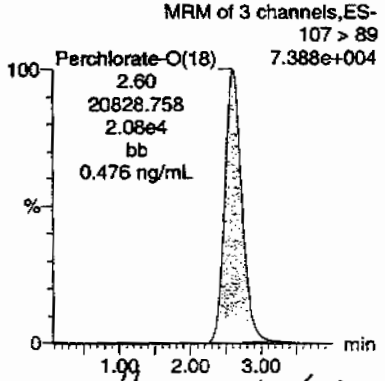

AWW 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.61	2360.763	2360.763	bb			0.0488	97.69	-2.31	448.651	3.08
WCL090706-07CRI	Perchlorate-101	101 > 85	2.61	766.896	766.896	bb			0.0493	98.51	-1.49	215.016	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.60	20828.758	20828.758	bb			0.4758	95.17	-4.83	12080....	

332

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708035a
Date: 08-Jul-2009
Time: 16:59:31
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
and
07-09-09

Perchlorate

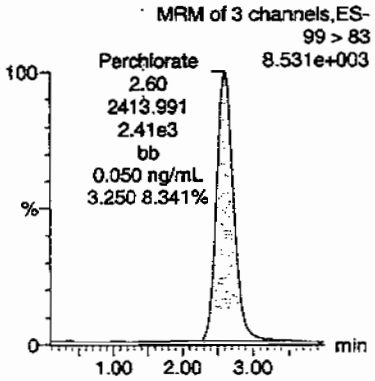

Perchlorate

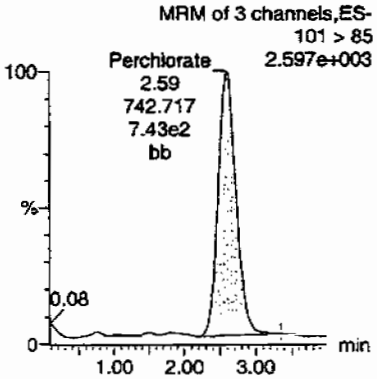

Perchlorate-101

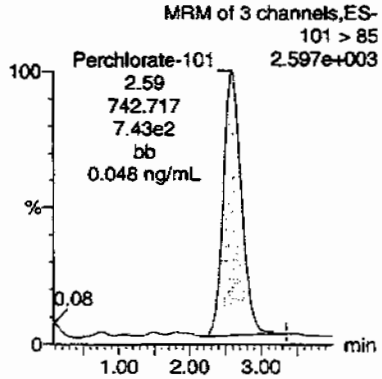

Perchlorate-O(18)

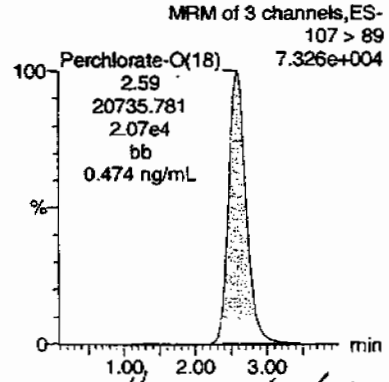

HMM 9/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.60	2413.991	2413.991	bb			0.0499	99.89	-0.11	1123.0...	3.25
WCL090706-07CRI	Perchlorate-101	101 > 85	2.59	742.717	742.717	bb			0.0477	95.40	-4.60	195.036	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.59	20735.781	20735.781	bb			0.4737	94.74	-5.26	10141....	

333

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708044a
Date: 08-Jul-2009
Time: 18:09:17
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
CWW
07-09-09

Perchlorate

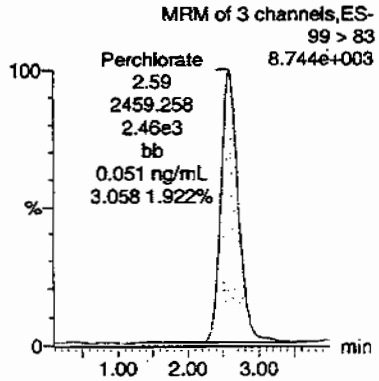

Perchlorate

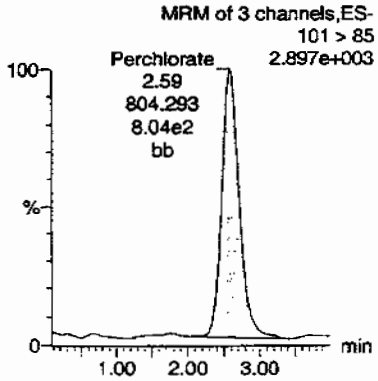

Perchlorate-101

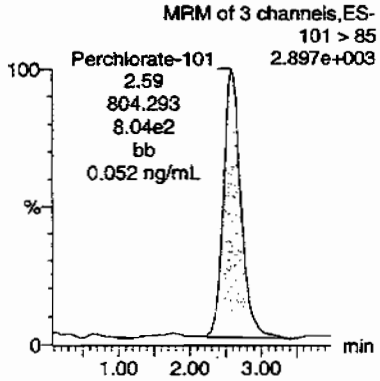

Perchlorate-O(18)

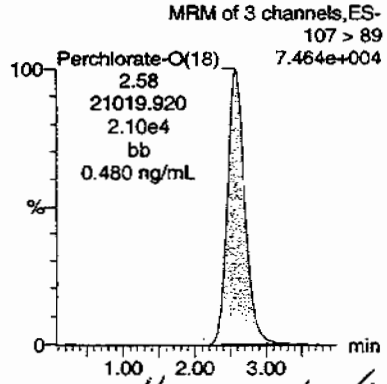

HWW 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.59	2459.258	2459.258	bb			0.0509	101.76	1.76	195.218	3.06
WCL090706-07CRI	Perchlorate-101	101 > 85	2.59	804.293	804.293	bb			0.0517	103.31	3.31	216.046	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.58	21019.920	21019.920	bb			0.4802	96.04	-3.96	3753.1...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708056a
Date: 08-Jul-2009
Time: 19:42:33
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
CWW
07-09

Perchlorate

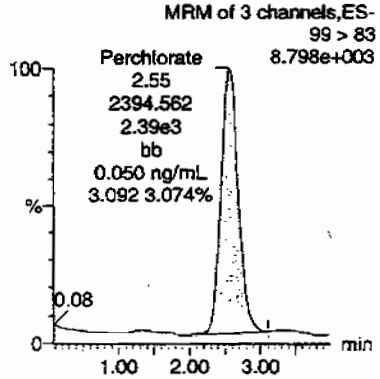

Perchlorate

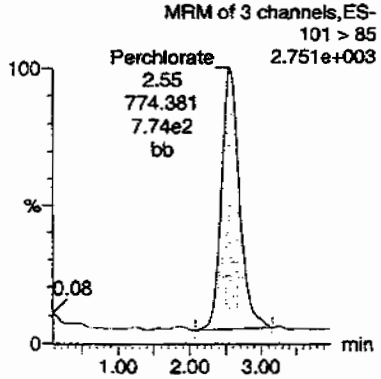

Perchlorate-101

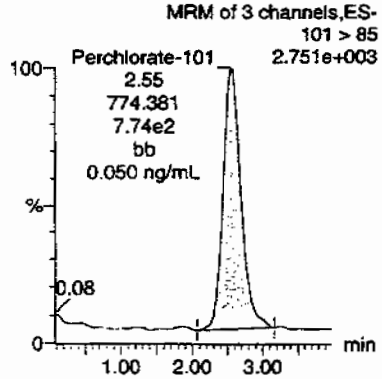

Perchlorate-O(18)

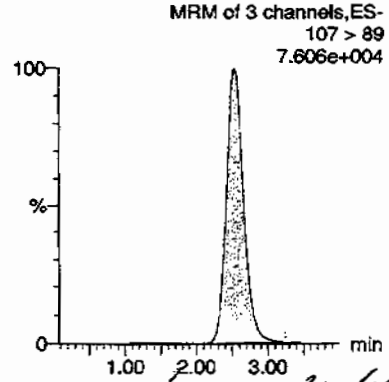

dmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.55	2394.562	2394.562	bb			0.0495	99.09	-0.91	283.551	3.09
WCL090706-07CRI	Perchlorate-101	101 > 85	2.55	774.381	774.381	bb			0.0497	99.47	-0.53	232.638	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.54	21226.893	21226.893	bb			0.4849	96.99	-3.01	4679.5...	

335

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708067a
Date: 08-Jul-2009
Time: 21:08:07
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
CWW
07-31-09

Perchlorate

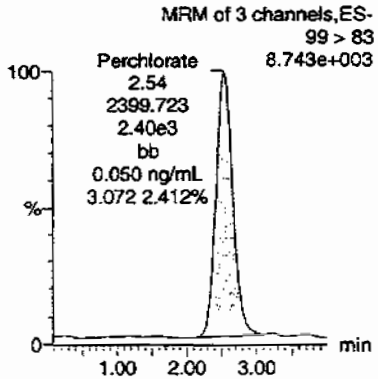

Perchlorate

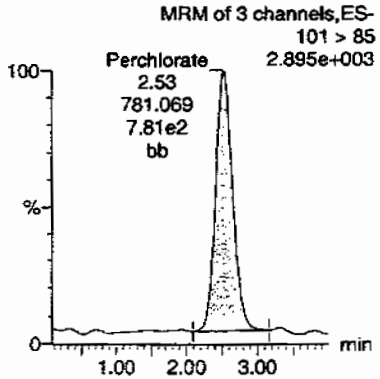

Perchlorate-101

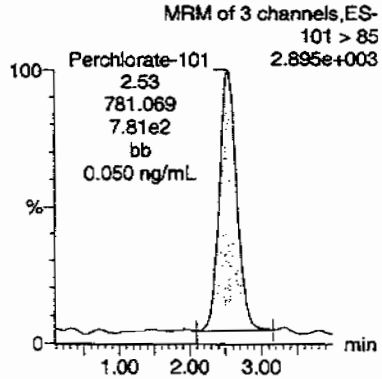

Perchlorate-O(18)

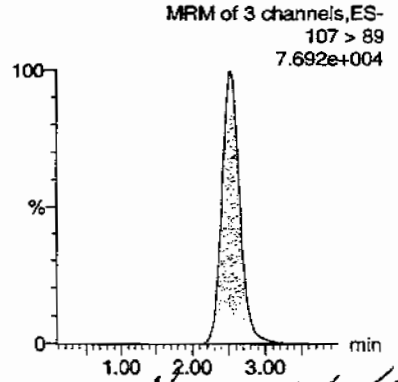

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.54	2399.723	2399.723	bb			0.0496	99.30	-0.70	206.912	3.07
WCL090706-07CRI	Perchlorate-101	101 > 85	2.53	781.069	781.069	bb			0.0502	100.33	0.33	112.139	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.51	21702.402	21702.402	bb			0.4958	99.16	-0.84	1034.6...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2510

GEL Sample ID: 1201872342

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	08-JUL-09 18:17	per0708045a
	Perchlorate-O(18)			4.73	ug/kg		1	08-JUL-09 18:17	per0708045a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708045a
Date: 08-Jul-2009
Time: 18:17:05
ID: 1201872342
Vial: 2:1,A

|LANL|881646|SDWD|MB|1|

CWW 07-31-09

Perchlorate

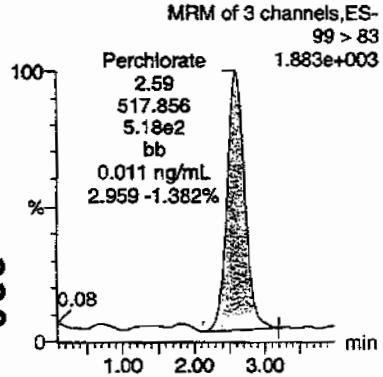

Perchlorate

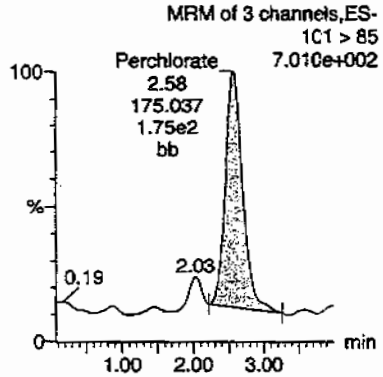

Perchlorate-101

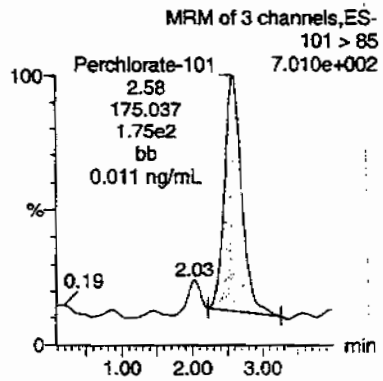

Perchlorate-O(18)

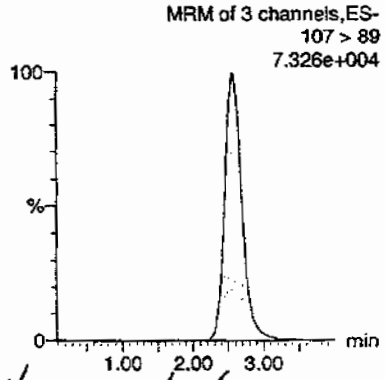

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872342	Perchlorate	99 > 83	2.59	517.856	517.856	bb			0.0107			140.764	2.96
1201872342	Perchlorate-101	101 > 85	2.58	175.037	175.037	bb			0.0112			80.373	
1201872342	Perchlorate-O(18)	107 > 89	2.56	20710.131	20710.131	bb			0.4731	94.63	-5.37	413.279	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2510

GEL Sample ID: 1201872343

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.04	ug/kg		1	08-JUL-09 18:25	per0708046a
	Perchlorate-O(18)			4.78	ug/kg		1	08-JUL-09 18:25	per0708046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708046a
Date: 08-Jul-2009
Time: 18:25:00
ID: 1201872343
Vial: 2:1,B

|LANL| 881646 |50620|LCS|1|

LMD 07/09/09

Perchlorate

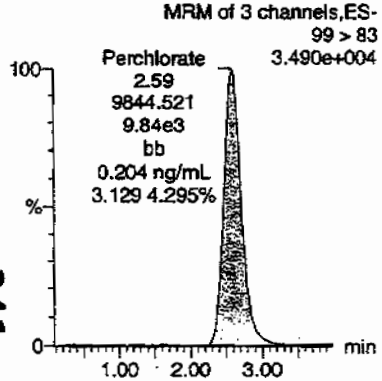

Perchlorate

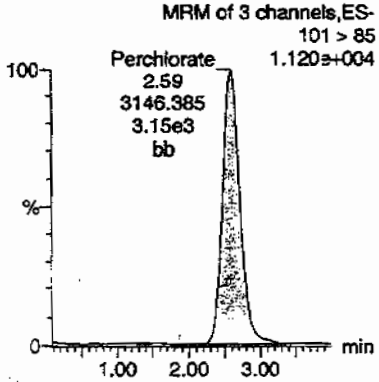

Perchlorate-101

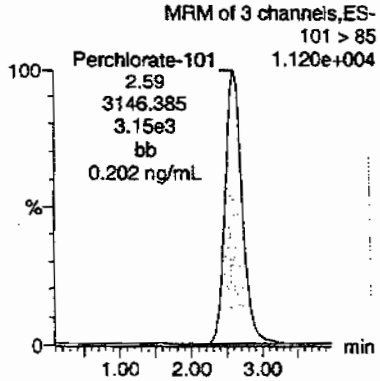

Perchlorate-O(18)

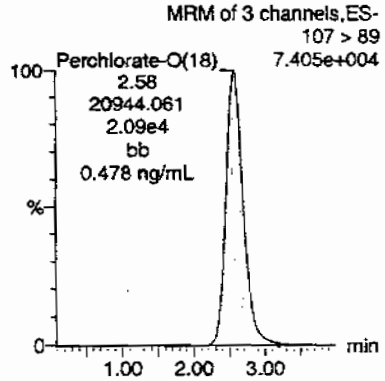

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872343	Perchlorate	99 > 83	2.59	9844.521	9844.521	bb			0.2037	101.84	1.84	733.467	3.13
1201872343	Perchlorate-101	101 > 85	2.59	3146.385	3146.385	bb			0.2021	101.04	1.04	1504.8...	
1201872343	Perchlorate-O(18)	107 > 89	2.58	20944.061	20944.061	bb			0.4785	95.69	-4.31	2058.2...	

$$\frac{9844.521}{48333.4} = 0.2037$$

HMM 07/10/09

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9946MS

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2510

GEL Sample ID: 1201872344

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 81

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.615	2.46	2.74	ug/kg		1	08-JUL-09 20:36	per0708063a
	Perchlorate-O(18)			6.24	ug/kg		1	08-JUL-09 20:36	per0708063a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708063a
Date: 08-Jul-2009
Time: 20:36:55
ID: 1201872344
Vial: 2:3,D

|LANL|881646|5020|MS|11|

07-29-09

Perchlorate

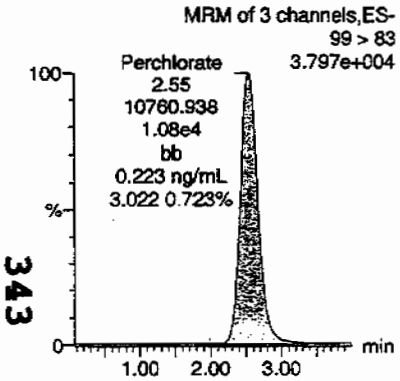

Perchlorate

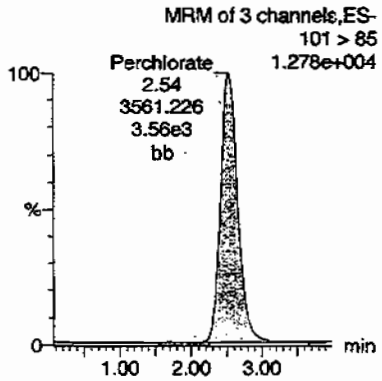

Perchlorate-101

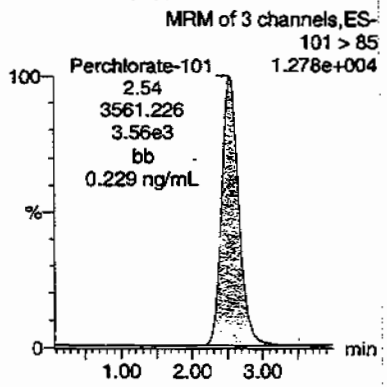

Perchlorate-O(18)

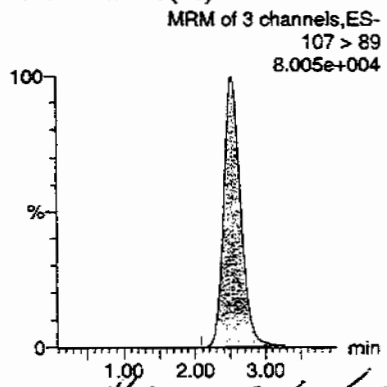

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872344	Perchlorate	99 > 83	2.55	10760.938	10760.938	bb			0.2226	111.32	11.32	1778.7...	3.02
1201872344	Perchlorate-101	101 > 85	2.54	3561.226	3561.226	bb			0.2287	114.36	14.36	409.957	
1201872344	Perchlorate-O(18)	107 > 89	2.53	22184.420	22184.420	bb			0.5068	101.36	1.36	7341.0...	

343

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9946MSD

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2510

GEL Sample ID: 1201872345

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 81

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.615	2.46	2.79	ug/kg		1	08-JUL-09 20:44	per0708064a
	Perchlorate-O(18)			6.22	ug/kg		1	08-JUL-09 20:44	per0708064a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708064a
Date: 08-Jul-2009
Time: 20:44:39
ID: 1201872345
Vial: 2:3,E

|LANL|881646|5020|MSO|1|

CWW 07 09 09

Perchlorate

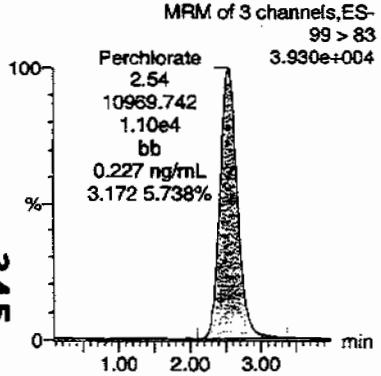

Perchlorate

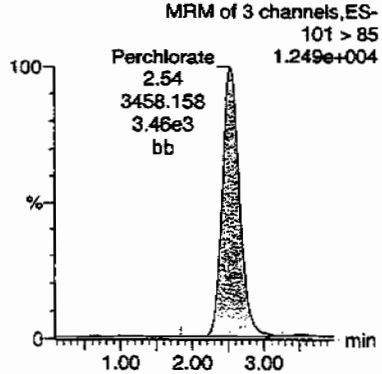

Perchlorate-101

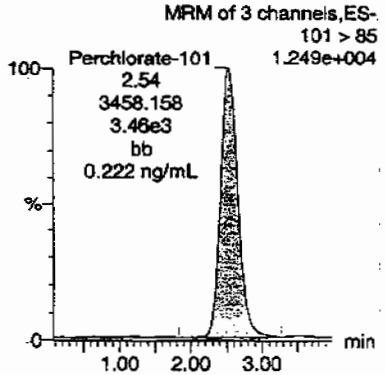

Perchlorate-O(18)

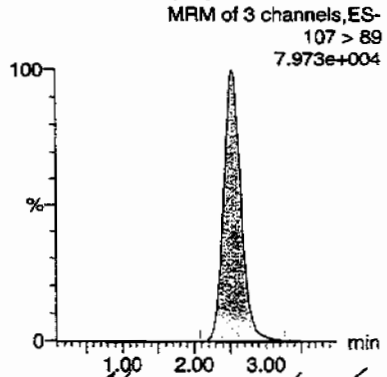

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	mg/mL	%Rec	%Dev	S/N	Ion Ratio
1201872345	Perchlorate	99 > 83	2.54	10969.742	10969.742	bb			0.2270	113.48	13.48	2005.0...	3.17
1201872345	Perchlorate-101	101 > 85	2.54	3458.158	3458.158	bb			0.2221	111.05	11.05	2356.5...	
1201872345	Perchlorate-O(18)	107 > 89	2.53	22121.789	22121.789	bb			0.5054	101.08	1.08	4214.8...	

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 881643 Verified by:
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201872342 MB	01-JUL-2009 13:18:37	2	20	10
1201872343 LCS	01-JUL-2009 13:18:37	2	20	10
232509001	01-JUL-2009 13:18:37	2	20	10
232509002	01-JUL-2009 13:18:37	2	20	10
232509003	01-JUL-2009 13:18:37	2	20	10
232509004	01-JUL-2009 13:18:37	2	20	10
232509005	01-JUL-2009 13:18:37	2	20	10
232509006	01-JUL-2009 13:18:37	2	20	10
232582001	01-JUL-2009 13:18:37	2	20	10
232582002	01-JUL-2009 13:18:37	2	20	10
232585001	01-JUL-2009 13:18:37	2	20	10
232585002	01-JUL-2009 13:18:37	2	20	10
232585003	01-JUL-2009 13:18:37	2	20	10
232591001	01-JUL-2009 13:18:37	2	20	10
1201872344 MS (232591001)	01-JUL-2009 13:18:37	2	20	10
1201872345 MSD (232591001)	01-JUL-2009 13:18:37	2	20	10
1201872346 ICS	01-JUL-2009 13:18:37	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201872346	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
LCS	1201872343	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MS	1201872344	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MSD	1201872345	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL

Comments:

Desalting cartridges used: 090408-1-Ba & 090608-1-H

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 07/08/09
Extr. Injection Volume: 20uL
Sequence Number: per070809a
Initial Calibration Date: 07/08/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: [illegible]
Date: 07/10/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0708001a	IPB001	CWW	7/8/2009 12:35			1		USE	B
per0708002a	IPB001	CWW	7/8/2009 12:43			1		USE	B
per0708003a	WCLICAL-01	CWW	7/8/2009 12:51			1		USE	I
per0708004a	WCLICAL-02	CWW	7/8/2009 12:59			1		USE	I
per0708005a	WCLICAL-03	CWW	7/8/2009 13:06			1		USE	I
per0708006a	WCLICAL-04	CWW	7/8/2009 13:14			1		USE	I
per0708007a	WCLICAL-05	CWW	7/8/2009 13:22			1		USE	I
per0708008a	IPB002	CWW	7/8/2009 13:30			1		USE	B
per0708009a	WCLICV	CWW	7/8/2009 13:37			1		USE	C
per0708010a	IPB003	CWW	7/8/2009 13:45			1		USE	B
per0708011a	WCLCRI	CWW	7/8/2009 13:53			1		USE	C
per0708012a	1201874299	CWW	7/8/2009 14:01	882496	VARIOUS	1	LANL	USE	S
per0708013a	1201874300	CWW	7/8/2009 14:08	882496	VARIOUS	1	LANL	USE	S
per0708014a	1201874307	CWW	7/8/2009 14:16	882496	VARIOUS	1	LANL	USE	S
per0708015a	232662001	CWW	7/8/2009 14:24	882496	09-2516	1	LANL	USE	S
per0708016a	1201874303	CWW	7/8/2009 14:32	882496	09-2516	1	LANL	USE	S
per0708017a	1201874305	CWW	7/8/2009 14:39	882496	09-2516	1	LANL	USE	S
per0708018a	232674001	CWW	7/8/2009 14:47	882496	09-2519	1	LANL	USE	S
per0708019a	232675001	CWW	7/8/2009 14:55	882496	09-2522	1	LANL	USE	S
per0708020a	1201874304	CWW	7/8/2009 15:03	882496	09-2522	1	LANL	USE	S
per0708021a	1201874306	CWW	7/8/2009 15:10	882496	09-2522	1	LANL	USE	S
per0708022a	WCLCCV	CWW	7/8/2009 15:18			1		USE	C
per0708023a	IPB004	CWW	7/8/2009 15:26			1		USE	B
per0708024a	WCLCRI	CWW	7/8/2009 15:34			1		USE	C
per0708025a	232742001	CWW	7/8/2009 15:41	882496	09-2525	1	LANL	USE	S
per0708026a	232750001	CWW	7/8/2009 15:49	882496	09-2528	1	LANL	USE	S
per0708027a	232755001	CWW	7/8/2009 15:57	882496	09-2536-1	1	LANL	USE	S
per0708028a	232757001	CWW	7/8/2009 16:05	882496	09-2539	1	LANL	USE	S
per0708029a	232759001	CWW	7/8/2009 16:13	882496	09-2542	1	LANL	USE	S

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per0708030a	232761001	CWW	7/8/2009 16:20	882496	09-2543	1	LANL	USE	S
per0708031a	1201874301	CWW	7/8/2009 16:28	882496	09-2543	1	LANL	USE	S
per0708032a	1201874302	CWW	7/8/2009 16:36	882496	09-2543	1	LANL	USE	S
per0708033a	WCLCCV	CWW	7/8/2009 16:44			1		USE	C
per0708034a	IPB005	CWW	7/8/2009 16:51			1		USE	B
per0708035a	WCLCRI	CWW	7/8/2009 16:59			1		USE	C
per0708036a	1201876313	CWW	7/8/2009 17:07	883299	09-2549	1	LANL	USE	S
per0708037a	1201876314	CWW	7/8/2009 17:15	883299	09-2549	1	LANL	USE	S
per0708038a	1201876317	CWW	7/8/2009 17:22	883299	09-2549	1	LANL	USE	S
per0708039a	232855001	CWW	7/8/2009 17:30	883299	09-2549	1	LANL	USE	S
per0708040a	1201876315	CWW	7/8/2009 17:38	883299	09-2549	1	LANL	USE	S
per0708041a	1201876316	CWW	7/8/2009 17:46	883299	09-2549	1	LANL	USE	S
per0708042a	WCLCCV	CWW	7/8/2009 17:53			1		USE	C
per0708043a	IPB006	CWW	7/8/2009 18:01			1		USE	B
per0708044a	WCLCRI	CWW	7/8/2009 18:09			1		USE	C
per0708045a	1201872342	CWW	7/8/2009 18:17	881646	VARIOUS	1	LANL	USE	S
per0708046a	1201872343	CWW	7/8/2009 18:25	881646	VARIOUS	1	LANL	USE	S
per0708047a	1201872346	CWW	7/8/2009 18:32	881646	VARIOUS	1	LANL	USE	S
per0708048a	232509001	CWW	7/8/2009 18:40	881646	09-2500	1	LANL	DUSE-DL	S
per0708049a	232509002	CWW	7/8/2009 18:48	881646	09-2500	1	LANL	DUSE-RA	S
per0708050a	232509003	CWW	7/8/2009 18:55	881646	09-2500	1	LANL	USE	S
per0708051a	232509004	CWW	7/8/2009 19:03	881646	09-2500	1	LANL	DUSE-DL	S
per0708052a	232509005	CWW	7/8/2009 19:11	881646	09-2500	1	LANL	DUSE-DL	S
per0708053a	232509006	CWW	7/8/2009 19:19	881646	09-2500	1	LANL	DUSE-RA	S
per0708054a	WCLCCV	CWW	7/8/2009 19:26			1		USE	C
per0708055a	IPB007	CWW	7/8/2009 19:34			1		USE	B
per0708056a	WCLCRI	CWW	7/8/2009 19:42			1		USE	C
per0708057a	232582001	CWW	7/8/2009 19:50	881646	09-2508	1	LANL	USE	S
per0708058a	232582002	CWW	7/8/2009 19:58	881646	09-2508	1	LANL	USE	S
per0708059a	232585001	CWW	7/8/2009 20:05	881646	09-2506	1	LANL	USE	S
per0708060a	232585002	CWW	7/8/2009 20:13	881646	09-2506	1	LANL	USE	S
per0708061a	232585003	CWW	7/8/2009 20:21	881646	09-2506	1	LANL	USE	S
per0708062a	232591001	CWW	7/8/2009 20:29	881646	09-2510	1	LANL	USE	S
per0708063a	1201872344	CWW	7/8/2009 20:36	881646	09-2510	1	LANL	USE	S
per0708064a	1201872345	CWW	7/8/2009 20:44	881646	09-2510	1	LANL	USE	S
per0708065a	WCLCCV	CWW	7/8/2009 20:52			1		USE	C
per0708066a	IPB008	CWW	7/8/2009 21:00			1		USE	B

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per0708067a	WCLCRI	CWW	7/8/2009 21:08	1	USE	C

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2510

Sample Analysis

Sample ID	Client ID
232591001	CAMO-09-9946
1201872897	Method Blank (MB) **ICP**
1201872898	Laboratory Control Sample (LCS)
1201872901	232591001(CAMO-09-9946L) Serial Dilution (SD)
1201872899	232591001(CAMO-09-9946D) Sample Duplicate (DUP)
1201872900	232591001(CAMO-09-9946S) Matrix Spike (MS)
1201872902	232591001(CAMO-09-9946SD) Matrix Spike Duplicate (MSD)
1201872852	Method Blank (MB) **ICP-MS**
1201872853	Laboratory Control Sample (LCS)
1201872856	232591001(CAMO-09-9946L) Serial Dilution (SD)
1201872854	232591001(CAMO-09-9946D) Sample Duplicate (DUP)
1201872855	232591001(CAMO-09-9946S) Matrix Spike (MS)
1201872859	232591001(CAMO-09-9946SD) Matrix Spike Duplicate (MSD)
1201873038	Method Blank (MB) **CVAA**
1201873039	Laboratory Control Sample (LCS)
1201873042	232591001(CAMO-09-9946L) Serial Dilution (SD)
1201873040	232591001(CAMO-09-9946D) Sample Duplicate (DUP)
1201873041	232591001(CAMO-09-9946S) Matrix Spike (MS)
1201873043	232591001(CAMO-09-9946SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	881859, 881838 and 881916
Prep Batch :	881858, 881836 and 881915
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements

All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232591001 (CAMO-09-9946)-ICP, CVAA and ICP-MS.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exceptions of barium, magnesium and potassium, as indicated by the "N" qualifiers.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exceptions of barium and calcium, as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements, with the exceptions of aluminum, barium, calcium, cobalt, iron, magnesium, manganese and potassium, as indicated by the "*" qualifiers.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 710443. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: By Davis **Date:** 7-20-09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2510 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232591001 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-9946 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 81

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4550000	ug/Kg	*	8020	23600	23600	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-36-0	Antimony	1180	ug/Kg	U	389	1180	1180	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-38-2	Arsenic	2020	ug/kg		245	1220	1220	2	MS	RMJ	07/14/09 16:34	090713-2	881838
7440-39-3	Barium	96100	ug/Kg	*N	118	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-41-7	Beryllium	746	ug/kg		24.5	122	122	2	MS	RMJ	07/14/09 16:34	090713-2	881838
7440-43-9	Cadmium	589	ug/Kg	U	118	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-70-2	Calcium	993000	ug/Kg	*N	9430	29500	29500	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-47-3	Chromium	15900	ug/Kg		177	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-48-4	Cobalt	6950	ug/Kg	*	177	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-50-8	Copper	12700	ug/Kg		354	1180	1180	1	P	HSC	07/08/09 15:07	070809A-1	881859
7439-89-6	Iron	16800000	ug/Kg	*	9430	29500	29500	1	P	HSC	07/08/09 15:07	070809A-1	881859
7439-92-1	Lead	8690	ug/Kg		295	1180	1180	1	P	HSC	07/08/09 15:07	070809A-1	881859
7439-95-4	Magnesium	747000	ug/Kg	*N	10000	35400	35400	1	P	HSC	07/08/09 15:07	070809A-1	881859
7439-96-5	Manganese	790000	ug/Kg	*	236	1180	1180	1	P	HSC	07/08/09 15:07	070809A-1	881859
7439-97-6	Mercury	7.77	ug/kg	J	4.56	13.4	13.4	1	AV	JXL1	07/13/09 12:11	071309S2-4	881916
7440-02-0	Nickel	3610	ug/kg		122	489	489	2	MS	RMJ	07/14/09 16:34	090713-2	881838
7440-09-7	Potassium	703000	ug/Kg	*N	7540	29500	29500	1	P	HSC	07/08/09 15:07	070809A-1	881859
7782-49-2	Selenium	1220	ug/kg	U	612	1220	1220	2	MS	RMJ	07/14/09 23:40	090714-3	881838
7440-22-4	Silver	527	ug/Kg	J	118	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-23-5	Sodium	95500	ug/Kg		8250	29500	29500	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-28-0	Thallium	138	ug/kg	J	73.4	245	245	2	MS	RMJ	07/14/09 16:34	090713-2	881838
7440-62-2	Vanadium	12200	ug/Kg		118	589	589	1	P	HSC	07/08/09 15:07	070809A-1	881859
7440-66-6	Zinc	57500	ug/Kg		389	1180	1180	1	P	HSC	07/08/09 15:07	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.503	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.522	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.55	g	30	mL	07/10/09	AXG2

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Antimony	535	ug/L	500	ug/L	107.1	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Barium	539	ug/L	500	ug/L	107.8	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Cadmium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Chromium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Cobalt	476	ug/L	500	ug/L	95.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Copper	527	ug/L	500	ug/L	105.3	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Iron	5150	ug/L	5000	ug/L	103	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Lead	512	ug/L	500	ug/L	102.3	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Magnesium	5270	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Manganese	521	ug/L	500	ug/L	104.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Potassium	2510	ug/L	2500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Silver	256	ug/L	250	ug/L	102.4	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Sodium	2550	ug/L	2500	ug/L	101.9	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Mercury	5.22	ug/L	5	ug/L	104.4	90.0 - 110.0	AV	13-JUL-09 09:48	071309S2-4
	Arsenic	50.5	ug/L	50	ug/L	101.1	90.0 - 110.0	MS	14-JUL-09 15:00	090713-2
	Beryllium	50.9	ug/L	50	ug/L	101.8	90.0 - 110.0	MS	14-JUL-09 15:00	090713-2
	Nickel	52.7	ug/L	50	ug/L	105.4	90.0 - 110.0	MS	14-JUL-09 15:00	090713-2
	Thallium	48.8	ug/L	50	ug/L	97.5	90.0 - 110.0	MS	14-JUL-09 15:00	090713-2
	Selenium	49.1	ug/L	50	ug/L	98.3	90.0 - 110.0	MS	14-JUL-09 22:36	090714-3
CCV01										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Antimony	506	ug/L	500	ug/L	101.3	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Barium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Cadmium	496	ug/L	500	ug/L	99.3	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Lead	504	ug/L	500	ug/L	100.9	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Manganese	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Potassium	5270	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Sodium	9980	ug/L	10000	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Mercury	5.16	ug/L	5	ug/L	103.2	80.0 - 120.0	AV	13-JUL-09 09:54	071309S2-4
	Arsenic	51	ug/L	50	ug/L	101.9	90.0 - 110.0	MS	14-JUL-09 15:29	090713-2
	Beryllium	52.9	ug/L	50	ug/L	105.8	90.0 - 110.0	MS	14-JUL-09 15:29	090713-2
	Nickel	53.3	ug/L	50	ug/L	106.7	90.0 - 110.0	MS	14-JUL-09 15:29	090713-2
	Thallium	49	ug/L	50	ug/L	97.9	90.0 - 110.0	MS	14-JUL-09 15:29	090713-2
	Selenium	50.6	ug/L	50	ug/L	101.3	90.0 - 110.0	MS	14-JUL-09 22:56	090714-3
CCV02										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Antimony	500	ug/L	500	ug/L	99.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Cadmium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Chromium	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Cobalt	485	ug/L	500	ug/L	97	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Copper	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Lead	501	ug/L	500	ug/L	100.2	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Magnesium	5200	ug/L	5000	ug/L	103.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Manganese	495	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Silver	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Sodium	9940	ug/L	10000	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 – 120.0	AV	13-JUL-09 10:18	071309S2-4
	Arsenic	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Beryllium	54.3	ug/L	50	ug/L	108.6	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Nickel	53.5	ug/L	50	ug/L	107	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Thallium	49.5	ug/L	50	ug/L	99	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Selenium	51.1	ug/L	50	ug/L	102.2	90.0 – 110.0	MS	14-JUL-09 23:32	090714-3
CCV03										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Antimony	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Cobalt	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Iron	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Lead	505	ug/L	500	ug/L	101	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Potassium	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Sodium	10300	ug/L	10000	ug/L	102.9	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Mercury	5.04	ug/L	5	ug/L	100.9	80.0 – 120.0	AV	13-JUL-09 10:42	071309S2-4

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Arsenic	51.8	ug/L	50	ug/L	103.6	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Beryllium	54.8	ug/L	50	ug/L	109.7	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Nickel	54.6	ug/L	50	ug/L	109.3	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Thallium	50.6	ug/L	50	ug/L	101.3	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Selenium	52.2	ug/L	50	ug/L	104.5	90.0 – 110.0	MS	15-JUL-09 00:00	090714-3
CCV04										
	Aluminum	4910	ug/L	5000	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Antimony	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Iron	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Lead	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Magnesium	5130	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Manganese	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Potassium	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Sodium	10700	ug/L	10000	ug/L	106.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Mercury	5.1	ug/L	5	ug/L	102	80.0 – 120.0	AV	13-JUL-09 11:06	071309S2-4
CCV05										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Antimony	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Calcium	4900	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Iron	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Lead	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 – 120.0	AV	13-JUL-09 11:29	071309S2-4
CCV06										
	Aluminum	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Antimony	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Silver	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Zinc	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Mercury	5.13	ug/L	5	ug/L	102.6	80.0 - 120.0	AV	13-JUL-09 11:53	071309S2-4
CCV07										
	Aluminum	4870	ug/L	5000	ug/L	97.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Antimony	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.6	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.7	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Lead	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Manganese	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Potassium	5110	ug/L	5000	ug/L	102.1	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Mercury	5.01	ug/L	5	ug/L	100.2	80.0 - 120.0	AV	13-JUL-09 12:17	071309S2-4
CCV08										
	Mercury	5.15	ug/L	5	ug/L	103	80.0 - 120.0	AV	13-JUL-09 12:41	071309S2-4

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 09–2510

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.146	ug/L	.2	ug/L	72.8	70.0 – 130.0	AV	13–JUL–09 09:52	071309S2–4
	Arsenic	4.48	ug/L	5	ug/L	89.5	70.0 – 130.0	MS	14–JUL–09 15:12	090713–2
	Nickel	2.02	ug/L	2	ug/L	100.9	70.0 – 130.0	MS	14–JUL–09 15:12	090713–2
	Thallium	1.05	ug/L	1	ug/L	104.6	70.0 – 130.0	MS	14–JUL–09 15:12	090713–2
	Beryllium	.487	ug/L	.5	ug/L	97.4	70.0 – 130.0	MS	14–JUL–09 15:12	090713–2
	Selenium	5.04	ug/L	5	ug/L	100.8	70.0 – 130.0	MS	14–JUL–09 22:44	090714–3
PQL01										
	Silver	5.23	ug/L	5	ug/L	104.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Cadmium	4.87	ug/L	5	ug/L	97.4	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Chromium	4.84	ug/L	5	ug/L	96.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Potassium	172	ug/L	150	ug/L	114.5	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Manganese	10.4	ug/L	10	ug/L	104.4	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Magnesium	326	ug/L	300	ug/L	108.5	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Lead	11.3	ug/L	10	ug/L	113.1	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Iron	102	ug/L	100	ug/L	102.1	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Copper	9.77	ug/L	10	ug/L	97.7	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Cobalt	5	ug/L	5	ug/L	100	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Calcium	198	ug/L	200	ug/L	99	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Barium	5.03	ug/L	5	ug/L	100.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Sodium	281	ug/L	300	ug/L	93.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Vanadium	5.27	ug/L	5	ug/L	105.3	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Antimony	11.1	ug/L	10	ug/L	111.2	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Aluminum	200	ug/L	200	ug/L	99.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Zinc	9.6	ug/L	10	ug/L	96	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2510

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 10:08	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 10:08	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Mercury	-0.121	+/-.2	J	0.068	0.2	SOL	AV	13-JUL-09 09:50	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 15:06	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 15:06	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 15:06	090713-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 15:06	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 22:40	090714-3
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 11:10	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:10	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2510

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:10	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Potassium	146.16	+/-250	J	64.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 09:56	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 15:35	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 15:35	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 15:35	090713-2
	Thallium	0.351	+/-1	J	0.3	1.0	SOL	MS	14-JUL-09 15:35	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 23:00	090714-3
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 11:31	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:31	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2510

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:20	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 16:28	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 16:28	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 16:28	090713-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 16:28	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 23:36	090714-3
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 12:44	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 12:44	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Potassium	65.21	+/-250	J	64.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:44	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 17:10	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 17:10	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 17:10	090713-2

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2510

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	14–JUL–09 17:10	090713–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	15–JUL–09 00:04	090714–3
CCB04										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 13:37	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 13:37	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 13:37	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 13:37	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 13:37	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 13:37	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 13:37	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 13:37	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 13:37	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 13:37	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 13:37	070809A–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	13–JUL–09 11:08	071309S2–4
CCB05										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 13:57	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 13:57	070809A–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2510

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 13:57	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 13:57	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 13:57	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:31	071309S2-4
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 14:53	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 14:53	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:55	071309S2-4
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 15:48	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 15:48	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2510

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 15:48	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Mercury	-0.114	+/-.2	J	0.068	0.2	SOL	AV	13-JUL-09 12:19	071309S2-4
CCB08	Mercury	-0.127	+/-.2	J	0.068	0.2	SOL	AV	13-JUL-09 12:43	071309S2-4

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 09-2510

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201872852								
	Arsenic	193	ug/kg	+/-965.251	U	MS	193	965
	Beryllium	19.3	ug/kg	+/-96.525	U	MS	19.3	96.5
	Nickel	96.5	ug/kg	+/-386.1	U	MS	96.5	386
	Selenium	483	ug/kg	+/-965.251	U	MS	483	965
	Thallium	66.4	ug/kg	+/-193.05	J	MS	57.9	193
1201872897								
	Aluminum	6600	ug/Kg	+/-19417.476	U	P	6600	19400
	Antimony	320	ug/Kg	+/-970.874	U	P	320	971
	Barium	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Cadmium	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Calcium	7770	ug/Kg	+/-24271.845	U	P	7770	24300
	Chromium	146	ug/Kg	+/-485.437	U	P	146	485
	Cobalt	146	ug/Kg	+/-485.437	U	P	146	485
	Copper	291	ug/Kg	+/-970.874	U	P	291	971
	Iron	7770	ug/Kg	+/-24271.845	U	P	7770	24300
	Lead	243	ug/Kg	+/-970.874	U	P	243	971
	Magnesium	8410	ug/Kg	+/-29126.214	J	P	8250	29100
	Manganese	194	ug/Kg	+/-970.874	U	P	194	971
	Potassium	6210	ug/Kg	+/-24271.845	U	P	6210	24300
	Silver	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Sodium	6800	ug/Kg	+/-24271.845	U	P	6800	24300
	Vanadium	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Zinc	320	ug/Kg	+/-970.874	U	P	320	971
1201873038								
	Mercury	-7.18	ug/kg	+/-11.516	J	AV	3.92	11.5

METALS
-4-
Interference Check Sample

SDG No: 09-2510

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Antimony	0.994	ug/L					08-JUL-09 10:22	070809A-1
	Barium	1.28	ug/L					08-JUL-09 10:22	070809A-1
	Cadmium	-1.01	ug/L					08-JUL-09 10:22	070809A-1
	Calcium	470000	ug/L	500000	ug/L	93.9	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Chromium	0.679	ug/L					08-JUL-09 10:22	070809A-1
	Cobalt	-1.77	ug/L					08-JUL-09 10:22	070809A-1
	Copper	4.61	ug/L					08-JUL-09 10:22	070809A-1
	Iron	185000	ug/L	200000	ug/L	92.3	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Lead	-1.9	ug/L					08-JUL-09 10:22	070809A-1
	Magnesium	493000	ug/L	500000	ug/L	98.6	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Manganese	11.9	ug/L					08-JUL-09 10:22	070809A-1
	Potassium	0.032	ug/L					08-JUL-09 10:22	070809A-1
	Silver	1.27	ug/L					08-JUL-09 10:22	070809A-1
	Sodium	-23.6	ug/L					08-JUL-09 10:22	070809A-1
	Vanadium	-2.21	ug/L					08-JUL-09 10:22	070809A-1
	Zinc	-8.84	ug/L					08-JUL-09 10:22	070809A-1
ICSAB01									
	Aluminum	513000	ug/L	500000	ug/L	103	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Antimony	568	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Barium	500	ug/L	500	ug/L	100	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cadmium	462	ug/L	500	ug/L	92.4	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Calcium	471000	ug/L	500000	ug/L	94.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Chromium	483	ug/L	500	ug/L	96.5	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cobalt	456	ug/L	500	ug/L	91.3	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Copper	571	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Iron	184000	ug/L	200000	ug/L	91.9	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Lead	475	ug/L	500	ug/L	95	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Magnesium	494000	ug/L	500000	ug/L	98.8	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
-4-
Interference Check Sample

SDG No: 09-2510

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	494	ug/L	500	ug/L	98.7	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Potassium	5890	ug/L	5000	ug/L	118	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Silver	284	ug/L	250	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Sodium	5600	ug/L	5000	ug/L	112	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Vanadium	523	ug/L	500	ug/L	105	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
-4-
Interference Check Sample

SDG No: 09-2510

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	1.39	ug/L					14-JUL-09 15:18	090713-2
	Beryllium	0.062	ug/L					14-JUL-09 15:18	090713-2
	Nickel	4.36	ug/L					14-JUL-09 15:18	090713-2
	Thallium	0.026	ug/L					14-JUL-09 15:18	090713-2
ICSAB01									
	Arsenic	23.1	ug/L	20	ug/L	115	80.0 - 120.0	14-JUL-09 15:24	090713-2
	Beryllium	20.7	ug/L	20	ug/L	103	80.0 - 120.0	14-JUL-09 15:24	090713-2
	Nickel	23.3	ug/L	22.1	ug/L	105	80.0 - 120.0	14-JUL-09 15:24	090713-2
	Thallium	18.0	ug/L	20	ug/L	89.8	80.0 - 120.0	14-JUL-09 15:24	090713-2

METALS
-4-
Interference Check Sample

SDG No: 09-2510

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Selenium	-1.09	ug/L					14-JUL-09 22:48	090714-3
ICSAB01									
	Selenium	20.8	ug/L	20	ug/L	104	80.0 - 120.0	14-JUL-09 22:52	090714-3

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2510 **Client ID** CAMO-09-9946S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872855

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	11700		2020		9450	102		MS
Beryllium	ug/kg	75-125	6890		746		5910	104		MS
Nickel	ug/kg	75-125	10200		3610		5910	112		MS
Selenium	ug/kg	75-125	2170		612	U	2360	84.5		MS
Thallium	ug/kg	75-125	11100		138	J	11800	92.7		MS

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2510 **Client ID** CAMO-09-9946SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872859

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	12100		2020		9430	107		MS
Beryllium	ug/kg	75-125	7040		746		5890	107		MS
Nickel	ug/kg	75-125	10200		3610		5890	111		MS
Selenium	ug/kg	75-125	2230		612	U	2360	87.3		MS
Thallium	ug/kg	75-125	11400		138	J	11800	95.4		MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2510 **Client ID** CAMO-09-9946S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872900

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		8360000		4550000		610000	623	N/A	P
Antimony	ug/Kg	75-125	57700		389	U	61000	94.5		P
Barium	ug/Kg	75-125	128000		96100		61000	52.1	N	P
Cadmium	ug/Kg	75-125	58300		118	U	61000	95.4		P
Calcium	ug/Kg	75-125	1510000		993000		610000	85.2		P
Chromium	ug/Kg	75-125	72000		15900		61000	91.9		P
Cobalt	ug/Kg	75-125	59300		6950		61000	85.7		P
Copper	ug/Kg	75-125	77500		12700		61000	106		P
Iron	ug/Kg		11200000		16800000		610000	-912	N/A	P
Lead	ug/Kg	75-125	66900		8690		61000	95.4		P
Magnesium	ug/Kg	75-125	1580000		747000		610000	137	N	P
Manganese	ug/Kg		391000		790000		61000	-653	N/A	P
Potassium	ug/Kg	75-125	1500000		703000		610000	131	N	P
Silver	ug/Kg	75-125	60700		527	J	61000	98.6		P
Sodium	ug/Kg	75-125	692000		95500		610000	97.8		P
Vanadium	ug/Kg	75-125	70700		12200		61000	95.8		P
Zinc	ug/Kg	75-125	123000		57500		61000	107		P

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2510 **Client ID** CAMO-09-9946SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872902

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		7780000		4550000		589000	548	N/A	P
Antimony	ug/Kg	75-125	55900		389	U	58900	94.7		P
Barium	ug/Kg	75-125	120000		96100		58900	40.7	N	P
Cadmium	ug/Kg	75-125	56200		118	U	58900	95.3		P
Calcium	ug/Kg	75-125	1400000		993000		589000	69.5	N	P
Chromium	ug/Kg	75-125	67800		15900		58900	88.1		P
Cobalt	ug/Kg	75-125	57200		6950		58900	85.3		P
Copper	ug/Kg	75-125	77300		12700		58900	110		P
Iron	ug/Kg		10700000		16800000		589000	-1020	N/A	P
Lead	ug/Kg	75-125	64700		8690		58900	94.9		P
Magnesium	ug/Kg	75-125	1450000		747000		589000	119		P
Manganese	ug/Kg		373000		790000		58900	-707	N/A	P
Potassium	ug/Kg	75-125	1400000		703000		589000	118		P
Silver	ug/Kg	75-125	58500		527	J	58900	98.4		P
Sodium	ug/Kg	75-125	651000		95500		589000	94.3		P
Vanadium	ug/Kg	75-125	67900		12200		58900	94.4		P
Zinc	ug/Kg	75-125	109000		57500		58900	87.6		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2510 **Client ID** CAMO-09-9946S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201873041

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	157		7.77	J	143	104		AV

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2510 **Client ID** CAMO-09-9946SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201873043

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	166		7.77	J	145	110		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946D

Sample ID: 232591001 **Duplicate ID:** 1201872854 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-1200	2020		2160		6.93		MS
Beryllium	ug/kg	+/-20%	746		726		2.76		MS
Nickel	ug/kg	+/-20%	3610		3730		3.51		MS
Selenium	ug/kg		612	U	602	U			MS
Thallium	ug/kg	+/-241	138	J	129	J	7.02		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946SD

Sample ID: 1201872855 **Duplicate ID:** 1201872859 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-20	11700		12100		3.38		MS
Beryllium	ug/kg	+/-20	6890		7040		2.1		MS
Nickel	ug/kg	+/-20	10200		10200		.328		MS
Selenium	ug/kg	+/-20	2170		2230		2.87		MS
Thallium	ug/kg	+/-20	11100		11400		2.68		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946D

Sample ID: 232591001 **Duplicate ID:** 1201872899 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	4550000		3490000		26.3	*	P
Antimony	ug/Kg		389	U	406	U			P
Barium	ug/Kg	+/-20%	96100		56700		51.6	*	P
Cadmium	ug/Kg		118	U	123	U			P
Calcium	ug/Kg	+/-20%	993000		778000		24.3	*	P
Chromium	ug/Kg	+/-20%	15900		18200		13.3		P
Cobalt	ug/Kg	+/-20%	6950		2290		101	*	P
Copper	ug/Kg	+/-20%	12700		15100		17.4		P
Iron	ug/Kg	+/-20%	16800000		9760000		52.8	*	P
Lead	ug/Kg	+/-20%	8690		7750		11.5		P
Magnesium	ug/Kg	+/-20%	747000		579000		25.4	*	P
Manganese	ug/Kg	+/-20%	790000		334000		81.1	*	P
Potassium	ug/Kg	+/-20%	703000		568000		21.3	*	P
Silver	ug/Kg	+/-615	527	J	321	J	48.7		P
Sodium	ug/Kg	+/-30800	95500		87400		8.9		P
Vanadium	ug/Kg	+/-20%	12200		10700		13.2		P
Zinc	ug/Kg	+/-20%	57500		54100		6.05		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2510

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–9946SD

Sample ID: 1201872900 **Duplicate ID:** 1201872902 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	8360000		7780000		7.11		P
Antimony	ug/Kg	+/–20	57700		55900		3.26		P
Barium	ug/Kg	+/–20	128000		120000		6.32		P
Cadmium	ug/Kg	+/–20	58300		56200		3.65		P
Calcium	ug/Kg	+/–20	1510000		1400000		7.59		P
Chromium	ug/Kg	+/–20	72000		67800		5.97		P
Cobalt	ug/Kg	+/–20	59300		57200		3.55		P
Copper	ug/Kg	+/–20	77500		77300		.22		P
Iron	ug/Kg	+/–20	11200000		10700000		4.04		P
Lead	ug/Kg	+/–20	66900		64700		3.42		P
Magnesium	ug/Kg	+/–20	1580000		1450000		9.02		P
Manganese	ug/Kg	+/–20	391000		373000		4.73		P
Potassium	ug/Kg	+/–20	1500000		1400000		7.14		P
Silver	ug/Kg	+/–20	60700		58500		3.69		P
Sodium	ug/Kg	+/–20	692000		651000		6.06		P
Vanadium	ug/Kg	+/–20	70700		67900		4.14		P
Zinc	ug/Kg	+/–20	123000		109000		11.7		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946D

Sample ID: 232591001 **Duplicate ID:** 1201873040 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-12.5	7.77	J	12.2	J	44.3		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2510

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946SD

Sample ID: 1201873041 **Duplicate ID:** 1201873043 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	157		166		5.58		AV

METALS
–7–
Laboratory Control Sample Summary

SDG NO. 09–2510

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201872853								
	Arsenic	ug/kg	255000	258000		101	83–120	MS
	Beryllium	ug/kg	86400	92400		107	81.2–126.8	MS
	Nickel	ug/kg	101000	108000		107	83.3–121.4	MS
	Selenium	ug/kg	171000	185000		108	80.2–125.9	MS
	Thallium	ug/kg	203000	205000		101	78–123.2	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2510

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201872898								
	Aluminum	ug/Kg	7290000	6410000		87.9	63.5-118	P
	Antimony	ug/Kg	121000	107000		88	39.1-132.1	P
	Barium	ug/Kg	475000	461000		97.1	82-110.6	P
	Cadmium	ug/Kg	116000	113000		97.5	77.9-115.2	P
	Calcium	ug/Kg	3720000	3420000		92	77.4-111.7	P
	Chromium	ug/Kg	84000	75100		89.4	66.6-116.5	P
	Cobalt	ug/Kg	83000	80200		96.6	79-113.9	P
	Copper	ug/Kg	105000	103000		97.7	77.6-112	P
	Iron	ug/Kg	20000000	18200000		91.2	51.5-145.5	P
	Lead	ug/Kg	161000	164000		102	83.1-114.7	P
	Magnesium	ug/Kg	2980000	2860000		95.9	81-114.3	P
	Manganese	ug/Kg	398000	365000		91.8	76.6-106.6	P
	Potassium	ug/Kg	2390000	2270000		95.2	72.2-111.1	P
	Silver	ug/Kg	133000	131000		98.6	81.7-115.7	P
	Sodium	ug/Kg	614000	573000		93.2	71.5-109.3	P
	Vanadium	ug/Kg	166000	147000		88.9	65-118.6	P
	Zinc	ug/Kg	195000	198000		101	82.8-111.9	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2510

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873039								
	Mercury	ug/kg	5150	5110		99.2	71.6-128.3	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2510 **Client ID** CAMO-09-9946L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232591001 **Serial Dilution ID:** 1201872856

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	8.25		5.1	J	38.2			MS
Beryllium	3.05		2.75		9.84			MS
Nickel	14.7		15.4		4.76			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.566	J	1.5	U	100			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2510 **Client ID** CAMO-09-9946L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232591001 **Serial Dilution ID:** 1201872901

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	38600		38400		.648		10	P
Antimony	3.3	U	16.5	U				P
Barium	816		835		2.33		10	P
Cadmium	1	U	5	U				P
Calcium	8430		8750		3.8		10	P
Chromium	135		139		2.59		10	P
Cobalt	59		61		3.39			P
Copper	108		104		4.17			P
Iron	142000		154000		8.1		10	P
Lead	73.7		78		5.83			P
Magnesium	6340		6650		4.89		10	P
Manganese	6700		7050		5.22		10	P
Potassium	5970		6050		1.34		10	P
Silver	4.47	J	6.35	J	42.1			P
Sodium	810		735	J	9.26			P
Vanadium	104		105		.481		10	P
Zinc	488		495		1.33		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2510 **Client ID** CAMO-09-9946L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232591001 **Serial Dilution ID:** 1201873042

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.116	J	.34	U	100			AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2510 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881858						
1201872897	MB for batch 881858	MB	S	06-JUL-09	.515g	50mL	
1201872898	LCS for batch 881858	LCS	S	06-JUL-09	.514g	50mL	
1201872900	CAMO-09-9946S	MS	S	06-JUL-09	.504g	50mL	
1201872902	CAMO-09-9946SD	MSD	S	06-JUL-09	.522g	50mL	
1201872899	CAMO-09-9946D	DUP	S	06-JUL-09	.5g	50mL	
232591001	CAMO-09-9946	SAMPLE	S	06-JUL-09	.522g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2510 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881836						
1201872852	MB for batch 881836	MB	S	06-JUL-09	.518g	50mL	
1201872853	LCS for batch 881836	LCS	S	06-JUL-09	.518g	50mL	
1201872855	CAMO-09-9946S	MS	S	06-JUL-09	.521g	50mL	
1201872859	CAMO-09-9946SD	MSD	S	06-JUL-09	.522g	50mL	
1201872854	CAMO-09-9946D	DUP	S	06-JUL-09	.511g	50mL	
232591001	CAMO-09-9946	SAMPLE	S	06-JUL-09	.503g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2510 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881915						
1201873038	MB for batch 881915	MB	S	10-JUL-09	.521g	30mL	
1201873039	LCS for batch 881915	LCS	S	10-JUL-09	.204g	30mL	
1201873041	CAMO-09-9946S	MS	S	10-JUL-09	.515g	30mL	
1201873043	CAMO-09-9946SD	MSD	S	10-JUL-09	.51g	30mL	
1201873040	CAMO-09-9946D	DUP	S	10-JUL-09	.593g	30mL	
232591001	CAMO-09-9946	SAMPLE	S	10-JUL-09	.55g	30mL	

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 14-JUL-09 **End Date:** 14-JUL-09

Client Sdg: 09-2510
Method MS
Data File: 090713-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	14:42			X		X											X					X		
S10	1	14:48			X		X											X					X		
S100	1	14:54			X		X											X					X		
ICV01	1	15:00			X		X											X					X		
ICB01	1	15:06			X		X											X					X		
CRDL01	1	15:12			X		X											X					X		
ICSA01	1	15:18			X		X											X					X		
ICSAB01	1	15:24			X		X											X					X		
CCV01	1	15:29			X		X											X					X		
CCB01	1	15:35			X		X											X					X		
1201872852	2	15:41			X		X											X					X		
1201872853	40	15:47			X		X											X					X		
ZZZZZZ	2	15:53																							
ZZZZZZ	2	15:59																							
ZZZZZZ	2	16:05																							
ZZZZZZ	2	16:11																							
ZZZZZZ	2	16:17																							
CCV02	1	16:22			X		X											X					X		
CCB02	1	16:28			X		X											X					X		
232591001	2	16:34			X		X											X					X		
1201872854	2	16:40			X		X											X					X		
1201872855	2	16:46			X		X											X					X		
1201872859	2	16:52			X		X											X					X		
1201872856	10	16:58			X		X											X					X		
CCV03	1	17:04			X		X											X					X		
CCB03	1	17:10			X		X											X					X		

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 14-JUL-09 **End Date:** 15-JUL-09

Client Sdg: 09-2510
Method MS
Data File: 090714-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	22:24																		X					
S10	1	22:28																		X					
S100	1	22:32																		X					
ICV01	1	22:36																		X					
ICB01	1	22:40																		X					
CRDL01	1	22:44																		X					
ICSA01	1	22:48																		X					
ICSAB01	1	22:52																		X					
CCV01	1	22:56																		X					
CCB01	1	23:00																		X					
1201872852	2	23:04																		X					
1201872853	40	23:08																		X					
ZZZZZZ	2	23:12																							
ZZZZZZ	2	23:16																							
ZZZZZZ	2	23:20																							
ZZZZZZ	2	23:24																							
ZZZZZZ	2	23:28																							
CCV02	1	23:32																		X					
CCB02	1	23:36																		X					
232591001	2	23:40																		X					
1201872854	2	23:44																		X					
1201872855	2	23:48																		X					
1201872859	2	23:52																		X					
1201872856	10	23:56																		X					
CCV03	1	00:00																		X					
CCB03	1	00:04																		X					

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 08-JUL-09 **End Date:** 08-JUL-09

Client Sdg: 09-2510
Method P
Data File: 070809A-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	09:35		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	09:41	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	09:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	09:55	X						X				X		X							X			
ICV01	1	10:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	10:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	10:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	10:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	10:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	10:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	10:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	10:47																							
ZZZZZZ	1	10:54																							
CCV01	1	11:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	11:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR03	1	11:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV02	1	11:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	11:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	11:42																							
ZZZZZZ	2	11:49																							
ZZZZZZ	1	11:56																							
ZZZZZZ	1	12:03																							
ZZZZZZ	1	12:10																							
ZZZZZZ	1	12:17																							
ZZZZZZ	5	12:23																							
ZZZZZZ	1	12:30																							
CCV03	1	12:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	12:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	5	12:49																							
ZZZZZZ	5	12:56																							
ZZZZZZ	5	13:03																							
ZZZZZZ	5	13:10																							
ZZZZZZ	25	13:16																							
ZZZZZZ	5	13:23																							
CCV04	1	13:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	13:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV05	1	13:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	13:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872897	1	14:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
1201872898	2	14:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	14:18																							
ZZZZZZ	1	14:25																							
ZZZZZZ	1	14:32																							
ZZZZZZ	1	14:39																							
CCV06	1	14:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	14:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	15:00																							
232591001	1	15:07	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872899	1	15:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872900	1	15:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872902	1	15:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872901	5	15:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV07	1	15:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	15:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 13-JUL-09 **End Date:** 13-JUL-09

Client Sdg: 09-2510
Method AV
Data File: 071309S2-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:36															X								
S0.2	1	09:38															X								
S0.5	1	09:40															X								
S2.0	1	09:42															X								
S5.0	1	09:44															X								
S10	1	09:46															X								
ICV01	1	09:48															X								
ICB01	1	09:50															X								
CRDL01	1	09:52															X								
CCV01	1	09:54															X								
CCB01	1	09:56															X								
ZZZZZZ	1	09:58																							
ZZZZZZ	10	10:00																							
ZZZZZZ	1	10:02																							
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
ZZZZZZ	1	10:08																							
ZZZZZZ	1	10:10																							
ZZZZZZ	1	10:12																							
ZZZZZZ	1	10:14																							
ZZZZZZ	5	10:16																							
CCV02	1	10:18															X								
CCB02	1	10:20															X								
ZZZZZZ	1	10:22																							
ZZZZZZ	1	10:24																							
ZZZZZZ	1	10:26																							
ZZZZZZ	1	10:28																							
ZZZZZZ	1	10:30																							
ZZZZZZ	1	10:32																							
ZZZZZZ	1	10:34																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:38																							
ZZZZZZ	1	10:40																							
CCV03	1	10:42															X								
CCB03	1	10:44															X								
ZZZZZZ	1	10:46																							
ZZZZZZ	1	10:48																							
ZZZZZZ	1	10:50																							
ZZZZZZ	1	10:52																							
ZZZZZZ	1	10:54																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	10	10:56																							
ZZZZZZ	1	10:58																							
ZZZZZZ	1	11:00																							
ZZZZZZ	1	11:02																							
ZZZZZZ	1	11:04																							
CCV04	1	11:06														X									
CCB04	1	11:08														X									
ZZZZZZ	1	11:10																							
ZZZZZZ	1	11:12																							
ZZZZZZ	1	11:14																							
ZZZZZZ	1	11:16																							
ZZZZZZ	1	11:18																							
ZZZZZZ	1	11:20																							
ZZZZZZ	1	11:22																							
ZZZZZZ	1	11:24																							
ZZZZZZ	1	11:26																							
ZZZZZZ	1	11:27																							
CCV05	1	11:29														X									
CCB05	1	11:31														X									
ZZZZZZ	1	11:33																							
ZZZZZZ	1	11:35																							
ZZZZZZ	1	11:37																							
ZZZZZZ	1	11:39																							
ZZZZZZ	5	11:41																							
ZZZZZZ	1	11:43																							
ZZZZZZ	1	11:45																							
ZZZZZZ	1	11:47																							
ZZZZZZ	1	11:49																							
ZZZZZZ	1	11:51																							
CCV06	1	11:53														X									
CCB06	1	11:55														X									
1201873038	1	11:57														X									
1201873039	10	11:59														X									
ZZZZZZ	1	12:01																							
ZZZZZZ	1	12:03																							
ZZZZZZ	1	12:05																							
ZZZZZZ	1	12:07																							
ZZZZZZ	1	12:09																							
232591001	1	12:11														X									
1201873040	1	12:13														X									

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
1201873041	1	12:15															X								
CCV07	1	12:17															X								
CCB07	1	12:19															X								
1201873043	1	12:21															X								
1201873042	5	12:23															X								
ZZZZZZ	1	12:25																							
ZZZZZZ	1	12:27																							
ZZZZZZ	1	12:29																							
ZZZZZZ	1	12:31																							
ZZZZZZ	1	12:33																							
ZZZZZZ	1	12:35																							
ZZZZZZ	5	12:37																							
ZZZZZZ	1	12:39																							
CCV08	1	12:41															X								
CCB08	1	12:43															X								

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2510

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2510

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2510

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2510
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 09-2510
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-MAY-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2510
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2510
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2510
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2510
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2510

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS6

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2510

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

Raw Data

Reprocessing Begun
Logged In Analyst: Optima3 Technique: ICP Continuous

Results Data Set (original): 070809
Results Library (original): C:\pe\Optima3\Results\Results.mdb
Results Data Set (reprocessed): 070809A
Results Library (reprocessed): C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX Method Last Saved: 7/8/2009 11:38:58
IEC File: 070309.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 8
Sample ID: S0 Date Collected: 7/8/2009 09:28:56
Analyst: Data Type: Reprocessed on 7/8/2009 11:40:03
Logged In Analyst (Original) : Optima3
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1059810.6	1059810.6	99.899	%	09:32:05
1	Sc Radial	5668.6	5668.6	102	%	09:30:49
1	Y 371.029	851543.7	851543.7	99.804	%	09:32:05
1	Y RADIAL	4889.8	4889.8	101.5	%	09:30:49
1	Ag 328.068†	593.9	594.5	[0.00]	ug/L	09:32:10

1	Al 396.153Radial†	-88.0	-86.4	[0.00]	ug/L	09:30:49
1	As 188.979†	-33.0	-33.0	[0.00]	ug/L	09:32:31
1	B 249.677†	-395.5	-395.9	[0.00]	ug/L	09:32:31
1	Ba 233.527†	22.7	22.7	[0.00]	ug/L	09:32:31
1	Be 313.107†	-7253.6	-7260.9	[0.00]	ug/L	09:32:10
1	Ca 317.933Radial†	19.9	19.6	[0.00]	ug/L	09:31:09
1	Cd 226.502†	-262.6	-262.9	[0.00]	ug/L	09:32:31
1	Co 228.616†	-86.2	-86.3	[0.00]	ug/L	09:32:31
1	Cr 267.716†	-35.2	-35.2	[0.00]	ug/L	09:32:31
1	Cu 324.752†	10171.2	10181.5	[0.00]	ug/L	09:32:10
1	Fe 238.204 Radial†	0.0	0.0	[0.00]	ug/L	09:31:09
1	K 766.490 Radial†	1428.1	1402.0	[0.00]	ug/L	09:30:49
1	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:09
1	Mn 257.610†	823.1	823.9	[0.00]	ug/L	09:32:31
1	Mo 202.031†	40.3	40.4	[0.00]	ug/L	09:32:31
1	Na 589.592 Radial†	-169.9	-166.8	[0.00]	ug/L	09:31:09
1	Ni 231.604†	160.5	160.7	[0.00]	ug/L	09:32:31
1	P 214.914†	340.8	341.2	[0.00]	ug/L	09:32:31
1	Pb 220.353†	-23.8	-23.8	[0.00]	ug/L	09:32:31
1	S 181.975 Axial†	74.8	74.8	[0.00]	ug/L	09:32:31
1	Sb 206.836†	39.3	39.4	[0.00]	ug/L	09:32:31
1	Se 196.026†	-21.9	-21.9	[0.00]	ug/L	09:32:31
1	Si 251.611†	569.0	569.6	[0.00]	ug/L	09:32:31
1	Sn 189.927†	4.8	4.8	[0.00]	ug/L	09:32:31
1	Sr 421.552†	-1.3	-1.3	[0.00]	ug/L	09:31:09
1	Ti 334.940†	-1079.9	-1081.0	[0.00]	ug/L	09:32:10
1	Tl 190.801†	-58.7	-58.8	[0.00]	ug/L	09:32:31
1	U 409.014†	-3815.0	-3818.9	[0.00]	ug/L	09:32:05
1	V 292.402†	-1684.3	-1686.1	[0.00]	ug/L	09:32:10
1	Zn 213.857†	1110.4	1111.5	[0.00]	ug/L	09:32:31
1	SiO2†	589.5	590.1	[0.00]	ug/L	09:33:36
2	Sc 361.383	1062041.1	1062041.1	100.11	%	09:32:36
2	Sc Radial	5550.5	5550.5	99.7	%	09:31:14
2	Y 371.029	854666.6	854666.6	100.17	%	09:32:36
2	Y RADIAL	4806.6	4806.6	99.81	%	09:31:14
2	Ag 328.068†	684.5	683.8	[0.00]	ug/L	09:32:41
2	Al 396.153Radial†	-103.1	-103.4	[0.00]	ug/L	09:31:14
2	As 188.979†	-37.3	-37.3	[0.00]	ug/L	09:33:01
2	B 249.677†	-376.8	-376.4	[0.00]	ug/L	09:33:01
2	Ba 233.527†	27.0	27.0	[0.00]	ug/L	09:33:01
2	Be 313.107†	-7342.2	-7334.2	[0.00]	ug/L	09:32:41
2	Ca 317.933Radial†	15.3	15.3	[0.00]	ug/L	09:31:34
2	Cd 226.502†	-297.3	-297.0	[0.00]	ug/L	09:33:01
2	Co 228.616†	-91.0	-90.9	[0.00]	ug/L	09:33:01
2	Cr 267.716†	-33.4	-33.4	[0.00]	ug/L	09:33:01
2	Cu 324.752†	10260.8	10249.6	[0.00]	ug/L	09:32:41
2	Fe 238.204 Radial†	0.2	0.2	[0.00]	ug/L	09:31:34
2	K 766.490 Radial†	1490.1	1493.9	[0.00]	ug/L	09:31:14
2	Mg 279.077 IEC†	-0.2	-0.2	[0.00]	ug/L	09:31:34
2	Mn 257.610†	833.3	832.3	[0.00]	ug/L	09:33:01
2	Mo 202.031†	24.6	24.6	[0.00]	ug/L	09:33:01
2	Na 589.592 Radial†	-169.2	-169.6	[0.00]	ug/L	09:31:34
2	Ni 231.604†	145.4	145.2	[0.00]	ug/L	09:33:01
2	P 214.914†	336.1	335.8	[0.00]	ug/L	09:33:01
2	Pb 220.353†	-39.7	-39.7	[0.00]	ug/L	09:33:01
2	S 181.975 Axial†	63.8	63.7	[0.00]	ug/L	09:33:01
2	Sb 206.836†	49.0	48.9	[0.00]	ug/L	09:33:01
2	Se 196.026†	-25.3	-25.3	[0.00]	ug/L	09:33:01
2	Si 251.611†	569.7	569.1	[0.00]	ug/L	09:33:01
2	Sn 189.927†	5.1	5.0	[0.00]	ug/L	09:33:01
2	Sr 421.552†	11.5	11.5	[0.00]	ug/L	09:31:34
2	Ti 334.940†	-1116.4	-1115.1	[0.00]	ug/L	09:32:41
2	Tl 190.801†	-57.5	-57.4	[0.00]	ug/L	09:33:01
2	U 409.014†	-3873.4	-3869.2	[0.00]	ug/L	09:32:36
2	V 292.402†	-1699.0	-1697.1	[0.00]	ug/L	09:32:41
2	Zn 213.857†	1115.6	1114.3	[0.00]	ug/L	09:33:01
2	SiO2†	600.0	599.4	[0.00]	ug/L	09:33:42
3	Sc 361.383	1060796.0	1060796.0	99.992	%	09:33:06
3	Sc Radial	5475.5	5475.5	98.4	%	09:31:39
3	Y 371.029	853433.0	853433.0	100.03	%	09:33:06
3	Y RADIAL	4750.8	4750.8	98.65	%	09:31:39

3	Ag 328.068†	637.4	637.5	[0.00]	ug/L	09:33:11
3	Al 396.153Radial†	-85.4	-86.8	[0.00]	ug/L	09:31:39
3	As 188.979†	-40.4	-40.4	[0.00]	ug/L	09:33:31
3	B 249.677†	-372.3	-372.3	[0.00]	ug/L	09:33:31
3	Ba 233.527†	23.1	23.1	[0.00]	ug/L	09:33:31
3	Be 313.107†	-7353.0	-7353.6	[0.00]	ug/L	09:33:11
3	Ca 317.933Radial†	15.7	15.9	[0.00]	ug/L	09:31:59
3	Cd 226.502†	-273.1	-273.1	[0.00]	ug/L	09:33:31
3	Co 228.616†	-94.1	-94.1	[0.00]	ug/L	09:33:31
3	Cr 267.716†	-17.2	-17.2	[0.00]	ug/L	09:33:31
3	Cu 324.752†	10141.9	10142.7	[0.00]	ug/L	09:33:11
3	Fe 238.204 Radial†	0.8	0.8	[0.00]	ug/L	09:31:59
3	K 766.490 Radial†	1498.9	1523.4	[0.00]	ug/L	09:31:39
3	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:59
3	Mn 257.610†	824.8	824.9	[0.00]	ug/L	09:33:31
3	Mo 202.031†	30.4	30.4	[0.00]	ug/L	09:33:31
3	Na 589.592 Radial†	-172.0	-174.9	[0.00]	ug/L	09:31:59
3	Ni 231.604†	138.9	138.9	[0.00]	ug/L	09:33:31
3	P 214.914†	333.9	333.9	[0.00]	ug/L	09:33:31
3	Pb 220.353†	-23.7	-23.8	[0.00]	ug/L	09:33:31
3	S 181.975 Axial†	64.9	64.9	[0.00]	ug/L	09:33:31
3	Sb 206.836†	48.0	48.0	[0.00]	ug/L	09:33:31
3	Se 196.026†	-17.7	-17.7	[0.00]	ug/L	09:33:31
3	Si 251.611†	541.6	541.6	[0.00]	ug/L	09:33:31
3	Sn 189.927†	6.6	6.6	[0.00]	ug/L	09:33:31
3	Sr 421.552†	6.1	6.2	[0.00]	ug/L	09:31:59
3	Ti 334.940†	-1131.5	-1131.6	[0.00]	ug/L	09:33:11
3	Tl 190.801†	-67.9	-67.9	[0.00]	ug/L	09:33:31
3	U 409.014†	-3815.9	-3816.2	[0.00]	ug/L	09:33:06
3	V 292.402†	-1575.1	-1575.2	[0.00]	ug/L	09:33:11
3	Zn 213.857†	1141.3	1141.4	[0.00]	ug/L	09:33:31
3	SiO2†	617.5	617.6	[0.00]	ug/L	09:33:47

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1060882.6	1117.80	0.11%	100.00	%
Sc Radial	5564.8	97.34	1.75%	100	%
Y 371.029	853214.5	1572.88	0.18%	100.000	%
Y RADIAL	4815.7	69.94	1.45%	100.0	%
Ag 328.068†	638.6	44.64	6.99%	[0.00]	ug/L
Al 396.153Radial†	-92.2	9.68	10.50%	[0.00]	ug/L
As 188.979†	-36.9	3.70	10.03%	[0.00]	ug/L
B 249.677†	-381.5	12.62	3.31%	[0.00]	ug/L
Ba 233.527†	24.3	2.36	9.74%	[0.00]	ug/L
Be 313.107†	-7316.2	48.87	0.67%	[0.00]	ug/L
Ca 317.933Radial†	16.9	2.30	13.61%	[0.00]	ug/L
Cd 226.502†	-277.6	17.49	6.30%	[0.00]	ug/L
Co 228.616†	-90.4	3.95	4.37%	[0.00]	ug/L
Cr 267.716†	-28.6	9.91	34.66%	[0.00]	ug/L
Cu 324.752†	10191.3	54.11	0.53%	[0.00]	ug/L
Fe 238.204 Radial†	0.3	0.40	120.31%	[0.00]	ug/L
K 766.490 Radial†	1473.1	63.31	4.30%	[0.00]	ug/L
Mg 279.077 IEC†	0.2	0.34	192.62%	[0.00]	ug/L
Mn 257.610†	827.0	4.63	0.56%	[0.00]	ug/L
Mo 202.031†	31.8	8.00	25.18%	[0.00]	ug/L
Na 589.592 Radial†	-170.4	4.09	2.40%	[0.00]	ug/L
Ni 231.604†	148.3	11.22	7.57%	[0.00]	ug/L
P 214.914†	336.9	3.77	1.12%	[0.00]	ug/L
Pb 220.353†	-29.1	9.17	31.52%	[0.00]	ug/L
S 181.975 Axial†	67.8	6.10	8.99%	[0.00]	ug/L
Sb 206.836†	45.4	5.28	11.62%	[0.00]	ug/L
Se 196.026†	-21.6	3.82	17.66%	[0.00]	ug/L
Si 251.611†	560.1	16.01	2.86%	[0.00]	ug/L
Sn 189.927†	5.5	0.95	17.40%	[0.00]	ug/L
Sr 421.552†	5.5	6.43	117.38%	[0.00]	ug/L
Ti 334.940†	-1109.3	25.82	2.33%	[0.00]	ug/L
Tl 190.801†	-61.4	5.70	9.29%	[0.00]	ug/L
U 409.014†	-3834.7	29.86	0.78%	[0.00]	ug/L
V 292.402†	-1652.8	67.41	4.08%	[0.00]	ug/L

Zn 213.857†	1122.4	16.48	1.47%	[0.00] ug/L
SiO2†	602.4	13.95	2.32%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/8/2009 09:35:57
Data Type: Reprocessed on 7/8/2009 11:40:04

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1043904.5	1043904.5	98.400	%	09:38:07
1	Sc Radial	5586.9	5586.9	100	%	09:37:49
1	Y 371.029	838768.8	838768.8	98.307	%	09:38:07
1	Y RADIAL	4867.7	4867.7	101.1	%	09:37:49
1	Ag 328.068†	25884.2	25666.6	[100]	ug/L	09:38:07
1	As 188.979†	393.4	436.7	[100]	ug/L	09:38:27
1	B 249.677†	5686.4	6160.4	[100]	ug/L	09:38:07
1	Ba 233.527†	20371.1	20678.1	[100]	ug/L	09:38:07
1	Be 313.107†	314654.5	327088.3	[100]	ug/L	09:38:07
1	Cd 226.502†	13132.5	13623.8	[100]	ug/L	09:38:27
1	Co 228.616†	8083.3	8305.1	[100]	ug/L	09:38:27
1	Cr 267.716†	11753.9	11973.6	[100]	ug/L	09:38:07
1	Cu 324.752†	50132.0	40756.1	[100]	ug/L	09:38:07
1	K 766.490 Radial†	3887.5	2399.0	[1000]	ug/L	09:37:49
1	Mn 257.610†	129366.8	130643.8	[100]	ug/L	09:38:07
1	Mo 202.031†	2580.5	2590.7	[100]	ug/L	09:38:27
1	Ni 231.604†	6525.4	6483.3	[100]	ug/L	09:38:27
1	P 214.914†	1779.1	1471.1	[500]	ug/L	09:38:27
1	Pb 220.353†	1342.2	1393.1	[100]	ug/L	09:38:27
1	S 181.975 Axial†	300.2	237.3	[200]	ug/L	09:38:27
1	Sb 206.836†	547.4	510.9	[100]	ug/L	09:38:27
1	Se 196.026†	295.6	322.0	[100]	ug/L	09:38:27
1	Si 251.611†	24511.6	24350.2	[500]	ug/L	09:38:07
1	Sn 189.927†	971.4	981.7	[100]	ug/L	09:38:27
1	Sr 421.552†	6665.1	6633.3	[100]	ug/L	09:37:49
1	Ti 334.940†	74671.4	76995.2	[100]	ug/L	09:38:07
1	Tl 190.801†	543.4	613.6	[100]	ug/L	09:38:27
1	U 409.014†	237.6	4076.2	[100]	ug/L	09:38:07
1	V 292.402†	15937.1	17849.1	[100]	ug/L	09:38:07
1	Zn 213.857†	19207.8	18397.8	[100]	ug/L	09:38:07
1	SiO2†	24699.0	24498.4	[1069.5]	ug/L	09:39:24
2	Sc 361.383	1055210.6	1055210.6	99.465	%	09:38:33
2	Sc Radial	5609.2	5609.2	101	%	09:37:55
2	Y 371.029	845639.6	845639.6	99.112	%	09:38:33
2	Y RADIAL	4877.8	4877.8	101.3	%	09:37:55
2	Ag 328.068†	26093.0	25594.7	[100]	ug/L	09:38:33
2	As 188.979†	391.5	430.5	[100]	ug/L	09:38:53
2	B 249.677†	5785.4	6198.0	[100]	ug/L	09:38:33
2	Ba 233.527†	20469.8	20555.5	[100]	ug/L	09:38:33
2	Be 313.107†	317338.9	326360.9	[100]	ug/L	09:38:33
2	Cd 226.502†	13157.8	13506.1	[100]	ug/L	09:38:53
2	Co 228.616†	8095.3	8229.3	[100]	ug/L	09:38:53
2	Cr 267.716†	11903.1	11995.7	[100]	ug/L	09:38:33
2	Cu 324.752†	50854.5	40936.6	[100]	ug/L	09:38:33
2	K 766.490 Radial†	3819.2	2315.9	[1000]	ug/L	09:37:55
2	Mn 257.610†	130782.0	130658.0	[100]	ug/L	09:38:33
2	Mo 202.031†	2603.2	2585.4	[100]	ug/L	09:38:53
2	Ni 231.604†	6538.1	6425.0	[100]	ug/L	09:38:53
2	P 214.914†	1796.1	1468.9	[500]	ug/L	09:38:53
2	Pb 220.353†	1350.1	1386.4	[100]	ug/L	09:38:53
2	S 181.975 Axial†	299.5	233.3	[200]	ug/L	09:38:53
2	Sb 206.836†	557.9	515.5	[100]	ug/L	09:38:53
2	Se 196.026†	303.1	326.3	[100]	ug/L	09:38:53
2	Si 251.611†	24790.1	24363.3	[500]	ug/L	09:38:33
2	Sn 189.927†	961.1	960.8	[100]	ug/L	09:38:53
2	Sr 421.552†	6653.8	6595.7	[100]	ug/L	09:37:55
2	Ti 334.940†	75608.5	77124.2	[100]	ug/L	09:38:33
2	Tl 190.801†	543.4	607.7	[100]	ug/L	09:38:53

2	U 409.014†	413.3	4250.3	[100]	ug/L	09:38:33
2	V 292.402†	16008.2	17747.0	[100]	ug/L	09:38:33
2	Zn 213.857†	19396.4	18378.2	[100]	ug/L	09:38:33
2	SiO2†	24456.8	23985.9	[1069.5]	ug/L	09:39:29
3	Sc 361.383	1055128.5	1055128.5	99.458	%	09:38:59
3	Sc Radial	5546.9	5546.9	99.7	%	09:38:00
3	Y 371.029	846188.4	846188.4	99.177	%	09:38:59
3	Y RADIAL	4841.3	4841.3	100.5	%	09:38:00
3	Ag 328.068†	26072.8	25576.4	[100]	ug/L	09:38:59
3	As 188.979†	395.1	434.2	[100]	ug/L	09:39:19
3	B 249.677†	5816.4	6229.6	[100]	ug/L	09:38:59
3	Ba 233.527†	20495.9	20583.4	[100]	ug/L	09:38:59
3	Be 313.107†	317444.7	326492.1	[100]	ug/L	09:38:59
3	Cd 226.502†	13125.5	13474.7	[100]	ug/L	09:39:19
3	Co 228.616†	8079.1	8213.6	[100]	ug/L	09:39:19
3	Cr 267.716†	11888.0	11981.4	[100]	ug/L	09:38:59
3	Cu 324.752†	50658.9	40743.9	[100]	ug/L	09:38:59
3	K 766.490 Radial†	3845.0	2384.3	[1000]	ug/L	09:38:00
3	Mn 257.610†	131078.2	130966.0	[100]	ug/L	09:38:59
3	Mo 202.031†	2603.9	2586.4	[100]	ug/L	09:39:19
3	Ni 231.604†	6537.8	6425.2	[100]	ug/L	09:39:19
3	P 214.914†	1782.9	1455.7	[500]	ug/L	09:39:19
3	Pb 220.353†	1365.6	1402.1	[100]	ug/L	09:39:19
3	S 181.975 Axial†	309.0	242.8	[200]	ug/L	09:39:19
3	Sb 206.836†	556.1	513.7	[100]	ug/L	09:39:19
3	Se 196.026†	279.5	302.7	[100]	ug/L	09:39:19
3	Si 251.611†	24805.8	24381.0	[500]	ug/L	09:38:59
3	Sn 189.927†	963.2	962.9	[100]	ug/L	09:39:19
3	Sr 421.552†	6580.5	6596.3	[100]	ug/L	09:38:00
3	Ti 334.940†	75559.4	77080.7	[100]	ug/L	09:38:59
3	Tl 190.801†	539.9	604.2	[100]	ug/L	09:39:19
3	U 409.014†	236.8	4072.8	[100]	ug/L	09:38:59
3	V 292.402†	16050.8	17791.1	[100]	ug/L	09:38:59
3	Zn 213.857†	19356.9	18340.1	[100]	ug/L	09:38:59
3	SiO2†	24872.7	24406.0	[1069.5]	ug/L	09:39:34

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051414.5	6504.03	0.62%	99.108	%
Sc Radial	5581.0	31.57	0.57%	100	%
Y 371.029	843532.3	4134.44	0.49%	98.865	%
Y RADIAL	4862.3	18.86	0.39%	101.0	%
Ag 328.068†	25612.5	47.66	0.19%	[100]	ug/L
As 188.979†	433.8	3.14	0.72%	[100]	ug/L
B 249.677†	6196.0	34.67	0.56%	[100]	ug/L
Ba 233.527†	20605.7	64.24	0.31%	[100]	ug/L
Be 313.107†	326647.1	387.66	0.12%	[100]	ug/L
Cd 226.502†	13534.9	78.59	0.58%	[100]	ug/L
Co 228.616†	8249.3	48.95	0.59%	[100]	ug/L
Cr 267.716†	11983.6	11.20	0.09%	[100]	ug/L
Cu 324.752†	40812.2	107.89	0.26%	[100]	ug/L
K 766.490 Radial†	2366.4	44.37	1.88%	[1000]	ug/L
Mn 257.610†	130755.9	182.06	0.14%	[100]	ug/L
Mo 202.031†	2587.5	2.81	0.11%	[100]	ug/L
Ni 231.604†	6444.5	33.62	0.52%	[100]	ug/L
P 214.914†	1465.2	8.32	0.57%	[500]	ug/L
Pb 220.353†	1393.9	7.86	0.56%	[100]	ug/L
S 181.975 Axial†	237.8	4.79	2.02%	[200]	ug/L
Sb 206.836†	513.3	2.30	0.45%	[100]	ug/L
Se 196.026†	317.0	12.62	3.98%	[100]	ug/L
Si 251.611†	24364.8	15.45	0.06%	[500]	ug/L
Sn 189.927†	968.5	11.51	1.19%	[100]	ug/L
Sr 421.552†	6608.4	21.50	0.33%	[100]	ug/L
Ti 334.940†	77066.7	65.66	0.09%	[100]	ug/L
Tl 190.801†	608.5	4.73	0.78%	[100]	ug/L
U 409.014†	4133.1	101.47	2.46%	[100]	ug/L
V 292.402†	17795.7	51.23	0.29%	[100]	ug/L
Zn 213.857†	18372.0	29.33	0.16%	[100]	ug/L
SiO2†	24296.8	273.12	1.12%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/8/2009 09:41:45
Data Type: Reprocessed on 7/8/2009 11:40:06

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1064607.4	1064607.4	100.35	%	09:44:57
1	Sc Radial	5461.3	5461.3	98.1	%	09:43:38
1	Y 371.029	846628.0	846628.0	99.228	%	09:44:57
1	Y RADIAL	4696.9	4696.9	97.53	%	09:43:38
1	Ag 328.068†	126803.5	125721.3	[500]	ug/L	09:44:57
1	Al 396.153Radial†	5174.4	5364.7	[5000]	ug/L	09:43:38
1	As 188.979†	2072.9	2102.5	[500]	ug/L	09:45:17
1	B 249.677†	31257.3	31529.4	[500]	ug/L	09:44:57
1	Ba 233.527†	98225.0	97857.1	[500]	ug/L	09:44:57
1	Be 313.107†	1595363.0	1597097.3	[500]	ug/L	09:44:57
1	Ca 317.933Radial†	1956.1	1976.3	[5000]	ug/L	09:43:58
1	Cd 226.502†	66327.4	66373.0	[500]	ug/L	09:44:57
1	Co 228.616†	39082.0	39035.6	[500]	ug/L	09:45:17
1	Cr 267.716†	58209.2	58034.2	[500]	ug/L	09:44:57
1	Cu 324.752†	212770.9	201835.2	[500]	ug/L	09:44:57
1	K 766.490 Radial†	12752.1	11520.9	[5000]	ug/L	09:43:38
1	Mg 279.077 IEC†	62.9	63.9	[5000]	ug/L	09:43:58
1	Mn 257.610†	630898.9	627864.5	[500]	ug/L	09:44:57
1	Mo 202.031†	12608.3	12532.4	[500]	ug/L	09:45:17
1	Ni 231.604†	30724.5	30468.8	[500]	ug/L	09:45:17
1	P 214.914†	7382.5	7019.8	[2500]	ug/L	09:45:17
1	Pb 220.353†	6649.1	6654.9	[500]	ug/L	09:45:17
1	S 181.975 Axial†	1242.8	1170.6	[1000]	ug/L	09:45:17
1	Sb 206.836†	2606.1	2551.6	[500]	ug/L	09:45:17
1	Se 196.026†	1514.2	1530.5	[500]	ug/L	09:45:17
1	Si 251.611†	122499.0	121510.3	[2500]	ug/L	09:44:57
1	Sn 189.927†	4778.2	4756.0	[500]	ug/L	09:45:17
1	Sr 421.552†	28452.4	28986.5	[500]	ug/L	09:43:38
1	Ti 334.940†	380085.1	379864.5	[500]	ug/L	09:44:57
1	Tl 190.801†	2870.2	2921.5	[500]	ug/L	09:45:17
1	U 409.014†	15794.5	19574.0	[500]	ug/L	09:44:57
1	V 292.402†	85607.5	86960.7	[500]	ug/L	09:44:57
1	Zn 213.857†	90358.1	88919.6	[500]	ug/L	09:44:57
1	SiO2†	122852.3	121820.1	[5347.5]	ug/L	09:46:17
2	Sc 361.383	1044221.1	1044221.1	98.429	%	09:45:24
2	Sc Radial	5389.0	5389.0	96.8	%	09:44:03
2	Y 371.029	829032.4	829032.4	97.166	%	09:45:24
2	Y RADIAL	4652.3	4652.3	96.61	%	09:44:03
2	Ag 328.068†	124967.2	126322.6	[500]	ug/L	09:45:24
2	Al 396.153Radial†	5096.7	5355.2	[5000]	ug/L	09:44:03
2	As 188.979†	2073.2	2143.2	[500]	ug/L	09:45:44
2	B 249.677†	30724.1	31595.8	[500]	ug/L	09:45:24
2	Ba 233.527†	97214.1	98740.9	[500]	ug/L	09:45:24
2	Be 313.107†	1569041.1	1601392.7	[500]	ug/L	09:45:24
2	Ca 317.933Radial†	1923.3	1969.1	[5000]	ug/L	09:44:23
2	Cd 226.502†	65506.0	66828.8	[500]	ug/L	09:45:24
2	Co 228.616†	39155.7	39870.9	[500]	ug/L	09:45:44
2	Cr 267.716†	57418.9	58363.7	[500]	ug/L	09:45:24
2	Cu 324.752†	208685.4	201823.9	[500]	ug/L	09:45:24
2	K 766.490 Radial†	12541.0	11477.1	[5000]	ug/L	09:44:03
2	Mg 279.077 IEC†	61.0	62.8	[5000]	ug/L	09:44:23
2	Mn 257.610†	623183.7	632300.1	[500]	ug/L	09:45:24
2	Mo 202.031†	12645.3	12815.3	[500]	ug/L	09:45:44
2	Ni 231.604†	30816.1	31159.5	[500]	ug/L	09:45:44
2	P 214.914†	7382.7	7163.6	[2500]	ug/L	09:45:44
2	Pb 220.353†	6652.5	6787.7	[500]	ug/L	09:45:44
2	S 181.975 Axial†	1248.0	1200.1	[1000]	ug/L	09:45:44
2	Sb 206.836†	2600.7	2596.7	[500]	ug/L	09:45:44

2	Se 196.026†	1507.7	1553.3	[500]	ug/L	09:45:44
2	Si 251.611†	120777.2	122144.2	[2500]	ug/L	09:45:24
2	Sn 189.927†	4796.7	4867.8	[500]	ug/L	09:45:44
2	Sr 421.552†	27876.2	28780.3	[500]	ug/L	09:44:03
2	Ti 334.940†	374439.3	381523.0	[500]	ug/L	09:45:24
2	Tl 190.801†	2885.2	2992.7	[500]	ug/L	09:45:44
2	U 409.014†	15437.6	19518.7	[500]	ug/L	09:45:24
2	V 292.402†	84337.2	87335.7	[500]	ug/L	09:45:24
2	Zn 213.857†	89070.9	89369.7	[500]	ug/L	09:45:24
2	SiO2†	121800.6	123141.7	[5347.5]	ug/L	09:46:22
3	Sc 361.383	1046590.0	1046590.0	98.653	%	09:45:52
3	Sc Radial	5352.8	5352.8	96.2	%	09:44:28
3	Y 371.029	832934.3	832934.3	97.623	%	09:45:52
3	Y RADIAL	4634.7	4634.7	96.24	%	09:44:28
3	Ag 328.068†	125631.5	126708.6	[500]	ug/L	09:45:52
3	Al 396.153Radial†	5102.6	5396.9	[5000]	ug/L	09:44:28
3	As 188.979†	2098.8	2164.3	[500]	ug/L	09:46:12
3	B 249.677†	30976.6	31781.2	[500]	ug/L	09:45:52
3	Ba 233.527†	97581.9	98890.3	[500]	ug/L	09:45:52
3	Be 313.107†	1579797.0	1608687.5	[500]	ug/L	09:45:52
3	Ca 317.933Radial†	1928.2	1987.6	[5000]	ug/L	09:44:48
3	Cd 226.502†	65857.4	67034.4	[500]	ug/L	09:45:52
3	Co 228.616†	39345.8	39973.6	[500]	ug/L	09:46:12
3	Cr 267.716†	57872.1	58691.1	[500]	ug/L	09:45:52
3	Cu 324.752†	210164.3	202843.1	[500]	ug/L	09:45:52
3	K 766.490 Radial†	12562.3	11586.7	[5000]	ug/L	09:44:28
3	Mg 279.077 IEC†	60.6	62.8	[5000]	ug/L	09:44:48
3	Mn 257.610†	626191.1	633915.6	[500]	ug/L	09:45:52
3	Mo 202.031†	12686.5	12828.0	[500]	ug/L	09:46:12
3	Ni 231.604†	31017.8	31293.1	[500]	ug/L	09:46:12
3	P 214.914†	7417.6	7182.0	[2500]	ug/L	09:46:12
3	Pb 220.353†	6707.4	6828.1	[500]	ug/L	09:46:12
3	S 181.975 Axial†	1249.2	1198.4	[1000]	ug/L	09:46:12
3	Sb 206.836†	2624.9	2615.3	[500]	ug/L	09:46:12
3	Se 196.026†	1511.8	1554.0	[500]	ug/L	09:46:12
3	Si 251.611†	121349.2	122446.3	[2500]	ug/L	09:45:52
3	Sn 189.927†	4809.3	4869.5	[500]	ug/L	09:46:12
3	Sr 421.552†	27833.2	28930.1	[500]	ug/L	09:44:28
3	Ti 334.940†	376623.4	382875.9	[500]	ug/L	09:45:52
3	Tl 190.801†	2901.3	3002.3	[500]	ug/L	09:46:12
3	U 409.014†	15617.2	19665.2	[500]	ug/L	09:45:52
3	V 292.402†	84908.9	87721.2	[500]	ug/L	09:45:52
3	Zn 213.857†	89582.5	89683.5	[500]	ug/L	09:45:52
3	SiO2†	122195.3	123261.7	[5347.5]	ug/L	09:46:27

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051806.2	11149.30	1.06%	99.144	%
Sc Radial	5401.0	55.21	1.02%	97.1	%
Y 371.029	836198.2	9240.74	1.11%	98.006	%
Y RADIAL	4661.3	32.06	0.69%	96.79	%
Ag 328.068†	126250.8	497.54	0.39%	[500]	ug/L
Al 396.153Radial†	5372.3	21.86	0.41%	[5000]	ug/L
As 188.979†	2136.7	31.42	1.47%	[500]	ug/L
B 249.677†	31635.5	130.46	0.41%	[500]	ug/L
Ba 233.527†	98496.1	558.43	0.57%	[500]	ug/L
Be 313.107†	1602392.5	5859.39	0.37%	[500]	ug/L
Ca 317.933Radial†	1977.7	9.33	0.47%	[5000]	ug/L
Cd 226.502†	66745.4	338.47	0.51%	[500]	ug/L
Co 228.616†	39626.7	514.43	1.30%	[500]	ug/L
Cr 267.716†	58363.0	328.45	0.56%	[500]	ug/L
Cu 324.752†	202167.4	585.22	0.29%	[500]	ug/L
K 766.490 Radial†	11528.2	55.20	0.48%	[5000]	ug/L
Mg 279.077 IEC†	63.2	0.61	0.97%	[5000]	ug/L
Mn 257.610†	631360.0	3133.16	0.50%	[500]	ug/L
Mo 202.031†	12725.2	167.14	1.31%	[500]	ug/L
Ni 231.604†	30973.8	442.43	1.43%	[500]	ug/L
P 214.914†	7121.8	88.83	1.25%	[2500]	ug/L
Pb 220.353†	6756.9	90.64	1.34%	[500]	ug/L

S 181.975 Axial†	1189.7	16.55	1.39%	[1000]	ug/L
Sb 206.836†	2587.9	32.79	1.27%	[500]	ug/L
Se 196.026†	1546.0	13.38	0.87%	[500]	ug/L
Si 251.611†	122033.6	477.69	0.39%	[2500]	ug/L
Sn 189.927†	4831.1	65.06	1.35%	[500]	ug/L
Sr 421.552†	28899.0	106.56	0.37%	[500]	ug/L
Ti 334.940†	381421.2	1508.28	0.40%	[500]	ug/L
Tl 190.801†	2972.2	44.12	1.48%	[500]	ug/L
U 409.014†	19586.0	73.99	0.38%	[500]	ug/L
V 292.402†	87339.2	380.24	0.44%	[500]	ug/L
Zn 213.857†	89324.3	383.98	0.43%	[500]	ug/L
SiO2†	122741.2	799.91	0.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/8/2009 09:48:38
Data Type: Reprocessed on 7/8/2009 11:40:07

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1052663.5	1052663.5	99.225	%	09:51:50
1	Sc Radial	5805.9	5805.9	104	%	09:50:31
1	Y 371.029	835045.6	835045.6	97.871	%	09:51:50
1	Y RADIAL	5007.7	5007.7	104.0	%	09:50:31
1	Ag 328.068†	252879.2	254215.1	[1000]	ug/L	09:51:55
1	Al 396.153Radial†	10753.9	10399.5	[10000]	ug/L	09:50:31
1	As 188.979†	4213.7	4283.5	[1000]	ug/L	09:52:15
1	B 249.677†	63888.7	64769.0	[1000]	ug/L	09:51:55
1	Ba 233.527†	197687.1	199206.4	[1000]	ug/L	09:51:55
1	Be 313.107†	3194923.7	3227185.7	[1000]	ug/L	09:51:50
1	Ca 317.933Radial†	4055.7	3870.4	[10000]	ug/L	09:50:31
1	Cd 226.502†	133744.7	135066.6	[1000]	ug/L	09:51:55
1	Co 228.616†	80516.0	81235.0	[1000]	ug/L	09:51:55
1	Cr 267.716†	117606.8	118553.7	[1000]	ug/L	09:51:55
1	Cu 324.752†	414400.4	407444.8	[1000]	ug/L	09:51:55
1	Fe 238.204 Radial†	287.2	275.0	[10000]	ug/L	09:50:51
1	K 766.490 Radial†	24918.9	22410.9	[10000]	ug/L	09:50:31
1	Mg 279.077 IEC†	131.8	126.2	[10000]	ug/L	09:50:51
1	Mn 257.610†	1260730.8	1269747.4	[1000]	ug/L	09:51:50
1	Mo 202.031†	24798.5	24960.4	[1000]	ug/L	09:52:15
1	Na 589.592 Radial†	3522.0	3546.2	[10000]	ug/L	09:50:31
1	Ni 231.604†	62750.5	63092.2	[1000]	ug/L	09:51:55
1	P 214.914†	14401.2	14176.7	[5000]	ug/L	09:52:15
1	Pb 220.353†	13201.7	13333.9	[1000]	ug/L	09:52:15
1	S 181.975 Axial†	2419.1	2370.2	[2000]	ug/L	09:52:15
1	Sb 206.836†	5119.1	5113.6	[1000]	ug/L	09:52:15
1	Se 196.026†	3047.7	3093.1	[1000]	ug/L	09:52:15
1	Si 251.611†	242154.4	243485.1	[5000]	ug/L	09:51:55
1	Sn 189.927†	9581.3	9650.6	[1000]	ug/L	09:52:15
1	Sr 421.552†	68083.4	65250.5	[1000]	ug/L	09:50:31
1	Ti 334.940†	758941.9	765976.9	[1000]	ug/L	09:51:50
1	Tl 190.801†	5824.9	5931.8	[1000]	ug/L	09:52:15
1	U 409.014†	36638.9	40759.8	[1000]	ug/L	09:51:55
1	V 292.402†	175178.4	178199.0	[1000]	ug/L	09:51:55
1	Zn 213.857†	180211.9	180496.5	[1000]	ug/L	09:51:55
1	SiO2†	241738.8	243023.9	[10695]	ug/L	09:53:25
2	Sc 361.383	1058804.9	1058804.9	99.804	%	09:52:22
2	Sc Radial	5593.3	5593.3	101	%	09:50:56
2	Y 371.029	839441.5	839441.5	98.386	%	09:52:22
2	Y RADIAL	4835.2	4835.2	100.4	%	09:50:56
2	Ag 328.068†	252282.7	252139.2	[1000]	ug/L	09:52:27
2	Al 396.153Radial†	10627.1	10665.3	[10000]	ug/L	09:50:56
2	As 188.979†	4198.8	4244.0	[1000]	ug/L	09:52:48
2	B 249.677†	63795.4	64302.1	[1000]	ug/L	09:52:27
2	Ba 233.527†	196404.5	196765.7	[1000]	ug/L	09:52:27
2	Be 313.107†	3201165.9	3214763.8	[1000]	ug/L	09:52:22
2	Ca 317.933Radial†	4012.0	3974.7	[10000]	ug/L	09:50:56
2	Cd 226.502†	132496.4	133034.0	[1000]	ug/L	09:52:27
2	Co 228.616†	79902.6	80149.8	[1000]	ug/L	09:52:27
2	Cr 267.716†	116813.2	117071.0	[1000]	ug/L	09:52:27
2	Cu 324.752†	414708.3	405330.8	[1000]	ug/L	09:52:27
2	Fe 238.204 Radial†	289.6	287.8	[10000]	ug/L	09:51:16
2	K 766.490 Radial†	24624.2	23025.9	[10000]	ug/L	09:50:56
2	Mg 279.077 IEC†	127.7	126.9	[10000]	ug/L	09:51:16
2	Mn 257.610†	1263110.3	1264761.9	[1000]	ug/L	09:52:22
2	Mo 202.031†	24699.2	24715.9	[1000]	ug/L	09:52:48
2	Na 589.592 Radial†	3465.5	3618.3	[10000]	ug/L	09:50:56
2	Ni 231.604†	62172.3	62146.1	[1000]	ug/L	09:52:27

2	P 214.914†	14342.8	14034.0	[5000]	ug/L	09:52:48
2	Pb 220.353†	13188.3	13243.2	[1000]	ug/L	09:52:48
2	S 181.975 Axial†	2410.9	2347.8	[2000]	ug/L	09:52:48
2	Sb 206.836†	5080.8	5045.3	[1000]	ug/L	09:52:48
2	Se 196.026†	3016.0	3043.5	[1000]	ug/L	09:52:48
2	Si 251.611†	241232.5	241145.8	[5000]	ug/L	09:52:27
2	Sn 189.927†	9534.0	9547.2	[1000]	ug/L	09:52:48
2	Sr 421.552†	66922.4	66576.7	[1000]	ug/L	09:50:56
2	Ti 334.940†	761509.7	764113.3	[1000]	ug/L	09:52:22
2	Tl 190.801†	5811.7	5884.5	[1000]	ug/L	09:52:48
2	U 409.014†	36579.5	40486.0	[1000]	ug/L	09:52:27
2	V 292.402†	173954.8	175949.0	[1000]	ug/L	09:52:27
2	Zn 213.857†	179274.3	178503.7	[1000]	ug/L	09:52:27
2	SiO2†	237359.4	237222.8	[10695]	ug/L	09:53:31
3	Sc 361.383	1057400.6	1057400.6	99.672	%	09:52:54
3	Sc Radial	5464.1	5464.1	98.2	%	09:51:21
3	Y 371.029	838883.9	838883.9	98.320	%	09:52:54
3	Y RADIAL	4771.4	4771.4	99.08	%	09:51:21
3	Ag 328.068†	251287.3	251476.2	[1000]	ug/L	09:53:00
3	Al 396.153Radial†	10656.6	10945.2	[10000]	ug/L	09:51:21
3	As 188.979†	4194.8	4245.6	[1000]	ug/L	09:53:20
3	B 249.677†	63568.3	64159.1	[1000]	ug/L	09:53:00
3	Ba 233.527†	196293.8	196915.9	[1000]	ug/L	09:53:00
3	Be 313.107†	3195458.9	3213297.7	[1000]	ug/L	09:52:54
3	Ca 317.933Radial†	4035.9	4093.3	[10000]	ug/L	09:51:21
3	Cd 226.502†	132396.2	133109.8	[1000]	ug/L	09:53:00
3	Co 228.616†	79823.3	80176.5	[1000]	ug/L	09:53:00
3	Cr 267.716†	116636.7	117049.4	[1000]	ug/L	09:53:00
3	Cu 324.752†	412621.4	403788.9	[1000]	ug/L	09:53:00
3	Fe 238.204 Radial†	285.3	290.2	[10000]	ug/L	09:51:41
3	K 766.490 Radial†	24699.5	23681.6	[10000]	ug/L	09:51:21
3	Mg 279.077 IEC†	125.8	127.9	[10000]	ug/L	09:51:41
3	Mn 257.610†	1259027.5	1262346.4	[1000]	ug/L	09:52:54
3	Mo 202.031†	24845.2	24895.3	[1000]	ug/L	09:53:20
3	Na 589.592 Radial†	3441.7	3675.5	[10000]	ug/L	09:51:21
3	Ni 231.604†	62152.7	62209.1	[1000]	ug/L	09:53:00
3	P 214.914†	14439.3	14149.9	[5000]	ug/L	09:53:20
3	Pb 220.353†	13219.9	13292.5	[1000]	ug/L	09:53:20
3	S 181.975 Axial†	2417.3	2357.4	[2000]	ug/L	09:53:20
3	Sb 206.836†	5111.4	5082.8	[1000]	ug/L	09:53:20
3	Se 196.026†	3040.7	3072.3	[1000]	ug/L	09:53:20
3	Si 251.611†	240711.3	240943.9	[5000]	ug/L	09:53:00
3	Sn 189.927†	9583.2	9609.3	[1000]	ug/L	09:53:20
3	Sr 421.552†	66963.1	68191.7	[1000]	ug/L	09:51:21
3	Ti 334.940†	758629.2	762236.6	[1000]	ug/L	09:52:54
3	Tl 190.801†	5861.7	5942.4	[1000]	ug/L	09:53:20
3	U 409.014†	36527.5	40482.6	[1000]	ug/L	09:53:00
3	V 292.402†	173694.3	175919.0	[1000]	ug/L	09:53:00
3	Zn 213.857†	178849.9	178316.4	[1000]	ug/L	09:53:00
3	SiO2†	243076.9	243275.0	[10695]	ug/L	09:53:36

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1056289.6	3217.89	0.30%	99.567	%
Sc Radial	5621.1	172.60	3.07%	101	%
Y 371.029	837790.3	2393.27	0.29%	98.192	%
Y RADIAL	4871.4	122.27	2.51%	101.2	%
Ag 328.068†	252610.2	1428.92	0.57%	[1000]	ug/L
Al 396.153Radial†	10670.0	272.89	2.56%	[10000]	ug/L
As 188.979†	4257.7	22.40	0.53%	[1000]	ug/L
B 249.677†	64410.1	318.97	0.50%	[1000]	ug/L
Ba 233.527†	197629.3	1367.84	0.69%	[1000]	ug/L
Be 313.107†	3218415.7	7630.29	0.24%	[1000]	ug/L
Ca 317.933Radial†	3979.5	111.54	2.80%	[10000]	ug/L
Cd 226.502†	133736.8	1152.25	0.86%	[1000]	ug/L
Co 228.616†	80520.5	618.97	0.77%	[1000]	ug/L
Cr 267.716†	117558.0	862.30	0.73%	[1000]	ug/L
Cu 324.752†	405521.5	1835.38	0.45%	[1000]	ug/L
Fe 238.204 Radial†	284.3	8.19	2.88%	[10000]	ug/L

K 766.490 Radial†	23039.5	635.42	2.76%	[10000]	ug/L
Mg 279.077 IEC†	127.0	0.88	0.69%	[10000]	ug/L
Mn 257.610†	1265618.6	3774.16	0.30%	[1000]	ug/L
Mo 202.031†	24857.2	126.63	0.51%	[1000]	ug/L
Na 589.592 Radial†	3613.3	64.84	1.79%	[10000]	ug/L
Ni 231.604†	62482.4	529.00	0.85%	[1000]	ug/L
P 214.914†	14120.2	75.84	0.54%	[5000]	ug/L
Pb 220.353†	13289.9	45.38	0.34%	[1000]	ug/L
S 181.975 Axial†	2358.5	11.23	0.48%	[2000]	ug/L
Sb 206.836†	5080.6	34.22	0.67%	[1000]	ug/L
Se 196.026†	3069.7	24.93	0.81%	[1000]	ug/L
Si 251.611†	241858.2	1412.48	0.58%	[5000]	ug/L
Sn 189.927†	9602.4	52.05	0.54%	[1000]	ug/L
Sr 421.552†	66673.0	1472.96	2.21%	[1000]	ug/L
Ti 334.940†	764108.9	1870.18	0.24%	[1000]	ug/L
Tl 190.801†	5919.6	30.81	0.52%	[1000]	ug/L
U 409.014†	40576.1	159.04	0.39%	[1000]	ug/L
V 292.402†	176689.0	1307.77	0.74%	[1000]	ug/L
Zn 213.857†	179105.5	1208.27	0.67%	[1000]	ug/L
SiO2†	241173.9	3424.04	1.42%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/8/2009 09:55:46
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1045205.1	1045205.1	98.522	%	09:58:57
1	Sc Radial	5445.4	5445.4	97.9	%	09:58:00
1	Y 371.029	824719.2	824719.2	96.660	%	09:58:57
1	Y RADIAL	4697.0	4697.0	97.54	%	09:58:00
1	Al 396.153Radial†	53617.0	54885.6	[50000]	ug/L	09:57:40
1	Ca 317.933Radial†	19630.1	20043.9	[50000]	ug/L	09:57:40
1	Fe 238.204 Radial†	559.3	571.2	[20000]	ug/L	09:58:00
1	Mg 279.077 IEC†	611.6	624.9	[50000]	ug/L	09:58:00
1	Na 589.592 Radial†	7093.1	7419.2	[20000]	ug/L	09:57:40
2	Sc 361.383	1039938.4	1039938.4	98.026	%	09:59:03
2	Sc Radial	5322.6	5322.6	95.6	%	09:58:25
2	Y 371.029	821364.5	821364.5	96.267	%	09:59:03
2	Y RADIAL	4573.5	4573.5	94.97	%	09:58:25
2	Al 396.153Radial†	52922.6	55423.3	[50000]	ug/L	09:58:05
2	Ca 317.933Radial†	19349.8	20213.5	[50000]	ug/L	09:58:05
2	Fe 238.204 Radial†	548.4	573.0	[20000]	ug/L	09:58:25
2	Mg 279.077 IEC†	611.0	638.7	[50000]	ug/L	09:58:25
2	Na 589.592 Radial†	6990.6	7479.1	[20000]	ug/L	09:58:05
3	Sc 361.383	1037774.1	1037774.1	97.822	%	09:59:09
3	Sc Radial	5437.5	5437.5	97.7	%	09:58:50
3	Y 371.029	819757.6	819757.6	96.079	%	09:59:09
3	Y RADIAL	4679.6	4679.6	97.17	%	09:58:50
3	Al 396.153Radial†	53368.0	54709.6	[50000]	ug/L	09:58:30
3	Ca 317.933Radial†	19552.5	19993.3	[50000]	ug/L	09:58:30
3	Fe 238.204 Radial†	554.5	567.2	[20000]	ug/L	09:58:50
3	Mg 279.077 IEC†	615.8	630.0	[50000]	ug/L	09:58:50
3	Na 589.592 Radial†	7083.3	7419.6	[20000]	ug/L	09:58:30

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1040972.5	3821.89	0.37%	98.123	%
Sc Radial	5401.8	68.73	1.27%	97.1	%
Y 371.029	821947.1	2531.58	0.31%	96.335	%
Y RADIAL	4650.1	66.85	1.44%	96.56	%
Al 396.153Radial†	55006.2	371.83	0.68%	[50000]	ug/L
Ca 317.933Radial†	20083.6	115.30	0.57%	[50000]	ug/L
Fe 238.204 Radial†	570.5	2.97	0.52%	[20000]	ug/L
Mg 279.077 IEC†	631.2	6.96	1.10%	[50000]	ug/L
Na 589.592 Radial†	7439.3	34.51	0.46%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	252.6	0.00000	0.999999	
Al 396.153Radial	3	Lin Thru 0	0.0	1.099	0.00000	0.999981	
As 188.979	3	Lin Thru 0	0.0	4.261	0.00000	0.999998	
B 249.677	3	Lin Thru 0	0.0	64.16	0.00000	0.999970	
Ba 233.527	3	Lin Thru 0	0.0	197.6	0.00000	0.999992	
Be 313.107	3	Lin Thru 0	0.0	3216	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.4015	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	133.7	0.00000	0.999999	
Co 228.616	3	Lin Thru 0	0.0	80.28	0.00000	0.999977	
Cr 267.716	3	Lin Thru 0	0.0	117.4	0.00000	0.999994	
Cu 324.752	3	Lin Thru 0	0.0	405.3	0.00000	0.999999	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0285	0.00000	0.999999	

K 766.490 Radial	3	Lin Thru 0	0.0	2.305	0.00000	0.999997
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0126	0.00000	0.999999
Mn 257.610	3	Lin Thru 0	0.0	1265	0.00000	0.999995
Mo 202.031	3	Lin Thru 0	0.0	24.98	0.00000	0.999950
Na 589.592 Radia	2	Lin Thru 0	0.0	0.3698	0.00000	0.999934
Ni 231.604	3	Lin Thru 0	0.0	62.39	0.00000	0.999990
P 214.914	3	Lin Thru 0	0.0	2.830	0.00000	0.999989
Pb 220.353	3	Lin Thru 0	0.0	13.34	0.00000	0.999970
S 181.975 Axial	3	Lin Thru 0	0.0	1.181	0.00000	0.999994
Sb 206.836	3	Lin Thru 0	0.0	5.100	0.00000	0.999972
Se 196.026	3	Lin Thru 0	0.0	3.075	0.00000	0.999992
Si 251.611	3	Lin Thru 0	0.0	48.46	0.00000	0.999993
Sn 189.927	3	Lin Thru 0	0.0	9.615	0.00000	0.999997
Sr 421.552	3	Lin Thru 0	0.0	64.91	0.00000	0.998518
Ti 334.940	3	Lin Thru 0	0.0	763.9	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	5.926	0.00000	0.999996
U 409.014	3	Lin Thru 0	0.0	40.30	0.00000	0.999901
V 292.402	3	Lin Thru 0	0.0	176.3	0.00000	0.999989
Zn 213.857	3	Lin Thru 0	0.0	179.1	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	22.63	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/8/2009 10:01:20
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1055963.1	1055963.1	99.536	%			10:04:31
1	Sc Radial	5613.9	5613.9	101	%			10:03:13
1	Y 371.029	843980.3	843980.3	98.918	%			10:04:31
1	Y RADIAL	4850.5	4850.5	100.7	%			10:03:13
1	Ag 328.068†	64392.7	64054.1	256.65	ug/L	256.65	ppb	10:04:31
1	Al 396.153Radial†	5477.4	5521.7	5003.5	ug/L	5003.5	ppb	10:03:13
1	As 188.979†	2018.5	2064.8	487.93	ug/L	487.93	ppb	10:04:51
1	B 249.677†	32013.9	32544.6	505.32	ug/L	505.32	ppb	10:04:31
1	Ba 233.527†	105864.5	106333.4	539.45	ug/L	539.45	ppb	10:04:31
1	Be 313.107†	824616.8	835774.7	261.06	ug/L	261.06	ppb	10:04:31
1	Ca 317.933Radial†	1980.0	1945.8	4846.6	ug/L	4846.6	ppb	10:03:33
1	Cd 226.502†	67172.4	67763.0	506.57	ug/L	506.57	ppb	10:04:31
1	Co 228.616†	37965.2	38232.5	476.49	ug/L	476.49	ppb	10:04:51
1	Cr 267.716†	59214.9	59519.4	507.63	ug/L	507.63	ppb	10:04:31
1	Cu 324.752†	223133.1	213981.3	528.24	ug/L	528.24	ppb	10:04:31
1	Fe 238.204 Radial†	145.6	144.0	5067.1	ug/L	5067.1	ppb	10:03:33
1	K 766.490 Radial†	7308.0	5771.0	2501.1	ug/L	2501.1	ppb	10:03:13
1	Mg 279.077 IEC†	65.6	64.8	5140.2	ug/L	5140.2	ppb	10:03:33
1	Mn 257.610†	657421.5	659657.3	521.87	ug/L	521.87	ppb	10:04:31
1	Mo 202.031†	13087.3	13116.5	525.36	ug/L	525.36	ppb	10:04:51
1	Na 589.592 Radial†	775.6	939.2	2539.6	ug/L	2539.6	ppb	10:03:33
1	Ni 231.604†	33519.4	33527.3	537.06	ug/L	537.06	ppb	10:04:31
1	P 214.914†	7515.0	7213.0	2469.3	ug/L	2469.3	ppb	10:04:51
1	Pb 220.353†	6757.4	6817.9	512.49	ug/L	512.49	ppb	10:04:51
1	S 181.975 Axial†	3135.7	3082.5	2608.2	ug/L	2608.2	ppb	10:04:51
1	Sb 206.836†	2711.8	2679.0	533.63	ug/L	533.63	ppb	10:04:51
1	Se 196.026†	7950.7	8009.4	2624.5	ug/L	2624.5	ppb	10:04:51
1	Si 251.611†	241856.0	242422.6	4990.7	ug/L	4990.7	ppb	10:04:31
1	Sn 189.927†	5102.2	5120.5	533.02	ug/L	533.02	ppb	10:04:51
1	Sr 421.552†	33892.8	33591.0	517.48	ug/L	517.48	ppb	10:03:13
1	Ti 334.940†	386933.6	389845.5	510.25	ug/L	510.25	ppb	10:04:31
1	Tl 190.801†	2870.1	2944.9	498.92	ug/L	498.92	ppb	10:04:51
1	U 409.014†	16738.6	20651.3	510.79	ug/L	510.79	ppb	10:04:31
1	V 292.402†	86386.8	88442.0	507.92	ug/L	507.92	ppb	10:04:31
1	Zn 213.857†	92798.7	92108.6	509.43	ug/L	509.43	ppb	10:04:31
1	SiO2†	240647.4	241166.2	10631	ug/L	10631	ppb	10:05:48
2	Sc 361.383	1061154.8	1061154.8	100.03	%			10:04:57
2	Sc Radial	5574.6	5574.6	100	%			10:03:38
2	Y 371.029	847082.8	847082.8	99.281	%			10:04:57
2	Y RADIAL	4828.4	4828.4	100.3	%			10:03:38
2	Ag 328.068†	64498.9	63843.8	255.81	ug/L	255.81	ppb	10:04:57
2	Al 396.153Radial†	5433.4	5516.1	4998.6	ug/L	4998.6	ppb	10:03:38
2	As 188.979†	2002.8	2039.2	481.91	ug/L	481.91	ppb	10:05:17
2	B 249.677†	32167.6	32540.8	505.28	ug/L	505.28	ppb	10:04:57
2	Ba 233.527†	106144.9	106093.4	538.23	ug/L	538.23	ppb	10:04:57
2	Be 313.107†	824477.0	831581.7	259.75	ug/L	259.75	ppb	10:04:57
2	Ca 317.933Radial†	1968.2	1947.8	4851.6	ug/L	4851.6	ppb	10:03:58
2	Cd 226.502†	67276.9	67537.3	504.89	ug/L	504.89	ppb	10:04:57
2	Co 228.616†	37893.6	37974.3	473.26	ug/L	473.26	ppb	10:05:17
2	Cr 267.716†	59208.0	59221.4	505.09	ug/L	505.09	ppb	10:04:57
2	Cu 324.752†	224086.8	213838.1	527.89	ug/L	527.89	ppb	10:04:57
2	Fe 238.204 Radial†	144.3	143.7	5055.6	ug/L	5055.6	ppb	10:03:58
2	K 766.490 Radial†	7330.2	5844.2	2532.9	ug/L	2532.9	ppb	10:03:38
2	Mg 279.077 IEC†	68.0	67.7	5365.3	ug/L	5365.3	ppb	10:03:58
2	Mn 257.610†	658788.7	657792.7	520.39	ug/L	520.39	ppb	10:04:57
2	Mo 202.031†	13056.1	13020.9	521.54	ug/L	521.54	ppb	10:05:17
2	Na 589.592 Radial†	764.6	933.7	2524.5	ug/L	2524.5	ppb	10:03:58
2	Ni 231.604†	33627.1	33470.2	536.15	ug/L	536.15	ppb	10:04:57

2	P 214.914†	7509.3	7170.5	2454.3 ug/L	2454.3 ppb	10:05:17
2	Pb 220.353†	6755.8	6783.1	509.87 ug/L	509.87 ppb	10:05:17
2	S 181.975 Axial†	3111.7	3043.1	2574.9 ug/L	2574.9 ppb	10:05:17
2	Sb 206.836†	2721.3	2675.2	532.82 ug/L	532.82 ppb	10:05:17
2	Se 196.026†	7952.2	7971.8	2612.2 ug/L	2612.2 ppb	10:05:17
2	Si 251.611†	242445.6	241823.3	4978.4 ug/L	4978.4 ppb	10:04:57
2	Sn 189.927†	5103.9	5097.1	530.59 ug/L	530.59 ppb	10:05:17
2	Sr 421.552†	33672.4	33607.8	517.74 ug/L	517.74 ppb	10:03:38
2	Ti 334.940†	387671.3	388681.1	508.73 ug/L	508.73 ppb	10:04:57
2	Tl 190.801†	2874.3	2934.9	497.25 ug/L	497.25 ppb	10:05:17
2	U 409.014†	16726.6	20557.1	508.46 ug/L	508.46 ppb	10:04:57
2	V 292.402†	86445.6	88076.2	505.80 ug/L	505.80 ppb	10:04:57
2	Zn 213.857†	92897.2	91751.0	507.43 ug/L	507.43 ppb	10:04:57
2	SiO2†	237580.2	236916.9	10443 ug/L	10443 ppb	10:05:54
3	Sc 361.383	1046189.2	1046189.2	98.615 %		10:05:23
3	Sc Radial	5513.6	5513.6	99.1 %		10:04:03
3	Y 371.029	834847.1	834847.1	97.847 %		10:05:23
3	Y RADIAL	4760.8	4760.8	98.86 %		10:04:03
3	Ag 328.068†	63545.9	63799.7	255.72 ug/L	255.72 ppb	10:05:23
3	Al 396.153Radial†	5377.5	5519.7	5001.6 ug/L	5001.6 ppb	10:04:03
3	As 188.979†	2001.8	2066.8	488.43 ug/L	488.43 ppb	10:05:43
3	B 249.677†	31566.1	32390.9	502.89 ug/L	502.89 ppb	10:05:23
3	Ba 233.527†	104823.4	106271.3	539.14 ug/L	539.14 ppb	10:05:23
3	Be 313.107†	812519.1	831246.8	259.64 ug/L	259.64 ppb	10:05:23
3	Ca 317.933Radial†	1993.1	1994.7	4968.4 ug/L	4968.4 ppb	10:04:23
3	Cd 226.502†	66540.9	67753.1	506.47 ug/L	506.47 ppb	10:05:23
3	Co 228.616†	37778.7	38399.7	478.58 ug/L	478.58 ppb	10:05:43
3	Cr 267.716†	58457.7	59307.3	505.83 ug/L	505.83 ppb	10:05:23
3	Cu 324.752†	219384.3	212274.2	524.04 ug/L	524.04 ppb	10:05:23
3	Fe 238.204 Radial†	150.5	151.5	5330.8 ug/L	5330.8 ppb	10:04:23
3	K 766.490 Radial†	7160.3	5753.8	2493.9 ug/L	2493.9 ppb	10:04:03
3	Mg 279.077 IEC†	66.6	67.1	5318.0 ug/L	5318.0 ppb	10:04:23
3	Mn 257.610†	650091.5	658394.7	520.91 ug/L	520.91 ppb	10:05:23
3	Mo 202.031†	13030.1	13181.3	527.98 ug/L	527.98 ppb	10:05:43
3	Na 589.592 Radial†	777.1	954.8	2581.6 ug/L	2581.6 ppb	10:04:23
3	Ni 231.604†	33207.7	33525.8	537.04 ug/L	537.04 ppb	10:05:23
3	P 214.914†	7486.1	7254.4	2484.4 ug/L	2484.4 ppb	10:05:43
3	Pb 220.353†	6694.0	6817.1	512.41 ug/L	512.41 ppb	10:05:43
3	S 181.975 Axial†	3113.7	3089.6	2614.2 ug/L	2614.2 ppb	10:05:43
3	Sb 206.836†	2715.5	2708.2	539.48 ug/L	539.48 ppb	10:05:43
3	Se 196.026†	7890.8	8023.3	2629.9 ug/L	2629.9 ppb	10:05:43
3	Si 251.611†	238657.3	241449.0	4970.5 ug/L	4970.5 ppb	10:05:23
3	Sn 189.927†	5067.2	5132.9	534.33 ug/L	534.33 ppb	10:05:43
3	Sr 421.552†	33182.0	33485.1	515.84 ug/L	515.84 ppb	10:04:03
3	Ti 334.940†	381414.1	387880.2	507.69 ug/L	507.69 ppb	10:05:23
3	Tl 190.801†	2873.4	2975.2	504.01 ug/L	504.01 ppb	10:05:43
3	U 409.014†	16428.1	20493.6	506.85 ug/L	506.85 ppb	10:05:23
3	V 292.402†	84994.3	87840.8	504.50 ug/L	504.50 ppb	10:05:23
3	Zn 213.857†	91642.8	91807.5	507.72 ug/L	507.72 ppb	10:05:23
3	SiO2†	239859.9	242626.3	10695 ug/L	10695 ppb	10:05:59

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054435.7	99.392	%	0.7163				0.72%
Sc Radial	5567.4	100	%	0.9				0.91%
Y 371.029	841970.1	98.682	%	0.7455				0.76%
Y RADIAL	4813.2	99.95	%	0.971				0.97%
Ag 328.068†	63899.2	256.06	ug/L	0.515	256.06	ppb	0.515	0.20%
QC value within limits for Ag 328.068 Recovery = 102.42%								
Al 396.153Radial†	5519.1	5001.2	ug/L	2.50	5001.2	ppb	2.50	0.05%
QC value within limits for Al 396.153Radial Recovery = 100.02%								
As 188.979†	2056.9	486.09	ug/L	3.628	486.09	ppb	3.628	0.75%
QC value within limits for As 188.979 Recovery = 97.22%								
B 249.677†	32492.1	504.50	ug/L	1.392	504.50	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.90%								
Ba 233.527†	106232.7	538.94	ug/L	0.633	538.94	ppb	0.633	0.12%
QC value within limits for Ba 233.527 Recovery = 107.79%								
Be 313.107†	832867.8	260.15	ug/L	0.787	260.15	ppb	0.787	0.30%
QC value within limits for Be 313.107 Recovery = 104.06%								

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Ca 317.933Radial†        1962.7      4888.9 ug/L         68.91      4888.9 ppb          68.91   1.41%
   QC value within limits for Ca 317.933Radial  Recovery = 97.78%
Cd 226.502†             67684.5      505.98 ug/L         0.945      505.98 ppb          0.945   0.19%
   QC value within limits for Cd 226.502  Recovery = 101.20%
Co 228.616†             38202.2      476.11 ug/L         2.677      476.11 ppb          2.677   0.56%
   QC value within limits for Co 228.616  Recovery = 95.22%
Cr 267.716†             59349.4      506.19 ug/L         1.307      506.19 ppb          1.307   0.26%
   QC value within limits for Cr 267.716  Recovery = 101.24%
Cu 324.752†            213364.5      526.72 ug/L         2.327      526.72 ppb          2.327   0.44%
   QC value within limits for Cu 324.752  Recovery = 105.34%
Fe 238.204 Radial†        146.4      5151.2 ug/L        155.66      5151.2 ppb         155.66   3.02%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.02%
K 766.490 Radial†        5789.7      2509.3 ug/L         20.76      2509.3 ppb          20.76   0.83%
   QC value within limits for K 766.490 Radial  Recovery = 100.37%
Mg 279.077 IEC†           66.5      5274.5 ug/L        118.66      5274.5 ppb         118.66   2.25%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.49%
Mn 257.610†            658614.9      521.06 ug/L         0.751      521.06 ppb          0.751   0.14%
   QC value within limits for Mn 257.610  Recovery = 104.21%
Mo 202.031†             13106.2      524.96 ug/L         3.238      524.96 ppb          3.238   0.62%
   QC value within limits for Mo 202.031  Recovery = 104.99%
Na 589.592 Radial†        942.6      2548.6 ug/L         29.60      2548.6 ppb          29.60   1.16%
   QC value within limits for Na 589.592 Radial  Recovery = 101.94%
Ni 231.604†             33507.8      536.75 ug/L         0.520      536.75 ppb          0.520   0.10%
   QC value within limits for Ni 231.604  Recovery = 107.35%
P 214.914†               7212.6      2469.3 ug/L         15.04      2469.3 ppb          15.04   0.61%
   QC value within limits for P 214.914  Recovery = 98.77%
Pb 220.353†              6806.1      511.59 ug/L         1.490      511.59 ppb          1.490   0.29%
   QC value within limits for Pb 220.353  Recovery = 102.32%
S 181.975 Axial†         3071.7      2599.1 ug/L         21.20      2599.1 ppb          21.20   0.82%
   QC value within limits for S 181.975 Axial  Recovery = 103.96%
Sb 206.836†              2687.5      535.31 ug/L         3.632      535.31 ppb          3.632   0.68%
   QC value within limits for Sb 206.836  Recovery = 107.06%
Se 196.026†              8001.5      2622.2 ug/L          9.08      2622.2 ppb           9.08   0.35%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†            241898.3      4979.9 ug/L         10.15      4979.9 ppb          10.15   0.20%
   QC value within limits for Si 251.611  Recovery = 99.60%
Sn 189.927†              5116.8      532.64 ug/L         1.897      532.64 ppb          1.897   0.36%
   QC value within limits for Sn 189.927  Recovery = 106.53%
Sr 421.552†             33561.3      517.02 ug/L         1.026      517.02 ppb          1.026   0.20%
   QC value within limits for Sr 421.552  Recovery = 103.40%
Ti 334.940†            388802.3      508.89 ug/L         1.289      508.89 ppb          1.289   0.25%
   QC value within limits for Ti 334.940  Recovery = 101.78%
Tl 190.801†              2951.7      500.06 ug/L         3.524      500.06 ppb          3.524   0.70%
   QC value within limits for Tl 190.801  Recovery = 100.01%
U 409.014†              20567.3      508.70 ug/L         1.982      508.70 ppb          1.982   0.39%
   QC value within limits for U 409.014  Recovery = 101.74%
V 292.402†              88119.7      506.07 ug/L         1.724      506.07 ppb          1.724   0.34%
   QC value within limits for V 292.402  Recovery = 101.21%
Zn 213.857†             91889.0      508.19 ug/L         1.080      508.19 ppb          1.080   0.21%
   QC value within limits for Zn 213.857  Recovery = 101.64%
SiO2†                  240236.5       10590 ug/L         130.9       10590 ppb          130.9   1.24%
   QC value within limits for SiO2  Recovery = 99.02%
All analyte(s) passed QC.
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Sequence No.: 7
Sample ID: ICB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/8/2009 10:08:09
Data Type: Reprocessed on 7/8/2009 11:40:09

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1062518.9	1062518.9	100.15	%			10:11:19
1	Sc Radial	5619.2	5619.2	101	%			10:10:02
1	Y 371.029	855063.0	855063.0	100.22	%			10:11:19
1	Y RADIAL	4891.2	4891.2	101.6	%			10:10:02
1	Ag 328.068†	686.9	47.3	0.1796	ug/L	0.1796	ppb	10:11:24
1	Al 396.153Radial†	-95.5	-2.4	-2.1842	ug/L	-2.1842	ppb	10:10:02
1	As 188.979†	-51.6	-14.6	-3.4416	ug/L	-3.4416	ppb	10:11:44
1	B 249.677†	-113.0	268.7	4.1899	ug/L	4.1899	ppb	10:11:24
1	Ba 233.527†	27.7	3.4	0.0163	ug/L	0.0163	ppb	10:11:44
1	Be 313.107†	-7419.2	-91.5	-0.0284	ug/L	-0.0284	ppb	10:11:24
1	Ca 317.933Radial†	20.0	2.8	7.0382	ug/L	7.0382	ppb	10:10:22
1	Cd 226.502†	-268.6	9.5	0.0735	ug/L	0.0735	ppb	10:11:44
1	Co 228.616†	-84.2	6.3	0.0795	ug/L	0.0795	ppb	10:11:44
1	Cr 267.716†	-63.7	-35.0	-0.2989	ug/L	-0.2989	ppb	10:11:24
1	Cu 324.752†	10404.8	197.5	0.4861	ug/L	0.4861	ppb	10:11:24
1	Fe 238.204 Radial†	-0.3	-0.6	-22.095	ug/L	-22.095	ppb	10:10:22
1	K 766.490 Radial†	1537.8	49.9	21.622	ug/L	21.622	ppb	10:10:02
1	Mg 279.077 IEC†	-0.3	-0.5	-40.804	ug/L	-40.804	ppb	10:10:22
1	Mn 257.610†	863.6	35.2	0.0257	ug/L	0.0257	ppb	10:11:44
1	Mo 202.031†	34.2	2.4	0.0952	ug/L	0.0952	ppb	10:11:44
1	Na 589.592 Radial†	-172.2	-0.1	-0.2094	ug/L	-0.2094	ppb	10:10:22
1	Ni 231.604†	165.5	17.0	0.2724	ug/L	0.2724	ppb	10:11:44
1	P 214.914†	359.3	21.8	7.6434	ug/L	7.6434	ppb	10:11:44
1	Pb 220.353†	-14.3	14.8	1.1103	ug/L	1.1103	ppb	10:11:44
1	S 181.975 Axial†	61.3	-6.6	-5.6162	ug/L	-5.6162	ppb	10:11:44
1	Sb 206.836†	50.7	5.2	1.0374	ug/L	1.0374	ppb	10:11:44
1	Se 196.026†	-15.1	6.5	2.0343	ug/L	2.0343	ppb	10:11:44
1	Si 251.611†	605.7	44.7	0.9121	ug/L	0.9121	ppb	10:11:44
1	Sn 189.927†	10.2	4.7	0.4889	ug/L	0.4889	ppb	10:11:44
1	Sr 421.552†	8.2	2.6	0.0401	ug/L	0.0401	ppb	10:10:22
1	Ti 334.940†	-1098.3	12.6	0.0172	ug/L	0.0172	ppb	10:11:24
1	Tl 190.801†	-61.2	0.3	0.0480	ug/L	0.0480	ppb	10:11:44
1	U 409.014†	-3850.0	-9.3	-0.2275	ug/L	-0.2275	ppb	10:11:19
1	V 292.402†	-1677.0	-21.6	-0.1194	ug/L	-0.1194	ppb	10:11:24
1	Zn 213.857†	1258.4	134.0	0.7499	ug/L	0.7499	ppb	10:11:44
1	SiO2†	620.8	17.5	0.7492	ug/L	0.7492	ppb	10:12:50
2	Sc 361.383	1069316.7	1069316.7	100.80	%			10:11:49
2	Sc Radial	5629.3	5629.3	101	%			10:10:27
2	Y 371.029	858517.5	858517.5	100.62	%			10:11:49
2	Y RADIAL	4855.9	4855.9	100.8	%			10:10:27
2	Ag 328.068†	676.2	32.3	0.1208	ug/L	0.1208	ppb	10:11:54
2	Al 396.153Radial†	-91.2	2.0	1.8521	ug/L	1.8521	ppb	10:10:27
2	As 188.979†	-44.8	-7.5	-1.7654	ug/L	-1.7654	ppb	10:12:14
2	B 249.677†	-123.3	259.2	4.0408	ug/L	4.0408	ppb	10:11:54
2	Ba 233.527†	23.9	-0.6	-0.0030	ug/L	-0.0030	ppb	10:12:14
2	Be 313.107†	-7510.8	-135.4	-0.0419	ug/L	-0.0419	ppb	10:11:54
2	Ca 317.933Radial†	16.0	-1.1	-2.7930	ug/L	-2.7930	ppb	10:10:47
2	Cd 226.502†	-288.6	-8.6	-0.0630	ug/L	-0.0630	ppb	10:12:14
2	Co 228.616†	-88.3	2.8	0.0352	ug/L	0.0352	ppb	10:12:14
2	Cr 267.716†	-28.7	0.1	0.0000	ug/L	0.0000	ppb	10:11:54
2	Cu 324.752†	10297.6	25.1	0.0611	ug/L	0.0611	ppb	10:11:54
2	Fe 238.204 Radial†	-0.0	-0.4	-13.229	ug/L	-13.229	ppb	10:10:47
2	K 766.490 Radial†	1552.5	61.7	26.759	ug/L	26.759	ppb	10:10:27
2	Mg 279.077 IEC†	2.2	2.0	160.02	ug/L	160.02	ppb	10:10:47
2	Mn 257.610†	868.0	34.2	0.0222	ug/L	0.0222	ppb	10:12:14
2	Mo 202.031†	38.9	6.8	0.2725	ug/L	0.2725	ppb	10:12:14
2	Na 589.592 Radial†	-186.1	-13.6	-36.706	ug/L	-36.706	ppb	10:10:47
2	Ni 231.604†	162.3	12.7	0.2043	ug/L	0.2043	ppb	10:12:14

2	P 214.914†	334.4	-5.1	-1.8065	ug/L	-1.8065	ppb	10:12:14
2	Pb 220.353†	-20.2	9.0	0.6783	ug/L	0.6783	ppb	10:12:14
2	S 181.975 Axial†	69.9	1.5	1.2588	ug/L	1.2588	ppb	10:12:14
2	Sb 206.836†	55.1	9.2	1.8205	ug/L	1.8205	ppb	10:12:14
2	Se 196.026†	-16.1	5.6	1.7877	ug/L	1.7877	ppb	10:12:14
2	Si 251.611†	597.5	32.7	0.6587	ug/L	0.6587	ppb	10:12:14
2	Sn 189.927†	12.0	6.5	0.6728	ug/L	0.6728	ppb	10:12:14
2	Sr 421.552†	-0.3	-5.8	-0.0892	ug/L	-0.0892	ppb	10:10:47
2	Ti 334.940†	-1058.2	59.4	0.0757	ug/L	0.0757	ppb	10:11:54
2	Tl 190.801†	-64.4	-2.5	-0.4195	ug/L	-0.4195	ppb	10:12:14
2	U 409.014†	-3694.3	169.6	4.2087	ug/L	4.2087	ppb	10:11:49
2	V 292.402†	-1628.9	36.7	0.2243	ug/L	0.2243	ppb	10:11:54
2	Zn 213.857†	1236.8	104.6	0.5788	ug/L	0.5788	ppb	10:12:14
2	SiO2†	605.7	-1.5	-0.0994	ug/L	-0.0994	ppb	10:12:55
3	Sc 361.383	1062135.4	1062135.4	100.12	%			10:12:20
3	Sc Radial	5726.3	5726.3	103	%			10:10:52
3	Y 371.029	854170.1	854170.1	100.11	%			10:12:20
3	Y RADIAL	4978.7	4978.7	103.4	%			10:10:52
3	Ag 328.068†	596.6	-42.7	-0.1739	ug/L	-0.1739	ppb	10:12:25
3	Al 396.153Radial†	-64.8	29.2	26.595	ug/L	26.595	ppb	10:10:52
3	As 188.979†	-48.3	-11.4	-2.6739	ug/L	-2.6739	ppb	10:12:45
3	B 249.677†	-137.5	244.2	3.8077	ug/L	3.8077	ppb	10:12:25
3	Ba 233.527†	32.8	8.5	0.0434	ug/L	0.0434	ppb	10:12:45
3	Be 313.107†	-7462.3	-137.3	-0.0426	ug/L	-0.0426	ppb	10:12:25
3	Ca 317.933Radial†	21.3	3.8	9.4766	ug/L	9.4766	ppb	10:11:12
3	Cd 226.502†	-293.9	-15.9	-0.1159	ug/L	-0.1159	ppb	10:12:45
3	Co 228.616†	-77.2	13.3	0.1659	ug/L	0.1659	ppb	10:12:45
3	Cr 267.716†	9.4	38.0	0.3245	ug/L	0.3245	ppb	10:12:25
3	Cu 324.752†	10285.9	82.5	0.2022	ug/L	0.2022	ppb	10:12:25
3	Fe 238.204 Radial†	-0.3	-0.6	-22.364	ug/L	-22.364	ppb	10:11:12
3	K 766.490 Radial†	1501.0	-14.5	-6.2704	ug/L	-6.2704	ppb	10:10:52
3	Mg 279.077 IEC†	-1.8	-1.9	-151.32	ug/L	-151.32	ppb	10:11:12
3	Mn 257.610†	857.0	29.0	0.0229	ug/L	0.0229	ppb	10:12:45
3	Mo 202.031†	36.6	4.8	0.1888	ug/L	0.1888	ppb	10:12:45
3	Na 589.592 Radial†	-183.0	-7.4	-20.091	ug/L	-20.091	ppb	10:11:12
3	Ni 231.604†	155.8	7.4	0.1180	ug/L	0.1180	ppb	10:12:45
3	P 214.914†	337.7	0.4	0.1410	ug/L	0.1410	ppb	10:12:45
3	Pb 220.353†	-5.3	23.7	1.7877	ug/L	1.7877	ppb	10:12:45
3	S 181.975 Axial†	71.0	3.0	2.5743	ug/L	2.5743	ppb	10:12:45
3	Sb 206.836†	52.0	6.6	1.2846	ug/L	1.2846	ppb	10:12:45
3	Se 196.026†	-12.9	8.7	2.7668	ug/L	2.7668	ppb	10:12:45
3	Si 251.611†	618.9	58.0	1.1952	ug/L	1.1952	ppb	10:12:45
3	Sn 189.927†	7.7	2.3	0.2347	ug/L	0.2347	ppb	10:12:45
3	Sr 421.552†	-1.2	-6.6	-0.1023	ug/L	-0.1023	ppb	10:11:12
3	Ti 334.940†	-1088.2	22.3	0.0301	ug/L	0.0301	ppb	10:12:25
3	Tl 190.801†	-57.0	4.4	0.7456	ug/L	0.7456	ppb	10:12:45
3	U 409.014†	-3872.6	-33.3	-0.8247	ug/L	-0.8247	ppb	10:12:20
3	V 292.402†	-1572.8	81.8	0.4653	ug/L	0.4653	ppb	10:12:25
3	Zn 213.857†	1256.5	132.6	0.7473	ug/L	0.7473	ppb	10:12:45
3	SiO2†	684.3	81.2	3.5825	ug/L	3.5825	ppb	10:13:00

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1064657.0	100.36	%	0.381				0.38%
Sc Radial	5658.3	102	%	1.1				1.05%
Y 371.029	855916.8	100.32	%	0.269				0.27%
Y RADIAL	4908.6	101.9	%	1.31				1.29%
Ag 328.068†	12.3	0.0422	ug/L	0.18942	0.0422	ppb	0.18942	448.85%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.6	8.7543	ug/L	15.58188	8.7543	ppb	15.58188	177.99%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.2	-2.6270	ug/L	0.83913	-2.6270	ppb	0.83913	31.94%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	257.3	4.0128	ug/L	0.19262	4.0128	ppb	0.19262	4.80%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.7	0.0189	ug/L	0.02328	0.0189	ppb	0.02328	123.18%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.4	-0.0376	ug/L	0.00800	-0.0376	ppb	0.00800	21.25%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          1.8      4.5739 ug/L       6.49541      4.5739 ppb        6.49541 142.01%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -5.0     -0.0351 ug/L       0.09773     -0.0351 ppb        0.09773 278.26%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                7.5      0.0936 ug/L       0.06649      0.0936 ppb        0.06649  71.07%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                1.1      0.0085 ug/L       0.31178      0.0085 ppb        0.31178 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              101.7      0.2498 ug/L       0.21648      0.2498 ppb        0.21648  86.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5    -19.229 ug/L        5.1983    -19.229 ppb         5.1983  27.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         32.4     14.037 ug/L       17.7734     14.037 ppb        17.7734 126.62%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.1    -10.703 ug/L      157.8385    -10.703 ppb       157.8385 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               32.8      0.0236 ug/L       0.00188      0.0236 ppb        0.00188   7.96%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.7      0.1855 ug/L       0.08870      0.1855 ppb        0.08870  47.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -7.0    -19.002 ug/L       18.2728    -19.002 ppb        18.2728  96.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               12.4      0.1983 ug/L       0.07739      0.1983 ppb        0.07739  39.03%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 5.7      1.9926 ug/L       4.98968      1.9926 ppb        4.98968 250.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               15.9      1.1921 ug/L       0.55921      1.1921 ppb        0.55921  46.91%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.7     -0.5944 ug/L       4.39850     -0.5944 ppb        4.39850 740.05%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.0      1.3808 ug/L       0.40029      1.3808 ppb        0.40029  28.99%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                7.0      2.1962 ug/L       0.50925      2.1962 ppb        0.50925  23.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               45.1      0.9220 ug/L       0.26841      0.9220 ppb        0.26841  29.11%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.5      0.4655 ug/L       0.22000      0.4655 ppb        0.22000  47.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -3.3     -0.0505 ug/L       0.07870     -0.0505 ppb        0.07870 155.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               31.5      0.0410 ug/L       0.03074      0.0410 ppb        0.03074  74.91%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.7      0.1247 ug/L       0.58632      0.1247 ppb        0.58632 470.17%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                42.3      1.0522 ug/L       2.74987      1.0522 ppb        2.74987 261.36%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                32.3      0.1900 ug/L       0.29386      0.1900 ppb        0.29386 154.62%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              123.8      0.6920 ug/L       0.09801      0.6920 ppb        0.09801  14.16%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     32.4      1.4108 ug/L       1.92802      1.4108 ppb        1.92802 136.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/8/2009 10:15:11
Data Type: Reprocessed on 7/8/2009 11:40:11

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1047868.8	1047868.8	98.773	%			10:18:21
1	Sc Radial	5489.2	5489.2	98.6	%			10:17:05
1	Y 371.029	843324.4	843324.4	98.841	%			10:18:21
1	Y RADIAL	4749.6	4749.6	98.63	%			10:17:05
1	Ag 328.068†	1908.9	1294.0	5.1281	ug/L	5.1281	ppb	10:18:26
1	Al 396.153Radial†	137.4	231.5	210.24	ug/L	210.24	ppb	10:17:05
1	As 188.979†	70.2	108.0	25.354	ug/L	25.354	ppb	10:18:47
1	B 249.677†	2924.9	3342.8	52.070	ug/L	52.070	ppb	10:18:26
1	Ba 233.527†	1019.6	1008.0	5.1161	ug/L	5.1161	ppb	10:18:47
1	Be 313.107†	8654.4	16078.1	5.0107	ug/L	5.0107	ppb	10:18:26
1	Ca 317.933Radial†	95.1	79.5	197.91	ug/L	197.91	ppb	10:17:25
1	Cd 226.502†	377.6	659.9	4.9265	ug/L	4.9265	ppb	10:18:47
1	Co 228.616†	298.6	392.8	4.9073	ug/L	4.9073	ppb	10:18:47
1	Cr 267.716†	559.7	595.3	5.0626	ug/L	5.0626	ppb	10:18:47
1	Cu 324.752†	13982.0	3964.4	9.7874	ug/L	9.7874	ppb	10:18:26
1	Fe 238.204 Radial†	3.4	3.1	108.63	ug/L	108.63	ppb	10:17:25
1	K 766.490 Radial†	1881.1	433.9	188.09	ug/L	188.09	ppb	10:17:05
1	Mg 279.077 IEC†	3.4	3.3	260.55	ug/L	260.55	ppb	10:17:25
1	Mn 257.610†	13937.0	13283.1	10.506	ug/L	10.506	ppb	10:18:26
1	Mo 202.031†	283.1	254.8	10.207	ug/L	10.207	ppb	10:18:47
1	Na 589.592 Radial†	-73.9	95.5	258.17	ug/L	258.17	ppb	10:17:25
1	Ni 231.604†	470.7	328.3	5.2585	ug/L	5.2585	ppb	10:18:47
1	P 214.914†	747.0	419.3	146.74	ug/L	146.74	ppb	10:18:47
1	Pb 220.353†	129.9	160.5	12.084	ug/L	12.084	ppb	10:18:47
1	S 181.975 Axial†	177.5	111.8	94.633	ug/L	94.633	ppb	10:18:47
1	Sb 206.836†	107.1	63.0	12.627	ug/L	12.627	ppb	10:18:47
1	Se 196.026†	79.0	101.6	33.458	ug/L	33.458	ppb	10:18:47
1	Si 251.611†	5379.4	4886.1	100.55	ug/L	100.55	ppb	10:18:26
1	Sn 189.927†	102.0	97.8	10.192	ug/L	10.192	ppb	10:18:47
1	Sr 421.552†	343.2	342.5	5.2744	ug/L	5.2744	ppb	10:17:25
1	Ti 334.940†	2629.6	3771.5	4.9245	ug/L	4.9245	ppb	10:18:26
1	Tl 190.801†	45.6	107.5	18.194	ug/L	18.194	ppb	10:18:47
1	U 409.014†	-1614.8	2199.9	54.559	ug/L	54.559	ppb	10:18:21
1	V 292.402†	-733.6	910.1	5.3790	ug/L	5.3790	ppb	10:18:26
1	Zn 213.857†	2833.5	1746.3	9.6832	ug/L	9.6832	ppb	10:18:47
1	SiO2†	5363.4	4827.7	212.72	ug/L	212.72	ppb	10:19:53
2	Sc 361.383	1047486.5	1047486.5	98.737	%			10:18:52
2	Sc Radial	5556.3	5556.3	99.8	%			10:17:30
2	Y 371.029	843422.2	843422.2	98.852	%			10:18:52
2	Y RADIAL	4839.9	4839.9	100.5	%			10:17:30
2	Ag 328.068†	1979.1	1365.8	5.4057	ug/L	5.4057	ppb	10:18:57
2	Al 396.153Radial†	131.7	224.1	203.50	ug/L	203.50	ppb	10:17:30
2	As 188.979†	79.1	117.0	27.460	ug/L	27.460	ppb	10:19:17
2	B 249.677†	2837.5	3255.3	50.709	ug/L	50.709	ppb	10:18:57
2	Ba 233.527†	999.5	988.0	5.0149	ug/L	5.0149	ppb	10:19:17
2	Be 313.107†	8590.8	16016.9	4.9918	ug/L	4.9918	ppb	10:18:57
2	Ca 317.933Radial†	97.2	80.4	200.20	ug/L	200.20	ppb	10:17:50
2	Cd 226.502†	375.2	657.6	4.9119	ug/L	4.9119	ppb	10:19:17
2	Co 228.616†	313.3	407.7	5.0943	ug/L	5.0943	ppb	10:19:17
2	Cr 267.716†	522.4	557.7	4.7420	ug/L	4.7420	ppb	10:19:17
2	Cu 324.752†	14012.6	4000.6	9.8754	ug/L	9.8754	ppb	10:18:57
2	Fe 238.204 Radial†	2.8	2.4	85.690	ug/L	85.690	ppb	10:17:50
2	K 766.490 Radial†	1891.7	421.5	182.69	ug/L	182.69	ppb	10:17:30
2	Mg 279.077 IEC†	3.4	3.3	259.03	ug/L	259.03	ppb	10:17:50
2	Mn 257.610†	13825.0	13174.8	10.418	ug/L	10.418	ppb	10:18:57
2	Mo 202.031†	288.8	260.7	10.442	ug/L	10.442	ppb	10:19:17
2	Na 589.592 Radial†	-60.0	110.3	298.35	ug/L	298.35	ppb	10:17:50
2	Ni 231.604†	467.6	325.3	5.2109	ug/L	5.2109	ppb	10:19:17

2	P 214.914†	747.1	419.7	146.89 ug/L	146.89 ppb	10:19:17
2	Pb 220.353†	109.3	139.8	10.531 ug/L	10.531 ppb	10:19:17
2	S 181.975 Axial†	174.7	109.1	92.292 ug/L	92.292 ppb	10:19:17
2	Sb 206.836†	103.9	59.8	12.037 ug/L	12.037 ppb	10:19:17
2	Se 196.026†	78.5	101.1	33.226 ug/L	33.226 ppb	10:19:17
2	Si 251.611†	5425.5	4934.8	101.55 ug/L	101.55 ppb	10:18:57
2	Sn 189.927†	110.5	106.5	11.091 ug/L	11.091 ppb	10:19:17
2	Sr 421.552†	350.2	345.2	5.3169 ug/L	5.3169 ppb	10:17:50
2	Ti 334.940†	2664.9	3808.2	4.9728 ug/L	4.9728 ppb	10:18:57
2	Tl 190.801†	64.2	126.4	21.375 ug/L	21.375 ppb	10:19:17
2	U 409.014†	-1616.1	2197.9	54.515 ug/L	54.515 ppb	10:18:52
2	V 292.402†	-696.6	947.3	5.5964 ug/L	5.5964 ppb	10:18:57
2	Zn 213.857†	2826.6	1740.4	9.6528 ug/L	9.6528 ppb	10:19:17
2	SiO2†	5326.0	4791.8	211.13 ug/L	211.13 ppb	10:19:58
3	Sc 361.383	1064715.9	1064715.9	100.36 %		10:19:22
3	Sc Radial	5636.0	5636.0	101 %		10:17:55
3	Y 371.029	857151.8	857151.8	100.46 %		10:19:22
3	Y RADIAL	4900.5	4900.5	101.8 %		10:17:55
3	Ag 328.068†	1947.8	1302.2	5.1615 ug/L	5.1615 ppb	10:19:27
3	Al 396.153Radial†	113.0	203.8	185.06 ug/L	185.06 ppb	10:17:55
3	As 188.979†	78.8	115.4	27.092 ug/L	27.092 ppb	10:19:47
3	B 249.677†	2917.2	3288.2	51.219 ug/L	51.219 ppb	10:19:27
3	Ba 233.527†	1004.9	977.0	4.9582 ug/L	4.9582 ppb	10:19:47
3	Be 313.107†	8767.1	16051.7	5.0025 ug/L	5.0025 ppb	10:19:27
3	Ca 317.933Radial†	96.9	78.7	196.13 ug/L	196.13 ppb	10:18:15
3	Cd 226.502†	363.6	640.0	4.7768 ug/L	4.7768 ppb	10:19:47
3	Co 228.616†	310.3	399.6	4.9919 ug/L	4.9919 ppb	10:19:47
3	Cr 267.716†	528.2	554.9	4.7188 ug/L	4.7188 ppb	10:19:47
3	Cu 324.752†	14146.2	3904.0	9.6387 ug/L	9.6387 ppb	10:19:27
3	Fe 238.204 Radial†	3.6	3.2	111.85 ug/L	111.85 ppb	10:18:15
3	K 766.490 Radial†	1829.8	333.6	144.57 ug/L	144.57 ppb	10:17:55
3	Mg 279.077 IEC†	6.0	5.8	456.93 ug/L	456.93 ppb	10:18:15
3	Mn 257.610†	14031.0	13153.4	10.401 ug/L	10.401 ppb	10:19:27
3	Mo 202.031†	277.9	245.2	9.8210 ug/L	9.8210 ppb	10:19:47
3	Na 589.592 Radial†	-65.4	105.8	286.15 ug/L	286.15 ppb	10:18:15
3	Ni 231.604†	473.1	323.1	5.1761 ug/L	5.1761 ppb	10:19:47
3	P 214.914†	766.3	426.6	149.31 ug/L	149.31 ppb	10:19:47
3	Pb 220.353†	121.9	150.5	11.326 ug/L	11.326 ppb	10:19:47
3	S 181.975 Axial†	173.4	104.9	88.788 ug/L	88.788 ppb	10:19:47
3	Sb 206.836†	88.6	42.9	8.6819 ug/L	8.6819 ppb	10:19:47
3	Se 196.026†	79.8	101.1	33.313 ug/L	33.313 ppb	10:19:47
3	Si 251.611†	5402.9	4823.3	99.277 ug/L	99.277 ppb	10:19:27
3	Sn 189.927†	103.1	97.3	10.137 ug/L	10.137 ppb	10:19:47
3	Sr 421.552†	361.1	351.1	5.4073 ug/L	5.4073 ppb	10:18:15
3	Ti 334.940†	2655.9	3755.6	4.9047 ug/L	4.9047 ppb	10:19:27
3	Tl 190.801†	61.2	122.4	20.700 ug/L	20.700 ppb	10:19:47
3	U 409.014†	-1729.9	2111.1	52.358 ug/L	52.358 ppb	10:19:22
3	V 292.402†	-842.5	813.3	4.8240 ug/L	4.8240 ppb	10:19:27
3	Zn 213.857†	2842.9	1710.3	9.4754 ug/L	9.4754 ppb	10:19:47
3	SiO2†	5379.4	4757.6	209.68 ug/L	209.68 ppb	10:20:03

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1053357.1	99.291	%	0.9274				0.93%
Sc Radial	5560.5	99.9	%	1.32				1.32%
Y 371.029	847966.2	99.385	%	0.9324				0.94%
Y RADIAL	4830.0	100.3	%	1.58				1.57%
Ag 328.068†	1320.7	5.2318	ug/L	0.15157	5.2318	ppb	0.15157	2.90%
QC value within limits for Ag 328.068 Recovery = 104.64%								
Al 396.153Radial†	219.8	199.60	ug/L	13.038	199.60	ppb	13.038	6.53%
QC value within limits for Al 396.153Radial Recovery = 99.80%								
As 188.979†	113.5	26.635	ug/L	1.1249	26.635	ppb	1.1249	4.22%
QC value within limits for As 188.979 Recovery = 88.78%								
B 249.677†	3295.4	51.333	ug/L	0.6874	51.333	ppb	0.6874	1.34%
QC value within limits for B 249.677 Recovery = 102.67%								
Ba 233.527†	991.0	5.0297	ug/L	0.08000	5.0297	ppb	0.08000	1.59%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	16048.9	5.0017	ug/L	0.00949	5.0017	ppb	0.00949	0.19%
QC value within limits for Be 313.107 Recovery = 100.03%								

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Ca 317.933Radial†          79.5      198.08 ug/L         2.042      198.08 ppb          2.042   1.03%
   QC value within limits for Ca 317.933Radial  Recovery = 99.04%
Cd 226.502†               652.5      4.8717 ug/L       0.08254      4.8717 ppb        0.08254   1.69%
   QC value within limits for Cd 226.502  Recovery = 97.43%
Co 228.616†               400.0      4.9978 ug/L       0.09363      4.9978 ppb        0.09363   1.87%
   QC value within limits for Co 228.616  Recovery = 99.96%
Cr 267.716†               569.3      4.8411 ug/L       0.19215      4.8411 ppb        0.19215   3.97%
   QC value within limits for Cr 267.716  Recovery = 96.82%
Cu 324.752†              3956.3      9.7672 ug/L       0.11961      9.7672 ppb        0.11961   1.22%
   QC value within limits for Cu 324.752  Recovery = 97.67%
Fe 238.204 Radial†         2.9      102.06 ug/L        14.266      102.06 ppb         14.266  13.98%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.06%
K 766.490 Radial†         396.3      171.78 ug/L        23.724      171.78 ppb         23.724  13.81%
   QC value within limits for K 766.490 Radial  Recovery = 114.52%
Mg 279.077 IEC†            4.1      325.50 ug/L       113.822      325.50 ppb        113.822  34.97%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.50%
Mn 257.610†            13203.8      10.442 ug/L        0.0568      10.442 ppb         0.0568   0.54%
   QC value within limits for Mn 257.610  Recovery = 104.42%
Mo 202.031†               253.6      10.157 ug/L        0.3133      10.157 ppb         0.3133   3.09%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†        103.9      280.89 ug/L        20.599      280.89 ppb         20.599   7.33%
   QC value within limits for Na 589.592 Radial  Recovery = 93.63%
Ni 231.604†               325.6      5.2152 ug/L       0.04137      5.2152 ppb        0.04137   0.79%
   QC value within limits for Ni 231.604  Recovery = 104.30%
P 214.914†                421.9      147.65 ug/L         1.445      147.65 ppb          1.445   0.98%
   QC value within limits for P 214.914  Recovery = 98.43%
Pb 220.353†               150.3      11.314 ug/L        0.7766      11.314 ppb         0.7766   6.86%
   QC value within limits for Pb 220.353  Recovery = 113.14%
S 181.975 Axial†          108.6      91.904 ug/L        2.9414      91.904 ppb         2.9414   3.20%
   QC value within limits for S 181.975 Axial  Recovery = 91.90%
Sb 206.836†                55.2      11.115 ug/L        2.1279      11.115 ppb         2.1279  19.14%
   QC value within limits for Sb 206.836  Recovery = 111.15%
Se 196.026†               101.3      33.332 ug/L        0.1173      33.332 ppb         0.1173   0.35%
   QC value within limits for Se 196.026  Recovery = 111.11%
Si 251.611†              4881.4      100.46 ug/L         1.140      100.46 ppb          1.140   1.13%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†               100.5      10.473 ug/L        0.5359      10.473 ppb         0.5359   5.12%
   QC value within limits for Sn 189.927  Recovery = 104.73%
Sr 421.552†               346.3      5.3328 ug/L       0.06788      5.3328 ppb        0.06788   1.27%
   QC value within limits for Sr 421.552  Recovery = 106.66%
Ti 334.940†              3778.5      4.9340 ug/L       0.03506      4.9340 ppb        0.03506   0.71%
   QC value within limits for Ti 334.940  Recovery = 98.68%
Tl 190.801†               118.8      20.090 ug/L        1.6764      20.090 ppb         1.6764   8.34%
   QC value within limits for Tl 190.801  Recovery = 100.45%
U 409.014†               2169.6      53.811 ug/L        1.2585      53.811 ppb         1.2585   2.34%
   QC value within limits for U 409.014  Recovery = 107.62%
V 292.402†                890.2      5.2665 ug/L       0.39826      5.2665 ppb        0.39826   7.56%
   QC value within limits for V 292.402  Recovery = 105.33%
Zn 213.857†              1732.3      9.6038 ug/L       0.11224      9.6038 ppb        0.11224   1.17%
   QC value within limits for Zn 213.857  Recovery = 96.04%
SiO2†                    4792.4      211.18 ug/L         1.524      211.18 ppb          1.524   0.72%
   QC value within limits for SiO2  Recovery = 99.14%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: ICSA
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/8/2009 10:22:14
Data Type: Reprocessed on 7/8/2009 11:40:12

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	895501.5	895501.5	84.411	%			10:25:25
1	Sc Radial	5081.7	5081.7	91.3	%			10:24:27
1	Y 371.029	714523.0	714523.0	83.745	%			10:25:25
1	Y RADIAL	4391.8	4391.8	91.20	%			10:24:27
1	Ag 328.068†	-10393.0	-12951.0	1.0699	ug/L	1.0699	ppb	10:25:25
1	Al 396.153Radial†	511366.0	560078.8	509800	ug/L	509800	ppb	10:24:07
1	As 188.979†	-139.2	-128.0	6.5707	ug/L	6.5707	ppb	10:25:45
1	B 249.677†	908.6	1457.9	-1.6992	ug/L	-1.6992	ppb	10:25:25
1	Ba 233.527†	-495.8	-611.7	1.2025	ug/L	1.2025	ppb	10:25:45
1	Be 313.107†	-7530.9	-1605.5	-0.5734	ug/L	-0.5734	ppb	10:25:25
1	Ca 317.933Radial†	172461.7	188842.4	470380	ug/L	470380	ppb	10:24:07
1	Cd 226.502†	2108.2	2775.1	-0.9878	ug/L	-0.9878	ppb	10:25:45
1	Co 228.616†	-24.7	61.1	-1.8391	ug/L	-1.8391	ppb	10:25:45
1	Cr 267.716†	-320.2	-350.7	0.5961	ug/L	0.5961	ppb	10:25:45
1	Cu 324.752†	6421.7	-2583.6	4.2681	ug/L	4.2681	ppb	10:25:25
1	Fe 238.204 Radial†	4791.8	5247.1	184080	ug/L	184080	ppb	10:24:27
1	K 766.490 Radial†	1268.1	-84.4	17.211	ug/L	17.211	ppb	10:24:07
1	Mg 279.077 IEC†	5667.1	6205.7	491320	ug/L	491320	ppb	10:24:27
1	Mn 257.610†	-1965.4	-3155.4	12.011	ug/L	12.011	ppb	10:25:25
1	Mo 202.031†	-328.7	-421.2	-4.2268	ug/L	-4.2268	ppb	10:25:45
1	Na 589.592 Radial†	-173.4	-19.4	-52.528	ug/L	-52.528	ppb	10:24:27
1	Ni 231.604†	337.4	251.5	4.0300	ug/L	4.0300	ppb	10:25:45
1	P 214.914†	293.5	10.8	28.559	ug/L	28.559	ppb	10:25:45
1	Pb 220.353†	-942.6	-1087.6	0.6717	ug/L	0.6717	ppb	10:25:45
1	S 181.975 Axial†	128.7	84.6	-28.638	ug/L	-28.638	ppb	10:25:45
1	Sb 206.836†	101.4	74.7	-0.8382	ug/L	-0.8382	ppb	10:25:45
1	Se 196.026†	-1802.9	-2114.3	-13.357	ug/L	-13.357	ppb	10:25:45
1	Si 251.611†	614.8	168.2	3.9128	ug/L	3.9128	ppb	10:25:45
1	Sn 189.927†	-348.4	-418.3	-4.5225	ug/L	-4.5225	ppb	10:25:45
1	Sr 421.552†	258.7	277.9	-0.0791	ug/L	-0.0791	ppb	10:24:27
1	Ti 334.940†	-21523.1	-24388.8	-0.4475	ug/L	-0.4475	ppb	10:25:25
1	Tl 190.801†	-123.2	-84.6	-11.647	ug/L	-11.647	ppb	10:25:45
1	U 409.014†	-2645.4	700.7	-5.2282	ug/L	-5.2282	ppb	10:25:25
1	V 292.402†	867.3	2680.3	-1.8957	ug/L	-1.8957	ppb	10:25:45
1	Zn 213.857†	5199.0	5036.8	-8.7856	ug/L	-8.7856	ppb	10:25:45
1	SiO2†	554.5	54.6	3.3717	ug/L	3.3717	ppb	10:26:41
2	Sc 361.383	894719.3	894719.3	84.337	%			10:25:50
2	Sc Radial	5092.9	5092.9	91.5	%			10:24:53
2	Y 371.029	715579.1	715579.1	83.869	%			10:25:50
2	Y RADIAL	4406.9	4406.9	91.51	%			10:24:53
2	Ag 328.068†	-10345.8	-12905.8	1.4483	ug/L	1.4483	ppb	10:25:50
2	Al 396.153Radial†	515497.0	563358.3	512790	ug/L	512790	ppb	10:24:33
2	As 188.979†	-138.6	-127.5	6.8312	ug/L	6.8312	ppb	10:26:10
2	B 249.677†	761.2	1284.1	-4.5082	ug/L	-4.5082	ppb	10:25:50
2	Ba 233.527†	-460.6	-570.4	1.4270	ug/L	1.4270	ppb	10:26:10
2	Be 313.107†	-7458.7	-1527.7	-0.5517	ug/L	-0.5517	ppb	10:25:50
2	Ca 317.933Radial†	173876.6	189972.1	473190	ug/L	473190	ppb	10:24:33
2	Cd 226.502†	2120.9	2792.4	-0.9470	ug/L	-0.9470	ppb	10:26:10
2	Co 228.616†	-11.2	77.1	-1.6492	ug/L	-1.6492	ppb	10:26:10
2	Cr 267.716†	-331.2	-364.1	0.4968	ug/L	0.4968	ppb	10:26:10
2	Cu 324.752†	6524.1	-2455.6	4.6269	ug/L	4.6269	ppb	10:25:50
2	Fe 238.204 Radial†	4821.9	5268.4	184820	ug/L	184820	ppb	10:24:53
2	K 766.490 Radial†	1216.4	-143.9	-8.5744	ug/L	-8.5744	ppb	10:24:33
2	Mg 279.077 IEC†	5711.8	6240.9	494110	ug/L	494110	ppb	10:24:53
2	Mn 257.610†	-2242.7	-3486.2	11.793	ug/L	11.793	ppb	10:25:50
2	Mo 202.031†	-331.9	-425.4	-4.3417	ug/L	-4.3417	ppb	10:26:10
2	Na 589.592 Radial†	-158.9	-3.3	-8.8064	ug/L	-8.8064	ppb	10:24:53
2	Ni 231.604†	322.8	234.5	3.7578	ug/L	3.7578	ppb	10:26:10

2	P 214.914†	282.3	-2.2	24.298 ug/L	24.298 ppb	10:26:10
2	Pb 220.353†	-980.2	-1133.2	-2.2283 ug/L	-2.2283 ppb	10:26:10
2	S 181.975 Axial†	133.9	90.9	-23.927 ug/L	-23.927 ppb	10:26:10
2	Sb 206.836†	107.1	81.5	0.3983 ug/L	0.3983 ppb	10:26:10
2	Se 196.026†	-1828.8	-2146.8	-21.144 ug/L	-21.144 ppb	10:26:10
2	Si 251.611†	621.0	176.2	4.0917 ug/L	4.0917 ppb	10:26:10
2	Sn 189.927†	-354.8	-426.2	-5.1179 ug/L	-5.1179 ppb	10:26:10
2	Sr 421.552†	253.4	271.4	-0.2039 ug/L	-0.2039 ppb	10:24:53
2	Ti 334.940†	-22184.0	-25194.7	-1.3121 ug/L	-1.3121 ppb	10:25:50
2	Tl 190.801†	-105.2	-63.3	-8.0480 ug/L	-8.0480 ppb	10:26:10
2	U 409.014†	-2792.9	523.2	-9.7248 ug/L	-9.7248 ppb	10:25:50
2	V 292.402†	765.0	2559.9	-2.6434 ug/L	-2.6434 ppb	10:26:10
2	Zn 213.857†	5183.7	5024.0	-9.0326 ug/L	-9.0326 ppb	10:26:10
2	SiO2†	499.4	-10.2	0.5414 ug/L	0.5414 ppb	10:26:46
3	Sc 361.383	893780.1	893780.1	84.249 %		10:26:15
3	Sc Radial	5118.7	5118.7	92.0 %		10:25:18
3	Y 371.029	713970.1	713970.1	83.680 %		10:26:15
3	Y RADIAL	4426.1	4426.1	91.91 %		10:25:18
3	Ag 328.068†	-10409.3	-12994.0	1.2796 ug/L	1.2796 ppb	10:26:15
3	Al 396.153Radial†	508361.4	552762.3	503140 ug/L	503140 ppb	10:24:58
3	As 188.979†	-128.5	-115.7	9.6416 ug/L	9.6416 ppb	10:26:36
3	B 249.677†	835.5	1373.2	-3.1464 ug/L	-3.1464 ppb	10:26:15
3	Ba 233.527†	-496.7	-613.9	1.2131 ug/L	1.2131 ppb	10:26:36
3	Be 313.107†	-7571.9	-1671.3	-0.5963 ug/L	-0.5963 ppb	10:26:15
3	Ca 317.933Radial†	171828.3	186787.9	465260 ug/L	465260 ppb	10:24:58
3	Cd 226.502†	2103.7	2774.7	-1.1037 ug/L	-1.1037 ppb	10:26:36
3	Co 228.616†	-21.9	64.4	-1.8116 ug/L	-1.8116 ppb	10:26:36
3	Cr 267.716†	-287.1	-312.1	0.9428 ug/L	0.9428 ppb	10:26:36
3	Cu 324.752†	6618.2	-2335.7	4.9347 ug/L	4.9347 ppb	10:26:15
3	Fe 238.204 Radial†	4851.7	5274.3	185030 ug/L	185030 ppb	10:25:18
3	K 766.490 Radial†	1220.8	-145.9	-8.5400 ug/L	-8.5400 ppb	10:24:58
3	Mg 279.077 IEC†	5734.1	6233.7	493540 ug/L	493540 ppb	10:25:18
3	Mn 257.610†	-2195.1	-3432.5	11.873 ug/L	11.873 ppb	10:26:15
3	Mo 202.031†	-345.3	-441.6	-4.9774 ug/L	-4.9774 ppb	10:26:36
3	Na 589.592 Radial†	-160.0	-3.5	-9.5568 ug/L	-9.5568 ppb	10:25:18
3	Ni 231.604†	344.5	260.6	4.1763 ug/L	4.1763 ppb	10:26:36
3	P 214.914†	258.2	-30.4	10.851 ug/L	10.851 ppb	10:26:36
3	Pb 220.353†	-979.4	-1133.4	-4.1545 ug/L	-4.1545 ppb	10:26:36
3	S 181.975 Axial†	130.4	86.9	-25.395 ug/L	-25.395 ppb	10:26:36
3	Sb 206.836†	118.6	95.4	3.4218 ug/L	3.4218 ppb	10:26:36
3	Se 196.026†	-1802.6	-2118.0	-11.599 ug/L	-11.599 ppb	10:26:36
3	Si 251.611†	555.6	99.4	2.5199 ug/L	2.5199 ppb	10:26:36
3	Sn 189.927†	-358.0	-430.4	-6.1399 ug/L	-6.1399 ppb	10:26:36
3	Sr 421.552†	264.5	282.1	0.0330 ug/L	0.0330 ppb	10:25:18
3	Ti 334.940†	-22156.0	-25189.1	-1.8382 ug/L	-1.8382 ppb	10:26:15
3	Tl 190.801†	-115.0	-75.1	-10.083 ug/L	-10.083 ppb	10:26:36
3	U 409.014†	-2610.1	736.7	-4.4537 ug/L	-4.4537 ppb	10:26:15
3	V 292.402†	851.7	2663.7	-2.0904 ug/L	-2.0904 ppb	10:26:36
3	Zn 213.857†	5227.2	5082.1	-8.7142 ug/L	-8.7142 ppb	10:26:36
3	SiO2†	573.2	78.0	4.4641 ug/L	4.4641 ppb	10:26:51

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	894667.0	84.332	%	0.0812				0.10%
Sc Radial	5097.8	91.6	%	0.34				0.37%
Y 371.029	714690.7	83.764	%	0.0958				0.11%
Y RADIAL	4408.3	91.54	%	0.357				0.39%
Ag 328.068†	-12950.3	1.2659	ug/L	0.18957	1.2659	ppb	0.18957	14.97%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	558733.1	508580	ug/L	4937.7	508580	ppb	4937.7	0.97%
QC value within limits for Al 396.153Radial Recovery = 101.72%								
As 188.979†	-123.7	7.6812	ug/L	1.70280	7.6812	ppb	1.70280	22.17%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1371.7	-3.1179	ug/L	1.40468	-3.1179	ppb	1.40468	45.05%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-598.7	1.2809	ug/L	0.12664	1.2809	ppb	0.12664	9.89%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1601.5	-0.5738	ug/L	0.02233	-0.5738	ppb	0.02233	3.89%
QC value within limits for Be 313.107 Recovery = Not calculated								

```
Ca 317.933Radial†     188534.1      469610 ug/L        4021.0      469610 ppb        4021.0   0.86%
   QC value within limits for Ca 317.933Radial  Recovery = 93.92%
Cd 226.502†             2780.7     -1.0128 ug/L       0.08129     -1.0128 ppb       0.08129   8.03%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               67.6     -1.7666 ug/L       0.10262     -1.7666 ppb       0.10262   5.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -342.3      0.6786 ug/L       0.23414      0.6786 ppb       0.23414  34.51%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -2458.3      4.6099 ug/L       0.33361      4.6099 ppb       0.33361   7.24%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†      5263.2      184640 ug/L         500.8      184640 ppb         500.8   0.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 92.32%
K 766.490 Radial†       -124.8      0.0323 ug/L      14.87743      0.0323 ppb      14.87743 >999.9%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†         6226.8      492990 ug/L        1472.2      492990 ppb        1472.2   0.30%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.60%
Mn 257.610†            -3358.1      11.893 ug/L        0.1103      11.893 ppb        0.1103   0.93%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -429.4     -4.5153 ug/L       0.40430     -4.5153 ppb       0.40430   8.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.630 ug/L       25.0287     -23.630 ppb       25.0287 105.92%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              248.9      3.9880 ug/L       0.21242      3.9880 ppb       0.21242   5.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -7.3      21.236 ug/L        9.2429      21.236 ppb        9.2429  43.52%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -1118.1     -1.9037 ug/L       2.42937     -1.9037 ppb       2.42937 127.61%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          87.5     -25.987 ug/L        2.4107     -25.987 ppb        2.4107   9.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               83.9      0.9940 ug/L       2.19156      0.9940 ppb       2.19156 220.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†            -2126.4     -15.367 ug/L        5.0800     -15.367 ppb        5.0800  33.06%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              148.0      3.5081 ug/L       0.86048      3.5081 ppb       0.86048  24.53%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -424.9     -5.2601 ug/L       0.81802     -5.2601 ppb       0.81802  15.55%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              277.1     -0.0833 ug/L       0.11853     -0.0833 ppb       0.11853 142.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†           -24924.2     -1.1993 ug/L       0.70220     -1.1993 ppb       0.70220  58.55%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -74.3     -9.9258 ug/L       1.80446     -9.9258 ppb       1.80446  18.18%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               653.6     -6.4689 ug/L       2.84611     -6.4689 ppb       2.84611  44.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              2634.7     -2.2098 ug/L       0.38789     -2.2098 ppb       0.38789  17.55%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             5047.6     -8.8442 ug/L       0.16704     -8.8442 ppb       0.16704   1.89%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     40.8      2.7924 ug/L       2.02453      2.7924 ppb       2.02453  72.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/8/2009 10:29:02
Data Type: Reprocessed on 7/8/2009 11:40:13

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	922949.8	922949.8	86.998	%			10:31:27
1	Sc Radial	5088.8	5088.8	91.4	%			10:30:59
1	Y 371.029	724486.5	724486.5	84.913	%			10:31:27
1	Y RADIAL	4396.5	4396.5	91.29	%			10:30:59
1	Ag 328.068†	51134.8	58138.2	284.08	ug/L	284.08	ppb	10:31:27
1	Al 396.153Radial†	511214.8	559124.8	508910	ug/L	508910	ppb	10:30:54
1	As 188.979†	1778.1	2080.7	527.29	ug/L	527.29	ppb	10:31:32
1	B 249.677†	30305.4	35216.0	523.28	ug/L	523.28	ppb	10:31:27
1	Ba 233.527†	84926.5	97594.3	499.43	ug/L	499.43	ppb	10:31:27
1	Be 313.107†	685114.1	794819.0	248.28	ug/L	248.28	ppb	10:31:27
1	Ca 317.933Radial†	171487.2	187510.8	467060	ug/L	467060	ppb	10:30:54
1	Cd 226.502†	56191.8	64867.2	463.74	ug/L	463.74	ppb	10:31:32
1	Co 228.616†	32068.4	36951.4	457.93	ug/L	457.93	ppb	10:31:32
1	Cr 267.716†	48976.1	56324.0	483.93	ug/L	483.93	ppb	10:31:32
1	Cu 324.752†	206474.7	227140.6	571.05	ug/L	571.05	ppb	10:31:27
1	Fe 238.204 Radial†	4792.9	5240.9	183870	ug/L	183870	ppb	10:30:59
1	K 766.490 Radial†	13633.7	13435.9	5876.8	ug/L	5876.8	ppb	10:30:59
1	Mg 279.077 IEC†	5720.0	6254.8	495220	ug/L	495220	ppb	10:30:59
1	Mn 257.610†	527932.1	606003.4	493.31	ug/L	493.31	ppb	10:31:27
1	Mo 202.031†	10741.5	12315.0	505.56	ug/L	505.56	ppb	10:31:32
1	Na 589.592 Radial†	1742.5	2075.9	5612.9	ug/L	5612.9	ppb	10:30:59
1	Ni 231.604†	24947.6	28527.7	456.94	ug/L	456.94	ppb	10:31:32
1	P 214.914†	6681.5	7343.1	2535.6	ug/L	2535.6	ppb	10:31:32
1	Pb 220.353†	4555.0	5264.8	477.54	ug/L	477.54	ppb	10:31:32
1	S 181.975 Axial†	2933.7	3304.3	2696.9	ug/L	2696.9	ppb	10:31:32
1	Sb 206.836†	2595.0	2937.4	568.65	ug/L	568.65	ppb	10:31:32
1	Se 196.026†	4971.6	5736.2	2540.6	ug/L	2540.6	ppb	10:31:32
1	Si 251.611†	227538.2	260983.1	5373.3	ug/L	5373.3	ppb	10:31:27
1	Sn 189.927†	3829.4	4396.2	495.92	ug/L	495.92	ppb	10:31:32
1	Sr 421.552†	32732.9	35789.2	547.06	ug/L	547.06	ppb	10:30:59
1	Ti 334.940†	325076.1	374767.2	521.46	ug/L	521.46	ppb	10:31:27
1	Tl 190.801†	2320.9	2729.1	464.98	ug/L	464.98	ppb	10:31:32
1	U 409.014†	14389.0	20374.2	482.00	ug/L	482.00	ppb	10:31:27
1	V 292.402†	80410.6	94080.6	523.26	ug/L	523.26	ppb	10:31:27
1	Zn 213.857†	83783.0	95181.8	490.76	ug/L	490.76	ppb	10:31:27
1	SiO2†	225071.9	258106.1	11379	ug/L	11379	ppb	10:31:59
2	Sc 361.383	922512.9	922512.9	86.957	%			10:31:38
2	Sc Radial	5114.2	5114.2	91.9	%			10:31:09
2	Y 371.029	723615.1	723615.1	84.810	%			10:31:38
2	Y RADIAL	4434.0	4434.0	92.07	%			10:31:09
2	Ag 328.068†	51203.8	58245.4	284.11	ug/L	284.11	ppb	10:31:38
2	Al 396.153Radial†	516287.7	561868.9	511410	ug/L	511410	ppb	10:31:04
2	As 188.979†	1781.2	2085.2	528.14	ug/L	528.14	ppb	10:31:43
2	B 249.677†	30212.2	35125.3	522.01	ug/L	522.01	ppb	10:31:38
2	Ba 233.527†	84896.2	97605.7	499.46	ug/L	499.46	ppb	10:31:38
2	Be 313.107†	684415.6	794388.8	248.15	ug/L	248.15	ppb	10:31:38
2	Ca 317.933Radial†	173685.3	188971.4	470700	ug/L	470700	ppb	10:31:04
2	Cd 226.502†	56169.1	64871.7	463.90	ug/L	463.90	ppb	10:31:43
2	Co 228.616†	32009.7	36901.3	457.33	ug/L	457.33	ppb	10:31:43
2	Cr 267.716†	48984.7	56360.6	484.22	ug/L	484.22	ppb	10:31:43
2	Cu 324.752†	206739.8	227557.9	572.02	ug/L	572.02	ppb	10:31:38
2	Fe 238.204 Radial†	4789.5	5211.1	182830	ug/L	182830	ppb	10:31:09
2	K 766.490 Radial†	13696.8	13430.5	5873.6	ug/L	5873.6	ppb	10:31:09
2	Mg 279.077 IEC†	5700.6	6202.7	491090	ug/L	491090	ppb	10:31:09
2	Mn 257.610†	527491.9	605784.5	493.08	ug/L	493.08	ppb	10:31:38
2	Mo 202.031†	10795.6	12383.1	508.21	ug/L	508.21	ppb	10:31:43
2	Na 589.592 Radial†	1739.5	2063.2	5578.5	ug/L	5578.5	ppb	10:31:09
2	Ni 231.604†	25007.5	28610.2	458.26	ug/L	458.26	ppb	10:31:43

2	P 214.914†	6657.3	7318.9	2528.5 ug/L	2528.5 ppb	10:31:43
2	Pb 220.353†	4521.9	5229.2	475.47 ug/L	475.47 ppb	10:31:43
2	S 181.975 Axial†	2966.6	3343.8	2729.8 ug/L	2729.8 ppb	10:31:43
2	Sb 206.836†	2571.5	2911.7	563.53 ug/L	563.53 ppb	10:31:43
2	Se 196.026†	5128.9	5919.8	2596.7 ug/L	2596.7 ppb	10:31:43
2	Si 251.611†	227663.7	261251.4	5378.8 ug/L	5378.8 ppb	10:31:38
2	Sn 189.927†	3812.8	4379.2	494.42 ug/L	494.42 ppb	10:31:43
2	Sr 421.552†	32971.9	35871.6	548.29 ug/L	548.29 ppb	10:31:09
2	Ti 334.940†	325093.7	374964.5	521.96 ug/L	521.96 ppb	10:31:38
2	Tl 190.801†	2278.3	2681.4	456.94 ug/L	456.94 ppb	10:31:43
2	U 409.014†	14518.6	20531.0	486.02 ug/L	486.02 ppb	10:31:38
2	V 292.402†	80202.9	93885.5	522.26 ug/L	522.26 ppb	10:31:38
2	Zn 213.857†	83836.4	95288.9	491.61 ug/L	491.61 ppb	10:31:38
2	SiO2†	226952.2	260390.9	11480 ug/L	11480 ppb	10:32:04
3	Sc 361.383	916394.6	916394.6	86.380 %		10:31:49
3	Sc Radial	5092.1	5092.1	91.5 %		10:31:20
3	Y 371.029	718336.1	718336.1	84.192 %		10:31:49
3	Y RADIAL	4424.4	4424.4	91.87 %		10:31:20
3	Ag 328.068†	50974.6	58373.2	285.14 ug/L	285.14 ppb	10:31:49
3	Al 396.153Radial†	519866.9	568222.7	517200 ug/L	517200 ppb	10:31:15
3	As 188.979†	1750.1	2062.9	523.28 ug/L	523.28 ppb	10:31:54
3	B 249.677†	30095.4	35222.0	523.28 ug/L	523.28 ppb	10:31:49
3	Ba 233.527†	84510.6	97811.1	500.55 ug/L	500.55 ppb	10:31:49
3	Be 313.107†	680536.4	795152.9	248.38 ug/L	248.38 ppb	10:31:49
3	Ca 317.933Radial†	174798.8	191009.9	475780 ug/L	475780 ppb	10:31:15
3	Cd 226.502†	55239.4	64226.6	458.85 ug/L	458.85 ppb	10:31:54
3	Co 228.616†	31559.8	36626.3	453.86 ug/L	453.86 ppb	10:31:54
3	Cr 267.716†	48208.5	55838.2	479.81 ug/L	479.81 ppb	10:31:54
3	Cu 324.752†	204835.2	226940.4	570.60 ug/L	570.60 ppb	10:31:49
3	Fe 238.204 Radial†	4816.3	5263.1	184650 ug/L	184650 ppb	10:31:20
3	K 766.490 Radial†	13730.6	13532.3	5918.2 ug/L	5918.2 ppb	10:31:20
3	Mg 279.077 IEC†	5726.3	6257.7	495450 ug/L	495450 ppb	10:31:20
3	Mn 257.610†	525190.6	607170.3	494.33 ug/L	494.33 ppb	10:31:49
3	Mo 202.031†	10571.3	12206.3	501.26 ug/L	501.26 ppb	10:31:54
3	Na 589.592 Radial†	1746.4	2079.0	5621.3 ug/L	5621.3 ppb	10:31:20
3	Ni 231.604†	24590.8	28319.8	453.61 ug/L	453.61 ppb	10:31:54
3	P 214.914†	6490.6	7177.1	2479.1 ug/L	2479.1 ppb	10:31:54
3	Pb 220.353†	4444.7	5174.6	472.31 ug/L	472.31 ppb	10:31:54
3	S 181.975 Axial†	2922.3	3315.2	2704.5 ug/L	2704.5 ppb	10:31:54
3	Sb 206.836†	2597.2	2961.2	572.95 ug/L	572.95 ppb	10:31:54
3	Se 196.026†	4938.2	5738.4	2544.4 ug/L	2544.4 ppb	10:31:54
3	Si 251.611†	226292.7	261412.2	5382.3 ug/L	5382.3 ppb	10:31:49
3	Sn 189.927†	3753.4	4339.7	490.73 ug/L	490.73 ppb	10:31:54
3	Sr 421.552†	32971.1	36026.6	550.64 ug/L	550.64 ppb	10:31:20
3	Ti 334.940†	322933.2	374959.4	522.30 ug/L	522.30 ppb	10:31:49
3	Tl 190.801†	2336.1	2765.8	471.25 ug/L	471.25 ppb	10:31:54
3	U 409.014†	14229.3	20307.5	480.26 ug/L	480.26 ppb	10:31:49
3	V 292.402†	79923.8	94178.2	523.65 ug/L	523.65 ppb	10:31:49
3	Zn 213.857†	83231.3	95232.0	490.97 ug/L	490.97 ppb	10:31:49
3	SiO2†	228890.9	264377.8	11656 ug/L	11656 ppb	10:32:10

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	920619.1	86.779	%	0.3455				0.40%
Sc Radial	5098.4	91.6	%	0.25				0.27%
Y 371.029	722145.9	84.638	%	0.3901				0.46%
Y RADIAL	4418.3	91.75	%	0.405				0.44%
Ag 328.068†	58252.3	284.44	ug/L	0.602	284.44	ppb	0.602	0.21%
QC value within limits for Ag 328.068 Recovery = 113.78%								
Al 396.153Radial†	563072.2	512510	ug/L	4248.0	512510	ppb	4248.0	0.83%
QC value within limits for Al 396.153Radial Recovery = 102.50%								
As 188.979†	2076.3	526.24	ug/L	2.594	526.24	ppb	2.594	0.49%
QC value within limits for As 188.979 Recovery = 105.25%								
B 249.677†	35187.8	522.85	ug/L	0.735	522.85	ppb	0.735	0.14%
QC value within limits for B 249.677 Recovery = 104.57%								
Ba 233.527†	97670.4	499.82	ug/L	0.636	499.82	ppb	0.636	0.13%
QC value within limits for Ba 233.527 Recovery = 99.96%								
Be 313.107†	794786.9	248.27	ug/L	0.119	248.27	ppb	0.119	0.05%
QC value within limits for Be 313.107 Recovery = 99.31%								

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Ca 317.933Radial†     189164.0      471180 ug/L        4377.5      471180 ppb         4377.5   0.93%
   QC value within limits for Ca 317.933Radial  Recovery = 94.24%
Cd 226.502†            64655.2      462.16 ug/L         2.867      462.16 ppb          2.867   0.62%
   QC value within limits for Cd 226.502  Recovery = 92.43%
Co 228.616†            36826.3      456.37 ug/L         2.197      456.37 ppb          2.197   0.48%
   QC value within limits for Co 228.616  Recovery = 91.27%
Cr 267.716†            56174.3      482.66 ug/L         2.467      482.66 ppb          2.467   0.51%
   QC value within limits for Cr 267.716  Recovery = 96.53%
Cu 324.752†           227213.0      571.22 ug/L         0.725      571.22 ppb          0.725   0.13%
   QC value within limits for Cu 324.752  Recovery = 114.24%
Fe 238.204 Radial†      5238.4      183780 ug/L         913.9      183780 ppb          913.9   0.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.89%
K 766.490 Radial†      13466.2      5889.5 ug/L         24.91      5889.5 ppb          24.91   0.42%
   QC value within limits for K 766.490 Radial  Recovery = 117.79%
Mg 279.077 IEC†         6238.4      493920 ug/L        2453.5      493920 ppb         2453.5   0.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.78%
Mn 257.610†           606319.4      493.58 ug/L         0.664      493.58 ppb          0.664   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.72%
Mo 202.031†            12301.5      505.01 ug/L         3.509      505.01 ppb          3.509   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.00%
Na 589.592 Radial†      2072.7      5604.3 ug/L         22.66      5604.3 ppb          22.66   0.40%
   QC value within limits for Na 589.592 Radial  Recovery = 112.09%
Ni 231.604†            28485.9      456.27 ug/L         2.398      456.27 ppb          2.398   0.53%
   QC value within limits for Ni 231.604  Recovery = 91.25%
P 214.914†              7279.7      2514.4 ug/L         30.79      2514.4 ppb          30.79   1.22%
   QC value within limits for P 214.914  Recovery = 100.58%
Pb 220.353†             5222.9      475.11 ug/L         2.633      475.11 ppb          2.633   0.55%
   QC value within limits for Pb 220.353  Recovery = 95.02%
S 181.975 Axial†        3321.1      2710.4 ug/L         17.23      2710.4 ppb          17.23   0.64%
   QC value within limits for S 181.975 Axial  Recovery = 108.42%
Sb 206.836†             2936.8      568.38 ug/L         4.717      568.38 ppb          4.717   0.83%
   QC value within limits for Sb 206.836  Recovery = 113.68%
Se 196.026†             5798.1      2560.6 ug/L         31.38      2560.6 ppb          31.38   1.23%
   QC value within limits for Se 196.026  Recovery = 102.42%
Si 251.611†           261215.6      5378.2 ug/L          4.51      5378.2 ppb           4.51   0.08%
   QC value within limits for Si 251.611  Recovery = 107.56%
Sn 189.927†             4371.7      493.69 ug/L         2.669      493.69 ppb          2.669   0.54%
   QC value within limits for Sn 189.927  Recovery = 98.74%
Sr 421.552†            35895.8      548.66 ug/L         1.817      548.66 ppb          1.817   0.33%
   QC value within limits for Sr 421.552  Recovery = 109.73%
Ti 334.940†           374897.0      521.91 ug/L         0.421      521.91 ppb          0.421   0.08%
   QC value within limits for Ti 334.940  Recovery = 104.38%
Tl 190.801†             2725.5      464.39 ug/L         7.171      464.39 ppb          7.171   1.54%
   QC value within limits for Tl 190.801  Recovery = 92.88%
U 409.014†             20404.2      482.76 ug/L         2.954      482.76 ppb          2.954   0.61%
   QC value within limits for U 409.014  Recovery = 96.55%
V 292.402†             94048.1      523.06 ug/L         0.714      523.06 ppb          0.714   0.14%
   QC value within limits for V 292.402  Recovery = 104.61%
Zn 213.857†            95234.2      491.11 ug/L         0.439      491.11 ppb          0.439   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.22%
SiO2†                 260958.2       11505 ug/L         140.4       11505 ppb          140.4   1.22%
   QC value within limits for SiO2  Recovery = 107.57%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/8/2009 10:34:19
Data Type: Reprocessed on 7/8/2009 11:40:14

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	903068.1	903068.1	85.124	%			10:37:30
1	Sc Radial	4907.1	4907.1	88.2	%			10:36:32
1	Y 371.029	711048.9	711048.9	83.338	%			10:37:30
1	Y RADIAL	4267.0	4267.0	88.60	%			10:36:32
1	Ag 328.068†	-24652.6	-29599.4	5.2180	ug/L	5.2180	ppb	10:37:30
1	Al 396.153Radial†	501001.0	568251.7	517240	ug/L	517240	ppb	10:36:12
1	As 188.979†	-286.0	-299.1	17.474	ug/L	17.474	ppb	10:37:35
1	B 249.677†	2112.7	2863.4	-13.637	ug/L	-13.637	ppb	10:37:30
1	Ba 233.527†	-1436.5	-1711.8	1.5622	ug/L	1.5622	ppb	10:37:35
1	Be 313.107†	-14446.8	-9655.2	-3.0542	ug/L	-3.0542	ppb	10:37:35
1	Ca 317.933Radial†	166917.5	189275.7	471460	ug/L	471460	ppb	10:36:12
1	Cd 226.502†	5594.5	6849.8	-0.6386	ug/L	-0.6386	ppb	10:37:35
1	Co 228.616†	294.3	436.1	-0.8830	ug/L	-0.8830	ppb	10:37:35
1	Cr 267.716†	-12.1	14.4	4.1493	ug/L	4.1493	ppb	10:37:35
1	Cu 324.752†	3503.0	-6076.1	10.395	ug/L	10.395	ppb	10:37:30
1	Fe 238.204 Radial†	11037.4	12516.6	439100	ug/L	439100	ppb	10:36:32
1	K 766.490 Radial†	1318.5	22.1	26.226	ug/L	26.226	ppb	10:36:12
1	Mg 279.077 IEC†	5521.4	6261.4	495510	ug/L	495510	ppb	10:36:32
1	Mn 257.610†	-38315.8	-45838.6	11.430	ug/L	11.430	ppb	10:37:30
1	Mo 202.031†	-778.9	-946.7	-7.7594	ug/L	-7.7594	ppb	10:37:35
1	Na 589.592 Radial†	171624.9	194801.4	526720	ug/L	526720	ppb	10:36:12
1	Ni 231.604†	465.6	398.7	6.3863	ug/L	6.3863	ppb	10:37:35
1	P 214.914†	838.8	648.5	52.119	ug/L	52.119	ppb	10:37:35
1	Pb 220.353†	-640.5	-723.3	5.3786	ug/L	5.3786	ppb	10:37:35
1	S 181.975 Axial†	149.8	108.1	-10.229	ug/L	-10.229	ppb	10:37:35
1	Sb 206.836†	146.8	127.0	13.157	ug/L	13.157	ppb	10:37:35
1	Se 196.026†	-4401.3	-5148.9	-103.95	ug/L	-103.95	ppb	10:37:35
1	Si 251.611†	-979.0	-1710.1	-34.481	ug/L	-34.481	ppb	10:37:35
1	Sn 189.927†	-388.8	-462.3	-4.5333	ug/L	-4.5333	ppb	10:37:35
1	Sr 421.552†	319.3	356.6	1.1243	ug/L	1.1243	ppb	10:36:32
1	Ti 334.940†	-15490.5	-17088.2	2.9945	ug/L	2.9945	ppb	10:37:35
1	Tl 190.801†	-133.6	-95.5	-13.648	ug/L	-13.648	ppb	10:37:35
1	U 409.014†	478080.9	565462.0	13976	ug/L	13976	ppb	10:37:30
1	V 292.402†	2200.9	4238.3	-0.8487	ug/L	-0.8487	ppb	10:37:35
1	Zn 213.857†	10091.7	10732.9	-4.6503	ug/L	-4.6503	ppb	10:37:35
1	SiO2†	-858.7	-1611.1	-69.439	ug/L	-69.439	ppb	10:38:03
2	Sc 361.383	901598.6	901598.6	84.986	%			10:37:41
2	Sc Radial	4913.8	4913.8	88.3	%			10:36:57
2	Y 371.029	709120.5	709120.5	83.112	%			10:37:41
2	Y RADIAL	4292.7	4292.7	89.14	%			10:36:57
2	Ag 328.068†	-24814.9	-29837.5	4.1617	ug/L	4.1617	ppb	10:37:41
2	Al 396.153Radial†	499453.7	565720.2	514940	ug/L	514940	ppb	10:36:37
2	As 188.979†	-323.1	-343.3	7.0255	ug/L	7.0255	ppb	10:37:46
2	B 249.677†	2057.8	2802.9	-14.529	ug/L	-14.529	ppb	10:37:41
2	Ba 233.527†	-1538.0	-1834.0	0.9343	ug/L	0.9343	ppb	10:37:46
2	Be 313.107†	-14278.5	-9484.8	-2.9994	ug/L	-2.9994	ppb	10:37:46
2	Ca 317.933Radial†	166575.3	188628.5	469840	ug/L	469840	ppb	10:36:37
2	Cd 226.502†	5560.2	6820.2	-0.8124	ug/L	-0.8124	ppb	10:37:46
2	Co 228.616†	329.8	478.5	-0.3494	ug/L	-0.3494	ppb	10:37:46
2	Cr 267.716†	64.5	104.5	4.9068	ug/L	4.9068	ppb	10:37:46
2	Cu 324.752†	3384.0	-6209.4	10.043	ug/L	10.043	ppb	10:37:41
2	Fe 238.204 Radial†	11042.3	12505.0	438690	ug/L	438690	ppb	10:36:57
2	K 766.490 Radial†	1363.1	70.6	47.960	ug/L	47.960	ppb	10:36:37
2	Mg 279.077 IEC†	5523.4	6255.1	495010	ug/L	495010	ppb	10:36:57
2	Mn 257.610†	-38665.9	-46324.0	11.003	ug/L	11.003	ppb	10:37:41
2	Mo 202.031†	-762.0	-928.4	-7.0553	ug/L	-7.0553	ppb	10:37:46
2	Na 589.592 Radial†	171230.3	194087.6	524790	ug/L	524790	ppb	10:36:37
2	Ni 231.604†	460.5	393.6	6.3048	ug/L	6.3048	ppb	10:37:46

2	P 214.914†	942.4	772.0	95.294	ug/L	95.294 ppb	10:37:46
2	Pb 220.353†	-620.4	-700.9	6.6499	ug/L	6.6499 ppb	10:37:46
2	S 181.975 Axial†	185.9	150.9	26.429	ug/L	26.429 ppb	10:37:46
2	Sb 206.836†	108.8	82.6	4.4435	ug/L	4.4435 ppb	10:37:46
2	Se 196.026†	-4291.9	-5028.5	-66.360	ug/L	-66.360 ppb	10:37:46
2	Si 251.611†	-923.9	-1647.3	-33.191	ug/L	-33.191 ppb	10:37:46
2	Sn 189.927†	-421.4	-501.3	-8.7146	ug/L	-8.7146 ppb	10:37:46
2	Sr 421.552†	322.3	359.5	1.1835	ug/L	1.1835 ppb	10:36:57
2	Ti 334.940†	-14961.4	-16495.3	3.6589	ug/L	3.6589 ppb	10:37:46
2	Tl 190.801†	-157.6	-124.0	-18.471	ug/L	-18.471 ppb	10:37:46
2	U 409.014†	477587.6	565796.9	13984	ug/L	13984 ppb	10:37:41
2	V 292.402†	2214.6	4258.6	-0.6621	ug/L	-0.6621 ppb	10:37:46
2	Zn 213.857†	9931.6	10563.8	-5.5320	ug/L	-5.5320 ppb	10:37:46
2	SiO2†	-947.4	-1717.2	-74.141	ug/L	-74.141 ppb	10:38:08
3	Sc 361.383	901333.6	901333.6	84.961	%		10:37:52
3	Sc Radial	4898.6	4898.6	88.0	%		10:37:23
3	Y 371.029	709314.8	709314.8	83.134	%		10:37:52
3	Y RADIAL	4273.7	4273.7	88.74	%		10:37:23
3	Ag 328.068†	-24785.9	-29811.9	3.2059	ug/L	3.2059 ppb	10:37:52
3	Al 396.153Radial†	500210.2	568328.0	517310	ug/L	517310 ppb	10:37:02
3	As 188.979†	-299.6	-315.7	12.839	ug/L	12.839 ppb	10:37:57
3	B 249.677†	2166.2	2931.2	-12.096	ug/L	-12.096 ppb	10:37:52
3	Ba 233.527†	-1531.2	-1826.5	0.8994	ug/L	0.8994 ppb	10:37:57
3	Be 313.107†	-14414.9	-9650.3	-3.0517	ug/L	-3.0517 ppb	10:37:57
3	Ca 317.933Radial†	166348.8	188954.3	470650	ug/L	470650 ppb	10:37:02
3	Cd 226.502†	5540.8	6799.3	-0.5842	ug/L	-0.5842 ppb	10:37:57
3	Co 228.616†	326.0	474.1	-0.3588	ug/L	-0.3588 ppb	10:37:57
3	Cr 267.716†	-19.8	5.3	3.9998	ug/L	3.9998 ppb	10:37:57
3	Cu 324.752†	3399.1	-6190.5	9.9012	ug/L	9.9012 ppb	10:37:52
3	Fe 238.204 Radial†	10926.4	12412.0	435430	ug/L	435430 ppb	10:37:23
3	K 766.490 Radial†	1311.1	16.4	22.386	ug/L	22.386 ppb	10:37:02
3	Mg 279.077 IEC†	5483.5	6229.0	492950	ug/L	492950 ppb	10:37:23
3	Mn 257.610†	-38504.0	-46146.8	10.758	ug/L	10.758 ppb	10:37:52
3	Mo 202.031†	-779.9	-949.7	-8.1288	ug/L	-8.1288 ppb	10:37:57
3	Na 589.592 Radial†	170529.0	193890.3	524260	ug/L	524260 ppb	10:37:02
3	Ni 231.604†	397.1	319.1	5.1105	ug/L	5.1105 ppb	10:37:57
3	P 214.914†	880.7	699.7	73.222	ug/L	73.222 ppb	10:37:57
3	Pb 220.353†	-643.4	-728.2	5.3697	ug/L	5.3697 ppb	10:37:57
3	S 181.975 Axial†	158.0	118.1	-1.7772	ug/L	-1.7772 ppb	10:37:57
3	Sb 206.836†	116.9	92.2	6.2449	ug/L	6.2449 ppb	10:37:57
3	Se 196.026†	-4293.9	-5032.4	-78.955	ug/L	-78.955 ppb	10:37:57
3	Si 251.611†	-893.4	-1611.7	-32.442	ug/L	-32.442 ppb	10:37:57
3	Sn 189.927†	-398.8	-474.9	-5.9803	ug/L	-5.9803 ppb	10:37:57
3	Sr 421.552†	302.5	338.2	0.8478	ug/L	0.8478 ppb	10:37:23
3	Ti 334.940†	-15207.4	-16790.1	3.3272	ug/L	3.3272 ppb	10:37:57
3	Tl 190.801†	-172.7	-141.9	-21.477	ug/L	-21.477 ppb	10:37:57
3	U 409.014†	477482.3	565838.3	13986	ug/L	13986 ppb	10:37:52
3	V 292.402†	2380.5	4454.7	0.8529	ug/L	0.8529 ppb	10:37:57
3	Zn 213.857†	9939.8	10576.9	-5.0280	ug/L	-5.0280 ppb	10:37:57
3	SiO2†	-939.4	-1708.1	-73.708	ug/L	-73.708 ppb	10:38:13

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	902000.1	85.024	%	0.0881				0.10%
Sc Radial	4906.5	88.2	%	0.14				0.15%
Y 371.029	709828.1	83.195	%	0.1244				0.15%
Y RADIAL	4277.8	88.83	%	0.277				0.31%
Ag 328.068†	-29749.6	4.1952	ug/L	1.00645	4.1952	ppb	1.00645	23.99%
Al 396.153Radial†	567433.3	516500	ug/L	1350.9	516500	ppb	1350.9	0.26%
QC value within limits for Al 396.153Radial Recovery = 103.30%								
As 188.979†	-319.4	12.446	ug/L	5.2351	12.446	ppb	5.2351	42.06%
B 249.677†	2865.8	-13.421	ug/L	1.2309	-13.421	ppb	1.2309	9.17%
Ba 233.527†	-1790.8	1.1320	ug/L	0.37301	1.1320	ppb	0.37301	32.95%
Be 313.107†	-9596.8	-3.0351	ug/L	0.03096	-3.0351	ppb	0.03096	1.02%
Ca 317.933Radial†	188952.8	470650	ug/L	805.9	470650	ppb	805.9	0.17%
QC value within limits for Ca 317.933Radial Recovery = 94.13%								
Cd 226.502†	6823.1	-0.6784	ug/L	0.11915	-0.6784	ppb	0.11915	17.56%
Co 228.616†	462.9	-0.5304	ug/L	0.30543	-0.5304	ppb	0.30543	57.59%
Cr 267.716†	41.4	4.3520	ug/L	0.48630	4.3520	ppb	0.48630	11.17%

Cu 324.752†	-6158.7	10.113 ug/L	0.2544	10.113 ppb	0.2544	2.52%
Fe 238.204 Radial†	12477.9	437740 ug/L	2010.7	437740 ppb	2010.7	0.46%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.55%						
K 766.490 Radial†	36.3	32.190 ug/L	13.7909	32.190 ppb	13.7909	42.84%
Mg 279.077 IEC†	6248.5	494490 ug/L	1357.9	494490 ppb	1357.9	0.27%
QC value within limits for Mg 279.077 IEC Recovery = 98.90%						
Mn 257.610†	-46103.1	11.063 ug/L	0.3401	11.063 ppb	0.3401	3.07%
Mo 202.031†	-941.6	-7.6478 ug/L	0.54541	-7.6478 ppb	0.54541	7.13%
Na 589.592 Radial†	194259.8	525260 ug/L	1296.0	525260 ppb	1296.0	0.25%
QC value within limits for Na 589.592 Radial Recovery = 105.05%						
Ni 231.604†	370.5	5.9339 ug/L	0.71420	5.9339 ppb	0.71420	12.04%
P 214.914†	706.7	73.545 ug/L	21.5891	73.545 ppb	21.5891	29.35%
Pb 220.353†	-717.5	5.7994 ug/L	0.73655	5.7994 ppb	0.73655	12.70%
S 181.975 Axial†	125.7	4.8073 ug/L	19.19563	4.8073 ppb	19.19563	399.30%
Sb 206.836†	100.6	7.9483 ug/L	4.59954	7.9483 ppb	4.59954	57.87%
Se 196.026†	-5069.9	-83.089 ug/L	19.1336	-83.089 ppb	19.1336	23.03%
Si 251.611†	-1656.4	-33.371 ug/L	1.0313	-33.371 ppb	1.0313	3.09%
Sn 189.927†	-479.5	-6.4094 ug/L	2.12342	-6.4094 ppb	2.12342	33.13%
Sr 421.552†	351.4	1.0519 ug/L	0.17919	1.0519 ppb	0.17919	17.04%
Ti 334.940†	-16791.2	3.3269 ug/L	0.33215	3.3269 ppb	0.33215	9.98%
Tl 190.801†	-120.5	-17.865 ug/L	3.9499	-17.865 ppb	3.9499	22.11%
U 409.014†	565699.1	13982 ug/L	5.3	13982 ppb	5.3	0.04%
QC value within limits for U 409.014 Recovery = 93.21%						
V 292.402†	4317.2	-0.2193 ug/L	0.93321	-0.2193 ppb	0.93321	425.48%
Zn 213.857†	10624.5	-5.0701 ug/L	0.44239	-5.0701 ppb	0.44239	8.73%
SiO2†	-1678.8	-72.429 ug/L	2.5989	-72.429 ppb	2.5989	3.59%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/8/2009 10:40:22
Data Type: Reprocessed on 7/8/2009 11:40:15

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1014953.4	1014953.4	95.671	%			10:43:57
1	Sc Radial	5417.4	5417.4	97.3	%			10:42:20
1	Y 371.029	800941.5	800941.5	93.873	%			10:43:57
1	Y RADIAL	4706.4	4706.4	97.73	%			10:42:20
1	Ag 328.068†	-7110.5	-8070.8	7.1415	ug/L	7.1415	ppb	10:44:02
1	Al 396.153Radial†	449.0	553.4	87.615	ug/L	87.615	ppb	10:42:20
1	As 188.979†	40482.4	42351.3	9989.0	ug/L	9989.0	ppb	10:44:02
1	B 249.677†	309866.7	324270.4	5029.0	ug/L	5029.0	ppb	10:43:57
1	Ba 233.527†	2664318.6	2784861.5	14118	ug/L	14118	ppb	10:43:57
1	Be 313.107†	8856992.8	9265110.5	2903.5	ug/L	2903.5	ppb	10:43:50
1	Ca 317.933Radial†	25.7	9.5	23.698	ug/L	23.698	ppb	10:42:40
1	Cd 226.502†	1280128.2	1338334.9	10016	ug/L	10016	ppb	10:43:57
1	Co 228.616†	749635.6	783648.9	9762.7	ug/L	9762.7	ppb	10:43:57
1	Cr 267.716†	2711737.5	2834479.1	24157	ug/L	24157	ppb	10:43:57
1	Cu 324.752†	7865610.7	8211358.3	20260	ug/L	20260	ppb	10:43:50
1	Fe 238.204 Radial†	-7.6	-8.1	23.148	ug/L	23.148	ppb	10:42:40
1	K 766.490 Radial†	684372.6	701529.4	304300	ug/L	304300	ppb	10:42:15
1	Mg 279.077 IEC†	-2.9	-3.1	-51.980	ug/L	-51.980	ppb	10:42:40
1	Mn 257.610†	11427294.3	11943581.3	9438.7	ug/L	9438.7	ppb	10:43:50
1	Mo 202.031†	232338.7	242820.8	9719.4	ug/L	9719.4	ppb	10:44:02
1	Na 589.592 Radial†	-122.5	44.6	120.62	ug/L	120.62	ppb	10:42:40
1	Ni 231.604†	591314.2	617924.4	9897.7	ug/L	9897.7	ppb	10:43:57
1	P 214.914†	48706.9	50574.1	14767	ug/L	14767	ppb	10:44:02
1	Pb 220.353†	309384.9	323414.5	24253	ug/L	24253	ppb	10:44:02
1	S 181.975 Axial†	58295.0	60865.2	51520	ug/L	51520	ppb	10:44:02
1	Sb 206.836†	53440.0	55812.8	10745	ug/L	10745	ppb	10:44:02
1	Se 196.026†	29668.4	31032.6	10122	ug/L	10122	ppb	10:44:02
1	Si 251.611†	2155853.2	2252850.9	46184	ug/L	46184	ppb	10:43:57
1	Sn 189.927†	95946.9	100283.2	10430	ug/L	10430	ppb	10:44:02
1	Sr 421.552†	646073.6	663655.5	10225	ug/L	10225	ppb	10:42:15
1	Ti 334.940†	7127693.7	7451349.2	9745.7	ug/L	9745.7	ppb	10:43:50
1	Tl 190.801†	55066.4	57619.7	9753.1	ug/L	9753.1	ppb	10:44:02
1	U 409.014†	-2611.3	1105.2	-19.174	ug/L	-19.174	ppb	10:44:02
1	V 292.402†	1681684.2	1759437.4	10082	ug/L	10082	ppb	10:43:57
1	Zn 213.857†	2418310.9	2526623.2	14016	ug/L	14016	ppb	10:43:57
1	SiO2†	2181096.5	2279194.3	100050	ug/L	100050	ppb	10:44:49
2	Sc 361.383	1029870.2	1029870.2	97.077	%			10:44:17
2	Sc Radial	5497.9	5497.9	98.8	%			10:42:50
2	Y 371.029	811966.1	811966.1	95.166	%			10:44:17
2	Y RADIAL	4740.4	4740.4	98.44	%			10:42:50
2	Ag 328.068†	-7088.1	-7940.1	6.7301	ug/L	6.7301	ppb	10:44:22
2	Al 396.153Radial†	473.1	571.1	109.77	ug/L	109.77	ppb	10:42:50
2	As 188.979†	40474.1	41729.8	9842.3	ug/L	9842.3	ppb	10:44:22
2	B 249.677†	307090.3	316719.2	4911.8	ug/L	4911.8	ppb	10:44:17
2	Ba 233.527†	2644634.7	2724248.1	13811	ug/L	13811	ppb	10:44:17
2	Be 313.107†	8832006.5	9105280.2	2853.4	ug/L	2853.4	ppb	10:44:10
2	Ca 317.933Radial†	28.1	11.5	28.754	ug/L	28.754	ppb	10:43:10
2	Cd 226.502†	1271277.6	1309837.1	9803.0	ug/L	9803.0	ppb	10:44:17
2	Co 228.616†	743954.7	766447.7	9548.5	ug/L	9548.5	ppb	10:44:17
2	Cr 267.716†	2688484.5	2769471.3	23603	ug/L	23603	ppb	10:44:17
2	Cu 324.752†	7842993.7	8068977.9	19908	ug/L	19908	ppb	10:44:10
2	Fe 238.204 Radial†	-5.8	-6.2	84.443	ug/L	84.443	ppb	10:43:10
2	K 766.490 Radial†	684716.9	691584.4	299980	ug/L	299980	ppb	10:42:45
2	Mg 279.077 IEC†	-2.0	-2.2	19.126	ug/L	19.126	ppb	10:43:10
2	Mn 257.610†	11404692.0	11747293.6	9283.6	ug/L	9283.6	ppb	10:44:10
2	Mo 202.031†	232311.4	239275.2	9577.5	ug/L	9577.5	ppb	10:44:22
2	Na 589.592 Radial†	-129.4	39.4	106.58	ug/L	106.58	ppb	10:43:10
2	Ni 231.604†	586038.5	603537.6	9667.2	ug/L	9667.2	ppb	10:44:17

2	P 214.914†	48755.1	49886.4	14579	ug/L	14579	ppb	10:44:22
2	Pb 220.353†	309441.3	318788.5	23906	ug/L	23906	ppb	10:44:22
2	S 181.975 Axial†	58411.2	60102.3	50874	ug/L	50874	ppb	10:44:22
2	Sb 206.836†	53362.1	54923.6	10578	ug/L	10578	ppb	10:44:22
2	Se 196.026†	29761.5	30679.3	10007	ug/L	10007	ppb	10:44:22
2	Si 251.611†	2138710.2	2202552.9	45150	ug/L	45150	ppb	10:44:17
2	Sn 189.927†	95957.5	98841.5	10280	ug/L	10280	ppb	10:44:22
2	Sr 421.552†	646581.7	654452.3	10083	ug/L	10083	ppb	10:42:45
2	Ti 334.940†	7109976.4	7325187.8	9580.8	ug/L	9580.8	ppb	10:44:10
2	Tl 190.801†	55268.7	56994.4	9647.5	ug/L	9647.5	ppb	10:44:22
2	U 409.014†	-2581.0	1176.0	-16.357	ug/L	-16.357	ppb	10:44:22
2	V 292.402†	1665056.2	1716848.7	9839.4	ug/L	9839.4	ppb	10:44:17
2	Zn 213.857†	2400720.5	2471890.8	13712	ug/L	13712	ppb	10:44:17
2	SiO2†	2194108.9	2259577.6	99188	ug/L	99188	ppb	10:44:57
3	Sc 361.383	1027984.8	1027984.8	96.899	%			10:44:37
3	Sc Radial	5311.1	5311.1	95.4	%			10:43:20
3	Y 371.029	810508.3	810508.3	94.995	%			10:44:37
3	Y RADIAL	4586.5	4586.5	95.24	%			10:43:20
3	Ag 328.068†	-7268.9	-8140.1	6.0153	ug/L	6.0153	ppb	10:44:42
3	Al 396.153Radial†	472.0	586.8	121.54	ug/L	121.54	ppb	10:43:20
3	As 188.979†	40697.9	42037.3	9914.2	ug/L	9914.2	ppb	10:44:42
3	B 249.677†	308195.5	318440.0	4938.5	ug/L	4938.5	ppb	10:44:37
3	Ba 233.527†	2647831.5	2732543.7	13853	ug/L	13853	ppb	10:44:37
3	Be 313.107†	8792922.6	9081631.8	2846.1	ug/L	2846.1	ppb	10:44:30
3	Ca 317.933Radial†	29.0	13.4	33.386	ug/L	33.386	ppb	10:43:40
3	Cd 226.502†	1272287.1	1313280.7	9828.8	ug/L	9828.8	ppb	10:44:37
3	Co 228.616†	745426.9	769372.6	9585.2	ug/L	9585.2	ppb	10:44:37
3	Cr 267.716†	2688412.8	2774476.6	23645	ug/L	23645	ppb	10:44:37
3	Cu 324.752†	7782720.1	8021593.1	19791	ug/L	19791	ppb	10:44:30
3	Fe 238.204 Radial†	-6.7	-7.3	44.771	ug/L	44.771	ppb	10:43:40
3	K 766.490 Radial†	683971.3	715172.9	310220	ug/L	310220	ppb	10:43:15
3	Mg 279.077 IEC†	-3.7	-4.1	-128.19	ug/L	-128.19	ppb	10:43:40
3	Mn 257.610†	11381446.6	11744851.0	9281.7	ug/L	9281.7	ppb	10:44:30
3	Mo 202.031†	233312.1	240746.8	9636.4	ug/L	9636.4	ppb	10:44:42
3	Na 589.592 Radial†	-122.9	41.6	112.55	ug/L	112.55	ppb	10:43:40
3	Ni 231.604†	587015.1	605652.6	9701.1	ug/L	9701.1	ppb	10:44:37
3	P 214.914†	49152.9	50388.9	14776	ug/L	14776	ppb	10:44:42
3	Pb 220.353†	310539.8	320506.8	24035	ug/L	24035	ppb	10:44:42
3	S 181.975 Axial†	58718.6	60529.9	51236	ug/L	51236	ppb	10:44:42
3	Sb 206.836†	53615.8	55286.2	10651	ug/L	10651	ppb	10:44:42
3	Se 196.026†	29842.3	30818.9	10053	ug/L	10053	ppb	10:44:42
3	Si 251.611†	2145121.2	2213209.7	45366	ug/L	45366	ppb	10:44:37
3	Sn 189.927†	96345.6	99423.4	10341	ug/L	10341	ppb	10:44:42
3	Sr 421.552†	646025.5	676882.0	10428	ug/L	10428	ppb	10:43:15
3	Ti 334.940†	7084549.3	7312379.8	9564.0	ug/L	9564.0	ppb	10:44:30
3	Tl 190.801†	55398.8	57233.1	9687.5	ug/L	9687.5	ppb	10:44:42
3	U 409.014†	-2499.7	1255.0	-14.474	ug/L	-14.474	ppb	10:44:42
3	V 292.402†	1665986.8	1720954.9	9863.5	ug/L	9863.5	ppb	10:44:37
3	Zn 213.857†	2405918.3	2481790.6	13767	ug/L	13767	ppb	10:44:37
3	SiO2†	2167381.8	2236140.5	98142	ug/L	98142	ppb	10:45:04

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1024269.4	96.549	%	0.7657				0.79%
Sc Radial	5408.8	97.2	%	1.68				1.73%
Y 371.029	807805.3	94.678	%	0.7019				0.74%
Y RADIAL	4677.8	97.14	%	1.679				1.73%
Ag 328.068†	-8050.3	6.6290	ug/L	0.56988	6.6290	ppb	0.56988	8.60%
Al 396.153Radial†	570.4	106.31	ug/L	17.224	106.31	ppb	17.224	16.20%
As 188.979†	42039.5	9915.2	ug/L	73.36	9915.2	ppb	73.36	0.74%
QC value within limits for As 188.979 Recovery = 99.15%								
B 249.677†	319809.9	4959.8	ug/L	61.39	4959.8	ppb	61.39	1.24%
QC value within limits for B 249.677 Recovery = 99.20%								
Ba 233.527†	2747217.8	13927	ug/L	166.6	13927	ppb	166.6	1.20%
QC value within limits for Ba 233.527 Recovery = 92.85%								
Be 313.107†	9150674.2	2867.7	ug/L	31.27	2867.7	ppb	31.27	1.09%
QC value within limits for Be 313.107 Recovery = 95.59%								
Ca 317.933Radial†	11.5	28.613	ug/L	4.8452	28.613	ppb	4.8452	16.93%
Cd 226.502†	1320484.3	9882.7	ug/L	116.42	9882.7	ppb	116.42	1.18%

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   QC value within limits for Cd 226.502  Recovery = 98.83%
Co 228.616†          773156.4      9632.2 ug/L        114.57      9632.2 ppb        114.57   1.19%
   QC value within limits for Co 228.616  Recovery = 96.32%
Cr 267.716†         2792809.0       23802 ug/L         308.3       23802 ppb         308.3   1.30%
   QC value within limits for Cr 267.716  Recovery = 95.21%
Cu 324.752†         8100643.1       19986 ug/L         243.7       19986 ppb         243.7   1.22%
   QC value within limits for Cu 324.752  Recovery = 99.93%
Fe 238.204 Radial†        -7.2      50.787 ug/L       31.0875      50.787 ppb       31.0875  61.21%
K 766.490 Radial†     702762.2      304830 ug/L        5138.4      304830 ppb        5138.4   1.69%
   QC value within limits for K 766.490 Radial  Recovery = 101.61%
Mg 279.077 IEC†           -3.1     -53.681 ug/L       73.6715     -53.681 ppb       73.6715 137.24%
Mn 257.610†         11811908.6      9334.7 ug/L         90.12      9334.7 ppb         90.12   0.97%
   QC value within limits for Mn 257.610  Recovery = 93.35%
Mo 202.031†          240947.6      9644.5 ug/L         71.30      9644.5 ppb         71.30   0.74%
   QC value within limits for Mo 202.031  Recovery = 96.44%
Na 589.592 Radial†        41.9      113.25 ug/L        7.046      113.25 ppb         7.046   6.22%
Ni 231.604†          609038.2      9755.3 ug/L        124.43      9755.3 ppb        124.43   1.28%
   QC value within limits for Ni 231.604  Recovery = 97.55%
P 214.914†            50283.1       14707 ug/L         111.5       14707 ppb         111.5   0.76%
   QC value within limits for P 214.914  Recovery = 98.05%
Pb 220.353†          320903.3       24065 ug/L         175.3       24065 ppb         175.3   0.73%
   QC value within limits for Pb 220.353  Recovery = 96.26%
S 181.975 Axial†      60499.1       51210 ug/L         323.6       51210 ppb         323.6   0.63%
   QC value within limits for S 181.975 Axial  Recovery = 102.42%
Sb 206.836†           55340.9       10658 ug/L          83.6       10658 ppb          83.6   0.78%
   QC value within limits for Sb 206.836  Recovery = 106.58%
Se 196.026†           30843.6       10061 ug/L          58.0       10061 ppb          58.0   0.58%
   QC value within limits for Se 196.026  Recovery = 100.61%
Si 251.611†         2222871.2       45567 ug/L         545.3       45567 ppb         545.3   1.20%
   QC value within limits for Si 251.611  Recovery = 91.13%
Sn 189.927†           99516.1       10350 ug/L          75.4       10350 ppb          75.4   0.73%
   QC value within limits for Sn 189.927  Recovery = 103.50%
Sr 421.552†          664996.6       10245 ug/L         173.7       10245 ppb         173.7   1.70%
   QC value within limits for Sr 421.552  Recovery = 102.45%
Ti 334.940†         7362972.3      9630.2 ug/L        100.43      9630.2 ppb        100.43   1.04%
   QC value within limits for Ti 334.940  Recovery = 96.30%
Tl 190.801†           57282.4      9696.0 ug/L         53.30      9696.0 ppb         53.30   0.55%
   QC value within limits for Tl 190.801  Recovery = 96.96%
U 409.014†             1178.7     -16.669 ug/L        2.3653     -16.669 ppb        2.3653  14.19%
V 292.402†          1732413.7      9928.4 ug/L        133.88      9928.4 ppb        133.88   1.35%
   QC value within limits for V 292.402  Recovery = 99.28%
Zn 213.857†         2493434.9       13832 ug/L         161.7       13832 ppb         161.7   1.17%
   QC value within limits for Zn 213.857  Recovery = 92.21%
SiO2†               2258304.1       99125 ug/L         953.1       99125 ppb         953.1   0.96%
   QC value within limits for SiO2  Recovery = 92.64%
All analyte(s) passed QC.
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Sequence No.: 15
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:03:37
Data Type: Reprocessed on 7/8/2009 11:40:18

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1067409.9	1067409.9	100.62	%			11:06:48
1	Sc Radial	5545.0	5545.0	99.6	%			11:05:29
1	Y 371.029	849738.5	849738.5	99.593	%			11:06:48
1	Y RADIAL	4788.0	4788.0	99.42	%			11:05:29
1	Ag 328.068†	127524.3	126105.9	502.25	ug/L	502.25	ppb	11:06:48
1	Al 396.153Radial†	5299.4	5410.6	4903.4	ug/L	4903.4	ppb	11:05:29
1	As 188.979†	2078.4	2102.6	496.72	ug/L	496.72	ppb	11:07:08
1	B 249.677†	31751.6	31939.0	495.88	ug/L	495.88	ppb	11:06:48
1	Ba 233.527†	98259.2	97634.0	495.40	ug/L	495.40	ppb	11:06:48
1	Be 313.107†	1589957.2	1587550.7	494.78	ug/L	494.78	ppb	11:06:48
1	Ca 317.933Radial†	2000.8	1991.0	4959.2	ug/L	4959.2	ppb	11:05:49
1	Cd 226.502†	66514.3	66385.2	496.24	ug/L	496.24	ppb	11:06:48
1	Co 228.616†	38913.1	38765.6	483.08	ug/L	483.08	ppb	11:07:08
1	Cr 267.716†	58344.9	58016.7	494.83	ug/L	494.83	ppb	11:06:48
1	Cu 324.752†	211137.7	199655.3	492.89	ug/L	492.89	ppb	11:06:48
1	Fe 238.204 Radial†	142.3	142.5	5015.0	ug/L	5015.0	ppb	11:05:49
1	K 766.490 Radial†	13511.2	12086.4	5238.2	ug/L	5238.2	ppb	11:05:29
1	Mg 279.077 IEC†	62.2	62.2	4932.1	ug/L	4932.1	ppb	11:05:49
1	Mn 257.610†	629929.2	625250.1	494.68	ug/L	494.68	ppb	11:06:48
1	Mo 202.031†	12643.5	12534.4	502.06	ug/L	502.06	ppb	11:07:08
1	Na 589.592 Radial†	3490.6	3673.5	9932.6	ug/L	9932.6	ppb	11:05:29
1	Ni 231.604†	30743.5	30407.2	487.05	ug/L	487.05	ppb	11:07:08
1	P 214.914†	7354.4	6972.5	2389.5	ug/L	2389.5	ppb	11:07:08
1	Pb 220.353†	6693.1	6681.2	502.20	ug/L	502.20	ppb	11:07:08
1	S 181.975 Axial†	1258.3	1182.8	1000.2	ug/L	1000.2	ppb	11:07:08
1	Sb 206.836†	2588.5	2527.3	503.10	ug/L	503.10	ppb	11:07:08
1	Se 196.026†	1499.7	1512.2	511.22	ug/L	511.22	ppb	11:07:08
1	Si 251.611†	122687.2	121376.8	2492.5	ug/L	2492.5	ppb	11:06:48
1	Sn 189.927†	4831.3	4796.3	499.31	ug/L	499.31	ppb	11:07:08
1	Sr 421.552†	33822.5	33937.9	522.82	ug/L	522.82	ppb	11:05:29
1	Ti 334.940†	380487.1	379269.6	496.43	ug/L	496.43	ppb	11:06:48
1	Tl 190.801†	2880.1	2923.9	495.14	ug/L	495.14	ppb	11:07:08
1	U 409.014†	15659.6	19398.6	479.74	ug/L	479.74	ppb	11:06:48
1	V 292.402†	85512.2	86642.1	497.38	ug/L	497.38	ppb	11:06:48
1	Zn 213.857†	90296.7	88622.2	490.34	ug/L	490.34	ppb	11:06:48
1	SiO2†	123097.1	121742.0	5353.1	ug/L	5353.1	ppb	11:08:09
2	Sc 361.383	1057828.3	1057828.3	99.712	%			11:07:16
2	Sc Radial	5453.0	5453.0	98.0	%			11:05:54
2	Y 371.029	842848.9	842848.9	98.785	%			11:07:16
2	Y RADIAL	4734.2	4734.2	98.31	%			11:05:54
2	Ag 328.068†	126253.5	125979.4	501.76	ug/L	501.76	ppb	11:07:16
2	Al 396.153Radial†	5204.3	5403.2	4896.6	ug/L	4896.6	ppb	11:05:54
2	As 188.979†	2077.1	2120.0	500.82	ug/L	500.82	ppb	11:07:36
2	B 249.677†	31594.9	32067.6	497.87	ug/L	497.87	ppb	11:07:16
2	Ba 233.527†	97420.0	97677.0	495.62	ug/L	495.62	ppb	11:07:16
2	Be 313.107†	1578761.2	1590635.7	495.74	ug/L	495.74	ppb	11:07:16
2	Ca 317.933Radial†	1973.0	1996.5	4973.1	ug/L	4973.1	ppb	11:06:14
2	Cd 226.502†	65741.0	66208.5	494.92	ug/L	494.92	ppb	11:07:16
2	Co 228.616†	38917.3	39120.1	487.50	ug/L	487.50	ppb	11:07:36
2	Cr 267.716†	57810.8	58006.3	494.74	ug/L	494.74	ppb	11:07:16
2	Cu 324.752†	209446.8	199860.3	493.40	ug/L	493.40	ppb	11:07:16
2	Fe 238.204 Radial†	140.5	143.1	5035.0	ug/L	5035.0	ppb	11:06:14
2	K 766.490 Radial†	13401.9	12203.6	5289.1	ug/L	5289.1	ppb	11:05:54
2	Mg 279.077 IEC†	61.6	62.7	4968.4	ug/L	4968.4	ppb	11:06:14
2	Mn 257.610†	623982.1	624956.7	494.45	ug/L	494.45	ppb	11:07:16
2	Mo 202.031†	12615.6	12620.3	505.50	ug/L	505.50	ppb	11:07:36
2	Na 589.592 Radial†	3446.1	3687.2	9969.7	ug/L	9969.7	ppb	11:05:54
2	Ni 231.604†	30735.8	30676.3	491.36	ug/L	491.36	ppb	11:07:36

2	P 214.914†	7337.1	7021.4	2406.8 ug/L	2406.8 ppb	11:07:36
2	Pb 220.353†	6673.6	6722.0	505.26 ug/L	505.26 ppb	11:07:36
2	S 181.975 Axial†	1264.2	1200.1	1014.8 ug/L	1014.8 ppb	11:07:36
2	Sb 206.836†	2593.9	2556.0	508.91 ug/L	508.91 ppb	11:07:36
2	Se 196.026†	1503.2	1529.2	516.82 ug/L	516.82 ppb	11:07:36
2	Si 251.611†	121455.1	121245.6	2489.7 ug/L	2489.7 ppb	11:07:16
2	Sn 189.927†	4839.5	4848.0	504.69 ug/L	504.69 ppb	11:07:36
2	Sr 421.552†	33228.1	33904.0	522.30 ug/L	522.30 ppb	11:05:54
2	Ti 334.940†	377267.8	379466.3	496.69 ug/L	496.69 ppb	11:07:16
2	Tl 190.801†	2881.9	2951.6	499.79 ug/L	499.79 ppb	11:07:36
2	U 409.014†	15609.8	19489.6	482.00 ug/L	482.00 ppb	11:07:16
2	V 292.402†	84902.2	86800.1	498.32 ug/L	498.32 ppb	11:07:16
2	Zn 213.857†	89406.2	88541.9	489.86 ug/L	489.86 ppb	11:07:16
2	SiO2†	122640.5	122392.2	5381.6 ug/L	5381.6 ppb	11:08:14
3	Sc 361.383	1055071.7	1055071.7	99.452 %		11:07:43
3	Sc Radial	5432.7	5432.7	97.6 %		11:06:19
3	Y 371.029	840276.0	840276.0	98.484 %		11:07:43
3	Y RADIAL	4696.8	4696.8	97.53 %		11:06:19
3	Ag 328.068†	126120.7	126176.7	502.55 ug/L	502.55 ppb	11:07:43
3	Al 396.153Radial†	5181.8	5400.1	4893.7 ug/L	4893.7 ppb	11:06:19
3	As 188.979†	2085.4	2133.8	504.06 ug/L	504.06 ppb	11:08:03
3	B 249.677†	31427.7	31982.3	496.53 ug/L	496.53 ppb	11:07:43
3	Ba 233.527†	97457.1	97969.6	497.10 ug/L	497.10 ppb	11:07:43
3	Be 313.107†	1576182.4	1592179.6	496.22 ug/L	496.22 ppb	11:07:43
3	Ca 317.933Radial†	1975.0	2006.1	4996.9 ug/L	4996.9 ppb	11:06:39
3	Cd 226.502†	65930.8	66571.6	497.63 ug/L	497.63 ppb	11:07:43
3	Co 228.616†	38836.3	39140.6	487.76 ug/L	487.76 ppb	11:08:03
3	Cr 267.716†	57863.2	58210.5	496.48 ug/L	496.48 ppb	11:07:43
3	Cu 324.752†	208532.5	199489.8	492.49 ug/L	492.49 ppb	11:07:43
3	Fe 238.204 Radial†	141.4	144.5	5084.1 ug/L	5084.1 ppb	11:06:39
3	K 766.490 Radial†	13356.4	12208.3	5291.1 ug/L	5291.1 ppb	11:06:19
3	Mg 279.077 IEC†	60.3	61.6	4883.3 ug/L	4883.3 ppb	11:06:39
3	Mn 257.610†	623827.7	626436.5	495.63 ug/L	495.63 ppb	11:07:43
3	Mo 202.031†	12607.0	12644.6	506.48 ug/L	506.48 ppb	11:08:03
3	Na 589.592 Radial†	3459.6	3714.2	10043 ug/L	10043 ppb	11:06:19
3	Ni 231.604†	30656.7	30677.3	491.38 ug/L	491.38 ppb	11:08:03
3	P 214.914†	7338.8	7042.2	2414.3 ug/L	2414.3 ppb	11:08:03
3	Pb 220.353†	6655.9	6721.6	505.23 ug/L	505.23 ppb	11:08:03
3	S 181.975 Axial†	1273.7	1212.9	1025.7 ug/L	1025.7 ppb	11:08:03
3	Sb 206.836†	2578.9	2547.6	507.27 ug/L	507.27 ppb	11:08:03
3	Se 196.026†	1491.2	1521.0	514.35 ug/L	514.35 ppb	11:08:03
3	Si 251.611†	121268.2	121376.0	2492.4 ug/L	2492.4 ppb	11:07:43
3	Sn 189.927†	4839.7	4860.9	506.04 ug/L	506.04 ppb	11:08:03
3	Sr 421.552†	33109.5	33909.5	522.38 ug/L	522.38 ppb	11:06:19
3	Ti 334.940†	376709.4	379893.4	497.25 ug/L	497.25 ppb	11:07:43
3	Tl 190.801†	2882.8	2960.1	501.23 ug/L	501.23 ppb	11:08:03
3	U 409.014†	15694.8	19616.0	485.13 ug/L	485.13 ppb	11:07:43
3	V 292.402†	84699.0	86818.3	498.43 ug/L	498.43 ppb	11:07:43
3	Zn 213.857†	89588.7	88959.8	492.20 ug/L	492.20 ppb	11:07:43
3	SiO2†	121565.4	121632.6	5348.0 ug/L	5348.0 ppb	11:08:19

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060103.3	99.927	%	0.6104				0.61%
Sc Radial	5476.9	98.4	%	1.08				1.09%
Y 371.029	844287.8	98.954	%	0.5734				0.58%
Y RADIAL	4739.7	98.42	%	0.952				0.97%
Ag 328.068†	126087.3	502.19	ug/L	0.401	502.19	ppb	0.401	0.08%
QC value within limits for Ag 328.068 Recovery = 100.44%								
Al 396.153Radial†	5404.6	4897.9	ug/L	5.00	4897.9	ppb	5.00	0.10%
QC value within limits for Al 396.153Radial Recovery = 97.96%								
As 188.979†	2118.8	500.53	ug/L	3.674	500.53	ppb	3.674	0.73%
QC value within limits for As 188.979 Recovery = 100.11%								
B 249.677†	31996.3	496.76	ug/L	1.015	496.76	ppb	1.015	0.20%
QC value within limits for B 249.677 Recovery = 99.35%								
Ba 233.527†	97760.2	496.04	ug/L	0.926	496.04	ppb	0.926	0.19%
QC value within limits for Ba 233.527 Recovery = 99.21%								
Be 313.107†	1590122.0	495.58	ug/L	0.734	495.58	ppb	0.734	0.15%
QC value within limits for Be 313.107 Recovery = 99.12%								

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Ca 317.933Radial†        1997.9      4976.4 ug/L        19.05      4976.4 ppb        19.05   0.38%
   QC value within limits for Ca 317.933Radial  Recovery = 99.53%
Cd 226.502†             66388.4      496.27 ug/L        1.355      496.27 ppb        1.355   0.27%
   QC value within limits for Cd 226.502  Recovery = 99.25%
Co 228.616†             39008.8      486.11 ug/L        2.631      486.11 ppb        2.631   0.54%
   QC value within limits for Co 228.616  Recovery = 97.22%
Cr 267.716†             58077.8      495.35 ug/L        0.980      495.35 ppb        0.980   0.20%
   QC value within limits for Cr 267.716  Recovery = 99.07%
Cu 324.752†            199668.4      492.93 ug/L        0.457      492.93 ppb        0.457   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†        143.4      5044.7 ug/L        35.56      5044.7 ppb        35.56   0.70%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.89%
K 766.490 Radial†       12166.1      5272.8 ug/L        29.98      5272.8 ppb        29.98   0.57%
   QC value within limits for K 766.490 Radial  Recovery = 105.46%
Mg 279.077 IEC†            62.1      4927.9 ug/L        42.66      4927.9 ppb        42.66   0.87%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.56%
Mn 257.610†            625547.8      494.92 ug/L        0.624      494.92 ppb        0.624   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.98%
Mo 202.031†             12599.8      504.68 ug/L        2.320      504.68 ppb        2.320   0.46%
   QC value within limits for Mo 202.031  Recovery = 100.94%
Na 589.592 Radial†       3691.6      9981.7 ug/L        56.08      9981.7 ppb        56.08   0.56%
   QC value within limits for Na 589.592 Radial  Recovery = 99.82%
Ni 231.604†             30586.9      489.93 ug/L        2.493      489.93 ppb        2.493   0.51%
   QC value within limits for Ni 231.604  Recovery = 97.99%
P 214.914†               7012.0      2403.5 ug/L        12.69      2403.5 ppb        12.69   0.53%
   QC value within limits for P 214.914  Recovery = 96.14%
Pb 220.353†              6708.3      504.23 ug/L        1.758      504.23 ppb        1.758   0.35%
   QC value within limits for Pb 220.353  Recovery = 100.85%
S 181.975 Axial†         1198.6      1013.6 ug/L        12.78      1013.6 ppb        12.78   1.26%
   QC value within limits for S 181.975 Axial  Recovery = 101.36%
Sb 206.836†              2543.6      506.43 ug/L        2.994      506.43 ppb        2.994   0.59%
   QC value within limits for Sb 206.836  Recovery = 101.29%
Se 196.026†              1520.8      514.13 ug/L        2.806      514.13 ppb        2.806   0.55%
   QC value within limits for Se 196.026  Recovery = 102.83%
Si 251.611†            121332.8      2491.6 ug/L         1.58      2491.6 ppb         1.58   0.06%
   QC value within limits for Si 251.611  Recovery = 99.66%
Sn 189.927†              4835.1      503.35 ug/L        3.557      503.35 ppb        3.557   0.71%
   QC value within limits for Sn 189.927  Recovery = 100.67%
Sr 421.552†             33917.1      522.50 ug/L        0.280      522.50 ppb        0.280   0.05%
   QC value within limits for Sr 421.552  Recovery = 104.50%
Ti 334.940†            379543.1      496.79 ug/L        0.417      496.79 ppb        0.417   0.08%
   QC value within limits for Ti 334.940  Recovery = 99.36%
Tl 190.801†              2945.2      498.72 ug/L        3.184      498.72 ppb        3.184   0.64%
   QC value within limits for Tl 190.801  Recovery = 99.74%
U 409.014†              19501.4      482.29 ug/L        2.703      482.29 ppb        2.703   0.56%
   QC value within limits for U 409.014  Recovery = 96.46%
V 292.402†              86753.5      498.04 ug/L        0.579      498.04 ppb        0.579   0.12%
   QC value within limits for V 292.402  Recovery = 99.61%
Zn 213.857†             88708.0      490.80 ug/L        1.232      490.80 ppb        1.232   0.25%
   QC value within limits for Zn 213.857  Recovery = 98.16%
SiO2†                  121922.3      5360.9 ug/L        18.12      5360.9 ppb        18.12   0.34%
   QC value within limits for SiO2  Recovery = 100.25%
All analyte(s) passed QC.
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Sequence No.: 16
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:10:29
Data Type: Reprocessed on 7/8/2009 11:40:19

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1056286.1	1056286.1	99.567	%			11:13:38
1	Sc Radial	5577.8	5577.8	100	%			11:12:21
1	Y 371.029	851747.2	851747.2	99.828	%			11:13:38
1	Y RADIAL	4867.5	4867.5	101.1	%			11:12:21
1	Ag 328.068†	792.7	157.6	0.6291	ug/L	0.6291	ppb	11:13:43
1	Al 396.153Radial†	-60.0	32.4	29.446	ug/L	29.446	ppb	11:12:21
1	As 188.979†	-47.8	-11.1	-2.5990	ug/L	-2.5990	ppb	11:14:03
1	B 249.677†	436.8	820.2	12.780	ug/L	12.780	ppb	11:13:43
1	Ba 233.527†	31.5	7.4	0.0373	ug/L	0.0373	ppb	11:14:03
1	Be 313.107†	-7422.8	-138.9	-0.0432	ug/L	-0.0432	ppb	11:13:43
1	Ca 317.933Radial†	33.6	16.5	41.209	ug/L	41.209	ppb	11:12:41
1	Cd 226.502†	-287.1	-10.7	-0.0827	ug/L	-0.0827	ppb	11:14:03
1	Co 228.616†	-82.2	7.8	0.0972	ug/L	0.0972	ppb	11:14:03
1	Cr 267.716†	-32.4	-4.0	-0.0341	ug/L	-0.0341	ppb	11:14:03
1	Cu 324.752†	10356.0	209.8	0.5189	ug/L	0.5189	ppb	11:13:43
1	Fe 238.204 Radial†	1.0	0.7	23.570	ug/L	23.570	ppb	11:12:41
1	K 766.490 Radial†	1855.2	377.8	163.93	ug/L	163.93	ppb	11:12:21
1	Mg 279.077 IEC†	1.4	1.2	93.519	ug/L	93.519	ppb	11:12:41
1	Mn 257.610†	821.4	-2.0	-0.0003	ug/L	-0.0003	ppb	11:14:03
1	Mo 202.031†	33.3	1.7	0.0702	ug/L	0.0702	ppb	11:14:03
1	Na 589.592 Radial†	-185.2	-14.4	-38.901	ug/L	-38.901	ppb	11:12:41
1	Ni 231.604†	168.8	21.3	0.3412	ug/L	0.3412	ppb	11:14:03
1	P 214.914†	333.0	-2.5	-0.9562	ug/L	-0.9562	ppb	11:14:03
1	Pb 220.353†	11.5	40.6	3.0505	ug/L	3.0505	ppb	11:14:03
1	S 181.975 Axial†	72.5	5.0	4.2399	ug/L	4.2399	ppb	11:14:03
1	Sb 206.836†	55.9	10.7	2.1229	ug/L	2.1229	ppb	11:14:03
1	Se 196.026†	-17.3	4.3	1.4749	ug/L	1.4749	ppb	11:14:03
1	Si 251.611†	665.9	108.7	2.1852	ug/L	2.1852	ppb	11:14:03
1	Sn 189.927†	14.7	9.3	0.9689	ug/L	0.9689	ppb	11:14:03
1	Sr 421.552†	24.7	19.1	0.2942	ug/L	0.2942	ppb	11:12:41
1	Ti 334.940†	-1110.3	-5.8	-0.0052	ug/L	-0.0052	ppb	11:13:43
1	Tl 190.801†	-57.1	4.0	0.6835	ug/L	0.6835	ppb	11:14:03
1	U 409.014†	-3785.0	33.2	0.8217	ug/L	0.8217	ppb	11:13:38
1	V 292.402†	-1685.0	-39.6	-0.2237	ug/L	-0.2237	ppb	11:13:43
1	Zn 213.857†	1105.7	-11.9	-0.0751	ug/L	-0.0751	ppb	11:14:03
1	SiO2†	681.4	82.0	3.4918	ug/L	3.4918	ppb	11:15:09
2	Sc 361.383	1055939.4	1055939.4	99.534	%			11:14:08
2	Sc Radial	5379.7	5379.7	96.7	%			11:12:46
2	Y 371.029	851096.0	851096.0	99.752	%			11:14:08
2	Y RADIAL	4702.4	4702.4	97.65	%			11:12:46
2	Ag 328.068†	776.8	141.8	0.5427	ug/L	0.5427	ppb	11:14:13
2	Al 396.153Radial†	-76.7	12.9	11.716	ug/L	11.716	ppb	11:12:46
2	As 188.979†	-40.2	-3.5	-0.8491	ug/L	-0.8491	ppb	11:14:33
2	B 249.677†	486.5	870.3	13.572	ug/L	13.572	ppb	11:14:13
2	Ba 233.527†	62.3	38.3	0.1924	ug/L	0.1924	ppb	11:14:33
2	Be 313.107†	-7290.4	-8.3	-0.0025	ug/L	-0.0025	ppb	11:14:13
2	Ca 317.933Radial†	28.6	12.6	31.463	ug/L	31.463	ppb	11:13:06
2	Cd 226.502†	-289.0	-12.7	-0.0867	ug/L	-0.0867	ppb	11:14:33
2	Co 228.616†	-77.8	12.3	0.1535	ug/L	0.1535	ppb	11:14:33
2	Cr 267.716†	-16.8	11.7	0.0997	ug/L	0.0997	ppb	11:14:33
2	Cu 324.752†	10238.9	95.6	0.2319	ug/L	0.2319	ppb	11:14:13
2	Fe 238.204 Radial†	-1.5	-1.9	-67.871	ug/L	-67.871	ppb	11:13:06
2	K 766.490 Radial†	1812.4	401.6	174.21	ug/L	174.21	ppb	11:12:46
2	Mg 279.077 IEC†	1.0	0.8	66.268	ug/L	66.268	ppb	11:13:06
2	Mn 257.610†	855.6	32.6	0.0157	ug/L	0.0157	ppb	11:14:33
2	Mo 202.031†	30.0	-1.6	-0.0706	ug/L	-0.0706	ppb	11:14:33
2	Na 589.592 Radial†	-174.9	-10.5	-28.379	ug/L	-28.379	ppb	11:13:06
2	Ni 231.604†	168.3	20.8	0.3332	ug/L	0.3332	ppb	11:14:33

2	P 214.914†	337.1	1.8	0.6504	ug/L	0.6504 ppb	11:14:33
2	Pb 220.353†	-5.9	23.2	1.7452	ug/L	1.7452 ppb	11:14:33
2	S 181.975 Axial†	79.7	12.3	10.368	ug/L	10.368 ppb	11:14:33
2	Sb 206.836†	62.7	17.5	3.4466	ug/L	3.4466 ppb	11:14:33
2	Se 196.026†	-10.1	11.5	3.4915	ug/L	3.4915 ppb	11:14:33
2	Si 251.611†	654.2	97.1	1.9448	ug/L	1.9448 ppb	11:14:33
2	Sn 189.927†	12.6	7.2	0.7527	ug/L	0.7527 ppb	11:14:33
2	Sr 421.552†	34.7	30.4	0.4675	ug/L	0.4675 ppb	11:13:06
2	Ti 334.940†	-1082.3	21.9	0.0326	ug/L	0.0326 ppb	11:14:13
2	Tl 190.801†	-39.2	22.0	3.7138	ug/L	3.7138 ppb	11:14:33
2	U 409.014†	-3991.4	-175.3	-4.3425	ug/L	-4.3425 ppb	11:14:08
2	V 292.402†	-1651.7	-6.6	-0.0367	ug/L	-0.0367 ppb	11:14:13
2	Zn 213.857†	1118.7	1.5	0.0109	ug/L	0.0109 ppb	11:14:33
2	SiO2†	678.0	78.8	3.3488	ug/L	3.3488 ppb	11:15:14
3	Sc 361.383	1066175.5	1066175.5	100.50	%		11:14:39
3	Sc Radial	5571.9	5571.9	100	%		11:13:11
3	Y 371.029	858182.7	858182.7	100.58	%		11:14:39
3	Y RADIAL	4847.5	4847.5	100.7	%		11:13:11
3	Ag 328.068†	733.0	90.7	0.3451	ug/L	0.3451 ppb	11:14:44
3	Al 396.153Radial†	-63.8	28.4	25.885	ug/L	25.885 ppb	11:13:11
3	As 188.979†	-36.2	0.9	0.1978	ug/L	0.1978 ppb	11:15:04
3	B 249.677†	438.0	817.4	12.743	ug/L	12.743 ppb	11:14:44
3	Ba 233.527†	45.2	20.7	0.1045	ug/L	0.1045 ppb	11:15:04
3	Be 313.107†	-7375.6	-22.8	-0.0070	ug/L	-0.0070 ppb	11:14:44
3	Ca 317.933Radial†	31.4	14.4	35.975	ug/L	35.975 ppb	11:13:31
3	Cd 226.502†	-275.1	4.0	0.0342	ug/L	0.0342 ppb	11:15:04
3	Co 228.616†	-85.2	5.6	0.0709	ug/L	0.0709 ppb	11:15:04
3	Cr 267.716†	-11.4	17.3	0.1457	ug/L	0.1457 ppb	11:15:04
3	Cu 324.752†	10202.8	-39.1	-0.0986	ug/L	-0.0986 ppb	11:14:44
3	Fe 238.204 Radial†	-0.7	-1.1	-36.971	ug/L	-36.971 ppb	11:13:31
3	K 766.490 Radial†	1706.6	231.3	100.35	ug/L	100.35 ppb	11:13:11
3	Mg 279.077 IEC†	0.4	0.2	14.946	ug/L	14.946 ppb	11:13:31
3	Mn 257.610†	832.1	0.9	-0.0044	ug/L	-0.0044 ppb	11:15:04
3	Mo 202.031†	38.5	6.5	0.2593	ug/L	0.2593 ppb	11:15:04
3	Na 589.592 Radial†	-180.8	-10.1	-27.397	ug/L	-27.397 ppb	11:13:31
3	Ni 231.604†	170.2	21.1	0.3376	ug/L	0.3376 ppb	11:15:04
3	P 214.914†	362.2	23.5	8.3827	ug/L	8.3827 ppb	11:15:04
3	Pb 220.353†	-20.1	9.1	0.6925	ug/L	0.6925 ppb	11:15:04
3	S 181.975 Axial†	80.7	12.5	10.586	ug/L	10.586 ppb	11:15:04
3	Sb 206.836†	62.0	16.3	3.2114	ug/L	3.2114 ppb	11:15:04
3	Se 196.026†	-17.5	4.2	1.2231	ug/L	1.2231 ppb	11:15:04
3	Si 251.611†	661.8	98.4	1.9887	ug/L	1.9887 ppb	11:15:04
3	Sn 189.927†	17.9	12.4	1.2868	ug/L	1.2868 ppb	11:15:04
3	Sr 421.552†	29.8	24.3	0.3745	ug/L	0.3745 ppb	11:13:31
3	Ti 334.940†	-1085.5	29.2	0.0391	ug/L	0.0391 ppb	11:14:44
3	Tl 190.801†	-66.9	-5.2	-0.8818	ug/L	-0.8818 ppb	11:15:04
3	U 409.014†	-3721.1	132.1	3.2823	ug/L	3.2823 ppb	11:14:39
3	V 292.402†	-1611.3	49.5	0.2955	ug/L	0.2955 ppb	11:14:44
3	Zn 213.857†	1113.1	-14.8	-0.0813	ug/L	-0.0813 ppb	11:15:04
3	SiO2†	689.8	84.0	3.6182	ug/L	3.6182 ppb	11:15:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1059467.0	99.867	%	0.5479				0.55%
Sc Radial	5509.8	99.0	%	2.03				2.05%
Y 371.029	853675.3	100.05	%	0.459				0.46%
Y RADIAL	4805.8	99.79	%	1.872				1.88%
Ag 328.068†	130.0	0.5056	ug/L	0.14559	0.5056	ppb	0.14559	28.79%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	24.6	22.349	ug/L	9.3789	22.349	ppb	9.3789	41.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.6	-1.0834	ug/L	1.41306	-1.0834	ppb	1.41306	130.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	836.0	13.032	ug/L	0.4684	13.032	ppb	0.4684	3.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.1	0.1114	ug/L	0.07778	0.1114	ppb	0.07778	69.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-56.7	-0.0176	ug/L	0.02232	-0.0176	ppb	0.02232	127.00%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          14.5      36.216 ug/L        4.8774      36.216 ppb        4.8774  13.47%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.5     -0.0451 ug/L       0.06867     -0.0451 ppb       0.06867 152.40%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 8.6      0.1072 ug/L       0.04222      0.1072 ppb       0.04222  39.39%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 8.3      0.0704 ug/L       0.09343      0.0704 ppb       0.09343 132.64%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                88.8      0.2174 ug/L       0.30899      0.2174 ppb       0.30899 142.11%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.8     -27.091 ug/L       46.5144     -27.091 ppb       46.5144 171.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         336.9      146.16 ug/L        40.010      146.16 ppb        40.010  27.37%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.7      58.244 ug/L       39.8965      58.244 ppb       39.8965  68.50%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                10.5      0.0036 ug/L       0.01059      0.0036 ppb       0.01059 290.42%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.2      0.0863 ug/L       0.16552      0.0863 ppb       0.16552 191.79%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -11.7     -31.559 ug/L        6.3772     -31.559 ppb        6.3772  20.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.1      0.3373 ug/L       0.00401      0.3373 ppb       0.00401   1.19%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  7.6      2.6923 ug/L       4.99307      2.6923 ppb       4.99307 185.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                24.3      1.8294 ug/L       1.18127      1.8294 ppb       1.18127  64.57%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            9.9      8.3978 ug/L       3.60254      8.3978 ppb       3.60254  42.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                14.8      2.9269 ug/L       0.70621      2.9269 ppb       0.70621  24.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 6.6      2.0632 ug/L       1.24335      2.0632 ppb       1.24335  60.26%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               101.4      2.0396 ug/L       0.12804      2.0396 ppb       0.12804   6.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.6      1.0028 ug/L       0.26867      1.0028 ppb       0.26867  26.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                24.6      0.3787 ug/L       0.08674      0.3787 ppb       0.08674  22.90%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                15.1      0.0222 ug/L       0.02395      0.0222 ppb       0.02395 107.99%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.1719 ug/L       2.33641      1.1719 ppb       2.33641 199.38%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 -3.3     -0.0795 ug/L       3.89151     -0.0795 ppb       3.89151 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  1.1      0.0117 ug/L       0.26296      0.0117 ppb       0.26296 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                -8.4     -0.0485 ug/L       0.05156     -0.0485 ppb       0.05156 106.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      81.6      3.4863 ug/L       0.13480      3.4863 ppb       0.13480   3.87%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: LR1
Analyst: HSC
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/8/2009 11:17:30
Data Type: Reprocessed on 7/8/2009 11:40:20

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1046705.1	1046705.1	98.664	%			11:20:42
1	Sc Radial	5285.9	5285.9	95.0	%			11:19:24
1	Y 371.029	838520.8	838520.8	98.278	%			11:20:42
1	Y RADIAL	4594.7	4594.7	95.41	%			11:19:24
1	Ag 328.068†	-28259.2	-29280.5	9.7367	ug/L	9.7367	ppb	11:20:42
1	Al 396.153Radial†	-104.1	-17.4	-14.625	ug/L	-14.625	ppb	11:19:24
1	As 188.979†	-375.6	-343.8	-2.6523	ug/L	-2.6523	ppb	11:21:02
1	B 249.677†	2868.7	3289.1	-0.5237	ug/L	-0.5237	ppb	11:20:42
1	Ba 233.527†	-1751.7	-1799.7	0.0492	ug/L	0.0492	ppb	11:21:02
1	Be 313.107†	-7239.6	-21.4	-0.0064	ug/L	-0.0064	ppb	11:20:42
1	Ca 317.933Radial†	22.3	6.5	16.305	ug/L	16.305	ppb	11:19:44
1	Cd 226.502†	5204.4	5552.6	-4.5755	ug/L	-4.5755	ppb	11:21:02
1	Co 228.616†	250.1	343.9	-1.3538	ug/L	-1.3538	ppb	11:21:02
1	Cr 267.716†	-824.6	-807.2	0.7505	ug/L	0.7505	ppb	11:21:02
1	Cu 324.752†	802.5	-9377.9	-0.5740	ug/L	-0.5740	ppb	11:20:42
1	Fe 238.204 Radial†	10567.5	11124.8	390270	ug/L	390270	ppb	11:19:24
1	K 766.490 Radial†	1599.4	210.8	389.48	ug/L	389.48	ppb	11:19:24
1	Mg 279.077 IEC†	6.2	6.3	166.70	ug/L	166.70	ppb	11:19:44
1	Mn 257.610†	-57355.3	-58959.2	4.2573	ug/L	4.2573	ppb	11:20:42
1	Mo 202.031†	-642.9	-683.4	-0.5684	ug/L	-0.5684	ppb	11:20:42
1	Na 589.592 Radial†	-176.8	-15.7	-42.375	ug/L	-42.375	ppb	11:19:44
1	Ni 231.604†	294.0	149.8	2.3977	ug/L	2.3977	ppb	11:21:02
1	P 214.914†	1226.8	906.5	9.2980	ug/L	9.2980	ppb	11:21:02
1	Pb 220.353†	427.8	462.7	-2.1099	ug/L	-2.1099	ppb	11:21:02
1	S 181.975 Axial†	88.8	22.2	18.788	ug/L	18.788	ppb	11:21:02
1	Sb 206.836†	15.9	-29.3	0.9649	ug/L	0.9649	ppb	11:21:02
1	Se 196.026†	-3818.0	-3848.1	119.57	ug/L	119.57	ppb	11:21:02
1	Si 251.611†	-912.5	-1484.9	-30.180	ug/L	-30.180	ppb	11:21:02
1	Sn 189.927†	-36.6	-42.6	2.5556	ug/L	2.5556	ppb	11:21:02
1	Sr 421.552†	22.5	18.2	0.2804	ug/L	0.2804	ppb	11:19:44
1	Ti 334.940†	-991.5	104.3	0.1206	ug/L	0.1206	ppb	11:21:02
1	Tl 190.801†	-76.4	-16.1	-3.1221	ug/L	-3.1221	ppb	11:21:02
1	U 409.014†	-2034.4	1772.8	-3.9602	ug/L	-3.9602	ppb	11:20:42
1	V 292.402†	7424.0	9177.3	-1.4441	ug/L	-1.4441	ppb	11:21:02
1	Zn 213.857†	8001.3	6987.3	-3.0916	ug/L	-3.0916	ppb	11:21:02
1	SiO2†	-992.8	-1608.6	-70.084	ug/L	-70.084	ppb	11:22:00
2	Sc 361.383	1052226.2	1052226.2	99.184	%			11:21:08
2	Sc Radial	5401.8	5401.8	97.1	%			11:19:49
2	Y 371.029	842665.3	842665.3	98.764	%			11:21:08
2	Y RADIAL	4714.0	4714.0	97.89	%			11:19:49
2	Ag 328.068†	-28377.9	-29249.9	9.3733	ug/L	9.3733	ppb	11:21:08
2	Al 396.153Radial†	-122.8	-34.3	-30.134	ug/L	-30.134	ppb	11:19:49
2	As 188.979†	-364.1	-330.2	0.2438	ug/L	0.2438	ppb	11:21:28
2	B 249.677†	3058.2	3464.9	2.4165	ug/L	2.4165	ppb	11:21:08
2	Ba 233.527†	-1739.0	-1777.6	0.1263	ug/L	0.1263	ppb	11:21:28
2	Be 313.107†	-7287.8	-31.5	-0.0094	ug/L	-0.0094	ppb	11:21:08
2	Ca 317.933Radial†	23.0	6.7	16.789	ug/L	16.789	ppb	11:20:09
2	Cd 226.502†	5255.4	5576.3	-4.2206	ug/L	-4.2206	ppb	11:21:28
2	Co 228.616†	235.9	328.3	-1.5227	ug/L	-1.5227	ppb	11:21:28
2	Cr 267.716†	-795.1	-773.0	1.0118	ug/L	1.0118	ppb	11:21:28
2	Cu 324.752†	938.3	-9245.3	-0.3338	ug/L	-0.3338	ppb	11:21:08
2	Fe 238.204 Radial†	10757.5	11081.9	388770	ug/L	388770	ppb	11:19:49
2	K 766.490 Radial†	1494.6	66.6	325.81	ug/L	325.81	ppb	11:19:49
2	Mg 279.077 IEC†	5.9	5.9	130.42	ug/L	130.42	ppb	11:20:09
2	Mn 257.610†	-57434.3	-58733.8	4.2400	ug/L	4.2400	ppb	11:21:08
2	Mo 202.031†	-612.5	-649.3	0.6913	ug/L	0.6913	ppb	11:21:08
2	Na 589.592 Radial†	-180.6	-15.6	-42.212	ug/L	-42.212	ppb	11:20:09
2	Ni 231.604†	278.0	132.1	2.1139	ug/L	2.1139	ppb	11:21:28

2	P 214.914†	1227.8	901.0	8.4921	ug/L	8.4921	ppb	11:21:28
2	Pb 220.353†	449.1	481.9	-0.5307	ug/L	-0.5307	ppb	11:21:28
2	S 181.975 Axial†	80.8	13.6	11.530	ug/L	11.530	ppb	11:21:28
2	Sb 206.836†	33.2	-12.0	4.3505	ug/L	4.3505	ppb	11:21:28
2	Se 196.026†	-3813.6	-3823.4	122.34	ug/L	122.34	ppb	11:21:28
2	Si 251.611†	-923.6	-1491.3	-30.313	ug/L	-30.313	ppb	11:21:28
2	Sn 189.927†	-40.9	-46.7	2.1032	ug/L	2.1032	ppb	11:21:28
2	Sr 421.552†	35.7	31.3	0.4814	ug/L	0.4814	ppb	11:20:09
2	Ti 334.940†	-974.5	126.7	0.1495	ug/L	0.1495	ppb	11:21:28
2	Tl 190.801†	-70.5	-9.6	-2.0337	ug/L	-2.0337	ppb	11:21:28
2	U 409.014†	-2005.9	1812.3	-2.7948	ug/L	-2.7948	ppb	11:21:08
2	V 292.402†	7472.6	9186.8	-1.1665	ug/L	-1.1665	ppb	11:21:28
2	Zn 213.857†	8017.0	6960.5	-3.0760	ug/L	-3.0760	ppb	11:21:28
2	SiO2†	-1024.5	-1635.3	-71.266	ug/L	-71.266	ppb	11:22:05
3	Sc 361.383	1038864.2	1038864.2	97.925	%			11:21:35
3	Sc Radial	5569.7	5569.7	100	%			11:20:14
3	Y 371.029	832242.4	832242.4	97.542	%			11:21:35
3	Y RADIAL	4850.2	4850.2	100.7	%			11:20:14
3	Ag 328.068†	-28102.1	-29336.3	7.7693	ug/L	7.7693	ppb	11:21:35
3	Al 396.153Radial†	-102.4	-10.1	-8.1423	ug/L	-8.1423	ppb	11:20:14
3	As 188.979†	-361.3	-332.1	-0.9980	ug/L	-0.9980	ppb	11:21:55
3	B 249.677†	2847.5	3289.3	0.2032	ug/L	0.2032	ppb	11:21:35
3	Ba 233.527†	-1784.8	-1846.9	-0.3157	ug/L	-0.3157	ppb	11:21:55
3	Be 313.107†	-7215.4	-52.1	-0.0159	ug/L	-0.0159	ppb	11:21:35
3	Ca 317.933Radial†	20.5	3.5	8.8182	ug/L	8.8182	ppb	11:20:34
3	Cd 226.502†	5264.7	5654.0	-3.1736	ug/L	-3.1736	ppb	11:21:55
3	Co 228.616†	244.1	339.7	-1.3213	ug/L	-1.3213	ppb	11:21:55
3	Cr 267.716†	-801.4	-789.8	0.7943	ug/L	0.7943	ppb	11:21:55
3	Cu 324.752†	902.1	-9270.0	-0.6227	ug/L	-0.6227	ppb	11:21:35
3	Fe 238.204 Radial†	10979.5	10969.5	384830	ug/L	384830	ppb	11:20:14
3	K 766.490 Radial†	1427.0	-47.3	273.35	ug/L	273.35	ppb	11:20:14
3	Mg 279.077 IEC†	6.1	5.9	137.86	ug/L	137.86	ppb	11:20:34
3	Mn 257.610†	-56773.9	-58804.2	3.6706	ug/L	3.6706	ppb	11:21:35
3	Mo 202.031†	-575.4	-619.4	1.6175	ug/L	1.6175	ppb	11:21:35
3	Na 589.592 Radial†	-177.6	-7.0	-19.058	ug/L	-19.058	ppb	11:20:34
3	Ni 231.604†	287.7	145.5	2.3298	ug/L	2.3298	ppb	11:21:55
3	P 214.914†	1224.2	913.2	16.013	ug/L	16.013	ppb	11:21:55
3	Pb 220.353†	422.9	460.9	-1.7263	ug/L	-1.7263	ppb	11:21:55
3	S 181.975 Axial†	81.7	15.6	13.165	ug/L	13.165	ppb	11:21:55
3	Sb 206.836†	38.2	-6.4	5.3941	ug/L	5.3941	ppb	11:21:55
3	Se 196.026†	-3850.1	-3910.1	80.299	ug/L	80.299	ppb	11:21:55
3	Si 251.611†	-924.9	-1504.6	-30.592	ug/L	-30.592	ppb	11:21:55
3	Sn 189.927†	-42.3	-48.7	1.8220	ug/L	1.8220	ppb	11:21:55
3	Sr 421.552†	28.6	23.1	0.3559	ug/L	0.3559	ppb	11:20:34
3	Ti 334.940†	-986.5	101.9	0.1187	ug/L	0.1187	ppb	11:21:55
3	Tl 190.801†	-94.3	-34.9	-6.3034	ug/L	-6.3034	ppb	11:21:55
3	U 409.014†	-2185.9	1602.5	-7.5175	ug/L	-7.5175	ppb	11:21:35
3	V 292.402†	7401.4	9211.1	-0.4859	ug/L	-0.4859	ppb	11:21:55
3	Zn 213.857†	8037.4	7085.4	-1.9547	ug/L	-1.9547	ppb	11:21:55
3	SiO2†	-936.7	-1558.9	-67.898	ug/L	-67.898	ppb	11:22:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1045931.8	98.591	%	0.6329				0.64%
Sc Radial	5419.1	97.4	%	2.56				2.63%
Y 371.029	837809.5	98.194	%	0.6151				0.63%
Y RADIAL	4719.6	98.00	%	2.655				2.71%
Ag 328.068†	-29288.9	8.9598	ug/L	1.04683	8.9598	ppb	1.04683	11.68%
Al 396.153Radial†	-20.6	-17.634	ug/L	11.3004	-17.634	ppb	11.3004	64.08%
As 188.979†	-335.4	-1.1355	ug/L	1.45294	-1.1355	ppb	1.45294	127.95%
B 249.677†	3347.8	0.6987	ug/L	1.53142	0.6987	ppb	1.53142	219.19%
Ba 233.527†	-1808.0	-0.0467	ug/L	0.23610	-0.0467	ppb	0.23610	505.55%
Be 313.107†	-35.0	-0.0105	ug/L	0.00487	-0.0105	ppb	0.00487	46.13%
Ca 317.933Radial†	5.6	13.971	ug/L	4.4688	13.971	ppb	4.4688	31.99%
Cd 226.502†	5594.3	-3.9899	ug/L	0.72889	-3.9899	ppb	0.72889	18.27%
Co 228.616†	337.3	-1.3993	ug/L	0.10812	-1.3993	ppb	0.10812	7.73%
Cr 267.716†	-790.0	0.8522	ug/L	0.13996	0.8522	ppb	0.13996	16.42%
Cu 324.752†	-9297.7	-0.5102	ug/L	0.15464	-0.5102	ppb	0.15464	30.31%
Fe 238.204 Radial†	11058.7	387960	ug/L	2812.7	387960	ppb	2812.7	0.72%

K 766.490 Radial†	76.7	329.55	ug/L	58.152	329.55	ppb	58.152	17.65%
Mg 279.077 IEC†	6.0	144.99	ug/L	19.161	144.99	ppb	19.161	13.21%
Mn 257.610†	-58832.4	4.0559	ug/L	0.33383	4.0559	ppb	0.33383	8.23%
Mo 202.031†	-650.7	0.5801	ug/L	1.09717	0.5801	ppb	1.09717	189.12%
Na 589.592 Radial†	-12.8	-34.548	ug/L	13.4155	-34.548	ppb	13.4155	38.83%
Ni 231.604†	142.4	2.2805	ug/L	0.14816	2.2805	ppb	0.14816	6.50%
P 214.914†	906.9	11.268	ug/L	4.1293	11.268	ppb	4.1293	36.65%
Pb 220.353†	468.5	-1.4556	ug/L	0.82364	-1.4556	ppb	0.82364	56.58%
S 181.975 Axial†	17.1	14.494	ug/L	3.8072	14.494	ppb	3.8072	26.27%
Sb 206.836†	-15.9	3.5699	ug/L	2.31548	3.5699	ppb	2.31548	64.86%
Se 196.026†	-3860.5	107.40	ug/L	23.512	107.40	ppb	23.512	21.89%
Si 251.611†	-1493.6	-30.362	ug/L	0.2100	-30.362	ppb	0.2100	0.69%
Sn 189.927†	-46.0	2.1603	ug/L	0.37012	2.1603	ppb	0.37012	17.13%
Sr 421.552†	24.2	0.3726	ug/L	0.10154	0.3726	ppb	0.10154	27.25%
Ti 334.940†	111.0	0.1296	ug/L	0.01724	0.1296	ppb	0.01724	13.30%
Tl 190.801†	-20.2	-3.8197	ug/L	2.21870	-3.8197	ppb	2.21870	58.09%
U 409.014†	1729.2	-4.7575	ug/L	2.46022	-4.7575	ppb	2.46022	51.71%
V 292.402†	9191.8	-1.0321	ug/L	0.49303	-1.0321	ppb	0.49303	47.77%
Zn 213.857†	7011.0	-2.7074	ug/L	0.65195	-2.7074	ppb	0.65195	24.08%
SiO2†	-1600.9	-69.749	ug/L	1.7089	-69.749	ppb	1.7089	2.45%

Sequence No.: 18
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:24:21
Data Type: Reprocessed on 7/8/2009 11:40:21

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1059944.6	1059944.6	99.912	%			11:27:33
1	Sc Radial	5479.4	5479.4	98.5	%			11:26:14
1	Y 371.029	844640.7	844640.7	98.995	%			11:27:33
1	Y RADIAL	4754.7	4754.7	98.73	%			11:26:14
1	Ag 328.068†	125630.8	125103.4	498.29	ug/L	498.29	ppb	11:27:33
1	Al 396.153Radial†	5189.1	5362.2	4859.2	ug/L	4859.2	ppb	11:26:14
1	As 188.979†	2086.1	2124.9	501.95	ug/L	501.95	ppb	11:27:53
1	B 249.677†	31012.2	31421.1	487.79	ug/L	487.79	ppb	11:27:33
1	Ba 233.527†	97648.8	97711.0	495.79	ug/L	495.79	ppb	11:27:33
1	Be 313.107†	1580190.1	1588904.8	495.20	ug/L	495.20	ppb	11:27:33
1	Ca 317.933Radial†	1996.6	2010.8	5008.6	ug/L	5008.6	ppb	11:26:34
1	Cd 226.502†	66244.6	66580.8	497.71	ug/L	497.71	ppb	11:27:33
1	Co 228.616†	39192.8	39317.9	489.98	ug/L	489.98	ppb	11:27:53
1	Cr 267.716†	57869.2	57949.0	494.25	ug/L	494.25	ppb	11:27:33
1	Cu 324.752†	208005.6	197998.5	488.80	ug/L	488.80	ppb	11:27:33
1	Fe 238.204 Radial†	141.0	142.8	5026.5	ug/L	5026.5	ppb	11:26:34
1	K 766.490 Radial†	13180.0	11912.5	5162.7	ug/L	5162.7	ppb	11:26:14
1	Mg 279.077 IEC†	65.0	65.8	5216.9	ug/L	5216.9	ppb	11:26:34
1	Mn 257.610†	624970.8	624696.8	494.24	ug/L	494.24	ppb	11:27:33
1	Mo 202.031†	12690.5	12670.0	507.49	ug/L	507.49	ppb	11:27:53
1	Na 589.592 Radial†	3480.4	3705.1	10018	ug/L	10018	ppb	11:26:14
1	Ni 231.604†	30935.7	30814.9	493.58	ug/L	493.58	ppb	11:27:53
1	P 214.914†	7423.2	7092.8	2432.7	ug/L	2432.7	ppb	11:27:53
1	Pb 220.353†	6700.4	6735.4	506.26	ug/L	506.26	ppb	11:27:53
1	S 181.975 Axial†	1257.4	1190.7	1006.9	ug/L	1006.9	ppb	11:27:53
1	Sb 206.836†	2570.6	2527.4	503.36	ug/L	503.36	ppb	11:27:53
1	Se 196.026†	1498.7	1521.6	514.33	ug/L	514.33	ppb	11:27:53
1	Si 251.611†	121332.8	120880.1	2482.2	ug/L	2482.2	ppb	11:27:33
1	Sn 189.927†	4849.4	4848.2	504.72	ug/L	504.72	ppb	11:27:53
1	Sr 421.552†	33394.2	33909.5	522.38	ug/L	522.38	ppb	11:26:14
1	Ti 334.940†	376930.4	378373.2	495.26	ug/L	495.26	ppb	11:27:33
1	Tl 190.801†	2903.5	2967.5	502.45	ug/L	502.45	ppb	11:27:53
1	U 409.014†	15423.9	19272.3	476.61	ug/L	476.61	ppb	11:27:33
1	V 292.402†	84907.4	86635.3	497.41	ug/L	497.41	ppb	11:27:33
1	Zn 213.857†	89673.2	88630.1	490.34	ug/L	490.34	ppb	11:27:33
1	SiO2†	121738.4	121243.8	5330.9	ug/L	5330.9	ppb	11:28:53
2	Sc 361.383	1066729.6	1066729.6	100.55	%			11:28:00
2	Sc Radial	5456.8	5456.8	98.1	%			11:26:39
2	Y 371.029	848088.2	848088.2	99.399	%			11:28:00
2	Y RADIAL	4734.1	4734.1	98.31	%			11:26:39
2	Ag 328.068†	126873.6	125539.5	500.03	ug/L	500.03	ppb	11:28:00
2	Al 396.153Radial†	5194.2	5389.3	4884.0	ug/L	4884.0	ppb	11:26:39
2	As 188.979†	2073.2	2098.8	495.85	ug/L	495.85	ppb	11:28:20
2	B 249.677†	31532.7	31741.4	492.78	ug/L	492.78	ppb	11:28:00
2	Ba 233.527†	98315.7	97752.5	496.00	ug/L	496.00	ppb	11:28:00
2	Be 313.107†	1590346.7	1588945.7	495.21	ug/L	495.21	ppb	11:28:00
2	Ca 317.933Radial†	1979.2	2001.5	4985.4	ug/L	4985.4	ppb	11:26:59
2	Cd 226.502†	66641.4	66553.8	497.50	ug/L	497.50	ppb	11:28:00
2	Co 228.616†	39043.6	38920.0	485.00	ug/L	485.00	ppb	11:28:20
2	Cr 267.716†	58361.0	58069.7	495.28	ug/L	495.28	ppb	11:28:00
2	Cu 324.752†	210274.7	198930.9	491.11	ug/L	491.11	ppb	11:28:00
2	Fe 238.204 Radial†	141.8	144.2	5075.0	ug/L	5075.0	ppb	11:26:59
2	K 766.490 Radial†	13045.1	11830.3	5127.1	ug/L	5127.1	ppb	11:26:39
2	Mg 279.077 IEC†	64.4	65.5	5190.8	ug/L	5190.8	ppb	11:26:59
2	Mn 257.610†	630407.8	626125.3	495.37	ug/L	495.37	ppb	11:28:00
2	Mo 202.031†	12642.8	12541.7	502.36	ug/L	502.36	ppb	11:28:20
2	Na 589.592 Radial†	3436.0	3674.5	9935.3	ug/L	9935.3	ppb	11:26:39
2	Ni 231.604†	30760.2	30443.3	487.63	ug/L	487.63	ppb	11:28:20

2	P 214.914†	7393.8	7016.4	2405.2	ug/L	2405.2 ppb	11:28:20
2	Pb 220.353†	6660.2	6652.8	500.06	ug/L	500.06 ppb	11:28:20
2	S 181.975 Axial†	1241.1	1166.5	986.41	ug/L	986.41 ppb	11:28:20
2	Sb 206.836†	2563.0	2503.6	498.42	ug/L	498.42 ppb	11:28:20
2	Se 196.026†	1509.3	1522.7	514.83	ug/L	514.83 ppb	11:28:20
2	Si 251.611†	122522.7	121291.0	2490.8	ug/L	2490.8 ppb	11:28:00
2	Sn 189.927†	4810.7	4778.9	497.51	ug/L	497.51 ppb	11:28:20
2	Sr 421.552†	33200.1	33852.0	521.50	ug/L	521.50 ppb	11:26:39
2	Ti 334.940†	380050.3	379076.4	496.18	ug/L	496.18 ppb	11:28:00
2	Tl 190.801†	2886.0	2931.6	496.43	ug/L	496.43 ppb	11:28:20
2	U 409.014†	15484.1	19233.9	475.65	ug/L	475.65 ppb	11:28:00
2	V 292.402†	85441.7	86626.2	497.28	ug/L	497.28 ppb	11:28:00
2	Zn 213.857†	90424.6	88806.6	491.36	ug/L	491.36 ppb	11:28:00
2	SiO2†	122259.9	120987.4	5319.9	ug/L	5319.9 ppb	11:28:58
3	Sc 361.383	1082048.6	1082048.6	102.00	%		11:28:28
3	Sc Radial	5526.8	5526.8	99.3	%		11:27:04
3	Y 371.029	860676.7	860676.7	100.87	%		11:28:28
3	Y RADIAL	4799.7	4799.7	99.67	%		11:27:04
3	Ag 328.068†	128584.5	125430.6	499.55	ug/L	499.55 ppb	11:28:28
3	Al 396.153Radial†	5214.3	5342.4	4841.4	ug/L	4841.4 ppb	11:27:04
3	As 188.979†	2101.0	2096.8	495.36	ug/L	495.36 ppb	11:28:48
3	B 249.677†	31978.4	31734.4	492.71	ug/L	492.71 ppb	11:28:28
3	Ba 233.527†	99589.5	97617.2	495.31	ug/L	495.31 ppb	11:28:28
3	Be 313.107†	1612564.5	1588337.3	495.03	ug/L	495.03 ppb	11:28:28
3	Ca 317.933Radial†	1986.9	1983.6	4940.9	ug/L	4940.9 ppb	11:27:24
3	Cd 226.502†	67416.7	66375.6	496.18	ug/L	496.18 ppb	11:28:28
3	Co 228.616†	39220.9	38544.1	480.32	ug/L	480.32 ppb	11:28:48
3	Cr 267.716†	58998.1	57872.6	493.60	ug/L	493.60 ppb	11:28:28
3	Cu 324.752†	213337.9	198973.6	491.20	ug/L	491.20 ppb	11:28:28
3	Fe 238.204 Radial†	139.2	139.9	4921.4	ug/L	4921.4 ppb	11:27:24
3	K 766.490 Radial†	13032.9	11649.4	5048.6	ug/L	5048.6 ppb	11:27:04
3	Mg 279.077 IEC†	65.0	65.3	5178.3	ug/L	5178.3 ppb	11:27:24
3	Mn 257.610†	638129.7	624820.2	494.32	ug/L	494.32 ppb	11:28:28
3	Mo 202.031†	12745.8	12464.7	499.27	ug/L	499.27 ppb	11:28:48
3	Na 589.592 Radial†	3456.2	3650.4	9870.2	ug/L	9870.2 ppb	11:27:04
3	Ni 231.604†	30951.5	30197.8	483.70	ug/L	483.70 ppb	11:28:48
3	P 214.914†	7425.2	6943.1	2379.4	ug/L	2379.4 ppb	11:28:48
3	Pb 220.353†	6701.0	6599.0	496.02	ug/L	496.02 ppb	11:28:48
3	S 181.975 Axial†	1257.6	1165.2	985.32	ug/L	985.32 ppb	11:28:48
3	Sb 206.836†	2594.2	2498.0	497.25	ug/L	497.25 ppb	11:28:48
3	Se 196.026†	1502.3	1494.6	505.14	ug/L	505.14 ppb	11:28:48
3	Si 251.611†	124261.8	121271.0	2490.5	ug/L	2490.5 ppb	11:28:28
3	Sn 189.927†	4852.5	4752.1	494.71	ug/L	494.71 ppb	11:28:48
3	Sr 421.552†	33364.0	33587.9	517.43	ug/L	517.43 ppb	11:27:04
3	Ti 334.940†	385685.4	379250.3	496.41	ug/L	496.41 ppb	11:28:28
3	Tl 190.801†	2899.8	2904.5	491.88	ug/L	491.88 ppb	11:28:48
3	U 409.014†	15696.4	19224.1	475.43	ug/L	475.43 ppb	11:28:28
3	V 292.402†	86520.6	86480.9	496.44	ug/L	496.44 ppb	11:28:28
3	Zn 213.857†	91402.4	88492.1	489.64	ug/L	489.64 ppb	11:28:28
3	SiO2†	123096.2	120085.9	5280.2	ug/L	5280.2 ppb	11:29:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1069574.3	100.82	%	1.067				1.06%
Sc Radial	5487.7	98.6	%	0.64				0.65%
Y 371.029	851135.2	99.756	%	0.9893				0.99%
Y RADIAL	4762.9	98.90	%	0.696				0.70%
Ag 328.068†	125357.9	499.29	ug/L	0.900	499.29	ppb	0.900	0.18%
QC value within limits for Ag 328.068 Recovery = 99.86%								
Al 396.153Radial†	5364.6	4861.5	ug/L	21.38	4861.5	ppb	21.38	0.44%
QC value within limits for Al 396.153Radial Recovery = 97.23%								
As 188.979†	2106.8	497.72	ug/L	3.671	497.72	ppb	3.671	0.74%
QC value within limits for As 188.979 Recovery = 99.54%								
B 249.677†	31632.3	491.09	ug/L	2.863	491.09	ppb	2.863	0.58%
QC value within limits for B 249.677 Recovery = 98.22%								
Ba 233.527†	97693.6	495.70	ug/L	0.354	495.70	ppb	0.354	0.07%
QC value within limits for Ba 233.527 Recovery = 99.14%								
Be 313.107†	1588729.2	495.15	ug/L	0.105	495.15	ppb	0.105	0.02%
QC value within limits for Be 313.107 Recovery = 99.03%								

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Ca 317.933Radial†        1998.7      4978.3 ug/L         34.43      4978.3 ppb          34.43   0.69%
   QC value within limits for Ca 317.933Radial  Recovery = 99.57%
Cd 226.502†             66503.4      497.13 ug/L          0.828      497.13 ppb           0.828   0.17%
   QC value within limits for Cd 226.502  Recovery = 99.43%
Co 228.616†             38927.4      485.10 ug/L          4.831      485.10 ppb           4.831   1.00%
   QC value within limits for Co 228.616  Recovery = 97.02%
Cr 267.716†             57963.8      494.38 ug/L          0.848      494.38 ppb           0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 98.88%
Cu 324.752†            198634.3      490.37 ug/L          1.359      490.37 ppb           1.359   0.28%
   QC value within limits for Cu 324.752  Recovery = 98.07%
Fe 238.204 Radial†        142.3      5007.6 ug/L         78.49      5007.6 ppb          78.49   1.57%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.15%
K 766.490 Radial†       11797.4      5112.8 ug/L         58.43      5112.8 ppb          58.43   1.14%
   QC value within limits for K 766.490 Radial  Recovery = 102.26%
Mg 279.077 IEC†            65.5      5195.3 ug/L         19.71      5195.3 ppb          19.71   0.38%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.91%
Mn 257.610†            625214.1      494.64 ug/L          0.633      494.64 ppb           0.633   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.93%
Mo 202.031†             12558.8      503.04 ug/L          4.154      503.04 ppb           4.154   0.83%
   QC value within limits for Mo 202.031  Recovery = 100.61%
Na 589.592 Radial†       3676.6      9941.2 ug/L         74.10      9941.2 ppb          74.10   0.75%
   QC value within limits for Na 589.592 Radial  Recovery = 99.41%
Ni 231.604†             30485.3      488.30 ug/L          4.976      488.30 ppb           4.976   1.02%
   QC value within limits for Ni 231.604  Recovery = 97.66%
P 214.914†               7017.4      2405.8 ug/L         26.68      2405.8 ppb          26.68   1.11%
   QC value within limits for P 214.914  Recovery = 96.23%
Pb 220.353†              6662.4      500.78 ug/L          5.161      500.78 ppb           5.161   1.03%
   QC value within limits for Pb 220.353  Recovery = 100.16%
S 181.975 Axial†         1174.1      992.89 ug/L         12.183      992.89 ppb          12.183   1.23%
   QC value within limits for S 181.975 Axial  Recovery = 99.29%
Sb 206.836†              2509.7      499.68 ug/L          3.243      499.68 ppb           3.243   0.65%
   QC value within limits for Sb 206.836  Recovery = 99.94%
Se 196.026†              1512.9      511.43 ug/L          5.455      511.43 ppb           5.455   1.07%
   QC value within limits for Se 196.026  Recovery = 102.29%
Si 251.611†            121147.3      2487.8 ug/L          4.88      2487.8 ppb           4.88   0.20%
   QC value within limits for Si 251.611  Recovery = 99.51%
Sn 189.927†              4793.1      498.98 ug/L          5.163      498.98 ppb           5.163   1.03%
   QC value within limits for Sn 189.927  Recovery = 99.80%
Sr 421.552†             33783.1      520.44 ug/L          2.642      520.44 ppb           2.642   0.51%
   QC value within limits for Sr 421.552  Recovery = 104.09%
Ti 334.940†            378899.9      495.95 ug/L          0.606      495.95 ppb           0.606   0.12%
   QC value within limits for Ti 334.940  Recovery = 99.19%
Tl 190.801†              2934.5      496.92 ug/L          5.303      496.92 ppb           5.303   1.07%
   QC value within limits for Tl 190.801  Recovery = 99.38%
U 409.014†              19243.5      475.90 ug/L          0.628      475.90 ppb           0.628   0.13%
   QC value within limits for U 409.014  Recovery = 95.18%
V 292.402†              86580.8      497.04 ug/L          0.527      497.04 ppb           0.527   0.11%
   QC value within limits for V 292.402  Recovery = 99.41%
Zn 213.857†             88642.9      490.45 ug/L          0.862      490.45 ppb           0.862   0.18%
   QC value within limits for Zn 213.857  Recovery = 98.09%
SiO2†                  120772.4      5310.3 ug/L         26.66      5310.3 ppb          26.66   0.50%
   QC value within limits for SiO2  Recovery = 99.30%
All analyte(s) passed QC.
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Sequence No.: 19
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:31:14
Data Type: Reprocessed on 7/8/2009 11:40:22

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1063802.9	1063802.9	100.28	%			11:34:23
1	Sc Radial	5561.9	5561.9	99.9	%			11:33:06
1	Y 371.029	855860.4	855860.4	100.31	%			11:34:23
1	Y RADIAL	4822.6	4822.6	100.1	%			11:33:06
1	Ag 328.068†	690.4	49.9	0.1978	ug/L	0.1978	ppb	11:34:28
1	Al 396.153Radial†	-87.8	4.4	3.9546	ug/L	3.9546	ppb	11:33:06
1	As 188.979†	-50.4	-13.3	-3.1357	ug/L	-3.1357	ppb	11:34:48
1	B 249.677†	268.9	649.6	10.124	ug/L	10.124	ppb	11:34:28
1	Ba 233.527†	37.8	13.4	0.0677	ug/L	0.0677	ppb	11:34:48
1	Be 313.107†	-7293.5	42.7	0.0128	ug/L	0.0128	ppb	11:34:28
1	Ca 317.933Radial†	28.8	11.8	29.483	ug/L	29.483	ppb	11:33:26
1	Cd 226.502†	-277.0	1.4	0.0100	ug/L	0.0100	ppb	11:34:48
1	Co 228.616†	-86.2	4.5	0.0585	ug/L	0.0585	ppb	11:34:48
1	Cr 267.716†	-5.4	23.2	0.1973	ug/L	0.1973	ppb	11:34:48
1	Cu 324.752†	10006.5	-212.2	-0.5235	ug/L	-0.5235	ppb	11:34:28
1	Fe 238.204 Radial†	0.4	0.1	3.2855	ug/L	3.2855	ppb	11:33:26
1	K 766.490 Radial†	1523.7	51.4	22.290	ug/L	22.290	ppb	11:33:06
1	Mg 279.077 IEC†	-1.0	-1.1	-89.992	ug/L	-89.992	ppb	11:33:26
1	Mn 257.610†	795.0	-34.2	-0.0249	ug/L	-0.0249	ppb	11:34:48
1	Mo 202.031†	53.0	21.1	0.8462	ug/L	0.8462	ppb	11:34:48
1	Na 589.592 Radial†	-162.4	7.9	21.478	ug/L	21.478	ppb	11:33:26
1	Ni 231.604†	144.6	-4.1	-0.0650	ug/L	-0.0650	ppb	11:34:48
1	P 214.914†	355.6	17.7	6.3689	ug/L	6.3689	ppb	11:34:48
1	Pb 220.353†	-11.4	17.7	1.3309	ug/L	1.3309	ppb	11:34:48
1	S 181.975 Axial†	60.0	-8.0	-6.7972	ug/L	-6.7972	ppb	11:34:48
1	Sb 206.836†	53.2	7.6	1.5394	ug/L	1.5394	ppb	11:34:48
1	Se 196.026†	-14.3	7.3	2.4023	ug/L	2.4023	ppb	11:34:48
1	Si 251.611†	618.5	56.7	1.1410	ug/L	1.1410	ppb	11:34:48
1	Sn 189.927†	25.8	20.2	2.1070	ug/L	2.1070	ppb	11:34:48
1	Sr 421.552†	21.5	16.0	0.2468	ug/L	0.2468	ppb	11:33:26
1	Ti 334.940†	-1262.3	-149.6	-0.1941	ug/L	-0.1941	ppb	11:34:28
1	Tl 190.801†	-62.7	-1.1	-0.1937	ug/L	-0.1937	ppb	11:34:48
1	U 409.014†	-3836.3	9.0	0.2216	ug/L	0.2216	ppb	11:34:23
1	V 292.402†	-1663.5	-6.2	-0.0256	ug/L	-0.0256	ppb	11:34:28
1	Zn 213.857†	1135.7	10.2	0.0608	ug/L	0.0608	ppb	11:34:48
1	SiO2†	634.2	30.1	1.2681	ug/L	1.2681	ppb	11:35:54
2	Sc 361.383	1062791.4	1062791.4	100.18	%			11:34:53
2	Sc Radial	5538.6	5538.6	99.5	%			11:33:31
2	Y 371.029	855845.5	855845.5	100.31	%			11:34:53
2	Y RADIAL	4808.4	4808.4	99.85	%			11:33:31
2	Ag 328.068†	769.1	129.1	0.5079	ug/L	0.5079	ppb	11:34:58
2	Al 396.153Radial†	-67.1	24.8	22.522	ug/L	22.522	ppb	11:33:31
2	As 188.979†	-45.9	-8.9	-2.0961	ug/L	-2.0961	ppb	11:35:18
2	B 249.677†	275.1	656.1	10.227	ug/L	10.227	ppb	11:34:58
2	Ba 233.527†	41.5	17.1	0.0865	ug/L	0.0865	ppb	11:35:18
2	Be 313.107†	-7364.6	-35.1	-0.0111	ug/L	-0.0111	ppb	11:34:58
2	Ca 317.933Radial†	27.0	10.2	25.462	ug/L	25.462	ppb	11:33:51
2	Cd 226.502†	-277.0	1.1	0.0093	ug/L	0.0093	ppb	11:35:18
2	Co 228.616†	-96.9	-6.3	-0.0770	ug/L	-0.0770	ppb	11:35:18
2	Cr 267.716†	3.5	32.1	0.2730	ug/L	0.2730	ppb	11:35:18
2	Cu 324.752†	10207.0	-2.6	-0.0068	ug/L	-0.0068	ppb	11:34:58
2	Fe 238.204 Radial†	0.1	-0.2	-6.6396	ug/L	-6.6396	ppb	11:33:51
2	K 766.490 Radial†	1591.7	126.2	54.709	ug/L	54.709	ppb	11:33:31
2	Mg 279.077 IEC†	3.9	3.7	294.15	ug/L	294.15	ppb	11:33:51
2	Mn 257.610†	810.3	-18.2	-0.0209	ug/L	-0.0209	ppb	11:35:18
2	Mo 202.031†	40.3	8.4	0.3367	ug/L	0.3367	ppb	11:35:18
2	Na 589.592 Radial†	-165.4	4.2	11.404	ug/L	11.404	ppb	11:33:51
2	Ni 231.604†	155.5	7.0	0.1119	ug/L	0.1119	ppb	11:35:18

2	P 214.914†	350.7	13.1	4.6724 ug/L	4.6724 ppb	11:35:18
2	Pb 220.353†	1.3	30.4	2.2862 ug/L	2.2862 ppb	11:35:18
2	S 181.975 Axial†	62.4	-5.5	-4.6975 ug/L	-4.6975 ppb	11:35:18
2	Sb 206.836†	46.9	1.4	0.3030 ug/L	0.3030 ppb	11:35:18
2	Se 196.026†	-24.0	-2.3	-0.7802 ug/L	-0.7802 ppb	11:35:18
2	Si 251.611†	641.1	79.9	1.6204 ug/L	1.6204 ppb	11:35:18
2	Sn 189.927†	17.4	11.9	1.2429 ug/L	1.2429 ppb	11:35:18
2	Sr 421.552†	27.5	22.2	0.3413 ug/L	0.3413 ppb	11:33:51
2	Ti 334.940†	-1173.5	-62.1	-0.0801 ug/L	-0.0801 ppb	11:34:58
2	Tl 190.801†	-57.3	4.2	0.7097 ug/L	0.7097 ppb	11:35:18
2	U 409.014†	-3809.4	32.2	0.7987 ug/L	0.7987 ppb	11:34:53
2	V 292.402†	-1655.4	0.3	0.0135 ug/L	0.0135 ppb	11:34:58
2	Zn 213.857†	1139.0	14.5	0.0708 ug/L	0.0708 ppb	11:35:18
2	SiO2†	668.5	65.0	2.8084 ug/L	2.8084 ppb	11:35:59
3	Sc 361.383	1063088.1	1063088.1	100.21 %		11:35:23
3	Sc Radial	5440.7	5440.7	97.8 %		11:33:56
3	Y 371.029	856947.0	856947.0	100.44 %		11:35:23
3	Y RADIAL	4756.3	4756.3	98.77 %		11:33:56
3	Ag 328.068†	752.9	112.7	0.4282 ug/L	0.4282 ppb	11:35:29
3	Al 396.153Radial†	-61.7	29.0	26.426 ug/L	26.426 ppb	11:33:56
3	As 188.979†	-51.0	-14.0	-3.3000 ug/L	-3.3000 ppb	11:35:49
3	B 249.677†	248.8	629.8	9.8225 ug/L	9.8225 ppb	11:35:29
3	Ba 233.527†	49.3	24.9	0.1240 ug/L	0.1240 ppb	11:35:49
3	Be 313.107†	-7424.6	-93.0	-0.0288 ug/L	-0.0288 ppb	11:35:29
3	Ca 317.933Radial†	29.0	12.8	31.771 ug/L	31.771 ppb	11:34:16
3	Cd 226.502†	-284.9	-6.6	-0.0439 ug/L	-0.0439 ppb	11:35:49
3	Co 228.616†	-101.2	-10.6	-0.1306 ug/L	-0.1306 ppb	11:35:49
3	Cr 267.716†	-30.9	-2.2	-0.0206 ug/L	-0.0206 ppb	11:35:49
3	Cu 324.752†	10236.2	23.7	0.0558 ug/L	0.0558 ppb	11:35:29
3	Fe 238.204 Radial†	-1.0	-1.4	-48.298 ug/L	-48.298 ppb	11:34:16
3	K 766.490 Radial†	1505.5	66.8	28.927 ug/L	28.927 ppb	11:33:56
3	Mg 279.077 IEC†	0.6	0.4	33.239 ug/L	33.239 ppb	11:34:16
3	Mn 257.610†	805.7	-23.0	-0.0251 ug/L	-0.0251 ppb	11:35:49
3	Mo 202.031†	36.0	4.1	0.1614 ug/L	0.1614 ppb	11:35:49
3	Na 589.592 Radial†	-166.0	0.6	1.7302 ug/L	1.7302 ppb	11:34:16
3	Ni 231.604†	154.3	5.8	0.0925 ug/L	0.0925 ppb	11:35:49
3	P 214.914†	333.2	-4.4	-1.5177 ug/L	-1.5177 ppb	11:35:49
3	Pb 220.353†	8.6	37.6	2.8325 ug/L	2.8325 ppb	11:35:49
3	S 181.975 Axial†	65.9	-2.0	-1.7280 ug/L	-1.7280 ppb	11:35:49
3	Sb 206.836†	54.2	8.7	1.7131 ug/L	1.7131 ppb	11:35:49
3	Se 196.026†	-34.5	-12.8	-4.3231 ug/L	-4.3231 ppb	11:35:49
3	Si 251.611†	617.8	56.4	1.1483 ug/L	1.1483 ppb	11:35:49
3	Sn 189.927†	12.9	7.4	0.7752 ug/L	0.7752 ppb	11:35:49
3	Sr 421.552†	24.1	19.1	0.2946 ug/L	0.2946 ppb	11:34:16
3	Ti 334.940†	-1056.8	54.6	0.0735 ug/L	0.0735 ppb	11:35:29
3	Tl 190.801†	-54.8	6.7	1.1352 ug/L	1.1352 ppb	11:35:49
3	U 409.014†	-3836.0	6.7	0.1717 ug/L	0.1717 ppb	11:35:23
3	V 292.402†	-1740.9	-84.5	-0.4699 ug/L	-0.4699 ppb	11:35:29
3	Zn 213.857†	1112.0	-12.7	-0.0677 ug/L	-0.0677 ppb	11:35:49
3	SiO2†	666.7	63.0	2.7492 ug/L	2.7492 ppb	11:36:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1063227.5	100.22	%	0.049				0.05%
Sc Radial	5513.8	99.1	%	1.16				1.17%
Y 371.029	856217.6	100.35	%	0.074				0.07%
Y RADIAL	4795.8	99.59	%	0.725				0.73%
Ag 328.068†	97.2	0.3779	ug/L	0.16103	0.3779	ppb	0.16103	42.61%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.4	17.634	ug/L	12.0065	17.634	ppb	12.0065	68.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.1	-2.8439	ug/L	0.65284	-2.8439	ppb	0.65284	22.96%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	645.2	10.058	ug/L	0.2102	10.058	ppb	0.2102	2.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	18.5	0.0927	ug/L	0.02864	0.0927	ppb	0.02864	30.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-28.5	-0.0090	ug/L	0.02087	-0.0090	ppb	0.02087	231.41%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          11.6      28.906 ug/L        3.1943      28.906 ppb        3.1943  11.05%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -1.4      -0.0082 ug/L       0.03088     -0.0082 ppb       0.03088 375.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -4.1      -0.0497 ug/L       0.09746     -0.0497 ppb       0.09746 196.02%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               17.7       0.1499 ug/L       0.15243      0.1499 ppb       0.15243 101.68%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -63.7      -0.1582 ug/L       0.31790     -0.1582 ppb       0.31790 200.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5      -17.217 ug/L       27.3704     -17.217 ppb       27.3704 158.97%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         81.4       35.309 ug/L       17.1254      35.309 ppb       17.1254  48.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            1.0       79.132 ug/L      196.1394      79.132 ppb      196.1394 247.86%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -25.1      -0.0236 ug/L       0.00236     -0.0236 ppb       0.00236   9.98%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               11.2       0.4481 ug/L       0.35572      0.4481 ppb       0.35572  79.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         4.3       11.538 ug/L        9.8746      11.538 ppb        9.8746  85.59%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                2.9       0.0465 ug/L       0.09700      0.0465 ppb       0.09700 208.67%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 8.8       3.1745 ug/L       4.15119      3.1745 ppb       4.15119 130.77%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               28.6       2.1499 ug/L       0.76002      2.1499 ppb       0.76002  35.35%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -5.2      -4.4076 ug/L       2.54698     -4.4076 ppb       2.54698  57.79%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                5.9       1.1852 ug/L       0.76889      1.1852 ppb       0.76889  64.88%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -2.6      -0.9003 ug/L       3.36431     -0.9003 ppb       3.36431 373.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               64.3       1.3033 ug/L       0.27467      1.3033 ppb       0.27467  21.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               13.2       1.3751 ug/L       0.67567      1.3751 ppb       0.67567  49.14%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               19.1       0.2942 ug/L       0.04727      0.2942 ppb       0.04727  16.07%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -52.4      -0.0669 ug/L       0.13429     -0.0669 ppb       0.13429 200.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                3.3       0.5504 ug/L       0.67863      0.5504 ppb       0.67863 123.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                15.9       0.3973 ug/L       0.34848      0.3973 ppb       0.34848  87.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -30.1      -0.1607 ug/L       0.26848     -0.1607 ppb       0.26848 167.11%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                4.0       0.0213 ug/L       0.07726      0.0213 ppb       0.07726 362.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     52.7       2.2752 ug/L       0.87275      2.2752 ppb       0.87275  38.36%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 12:37:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5606.1	5606.1	101	%			12:39:25
1	Y RADIAL	4851.1	4851.1	100.7	%			12:39:25
1	Al 396.153Radial†	5378.2	5430.8	4921.6	ug/L	4921.6	ppb	12:39:25
1	Ca 317.933Radial†	2021.2	1989.4	4955.2	ug/L	4955.2	ppb	12:39:45
1	Fe 238.204 Radial†	140.8	139.5	4908.3	ug/L	4908.3	ppb	12:39:45
1	K 766.490 Radial†	13453.7	11881.6	5149.1	ug/L	5149.1	ppb	12:39:25
1	Mg 279.077 IEC†	63.3	62.7	4971.3	ug/L	4971.3	ppb	12:39:45
1	Na 589.592 Radial†	3647.9	3791.5	10252	ug/L	10252	ppb	12:39:25
1	Sr 421.552†	35108.7	34844.6	536.79	ug/L	536.79	ppb	12:39:25
1	Sc 361.383	1058412.2	1058412.2	99.767	%			12:40:44
1	Y 371.029	842280.3	842280.3	98.718	%			12:40:44
1	Ag 328.068†	126383.3	126039.7	501.96	ug/L	501.96	ppb	12:40:44
1	As 188.979†	2067.2	2108.9	498.21	ug/L	498.21	ppb	12:41:04
1	B 249.677†	31249.4	31703.9	492.21	ug/L	492.21	ppb	12:40:44
1	Ba 233.527†	97896.4	98100.6	497.76	ug/L	497.76	ppb	12:40:44
1	Be 313.107†	1582299.5	1593308.9	496.58	ug/L	496.58	ppb	12:40:44
1	Cd 226.502†	66319.2	66751.6	499.00	ug/L	499.00	ppb	12:40:44
1	Co 228.616†	39106.2	39287.9	489.60	ug/L	489.60	ppb	12:41:04
1	Cr 267.716†	58017.2	58181.2	496.23	ug/L	496.23	ppb	12:40:44
1	Cu 324.752†	209452.1	199749.8	493.12	ug/L	493.12	ppb	12:40:44
1	Mn 257.610†	627242.3	627879.2	496.74	ug/L	496.74	ppb	12:40:44
1	Mo 202.031†	12652.8	12650.6	506.70	ug/L	506.70	ppb	12:41:04
1	Ni 231.604†	30863.4	30787.2	493.14	ug/L	493.14	ppb	12:41:04
1	P 214.914†	7409.4	7089.8	2431.0	ug/L	2431.0	ppb	12:41:04
1	Pb 220.353†	6655.3	6699.9	503.62	ug/L	503.62	ppb	12:41:04
1	S 181.975 Axial†	1267.1	1202.2	1016.6	ug/L	1016.6	ppb	12:41:04
1	Sb 206.836†	2567.2	2527.8	503.31	ug/L	503.31	ppb	12:41:04
1	Se 196.026†	1499.0	1524.1	514.74	ug/L	514.74	ppb	12:41:04
1	Si 251.611†	123740.7	123469.4	2535.6	ug/L	2535.6	ppb	12:40:44
1	Sn 189.927†	4813.6	4819.3	501.70	ug/L	501.70	ppb	12:41:04
1	Ti 334.940†	379065.1	381059.1	498.77	ug/L	498.77	ppb	12:40:44
1	Tl 190.801†	2892.3	2960.4	501.29	ug/L	501.29	ppb	12:41:04
1	U 409.014†	15455.7	19326.6	477.97	ug/L	477.97	ppb	12:40:44
1	V 292.402†	85007.9	86859.1	498.67	ug/L	498.67	ppb	12:40:44
1	Zn 213.857†	90043.3	89131.1	493.16	ug/L	493.16	ppb	12:40:44
1	SiO2†	124276.3	123964.1	5451.2	ug/L	5451.2	ppb	12:42:04
2	Sc Radial	5585.7	5585.7	100	%			12:39:50
2	Y RADIAL	4837.6	4837.6	100.5	%			12:39:50
2	Al 396.153Radial†	5301.2	5373.6	4869.5	ug/L	4869.5	ppb	12:39:50
2	Ca 317.933Radial†	2018.6	1994.2	4967.2	ug/L	4967.2	ppb	12:40:10
2	Fe 238.204 Radial†	146.6	145.8	5129.1	ug/L	5129.1	ppb	12:40:10
2	K 766.490 Radial†	13445.7	11922.5	5167.1	ug/L	5167.1	ppb	12:39:50
2	Mg 279.077 IEC†	62.9	62.5	4955.1	ug/L	4955.1	ppb	12:40:10
2	Na 589.592 Radial†	3631.8	3788.6	10244	ug/L	10244	ppb	12:39:50
2	Sr 421.552†	34927.0	34791.2	535.97	ug/L	535.97	ppb	12:39:50
2	Sc 361.383	1052564.2	1052564.2	99.216	%			12:41:12
2	Y 371.029	837846.1	837846.1	98.199	%			12:41:12
2	Ag 328.068†	125844.2	126200.1	502.67	ug/L	502.67	ppb	12:41:12
2	As 188.979†	2073.2	2126.5	502.37	ug/L	502.37	ppb	12:41:32
2	B 249.677†	31117.5	31744.9	492.82	ug/L	492.82	ppb	12:41:12
2	Ba 233.527†	97205.3	97949.3	496.99	ug/L	496.99	ppb	12:41:12
2	Be 313.107†	1572088.7	1591829.1	496.11	ug/L	496.11	ppb	12:41:12
2	Cd 226.502†	65885.5	66683.9	498.47	ug/L	498.47	ppb	12:41:12
2	Co 228.616†	38903.8	39301.7	489.77	ug/L	489.77	ppb	12:41:32
2	Cr 267.716†	57670.9	58155.3	496.01	ug/L	496.01	ppb	12:41:12
2	Cu 324.752†	208260.2	199714.8	493.05	ug/L	493.05	ppb	12:41:12
2	Mn 257.610†	622713.6	626807.8	495.92	ug/L	495.92	ppb	12:41:12
2	Mo 202.031†	12649.0	12717.2	509.38	ug/L	509.38	ppb	12:41:32
2	Ni 231.604†	30707.2	30801.6	493.37	ug/L	493.37	ppb	12:41:32

2	P 214.914†	7360.8	7082.0	2428.1 ug/L	2428.1 ppb	12:41:32
2	Pb 220.353†	6668.7	6750.4	507.38 ug/L	507.38 ppb	12:41:32
2	S 181.975 Axial†	1268.3	1210.5	1023.7 ug/L	1023.7 ppb	12:41:32
2	Sb 206.836†	2554.2	2529.0	503.61 ug/L	503.61 ppb	12:41:32
2	Se 196.026†	1489.9	1523.3	515.24 ug/L	515.24 ppb	12:41:32
2	Si 251.611†	122736.1	123146.0	2528.9 ug/L	2528.9 ppb	12:41:12
2	Sn 189.927†	4784.8	4817.1	501.48 ug/L	501.48 ppb	12:41:32
2	Ti 334.940†	376326.4	380409.8	497.92 ug/L	497.92 ppb	12:41:12
2	Tl 190.801†	2869.4	2953.4	500.11 ug/L	500.11 ppb	12:41:32
2	U 409.014†	15348.9	19304.9	477.40 ug/L	477.40 ppb	12:41:12
2	V 292.402†	84354.4	86673.8	497.63 ug/L	497.63 ppb	12:41:12
2	Zn 213.857†	89243.2	88826.1	491.43 ug/L	491.43 ppb	12:41:12
2	SiO2†	123446.6	123819.8	5444.7 ug/L	5444.7 ppb	12:42:10
3	Sc Radial	5622.4	5622.4	101 %		12:40:15
3	Y RADIAL	4895.1	4895.1	101.6 %		12:40:15
3	Al 396.153Radial†	5385.6	5422.7	4914.2 ug/L	4914.2 ppb	12:40:15
3	Ca 317.933Radial†	2021.8	1984.1	4942.2 ug/L	4942.2 ppb	12:40:35
3	Fe 238.204 Radial†	143.1	141.3	4973.4 ug/L	4973.4 ppb	12:40:35
3	K 766.490 Radial†	13475.9	11864.8	5141.9 ug/L	5141.9 ppb	12:40:15
3	Mg 279.077 IEC†	64.9	64.0	5076.8 ug/L	5076.8 ppb	12:40:35
3	Na 589.592 Radial†	3704.4	3836.9	10375 ug/L	10375 ppb	12:40:15
3	Sr 421.552†	35367.4	34999.8	539.18 ug/L	539.18 ppb	12:40:15
3	Sc 361.383	1055266.8	1055266.8	99.471 %		12:41:39
3	Y 371.029	840466.9	840466.9	98.506 %		12:41:39
3	Ag 328.068†	125875.6	125906.9	501.45 ug/L	501.45 ppb	12:41:39
3	As 188.979†	2070.2	2118.1	500.36 ug/L	500.36 ppb	12:41:59
3	B 249.677†	31096.7	31643.7	491.26 ug/L	491.26 ppb	12:41:39
3	Ba 233.527†	97326.4	97820.1	496.34 ug/L	496.34 ppb	12:41:39
3	Be 313.107†	1575608.3	1591309.3	495.95 ug/L	495.95 ppb	12:41:39
3	Cd 226.502†	65831.5	66459.5	496.81 ug/L	496.81 ppb	12:41:39
3	Co 228.616†	38937.8	39235.4	488.94 ug/L	488.94 ppb	12:41:59
3	Cr 267.716†	57725.3	58061.1	495.21 ug/L	495.21 ppb	12:41:39
3	Cu 324.752†	208650.8	199569.9	492.68 ug/L	492.68 ppb	12:41:39
3	Mn 257.610†	623476.5	625967.4	495.24 ug/L	495.24 ppb	12:41:39
3	Mo 202.031†	12620.8	12656.2	506.93 ug/L	506.93 ppb	12:41:59
3	Ni 231.604†	30715.0	30730.2	492.22 ug/L	492.22 ppb	12:41:59
3	P 214.914†	7373.4	7075.7	2426.1 ug/L	2426.1 ppb	12:41:59
3	Pb 220.353†	6643.3	6707.8	504.20 ug/L	504.20 ppb	12:41:59
3	S 181.975 Axial†	1267.5	1206.4	1020.2 ug/L	1020.2 ppb	12:41:59
3	Sb 206.836†	2557.1	2525.3	502.87 ug/L	502.87 ppb	12:41:59
3	Se 196.026†	1494.6	1524.2	514.98 ug/L	514.98 ppb	12:41:59
3	Si 251.611†	122713.6	122806.5	2522.0 ug/L	2522.0 ppb	12:41:39
3	Sn 189.927†	4806.5	4826.6	502.46 ug/L	502.46 ppb	12:41:59
3	Ti 334.940†	376677.4	379791.2	497.11 ug/L	497.11 ppb	12:41:39
3	Tl 190.801†	2887.1	2963.8	501.86 ug/L	501.86 ppb	12:41:59
3	U 409.014†	15446.1	19363.0	478.87 ug/L	478.87 ppb	12:41:39
3	V 292.402†	84553.0	86655.7	497.52 ug/L	497.52 ppb	12:41:39
3	Zn 213.857†	89401.2	88754.6	491.05 ug/L	491.05 ppb	12:41:39
3	SiO2†	122933.1	122984.9	5407.9 ug/L	5407.9 ppb	12:42:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1055414.4	99.485	%	0.2759				0.28%
Sc Radial	5604.7	101	%	0.3				0.33%
Y 371.029	840197.8	98.474	%	0.2613				0.27%
Y RADIAL	4861.2	100.9	%	0.62				0.62%
Ag 328.068†	126048.9	502.03	ug/L	0.609	502.03	ppb	0.609	0.12%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5409.0	4901.8	ug/L	28.21	4901.8	ppb	28.21	0.58%
QC value within limits for Al 396.153Radial Recovery = 98.04%								
As 188.979†	2117.9	500.31	ug/L	2.082	500.31	ppb	2.082	0.42%
QC value within limits for As 188.979 Recovery = 100.06%								
B 249.677†	31697.5	492.10	ug/L	0.784	492.10	ppb	0.784	0.16%
QC value within limits for B 249.677 Recovery = 98.42%								
Ba 233.527†	97956.7	497.03	ug/L	0.711	497.03	ppb	0.711	0.14%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1592149.1	496.21	ug/L	0.324	496.21	ppb	0.324	0.07%
QC value within limits for Be 313.107 Recovery = 99.24%								
Ca 317.933Radial†	1989.2	4954.9	ug/L	12.52	4954.9	ppb	12.52	0.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.10%
Cd 226.502†          66631.7      498.09 ug/L        1.144      498.09 ppb        1.144   0.23%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†          39275.0      489.44 ug/L        0.436      489.44 ppb        0.436   0.09%
   QC value within limits for Co 228.616  Recovery = 97.89%
Cr 267.716†          58132.5      495.82 ug/L        0.539      495.82 ppb        0.539   0.11%
   QC value within limits for Cr 267.716  Recovery = 99.16%
Cu 324.752†         199678.2      492.95 ug/L        0.236      492.95 ppb        0.236   0.05%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†     142.2      5003.6 ug/L       113.48      5003.6 ppb       113.48   2.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.07%
K 766.490 Radial†    11889.6      5152.7 ug/L        12.97      5152.7 ppb        12.97   0.25%
   QC value within limits for K 766.490 Radial  Recovery = 103.05%
Mg 279.077 IEC†         63.1      5001.1 ug/L        66.09      5001.1 ppb        66.09   1.32%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.02%
Mn 257.610†         626884.8      495.97 ug/L        0.753      495.97 ppb        0.753   0.15%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†          12674.6      507.67 ug/L        1.485      507.67 ppb        1.485   0.29%
   QC value within limits for Mo 202.031  Recovery = 101.53%
Na 589.592 Radial†    3805.7       10290 ug/L         73.3       10290 ppb         73.3   0.71%
   QC value within limits for Na 589.592 Radial  Recovery = 102.90%
Ni 231.604†          30773.0      492.91 ug/L        0.605      492.91 ppb        0.605   0.12%
   QC value within limits for Ni 231.604  Recovery = 98.58%
P 214.914†            7082.5      2428.4 ug/L         2.49      2428.4 ppb         2.49   0.10%
   QC value within limits for P 214.914  Recovery = 97.14%
Pb 220.353†           6719.4      505.07 ug/L        2.026      505.07 ppb        2.026   0.40%
   QC value within limits for Pb 220.353  Recovery = 101.01%
S 181.975 Axial†      1206.4      1020.2 ug/L         3.51      1020.2 ppb         3.51   0.34%
   QC value within limits for S 181.975 Axial  Recovery = 102.02%
Sb 206.836†           2527.4      503.26 ug/L        0.369      503.26 ppb        0.369   0.07%
   QC value within limits for Sb 206.836  Recovery = 100.65%
Se 196.026†           1523.9      514.99 ug/L        0.251      514.99 ppb        0.251   0.05%
   QC value within limits for Se 196.026  Recovery = 103.00%
Si 251.611†         123140.6      2528.8 ug/L         6.84      2528.8 ppb         6.84   0.27%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†           4821.0      501.88 ug/L        0.511      501.88 ppb        0.511   0.10%
   QC value within limits for Sn 189.927  Recovery = 100.38%
Sr 421.552†          34878.5      537.31 ug/L        1.669      537.31 ppb        1.669   0.31%
   QC value within limits for Sr 421.552  Recovery = 107.46%
Ti 334.940†         380420.0      497.94 ug/L        0.830      497.94 ppb        0.830   0.17%
   QC value within limits for Ti 334.940  Recovery = 99.59%
Tl 190.801†           2959.2      501.08 ug/L        0.893      501.08 ppb        0.893   0.18%
   QC value within limits for Tl 190.801  Recovery = 100.22%
U 409.014†           19331.5      478.08 ug/L        0.738      478.08 ppb        0.738   0.15%
   QC value within limits for U 409.014  Recovery = 95.62%
V 292.402†           86729.6      497.94 ug/L        0.638      497.94 ppb        0.638   0.13%
   QC value within limits for V 292.402  Recovery = 99.59%
Zn 213.857†          88903.9      491.88 ug/L        1.123      491.88 ppb        1.123   0.23%
   QC value within limits for Zn 213.857  Recovery = 98.38%
SiO2†               123589.6      5434.6 ug/L        23.34      5434.6 ppb        23.34   0.43%
   QC value within limits for SiO2  Recovery = 101.63%
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 12:44:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5518.3	5518.3	99.2	%			12:46:17
1	Y RADIAL	4806.7	4806.7	99.81	%			12:46:17
1	Al 396.153Radial†	-80.6	10.9	9.9589	ug/L	9.9589	ppb	12:46:17
1	Ca 317.933Radial†	44.1	27.5	68.573	ug/L	68.573	ppb	12:46:37
1	Fe 238.204 Radial†	0.0	-0.3	-9.9293	ug/L	-9.9293	ppb	12:46:37
1	K 766.490 Radial†	1698.7	239.9	104.08	ug/L	104.08	ppb	12:46:17
1	Mg 279.077 IEC†	-1.8	-2.0	-155.04	ug/L	-155.04	ppb	12:46:37
1	Na 589.592 Radial†	-174.1	-5.2	-13.943	ug/L	-13.943	ppb	12:46:37
1	Sr 421.552†	32.4	27.2	0.4180	ug/L	0.4180	ppb	12:46:37
1	Sc 361.383	1052130.1	1052130.1	99.175	%			12:47:34
1	Y 371.029	846654.6	846654.6	99.231	%			12:47:34
1	Ag 328.068†	745.4	113.0	0.4445	ug/L	0.4445	ppb	12:47:39
1	As 188.979†	-50.6	-14.1	-3.3222	ug/L	-3.3222	ppb	12:47:59
1	B 249.677†	375.6	760.3	11.850	ug/L	11.850	ppb	12:47:39
1	Ba 233.527†	45.5	21.6	0.1076	ug/L	0.1076	ppb	12:47:59
1	Be 313.107†	-7407.1	-152.6	-0.0474	ug/L	-0.0474	ppb	12:47:39
1	Cd 226.502†	-302.4	-27.3	-0.2026	ug/L	-0.2026	ppb	12:47:59
1	Co 228.616†	-78.2	11.6	0.1438	ug/L	0.1438	ppb	12:47:59
1	Cr 267.716†	-24.3	4.1	0.0351	ug/L	0.0351	ppb	12:47:59
1	Cu 324.752†	10111.8	4.6	0.0108	ug/L	0.0108	ppb	12:47:39
1	Mn 257.610†	869.1	49.3	0.0406	ug/L	0.0406	ppb	12:47:59
1	Mo 202.031†	26.7	-4.8	-0.1934	ug/L	-0.1934	ppb	12:47:59
1	Ni 231.604†	157.5	10.6	0.1698	ug/L	0.1698	ppb	12:47:59
1	P 214.914†	363.5	29.6	10.483	ug/L	10.483	ppb	12:47:59
1	Pb 220.353†	-2.2	26.8	2.0130	ug/L	2.0130	ppb	12:47:59
1	S 181.975 Axial†	74.3	7.1	5.9751	ug/L	5.9751	ppb	12:47:59
1	Sb 206.836†	39.2	-5.9	-1.1554	ug/L	-1.1554	ppb	12:47:59
1	Se 196.026†	-23.4	-2.0	-0.6703	ug/L	-0.6703	ppb	12:47:59
1	Si 251.611†	1253.7	704.0	14.495	ug/L	14.495	ppb	12:47:59
1	Sn 189.927†	8.5	3.1	0.3237	ug/L	0.3237	ppb	12:47:59
1	Ti 334.940†	-1083.2	17.0	0.0287	ug/L	0.0287	ppb	12:47:39
1	Tl 190.801†	-53.7	7.3	1.2282	ug/L	1.2282	ppb	12:47:59
1	U 409.014†	-3965.4	-163.6	-4.0586	ug/L	-4.0586	ppb	12:47:34
1	V 292.402†	-1733.9	-95.6	-0.5536	ug/L	-0.5536	ppb	12:47:39
1	Zn 213.857†	1100.4	-12.8	-0.0663	ug/L	-0.0663	ppb	12:47:59
1	SiO2†	1196.6	604.2	26.624	ug/L	26.624	ppb	12:49:05
2	Sc Radial	5530.0	5530.0	99.4	%			12:46:42
2	Y RADIAL	4804.0	4804.0	99.76	%			12:46:42
2	Al 396.153Radial†	-46.8	45.1	41.028	ug/L	41.028	ppb	12:46:42
2	Ca 317.933Radial†	43.2	26.6	66.161	ug/L	66.161	ppb	12:47:02
2	Fe 238.204 Radial†	0.2	-0.1	-3.2086	ug/L	-3.2086	ppb	12:47:02
2	K 766.490 Radial†	1500.2	36.5	15.864	ug/L	15.864	ppb	12:46:42
2	Mg 279.077 IEC†	0.1	-0.0	-2.9802	ug/L	-2.9802	ppb	12:47:02
2	Na 589.592 Radial†	-185.3	-16.0	-43.367	ug/L	-43.367	ppb	12:47:02
2	Sr 421.552†	24.3	19.0	0.2916	ug/L	0.2916	ppb	12:47:02
2	Sc 361.383	1055228.2	1055228.2	99.467	%			12:48:04
2	Y 371.029	850024.5	850024.5	99.626	%			12:48:04
2	Ag 328.068†	646.4	11.3	0.0443	ug/L	0.0443	ppb	12:48:09
2	As 188.979†	-42.6	-5.9	-1.4010	ug/L	-1.4010	ppb	12:48:29
2	B 249.677†	320.9	704.1	10.974	ug/L	10.974	ppb	12:48:09
2	Ba 233.527†	61.0	37.0	0.1867	ug/L	0.1867	ppb	12:48:29
2	Be 313.107†	-7402.9	-126.4	-0.0393	ug/L	-0.0393	ppb	12:48:09
2	Cd 226.502†	-287.6	-11.5	-0.0851	ug/L	-0.0851	ppb	12:48:29
2	Co 228.616†	-95.0	-5.1	-0.0621	ug/L	-0.0621	ppb	12:48:29
2	Cr 267.716†	-27.2	1.3	0.0113	ug/L	0.0113	ppb	12:48:29
2	Cu 324.752†	10074.9	-62.4	-0.1541	ug/L	-0.1541	ppb	12:48:09
2	Mn 257.610†	873.6	51.3	0.0402	ug/L	0.0402	ppb	12:48:29
2	Mo 202.031†	40.5	8.9	0.3563	ug/L	0.3563	ppb	12:48:29
2	Ni 231.604†	174.4	27.0	0.4336	ug/L	0.4336	ppb	12:48:29

2	P 214.914†	361.0	26.0	9.2291 ug/L	9.2291 ppb	12:48:29
2	Pb 220.353†	-10.0	19.1	1.4379 ug/L	1.4379 ppb	12:48:29
2	S 181.975 Axial†	81.6	14.2	11.973 ug/L	11.973 ppb	12:48:29
2	Sb 206.836†	42.3	-2.9	-0.5447 ug/L	-0.5447 ppb	12:48:29
2	Se 196.026†	-24.2	-2.7	-0.8785 ug/L	-0.8785 ppb	12:48:29
2	Si 251.611†	1175.1	621.2	12.805 ug/L	12.805 ppb	12:48:29
2	Sn 189.927†	14.8	9.4	0.9833 ug/L	0.9833 ppb	12:48:29
2	Ti 334.940†	-1119.7	-16.5	-0.0158 ug/L	-0.0158 ppb	12:48:09
2	Tl 190.801†	-65.4	-4.3	-0.7287 ug/L	-0.7287 ppb	12:48:29
2	U 409.014†	-3934.1	-120.4	-2.9874 ug/L	-2.9874 ppb	12:48:04
2	V 292.402†	-1688.4	-44.7	-0.2542 ug/L	-0.2542 ppb	12:48:09
2	Zn 213.857†	1094.3	-22.2	-0.1261 ug/L	-0.1261 ppb	12:48:29
2	SiO2†	1154.6	558.4	24.643 ug/L	24.643 ppb	12:49:10
3	Sc Radial	5536.9	5536.9	99.5 %		12:47:07
3	Y RADIAL	4795.3	4795.3	99.58 %		12:47:07
3	Al 396.153Radial†	-88.7	3.1	2.7784 ug/L	2.7784 ppb	12:47:07
3	Ca 317.933Radial†	38.0	21.3	52.934 ug/L	52.934 ppb	12:47:27
3	Fe 238.204 Radial†	0.3	-0.0	-1.5937 ug/L	-1.5937 ppb	12:47:27
3	K 766.490 Radial†	1639.2	174.4	75.680 ug/L	75.680 ppb	12:47:07
3	Mg 279.077 IEC†	-0.9	-1.1	-89.124 ug/L	-89.124 ppb	12:47:27
3	Na 589.592 Radial†	-174.5	-4.9	-13.365 ug/L	-13.365 ppb	12:47:27
3	Sr 421.552†	25.1	19.8	0.3045 ug/L	0.3045 ppb	12:47:27
3	Sc 361.383	1057181.0	1057181.0	99.651 %		12:48:34
3	Y 371.029	851270.4	851270.4	99.772 %		12:48:34
3	Ag 328.068†	674.9	38.7	0.1554 ug/L	0.1554 ppb	12:48:39
3	As 188.979†	-44.5	-7.8	-1.8396 ug/L	-1.8396 ppb	12:48:59
3	B 249.677†	378.7	761.6	11.869 ug/L	11.869 ppb	12:48:39
3	Ba 233.527†	63.9	39.8	0.2017 ug/L	0.2017 ppb	12:48:59
3	Be 313.107†	-7375.2	-84.8	-0.0266 ug/L	-0.0266 ppb	12:48:39
3	Cd 226.502†	-299.1	-22.5	-0.1676 ug/L	-0.1676 ppb	12:48:59
3	Co 228.616†	-94.7	-4.6	-0.0558 ug/L	-0.0558 ppb	12:48:59
3	Cr 267.716†	-31.6	-3.1	-0.0251 ug/L	-0.0251 ppb	12:48:59
3	Cu 324.752†	10184.5	28.9	0.0711 ug/L	0.0711 ppb	12:48:39
3	Mn 257.610†	910.4	86.5	0.0699 ug/L	0.0699 ppb	12:48:59
3	Mo 202.031†	44.9	13.3	0.5325 ug/L	0.5325 ppb	12:48:59
3	Ni 231.604†	167.2	19.5	0.3133 ug/L	0.3133 ppb	12:48:59
3	P 214.914†	336.4	0.6	0.2154 ug/L	0.2154 ppb	12:48:59
3	Pb 220.353†	-22.4	6.6	0.4997 ug/L	0.4997 ppb	12:48:59
3	S 181.975 Axial†	69.3	1.8	1.4809 ug/L	1.4809 ppb	12:48:59
3	Sb 206.836†	57.9	12.6	2.5004 ug/L	2.5004 ppb	12:48:59
3	Se 196.026†	-30.6	-9.1	-2.9626 ug/L	-2.9626 ppb	12:48:59
3	Si 251.611†	1139.2	583.1	11.995 ug/L	11.995 ppb	12:48:59
3	Sn 189.927†	11.6	6.1	0.6428 ug/L	0.6428 ppb	12:48:59
3	Ti 334.940†	-1167.7	-62.5	-0.0766 ug/L	-0.0766 ppb	12:48:39
3	Tl 190.801†	-61.2	0.0	0.0020 ug/L	0.0020 ppb	12:48:59
3	U 409.014†	-3975.3	-154.5	-3.8330 ug/L	-3.8330 ppb	12:48:34
3	V 292.402†	-1637.3	9.7	0.0534 ug/L	0.0534 ppb	12:48:39
3	Zn 213.857†	1125.6	7.1	0.0408 ug/L	0.0408 ppb	12:48:59
3	SiO2†	1173.0	574.8	25.317 ug/L	25.317 ppb	12:49:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054846.5	99.431	%	0.2401				0.24%
Sc Radial	5528.4	99.3	%	0.17				0.17%
Y 371.029	849316.5	99.543	%	0.2799				0.28%
Y RADIAL	4802.0	99.72	%	0.125				0.12%
Ag 328.068†	54.3	0.2147	ug/L	0.20658	0.2147	ppb	0.20658	96.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.7	17.922	ug/L	20.3303	17.922	ppb	20.3303	113.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-9.3	-2.1876	ug/L	1.00674	-2.1876	ppb	1.00674	46.02%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	742.0	11.565	ug/L	0.5111	11.565	ppb	0.5111	4.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.8	0.1653	ug/L	0.05052	0.1653	ppb	0.05052	30.56%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.3	-0.0378	ug/L	0.01050	-0.0378	ppb	0.01050	27.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	25.1	62.556	ug/L	8.4198	62.556	ppb	8.4198	13.46%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -20.4     -0.1518 ug/L       0.06032     -0.1518 ppb        0.06032  39.74%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                0.6      0.0086 ug/L       0.11710      0.0086 ppb        0.11710 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                0.8      0.0071 ug/L       0.03031      0.0071 ppb        0.03031 424.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -9.6     -0.0240 ug/L       0.11658     -0.0240 ppb        0.11658 485.05%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.1     -4.9105 ug/L       4.42071     -4.9105 ppb        4.42071  90.02%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        150.3      65.208 ug/L       45.0299      65.208 ppb        45.0299  69.06%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.0     -82.381 ug/L       76.2536     -82.381 ppb        76.2536  92.56%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               62.3      0.0502 ug/L       0.01702      0.0502 ppb        0.01702  33.90%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                5.8      0.2318 ug/L       0.37863      0.2318 ppb        0.37863 163.36%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.558 ug/L       17.1571     -23.558 ppb        17.1571  72.83%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               19.1      0.3055 ug/L       0.13208      0.3055 ppb        0.13208  43.23%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                18.7      6.6426 ug/L       5.60129      6.6426 ppb        5.60129  84.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               17.5      1.3169 ug/L       0.76385      1.3169 ppb        0.76385  58.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           7.7      6.4762 ug/L       5.26375      6.4762 ppb        5.26375  81.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                1.3      0.2668 ug/L       1.95832      0.2668 ppb        1.95832 734.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.6     -1.5038 ug/L       1.26762     -1.5038 ppb        1.26762  84.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              636.1      13.098 ug/L        1.2757      13.098 ppb         1.2757   9.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.2      0.6499 ug/L       0.32985      0.6499 ppb        0.32985  50.75%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               22.0      0.3380 ug/L       0.06959      0.3380 ppb        0.06959  20.59%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -20.6     -0.0212 ug/L       0.05284     -0.0212 ppb        0.05284 248.77%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.0      0.1672 ug/L       0.98883      0.1672 ppb        0.98883 591.54%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -146.2     -3.6263 ug/L       0.56469     -3.6263 ppb        0.56469  15.57%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -43.5     -0.2515 ug/L       0.30350     -0.2515 ppb        0.30350 120.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -9.3     -0.0505 ug/L       0.08455     -0.0505 ppb        0.08455 167.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    579.1      25.528 ug/L        1.0068      25.528 ppb         1.0068   3.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 13:30:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5593.8	5593.8	101	%			13:32:15
1	Y RADIAL	4842.5	4842.5	100.6	%			13:32:15
1	Al 396.153Radial†	5375.4	5439.8	4930.0	ug/L	4930.0	ppb	13:32:15
1	Ca 317.933Radial†	2030.0	2002.6	4988.1	ug/L	4988.1	ppb	13:32:35
1	Fe 238.204 Radial†	143.1	142.0	4997.8	ug/L	4997.8	ppb	13:32:35
1	K 766.490 Radial†	13576.3	12032.8	5214.6	ug/L	5214.6	ppb	13:32:15
1	Mg 279.077 IEC†	64.5	64.0	5074.9	ug/L	5074.9	ppb	13:32:35
1	Na 589.592 Radial†	3820.6	3971.3	10738	ug/L	10738	ppb	13:32:15
1	Sr 421.552†	36184.6	35991.7	554.46	ug/L	554.46	ppb	13:32:15
1	Sc 361.383	1067935.1	1067935.1	100.66	%			13:33:34
1	Y 371.029	850350.6	850350.6	99.664	%			13:33:34
1	Ag 328.068†	127384.2	125904.4	501.45	ug/L	501.45	ppb	13:33:34
1	As 188.979†	2071.9	2095.1	494.98	ug/L	494.98	ppb	13:33:49
1	B 249.677†	31471.2	31644.9	491.29	ug/L	491.29	ppb	13:33:34
1	Ba 233.527†	98516.8	97841.9	496.45	ug/L	496.45	ppb	13:33:34
1	Be 313.107†	1595916.3	1592693.3	496.38	ug/L	496.38	ppb	13:33:34
1	Cd 226.502†	66618.5	66456.2	496.78	ug/L	496.78	ppb	13:33:34
1	Co 228.616†	39113.3	38945.4	485.32	ug/L	485.32	ppb	13:33:49
1	Cr 267.716†	58357.9	58001.1	494.70	ug/L	494.70	ppb	13:33:34
1	Cu 324.752†	211740.1	200150.5	494.11	ug/L	494.11	ppb	13:33:34
1	Mn 257.610†	631157.2	626162.1	495.39	ug/L	495.39	ppb	13:33:34
1	Mo 202.031†	12651.2	12535.9	502.12	ug/L	502.12	ppb	13:33:49
1	Ni 231.604†	30868.2	30516.1	488.79	ug/L	488.79	ppb	13:33:49
1	P 214.914†	7390.5	7004.7	2400.7	ug/L	2400.7	ppb	13:33:49
1	Pb 220.353†	6658.3	6643.4	499.37	ug/L	499.37	ppb	13:33:49
1	S 181.975 Axial†	1261.6	1185.4	1002.5	ug/L	1002.5	ppb	13:33:49
1	Sb 206.836†	2570.5	2508.1	499.32	ug/L	499.32	ppb	13:33:49
1	Se 196.026†	1503.6	1515.3	512.16	ug/L	512.16	ppb	13:33:49
1	Si 251.611†	123414.2	122039.0	2506.2	ug/L	2506.2	ppb	13:33:34
1	Sn 189.927†	4826.6	4789.2	498.58	ug/L	498.58	ppb	13:33:49
1	Ti 334.940†	381885.1	380472.4	498.01	ug/L	498.01	ppb	13:33:34
1	Tl 190.801†	2890.2	2932.5	496.60	ug/L	496.60	ppb	13:33:49
1	U 409.014†	15716.9	19447.9	480.97	ug/L	480.97	ppb	13:33:34
1	V 292.402†	85492.2	86580.4	497.03	ug/L	497.03	ppb	13:33:34
1	Zn 213.857†	90459.6	88739.9	490.98	ug/L	490.98	ppb	13:33:34
1	SiO2†	121080.0	119678.0	5261.9	ug/L	5261.9	ppb	13:34:50
2	Sc Radial	5672.4	5672.4	102	%			13:32:40
2	Y RADIAL	4945.5	4945.5	102.7	%			13:32:40
2	Al 396.153Radial†	5436.6	5425.7	4917.2	ug/L	4917.2	ppb	13:32:40
2	Ca 317.933Radial†	2037.9	1982.3	4937.6	ug/L	4937.6	ppb	13:33:00
2	Fe 238.204 Radial†	144.7	141.6	4983.6	ug/L	4983.6	ppb	13:33:00
2	K 766.490 Radial†	13656.0	11923.8	5167.3	ug/L	5167.3	ppb	13:32:40
2	Mg 279.077 IEC†	65.5	64.0	5077.9	ug/L	5077.9	ppb	13:33:00
2	Na 589.592 Radial†	3830.1	3927.9	10620	ug/L	10620	ppb	13:32:40
2	Sr 421.552†	36620.5	35920.3	553.36	ug/L	553.36	ppb	13:32:40
2	Sc 361.383	1070653.1	1070653.1	100.92	%			13:33:57
2	Y 371.029	851300.7	851300.7	99.776	%			13:33:57
2	Ag 328.068†	127724.7	125920.6	501.52	ug/L	501.52	ppb	13:33:57
2	As 188.979†	2076.5	2094.5	494.83	ug/L	494.83	ppb	13:34:17
2	B 249.677†	31609.9	31703.0	492.20	ug/L	492.20	ppb	13:33:57
2	Ba 233.527†	98878.2	97951.6	497.00	ug/L	497.00	ppb	13:33:57
2	Be 313.107†	1599999.7	1592714.8	496.39	ug/L	496.39	ppb	13:33:57
2	Cd 226.502†	67082.9	66748.4	498.96	ug/L	498.96	ppb	13:33:57
2	Co 228.616†	39157.1	38890.2	484.63	ug/L	484.63	ppb	13:34:17
2	Cr 267.716†	58566.4	58060.5	495.20	ug/L	495.20	ppb	13:33:57
2	Cu 324.752†	211700.3	199577.1	492.70	ug/L	492.70	ppb	13:33:57
2	Mn 257.610†	634065.3	627452.0	496.41	ug/L	496.41	ppb	13:33:57
2	Mo 202.031†	12650.3	12503.1	500.81	ug/L	500.81	ppb	13:34:17
2	Ni 231.604†	30868.0	30438.0	487.54	ug/L	487.54	ppb	13:34:17

2	P 214.914†	7401.9	6997.4	2398.4 ug/L	2398.4 ppb	13:34:17
2	Pb 220.353†	6676.9	6645.0	499.48 ug/L	499.48 ppb	13:34:17
2	S 181.975 Axial†	1250.3	1171.1	990.32 ug/L	990.32 ppb	13:34:17
2	Sb 206.836†	2582.9	2513.9	500.41 ug/L	500.41 ppb	13:34:17
2	Se 196.026†	1510.6	1518.4	513.14 ug/L	513.14 ppb	13:34:17
2	Si 251.611†	123797.7	122107.8	2507.7 ug/L	2507.7 ppb	13:33:57
2	Sn 189.927†	4829.4	4779.9	497.60 ug/L	497.60 ppb	13:34:17
2	Ti 334.940†	383068.5	380682.0	498.28 ug/L	498.28 ppb	13:33:57
2	Tl 190.801†	2883.4	2918.5	494.24 ug/L	494.24 ppb	13:34:17
2	U 409.014†	15572.6	19265.3	476.44 ug/L	476.44 ppb	13:33:57
2	V 292.402†	85872.5	86741.7	497.92 ug/L	497.92 ppb	13:33:57
2	Zn 213.857†	90799.4	88848.4	491.60 ug/L	491.60 ppb	13:33:57
2	SiO2†	123201.1	121474.4	5341.4 ug/L	5341.4 ppb	13:34:55
3	Sc Radial	5530.2	5530.2	99.4 %		13:33:05
3	Y RADIAL	4824.8	4824.8	100.2 %		13:33:05
3	Al 396.153Radial†	5269.6	5394.8	4888.9 ug/L	4888.9 ppb	13:33:05
3	Ca 317.933Radial†	2016.5	2012.2	5012.0 ug/L	5012.0 ppb	13:33:25
3	Fe 238.204 Radial†	142.0	142.6	5017.8 ug/L	5017.8 ppb	13:33:25
3	K 766.490 Radial†	13240.5	11850.4	5135.5 ug/L	5135.5 ppb	13:33:05
3	Mg 279.077 IEC†	66.0	66.2	5249.4 ug/L	5249.4 ppb	13:33:25
3	Na 589.592 Radial†	3727.2	3921.0	10602 ug/L	10602 ppb	13:33:05
3	Sr 421.552†	35503.6	35720.6	550.29 ug/L	550.29 ppb	13:33:05
3	Sc 361.383	1058446.8	1058446.8	99.770 %		13:34:24
3	Y 371.029	840681.7	840681.7	98.531 %		13:34:24
3	Ag 328.068†	126248.3	125900.3	501.44 ug/L	501.44 ppb	13:34:24
3	As 188.979†	2075.8	2117.5	500.23 ug/L	500.23 ppb	13:34:44
3	B 249.677†	31241.6	31695.0	492.06 ug/L	492.06 ppb	13:34:24
3	Ba 233.527†	97802.6	98003.4	497.27 ug/L	497.27 ppb	13:34:24
3	Be 313.107†	1580830.6	1591784.7	496.10 ug/L	496.10 ppb	13:34:24
3	Cd 226.502†	66147.2	66577.1	497.68 ug/L	497.68 ppb	13:34:24
3	Co 228.616†	38965.8	39145.9	487.83 ug/L	487.83 ppb	13:34:44
3	Cr 267.716†	57808.5	57970.1	494.43 ug/L	494.43 ppb	13:34:24
3	Cu 324.752†	209941.6	200233.4	494.32 ug/L	494.32 ppb	13:34:24
3	Mn 257.610†	627495.4	628112.4	496.93 ug/L	496.93 ppb	13:34:24
3	Mo 202.031†	12657.7	12655.1	506.89 ug/L	506.89 ppb	13:34:44
3	Ni 231.604†	30736.2	30658.7	491.08 ug/L	491.08 ppb	13:34:44
3	P 214.914†	7364.3	7044.3	2414.7 ug/L	2414.7 ppb	13:34:44
3	Pb 220.353†	6650.9	6695.3	503.26 ug/L	503.26 ppb	13:34:44
3	S 181.975 Axial†	1250.1	1185.1	1002.2 ug/L	1002.2 ppb	13:34:44
3	Sb 206.836†	2580.3	2540.8	505.92 ug/L	505.92 ppb	13:34:44
3	Se 196.026†	1500.2	1525.3	515.51 ug/L	515.51 ppb	13:34:44
3	Si 251.611†	122421.6	122143.2	2508.3 ug/L	2508.3 ppb	13:34:24
3	Sn 189.927†	4816.0	4821.6	501.94 ug/L	501.94 ppb	13:34:44
3	Ti 334.940†	378995.5	380976.9	498.67 ug/L	498.67 ppb	13:34:24
3	Tl 190.801†	2891.6	2959.6	501.16 ug/L	501.16 ppb	13:34:44
3	U 409.014†	15388.1	19258.2	476.26 ug/L	476.26 ppb	13:34:24
3	V 292.402†	84860.2	86708.3	497.81 ug/L	497.81 ppb	13:34:24
3	Zn 213.857†	89990.4	89075.1	492.83 ug/L	492.83 ppb	13:34:24
3	SiO2†	121574.6	121252.0	5331.3 ug/L	5331.3 ppb	13:35:00

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065678.3	100.45	%	0.604				0.60%
Sc Radial	5598.8	101	%	1.3				1.27%
Y 371.029	847444.4	99.324	%	0.6887				0.69%
Y RADIAL	4870.9	101.1	%	1.35				1.34%
Ag 328.068†	125908.4	501.47	ug/L	0.040	501.47	ppb	0.040	0.01%
QC value within limits for Ag 328.068 Recovery = 100.29%								
Al 396.153Radial†	5420.1	4912.0	ug/L	21.04	4912.0	ppb	21.04	0.43%
QC value within limits for Al 396.153Radial Recovery = 98.24%								
As 188.979†	2102.3	496.68	ug/L	3.073	496.68	ppb	3.073	0.62%
QC value within limits for As 188.979 Recovery = 99.34%								
B 249.677†	31681.0	491.85	ug/L	0.490	491.85	ppb	0.490	0.10%
QC value within limits for B 249.677 Recovery = 98.37%								
Ba 233.527†	97932.3	496.91	ug/L	0.418	496.91	ppb	0.418	0.08%
QC value within limits for Ba 233.527 Recovery = 99.38%								
Be 313.107†	1592397.6	496.29	ug/L	0.164	496.29	ppb	0.164	0.03%
QC value within limits for Be 313.107 Recovery = 99.26%								
Ca 317.933Radial†	1999.0	4979.2	ug/L	37.99	4979.2	ppb	37.99	0.76%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.58%
Cd 226.502†            66593.9      497.81 ug/L         1.099      497.81 ppb          1.099   0.22%
   QC value within limits for Cd 226.502  Recovery = 99.56%
Co 228.616†            38993.8      485.92 ug/L         1.684      485.92 ppb          1.684   0.35%
   QC value within limits for Co 228.616  Recovery = 97.18%
Cr 267.716†            58010.6      494.78 ug/L         0.391      494.78 ppb          0.391   0.08%
   QC value within limits for Cr 267.716  Recovery = 98.96%
Cu 324.752†           199987.0      493.71 ug/L         0.883      493.71 ppb          0.883   0.18%
   QC value within limits for Cu 324.752  Recovery = 98.74%
Fe 238.204 Radial†       142.1      4999.7 ug/L         17.21      4999.7 ppb          17.21   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.99%
K 766.490 Radial†      11935.7      5172.5 ug/L         39.80      5172.5 ppb          39.80   0.77%
   QC value within limits for K 766.490 Radial  Recovery = 103.45%
Mg 279.077 IEC†           64.8      5134.0 ug/L         99.90      5134.0 ppb          99.90   1.95%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.68%
Mn 257.610†           627242.2      496.25 ug/L         0.783      496.25 ppb          0.783   0.16%
   QC value within limits for Mn 257.610  Recovery = 99.25%
Mo 202.031†            12564.7      503.27 ug/L         3.202      503.27 ppb          3.202   0.64%
   QC value within limits for Mo 202.031  Recovery = 100.65%
Na 589.592 Radial†      3940.0       10653 ug/L          73.7       10653 ppb           73.7   0.69%
   QC value within limits for Na 589.592 Radial  Recovery = 106.53%
Ni 231.604†            30537.6      489.14 ug/L         1.792      489.14 ppb          1.792   0.37%
   QC value within limits for Ni 231.604  Recovery = 97.83%
P 214.914†              7015.5      2404.6 ug/L          8.82      2404.6 ppb           8.82   0.37%
   QC value within limits for P 214.914  Recovery = 96.18%
Pb 220.353†             6661.2      500.70 ug/L         2.213      500.70 ppb          2.213   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.14%
S 181.975 Axial†        1180.6      998.33 ug/L         6.940      998.33 ppb          6.940   0.70%
   QC value within limits for S 181.975 Axial  Recovery = 99.83%
Sb 206.836†             2520.9      501.88 ug/L         3.538      501.88 ppb          3.538   0.70%
   QC value within limits for Sb 206.836  Recovery = 100.38%
Se 196.026†             1519.7      513.60 ug/L         1.722      513.60 ppb          1.722   0.34%
   QC value within limits for Se 196.026  Recovery = 102.72%
Si 251.611†           122096.7      2507.4 ug/L          1.07      2507.4 ppb           1.07   0.04%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4796.9      499.37 ug/L         2.279      499.37 ppb          2.279   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.87%
Sr 421.552†            35877.5      552.70 ug/L         2.165      552.70 ppb          2.165   0.39%
   QC value greater than the upper limit for Sr 421.552  Recovery = 110.54%
Ti 334.940†           380710.4      498.32 ug/L         0.334      498.32 ppb          0.334   0.07%
   QC value within limits for Ti 334.940  Recovery = 99.66%
Tl 190.801†             2936.9      497.33 ug/L         3.520      497.33 ppb          3.520   0.71%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19323.8      477.89 ug/L         2.668      477.89 ppb          2.668   0.56%
   QC value within limits for U 409.014  Recovery = 95.58%
V 292.402†             86676.8      497.59 ug/L         0.485      497.59 ppb          0.485   0.10%
   QC value within limits for V 292.402  Recovery = 99.52%
Zn 213.857†            88887.8      491.81 ug/L         0.941      491.81 ppb          0.941   0.19%
   QC value within limits for Zn 213.857  Recovery = 98.36%
SiO2†                 120801.5      5311.6 ug/L         43.27      5311.6 ppb          43.27   0.81%
   QC value within limits for SiO2  Recovery = 99.33%
QC Failed.  Continue with analysis.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:37:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5413.7	5413.7	97.3	%			13:39:02
1	Y RADIAL	4722.7	4722.7	98.07	%			13:39:02
1	Al 396.153Radial†	-76.0	14.1	12.785	ug/L	12.785	ppb	13:39:02
1	Ca 317.933Radial†	35.2	19.2	47.934	ug/L	47.934	ppb	13:39:22
1	Fe 238.204 Radial†	1.2	0.9	31.911	ug/L	31.911	ppb	13:39:22
1	K 766.490 Radial†	1580.2	151.2	65.626	ug/L	65.626	ppb	13:39:02
1	Mg 279.077 IEC†	-0.2	-0.4	-31.882	ug/L	-31.882	ppb	13:39:22
1	Na 589.592 Radial†	-172.1	-6.5	-17.590	ug/L	-17.590	ppb	13:39:22
1	Sr 421.552†	25.9	21.2	0.3255	ug/L	0.3255	ppb	13:39:22
1	Sc 361.383	1053963.2	1053963.2	99.348	%			13:40:19
1	Y 371.029	848397.9	848397.9	99.435	%			13:40:19
1	Ag 328.068†	697.3	63.3	0.2597	ug/L	0.2597	ppb	13:40:24
1	As 188.979†	-43.2	-6.6	-1.5430	ug/L	-1.5430	ppb	13:40:44
1	B 249.677†	186.7	569.4	8.8696	ug/L	8.8696	ppb	13:40:24
1	Ba 233.527†	25.2	1.1	0.0062	ug/L	0.0062	ppb	13:40:44
1	Be 313.107†	-7423.5	-156.0	-0.0488	ug/L	-0.0488	ppb	13:40:24
1	Cd 226.502†	-280.8	-5.0	-0.0412	ug/L	-0.0412	ppb	13:40:44
1	Co 228.616†	-84.6	5.2	0.0655	ug/L	0.0655	ppb	13:40:44
1	Cr 267.716†	-15.0	13.5	0.1154	ug/L	0.1154	ppb	13:40:44
1	Cu 324.752†	10214.2	90.0	0.2240	ug/L	0.2240	ppb	13:40:24
1	Mn 257.610†	861.8	40.4	0.0367	ug/L	0.0367	ppb	13:40:44
1	Mo 202.031†	34.4	2.9	0.1183	ug/L	0.1183	ppb	13:40:44
1	Ni 231.604†	156.3	9.1	0.1453	ug/L	0.1453	ppb	13:40:44
1	P 214.914†	354.0	19.4	6.7924	ug/L	6.7924	ppb	13:40:44
1	Pb 220.353†	-16.7	12.3	0.9181	ug/L	0.9181	ppb	13:40:44
1	S 181.975 Axial†	70.6	3.2	2.7071	ug/L	2.7071	ppb	13:40:44
1	Sb 206.836†	39.9	-5.3	-1.0467	ug/L	-1.0467	ppb	13:40:44
1	Se 196.026†	-22.9	-1.5	-0.3668	ug/L	-0.3668	ppb	13:40:44
1	Si 251.611†	869.2	314.8	6.4745	ug/L	6.4745	ppb	13:40:44
1	Sn 189.927†	0.9	-4.6	-0.4731	ug/L	-0.4731	ppb	13:40:44
1	Ti 334.940†	-1211.1	-109.8	-0.1404	ug/L	-0.1404	ppb	13:40:24
1	Tl 190.801†	-59.9	1.1	0.1786	ug/L	0.1786	ppb	13:40:44
1	U 409.014†	-3817.1	-7.5	-0.1890	ug/L	-0.1890	ppb	13:40:19
1	V 292.402†	-1664.4	-22.5	-0.1316	ug/L	-0.1316	ppb	13:40:24
1	Zn 213.857†	1133.9	18.9	0.1021	ug/L	0.1021	ppb	13:40:44
1	SiO2†	854.9	258.2	11.358	ug/L	11.358	ppb	13:41:50
2	Sc Radial	5529.6	5529.6	99.4	%			13:39:27
2	Y RADIAL	4800.3	4800.3	99.68	%			13:39:27
2	Al 396.153Radial†	-66.9	24.8	22.617	ug/L	22.617	ppb	13:39:27
2	Ca 317.933Radial†	32.0	15.3	38.110	ug/L	38.110	ppb	13:39:47
2	Fe 238.204 Radial†	-0.4	-0.7	-24.391	ug/L	-24.391	ppb	13:39:47
2	K 766.490 Radial†	1456.8	-7.0	-3.0184	ug/L	-3.0184	ppb	13:39:27
2	Mg 279.077 IEC†	-1.1	-1.3	-105.28	ug/L	-105.28	ppb	13:39:47
2	Na 589.592 Radial†	-182.7	-13.4	-36.229	ug/L	-36.229	ppb	13:39:47
2	Sr 421.552†	13.5	8.1	0.1251	ug/L	0.1251	ppb	13:39:47
2	Sc 361.383	1050298.1	1050298.1	99.002	%			13:40:49
2	Y 371.029	845092.6	845092.6	99.048	%			13:40:49
2	Ag 328.068†	722.6	91.3	0.3522	ug/L	0.3522	ppb	13:40:54
2	As 188.979†	-47.8	-11.4	-2.6790	ug/L	-2.6790	ppb	13:41:14
2	B 249.677†	113.4	496.1	7.7347	ug/L	7.7347	ppb	13:40:54
2	Ba 233.527†	39.8	15.9	0.0791	ug/L	0.0791	ppb	13:41:14
2	Be 313.107†	-7481.4	-240.6	-0.0748	ug/L	-0.0748	ppb	13:40:54
2	Cd 226.502†	-281.1	-6.3	-0.0443	ug/L	-0.0443	ppb	13:41:14
2	Co 228.616†	-106.2	-16.8	-0.2105	ug/L	-0.2105	ppb	13:41:14
2	Cr 267.716†	-17.2	11.3	0.0951	ug/L	0.0951	ppb	13:41:14
2	Cu 324.752†	10211.9	123.5	0.3033	ug/L	0.3033	ppb	13:40:54
2	Mn 257.610†	849.4	30.9	0.0233	ug/L	0.0233	ppb	13:41:14
2	Mo 202.031†	18.3	-13.3	-0.5352	ug/L	-0.5352	ppb	13:41:14
2	Ni 231.604†	164.4	17.8	0.2854	ug/L	0.2854	ppb	13:41:14

2	P 214.914†	350.8	17.5	6.1379	ug/L	6.1379 ppb	13:41:14
2	Pb 220.353†	-10.6	18.4	1.3861	ug/L	1.3861 ppb	13:41:14
2	S 181.975 Axial†	62.6	-4.6	-3.8702	ug/L	-3.8702 ppb	13:41:14
2	Sb 206.836†	45.8	0.8	0.1341	ug/L	0.1341 ppb	13:41:14
2	Se 196.026†	-24.4	-3.1	-1.0828	ug/L	-1.0828 ppb	13:41:14
2	Si 251.611†	863.1	311.7	6.4431	ug/L	6.4431 ppb	13:41:14
2	Sn 189.927†	0.2	-5.3	-0.5453	ug/L	-0.5453 ppb	13:41:14
2	Ti 334.940†	-1096.8	1.4	0.0048	ug/L	0.0048 ppb	13:40:54
2	Tl 190.801†	-63.6	-2.9	-0.4817	ug/L	-0.4817 ppb	13:41:14
2	U 409.014†	-3840.4	-44.4	-1.0988	ug/L	-1.0988 ppb	13:40:49
2	V 292.402†	-1708.7	-73.1	-0.4221	ug/L	-0.4221 ppb	13:40:54
2	Zn 213.857†	1132.6	21.6	0.1245	ug/L	0.1245 ppb	13:41:14
2	SiO2†	832.1	238.2	10.549	ug/L	10.549 ppb	13:41:55
3	Sc Radial	5577.9	5577.9	100	%		13:39:52
3	Y RADIAL	4835.1	4835.1	100.4	%		13:39:52
3	Al 396.153Radial†	-70.3	22.1	20.104	ug/L	20.104 ppb	13:39:52
3	Ca 317.933Radial†	35.5	18.5	45.957	ug/L	45.957 ppb	13:40:12
3	Fe 238.204 Radial†	0.8	0.4	15.248	ug/L	15.248 ppb	13:40:12
3	K 766.490 Radial†	1595.4	118.6	51.472	ug/L	51.472 ppb	13:39:52
3	Mg 279.077 IEC†	1.1	0.9	72.486	ug/L	72.486 ppb	13:40:12
3	Na 589.592 Radial†	-180.7	-9.9	-26.682	ug/L	-26.682 ppb	13:40:12
3	Sr 421.552†	20.5	15.0	0.2301	ug/L	0.2301 ppb	13:40:12
3	Sc 361.383	1059808.1	1059808.1	99.899	%		13:41:19
3	Y 371.029	852835.7	852835.7	99.956	%		13:41:19
3	Ag 328.068†	652.2	14.3	0.0614	ug/L	0.0614 ppb	13:41:24
3	As 188.979†	-45.4	-8.6	-2.0185	ug/L	-2.0185 ppb	13:41:44
3	B 249.677†	65.4	446.9	6.9635	ug/L	6.9635 ppb	13:41:24
3	Ba 233.527†	22.1	-2.1	-0.0105	ug/L	-0.0105 ppb	13:41:44
3	Be 313.107†	-7445.6	-136.9	-0.0427	ug/L	-0.0427 ppb	13:41:24
3	Cd 226.502†	-289.9	-12.6	-0.0960	ug/L	-0.0960 ppb	13:41:44
3	Co 228.616†	-93.1	-2.8	-0.0344	ug/L	-0.0344 ppb	13:41:44
3	Cr 267.716†	-11.2	17.4	0.1485	ug/L	0.1485 ppb	13:41:44
3	Cu 324.752†	10243.7	62.8	0.1558	ug/L	0.1558 ppb	13:41:24
3	Mn 257.610†	848.9	22.8	0.0186	ug/L	0.0186 ppb	13:41:44
3	Mo 202.031†	37.0	5.3	0.2126	ug/L	0.2126 ppb	13:41:44
3	Ni 231.604†	140.9	-7.2	-0.1159	ug/L	-0.1159 ppb	13:41:44
3	P 214.914†	339.1	2.5	0.8606	ug/L	0.8606 ppb	13:41:44
3	Pb 220.353†	-19.1	9.9	0.7469	ug/L	0.7469 ppb	13:41:44
3	S 181.975 Axial†	72.1	4.4	3.7018	ug/L	3.7018 ppb	13:41:44
3	Sb 206.836†	45.8	0.4	0.0909	ug/L	0.0909 ppb	13:41:44
3	Se 196.026†	-18.5	3.1	1.0727	ug/L	1.0727 ppb	13:41:44
3	Si 251.611†	817.6	258.4	5.3084	ug/L	5.3084 ppb	13:41:44
3	Sn 189.927†	11.2	5.7	0.5975	ug/L	0.5975 ppb	13:41:44
3	Ti 334.940†	-1138.5	-30.4	-0.0364	ug/L	-0.0364 ppb	13:41:24
3	Tl 190.801†	-59.9	1.4	0.2410	ug/L	0.2410 ppb	13:41:44
3	U 409.014†	-3866.5	-35.7	-0.8885	ug/L	-0.8885 ppb	13:41:19
3	V 292.402†	-1658.7	-7.6	-0.0432	ug/L	-0.0432 ppb	13:41:24
3	Zn 213.857†	1144.7	23.5	0.1274	ug/L	0.1274 ppb	13:41:44
3	SiO2†	856.3	254.8	11.208	ug/L	11.208 ppb	13:42:00

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054689.8	99.416	%	0.4521				0.45%
Sc Radial	5507.0	99.0	%	1.52				1.53%
Y 371.029	848775.4	99.480	%	0.4554				0.46%
Y RADIAL	4786.0	99.38	%	1.195				1.20%
Ag 328.068†	56.3	0.2244	ug/L	0.14858	0.2244	ppb	0.14858	66.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.3	18.502	ug/L	5.1080	18.502	ppb	5.1080	27.61%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-8.9	-2.0802	ug/L	0.57051	-2.0802	ppb	0.57051	27.43%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	504.1	7.8559	ug/L	0.95880	7.8559	ppb	0.95880	12.20%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.0	0.0249	ug/L	0.04766	0.0249	ppb	0.04766	191.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-177.8	-0.0554	ug/L	0.01705	-0.0554	ppb	0.01705	30.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	17.7	44.000	ug/L	5.1960	44.000	ppb	5.1960	11.81%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -8.0     -0.0605 ug/L       0.03078     -0.0605 ppb        0.03078  50.88%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -4.8     -0.0598 ug/L       0.13974     -0.0598 ppb        0.13974 233.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              14.0      0.1197 ug/L       0.02695      0.1197 ppb        0.02695  22.52%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              92.1      0.2277 ug/L       0.07381      0.2277 ppb        0.07381  32.42%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.2      7.5897 ug/L      28.92162      7.5897 ppb       28.92162 381.07%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        87.6      38.027 ug/L       36.2437      38.027 ppb        36.2437  95.31%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.3     -21.559 ug/L       89.3317     -21.559 ppb        89.3317 414.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              31.4      0.0262 ug/L       0.00940      0.0262 ppb        0.00940  35.89%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -1.7     -0.0681 ug/L       0.40727     -0.0681 ppb        0.40727 597.93%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -9.9     -26.834 ug/L        9.3203     -26.834 ppb         9.3203  34.73%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               6.5      0.1049 ug/L       0.20368      0.1049 ppb        0.20368 194.15%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               13.1      4.5970 ug/L       3.25230      4.5970 ppb        3.25230  70.75%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              13.5      1.0170 ug/L       0.33087      1.0170 ppb        0.33087  32.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          1.0      0.8462 ug/L       4.11469      0.8462 ppb        4.11469 486.24%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              -1.4     -0.2739 ug/L       0.66961     -0.2739 ppb        0.66961 244.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.5     -0.1256 ug/L       1.09782     -0.1256 ppb        1.09782 873.95%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             295.0      6.0753 ug/L       0.66436      6.0753 ppb        0.66436  10.94%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -1.4     -0.1403 ug/L       0.63995     -0.1403 ppb        0.63995 456.09%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              14.8      0.2269 ug/L       0.10024      0.2269 ppb        0.10024  44.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -46.3     -0.0574 ug/L       0.07484     -0.0574 ppb        0.07484 130.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -0.1     -0.0207 ug/L       0.40044     -0.0207 ppb        0.40044 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -29.2     -0.7254 ug/L       0.47631     -0.7254 ppb        0.47631  65.66%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -34.4     -0.1990 ug/L       0.19822     -0.1990 ppb        0.19822  99.63%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              21.3      0.1180 ug/L       0.01386      0.1180 ppb        0.01386  11.75%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   250.4      11.038 ug/L        0.4304      11.038 ppb         0.4304   3.90%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Analysis Begun

Start Time: 7/8/2009 13:50:46
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601
Plasma On Time: 00:00:00
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070809A.sif
Batch ID:
Results Data Set: 070809A
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 7
Date Collected: 7/8/2009 13:50:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5532.4	5532.4	99.4	%			13:52:39
1	Y RADIAL	4797.0	4797.0	99.61	%			13:52:39
1	Al 396.153Radial†	5229.0	5351.8	4849.9	ug/L	4849.9	ppb	13:52:39
1	Ca 317.933Radial†	1958.2	1952.7	4863.9	ug/L	4863.9	ppb	13:52:59
1	Fe 238.204 Radial†	138.6	139.1	4894.2	ug/L	4894.2	ppb	13:52:59
1	K 766.490 Radial†	13095.3	11698.9	5070.2	ug/L	5070.2	ppb	13:52:39
1	Mg 279.077 IEC†	62.6	62.8	4978.5	ug/L	4978.5	ppb	13:52:59
1	Na 589.592 Radial†	3365.0	3555.1	9612.7	ug/L	9612.7	ppb	13:52:39
1	Sr 421.552†	32629.9	32815.6	505.53	ug/L	505.53	ppb	13:52:39
1	Sc 361.383	1065706.7	1065706.7	100.45	%			13:53:58
1	Y 371.029	846819.9	846819.9	99.251	%			13:53:58
1	Ag 328.068†	126960.9	125747.6	500.80	ug/L	500.80	ppb	13:53:58
1	As 188.979†	2061.4	2089.0	493.53	ug/L	493.53	ppb	13:54:18
1	B 249.677†	31314.7	31554.4	489.90	ug/L	489.90	ppb	13:53:58
1	Ba 233.527†	98387.1	97917.5	496.83	ug/L	496.83	ppb	13:53:58
1	Be 313.107†	1590293.1	1590410.5	495.67	ug/L	495.67	ppb	13:53:58
1	Cd 226.502†	66680.2	66656.0	498.28	ug/L	498.28	ppb	13:53:58
1	Co 228.616†	38914.5	38828.7	483.86	ug/L	483.86	ppb	13:54:18
1	Cr 267.716†	58123.4	57888.9	493.74	ug/L	493.74	ppb	13:53:58
1	Cu 324.752†	211262.3	200114.7	494.02	ug/L	494.02	ppb	13:53:58
1	Mn 257.610†	631066.9	627383.2	496.35	ug/L	496.35	ppb	13:53:58
1	Mo 202.031†	12608.8	12520.0	501.47	ug/L	501.47	ppb	13:54:18
1	Ni 231.604†	30720.7	30433.4	487.47	ug/L	487.47	ppb	13:54:18
1	P 214.914†	7349.3	6979.1	2391.7	ug/L	2391.7	ppb	13:54:18
1	Pb 220.353†	6619.8	6619.0	497.53	ug/L	497.53	ppb	13:54:18
1	S 181.975 Axial†	1249.9	1176.4	994.81	ug/L	994.81	ppb	13:54:18
1	Sb 206.836†	2566.6	2509.6	499.57	ug/L	499.57	ppb	13:54:18
1	Se 196.026†	1498.0	1512.8	511.00	ug/L	511.00	ppb	13:54:18
1	Si 251.611†	122865.0	121748.7	2500.3	ug/L	2500.3	ppb	13:53:58
1	Sn 189.927†	4783.6	4756.4	495.16	ug/L	495.16	ppb	13:54:18
1	Ti 334.940†	381207.0	380590.6	498.15	ug/L	498.15	ppb	13:53:58
1	Tl 190.801†	2869.1	2917.5	494.08	ug/L	494.08	ppb	13:54:18
1	U 409.014†	15602.1	19366.2	478.96	ug/L	478.96	ppb	13:53:58
1	V 292.402†	85431.5	86697.6	497.70	ug/L	497.70	ppb	13:53:58
1	Zn 213.857†	90487.4	88955.4	492.21	ug/L	492.21	ppb	13:53:58
1	SiO2†	122908.9	121750.2	5353.7	ug/L	5353.7	ppb	13:55:18
2	Sc Radial	5478.6	5478.6	98.5	%			13:53:04
2	Y RADIAL	4737.8	4737.8	98.38	%			13:53:04
2	Al 396.153Radial†	5218.1	5392.4	4886.9	ug/L	4886.9	ppb	13:53:04
2	Ca 317.933Radial†	1985.5	1999.9	4981.3	ug/L	4981.3	ppb	13:53:24
2	Fe 238.204 Radial†	138.0	139.8	4919.3	ug/L	4919.3	ppb	13:53:24
2	K 766.490 Radial†	13047.9	11780.2	5105.5	ug/L	5105.5	ppb	13:53:04
2	Mg 279.077 IEC†	63.8	64.6	5122.0	ug/L	5122.0	ppb	13:53:24
2	Na 589.592 Radial†	3309.4	3531.9	9549.8	ug/L	9549.8	ppb	13:53:04
2	Sr 421.552†	32384.5	32888.7	506.66	ug/L	506.66	ppb	13:53:04
2	Sc 361.383	1063461.6	1063461.6	100.24	%			13:54:25
2	Y 371.029	846126.2	846126.2	99.169	%			13:54:25

2	Ag 328.068†	126811.5	125865.3	501.27 ug/L	501.27 ppb	13:54:25
2	As 188.979†	2058.4	2090.4	493.85 ug/L	493.85 ppb	13:54:45
2	B 249.677†	31323.3	31628.9	491.05 ug/L	491.05 ppb	13:54:25
2	Ba 233.527†	98085.9	97823.8	496.36 ug/L	496.36 ppb	13:54:25
2	Be 313.107†	1587952.8	1591418.1	495.99 ug/L	495.99 ppb	13:54:25
2	Cd 226.502†	66376.1	66492.8	497.06 ug/L	497.06 ppb	13:54:25
2	Co 228.616†	38816.9	38813.2	483.67 ug/L	483.67 ppb	13:54:45
2	Cr 267.716†	58135.0	58022.7	494.88 ug/L	494.88 ppb	13:54:25
2	Cu 324.752†	210177.7	199476.8	492.45 ug/L	492.45 ppb	13:54:25
2	Mn 257.610†	628370.5	626019.6	495.27 ug/L	495.27 ppb	13:54:25
2	Mo 202.031†	12579.9	12517.6	501.38 ug/L	501.38 ppb	13:54:45
2	Ni 231.604†	30677.7	30455.1	487.82 ug/L	487.82 ppb	13:54:45
2	P 214.914†	7338.8	6984.1	2393.7 ug/L	2393.7 ppb	13:54:45
2	Pb 220.353†	6619.2	6632.2	498.52 ug/L	498.52 ppb	13:54:45
2	S 181.975 Axial†	1248.9	1178.1	996.23 ug/L	996.23 ppb	13:54:45
2	Sb 206.836†	2544.9	2493.3	496.34 ug/L	496.34 ppb	13:54:45
2	Se 196.026†	1498.5	1516.5	512.27 ug/L	512.27 ppb	13:54:45
2	Si 251.611†	122326.0	121469.2	2494.5 ug/L	2494.5 ppb	13:54:25
2	Sn 189.927†	4769.0	4752.0	494.70 ug/L	494.70 ppb	13:54:45
2	Ti 334.940†	380132.8	380320.2	497.81 ug/L	497.81 ppb	13:54:25
2	Tl 190.801†	2870.3	2924.7	495.28 ug/L	495.28 ppb	13:54:45
2	U 409.014†	15658.2	19455.0	481.15 ug/L	481.15 ppb	13:54:25
2	V 292.402†	85307.7	86753.6	498.02 ug/L	498.02 ppb	13:54:25
2	Zn 213.857†	90245.0	88903.8	491.92 ug/L	491.92 ppb	13:54:25
2	SiO2†	123285.6	122384.3	5381.7 ug/L	5381.7 ppb	13:55:23
3	Sc Radial	5573.7	5573.7	100 %		13:53:29
3	Y RADIAL	4812.9	4812.9	99.94 %		13:53:29
3	Al 396.153Radial†	5255.8	5339.6	4838.8 ug/L	4838.8 ppb	13:53:29
3	Ca 317.933Radial†	1973.1	1953.0	4864.6 ug/L	4864.6 ppb	13:53:49
3	Fe 238.204 Radial†	139.2	138.6	4878.6 ug/L	4878.6 ppb	13:53:49
3	K 766.490 Radial†	13120.0	11626.0	5038.5 ug/L	5038.5 ppb	13:53:29
3	Mg 279.077 IEC†	64.1	63.8	5056.8 ug/L	5056.8 ppb	13:53:49
3	Na 589.592 Radial†	3353.7	3518.8	9514.4 ug/L	9514.4 ppb	13:53:29
3	Sr 421.552†	32719.5	32661.7	503.16 ug/L	503.16 ppb	13:53:29
3	Sc 361.383	1058179.3	1058179.3	99.745 %		13:54:53
3	Y 371.029	842497.6	842497.6	98.744 %		13:54:53
3	Ag 328.068†	126330.4	126014.5	501.86 ug/L	501.86 ppb	13:54:53
3	As 188.979†	2057.5	2099.7	496.03 ug/L	496.03 ppb	13:55:13
3	B 249.677†	31210.0	31671.2	491.71 ug/L	491.71 ppb	13:54:53
3	Ba 233.527†	97758.5	97984.0	497.17 ug/L	497.17 ppb	13:54:53
3	Be 313.107†	1583127.1	1594487.7	496.94 ug/L	496.94 ppb	13:54:53
3	Cd 226.502†	66127.5	66574.1	497.67 ug/L	497.67 ppb	13:54:53
3	Co 228.616†	38831.5	39021.1	486.27 ug/L	486.27 ppb	13:55:13
3	Cr 267.716†	57986.8	58163.5	496.08 ug/L	496.08 ppb	13:54:53
3	Cu 324.752†	209484.3	199828.2	493.31 ug/L	493.31 ppb	13:54:53
3	Mn 257.610†	626333.1	627106.1	496.12 ug/L	496.12 ppb	13:54:53
3	Mo 202.031†	12578.2	12578.6	503.82 ug/L	503.82 ppb	13:55:13
3	Ni 231.604†	30631.5	30561.5	489.52 ug/L	489.52 ppb	13:55:13
3	P 214.914†	7330.3	7012.1	2403.5 ug/L	2403.5 ppb	13:55:13
3	Pb 220.353†	6608.7	6654.6	500.21 ug/L	500.21 ppb	13:55:13
3	S 181.975 Axial†	1242.9	1178.2	996.34 ug/L	996.34 ppb	13:55:13
3	Sb 206.836†	2548.0	2509.1	499.55 ug/L	499.55 ppb	13:55:13
3	Se 196.026†	1496.7	1522.2	513.99 ug/L	513.99 ppb	13:55:13
3	Si 251.611†	122075.1	121826.8	2501.8 ug/L	2501.8 ppb	13:54:53
3	Sn 189.927†	4792.6	4799.3	499.62 ug/L	499.62 ppb	13:55:13
3	Ti 334.940†	378543.4	380619.7	498.19 ug/L	498.19 ppb	13:54:53
3	Tl 190.801†	2875.5	2944.2	498.57 ug/L	498.57 ppb	13:55:13
3	U 409.014†	15463.5	19337.7	478.25 ug/L	478.25 ppb	13:54:53
3	V 292.402†	84999.2	86869.1	498.70 ug/L	498.70 ppb	13:54:53
3	Zn 213.857†	89816.3	88923.4	492.02 ug/L	492.02 ppb	13:54:53
3	SiO2†	121842.0	121550.9	5344.7 ug/L	5344.7 ppb	13:55:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1062449.2	100.15	%	0.364				0.36%
Sc Radial	5528.3	99.3	%	0.86				0.86%
Y 371.029	845147.9	99.055	%	0.2721				0.27%
Y RADIAL	4782.6	99.31	%	0.822				0.83%
Ag 328.068†	125875.8	501.31	ug/L	0.529	501.31	ppb	0.529	0.11%

```
   QC value within limits for Ag 328.068  Recovery = 100.26%
Al 396.153Radial†       5361.3      4858.5 ug/L        25.19      4858.5 ppb        25.19   0.52%
   QC value within limits for Al 396.153Radial  Recovery = 97.17%
As 188.979†             2093.0      494.47 ug/L        1.360      494.47 ppb        1.360   0.27%
   QC value within limits for As 188.979  Recovery = 98.89%
B 249.677†             31618.2      490.89 ug/L        0.920      490.89 ppb        0.920   0.19%
   QC value within limits for B 249.677  Recovery = 98.18%
Ba 233.527†            97908.4      496.78 ug/L        0.408      496.78 ppb        0.408   0.08%
   QC value within limits for Ba 233.527  Recovery = 99.36%
Be 313.107†          1592105.4      496.20 ug/L        0.661      496.20 ppb        0.661   0.13%
   QC value within limits for Be 313.107  Recovery = 99.24%
Ca 317.933Radial†       1968.5      4903.3 ug/L        67.61      4903.3 ppb        67.61   1.38%
   QC value within limits for Ca 317.933Radial  Recovery = 98.07%
Cd 226.502†            66574.3      497.67 ug/L        0.612      497.67 ppb        0.612   0.12%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            38887.7      484.60 ug/L        1.446      484.60 ppb        1.446   0.30%
   QC value within limits for Co 228.616  Recovery = 96.92%
Cr 267.716†            58025.0      494.90 ug/L        1.170      494.90 ppb        1.170   0.24%
   QC value within limits for Cr 267.716  Recovery = 98.98%
Cu 324.752†           199806.6      493.26 ug/L        0.788      493.26 ppb        0.788   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.65%
Fe 238.204 Radial†       139.2      4897.4 ug/L        20.54      4897.4 ppb        20.54   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.95%
K 766.490 Radial†      11701.7      5071.4 ug/L        33.47      5071.4 ppb        33.47   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 101.43%
Mg 279.077 IEC†           63.7      5052.4 ug/L        71.88      5052.4 ppb        71.88   1.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.05%
Mn 257.610†           626836.3      495.91 ug/L        0.569      495.91 ppb        0.569   0.11%
   QC value within limits for Mn 257.610  Recovery = 99.18%
Mo 202.031†            12538.7      502.23 ug/L        1.381      502.23 ppb        1.381   0.27%
   QC value within limits for Mo 202.031  Recovery = 100.45%
Na 589.592 Radial†      3535.3      9559.0 ug/L        49.77      9559.0 ppb        49.77   0.52%
   QC value within limits for Na 589.592 Radial  Recovery = 95.59%
Ni 231.604†            30483.3      488.27 ug/L        1.098      488.27 ppb        1.098   0.22%
   QC value within limits for Ni 231.604  Recovery = 97.65%
P 214.914†              6991.7      2396.3 ug/L         6.34      2396.3 ppb         6.34   0.26%
   QC value within limits for P 214.914  Recovery = 95.85%
Pb 220.353†             6635.3      498.75 ug/L        1.354      498.75 ppb        1.354   0.27%
   QC value within limits for Pb 220.353  Recovery = 99.75%
S 181.975 Axial†        1177.6      995.80 ug/L        0.853      995.80 ppb        0.853   0.09%
   QC value within limits for S 181.975 Axial  Recovery = 99.58%
Sb 206.836†             2504.0      498.48 ug/L        1.857      498.48 ppb        1.857   0.37%
   QC value within limits for Sb 206.836  Recovery = 99.70%
Se 196.026†             1517.2      512.42 ug/L        1.501      512.42 ppb        1.501   0.29%
   QC value within limits for Se 196.026  Recovery = 102.48%
Si 251.611†           121681.6      2498.9 ug/L         3.87      2498.9 ppb         3.87   0.15%
   QC value within limits for Si 251.611  Recovery = 99.96%
Sn 189.927†             4769.3      496.49 ug/L        2.717      496.49 ppb        2.717   0.55%
   QC value within limits for Sn 189.927  Recovery = 99.30%
Sr 421.552†            32788.7      505.12 ug/L        1.785      505.12 ppb        1.785   0.35%
   QC value within limits for Sr 421.552  Recovery = 101.02%
Ti 334.940†           380510.2      498.05 ug/L        0.212      498.05 ppb        0.212   0.04%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2928.8      495.98 ug/L        2.322      495.98 ppb        2.322   0.47%
   QC value within limits for Tl 190.801  Recovery = 99.20%
U 409.014†             19386.3      479.45 ug/L        1.515      479.45 ppb        1.515   0.32%
   QC value within limits for U 409.014  Recovery = 95.89%
V 292.402†             86773.4      498.14 ug/L        0.513      498.14 ppb        0.513   0.10%
   QC value within limits for V 292.402  Recovery = 99.63%
Zn 213.857†            88927.5      492.05 ug/L        0.150      492.05 ppb        0.150   0.03%
   QC value within limits for Zn 213.857  Recovery = 98.41%
SiO2†                 121895.1      5360.0 ug/L        19.26      5360.0 ppb        19.26   0.36%
   QC value within limits for SiO2  Recovery = 100.23%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:57:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5512.4	5512.4	99.1	%			13:59:32
1	Y RADIAL	4836.2	4836.2	100.4	%			13:59:32
1	Al 396.153Radial†	-55.4	36.2	32.965	ug/L	32.965	ppb	13:59:32
1	Ca 317.933Radial†	28.9	12.2	30.392	ug/L	30.392	ppb	13:59:52
1	Fe 238.204 Radial†	1.4	1.1	39.203	ug/L	39.203	ppb	13:59:52
1	K 766.490 Radial†	1556.0	97.7	42.443	ug/L	42.443	ppb	13:59:32
1	Mg 279.077 IEC†	-0.5	-0.7	-54.448	ug/L	-54.448	ppb	13:59:52
1	Na 589.592 Radial†	-170.4	-1.6	-4.3331	ug/L	-4.3331	ppb	13:59:52
1	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431	ppb	13:59:52
1	Sc 361.383	1045095.6	1045095.6	98.512	%			14:00:48
1	Y 371.029	840297.9	840297.9	98.486	%			14:00:48
1	Ag 328.068†	669.1	40.6	0.1714	ug/L	0.1714	ppb	14:00:53
1	As 188.979†	-47.0	-10.8	-2.5308	ug/L	-2.5308	ppb	14:01:14
1	B 249.677†	41.0	423.1	6.5884	ug/L	6.5884	ppb	14:00:53
1	Ba 233.527†	26.8	2.9	0.0152	ug/L	0.0152	ppb	14:01:14
1	Be 313.107†	-7456.8	-253.3	-0.0788	ug/L	-0.0788	ppb	14:00:53
1	Cd 226.502†	-287.1	-13.8	-0.1077	ug/L	-0.1077	ppb	14:01:14
1	Co 228.616†	-82.7	6.5	0.0810	ug/L	0.0810	ppb	14:01:14
1	Cr 267.716†	-22.8	5.4	0.0463	ug/L	0.0463	ppb	14:01:14
1	Cu 324.752†	10117.6	79.2	0.1976	ug/L	0.1976	ppb	14:00:53
1	Mn 257.610†	832.3	17.8	0.0203	ug/L	0.0203	ppb	14:01:14
1	Mo 202.031†	36.8	5.6	0.2251	ug/L	0.2251	ppb	14:01:14
1	Ni 231.604†	175.4	29.8	0.4780	ug/L	0.4780	ppb	14:01:14
1	P 214.914†	347.7	16.0	5.6120	ug/L	5.6120	ppb	14:01:14
1	Pb 220.353†	-10.0	18.9	1.4202	ug/L	1.4202	ppb	14:01:14
1	S 181.975 Axial†	68.0	1.2	0.9994	ug/L	0.9994	ppb	14:01:14
1	Sb 206.836†	66.3	21.9	4.3017	ug/L	4.3017	ppb	14:01:14
1	Se 196.026†	-16.7	4.6	1.6497	ug/L	1.6497	ppb	14:01:14
1	Si 251.611†	727.7	178.6	3.6667	ug/L	3.6667	ppb	14:01:14
1	Sn 189.927†	7.0	1.6	0.1723	ug/L	0.1723	ppb	14:01:14
1	Ti 334.940†	-1108.8	-16.3	-0.0199	ug/L	-0.0199	ppb	14:00:53
1	Tl 190.801†	-63.4	-2.9	-0.4929	ug/L	-0.4929	ppb	14:01:14
1	U 409.014†	-3726.3	52.2	1.2899	ug/L	1.2899	ppb	14:00:48
1	V 292.402†	-1652.5	-24.6	-0.1406	ug/L	-0.1406	ppb	14:00:53
1	Zn 213.857†	1130.3	25.0	0.1340	ug/L	0.1340	ppb	14:01:14
1	SiO2†	726.7	135.3	5.9362	ug/L	5.9362	ppb	14:02:19
2	Sc Radial	5511.5	5511.5	99.0	%			13:59:57
2	Y RADIAL	4786.2	4786.2	99.39	%			13:59:57
2	Al 396.153Radial†	-72.0	19.5	17.796	ug/L	17.796	ppb	13:59:57
2	Ca 317.933Radial†	29.7	13.1	32.554	ug/L	32.554	ppb	14:00:17
2	Fe 238.204 Radial†	-0.3	-0.7	-23.581	ug/L	-23.581	ppb	14:00:17
2	K 766.490 Radial†	1595.9	138.3	59.989	ug/L	59.989	ppb	13:59:57
2	Mg 279.077 IEC†	-0.0	-0.2	-16.582	ug/L	-16.582	ppb	14:00:17
2	Na 589.592 Radial†	-181.5	-12.8	-34.604	ug/L	-34.604	ppb	14:00:17
2	Sr 421.552†	12.3	7.0	0.1070	ug/L	0.1070	ppb	14:00:17
2	Sc 361.383	1050518.5	1050518.5	99.023	%			14:01:19
2	Y 371.029	845673.2	845673.2	99.116	%			14:01:19
2	Ag 328.068†	645.1	12.9	0.0438	ug/L	0.0438	ppb	14:01:24
2	As 188.979†	-49.5	-13.1	-3.0770	ug/L	-3.0770	ppb	14:01:44
2	B 249.677†	118.8	501.5	7.8188	ug/L	7.8188	ppb	14:01:24
2	Ba 233.527†	40.4	16.5	0.0832	ug/L	0.0832	ppb	14:01:44
2	Be 313.107†	-7364.0	-120.4	-0.0373	ug/L	-0.0373	ppb	14:01:24
2	Cd 226.502†	-300.7	-26.0	-0.1917	ug/L	-0.1917	ppb	14:01:44
2	Co 228.616†	-75.1	14.6	0.1807	ug/L	0.1807	ppb	14:01:44
2	Cr 267.716†	-8.5	20.0	0.1703	ug/L	0.1703	ppb	14:01:44
2	Cu 324.752†	10243.6	153.4	0.3772	ug/L	0.3772	ppb	14:01:24
2	Mn 257.610†	843.7	25.0	0.0170	ug/L	0.0170	ppb	14:01:44
2	Mo 202.031†	21.8	-9.8	-0.3926	ug/L	-0.3926	ppb	14:01:44
2	Ni 231.604†	171.6	25.1	0.4014	ug/L	0.4014	ppb	14:01:44

2	P 214.914†	348.3	14.8	5.2050 ug/L	5.2050 ppb	14:01:44
2	Pb 220.353†	-12.7	16.3	1.2244 ug/L	1.2244 ppb	14:01:44
2	S 181.975 Axial†	60.3	-6.9	-5.8538 ug/L	-5.8538 ppb	14:01:44
2	Sb 206.836†	37.3	-7.8	-1.5329 ug/L	-1.5329 ppb	14:01:44
2	Se 196.026†	-18.7	2.7	0.8056 ug/L	0.8056 ppb	14:01:44
2	Si 251.611†	723.3	170.4	3.5003 ug/L	3.5003 ppb	14:01:44
2	Sn 189.927†	11.3	6.0	0.6230 ug/L	0.6230 ppb	14:01:44
2	Ti 334.940†	-1056.9	41.9	0.0571 ug/L	0.0571 ppb	14:01:24
2	Tl 190.801†	-56.2	4.7	0.7874 ug/L	0.7874 ppb	14:01:44
2	U 409.014†	-3810.6	-13.5	-0.3320 ug/L	-0.3320 ppb	14:01:19
2	V 292.402†	-1611.2	25.7	0.1429 ug/L	0.1429 ppb	14:01:24
2	Zn 213.857†	1136.7	25.5	0.1424 ug/L	0.1424 ppb	14:01:44
2	SiO2†	739.3	144.2	6.3394 ug/L	6.3394 ppb	14:02:24
3	Sc Radial	5518.7	5518.7	99.2 %		14:00:22
3	Y RADIAL	4792.7	4792.7	99.52 %		14:00:22
3	Al 396.153Radial†	-86.9	4.6	4.1447 ug/L	4.1447 ppb	14:00:22
3	Ca 317.933Radial†	25.9	9.2	22.974 ug/L	22.974 ppb	14:00:42
3	Fe 238.204 Radial†	-0.1	-0.4	-15.497 ug/L	-15.497 ppb	14:00:42
3	K 766.490 Radial†	1555.4	95.3	41.343 ug/L	41.343 ppb	14:00:22
3	Mg 279.077 IEC†	-0.0	-0.2	-17.227 ug/L	-17.227 ppb	14:00:42
3	Na 589.592 Radial†	-174.6	-5.6	-15.194 ug/L	-15.194 ppb	14:00:42
3	Sr 421.552†	23.6	18.4	0.2827 ug/L	0.2827 ppb	14:00:42
3	Sc 361.383	1057245.8	1057245.8	99.657 %		14:01:49
3	Y 371.029	850037.2	850037.2	99.628 %		14:01:49
3	Ag 328.068†	694.9	58.7	0.2256 ug/L	0.2256 ppb	14:01:54
3	As 188.979†	-47.5	-10.8	-2.5338 ug/L	-2.5338 ppb	14:02:14
3	B 249.677†	68.0	449.8	7.0124 ug/L	7.0124 ppb	14:01:54
3	Ba 233.527†	35.7	11.5	0.0574 ug/L	0.0574 ppb	14:02:14
3	Be 313.107†	-7483.5	-193.0	-0.0600 ug/L	-0.0600 ppb	14:01:54
3	Cd 226.502†	-289.4	-12.7	-0.0931 ug/L	-0.0931 ppb	14:02:14
3	Co 228.616†	-98.9	-8.8	-0.1094 ug/L	-0.1094 ppb	14:02:14
3	Cr 267.716†	5.9	34.5	0.2927 ug/L	0.2927 ppb	14:02:14
3	Cu 324.752†	10251.7	95.7	0.2352 ug/L	0.2352 ppb	14:01:54
3	Mn 257.610†	869.3	45.2	0.0341 ug/L	0.0341 ppb	14:02:14
3	Mo 202.031†	34.7	3.0	0.1197 ug/L	0.1197 ppb	14:02:14
3	Ni 231.604†	157.2	9.4	0.1515 ug/L	0.1515 ppb	14:02:14
3	P 214.914†	335.6	-0.2	-0.0906 ug/L	-0.0906 ppb	14:02:14
3	Pb 220.353†	2.8	31.9	2.3909 ug/L	2.3909 ppb	14:02:14
3	S 181.975 Axial†	65.8	-1.8	-1.5179 ug/L	-1.5179 ppb	14:02:14
3	Sb 206.836†	43.4	-1.9	-0.3829 ug/L	-0.3829 ppb	14:02:14
3	Se 196.026†	-16.8	4.8	1.5002 ug/L	1.5002 ppb	14:02:14
3	Si 251.611†	726.0	168.4	3.4599 ug/L	3.4599 ppb	14:02:14
3	Sn 189.927†	2.6	-2.9	-0.3010 ug/L	-0.3010 ppb	14:02:14
3	Ti 334.940†	-1099.9	5.6	0.0087 ug/L	0.0087 ppb	14:01:54
3	Tl 190.801†	-56.6	4.6	0.7834 ug/L	0.7834 ppb	14:02:14
3	U 409.014†	-3812.4	9.3	0.2316 ug/L	0.2316 ppb	14:01:49
3	V 292.402†	-1702.0	-55.1	-0.3086 ug/L	-0.3086 ppb	14:01:54
3	Zn 213.857†	1134.7	16.2	0.0914 ug/L	0.0914 ppb	14:02:14
3	SiO2†	754.5	154.7	6.8042 ug/L	6.8042 ppb	14:02:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1050953.3	99.064	%	0.5737				0.58%
Sc Radial	5514.2	99.1	%	0.07				0.07%
Y 371.029	845336.1	99.077	%	0.5718				0.58%
Y RADIAL	4805.0	99.78	%	0.565				0.57%
Ag 328.068†	37.4	0.1469	ug/L	0.09332	0.1469	ppb	0.09332	63.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.1	18.302	ug/L	14.4166	18.302	ppb	14.4166	78.77%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.5	-2.7138	ug/L	0.31447	-2.7138	ppb	0.31447	11.59%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	458.1	7.1399	ug/L	0.62502	7.1399	ppb	0.62502	8.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.3	0.0519	ug/L	0.03434	0.0519	ppb	0.03434	66.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-188.9	-0.0587	ug/L	0.02078	-0.0587	ppb	0.02078	35.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.5	28.640	ug/L	5.0242	28.640	ppb	5.0242	17.54%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -17.5     -0.1308 ug/L       0.05322     -0.1308 ppb        0.05322  40.67%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.1      0.0508 ug/L       0.14740      0.0508 ppb        0.14740 290.21%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               20.0      0.1698 ug/L       0.12323      0.1698 ppb        0.12323  72.58%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              109.4      0.2700 ug/L       0.09473      0.2700 ppb        0.09473  35.09%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.0      0.0417 ug/L      34.15450      0.0417 ppb       34.15450 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.4     47.925 ug/L       10.4622     47.925 ppb        10.4622  21.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4    -29.419 ug/L       21.6782    -29.419 ppb        21.6782  73.69%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               29.4      0.0238 ug/L       0.00904      0.0238 ppb        0.00904  38.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.4     -0.0160 ug/L       0.33043     -0.0160 ppb        0.33043 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -6.7    -18.043 ug/L       15.3353    -18.043 ppb        15.3353  84.99%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.4      0.3436 ug/L       0.17075      0.3436 ppb        0.17075  49.69%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                10.2      3.5755 ug/L       3.18145      3.5755 ppb        3.18145  88.98%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               22.3      1.6785 ug/L       0.62466      1.6785 ppb        0.62466  37.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -2.5     -2.1241 ug/L       3.46659     -2.1241 ppb        3.46659 163.20%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.1      0.7953 ug/L       3.09058      0.7953 ppb        3.09058 388.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.1      1.3185 ug/L       0.45042      1.3185 ppb        0.45042  34.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              172.4      3.5423 ug/L       0.10965      3.5423 ppb        0.10965   3.10%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.6      0.1647 ug/L       0.46206      0.1647 ppb        0.46206 280.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               15.9      0.2443 ug/L       0.12268      0.2443 ppb        0.12268  50.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               10.4      0.0153 ug/L       0.03894      0.0153 ppb        0.03894 254.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                2.1      0.3593 ug/L       0.73803      0.3593 ppb        0.73803 205.41%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                16.0      0.3965 ug/L       0.82342      0.3965 ppb        0.82342 207.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -18.0     -0.1021 ug/L       0.22820     -0.1021 ppb        0.22820 223.47%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               22.2      0.1226 ug/L       0.02735      0.1226 ppb        0.02735  22.32%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    144.8      6.3599 ug/L       0.43437      6.3599 ppb        0.43437   6.83%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: 1201872897|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 38
Date Collected: 7/8/2009 14:04:40
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872897|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5504.9	5504.9	98.9	%			14:06:32
1	Y RADIAL	4784.7	4784.7	99.36	%			14:06:32
1	Al 396.153Radial†	-64.6	26.9	24.470	ug/L	24.470	ppb	14:06:32
1	Ca 317.933Radial†	20.6	3.9	9.8127	ug/L	9.8127	ppb	14:06:53
1	Fe 238.204 Radial†	0.3	-0.0	-1.2944	ug/L	-1.2944	ppb	14:06:53
1	K 766.490 Radial†	1531.7	75.2	32.625	ug/L	32.625	ppb	14:06:32
1	Mg 279.077 IEC†	2.4	2.2	177.56	ug/L	177.56	ppb	14:06:53
1	Na 589.592 Radial†	-172.0	-3.5	-9.4695	ug/L	-9.4695	ppb	14:06:53
1	Sr 421.552†	10.0	4.6	0.0706	ug/L	0.0706	ppb	14:06:53
1	Sc 361.383	1062639.7	1062639.7	100.17	%			14:07:49
1	Y 371.029	852972.0	852972.0	99.972	%			14:07:49
1	Ag 328.068†	710.6	70.8	0.2807	ug/L	0.2807	ppb	14:07:54
1	As 188.979†	-48.2	-11.2	-2.6342	ug/L	-2.6342	ppb	14:08:14
1	B 249.677†	-45.1	336.5	5.2445	ug/L	5.2445	ppb	14:07:54
1	Ba 233.527†	49.0	24.7	0.1259	ug/L	0.1259	ppb	14:08:14
1	Be 313.107†	-7572.9	-244.1	-0.0752	ug/L	-0.0752	ppb	14:07:54
1	Cd 226.502†	-280.8	-2.7	-0.0198	ug/L	-0.0198	ppb	14:08:14
1	Co 228.616†	-85.4	5.1	0.0624	ug/L	0.0624	ppb	14:08:14
1	Cr 267.716†	-20.3	8.4	0.0717	ug/L	0.0717	ppb	14:07:54
1	Cu 324.752†	10306.8	98.5	0.2429	ug/L	0.2429	ppb	14:07:54
1	Mn 257.610†	1540.2	710.6	0.5580	ug/L	0.5580	ppb	14:07:54
1	Mo 202.031†	24.7	-7.1	-0.2859	ug/L	-0.2859	ppb	14:08:14
1	Ni 231.604†	168.8	20.2	0.3245	ug/L	0.3245	ppb	14:08:14
1	P 214.914†	336.4	-1.1	-0.3766	ug/L	-0.3766	ppb	14:08:14
1	Pb 220.353†	7.8	36.8	2.7663	ug/L	2.7663	ppb	14:08:14
1	S 181.975 Axial†	68.4	0.4	0.3506	ug/L	0.3506	ppb	14:08:14
1	Sb 206.836†	57.7	12.2	2.4208	ug/L	2.4208	ppb	14:08:14
1	Se 196.026†	-33.3	-11.6	-3.7842	ug/L	-3.7842	ppb	14:08:14
1	Si 251.611†	1538.2	975.6	20.119	ug/L	20.119	ppb	14:08:14
1	Sn 189.927†	24.1	18.6	1.9356	ug/L	1.9356	ppb	14:08:14
1	Ti 334.940†	-874.2	236.5	0.3098	ug/L	0.3098	ppb	14:07:54
1	Tl 190.801†	-51.7	9.8	1.6513	ug/L	1.6513	ppb	14:08:14
1	U 409.014†	-3803.4	37.6	0.9329	ug/L	0.9329	ppb	14:07:49
1	V 292.402†	-1577.4	78.0	0.4435	ug/L	0.4435	ppb	14:07:54
1	Zn 213.857†	1169.7	45.4	0.2451	ug/L	0.2451	ppb	14:08:14
1	SiO2†	1635.6	1030.6	45.510	ug/L	45.510	ppb	14:09:20
2	Sc Radial	5453.4	5453.4	98.0	%			14:06:58
2	Y RADIAL	4732.3	4732.3	98.27	%			14:06:58
2	Al 396.153Radial†	-47.5	43.7	39.779	ug/L	39.779	ppb	14:06:58
2	Ca 317.933Radial†	20.6	4.1	10.254	ug/L	10.254	ppb	14:07:18
2	Fe 238.204 Radial†	0.8	0.5	17.176	ug/L	17.176	ppb	14:07:18
2	K 766.490 Radial†	1458.2	14.9	6.4519	ug/L	6.4519	ppb	14:06:58
2	Mg 279.077 IEC†	0.4	0.3	20.619	ug/L	20.619	ppb	14:07:18
2	Na 589.592 Radial†	-166.0	1.0	2.8109	ug/L	2.8109	ppb	14:07:18
2	Sr 421.552†	7.6	2.3	0.0357	ug/L	0.0357	ppb	14:07:18
2	Sc 361.383	1048830.6	1048830.6	98.864	%			14:08:20
2	Y 371.029	841877.7	841877.7	98.671	%			14:08:20
2	Ag 328.068†	653.9	22.8	0.0959	ug/L	0.0959	ppb	14:08:25
2	As 188.979†	-50.5	-14.2	-3.3239	ug/L	-3.3239	ppb	14:08:45
2	B 249.677†	-103.5	276.9	4.3130	ug/L	4.3130	ppb	14:08:25
2	Ba 233.527†	50.8	27.1	0.1373	ug/L	0.1373	ppb	14:08:45
2	Be 313.107†	-7547.9	-318.4	-0.0984	ug/L	-0.0984	ppb	14:08:25
2	Cd 226.502†	-282.1	-7.7	-0.0595	ug/L	-0.0595	ppb	14:08:45
2	Co 228.616†	-102.6	-13.3	-0.1682	ug/L	-0.1682	ppb	14:08:45
2	Cr 267.716†	51.0	80.2	0.6832	ug/L	0.6832	ppb	14:08:25
2	Cu 324.752†	10372.8	300.7	0.7429	ug/L	0.7429	ppb	14:08:25
2	Mn 257.610†	1663.9	856.0	0.6783	ug/L	0.6783	ppb	14:08:25
2	Mo 202.031†	20.6	-10.9	-0.4346	ug/L	-0.4346	ppb	14:08:45
2	Ni 231.604†	177.9	31.7	0.5080	ug/L	0.5080	ppb	14:08:45

2	P 214.914†	346.1	13.1	4.5598	ug/L	4.5598	ppb	14:08:45
2	Pb 220.353†	-18.9	10.0	0.7505	ug/L	0.7505	ppb	14:08:45
2	S 181.975 Axial†	70.7	3.6	3.0677	ug/L	3.0677	ppb	14:08:45
2	Sb 206.836†	57.3	12.5	2.4701	ug/L	2.4701	ppb	14:08:45
2	Se 196.026†	-23.2	-1.8	-0.5257	ug/L	-0.5257	ppb	14:08:45
2	Si 251.611†	1542.1	999.8	20.627	ug/L	20.627	ppb	14:08:45
2	Sn 189.927†	31.9	26.8	2.7852	ug/L	2.7852	ppb	14:08:45
2	Ti 334.940†	-904.8	194.1	0.2548	ug/L	0.2548	ppb	14:08:25
2	Tl 190.801†	-55.9	4.9	0.8301	ug/L	0.8301	ppb	14:08:45
2	U 409.014†	-3818.7	-27.8	-0.6935	ug/L	-0.6935	ppb	14:08:20
2	V 292.402†	-1652.1	-18.3	-0.1129	ug/L	-0.1129	ppb	14:08:25
2	Zn 213.857†	1176.2	67.4	0.3692	ug/L	0.3692	ppb	14:08:45
2	SiO2†	1673.9	1090.7	48.188	ug/L	48.188	ppb	14:09:25
3	Sc Radial	5463.6	5463.6	98.2	%			14:07:23
3	Y RADIAL	4757.9	4757.9	98.80	%			14:07:23
3	Al 396.153Radial†	-69.6	21.3	19.382	ug/L	19.382	ppb	14:07:23
3	Ca 317.933Radial†	21.6	5.0	12.575	ug/L	12.575	ppb	14:07:43
3	Fe 238.204 Radial†	0.1	-0.2	-8.1710	ug/L	-8.1710	ppb	14:07:43
3	K 766.490 Radial†	1659.8	217.5	94.353	ug/L	94.353	ppb	14:07:23
3	Mg 279.077 IEC†	0.9	0.8	61.641	ug/L	61.641	ppb	14:07:43
3	Na 589.592 Radial†	-163.6	3.8	10.206	ug/L	10.206	ppb	14:07:43
3	Sr 421.552†	0.6	-4.9	-0.0755	ug/L	-0.0755	ppb	14:07:43
3	Sc 361.383	1057777.2	1057777.2	99.707	%			14:08:50
3	Y 371.029	848980.8	848980.8	99.504	%			14:08:50
3	Ag 328.068†	745.9	109.5	0.4330	ug/L	0.4330	ppb	14:08:55
3	As 188.979†	-49.7	-12.9	-3.0366	ug/L	-3.0366	ppb	14:09:15
3	B 249.677†	-147.6	233.5	3.6396	ug/L	3.6396	ppb	14:08:55
3	Ba 233.527†	44.1	19.9	0.1017	ug/L	0.1017	ppb	14:09:15
3	Be 313.107†	-7560.9	-266.9	-0.0819	ug/L	-0.0819	ppb	14:08:55
3	Cd 226.502†	-278.1	-1.3	-0.0081	ug/L	-0.0081	ppb	14:09:15
3	Co 228.616†	-82.5	7.7	0.0951	ug/L	0.0951	ppb	14:09:15
3	Cr 267.716†	17.3	45.9	0.3918	ug/L	0.3918	ppb	14:08:55
3	Cu 324.752†	10240.7	79.5	0.1958	ug/L	0.1958	ppb	14:08:55
3	Mn 257.610†	1667.0	844.9	0.6654	ug/L	0.6654	ppb	14:08:55
3	Mo 202.031†	37.1	5.4	0.2163	ug/L	0.2163	ppb	14:09:15
3	Ni 231.604†	193.4	45.7	0.7328	ug/L	0.7328	ppb	14:09:15
3	P 214.914†	346.5	10.6	3.7725	ug/L	3.7725	ppb	14:09:15
3	Pb 220.353†	-13.9	15.2	1.1425	ug/L	1.1425	ppb	14:09:15
3	S 181.975 Axial†	74.2	6.6	5.5607	ug/L	5.5607	ppb	14:09:15
3	Sb 206.836†	58.5	13.3	2.6452	ug/L	2.6452	ppb	14:09:15
3	Se 196.026†	-20.8	0.7	0.2047	ug/L	0.2047	ppb	14:09:15
3	Si 251.611†	1525.3	969.7	19.966	ug/L	19.966	ppb	14:09:15
3	Sn 189.927†	32.9	27.5	2.8651	ug/L	2.8651	ppb	14:09:15
3	Ti 334.940†	-752.8	354.3	0.4648	ug/L	0.4648	ppb	14:08:55
3	Tl 190.801†	-60.8	0.4	0.0793	ug/L	0.0793	ppb	14:09:15
3	U 409.014†	-3849.6	-26.2	-0.6499	ug/L	-0.6499	ppb	14:08:50
3	V 292.402†	-1569.1	79.1	0.4518	ug/L	0.4518	ppb	14:08:55
3	Zn 213.857†	1149.9	30.9	0.1661	ug/L	0.1661	ppb	14:09:15
3	SiO2†	1628.5	1030.9	45.456	ug/L	45.456	ppb	14:09:30

Mean Data: 1201872897|881859|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056415.8	99.579	%	0.6603				0.66%
Sc Radial	5473.9	98.4	%	0.49				0.50%
Y 371.029	847943.5	99.382	%	0.6586				0.66%
Y RADIAL	4758.3	98.81	%	0.544				0.55%
Ag 328.068†	67.7	0.2699	ug/L	0.16879	0.2699	ppb	0.16879	62.54%
Al 396.153Radial†	30.6	27.877	ug/L	10.6168	27.877	ppb	10.6168	38.08%
As 188.979†	-12.8	-2.9982	ug/L	0.34648	-2.9982	ppb	0.34648	11.56%
B 249.677†	282.3	4.3990	ug/L	0.80590	4.3990	ppb	0.80590	18.32%
Ba 233.527†	23.9	0.1216	ug/L	0.01820	0.1216	ppb	0.01820	14.96%
Be 313.107†	-276.5	-0.0852	ug/L	0.01194	-0.0852	ppb	0.01194	14.02%
Ca 317.933Radial†	4.4	10.880	ug/L	1.4838	10.880	ppb	1.4838	13.64%
Cd 226.502†	-3.9	-0.0292	ug/L	0.02695	-0.0292	ppb	0.02695	92.44%
Co 228.616†	-0.2	-0.0036	ug/L	0.14350	-0.0036	ppb	0.14350	>999.9%
Cr 267.716†	44.8	0.3822	ug/L	0.30587	0.3822	ppb	0.30587	80.02%
Cu 324.752†	159.6	0.3939	ug/L	0.30322	0.3939	ppb	0.30322	76.98%
Fe 238.204 Radial†	0.1	2.5702	ug/L	13.10795	2.5702	ppb	13.10795	510.00%
K 766.490 Radial†	102.5	44.477	ug/L	45.1333	44.477	ppb	45.1333	101.48%

Mg 279.077 IEC†	1.1	86.607	ug/L	81.3956	86.607	ppb	81.3956 93.98%
Mn 257.610†	803.8	0.6339	ug/L	0.06607	0.6339	ppb	0.06607 10.42%
Mo 202.031†	-4.2	-0.1681	ug/L	0.34108	-0.1681	ppb	0.34108 202.96%
Na 589.592 Radial†	0.4	1.1824	ug/L	9.93825	1.1824	ppb	9.93825 840.49%
Ni 231.604†	32.6	0.5218	ug/L	0.20448	0.5218	ppb	0.20448 39.19%
P 214.914†	7.6	2.6519	ug/L	2.65214	2.6519	ppb	2.65214 100.01%
Pb 220.353†	20.7	1.5531	ug/L	1.06880	1.5531	ppb	1.06880 68.82%
S 181.975 Axial†	3.5	2.9930	ug/L	2.60587	2.9930	ppb	2.60587 87.07%
Sb 206.836†	12.7	2.5120	ug/L	0.11792	2.5120	ppb	0.11792 4.69%
Se 196.026†	-4.2	-1.3684	ug/L	2.12381	-1.3684	ppb	2.12381 155.20%
Si 251.611†	981.7	20.237	ug/L	0.3459	20.237	ppb	0.3459 1.71%
Sn 189.927†	24.3	2.5286	ug/L	0.51515	2.5286	ppb	0.51515 20.37%
Sr 421.552†	0.7	0.0102	ug/L	0.07628	0.0102	ppb	0.07628 744.23%
Ti 334.940†	261.6	0.3431	ug/L	0.10886	0.3431	ppb	0.10886 31.73%
Tl 190.801†	5.0	0.8536	ug/L	0.78623	0.8536	ppb	0.78623 92.11%
U 409.014†	-5.5	-0.1368	ug/L	0.92665	-0.1368	ppb	0.92665 677.25%
V 292.402†	46.3	0.2608	ug/L	0.32371	0.2608	ppb	0.32371 124.12%
Zn 213.857†	47.9	0.2602	ug/L	0.10237	0.2602	ppb	0.10237 39.35%
SiO2†	1050.7	46.385	ug/L	1.5621	46.385	ppb	1.5621 3.37%

Sequence No.: 4
Sample ID: 1201872898|881859|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 39
Date Collected: 7/8/2009 14:11:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872898|881859|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5813.9	5813.9	104	%			14:13:33
1	Y RADIAL	5396.0	5396.0	112.0	%			14:13:33
1	Al 396.153Radial†	37735.0	36210.8	32942	ug/L	32942	ppb	14:13:33
1	Ca 317.933Radial†	7391.1	7057.5	17579	ug/L	17579	ppb	14:13:33
1	Fe 238.204 Radial†	2737.8	2620.2	91933	ug/L	91933	ppb	14:13:54
1	K 766.490 Radial†	29433.4	26699.5	11630	ug/L	11630	ppb	14:13:33
1	Mg 279.077 IEC†	191.6	183.2	14439	ug/L	14439	ppb	14:13:54
1	Na 589.592 Radial†	954.0	1083.5	2929.8	ug/L	2929.8	ppb	14:13:33
1	Sr 421.552†	60112.5	57532.0	886.21	ug/L	886.21	ppb	14:13:33
1	Sc 361.383	1076768.0	1076768.0	101.50	%			14:14:53
1	Y 371.029	912800.2	912800.2	106.98	%			14:14:53
1	Ag 328.068†	164734.1	161665.2	672.43	ug/L	672.43	ppb	14:14:53
1	As 188.979†	5577.8	5532.4	1327.1	ug/L	1327.1	ppb	14:15:13
1	B 249.677†	44893.2	44612.4	682.03	ug/L	682.03	ppb	14:14:53
1	Ba 233.527†	474729.7	467701.8	2371.1	ug/L	2371.1	ppb	14:14:53
1	Be 313.107†	1479814.6	1465299.3	459.73	ug/L	459.73	ppb	14:14:53
1	Cd 226.502†	80061.0	79157.5	581.53	ug/L	581.53	ppb	14:14:53
1	Co 228.616†	33805.0	33396.7	412.93	ug/L	412.93	ppb	14:15:13
1	Cr 267.716†	45606.3	44962.0	385.96	ug/L	385.96	ppb	14:14:53
1	Cu 324.752†	224812.0	211304.1	526.66	ug/L	526.66	ppb	14:14:53
1	Mn 257.610†	2397013.7	2360823.9	1877.4	ug/L	1877.4	ppb	14:14:53
1	Mo 202.031†	10634.4	10445.7	424.42	ug/L	424.42	ppb	14:15:13
1	Ni 231.604†	33353.3	32713.0	524.05	ug/L	524.05	ppb	14:14:53
1	P 214.914†	10970.2	10471.4	3561.5	ug/L	3561.5	ppb	14:15:13
1	Pb 220.353†	11407.4	11268.2	843.12	ug/L	843.12	ppb	14:15:13
1	S 181.975 Axial†	1314.6	1227.3	1032.4	ug/L	1032.4	ppb	14:15:13
1	Sb 206.836†	2846.8	2759.4	548.21	ug/L	548.21	ppb	14:15:13
1	Se 196.026†	2017.0	2008.8	979.36	ug/L	979.36	ppb	14:15:13
1	Si 251.611†	363978.2	358048.4	7375.4	ug/L	7375.4	ppb	14:14:53
1	Sn 189.927†	5374.1	5289.4	552.92	ug/L	552.92	ppb	14:15:13
1	Ti 334.940†	1370165.8	1351061.2	1769.7	ug/L	1769.7	ppb	14:14:53
1	Tl 190.801†	5739.1	5715.8	980.36	ug/L	980.36	ppb	14:15:13
1	U 409.014†	-11211.0	-7210.8	-190.95	ug/L	-190.95	ppb	14:14:53
1	V 292.402†	135747.3	135397.4	758.53	ug/L	758.53	ppb	14:14:53
1	Zn 213.857†	188145.9	184247.8	1014.4	ug/L	1014.4	ppb	14:14:53
1	SiO2†	364794.2	358810.1	15826	ug/L	15826	ppb	14:16:13
2	Sc Radial	5773.4	5773.4	104	%			14:13:59
2	Y RADIAL	5336.8	5336.8	110.8	%			14:13:59
2	Al 396.153Radial†	37366.6	36108.9	32850	ug/L	32850	ppb	14:13:59
2	Ca 317.933Radial†	7361.8	7079.0	17633	ug/L	17633	ppb	14:13:59
2	Fe 238.204 Radial†	2747.8	2648.2	92916	ug/L	92916	ppb	14:14:19
2	K 766.490 Radial†	29307.4	26775.6	11663	ug/L	11663	ppb	14:13:59
2	Mg 279.077 IEC†	191.7	184.6	14552	ug/L	14552	ppb	14:14:19
2	Na 589.592 Radial†	958.4	1094.2	2958.7	ug/L	2958.7	ppb	14:13:59
2	Sr 421.552†	59570.4	57412.9	884.37	ug/L	884.37	ppb	14:13:59
2	Sc 361.383	1078422.7	1078422.7	101.65	%			14:15:20
2	Y 371.029	914296.8	914296.8	107.16	%			14:15:20
2	Ag 328.068†	165375.4	162047.1	674.25	ug/L	674.25	ppb	14:15:20
2	As 188.979†	5612.6	5558.2	1333.4	ug/L	1333.4	ppb	14:15:40
2	B 249.677†	45071.3	44719.8	683.57	ug/L	683.57	ppb	14:15:20
2	Ba 233.527†	475248.7	467494.7	2370.1	ug/L	2370.1	ppb	14:15:20
2	Be 313.107†	1480385.5	1463623.7	459.21	ug/L	459.21	ppb	14:15:20
2	Cd 226.502†	80217.6	79190.6	581.66	ug/L	581.66	ppb	14:15:20
2	Co 228.616†	33928.4	33467.0	413.79	ug/L	413.79	ppb	14:15:40
2	Cr 267.716†	45747.6	45032.1	386.58	ug/L	386.58	ppb	14:15:20
2	Cu 324.752†	225500.9	211642.0	527.55	ug/L	527.55	ppb	14:15:20
2	Mn 257.610†	2401708.1	2361818.2	1878.3	ug/L	1878.3	ppb	14:15:20
2	Mo 202.031†	10672.1	10466.8	425.33	ug/L	425.33	ppb	14:15:40
2	Ni 231.604†	33419.6	32727.8	524.29	ug/L	524.29	ppb	14:15:20

2	P 214.914†	11020.6	10504.5	3572.3	ug/L	3572.3	ppb	14:15:40
2	Pb 220.353†	11436.7	11279.8	843.88	ug/L	843.88	ppb	14:15:40
2	S 181.975 Axial†	1322.6	1233.3	1037.4	ug/L	1037.4	ppb	14:15:40
2	Sb 206.836†	2861.2	2769.3	550.23	ug/L	550.23	ppb	14:15:40
2	Se 196.026†	2035.9	2024.4	987.87	ug/L	987.87	ppb	14:15:40
2	Si 251.611†	365006.4	358509.6	7384.8	ug/L	7384.8	ppb	14:15:20
2	Sn 189.927†	5415.8	5322.3	556.37	ug/L	556.37	ppb	14:15:40
2	Ti 334.940†	1373598.5	1352366.7	1771.4	ug/L	1771.4	ppb	14:15:20
2	Tl 190.801†	5734.3	5702.4	978.11	ug/L	978.11	ppb	14:15:40
2	U 409.014†	-11180.6	-7164.0	-189.91	ug/L	-189.91	ppb	14:15:20
2	V 292.402†	135922.1	135364.2	758.22	ug/L	758.22	ppb	14:15:20
2	Zn 213.857†	188904.2	184709.4	1016.9	ug/L	1016.9	ppb	14:15:20
2	SiO2†	366938.9	360368.4	15895	ug/L	15895	ppb	14:16:19
3	Sc Radial	5598.9	5598.9	101	%			14:14:24
3	Y RADIAL	5189.2	5189.2	107.8	%			14:14:24
3	Al 396.153Radial†	36453.9	36324.4	33046	ug/L	33046	ppb	14:14:24
3	Ca 317.933Radial†	7120.5	7060.3	17586	ug/L	17586	ppb	14:14:24
3	Fe 238.204 Radial†	2743.0	2726.0	95645	ug/L	95645	ppb	14:14:44
3	K 766.490 Radial†	28597.7	26950.7	11741	ug/L	11741	ppb	14:14:24
3	Mg 279.077 IEC†	192.4	191.1	15058	ug/L	15058	ppb	14:14:44
3	Na 589.592 Radial†	922.6	1087.4	2940.3	ug/L	2940.3	ppb	14:14:24
3	Sr 421.552†	57772.2	57415.3	884.41	ug/L	884.41	ppb	14:14:24
3	Sc 361.383	1080956.7	1080956.7	101.89	%			14:15:48
3	Y 371.029	916798.2	916798.2	107.45	%			14:15:48
3	Ag 328.068†	165825.4	162107.3	675.36	ug/L	675.36	ppb	14:15:48
3	As 188.979†	5592.3	5525.4	1326.2	ug/L	1326.2	ppb	14:16:08
3	B 249.677†	45250.8	44792.0	684.34	ug/L	684.34	ppb	14:15:48
3	Ba 233.527†	476791.7	467913.1	2372.3	ug/L	2372.3	ppb	14:15:48
3	Be 313.107†	1484068.0	1463824.0	459.27	ug/L	459.27	ppb	14:15:48
3	Cd 226.502†	80441.0	79224.8	581.59	ug/L	581.59	ppb	14:15:48
3	Co 228.616†	33688.8	33153.6	409.83	ug/L	409.83	ppb	14:16:08
3	Cr 267.716†	45759.0	44937.8	385.82	ug/L	385.82	ppb	14:15:48
3	Cu 324.752†	226248.3	211855.5	528.23	ug/L	528.23	ppb	14:15:48
3	Mn 257.610†	2406494.6	2360977.2	1878.0	ug/L	1878.0	ppb	14:15:48
3	Mo 202.031†	10589.8	10361.4	421.30	ug/L	421.30	ppb	14:16:08
3	Ni 231.604†	33460.9	32691.3	523.70	ug/L	523.70	ppb	14:15:48
3	P 214.914†	10952.5	10412.2	3537.3	ug/L	3537.3	ppb	14:16:08
3	Pb 220.353†	11362.5	11180.6	836.22	ug/L	836.22	ppb	14:16:08
3	S 181.975 Axial†	1306.4	1214.3	1021.4	ug/L	1021.4	ppb	14:16:08
3	Sb 206.836†	2837.1	2739.0	544.16	ug/L	544.16	ppb	14:16:08
3	Se 196.026†	2022.3	2006.4	991.60	ug/L	991.60	ppb	14:16:08
3	Si 251.611†	365674.5	358323.5	7381.1	ug/L	7381.1	ppb	14:15:48
3	Sn 189.927†	5371.7	5266.5	550.61	ug/L	550.61	ppb	14:16:08
3	Ti 334.940†	1377628.0	1353153.7	1772.5	ug/L	1772.5	ppb	14:15:48
3	Tl 190.801†	5717.8	5673.1	973.18	ug/L	973.18	ppb	14:16:08
3	U 409.014†	-10950.5	-6912.4	-184.00	ug/L	-184.00	ppb	14:15:48
3	V 292.402†	136211.6	135334.8	757.65	ug/L	757.65	ppb	14:15:48
3	Zn 213.857†	188950.2	184318.8	1014.4	ug/L	1014.4	ppb	14:15:48
3	SiO2†	363527.9	356174.6	15710	ug/L	15710	ppb	14:16:24

Mean Data: 1201872898|881859|2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1078715.8	101.68	%	0.199				0.20%
Sc Radial	5728.7	103	%	2.1				1.99%
Y 371.029	914631.7	107.20	%	0.237				0.22%
Y RADIAL	5307.3	110.2	%	2.21				2.01%
Ag 328.068†	161939.9	674.02	ug/L	1.482	674.02	ppb	1.482	0.22%
Al 396.153Radial†	36214.7	32946	ug/L	98.2	32946	ppb	98.2	0.30%
As 188.979†	5538.7	1328.9	ug/L	3.90	1328.9	ppb	3.90	0.29%
B 249.677†	44708.1	683.31	ug/L	1.178	683.31	ppb	1.178	0.17%
Ba 233.527†	467703.2	2371.2	ug/L	1.09	2371.2	ppb	1.09	0.05%
Be 313.107†	1464249.0	459.40	ug/L	0.282	459.40	ppb	0.282	0.06%
Ca 317.933Radial†	7065.6	17599	ug/L	29.0	17599	ppb	29.0	0.16%
Cd 226.502†	79190.9	581.59	ug/L	0.066	581.59	ppb	0.066	0.01%
Co 228.616†	33339.1	412.18	ug/L	2.080	412.18	ppb	2.080	0.50%
Cr 267.716†	44977.3	386.12	ug/L	0.401	386.12	ppb	0.401	0.10%
Cu 324.752†	211600.5	527.48	ug/L	0.790	527.48	ppb	0.790	0.15%
Fe 238.204 Radial†	2664.8	93498	ug/L	1923.5	93498	ppb	1923.5	2.06%
K 766.490 Radial†	26808.6	11678	ug/L	57.3	11678	ppb	57.3	0.49%

Mg 279.077 IEC†	186.3	14683	ug/L	329.6	14683	ppb	329.6	2.24%
Mn 257.610†	2361206.4	1877.9	ug/L	0.46	1877.9	ppb	0.46	0.02%
Mo 202.031†	10424.6	423.68	ug/L	2.115	423.68	ppb	2.115	0.50%
Na 589.592 Radial†	1088.4	2942.9	ug/L	14.64	2942.9	ppb	14.64	0.50%
Ni 231.604†	32710.7	524.01	ug/L	0.293	524.01	ppb	0.293	0.06%
P 214.914†	10462.7	3557.0	ug/L	17.88	3557.0	ppb	17.88	0.50%
Pb 220.353†	11242.8	841.07	ug/L	4.223	841.07	ppb	4.223	0.50%
S 181.975 Axial†	1225.0	1030.4	ug/L	8.22	1030.4	ppb	8.22	0.80%
Sb 206.836†	2755.9	547.53	ug/L	3.093	547.53	ppb	3.093	0.56%
Se 196.026†	2013.2	986.28	ug/L	6.276	986.28	ppb	6.276	0.64%
Si 251.611†	358293.8	7380.4	ug/L	4.77	7380.4	ppb	4.77	0.06%
Sn 189.927†	5292.7	553.30	ug/L	2.900	553.30	ppb	2.900	0.52%
Sr 421.552†	57453.4	885.00	ug/L	1.049	885.00	ppb	1.049	0.12%
Ti 334.940†	1352193.9	1771.2	ug/L	1.38	1771.2	ppb	1.38	0.08%
Tl 190.801†	5697.1	977.22	ug/L	3.672	977.22	ppb	3.672	0.38%
U 409.014†	-7095.8	-188.29	ug/L	3.748	-188.29	ppb	3.748	1.99%
V 292.402†	135365.5	758.13	ug/L	0.448	758.13	ppb	0.448	0.06%
Zn 213.857†	184425.3	1015.2	ug/L	1.43	1015.2	ppb	1.43	0.14%
SiO2†	358451.0	15811	ug/L	93.6	15811	ppb	93.6	0.59%

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 14:46:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5663.2	5663.2	102	%			14:48:38
1	Y RADIAL	4921.9	4921.9	102.2	%			14:48:38
1	Al 396.153Radial†	5410.9	5409.1	4902.2	ug/L	4902.2	ppb	14:48:38
1	Ca 317.933Radial†	1995.4	1943.8	4841.7	ug/L	4841.7	ppb	14:48:58
1	Fe 238.204 Radial†	141.6	138.8	4883.9	ug/L	4883.9	ppb	14:48:58
1	K 766.490 Radial†	13474.7	11767.5	5099.6	ug/L	5099.6	ppb	14:48:38
1	Mg 279.077 IEC†	63.7	62.4	4947.6	ug/L	4947.6	ppb	14:48:58
1	Na 589.592 Radial†	3686.9	3793.3	10257	ug/L	10257	ppb	14:48:38
1	Sr 421.552†	35305.4	34686.6	534.36	ug/L	534.36	ppb	14:48:38
1	Sc 361.383	1067499.7	1067499.7	100.62	%			14:49:57
1	Y 371.029	849118.5	849118.5	99.520	%			14:49:57
1	Ag 328.068†	127285.3	125857.7	501.23	ug/L	501.23	ppb	14:49:57
1	As 188.979†	2071.6	2095.7	495.11	ug/L	495.11	ppb	14:50:17
1	B 249.677†	31156.7	31345.1	486.64	ug/L	486.64	ppb	14:49:57
1	Ba 233.527†	98393.7	97759.6	496.03	ug/L	496.03	ppb	14:49:57
1	Be 313.107†	1596893.7	1594311.3	496.89	ug/L	496.89	ppb	14:49:57
1	Cd 226.502†	66558.7	66423.8	496.55	ug/L	496.55	ppb	14:49:57
1	Co 228.616†	38907.9	38757.1	482.97	ug/L	482.97	ppb	14:50:17
1	Cr 267.716†	58242.4	57910.0	493.92	ug/L	493.92	ppb	14:49:57
1	Cu 324.752†	211606.8	200103.9	493.99	ug/L	493.99	ppb	14:49:57
1	Mn 257.610†	631676.1	626933.6	495.99	ug/L	495.99	ppb	14:49:57
1	Mo 202.031†	12587.0	12477.2	499.76	ug/L	499.76	ppb	14:50:17
1	Ni 231.604†	30647.6	30309.4	485.48	ug/L	485.48	ppb	14:50:17
1	P 214.914†	7375.2	6992.6	2396.5	ug/L	2396.5	ppb	14:50:17
1	Pb 220.353†	6646.8	6634.7	498.71	ug/L	498.71	ppb	14:50:17
1	S 181.975 Axial†	1245.2	1169.7	989.10	ug/L	989.10	ppb	14:50:17
1	Sb 206.836†	2573.9	2512.6	500.11	ug/L	500.11	ppb	14:50:17
1	Se 196.026†	1503.7	1516.0	511.99	ug/L	511.99	ppb	14:50:17
1	Si 251.611†	123652.9	122326.3	2512.2	ug/L	2512.2	ppb	14:49:57
1	Sn 189.927†	4790.4	4755.2	495.03	ug/L	495.03	ppb	14:50:17
1	Ti 334.940†	382199.7	380939.8	498.61	ug/L	498.61	ppb	14:49:57
1	Tl 190.801†	2862.4	2906.0	492.14	ug/L	492.14	ppb	14:50:17
1	U 409.014†	15590.1	19328.2	478.01	ug/L	478.01	ppb	14:49:57
1	V 292.402†	85513.5	86636.2	497.33	ug/L	497.33	ppb	14:49:57
1	Zn 213.857†	90612.3	88928.3	492.08	ug/L	492.08	ppb	14:49:57
1	SiO2†	124200.5	122828.2	5401.3	ug/L	5401.3	ppb	14:51:17
2	Sc Radial	5446.9	5446.9	97.9	%			14:49:03
2	Y RADIAL	4712.8	4712.8	97.86	%			14:49:03
2	Al 396.153Radial†	5213.9	5419.0	4910.9	ug/L	4910.9	ppb	14:49:03
2	Ca 317.933Radial†	1989.6	2015.7	5020.8	ug/L	5020.8	ppb	14:49:23
2	Fe 238.204 Radial†	140.2	142.9	5030.3	ug/L	5030.3	ppb	14:49:23
2	K 766.490 Radial†	13037.0	11846.3	5133.9	ug/L	5133.9	ppb	14:49:03
2	Mg 279.077 IEC†	62.1	63.2	5014.8	ug/L	5014.8	ppb	14:49:23
2	Na 589.592 Radial†	3542.3	3789.5	10246	ug/L	10246	ppb	14:49:03
2	Sr 421.552†	33787.9	34514.2	531.70	ug/L	531.70	ppb	14:49:03
2	Sc 361.383	1055183.8	1055183.8	99.463	%			14:50:24
2	Y 371.029	838651.5	838651.5	98.293	%			14:50:24
2	Ag 328.068†	126214.7	126257.7	502.87	ug/L	502.87	ppb	14:50:24
2	As 188.979†	2075.2	2123.3	501.61	ug/L	501.61	ppb	14:50:44
2	B 249.677†	30917.9	31466.4	488.49	ug/L	488.49	ppb	14:50:24
2	Ba 233.527†	97565.5	98068.1	497.60	ug/L	497.60	ppb	14:50:24
2	Be 313.107†	1577953.1	1593791.5	496.73	ug/L	496.73	ppb	14:50:24
2	Cd 226.502†	66051.4	66685.8	498.49	ug/L	498.49	ppb	14:50:24
2	Co 228.616†	39043.3	39344.5	490.30	ug/L	490.30	ppb	14:50:44
2	Cr 267.716†	57589.2	57928.8	494.08	ug/L	494.08	ppb	14:50:24
2	Cu 324.752†	209513.9	200454.2	494.86	ug/L	494.86	ppb	14:50:24
2	Mn 257.610†	625453.1	628004.0	496.86	ug/L	496.86	ppb	14:50:24
2	Mo 202.031†	12625.4	12661.8	507.16	ug/L	507.16	ppb	14:50:44
2	Ni 231.604†	30744.2	30762.0	492.73	ug/L	492.73	ppb	14:50:44

2	P 214.914†	7400.3	7103.3	2435.4	ug/L	2435.4 ppb	14:50:44
2	Pb 220.353†	6622.3	6687.2	502.65	ug/L	502.65 ppb	14:50:44
2	S 181.975 Axial†	1258.3	1197.3	1012.5	ug/L	1012.5 ppb	14:50:44
2	Sb 206.836†	2580.0	2548.5	507.42	ug/L	507.42 ppb	14:50:44
2	Se 196.026†	1502.6	1532.3	517.83	ug/L	517.83 ppb	14:50:44
2	Si 251.611†	122528.7	122630.3	2518.3	ug/L	2518.3 ppb	14:50:24
2	Sn 189.927†	4790.5	4810.9	500.83	ug/L	500.83 ppb	14:50:44
2	Ti 334.940†	378341.9	381494.5	499.35	ug/L	499.35 ppb	14:50:24
2	Tl 190.801†	2870.9	2947.8	499.17	ug/L	499.17 ppb	14:50:44
2	U 409.014†	15257.4	19174.6	474.18	ug/L	474.18 ppb	14:50:24
2	V 292.402†	84668.4	86778.5	498.20	ug/L	498.20 ppb	14:50:24
2	Zn 213.857†	89929.9	89293.2	494.05	ug/L	494.05 ppb	14:50:24
2	SiO2†	124500.2	124570.2	5478.0	ug/L	5478.0 ppb	14:51:22
3	Sc Radial	5449.0	5449.0	97.9	%		14:49:28
3	Y RADIAL	4751.1	4751.1	98.66	%		14:49:28
3	Al 396.153Radial†	5174.8	5377.0	4872.7	ug/L	4872.7 ppb	14:49:28
3	Ca 317.933Radial†	2014.0	2039.9	5081.0	ug/L	5081.0 ppb	14:49:48
3	Fe 238.204 Radial†	143.3	146.0	5137.0	ug/L	5137.0 ppb	14:49:48
3	K 766.490 Radial†	13008.8	11812.4	5119.3	ug/L	5119.3 ppb	14:49:28
3	Mg 279.077 IEC†	65.2	66.4	5266.1	ug/L	5266.1 ppb	14:49:48
3	Na 589.592 Radial†	3500.5	3745.4	10127	ug/L	10127 ppb	14:49:28
3	Sr 421.552†	33740.1	34452.0	530.74	ug/L	530.74 ppb	14:49:28
3	Sc 361.383	1058649.0	1058649.0	99.789	%		14:50:52
3	Y 371.029	841526.8	841526.8	98.630	%		14:50:52
3	Ag 328.068†	126556.5	126184.9	502.61	ug/L	502.61 ppb	14:50:52
3	As 188.979†	2067.1	2108.3	498.11	ug/L	498.11 ppb	14:51:12
3	B 249.677†	31071.1	31518.1	489.29	ug/L	489.29 ppb	14:50:52
3	Ba 233.527†	97563.9	97745.5	495.96	ug/L	495.96 ppb	14:50:52
3	Be 313.107†	1581052.4	1591704.4	496.08	ug/L	496.08 ppb	14:50:52
3	Cd 226.502†	66155.8	66573.0	497.64	ug/L	497.64 ppb	14:50:52
3	Co 228.616†	38962.9	39135.5	487.69	ug/L	487.69 ppb	14:51:12
3	Cr 267.716†	57794.8	57945.3	494.22	ug/L	494.22 ppb	14:50:52
3	Cu 324.752†	210072.8	200324.8	494.55	ug/L	494.55 ppb	14:50:52
3	Mn 257.610†	626128.3	626622.3	495.77	ug/L	495.77 ppb	14:50:52
3	Mo 202.031†	12621.3	12616.2	505.34	ug/L	505.34 ppb	14:51:12
3	Ni 231.604†	30683.7	30600.2	490.14	ug/L	490.14 ppb	14:51:12
3	P 214.914†	7387.7	7066.4	2422.3	ug/L	2422.3 ppb	14:51:12
3	Pb 220.353†	6644.7	6687.8	502.68	ug/L	502.68 ppb	14:51:12
3	S 181.975 Axial†	1254.7	1189.5	1005.9	ug/L	1005.9 ppb	14:51:12
3	Sb 206.836†	2576.1	2536.1	504.89	ug/L	504.89 ppb	14:51:12
3	Se 196.026†	1509.7	1534.5	518.90	ug/L	518.90 ppb	14:51:12
3	Si 251.611†	122635.6	122334.2	2512.3	ug/L	2512.3 ppb	14:50:52
3	Sn 189.927†	4780.2	4784.8	498.13	ug/L	498.13 ppb	14:51:12
3	Ti 334.940†	379019.7	380928.6	498.61	ug/L	498.61 ppb	14:50:52
3	Tl 190.801†	2889.3	2956.8	500.68	ug/L	500.68 ppb	14:51:12
3	U 409.014†	15553.0	19420.5	480.27	ug/L	480.27 ppb	14:50:52
3	V 292.402†	84924.5	86756.4	498.05	ug/L	498.05 ppb	14:50:52
3	Zn 213.857†	89838.3	88905.4	491.88	ug/L	491.88 ppb	14:50:52
3	SiO2†	123331.7	122989.5	5408.2	ug/L	5408.2 ppb	14:51:27

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1060444.2	99.959	%	0.5987				0.60%
Sc Radial	5519.7	99.2	%	2.23				2.25%
Y 371.029	843098.9	98.814	%	0.6338				0.64%
Y RADIAL	4795.3	99.58	%	2.312				2.32%
Ag 328.068†	126100.1	502.23	ug/L	0.878	502.23	ppb	0.878	0.17%
QC value within limits for Ag 328.068 Recovery = 100.45%								
Al 396.153Radial†	5401.7	4895.3	ug/L	19.99	4895.3	ppb	19.99	0.41%
QC value within limits for Al 396.153Radial Recovery = 97.91%								
As 188.979†	2109.1	498.28	ug/L	3.254	498.28	ppb	3.254	0.65%
QC value within limits for As 188.979 Recovery = 99.66%								
B 249.677†	31443.2	488.14	ug/L	1.360	488.14	ppb	1.360	0.28%
QC value within limits for B 249.677 Recovery = 97.63%								
Ba 233.527†	97857.7	496.53	ug/L	0.924	496.53	ppb	0.924	0.19%
QC value within limits for Ba 233.527 Recovery = 99.31%								
Be 313.107†	1593269.0	496.56	ug/L	0.429	496.56	ppb	0.429	0.09%
QC value within limits for Be 313.107 Recovery = 99.31%								
Ca 317.933Radial†	1999.8	4981.2	ug/L	124.51	4981.2	ppb	124.51	2.50%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.62%
Cd 226.502†          66560.8      497.56 ug/L        0.976      497.56 ppb        0.976   0.20%
   QC value within limits for Cd 226.502  Recovery = 99.51%
Co 228.616†          39079.1      486.99 ug/L        3.717      486.99 ppb        3.717   0.76%
   QC value within limits for Co 228.616  Recovery = 97.40%
Cr 267.716†          57928.0      494.08 ug/L        0.153      494.08 ppb        0.153   0.03%
   QC value within limits for Cr 267.716  Recovery = 98.82%
Cu 324.752†         200294.3      494.47 ug/L        0.442      494.47 ppb        0.442   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.89%
Fe 238.204 Radial†     142.6      5017.1 ug/L       127.10      5017.1 ppb       127.10   2.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.34%
K 766.490 Radial†    11808.7      5117.6 ug/L        17.20      5117.6 ppb        17.20   0.34%
   QC value within limits for K 766.490 Radial  Recovery = 102.35%
Mg 279.077 IEC†         64.0      5076.2 ug/L       167.87      5076.2 ppb       167.87   3.31%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.52%
Mn 257.610†         627186.6      496.21 ug/L        0.573      496.21 ppb        0.573   0.12%
   QC value within limits for Mn 257.610  Recovery = 99.24%
Mo 202.031†          12585.1      504.09 ug/L        3.856      504.09 ppb        3.856   0.76%
   QC value within limits for Mo 202.031  Recovery = 100.82%
Na 589.592 Radial†    3776.0       10210 ug/L         71.9       10210 ppb         71.9   0.70%
   QC value within limits for Na 589.592 Radial  Recovery = 102.10%
Ni 231.604†          30557.2      489.45 ug/L        3.673      489.45 ppb        3.673   0.75%
   QC value within limits for Ni 231.604  Recovery = 97.89%
P 214.914†            7054.1      2418.1 ug/L        19.82      2418.1 ppb        19.82   0.82%
   QC value within limits for P 214.914  Recovery = 96.72%
Pb 220.353†           6669.9      501.35 ug/L        2.283      501.35 ppb        2.283   0.46%
   QC value within limits for Pb 220.353  Recovery = 100.27%
S 181.975 Axial†      1185.5      1002.5 ug/L        12.05      1002.5 ppb        12.05   1.20%
   QC value within limits for S 181.975 Axial  Recovery = 100.25%
Sb 206.836†           2532.4      504.14 ug/L        3.715      504.14 ppb        3.715   0.74%
   QC value within limits for Sb 206.836  Recovery = 100.83%
Se 196.026†           1527.6      516.24 ug/L        3.717      516.24 ppb        3.717   0.72%
   QC value within limits for Se 196.026  Recovery = 103.25%
Si 251.611†         122430.3      2514.3 ug/L         3.52      2514.3 ppb         3.52   0.14%
   QC value within limits for Si 251.611  Recovery = 100.57%
Sn 189.927†           4783.6      498.00 ug/L        2.905      498.00 ppb        2.905   0.58%
   QC value within limits for Sn 189.927  Recovery = 99.60%
Sr 421.552†          34550.9      532.27 ug/L        1.873      532.27 ppb        1.873   0.35%
   QC value within limits for Sr 421.552  Recovery = 106.45%
Ti 334.940†         381121.0      498.86 ug/L        0.427      498.86 ppb        0.427   0.09%
   QC value within limits for Ti 334.940  Recovery = 99.77%
Tl 190.801†           2936.9      497.33 ug/L        4.557      497.33 ppb        4.557   0.92%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†           19307.8      477.49 ug/L        3.078      477.49 ppb        3.078   0.64%
   QC value within limits for U 409.014  Recovery = 95.50%
V 292.402†           86723.7      497.86 ug/L        0.468      497.86 ppb        0.468   0.09%
   QC value within limits for V 292.402  Recovery = 99.57%
Zn 213.857†          89042.3      492.67 ug/L        1.200      492.67 ppb        1.200   0.24%
   QC value within limits for Zn 213.857  Recovery = 98.53%
SiO2†               123462.7      5429.2 ug/L        42.40      5429.2 ppb        42.40   0.78%
   QC value within limits for SiO2  Recovery = 101.53%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 14:53:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5472.3	5472.3	98.3	%			14:55:30
1	Y RADIAL	4760.3	4760.3	98.85	%			14:55:30
1	Al 396.153Radial†	-81.1	9.7	8.8083	ug/L	8.8083	ppb	14:55:30
1	Ca 317.933Radial†	30.8	14.4	35.761	ug/L	35.761	ppb	14:55:50
1	Fe 238.204 Radial†	0.5	0.2	5.6899	ug/L	5.6899	ppb	14:55:50
1	K 766.490 Radial†	1569.9	123.4	53.550	ug/L	53.550	ppb	14:55:30
1	Mg 279.077 IEC†	-0.7	-0.9	-68.768	ug/L	-68.768	ppb	14:55:50
1	Na 589.592 Radial†	-177.5	-10.1	-27.266	ug/L	-27.266	ppb	14:55:50
1	Sr 421.552†	35.3	30.4	0.4686	ug/L	0.4686	ppb	14:55:50
1	Sc 361.383	1053868.2	1053868.2	99.339	%			14:56:47
1	Y 371.029	847547.6	847547.6	99.336	%			14:56:47
1	Ag 328.068†	611.0	-23.5	-0.0912	ug/L	-0.0912	ppb	14:56:52
1	As 188.979†	-59.7	-23.1	-5.4331	ug/L	-5.4331	ppb	14:57:12
1	B 249.677†	-115.7	265.0	4.1295	ug/L	4.1295	ppb	14:56:52
1	Ba 233.527†	39.3	15.3	0.0772	ug/L	0.0772	ppb	14:57:12
1	Be 313.107†	-7467.3	-200.8	-0.0623	ug/L	-0.0623	ppb	14:56:52
1	Cd 226.502†	-282.8	-7.0	-0.0528	ug/L	-0.0528	ppb	14:57:12
1	Co 228.616†	-98.5	-8.7	-0.1082	ug/L	-0.1082	ppb	14:57:12
1	Cr 267.716†	-17.9	10.6	0.0901	ug/L	0.0901	ppb	14:57:12
1	Cu 324.752†	10191.0	67.6	0.1671	ug/L	0.1671	ppb	14:56:52
1	Mn 257.610†	957.5	136.8	0.1102	ug/L	0.1102	ppb	14:57:12
1	Mo 202.031†	35.6	4.1	0.1634	ug/L	0.1634	ppb	14:57:12
1	Ni 231.604†	164.1	16.9	0.2714	ug/L	0.2714	ppb	14:57:12
1	P 214.914†	332.8	-1.9	-0.6902	ug/L	-0.6902	ppb	14:57:12
1	Pb 220.353†	-0.7	28.4	2.1276	ug/L	2.1276	ppb	14:57:12
1	S 181.975 Axial†	64.3	-3.1	-2.6380	ug/L	-2.6380	ppb	14:57:12
1	Sb 206.836†	50.1	5.0	0.9831	ug/L	0.9831	ppb	14:57:12
1	Se 196.026†	-20.4	1.0	0.3567	ug/L	0.3567	ppb	14:57:12
1	Si 251.611†	771.9	216.9	4.4555	ug/L	4.4555	ppb	14:57:12
1	Sn 189.927†	3.4	-2.0	-0.2090	ug/L	-0.2090	ppb	14:57:12
1	Ti 334.940†	-1048.8	53.5	0.0729	ug/L	0.0729	ppb	14:56:52
1	Tl 190.801†	-48.9	12.2	2.0617	ug/L	2.0617	ppb	14:57:12
1	U 409.014†	-3860.6	-51.6	-1.2803	ug/L	-1.2803	ppb	14:56:47
1	V 292.402†	-1672.4	-30.8	-0.1770	ug/L	-0.1770	ppb	14:56:52
1	Zn 213.857†	1170.2	55.5	0.3100	ug/L	0.3100	ppb	14:57:12
1	SiO2†	796.6	199.5	8.7725	ug/L	8.7725	ppb	14:58:18
2	Sc Radial	5640.5	5640.5	101	%			14:55:55
2	Y RADIAL	4909.7	4909.7	102.0	%			14:55:55
2	Al 396.153Radial†	-62.3	30.8	28.013	ug/L	28.013	ppb	14:55:55
2	Ca 317.933Radial†	30.3	12.9	32.245	ug/L	32.245	ppb	14:56:15
2	Fe 238.204 Radial†	-0.5	-0.8	-29.760	ug/L	-29.760	ppb	14:56:15
2	K 766.490 Radial†	1516.6	23.1	10.017	ug/L	10.017	ppb	14:55:55
2	Mg 279.077 IEC†	0.3	0.1	8.2285	ug/L	8.2285	ppb	14:56:15
2	Na 589.592 Radial†	-177.1	-4.3	-11.518	ug/L	-11.518	ppb	14:56:15
2	Sr 421.552†	6.1	0.6	0.0086	ug/L	0.0086	ppb	14:56:15
2	Sc 361.383	1063342.1	1063342.1	100.23	%			14:57:17
2	Y 371.029	854778.4	854778.4	100.18	%			14:57:17
2	Ag 328.068†	643.4	3.4	0.0032	ug/L	0.0032	ppb	14:57:22
2	As 188.979†	-51.2	-14.2	-3.3303	ug/L	-3.3303	ppb	14:57:42
2	B 249.677†	-29.0	352.6	5.4981	ug/L	5.4981	ppb	14:57:22
2	Ba 233.527†	26.1	1.8	0.0085	ug/L	0.0085	ppb	14:57:42
2	Be 313.107†	-7456.4	-123.0	-0.0382	ug/L	-0.0382	ppb	14:57:22
2	Cd 226.502†	-288.4	-10.1	-0.0717	ug/L	-0.0717	ppb	14:57:42
2	Co 228.616†	-70.3	20.3	0.2517	ug/L	0.2517	ppb	14:57:42
2	Cr 267.716†	-12.6	16.0	0.1359	ug/L	0.1359	ppb	14:57:42
2	Cu 324.752†	10255.5	40.5	0.0983	ug/L	0.0983	ppb	14:57:22
2	Mn 257.610†	981.3	152.0	0.1161	ug/L	0.1161	ppb	14:57:42
2	Mo 202.031†	22.2	-9.6	-0.3874	ug/L	-0.3874	ppb	14:57:42
2	Ni 231.604†	156.9	8.2	0.1321	ug/L	0.1321	ppb	14:57:42

2	P 214.914†	349.2	11.4	4.0629	ug/L	4.0629 ppb	14:57:42
2	Pb 220.353†	-26.9	2.3	0.1761	ug/L	0.1761 ppb	14:57:42
2	S 181.975 Axial†	69.4	1.4	1.1802	ug/L	1.1802 ppb	14:57:42
2	Sb 206.836†	51.9	6.4	1.2457	ug/L	1.2457 ppb	14:57:42
2	Se 196.026†	-27.8	-6.2	-2.1074	ug/L	-2.1074 ppb	14:57:42
2	Si 251.611†	798.7	236.8	4.8879	ug/L	4.8879 ppb	14:57:42
2	Sn 189.927†	9.7	4.2	0.4366	ug/L	0.4366 ppb	14:57:42
2	Ti 334.940†	-1103.0	8.8	0.0133	ug/L	0.0133 ppb	14:57:22
2	Tl 190.801†	-47.5	14.0	2.3645	ug/L	2.3645 ppb	14:57:42
2	U 409.014†	-3819.8	23.8	0.5932	ug/L	0.5932 ppb	14:57:17
2	V 292.402†	-1637.6	19.0	0.1084	ug/L	0.1084 ppb	14:57:22
2	Zn 213.857†	1144.2	19.2	0.1089	ug/L	0.1089 ppb	14:57:42
2	SiO2†	764.0	159.9	7.0706	ug/L	7.0706 ppb	14:58:23
3	Sc Radial	5502.0	5502.0	98.9	%		14:56:20
3	Y RADIAL	4784.6	4784.6	99.35	%		14:56:20
3	Al 396.153Radial†	-79.0	12.3	11.188	ug/L	11.188 ppb	14:56:20
3	Ca 317.933Radial†	25.1	8.5	21.069	ug/L	21.069 ppb	14:56:40
3	Fe 238.204 Radial†	1.2	0.9	30.106	ug/L	30.106 ppb	14:56:40
3	K 766.490 Radial†	1574.7	119.6	51.922	ug/L	51.922 ppb	14:56:20
3	Mg 279.077 IEC†	2.6	2.5	197.62	ug/L	197.62 ppb	14:56:40
3	Na 589.592 Radial†	-180.3	-11.9	-32.235	ug/L	-32.235 ppb	14:56:40
3	Sr 421.552†	15.5	10.2	0.1562	ug/L	0.1562 ppb	14:56:40
3	Sc 361.383	1051449.5	1051449.5	99.111	%		14:57:47
3	Y 371.029	846638.2	846638.2	99.229	%		14:57:47
3	Ag 328.068†	588.3	-45.1	-0.1673	ug/L	-0.1673 ppb	14:57:52
3	As 188.979†	-54.8	-18.3	-4.3026	ug/L	-4.3026 ppb	14:58:13
3	B 249.677†	-85.6	295.2	4.5964	ug/L	4.5964 ppb	14:57:52
3	Ba 233.527†	31.6	7.6	0.0395	ug/L	0.0395 ppb	14:58:13
3	Be 313.107†	-7461.5	-212.2	-0.0661	ug/L	-0.0661 ppb	14:57:52
3	Cd 226.502†	-273.8	1.4	0.0072	ug/L	0.0072 ppb	14:58:13
3	Co 228.616†	-94.2	-4.7	-0.0576	ug/L	-0.0576 ppb	14:58:13
3	Cr 267.716†	-11.6	16.9	0.1449	ug/L	0.1449 ppb	14:58:13
3	Cu 324.752†	10178.7	78.7	0.1959	ug/L	0.1959 ppb	14:57:52
3	Mn 257.610†	987.9	169.8	0.1343	ug/L	0.1343 ppb	14:58:13
3	Mo 202.031†	39.6	8.2	0.3293	ug/L	0.3293 ppb	14:58:13
3	Ni 231.604†	164.9	18.1	0.2903	ug/L	0.2903 ppb	14:58:13
3	P 214.914†	362.0	28.3	9.9383	ug/L	9.9383 ppb	14:58:13
3	Pb 220.353†	-9.5	19.5	1.4654	ug/L	1.4654 ppb	14:58:13
3	S 181.975 Axial†	64.0	-3.2	-2.7432	ug/L	-2.7432 ppb	14:58:13
3	Sb 206.836†	52.1	7.2	1.4070	ug/L	1.4070 ppb	14:58:13
3	Se 196.026†	-24.8	-3.4	-0.9905	ug/L	-0.9905 ppb	14:58:13
3	Si 251.611†	779.4	226.3	4.6478	ug/L	4.6478 ppb	14:58:13
3	Sn 189.927†	2.2	-3.2	-0.3355	ug/L	-0.3355 ppb	14:58:13
3	Ti 334.940†	-1145.5	-46.5	-0.0588	ug/L	-0.0588 ppb	14:57:52
3	Tl 190.801†	-50.5	10.5	1.7647	ug/L	1.7647 ppb	14:58:13
3	U 409.014†	-3862.5	-62.4	-1.5531	ug/L	-1.5531 ppb	14:57:47
3	V 292.402†	-1624.6	13.6	0.0773	ug/L	0.0773 ppb	14:57:52
3	Zn 213.857†	1159.9	47.9	0.2551	ug/L	0.2551 ppb	14:58:13
3	SiO2†	806.9	211.8	9.3098	ug/L	9.3098 ppb	14:58:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056219.9	99.560	%	0.5925				0.60%
Sc Radial	5538.3	99.5	%	1.61				1.62%
Y 371.029	849654.7	99.583	%	0.5228				0.52%
Y RADIAL	4818.2	100.1	%	1.66				1.66%
Ag 328.068†	-21.7	-0.0851	ug/L	0.08542	-0.0851	ppb	0.08542	100.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.6	16.003	ug/L	10.4684	16.003	ppb	10.4684	65.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-18.6	-4.3553	ug/L	1.05239	-4.3553	ppb	1.05239	24.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	304.2	4.7413	ug/L	0.69569	4.7413	ppb	0.69569	14.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.2	0.0417	ug/L	0.03442	0.0417	ppb	0.03442	82.50%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-178.7	-0.0555	ug/L	0.01513	-0.0555	ppb	0.01513	27.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.9	29.692	ug/L	7.6715	29.692	ppb	7.6715	25.84%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -5.2     -0.0391 ug/L       0.04120     -0.0391 ppb        0.04120 105.48%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 2.3      0.0286 ug/L       0.19481      0.0286 ppb        0.19481 680.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.5      0.1236 ug/L       0.02938      0.1236 ppb        0.02938  23.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                62.3      0.1538 ug/L       0.05016      0.1538 ppb        0.05016  32.62%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.1      2.0121 ug/L      30.10210      2.0121 ppb       30.10210 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          88.7     38.496 ug/L       24.6777     38.496 ppb        24.6777  64.10%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.6     45.694 ug/L      137.0902     45.694 ppb       137.0902 300.02%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               152.9      0.1202 ug/L       0.01255      0.1202 ppb        0.01255  10.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 0.9      0.0351 ug/L       0.37516      0.0351 ppb        0.37516 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -8.8    -23.673 ug/L       10.8153    -23.673 ppb        10.8153  45.69%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.4      0.2313 ug/L       0.08644      0.2313 ppb        0.08644  37.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 12.6      4.4370 ug/L       5.32411      4.4370 ppb        5.32411 119.99%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                16.7      1.2563 ug/L       0.99239      1.2563 ppb        0.99239  78.99%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -1.7    -1.4003 ug/L       2.23542    -1.4003 ppb        2.23542 159.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.2      1.2119 ug/L       0.21396      1.2119 ppb        0.21396  17.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.8    -0.9137 ug/L       1.23385    -0.9137 ppb        1.23385 135.04%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               226.7      4.6637 ug/L       0.21666      4.6637 ppb        0.21666   4.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -0.4    -0.0360 ug/L       0.41410     -0.0360 ppb        0.41410 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                13.7      0.2112 ug/L       0.23488      0.2112 ppb        0.23488 111.23%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 5.2      0.0091 ug/L       0.06596      0.0091 ppb        0.06596 721.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                12.2      2.0636 ug/L       0.29992      2.0636 ppb        0.29992  14.53%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -30.1    -0.7468 ug/L       1.16839    -0.7468 ppb        1.16839 156.46%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  0.6      0.0029 ug/L       0.15653      0.0029 ppb        0.15653 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                40.9      0.2247 ug/L       0.10391      0.2247 ppb        0.10391  46.25%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     190.4      8.3843 ug/L       1.16902      8.3843 ppb        1.16902  13.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 12
Sample ID: 232591001|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 45
Date Collected: 7/8/2009 15:07:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232591001|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5605.5	5605.5	101	%			15:09:38
1	Y RADIAL	5746.1	5746.1	119.3	%			15:09:38
1	Al 396.153Radial†	42726.9	42508.8	38693	ug/L	38693	ppb	15:09:38
1	Ca 317.933Radial†	3465.7	3423.6	8527.7	ug/L	8527.7	ppb	15:09:58
1	Fe 238.204 Radial†	4118.4	4088.2	143420	ug/L	143420	ppb	15:09:58
1	K 766.490 Radial†	15294.7	13710.5	5975.4	ug/L	5975.4	ppb	15:09:38
1	Mg 279.077 IEC†	83.9	83.1	6460.9	ug/L	6460.9	ppb	15:09:58
1	Na 589.592 Radial†	129.5	299.0	808.47	ug/L	808.47	ppb	15:09:58
1	Sr 421.552†	5950.8	5902.2	90.853	ug/L	90.853	ppb	15:09:38
1	Sc 361.383	1072500.0	1072500.0	101.10	%			15:11:02
1	Y 371.029	1002350.0	1002350.0	117.48	%			15:11:02
1	Ag 328.068†	-9999.2	-10529.4	4.9699	ug/L	4.9699	ppb	15:11:02
1	As 188.979†	5.2	42.1	55.401	ug/L	55.401	ppb	15:11:23
1	B 249.677†	1358.4	1725.2	7.6924	ug/L	7.6924	ppb	15:11:02
1	Ba 233.527†	162063.7	160283.9	814.88	ug/L	814.88	ppb	15:11:02
1	Be 313.107†	-10641.9	-3210.4	5.1053	ug/L	5.1053	ppb	15:11:02
1	Cd 226.502†	1980.8	2237.0	-0.1597	ug/L	-0.1597	ppb	15:11:23
1	Co 228.616†	5290.5	5323.6	59.016	ug/L	59.016	ppb	15:11:23
1	Cr 267.716†	15702.3	15560.8	135.57	ug/L	135.57	ppb	15:11:23
1	Cu 324.752†	51146.4	40401.1	107.97	ug/L	107.97	ppb	15:11:02
1	Mn 257.610†	8555072.2	8461575.8	6705.6	ug/L	6705.6	ppb	15:10:56
1	Mo 202.031†	234.9	200.6	17.872	ug/L	17.872	ppb	15:11:23
1	Ni 231.604†	5316.2	5110.3	81.864	ug/L	81.864	ppb	15:11:23
1	P 214.914†	4464.8	4079.5	1323.1	ug/L	1323.1	ppb	15:11:23
1	Pb 220.353†	1056.4	1074.1	74.515	ug/L	74.515	ppb	15:11:23
1	S 181.975 Axial†	632.7	558.0	464.71	ug/L	464.71	ppb	15:11:23
1	Sb 206.836†	89.8	43.4	-0.4024	ug/L	-0.4024	ppb	15:11:23
1	Se 196.026†	-1476.2	-1438.6	38.141	ug/L	38.141	ppb	15:11:23
1	Si 251.611†	573603.3	566829.9	11694	ug/L	11694	ppb	15:11:02
1	Sn 189.927†	20.0	14.3	4.3254	ug/L	4.3254	ppb	15:11:23
1	Ti 334.940†	2026899.2	2006052.9	2626.6	ug/L	2626.6	ppb	15:11:02
1	Tl 190.801†	-396.4	-330.7	-4.3482	ug/L	-4.3482	ppb	15:11:23
1	U 409.014†	-11905.6	-7941.9	-214.93	ug/L	-214.93	ppb	15:11:02
1	V 292.402†	20866.3	22293.1	103.76	ug/L	103.76	ppb	15:11:23
1	Zn 213.857†	92285.1	90163.1	487.17	ug/L	487.17	ppb	15:11:02
1	SiO2†	577428.4	570571.3	25207	ug/L	25207	ppb	15:12:34
2	Sc Radial	5672.0	5672.0	102	%			15:10:03
2	Y RADIAL	5767.6	5767.6	119.8	%			15:10:03
2	Al 396.153Radial†	43018.5	42298.1	38501	ug/L	38501	ppb	15:10:03
2	Ca 317.933Radial†	3421.2	3339.7	8318.6	ug/L	8318.6	ppb	15:10:23
2	Fe 238.204 Radial†	4085.4	4007.9	140600	ug/L	140600	ppb	15:10:23
2	K 766.490 Radial†	15431.1	13666.5	5954.9	ug/L	5954.9	ppb	15:10:03
2	Mg 279.077 IEC†	82.0	80.3	6239.0	ug/L	6239.0	ppb	15:10:23
2	Na 589.592 Radial†	133.4	301.3	814.78	ug/L	814.78	ppb	15:10:23
2	Sr 421.552†	6004.7	5885.8	90.603	ug/L	90.603	ppb	15:10:03
2	Sc 361.383	1079943.6	1079943.6	101.80	%			15:11:35
2	Y 371.029	1008892.9	1008892.9	118.25	%			15:11:35
2	Ag 328.068†	-10115.0	-10575.1	3.8807	ug/L	3.8807	ppb	15:11:35
2	As 188.979†	6.6	43.4	55.124	ug/L	55.124	ppb	15:11:55
2	B 249.677†	1462.4	1818.1	9.5155	ug/L	9.5155	ppb	15:11:35
2	Ba 233.527†	163213.4	160308.4	814.94	ug/L	814.94	ppb	15:11:35
2	Be 313.107†	-10895.1	-3386.6	5.0463	ug/L	5.0463	ppb	15:11:35
2	Cd 226.502†	1960.1	2203.2	-0.0807	ug/L	-0.0807	ppb	15:11:55
2	Co 228.616†	5286.6	5283.7	58.561	ug/L	58.561	ppb	15:11:55
2	Cr 267.716†	15670.0	15422.0	134.33	ug/L	134.33	ppb	15:11:55
2	Cu 324.752†	51368.2	40270.3	107.49	ug/L	107.49	ppb	15:11:35
2	Mn 257.610†	8547750.1	8396055.1	6653.4	ug/L	6653.4	ppb	15:11:29
2	Mo 202.031†	216.4	180.8	16.888	ug/L	16.888	ppb	15:11:55
2	Ni 231.604†	5249.4	5008.5	80.233	ug/L	80.233	ppb	15:11:55

2	P 214.914†	4482.7	4066.7	1320.8 ug/L	1320.8 ppb	15:11:55
2	Pb 220.353†	1028.8	1039.7	72.165 ug/L	72.165 ppb	15:11:55
2	S 181.975 Axial†	641.7	562.5	468.58 ug/L	468.58 ppb	15:11:55
2	Sb 206.836†	106.2	58.9	2.5965 ug/L	2.5965 ppb	15:11:55
2	Se 196.026†	-1457.9	-1410.6	37.342 ug/L	37.342 ppb	15:11:55
2	Si 251.611†	577173.3	566426.1	11686 ug/L	11686 ppb	15:11:35
2	Sn 189.927†	17.6	11.8	3.9996 ug/L	3.9996 ppb	15:11:55
2	Ti 334.940†	2039579.3	2004689.9	2624.8 ug/L	2624.8 ppb	15:11:35
2	Tl 190.801†	-399.0	-330.6	-4.6322 ug/L	-4.6322 ppb	15:11:55
2	U 409.014†	-11892.6	-7848.0	-212.25 ug/L	-212.25 ppb	15:11:35
2	V 292.402†	20826.1	22111.4	103.11 ug/L	103.11 ppb	15:11:55
2	Zn 213.857†	93061.2	90296.3	488.24 ug/L	488.24 ppb	15:11:35
2	SiO2†	574120.4	563384.8	24889 ug/L	24889 ppb	15:12:39
3	Sc Radial	5609.6	5609.6	101 %		15:10:28
3	Y RADIAL	5732.3	5732.3	119.0 %		15:10:28
3	Al 396.153Radial†	42685.0	42436.4	38627 ug/L	38627 ppb	15:10:28
3	Ca 317.933Radial†	3428.6	3384.3	8429.8 ug/L	8429.8 ppb	15:10:48
3	Fe 238.204 Radial†	4088.9	4055.9	142290 ug/L	142290 ppb	15:10:48
3	K 766.490 Radial†	15290.2	13695.0	5967.5 ug/L	5967.5 ppb	15:10:28
3	Mg 279.077 IEC†	82.2	81.3	6319.4 ug/L	6319.4 ppb	15:10:48
3	Na 589.592 Radial†	129.2	298.6	807.44 ug/L	807.44 ppb	15:10:48
3	Sr 421.552†	5972.9	5919.7	91.124 ug/L	91.124 ppb	15:10:28
3	Sc 361.383	1074739.6	1074739.6	101.31 %		15:12:08
3	Y 371.029	1002958.4	1002958.4	117.55 %		15:12:08
3	Ag 328.068†	-10031.7	-10541.0	4.5634 ug/L	4.5634 ppb	15:12:08
3	As 188.979†	11.8	48.5	56.713 ug/L	56.713 ppb	15:12:28
3	B 249.677†	1422.3	1785.5	8.7820 ug/L	8.7820 ppb	15:12:08
3	Ba 233.527†	162765.0	160642.1	816.67 ug/L	816.67 ppb	15:12:08
3	Be 313.107†	-10599.3	-3146.4	5.1336 ug/L	5.1336 ppb	15:12:08
3	Cd 226.502†	1998.1	2250.0	0.0710 ug/L	0.0710 ppb	15:12:28
3	Co 228.616†	5322.9	5344.7	59.287 ug/L	59.287 ppb	15:12:28
3	Cr 267.716†	15717.9	15543.9	135.40 ug/L	135.40 ppb	15:12:28
3	Cu 324.752†	51040.6	40191.2	107.39 ug/L	107.39 ppb	15:12:08
3	Mn 257.610†	8615421.9	8503513.3	6738.6 ug/L	6738.6 ppb	15:12:02
3	Mo 202.031†	226.7	192.0	17.452 ug/L	17.452 ppb	15:12:28
3	Ni 231.604†	5277.2	5060.9	81.072 ug/L	81.072 ppb	15:12:28
3	P 214.914†	4472.7	4078.1	1323.6 ug/L	1323.6 ppb	15:12:28
3	Pb 220.353†	1058.0	1073.5	74.562 ug/L	74.562 ppb	15:12:28
3	S 181.975 Axial†	627.5	551.6	459.32 ug/L	459.32 ppb	15:12:28
3	Sb 206.836†	88.7	42.1	-0.6649 ug/L	-0.6649 ppb	15:12:28
3	Se 196.026†	-1445.0	-1404.8	45.154 ug/L	45.154 ppb	15:12:28
3	Si 251.611†	575327.7	567349.7	11705 ug/L	11705 ppb	15:12:08
3	Sn 189.927†	33.6	27.7	5.6921 ug/L	5.6921 ppb	15:12:28
3	Ti 334.940†	2033937.8	2008822.8	2630.3 ug/L	2630.3 ppb	15:12:08
3	Tl 190.801†	-404.2	-337.6	-5.3069 ug/L	-5.3069 ppb	15:12:28
3	U 409.014†	-11941.9	-7953.2	-215.07 ug/L	-215.07 ppb	15:12:08
3	V 292.402†	20975.7	22358.0	104.28 ug/L	104.28 ppb	15:12:28
3	Zn 213.857†	92567.2	90251.3	487.80 ug/L	487.80 ppb	15:12:08
3	SiO2†	571480.4	563509.8	24895 ug/L	24895 ppb	15:12:45

Mean Data: 232591001|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1075727.7	101.40	%	0.360				0.36%
Sc Radial	5629.0	101	%	0.7				0.66%
Y 371.029	1004733.8	117.76	%	0.424				0.36%
Y RADIAL	5748.6	119.4	%	0.37				0.31%
Ag 328.068†	-10548.5	4.4713	ug/L	0.55040	4.4713	ppb	0.55040	12.31%
Al 396.153Radial†	42414.4	38607	ug/L	97.4	38607	ppb	97.4	0.25%
As 188.979†	44.7	55.746	ug/L	0.8488	55.746	ppb	0.8488	1.52%
B 249.677†	1776.2	8.6633	ug/L	0.91735	8.6633	ppb	0.91735	10.59%
Ba 233.527†	160411.5	815.50	ug/L	1.016	815.50	ppb	1.016	0.12%
Be 313.107†	-3247.8	5.0951	ug/L	0.04451	5.0951	ppb	0.04451	0.87%
Ca 317.933Radial†	3382.5	8425.4	ug/L	104.62	8425.4	ppb	104.62	1.24%
Cd 226.502†	2230.0	-0.0565	ug/L	0.11727	-0.0565	ppb	0.11727	207.71%
Co 228.616†	5317.4	58.955	ug/L	0.3665	58.955	ppb	0.3665	0.62%
Cr 267.716†	15508.9	135.10	ug/L	0.673	135.10	ppb	0.673	0.50%
Cu 324.752†	40287.5	107.62	ug/L	0.312	107.62	ppb	0.312	0.29%
Fe 238.204 Radial†	4050.6	142100	ug/L	1417.2	142100	ppb	1417.2	1.00%
K 766.490 Radial†	13690.7	5965.9	ug/L	10.36	5965.9	ppb	10.36	0.17%

Mg 279.077 IEC†	81.6	6339.8	ug/L	112.35	6339.8	ppb	112.35	1.77%
Mn 257.610†	8453714.7	6699.2	ug/L	42.93	6699.2	ppb	42.93	0.64%
Mo 202.031†	191.2	17.404	ug/L	0.4939	17.404	ppb	0.4939	2.84%
Na 589.592 Radial†	299.7	810.23	ug/L	3.975	810.23	ppb	3.975	0.49%
Ni 231.604†	5059.9	81.056	ug/L	0.8157	81.056	ppb	0.8157	1.01%
P 214.914†	4074.8	1322.5	ug/L	1.48	1322.5	ppb	1.48	0.11%
Pb 220.353†	1062.4	73.747	ug/L	1.3708	73.747	ppb	1.3708	1.86%
S 181.975 Axial†	557.4	464.20	ug/L	4.654	464.20	ppb	4.654	1.00%
Sb 206.836†	48.1	0.5097	ug/L	1.81198	0.5097	ppb	1.81198	355.47%
Se 196.026†	-1418.0	40.212	ug/L	4.2982	40.212	ppb	4.2982	10.69%
Si 251.611†	566868.6	11695	ug/L	9.5	11695	ppb	9.5	0.08%
Sn 189.927†	18.0	4.6723	ug/L	0.89802	4.6723	ppb	0.89802	19.22%
Sr 421.552†	5902.5	90.860	ug/L	0.2609	90.860	ppb	0.2609	0.29%
Ti 334.940†	2006521.9	2627.3	ug/L	2.76	2627.3	ppb	2.76	0.11%
Tl 190.801†	-333.0	-4.7625	ug/L	0.49244	-4.7625	ppb	0.49244	10.34%
U 409.014†	-7914.4	-214.09	ug/L	1.589	-214.09	ppb	1.589	0.74%
V 292.402†	22254.2	103.72	ug/L	0.584	103.72	ppb	0.584	0.56%
Zn 213.857†	90236.9	487.73	ug/L	0.536	487.73	ppb	0.536	0.11%
SiO2†	565821.9	24997	ug/L	181.7	24997	ppb	181.7	0.73%

Sequence No.: 13
Sample ID: 1201872899|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 46
Date Collected: 7/8/2009 15:14:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872899|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5642.7	5642.7	101	%			15:16:48
1	Y RADIAL	5772.0	5772.0	119.9	%			15:16:48
1	Al 396.153Radial†	31493.9	31151.3	28355	ug/L	28355	ppb	15:16:48
1	Ca 317.933Radial†	2607.1	2554.2	6362.0	ug/L	6362.0	ppb	15:17:08
1	Fe 238.204 Radial†	2312.8	2280.5	80005	ug/L	80005	ppb	15:17:08
1	K 766.490 Radial†	12221.7	10579.9	4618.1	ug/L	4618.1	ppb	15:16:48
1	Mg 279.077 IEC†	62.5	61.4	4797.3	ug/L	4797.3	ppb	15:17:08
1	Na 589.592 Radial†	95.1	264.2	714.50	ug/L	714.50	ppb	15:17:08
1	Sr 421.552†	4203.3	4139.8	63.721	ug/L	63.721	ppb	15:16:48
1	Sc 361.383	1077997.6	1077997.6	101.61	%			15:18:06
1	Y 371.029	1011721.1	1011721.1	118.58	%			15:18:06
1	Ag 328.068†	-5414.1	-5966.7	2.5865	ug/L	2.5865	ppb	15:18:12
1	As 188.979†	-35.2	2.2	31.880	ug/L	31.880	ppb	15:18:32
1	B 249.677†	794.2	1163.1	7.4507	ug/L	7.4507	ppb	15:18:12
1	Ba 233.527†	92385.6	90894.6	462.14	ug/L	462.14	ppb	15:18:12
1	Be 313.107†	-11434.9	-3937.1	4.3355	ug/L	4.3355	ppb	15:18:12
1	Cd 226.502†	954.0	1216.5	-0.3042	ug/L	-0.3042	ppb	15:18:32
1	Co 228.616†	1926.2	1986.0	18.680	ug/L	18.680	ppb	15:18:32
1	Cr 267.716†	17492.4	17243.3	148.63	ug/L	148.63	ppb	15:18:12
1	Cu 324.752†	59186.3	48055.4	123.19	ug/L	123.19	ppb	15:18:12
1	Mn 257.610†	3471145.0	3415207.6	2709.3	ug/L	2709.3	ppb	15:18:06
1	Mo 202.031†	218.1	182.9	12.810	ug/L	12.810	ppb	15:18:32
1	Ni 231.604†	4935.9	4709.3	75.464	ug/L	75.464	ppb	15:18:32
1	P 214.914†	2732.0	2351.7	757.22	ug/L	757.22	ppb	15:18:32
1	Pb 220.353†	852.6	868.2	63.014	ug/L	63.014	ppb	15:18:32
1	S 181.975 Axial†	440.4	365.5	303.84	ug/L	303.84	ppb	15:18:32
1	Sb 206.836†	106.4	59.3	2.2483	ug/L	2.2483	ppb	15:18:32
1	Se 196.026†	-806.2	-771.8	31.634	ug/L	31.634	ppb	15:18:32
1	Si 251.611†	529721.2	520750.9	10744	ug/L	10744	ppb	15:18:06
1	Sn 189.927†	79.7	73.0	9.2299	ug/L	9.2299	ppb	15:18:32
1	Ti 334.940†	1855685.6	1827332.7	2392.5	ug/L	2392.5	ppb	15:18:06
1	Tl 190.801†	-260.7	-195.2	-5.7602	ug/L	-5.7602	ppb	15:18:32
1	U 409.014†	-12568.6	-8534.3	-221.87	ug/L	-221.87	ppb	15:18:06
1	V 292.402†	16381.7	17774.4	86.973	ug/L	86.973	ppb	15:18:12
1	Zn 213.857†	83128.9	80686.7	441.16	ug/L	441.16	ppb	15:18:12
1	SiO2†	527379.3	518403.9	22903	ug/L	22903	ppb	15:19:41
2	Sc Radial	5682.9	5682.9	102	%			15:17:13
2	Y RADIAL	5838.7	5838.7	121.2	%			15:17:13
2	Al 396.153Radial†	31871.9	31301.6	28492	ug/L	28492	ppb	15:17:13
2	Ca 317.933Radial†	2583.7	2513.1	6259.7	ug/L	6259.7	ppb	15:17:33
2	Fe 238.204 Radial†	2287.3	2239.4	78564	ug/L	78564	ppb	15:17:33
2	K 766.490 Radial†	12345.0	10615.3	4632.4	ug/L	4632.4	ppb	15:17:13
2	Mg 279.077 IEC†	62.4	61.0	4760.7	ug/L	4760.7	ppb	15:17:33
2	Na 589.592 Radial†	92.2	260.7	704.94	ug/L	704.94	ppb	15:17:33
2	Sr 421.552†	4209.3	4116.4	63.361	ug/L	63.361	ppb	15:17:13
2	Sc 361.383	1076250.4	1076250.4	101.45	%			15:18:38
2	Y 371.029	1007927.0	1007927.0	118.13	%			15:18:38
2	Ag 328.068†	-5391.7	-5953.3	2.1827	ug/L	2.1827	ppb	15:18:44
2	As 188.979†	-45.6	-8.0	29.208	ug/L	29.208	ppb	15:19:04
2	B 249.677†	845.3	1214.7	8.4470	ug/L	8.4470	ppb	15:18:44
2	Ba 233.527†	92594.7	91248.2	463.90	ug/L	463.90	ppb	15:18:44
2	Be 313.107†	-11301.2	-3823.6	4.3788	ug/L	4.3788	ppb	15:18:44
2	Cd 226.502†	937.9	1202.2	-0.2419	ug/L	-0.2419	ppb	15:19:04
2	Co 228.616†	1910.7	1973.8	18.540	ug/L	18.540	ppb	15:19:04
2	Cr 267.716†	17452.1	17231.5	148.51	ug/L	148.51	ppb	15:18:44
2	Cu 324.752†	59272.6	48235.0	123.55	ug/L	123.55	ppb	15:18:44
2	Mn 257.610†	3473558.2	3423132.2	2715.4	ug/L	2715.4	ppb	15:18:38
2	Mo 202.031†	203.1	168.5	12.135	ug/L	12.135	ppb	15:19:04
2	Ni 231.604†	4866.9	4649.1	74.499	ug/L	74.499	ppb	15:19:04

2	P 214.914†	2718.0	2342.3	755.03 ug/L	755.03 ppb	15:19:04
2	Pb 220.353†	844.8	861.9	62.701 ug/L	62.701 ppb	15:19:04
2	S 181.975 Axial†	423.8	349.9	290.60 ug/L	290.60 ppb	15:19:04
2	Sb 206.836†	100.3	53.5	1.0368 ug/L	1.0368 ppb	15:19:04
2	Se 196.026†	-792.5	-759.6	30.547 ug/L	30.547 ppb	15:19:04
2	Si 251.611†	530935.7	522794.4	10786 ug/L	10786 ppb	15:18:38
2	Sn 189.927†	69.4	63.0	8.1511 ug/L	8.1511 ppb	15:19:04
2	Ti 334.940†	1855340.3	1829957.1	2396.0 ug/L	2396.0 ppb	15:18:38
2	Tl 190.801†	-253.5	-188.5	-4.5703 ug/L	-4.5703 ppb	15:19:04
2	U 409.014†	-12669.2	-8653.6	-224.65 ug/L	-224.65 ppb	15:18:38
2	V 292.402†	16471.6	17889.2	87.803 ug/L	87.803 ppb	15:18:44
2	Zn 213.857†	83116.2	80807.0	441.99 ug/L	441.99 ppb	15:18:44
2	SiO2†	534304.3	526072.5	23242 ug/L	23242 ppb	15:19:47
3	Sc Radial	5667.0	5667.0	102 %		15:17:38
3	Y RADIAL	5780.9	5780.9	120.0 %		15:17:38
3	Al 396.153Radial†	31573.1	31095.9	28304 ug/L	28304 ppb	15:17:38
3	Ca 317.933Radial†	2611.2	2547.2	6344.6 ug/L	6344.6 ppb	15:17:58
3	Fe 238.204 Radial†	2301.9	2260.0	79286 ug/L	79286 ppb	15:17:58
3	K 766.490 Radial†	12229.9	10536.2	4598.6 ug/L	4598.6 ppb	15:17:38
3	Mg 279.077 IEC†	59.6	58.4	4555.2 ug/L	4555.2 ppb	15:17:58
3	Na 589.592 Radial†	94.0	262.7	710.32 ug/L	710.32 ppb	15:17:58
3	Sr 421.552†	4174.4	4093.7	63.011 ug/L	63.011 ppb	15:17:38
3	Sc 361.383	1087003.8	1087003.8	102.46 %		15:19:10
3	Y 371.029	1017791.3	1017791.3	119.29 %		15:19:10
3	Ag 328.068†	-5278.3	-5790.0	3.0511 ug/L	3.0511 ppb	15:19:16
3	As 188.979†	-42.1	-4.1	30.258 ug/L	30.258 ppb	15:19:36
3	B 249.677†	766.4	1129.5	7.0225 ug/L	7.0225 ppb	15:19:16
3	Ba 233.527†	92059.9	89823.4	456.70 ug/L	456.70 ppb	15:19:16
3	Be 313.107†	-11347.7	-3758.8	4.3978 ug/L	4.3978 ppb	15:19:16
3	Cd 226.502†	959.8	1214.4	-0.2360 ug/L	-0.2360 ppb	15:19:36
3	Co 228.616†	1928.6	1972.7	18.514 ug/L	18.514 ppb	15:19:36
3	Cr 267.716†	17376.4	16987.4	146.44 ug/L	146.44 ppb	15:19:16
3	Cu 324.752†	59022.8	47413.2	121.56 ug/L	121.56 ppb	15:19:16
3	Mn 257.610†	3505151.6	3420093.9	2713.1 ug/L	2713.1 ppb	15:19:10
3	Mo 202.031†	194.5	158.0	11.767 ug/L	11.767 ppb	15:19:36
3	Ni 231.604†	4897.1	4631.1	74.211 ug/L	74.211 ppb	15:19:36
3	P 214.914†	2725.8	2323.3	748.03 ug/L	748.03 ppb	15:19:36
3	Pb 220.353†	860.2	868.6	63.103 ug/L	63.103 ppb	15:19:36
3	S 181.975 Axial†	419.4	341.5	283.49 ug/L	283.49 ppb	15:19:36
3	Sb 206.836†	82.2	34.8	-2.5571 ug/L	-2.5571 ppb	15:19:36
3	Se 196.026†	-804.8	-763.8	31.693 ug/L	31.693 ppb	15:19:36
3	Si 251.611†	535281.2	521858.0	10767 ug/L	10767 ppb	15:19:10
3	Sn 189.927†	76.6	69.3	8.8317 ug/L	8.8317 ppb	15:19:36
3	Ti 334.940†	1873474.0	1829562.7	2395.5 ug/L	2395.5 ppb	15:19:10
3	Tl 190.801†	-265.1	-197.3	-6.0823 ug/L	-6.0823 ppb	15:19:36
3	U 409.014†	-12627.8	-8489.6	-220.66 ug/L	-220.66 ppb	15:19:10
3	V 292.402†	16373.0	17632.3	86.248 ug/L	86.248 ppb	15:19:16
3	Zn 213.857†	82871.5	79757.6	436.07 ug/L	436.07 ppb	15:19:16
3	SiO2†	527978.3	514688.3	22739 ug/L	22739 ppb	15:19:52

Mean Data: 1201872899|881859|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1080417.3	101.84	%	0.544				0.53%
Sc Radial	5664.2	102	%	0.4				0.36%
Y 371.029	1012479.8	118.67	%	0.583				0.49%
Y RADIAL	5797.2	120.4	%	0.75				0.63%
Ag 328.068†	-5903.4	2.6068	ug/L	0.43458	2.6068	ppb	0.43458	16.67%
Al 396.153Radial†	31183.0	28384	ug/L	96.9	28384	ppb	96.9	0.34%
As 188.979†	-3.3	30.449	ug/L	1.3459	30.449	ppb	1.3459	4.42%
B 249.677†	1169.1	7.6401	ug/L	0.73090	7.6401	ppb	0.73090	9.57%
Ba 233.527†	90655.4	460.92	ug/L	3.753	460.92	ppb	3.753	0.81%
Be 313.107†	-3839.8	4.3707	ug/L	0.03190	4.3707	ppb	0.03190	0.73%
Ca 317.933Radial†	2538.1	6322.1	ug/L	54.76	6322.1	ppb	54.76	0.87%
Cd 226.502†	1211.0	-0.2607	ug/L	0.03781	-0.2607	ppb	0.03781	14.50%
Co 228.616†	1977.5	18.578	ug/L	0.0893	18.578	ppb	0.0893	0.48%
Cr 267.716†	17154.1	147.86	ug/L	1.232	147.86	ppb	1.232	0.83%
Cu 324.752†	47901.2	122.77	ug/L	1.058	122.77	ppb	1.058	0.86%
Fe 238.204 Radial†	2260.0	79285	ug/L	720.7	79285	ppb	720.7	0.91%
K 766.490 Radial†	10577.1	4616.4	ug/L	16.95	4616.4	ppb	16.95	0.37%

Mg 279.077 IEC†	60.3	4704.4	ug/L	130.48	4704.4	ppb	130.48	2.77%
Mn 257.610†	3419477.9	2712.6	ug/L	3.07	2712.6	ppb	3.07	0.11%
Mo 202.031†	169.8	12.237	ug/L	0.5293	12.237	ppb	0.5293	4.33%
Na 589.592 Radial†	262.6	709.92	ug/L	4.793	709.92	ppb	4.793	0.68%
Ni 231.604†	4663.2	74.725	ug/L	0.6562	74.725	ppb	0.6562	0.88%
P 214.914†	2339.1	753.43	ug/L	4.800	753.43	ppb	4.800	0.64%
Pb 220.353†	866.2	62.939	ug/L	0.2108	62.939	ppb	0.2108	0.33%
S 181.975 Axial†	352.3	292.65	ug/L	10.331	292.65	ppb	10.331	3.53%
Sb 206.836†	49.2	0.2426	ug/L	2.49918	0.2426	ppb	2.49918	>999.9%
Se 196.026†	-765.1	31.291	ug/L	0.6451	31.291	ppb	0.6451	2.06%
Si 251.611†	521801.1	10766	ug/L	21.1	10766	ppb	21.1	0.20%
Sn 189.927†	68.4	8.7376	ug/L	0.54555	8.7376	ppb	0.54555	6.24%
Sr 421.552†	4116.6	63.364	ug/L	0.3549	63.364	ppb	0.3549	0.56%
Ti 334.940†	1828950.8	2394.7	ug/L	1.85	2394.7	ppb	1.85	0.08%
Tl 190.801†	-193.7	-5.4709	ug/L	0.79643	-5.4709	ppb	0.79643	14.56%
U 409.014†	-8559.2	-222.39	ug/L	2.043	-222.39	ppb	2.043	0.92%
V 292.402†	17765.3	87.008	ug/L	0.7779	87.008	ppb	0.7779	0.89%
Zn 213.857†	80417.1	439.74	ug/L	3.208	439.74	ppb	3.208	0.73%
SiO2†	519721.6	22961	ug/L	256.5	22961	ppb	256.5	1.12%

Sequence No.: 14
Sample ID: 1201872900|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 47
Date Collected: 7/8/2009 15:22:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872900|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5540.9	5540.9	99.6	%			15:23:57
1	Y RADIAL	5700.5	5700.5	118.4	%			15:23:57
1	Al 396.153Radial†	75109.5	75525.8	68726	ug/L	68726	ppb	15:23:57
1	Ca 317.933Radial†	4990.2	4994.8	12441	ug/L	12441	ppb	15:23:57
1	Fe 238.204 Radial†	2647.2	2658.3	93271	ug/L	93271	ppb	15:24:17
1	K 766.490 Radial†	29823.0	28478.6	12389	ug/L	12389	ppb	15:23:57
1	Mg 279.077 IEC†	169.7	170.3	13416	ug/L	13416	ppb	15:24:17
1	Na 589.592 Radial†	1922.2	2100.9	5680.6	ug/L	5680.6	ppb	15:23:57
1	Sr 421.552†	37980.7	38139.1	587.48	ug/L	587.48	ppb	15:23:57
1	Sc 361.383	1084770.4	1084770.4	102.25	%			15:25:18
1	Y 371.029	1010939.2	1010939.2	118.49	%			15:25:18
1	Ag 328.068†	120873.4	117573.1	497.29	ug/L	497.29	ppb	15:25:18
1	As 188.979†	2048.6	2040.4	518.28	ug/L	518.28	ppb	15:25:23
1	B 249.677†	32326.7	31996.4	485.04	ug/L	485.04	ppb	15:25:18
1	Ba 233.527†	210968.4	206298.4	1047.7	ug/L	1047.7	ppb	15:25:18
1	Be 313.107†	1605277.2	1577243.6	498.25	ug/L	498.25	ppb	15:25:18
1	Cd 226.502†	66436.9	65251.6	477.37	ug/L	477.37	ppb	15:25:23
1	Co 228.616†	40369.9	39571.3	485.86	ug/L	485.86	ppb	15:25:23
1	Cr 267.716†	70360.4	68839.6	588.93	ug/L	588.93	ppb	15:25:18
1	Cu 324.752†	271286.3	255121.1	634.84	ug/L	634.84	ppb	15:25:18
1	Mn 257.610†	4130821.2	4039029.1	3203.9	ug/L	3203.9	ppb	15:25:18
1	Mo 202.031†	11860.9	11567.9	469.43	ug/L	469.43	ppb	15:25:23
1	Ni 231.604†	34300.5	33396.9	534.96	ug/L	534.96	ppb	15:25:23
1	P 214.914†	4649.8	4210.4	1341.7	ug/L	1341.7	ppb	15:25:23
1	Pb 220.353†	7337.0	7204.5	545.38	ug/L	545.38	ppb	15:25:23
1	S 181.975 Axial†	6376.4	6168.1	5207.6	ug/L	5207.6	ppb	15:25:23
1	Sb 206.836†	2566.3	2464.4	478.84	ug/L	478.84	ppb	15:25:23
1	Se 196.026†	620.6	628.6	537.25	ug/L	537.25	ppb	15:25:23
1	Si 251.611†	897298.9	876979.4	18082	ug/L	18082	ppb	15:25:18
1	Sn 189.927†	4752.0	4641.9	484.69	ug/L	484.69	ppb	15:25:23
1	Ti 334.940†	2630214.7	2573403.8	3369.2	ug/L	3369.2	ppb	15:25:18
1	Tl 190.801†	2584.8	2589.3	468.45	ug/L	468.45	ppb	15:25:23
1	U 409.014†	7690.6	11356.0	269.17	ug/L	269.17	ppb	15:25:18
1	V 292.402†	104391.5	103745.5	578.41	ug/L	578.41	ppb	15:25:18
1	Zn 213.857†	187789.8	182532.0	1004.5	ug/L	1004.5	ppb	15:25:18
1	SiO2†	898095.0	877715.7	38753	ug/L	38753	ppb	15:25:58
2	Sc Radial	5687.9	5687.9	102	%			15:24:22
2	Y RADIAL	5805.7	5805.7	120.6	%			15:24:22
2	Al 396.153Radial†	76762.1	75193.3	68424	ug/L	68424	ppb	15:24:22
2	Ca 317.933Radial†	5098.6	4971.4	12383	ug/L	12383	ppb	15:24:22
2	Fe 238.204 Radial†	2664.2	2606.2	91446	ug/L	91446	ppb	15:24:42
2	K 766.490 Radial†	30393.1	28262.3	12294	ug/L	12294	ppb	15:24:22
2	Mg 279.077 IEC†	166.1	162.3	12788	ug/L	12788	ppb	15:24:42
2	Na 589.592 Radial†	1963.3	2091.3	5654.6	ug/L	5654.6	ppb	15:24:22
2	Sr 421.552†	38670.4	37828.2	582.69	ug/L	582.69	ppb	15:24:22
2	Sc 361.383	1081688.1	1081688.1	101.96	%			15:25:32
2	Y 371.029	1007673.6	1007673.6	118.10	%			15:25:32
2	Ag 328.068†	120765.4	117804.0	497.63	ug/L	497.63	ppb	15:25:32
2	As 188.979†	2021.4	2019.4	513.00	ug/L	513.00	ppb	15:25:37
2	B 249.677†	32283.7	32044.2	486.02	ug/L	486.02	ppb	15:25:32
2	Ba 233.527†	210351.7	206281.5	1047.5	ug/L	1047.5	ppb	15:25:32
2	Be 313.107†	1600902.1	1577426.0	498.31	ug/L	498.31	ppb	15:25:32
2	Cd 226.502†	66520.6	65518.8	479.58	ug/L	479.58	ppb	15:25:37
2	Co 228.616†	40455.0	39767.3	488.33	ug/L	488.33	ppb	15:25:37
2	Cr 267.716†	70278.3	68955.2	589.88	ug/L	589.88	ppb	15:25:32
2	Cu 324.752†	270712.4	255314.1	635.21	ug/L	635.21	ppb	15:25:32
2	Mn 257.610†	4118901.9	4038850.5	3203.5	ug/L	3203.5	ppb	15:25:32
2	Mo 202.031†	11888.5	11628.0	471.71	ug/L	471.71	ppb	15:25:37
2	Ni 231.604†	34326.8	33518.3	536.91	ug/L	536.91	ppb	15:25:37

2	P 214.914†	4624.2	4198.3	1338.7	ug/L	1338.7 ppb	15:25:37
2	Pb 220.353†	7394.3	7281.1	551.24	ug/L	551.24 ppb	15:25:37
2	S 181.975 Axial†	6331.1	6141.5	5185.1	ug/L	5185.1 ppb	15:25:37
2	Sb 206.836†	2533.1	2439.0	473.88	ug/L	473.88 ppb	15:25:37
2	Se 196.026†	627.4	636.9	533.54	ug/L	533.54 ppb	15:25:37
2	Si 251.611†	895695.8	877907.6	18102	ug/L	18102 ppb	15:25:32
2	Sn 189.927†	4744.5	4647.7	485.26	ug/L	485.26 ppb	15:25:37
2	Ti 334.940†	2624352.1	2574983.7	3371.3	ug/L	3371.3 ppb	15:25:32
2	Tl 190.801†	2589.3	2600.9	470.40	ug/L	470.40 ppb	15:25:37
2	U 409.014†	7420.5	11112.5	263.35	ug/L	263.35 ppb	15:25:32
2	V 292.402†	104292.9	103939.7	579.77	ug/L	579.77 ppb	15:25:32
2	Zn 213.857†	187523.5	182794.2	1006.2	ug/L	1006.2 ppb	15:25:32
2	SiO2†	882975.7	865389.9	38208	ug/L	38208 ppb	15:26:04
3	Sc Radial	5711.4	5711.4	103	%		15:24:47
3	Y RAD1AL	5831.0	5831.0	121.1	%		15:24:47
3	Al 396.153Radial†	76802.3	74923.5	68178	ug/L	68178 ppb	15:24:47
3	Ca 317.933Radial†	5110.5	4962.4	12361	ug/L	12361 ppb	15:24:47
3	Fe 238.204 Radial†	2633.5	2565.6	90020	ug/L	90020 ppb	15:25:07
3	K 766.490 Radial†	30284.5	28034.2	12193	ug/L	12193 ppb	15:24:47
3	Mg 279.077 IEC†	166.0	161.6	12730	ug/L	12730 ppb	15:25:07
3	Na 589.592 Radial†	1979.0	2098.6	5674.4	ug/L	5674.4 ppb	15:24:47
3	Sr 421.552†	38726.1	37726.8	581.13	ug/L	581.13 ppb	15:24:47
3	Sc 361.383	1080555.3	1080555.3	101.85	%		15:25:47
3	Y 371.029	1008101.8	1008101.8	118.15	%		15:25:47
3	Ag 328.068†	120551.5	117718.2	496.83	ug/L	496.83 ppb	15:25:47
3	As 188.979†	1985.7	1986.5	504.99	ug/L	504.99 ppb	15:25:52
3	B 249.677†	32093.2	31890.5	483.83	ug/L	483.83 ppb	15:25:47
3	Ba 233.527†	210478.4	206622.1	1049.2	ug/L	1049.2 ppb	15:25:47
3	Be 313.107†	1601180.5	1579345.5	498.91	ug/L	498.91 ppb	15:25:47
3	Cd 226.502†	65758.4	64838.8	474.66	ug/L	474.66 ppb	15:25:52
3	Co 228.616†	39908.4	39272.2	482.17	ug/L	482.17 ppb	15:25:52
3	Cr 267.716†	70309.3	69057.8	590.73	ug/L	590.73 ppb	15:25:47
3	Cu 324.752†	269950.6	254844.6	633.97	ug/L	633.97 ppb	15:25:47
3	Mn 257.610†	4116256.3	4040488.2	3204.6	ug/L	3204.6 ppb	15:25:47
3	Mo 202.031†	11765.1	11519.1	467.26	ug/L	467.26 ppb	15:25:52
3	Ni 231.604†	33861.2	33096.5	530.15	ug/L	530.15 ppb	15:25:52
3	P 214.914†	4615.3	4194.3	1338.6	ug/L	1338.6 ppb	15:25:52
3	Pb 220.353†	7331.4	7227.0	547.26	ug/L	547.26 ppb	15:25:52
3	S 181.975 Axial†	6216.2	6035.1	5095.1	ug/L	5095.1 ppb	15:25:52
3	Sb 206.836†	2489.4	2398.6	465.83	ug/L	465.83 ppb	15:25:52
3	Se 196.026†	669.8	679.3	542.28	ug/L	542.28 ppb	15:25:52
3	Si 251.611†	893579.0	876750.3	18078	ug/L	18078 ppb	15:25:47
3	Sn 189.927†	4738.8	4647.0	485.17	ug/L	485.17 ppb	15:25:52
3	Ti 334.940†	2620847.7	2574241.5	3370.3	ug/L	3370.3 ppb	15:25:47
3	Tl 190.801†	2535.7	2550.9	462.00	ug/L	462.00 ppb	15:25:52
3	U 409.014†	7407.0	11106.9	263.38	ug/L	263.38 ppb	15:25:47
3	V 292.402†	104142.5	103899.3	579.68	ug/L	579.68 ppb	15:25:47
3	Zn 213.857†	187212.0	182681.2	1005.7	ug/L	1005.7 ppb	15:25:47
3	SiO2†	888355.3	871579.4	38482	ug/L	38482 ppb	15:26:10

Mean Data: 1201872900|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1082337.9	102.02	%	0.206				0.20%
Sc Radial	5646.7	101	%	1.7				1.64%
Y 371.029	1008904.8	118.25	%	0.208				0.18%
Y RADIAL	5779.1	120.0	%	1.44				1.20%
Ag 328.068†	117698.4	497.25	ug/L	0.401	497.25	ppb	0.401	0.08%
Al 396.153Radial†	75214.2	68443	ug/L	274.6	68443	ppb	274.6	0.40%
As 188.979†	2015.4	512.09	ug/L	6.692	512.09	ppb	6.692	1.31%
B 249.677†	31977.0	484.96	ug/L	1.098	484.96	ppb	1.098	0.23%
Ba 233.527†	206400.7	1048.1	ug/L	0.94	1048.1	ppb	0.94	0.09%
Be 313.107†	1578005.0	498.49	ug/L	0.362	498.49	ppb	0.362	0.07%
Ca 317.933Radial†	4976.2	12395	ug/L	41.7	12395	ppb	41.7	0.34%
Cd 226.502†	65203.0	477.21	ug/L	2.465	477.21	ppb	2.465	0.52%
Co 228.616†	39536.9	485.45	ug/L	3.098	485.45	ppb	3.098	0.64%
Cr 267.716†	68950.9	589.85	ug/L	0.900	589.85	ppb	0.900	0.15%
Cu 324.752†	255093.2	634.68	ug/L	0.637	634.68	ppb	0.637	0.10%
Fe 238.204 Radial†	2610.0	91579	ug/L	1629.7	91579	ppb	1629.7	1.78%
K 766.490 Radial†	28258.4	12292	ug/L	97.7	12292	ppb	97.7	0.79%

Mg 279.077 IEC†	164.7	12978	ug/L	380.1	12978	ppb	380.1	2.93%
Mn 257.610†	4039456.0	3204.0	ug/L	0.57	3204.0	ppb	0.57	0.02%
Mo 202.031†	11571.7	469.47	ug/L	2.229	469.47	ppb	2.229	0.47%
Na 589.592 Radial†	2096.9	5669.9	ug/L	13.59	5669.9	ppb	13.59	0.24%
Ni 231.604†	33337.2	534.01	ug/L	3.479	534.01	ppb	3.479	0.65%
P 214.914†	4201.0	1339.7	ug/L	1.77	1339.7	ppb	1.77	0.13%
Pb 220.353†	7237.6	547.96	ug/L	2.993	547.96	ppb	2.993	0.55%
S 181.975 Axial†	6114.9	5162.6	ug/L	59.50	5162.6	ppb	59.50	1.15%
Sb 206.836†	2434.0	472.85	ug/L	6.567	472.85	ppb	6.567	1.39%
Se 196.026†	648.3	537.69	ug/L	4.386	537.69	ppb	4.386	0.82%
Si 251.611†	877212.4	18087	ug/L	12.6	18087	ppb	12.6	0.07%
Sn 189.927†	4645.6	485.04	ug/L	0.308	485.04	ppb	0.308	0.06%
Sr 421.552†	37898.0	583.76	ug/L	3.310	583.76	ppb	3.310	0.57%
Ti 334.940†	2574209.7	3370.3	ug/L	1.03	3370.3	ppb	1.03	0.03%
Tl 190.801†	2580.4	466.95	ug/L	4.395	466.95	ppb	4.395	0.94%
U 409.014†	11191.8	265.30	ug/L	3.349	265.30	ppb	3.349	1.26%
V 292.402†	103861.5	579.29	ug/L	0.758	579.29	ppb	0.758	0.13%
Zn 213.857†	182669.1	1005.5	ug/L	0.87	1005.5	ppb	0.87	0.09%
SiO2†	871561.7	38481	ug/L	272.3	38481	ppb	272.3	0.71%

Sequence No.: 15
Sample ID: 1201872902|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 48
Date Collected: 7/8/2009 15:28:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872902|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5583.4	5583.4	100	%			15:30:14
1	Y RADIAL	5790.9	5790.9	120.3	%			15:30:14
1	Al 396.153Radial†	73241.5	73090.6	66510	ug/L	66510	ppb	15:30:14
1	Ca 317.933Radial†	4839.3	4806.3	11972	ug/L	11972	ppb	15:30:14
1	Fe 238.204 Radial†	2632.9	2623.8	92062	ug/L	92062	ppb	15:30:34
1	K 766.490 Radial†	28960.9	27391.7	11917	ug/L	11917	ppb	15:30:14
1	Mg 279.077 IEC†	158.0	157.3	12386	ug/L	12386	ppb	15:30:34
1	Na 589.592 Radial†	1903.7	2067.8	5591.1	ug/L	5591.1	ppb	15:30:14
1	Sr 421.552†	37761.5	37630.7	579.65	ug/L	579.65	ppb	15:30:14
1	Sc 361.383	1087220.9	1087220.9	102.48	%			15:31:35
1	Y 371.029	1026354.9	1026354.9	120.29	%			15:31:35
1	Ag 328.068†	120887.5	117320.4	495.91	ug/L	495.91	ppb	15:31:35
1	As 188.979†	2028.0	2015.8	511.20	ug/L	511.20	ppb	15:31:40
1	B 249.677†	32547.7	32140.7	487.46	ug/L	487.46	ppb	15:31:35
1	Ba 233.527†	205741.7	200733.3	1019.5	ug/L	1019.5	ppb	15:31:35
1	Be 313.107†	1616551.9	1584706.6	500.19	ug/L	500.19	ppb	15:31:35
1	Cd 226.502†	66034.1	64712.0	473.47	ug/L	473.47	ppb	15:31:40
1	Co 228.616†	40082.1	39201.5	481.61	ug/L	481.61	ppb	15:31:40
1	Cr 267.716†	68906.6	67266.0	575.51	ug/L	575.51	ppb	15:31:35
1	Cu 324.752†	280368.1	263384.8	655.16	ug/L	655.16	ppb	15:31:35
1	Mn 257.610†	4088876.6	3988995.2	3164.2	ug/L	3164.2	ppb	15:31:35
1	Mo 202.031†	11861.8	11542.7	468.34	ug/L	468.34	ppb	15:31:40
1	Ni 231.604†	33673.3	32709.3	523.94	ug/L	523.94	ppb	15:31:40
1	P 214.914†	4370.8	3927.9	1238.7	ug/L	1238.7	ppb	15:31:40
1	Pb 220.353†	7360.9	7211.7	545.58	ug/L	545.58	ppb	15:31:40
1	S 181.975 Axial†	6292.1	6071.9	5126.5	ug/L	5126.5	ppb	15:31:40
1	Sb 206.836†	2524.9	2418.3	470.46	ug/L	470.46	ppb	15:31:40
1	Se 196.026†	630.9	637.3	535.70	ug/L	535.70	ppb	15:31:40
1	Si 251.611†	878164.7	856330.8	17657	ug/L	17657	ppb	15:31:35
1	Sn 189.927†	4661.2	4542.8	474.35	ug/L	474.35	ppb	15:31:40
1	Ti 334.940†	2506711.6	2447095.0	3203.9	ug/L	3203.9	ppb	15:31:35
1	Tl 190.801†	2571.3	2570.4	464.24	ug/L	464.24	ppb	15:31:40
1	U 409.014†	7034.4	10698.8	253.04	ug/L	253.04	ppb	15:31:35
1	V 292.402†	104047.5	103179.7	575.50	ug/L	575.50	ppb	15:31:35
1	Zn 213.857†	173618.2	168289.9	925.14	ug/L	925.14	ppb	15:31:35
1	SiO2†	858838.0	837430.0	36974	ug/L	36974	ppb	15:32:15
2	Sc Radial	5705.4	5705.4	103	%			15:30:39
2	Y RADIAL	5904.3	5904.3	122.6	%			15:30:39
2	Al 396.153Radial†	74259.7	72522.4	65992	ug/L	65992	ppb	15:30:39
2	Ca 317.933Radial†	4933.8	4795.3	11944	ug/L	11944	ppb	15:30:39
2	Fe 238.204 Radial†	2622.5	2557.6	89740	ug/L	89740	ppb	15:30:59
2	K 766.490 Radial†	29439.8	27241.4	11850	ug/L	11850	ppb	15:30:39
2	Mg 279.077 IEC†	158.7	154.6	12178	ug/L	12178	ppb	15:30:59
2	Na 589.592 Radial†	1925.2	2048.2	5538.0	ug/L	5538.0	ppb	15:30:39
2	Sr 421.552†	38291.3	37342.5	575.21	ug/L	575.21	ppb	15:30:39
2	Sc 361.383	1075949.9	1075949.9	101.42	%			15:31:50
2	Y 371.029	1015444.3	1015444.3	119.01	%			15:31:50
2	Ag 328.068†	119813.9	117497.5	495.87	ug/L	495.87	ppb	15:31:50
2	As 188.979†	2018.9	2027.5	513.48	ug/L	513.48	ppb	15:31:55
2	B 249.677†	32256.5	32186.3	488.46	ug/L	488.46	ppb	15:31:50
2	Ba 233.527†	203497.9	200623.9	1018.9	ug/L	1018.9	ppb	15:31:50
2	Be 313.107†	1599397.7	1584316.4	500.07	ug/L	500.07	ppb	15:31:50
2	Cd 226.502†	66092.8	65444.9	479.23	ug/L	479.23	ppb	15:31:55
2	Co 228.616†	40216.4	39743.6	488.41	ug/L	488.41	ppb	15:31:55
2	Cr 267.716†	68245.8	67318.7	575.91	ug/L	575.91	ppb	15:31:50
2	Cu 324.752†	277666.4	263586.8	655.53	ug/L	655.53	ppb	15:31:50
2	Mn 257.610†	4049189.8	3991659.0	3166.0	ug/L	3166.0	ppb	15:31:50
2	Mo 202.031†	11875.4	11677.3	473.57	ug/L	473.57	ppb	15:31:55
2	Ni 231.604†	33683.6	33063.6	529.62	ug/L	529.62	ppb	15:31:55

2	P 214.914†	4334.9	3937.3	1243.8 ug/L	1243.8 ppb	15:31:55
2	Pb 220.353†	7372.0	7297.8	552.17 ug/L	552.17 ppb	15:31:55
2	S 181.975 Axial†	6319.9	6163.6	5204.2 ug/L	5204.2 ppb	15:31:55
2	Sb 206.836†	2546.0	2464.9	479.88 ug/L	479.88 ppb	15:31:55
2	Se 196.026†	656.0	668.5	537.68 ug/L	537.68 ppb	15:31:55
2	Si 251.611†	869389.5	856654.7	17663 ug/L	17663 ppb	15:31:50
2	Sn 189.927†	4723.0	4651.4	485.60 ug/L	485.60 ppb	15:31:55
2	Ti 334.940†	2480432.5	2446806.4	3203.5 ug/L	3203.5 ppb	15:31:50
2	Tl 190.801†	2580.4	2605.7	470.17 ug/L	470.17 ppb	15:31:55
2	U 409.014†	6844.4	10583.3	250.46 ug/L	250.46 ppb	15:31:50
2	V 292.402†	102943.9	103155.1	575.73 ug/L	575.73 ppb	15:31:50
2	Zn 213.857†	171988.0	168457.1	926.30 ug/L	926.30 ppb	15:31:50
2	SiO2†	878228.5	865327.7	38206 ug/L	38206 ppb	15:32:21
3	Sc Radial	5608.7	5608.7	101 %		15:31:04
3	Y RADIAL	5759.7	5759.7	119.6 %		15:31:04
3	Al 396.153Radial†	72520.6	72045.6	65559 ug/L	65559 ppb	15:31:04
3	Ca 317.933Radial†	4784.4	4730.0	11782 ug/L	11782 ppb	15:31:04
3	Fe 238.204 Radial†	2628.5	2607.6	91494 ug/L	91494 ppb	15:31:24
3	K 766.490 Radial†	28801.7	27103.3	11791 ug/L	11791 ppb	15:31:04
3	Mg 279.077 IEC†	157.3	155.9	12280 ug/L	12280 ppb	15:31:24
3	Na 589.592 Radial†	1860.4	2016.2	5451.7 ug/L	5451.7 ppb	15:31:04
3	Sr 421.552†	37355.1	37057.4	570.82 ug/L	570.82 ppb	15:31:04
3	Sc 361.383	1082947.7	1082947.7	102.08 %		15:32:04
3	Y 371.029	1021512.4	1021512.4	119.73 %		15:32:04
3	Ag 328.068†	120820.1	117719.8	497.31 ug/L	497.31 ppb	15:32:04
3	As 188.979†	2047.1	2042.3	517.32 ug/L	517.32 ppb	15:32:09
3	B 249.677†	32599.7	32317.0	490.27 ug/L	490.27 ppb	15:32:04
3	Ba 233.527†	204763.0	200566.6	1018.6 ug/L	1018.6 ppb	15:32:04
3	Be 313.107†	1608274.7	1582822.2	499.61 ug/L	499.61 ppb	15:32:04
3	Cd 226.502†	66234.2	65162.4	476.91 ug/L	476.91 ppb	15:32:09
3	Co 228.616†	40266.2	39536.2	485.79 ug/L	485.79 ppb	15:32:09
3	Cr 267.716†	68579.1	67210.4	575.02 ug/L	575.02 ppb	15:32:04
3	Cu 324.752†	280050.6	264153.3	657.03 ug/L	657.03 ppb	15:32:04
3	Mn 257.610†	4073637.2	3989809.4	3164.7 ug/L	3164.7 ppb	15:32:04
3	Mo 202.031†	11846.9	11573.8	469.54 ug/L	469.54 ppb	15:32:09
3	Ni 231.604†	33781.7	32945.1	527.72 ug/L	527.72 ppb	15:32:09
3	P 214.914†	4421.6	3994.5	1262.2 ug/L	1262.2 ppb	15:32:09
3	Pb 220.353†	7362.3	7241.4	547.68 ug/L	547.68 ppb	15:32:09
3	S 181.975 Axial†	6345.7	6148.6	5191.6 ug/L	5191.6 ppb	15:32:09
3	Sb 206.836†	2520.8	2424.0	471.81 ug/L	471.81 ppb	15:32:09
3	Se 196.026†	625.5	634.4	532.72 ug/L	532.72 ppb	15:32:09
3	Si 251.611†	876856.4	858430.2	17700 ug/L	17700 ppb	15:32:04
3	Sn 189.927†	4748.4	4646.2	485.09 ug/L	485.09 ppb	15:32:09
3	Ti 334.940†	2498337.1	2448542.5	3205.7 ug/L	3205.7 ppb	15:32:04
3	Tl 190.801†	2580.8	2589.6	467.47 ug/L	467.47 ppb	15:32:09
3	U 409.014†	7066.8	10757.6	254.57 ug/L	254.57 ppb	15:32:04
3	V 292.402†	103651.8	103192.7	575.66 ug/L	575.66 ppb	15:32:04
3	Zn 213.857†	173141.7	168491.6	926.31 ug/L	926.31 ppb	15:32:04
3	SiO2†	871980.1	853611.1	37688 ug/L	37688 ppb	15:32:27

Mean Data: 1201872902|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1082039.5	101.99	%	0.536				0.53%
Sc Radial	5632.5	101	%	1.2				1.14%
Y 371.029	1021103.8	119.68	%	0.641				0.54%
Y RADIAL	5818.3	120.8	%	1.58				1.31%
Ag 328.068†	117512.5	496.36	ug/L	0.821	496.36	ppb	0.821	0.17%
Al 396.153Radial†	72552.9	66020	ug/L	476.3	66020	ppb	476.3	0.72%
As 188.979†	2028.5	514.00	ug/L	3.095	514.00	ppb	3.095	0.60%
B 249.677†	32214.7	488.73	ug/L	1.425	488.73	ppb	1.425	0.29%
Ba 233.527†	200641.3	1019.0	ug/L	0.44	1019.0	ppb	0.44	0.04%
Be 313.107†	1583948.4	499.95	ug/L	0.307	499.95	ppb	0.307	0.06%
Ca 317.933Radial†	4777.2	11899	ug/L	102.7	11899	ppb	102.7	0.86%
Cd 226.502†	65106.4	476.53	ug/L	2.898	476.53	ppb	2.898	0.61%
Co 228.616†	39493.8	485.27	ug/L	3.430	485.27	ppb	3.430	0.71%
Cr 267.716†	67265.0	575.48	ug/L	0.446	575.48	ppb	0.446	0.08%
Cu 324.752†	263708.3	655.90	ug/L	0.988	655.90	ppb	0.988	0.15%
Fe 238.204 Radial†	2596.3	91098	ug/L	1210.4	91098	ppb	1210.4	1.33%
K 766.490 Radial†	27245.5	11853	ug/L	62.8	11853	ppb	62.8	0.53%

Mg 279.077 IEC†	155.9	12282	ug/L	103.9	12282	ppb	103.9	0.85%
Mn 257.610†	3990154.5	3165.0	ug/L	0.92	3165.0	ppb	0.92	0.03%
Mo 202.031†	11597.9	470.48	ug/L	2.738	470.48	ppb	2.738	0.58%
Na 589.592 Radial†	2044.1	5526.9	ug/L	70.34	5526.9	ppb	70.34	1.27%
Ni 231.604†	32906.0	527.09	ug/L	2.889	527.09	ppb	2.889	0.55%
P 214.914†	3953.2	1248.2	ug/L	12.37	1248.2	ppb	12.37	0.99%
Pb 220.353†	7250.3	548.47	ug/L	3.367	548.47	ppb	3.367	0.61%
S 181.975 Axial†	6128.0	5174.1	ug/L	41.70	5174.1	ppb	41.70	0.81%
Sb 206.836†	2435.7	474.05	ug/L	5.093	474.05	ppb	5.093	1.07%
Se 196.026†	646.7	535.37	ug/L	2.497	535.37	ppb	2.497	0.47%
Si 251.611†	857138.6	17673	ug/L	23.3	17673	ppb	23.3	0.13%
Sn 189.927†	4613.5	481.68	ug/L	6.355	481.68	ppb	6.355	1.32%
Sr 421.552†	37343.5	575.23	ug/L	4.415	575.23	ppb	4.415	0.77%
Ti 334.940†	2447481.3	3204.4	ug/L	1.21	3204.4	ppb	1.21	0.04%
Tl 190.801†	2588.5	467.29	ug/L	2.968	467.29	ppb	2.968	0.64%
U 409.014†	10679.9	252.69	ug/L	2.078	252.69	ppb	2.078	0.82%
V 292.402†	103175.9	575.63	ug/L	0.121	575.63	ppb	0.121	0.02%
Zn 213.857†	168412.8	925.92	ug/L	0.669	925.92	ppb	0.669	0.07%
SiO2†	852122.9	37623	ug/L	618.9	37623	ppb	618.9	1.64%

Sequence No.: 16
Sample ID: 1201872901|881859|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 49
Date Collected: 7/8/2009 15:34:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872901|881859|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5615.1	5615.1	101	%			15:36:31
1	Y RADIAL	5016.5	5016.5	104.2	%			15:36:31
1	Al 396.153Radial†	8390.5	8407.5	7652.7	ug/L	7652.7	ppb	15:36:31
1	Ca 317.933Radial†	727.4	703.9	1753.4	ug/L	1753.4	ppb	15:36:51
1	Fe 238.204 Radial†	892.5	884.2	31020	ug/L	31020	ppb	15:36:51
1	K 766.490 Radial†	4296.5	2785.0	1214.6	ug/L	1214.6	ppb	15:36:31
1	Mg 279.077 IEC†	16.1	15.8	1221.0	ug/L	1221.0	ppb	15:36:51
1	Na 589.592 Radial†	-122.4	49.1	132.68	ug/L	132.68	ppb	15:36:51
1	Sr 421.552†	1214.0	1197.6	18.435	ug/L	18.435	ppb	15:36:31
1	Sc 361.383	1087781.7	1087781.7	102.54	%			15:37:48
1	Y 371.029	899296.3	899296.3	105.40	%			15:37:48
1	Ag 328.068†	-1653.4	-2251.1	1.1704	ug/L	1.1704	ppb	15:37:54
1	As 188.979†	-38.6	-0.8	9.4668	ug/L	9.4668	ppb	15:38:14
1	B 249.677†	201.5	578.1	4.8596	ug/L	4.8596	ppb	15:37:54
1	Ba 233.527†	33350.7	32501.8	165.28	ug/L	165.28	ppb	15:37:54
1	Be 313.107†	-8193.4	-674.6	1.0376	ug/L	1.0376	ppb	15:37:54
1	Cd 226.502†	188.3	461.2	-0.2043	ug/L	-0.2043	ppb	15:38:14
1	Co 228.616†	1027.2	1092.2	12.089	ug/L	12.089	ppb	15:38:14
1	Cr 267.716†	3194.3	3143.9	27.429	ug/L	27.429	ppb	15:38:14
1	Cu 324.752†	18014.9	7378.1	19.997	ug/L	19.997	ppb	15:37:54
1	Mn 257.610†	1822004.0	1776121.7	1407.6	ug/L	1407.6	ppb	15:37:48
1	Mo 202.031†	76.2	42.5	3.8310	ug/L	3.8310	ppb	15:38:14
1	Ni 231.604†	1194.1	1016.3	16.280	ug/L	16.280	ppb	15:38:14
1	P 214.914†	1179.0	812.9	261.91	ug/L	261.91	ppb	15:38:14
1	Pb 220.353†	203.7	227.7	15.636	ug/L	15.636	ppb	15:38:14
1	S 181.975 Axial†	174.1	101.9	84.763	ug/L	84.763	ppb	15:38:14
1	Sb 206.836†	47.2	0.6	-1.6786	ug/L	-1.6786	ppb	15:38:14
1	Se 196.026†	-325.2	-295.5	13.288	ug/L	13.288	ppb	15:38:14
1	Si 251.611†	116606.7	113163.1	2334.7	ug/L	2334.7	ppb	15:37:54
1	Sn 189.927†	-0.7	-6.2	-0.0297	ug/L	-0.0297	ppb	15:38:14
1	Ti 334.940†	419231.8	409974.1	536.80	ug/L	536.80	ppb	15:37:48
1	Tl 190.801†	-117.5	-53.2	1.7511	ug/L	1.7511	ppb	15:38:14
1	U 409.014†	-5557.5	-1585.3	-43.198	ug/L	-43.198	ppb	15:37:54
1	V 292.402†	2930.4	4510.7	20.717	ug/L	20.717	ppb	15:38:14
1	Zn 213.857†	19726.4	18116.2	97.655	ug/L	97.655	ppb	15:37:54
1	SiO2†	115100.0	111651.4	4932.5	ug/L	4932.5	ppb	15:39:21
2	Sc Radial	5460.2	5460.2	98.1	%			15:36:56
2	Y RADIAL	4876.4	4876.4	101.3	%			15:36:56
2	Al 396.153Radial†	8206.7	8456.2	7697.1	ug/L	7697.1	ppb	15:36:56
2	Ca 317.933Radial†	721.3	718.2	1788.9	ug/L	1788.9	ppb	15:37:16
2	Fe 238.204 Radial†	874.9	891.3	31269	ug/L	31269	ppb	15:37:16
2	K 766.490 Radial†	4218.1	2825.9	1232.5	ug/L	1232.5	ppb	15:36:56
2	Mg 279.077 IEC†	17.9	18.1	1407.7	ug/L	1407.7	ppb	15:37:16
2	Na 589.592 Radial†	-110.2	58.1	156.99	ug/L	156.99	ppb	15:37:16
2	Sr 421.552†	1169.9	1186.9	18.269	ug/L	18.269	ppb	15:36:56
2	Sc 361.383	1071002.7	1071002.7	100.95	%			15:38:19
2	Y 371.029	884378.6	884378.6	103.65	%			15:38:19
2	Ag 328.068†	-1598.0	-2221.4	1.3699	ug/L	1.3699	ppb	15:38:25
2	As 188.979†	-36.2	1.0	9.9392	ug/L	9.9392	ppb	15:38:45
2	B 249.677†	192.1	571.8	4.7289	ug/L	4.7289	ppb	15:38:25
2	Ba 233.527†	33619.8	33277.8	169.22	ug/L	169.22	ppb	15:38:25
2	Be 313.107†	-8293.6	-899.0	0.9679	ug/L	0.9679	ppb	15:38:25
2	Cd 226.502†	172.6	448.6	-0.3280	ug/L	-0.3280	ppb	15:38:45
2	Co 228.616†	1020.8	1101.6	12.204	ug/L	12.204	ppb	15:38:45
2	Cr 267.716†	3202.4	3200.7	27.920	ug/L	27.920	ppb	15:38:45
2	Cu 324.752†	18248.2	7884.5	21.261	ug/L	21.261	ppb	15:38:25
2	Mn 257.610†	1798592.1	1780769.9	1411.4	ug/L	1411.4	ppb	15:38:19
2	Mo 202.031†	72.3	39.9	3.7426	ug/L	3.7426	ppb	15:38:45
2	Ni 231.604†	1218.3	1058.5	16.956	ug/L	16.956	ppb	15:38:45

2	P 214.914†	1181.2	833.1	268.69 ug/L	268.69 ppb	15:38:45
2	Pb 220.353†	184.3	211.6	14.411 ug/L	14.411 ppb	15:38:45
2	S 181.975 Axial†	192.4	122.8	102.42 ug/L	102.42 ppb	15:38:45
2	Sb 206.836†	60.7	14.7	1.1028 ug/L	1.1028 ppb	15:38:45
2	Se 196.026†	-300.8	-276.3	20.404 ug/L	20.404 ppb	15:38:45
2	Si 251.611†	117305.4	115636.9	2385.7 ug/L	2385.7 ppb	15:38:25
2	Sn 189.927†	7.9	2.4	0.8698 ug/L	0.8698 ppb	15:38:45
2	Ti 334.940†	412774.3	409983.2	536.82 ug/L	536.82 ppb	15:38:19
2	Tl 190.801†	-119.0	-56.5	1.2152 ug/L	1.2152 ppb	15:38:45
2	U 409.014†	-5536.8	-1649.7	-44.827 ug/L	-44.827 ppb	15:38:25
2	V 292.402†	2939.4	4564.4	20.986 ug/L	20.986 ppb	15:38:45
2	Zn 213.857†	19838.2	18528.3	99.917 ug/L	99.917 ppb	15:38:25
2	SiO2†	116183.4	114483.2	5057.6 ug/L	5057.6 ppb	15:39:26
3	Sc Radial	5696.0	5696.0	102 %		15:37:21
3	Y RADIAL	5089.9	5089.9	105.7 %		15:37:21
3	Al 396.153Radial†	8510.9	8407.2	7652.4 ug/L	7652.4 ppb	15:37:21
3	Ca 317.933Radial†	719.4	685.9	1708.6 ug/L	1708.6 ppb	15:37:41
3	Fe 238.204 Radial†	874.0	853.5	29942 ug/L	29942 ppb	15:37:41
3	K 766.490 Radial†	4282.5	2710.8	1181.6 ug/L	1181.6 ppb	15:37:21
3	Mg 279.077 IEC†	18.2	17.6	1367.3 ug/L	1367.3 ppb	15:37:41
3	Na 589.592 Radial†	-117.4	55.8	150.78 ug/L	150.78 ppb	15:37:41
3	Sr 421.552†	1223.4	1189.8	18.315 ug/L	18.315 ppb	15:37:21
3	Sc 361.383	1072873.8	1072873.8	101.13 %		15:38:50
3	Y 371.029	884785.5	884785.5	103.70 %		15:38:50
3	Ag 328.068†	-1517.1	-2138.8	1.2739 ug/L	1.2739 ppb	15:38:56
3	As 188.979†	-33.1	4.2	10.413 ug/L	10.413 ppb	15:39:16
3	B 249.677†	220.6	599.7	5.3388 ug/L	5.3388 ppb	15:38:56
3	Ba 233.527†	33392.2	32994.7	167.75 ug/L	167.75 ppb	15:38:56
3	Be 313.107†	-8235.6	-827.4	0.9915 ug/L	0.9915 ppb	15:38:56
3	Cd 226.502†	163.1	439.0	-0.2434 ug/L	-0.2434 ppb	15:39:16
3	Co 228.616†	1036.2	1115.1	12.389 ug/L	12.389 ppb	15:39:16
3	Cr 267.716†	3208.3	3201.0	27.897 ug/L	27.897 ppb	15:39:16
3	Cu 324.752†	18118.8	7725.0	20.791 ug/L	20.791 ppb	15:38:56
3	Mn 257.610†	1802975.3	1781996.8	1412.1 ug/L	1412.1 ppb	15:38:50
3	Mo 202.031†	75.1	42.5	3.7576 ug/L	3.7576 ppb	15:39:16
3	Ni 231.604†	1211.5	1049.7	16.816 ug/L	16.816 ppb	15:39:16
3	P 214.914†	1170.7	820.6	265.40 ug/L	265.40 ppb	15:39:16
3	Pb 220.353†	212.6	239.3	16.606 ug/L	16.606 ppb	15:39:16
3	S 181.975 Axial†	183.3	113.4	94.470 ug/L	94.470 ppb	15:39:16
3	Sb 206.836†	59.2	13.2	0.7809 ug/L	0.7809 ppb	15:39:16
3	Se 196.026†	-320.2	-295.0	9.6678 ug/L	9.6678 ppb	15:39:16
3	Si 251.611†	116528.9	114666.3	2365.7 ug/L	2365.7 ppb	15:38:56
3	Sn 189.927†	13.5	7.9	1.4084 ug/L	1.4084 ppb	15:39:16
3	Ti 334.940†	413937.3	410420.0	537.39 ug/L	537.39 ppb	15:38:50
3	Tl 190.801†	-132.5	-69.6	-0.9822 ug/L	-0.9822 ppb	15:39:16
3	U 409.014†	-5663.6	-1765.6	-47.539 ug/L	-47.539 ppb	15:38:56
3	V 292.402†	2917.7	4537.9	21.012 ug/L	21.012 ppb	15:39:16
3	Zn 213.857†	19715.8	18373.1	99.196 ug/L	99.196 ppb	15:38:56
3	SiO2†	116568.8	114663.6	5065.6 ug/L	5065.6 ppb	15:39:31

Mean Data: 1201872901|881859|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1077219.4	101.54	%	0.867				0.85%
Sc Radial	5590.4	100	%	2.2				2.14%
Y 371.029	889486.8	104.25	%	0.996				0.96%
Y RADIAL	4994.3	103.7	%	2.25				2.17%
Ag 328.068†	-2203.8	1.2714	ug/L	0.09976	1.2714	ppb	0.09976	7.85%
Al 396.153Radial†	8423.6	7667.4	ug/L	25.70	7667.4	ppb	25.70	0.34%
As 188.979†	1.5	9.9398	ug/L	0.47328	9.9398	ppb	0.47328	4.76%
B 249.677†	583.2	4.9757	ug/L	0.32111	4.9757	ppb	0.32111	6.45%
Ba 233.527†	32924.8	167.42	ug/L	1.989	167.42	ppb	1.989	1.19%
Be 313.107†	-800.3	0.9990	ug/L	0.03548	0.9990	ppb	0.03548	3.55%
Ca 317.933Radial†	702.7	1750.3	ug/L	40.24	1750.3	ppb	40.24	2.30%
Cd 226.502†	449.6	-0.2586	ug/L	0.06324	-0.2586	ppb	0.06324	24.46%
Co 228.616†	1102.9	12.227	ug/L	0.1513	12.227	ppb	0.1513	1.24%
Cr 267.716†	3181.9	27.749	ug/L	0.2768	27.749	ppb	0.2768	1.00%
Cu 324.752†	7662.5	20.683	ug/L	0.6388	20.683	ppb	0.6388	3.09%
Fe 238.204 Radial†	876.3	30744	ug/L	704.9	30744	ppb	704.9	2.29%
K 766.490 Radial†	2773.9	1209.6	ug/L	25.85	1209.6	ppb	25.85	2.14%

Mg 279.077 1EC†	17.2	1332.0	ug/L	98.23	1332.0	ppb	98.23	7.37%
Mn 257.610†	1779629.5	1410.4	ug/L	2.40	1410.4	ppb	2.40	0.17%
Mo 202.031†	41.7	3.7771	ug/L	0.04730	3.7771	ppb	0.04730	1.25%
Na 589.592 Radial†	54.3	146.82	ug/L	12.629	146.82	ppb	12.629	8.60%
Ni 231.604†	1041.5	16.684	ug/L	0.3570	16.684	ppb	0.3570	2.14%
P 214.914†	822.2	265.34	ug/L	3.394	265.34	ppb	3.394	1.28%
Pb 220.353†	226.2	15.551	ug/L	1.0999	15.551	ppb	1.0999	7.07%
S 181.975 Axial†	112.7	93.885	ug/L	8.8434	93.885	ppb	8.8434	9.42%
Sb 206.836†	9.5	0.0684	ug/L	1.52148	0.0684	ppb	1.52148	>999.9%
Se 196.026†	-289.0	14.453	ug/L	5.4623	14.453	ppb	5.4623	37.79%
Si 251.611†	114488.8	2362.0	ug/L	25.72	2362.0	ppb	25.72	1.09%
Sn 189.927†	1.3	0.7495	ug/L	0.72656	0.7495	ppb	0.72656	96.94%
Sr 421.552†	1191.4	18.340	ug/L	0.0860	18.340	ppb	0.0860	0.47%
Ti 334.940†	410125.8	537.00	ug/L	0.332	537.00	ppb	0.332	0.06%
Tl 190.801†	-59.8	0.6614	ug/L	1.44839	0.6614	ppb	1.44839	219.00%
U 409.014†	-1666.9	-45.188	ug/L	2.1929	-45.188	ppb	2.1929	4.85%
V 292.402†	4537.7	20.905	ug/L	0.1630	20.905	ppb	0.1630	0.78%
Zn 213.857†	18339.2	98.922	ug/L	1.1555	98.922	ppb	1.1555	1.17%
SiO2†	113599.4	5018.6	ug/L	74.65	5018.6	ppb	74.65	1.49%

Sequence No.: 17
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 15:41:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5550.0	5550.0	99.7	%			15:43:35
1	Y RADIAL	4798.2	4798.2	99.64	%			15:43:35
1	Al 396.153Radial†	5250.4	5356.7	4854.3	ug/L	4854.3	ppb	15:43:35
1	Ca 317.933Radial†	1970.4	1958.7	4878.8	ug/L	4878.8	ppb	15:43:55
1	Fe 238.204 Radial†	137.3	137.4	4834.0	ug/L	4834.0	ppb	15:43:55
1	K 766.490 Radial†	13208.1	11770.2	5101.0	ug/L	5101.0	ppb	15:43:35
1	Mg 279.077 IEC†	62.7	62.7	4968.1	ug/L	4968.1	ppb	15:43:55
1	Na 589.592 Radial†	3392.0	3571.5	9656.9	ug/L	9656.9	ppb	15:43:35
1	Sr 421.552†	32852.9	32935.1	507.37	ug/L	507.37	ppb	15:43:35
1	Sc 361.383	1064992.1	1064992.1	100.39	%			15:44:54
1	Y 371.029	848241.6	848241.6	99.417	%			15:44:54
1	Ag 328.068†	127421.5	126291.3	502.94	ug/L	502.94	ppb	15:44:54
1	As 188.979†	2061.8	2090.8	493.94	ug/L	493.94	ppb	15:45:14
1	B 249.677†	31095.4	31357.0	486.83	ug/L	486.83	ppb	15:44:54
1	Ba 233.527†	98115.4	97712.5	495.79	ug/L	495.79	ppb	15:44:54
1	Be 313.107†	1594280.0	1595444.2	497.24	ug/L	497.24	ppb	15:44:54
1	Cd 226.502†	66508.1	66529.1	497.34	ug/L	497.34	ppb	15:44:54
1	Co 228.616†	38950.3	38890.4	484.63	ug/L	484.63	ppb	15:45:14
1	Cr 267.716†	58229.3	58033.2	494.97	ug/L	494.97	ppb	15:44:54
1	Cu 324.752†	211193.1	200186.9	494.19	ug/L	494.19	ppb	15:44:54
1	Mn 257.610†	629952.0	626694.1	495.80	ug/L	495.80	ppb	15:44:54
1	Mo 202.031†	12627.7	12547.2	502.56	ug/L	502.56	ppb	15:45:14
1	Ni 231.604†	30770.4	30503.4	488.59	ug/L	488.59	ppb	15:45:14
1	P 214.914†	7365.6	7000.2	2399.2	ug/L	2399.2	ppb	15:45:14
1	Pb 220.353†	6628.4	6631.9	498.51	ug/L	498.51	ppb	15:45:14
1	S 181.975 Axial†	1254.4	1181.7	999.29	ug/L	999.29	ppb	15:45:14
1	Sb 206.836†	2567.0	2511.7	499.99	ug/L	499.99	ppb	15:45:14
1	Se 196.026†	1506.6	1522.4	513.89	ug/L	513.89	ppb	15:45:14
1	Si 251.611†	123069.6	122034.6	2506.1	ug/L	2506.1	ppb	15:44:54
1	Sn 189.927†	4784.8	4760.9	495.62	ug/L	495.62	ppb	15:45:14
1	Ti 334.940†	381087.6	380726.3	498.33	ug/L	498.33	ppb	15:44:54
1	Tl 190.801†	2886.0	2936.3	497.24	ug/L	497.24	ppb	15:45:14
1	U 409.014†	15577.1	19351.8	478.60	ug/L	478.60	ppb	15:44:54
1	V 292.402†	85505.0	86827.9	498.46	ug/L	498.46	ppb	15:44:54
1	Zn 213.857†	90597.9	89125.9	493.16	ug/L	493.16	ppb	15:44:54
1	SiO2†	122068.2	120994.8	5320.2	ug/L	5320.2	ppb	15:46:14
2	Sc Radial	5447.3	5447.3	97.9	%			15:44:00
2	Y RADIAL	4711.7	4711.7	97.84	%			15:44:00
2	Al 396.153Radial†	5172.6	5376.3	4872.0	ug/L	4872.0	ppb	15:44:00
2	Ca 317.933Radial†	1978.6	2004.4	4992.5	ug/L	4992.5	ppb	15:44:20
2	Fe 238.204 Radial†	139.0	141.6	4983.9	ug/L	4983.9	ppb	15:44:20
2	K 766.490 Radial†	12957.8	11764.2	5098.5	ug/L	5098.5	ppb	15:44:00
2	Mg 279.077 IEC†	62.4	63.6	5042.1	ug/L	5042.1	ppb	15:44:20
2	Na 589.592 Radial†	3337.3	3579.7	9679.1	ug/L	9679.1	ppb	15:44:00
2	Sr 421.552†	32178.4	32867.1	506.32	ug/L	506.32	ppb	15:44:00
2	Sc 361.383	1051068.9	1051068.9	99.075	%			15:45:22
2	Y 371.029	835857.7	835857.7	97.966	%			15:45:22
2	Ag 328.068†	126172.9	126712.4	504.65	ug/L	504.65	ppb	15:45:22
2	As 188.979†	2053.8	2109.9	498.46	ug/L	498.46	ppb	15:45:42
2	B 249.677†	30728.4	31396.9	487.41	ug/L	487.41	ppb	15:45:22
2	Ba 233.527†	97233.2	98116.8	497.84	ug/L	497.84	ppb	15:45:22
2	Be 313.107†	1574216.1	1596230.6	497.49	ug/L	497.49	ppb	15:45:22
2	Cd 226.502†	65742.7	66634.2	498.11	ug/L	498.11	ppb	15:45:22
2	Co 228.616†	38877.4	39330.9	490.13	ug/L	490.13	ppb	15:45:42
2	Cr 267.716†	57664.8	58231.8	496.66	ug/L	496.66	ppb	15:45:22
2	Cu 324.752†	208926.4	200685.8	495.43	ug/L	495.43	ppb	15:45:22
2	Mn 257.610†	623851.7	628849.5	497.52	ug/L	497.52	ppb	15:45:22
2	Mo 202.031†	12603.0	12688.9	508.24	ug/L	508.24	ppb	15:45:42
2	Ni 231.604†	30731.8	30870.5	494.47	ug/L	494.47	ppb	15:45:42

2	P 214.914†	7351.1	7082.8	2428.1 ug/L	2428.1 ppb	15:45:42
2	Pb 220.353†	6620.8	6711.7	504.49 ug/L	504.49 ppb	15:45:42
2	S 181.975 Axial†	1262.4	1206.4	1020.2 ug/L	1020.2 ppb	15:45:42
2	Sb 206.836†	2541.1	2519.4	501.67 ug/L	501.67 ppb	15:45:42
2	Se 196.026†	1500.7	1536.3	518.98 ug/L	518.98 ppb	15:45:42
2	Si 251.611†	121951.6	122530.2	2516.3 ug/L	2516.3 ppb	15:45:22
2	Sn 189.927†	4769.9	4808.9	500.63 ug/L	500.63 ppb	15:45:42
2	Ti 334.940†	377304.3	381936.4	499.92 ug/L	499.92 ppb	15:45:22
2	Tl 190.801†	2878.0	2966.2	502.28 ug/L	502.28 ppb	15:45:42
2	U 409.014†	15599.1	19579.5	484.23 ug/L	484.23 ppb	15:45:22
2	V 292.402†	84556.2	86998.4	499.49 ug/L	499.49 ppb	15:45:22
2	Zn 213.857†	89634.5	89349.0	494.35 ug/L	494.35 ppb	15:45:22
2	SiO2†	124157.3	124714.2	5484.3 ug/L	5484.3 ppb	15:46:20
3	Sc Radial	5536.4	5536.4	99.5 %		15:44:25
3	Y RADIAL	4822.5	4822.5	100.1 %		15:44:25
3	Al 396.153Radial†	5265.5	5384.7	4879.5 ug/L	4879.5 ppb	15:44:25
3	Ca 317.933Radial†	1962.2	1955.4	4870.5 ug/L	4870.5 ppb	15:44:45
3	Fe 238.204 Radial†	137.2	137.6	4842.9 ug/L	4842.9 ppb	15:44:45
3	K 766.490 Radial†	13216.2	11810.9	5118.7 ug/L	5118.7 ppb	15:44:25
3	Mg 279.077 IEC†	62.7	62.8	4983.0 ug/L	4983.0 ppb	15:44:45
3	Na 589.592 Radial†	3349.3	3536.8	9563.2 ug/L	9563.2 ppb	15:44:25
3	Sr 421.552†	32669.2	32831.2	505.77 ug/L	505.77 ppb	15:44:25
3	Sc 361.383	1057782.7	1057782.7	99.708 %		15:45:49
3	Y 371.029	842128.4	842128.4	98.701 %		15:45:49
3	Ag 328.068†	126824.6	126557.6	504.00 ug/L	504.00 ppb	15:45:49
3	As 188.979†	2088.9	2131.9	503.59 ug/L	503.59 ppb	15:46:09
3	B 249.677†	31037.4	31509.9	489.19 ug/L	489.19 ppb	15:45:49
3	Ba 233.527†	97777.3	98039.6	497.45 ug/L	497.45 ppb	15:45:49
3	Be 313.107†	1585103.6	1597065.1	497.75 ug/L	497.75 ppb	15:45:49
3	Cd 226.502†	66249.3	66721.1	498.78 ug/L	498.78 ppb	15:45:49
3	Co 228.616†	39095.7	39300.7	489.76 ug/L	489.76 ppb	15:46:09
3	Cr 267.716†	57940.4	58138.8	495.87 ug/L	495.87 ppb	15:45:49
3	Cu 324.752†	210463.9	200889.4	495.93 ug/L	495.93 ppb	15:45:49
3	Mn 257.610†	627057.2	628067.8	496.88 ug/L	496.88 ppb	15:45:49
3	Mo 202.031†	12692.2	12697.7	508.58 ug/L	508.58 ppb	15:46:09
3	Ni 231.604†	30844.9	30787.0	493.13 ug/L	493.13 ppb	15:46:09
3	P 214.914†	7405.1	7089.9	2430.6 ug/L	2430.6 ppb	15:46:09
3	Pb 220.353†	6652.2	6700.8	503.69 ug/L	503.69 ppb	15:46:09
3	S 181.975 Axial†	1250.4	1186.2	1003.1 ug/L	1003.1 ppb	15:46:09
3	Sb 206.836†	2566.7	2528.8	503.51 ug/L	503.51 ppb	15:46:09
3	Se 196.026†	1528.1	1554.1	524.28 ug/L	524.28 ppb	15:46:09
3	Si 251.611†	122522.5	122321.5	2511.9 ug/L	2511.9 ppb	15:45:49
3	Sn 189.927†	4781.4	4789.9	498.63 ug/L	498.63 ppb	15:46:09
3	Ti 334.940†	379146.9	381367.2	499.17 ug/L	499.17 ppb	15:45:49
3	Tl 190.801†	2882.7	2952.6	499.96 ug/L	499.96 ppb	15:46:09
3	U 409.014†	15482.2	19362.3	478.86 ug/L	478.86 ppb	15:45:49
3	V 292.402†	85105.0	87007.2	499.55 ug/L	499.55 ppb	15:45:49
3	Zn 213.857†	90130.2	89272.0	493.95 ug/L	493.95 ppb	15:45:49
3	SiO2†	121770.0	121524.5	5343.3 ug/L	5343.3 ppb	15:46:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1057947.9	99.723	%	0.6563				0.66%
Sc Radial	5511.3	99.0	%	1.00				1.01%
Y 371.029	842075.9	98.695	%	0.7257				0.74%
Y RADIAL	4777.5	99.21	%	1.210				1.22%
Ag 328.068†	126520.4	503.86	ug/L	0.864	503.86	ppb	0.864	0.17%
QC value within limits for Ag 328.068 Recovery = 100.77%								
Al 396.153Radial†	5372.6	4868.6	ug/L	12.94	4868.6	ppb	12.94	0.27%
QC value within limits for Al 396.153Radial Recovery = 97.37%								
As 188.979†	2110.9	498.66	ug/L	4.828	498.66	ppb	4.828	0.97%
QC value within limits for As 188.979 Recovery = 99.73%								
B 249.677†	31421.2	487.81	ug/L	1.234	487.81	ppb	1.234	0.25%
QC value within limits for B 249.677 Recovery = 97.56%								
Ba 233.527†	97956.3	497.03	ug/L	1.089	497.03	ppb	1.089	0.22%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1596246.7	497.49	ug/L	0.253	497.49	ppb	0.253	0.05%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	1972.8	4913.9	ug/L	68.18	4913.9	ppb	68.18	1.39%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.28%
Cd 226.502†            66628.1      498.08 ug/L         0.720      498.08 ppb          0.720   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39174.0      488.17 ug/L         3.072      488.17 ppb          3.072   0.63%
   QC value within limits for Co 228.616  Recovery = 97.63%
Cr 267.716†            58134.6      495.83 ug/L         0.848      495.83 ppb          0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 99.17%
Cu 324.752†           200587.4      495.18 ug/L         0.893      495.18 ppb          0.893   0.18%
   QC value within limits for Cu 324.752  Recovery = 99.04%
Fe 238.204 Radial†       138.9      4886.9 ug/L         84.13      4886.9 ppb          84.13   1.72%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.74%
K 766.490 Radial†      11781.8      5106.1 ug/L         11.02      5106.1 ppb          11.02   0.22%
   QC value within limits for K 766.490 Radial  Recovery = 102.12%
Mg 279.077 IEC†           63.0      4997.8 ug/L         39.10      4997.8 ppb          39.10   0.78%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.96%
Mn 257.610†           627870.5      496.73 ug/L         0.871      496.73 ppb          0.871   0.18%
   QC value within limits for Mn 257.610  Recovery = 99.35%
Mo 202.031†            12644.6      506.46 ug/L         3.383      506.46 ppb          3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.29%
Na 589.592 Radial†      3562.7      9633.1 ug/L         61.49      9633.1 ppb          61.49   0.64%
   QC value within limits for Na 589.592 Radial  Recovery = 96.33%
Ni 231.604†            30720.3      492.07 ug/L         3.082      492.07 ppb          3.082   0.63%
   QC value within limits for Ni 231.604  Recovery = 98.41%
P 214.914†              7057.6      2419.3 ug/L         17.48      2419.3 ppb          17.48   0.72%
   QC value within limits for P 214.914  Recovery = 96.77%
Pb 220.353†             6681.5      502.23 ug/L         3.248      502.23 ppb          3.248   0.65%
   QC value within limits for Pb 220.353  Recovery = 100.45%
S 181.975 Axial†        1191.4      1007.5 ug/L         11.14      1007.5 ppb          11.14   1.11%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             2520.0      501.72 ug/L         1.761      501.72 ppb          1.761   0.35%
   QC value within limits for Sb 206.836  Recovery = 100.34%
Se 196.026†             1537.6      519.05 ug/L         5.195      519.05 ppb          5.195   1.00%
   QC value within limits for Se 196.026  Recovery = 103.81%
Si 251.611†           122295.4      2511.5 ug/L          5.07      2511.5 ppb           5.07   0.20%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†             4786.6      498.30 ug/L         2.522      498.30 ppb          2.522   0.51%
   QC value within limits for Sn 189.927  Recovery = 99.66%
Sr 421.552†            32877.8      506.49 ug/L         0.813      506.49 ppb          0.813   0.16%
   QC value within limits for Sr 421.552  Recovery = 101.30%
Ti 334.940†           381343.3      499.14 ug/L         0.795      499.14 ppb          0.795   0.16%
   QC value within limits for Ti 334.940  Recovery = 99.83%
Tl 190.801†             2951.7      499.83 ug/L         2.522      499.83 ppb          2.522   0.50%
   QC value within limits for Tl 190.801  Recovery = 99.97%
U 409.014†             19431.2      480.57 ug/L         3.177      480.57 ppb          3.177   0.66%
   QC value within limits for U 409.014  Recovery = 96.11%
V 292.402†             86944.5      499.16 ug/L         0.613      499.16 ppb          0.613   0.12%
   QC value within limits for V 292.402  Recovery = 99.83%
Zn 213.857†            89249.0      493.82 ug/L         0.604      493.82 ppb          0.604   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.76%
SiO2†                 122411.2      5382.6 ug/L         88.82      5382.6 ppb          88.82   1.65%
   QC value within limits for SiO2  Recovery = 100.66%
All analyte(s) passed QC.
```

Sequence No.: 18
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 15:48:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5444.7	5444.7	97.8	%			15:50:26
1	Y RADIAL	4754.6	4754.6	98.73	%			15:50:26
1	Al 396.153Radial†	-89.0	1.3	1.1300	ug/L	1.1300	ppb	15:50:26
1	Ca 317.933Radial†	24.6	8.2	20.486	ug/L	20.486	ppb	15:50:46
1	Fe 238.204 Radial†	1.6	1.3	45.016	ug/L	45.016	ppb	15:50:46
1	K 766.490 Radial†	1541.6	102.5	44.484	ug/L	44.484	ppb	15:50:26
1	Mg 279.077 IEC†	0.2	0.0	0.5452	ug/L	0.5452	ppb	15:50:46
1	Na 589.592 Radial†	-165.9	0.9	2.3237	ug/L	2.3237	ppb	15:50:46
1	Sr 421.552†	27.6	22.8	0.3506	ug/L	0.3506	ppb	15:50:46
1	Sc 361.383	1056924.6	1056924.6	99.627	%			15:51:43
1	Y 371.029	852084.4	852084.4	99.868	%			15:51:43
1	Ag 328.068†	677.5	41.4	0.1786	ug/L	0.1786	ppb	15:51:48
1	As 188.979†	-48.7	-12.0	-2.7987	ug/L	-2.7987	ppb	15:52:08
1	B 249.677†	-15.3	366.2	5.7014	ug/L	5.7014	ppb	15:51:48
1	Ba 233.527†	58.9	34.8	0.1773	ug/L	0.1773	ppb	15:52:08
1	Be 313.107†	-7518.0	-229.9	-0.0713	ug/L	-0.0713	ppb	15:51:48
1	Cd 226.502†	-272.1	4.5	0.0287	ug/L	0.0287	ppb	15:52:08
1	Co 228.616†	-101.3	-11.3	-0.1398	ug/L	-0.1398	ppb	15:52:08
1	Cr 267.716†	-33.1	-4.6	-0.0380	ug/L	-0.0380	ppb	15:51:48
1	Cu 324.752†	10167.5	14.3	0.0379	ug/L	0.0379	ppb	15:51:48
1	Mn 257.610†	919.8	96.2	0.0819	ug/L	0.0819	ppb	15:52:08
1	Mo 202.031†	42.0	10.4	0.4188	ug/L	0.4188	ppb	15:52:08
1	Ni 231.604†	169.3	21.7	0.3482	ug/L	0.3482	ppb	15:52:08
1	P 214.914†	354.3	18.7	6.5814	ug/L	6.5814	ppb	15:52:08
1	Pb 220.353†	-16.7	12.4	0.9234	ug/L	0.9234	ppb	15:52:08
1	S 181.975 Axial†	61.6	-6.0	-5.0843	ug/L	-5.0843	ppb	15:52:08
1	Sb 206.836†	53.3	8.1	1.6077	ug/L	1.6077	ppb	15:52:08
1	Se 196.026†	-12.1	9.5	3.2413	ug/L	3.2413	ppb	15:52:08
1	Si 251.611†	756.7	199.4	4.0905	ug/L	4.0905	ppb	15:52:08
1	Sn 189.927†	12.1	6.6	0.6931	ug/L	0.6931	ppb	15:52:08
1	Ti 334.940†	-1028.7	76.7	0.1021	ug/L	0.1021	ppb	15:51:48
1	Tl 190.801†	-51.6	9.6	1.6197	ug/L	1.6197	ppb	15:52:08
1	U 409.014†	-3848.7	-28.4	-0.7103	ug/L	-0.7103	ppb	15:51:43
1	V 292.402†	-1650.6	-3.9	-0.0247	ug/L	-0.0247	ppb	15:51:48
1	Zn 213.857†	1092.3	-26.1	-0.1527	ug/L	-0.1527	ppb	15:52:08
1	SiO2†	812.7	213.4	9.3760	ug/L	9.3760	ppb	15:53:14
2	Sc Radial	5363.3	5363.3	96.4	%			15:50:52
2	Y RADIAL	4689.7	4689.7	97.38	%			15:50:52
2	Al 396.153Radial†	-93.9	-5.3	-4.8063	ug/L	-4.8063	ppb	15:50:52
2	Ca 317.933Radial†	33.6	17.9	44.640	ug/L	44.640	ppb	15:51:12
2	Fe 238.204 Radial†	-0.5	-0.8	-29.258	ug/L	-29.258	ppb	15:51:12
2	K 766.490 Radial†	1469.5	51.7	22.381	ug/L	22.381	ppb	15:50:52
2	Mg 279.077 IEC†	0.5	0.4	29.965	ug/L	29.965	ppb	15:51:12
2	Na 589.592 Radial†	-167.6	-3.4	-9.2756	ug/L	-9.2756	ppb	15:51:12
2	Sr 421.552†	18.3	13.5	0.2083	ug/L	0.2083	ppb	15:51:12
2	Sc 361.383	1064727.6	1064727.6	100.36	%			15:52:14
2	Y 371.029	856448.2	856448.2	100.38	%			15:52:14
2	Ag 328.068†	654.6	13.6	0.0456	ug/L	0.0456	ppb	15:52:19
2	As 188.979†	-55.1	-18.0	-4.2429	ug/L	-4.2429	ppb	15:52:39
2	B 249.677†	-27.0	354.6	5.5302	ug/L	5.5302	ppb	15:52:19
2	Ba 233.527†	26.3	1.9	0.0090	ug/L	0.0090	ppb	15:52:39
2	Be 313.107†	-7608.1	-264.4	-0.0820	ug/L	-0.0820	ppb	15:52:19
2	Cd 226.502†	-292.9	-14.2	-0.1025	ug/L	-0.1025	ppb	15:52:39
2	Co 228.616†	-105.7	-14.9	-0.1859	ug/L	-0.1859	ppb	15:52:39
2	Cr 267.716†	-9.5	19.1	0.1627	ug/L	0.1627	ppb	15:52:19
2	Cu 324.752†	10209.3	-18.8	-0.0481	ug/L	-0.0481	ppb	15:52:19
2	Mn 257.610†	890.8	60.5	0.0435	ug/L	0.0435	ppb	15:52:39
2	Mo 202.031†	30.8	-1.1	-0.0470	ug/L	-0.0470	ppb	15:52:39
2	Ni 231.604†	166.7	17.8	0.2862	ug/L	0.2862	ppb	15:52:39

2	P 214.914†	351.3	13.1	4.6814	ug/L	4.6814 ppb	15:52:39
2	Pb 220.353†	0.4	29.5	2.2147	ug/L	2.2147 ppb	15:52:39
2	S 181.975 Axial†	58.3	-9.7	-8.2376	ug/L	-8.2376 ppb	15:52:39
2	Sb 206.836†	44.7	-0.9	-0.1791	ug/L	-0.1791 ppb	15:52:39
2	Se 196.026†	-22.7	-1.0	-0.4269	ug/L	-0.4269 ppb	15:52:39
2	Si 251.611†	732.9	170.1	3.5028	ug/L	3.5028 ppb	15:52:39
2	Sn 189.927†	9.3	3.8	0.3997	ug/L	0.3997 ppb	15:52:39
2	Ti 334.940†	-1052.4	60.6	0.0833	ug/L	0.0833 ppb	15:52:19
2	Tl 190.801†	-73.7	-12.1	-2.0323	ug/L	-2.0323 ppb	15:52:39
2	U 409.014†	-3937.4	-88.5	-2.1916	ug/L	-2.1916 ppb	15:52:14
2	V 292.402†	-1664.6	-5.8	-0.0333	ug/L	-0.0333 ppb	15:52:19
2	Zn 213.857†	1086.7	-39.7	-0.2212	ug/L	-0.2212 ppb	15:52:39
2	SiO2†	810.0	204.8	9.0296	ug/L	9.0296 ppb	15:53:19
3	Sc Radial	5503.9	5503.9	98.9	%		15:51:17
3	Y RADIAL	4786.1	4786.1	99.38	%		15:51:17
3	Al 396.153Radial†	-55.5	36.1	32.846	ug/L	32.846 ppb	15:51:17
3	Ca 317.933Radial†	29.6	13.0	32.437	ug/L	32.437 ppb	15:51:37
3	Fe 238.204 Radial†	1.1	0.8	28.650	ug/L	28.650 ppb	15:51:37
3	K 766.490 Radial†	1444.0	-13.2	-5.6858	ug/L	-5.6858 ppb	15:51:17
3	Mg 279.077 IEC†	-0.3	-0.5	-38.345	ug/L	-38.345 ppb	15:51:37
3	Na 589.592 Radial†	-167.4	1.1	3.0210	ug/L	3.0210 ppb	15:51:37
3	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431 ppb	15:51:37
3	Sc 361.383	1059763.4	1059763.4	99.895	%		15:52:44
3	Y 371.029	853150.8	853150.8	99.993	%		15:52:44
3	Ag 328.068†	638.8	0.9	0.0116	ug/L	0.0116 ppb	15:52:49
3	As 188.979†	-47.8	-11.0	-2.5746	ug/L	-2.5746 ppb	15:53:09
3	B 249.677†	-68.1	313.4	4.8798	ug/L	4.8798 ppb	15:52:49
3	Ba 233.527†	39.3	15.1	0.0771	ug/L	0.0771 ppb	15:53:09
3	Be 313.107†	-7522.3	-214.0	-0.0666	ug/L	-0.0666 ppb	15:52:49
3	Cd 226.502†	-285.9	-8.6	-0.0673	ug/L	-0.0673 ppb	15:53:09
3	Co 228.616†	-84.6	5.7	0.0719	ug/L	0.0719 ppb	15:53:09
3	Cr 267.716†	-51.0	-22.5	-0.1911	ug/L	-0.1911 ppb	15:52:49
3	Cu 324.752†	9963.6	-217.1	-0.5340	ug/L	-0.5340 ppb	15:52:49
3	Mn 257.610†	951.3	125.3	0.1035	ug/L	0.1035 ppb	15:53:09
3	Mo 202.031†	38.3	6.6	0.2645	ug/L	0.2645 ppb	15:53:09
3	Ni 231.604†	159.8	11.7	0.1876	ug/L	0.1876 ppb	15:53:09
3	P 214.914†	347.1	10.6	3.7978	ug/L	3.7978 ppb	15:53:09
3	Pb 220.353†	-25.4	3.7	0.2791	ug/L	0.2791 ppb	15:53:09
3	S 181.975 Axial†	64.7	-3.1	-2.6014	ug/L	-2.6014 ppb	15:53:09
3	Sb 206.836†	43.5	-1.9	-0.3719	ug/L	-0.3719 ppb	15:53:09
3	Se 196.026†	-24.2	-2.6	-0.7417	ug/L	-0.7417 ppb	15:53:09
3	Si 251.611†	723.7	164.4	3.3914	ug/L	3.3914 ppb	15:53:09
3	Sn 189.927†	-1.8	-7.3	-0.7591	ug/L	-0.7591 ppb	15:53:09
3	Ti 334.940†	-1125.7	-17.7	-0.0213	ug/L	-0.0213 ppb	15:52:49
3	Tl 190.801†	-47.4	13.9	2.3508	ug/L	2.3508 ppb	15:53:09
3	U 409.014†	-3791.5	39.2	0.9702	ug/L	0.9702 ppb	15:52:44
3	V 292.402†	-1640.9	10.2	0.0584	ug/L	0.0584 ppb	15:52:49
3	Zn 213.857†	1086.8	-34.5	-0.1947	ug/L	-0.1947 ppb	15:53:09
3	SiO2†	778.6	177.1	7.8246	ug/L	7.8246 ppb	15:53:24

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060471.9	99.961	%	0.3723				0.37%
Sc Radial	5437.3	97.7	%	1.27				1.30%
Y 371.029	853894.4	100.08	%	0.267				0.27%
Y RADIAL	4743.4	98.50	%	1.020				1.04%
Ag 328.068†	18.6	0.0786	ug/L	0.08825	0.0786	ppb	0.08825	112.24%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	10.7	9.7234	ug/L	20.24395	9.7234	ppb	20.24395	208.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-13.7	-3.2054	ug/L	0.90543	-3.2054	ppb	0.90543	28.25%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	344.7	5.3705	ug/L	0.43345	5.3705	ppb	0.43345	8.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	17.3	0.0878	ug/L	0.08464	0.0878	ppb	0.08464	96.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-236.1	-0.0733	ug/L	0.00791	-0.0733	ppb	0.00791	10.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.1	32.521	ug/L	12.0776	32.521	ppb	12.0776	37.14%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.1      -0.0470 ug/L       0.06789      -0.0470 ppb        0.06789 144.30%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -6.8      -0.0846 ug/L       0.13746      -0.0846 ppb        0.13746 162.45%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -2.7      -0.0221 ug/L       0.17746      -0.0221 ppb        0.17746 801.61%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -73.9      -0.1814 ug/L       0.30837      -0.1814 ppb        0.30837 170.01%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.4       14.803 ug/L      39.0249       14.803 ppb       39.0249 263.64%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          47.0       20.393 ug/L      25.1438       20.393 ppb       25.1438 123.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.0       -2.6115 ug/L     34.26394      -2.6115 ppb      34.26394 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                94.0        0.0763 ug/L      0.03041       0.0763 ppb       0.03041  39.87%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 5.3        0.2121 ug/L      0.23732       0.2121 ppb       0.23732 111.89%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -0.5       -1.3103 ug/L      6.90696      -1.3103 ppb       6.90696 527.13%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                17.1        0.2740 ug/L      0.08098       0.2740 ppb       0.08098  29.55%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 14.1        5.0202 ug/L      1.42236       5.0202 ppb       1.42236  28.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                15.2        1.1391 ug/L      0.98566       1.1391 ppb       0.98566  86.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -6.3       -5.3078 ug/L      2.82471      -5.3078 ppb       2.82471  53.22%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 1.8        0.3522 ug/L      1.09156       0.3522 ppb       1.09156 309.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 2.0        0.6909 ug/L      2.21432       0.6909 ppb       2.21432 320.50%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               178.0        3.6616 ug/L      0.37560       3.6616 ppb       0.37560  10.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.0        0.1112 ug/L      0.76790       0.1112 ppb       0.76790 690.45%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                19.5        0.3006 ug/L      0.08009       0.3006 ppb       0.08009  26.64%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                39.9        0.0547 ug/L      0.06651       0.0547 ppb       0.06651 121.59%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.8        0.6461 ug/L      2.34820       0.6461 ppb       2.34820 363.46%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -25.9       -0.6439 ug/L      1.58194      -0.6439 ppb       1.58194 245.69%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  0.1        0.0001 ug/L      0.05062       0.0001 ppb       0.05062 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -33.4       -0.1895 ug/L      0.03453      -0.1895 ppb       0.03453  18.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     198.4        8.7434 ug/L      0.81433       8.7434 ppb       0.81433   9.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Monday, July 13, 2009 21:52:36
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090704\Sample.060
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	813.4	813.423	35.566	4.4
	Mg	24.0	13233.5	13233.528	231.778	1.8
	Co	58.9	16639.5	16639.489	380.771	2.3
	Rh	102.9	26958.8	26958.823	586.949	2.2
	In	114.9	28207.6	28207.626	441.465	1.6
	Pb	208.0	15069.1	15069.144	161.587	1.1
⌈>	Ba	137.9	23069.3	23069.340	298.488	1.3
⌊	Ba++	69.0	787.2	0.034	0.001	2.6
⌈>	Ce	139.9	31217.7	31217.679	499.349	1.6
⌊	CeO	155.9	652.0	0.021	0.000	1.8
	Bkgd	220.0	2.5	2.500	0.612	24.5

Current Optimization File Data

Current Value	Description
0.89	Nebulizer Gas Flow
6.50	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	9.0	2062.8
Co	59	25	10.3	23764.8
In	115	25	11.8	35194.3

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	585	2080	0.631
Be	9.0	9.1	2051	2080	0.639
Mg	24.0	24.0	5690	2120	0.584
Mg	25.0	24.9	5912	2080	0.665
Mg	26.0	25.9	6145	2120	0.658
Co	58.9	58.9	14169	2170	0.632
Rh	102.9	103.0	24867	2230	0.697
In	114.9	115.0	27803	2260	0.687
Ce	139.9	140.0	33869	2280	0.763
Pb	206.0	206.0	49936	2420	0.663
Pb	207.0	206.9	50183	2385	0.775
Pb	208.0	208.0	50427	2430	0.720
U	238.1	238.0	57732	2470	0.709

Report Date/Time: Monday, July 13, 2009 2:51:10

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 14:42:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Blank.172

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		43	
	Be	9		ug/L		4	
	B	11		ug/L		345	
	Na	23		ug/L		9670	
	Mg	24		ug/L		1667	
	Al	27		ug/L		4334	
	P	31		ug/L		2996	
	K	39		ug/L		240341	
	Ca	43		ug/L		150	
>	Sc	45		ug/L		611775	
	V	51		ug/L		3052	
	Cr	52		ug/L		1534	
	Cr	53		ug/L		34600	
	Mn	55		ug/L		598	
	Fe	57		ug/L		2081	
	Co	59		ug/L		106	
	Ni	60		ug/L		39	
	Cu	63		ug/L		168	
	Cu	65		ug/L		31	
	Zn	66		ug/L		238	
	Zn	67		ug/L		3209	
	Zn	68		ug/L		334	
>	Ge	74		ug/L		68213	
	As	75		ug/L		152	
	Se	77		ug/L		1519	
	Se	82		ug/L		-6	
	Kr	83		ug/L		28	
	Sr	88		ug/L		59	
	Y	89		ug/L		10	
	Ag	107		ug/L		13	
	Cd	111		ug/L		8	
	Cd	114		ug/L		17	
>	In	115		ug/L		30621	
	Sn	120		ug/L		192	
	Sb	121		ug/L		63	
	Sb	123		ug/L		59	
	Ba	135		ug/L		5	
	Ba	137		ug/L		11	
	Ho	165		ug/L		5	
>	Lu	175		ug/L		33228	
	Tl	205		ug/L		359	
	Pb	208		ug/L		1360	
	Bi	209		ug/L		56	
	U	238		ug/L		32	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 14:48:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Standard 1.173

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	10.000	ug/L	3.718	3601	0.006
	Be	9	10.000	ug/L	2.664	1216	0.002
	B	11	20.000	ug/L	4.448	2423	0.003
	Na	23	1000.000	ug/L	4.906	1225238	1.978
	Mg	24	1000.000	ug/L	6.541	827013	1.344
	Al	27	1000.000	ug/L	0.929	1193540	1.938
	P	31	1000.000	ug/L	0.662	68920	0.107
	K	39	1000.000	ug/L	7.330	1522134	2.088
	Ca	43	1000.000	ug/L	3.096	2850	0.004
>	Sc	45		ug/L		613828	613827.680
	V	51	10.000	ug/L	5.856	15535	0.020
	Cr	52	10.000	ug/L	1.463	12502	0.018
	Cr	53		ug/L		36034	0.002
	Mn	55	10.000	ug/L	2.100	16343	0.026
	Fe	57	1000.000	ug/L	1.256	32629	0.050
	Co	59	10.000	ug/L	1.412	11509	0.019
	Ni	60	10.000	ug/L	4.697	2328	0.004
	Cu	63		ug/L		5454	0.009
	Cu	65	10.000	ug/L	0.975	2548	0.004
	Zn	66	10.000	ug/L	2.118	1795	0.023
	Zn	67		ug/L		3460	0.004
	Zn	68		ug/L		1479	0.017
>	Ge	74		ug/L		67548	67547.675
	As	75	10.000	ug/L	6.032	1768	0.024
	Se	77		ug/L		1686	0.003
	Se	82	10.000	ug/L	6.152	160	0.002
	Kr	83		ug/L		29	0.000
	Sr	88	10.000	ug/L	1.334	18603	0.606
	Y	89		ug/L		13	0.000
	Ag	107	10.000	ug/L	0.527	6995	0.228
	Cd	111	10.000	ug/L	4.566	1612	0.052
	Cd	114		ug/L		3708	0.121
>	In	115		ug/L		30599	30598.594
	Sn	120	10.000	ug/L	3.150	6806	0.216
	Sb	121	10.000	ug/L	5.195	5499	0.178
	Sb	123		ug/L		4126	0.133
	Ba	135		ug/L		1416	0.042
	Ba	137	10.000	ug/L	3.872	2498	0.074
	Ho	165		ug/L		5	0.000
>	Lu	175		ug/L		33669	33668.633
	Tl	205	10.000	ug/L	3.447	10592	0.304
	Pb	208	10.000	ug/L	0.499	16273	0.442
	Bi	209		ug/L		47	-0.000
	U	238	10.000	ug/L	0.746	15226	0.451

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 14:54:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Standard 2.174

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.028**	**ug/L**	3.455	35918	0.060
	Be	9	**100.022**	**ug/L**	1.892	12134	0.020
	B	11	**200.038**	**ug/L**	1.971	21085	0.035
	Na	23	**9997.440**	**ug/L**	10.537	11612681	19.285
	Mg	24	**10000.093**	**ug/L**	7.180	8094019	13.457
	Al	27	**10002.767**	**ug/L**	5.641	11980037	19.934
	P	31	**9996.580**	**ug/L**	0.363	626968	1.038
	K	39	**10002.575**	**ug/L**	2.341	13125196	21.440
	Ca	43	**9998.155**	**ug/L**	0.715	26082	0.043
>	Sc	45		**ug/L**		601124	601123.943
	V	51	**100.058**	**ug/L**	1.683	132622	0.216
	Cr	52	**99.979**	**ug/L**	0.063	106617	0.175
	Cr	53		**ug/L**		45963	0.020
	Mn	55	**99.978**	**ug/L**	0.384	151354	0.251
	Fe	57	**9998.054**	**ug/L**	0.692	295390	0.488
	Co	59	**99.972**	**ug/L**	0.557	108720	0.181
	Ni	60	**100.001**	**ug/L**	0.528	22486	0.037
	Cu	63		**ug/L**		50588	0.084
	Cu	65	**99.974**	**ug/L**	0.246	24051	0.040
	Zn	66	**99.981**	**ug/L**	0.455	15196	0.226
	Zn	67		**ug/L**		5646	0.038
	Zn	68		**ug/L**		11243	0.165
>	Ge	74		**ug/L**		66088	66087.516
	As	75	**100.103**	**ug/L**	0.998	17799	0.267
	Se	77		**ug/L**		2903	0.022
	Se	82	**99.974**	**ug/L**	0.509	1579	0.024
	Kr	83		**ug/L**		29	0.000
	Sr	88	**100.005**	**ug/L**	2.173	182133	6.094
	Y	89		**ug/L**		31	0.001
	Ag	107	**100.003**	**ug/L**	1.238	68416	2.289
	Cd	111	**100.005**	**ug/L**	1.078	15749	0.527
	Cd	114		**ug/L**		36066	1.206
>	In	115		**ug/L**		29880	29880.429
	Sn	120	**100.005**	**ug/L**	0.968	65079	2.172
	Sb	121	**100.064**	**ug/L**	4.672	56818	1.900
	Sb	123		**ug/L**		43306	1.448
	Ba	135		**ug/L**		13924	0.418
	Ba	137	**99.989**	**ug/L**	2.228	24350	0.731
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		33303	33303.117
	Tl	205	**99.997**	**ug/L**	2.642	101170	3.028
	Pb	208	**99.984**	**ug/L**	1.553	146394	4.356
	Bi	209		**ug/L**		105	0.001
	U	238	**99.993**	**ug/L**	2.161	149169	4.479

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 15:00:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 1.175

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.547**	**ug/L**	5.656	18366	0.031
	Be	9	**50.922**	**ug/L**	4.909	6125	0.010
	B	11	**103.528**	**ug/L**	4.433	10980	0.018
	Na	23	**5250.664**	**ug/L**	7.026	6041488	10.128
	Mg	24	**5074.585**	**ug/L**	2.648	4074365	6.829
	Al	27	**4913.706**	**ug/L**	6.512	5835709	9.792
	P	31	**5130.564**	**ug/L**	1.038	320592	0.533
	K	39	**4744.805**	**ug/L**	4.422	6304787	10.170
	Ca	43	**4944.423**	**ug/L**	0.973	12872	0.021
>	Sc	45		**ug/L**		596397	596397.425
	V	51	**50.580**	**ug/L**	3.212	67930	0.109
	Cr	52	**52.275**	**ug/L**	1.213	56006	0.091
	Cr	53		**ug/L**		40544	0.011
	Mn	55	**49.475**	**ug/L**	0.769	74597	0.124
	Fe	57	**5068.071**	**ug/L**	1.637	149506	0.247
	Co	59	**52.490**	**ug/L**	1.397	56663	0.095
	Ni	60	**52.720**	**ug/L**	1.784	11776	0.020
	Cu	63		**ug/L**		24897	0.041
	Cu	65	**49.825**	**ug/L**	2.143	11902	0.020
	Zn	66	**51.506**	**ug/L**	2.205	7892	0.117
	Zn	67		**ug/L**		4391	0.020
	Zn	68		**ug/L**		6024	0.087
>	Ge	74		**ug/L**		65705	65705.138
	As	75	**50.532**	**ug/L**	2.039	9009	0.135
	Se	77		**ug/L**		2253	0.012
	Se	82	**52.413**	**ug/L**	0.721	820	0.013
	Kr	83		**ug/L**		28	0.000
	Sr	88	**51.242**	**ug/L**	0.788	92810	3.122
	Y	89		**ug/L**		24	0.001
	Ag	107	**50.719**	**ug/L**	1.058	34503	1.161
	Cd	111	**53.161**	**ug/L**	2.046	8326	0.280
	Cd	114		**ug/L**		19069	0.641
>	In	115		**ug/L**		29705	29705.289
	Sn	120	**49.914**	**ug/L**	0.402	32386	1.084
	Sb	121	**49.047**	**ug/L**	3.460	27727	0.931
	Sb	123		**ug/L**		20958	0.703
	Ba	135		**ug/L**		7063	0.214
	Ba	137	**51.526**	**ug/L**	2.077	12423	0.377
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		32950	32949.618
	Tl	205	**48.755**	**ug/L**	3.625	48996	1.476
	Pb	208	**51.879**	**ug/L**	0.698	75815	2.260
	Bi	209		**ug/L**		65	0.000
	U	238	**52.414**	**ug/L**	2.093	77393	2.348

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	103.093				
	Be	9	101.845				
	B	11	103.528				
	Na	23	105.013				
	Mg	24	101.492				
	Al	27	97.301				
	P	31	102.611				
	K	39	94.896				
	Ca	43	98.888				
>	Sc	45			97.5		
	V	51	101.161				
	Cr	52	104.550				
	Cr	53					
	Mn	55	98.951				
	Fe	57	101.361				
	Co	59	104.980				
	Ni	60	105.440				
	Cu	63					
	Cu	65	99.651				
	Zn	66	103.012				
	Zn	67					
	Zn	68					
>	Ge	74			96.3		
	As	75	101.063				
	Se	77					
	Se	82	104.825				
	Kr	83					
	Sr	88	102.484				
	Y	89					
	Ag	107	101.438				
	Cd	111	106.322				
	Cd	114					
>	In	115			97.0		
	Sn	120	99.827				
	Sb	121	98.094				
	Sb	123					
	Ba	135					
	Ba	137	103.052				
	Ho	165					
>	Lu	175			99.2		
	Tl	205	97.511				
	Pb	208	103.757				
	Bi	209					
	U	238	104.828				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 15:06:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 2.176

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.054**	**ug/L**	74.326	61	0.000
	Be	9	**0.019**	**ug/L**	144.611	6	0.000
	B	11	**3.066**	**ug/L**	16.005	657	0.001
	Na	23	**-1.460**	**ug/L**	414.458	7670	-0.003
	Mg	24	**0.922**	**ug/L**	326.322	2334	0.001
	Al	27	**-1.345**	**ug/L**	67.462	2667	-0.003
	P	31	**0.313**	**ug/L**	468.250	2971	0.000
	K	39	**-0.634**	**ug/L**	464.789	235935	-0.001
	Ca	43	**4.720**	**ug/L**	203.743	160	0.000
>	Sc	45		**ug/L**		602450	602450.222
	V	51	**0.448**	**ug/L**	106.313	3601	0.001
	Cr	52	**0.049**	**ug/L**	202.714	1560	0.000
	Cr	53		**ug/L**		34784	0.001
	Mn	55	**-0.011**	**ug/L**	19.864	572	-0.000
	Fe	57	**2.533**	**ug/L**	74.926	2124	0.000
	Co	59	**0.014**	**ug/L**	27.721	120	0.000
	Ni	60	**0.010**	**ug/L**	243.314	41	0.000
	Cu	63		**ug/L**		163	-0.000
	Cu	65	**0.023**	**ug/L**	161.947	36	0.000
	Zn	66	**-0.040**	**ug/L**	147.872	227	-0.000
	Zn	67		**ug/L**		3183	0.001
	Zn	68		**ug/L**		340	0.000
>	Ge	74		**ug/L**		66661	66660.902
	As	75	**0.092**	**ug/L**	850.679	164	0.000
	Se	77		**ug/L**		1582	0.001
	Se	82	**0.411**	**ug/L**	41.400	1	0.000
	Kr	83		**ug/L**		25	-0.000
	Sr	88	**0.000**	**ug/L**	2873.639	58	0.000
	Y	89		**ug/L**		12	0.000
	Ag	107	**0.008**	**ug/L**	72.154	18	0.000
	Cd	111	**0.017**	**ug/L**	49.745	11	0.000
	Cd	114		**ug/L**		17	0.000
>	In	115		**ug/L**		30095	30094.765
	Sn	120	**0.254**	**ug/L**	9.585	354	0.006
	Sb	121	**0.534**	**ug/L**	20.074	367	0.010
	Sb	123		**ug/L**		291	0.008
	Ba	135		**ug/L**		8	0.000
	Ba	137	**-0.001**	**ug/L**	184.268	10	-0.000
	Ho	165		**ug/L**		6	0.000
>	Lu	175		**ug/L**		33178	33177.816
	Tl	205	**0.261**	**ug/L**	35.993	621	0.008
	Pb	208	**-0.154**	**ug/L**	5.162	1135	-0.007
	Bi	209		**ug/L**		43	-0.000
	U	238	**0.038**	**ug/L**	33.584	89	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		98.5			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 15:12:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 3.177

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**9.987**	**ug/L**	6.325	3676	0.006
	Be	9	**0.487**	**ug/L**	15.478	64	0.000
	B	11	**15.588**	**ug/L**	1.417	1986	0.003
	Na	23	**259.976**	**ug/L**	16.917	315157	0.501
	Mg	24	**22.824**	**ug/L**	19.097	20348	0.031
	Al	27	**31.952**	**ug/L**	14.968	43065	0.064
	P	31	**57.315**	**ug/L**	4.865	6625	0.006
	K	39	**294.724**	**ug/L**	3.785	625413	0.632
	Ca	43	**208.804**	**ug/L**	4.472	700	0.001
>	Sc	45		**ug/L**		610326	610325.637
	V	51	**10.064**	**ug/L**	3.329	16287	0.022
	Cr	52	**10.012**	**ug/L**	2.221	12218	0.018
	Cr	53		**ug/L**		36412	0.003
	Mn	55	**5.187**	**ug/L**	1.269	8535	0.013
	Fe	57	**111.639**	**ug/L**	5.057	5404	0.005
	Co	59	**1.042**	**ug/L**	1.600	1255	0.002
	Ni	60	**2.017**	**ug/L**	5.034	499	0.001
	Cu	63		**ug/L**		734	0.001
	Cu	65	**1.037**	**ug/L**	2.385	284	0.000
	Zn	66	**9.939**	**ug/L**	3.570	1763	0.023
	Zn	67		**ug/L**		3397	0.003
	Zn	68		**ug/L**		1464	0.017
>	Ge	74		**ug/L**		67776	67775.784
	As	75	**4.477**	**ug/L**	15.004	963	0.012
	Se	77		**ug/L**		1651	0.002
	Se	82	**5.835**	**ug/L**	11.775	89	0.001
	Kr	83		**ug/L**		25	-0.000
	Sr	88	**10.097**	**ug/L**	0.716	18892	0.615
	Y	89		**ug/L**		14	0.000
	Ag	107	**0.986**	**ug/L**	1.810	704	0.023
	Cd	111	**0.969**	**ug/L**	6.956	165	0.005
	Cd	114		**ug/L**		377	0.012
>	In	115		**ug/L**		30610	30610.355
	Sn	120	**4.993**	**ug/L**	3.184	3512	0.108
	Sb	121	**2.592**	**ug/L**	7.686	1570	0.049
	Sb	123		**ug/L**		1200	0.037
	Ba	135		**ug/L**		289	0.008
	Ba	137	**2.018**	**ug/L**	4.448	504	0.015
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		33437	33437.087
	Tl	205	**1.046**	**ug/L**	2.532	1421	0.032
	Pb	208	**1.823**	**ug/L**	3.668	4025	0.079
	Bi	209		**ug/L**		50	-0.000
	U	238	**0.224**	**ug/L**	3.678	367	0.010

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	99.871				
	Be	9	97.431				
	B	11	103.919				
	Na	23	103.991				
	Mg	24	152.162				
	Al	27	106.505				
	P	31	114.631				
	K	39	98.241				
	Ca	43	104.402				
>	Sc	45		99.8			
	V	51	100.643				
	Cr	52	100.125				
	Cr	53					
	Mn	55	103.736				
	Fe	57	111.639				
	Co	59	104.198				
	Ni	60	100.831				
	Cu	63					
	Cu	65	103.656				
	Zn	66	99.388				
	Zn	67					
	Zn	68					
>	Ge	74		99.4			
	As	75	89.545				
	Se	77					
	Se	82	116.698				
	Kr	83					
	Sr	88	100.968				
	Y	89					
	Ag	107	98.611				
	Cd	111	96.855				
	Cd	114					
>	In	115		100.0			
	Sn	120	99.869				
	Sb	121	86.397				
	Sb	123					
	Ba	135					
	Ba	137	100.884				
	Ho	165					
>	Lu	175		100.6			
	Tl	205	104.641				
	Pb	208	91.155				
	Bi	209					
	U	238	111.880				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Mg	24	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 15:18:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 4.178

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.231**	**ug/L**	13.563	117	0.000
	Be	9	**0.062**	**ug/L**	70.170	11	0.000
	B	11	**1.732**	**ug/L**	18.507	487	0.000
	Na	23	**105969.456**	**ug/L**	2.967	115554565	204.410
	Mg	24	**99363.215**	**ug/L**	1.809	75591383	133.714
	Al	27	**97038.889**	**ug/L**	4.528	109332259	193.383
	P	31	**99968.856**	**ug/L**	2.210	5871451	10.381
	K	39	**100083.882**	**ug/L**	5.726	121526166	214.529
	Ca	43	**95541.804**	**ug/L**	0.551	233161	0.412
>	Sc	45		**ug/L**		565208	565208.445
	V	51	**0.106**	**ug/L**	1122.765	2964	0.000
	Cr	52	**4.252**	**ug/L**	0.981	5620	0.007
	Cr	53		**ug/L**		30986	-0.002
	Mn	55	**5.766**	**ug/L**	0.578	8727	0.014
	Fe	57	**96477.786**	**ug/L**	0.408	2663324	4.709
	Co	59	**0.420**	**ug/L**	12.206	527	0.001
	Ni	60	**4.355**	**ug/L**	4.161	955	0.002
	Cu	63		**ug/L**		1357	0.002
	Cu	65	**4.742**	**ug/L**	1.545	1100	0.002
	Zn	66	**5.781**	**ug/L**	1.410	1004	0.013
	Zn	67		**ug/L**		3373	0.009
	Zn	68		**ug/L**		432	0.002
>	Ge	74		**ug/L**		60551	60550.991
	As	75	**1.390**	**ug/L**	53.101	360	0.004
	Se	77		**ug/L**		1786	0.007
	Se	82	**8.565**	**ug/L**	20.259	119	0.002
	Kr	83		**ug/L**		58	0.001
	Sr	88	**1.200**	**ug/L**	3.687	2068	0.073
	Y	89		**ug/L**		76	0.002
	Ag	107	**0.415**	**ug/L**	57.030	274	0.010
	Cd	111	**1.588**	**ug/L**	57.661	238	0.008
	Cd	114		**ug/L**		1142	0.041
>	In	115		**ug/L**		27568	27567.722
	Sn	120	**0.233**	**ug/L**	20.937	312	0.005
	Sb	121	**0.234**	**ug/L**	15.211	180	0.004
	Sb	123		**ug/L**		147	0.003
	Ba	135		**ug/L**		96	0.003
	Ba	137	**0.664**	**ug/L**	1.736	158	0.005
	Ho	165		**ug/L**		78	0.002
>	Lu	175		**ug/L**		30477	30477.117
	Tl	205	**0.026**	**ug/L**	72.758	354	0.001
	Pb	208	**1.181**	**ug/L**	5.676	2816	0.051
	Bi	209		**ug/L**		82	0.001
	U	238	**-0.003**	**ug/L**	69.168	26	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	105.969				
	Mg	24	99.363				
	Al	27	97.039				
	P	31	99.969				
	K	39	100.084				
	Ca	43	95.542				
>	Sc	45			92.4		
	V	51					
	Cr	52	114.922				
	Cr	53					
	Mn	55	99.407				
	Fe	57	96.478				
	Co	59	168.197				
	Ni	60	161.290				
	Cu	63					
	Cu	65	163.511				
	Zn	66	160.592				
	Zn	67					
	Zn	68					
>	Ge	74			88.8		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	99.983				
	Y	89					
	Ag	107					
	Cd	111	396.895				
	Cd	114					
>	In	115			90.0		
	Sn	120					
	Sb	121	234.303				
	Sb	123					
	Ba	135					
	Ba	137	99.070				
	Ho	165					
>	Lu	175			91.7		
	Tl	205					
	Pb	208	590.467				
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 15:24:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 5.179

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**20.769**	**ug/L**	6.436	6760	0.012
	Be	9	**20.698**	**ug/L**	3.644	2269	0.004
	B	11	**21.656**	**ug/L**	3.809	2333	0.004
	Na	23	**107360.828**	**ug/L**	2.070	112397336	207.094
	Mg	24	**106324.697**	**ug/L**	7.903	77651094	143.083
	Al	27	**96762.489**	**ug/L**	5.331	104743496	192.832
	P	31	**100445.030**	**ug/L**	1.813	5665803	10.430
	K	39	**102370.861**	**ug/L**	3.372	119352527	219.431
	Ca	43	**94830.500**	**ug/L**	1.498	222284	0.409
>	Sc	45		**ug/L**		542809	542809.463
	V	51	**19.097**	**ug/L**	5.824	25065	0.041
	Cr	52	**23.582**	**ug/L**	0.904	23747	0.041
	Cr	53		**ug/L**		31819	0.002
	Mn	55	**25.611**	**ug/L**	0.784	35408	0.064
	Fe	57	**98078.171**	**ug/L**	0.308	2600162	4.787
	Co	59	**20.254**	**ug/L**	1.269	19961	0.037
	Ni	60	**23.266**	**ug/L**	0.856	4751	0.009
	Cu	63		**ug/L**		9816	0.018
	Cu	65	**23.577**	**ug/L**	2.238	5141	0.009
	Zn	66	**24.752**	**ug/L**	1.870	3487	0.056
	Zn	67		**ug/L**		3681	0.016
	Zn	68		**ug/L**		2268	0.034
>	Ge	74		**ug/L**		58555	58555.347
	As	75	**23.056**	**ug/L**	3.849	3733	0.062
	Se	77		**ug/L**		1923	0.011
	Se	82	**25.585**	**ug/L**	5.301	354	0.006
	Kr	83		**ug/L**		50	0.000
	Sr	88	**21.694**	**ug/L**	0.976	35214	1.322
	Y	89		**ug/L**		69	0.002
	Ag	107	**19.536**	**ug/L**	1.735	11908	0.447
	Cd	111	**19.869**	**ug/L**	1.868	2792	0.105
	Cd	114		**ug/L**		7432	0.279
>	In	115		**ug/L**		26601	26600.503
	Sn	120	**20.248**	**ug/L**	0.575	11864	0.440
	Sb	121	**21.211**	**ug/L**	0.487	10766	0.403
	Sb	123		**ug/L**		8326	0.311
	Ba	135		**ug/L**		2531	0.086
	Ba	137	**22.769**	**ug/L**	12.402	4910	0.166
	Ho	165		**ug/L**		76	0.002
>	Lu	175		**ug/L**		29417	29417.223
	Tl	205	**17.963**	**ug/L**	5.224	16311	0.544
	Pb	208	**20.659**	**ug/L**	1.315	27676	0.900
	Bi	209		**ug/L**		87	0.001
	U	238	**20.366**	**ug/L**	1.924	26862	0.912

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	103.846				
	Be	9	103.492				
	B	11	108.281				
	Na	23	107.361				
	Mg	24	106.325				
	Al	27	96.762				
	P	31	100.445				
	K	39	102.371				
	Ca	43	94.830				
>	Sc	45		88.7			
	V	51	95.483				
	Cr	52	99.503				
	Cr	53					
	Mn	55	99.269				
	Fe	57	98.078				
	Co	59	100.021				
	Ni	60	102.494				
	Cu	63					
	Cu	65	102.958				
	Zn	66	104.881				
	Zn	67					
	Zn	68					
>	Ge	74		85.8			
	As	75	115.280				
	Se	77					
	Se	82	127.927				
	Kr	83					
	Sr	88	102.328				
	Y	89					
	Ag	107	97.680				
	Cd	111	97.398				
	Cd	114					
>	In	115		86.9			
	Sn	120	101.242				
	Sb	121	105.526				
	Sb	123					
	Ba	135					
	Ba	137	110.155				
	Ho	165					
>	Lu	175		88.5			
	Tl	205	89.813				
	Pb	208	102.274				
	Bi	209					
	U	238	101.828				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Se	82	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 15:29:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.180

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.743**	**ug/L**	4.706	17774	0.031
	Be	9	**52.889**	**ug/L**	3.096	6017	0.011
	B	11	**104.923**	**ug/L**	1.843	10523	0.018
	Na	23	**5117.498**	**ug/L**	3.754	5577770	9.871
	Mg	24	**5033.112**	**ug/L**	7.456	3826556	6.773
	Al	27	**4887.371**	**ug/L**	0.872	5495916	9.740
	P	31	**5123.540**	**ug/L**	0.496	302746	0.532
	K	39	**5082.747**	**ug/L**	1.602	6363451	10.895
	Ca	43	**5033.740**	**ug/L**	1.033	12387	0.022
>	Sc	45		**ug/L**		563898	563898.248
	V	51	**50.967**	**ug/L**	2.261	64766	0.110
	Cr	52	**51.705**	**ug/L**	0.664	52412	0.090
	Cr	53		**ug/L**		37276	0.010
	Mn	55	**48.820**	**ug/L**	0.531	69617	0.122
	Fe	57	**5076.650**	**ug/L**	1.482	141671	0.248
	Co	59	**52.075**	**ug/L**	0.681	53167	0.094
	Ni	60	**53.329**	**ug/L**	0.987	11266	0.020
	Cu	63		**ug/L**		23535	0.041
	Cu	65	**49.341**	**ug/L**	2.150	11144	0.020
	Zn	66	**51.772**	**ug/L**	1.011	7412	0.117
	Zn	67		**ug/L**		4189	0.021
	Zn	68		**ug/L**		5624	0.087
>	Ge	74		**ug/L**		61388	61388.239
	As	75	**50.969**	**ug/L**	1.808	8487	0.136
	Se	77		**ug/L**		1998	0.010
	Se	82	**50.978**	**ug/L**	3.685	745	0.012
	Kr	83		**ug/L**		23	-0.000
	Sr	88	**50.850**	**ug/L**	1.242	87451	3.099
	Y	89		**ug/L**		23	0.000
	Ag	107	**50.353**	**ug/L**	0.741	32525	1.153
	Cd	111	**52.479**	**ug/L**	0.080	7805	0.276
	Cd	114		**ug/L**		18196	0.645
>	In	115		**ug/L**		28205	28204.700
	Sn	120	**48.975**	**ug/L**	0.794	30176	1.064
	Sb	121	**48.495**	**ug/L**	3.235	26028	0.921
	Sb	123		**ug/L**		19885	0.703
	Ba	135		**ug/L**		6544	0.216
	Ba	137	**51.463**	**ug/L**	2.595	11421	0.376
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		30329	30329.465
	Tl	205	**48.949**	**ug/L**	2.938	45285	1.482
	Pb	208	**51.505**	**ug/L**	1.008	69296	2.244
	Bi	209		**ug/L**		55	0.000
	U	238	**52.370**	**ug/L**	0.093	71184	2.346

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	105.486				
	Be	9	105.778				
	B	11	104.923				
	Na	23	102.350				
	Mg	24	100.662				
	Al	27	96.780				
	P	31	102.471				
	K	39	101.655				
	Ca	43	100.675				
>	Sc	45		92.2			
	V	51	101.935				
	Cr	52	103.410				
	Cr	53					
	Mn	55	97.641				
	Fe	57	101.533				
	Co	59	104.149				
	Ni	60	106.658				
	Cu	63					
	Cu	65	98.681				
	Zn	66	103.544				
	Zn	67					
	Zn	68					
>	Ge	74		90.0			
	As	75	101.937				
	Se	77					
	Se	82	101.956				
	Kr	83					
	Sr	88	101.700				
	Y	89					
	Ag	107	100.707				
	Cd	111	104.959				
	Cd	114					
>	In	115		92.1			
	Sn	120	97.950				
	Sb	121	96.990				
	Sb	123					
	Ba	135					
	Ba	137	102.926				
	Ho	165					
>	Lu	175		91.3			
	Tl	205	97.899				
	Pb	208	103.010				
	Bi	209					
	U	238	104.739				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 15:35:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.181

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.167**	**ug/L**	10.181	96	0.000
	Be	9	**-0.006**	**ug/L**	270.071	3	-0.000
	B	11	**2.272**	**ug/L**	18.903	538	0.000
	Na	23	**5.511**	**ug/L**	69.369	15008	0.011
	Mg	24	**0.593**	**ug/L**	377.031	2000	0.001
	Al	27	**1.133**	**ug/L**	229.531	5335	0.002
	P	31	**0.613**	**ug/L**	94.385	2800	0.000
	K	39	**20.174**	**ug/L**	182.050	245806	0.043
	Ca	43	**-0.593**	**ug/L**	1396.506	137	-0.000
>	Sc	45		**ug/L**		564338	564337.700
	V	51	**0.018**	**ug/L**	2854.598	2850	0.000
	Cr	52	**-0.127**	**ug/L**	20.089	1289	-0.000
	Cr	53		**ug/L**		32355	0.001
	Mn	55	**-0.059**	**ug/L**	3.411	467	-0.000
	Fe	57	**2.854**	**ug/L**	82.657	1997	0.000
	Co	59	**0.014**	**ug/L**	41.944	112	0.000
	Ni	60	**-0.031**	**ug/L**	106.273	29	-0.000
	Cu	63		**ug/L**		98	-0.000
	Cu	65	**0.028**	**ug/L**	61.027	35	0.000
	Zn	66	**0.076**	**ug/L**	120.957	227	0.000
	Zn	67		**ug/L**		2992	0.001
	Zn	68		**ug/L**		325	0.000
>	Ge	74		**ug/L**		62060	62060.490
	As	75	**-0.070**	**ug/L**	784.294	126	-0.000
	Se	77		**ug/L**		1474	0.001
	Se	82	**1.179**	**ug/L**	17.542	12	0.000
	Kr	83		**ug/L**		18	-0.000
	Sr	88	**0.006**	**ug/L**	65.144	64	0.000
	Y	89		**ug/L**		9	0.000
	Ag	107	**0.013**	**ug/L**	15.955	20	0.000
	Cd	111	**-0.036**	**ug/L**	47.292	2	-0.000
	Cd	114		**ug/L**		16	0.000
>	In	115		**ug/L**		28003	28003.098
	Sn	120	**0.093**	**ug/L**	28.075	232	0.002
	Sb	121	**0.395**	**ug/L**	31.452	267	0.007
	Sb	123		**ug/L**		213	0.006
	Ba	135		**ug/L**		8	0.000
	Ba	137	**-0.011**	**ug/L**	88.480	7	-0.000
	Ho	165		**ug/L**		3	-0.000
>	Lu	175		**ug/L**		30420	30420.331
	Tl	205	**0.351**	**ug/L**	17.395	653	0.011
	Pb	208	**-0.299**	**ug/L**	4.929	850	-0.013
	Bi	209		**ug/L**		46	-0.000
	U	238	**0.032**	**ug/L**	15.376	73	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			92.2		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			91.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			91.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			91.6		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872852
Sample Date/Time: Tuesday, July 14, 2009 15:41:44
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872852.182

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.159**	**ug/L**	100.006	89	0.000
	Be	9	**-0.001**	**ug/L**	8733.463	3	-0.000
	B	11	**1.423**	**ug/L**	15.029	438	0.000
	Na	23	**17.704**	**ug/L**	25.193	27026	0.034
	Mg	24	**2.113**	**ug/L**	128.678	3000	0.003
	Al	27	**8.254**	**ug/L**	49.096	12673	0.016
	P	31	**43.006**	**ug/L**	4.207	5070	0.004
	K	39	**-8.806**	**ug/L**	87.318	202425	-0.019
	Ca	43	**-1.799**	**ug/L**	520.346	128	-0.000
>	Sc	45		**ug/L**		541758	541758.180
	V	51	**-0.757**	**ug/L**	18.030	1815	-0.002
	Cr	52	**0.091**	**ug/L**	74.773	1442	0.000
	Cr	53		**ug/L**		24288	-0.012
	Mn	55	**0.234**	**ug/L**	4.013	847	0.001
	Fe	57	**10.872**	**ug/L**	40.249	2127	0.001
	Co	59	**0.137**	**ug/L**	9.081	228	0.000
	Ni	60	**0.167**	**ug/L**	13.765	68	0.000
	Cu	63		**ug/L**		132	-0.000
	Cu	65	**0.110**	**ug/L**	56.625	51	0.000
	Zn	66	**0.137**	**ug/L**	125.072	225	0.000
	Zn	67		**ug/L**		2345	-0.007
	Zn	68		**ug/L**		324	0.001
>	Ge	74		**ug/L**		59150	59149.507
	As	75	**0.064**	**ug/L**	752.548	143	0.000
	Se	77		**ug/L**		988	-0.006
	Se	82	**0.541**	**ug/L**	155.660	2	0.000
	Kr	83		**ug/L**		20	-0.000
	Sr	88	**0.006**	**ug/L**	78.172	63	0.000
	Y	89		**ug/L**		20	0.000
	Ag	107	**-0.002**	**ug/L**	154.306	10	-0.000
	Cd	111	**0.007**	**ug/L**	797.194	8	0.000
	Cd	114		**ug/L**		12	-0.000
>	In	115		**ug/L**		27656	27656.059
	Sn	120	**0.091**	**ug/L**	72.133	228	0.002
	Sb	121	**0.075**	**ug/L**	45.016	96	0.001
	Sb	123		**ug/L**		74	0.001
	Ba	135		**ug/L**		10	0.000
	Ba	137	**0.050**	**ug/L**	51.394	21	0.000
	Ho	165		**ug/L**		6	0.000
>	Lu	175		**ug/L**		29993	29993.088
	Tl	205	**0.344**	**ug/L**	9.399	637	0.010
	Pb	208	**0.370**	**ug/L**	19.626	1711	0.016
	Bi	209		**ug/L**		63	0.000
	U	238	**0.120**	**ug/L**	173.284	189	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			88.6		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			86.7		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			90.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			90.3		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872853
Sample Date/Time: Tuesday, July 14, 2009 15:47:38
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881838|40|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872853.183

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.238**	ug/L	8.378	810	0.001
	Be	9	**23.932**	ug/L	1.292	2791	0.005
	B	11	**37.764**	ug/L	3.911	4084	0.007
	Na	23	**166.110**	ug/L	8.525	194322	0.320
	Mg	24	**823.499**	ug/L	6.171	640742	1.108
	Al	27	**2218.608**	ug/L	6.102	2553123	4.421
	P	31	**200.544**	ug/L	1.333	14851	0.021
	K	39	**693.308**	ug/L	7.340	1085958	1.486
	Ca	43	**980.004**	ug/L	3.549	2581	0.004
>	Sc	45		ug/L		577297	577297.259
	V	51	**35.775**	ug/L	2.776	47393	0.077
	Cr	52	**18.278**	ug/L	0.670	19904	0.032
	Cr	53		ug/L		33718	0.002
	Mn	55	**97.047**	ug/L	1.163	141067	0.243
	Fe	57	**2773.679**	ug/L	1.479	80089	0.135
	Co	59	**22.498**	ug/L	0.762	23575	0.041
	Ni	60	**27.985**	ug/L	2.800	6067	0.010
	Cu	63		ug/L		13043	0.022
	Cu	65	**26.692**	ug/L	3.281	6184	0.011
	Zn	66	**54.083**	ug/L	0.596	7974	0.122
	Zn	67		ug/L		4201	0.019
	Zn	68		ug/L		6176	0.093
>	Ge	74		ug/L		63295	63294.567
	As	75	**66.751**	ug/L	0.533	11415	0.178
	Se	77		ug/L		1981	0.009
	Se	82	**48.549**	ug/L	3.515	731	0.012
	Kr	83		ug/L		24	-0.000
	Sr	88	**43.193**	ug/L	0.865	75741	2.632
	Y	89		ug/L		6920	0.240
	Ag	107	**4.487**	ug/L	0.253	2966	0.103
	Cd	111	**31.931**	ug/L	0.582	4845	0.168
	Cd	114		ug/L		11078	0.385
>	In	115		ug/L		28757	28756.940
	Sn	120	**9.480**	ug/L	1.137	6100	0.206
	Sb	121	**7.872**	ug/L	1.711	4358	0.149
	Sb	123		ug/L		3403	0.116
	Ba	135		ug/L		17003	0.546
	Ba	137	**130.341**	ug/L	0.107	29693	0.953
	Ho	165		ug/L		248	0.008
>	Lu	175		ug/L		31148	31148.236
	Tl	205	**53.020**	ug/L	2.134	50352	1.606
	Pb	208	**46.196**	ug/L	1.374	63953	2.012
	Bi	209		ug/L		141	0.003
	U	238	**0.458**	ug/L	3.533	670	0.021

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		94.4			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		93.7			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 16:22:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.189

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.721**	**ug/L**	2.434	17869	0.032
	Be	9	**54.294**	**ug/L**	4.369	6094	0.011
	B	11	**104.977**	**ug/L**	1.577	10388	0.018
	Na	23	**5409.349**	**ug/L**	3.581	5814563	10.434
	Mg	24	**5281.969**	**ug/L**	5.019	3958507	7.108
	Al	27	**4903.249**	**ug/L**	0.471	5439804	9.771
	P	31	**5149.329**	**ug/L**	1.246	300269	0.535
	K	39	**5246.163**	**ug/L**	8.536	6483866	11.245
	Ca	43	**4978.417**	**ug/L**	0.968	12085	0.021
>	Sc	45		**ug/L**		556333	556332.751
	V	51	**51.258**	**ug/L**	1.257	64231	0.110
	Cr	52	**51.867**	**ug/L**	0.657	51865	0.091
	Cr	53		**ug/L**		35368	0.007
	Mn	55	**49.355**	**ug/L**	1.214	69438	0.124
	Fe	57	**5071.933**	**ug/L**	0.850	139600	0.248
	Co	59	**52.347**	**ug/L**	0.386	52727	0.095
	Ni	60	**53.501**	**ug/L**	1.682	11154	0.020
	Cu	63		**ug/L**		23485	0.042
	Cu	65	**49.602**	**ug/L**	0.768	11057	0.020
	Zn	66	**51.667**	**ug/L**	0.846	7370	0.117
	Zn	67		**ug/L**		4040	0.019
	Zn	68		**ug/L**		5580	0.086
>	Ge	74		**ug/L**		61156	61155.930
	As	75	**51.747**	**ug/L**	2.972	8582	0.138
	Se	77		**ug/L**		1917	0.009
	Se	82	**49.926**	**ug/L**	1.390	727	0.012
	Kr	83		**ug/L**		22	-0.000
	Sr	88	**51.633**	**ug/L**	1.276	87910	3.146
	Y	89		**ug/L**		39	0.001
	Ag	107	**51.037**	**ug/L**	0.214	32637	1.168
	Cd	111	**53.839**	**ug/L**	2.029	7928	0.284
	Cd	114		**ug/L**		18352	0.657
>	In	115		**ug/L**		27922	27922.409
	Sn	120	**49.809**	**ug/L**	1.071	30381	1.082
	Sb	121	**48.806**	**ug/L**	4.243	25936	0.927
	Sb	123		**ug/L**		19812	0.708
	Ba	135		**ug/L**		6589	0.215
	Ba	137	**51.731**	**ug/L**	1.499	11566	0.378
	Ho	165		**ug/L**		9	0.000
>	Lu	175		**ug/L**		30558	30557.955
	Tl	205	**49.519**	**ug/L**	2.808	46158	1.499
	Pb	208	**52.204**	**ug/L**	0.850	70745	2.274
	Bi	209		**ug/L**		62	0.000
	U	238	**53.470**	**ug/L**	0.536	73225	2.395

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	107.442				
	Be	9	108.587				
	B	11	104.977				
	Na	23	108.187				
	Mg	24	105.639				
	Al	27	97.094				
	P	31	102.987				
	K	39	104.923				
	Ca	43	99.568				
>	Sc	45		90.9			
	V	51	102.515				
	Cr	52	103.734				
	Cr	53					
	Mn	55	98.710				
	Fe	57	101.439				
	Co	59	104.695				
	Ni	60	107.002				
	Cu	63					
	Cu	65	99.203				
	Zn	66	103.334				
	Zn	67					
	Zn	68					
>	Ge	74		89.7			
	As	75	103.494				
	Se	77					
	Se	82	99.852				
	Kr	83					
	Sr	88	103.267				
	Y	89					
	Ag	107	102.073				
	Cd	111	107.677				
	Cd	114					
>	In	115		91.2			
	Sn	120	99.619				
	Sb	121	97.612				
	Sb	123					
	Ba	135					
	Ba	137	103.463				
	Ho	165					
>	Lu	175		92.0			
	Tl	205	99.038				
	Pb	208	104.408				
	Bi	209					
	U	238	106.941				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 16:28:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.190

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.057**	**ug/L**	69.534	57	0.000
	Be	9	**0.006**	**ug/L**	208.472	4	0.000
	B	11	**1.907**	**ug/L**	28.261	494	0.000
	Na	23	**-1.062**	**ug/L**	166.187	7669	-0.002
	Mg	24	**0.273**	**ug/L**	1068.655	1667	0.000
	Al	27	**0.656**	**ug/L**	410.139	4668	0.001
	P	31	**3.072**	**ug/L**	35.580	2898	0.000
	K	39	**8.429**	**ug/L**	306.635	227475	0.018
	Ca	43	**3.566**	**ug/L**	60.540	145	0.000
>	Sc	45		**ug/L**		555287	555287.441
	V	51	**-0.260**	**ug/L**	240.975	2468	-0.001
	Cr	52	**-0.055**	**ug/L**	97.101	1338	-0.000
	Cr	53		**ug/L**		30764	-0.001
	Mn	55	**0.069**	**ug/L**	16.198	638	0.000
	Fe	57	**2.563**	**ug/L**	78.733	1958	0.000
	Co	59	**0.023**	**ug/L**	23.944	120	0.000
	Ni	60	**-0.027**	**ug/L**	61.293	30	-0.000
	Cu	63		**ug/L**		113	-0.000
	Cu	65	**0.028**	**ug/L**	128.583	34	0.000
	Zn	66	**0.012**	**ug/L**	895.728	217	0.000
	Zn	67		**ug/L**		3000	0.002
	Zn	68		**ug/L**		309	0.000
>	Ge	74		**ug/L**		61688	61688.200
	As	75	**-0.098**	**ug/L**	677.838	122	-0.000
	Se	77		**ug/L**		1336	-0.001
	Se	82	**0.161**	**ug/L**	385.184	-3	0.000
	Kr	83		**ug/L**		26	0.000
	Sr	88	**0.002**	**ug/L**	503.934	57	0.000
	Y	89		**ug/L**		13	0.000
	Ag	107	**0.008**	**ug/L**	55.130	17	0.000
	Cd	111	**0.014**	**ug/L**	376.666	10	0.000
	Cd	114		**ug/L**		16	0.000
>	In	115		**ug/L**		28220	28219.783
	Sn	120	**0.083**	**ug/L**	10.475	228	0.002
	Sb	121	**0.459**	**ug/L**	28.864	303	0.009
	Sb	123		**ug/L**		227	0.006
	Ba	135		**ug/L**		7	0.000
	Ba	137	**-0.003**	**ug/L**	353.555	9	-0.000
	Ho	165		**ug/L**		5	0.000
>	Lu	175		**ug/L**		30918	30918.065
	Tl	205	**0.208**	**ug/L**	27.535	529	0.006
	Pb	208	**-0.289**	**ug/L**	16.715	877	-0.013
	Bi	209		**ug/L**		52	-0.000
	U	238	**0.025**	**ug/L**	35.695	65	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			90.8		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			90.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			92.2		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			93.0		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232591001
Sample Date/Time: Tuesday, July 14, 2009 16:34:48
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\232591001.191

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**35.216**	**ug/L**	3.744	11321	0.021
	Be	9	**3.051**	**ug/L**	2.005	334	0.001
	B	11	**7.909**	**ug/L**	2.791	1036	0.001
	Na	23	**535.513**	**ug/L**	3.681	563593	1.033
	Mg	24	**3587.316**	**ug/L**	2.958	2593948	4.827
	Al	27	**27230.058**	**ug/L**	4.159	29128667	54.265
	P	31	**413.192**	**ug/L**	1.947	25688	0.043
	K	39	**3415.730**	**ug/L**	8.797	4146586	7.322
	Ca	43	**3476.898**	**ug/L**	1.694	8194	0.015
>	Sc	45		**ug/L**		537183	537182.834
	V	51	**39.795**	**ug/L**	1.784	48737	0.086
	Cr	52	**19.900**	**ug/L**	0.207	20042	0.035
	Cr	53		**ug/L**		24067	-0.012
	Mn	55	**862.417**	**ug/L**	0.233	1162665	2.163
	Fe	57	**27728.942**	**ug/L**	0.626	728805	1.353
	Co	59	**8.827**	**ug/L**	2.662	8666	0.016
	Ni	60	**14.736**	**ug/L**	1.081	2991	0.006
	Cu	63		**ug/L**		22027	0.041
	Cu	65	**49.416**	**ug/L**	1.611	10637	0.020
	Zn	66	**181.554**	**ug/L**	1.825	23909	0.411
	Zn	67		**ug/L**		6192	0.060
	Zn	68		**ug/L**		18170	0.310
>	Ge	74		**ug/L**		57650	57650.344
	As	75	**8.245**	**ug/L**	4.959	1397	0.022
	Se	77		**ug/L**		887	-0.007
	Se	82	**1.782**	**ug/L**	13.703	20	0.000
	Kr	83		**ug/L**		37	0.000
	Sr	88	**35.586**	**ug/L**	0.562	59173	2.168
	Y	89		**ug/L**		112932	4.141
	Ag	107	**0.190**	**ug/L**	11.758	130	0.004
	Cd	111	**0.979**	**ug/L**	15.936	148	0.005
	Cd	114		**ug/L**		78	0.002
>	In	115		**ug/L**		27266	27266.206
	Sn	120	**1.517**	**ug/L**	3.192	1069	0.033
	Sb	121	**0.311**	**ug/L**	7.434	217	0.006
	Sb	123		**ug/L**		158	0.004
	Ba	135		**ug/L**		29887	0.972
	Ba	137	**230.978**	**ug/L**	0.696	51946	1.689
	Ho	165		**ug/L**		3859	0.125
>	Lu	175		**ug/L**		30754	30753.708
	Tl	205	**0.566**	**ug/L**	10.974	859	0.017
	Pb	208	**27.660**	**ug/L**	1.054	38317	1.205
	Bi	209		**ug/L**		1681	0.053
	U	238	**5.063**	**ug/L**	1.701	7004	0.227

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			87.8		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			84.5		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			89.0		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			92.6		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872854
Sample Date/Time: Tuesday, July 14, 2009 16:40:43
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872854.192

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**47.982**	ug/L	7.841	15252	0.029
	Be	9	**3.015**	ug/L	0.933	327	0.001
	B	11	**7.643**	ug/L	3.513	1001	0.001
	Na	23	**556.618**	ug/L	6.458	579185	1.074
	Mg	24	**3851.292**	ug/L	3.425	2758081	5.183
	Al	27	**25356.739**	ug/L	7.628	26958981	50.532
	P	31	**420.832**	ug/L	1.840	25860	0.044
	K	39	**3848.579**	ug/L	3.196	4600457	8.249
	Ca	43	**3390.607**	ug/L	0.224	7920	0.015
>	Sc	45		ug/L		532377	532376.974
	V	51	**38.281**	ug/L	1.500	46586	0.082
	Cr	52	**19.627**	ug/L	1.132	19604	0.034
	Cr	53		ug/L		22761	-0.014
	Mn	55	**1205.019**	ug/L	1.551	1609174	3.023
	Fe	57	**28235.936**	ug/L	1.061	735254	1.378
	Co	59	**9.737**	ug/L	1.317	9461	0.018
	Ni	60	**15.505**	ug/L	2.101	3115	0.006
	Cu	63		ug/L		30270	0.057
	Cu	65	**68.333**	ug/L	1.802	14561	0.027
	Zn	66	**203.434**	ug/L	0.099	26044	0.461
	Zn	67		ug/L		6417	0.067
	Zn	68		ug/L		19463	0.342
>	Ge	74		ug/L		56101	56101.199
	As	75	**8.977**	ug/L	1.537	1469	0.024
	Se	77		ug/L		822	-0.008
	Se	82	**1.948**	ug/L	37.116	21	0.000
	Kr	83		ug/L		38	0.000
	Sr	88	**36.049**	ug/L	1.472	59076	2.197
	Y	89		ug/L		122968	4.576
	Ag	107	**0.263**	ug/L	11.707	173	0.006
	Cd	111	**1.147**	ug/L	3.023	170	0.006
	Cd	114		ug/L		95	0.003
>	In	115		ug/L		26871	26870.543
	Sn	120	**1.770**	ug/L	5.434	1201	0.038
	Sb	121	**0.257**	ug/L	11.926	187	0.005
	Sb	123		ug/L		139	0.003
	Ba	135		ug/L		31538	1.042
	Ba	137	**252.209**	ug/L	1.265	55809	1.844
	Ho	165		ug/L		4277	0.141
>	Lu	175		ug/L		30263	30263.329
	Tl	205	**0.536**	ug/L	6.417	819	0.016
	Pb	208	**29.906**	ug/L	1.817	40660	1.303
	Bi	209		ug/L		1889	0.061
	U	238	**4.680**	ug/L	0.867	6374	0.210

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		87.0			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		82.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		87.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEf	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201872855
Sample Date/Time: Tuesday, July 14, 2009 16:46:37
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872855.193

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**73.101**	**ug/L**	6.208	22891	0.044
	Be	9	**29.176**	**ug/L**	1.449	3090	0.006
	B	11	**62.863**	**ug/L**	1.940	5983	0.011
	Na	23	**1556.808**	**ug/L**	6.407	1585870	3.003
	Mg	24	**5919.560**	**ug/L**	8.813	4174132	7.966
	Al	27	**38755.377**	**ug/L**	5.826	40500818	77.233
	P	31	**1482.507**	**ug/L**	1.830	83355	0.154
	K	39	**6202.737**	**ug/L**	6.581	7190916	13.296
	Ca	43	**5083.430**	**ug/L**	0.409	11635	0.022
>	Sc	45		**ug/L**		524553	524552.689
	V	51	**75.090**	**ug/L**	1.616	87517	0.162
	Cr	52	**50.045**	**ug/L**	0.971	47237	0.088
	Cr	53		**ug/L**		25731	-0.007
	Mn	55	**1269.432**	**ug/L**	1.321	1670470	3.184
	Fe	57	**39403.716**	**ug/L**	1.145	1010311	1.923
	Co	59	**38.403**	**ug/L**	0.380	36496	0.069
	Ni	60	**43.208**	**ug/L**	1.586	8495	0.016
	Cu	63		**ug/L**		36854	0.070
	Cu	65	**84.255**	**ug/L**	1.176	17688	0.034
	Zn	66	**302.295**	**ug/L**	0.619	38179	0.685
	Zn	67		**ug/L**		8335	0.103
	Zn	68		**ug/L**		28205	0.504
>	Ge	74		**ug/L**		55478	55477.777
	As	75	**49.483**	**ug/L**	1.239	7450	0.132
	Se	77		**ug/L**		892	-0.006
	Se	82	**9.532**	**ug/L**	10.561	122	0.002
	Kr	83		**ug/L**		42	0.000
	Sr	88	**69.568**	**ug/L**	0.394	112204	4.239
	Y	89		**ug/L**		129465	4.893
	Ag	107	**24.444**	**ug/L**	0.937	14816	0.560
	Cd	111	**7.046**	**ug/L**	1.104	989	0.037
	Cd	114		**ug/L**		1714	0.064
>	In	115		**ug/L**		26457	26456.843
	Sn	120	**17.379**	**ug/L**	1.336	10152	0.377
	Sb	121	**49.528**	**ug/L**	1.426	24929	0.940
	Sb	123		**ug/L**		19249	0.726
	Ba	135		**ug/L**		40873	1.349
	Ba	137	**321.430**	**ug/L**	0.644	71201	2.350
	Ho	165		**ug/L**		4541	0.150
>	Lu	175		**ug/L**		30292	30292.387
	Tl	205	**46.912**	**ug/L**	1.907	43363	1.421
	Pb	208	**126.561**	**ug/L**	0.065	168258	5.514
	Bi	209		**ug/L**		1921	0.062
	U	238	**30.650**	**ug/L**	0.672	41622	1.373

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		85.7			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		81.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		86.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.2			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201872859
Sample Date/Time: Tuesday, July 14, 2009 16:52:31
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872859.194

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**71.306**	**ug/L**	6.199	21946	0.043
	Be	9	**29.853**	**ug/L**	2.337	3107	0.006
	B	11	**64.334**	**ug/L**	1.593	6011	0.011
	Na	23	**1591.443**	**ug/L**	5.810	1589142	3.070
	Mg	24	**4698.432**	**ug/L**	3.508	3263354	6.323
	Al	27	**31282.846**	**ug/L**	2.354	32146278	62.342
	P	31	**1465.578**	**ug/L**	0.737	80980	0.152
	K	39	**4843.969**	**ug/L**	3.960	5557599	10.383
	Ca	43	**4299.868**	**ug/L**	1.449	9695	0.019
>	Sc	45		**ug/L**		515537	515536.979
	V	51	**65.640**	**ug/L**	1.662	75495	0.141
	Cr	52	**44.886**	**ug/L**	0.966	41764	0.079
	Cr	53		**ug/L**		24655	-0.009
	Mn	55	**3677.763**	**ug/L**	0.124	4756880	9.226
	Fe	57	**37361.626**	**ug/L**	0.913	941640	1.823
	Co	59	**46.798**	**ug/L**	1.027	43683	0.085
	Ni	60	**43.149**	**ug/L**	2.531	8336	0.016
	Cu	63		**ug/L**		40046	0.077
	Cu	65	**93.783**	**ug/L**	0.899	19348	0.037
	Zn	66	**248.906**	**ug/L**	0.940	31070	0.564
	Zn	67		**ug/L**		7232	0.085
	Zn	68		**ug/L**		23337	0.421
>	Ge	74		**ug/L**		54786	54786.446
	As	75	**51.282**	**ug/L**	0.469	7619	0.137
	Se	77		**ug/L**		822	-0.007
	Se	82	**10.123**	**ug/L**	5.705	128	0.002
	Kr	83		**ug/L**		42	0.000
	Sr	88	**61.553**	**ug/L**	0.855	98443	3.751
	Y	89		**ug/L**		131223	5.002
	Ag	107	**24.744**	**ug/L**	1.875	14870	0.566
	Cd	111	**7.036**	**ug/L**	5.090	979	0.037
	Cd	114		**ug/L**		1642	0.062
>	In	115		**ug/L**		26232	26231.836
	Sn	120	**20.332**	**ug/L**	0.891	11748	0.442
	Sb	121	**56.852**	**ug/L**	0.300	28366	1.079
	Sb	123		**ug/L**		21530	0.819
	Ba	135		**ug/L**		50629	1.693
	Ba	137	**406.013**	**ug/L**	1.716	88768	2.969
	Ho	165		**ug/L**		4554	0.152
>	Lu	175		**ug/L**		29900	29899.891
	Tl	205	**48.279**	**ug/L**	1.172	44034	1.462
	Pb	208	**124.852**	**ug/L**	0.953	163849	5.439
	Bi	209		**ug/L**		1946	0.063
	U	238	**29.952**	**ug/L**	1.043	40147	1.342

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		84.3			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		80.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		85.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		90.0			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEfMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201872856
Sample Date/Time: Tuesday, July 14, 2009 16:58:25
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881838|10|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872856.195

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**7.367**	**ug/L**	6.391	2402	0.004
	Be	9	**0.550**	**ug/L**	8.099	63	0.000
	B	11	**2.524**	**ug/L**	15.694	537	0.000
	Na	23	**92.830**	**ug/L**	5.881	105053	0.179
	Mg	24	**738.712**	**ug/L**	4.798	536215	0.994
	Al	27	**5563.289**	**ug/L**	7.317	5979108	11.087
	P	31	**86.810**	**ug/L**	3.926	7487	0.009
	K	39	**720.022**	**ug/L**	6.002	1042434	1.543
	Ca	43	**692.209**	**ug/L**	4.944	1739	0.003
>	Sc	45		**ug/L**		538457	538457.228
	V	51	**7.825**	**ug/L**	5.814	11761	0.017
	Cr	52	**3.781**	**ug/L**	1.957	4910	0.007
	Cr	53		**ug/L**		26359	-0.008
	Mn	55	**189.892**	**ug/L**	0.753	256986	0.476
	Fe	57	**5945.090**	**ug/L**	1.088	158034	0.290
	Co	59	**1.761**	**ug/L**	3.043	1808	0.003
	Ni	60	**3.083**	**ug/L**	4.678	654	0.001
	Cu	63		**ug/L**		4626	0.008
	Cu	65	**10.253**	**ug/L**	1.994	2234	0.004
	Zn	66	**37.926**	**ug/L**	1.430	5303	0.086
	Zn	67		**ug/L**		3432	0.011
	Zn	68		**ug/L**		4108	0.064
>	Ge	74		**ug/L**		59322	59322.205
	As	75	**1.019**	**ug/L**	55.469	293	0.003
	Se	77		**ug/L**		997	-0.005
	Se	82	**0.461**	**ug/L**	69.429	1	0.000
	Kr	83		**ug/L**		24	-0.000
	Sr	88	**7.139**	**ug/L**	0.841	11962	0.435
	Y	89		**ug/L**		22831	0.834
	Ag	107	**0.041**	**ug/L**	21.278	37	0.001
	Cd	111	**0.158**	**ug/L**	10.596	30	0.001
	Cd	114		**ug/L**		29	0.001
>	In	115		**ug/L**		27377	27377.423
	Sn	120	**0.272**	**ug/L**	12.669	334	0.006
	Sb	121	**0.079**	**ug/L**	35.014	98	0.002
	Sb	123		**ug/L**		79	0.001
	Ba	135		**ug/L**		6013	0.200
	Ba	137	**48.102**	**ug/L**	2.746	10586	0.352
	Ho	165		**ug/L**		761	0.025
>	Lu	175		**ug/L**		30078	30077.934
	Tl	205	**0.238**	**ug/L**	14.738	542	0.007
	Pb	208	**5.505**	**ug/L**	1.307	8444	0.240
	Bi	209		**ug/L**		362	0.010
	U	238	**1.029**	**ug/L**	1.161	1416	0.046

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			88.0		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			87.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			89.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			90.5		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 17:04:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.196

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.919**	ug/L	6.410	17207	0.032
	Be	9	**54.843**	ug/L	1.820	5916	0.011
	B	11	**108.476**	ug/L	2.848	10298	0.019
	Na	23	**5468.215**	ug/L	4.115	5643546	10.548
	Mg	24	**5192.128**	ug/L	2.690	3739662	6.987
	Al	27	**5142.074**	ug/L	8.580	5483447	10.247
	P	31	**5248.839**	ug/L	1.066	293913	0.545
	K	39	**4932.597**	ug/L	5.250	5872530	10.573
	Ca	43	**5035.777**	ug/L	1.322	11744	0.022
>	Sc	45		ug/L		534634	534634.036
	V	51	**52.445**	ug/L	2.690	63028	0.113
	Cr	52	**53.255**	ug/L	1.409	51112	0.093
	Cr	53		ug/L		34500	0.008
	Mn	55	**50.223**	ug/L	1.965	67835	0.126
	Fe	57	**5202.995**	ug/L	2.866	137450	0.254
	Co	59	**53.741**	ug/L	2.620	51975	0.097
	Ni	60	**54.635**	ug/L	3.331	10930	0.020
	Cu	63		ug/L		22880	0.043
	Cu	65	**51.097**	ug/L	2.128	10939	0.020
	Zn	66	**52.237**	ug/L	4.014	7232	0.118
	Zn	67		ug/L		4045	0.021
	Zn	68		ug/L		5529	0.088
>	Ge	74		ug/L		59443	59443.167
	As	75	**51.784**	ug/L	0.710	8345	0.138
	Se	77		ug/L		1820	0.008
	Se	82	**50.310**	ug/L	5.085	712	0.012
	Kr	83		ug/L		30	0.000
	Sr	88	**52.709**	ug/L	3.750	86074	3.212
	Y	89		ug/L		34	0.001
	Ag	107	**52.406**	ug/L	4.577	32135	1.200
	Cd	111	**55.669**	ug/L	5.658	7857	0.293
	Cd	114		ug/L		17892	0.668
>	In	115		ug/L		26819	26818.880
	Sn	120	**51.268**	ug/L	5.180	29979	1.113
	Sb	121	**50.360**	ug/L	1.385	25688	0.956
	Sb	123		ug/L		19625	0.730
	Ba	135		ug/L		6609	0.225
	Ba	137	**53.845**	ug/L	3.247	11538	0.394
	Ho	165		ug/L		7	0.000
>	Lu	175		ug/L		29304	29304.343
	Tl	205	**50.636**	ug/L	0.253	45252	1.533
	Pb	208	**53.735**	ug/L	3.895	69737	2.341
	Bi	209		ug/L		51	0.000
	U	238	**54.667**	ug/L	3.788	71731	2.449

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	107.839				
	Be	9	109.686				
	B	11	108.476				
	Na	23	109.364				
	Mg	24	103.843				
	Al	27	101.823				
	P	31	104.977				
	K	39	98.652				
	Ca	43	100.716				
>	Sc	45		87.4			
	V	51	104.890				
	Cr	52	106.509				
	Cr	53					
	Mn	55	100.446				
	Fe	57	104.060				
	Co	59	107.481				
	Ni	60	109.269				
	Cu	63					
	Cu	65	102.194				
	Zn	66	104.473				
	Zn	67					
	Zn	68					
>	Ge	74		87.1			
	As	75	103.568				
	Se	77					
	Se	82	100.620				
	Kr	83					
	Sr	88	105.417				
	Y	89					
	Ag	107	104.811				
	Cd	111	111.339				
	Cd	114					
>	In	115		87.6			
	Sn	120	102.535				
	Sb	121	100.719				
	Sb	123					
	Ba	135					
	Ba	137	107.690				
	Ho	165					
>	Lu	175		88.2			
	Tl	205	101.273				
	Pb	208	107.470				
	Bi	209					
	U	238	109.334				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Cd	111	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 17:10:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.197

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.057**	ug/L	21.924	57	0.000
	Be	9	**0.010**	ug/L	143.757	5	0.000
	B	11	**2.103**	ug/L	21.688	507	0.000
	Na	23	**-1.282**	ug/L	292.138	7336	-0.002
	Mg	24	**0.261**	ug/L	817.365	1667	0.000
	Al	27	**-1.115**	ug/L	168.542	2667	-0.002
	P	31	**1.770**	ug/L	66.105	2788	0.000
	K	39	**17.161**	ug/L	64.299	235596	0.037
	Ca	43	**1.921**	ug/L	423.510	139	0.000
>	Sc	45		ug/L		548825	548825.465
	V	51	**-0.918**	ug/L	36.992	1661	-0.002
	Cr	52	**-0.201**	ug/L	22.424	1183	-0.000
	Cr	53		ug/L		29729	-0.002
	Mn	55	**0.127**	ug/L	25.490	710	0.000
	Fe	57	**3.311**	ug/L	68.990	1954	0.000
	Co	59	**0.011**	ug/L	90.639	106	0.000
	Ni	60	**0.005**	ug/L	545.329	36	0.000
	Cu	63		ug/L		97	-0.000
	Cu	65	**0.024**	ug/L	13.865	33	0.000
	Zn	66	**-0.002**	ug/L	953.717	211	-0.000
	Zn	67		ug/L		2969	0.002
	Zn	68		ug/L		348	0.001
>	Ge	74		ug/L		60487	60486.735
	As	75	**-0.229**	ug/L	412.924	100	-0.001
	Se	77		ug/L		1191	-0.003
	Se	82	**0.459**	ug/L	136.846	1	0.000
	Kr	83		ug/L		22	-0.000
	Sr	88	**-0.000**	ug/L	610.028	53	-0.000
	Y	89		ug/L		17	0.000
	Ag	107	**0.004**	ug/L	146.616	14	0.000
	Cd	111	**-0.014**	ug/L	248.996	5	-0.000
	Cd	114		ug/L		17	0.000
>	In	115		ug/L		27764	27763.733
	Sn	120	**0.135**	ug/L	49.600	255	0.003
	Sb	121	**0.465**	ug/L	19.822	302	0.009
	Sb	123		ug/L		233	0.006
	Ba	135		ug/L		12	0.000
	Ba	137	**-0.007**	ug/L	310.791	8	-0.000
	Ho	165		ug/L		2	-0.000
>	Lu	175		ug/L		30026	30026.490
	Tl	205	**0.229**	ug/L	5.810	533	0.007
	Pb	208	**-0.321**	ug/L	8.890	810	-0.014
	Bi	209		ug/L		40	-0.000
	U	238	**0.032**	ug/L	5.554	72	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		89.7			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		88.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		90.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		90.4			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, July 14, 2009 19:53:01
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090704\Sample.062
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	820.4	820.424	38.923	4.7
	Mg	24.0	13528.4	13528.403	144.156	1.1
	Co	58.9	20541.2	20541.160	298.001	1.5
	Rh	102.9	32961.2	32961.187	455.921	1.4
	In	114.9	36375.7	36375.658	432.887	1.2
	Pb	208.0	16323.7	16323.722	232.178	1.4
⌈>	Ba	137.9	31346.3	31346.326	459.318	1.5
⌊	Ba++	69.0	1245.3	0.040	0.000	1.2
⌈>	Ce	139.9	42282.1	42282.081	197.657	0.5
⌊	CeO	155.9	884.0	0.021	0.000	2.0
	Bkgd	220.0	4.3	4.300	1.441	33.5

Current Optimization File Data

Current Value	Description
0.86	Nebulizer Gas Flow
6.50	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	9.3	2341.9
Co	59	25	10.5	32482.6
In	115	25	12.5	43915.1

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	587	2080	0.616
Be	9.0	9.0	2043	2080	0.614
Mg	24.0	24.0	5700	2120	0.603
Mg	25.0	25.0	5922	2080	0.689
Mg	26.0	26.1	6167	2120	0.663
Co	58.9	58.9	14167	2170	0.630
Rh	102.9	102.9	24872	2230	0.697
In	114.9	114.8	27784	2260	0.707
Ce	139.9	139.9	33862	2280	0.775
Pb	206.0	206.0	49936	2420	0.660
Pb	207.0	207.0	50183	2385	0.734
Pb	208.0	208.0	50439	2430	0.738
U	238.1	238.1	57737	2470	0.720

Report Date/Time: Tuesday, July 14, 2009 [illegible]0:13

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 22:24:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Blank.098

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		ug/L		657008	
	Ni	60		ug/L		199	
>	Ge	74		ug/L		139642	
	As	75		ug/L		433	
	Se	77		ug/L		4579	
	Se	82		ug/L		-30	
	Kr	83		ug/L		75	
>	Lu	175		ug/L		62258	
	Tl	205		ug/L		612	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45					
⌊	Ni	60					
⌈>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175					
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 22:28:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Standard 1.099

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		625204	625203.538
⌊	Ni	60	**10.000**	ug/L	2.103	5180	0.008
⌈>	Ge	74		ug/L		138863	138862.562
|	As	75	**10.000**	ug/L	7.356	4250	0.028
|	Se	77		ug/L		4993	0.003
|	Se	82	**10.000**	ug/L	2.294	273	0.002
⌊	Kr	83		ug/L		89	0.000
⌈>	Lu	175		ug/L		62108	62108.009
⌊	Tl	205	**10.000**	ug/L	1.705	21724	0.340

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45					
⌊	Ni	60					
⌈>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175					
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 22:32:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Standard 2.100

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		625395	625394.863
⌊	Ni	60	**99.981**	ug/L	6.692	49086	0.078
⌈>	Ge	74		ug/L		138384	138383.549
|	As	75	**100.050**	ug/L	2.493	40530	0.290
|	Se	77		ug/L		7887	0.024
|	Se	82	**100.049**	ug/L	2.656	3149	0.023
⌊	Kr	83		ug/L		84	0.000
⌈>	Lu	175		ug/L		61801	61800.677
⌊	Tl	205	**99.992**	ug/L	1.819	209020	3.372

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 22:36:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 1.101

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		621903	621902.817
⌊	Ni	60	**53.641**	**ug/L**	6.065	26280	0.042
⌈>	Ge	74		**ug/L**		137728	137727.518
|	As	75	**49.430**	**ug/L**	2.066	20142	0.143
|	Se	77		**ug/L**		6835	0.017
|	Se	82	**49.144**	**ug/L**	2.595	1524	0.011
⌊	Kr	83		**ug/L**		86	0.000
⌈>	Lu	175		**ug/L**		62219	62218.898
⌊	Tl	205	**50.970**	**ug/L**	2.434	107526	1.719

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		94.7			
⌊	Ni	60	107.283				
⌈>	Ge	74		98.6			
|	As	75	98.859				
|	Se	77					
|	Se	82	98.288				
⌊	Kr	83					
⌈>	Lu	175		99.9			
⌊	Tl	205	101.940				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 22:40:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 2.102

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		638028	638028.154
⌊	Ni	60	**0.021**	**ug/L**	15.899	204	0.000
⌈>	Ge	74		**ug/L**		138914	138913.830
|	As	75	**0.514**	**ug/L**	100.192	640	0.001
|	Se	77		**ug/L**		5620	0.008
|	Se	82	**0.081**	**ug/L**	231.553	-27	0.000
⌊	Kr	83		**ug/L**		79	0.000
⌈>	Lu	175		**ug/L**		61573	61572.703
⌊	Tl	205	**0.030**	**ug/L**	26.830	668	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		97.1			
⌊	Ni	60					
⌈>	Ge	74		99.5			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		98.9			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 22:44:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 3.103

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		672410	672409.502
⌊	Ni	60	**1.935**	**ug/L**	3.900	1222	0.002
⌈>	Ge	74		**ug/L**		139193	139192.553
|	As	75	**6.170**	**ug/L**	9.997	2919	0.018
|	Se	77		**ug/L**		5443	0.006
|	Se	82	**5.039**	**ug/L**	10.843	131	0.001
⌊	Kr	83		**ug/L**		71	-0.000
⌈>	Lu	175		**ug/L**		62075	62074.939
⌊	Tl	205	**1.043**	**ug/L**	4.211	2792	0.035

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		102.3			
⌊	Ni	60	96.758				
⌈>	Ge	74		99.7			
|	As	75	123.408				
|	Se	77					
|	Se	82	100.772				
⌊	Kr	83					
⌈>	Lu	175		99.7			
⌊	Tl	205	104.270				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 22:48:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 4.104

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		593709	593709.396
⌊	Ni	60	**4.248**	**ug/L**	0.888	2155	0.003
⌈>	Ge	74		**ug/L**		126707	126706.888
|	As	75	**2.085**	**ug/L**	32.591	1155	0.006
|	Se	77		**ug/L**		6543	0.019
|	Se	82	**-1.091**	**ug/L**	36.458	-59	-0.000
⌊	Kr	83		**ug/L**		137	0.001
⌈>	Lu	175		**ug/L**		59433	59432.644
⌊	Tl	205	**-0.000**	**ug/L**	2029.393	584	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		90.4			
⌊	Ni	60	157.343				
⌈>	Ge	74		90.7			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		95.5			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 22:52:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 5.105

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		581319	581319.085
	Ni	60	**22.668**	**ug/L**	1.325	10497	0.018
>	Ge	74		**ug/L**		125137	125136.997
	As	75	**22.580**	**ug/L**	4.145	8572	0.065
	Se	77		**ug/L**		6637	0.020
	Se	82	**20.745**	**ug/L**	2.965	569	0.005
	Kr	83		**ug/L**		129	0.000
>	Lu	175		**ug/L**		59386	59385.775
	Tl	205	**17.962**	**ug/L**	0.466	36559	0.606

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		88.5			
⌊	Ni	60	99.860				
⌈>	Ge	74		89.6			
|	As	75	112.901				
|	Se	77					
|	Se	82	103.726				
⌊	Kr	83					
⌈>	Lu	175		95.4			
⌊	Tl	205	89.811				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 22:56:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.106

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		623646	623645.642
⌊	Ni	60	**53.457**	**ug/L**	2.546	26291	0.042
⌈>	Ge	74		**ug/L**		135006	135006.379
|	As	75	**48.647**	**ug/L**	1.214	19448	0.141
|	Se	77		**ug/L**		7079	0.020
|	Se	82	**50.626**	**ug/L**	1.623	1540	0.012
⌊	Kr	83		**ug/L**		74	0.000
⌈>	Lu	175		**ug/L**		60927	60926.599
⌊	Tl	205	**49.647**	**ug/L**	2.083	102595	1.674

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		94.9			
⌊	Ni	60	106.914				
⌈>	Ge	74		96.7			
|	As	75	97.294				
|	Se	77					
|	Se	82	101.253				
⌊	Kr	83					
⌈>	Lu	175		97.9			
⌊	Tl	205	99.294				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 23:00:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.107

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		623407	623407.475
	Ni	60	**-0.024**	**ug/L**	223.586	177	-0.000
>	Ge	74		**ug/L**		137165	137164.983
	As	75	**0.403**	**ug/L**	199.518	587	0.001
	Se	77		**ug/L**		6289	0.013
	Se	82	**-0.087**	**ug/L**	570.190	-32	-0.000
	Kr	83		**ug/L**		80	0.000
>	Lu	175		**ug/L**		61198	61198.427
	Tl	205	**0.007**	**ug/L**	188.729	616	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		94.9			
	Ni	60					
>	Ge	74		98.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		98.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872852
Sample Date/Time: Tuesday, July 14, 2009 23:04:42
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872852.108

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		656617	656617.301
⌊	Ni	60	**0.162**	**ug/L**	40.244	281	0.000
⌈>	Ge	74		**ug/L**		135207	135206.881
|	As	75	**0.046**	**ug/L**	1554.634	440	0.000
|	Se	77		**ug/L**		4571	0.001
|	Se	82	**-0.148**	**ug/L**	162.716	-34	-0.000
⌊	Kr	83		**ug/L**		79	0.000
⌈>	Lu	175		**ug/L**		62186	62186.351
⌊	Tl	205	**0.214**	**ug/L**	2.849	1061	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		99.9			
⌊	Ni	60					
⌈>	Ge	74		96.8			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		99.9			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872853
Sample Date/Time: Tuesday, July 14, 2009 23:08:41
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881838|40|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872853.109

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		629928	629927.659
⌊	Ni	60	**27.948**	ug/L	3.616	13976	0.022
⌈>	Ge	74		ug/L		137456	137455.728
|	As	75	**67.220**	ug/L	2.629	27185	0.195
|	Se	77		ug/L		7315	0.020
|	Se	82	**47.852**	ug/L	1.730	1481	0.011
⌊	Kr	83		ug/L		83	0.000
⌈>	Lu	175		ug/L		62363	62363.479
⌊	Tl	205	**47.611**	ug/L	5.125	100726	1.606

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		95.9			
	Ni	60					
>	Ge	74		98.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.2			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 23:32:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.115

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		639620	639619.673
⌊	Ni	60	**50.965**	**ug/L**	1.773	25729	0.040
⌈>	Ge	74		**ug/L**		132949	132948.783
|	As	75	**49.172**	**ug/L**	2.618	19350	0.142
|	Se	77		**ug/L**		6005	0.012
|	Se	82	**51.118**	**ug/L**	2.412	1531	0.012
⌊	Kr	83		**ug/L**		78	0.000
⌈>	Lu	175		**ug/L**		61428	61428.114
⌊	Tl	205	**47.386**	**ug/L**	1.524	98782	1.598

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		97.4			
⌊	Ni	60	101.929				
⌈>	Ge	74		95.2			
|	As	75	98.344				
|	Se	77					
|	Se	82	102.235				
⌊	Kr	83					
⌈>	Lu	175		98.7			
⌊	Tl	205	94.771				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 23:36:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.116

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		665749	665749.038
⌊	Ni	60	**0.040**	**ug/L**	50.394	222	0.000
⌈>	Ge	74		**ug/L**		137288	137288.069
|	As	75	**0.679**	**ug/L**	215.234	695	0.002
|	Se	77		**ug/L**		4997	0.004
|	Se	82	**0.132**	**ug/L**	389.412	-25	0.000
⌊	Kr	83		**ug/L**		74	0.000
⌈>	Lu	175		**ug/L**		61419	61418.742
⌊	Tl	205	**0.127**	**ug/L**	11.783	867	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		101.3			
⌊	Ni	60					
⌈>	Ge	74		98.3			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		98.7			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232591001
Sample Date/Time: Tuesday, July 14, 2009 23:40:32
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\232591001.117

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		649379	649378.934
⌊	Ni	60	**14.700**	ug/L	1.897	7676	0.012
⌈>	Ge	74		ug/L		132016	132016.289
|	As	75	**8.080**	ug/L	12.739	3498	0.023
|	Se	77		ug/L		3167	-0.009
|	Se	82	**0.704**	ug/L	42.536	-7	0.000
⌊	Kr	83		ug/L		124	0.000
⌈>	Lu	175		ug/L		64314	64313.764
⌊	Tl	205	**0.455**	ug/L	3.629	1620	0.015

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		98.8			
	Ni	60					
>	Ge	74		94.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		103.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872854
Sample Date/Time: Tuesday, July 14, 2009 23:44:32
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872854.118

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		664451	664450.730
⌊	Ni	60	**14.618**	ug/L	5.280	7801	0.011
⌈>	Ge	74		ug/L		129667	129666.865
|	As	75	**8.226**	ug/L	8.305	3492	0.024
|	Se	77		ug/L		2877	-0.011
|	Se	82	**1.058**	ug/L	93.832	4	0.000
⌊	Kr	83		ug/L		121	0.000
⌈>	Lu	175		ug/L		64317	64317.121
⌊	Tl	205	**0.455**	ug/L	3.323	1619	0.015

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		101.1			
⌊	Ni	60					
⌈>	Ge	74		92.9			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		103.3			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872855
Sample Date/Time: Tuesday, July 14, 2009 23:48:31
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872855.119

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		652467	652466.704
⌊	Ni	60	**40.805**	ug/L	1.330	21053	0.032
⌈>	Ge	74		ug/L		130186	130186.475
|	As	75	**48.353**	ug/L	2.185	18641	0.140
|	Se	77		ug/L		3036	-0.009
|	Se	82	**9.177**	ug/L	10.620	246	0.002
⌊	Kr	83		ug/L		126	0.000
⌈>	Lu	175		ug/L		64348	64347.593
⌊	Tl	205	**44.274**	ug/L	2.140	96710	1.493

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		99.3			
	Ni	60					
>	Ge	74		93.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		103.4			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872859
Sample Date/Time: Tuesday, July 14, 2009 23:52:30
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872859.120

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		667009	667008.928
⌊	Ni	60	**39.297**	**ug/L**	5.508	20709	0.031
⌈>	Ge	74		**ug/L**		130477	130476.859
|	As	75	**50.004**	**ug/L**	0.806	19309	0.145
|	Se	77		**ug/L**		3016	-0.010
|	Se	82	**9.462**	**ug/L**	7.844	256	0.002
⌊	Kr	83		**ug/L**		123	0.000
⌈>	Lu	175		**ug/L**		64951	64951.324
⌊	Tl	205	**45.459**	**ug/L**	0.806	100217	1.533

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		101.5			
	Ni	60					
>	Ge	74		93.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		104.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872856
Sample Date/Time: Tuesday, July 14, 2009 23:56:29
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881838|10|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872856.121

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		635635	635635.271
⌊	Ni	60	**3.098**	**ug/L**	7.416	1734	0.002
⌈>	Ge	74		**ug/L**		130839	130839.181
|	As	75	**1.921**	**ug/L**	31.857	1132	0.006
|	Se	77		**ug/L**		3460	-0.006
|	Se	82	**0.065**	**ug/L**	706.903	-26	0.000
⌊	Kr	83		**ug/L**		84	0.000
⌈>	Lu	175		**ug/L**		61607	61607.188
⌊	Tl	205	**0.270**	**ug/L**	5.910	1167	0.009

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		96.7			
⌊	Ni	60					
⌈>	Ge	74		93.7			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		99.0			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 15, 2009 00:00:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.122

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		664694	664694.302
⌊	Ni	60	**48.496**	**ug/L**	3.407	25441	0.038
⌈>	Ge	74		**ug/L**		129524	129523.731
|	As	75	**48.978**	**ug/L**	2.888	18775	0.142
|	Se	77		**ug/L**		5593	0.010
|	Se	82	**52.232**	**ug/L**	1.816	1525	0.012
⌊	Kr	83		**ug/L**		79	0.000
⌈>	Lu	175		**ug/L**		60100	60099.823
⌊	Tl	205	**48.249**	**ug/L**	1.863	98382	1.627

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		101.2			
	Ni	60	96.992				
>	Ge	74		92.8			
	As	75	97.955				
	Se	77					
	Se	82	104.465				
	Kr	83					
>	Lu	175		96.5			
	Tl	205	96.498				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 15, 2009 00:04:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.123

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		657563	657563.488
⌊	Ni	60	**0.065**	**ug/L**	158.866	232	0.000
⌈>	Ge	74		**ug/L**		134753	134752.611
|	As	75	**0.709**	**ug/L**	53.863	695	0.002
|	Se	77		**ug/L**		4604	0.001
|	Se	82	**-0.277**	**ug/L**	244.659	-37	-0.000
⌊	Kr	83		**ug/L**		86	0.000
⌈>	Lu	175		**ug/L**		60276	60275.942
⌊	Tl	205	**0.133**	**ug/L**	7.473	863	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		100.1			
	Ni	60					
>	Ge	74		96.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		96.8			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

==========

Method Name: SOIL
Method Description: 7471A, ILM04 ANALYST JXL1
Element: Hg

Date: 07/13/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 071309S1.SIF Results Data Set Name: 071309S2

==========

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/13/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0026	0.0026	09:36:04	No
2			0.0025	0.0025	09:36:39	No
Mean:			0.0025			
SD :			0.0001			
%RSD:			2.0116			

Auto-zero performed.

==========

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/13/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0047	0.0072	09:38:01	No
2			0.0046	0.0071	09:38:35	No
Mean:			0.0046			
SD :			0.0001			
%RSD:			1.1672			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.02310
Intercept : 0.00000

==========

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/13/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0089	0.0114	09:39:58	No
2			0.0089	0.0115	09:40:33	No
Mean:			0.0089			
SD :			0.0001			
%RSD:			0.5682			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99055 Slope: 0.01750
Intercept : 0.00042

==========

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/13/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0294	0.0320	09:41:58	No
2			0.0290	0.0315	09:42:33	No
Mean:			0.0292			
SD :			0.0003			
%RSD:			1.1424			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99775 Slope: 0.01416
Intercept : 0.00112

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/13/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0650	0.0676	09:43:58	No
2			0.0670	0.0695	09:44:32	No
Mean:			0.0660			
SD :			0.0014			
%RSD:			2.0933			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99895 Slope: 0.01299
Intercept : 0.00174

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/13/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1277	0.1302	09:45:59	No
2			0.1281	0.1306	09:46:33	No
Mean:			0.1279			
SD :			0.0003			
%RSD:			0.1987			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99964 Slope: 0.01265
Intercept : 0.00213

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0025	---	----	----	----
S0.2	0.0046	0.200	0.197	0.0001	1.2
S0.5	0.0089	0.500	0.535	0.0001	0.6
S2.0	0.0292	2.000	2.141	0.0003	1.1
S5.0	0.0660	5.000	5.051	0.0014	2.1
S10	0.1279	10.000	9.945	0.0003	0.2
Calib Blank	0.0025	---	----	----	----

Correlation Coefficient: 0.99964 Slope: 0.01265 Intercept: 0.0021

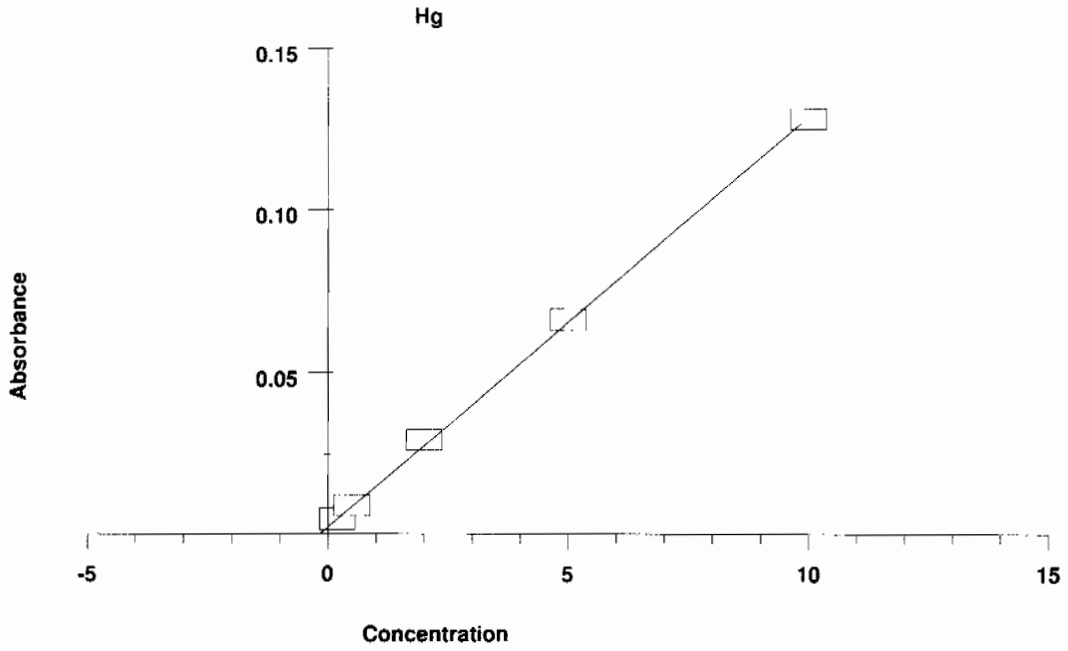

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/13/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.179	5.179	0.0676	0.0702	09:48:02	No
2	5.264	5.264	0.0687	0.0712	09:48:37	No
Mean:	5.221	5.221	0.0682			
SD :	0.0602	0.0602	0.0008			
%RSD:	1.2	1.2	1.1171			

QC value within specified limits.

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/13/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.117	-0.117	0.0007	0.0032	09:49:59	No
2	-0.126	-0.126	0.0005	0.0031	09:50:34	No
Mean:	-0.121	-0.121	0.0006			
SD :	0.0064	0.0064	0.0001			
%RSD:	5.3	5.3	13.7540			

QC value within specified limits.

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/13/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.156	0.156	0.0041	0.0066	09:51:56	No
2	0.135	0.135	0.0038	0.0064	09:52:31	No
Mean:	0.146	0.146	0.0040			
SD :	0.0146	0.0146	0.0002			
%RSD:	10.0	10.0	4.6526			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	09:53:56	No
2	5.219	5.219	0.0681	0.0707	09:54:31	No
Mean:	5.160	5.160	0.0674			
SD :	0.0831	0.0831	0.0011			
%RSD:	1.6	1.6	1.5602			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.014	0.014	0.0023	0.0048	09:55:59	No
2	0.023	0.023	0.0024	0.0050	09:56:34	No
Mean:	0.019	0.019	0.0024			
SD :	0.0063	0.0063	0.0001			
%RSD:	33.8	33.8	3.3712			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/13/2009
Sample ID: 1201870737|i||880997|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.145	-0.145	0.0003	0.0028	09:58:00	No
2	-0.154	-0.154	0.0002	0.0027	09:58:35	No
Mean:	-0.150	-0.150	0.0002			
SD :	0.0066	0.0066	0.0001			
%RSD:	4.4	4.4	35.8425			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/13/2009
Sample ID: 1201870738|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.783	3.783	0.0500	0.0525	10:00:01	No
2	3.816	3.816	0.0504	0.0529	10:00:35	No
Mean:	3.800	3.800	0.0502			
SD :	0.0230	0.0230	0.0003			
%RSD:	0.6	0.6	0.5806			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/13/2009
Sample ID: 232424001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.002	-0.002	0.0021	0.0046	10:02:01	No
2	-0.007	-0.007	0.0020	0.0046	10:02:35	No
Mean:	-0.005	-0.005	0.0021			
SD :	0.0040	0.0040	0.0001			
%RSD:	86.6	86.6	2.4535			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/13/2009
Sample ID: 232426001|i|||

%RSD: 1.7 1.7 1.5996

==========

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/13/2009
Sample ID: 1201870745|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.025	0.025	0.0024	0.0050	10:15:50	No
2	-0.002	-0.002	0.0021	0.0046	10:16:25	No
Mean:	0.012	0.012	0.0023			
SD :	0.0185	0.0185	0.0002			
%RSD:	159.8	159.8	10.3056			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	10:17:50	No
2	4.942	4.942	0.0646	0.0672	10:18:24	No
Mean:	5.022	5.022	0.0656			
SD :	0.1122	0.1122	0.0014			
%RSD:	2.2	2.2	2.1625			

QC value within specified limits.

==========

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.043	-0.043	0.0016	0.0041	10:19:52	No
2	-0.052	-0.052	0.0015	0.0040	10:20:27	No
Mean:	-0.048	-0.048	0.0015			
SD :	0.0057	0.0057	0.0001			
%RSD:	11.9	11.9	4.7042			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/13/2009
Sample ID: 232429002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.240	0.240	0.0052	0.0077	10:21:52	No
2	0.235	0.235	0.0051	0.0076	10:22:27	No
Mean:	0.238	0.238	0.0051			
SD :	0.0035	0.0035	0.0000			
%RSD:	1.5	1.5	0.8527			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/13/2009
Sample ID: 232429003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.189	0.189	0.0045	0.0070	10:23:51	No
2	0.176	0.176	0.0044	0.0069	10:24:26	No
Mean:	0.183	0.183	0.0044			
SD :	0.0087	0.0087	0.0001			
%RSD:	4.8	4.8	2.4733			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/13/2009
Sample ID: 232429004|i|||

%RSD: 1.7 1.7 1.4172

==========

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/13/2009
Sample ID: 232429010|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.233	0.233	0.0051	0.0076	10:37:52	No
2	0.223	0.223	0.0049	0.0075	10:38:27	No
Mean:	0.228	0.228	0.0050			
SD :	0.0069	0.0069	0.0001			
%RSD:	3.0	3.0	1.7516			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/13/2009
Sample ID: 232429011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.044	0.044	0.0027	0.0052	10:39:54	No
2	0.039	0.039	0.0026	0.0052	10:40:28	No
Mean:	0.042	0.042	0.0027			
SD :	0.0041	0.0041	0.0001			
%RSD:	9.8	9.8	1.9407			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.042	5.042	0.0659	0.0684	10:41:55	No
2	5.045	5.045	0.0659	0.0685	10:42:29	No
Mean:	5.044	5.044	0.0659			
SD :	0.0015	0.0015	0.0000			
%RSD:						

QC value within specified limits.

==========

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.064	-0.064	0.0013	0.0039	10:43:58	No
2	-0.060	-0.060	0.0014	0.0039	10:44:32	No
Mean:	-0.062	-0.062	0.0013			
SD :	0.0028	0.0028	0.0000			
%RSD:	4.5	4.5	2.6158			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/13/2009
Sample ID: 232429012|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.371	0.371	0.0068	0.0093	10:45:57	No
2	0.372	0.372	0.0068	0.0094	10:46:32	No
Mean:	0.371	0.371	0.0068			
SD :	0.0010	0.0010	0.0000			
%RSD:	0.3	0.3	0.1822			

==========

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/13/2009
Sample ID: 232429013|i|||

%RSD: 2.2 2.2 0.9016

==========

Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 07/13/2009
Sample ID: 232504002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.105	0.105	0.0035	0.0060	10:59:32	No
2	0.090	0.090	0.0033	0.0058	11:00:07	No
Mean:	0.097	0.097	0.0034			
SD :	0.0108	0.0108	0.0001			
%RSD:	11.0	11.0	4.0497			

==========

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 07/13/2009
Sample ID: 232504003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.390	0.390	0.0071	0.0096	11:01:30	No
2	0.372	0.372	0.0068	0.0094	11:02:05	No
Mean:	0.381	0.381	0.0069			
SD :	0.0123	0.0123	0.0002			
%RSD:	3.2	3.2	2.2337			

==========

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 07/13/2009
Sample ID: 232504004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.166	0.166	0.0042	0.0068	11:03:29	No
2	0.150	0.150	0.0040	0.0066	11:04:04	No
Mean:	0.158	0.158	0.0041			
SD :	0.0114	0.0114	0.0001			
%RSD:	7.2	7.2	3.4993			

==========

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.130	5.130	0.0670	0.0695	11:05:30	No
2	5.073	5.073	0.0663	0.0688	11:06:05	No
Mean:	5.101	5.101	0.0666			
SD :	0.0403	0.0403	0.0005			
%RSD:	0.8	0.8	0.7652			

QC value within specified limits.

==========

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.056	-0.056	0.0014	0.0040	11:07:33	No
2	-0.058	-0.058	0.0014	0.0039	11:08:08	No
Mean:	-0.057	-0.057	0.0014			
SD :	0.0014	0.0014	0.0000			
%RSD:	2.4	2.4	1.2413			

QC value within specified limits.

==========

Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 07/13/2009
Sample ID: 232504005|i|||

%RSD: 6.0 6.0 2.5541

==========

Element: Hg Seq. No.: 54 AS Loc.: 48 Date: 07/13/2009
Sample ID: 232504011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.022	-0.022	0.0019	0.0044	11:21:35	No
2	-0.036	-0.036	0.0017	0.0042	11:22:10	No
Mean:	-0.029	-0.029	0.0018			
SD :	0.0101	0.0101	0.0001			
%RSD:	35.2	35.2	7.2230			

==========

Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 07/13/2009
Sample ID: 232504012|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.073	0.073	0.0030	0.0056	11:23:30	No
2	0.069	0.069	0.0030	0.0055	11:24:05	No
Mean:	0.071	0.071	0.0030			
SD :	0.0030	0.0030	0.0000			
%RSD:	4.3	4.3	1.2653			

==========

Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 07/13/2009
Sample ID: 232504013|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.132	0.132	0.0038	0.0063	11:25:25	No
2	0.124	0.124	0.0037	0.0062	11:26:00	No
Mean:	0.128	0.128	0.0037			
SD :	0.0058	0.0058	0.0001			
%RSD:	4.5	4.5	1.9637			

==========

Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 07/13/2009
Sample ID: 232504014|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.072	-0.072	0.0012	0.0037	11:27:22	No
2	-0.079	-0.079	0.0011	0.0037	11:27:57	No
Mean:	-0.075	-0.075	0.0012			
SD :	0.0047	0.0047	0.0001			
%RSD:	6.2	6.2	5.0576			

==========

Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.976	4.976	0.0651	0.0676	11:29:22	No
2	5.108	5.108	0.0667	0.0693	11:29:57	No
Mean:	5.042	5.042	0.0659			
SD :	0.0927	0.0927	0.0012			
%RSD:	1.8	1.8	1.7799			

QC value within specified limits.

==========

Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	0.0015	0.0040	11:31:25	No
2	-0.046	-0.046	0.0015	0.0041	11:31:59	No
Mean:	-0.050	-0.050	0.0015			
SD :	0.0051	0.0051	0.0001			
%RSD:	10.2	10.2	4.2953			

QC value within specified limits.

==========

Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 07/13/2009
Sample ID: 232509001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.787	1.787	0.0247	0.0273	11:33:23	No
2	1.785	1.785	0.0247	0.0272	11:33:58	No
Mean:	1.786	1.786	0.0247			
SD :	0.0015	0.0015	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 07/13/2009
Sample ID: 1201873033|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.961	0.961	0.0143	0.0168	11:35:20	No
2	0.924	0.924	0.0138	0.0163	11:35:55	No
Mean:	0.942	0.942	0.0140			
SD :	0.0259	0.0259	0.0003			
%RSD:	2.8	2.8	2.3359			

==========

Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 07/13/2009
Sample ID: 1201873034|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.725	3.725	0.0492	0.0518	11:37:17	No
2	3.714	3.714	0.0491	0.0516	11:37:52	No
Mean:	3.720	3.720	0.0492			
SD :	0.0083	0.0083	0.0001			
%RSD:	0.2	0.2	0.2132			

==========

Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 07/13/2009
Sample ID: 1201873037|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.892	3.892	0.0514	0.0539	11:39:15	No
2	3.893	3.893	0.0514	0.0539	11:39:49	No
Mean:	3.893	3.893	0.0514			
SD :	0.0008	0.0008	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 07/13/2009
Sample ID: 1201873036|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.267	0.267	0.0055	0.0080	11:41:13	No
2	0.248	0.248	0.0053	0.0078	11:41:48	No
Mean:	0.258	0.258	0.0054			
SD :	0.0134	0.0134	0.0002			

%RSD: 5.2 5.2 3.1457

==========

Element: Hg Seq. No.: 65 AS Loc.: 57 Date: 07/13/2009
Sample ID: 232509002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.313	0.313	0.0061	0.0086	11:43:12	No
2	0.292	0.292	0.0058	0.0084	11:43:47	No
Mean:	0.303	0.303	0.0060			
SD :	0.0145	0.0145	0.0002			
%RSD:	4.8	4.8	3.0720			

==========

Element: Hg Seq. No.: 66 AS Loc.: 58 Date: 07/13/2009
Sample ID: 232509003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	0.0013	0.0038	11:45:11	No
2	-0.067	-0.067	0.0013	0.0038	11:45:46	No
Mean:	-0.067	-0.067	0.0013			
SD :	0.0003	0.0003	0.0000			
%RSD:	0.5	0.5	0.3351			

==========

Element: Hg Seq. No.: 67 AS Loc.: 59 Date: 07/13/2009
Sample ID: 232509004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.344	1.344	0.0191	0.0217	11:47:11	No
2	1.328	1.328	0.0189	0.0215	11:47:45	No
Mean:	1.336	1.336	0.0190			
SD :	0.0116	0.0116	0.0001			
%RSD:	0.9	0.9	0.7745			

==========

Element: Hg Seq. No.: 68 AS Loc.: 60 Date: 07/13/2009
Sample ID: 232509005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.566	0.566	0.0093	0.0118	11:49:10	No
2	0.563	0.563	0.0093	0.0118	11:49:45	No
Mean:	0.565	0.565	0.0093			
SD :	0.0016	0.0016	0.0000			
%RSD:	0.3	0.3	0.2214			

==========

Element: Hg Seq. No.: 69 AS Loc.: 61 Date: 07/13/2009
Sample ID: 232509006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.184	0.184	0.0045	0.0070	11:51:12	No
2	0.171	0.171	0.0043	0.0068	11:51:47	No
Mean:	0.178	0.178	0.0044			
SD :	0.0089	0.0089	0.0001			
%RSD:	5.0	5.0	2.5778			

==========

Element: Hg Seq. No.: 70 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	5.144	5.144	0.0672	0.0697	11:53:13	No
2	5.119	5.119	0.0669	0.0694	11:53:48	No
Mean:	5.131	5.131	0.0670			
SD :	0.0183	0.0183	0.0002			
%RSD:	0.4	0.4	0.3449			

QC value within specified limits.

==========

Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	0.0014	0.0039	11:55:16	No
2	-0.064	-0.064	0.0013	0.0038	11:55:51	No
Mean:	-0.061	-0.061	0.0014			
SD :	0.0051	0.0051	0.0001			
%RSD:	8.4	8.4	4.7284			

QC value within specified limits.

==========

Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 07/13/2009
Sample ID: 1201873038|i||881916|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.121	-0.121	0.0006	0.0031	11:57:18	No
2	-0.129	-0.129	0.0005	0.0030	11:57:53	No
Mean:	-0.125	-0.125	0.0006			
SD :	0.0055	0.0055	0.0001			
%RSD:	4.4	4.4	12.7065			

==========

Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 07/13/2009
Sample ID: 1201873039|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.532	3.532	0.0468	0.0493	11:59:16	No
2	3.416	3.416	0.0453	0.0479	11:59:50	No
Mean:	3.474	3.474	0.0461			
SD :	0.0817	0.0817	0.0010			
%RSD:	2.4	2.4	2.2434			

==========

Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 07/13/2009
Sample ID: 232582001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.170	0.170	0.0043	0.0068	12:01:10	No
2	0.157	0.157	0.0041	0.0066	12:01:46	No
Mean:	0.163	0.163	0.0042			
SD :	0.0090	0.0090	0.0001			
%RSD:	5.5	5.5	2.7076			

==========

Element: Hg Seq. No.: 75 AS Loc.: 65 Date: 07/13/2009
Sample ID: 232582002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.106	0.106	0.0035	0.0060	12:03:06	No
2	0.108	0.108	0.0035	0.0060	12:03:40	No
Mean:	0.107	0.107	0.0035			
SD :	0.0013	0.0013	0.0000			

%RSD: 1.2 1.2 0.4770

==========

Element: Hg Seq. No.: 76 AS Loc.: 66 Date: 07/13/2009
Sample ID: 232585001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.047	-0.047	0.0015	0.0041	12:05:01	No
2	-0.050	-0.050	0.0015	0.0040	12:05:36	No
Mean:	-0.048	-0.048	0.0015			
SD :	0.0022	0.0022	0.0000			
%RSD:	4.5	4.5	1.7908			

==========

Element: Hg Seq. No.: 77 AS Loc.: 67 Date: 07/13/2009
Sample ID: 232585002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.282	0.282	0.0057	0.0082	12:06:57	No
2	0.292	0.292	0.0058	0.0084	12:07:32	No
Mean:	0.287	0.287	0.0058			
SD :	0.0073	0.0073	0.0001			
%RSD:	2.6	2.6	1.6139			

==========

Element: Hg Seq. No.: 78 AS Loc.: 68 Date: 07/13/2009
Sample ID: 232585003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.276	0.276	0.0056	0.0082	12:08:54	No
2	0.274	0.274	0.0056	0.0081	12:09:29	No
Mean:	0.275	0.275	0.0056			
SD :	0.0013	0.0013	0.0000			
%RSD:	0.5	0.5	0.2824			

==========

Element: Hg Seq. No.: 79 AS Loc.: 69 Date: 07/13/2009
Sample ID: 232591001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.119	0.119	0.0036	0.0062	12:10:51	No
2	0.112	0.112	0.0035	0.0061	12:11:26	No
Mean:	0.116	0.116	0.0036			
SD :	0.0047	0.0047	0.0001			
%RSD:	4.1	4.1	1.6549			

==========

Element: Hg Seq. No.: 80 AS Loc.: 70 Date: 07/13/2009
Sample ID: 1201873040|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.204	0.204	0.0047	0.0072	12:12:48	No
2	0.188	0.188	0.0045	0.0070	12:13:22	No
Mean:	0.196	0.196	0.0046			
SD :	0.0116	0.0116	0.0001			
%RSD:	5.9	5.9	3.1890			

==========

Element: Hg Seq. No.: 81 AS Loc.: 71 Date: 07/13/2009
Sample ID: 1201873041|i|||MS

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	2.167	2.167	0.0295	0.0321	12:14:46	No
2	2.222	2.222	0.0302	0.0328	12:15:21	No
Mean:	2.194	2.194	0.0299			
SD :	0.0391	0.0391	0.0005			
%RSD:	1.8	1.8	1.6559			

==========

Element: Hg Seq. No.: 82 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.016	5.016	0.0656	0.0681	12:16:46	No
2	5.000	5.000	0.0654	0.0679	12:17:21	No
Mean:	5.008	5.008	0.0655			
SD :	0.0112	0.0112	0.0001			
%RSD:	0.2	0.2	0.2155			

QC value within specified limits.

==========

Element: Hg Seq. No.: 83 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.111	-0.111	0.0007	0.0033	12:18:49	No
2	-0.116	-0.116	0.0007	0.0032	12:19:24	No
Mean:	-0.114	-0.114	0.0007			
SD :	0.0038	0.0038	0.0000			
%RSD:	3.4	3.4	7.0276			

QC value within specified limits.

==========

Element: Hg Seq. No.: 84 AS Loc.: 72 Date: 07/13/2009
Sample ID: 1201873043|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.305	2.305	0.0313	0.0338	12:20:50	No
2	2.291	2.291	0.0311	0.0336	12:21:25	No
Mean:	2.298	2.298	0.0312			
SD :	0.0099	0.0099	0.0001			
%RSD:	0.4	0.4	0.4008			

==========

Element: Hg Seq. No.: 85 AS Loc.: 73 Date: 07/13/2009
Sample ID: 1201873042|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.081	-0.081	0.0011	0.0036	12:22:49	No
2	-0.094	-0.094	0.0009	0.0035	12:23:24	No
Mean:	-0.087	-0.087	0.0010			
SD :	0.0093	0.0093	0.0001			
%RSD:	10.7	10.7	11.5399			

==========

Element: Hg Seq. No.: 86 AS Loc.: 74 Date: 07/13/2009
Sample ID: 1201877904|i||883966|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.087	-0.087	0.0010	0.0036	12:24:48	No
2	-0.106	-0.106	0.0008	0.0033	12:25:23	No
Mean:	-0.096	-0.096	0.0009			
SD :	0.0137	0.0137	0.0002			

#	µg/L	µg/L	Signal	Height		Stored
1	-0.100	-0.100	0.0009	0.0034	12:36:36	No
2	-0.113	-0.113	0.0007	0.0032	12:37:12	No
Mean:	-0.106	-0.106	0.0008			
SD :	0.0093	0.0093	0.0001			
%RSD:	8.7	8.7	14.9573			

==========

Element: Hg Seq. No.: 93 AS Loc.: 81 Date: 07/13/2009
Sample ID: 233081003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.184	0.184	0.0045	0.0070	12:38:31	No
2	0.164	0.164	0.0042	0.0067	12:39:07	No
Mean:	0.174	0.174	0.0043			
SD :	0.0138	0.0138	0.0002			
%RSD:	7.9	7.9	4.0292			

==========

Element: Hg Seq. No.: 94 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.133	5.133	0.0670	0.0696	12:40:30	No
2	5.164	5.164	0.0674	0.0700	12:41:05	No
Mean:	5.148	5.148	0.0672			
SD :	0.0216	0.0216	0.0003			
%RSD:	0.4	0.4	0.4055			

QC value within specified limits.

==========

Element: Hg Seq. No.: 95 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.129	-0.129	0.0005	0.0030	12:42:33	No
2	-0.125	-0.125	0.0005	0.0031	12:43:08	No
Mean:	-0.127	-0.127	0.0005			
SD :	0.0026	0.0026	0.0000			
%RSD:	2.0	2.0	6.2605			

QC value within specified limits.

==========

Element: Hg Seq. No.: 96 AS Loc.: 82 Date: 07/13/2009
Sample ID: 233081004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.216	0.216	0.0049	0.0074	12:44:32	No
2	0.211	0.211	0.0048	0.0073	12:45:07	No
Mean:	0.214	0.214	0.0048			
SD :	0.0034	0.0034	0.0000			
%RSD:	1.6	1.6	0.8786			

==========

Element: Hg Seq. No.: 97 AS Loc.: 83 Date: 07/13/2009
Sample ID: 233081005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.140	0.140	0.0039	0.0064	12:46:28	No
2	0.154	0.154	0.0041	0.0066	12:47:03	No
Mean:	0.147	0.147	0.0040			
SD :	0.0098	0.0098	0.0001			

Miscellaneous

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 881836

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201872853	UI647733-01	.518	g
MS	1201872855	UI042709-A	.5	mL
MS	1201872855	UI042709-B	.5	mL
MSD	1201872859	UI042709-A	.5	mL
MSD	1201872859	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872852		SW846 3050B	06-JUL-2009 07:45	0.518 g	50 mL	96.5251	SOIL
LCS	1201872853		SW846 3050B	06-JUL-2009 07:45	0.518 g	50 mL	96.5251	SOIL
SAMPLE	232582001		SW846 3050B	06-JUL-2009 07:45	0.524 g	50 mL	95.41985	SOIL
SAMPLE	232582002		SW846 3050B	06-JUL-2009 07:45	0.512 g	50 mL	97.65625	SOIL
SAMPLE	232585001		SW846 3050B	06-JUL-2009 07:45	0.524 g	50 mL	95.41985	SOIL
SAMPLE	232585002		SW846 3050B	06-JUL-2009 07:45	0.516 g	50 mL	96.89922	SOIL
SAMPLE	232585003		SW846 3050B	06-JUL-2009 07:45	0.525 g	50 mL	95.2381	SOIL
SAMPLE	232591001		SW846 3050B	06-JUL-2009 07:45	0.503 g	50 mL	99.40358	SOIL
DUP	1201872854	232591001	SW846 3050B	06-JUL-2009 07:45	0.511 g	50 mL	97.84736	SOIL
MS	1201872855	232591001	SW846 3050B	06-JUL-2009 07:45	0.521 g	50 mL	95.96929	SOIL
MSD	1201872859	232591001	SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL
SDILT	1201872856	232591001	SW846 3050B	06-JUL-2009 07:45	0.503 g	50 mL	99.40358	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments QC Sample #232591001 is a tan soil.

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 881858

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201872898	UI652380	.514	g
MS	1201872900	UI090622-01	.25	mL
MS	1201872900	UI090622-06	.25	mL
MSD	1201872902	UI090622-01	.25	mL
MSD	1201872902	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872897		SW846 3050B	06-JUL-2009 07:45	0.515 g	50 mL	97.08738	SOIL
LCS	1201872898		SW846 3050B	06-JUL-2009 07:45	0.514 g	50 mL	97.27626	SOIL
SAMPLE	232582001		SW846 3050B	06-JUL-2009 07:45	0.51 g	50 mL	98.03922	SOIL
SAMPLE	232582002		SW846 3050B	06-JUL-2009 07:45	0.514 g	50 mL	97.27626	SOIL
SAMPLE	232585001		SW846 3050B	06-JUL-2009 07:45	0.502 g	50 mL	99.60159	SOIL
SAMPLE	232585002		SW846 3050B	06-JUL-2009 07:45	0.506 g	50 mL	98.81423	SOIL
SAMPLE	232585003		SW846 3050B	06-JUL-2009 07:45	0.513 g	50 mL	97.46589	SOIL
SAMPLE	232591001		SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL
DUP	1201872899	232591001	SW846 3050B	06-JUL-2009 07:45	0.5 g	50 mL	100	SOIL
MS	1201872900	232591001	SW846 3050B	06-JUL-2009 07:45	0.504 g	50 mL	99.20635	SOIL
MSD	1201872902	232591001	SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL
SDILT	1201872901	232591001	SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881915

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873039	UI031809A	.204	g
MS	1201873041	WHG090710-14	.3	mL
MSD	1201873043	WHG090710-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873038		SW846 7471A Prep	10-JUL-2009 14:20	0.521 g	30 mL	57.58157	SOIL
LCS	1201873039		SW846 7471A Prep	10-JUL-2009 14:20	0.204 g	30 mL	147.05882	SOIL
SAMPLE	232582001		SW846 7471A Prep	10-JUL-2009 14:20	0.53 g	30 mL	56.60377	SOIL
SAMPLE	232582002		SW846 7471A Prep	10-JUL-2009 14:20	0.508 g	30 mL	59.05512	SOIL
SAMPLE	232585001		SW846 7471A Prep	10-JUL-2009 14:20	0.53 g	30 mL	56.60377	SOIL
SAMPLE	232585002		SW846 7471A Prep	10-JUL-2009 14:20	0.578 g	30 mL	51.90311	SOIL
SAMPLE	232585003		SW846 7471A Prep	10-JUL-2009 14:20	0.572 g	30 mL	52.44755	SOIL
SAMPLE	232591001		SW846 7471A Prep	10-JUL-2009 14:20	0.55 g	30 mL	54.54545	SOIL
DUP	1201873040	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.593 g	30 mL	50.59022	SOIL
MS	1201873041	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.515 g	30 mL	58.25243	SOIL
MSD	1201873043	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.51 g	30 mL	58.82353	SOIL
SDILT	1201873042	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.55 g	30 mL	54.54545	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution
1144356-C	2 mL	Hg reducing agent
WHG090710-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090710-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG090710-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090710-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090710-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090710-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

Comments Sample 232591001 consist of brown, clumpy soil.
Digestion Start Date: 10-JUL-09 14:20
Digestion End Date: 10-JUL-09 14:50

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 710443
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
10-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
881859	See Below		

Potentially affected work order(s)(SDG): 232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201872900MS 2. Failed RPD for DUP: QC 1201872899DUP 3. Failed Recovery for MSD/PSD: QC 1201872902MSD	1. The matrix spike recovery failed outside of the control limits for barium,magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The sample and sample duplicate % RPD failed outside the control limits for aluminum,barium,calcium,cobalt,iron,magnesium,manganese and potassium due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike duplicate recovery failed outside of the control limits for barium and calcium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:
Helen Camello 10-JUL-09

Data Validator/Group Leader:
Louise Smith 13-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.18 **Opened:** 08-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 09-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Standard Logbook

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI647733-01 **Opened:** 02-APR-07 **Amount :** 80 g
Name: ICPMSSOILSRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis
Supplier: ERA
Description: ICPMS Soil LCS (Reference)
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	8270 mg/kg	Antimony	55.8 mg/kg
Arsenic	255 mg/kg	Barium	469 mg/kg
Beryllium	86.4 mg/kg	Boron	138 mg/kg
Cadmium	119 mg/kg	Calcium	3760 mg/kg
Chromium	71.2 mg/kg	Cobalt	79.6 mg/kg
Copper	96.2 mg/kg	Iron	13200 mg/kg
Lead	169 mg/kg	Lithium	8.01 mg/kg
Magnesium	2990 mg/kg	Manganese	364 mg/kg
Mercury	4.18 mg/kg	Molybdenum	79.6 mg/kg
Nickel	101 mg/kg	Phosphorous	752 mg/kg
Potassium	2420 mg/kg	Selenium	171 mg/kg

Analyte	Concentration	Analyte	Concentration
Silver	116 mg/kg	Sodium	575 mg/kg
Strontium	144 mg/kg	Thallium	203 mg/kg
Thorium	17.2 mg/kg	Titanium	255 mg/kg
Uranium	2.12 mg/kg	Uranium-235	.0153 mg/kg
Uranium-238	2.105 mg/kg	Vanadium	134 mg/kg
Zinc	202 mg/kg	Zirconium	6.83 mg/kg

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090710-01 **Opened:** 10-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 10-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: IHG090710-02 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 10-JUL-09
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090710-07 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090710-08 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090710-09 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Standard Logbook

Serial ID: WHG090710-10 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-11 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090710-12 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-14 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: WI090708-42 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090708-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090708-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090708-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Serial ID: WI090708-43 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Standard Logbook

Serial ID: WI090708-44 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1150990
Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Serial ID: WI090708-45 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1150990
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090708-46 **Opened:** 08-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1150990
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090708-47 **Opened:** 08-JUL-09 **Solvent :** 3%HCL &1%HNO3-1150990
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090713-04AB **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705

Name: ICPMS Cal Standard 10 **Received:** 13-JUL-09

Type: Working **Expires:** 14-JUL-09

Employee: Rose Jenkins

Supplier: GEL

Description: ICPMS Calibration Standard (10 ppb)

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090713-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090713-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090713-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090713-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090713-04B **Opened:** 13-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090713-05B **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS090713-06B **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS090713-07B **Opened:** 13-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090713-08B **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-04AB **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090714-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090714-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090714-04B **Opened:** 14-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090714-05B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090714-06B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090714-07B **Opened:** 14-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-08B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1090957-A
Name: B-KMnO4(VWR)-MER
Type: Reagent/Solvent
Employee: Tara Griffin
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Opened: 09-MAR-09
Received: 09-MAR-09
Expires: 09-MAR-10
Verified: 07-AUG-07

Lot Number : 48162839

Standard Logbook

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1150990 **Opened:** 06-JUL-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 06-JUL-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 13-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Louise Smith
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1153776 **Opened:** 13-JUL-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 13-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Standard Logbook

Serial ID:	908024-A	**Opened:**	22-DEC-08	**Lot Number :**	48053817
Name:	B-NH2OH.HCl-MER	**Received:**	22-DEC-08		
Type:	Reagent/Solvent	**Expires:**	22-DEC-09		
Employee:	Tara Griffin				
Supplier:	Fisher Scientific				
Description:	Hydroxlyamine Hydrochloride				
Comments:	None				

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2510

Method/Analysis Information

Product: **pH**

Analytical Batch: 881740 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232591001	CAMO-09-9946
1201872623	232582001(CAMO-09-10464) Sample Duplicate (DUP)
1201872624	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHect pH Meter Orion 370.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232582001 (CAMO-09-10464).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 1201872623 (CAMO-09-10464) and 232591001 (CAMO-09-9946).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881270	**Method:**	SW846 9012A
Prep Batch :	881268	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232591001	CAMO-09-9946
1201871532	Method Blank (MB)
1201871533	232509006(CAMO-09-6531) Sample Duplicate (DUP)
1201871534	232509006(CAMO-09-6531) Matrix Spike (MS)
1201871535	232509006(CAMO-09-6531) Matrix Spike Duplicate (MSD)
1201871536	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232509006 (CAMO-09-6531).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recovery for this sample set was within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recovery for this sample set was within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1201871536 (LCS).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	881671	**Method:**	EPA 300.0
Prep Batch :	881669	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232591001	CAMO-09-9946
1201872402	Method Blank (MB)
1201872403	232585001(CAMO-09-6605) Sample Duplicate (DUP)
1201872404	232585001(CAMO-09-6605) Matrix Spike (MS)
1201872405	232585001(CAMO-09-6605) Matrix Spike Duplicate (MSD)
1201872406	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232585001 (CAMO-09-6605).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recovery for this sample set was within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recovery for this sample set was within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following sample from this sample group was received by the lab outside of the method specified holding time: 232591001 (CAMO-09-9946).

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Manual Integrations
Manual integrations were not required for the samples in this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 20July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2510 GEL Work Order: 232591

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2510

Client Sample ID:	CAMO-09-9946	Project:	LANL01004
Sample ID:	232591001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	18.7%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.6C	H	6.68	0.010	0.100	SU	1	TXT1 07/01/09	1304	881740	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	74.7	275	ug/kg	1	AXC2 07/02/09	1005	881270	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.78	0.369	1.23	mg/kg	1	MAR1 07/10/09	2257	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 14, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232591

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis											
Batch 881740											
QC1201872623 232582001 DUP											
pH		H	7.57	H	7.60	SU	0.396		(0%-10%)	TXT1	07/01/09 12:39
QC1201872624 LCS											
pH	7.00				7.02	SU		100	(95%-105%)		07/01/09 12:33
Flow Injection Analysis											
Batch 881270											
QC1201871533 232509006 DUP											
Cyanide, Total		J	208	J	212	ug/kg	N/A ^		(+/-263)	AXC2	07/02/09 09:54
QC1201871536 LCS											
Cyanide, Total	174000				175000	ug/kg		101	(46%-145%)		07/02/09 09:51
QC1201871532 MB											
Cyanide, Total				J	167	ug/kg					07/02/09 09:50
QC1201871534 232509006 MS											
Cyanide, Total	5350	J	208		5610	ug/kg		101	(50%-130%)		07/02/09 09:55
QC1201871535 232509006 MSD											
Cyanide, Total	5350	J	208		5300	ug/kg	5.68	95.3	(0%-30%)		07/02/09 09:59
Ion Chromatography											
Batch 881671											
QC1201872403 232585001 DUP											
Nitrate-N		HUh	ND	HUh	ND	mg/kg	N/A		(+/-1.07)	MAR1	07/10/09 19:35
QC1201872406 LCS											
Nitrate-N	50.0				46.6	mg/kg		93.3	(90%-110%)		07/10/09 17:39
QC1201872402 MB											
Nitrate-N				U	1.00	mg/kg					07/10/09 17:10
QC1201872404 232585001 MS											
Nitrate-N	53.5	HUh	ND	Hh	49.0	mg/kg		91.6	(90%-110%)		07/10/09 20:04
QC1201872405 232585001 MSD											
Nitrate-N	53.5	HUh	ND	Hh	49.0	mg/kg	0.0611	91.6	(0%-20%)		07/10/09 20:33

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

QC Summary

Workorder: 232591

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 14-JUL-2009 16:34

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2510

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**02-JUL-2009 09:29:22**	**OM_7-2-2009_09-19-36**	**143**	**150**	**95**	**(90%-110%)**	**Yes**
CCV	02-JUL-2009 09:43:39	OM_7-2-2009_09-19-36	95.6	100	96	(90%-110%)	Yes
CCV	02-JUL-2009 09:56:05	OM_7-2-2009_09-19-36	103	100	103	(90%-110%)	Yes
CCV	02-JUL-2009 10:08:28	OM_7-2-2009_09-19-36	102	100	102	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**02-JUL-2009 09:31:12**	**OM_7-2-2009_09-19-36**	**-1.5**	**5**	**Yes**
CCB	02-JUL-2009 09:45:29	OM_7-2-2009_09-19-36	-1.03	5	Yes
CCB	02-JUL-2009 09:57:55	OM_7-2-2009_09-19-36	-0.586	5	Yes
CCB	02-JUL-2009 10:10:18	OM_7-2-2009_09-19-36	-1.57	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 14-JUL-2009 16:34

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2510

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**10-JUL-2009 10:55:00**	**090710**	**4.6565**	**5**	**93**	**(90%-110%)**	**Yes**
CCV	10-JUL-2009 16:12:00	090710	7.2904	7.5	97	(90%-110%)	Yes
CCV	10-JUL-2009 21:01:00	090710	4.6637	5	93	(90%-110%)	Yes
CCV	10-JUL-2009 23:26:00	090710	7.288	7.5	97	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**10-JUL-2009 11:24:00**	**090710**	**0**	**0.1**	**Yes**
CCB	10-JUL-2009 16:41:00	090710	0	0.1	Yes
CCB	10-JUL-2009 21:30:00	090710	0	0.1	Yes
CCB	10-JUL-2009 23:55:00	090710	0	0.1	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881268

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871536	URF071009-01	.25	g
MS	1201871534	URF1091135-02	.025	mL
MSD	1201871535	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871532		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	MISC SOLID
LCS	1201871536		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.25 g	25 mL	100	MISC SOLID
SAMPLE	232465001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	MISC SOLID
SAMPLE	232509006		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.54 g	25 mL	46.2963	SOIL
DUP	1201871533	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.56 g	25 mL	44.64286	SOIL
MS	1201871534	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.55 g	25 mL	45.45455	SOIL
MSD	1201871535	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232582001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232582002		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232585001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232585002		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232585003		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232591001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.56 g	25 mL	44.64286	SOIL

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090702-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/2/2009 9:22:13	OM_7-2-2009_09-19-36
150 ppb		1	axc2	7/2/2009 9:23:04	OM_7-2-2009_09-19-36
100 ppb		1	axc2	7/2/2009 9:23:57	OM_7-2-2009_09-19-36
50 ppb		1	axc2	7/2/2009 9:24:50	OM_7-2-2009_09-19-36
10 ppb		1	axc2	7/2/2009 9:25:43	OM_7-2-2009_09-19-36
CRDL 5.0 ppb		1	axc2	7/2/2009 9:26:37	OM_7-2-2009_09-19-36
ICAL-00		1	axc2	7/2/2009 9:27:31	OM_7-2-2009_09-19-36
ICV		1	axc2	7/2/2009 9:29:22	OM_7-2-2009_09-19-36
ICB		1	axc2	7/2/2009 9:31:12	OM_7-2-2009_09-19-36
CRDL		1	axc2	7/2/2009 9:33:01	OM_7-2-2009_09-19-36
1201870882	881036	1	axc2	7/2/2009 9:34:51	OM_7-2-2009_09-19-36
1201870889	881036	1	axc2	7/2/2009 9:35:44	OM_7-2-2009_09-19-36
232341002	881036	1	axc2	7/2/2009 9:36:37	OM_7-2-2009_09-19-36
1201870884	881036	1	axc2	7/2/2009 9:37:31	OM_7-2-2009_09-19-36
1201870886	881036	1	axc2	7/2/2009 9:38:24	OM_7-2-2009_09-19-36
1201870888	881036	1	axc2	7/2/2009 9:39:17	OM_7-2-2009_09-19-36
232370001	881036	1	axc2	7/2/2009 9:40:09	OM_7-2-2009_09-19-36
1201870883	881036	1	axc2	7/2/2009 9:41:02	OM_7-2-2009_09-19-36
1201870885	881036	1	axc2	7/2/2009 9:41:55	OM_7-2-2009_09-19-36
1201870887	881036	1	axc2	7/2/2009 9:42:47	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:43:39	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:45:29	OM_7-2-2009_09-19-36
232425001	881036	1	axc2	7/2/2009 9:47:17	OM_7-2-2009_09-19-36
232432001	881036	1	axc2	7/2/2009 9:48:10	OM_7-2-2009_09-19-36
232482002	881036	1	axc2	7/2/2009 9:49:02	OM_7-2-2009_09-19-36
232510001	881036	1	axc2	7/2/2009 9:49:54	OM_7-2-2009_09-19-36
1201871532	881270	1	axc2	7/2/2009 9:50:45	OM_7-2-2009_09-19-36
1201871536	881270	50	axc2	7/2/2009 9:51:39	OM_7-2-2009_09-19-36
232465001	881270	1	axc2	7/2/2009 9:52:32	OM_7-2-2009_09-19-36
232509006	881270	1	axc2	7/2/2009 9:53:26	OM_7-2-2009_09-19-36
1201871533	881270	1	axc2	7/2/2009 9:54:19	OM_7-2-2009_09-19-36
1201871534	881270	1	axc2	7/2/2009 9:55:12	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:56:05	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:57:55	OM_7-2-2009_09-19-36
1201871535	881270	1	axc2	7/2/2009 9:59:45	OM_7-2-2009_09-19-36
232582001	881270	1	axc2	7/2/2009 10:00:37	OM_7-2-2009_09-19-36
232582002	881270	1	axc2	7/2/2009 10:01:30	OM_7-2-2009_09-19-36
232585001	881270	1	axc2	7/2/2009 10:02:23	OM_7-2-2009_09-19-36
232585002	881270	1	axc2	7/2/2009 10:03:15	OM_7-2-2009_09-19-36
232585003	881270	1	axc2	7/2/2009 10:04:07	OM_7-2-2009_09-19-36
232591001	881270	1	axc2	7/2/2009 10:05:00	OM_7-2-2009_09-19-36
1201871541	881272	1	axc2	7/2/2009 10:05:51	OM_7-2-2009_09-19-36
1201871543	881272	1	axc2	7/2/2009 10:06:44	OM_7-2-2009_09-19-36
232465001	881272	1	axc2	7/2/2009 10:07:35	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:08:28	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:10:18	OM_7-2-2009_09-19-36
1201871542	881272	1	axc2	7/2/2009 10:12:09	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:13:01	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:14:52	OM_7-2-2009_09-19-36

Author: axc2 Date : 7/2/2009

Original Run Filename: OM_7-2-2009_09-19-36.OMN created 7/2/2009 09:19:36
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-2-2009_09-19-36.OMN last modified 7/2/2009 10:15:57
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090702-01	1	S1	200	8.98	7/2/2009@09:22:13			200 ppb
WCN090702-02	1	S2	150	6.83	7/2/2009@09:23:04			150 ppb
WCN090702-03	1	S3	100	4.37	7/2/2009@09:23:57			100 ppb
WCN090702-04	1	S4	50.0	2.32	7/2/2009@09:24:50			50 ppb
WCN090702-05	1	S5	10.0	0.586	7/2/2009@09:25:43			10 ppb
WCN090702-06	1	S6	5.00	0.295	7/2/2009@09:26:37			CRDL 5.0 ppb
WCN090702-08	1	S7	0.00	0.0308	7/2/2009@09:27:31			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99974 > 0.99500					
Message			Pass					
Action			Continue					
WCN090702-07	1	S8	143	6.45	7/2/2009@09:29:22			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-4.5 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-4.5 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN090702-08	1	S7	-1.50	-3.75e-4	7/2/2009@09:31:12			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.50 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.50 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN090702-06	1	S6	5.03	0.291	7/2/2009@09:33:01			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			5.03 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			5.03 > 2.50					
Message			CRDL Passed					
Action			Continue					
1201870882|881036|MB	1	1	0.440	0.0860	7/2/2009@09:34:51			
1201870889||LCS	1	2	51.2	2.35	7/2/2009@09:35:44			
232341002	1	3	-0.350	0.0509	7/2/2009@09:36:37			
1201870884||DUP	1	4	0.739	0.0994	7/2/2009@09:37:31			
1201870886||MS	1	5	102	4.60	7/2/2009@09:38:24			
1201870888||MSD	1	6	106	4.80	7/2/2009@09:39:17			
232370001	1	7	0.145	0.0729	7/2/2009@09:40:09			
1201870883||DUP	1	8	-0.522	0.0432	7/2/2009@09:41:02			
1201870885||MS	1	9	103	4.66	7/2/2009@09:41:55			
1201870887||MSD	1	10	106	4.79	7/2/2009@09:42:47			
WCN090702-03	1	S3	95.6	4.32	7/2/2009@09:43:39			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-4.4 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.03	0.0204	7/2/2009@09:45:29			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.03 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.03 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232425001	1	11	2.25	0.167	7/2/2009@09:47:17			
232432001	1	12	0.839	0.104	7/2/2009@09:48:10			
232482002	1	13	3.65	0.229	7/2/2009@09:49:02			
232510001	1	14	-0.112	0.0615	7/2/2009@09:49:54			
1201871532|881270|MB	1	15	3.33	0.215	7/2/2009@09:50:45			
1201871536||LCS	1	16	35.0	1.62	7/2/2009@09:51:39		50.00	
232465001	1	17	7.81	0.414	7/2/2009@09:52:32			
232509006	1	18	3.82	0.237	7/2/2009@09:53:26			
1201871533||DUP	1	19	4.04	0.246	7/2/2009@09:54:19			
1201871534||MS	1	20	105	4.73	7/2/2009@09:55:12			
WCN090702-03	1	S3	103	4.64	7/2/2009@09:56:05			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-0.586	0.0403	7/2/2009@09:57:55			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.586 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.586 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201871535||MSD	1	21	99.2	4.49	7/2/2009@09:59:45			
232582001	1	22	0.545	0.0907	7/2/2009@10:00:37			
232582002	1	23	3.17	0.208	7/2/2009@10:01:30			
232585001	1	24	0.846	0.104	7/2/2009@10:02:23			
232585002	1	25	4.51	0.267	7/2/2009@10:03:15			
232585003	1	26	1.34	0.126	7/2/2009@10:04:07			
232591001	1	27	1.16	0.118	7/2/2009@10:05:00			
1201871541|881272|MB	1	28	-0.342	0.0512	7/2/2009@10:05:51			
1201871543||LCS	1	29	0.253	0.0777	7/2/2009@10:06:44			
232465001	1	30	27.3	1.28	7/2/2009@10:07:35			
WCN090702-03	1	S3	102	4.62	7/2/2009@10:08:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.57	-0.00337	7/2/2009@10:10:18			CCB
		Known Conc:	0.00					

DQM Test: > + Concentration Limit								
		Result:	-1.57 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.57 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201871542||DUP	1	31	48.0	2.20	7/2/2009@10:12:09			
WCN090702-03	1	S3	108	4.87	7/2/2009@10:13:01			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	7.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	7.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-0.342	0.0512	7/2/2009@10:14:52			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.342 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.342 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_7-2-2009_09-19-36.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/2/2009

Channel 1: Current View

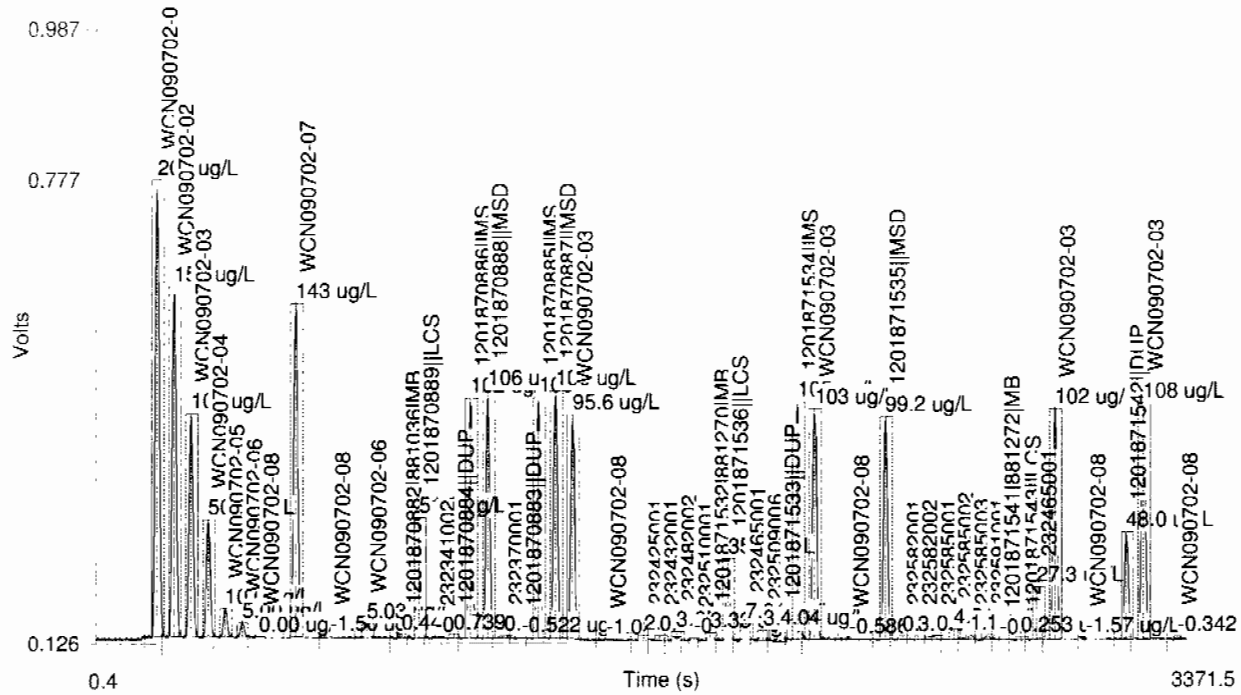

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.98	0.640	-0.0	7/2/2009	09:23:15
2	150	1	6.83	0.489	-1.3	7/2/2009	09:24:07
3	100	1	4.37	0.313	3.4	7/2/2009	09:25:00
4	50.0	1	2.32	0.165	-1.2	7/2/2009	09:25:53
5	10.0	1	0.586	0.0398	-14.0	7/2/2009	09:26:46
6	5.00	1	0.295	0.0201	-1.4	7/2/2009	09:27:40
7	0.00	1	0.0308	8.07e-4		7/2/2009	09:28:34

Figure 1: TCYANIDE

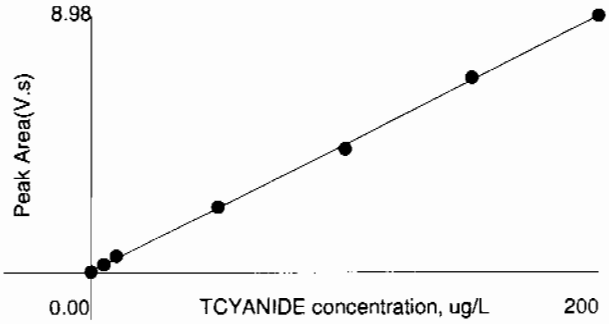

Area = 0.0445 * Conc + 0.0682
Conc = 22.4 * Area - 1.49
Correlation Coefficient (r) = 0.99974

No Weighting

Ion Chromatography

Prep LogBook

Analyst: MAR1 Verified by:_____

Batch: 881669

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201872406	UIC090627SPK	.8	mL
MS	1201872404	UIC090627SPK	.8	mL
MSD	1201872405	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872402		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
LCS	1201872406		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232582001		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232582002		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232585001		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
DUP	1201872403	232585001	EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
MS	1201872404	232585001	EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
MSD	1201872405	232585001	EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232585002		EPA 300.0 PREP	10-JUL-2009 08:50	4.01 g	40 mL	9.97506	SOIL
SAMPLE	232585003		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232591001		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL

Comments

This is runlog for Sequence 090707.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	07/03/09 22:08		1	090707	MAR1
ICAL-06	07/03/09 22:41		1	090707	MAR1
ICAL-05	07/03/09 23:14		1	090707	MAR1
ICAL-04	07/03/09 23:47		1	090707	MAR1

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

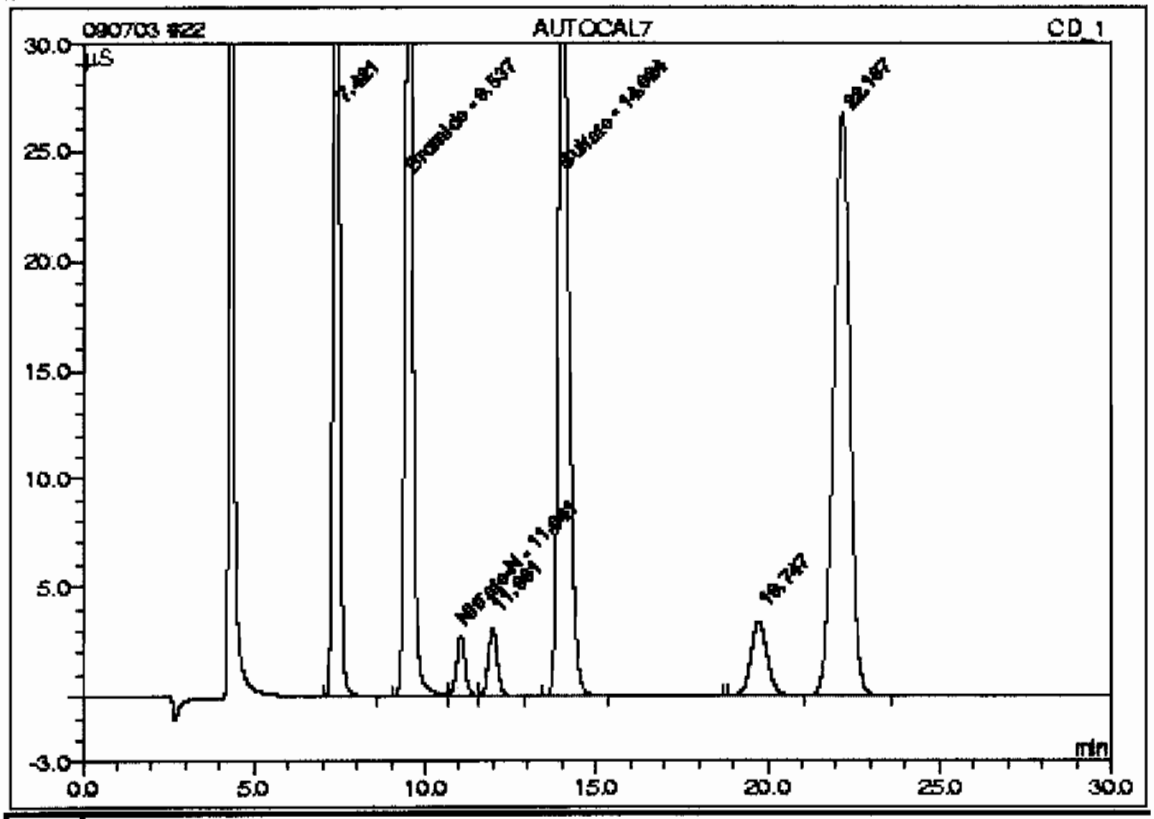

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	20.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	5.0000	n.a.	n.a.	n.a.	n.a.
2	9.54	Bromide	5.0000	5.0000		10.49618	20.17
n.a.	n.a.	Chlorate	5.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	10.0000	10.0000		0.81946	1.58
5	14.02	Sulfate	40.0000	40.0000		12.51803	24.06
Total:				55.0000	0.000	23.834	45.81

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE0885;300;9058

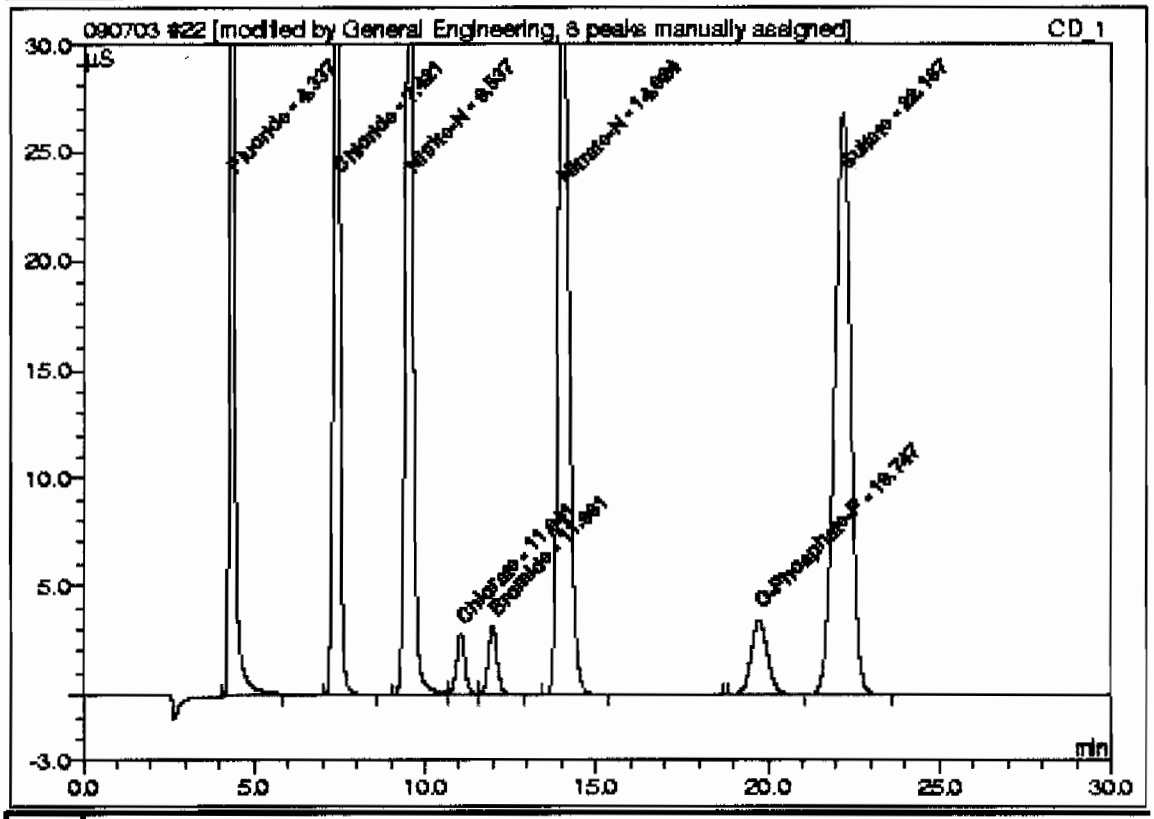

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	10.0000	10.0444	*	6.95356	11.79
2	7.42	Chloride	20.0000	20.3404		10.85875	18.41
3	9.54	Nitrite-N	10.0000	10.0541		10.49618	17.80
4	11.04	Chlorate	5.0000	4.9982		0.81946	1.39
5	11.98	Bromide	5.0000	5.0134		0.92846	1.57
6	14.02	Nitrate-N	10.0000	10.1573		12.51803	21.22
7	19.75	O-Phosphate-P	5.0000	5.0143		1.85201	3.14
8	22.19	Sulfate	40.0000	40.5382		14.55636	24.68
Total:				106.1605	0.000	59.982	100.00

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE086;300;9056

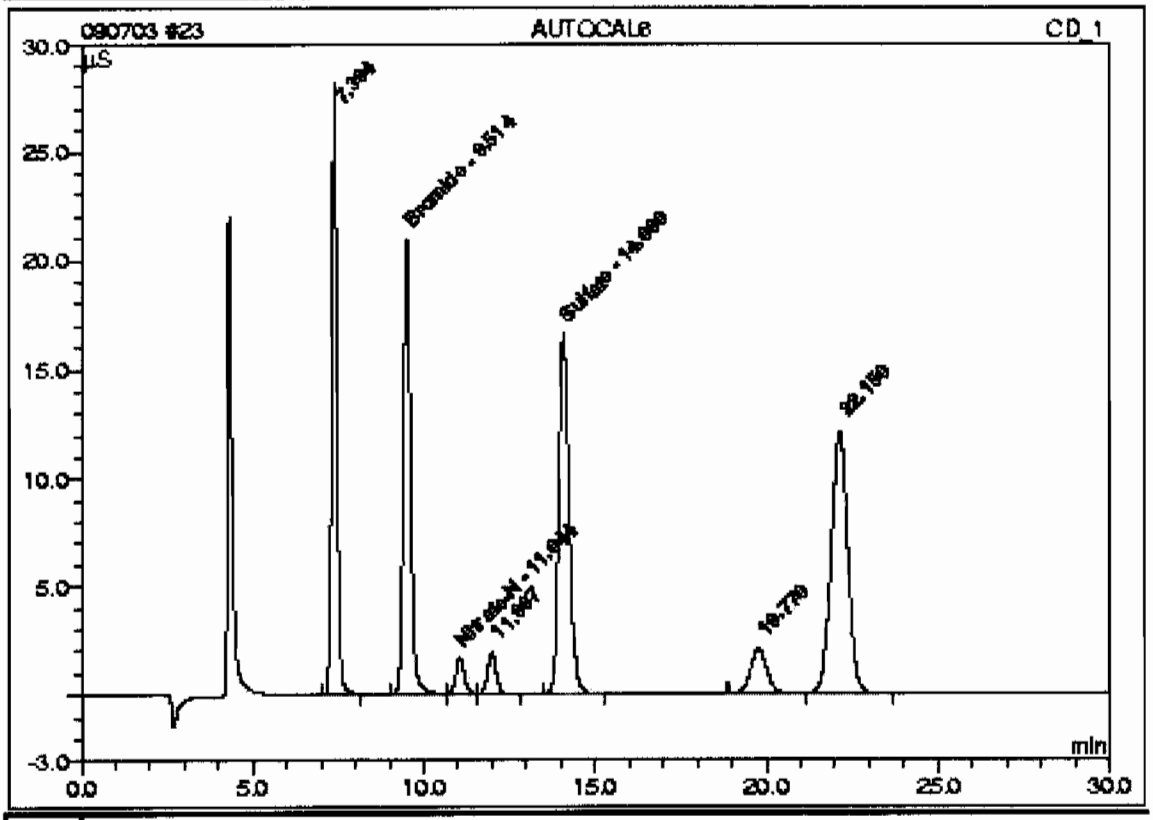

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	3.0000	n.a.	n.a.	n.a.	n.a.
2	9.51	Bromide	3.0000	2.6148		5.08735	20.64
n.a.	n.a.	Chlorate	3.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	5.0000	5.6994		0.49447	2.01
5	14.08	Sulfate	20.0000	18.8591		5.72345	23.22
Total:				27.1634	0.000	11.305	45.87

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE086;300;9056

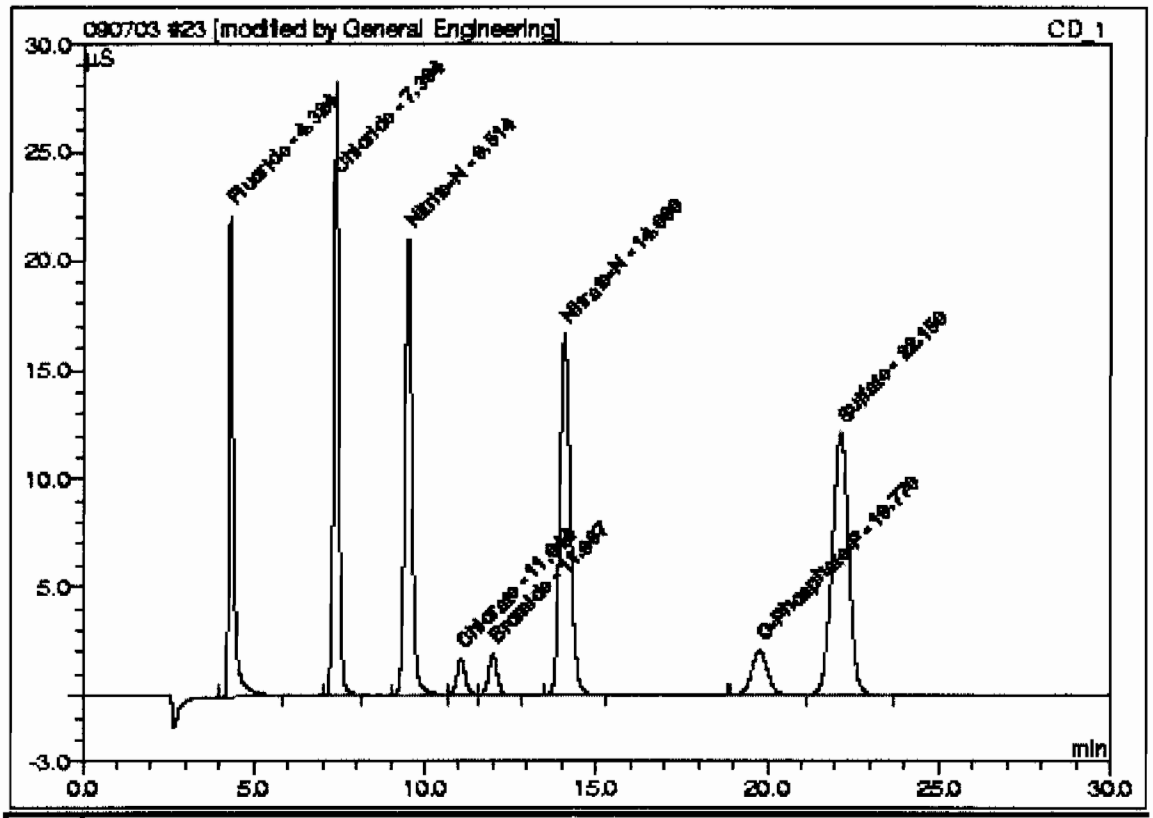

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	5.0000	4.9254	*	3.38643	12.08
2	7.39	Chloride	10.0000	9.3510		4.93051	17.59
3	9.51	Nitrite-N	5.0000	4.9036		5.08735	18.15
4	11.04	Chlorate	3.0000	3.0238		0.49447	1.76
5	11.99	Bromide	3.0000	3.0288		0.55878	1.99
6	14.08	Nitrate-N	5.0000	4.6989		5.72345	20.42
7	19.77	O-Phosphate-P	3.0000	3.0156		1.10727	3.95
8	22.15	Sulfate	20.0000	18.9609		6.74477	24.06
Total:				51.9078	0.000	28.033	100.00

24 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

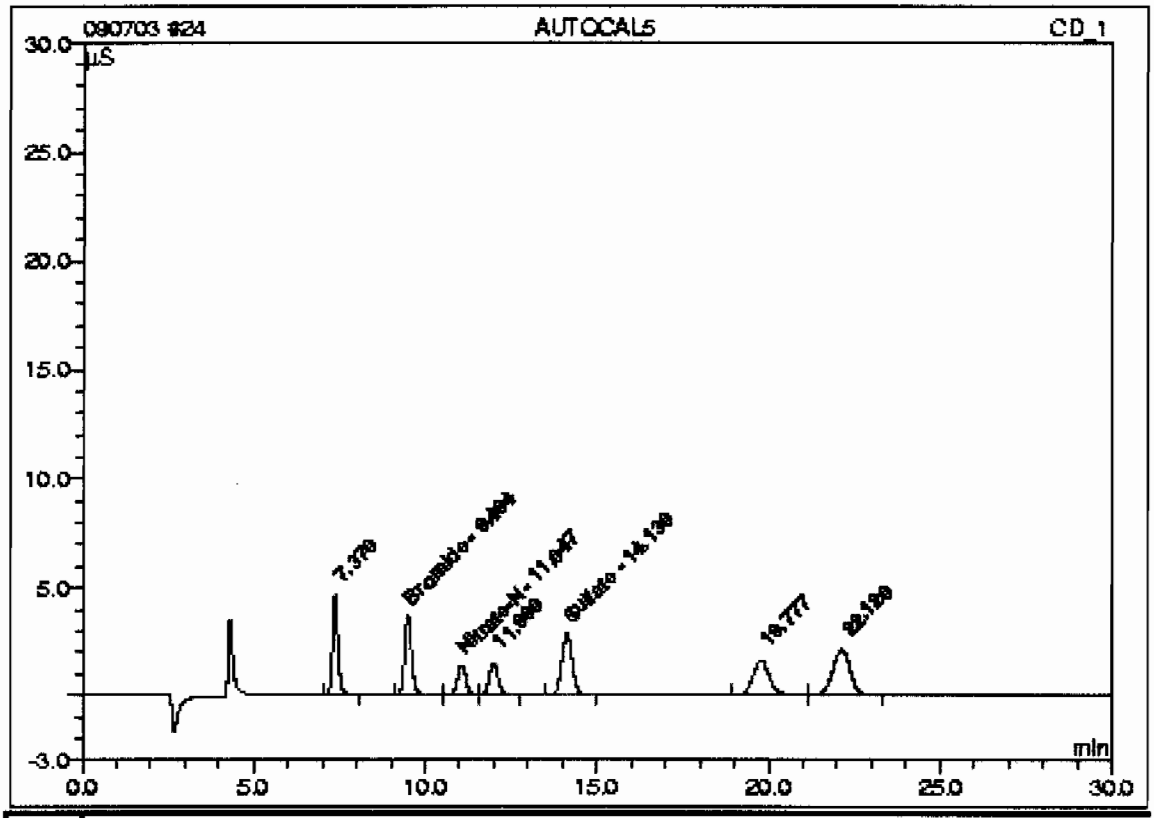

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	2.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	2.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	2.5000	1.1051		0.92663	15.98
n.a.	n.a.	Chlorate	2.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	1.0000	3.6480		0.40624	7.01
5	14.13	Sulfate	4.0000	3.8794		1.01074	17.44
Total:				8.6325	0.000	2.344	40.43

24 AUTOCAL5

Sample Name:	**AUTOCAL5**	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

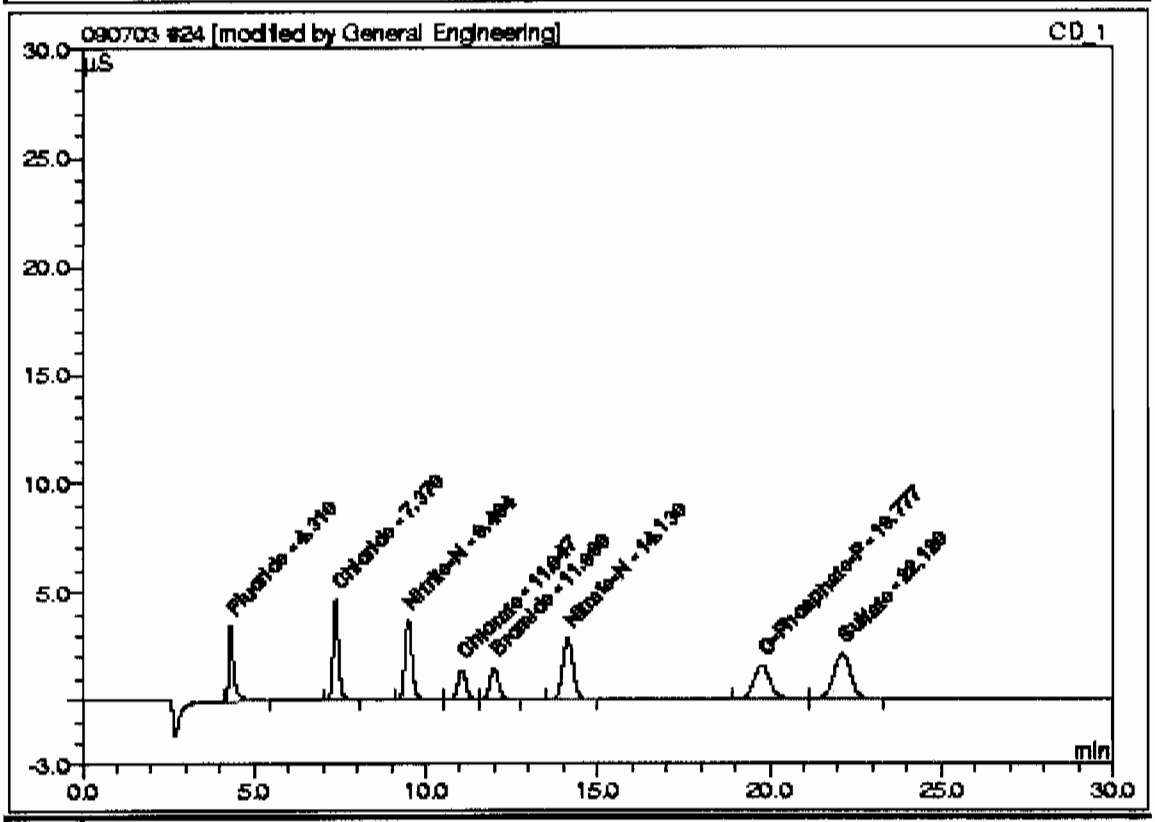

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	1.0000	0.9326	*	0.60409	9.44
2	7.37	Chloride	2.0000	1.7967		0.85540	13.36
3	9.49	Nitrite-N	1.0000	0.9416		0.92663	14.48
4	11.05	Chlorate	2.5000	2.4878		0.40624	6.35
5	11.99	Bromide	2.5000	2.4502		0.45103	7.05
6	14.13	Nitrate-N	1.0000	0.9129		1.01074	15.79
7	19.78	O-Phosphate-P	2.5000	2.4771		0.90660	14.16
8	22.12	Sulfate	4.0000	3.7545		1.24042	19.38
Total:				15.7534	0.000	6.401	100.00

25 AUTOCAL4

Sample Name:	**AUTOCAL4**	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	**AS23_HC**	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

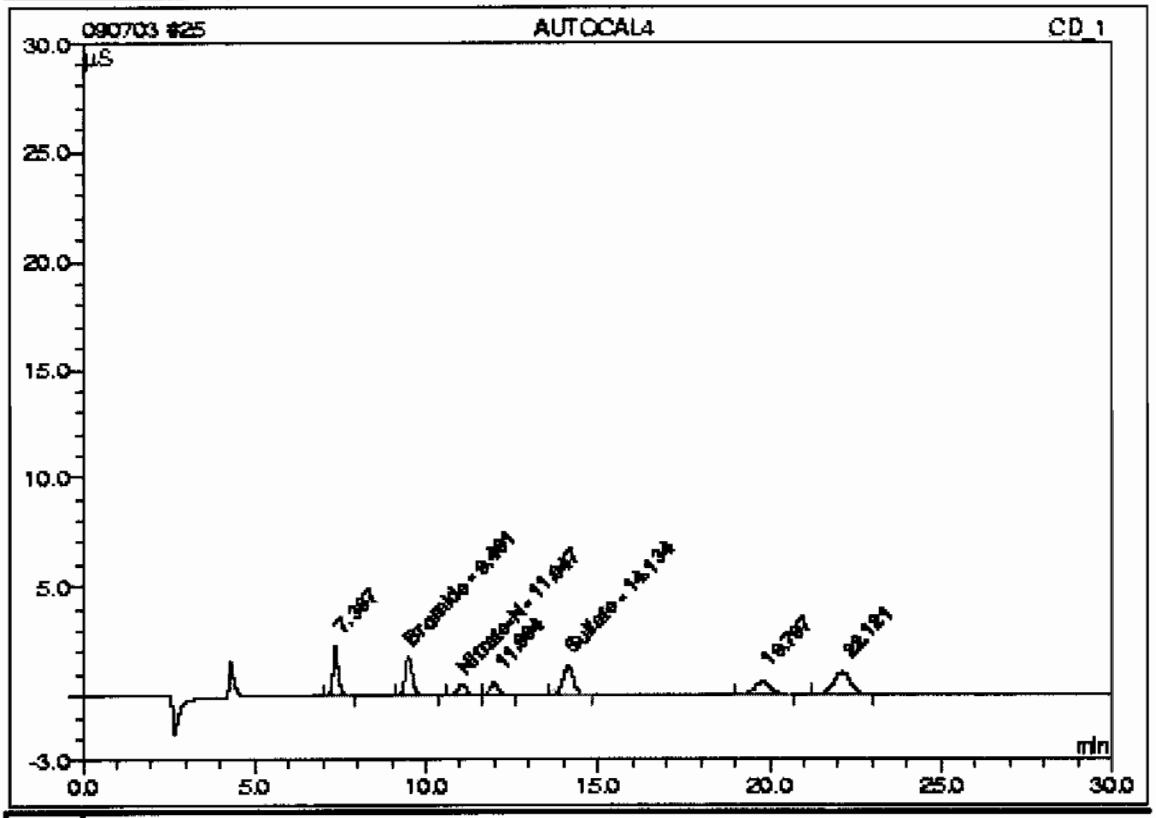

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	1.0000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	1.0000	0.9160		0.44459	16.96
n.a.	n.a.	Chlorate	1.0000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.5000	0.1296		0.15634	5.97
5	14.13	Sulfate	2.0000	2.1573		0.49242	18.79
Total:				3.2029	0.000	1.093	41.72

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9058

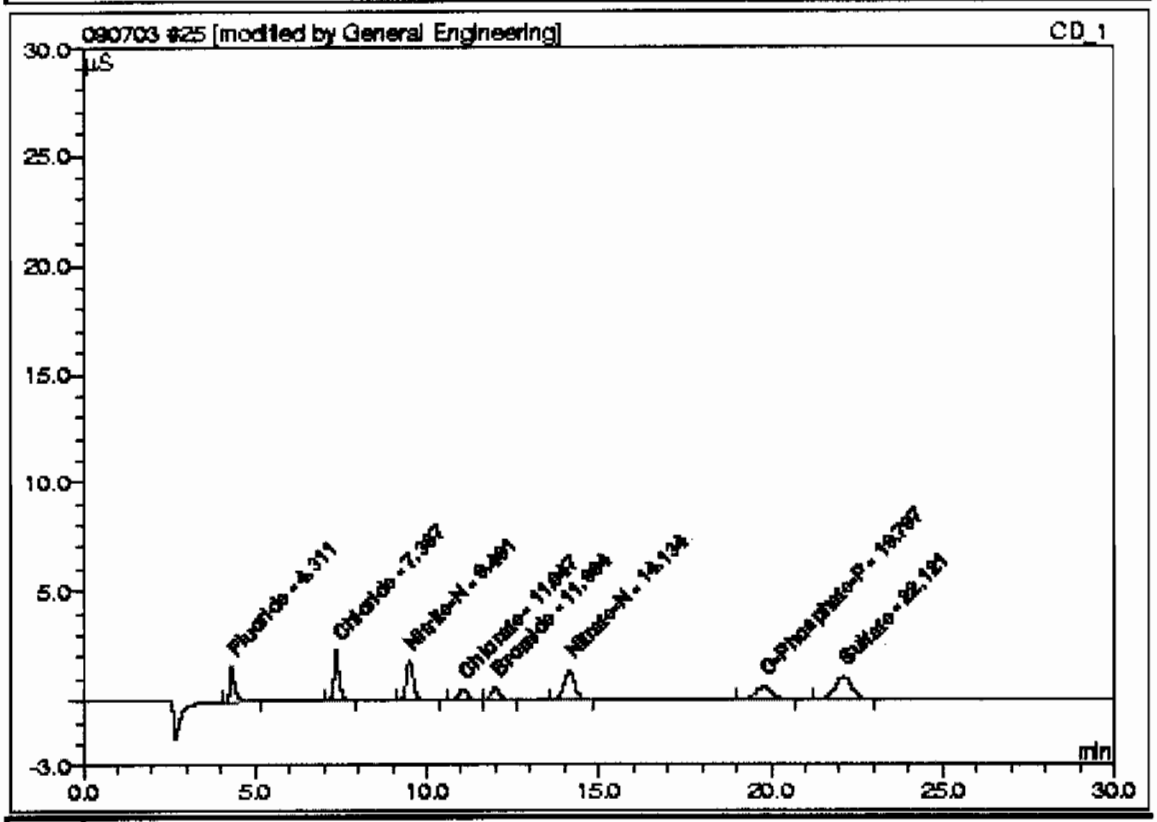

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.5000	0.4772	*	0.28671	9.86
2	7.37	Chloride	1.0000	0.9876		0.41893	14.41
3	9.49	Nitrite-N	0.5000	0.4826		0.44459	15.29
4	11.05	Chlorate	1.0000	0.9695		0.15634	5.39
5	11.99	Bromide	1.0000	0.9693		0.17517	6.02
6	14.13	Nitrate-N	0.5000	0.4966		0.49242	16.94
7	19.80	O-Phosphate-P	1.0000	0.9414		0.33440	11.50
8	22.12	Sulfate	2.0000	1.9824		0.59899	20.60
Total:				7.3065	0.000	2.908	100.00

This is runlog for Sequence 090703.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-03	07/04/09 00:20		1	090703	MAR1
ICAL-02	07/04/09 00:53		1	090703	MAR1
ICAL-01	07/04/09 01:26		1	090703	MAR1
ICV	07/04/09 01:59		1	090703	MAR1
ICB	07/04/09 02:32		1	090703	MAR1

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE085;300;9055

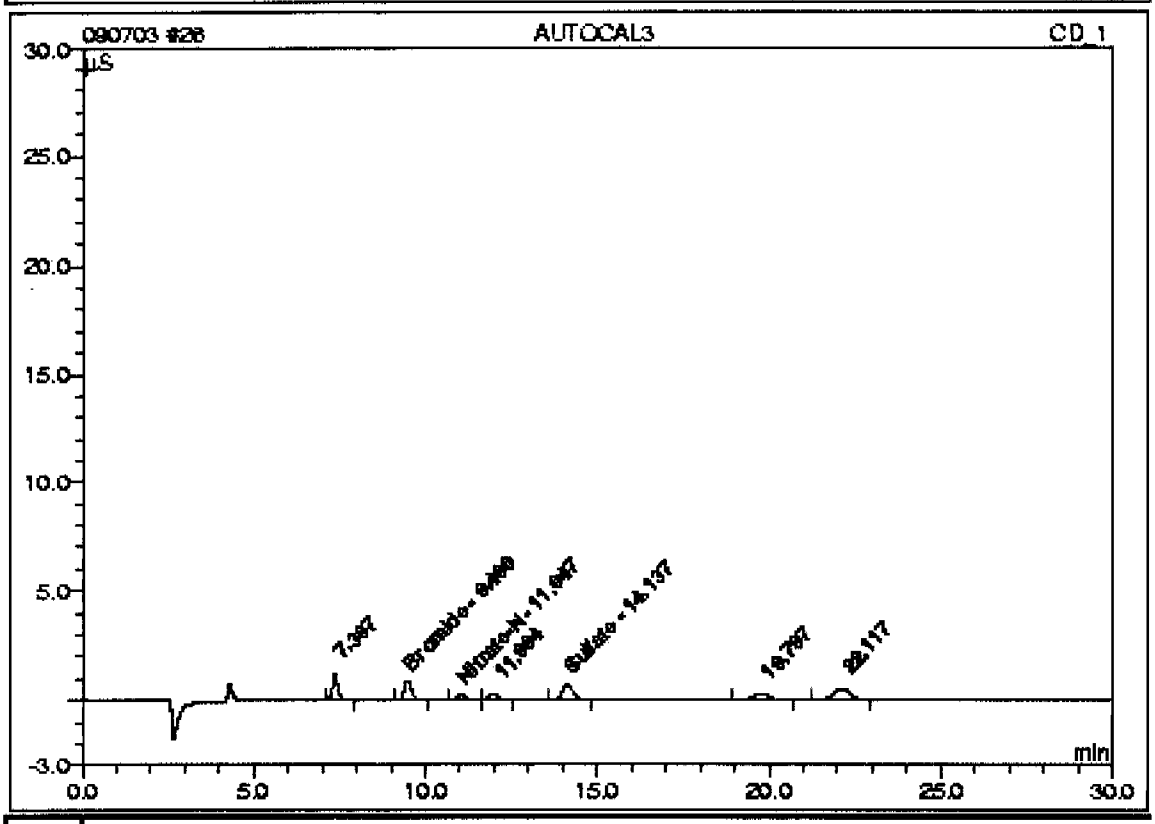

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.5000	0.7242		0.21812	16.45
n.a.	n.a.	Chlorate	0.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.2500	-0.6565		0.07808	5.89
5	14.14	Sulfate	1.0000	1.2880		0.24968	18.83
Total:				1.3557	0.000	0.546	41.17

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE086;300;9056

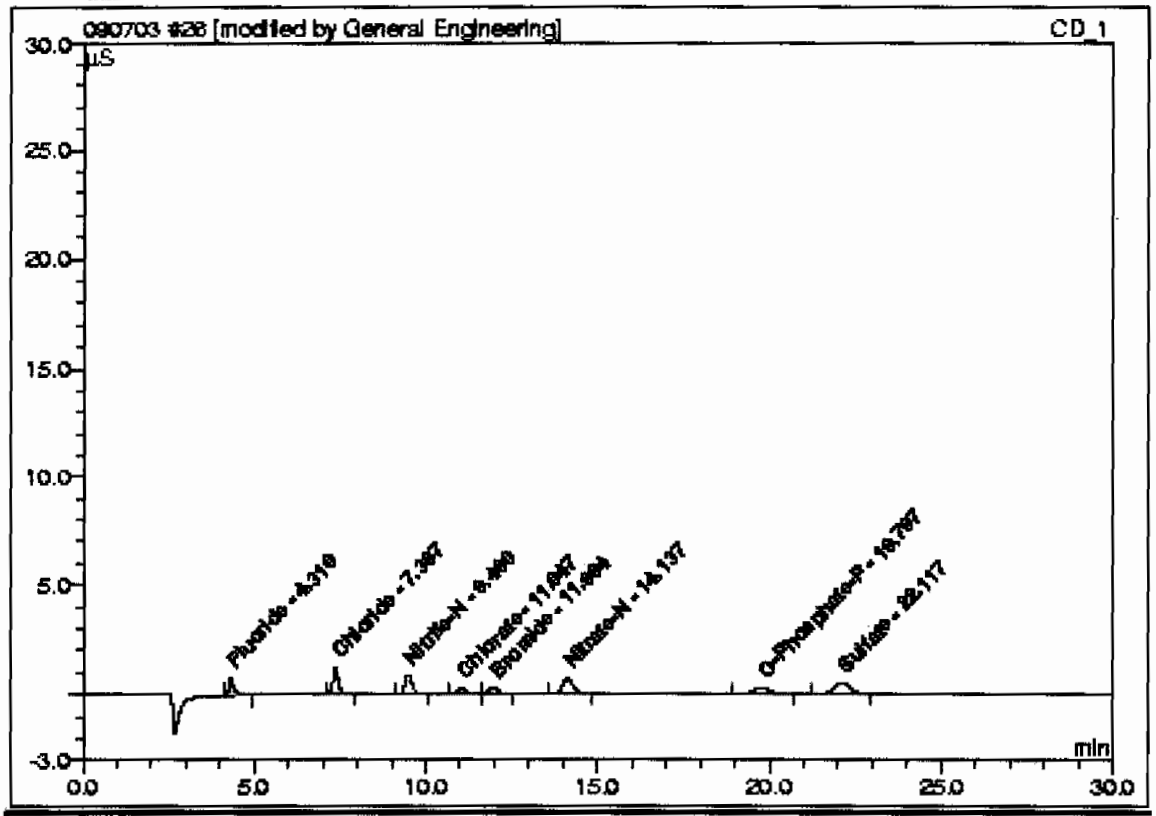

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.2500	0.2638	*	0.13800	9.43
2	7.37	Chloride	0.5000	0.6284		0.22515	15.38
3	9.49	Nitrite-N	0.2500	0.2669		0.21812	14.90
4	11.05	Chlorate	0.5000	0.4940		0.07808	5.33
5	11.99	Bromide	0.5000	0.4991		0.09759	5.98
6	14.14	Nitrate-N	0.2500	0.3016		0.24968	17.05
7	19.80	O-Phosphate-P	0.5000	0.4865		0.16491	11.26
8	22.12	Sulfate	1.0000	1.1634		0.30252	20.66
Total:				4.1037	0.000	1.464	100.00

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9056

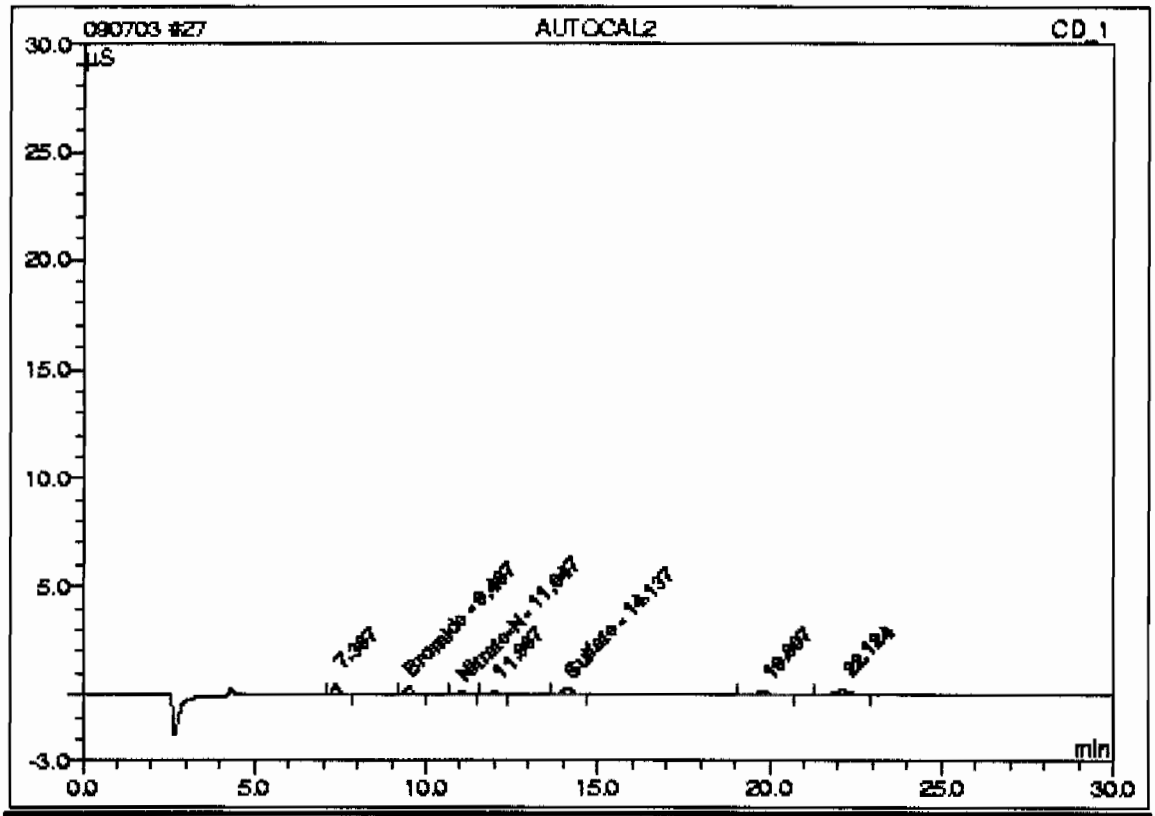

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.2000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.2000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.2000	0.5534		0.08703	16.21
n.a.	n.a.	Chlorate	0.2000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.1000	-0.9932		0.03083	5.74
5	14.14	Sulfate	0.4000	0.7269		0.10053	18.72
Total:				0.2971	0.000	0.218	40.67

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9055

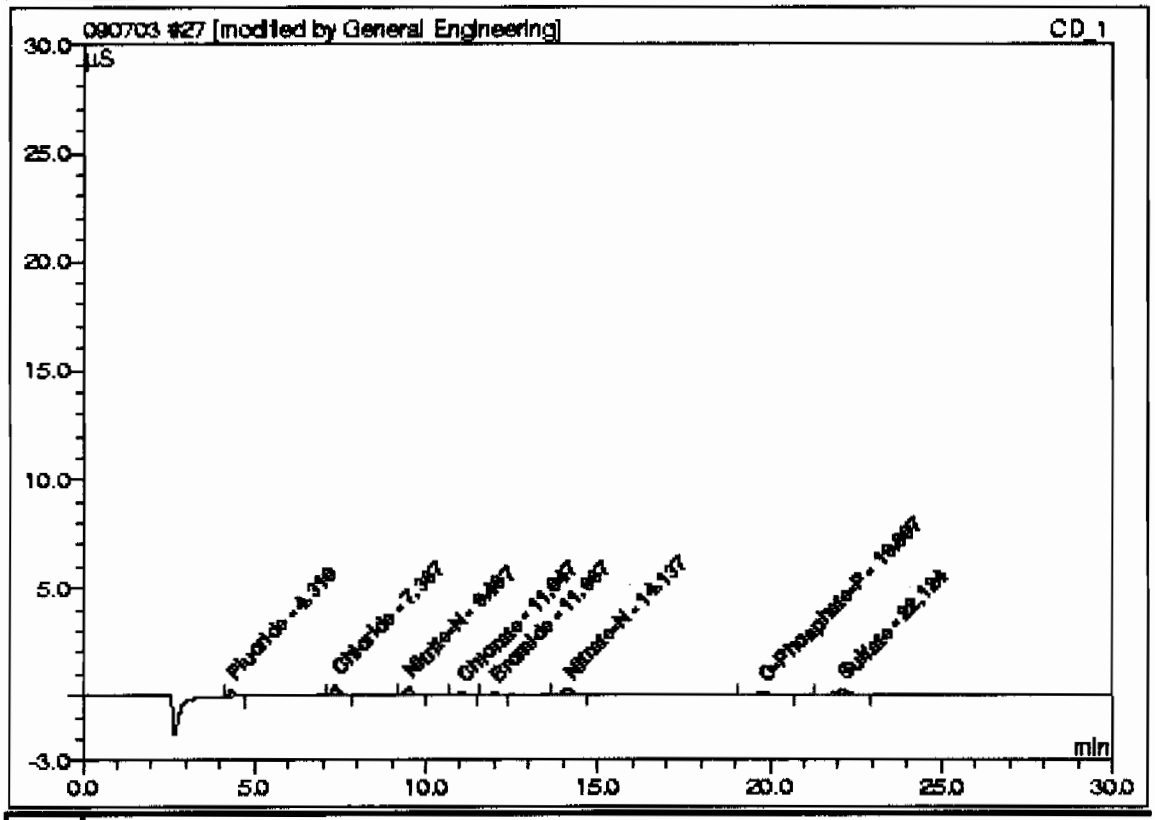

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.1000	0.1409	*	0.05234	8.89
2	7.37	Chloride	0.2000	0.3848		0.09372	15.91
3	9.49	Nitrite-N	0.1000	0.1421		0.08703	14.77
4	11.05	Chlorate	0.2000	0.2070		0.03083	5.23
5	11.99	Bromide	0.2000	0.2104		0.03382	5.74
6	14.14	Nitrate-N	0.1000	0.1817		0.10053	17.06
7	19.81	O-Phosphate-P	0.2000	0.2212		0.06603	11.21
8	22.12	Sulfate	0.4000	0.6729		0.12497	21.21
Total:				2.1609	0.000	0.589	100.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

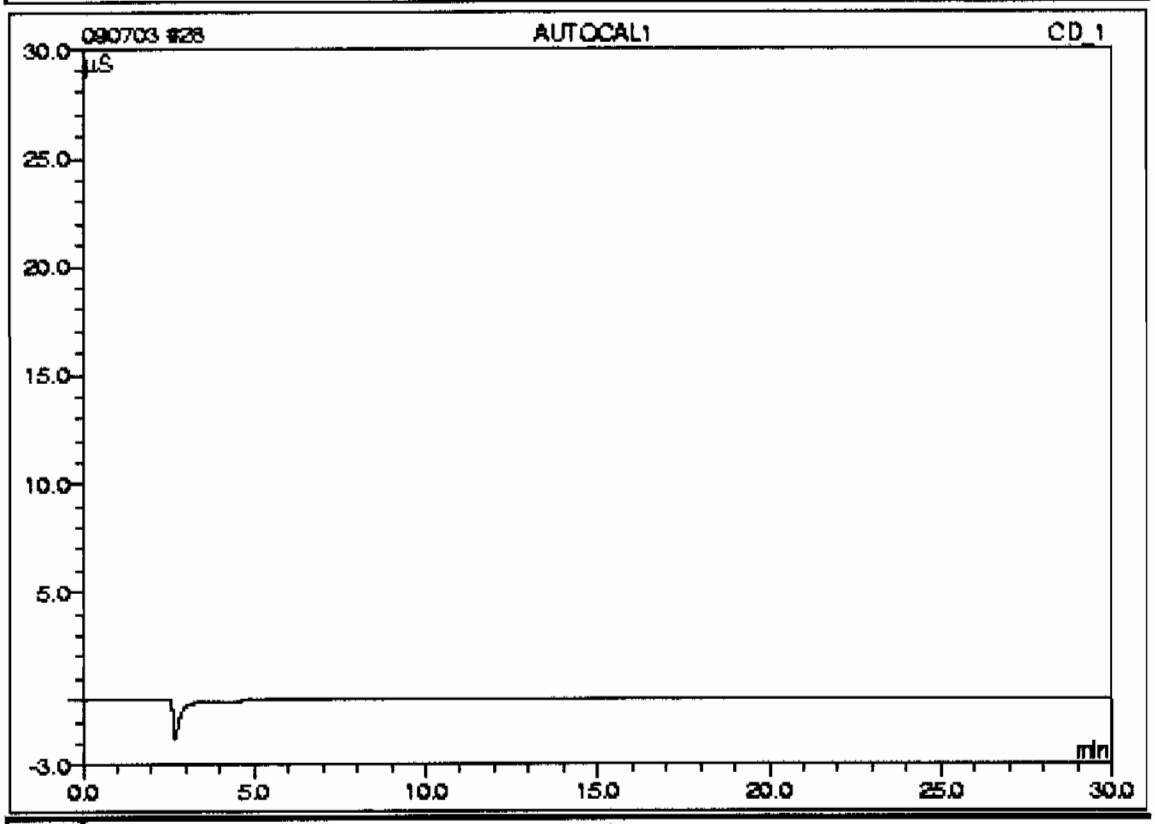

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-015580;GLGCE088;300;9058

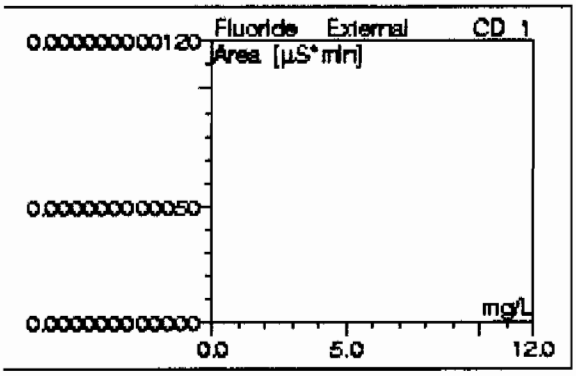

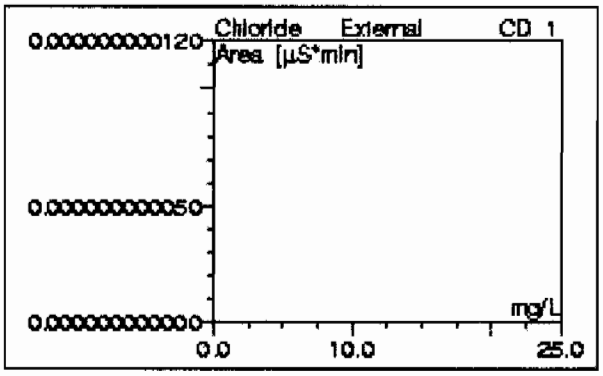

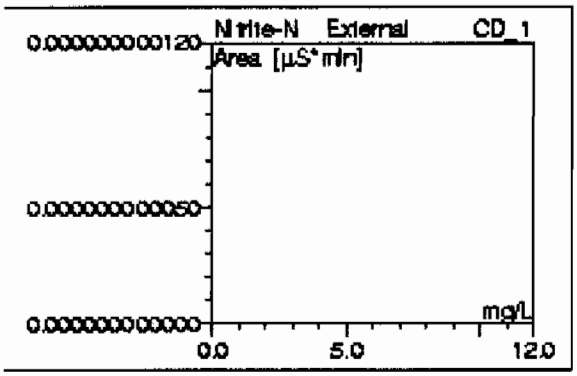

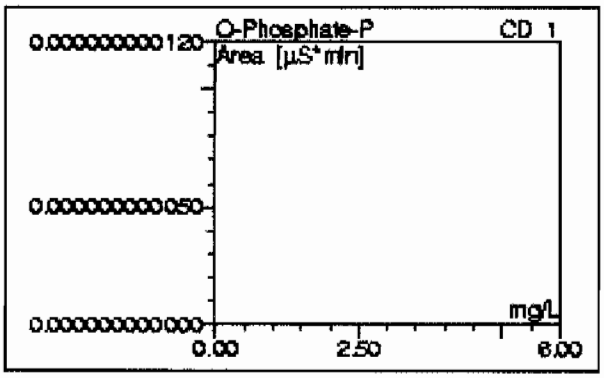

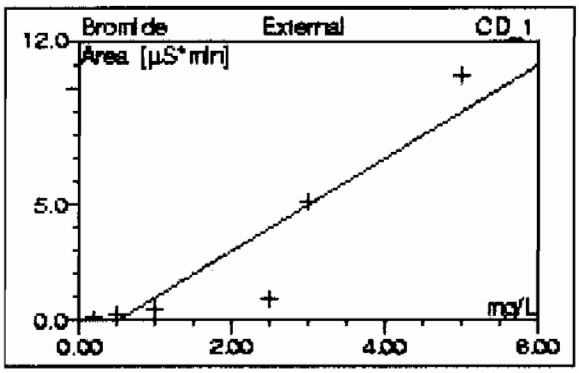

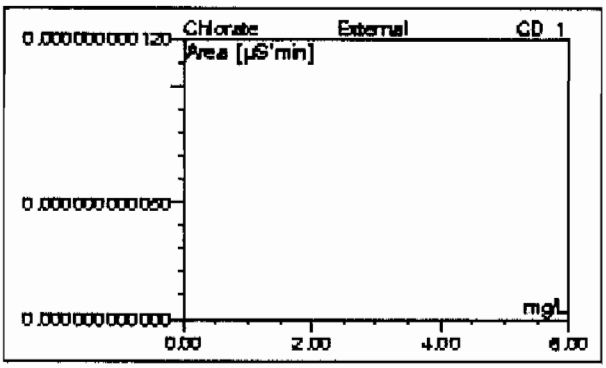

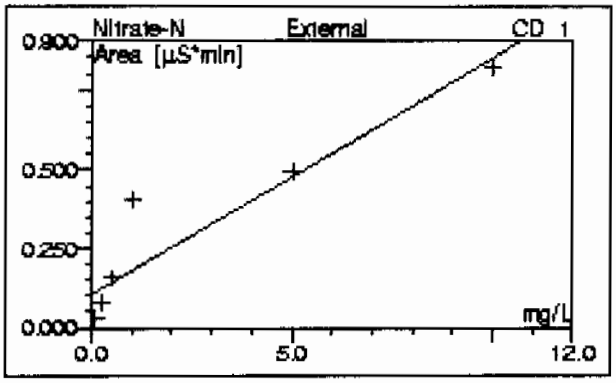

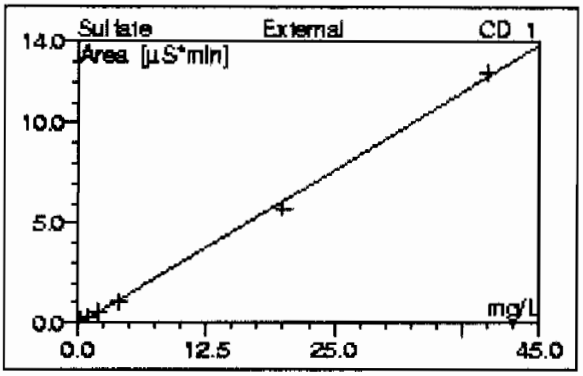

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Chloride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrite-N	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Bromide	0LOff	85.7419	-1.0196	1.9997	0.0000
n.a.	n.a.	Chlorate	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrate-N	0LOff	86.4468	0.1041	0.0746	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8340	-0.1257	0.3112	0.0000
Average:				90.6742	-0.1301	0.2982	0.0000

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

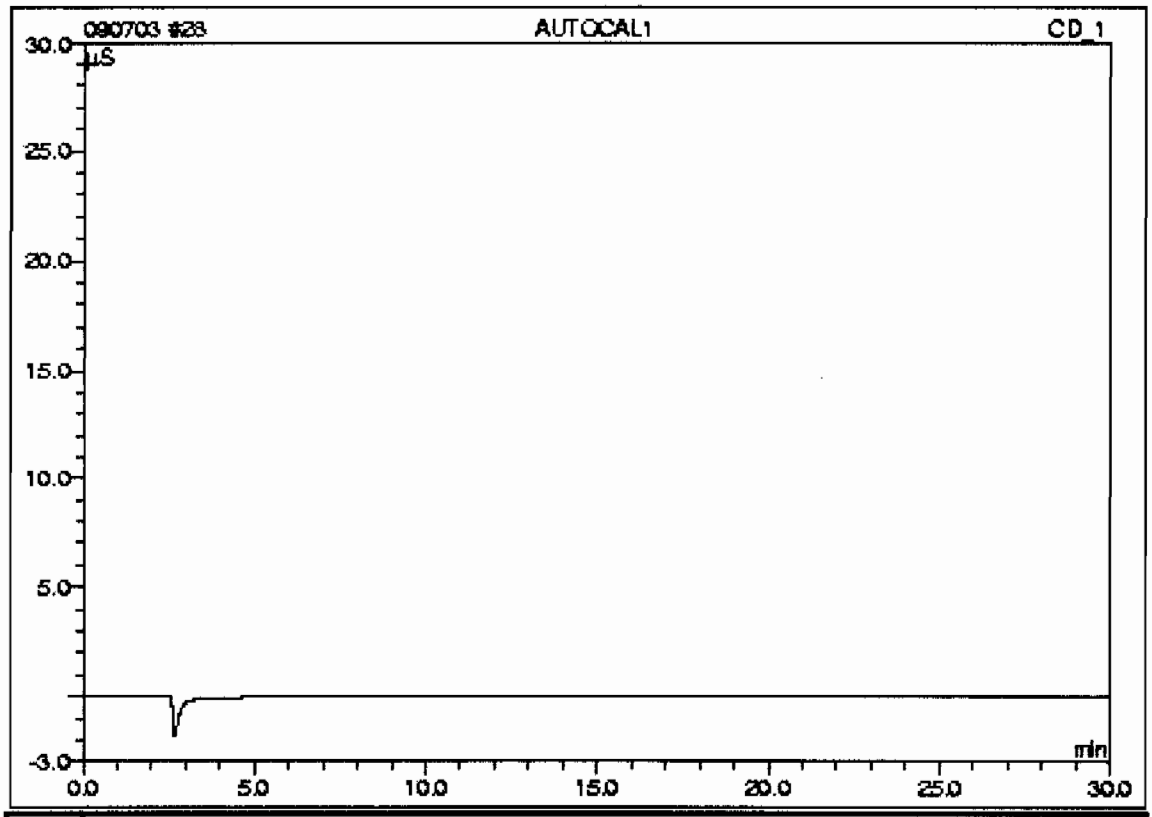

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:25	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGC:E085;300;9055

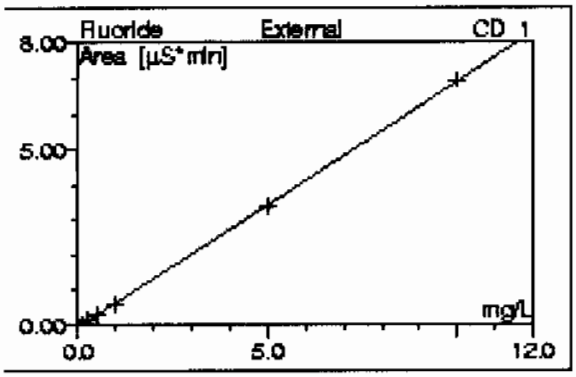

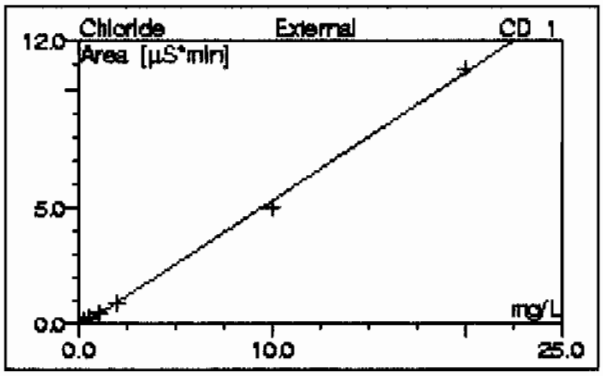

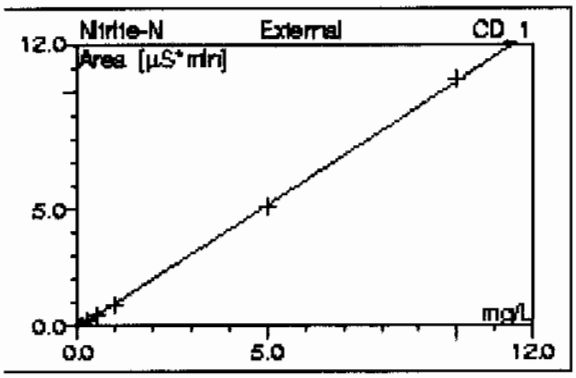

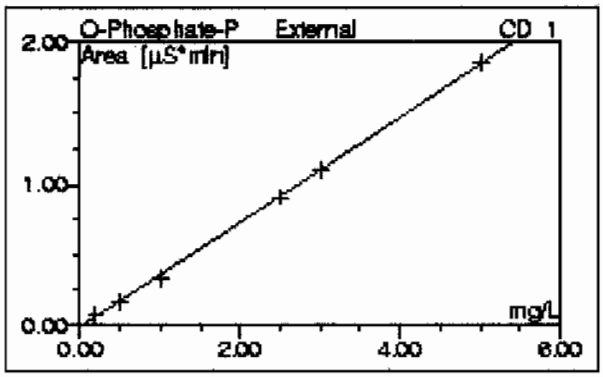

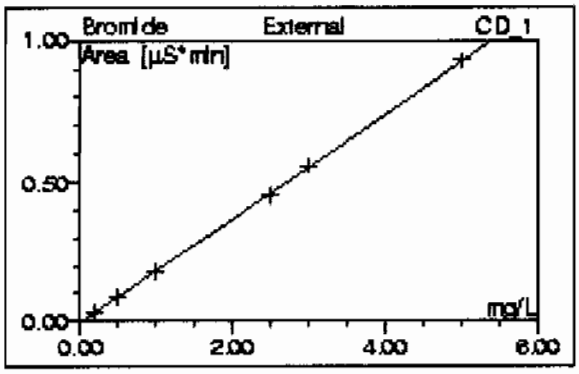

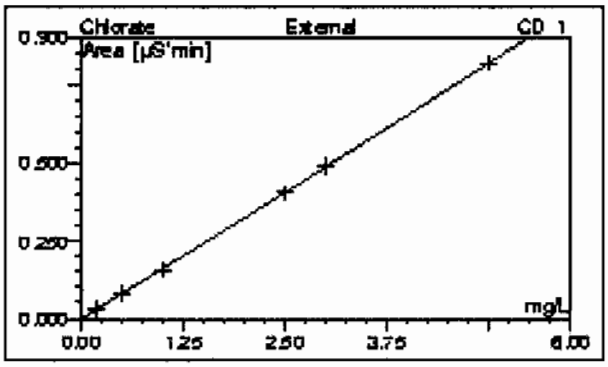

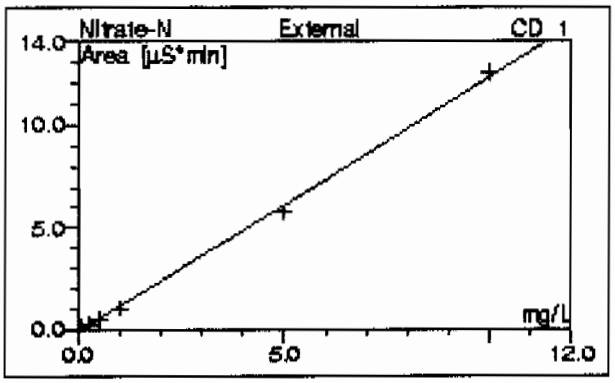

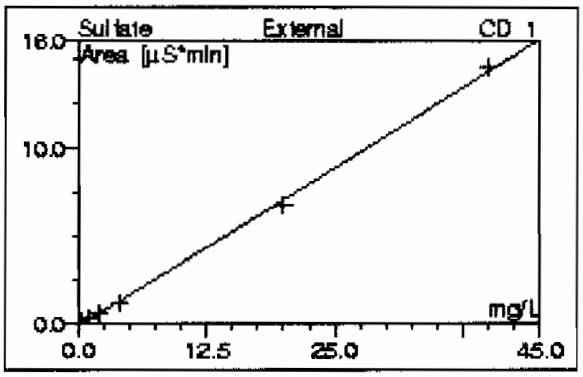

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9818	-0.0458	0.6968	0.0000
n.a.	n.a.	Chloride	0LOff	99.8028	-0.1138	0.5394	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9773	-0.0622	1.0502	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	99.9702	-0.0164	0.3726	0.0000
n.a.	n.a.	Bromide	0LOff	99.9731	-0.0054	0.1863	0.0000
n.a.	n.a.	Chlorate	0LOff	99.9897	-0.0032	0.1646	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.8340	-0.1257	1.2448	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8797	-0.1186	0.3620	0.0000
Average:				99.9261	-0.0614	0.5771	0.0000

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

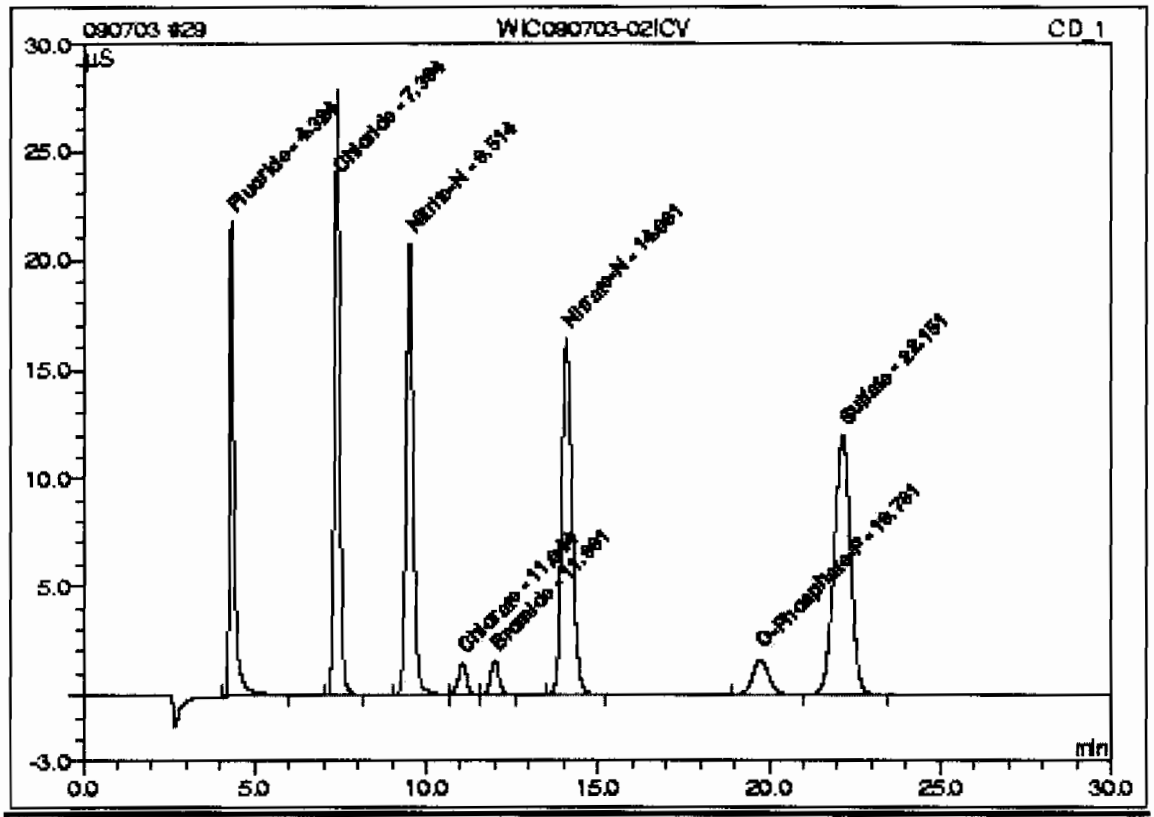

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.09	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65338	24.40
Total:				49.6694	0.000	27.271	100.00

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

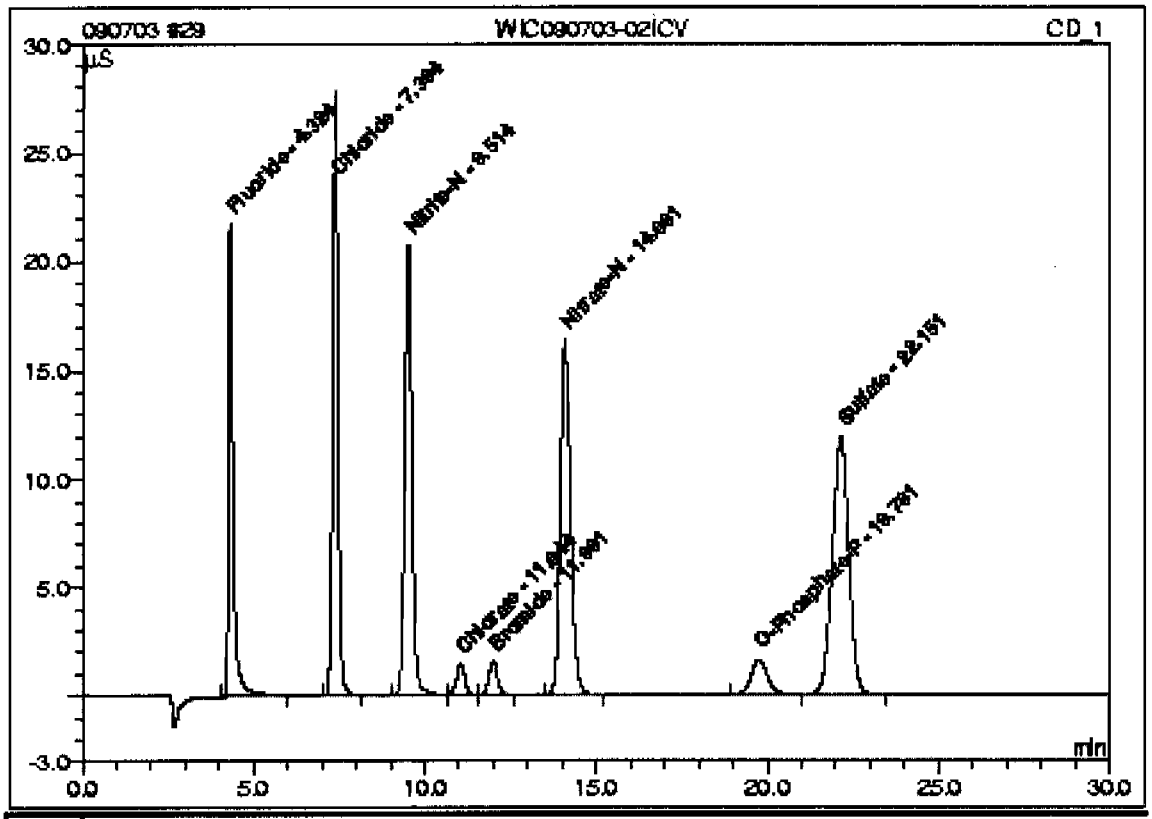

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.08	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65338	24.40
Total:				49.6694	0.000	27.271	100.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

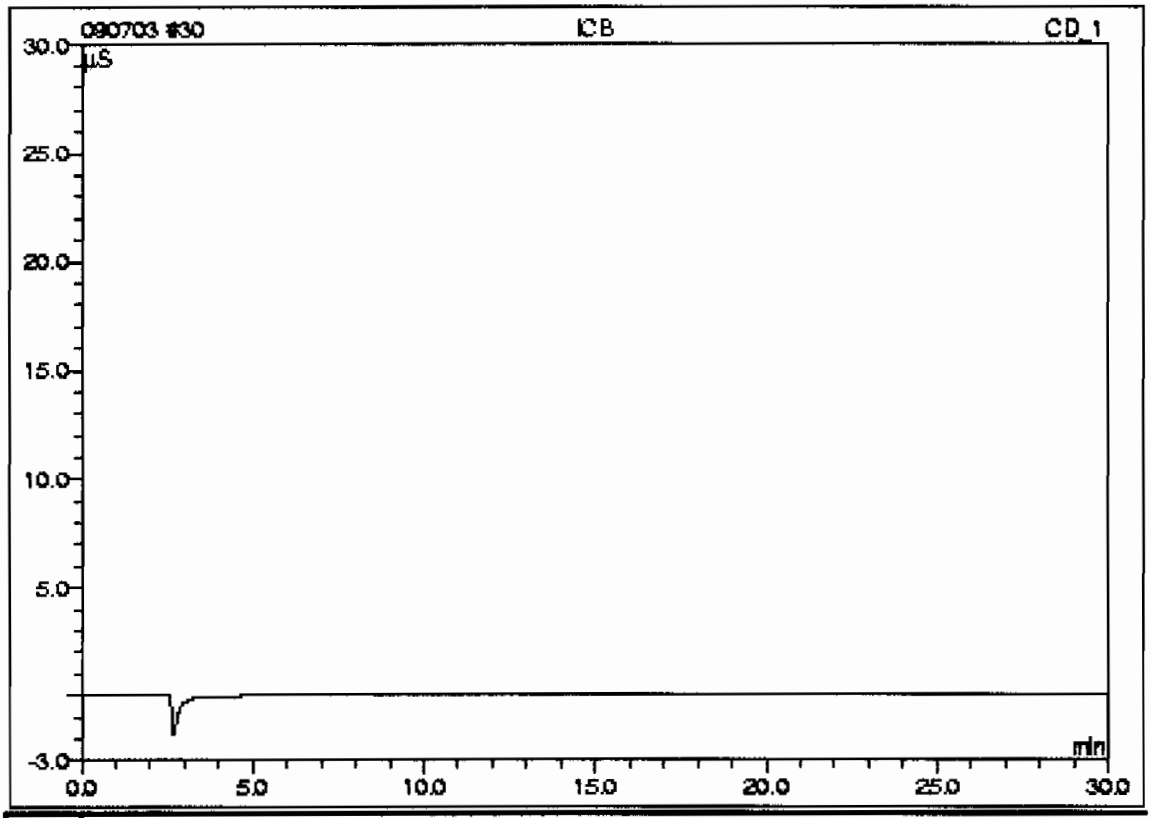

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703sn	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

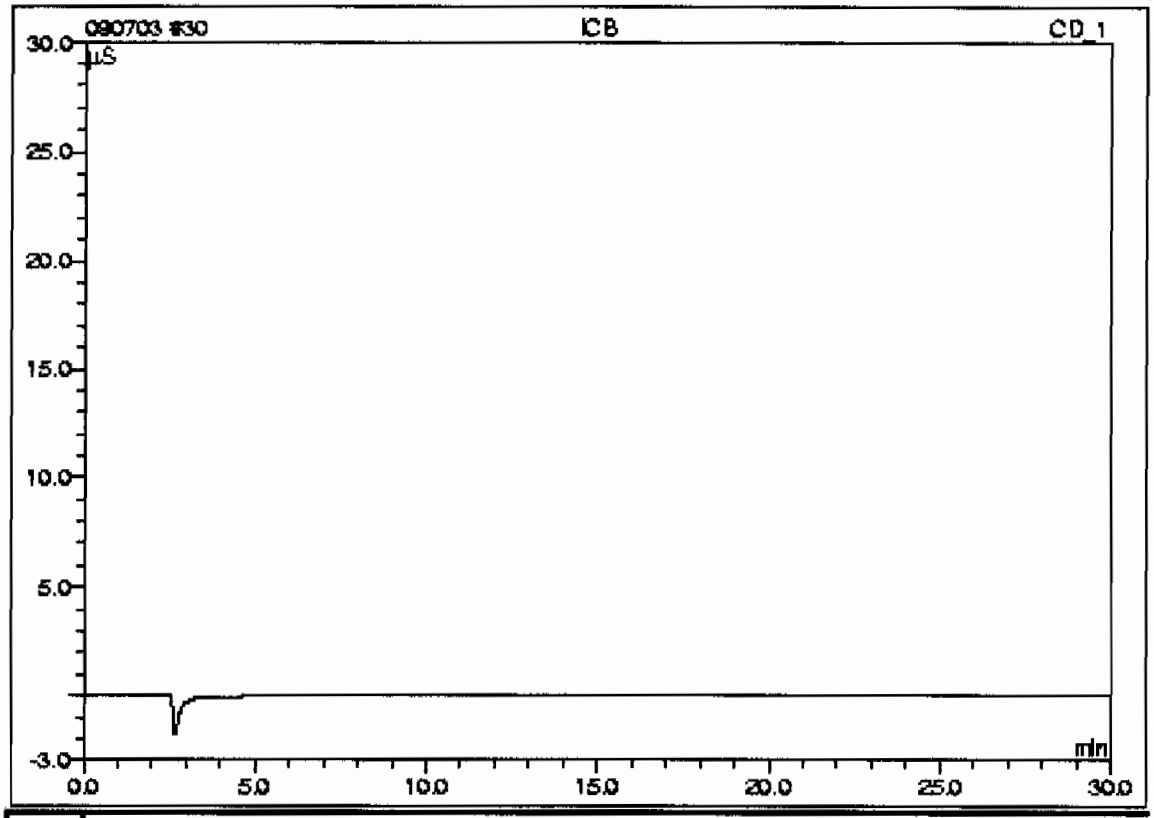

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 090710.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/10/09 10:27		1	090710	MAR1
ICV	07/10/09 10:55		1	090710	MAR1
ICB	07/10/09 11:24		1	090710	MAR1
1201869897	07/10/09 11:53	880627	1	090710	MAR1
1201869901	07/10/09 12:22	880627	1	090710	MAR1
232347001	07/10/09 12:50	880627	1	090710	MAR1
1201869898	07/10/09 13:19	880627	1	090710	MAR1
1201869899	07/10/09 13:48	880627	1	090710	MAR1
1201869900	07/10/09 14:17	880627	1	090710	MAR1
232347002	07/10/09 14:46	880627	1	090710	MAR1
232347003	07/10/09 15:15	880627	1	090710	MAR1
232347004	07/10/09 15:43	880627	1	090710	MAR1
CVH	07/10/09 16:12		1	090710	MAR1
CCB	07/10/09 16:41		1	090710	MAR1
1201872402	07/10/09 17:10	881671	1	090710	MAR1
1201872406	07/10/09 17:39	881671	1	090710	MAR1
232582001	07/10/09 18:08	881671	1	090710	MAR1
232582002	07/10/09 18:37	881671	1	090710	MAR1
232585001	07/10/09 19:06	881671	1	090710	MAR1
1201872403	07/10/09 19:35	881671	1	090710	MAR1
1201872404	07/10/09 20:04	881671	1	090710	MAR1
1201872405	07/10/09 20:33	881671	1	090710	MAR1
CCV	07/10/09 21:01		1	090710	MAR1
CCB	07/10/09 21:30		1	090710	MAR1
232585002	07/10/09 21:59	881671	1	090710	MAR1
232585003	07/10/09 22:28	881671	1	090710	MAR1
232591001	07/10/09 22:57	881671	1	090710	MAR1
CVH	07/10/09 23:26		1	090710	MAR1

9 WIC090710-02ICV

Sample Name:	WIC090710-02ICV	*Injection Volume:*	1.0
Vial Number:	2	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 10:55	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9055

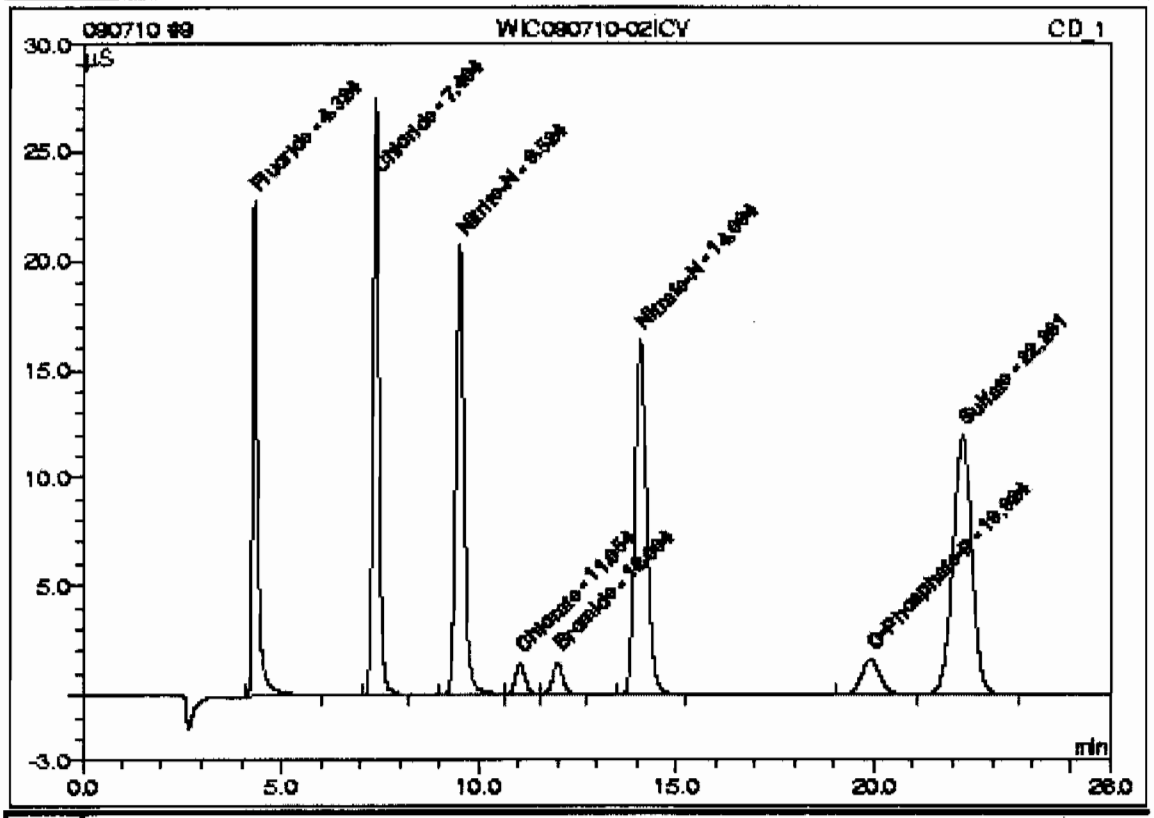

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.9513		3.40445	12.40
2	7.40	Chloride	n.a.	9.2589		4.88087	17.78
3	9.52	Nitrite-N	n.a.	4.8602		5.04179	18.37
4	11.05	Chlorate	n.a.	2.5362		0.41404	1.51
5	12.00	Bromide	n.a.	2.4394		0.44900	1.64
6	14.09	Nitrate-N	n.a.	4.6565		5.67065	20.66
7	19.92	O-Phosphate-P	n.a.	2.4520		0.89726	3.27
8	22.26	Sulfate	n.a.	18.8047		6.68826	24.37
Total:				49.9581	0.000	27.446	100.00

10 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	3	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 11:24	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE088;300;9058

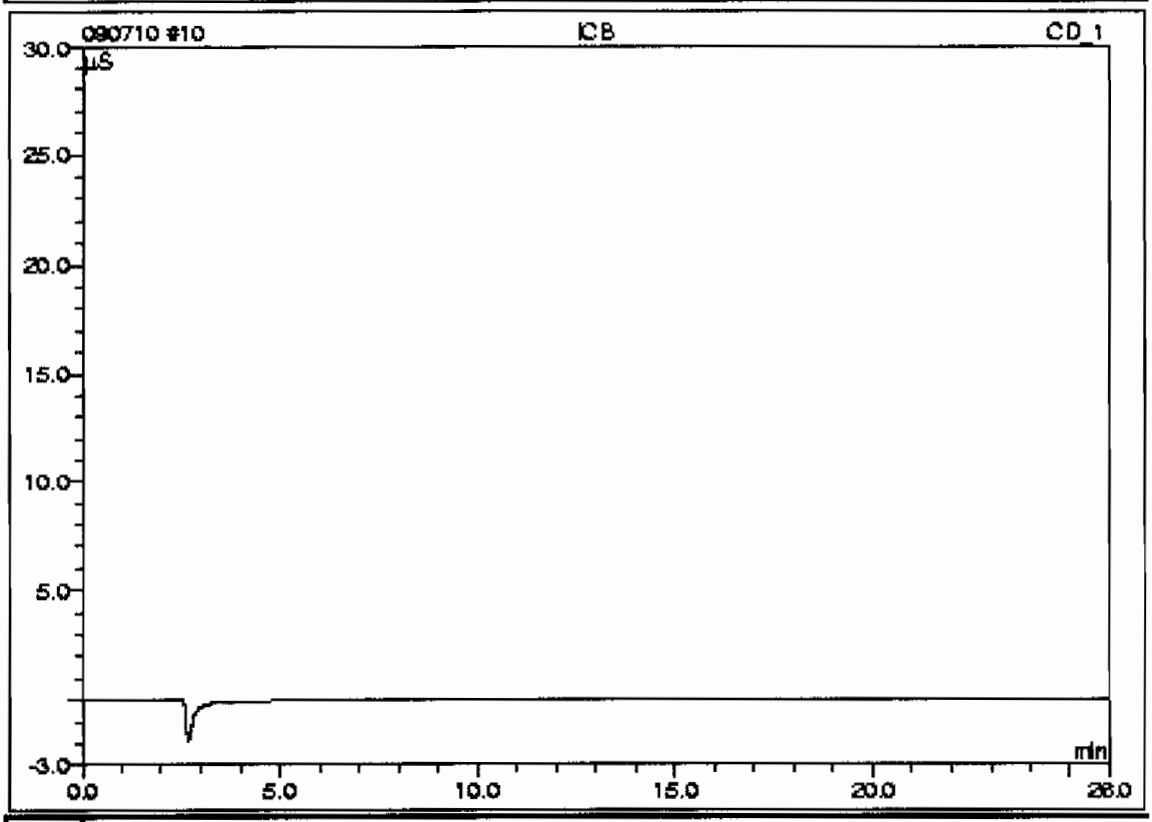

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

20 WIC090710-02CVH

Sample Name:	WIC090710-02CVH	*Injection Volume:*	1.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 16:12	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

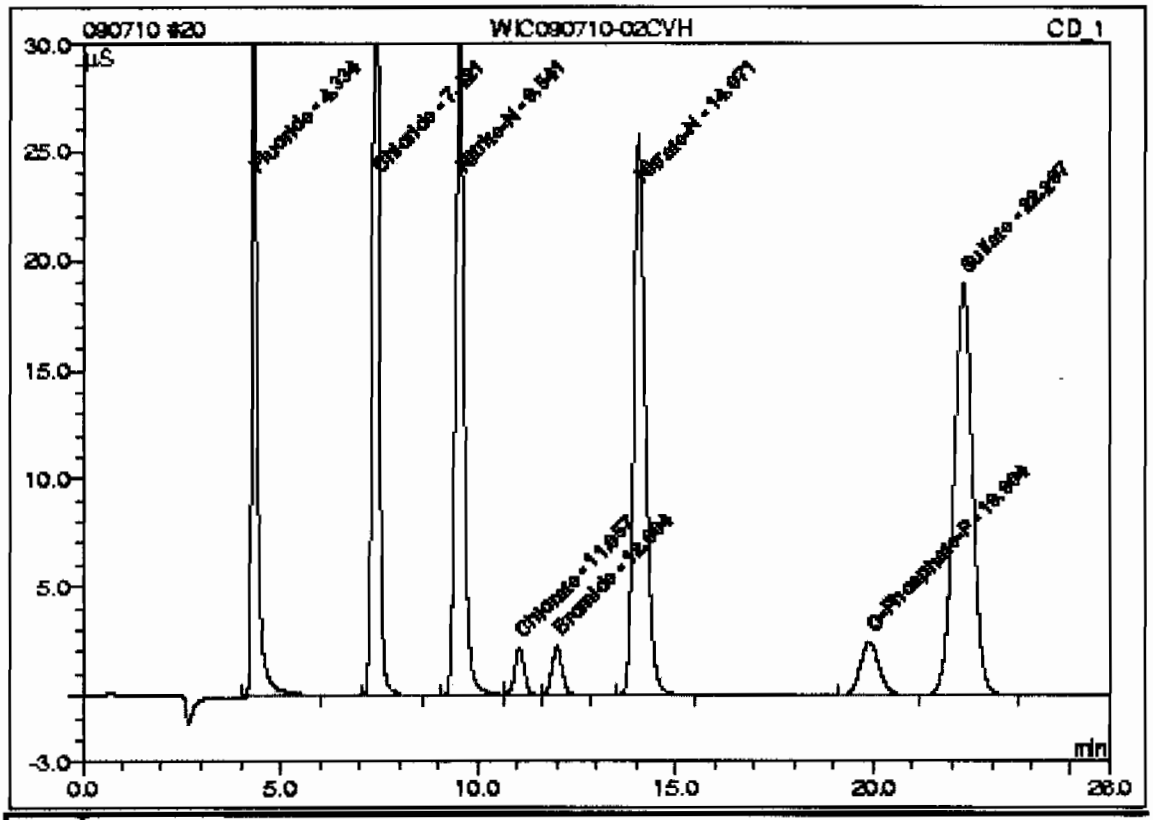

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	7.5118		5.18871	12.15
2	7.42	Chloride	n.a.	14.5867		7.75491	18.16
3	9.54	Nitrite-N	n.a.	7.4133		7.72299	18.08
4	11.06	Chlorate	n.a.	3.8270		0.62667	1.47
5	12.00	Bromide	n.a.	3.6753		0.67921	1.59
6	14.07	Nitrate-N	n.a.	7.2904		8.94931	20.95
7	19.90	O-Phosphate-P	n.a.	3.6723		1.35196	3.17
8	22.30	Sulfate	n.a.	29.1672		10.43929	24.44
Total:				77.1440	0.000	42.713	100.00

21 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	14	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 15:41	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE088;300;9058

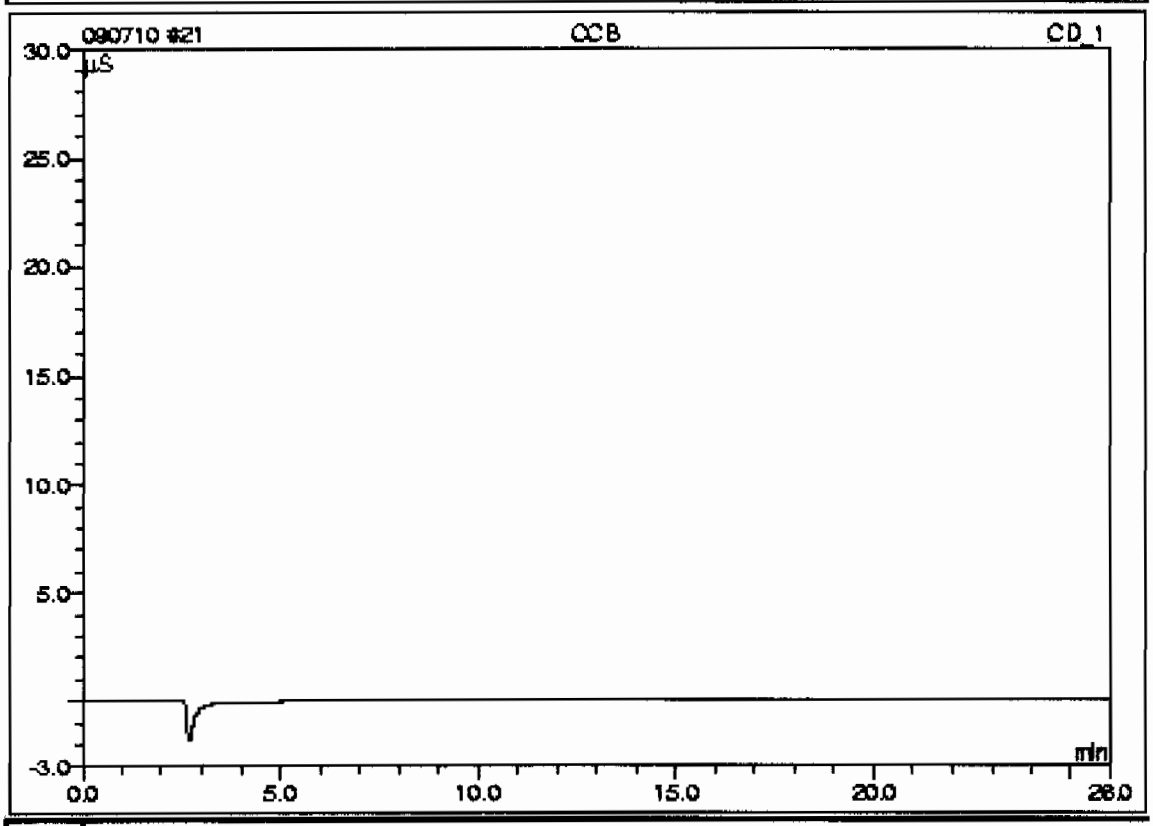

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

22 1201872402/881671/1/1/MB

Sample Name:	1201872402/881671/1/1/MB	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 17:10	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

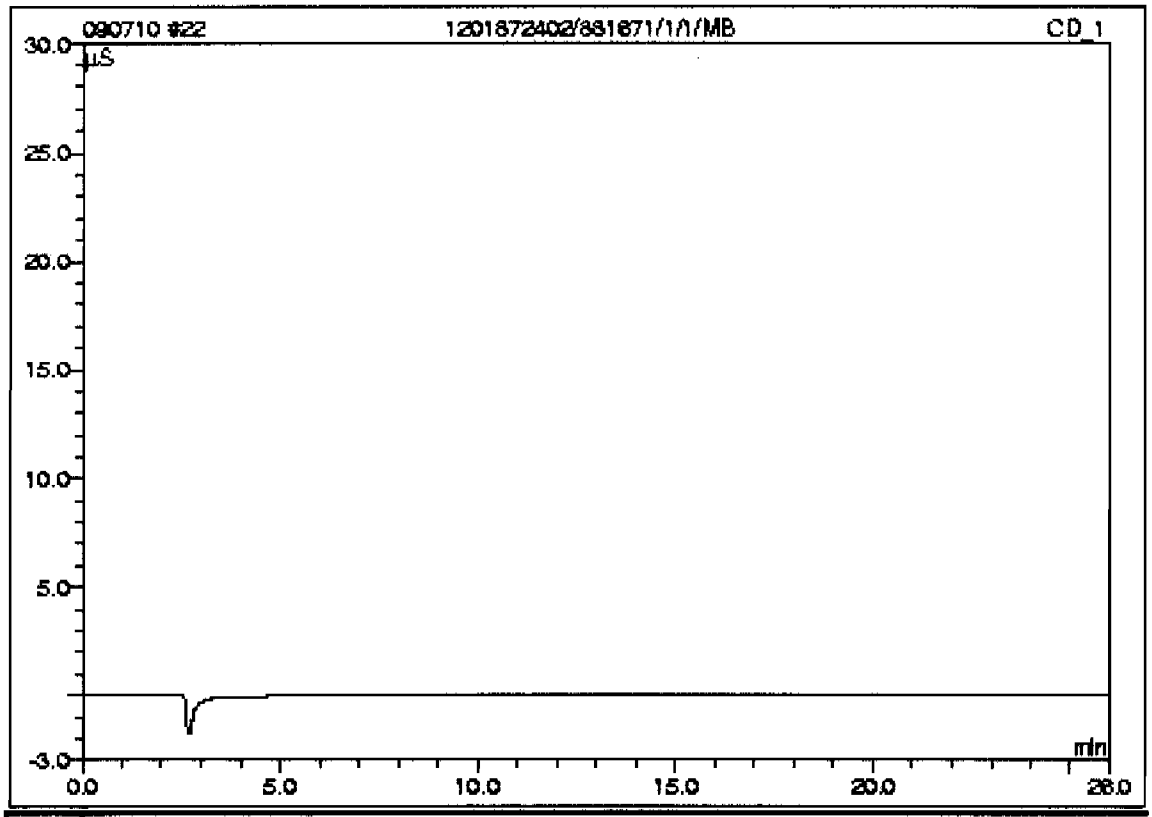

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

23 1201872406/881671/1/1/LCS

Sample Name:	1201872406/881671/1/1/LCS	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 17:39	Analyst:	MAR1
Run Time (min):	25.00 Column:	AS9HC-014108;GLGCE088;300;9058	

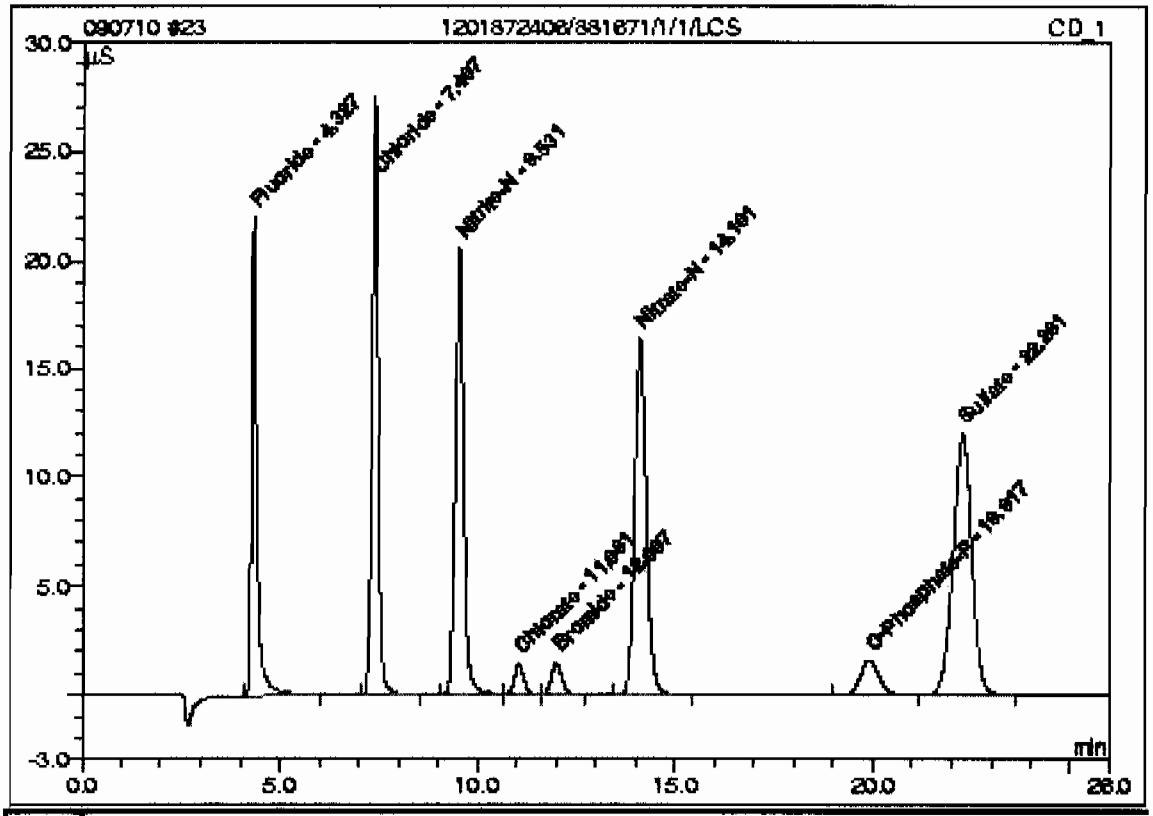

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9238		3.38533	12.33
2	7.41	Chloride	n.a.	9.2994		4.90269	17.85
3	9.53	Nitrite-N	n.a.	4.8611		5.04275	18.36
4	11.06	Chlorate	n.a.	2.5548		0.41727	1.52
5	12.01	Bromide	n.a.	2.4424		0.44957	1.64
6	14.10	Nitrate-N	n.a.	4.6625		5.67819	20.68
7	19.92	O-Phosphate-P	n.a.	2.4455		0.89486	3.26
8	22.28	Sulfate	n.a.	18.8109		6.69052	24.36
Total:				50.0006	0.000	27.461	100.00

26 232585001/881671/1/1/

Sample Name:	232585001/881671/1/1/	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703sn	*Sample Amount:*	1.0000
Recording Time:	7/10/09 19:05	Analyst:	MAR1
Run Time (min):	25.00 Column:	AS9HC-014108;GLGCE085;300;9055	

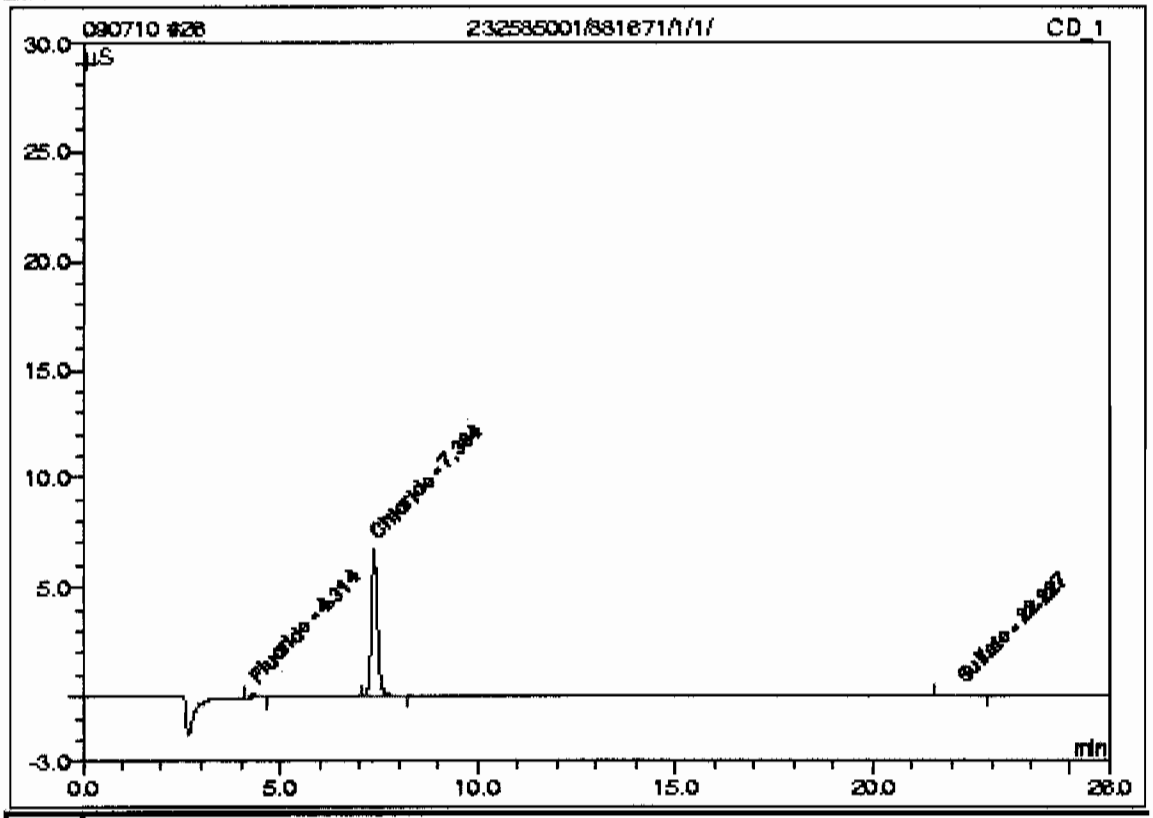

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.1102		0.03098	2.38
2	7.38	Chloride	n.a.	2.4952		1.23216	94.54
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.23	Sulfate	n.a.	0.4385		0.04011	3.08
Total:				3.0439	0.000	1.303	100.00

27 1201872403/881671/1/1/DUP

Sample Name:	1201872403/881671/1/1/DUP	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 19:35	Analyst:	MAR1
Run Time (min):	25.00 Column:	AS9HC-014108;GLGCE088;300;9058	

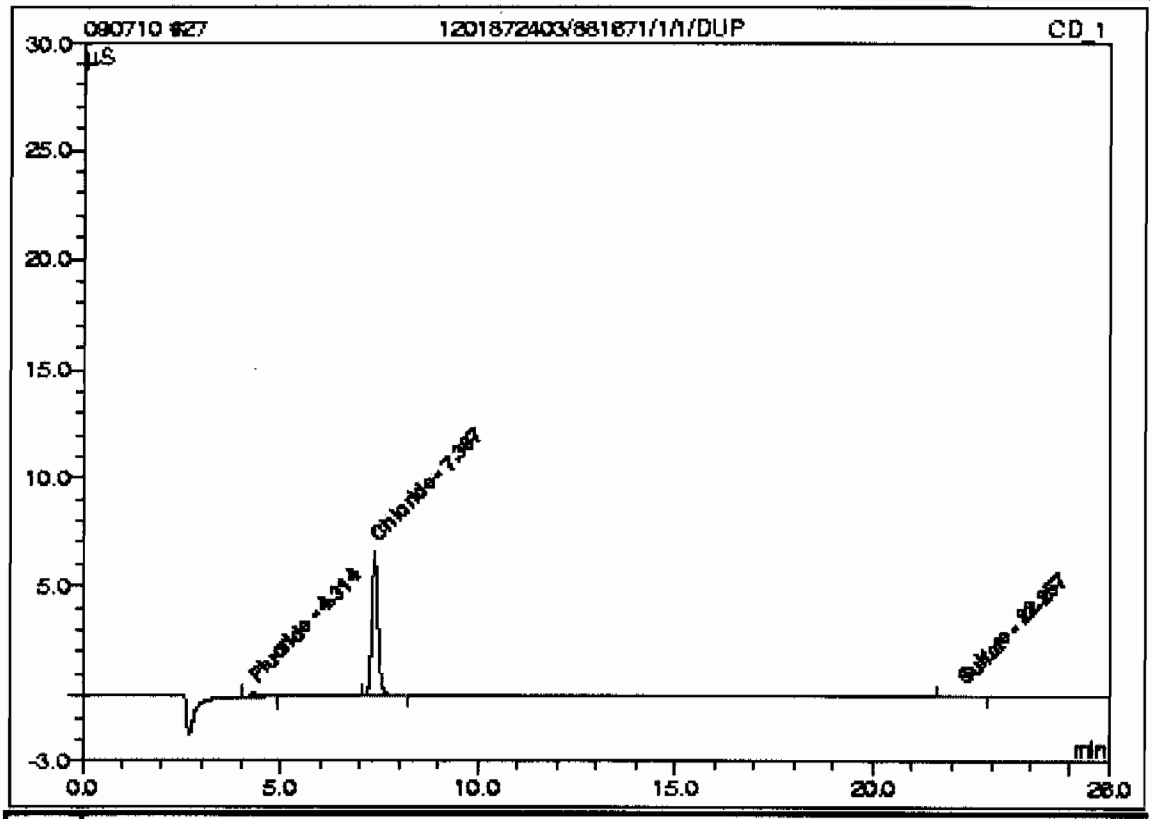

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.1193		0.03732	2.89
2	7.39	Chloride	n.a.	2.4674		1.21721	94.33
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.26	Sulfate	n.a.	0.4266		0.03582	2.78
Total:				3.0134	0.000	1.290	100.00

28 1201872404/881671/1/1/MS

Sample Name:	1201872404/881671/1/1/MS	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 20:04	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

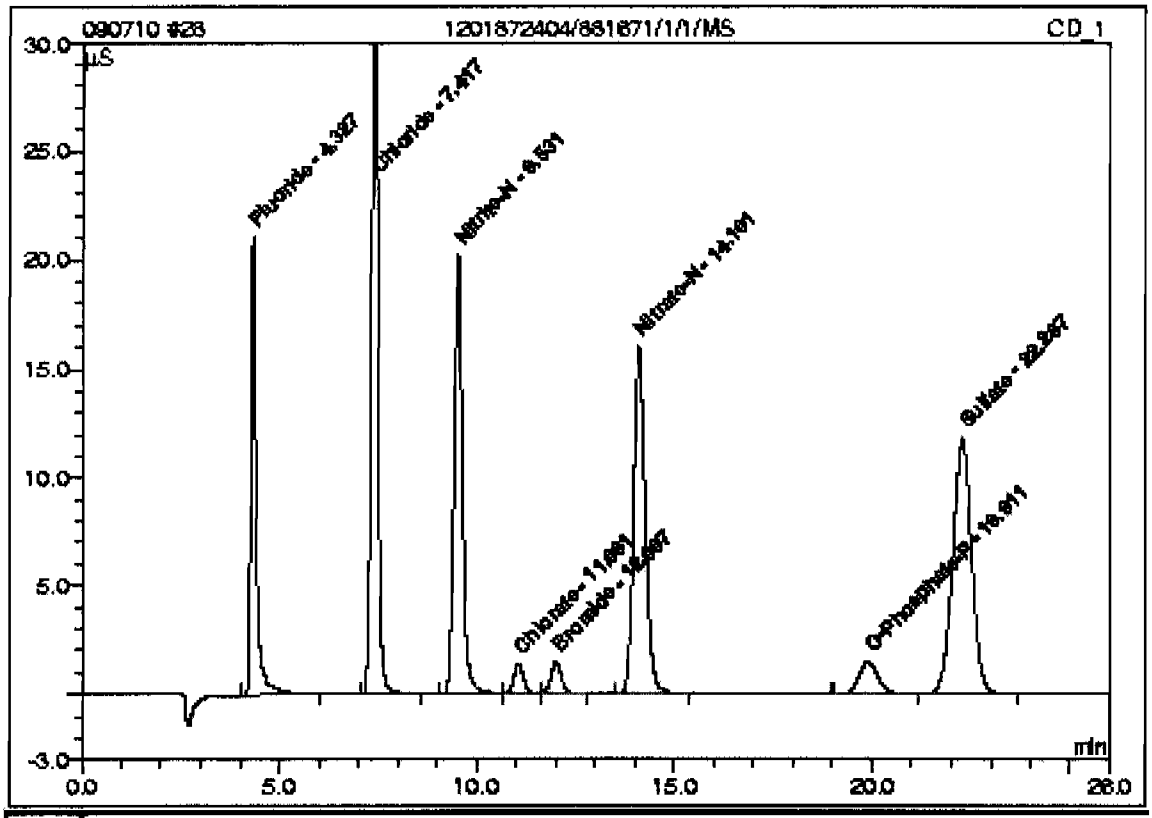

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.7485		3.26313	11.39
2	7.42	Chloride	n.a.	12.4254		6.59900	22.97
3	9.53	Nitrite-N	n.a.	4.7764		4.95382	17.27
4	11.06	Chlorate	n.a.	2.4951		0.40745	1.42
5	12.01	Bromide	n.a.	2.4017		0.44199	1.54
6	14.10	Nitrate-N	n.a.	4.5778		5.57264	19.43
7	19.91	O-Phosphate-P	n.a.	2.2616		0.82634	2.88
8	22.29	Sulfate	n.a.	18.6998		6.62859	23.11
Total:				52.3263	0.000	28.683	100.00

29 1201872405/881671/1/1/MSD

Sample Name:	1201872405/881671/1/1/**MSD**	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 20:33	Analyst:	**MAR1**
Run Time (min):	28.00 Column:	AS9HC-014108;GLGCE088;300;9058	

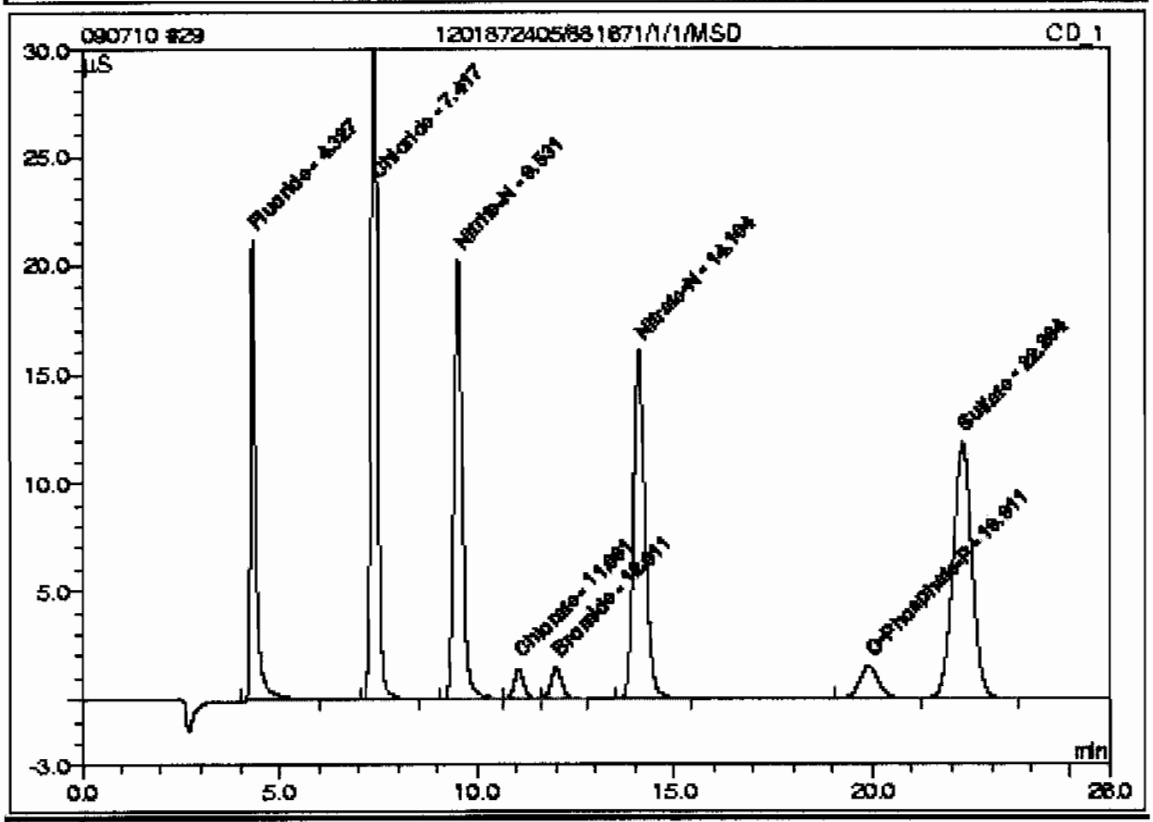

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.7534		3.26656	11.39
2	7.42	Chloride	n.a.	12.4318		6.59249	22.96
3	9.53	Nitrite-N	n.a.	4.7852		4.96307	17.29
4	11.06	Chlorate	n.a.	2.5168		0.41101	1.43
5	12.01	Bromide	n.a.	2.4188		0.44517	1.55
6	14.10	Nitrate-N	n.a.	4.5806		5.57615	19.42
7	19.91	O-Phosphate-P	n.a.	2.2642		0.82728	2.88
8	22.28	Sulfate	n.a.	18.6560		6.63444	23.10
Total:				52.4067	0.000	28.716	100.00

30 WIC090710-02CCV

Sample Name:	WIC090710-02CCV	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 21:01	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

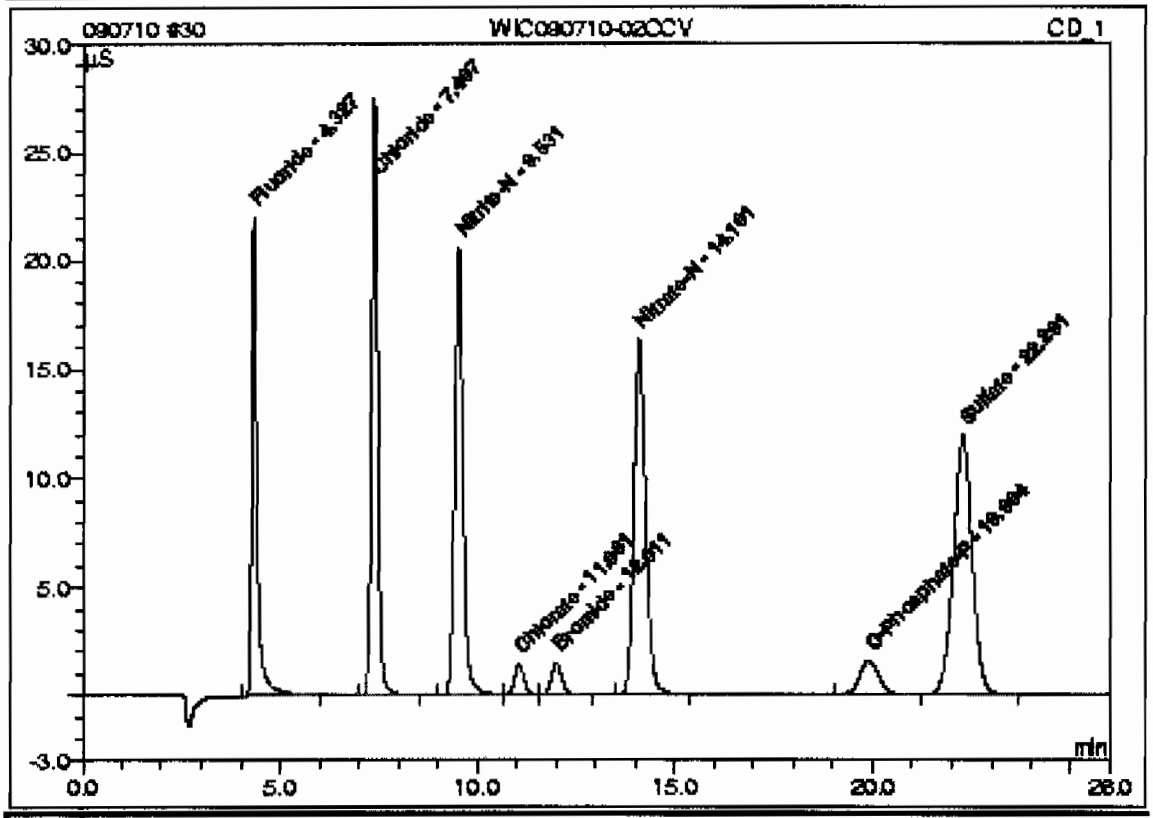

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9347		3.39290	12.34
2	7.41	Chloride	n.a.	9.3011		4.90363	17.84
3	9.53	Nitrite-N	n.a.	4.8658		5.04763	18.36
4	11.06	Chlorate	n.a.	2.5538		0.41710	1.52
5	12.01	Bromide	n.a.	2.4641		0.45360	1.65
6	14.10	Nitrate-N	n.a.	4.6637		5.67962	20.66
7	19.90	O-Phosphate-P	n.a.	2.4489		0.89612	3.26
8	22.29	Sulfate	n.a.	19.8318		6.69809	24.37
Total:				50.0638	0.000	27.489	100.00

31 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	24	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 21:30	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

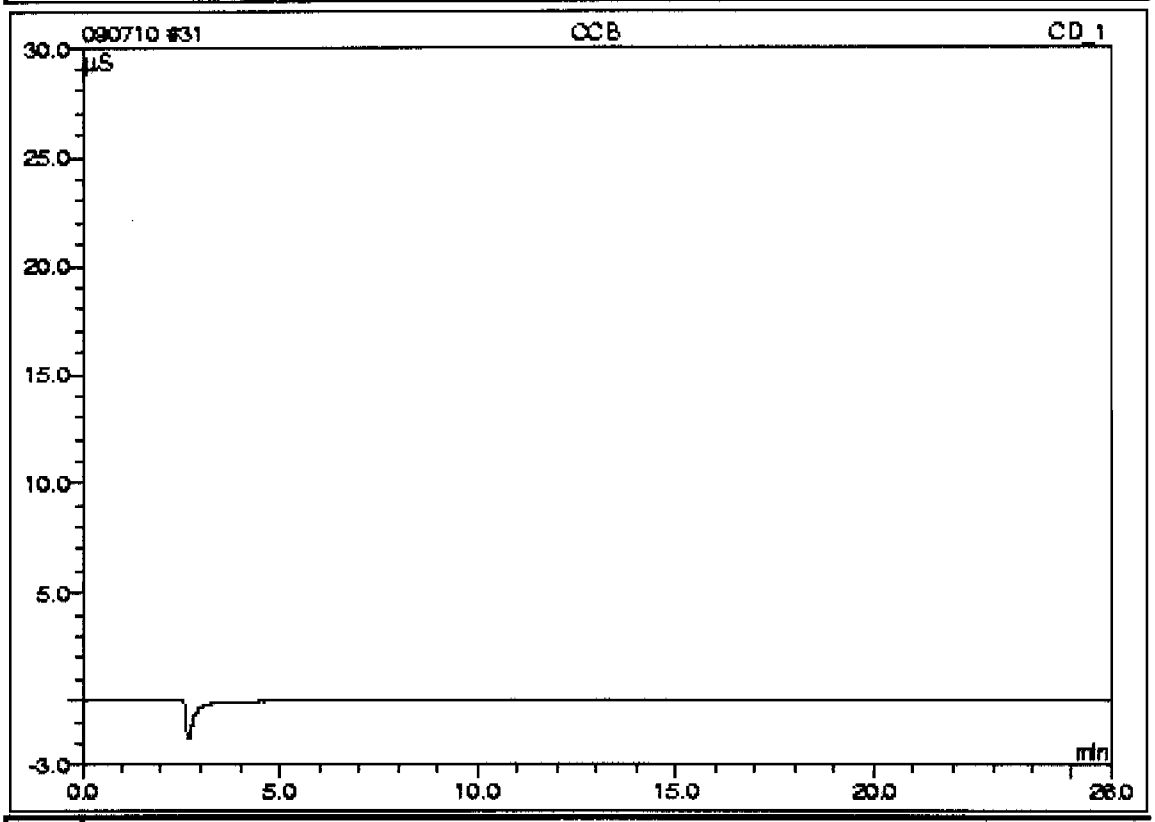

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

34 232591001/881671/1/1/

Sample Name:	232591001/881671/1/1/	*Injection Volume:*	1.0
Vial Number:	27	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 22:57	Analyst:	MAR1
Run Time (min):	28.00 Column:	AS9HC-014108;GLGCE088;300;9058	

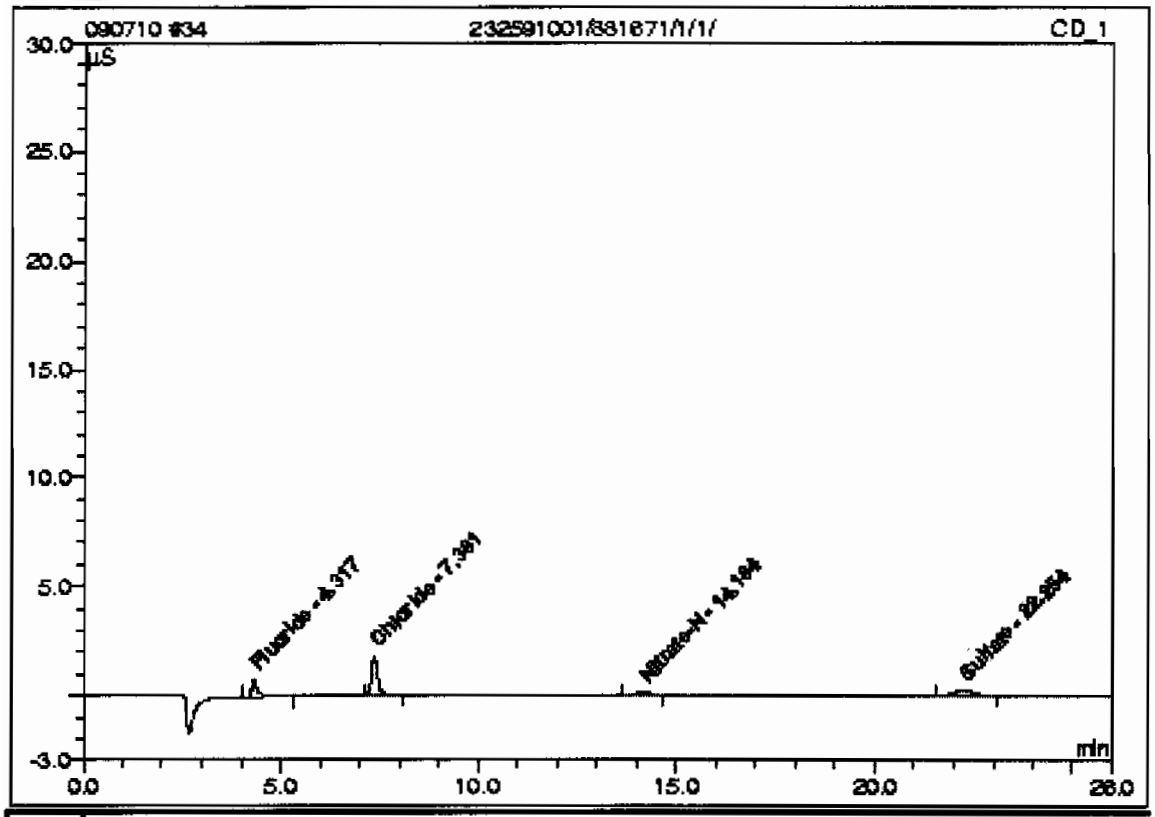

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.2655		0.13919	19.78
2	7.38	Chloride	n.a.	0.8439		0.34142	48.52
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.16	Nitrate-N	n.a.	0.1446		0.05435	7.72
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	22.25	Sulfate	n.a.	0.7940		0.16878	23.99
Total:				2.0480	0.000	0.704	100.00

35 WIC090710-02CVH

Sample Name:	WIC090710-02CVH	*Injection Volume:*	1.0
Vial Number:	28	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 23:25	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9055

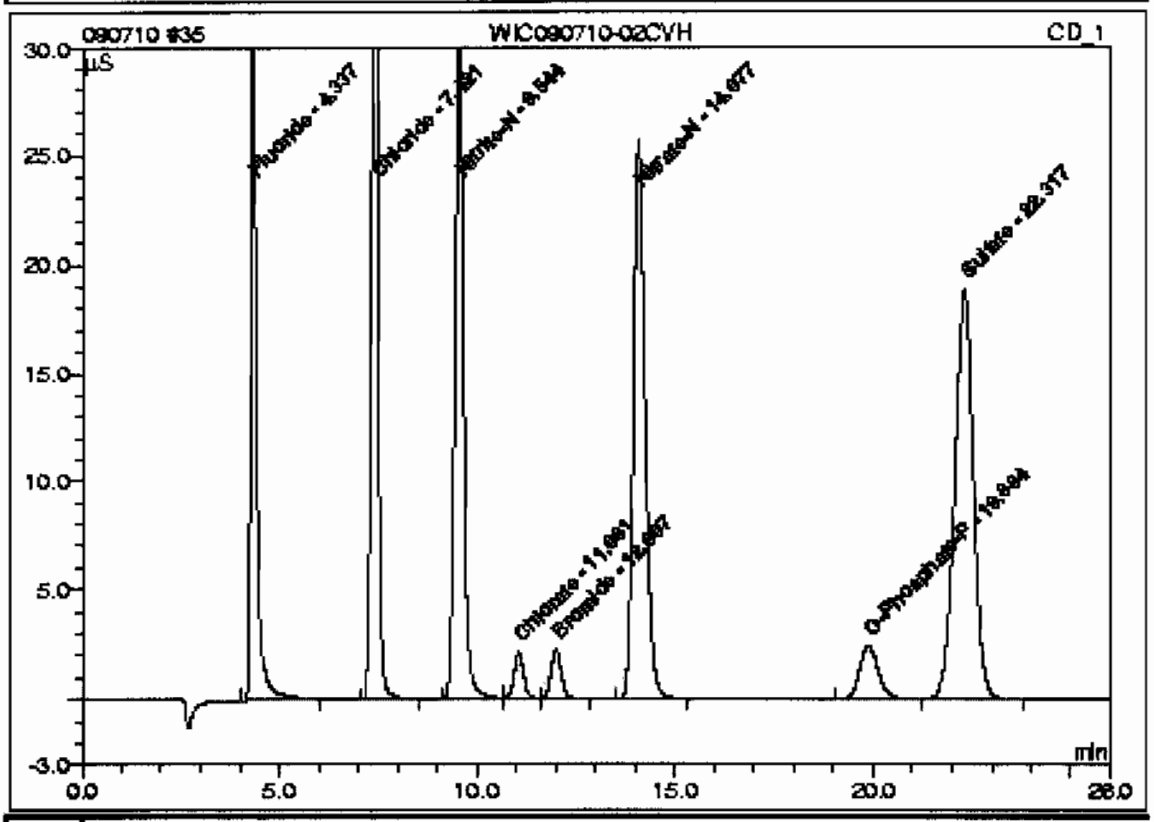

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	n.a.	7.5130		5.18953	12.14
2	7.42	Chloride	n.a.	14.6083		7.76658	18.17
3	9.54	Nitrite-N	n.a.	7.4154		7.72511	18.07
4	11.06	Chlorate	n.a.	3.8370		0.62832	1.47
5	12.01	Bromide	n.a.	3.6802		0.68013	1.59
6	14.08	Nitrate-N	n.a.	7.2880		8.94637	20.93
7	19.88	O-Phosphate-P	n.a.	3.6811		1.35522	3.17
8	22.32	Sulfate	n.a.	29.2139		10.45598	24.46
Total:				77.2362	0.000	42.747	100.00

36 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	29	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 23:55	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9056

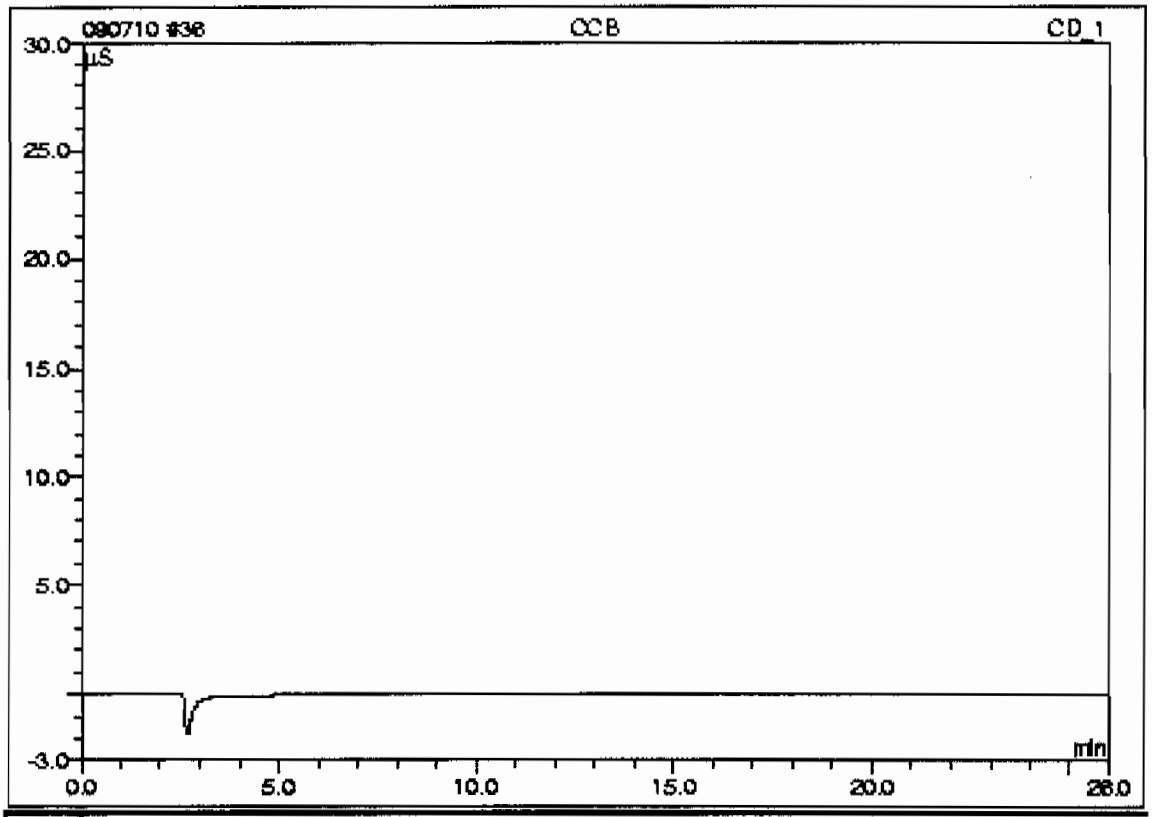

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

pH

pH / Corrosivity LogBook

Analyst: TXT1
Batch: 881740
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201872624	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201872624 LCS		Soil	10:00	10:05	01-JUL-09 12:33	pH	20	20	7.02	21.7'C	7	100.286	
1201872624 LCS		Soil	10:00	10:05	01-JUL-09 12:33	pH 2	20	20	7.02	21.7'C	7	100.286	
232582001		Soil	10:00	10:05	01-JUL-09 12:36	pH	20	20	7.57	22.1'C			
232582001		Soil	10:00	10:05	01-JUL-09 12:36	pH 2	20	20	7.59	22.2'C			
1201872623 DUP	232582001	Soil	10:00	10:05	01-JUL-09 12:39	pH	20	20	7.6	22.2'C			.396
1201872623 DUP	232582001	Soil	10:00	10:05	01-JUL-09 12:39	pH 2	20	20	7.58	22.4'C			.132
232582002		Soil	10:00	10:05	01-JUL-09 12:44	pH	20	20	8.34	22.2'C			
232582002		Soil	10:00	10:05	01-JUL-09 12:44	pH 2	20	20	8.29	22.4'C			
232585001		Soil	10:00	10:05	01-JUL-09 12:47	pH	20	20	7.74	22.2'C			
232585001		Soil	10:00	10:05	01-JUL-09 12:47	pH 2	20	20	7.7	22.3'C			
CCV			10:00	10:05	01-JUL-09 12:49	pH	20	20	7.02	21.6'C	7	100.286	
CCV			10:00	10:05	01-JUL-09 12:49	pH 2	20	20	7.01	21.7'C	7	100.143	
232585002		Soil	10:00	10:05	01-JUL-09 12:51	pH	20	20	6.6	22.3'C			
232585002		Soil	10:00	10:05	01-JUL-09 12:51	pH 2	20	20	6.57	22.7'C			
232585003		Soil	10:00	10:05	01-JUL-09 12:57	pH	20	20	6.61	22.4'C			
232585003		Soil	10:00	10:05	01-JUL-09 12:57	pH 2	20	20	6.58	22.8'C			
232591001		Soil	10:00	10:05	01-JUL-09 13:04	pH	20	20	6.68	22.6'C			
232591001		Soil	10:00	10:05	01-JUL-09 13:04	pH 2	20	20	6.64	22.7'C			
CCV			10:00	10:05	01-JUL-09 13:09	pH	20	20	7	22.0'C	7	100	
CCV			10:00	10:05	01-JUL-09 13:09	pH 2	20	20	6.99	22.1'C	7	99.857	

Calibration Information:
Run Date: 01-JUL-09 12:13
Instrument: PHX370
Analyst: TXT1

	Standard	Observed	Theoretical		C	%Recovery
12:13	IMM090701-PH1	4.01	4	SU	21.9	100.25
12:13	IMM090701-PH-	7.02	7	SU	21.9	100.29
12:13	UPH090701b3-1	10.03	10	SU	21.9	100.3
12:13	UPH090701-03e-	2.04	2	SU	21.9	102
12:13	090701F30-1	11.97	12	SU	21.9	99.75
12:13	IMM090701g3-1	7.03	7	SU	21.9	100.43

Comments:

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2510

Method/Analysis Information

Procedure:	**Dry Weight-Percent Moisture**
Analytical Method:	
Analytical Batch Number:	881796

Sample ID	Client ID
232591001	CAMO-09-9946
1201872768	232585001(CAMO-09-6605) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-020 REV# 9.

Calibration Information:

Quality Control (QC) Information:

Designated QC
The following sample was used for QC: 232585001 (CAMO-09-6605). The QC was from LANL work order 232585.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU. Not Applicable.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
Not Applicable. The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882671
Prep Batch Number:	881800

Sample ID	Client ID
232591001	CAMO-09-9946
1201874683	Method Blank (MB)
1201874684	232278002(CAMO-09-10459) Sample Duplicate (DUP)
1201874685	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874683 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232278002 (CAMO-09-10459). The QC was from LANL work order 232278.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
Manual integration of alpha spectroscopy spectra 1201874685 (LCS) was performed to fully separate counts in Regions of Interest which would have been biased.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882673
Prep Batch Number:	881800

Sample ID	Client ID
232591001	CAMO-09-9946
1201874686	Method Blank (MB)
1201874687	232278002(CAMO-09-10459) Sample Duplicate (DUP)
1201874688	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874686 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232278002 (CAMO-09-10459). The QC was from LANL work order 232278.

QC Information

All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples 1201874687 (CAMO-09-10459) were cleaned-up and recounted due to poor resolution.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 710606 was generated due to RDL less than MDA. 1. Sample 232585001 does not meet the detection limits for U-235/236 due to the high standard deviation. 1. When a blank population is performed, the MDA is greater than the RDL due to the high standard deviation. Reporting results.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881931
Prep Batch Number:	881800

Sample ID	Client ID
232591001	CAMO-09-9946
1201873069	Method Blank (MB)
1201873070	232591001(CAMO-09-9946) Sample Duplicate (DUP)
1201873071	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, November 2008 and March 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232591001 (CAMO-09-9946). The QC was from LANL work order 232591.

QC Information
Refer to Non-Conformance Report.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 711888 was generated due to Failed RPD for DUP. 1. Failed RPD for DUP: QC 1201873070DUP 1. Precision was not demonstrated for Pb-212, however precison was demonstrated for all other requested isotopes.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232591001	CAMO-09-9946
			1201873070	CAMO-09-9946(232591001DUP)
		Cadmium-109	232591001	CAMO-09-9946
			1201873070	CAMO-09-9946(232591001DUP)
		Radium-224	232591001	CAMO-09-9946
			1201873070	CAMO-09-9946(232591001DUP)
UI	Data rejected due to low abundance.	Cesium-134	232591001	CAMO-09-9946
		Strontium-85	232591001	CAMO-09-9946

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883020

Sample ID	Client ID
232591001	CAMO-09-9946
1201875586	Method Blank (MB)
1201875587	232347003(CAMO-09-10461) Sample Duplicate (DUP)
1201875588	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232347003 (CAMO-09-10461). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 7/17/09

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
12-JUL-09	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ALPHA SPECTROMETER	DOE EML HASL-300, U-02-RC Modified	Solid	LANL
Batch ID:	**Sample Numbers:**		
882673	See Below		

Potentially affected work order(s)(SDG): 232211(09-2425),232212(09-2427),232278(09-2437),232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

RDL less than MDA

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Sample 232585001 does not meet the detection limits for U-235/236 due to the high standard deviation.	1. When a blank population is performed, the MDA is greater than the RDL due to the high standard deviation. Reporting results.

Originator's Name:

Jessica Downey 12-JUL-09

Data Validator/Group Leader:

Eric Brimstin 12-JUL-09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 711888
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
15-JUL-09	Radiochemistry	Specifications	Process
Instrument Type: GAMMA SPECTROMETER	**Test / Method:** EML HASL 300, 4.5.2.3	**Matrix Type:** Solid	**Client Code:** LANL
Batch ID: 881931	**Sample Numbers:** See Below		

Potentially affected work order(s)(SDG): 232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

Failed RPD for DUP

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed RPD for DUP: QC 1201873070DUP	1. Precision was not demonstrated for Pb-212, however precison was demonstrated for all other requested isotopes.

Originator's Name:

Maggie Stamps 15-JUL-09

Data Validator/Group Leader:

Michael Hilton 17-JUL-09

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2510 GEL Work Order: 232591

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/17/09

Reviewed by

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-9946	Project:	LANL01004
Sample ID:	232591001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	18.7%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.0119	0.0211	+/-0.0038	0.050	pCi/g		KXM4	07/09/09	2052	882671	2
Plutonium-239/240		0.627	0.0257	+/-0.0409	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.840	0.219	+/-0.0897	0.100	pCi/g		KXM4	07/09/09	2053	882673	3
Uranium-235/236	U	0.0494	0.101	+/-0.0255	0.100	pCi/g						
Uranium-238		1.03	0.0855	+/-0.103	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.273	0.417	+/-0.116	0.200	pCi/g		MXR1	07/09/09	0835	881931	4
Bismuth-211	UI	4.16	0.314	+/-0.282		pCi/g						
Bismuth-214		1.28	0.117	+/-0.0925	0.200	pCi/g						
Cadmium-109	UI	3.01	1.42	+/-0.582		pCi/g						
Cerium-139	U	0.0331	0.0507	+/-0.0147	0.050	pCi/g						
Cesium-134	UI	0.127	0.0952	+/-0.0293	0.100	pCi/g						
Cesium-137	U	0.0456	0.0728	+/-0.0201	0.100	pCi/g						
Cobalt-60	U	-0.0188	0.0642	+/-0.0205	0.100	pCi/g						
Europium-152	U	-0.029	0.152	+/-0.0478	0.200	pCi/g						
Lanthanum-140	U	0.0338	0.139	+/-0.0399		pCi/g						
Lead-212		1.73	0.0953	+/-0.0873	0.100	pCi/g						
Lead-214		1.45	0.109	+/-0.105	0.100	pCi/g						
Mercury-203	U	0.0254	0.0754	+/-0.0218	0.100	pCi/g						
Potassium-40		32.8	0.622	+/-1.71	1.00	pCi/g						
Radium-223	U	-0.07	1.09	+/-0.369		pCi/g						
Radium-224	UI	4.42	1.09	+/-0.591		pCi/g						
Radium-226		1.28	0.117	+/-0.0925		pCi/g						
Radium-228		1.54	0.219	+/-0.200	0.500	pCi/g						
Ruthenium-106	U	-0.223	0.486	+/-0.152	0.800	pCi/g						
Sodium-22	U	-0.0151	0.0782	+/-0.0242	0.080	pCi/g						
Strontium-85	UI	0.0887	0.0702	+/-0.0188		pCi/g						
Thallium-208		0.471	0.0525	+/-0.0437	0.080	pCi/g						
Thorium-227	U	0.127	0.648	+/-0.186		pCi/g						
Thorium-231	U	-0.07	1.09	+/-0.369		pCi/g						
Thorium-234	U	2.54	3.37	+/-0.968	2.00	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-9946
Sample ID: 232591001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Tin-113	U	0.018	0.0727	+/-0.0212	0.100	pCi/g						
Uranium-235	U	0.179	0.377	+/-0.112	0.500	pCi/g						
Yttrium-88	U	0.0323	0.0565	+/-0.0138	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	91.9	236	+/-71.2	250	pCi/L		KXK2	07/15/09	0946	883020	5

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	81.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	78.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated

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Report Date: July 17, 2009

Client Sample ID: CAMO-09-9946
Sample ID: 232591001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 17, 2009

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232591

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882671										
QC1201874684 232278002 DUP										
Plutonium-238	U	-0.0021	U	0.00	pCi/g	0.347		(0-1)	KXM4	07/09/0920:52
	TPU:	+/-0.00184		+/-0.00118						
	Yield:	90.8		83.8						
Plutonium-239/240	U	0.00	U	0.00236	pCi/g	0.427		(0-1)		
	TPU:	+/-0.00109		+/-0.00167						
	Yield:	90.8		83.8						
QC1201874685 LCS										
Plutonium-238				5.53	pCi/g			(75%-125%)		07/09/0920:52
	TPU:			+/-0.402						
	Yield:			99.4						
Plutonium-239/240	41.8			32.8	pCi/g		78.5	(75%-125%)		
	TPU:			+/-1.94						
	Yield:			99.4						
QC1201874683 MB										
Plutonium-238			U	-0.00134	pCi/g					07/09/0920:52
	TPU:			+/-0.00193						
	Yield:			88.6						
Plutonium-239/240			U	0.00	pCi/g					
	TPU:			+/-0.00139						
	Yield:			88.6						
Batch 882673										
QC1201874687 232278002 DUP										
Uranium-233/234		0.547		0.506	pCi/g	0.152		(0-1)	KXM4	07/10/0921:23
	TPU:	+/-0.0729		+/-0.0631						
	Yield:	57.9		72.9						
Uranium-235/236	U	0.0159	U	0.0242	pCi/g	0.158		(0-1)		
	TPU:	+/-0.0113		+/-0.0149						
	Yield:	57.9		72.9						
Uranium-238		0.561		0.456	pCi/g	0.398		(0-1)		
	TPU:	+/-0.073		+/-0.0583						
	Yield:	57.9		72.9						
QC1201874688 LCS										
Uranium-233/234				6.01	pCi/g			(75%-125%)		07/09/0920:53
	TPU:			+/-0.584						
	Yield:			92.0						
Uranium-235/236			U	0.277	pCi/g			(75%-125%)		
	TPU:			+/-0.0863						
	Yield:			92.0						
Uranium-238	5.75			6.18	pCi/g		107	(75%-125%)		
	TPU:			+/-0.596						
	Yield:			92.0						
QC1201874686 MB										
Uranium-233/234			U	-0.00338	pCi/g					07/09/0920:53

QC Summary

Workorder: 232591

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882673										
	TPU:			+/-0.0026						
	Yield:			98.8						
Uranium-235/236			U	0.00241	pCi/g					
	TPU:			+/-0.00396						
	Yield:			98.8						
Uranium-238			U	7.52E-05	pCi/g					
	TPU:			+/-0.0026						
	Yield:			98.8						
Rad Gamma Spec										
Batch 881931										
QC1201873070 232591001 DUP										
Americium-241	U	0.273	U	0.130	pCi/g	0.387		(0-1)	MXR1	07/09/0908:36
	TPU:	+/-0.116		+/-0.0691						
Bismuth-211	UI	4.16	UI	3.34	pCi/g	0.804		(0-1)		
	TPU:	+/-0.282		+/-0.227						
Bismuth-214		1.28		1.07	pCi/g	0.596		(0-1)		
	TPU:	+/-0.0925		+/-0.0844						
Cadmium-109	UI	3.01	UI	2.50	pCi/g	0.259		(0-1)		
	TPU:	+/-0.582		+/-0.397						
Cerium-139	U	0.0331	U	0.00333	pCi/g	0.510		(0-1)		
	TPU:	+/-0.0147		+/-0.0146						
Cesium-134	UI	0.127	U	0.0632	pCi/g	0.605		(0-1)		
	TPU:	+/-0.0293		+/-0.0231						
Cesium-137	U	0.0456	U	0.0355	pCi/g	0.128		(0-1)		
	TPU:	+/-0.0201		+/-0.0196						
Cobalt-60	U	-0.0188	U	0.0051	pCi/g	0.289		(0-1)		
	TPU:	+/-0.0205		+/-0.0208						
Europium-152	U	-0.029	U	0.0493	pCi/g	0.392		(0-1)		
	TPU:	+/-0.0478		+/-0.0521						
Lanthanum-140	U	0.0338	U	-0.0841	pCi/g	0.795		(0-1)		
	TPU:	+/-0.0399		+/-0.0343						
Lead-212		1.73		1.35	pCi/g	1.16		(0-1)		
	TPU:	+/-0.0873		+/-0.0733						
Lead-214		1.45		1.16	pCi/g	0.751		(0-1)		
	TPU:	+/-0.105		+/-0.0844						
Mercury-203	U	0.0254	U	0.0271	pCi/g	0.0189		(0-1)		
	TPU:	+/-0.0218		+/-0.0222						
Potassium-40		32.8		32.7	pCi/g	0.0256		(0-1)		
	TPU:	+/-1.71		+/-1.42						
Radium-223	U	-0.07	U	0.299	pCi/g	0.260		(0-1)		
	TPU:	+/-0.369		+/-0.340						
Radium-224	UI	4.42	UI	3.48	pCi/g	0.382		(0-1)		
	TPU:	+/-0.591		+/-0.638						
Radium-226		1.28		1.07	pCi/g	0.596		(0-1)		
	TPU:	+/-0.0925		+/-0.0844						
Radium-228		1.54		1.22	pCi/g	0.453		(0-1)		
	TPU:	+/-0.200		+/-0.144						
Ruthenium-106	U	-0.223	U	-0.182	pCi/g	0.0664		(0-1)		
	TPU:	+/-0.152		+/-0.154						
Sodium-22	U	-0.0151	U	-0.0142	pCi/g	0.00966		(0-1)		

QC Summary

Workorder: 232591

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881931										
	TPU:	+/-0.0242		+/-0.0239						
Strontium-85	UI	0.0887	U	0.0422	pCi/g	0.587		(0-1)		
	TPU:	+/-0.0188		+/-0.0208						
Thallium-208		0.471		0.485	pCi/g	0.0825		(0-1)		
	TPU:	+/-0.0437		+/-0.040						
Thorium-227	U	0.127	U	0.111	pCi/g	0.0213		(0-1)		
	TPU:	+/-0.186		+/-0.190						
Thorium-231	U	-0.07	U	0.299	pCi/g	0.260		(0-1)		
	TPU:	+/-0.369		+/-0.340						
Thorium-234	U	2.54		2.21	pCi/g	0.0941		(0-1)		
	TPU:	+/-0.968		+/-0.759						
Tin-113	U	0.018	U	-0.0207	pCi/g	0.454		(0-1)		
	TPU:	+/-0.0212		+/-0.0214						
Uranium-235	U	0.179	U	0.187	pCi/g	0.0126		(0-1)		
	TPU:	+/-0.112		+/-0.185						
Yttrium-88	U	0.0323	U	-0.00432	pCi/g	0.663		(0-1)		
	TPU:	+/-0.0138		+/-0.0138						
QC1201873071 LCS										
Americium-241	16.3			13.5	pCi/g		83	(75%-125%)		07/09/0908:51
	TPU:			+/-0.596						
Bismuth-211				2.66	pCi/g					
	TPU:			+/-0.329						
Bismuth-214				0.831	pCi/g					
	TPU:			+/-0.107						
Cadmium-109				47.7	pCi/g					
	TPU:			+/-2.15						
Cerium-139			U	0.0776	pCi/g					
	TPU:			+/-0.030						
Cesium-134			U	0.127	pCi/g					
	TPU:			+/-0.0499						
Cesium-137	5.78			5.95	pCi/g		103	(75%-125%)		
	TPU:			+/-0.234						
Cobalt-60	7.10			7.37	pCi/g		104	(75%-125%)		
	TPU:			+/-0.278						
Europium-152			U	-0.136	pCi/g					
	TPU:			+/-0.0998						
Lanthanum-140			U	-0.101	pCi/g					
	TPU:			+/-0.0411						
Lead-212				1.33	pCi/g					
	TPU:			+/-0.101						
Lead-214				0.926	pCi/g					
	TPU:			+/-0.117						
Mercury-203			U	0.0673	pCi/g					
	TPU:			+/-0.0369						
Potassium-40			U	0.520	pCi/g					
	TPU:			+/-0.310						
Radium-223			U	-0.219	pCi/g					
	TPU:			+/-0.601						
Radium-224				5.59	pCi/g					
	TPU:			+/-0.742						
Radium-226				0.831	pCi/g					

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881931										
	TPU:			+/-0.107						
Radium-228				1.89	pCi/g					
	TPU:			+/-0.300						
Ruthenium-106			U	-0.253	pCi/g					
	TPU:			+/-0.307						
Sodium-22			U	-0.0081	pCi/g					
	TPU:			+/-0.0262						
Strontium-85			U	0.0816	pCi/g					
	TPU:			+/-0.0327						
Thallium-208				0.471	pCi/g					
	TPU:			+/-0.0678						
Thorium-227			U	0.550	pCi/g					
	TPU:			+/-0.329						
Thorium-231			U	-0.219	pCi/g					
	TPU:			+/-0.601						
Thorium-234			U	0.0802	pCi/g					
	TPU:			+/-0.849						
Tin-113			U	0.0472	pCi/g					
	TPU:			+/-0.0434						
Uranium-235			U	0.0049	pCi/g					
	TPU:			+/-0.160						
Yttrium-88			U	0.114	pCi/g					
	TPU:			+/-0.0319						
QC1201873069 MB										
Americium-241			U	0.00385	pCi/g					07/09/0908:22
	TPU:			+/-0.0104						
Bismuth-211			U	-0.0219	pCi/g					
	TPU:			+/-0.0685						
Bismuth-214			U	0.00628	pCi/g					
	TPU:			+/-0.0301						
Cadmium-109			U	-0.175	pCi/g					
	TPU:			+/-0.107						
Cerium-139			U	-0.00397	pCi/g					
	TPU:			+/-0.00608						
Cesium-134			U	-0.0285	pCi/g					
	TPU:			+/-0.0165						
Cesium-137			U	0.0203	pCi/g					
	TPU:			+/-0.0126						
Cobalt-60			U	0.00695	pCi/g					
	TPU:			+/-0.0166						
Europium-152			U	-0.0219	pCi/g					
	TPU:			+/-0.028						
Lanthanum-140			U	-0.022	pCi/g					
	TPU:			+/-0.024						
Lead-212			U	0.00214	pCi/g					
	TPU:			+/-0.0161						
Lead-214			U	-0.00926	pCi/g					
	TPU:			+/-0.0238						
Mercury-203			U	-0.00418	pCi/g					
	TPU:			+/-0.00888						
Potassium-40			U	0.116	pCi/g					

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QC Summary

Workorder: 232591

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881931										
	TPU:			+/-0.168						
Radium-223			U	0.0636	pCi/g					
	TPU:			+/-0.186						
Radium-224			U	0.032	pCi/g					
	TPU:			+/-0.158						
Radium-226			U	0.00628	pCi/g					
	TPU:			+/-0.0301						
Radium-228			U	0.0764	pCi/g					
	TPU:			+/-0.0545						
Ruthenium-106			U	0.108	pCi/g					
	TPU:			+/-0.132						
Sodium-22			U	0.00551	pCi/g					
	TPU:			+/-0.0149						
Strontium-85			U	-0.0332	pCi/g					
	TPU:			+/-0.0162						
Thallium-208			U	-0.0174	pCi/g					
	TPU:			+/-0.0165						
Thorium-227			U	0.164	pCi/g					
	TPU:			+/-0.111						
Thorium-231			U	0.0636	pCi/g					
	TPU:			+/-0.186						
Thorium-234			U	0.0343	pCi/g					
	TPU:			+/-0.101						
Tin-113			U	0.0191	pCi/g					
	TPU:			+/-0.0135						
Uranium-235			U	-0.061	pCi/g					
	TPU:			+/-0.047						
Yttrium-88			U	-0.00129	pCi/g					
	TPU:			+/-0.0186						
Rad Liquid Scintillation										
Batch 883020										
QC1201875587 232347003 DUP										
Tritium		1170		1050	pCi/L	0.266		(0-1)	KXK2	07/15/0917:03
	TPU:	+/-113		+/-116						
QC1201875588 LCS										
Tritium	5730			6320	pCi/L		110	(75%-125%)		07/15/0918:05
	TPU:			+/-529						
QC1201875586 MB										
Tritium			U	-126	pCi/L					07/15/0916:01
	TPU:			+/-66.4						

Notes:
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

QC Summary

Workorder: 232591

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time

B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 882671 Product: PU Date: 7/12/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument blg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/12/09

Secondary Review Performed By: [signature] 7/12/09

7/10-7/14

LAN

Plutonium Que Sheet

06-JUL-09

Batch #: 882671 Analyst: KXM4 First Client Due Date: ~~21-JUL-09~~ 14-JUL-09 9/10/09 Internal Due Date: 10-JUL-09

Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 1762-A Expiration Date: 5-11-10 Vol: 0.1 L

LCS Isotope(s): Pu-239/Pu-238 LCS Code: SPK 0244-B Expiration Date: 4-30-10 Vol: 0.1 g

Spike Isotope(s): Pu-239/Pu-238 Spike Code: NA Expiration Date: NA Vol: NA

Prep Date: 7-7-09 Initials: KM Pipet ID: 2971038 Balance ID: 50410272 Witness: MDA 7/7/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Pu Det #
~~232211001-1~~	~~CAMO-09-10155~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~1~~	~~1~~	~~1.250~~	~~209 213~~
232211002-1	CAMO-09-10156	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	2	2	1.247	210
232211003-1	CAMO-09-10146	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	3	3	1.251	211
232211004-1	CAMO-09-10158	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	4	4	1.252	212
~~232211005-1~~	~~CAMO-09-10145~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~5~~	~~5~~	~~1.255~~	~~213 214~~
232211006-1	CAMO-09-10157	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	6	6	1.250	214
~~232211007-1~~	~~CAMO-09-10162~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~7~~	~~7~~	~~1.249~~	~~215 218~~
232211008-1	CAMO-09-10163	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	8	8	1.250	216
232212001-1	CAMO-09-9944	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	9	9	1.251	217
232212002-1	CAMO-09-9945	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	10	10	1.257	~~218~~ 114
~~232212003-1~~	~~CAMO-09-10028~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~11~~	~~11~~	~~1.248~~	~~219 216~~
232278001-1	CAMO-09-10458	SAMPLE		.05 pCi/g	SOIL	LANL010	19-JUN-09	12	12	1.250	220
232278002-1	CAMO-09-10459	SAMPLE		.05 pCi/g	SOIL	LANL010	19-JUN-09	13	13	1.249	221
~~232582001-1~~	~~CAMO-09-10464~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~25-JUN-09~~	~~14~~	~~14~~	~~1.252~~	~~222 217~~
232582002-1	CAMO-09-10465	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	15	15	1.249	223
232585001-1	CAMO-09-6605	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	16	16	1.249	224
232585002-1	CAMO-09-6603	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	17	17	1.247	225
232585003-1	CAMO-09-6604	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	18	18	1.250	226
232591001-1	CAMO-09-9946	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	19	19	1.254	227
1201874683-1	MB for batch 882671	MB		.05 pCi/g	SOIL	QC ACCOUNT		20	20	~~1.257~~ 1.0	228
1201874684-1	CAMO-09-10459(232278002DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	19-JUN-09	21	21	1.253	229
1201874685-1	LCS for batch 882671	LCS		.05 pCi/g	SOIL	QC ACCOUNT		22	22	0.107	230

#SPK 0244-B exp 4-30-10

Choose SOP Used: GL-RAD-A-011 / GL-RAD-A-045 / GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: 7/12/09

803

Blank Correction Report

Batch ID 882671

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874684	DUP	Plutonium-238	1.25 g	0.00	0.00118	0.0209	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00236	0.00167	0.0255	0	pCi/g	NO
1201874685	LCS	Plutonium-238	0.107 g	5.41	0.393	0.205	-.01252336	pCi/g	NO
		Plutonium-239/240	0.107 g	31.5	1.86	0.251	0	pCi/g	NO
1201874683	MB	Plutonium-238	1.00 g	-0.00134	0.00193	0.0246	-.00134	pCi/g	NO
		Plutonium-239/240	1.00 g	0.00	0.00139	0.030	0	pCi/g	NO
232211002	CAMO-09-10156	Plutonium-238	1.25 g	0.00243	0.00172	0.0215	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00126	0.00207	0.0262	0	pCi/g	NO
232211003	CAMO-09-10146	Plutonium-238	1.25 g	0.00121	0.002	0.0207	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	4.33E-05	0.00162	0.0253	0	pCi/g	NO
232211004	CAMO-09-10158	Plutonium-238	1.25 g	0.00	0.00142	0.0251	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00283	0.00201	0.0306	0	pCi/g	NO
232211006	CAMO-09-10157	Plutonium-238	1.25 g	0.0828	0.0108	0.0216	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.134	0.0143	0.0264	0	pCi/g	NO
232211008	CAMO-09-10163	Plutonium-238	1.25 g	0.00966	0.00345	0.0214	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0906	0.0116	0.0261	0	pCi/g	NO
232212001	CAMO-09-9944	Plutonium-238	1.25 g	0.0405	0.00693	0.0194	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.708	0.0438	0.0237	0	pCi/g	NO
232212002	CAMO-09-9945	Plutonium-238	1.26 g	0.0699	0.0157	0.0453	-.00106349	pCi/g	NO
		Plutonium-239/240	1.26 g	7.04	0.438	0.0551	0	pCi/g	NO
232278001	CAMO-09-10458	Plutonium-238	1.25 g	0.00	0.00109	0.0193	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00113	0.00186	0.0236	0	pCi/g	NO
232278002	CAMO-09-10459	Plutonium-238	1.25 g	-0.0021	0.00184	0.0193	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00	0.00109	0.0236	0	pCi/g	NO
232582002	CAMO-09-10465	Plutonium-238	1.25 g	0.00118	0.00243	0.0195	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00	0.0011	0.0239	0	pCi/g	NO
232585001	CAMO-09-6605	Plutonium-238	1.25 g	0.00111	0.00111	0.0197	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00999	0.00337	0.024	0	pCi/g	NO
232585002	CAMO-09-6603	Plutonium-238	1.25 g	0.0525	0.00798	0.0194	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	1.25	0.0701	0.0237	0	pCi/g	NO
232585003	CAMO-09-6604	Plutonium-238	1.25 g	0.00367	0.00213	0.0217	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.211	0.019	0.0265	0	pCi/g	NO
232591001	CAMO-09-9946	Plutonium-238	1.25 g	0.0119	0.0038	0.0211	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.627	0.0409	0.0257	0	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S0232278002_PU
SAMPLE QTY: 1.249 G

DETECTOR NUMBER :79414
AVERAGE %EFFICIENCY :37.9316
% YIELD : 90.810

COUNT DATE: 9-JUL-2009 20:51:52
ELAPSED LIVE TIME(SEC): 57797.41
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B221.CNF;13
PCI/G : 1.478E+00	PCI/G : 1.478E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.82067 dpm	EFF FILE : W221.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	0.000	0.000	0.000	4.1106	99.90000	0.00E+00	1.09E-03	1.03E-02	2.36E-02	1.09E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.10E-03	6.80E-03	1.66E-02	1.10E-03
PU-238	5499.000	0.000	-1.927	1.927	3.2589	99.90000	-2.10E-03	1.84E-03	8.17E-03	1.93E-02	1.84E-03
PU242	4890.000	1397.000	1396.037	0.963	0.9815	100.0000	1.52E+00	8.31E-02	2.46E-03	7.86E-03	4.06E-02
PU-244	4589.000	6.000	6.000	0.000	4.8319	99.90000	6.53E-03	2.68E-03	1.21E-02	2.72E-02	2.67E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

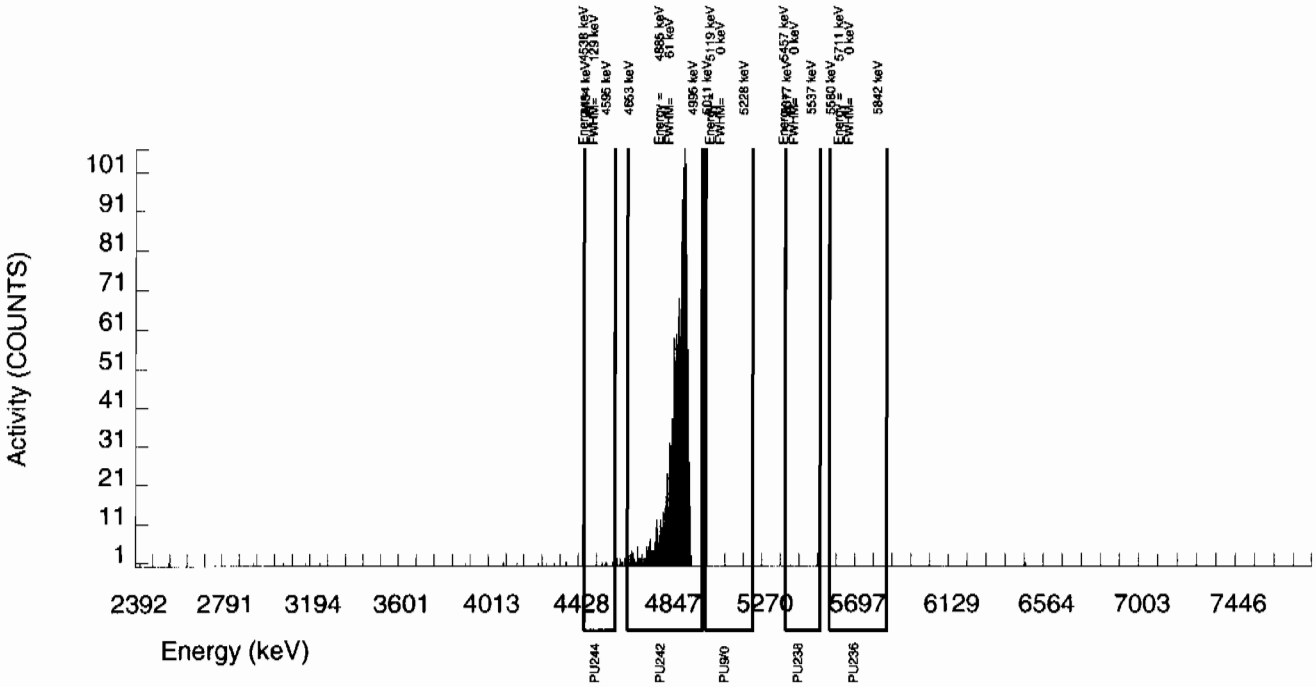

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232591001_PU
SAMPLE QTY: 1.254 G

DETECTOR NUMBER :79420
AVERAGE %EFFICIENCY :38.3447
% YIELD : 81.892

COUNT DATE: 9-JUL-2009 20:52:06
ELAPSED LIVE TIME(SEC): 57813.36
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B227.CNF;13
PCI/G : 1.472E+00	PCI/G : 1.472E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.44545 dpm	EFF FILE : W227.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	528.000	528.000	0.000	4.1106	99.90000	6.27E-01	4.09E-02	1.13E-02	2.57E-02	2.73E-02
PU-236	5749.000	3.000	3.000	0.000	2.7154	100.0000	3.60E-03	2.08E-03	7.43E-03	1.81E-02	2.08E-03
PU-238	5499.000	10.000	10.000	0.000	3.2589	99.90000	1.19E-02	3.80E-03	8.93E-03	2.11E-02	3.76E-03
PU242	4890.000	1273.000	1273.000	0.000	0.0000	100.0000	1.51E+00	8.46E-02	0.00E+00	3.22E-03	4.24E-02
PU-244	4589.000	13.000	13.000	0.000	4.8319	99.90000	1.54E-02	4.35E-03	1.32E-02	2.97E-02	4.28E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

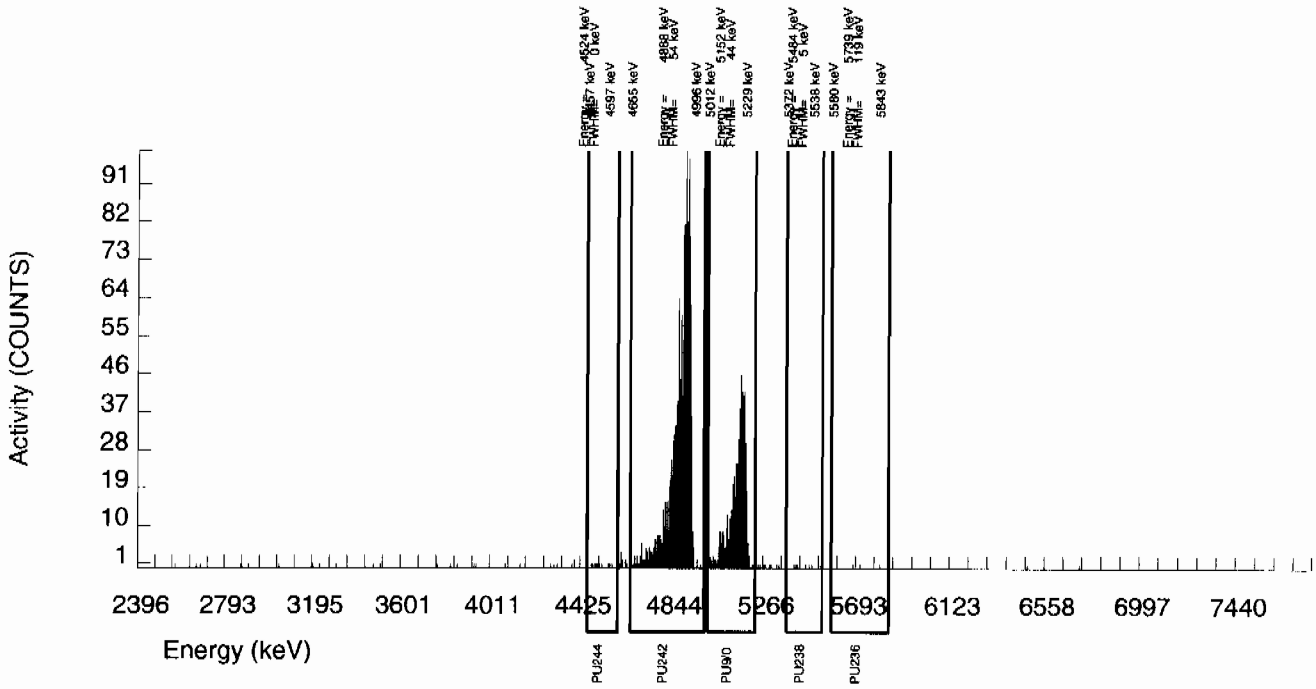

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 7-JUL-2009 00:00:00.

SAMPLE ID : S1201874683_PU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :79421
AVERAGE %EFFICIENCY :38.1208
% YIELD : 88.584

COUNT DATE: 9-JUL-2009 20:52:09
ELAPSED LIVE TIME(SEC): 57818.27
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B228.CNF;13
PCI/G : 1.846E+00	PCI/G : 1.846E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.72702 dpm	EFF FILE : W228.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	0.000	0.000	0.000	4.1106	99.90000	0.00E+00	1.39E-03	1.31E-02	3.00E-02	1.39E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.39E-03	8.66E-03	2.11E-02	1.39E-03
PU-238	5499.000	0.000	-0.964	0.964	3.2589	99.90000	-1.34E-03	1.93E-03	1.04E-02	2.46E-02	1.92E-03
PU242	4890.000	1372.000	1369.109	2.891	1.7003	100.0000	1.90E+00	1.04E-01	5.43E-03	1.46E-02	5.13E-02
PU-244	4589.000	7.000	7.000	0.000	4.8319	99.90000	9.70E-03	3.70E-03	1.54E-02	3.46E-02	3.67E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

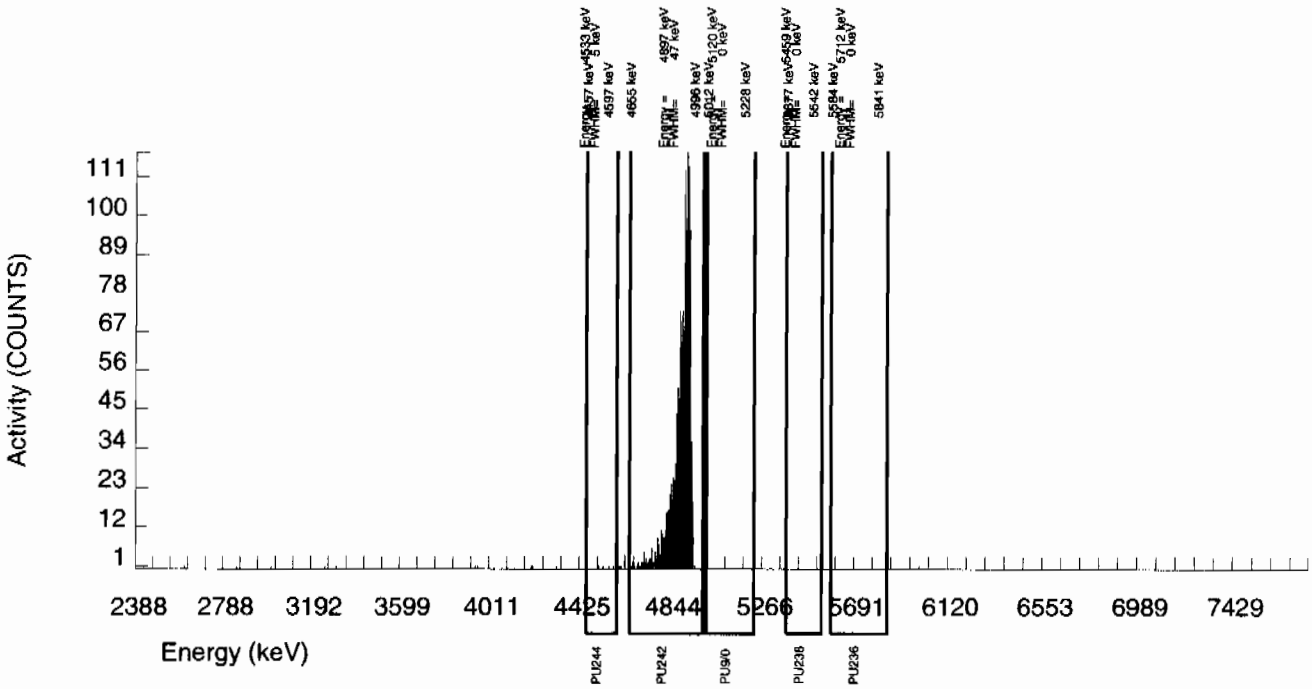

Alpha Spectroscopy Software Version 2 0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S1201874684_PU
SAMPLE QTY: 1.253 G

DETECTOR NUMBER :79422
AVERAGE %EFFICIENCY :37.7719
% YIELD : 83.844

COUNT DATE: 9-JUL-2009 20:52:12
ELAPSED LIVE TIME(SEC): 57820.21
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B229.CNF;13
PCI/G : 1.473E+00	PCI/G : 1.473E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.52761 dpm	EFF FILE : W229.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2.000	2.000	0.000	4.1106	99.90000	2.36E-03	1.67E-03	1.12E-02	2.55E-02	1.67E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.20E-03	7.37E-03	1.79E-02	1.19E-03
PU-238	5499.000	0.000	0.000	0.000	3.2589	99.90000	0.00E+00	1.18E-03	8.86E-03	2.09E-02	1.18E-03
PU242	4890.000	1285.000	1284.036	0.964	0.9817	100.0000	1.51E+00	8.45E-02	2.67E-03	8.52E-03	4.22E-02
PU-244	4589.000	7.000	6.036	0.964	4.8319	99.90000	7.12E-03	3.34E-03	1.31E-02	2.95E-02	3.32E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

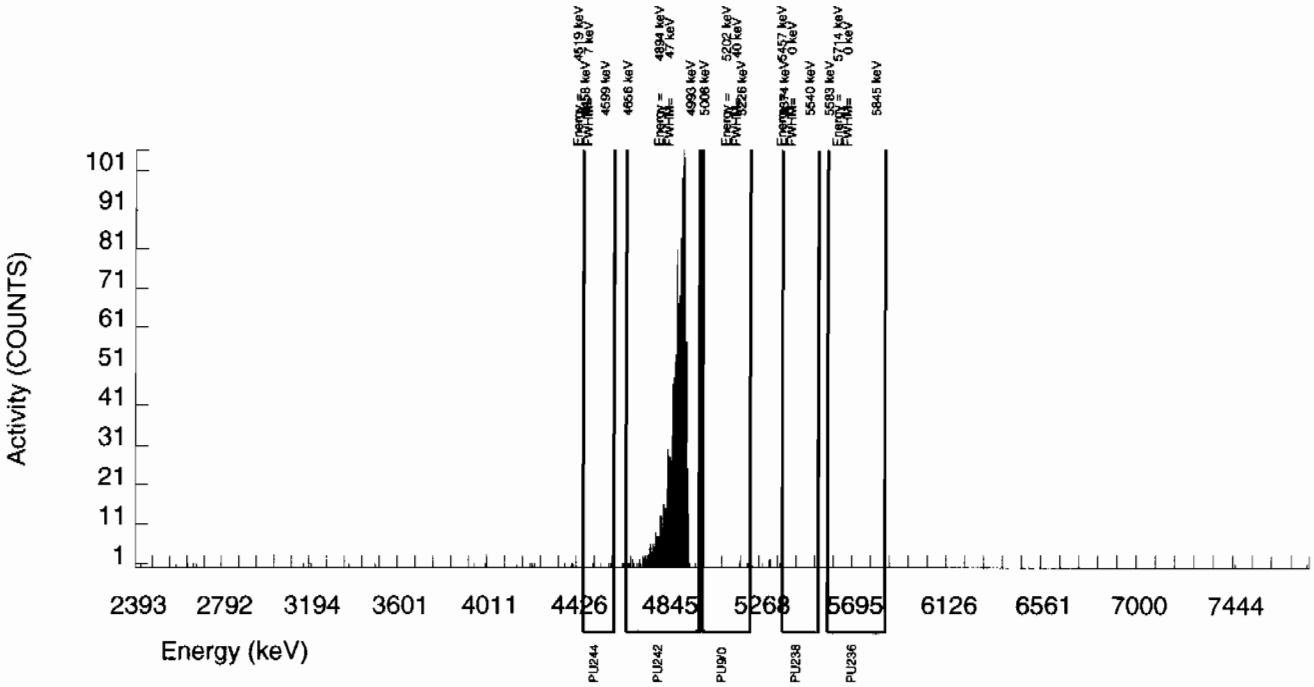

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 7-JUL-2009 00:00:00.

SAMPLE ID : S1201874685_PU
SAMPLE QTY: 0.107 G

DETECTOR NUMBER :79423
AVERAGE %EFFICIENCY :37.2375
% YIELD : 99.406

COUNT DATE: 9-JUL-2009 20:52:14
ELAPSED LIVE TIME(SEC): 57827.62
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B230.CNF;13
PCI/G : 1.725E+01	PCI/G : 1.725E+01	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.18231 dpm	EFF FILE : W230.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2775.000	2774.036	0.964	4.1106	99.90000	3.28E+01	1.94E+00	1.12E-01	2.56E-01	6.22E-01
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.18E-02	7.39E-02	1.80E-01	1.18E-02
PU-238	5499.000	469.000	468.036	0.964	3.2589	99.90000	5.53E+00	4.02E-01	8.87E-02	2.09E-01	2.56E-01
PU242	4890.000	1501.000	1501.000	0.000	0.0000	100.0000	1.77E+01	1.09E+00	0.00E+00	3.20E-02	4.57E-01
PU-244	4589.000	10.000	9.036	0.964	4.8319	99.90000	1.07E-01	3.95E-02	1.32E-01	2.95E-01	3.90E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

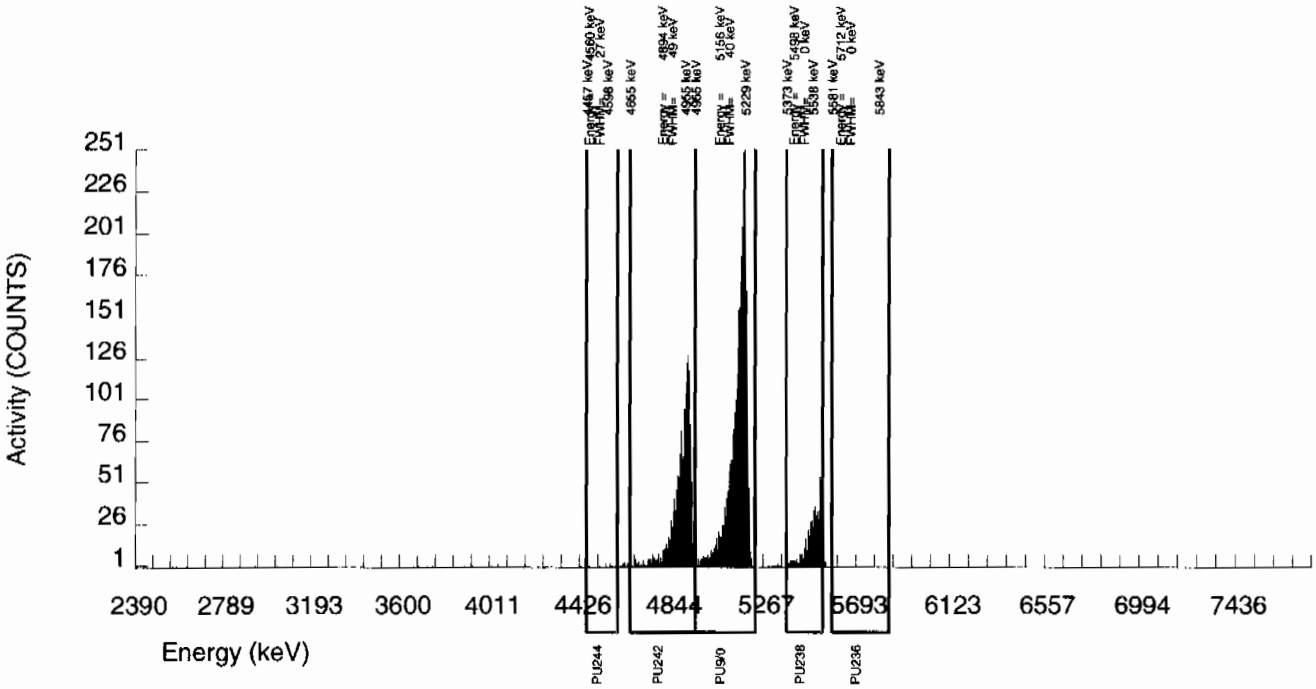

Alpha Spectroscopy Software Version 2.0
effective date: 08-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671 SAMPLE DATE : 7-JUL-2009 00:00:00.	SAMPLE ID : S1201874685_PU SAMPLE QTY: 0.107 G
DETECTOR NUMBER :79423 AVERAGE %EFFICIENCY :37.2375 % YIELD : 102.324	COUNT DATE: 9-JUL-2009 20:52:14 ELAPSED LIVE TIME(SEC): 52061.47 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.725E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.725E+01	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.30509 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B230.CNF;13 BKG DATE : 5-JUL-2009 EFF FILE : W230.CNF;8 CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2472.000	2471.132	0.868	4.1684	99.90000	3.15E+01	1.89E+00	1.19E-01	2.73E-01	6.34E-01
PU-236	5749.000	0.000	0.000	0.000	3.3854	100.0000	0.00E+00	1.28E-02	9.69E-02	2.28E-01	1.28E-02
PU-238	5499.000	412.000	411.132	0.868	3.3734	99.90000	5.24E+00	3.93E-01	9.67E-02	2.28E-01	2.59E-01
PU242	4890.000	1391.000	1391.000	0.000	0.0000	100.0000	1.77E+01	1.11E+00	0.00E+00	3.45E-02	4.75E-01
PU-244	4589.000	10.000	9.132	0.868	4.1569	99.90000	1.16E-01	4.23E-02	1.19E-01	2.73E-01	4.18E-02

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

Integrate

DO NOT REPORT

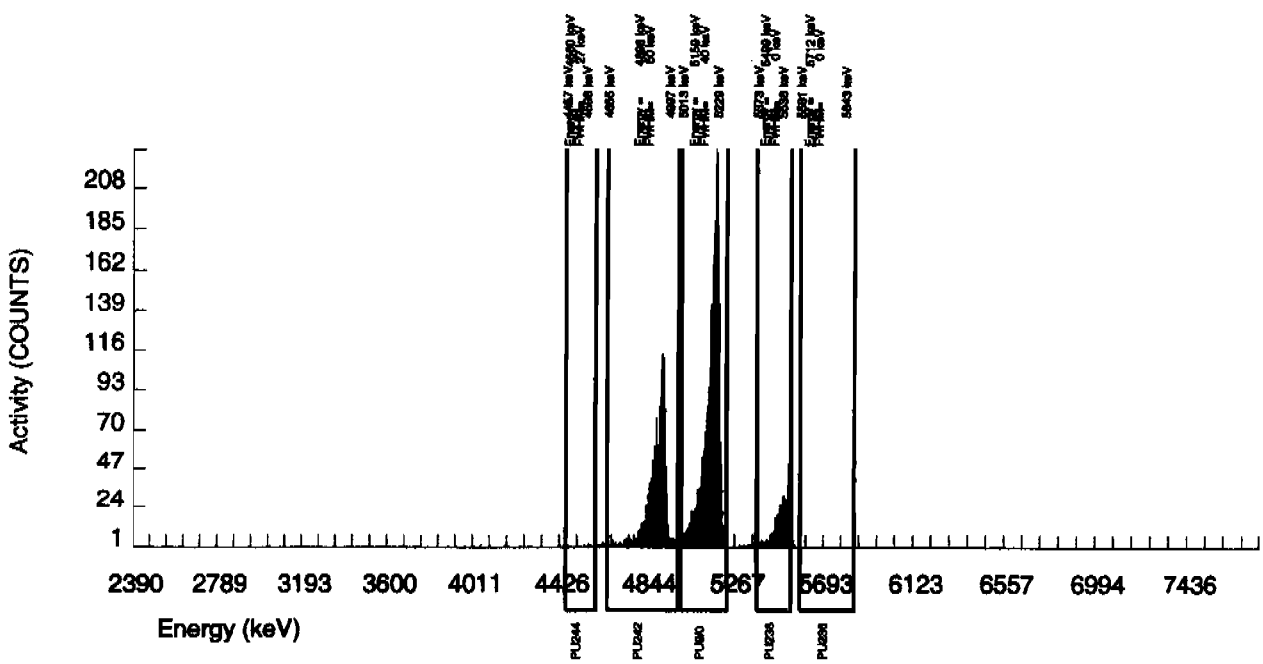

Radiochemistry Batch Checklist, Rev 9

Batch# 882673 Product: U Date: 7/12/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument blg check is within limits.	✓		
Method RDL/ LLD has been met.		✓	NCR# 710606
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		case narrative
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		NCR# 710606
Batch non-conformances second reviewed and disposition verified to be completed.	✓		NCR# 710606
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/12/09

Secondary Review Performed By: [signature] 7/12/09

7/10-7/14
CANL

P ✓

Uranium Que Sheet

06-JUL-09

Batch #: 882673 Analyst: KXM4 First Client Due Date: ~~21-JUL-09~~ 14-JUL-09 Internal Due Date: 10-JUL-09

Tracer Isotope: U-232/U-236 Tracer Code: VRJ-B Expiration Date: 12-16-09 Vol: 0.1ml

LCS Isotope: U-238 LCS Code: SRM 0244-A Expiration Date: 10-31-20 Vol: 0.1g

Spike Isotope: U-238 Spike Code: NA Expiration Date: NA Vol: NA

Prep Date: 7-7-09 Initials: KM Pipet ID: 2071078 Balance ID: 50410272 Witness: MDA 7/9/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/ml/l)	U Det #
232211001-1	CAMO-09-10155	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	1	21	0.500	113
232211002-1	CAMO-09-10156	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	2	22	0.502	~~119~~ 113
232211003-1	CAMO-09-10146	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	3	23	0.507	~~115~~ 170
232211004-1	CAMO-09-10158	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	4	24	0.503	116
232211005-1	CAMO-09-10145	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	5	25	0.500	117
232211006-1	CAMO-09-10157	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	6	26	0.508	118
232211007-1	CAMO-09-10162	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	7	27	0.504	121
232211008-1	CAMO-09-10163	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	8	28	0.506	122
232212001-1	CAMO-09-9944	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	9	29	0.500	123
232212002-1	CAMO-09-9945	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	10	30	0.505	124
232212003-1	CAMO-09-10029	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	11	31	0.500	125
232278001-1	CAMO-09-10458	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	12	32	0.504	126
232278002-1	CAMO-09-10459	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	13	33	0.509	127
232582001-1	CAMO-09-10464	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	14	34	0.501	129
232582002-1	CAMO-09-10465	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	15	35	0.499	130
232585001-1	CAMO-09-6605	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	16	36	0.499	131
232585002-1	CAMO-09-6603	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	17	37	0.503	~~132~~ 155
232585003-1	CAMO-09-6604	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	18	38	0.503	133
232591001-1	CAMO-09-9946	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	19	39	0.503	134
1201874686-1	MB for batch 882673	MB		.1 pCi/g	SOIL	QC ACCOUNT		20	40	~~0.509~~ 1.0	135
1201874687-1	CAMO-09-10459(232278002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	19-JUN-09	21	41	0.506	~~136~~ 156
1201874688-1	LCS for batch 882673	*LCS		.1 pCi/g	SOIL	QC ACCOUNT		22	42	0.101	144

*SRM 0241-A exp. 10-31-20

Choose SOP used: GL-RAD-A-011
GL-RAD-A-038
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: 7/12/09

GEL Laboratories LLC, Radiochemistry Division

812

Blank Correction Report

Batch ID 882673

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874687	DUP	Uranium-233/234	0.506 g	0.506	0.0631	0.223	-.00667984	pCi/g	NO
		Uranium-235/236	0.506 g	0.0242	0.0149	0.102	.004762846	pCi/g	NO
		Uranium-238	0.506 g	0.456	0.0583	0.0868	.000148617	pCi/g	NO
1201874688	LCS	Uranium-233/234	0.101 g	6.01	0.584	0.919	-.03346535	pCi/g	NO
		Uranium-235/236	0.101 g	0.277	0.0863	0.421	.023861386	pCi/g	NO
		Uranium-238	0.101 g	6.18	0.596	0.358	.000744554	pCi/g	NO
1201874686	MB	Uranium-233/234	1.00 g	-0.00338	0.0026	0.0843	-.00338	pCi/g	NO
		Uranium-235/236	1.00 g	0.00241	0.00396	0.0387	.00241	pCi/g	YES
		Uranium-238	1.00 g	7.52E-05	0.0026	0.0328	.0000752	pCi/g	YES
232211001	CAMO-09-10155	Uranium-233/234	0.500 g	0.765	0.0813	0.213	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.0294	0.0155	0.0975	.00482	pCi/g	NO
		Uranium-238	0.500 g	0.925	0.0933	0.0828	.0001504	pCi/g	NO
232211002	CAMO-09-10156	Uranium-233/234	0.502 g	0.698	0.0788	0.257	-.00673307	pCi/g	NO
		Uranium-235/236	0.502 g	0.0481	0.0214	0.117	.004800797	pCi/g	NO
		Uranium-238	0.502 g	0.756	0.0828	0.0991	.000149801	pCi/g	NO
232211003	CAMO-09-10146	Uranium-233/234	0.507 g	0.958	0.095	0.193	-.00666667	pCi/g	NO
		Uranium-235/236	0.507 g	0.016	0.00929	0.0885	.004753452	pCi/g	YES
		Uranium-238	0.507 g	0.944	0.0928	0.0752	.000148323	pCi/g	NO
232211004	CAMO-09-10158	Uranium-233/234	0.503 g	0.758	0.0934	0.304	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0425	0.025	0.140	.004791252	pCi/g	NO
		Uranium-238	0.503 g	0.798	0.0944	0.119	.000149503	pCi/g	NO
232211005	CAMO-09-10145	Uranium-233/234	0.500 g	1.05	0.113	0.279	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.0612	0.0221	0.128	.00482	pCi/g	NO
		Uranium-238	0.500 g	1.15	0.120	0.109	.0001504	pCi/g	NO
232211006	CAMO-09-10157	Uranium-233/234	0.508 g	1.00	0.103	0.227	-.00665354	pCi/g	NO
		Uranium-235/236	0.508 g	0.0497	0.0179	0.104	.004744094	pCi/g	NO
		Uranium-238	0.508 g	1.14	0.112	0.0883	.000148031	pCi/g	NO
232211007	CAMO-09-10162	Uranium-233/234	0.504 g	1.08	0.114	0.271	-.00670635	pCi/g	NO
		Uranium-235/236	0.504 g	0.0521	0.020	0.124	.004781746	pCi/g	NO
		Uranium-238	0.504 g	0.934	0.102	0.106	.000149206	pCi/g	NO
232211008	CAMO-09-10163	Uranium-233/234	0.506 g	0.864	0.0909	0.223	-.00667984	pCi/g	NO
		Uranium-235/236	0.506 g	0.049	0.0177	0.102	.004762846	pCi/g	NO
		Uranium-238	0.506 g	0.977	0.0994	0.087	.000148617	pCi/g	NO
232212001	CAMO-09-9944	Uranium-233/234	0.500 g	0.887	0.0902	0.209	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.109	0.0262	0.096	.00482	pCi/g	NO
		Uranium-238	0.500 g	1.06	0.103	0.0815	.0001504	pCi/g	NO
232212002	CAMO-09-9945	Uranium-233/234	0.505 g	0.903	0.0964	0.239	-.00669307	pCi/g	NO
		Uranium-235/236	0.505 g	0.0786	0.0234	0.109	.004772277	pCi/g	NO
		Uranium-238	0.505 g	0.848	0.091	0.093	.000148911	pCi/g	NO
232212003	CAMO-09-10029	Uranium-233/234	0.500 g	0.814	0.0854	0.208	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.0178	0.017	0.0955	.00482	pCi/g	YES

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232212003	CAMO-09-10029	Uranium-238	0.500 g	0.850	0.0873	0.0811	.0001504	pCi/g	NO
232278001	CAMO-09-10458	Uranium-233/234	0.504 g	0.354	0.0519	0.229	-.00670635	pCi/g	NO
		Uranium-235/236	0.504 g	0.0129	0.0125	0.105	.004781746	pCi/g	YES
		Uranium-238	0.504 g	0.352	0.0508	0.0894	.000149206	pCi/g	NO
232278002	CAMO-09-10459	Uranium-233/234	0.509 g	0.547	0.0729	0.290	-.00664047	pCi/g	NO
		Uranium-235/236	0.509 g	0.0159	0.0113	0.133	.004734774	pCi/g	YES
		Uranium-238	0.509 g	0.561	0.073	0.113	.000147741	pCi/g	NO
232582001	CAMO-09-10464	Uranium-233/234	0.501 g	0.508	0.0715	0.305	-.00674651	pCi/g	NO
		Uranium-235/236	0.501 g	0.0254	0.0187	0.140	.004810379	pCi/g	NO
		Uranium-238	0.501 g	0.387	0.0608	0.119	.000150100	pCi/g	NO
232582002	CAMO-09-10465	Uranium-233/234	0.499 g	0.334	0.0532	0.244	-.00677355	pCi/g	NO
		Uranium-235/236	0.499 g	0.0142	0.0187	0.112	.004829659	pCi/g	YES
		Uranium-238	0.499 g	0.428	0.0586	0.095	.000150701	pCi/g	NO
232585001	CAMO-09-6605	Uranium-233/234	0.499 g	0.716	0.0916	0.329	-.00677355	pCi/g	NO
		Uranium-235/236	0.499 g	0.109	0.0346	0.151	.004829659	pCi/g	NO
		Uranium-238	0.499 g	0.753	0.0952	0.128	.000150701	pCi/g	NO
232585002	CAMO-09-6603	Uranium-233/234	0.503 g	1.36	0.140	0.309	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0336	0.0239	0.142	.004791252	pCi/g	NO
		Uranium-238	0.503 g	1.44	0.147	0.120	.000149503	pCi/g	NO
232585003	CAMO-09-6604	Uranium-233/234	0.503 g	1.04	0.114	0.298	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0654	0.0236	0.137	.004791252	pCi/g	NO
		Uranium-238	0.503 g	0.965	0.108	0.116	.000149503	pCi/g	NO
232591001	CAMO-09-9946	Uranium-233/234	0.503 g	0.840	0.0897	0.219	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0494	0.0255	0.101	.004791252	pCi/g	NO
		Uranium-238	0.503 g	1.03	0.103	0.0855	.000149503	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S0232278002_UU
SAMPLE QTY: 0.509 G

DETECTOR NUMBER :78770
AVERAGE %EFFICIENCY :24.7595
% YIELD : 57.937

COUNT DATE: 9-JUL-2009 20:53:30
ELAPSED LIVE TIME(SEC): 57449.93
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B127.CNF;382
PCI/G : 2.310E+01	PCI/G : 2.310E+01	NOMINAL : 5.29685 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.06884 dpm	EFF FILE : W127.CNF;108
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	89.000	84.891	1.915	9.1924	100.0000	5.47E-01	7.29E-02	1.36E-01	2.90E-01	6.07E-02
U232	5302.100	730.000	727.128	2.872	1.6948	100.0000	4.69E+00	3.87E-01	2.51E-02	6.77E-02	1.75E-01
U-235	4391.000	2.000	2.000	0.000	3.0409	80.90000	1.59E-02	1.13E-02	5.57E-02	1.33E-01	1.13E-02
U-238	4184.730	87.000	87.000	0.000	3.2215	100.0000	5.61E-01	7.30E-02	4.78E-02	1.13E-01	6.01E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

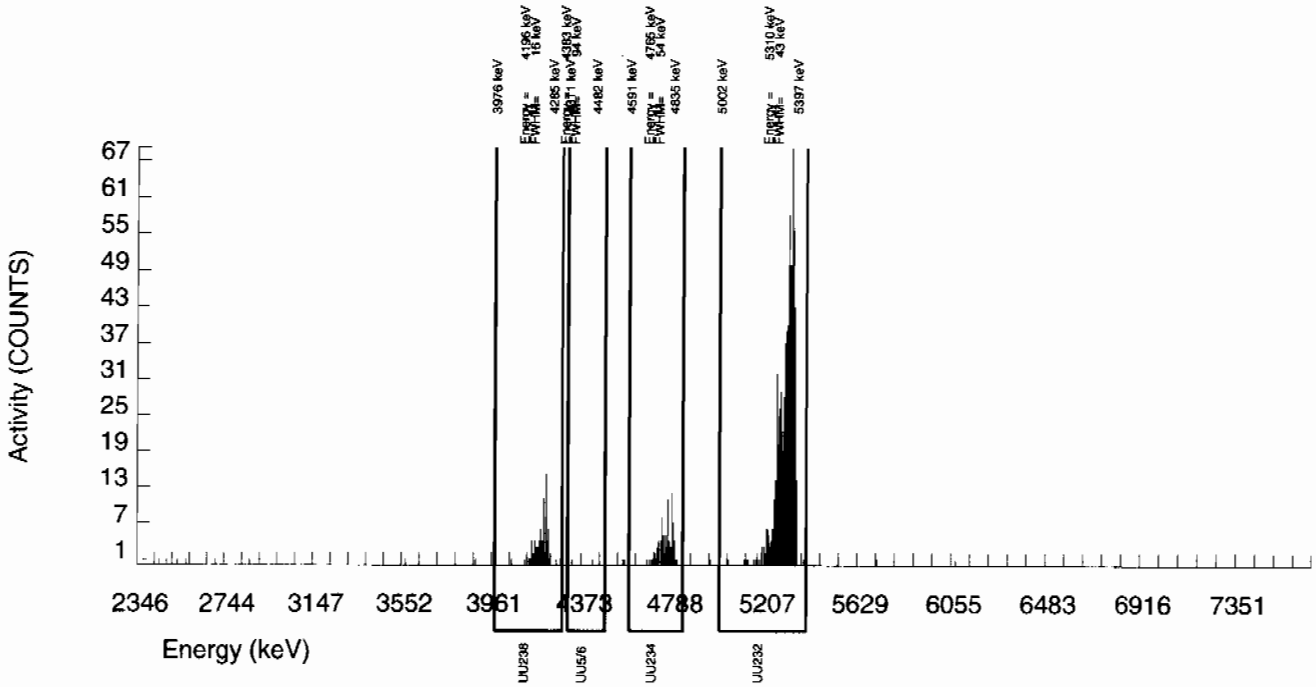

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232591001_UU
SAMPLE QTY: 0.503 G

DETECTOR NUMBER :76230
AVERAGE %EFFICIENCY :24.4411
% YIELD : 78.372

COUNT DATE: 9-JUL-2009 20:53:45
ELAPSED LIVE TIME(SEC): 57585.56
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B134.CNF;360
PCI/G : 2.338E+01	PCI/G : 2.338E+01	NOMINAL : 5.29601 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.15060 dpm	EFF FILE : W134.CNF;111
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	183.000	172.386	7.678	9.1924	100.0000	8.40E-01	8.97E-02	1.03E-01	2.19E-01	6.67E-02
U232	5302.100	979.000	973.241	5.759	2.3997	100.0000	4.74E+00	3.72E-01	2.69E-02	6.70E-02	1.53E-01
U-235	4391.000	13.000	8.201	4.799	3.0409	80.90000	4.94E-02	2.55E-02	4.22E-02	1.01E-01	2.53E-02
U-238	4184.730	214.000	211.121	2.879	3.2215	100.0000	1.03E+00	1.03E-01	3.61E-02	8.55E-02	7.17E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

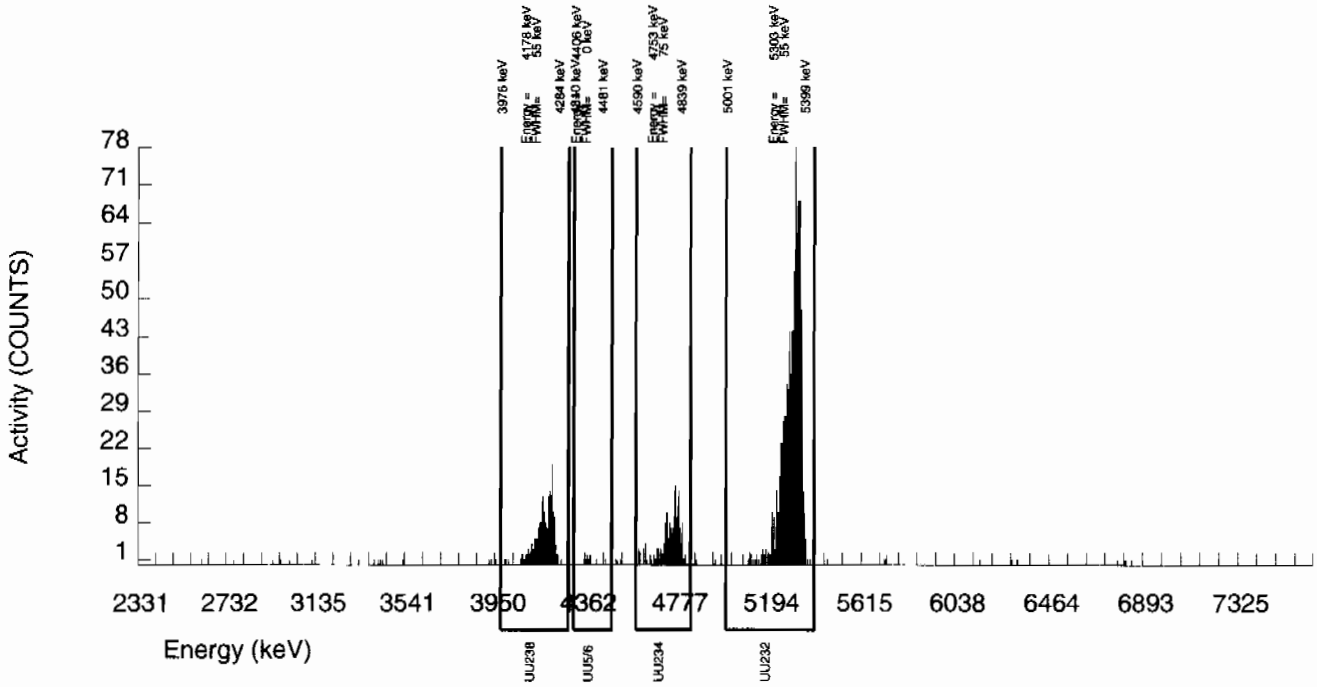

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 7-JUL-2009 00:00:00.

SAMPLE ID : S1201874686_UU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :64270
AVERAGE %EFFICIENCY :25.3758
% YIELD : 98.818

COUNT DATE: 9-JUL-2009 20:53:48
ELAPSED LIVE TIME(SEC): 57588.11
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B135.CNF;372
PCI/G : 1.176E+01	PCI/G : 1.176E+01	NOMINAL : 5.29434 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.23175 dpm	EFF FILE : W135.CNF;122
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	3.000	-1.804	0.960	9.1924	100.0000	-3.38E-03	2.60E-03	3.96E-02	8.43E-02	2.59E-03
U232	5302.100	1277.000	1274.121	2.879	1.6969	100.0000	2.38E+00	1.79E-01	7.31E-03	1.97E-02	6.70E-02
U-235	4391.000	2.000	1.040	0.960	3.0409	80.90000	2.41E-03	3.96E-03	1.62E-02	3.87E-02	3.95E-03
U-238	4184.730	1.000	0.040	0.960	3.2215	100.0000	7.52E-05	2.60E-03	1.39E-02	3.28E-02	2.59E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

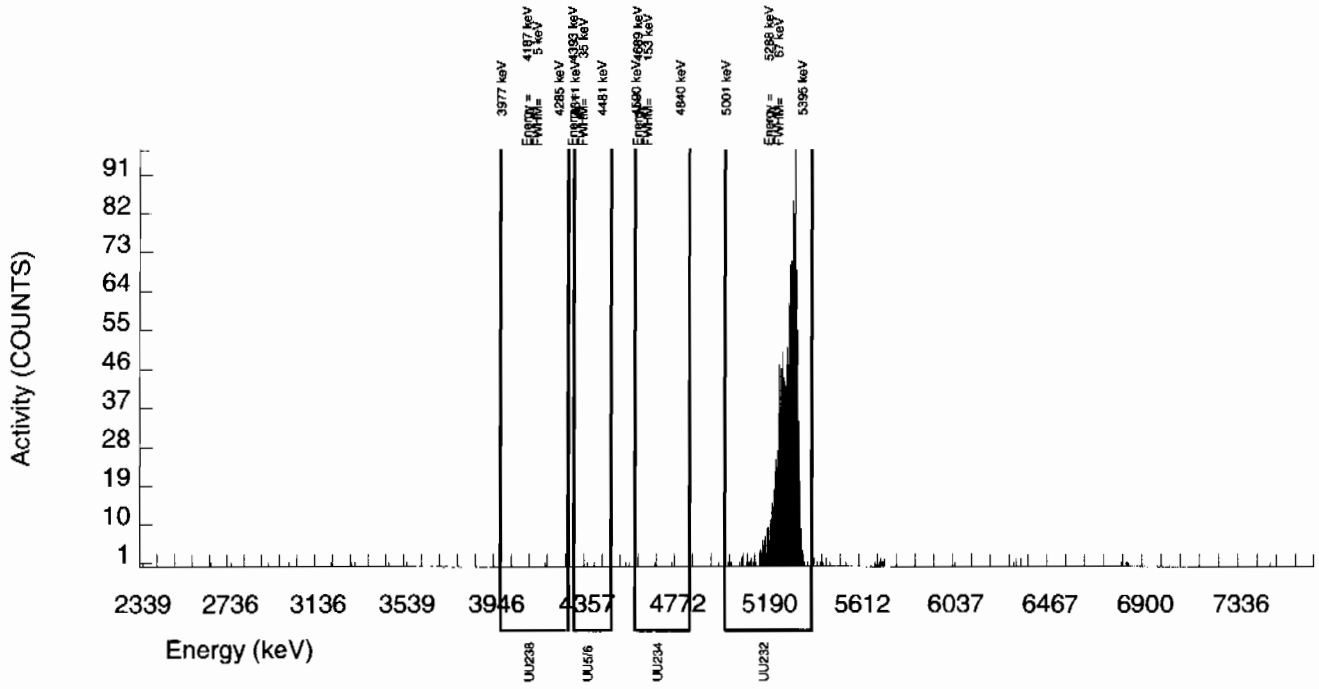

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S1201874687_UU
SAMPLE QTY: 0.506 G

DETECTOR NUMBER :75554
AVERAGE %EFFICIENCY :24.9092
% YIELD : 72.878

COUNT DATE:10-JUL-2009 21:23:10
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B156.CNF;331
PCI/G : 2.324E+01	PCI/G : 2.324E+01	NOMINAL : 5.29685 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.86027 dpm	EFF FILE : W156.CNF;105
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	110.000	103.101	4.000	9.1924	100.0000	5.06E-01	6.31E-02	1.05E-01	2.23E-01	5.17E-02
U232	5302.100	972.000	961.000	11.000	3.3166	100.0000	4.72E+00	3.71E-01	3.78E-02	8.90E-02	1.54E-01
U-235	4391.000	5.000	4.000	1.000	3.0409	80.90000	2.42E-02	1.49E-02	4.29E-02	1.02E-01	1.48E-02
U-238	4184.730	95.000	93.000	2.000	3.2215	100.0000	4.56E-01	5.83E-02	3.68E-02	8.68E-02	4.83E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

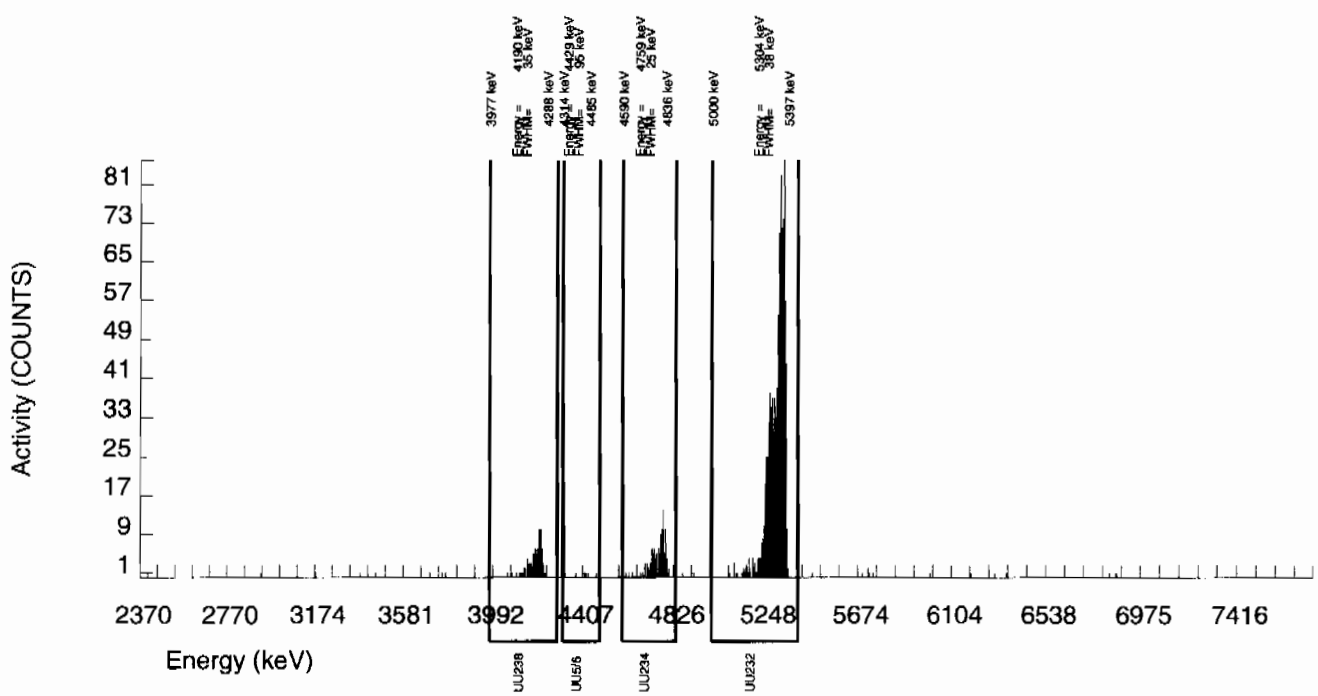

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 7-JUL-2009 00:00:00.

SAMPLE ID : S1201874688_UU
SAMPLE QTY: 0.101 G

DETECTOR NUMBER :75551
AVERAGE %EFFICIENCY :24.7777
% YIELD : 92.048

COUNT DATE: 9-JUL-2009 20:53:53
ELAPSED LIVE TIME(SEC): 57526.06
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B144.CNF;327
PCI/G : 1.164E+02	PCI/G : 1.164E+02	NOMINAL : 5.29434 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.87335 dpm	EFF FILE : W144.CNF;92
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	303.000	294.714	4.794	9.1924	100.0000	6.01E+00	5.84E-01	4.32E-01	9.19E-01	3.56E-01
U232	5302.100	1172.000	1157.619	14.382	3.7923	100.0000	2.36E+01	1.95E+00	1.78E-01	4.11E-01	7.02E-01
U-235	4391.000	11.000	11.000	0.000	3.0409	80.90000	2.77E-01	8.63E-02	1.77E-01	4.21E-01	8.36E-02
U-238	4184.730	306.000	303.124	2.876	3.2215	100.0000	6.18E+00	5.96E-01	1.51E-01	3.58E-01	3.58E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

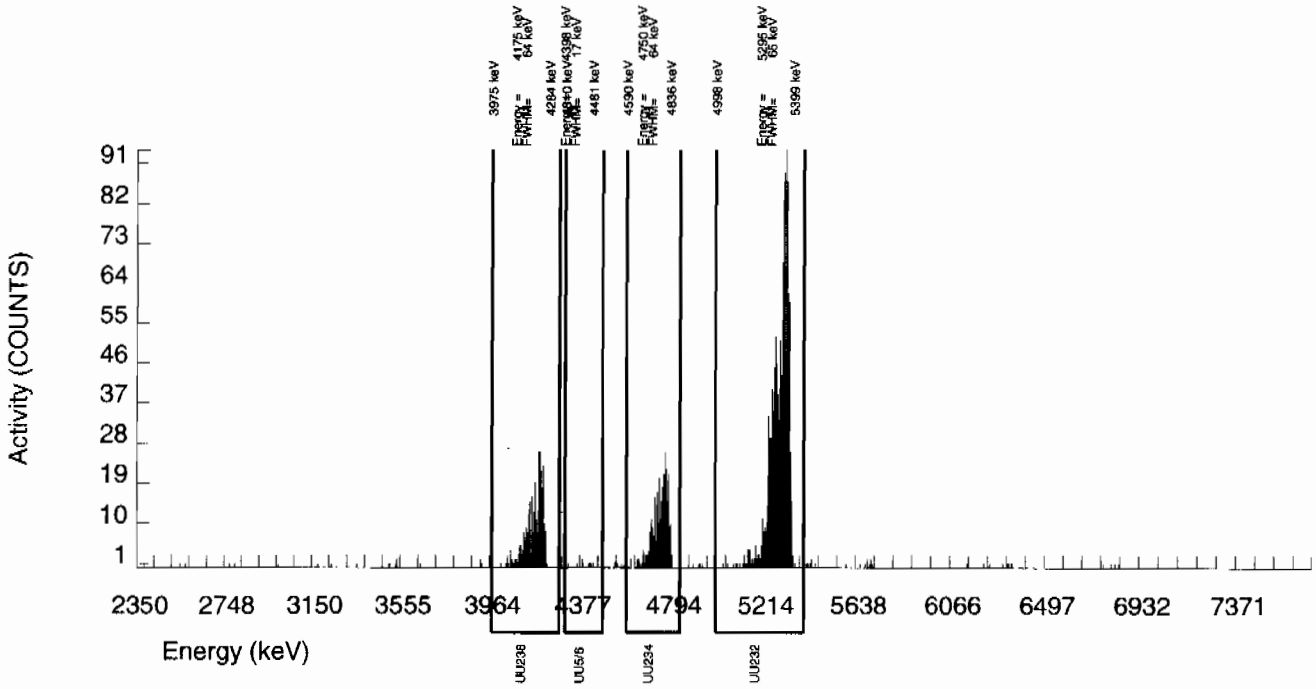

Radiochemistry Batch Checklist, Rev 9

Batch# 883020 Product: H3 Date: 7/16/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Diana Marie [illegible]

Secondary Review Performed By: [illegible]

LANL 7-22-09

LANL 7/22/09

Tritium Que Sheet

13-JUL-09

Batch #: 883020 **Analyst:** KXK2 **First Client Due Date** 22-JUL-09 **Internal Due Date:** 11-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** ~~0~~ KKG 7/13/09 **Expiration Date:** _____ **Vol:** _____

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.2

Prep Date: 7/10/09 **Initials:** KXK2 **Pipet ID:** 2970968 **Witness:** [illegible] 7/13/09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	~~Dist Vol (mL)~~ Total MOISTURE KKG 7/13/09
232347001-1	CAMO-09-10462	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-2	1		382.65	357.78	24.87
232347002-1	CAMO-09-10460	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-3	2		451.25	413.80	37.45
232347003-1	CAMO-09-10461	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-4	3		524.03	463.77	60.26
232347004-1	CAMO-09-10467	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-5	4		293.05	279.86	13.19
232582001-1	CAMO-09-10464	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	6-6	5		480.42	448.23	32.19
232582002-1	CAMO-09-10465	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	6-7	6	KKG 7/14/09	429.56	408.94	20.62
232585001-1	CAMO-09-6605	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-1	7		445.56	416.15	29.41
232585002-1	CAMO-09-6603	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-2	8		401.80	372.87	28.93
232585003-1	CAMO-09-6604	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-3	9		475.14	425.73	49.41
232591001-1	CAMO-09-9946	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-4	10		665.38	541.44	124.54
232664001-1	CAMO-09-9942	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-5	11		416.90	367.71	49.19
232664002-1	CAMO-09-9941	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-6	12		502.20	447.96	54.24
232664003-1	CAMO-09-9943	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-7	13		521.28	449.34	71.94
232664004-1	CAMO-09-10030	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-8	14		480.98	432.88	48.10
232664005-1	CAMO-09-9989	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-9	15		573.89	478.62	95.27
1201875586-1	MB for batch 883020	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	41-10	16		40.00	0	40.00
1201875587-1	~~CAMO-09-10462(232347001DUP)~~ CAMO-09-10462(232347003DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	22-JUN-09	10	41-11	3		524.03	463.77	60.26
1201875588-1	LCS for batch 883020	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	27-1	17		40.00	0	40.00

Bkg Rack #: 6-1

daitier

821

Comments: _____

Bkg prepared with dead water? Yes/No

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, ~~LS6000 (Brown)~~ 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069128, Silver 7060656*

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Econscint Ultra)*

Data Reviewed By: [illegible]

GEL Laboratories LLC, Radiochemistry Division

DATE	7/10/2009	INITIALS	KXK2		BATCH NUMBER	883020

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232347001	382.65	0.065	24.87	357.78	10	602
232347002	451.25	0.083	37.45	413.80	10	18
232347003	524.03	0.115	60.26	463.77	10	11
232347004	293.05	0.045	13.19	279.86	10	722
232582001	480.42	0.067	32.19	448.23	10	521
232582002	429.56	0.048	20.62	408.94	10	908
232585001	445.56	0.066	29.41	416.15	10	200
232585002	401.80	0.072	28.93	372.87	10	55
232585003	475.14	0.104	49.41	425.73	10	40
232591001	665.98	0.187	124.54	541.44	10	50
232664001	416.90	0.118	49.19	367.71	10	85
232664002	502.20	0.108	54.24	447.96	10	812
232664003	521.28	0.138	71.94	449.34	10	62
232664004	480.98	0.100	48.10	432.88	10	49
232664005	573.89	0.166	95.27	478.62	10	614
MB			0.00	0.00	10	74
LCS			0.00	0.00	10	10

Tritium Solid

Filename :	H3VAC.XLS	Spike S/N :	N/A	LCS S/N :	0134-K
File type :	Excel	Spike Exp Date :	N/A	LCS Exp Date :	3/27/2010
Version # :	1.2.5	Spike Activity (dpm/ml):	N/A	LCS Activity (dpm/ml):	2545.47
		Spike Volume Added:	N/A	LCS Volume Added:	0.20
Batch :	883020				
Analyst :	KXK2				
Prep Date :	7/10/2009				

					Procedure Code :	LSC_VH3S	
H-3 Abundance :	1	Pipet, 0.1 ml Stdev : +/-	0.000701	ml	Parmname :	Tritium	
Method Uncertainty :	0.0691	Pipet, 0.5 ml Stdev : +/-	0.002564	ml	Required MDC :	250	pCi/L
Geometry:	10mL DW/13mL Ecoscint Ultra	Pipet, 1.0 ml Stdev : +/-	0.005480	ml	Halflife of Tritium :	12.28	years
		Pipet, 5.0 ml Stdev : +/-	0.025729	ml			

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232347001.1	382.65	0.0249	0.0100	2.5729E-05	357.78	6.50%	1	6/22/2009 12:00
2	232347002.1	451.25	0.0375	0.0100	2.5729E-05	413.80	8.30%	2	6/22/2009 12:00
3	232347003.1	524.03	0.0603	0.0100	2.5729E-05	463.77	11.50%	3	6/22/2009 12:00
4	232347004.1	293.05	0.0132	0.0100	2.5729E-05	279.86	4.50%	4	6/22/2009 12:00
5	232582001.1	480.42	0.0322	0.0100	2.5729E-05	448.23	6.70%	5	6/25/2009 12:00
6	232582002.1	429.56	0.0206	0.0100	2.5729E-05	408.94	4.80%	6	6/25/2009 12:00
7	232585001.1	445.56	0.0294	0.0100	2.5729E-05	416.15	6.60%	7	6/25/2009 12:00
8	232585002.1	401.60	0.0289	0.0100	2.5729E-05	372.87	7.20%	8	6/25/2009 12:00
9	232585003.1	475.14	0.0494	0.0100	2.5729E-05	425.73	10.40%	9	6/25/2009 12:00
10	232591001.1	665.38	0.1245	0.0100	2.5729E-05	541.44	18.63%	10	6/25/2009 12:00
11	232664001.1	416.90	0.0492	0.0100	2.5729E-05	367.71	11.80%	11	6/26/2009 12:00
12	232664002.1	502.20	0.0542	0.0100	2.5729E-05	447.96	10.80%	12	6/26/2009 12:00
13	232664003.1	521.28	0.0719	0.0100	2.5729E-05	449.34	13.80%	13	6/26/2009 12:00
14	232664004.1	480.98	0.0481	0.0100	2.5729E-05	432.88	10.00%	14	6/26/2009 12:00
15	232664005.1	573.89	0.0953	0.0100	2.5729E-05	478.62	16.60%	15	6/26/2009 12:00
16	1201875586.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	16	7/10/2009 0:00
17	1201875587.1	524.03	0.0603	0.0100	2.5729E-05	463.77	11.50%	3	6/22/2009 12:00
18	1201875588.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	17	7/10/2009 0:00

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	6-2	95	129.2	7.93	6.06	95	7/14/2009 18:04	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2644	0.00792	6-1	7/14/2009 16:25
2	6-3	95	132.5	11.58	6.06	95	7/14/2009 19:43	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2585	0.00792	6-1	7/14/2009 16:25
3	6-4	95	132	12.78	6.06	95	7/14/2009 21:21	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2594	0.00792	6-1	7/14/2009 16:25
4	6-5	95	129.8	6.93	6.06	95	7/14/2009 22:59	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2633	0.00792	6-1	7/14/2009 16:25
5	6-6	95	133.6	9.14	6.06	95	7/15/2009 0:38	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2565	0.00792	6-1	7/14/2009 16:25
6	6-7	95	136.8	8.04	6.06	95	7/15/2009 2:16	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2506	0.00792	6-1	7/14/2009 16:25
7	41-1	95	138.1	6.61	6.06	95	7/15/2009 5:08	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2484	0.00792	6-1	7/14/2009 16:25
8	41-2	60	133.7	5.72	6.06	95	7/15/2009 7:41	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2564	0.00792	6-1	7/14/2009 16:25
9	41-3	60	128.9	7.18	6.06	95	7/15/2009 8:43	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2649	0.00792	6-1	7/14/2009 16:25
10	41-4	60	128.5	6.6	6.06	95	7/15/2009 9:46	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2656	0.00792	6-1	7/14/2009 16:25
11	41-5	60	129.1	6.02	6.06	95	7/15/2009 10:48	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2645	0.00792	6-1	7/14/2009 16:25
12	41-6	60	130.5	7.48	6.06	95	7/15/2009 11:51	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2621	0.00792	6-1	7/14/2009 16:25
13	41-7	60	128.4	6.85	6.06	95	7/15/2009 12:53	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2658	0.00792	6-1	7/14/2009 16:25
14	41-8	60	128.7	7.33	6.06	95	7/15/2009 13:56	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2652	0.00792	6-1	7/14/2009 16:25
15	41-9	60	129.3	6.7	6.06	95	7/15/2009 14:58	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2642	0.00792	6-1	7/14/2009 16:25
16	41-10	60	128.8	5.32	6.06	95	7/15/2009 16:01	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2651	0.00792	6-1	7/14/2009 16:25
17	41-11	60	132.3	12.07	6.06	95	7/15/2009 17:03	0.996	LSCSILVER	8/6/2008	8/31/2009	0.2589	0.00792	6-1	7/14/2009 16:25
18	29-1	15	130.3	42.87	6.06	95	7/15/2009 18:05	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2624	0.00792	6-1	7/14/2009 16:25

824

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	142.2958	100.4620	250	206.3234	**319.7335**	0.205	1.870	0.384	65.6138	69.2895		SAMPLE				
2	145.5156	102.7353	250	210.9921	**965.1686**	0.079	5.520	0.431	75.3445	100.9729		SAMPLE				
3	145.0171	102.3633	250	210.2692	**1170.9623**	0.067	6.720	0.445	77.5983	112.5729		SAMPLE				
4	142.8712	100.8683	250	207.1578	**149.3545**	0.425	0.870	0.370	63.4807	64.3274		SAMPLE				
5	146.5684	103.4785	250	212.5185	**542.4323**	0.130	3.060	0.400	70.4457	79.9366		SAMPLE				
6	149.9428	105.8609	250	217.4113	**356.7346**	0.195	1.980	0.385	69.4109	73.7237		SAMPLE				
7	151.3714	106.8695	250	219.4827	**100.0371**	0.664	0.550	0.365	66.4240	66.7884		SAMPLE				
8	166.7009	117.6923	250	244.1968	**-59.9234**	1.173	-0.340	0.399	70.3048	70.3049		SAMPLE				
9	161.3397	113.9072	250	236.3432	**191.0462**	0.383	1.120	0.428	73.0612	74.2629		SAMPLE				
10	160.9146	113.6071	250	235.7206	**91.8689**	0.772	0.540	0.417	70.9229	71.2110		SAMPLE				
11	161.5311	114.0423	250	236.6236	**-6.8312**	10.128	-0.040	0.405	69.1863	69.1866		SAMPLE				
12	163.0536	115.1173	250	238.8540	**244.7925**	0.306	1.420	0.434	74.8368	76.7543		SAMPLE				
13	160.7870	113.5170	250	235.5336	**134.2942**	0.534	0.790	0.422	71.7112	72.3186		SAMPLE				
14	161.1067	113.7427	250	236.0020	**216.3200**	0.340	1.270	0.431	73.4511	74.9803		SAMPLE				
15	161.7504	114.1972	250	236.9449	**109.4472**	0.655	0.640	0.419	71.6323	72.0368		SAMPLE				
16	160.8795	113.5823	250	235.6691	**-125.8670**	0.528	-0.740	0.390	66.4129	66.4132		MB				
17	165.1751	116.6150	250	241.9617	**1049.5386**	0.086	6.010	0.515	89.8899	115.8597	232347003.1	DUP	10.9%	0.2658		
18	273.7888	193.2972	250	420.9553	**6324.1227**	0.047	36.810	1.709	293.6696	529.3829		LCS			5733.0311	110.3%

ID:TRITIUM 14 JUL 2009 16:15

USER: 2 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	6-1	95.00	129.3	6.06	9.08	43.93	3.14	2.66	98.03
2	6-2	95.00	129.2	7.93	7.72	45.81	3.06	2.19	196.53
3	6-3	95.00	132.5	11.58	6.35	52.07	2.88	2.49	295.12
4	6-4	95.00	132.0	12.78	5.99	51.79	2.88	2.21	393.67
5	6-5	95.00	129.8	6.93	8.06	44.73	3.08	1.15	491.96
6	6-6	95.00	133.6	9.14	7.09	47.08	3.02	1.87	590.42
7	6-7	95.00	136.8	8.04	7.53	46.39	3.03	1.48	688.79

QP

INSTRUMENT CALIBRATION: Maxi 15 JUL 2009 03:46
Calibration successful

QP

Calibrating Auto DPM
Counting Standard for 14C
Calibration Complete: 14C
Counting Standard for 3H
Calibration Complete: 3H
Calibration Successful

QPQP

ID:TRITIUM 15 JUL 2002 04:50

USER: 2 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	41-1	95.00	138.1	6.61	8.35	46.37	3.03	1.43	97.83
2	41-2	38.80	133.6	6.34	13.51	44.48	4.86	1.82	138.62
3	41-3	0.05	128.1	0.00	0.00	0.00	0.00	0.00	139.45
4	41-4	0.05	128.4	20.00	200.00	80.00	100.00	3.13	140.35
5	41-5	0.05	129.2	40.00	141.42	60.00	115.47	4.18	141.23
6	41-6	0.05	130.8	0.00	0.00	20.00	200.00	17.61	142.13
7	41-7	0.05	128.6	20.00	200.00	80.00	100.00	2.99	143.03
8	41-8	0.05	129.7	0.00	0.00	80.00	200.00	10.08	143.95
9	41-9	0.05	129.4	0.00	0.00	20.00	200.00	9.09	144.83
10	41-10	0.05	128.7	40.00	141.42	100.00	89.44	1.77	145.72
11	41-11	0.05	132.5	40.00	141.42	80.00	100.00	2.87	146.62
12	41-12	0.05	130.0	60.00	115.47	160.00	70.71	0.90	147.52

7-16-09

ID:TRITIUM 15 JUL 2002 07:22

USER: 2 COMMENT:SILVER

PRESET TIME : 60.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
2	41-2	60.00	133.7	5.72	11.55	42.37	4.00	2.01	62.01
3	41-3	60.00	128.9	7.18	10.14	46.35	3.82	1.77	124.55
4	41-4	60.00	128.5	6.60	10.50	45.68	3.85	1.43	187.03
5	41-5	60.00	129.1	6.02	11.11	45.95	3.84	1.59	249.54
6	41-6	60.00	130.5	7.48	9.90	46.02	3.84	1.72	312.05
7	41-7	60.00	128.4	6.85	10.25	45.47	3.85	1.29	374.51
8	41-8	60.00	128.7	7.33	9.88	45.47	3.85	1.25	436.97
9	41-9	60.00	129.3	6.70	10.23	45.85	3.83	0.85	499.36
10	41-10	60.00	128.8	5.32	11.48	43.70	3.92	0.72	561.73
11	41-11	60.00	132.3	12.07	7.58	50.98	3.63	1.03	624.18

QPQP

ID:TRITIUM 15 JUL 2009 17:57

USER: 3 COMMENT:SILVER

PRESET TIME : 15.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	29-1	15.00	130.3	42.87	7.90	81.20	5.74	0.33	15.80
MISSING SAMPLE									
13	30-1	15.00	127.5	6.60	21.29	44.13	7.84	2.02	32.40
14	30-2	15.00	127.6	9.60	17.46	44.27	7.84	2.26	48.76
15	30-3	15.00	127.7	13.13	14.68	51.80	7.23	1.67	65.11
16	30-4	15.00	128.5	7.53	19.79	46.33	7.65	1.96	81.47
17	30-5	15.00	128.4	5.53	23.36	42.47	7.99	2.00	97.83
18	30-6	15.00	124.2	6.20	21.93	43.67	7.88	1.86	114.20
19	30-7	15.00	128.0	7.67	19.52	43.73	7.97	1.96	130.56
20	30-8	15.00	128.5	22.07	11.17	60.87	6.66	1.91	146.93
21	30-9	15.00	121.9	19.60	11.88	58.07	6.82	1.43	163.30

QPQ`

SLB
7.15.09

Sample Count Start Time:	14 Jul 2009 16:25:55		
Data Capture Date	14 Jul 2009 18:01:14		
User Filename	S02071406-1A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	6-1	95.00
H#, Total Counts:	129.3	3859	
Start, End, X-Axis:	0	990	Channel Number

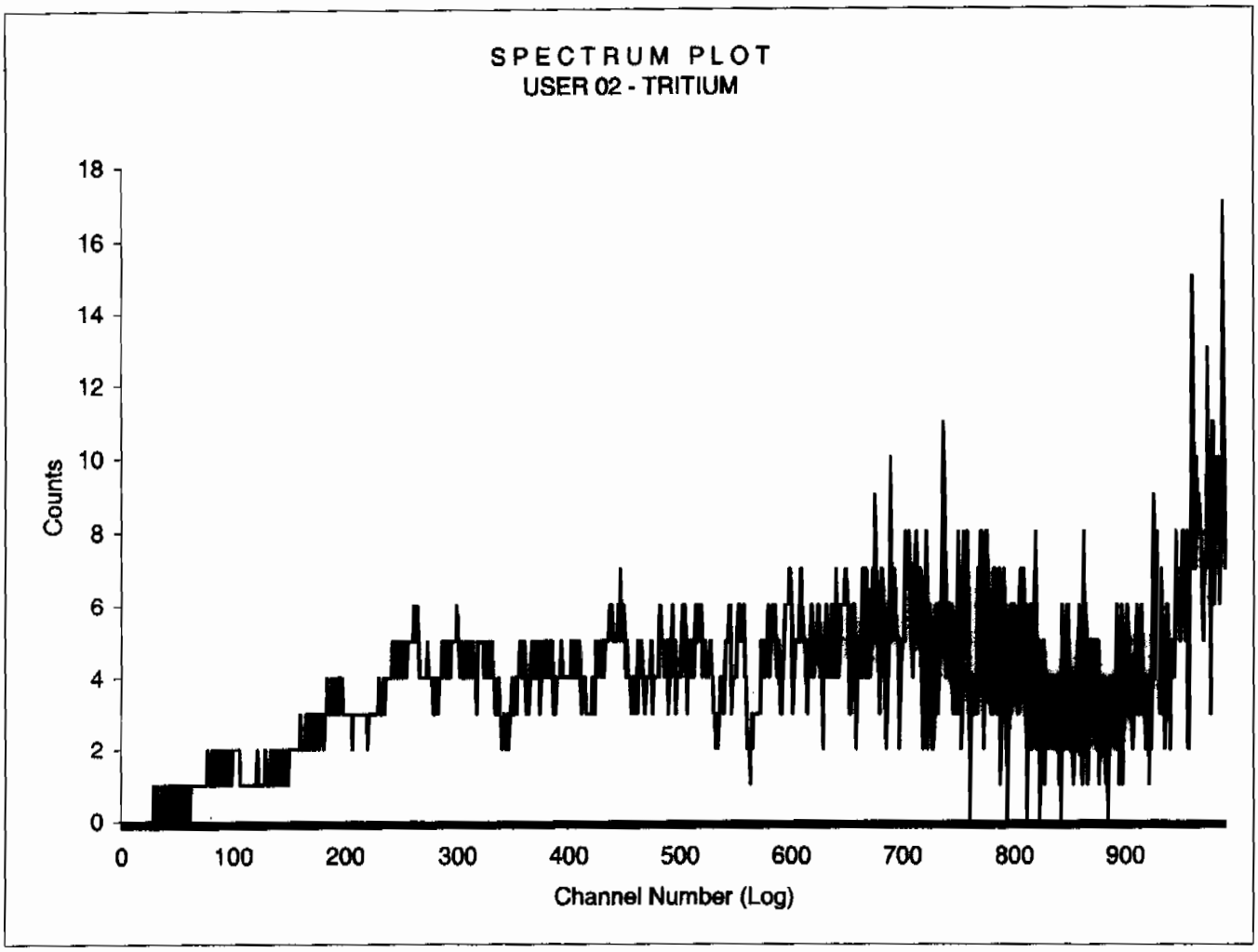

Sample Count Start Time:	14 Jul 2009 18:04:25		
Data Capture Date	14 Jul 2009 19:39:44		
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	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	6-2	95.00
H#, Total Counts:	129.2	4087	
Start, End, X-Axis:	0	990	Channel Number

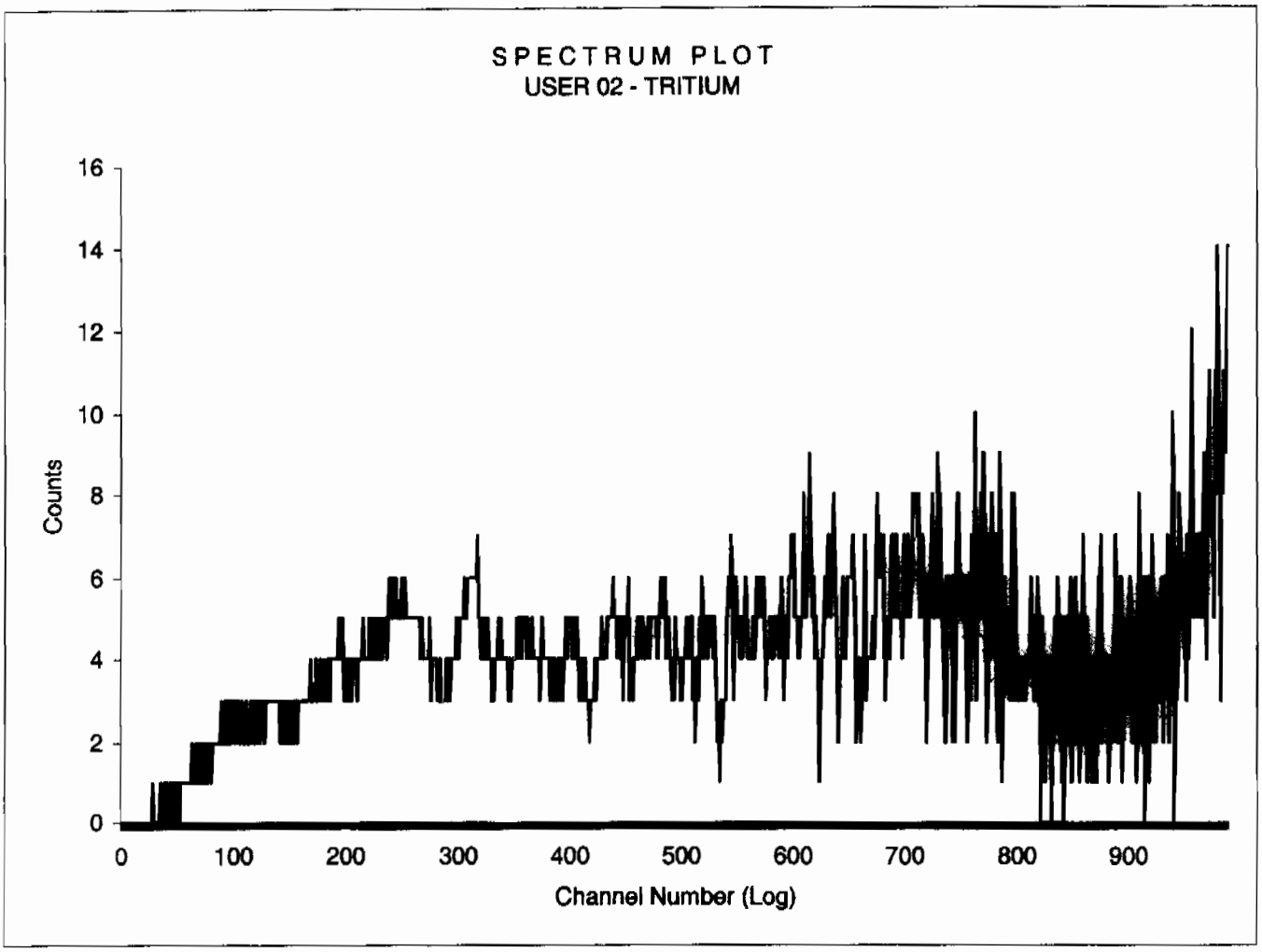

Sample Count Start Time:	14 Jul 2009 19:43:00		
Data Capture Date	14 Jul 2009 21:18:20		
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	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	6-3	95.00
H#, Total Counts:	132.5	4672	
Start, End, X-Axis:	0	990	Channel Number

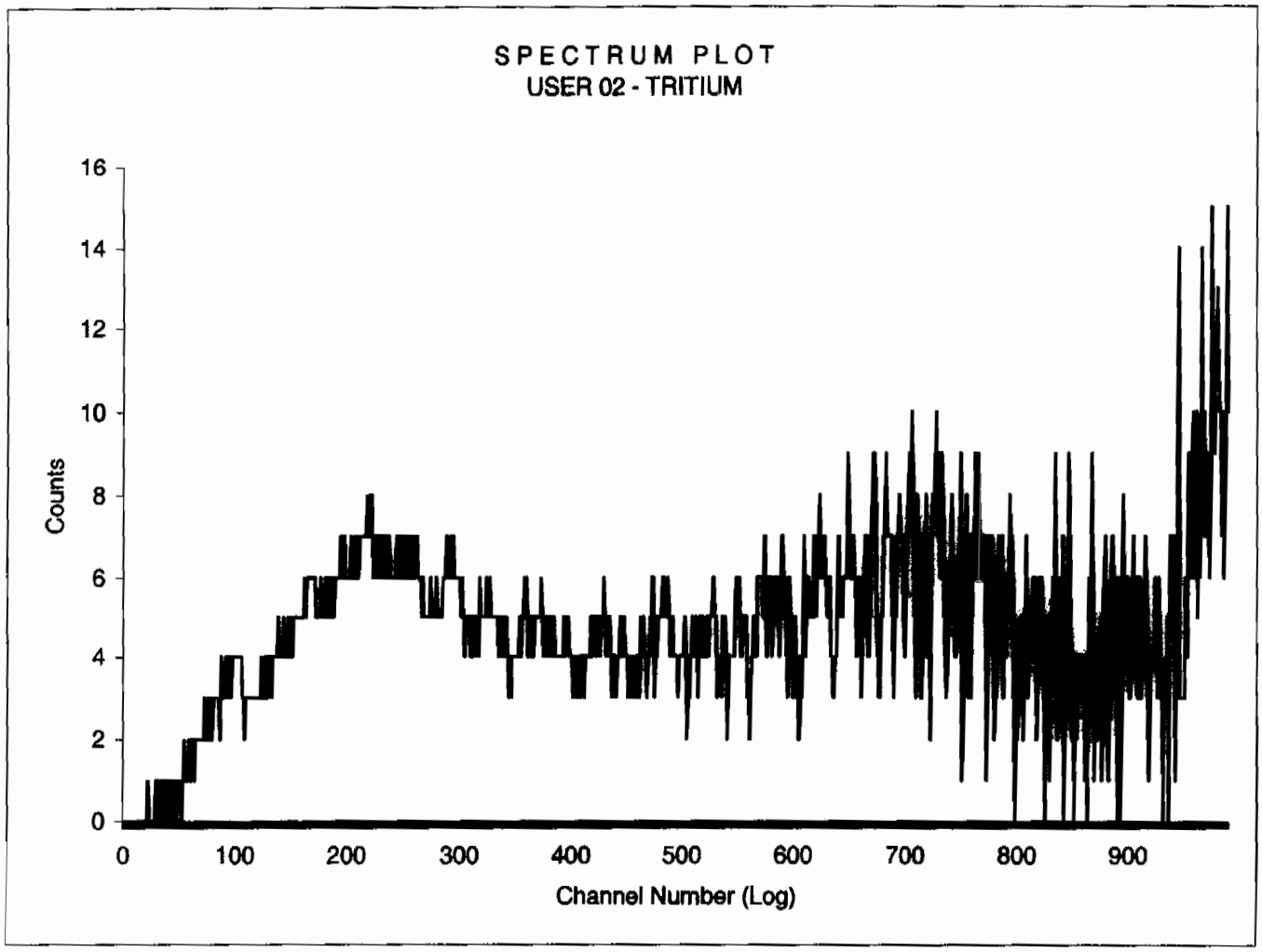

Sample Count Start Time:	14 Jul 2009 21:21:33		
Data Capture Date	14 Jul 2009 22:56:53		
User Filename	S02071406-4A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	6-4	95.00
H#, Total Counts:	132.0	4609	
Start, End, X-Axis:	0	990	Channel Number

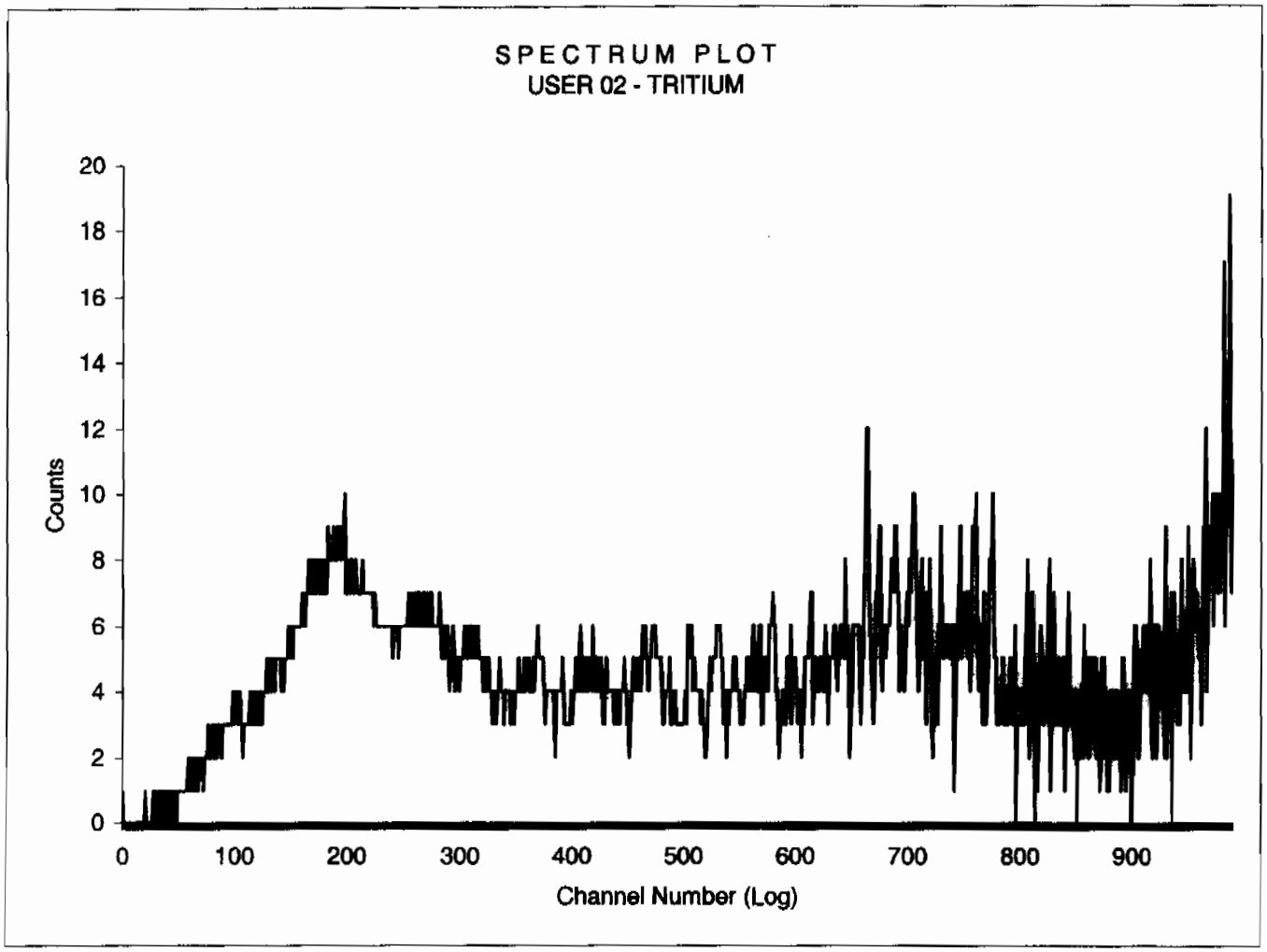

Sample Count Start Time:	14 Jul 2009 22:59:51		
Data Capture Date	15 Jul 2009 00:35:10		
User Filename	S02071506-5A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	6-5	95.00
H#, Total Counts:	129.8	3966	
Start, End, X-Axis:	0	990	Channel Number

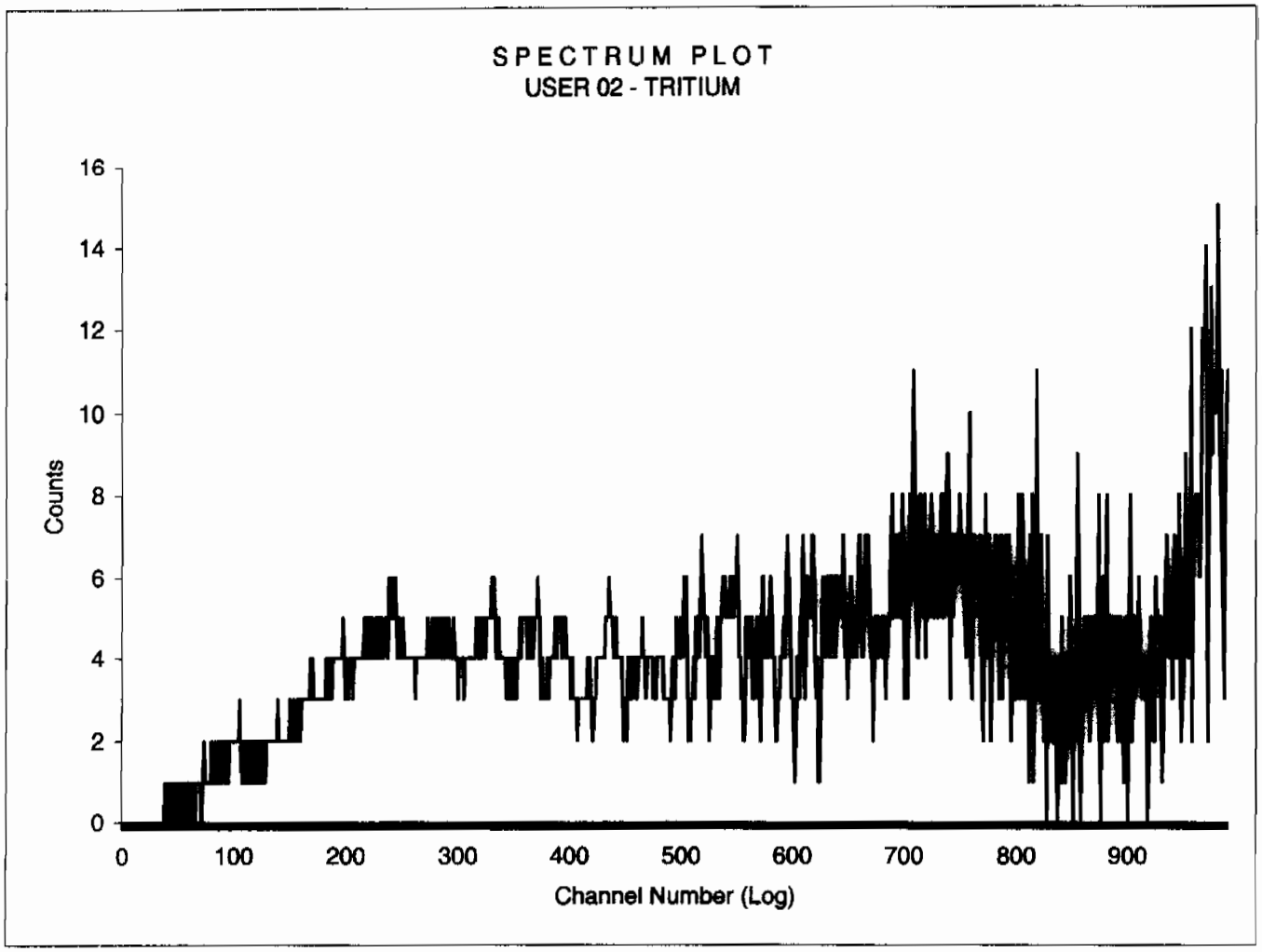

Sample Count Start Time:	15 Jul 2009 00:38:18		
Data Capture Date	15 Jul 2009 02:13:38		
User Filename	S02071506-6A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	6-6	95.00
H#, Total Counts:	133.6	4213	
Start, End, X-Axis:	0	990	Channel Number

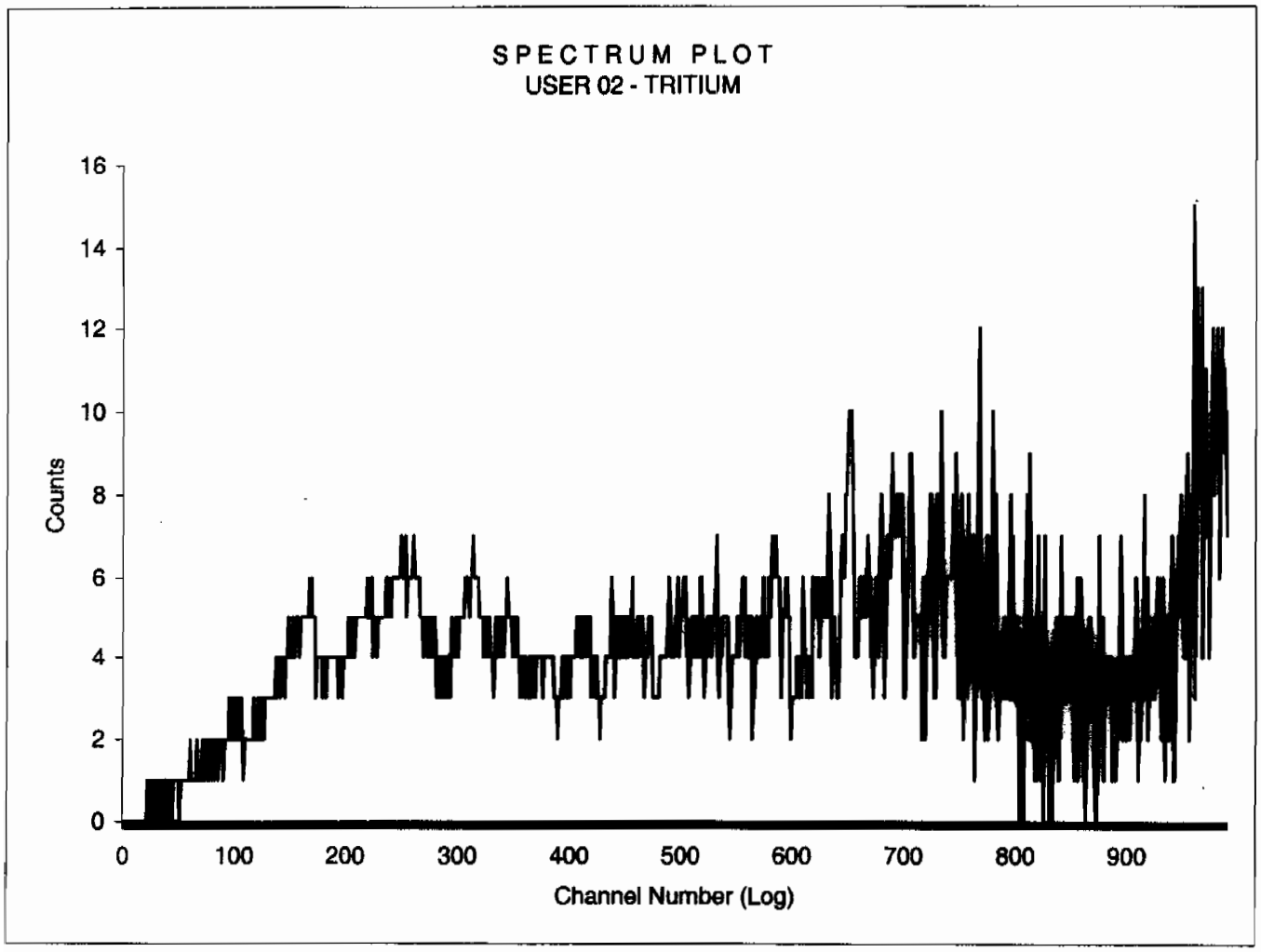

Sample Count Start Time:	15 Jul 2009 02:16:40		
Data Capture Date	15 Jul 2009 03:52:00		
User Filename	S02071506-7A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	6-7	95.00
H#, Total Counts:	136.8	4152	
Start, End, X-Axis:	0	990	Channel Number

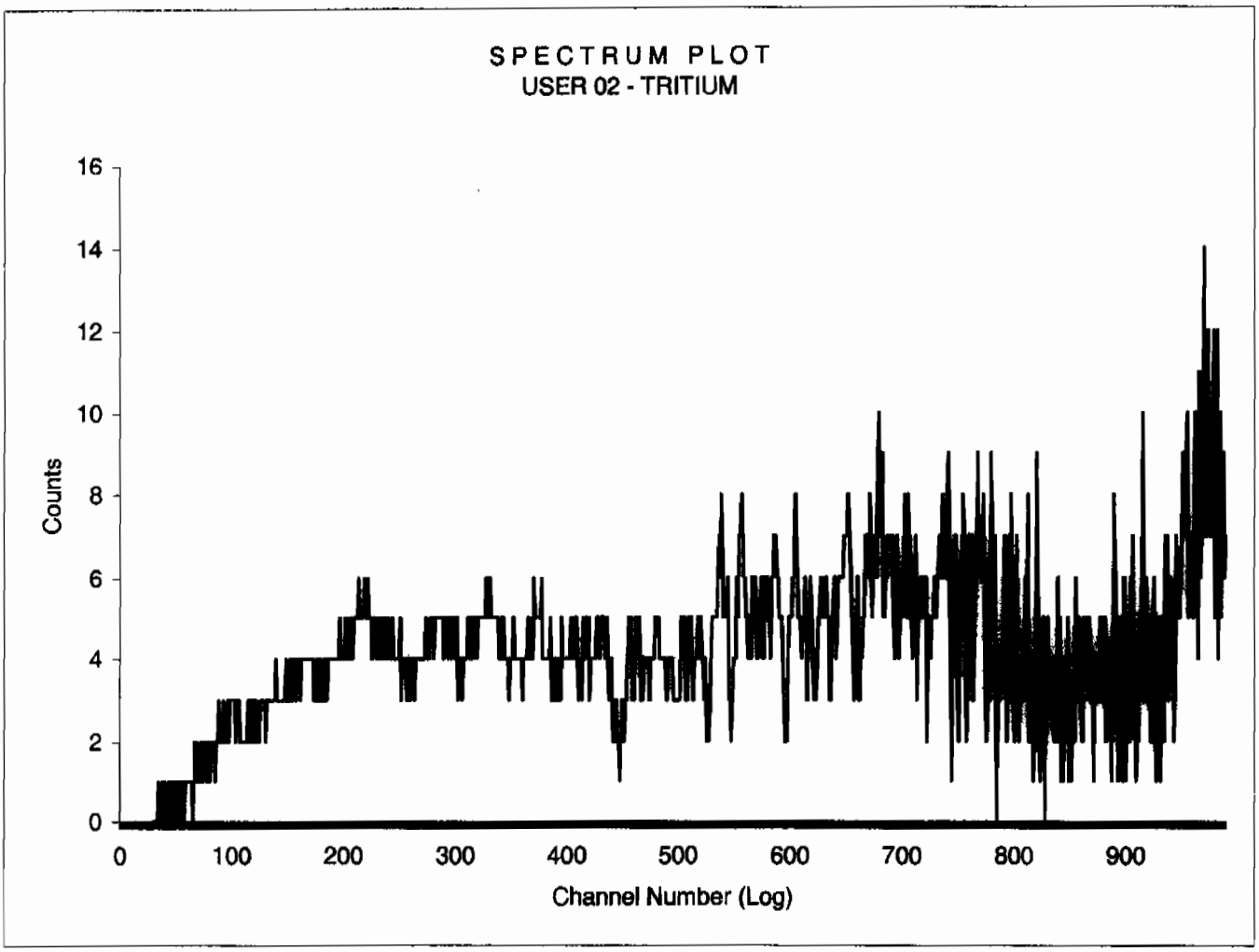

Sample Count Start Time:	15 Jul 2009 05:08:32		
Data Capture Date	15 Jul 2009 06:43:58		
User Filename	S02071541-1A.XLS		
	U02071541-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	41-1	95.00
H#, Total Counts:	138.1	4171	
Start, End, X-Axis:	0	990	Channel Number

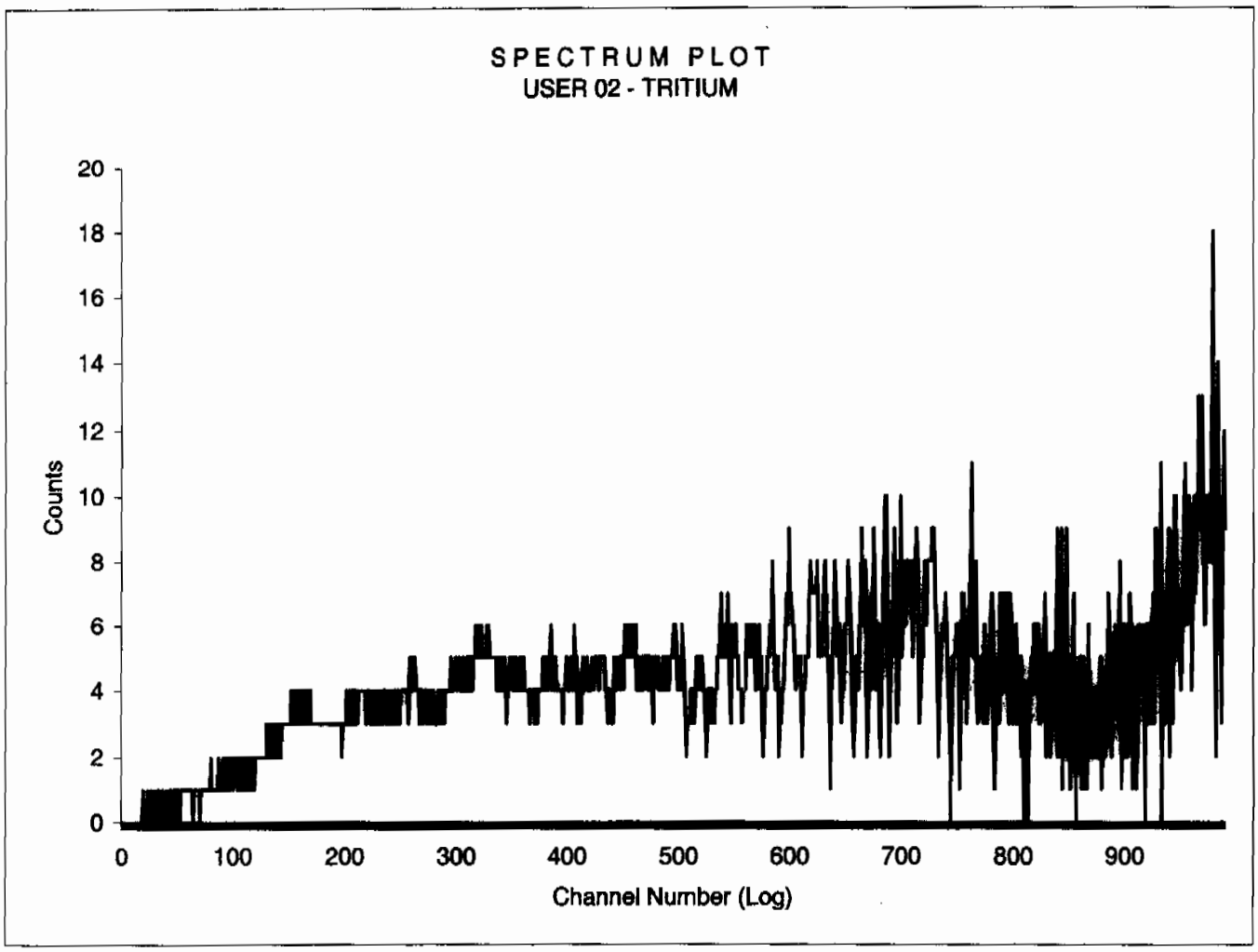

Sample Count Start Time:	15 Jul 2009 07:41:21		
Data Capture Date	15 Jul 2009 08:41:47		
User Filename	S02071541-2B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	41-2	60.00
H#, Total Counts:	133.7	2407	
Start, End, X-Axis:	0	990	Channel Number

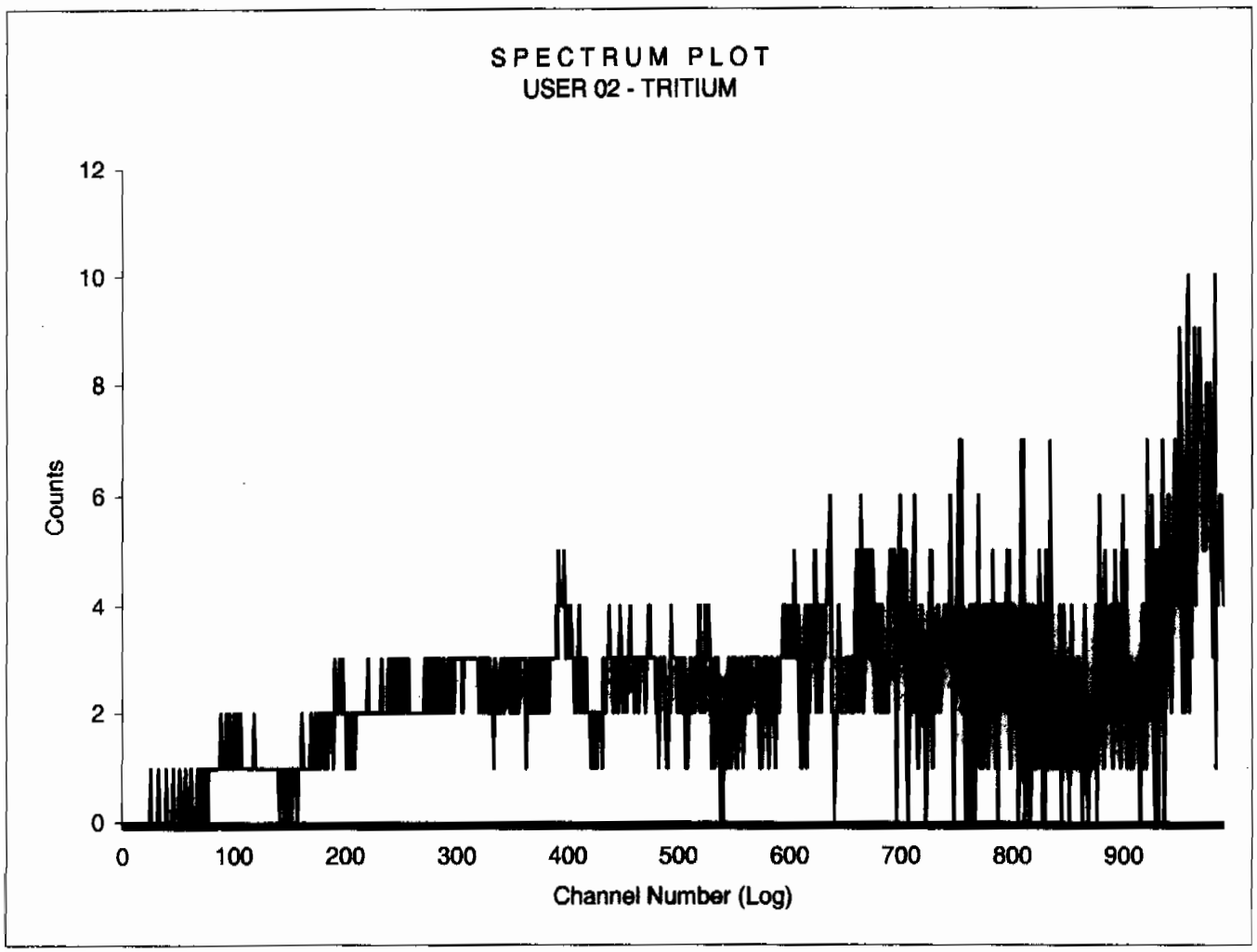

Sample Count Start Time:	15 Jul 2009 08:43:53		
Data Capture Date	15 Jul 2009 09:44:21		
User Filename	S02071541-3B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	41-3	60.00
H#, Total Counts:	128.9	2594	
Start, End, X-Axis:	0	990	Channel Number

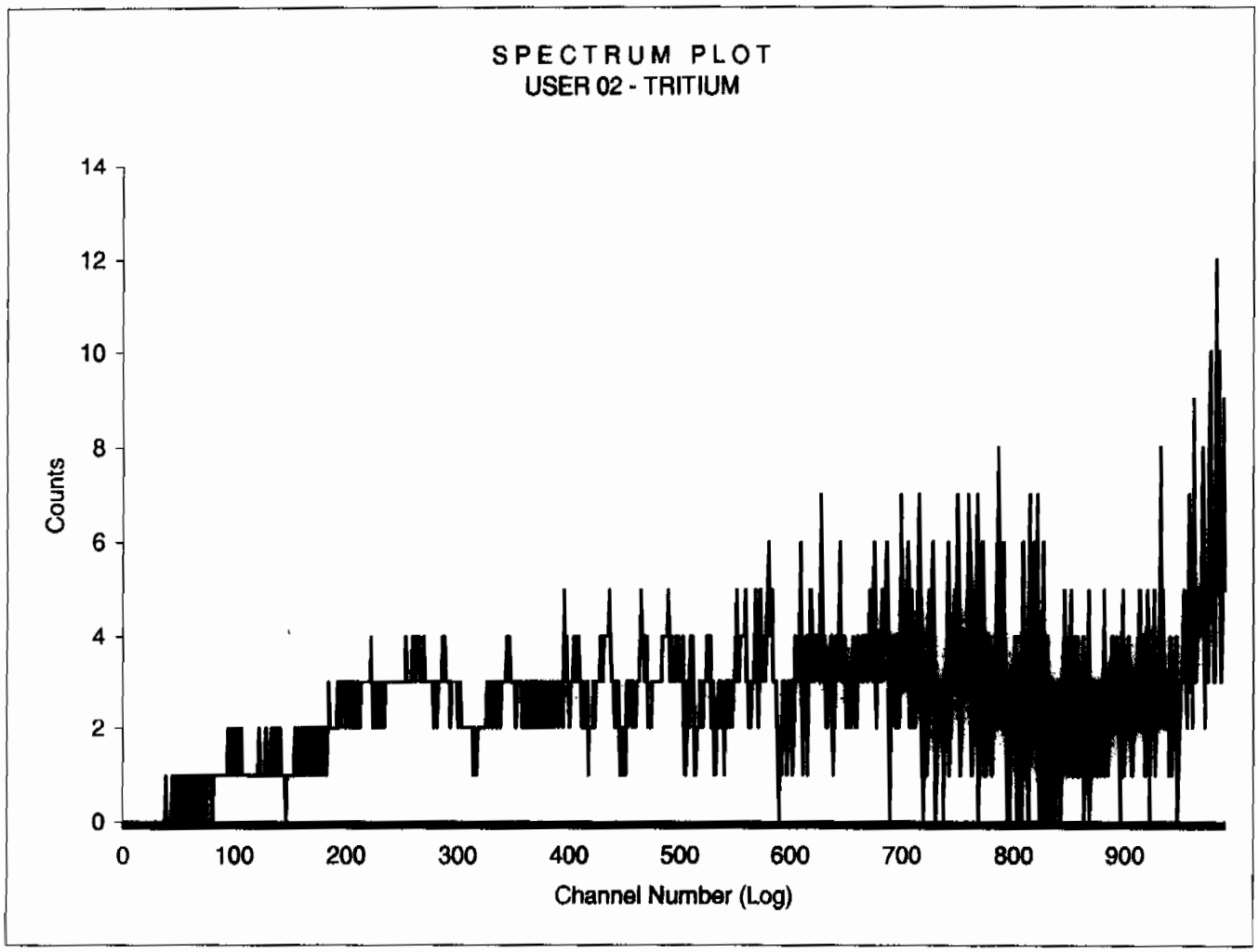

Sample Count Start Time:	15 Jul 2009 09:46:22		
Data Capture Date	15 Jul 2009 10:46:48		
User Filename	S02071541-4B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	41-4	60.00
H#, Total Counts:	128.5	2530	
Start, End, X-Axis:	0	990	Channel Number

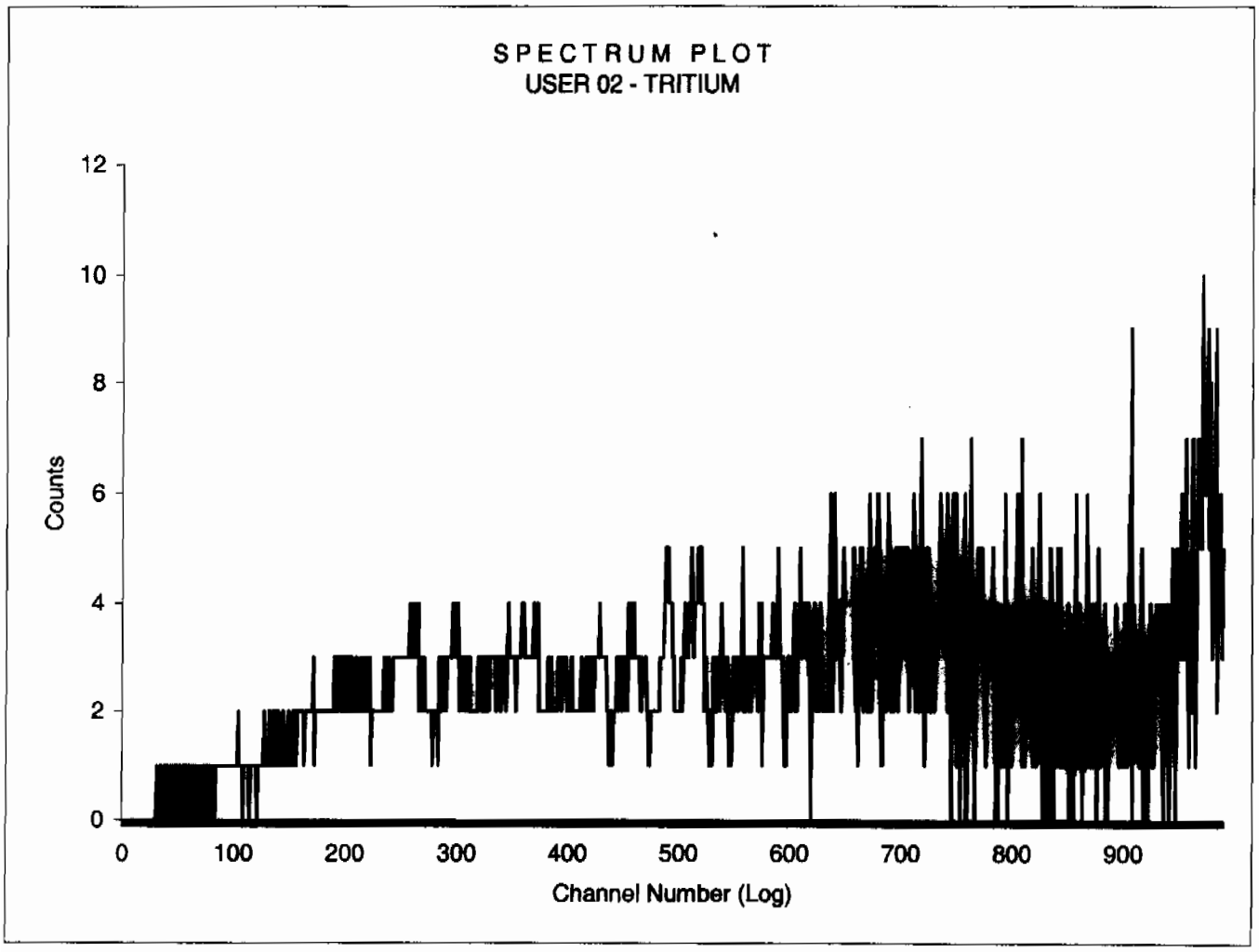

Sample Count Start Time:	15 Jul 2009 10:48:52		
Data Capture Date	15 Jul 2009 11:49:19		
User Filename	S02071541-5B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	41-5	60.00
H#, Total Counts:	129.1	2559	
Start, End, X-Axis:	0	990	Channel Number

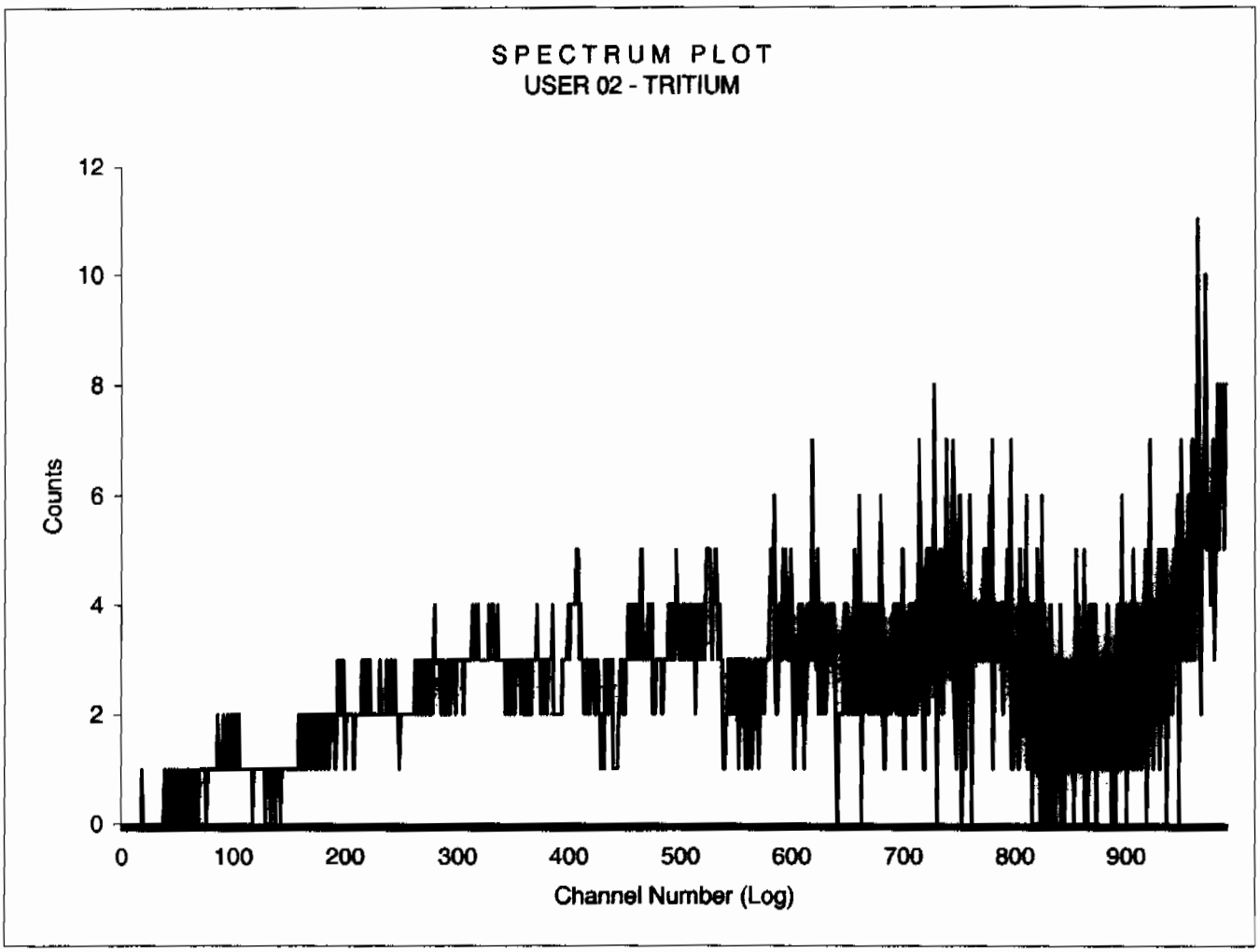

Sample Count Start Time:	15 Jul 2009 11:51:23		
Data Capture Date	15 Jul 2009 12:51:49		
User Filename	S02071541-6B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	41-6	60.00
H#, Total Counts:	130.5	2579	
Start, End, X-Axis:	0	990	Channel Number

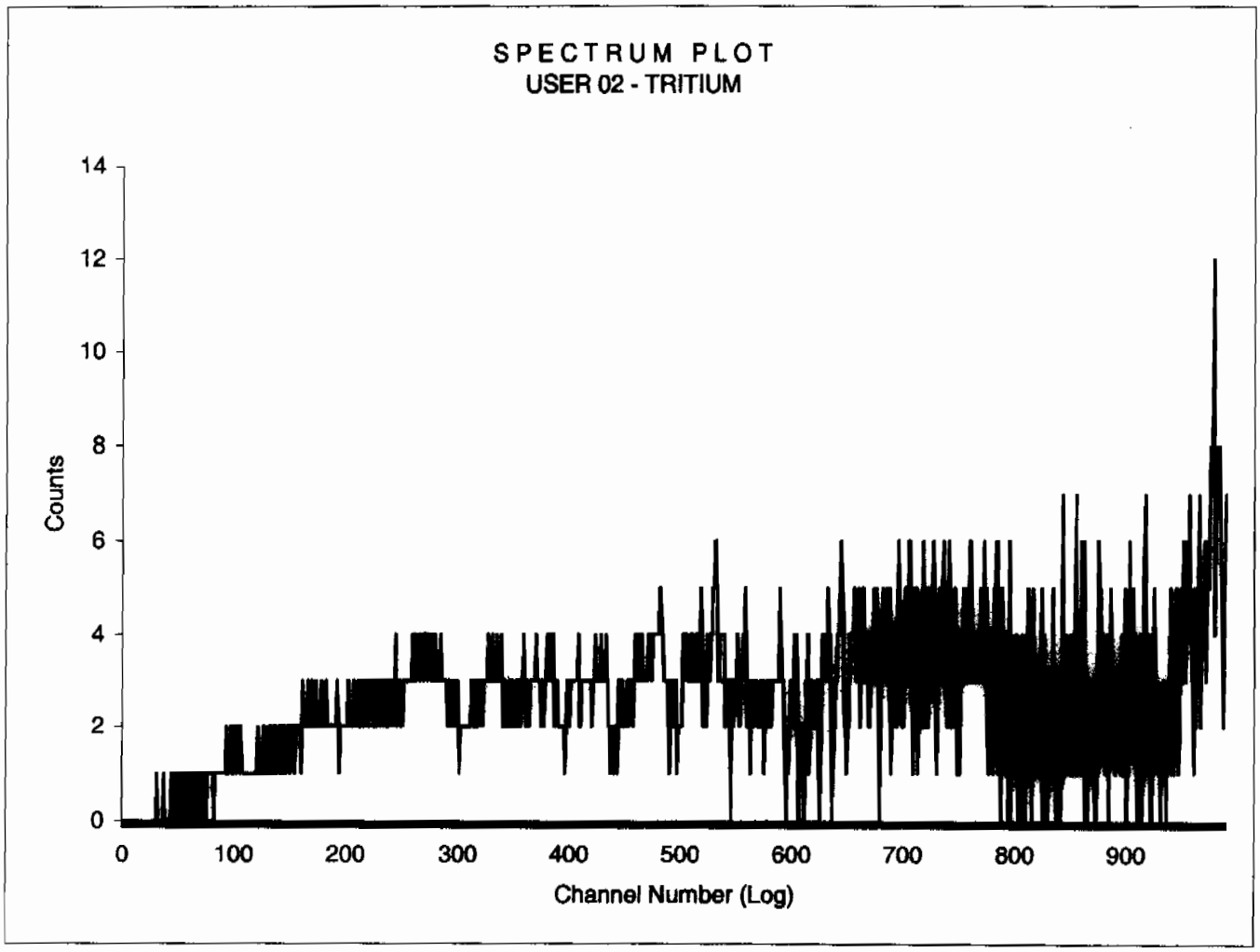

Sample Count Start Time:	15 Jul 2009 12:53:51		
Data Capture Date	15 Jul 2009 13:54:17		
User Filename	S02071541-7B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	41-7	60.00
H#, Total Counts:	128.4	2542	
Start, End, X-Axis:	0	990	Channel Number

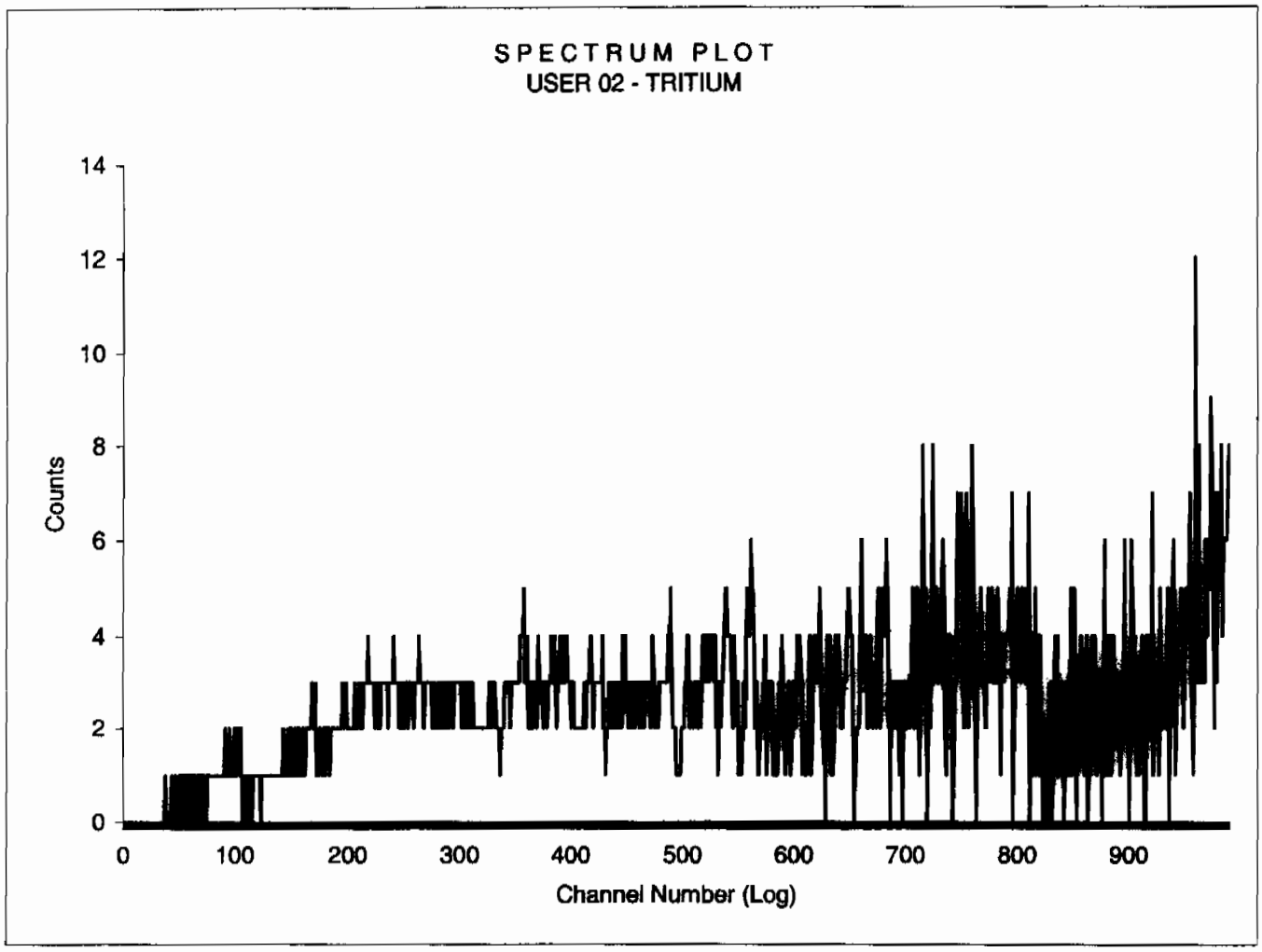

Sample Count Start Time:	15 Jul 2009 13:56:18		
Data Capture Date	15 Jul 2009 14:56:44		
User Filename	S02071541-8B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	41-8	60.00
H#, Total Counts:	128.7	2548	
Start, End, X-Axis:	0	990	Channel Number

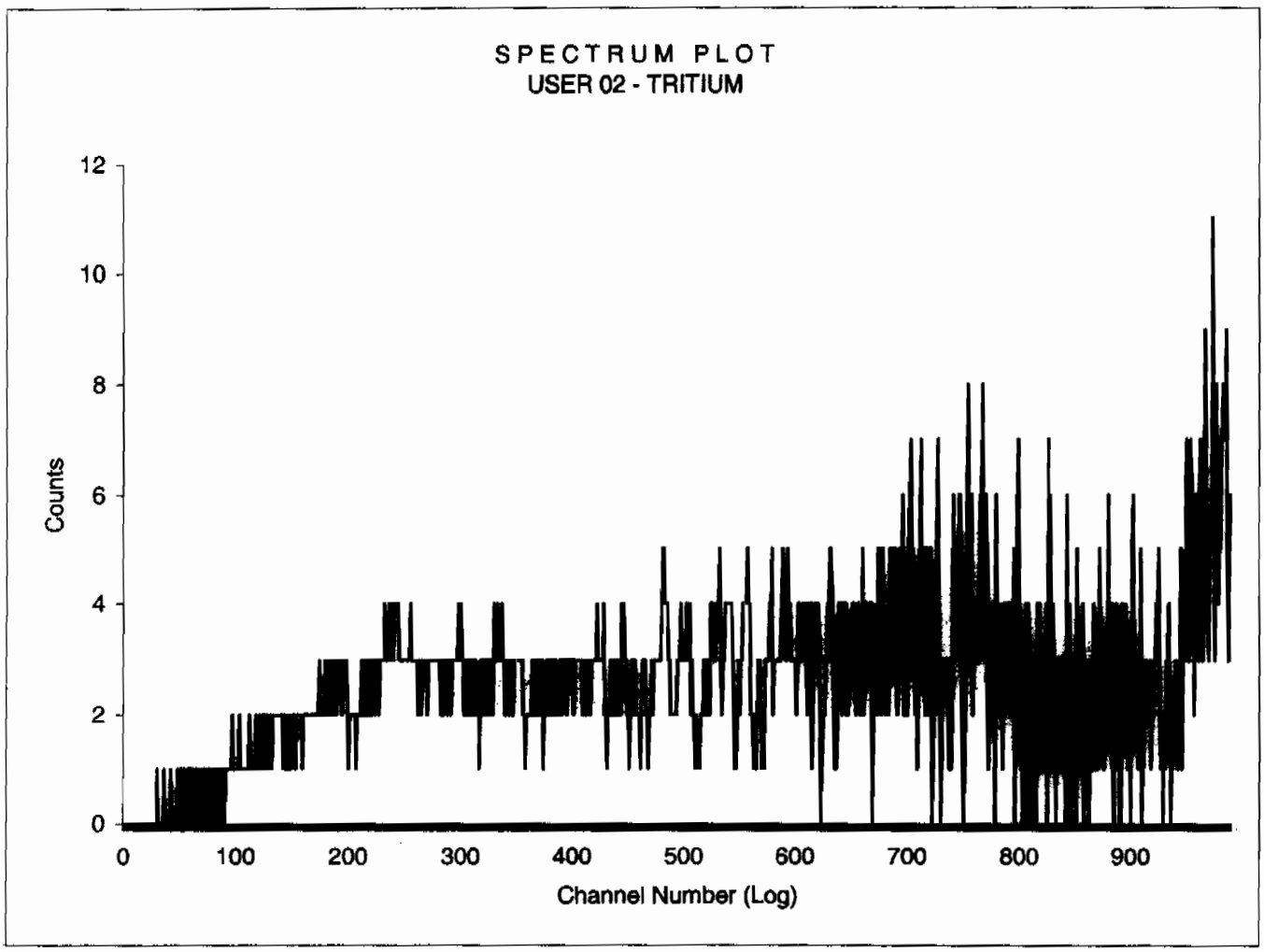

Sample Count Start Time:	15 Jul 2009 14:58:42		
Data Capture Date	15 Jul 2009 15:59:08		
User Filename	S02071541-9B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	41-9	60.00
H#, Total Counts:	129.3	2573	
Start, End, X-Axis:	0	990	Channel Number

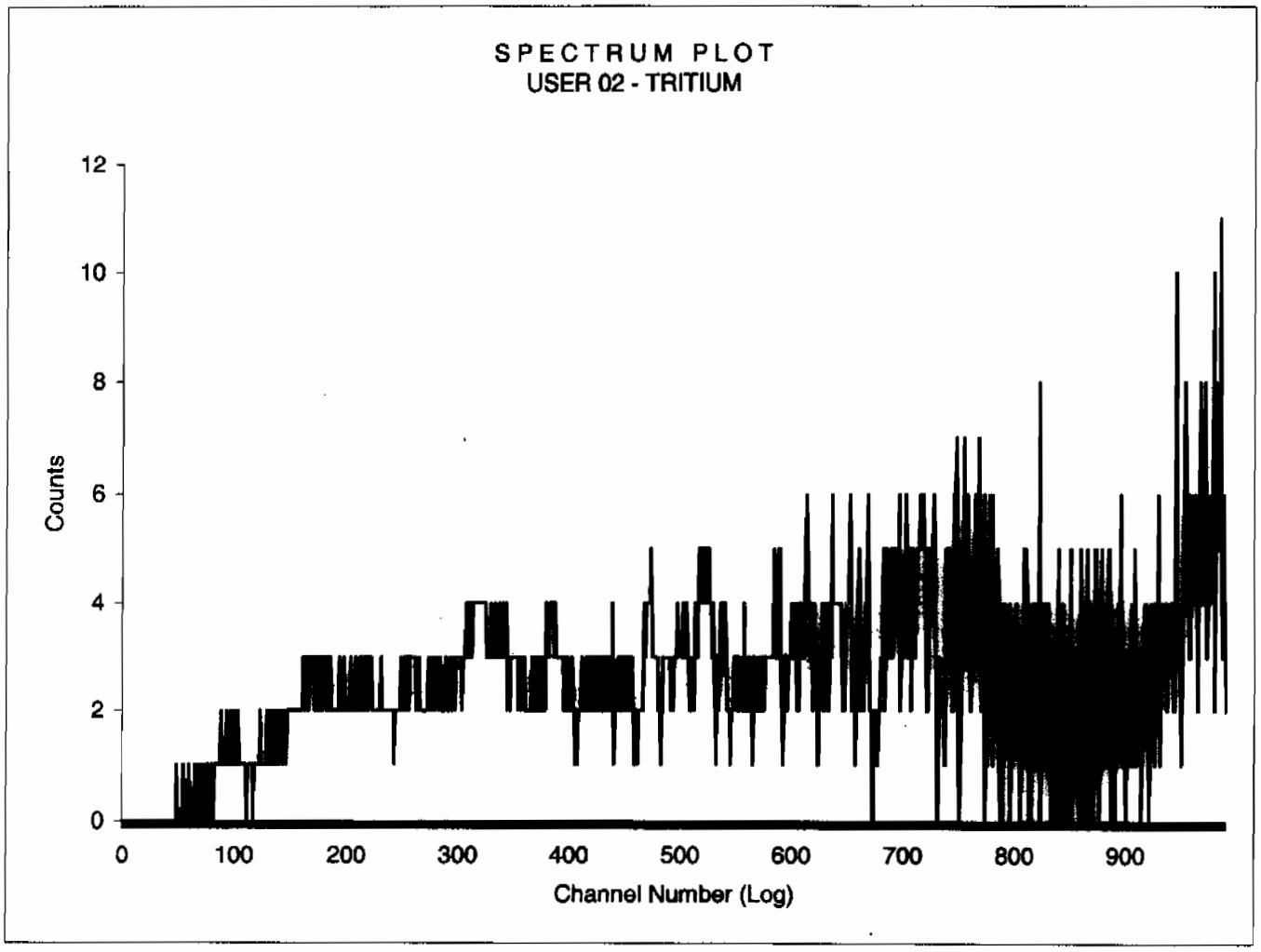

Sample Count Start Time:	15 Jul 2009 16:01:04		
Data Capture Date	15 Jul 2009 17:01:30		
User Filename	S02071541-10B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	41-10	60.00
H#, Total Counts:	128.8	2395	
Start, End, X-Axis:	0	990	Channel Number

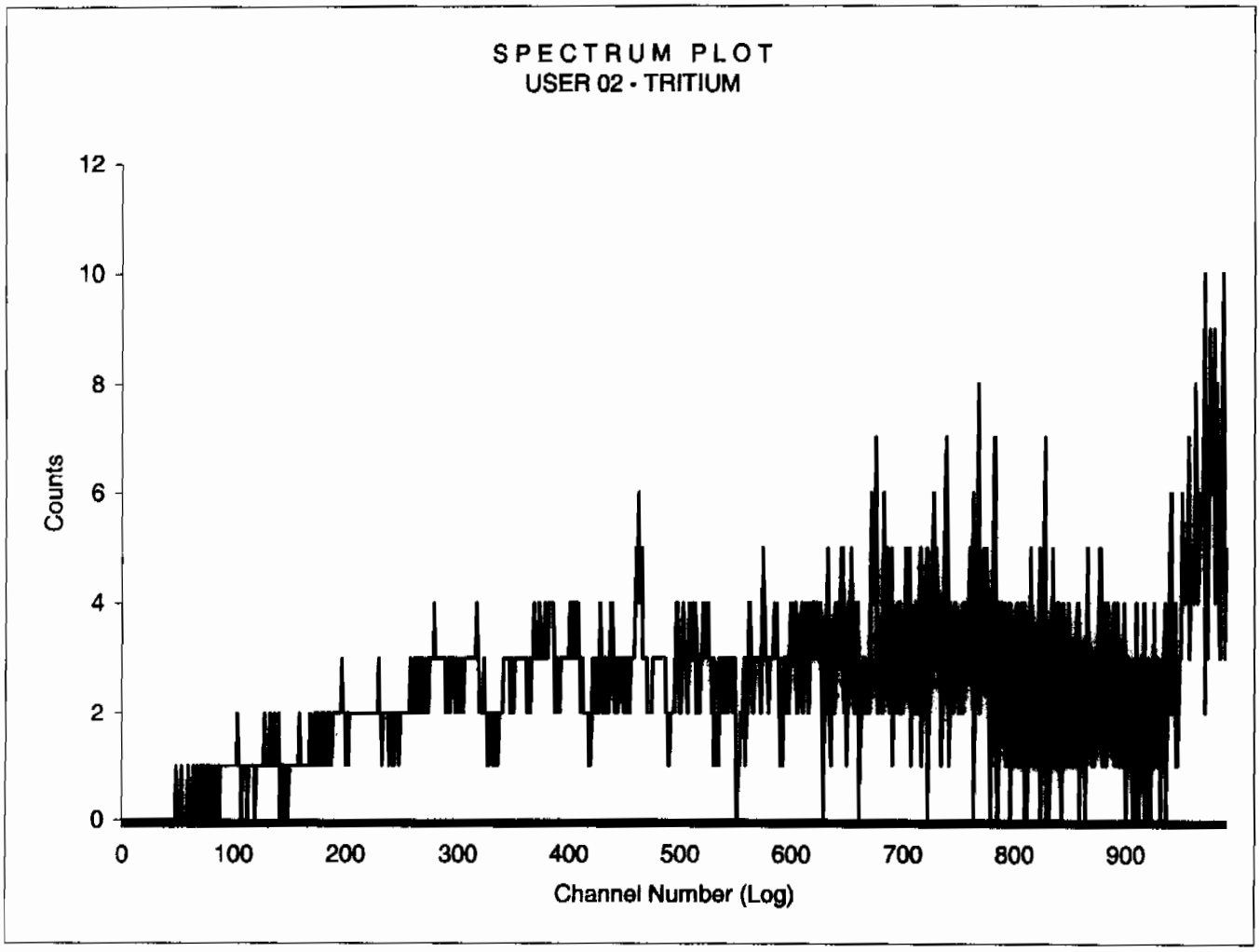

Sample Count Start Time:	15 Jul 2009 17:03:31		
Data Capture Date	15 Jul 2009 18:03:57		
User Filename	S02071541-11B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	41-11	60.00
H#, Total Counts:	132.3	2870	
Start, End, X-Axis:	0	990	Channel Number

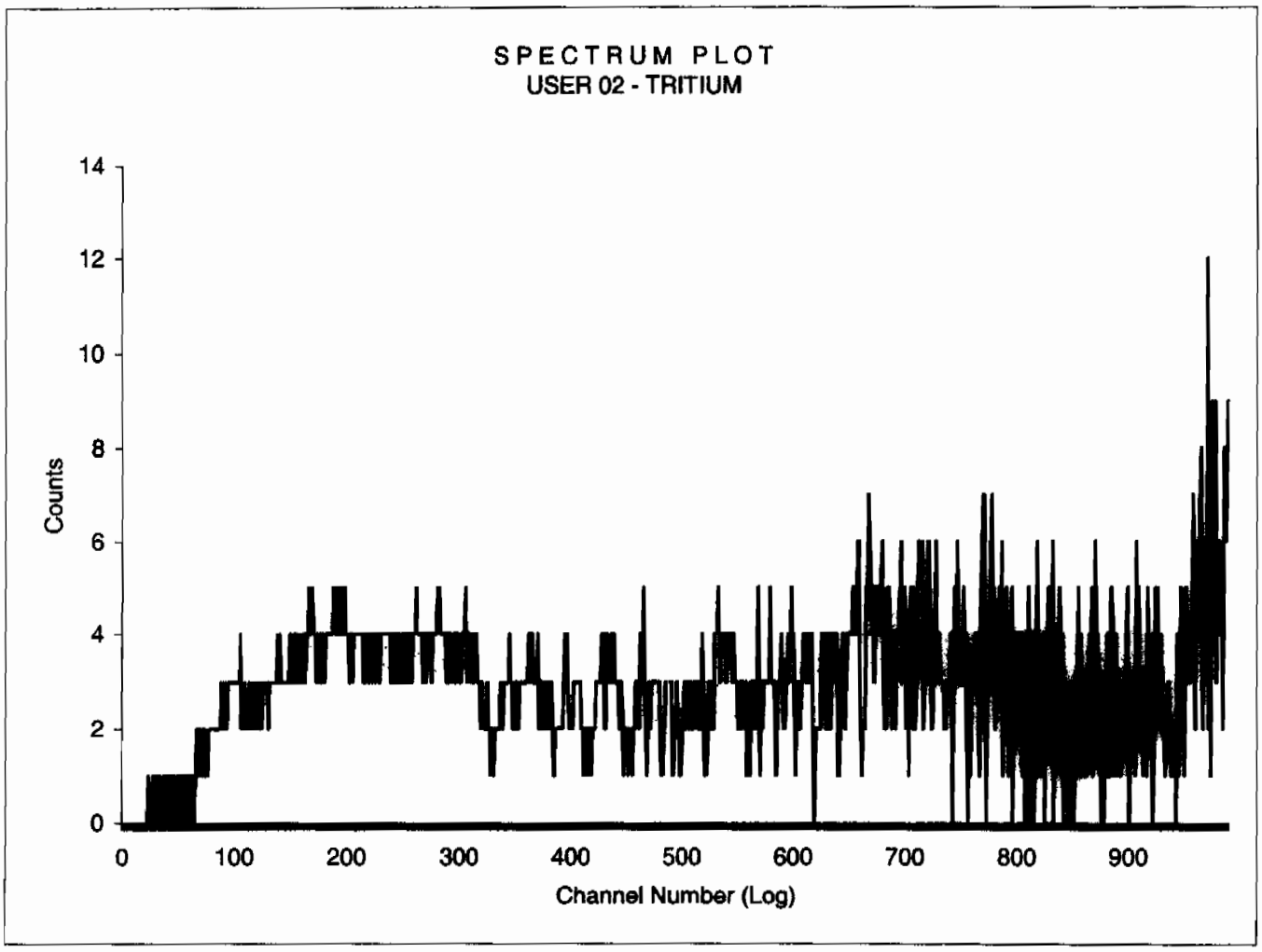

Sample Count Start Time:	15 Jul 2009 18:05:02		
Data Capture Date	15 Jul 2009 18:20:26		
User Filename	S03071529-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	29-1	15.00
H#, Total Counts:	130.3	1167	
Start, End, X-Axis:	0	990	Channel Number

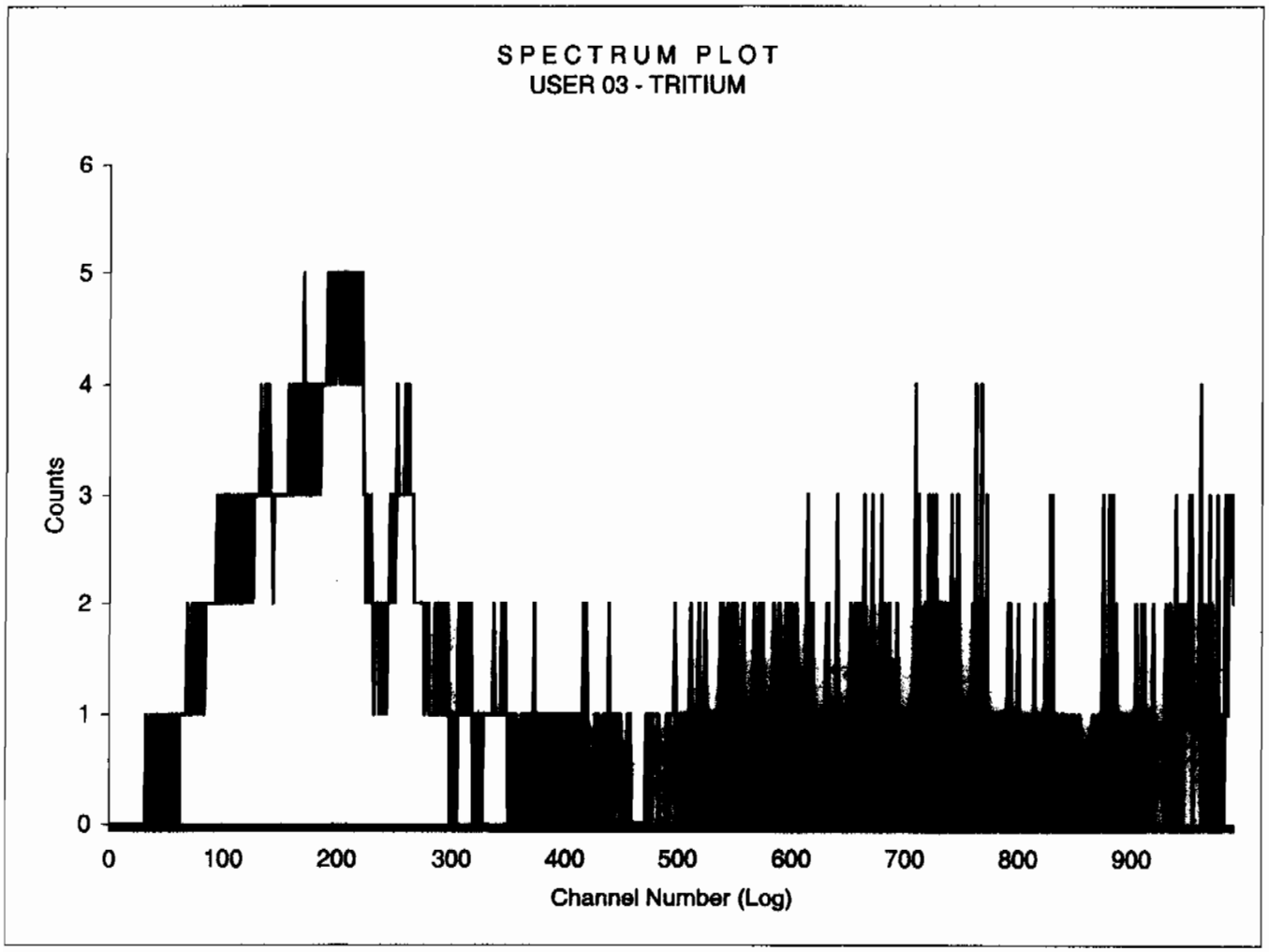

Radiochemistry Batch Checklist, Rev 9

Batch# 881931 Product: Y/LANL Date: 7/15/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			n/a
Samples have been blank corrected (if required)			n/a
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.		✓	See NCR#711888
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			n/a
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			n/a
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent	✓		
Aux data is correct.			n/a
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			n/a
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		#711888
Batch non-conformances second reviewed and disposition verified to be completed.	✓		
Aliquot Correction completed if required.			n/a
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Maggie Stamps 7/15/09

Secondary Review Performed By: [illegible] 7/16/09

7/22

Gamma Spec Que Sheet

I.G. - 7/9/09

07/01/2009

Batch #: 881931 **Analyst:** MXR1 **First Client DueDate** 07/22/2009 **Internal Due Date:** 07/11/2009

Gamma Spike Isotope: Mixed Gamma **Spike Code:** n/a **Expiration Date:** n/a **Vol:** n/a **Nominal Concentration:** n/a

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1.0mL **Nominal Concentration:** Cs137-5.775 Co60-7.096 Am241-16.31

Initials: MS **Prep Date:** 7/2/09 **Witness:** n/a

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/E/F)	Detector	Sealing Date/Time (if Applicable)
232582001-1	CAMO-09-10464	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	117.26	2	7/2/09
232582002-1	CAMO-09-10465	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	116.70	17	
232585001-1	CAMO-09-6605	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	132.82	22 ~~22~~	mga 7/7/09
232585002-1	CAMO-09-6603	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	112.05	1	
232585003-1	CAMO-09-6604	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	128.17	5	
232591001-1	CAMO-09-9946	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	125.48	10	
1201873069-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	7/2/09	132.82	21	
1201873070-1	DUP CAMO-09-9946(232591001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	25-JUN-09 12:00:00	125.46	11	
1201873071-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	7/2/09	151.73	7	

050

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: Maggie Stamps 7/15/09 7/17/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881931	232582001	SAMPLE	09-JUL-09	Americium-241	0.06977	0.3255	0.200
				Cerium-139	-0.01258	0.05217	0.050
				Sodium-22	-0.03963	0.08342	0.080
				Thorium-234	0.05884	2.529	2.00
881931	232582002	SAMPLE	09-JUL-09	Cerium-139	-0.0006	0.05723	0.050
				Cesium-134	0.109	0.1147	0.100
				Europium-152	-0.02628	0.2032	0.200
				Sodium-22	-0.01125	0.1185	0.080
881931	232585001	SAMPLE	09-JUL-09	Americium-241	0.09767	0.2167	0.200
881931	232585002	SAMPLE	09-JUL-09	Americium-241	0.2703	0.3619	0.200
				Cerium-139	-0.01626	0.05466	0.050
				Cesium-134	0.08236	0.1046	0.100
				Thorium-234	2.336	2.637	2.00
881931	232585003	SAMPLE	09-JUL-09	Cerium-139	-0.01625	0.05081	0.050
				Sodium-22	0.01058	0.09204	0.080
881931	232591001	SAMPLE	09-JUL-09	Americium-241	0.2727	0.4166	0.200
				Cerium-139	0.0331	0.05069	0.050
				Thorium-234	2.539	3.366	2.00
881931	1201873069	MB	09-JUL-09				
881931	1201873070	DUP	09-JUL-09	Americium-241	0.1295	0.2217	0.200
881931	1201873071	LCS	09-JUL-09	Cerium-139	0.07764	0.07837	0.050
				Cesium-134	0.1268	0.1799	0.100
				Europium-152	-0.1355	0.3004	0.200
				Mercury-203	0.06733	0.1188	0.100
				Potassium-40	0.5196	1.16	1.00
				Ruthenium-106	-0.2528	1.004	0.800
				Sodium-22	-0.0081	0.08536	0.080
				Thorium-234	0.08022	2.751	2.00
				Tin-113	0.04723	0.1505	0.100
				Uranium-235	0.0049	0.5453	0.500
				Yttrium-88	0.1137	0.1219	0.100

Gamma Review Report based on Result > MDA for Batch:881931

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232582001	25-JUN-09 12:00	09-JUL-09 08:14	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.616	0.1779	pCi/g	0.2114	N	911.1	3	1.71	IDENTIFIED	9.328	☐	
Americium-243 INT		0.2659	0.04062	pCi/g	0.09595	N	74.81	2	0.9552	IDENTIFIED	14.38	☐	
Annihilation Rad.	HE	0.1046	0.0398	pCi/g	0.0515	N	510.6	2	1.94	IDENTIFIED	37.91	☐	
Pb214 Bismuth-211 INT		3.386	0.2745	pCi/g	0.364	Y	352	4	1.421	IDENTIFIED	7.032	☑ UI	
Bismuth-212	HE	1.048	0.2828	pCi/g	0.7344	N	728	1	0.8624	FAIL_ABUND	26.63	☐	
Bismuth-214 ✓		0.953	0.081	pCi/g	0.1268	0.200	609.2	4	1.462	IDENTIFIED	7.411	☐	
Pb214 Cadmium-109 INT		2.044	0.5019	pCi/g	1.329	Y	87.17	3	1.068	IDENTIFIED	23.85	☑ UI	
Cerium-143		225.4	53.18	pCi/g	0	N	328.1	1	1.028	FAIL_DECAY	67.79	☐	
Gross Gamma	HE	8.441	3.649	pCi/g	2.78	N		0				☐	
Iodine-135	HE	1.74E+12	1.34E+14	pCi/g	0	N	510.6	2	1.94	NOT_IDENTI	37.91	☐	
Lead-212 ✓		1.434	0.09031	pCi/g	0.0967	0.100	238.6	5	1.096	IDENTIFIED	4.15	☐	
Lead-214 ✓		1.178	0.1003	pCi/g	0.1326	0.100	352	4	1.421	IDENTIFIED	7.032	☐	
Lutetium-177	HE	2.991	0.9182	pCi/g	1.918	N	209.2	1	1.362	FAIL_ABUND	30.46	☐	
Neptunium-237	HE	0.591	0.1574	pCi/g	0.3705	N	87.17	3	1.068	IDENTIFIED	23.85	☐	
Polonium-212 NV		1.434	0.09031	pCi/g	0.0967	N	238.6	5	1.096	IDENTIFIED	4.15	☐	
Polonium-214 NV		1.178	0.1003	pCi/g	0.1326	N	352	4	1.421	IDENTIFIED	7.032	☐	
Polonium-216 NV		1.434	0.09031	pCi/g	0.0967	N	238.6	5	1.096	IDENTIFIED	4.15	☐	
Polonium-218 NV		1.178	0.1003	pCi/g	0.1326	N	352	4	1.421	IDENTIFIED	7.032	☐	
Potassium-40 ✓		33.47	1.628	pCi/g	0.6941	1.00	1461	1	2.199	IDENTIFIED	3.15	☐	
Pb214 Radium-224 INT		3.621	0.6572	pCi/g	1.101	Y	241.7	1	2.085	IDENTIFIED	17.66	☑ UI	
Radium-226 ✓		0.953	0.081	pCi/g	0.1268	Y	609.2	4	1.462	IDENTIFIED	7.411	☐	
Radium-228 ✓		1.616	0.1779	pCi/g	0.2114	0.500	911.1	3	1.71	IDENTIFIED	9.328	☐	
Thallium-200	HE	14.94	110.7	pCi/g	0	N	74.81	2	0.9552	NOT_IDENTI	14.38	☐	
Thallium-208 ✓		0.4636	0.04702	pCi/g	0.06445	0.080	583.2	1	1.419	IDENTIFIED	9.454	☐	
Thorium-228 ✓		1.434	0.09031	pCi/g	0.09669	N	238.6	5	1.096	IDENTIFIED	4.15	☐	
Thorium-230 ✓		0.9529	0.081	pCi/g	0.1268	N	609.2	4	1.462	IDENTIFIED	7.411	☐	
Thorium-232 ✓		1.616	0.1779	pCi/g	0.2114	N	911.1	3	1.71	IDENTIFIED	9.328	☐	
Tin-126	HE	0.2012	0.04943	pCi/g	0.1317	N	87.17	3	1.068	IDENTIFIED	23.85	☐	
Titanium-44 LA		0.31	0.03112	pCi/g	0.0738	N	76.99	1	0.9832	FAIL_ABUND	8.552	☐	
Uranium-234 ✓		0.9529	0.081	pCi/g	0.1268	N	609.2	4	1.462	IDENTIFIED	7.411	☐	
Zirconium-97		1.16E+06	3.05E+05	pCi/g	0	N	238.6	5	1.096	NOT_IDENTI	4.15	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232582002	25-JUN-09 12:00	09-JUL-09 08:15	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.524	0.2065	pCi/g	0.2841	N	911.1	3	1.605	IDENTIFIED	12.54	☐	
Americium-243 INT		0.4978	0.0399	pCi/g	0.06964	N	74.91	1	1.439	IDENTIFIED	6.802	☐	
Annihilation Rad.	HE	0.09121	0.04112	pCi/g	0.06191	N	510.8	2	1.287	IDENTIFIED	44.95	☐	
Pb-214 Bismuth-211 INT		2.891	0.2707	pCi/g	0.4491	Y	352.1	4	1.017	IDENTIFIED	8.647	☑ UI	
Bismuth-214 ✓		1.019	0.1061	pCi/g	0.1518	0.200	609.4	4	1.32	IDENTIFIED	9.386	☐	
Pb214 Cadmium-109 INT		3.94	0.4907	pCi/g	1.122	Y	87.43	3	1.287	IDENTIFIED	11.78	☑ UI	
Cerium-143		339.3	65.4	pCi/g	0	N	330.1	1	4.945	NOT_IDENTI	33.72	☐	
Gross Gamma		9.003	1.583	pCi/g	4.435	N		0				☐	
Iodine-133	HE	843.8	1497	pCi/g	0	N	510.8	2	1.287	FAIL_DECAY	44.95	☐	
Krypton-85	HE	20.76	5.224	pCi/g	17.96	N	238.8	8	0.9946	NOT_IDENTI	4.6	☐	
Lead-212 ✓		1.259	0.08005	pCi/g	0.1071	0.100	238.8	8	0.9946	IDENTIFIED	4.6	☐	
Lead-214 ✓		1.006	0.09774	pCi/g	0.1377	0.100	352.1	4	1.017	IDENTIFIED	8.647	☐	

Mercury-203 nvp	0.137	0.03805	pCi/g	0.08005	0.100	278.2	1	1.143	IDENTIFIED	27.5	☑ UI	
Neptunium-237 INT	1.139	0.1843	pCi/g	0.3235	N	87.43	3	1.287	IDENTIFIED	11.78	☐	
Niobium-97 HE	1448	18980	pCi/g	0	N	238.8	8	0.9946	NOT_IDENTI	4.6	☐	
Polonium-212 nv	1.259	0.08005	pCi/g	0.1071	N	238.8	8	0.9946	IDENTIFIED	4.6	☐	
Polonium-214 nv	1.006	0.09774	pCi/g	0.1377	N	352.1	4	1.017	IDENTIFIED	8.647	☐	
Polonium-216 nv	1.259	0.08005	pCi/g	0.1071	N	238.8	8	0.9946	IDENTIFIED	4.6	☐	
Polonium-218 nv	1.006	0.09774	pCi/g	0.1377	N	352.1	4	1.017	IDENTIFIED	8.647	☐	
Potassium-40 ✓	34.75	1.588	pCi/g	0.5307	1.00	1460	1	1.875	IDENTIFIED	3.383	☐	
Pb214 Radium-224 INT	4.118	0.727	pCi/g	1.219	Y	241.9	1	1.734	IDENTIFIED	17.25	☑ UI	
Radium-226 ✓	1.019	0.1061	pCi/g	0.1518	Y	609.4	4	1.32	IDENTIFIED	9.386	☐	
Radium-228 ✓	1.524	0.2065	pCi/g	0.2841	0.500	911.1	3	1.605	IDENTIFIED	12.54	☐	
Sodium-24 HE	1.54E+05	1.22E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA	0.105	0.02643	pCi/g	0.09085	Y	238.8	8	0.9946	NOT_IDENTI	4.6	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.3836	0.05485	pCi/g	0.09095	0.080	583.1	1	1.429	IDENTIFIED	13.74	☐	
Thorium-228 ✓	1.259	0.08005	pCi/g	0.1071	N	238.8	8	0.9946	IDENTIFIED	4.6	☐	
Thorium-230 ✓	1.019	0.106	pCi/g	0.1518	N	609.4	4	1.32	IDENTIFIED	9.386	☐	
Thorium-232 ✓	1.524	0.2065	pCi/g	0.2841	N	911.1	3	1.605	IDENTIFIED	12.54	☐	
Thorium-234 ✓	1.599	0.5054	pCi/g	1.286	2.00	63.49	2	0.8711	IDENTIFIED	30.29	☐	
Tin-126 INT	0.388	0.04832	pCi/g	0.1104	N	87.43	3	1.287	IDENTIFIED	11.78	☐	
Titanium-44 LA	0.3778	0.02461	pCi/g	0.07695	N	77.37	1	1.024	FAIL_ABUND	4.986	☐	
Total Uranium	4.7829	1.50E-06	ug/g	1.916	N		0				☐	
Uranium-234 ✓	1.019	0.106	pCi/g	0.1518	N	609.4	4	1.32	IDENTIFIED	9.386	☐	
Uranium-238 HE	1.599	0.5054	pCi/g	1.286	N	63.49	2	0.8711	IDENTIFIED	30.29	☐	
Zirconium-97	9.18E+05	4.00E+05	pCi/g	0	N	238.8	8	0.9946	NOT_IDENTI	4.6	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232585001	25-JUN-09 12:00	09-JUL-09 08:16	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.912	0.1679	pCi/g	0.1737	N	911.6	3	2.164	IDENTIFIED	6.165	☐	
Americium-243 INT	0.3876	0.03637	pCi/g	0.08295	N	74.83	1	1.127	IDENTIFIED	8.538	☐	
Annihilation Rad.	0.1624	0.02641	pCi/g	0.03815	N	511	1	2.072	IDENTIFIED	15.94	☐	
Pb214 Bismuth-211 INT	4.04	0.2123	pCi/g	0.29	Y	352.1	4	1.421	IDENTIFIED	4.19	☑ UI	
Bismuth-212 HE	0.9779	0.2233	pCi/g	0.5588	N	727.8	1	1.815	FAIL_ABUND	22.32	☐	
Bismuth-214 ✓	1.232	0.0881	pCi/g	0.09523	0.200	609.6	4	1.937	IDENTIFIED	5.64	☐	
Pb214 Cadmium-109 INT	2.695	0.4517	pCi/g	1.438	Y	87.08	4	1.25	IDENTIFIED	16.16	☑ UI	
Cerium-143	474.7	64.7	pCi/g	0	N	328.2	1	1.043	FAIL_DECAY	27.03	☐	
Cesium-134 LA	0.09407	0.03466	pCi/g	0.07548	0.100	795.7	2	1.595	FAIL_ABUND	36.57	☑ UI	Data rejected due to low abundance.
Cesium-135 HE	0.2999	0.07734	pCi/g	0.2527	N	795.7	2	1.595	NOT_IDENTI	36.57	☐	
Gross Gamma	10.15	1.448	pCi/g	2.273	N		0				☐	
Iodine-123 HE	3.97E+05	5.54E+05	pCi/g	0	N	87.08	4	1.25	NOT_IDENTI	16.16	☐	
Krypton-85 LA	30.47	3.688	pCi/g	13.04	N	238.8	8	1.344	NOT_IDENTI	2.843	☐	
Lead-212 ✓	1.726	0.07831	pCi/g	0.08155	0.100	238.8	8	1.344	IDENTIFIED	2.843	☐	
Lead-214 ✓	1.405	0.08246	pCi/g	0.1004	0.100	352.1	4	1.421	IDENTIFIED	4.19	☐	
Lutetium-177 HE	1.815	0.5455	pCi/g	1.582	N	209.3	1	1.438	FAIL_ABUND	29.93	☐	
Neptunium-237 INT	0.7794	0.1534	pCi/g	0.3236	N	87.08	4	1.25	IDENTIFIED	16.16	☐	
Niobium-95m HE	0.3014	0.06609	pCi/g	0.208	N	238.8	8	1.344	NOT_IDENTI	2.843	☐	
Polonium-212 nv	1.726	0.07831	pCi/g	0.08155	N	238.8	8	1.344	IDENTIFIED	2.843	☐	
Polonium-214 nv	1.405	0.08246	pCi/g	0.1004	N	352.1	4	1.421	IDENTIFIED	4.19	☐	
Polonium-216 nv	1.726	0.07831	pCi/g	0.08155	N	238.8	8	1.344	IDENTIFIED	2.843	☐	
Polonium-218 nv	1.405	0.08246	pCi/g	0.1004	N	352.1	4	1.421	IDENTIFIED	4.19	☐	
Potassium-40 ✓	36.37	1.479	pCi/g	0.3988	1.00	1461	1	3.092	IDENTIFIED	2.106	☑ ~~UI~~	~~Data rejected due to high peak width.~~ LC 7/17/09
Pb214 Radium-224 INT	4.762	0.5846	pCi/g	0.9266	Y	241.7	1	1.823	IDENTIFIED	11.97	☑ UI	
Radium-226 ✓	1.232	0.0881	pCi/g	0.09523	Y	609.6	4	1.937	IDENTIFIED	5.64	☐	
Radium-228 ✓	1.912	0.1679	pCi/g	0.1737	0.500	911.6	3	2.164	IDENTIFIED	6.165	☐	
Strontium-85 LA	0.1541	0.01866	pCi/g	0.06599	Y	238.8	8	1.344	NOT_IDENTI	2.843	☑ UI	Data rejected due to low abundance.

Thallium-208 ✓	**0.5336**	0.03997	pCi/g	**0.04646**	**0.080**	583.3	1	1.533	IDENTIFIED	6.425	☐
Thorium-228 ✓	**1.726**	0.07831	pCi/g	**0.08154**	**N**	238.8	8	1.344	IDENTIFIED	2.843	☐
Thorium-230 ✓	**1.232**	0.0881	pCi/g	**0.09523**	**N**	609.6	4	1.937	IDENTIFIED	5.64	☐
Thorium-232 ✓	**1.912**	0.1679	pCi/g	**0.1737**	**N**	911.6	3	2.164	IDENTIFIED	6.165	☐
Tin-126 INT	**0.2654**	0.04448	pCi/g	**0.1328**	**N**	87.08	4	1.25	IDENTIFIED	16.16	☐
Titanium-44 LA	**0.4118**	0.02944	pCi/g	**0.07566**	**N**	77.16	1	1.266	FAIL_ABUND	5.941	☐
Uranium-234 ✓	**1.232**	0.0881	pCi/g	**0.09523**	**N**	609.6	4	1.937	IDENTIFIED	5.64	☐
Zirconium-97	**1.17E+06**	2.48E+05	pCi/g	**0**	**N**	238.8	8	1.344	NOT_IDENTI	2.843	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232585002	25-JUN-09 12:00	09-JUL-09 08:34	13.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.866**	0.2138	pCi/g	**0.229**	**N**	911.6	3	1.461	IDENTIFIED	10.28	☐	
Americium-243 INT	**0.4852**	0.05931	pCi/g	**0.1126**	**N**	74.9	1	1.435	IDENTIFIED	11.47	☐	
Annihilation Rad.	**0.179**	0.03983	pCi/g	**0.06033**	**N**	511.1	1	1.844	IDENTIFIED	22.07	☐	
Barium-137m LA	**0.1855**	0.02811	pCi/g	**0.1056**	**N**	87.22	6	1.183	NOT_IDENTI	19.83	☐	
Pb214 Bismuth-211 INT	**4.338**	0.2972	pCi/g	**0.393**	**Y**	352.3	4	1.349	IDENTIFIED	6.077	☑ UI	
Bismuth-212 HE	**1.181**	0.2435	pCi/g	**0.7532**	**N**	727.6	1	1.173	FAIL_ABUND	20.28	☐	
Bismuth-214 ✓	**1.373**	0.1156	pCi/g	**0.1239**	**0.200**	609.7	4	1.52	IDENTIFIED	7.558	☐	
Pb214 Cadmium-109 INT	**2.978**	0.6059	pCi/g	**1.515**	**Y**	87.22	6	1.183	IDENTIFIED	19.83	☑ UI	
Cerium-143	**126.2**	53.39	pCi/g	**0**	**N**	87.22	6	1.183	FAIL_DECAY	19.83	☐	
Cesium-137 LA	**0.1961**	0.02972	pCi/g	**0.1116**	**0.100**	87.22	6	1.183	NOT_IDENTI	19.83	☑ UI	Data rejected due to low abundance.
Gross Gamma	**9.541**	1.605	pCi/g	**3.538**	**N**		0				☐	
Iodine-135 HE	**1.39E+14**	1.39E+14	pCi/g	**0**	**N**	796	1	1.671	NOT_IDENTI	38.38	☐	
Krypton-85 HE	**22.27**	5.607	pCi/g	**18.48**	**N**	239	6	1.219	NOT_IDENTI	4.902	☐	
Lead-212 ✓	**1.569**	0.09584	pCi/g	**0.1228**	**0.100**	239	6	1.219	IDENTIFIED	4.902	☐	
Lead-214 ✓	**1.509**	0.1106	pCi/g	**0.137**	**0.100**	352.3	4	1.349	IDENTIFIED	6.077	☐	
Lutetium-177 HE	**3.06**	1.016	pCi/g	**2.039**	**N**	209.8	1	1.212	FAIL_ABUND	33.07	☐	
Neptunium-237 HE	**0.861**	0.1964	pCi/g	**0.5156**	**N**	87.22	6	1.183	IDENTIFIED	19.83	☐	
Niobium-97 HE	**10970**	16160	pCi/g	**0**	**N**	392.8	2	5.769	NOT_IDENTI	86.76	☐	
Polonium-212 nr	**1.569**	0.09584	pCi/g	**0.1228**	**N**	239	6	1.219	IDENTIFIED	4.902	☐	
Polonium-214 nr	**1.509**	0.1106	pCi/g	**0.137**	**N**	352.3	4	1.349	IDENTIFIED	6.077	☐	
Polonium-216 nr	**1.569**	0.09584	pCi/g	**0.1228**	**N**	239	6	1.219	IDENTIFIED	4.902	☐	
Polonium-218 nr	**1.509**	0.1106	pCi/g	**0.137**	**N**	352.3	4	1.349	IDENTIFIED	6.077	☐	
Potassium-40 ✓	**29.25**	1.454	pCi/g	**0.5769**	**1.00**	1461	1	1.904	IDENTIFIED	3.478	☐	
Pb214 Radium-224 INT	**2.993**	0.5555	pCi/g	**1.715**	**Y**	242.2	1	1.526	IDENTIFIED	18.33	☑ UI	
Radium-226 ✓	**1.373**	0.1156	pCi/g	**0.1239**	**Y**	609.7	4	1.52	IDENTIFIED	7.558	☐	
Radium-228 ✓	**1.866**	0.2138	pCi/g	**0.229**	**0.500**	911.6	3	1.461	IDENTIFIED	10.28	☐	
Strontium-85 LA	**0.1127**	0.02837	pCi/g	**0.09353**	**Y**	239	6	1.219	NOT_IDENTI	4.902	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	**0.4639**	0.05657	pCi/g	**0.06977**	**0.080**	583.5	1	1.394	IDENTIFIED	11.78	☐	
Thorium-228 ✓	**1.569**	0.09584	pCi/g	**0.1228**	**N**	239	6	1.219	IDENTIFIED	4.902	☐	
Thorium-230 ✓	**1.373**	0.1156	pCi/g	**0.1239**	**N**	609.7	4	1.52	IDENTIFIED	7.558	☐	
Thorium-232 ✓	**1.866**	0.2138	pCi/g	**0.229**	**N**	911.6	3	1.461	IDENTIFIED	10.28	☐	
Tin-126 INT	**0.2932**	0.05966	pCi/g	**0.15**	**N**	87.22	6	1.183	IDENTIFIED	19.83	☐	
Titanium-44 LA	**0.3707**	0.03476	pCi/g	**0.09604**	**N**	77.11	1	1.13	FAIL_ABUND	8.354	☐	
Total Uranium	**7.0023**	3.32E-06	ug/g	**3.9262**	**N**		0				☐	
Uranium-234 ✓	**1.373**	0.1156	pCi/g	**0.1239**	**N**	609.7	4	1.52	IDENTIFIED	7.558	☐	
Zirconium-97 HE	**86680**	3.48E+05	pCi/g	**0**	**N**	392.8	2	5.769	NOT_IDENTI	86.76	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232585003	25-JUN-09 12:00	09-JUL-09 08:34	13.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	**1.403**	0.1734	pCi/g	**0.2684**	**N**	911.2	3	1.728	IDENTIFIED	10.7	☐	
Americium-243 INT	**0.3538**	0.03283	pCi/g	**0.06154**	**N**	74.68	2	1.493	IDENTIFIED	8.411	☐	

	Annihilation Rad.	HE	0.1226	0.04088	pCi/g	0.05069	N	510.8	1	2.036	IDENTIFIED	33.19	☐
Pb214	Bismuth-211	INT	3.551	0.2804	pCi/g	0.3672	Y	351.9	4	1.521	IDENTIFIED	6.839	☑ UI
	Bismuth-212	HE	1.12	0.2753	pCi/g	0.7816	N	726.9	1	2.207	FAIL_ABUND	24.15	☐
	Bismuth-214 ✓		0.9202	0.0976	pCi/g	0.1234	0.200	609.4	4	1.686	IDENTIFIED	9.743	☐
Pb214	Cadmium-109	INT	3.57	0.4352	pCi/g	1.008	Y	87.21	4	1.306	IDENTIFIED	11.58	☑ UI
	Cerium-143		408.7	67.12	pCi/g	0	N	925.8	1	1.274	FAIL_DECAY	54.38	☐
	Cesium-134	LA	0.1126	0.04248	pCi/g	0.1051	0.100	794.6	2	1.371	FAIL_ABUND	37.47	☑ UI Data rejected due to low abundance.
	Gross Gamma		8.995	1.481	pCi/g	4.879	N		0				☐
	Iodine-123	HE	9.38E+05	6.20E+05	pCi/g	0	N	87.21	4	1.306	NOT_IDENTI	11.58	☐
	Iodine-135	HE	4.00E+13	1.28E+14	pCi/g	0	N	794.6	2	1.371	NOT_IDENTI	37.47	☐
	Krypton-85	HE	23.38	4.541	pCi/g	15.93	N	238.7	8	1.327	NOT_IDENTI	3.812	☐
	Lead-212 ✓		1.431	0.0945	pCi/g	0.08821	0.100	238.7	8	1.327	IDENTIFIED	3.812	☐
	Lead-214 ✓		1.235	0.1027	pCi/g	0.1241	0.100	351.9	4	1.521	IDENTIFIED	6.839	☐
	Neptunium-237	INT	1.032	0.1649	pCi/g	0.2902	N	87.21	4	1.306	IDENTIFIED	11.58	☐
	Niobium-95m	HE	0.3593	0.07505	pCi/g	0.2418	N	238.7	8	1.327	NOT_IDENTI	3.812	☐
	Polonium-212	NV	1.431	0.0945	pCi/g	0.08821	N	238.7	8	1.327	IDENTIFIED	3.812	☐
	Polonium-214	NV	1.235	0.1027	pCi/g	0.1241	N	351.9	4	1.521	IDENTIFIED	6.839	☐
	Polonium-216	NV	1.431	0.0945	pCi/g	0.08821	N	238.7	8	1.327	IDENTIFIED	3.812	☐
	Polonium-218	NV	1.235	0.1027	pCi/g	0.1241	N	351.9	4	1.521	IDENTIFIED	6.839	☐
	Potassium-40 ✓		29.05	1.357	pCi/g	0.6328	1.00	1460	1	2.103	IDENTIFIED	3.487	☐
Pb214	Radium-224	INT	4.222	0.7317	pCi/g	1.004	Y	241.6	1	1.95	IDENTIFIED	16.63	☑ UI
	Radium-226 ✓		0.9202	0.0976	pCi/g	0.1234	Y	609.4	4	1.686	IDENTIFIED	9.743	☐
	Radium-228 ✓		1.403	0.1734	pCi/g	0.2684	0.500	911.2	3	1.728	IDENTIFIED	10.7	☐
	Sodium-24	HE	1.33E+05	1.07E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐
	Strontium-85	LA	0.1183	0.02298	pCi/g	0.08062	Y	238.7	8	1.327	NOT_IDENTI	3.812	☑ UI Data rejected due to low abundance.
	Thallium-200	HE	112.4	112.7	pCi/g	0	N	74.68	2	1.493	NOT_IDENTI	8.411	☐
	Thallium-208 ✓		0.5281	0.04764	pCi/g	0.06405	0.080	583	1	1.411	IDENTIFIED	8.237	☐
	Thorium-228 ✓		1.431	0.0945	pCi/g	0.0882	N	238.7	8	1.327	IDENTIFIED	3.812	☐
	Thorium-230 ✓		0.9201	0.09759	pCi/g	0.1234	N	609.4	4	1.686	IDENTIFIED	9.743	☐
	Thorium-232 ✓		1.403	0.1734	pCi/g	0.2684	N	911.2	3	1.728	IDENTIFIED	10.7	☐
	Thorium-234 ✓		1.347	0.5008	pCi/g	1.018	2.00	63.16	2	1.128	IDENTIFIED	36.1	☐
	Tin-126	INT	0.3516	0.04286	pCi/g	0.09912	N	87.21	4	1.306	IDENTIFIED	11.58	☐
	Titanium-44	LA	0.3284	0.02213	pCi/g	0.06315	N	77	1	1.191	FAIL_ABUND	5.501	☐
	Total Uranium		4.0437	1.49E-06	ug/g	1.5174	N		0				☐
	Uranium-234 ✓		0.9201	0.09759	pCi/g	0.1234	N	609.4	4	1.686	IDENTIFIED	9.743	☐
	Uranium-238	HE	1.347	0.5008	pCi/g	1.018	N	63.16	2	1.128	IDENTIFIED	36.1	☐
	Zirconium-97		1.37E+06	3.55E+05	pCi/g	0	N	238.7	8	1.327	NOT_IDENTI	3.812	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232591001	25-JUN-09 12:00	09-JUL-09 08:35	13.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓		1.536	0.2004	pCi/g	0.2186	N	911.4	3	1.533	IDENTIFIED	11.5	☐	
	Americium-243	INT	0.4028	0.05381	pCi/g	0.1088	N	74.89	2	1.301	IDENTIFIED	12.19	☐	
	Annihilation Rad.		0.1231	0.03741	pCi/g	0.04303	N	511.3	2	1.949	IDENTIFIED	30.21	☐	
Pb214	Bismuth-211	INT	4.159	0.2823	pCi/g	0.3136	Y	352	4	1.156	IDENTIFIED	5.725	☑ UI	
	Bismuth-212	LA	1.221	0.2658	pCi/g	0.6807	N	727.9	1	1.325	FAIL_ABUND	21.4	☐	
	Bismuth-214 ✓		1.282	0.09253	pCi/g	0.1167	0.200	609.6	4	1.56	IDENTIFIED	6.133	☐	
Pb214	Cadmium-109	INT	3.011	0.5822	pCi/g	1.422	Y	87.46	3	1.106	IDENTIFIED	18.49	☑ UI	
	Cerium-143		194.2	45.55	pCi/g	0	N	328.3	1	1.408	FAIL_DECAY	53.93	☐	
	Cesium-134	LA	0.1266	0.02932	pCi/g	0.09517	0.100	795.2	2	1.483	FAIL_ABUND	22.84	☑ UI Data rejected due to low abundance.	
	Gross Gamma		9.669	1.637	pCi/g	2.944	N		0				☐	
	Iodine-133	HE	490.2	1135	pCi/g	0	N	511.3	2	1.949	FAIL_DECAY	30.21	☐	
	Iodine-135	HE	3.72E+13	1.33E+14	pCi/g	0	N	795.2	2	1.483	NOT_IDENTI	22.84	☐	
	Krypton-85	HE	17.53	3.723	pCi/g	13.87	N	238.8	7	1.116	NOT_IDENTI	3.354	☐	
	Lead-212 ✓		1.725	0.08734	pCi/g	0.09533	0.100	238.8	7	1.116	IDENTIFIED	3.354	☐	

	Lead-214 ✓	1.447	0.1052	pCi/g	0.1093	0.100	352	4	1.156	IDENTIFIED	5.725	☐	
	Neptunium-237 INT	0.8708	0.1908	pCi/g	0.4697	N	87.46	3	1.106	IDENTIFIED	18.49	☐	
	Polonium-212 nr	1.725	0.08734	pCi/g	0.09533	N	238.8	7	1.116	IDENTIFIED	3.354	☐	
	Polonium-214 nr	1.447	0.1052	pCi/g	0.1093	N	352	4	1.156	IDENTIFIED	5.725	☐	
	Polonium-216 nr	1.725	0.08734	pCi/g	0.09533	N	238.8	7	1.116	IDENTIFIED	3.354	☐	
	Polonium-218 nr	1.447	0.1052	pCi/g	0.1093	N	352	4	1.156	IDENTIFIED	5.725	☐	
	Potassium-40 ✓	32.82	1.707	pCi/g	0.6215	1.00	1461	1	1.97	IDENTIFIED	2.918	☐	
Pb214	Radium-224 INT	4.42	0.5914	pCi/g	1.085	Y	241.8	1	1.617	IDENTIFIED	13.02	☑ UI	
	Radium-226 ✓	1.282	0.09253	pCi/g	0.1167	Y	609.6	4	1.56	IDENTIFIED	6.133	☐	
	Radium-228 ✓	1.536	0.2004	pCi/g	0.2186	0.500	911.4	3	1.533	IDENTIFIED	11.5	☐	
	Strontium-85 LA	0.08869	0.01884	pCi/g	0.07016	Y	238.8	7	1.116	NOT_IDENTI	3.354	☑ UI	Data rejected due to low abundance.
	Thallium-200 HE	150.2	116.4	pCi/g	0	N	74.89	2	1.301	NOT_IDENTI	12.19	☐	
	Thallium-208 ✓	0.4707	0.04366	pCi/g	0.05247	0.080	583.5	1	1.293	IDENTIFIED	8.646	☐	
	Thorium-228 ✓	1.725	0.08734	pCi/g	0.09532	N	238.8	7	1.116	IDENTIFIED	3.354	☐	
	Thorium-230 ✓	1.282	0.09253	pCi/g	0.1167	N	609.6	4	1.56	IDENTIFIED	6.133	☐	
	Thorium-232 ✓	1.536	0.2004	pCi/g	0.2186	N	911.4	3	1.533	IDENTIFIED	11.5	☐	
	Tin-126 INT	0.2966	0.05733	pCi/g	0.141	N	87.46	3	1.106	IDENTIFIED	18.49	☐	
	Titanium-44 LA	0.4128	0.03948	pCi/g	0.09352	N	77.27	1	1.303	FAIL_ABUND	7.848	☐	
	Total Uranium	7.637	2.88E-06	ug/g	5.01	N		0				☐	
	Uranium-234 ✓	1.282	0.09253	pCi/g	0.1167	N	609.6	4	1.56	IDENTIFIED	6.133	☐	
	Zirconium-97 HE	3.36E+05	2.63E+05	pCi/g	0	N	238.8	7	1.116	NOT_IDENTI	3.354	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201873069		09-JUL-09 08:22	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Iodine-133	HE	6.452	4.264	pCi/g	0	N	0	2	0	NOT_IDENTI	0	☐	
Technetium-99m	HE	1.83E+06	3.91E+06	pCi/g	0	N	0	2	0	NOT_IDENTI	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201873070	25-JUN-09 12:00	09-JUL-09 08:36	13.9	DUP	LOAD	1		LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.224	0.144	pCi/g	0.238	N	911.2	3	1.181	IDENTIFIED	10.46	☐	
	Americium-243 INT	0.4284	0.04129	pCi/g	0.08027	N	74.09	1	1.458	IDENTIFIED	8.847	☐	
	Annihilation Rad.	0.138	0.03484	pCi/g	0.04602	N	510.6	3	1.671	IDENTIFIED	25.06	☐	
Pb214	Bismuth-211 INT	3.341	0.2265	pCi/g	0.2909	Y	351.4	4	1.067	IDENTIFIED	5.806	☑ UI	
	Bismuth-212 HE	0.9922	0.2052	pCi/g	0.6127	N	727.5	1	1.272	FAIL_ABUND	20.19	☐	
	Bismuth-214 ✓	1.071	0.08443	pCi/g	0.1112	0.200	609.1	4	1.339	IDENTIFIED	6.632	☐	
Pb214	Cadmium-109 INT	2.504	0.3966	pCi/g	1.105	Y	89.36	2	1.155	IDENTIFIED	15.19	☑ UI	
	Cerium-143	537.5	75.47	pCi/g	0	N	86.52	3	1.548	FAIL_DECAY	12.73	☐	
	Gross Gamma	9.303	1.519	pCi/g	3.886	N		0				☐	
	Iodine-123 HE	3.52E+05	5.90E+05	pCi/g	0	N	89.36	2	1.155	NOT_IDENTI	15.19	☐	
	Iodine-133 HE	312	1082	pCi/g	0	N	510.6	3	1.671	FAIL_DECAY	25.06	☐	
	Iodine-135 HE	2.49E+13	1.31E+14	pCi/g	0	N	510.6	3	1.671	NOT_IDENTI	25.06	☐	
	Lead-212 ✓	1.351	0.07326	pCi/g	0.09253	0.100	238.1	6	0.9598	IDENTIFIED	3.587	☐	
	Lead-214 ✓	1.162	0.08443	pCi/g	0.09541	0.100	351.4	4	1.067	IDENTIFIED	5.806	☐	
	Lutetium-177 HE	2.953	0.7007	pCi/g	1.725	N	209.3	1	1.082	FAIL_ABUND	23.53	☐	
	Neptunium-237 INT	1.09	0.1852	pCi/g	0.3235	N	86.52	3	1.548	IDENTIFIED	12.73	☐	
	Niobium-95m LA	0.7866	0.08748	pCi/g	0.2884	N	238.1	6	0.9598	NOT_IDENTI	3.587	☐	
	Polonium-212 nr	1.351	0.07326	pCi/g	0.09253	N	238.1	6	0.9598	IDENTIFIED	3.587	☐	
	Polonium-214 nr	1.162	0.08443	pCi/g	0.09541	N	351.4	4	1.067	IDENTIFIED	5.806	☐	
	Polonium-216 nr	1.351	0.07326	pCi/g	0.09253	N	238.1	6	0.9598	IDENTIFIED	3.587	☐	
	Polonium-218 nr	1.162	0.08443	pCi/g	0.09541	N	351.4	4	1.067	IDENTIFIED	5.806	☐	
	Potassium-40 ✓	32.66	1.415	pCi/g	0.4295	1.00	1461	2	1.913	IDENTIFIED	2.745	☐	
Pb214	Radium-224 INT	3.482	0.6379	pCi/g	1.053	Y	241.3	1	1.97	IDENTIFIED	18	☑ UI	

Radium-226 ✓	1.071	0.08443	pCi/g	0.1112	Y	609.1	4	1.339	IDENTIFIED	6.632	
Radium-228 ✓	1.224	0.144	pCi/g	0.238	0.500	911.2	3	1.181	IDENTIFIED	10.46	
Thallium-208 ✓	0.4845	0.03997	pCi/g	0.05676	0.080	582.7	1	1.303	IDENTIFIED	7.372	
Thorium-228 ✓	1.351	0.07326	pCi/g	0.09252	N	238.1	6	0.9598	IDENTIFIED	3.587	
Thorium-230 ✓	1.071	0.08443	pCi/g	0.1112	N	609.1	4	1.339	IDENTIFIED	6.632	
Thorium-232 ✓	1.224	0.144	pCi/g	0.238	N	911.2	3	1.181	IDENTIFIED	10.46	
Thorium-234 ✓	2.214	0.7594	pCi/g	1.845	2.00	63.05	2	1.053	IDENTIFIED	33.2	
Tin-126 INT	0.3711	0.05009	pCi/g	0.1092	N	86.52	3	1.548	IDENTIFIED	12.73	
Titanium-44 LA	0.1963	0.02153	pCi/g	0.06532	N	1461	2	1.913	NOT_IDENTI	2.745	
Total Uranium	6.6737	2.26E-06	ug/g	2.7471	N		0				
Uranium-234 ✓	1.071	0.08443	pCi/g	0.1112	N	609.1	4	1.339	IDENTIFIED	6.632	
Uranium-238 HE	2.214	0.7594	pCi/g	1.845	N	63.05	2	1.053	IDENTIFIED	33.2	
Zirconium-97	1.29E+06	3.27E+05	pCi/g	0	N	238.1	6	0.9598	NOT_IDENTI	3.587	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201873071		09-JUL-09 08:51	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228		1.885	0.3002	pCi/g	0.574	N	911	3	1.548	IDENTIFIED	14.99		
Americium-241		13.53	0.5961	pCi/g	0.4161	0.200	59.5	1	1.011	IDENTIFIED	2.239	83%	
Americium-243		0.3194	0.05083	pCi/g	0.1365	N	74.93	1	1.164	IDENTIFIED	15.54		
Annihilation Rad.	HE	0.1259	0.04647	pCi/g	0.09813	N	510.5	3	1.548	IDENTIFIED	36.8		
Barium-137m		5.633	0.2209	pCi/g	0.1274	N	661.6	2	1.499	IDENTIFIED	2.293		
Bismuth-211		2.663	0.329	pCi/g	0.6399	Y	352	4	1.108	IDENTIFIED	11.92		
Bismuth-212	HE	1.2	0.4061	pCi/g	1.156	N	727	1	3.148	FAIL_ABUND	33.56		
Bismuth-214		0.8307	0.1074	pCi/g	0.359	0.200	609.2	4	1.25	FAIL_ABUND	12.28		
Cadmium-109		47.72	2.146	pCi/g	2.27	Y	88.04	2	1.052	IDENTIFIED	2.372		
Cerium-143	HE	9.634	2.852	pCi/g	8.999	N	165.7	1	1.091	FAIL_ABUND	38.54		
Cesium-137		5.954	0.234	pCi/g	0.1346	0.100	661.6	2	1.499	IDENTIFIED	2.293	103%	
Cobalt-57		0.3682	0.03668	pCi/g	0.06741	N	122.1	2	0.9431	IDENTIFIED	8.776		
Cobalt-60		7.374	0.2776	pCi/g	0.09091	0.100	1332	1	1.707	IDENTIFIED	2.369	104%	
Gross Gamma		31	3.157	pCi/g	6.206	N		0					
Iodine-133	HE	10.98	11.47	pCi/g	0	N	510.5	3	1.548	FAIL_DECAY	36.8		
Iodine-135	HE	5.32E+06	1.16E+07	pCi/g	0	N	510.5	3	1.548	NOT_IDENTI	36.8		
Lead-212		1.331	0.1009	pCi/g	0.1947	0.100	238.6	4	1.043	IDENTIFIED	6.415		
Lead-214		0.9262	0.117	pCi/g	0.2269	0.100	352	4	1.108	IDENTIFIED	11.92		
Neptunium-237		6.807	0.8032	pCi/g	1.196	N	92.96	1	1.55	NOT_IDENTI	37.62		
Niobium-97		168.9	60.48	pCi/g	0	N	1836	2	1.412	NOT_IDENTI	27.92		
Polonium-212		1.331	0.1009	pCi/g	0.1947	N	238.6	4	1.043	IDENTIFIED	6.415		
Polonium-214		0.9262	0.117	pCi/g	0.2269	N	352	4	1.108	IDENTIFIED	11.92		
Polonium-216		1.331	0.1009	pCi/g	0.1947	N	238.6	4	1.043	IDENTIFIED	6.415		
Polonium-218		0.9262	0.117	pCi/g	0.2269	N	352	4	1.108	IDENTIFIED	11.92		
Radium-224		5.593	0.742	pCi/g	2.62	Y	122.1	2	0.9431	NOT_IDENTI	8.776		
Radium-226		0.8307	0.1074	pCi/g	0.359	Y	609.2	4	1.25	FAIL_ABUND	12.28		
Radium-228		1.885	0.3002	pCi/g	0.574	0.500	911	3	1.548	IDENTIFIED	14.99		
Thallium-208		0.4711	0.06782	pCi/g	0.1159	0.080	583	1	1.289	IDENTIFIED	13.96		
Thorium-228		1.331	0.1009	pCi/g	0.1946	N	238.6	4	1.043	IDENTIFIED	6.415		
Thorium-230		0.8307	0.1074	pCi/g	0.359	N	609.2	4	1.25	FAIL_ABUND	12.28		
Thorium-232		1.885	0.3002	pCi/g	0.574	N	911	3	1.548	IDENTIFIED	14.99		
Tin-126		4.745	0.2134	pCi/g	0.2262	N	88.04	2	1.052	IDENTIFIED	2.372		
Titanium-44		0.3128	0.03911	pCi/g	0.1058	N	77.2	1	1.262	FAIL_ABUND	12		
Uranium-234		0.8307	0.1074	pCi/g	0.359	N	609.2	4	1.25	FAIL_ABUND	12.28		
Zirconium-97	HE	1458	837.9	pCi/g	0	N	1836	2	1.412	NOT_IDENTI	27.92		

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 881931

Report run on: July 15, 2009 4:23 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232585003-1 09-JUL-2009 08:34	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.57			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1126		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.222			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1183			
232591001-1 09-JUL-2009 08:35	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.159			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.011			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1266		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.42			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08869			
1201873070-1 DUP 09-JUL-2009 08:36	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.341			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.504			
	Radium-224	UI	UI	UI	~~NA~~ DATA REJECTED DUE TO INTERFERENCE.		3.482			

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7/17/09

858

GEL QUALS

Batch ID: 881931

Report run on: July 15, 2009 4:23 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232582001-1 09-JUL-2009 08:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.386			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.044			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.621			
232582002-1 09-JUL-2009 08:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.891			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.94			
	Mercury-203	UI	UI	UI	Data rejected due to no valid peak.		.137		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.118			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.105			
232585001-1 09-JUL-2009 08:16	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.04			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.695			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09407		.1	.1
	~~Potassium-40~~	~~UI~~	~~UI~~	~~UI~~	~~Data rejected due to high peak width.~~	mmg 7/17/09	36.37		1	1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.762			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1541			
232585002-1 09-JUL-2009 08:34	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.338			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.978			
	Cesium-137	UI	UI	UI	Data rejected due to low abundance.		.1961		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.993			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1127			
232585003-1 09-JUL-2009 08:34	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.551			

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:36:26.36

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:35:24.
Sample ID         : G232591001           Sample quantity  : 1.25480E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.07  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	74.89*	347	420	1.30	149.93	144	18	4.82E-02	12.2	3.11E+00
2	3	77.27	566	435	1.30	154.67	144	18	7.86E-02	7.8	
3	3	87.46	194	426	1.11	175.03	171	20	2.70E-02	18.5	1.13E+00
4	3	90.06	133	399	1.10	180.24	171	20	1.85E-02	26.0	
5	3	93.08*	212	414	1.26	186.27	171	20	2.95E-02	19.2	
6	0	185.91*	185	367	1.33	371.77	367	10	2.57E-02	21.5	
7	0	209.26	82	327	1.09	418.42	414	9	1.14E-02	41.3	
8	3	238.84*	1314	207	1.12	477.55	470	21	1.83E-01	3.4	2.27E+00
9	3	241.77	296	280	1.62	483.39	470	21	4.11E-02	13.0	
10	2	295.45*	399	125	1.23	590.68	585	20	5.54E-02	7.0	7.65E-01
11	2	300.22	69	173	1.54	600.21	585	20	9.63E-03	35.3	
12	0	328.31	46	177	1.41	656.35	653	9	6.43E-03	53.9	
13	0	338.40	273	142	1.11	676.52	671	10	3.80E-02	10.2	
14	0	352.01*	699	193	1.16	703.72	697	14	9.71E-02	5.7	
15	0	375.01	12	201	2.89	749.70	738	13	1.70E-03	241.7	
16	0	409.92	30	132	1.12	819.47	815	9	4.16E-03	71.6	
17	0	463.40	95	92	1.09	926.36	922	10	1.33E-02	21.4	
18	0	511.33*	120	177	1.95	1022.18	1014	19	1.67E-02	30.2	
19	0	583.54*	348	114	1.29	1166.52	1160	14	4.83E-02	8.6	
20	0	609.55	502	108	1.56	1218.52	1213	13	6.97E-02	6.1	
21	0	727.88	104	82	1.32	1455.10	1447	15	1.44E-02	21.4	
22	0	795.21	64	42	1.48	1589.70	1584	10	8.86E-03	22.8	
23	0	861.55	77	84	2.92	1722.35	1712	21	1.07E-02	31.9	
24	0	911.38*	247	116	1.53	1821.99	1816	15	3.43E-02	11.5	
25	2	964.75	66	44	2.12	1928.71	1924	20	9.22E-03	20.5	6.13E-01
26	2	969.13	186	30	1.63	1937.47	1924	20	2.58E-02	9.5	
27	0	1120.64*	103	89	2.05	2240.49	2232	17	1.43E-02	23.5	
28	0	1460.77*	1296	19	1.97	2920.85	2910	19	1.80E-01	2.9	
29	0	1764.79*	96	4	2.15	3529.15	3522	17	1.34E-02	12.1	
30	0	1848.24	9	9	0.69	3696.16	3689	12	1.24E-03	75.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:36:29

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:35:24
Sample ID : G232591001 Sample quantity : 125.48 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA10 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.07 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.282E+01	3.415E+00	6.220E-01	5.357E-02	52.766
CD-109	+	88.03	*	3.011E+00	1.164E+00	1.367E+00	1.550E-01	2.202
SN-126		64.28		6.826E-01	7.126E-01	1.196E+00	2.045E-01	0.571
	+	86.94		1.233E+00	6.899E-01	5.697E-01	2.392E-01	2.164
	+	87.57	*	2.966E-01	1.147E-01	1.356E-01	1.535E-02	2.186
TL-208		277.35		4.290E-01	4.025E-01	6.906E-01	7.532E-02	0.621
	+	510.84		5.701E-01	3.497E-01	1.963E-01	2.063E-02	2.904
	+	583.14	*	4.707E-01	8.732E-02	5.182E-02	3.482E-03	9.084
	+	860.37		1.006E+00	6.484E-01	4.400E-01	4.297E-02	2.285
BI-211		72.87		3.542E+00	4.022E+00	6.174E+00	6.790E-01	0.574
	+	351.07	*	4.159E+00	5.646E-01	3.075E-01	2.242E-02	13.525
PB-212	+	74.81		2.485E+00	7.033E-01	6.410E-01	9.228E-02	3.876
	+	77.11		2.237E+00	4.279E-01	3.552E-01	3.884E-02	6.298
	+	87.30		1.372E+00	5.478E-01	6.300E-01	9.507E-02	2.177
	+	238.63	*	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
	+	300.09		1.395E+00	9.926E-01	1.186E+00	1.042E-01	1.176
PO-212	+	74.81		2.485E+00	7.033E-01	6.410E-01	9.228E-02	3.876
	+	77.11		2.237E+00	4.279E-01	3.552E-01	3.884E-02	6.298
	+	87.30		1.372E+00	5.478E-01	6.300E-01	9.507E-02	2.177
		115.19		-8.830E-01	3.544E+00	5.693E+00	4.073E-01	-0.155
	+	238.63	*	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
	+	300.09		1.395E+00	9.926E-01	1.186E+00	1.042E-01	1.176
BI-214	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.111E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
PB-214	+	74.81		4.281E+00	1.187E+00	1.105E+00	1.460E-01	3.876
	+	77.11		3.835E+00	7.896E-01	6.089E-01	8.115E-02	6.298
	+	87.30		2.350E+00	9.264E-01	1.079E+00	1.476E-01	2.177
	+	241.98		2.331E+00	6.374E-01	5.597E-01	4.657E-02	4.165
	+	295.21		1.409E+00	2.342E-01	2.078E-01	1.876E-02	6.782

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-214	+	74.81		4.281E+00	1.187E+00	1.105E+00	1.460E-01	3.876
	+	77.11		3.835E+00	7.896E-01	6.089E-01	8.115E-02	6.298
	+	87.30		2.350E+00	9.264E-01	1.079E+00	1.476E-01	2.177
	+	241.98		2.331E+00	6.374E-01	5.597E-01	4.657E-02	4.165
	+	295.21		1.409E+00	2.342E-01	2.078E-01	1.876E-02	6.782
	+	351.92	*	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-216	+	74.81		2.485E+00	7.033E-01	6.410E-01	9.228E-02	3.876
	+	77.11		2.237E+00	4.279E-01	3.552E-01	3.884E-02	6.298
	+	87.30		1.372E+00	5.478E-01	6.300E-01	9.507E-02	2.177
	+	238.63	*	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
	+	300.09		1.395E+00	9.926E-01	1.186E+00	1.042E-01	1.176
PO-218	+	74.81		4.281E+00	1.187E+00	1.105E+00	1.460E-01	3.876
	+	77.11		3.835E+00	7.896E-01	6.089E-01	8.115E-02	6.298
	+	87.30		2.350E+00	9.264E-01	1.079E+00	1.476E-01	2.177
	+	241.98		2.331E+00	6.374E-01	5.597E-01	4.657E-02	4.165
	+	295.21		1.409E+00	2.342E-01	2.078E-01	1.876E-02	6.782
	+	351.92	*	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
RA-224	+	240.98	*	4.420E+00	1.183E+00	1.058E+00	6.493E-02	4.178
RA-226	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.111E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
AC-228	+	338.32		1.794E+00	8.194E-01	3.668E-01	1.500E-01	4.891
	+	911.07	*	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
	+	969.11		2.047E+00	6.206E-01	3.559E-01	8.414E-02	5.753
RA-228	+	338.32		1.794E+00	8.194E-01	3.668E-01	1.500E-01	4.891
	+	911.07	*	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
	+	969.11		2.047E+00	6.206E-01	3.559E-01	8.414E-02	5.753
TH-228		84.40		3.561E-01	3.163E+00	4.691E+00	6.993E-01	0.076
	+	238.60	*	1.725E+00	1.747E-01	9.296E-02	7.051E-03	18.556
	+	300.10		1.395E+00	1.284E+00	1.186E+00	6.998E-01	1.176
TH-230	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.110E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
TH-232	+	338.32		1.794E+00	3.838E-01	3.668E-01	2.459E-02	4.891
	+	911.07	*	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
	+	969.11		2.047E+00	6.206E-01	3.559E-01	8.414E-02	5.753
U-234	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.110E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
NP-237	+	86.50	*	8.708E-01	3.817E-01	4.517E-01	1.062E-01	1.928
		95.87		-5.570E-02	1.057E+00	1.543E+00	3.855E-01	-0.036
AM-243	+	74.67	*	4.028E-01	1.076E-01	1.044E-01	1.143E-02	3.858
	+	86.72		3.266E+01	1.263E+01	1.515E+01	1.706E+00	2.156
		117.66		-3.122E-01	3.860E+00	6.243E+00	4.332E-01	-0.050
		142.18		-2.781E+00	1.847E+01	2.951E+01	1.762E+00	-0.094
ANH-511	+	511.00	*	1.231E-01	7.483E-02	4.241E-02	2.717E-03	2.904

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-9.064E-02	3.155E-01	4.982E-01	3.705E-02	-0.182
NA-22		1274.54	*	-1.508E-02	4.842E-02	7.809E-02	6.049E-03	-0.193
NA-24		1368.53	*	-8.263E-02	4.842E-02	Half-Life too short		
AL-26		1129.67		6.643E-01	1.964E+00	3.251E+00	2.280E-01	0.204
		1808.65	*	9.558E-03	3.255E-02	5.565E-02	3.529E-03	0.172
TI-44		67.85		-1.904E-02	5.878E-02	9.588E-02	1.082E-02	-0.199
	+	78.38	*	4.128E-01	7.896E-02	8.983E-02	9.829E-03	4.595
SC-46		889.25	*	-5.161E-02	4.183E-02	5.954E-02	5.892E-03	-0.867
	+	1120.51		2.441E-01	1.163E-01	1.427E-01	1.025E-02	1.711
V-48		944.10		-4.294E-02	8.072E-01	1.306E+00	1.265E-01	-0.033
		983.50	*	-4.840E-02	6.817E-02	1.018E-01	9.410E-03	-0.476
		1312.09		-8.588E-03	8.022E-02	1.316E-01	1.098E-02	-0.065
CR-51		320.08	*	1.789E-01	3.426E-01	5.842E-01	4.220E-02	0.306
MN-52		744.21		-3.669E-02	1.960E-01	3.193E-01	2.083E-02	-0.115
		848.13		5.144E-01	6.007E+00	9.932E+00	8.803E-01	0.052
		935.52		2.966E-01	2.264E-01	4.098E-01	4.006E-02	0.724
		1246.25		1.854E-01	6.899E+00	1.152E+01	8.394E-01	0.016
		1333.61		5.701E-01	4.446E+00	7.482E+00	6.501E-01	0.076
		1434.06	*	-1.546E-02	1.985E-01	3.233E-01	2.732E-02	-0.048
MN-54		834.83	*	-2.184E-03	4.137E-02	6.767E-02	5.781E-03	-0.032
CO-56		846.75	*	-7.039E-04	3.946E-02	6.464E-02	5.708E-03	-0.011
		977.42		1.075E+00	3.033E+00	5.095E+00	4.749E-01	0.211
		1037.82		-2.759E-01	3.436E-01	5.077E-01	4.565E-02	-0.543
		1175.09		2.413E-01	2.374E+00	4.010E+00	2.484E-01	0.060
		1238.25		1.806E-01	1.146E-01	2.084E-01	1.554E-02	0.866
		1360.21		-1.920E-01	9.739E-01	1.569E+00	1.355E-01	-0.122
		1771.40		4.531E-02	1.869E-01	2.847E-01	1.886E-02	0.159
CO-57		122.06	*	-2.309E-02	2.592E-02	4.025E-02	2.655E-03	-0.574
		136.48		-5.861E-02	2.143E-01	3.412E-01	2.386E-02	-0.172
CO-58		810.76	*	-3.084E-02	4.298E-02	6.635E-02	5.308E-03	-0.465
FE-59		142.65		-2.519E-01	2.829E+00	4.533E+00	2.701E-01	-0.056
		192.34		-6.185E-01	9.448E-01	1.442E+00	1.695E-01	-0.429
		1099.22	*	6.530E-03	9.298E-02	1.506E-01	1.257E-02	0.043
		1291.56		1.513E-02	1.224E-01	2.061E-01	1.907E-02	0.073

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60		1173.22		-1.094E-02	4.987E-02	8.196E-02	5.054E-03	-0.134
		1332.49	*	-1.882E-02	4.100E-02	6.411E-02	5.571E-03	-0.294
ZN-65		1115.52	*	-2.451E-02	1.090E-01	1.458E-01	1.062E-02	-0.168
GE-68		1077.35	*	-7.842E-01	1.459E+00	2.225E+00	1.762E-01	-0.352
AS-73		53.44	*	1.012E-02	1.471E+00	2.463E+00	3.259E-01	0.004
AS-74		595.88	*	6.989E-02	8.065E-02	1.441E-01	8.229E-03	0.485
		634.78		1.939E-01	3.209E-01	5.622E-01	2.967E-02	0.345
SE-75		66.05		-1.182E+01	6.624E+00	9.940E+00	1.280E+00	-1.189
		96.73		-7.547E-02	8.681E-01	1.264E+00	1.789E-01	-0.060
		121.11		-1.712E-02	1.381E-01	2.226E-01	2.180E-02	-0.077
		136.00		-1.641E-02	4.032E-02	6.382E-02	3.963E-03	-0.257
		198.60		-1.331E+00	1.898E+00	2.864E+00	2.029E-01	-0.465
		264.65	*	3.492E-03	4.207E-02	7.073E-02	4.512E-03	0.049
		279.53		6.998E-02	1.153E-01	1.951E-01	1.337E-02	0.359
		303.91		-1.130E+00	2.247E+00	3.148E+00	3.156E-01	-0.359
		400.65		2.400E-01	2.382E-01	4.136E-01	4.039E-02	0.580
BR-77	+	87.88		4.515E+02	1.746E+02	2.487E+02	2.820E+01	1.816
		200.40		-3.199E+01	1.160E+02	1.806E+02	1.042E+01	-0.177
	+	239.00		1.919E+02	1.742E+01	2.714E+01	1.661E+00	7.070
		249.79		-2.092E+01	4.428E+01	7.262E+01	4.510E+00	-0.288
		281.68		-3.046E+01	6.348E+01	1.033E+02	6.653E+00	-0.295
		297.23		2.098E+02	4.577E+01	8.584E+01	5.604E+00	2.444
		303.76		-7.007E+01	1.334E+02	1.866E+02	1.224E+01	-0.376
		439.47		6.282E+01	1.022E+02	1.727E+02	1.161E+01	0.364
		484.57		-6.321E+00	1.605E+02	2.582E+02	1.692E+01	-0.024
		520.65	*	3.239E+00	7.361E+00	1.184E+01	7.513E-01	0.274
		574.64		-2.901E+01	1.375E+02	2.282E+02	1.351E+01	-0.127
		578.91		-2.654E+01	6.221E+01	8.709E+01	5.120E+00	-0.305
		585.48		9.355E+02	1.751E+02	3.326E+02	1.935E+01	2.812
		755.35		9.730E+01	1.084E+02	1.929E+02	1.303E+01	0.504
		817.79		-7.808E+00	1.027E+02	1.678E+02	1.366E+01	-0.047
SR-82		698.33		-1.991E+01	3.226E+01	5.103E+01	2.863E+00	-0.390
		776.49	*	1.128E-01	3.624E-01	6.143E-01	4.429E-02	0.184
		1395.20		6.731E+00	1.100E+01	1.958E+01	1.676E+00	0.344
RB-83		520.41	*	2.455E-02	6.909E-02	1.104E-01	7.006E-03	0.222
		529.64		-2.663E-03	1.088E-01	1.740E-01	1.094E-02	-0.015
		552.65		-1.149E-01	2.059E-01	3.138E-01	1.917E-02	-0.366
RB-84		881.50	*	5.841E-03	7.004E-02	1.155E-01	1.120E-02	0.051
KR-85		513.99	*	1.753E+01	7.447E+00	1.367E+01	8.732E-01	1.282
SR-85		513.99	*	8.869E-02	3.768E-02	6.917E-02	4.418E-03	1.282
RB-86		1076.63	*	-8.853E-01	9.051E-01	1.314E+00	1.042E-01	-0.674
Y-88		898.02		-5.945E-02	4.424E-02	6.192E-02	6.290E-03	-0.960
		1836.01	*	3.231E-02	2.763E-02	5.675E-02	3.482E-03	0.569
ZR-88		392.90	*	-1.567E-03	2.967E-02	4.836E-02	3.286E-03	-0.032
Y-91		1204.90	*	-7.518E+00	2.100E+01	3.407E+01	2.263E+00	-0.221
NB-94		702.63	*	2.083E-02	3.521E-02	6.100E-02	3.473E-03	0.342
		871.10		1.016E-02	3.585E-02	5.709E-02	5.386E-03	0.178
NB-95		765.79	*	1.715E-02	4.398E-02	7.478E-02	5.218E-03	0.229
NB-95M		235.69	*	5.289E-02	1.337E-01	2.041E-01	1.583E-02	0.259

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95		724.18		-1.587E-02	1.016E-01	1.438E-01	1.025E-02	-0.110
		756.15	*	8.356E-02	6.697E-02	1.219E-01	9.573E-03	0.686
NB-97		657.90	*	-2.431E-02	6.697E-02	Half-Life too short		
		1024.50		-2.921E+00	6.697E-02	Half-Life too short		
ZR-97		254.15		1.833E-01	6.697E-02	Half-Life too short		
		355.39		7.792E-02	6.697E-02	Half-Life too short		
		507.63	*	3.355E-01	6.697E-02	Half-Life too short		
		602.52		-1.383E+00	6.697E-02	Half-Life too short		
		1021.30		-6.472E-01	6.697E-02	Half-Life too short		
		1147.95		-3.776E-01	6.697E-02	Half-Life too short		
		1362.66		-1.486E+00	6.697E-02	Half-Life too short		
		1750.46		2.399E-01	6.697E-02	Half-Life too short		
MO-99		140.51		-3.754E+00	1.987E+01	3.168E+01	8.551E+00	-0.118
		181.06		1.521E+00	1.409E+01	2.003E+01	3.419E+00	0.076
		366.43		2.036E+01	6.826E+01	1.009E+02	6.835E+00	0.202
		739.58	*	5.319E+00	7.876E+00	1.376E+01	1.935E+00	0.386
		778.00		-2.984E+01	2.584E+01	3.821E+01	2.768E+00	-0.781
TC-99M		140.51	*	-2.310E+08	2.584E+01	Half-Life too short		
RH-101		127.23		-2.271E-02	3.307E-02	5.185E-02	3.314E-03	-0.438
		198.01	*	-6.641E-03	3.420E-02	5.297E-02	3.043E-03	-0.125
		325.23		5.673E-02	2.434E-01	3.603E-01	2.399E-02	0.157
RH-102		418.52		-1.175E-01	2.878E-01	4.556E-01	3.084E-02	-0.258
		475.06	*	1.030E-02	2.952E-02	4.890E-02	3.225E-03	0.211
		631.29		1.872E-02	5.369E-02	9.229E-02	4.910E-03	0.203
		697.49		-5.078E-02	7.459E-02	1.173E-01	6.560E-03	-0.433
		766.84		2.216E-01	1.154E-01	2.143E-01	1.500E-02	1.034
		1046.59		4.933E-03	1.349E-01	2.185E-01	1.835E-02	0.023
		1112.84		2.645E-02	2.703E-01	3.793E-01	2.777E-02	0.070
RU-103		497.08	*	-5.403E-03	3.855E-02	6.054E-02	7.854E-03	-0.089
	+	610.33		1.354E+01	2.659E+00	3.013E+00	4.618E-01	4.494
RH-106	+	511.85		6.136E-01	3.729E-01	4.164E-01	2.665E-02	1.474
		621.84	*	-2.228E-01	3.048E-01	4.800E-01	5.549E-02	-0.464
		1050.47		8.834E-01	2.654E+00	4.397E+00	3.667E-01	0.201
RU-106	+	511.85		6.136E-01	3.729E-01	4.164E-01	2.665E-02	1.474
		621.84	*	-2.228E-01	3.040E-01	4.800E-01	2.607E-02	-0.464
		1050.47		8.834E-01	2.654E+00	4.397E+00	3.667E-01	0.201
AG-108M		433.93	*	-1.683E-02	3.401E-02	5.336E-02	3.826E-03	-0.315
		614.37		-7.708E-03	4.378E-02	6.283E-02	3.789E-03	-0.123
		722.95		-3.553E-02	4.651E-02	6.072E-02	3.984E-03	-0.585
AG-110M		657.75	*	-2.666E-02	3.625E-02	5.722E-02	3.100E-03	-0.466
		677.61		-6.304E-02	2.910E-01	4.765E-01	2.675E-02	-0.132
		706.67		-2.419E-02	2.232E-01	3.682E-01	2.254E-02	-0.066
		763.93		-2.848E-01	1.768E-01	2.523E-01	1.827E-02	-1.129
		884.67		1.969E-02	5.004E-02	8.486E-02	8.506E-03	0.232
		937.48		8.203E-03	1.147E-01	1.880E-01	1.887E-02	0.044
		1384.27		8.943E-02	1.748E-01	3.065E-01	2.706E-02	0.292
IN-111		171.28		5.066E-02	7.431E-01	1.188E+00	6.534E-02	0.043
		245.39	*	4.085E-01	8.444E-01	1.290E+00	7.967E-02	0.317
IN-113M		391.69	*	1.800E-02	4.244E-02	7.135E-02	5.088E-03	0.252

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113		391.69	*	1.800E-02	4.244E-02	7.135E-02	5.088E-03	0.252
IN-114M		190.27	*	-1.782E-02	1.992E-01	2.781E-01	1.577E-02	-0.064
CD-115		260.90		-3.726E+00	8.422E+01	1.408E+02	8.864E+00	-0.026
		492.35		-1.164E+01	2.295E+01	3.537E+01	2.303E+00	-0.329
		527.90	*	-3.477E+00	7.157E+00	1.099E+01	6.922E-01	-0.316
SN-117M		156.02		-1.596E+00	2.240E+00	3.470E+00	1.965E-01	-0.460
		158.56	*	-3.871E-02	5.220E-02	8.051E-02	4.515E-03	-0.481
SB-122		563.90	*	2.901E-01	1.583E+00	2.563E+00	1.542E-01	0.113
		692.80		1.431E+01	3.280E+01	5.631E+01	3.100E+00	0.254
I-123		159.00	*	-4.774E-01	3.280E+01	Half-Life too short		
		528.96		1.694E+01	3.280E+01	Half-Life too short		
TE-123M		159.00	*	-1.154E-02	2.876E-02	4.513E-02	2.563E-03	-0.256
I-124		602.71	*	-3.886E-01	5.675E-01	8.499E-01	4.795E-02	-0.457
		722.78		-3.157E+00	3.932E+00	5.104E+00	3.107E-01	-0.619
		1325.50		4.357E+01	2.960E+01	5.652E+01	4.845E+00	0.771
		1376.25		4.684E+01	2.900E+01	5.524E+01	4.753E+00	0.848
		1509.49		9.572E+00	1.386E+01	2.480E+01	2.027E+00	0.386
		1691.02		1.597E-01	2.785E+00	4.584E+00	3.297E-01	0.035
SB-124		602.71		-2.743E-02	4.005E-02	5.999E-02	3.386E-03	-0.457
		645.85		-1.617E-01	4.810E-01	7.832E-01	4.673E-02	-0.206
		709.31		1.576E+00	2.781E+00	4.817E+00	2.805E-01	0.327
		713.82		-1.264E+00	1.669E+00	2.598E+00	2.669E-01	-0.487
		722.78		-3.230E-01	4.024E-01	5.222E-01	3.316E-02	-0.619
	+	968.20		2.077E+01	4.399E+00	7.880E+00	7.429E-01	2.636
		1045.16		-1.802E+00	2.870E+00	4.347E+00	3.660E-01	-0.414
		1325.50		4.762E+00	3.234E+00	6.176E+00	5.295E-01	0.771
		1368.21		-7.803E-01	1.746E+00	2.705E+00	3.646E-01	-0.288
		1436.60		-3.598E+00	3.737E+00	5.200E+00	4.391E-01	-0.692
		1691.02	*	3.855E-03	6.722E-02	1.106E-01	8.406E-03	0.035
SB-125		427.89	*	4.778E-02	9.394E-02	1.579E-01	1.100E-02	0.303
	+	463.38		8.807E-01	3.831E-01	5.628E-01	4.221E-02	1.565
		600.56		-4.321E-02	1.735E-01	2.865E-01	1.888E-02	-0.151
		635.90		-1.567E-02	2.570E-01	4.284E-01	2.716E-02	-0.037
TE-125M		109.28	*	1.314E+00	9.268E+00	1.518E+01	1.457E+00	0.087
I-126		388.63		3.800E-03	1.884E-01	3.087E-01	2.098E-02	0.012
		666.33	*	-1.524E-01	1.742E-01	2.715E-01	1.362E-02	-0.561
		753.82		1.864E-01	1.266E+00	2.123E+00	1.427E-01	0.088
SB-126		223.80		-8.506E-01	3.686E+00	6.163E+00	3.690E-01	-0.138
		278.60		2.881E+00	2.486E+00	4.297E+00	2.758E-01	0.670
	+	296.50		1.307E+01	2.013E+00	3.498E+00	2.282E-01	3.738
		414.70		1.951E-02	7.487E-02	1.096E-01	7.425E-03	0.178
		415.30		9.457E-01	5.919E+00	9.045E+00	6.128E-01	0.105
		555.20		3.742E+00	3.881E+00	6.658E+00	4.054E-01	0.562
		573.80		-5.550E-01	9.415E-01	1.520E+00	9.006E-02	-0.365
		593.00		-7.672E-01	7.997E-01	1.241E+00	7.126E-02	-0.618
		656.30		-1.208E+00	3.066E+00	4.966E+00	2.486E-01	-0.243
		666.33		-6.349E-02	7.258E-02	1.131E-01	5.674E-03	-0.561
		675.00		-4.838E-01	1.729E+00	2.815E+00	1.457E-01	-0.172
		695.00		-9.198E-03	7.210E-02	1.188E-01	6.591E-03	-0.077

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		697.00		-1.949E-01	2.460E-01	3.830E-01	2.139E-02	-0.509
		720.50	*	1.378E-02	1.513E-01	2.204E-01	1.331E-02	0.063
		856.80		-9.038E-03	4.806E-01	6.800E-01	6.173E-02	-0.013
		989.30		-5.313E-01	1.269E+00	1.968E+00	1.806E-01	-0.270
		1034.80		1.527E+00	8.821E+00	1.450E+01	1.243E+00	0.105
		1213.00		6.605E-01	5.040E+00	8.502E+00	5.752E-01	0.078
SB-127		61.10		-8.116E+01	6.972E+01	1.097E+02	1.509E+01	-0.740
		252.40		-8.558E-01	3.370E+00	5.555E+00	2.306E+00	-0.154
		290.80		-1.507E+01	1.952E+01	2.693E+01	2.474E+00	-0.559
		411.60		1.246E+01	1.094E+01	1.700E+01	2.469E+00	0.733
		444.90		3.447E+00	7.003E+00	1.179E+01	1.290E+00	0.292
		473.00		6.678E-02	1.374E+00	2.228E+00	2.509E-01	0.030
		543.00		-3.624E+00	1.316E+01	2.055E+01	2.625E+00	-0.176
		603.60		6.603E+00	9.561E+00	1.496E+01	1.539E+00	0.441
		685.20	*	-5.456E-01	1.086E+00	1.736E+00	1.514E-01	-0.314
		698.50		-7.414E+00	1.197E+01	1.886E+01	2.664E+00	-0.393
		722.20		-9.172E+00	2.564E+01	3.530E+01	3.141E+00	-0.260
		783.80		6.548E+00	3.099E+00	5.775E+00	6.487E-01	1.134
XE-127		57.60		-1.306E+01	9.447E+00	1.462E+01	1.859E+00	-0.893
		145.22		2.997E-01	7.284E-01	1.173E+00	6.919E-02	0.255
		172.10		1.126E-01	1.138E-01	1.898E-01	1.045E-02	0.594
		202.84	*	-6.192E-03	4.408E-02	7.432E-02	4.304E-03	-0.083
	+	374.96		7.404E-02	3.579E-01	2.976E-01	2.019E-02	0.249
I-131		80.18		-1.431E+00	4.974E+00	7.234E+00	7.966E-01	-0.198
		284.30		-7.286E-01	1.294E+00	2.091E+00	1.471E-01	-0.348
		364.48	*	-2.209E-02	1.011E-01	1.637E-01	1.202E-02	-0.135
		636.97		-1.663E+00	1.357E+00	2.042E+00	1.224E-01	-0.815
		722.89		-5.460E+00	7.020E+00	9.147E+00	5.631E-01	-0.597
TE-132		49.72		-2.375E+01	3.211E+01	5.193E+01	7.286E+00	-0.457
		111.76		-5.662E+00	2.328E+01	3.747E+01	3.604E+00	-0.151
		116.30		-1.520E+01	2.147E+01	3.370E+01	3.133E+00	-0.451
		228.16	*	-2.278E-01	5.190E-01	8.573E-01	1.219E-01	-0.266
BA-133		53.15		5.710E-02	6.557E+00	1.098E+01	1.454E+00	0.005
		79.62		4.025E-03	1.591E+00	2.349E+00	3.914E-01	0.002
		81.00		-1.577E-01	1.251E-01	1.687E-01	2.915E-02	-0.935
		276.40		6.567E-01	3.955E-01	6.927E-01	9.176E-02	0.948
		302.84		-3.245E-02	1.543E-01	2.217E-01	2.672E-02	-0.146
		356.01	*	-1.897E-02	4.734E-02	6.584E-02	7.944E-03	-0.288
		383.85		-3.724E-02	3.010E-01	4.892E-01	5.592E-02	-0.076
I-133	+	510.53		4.577E-01	3.010E-01	Half-Life too short		
		529.87	*	4.902E-04	3.010E-01	Half-Life too short		
		706.58		-2.190E-02	3.010E-01	Half-Life too short		
		856.28		-1.409E-01	3.010E-01	Half-Life too short		
		875.33		-1.905E-02	3.010E-01	Half-Life too short		
		1236.41		2.717E-01	3.010E-01	Half-Life too short		
		1298.22		5.477E-02	3.010E-01	Half-Life too short		
CS-134		475.35		1.136E+00	1.889E+00	3.186E+00	2.101E-01	0.357
		563.23		-6.400E-02	3.867E-01	6.094E-01	3.740E-02	-0.105
		569.32		2.235E-02	2.293E-01	3.635E-01	2.230E-02	0.061

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		604.70		-4.815E-03	3.545E-02	5.113E-02	2.891E-03	-0.094
	+	795.84	*	1.266E-01	5.863E-02	9.440E-02	7.278E-03	1.341
		801.93		-2.435E-01	4.122E-01	6.225E-01	4.874E-02	-0.391
		1038.57		-3.634E+00	4.310E+00	6.335E+00	5.395E-01	-0.574
		1167.94		1.056E-01	2.859E+00	4.803E+00	3.013E-01	0.022
		1365.15		3.901E-01	1.141E+00	1.978E+00	1.785E-01	0.197
CS-135		268.24	*	-8.035E-02	1.559E-01	2.541E-01	2.054E-02	-0.316
I-135		288.45		1.752E+09	1.559E-01	Half-Life too short		
		417.63		1.449E+08	1.559E-01	Half-Life too short		
		546.56		2.257E+08	1.559E-01	Half-Life too short		
		836.80		4.372E+08	1.559E-01	Half-Life too short		
		1038.76		-6.913E+08	1.559E-01	Half-Life too short		
		1124.00		1.467E+09	1.559E-01	Half-Life too short		
		1131.51		2.441E+08	1.559E-01	Half-Life too short		
		1260.41	*	3.716E+07	1.559E-01	Half-Life too short		
		1457.56		2.491E+10	1.559E-01	Half-Life too short		
		1678.03		-5.040E+08	1.559E-01	Half-Life too short		
		1706.46		3.345E+08	1.559E-01	Half-Life too short		
		1791.20		2.216E+08	1.559E-01	Half-Life too short		
CS-136		66.91		-6.468E-01	9.382E-01	1.500E+00	2.568E-01	-0.431
	+	86.29		3.622E+00	1.442E+00	2.005E+00	2.954E-01	1.806
		153.22		8.122E-01	6.448E-01	1.085E+00	7.765E-02	0.749
		163.89		-6.992E-01	1.030E+00	1.590E+00	1.115E-01	-0.440
		176.55		-9.662E-02	3.525E-01	5.532E-01	3.480E-02	-0.175
		273.65		-8.606E-01	4.373E-01	6.546E-01	4.669E-02	-1.315
		340.57		3.692E-01	1.394E-01	2.347E-01	1.650E-02	1.573
		818.51		-2.647E-02	7.785E-02	1.244E-01	1.015E-02	-0.213
		1048.07	*	6.555E-02	1.174E-01	1.990E-01	1.742E-02	0.329
		1235.34		5.231E-01	6.694E-01	1.171E+00	1.265E-01	0.447
BA-137M		661.65	*	4.316E-02	3.793E-02	6.811E-02	3.361E-03	0.634
CS-137		661.65	*	4.562E-02	4.010E-02	7.200E-02	3.573E-03	0.634
CE-139		165.85	*	3.310E-02	2.931E-02	4.918E-02	2.686E-03	0.673
BA-140		162.64		2.272E-01	7.086E-01	1.149E+00	7.214E-02	0.198
		304.84		4.797E-01	1.218E+00	1.825E+00	5.012E-01	0.263
		423.70		-1.242E+00	1.874E+00	2.843E+00	9.090E-01	-0.437
		537.32	*	-4.333E-02	2.518E-01	3.971E-01	1.295E-01	-0.109
LA-140	+	328.77		3.509E-01	3.794E-01	5.023E-01	3.659E-02	0.699
		432.53		-1.383E+00	1.991E+00	3.075E+00	2.235E-01	-0.450
		487.03		4.103E-02	1.304E-01	2.152E-01	1.555E-02	0.191
		751.79		-2.234E+00	1.479E+00	2.065E+00	1.618E-01	-1.082
		815.85		1.483E-01	3.349E-01	5.706E-01	5.219E-02	0.260
		867.82		-8.989E-01	1.562E+00	2.068E+00	2.021E-01	-0.435
		919.63		1.602E+00	3.078E+00	4.821E+00	5.657E-01	0.332
		925.24		-1.267E-01	1.072E+00	1.726E+00	1.787E-01	-0.073
		1596.49	*	3.378E-02	7.981E-02	1.391E-01	1.079E-02	0.243
CE-141		145.44	*	2.914E-02	6.534E-02	1.054E-01	6.448E-03	0.277
CE-143		57.37		-1.158E-03	6.534E-02	Half-Life too short		
		231.56		4.494E-04	6.534E-02	Half-Life too short		
		293.26	*	1.942E-04	6.534E-02	Half-Life too short		

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	+	350.59		1.748E-02	6.534E-02	Half-Life too short		
		490.36		-1.500E-03	6.534E-02	Half-Life too short		
		664.57		7.155E-05	6.534E-02	Half-Life too short		
		721.93		-6.207E-04	6.534E-02	Half-Life too short		
CE-144		80.11		-6.585E-01	2.549E+00	3.713E+00	4.074E-01	-0.177
		133.54	*	-3.818E-02	2.138E-01	3.422E-01	4.916E-02	-0.112
PM-144		476.78		1.722E-02	6.586E-02	1.085E-01	8.258E-03	0.159
		618.01		-3.956E-03	3.146E-02	5.231E-02	3.056E-03	-0.076
		696.49	*	-1.945E-02	3.420E-02	5.435E-02	3.032E-03	-0.358
		778.57		-3.144E+00	2.387E+00	3.466E+00	2.516E-01	-0.907
PR-144		696.49	*	-1.317E+00	2.316E+00	3.680E+00	2.052E-01	-0.358
		1489.15		-4.508E+00	1.127E+01	1.720E+01	1.421E+00	-0.262
PM-146		453.90	*	-2.150E-02	4.191E-02	6.516E-02	6.019E-03	-0.330
		633.02		5.759E-01	1.373E+00	2.345E+00	8.616E-01	0.246
		735.90		-1.592E-01	1.565E-01	2.174E-01	6.089E-02	-0.732
		747.13		9.017E-02	8.472E-02	1.520E-01	1.959E-02	0.593
ND-147	+	91.11		6.215E-01	3.312E-01	4.746E-01	5.291E-02	1.309
		319.41		6.443E-01	2.940E+00	4.930E+00	3.272E-01	0.131
		439.89		1.575E+00	5.580E+00	9.233E+00	6.208E-01	0.171
		531.02	*	7.212E-02	5.292E-01	8.575E-01	1.177E-01	0.084
PM-149		285.90	*	-6.997E+01	6.103E+01	9.403E+01	1.359E+01	-0.744
EU-152		121.78		-7.386E-02	7.630E-02	1.179E-01	9.717E-03	-0.626
		244.69		1.154E-01	3.558E-01	5.384E-01	3.322E-02	0.214
		344.27	*	-2.895E-02	9.556E-02	1.491E-01	1.098E-02	-0.194
		443.98		-9.275E-02	8.774E-01	1.412E+00	9.476E-02	-0.066
		778.89		-2.991E-01	2.774E-01	4.139E-01	3.006E-02	-0.723
		867.32		-5.944E-01	9.946E-01	1.313E+00	1.226E-01	-0.453
	+	964.01		8.406E-01	3.545E-01	6.496E-01	6.154E-02	1.294
		1085.78		1.445E-02	4.641E-01	7.492E-01	5.832E-02	0.019
		1112.02		-1.572E-01	3.829E-01	5.254E-01	3.853E-02	-0.299
		1407.95		2.012E-01	2.017E-01	3.706E-01	3.160E-02	0.543
GD-153		69.67		1.725E+00	2.196E+00	3.376E+00	3.765E-01	0.511
		83.37		4.881E+00	1.988E+01	2.730E+01	3.025E+00	0.179
		97.43	*	-5.452E-02	9.228E-02	1.303E-01	1.213E-02	-0.418
		103.18		-3.323E-02	1.107E-01	1.770E-01	1.496E-02	-0.188
EU-154		123.07		-2.155E-02	5.160E-02	8.192E-02	8.095E-03	-0.263
		247.94		1.349E-01	3.941E-01	5.968E-01	5.840E-02	0.226
		591.81		-1.885E-01	5.555E-01	9.091E-01	8.861E-02	-0.207
		723.30		-1.536E-01	1.983E-01	2.590E-01	1.897E-02	-0.593
		756.87		8.339E-01	7.269E-01	1.312E+00	1.408E-01	0.636
		873.19		2.397E-02	2.907E-01	4.798E-01	6.175E-02	0.050
		996.32		-3.120E-01	4.160E-01	6.187E-01	1.113E-01	-0.504
		1004.76		-2.748E-02	2.369E-01	3.793E-01	4.518E-02	-0.072
		1274.45	*	-3.573E-02	1.347E-01	2.183E-01	2.325E-02	-0.164
EU-155		48.70		1.281E+00	5.517E+00	9.342E+00	1.122E+00	0.137
		60.01		4.527E+00	7.326E+00	1.246E+01	1.535E+00	0.363
	+	86.54		3.570E-01	1.381E-01	1.988E-01	2.250E-02	1.795
		105.31	*	9.777E-03	1.114E-01	1.824E-01	1.513E-02	0.054
TB-160	+	86.79		9.426E-01	3.645E-01	5.270E-01	5.937E-02	1.789

---- Non-Identified Nuclides ----

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		197.04		7.566E-02	5.704E-01	9.079E-01	5.207E-02	0.083
		215.65		-1.886E-01	7.122E-01	1.192E+00	7.045E-02	-0.158
		298.57		1.107E-01	1.084E-01	1.890E-01	1.235E-02	0.586
		879.36	*	5.561E-02	1.352E-01	2.300E-01	2.218E-02	0.242
		962.29		1.155E+00	6.024E-01	1.028E+00	9.760E-02	1.124
	+	966.15		5.704E-01	2.405E-01	5.194E-01	4.908E-02	1.098
		1177.93		-7.527E-02	3.765E-01	6.191E-01	3.861E-02	-0.122
		1271.85		-2.279E-01	7.813E-01	1.263E+00	9.716E-02	-0.180
HO-166M		80.57		-2.541E-01	3.325E-01	4.704E-01	5.167E-02	-0.540
	+	184.41		1.285E-01	5.584E-02	6.464E-02	3.630E-03	1.988
		280.46		-1.132E-01	8.965E-02	1.400E-01	9.001E-03	-0.809
	+	410.95		2.305E-01	3.305E-01	4.401E-01	2.984E-02	0.524
		711.68	*	-2.530E-02	6.245E-02	1.005E-01	5.895E-03	-0.252
		752.31		-1.684E-01	2.464E-01	3.805E-01	2.546E-02	-0.443
		810.29		-5.964E-02	6.583E-02	9.976E-02	7.948E-03	-0.598
TM-171		51.35		-8.971E+00	6.057E+01	1.009E+02	1.326E+01	-0.089
		52.39		5.675E+00	2.982E+01	5.031E+01	6.664E+00	0.113
		59.40		4.870E+01	4.001E+01	6.906E+01	8.580E+00	0.705
		66.72	*	-2.673E+01	3.660E+01	5.863E+01	6.680E+00	-0.456
LU-176	+	88.36		7.034E-01	2.720E-01	3.869E-01	4.352E-02	1.818
		201.83		-9.915E-03	2.739E-02	4.581E-02	2.648E-03	-0.216
		306.84	*	-7.786E-03	2.282E-02	3.711E-02	2.441E-03	-0.210
		401.10		5.478E+00	6.283E+00	1.085E+01	7.367E-01	0.505
LU-177		112.95		1.389E-01	1.429E+00	2.334E+00	1.718E-01	0.060
	+	208.36	*	1.679E+00	1.391E+00	1.751E+00	1.023E-01	0.959
LU-177M		52.97		8.921E-01	2.951E+00	4.998E+00	6.622E-01	0.178
		54.07		-3.171E-01	1.496E+00	2.479E+00	3.270E-01	-0.128
		61.30		-2.399E+00	2.212E+00	3.505E+00	4.241E-01	-0.684
		121.62		-2.138E-01	3.835E-01	6.056E-01	4.007E-02	-0.353
		147.16		-3.809E-01	6.763E-01	1.059E+00	6.196E-02	-0.360
		171.86		3.380E-01	4.734E-01	7.799E-01	4.293E-02	0.433
		218.09		4.986E-02	8.371E-01	1.419E+00	8.423E-02	0.035
		268.79		2.634E-01	7.884E-01	1.339E+00	8.507E-02	0.197
		319.02		2.108E-02	2.473E-01	4.117E-01	2.731E-02	0.051
		367.43		5.376E-01	1.027E+00	1.545E+00	1.046E-01	0.348
		413.65	*	-6.891E-02	1.930E-01	2.657E-01	1.801E-02	-0.259
HF-181		56.28		-1.539E+00	1.492E+00	2.361E+00	3.050E-01	-0.652
		57.53		-1.032E+00	7.944E-01	1.236E+00	1.573E-01	-0.835
		65.20		-9.696E-01	1.249E+00	2.009E+00	2.322E-01	-0.483
		133.02		1.483E-02	6.651E-02	1.084E-01	6.729E-03	0.137
		136.25		-1.633E-01	4.634E-01	7.352E-01	4.499E-02	-0.222
		345.85		-3.549E-02	2.023E-01	2.882E-01	1.938E-02	-0.123
		482.03	*	1.992E-02	3.954E-02	6.632E-02	4.353E-03	0.300
W-181		56.28		-6.096E-01	5.919E-01	9.367E-01	1.210E-01	-0.651
		57.53		-4.096E-01	3.154E-01	4.909E-01	6.246E-02	-0.834
		65.20	*	-3.819E-01	4.920E-01	7.914E-01	9.144E-02	-0.483
TA-182		67.75		-4.519E-02	1.395E-01	2.276E-01	2.571E-02	-0.199
		100.10		2.753E-02	1.809E-01	2.975E-01	2.644E-02	0.093
		152.43		-8.415E-02	3.489E-01	5.532E-01	3.174E-02	-0.152

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		222.10		-1.140E-01	3.397E-01	5.657E-01	3.378E-02	-0.202
		1001.68		1.639E+00	2.265E+00	3.879E+00	3.499E-01	0.422
	+	1121.28		6.761E-01	3.220E-01	3.946E-01	2.829E-02	1.713
		1189.05		-1.092E-01	3.499E-01	5.704E-01	3.652E-02	-0.191
		1221.42	*	6.860E-02	2.162E-01	3.698E-01	2.550E-02	0.186
		1230.97		5.432E-04	5.273E-01	8.797E-01	6.197E-02	0.001
RE-183		57.98		-2.236E-01	3.048E-01	4.912E-01	6.215E-02	-0.455
		59.32		2.023E-01	1.634E-01	2.821E-01	3.508E-02	0.717
		67.20		-1.263E-01	2.488E-01	4.026E-01	4.568E-02	-0.314
		162.32	*	3.392E-02	1.092E-01	1.770E-01	9.790E-03	0.192
	+	208.81		1.697E+00	1.406E+00	1.785E+00	1.044E-01	0.951
		291.72		-1.142E+00	1.054E+00	1.417E+00	9.209E-02	-0.806
RE-184		57.98		-8.301E-01	1.131E+00	1.823E+00	2.307E-01	-0.455
		59.32		7.503E-01	6.059E-01	1.046E+00	1.301E-01	0.717
		67.20		-4.688E-01	9.234E-01	1.494E+00	1.695E-01	-0.314
		161.27		9.536E-02	3.626E-01	5.865E-01	3.257E-02	0.163
		216.55		-4.397E-03	2.541E-01	4.295E-01	2.543E-02	-0.010
		252.85	*	6.263E-02	2.221E-01	3.778E-01	2.355E-02	0.166
		318.01		-1.529E-01	4.297E-01	6.969E-01	4.620E-02	-0.219
		792.07		6.512E-01	1.020E+00	1.577E+00	1.192E-01	0.413
		903.28		5.580E-01	1.075E+00	1.793E+00	1.807E-01	0.311
		920.93		2.927E-01	4.872E-01	8.368E-01	8.299E-02	0.350
OS-185		59.72		3.771E-01	4.339E-01	7.432E-01	9.192E-02	0.507
		61.14		-2.880E-01	2.454E-01	3.870E-01	4.693E-02	-0.744
		69.30		3.114E-01	3.907E-01	6.013E-01	6.721E-02	0.518
		592.07		-6.119E-01	2.259E+00	3.720E+00	2.140E-01	-0.164
		646.12	*	-1.091E-02	4.164E-02	6.823E-02	3.505E-03	-0.160
		717.42		2.194E-01	8.890E-01	1.505E+00	9.003E-02	0.146
		874.81		-3.210E-01	6.033E-01	9.352E-01	8.910E-02	-0.343
		880.27		1.763E-01	7.724E-01	1.292E+00	1.248E-01	0.136
RE-188		155.03	*	2.252E-01	1.770E-01	2.983E-01	1.695E-02	0.755
		477.96		-2.981E-01	2.939E+00	4.708E+00	3.099E-01	-0.063
		633.10		1.097E+00	2.705E+00	4.668E+00	2.473E-01	0.235
W-188		63.58		9.587E+01	7.366E+01	1.253E+02	1.473E+01	0.765
		227.08		7.377E+00	1.215E+01	2.103E+01	1.265E+00	0.351
		290.67	*	-2.290E+00	8.133E+00	1.167E+01	7.576E-01	-0.196
IR-192	+	295.96		1.062E+00	1.639E-01	2.895E-01	1.912E-02	3.668
		308.46		-6.226E-02	8.826E-02	1.401E-01	9.312E-03	-0.444
		316.51	*	-1.050E-02	3.274E-02	5.323E-02	3.538E-03	-0.197
		468.07		-3.004E-02	7.402E-02	1.000E-01	7.417E-03	-0.300
		604.41		1.126E-02	4.794E-01	7.033E-01	7.920E-02	0.016
		612.46		1.863E+00	9.127E-01	1.535E+00	1.132E-01	1.214
AU-195		65.12		-1.647E-01	2.293E-01	3.698E-01	4.276E-02	-0.445
		66.83		-8.025E-02	1.197E-01	1.923E-01	2.188E-02	-0.417
	+	75.70		1.297E+00	3.466E-01	5.069E-01	5.545E-02	2.559
		98.88	*	6.436E-02	2.323E-01	3.821E-01	3.467E-02	0.168
		129.76		2.595E+00	2.983E+00	4.983E+00	3.144E-01	0.521
TL-200		367.94	*	1.502E-04	2.983E+00	Half-Life too short		
		579.30		-8.372E-04	2.983E+00	Half-Life too short		

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		828.27		-4.670E-04	2.983E+00	Half-Life too short		
		1205.75		-1.485E-04	2.983E+00	Half-Life too short		
TL-201		68.90		2.712E+00	4.518E+00	7.319E+00	8.201E-01	0.371
		70.82		2.612E-01	2.640E+00	3.939E+00	4.366E-01	0.066
		80.30		-3.292E+00	4.633E+00	6.578E+00	7.221E-01	-0.500
		135.34		-6.923E+00	1.985E+01	3.151E+01	1.936E+00	-0.220
		167.43	*	-7.308E-01	5.405E+00	8.568E+00	4.686E-01	-0.085
TL-202		68.90		3.025E-01	5.040E-01	8.163E-01	9.148E-02	0.371
		70.82		2.906E-02	2.937E-01	4.381E-01	4.857E-02	0.066
		80.30		-3.663E-01	5.155E-01	7.319E-01	8.035E-02	-0.500
		439.56	*	1.979E-02	6.722E-02	1.113E-01	7.484E-03	0.178
HG-203		70.83		1.383E-01	1.341E+00	2.002E+00	3.060E-01	0.069
		72.87		6.915E-01	7.882E-01	1.205E+00	1.792E-01	0.574
		82.60		3.832E-01	1.458E+00	1.992E+00	3.064E-01	0.192
		279.20	*	2.544E-02	4.360E-02	7.368E-02	4.972E-03	0.345
BI-207		72.80		1.624E-01	2.332E-01	3.558E-01	3.914E-02	0.457
	+	74.97		7.230E-01	1.932E-01	2.600E-01	2.846E-02	2.781
		84.90		1.845E-02	2.313E-01	3.425E-01	3.821E-02	0.054
		569.67		2.680E-03	3.574E-02	5.657E-02	3.373E-03	0.047
		1063.62	*	-8.850E-03	5.659E-02	8.975E-02	7.306E-03	-0.099
		1770.23		4.045E-01	3.388E-01	6.871E-01	4.559E-02	0.589
TL-207		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281
PO-209		260.50		-3.695E-01	9.478E+00	1.561E+01	9.822E-01	-0.024
		262.80		-1.607E+01	2.562E+01	4.150E+01	2.619E+00	-0.387
		896.60	*	-7.020E+00	7.909E+00	1.175E+01	1.185E+00	-0.598
BI-210		46.50	*	4.094E+00	8.988E+00	1.536E+01	1.506E+00	0.267
PB-210		46.50	*	4.094E+00	8.988E+00	1.536E+01	1.506E+00	0.267
PO-210		46.50	*	4.094E+00	8.987E+00	1.536E+01	1.379E+00	0.267
PB-211		404.84	*	-1.141E+00	1.256E+00	1.318E+00	8.232E-01	-0.865
		427.08		8.632E-01	2.167E+00	3.511E+00	2.173E+00	0.246
		831.96		-7.025E-02	1.361E+00	2.226E+00	1.394E+00	-0.032
BI-212	+	727.18	*	1.221E+00	5.317E-01	6.744E-01	5.395E-02	1.811
		785.46		1.252E+00	1.886E+00	3.267E+00	2.420E-01	0.383
		1620.62		8.307E-01	1.433E+00	2.535E+00	1.933E-01	0.328
PO-215		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281
RN-219		271.23		2.783E-01	2.412E-01	4.226E-01	3.601E-02	0.659
		401.81	*	3.097E-01	3.872E-01	6.627E-01	9.315E-02	0.467
RN-220		549.76	*	-1.556E+01	2.573E+01	3.894E+01	2.388E+00	-0.400
RA-223		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281
AC-227		79.80		-1.856E-01	1.996E+00	2.933E+00	6.614E-01	-0.063
		236.00		1.366E-01	2.521E-01	3.875E-01	4.115E-02	0.353
		256.20	*	1.274E-01	3.714E-01	6.324E-01	8.954E-02	0.201
		286.10		-1.425E+00	1.507E+00	2.368E+00	2.820E-01	-0.602
	+	299.80		2.585E+00	1.875E+00	2.501E+00	4.143E-01	1.034
		304.40		1.225E+00	1.903E+00	2.906E+00	5.106E-01	0.421
		334.20		2.485E-01	2.897E+00	3.578E+00	6.666E-01	0.069
TH-227		79.80		-1.856E-01	1.996E+00	2.933E+00	6.691E-01	-0.063
	+	94.00		7.884E+00	3.510E+00	4.027E+00	8.994E-01	1.958
		236.00		1.366E-01	2.520E-01	3.875E-01	3.584E-02	0.353
		256.20	*	1.274E-01	3.716E-01	6.324E-01	1.079E-01	0.201
		286.10		-1.425E+00	2.069E+00	2.368E+00	2.373E+00	-0.602
	+	299.80		2.585E+00	1.875E+00	2.501E+00	4.143E-01	1.034
		304.40		1.225E+00	1.903E+00	2.906E+00	5.106E-01	0.421
		334.20		2.485E-01	2.897E+00	3.578E+00	6.666E-01	0.069
TH-229		85.43		-5.554E-02	2.310E-01	3.367E-01	3.766E-02	-0.165
	+	88.47		4.049E-01	1.566E-01	2.229E-01	2.501E-02	1.816
		100.00		-1.297E-02	1.927E-01	3.124E-01	2.781E-02	-0.042
		193.63	*	1.027E-01	5.095E-01	8.146E-01	4.646E-02	0.126
		210.97		1.244E+00	8.520E-01	1.369E+00	8.033E-02	0.909
PA-231		283.67	*	-9.014E-01	1.495E+00	2.404E+00	3.382E-01	-0.375
	+	301.29		1.034E+00	7.388E-01	9.982E-01	1.087E-01	1.036
TH-231		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		7.101E-01	5.443E+00	8.079E+00	8.986E-01	0.088
	+	92.29		6.325E+00	2.516E+00	3.410E+00	3.510E-01	1.855
		95.87	*	-5.128E-02	9.732E-01	1.420E+00	1.361E-01	-0.036
		108.00		6.975E-01	1.696E+00	2.809E+00	2.211E-01	0.248
PA-233	+	75.28		2.110E+01	6.242E+00	7.715E+00	1.293E+00	2.735
	+	86.59		5.805E+00	2.686E+00	3.237E+00	8.992E-01	1.793
	+	300.12		7.208E-01	5.185E-01	6.962E-01	9.590E-02	1.035
		311.98	*	8.658E-02	6.151E-02	1.095E-01	7.578E-03	0.791
		340.50		2.168E+00	8.797E-01	1.254E+00	2.910E-01	1.729
		398.62		-4.594E-01	2.060E+00	3.312E+00	8.642E-01	-0.139
		415.76		-5.727E-01	1.669E+00	2.549E+00	5.324E-01	-0.225
PA-234		63.00		2.506E+00	2.279E+00	3.825E+00	6.693E-01	0.655
		94.67		4.555E-01	2.022E-01	3.150E-01	4.175E-02	1.446
		98.44		1.979E-02	9.605E-02	1.566E-01	8.748E-02	0.126
		99.86		-5.072E-03	4.892E-01	7.951E-01	7.095E-02	-0.006
		111.00		-9.004E-02	1.892E-01	3.011E-01	3.419E-02	-0.299
		131.20		1.473E-02	1.109E-01	1.800E-01	1.128E-02	0.082
		152.70		1.577E-01	3.390E-01	5.529E-01	8.726E-02	0.285
	+	186.00		4.627E+00	2.443E+00	2.610E+00	7.967E-01	1.773
		226.40		1.976E-01	3.909E-01	6.729E-01	7.851E-02	0.294
		227.20		1.473E-01	4.195E-01	7.186E-01	4.325E-02	0.205
		248.90		-4.331E-01	8.191E-01	1.284E+00	2.774E-01	-0.337
		293.70		3.719E+00	1.055E+00	1.552E+00	2.537E-01	2.397
		369.80		-4.680E-01	1.014E+00	1.395E+00	2.945E-01	-0.336
		568.70		9.477E-01	1.120E+00	1.871E+00	1.117E-01	0.507
		569.50		2.727E-02	3.174E-01	5.027E-01	2.999E-02	0.054
		574.00		-7.653E-01	1.457E+00	2.365E+00	1.401E-01	-0.324
		699.00		-6.104E-01	7.244E-01	1.112E+00	1.994E-01	-0.549
		706.10		-2.417E-01	1.132E+00	1.845E+00	8.143E-01	-0.131
		733.00		3.138E-01	3.719E-01	5.861E-01	1.254E-01	0.535
		742.81		-9.768E-01	1.535E+00	2.101E+00	1.407E+00	-0.465
	+	796.30		2.463E+00	1.304E+00	1.834E+00	4.906E-01	1.343
		805.60		4.202E-01	1.080E+00	1.788E+00	5.444E-01	0.235
		819.60		-1.857E-01	1.391E+00	2.259E+00	8.568E-01	-0.082
		826.30		-1.077E+00	1.022E+00	1.323E+00	5.913E-01	-0.814
		831.60		-1.383E-01	7.105E-01	1.147E+00	3.419E-01	-0.121
		876.40		-4.174E-01	9.522E-01	1.323E+00	1.362E+00	-0.315
		880.51		9.694E-02	2.851E-01	4.814E-01	4.656E-02	0.201
		883.24		-6.914E-02	2.931E-01	4.621E-01	3.113E-01	-0.150
		899.00		-9.601E-01	9.954E-01	1.327E+00	5.844E-01	-0.723
		925.00		-1.693E-01	1.201E+00	1.930E+00	1.907E-01	-0.088
		926.50		-6.522E-02	1.756E-01	2.738E-01	7.045E-02	-0.238
		946.00	*	-8.805E-02	3.049E-01	4.805E-01	9.258E-02	-0.183
		949.00		-2.228E-01	4.976E-01	7.746E-01	7.466E-02	-0.288
		980.50		-2.996E-01	7.643E-01	1.189E+00	1.103E-01	-0.252
		1394.10		5.157E-01	1.242E+00	2.089E+00	1.359E+00	0.247
PA-234M		766.41		2.728E+01	2.763E+01	3.313E+01	2.535E+01	0.823
		1001.03	*	8.629E-01	7.515E+00	1.223E+01	1.406E+00	0.071
TH-234		63.29	*	2.539E+00	1.935E+00	3.223E+00	6.353E-01	0.788

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.040E+00	8.739E-01	1.102E+00	2.085E-01	1.852
U-235	+	89.95		2.680E+00	1.631E+00	1.991E+00	6.282E-01	1.346
	+	93.35		2.453E+00	1.175E+00	1.311E+00	3.738E-01	1.871
		105.00		7.549E-01	1.098E+00	1.806E+00	5.369E-01	0.418
		143.76	*	1.791E-01	2.248E-01	3.651E-01	5.969E-02	0.491
		163.35		7.108E-02	4.842E-01	7.785E-01	1.393E-01	0.091
	+	185.71		1.714E-01	7.445E-02	9.675E-02	5.445E-03	1.771
		205.31		-1.983E-01	5.701E-01	8.321E-01	1.497E-01	-0.238
NP-236		94.67		3.481E-01	1.504E-01	2.392E-01	2.346E-02	1.455
		98.44		1.497E-02	7.214E-02	1.184E-01	1.082E-02	0.126
		111.00		-6.811E-02	1.430E-01	2.278E-01	1.721E-02	-0.299
		160.31	*	7.273E-02	7.887E-02	1.314E-01	7.320E-03	0.554
U-238		63.29	*	2.539E+00	1.935E+00	3.223E+00	6.353E-01	0.788
	+	92.38		2.040E+00	8.115E-01	1.102E+00	1.132E-01	1.852
NP-239		99.55		4.582E-02	1.624E-01	2.670E-01	2.396E-02	0.172
		117.00	*	-1.044E-01	1.939E-01	3.071E-01	2.148E-02	-0.340
	+	209.75		1.356E+00	1.123E+00	1.426E+00	8.353E-02	0.951
		228.18		-9.974E-02	2.214E-01	3.662E-01	2.207E-02	-0.272
		277.60		2.178E-01	1.924E-01	3.323E-01	2.131E-02	0.655
		334.30		1.482E-01	1.642E+00	2.029E+00	1.357E-01	0.073
AM-241		59.54	*	2.727E-01	2.313E-01	3.987E-01	5.120E-02	0.684
CM-243		99.55		4.714E-02	1.670E-01	2.748E-01	2.465E-02	0.172
		103.76	*	1.633E-02	1.000E-01	1.644E-01	1.377E-02	0.099
		117.00		-1.074E-01	1.995E-01	3.159E-01	2.210E-02	-0.340
	+	209.75		1.337E+00	1.107E+00	1.406E+00	8.233E-02	0.951
		228.18		-1.008E-01	2.237E-01	3.700E-01	2.230E-02	-0.272
		277.60		2.196E-01	1.939E-01	3.350E-01	2.148E-02	0.655
CM-247		278.00		1.015E+00	8.013E-01	1.391E+00	8.923E-02	0.730
		287.40		7.788E-01	1.208E+00	2.079E+00	1.346E-01	0.375
		402.60	*	-9.905E-03	3.493E-02	5.591E-02	3.796E-03	-0.177
CF-249		252.85		2.362E-01	8.376E-01	1.425E+00	8.883E-02	0.166
		333.44		4.259E-02	2.533E-01	2.720E-01	1.819E-02	0.157
		387.95	*	6.521E-03	3.907E-02	6.466E-02	4.393E-03	0.101
CF-251		176.60	*	-2.943E-02	1.299E-01	2.043E-01	1.133E-02	-0.144
		227.00		2.120E-01	3.701E-01	6.396E-01	3.848E-02	0.331
		285.00		-2.449E+00	1.715E+00	2.625E+00	1.696E-01	-0.933

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001      *
* Acquisition date :  9-JUL-2009 08:35:24 Detector SN#     :                *
* Detector ID        : GAM10               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:02.07     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232591001           Analyst initials: MXR1          *
* Batch Number       : 881931               Sample Quantity : 1.2548E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.282E+01	3.346E+00	6.215E-01	0.000E+00
CD-109	3.011E+00	1.141E+00	1.422E+00	0.000E+00
SN-126	2.966E-01	1.124E-01	1.410E-01	0.000E+00
TL-208	4.707E-01	8.557E-02	5.247E-02	0.000E+00
BI-211	4.159E+00	5.533E-01	3.136E-01	0.000E+00
PB-212	1.725E+00	1.712E-01	9.533E-02	0.000E+00
PO-212	1.725E+00	1.712E-01	9.533E-02	0.000E+00
BI-214	1.282E+00	1.814E-01	1.167E-01	0.000E+00
PB-214	1.447E+00	2.062E-01	1.093E-01	0.000E+00
PO-214	1.447E+00	2.062E-01	1.093E-01	0.000E+00
PO-216	1.725E+00	1.712E-01	9.533E-02	0.000E+00
PO-218	1.447E+00	2.062E-01	1.093E-01	0.000E+00
RA-224	4.420E+00	1.159E+00	1.085E+00	0.000E+00
RA-226	1.282E+00	1.814E-01	1.167E-01	0.000E+00
AC-228	1.536E+00	3.928E-01	2.186E-01	0.000E+00
RA-228	1.536E+00	3.928E-01	2.186E-01	0.000E+00
TH-228	1.725E+00	1.712E-01	9.532E-02	0.000E+00
TH-230	1.282E+00	1.813E-01	1.167E-01	0.000E+00
TH-232	1.536E+00	3.928E-01	2.186E-01	0.000E+00
U-234	1.282E+00	1.813E-01	1.167E-01	0.000E+00
NP-237	8.708E-01	3.740E-01	4.697E-01	0.000E+00
AM-243	4.028E-01	1.055E-01	1.088E-01	0.000E+00
ANH-511	1.231E-01	7.333E-02	4.303E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-9.064E-02	3.092E-01	5.059E-01	0.000E+00	NOT IDENT.
NA-22	-1.508E-02	4.745E-02	7.819E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.811E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	9.558E-03	3.190E-02	5.544E-02	0.000E+00	NOT IDENT.

TI-44	0.000E+00	7.738E-02	9.352E-02	0.000E+00	FAIL ABUN
SC-46	-5.161E-02	4.099E-02	5.992E-02	0.000E+00	FAIL ABUN
V-48	-4.840E-02	6.681E-02	1.023E-01	0.000E+00	NOT IDENT.
CR-51	1.789E-01	3.358E-01	5.966E-01	0.000E+00	NOT IDENT.
MN-52	-1.546E-02	1.945E-01	3.231E-01	0.000E+00	NOT IDENT.
MN-54	-2.184E-03	4.054E-02	6.817E-02	0.000E+00	NOT IDENT.
CO-56	-7.039E-04	3.867E-02	6.510E-02	0.000E+00	NOT IDENT.
CO-57	-2.309E-02	2.541E-02	4.166E-02	0.000E+00	NOT IDENT.
CO-58	-3.084E-02	4.212E-02	6.687E-02	0.000E+00	NOT IDENT.
FE-59	6.530E-03	9.113E-02	1.511E-01	0.000E+00	NOT IDENT.
CO-60	-1.882E-02	4.018E-02	6.415E-02	0.000E+00	NOT IDENT.
ZN-65	-2.451E-02	1.069E-01	1.462E-01	0.000E+00	NOT IDENT.
GE-68	-7.842E-01	1.430E+00	2.233E+00	0.000E+00	NOT IDENT.
AS-73	1.012E-02	1.442E+00	2.577E+00	0.000E+00	NOT IDENT.
AS-74	6.989E-02	7.903E-02	1.458E-01	0.000E+00	NOT IDENT.
SE-75	3.492E-03	4.123E-02	7.242E-02	0.000E+00	NOT IDENT.
BR-77	3.239E+00	7.214E+00	1.201E+01	0.000E+00	FAIL ABUN
SR-82	1.128E-01	3.552E-01	6.195E-01	0.000E+00	NOT IDENT.
RB-83	2.455E-02	6.771E-02	1.120E-01	0.000E+00	NOT IDENT.
RB-84	5.841E-03	6.864E-02	1.163E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.298E+00	1.387E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.692E-02	7.016E-02	0.000E+00	NOT IDENT.
RB-86	-8.853E-01	8.870E-01	1.319E+00	0.000E+00	NOT IDENT.
Y-88	3.231E-02	2.708E-02	5.652E-02	0.000E+00	NOT IDENT.
ZR-88	-1.567E-03	2.907E-02	4.924E-02	0.000E+00	NOT IDENT.
Y-91	-7.518E+00	2.058E+01	3.414E+01	0.000E+00	NOT IDENT.
NB-94	2.083E-02	3.451E-02	6.161E-02	0.000E+00	NOT IDENT.
NB-95	1.715E-02	4.310E-02	7.543E-02	0.000E+00	NOT IDENT.
NB-95M	5.289E-02	1.310E-01	2.094E-01	0.000E+00	NOT IDENT.
ZR-95	8.356E-02	6.564E-02	1.230E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.858E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.150E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.319E+00	7.719E+00	1.389E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.198E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.641E-03	3.352E-02	5.446E-02	0.000E+00	NOT IDENT.
RH-102	1.030E-02	2.893E-02	4.966E-02	0.000E+00	NOT IDENT.
RU-103	-5.403E-03	3.778E-02	6.144E-02	0.000E+00	FAIL ABUN
RH-106	-2.228E-01	2.988E-01	4.856E-01	0.000E+00	FAIL ABUN
RU-106	-2.228E-01	2.979E-01	4.856E-01	0.000E+00	FAIL ABUN
AG-108M	-1.683E-02	3.333E-02	5.426E-02	0.000E+00	NOT IDENT.
AG-110M	-2.666E-02	3.552E-02	5.784E-02	0.000E+00	NOT IDENT.
IN-111	4.085E-01	8.275E-01	1.323E+00	0.000E+00	NOT IDENT.
IN-113M	1.800E-02	4.159E-02	7.266E-02	0.000E+00	NOT IDENT.
SN-113	1.800E-02	4.159E-02	7.266E-02	0.000E+00	NOT IDENT.
IN-114M	-1.782E-02	1.952E-01	2.861E-01	0.000E+00	NOT IDENT.
CD-115	-3.477E+00	7.014E+00	1.115E+01	0.000E+00	NOT IDENT.
SN-117M	-3.871E-02	5.115E-02	8.302E-02	0.000E+00	NOT IDENT.
SB-122	2.901E-01	1.552E+00	2.597E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.166E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.154E-02	2.818E-02	4.653E-02	0.000E+00	NOT IDENT.
I-124	-3.886E-01	5.561E-01	8.602E-01	0.000E+00	NOT IDENT.
SB-124	3.855E-03	6.587E-02	1.103E-01	0.000E+00	FAIL ABUN
SB-125	4.778E-02	9.206E-02	1.606E-01	0.000E+00	FAIL ABUN
TE-125M	1.314E+00	9.082E+00	1.574E+01	0.000E+00	NOT IDENT.
I-126	-1.524E-01	1.707E-01	2.744E-01	0.000E+00	NOT IDENT.
SB-126	1.378E-02	1.482E-01	2.225E-01	0.000E+00	FAIL ABUN
SB-127	-5.456E-01	1.065E+00	1.754E+00	0.000E+00	NOT IDENT.
XE-127	-6.192E-03	4.319E-02	7.638E-02	0.000E+00	FAIL ABUN
I-131	-2.209E-02	9.904E-02	1.669E-01	0.000E+00	NOT IDENT.
TE-132	-2.278E-01	5.086E-01	8.797E-01	0.000E+00	NOT IDENT.
BA-133	-1.897E-02	4.640E-02	6.714E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.225E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.746E-02	9.517E-02	0.000E+00	FAIL ABUN
CS-135	-8.035E-02	1.528E-01	2.602E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.607E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.555E-02	1.150E-01	1.998E-01	0.000E+00	FAIL ABUN
BA-137M	4.316E-02	3.718E-02	6.885E-02	0.000E+00	NOT IDENT.
CS-137	4.562E-02	3.930E-02	7.278E-02	0.000E+00	NOT IDENT.
CE-139	3.310E-02	2.872E-02	5.069E-02	0.000E+00	NOT IDENT.
BA-140	-4.333E-02	2.468E-01	4.026E-01	0.000E+00	NOT IDENT.
LA-140	3.378E-02	7.821E-02	1.388E-01	0.000E+00	FAIL ABUN
CE-141	2.914E-02	6.403E-02	1.088E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.928E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.818E-02	2.095E-01	3.537E-01	0.000E+00	NOT IDENT.
PM-144	-1.945E-02	3.351E-02	5.489E-02	0.000E+00	NOT IDENT.
PR-144	-1.317E+00	2.269E+00	3.717E+00	0.000E+00	NOT IDENT.
PM-146	-2.150E-02	4.107E-02	6.622E-02	0.000E+00	NOT IDENT.
ND-147	7.212E-02	5.186E-01	8.695E-01	0.000E+00	FAIL ABUN

PM-149	-6.997E+01	5.981E+01	9.617E+01	0.000E+00	NOT IDENT.
EU-152	-2.895E-02	9.365E-02	1.521E-01	0.000E+00	FAIL ABUN
GD-153	-5.452E-02	9.043E-02	1.353E-01	0.000E+00	NOT IDENT.
EU-154	-3.573E-02	1.320E-01	2.185E-01	0.000E+00	NOT IDENT.
EU-155	9.777E-03	1.092E-01	1.892E-01	0.000E+00	FAIL ABUN
TB-160	5.561E-02	1.325E-01	2.315E-01	0.000E+00	FAIL ABUN
HO-166M	-2.530E-02	6.120E-02	1.014E-01	0.000E+00	FAIL ABUN
TM-171	-2.673E+01	3.587E+01	6.118E+01	0.000E+00	NOT IDENT.
LU-176	-7.786E-03	2.236E-02	3.792E-02	0.000E+00	FAIL ABUN
LU-177	1.679E+00	1.363E+00	1.799E+00	0.000E+00	FAIL ABUN
LU-177M	-6.891E-02	1.891E-01	2.704E-01	0.000E+00	NOT IDENT.
HF-181	1.992E-02	3.875E-02	6.733E-02	0.000E+00	NOT IDENT.
W-181	-3.819E-01	4.822E-01	8.260E-01	0.000E+00	NOT IDENT.
TA-182	6.860E-02	2.118E-01	3.705E-01	0.000E+00	FAIL ABUN
RE-183	3.392E-02	1.070E-01	1.825E-01	0.000E+00	FAIL ABUN
RE-184	6.263E-02	2.176E-01	3.871E-01	0.000E+00	NOT IDENT.
OS-185	-1.091E-02	4.081E-02	6.899E-02	0.000E+00	NOT IDENT.
RE-188	2.252E-01	1.735E-01	3.077E-01	0.000E+00	NOT IDENT.
W-188	-2.290E+00	7.971E+00	1.193E+01	0.000E+00	NOT IDENT.
IR-192	-1.050E-02	3.208E-02	5.436E-02	0.000E+00	FAIL ABUN
AU-195	6.436E-02	2.276E-01	3.966E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.281E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-7.308E-01	5.297E+00	8.829E+00	0.000E+00	NOT IDENT.
TL-202	1.979E-02	6.587E-02	1.132E-01	0.000E+00	NOT IDENT.
HG-203	2.544E-02	4.272E-02	7.538E-02	0.000E+00	NOT IDENT.
BI-207	-8.850E-03	5.546E-02	9.010E-02	0.000E+00	FAIL ABUN
TL-207	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
PO-209	-7.020E+00	7.750E+00	1.182E+01	0.000E+00	NOT IDENT.
BI-210	4.094E+00	8.809E+00	1.610E+01	0.000E+00	NOT IDENT.
PB-210	4.094E+00	8.809E+00	1.610E+01	0.000E+00	NOT IDENT.
PO-210	4.094E+00	8.807E+00	1.610E+01	0.000E+00	NOT IDENT.
PB-211	-1.141E+00	1.231E+00	1.342E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.211E-01	6.807E-01	0.000E+00	FAIL ABUN
PO-215	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
RN-219	3.097E-01	3.794E-01	6.746E-01	0.000E+00	NOT IDENT.
RN-220	-1.556E+01	2.522E+01	3.946E+01	0.000E+00	NOT IDENT.
RA-223	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
AC-227	1.274E-01	3.640E-01	6.479E-01	0.000E+00	FAIL ABUN
TH-227	1.274E-01	3.642E-01	6.479E-01	0.000E+00	FAIL ABUN
TH-229	1.027E-01	4.993E-01	8.378E-01	0.000E+00	FAIL ABUN
PA-231	-9.014E-01	1.465E+00	2.459E+00	0.000E+00	FAIL ABUN
TH-231	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
U-231	-5.128E-02	9.537E-01	1.475E+00	0.000E+00	FAIL ABUN
PA-233	8.658E-02	6.028E-02	1.119E-01	0.000E+00	FAIL ABUN
PA-234	-8.805E-02	2.988E-01	4.832E-01	0.000E+00	FAIL ABUN
PA-234M	8.629E-01	7.364E+00	1.229E+01	0.000E+00	NOT IDENT.
TH-234	2.539E+00	1.897E+00	3.366E+00	0.000E+00	FAIL ABUN
U-235	1.791E-01	2.203E-01	3.770E-01	0.000E+00	FAIL ABUN
NP-236	7.273E-02	7.729E-02	1.355E-01	0.000E+00	NOT IDENT.
U-238	2.539E+00	1.897E+00	3.366E+00	0.000E+00	FAIL ABUN
NP-239	-1.044E-01	1.900E-01	3.180E-01	0.000E+00	FAIL ABUN
AM-241	2.727E-01	2.267E-01	4.166E-01	0.000E+00	NOT IDENT.
CM-243	1.633E-02	9.805E-02	1.705E-01	0.000E+00	FAIL ABUN
CM-247	-9.905E-03	3.423E-02	5.691E-02	0.000E+00	NOT IDENT.
CF-249	6.521E-03	3.829E-02	6.585E-02	0.000E+00	NOT IDENT.
CF-251	-2.943E-02	1.273E-01	2.104E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:36:27.60

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:35:24.
Sample ID         : G232591001           Sample quantity  : 1.25480E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.07  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1296	10.67*	1.107E+00	3.282E+01	3.282E+01	10.40
CD-109	88.03	194	3.72*	5.295E+00	2.950E+00	3.011E+00	38.67
SN-126	64.28	------	9.60	2.419E+00	------ Line Not Found		------
	86.94	194	8.90	5.295E+00	1.233E+00	1.233E+00	55.96
	87.57	194	37.00*	5.295E+00	2.966E-01	2.966E-01	38.67
TL-208	277.35	------	6.80	4.610E+00	------ Line Not Found		------
	510.84	120	21.60	2.927E+00	5.701E-01	5.701E-01	61.34
	583.14	348	84.20*	2.626E+00	4.707E-01	4.707E-01	18.55
	860.37	77	12.46	1.838E+00	1.006E+00	1.006E+00	64.48
BI-211	72.87	------	1.27	3.633E+00	------ Line Not Found		------
	351.07	699	12.94*	3.886E+00	4.159E+00	4.159E+00	13.58
PB-212	74.81	347	10.70	3.902E+00	2.485E+00	2.485E+00	28.30
	77.11	566	18.00	4.203E+00	2.237E+00	2.237E+00	19.13
	87.30	194	8.00	5.295E+00	1.372E+00	1.372E+00	39.94
	238.63	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.09	69	3.41	4.358E+00	1.395E+00	1.395E+00	71.15
PO-212	74.81	347	10.70	3.902E+00	2.485E+00	2.485E+00	28.30
	77.11	566	18.00	4.203E+00	2.237E+00	2.237E+00	19.13
	87.30	194	8.00	5.295E+00	1.372E+00	1.372E+00	39.94
	115.19	------	0.60	6.657E+00	------ Line Not Found		------
	238.63	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.09	69	3.41	4.358E+00	1.395E+00	1.395E+00	71.15
BI-214	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------ Line Not Found		------
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	------	4.11	1.163E+00	------ Line Not Found		------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
PB-214	74.81	347	6.21	3.902E+00	4.281E+00	4.281E+00	27.72
	77.11	566	10.50	4.203E+00	3.835E+00	3.835E+00	20.59
	87.30	194	4.67	5.295E+00	2.350E+00	2.350E+00	39.43

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	296	7.49	5.069E+00	2.331E+00	2.331E+00	27.34
	295.21	399	19.20	4.408E+00	1.409E+00	1.409E+00	16.62
	351.92	699	37.20*	3.886E+00	1.447E+00	1.447E+00	14.54
PO-214	74.81	347	6.21	3.902E+00	4.281E+00	4.281E+00	27.72
	77.11	566	10.50	4.203E+00	3.835E+00	3.835E+00	20.59
	87.30	194	4.67	5.295E+00	2.350E+00	2.350E+00	39.43
	241.98	296	7.49	5.069E+00	2.331E+00	2.331E+00	27.34
	295.21	399	19.20	4.408E+00	1.409E+00	1.409E+00	16.62
	351.92	699	37.20*	3.886E+00	1.447E+00	1.447E+00	14.54
PO-216	74.81	347	10.70	3.902E+00	2.485E+00	2.485E+00	28.30
	77.11	566	18.00	4.203E+00	2.237E+00	2.237E+00	19.13
	87.30	194	8.00	5.295E+00	1.372E+00	1.372E+00	39.94
	238.63	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.09	69	3.41	4.358E+00	1.395E+00	1.395E+00	71.15
PO-218	74.81	347	6.21	3.902E+00	4.281E+00	4.281E+00	27.72
	77.11	566	10.50	4.203E+00	3.835E+00	3.835E+00	20.59
	87.30	194	4.67	5.295E+00	2.350E+00	2.350E+00	39.43
	241.98	296	7.49	5.069E+00	2.331E+00	2.331E+00	27.34
	295.21	399	19.20	4.408E+00	1.409E+00	1.409E+00	16.62
	351.92	699	37.20*	3.886E+00	1.447E+00	1.447E+00	14.54
RA-224	240.98	296	3.95*	5.069E+00	4.420E+00	4.420E+00	26.76
RA-226	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------	Line Not Found	------
	934.06	------	3.21	1.697E+00	------	Line Not Found	------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------	Line Not Found	------
	1377.67	------	4.11	1.163E+00	------	Line Not Found	------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
AC-228	338.32	273	11.40	3.999E+00	1.794E+00	1.794E+00	45.67
	911.07	247	27.70*	1.739E+00	1.536E+00	1.536E+00	26.10
	969.11	186	16.60	1.636E+00	2.047E+00	2.047E+00	30.31
RA-228	338.32	273	11.40	3.999E+00	1.794E+00	1.794E+00	45.67
	911.07	247	27.70*	1.739E+00	1.536E+00	1.536E+00	26.10
	969.11	186	16.60	1.636E+00	2.047E+00	2.047E+00	30.31
TH-228	84.40	------	1.21	5.004E+00	------	Line Not Found	------
	238.60	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.10	69	3.41	4.358E+00	1.395E+00	1.395E+00	92.02
TH-230	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------	Line Not Found	------
	934.06	------	3.21	1.697E+00	------	Line Not Found	------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------	Line Not Found	------
	1377.67	------	4.11	1.163E+00	------	Line Not Found	------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
TH-232	338.32	273	11.40	3.999E+00	1.794E+00	1.794E+00	21.39
	911.07	247	27.70*	1.739E+00	1.536E+00	1.536E+00	26.10
	969.11	186	16.60	1.636E+00	2.047E+00	2.047E+00	30.31
U-234	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------	Line Not Found	------

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	934.06	------	3.21	1.697E+00	------	Line Not Found	------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------	Line Not Found	------
	1377.67	------	4.11	1.163E+00	------	Line Not Found	------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
NP-237	86.50	194	12.60*	5.295E+00	8.708E-01	8.708E-01	43.83
	95.87	------	2.60	5.933E+00	------	Line Not Found	------
AM-243	74.67	347	66.00*	3.902E+00	4.028E-01	4.028E-01	26.72
	86.72	194	0.34	5.295E+00	3.266E+01	3.266E+01	38.67
	117.66	------	0.55	6.694E+00	------	Line Not Found	------
	142.18	------	0.13	6.676E+00	------	Line Not Found	------
ANH-511	511.00	120	100.00*	2.927E+00	1.231E-01	1.231E-01	60.77

Flag: "*" = Keyline

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

Total number of lines in spectrum 30
Number of unidentified lines 1
Number of lines tentatively identified by NID 29 96.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.282E+01	3.282E+01	0.341E+01	10.40	
CD-109	464.00D	1.02	2.950E+00	3.011E+00	1.164E+00	38.67	
SN-126	1.00E+05Y	1.00	2.966E-01	2.966E-01	1.147E-01	38.67	
TL-208	1.41E+10Y	1.00	4.707E-01	4.707E-01	0.873E-01	18.55	
BI-211	7.04E+08Y	1.00	4.159E+00	4.159E+00	0.565E+00	13.58	
PB-212	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
PO-212	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
BI-214	1600.00Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
PB-214	1600.00Y	1.00	1.447E+00	1.447E+00	0.210E+00	14.54	
PO-214	1600.00Y	1.00	1.447E+00	1.447E+00	0.210E+00	14.54	
PO-216	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
PO-218	1600.00Y	1.00	1.447E+00	1.447E+00	0.210E+00	14.54	
RA-224	1.41E+10Y	1.00	4.420E+00	4.420E+00	1.183E+00	26.76	
RA-226	1600.00Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
AC-228	1.41E+10Y	1.00	1.536E+00	1.536E+00	0.401E+00	26.10	
RA-228	1.41E+10Y	1.00	1.536E+00	1.536E+00	0.401E+00	26.10	
TH-228	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
TH-230	4.47E+09Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
TH-232	1.41E+10Y	1.00	1.536E+00	1.536E+00	0.401E+00	26.10	
U-234	4.47E+09Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
NP-237	2.14E+06Y	1.00	8.708E-01	8.708E-01	3.817E-01	43.83	
AM-243	7380.00Y	1.00	4.028E-01	4.028E-01	1.076E-01	26.72	
ANH-511	1.00E+09Y	1.00	1.231E-01	1.231E-01	0.748E-01	60.77	
	Total Activity :		6.749E+01	6.755E+01			

Grand Total Activity : 6.749E+01 6.755E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	90.06	133	399	1.10	180.24	171	20	1.85E-02	52.1	5.52E+00	T
3	93.08	212	414	1.26	186.27	171	20	2.95E-02	38.5	5.75E+00	T
0	185.91	185	367	1.33	371.77	367	10	2.57E-02	43.1	5.98E+00	T
0	209.26	82	327	1.09	418.42	414	9	1.14E-02	82.6	5.57E+00	T
0	328.31	46	177	1.41	656.35	653	9	6.43E-03	****	4.09E+00	T
0	375.01	12	201	2.89	749.70	738	13	1.70E-03	****	3.71E+00	T
0	409.92	30	132	1.12	819.47	815	9	4.16E-03	****	3.47E+00	T
0	463.40	95	92	1.09	926.36	922	10	1.33E-02	42.8	3.16E+00	T
0	727.88	104	82	1.32	1455.10	1447	15	1.44E-02	42.8	2.16E+00	T
0	795.21	64	42	1.48	1589.70	1584	10	8.86E-03	45.7	1.99E+00	T
2	964.75	66	44	2.12	1928.71	1924	20	9.22E-03	41.1	1.64E+00	T
0	1848.24	9	9	0.69	3696.16	3689	12	1.24E-03	****	9.57E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:36:32.15

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1 *
* Acquisition date  : 9-JUL-2009 08:35:24.  Detector SN#     :             *
* Detector ID       : GAM10                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:02.07          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232591001            Analyst initials: MXR1         *
* Batch Number      : 881931                Sample Quantity : 1.25480E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08.8MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.282E+01	3.415E+00	6.220E-01	5.357E-02	52.766
CD-109	3.011E+00	1.164E+00	1.367E+00	1.550E-01	2.202
SN-126	2.966E-01	1.147E-01	1.356E-01	1.535E-02	2.186
TL-208	4.707E-01	8.732E-02	5.182E-02	3.482E-03	9.084
BI-211	4.159E+00	5.646E-01	3.075E-01	2.242E-02	13.525
PB-212	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
PO-212	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
BI-214	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
PB-214	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-214	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-216	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
PO-218	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
RA-224	4.420E+00	1.183E+00	1.058E+00	6.493E-02	4.178
RA-226	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
AC-228	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
RA-228	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
TH-228	1.725E+00	1.747E-01	9.296E-02	7.051E-03	18.556
TH-230	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
U-234	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
NP-237	8.708E-01	3.817E-01	4.517E-01	1.062E-01	1.928
AM-243	4.028E-01	1.076E-01	1.044E-01	1.143E-02	3.858
ANH-511	1.231E-01	7.483E-02	4.241E-02	2.717E-03	2.904

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-9.064E-02		3.155E-01	4.982E-01	3.705E-02	-0.182
NA-22	-1.508E-02		4.842E-02	7.809E-02	6.049E-03	-0.193
NA-24	-8.263E-02		9.241E-02	Half-Life too short		
AL-26	9.558E-03		3.255E-02	5.565E-02	3.529E-03	0.172
TI-44	4.128E-01	+	7.896E-02	8.983E-02	9.829E-03	4.595
SC-46	-5.161E-02		4.183E-02	5.954E-02	5.892E-03	-0.867
V-48	-4.840E-02		6.817E-02	1.018E-01	9.410E-03	-0.476
CR-51	1.789E-01		3.426E-01	5.842E-01	4.220E-02	0.306
MN-52	-1.546E-02		1.985E-01	3.233E-01	2.732E-02	-0.048
MN-54	-2.184E-03		4.137E-02	6.767E-02	5.781E-03	-0.032
CO-56	-7.039E-04		3.946E-02	6.464E-02	5.708E-03	-0.011
CO-57	-2.309E-02		2.592E-02	4.025E-02	2.655E-03	-0.574
CO-58	-3.084E-02		4.298E-02	6.635E-02	5.308E-03	-0.465
FE-59	6.530E-03		9.298E-02	1.506E-01	1.257E-02	0.043
CO-60	-1.882E-02		4.100E-02	6.411E-02	5.571E-03	-0.294
ZN-65	-2.451E-02		1.090E-01	1.458E-01	1.062E-02	-0.168
GE-68	-7.842E-01		1.459E+00	2.225E+00	1.762E-01	-0.352
AS-73	1.012E-02		1.471E+00	2.463E+00	3.259E-01	0.004
AS-74	6.989E-02		8.065E-02	1.441E-01	8.229E-03	0.485
SE-75	3.492E-03		4.207E-02	7.073E-02	4.512E-03	0.049
BR-77	3.239E+00		7.361E+00	1.184E+01	7.513E-01	0.274
SR-82	1.128E-01		3.624E-01	6.143E-01	4.429E-02	0.184
RB-83	2.455E-02		6.909E-02	1.104E-01	7.006E-03	0.222
RB-84	5.841E-03		7.004E-02	1.155E-01	1.120E-02	0.051
KR-85	1.753E+01		7.447E+00	1.367E+01	8.732E-01	1.282
SR-85	8.869E-02		3.768E-02	6.917E-02	4.418E-03	1.282
RB-86	-8.853E-01		9.051E-01	1.314E+00	1.042E-01	-0.674
Y-88	3.231E-02		2.763E-02	5.675E-02	3.482E-03	0.569
ZR-88	-1.567E-03		2.967E-02	4.836E-02	3.286E-03	-0.032
Y-91	-7.518E+00		2.100E+01	3.407E+01	2.263E+00	-0.221
NB-94	2.083E-02		3.521E-02	6.100E-02	3.473E-03	0.342
NB-95	1.715E-02		4.398E-02	7.478E-02	5.218E-03	0.229
NB-95M	5.289E-02		1.337E-01	2.041E-01	1.583E-02	0.259
ZR-95	8.356E-02		6.697E-02	1.219E-01	9.573E-03	0.686
NB-97	-2.431E-02		1.458E-02	Half-Life too short		
ZR-97	3.355E-01		2.627E-01	Half-Life too short		
MO-99	5.319E+00		7.876E+00	1.376E+01	1.935E+00	0.386
TC-99M	-2.310E+08		6.114E+08	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101	-6.641E-03		3.420E-02	5.297E-02	3.043E-03	-0.125
RH-102	1.030E-02		2.952E-02	4.890E-02	3.225E-03	0.211
RU-103	-5.403E-03		3.855E-02	6.054E-02	7.854E-03	-0.089
RH-106	-2.228E-01		3.048E-01	4.800E-01	5.549E-02	-0.464
RU-106	-2.228E-01		3.040E-01	4.800E-01	2.607E-02	-0.464
AG-108M	-1.683E-02		3.401E-02	5.336E-02	3.826E-03	-0.315
AG-110M	-2.666E-02		3.625E-02	5.722E-02	3.100E-03	-0.466
IN-111	4.085E-01		8.444E-01	1.290E+00	7.967E-02	0.317
IN-113M	1.800E-02		4.244E-02	7.135E-02	5.088E-03	0.252
SN-113	1.800E-02		4.244E-02	7.135E-02	5.088E-03	0.252
IN-114M	-1.782E-02		1.992E-01	2.781E-01	1.577E-02	-0.064
CD-115	-3.477E+00		7.157E+00	1.099E+01	6.922E-01	-0.316
SN-117M	-3.871E-02		5.220E-02	8.051E-02	4.515E-03	-0.481
SB-122	2.901E-01		1.583E+00	2.563E+00	1.542E-01	0.113
I-123	-4.774E-01		5.948E-01	Half-Life too short		
TE-123M	-1.154E-02		2.876E-02	4.513E-02	2.563E-03	-0.256
I-124	-3.886E-01		5.675E-01	8.499E-01	4.795E-02	-0.457
SB-124	3.855E-03		6.722E-02	1.106E-01	8.406E-03	0.035
SB-125	4.778E-02		9.394E-02	1.579E-01	1.100E-02	0.303
TE-125M	1.314E+00		9.268E+00	1.518E+01	1.457E+00	0.087
I-126	-1.524E-01		1.742E-01	2.715E-01	1.362E-02	-0.561
SB-126	1.378E-02		1.513E-01	2.204E-01	1.331E-02	0.063
SB-127	-5.456E-01		1.086E+00	1.736E+00	1.514E-01	-0.314
XE-127	-6.192E-03		4.408E-02	7.432E-02	4.304E-03	-0.083
I-131	-2.209E-02		1.011E-01	1.637E-01	1.202E-02	-0.135
TE-132	-2.278E-01		5.190E-01	8.573E-01	1.219E-01	-0.266
BA-133	-1.897E-02		4.734E-02	6.584E-02	7.944E-03	-0.288
I-133	4.902E-04		1.135E-03	Half-Life too short		
CS-134	1.266E-01	+	5.863E-02	9.440E-02	7.278E-03	1.341
CS-135	-8.035E-02		1.559E-01	2.541E-01	2.054E-02	-0.316
I-135	3.716E+07		1.330E+08	Half-Life too short		
CS-136	6.555E-02		1.174E-01	1.990E-01	1.742E-02	0.329
BA-137M	4.316E-02		3.793E-02	6.811E-02	3.361E-03	0.634
CS-137	4.562E-02		4.010E-02	7.200E-02	3.573E-03	0.634
CE-139	3.310E-02		2.931E-02	4.918E-02	2.686E-03	0.673
BA-140	-4.333E-02		2.518E-01	3.971E-01	1.295E-01	-0.109
LA-140	3.378E-02		7.981E-02	1.391E-01	1.079E-02	0.243
CE-141	2.914E-02		6.534E-02	1.054E-01	6.448E-03	0.277
CE-143	1.942E-04		4.555E-05	Half-Life too short		
CE-144	-3.818E-02		2.138E-01	3.422E-01	4.916E-02	-0.112
PM-144	-1.945E-02		3.420E-02	5.435E-02	3.032E-03	-0.358
PR-144	-1.317E+00		2.316E+00	3.680E+00	2.052E-01	-0.358
PM-146	-2.150E-02		4.191E-02	6.516E-02	6.019E-03	-0.330
ND-147	7.212E-02		5.292E-01	8.575E-01	1.177E-01	0.084
PM-149	-6.997E+01		6.103E+01	9.403E+01	1.359E+01	-0.744
EU-152	-2.895E-02		9.556E-02	1.491E-01	1.098E-02	-0.194
GD-153	-5.452E-02		9.228E-02	1.303E-01	1.213E-02	-0.418
EU-154	-3.573E-02		1.347E-01	2.183E-01	2.325E-02	-0.164

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	9.777E-03		1.114E-01	1.824E-01	1.513E-02	0.054
TB-160	5.561E-02		1.352E-01	2.300E-01	2.218E-02	0.242
HO-166M	-2.530E-02		6.245E-02	1.005E-01	5.895E-03	-0.252
TM-171	-2.673E+01		3.660E+01	5.863E+01	6.680E+00	-0.456
LU-176	-7.786E-03		2.282E-02	3.711E-02	2.441E-03	-0.210
LU-177	1.679E+00	+	1.391E+00	1.751E+00	1.023E-01	0.959
LU-177M	-6.891E-02		1.930E-01	2.657E-01	1.801E-02	-0.259
HF-181	1.992E-02		3.954E-02	6.632E-02	4.353E-03	0.300
W-181	-3.819E-01		4.920E-01	7.914E-01	9.144E-02	-0.483
TA-182	6.860E-02		2.162E-01	3.698E-01	2.550E-02	0.186
RE-183	3.392E-02		1.092E-01	1.770E-01	9.790E-03	0.192
RE-184	6.263E-02		2.221E-01	3.778E-01	2.355E-02	0.166
OS-185	-1.091E-02		4.164E-02	6.823E-02	3.505E-03	-0.160
RE-188	2.252E-01		1.770E-01	2.983E-01	1.695E-02	0.755
W-188	-2.290E+00		8.133E+00	1.167E+01	7.576E-01	-0.196
IR-192	-1.050E-02		3.274E-02	5.323E-02	3.538E-03	-0.197
AU-195	6.436E-02		2.323E-01	3.821E-01	3.467E-02	0.168
TL-200	1.502E-04		1.164E-04	Half-Life too short		
TL-201	-7.308E-01		5.405E+00	8.568E+00	4.686E-01	-0.085
TL-202	1.979E-02		6.722E-02	1.113E-01	7.484E-03	0.178
HG-203	2.544E-02		4.360E-02	7.368E-02	4.972E-03	0.345
BI-207	-8.850E-03		5.659E-02	8.975E-02	7.306E-03	-0.099
TL-207	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
PO-209	-7.020E+00		7.909E+00	1.175E+01	1.185E+00	-0.598
BI-210	4.094E+00		8.988E+00	1.536E+01	1.506E+00	0.267
PB-210	4.094E+00		8.988E+00	1.536E+01	1.506E+00	0.267
PO-210	4.094E+00		8.987E+00	1.536E+01	1.379E+00	0.267
PB-211	-1.141E+00		1.256E+00	1.318E+00	8.232E-01	-0.865
BI-212	1.221E+00	+	5.317E-01	6.744E-01	5.395E-02	1.811
PO-215	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
RN-219	3.097E-01		3.872E-01	6.627E-01	9.315E-02	0.467
RN-220	-1.556E+01		2.573E+01	3.894E+01	2.388E+00	-0.400
RA-223	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
AC-227	1.274E-01		3.714E-01	6.324E-01	8.954E-02	0.201
TH-227	1.274E-01		3.716E-01	6.324E-01	1.079E-01	0.201
TH-229	1.027E-01		5.095E-01	8.146E-01	4.646E-02	0.126
PA-231	-9.014E-01		1.495E+00	2.404E+00	3.382E-01	-0.375
TH-231	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
U-231	-5.128E-02		9.732E-01	1.420E+00	1.361E-01	-0.036
PA-233	8.658E-02		6.151E-02	1.095E-01	7.578E-03	0.791
PA-234	-8.805E-02		3.049E-01	4.805E-01	9.258E-02	-0.183
PA-234M	8.629E-01		7.515E+00	1.223E+01	1.406E+00	0.071
TH-234	2.539E+00		1.935E+00	3.223E+00	6.353E-01	0.788
U-235	1.791E-01		2.248E-01	3.651E-01	5.969E-02	0.491
NP-236	7.273E-02		7.887E-02	1.314E-01	7.320E-03	0.554
U-238	2.539E+00		1.935E+00	3.223E+00	6.353E-01	0.788
NP-239	-1.044E-01		1.939E-01	3.071E-01	2.148E-02	-0.340
AM-241	2.727E-01		2.313E-01	3.987E-01	5.120E-02	0.684

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.633E-02		1.000E-01	1.644E-01	1.377E-02	0.099
CM-247	-9.905E-03		3.493E-02	5.591E-02	3.796E-03	-0.177
CF-249	6.521E-03		3.907E-02	6.466E-02	4.393E-03	0.101
CF-251	-2.943E-02		1.299E-01	2.043E-01	1.133E-02	-0.144

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232591001           *
* Acquisition date  :  9-JUL-2009 08:35:24 Detector SN#     :               *
* Detector ID       : GAM10                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:02.07      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232591001           Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.2548E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.282E+01	3.346E+00	3.110E-01	1.707E+00
CD-109	3.011E+00	1.141E+00	7.112E-01	5.822E-01
SN-126	2.966E-01	1.124E-01	7.055E-02	5.733E-02
TL-208	4.707E-01	8.557E-02	2.625E-02	4.366E-02
BI-211	4.159E+00	5.533E-01	1.569E-01	2.823E-01
PB-212	1.725E+00	1.712E-01	4.769E-02	8.734E-02
PO-212	1.725E+00	1.712E-01	4.769E-02	8.734E-02
BI-214	1.282E+00	1.814E-01	5.840E-02	9.253E-02
PB-214	1.447E+00	2.062E-01	5.469E-02	1.052E-01
PO-214	1.447E+00	2.062E-01	5.469E-02	1.052E-01
PO-216	1.725E+00	1.712E-01	4.769E-02	8.734E-02
PO-218	1.447E+00	2.062E-01	5.469E-02	1.052E-01
RA-224	4.420E+00	1.159E+00	5.426E-01	5.914E-01
RA-226	1.282E+00	1.814E-01	5.840E-02	9.253E-02
AC-228	1.536E+00	3.928E-01	1.094E-01	2.004E-01
RA-228	1.536E+00	3.928E-01	1.094E-01	2.004E-01
TH-228	1.725E+00	1.712E-01	4.769E-02	8.734E-02
TH-230	1.282E+00	1.813E-01	5.840E-02	9.253E-02
TH-232	1.536E+00	3.928E-01	1.094E-01	2.004E-01
U-234	1.282E+00	1.813E-01	5.840E-02	9.253E-02
NP-237	8.708E-01	3.740E-01	2.350E-01	1.908E-01
AM-243	4.028E-01	1.055E-01	5.442E-02	5.381E-02
ANH-511	1.231E-01	7.333E-02	2.153E-02	3.741E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-9.064E-02	3.092E-01	2.531E-01	1.577E-01	NOT IDENT.
NA-22	-1.508E-02	4.745E-02	3.912E-02	2.421E-02	NOT IDENT.
NA-24	-8.263E+04	1.811E+05	0.000E+00	9.241E+04	SHORT HLIF
AL-26	9.558E-03	3.190E-02	2.774E-02	1.628E-02	NOT IDENT.

TI-44	4.128E-01	7.738E-02	4.679E-02	3.948E-02	FAIL ABUN
SC-46	-5.161E-02	4.099E-02	2.998E-02	2.092E-02	FAIL ABUN
V-48	-4.840E-02	6.681E-02	5.117E-02	3.409E-02	NOT IDENT.
CR-51	1.789E-01	3.358E-01	2.985E-01	1.713E-01	NOT IDENT.
MN-52	-1.546E-02	1.945E-01	1.617E-01	9.924E-02	NOT IDENT.
MN-54	-2.184E-03	4.054E-02	3.411E-02	2.068E-02	NOT IDENT.
CO-56	-7.039E-04	3.867E-02	3.257E-02	1.973E-02	NOT IDENT.
CO-57	-2.309E-02	2.541E-02	2.084E-02	1.296E-02	NOT IDENT.
CO-58	-3.084E-02	4.212E-02	3.345E-02	2.149E-02	NOT IDENT.
FE-59	6.530E-03	9.113E-02	7.561E-02	4.649E-02	NOT IDENT.
CO-60	-1.882E-02	4.018E-02	3.209E-02	2.050E-02	NOT IDENT.
ZN-65	-2.451E-02	1.069E-01	7.316E-02	5.452E-02	NOT IDENT.
GE-68	-7.842E-01	1.430E+00	1.117E+00	7.296E-01	NOT IDENT.
AS-73	1.012E-02	1.442E+00	1.289E+00	7.356E-01	NOT IDENT.
AS-74	6.989E-02	7.903E-02	7.296E-02	4.032E-02	NOT IDENT.
SE-75	3.492E-03	4.123E-02	3.623E-02	2.104E-02	NOT IDENT.
BR-77	3.239E+00	7.214E+00	6.009E+00	3.681E+00	FAIL ABUN
SR-82	1.128E-01	3.552E-01	3.099E-01	1.812E-01	NOT IDENT.
RB-83	2.455E-02	6.771E-02	5.602E-02	3.455E-02	NOT IDENT.
RB-84	5.841E-03	6.864E-02	5.817E-02	3.502E-02	NOT IDENT.
KR-85	1.753E+01	7.298E+00	6.938E+00	3.723E+00	NOT IDENT.
SR-85	8.869E-02	3.692E-02	3.510E-02	1.884E-02	NOT IDENT.
RB-86	-8.853E-01	8.870E-01	6.597E-01	4.525E-01	NOT IDENT.
Y-88	3.231E-02	2.708E-02	2.828E-02	1.382E-02	NOT IDENT.
ZR-88	-1.567E-03	2.907E-02	2.464E-02	1.483E-02	NOT IDENT.
Y-91	-7.518E+00	2.058E+01	1.708E+01	1.050E+01	NOT IDENT.
NB-94	2.083E-02	3.451E-02	3.082E-02	1.761E-02	NOT IDENT.
NB-95	1.715E-02	4.310E-02	3.774E-02	2.199E-02	NOT IDENT.
NB-95M	5.289E-02	1.310E-01	1.047E-01	6.684E-02	NOT IDENT.
ZR-95	8.356E-02	6.564E-02	6.151E-02	3.349E-02	NOT IDENT.
NB-97	-2.431E+04	2.858E+04	0.000E+00	1.458E+04	SHORT HLIF
ZR-97	3.355E+05	5.150E+05	0.000E+00	2.627E+05	SHORT HLIF
MO-99	5.319E+00	7.719E+00	6.950E+00	3.938E+00	NOT IDENT.
TC-99M	-2.310E+14	1.198E+15	0.000E+00	6.114E+14	SHORT HLIF
RH-101	-6.641E-03	3.352E-02	2.725E-02	1.710E-02	NOT IDENT.
RH-102	1.030E-02	2.893E-02	2.484E-02	1.476E-02	NOT IDENT.
RU-103	-5.403E-03	3.778E-02	3.074E-02	1.928E-02	FAIL ABUN
RH-106	-2.228E-01	2.988E-01	2.430E-01	1.524E-01	FAIL ABUN
RU-106	-2.228E-01	2.979E-01	2.430E-01	1.520E-01	FAIL ABUN
AG-108M	-1.683E-02	3.333E-02	2.714E-02	1.701E-02	NOT IDENT.
AG-110M	-2.666E-02	3.552E-02	2.894E-02	1.812E-02	NOT IDENT.
IN-111	4.085E-01	8.275E-01	6.617E-01	4.222E-01	NOT IDENT.
IN-113M	1.800E-02	4.159E-02	3.635E-02	2.122E-02	NOT IDENT.
SN-113	1.800E-02	4.159E-02	3.635E-02	2.122E-02	NOT IDENT.
IN-114M	-1.782E-02	1.952E-01	1.431E-01	9.960E-02	NOT IDENT.
CD-115	-3.477E+00	7.014E+00	5.578E+00	3.578E+00	NOT IDENT.
SN-117M	-3.871E-02	5.115E-02	4.153E-02	2.610E-02	NOT IDENT.
SB-122	2.901E-01	1.552E+00	1.299E+00	7.916E-01	NOT IDENT.
I-123	-4.774E+05	1.166E+06	0.000E+00	5.948E+05	SHORT HLIF
TE-123M	-1.154E-02	2.818E-02	2.328E-02	1.438E-02	NOT IDENT.
I-124	-3.886E-01	5.561E-01	4.303E-01	2.837E-01	NOT IDENT.
SB-124	3.855E-03	6.587E-02	5.519E-02	3.361E-02	FAIL ABUN
SB-125	4.778E-02	9.206E-02	8.036E-02	4.697E-02	FAIL ABUN
TE-125M	1.314E+00	9.082E+00	7.873E+00	4.634E+00	NOT IDENT.
I-126	-1.524E-01	1.707E-01	1.373E-01	8.709E-02	NOT IDENT.
SB-126	1.378E-02	1.482E-01	1.113E-01	7.563E-02	FAIL ABUN
SB-127	-5.456E-01	1.065E+00	8.774E-01	5.432E-01	NOT IDENT.
XE-127	-6.192E-03	4.319E-02	3.821E-02	2.204E-02	FAIL ABUN
I-131	-2.209E-02	9.904E-02	8.350E-02	5.053E-02	NOT IDENT.
TE-132	-2.278E-01	5.086E-01	4.401E-01	2.595E-01	NOT IDENT.
BA-133	-1.897E-02	4.640E-02	3.359E-02	2.367E-02	NOT IDENT.
I-133	4.902E+02	2.225E+03	0.000E+00	1.135E+03	SHORT HLIF
CS-134	1.266E-01	5.746E-02	4.761E-02	2.932E-02	FAIL ABUN
CS-135	-8.035E-02	1.528E-01	1.302E-01	7.795E-02	NOT IDENT.
I-135	3.716E+13	2.607E+14	0.000E+00	1.330E+14	SHORT HLIF
CS-136	6.555E-02	1.150E-01	9.996E-02	5.869E-02	FAIL ABUN
BA-137M	4.316E-02	3.718E-02	3.444E-02	1.897E-02	NOT IDENT.
CS-137	4.562E-02	3.930E-02	3.641E-02	2.005E-02	NOT IDENT.
CE-139	3.310E-02	2.872E-02	2.536E-02	1.465E-02	NOT IDENT.
BA-140	-4.333E-02	2.468E-01	2.014E-01	1.259E-01	NOT IDENT.
LA-140	3.378E-02	7.821E-02	6.945E-02	3.990E-02	FAIL ABUN
CE-141	2.914E-02	6.403E-02	5.443E-02	3.267E-02	NOT IDENT.
CE-143	1.942E+02	8.928E+01	0.000E+00	4.555E+01	SHORT HLIF
CE-144	-3.818E-02	2.095E-01	1.770E-01	1.069E-01	NOT IDENT.
PM-144	-1.945E-02	3.351E-02	2.746E-02	1.710E-02	NOT IDENT.
PR-144	-1.317E+00	2.269E+00	1.860E+00	1.158E+00	NOT IDENT.
PM-146	-2.150E-02	4.107E-02	3.313E-02	2.096E-02	NOT IDENT.
ND-147	7.212E-02	5.186E-01	4.350E-01	2.646E-01	FAIL ABUN

PM-149	-6.997E+01	5.981E+01	4.812E+01	3.052E+01	NOT IDENT.
EU-152	-2.895E-02	9.365E-02	7.609E-02	4.778E-02	FAIL ABUN
GD-153	-5.452E-02	9.043E-02	6.767E-02	4.614E-02	NOT IDENT.
EU-154	-3.573E-02	1.320E-01	1.093E-01	6.736E-02	NOT IDENT.
EU-155	9.777E-03	1.092E-01	9.465E-02	5.572E-02	FAIL ABUN
TB-160	5.561E-02	1.325E-01	1.158E-01	6.760E-02	FAIL ABUN
HO-166M	-2.530E-02	6.120E-02	5.075E-02	3.122E-02	FAIL ABUN
TM-171	-2.673E+01	3.587E+01	3.061E+01	1.830E+01	NOT IDENT.
LU-176	-7.786E-03	2.236E-02	1.897E-02	1.141E-02	FAIL ABUN
LU-177	1.679E+00	1.363E+00	8.999E-01	6.953E-01	FAIL ABUN
LU-177M	-6.891E-02	1.891E-01	1.353E-01	9.648E-02	NOT IDENT.
HF-181	1.992E-02	3.875E-02	3.369E-02	1.977E-02	NOT IDENT.
W-181	-3.819E-01	4.822E-01	4.133E-01	2.460E-01	NOT IDENT.
TA-182	6.860E-02	2.118E-01	1.854E-01	1.081E-01	FAIL ABUN
RE-183	3.392E-02	1.070E-01	9.129E-02	5.460E-02	FAIL ABUN
RE-184	6.263E-02	2.176E-01	1.936E-01	1.110E-01	NOT IDENT.
OS-185	-1.091E-02	4.081E-02	3.452E-02	2.082E-02	NOT IDENT.
RE-188	2.252E-01	1.735E-01	1.539E-01	8.850E-02	NOT IDENT.
W-188	-2.290E+00	7.971E+00	5.970E+00	4.067E+00	NOT IDENT.
IR-192	-1.050E-02	3.208E-02	2.720E-02	1.637E-02	FAIL ABUN
AU-195	6.436E-02	2.276E-01	1.984E-01	1.161E-01	FAIL ABUN
TL-200	1.502E+02	2.281E+02	0.000E+00	1.164E+02	SHORT HLIF
TL-201	-7.308E-01	5.297E+00	4.417E+00	2.703E+00	NOT IDENT.
TL-202	1.979E-02	6.587E-02	5.662E-02	3.361E-02	NOT IDENT.
HG-203	2.544E-02	4.272E-02	3.771E-02	2.180E-02	NOT IDENT.
BI-207	-8.850E-03	5.546E-02	4.508E-02	2.829E-02	FAIL ABUN
TL-207	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
PO-209	-7.020E+00	7.750E+00	5.914E+00	3.954E+00	NOT IDENT.
BI-210	4.094E+00	8.809E+00	8.056E+00	4.494E+00	NOT IDENT.
PB-210	4.094E+00	8.809E+00	8.056E+00	4.494E+00	NOT IDENT.
PO-210	4.094E+00	8.807E+00	8.056E+00	4.493E+00	NOT IDENT.
PB-211	-1.141E+00	1.231E+00	6.713E-01	6.282E-01	NOT IDENT.
BI-212	1.221E+00	5.211E-01	3.406E-01	2.658E-01	FAIL ABUN
PO-215	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
RN-219	3.097E-01	3.794E-01	3.375E-01	1.936E-01	NOT IDENT.
RN-220	-1.556E+01	2.522E+01	1.974E+01	1.286E+01	NOT IDENT.
RA-223	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
AC-227	1.274E-01	3.640E-01	3.241E-01	1.857E-01	FAIL ABUN
TH-227	1.274E-01	3.642E-01	3.241E-01	1.858E-01	FAIL ABUN
TH-229	1.027E-01	4.993E-01	4.191E-01	2.547E-01	FAIL ABUN
PA-231	-9.014E-01	1.465E+00	1.230E+00	7.474E-01	FAIL ABUN
TH-231	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
U-231	-5.128E-02	9.537E-01	7.378E-01	4.866E-01	FAIL ABUN
PA-233	8.658E-02	6.028E-02	5.597E-02	3.076E-02	FAIL ABUN
PA-234	-8.805E-02	2.988E-01	2.417E-01	1.524E-01	FAIL ABUN
PA-234M	8.629E-01	7.364E+00	6.148E+00	3.757E+00	NOT IDENT.
TH-234	2.539E+00	1.897E+00	1.684E+00	9.677E-01	FAIL ABUN
U-235	1.791E-01	2.203E-01	1.886E-01	1.124E-01	FAIL ABUN
NP-236	7.273E-02	7.729E-02	6.777E-02	3.943E-02	NOT IDENT.
U-238	2.539E+00	1.897E+00	1.684E+00	9.677E-01	FAIL ABUN
NP-239	-1.044E-01	1.900E-01	1.591E-01	9.695E-02	FAIL ABUN
AM-241	2.727E-01	2.267E-01	2.084E-01	1.157E-01	NOT IDENT.
CM-243	1.633E-02	9.805E-02	8.531E-02	5.002E-02	FAIL ABUN
CM-247	-9.905E-03	3.423E-02	2.847E-02	1.746E-02	NOT IDENT.
CF-249	6.521E-03	3.829E-02	3.294E-02	1.954E-02	NOT IDENT.
CF-251	-2.943E-02	1.273E-01	1.053E-01	6.493E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	274.0410
46.50	274.0410
46.50	274.0410
48.70	269.2525
49.72	290.2568
51.35	268.3630
52.39	260.7319
52.97	252.7546
53.15	264.0262
53.44	259.5680
54.07	269.2985
56.28	285.7653
56.28	285.7676
57.37	0.0000
57.53	311.0710
57.53	311.0722
57.60	315.8229
57.98	299.1772
57.98	299.1772
59.32	268.0433
59.32	268.0433
59.40	268.0939
59.54	268.1827
59.72	281.5228
60.01	293.0587
61.10	387.6334
61.14	387.6688
61.30	381.1750
63.00	323.6470
63.29	311.4773
63.29	311.4773
63.58	311.6819
64.28	328.4034
65.12	383.5391
65.20	383.6069
65.20	383.6069
66.05	410.2080
66.72	357.0601
66.83	352.3467
66.91	352.4083
67.20	342.0630
67.20	342.0630
67.75	349.2062
67.85	349.2819
68.90	319.4063
68.90	319.4063
69.30	314.1792
69.67	320.2251
70.82	341.3391
70.82	341.3391
70.83	341.3463
72.80	352.9653
72.87	353.0170
72.87	353.0170
74.67	367.9896
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.97	368.2139
75.28	368.4459
75.70	368.7585
77.11	369.8035
77.11	369.8035
77.11	369.8035

77.11	369.8035
77.11	369.8035
77.11	369,8035
78.38	370.7374
79.62	371.1476
79.80	366.8403
79.80	366.8403
80.11	367.0635
80.18	367.1127
80.30	392.3687
80.30	392.3687
80.57	392.5749
81.00	424.0381
81.07	424.0948
81.07	424.0948
81.07	424.0948
81.07	424.0948
82.60	378.7417
83.37	371.3521
83.78	393.5045
83.78	393.5045
83.78	393.5045
83.78	393.5045
84.21	384.8722
84.40	385.0100
84.90	380.8911
85.43	406.6864
86.29	453.7603
86.50	453.9383
86.54	453.9706
86.59	454.0122
86.72	365.6966
86.79	365.7412
86.94	365.8436
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.57	366.2681
87.88	366.4766
88.03	366.5771
88.36	366.7986
88.47	366.8712
89.95	367.8578
91.11	368.6248
92.29	369.3992
92.38	369.4588
92.38	369.4588
93.35	370.0917
94.00	285.4782
94.67	293.4109
94.67	293.4138
94.90	307.2196
94.90	307.2196
94.90	307.2196
94.90	307.2196
95.87	295.5484
95.87	295.5484
96.73	297.5137
97.43	308.5620
98.44	279.5104
98.44	279.5104
98.88	274.6151
99.55	273.9037
99.55	273.9037
99.86	285.2950
100.00	285.3631
100.10	285.4128
103.18	299.2131
103.76	288.1775
105.00	269.1669
105.31	294.0672
108.00	279.7984
109.28	284.5220
111.00	305.0757
111.00	305.0757

111.76	303.3544
112.95	280.9389
115.19	280.8610
116.30	300.2310
117.00	294.2444
117.00	294.2444
117.66	280.8628
121.11	281.2545
121.62	292.0483
121.78	309.0515
122.06	301.7659
122.32	282.8143
122.32	282.8143
122.32	282.8143
122.32	282.8143
123.07	276.7643
127.23	323.2375
129.76	300.8464
131.20	311.1104
133.02	293.6144
133.54	308.8934
135.34	308.5794
136.00	304.5390
136.25	302.4817
136.48	298.2560
140.51	314.0035
140.51	0.0000
142.18	321.2368
142.65	330.1518
143.76	285.8962
144.24	289.3504
144.24	289.3504
144.24	289.3504
144.24	289.3504
145.22	301.7487
145.44	295.2740
147.16	320.0463
152.43	306.7604
152.70	289.2037
153.22	270.6155
154.21	252.1489
154.21	252.1489
154.21	252.1489
154.21	252.1489
155.03	267.9075
156.02	319.2246
158.56	287.9815
159.00	0.0000
159.00	282.5745
160.31	237.3412
161.27	271.0860
162.32	260.2620
162.64	261.4790
163.35	274.0050
163.89	293.2068
165.85	228.8339
167.43	275.3409
171.28	251.7506
171.86	227.0676
172.10	214.7009
176.55	266.9114
176.60	265.7899
181.06	260.2828
184.41	247.5044
185.71	270.8080
186.00	270.8944
190.27	235.2545
192.34	262.3625
193.63	237.2627
197.04	255.5455
198.01	238.3638
198.60	261.7813
200.40	256.4451
201.83	260.0381
202.84	249.7925
205.31	255.8753
208.36	253.8501
208.81	246.9119

209.75	235.8488
209.75	235.8488
210.97	241.7943
215.65	242.3908
216.55	233.7207
218.09	242.0840
222.10	246.6064
223.80	238.0610
226.40	215.3284
227.00	210.9625
227.08	209.1831
227.20	219.0847
228.16	239.0554
228.18	239.0595
228.18	239.0595
231.56	0.0000
235.69	237.4917
236.00	237.5618
236.00	237.5618
238.60	232.3242
238.63	232.3301
238.63	232.3301
238.63	232.3301
239.00	232.4082
240.98	232.8301
241.98	233.0430
241.98	233.0430
241.98	233.0430
244.69	197.1145
245.39	189.9330
247.94	183.0460
248.90	197.8594
249.79	197.1008
252.40	192.0436
252.85	178.3316
252.85	178.3316
254.15	0.0000
256.20	181.6214
256.20	181.6214
260.50	174.8977
260.90	177.7354
262.80	188.2248
264.65	175.5235
268.24	210.5232
268.79	197.5757
269.46	173.4413
269.46	173.4413
269.46	173.4413
269.46	173.4413
271.23	181.1705
273.65	259.2057
276.40	181.0141
277.35	193.3576
277.60	189.6432
277.60	189.6432
278.00	187.8265
278.60	192.6192
279.20	204.9338
279.53	194.6468
280.46	233.3779
281.68	199.6978
283.67	179.2644
284.30	174.6372
285.00	194.5709
285.90	189.0411
286.10	185.2902
286.10	185.2902
287.40	157.0916
288.45	0.0000
290.67	180.6557
290.80	198.8923
291.72	203.5975
293.26	0.0000
293.70	161.3084
295.21	159.9763
295.21	159.9763
295.21	159.9763
295.96	160.0712

296.50	160.1378
297.23	160.2301
298.57	160.3993
299.80	160.5531
299.80	160.5531
300.09	160.5890
300.09	160.5890
300.09	160.5890
300.10	160.5890
300.12	160.5916
301.29	150.0218
302.84	151.7363
303.76	154.9102
303.91	154.9300
304.40	124.2962
304.40	124.2962
304.84	128.9449
306.84	142.2097
308.46	149.1203
311.98	118.6514
316.51	147.1271
318.01	148.2608
319.02	140.6148
319.41	137.7445
320.08	130.0497
323.87	154.1606
323.87	154.1606
323.87	154.1606
323.87	154.1606
325.23	146.5216
328.77	160.1863
333.44	141.1260
334.20	138.5902
334.20	138.5902
334.30	138.5988
338.28	144.5663
338.28	144.5663
338.28	144.5663
338.28	144.5663
338.32	144.5708
338.32	144.5708
338.32	144.5708
340.50	130.8081
340.57	130.8142
344.27	135.4457
345.85	131.3025
350.59	0.0000
351.07	124.0406
351.92	124.1150
351.92	124.1150
351.92	124.1150
355.39	0.0000
356.01	133.8237
364.48	126.1846
366.43	117.1262
367.43	120.4156
367.94	0.0000
369.80	144.7273
374.96	129.0879
383.85	127.8111
387.95	117.9807
388.63	122.1021
391.69	108.0687
391.69	108.0687
392.90	118.3541
398.62	121.8562
400.65	92.2783
401.10	95.3812
401.81	95.4238
402.60	113.9488
404.84	131.5840
410.95	97.4119
411.60	100.7542
413.65	115.7649
414.70	99.2915
415.30	100.7077
415.76	114.7325
417.63	0.0000

418.52	121.2936
423.70	129.9934
427.08	109.4156
427.89	107.3849
432.53	125.4547
433.93	123.4646
439.47	103.9231
439.56	111.2777
439.89	110.2487
443.98	89.4630
444.90	77.9261
445.03	77.9328
445.03	77.9328
445.03	77.9328
445.03	77.9328
453.90	102.6777
463.38	108.5524
468.07	104.1438
473.00	102.7178
475.06	95.3366
475.35	87.8520
476.78	90.0652
477.59	100.8317
477.96	92.2700
482.03	79.5724
484.57	97.9872
487.03	92.7279
490.36	0.0000
492.35	87.5877
497.08	81.3046
507.63	0.0000
510.53	0.0000
510.84	79.7140
511.00	79.7207
511.85	79.7552
511.85	79.7552
513.99	79.8443
513.99	79.8443
520.41	79.0137
520.65	79.0225
527.90	88.1299
528.96	0.0000
529.64	93.7210
529.87	0.0000
531.02	87.1657
537.32	94.0842
543.00	86.5812
546.56	0.0000
549.76	87.9866
552.65	98.1487
555.20	77.0544
563.23	100.9012
563.90	93.0837
568.70	87.6786
569.32	106.8199
569.50	106.8286
569.67	106.8373
573.80	95.5553
574.00	95.5630
574.64	86.5758
578.91	84.3418
579.30	0.0000
583.14	67.9102
585.48	67.9852
591.81	74.5507
592.07	74.5607
593.00	86.4185
595.88	65.5840
600.56	93.1099
602.52	0.0000
602.71	103.9385
602.71	103.9385
603.60	71.6073
604.41	85.3512
604.70	85.3626
609.31	94.4024
609.31	94.4024
609.31	94.4024

609.31	94.4024
610.33	94.4452
612.46	96.3713
614.37	91.8628
618.01	84.6530
621.84	84.7990
621.84	84.7990
631.29	73.1232
633.02	71.3265
633.10	71.3303
634.78	63.9665
635.90	72.3461
636.97	90.9395
645.85	78.2517
646.12	79.1915
656.30	82.3496
657.75	97.3832
657.90	0.0000
661.65	76.9110
661.65	76.9110
664.57	0.0000
666.33	98.6785
666.33	98.6785
675.00	69.8014
677.61	70.8215
685.20	81.4669
692.80	79.8226
695.00	80.8475
696.49	86.6055
696.49	86.6055
697.00	87.5774
697.49	84.7369
698.33	85.7197
698.50	86.6788
699.00	92.4129
702.63	80.1466
706.10	94.5914
706.58	0.0000
706.67	91.7461
709.31	71.7535
711.68	84.2703
713.82	88.1771
717.42	70.0682
720.50	70.4750
721.93	0.0000
722.20	72.1252
722.78	81.7606
722.78	81.7606
722.89	81.7648
722.95	81.7668
723.30	84.9863
724.18	75.3901
727.18	65.5230
733.00	43.4608
735.90	78.4279
739.58	51.3205
742.81	69.8063
744.21	64.9946
747.13	45.6448
751.79	73.9423
752.31	62.2797
753.82	56.4735
755.35	50.6606
756.15	47.7535
756.87	46.7918
763.93	106.5438
765.79	80.2083
766.41	66.5308
766.84	62.6266
768.36	66.5789
768.36	66.5789
768.36	66.5789
768.36	66.5789
776.49	60.8920
778.00	84.5114
778.57	86.4961
778.89	84.5387
783.80	48.2571

785.46	69.9669
792.07	49.3933
795.84	61.0042
796.30	57.7153
801.93	71.6068
805.60	57.5823
810.29	85.5276
810.76	82.5583
815.85	66.7661
817.79	72.7968
818.51	76.8064
819.60	74.8407
826.30	84.0226
828.27	0.0000
831.60	82.1782
831.96	79.1813
834.83	81.2690
836.80	0.0000
846.75	59.4465
848.13	60.4834
856.28	0.0000
856.80	53.9258
860.37	52.6437
867.32	60.8892
867.82	60.8994
871.10	49.5367
873.19	49.8266
874.81	63.0808
875.33	0.0000
876.40	60.0616
879.36	46.8749
880.27	50.9668
880.51	50.9705
881.50	55.0666
883.24	56.1199
884.67	50.0216
889.25	73.6154
896.60	68.6734
898.02	74.8589
899.00	69.7548
903.28	54.7878
911.07	56.6462
911.07	56.6462
911.07	56.6462
919.63	53.1186
920.93	52.6983
925.00	53.8040
925.24	52.7730
926.50	53.8294
934.06	46.6985
934.06	46.6985
934.06	46.6985
934.06	46.6985
935.52	42.5675
937.48	55.0613
944.10	45.8101
946.00	54.1722
949.00	67.7803
962.29	41.8877
964.01	47.1500
966.15	48.2304
968.20	48.2618
969.11	48.2753
969.11	48.2753
969.11	48.2753
977.42	48.4022
980.50	55.8208
983.50	55.8739
989.30	59.1432
996.32	69.8559
1001.03	60.4178
1001.68	50.8875
1004.76	61.5471
1021.30	0.0000
1024.50	0.0000
1034.80	50.3299
1037.82	65.3814
1038.57	65.3963

1038.76	0.0000
1045.16	70.8952
1046.59	63.4048
1048.07	55.9051
1050.47	54.8698
1050.47	54.8698
1063.62	55.0815
1076.63	75.8892
1077.35	68.3156
1085.78	60.8727
1099.22	49.1045
1112.02	61.0164
1112.84	51.1191
1115.52	58.4661
1120.29	57.0807
1120.29	57.0807
1120.29	57.0807
1120.29	57.0807
1120.51	57.0857
1121.28	57.0984
1124.00	0.0000
1129.67	59.4330
1131.51	0.0000
1147.95	0.0000
1167.94	68.5891
1173.22	67.7603
1175.09	59.4349
1177.93	61.3406
1189.05	74.5736
1204.90	75.8254
1205.75	0.0000
1213.00	74.1107
1221.42	66.7532
1230.97	74.4579
1235.34	83.9807
1236.41	0.0000
1238.11	84.0387
1238.11	84.0387
1238.11	84.0387
1238.11	84.0387
1238.25	84.0423
1246.25	62.4524
1260.41	0.0000
1271.85	54.2887
1274.45	53.3727
1274.54	54.3258
1291.56	38.2878
1298.22	0.0000
1312.09	39.4452
1325.50	22.2008
1325.50	22.2008
1332.49	37.7083
1333.61	31.9164
1360.21	28.2283
1362.66	0.0000
1365.15	20.4651
1368.21	30.2331
1368.53	0.0000
1376.25	26.3815
1377.67	30.2999
1377.67	30.2999
1377.67	30.2999
1377.67	30.2999
1384.27	27.4110
1394.10	22.5686
1395.20	22.5742
1407.95	23.6260
1434.06	22.7782
1436.60	29.7278
1457.56	0.0000
1460.81	27.8997
1489.15	20.0545
1509.49	21.1521
1596.49	16.4199
1620.62	18.5654
1678.03	0.0000
1691.02	10.4626
1691.02	10.4626

1706.46	0.0000
1750.46	0.0000
1764.49	7.4301
1764.49	7.4301
1764.49	7.4301
1764.49	7.4301
1770.23	1.8216
1771.40	5.4662
1791.20	0.0000
1808.65	11.7748
1836.01	3.2278

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232591001

Total Uranium Activity	7.6370E+00	ug/g
Total Uranium Counting Unc.	5.6433E+00	ug/g
Total Uranium Tpu	2.8793E-06	ug/g
Total Uranium Mda	5.0100E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID  : G232591001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM10            *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:35:24.45    SAMPLE ALQT:  125.480 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.669E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.637E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.944E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.424E+00
```

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:24:24.14

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:22:22.
Sample ID         : G1201873069          Sample quantity  : 1.32820E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.24  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
No peaks were found
```

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:24:26

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 2-JUL-2009 00:00:00 Acquisition date : 9-JUL-2009 08:22:22
Sample ID : G1201873069 Sample quantity : 132.82 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.24 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.057E-01	1.934E-01	2.700E-01	1.900E-02	-0.391
NA-22		1274.54	*	5.508E-03	2.973E-02	5.040E-02	2.981E-03	0.109
NA-24		1368.53	*	-7.892E-05	2.973E-02	Half-Life too short		
AL-26		1129.67		4.667E-01	1.039E+00	1.871E+00	1.126E-01	0.249
		1808.65	*	1.059E-03	3.994E-02	6.649E-02	3.702E-03	0.016
K-40		1460.81	*	1.161E-01	3.351E-01	5.820E-01	3.704E-02	0.199
TI-44		67.85		-7.748E-04	7.801E-03	1.258E-02	9.152E-04	-0.062
		78.38	*	-1.007E-02	9.084E-03	1.264E-02	9.775E-04	-0.797
SC-46		889.25	*	-2.137E-02	2.307E-02	2.953E-02	2.120E-03	-0.724
		1120.51		1.462E-02	2.791E-02	5.092E-02	3.099E-03	0.287
V-48		944.10		-8.409E-02	3.584E-01	5.559E-01	3.907E-02	-0.151
		983.50	*	-4.730E-02	3.639E-02	4.128E-02	2.840E-03	-1.146
		1312.09		3.372E-02	4.415E-02	8.348E-02	4.989E-03	0.404
CR-51		320.08	*	1.004E-01	1.776E-01	3.112E-01	2.024E-02	0.323
MN-52		744.21		4.783E-02	5.771E-02	1.097E-01	8.023E-03	0.436
		848.13		-6.448E-01	1.954E+00	3.055E+00	2.222E-01	-0.211
		935.52		-3.590E-02	6.326E-02	8.721E-02	6.153E-03	-0.412
		1246.25		-7.159E-01	1.946E+00	2.906E+00	1.697E-01	-0.246
		1333.61		9.273E-01	1.592E+00	2.908E+00	1.749E-01	0.319
		1434.06	*	-1.474E-03	1.064E-01	1.712E-01	1.032E-02	-0.009
MN-54		834.83	*	-1.609E-02	2.456E-02	3.563E-02	2.599E-03	-0.452
CO-56		846.75	*	-1.989E-02	2.822E-02	4.090E-02	2.976E-03	-0.486
		977.42		1.769E+00	1.721E+00	3.431E+00	2.369E-01	0.516
		1037.82		-5.063E-02	1.982E-01	3.071E-01	2.213E-02	-0.165
		1175.09		1.363E-01	1.506E+00	2.501E+00	1.418E-01	0.055
		1238.25		-1.818E-02	4.966E-02	7.391E-02	4.572E-03	-0.246
		1360.21		1.702E-01	5.896E-01	1.040E+00	6.264E-02	0.164
		1771.40		-8.956E-02	2.088E-01	2.983E-01	1.685E-02	-0.300
CO-57		122.06	*	3.399E-03	1.035E-02	1.714E-02	1.973E-03	0.198
		136.48		-1.248E-02	9.135E-02	1.444E-01	1.520E-02	-0.086
CO-58		810.76	*	1.470E-02	2.914E-02	5.206E-02	3.824E-03	0.282
FE-59		142.65		-3.457E-01	1.101E+00	1.624E+00	1.499E-01	-0.213
		192.34		-1.990E-01	4.011E-01	6.427E-01	7.712E-02	-0.310
		1099.22	*	-8.377E-03	5.121E-02	8.059E-02	5.780E-03	-0.104

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1291.56		6.178E-02	6.019E-02	1.250E-01	9.409E-03	0.494
CO-60		1173.22		-1.927E-02	3.303E-02	4.726E-02	2.678E-03	-0.408
		1332.49	*	6.945E-03	3.313E-02	5.617E-02	3.379E-03	0.124
ZN-65		1115.52	*	3.344E-02	5.662E-02	1.038E-01	6.367E-03	0.322
GE-68		1077.35	*	-4.615E-01	9.392E-01	1.385E+00	8.839E-02	-0.333
AS-73		53.44	*	-4.483E-02	6.811E-02	1.029E-01	6.917E-03	-0.435
AS-74		595.88	*	2.940E-04	4.642E-02	7.485E-02	5.151E-03	0.004
		634.78		-4.344E-02	1.929E-01	2.979E-01	2.100E-02	-0.146
SE-75		66.05		-1.929E-01	8.358E-01	1.223E+00	1.139E-01	-0.158
		96.73		-4.775E-02	2.200E-01	3.473E-01	4.817E-02	-0.137
		121.11		-7.184E-03	5.325E-02	8.444E-02	1.138E-02	-0.085
		136.00		-1.189E-04	1.632E-02	2.613E-02	2.630E-03	-0.005
		198.60		7.542E-01	8.064E-01	1.456E+00	1.084E-01	0.518
		264.65	*	5.518E-03	2.170E-02	3.703E-02	2.240E-03	0.149
		279.53		-1.524E-02	5.127E-02	8.215E-02	5.181E-03	-0.186
		303.91		-3.904E-01	1.050E+00	1.660E+00	1.591E-01	-0.235
		400.65		-1.097E-02	1.410E-01	2.285E-01	2.033E-02	-0.048
BR-77		87.88		-4.030E+00	4.829E+00	7.173E+00	5.937E-01	-0.562
		200.40		-3.975E+00	7.850E+00	1.254E+01	7.766E-01	-0.317
		239.00		1.968E-01	5.248E-01	8.868E-01	5.461E-02	0.222
		249.79		-9.218E-01	3.792E+00	6.168E+00	3.765E-01	-0.149
		281.68		-1.400E+00	4.516E+00	7.212E+00	4.216E-01	-0.194
		297.23		2.705E-01	3.036E+00	5.073E+00	2.976E-01	0.053
		303.76		-2.400E+00	9.849E+00	1.584E+01	9.290E-01	-0.152
		439.47		-7.344E+00	8.570E+00	1.199E+01	6.977E-01	-0.613
		484.57		1.763E+00	1.506E+01	2.492E+01	1.542E+00	0.071
		520.65	*	4.969E-02	6.918E-01	1.134E+00	7.311E-02	0.044
		574.64		-4.187E+00	1.299E+01	1.968E+01	1.333E+00	-0.213
		578.91		-6.964E+00	6.344E+00	8.306E+00	5.645E-01	-0.838
		585.48		7.615E+00	1.311E+01	2.279E+01	1.557E+00	0.334
		755.35		-4.746E+00	1.007E+01	1.515E+01	1.109E+00	-0.313
		817.79		-5.644E+00	1.024E+01	1.531E+01	1.120E+00	-0.369
SR-82		698.33		6.945E+00	2.232E+01	3.882E+01	2.811E+00	0.179
		776.49	*	8.230E-02	2.442E-01	4.264E-01	3.126E-02	0.193
		1395.20		-4.113E+00	8.390E+00	1.194E+01	7.198E-01	-0.345
RB-83		520.41	*	-1.084E-02	4.349E-02	6.769E-02	4.362E-03	-0.160
		529.64		4.077E-02	7.105E-02	1.243E-01	8.087E-03	0.328
		552.65		-1.064E-01	1.166E-01	1.553E-01	1.032E-02	-0.685
RB-84		881.50	*	1.453E-02	3.378E-02	6.132E-02	4.416E-03	0.237
KR-85		513.99	*	-7.030E+00	6.860E+00	9.933E+00	6.357E-01	-0.708
SR-85		513.99	*	-3.322E-02	3.241E-02	4.693E-02	3.004E-03	-0.708
RB-86		1076.63	*	-3.497E-01	4.476E-01	6.100E-01	3.896E-02	-0.573
Y-88		898.02		-2.582E-02	2.935E-02	3.999E-02	2.881E-03	-0.646
		1836.01	*	-1.293E-03	3.715E-02	6.083E-02	3.357E-03	-0.021
ZR-88		392.90	*	1.199E-03	1.880E-02	3.106E-02	1.675E-03	0.039
Y-91		1204.90	*	3.325E+00	1.149E+01	1.984E+01	1.140E+00	0.168
NB-94		702.63	*	3.184E-03	2.812E-02	4.772E-02	3.460E-03	0.067
		871.10		2.300E-02	2.529E-02	4.819E-02	3.483E-03	0.477
NB-95		765.79	*	-7.575E-04	2.960E-02	4.917E-02	3.603E-03	-0.015

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M		235.69	*	-1.457E-02	5.331E-02	8.659E-02	6.770E-03	-0.168
ZR-95		724.18		1.333E-03	5.531E-02	9.280E-02	7.570E-03	0.014
		756.15	*	-9.515E-03	4.136E-02	6.604E-02	5.504E-03	-0.144
NB-97		657.90	*	-1.058E-05	4.136E-02	Half-Life too short		
		1024.50		-1.480E-03	4.136E-02	Half-Life too short		
ZR-97		254.15		-6.006E-04	4.136E-02	Half-Life too short		
		355.39		4.877E-04	4.136E-02	Half-Life too short		
		507.63	*	-1.086E-03	4.136E-02	Half-Life too short		
		602.52		4.356E-04	4.136E-02	Half-Life too short		
		1021.30		-2.393E-04	4.136E-02	Half-Life too short		
		1147.95		-4.800E-05	4.136E-02	Half-Life too short		
		1362.66		1.347E-03	4.136E-02	Half-Life too short		
		1750.46		-2.149E-03	4.136E-02	Half-Life too short		
MO-99		140.51		3.734E-01	1.598E+00	2.610E+00	7.301E-01	0.143
		181.06		1.360E-01	1.131E+00	1.919E+00	3.312E-01	0.071
		366.43		7.154E+00	7.521E+00	1.368E+01	7.686E-01	0.523
		739.58	*	-1.366E+00	1.047E+00	1.230E+00	1.781E-01	-1.111
		778.00		3.937E-01	3.523E+00	5.973E+00	4.379E-01	0.066
TC-99M		140.51	*	1.829E+00	3.523E+00	Half-Life too short		
RH-101		127.23		-7.711E-04	1.395E-02	2.228E-02	2.445E-03	-0.035
		198.01	*	1.608E-02	1.565E-02	2.842E-02	1.759E-03	0.566
		325.23		-6.497E-02	1.196E-01	1.841E-01	1.074E-02	-0.353
RH-102		418.52		-7.247E-02	1.617E-01	2.461E-01	1.386E-02	-0.295
		475.06	*	5.059E-03	1.847E-02	3.125E-02	1.910E-03	0.162
		631.29		-7.177E-03	3.779E-02	5.865E-02	4.127E-03	-0.122
		697.49		1.685E-02	6.079E-02	1.054E-01	7.629E-03	0.160
		766.84		5.067E-02	8.031E-02	1.454E-01	1.065E-02	0.349
		1046.59		-3.891E-02	8.084E-02	1.187E-01	7.795E-03	-0.328
		1112.84		-4.620E-02	1.544E-01	2.362E-01	1.451E-02	-0.196
RU-103		497.08	*	-3.365E-03	2.156E-02	3.409E-02	4.388E-03	-0.099
		610.33		1.421E-01	5.508E-01	9.104E-01	1.446E-01	0.156
RH-106		511.85		-2.514E-01	1.764E-01	3.054E-01	1.950E-02	-0.823
		621.84	*	1.076E-01	2.637E-01	4.126E-01	5.106E-02	0.261
		1050.47		4.422E-02	1.770E+00	2.919E+00	1.911E-01	0.015
RU-106		511.85		-2.514E-01	1.764E-01	3.054E-01	1.950E-02	-0.823
		621.84	*	1.076E-01	2.634E-01	4.126E-01	2.888E-02	0.261
		1050.47		4.422E-02	1.770E+00	2.919E+00	1.911E-01	0.015
AG-108M		433.93	*	-4.853E-03	1.679E-02	2.602E-02	1.632E-03	-0.186
		614.37		-1.633E-02	2.798E-02	4.066E-02	3.001E-03	-0.401
		722.95		-6.763E-04	2.836E-02	4.724E-02	3.629E-03	-0.014
CD-109		88.03	*	-1.750E-01	2.132E-01	3.172E-01	2.629E-02	-0.552
AG-110M		657.75	*	-8.917E-03	2.339E-02	3.693E-02	2.747E-03	-0.241
		677.61		-5.004E-02	2.091E-01	3.373E-01	2.523E-02	-0.148
		706.67		-2.677E-02	1.548E-01	2.527E-01	1.905E-02	-0.106
		763.93		-3.088E-02	1.230E-01	1.975E-01	1.504E-02	-0.156
		884.67		7.463E-03	2.810E-02	4.930E-02	3.709E-03	0.151
		937.48		2.162E-02	5.359E-02	9.783E-02	7.266E-03	0.221
		1384.27		-1.023E-01	1.238E-01	1.530E-01	9.749E-03	-0.669
IN-111		171.28		-2.810E-02	6.480E-02	1.047E-01	6.367E-03	-0.268

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		245.39	*	-1.061E-02	7.656E-02	1.257E-01	7.705E-03	-0.084
IN-113M		391.69	*	1.913E-02	2.691E-02	4.781E-02	2.772E-03	0.400
SN-113		391.69	*	1.913E-02	2.691E-02	4.781E-02	2.772E-03	0.400
IN-114M		190.27	*	-4.911E-02	7.510E-02	1.185E-01	7.309E-03	-0.414
CD-115		260.90		2.075E-01	6.444E+00	1.075E+01	6.476E-01	0.019
		492.35		-8.954E-01	1.913E+00	2.852E+00	1.781E-01	-0.314
		527.90	*	1.549E-01	7.020E-01	1.173E+00	7.615E-02	0.132
SN-117M		156.02		-7.826E-01	7.705E-01	1.109E+00	8.306E-02	-0.706
		158.56	*	1.304E-02	1.722E-02	2.941E-02	2.097E-03	0.443
SB-122		563.90	*	-9.189E-02	1.942E-01	2.893E-01	1.942E-02	-0.318
		692.80		-1.868E+00	4.289E+00	6.710E+00	4.850E-01	-0.278
I-123		159.00	*	-9.611E-06	4.289E+00	Half-Life too short		
		528.96		3.152E-03	4.289E+00	Half-Life too short		
TE-123M		159.00	*	-8.537E-04	1.292E-02	2.048E-02	1.461E-03	-0.042
I-124		602.71	*	2.069E-02	1.369E-01	2.252E-01	1.557E-02	0.092
		722.78		-7.515E-02	8.079E-01	1.330E+00	9.694E-02	-0.056
		1325.50		3.041E+00	7.882E+00	1.386E+01	8.321E-01	0.219
		1376.25		5.574E+00	6.597E+00	1.271E+01	7.660E-01	0.439
		1509.49		-1.564E-01	3.947E+00	6.539E+00	3.922E-01	-0.024
		1691.02		1.386E-01	1.129E+00	1.933E+00	1.120E-01	0.072
SB-124		602.71		3.987E-03	2.638E-02	4.340E-02	3.002E-03	0.092
		645.85		1.246E-02	3.541E-01	5.715E-01	4.407E-02	0.022
		709.31		2.564E-01	1.919E+00	3.271E+00	2.376E-01	0.078
		713.82		-5.655E-01	1.136E+00	1.749E+00	1.944E-01	-0.323
		722.78		-2.099E-02	2.257E-01	3.717E-01	2.790E-02	-0.056
		968.20		1.664E-01	1.472E+00	2.480E+00	1.722E-01	0.067
		1045.16		-3.284E-01	1.479E+00	2.305E+00	1.516E-01	-0.142
		1325.50		9.072E-01	2.352E+00	4.136E+00	2.483E-01	0.219
		1368.21		-1.045E+00	1.333E+00	1.664E+00	1.994E-01	-0.628
		1436.60		3.080E-01	4.139E+00	6.770E+00	4.081E-01	0.045
		1691.02	*	9.132E-03	7.437E-02	1.273E-01	8.012E-03	0.072
SB-125		427.89	*	3.257E-02	5.328E-02	9.455E-02	5.641E-03	0.345
		463.38		6.311E-02	1.708E-01	2.925E-01	2.034E-02	0.216
		600.56		5.480E-03	1.255E-01	2.035E-01	1.564E-02	0.027
		635.90		-4.296E-02	1.930E-01	2.978E-01	2.350E-02	-0.144
TE-125M		109.28	*	8.374E-01	3.256E+00	5.369E+00	6.241E-01	0.156
I-126		388.63		7.935E-03	8.057E-02	1.338E-01	7.245E-03	0.059
		666.33	*	-3.197E-02	7.910E-02	1.241E-01	8.884E-03	-0.258
		753.82		-5.222E-01	6.239E-01	8.694E-01	6.365E-02	-0.601
SB-126		223.80		4.478E-01	1.370E+00	2.354E+00	1.460E-01	0.190
		278.60		-3.562E-01	7.925E-01	1.247E+00	7.294E-02	-0.286
		296.50		-2.686E-01	5.567E-01	8.018E-01	4.703E-02	-0.335
		414.70		8.592E-03	2.779E-02	4.745E-02	2.656E-03	0.181
		415.30		3.339E-01	2.312E+00	3.861E+00	2.164E-01	0.086
		555.20		1.346E+00	1.555E+00	2.878E+00	1.918E-01	0.468
		573.80		-1.894E-01	4.440E-01	6.631E-01	4.488E-02	-0.286
		593.00		-1.835E-01	4.636E-01	7.014E-01	4.817E-02	-0.262
		656.30		-1.326E+00	1.507E+00	2.170E+00	1.546E-01	-0.611
		666.33		-1.312E-02	3.247E-02	5.095E-02	3.647E-03	-0.258

---- Non-Identified Nuclides ----

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		675.00		-3.618E-01	9.704E-01	1.538E+00	1.105E-01	-0.235
		695.00		-6.849E-03	3.836E-02	6.264E-02	4.531E-03	-0.109
		697.00		3.380E-02	1.355E-01	2.343E-01	1.696E-02	0.144
		720.50	*	2.150E-02	6.239E-02	1.100E-01	8.009E-03	0.196
		856.80		-1.079E-01	2.392E-01	3.667E-01	2.661E-02	-0.294
		989.30		9.436E-01	7.306E-01	1.428E+00	9.787E-02	0.661
		1034.80		1.690E+00	3.776E+00	6.792E+00	4.506E-01	0.249
		1213.00		-2.480E+00	1.923E+00	2.036E+00	1.173E-01	-1.218
SN-126		64.28		4.832E-02	7.627E-02	1.311E-01	1.889E-02	0.369
		86.94		-8.608E-02	1.003E-01	1.320E-01	5.450E-02	-0.652
		87.57	*	-1.780E-02	2.256E-02	3.212E-02	2.653E-03	-0.554
SB-127		61.10		9.014E-01	2.028E+00	3.440E+00	2.711E-01	0.262
		252.40		-8.092E-02	6.148E-01	1.010E+00	4.152E-01	-0.080
		290.80		-5.656E-01	2.678E+00	4.330E+00	2.946E-01	-0.131
		411.60		1.071E+00	1.789E+00	3.148E+00	4.053E-01	0.340
		444.90		6.568E-01	1.522E+00	2.629E+00	2.334E-01	0.250
		473.00		2.296E-01	2.575E-01	4.713E-01	4.473E-02	0.487
		543.00		-1.378E+00	3.112E+00	4.674E+00	5.491E-01	-0.295
		603.60		3.287E-02	2.205E+00	3.558E+00	3.407E-01	0.009
		685.20	*	4.538E-02	2.101E-01	3.648E-01	3.029E-02	0.124
		698.50		7.343E-01	3.068E+00	5.287E+00	7.289E-01	0.139
		722.20		-1.244E+00	4.836E+00	7.738E+00	6.240E-01	-0.161
		783.80		-2.007E-01	5.914E-01	9.242E-01	9.023E-02	-0.217
XE-127		57.60		1.397E-01	6.193E-01	1.034E+00	7.176E-02	0.135
		145.22		3.266E-02	2.365E-01	3.838E-01	3.421E-02	0.085
		172.10		-2.785E-03	4.371E-02	7.316E-02	4.451E-03	-0.038
		202.84	*	-1.710E-02	1.808E-02	2.743E-02	1.700E-03	-0.623
		374.96		3.703E-02	1.020E-01	1.750E-01	9.710E-03	0.212
I-131		80.18		-2.794E-01	5.555E-01	8.581E-01	6.729E-02	-0.326
		284.30		4.377E-02	3.600E-01	6.060E-01	3.902E-02	0.072
		364.48	*	1.915E-02	3.773E-02	6.558E-02	4.111E-03	0.292
		636.97		-3.224E-02	5.818E-01	9.256E-01	7.027E-02	-0.035
		722.89		-1.073E-01	2.437E+00	4.046E+00	2.954E-01	-0.027
TE-132		49.72		1.980E-02	2.641E-01	4.359E-01	3.186E-02	0.045
		111.76		1.958E-01	2.243E+00	3.641E+00	3.965E-01	0.054
		116.30		3.788E-01	2.090E+00	3.421E+00	3.879E-01	0.111
		228.16	*	4.258E-02	7.178E-02	1.255E-01	1.674E-02	0.339
BA-133		53.15		-2.876E-01	3.143E-01	4.597E-01	3.083E-02	-0.625
		79.62		9.013E-03	2.983E-01	4.855E-01	7.173E-02	0.019
		81.00		-2.582E-02	2.810E-02	3.671E-02	5.684E-03	-0.703
		276.40		3.814E-02	1.879E-01	3.185E-01	4.139E-02	0.120
		302.84		1.504E-02	8.120E-02	1.370E-01	1.601E-02	0.110
		356.01	*	-5.253E-03	2.557E-02	4.100E-02	4.718E-03	-0.128
		383.85		7.443E-02	1.744E-01	3.017E-01	3.227E-02	0.247
I-133		510.53		-6.178E-04	1.744E-01	Half-Life too short		
		529.87	*	6.452E-06	1.744E-01	Half-Life too short		
		706.58		-9.986E-05	1.744E-01	Half-Life too short		
		856.28		-5.634E-04	1.744E-01	Half-Life too short		
		875.33		-6.788E-05	1.744E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1236.41		-1.178E-03	1.744E-01	Half-Life too short		
		1298.22		-4.196E-04	1.744E-01	Half-Life too short		
CS-134		475.35		1.004E-01	1.198E+00	1.973E+00	1.207E-01	0.051
		563.23		-1.263E-01	2.453E-01	3.624E-01	2.470E-02	-0.349
		569.32		6.186E-02	1.348E-01	2.327E-01	1.604E-02	0.266
		604.70		-9.211E-03	2.726E-02	4.187E-02	2.910E-03	-0.220
		795.84	*	-2.848E-02	3.303E-02	4.653E-02	3.444E-03	-0.612
		801.93		2.503E-01	2.922E-01	5.488E-01	4.052E-02	0.456
		1038.57		5.810E-01	2.399E+00	4.158E+00	2.750E-01	0.140
		1167.94		-4.173E-01	1.745E+00	2.703E+00	1.544E-01	-0.154
		1365.15		1.913E-01	9.269E-01	1.583E+00	1.041E-01	0.121
CS-135		268.24	*	3.782E-02	8.169E-02	1.420E-01	1.104E-02	0.266
I-135		288.45		-3.497E+00	8.169E-02	Half-Life too short		
		417.63		-3.041E+01	8.169E-02	Half-Life too short		
		546.56		1.504E+01	8.169E-02	Half-Life too short		
		836.80		2.305E+01	8.169E-02	Half-Life too short		
		1038.76		8.728E+00	8.169E-02	Half-Life too short		
		1124.00		-7.283E+01	8.169E-02	Half-Life too short		
		1131.51		-3.659E+00	8.169E-02	Half-Life too short		
		1260.41	*	-7.742E+00	8.169E-02	Half-Life too short		
		1457.56		2.876E+01	8.169E-02	Half-Life too short		
		1678.03		6.065E+01	8.169E-02	Half-Life too short		
		1706.46		-7.754E+01	8.169E-02	Half-Life too short		
		1791.20		5.515E+01	8.169E-02	Half-Life too short		
CS-136		66.91		-6.624E-02	9.735E-02	1.350E-01	1.986E-02	-0.491
		86.29		-1.327E-01	1.941E-01	2.788E-01	3.501E-02	-0.476
		153.22		1.955E-01	2.030E-01	3.516E-01	3.153E-02	0.556
		163.89		-1.445E-01	3.085E-01	4.984E-01	3.835E-02	-0.290
		176.55		2.958E-02	1.088E-01	1.874E-01	1.271E-02	0.158
		273.65		5.427E-02	1.570E-01	2.697E-01	1.806E-02	0.201
		340.57		-2.616E-03	4.315E-02	7.057E-02	4.331E-03	-0.037
		818.51		-2.141E-02	3.741E-02	5.586E-02	4.087E-03	-0.383
		1048.07	*	-1.052E-02	5.357E-02	8.448E-02	5.936E-03	-0.125
		1235.34		-2.750E-01	2.697E-01	3.398E-01	3.394E-02	-0.809
BA-137M		661.65	*	1.923E-02	2.377E-02	4.449E-02	3.178E-03	0.432
CS-137		661.65	*	2.032E-02	2.513E-02	4.703E-02	3.369E-03	0.432
CE-139		165.85	*	-3.965E-03	1.215E-02	1.987E-02	1.204E-03	-0.199
BA-140		162.64		-1.475E-01	2.172E-01	3.442E-01	2.474E-02	-0.429
		304.84		-1.057E-01	4.437E-01	7.120E-01	1.944E-01	-0.148
		423.70		1.648E-01	7.254E-01	1.221E+00	3.879E-01	0.135
		537.32	*	-5.633E-02	1.171E-01	1.723E-01	5.627E-02	-0.327
LA-140		328.77		-1.608E-02	1.096E-01	1.779E-01	1.159E-02	-0.090
		432.53		-2.777E-01	7.190E-01	1.097E+00	6.985E-02	-0.253
		487.03		1.050E-02	5.815E-02	9.705E-02	6.722E-03	0.108
		751.79		-2.539E-01	5.864E-01	8.795E-01	7.375E-02	-0.289
		815.85		5.232E-02	1.666E-01	2.904E-01	2.458E-02	0.180
		867.82		-1.717E-01	6.966E-01	1.104E+00	8.581E-02	-0.156
		919.63		1.656E-01	1.370E+00	2.314E+00	2.189E-01	0.072
		925.24		-5.961E-01	5.122E-01	6.125E-01	4.738E-02	-0.973

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1596.49	*	-2.203E-02	4.805E-02	6.985E-02	4.139E-03	-0.315
CE-141		145.44	*	2.015E-03	2.101E-02	3.394E-02	3.067E-03	0.059
CE-143		57.37		3.923E-01	2.464E+00	4.089E+00	3.381E-01	0.096
		231.56		6.425E+00	2.719E+01	4.461E+01	1.381E+01	0.144
		293.26	*	7.068E-02	1.291E+00	2.152E+00	4.397E-01	0.033
		350.59		-1.084E+01	2.155E+01	3.237E+01	9.809E+00	-0.335
		490.36		1.540E+01	3.436E+01	5.928E+01	1.836E+01	0.260
		664.57		-1.061E+01	1.796E+01	2.682E+01	8.558E+00	-0.396
		721.93		-5.383E+00	1.862E+01	2.956E+01	8.501E+00	-0.182
CE-144		80.11		-1.727E-01	4.838E-01	7.583E-01	5.933E-02	-0.228
		133.54	*	-4.773E-02	8.784E-02	1.327E-01	2.197E-02	-0.360
PM-144		476.78		-2.779E-02	4.453E-02	6.133E-02	4.425E-03	-0.453
		618.01		-1.881E-02	2.306E-02	3.178E-02	2.311E-03	-0.592
		696.49	*	1.055E-02	2.656E-02	4.675E-02	3.384E-03	0.226
		778.57		5.137E-02	1.676E+00	2.806E+00	2.058E-01	0.018
PR-144		696.49	*	7.120E-01	1.792E+00	3.155E+00	2.283E-01	0.226
		1489.15		1.857E+00	1.181E+01	2.040E+01	1.226E+00	0.091
PM-146		453.90	*	-1.187E-02	3.139E-02	4.864E-02	4.240E-03	-0.244
		633.02		9.231E-02	9.507E-01	1.552E+00	5.750E-01	0.059
		735.90		2.482E-02	8.280E-02	1.460E-01	4.123E-02	0.170
		747.13		3.150E-03	5.901E-02	9.941E-02	1.320E-02	0.032
ND-147		91.11		3.721E-02	4.374E-02	7.609E-02	7.034E-03	0.489
		319.41		-5.592E-01	1.202E+00	1.880E+00	1.100E-01	-0.297
		439.89		-8.555E-01	2.002E+00	3.038E+00	1.769E-01	-0.282
		531.02	*	2.533E-01	2.446E-01	4.494E-01	6.221E-02	0.564
PM-149		285.90	*	6.789E-01	3.934E+00	6.654E+00	9.433E-01	0.102
EU-152		121.78		8.845E-03	3.074E-02	5.072E-02	6.331E-03	0.174
		244.69		-8.233E-02	1.590E-01	2.504E-01	1.536E-02	-0.329
		344.27	*	-2.187E-02	5.606E-02	8.790E-02	5.717E-03	-0.249
		443.98		1.970E-01	5.803E-01	9.930E-01	5.817E-02	0.198
		778.89		-1.299E-02	1.981E-01	3.266E-01	2.395E-02	-0.040
		867.32		-2.220E-01	6.200E-01	9.604E-01	6.949E-02	-0.231
		964.01		1.247E-01	1.931E-01	3.540E-01	2.463E-02	0.352
		1085.78		-6.668E-02	3.221E-01	5.072E-01	3.209E-02	-0.131
		1112.02		-1.324E-01	2.339E-01	3.374E-01	2.074E-02	-0.392
		1407.95		1.183E-01	1.425E-01	2.771E-01	1.671E-02	0.427
GD-153		69.67		-1.679E-01	2.853E-01	4.365E-01	3.205E-02	-0.385
		83.37		3.213E+00	3.385E+00	5.962E+00	4.773E-01	0.539
		97.43	*	-2.600E-03	2.276E-02	3.632E-02	3.288E-03	-0.072
		103.18		1.651E-02	3.378E-02	5.716E-02	5.469E-03	0.289
EU-154		123.07		3.869E-03	2.168E-02	3.541E-02	4.815E-03	0.109
		247.94		1.939E-02	1.854E-01	3.121E-01	3.038E-02	0.062
		591.81		-3.149E-01	4.897E-01	7.099E-01	7.411E-02	-0.444
		723.30		1.835E-02	1.129E-01	1.936E-01	1.615E-02	0.095
		756.87		3.703E-01	5.003E-01	9.353E-01	1.036E-01	0.396
		873.19		1.175E-01	2.124E-01	3.860E-01	4.363E-02	0.304
		996.32		-4.089E-01	3.289E-01	4.062E-01	6.891E-02	-1.007
		1004.76		2.102E-02	1.848E-01	3.096E-01	3.206E-02	0.068
		1274.45	*	1.545E-02	8.339E-02	1.414E-01	1.329E-02	0.109

Sample iD : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		48.70		-2.072E-03	1.630E-01	2.668E-01	1.741E-02	-0.008
		60.01		-1.377E-01	6.898E-01	1.105E+00	7.803E-02	-0.125
		86.54		-2.212E-02	2.696E-02	3.822E-02	3.167E-03	-0.579
		105.31	*	-2.227E-02	3.802E-02	5.756E-02	5.676E-03	-0.387
TB-160		86.79		-5.424E-02	6.665E-02	9.445E-02	7.754E-03	-0.574
		197.04		2.169E-01	2.520E-01	4.520E-01	2.796E-02	0.480
		215.65		-2.815E-02	3.605E-01	5.990E-01	3.719E-02	-0.047
		298.57		8.949E-03	5.925E-02	9.959E-02	5.842E-03	0.090
		879.36	*	-6.171E-02	8.345E-02	1.148E-01	8.274E-03	-0.538
		962.29		-4.598E-02	3.273E-01	5.252E-01	3.658E-02	-0.088
		966.15		1.007E-01	1.189E-01	2.254E-01	1.567E-02	0.447
		1177.93		2.942E-02	2.419E-01	4.042E-01	2.295E-02	0.073
		1271.85		-1.459E-01	4.509E-01	6.723E-01	3.963E-02	-0.217
HO-166M		80.57		-7.362E-02	7.610E-02	9.931E-02	7.795E-03	-0.741
		184.41		-3.568E-03	1.686E-02	2.581E-02	1.585E-03	-0.138
		280.46		-4.335E-03	4.105E-02	6.726E-02	3.930E-03	-0.064
		410.95		9.358E-02	1.478E-01	2.612E-01	1.453E-02	0.358
		711.68	*	-4.423E-03	4.480E-02	7.383E-02	5.366E-03	-0.060
		752.31		-7.121E-02	1.479E-01	2.198E-01	1.609E-02	-0.324
		810.29		2.780E-02	4.439E-02	8.101E-02	5.930E-03	0.343
TM-171		51.35		-3.846E-01	2.354E+00	3.784E+00	2.507E-01	-0.102
		52.39		-7.148E-01	1.296E+00	1.989E+00	1.327E-01	-0.359
		59.40		5.184E-01	3.515E+00	5.818E+00	4.100E-01	0.089
		66.72	*	-3.822E+00	5.292E+00	7.354E+00	5.322E-01	-0.520
LU-176		88.36		-2.737E-02	4.981E-02	7.634E-02	6.346E-03	-0.358
		201.83		-1.141E-02	1.319E-02	2.027E-02	1.256E-03	-0.563
		306.84	*	-1.577E-02	1.363E-02	1.927E-02	1.130E-03	-0.818
		401.10		-1.628E+00	3.967E+00	6.128E+00	3.353E-01	-0.266
LU-177		112.95		3.924E-02	2.892E-01	4.714E-01	4.960E-02	0.083
		208.36	*	1.063E-01	2.342E-01	4.071E-01	2.526E-02	0.261
LU-177M		52.97		-1.224E-01	1.363E-01	2.000E-01	1.339E-02	-0.612
		54.07		-2.412E-02	7.612E-02	1.201E-01	8.108E-03	-0.201
		61.30		8.534E-02	2.061E-01	3.487E-01	2.472E-02	0.245
		121.62		4.602E-02	1.527E-01	2.522E-01	2.888E-02	0.182
		147.16		-9.780E-02	2.562E-01	3.925E-01	3.402E-02	-0.249
		171.86		-5.369E-02	2.003E-01	3.289E-01	2.000E-02	-0.163
		218.09		2.455E-01	4.231E-01	7.423E-01	4.607E-02	0.331
		268.79		5.153E-02	3.962E-01	6.670E-01	3.970E-02	0.077
		319.02		-1.079E-01	1.526E-01	2.320E-01	1.357E-02	-0.465
		367.43		2.002E-01	5.445E-01	9.337E-01	5.239E-02	0.214
		413.65	*	-1.332E-02	1.018E-01	1.636E-01	9.141E-03	-0.081
HF-181		56.28		-4.056E-02	9.065E-02	1.411E-01	9.684E-03	-0.287
		57.53		1.091E-02	5.293E-02	8.823E-02	6.119E-03	0.124
		65.20		-2.797E-02	1.480E-01	2.180E-01	1.567E-02	-0.128
		133.02		-3.936E-03	2.436E-02	3.843E-02	3.977E-03	-0.102
		136.25		-2.804E-02	1.794E-01	2.831E-01	2.827E-02	-0.099
		345.85		2.370E-02	9.686E-02	1.642E-01	9.444E-03	0.144
		482.03	*	9.115E-03	2.119E-02	3.689E-02	2.275E-03	0.247
W-181		56.28		-1.722E-02	3.854E-02	5.999E-02	4.118E-03	-0.287

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		57.53		4.627E-03	2.252E-02	3.753E-02	2.602E-03	0.123
		65.20	*	-1.181E-02	6.244E-02	9.200E-02	6.613E-03	-0.128
TA-182		67.75		-2.832E-03	1.779E-02	2.851E-02	2.073E-03	-0.099
		100.10		-5.173E-02	5.537E-02	8.013E-02	7.443E-03	-0.646
		152.43		6.417E-02	1.495E-01	2.483E-01	1.981E-02	0.258
		222.10		-6.757E-02	1.742E-01	2.811E-01	1.744E-02	-0.240
		1001.68		1.080E+00	1.573E+00	2.873E+00	1.954E-01	0.376
		1121.28		-5.403E-03	7.625E-02	1.226E-01	7.453E-03	-0.044
		1189.05		3.407E-03	1.577E-01	2.587E-01	1.476E-02	0.013
		1221.42	*	7.968E-02	1.219E-01	2.245E-01	1.298E-02	0.355
		1230.97		2.849E-01	3.211E-01	6.054E-01	3.514E-02	0.471
RE-183		57.98		1.459E-02	2.178E-02	3.789E-02	2.637E-03	0.385
		59.32		1.686E-03	1.342E-02	2.216E-02	1.561E-03	0.076
		67.20		-2.589E-02	3.476E-02	4.796E-02	3.479E-03	-0.540
		162.32	*	-2.091E-02	4.495E-02	7.273E-02	4.790E-03	-0.288
		208.81		3.032E-01	4.326E-01	7.663E-01	4.755E-02	0.396
		291.72		-5.991E-02	4.310E-01	7.026E-01	4.118E-02	-0.085
RE-184		57.98		5.624E-02	8.394E-02	1.460E-01	1.017E-02	0.385
		59.32		6.495E-03	5.168E-02	8.536E-02	6.011E-03	0.076
		67.20		-9.976E-02	1.340E-01	1.848E-01	1.340E-02	-0.540
		161.27		6.382E-02	1.497E-01	2.614E-01	1.762E-02	0.244
		216.55		5.767E-02	1.314E-01	2.280E-01	1.416E-02	0.253
		252.85	*	1.452E-02	1.309E-01	2.201E-01	1.339E-02	0.066
		318.01		-1.513E-01	2.658E-01	4.113E-01	2.407E-02	-0.368
		792.07		-3.580E-02	6.290E-01	1.036E+00	7.597E-02	-0.035
		903.28		4.103E-02	7.372E-01	1.231E+00	8.793E-02	0.033
		920.93		1.192E-01	2.975E-01	5.298E-01	3.761E-02	0.225
OS-185		59.72		-4.840E-03	3.869E-02	6.242E-02	4.405E-03	-0.078
		61.14		1.108E-02	2.201E-02	3.753E-02	2.659E-03	0.295
		69.30		-1.773E-02	4.670E-02	7.300E-02	5.349E-03	-0.243
		592.07		-8.153E-01	1.825E+00	2.736E+00	1.878E-01	-0.298
		646.12	*	8.206E-03	3.061E-02	5.123E-02	3.633E-03	0.160
		717.42		-2.496E-01	6.034E-01	9.418E-01	6.854E-02	-0.265
		874.81		-1.564E-01	4.192E-01	6.470E-01	4.670E-02	-0.242
		880.27		-2.517E-01	4.521E-01	6.512E-01	4.691E-02	-0.386
RE-188		155.03	*	1.859E-02	7.528E-02	1.229E-01	9.375E-03	0.151
		477.96		-1.309E+00	1.899E+00	2.575E+00	1.580E-01	-0.508
		633.10		1.500E-01	1.778E+00	2.899E+00	2.042E-01	0.052
W-188		63.58		5.059E-01	7.408E+00	1.215E+01	8.681E-01	0.042
		227.08		1.079E+00	6.460E+00	1.094E+01	6.779E-01	0.099
		290.67	*	-7.870E-01	3.468E+00	5.596E+00	3.280E-01	-0.141
IR-192		295.96		-2.240E-02	5.917E-02	8.561E-02	5.099E-03	-0.262
		308.46		6.926E-03	4.703E-02	7.915E-02	4.693E-03	0.088
		316.51	*	1.399E-02	1.894E-02	3.371E-02	1.983E-03	0.415
		468.07		-3.303E-02	4.114E-02	5.892E-02	4.072E-03	-0.561
		604.41		-7.965E-02	3.380E-01	5.263E-01	6.296E-02	-0.151
		612.46		-3.016E-02	4.910E-01	7.829E-01	6.649E-02	-0.039
AU-195		65.12		4.404E-05	2.913E-02	4.372E-02	3.142E-03	0.001
		66.83		-1.128E-02	1.702E-02	2.377E-02	1.721E-03	-0.474

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		75.70		1.373E-02	4.418E-02	6.817E-02	5.181E-03	0.201
		98.88	*	-6.205E-03	6.704E-02	1.072E-01	9.841E-03	-0.058
		129.76		4.202E-01	1.178E+00	1.951E+00	2.088E-01	0.215
TL-200		367.94	*	-1.230E-01	2.000E+00	3.262E+00	1.829E-01	-0.038
		579.30		-1.598E+01	1.760E+01	2.408E+01	1.637E+00	-0.664
		828.27		1.996E+01	2.242E+01	4.319E+01	3.154E+00	0.462
		1205.75		6.058E+00	1.176E+01	2.114E+01	1.215E+00	0.287
TL-201		68.90		-5.777E-02	1.380E-01	2.150E-01	1.572E-02	-0.269
		70.82		-7.079E-02	8.569E-02	1.278E-01	9.443E-03	-0.554
		80.30		-1.058E-01	2.017E-01	3.108E-01	2.435E-02	-0.340
		135.34		-9.988E-01	1.857E+00	2.810E+00	2.835E-01	-0.355
		167.43	*	-1.634E-01	5.147E-01	8.424E-01	5.102E-02	-0.194
TL-202		68.90		-1.961E-02	4.685E-02	7.300E-02	5.338E-03	-0.269
		70.82		-2.397E-02	2.902E-02	4.329E-02	3.198E-03	-0.554
		80.30		-3.585E-02	6.832E-02	1.053E-01	8.248E-03	-0.340
		439.56	*	-1.993E-02	2.546E-02	3.610E-02	2.101E-03	-0.552
HG-203		70.83		-1.435E-01	1.747E-01	2.597E-01	3.340E-02	-0.552
		72.87		1.497E-02	1.043E-01	1.718E-01	2.144E-02	0.087
		82.60		4.755E-02	2.750E-01	4.021E-01	5.364E-02	0.118
		279.20	*	-4.180E-03	1.775E-02	2.865E-02	1.775E-03	-0.146
BI-207		72.80		1.920E-03	3.402E-02	5.561E-02	4.153E-03	0.035
		74.97		-8.555E-03	2.515E-02	3.661E-02	2.770E-03	-0.234
		84.90		-5.406E-02	5.239E-02	7.291E-02	5.902E-03	-0.741
		569.67		-6.770E-04	2.262E-02	3.636E-02	2.453E-03	-0.019
		1063.62	*	2.911E-02	3.736E-02	7.038E-02	4.552E-03	0.414
		1770.23		-5.799E-02	4.021E-01	6.336E-01	3.580E-02	-0.092
TL-207		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
TL-208		277.35		-4.420E-02	1.930E-01	3.124E-01	3.309E-02	-0.142
		510.84		-1.338E-01	1.629E-01	2.950E-01	3.096E-02	-0.453
		583.14	*	-1.740E-02	3.308E-02	4.150E-02	3.148E-03	-0.419
		860.37		1.495E-01	2.133E-01	3.928E-01	3.141E-02	0.381
PO-209		260.50		3.092E-01	5.434E+00	9.086E+00	5.476E-01	0.034
		262.80		-1.532E+01	1.492E+01	2.213E+01	1.330E+00	-0.692
		896.60	*	-1.517E+00	5.039E+00	7.820E+00	5.598E-01	-0.194
BI-210		46.50	*	4.000E-02	1.928E-01	3.223E-01	2.441E-02	0.124
PB-210		46.50	*	4.000E-02	1.928E-01	3.223E-01	2.441E-02	0.124
PO-210		46.50	*	4.000E-02	1.927E-01	3.223E-01	2.083E-02	0.124
BI-211		72.87		8.446E-02	5.883E-01	9.694E-01	7.243E-02	0.087
		351.07	*	-2.192E-02	1.370E-01	2.171E-01	1.382E-02	-0.101
PB-211		404.84	*	7.020E-02	5.240E-01	8.712E-01	5.429E-01	0.081

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		427.08		4.011E-01	1.171E+00	1.968E+00	1.216E+00	0.204
		831.96		-7.895E-02	7.797E-01	1.267E+00	7.918E-01	-0.062
BI-212		727.18	*	1.162E-02	1.805E-01	3.050E-01	2.711E-02	0.038
		785.46		-7.482E-02	1.226E+00	2.021E+00	1.482E-01	-0.037
		1620.62		2.336E-01	9.297E-01	1.667E+00	9.828E-02	0.140
PB-212		74.81		-3.141E-02	8.637E-02	1.253E-01	1.506E-02	-0.251
		77.11		-1.145E-03	4.815E-02	7.461E-02	5.723E-03	-0.015
		87.30		-8.987E-02	1.056E-01	1.489E-01	1.929E-02	-0.604
		238.63	*	2.140E-03	3.217E-02	5.303E-02	4.040E-03	0.040
		300.09		4.644E-01	4.293E-01	7.837E-01	6.502E-02	0.593
PO-212		74.81		-3.141E-02	8.637E-02	1.253E-01	1.506E-02	-0.251
		77.11		-1.145E-03	4.815E-02	7.461E-02	5.723E-03	-0.015
		87.30		-8.987E-02	1.056E-01	1.489E-01	1.929E-02	-0.604
		115.19		-5.504E-02	1.413E+00	2.266E+00	2.437E-01	-0.024
		238.63	*	2.140E-03	3.217E-02	5.303E-02	4.040E-03	0.040
		300.09		4.644E-01	4.293E-01	7.837E-01	6.502E-02	0.593
BI-214		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.713E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
PB-214		74.81		-5.412E-02	1.488E-01	2.159E-01	2.285E-02	-0.251
		77.11		-1.962E-03	8.254E-02	1.279E-01	1.383E-02	-0.015
		87.30		-1.540E-01	1.806E-01	2.551E-01	2.878E-02	-0.604
		241.98		-2.196E-01	1.725E-01	2.495E-01	2.076E-02	-0.880
		295.21		-6.632E-02	8.225E-02	1.118E-01	9.582E-03	-0.593
		351.92	*	-9.257E-03	4.764E-02	7.516E-02	6.183E-03	-0.123
PO-214		74.81		-5.412E-02	1.488E-01	2.159E-01	2.285E-02	-0.251
		77.11		-1.962E-03	8.254E-02	1.279E-01	1.383E-02	-0.015
		87.30		-1.540E-01	1.806E-01	2.551E-01	2.878E-02	-0.604
		241.98		-2.196E-01	1.725E-01	2.495E-01	2.076E-02	-0.880
		295.21		-6.632E-02	8.225E-02	1.118E-01	9.582E-03	-0.593
		351.92	*	-9.257E-03	4.764E-02	7.516E-02	6.183E-03	-0.123
PO-215		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
PO-216		74.81		-3.141E-02	8.637E-02	1.253E-01	1.506E-02	-0.251
		77.11		-1.145E-03	4.815E-02	7.461E-02	5.723E-03	-0.015
		87.30		-8.987E-02	1.056E-01	1.489E-01	1.929E-02	-0.604
		238.63	*	2.140E-03	3.217E-02	5.303E-02	4.040E-03	0.040

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		300.09		4.644E-01	4.293E-01	7.837E-01	6.502E-02	0.593
PO-218		74.81		-5.412E-02	1.488E-01	2.159E-01	2.285E-02	-0.251
		77.11		-1.962E-03	8.254E-02	1.279E-01	1.383E-02	-0.015
		87.30		-1.540E-01	1.806E-01	2.551E-01	2.878E-02	-0.604
		241.98		-2.196E-01	1.725E-01	2.495E-01	2.076E-02	-0.880
		295.21		-6.632E-02	8.225E-02	1.118E-01	9.582E-03	-0.593
		351.92	*	-9.257E-03	4.764E-02	7.516E-02	6.183E-03	-0.123
RN-219		271.23		-3.627E-02	1.280E-01	2.065E-01	1.692E-02	-0.176
		401.81	*	-8.733E-02	2.377E-01	3.686E-01	4.965E-02	-0.237
RN-220		549.76	*	-8.942E+00	1.528E+01	2.183E+01	1.448E+00	-0.410
RA-223		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
RA-224		240.98	*	3.196E-02	3.157E-01	5.314E-01	3.268E-02	0.060
RA-226		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.713E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
AC-227		79.80		-3.067E-02	3.762E-01	6.058E-01	1.284E-01	-0.051
		236.00		-4.848E-03	1.095E-01	1.820E-01	1.940E-02	-0.027
		256.20	*	1.643E-01	2.222E-01	3.920E-01	5.515E-02	0.419
		286.10		-5.719E-02	7.618E-01	1.252E+00	1.451E-01	-0.046
		299.80		6.476E-01	8.273E-01	1.462E+00	2.384E-01	0.443
		304.40		-6.040E-01	1.028E+00	1.577E+00	2.732E-01	-0.383
		334.20		9.312E-01	1.371E+00	2.406E+00	4.410E-01	0.387
TH-227		79.80		-3.067E-02	3.762E-01	6.058E-01	1.301E-01	-0.051
		94.00		-3.833E-01	6.106E-01	8.571E-01	1.872E-01	-0.447
		236.00		-4.848E-03	1.095E-01	1.820E-01	1.692E-02	-0.027
		256.20	*	1.643E-01	2.227E-01	3.920E-01	6.660E-02	0.419
		286.10		-5.719E-02	7.640E-01	1.252E+00	1.254E+00	-0.046
		299.80		6.476E-01	8.273E-01	1.462E+00	2.384E-01	0.443
		304.40		-6.040E-01	1.028E+00	1.577E+00	2.732E-01	-0.383
		334.20		9.312E-01	1.371E+00	2.406E+00	4.410E-01	0.387
AC-228		338.32		3.153E-02	1.270E-01	2.145E-01	8.745E-02	0.147
		911.07	*	7.644E-02	1.090E-01	1.989E-01	2.018E-02	0.384
		969.11		-4.660E-03	1.520E-01	2.489E-01	5.668E-02	-0.019
RA-228		338.32		3.153E-02	1.270E-01	2.145E-01	8.745E-02	0.147
		911.07	*	7.644E-02	1.090E-01	1.989E-01	2.018E-02	0.384
		969.11		-4.660E-03	1.520E-01	2.489E-01	5.668E-02	-0.019

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228		84.40		-2.520E-02	6.199E-01	1.001E+00	1.279E-01	-0.025
		238.60	*	1.972E-03	3.215E-02	5.297E-02	4.036E-03	0.037
		300.10		4.644E-01	5.077E-01	7.838E-01	4.620E-01	0.593
TH-229		85.43		-6.099E-02	5.197E-02	7.110E-02	5.778E-03	-0.858
		88.47		-1.493E-02	2.875E-02	4.422E-02	3.679E-03	-0.338
		100.00		-5.564E-02	6.024E-02	8.731E-02	8.101E-03	-0.637
		193.63	*	-2.919E-03	2.394E-01	4.012E-01	2.478E-02	-0.007
		210.97		1.769E-01	3.759E-01	6.536E-01	4.057E-02	0.271
TH-230		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.712E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
PA-231		283.67	*	6.319E-02	7.262E-01	1.217E+00	1.680E-01	0.052
		301.29		2.754E-01	3.191E-01	5.716E-01	5.996E-02	0.482
TH-231		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
U-231		84.21		4.040E-02	3.612E-01	5.918E-01	4.766E-02	0.068
		92.29		-1.310E-02	1.674E-01	2.524E-01	2.176E-02	-0.052
		95.87	*	-2.747E-02	9.025E-02	1.413E-01	1.261E-02	-0.194
		108.00		5.401E-02	2.074E-01	3.425E-01	3.435E-02	0.158
TH-232		338.32		3.153E-02	1.264E-01	2.145E-01	1.242E-02	0.147
		911.07	*	7.644E-02	1.090E-01	1.989E-01	2.018E-02	0.384
		969.11		-4.660E-03	1.520E-01	2.489E-01	5.668E-02	-0.019
PA-233		75.28		4.864E-02	7.229E-01	1.089E+00	1.611E-01	0.045
		86.59		-3.660E-01	4.489E-01	6.215E-01	1.659E-01	-0.589
		300.12		2.400E-01	2.233E-01	4.050E-01	5.454E-02	0.593
		311.98	*	2.836E-02	3.833E-02	6.814E-02	4.236E-03	0.416
		340.50		-8.019E-02	3.224E-01	5.141E-01	1.181E-01	-0.156
		398.62		2.153E-01	1.270E+00	2.125E+00	5.478E-01	0.101
		415.76		-8.639E-02	9.336E-01	1.506E+00	3.092E-01	-0.057
PA-234		63.00		6.963E-02	2.354E-01	3.938E-01	5.798E-02	0.177
		94.67		-1.652E-02	4.806E-02	7.497E-02	9.402E-03	-0.220
		98.44		1.311E-03	2.802E-02	4.547E-02	2.540E-02	0.029
		99.86		-9.036E-02	1.477E-01	2.223E-01	2.060E-02	-0.406
		111.00		-3.456E-03	7.429E-02	1.192E-01	1.592E-02	-0.029
		131.20		1.259E-02	4.508E-02	7.417E-02	7.824E-03	0.170
		152.70		1.101E-01	1.507E-01	2.552E-01	4.266E-02	0.432
		186.00		-2.533E-02	6.089E-01	9.459E-01	2.897E-01	-0.027

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		226.40		1.015E-01	2.174E-01	3.769E-01	4.433E-02	0.269
		227.20		1.095E-01	2.317E-01	4.024E-01	2.493E-02	0.272
		248.90		-1.525E-01	4.383E-01	7.028E-01	1.516E-01	-0.217
		293.70		4.186E-03	3.298E-01	5.471E-01	8.812E-02	0.008
		369.80		-3.676E-01	5.463E-01	8.137E-01	1.690E-01	-0.452
		568.70		4.508E-01	6.913E-01	1.224E+00	8.250E-02	0.368
		569.50		-1.306E-03	2.015E-01	3.249E-01	2.192E-02	-0.004
		574.00		-3.910E-01	9.620E-01	1.440E+00	9.747E-02	-0.272
		699.00		2.437E-01	5.912E-01	1.037E+00	1.918E-01	0.235
		706.10		-5.155E-02	8.185E-01	1.357E+00	6.019E-01	-0.038
		733.00		8.463E-02	2.191E-01	3.909E-01	8.489E-02	0.217
		742.81		7.076E-01	9.828E-01	1.638E+00	1.098E+00	0.432
		796.30		-5.903E-01	6.759E-01	9.243E-01	2.465E-01	-0.639
		805.60		-7.220E-01	8.270E-01	1.128E+00	3.420E-01	-0.640
		819.60		-2.437E-02	8.912E-01	1.474E+00	5.564E-01	-0.017
		826.30		-8.353E-04	5.763E-01	9.572E-01	4.260E-01	-0.001
		831.60		-1.844E-01	4.078E-01	6.102E-01	1.799E-01	-0.302
		876.40		-1.949E-01	6.130E-01	8.954E-01	9.195E-01	-0.218
		880.51		-9.536E-02	1.734E-01	2.503E-01	1.803E-02	-0.381
		883.24		9.185E-02	1.708E-01	2.984E-01	2.001E-01	0.308
		899.00		-4.341E-01	6.500E-01	8.899E-01	3.866E-01	-0.488
		925.00		-1.080E+00	8.161E-01	9.168E-01	6.497E-02	-1.178
		926.50		-3.909E-02	1.166E-01	1.780E-01	4.414E-02	-0.220
		946.00	*	6.598E-02	1.745E-01	3.124E-01	5.650E-02	0.211
		949.00		2.999E-02	2.701E-01	4.569E-01	3.203E-02	0.066
		980.50		-1.015E-01	4.704E-01	7.366E-01	5.077E-02	-0.138
		1394.10		2.053E-02	1.074E+00	1.743E+00	1.130E+00	0.012
PA-234M		766.41		5.768E+00	1.357E+01	2.273E+01	1.740E+01	0.254
		1001.03	*	2.399E+00	5.263E+00	9.310E+00	9.167E-01	0.258
TH-234		63.29	*	3.425E-02	2.012E-01	3.330E-01	5.769E-02	0.103
		92.38		6.530E-03	1.574E-01	2.399E-01	4.340E-02	0.027
U-234		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.712E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
U-235		89.95		1.779E-01	2.822E-01	4.753E-01	1.464E-01	0.374
		93.35		-8.292E-02	1.921E-01	2.771E-01	7.774E-02	-0.299
		105.00		-1.819E-01	3.730E-01	5.651E-01	1.706E-01	-0.322
		143.76	*	-6.096E-02	9.401E-02	1.317E-01	2.338E-02	-0.463
		163.35		-1.382E-01	2.082E-01	3.281E-01	5.969E-02	-0.421
		185.71		-3.935E-04	2.257E-02	3.514E-02	2.161E-03	-0.011
		205.31		-4.013E-02	2.393E-01	3.946E-01	7.149E-02	-0.102
NP-236		94.67		-1.246E-02	3.644E-02	5.688E-02	5.015E-03	-0.219
		98.44		9.953E-04	2.117E-02	3.437E-02	3.142E-03	0.029
		111.00		-2.614E-03	5.620E-02	9.014E-02	9.306E-03	-0.029
		160.31	*	6.951E-03	3.743E-02	6.078E-02	4.182E-03	0.114

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237		86.50	*	-5.344E-02	6.688E-02	9.366E-02	2.079E-02	-0.571
		95.87		-8.737E-02	2.877E-01	4.495E-01	1.112E-01	-0.194
U-238		63.29	*	3.425E-02	2.012E-01	3.330E-01	5.769E-02	0.103
		92.38		6.530E-03	1.574E-01	2.399E-01	2.070E-02	0.027
NP-239		99.55		-1.756E-02	4.929E-02	7.655E-02	7.072E-03	-0.229
		117.00	*	2.319E-03	7.434E-02	1.200E-01	1.313E-02	0.019
		209.75		2.255E-01	3.782E-01	6.640E-01	4.121E-02	0.340
		228.18		7.225E-02	1.222E-01	2.141E-01	1.326E-02	0.337
		277.60		-4.439E-02	9.488E-02	1.496E-01	8.762E-03	-0.297
		334.30		5.363E-01	7.723E-01	1.366E+00	7.930E-02	0.393
AM-241		59.54	*	3.850E-03	2.077E-02	3.449E-02	2.692E-03	0.112
AM-243		74.67	*	-7.902E-03	1.411E-02	2.013E-02	1.520E-03	-0.393
		86.72		-1.986E+00	2.459E+00	3.487E+00	2.861E-01	-0.570
		117.66		-6.764E-01	1.542E+00	2.370E+00	2.611E-01	-0.285
		142.18		1.644E+00	7.580E+00	1.238E+01	1.150E+00	0.133
CM-243		99.55		-1.806E-02	5.069E-02	7.873E-02	7.273E-03	-0.229
		103.76	*	9.780E-03	3.209E-02	5.337E-02	5.136E-03	0.183
		117.00		2.384E-03	7.645E-02	1.234E-01	1.350E-02	0.019
		209.75		2.222E-01	3.727E-01	6.543E-01	4.061E-02	0.340
		228.18		7.297E-02	1.234E-01	2.163E-01	1.339E-02	0.337
		277.60		-4.473E-02	9.560E-02	1.507E-01	8.829E-03	-0.297
CM-247		278.00		-2.061E-01	3.917E-01	6.131E-01	3.589E-02	-0.336
		287.40		-2.389E-01	5.976E-01	9.413E-01	5.512E-02	-0.254
		402.60	*	-7.342E-03	2.013E-02	3.116E-02	1.709E-03	-0.236
CF-249		252.85		5.626E-02	5.070E-01	8.526E-01	5.187E-02	0.066
		333.44		8.682E-02	1.003E-01	1.804E-01	1.048E-02	0.481
		387.95	*	-1.636E-02	2.427E-02	3.618E-02	1.962E-03	-0.452
CF-251		176.60	*	1.384E-02	5.681E-02	9.760E-02	5.960E-03	0.142
		227.00		3.500E-02	2.095E-01	3.548E-01	2.198E-02	0.099
		285.00		1.172E-02	8.264E-01	1.373E+00	8.034E-02	0.009
ANH-511		511.00	*	-2.890E-02	3.513E-02	6.374E-02	4.067E-03	-0.453

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069 *
* Acquisition date :  9-JUL-2009 08:22:22 Detector SN#     :            *
* Detector ID        : GAM21              Sensitivity      : 5.000     *
* Geometry           : CAN                Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:08.24     Half life ratio :  8.000     *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date        :  2-JUL-2009 00:00:00 Nuclide Library : SOLID    *
* Sample ID          : G1201873069        Analyst initials: MXR1       *
* Batch Number       : 881931             Sample Quantity : 1.3282E+02 GRAM *
* Recovery           :    1.00000         Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
* Standard Weight  :    0.00000                                         *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :             *
* MSD DPM          :     0.000           MSD Isotope      :            *
* LCS DPM          :     0.000           LCS Isotope      :            *
* LCSD DPM         :     0.000           LCSD Isotope     :            *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)	
BE-7	-1.057E-01	1.896E-01	2.758E-01	0.000E+00 NOT IDENT.
NA-22	5.508E-03	2.914E-02	5.061E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	1.109E+02	0.000E+00	0.000E+00 SHORT HLIF
AL-26	1.059E-03	3.915E-02	6.633E-02	0.000E+00 NOT IDENT.
K-40	1.161E-01	3.284E-01	5.829E-01	0.000E+00 NOT IDENT.
TI-44	-1.007E-02	8.902E-03	1.331E-02	0.000E+00 NOT IDENT.
SC-46	-2.137E-02	2.261E-02	2.984E-02	0.000E+00 NOT IDENT.
V-48	-4.730E-02	3.567E-02	4.163E-02	0.000E+00 NOT IDENT.
CR-51	1.004E-01	1.740E-01	3.201E-01	0.000E+00 NOT IDENT.
MN-52	-1.474E-03	1.043E-01	1.716E-01	0.000E+00 NOT IDENT.
MN-54	-1.609E-02	2.407E-02	3.605E-02	0.000E+00 NOT IDENT.
CO-56	-1.989E-02	2.766E-02	4.136E-02	0.000E+00 NOT IDENT.
CO-57	3.399E-03	1.015E-02	1.792E-02	0.000E+00 NOT IDENT.
CO-58	1.470E-02	2.855E-02	5.269E-02	0.000E+00 NOT IDENT.
FE-59	-8.377E-03	5.018E-02	8.112E-02	0.000E+00 NOT IDENT.
CO-60	6.945E-03	3.247E-02	5.635E-02	0.000E+00 NOT IDENT.
ZN-65	3.344E-02	5.549E-02	1.044E-01	0.000E+00 NOT IDENT.
GE-68	-4.615E-01	9.204E-01	1.395E+00	0.000E+00 NOT IDENT.
AS-73	-4.483E-02	6.675E-02	1.091E-01	0.000E+00 NOT IDENT.
AS-74	2.940E-04	4.549E-02	7.617E-02	0.000E+00 NOT IDENT.
SE-75	5.518E-03	2.127E-02	3.821E-02	0.000E+00 NOT IDENT.
BR-77	4.969E-02	6.780E-01	1.157E+00	0.000E+00 NOT IDENT.
SR-82	8.230E-02	2.393E-01	4.319E-01	0.000E+00 NOT IDENT.
RB-83	-1.084E-02	4.262E-02	6.905E-02	0.000E+00 NOT IDENT.
RB-84	1.453E-02	3.310E-02	6.197E-02	0.000E+00 NOT IDENT.
KR-85	-7.030E+00	6.722E+00	1.013E+01	0.000E+00 NOT IDENT.

SR-85	-3.322E-02	3.176E-02	4.788E-02	0.000E+00	NOT IDENT.
RB-86	-3.497E-01	4.387E-01	6.143E-01	0.000E+00	NOT IDENT.
Y-88	-1.293E-03	3.641E-02	6.067E-02	0.000E+00	NOT IDENT.
ZR-88	1.199E-03	1.843E-02	3.184E-02	0.000E+00	NOT IDENT.
Y-91	3.325E+00	1.126E+01	1.994E+01	0.000E+00	NOT IDENT.
NB-94	3.184E-03	2.756E-02	4.842E-02	0.000E+00	NOT IDENT.
NB-95	-7.575E-04	2.901E-02	4.981E-02	0.000E+00	NOT IDENT.
NB-95M	-1.457E-02	5.225E-02	8.953E-02	0.000E+00	NOT IDENT.
ZR-95	-9.515E-03	4.053E-02	6.692E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.144E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.731E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.366E+00	1.026E+00	1.247E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.657E+06	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.608E-02	1.534E-02	2.947E-02	0.000E+00	NOT IDENT.
RH-102	5.059E-03	1.810E-02	3.192E-02	0.000E+00	NOT IDENT.
RU-103	-3.365E-03	2.113E-02	3.480E-02	0.000E+00	NOT IDENT.
RH-106	1.076E-01	2.584E-01	4.196E-01	0.000E+00	NOT IDENT.
RU-106	1.076E-01	2.582E-01	4.196E-01	0.000E+00	NOT IDENT.
AG-108M	-4.853E-03	1.645E-02	2.663E-02	0.000E+00	NOT IDENT.
CD-109	-1.750E-01	2.089E-01	3.334E-01	0.000E+00	NOT IDENT.
AG-110M	-8.917E-03	2.292E-02	3.751E-02	0.000E+00	NOT IDENT.
IN-111	-1.061E-02	7.503E-02	1.299E-01	0.000E+00	NOT IDENT.
IN-113M	1.913E-02	2.637E-02	4.901E-02	0.000E+00	NOT IDENT.
SN-113	1.913E-02	2.637E-02	4.901E-02	0.000E+00	NOT IDENT.
IN-114M	-4.911E-02	7.360E-02	1.230E-01	0.000E+00	NOT IDENT.
CD-115	1.549E-01	6.879E-01	1.196E+00	0.000E+00	NOT IDENT.
SN-117M	1.304E-02	1.687E-02	3.061E-02	0.000E+00	NOT IDENT.
SB-122	-9.189E-02	1.903E-01	2.946E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.426E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-8.537E-04	1.266E-02	2.132E-02	0.000E+00	NOT IDENT.
I-124	2.069E-02	1.341E-01	2.291E-01	0.000E+00	NOT IDENT.
SB-124	9.132E-03	7.289E-02	1.272E-01	0.000E+00	NOT IDENT.
SB-125	3.257E-02	5.222E-02	9.677E-02	0.000E+00	NOT IDENT.
TE-125M	8.374E-01	3.191E+00	5.623E+00	0.000E+00	NOT IDENT.
I-126	-3.197E-02	7.751E-02	1.261E-01	0.000E+00	NOT IDENT.
SB-126	2.150E-02	6.114E-02	1.115E-01	0.000E+00	NOT IDENT.
SN-126	-1.780E-02	2.211E-02	3.377E-02	0.000E+00	NOT IDENT.
SB-127	4.538E-02	2.059E-01	3.703E-01	0.000E+00	NOT IDENT.
XE-127	-1.710E-02	1.772E-02	2.843E-02	0.000E+00	NOT IDENT.
I-131	1.915E-02	3.697E-02	6.730E-02	0.000E+00	NOT IDENT.
TE-132	4.258E-02	7.035E-02	1.298E-01	0.000E+00	NOT IDENT.
BA-133	-5.253E-03	2.505E-02	4.209E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	8.357E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	-2.848E-02	3.237E-02	4.711E-02	0.000E+00	NOT IDENT.
CS-135	3.782E-02	8.006E-02	1.464E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.425E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.052E-02	5.250E-02	8.511E-02	0.000E+00	NOT IDENT.
BA-137M	1.923E-02	2.330E-02	4.519E-02	0.000E+00	NOT IDENT.
CS-137	2.032E-02	2.463E-02	4.777E-02	0.000E+00	NOT IDENT.
CE-139	-3.965E-03	1.191E-02	2.067E-02	0.000E+00	NOT IDENT.
BA-140	-5.633E-02	1.147E-01	1.756E-01	0.000E+00	NOT IDENT.
LA-140	-2.203E-02	4.709E-02	6.985E-02	0.000E+00	NOT IDENT.
CE-141	2.015E-03	2.059E-02	3.538E-02	0.000E+00	NOT IDENT.
CE-143	7.068E-02	1.265E+00	2.216E+00	0.000E+00	NOT IDENT.
CE-144	-4.773E-02	8.608E-02	1.386E-01	0.000E+00	NOT IDENT.
PM-144	1.055E-02	2.603E-02	4.744E-02	0.000E+00	NOT IDENT.
PR-144	7.120E-01	1.757E+00	3.202E+00	0.000E+00	NOT IDENT.
PM-146	-1.187E-02	3.076E-02	4.973E-02	0.000E+00	NOT IDENT.
ND-147	2.533E-01	2.397E-01	4.582E-01	0.000E+00	NOT IDENT.
PM-149	6.789E-01	3.855E+00	6.858E+00	0.000E+00	NOT IDENT.
EU-152	-2.187E-02	5.493E-02	9.030E-02	0.000E+00	NOT IDENT.
GD-153	-2.600E-03	2.231E-02	3.812E-02	0.000E+00	NOT IDENT.
EU-154	1.545E-02	8.172E-02	1.419E-01	0.000E+00	NOT IDENT.
EU-155	-2.227E-02	3.726E-02	6.032E-02	0.000E+00	NOT IDENT.
TB-160	-6.171E-02	8.178E-02	1.160E-01	0.000E+00	NOT IDENT.
HO-166M	-4.423E-03	4.390E-02	7.490E-02	0.000E+00	NOT IDENT.
TM-171	-3.822E+00	5.186E+00	7.765E+00	0.000E+00	NOT IDENT.
LU-176	-1.577E-02	1.335E-02	1.984E-02	0.000E+00	NOT IDENT.
LU-177	1.063E-01	2.296E-01	4.218E-01	0.000E+00	NOT IDENT.
LU-177M	-1.332E-02	9.977E-02	1.675E-01	0.000E+00	NOT IDENT.
HF-181	9.115E-03	2.076E-02	3.768E-02	0.000E+00	NOT IDENT.
W-181	-1.181E-02	6.120E-02	9.717E-02	0.000E+00	NOT IDENT.
TA-182	7.968E-02	1.194E-01	2.255E-01	0.000E+00	NOT IDENT.
RE-183	-2.091E-02	4.405E-02	7.567E-02	0.000E+00	NOT IDENT.
RE-184	1.452E-02	1.283E-01	2.273E-01	0.000E+00	NOT IDENT.
OS-185	8.206E-03	3.000E-02	5.206E-02	0.000E+00	NOT IDENT.
RE-188	1.859E-02	7.377E-02	1.280E-01	0.000E+00	NOT IDENT.
W-188	-7.870E-01	3.399E+00	5.766E+00	0.000E+00	NOT IDENT.

IR-192	1.399E-02	1.856E-02	3.468E-02	0.000E+00	NOT IDENT.
AU-195	-6.205E-03	6.570E-02	1.125E-01	0.000E+00	NOT IDENT.
TL-200	-1.230E-01	1.960E+00	3.348E+00	0.000E+00	NOT IDENT.
TL-201	-1.634E-01	5.044E-01	8.760E-01	0.000E+00	NOT IDENT.
TL-202	-1.993E-02	2.495E-02	3.693E-02	0.000E+00	NOT IDENT.
HG-203	-4.180E-03	1.739E-02	2.954E-02	0.000E+00	NOT IDENT.
BI-207	2.911E-02	3.661E-02	7.090E-02	0.000E+00	NOT IDENT.
TL-207	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
TL-208	-1.740E-02	3.242E-02	4.225E-02	0.000E+00	NOT IDENT.
PO-209	-1.517E+00	4.938E+00	7.901E+00	0.000E+00	NOT IDENT.
BI-210	4.000E-02	1.889E-01	3.423E-01	0.000E+00	NOT IDENT.
PB-210	4.000E-02	1.889E-01	3.423E-01	0.000E+00	NOT IDENT.
PO-210	4.000E-02	1.889E-01	3.423E-01	0.000E+00	NOT IDENT.
BI-211	-2.192E-02	1.343E-01	2.230E-01	0.000E+00	NOT IDENT.
PB-211	7.020E-02	5.135E-01	8.925E-01	0.000E+00	NOT IDENT.
BI-212	1.162E-02	1.769E-01	3.093E-01	0.000E+00	NOT IDENT.
PB-212	2.140E-03	3.153E-02	5.482E-02	0.000E+00	NOT IDENT.
PO-212	2.140E-03	3.153E-02	5.482E-02	0.000E+00	NOT IDENT.
BI-214	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
PB-214	-9.257E-03	4.668E-02	7.718E-02	0.000E+00	NOT IDENT.
PO-214	-9.257E-03	4.668E-02	7.718E-02	0.000E+00	NOT IDENT.
PO-215	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
PO-216	2.140E-03	3.153E-02	5.482E-02	0.000E+00	NOT IDENT.
PO-218	-9.257E-03	4.668E-02	7.718E-02	0.000E+00	NOT IDENT.
RN-219	-8.733E-02	2.330E-01	3.776E-01	0.000E+00	NOT IDENT.
RN-220	-8.942E+00	1.497E+01	2.225E+01	0.000E+00	NOT IDENT.
RA-223	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
RA-224	3.196E-02	3.094E-01	5.493E-01	0.000E+00	NOT IDENT.
RA-226	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
AC-227	1.643E-01	2.178E-01	4.047E-01	0.000E+00	NOT IDENT.
TH-227	1.643E-01	2.183E-01	4.047E-01	0.000E+00	NOT IDENT.
AC-228	7.644E-02	1.068E-01	2.009E-01	0.000E+00	NOT IDENT.
RA-228	7.644E-02	1.068E-01	2.009E-01	0.000E+00	NOT IDENT.
TH-228	1.972E-03	3.151E-02	5.476E-02	0.000E+00	NOT IDENT.
TH-229	-2.919E-03	2.346E-01	4.162E-01	0.000E+00	NOT IDENT.
TH-230	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
PA-231	6.319E-02	7.117E-01	1.255E+00	0.000E+00	NOT IDENT.
TH-231	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
U-231	-2.747E-02	8.845E-02	1.483E-01	0.000E+00	NOT IDENT.
TH-232	7.644E-02	1.068E-01	2.009E-01	0.000E+00	NOT IDENT.
PA-233	2.836E-02	3.756E-02	7.012E-02	0.000E+00	NOT IDENT.
PA-234	6.598E-02	1.710E-01	3.153E-01	0.000E+00	NOT IDENT.
PA-234M	2.399E+00	5.158E+00	9.388E+00	0.000E+00	NOT IDENT.
TH-234	3.425E-02	1.972E-01	3.519E-01	0.000E+00	NOT IDENT.
U-234	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
U-235	-6.096E-02	9.213E-02	1.373E-01	0.000E+00	NOT IDENT.
NP-236	6.951E-03	3.668E-02	6.325E-02	0.000E+00	NOT IDENT.
NP-237	-5.344E-02	6.554E-02	9.847E-02	0.000E+00	NOT IDENT.
U-238	3.425E-02	1.972E-01	3.519E-01	0.000E+00	NOT IDENT.
NP-239	2.319E-03	7.286E-02	1.255E-01	0.000E+00	NOT IDENT.
AM-241	3.850E-03	2.036E-02	3.648E-02	0.000E+00	NOT IDENT.
AM-243	-7.902E-03	1.383E-02	2.121E-02	0.000E+00	NOT IDENT.
CM-243	9.780E-03	3.145E-02	5.595E-02	0.000E+00	NOT IDENT.
CM-247	-7.342E-03	1.973E-02	3.192E-02	0.000E+00	NOT IDENT.
CF-249	-1.636E-02	2.378E-02	3.709E-02	0.000E+00	NOT IDENT.
CF-251	1.384E-02	5.568E-02	1.014E-01	0.000E+00	NOT IDENT.
ANH-511	-2.890E-02	3.442E-02	6.504E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:24:25.15

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1
Sample date      : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:22:22.
Sample ID        : G1201873069          Sample quantity  : 1.32820E+02 GRAM
Detector name    : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:08.24  0.1%
Energy tolerance : 1.50000 keV          Analyst Initials : MXR1
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 881931               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Flag: "*" = Keyline

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

None

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:24:29.68

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1  *
* Acquisition date  : 9-JUL-2009 08:22:22.  Detector SN#     :             *
* Detector ID       : GAM21                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:08.24          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 2-JUL-2009 00:00:00.  Nuclide Library : SOLID        *
* Sample ID         : G1201873069           Analyst initials: MXR1         *
* Batch Number      : 881931                Sample Quantity : 1.32820E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.057E-01		1.934E-01	2.700E-01	1.900E-02	-0.391
NA-22	5.508E-03		2.973E-02	5.040E-02	2.981E-03	0.109
NA-24	-7.892E-05		5.659E-05	Half-Life too short		
AL-26	1.059E-03		3.994E-02	6.649E-02	3.702E-03	0.016
K-40	1.161E-01		3.351E-01	5.820E-01	3.704E-02	0.199
TI-44	-1.007E-02		9.084E-03	1.264E-02	9.775E-04	-0.797
SC-46	-2.137E-02		2.307E-02	2.953E-02	2.120E-03	-0.724
V-48	-4.730E-02		3.639E-02	4.128E-02	2.840E-03	-1.146
CR-51	1.004E-01		1.776E-01	3.112E-01	2.024E-02	0.323
MN-52	-1.474E-03		1.064E-01	1.712E-01	1.032E-02	-0.009
MN-54	-1.609E-02		2.456E-02	3.563E-02	2.599E-03	-0.452
CO-56	-1.989E-02		2.822E-02	4.090E-02	2.976E-03	-0.486
CO-57	3.399E-03		1.035E-02	1.714E-02	1.973E-03	0.198
CO-58	1.470E-02		2.914E-02	5.206E-02	3.824E-03	0.282
FE-59	-8.377E-03		5.121E-02	8.059E-02	5.780E-03	-0.104
CO-60	6.945E-03		3.313E-02	5.617E-02	3.379E-03	0.124
ZN-65	3.344E-02		5.662E-02	1.038E-01	6.367E-03	0.322

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	-4.615E-01		9.392E-01	1.385E+00	8.839E-02	-0.333
AS-73	-4.483E-02		6.811E-02	1.029E-01	6.917E-03	-0.435
AS-74	2.940E-04		4.642E-02	7.485E-02	5.151E-03	0.004
SE-75	5.518E-03		2.170E-02	3.703E-02	2.240E-03	0.149
BR-77	4.969E-02		6.918E-01	1.134E+00	7.311E-02	0.044
SR-82	8.230E-02		2.442E-01	4.264E-01	3.126E-02	0.193
RB-83	-1.084E-02		4.349E-02	6.769E-02	4.362E-03	-0.160
RB-84	1.453E-02		3.378E-02	6.132E-02	4.416E-03	0.237
KR-85	-7.030E+00		6.860E+00	9.933E+00	6.357E-01	-0.708
SR-85	-3.322E-02		3.241E-02	4.693E-02	3.004E-03	-0.708
RB-86	-3.497E-01		4.476E-01	6.100E-01	3.896E-02	-0.573
Y-88	-1.293E-03		3.715E-02	6.083E-02	3.357E-03	-0.021
ZR-88	1.199E-03		1.880E-02	3.106E-02	1.675E-03	0.039
Y-91	3.325E+00		1.149E+01	1.984E+01	1.140E+00	0.168
NB-94	3.184E-03		2.812E-02	4.772E-02	3.460E-03	0.067
NB-95	-7.575E-04		2.960E-02	4.917E-02	3.603E-03	-0.015
NB-95M	-1.457E-02		5.331E-02	8.659E-02	6.770E-03	-0.168
ZR-95	-9.515E-03		4.136E-02	6.604E-02	5.504E-03	-0.144
NB-97	-1.058E-05		1.604E-05	Half-Life too short		
ZR-97	-1.086E-03		3.944E-04	Half-Life too short		
MO-99	-1.366E+00		1.047E+00	1.230E+00	1.781E-01	-1.111
TC-99M	1.829E+00		3.906E+00	Half-Life too short		
RH-101	1.608E-02		1.565E-02	2.842E-02	1.759E-03	0.566
RH-102	5.059E-03		1.847E-02	3.125E-02	1.910E-03	0.162
RU-103	-3.365E-03		2.156E-02	3.409E-02	4.388E-03	-0.099
RH-106	1.076E-01		2.637E-01	4.126E-01	5.106E-02	0.261
RU-106	1.076E-01		2.634E-01	4.126E-01	2.888E-02	0.261
AG-108M	-4.853E-03		1.679E-02	2.602E-02	1.632E-03	-0.186
CD-109	-1.750E-01		2.132E-01	3.172E-01	2.629E-02	-0.552
AG-110M	-8.917E-03		2.339E-02	3.693E-02	2.747E-03	-0.241
IN-111	-1.061E-02		7.656E-02	1.257E-01	7.705E-03	-0.084
IN-113M	1.913E-02		2.691E-02	4.781E-02	2.772E-03	0.400
SN-113	1.913E-02		2.691E-02	4.781E-02	2.772E-03	0.400
IN-114M	-4.911E-02		7.510E-02	1.185E-01	7.309E-03	-0.414
CD-115	1.549E-01		7.020E-01	1.173E+00	7.615E-02	0.132
SN-117M	1.304E-02		1.722E-02	2.941E-02	2.097E-03	0.443
SB-122	-9.189E-02		1.942E-01	2.893E-01	1.942E-02	-0.318
I-123	-9.611E-06		7.273E-05	Half-Life too short		
TE-123M	-8.537E-04		1.292E-02	2.048E-02	1.461E-03	-0.042
I-124	2.069E-02		1.369E-01	2.252E-01	1.557E-02	0.092
SB-124	9.132E-03		7.437E-02	1.273E-01	8.012E-03	0.072
SB-125	3.257E-02		5.328E-02	9.455E-02	5.641E-03	0.345
TE-125M	8.374E-01		3.256E+00	5.369E+00	6.241E-01	0.156
I-126	-3.197E-02		7.910E-02	1.241E-01	8.884E-03	-0.258
SB-126	2.150E-02		6.239E-02	1.100E-01	8.009E-03	0.196
SN-126	-1.780E-02		2.256E-02	3.212E-02	2.653E-03	-0.554
SB-127	4.538E-02		2.101E-01	3.648E-01	3.029E-02	0.124
XE-127	-1.710E-02		1.808E-02	2.743E-02	1.700E-03	-0.623

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	1.915E-02		3.773E-02	6.558E-02	4.111E-03	0.292
TE-132	4.258E-02		7.178E-02	1.255E-01	1.674E-02	0.339
BA-133	-5.253E-03		2.557E-02	4.100E-02	4.718E-03	-0.128
I-133	6.452E-06		4.264E-06	Half-Life too short		
CS-134	-2.848E-02		3.303E-02	4.653E-02	3.444E-03	-0.612
CS-135	3.782E-02		8.169E-02	1.420E-01	1.104E-02	0.266
I-135	-7.742E+00		7.272E+00	Half-Life too short		
CS-136	-1.052E-02		5.357E-02	8.448E-02	5.936E-03	-0.125
BA-137M	1.923E-02		2.377E-02	4.449E-02	3.178E-03	0.432
CS-137	2.032E-02		2.513E-02	4.703E-02	3.369E-03	0.432
CE-139	-3.965E-03		1.215E-02	1.987E-02	1.204E-03	-0.199
BA-140	-5.633E-02		1.171E-01	1.723E-01	5.627E-02	-0.327
LA-140	-2.203E-02		4.805E-02	6.985E-02	4.139E-03	-0.315
CE-141	2.015E-03		2.101E-02	3.394E-02	3.067E-03	0.059
CE-143	7.068E-02		1.291E+00	2.152E+00	4.397E-01	0.033
CE-144	-4.773E-02		8.784E-02	1.327E-01	2.197E-02	-0.360
PM-144	1.055E-02		2.656E-02	4.675E-02	3.384E-03	0.226
PR-144	7.120E-01		1.792E+00	3.155E+00	2.283E-01	0.226
PM-146	-1.187E-02		3.139E-02	4.864E-02	4.240E-03	-0.244
ND-147	2.533E-01		2.446E-01	4.494E-01	6.221E-02	0.564
PM-149	6.789E-01		3.934E+00	6.654E+00	9.433E-01	0.102
EU-152	-2.187E-02		5.606E-02	8.790E-02	5.717E-03	-0.249
GD-153	-2.600E-03		2.276E-02	3.632E-02	3.288E-03	-0.072
EU-154	1.545E-02		8.339E-02	1.414E-01	1.329E-02	0.109
EU-155	-2.227E-02		3.802E-02	5.756E-02	5.676E-03	-0.387
TB-160	-6.171E-02		8.345E-02	1.148E-01	8.274E-03	-0.538
HO-166M	-4.423E-03		4.480E-02	7.383E-02	5.366E-03	-0.060
TM-171	-3.822E+00		5.292E+00	7.354E+00	5.322E-01	-0.520
LU-176	-1.577E-02		1.363E-02	1.927E-02	1.130E-03	-0.818
LU-177	1.063E-01		2.342E-01	4.071E-01	2.526E-02	0.261
LU-177M	-1.332E-02		1.018E-01	1.636E-01	9.141E-03	-0.081
HF-181	9.115E-03		2.119E-02	3.689E-02	2.275E-03	0.247
W-181	-1.181E-02		6.244E-02	9.200E-02	6.613E-03	-0.128
TA-182	7.968E-02		1.219E-01	2.245E-01	1.298E-02	0.355
RE-183	-2.091E-02		4.495E-02	7.273E-02	4.790E-03	-0.288
RE-184	1.452E-02		1.309E-01	2.201E-01	1.339E-02	0.066
OS-185	8.206E-03		3.061E-02	5.123E-02	3.633E-03	0.160
RE-188	1.859E-02		7.528E-02	1.229E-01	9.375E-03	0.151
W-188	-7.870E-01		3.468E+00	5.596E+00	3.280E-01	-0.141
IR-192	1.399E-02		1.894E-02	3.371E-02	1.983E-03	0.415
AU-195	-6.205E-03		6.704E-02	1.072E-01	9.841E-03	-0.058
TL-200	-1.230E-01		2.000E+00	3.262E+00	1.829E-01	-0.038
TL-201	-1.634E-01		5.147E-01	8.424E-01	5.102E-02	-0.194
TL-202	-1.993E-02		2.546E-02	3.610E-02	2.101E-03	-0.552
HG-203	-4.180E-03		1.775E-02	2.865E-02	1.775E-03	-0.146
BI-207	2.911E-02		3.736E-02	7.038E-02	4.552E-03	0.414
TL-207	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
TL-208	-1.740E-02		3.308E-02	4.150E-02	3.148E-03	-0.419

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	-1.517E+00		5.039E+00	7.820E+00	5.598E-01	-0.194
BI-210	4.000E-02		1.928E-01	3.223E-01	2.441E-02	0.124
PB-210	4.000E-02		1.928E-01	3.223E-01	2.441E-02	0.124
PO-210	4.000E-02		1.927E-01	3.223E-01	2.083E-02	0.124
BI-211	-2.192E-02		1.370E-01	2.171E-01	1.382E-02	-0.101
PB-211	7.020E-02		5.240E-01	8.712E-01	5.429E-01	0.081
BI-212	1.162E-02		1.805E-01	3.050E-01	2.711E-02	0.038
PB-212	2.140E-03		3.217E-02	5.303E-02	4.040E-03	0.040
PO-212	2.140E-03		3.217E-02	5.303E-02	4.040E-03	0.040
BI-214	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
PB-214	-9.257E-03		4.764E-02	7.516E-02	6.183E-03	-0.123
PO-214	-9.257E-03		4.764E-02	7.516E-02	6.183E-03	-0.123
PO-215	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
PO-216	2.140E-03		3.217E-02	5.303E-02	4.040E-03	0.040
PO-218	-9.257E-03		4.764E-02	7.516E-02	6.183E-03	-0.123
RN-219	-8.733E-02		2.377E-01	3.686E-01	4.965E-02	-0.237
RN-220	-8.942E+00		1.528E+01	2.183E+01	1.448E+00	-0.410
RA-223	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
RA-224	3.196E-02		3.157E-01	5.314E-01	3.268E-02	0.060
RA-226	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
AC-227	1.643E-01		2.222E-01	3.920E-01	5.515E-02	0.419
TH-227	1.643E-01		2.227E-01	3.920E-01	6.660E-02	0.419
AC-228	7.644E-02		1.090E-01	1.989E-01	2.018E-02	0.384
RA-228	7.644E-02		1.090E-01	1.989E-01	2.018E-02	0.384
TH-228	1.972E-03		3.215E-02	5.297E-02	4.036E-03	0.037
TH-229	-2.919E-03		2.394E-01	4.012E-01	2.478E-02	-0.007
TH-230	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
PA-231	6.319E-02		7.262E-01	1.217E+00	1.680E-01	0.052
TH-231	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
U-231	-2.747E-02		9.025E-02	1.413E-01	1.261E-02	-0.194
TH-232	7.644E-02		1.090E-01	1.989E-01	2.018E-02	0.384
PA-233	2.836E-02		3.833E-02	6.814E-02	4.236E-03	0.416
PA-234	6.598E-02		1.745E-01	3.124E-01	5.650E-02	0.211
PA-234M	2.399E+00		5.263E+00	9.310E+00	9.167E-01	0.258
TH-234	3.425E-02		2.012E-01	3.330E-01	5.769E-02	0.103
U-234	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
U-235	-6.096E-02		9.401E-02	1.317E-01	2.338E-02	-0.463
NP-236	6.951E-03		3.743E-02	6.078E-02	4.182E-03	0.114
NP-237	-5.344E-02		6.688E-02	9.366E-02	2.079E-02	-0.571
U-238	3.425E-02		2.012E-01	3.330E-01	5.769E-02	0.103
NP-239	2.319E-03		7.434E-02	1.200E-01	1.313E-02	0.019
AM-241	3.850E-03		2.077E-02	3.449E-02	2.692E-03	0.112
AM-243	-7.902E-03		1.411E-02	2.013E-02	1.520E-03	-0.393
CM-243	9.780E-03		3.209E-02	5.337E-02	5.136E-03	0.183
CM-247	-7.342E-03		2.013E-02	3.116E-02	1.709E-03	-0.236
CF-249	-1.636E-02		2.427E-02	3.618E-02	1.962E-03	-0.452
CF-251	1.384E-02		5.681E-02	9.760E-02	5.960E-03	0.142
ANH-511	-2.890E-02		3.513E-02	6.374E-02	4.067E-03	-0.453

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201873069          *
* Acquisition date  :  9-JUL-2009 08:22:22 Detector SN#     :               *
* Detector ID       : GAM21                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:08.24      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       :  2-JUL-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201873069          Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.3282E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.057E-01	1.896E-01	1.380E-01	9.671E-02 NOT IDENT.
NA-22	5.508E-03	2.914E-02	2.532E-02	1.487E-02 NOT IDENT.
NA-24	-7.892E+01	1.109E+02	0.000E+00	5.659E+01 SHORT HLIF
AL-26	1.059E-03	3.915E-02	3.319E-02	1.997E-02 NOT IDENT.
K-40	1.161E-01	3.284E-01	2.916E-01	1.675E-01 NOT IDENT.
TI-44	-1.007E-02	8.902E-03	6.659E-03	4.542E-03 NOT IDENT.
SC-46	-2.137E-02	2.261E-02	1.493E-02	1.154E-02 NOT IDENT.
V-48	-4.730E-02	3.567E-02	2.083E-02	1.820E-02 NOT IDENT.
CR-51	1.004E-01	1.740E-01	1.601E-01	8.878E-02 NOT IDENT.
MN-52	-1.474E-03	1.043E-01	8.583E-02	5.322E-02 NOT IDENT.
MN-54	-1.609E-02	2.407E-02	1.803E-02	1.228E-02 NOT IDENT.
CO-56	-1.989E-02	2.766E-02	2.069E-02	1.411E-02 NOT IDENT.
CO-57	3.399E-03	1.015E-02	8.966E-03	5.176E-03 NOT IDENT.
CO-58	1.470E-02	2.855E-02	2.636E-02	1.457E-02 NOT IDENT.
FE-59	-8.377E-03	5.018E-02	4.059E-02	2.560E-02 NOT IDENT.
CO-60	6.945E-03	3.247E-02	2.819E-02	1.656E-02 NOT IDENT.
ZN-65	3.344E-02	5.549E-02	5.225E-02	2.831E-02 NOT IDENT.
GE-68	-4.615E-01	9.204E-01	6.977E-01	4.696E-01 NOT IDENT.
AS-73	-4.483E-02	6.675E-02	5.457E-02	3.405E-02 NOT IDENT.
AS-74	2.940E-04	4.549E-02	3.811E-02	2.321E-02 NOT IDENT.
SE-75	5.518E-03	2.127E-02	1.912E-02	1.085E-02 NOT IDENT.
BR-77	4.969E-02	6.780E-01	5.788E-01	3.459E-01 NOT IDENT.
SR-82	8.230E-02	2.393E-01	2.161E-01	1.221E-01 NOT IDENT.
RB-83	-1.084E-02	4.262E-02	3.454E-02	2.174E-02 NOT IDENT.
RB-84	1.453E-02	3.310E-02	3.101E-02	1.689E-02 NOT IDENT.
KR-85	-7.030E+00	6.722E+00	5.070E+00	3.430E+00 NOT IDENT.

SR-85	-3.322E-02	3.176E-02	2.396E-02	1.621E-02	NOT IDENT.
RB-86	-3.497E-01	4.387E-01	3.073E-01	2.238E-01	NOT IDENT.
Y-88	-1.293E-03	3.641E-02	3.035E-02	1.858E-02	NOT IDENT.
ZR-88	1.199E-03	1.843E-02	1.593E-02	9.402E-03	NOT IDENT.
Y-91	3.325E+00	1.126E+01	9.976E+00	5.747E+00	NOT IDENT.
NB-94	3.184E-03	2.756E-02	2.423E-02	1.406E-02	NOT IDENT.
NB-95	-7.575E-04	2.901E-02	2.492E-02	1.480E-02	NOT IDENT.
NB-95M	-1.457E-02	5.225E-02	4.479E-02	2.666E-02	NOT IDENT.
ZR-95	-9.515E-03	4.053E-02	3.348E-02	2.068E-02	NOT IDENT.
NB-97	-1.058E+01	3.144E+01	0.000E+00	1.604E+01	SHORT HLIF
ZR-97	-1.086E+03	7.731E+02	0.000E+00	3.944E+02	SHORT HLIF
MO-99	-1.366E+00	1.026E+00	6.239E-01	5.233E-01	NOT IDENT.
TC-99M	1.829E+06	7.657E+06	0.000E+00	3.906E+06	SHORT HLIF
RH-101	1.608E-02	1.534E-02	1.475E-02	7.824E-03	NOT IDENT.
RH-102	5.059E-03	1.810E-02	1.597E-02	9.233E-03	NOT IDENT.
RU-103	-3.365E-03	2.113E-02	1.741E-02	1.078E-02	NOT IDENT.
RH-106	1.076E-01	2.584E-01	2.099E-01	1.318E-01	NOT IDENT.
RU-106	1.076E-01	2.582E-01	2.099E-01	1.317E-01	NOT IDENT.
AG-108M	-4.853E-03	1.645E-02	1.332E-02	8.395E-03	NOT IDENT.
CD-109	-1.750E-01	2.089E-01	1.668E-01	1.066E-01	NOT IDENT.
AG-110M	-8.917E-03	2.292E-02	1.877E-02	1.169E-02	NOT IDENT.
IN-111	-1.061E-02	7.503E-02	6.500E-02	3.828E-02	NOT IDENT.
IN-113M	1.913E-02	2.637E-02	2.452E-02	1.345E-02	NOT IDENT.
SN-113	1.913E-02	2.637E-02	2.452E-02	1.345E-02	NOT IDENT.
IN-114M	-4.911E-02	7.360E-02	6.154E-02	3.755E-02	NOT IDENT.
CD-115	1.549E-01	6.879E-01	5.983E-01	3.510E-01	NOT IDENT.
SN-117M	1.304E-02	1.687E-02	1.532E-02	8.608E-03	NOT IDENT.
SB-122	-9.189E-02	1.903E-01	1.474E-01	9.709E-02	NOT IDENT.
I-123	-9.611E+00	1.426E+02	0.000E+00	7.273E+01	SHORT HLIF
TE-123M	-8.537E-04	1.266E-02	1.066E-02	6.460E-03	NOT IDENT.
I-124	2.069E-02	1.341E-01	1.146E-01	6.844E-02	NOT IDENT.
SB-124	9.132E-03	7.289E-02	6.364E-02	3.719E-02	NOT IDENT.
SB-125	3.257E-02	5.222E-02	4.841E-02	2.664E-02	NOT IDENT.
TE-125M	8.374E-01	3.191E+00	2.813E+00	1.628E+00	NOT IDENT.
I-126	-3.197E-02	7.751E-02	6.306E-02	3.955E-02	NOT IDENT.
SB-126	2.150E-02	6.114E-02	5.580E-02	3.120E-02	NOT IDENT.
SN-126	-1.780E-02	2.211E-02	1.689E-02	1.128E-02	NOT IDENT.
SB-127	4.538E-02	2.059E-01	1.853E-01	1.051E-01	NOT IDENT.
XE-127	-1.710E-02	1.772E-02	1.422E-02	9.040E-03	NOT IDENT.
I-131	1.915E-02	3.697E-02	3.367E-02	1.886E-02	NOT IDENT.
TE-132	4.258E-02	7.035E-02	6.495E-02	3.589E-02	NOT IDENT.
BA-133	-5.253E-03	2.505E-02	2.106E-02	1.278E-02	NOT IDENT.
I-133	6.452E+00	8.357E+00	0.000E+00	4.264E+00	SHORT HLIF
CS-134	-2.848E-02	3.237E-02	2.357E-02	1.651E-02	NOT IDENT.
CS-135	3.782E-02	8.006E-02	7.327E-02	4.085E-02	NOT IDENT.
I-135	-7.742E+06	1.425E+07	0.000E+00	7.272E+06	SHORT HLIF
CS-136	-1.052E-02	5.250E-02	4.258E-02	2.679E-02	NOT IDENT.
BA-137M	1.923E-02	2.330E-02	2.261E-02	1.189E-02	NOT IDENT.
CS-137	2.032E-02	2.463E-02	2.390E-02	1.257E-02	NOT IDENT.
CE-139	-3.965E-03	1.191E-02	1.034E-02	6.076E-03	NOT IDENT.
BA-140	-5.633E-02	1.147E-01	8.785E-02	5.854E-02	NOT IDENT.
LA-140	-2.203E-02	4.709E-02	3.494E-02	2.403E-02	NOT IDENT.
CE-141	2.015E-03	2.059E-02	1.770E-02	1.050E-02	NOT IDENT.
CE-143	7.068E-02	1.265E+00	1.109E+00	6.454E-01	NOT IDENT.
CE-144	-4.773E-02	8.608E-02	6.932E-02	4.392E-02	NOT IDENT.
PM-144	1.055E-02	2.603E-02	2.373E-02	1.328E-02	NOT IDENT.
PR-144	7.120E-01	1.757E+00	1.602E+00	8.962E-01	NOT IDENT.
PM-146	-1.187E-02	3.076E-02	2.488E-02	1.569E-02	NOT IDENT.
ND-147	2.533E-01	2.397E-01	2.292E-01	1.223E-01	NOT IDENT.
PM-149	6.789E-01	3.855E+00	3.431E+00	1.967E+00	NOT IDENT.
EU-152	-2.187E-02	5.493E-02	4.518E-02	2.803E-02	NOT IDENT.
GD-153	-2.600E-03	2.231E-02	1.907E-02	1.138E-02	NOT IDENT.
EU-154	1.545E-02	8.172E-02	7.100E-02	4.169E-02	NOT IDENT.
EU-155	-2.227E-02	3.726E-02	3.018E-02	1.901E-02	NOT IDENT.
TB-160	-6.171E-02	8.178E-02	5.805E-02	4.172E-02	NOT IDENT.
HO-166M	-4.423E-03	4.390E-02	3.747E-02	2.240E-02	NOT IDENT.
TM-171	-3.822E+00	5.186E+00	3.885E+00	2.646E+00	NOT IDENT.
LU-176	-1.577E-02	1.335E-02	9.926E-03	6.813E-03	NOT IDENT.
LU-177	1.063E-01	2.296E-01	2.110E-01	1.171E-01	NOT IDENT.
LU-177M	-1.332E-02	9.977E-02	8.380E-02	5.091E-02	NOT IDENT.
HF-181	9.115E-03	2.076E-02	1.885E-02	1.059E-02	NOT IDENT.
W-181	-1.181E-02	6.120E-02	4.861E-02	3.122E-02	NOT IDENT.
TA-182	7.968E-02	1.194E-01	1.128E-01	6.093E-02	NOT IDENT.
RE-183	-2.091E-02	4.405E-02	3.786E-02	2.247E-02	NOT IDENT.
RE-184	1.452E-02	1.283E-01	1.137E-01	6.545E-02	NOT IDENT.
OS-185	8.206E-03	3.000E-02	2.604E-02	1.531E-02	NOT IDENT.
RE-188	1.859E-02	7.377E-02	6.404E-02	3.764E-02	NOT IDENT.
W-188	-7.870E-01	3.399E+00	2.885E+00	1.734E+00	NOT IDENT.

IR-192	1.399E-02	1.856E-02	1.735E-02	9.469E-03	NOT IDENT.
AU-195	-6.205E-03	6.570E-02	5.627E-02	3.352E-02	NOT IDENT.
TL-200	-1.230E-01	1.960E+00	1.675E+00	1.000E+00	NOT IDENT.
TL-201	-1.634E-01	5.044E-01	4.383E-01	2.573E-01	NOT IDENT.
TL-202	-1.993E-02	2.495E-02	1.848E-02	1.273E-02	NOT IDENT.
HG-203	-4.180E-03	1.739E-02	1.478E-02	8.875E-03	NOT IDENT.
BI-207	2.911E-02	3.661E-02	3.547E-02	1.868E-02	NOT IDENT.
TL-207	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
TL-208	-1.740E-02	3.242E-02	2.114E-02	1.654E-02	NOT IDENT.
PO-209	-1.517E+00	4.938E+00	3.953E+00	2.519E+00	NOT IDENT.
BI-210	4.000E-02	1.889E-01	1.712E-01	9.638E-02	NOT IDENT.
PB-210	4.000E-02	1.889E-01	1.712E-01	9.638E-02	NOT IDENT.
PO-210	4.000E-02	1.889E-01	1.712E-01	9.637E-02	NOT IDENT.
BI-211	-2.192E-02	1.343E-01	1.116E-01	6.852E-02	NOT IDENT.
PB-211	7.020E-02	5.135E-01	4.465E-01	2.620E-01	NOT IDENT.
BI-212	1.162E-02	1.769E-01	1.547E-01	9.026E-02	NOT IDENT.
PB-212	2.140E-03	3.153E-02	2.742E-02	1.609E-02	NOT IDENT.
PO-212	2.140E-03	3.153E-02	2.742E-02	1.609E-02	NOT IDENT.
BI-214	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
PB-214	-9.257E-03	4.668E-02	3.861E-02	2.382E-02	NOT IDENT.
PO-214	-9.257E-03	4.668E-02	3.861E-02	2.382E-02	NOT IDENT.
PO-215	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
PO-216	2.140E-03	3.153E-02	2.742E-02	1.609E-02	NOT IDENT.
PO-218	-9.257E-03	4.668E-02	3.861E-02	2.382E-02	NOT IDENT.
RN-219	-8.733E-02	2.330E-01	1.889E-01	1.189E-01	NOT IDENT.
RN-220	-8.942E+00	1.497E+01	1.113E+01	7.640E+00	NOT IDENT.
RA-223	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
RA-224	3.196E-02	3.094E-01	2.748E-01	1.578E-01	NOT IDENT.
RA-226	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
AC-227	1.643E-01	2.178E-01	2.025E-01	1.111E-01	NOT IDENT.
TH-227	1.643E-01	2.183E-01	2.025E-01	1.114E-01	NOT IDENT.
AC-228	7.644E-02	1.068E-01	1.005E-01	5.451E-02	NOT IDENT.
RA-228	7.644E-02	1.068E-01	1.005E-01	5.451E-02	NOT IDENT.
TH-228	1.972E-03	3.151E-02	2.740E-02	1.608E-02	NOT IDENT.
TH-229	-2.919E-03	2.346E-01	2.082E-01	1.197E-01	NOT IDENT.
TH-230	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
PA-231	6.319E-02	7.117E-01	6.277E-01	3.631E-01	NOT IDENT.
TH-231	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
U-231	-2.747E-02	8.845E-02	7.422E-02	4.513E-02	NOT IDENT.
TH-232	7.644E-02	1.068E-01	1.005E-01	5.451E-02	NOT IDENT.
PA-233	2.836E-02	3.756E-02	3.508E-02	1.916E-02	NOT IDENT.
PA-234	6.598E-02	1.710E-01	1.578E-01	8.726E-02	NOT IDENT.
PA-234M	2.399E+00	5.158E+00	4.697E+00	2.631E+00	NOT IDENT.
TH-234	3.425E-02	1.972E-01	1.760E-01	1.006E-01	NOT IDENT.
U-234	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
U-235	-6.096E-02	9.213E-02	6.871E-02	4.701E-02	NOT IDENT.
NP-236	6.951E-03	3.668E-02	3.164E-02	1.872E-02	NOT IDENT.
NP-237	-5.344E-02	6.554E-02	4.926E-02	3.344E-02	NOT IDENT.
U-238	3.425E-02	1.972E-01	1.760E-01	1.006E-01	NOT IDENT.
NP-239	2.319E-03	7.286E-02	6.279E-02	3.717E-02	NOT IDENT.
AM-241	3.850E-03	2.036E-02	1.825E-02	1.039E-02	NOT IDENT.
AM-243	-7.902E-03	1.383E-02	1.061E-02	7.055E-03	NOT IDENT.
CM-243	9.780E-03	3.145E-02	2.799E-02	1.605E-02	NOT IDENT.
CM-247	-7.342E-03	1.973E-02	1.597E-02	1.007E-02	NOT IDENT.
CF-249	-1.636E-02	2.378E-02	1.856E-02	1.213E-02	NOT IDENT.
CF-251	1.384E-02	5.568E-02	5.073E-02	2.841E-02	NOT IDENT.
ANH-511	-2.890E-02	3.442E-02	3.254E-02	1.756E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	51.5619
46.50	51.5619
46.50	51.5619
48.70	51.7203
49.72	47.7304
51.35	45.7999
52.39	48.9207
52.97	53.0379
53.15	53.0504
53.44	48.9882
54.07	46.9856
56.28	53.2646
56.28	53.2648
57.37	49.2351
57.53	49.2450
57.53	49.2451
57.60	49.2493
57.98	43.1136
57.98	43.1136
59.32	56.5521
59.32	56.5521
59.40	56.5576
59.54	56.5674
59.72	63.7809
60.01	63.8035
61.10	56.6750
61.14	55.6472
61.30	56.6886
63.00	59.9027
63.29	60.9564
63.29	60.9564
63.58	60.9774
64.28	50.6840
65.12	52.8046
65.20	55.9159
65.20	55.9159
66.05	54.9347
66.72	63.2753
66.83	61.2086
66.91	61.2142
67.20	61.2347
67.20	61.2347
67.75	58.1576
67.85	57.1256
68.90	58.2334
68.90	58.2334
69.30	55.1386
69.67	62.4472
70.82	68.7800
70.82	68.7800
70.83	68.7808
72.80	59.5308
72.87	59.5352
72.87	59.5352
74.67	65.9308
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.97	61.7645
75.28	53.4076
75.70	53.4315
77.11	59.8071
77.11	59.8071
77.11	59.8071

77.11	59.8071
77.11	59.8071
77.11	59.8071
78.38	76.6976
79.62	62.0686
79.80	62.0803
79.80	62.0803
80.11	66.3102
80.18	69.4729
80.30	69.4815
80.30	69.4815
80.57	71.6069
81.00	72.6921
81.07	72.6974
81.07	72.6974
81.07	72.6974
81.07	72.6974
82.60	49.5960
83.37	46.4663
83.78	49.6553
83.78	49.6553
83.78	49.6553
83.78	49.6553
84.21	58.1322
84.40	60.2577
84.90	67.6917
85.43	69.8440
86.29	58.2531
86.50	60.3838
86.54	60.3862
86.59	60.3892
86.72	59.3374
86.79	59.3413
86.94	62.5297
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.57	60.4475
87.88	73.1956
88.03	73.2064
88.36	68.9846
88.47	68.9921
89.95	51.0212
91.11	51.0784
92.29	56.4626
92.38	54.3365
92.38	54.3365
93.35	60.7850
94.00	60.8223
94.67	60.8604
94.67	60.8606
94.90	63.0097
94.90	63.0097
94.90	63.0097
94.90	63.0097
95.87	58.7910
95.87	58.7910
96.73	53.4893
97.43	49.2417
98.44	49.2875
98.44	49.2875
98.88	50.3793
99.55	54.7003
99.55	54.7003
99.86	56.8614
100.00	63.3067
100.10	63.3126
103.18	46.2708
103.76	48.4480
105.00	61.4349
105.31	63.6079
108.00	56.1932
109.28	61.6645
111.00	69.3396
111.00	69.3396

111.76	65.0480
112.95	64.0282
115.19	63.0616
116.30	58.7669
117.00	57.7120
117.00	57.7120
117.66	66.4595
121.11	61.1842
121.62	59.0234
121.78	59.0310
122.06	57.9510
122.32	65.6186
122.32	65.6186
122.32	65.6186
122.32	65.6186
123.07	60.1867
127.23	70.2672
129.76	61.6056
131.20	60.5729
133.02	61.7610
133.54	69.5085
135.34	66.2892
136.00	61.9011
136.25	66.3350
136.48	66.3464
140.51	58.7827
140.51	0.0000
142.18	58.8555
142.65	61.0975
143.76	60.0354
144.24	52.2715
144.24	52.2715
144.24	52.2715
144.24	52.2715
145.22	48.9699
145.44	48.9777
147.16	55.7255
152.43	60.4101
152.70	55.9460
153.22	53.7279
154.21	57.1256
154.21	57.1256
154.21	57.1256
154.21	57.1256
155.03	63.8828
156.02	86.3571
158.56	52.8044
159.00	0.0000
159.00	64.0589
160.31	59.6169
161.27	54.0282
162.32	65.7811
162.64	67.5980
163.35	66.7287
163.89	63.1448
165.85	57.8086
167.43	58.7737
171.28	58.0172
171.86	55.3189
172.10	51.6994
176.55	52.7586
176.60	53.6701
181.06	62.0338
184.41	59.4224
185.71	56.7260
186.00	56.7366
190.27	64.2271
192.34	65.2273
193.63	57.9235
197.04	51.5939
198.01	47.9365
198.60	47.0315
200.40	60.0068
201.83	62.8294
202.84	60.0937
205.31	56.4779
208.36	55.6512
208.81	51.9545

209.75	55.6959
209.75	55.6959
210.97	56.6644
215.65	62.4052
216.55	54.0500
218.09	52.2320
222.10	64.5026
223.80	55.2066
226.40	56.2233
227.00	60.9288
227.08	60.9315
227.20	55.3107
228.16	54.4019
228.18	54.4026
228.18	54.4026
231.56	46.0461
235.69	53.6838
236.00	53.6929
236.00	53.6929
238.60	42.4482
238.63	42.4490
238.63	42.4490
238.63	42.4490
239.00	35.8528
240.98	49.1134
241.98	66.1497
241.98	66.1497
241.98	66.1497
244.69	49.2099
245.39	44.4945
247.94	44.5542
248.90	52.1641
249.79	54.0860
252.40	56.0594
252.85	55.1219
252.85	55.1219
254.15	0.0000
256.20	47.6007
256.20	47.6007
260.50	50.5674
260.90	48.6691
262.80	59.2232
264.65	39.1997
268.24	40.2281
268.79	43.1131
269.46	51.7529
269.46	51.7529
269.46	51.7529
269.46	51.7529
271.23	49.8799
273.65	42.2565
276.40	39.4285
277.35	44.2570
277.60	48.1116
277.60	48.1116
278.00	48.1207
278.60	42.3586
279.20	38.5190
279.53	39.4880
280.46	35.6518
281.68	36.6367
283.67	30.8816
284.30	29.9257
285.00	30.9012
285.90	31.8805
286.10	34.7823
286.10	34.7823
287.40	35.7706
288.45	0.0000
290.67	38.7310
290.80	38.7329
291.72	36.8125
293.26	36.8389
293.70	37.8165
295.21	46.5762
295.21	46.5762
295.21	46.5762
295.96	43.6805

296.50	48.5461
297.23	44.6776
298.57	45.6776
299.80	39.8689
299.80	39.8689
300.09	34.0391
300.09	34.0391
300.09	34.0391
300.10	34.0391
300.12	34.0396
301.29	36.0041
302.84	40.8987
303.76	38.9673
303.91	38.9702
304.40	43.8514
304.40	43.8514
304.84	38.0121
306.84	46.8270
308.46	32.2173
311.98	35.2022
316.51	33.3144
318.01	48.0436
319.02	49.0466
319.41	44.1491
320.08	33.3671
323.87	35.3892
323.87	35.3892
323.87	35.3892
323.87	35.3892
325.23	39.3447
328.77	40.3909
333.44	32.5758
334.20	34.5616
334.20	34.5616
334.30	34.5629
338.28	31.6547
338.28	31.6547
338.28	31.6547
338.28	31.6547
338.32	31.6551
338.32	31.6551
338.32	31.6551
340.50	35.6454
340.57	32.6757
344.27	37.6860
345.85	31.7566
350.59	37.7862
351.07	35.8049
351.92	35.8176
351.92	35.8176
351.92	35.8176
355.39	0.0000
356.01	35.8785
364.48	32.0031
366.43	27.0244
367.43	31.0405
367.94	34.0515
369.80	41.0931
374.96	28.1217
383.85	25.1978
387.95	36.3432
388.63	29.2843
391.69	27.2973
391.69	27.2973
392.90	34.3906
398.62	28.3845
400.65	27.3919
401.10	31.4556
401.81	29.4340
402.60	26.3974
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411.60	23.4312
413.65	28.5472
414.70	22.4388
415.30	23.4638
415.76	24.4884
417.63	0.0000

418.52	26.5564
423.70	22.5140
427.08	19.4683
427.89	19.4741
432.53	21.5606
433.93	19.5172
439.47	27.7907
439.56	26.7624
439.89	23.6772
443.98	21.6501
444.90	22.6886
445.03	22.6896
445.03	22.6896
445.03	22.6896
445.03	22.6896
453.90	36.2112
463.38	22.8374
468.07	33.2719
473.00	16.6643
475.06	21.8875
475.35	22.9319
476.78	25.0289
477.59	23.9928
477.96	25.0392
482.03	15.6711
484.57	21.9585
487.03	21.9767
490.36	16.7629
492.35	22.0162
497.08	21.0007
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510.53	0.0000
510.84	16.8771
511.00	16.8779
511.85	27.4343
511.85	27.4343
513.99	68.6340
513.99	68.6340
520.41	24.3364
520.65	20.1054
527.90	24.3948
528.96	0.0000
529.64	21.2251
529.87	0.0000
531.02	16.9875
537.32	25.5322
543.00	22.3807
546.56	0.0000
549.76	19.2239
552.65	23.5168
555.20	11.7678
563.23	25.7385
563.90	25.7438
568.70	18.2621
569.32	19.3399
569.50	25.7877
569.67	25.7895
573.80	22.5940
574.00	21.5190
574.64	18.2949
578.91	31.2493
579.30	30.1752
583.14	28.0522
585.48	23.7531
591.81	31.3697
592.07	28.1265
593.00	28.1347
595.88	20.5771
600.56	22.7744
602.52	0.0000
602.71	24.9592
602.71	24.9592
603.60	28.2223
604.41	32.5715
604.70	34.7461
609.31	26.0947
609.31	26.0947
609.31	26.0947

609.31	26.0947
610.33	22.8396
612.46	27.2070
614.37	27.2217
618.01	27.2504
621.84	14.1857
621.84	14.1857
631.29	19.6950
633.02	17.5152
633.10	17.5156
634.78	21.9048
635.90	20.8160
636.97	20.8225
645.85	21.9731
646.12	19.7771
656.30	25.7094
657.75	22.0454
657.90	0.0000
661.65	13.7933
661.65	13.7933
664.57	23.9275
666.33	21.1769
666.33	21.1769
675.00	19.3812
677.61	20.3184
685.20	13.8818
692.80	24.1105
695.00	25.0527
696.49	22.2778
696.49	22.2778
697.00	23.2091
697.49	24.1407
698.33	25.0746
698.50	26.0045
699.00	25.0790
702.63	27.8925
706.10	25.1263
706.58	0.0000
706.67	24.1989
709.31	21.4216
711.68	21.4348
713.82	22.3794
717.42	21.4670
720.50	14.9456
721.93	19.6234
722.20	18.6902
722.78	18.6930
722.78	18.6930
722.89	18.6934
722.95	18.6938
723.30	15.8912
724.18	16.8296
727.18	14.9714
733.00	10.3082
735.90	9.3781
739.58	20.6510
742.81	9.3945
744.21	9.3978
747.13	14.1071
751.79	11.2991
752.31	12.2422
753.82	18.8411
755.35	14.1364
756.15	15.0820
756.87	10.3707
763.93	23.6115
765.79	22.6772
766.41	18.9006
766.84	17.9575
768.36	21.7464
768.36	21.7464
768.36	21.7464
768.36	21.7464
776.49	18.9478
778.00	17.0592
778.57	18.0096
778.89	18.9591
783.80	17.0837

785.46	17.0907
792.07	15.2161
795.84	22.8447
796.30	23.7996
801.93	12.3925
805.60	25.7607
810.29	13.3725
810.76	16.2398
815.85	16.2595
817.79	19.1378
818.51	20.0981
819.60	15.3167
826.30	14.3823
828.27	7.6742
831.60	15.3604
831.96	13.4414
834.83	18.2539
836.80	0.0000
846.75	21.1952
848.13	18.3108
856.28	0.0000
856.80	21.2440
860.37	12.5636
867.32	17.4236
867.82	17.4254
871.10	9.6881
873.19	10.6618
874.81	17.4532
875.33	0.0000
876.40	14.5496
879.36	14.5593
880.27	12.6207
880.51	12.6213
881.50	6.7976
883.24	5.8289
884.67	7.7743
889.25	14.5917
896.60	13.6414
898.02	19.4938
899.00	18.5230
903.28	15.6133
911.07	14.6625
911.07	14.6625
911.07	14.6625
919.63	13.7109
920.93	9.7961
925.00	18.6293
925.24	17.6497
926.50	12.7506
934.06	10.8066
934.06	10.8066
934.06	10.8066
934.06	10.8066
935.52	7.8618
937.48	4.9158
944.10	8.8608
946.00	6.8946
949.00	8.8702
962.29	14.8257
964.01	10.8760
966.15	8.9026
968.20	11.8752
969.11	11.8777
969.11	11.8777
969.11	11.8777
977.42	4.9577
980.50	10.9138
983.50	18.8632
989.30	10.9340
996.32	26.8770
1001.03	13.9496
1001.68	12.9550
1004.76	17.9491
1021.30	0.0000
1024.50	0.0000
1034.80	8.0264
1037.82	12.0469
1038.57	8.0322

1038.76	0.0000
1045.16	11.0591
1046.59	14.0792
1048.07	14.0832
1050.47	14.0900
1050.47	14.0900
1063.62	8.0726
1076.63	17.1978
1077.35	16.1888
1085.78	16.2148
1099.22	10.1607
1112.02	16.2975
1112.84	13.2439
1115.52	8.1543
1120.29	7.1413
1120.29	7.1413
1120.29	7.1413
1120.29	7.1413
1120.51	7.1416
1121.28	9.1835
1124.00	0.0000
1129.67	7.1541
1131.51	0.0000
1147.95	0.0000
1167.94	13.3814
1173.22	16.4857
1175.09	12.3687
1177.93	12.3750
1189.05	7.2333
1204.90	10.3630
1205.75	9.3281
1213.00	16.6055
1221.42	8.3151
1230.97	9.3706
1235.34	19.7979
1236.41	0.0000
1238.11	15.6372
1238.11	15.6372
1238.11	15.6372
1238.11	15.6372
1238.25	12.5103
1246.25	13.5718
1260.41	0.0000
1271.85	10.4867
1274.45	8.3932
1274.54	8.3932
1291.56	2.1045
1298.22	0.0000
1312.09	6.3357
1325.50	8.4668
1325.50	8.4668
1332.49	9.5361
1333.61	7.4184
1360.21	4.2580
1362.66	0.0000
1365.15	6.3921
1368.21	11.7251
1368.53	0.0000
1376.25	5.3365
1377.67	8.5404
1377.67	8.5404
1377.67	8.5404
1377.67	8.5404
1384.27	5.3436
1394.10	9.6339
1395.20	12.8472
1407.95	4.2913
1434.06	15.0824
1436.60	15.0886
1457.56	0.0000
1460.81	8.6553
1489.15	9.3143
1509.49	9.3436
1596.49	8.5201
1620.62	3.8001
1678.03	0.0000
1691.02	6.7175
1691.02	6.7175

1706.46	0.0000
1750.46	0.0000
1764.49	5.8169
1764.49	5.8169
1764.49	5.8169
1764.49	5.8169
1770.23	4.8512
1771.40	6.7927
1791.20	0.0000
1808.65	8.7778
1836.01	6.8521

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201873069

Total Uranium Activity	7.3681E-02	ug/g
Total Uranium Counting Unc.	5.8811E-01	ug/g
Total Uranium Tpu	3.0006E-07	ug/g
Total Uranium Mda	5.2465E-01	ug/g

THERE ARE NO PEAKS !

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:37:18.35

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:36:12.
Sample ID         : G1201873070          Sample quantity  : 1.25460E+02 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.66  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.05*	125	468	1.05	126.10	122	9	1.74E-02	33.2	
2	3	74.09	555	564	1.46	148.18	141	16	7.71E-02	8.8	6.21E+00
3	3	76.55*	621	334	0.94	153.10	141	16	8.63E-02	6.4	
4	2	83.69*	124	302	1.46	167.39	164	29	1.73E-02	25.3	1.49E+00
5	2	86.52	317	384	1.55	173.04	164	29	4.40E-02	12.7	
6	2	89.36	215	294	1.15	178.72	164	29	2.99E-02	15.2	
7	2	92.23*	270	330	1.37	184.46	164	29	3.75E-02	14.3	
8	0	128.41	69	307	0.74	256.83	254	8	9.52E-03	45.9	
9	0	143.92*	48	495	0.63	287.84	280	13	6.62E-03	98.6	
10	0	185.56*	212	401	1.49	371.12	366	13	2.95E-02	21.3	
11	0	209.33	155	313	1.08	418.65	414	11	2.15E-02	23.5	
12	4	238.13*	1105	178	0.96	476.26	472	19	1.53E-01	3.6	2.03E+00
13	4	241.30*	250	300	1.97	482.60	472	19	3.47E-02	18.0	
14	0	269.83	131	192	1.23	539.65	535	10	1.82E-02	21.6	
15	0	277.18	80	254	0.80	554.36	547	13	1.11E-02	42.9	
16	0	294.77	339	180	1.07	589.53	584	10	4.71E-02	9.2	
17	0	326.80	85	217	2.44	653.59	648	15	1.19E-02	38.9	
18	0	337.67*	187	155	1.07	675.34	671	10	2.59E-02	14.7	
19	0	351.41*	596	141	1.07	702.83	697	12	8.28E-02	5.8	
20	0	462.92*	67	100	1.47	925.85	920	11	9.29E-03	32.7	
21	0	510.58*	142	174	1.67	1021.16	1013	17	1.97E-02	25.1	
22	0	582.72*	377	79	1.30	1165.44	1157	14	5.24E-02	7.4	
23	0	609.08*	442	85	1.34	1218.17	1213	13	6.14E-02	6.6	
24	0	727.54	90	59	1.27	1455.08	1450	12	1.25E-02	20.2	
25	0	860.75	55	42	1.82	1721.51	1715	13	7.59E-03	28.0	
26	0	911.18*	214	65	1.18	1822.36	1816	12	2.97E-02	10.5	
27	0	934.47	60	57	1.73	1868.95	1859	19	8.33E-03	32.8	
28	8	964.64	41	49	2.62	1929.28	1924	21	5.68E-03	35.6	1.19E+00
29	8	968.84*	162	42	1.58	1937.67	1924	21	2.25E-02	10.8	
30	0	1120.59	93	63	1.36	2241.18	2236	12	1.30E-02	19.9	
31	0	1238.62	95	64	2.16	2477.25	2470	18	1.32E-02	22.2	
32	0	1378.20	20	19	0.98	2756.40	2751	10	2.73E-03	48.0	
33	0	1460.86*	1464	24	1.91	2921.73	2912	19	2.03E-01	2.7	
34	0	1496.29	22	3	1.98	2992.58	2985	13	3.09E-03	26.8	
35	0	1730.11	29	6	1.90	3460.21	3453	13	3.98E-03	26.2	
36	0	1764.61*	73	3	2.34	3529.22	3522	13	1.01E-02	13.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:37:21

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:36:12
Sample ID : G1201873070 Sample quantity : 125.46 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA11 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.66 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.266E+01	2.830E+00	4.298E-01	2.881E-02	75.996
CD-109	+	88.03	*	2.504E+00	7.932E-01	1.063E+00	9.739E-02	2.355
SN-126	+	64.28		8.765E-01	5.952E-01	6.766E-01	9.629E-02	1.295
	+	86.94		1.543E+00	7.503E-01	4.389E-01	1.819E-01	3.516
	+	87.57	*	3.711E-01	1.002E-01	1.051E-01	9.572E-03	3.532
TL-208	+	277.35		7.111E-01	6.164E-01	5.847E-01	6.855E-02	1.216
	+	510.84		6.388E-01	3.270E-01	2.099E-01	2.176E-02	3.043
	+	583.14	*	4.845E-01	7.994E-02	5.606E-02	4.154E-03	8.642
	+	860.37		6.610E-01	3.747E-01	4.496E-01	3.877E-02	1.470
BI-211	+	72.87		2.226E+01	4.291E+00	4.134E+00	3.114E-01	5.385
	+	351.07	*	3.341E+00	4.530E-01	2.852E-01	1.999E-02	11.713
PB-212	+	74.81		2.642E+00	5.660E-01	4.741E-01	5.745E-02	5.573
	+	77.11		1.684E+00	2.545E-01	2.644E-01	2.099E-02	6.370
	+	87.30		1.717E+00	4.941E-01	4.869E-01	6.576E-02	3.525
	+	238.63	*	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
		300.09		1.059E+00	7.986E-01	1.311E+00	1.245E-01	0.808
PO-212	+	74.81		2.642E+00	5.660E-01	4.741E-01	5.745E-02	5.573
	+	77.11		1.684E+00	2.545E-01	2.644E-01	2.099E-02	6.370
	+	87.30		1.717E+00	4.941E-01	4.869E-01	6.576E-02	3.525
		115.19		-1.084E+00	3.376E+00	5.492E+00	3.792E-01	-0.197
	+	238.63	*	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
		300.09		1.059E+00	7.986E-01	1.311E+00	1.245E-01	0.808
BI-214	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.302E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
PB-214	+	74.81		4.553E+00	9.402E-01	8.169E-01	8.737E-02	5.573
	+	77.11		2.888E+00	4.886E-01	4.533E-01	4.988E-02	6.370
	+	87.30		2.941E+00	8.255E-01	8.341E-01	9.933E-02	3.525
	+	241.98		1.836E+00	6.806E-01	5.432E-01	4.822E-02	3.380
	+	295.21		1.122E+00	2.336E-01	2.437E-01	2.388E-02	4.606

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-214	+	74.81		4.553E+00	9.402E-01	8.169E-01	8.737E-02	5.573
	+	77.11		2.888E+00	4.886E-01	4.533E-01	4.988E-02	6.370
	+	87.30		2.941E+00	8.255E-01	8.341E-01	9.933E-02	3.525
	+	241.98		1.836E+00	6.806E-01	5.432E-01	4.822E-02	3.380
	+	295.21		1.122E+00	2.336E-01	2.437E-01	2.388E-02	4.606
	+	351.92	*	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-216	+	74.81		2.642E+00	5.660E-01	4.741E-01	5.745E-02	5.573
	+	77.11		1.684E+00	2.545E-01	2.644E-01	2.099E-02	6.370
	+	87.30		1.717E+00	4.941E-01	4.869E-01	6.576E-02	3.525
	+	238.63	*	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
		300.09		1.059E+00	7.986E-01	1.311E+00	1.245E-01	0.808
PO-218	+	74.81		4.553E+00	9.402E-01	8.169E-01	8.737E-02	5.573
	+	77.11		2.888E+00	4.886E-01	4.533E-01	4.988E-02	6.370
	+	87.30		2.941E+00	8.255E-01	8.341E-01	9.933E-02	3.525
	+	241.98		1.836E+00	6.806E-01	5.432E-01	4.822E-02	3.380
	+	295.21		1.122E+00	2.336E-01	2.437E-01	2.388E-02	4.606
	+	351.92	*	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
RA-224	+	240.98	*	3.482E+00	1.276E+00	1.027E+00	7.041E-02	3.391
RA-226	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.302E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
AC-228	+	338.32		1.151E+00	5.806E-01	3.434E-01	1.405E-01	3.353
	+	911.07	*	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
	+	969.11		1.629E+00	5.128E-01	3.658E-01	8.405E-02	4.454
RA-228	+	338.32		1.151E+00	5.806E-01	3.434E-01	1.405E-01	3.353
	+	911.07	*	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
	+	969.11		1.629E+00	5.128E-01	3.658E-01	8.405E-02	4.454
TH-228	+	84.40		4.575E+00	2.392E+00	3.299E+00	4.358E-01	1.387
	+	238.60	*	1.351E+00	1.465E-01	9.023E-02	7.352E-03	14.967
		300.10		1.060E+00	1.010E+00	1.311E+00	7.751E-01	0.808
TH-230	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.301E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
TH-232	+	338.32		1.151E+00	3.482E-01	3.434E-01	2.313E-02	3.353
	+	911.07	*	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
	+	969.11		1.629E+00	5.128E-01	3.658E-01	8.405E-02	4.454
TH-234	+	63.29	*	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
	+	92.38		2.075E+00	7.032E-01	6.971E-01	1.261E-01	2.977
U-234	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.301E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
U-235	+	89.95		3.379E+00	1.466E+00	1.416E+00	4.383E-01	2.386
	+	93.35		2.495E+00	1.000E+00	8.340E-01	2.335E-01	2.991
		105.00		9.097E-01	1.077E+00	1.775E+00	5.245E-01	0.512
	+	143.76	*	1.866E-01	3.692E-01	3.234E-01	5.281E-02	0.577
		163.35		-5.409E-01	4.844E-01	7.368E-01	1.314E-01	-0.734
	+	185.71		1.825E-01	7.826E-02	6.717E-02	3.783E-03	2.717
		205.31		3.979E-01	5.417E-01	7.943E-01	1.435E-01	0.501
NP-237	+	86.50	*	1.090E+00	3.703E-01	3.111E-01	7.001E-02	3.503
		95.87		-6.682E-01	1.004E+00	1.393E+00	3.416E-01	-0.480
U-238	+	63.29	*	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
	+	92.38		2.075E+00	6.210E-01	6.971E-01	6.020E-02	2.977
AM-243	+	74.67	*	4.284E-01	8.257E-02	7.705E-02	5.933E-03	5.560
	+	86.72		4.087E+01	1.103E+01	1.165E+01	1.049E+00	3.509
		117.66		8.843E-01	3.665E+00	6.089E+00	4.123E-01	0.145
		142.18		1.041E+01	1.757E+01	2.909E+01	1.723E+00	0.358
ANH-511	+	511.00	*	1.380E-01	6.968E-02	4.536E-02	2.796E-03	3.042

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.576E-01	3.119E-01	4.955E-01	3.402E-02	-0.318
NA-22		1274.54	*	-1.415E-02	4.788E-02	7.585E-02	4.649E-03	-0.187
NA-24		1368.53	*	-9.176E-02	4.788E-02	Half-Life too short		
AL-26		1129.67		-7.109E-01	1.842E+00	2.852E+00	1.721E-01	-0.249
		1808.65	*	3.332E-03	2.269E-02	3.883E-02	2.142E-03	0.086
TI-44		67.85		-1.635E-03	6.094E-02	6.493E-02	4.605E-03	-0.025
		78.38	*	1.963E-01	4.306E-02	6.274E-02	5.062E-03	3.129
SC-46		889.25	*	-1.814E-04	3.810E-02	6.345E-02	5.097E-03	-0.003
	+	1120.51		1.992E-01	8.019E-02	1.240E-01	7.614E-03	1.607
V-48		944.10		-6.102E-02	8.783E-01	1.382E+00	1.074E-01	-0.044
		983.50	*	-4.293E-03	6.598E-02	1.086E-01	8.128E-03	-0.040
		1312.09		1.439E-02	7.607E-02	1.263E-01	8.023E-03	0.114
CR-51		320.08	*	1.827E-01	3.621E-01	5.720E-01	4.386E-02	0.319
MN-52		744.21		-1.376E-02	2.124E-01	3.397E-01	2.538E-02	-0.041
		848.13		-8.041E-01	5.670E+00	9.360E+00	7.390E-01	-0.086
	+	935.52		5.764E-01	3.810E-01	4.167E-01	3.264E-02	1.383
		1246.25		3.804E+00	7.133E+00	1.067E+01	6.342E-01	0.356
		1333.61		3.426E+00	4.614E+00	8.082E+00	5.237E-01	0.424
		1434.06	*	-1.269E-01	1.818E-01	2.600E-01	1.666E-02	-0.488
MN-54		834.83	*	-1.561E-02	3.781E-02	6.120E-02	4.802E-03	-0.255
CO-56		846.75	*	3.360E-03	3.707E-02	6.240E-02	4.924E-03	0.054
		977.42		8.720E-01	2.874E+00	4.689E+00	3.531E-01	0.186
		1037.82		-7.461E-02	3.132E-01	5.058E-01	3.828E-02	-0.148

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1175.09		3.776E+00	2.356E+00	4.338E+00	2.388E-01	0.870
	+	1238.25		3.313E-01	1.487E-01	1.786E-01	1.116E-02	1.855
		1360.21		9.527E-01	8.968E-01	1.653E+00	1.069E-01	0.576
		1771.40		-9.566E-01	3.441E-01	3.370E-01	1.903E-02	-2.839
CO-57		122.06	*	-1.308E-02	2.436E-02	3.918E-02	2.570E-03	-0.334
		136.48		-9.111E-03	2.221E-01	3.362E-01	2.343E-02	-0.027
CO-58		810.76	*	-1.763E-02	3.418E-02	5.450E-02	4.239E-03	-0.323
FE-59	+	142.65		2.361E+00	4.656E+00	4.377E+00	2.587E-01	0.539
		192.34		-2.170E-02	1.021E+00	1.443E+00	1.702E-01	-0.015
		1099.22	*	-3.286E-02	9.838E-02	1.572E-01	1.148E-02	-0.209
		1291.56		-3.502E-02	1.197E-01	1.887E-01	1.464E-02	-0.186
CO-60		1173.22		6.154E-02	5.037E-02	9.007E-02	4.948E-03	0.683
		1332.49	*	5.103E-03	4.164E-02	6.858E-02	4.444E-03	0.074
ZN-65		1115.52	*	-4.993E-02	1.091E-01	1.480E-01	9.195E-03	-0.337
GE-68		1077.35	*	-8.634E-01	1.364E+00	2.122E+00	1.404E-01	-0.407
AS-73		53.44	*	-4.229E-01	6.012E-01	9.710E-01	6.196E-02	-0.436
AS-74		595.88	*	-2.167E-02	8.228E-02	1.311E-01	8.782E-03	-0.165
		634.78		-1.123E-01	3.434E-01	5.423E-01	3.754E-02	-0.207
SE-75		66.05		-2.393E+00	4.526E+00	6.481E+00	5.897E-01	-0.369
		96.73		-6.573E-01	8.101E-01	1.115E+00	1.491E-01	-0.589
		121.11		-1.208E-01	1.339E-01	2.116E-01	2.064E-02	-0.571
		136.00		-7.753E-03	4.021E-02	6.312E-02	3.904E-03	-0.123
		198.60		2.046E+00	1.693E+00	2.874E+00	2.072E-01	0.712
		264.65	*	2.699E-02	5.076E-02	7.342E-02	5.480E-03	0.368
		279.53		1.725E-02	1.190E-01	1.740E-01	1.413E-02	0.099
		303.91		-1.846E+00	1.997E+00	3.184E+00	3.374E-01	-0.580
		400.65		1.284E-01	2.531E-01	4.320E-01	3.814E-02	0.297
BR-77	+	87.88		5.652E+02	1.526E+02	2.268E+02	2.075E+01	2.492
		200.40		-1.994E+01	1.106E+02	1.774E+02	1.054E+01	-0.112
	+	239.00		1.502E+02	1.484E+01	2.435E+01	1.659E+00	6.169
		249.79		-2.718E+01	4.604E+01	7.139E+01	5.043E+00	-0.381
		281.68		1.522E+00	6.635E+01	9.766E+01	7.554E+00	0.016
		297.23		1.052E+02	4.258E+01	7.052E+01	5.301E+00	1.491
		303.76		-9.738E+01	1.190E+02	1.915E+02	1.420E+01	-0.508
		439.47		6.531E+01	9.611E+01	1.656E+02	9.370E+00	0.394
		484.57		6.658E+01	1.546E+02	2.619E+02	1.567E+01	0.254
		520.65	*	-1.642E-01	7.335E+00	1.201E+01	7.479E-01	-0.014
		574.64		1.722E+01	1.465E+02	2.192E+02	1.441E+01	0.079
		578.91		7.170E+01	6.055E+01	9.639E+01	6.359E+00	0.744
		585.48		6.777E+02	1.658E+02	2.957E+02	1.963E+01	2.292
		755.35		2.557E+01	1.155E+02	1.891E+02	1.422E+01	0.135
		817.79		3.003E+01	7.947E+01	1.376E+02	1.071E+01	0.218
SR-82		698.33		3.380E+00	3.281E+01	5.339E+01	3.873E+00	0.063
		776.49	*	-3.198E-01	3.591E-01	5.586E-01	4.254E-02	-0.572
		1395.20		-6.903E+00	9.221E+00	1.311E+01	8.448E-01	-0.527
RB-83		520.41	*	7.665E-03	6.992E-02	1.155E-01	7.193E-03	0.066
		529.64		-7.905E-03	1.034E-01	1.685E-01	1.059E-02	-0.047
		552.65		-1.225E-01	1.926E-01	2.991E-01	1.925E-02	-0.410
RB-84		881.50	*	4.069E-02	6.633E-02	1.162E-01	9.305E-03	0.350

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
KR-85		513.99	*	8.332E+00	8.208E+00	1.268E+01	7.842E-01	0.657
SR-85		513.99	*	4.216E-02	4.153E-02	6.417E-02	3.968E-03	0.657
RB-86		1076.63	*	-2.606E-01	8.021E-01	1.283E+00	8.504E-02	-0.203
Y-88		898.02		1.179E-02	3.717E-02	6.369E-02	5.163E-03	0.185
		1836.01	*	-4.315E-03	2.756E-02	4.395E-02	2.387E-03	-0.098
ZR-88		392.90	*	-4.245E-03	2.956E-02	4.872E-02	2.580E-03	-0.087
Y-91		1204.90	*	-6.113E+00	1.958E+01	3.117E+01	1.773E+00	-0.196
NB-94		702.63	*	9.777E-03	3.395E-02	5.601E-02	4.075E-03	0.175
		871.10		-3.420E-02	3.145E-02	4.674E-02	3.727E-03	-0.732
NB-95		765.79	*	5.387E-02	4.425E-02	7.725E-02	5.847E-03	0.697
NB-95M		235.69	*	7.866E-01	1.750E-01	2.812E-01	2.325E-02	2.798
ZR-95		724.18		3.758E-02	1.091E-01	1.572E-01	1.295E-02	0.239
		756.15	*	1.922E-02	6.968E-02	1.146E-01	9.757E-03	0.168
NB-97		657.90	*	-2.090E-02	6.968E-02	Half-Life too short		
		1024.50		-5.956E-01	6.968E-02	Half-Life too short		
ZR-97		254.15		-1.512E-01	6.968E-02	Half-Life too short		
		355.39		-9.791E-01	6.968E-02	Half-Life too short		
		507.63	*	1.287E+00	6.968E-02	Half-Life too short		
		602.52		1.759E+00	6.968E-02	Half-Life too short		
		1021.30		-3.345E-01	6.968E-02	Half-Life too short		
		1147.95		5.146E-01	6.968E-02	Half-Life too short		
		1362.66		8.360E-01	6.968E-02	Half-Life too short		
		1750.46		2.917E-01	6.968E-02	Half-Life too short		
MO-99		140.51		-9.984E+00	2.137E+01	2.962E+01	7.992E+00	-0.337
		181.06		2.943E+00	1.378E+01	1.980E+01	3.376E+00	0.149
		366.43		-1.070E+00	5.792E+01	9.646E+01	5.821E+00	-0.011
		739.58	*	1.180E+00	8.180E+00	1.333E+01	1.939E+00	0.089
		778.00		-1.787E+01	2.423E+01	3.822E+01	2.913E+00	-0.467
TC-99M		140.51	*	-6.153E+08	2.423E+01	Half-Life too short		
RH-101	+	127.23		4.043E-02	3.718E-02	5.306E-02	3.380E-03	0.762
		198.01	*	4.171E-02	3.271E-02	5.395E-02	3.178E-03	0.773
		325.23		4.143E-02	2.401E-01	3.547E-01	2.488E-02	0.117
RH-102		418.52		6.576E-02	2.716E-01	4.569E-01	2.512E-02	0.144
		475.06	*	-2.080E-02	2.812E-02	4.386E-02	2.595E-03	-0.474
		631.29		-1.657E-02	5.454E-02	8.630E-02	5.956E-03	-0.192
		697.49		-5.457E-03	7.518E-02	1.206E-01	8.744E-03	-0.045
		766.84		1.276E-01	1.155E-01	1.999E-01	1.514E-02	0.638
		1046.59		6.595E-02	1.212E-01	2.090E-01	1.448E-02	0.316
		1112.84		1.243E-01	2.579E-01	4.116E-01	2.565E-02	0.302
RU-103		497.08	*	6.784E-03	3.757E-02	6.253E-02	7.986E-03	0.108
	+	610.33		1.131E+01	2.334E+00	2.685E+00	4.247E-01	4.211
RH-106	+	511.85		6.876E-01	3.472E-01	4.282E-01	2.642E-02	1.606
		621.84	*	-1.822E-01	3.082E-01	4.746E-01	5.833E-02	-0.384
		1050.47		3.959E-01	2.348E+00	3.931E+00	2.709E-01	0.101
RU-106	+	511.85		6.876E-01	3.472E-01	4.282E-01	2.642E-02	1.606
		621.84	*	-1.822E-01	3.077E-01	4.746E-01	3.250E-02	-0.384
		1050.47		3.959E-01	2.348E+00	3.931E+00	2.709E-01	0.101
AG-108M		433.93	*	-2.249E-03	3.102E-02	5.107E-02	3.129E-03	-0.044
		614.37		-2.689E-03	4.160E-02	5.796E-02	4.190E-03	-0.046

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.95		3.988E-02	4.508E-02	6.908E-02	5.365E-03	0.577
AG-110M		657.75	*	-2.736E-02	3.610E-02	5.481E-02	4.033E-03	-0.499
		677.61		-3.349E-02	2.921E-01	4.675E-01	3.479E-02	-0.072
		706.67		-1.732E-01	2.062E-01	3.077E-01	2.331E-02	-0.563
		763.93		-1.177E-01	1.775E-01	2.694E-01	2.111E-02	-0.437
		884.67		8.849E-03	4.954E-02	8.379E-02	6.968E-03	0.106
		937.48		4.808E-03	1.257E-01	1.805E-01	1.473E-02	0.027
		1384.27		-1.376E-01	1.986E-01	2.385E-01	1.616E-02	-0.577
IN-111		171.28		-1.747E-01	7.227E-01	1.163E+00	6.214E-02	-0.150
		245.39	*	3.128E-01	8.684E-01	1.245E+00	8.668E-02	0.251
IN-113M		391.69	*	-2.074E-02	4.285E-02	6.914E-02	3.949E-03	-0.300
SN-113		391.69	*	-2.074E-02	4.285E-02	6.914E-02	3.949E-03	-0.300
IN-114M		190.27	*	1.299E-01	1.874E-01	2.769E-01	1.585E-02	0.469
CD-115		260.90		-1.143E+02	8.972E+01	1.328E+02	9.729E+00	-0.861
		492.35		1.074E+01	2.244E+01	3.818E+01	2.305E+00	0.281
		527.90	*	-2.229E+00	7.137E+00	1.142E+01	7.166E-01	-0.195
SN-117M		156.02		-2.252E+00	2.137E+00	3.332E+00	1.842E-01	-0.676
		158.56	*	1.662E-02	5.144E-02	8.495E-02	4.635E-03	0.196
SB-122		563.90	*	1.145E+00	1.485E+00	2.555E+00	1.662E-01	0.448
		692.80		-1.096E+01	3.095E+01	4.846E+01	3.502E+00	-0.226
I-123		159.00	*	3.523E-01	3.095E+01	Half-Life too short		
		528.96		-6.184E+01	3.095E+01	Half-Life too short		
TE-123M		159.00	*	8.512E-03	2.850E-02	4.700E-02	2.598E-03	0.181
I-124		602.71	*	5.147E-01	6.160E-01	9.385E-01	6.324E-02	0.548
		722.78		3.199E+00	3.808E+00	5.812E+00	4.285E-01	0.550
		1325.50		-1.232E+01	2.992E+01	4.562E+01	2.936E+00	-0.270
		1376.25		2.694E+01	2.749E+01	4.443E+01	2.869E+00	0.607
		1509.49		1.472E+01	1.286E+01	2.379E+01	1.501E+00	0.619
		1691.02		3.064E+00	2.819E+00	5.514E+00	3.253E-01	0.556
SB-124		602.71		3.633E-02	4.348E-02	6.624E-02	4.465E-03	0.548
		645.85		-3.194E-01	4.881E-01	7.462E-01	5.679E-02	-0.428
		709.31		-2.132E+00	2.775E+00	4.176E+00	3.052E-01	-0.511
		713.82		7.200E-01	1.567E+00	2.621E+00	2.923E-01	0.275
		722.78		3.273E-01	3.896E-01	5.946E-01	4.513E-02	0.550
	+	968.20		1.653E+01	3.771E+00	6.975E+00	5.301E-01	2.370
		1045.16		8.243E-02	2.571E+00	4.254E+00	2.953E-01	0.019
		1325.50		-1.347E+00	3.270E+00	4.985E+00	3.209E-01	-0.270
		1368.21		-1.181E+00	1.616E+00	2.330E+00	2.845E-01	-0.507
		1436.60		1.432E+00	3.270E+00	5.638E+00	3.612E-01	0.254
		1691.02	*	7.395E-02	6.806E-02	1.331E-01	8.499E-03	0.556
SB-125		427.89	*	4.226E-02	8.733E-02	1.490E-01	8.678E-03	0.284
	+	463.38		5.859E-01	3.850E-01	5.160E-01	3.504E-02	1.135
		600.56		1.423E-01	1.797E-01	3.083E-01	2.320E-02	0.461
		635.90		-1.176E-01	2.877E-01	4.517E-01	3.513E-02	-0.260
TE-125M		109.28	*	-6.013E+00	8.708E+00	1.396E+01	1.287E+00	-0.431
I-126		388.63		5.932E-02	1.792E-01	3.038E-01	1.636E-02	0.195
		666.33	*	-1.306E-01	1.752E-01	2.662E-01	1.888E-02	-0.491
		753.82		6.338E-01	1.376E+00	2.297E+00	1.727E-01	0.276
SB-126		223.80		4.490E-01	3.746E+00	6.063E+00	3.918E-01	0.074

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	278.60		4.382E+00	3.778E+00	3.991E+00	3.094E-01	1.098
		296.50		8.132E+00	1.847E+00	3.129E+00	2.356E-01	2.599
		414.70		1.534E-02	6.492E-02	1.092E-01	5.974E-03	0.140
		415.30		2.171E+00	5.452E+00	9.263E+00	5.070E-01	0.234
		555.20		2.425E+00	3.444E+00	5.930E+00	3.825E-01	0.409
		573.80		-2.978E-01	9.686E-01	1.445E+00	9.490E-02	-0.206
		593.00		-2.509E-01	7.928E-01	1.256E+00	8.394E-02	-0.200
		656.30		-1.076E+00	2.954E+00	4.631E+00	3.259E-01	-0.232
		666.33		-5.443E-02	7.299E-02	1.109E-01	7.867E-03	-0.491
		675.00		-6.907E-01	1.718E+00	2.675E+00	1.909E-01	-0.258
		695.00		-1.371E-02	6.972E-02	1.106E-01	8.008E-03	-0.124
		697.00		-2.093E-02	2.470E-01	3.959E-01	2.870E-02	-0.053
		720.50	*	6.378E-02	1.369E-01	2.172E-01	1.599E-02	0.294
		856.80		-3.979E-01	4.933E-01	6.352E-01	5.035E-02	-0.626
		989.30		1.259E-02	1.110E+00	1.840E+00	1.368E-01	0.007
		1034.80		-6.015E-01	8.420E+00	1.381E+01	9.725E-01	-0.044
		1213.00		3.142E+00	4.719E+00	8.112E+00	4.653E-01	0.387
SB-127		61.10		1.934E+01	4.211E+01	6.333E+01	5.841E+00	0.305
		252.40		-1.752E+00	3.530E+00	5.380E+00	2.241E+00	-0.326
		290.80		-2.459E+00	1.806E+01	2.624E+01	2.626E+00	-0.094
		411.60		-5.988E+00	9.413E+00	1.494E+01	2.085E+00	-0.401
		444.90		-2.763E+00	7.295E+00	1.173E+01	1.215E+00	-0.236
		473.00		8.086E-01	1.271E+00	2.181E+00	2.369E-01	0.371
		543.00		-3.426E+00	1.209E+01	1.932E+01	2.486E+00	-0.177
		603.60		5.499E+00	1.052E+01	1.555E+01	1.701E+00	0.354
		685.20	*	3.891E-01	1.043E+00	1.737E+00	1.728E-01	0.224
		698.50		2.680E+00	1.203E+01	1.974E+01	2.932E+00	0.136
		722.20		2.111E+01	2.570E+01	3.911E+01	3.843E+00	0.540
		783.80		4.126E+00	2.920E+00	5.322E+00	6.076E-01	0.775
XE-127		57.60		9.575E+00	4.998E+00	8.319E+00	5.317E-01	1.151
	+	145.22		6.022E-01	1.188E+00	1.090E+00	6.358E-02	0.553
		172.10		-4.537E-02	1.128E-01	1.802E-01	9.656E-03	-0.252
		202.84	*	-4.291E-02	4.678E-02	6.948E-02	4.165E-03	-0.618
		374.96		-5.921E-02	1.779E-01	2.902E-01	1.681E-02	-0.204
I-131		80.18		4.870E+00	4.844E+00	5.576E+00	4.632E-01	0.873
		284.30		-2.427E-01	1.327E+00	2.159E+00	1.769E-01	-0.112
		364.48	*	1.449E-02	9.637E-02	1.621E-01	1.090E-02	0.089
		636.97		4.746E-01	1.453E+00	2.415E+00	1.814E-01	0.197
		722.89		5.911E+00	6.802E+00	1.041E+01	7.733E-01	0.568
TE-132		49.72		-1.049E+01	9.983E+00	1.608E+01	1.413E+00	-0.652
		111.76		-7.958E+00	2.115E+01	3.435E+01	3.204E+00	-0.232
		116.30		1.512E+01	2.022E+01	3.417E+01	3.121E+00	0.443
		228.16	*	-1.990E-01	5.253E-01	8.281E-01	1.197E-01	-0.240
BA-133		53.15		-1.977E+00	2.586E+00	4.163E+00	2.657E-01	-0.475
		79.62		6.987E-01	1.597E+00	1.754E+00	2.630E-01	0.398
		81.00		5.518E-02	1.198E-01	1.317E-01	2.072E-02	0.419
	+	276.40		7.026E-01	6.112E-01	6.453E-01	8.981E-02	1.089
		302.84		-1.233E-01	1.380E-01	2.201E-01	2.762E-02	-0.560
		356.01	*	-1.406E-03	4.353E-02	6.300E-02	7.450E-03	-0.022

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		383.85		-8.561E-02	2.927E-01	4.784E-01	5.134E-02	-0.179
I-133	+	510.53		5.131E-01	2.927E-01	Half-Life too short		
		529.87	*	3.120E-04	2.927E-01	Half-Life too short		
		706.58		-1.193E-01	2.927E-01	Half-Life too short		
		856.28		-2.217E-01	2.927E-01	Half-Life too short		
		875.33		3.371E-03	2.927E-01	Half-Life too short		
		1236.41		4.498E-01	2.927E-01	Half-Life too short		
		1298.22		-1.935E-02	2.927E-01	Half-Life too short		
CS-134		475.35		-1.860E+00	1.866E+00	2.852E+00	1.688E-01	-0.652
		563.23		3.616E-01	3.559E-01	6.219E-01	4.110E-02	0.582
		569.32		-1.703E-01	2.084E-01	3.118E-01	2.087E-02	-0.546
		604.70		-3.943E-03	3.920E-02	5.452E-02	3.695E-03	-0.072
		795.84	*	6.318E-02	4.616E-02	8.449E-02	6.561E-03	0.748
		801.93		8.575E-02	4.224E-01	7.103E-01	5.522E-02	0.121
		1038.57		9.597E-01	3.922E+00	6.615E+00	4.634E-01	0.145
		1167.94		-5.475E-01	2.896E+00	4.676E+00	2.601E-01	-0.117
		1365.15		4.446E-01	1.142E+00	1.950E+00	1.361E-01	0.228
CS-135		268.24	*	2.581E-01	1.960E-01	2.943E-01	2.654E-02	0.877
I-135		288.45		-6.455E+08	1.960E-01	Half-Life too short		
		417.63		2.448E+08	1.960E-01	Half-Life too short		
		546.56		1.469E+08	1.960E-01	Half-Life too short		
		836.80		1.713E+09	1.960E-01	Half-Life too short		
		1038.76		4.206E+08	1.960E-01	Half-Life too short		
		1124.00		1.947E+09	1.960E-01	Half-Life too short		
		1131.51		-7.347E+04	1.960E-01	Half-Life too short		
		1260.41	*	2.488E+07	1.960E-01	Half-Life too short		
		1457.56		2.878E+10	1.960E-01	Half-Life too short		
		1678.03		-1.043E+08	1.960E-01	Half-Life too short		
		1706.46		-7.569E+08	1.960E-01	Half-Life too short		
		1791.20		-4.349E+08	1.960E-01	Half-Life too short		
CS-136		66.91		-4.095E-01	8.257E-01	9.951E-01	1.453E-01	-0.412
	+	86.29		4.533E+00	1.298E+00	1.720E+00	2.249E-01	2.635
		153.22		3.754E-01	6.055E-01	1.012E+00	7.151E-02	0.371
		163.89		-5.789E-01	9.958E-01	1.582E+00	1.085E-01	-0.366
		176.55		1.020E-01	3.322E-01	5.467E-01	3.391E-02	0.187
		273.65		1.054E-01	6.317E-01	6.414E-01	5.303E-02	0.164
		340.57		3.270E-02	1.256E-01	1.862E-01	1.304E-02	0.176
		818.51		2.471E-02	5.956E-02	1.035E-01	8.061E-03	0.239
		1048.07	*	8.441E-02	1.052E-01	1.851E-01	1.363E-02	0.456
		1235.34		8.103E-01	7.037E-01	1.096E+00	1.099E-01	0.739
BA-137M		661.65	*	3.354E-02	3.711E-02	6.399E-02	4.522E-03	0.524
CS-137		661.65	*	3.546E-02	3.923E-02	6.764E-02	4.793E-03	0.524
CE-139		165.85	*	3.330E-03	2.910E-02	4.760E-02	2.497E-03	0.070
BA-140		162.64		-1.847E-01	7.037E-01	1.134E+00	6.936E-02	-0.163
		304.84		-5.769E-01	1.104E+00	1.785E+00	4.941E-01	-0.323
		423.70		-1.128E+00	1.712E+00	2.649E+00	8.407E-01	-0.426
		537.32	*	5.998E-02	2.205E-01	3.672E-01	1.198E-01	0.163
LA-140		328.77		2.717E-01	2.669E-01	4.678E-01	3.525E-02	0.581
		432.53		-8.887E-01	1.897E+00	3.044E+00	1.896E-01	-0.292

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		487.03		-4.823E-02	1.242E-01	1.986E-01	1.339E-02	-0.243
		751.79		-1.406E-01	1.696E+00	2.707E+00	2.314E-01	-0.052
		815.85		-5.707E-02	2.617E-01	4.292E-01	3.804E-02	-0.133
		867.82		3.476E-01	1.300E+00	2.010E+00	1.699E-01	0.173
		919.63		-8.941E-03	2.712E+00	4.509E+00	4.554E-01	-0.002
		925.24		9.245E-01	1.175E+00	1.902E+00	1.614E-01	0.486
		1596.49	*	-8.414E-02	6.859E-02	8.954E-02	5.499E-03	-0.940
CE-141		145.44	*	3.443E-02	6.644E-02	9.787E-02	5.930E-03	0.352
CE-143		57.37		8.664E-04	6.644E-02	Half-Life too short		
		231.56		6.752E-04	6.644E-02	Half-Life too short		
		293.26	*	5.375E-04	6.644E-02	Half-Life too short		
	+	350.59		1.404E-02	6.644E-02	Half-Life too short		
		490.36		-7.215E-04	6.644E-02	Half-Life too short		
		664.57		-3.287E-04	6.644E-02	Half-Life too short		
		721.93		7.507E-04	6.644E-02	Half-Life too short		
CE-144		80.11		1.369E+00	2.575E+00	2.854E+00	2.355E-01	0.480
		133.54	*	-1.116E-02	2.288E-01	3.280E-01	4.710E-02	-0.034
PM-144		476.78		-3.139E-02	6.608E-02	1.052E-01	7.417E-03	-0.298
		618.01		-7.659E-04	3.014E-02	4.887E-02	3.482E-03	-0.016
		696.49	*	-1.524E-02	3.393E-02	5.268E-02	3.818E-03	-0.289
		778.57		-1.207E+00	2.143E+00	3.427E+00	2.614E-01	-0.352
PR-144		696.49	*	-1.032E+00	2.298E+00	3.567E+00	2.585E-01	-0.289
		1489.15		1.702E-01	1.085E+01	1.501E+01	9.512E-01	0.011
PM-146		453.90	*	2.502E-02	3.986E-02	6.854E-02	5.893E-03	0.365
		633.02		3.677E-01	1.374E+00	2.267E+00	8.390E-01	0.162
		735.90		2.295E-02	1.424E-01	2.262E-01	6.393E-02	0.101
		747.13		5.502E-02	9.579E-02	1.609E-01	2.151E-02	0.342
ND-147	+	91.11		9.642E-01	2.906E-01	4.735E-01	4.488E-02	2.037
		319.41		-9.452E-01	2.944E+00	4.721E+00	3.367E-01	-0.200
		439.89		3.340E+00	5.115E+00	8.809E+00	4.988E-01	0.379
		531.02	*	-1.824E-01	5.141E-01	8.191E-01	1.126E-01	-0.223
PM-149		285.90	*	2.539E+01	5.906E+01	1.013E+02	1.524E+01	0.251
EU-152		121.78		-4.508E-02	7.066E-02	1.131E-01	9.280E-03	-0.399
		244.69		1.739E-01	3.652E-01	5.278E-01	3.665E-02	0.329
		344.27	*	4.934E-02	1.043E-01	1.572E-01	1.141E-02	0.314
		443.98		-4.865E-01	9.093E-01	1.447E+00	8.236E-02	-0.336
		778.89		-1.257E-01	2.491E-01	4.006E-01	3.055E-02	-0.314
		867.32		3.278E-01	8.647E-01	1.306E+00	1.040E-01	0.251
	+	964.01		4.739E-01	3.394E-01	5.437E-01	4.149E-02	0.872
		1085.78		-3.373E-01	4.367E-01	6.694E-01	4.371E-02	-0.504
		1112.02		2.226E-01	3.465E-01	5.878E-01	3.668E-02	0.379
		1407.95		5.617E-02	1.698E-01	2.873E-01	1.849E-02	0.195
GD-153		69.67		2.571E-01	1.601E+00	2.370E+00	1.718E-01	0.108
	+	83.37		2.618E+01	1.344E+01	2.124E+01	1.829E+00	1.233
		97.43	*	-5.330E-03	8.317E-02	1.198E-01	9.746E-03	-0.044
		103.18		-4.003E-02	1.040E-01	1.695E-01	1.299E-02	-0.236
EU-154		123.07		2.218E-02	5.104E-02	8.254E-02	8.139E-03	0.269
		247.94		2.128E-01	3.942E-01	5.725E-01	5.913E-02	0.372
		591.81		-5.130E-02	5.652E-01	9.135E-01	9.425E-02	-0.056

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		723.30		1.718E-01	1.842E-01	2.841E-01	2.392E-02	0.605
		756.87		1.069E-01	7.540E-01	1.226E+00	1.376E-01	0.087
		873.19		-5.712E-02	2.690E-01	4.396E-01	5.189E-02	-0.130
		996.32		-1.937E-01	3.509E-01	5.475E-01	9.415E-02	-0.354
		1004.76		-2.468E-01	2.195E-01	3.232E-01	3.459E-02	-0.763
		1274.45	*	-3.848E-02	1.340E-01	2.123E-01	2.026E-02	-0.181
EU-155		48.70		-1.626E+00	1.610E+00	2.606E+00	1.656E-01	-0.624
		60.01		2.453E+00	4.411E+00	6.674E+00	4.307E-01	0.368
	+	86.54		4.468E-01	1.207E-01	1.692E-01	1.534E-02	2.641
		105.31	*	1.117E-01	1.067E-01	1.821E-01	1.390E-02	0.614
TB-160	+	86.79		1.180E+00	3.185E-01	4.476E-01	4.035E-02	2.636
		197.04		1.102E-01	5.590E-01	8.828E-01	5.182E-02	0.125
		215.65		4.248E-02	7.805E-01	1.165E+00	7.316E-02	0.036
		298.57		1.166E-01	1.220E-01	1.894E-01	1.420E-02	0.616
		879.36	*	-1.992E-02	1.317E-01	2.166E-01	1.733E-02	-0.092
		962.29		7.098E-01	6.259E-01	9.968E-01	7.620E-02	0.712
		966.15		1.069E+00	2.646E-01	5.136E-01	3.911E-02	2.081
		1177.93		-4.384E-01	3.947E-01	5.841E-01	3.225E-02	-0.751
		1271.85		3.806E-01	7.474E-01	1.276E+00	7.782E-02	0.298
HO-166M		80.57		2.974E-01	3.177E-01	3.639E-01	3.021E-02	0.817
	+	184.41		1.369E-01	5.869E-02	6.766E-02	3.792E-03	2.023
		280.46		3.807E-02	8.901E-02	1.346E-01	1.044E-02	0.283
		410.95		4.920E-02	2.342E-01	3.934E-01	2.140E-02	0.125
		711.68	*	7.009E-02	5.789E-02	1.025E-01	7.501E-03	0.684
		752.31		-4.284E-02	2.892E-01	4.588E-01	3.446E-02	-0.093
		810.29		-3.565E-02	5.257E-02	8.246E-02	6.393E-03	-0.432
TM-171		51.35		1.666E+01	2.079E+01	3.593E+01	2.293E+00	0.464
		52.39		-1.066E+00	1.095E+01	1.808E+01	1.154E+00	-0.059
		59.40		2.216E+01	2.373E+01	3.646E+01	2.336E+00	0.608
		66.72	*	-1.863E+01	2.897E+01	3.838E+01	2.686E+00	-0.485
LU-176	+	88.36		5.849E-01	1.853E-01	3.430E-01	3.127E-02	1.705
		201.83		-2.646E-02	2.756E-02	4.247E-02	2.537E-03	-0.623
		306.84	*	-1.219E-02	2.272E-02	3.703E-02	2.726E-03	-0.329
		401.10		1.675E+00	6.689E+00	1.127E+01	6.041E-01	0.149
LU-177		112.95		6.788E-01	1.323E+00	2.222E+00	1.563E-01	0.305
	+	208.36	*	2.953E+00	1.401E+00	1.679E+00	1.027E-01	1.759
LU-177M		52.97		-9.010E-01	1.152E+00	1.853E+00	1.183E-01	-0.486
		54.07		-6.738E-01	6.258E-01	9.947E-01	6.347E-02	-0.677
		61.30		3.005E-01	1.403E+00	2.090E+00	1.371E-01	0.144
		121.62		-3.340E-01	3.660E-01	5.792E-01	3.803E-02	-0.577
		147.16		7.775E-02	6.914E-01	9.964E-01	5.760E-02	0.078
		171.86		-1.260E-01	4.657E-01	7.481E-01	4.006E-02	-0.168
		218.09		-8.761E-02	8.437E-01	1.353E+00	8.566E-02	-0.065
	+	268.79		2.442E+00	1.071E+00	1.473E+00	1.107E-01	1.657
		319.02		-6.541E-02	2.430E-01	3.908E-01	2.790E-02	-0.167
		367.43		-1.547E-01	8.457E-01	1.394E+00	8.374E-02	-0.111
		413.65	*	-2.036E-01	1.715E-01	2.626E-01	1.434E-02	-0.775
HF-181		56.28		-9.536E-02	7.157E-01	1.196E+00	7.634E-02	-0.080
		57.53		9.467E-01	4.161E-01	7.003E-01	4.475E-02	1.352

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20		-7.613E-02	8.566E-01	1.252E+00	8.609E-02	-0.061
		133.02		3.661E-04	7.090E-02	1.020E-01	6.311E-03	0.004
		136.25		-1.425E-01	4.873E-01	7.286E-01	4.440E-02	-0.196
		345.85		8.382E-02	1.981E-01	2.978E-01	1.954E-02	0.281
		482.03	*	2.746E-03	4.269E-02	7.056E-02	4.209E-03	0.039
W-181		56.28		-3.693E-02	2.840E-01	4.745E-01	3.029E-02	-0.078
		57.53		3.757E-01	1.652E-01	2.780E-01	1.777E-02	1.351
		65.20	*	-2.998E-02	3.374E-01	4.932E-01	3.391E-02	-0.061
TA-182		67.75		-4.179E-03	1.443E-01	1.537E-01	1.089E-02	-0.027
		100.10		1.491E-01	1.733E-01	2.859E-01	2.260E-02	0.521
		152.43		2.368E-01	3.298E-01	5.532E-01	3.115E-02	0.428
		222.10		1.631E-01	3.445E-01	5.666E-01	3.640E-02	0.288
		1001.68		1.484E+00	2.039E+00	3.588E+00	2.631E-01	0.414
	+	1121.28		5.518E-01	2.221E-01	3.427E-01	2.102E-02	1.610
		1189.05		-2.512E-02	3.205E-01	5.211E-01	2.913E-02	-0.048
		1221.42	*	1.258E-01	2.112E-01	3.609E-01	2.089E-02	0.348
		1230.97		2.878E-01	5.774E-01	8.544E-01	4.995E-02	0.337
RE-183		57.98		3.364E-01	1.742E-01	2.780E-01	1.777E-02	1.210
		59.32		9.084E-02	9.648E-02	1.483E-01	9.502E-03	0.613
		67.20		-1.730E-03	2.188E-01	2.721E-01	1.915E-02	-0.006
		162.32	*	1.862E-02	1.081E-01	1.774E-01	9.485E-03	0.105
	+	208.81		2.986E+00	1.417E+00	1.721E+00	1.054E-01	1.735
		291.72		3.571E-01	1.004E+00	1.508E+00	1.146E-01	0.237
RE-184		57.98		1.249E+00	6.467E-01	1.032E+00	6.597E-02	1.210
		59.32		3.369E-01	3.578E-01	5.500E-01	3.524E-02	0.613
		67.20		-6.421E-03	8.119E-01	1.010E+00	7.106E-02	-0.006
		161.27		3.660E-01	3.500E-01	5.933E-01	3.191E-02	0.617
		216.55		6.582E-02	2.627E-01	4.282E-01	2.697E-02	0.154
		252.85	*	-1.269E-01	2.292E-01	3.558E-01	2.539E-02	-0.357
		318.01		-9.083E-02	4.096E-01	6.786E-01	4.858E-02	-0.134
		792.07		-1.154E-01	9.398E-01	1.561E+00	1.199E-01	-0.074
		903.28		-7.028E-01	1.071E+00	1.535E+00	1.233E-01	-0.458
		920.93		-1.791E-01	4.611E-01	7.407E-01	5.870E-02	-0.242
OS-185		59.72		1.787E-01	2.612E-01	3.972E-01	2.554E-02	0.450
		61.14		-6.470E-03	1.527E-01	2.249E-01	1.472E-02	-0.029
		69.30		1.711E-02	2.835E-01	4.179E-01	3.015E-02	0.041
		592.07		-8.321E-02	2.281E+00	3.703E+00	2.472E-01	-0.022
		646.12	*	-6.817E-03	4.052E-02	6.472E-02	4.520E-03	-0.105
		717.42		-1.087E+00	8.773E-01	1.247E+00	9.161E-02	-0.872
		874.81		2.438E-01	5.120E-01	8.912E-01	7.118E-02	0.274
		880.27		-2.520E-01	7.587E-01	1.228E+00	9.829E-02	-0.205
RE-188		155.03	*	1.161E-02	1.676E-01	2.743E-01	1.524E-02	0.042
		477.96		-9.953E-01	2.993E+00	4.816E+00	2.859E-01	-0.207
		633.10		8.017E-01	2.736E+00	4.543E+00	3.140E-01	0.176
W-188	+	63.58		8.788E+01	5.866E+01	7.567E+01	5.103E+00	1.161
		227.08		-1.014E+01	1.254E+01	1.934E+01	1.264E+00	-0.524
		290.67	*	-6.750E-01	7.764E+00	1.132E+01	8.619E-01	-0.060
IR-192	+	295.96		8.458E-01	1.681E-01	2.612E-01	1.987E-02	3.238
		308.46		-3.049E-03	8.672E-02	1.454E-01	1.074E-02	-0.021

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		316.51	*	1.097E-03	3.209E-02	5.394E-02	3.889E-03	0.020
		468.07		-1.962E-02	7.117E-02	9.882E-02	6.664E-03	-0.198
		604.41		-2.762E-02	5.260E-01	7.351E-01	8.720E-02	-0.038
		612.46		7.629E-01	7.507E-01	1.164E+00	9.730E-02	0.655
AU-195		65.12		-1.394E-02	1.566E-01	2.290E-01	1.573E-02	-0.061
		66.83		-5.828E-02	9.553E-02	1.268E-01	8.887E-03	-0.460
	+	75.70		1.480E+00	2.235E-01	4.266E-01	3.328E-02	3.468
		98.88	*	2.054E-01	2.375E-01	3.572E-01	2.861E-02	0.575
	+	129.76		3.549E+00	3.263E+00	4.639E+00	2.918E-01	0.765
TL-200		367.94	*	-7.708E-05	3.263E+00	Half-Life too short		
		579.30		2.319E-03	3.263E+00	Half-Life too short		
		828.27		2.461E-04	3.263E+00	Half-Life too short		
		1205.75		-2.960E-04	3.263E+00	Half-Life too short		
TL-201		68.90		1.593E-01	3.686E+00	5.066E+00	3.638E-01	0.031
		70.82		1.563E+00	1.992E+00	3.017E+00	2.217E-01	0.518
		80.30		4.300E+00	4.413E+00	5.070E+00	4.193E-01	0.848
		135.34		7.459E+00	1.860E+01	3.095E+01	1.894E+00	0.241
		167.43	*	2.954E+00	5.149E+00	8.576E+00	4.520E-01	0.344
TL-202		68.90		1.777E-02	4.111E-01	5.651E-01	4.058E-02	0.031
		70.82		1.739E-01	2.216E-01	3.356E-01	2.465E-02	0.518
		80.30		4.785E-01	4.910E-01	5.641E-01	4.666E-02	0.848
		439.56	*	4.174E-02	6.248E-02	1.076E-01	6.089E-03	0.388
HG-203		70.83		7.998E-01	1.016E+00	1.533E+00	1.968E-01	0.522
	+	72.87		4.346E+00	9.437E-01	1.138E+00	1.425E-01	3.818
	+	82.60		1.917E+00	1.005E+00	1.552E+00	2.124E-01	1.235
		279.20	*	2.710E-02	4.444E-02	6.692E-02	5.379E-03	0.405
BI-207	+	72.80		1.298E+00	2.502E-01	3.370E-01	2.536E-02	3.851
	+	74.97		7.689E-01	1.482E-01	2.370E-01	1.832E-02	3.244
	+	84.90		3.399E-01	1.745E-01	3.206E-01	2.818E-02	1.060
		569.67		-2.172E-02	3.207E-02	4.850E-02	3.172E-03	-0.448
		1063.62	*	6.754E-03	5.248E-02	8.753E-02	5.917E-03	0.077
		1770.23		2.271E-02	4.242E-01	6.109E-01	3.452E-02	0.037
TL-207		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
PO-209		260.50		-8.023E+00	9.721E+00	1.482E+01	1.084E+00	-0.541
		262.80		-8.635E+00	2.709E+01	4.256E+01	3.137E+00	-0.203
		896.60	*	7.048E+00	6.760E+00	1.227E+01	9.884E-01	0.574
BI-210		46.50	*	1.210E+00	2.260E+00	3.826E+00	2.836E-01	0.316
PB-210		46.50	*	1.210E+00	2.260E+00	3.826E+00	2.836E-01	0.316
PO-210		46.50	*	1.210E+00	2.259E+00	3.826E+00	2.400E-01	0.316
PB-211		404.84	*	-6.519E-01	1.061E+00	1.567E+00	9.761E-01	-0.416

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		427.08		4.322E-01	1.981E+00	3.296E+00	2.036E+00	0.131
		831.96		-3.714E-01	1.156E+00	1.842E+00	1.153E+00	-0.202
BI-212	+	727.18	*	9.922E-01	4.104E-01	6.070E-01	5.447E-02	1.635
		785.46		5.603E-01	1.768E+00	3.033E+00	2.321E-01	0.185
		1620.62		8.202E-01	1.102E+00	2.043E+00	1.243E-01	0.401
PO-215		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
RN-219	+	271.23		7.374E-01	3.262E-01	4.494E-01	4.249E-02	1.641
		401.81	*	1.474E-01	4.182E-01	7.073E-01	9.497E-02	0.208
RN-220		549.76	*	1.033E+01	2.402E+01	4.059E+01	2.604E+00	0.254
RA-223		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
AC-227		79.80		8.188E-01	2.028E+00	2.218E+00	4.735E-01	0.369
		236.00		3.026E+00	4.831E-01	6.610E-01	7.273E-02	4.577
		256.20	*	1.114E-01	3.799E-01	6.169E-01	9.009E-02	0.181
		286.10		7.799E-01	1.466E+00	2.526E+00	3.185E-01	0.309
		299.80		1.774E+00	1.579E+00	2.442E+00	4.140E-01	0.726
		304.40		-1.394E+00	1.800E+00	2.878E+00	5.152E-01	-0.484
		334.20		2.023E+00	3.320E+00	3.595E+00	6.716E-01	0.563
TH-227		79.80		8.188E-01	2.028E+00	2.218E+00	4.797E-01	0.369
		94.00		6.394E+00	2.298E+00	3.348E+00	7.272E-01	1.910
		236.00		3.026E+00	4.566E-01	6.610E-01	6.404E-02	4.577
		256.20	*	1.114E-01	3.800E-01	6.169E-01	1.076E-01	0.181
		286.10		7.799E-01	1.659E+00	2.526E+00	2.534E+00	0.309
		299.80		1.774E+00	1.579E+00	2.442E+00	4.140E-01	0.726
		304.40		-1.394E+00	1.800E+00	2.878E+00	5.152E-01	-0.484
		334.20		2.023E+00	3.320E+00	3.595E+00	6.716E-01	0.563
TH-229	+	85.43		8.323E-01	2.247E-01	3.262E-01	2.887E-02	2.552
	+	88.47		3.367E-01	1.066E-01	1.943E-01	1.768E-02	1.733
		100.00		1.613E-01	1.815E-01	2.996E-01	2.372E-02	0.538
		193.63	*	-2.191E-01	4.853E-01	7.690E-01	4.458E-02	-0.285
		210.97		1.435E+00	8.583E-01	1.323E+00	8.165E-02	1.085
PA-231		283.67	*	-1.733E-01	1.562E+00	2.473E+00	3.632E-01	-0.070

---- Non-Identified Nuclides ----

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		301.29		7.054E-01	5.570E-01	9.607E-01	1.100E-01	0.734
TH-231		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
U-231	+	84.21		7.840E+00	4.025E+00	6.782E+00	5.906E-01	1.156
	+	92.29		6.434E+00	1.925E+00	2.972E+00	2.570E-01	2.165
		95.87	*	-6.152E-01	9.137E-01	1.283E+00	1.062E-01	-0.480
		108.00		-3.399E-01	1.623E+00	2.658E+00	1.949E-01	-0.128
PA-233	+	75.28		2.244E+01	5.180E+00	7.063E+00	1.051E+00	3.177
	+	86.59		7.266E+00	2.693E+00	2.750E+00	7.410E-01	2.642
		300.12		5.488E-01	4.168E-01	6.776E-01	9.647E-02	0.810
		311.98	*	-1.306E-02	5.849E-02	9.699E-02	7.332E-03	-0.135
		340.50		3.544E-01	6.645E-01	9.969E-01	2.313E-01	0.355
		398.62		-4.695E-01	2.095E+00	3.429E+00	8.833E-01	-0.137
		415.76		4.759E-01	1.536E+00	2.592E+00	5.312E-01	0.184
PA-234	+	63.00		2.581E+00	1.755E+00	2.268E+00	3.293E-01	1.138
		94.67		2.671E-01	1.670E-01	2.569E-01	3.147E-02	1.040
		98.44		4.685E-02	1.013E-01	1.448E-01	8.065E-02	0.324
		99.86		4.268E-01	4.602E-01	7.606E-01	6.029E-02	0.561
		111.00		-1.063E-01	1.750E-01	2.814E-01	3.119E-02	-0.378
		131.20		-5.722E-02	1.155E-01	1.615E-01	1.009E-02	-0.354
		152.70		2.262E-01	3.211E-01	5.356E-01	8.432E-02	0.422
	+	186.00		4.927E+00	2.579E+00	2.469E+00	7.538E-01	1.995
		226.40		-1.076E-01	3.978E-01	6.312E-01	7.536E-02	-0.170
		227.20		-3.424E-01	4.291E-01	6.624E-01	4.331E-02	-0.517
		248.90		-2.218E-01	8.799E-01	1.277E+00	2.792E-01	-0.174
	+	293.70		5.387E+00	1.341E+00	1.663E+00	2.795E-01	3.239
		369.80		-3.500E-01	8.060E-01	1.303E+00	2.718E-01	-0.269
		568.70		-1.089E+00	1.062E+00	1.562E+00	1.021E-01	-0.697
		569.50		-1.895E-01	2.848E-01	4.312E-01	2.820E-02	-0.439
		574.00		-2.266E-01	1.486E+00	2.251E+00	1.478E-01	-0.101
		699.00		2.493E-01	7.186E-01	1.189E+00	2.200E-01	0.210
		706.10		-5.572E-01	1.070E+00	1.604E+00	7.113E-01	-0.347
		733.00		1.257E-01	3.675E-01	5.331E-01	1.160E-01	0.236
		742.81		-9.160E-01	1.551E+00	2.161E+00	1.449E+00	-0.424
		796.30		1.237E+00	9.487E-01	1.639E+00	4.387E-01	0.755
		805.60		1.098E+00	1.040E+00	1.789E+00	5.442E-01	0.614
		819.60		1.536E-01	1.070E+00	1.812E+00	6.857E-01	0.085
		826.30		-3.878E-01	7.135E-01	1.094E+00	4.880E-01	-0.354
		831.60		-1.093E-01	5.736E-01	9.421E-01	2.791E-01	-0.116
		876.40		9.890E-02	7.737E-01	1.294E+00	1.330E+00	0.076
		880.51		1.644E-02	2.719E-01	4.557E-01	3.648E-02	0.036

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		883.24		6.912E-02	2.952E-01	4.954E-01	3.326E-01	0.140
		899.00		-2.104E-01	7.911E-01	1.276E+00	5.566E-01	-0.165
		925.00		1.169E+00	1.288E+00	2.112E+00	1.669E-01	0.553
		926.50		9.396E-02	2.048E-01	3.079E-01	7.710E-02	0.305
		946.00	*	-9.030E-02	2.896E-01	4.662E-01	8.571E-02	-0.194
		949.00		4.422E-02	4.254E-01	7.128E-01	5.517E-02	0.062
		980.50		-1.696E-01	7.141E-01	1.157E+00	8.682E-02	-0.147
		1394.10		-1.402E+00	1.375E+00	1.282E+00	8.310E-01	-1.094
PA-234M		766.41		2.572E+01	2.695E+01	3.257E+01	2.494E+01	0.790
		1001.03	*	5.944E+00	6.703E+00	1.190E+01	1.217E+00	0.500
NP-236		94.67		2.048E-01	1.254E-01	1.951E-01	1.638E-02	1.050
		98.44		3.541E-02	7.403E-02	1.095E-01	8.808E-03	0.324
		111.00		-8.039E-02	1.322E-01	2.128E-01	1.521E-02	-0.378
		160.31	*	5.222E-02	8.047E-02	1.344E-01	7.268E-03	0.388
NP-239		99.55		2.088E-01	1.568E-01	2.533E-01	2.015E-02	0.824
		117.00	*	5.517E-02	1.821E-01	3.033E-01	2.065E-02	0.182
	+	209.75		2.385E+00	1.132E+00	1.448E+00	8.900E-02	1.647
		228.18		-8.408E-02	2.244E-01	3.542E-01	2.324E-02	-0.237
	+	277.60		3.429E-01	2.957E-01	3.191E-01	2.466E-02	1.075
		334.30		1.160E+00	1.871E+00	2.039E+00	1.392E-01	0.569
AM-241		59.54	*	1.295E-01	1.382E-01	2.122E-01	1.535E-02	0.610
CM-243		99.55		2.148E-01	1.614E-01	2.606E-01	2.073E-02	0.824
		103.76	*	2.890E-02	9.506E-02	1.588E-01	1.211E-02	0.182
		117.00		5.676E-02	1.873E-01	3.120E-01	2.124E-02	0.182
	+	209.75		2.351E+00	1.116E+00	1.427E+00	8.772E-02	1.647
		228.18		-8.495E-02	2.267E-01	3.578E-01	2.348E-02	-0.237
	+	277.60		3.457E-01	2.981E-01	3.217E-01	2.486E-02	1.075
CM-247	+	278.00		1.422E+00	1.226E+00	1.306E+00	1.010E-01	1.089
		287.40		8.563E-02	1.209E+00	1.993E+00	1.526E-01	0.043
		402.60	*	1.383E-02	3.751E-02	6.355E-02	3.415E-03	0.218
CF-249		252.85		-4.787E-01	8.645E-01	1.342E+00	9.575E-02	-0.357
		333.44		1.444E-01	2.442E-01	2.652E-01	1.815E-02	0.544
		387.95	*	3.826E-03	3.815E-02	6.382E-02	3.449E-03	0.060
CF-251		176.60	*	3.375E-02	1.222E-01	2.009E-01	1.094E-02	0.168
		227.00		-2.829E-01	3.803E-01	5.888E-01	3.848E-02	-0.480
		285.00		-9.285E-02	1.679E+00	2.821E+00	2.170E-01	-0.033

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070    *
* Acquisition date :  9-JUL-2009 08:36:12 Detector SN#     :               *
* Detector ID        : GAM11               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.66      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201873070          Analyst initials: MXR1         *
* Batch Number       : 881931               Sample Quantity : 1.2546E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.266E+01	2.773E+00	4.295E-01	0.000E+00
CD-109	2.504E+00	7.773E-01	1.105E+00	0.000E+00
SN-126	3.711E-01	9.818E-02	1.092E-01	0.000E+00
TL-208	4.845E-01	7.834E-02	5.676E-02	0.000E+00
BI-211	3.341E+00	4.440E-01	2.909E-01	0.000E+00
PB-212	1.351E+00	1.436E-01	9.253E-02	0.000E+00
PO-212	1.351E+00	1.436E-01	9.253E-02	0.000E+00
BI-214	1.071E+00	1.655E-01	1.112E-01	0.000E+00
PB-214	1.162E+00	1.655E-01	9.541E-02	0.000E+00
PO-214	1.162E+00	1.655E-01	9.541E-02	0.000E+00
PO-216	1.351E+00	1.436E-01	9.253E-02	0.000E+00
PO-218	1.162E+00	1.655E-01	9.541E-02	0.000E+00
RA-224	3.482E+00	1.250E+00	1.053E+00	0.000E+00
RA-226	1.071E+00	1.655E-01	1.112E-01	0.000E+00
AC-228	1.224E+00	2.823E-01	2.380E-01	0.000E+00
RA-228	1.224E+00	2.823E-01	2.380E-01	0.000E+00
TH-228	1.351E+00	1.436E-01	9.252E-02	0.000E+00
TH-230	1.071E+00	1.655E-01	1.112E-01	0.000E+00
TH-232	1.224E+00	2.823E-01	2.380E-01	0.000E+00
TH-234	2.214E+00	1.488E+00	1.845E+00	0.000E+00
U-234	1.071E+00	1.655E-01	1.112E-01	0.000E+00
U-235	1.866E-01	3.618E-01	3.339E-01	0.000E+00
NP-237	1.090E+00	3.629E-01	3.235E-01	0.000E+00
U-238	2.214E+00	1.488E+00	1.845E+00	0.000E+00
AM-243	4.284E-01	8.092E-02	8.027E-02	0.000E+00
ANH-511	1.380E-01	6.829E-02	4.602E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
BE-7	-1.576E-01		3.056E-01	5.031E-01	0.000E+00	NOT IDENT.

NA-22	-1.415E-02	4.693E-02	7.594E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.654E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.332E-03	2.224E-02	3.868E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.220E-02	6.532E-02	0.000E+00	NOT IDENT.
SC-46	-1.814E-04	3.733E-02	6.386E-02	0.000E+00	FAIL ABUN
V-48	-4.293E-03	6.466E-02	1.092E-01	0.000E+00	NOT IDENT.
CR-51	1.827E-01	3.548E-01	5.841E-01	0.000E+00	NOT IDENT.
MN-52	-1.269E-01	1.782E-01	2.599E-01	0.000E+00	FAIL ABUN
MN-54	-1.561E-02	3.705E-02	6.165E-02	0.000E+00	NOT IDENT.
CO-56	3.360E-03	3.632E-02	6.285E-02	0.000E+00	FAIL ABUN
CO-57	-1.308E-02	2.387E-02	4.055E-02	0.000E+00	NOT IDENT.
CO-58	-1.763E-02	3.350E-02	5.492E-02	0.000E+00	NOT IDENT.
FE-59	-3.286E-02	9.641E-02	1.578E-01	0.000E+00	FAIL ABUN
CO-60	5.103E-03	4.081E-02	6.862E-02	0.000E+00	NOT IDENT.
ZN-65	-4.993E-02	1.069E-01	1.485E-01	0.000E+00	NOT IDENT.
GE-68	-8.634E-01	1.337E+00	2.129E+00	0.000E+00	NOT IDENT.
AS-73	-4.229E-01	5.892E-01	1.016E+00	0.000E+00	NOT IDENT.
AS-74	-2.167E-02	8.064E-02	1.327E-01	0.000E+00	NOT IDENT.
SE-75	2.699E-02	4.975E-02	7.518E-02	0.000E+00	NOT IDENT.
BR-77	-1.642E-01	7.188E+00	1.218E+01	0.000E+00	FAIL ABUN
SR-82	-3.198E-01	3.519E-01	5.634E-01	0.000E+00	NOT IDENT.
RB-83	7.665E-03	6.852E-02	1.172E-01	0.000E+00	NOT IDENT.
RB-84	4.069E-02	6.500E-02	1.170E-01	0.000E+00	NOT IDENT.
KR-85	8.332E+00	8.044E+00	1.286E+01	0.000E+00	NOT IDENT.
SR-85	4.216E-02	4.070E-02	6.509E-02	0.000E+00	NOT IDENT.
RB-86	-2.606E-01	7.861E-01	1.288E+00	0.000E+00	NOT IDENT.
Y-88	-4.315E-03	2.701E-02	4.377E-02	0.000E+00	NOT IDENT.
ZR-88	-4.245E-03	2.897E-02	4.961E-02	0.000E+00	NOT IDENT.
Y-91	-6.113E+00	1.919E+01	3.124E+01	0.000E+00	NOT IDENT.
NB-94	9.777E-03	3.327E-02	5.657E-02	0.000E+00	NOT IDENT.
NB-95	5.387E-02	4.336E-02	7.792E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.715E-01	2.884E-01	0.000E+00	NOT IDENT.
ZR-95	1.922E-02	6.828E-02	1.156E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.876E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.404E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.180E+00	8.016E+00	1.345E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.290E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.171E-02	3.206E-02	5.546E-02	0.000E+00	FAIL ABUN
RH-102	-2.080E-02	2.756E-02	4.454E-02	0.000E+00	NOT IDENT.
RU-103	6.784E-03	3.682E-02	6.346E-02	0.000E+00	FAIL ABUN
RH-106	-1.822E-01	3.021E-01	4.802E-01	0.000E+00	FAIL ABUN
RU-106	-1.822E-01	3.015E-01	4.802E-01	0.000E+00	FAIL ABUN
AG-108M	-2.249E-03	3.040E-02	5.193E-02	0.000E+00	NOT IDENT.
AG-110M	-2.736E-02	3.537E-02	5.541E-02	0.000E+00	NOT IDENT.
IN-111	3.128E-01	8.510E-01	1.276E+00	0.000E+00	NOT IDENT.
IN-113M	-2.074E-02	4.199E-02	7.041E-02	0.000E+00	NOT IDENT.
SN-113	-2.074E-02	4.199E-02	7.041E-02	0.000E+00	NOT IDENT.
IN-114M	1.299E-01	1.837E-01	2.848E-01	0.000E+00	NOT IDENT.
CD-115	-2.229E+00	6.994E+00	1.158E+01	0.000E+00	NOT IDENT.
SN-117M	1.662E-02	5.041E-02	8.760E-02	0.000E+00	NOT IDENT.
SB-122	1.145E+00	1.455E+00	2.589E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.156E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	8.512E-03	2.793E-02	4.847E-02	0.000E+00	NOT IDENT.
I-124	5.147E-01	6.037E-01	9.498E-01	0.000E+00	NOT IDENT.
SB-124	7.395E-02	6.670E-02	1.327E-01	0.000E+00	FAIL ABUN
SB-125	4.226E-02	8.558E-02	1.515E-01	0.000E+00	FAIL ABUN
TE-125M	-6.013E+00	8.534E+00	1.447E+01	0.000E+00	NOT IDENT.
I-126	-1.306E-01	1.717E-01	2.691E-01	0.000E+00	NOT IDENT.
SB-126	6.378E-02	1.342E-01	2.192E-01	0.000E+00	FAIL ABUN
SB-127	3.891E-01	1.022E+00	1.755E+00	0.000E+00	NOT IDENT.
XE-127	-4.291E-02	4.585E-02	7.140E-02	0.000E+00	FAIL ABUN
I-131	1.449E-02	9.445E-02	1.653E-01	0.000E+00	NOT IDENT.
TE-132	-1.990E-01	5.148E-01	8.497E-01	0.000E+00	NOT IDENT.
BA-133	-1.406E-03	4.266E-02	6.424E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.120E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.318E-02	4.524E-02	8.517E-02	0.000E+00	NOT IDENT.
CS-135	2.581E-01	1.920E-01	3.013E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.563E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.441E-02	1.031E-01	1.859E-01	0.000E+00	FAIL ABUN
BA-137M	3.354E-02	3.637E-02	6.468E-02	0.000E+00	NOT IDENT.
CS-137	3.546E-02	3.845E-02	6.837E-02	0.000E+00	NOT IDENT.
CE-139	3.330E-03	2.852E-02	4.905E-02	0.000E+00	NOT IDENT.
BA-140	5.998E-02	2.160E-01	3.723E-01	0.000E+00	NOT IDENT.
LA-140	-8.414E-02	6.722E-02	8.936E-02	0.000E+00	NOT IDENT.
CE-141	3.443E-02	6.511E-02	1.010E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.479E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.116E-02	2.242E-01	3.391E-01	0.000E+00	NOT IDENT.
PM-144	-1.524E-02	3.325E-02	5.320E-02	0.000E+00	NOT IDENT.

PR-144	-1.032E+00	2.252E+00	3.603E+00	0.000E+00	NOT IDENT.
PM-146	2.502E-02	3.906E-02	6.965E-02	0.000E+00	NOT IDENT.
ND-147	-1.824E-01	5.039E-01	8.305E-01	0.000E+00	FAIL ABUN
PM-149	2.539E+01	5.788E+01	1.036E+02	0.000E+00	NOT IDENT.
EU-152	4.934E-02	1.022E-01	1.604E-01	0.000E+00	FAIL ABUN
GD-153	-5.330E-03	8.151E-02	1.243E-01	0.000E+00	FAIL ABUN
EU-154	-3.848E-02	1.313E-01	2.126E-01	0.000E+00	NOT IDENT.
EU-155	1.117E-01	1.045E-01	1.888E-01	0.000E+00	FAIL ABUN
TB-160	-1.992E-02	1.291E-01	2.181E-01	0.000E+00	FAIL ABUN
HO-166M	7.009E-02	5.673E-02	1.035E-01	0.000E+00	FAIL ABUN
TM-171	-1.863E+01	2.839E+01	4.005E+01	0.000E+00	NOT IDENT.
LU-176	-1.219E-02	2.226E-02	3.784E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.373E+00	1.725E+00	0.000E+00	FAIL ABUN
LU-177M	-2.036E-01	1.680E-01	2.672E-01	0.000E+00	FAIL ABUN
HF-181	2.746E-03	4.183E-02	7.164E-02	0.000E+00	NOT IDENT.
W-181	-2.998E-02	3.306E-01	5.148E-01	0.000E+00	NOT IDENT.
TA-182	1.258E-01	2.070E-01	3.616E-01	0.000E+00	FAIL ABUN
RE-183	1.862E-02	1.060E-01	1.828E-01	0.000E+00	FAIL ABUN
RE-184	-1.269E-01	2.246E-01	3.645E-01	0.000E+00	NOT IDENT.
OS-185	-6.817E-03	3.971E-02	6.544E-02	0.000E+00	NOT IDENT.
RE-188	1.161E-02	1.643E-01	2.829E-01	0.000E+00	NOT IDENT.
W-188	-6.750E-01	7.609E+00	1.158E+01	0.000E+00	FAIL ABUN
IR-192	1.097E-03	3.145E-02	5.509E-02	0.000E+00	FAIL ABUN
AU-195	2.054E-01	2.328E-01	3.708E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.900E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.954E+00	5.046E+00	8.837E+00	0.000E+00	NOT IDENT.
TL-202	4.174E-02	6.123E-02	1.094E-01	0.000E+00	NOT IDENT.
HG-203	2.710E-02	4.355E-02	6.847E-02	0.000E+00	FAIL ABUN
BI-207	6.754E-03	5.143E-02	8.787E-02	0.000E+00	FAIL ABUN
TL-207	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
PO-209	7.048E+00	6.625E+00	1.235E+01	0.000E+00	NOT IDENT.
BI-210	1.210E+00	2.215E+00	4.011E+00	0.000E+00	NOT IDENT.
PB-210	1.210E+00	2.215E+00	4.011E+00	0.000E+00	NOT IDENT.
PO-210	1.210E+00	2.214E+00	4.011E+00	0.000E+00	NOT IDENT.
PB-211	-6.519E-01	1.040E+00	1.595E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.022E-01	6.127E-01	0.000E+00	FAIL ABUN
PO-215	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
RN-219	1.474E-01	4.098E-01	7.200E-01	0.000E+00	FAIL ABUN
RN-220	1.033E+01	2.354E+01	4.113E+01	0.000E+00	NOT IDENT.
RA-223	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
AC-227	1.114E-01	3.723E-01	6.319E-01	0.000E+00	NOT IDENT.
TH-227	1.114E-01	3.724E-01	6.319E-01	0.000E+00	NOT IDENT.
TH-229	-2.191E-01	4.756E-01	7.909E-01	0.000E+00	FAIL ABUN
PA-231	-1.733E-01	1.531E+00	2.530E+00	0.000E+00	NOT IDENT.
TH-231	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
U-231	-6.152E-01	8.954E-01	1.332E+00	0.000E+00	FAIL ABUN
PA-233	-1.306E-02	5.732E-02	9.909E-02	0.000E+00	FAIL ABUN
PA-234	-9.030E-02	2.838E-01	4.688E-01	0.000E+00	FAIL ABUN
PA-234M	5.944E+00	6.569E+00	1.196E+01	0.000E+00	NOT IDENT.
NP-236	5.222E-02	7.886E-02	1.386E-01	0.000E+00	NOT IDENT.
NP-239	5.517E-02	1.785E-01	3.141E-01	0.000E+00	FAIL ABUN
AM-241	1.295E-01	1.354E-01	2.217E-01	0.000E+00	NOT IDENT.
CM-243	2.890E-02	9.316E-02	1.647E-01	0.000E+00	FAIL ABUN
CM-247	1.383E-02	3.676E-02	6.469E-02	0.000E+00	FAIL ABUN
CF-249	3.826E-03	3.739E-02	6.500E-02	0.000E+00	NOT IDENT.
CF-251	3.375E-02	1.198E-01	2.069E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:37:19.41

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:36:12.
Sample ID         : G1201873070          Sample quantity  : 1.25460E+02 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.66  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1464	10.67*	1.257E+00	3.266E+01	3.266E+01	8.66
CD-109	88.03	215	3.72*	7.058E+00	2.453E+00	2.504E+00	31.68
SN-126	64.28	125	9.60	4.447E+00	8.765E-01	8.765E-01	67.91
	86.94	317	8.90	6.901E+00	1.543E+00	1.543E+00	48.63
	87.57	317	37.00*	6.901E+00	3.711E-01	3.711E-01	26.99
TL-208	277.35	80	6.80	4.926E+00	7.111E-01	7.111E-01	86.68
	510.84	142	21.60	3.080E+00	6.388E-01	6.388E-01	51.18
	583.14	377	84.20*	2.766E+00	4.845E-01	4.845E-01	16.50
	860.37	55	12.46	1.985E+00	6.610E-01	6.610E-01	56.70
BI-211	72.87	555	1.27	5.878E+00	2.226E+01	2.226E+01	19.28
	351.07	596	12.94*	4.126E+00	3.341E+00	3.341E+00	13.56
PB-212	74.81	555	10.70	5.878E+00	2.642E+00	2.642E+00	21.42
	77.11	621	18.00	6.128E+00	1.684E+00	1.684E+00	15.11
	87.30	317	8.00	6.901E+00	1.717E+00	1.717E+00	28.79
	238.63	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.09	------	3.41	4.646E+00	------ Line Not Found		------
PO-212	74.81	555	10.70	5.878E+00	2.642E+00	2.642E+00	21.42
	77.11	621	18.00	6.128E+00	1.684E+00	1.684E+00	15.11
	87.30	317	8.00	6.901E+00	1.717E+00	1.717E+00	28.79
	115.19	------	0.60	7.604E+00	------ Line Not Found		------
	238.63	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.09	------	3.41	4.646E+00	------ Line Not Found		------
BI-214	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
PB-214	74.81	555	6.21	5.878E+00	4.553E+00	4.553E+00	20.65
	77.11	621	10.50	6.128E+00	2.887E+00	2.888E+00	16.92
	87.30	317	4.67	6.901E+00	2.941E+00	2.941E+00	28.07

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	250	7.49	5.438E+00	1.836E+00	1.836E+00	37.07
	295.21	339	19.20	4.708E+00	1.122E+00	1.122E+00	20.81
	351.92	596	37.20*	4.126E+00	1.162E+00	1.162E+00	14.53
PO-214	74.81	555	6.21	5.878E+00	4.553E+00	4.553E+00	20.65
	77.11	621	10.50	6.128E+00	2.887E+00	2.888E+00	16.92
	87.30	317	4.67	6.901E+00	2.941E+00	2.941E+00	28.07
	241.98	250	7.49	5.438E+00	1.836E+00	1.836E+00	37.07
	295.21	339	19.20	4.708E+00	1.122E+00	1.122E+00	20.81
	351.92	596	37.20*	4.126E+00	1.162E+00	1.162E+00	14.53
PO-216	74.81	555	10.70	5.878E+00	2.642E+00	2.642E+00	21.42
	77.11	621	18.00	6.128E+00	1.684E+00	1.684E+00	15.11
	87.30	317	8.00	6.901E+00	1.717E+00	1.717E+00	28.79
	238.63	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.09	------	3.41	4.646E+00	------ Line Not Found		------
PO-218	74.81	555	6.21	5.878E+00	4.553E+00	4.553E+00	20.65
	77.11	621	10.50	6.128E+00	2.887E+00	2.888E+00	16.92
	87.30	317	4.67	6.901E+00	2.941E+00	2.941E+00	28.07
	241.98	250	7.49	5.438E+00	1.836E+00	1.836E+00	37.07
	295.21	339	19.20	4.708E+00	1.122E+00	1.122E+00	20.81
	351.92	596	37.20*	4.126E+00	1.162E+00	1.162E+00	14.53
RA-224	240.98	250	3.95*	5.438E+00	3.482E+00	3.482E+00	36.64
RA-226	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
AC-228	338.32	187	11.40	4.253E+00	1.151E+00	1.151E+00	50.42
	911.07	214	27.70*	1.888E+00	1.224E+00	1.224E+00	23.53
	969.11	162	16.60	1.789E+00	1.629E+00	1.629E+00	31.48
RA-228	338.32	187	11.40	4.253E+00	1.151E+00	1.151E+00	50.42
	911.07	214	27.70*	1.888E+00	1.224E+00	1.224E+00	23.53
	969.11	162	16.60	1.789E+00	1.629E+00	1.629E+00	31.48
TH-228	84.40	124	1.21	6.719E+00	4.575E+00	4.575E+00	52.28
	238.60	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.10	------	3.41	4.646E+00	------ Line Not Found		------
TH-230	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
TH-232	338.32	187	11.40	4.253E+00	1.151E+00	1.151E+00	30.24
	911.07	214	27.70*	1.888E+00	1.224E+00	1.224E+00	23.53
	969.11	162	16.60	1.789E+00	1.629E+00	1.629E+00	31.48
TH-234	63.29	125	3.80*	4.447E+00	2.214E+00	2.214E+00	68.59
	92.38	270	5.41	7.192E+00	2.075E+00	2.075E+00	33.89

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
U-235	89.95	215	2.70	7.058E+00	3.379E+00	3.379E+00	43.37
	93.35	270	4.50	7.192E+00	2.495E+00	2.495E+00	40.08
	105.00	------	2.10	7.539E+00	------ Line Not Found		------
	143.76	48	10.50*	7.283E+00	1.866E-01	1.866E-01	197.81
	163.35	------	4.70	6.902E+00	------ Line Not Found		------
	185.71	212	54.00	6.446E+00	1.825E-01	1.825E-01	42.88
	205.31	------	4.70	6.059E+00	------ Line Not Found		------
NP-237	86.50	317	12.60*	6.901E+00	1.090E+00	1.090E+00	33.98
	95.87	------	2.60	7.329E+00	------ Line Not Found		------
U-238	63.29	125	3.80*	4.447E+00	2.214E+00	2.214E+00	68.59
	92.38	270	5.41	7.192E+00	2.075E+00	2.075E+00	29.93
AM-243	74.67	555	66.00*	5.878E+00	4.284E-01	4.284E-01	19.28
	86.72	317	0.34	6.901E+00	4.087E+01	4.087E+01	26.99
	117.66	------	0.55	7.600E+00	------ Line Not Found		------
	142.18	------	0.13	7.314E+00	------ Line Not Found		------
ANH-511	511.00	142	100.00*	3.080E+00	1.380E-01	1.380E-01	50.50

Flag: "*" = Keyline

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

Total number of lines in spectrum 36
Number of unidentified lines 3
Number of lines tentatively identified by NID 33 91.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.266E+01	3.266E+01	0.283E+01	8.66	
CD-109	464.00D	1.02	2.453E+00	2.504E+00	0.793E+00	31.68	
SN-126	1.00E+05Y	1.00	3.711E-01	3.711E-01	1.002E-01	26.99	
TL-208	1.41E+10Y	1.00	4.845E-01	4.845E-01	0.799E-01	16.50	
BI-211	7.04E+08Y	1.00	3.341E+00	3.341E+00	0.453E+00	13.56	
PB-212	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
PO-212	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
BI-214	1600.00Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
PB-214	1600.00Y	1.00	1.162E+00	1.162E+00	0.169E+00	14.53	
PO-214	1600.00Y	1.00	1.162E+00	1.162E+00	0.169E+00	14.53	
PO-216	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
PO-218	1600.00Y	1.00	1.162E+00	1.162E+00	0.169E+00	14.53	
RA-224	1.41E+10Y	1.00	3.482E+00	3.482E+00	1.276E+00	36.64	
RA-226	1600.00Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
AC-228	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.288E+00	23.53	
RA-228	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.288E+00	23.53	
TH-228	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
TH-230	4.47E+09Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
TH-232	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.288E+00	23.53	
TH-234	4.47E+09Y	1.00	2.214E+00	2.214E+00	1.519E+00	68.59	
U-234	4.47E+09Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
U-235	7.04E+08Y	1.00	1.866E-01	1.866E-01	3.692E-01	197.81	
NP-237	2.14E+06Y	1.00	1.090E+00	1.090E+00	0.370E+00	33.98	
U-238	4.47E+09Y	1.00	2.214E+00	2.214E+00	1.519E+00	68.59	
AM-243	7380.00Y	1.00	4.284E-01	4.284E-01	0.826E-01	19.28	
ANH-511	1.00E+09Y	1.00	1.380E-01	1.380E-01	0.697E-01	50.50	
	Total Activity :		6.591E+01	6.596E+01			

Grand Total Activity : 6.591E+01 6.596E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	128.41	69	307	0.74	256.83	254	8	9.52E-03	91.7	7.52E+00	T
0	209.33	155	313	1.08	418.65	414	11	2.15E-02	47.1	5.98E+00	T
0	269.83	131	192	1.23	539.65	535	10	1.82E-02	43.2	5.02E+00	T
0	326.80	85	217	2.44	653.59	648	15	1.19E-02	77.8	4.36E+00	
0	462.92	67	100	1.47	925.85	920	11	9.29E-03	65.4	3.33E+00	T
0	727.54	90	59	1.27	1455.08	1450	12	1.25E-02	40.4	2.30E+00	T
8	964.64	41	49	2.62	1929.28	1924	21	5.68E-03	71.2	1.80E+00	T
0	1496.29	22	3	1.98	2992.58	2985	13	3.09E-03	53.6	1.23E+00	
0	1730.11	29	6	1.90	3460.21	3453	13	3.98E-03	52.3	1.11E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:37:24.03

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1  *
* Acquisition date  : 9-JUL-2009 08:36:12.  Detector SN#     :             *
* Detector ID       : GAM11                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.66          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201873070           Analyst initials: MXR1         *
* Batch Number      : 881931                Sample Quantity : 1.25460E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 1-NOV-2008 15:37:21.59MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.266E+01	2.830E+00	4.298E-01	2.881E-02	75.996
CD-109	2.504E+00	7.932E-01	1.063E+00	9.739E-02	2.355
SN-126	3.711E-01	1.002E-01	1.051E-01	9.572E-03	3.532
TL-208	4.845E-01	7.994E-02	5.606E-02	4.154E-03	8.642
BI-211	3.341E+00	4.530E-01	2.852E-01	1.999E-02	11.713
PB-212	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
PO-212	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
BI-214	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
PB-214	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-214	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-216	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
PO-218	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
RA-224	3.482E+00	1.276E+00	1.027E+00	7.041E-02	3.391
RA-226	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
AC-228	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
RA-228	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
TH-228	1.351E+00	1.465E-01	9.023E-02	7.352E-03	14.967
TH-230	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
TH-234	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
U-234	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
U-235	1.866E-01	3.692E-01	3.234E-01	5.281E-02	0.577
NP-237	1.090E+00	3.703E-01	3.111E-01	7.001E-02	3.503
U-238	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
AM-243	4.284E-01	8.257E-02	7.705E-02	5.933E-03	5.560
ANH-511	1.380E-01	6.968E-02	4.536E-02	2.796E-03	3.042

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.576E-01		3.119E-01	4.955E-01	3.402E-02	-0.318
NA-22	-1.415E-02		4.788E-02	7.585E-02	4.649E-03	-0.187
NA-24	-9.176E-02		8.439E-02	Half-Life too short		
AL-26	3.332E-03		2.269E-02	3.883E-02	2.142E-03	0.086
TI-44	1.963E-01		4.306E-02	6.274E-02	5.062E-03	3.129
SC-46	-1.814E-04		3.810E-02	6.345E-02	5.097E-03	-0.003
V-48	-4.293E-03		6.598E-02	1.086E-01	8.128E-03	-0.040
CR-51	1.827E-01		3.621E-01	5.720E-01	4.386E-02	0.319
MN-52	-1.269E-01		1.818E-01	2.600E-01	1.666E-02	-0.488
MN-54	-1.561E-02		3.781E-02	6.120E-02	4.802E-03	-0.255
CO-56	3.360E-03		3.707E-02	6.240E-02	4.924E-03	0.054
CO-57	-1.308E-02		2.436E-02	3.918E-02	2.570E-03	-0.334
CO-58	-1.763E-02		3.418E-02	5.450E-02	4.239E-03	-0.323
FE-59	-3.286E-02		9.838E-02	1.572E-01	1.148E-02	-0.209
CO-60	5.103E-03		4.164E-02	6.858E-02	4.444E-03	0.074
ZN-65	-4.993E-02		1.091E-01	1.480E-01	9.195E-03	-0.337
GE-68	-8.634E-01		1.364E+00	2.122E+00	1.404E-01	-0.407
AS-73	-4.229E-01		6.012E-01	9.710E-01	6.196E-02	-0.436
AS-74	-2.167E-02		8.228E-02	1.311E-01	8.782E-03	-0.165
SE-75	2.699E-02		5.076E-02	7.342E-02	5.480E-03	0.368
BR-77	-1.642E-01		7.335E+00	1.201E+01	7.479E-01	-0.014
SR-82	-3.198E-01		3.591E-01	5.586E-01	4.254E-02	-0.572
RB-83	7.665E-03		6.992E-02	1.155E-01	7.193E-03	0.066
RB-84	4.069E-02		6.633E-02	1.162E-01	9.305E-03	0.350
KR-85	8.332E+00		8.208E+00	1.268E+01	7.842E-01	0.657
SR-85	4.216E-02		4.153E-02	6.417E-02	3.968E-03	0.657
RB-86	-2.606E-01		8.021E-01	1.283E+00	8.504E-02	-0.203
Y-88	-4.315E-03		2.756E-02	4.395E-02	2.387E-03	-0.098
ZR-88	-4.245E-03		2.956E-02	4.872E-02	2.580E-03	-0.087
Y-91	-6.113E+00		1.958E+01	3.117E+01	1.773E+00	-0.196
NB-94	9.777E-03		3.395E-02	5.601E-02	4.075E-03	0.175
NB-95	5.387E-02		4.425E-02	7.725E-02	5.847E-03	0.697
NB-95M	7.866E-01		1.750E-01	2.812E-01	2.325E-02	2.798
ZR-95	1.922E-02		6.968E-02	1.146E-01	9.757E-03	0.168
NB-97	-2.090E-02		1.467E-02	Half-Life too short		

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1.287E+00		3.267E-01	Half-Life too short		
MO-99	1.180E+00		8.180E+00	1.333E+01	1.939E+00	0.089
TC-99M	-6.153E+08		6.582E+08	Half-Life too short		
RH-101	4.171E-02		3.271E-02	5.395E-02	3.178E-03	0.773
RH-102	-2.080E-02		2.812E-02	4.386E-02	2.595E-03	-0.474
RU-103	6.784E-03		3.757E-02	6.253E-02	7.986E-03	0.108
RH-106	-1.822E-01		3.082E-01	4.746E-01	5.833E-02	-0.384
RU-106	-1.822E-01		3.077E-01	4.746E-01	3.250E-02	-0.384
AG-108M	-2.249E-03		3.102E-02	5.107E-02	3.129E-03	-0.044
AG-110M	-2.736E-02		3.610E-02	5.481E-02	4.033E-03	-0.499
IN-111	3.128E-01		8.684E-01	1.245E+00	8.668E-02	0.251
IN-113M	-2.074E-02		4.285E-02	6.914E-02	3.949E-03	-0.300
SN-113	-2.074E-02		4.285E-02	6.914E-02	3.949E-03	-0.300
IN-114M	1.299E-01		1.874E-01	2.769E-01	1.585E-02	0.469
CD-115	-2.229E+00		7.137E+00	1.142E+01	7.166E-01	-0.195
SN-117M	1.662E-02		5.144E-02	8.495E-02	4.635E-03	0.196
SB-122	1.145E+00		1.485E+00	2.555E+00	1.662E-01	0.448
I-123	3.523E-01		5.898E-01	Half-Life too short		
TE-123M	8.512E-03		2.850E-02	4.700E-02	2.598E-03	0.181
I-124	5.147E-01		6.160E-01	9.385E-01	6.324E-02	0.548
SB-124	7.395E-02		6.806E-02	1.331E-01	8.499E-03	0.556
SB-125	4.226E-02		8.733E-02	1.490E-01	8.678E-03	0.284
TE-125M	-6.013E+00		8.708E+00	1.396E+01	1.287E+00	-0.431
I-126	-1.306E-01		1.752E-01	2.662E-01	1.888E-02	-0.491
SB-126	6.378E-02		1.369E-01	2.172E-01	1.599E-02	0.294
SB-127	3.891E-01		1.043E+00	1.737E+00	1.728E-01	0.224
XE-127	-4.291E-02		4.678E-02	6.948E-02	4.165E-03	-0.618
I-131	1.449E-02		9.637E-02	1.621E-01	1.090E-02	0.089
TE-132	-1.990E-01		5.253E-01	8.281E-01	1.197E-01	-0.240
BA-133	-1.406E-03		4.353E-02	6.300E-02	7.450E-03	-0.022
I-133	3.120E-04		1.082E-03	Half-Life too short		
CS-134	6.318E-02		4.616E-02	8.449E-02	6.561E-03	0.748
CS-135	2.581E-01		1.960E-01	2.943E-01	2.654E-02	0.877
I-135	2.488E+07		1.307E+08	Half-Life too short		
CS-136	8.441E-02		1.052E-01	1.851E-01	1.363E-02	0.456
BA-137M	3.354E-02		3.711E-02	6.399E-02	4.522E-03	0.524
CS-137	3.546E-02		3.923E-02	6.764E-02	4.793E-03	0.524
CE-139	3.330E-03		2.910E-02	4.760E-02	2.497E-03	0.070
BA-140	5.998E-02		2.205E-01	3.672E-01	1.198E-01	0.163
LA-140	-8.414E-02		6.859E-02	8.954E-02	5.499E-03	-0.940
CE-141	3.443E-02		6.644E-02	9.787E-02	5.930E-03	0.352
CE-143	5.375E-04		7.547E-05	Half-Life too short		
CE-144	-1.116E-02		2.288E-01	3.280E-01	4.710E-02	-0.034
PM-144	-1.524E-02		3.393E-02	5.268E-02	3.818E-03	-0.289
PR-144	-1.032E+00		2.298E+00	3.567E+00	2.585E-01	-0.289
PM-146	2.502E-02		3.986E-02	6.854E-02	5.893E-03	0.365
ND-147	-1.824E-01		5.141E-01	8.191E-01	1.126E-01	-0.223
PM-149	2.539E+01		5.906E+01	1.013E+02	1.524E+01	0.251

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	4.934E-02		1.043E-01	1.572E-01	1.141E-02	0.314
GD-153	-5.330E-03		8.317E-02	1.198E-01	9.746E-03	-0.044
EU-154	-3.848E-02		1.340E-01	2.123E-01	2.026E-02	-0.181
EU-155	1.117E-01		1.067E-01	1.821E-01	1.390E-02	0.614
TB-160	-1.992E-02		1.317E-01	2.166E-01	1.733E-02	-0.092
HO-166M	7.009E-02		5.789E-02	1.025E-01	7.501E-03	0.684
TM-171	-1.863E+01		2.897E+01	3.838E+01	2.686E+00	-0.485
LU-176	-1.219E-02		2.272E-02	3.703E-02	2.726E-03	-0.329
LU-177	2.953E+00	+	1.401E+00	1.679E+00	1.027E-01	1.759
LU-177M	-2.036E-01		1.715E-01	2.626E-01	1.434E-02	-0.775
HF-181	2.746E-03		4.269E-02	7.056E-02	4.209E-03	0.039
W-181	-2.998E-02		3.374E-01	4.932E-01	3.391E-02	-0.061
TA-182	1.258E-01		2.112E-01	3.609E-01	2.089E-02	0.348
RE-183	1.862E-02		1.081E-01	1.774E-01	9.485E-03	0.105
RE-184	-1.269E-01		2.292E-01	3.558E-01	2.539E-02	-0.357
OS-185	-6.817E-03		4.052E-02	6.472E-02	4.520E-03	-0.105
RE-188	1.161E-02		1.676E-01	2.743E-01	1.524E-02	0.042
W-188	-6.750E-01		7.764E+00	1.132E+01	8.619E-01	-0.060
IR-192	1.097E-03		3.209E-02	5.394E-02	3.889E-03	0.020
AU-195	2.054E-01		2.375E-01	3.572E-01	2.861E-02	0.575
TL-200	-7.708E-05		9.691E-05	Half-Life too short		
TL-201	2.954E+00		5.149E+00	8.576E+00	4.520E-01	0.344
TL-202	4.174E-02		6.248E-02	1.076E-01	6.089E-03	0.388
HG-203	2.710E-02		4.444E-02	6.692E-02	5.379E-03	0.405
BI-207	6.754E-03		5.248E-02	8.753E-02	5.917E-03	0.077
TL-207	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
PO-209	7.048E+00		6.760E+00	1.227E+01	9.884E-01	0.574
BI-210	1.210E+00		2.260E+00	3.826E+00	2.836E-01	0.316
PB-210	1.210E+00		2.260E+00	3.826E+00	2.836E-01	0.316
PO-210	1.210E+00		2.259E+00	3.826E+00	2.400E-01	0.316
PB-211	-6.519E-01		1.061E+00	1.567E+00	9.761E-01	-0.416
BI-212	9.922E-01	+	4.104E-01	6.070E-01	5.447E-02	1.635
PO-215	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
RN-219	1.474E-01		4.182E-01	7.073E-01	9.497E-02	0.208
RN-220	1.033E+01		2.402E+01	4.059E+01	2.604E+00	0.254
RA-223	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
AC-227	1.114E-01		3.799E-01	6.169E-01	9.009E-02	0.181
TH-227	1.114E-01		3.800E-01	6.169E-01	1.076E-01	0.181
TH-229	-2.191E-01		4.853E-01	7.690E-01	4.458E-02	-0.285
PA-231	-1.733E-01		1.562E+00	2.473E+00	3.632E-01	-0.070
TH-231	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
U-231	-6.152E-01		9.137E-01	1.283E+00	1.062E-01	-0.480
PA-233	-1.306E-02		5.849E-02	9.699E-02	7.332E-03	-0.135
PA-234	-9.030E-02		2.896E-01	4.662E-01	8.571E-02	-0.194
PA-234M	5.944E+00		6.703E+00	1.190E+01	1.217E+00	0.500
NP-236	5.222E-02		8.047E-02	1.344E-01	7.268E-03	0.388
NP-239	5.517E-02		1.821E-01	3.033E-01	2.065E-02	0.182
AM-241	1.295E-01		1.382E-01	2.122E-01	1.535E-02	0.610

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.890E-02		9.506E-02	1.588E-01	1.211E-02	0.182
CM-247	1.383E-02		3.751E-02	6.355E-02	3.415E-03	0.218
CF-249	3.826E-03		3.815E-02	6.382E-02	3.449E-03	0.060
CF-251	3.375E-02		1.222E-01	2.009E-01	1.094E-02	0.168

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201873070           *
* Acquisition date :  9-JUL-2009 08:36:12 Detector SN#    :                 *
* Detector ID      : GAM11                Sensitivity     : 5.000           *
* Geometry         : CAN                  Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:01.66     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 25-JUN-2009 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G1201873070          Analyst initials: MXR1            *
* Batch Number     : 881931               Sample Quantity : 1.2546E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.266E+01	2.773E+00	2.149E-01	1.415E+00
CD-109	2.504E+00	7.773E-01	5.530E-01	3.966E-01
SN-126	3.711E-01	9.818E-02	5.465E-02	5.009E-02
TL-208	4.845E-01	7.834E-02	2.840E-02	3.997E-02
BI-211	3.341E+00	4.440E-01	1.455E-01	2.265E-01
PB-212	1.351E+00	1.436E-01	4.629E-02	7.326E-02
PO-212	1.351E+00	1.436E-01	4.629E-02	7.326E-02
BI-214	1.071E+00	1.655E-01	5.563E-02	8.443E-02
PB-214	1.162E+00	1.655E-01	4.774E-02	8.443E-02
PO-214	1.162E+00	1.655E-01	4.774E-02	8.443E-02
PO-216	1.351E+00	1.436E-01	4.629E-02	7.326E-02
PO-218	1.162E+00	1.655E-01	4.774E-02	8.443E-02
RA-224	3.482E+00	1.250E+00	5.266E-01	6.379E-01
RA-226	1.071E+00	1.655E-01	5.563E-02	8.443E-02
AC-228	1.224E+00	2.823E-01	1.191E-01	1.440E-01
RA-228	1.224E+00	2.823E-01	1.191E-01	1.440E-01
TH-228	1.351E+00	1.436E-01	4.629E-02	7.326E-02
TH-230	1.071E+00	1.655E-01	5.563E-02	8.443E-02
TH-232	1.224E+00	2.823E-01	1.191E-01	1.440E-01
TH-234	2.214E+00	1.488E+00	9.230E-01	7.594E-01
U-234	1.071E+00	1.655E-01	5.563E-02	8.443E-02
U-235	1.866E-01	3.618E-01	1.670E-01	1.846E-01
NP-237	1.090E+00	3.629E-01	1.618E-01	1.852E-01
U-238	2.214E+00	1.488E+00	9.230E-01	7.594E-01
AM-243	4.284E-01	8.092E-02	4.016E-02	4.129E-02
ANH-511	1.380E-01	6.829E-02	2.302E-02	3.484E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.576E-01	3.056E-01	2.517E-01	1.559E-01 NOT IDENT.

NA-22	-1.415E-02	4.693E-02	3.799E-02	2.394E-02	NOT IDENT.
NA-24	-9.176E+04	1.654E+05	0.000E+00	8.439E+04	SHORT HLIF
AL-26	3.332E-03	2.224E-02	1.935E-02	1.134E-02	NOT IDENT.
TI-44	1.963E-01	4.220E-02	3.268E-02	2.153E-02	NOT IDENT.
SC-46	-1.814E-04	3.733E-02	3.195E-02	1.905E-02	FAIL ABUN
V-48	-4.293E-03	6.466E-02	5.462E-02	3.299E-02	NOT IDENT.
CR-51	1.827E-01	3.548E-01	2.922E-01	1.810E-01	NOT IDENT.
MN-52	-1.269E-01	1.782E-01	1.300E-01	9.089E-02	FAIL ABUN
MN-54	-1.561E-02	3.705E-02	3.084E-02	1.890E-02	NOT IDENT.
CO-56	3.360E-03	3.632E-02	3.144E-02	1.853E-02	FAIL ABUN
CO-57	-1.308E-02	2.387E-02	2.029E-02	1.218E-02	NOT IDENT.
CO-58	-1.763E-02	3.350E-02	2.748E-02	1.709E-02	NOT IDENT.
FE-59	-3.286E-02	9.641E-02	7.893E-02	4.919E-02	FAIL ABUN
CO-60	5.103E-03	4.081E-02	3.433E-02	2.082E-02	NOT IDENT.
ZN-65	-4.993E-02	1.069E-01	7.428E-02	5.456E-02	NOT IDENT.
GE-68	-8.634E-01	1.337E+00	1.065E+00	6.819E-01	NOT IDENT.
AS-73	-4.229E-01	5.892E-01	5.084E-01	3.006E-01	NOT IDENT.
AS-74	-2.167E-02	8.064E-02	6.639E-02	4.114E-02	NOT IDENT.
SE-75	2.699E-02	4.975E-02	3.761E-02	2.538E-02	NOT IDENT.
BR-77	-1.642E-01	7.188E+00	6.093E+00	3.667E+00	FAIL ABUN
SR-82	-3.198E-01	3.519E-01	2.818E-01	1.795E-01	NOT IDENT.
RB-83	7.665E-03	6.852E-02	5.861E-02	3.496E-02	NOT IDENT.
RB-84	4.069E-02	6.500E-02	5.851E-02	3.317E-02	NOT IDENT.
KR-85	8.332E+00	8.044E+00	6.436E+00	4.104E+00	NOT IDENT.
SR-85	4.216E-02	4.070E-02	3.257E-02	2.077E-02	NOT IDENT.
RB-86	-2.606E-01	7.861E-01	6.444E-01	4.011E-01	NOT IDENT.
Y-88	-4.315E-03	2.701E-02	2.190E-02	1.378E-02	NOT IDENT.
ZR-88	-4.245E-03	2.897E-02	2.482E-02	1.478E-02	NOT IDENT.
Y-91	-6.113E+00	1.919E+01	1.563E+01	9.788E+00	NOT IDENT.
NB-94	9.777E-03	3.327E-02	2.830E-02	1.698E-02	NOT IDENT.
NB-95	5.387E-02	4.336E-02	3.898E-02	2.212E-02	NOT IDENT.
NB-95M	7.866E-01	1.715E-01	1.443E-01	8.748E-02	NOT IDENT.
ZR-95	1.922E-02	6.828E-02	5.785E-02	3.484E-02	NOT IDENT.
NB-97	-2.090E+04	2.876E+04	0.000E+00	1.467E+04	SHORT HLIF
ZR-97	1.287E+06	6.404E+05	0.000E+00	3.267E+05	SHORT HLIF
MO-99	1.180E+00	8.016E+00	6.728E+00	4.090E+00	NOT IDENT.
TC-99M	-6.153E+14	1.290E+15	0.000E+00	6.582E+14	SHORT HLIF
RH-101	4.171E-02	3.206E-02	2.775E-02	1.636E-02	FAIL ABUN
RH-102	-2.080E-02	2.756E-02	2.229E-02	1.406E-02	NOT IDENT.
RU-103	6.784E-03	3.682E-02	3.175E-02	1.878E-02	FAIL ABUN
RH-106	-1.822E-01	3.021E-01	2.402E-01	1.541E-01	FAIL ABUN
RU-106	-1.822E-01	3.015E-01	2.402E-01	1.538E-01	FAIL ABUN
AG-108M	-2.249E-03	3.040E-02	2.598E-02	1.551E-02	NOT IDENT.
AG-110M	-2.736E-02	3.537E-02	2.772E-02	1.805E-02	NOT IDENT.
IN-111	3.128E-01	8.510E-01	6.386E-01	4.342E-01	NOT IDENT.
IN-113M	-2.074E-02	4.199E-02	3.523E-02	2.143E-02	NOT IDENT.
SN-113	-2.074E-02	4.199E-02	3.523E-02	2.143E-02	NOT IDENT.
IN-114M	1.299E-01	1.837E-01	1.425E-01	9.370E-02	NOT IDENT.
CD-115	-2.229E+00	6.994E+00	5.793E+00	3.568E+00	NOT IDENT.
SN-117M	1.662E-02	5.041E-02	4.383E-02	2.572E-02	NOT IDENT.
SB-122	1.145E+00	1.455E+00	1.295E+00	7.426E-01	NOT IDENT.
I-123	3.523E+05	1.156E+06	0.000E+00	5.898E+05	SHORT HLIF
TE-123M	8.512E-03	2.793E-02	2.425E-02	1.425E-02	NOT IDENT.
I-124	5.147E-01	6.037E-01	4.752E-01	3.080E-01	NOT IDENT.
SB-124	7.395E-02	6.670E-02	6.638E-02	3.403E-02	FAIL ABUN
SB-125	4.226E-02	8.558E-02	7.580E-02	4.366E-02	FAIL ABUN
TE-125M	-6.013E+00	8.534E+00	7.241E+00	4.354E+00	NOT IDENT.
I-126	-1.306E-01	1.717E-01	1.346E-01	8.759E-02	NOT IDENT.
SB-126	6.378E-02	1.342E-01	1.097E-01	6.847E-02	FAIL ABUN
SB-127	3.891E-01	1.022E+00	8.779E-01	5.213E-01	NOT IDENT.
XE-127	-4.291E-02	4.585E-02	3.572E-02	2.339E-02	FAIL ABUN
I-131	1.449E-02	9.445E-02	8.269E-02	4.819E-02	NOT IDENT.
TE-132	-1.990E-01	5.148E-01	4.251E-01	2.627E-01	NOT IDENT.
BA-133	-1.406E-03	4.266E-02	3.214E-02	2.177E-02	FAIL ABUN
I-133	3.120E+02	2.120E+03	0.000E+00	1.082E+03	SHORT HLIF
CS-134	6.318E-02	4.524E-02	4.261E-02	2.308E-02	NOT IDENT.
CS-135	2.581E-01	1.920E-01	1.508E-01	9.798E-02	NOT IDENT.
I-135	2.488E+13	2.563E+14	0.000E+00	1.307E+14	SHORT HLIF
CS-136	8.441E-02	1.031E-01	9.299E-02	5.260E-02	FAIL ABUN
BA-137M	3.354E-02	3.637E-02	3.236E-02	1.856E-02	NOT IDENT.
CS-137	3.546E-02	3.845E-02	3.421E-02	1.962E-02	NOT IDENT.
CE-139	3.330E-03	2.852E-02	2.454E-02	1.455E-02	NOT IDENT.
BA-140	5.998E-02	2.160E-01	1.862E-01	1.102E-01	NOT IDENT.
LA-140	-8.414E-02	6.722E-02	4.470E-02	3.430E-02	NOT IDENT.
CE-141	3.443E-02	6.511E-02	5.055E-02	3.322E-02	NOT IDENT.
CE-143	5.375E+02	1.479E+02	0.000E+00	7.547E+01	SHORT HLIF
CE-144	-1.116E-02	2.242E-01	1.696E-01	1.144E-01	NOT IDENT.
PM-144	-1.524E-02	3.325E-02	2.662E-02	1.696E-02	NOT IDENT.

PR-144	-1.032E+00	2.252E+00	1.803E+00	1.149E+00	NOT IDENT.
PM-146	2.502E-02	3.906E-02	3.485E-02	1.993E-02	NOT IDENT.
ND-147	-1.824E-01	5.039E-01	4.155E-01	2.571E-01	FAIL ABUN
PM-149	2.539E+01	5.788E+01	5.185E+01	2.953E+01	NOT IDENT.
EU-152	4.934E-02	1.022E-01	8.023E-02	5.213E-02	FAIL ABUN
GD-153	-5.330E-03	8.151E-02	6.221E-02	4.159E-02	FAIL ABUN
EU-154	-3.848E-02	1.313E-01	1.064E-01	6.698E-02	NOT IDENT.
EU-155	1.117E-01	1.045E-01	9.445E-02	5.333E-02	FAIL ABUN
TB-160	-1.992E-02	1.291E-01	1.091E-01	6.585E-02	FAIL ABUN
HO-166M	7.009E-02	5.673E-02	5.176E-02	2.895E-02	FAIL ABUN
TM-171	-1.863E+01	2.839E+01	2.004E+01	1.448E+01	NOT IDENT.
LU-176	-1.219E-02	2.226E-02	1.893E-02	1.136E-02	FAIL ABUN
LU-177	2.953E+00	1.373E+00	8.628E-01	7.007E-01	FAIL ABUN
LU-177M	-2.036E-01	1.680E-01	1.337E-01	8.573E-02	FAIL ABUN
HF-181	2.746E-03	4.183E-02	3.584E-02	2.134E-02	NOT IDENT.
W-181	-2.998E-02	3.306E-01	2.576E-01	1.687E-01	NOT IDENT.
TA-182	1.258E-01	2.070E-01	1.809E-01	1.056E-01	FAIL ABUN
RE-183	1.862E-02	1.060E-01	9.148E-02	5.406E-02	FAIL ABUN
RE-184	-1.269E-01	2.246E-01	1.824E-01	1.146E-01	NOT IDENT.
OS-185	-6.817E-03	3.971E-02	3.274E-02	2.026E-02	NOT IDENT.
RE-188	1.161E-02	1.643E-01	1.415E-01	8.381E-02	NOT IDENT.
W-188	-6.750E-01	7.609E+00	5.791E+00	3.882E+00	FAIL ABUN
IR-192	1.097E-03	3.145E-02	2.756E-02	1.605E-02	FAIL ABUN
AU-195	2.054E-01	2.328E-01	1.855E-01	1.188E-01	FAIL ABUN
TL-200	-7.708E+01	1.900E+02	0.000E+00	9.691E+01	SHORT HLIF
TL-201	2.954E+00	5.046E+00	4.421E+00	2.575E+00	NOT IDENT.
TL-202	4.174E-02	6.123E-02	5.474E-02	3.124E-02	NOT IDENT.
HG-203	2.710E-02	4.355E-02	3.426E-02	2.222E-02	FAIL ABUN
BI-207	6.754E-03	5.143E-02	4.396E-02	2.624E-02	FAIL ABUN
TL-207	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
PO-209	7.048E+00	6.625E+00	6.177E+00	3.380E+00	NOT IDENT.
BI-210	1.210E+00	2.215E+00	2.007E+00	1.130E+00	NOT IDENT.
PB-210	1.210E+00	2.215E+00	2.007E+00	1.130E+00	NOT IDENT.
PO-210	1.210E+00	2.214E+00	2.007E+00	1.130E+00	NOT IDENT.
PB-211	-6.519E-01	1.040E+00	7.978E-01	5.305E-01	NOT IDENT.
BI-212	9.922E-01	4.022E-01	3.066E-01	2.052E-01	FAIL ABUN
PO-215	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
RN-219	1.474E-01	4.098E-01	3.602E-01	2.091E-01	FAIL ABUN
RN-220	1.033E+01	2.354E+01	2.058E+01	1.201E+01	NOT IDENT.
RA-223	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
AC-227	1.114E-01	3.723E-01	3.161E-01	1.899E-01	NOT IDENT.
TH-227	1.114E-01	3.724E-01	3.161E-01	1.900E-01	NOT IDENT.
TH-229	-2.191E-01	4.756E-01	3.957E-01	2.427E-01	FAIL ABUN
PA-231	-1.733E-01	1.531E+00	1.266E+00	7.809E-01	NOT IDENT.
TH-231	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
U-231	-6.152E-01	8.954E-01	6.664E-01	4.569E-01	FAIL ABUN
PA-233	-1.306E-02	5.732E-02	4.957E-02	2.925E-02	FAIL ABUN
PA-234	-9.030E-02	2.838E-01	2.345E-01	1.448E-01	FAIL ABUN
PA-234M	5.944E+00	6.569E+00	5.982E+00	3.351E+00	NOT IDENT.
NP-236	5.222E-02	7.886E-02	6.935E-02	4.024E-02	NOT IDENT.
NP-239	5.517E-02	1.785E-01	1.571E-01	9.106E-02	FAIL ABUN
AM-241	1.295E-01	1.354E-01	1.109E-01	6.908E-02	NOT IDENT.
CM-243	2.890E-02	9.316E-02	8.238E-02	4.753E-02	FAIL ABUN
CM-247	1.383E-02	3.676E-02	3.236E-02	1.875E-02	FAIL ABUN
CF-249	3.826E-03	3.739E-02	3.252E-02	1.907E-02	NOT IDENT.
CF-251	3.375E-02	1.198E-01	1.035E-01	6.112E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	300.8419
46.50	300.8419
46.50	300.8419
48.70	366.4348
49.72	364.3700
51.35	305.2627
52.39	319.5000
52.97	351.7958
53.15	357.3872
53.44	364.8776
54.07	375.3334
56.28	397.8364
56.28	397.8381
57.37	0.0000
57.53	325.2999
57.53	325.3006
57.60	347.4346
57.98	347.8926
57.98	347.8926
59.32	394.4312
59.32	394.4312
59.40	394.4809
59.54	394.5681
59.72	406.5062
60.01	406.6917
61.10	450.3455
61.14	488.8921
61.30	489.0139
63.00	468.0088
63.29	468.2150
63.29	468.2150
63.58	463.9610
64.28	467.4295
65.12	456.0958
65.20	456.1499
65.20	456.1499
66.05	482.1027
66.72	493.0362
66.83	493.1188
66.91	490.6864
67.20	473.4518
67.20	473.4518
67.75	486.3019
67.85	486.3733
68.90	488.9907
68.90	488.9907
69.30	494.8973
69.67	498.1642
70.82	492.9689
70.82	492.9689
70.83	492.9769
72.80	470.0472
72.87	470.0929
72.87	470.0929
74.67	471.2693
74.81	471.3607
74.81	471.3607
74.81	471.3607
74.81	471.3607
74.81	471.3607
74.81	471.3607
74.97	471.4635
75.28	471.6653
75.70	471.9355
77.11	447.2570
77.11	447.2570
77.11	447.2570

77.11	447.2570
77.11	447.2570
77.11	447.2570
78.38	364.4927
79.62	384.1101
79.80	384.2010
79.80	384.2010
80.11	372.9431
80.18	334.9186
80.30	334.9709
80.30	334.9709
80.57	335.0905
81.00	373.3798
81.07	373.4142
81.07	373.4142
81.07	373.4142
81.07	373.4142
82.60	416.9215
83.37	429.5644
83.78	376.6420
83.78	376.6420
83.78	376.6420
83.78	376.6420
84.21	376.8509
84.40	376.9426
84.90	377.1830
85.43	377.4370
86.29	377.8489
86.50	377.9496
86.54	377.9676
86.59	377.9916
86.72	378.0548
86.79	378.0863
86.94	378.1585
87.30	378.3298
87.30	378.3298
87.30	378.3298
87.30	378.3298
87.30	378.3298
87.30	378.3298
87.57	378.4576
87.88	378.6049
88.03	378.6755
88.36	378.8303
88.47	378.8829
89.95	379.5773
91.11	380.1184
92.29	380.6640
92.38	380.7061
92.38	380.7061
93.35	381.1524
94.00	381.4500
94.67	344.1590
94.67	344.1610
94.90	390.7769
94.90	390.7769
94.90	390.7769
94.90	390.7769
95.87	406.7524
95.87	406.7524
96.73	386.9637
97.43	360.8405
98.44	345.6935
98.44	345.6948
98.88	327.1752
99.55	319.6343
99.55	319.6343
99.86	345.3726
100.00	345.4280
100.10	345.4699
103.18	402.1840
103.76	372.0925
105.00	359.8642
105.31	355.0844
108.00	376.8052
109.28	369.4525
111.00	360.2743
111.00	360.2743

111.76	344.7637
112.95	315.5306
115.19	343.0540
116.30	315.6612
117.00	322.8465
117.00	322.8465
117.66	327.0459
121.11	363.1308
121.62	354.3378
121.78	337.4236
122.06	337.5204
122.32	306.6451
122.32	306.6451
122.32	306.6451
122.32	306.6451
123.07	306.1654
127.23	311.5764
129.76	328.4569
131.20	343.4313
133.02	329.5003
133.54	339.3633
135.34	320.7269
136.00	348.2622
136.25	356.4473
136.48	337.6185
140.51	348.1209
140.51	0.0000
142.18	315.6692
142.65	315.8064
143.76	316.1304
144.24	300.3544
144.24	300.3544
144.24	300.3544
144.24	300.3544
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145.44	307.2212
147.16	301.1563
152.43	311.4215
152.70	310.4675
153.22	311.6389
154.21	306.7623
154.21	306.7623
154.21	306.7623
154.21	306.7623
155.03	327.5881
156.02	362.9275
158.56	314.1309
159.00	0.0000
159.00	320.4514
160.31	311.4994
161.27	287.9346
162.32	315.1444
162.64	329.7474
163.35	353.8104
163.89	331.1360
165.85	302.5714
167.43	286.3129
171.28	296.6278
171.86	291.5460
172.10	291.6035
176.55	273.7800
176.60	273.7899
181.06	289.7188
184.41	293.8629
185.71	282.1169
186.00	282.1821
190.27	237.5215
192.34	270.1835
193.63	275.3397
197.04	262.1952
198.01	226.1218
198.60	235.8242
200.40	279.9521
201.83	287.7355
202.84	299.7260
205.31	226.4899
208.36	266.5463
208.81	275.2344

209.75	264.6613
209.75	264.6613
210.97	248.0959
215.65	252.0966
216.55	255.1397
218.09	260.8284
222.10	246.3675
223.80	248.8317
226.40	251.4543
227.00	262.4482
227.08	264.6411
227.20	264.6633
228.16	253.9371
228.18	253.9407
228.18	253.9407
231.56	0.0000
235.69	264.6537
236.00	268.2151
236.00	268.2151
238.60	251.3388
238.63	251.3441
238.63	251.3441
238.63	251.3441
239.00	251.4052
240.98	251.7354
241.98	251.9014
241.98	251.9014
241.98	251.9014
244.69	209.8130
245.39	208.1450
247.94	183.7532
248.90	212.1548
249.79	223.3324
252.40	217.0622
252.85	214.9094
252.85	214.9094
254.15	0.0000
256.20	199.8248
256.20	199.8248
260.50	222.6288
260.90	232.7077
262.80	211.8018
264.65	194.6353
268.24	221.9103
268.79	227.3567
269.46	225.6588
269.46	225.6588
269.46	225.6588
269.46	225.6588
271.23	183.7718
273.65	184.0421
276.40	197.8362
277.35	197.9490
277.60	194.3789
277.60	194.3789
278.00	175.5238
278.60	172.5842
279.20	177.1512
279.53	181.6895
280.46	174.2785
281.68	183.4269
283.67	194.1797
284.30	194.7552
285.00	189.8126
285.90	178.1585
286.10	175.4644
286.10	175.4644
287.40	186.0589
288.45	0.0000
290.67	184.3999
290.80	184.4123
291.72	186.0240
293.26	0.0000
293.70	177.1544
295.21	250.0479
295.21	250.0479
295.21	250.0479
295.96	242.5781

296.50	212.3214
297.23	174.4794
298.57	183.7230
299.80	174.7367
299.80	174.7367
300.09	166.7321
300.09	166.7321
300.09	166.7321
300.10	166.7321
300.12	166.7344
301.29	166.2666
302.84	201.8271
303.76	199.1911
303.91	199.2071
304.40	193.7787
304.40	193.7787
304.84	174.6256
306.84	166.5860
308.46	154.8273
311.98	155.1305
316.51	157.3588
318.01	153.8064
319.02	155.6305
319.41	161.8081
320.08	140.9394
323.87	140.1306
323.87	140.1306
323.87	140.1306
323.87	140.1306
325.23	163.3477
328.77	160.2636
333.44	120.7292
334.20	120.7784
334.20	120.7784
334.30	120.7848
338.28	142.7636
338.28	142.7636
338.28	142.7636
338.28	142.7636
338.32	142.7655
338.32	142.7655
338.32	142.7655
340.50	163.1268
340.57	163.1311
344.27	138.5410
345.85	133.9796
350.59	0.0000
351.07	119.9703
351.92	106.2694
351.92	106.2694
351.92	106.2694
355.39	0.0000
356.01	123.7172
364.48	126.4478
366.43	131.2949
367.43	133.2495
367.94	0.0000
369.80	138.1368
374.96	129.9510
383.85	141.9465
387.95	130.7721
388.63	122.2203
391.69	142.4794
391.69	142.4794
392.90	136.8206
398.62	144.8656
400.65	131.5598
401.10	137.3512
401.81	139.3182
402.60	139.3696
404.84	169.3420
410.95	127.3658
411.60	141.8823
413.65	150.7099
414.70	112.1201
415.30	111.1844
415.76	110.2413
417.63	0.0000

418.52	114.2520
423.70	125.1955
427.08	112.7502
427.89	106.9573
432.53	127.6403
433.93	112.1194
439.47	104.5758
439.56	104.5797
439.89	100.6853
443.98	116.5334
444.90	110.7019
445.03	110.7088
445.03	110.7088
445.03	110.7088
445.03	110.7088
453.90	90.4805
463.38	88.8728
468.07	107.1881
473.00	92.2076
475.06	115.1093
475.35	122.0706
476.78	115.1915
477.59	116.2245
477.96	113.2611
482.03	114.4469
484.57	97.6303
487.03	106.7048
490.36	0.0000
492.35	82.9504
497.08	92.1213
507.63	0.0000
510.53	0.0000
510.84	100.6830
511.00	100.6891
511.85	100.7239
511.85	100.7239
513.99	109.2088
513.99	109.2088
520.41	104.0939
520.65	104.1039
527.90	98.3167
528.96	0.0000
529.64	98.3830
529.87	0.0000
531.02	101.4795
537.32	77.3100
543.00	84.6130
546.56	0.0000
549.76	75.6314
552.65	100.2682
555.20	72.7126
563.23	82.1738
563.90	86.3051
568.70	108.0710
569.32	103.9787
569.50	98.8383
569.67	98.8430
573.80	88.9390
574.00	86.3672
574.64	79.5724
578.91	63.7067
579.30	0.0000
583.14	87.9468
585.48	84.5697
591.81	76.8039
592.07	75.7731
593.00	79.9514
595.88	86.2685
600.56	88.4946
602.52	0.0000
602.71	86.8245
602.71	86.8245
603.60	92.0642
604.41	105.9905
604.70	106.0004
609.31	95.0324
609.31	95.0324
609.31	95.0324

609.31	95.0324
610.33	87.0565
612.46	76.6670
614.37	83.6934
618.01	79.6089
621.84	88.1036
621.84	88.1036
631.29	87.3385
633.02	77.9132
633.10	77.9150
634.78	89.5488
635.90	99.0672
636.97	86.4523
645.85	87.7680
646.12	77.2007
656.30	79.5850
657.75	100.8563
657.90	0.0000
661.65	80.7890
661.65	80.7890
664.57	0.0000
666.33	102.2063
666.33	102.2063
675.00	73.6679
677.61	73.7303
685.20	68.5547
692.80	84.8286
695.00	80.5902
696.49	88.1540
696.49	88.1540
697.00	83.8671
697.49	82.8051
698.33	83.9014
698.50	81.7557
699.00	81.7687
702.63	82.9385
706.10	89.4986
706.58	0.0000
706.67	91.6718
709.31	92.8279
711.68	57.2506
713.82	68.0972
717.42	89.8167
720.50	67.6971
721.93	0.0000
722.20	63.2175
722.78	63.2281
722.78	63.2281
722.89	63.2310
722.95	63.2324
723.30	59.6259
724.18	84.9446
727.18	79.5960
733.00	50.7420
735.90	61.6707
739.58	66.4596
742.81	87.2461
744.21	79.6459
747.13	72.0731
751.79	83.1083
752.31	83.1213
753.82	67.8413
755.35	71.1556
756.15	68.9832
756.87	67.9033
763.93	102.0684
765.79	75.7703
766.41	76.8821
766.84	81.2862
768.36	80.2234
768.36	80.2234
768.36	80.2234
768.36	80.2234
776.49	85.3730
778.00	82.6556
778.57	74.4016
778.89	74.4082
783.80	62.5561

785.46	77.3127
792.07	75.6171
795.84	61.8515
796.30	60.9364
801.93	70.2836
805.60	58.3217
810.29	63.9617
810.76	61.1888
815.85	54.7783
817.79	47.3767
818.51	46.4569
819.60	50.1888
826.30	54.9392
828.27	0.0000
831.60	64.3464
831.96	69.0167
834.83	85.8738
836.80	0.0000
846.75	61.8079
848.13	67.4531
856.28	0.0000
856.80	75.6619
860.37	63.9188
867.32	50.0474
867.82	50.8612
871.10	65.9896
873.19	54.7078
874.81	45.2959
875.33	0.0000
876.40	52.8669
879.36	60.4674
880.27	66.1534
880.51	59.5419
881.50	53.8851
883.24	63.3673
884.67	62.4457
889.25	61.5749
896.60	41.7629
898.02	49.3742
899.00	59.8341
903.28	73.5305
911.07	79.0790
911.07	79.0790
911.07	79.0790
919.63	67.7961
920.93	69.7296
925.00	50.2003
925.24	53.0723
926.50	57.3950
934.06	56.5477
934.06	56.5477
934.06	56.5477
934.06	56.5477
935.52	56.5693
937.48	60.8451
944.10	61.1130
946.00	60.5660
949.00	55.8016
962.29	69.5024
964.01	86.0869
966.15	60.8736
968.20	60.9044
969.11	60.9185
969.11	60.9185
969.11	60.9185
977.42	49.9980
980.50	59.1508
983.50	58.2251
989.30	52.4773
996.32	61.3286
1001.03	48.7295
1001.68	49.7113
1004.76	77.0616
1021.30	0.0000
1024.50	0.0000
1034.80	60.9177
1037.82	62.9271
1038.57	57.0371

1038.76	0.0000
1045.16	65.0063
1046.59	59.1162
1048.07	54.2078
1050.47	59.1699
1050.47	59.1699
1063.62	57.3746
1076.63	69.4531
1077.35	77.4033
1085.78	78.5468
1099.22	75.7959
1112.02	63.2856
1112.84	65.3599
1115.52	73.7863
1120.29	66.1370
1120.29	66.1370
1120.29	66.1370
1120.29	66.1370
1120.51	66.1396
1121.28	60.1367
1124.00	0.0000
1129.67	73.3943
1131.51	0.0000
1147.95	0.0000
1167.94	87.0848
1173.22	63.8690
1175.09	51.7242
1177.93	91.3330
1189.05	72.2249
1204.90	78.5916
1205.75	0.0000
1213.00	71.5694
1221.42	73.7461
1230.97	73.8926
1235.34	79.2428
1236.41	0.0000
1238.11	80.1677
1238.11	80.1677
1238.11	80.1677
1238.11	80.1677
1238.25	80.1709
1246.25	54.7127
1260.41	0.0000
1271.85	51.7476
1274.45	64.1999
1274.54	64.2024
1291.56	48.8359
1298.22	0.0000
1312.09	40.6901
1325.50	42.8902
1325.50	42.8902
1332.49	41.9027
1333.61	36.6720
1360.21	20.0112
1362.66	0.0000
1365.15	25.3008
1368.21	33.7552
1368.53	0.0000
1376.25	27.1666
1377.67	31.7029
1377.67	31.7029
1377.67	31.7029
1377.67	31.7029
1384.27	41.7196
1394.10	32.8618
1395.20	28.6282
1407.95	25.5078
1434.06	27.7689
1436.60	19.2334
1457.56	0.0000
1460.81	17.1732
1489.15	14.7958
1509.49	19.4897
1596.49	26.3838
1620.62	13.2461
1678.03	0.0000
1691.02	8.6155
1691.02	8.6155

1706.46	0.0000
1750.46	0.0000
1764.49	13.5610
1764.49	13.5610
1764.49	13.5610
1764.49	13.5610
1770.23	10.1799
1771.40	61.0906
1791.20	0.0000
1808.65	7.8030
1836.01	10.7744

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201873070

Total Uranium Activity	6.6737E+00	ug/g
Total Uranium Counting Unc.	4.4310E+00	ug/g
Total Uranium Tpu	2.2607E-06	ug/g
Total Uranium Mda	2.7471E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID  : G1201873070      *
*   ANALYST       : MXR1                      DETECTOR   : GAM11            *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:36:12.08    SAMPLE ALQT:  125.460 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.303E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.519E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.886E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.890E+00
```

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 09:51:53.32

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:51:19.
Sample ID         : G1201873071          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM07                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.46  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.50	4585	1430	1.01	118.60	113	12	1.27E+00	2.2	
2	3	74.93*	271	564	1.16	149.47	146	14	7.54E-02	15.5	1.84E+00
3	3	77.20*	403	594	1.26	154.01	146	14	1.12E-01	12.0	
4	2	88.04*	2521	413	1.05	175.68	171	11	7.00E-01	2.4	5.39E+00
5	2	89.71*	72	359	1.05	179.02	171	11	1.99E-02	70.4	
6	0	92.96*	90	358	1.55	185.53	182	7	2.49E-02	37.6	
7	0	122.05	459	358	0.94	243.71	240	9	1.27E-01	8.8	
8	0	165.66	80	291	1.09	330.94	328	8	2.22E-02	38.5	
9	0	186.00*	164	365	1.41	371.61	366	12	4.56E-02	24.9	
10	0	209.69	76	324	1.23	419.00	414	10	2.11E-02	45.9	
11	0	238.62*	629	323	1.04	476.87	473	8	1.75E-01	6.4	
12	0	277.42	50	190	1.10	554.48	551	7	1.39E-02	48.1	
13	0	295.44*	176	254	1.26	590.52	585	10	4.90E-02	18.6	
14	0	338.36	143	210	1.04	676.37	672	10	3.97E-02	20.7	
15	0	352.02*	272	220	1.11	703.70	699	10	7.57E-02	11.9	
16	0	510.45*	73	141	1.55	1020.63	1014	12	2.04E-02	36.8	
17	0	582.98*	207	148	1.29	1165.72	1161	13	5.74E-02	14.0	
18	0	609.24*	193	100	1.25	1218.27	1213	10	5.35E-02	12.3	
19	0	661.62	2363	140	1.50	1323.05	1317	13	6.56E-01	2.3	
20	0	726.96*	61	95	3.15	1453.77	1449	11	1.69E-02	33.6	
21	0	911.03*	184	133	1.55	1822.07	1815	13	5.10E-02	15.0	
22	0	968.67*	94	108	1.29	1937.38	1932	11	2.60E-02	24.1	
23	0	1172.95	2061	77	1.88	2346.16	2337	19	5.73E-01	2.4	
24	0	1332.16	1867	17	1.71	2664.77	2656	17	5.19E-01	2.4	
25	0	1764.24*	30	12	1.44	3529.54	3522	16	8.34E-03	32.7	
26	0	1836.27	22	3	1.41	3673.71	3666	14	6.07E-03	27.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 09:51:56

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 2-JUL-2009 00:00:00 Acquisition date : 9-JUL-2009 08:51:19
Sample ID : G1201873071 Sample quantity : 151.73 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA7 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.46 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	3.682E-01	7.337E-02	6.289E-02	5.931E-03	5.855
		136.48		2.672E-01	3.385E-01	5.559E-01	5.084E-02	0.481
CO-60	+	1173.22		7.330E+00	5.564E-01	1.307E-01	7.630E-03	56.073
	+	1332.49	*	7.374E+00	5.551E-01	9.002E-02	5.266E-03	81.914
CD-109	+	88.03	*	4.772E+01	4.292E+00	2.102E+00	1.606E-01	22.705
SN-126		64.28		-2.176E-01	6.695E-01	9.784E-01	1.388E-01	-0.222
	+	86.94		1.973E+01	8.174E+00	9.134E-01	3.759E-01	21.597
	+	87.57	*	4.745E+00	4.268E-01	2.094E-01	1.593E-02	22.659
BA-137M	+	661.65	*	5.633E+00	4.417E-01	1.238E-01	7.877E-03	45.485
CS-137	+	661.65	*	5.954E+00	4.680E-01	1.309E-01	8.356E-03	45.485
CE-139	+	165.85	*	7.764E-02	6.006E-02	7.365E-02	4.823E-03	1.054
TL-208	+	277.35		7.734E-01	7.485E-01	1.075E+00	1.185E-01	0.720
	+	510.84		5.827E-01	4.330E-01	4.387E-01	4.486E-02	1.328
	+	583.14	*	4.711E-01	1.356E-01	1.124E-01	7.890E-03	4.193
		860.37		5.862E-01	6.850E-01	1.175E+00	9.983E-02	0.499
BI-211		72.87		3.643E+00	4.667E+00	7.016E+00	4.793E-01	0.519
	+	351.07	*	2.663E+00	6.580E-01	6.124E-01	4.018E-02	4.348
PB-212	+	74.81		1.970E+00	6.535E-01	7.756E-01	9.009E-02	2.540
	+	77.11		1.696E+00	4.240E-01	4.499E-01	3.148E-02	3.769
	+	87.30		2.195E+01	2.952E+00	9.697E-01	1.217E-01	22.632
	+	238.63	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.09		1.163E+00	1.487E+00	2.252E+00	1.968E-01	0.517
PO-212	+	74.81		1.970E+00	6.535E-01	7.756E-01	9.009E-02	2.540
	+	77.11		1.696E+00	4.240E-01	4.499E-01	3.148E-02	3.769
	+	87.30		2.195E+01	2.952E+00	9.697E-01	1.217E-01	22.632
		115.19		-6.885E-01	5.271E+00	8.399E+00	7.506E-01	-0.082
	+	238.63	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.09		1.163E+00	1.487E+00	2.252E+00	1.968E-01	0.517
PB-214	+	74.81		3.394E+00	1.109E+00	1.336E+00	1.353E-01	2.540
	+	77.11		2.907E+00	7.599E-01	7.713E-01	7.979E-02	3.769
	+	87.30		3.759E+01	4.453E+00	1.661E+00	1.797E-01	22.632
		241.98		1.666E+00	7.002E-01	1.132E+00	9.906E-02	1.472
	+	295.21		1.013E+00	3.887E-01	3.751E-01	3.387E-02	2.701
	+	351.92	*	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.394E+00	1.109E+00	1.336E+00	1.353E-01	2.540
	+	77.11		2.907E+00	7.599E-01	7.713E-01	7.979E-02	3.769
	+	87.30		3.759E+01	4.453E+00	1.661E+00	1.797E-01	22.632
		241.98		1.666E+00	7.002E-01	1.132E+00	9.906E-02	1.472
	+	295.21		1.013E+00	3.887E-01	3.751E-01	3.387E-02	2.701
	+	351.92	*	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
PO-216	+	74.81		1.970E+00	6.535E-01	7.756E-01	9.009E-02	2.540
	+	77.11		1.696E+00	4.240E-01	4.499E-01	3.148E-02	3.769
	+	87.30		2.195E+01	2.952E+00	9.697E-01	1.217E-01	22.632
	+	238.63	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.09		1.163E+00	1.487E+00	2.252E+00	1.968E-01	0.517
PO-218	+	74.81		3.394E+00	1.109E+00	1.336E+00	1.353E-01	2.540
	+	77.11		2.907E+00	7.599E-01	7.713E-01	7.979E-02	3.769
	+	87.30		3.759E+01	4.453E+00	1.661E+00	1.797E-01	22.632
		241.98		1.666E+00	7.002E-01	1.132E+00	9.906E-02	1.472
	+	295.21		1.013E+00	3.887E-01	3.751E-01	3.387E-02	2.701
	+	351.92	*	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
AC-228	+	338.32		1.536E+00	8.923E-01	6.779E-01	2.767E-01	2.266
	+	911.07	*	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
	+	969.11		1.693E+00	9.046E-01	8.852E-01	2.036E-01	1.912
RA-228	+	338.32		1.536E+00	8.923E-01	6.779E-01	2.767E-01	2.266
	+	911.07	*	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
	+	969.11		1.693E+00	9.046E-01	8.852E-01	2.036E-01	1.912
TH-228		84.40		2.855E+00	4.485E+00	6.664E+00	8.244E-01	0.428
	+	238.60	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.10		1.165E+00	1.635E+00	2.252E+00	1.329E+00	0.517
TH-232	+	338.32		1.536E+00	6.418E-01	6.779E-01	4.139E-02	2.266
	+	911.07	*	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
	+	969.11		1.693E+00	9.046E-01	8.852E-01	2.036E-01	1.912
AM-241	+	59.54	*	1.353E+01	1.192E+00	3.818E-01	2.899E-02	35.426
AM-243	+	74.67	*	3.194E-01	1.017E-01	1.259E-01	8.682E-03	2.536
	+	86.72		5.225E+02	4.699E+01	2.422E+01	1.829E+00	21.575
		117.66		3.305E-01	6.537E+00	9.346E+00	8.510E-01	0.035
		142.18		1.288E+01	2.671E+01	4.335E+01	3.524E+00	0.297
ANH-511	+	511.00	*	1.259E-01	9.293E-02	9.479E-02	5.616E-03	1.328

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.247E-01	6.608E-01	1.085E+00	7.297E-02	0.299
NA-22		1274.54	*	-8.096E-03	5.236E-02	8.442E-02	4.963E-03	-0.096
NA-24		1368.53	*	-1.036E-04	5.236E-02	Half-Life too short		
AL-26		1129.67		7.417E-01	3.193E+00	5.416E+00	3.421E-01	0.137
		1808.65	*	1.288E-02	3.861E-02	6.928E-02	3.801E-03	0.186
K-40		1460.81	*	5.196E-01	6.208E-01	1.152E+00	7.168E-02	0.451
TI-44		67.85		6.559E-02	5.960E-02	1.007E-01	6.768E-03	0.651
	+	78.38	*	3.128E-01	7.823E-02	9.767E-02	6.891E-03	3.203
SC-46		889.25	*	-7.621E-02	9.696E-02	1.485E-01	1.187E-02	-0.513

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1120.51		1.856E-01	9.812E-02	1.828E-01	1.172E-02	1.016
V-48		944.10		8.665E-01	1.751E+00	2.910E+00	2.275E-01	0.298
		983.50	*	1.783E-02	1.348E-01	2.186E-01	1.656E-02	0.082
		1312.09		-3.195E-02	7.611E-02	1.174E-01	6.878E-03	-0.272
CR-51		320.08	*	2.993E-01	5.470E-01	9.213E-01	6.376E-02	0.325
MN-52		744.21		-9.880E-02	1.876E-01	2.959E-01	2.063E-02	-0.334
		848.13		-2.725E-01	6.235E+00	1.010E+01	7.793E-01	-0.027
		935.52		1.639E-01	2.574E-01	4.315E-01	3.395E-02	0.380
		1246.25		3.597E+00	2.860E+00	5.545E+00	3.252E-01	0.649
	+	1333.61		3.626E+02	2.730E+01	3.831E+01	2.241E+00	9.466
		1434.06	*	8.301E-02	1.197E-01	2.183E-01	1.282E-02	0.380
MN-54		834.83	*	4.738E-03	7.601E-02	1.243E-01	9.468E-03	0.038
CO-56		846.75	*	-5.056E-03	8.659E-02	1.402E-01	1.080E-02	-0.036
		977.42		-7.633E-01	7.193E+00	1.148E+01	8.741E-01	-0.066
		1037.82		5.973E-03	7.104E-01	1.191E+00	9.189E-02	0.005
		1175.09		2.810E+02	2.178E+01	3.236E+01	1.889E+00	8.682
		1238.25		8.100E-02	9.751E-02	1.762E-01	1.097E-02	0.460
		1360.21		-5.600E-01	1.176E+00	1.766E+00	1.035E-01	-0.317
		1771.40		-1.717E-01	3.619E-01	4.366E-01	2.426E-02	-0.393
CO-58		810.76	*	-7.497E-02	7.901E-02	1.193E-01	8.917E-03	-0.628
FE-59		142.65		2.202E+00	3.621E+00	5.923E+00	4.797E-01	0.372
		192.34		1.137E+00	1.361E+00	2.287E+00	2.802E-01	0.497
		1099.22	*	9.180E-02	1.861E-01	3.204E-01	2.406E-02	0.287
		1291.56		6.692E-02	1.413E-01	2.477E-01	1.850E-02	0.270
ZN-65		1115.52	*	-2.741E-01	2.000E-01	3.008E-01	1.947E-02	-0.911
GE-68		1077.35	*	-4.716E-01	2.887E+00	4.771E+00	3.258E-01	-0.099
AS-73		53.44	*	-7.070E-01	1.185E+00	1.927E+00	1.272E-01	-0.367
AS-74		595.88	*	-9.255E-02	1.296E-01	2.057E-01	1.280E-02	-0.450
		634.78		-6.066E-02	5.033E-01	8.280E-01	5.228E-02	-0.073
SE-75		66.05		-8.618E+00	5.872E+00	9.079E+00	8.099E-01	-0.949
		96.73		-4.633E-01	1.184E+00	1.665E+00	2.197E-01	-0.278
	+	121.11		1.931E+00	4.089E-01	5.177E-01	6.106E-02	3.730
		136.00		6.178E-02	6.150E-02	1.018E-01	8.740E-03	0.607
		198.60		3.840E-01	2.762E+00	4.641E+00	3.641E-01	0.083
		264.65	*	-8.727E-03	7.360E-02	1.212E-01	8.150E-03	-0.072
		279.53		1.416E-01	2.076E-01	3.138E-01	2.205E-02	0.451
		303.91		-4.460E+00	3.654E+00	5.586E+00	5.559E-01	-0.798
		400.65		7.135E-03	4.973E-01	8.043E-01	7.093E-02	0.009
BR-77	+	87.88		1.082E+03	9.733E+01	1.089E+02	8.314E+00	9.934
		200.40		-4.400E+00	2.713E+01	4.525E+01	3.019E+00	-0.097
	+	239.00		2.217E+01	3.211E+00	5.122E+00	3.443E-01	4.329
		249.79		6.986E+00	1.178E+01	2.008E+01	1.348E+00	0.348
		281.68		1.430E+00	1.871E+01	2.724E+01	1.798E+00	0.052
		297.23		1.386E+01	1.197E+01	1.841E+01	1.197E+00	0.753
		303.76		-4.049E+01	3.367E+01	5.177E+01	3.341E+00	-0.782
		439.47		-2.573E+01	3.362E+01	5.166E+01	2.878E+00	-0.498
		484.57		4.308E+00	4.932E+01	7.915E+01	4.595E+00	0.054
		520.65	*	1.078E+00	2.068E+00	3.579E+00	2.135E-01	0.301
		574.64		7.379E+00	4.082E+01	6.893E+01	4.246E+00	0.107

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		578.91		5.285E+00	1.887E+01	2.807E+01	1.733E+00	0.188
		585.48		1.249E+02	4.313E+01	7.439E+01	4.606E+00	1.679
		755.35		5.140E+01	3.731E+01	6.634E+01	4.679E+00	0.775
		817.79		1.659E+01	3.121E+01	5.271E+01	3.953E+00	0.315
SR-82		698.33		-1.531E+00	5.203E+01	8.558E+01	5.678E+00	-0.018
		776.49	*	7.426E-02	6.398E-01	1.055E+00	7.604E-02	0.070
		1395.20		3.687E+00	1.284E+01	2.195E+01	1.289E+00	0.168
RB-83		520.41	*	6.617E-02	1.225E-01	2.123E-01	1.266E-02	0.312
		529.64		8.491E-02	1.882E-01	3.243E-01	1.946E-02	0.262
		552.65		-7.131E-03	3.647E-01	6.098E-01	3.712E-02	-0.012
RB-84		881.50	*	-3.667E-02	1.532E-01	2.443E-01	1.940E-02	-0.150
KR-85		513.99	*	1.727E+01	1.382E+01	2.230E+01	1.324E+00	0.775
SR-85		513.99	*	8.162E-02	6.529E-02	1.054E-01	6.255E-03	0.775
RB-86		1076.63	*	-9.497E-01	1.392E+00	2.215E+00	1.514E-01	-0.429
Y-88		898.02		5.016E-02	1.080E-01	1.796E-01	1.455E-02	0.279
	+	1836.01	*	1.137E-01	6.377E-02	1.217E-01	6.629E-03	0.934
ZR-88		392.90	*	-3.081E-02	5.899E-02	9.266E-02	4.902E-03	-0.333
Y-91		1204.90	*	6.839E+00	2.269E+01	3.885E+01	2.274E+00	0.176
NB-94		702.63	*	-3.199E-02	6.382E-02	1.013E-01	6.753E-03	-0.316
		871.10		2.528E-04	8.364E-02	1.357E-01	1.068E-02	0.002
NB-95		765.79	*	4.730E-02	7.796E-02	1.328E-01	9.465E-03	0.356
NB-95M		235.69	*	1.443E-01	2.101E-01	3.196E-01	2.640E-02	0.451
ZR-95		724.18		9.030E-02	1.965E-01	2.919E-01	2.261E-02	0.309
		756.15	*	1.133E-01	1.403E-01	2.418E-01	1.959E-02	0.469
NB-97		657.90	*	1.689E-04	1.403E-01	Half-Life too short		
		1024.50		-2.623E-03	1.403E-01	Half-Life too short		
ZR-97		254.15		-4.919E-03	1.403E-01	Half-Life too short		
		355.39		9.816E-04	1.403E-01	Half-Life too short		
		507.63	*	1.458E-03	1.403E-01	Half-Life too short		
		602.52		5.141E-04	1.403E-01	Half-Life too short		
		1021.30		4.397E-03	1.403E-01	Half-Life too short		
		1147.95		2.985E-03	1.403E-01	Half-Life too short		
		1362.66		2.715E-03	1.403E-01	Half-Life too short		
		1750.46		3.236E-04	1.403E-01	Half-Life too short		
MO-99		140.51		-3.040E+00	5.826E+00	8.928E+00	2.462E+00	-0.341
		181.06		6.190E-01	4.065E+00	6.105E+00	1.064E+00	0.101
		366.43		-8.329E+00	2.361E+01	3.761E+01	2.150E+00	-0.221
		739.58	*	2.758E+00	3.359E+00	5.791E+00	8.279E-01	0.476
		778.00		8.184E-01	9.960E+00	1.639E+01	1.183E+00	0.050
TC-99M		140.51	*	-1.488E+01	9.960E+00	Half-Life too short		
RH-101		127.23		-4.636E-03	5.332E-02	8.058E-02	7.320E-03	-0.058
		198.01	*	3.477E-03	5.284E-02	8.856E-02	5.902E-03	0.039
		325.23		-3.972E-01	4.257E-01	6.633E-01	4.149E-02	-0.599
RH-102		418.52		4.878E-01	5.773E-01	9.741E-01	5.309E-02	0.501
		475.06	*	3.956E-02	6.577E-02	1.087E-01	6.258E-03	0.364
		631.29		-1.799E-03	1.073E-01	1.779E-01	1.122E-02	-0.010
		697.49		8.633E-02	1.451E-01	2.488E-01	1.649E-02	0.347
		766.84		2.000E-01	2.186E-01	3.786E-01	2.701E-02	0.528
		1046.59		-2.754E-01	2.622E-01	4.054E-01	2.878E-02	-0.679

---- Non-Identified Nuclides ----

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		1112.84		9.768E-02	5.006E-01	8.452E-01	5.484E-02	0.116
RU-103		497.08	*	-3.235E-02	6.980E-02	1.144E-01	1.449E-02	-0.283
	+	610.33		7.822E+00	2.275E+00	3.234E+00	5.044E-01	2.419
RH-106	+	511.85		6.196E-01	4.574E-01	6.004E-01	3.559E-02	1.032
		621.84	*	-2.528E-01	6.136E-01	9.752E-01	1.169E-01	-0.259
		1050.47		1.164E-02	5.137E+00	8.601E+00	6.077E-01	0.001
RU-106	+	511.85		6.196E-01	4.574E-01	6.004E-01	3.559E-02	1.032
		621.84	*	-2.528E-01	6.130E-01	9.752E-01	6.130E-02	-0.259
		1050.47		1.164E-02	5.137E+00	8.601E+00	6.077E-01	0.001
AG-108M		433.93	*	7.341E-02	7.131E-02	1.209E-01	7.325E-03	0.607
		614.37		-1.680E-02	8.475E-02	1.201E-01	8.079E-03	-0.140
		722.95		4.224E-02	9.252E-02	1.377E-01	9.964E-03	0.307
AG-110M		657.75	*	1.081E-01	8.647E-02	1.365E-01	9.146E-03	0.792
		677.61		5.684E-01	5.789E-01	1.019E+00	6.926E-02	0.558
		706.67		-1.973E-01	4.007E-01	6.367E-01	4.456E-02	-0.310
		763.93		-2.363E-01	3.419E-01	5.329E-01	3.948E-02	-0.443
		884.67		-1.967E-02	1.254E-01	2.010E-01	1.661E-02	-0.098
		937.48		-1.770E-01	3.041E-01	4.720E-01	3.870E-02	-0.375
		1384.27		1.470E-02	1.977E-01	3.282E-01	2.042E-02	0.045
IN-111		171.28		-1.557E-01	2.333E-01	3.700E-01	2.429E-02	-0.421
		245.39	*	-6.233E-01	2.868E-01	4.256E-01	2.859E-02	-1.464
IN-113M		391.69	*	4.723E-02	8.672E-02	1.444E-01	8.239E-03	0.327
SN-113		391.69	*	4.723E-02	8.672E-02	1.444E-01	8.239E-03	0.327
IN-114M		190.27	*	7.153E-02	2.836E-01	4.272E-01	2.836E-02	0.167
CD-115		260.90		-7.816E+00	2.047E+01	3.331E+01	2.227E+00	-0.235
		492.35		4.924E+00	6.340E+00	1.113E+01	6.502E-01	0.442
		527.90	*	2.130E-01	1.808E+00	3.056E+00	1.832E-01	0.070
SN-117M		156.02		1.113E+00	2.421E+00	3.908E+00	2.823E-01	0.285
		158.56	*	1.677E-03	5.561E-02	9.451E-02	6.666E-03	0.018
SB-122		563.90	*	8.205E-02	5.115E-01	8.640E-01	5.292E-02	0.095
		692.80		-8.855E+00	1.171E+01	1.831E+01	1.207E+00	-0.484
I-123		159.00	*	-1.432E-05	1.171E+01	Half-Life too short		
		528.96		2.500E-02	1.171E+01	Half-Life too short		
TE-123M		159.00	*	-1.273E-03	4.067E-02	6.895E-02	4.886E-03	-0.018
I-124		602.71	*	3.729E-02	3.896E-01	5.944E-01	3.709E-02	0.063
		722.78		1.362E+00	2.652E+00	3.968E+00	2.704E-01	0.343
		1325.50		8.605E+00	1.643E+01	2.549E+01	1.492E+00	0.338
		1376.25		6.416E+00	1.021E+01	1.841E+01	1.080E+00	0.348
		1509.49		2.307E+00	5.366E+00	9.440E+00	5.528E-01	0.244
		1691.02		-1.302E+00	1.598E+00	2.077E+00	1.181E-01	-0.627
SB-124		602.71		7.186E-03	7.509E-02	1.146E-01	7.151E-03	0.063
		645.85		4.610E-01	9.438E-01	1.612E+00	1.132E-01	0.286
		709.31		7.656E+00	4.901E+00	8.877E+00	5.962E-01	0.862
		713.82		-1.563E+00	2.909E+00	4.590E+00	4.948E-01	-0.340
		722.78		3.805E-01	7.410E-01	1.109E+00	7.814E-02	0.343
	+	968.20		1.593E+01	7.783E+00	1.134E+01	8.700E-01	1.406
		1045.16		-2.198E+00	5.309E+00	8.641E+00	6.144E-01	-0.254
		1325.50		2.568E+00	4.904E+00	7.607E+00	4.452E-01	0.338
		1368.21		-1.256E+00	2.140E+00	3.144E+00	3.742E-01	-0.400

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		1436.60		-2.227E+00	4.352E+00	6.388E+00	3.752E-01	-0.349
		1691.02	*	-8.578E-02	1.054E-01	1.368E-01	8.471E-03	-0.627
SB-125		427.89	*	-1.887E-02	1.971E-01	3.156E-01	1.819E-02	-0.060
		463.38		8.876E-01	6.167E-01	1.057E+00	7.056E-02	0.840
		600.56		9.117E-02	3.419E-01	5.785E-01	4.100E-02	0.158
		635.90		-5.191E-02	5.151E-01	8.484E-01	6.140E-02	-0.061
TE-125M		109.28	*	1.229E+01	1.243E+01	2.075E+01	2.130E+00	0.592
I-126		388.63		-1.216E-01	2.815E-01	4.451E-01	2.377E-02	-0.273
		666.33	*	3.226E-02	2.468E-01	3.588E-01	2.295E-02	0.090
		753.82		3.256E-01	2.155E+00	3.568E+00	2.513E-01	0.091
SB-126		223.80		-1.816E+00	4.277E+00	7.008E+00	4.709E-01	-0.259
	+	278.60		3.312E+00	3.192E+00	5.156E+00	3.411E-01	0.642
	+	296.50		6.533E+00	2.473E+00	3.376E+00	2.197E-01	1.935
		414.70		-7.210E-02	9.856E-02	1.520E-01	8.249E-03	-0.474
		415.30		-2.939E+00	8.302E+00	1.311E+01	7.121E-01	-0.224
		555.20		-2.340E-01	4.919E+00	8.208E+00	5.004E-01	-0.029
		573.80		-7.540E-02	1.268E+00	2.110E+00	1.299E-01	-0.036
		593.00		1.665E-01	1.130E+00	1.901E+00	1.181E-01	0.088
		656.30		9.949E-01	5.233E+00	7.643E+00	4.855E-01	0.130
		666.33		1.324E-02	1.013E-01	1.473E-01	9.419E-03	0.090
		675.00		-1.907E+00	2.487E+00	3.875E+00	2.504E-01	-0.492
		695.00		-5.137E-02	9.860E-02	1.566E-01	1.035E-02	-0.328
		697.00		1.077E-01	3.293E-01	5.551E-01	3.677E-02	0.194
		720.50	*	9.278E-02	1.950E-01	3.038E-01	2.065E-02	0.305
		856.80		-2.882E-01	7.473E-01	1.182E+00	9.190E-02	-0.244
		989.30		-5.105E-01	2.108E+00	3.328E+00	2.507E-01	-0.153
		1034.80		-5.467E-01	1.397E+01	2.335E+01	1.680E+00	-0.023
		1213.00		-1.054E+00	3.916E+00	6.281E+00	3.679E-01	-0.168
SB-127		61.10		5.629E+02	5.291E+01	6.379E+01	4.845E+00	8.824
		252.40		2.658E-01	1.809E+00	3.018E+00	1.244E+00	0.088
		290.80		5.454E-01	1.026E+01	1.488E+01	1.101E+00	0.037
		411.60		-2.042E+00	6.105E+00	9.654E+00	1.236E+00	-0.212
		444.90		7.976E-02	5.245E+00	8.427E+00	7.337E-01	0.009
		473.00		-4.252E-02	9.523E-01	1.518E+00	1.408E-01	-0.028
		543.00		-9.072E-01	7.507E+00	1.248E+01	1.430E+00	-0.073
		603.60		1.196E+00	6.245E+00	9.183E+00	8.356E-01	0.130
		685.20	*	-4.450E-01	6.728E-01	1.057E+00	8.169E-02	-0.421
		698.50		-9.432E-01	7.151E+00	1.168E+01	1.574E+00	-0.081
		722.20		1.084E+00	1.627E+01	2.332E+01	1.781E+00	0.047
		783.80		8.806E-01	1.775E+00	3.004E+00	2.916E-01	0.293
XE-127		57.60		7.414E+01	1.246E+01	1.944E+01	1.310E+00	3.813
		145.22		-6.360E-01	9.094E-01	1.394E+00	1.106E-01	-0.456
		172.10		-1.041E-01	1.556E-01	2.557E-01	1.679E-02	-0.407
		202.84	*	2.011E-02	6.279E-02	1.068E-01	7.130E-03	0.188
		374.96		-9.102E-02	3.305E-01	5.279E-01	2.945E-02	-0.172
I-131		80.18		-1.559E+00	3.765E+00	5.376E+00	3.851E-01	-0.290
		284.30		9.853E-02	1.362E+00	2.254E+00	1.603E-01	0.044
		364.48	*	9.314E-02	1.140E-01	1.934E-01	1.232E-02	0.482
		636.97		4.288E-01	1.459E+00	2.470E+00	1.707E-01	0.174

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.89		3.758E+00	7.983E+00	1.189E+01	8.126E-01	0.316
TE-132		49.72		3.924E+00	4.613E+00	7.776E+00	5.648E-01	0.505
		111.76		-7.171E+00	8.482E+00	1.305E+01	1.212E+00	-0.550
		116.30		-3.259E+00	7.954E+00	1.249E+01	1.195E+00	-0.261
		228.16	*	2.445E-02	2.174E-01	3.644E-01	4.952E-02	0.067
BA-133		53.15		-3.948E+00	5.383E+00	8.725E+00	5.752E-01	-0.453
		79.62		-3.686E-01	2.035E+00	2.937E+00	4.237E-01	-0.126
		81.00		-1.549E-01	1.656E-01	2.287E-01	3.464E-02	-0.678
	+	276.40		7.632E-01	7.408E-01	1.175E+00	1.569E-01	0.649
		302.84		-1.904E-01	2.531E-01	3.983E-01	4.779E-02	-0.478
		356.01	*	-4.231E-02	9.453E-02	1.308E-01	1.516E-02	-0.324
		383.85		-2.053E-01	5.568E-01	8.816E-01	9.413E-02	-0.233
I-133	+	510.53		2.565E-03	5.568E-01	Half-Life too short		
		529.87	*	1.098E-05	5.568E-01	Half-Life too short		
		706.58		-8.081E-04	5.568E-01	Half-Life too short		
		856.28		-6.935E-04	5.568E-01	Half-Life too short		
		875.33		3.390E-05	5.568E-01	Half-Life too short		
		1236.41		1.561E-03	5.568E-01	Half-Life too short		
		1298.22		-3.429E-04	5.568E-01	Half-Life too short		
CS-134		475.35		1.645E+00	4.377E+00	7.141E+00	4.113E-01	0.230
		563.23		1.936E-01	6.507E-01	1.108E+00	6.915E-02	0.175
		569.32		4.674E-02	3.582E-01	6.044E-01	3.811E-02	0.077
		604.70		-2.344E-02	7.279E-02	1.022E-01	6.410E-03	-0.229
		795.84	*	1.268E-01	9.976E-02	1.758E-01	1.304E-02	0.721
		801.93		-4.513E-01	8.591E-01	1.352E+00	1.006E-01	-0.334
		1038.57		-5.601E+00	9.501E+00	1.530E+01	1.096E+00	-0.366
		1167.94		1.493E+00	5.264E+00	7.784E+00	4.590E-01	0.192
		1365.15		8.718E-01	1.527E+00	2.743E+00	1.763E-01	0.318
CS-135		268.24	*	-1.096E-01	2.755E-01	4.473E-01	3.725E-02	-0.245
I-135		288.45		-3.029E+01	2.755E-01	Half-Life too short		
		417.63		1.686E+02	2.755E-01	Half-Life too short		
		546.56		4.834E+01	2.755E-01	Half-Life too short		
		836.80		-3.815E+01	2.755E-01	Half-Life too short		
		1038.76		-8.591E+01	2.755E-01	Half-Life too short		
		1124.00		-4.717E+02	2.755E-01	Half-Life too short		
		1131.51		-1.636E+01	2.755E-01	Half-Life too short		
		1260.41	*	5.315E+00	2.755E-01	Half-Life too short		
		1457.56		2.467E+01	2.755E-01	Half-Life too short		
		1678.03		-3.250E+00	2.755E-01	Half-Life too short		
		1706.46		1.243E+01	2.755E-01	Half-Life too short		
		1791.20		4.264E+01	2.755E-01	Half-Life too short		
CS-136		66.91		6.458E-02	6.537E-01	1.074E+00	1.553E-01	0.060
		86.29		1.351E+01	2.293E+00	2.890E+00	3.508E-01	4.675
		153.22		-1.405E-01	6.921E-01	1.084E+00	9.284E-02	-0.130
		163.89		9.516E-01	1.223E+00	1.905E+00	1.518E-01	0.500
		176.55		2.515E-01	3.790E-01	6.564E-01	4.738E-02	0.383
		273.65		-6.554E-01	6.380E-01	8.646E-01	6.358E-02	-0.758
		340.57		2.507E-01	1.753E-01	2.736E-01	1.757E-02	0.916
		818.51		6.898E-02	1.154E-01	1.955E-01	1.467E-02	0.353

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1048.07	*	-7.661E-02	1.644E-01	2.663E-01	2.002E-02	-0.288
		1235.34		2.034E-01	4.746E-01	8.216E-01	8.231E-02	0.248
BA-140		162.64		1.382E-01	8.243E-01	1.247E+00	9.225E-02	0.111
		304.84		-9.552E-01	1.523E+00	2.385E+00	6.543E-01	-0.401
		423.70		1.401E+00	2.587E+00	4.233E+00	1.343E+00	0.331
		537.32	*	-1.421E-02	3.030E-01	5.066E-01	1.650E-01	-0.028
LA-140		328.77		3.395E-01	3.681E-01	6.272E-01	4.309E-02	0.541
		432.53		-2.461E+00	3.090E+00	4.746E+00	2.926E-01	-0.519
		487.03		3.572E-02	1.873E-01	3.026E-01	1.991E-02	0.118
		751.79		1.061E+00	2.461E+00	4.148E+00	3.373E-01	0.256
		815.85		-3.581E-03	4.655E-01	7.583E-01	6.530E-02	-0.005
		867.82		1.060E-01	2.204E+00	3.589E+00	2.996E-01	0.030
		919.63		-5.117E+00	5.143E+00	7.735E+00	7.823E-01	-0.662
		925.24		-5.853E-01	2.087E+00	3.309E+00	2.816E-01	-0.177
		1596.49	*	-1.005E-01	8.226E-02	9.888E-02	5.733E-03	-1.016
CE-141		145.44	*	-5.040E-02	8.083E-02	1.241E-01	1.004E-02	-0.406
CE-143		57.37		1.277E+02	4.417E+01	6.829E+01	5.533E+00	1.871
		231.56		-4.291E+01	8.715E+01	1.406E+02	4.368E+01	-0.305
		293.26	*	9.634E+00	5.704E+00	8.573E+00	1.769E+00	1.124
	+	350.59		4.203E+02	1.622E+02	1.493E+02	4.529E+01	2.816
		490.36		-1.562E+01	1.126E+02	1.882E+02	5.815E+01	-0.083
		664.57		8.777E+02	2.937E+02	1.946E+02	6.178E+01	4.510
		721.93		6.117E+00	6.133E+01	8.819E+01	2.526E+01	0.069
CE-144		80.11		-1.402E+00	3.321E+00	4.740E+00	3.386E-01	-0.296
		133.54	*	-3.740E-01	3.346E-01	4.974E-01	7.759E-02	-0.752
PM-144		476.78		2.733E-02	1.545E-01	2.493E-01	1.723E-02	0.110
		618.01		3.228E-02	6.138E-02	1.054E-01	6.952E-03	0.306
		696.49	*	-9.839E-03	6.472E-02	1.055E-01	6.989E-03	-0.093
		778.57		-7.354E-01	4.625E+00	7.475E+00	5.398E-01	-0.098
PR-144		696.49	*	-6.640E-01	4.367E+00	7.122E+00	4.716E-01	-0.093
		1489.15		1.068E+01	1.821E+01	3.241E+01	1.901E+00	0.330
PM-146		453.90	*	1.391E-02	9.380E-02	1.517E-01	1.292E-02	0.092
		633.02		-1.468E+00	2.738E+00	4.286E+00	1.582E+00	-0.343
		735.90		-1.332E-01	3.080E-01	4.864E-01	1.368E-01	-0.274
		747.13		8.176E-02	1.852E-01	3.129E-01	4.099E-02	0.261
ND-147	+	91.11		2.825E-01	3.982E-01	3.891E-01	3.311E-02	0.726
		319.41		-2.105E-02	3.613E+00	5.917E+00	3.736E-01	-0.004
		439.89		-1.352E+00	7.878E+00	1.253E+01	6.987E-01	-0.108
		531.02	*	2.985E-01	6.419E-01	1.106E+00	1.505E-01	0.270
PM-149		285.90	*	-1.865E+00	1.428E+01	2.339E+01	3.390E+00	-0.080
EU-152	+	121.78		1.089E+00	2.235E-01	2.980E-01	3.163E-02	3.655
		244.69		-1.429E+00	6.100E-01	8.995E-01	6.043E-02	-1.588
		344.27	*	-1.355E-01	1.997E-01	2.873E-01	1.938E-02	-0.471
		443.98		5.799E-01	2.110E+00	3.440E+00	1.925E-01	0.169
		778.89		-1.280E-01	5.412E-01	8.695E-01	6.280E-02	-0.147
		867.32		1.409E-01	1.993E+00	3.250E+00	2.550E-01	0.043
		964.01		3.191E-01	8.342E-01	1.196E+00	9.207E-02	0.267
		1085.78		-5.221E-01	9.030E-01	1.445E+00	9.757E-02	-0.361
		1112.02		1.962E-01	7.194E-01	1.221E+00	7.929E-02	0.161

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1407.95		1.028E-01	2.389E-01	4.184E-01	2.457E-02	0.246
GD-153		69.67		-3.803E-01	2.177E+00	3.541E+00	2.390E-01	-0.107
		83.37		3.046E+01	2.474E+01	3.764E+01	2.760E+00	0.809
		97.43	*	1.535E-02	1.148E-01	1.775E-01	1.412E-02	0.086
		103.18		-7.519E-02	1.523E-01	2.398E-01	1.972E-02	-0.313
EU-154	+	123.07		7.641E-01	1.624E-01	2.051E-01	2.449E-02	3.725
		247.94		4.016E-01	6.109E-01	1.043E+00	1.056E-01	0.385
		591.81		6.948E-02	1.194E+00	1.998E+00	2.002E-01	0.035
		723.30		1.433E-01	3.842E-01	5.673E-01	4.502E-02	0.253
		756.87		-1.784E-01	1.667E+00	2.712E+00	2.959E-01	-0.066
		873.19		-1.976E-01	7.313E-01	1.163E+00	1.365E-01	-0.170
		996.32		-3.163E-01	9.815E-01	1.539E+00	2.654E-01	-0.206
		1004.76		-5.805E-01	5.322E-01	8.268E-01	8.917E-02	-0.702
		1274.45	*	-4.580E-02	1.496E-01	2.358E-01	2.212E-02	-0.194
EU-155		48.70		-1.604E+00	2.840E+00	4.631E+00	3.006E-01	-0.346
	+	60.01		4.387E+02	3.578E+01	3.103E+01	2.110E+00	14.136
		86.54		2.921E+00	3.316E-01	4.632E-01	3.538E-02	6.306
		105.31	*	1.421E-01	1.592E-01	2.654E-01	2.241E-02	0.536
TB-160	+	86.79		1.417E+01	1.274E+00	1.303E+00	9.847E-02	10.871
		197.04		9.956E-03	8.364E-01	1.399E+00	9.318E-02	0.007
		215.65		5.598E-01	1.204E+00	1.988E+00	1.333E-01	0.282
		298.57		1.110E-01	2.017E-01	3.018E-01	1.959E-02	0.368
		879.36	*	5.609E-02	3.205E-01	5.256E-01	4.167E-02	0.107
		962.29		5.631E-02	1.448E+00	2.016E+00	1.554E-01	0.028
		966.15		8.240E-01	5.573E-01	8.614E-01	6.622E-02	0.957
		1177.93		3.286E-01	7.005E-01	1.057E+00	6.173E-02	0.311
		1271.85		-5.117E-01	8.066E-01	1.204E+00	7.060E-02	-0.425
HO-166M		80.57		-1.730E-01	4.362E-01	6.232E-01	4.468E-02	-0.278
		184.41		8.336E-02	6.033E-02	9.730E-02	6.438E-03	0.857
		280.46		-2.214E-02	1.713E-01	2.461E-01	1.626E-02	-0.090
		410.95		3.969E-01	4.855E-01	8.181E-01	4.421E-02	0.485
		711.68	*	-1.142E-02	1.229E-01	2.011E-01	1.354E-02	-0.057
		752.31		2.083E-01	5.912E-01	9.919E-01	6.974E-02	0.210
		810.29		-4.595E-02	1.247E-01	1.976E-01	1.471E-02	-0.233
TM-171		51.35		1.503E+01	4.165E+01	6.941E+01	4.545E+00	0.217
		52.39		-9.529E+00	2.259E+01	3.693E+01	2.427E+00	-0.258
	+	59.40		2.296E+03	1.873E+02	1.689E+02	1.151E+01	13.592
		66.72	*	-2.136E+00	3.524E+01	5.762E+01	3.867E+00	-0.037
LU-176	+	88.36		1.125E+01	1.012E+00	1.130E+00	8.643E-02	9.959
		201.83		-1.747E-02	4.533E-02	7.485E-02	4.997E-03	-0.233
		306.84	*	3.208E-02	4.449E-02	7.564E-02	4.862E-03	0.424
		401.10		-1.904E+00	1.365E+01	2.188E+01	1.169E+00	-0.087
LU-177		112.95		-2.157E-01	1.052E+00	1.671E+00	1.469E-01	-0.129
	+	208.36	*	1.280E+00	1.177E+00	1.361E+00	9.112E-02	0.940
LU-177M		52.97		-2.214E+00	2.345E+00	3.779E+00	2.490E-01	-0.586
		54.07		6.093E-01	1.421E+00	2.126E+00	1.407E-01	0.287
		61.30		3.405E+01	3.576E+00	5.317E+00	3.593E-01	6.405
	+	121.62		5.407E+00	1.077E+00	1.477E+00	1.387E-01	3.661
		147.16		-1.953E-01	9.484E-01	1.488E+00	1.162E-01	-0.131

---- Non-Identified Nuclides ----

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		171.86		-4.470E-01	7.041E-01	1.159E+00	7.608E-02	-0.386
		218.09		1.083E+00	1.383E+00	2.383E+00	1.600E-01	0.454
		268.79		2.928E-01	1.365E+00	2.279E+00	1.518E-01	0.128
		319.02		-3.016E-02	4.570E-01	7.461E-01	4.714E-02	-0.040
		367.43		-1.131E+00	1.697E+00	2.651E+00	1.511E-01	-0.426
		413.65	*	-1.054E-01	3.388E-01	5.365E-01	2.908E-02	-0.196
HF-181		56.28		1.759E+00	1.559E+00	2.368E+00	1.584E-01	0.743
		57.53		4.744E+00	1.004E+00	1.577E+00	1.062E-01	3.009
		65.20		-1.123E+00	1.071E+00	1.603E+00	1.075E-01	-0.700
		133.02		1.053E-02	9.067E-02	1.452E-01	1.265E-02	0.073
		136.25		5.744E-01	6.682E-01	1.100E+00	9.359E-02	0.522
		345.85		5.910E-02	3.245E-01	5.164E-01	3.104E-02	0.114
		482.03	*	-4.113E-02	8.134E-02	1.257E-01	7.283E-03	-0.327
W-181		56.28		7.488E-01	6.629E-01	1.007E+00	6.735E-02	0.744
		57.53		1.998E+00	4.262E-01	6.697E-01	4.510E-02	2.984
		65.20	*	-4.739E-01	4.520E-01	6.766E-01	4.538E-02	-0.700
TA-182		67.75		1.458E-01	1.355E-01	2.288E-01	1.538E-02	0.637
		100.10		-3.942E-02	2.455E-01	3.932E-01	3.173E-02	-0.100
		152.43		-9.436E-04	5.007E-01	7.921E-01	5.913E-02	-0.001
		222.10		-3.501E-01	5.421E-01	8.786E-01	5.901E-02	-0.398
		1001.68		4.464E+00	4.996E+00	8.488E+00	6.321E-01	0.526
		1121.28		4.281E-01	2.780E-01	5.083E-01	3.254E-02	0.842
		1189.05		-3.773E-02	4.163E-01	6.838E-01	3.997E-02	-0.055
		1221.42	*	2.526E-02	2.147E-01	3.607E-01	2.113E-02	0.070
		1230.97		-1.319E-02	5.656E-01	9.331E-01	5.470E-02	-0.014
RE-183		57.98		7.351E+00	6.518E-01	8.722E-01	5.890E-02	8.428
	+	59.32		8.780E+00	7.161E-01	6.486E-01	4.417E-02	13.536
		67.20		2.261E-01	2.319E-01	3.910E-01	2.625E-02	0.578
		162.32	*	4.824E-02	1.707E-01	2.598E-01	1.765E-02	0.186
	+	208.81		2.377E+00	2.187E+00	2.542E+00	1.702E-01	0.935
		291.72		-5.797E-01	1.671E+00	2.354E+00	1.540E-01	-0.246
RE-184		57.98		2.834E+01	2.512E+00	3.362E+00	2.270E-01	8.428
	+	59.32		3.382E+01	2.758E+00	2.498E+00	1.701E-01	13.536
		67.20		8.712E-01	8.937E-01	1.507E+00	1.012E-01	0.578
		161.27		2.600E-02	5.829E-01	8.759E-01	6.015E-02	0.030
		216.55		4.763E-01	4.394E-01	7.647E-01	5.130E-02	0.623
		252.85	*	-1.115E-01	3.798E-01	6.214E-01	4.166E-02	-0.180
		318.01		-4.111E-01	8.037E-01	1.281E+00	8.107E-02	-0.321
		792.07		7.514E-01	2.052E+00	3.434E+00	2.513E-01	0.219
		903.28		-8.622E-01	2.834E+00	4.043E+00	3.247E-01	-0.213
		920.93		-7.726E-01	1.215E+00	1.879E+00	1.493E-01	-0.411
OS-185	+	59.72		2.442E+01	1.992E+00	1.763E+00	1.200E-01	13.856
		61.14		5.630E+00	5.043E-01	6.712E-01	4.539E-02	8.389
		69.30		1.615E-01	3.723E-01	6.172E-01	4.161E-02	0.262
		592.07		-7.559E-01	4.657E+00	7.681E+00	4.771E-01	-0.098
		646.12	*	2.726E-02	8.271E-02	1.399E-01	8.864E-03	0.195
		717.42		-5.668E-01	1.625E+00	2.603E+00	1.763E-01	-0.218
		874.81		6.640E-02	1.368E+00	2.225E+00	1.757E-01	0.030
		880.27		4.141E-01	1.849E+00	3.041E+00	2.413E-01	0.136

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188		155.03	*	1.502E-02	2.501E-01	3.965E-01	2.891E-02	0.038
		477.96		1.216E+00	6.479E+00	1.046E+01	6.040E-01	0.116
		633.10		-2.837E+00	5.030E+00	8.017E+00	5.059E-01	-0.354
W-188		63.58		-1.866E+01	6.368E+01	9.331E+01	6.267E+00	-0.200
		227.08		1.366E+01	1.953E+01	3.353E+01	2.254E+00	0.407
		290.67	*	7.071E-01	1.331E+01	1.931E+01	1.264E+00	0.037
IR-192	+	295.96		7.183E-01	2.720E-01	3.744E-01	2.468E-02	1.919
		308.46		7.001E-03	1.641E-01	2.700E-01	1.748E-02	0.026
		316.51	*	3.291E-02	5.713E-02	9.642E-02	6.140E-03	0.341
		468.07		-4.268E-02	1.329E-01	2.085E-01	1.380E-02	-0.205
		604.41		-2.336E-01	9.254E-01	1.307E+00	1.514E-01	-0.179
		612.46		1.614E-01	1.433E+00	2.091E+00	1.659E-01	0.077
AU-195		65.12		-2.170E-01	2.125E-01	3.185E-01	2.136E-02	-0.681
		66.83		3.730E-03	1.145E-01	1.877E-01	1.260E-02	0.020
	+	75.70		1.004E+00	3.195E-01	5.183E-01	3.595E-02	1.936
		98.88	*	4.923E-02	3.171E-01	5.151E-01	4.128E-02	0.096
		129.76		4.411E+00	4.411E+00	7.311E+00	6.522E-01	0.603
TL-200		367.94	*	-1.060E+00	6.273E+00	1.009E+01	5.746E-01	-0.105
		579.30		5.987E+00	5.310E+01	7.782E+01	4.805E+00	0.077
		828.27		-6.752E+01	7.769E+01	1.180E+02	8.940E+00	-0.572
		1205.75		1.566E+01	2.358E+01	4.181E+01	2.447E+00	0.375
TL-201		68.90		5.697E-01	1.071E+00	1.781E+00	1.200E-01	0.320
		70.82		-4.879E-01	7.072E-01	1.002E+00	6.788E-02	-0.487
		80.30		-5.478E-01	1.368E+00	1.955E+00	1.399E-01	-0.280
		135.34		6.234E+00	6.971E+00	1.151E+01	9.855E-01	0.542
		167.43	*	1.921E+00	2.138E+00	3.344E+00	2.190E-01	0.574
TL-202		68.90		1.935E-01	3.638E-01	6.049E-01	4.074E-02	0.320
		70.82		-1.652E-01	2.395E-01	3.393E-01	2.299E-02	-0.487
		80.30		-1.856E-01	4.635E-01	6.622E-01	4.738E-02	-0.280
		439.56	*	-7.685E-02	1.010E-01	1.553E-01	8.651E-03	-0.495
HG-203		70.83		-9.870E-01	1.440E+00	2.035E+00	2.548E-01	-0.485
		72.87		6.454E-01	8.295E-01	1.243E+00	1.506E-01	0.519
		82.60		7.050E-01	1.681E+00	2.478E+00	3.209E-01	0.284
		279.20	*	6.733E-02	7.388E-02	1.130E-01	7.832E-03	0.596
BI-207		72.80		1.878E-01	2.715E-01	4.069E-01	2.779E-02	0.462
	+	74.97		5.730E-01	1.824E-01	2.740E-01	1.892E-02	2.091
		84.90		2.873E-01	3.287E-01	4.935E-01	3.666E-02	0.582
		569.67		1.970E-02	5.613E-02	9.600E-02	5.898E-03	0.205
		1063.62	*	8.285E-02	1.231E-01	2.146E-01	1.492E-02	0.386
		1770.23		-1.718E-01	8.032E-01	1.075E+00	5.973E-02	-0.160
TL-207		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
PO-209		260.50		-1.269E+01	1.702E+01	2.719E+01	1.818E+00	-0.467
		262.80		1.163E+01	4.573E+01	7.665E+01	5.120E+00	0.152
		896.60	*	1.794E+01	2.057E+01	3.496E+01	2.813E+00	0.513
BI-210		46.50	*	-1.828E+00	3.396E+00	5.587E+00	4.220E-01	-0.327
PB-210		46.50	*	-1.828E+00	3.396E+00	5.587E+00	4.220E-01	-0.327
PO-210		46.50	*	-1.828E+00	3.395E+00	5.587E+00	3.597E-01	-0.327
PB-211		404.84	*	-1.065E+00	2.037E+00	3.015E+00	1.878E+00	-0.353
		427.08		5.883E-01	4.378E+00	7.075E+00	4.371E+00	0.083
		831.96		2.532E-01	2.525E+00	4.132E+00	2.584E+00	0.061
BI-212	+	727.18	*	1.200E+00	8.121E-01	1.127E+00	9.614E-02	1.065
		785.46		9.555E-01	3.469E+00	5.785E+00	4.205E-01	0.165
		1620.62		2.570E+00	1.850E+00	3.694E+00	2.132E-01	0.696
BI-214	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.613E-01	5.353E-02	0.952
PO-215		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
RN-219		271.23		5.087E-01	4.349E-01	7.516E-01	6.563E-02	0.677
		401.81	*	4.775E-01	8.398E-01	1.395E+00	1.872E-01	0.342
RN-220		549.76	*	2.311E+01	4.922E+01	8.479E+01	5.152E+00	0.273
RA-223		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
RA-224		240.98	*	5.593E+00	1.484E+00	2.484E+00	1.670E-01	2.252
RA-226	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569

---- Non-Identified Nuclides ----

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		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.613E-01	5.353E-02	0.952
AC-227		79.80		-4.543E-01	2.588E+00	3.735E+00	7.826E-01	-0.122
		236.00		2.850E-01	4.389E-01	6.647E-01	7.306E-02	0.429
		256.20	*	5.496E-01	6.550E-01	1.120E+00	1.608E-01	0.491
		286.10		-2.669E-02	2.696E+00	4.442E+00	5.316E-01	-0.006
		299.80		2.645E+00	2.749E+00	4.170E+00	6.898E-01	0.634
		304.40		-3.110E+00	3.425E+00	5.296E+00	9.281E-01	-0.587
		334.20		-1.829E+00	4.617E+00	6.391E+00	1.179E+00	-0.286
TH-227		79.80		-4.543E-01	2.588E+00	3.735E+00	7.931E-01	-0.122
	+	94.00		4.374E+00	3.422E+00	4.641E+00	9.965E-01	0.943
		236.00		2.850E-01	4.386E-01	6.647E-01	6.431E-02	0.429
		256.20	*	5.496E-01	6.571E-01	1.120E+00	1.930E-01	0.491
		286.10		-2.669E-02	2.696E+00	4.442E+00	4.452E+00	-0.006
		299.80		2.645E+00	2.749E+00	4.170E+00	6.898E-01	0.634
		304.40		-3.110E+00	3.425E+00	5.296E+00	9.281E-01	-0.587
		334.20		-1.829E+00	4.617E+00	6.391E+00	1.179E+00	-0.286
TH-229		85.43		4.121E-01	3.329E-01	5.049E-01	3.768E-02	0.816
	+	88.47		6.478E+00	5.827E-01	6.488E-01	4.964E-02	9.985
		100.00		-9.504E-03	2.659E-01	4.282E-01	3.453E-02	-0.022
		193.63	*	-8.969E-02	8.033E-01	1.345E+00	8.945E-02	-0.067
	+	210.97		2.010E+00	1.850E+00	2.109E+00	1.413E-01	0.953
TH-230	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.612E-01	5.353E-02	0.952
PA-231		283.67	*	-7.883E-01	2.730E+00	4.436E+00	6.268E-01	-0.178
		301.29		3.034E-01	1.024E+00	1.647E+00	1.785E-01	0.184
TH-231		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
U-231		84.21		1.645E+00	2.621E+00	3.902E+00	2.881E-01	0.422
	+	92.29		1.198E+00	9.064E-01	1.359E+00	1.054E-01	0.882
		95.87	*	-5.597E-02	4.613E-01	6.599E-01	5.204E-02	-0.085
		108.00		-3.793E-01	8.492E-01	1.337E+00	1.135E-01	-0.284
PA-233	+	75.28		1.673E+01	5.733E+00	8.222E+00	1.189E+00	2.035
	+	86.59		9.289E+01	2.503E+01	7.762E+00	2.056E+00	11.967
		300.12		6.031E-01	7.713E-01	1.164E+00	1.600E-01	0.518
		311.98	*	-7.700E-02	1.131E-01	1.785E-01	1.198E-02	-0.431

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		340.50		2.026E+00	1.365E+00	2.026E+00	4.669E-01	1.000
		398.62		4.225E-01	4.313E+00	7.007E+00	1.805E+00	0.060
		415.76		-7.584E-01	3.357E+00	5.336E+00	1.093E+00	-0.142
PA-234		63.00		1.467E-01	1.995E+00	2.972E+00	4.320E-01	0.049
		94.67		1.909E-01	2.521E-01	3.768E-01	4.474E-02	0.507
		98.44		1.002E-01	1.424E-01	2.184E-01	1.216E-01	0.459
		99.86		-1.109E-03	6.738E-01	1.087E+00	8.758E-02	-0.001
		111.00		-1.451E-01	2.721E-01	4.254E-01	5.156E-02	-0.341
		131.20		-1.716E-01	1.728E-01	2.620E-01	2.313E-02	-0.655
		152.70		-1.092E-01	5.123E-01	8.017E-01	1.322E-01	-0.136
	+	186.00		6.582E+00	3.849E+00	3.766E+00	1.157E+00	1.748
		226.40		3.482E-01	6.601E-01	1.124E+00	1.355E-01	0.310
		227.20		4.794E-01	7.120E-01	1.221E+00	8.208E-02	0.393
		248.90		2.195E-01	1.405E+00	2.350E+00	5.111E-01	0.093
		293.70		4.121E+00	1.565E+00	2.377E+00	3.888E-01	1.734
		369.80		2.459E-01	1.640E+00	2.685E+00	5.581E-01	0.092
		568.70		4.117E-02	1.837E+00	3.079E+00	1.891E-01	0.013
		569.50		8.362E-02	5.004E-01	8.463E-01	5.199E-02	0.099
		574.00		-9.128E-02	2.817E+00	4.695E+00	2.891E-01	-0.019
		699.00		-2.872E-01	1.371E+00	2.225E+00	4.065E-01	-0.129
		706.10		-5.236E-01	2.051E+00	3.296E+00	1.459E+00	-0.159
		733.00		2.529E-02	8.525E-01	1.216E+00	2.625E-01	0.021
		742.81		1.948E-01	2.801E+00	4.614E+00	3.093E+00	0.042
		796.30		2.298E+00	2.036E+00	3.418E+00	9.117E-01	0.672
		805.60		8.993E-01	2.227E+00	3.708E+00	1.125E+00	0.243
		819.60		1.254E+00	3.015E+00	4.985E+00	1.884E+00	0.251
		826.30		-2.784E-01	1.855E+00	2.981E+00	1.328E+00	-0.093
		831.60		7.011E-01	1.305E+00	2.181E+00	6.449E-01	0.321
		876.40		-4.021E-01	2.125E+00	3.334E+00	3.426E+00	-0.121
		880.51		8.483E-02	7.157E-01	1.169E+00	9.279E-02	0.073
		883.24		3.180E-01	7.464E-01	1.194E+00	8.014E-01	0.266
		899.00		-4.153E-01	2.314E+00	3.691E+00	1.610E+00	-0.113
		925.00		-9.946E-02	3.288E+00	5.300E+00	4.199E-01	-0.019
		926.50		2.785E-02	4.918E-01	7.967E-01	1.995E-01	0.035
		946.00	*	-3.701E-01	8.448E-01	1.319E+00	2.428E-01	-0.281
		949.00		-2.333E-01	1.208E+00	1.923E+00	1.498E-01	-0.121
		980.50		-1.740E-02	1.924E+00	3.090E+00	2.347E-01	-0.006
		1394.10		-1.702E-01	1.785E+00	2.877E+00	1.864E+00	-0.059
PA-234M		766.41		3.380E+01	4.320E+01	6.031E+01	4.615E+01	0.560
		1001.03	*	1.554E+01	1.727E+01	2.927E+01	3.016E+00	0.531
TH-234		63.29	*	8.022E-02	1.698E+00	2.528E+00	4.338E-01	0.032
	+	92.38		1.132E+00	8.748E-01	1.284E+00	2.271E-01	0.882
U-234	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.612E-01	5.353E-02	0.952

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-235	+	89.95		1.837E+00	2.646E+00	3.780E+00	1.157E+00	0.486
	+	93.35		1.361E+00	1.091E+00	1.513E+00	4.204E-01	0.899
		105.00		1.097E+00	1.613E+00	2.619E+00	7.793E-01	0.419
		143.76	*	4.902E-03	3.208E-01	5.107E-01	8.796E-02	0.010
		163.35		1.487E-01	7.970E-01	1.206E+00	2.206E-01	0.123
	+	185.71		2.438E-01	1.224E-01	1.388E-01	9.189E-03	1.757
		205.31		1.446E-01	8.938E-01	1.333E+00	2.438E-01	0.108
NP-236		94.67		1.460E-01	1.908E-01	2.859E-01	2.242E-02	0.511
		98.44		7.576E-02	9.924E-02	1.651E-01	1.320E-02	0.459
		111.00		-1.098E-01	2.056E-01	3.217E-01	2.789E-02	-0.341
		160.31	*	-5.327E-02	1.244E-01	2.004E-01	1.389E-02	-0.266
NP-237		86.50	*	6.807E+00	1.606E+00	1.107E+00	2.432E-01	6.148
		95.87		-1.780E-01	1.468E+00	2.099E+00	5.119E-01	-0.085
U-238		63.29	*	8.022E-02	1.698E+00	2.528E+00	4.338E-01	0.032
	+	92.38		1.132E+00	8.561E-01	1.284E+00	9.963E-02	0.882
NP-239		99.55		-4.534E-02	2.286E-01	3.656E-01	2.941E-02	-0.124
		117.00	*	-1.367E-01	3.069E-01	4.564E-01	4.135E-02	-0.299
	+	209.75		2.025E+00	1.863E+00	2.183E+00	1.462E-01	0.928
		228.18		4.038E-02	3.711E-01	6.221E-01	4.182E-02	0.065
	+	277.60		3.730E-01	3.595E-01	5.661E-01	3.748E-02	0.659
		334.30		-1.156E+00	2.605E+00	3.600E+00	2.215E-01	-0.321
CM-243		99.55		-4.663E-02	2.351E-01	3.760E-01	3.025E-02	-0.124
		103.76	*	-1.683E-02	1.429E-01	2.290E-01	1.890E-02	-0.073
		117.00		-1.406E-01	3.156E-01	4.693E-01	4.252E-02	-0.299
	+	209.75		1.996E+00	1.836E+00	2.151E+00	1.440E-01	0.928
		228.18		4.079E-02	3.748E-01	6.283E-01	4.224E-02	0.065
	+	277.60		3.758E-01	3.622E-01	5.704E-01	3.776E-02	0.659
CM-247	+	278.00		1.547E+00	1.491E+00	2.373E+00	1.570E-01	0.652
		287.40		4.304E-01	2.181E+00	3.621E+00	2.378E-01	0.119
		402.60	*	1.226E-02	7.487E-02	1.221E-01	6.533E-03	0.100
CF-249		252.85		-4.321E-01	1.471E+00	2.407E+00	1.614E-01	-0.180
		333.44		-9.629E-02	3.443E-01	4.824E-01	2.973E-02	-0.200
		387.95	*	-1.435E-03	8.213E-02	1.329E-01	7.112E-03	-0.011
CF-251		176.60	*	1.337E-01	1.969E-01	3.412E-01	2.247E-02	0.392
		227.00		5.780E-01	6.279E-01	1.087E+00	7.307E-02	0.532
		285.00		1.488E+00	3.095E+00	5.219E+00	3.435E-01	0.285

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071    *
* Acquisition date :  9-JUL-2009 08:51:19 Detector SN#     :               *
* Detector ID        : GAM07               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 01:00:01.46      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        :  2-JUL-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201873071          Analyst initials: MXR1          *
* Batch Number       : 881931               Sample Quantity : 1.5173E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-NOV-2008 14:41:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	3.682E-01	7.190E-02	6.741E-02	0.000E+00
CO-60	7.374E+00	5.440E-01	9.091E-02	0.000E+00
CD-109	4.772E+01	4.206E+00	2.270E+00	0.000E+00
SN-126	4.745E+00	4.182E-01	2.262E-01	0.000E+00
BA-137M	5.633E+00	4.329E-01	1.274E-01	0.000E+00
CS-137	5.954E+00	4.586E-01	1.346E-01	0.000E+00
CE-139	7.764E-02	5.886E-02	7.837E-02	0.000E+00
TL-208	4.711E-01	1.329E-01	1.159E-01	0.000E+00
BI-211	2.663E+00	6.449E-01	6.399E-01	0.000E+00
PB-212	1.331E+00	1.977E-01	1.947E-01	0.000E+00
PO-212	1.331E+00	1.977E-01	1.947E-01	0.000E+00
PB-214	9.262E-01	2.293E-01	2.269E-01	0.000E+00
PO-214	9.262E-01	2.293E-01	2.269E-01	0.000E+00
PO-216	1.331E+00	1.977E-01	1.947E-01	0.000E+00
PO-218	9.262E-01	2.293E-01	2.269E-01	0.000E+00
AC-228	1.885E+00	5.884E-01	5.740E-01	0.000E+00
RA-228	1.885E+00	5.884E-01	5.740E-01	0.000E+00
TH-228	1.331E+00	1.977E-01	1.946E-01	0.000E+00
TH-232	1.885E+00	5.884E-01	5.740E-01	0.000E+00
AM-241	1.353E+01	1.168E+00	4.161E-01	0.000E+00
AM-243	3.194E-01	9.963E-02	1.365E-01	0.000E+00
ANH-511	1.259E-01	9.107E-02	9.813E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	3.247E-01	6.476E-01	1.125E+00	0.000E+00	NOT IDENT.
NA-22	-8.096E-03	5.131E-02	8.536E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.752E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.288E-02	3.784E-02	6.939E-02	0.000E+00	NOT IDENT.
K-40	5.196E-01	6.084E-01	1.160E+00	0.000E+00	NOT IDENT.

TI-44	0.000E+00	7.666E-02	1.058E-01	0.000E+00	FAIL ABUN
SC-46	-7.621E-02	9.502E-02	1.516E-01	0.000E+00	NOT IDENT.
V-48	1.783E-02	1.321E-01	2.225E-01	0.000E+00	NOT IDENT.
CR-51	2.993E-01	5.361E-01	9.649E-01	0.000E+00	NOT IDENT.
MN-52	8.301E-02	1.173E-01	2.200E-01	0.000E+00	FAIL ABUN
MN-54	4.738E-03	7.449E-02	1.270E-01	0.000E+00	NOT IDENT.
CO-56	-5.056E-03	8.486E-02	1.433E-01	0.000E+00	NOT IDENT.
CO-58	-7.497E-02	7.743E-02	1.220E-01	0.000E+00	NOT IDENT.
FE-59	9.180E-02	1.823E-01	3.252E-01	0.000E+00	NOT IDENT.
ZN-65	-2.741E-01	1.960E-01	3.052E-01	0.000E+00	NOT IDENT.
GE-68	-4.716E-01	2.829E+00	4.845E+00	0.000E+00	NOT IDENT.
AS-73	-7.070E-01	1.161E+00	2.105E+00	0.000E+00	NOT IDENT.
AS-74	-9.255E-02	1.270E-01	2.121E-01	0.000E+00	NOT IDENT.
SE-75	-8.727E-03	7.213E-02	1.275E-01	0.000E+00	FAIL ABUN
BR-77	1.078E+00	2.027E+00	3.703E+00	0.000E+00	FAIL ABUN
SR-82	7.426E-02	6.270E-01	1.081E+00	0.000E+00	NOT IDENT.
RB-83	6.617E-02	1.201E-01	2.197E-01	0.000E+00	NOT IDENT.
RB-84	-3.667E-02	1.501E-01	2.494E-01	0.000E+00	NOT IDENT.
KR-85	1.727E+01	1.354E+01	2.308E+01	0.000E+00	NOT IDENT.
SR-85	8.162E-02	6.399E-02	1.090E-01	0.000E+00	NOT IDENT.
RB-86	-9.497E-01	1.364E+00	2.250E+00	0.000E+00	NOT IDENT.
Y-88	1.137E-01	6.250E-02	1.219E-01	0.000E+00	FAIL ABUN
ZR-88	-3.081E-02	5.781E-02	9.655E-02	0.000E+00	NOT IDENT.
Y-91	6.839E+00	2.224E+01	3.934E+01	0.000E+00	NOT IDENT.
NB-94	-3.199E-02	6.254E-02	1.040E-01	0.000E+00	NOT IDENT.
NB-95	4.730E-02	7.640E-02	1.360E-01	0.000E+00	NOT IDENT.
NB-95M	1.443E-01	2.059E-01	3.372E-01	0.000E+00	NOT IDENT.
ZR-95	1.133E-01	1.375E-01	2.478E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.185E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.642E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.758E+00	3.292E+00	5.939E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.776E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.477E-03	5.179E-02	9.384E-02	0.000E+00	NOT IDENT.
RH-102	3.956E-02	6.446E-02	1.127E-01	0.000E+00	NOT IDENT.
RU-103	-3.235E-02	6.841E-02	1.185E-01	0.000E+00	FAIL ABUN
RH-106	-2.528E-01	6.013E-01	1.004E+00	0.000E+00	FAIL ABUN
RU-106	-2.528E-01	6.008E-01	1.004E+00	0.000E+00	FAIL ABUN
AG-108M	7.341E-02	6.989E-02	1.257E-01	0.000E+00	NOT IDENT.
AG-110M	1.081E-01	8.474E-02	1.404E-01	0.000E+00	NOT IDENT.
IN-111	-6.233E-01	2.810E-01	4.487E-01	0.000E+00	NOT IDENT.
IN-113M	4.723E-02	8.498E-02	1.505E-01	0.000E+00	NOT IDENT.
SN-113	4.723E-02	8.498E-02	1.505E-01	0.000E+00	NOT IDENT.
IN-114M	7.153E-02	2.780E-01	4.532E-01	0.000E+00	NOT IDENT.
CD-115	2.130E-01	1.771E+00	3.161E+00	0.000E+00	NOT IDENT.
SN-117M	1.677E-03	5.450E-02	1.007E-01	0.000E+00	NOT IDENT.
SB-122	8.205E-02	5.013E-01	8.921E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.485E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.273E-03	3.986E-02	7.344E-02	0.000E+00	NOT IDENT.
I-124	3.729E-02	3.818E-01	6.127E-01	0.000E+00	NOT IDENT.
SB-124	-8.578E-02	1.033E-01	1.373E-01	0.000E+00	FAIL ABUN
SB-125	-1.887E-02	1.932E-01	3.281E-01	0.000E+00	NOT IDENT.
TE-125M	1.229E+01	1.218E+01	2.230E+01	0.000E+00	NOT IDENT.
I-126	3.226E-02	2.419E-01	3.689E-01	0.000E+00	NOT IDENT.
SB-126	9.278E-02	1.911E-01	3.118E-01	0.000E+00	FAIL ABUN
SB-127	-4.450E-01	6.594E-01	1.086E+00	0.000E+00	NOT IDENT.
XE-127	2.011E-02	6.153E-02	1.131E-01	0.000E+00	NOT IDENT.
I-131	9.314E-02	1.118E-01	2.019E-01	0.000E+00	NOT IDENT.
TE-132	2.445E-02	2.130E-01	3.848E-01	0.000E+00	NOT IDENT.
BA-133	-4.231E-02	9.264E-02	1.366E-01	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.248E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.268E-01	9.777E-02	1.799E-01	0.000E+00	NOT IDENT.
CS-135	-1.096E-01	2.700E-01	4.705E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.266E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.661E-02	1.611E-01	2.706E-01	0.000E+00	NOT IDENT.
BA-140	-1.421E-02	2.970E-01	5.237E-01	0.000E+00	NOT IDENT.
LA-140	-1.005E-01	8.062E-02	9.938E-02	0.000E+00	NOT IDENT.
CE-141	-5.040E-02	7.922E-02	1.324E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.590E+00	8.999E+00	0.000E+00	FAIL ABUN
CE-144	-3.740E-01	3.279E-01	5.320E-01	0.000E+00	NOT IDENT.
PM-144	-9.839E-03	6.342E-02	1.084E-01	0.000E+00	NOT IDENT.
PR-144	-6.640E-01	4.280E+00	7.315E+00	0.000E+00	NOT IDENT.
PM-146	1.391E-02	9.193E-02	1.575E-01	0.000E+00	NOT IDENT.
ND-147	2.985E-01	6.290E-01	1.143E+00	0.000E+00	FAIL ABUN
PM-149	-1.865E+00	1.400E+01	2.457E+01	0.000E+00	NOT IDENT.
EU-152	-1.355E-01	1.957E-01	3.004E-01	0.000E+00	FAIL ABUN
GD-153	1.535E-02	1.125E-01	1.913E-01	0.000E+00	NOT IDENT.
EU-154	-4.580E-02	1.466E-01	2.384E-01	0.000E+00	FAIL ABUN
EU-155	1.421E-01	1.560E-01	2.854E-01	0.000E+00	FAIL ABUN

TB-160	5.609E-02	3.141E-01	5.366E-01	0.000E+00	FAIL ABUN
HO-166M	-1.142E-02	1.205E-01	2.064E-01	0.000E+00	NOT IDENT.
TM-171	-2.136E+00	3.454E+01	6.264E+01	0.000E+00	FAIL ABUN
LU-176	3.208E-02	4.360E-02	7.930E-02	0.000E+00	FAIL ABUN
LU-177	1.280E+00	1.154E+00	1.441E+00	0.000E+00	FAIL ABUN
LU-177M	-1.054E-01	3.321E-01	5.583E-01	0.000E+00	FAIL ABUN
HF-181	-4.113E-02	7.971E-02	1.303E-01	0.000E+00	NOT IDENT.
W-181	-4.739E-01	4.429E-01	7.359E-01	0.000E+00	NOT IDENT.
TA-182	2.526E-02	2.104E-01	3.650E-01	0.000E+00	NOT IDENT.
RE-183	4.824E-02	1.673E-01	2.766E-01	0.000E+00	FAIL ABUN
RE-184	-1.115E-01	3.722E-01	6.546E-01	0.000E+00	FAIL ABUN
OS-185	2.726E-02	8.105E-02	1.440E-01	0.000E+00	FAIL ABUN
RE-188	1.502E-02	2.451E-01	4.226E-01	0.000E+00	NOT IDENT.
W-188	7.071E-01	1.304E+01	2.027E+01	0.000E+00	NOT IDENT.
IR-192	3.291E-02	5.598E-02	1.010E-01	0.000E+00	FAIL ABUN
AU-195	4.923E-02	3.107E-01	5.548E-01	0.000E+00	FAIL ABUN
TL-200	-1.060E+00	6.147E+00	1.054E+01	0.000E+00	NOT IDENT.
TL-201	1.921E+00	2.095E+00	3.558E+00	0.000E+00	NOT IDENT.
TL-202	-7.685E-02	9.900E-02	1.613E-01	0.000E+00	NOT IDENT.
HG-203	6.733E-02	7.240E-02	1.188E-01	0.000E+00	NOT IDENT.
BI-207	8.285E-02	1.206E-01	2.180E-01	0.000E+00	FAIL ABUN
TL-207	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
PO-209	1.794E+01	2.016E+01	3.568E+01	0.000E+00	NOT IDENT.
BI-210	-1.828E+00	3.328E+00	6.123E+00	0.000E+00	NOT IDENT.
PB-210	-1.828E+00	3.328E+00	6.123E+00	0.000E+00	NOT IDENT.
PO-210	-1.828E+00	3.327E+00	6.123E+00	0.000E+00	NOT IDENT.
PB-211	-1.065E+00	1.996E+00	3.139E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	7.959E-01	1.156E+00	0.000E+00	FAIL ABUN
BI-214	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
PO-215	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
RN-219	4.775E-01	8.230E-01	1.453E+00	0.000E+00	NOT IDENT.
RN-220	2.311E+01	4.824E+01	8.761E+01	0.000E+00	NOT IDENT.
RA-223	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.454E+00	2.620E+00	0.000E+00	NOT IDENT.
RA-226	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
AC-227	5.496E-01	6.419E-01	1.180E+00	0.000E+00	NOT IDENT.
TH-227	5.496E-01	6.439E-01	1.180E+00	0.000E+00	FAIL ABUN
TH-229	-8.969E-02	7.872E-01	1.426E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
PA-231	-7.883E-01	2.676E+00	4.660E+00	0.000E+00	NOT IDENT.
TH-231	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
U-231	-5.597E-02	4.521E-01	7.113E-01	0.000E+00	FAIL ABUN
PA-233	-7.700E-02	1.108E-01	1.870E-01	0.000E+00	FAIL ABUN
PA-234	-3.701E-01	8.279E-01	1.344E+00	0.000E+00	FAIL ABUN
PA-234M	1.554E+01	1.693E+01	2.978E+01	0.000E+00	NOT IDENT.
TH-234	8.022E-02	1.664E+00	2.751E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
U-235	4.902E-03	3.144E-01	5.453E-01	0.000E+00	FAIL ABUN
NP-236	-5.327E-02	1.219E-01	2.134E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	1.574E+00	1.196E+00	0.000E+00	NOT IDENT.
U-238	8.022E-02	1.664E+00	2.751E+00	0.000E+00	FAIL ABUN
NP-239	-1.367E-01	3.008E-01	4.897E-01	0.000E+00	FAIL ABUN
CM-243	-1.683E-02	1.401E-01	2.464E-01	0.000E+00	FAIL ABUN
CM-247	1.226E-02	7.338E-02	1.271E-01	0.000E+00	FAIL ABUN
CF-249	-1.435E-03	8.049E-02	1.385E-01	0.000E+00	NOT IDENT.
CF-251	1.337E-01	1.930E-01	3.626E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 09:51:54.27

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:51:19.
Sample ID         : G1201873071          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM07                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.46  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	459	85.51*	7.349E+00	3.613E-01	3.682E-01	19.92
	136.48	------	10.60	7.139E+00	------ Line Not Found		------
CO-60	1173.22	2061	100.00	1.395E+00	7.310E+00	7.330E+00	7.59
	1332.49	1867	100.00*	1.256E+00	7.355E+00	7.374E+00	7.53
CD-109	88.03	2521	3.72*	7.106E+00	4.720E+01	4.772E+01	8.99
SN-126	64.28	------	9.60	5.307E+00	------ Line Not Found		------
	86.94	2521	8.90	7.106E+00	1.973E+01	1.973E+01	41.44
	87.57	2521	37.00*	7.106E+00	4.745E+00	4.745E+00	8.99
BA-137M	661.65	2363	89.98*	2.308E+00	5.630E+00	5.633E+00	7.84
CS-137	661.65	2363	85.12*	2.308E+00	5.952E+00	5.954E+00	7.86
CE-139	165.85	80	80.35*	6.573E+00	7.480E-02	7.764E-02	77.36
TL-208	277.35	50	6.80	4.700E+00	7.734E-01	7.734E-01	96.78
	510.84	73	21.60	2.885E+00	5.827E-01	5.827E-01	74.30
	583.14	207	84.20*	2.576E+00	4.711E-01	4.711E-01	28.79
	860.37	------	12.46	1.830E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	6.202E+00	------ Line Not Found		------
	351.07	272	12.94*	3.913E+00	2.663E+00	2.663E+00	24.71
PB-212	74.81	271	10.70	6.372E+00	1.970E+00	1.970E+00	33.18
	77.11	403	18.00	6.540E+00	1.696E+00	1.696E+00	25.01
	87.30	2521	8.00	7.106E+00	2.195E+01	2.195E+01	13.45
	238.63	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.09	------	3.41	4.430E+00	------ Line Not Found		------
PO-212	74.81	271	10.70	6.372E+00	1.970E+00	1.970E+00	33.18
	77.11	403	18.00	6.540E+00	1.696E+00	1.696E+00	25.01
	87.30	2521	8.00	7.106E+00	2.195E+01	2.195E+01	13.45
	115.19	------	0.60	7.410E+00	------ Line Not Found		------
	238.63	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.09	------	3.41	4.430E+00	------ Line Not Found		------
PB-214	74.81	271	6.21	6.372E+00	3.394E+00	3.394E+00	32.68
	77.11	403	10.50	6.540E+00	2.907E+00	2.907E+00	26.14
	87.30	2521	4.67	7.106E+00	3.759E+01	3.759E+01	11.85
	241.98	------	7.49	5.191E+00	------ Line Not Found		------

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	176	19.20	4.483E+00	1.013E+00	1.013E+00	38.37
	351.92	272	37.20*	3.913E+00	9.262E-01	9.262E-01	25.26
PO-214	74.81	271	6.21	6.372E+00	3.394E+00	3.394E+00	32.68
	77.11	403	10.50	6.540E+00	2.907E+00	2.907E+00	26.14
	87.30	2521	4.67	7.106E+00	3.759E+01	3.759E+01	11.85
	241.98	------	7.49	5.191E+00	------ Line Not Found		------
	295.21	176	19.20	4.483E+00	1.013E+00	1.013E+00	38.37
	351.92	272	37.20*	3.913E+00	9.262E-01	9.262E-01	25.26
PO-216	74.81	271	10.70	6.372E+00	1.970E+00	1.970E+00	33.18
	77.11	403	18.00	6.540E+00	1.696E+00	1.696E+00	25.01
	87.30	2521	8.00	7.106E+00	2.195E+01	2.195E+01	13.45
	238.63	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.09	------	3.41	4.430E+00	------ Line Not Found		------
PO-218	74.81	271	6.21	6.372E+00	3.394E+00	3.394E+00	32.68
	77.11	403	10.50	6.540E+00	2.907E+00	2.907E+00	26.14
	87.30	2521	4.67	7.106E+00	3.759E+01	3.759E+01	11.85
	241.98	------	7.49	5.191E+00	------ Line Not Found		------
	295.21	176	19.20	4.483E+00	1.013E+00	1.013E+00	38.37
	351.92	272	37.20*	3.913E+00	9.262E-01	9.262E-01	25.26
AC-228	338.32	143	11.40	4.037E+00	1.536E+00	1.536E+00	58.08
	911.07	184	27.70*	1.739E+00	1.885E+00	1.885E+00	31.86
	969.11	94	16.60	1.648E+00	1.693E+00	1.693E+00	53.44
RA-228	338.32	143	11.40	4.037E+00	1.536E+00	1.536E+00	58.08
	911.07	184	27.70*	1.739E+00	1.885E+00	1.885E+00	31.86
	969.11	94	16.60	1.648E+00	1.693E+00	1.693E+00	53.44
TH-228	84.40	------	1.21	6.955E+00	------ Line Not Found		------
	238.60	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.10	------	3.41	4.430E+00	------ Line Not Found		------
TH-232	338.32	143	11.40	4.037E+00	1.536E+00	1.536E+00	41.77
	911.07	184	27.70*	1.739E+00	1.885E+00	1.885E+00	31.86
	969.11	94	16.60	1.648E+00	1.693E+00	1.693E+00	53.44
AM-241	59.54	4585	35.90*	4.672E+00	1.353E+01	1.353E+01	8.81
AM-243	74.67	271	66.00*	6.372E+00	3.194E-01	3.194E-01	31.83
	86.72	2521	0.34	7.106E+00	5.225E+02	5.225E+02	8.99
	117.66	------	0.55	7.392E+00	------ Line Not Found		------
	142.18	------	0.13	7.037E+00	------ Line Not Found		------
ANH-511	511.00	73	100.00*	2.885E+00	1.259E-01	1.259E-01	73.83

Flag: "*" = Keyline

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

Total number of lines in spectrum 26
Number of unidentified lines 0
Number of lines tentatively identified by NID 26 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	3.613E-01	3.682E-01	0.734E-01	19.92	
CO-60	5.27Y	1.00	7.355E+00	7.374E+00	0.555E+00	7.53	
CD-109	464.00D	1.01	4.720E+01	4.772E+01	0.429E+01	8.99	
SN-126	1.00E+05Y	1.00	4.745E+00	4.745E+00	0.427E+00	8.99	
BA-137M	30.17Y	1.00	5.630E+00	5.633E+00	0.442E+00	7.84	
CS-137	30.17Y	1.00	5.952E+00	5.954E+00	0.468E+00	7.86	
CE-139	137.66D	1.04	7.480E-02	7.764E-02	6.006E-02	77.36	
TL-208	1.41E+10Y	1.00	4.711E-01	4.711E-01	1.356E-01	28.79	
BI-211	7.04E+08Y	1.00	2.663E+00	2.663E+00	0.658E+00	24.71	
PB-212	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
PO-212	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
PB-214	1600.00Y	1.00	9.262E-01	9.262E-01	2.339E-01	25.26	
PO-214	1600.00Y	1.00	9.262E-01	9.262E-01	2.339E-01	25.26	
PO-216	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
PO-218	1600.00Y	1.00	9.262E-01	9.262E-01	2.339E-01	25.26	
AC-228	1.41E+10Y	1.00	1.885E+00	1.885E+00	0.600E+00	31.86	
RA-228	1.41E+10Y	1.00	1.885E+00	1.885E+00	0.600E+00	31.86	
TH-228	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
TH-232	1.41E+10Y	1.00	1.885E+00	1.885E+00	0.600E+00	31.86	
AM-241	432.20Y	1.00	1.353E+01	1.353E+01	0.119E+01	8.81	
AM-243	7380.00Y	1.00	3.194E-01	3.194E-01	1.017E-01	31.83	
ANH-511	1.00E+09Y	1.00	1.259E-01	1.259E-01	0.929E-01	73.83	
	Total Activity :		1.022E+02	1.027E+02			

Grand Total Activity : 1.022E+02 1.027E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.71	72	359	1.05	179.02	171	11	1.99E-02	****	7.16E+00	T
0	92.96	90	358	1.55	185.53	182	7	2.49E-02	75.2	7.26E+00	T
0	186.00	164	365	1.41	371.61	366	12	4.56E-02	49.8	6.17E+00	T
0	209.69	76	324	1.23	419.00	414	10	2.11E-02	91.8	5.72E+00	T
0	609.24	193	100	1.25	1218.27	1213	10	5.35E-02	24.6	2.48E+00	T
0	726.96	61	95	3.15	1453.77	1449	11	1.69E-02	67.1	2.12E+00	T
0	1764.24	30	12	1.44	3529.54	3522	16	8.34E-03	65.5	1.03E+00	T
0	1836.27	22	3	1.41	3673.71	3666	14	6.07E-03	55.8	1.00E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 09:51:59.08

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1 *
* Acquisition date : 9-JUL-2009 08:51:19.  Detector SN#     :              *
* Detector ID      : GAM07                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 01:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 01:00:01.46         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 2-JUL-2009 00:00:00.  Nuclide Library : SOLID          *
* Sample ID        : G1201873071           Analyst initials: MXR1           *
* Batch Number     : 881931                Sample Quantity : 1.51730E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 2-NOV-2008 14:41:14.60MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	3.682E-01	7.337E-02	6.289E-02	5.931E-03	5.855
CO-60	7.374E+00	5.551E-01	9.002E-02	5.266E-03	81.914
CD-109	4.772E+01	4.292E+00	2.102E+00	1.606E-01	22.705
SN-126	4.745E+00	4.268E-01	2.094E-01	1.593E-02	22.659
BA-137M	5.633E+00	4.417E-01	1.238E-01	7.877E-03	45.485
CS-137	5.954E+00	4.680E-01	1.309E-01	8.356E-03	45.485
CE-139	7.764E-02	6.006E-02	7.365E-02	4.823E-03	1.054
TL-208	4.711E-01	1.356E-01	1.124E-01	7.890E-03	4.193
BI-211	2.663E+00	6.580E-01	6.124E-01	4.018E-02	4.348
PB-212	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
PO-212	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
PB-214	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
PO-214	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
PO-216	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
PO-218	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
AC-228	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
RA-228	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
TH-228	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
AM-241	1.353E+01	1.192E+00	3.818E-01	2.899E-02	35.426
AM-243	3.194E-01	1.017E-01	1.259E-01	8.682E-03	2.536
ANH-511	1.259E-01	9.293E-02	9.479E-02	5.616E-03	1.328

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.247E-01		6.608E-01	1.085E+00	7.297E-02	0.299
NA-22	-8.096E-03		5.236E-02	8.442E-02	4.963E-03	-0.096
NA-24	-1.036E-04		8.941E-05	Half-Life too short		
AL-26	1.288E-02		3.861E-02	6.928E-02	3.801E-03	0.186
K-40	5.196E-01		6.208E-01	1.152E+00	7.168E-02	0.451
TI-44	3.128E-01	+	7.823E-02	9.767E-02	6.891E-03	3.203
SC-46	-7.621E-02		9.696E-02	1.485E-01	1.187E-02	-0.513
V-48	1.783E-02		1.348E-01	2.186E-01	1.656E-02	0.082
CR-51	2.993E-01		5.470E-01	9.213E-01	6.376E-02	0.325
MN-52	8.301E-02		1.197E-01	2.183E-01	1.282E-02	0.380
MN-54	4.738E-03		7.601E-02	1.243E-01	9.468E-03	0.038
CO-56	-5.056E-03		8.659E-02	1.402E-01	1.080E-02	-0.036
CO-58	-7.497E-02		7.901E-02	1.193E-01	8.917E-03	-0.628
FE-59	9.180E-02		1.861E-01	3.204E-01	2.406E-02	0.287
ZN-65	-2.741E-01		2.000E-01	3.008E-01	1.947E-02	-0.911
GE-68	-4.716E-01		2.887E+00	4.771E+00	3.258E-01	-0.099
AS-73	-7.070E-01		1.185E+00	1.927E+00	1.272E-01	-0.367
AS-74	-9.255E-02		1.296E-01	2.057E-01	1.280E-02	-0.450
SE-75	-8.727E-03		7.360E-02	1.212E-01	8.150E-03	-0.072
BR-77	1.078E+00		2.068E+00	3.579E+00	2.135E-01	0.301
SR-82	7.426E-02		6.398E-01	1.055E+00	7.604E-02	0.070
RB-83	6.617E-02		1.225E-01	2.123E-01	1.266E-02	0.312
RB-84	-3.667E-02		1.532E-01	2.443E-01	1.940E-02	-0.150
KR-85	1.727E+01		1.382E+01	2.230E+01	1.324E+00	0.775
SR-85	8.162E-02		6.529E-02	1.054E-01	6.255E-03	0.775
RB-86	-9.497E-01		1.392E+00	2.215E+00	1.514E-01	-0.429
Y-88	1.137E-01	+	6.377E-02	1.217E-01	6.629E-03	0.934
ZR-88	-3.081E-02		5.899E-02	9.266E-02	4.902E-03	-0.333
Y-91	6.839E+00		2.269E+01	3.885E+01	2.274E+00	0.176
NB-94	-3.199E-02		6.382E-02	1.013E-01	6.753E-03	-0.316
NB-95	4.730E-02		7.796E-02	1.328E-01	9.465E-03	0.356
NB-95M	1.443E-01		2.101E-01	3.196E-01	2.640E-02	0.451
ZR-95	1.133E-01		1.403E-01	2.418E-01	1.959E-02	0.469
NB-97	1.689E-04		6.048E-05	Half-Life too short		
ZR-97	1.458E-03		8.379E-04	Half-Life too short		
MO-99	2.758E+00		3.359E+00	5.791E+00	8.279E-01	0.476
TC-99M	-1.488E+01		1.416E+01	Half-Life too short		
RH-101	3.477E-03		5.284E-02	8.856E-02	5.902E-03	0.039
RH-102	3.956E-02		6.577E-02	1.087E-01	6.258E-03	0.364

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RU-103	-3.235E-02		6.980E-02	1.144E-01	1.449E-02	-0.283
RH-106	-2.528E-01		6.136E-01	9.752E-01	1.169E-01	-0.259
RU-106	-2.528E-01		6.130E-01	9.752E-01	6.130E-02	-0.259
AG-108M	7.341E-02		7.131E-02	1.209E-01	7.325E-03	0.607
AG-110M	1.081E-01		8.647E-02	1.365E-01	9.146E-03	0.792
IN-111	-6.233E-01		2.868E-01	4.256E-01	2.859E-02	-1.464
IN-113M	4.723E-02		8.672E-02	1.444E-01	8.239E-03	0.327
SN-113	4.723E-02		8.672E-02	1.444E-01	8.239E-03	0.327
IN-114M	7.153E-02		2.836E-01	4.272E-01	2.836E-02	0.167
CD-115	2.130E-01		1.808E+00	3.056E+00	1.832E-01	0.070
SN-117M	1.677E-03		5.561E-02	9.451E-02	6.666E-03	0.018
SB-122	8.205E-02		5.115E-01	8.640E-01	5.292E-02	0.095
I-123	-1.432E-05		2.288E-04	Half-Life too short		
TE-123M	-1.273E-03		4.067E-02	6.895E-02	4.886E-03	-0.018
I-124	3.729E-02		3.896E-01	5.944E-01	3.709E-02	0.063
SB-124	-8.578E-02		1.054E-01	1.368E-01	8.471E-03	-0.627
SB-125	-1.887E-02		1.971E-01	3.156E-01	1.819E-02	-0.060
TE-125M	1.229E+01		1.243E+01	2.075E+01	2.130E+00	0.592
I-126	3.226E-02		2.468E-01	3.588E-01	2.295E-02	0.090
SB-126	9.278E-02		1.950E-01	3.038E-01	2.065E-02	0.305
SB-127	-4.450E-01		6.728E-01	1.057E+00	8.169E-02	-0.421
XE-127	2.011E-02		6.279E-02	1.068E-01	7.130E-03	0.188
I-131	9.314E-02		1.140E-01	1.934E-01	1.232E-02	0.482
TE-132	2.445E-02		2.174E-01	3.644E-01	4.952E-02	0.067
BA-133	-4.231E-02		9.453E-02	1.308E-01	1.516E-02	-0.324
I-133	1.098E-05		1.147E-05	Half-Life too short		
CS-134	1.268E-01		9.976E-02	1.758E-01	1.304E-02	0.721
CS-135	-1.096E-01		2.755E-01	4.473E-01	3.725E-02	-0.245
I-135	5.315E+00		1.156E+01	Half-Life too short		
CS-136	-7.661E-02		1.644E-01	2.663E-01	2.002E-02	-0.288
BA-140	-1.421E-02		3.030E-01	5.066E-01	1.650E-01	-0.028
LA-140	-1.005E-01		8.226E-02	9.888E-02	5.733E-03	-1.016
CE-141	-5.040E-02		8.083E-02	1.241E-01	1.004E-02	-0.406
CE-143	9.634E+00		5.704E+00	8.573E+00	1.769E+00	1.124
CE-144	-3.740E-01		3.346E-01	4.974E-01	7.759E-02	-0.752
PM-144	-9.839E-03		6.472E-02	1.055E-01	6.989E-03	-0.093
PR-144	-6.640E-01		4.367E+00	7.122E+00	4.716E-01	-0.093
PM-146	1.391E-02		9.380E-02	1.517E-01	1.292E-02	0.092
ND-147	2.985E-01		6.419E-01	1.106E+00	1.505E-01	0.270
PM-149	-1.865E+00		1.428E+01	2.339E+01	3.390E+00	-0.080
EU-152	-1.355E-01		1.997E-01	2.873E-01	1.938E-02	-0.471
GD-153	1.535E-02		1.148E-01	1.775E-01	1.412E-02	0.086
EU-154	-4.580E-02		1.496E-01	2.358E-01	2.212E-02	-0.194
EU-155	1.421E-01		1.592E-01	2.654E-01	2.241E-02	0.536
TB-160	5.609E-02		3.205E-01	5.256E-01	4.167E-02	0.107
HO-166M	-1.142E-02		1.229E-01	2.011E-01	1.354E-02	-0.057
TM-171	-2.136E+00		3.524E+01	5.762E+01	3.867E+00	-0.037
LU-176	3.208E-02		4.449E-02	7.564E-02	4.862E-03	0.424

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	1.280E+00	+	1.177E+00	1.361E+00	9.112E-02	0.940
LU-177M	-1.054E-01		3.388E-01	5.365E-01	2.908E-02	-0.196
HF-181	-4.113E-02		8.134E-02	1.257E-01	7.283E-03	-0.327
W-181	-4.739E-01		4.520E-01	6.766E-01	4.538E-02	-0.700
TA-182	2.526E-02		2.147E-01	3.607E-01	2.113E-02	0.070
RE-183	4.824E-02		1.707E-01	2.598E-01	1.765E-02	0.186
RE-184	-1.115E-01		3.798E-01	6.214E-01	4.166E-02	-0.180
OS-185	2.726E-02		8.271E-02	1.399E-01	8.864E-03	0.195
RE-188	1.502E-02		2.501E-01	3.965E-01	2.891E-02	0.038
W-188	7.071E-01		1.331E+01	1.931E+01	1.264E+00	0.037
IR-192	3.291E-02		5.713E-02	9.642E-02	6.140E-03	0.341
AU-195	4.923E-02		3.171E-01	5.151E-01	4.128E-02	0.096
TL-200	-1.060E+00		6.273E+00	1.009E+01	5.746E-01	-0.105
TL-201	1.921E+00		2.138E+00	3.344E+00	2.190E-01	0.574
TL-202	-7.685E-02		1.010E-01	1.553E-01	8.651E-03	-0.495
HG-203	6.733E-02		7.388E-02	1.130E-01	7.832E-03	0.596
BI-207	8.285E-02		1.231E-01	2.146E-01	1.492E-02	0.386
TL-207	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
PO-209	1.794E+01		2.057E+01	3.496E+01	2.813E+00	0.513
BI-210	-1.828E+00		3.396E+00	5.587E+00	4.220E-01	-0.327
PB-210	-1.828E+00		3.396E+00	5.587E+00	4.220E-01	-0.327
PO-210	-1.828E+00		3.395E+00	5.587E+00	3.597E-01	-0.327
PB-211	-1.065E+00		2.037E+00	3.015E+00	1.878E+00	-0.353
BI-212	1.200E+00	+	8.121E-01	1.127E+00	9.614E-02	1.065
BI-214	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
PO-215	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
RN-219	4.775E-01		8.398E-01	1.395E+00	1.872E-01	0.342
RN-220	2.311E+01		4.922E+01	8.479E+01	5.152E+00	0.273
RA-223	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
RA-224	5.593E+00		1.484E+00	2.484E+00	1.670E-01	2.252
RA-226	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
AC-227	5.496E-01		6.550E-01	1.120E+00	1.608E-01	0.491
TH-227	5.496E-01		6.571E-01	1.120E+00	1.930E-01	0.491
TH-229	-8.969E-02		8.033E-01	1.345E+00	8.945E-02	-0.067
TH-230	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
PA-231	-7.883E-01		2.730E+00	4.436E+00	6.268E-01	-0.178
TH-231	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
U-231	-5.597E-02		4.613E-01	6.599E-01	5.204E-02	-0.085
PA-233	-7.700E-02		1.131E-01	1.785E-01	1.198E-02	-0.431
PA-234	-3.701E-01		8.448E-01	1.319E+00	2.428E-01	-0.281
PA-234M	1.554E+01		1.727E+01	2.927E+01	3.016E+00	0.531
TH-234	8.022E-02		1.698E+00	2.528E+00	4.338E-01	0.032
U-234	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
U-235	4.902E-03		3.208E-01	5.107E-01	8.796E-02	0.010
NP-236	-5.327E-02		1.244E-01	2.004E-01	1.389E-02	-0.266
NP-237	6.807E+00		1.606E+00	1.107E+00	2.432E-01	6.148
U-238	8.022E-02		1.698E+00	2.528E+00	4.338E-01	0.032
NP-239	-1.367E-01		3.069E-01	4.564E-01	4.135E-02	-0.299

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.683E-02		1.429E-01	2.290E-01	1.890E-02	-0.073
CM-247	1.226E-02		7.487E-02	1.221E-01	6.533E-03	0.100
CF-249	-1.435E-03		8.213E-02	1.329E-01	7.112E-03	-0.011
CF-251	1.337E-01		1.969E-01	3.412E-01	2.247E-02	0.392

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201873071          *
* Acquisition date  :  9-JUL-2009 08:51:19 Detector SN#     :               *
* Detector ID       : GAM07                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 01:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 01:00:01.46     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       :  2-JUL-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201873071          Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.5173E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  2-NOV-2008 14:41:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	3.682E-01	7.190E-02	3.372E-02	3.668E-02
CO-60	7.374E+00	5.440E-01	4.548E-02	2.776E-01
CD-109	4.772E+01	4.206E+00	1.136E+00	2.146E+00
SN-126	4.745E+00	4.182E-01	1.132E-01	2.134E-01
BA-137M	5.633E+00	4.329E-01	6.372E-02	2.209E-01
CS-137	5.954E+00	4.586E-01	6.735E-02	2.340E-01
CE-139	7.764E-02	5.886E-02	3.921E-02	3.003E-02
TL-208	4.711E-01	1.329E-01	5.799E-02	6.782E-02
BI-211	2.663E+00	6.449E-01	3.202E-01	3.290E-01
PB-212	1.331E+00	1.977E-01	9.739E-02	1.009E-01
PO-212	1.331E+00	1.977E-01	9.739E-02	1.009E-01
PB-214	9.262E-01	2.293E-01	1.135E-01	1.170E-01
PO-214	9.262E-01	2.293E-01	1.135E-01	1.170E-01
PO-216	1.331E+00	1.977E-01	9.739E-02	1.009E-01
PO-218	9.262E-01	2.293E-01	1.135E-01	1.170E-01
AC-228	1.885E+00	5.884E-01	2.872E-01	3.002E-01
RA-228	1.885E+00	5.884E-01	2.872E-01	3.002E-01
TH-228	1.331E+00	1.977E-01	9.738E-02	1.009E-01
TH-232	1.885E+00	5.884E-01	2.872E-01	3.002E-01
AM-241	1.353E+01	1.168E+00	2.082E-01	5.961E-01
AM-243	3.194E-01	9.963E-02	6.831E-02	5.083E-02
ANH-511	1.259E-01	9.107E-02	4.909E-02	4.647E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	3.247E-01	6.476E-01	5.628E-01	3.304E-01	NOT IDENT.
NA-22	-8.096E-03	5.131E-02	4.270E-02	2.618E-02	NOT IDENT.
NA-24	-1.036E+02	1.752E+02	0.000E+00	8.941E+01	SHORT HLIF
AL-26	1.288E-02	3.784E-02	3.472E-02	1.930E-02	NOT IDENT.
K-40	5.196E-01	6.084E-01	5.806E-01	3.104E-01	NOT IDENT.

TI-44	3.128E-01	7.666E-02	5.292E-02	3.911E-02	FAIL ABUN
SC-46	-7.621E-02	9.502E-02	7.583E-02	4.848E-02	NOT IDENT.
V-48	1.783E-02	1.321E-01	1.113E-01	6.740E-02	NOT IDENT.
CR-51	2.993E-01	5.361E-01	4.827E-01	2.735E-01	NOT IDENT.
MN-52	8.301E-02	1.173E-01	1.101E-01	5.983E-02	FAIL ABUN
MN-54	4.738E-03	7.449E-02	6.355E-02	3.801E-02	NOT IDENT.
CO-56	-5.056E-03	8.486E-02	7.167E-02	4.329E-02	NOT IDENT.
CO-58	-7.497E-02	7.743E-02	6.106E-02	3.950E-02	NOT IDENT.
FE-59	9.180E-02	1.823E-01	1.627E-01	9.303E-02	NOT IDENT.
ZN-65	-2.741E-01	1.960E-01	1.527E-01	9.999E-02	NOT IDENT.
GE-68	-4.716E-01	2.829E+00	2.424E+00	1.443E+00	NOT IDENT.
AS-73	-7.070E-01	1.161E+00	1.053E+00	5.923E-01	NOT IDENT.
AS-74	-9.255E-02	1.270E-01	1.061E-01	6.481E-02	NOT IDENT.
SE-75	-8.727E-03	7.213E-02	6.379E-02	3.680E-02	FAIL ABUN
BR-77	1.078E+00	2.027E+00	1.853E+00	1.034E+00	FAIL ABUN
SR-82	7.426E-02	6.270E-01	5.407E-01	3.199E-01	NOT IDENT.
RB-83	6.617E-02	1.201E-01	1.099E-01	6.125E-02	NOT IDENT.
RB-84	-3.667E-02	1.501E-01	1.248E-01	7.660E-02	NOT IDENT.
KR-85	1.727E+01	1.354E+01	1.155E+01	6.909E+00	NOT IDENT.
SR-85	8.162E-02	6.399E-02	5.456E-02	3.265E-02	NOT IDENT.
RB-86	-9.497E-01	1.364E+00	1.126E+00	6.960E-01	NOT IDENT.
Y-88	1.137E-01	6.250E-02	6.098E-02	3.189E-02	FAIL ABUN
ZR-88	-3.081E-02	5.781E-02	4.830E-02	2.950E-02	NOT IDENT.
Y-91	6.839E+00	2.224E+01	1.968E+01	1.135E+01	NOT IDENT.
NB-94	-3.199E-02	6.254E-02	5.204E-02	3.191E-02	NOT IDENT.
NB-95	4.730E-02	7.640E-02	6.806E-02	3.898E-02	NOT IDENT.
NB-95M	1.443E-01	2.059E-01	1.687E-01	1.051E-01	NOT IDENT.
ZR-95	1.133E-01	1.375E-01	1.240E-01	7.014E-02	NOT IDENT.
NB-97	1.689E+02	1.185E+02	0.000E+00	6.048E+01	SHORT HLIF
ZR-97	1.458E+03	1.642E+03	0.000E+00	8.379E+02	SHORT HLIF
MO-99	2.758E+00	3.292E+00	2.971E+00	1.679E+00	NOT IDENT.
TC-99M	-1.488E+07	2.776E+07	0.000E+00	1.416E+07	SHORT HLIF
RH-101	3.477E-03	5.179E-02	4.695E-02	2.642E-02	NOT IDENT.
RH-102	3.956E-02	6.446E-02	5.638E-02	3.289E-02	NOT IDENT.
RU-103	-3.235E-02	6.841E-02	5.926E-02	3.490E-02	FAIL ABUN
RH-106	-2.528E-01	6.013E-01	5.025E-01	3.068E-01	FAIL ABUN
RU-106	-2.528E-01	6.008E-01	5.025E-01	3.065E-01	FAIL ABUN
AG-108M	7.341E-02	6.989E-02	6.287E-02	3.566E-02	NOT IDENT.
AG-110M	1.081E-01	8.474E-02	7.026E-02	4.324E-02	NOT IDENT.
IN-111	-6.233E-01	2.810E-01	2.245E-01	1.434E-01	NOT IDENT.
IN-113M	4.723E-02	8.498E-02	7.527E-02	4.336E-02	NOT IDENT.
SN-113	4.723E-02	8.498E-02	7.527E-02	4.336E-02	NOT IDENT.
IN-114M	7.153E-02	2.780E-01	2.267E-01	1.418E-01	NOT IDENT.
CD-115	2.130E-01	1.771E+00	1.582E+00	9.038E-01	NOT IDENT.
SN-117M	1.677E-03	5.450E-02	5.037E-02	2.781E-02	NOT IDENT.
SB-122	8.205E-02	5.013E-01	4.463E-01	2.558E-01	NOT IDENT.
I-123	-1.432E+01	4.485E+02	0.000E+00	2.288E+02	SHORT HLIF
TE-123M	-1.273E-03	3.986E-02	3.674E-02	2.034E-02	NOT IDENT.
I-124	3.729E-02	3.818E-01	3.065E-01	1.948E-01	NOT IDENT.
SB-124	-8.578E-02	1.033E-01	6.870E-02	5.268E-02	FAIL ABUN
SB-125	-1.887E-02	1.932E-01	1.642E-01	9.857E-02	NOT IDENT.
TE-125M	1.229E+01	1.218E+01	1.116E+01	6.215E+00	NOT IDENT.
I-126	3.226E-02	2.419E-01	1.846E-01	1.234E-01	NOT IDENT.
SB-126	9.278E-02	1.911E-01	1.560E-01	9.751E-02	FAIL ABUN
SB-127	-4.450E-01	6.594E-01	5.435E-01	3.364E-01	NOT IDENT.
XE-127	2.011E-02	6.153E-02	5.656E-02	3.139E-02	NOT IDENT.
I-131	9.314E-02	1.118E-01	1.010E-01	5.702E-02	NOT IDENT.
TE-132	2.445E-02	2.130E-01	1.925E-01	1.087E-01	NOT IDENT.
BA-133	-4.231E-02	9.264E-02	6.833E-02	4.726E-02	FAIL ABUN
I-133	1.098E+01	2.248E+01	0.000E+00	1.147E+01	SHORT HLIF
CS-134	1.268E-01	9.777E-02	9.001E-02	4.988E-02	NOT IDENT.
CS-135	-1.096E-01	2.700E-01	2.354E-01	1.378E-01	NOT IDENT.
I-135	5.315E+06	2.266E+07	0.000E+00	1.156E+07	SHORT HLIF
CS-136	-7.661E-02	1.611E-01	1.354E-01	8.219E-02	NOT IDENT.
BA-140	-1.421E-02	2.970E-01	2.620E-01	1.515E-01	NOT IDENT.
LA-140	-1.005E-01	8.062E-02	4.972E-02	4.113E-02	NOT IDENT.
CE-141	-5.040E-02	7.922E-02	6.626E-02	4.042E-02	NOT IDENT.
CE-143	9.634E+00	5.590E+00	4.502E+00	2.852E+00	FAIL ABUN
CE-144	-3.740E-01	3.279E-01	2.662E-01	1.673E-01	NOT IDENT.
PM-144	-9.839E-03	6.342E-02	5.423E-02	3.236E-02	NOT IDENT.
PR-144	-6.640E-01	4.280E+00	3.660E+00	2.184E+00	NOT IDENT.
PM-146	1.391E-02	9.193E-02	7.878E-02	4.690E-02	NOT IDENT.
ND-147	2.985E-01	6.290E-01	5.721E-01	3.209E-01	FAIL ABUN
PM-149	-1.865E+00	1.400E+01	1.229E+01	7.142E+00	NOT IDENT.
EU-152	-1.355E-01	1.957E-01	1.503E-01	9.983E-02	FAIL ABUN
GD-153	1.535E-02	1.125E-01	9.572E-02	5.738E-02	NOT IDENT.
EU-154	-4.580E-02	1.466E-01	1.193E-01	7.481E-02	FAIL ABUN
EU-155	1.421E-01	1.560E-01	1.428E-01	7.958E-02	FAIL ABUN

TB-160	5.609E-02	3.141E-01	2.685E-01	1.602E-01	FAIL ABUN
HO-166M	-1.142E-02	1.205E-01	1.033E-01	6.147E-02	NOT IDENT.
TM-171	-2.136E+00	3.454E+01	3.134E+01	1.762E+01	FAIL ABUN
LU-176	3.208E-02	4.360E-02	3.968E-02	2.225E-02	FAIL ABUN
LU-177	1.280E+00	1.154E+00	7.209E-01	5.887E-01	FAIL ABUN
LU-177M	-1.054E-01	3.321E-01	2.793E-01	1.694E-01	FAIL ABUN
HF-181	-4.113E-02	7.971E-02	6.521E-02	4.067E-02	NOT IDENT.
W-181	-4.739E-01	4.429E-01	3.682E-01	2.260E-01	NOT IDENT.
TA-182	2.526E-02	2.104E-01	1.826E-01	1.073E-01	NOT IDENT.
RE-183	4.824E-02	1.673E-01	1.384E-01	8.536E-02	FAIL ABUN
RE-184	-1.115E-01	3.722E-01	3.275E-01	1.899E-01	FAIL ABUN
OS-185	2.726E-02	8.105E-02	7.203E-02	4.135E-02	FAIL ABUN
RE-188	1.502E-02	2.451E-01	2.114E-01	1.250E-01	NOT IDENT.
W-188	7.071E-01	1.304E+01	1.014E+01	6.655E+00	NOT IDENT.
IR-192	3.291E-02	5.598E-02	5.053E-02	2.856E-02	FAIL ABUN
AU-195	4.923E-02	3.107E-01	2.776E-01	1.585E-01	FAIL ABUN
TL-200	-1.060E+00	6.147E+00	5.271E+00	3.136E+00	NOT IDENT.
TL-201	1.921E+00	2.095E+00	1.780E+00	1.069E+00	NOT IDENT.
TL-202	-7.685E-02	9.900E-02	8.072E-02	5.051E-02	NOT IDENT.
HG-203	6.733E-02	7.240E-02	5.943E-02	3.694E-02	NOT IDENT.
BI-207	8.285E-02	1.206E-01	1.090E-01	6.153E-02	FAIL ABUN
TL-207	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
PO-209	1.794E+01	2.016E+01	1.785E+01	1.029E+01	NOT IDENT.
BI-210	-1.828E+00	3.328E+00	3.063E+00	1.698E+00	NOT IDENT.
PB-210	-1.828E+00	3.328E+00	3.063E+00	1.698E+00	NOT IDENT.
PO-210	-1.828E+00	3.327E+00	3.063E+00	1.697E+00	NOT IDENT.
PB-211	-1.065E+00	1.996E+00	1.570E+00	1.018E+00	NOT IDENT.
BI-212	1.200E+00	7.959E-01	5.786E-01	4.061E-01	FAIL ABUN
BI-214	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
PO-215	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
RN-219	4.775E-01	8.230E-01	7.268E-01	4.199E-01	NOT IDENT.
RN-220	2.311E+01	4.824E+01	4.383E+01	2.461E+01	NOT IDENT.
RA-223	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
RA-224	5.593E+00	1.454E+00	1.311E+00	7.420E-01	NOT IDENT.
RA-226	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
AC-227	5.496E-01	6.419E-01	5.902E-01	3.275E-01	NOT IDENT.
TH-227	5.496E-01	6.439E-01	5.902E-01	3.285E-01	FAIL ABUN
TH-229	-8.969E-02	7.872E-01	7.134E-01	4.016E-01	FAIL ABUN
TH-230	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
PA-231	-7.883E-01	2.676E+00	2.331E+00	1.365E+00	NOT IDENT.
TH-231	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
U-231	-5.597E-02	4.521E-01	3.559E-01	2.307E-01	FAIL ABUN
PA-233	-7.700E-02	1.108E-01	9.357E-02	5.654E-02	FAIL ABUN
PA-234	-3.701E-01	8.279E-01	6.725E-01	4.224E-01	FAIL ABUN
PA-234M	1.554E+01	1.693E+01	1.490E+01	8.637E+00	NOT IDENT.
TH-234	8.022E-02	1.664E+00	1.376E+00	8.492E-01	FAIL ABUN
U-234	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
U-235	4.902E-03	3.144E-01	2.728E-01	1.604E-01	FAIL ABUN
NP-236	-5.327E-02	1.219E-01	1.068E-01	6.218E-02	NOT IDENT.
NP-237	6.807E+00	1.574E+00	5.986E-01	8.032E-01	NOT IDENT.
U-238	8.022E-02	1.664E+00	1.376E+00	8.492E-01	FAIL ABUN
NP-239	-1.367E-01	3.008E-01	2.450E-01	1.535E-01	FAIL ABUN
CM-243	-1.683E-02	1.401E-01	1.233E-01	7.147E-02	FAIL ABUN
CM-247	1.226E-02	7.338E-02	6.359E-02	3.744E-02	FAIL ABUN
CF-249	-1.435E-03	8.049E-02	6.929E-02	4.107E-02	NOT IDENT.
CF-251	1.337E-01	1.930E-01	1.814E-01	9.845E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	639.0174
46.50	639.0174
46.50	639.0174
48.70	776.8658
49.72	749.6448
51.35	835.9173
52.39	906.7592
52.97	962.0948
53.15	956.6166
53.44	966.1468
54.07	914.8989
56.28	967.2495
56.28	967.2569
57.37	1033.7673
57.53	1035.6414
57.53	1035.6466
57.60	1035.8083
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57.98	773.6828
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59.32	776.0551
59.40	776.1956
59.54	776.4409
59.72	776.7575
60.01	777.2660
61.10	500.2469
61.14	500.2914
61.30	500.4692
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63.29	440.7736
63.29	440.7736
63.58	463.7083
64.28	467.4364
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65.20	512.9211
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66.72	486.5942
66.83	486.7090
66.91	486.7920
67.20	448.5263
67.20	448.5263
67.75	459.2005
67.85	459.2970
68.90	493.9028
68.90	493.9028
69.30	505.5185
69.67	534.4636
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70.82	564.3395
70.83	564.3507
72.80	518.8595
72.87	518.9315
72.87	518.9315
74.67	526.4411
74.81	526.5867
74.81	526.5867
74.81	526.5867
74.81	526.5867
74.81	526.5867
74.81	526.5867
74.97	526.7504
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75.70	527.4990
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77.11	528.9362

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77.11	528.9362
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80.30	498.2915
80.30	498.2915
80.57	501.6678
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81.07	556.8856
81.07	556.8856
81.07	556.8856
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83.78	525.0756
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83.78	525.0756
83.78	525.0756
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84.40	536.6811
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86.72	622.6771
86.79	622.7522
86.94	622.9205
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88.36	570.5942
88.47	570.7040
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91.11	369.4756
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92.38	304.8419
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94.67	307.6260
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94.90	315.7588
94.90	315.7588
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98.44	277.3059
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99.55	306.8800
99.86	291.9514
100.00	292.0175
100.10	297.4558
103.18	306.5027
103.76	293.7763
105.00	280.2283
105.31	268.4113
108.00	301.1773
109.28	253.6591
111.00	288.3050
111.00	288.3050

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115.19	271.3572
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117.00	288.0031
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121.62	283.9101
121.78	283.9743
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136.48	281.7700
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144.24	254.7612
144.24	254.7612
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147.16	254.5466
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152.70	272.5220
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154.21	276.5070
154.21	276.5070
154.21	276.5070
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156.02	254.9876
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162.64	252.0596
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163.89	252.4245
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167.43	264.7813
171.28	265.1259
171.86	265.0448
172.10	265.1152
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176.60	247.6668
181.06	248.6938
184.41	253.9174
185.71	249.2132
186.00	249.2890
190.27	249.6856
192.34	239.0004
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197.04	263.1292
198.01	263.3884
198.60	259.8863
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201.83	269.9142
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205.31	241.7398
208.36	235.0743
208.81	233.8829

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209.75	234.0972
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215.65	259.4968
216.55	250.5395
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226.40	231.2444
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227.08	230.4501
227.20	230.4744
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228.18	240.0975
228.18	240.0975
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236.00	273.1003
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238.63	351.6852
238.63	351.6852
238.63	351.6852
239.00	419.8792
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241.98	234.8989
241.98	234.8989
241.98	234.8989
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247.94	205.0757
248.90	220.5910
249.79	209.2432
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252.85	218.4532
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256.20	198.8089
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268.79	236.9858
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269.46	218.5757
269.46	218.5757
269.46	218.5757
271.23	221.8217
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277.60	226.8901
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284.30	206.3722
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285.90	209.5965
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286.10	201.7183
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291.72	201.8078
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293.70	192.5661
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295.21	197.1692
295.21	197.1692
295.96	224.7807

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297.23	236.1677
298.57	191.6836
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299.80	172.6761
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300.09	180.7090
300.09	180.7090
300.10	180.7117
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301.29	196.6494
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303.76	231.5217
303.91	231.5463
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304.40	222.6064
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319.02	189.5338
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323.87	195.2813
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338.28	183.9109
338.28	183.9109
338.28	183.9109
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351.92	188.7400
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367.43	185.4454
367.94	176.0750
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374.96	176.8748
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387.95	191.0715
388.63	204.9594
391.69	174.4927
391.69	174.4927
392.90	194.8536
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400.65	180.8055
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401.81	170.2282
402.60	176.7375
404.84	198.4284
410.95	158.2511
411.60	185.2380
413.65	173.6027
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415.76	173.8213
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427.08	173.8940
427.89	182.6733
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433.93	160.3977
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439.89	186.1295
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444.90	173.4827
445.03	173.4948
445.03	173.4948
445.03	173.4948
445.03	173.4948
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468.07	171.2714
473.00	181.7658
475.06	164.1054
475.35	175.2954
476.78	181.0165
477.59	166.5632
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487.03	138.1892
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510.53	0.0000
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511.00	141.0515
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511.85	138.0774
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513.99	101.7711
520.41	112.4627
520.65	115.2211
527.90	114.7186
528.96	0.0000
529.64	112.9822
529.87	0.0000
531.02	107.5423
537.32	105.1104
543.00	110.9502
546.56	0.0000
549.76	106.6726
552.65	122.6124
555.20	116.2506
563.23	104.5598
563.90	106.4603
568.70	107.6356
569.32	104.8578
569.50	104.8688
569.67	101.1313
573.80	114.4614
574.00	114.4703
574.64	110.7518
578.91	108.1494
579.30	114.4397
583.14	112.1290
585.48	110.0472
591.81	111.6275
592.07	117.3186
593.00	104.1160
595.88	124.1526
600.56	116.8170
602.52	0.0000
602.71	122.2276
602.71	122.2276
603.60	118.8782
604.41	126.8522
604.70	126.8685
609.31	109.6487
609.31	109.6487
609.31	109.6487

609.31	109.6487
610.33	111.2862
612.46	120.9395
614.37	117.8562
618.01	103.3699
621.84	108.3376
621.84	108.3376
631.29	107.8191
633.02	111.7548
633.10	111.7576
634.78	102.1984
635.90	101.2830
636.97	88.7836
645.85	106.5571
646.12	108.5082
656.30	118.3785
657.75	115.2074
657.90	0.0000
661.65	124.8219
661.65	124.8219
664.57	82.9891
666.33	89.5630
666.33	89.5630
675.00	108.8429
677.61	82.4558
685.20	113.2340
692.80	115.5575
695.00	111.7061
696.49	102.8701
696.49	102.8701
697.00	94.9758
697.49	92.0260
698.33	100.9666
698.50	103.9438
699.00	105.9446
702.63	107.0877
706.10	107.2354
706.58	0.0000
706.67	111.2344
709.31	75.5584
711.68	107.4727
713.82	103.5785
717.42	97.7416
720.50	87.0173
721.93	98.2469
722.20	98.2565
722.78	93.2809
722.78	93.2809
722.89	94.9513
722.95	94.9536
723.30	94.9675
724.18	103.3333
727.18	97.1113
733.00	95.3247
735.90	107.4833
739.58	86.5102
742.81	98.7034
744.21	107.8255
747.13	90.7954
751.79	107.1257
752.31	105.1248
753.82	115.2998
755.35	90.0647
756.15	97.1789
756.87	112.3929
763.93	126.9043
765.79	98.5440
766.41	95.5192
766.84	99.6006
768.36	105.7570
768.36	105.7570
768.36	105.7570
768.36	105.7570
776.49	98.9348
778.00	96.9506
778.57	97.9898
778.89	99.0224
783.80	87.9505

785.46	89.0284
792.07	104.6284
795.84	92.4456
796.30	93.4883
801.93	111.1772
805.60	101.0146
810.29	99.1195
810.76	112.5606
815.85	99.3164
817.79	96.2786
818.51	102.5143
819.60	111.8786
826.30	105.9122
828.27	114.2969
831.60	85.3012
831.96	93.6365
834.83	97.8945
836.80	0.0000
846.75	113.9843
848.13	118.2252
856.28	0.0000
856.80	133.2663
860.37	105.0610
867.32	111.6261
867.82	112.6974
871.10	113.8773
873.19	118.1769
874.81	115.0754
875.33	0.0000
876.40	120.4181
879.36	113.1363
880.27	116.3433
880.51	120.5823
881.50	129.0859
883.24	110.1039
884.67	128.1637
889.25	142.1493
896.60	128.6689
898.02	134.0473
899.00	146.8608
903.28	141.5856
911.07	138.8931
911.07	138.8931
911.07	138.8931
919.63	159.6330
920.93	150.0557
925.00	141.6647
925.24	147.0409
926.50	141.7324
934.06	146.3793
934.06	146.3793
934.06	146.3793
934.06	146.3793
935.52	123.8356
937.48	156.2361
944.10	127.4089
946.00	149.0946
949.00	137.3405
962.29	146.5983
964.01	137.6201
966.15	132.2769
968.20	141.4258
969.11	110.6345
969.11	110.6345
969.11	110.6345
977.42	121.1000
980.50	120.1218
983.50	121.3250
989.30	118.2542
996.32	132.7691
1001.03	110.9816
1001.68	106.6076
1004.76	138.4228
1021.30	0.0000
1024.50	0.0000
1034.80	110.0663
1037.82	111.0889
1038.57	122.2246

1038.76	0.0000
1045.16	109.4678
1046.59	113.2283
1048.07	104.9213
1050.47	95.6991
1050.47	95.6991
1063.62	93.2658
1076.63	112.3340
1077.35	105.8042
1085.78	103.2414
1099.22	93.2677
1112.02	95.4889
1112.84	94.5638
1115.52	129.6528
1120.29	81.4928
1120.29	81.4928
1120.29	81.4928
1120.29	81.4928
1120.51	66.3342
1121.28	72.9833
1124.00	0.0000
1129.67	66.5023
1131.51	0.0000
1147.95	0.0000
1167.94	64.1748
1173.22	62.4795
1175.09	62.6459
1177.93	61.0438
1189.05	42.4692
1204.90	34.8911
1205.75	32.9610
1213.00	38.8493
1221.42	28.2271
1230.97	36.1012
1235.34	33.2114
1236.41	0.0000
1238.11	24.4375
1238.11	24.4375
1238.11	24.4375
1238.11	24.4375
1238.25	27.3711
1246.25	12.7334
1260.41	0.0000
1271.85	28.5882
1274.45	26.6331
1274.54	24.6613
1291.56	21.7923
1298.22	0.0000
1312.09	26.8792
1325.50	23.9697
1325.50	23.9697
1332.49	24.0098
1333.61	13.7238
1360.21	20.1400
1362.66	0.0000
1365.15	13.1063
1368.21	22.1952
1368.53	0.0000
1376.25	14.1510
1377.67	18.2000
1377.67	18.2000
1377.67	18.2000
1377.67	18.2000
1384.27	16.2025
1394.10	23.3435
1395.20	19.2891
1407.95	15.2728
1434.06	12.2905
1436.60	17.4213
1457.56	0.0000
1460.81	19.5760
1489.15	15.5511
1509.49	11.4548
1596.49	23.3320
1620.62	7.4606
1678.03	0.0000
1691.02	16.2128
1691.02	16.2128

1706.46	0.0000
1750.46	0.0000
1764.49	5.6380
1764.49	5.6380
1764.49	5.6380
1764.49	5.6380
1770.23	13.1694
1771.40	13.1724
1791.20	0.0000
1808.65	6.6321
1836.01	11.6647

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201873071

Total Uranium Activity	2.4094E-01	ug/g
Total Uranium Counting Unc.	4.9539E+00	ug/g
Total Uranium Tpu	2.5275E-06	ug/g
Total Uranium Mda	4.0966E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID  : G1201873071      *
*   ANALYST       : MXR1                      DETECTOR   : GAM07            *
*   SAMPLE DATE   :  2-JUL-2009 00:00:00.00   COUNT TIME :    0 01:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:51:19.80    SAMPLE ALQT:  151.730 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 3.100E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.157E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 6.206E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 3.042E+00
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BACKGROUND AND EFFICIENCY DATA

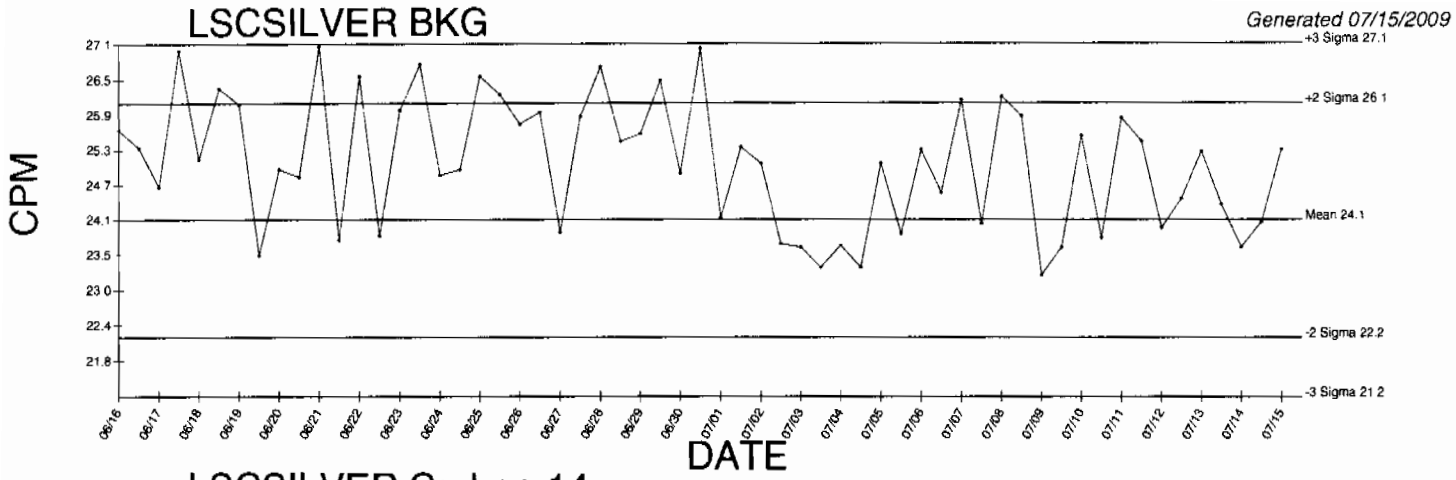

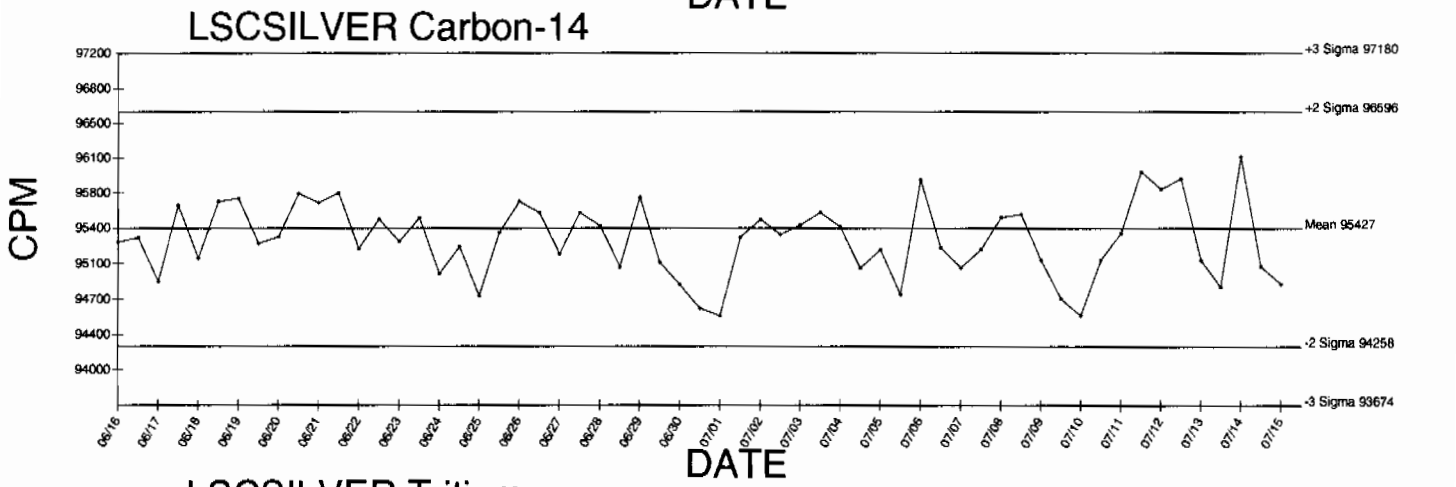

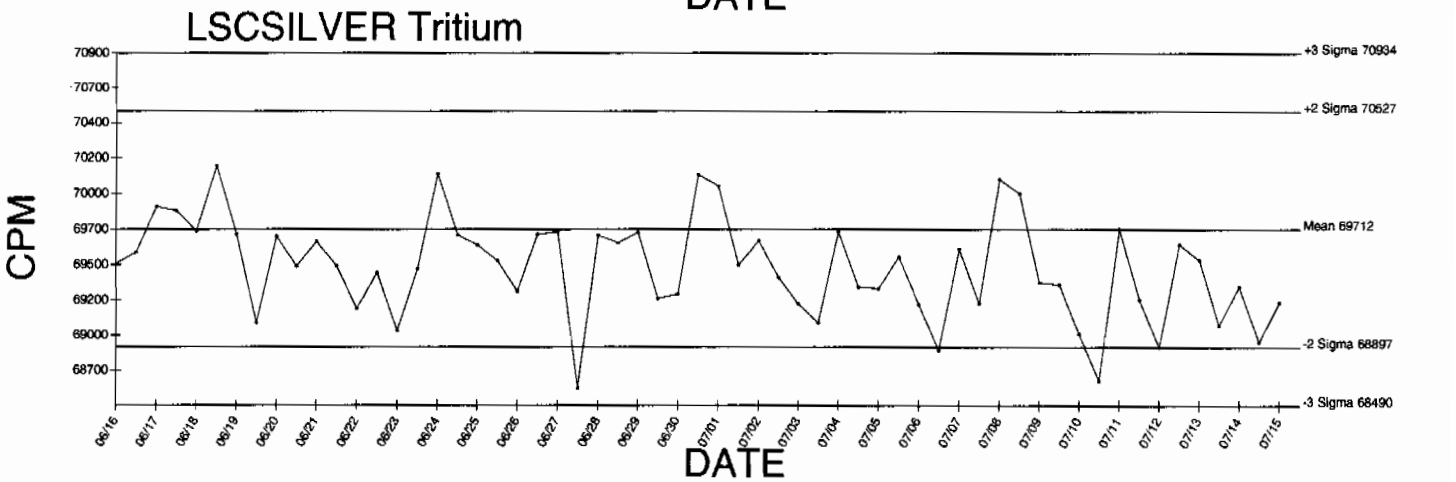

● Denotes Outlier

QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:23:48 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.237773 through 0.257773

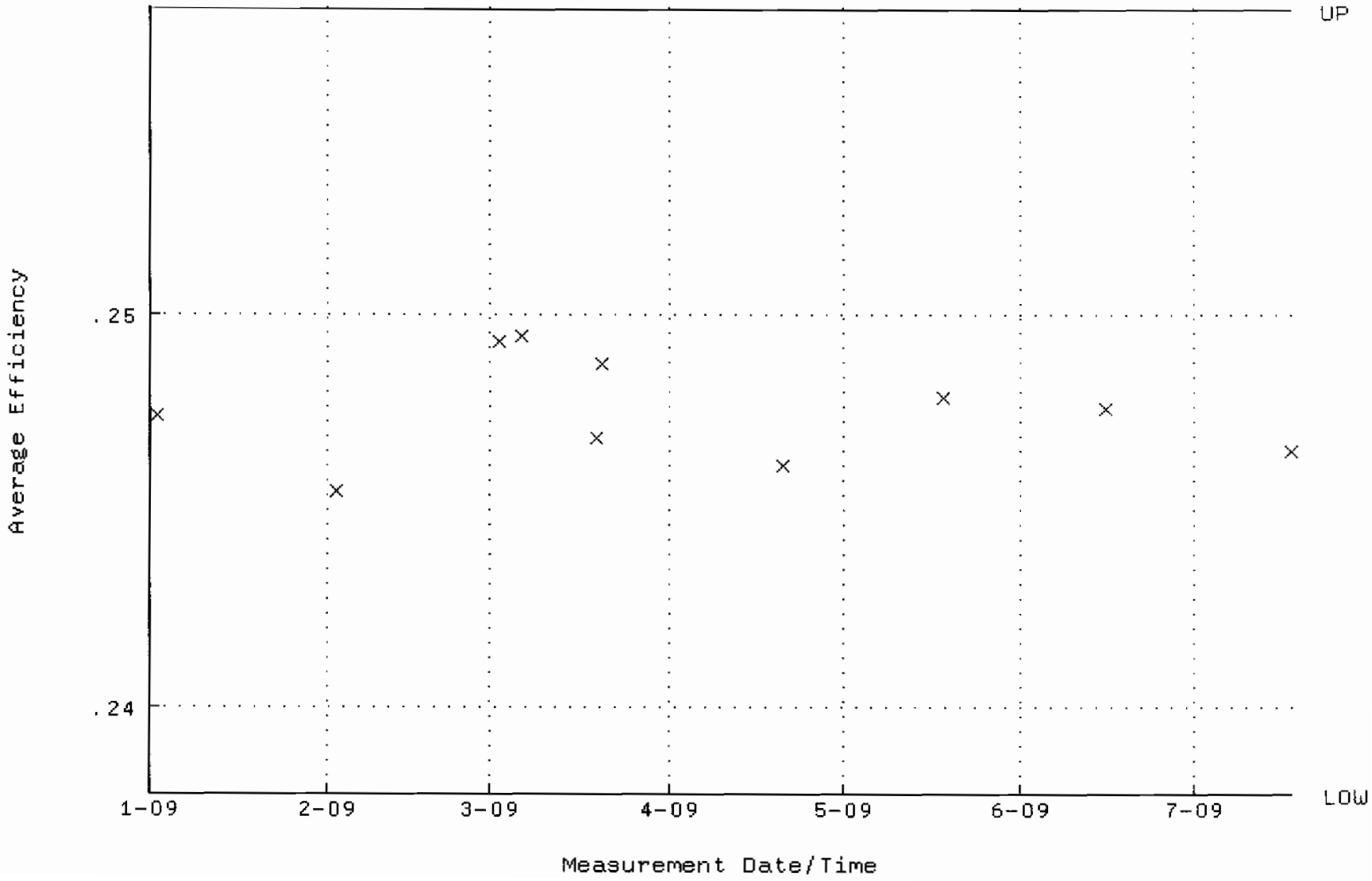

QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:23:48 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 90.4503 through 99.9713

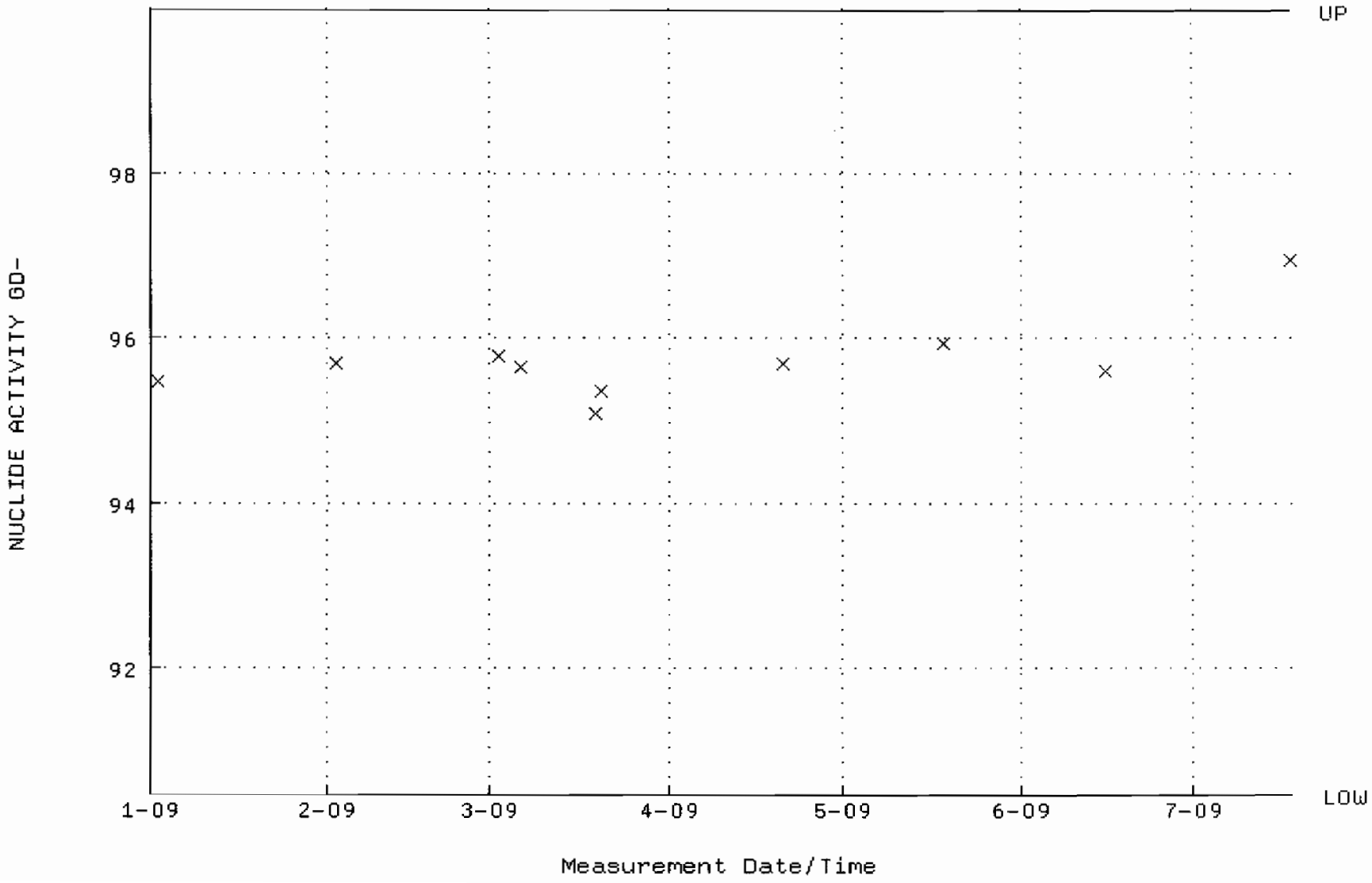

QA filename : DKA100:[ENV_ALPHA.QA.B]B127.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:22:48 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

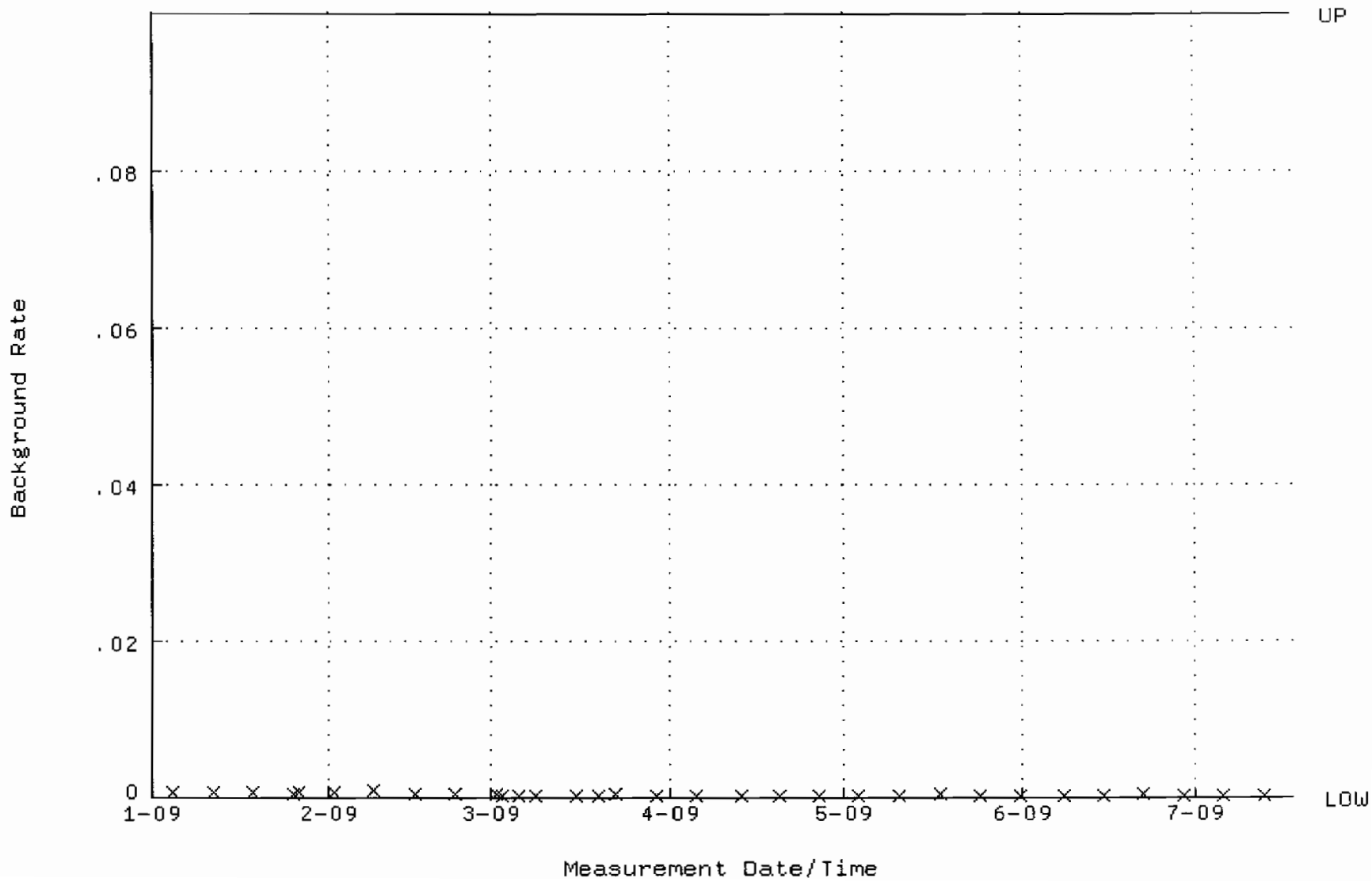

QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:23 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.236455 through 0.256455

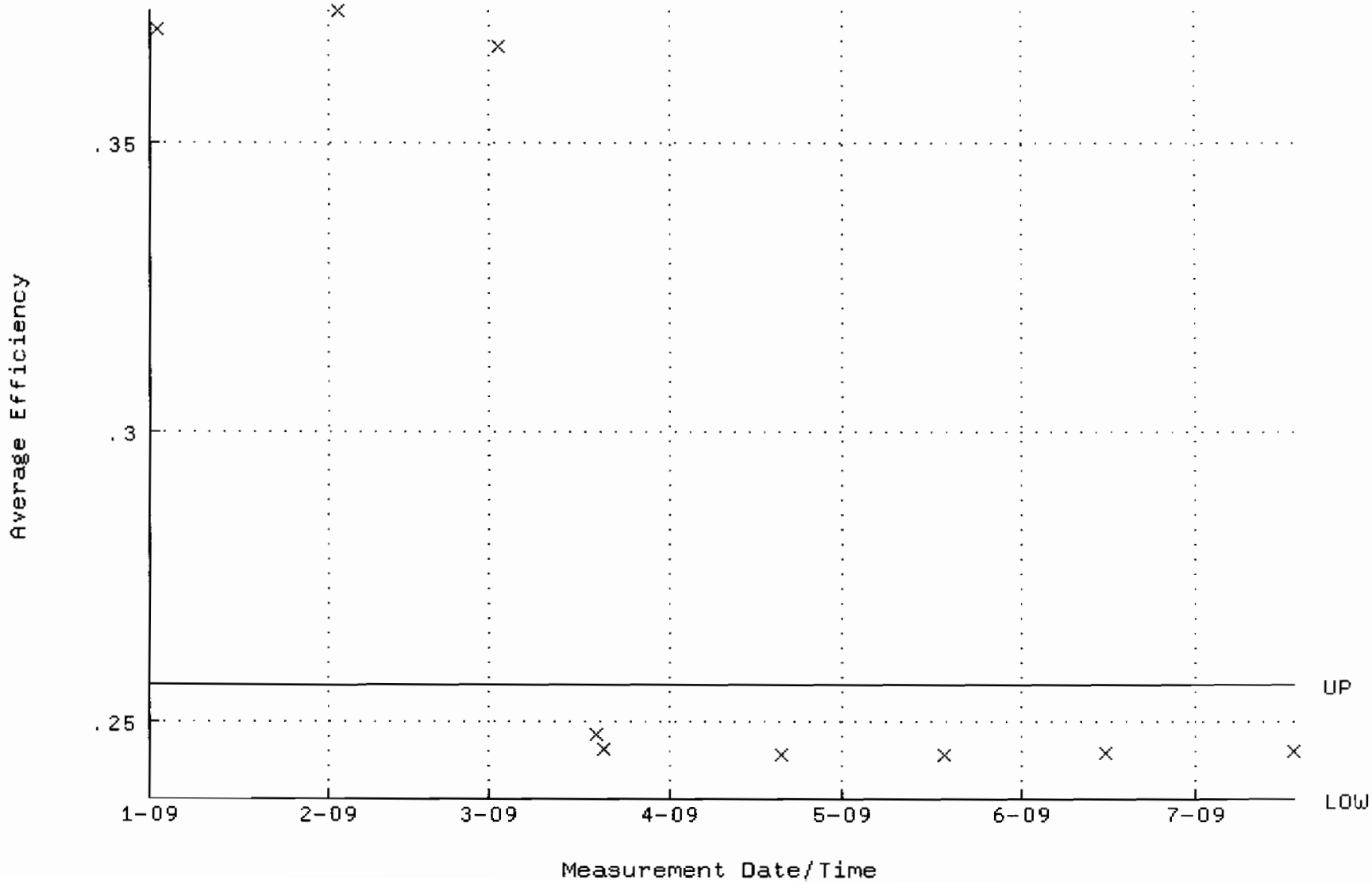

QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:23 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 87.6576 through 96.8848

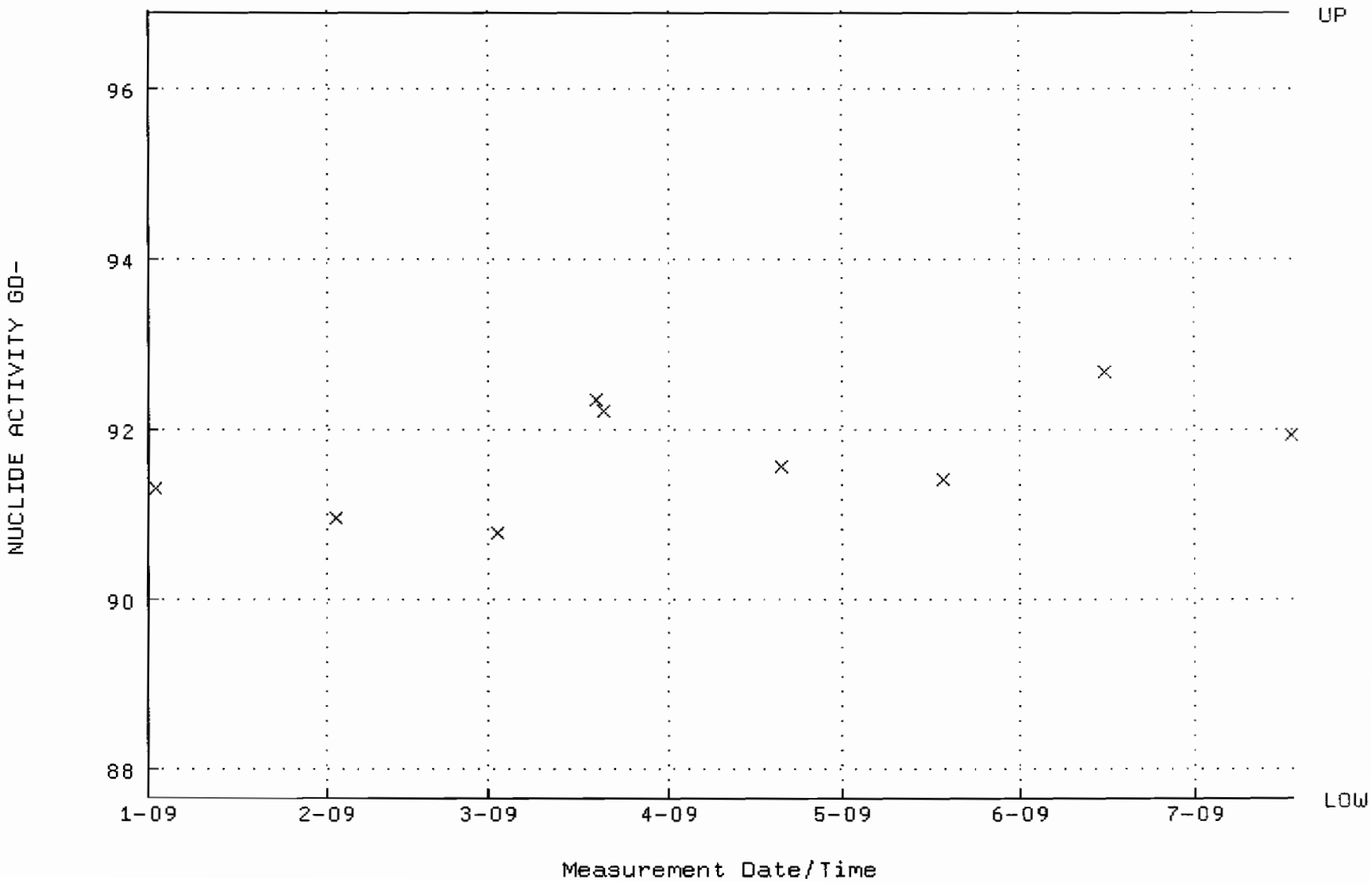

QA filename : DKA100:[ENV_ALPHA.QA.B]B134.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:18 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

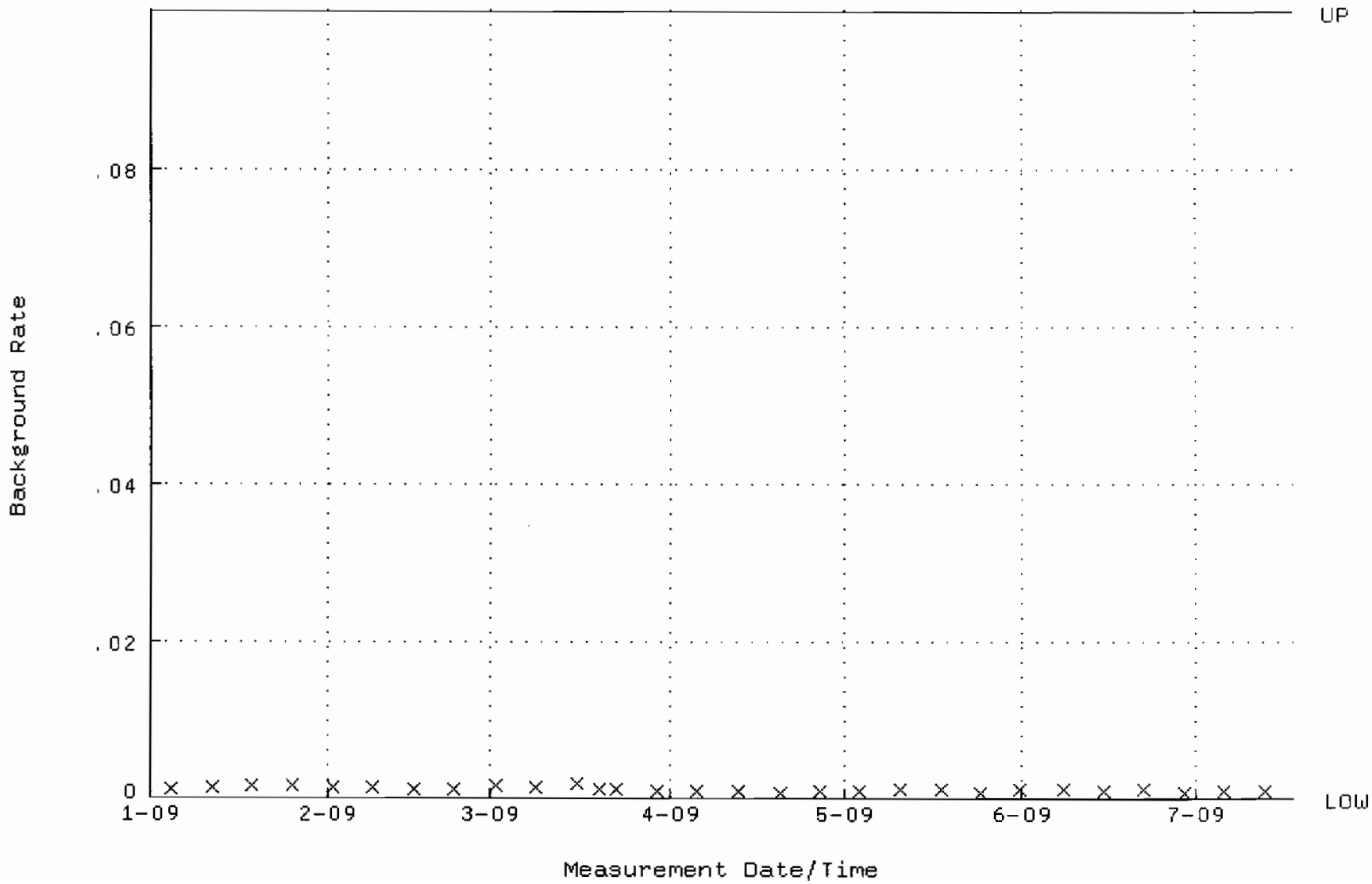

QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:28 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.244305 through 0.264305

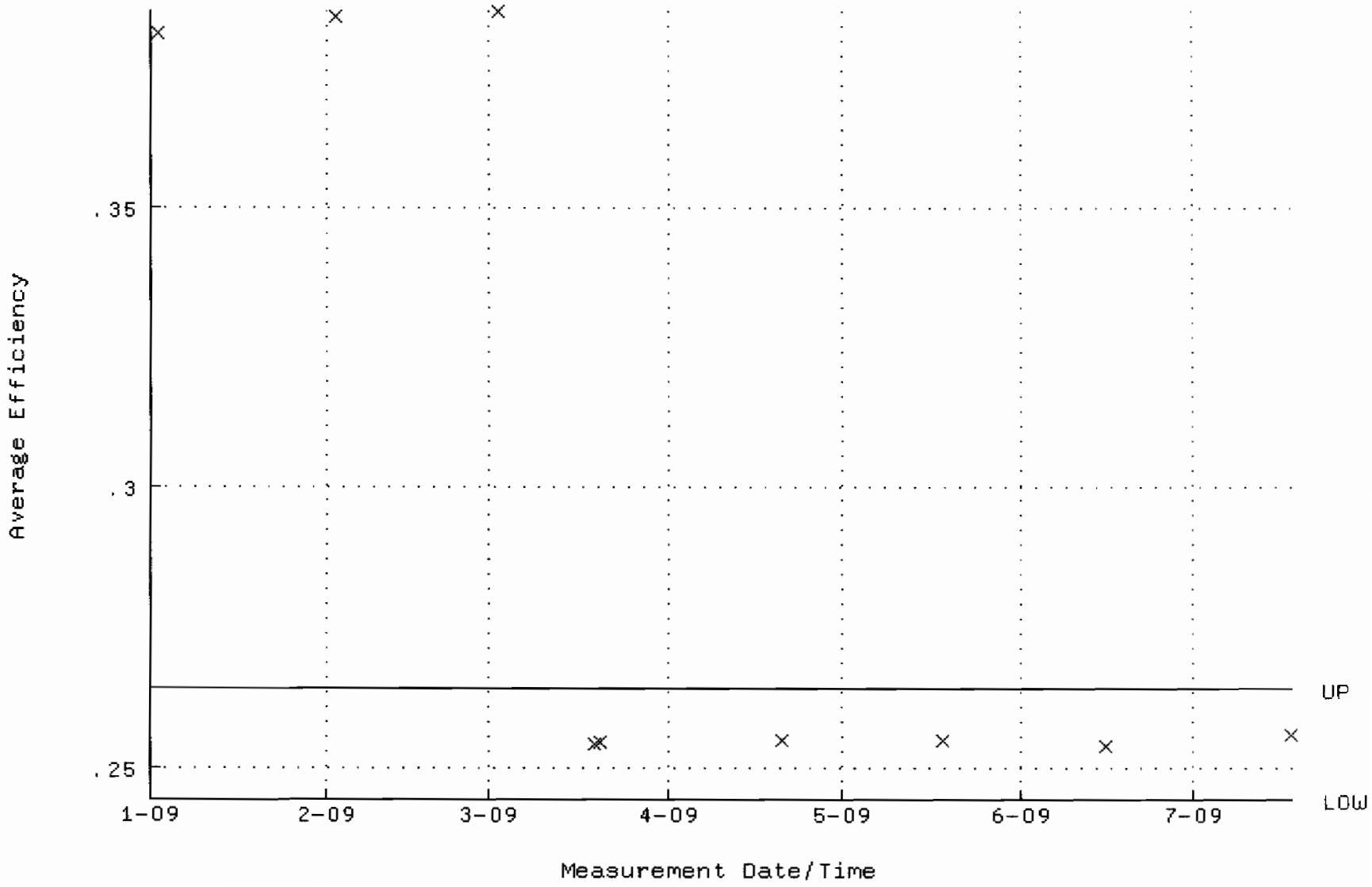

QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:28 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 87.1482 through 96.3217

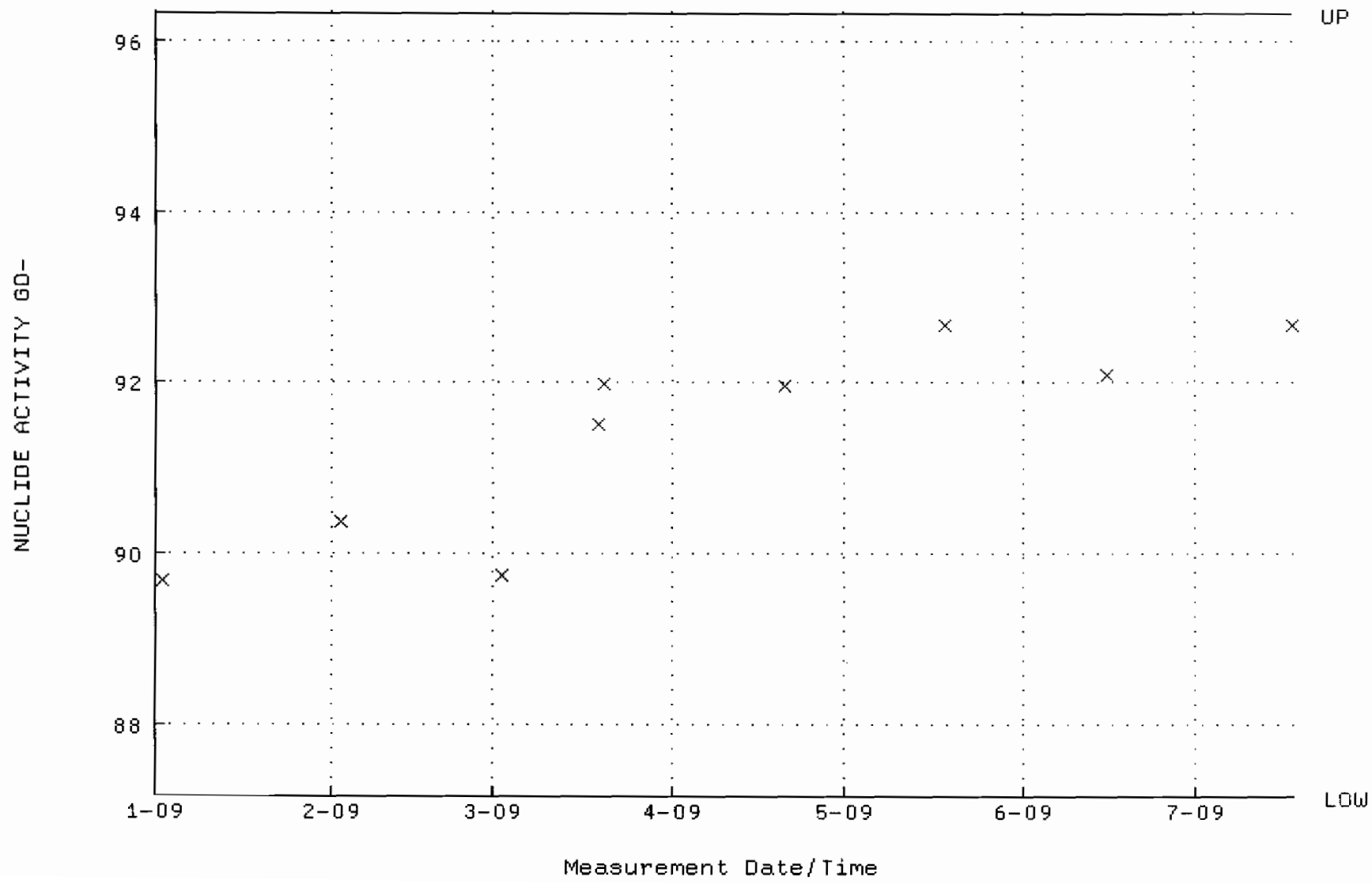

QA filename : DKA100:[ENV_ALPHA.QA.B]B135.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:22 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

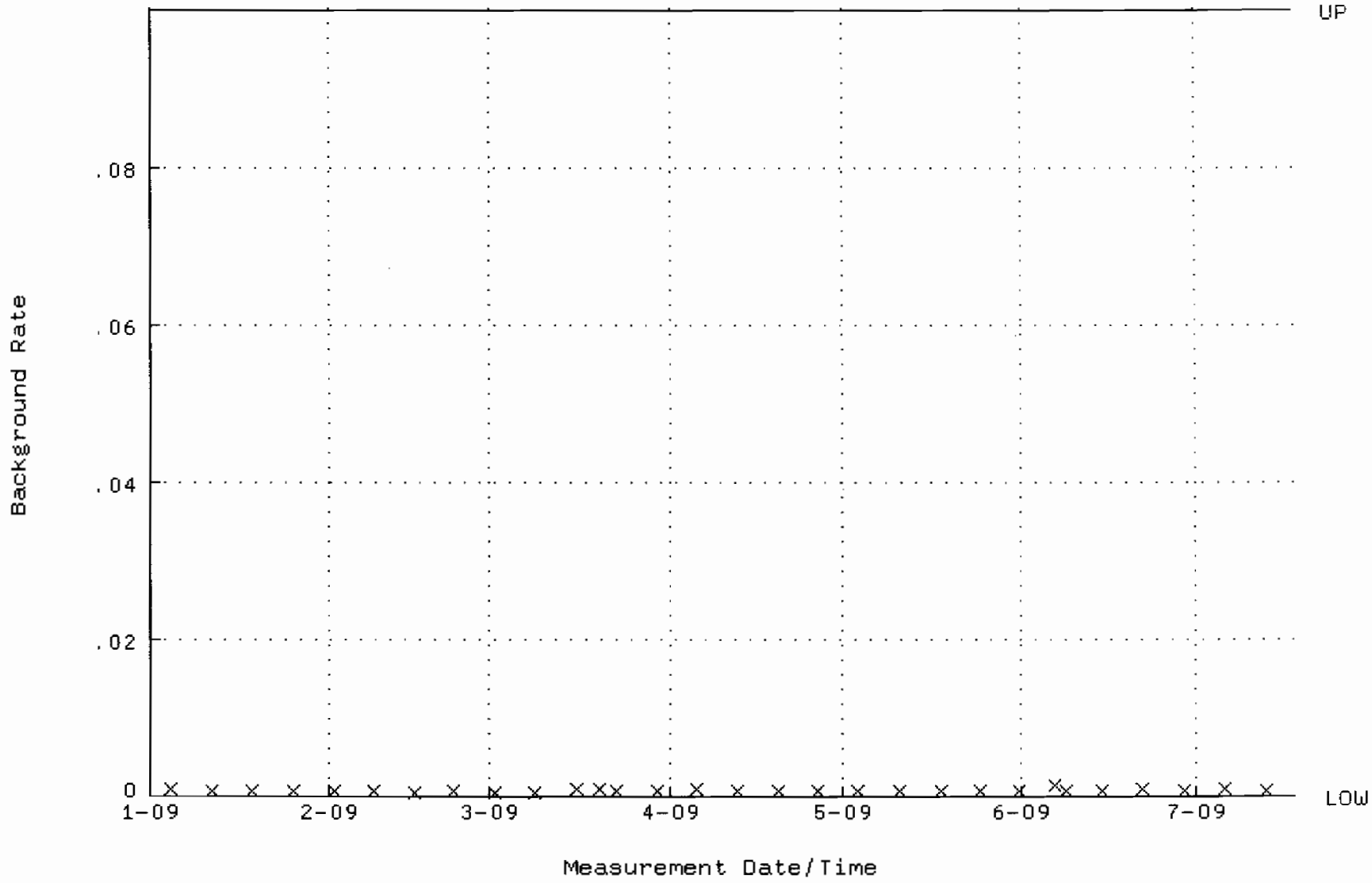

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:11 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.237963 through 0.257963

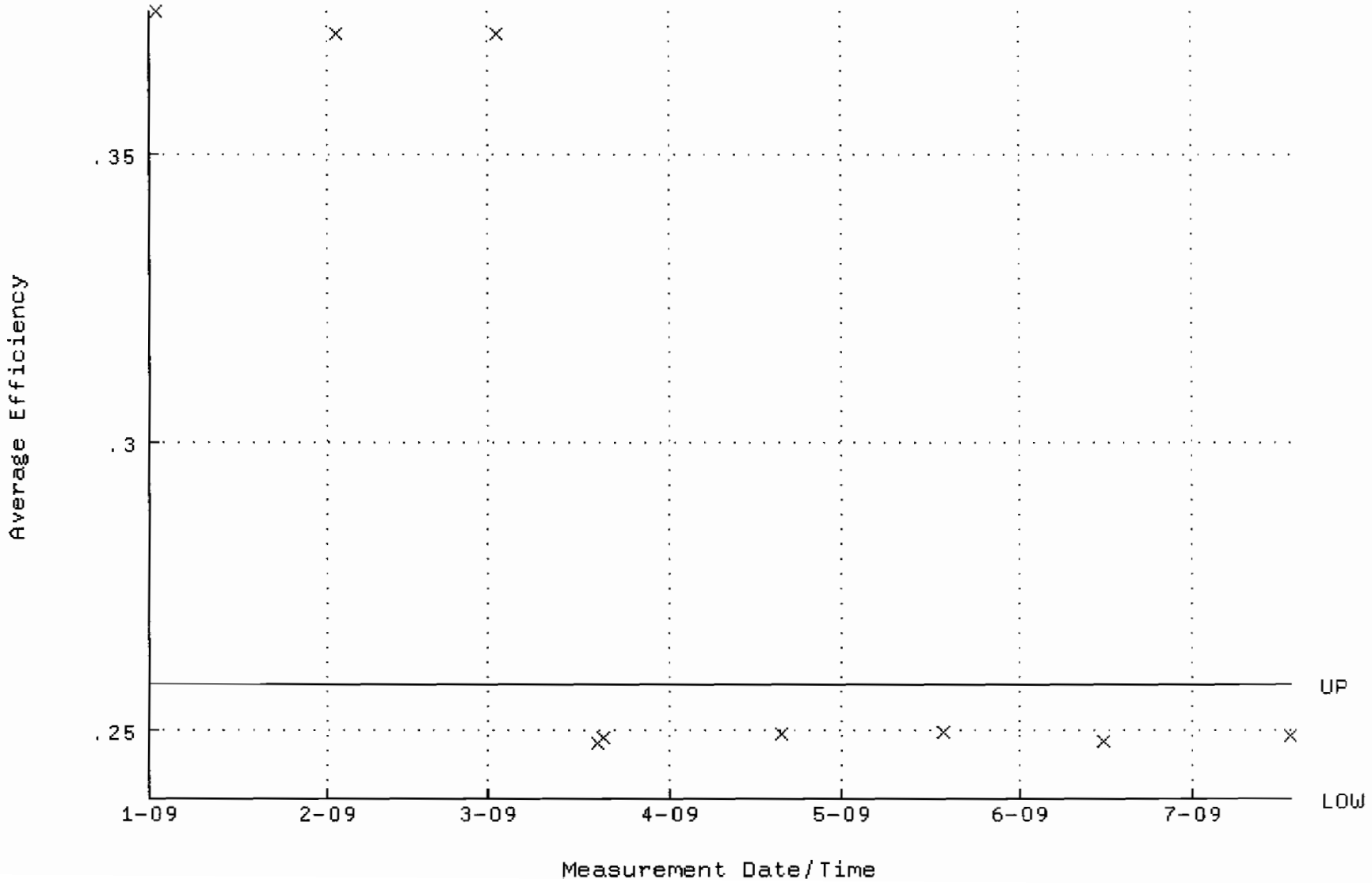

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:11 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 84.6507 through 93.5613

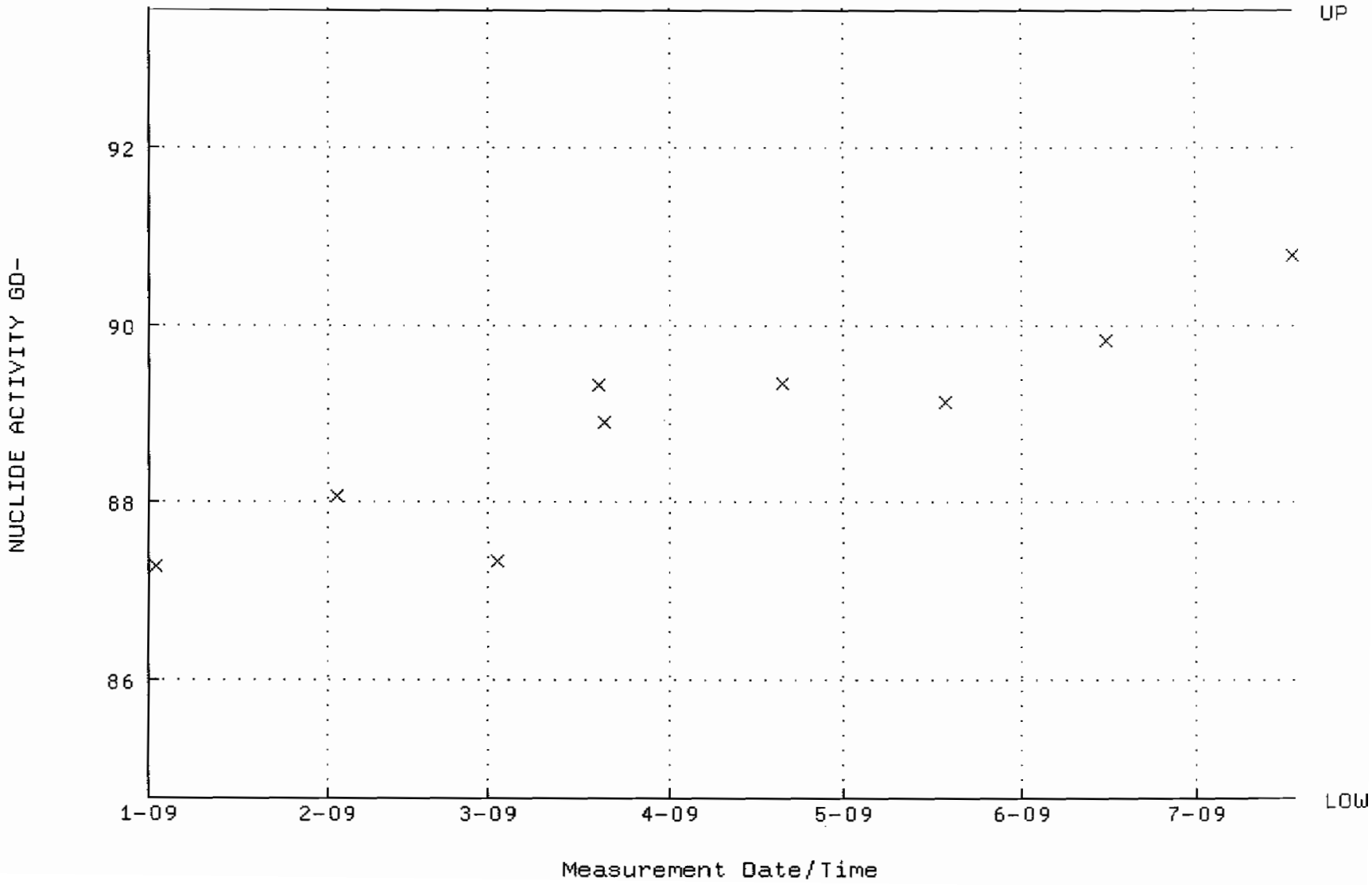

QA filename : DKA100:[ENV_ALPHA.QA.B]B144.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:00 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

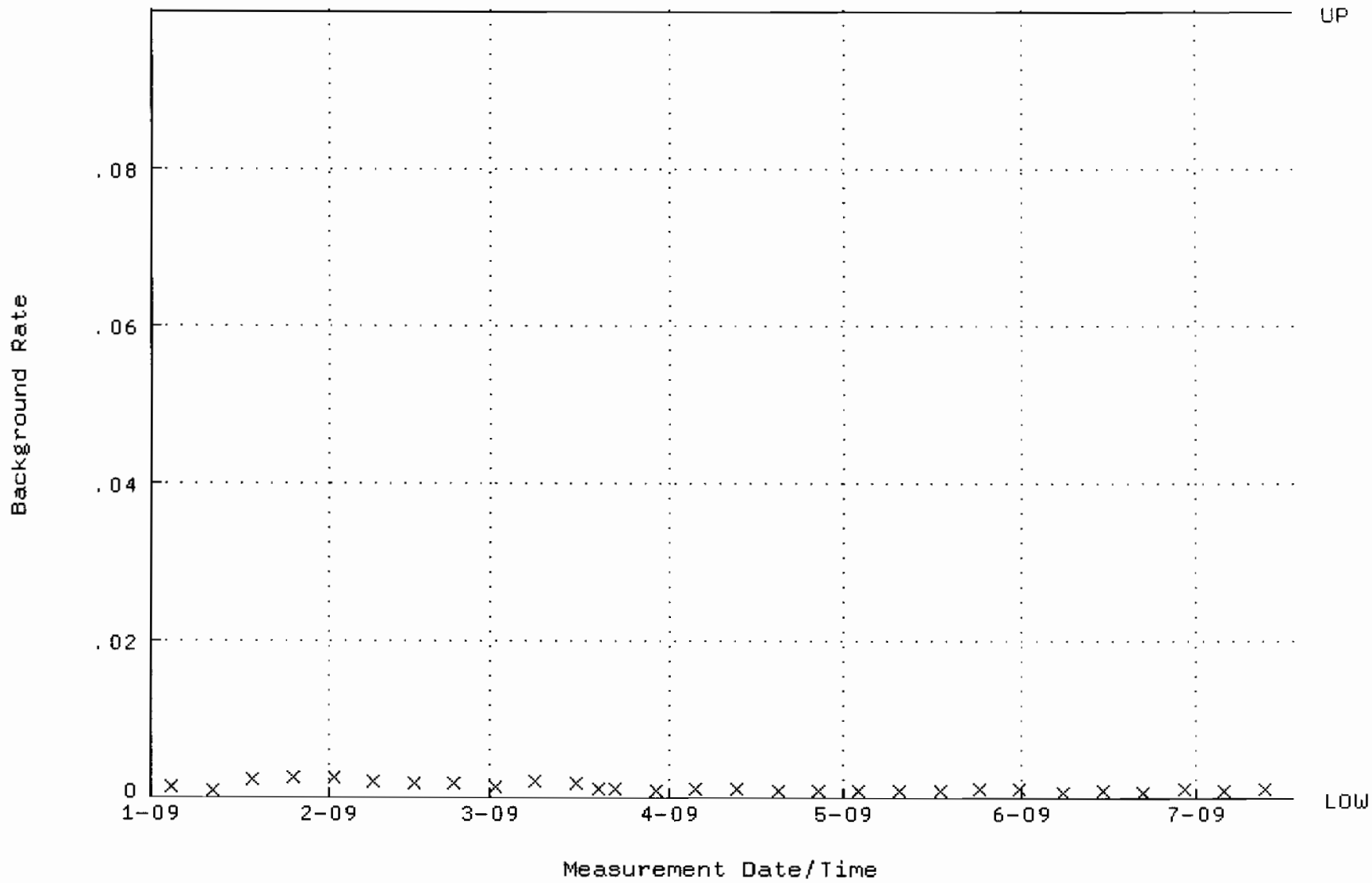

QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:06 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.241250 through 0.261250

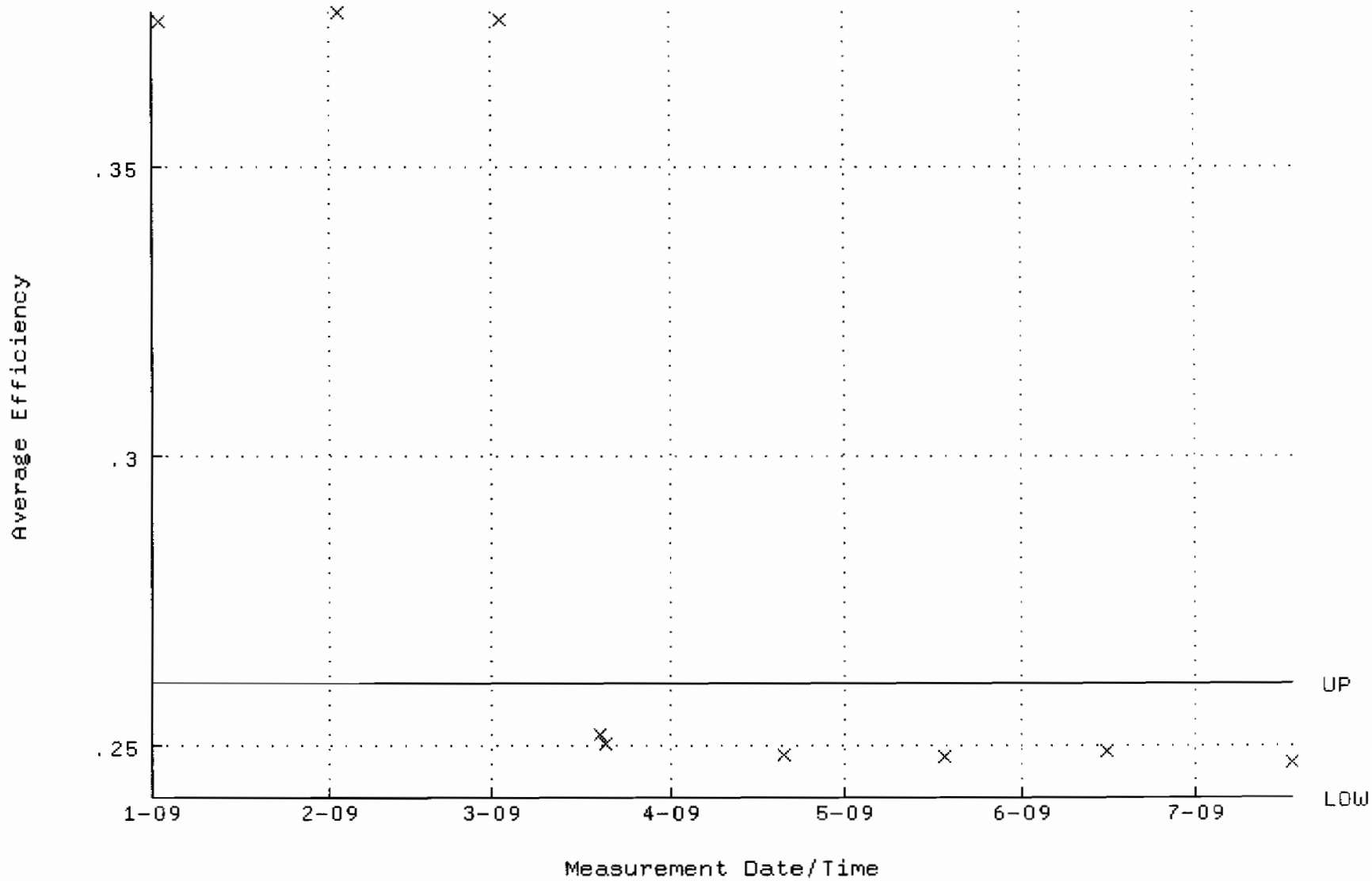

QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:06 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 82.7847 through 91.4989

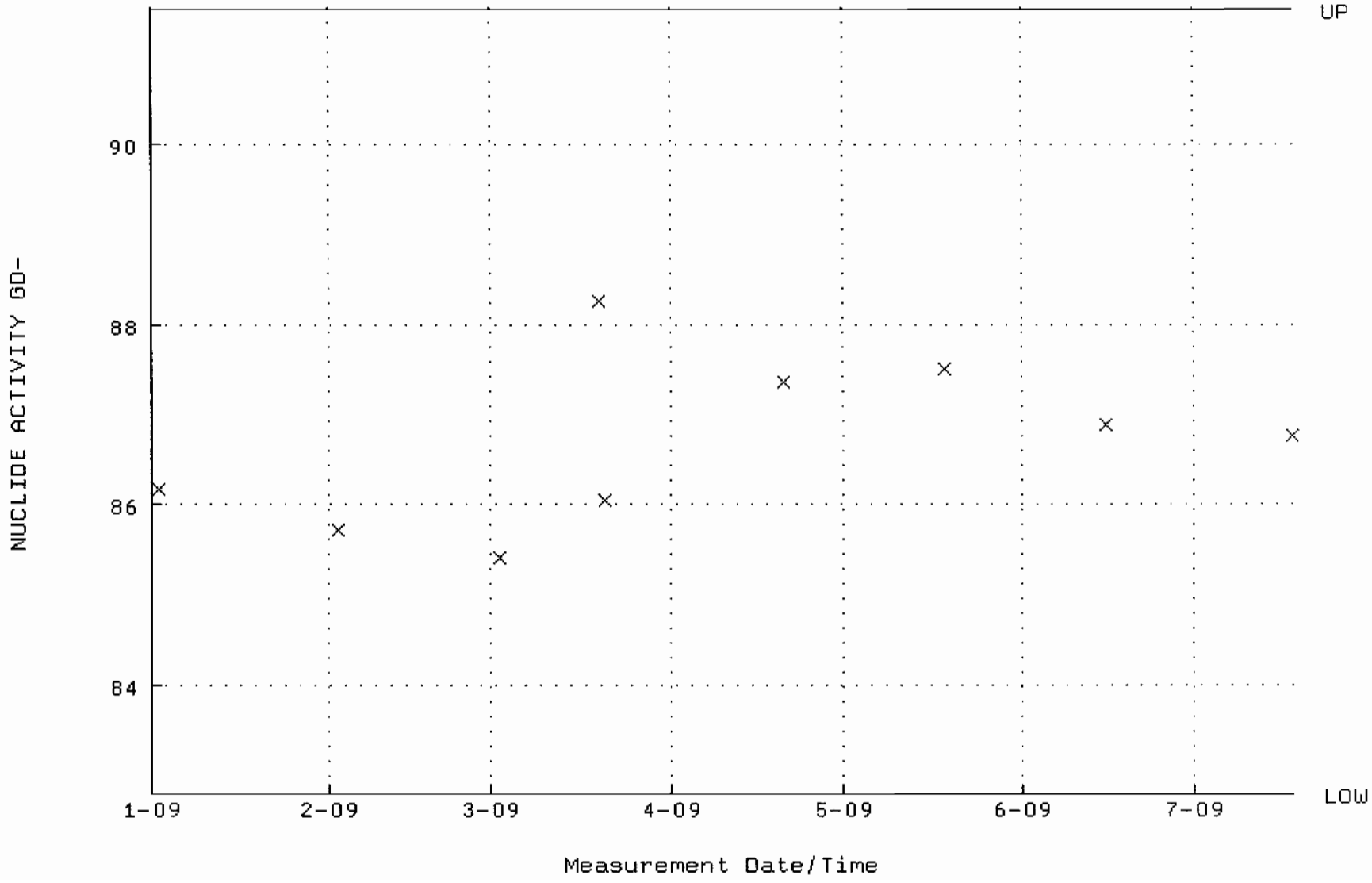

QA filename : DKA100:[ENV_ALPHA.QA.B]B156.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:47 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

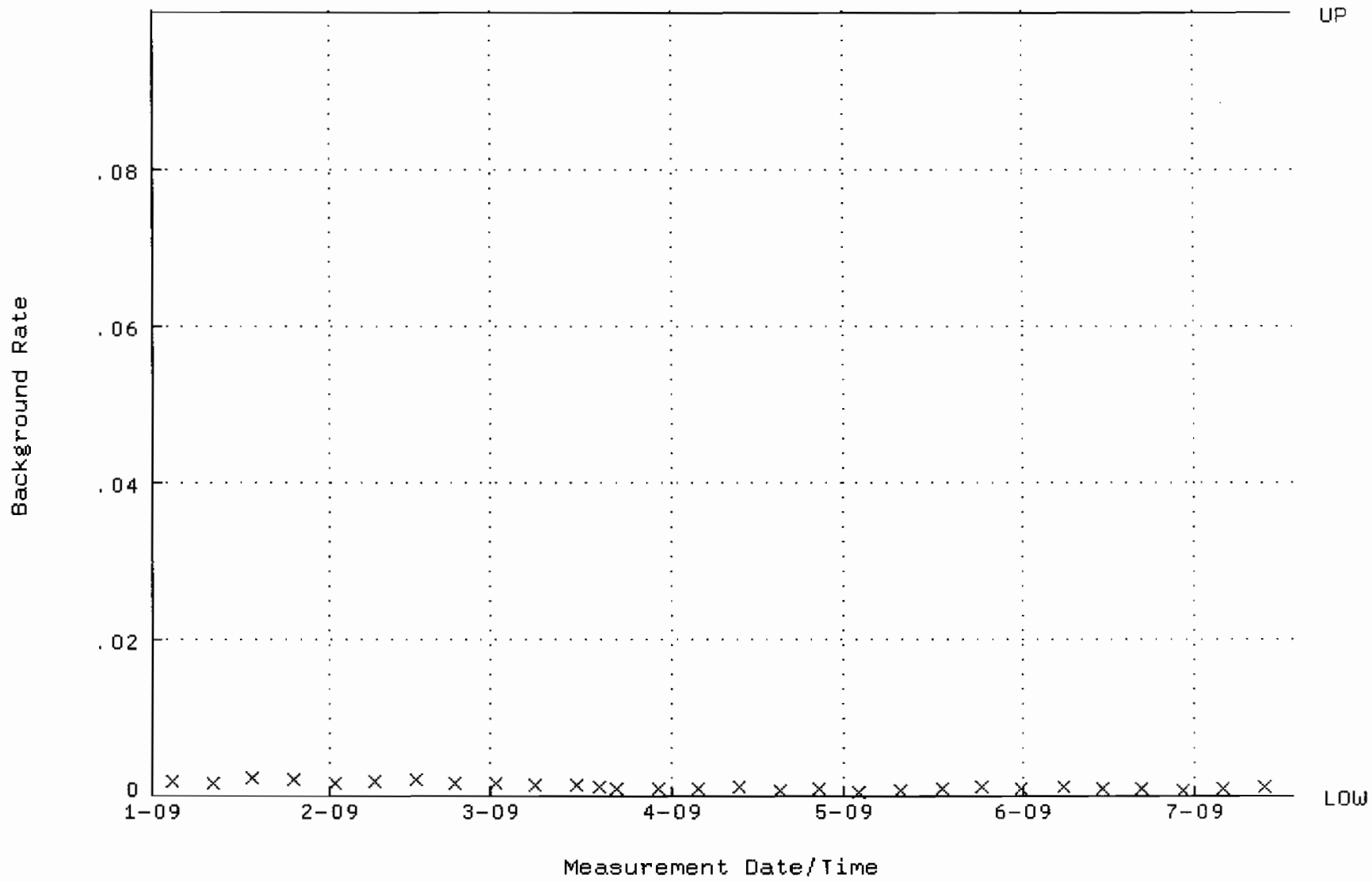

QA filename : DKA100:[ENV_ALPHA.QA.W]W221.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:31:39 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.366972 through 0.386972

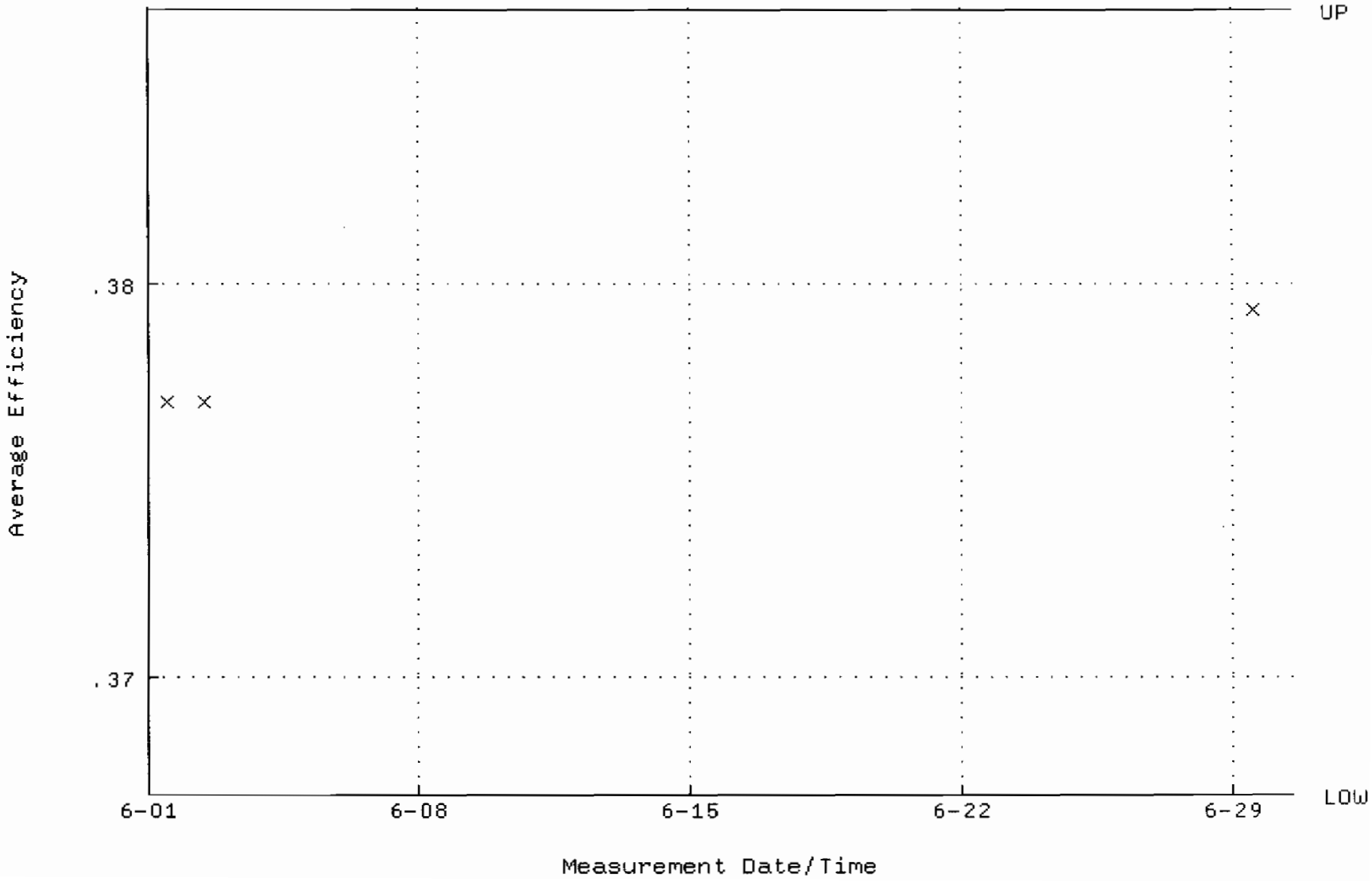

QA filename : DKA100:[ENV_ALPHA.QA.W]W221.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:31:39 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 86.3706 through 95.4622

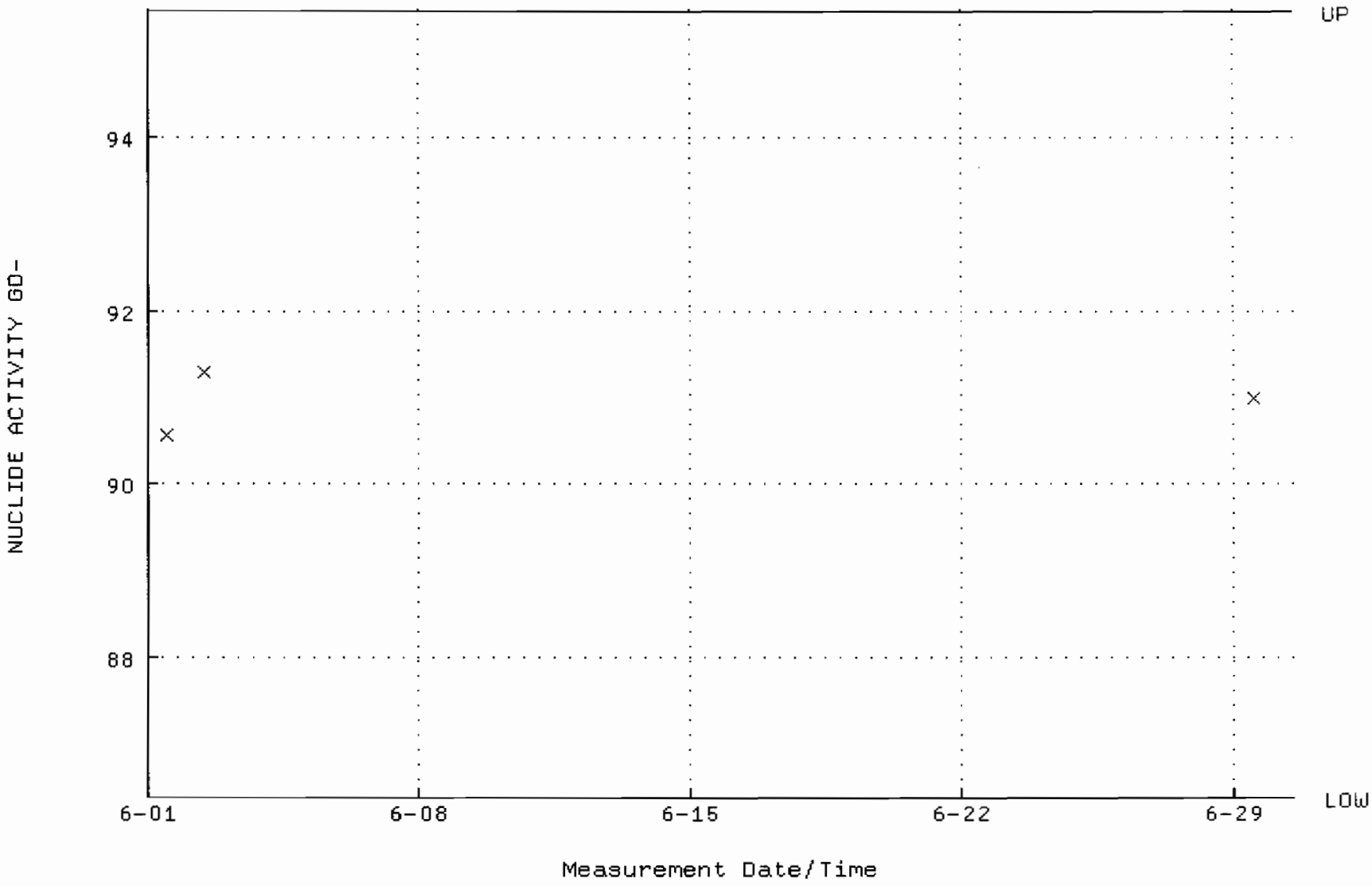

QA filename : DKA100:[ENV_ALPHA.QA.B]B221.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:25 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

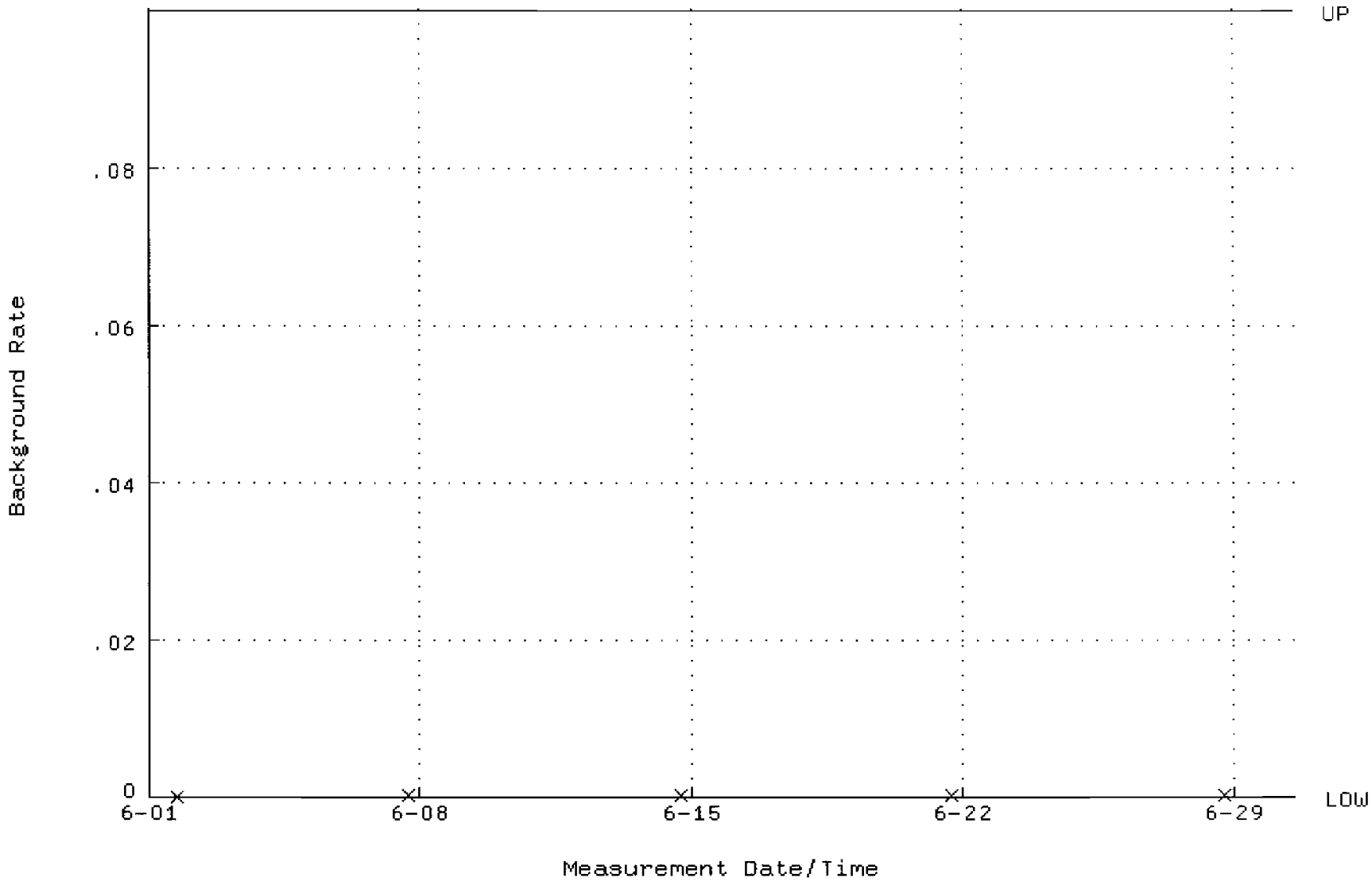

QA filename : DKA100:[ENV_ALPHA.QA.W]W227.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:08 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.376026 through 0.396026

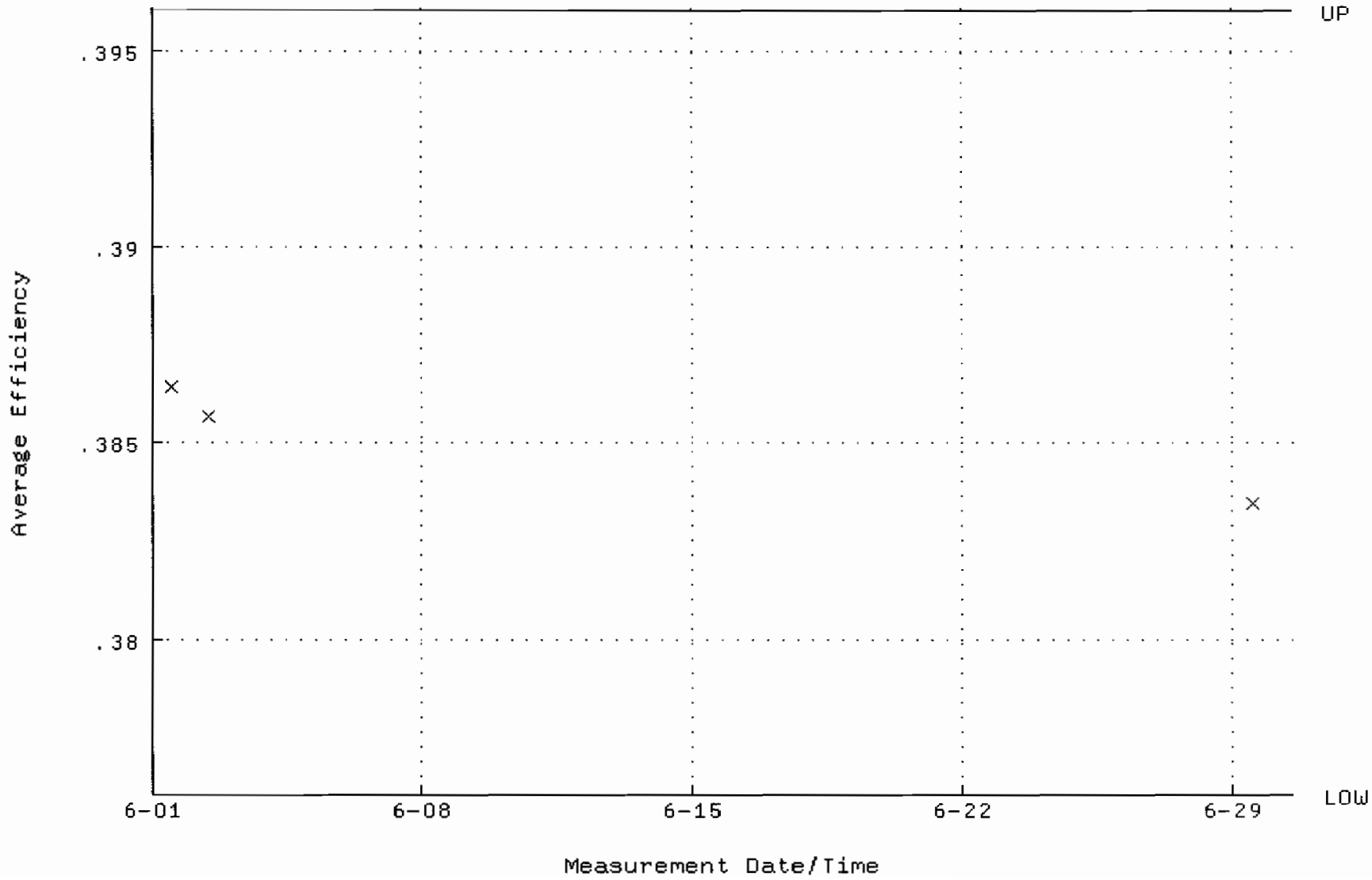

QA filename : DKA100:[ENV_ALPHA.QA.W]W227.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:08 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 86.1275 through 95.1935

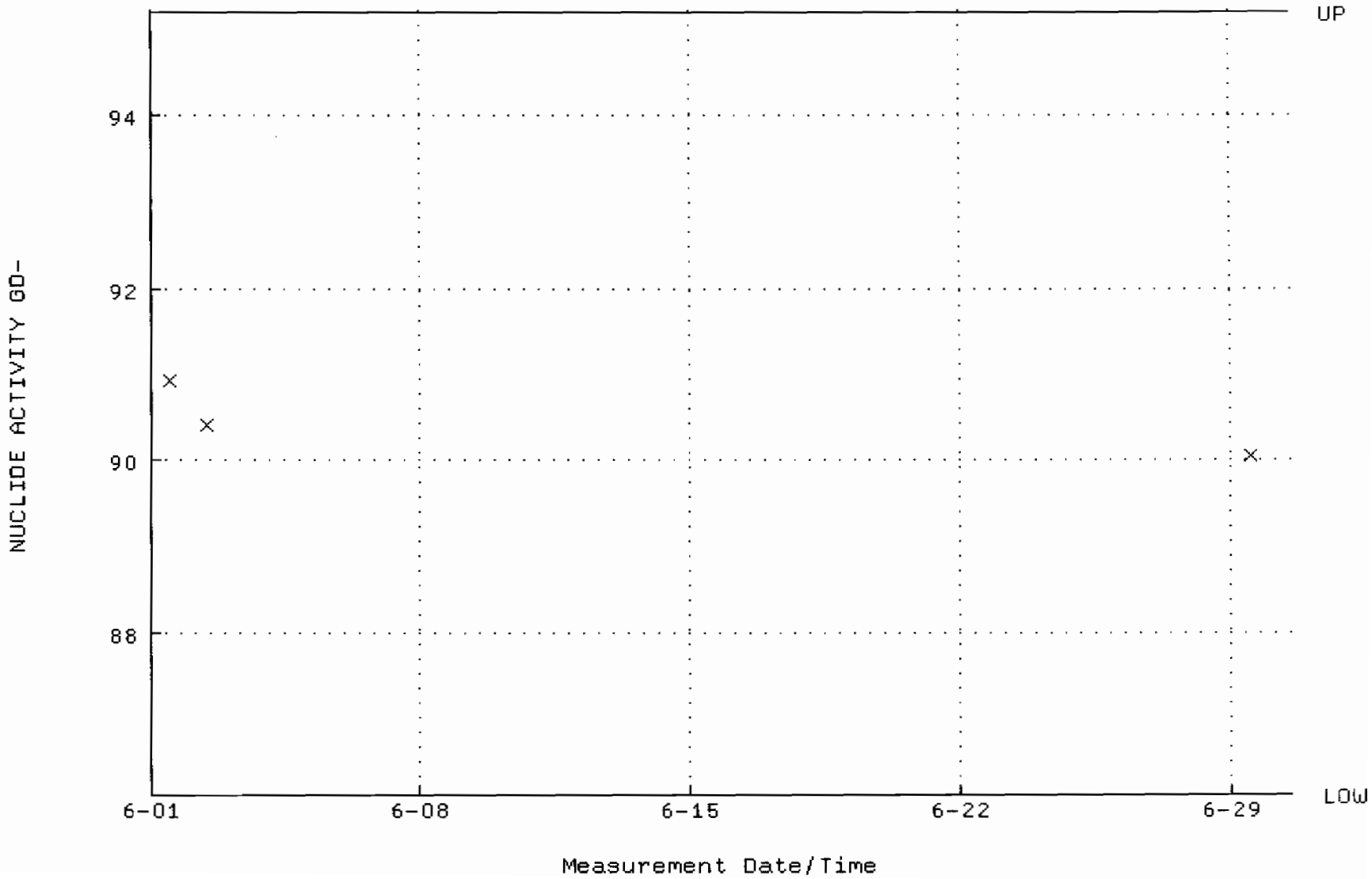

QA filename : DKA100:[ENV_ALPHA.QA.B]B227.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:52 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

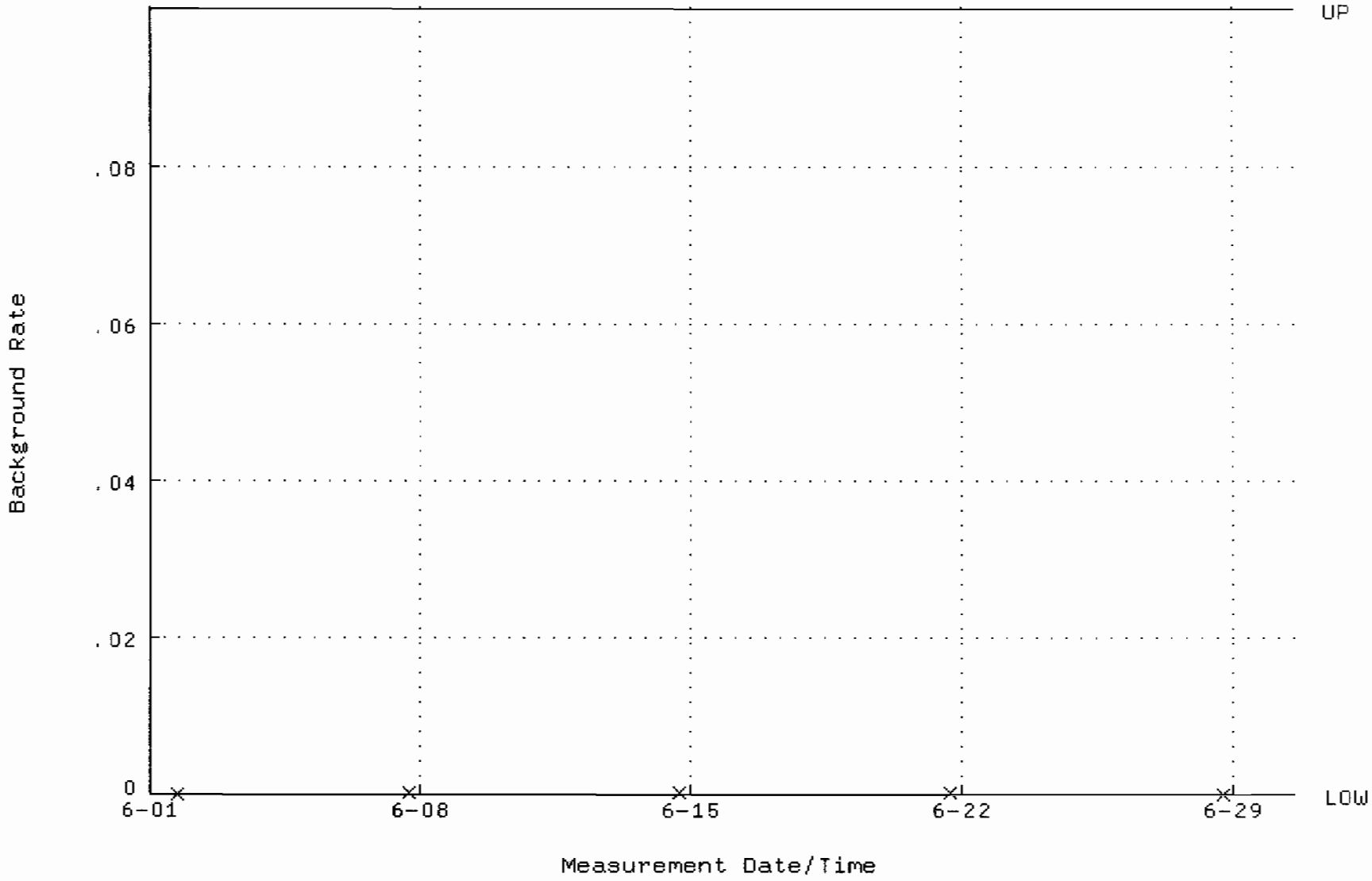

QA filename : DKA100:[ENV_ALPHA.QA.W]W228.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:12 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.372265 through 0.392265

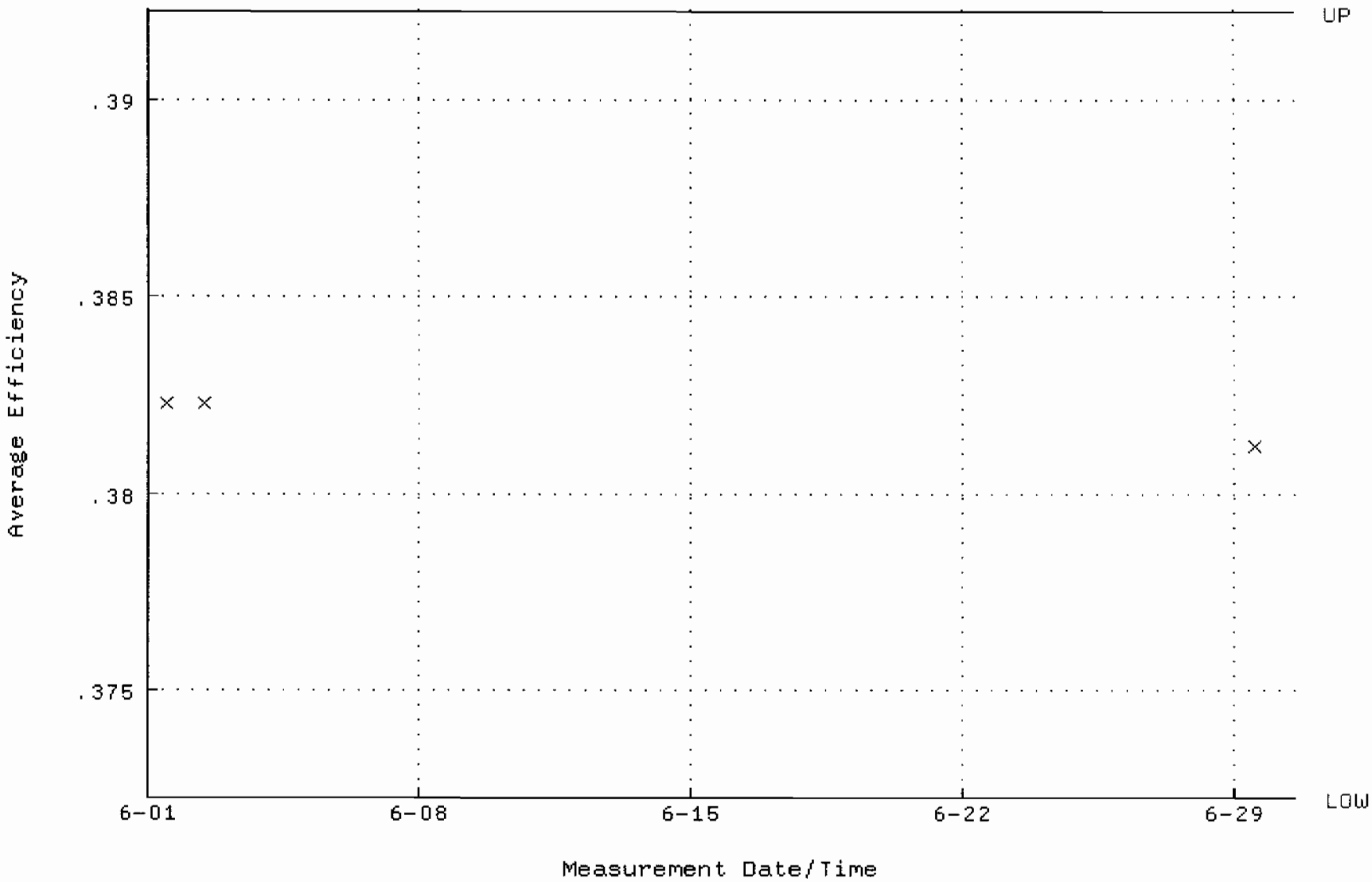

QA filename : DKA100:[ENV_ALPHA.QA.W]W228.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:12 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 85.4480 through 94.4426

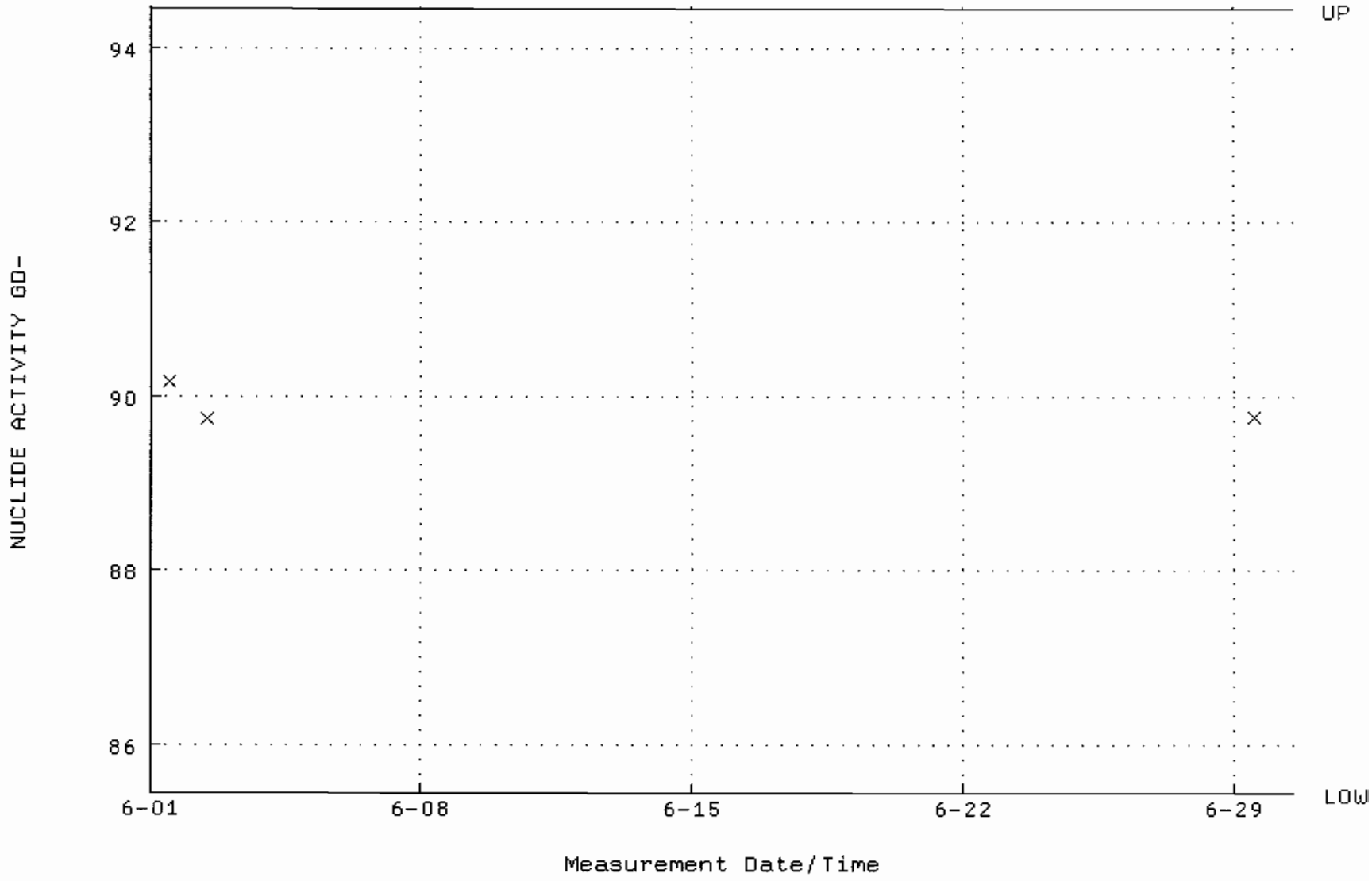

QA filename : DKA100:[ENV_ALPHA.QA.B]B228.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:57 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

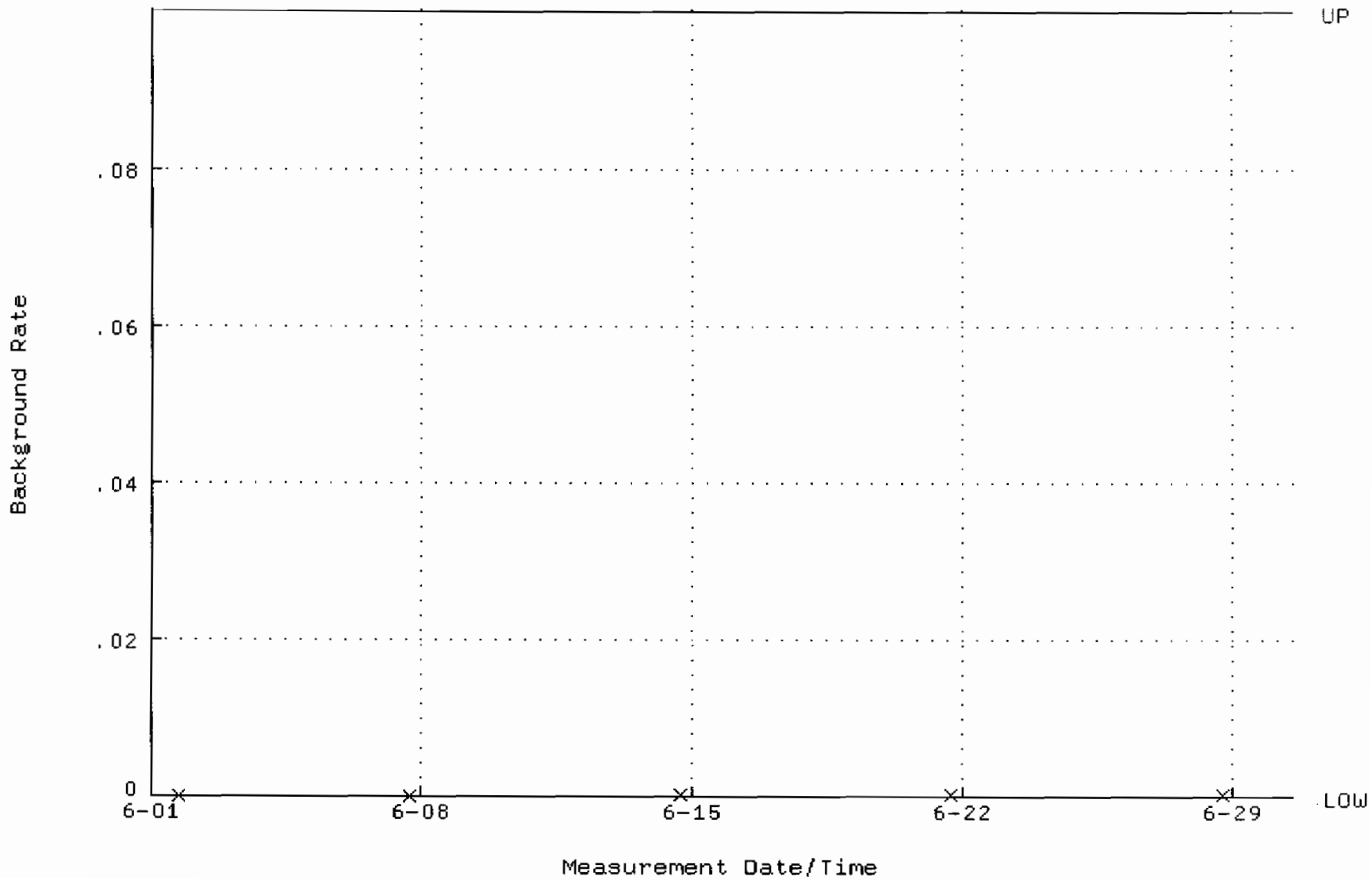

QA filename : DKA100:[ENV_ALPHA.QA.W]W229.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:17 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.371063 through 0.391063

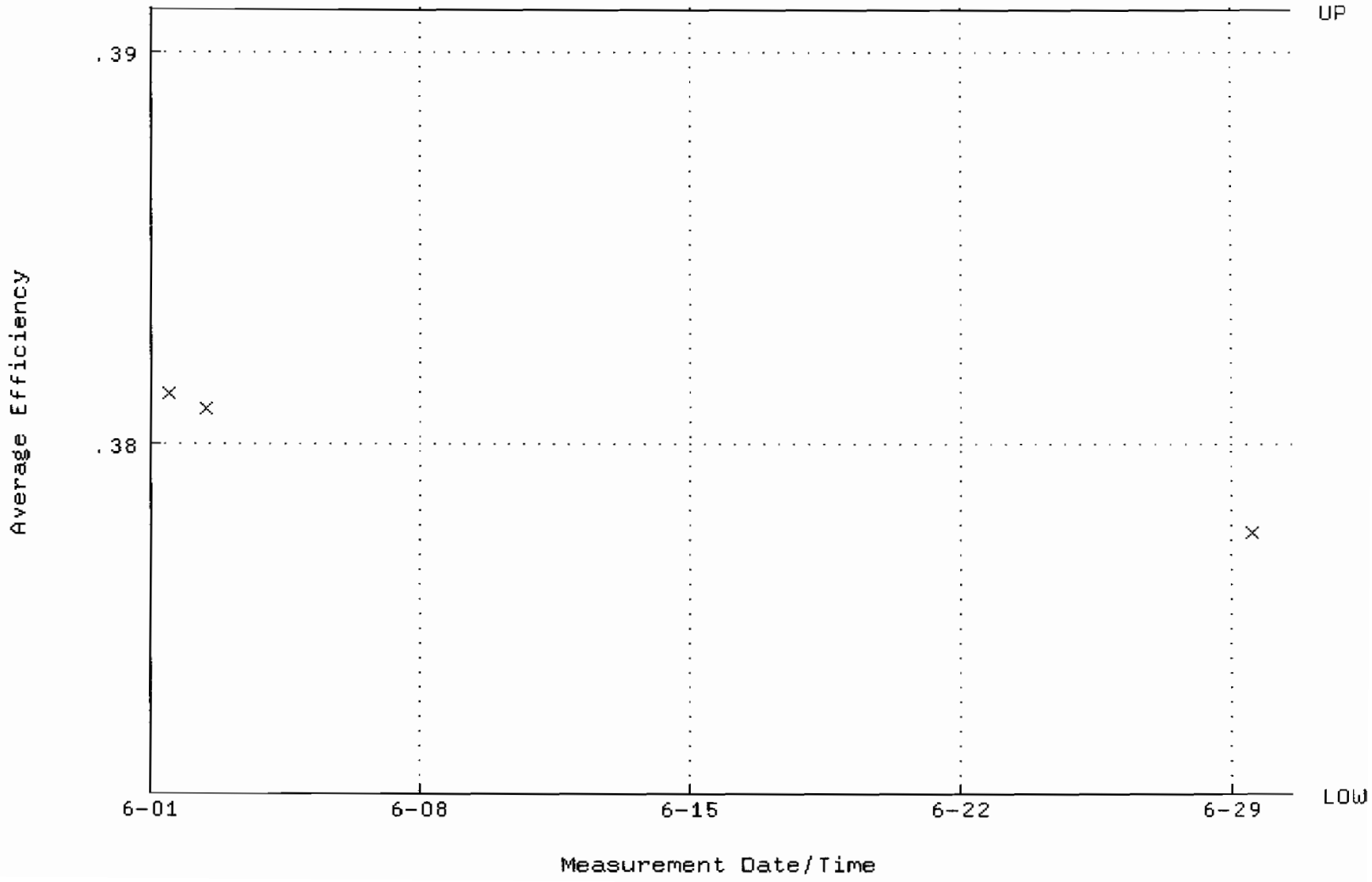

QA filename : DKA100:[ENV_ALPHA.QA.W]W229.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:17 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 87.6635 through 96.8913

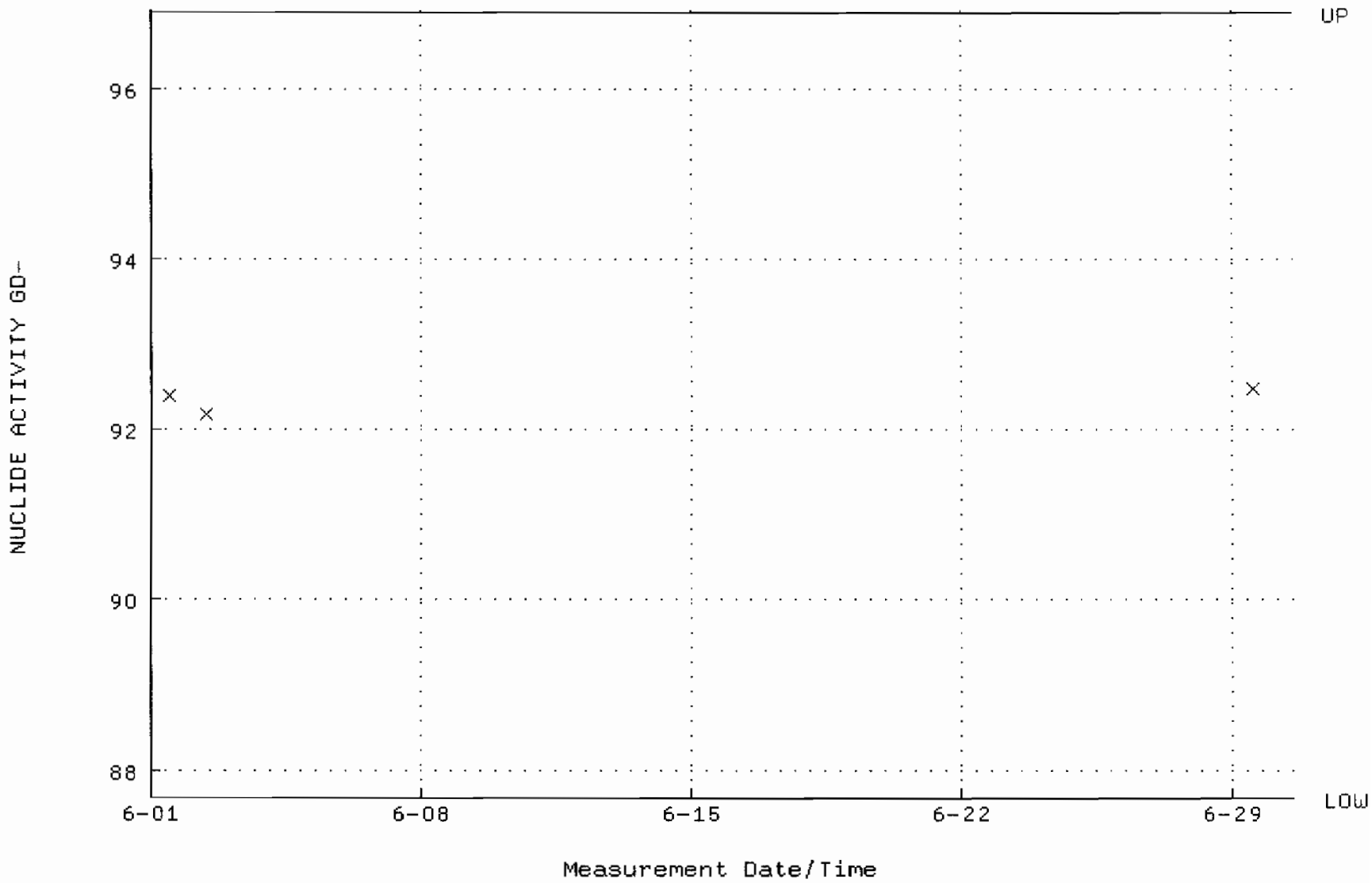

QA filename : DKA100:[ENV_ALPHA.QA.B]B229.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:45:01 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

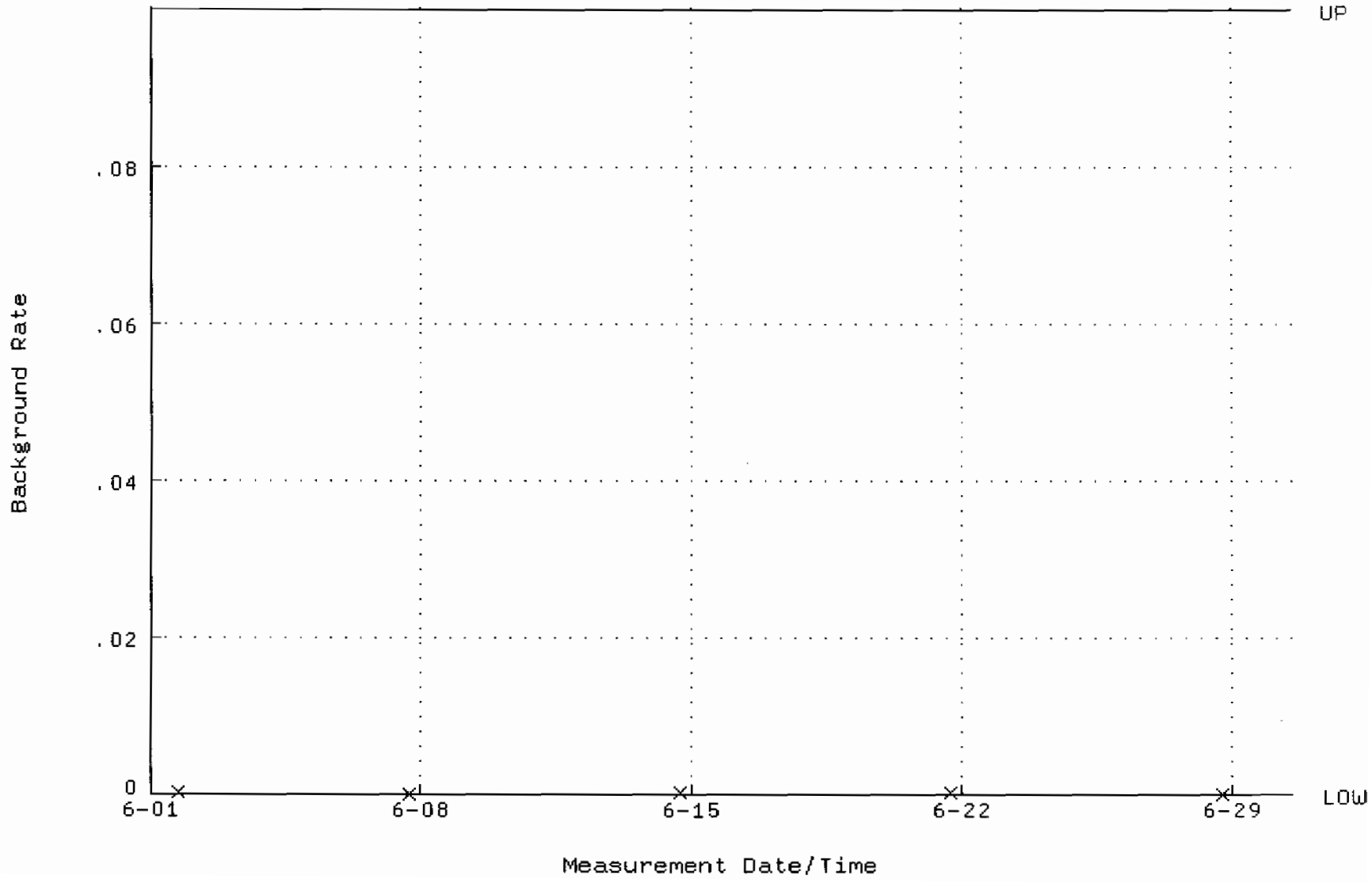

QA filename : DKA100:[ENV_ALPHA.QA.W]W230.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:22 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.363845 through 0.383845

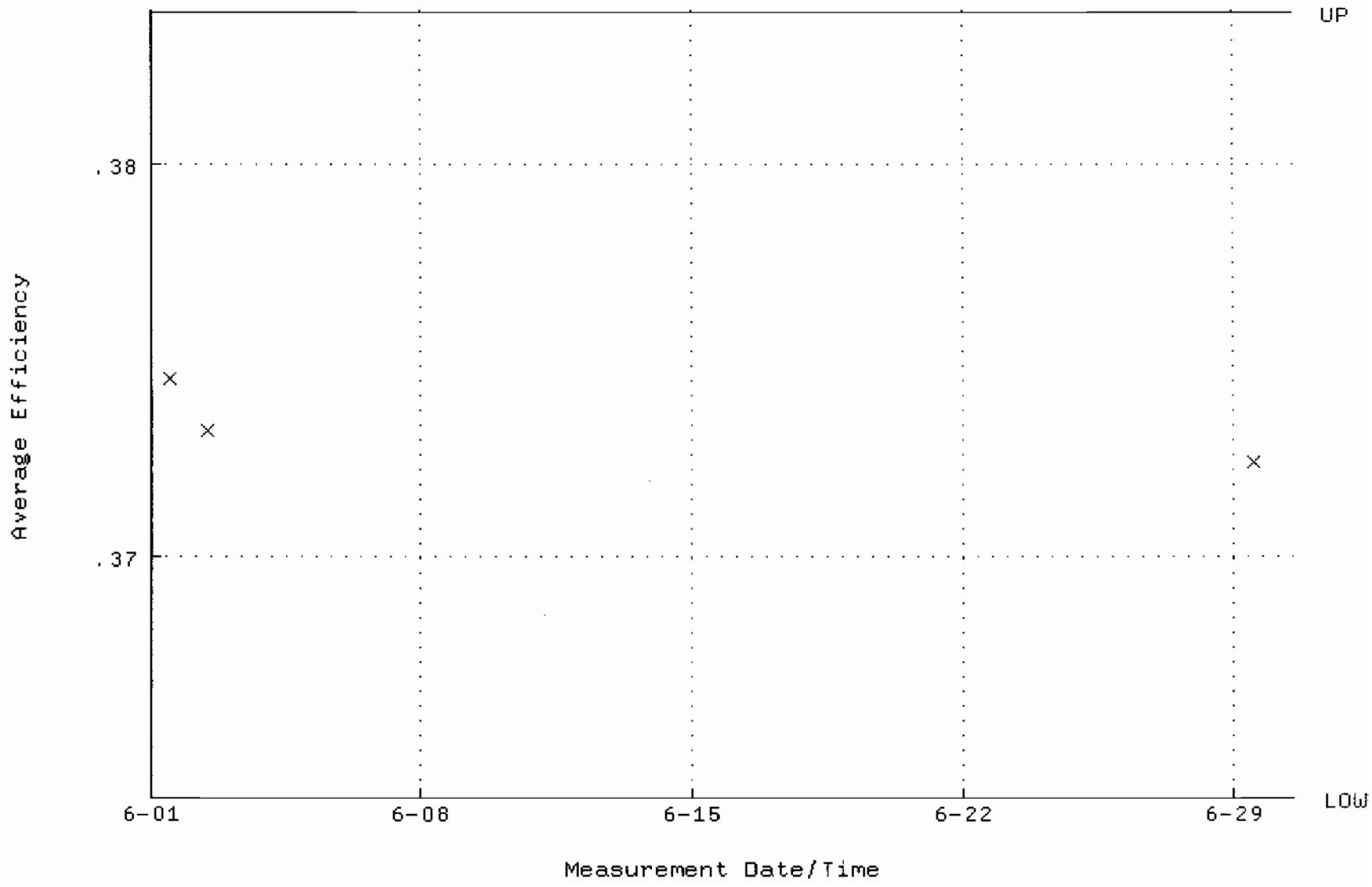

QA filename : DKA100:[ENV_ALPHA.QA.W]W230.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:22 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 86.9924 through 96.1494

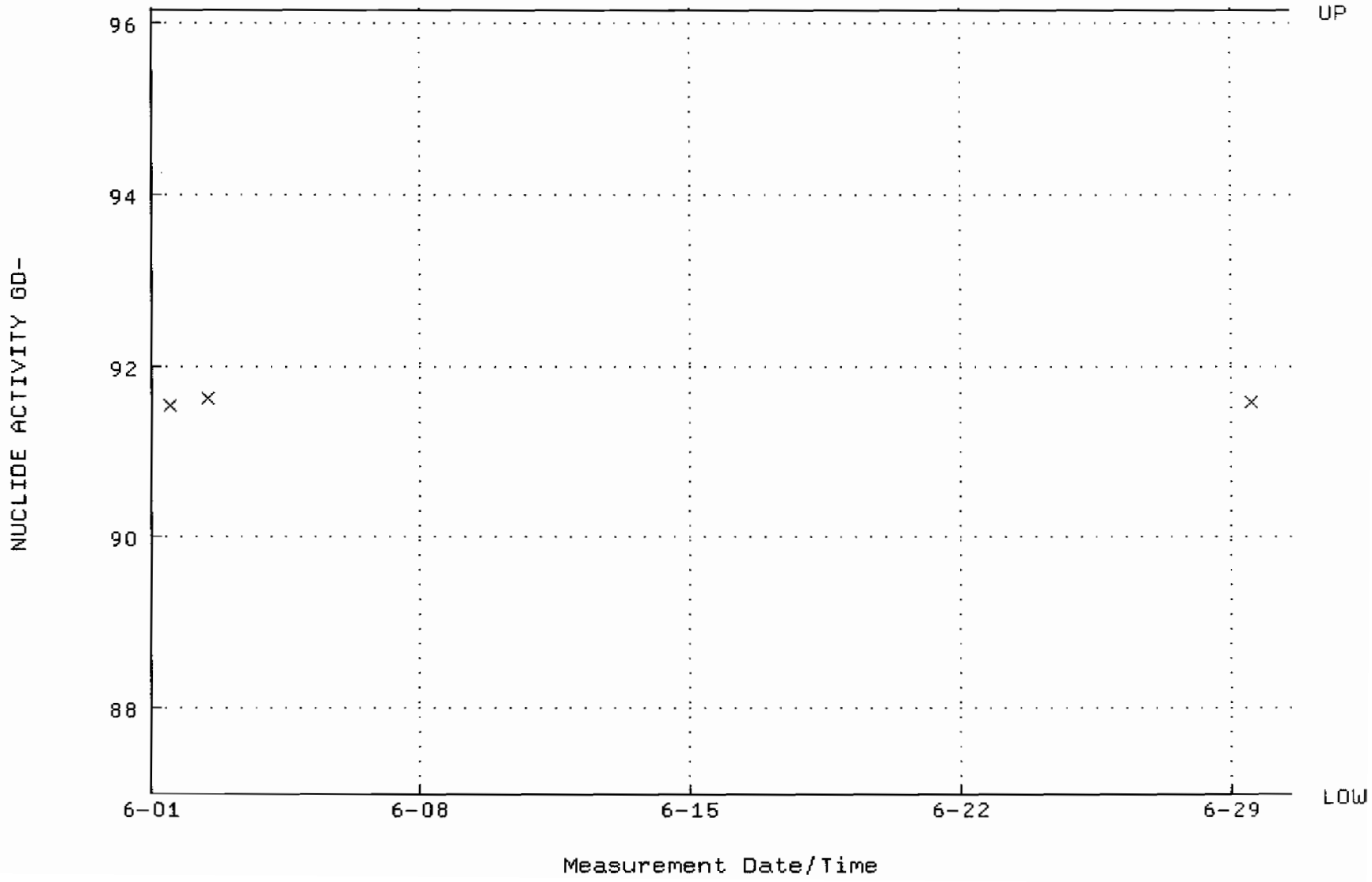

QA filename : DKA100:[ENV_ALPHA.QA.B]B230.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:45:05 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

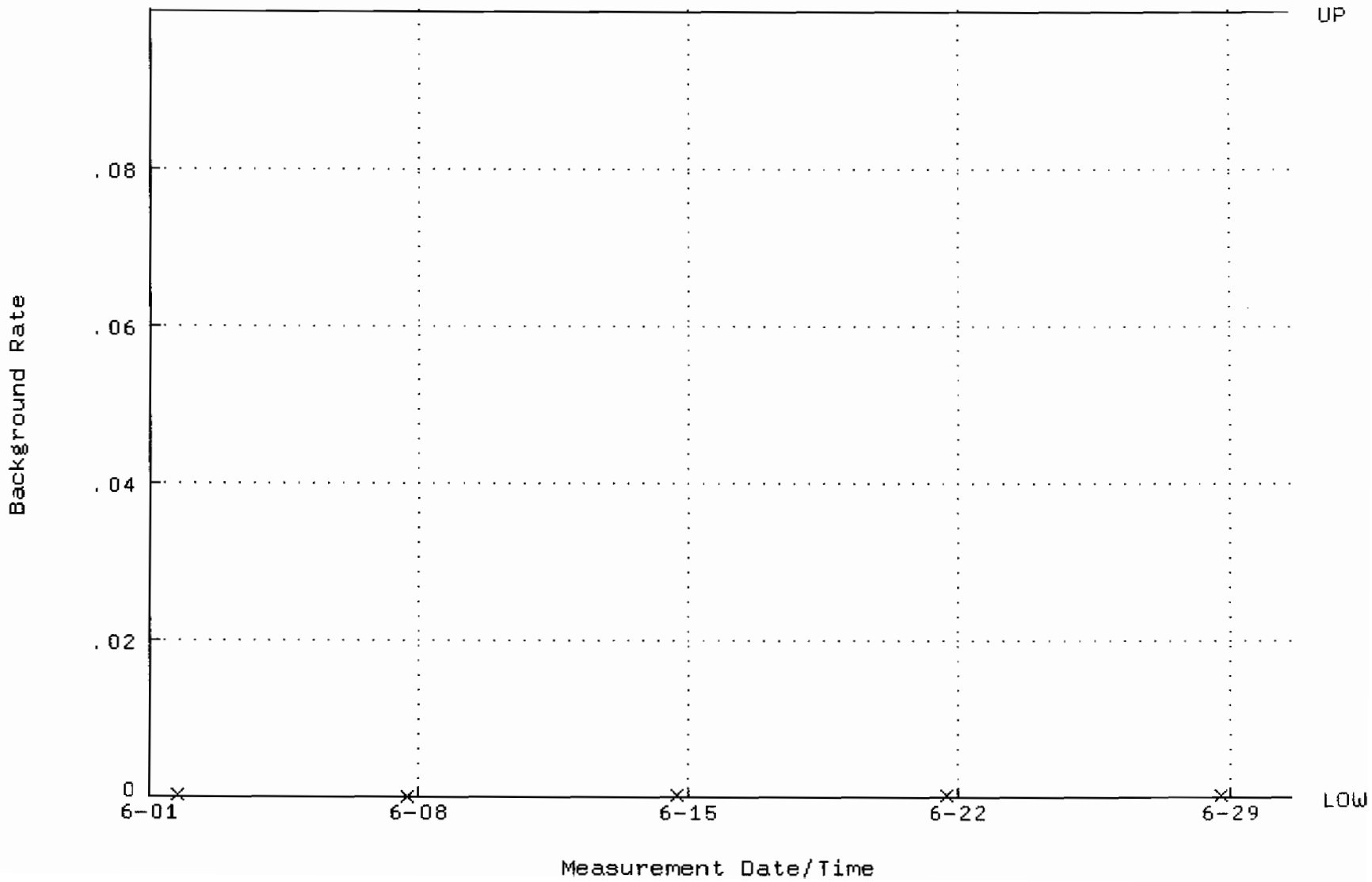

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM07_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:09 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

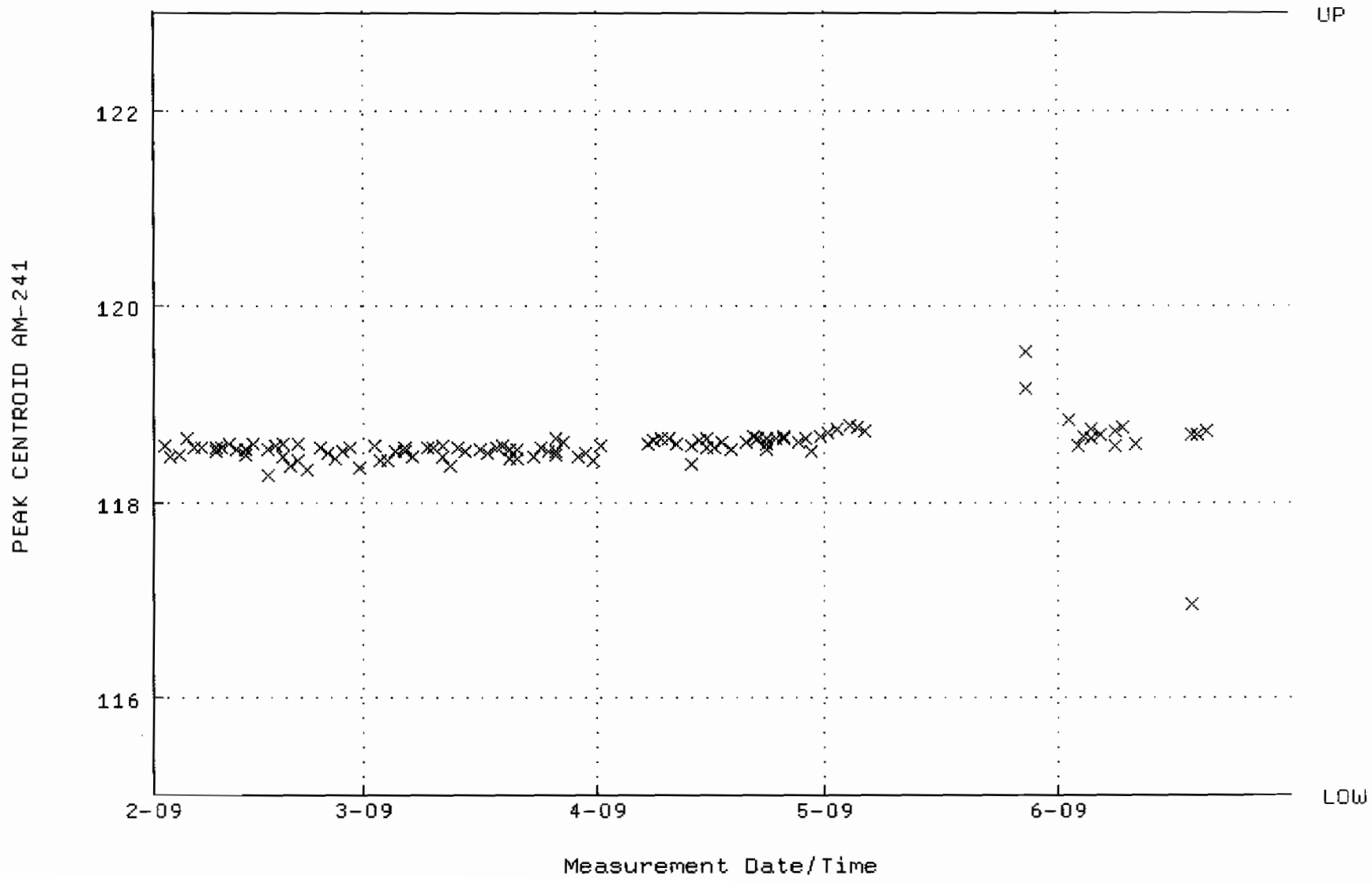

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM07.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:02 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.44400 through 1.56330

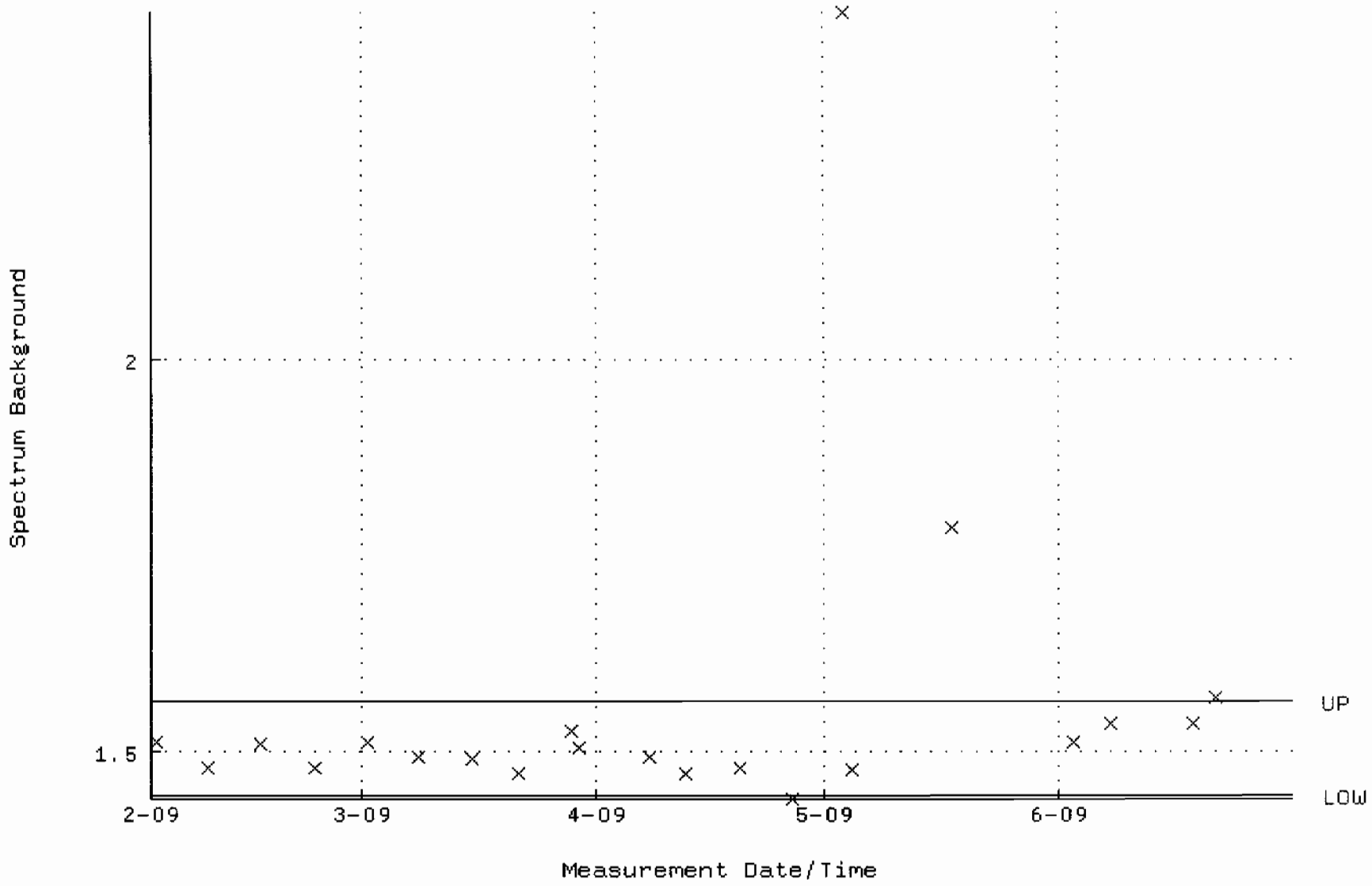

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM10_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:33 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

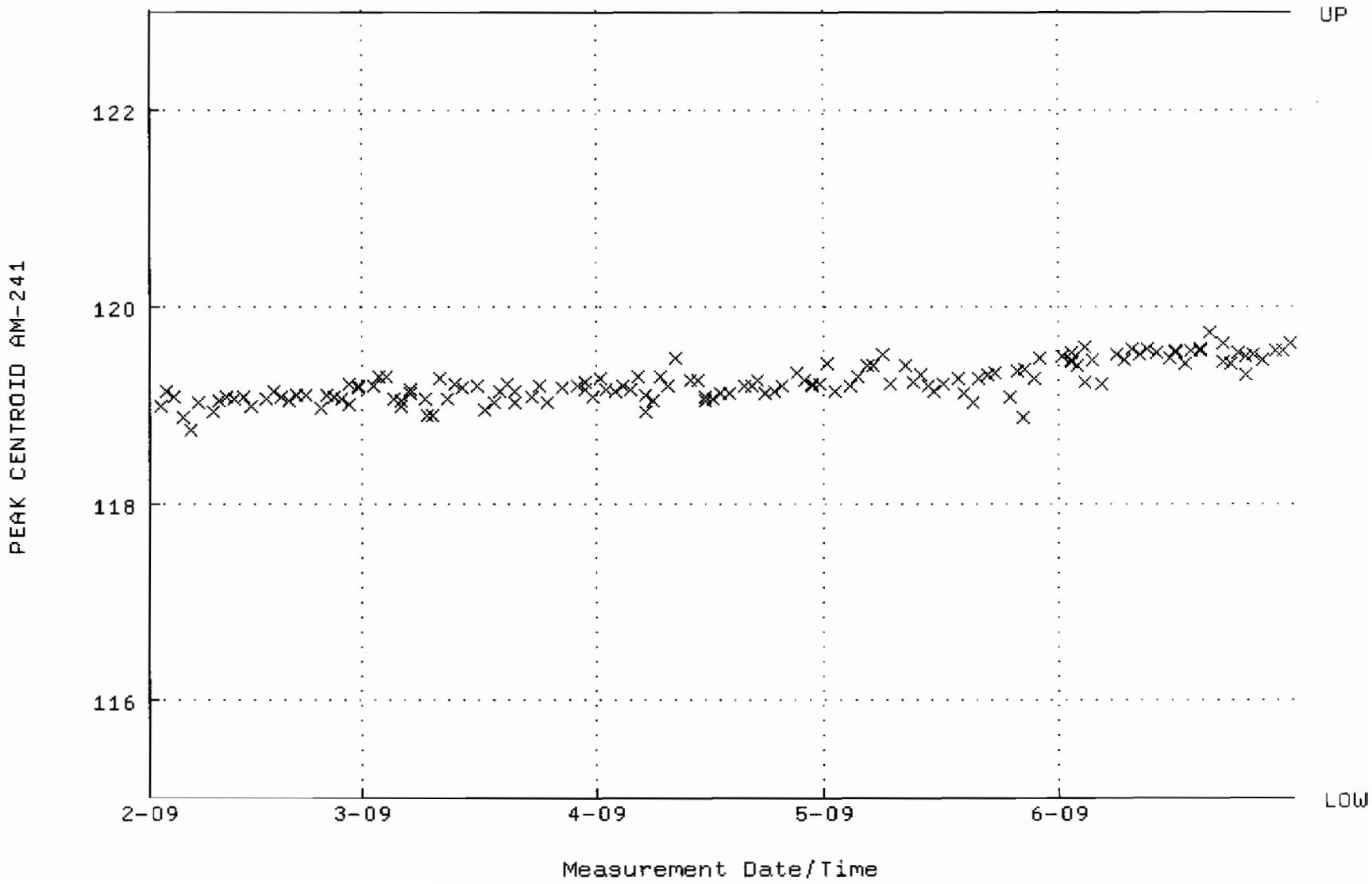

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM10.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.36818 through 1.67222

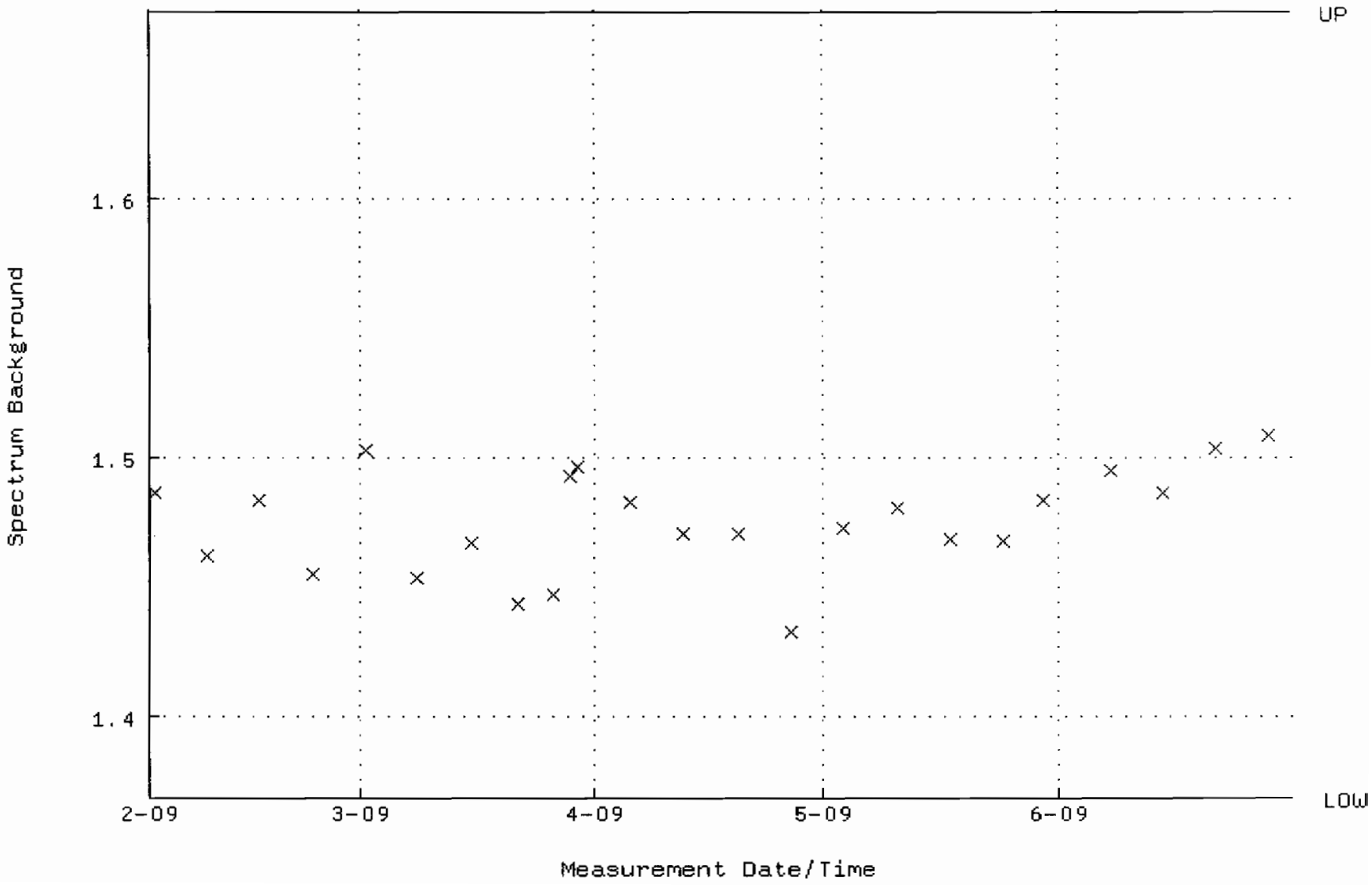

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:41 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

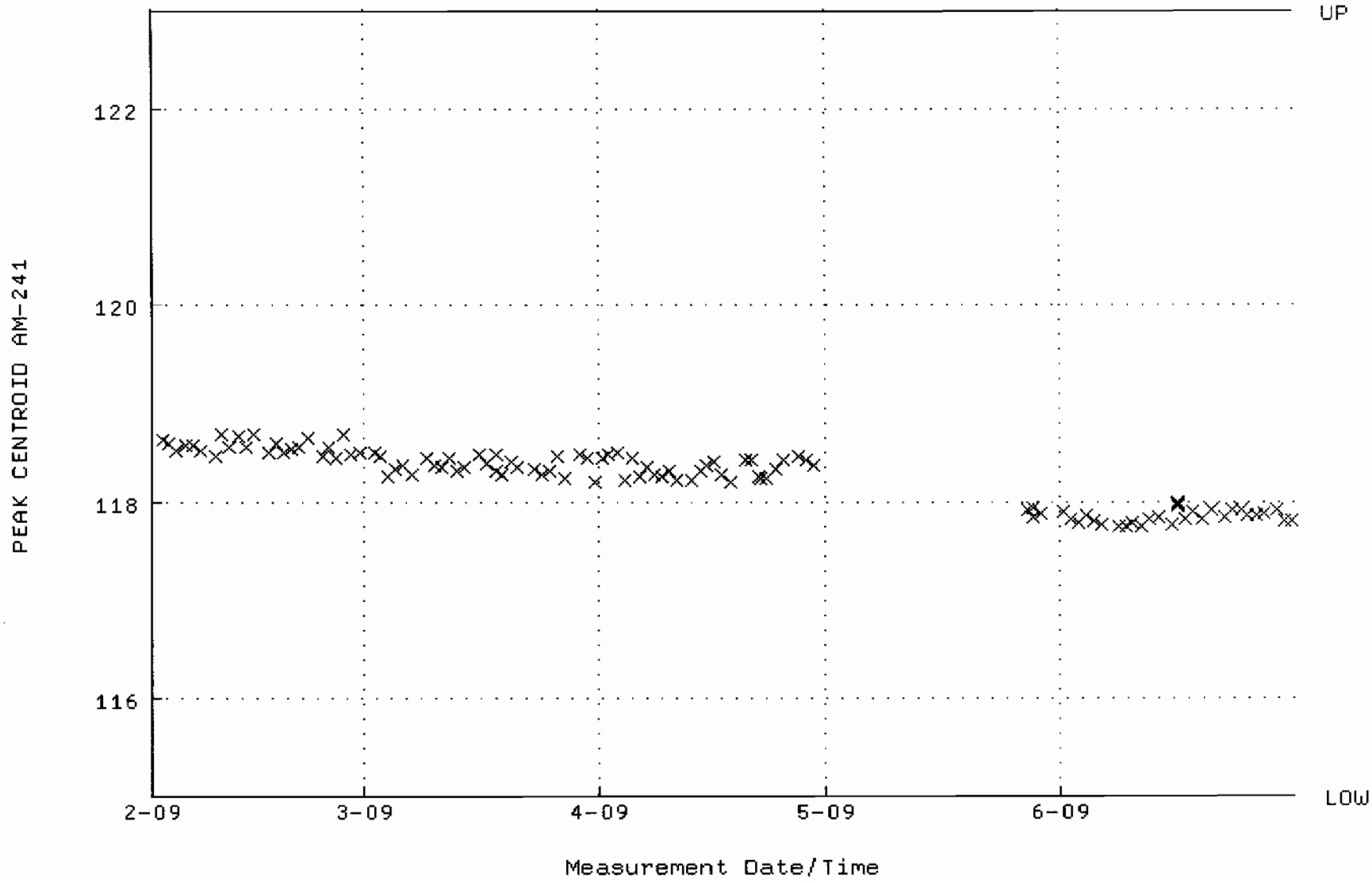

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM11.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:39 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.47699 through 1.80520

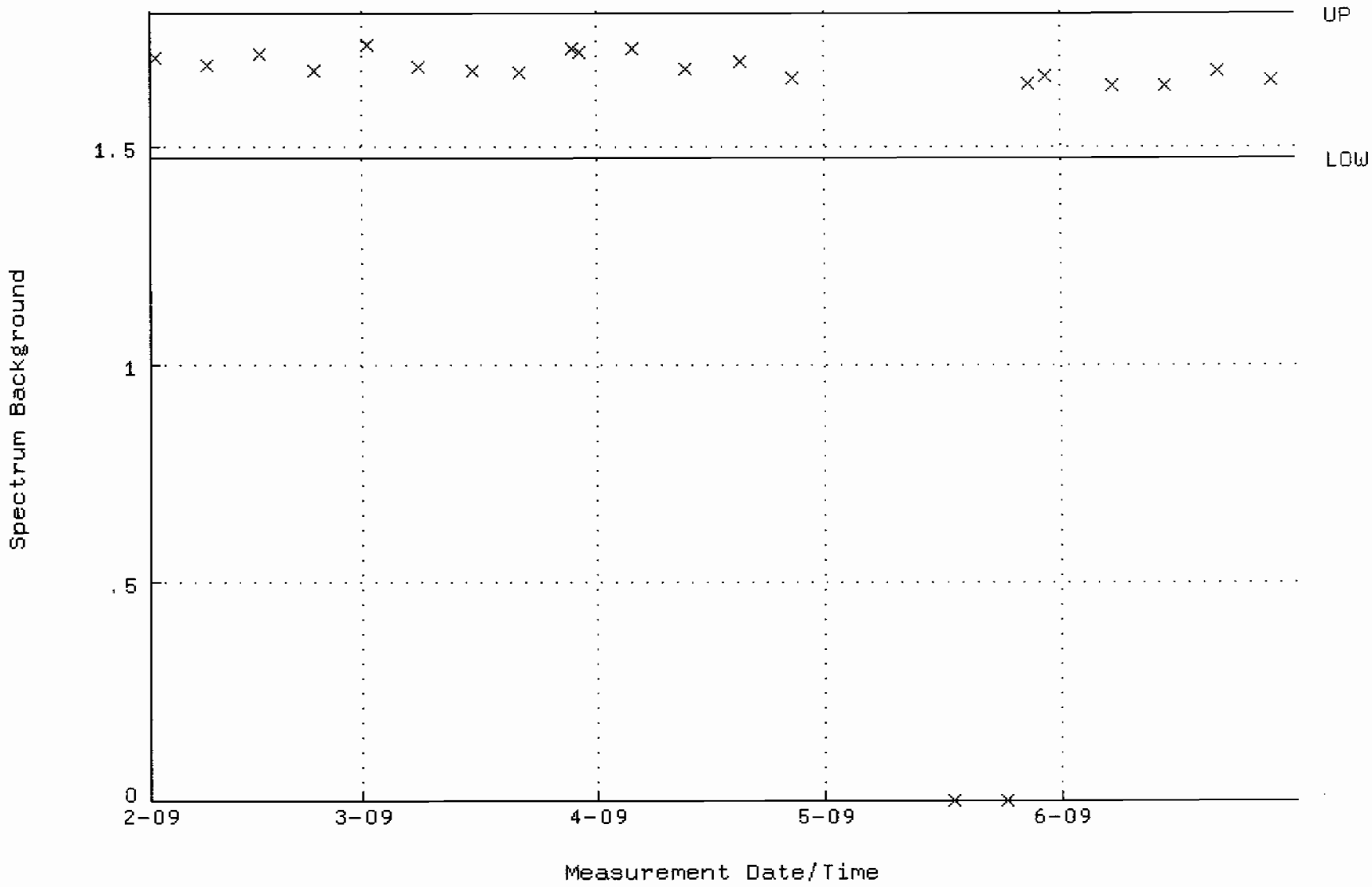

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:33:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

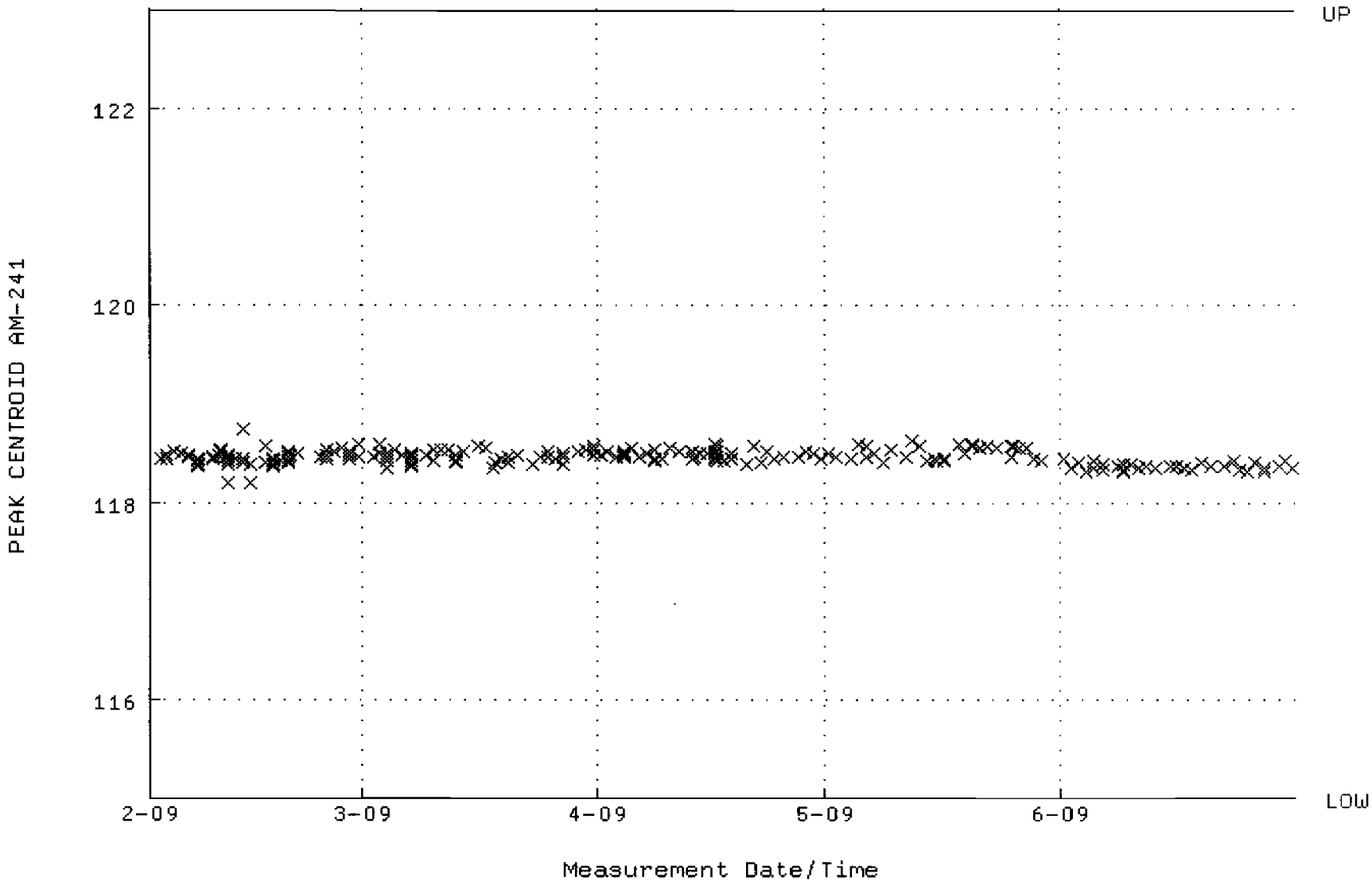

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM21.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:00 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.71450 through 2.09550

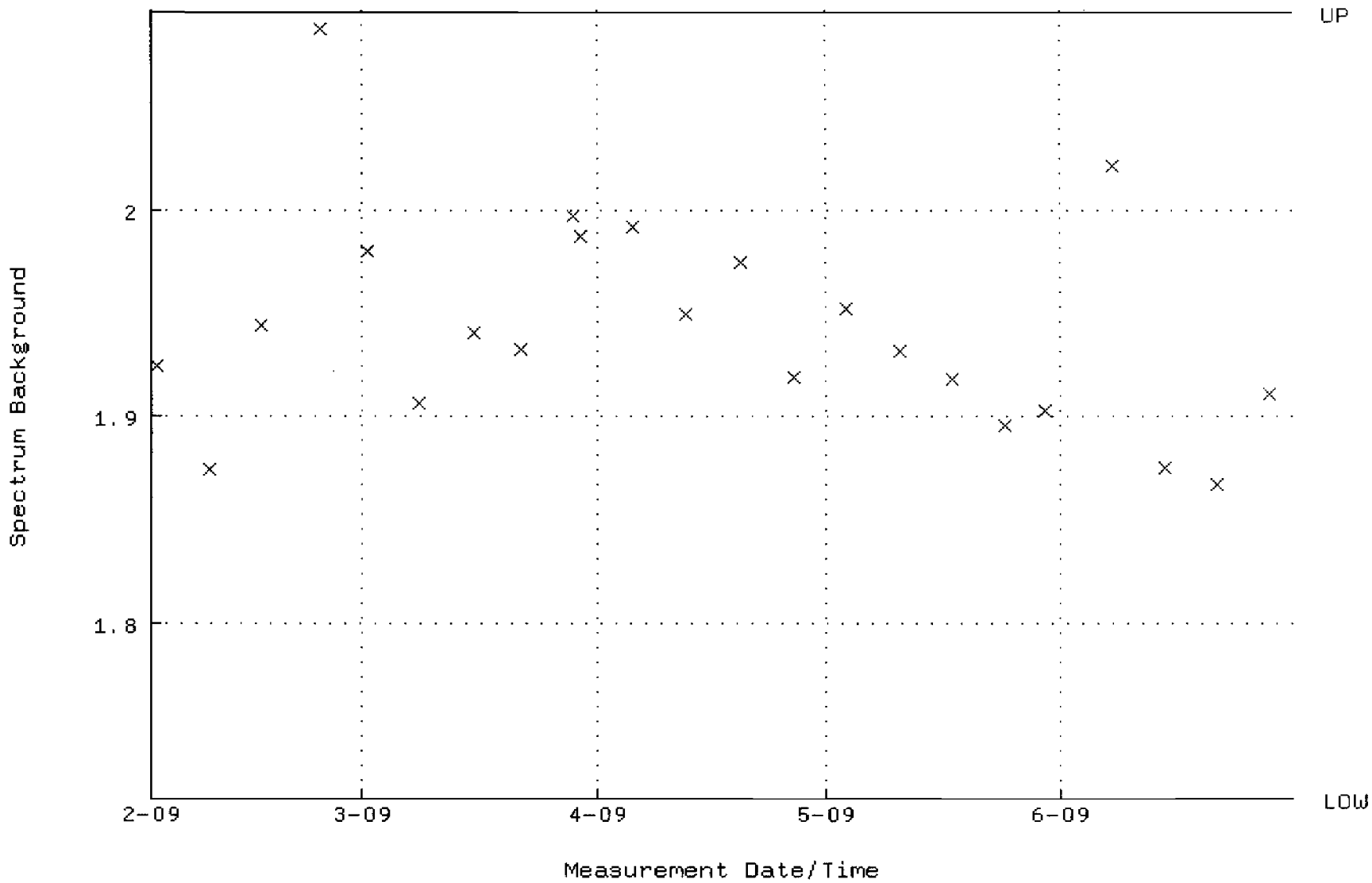

STANDARDS DATA

Amersham International plc
Amersham Laboratories

0134

NAMAS
CALIBRATION
No. 0146

[redacted]

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (µCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

RC-5-024-061

W. F. Case

W.F. Case

1073

Amersham
The Health Science Group

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

Mary Litdews 4/9/09
Amanda L. Tehr 4/9/09

ANALYTICS
Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-2-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-0

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318

Tel 404·352·8677
Fax 404·352·2837
www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info

Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info

Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

1078

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David Dry 12/4/08
Amanda Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

	Isotope	Result	
	Mixed Gamma N1	440.7	pCi/L
	Mixed Gamma N2	461.1	pCi/L
	Mixed Gamma N3	467.4	pCi/L
Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**
Certificate Value =	444.3738739	pCi/L	
Lower Limit =	428.4865624	pCi/L	
Upper Limit =	484.3134376	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	27.91343762		
10 % of Mean =	45.64000000		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David D. 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr 12/4/2008	**Isotope**	**Result** **pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L		**Rule 3 (Pass/Fail)**
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

12/4/08
Amanda Fehr
12/14/08

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATA 4/14/2000 Jeff C Neff 12/1/04

Angela D. Johnson 12/3/04

TRM

Invoice:

5 bottles of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	425 ± 24	22.1 ± 1.3	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: 2-2-6-4-9-4
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2460A
Case No.: 10204 13
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location — Tech Area VI
Building N/A — Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID (LAB USE)
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

1084

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab

Sample Tracking — SMO USE
Date Entered (m/d/y)
Entered by

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well decontamination rad materials being sent to GEL on behalf of Hank Mintzer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Turnaround Time ☒Normal ☐Rush Required Report Date
QC Limits

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	Douglas E. Perry	DEP	Weston / 7577 / 845-0867

1. Relinquished by	Douglas E. Perry	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original — To Accompany Samples, Laboratory Copy (White)
1st Copy — To Accompany Samples, Return to SMO (Blue)
2nd Copy — SMO Suspense Copy (Yellow)
3rd Copy — Field Copy (Pink)

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATA 4/14/2000

Amanda L. Fehr 4/30/04
[illegible] 5/1/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped 11-16-99 SMO USE
Carrier/Waybill No. [illegible]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location — Tech Area VI — Building N/A — Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special Instructions Below	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

1087

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

Sample Tracking (LAB USE) Date Entered (dd/mm/yy) Entered by QC Initials

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DP	Weston / 7577 / 845-0867

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized and materials being sent to GEL on behalf of Hank Hinton
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

1. Relinquished by [signature]	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by	Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by	Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by	Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by	Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by	Org.	Date	Time	6. Received by	Org.	Date

Original — To Accompany Samples, Laboratory Copy (White)
1st Copy — To Accompany Samples, Return to SMO (Blue)
2nd Copy — SMO Suspense Copy (Yellow)
3rd Copy — Field Copy (Pink)

1380 Seaboard Industrial Blvd.

1262

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

laithersburg, Maryland 20899
anuary 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

RECEIVED 10/5/05

a, 30318

1088

*Notes and references

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994** [b]*
Massic activity of the solution [c]	**26.31 Bq·g^{-1}**
Relative expanded uncertainty (k=2)	**0.72%** [d] [e]
Solution density	**(1.105 ± 0.002) g·mL^{-1} at 20 °C** [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L^{-1})	Mass Fraction (g·g^{-1})
	H_2O HNO_3 $^{242}Pu^{+6}$	50 3.2 8×10^{-7}	0.81 0.19 2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) Bq·g^{-1} [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three 4πα liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	$^{239}Pu + ^{240}Pu$ <0.000 001 [u]	$^{239}Pu + ^{240}Pu$ 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	$^{238}Pu + ^{241}Am$ <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One µSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (µSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 $s^{-1} \cdot g^{-1}$ for energies less than 3.1 MeV,
0.03 $s^{-1} \cdot g^{-1}$ for energies between 3.1 and 4.4 MeV, and
0.003 $s^{-1} \cdot g^{-1}$ for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 19 and 39 keV,
7×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 49 and 92 keV,
2×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 106 and 507 keV,
1×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 515 and 1456 keV, and
5×10^{-6} $s^{-1} \cdot g^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i| \cdot (x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i| \cdot (x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i| \cdot u(x_i)/y = |\partial y/\partial x_i| \cdot (x_i/y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i| \cdot (x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}·{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1262
Prepared By:	Daniel Roy
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-048-143

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Mary Aders
Prep Date:	05/08/2009
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	1262-A
Dilution(mL):	200 mL
Mass of Parent(g):	5.3306 g
Density(g/mL):	1.0000
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (200 mL) = 42.0744 dpm/mL
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0000 g/mL) / (200 mL) = 42.0744 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1262-*A*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	1262-A	1.830	0.2560
	1262-A	1.890	0.2630
	1262-A	1.810	0.2520
Mean Value (Counting) =	1.843	97.26	**Pass**
Stdev =	0.04163332		**Rule 3 (Pass/Fail)**
Target =	1.90		
Lower Limit =	1.760066693		
Upper Limit =	1.926599973		
Rule 1 Pass/Fail	**Pass**		
Two sigma =	0.08326664		
10 % of Mean =	0.184333333		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1262-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-Y and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Five drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 48% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

5/15/09

05/15/09

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.18, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

1097
End of Certificate

RECEIVED 12/15/08
RC-S-OE

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

	Serial #	Value		Uncertainty	
Analyst: D. Roy					
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L

Mean Value (Counting) =	2.407	pCi/L	**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L		**Rule 3 (Pass/Fail)**

Target =	2.397	pCi/L
Lower Limit =	2.259244371	pCi/L
Upper Limit =	2.554088963	pCi/L
Rule 1 Pass/Fail	**Pass**	
Two sigma =	0.147422296	
10 % of Mean =	0.240666667	
Rule 2 (Pass/Fail)	**Pass**	

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09
1/5/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 881931**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232582001	SAMPLE	MXR1	GAM02	09-JUL-09 08:14	DONE CAN		01-NOV-08 00:00
232582002	SAMPLE	MXR1	GAM17	09-JUL-09 08:15	DONE CAN		27-JAN-09 00:00
232585001	SAMPLE	MXR1	GAM22	09-JUL-09 08:16	DONE CAN		18-FEB-09 00:00
1201873069	MB	MXR1	GAM21	09-JUL-09 08:22	DONE CAN		25-JUL-08 00:00
232585002	SAMPLE	MXR1	GAM01	09-JUL-09 08:34	DONE CAN		30-JAN-09 00:00
232585003	SAMPLE	MXR1	GAM05	09-JUL-09 08:34	DONE CAN		11-JUN-09 00:00
232591001	SAMPLE	MXR1	GAM10	09-JUL-09 08:35	DONE CAN		16-MAR-09 00:00
1201873070	DUP	MXR1	GAM11	09-JUL-09 08:36	DONE CAN		01-NOV-08 00:00
1201873071	LCS	MXR1	GAM07	09-JUL-09 08:51	DONE CAN		01-NOV-08 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882671**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232211001	SAMPLE	KXM4	1209	09-JUL-09 20:51	DUSE		
232211002	SAMPLE	KXM4	1210	09-JUL-09 20:51	DONE		
232211003	SAMPLE	KXM4	1211	09-JUL-09 20:51	DONE		
232211004	SAMPLE	KXM4	1212	09-JUL-09 20:51	DONE		
232211005	SAMPLE	KXM4	1213	09-JUL-09 20:51	DUSE		
232211006	SAMPLE	KXM4	1214	09-JUL-09 20:51	DONE		
232211007	SAMPLE	KXM4	1215	09-JUL-09 20:51	DUSE		
232211008	SAMPLE	KXM4	1216	09-JUL-09 20:51	DONE		
232212001	SAMPLE	KXM4	1217	09-JUL-09 20:51	DONE		
232212003	SAMPLE	KXM4	1219	09-JUL-09 20:51	DUSE		
232278001	SAMPLE	KXM4	1220	09-JUL-09 20:51	DONE		
232278002	SAMPLE	KXM4	1221	09-JUL-09 20:51	DONE		
232582001	SAMPLE	KXM4	1222	09-JUL-09 20:51	DUSE		
232582002	SAMPLE	KXM4	1223	09-JUL-09 20:51	DONE		
232585001	SAMPLE	KXM4	1224	09-JUL-09 20:51	DONE		
232585002	SAMPLE	KXM4	1225	09-JUL-09 20:52	DONE		
232585003	SAMPLE	KXM4	1226	09-JUL-09 20:52	DONE		
232591001	SAMPLE	KXM4	1227	09-JUL-09 20:52	DONE		
1201874683	MB	KXM4	1228	09-JUL-09 20:52	DONE		
1201874684	DUP	KXM4	1229	09-JUL-09 20:52	DONE		
1201874685	LCS	KXM4	1230	09-JUL-09 20:52	DONE		
232212002	SAMPLE	KXM4	1114	10-JUL-09 13:36	DONE		
232211001	SAMPLE	KXM4	1213	10-JUL-09 21:22	DUSE		
232211005	SAMPLE	KXM4	1214	10-JUL-09 21:22	DUSE		
232211007	SAMPLE	KXM4	1215	10-JUL-09 21:23	DUSE		
232212003	SAMPLE	KXM4	1216	10-JUL-09 21:23	DUSE		
232582001	SAMPLE	KXM4	1217	10-JUL-09 21:23	DUSE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882673**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232211001	SAMPLE	KXM4	1113	09-JUL-09 20:53	DONE		
232211004	SAMPLE	KXM4	1116	09-JUL-09 20:53	DONE		
232211005	SAMPLE	KXM4	1117	09-JUL-09 20:53	DONE		
232211006	SAMPLE	KXM4	1118	09-JUL-09 20:53	DONE		
232211007	SAMPLE	KXM4	1121	09-JUL-09 20:53	DONE		
232211008	SAMPLE	KXM4	1122	09-JUL-09 20:53	DONE		
232212001	SAMPLE	KXM4	1123	09-JUL-09 20:53	DONE		
232212002	SAMPLE	KXM4	1124	09-JUL-09 20:53	DONE		
232212003	SAMPLE	KXM4	1125	09-JUL-09 20:53	DONE		
232278001	SAMPLE	KXM4	1126	09-JUL-09 20:53	DONE		
232278002	SAMPLE	KXM4	1127	09-JUL-09 20:53	DONE		
232582001	SAMPLE	KXM4	1129	09-JUL-09 20:53	DONE		
232582002	SAMPLE	KXM4	1130	09-JUL-09 20:53	DONE		
232585001	SAMPLE	KXM4	1131	09-JUL-09 20:53	DONE		
232585003	SAMPLE	KXM4	1133	09-JUL-09 20:53	DONE		
232591001	SAMPLE	KXM4	1134	09-JUL-09 20:53	DONE		
1201874686	MB	KXM4	1135	09-JUL-09 20:53	DONE		
1201874688	LCS	KXM4	1144	09-JUL-09 20:53	DONE		
232211003	SAMPLE	KXM4	1170	09-JUL-09 21:21	DONE		
232211002	SAMPLE	KXM4	1113	10-JUL-09 13:36	DONE		
232585002	SAMPLE	KXM4	1155	10-JUL-09 21:23	DONE		
1201874687	DUP	KXM4	1156	10-JUL-09 21:23	DONE		

Instrument Run Log

Instrument Type: LSC **Batch ID: 883020**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	KXK2	LSCSILVER	14-JUL-09 18:04	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347002	SAMPLE	KXK2	LSCSILVER	14-JUL-09 19:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347003	SAMPLE	KXK2	LSCSILVER	14-JUL-09 21:21	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347004	SAMPLE	KXK2	LSCSILVER	14-JUL-09 22:59	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232582001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 00:38	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232582002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 02:16	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 05:08	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 07:41	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585003	SAMPLE	KXK2	LSCSILVER	15-JUL-09 08:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232591001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 09:46	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 10:48	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 11:51	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664003	SAMPLE	KXK2	LSCSILVER	15-JUL-09 12:53	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664004	SAMPLE	KXK2	LSCSILVER	15-JUL-09 13:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664005	SAMPLE	KXK2	LSCSILVER	15-JUL-09 14:58	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875586	MB	KXK2	LSCSILVER	15-JUL-09 16:01	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875587	DUP	KXK2	LSCSILVER	15-JUL-09 17:03	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875588	LCS	KXK2	LSCSILVER	15-JUL-09 18:05	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Monday, June 29, 2009

REQUEST NUMBER: 09-2509

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2509
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-9946	R	6/25/2009	
		2	CAMO-09-9946	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2509

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2509

REQUEST NUMBER: 09-2509

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

LAB REQUEST COMMENTS:

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9946	1	GLASS	8290	Ice	R
CAMO-09-9946	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/29/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9946

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06.26.2009	MEDIA:	QBT4	QbT3
TIME COLLECTED (HH:MM)		1450	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605458	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	8.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	9.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Packag
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: moist purple/gray tuff

SAMPLE COMMENTS: used power auger to depth & collected sample w/ hand auger

LOCATION DESC: 50-004(a)-10

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 31 dpm

β/γ ≤ 978 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gormas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gormas	6.25.09	(Printed Name) Sherri Sherwood	6/25/09
(Signature) [signature]	1550	(Signature) Sherri Sherwood	4:00

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00076
Client Sample ID: CAMO-09-9946
Sample Collection Date: 06/25/09 14:50
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00076-001
Date Received: 06/26/09 00:00
Report Date: 06/26/09 16:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	90.03	93.51	133.66	94.45	U	pCi/g	EPA 900.0M	6/26/2009	LR	N/A
GROSS BETA	34.62	15.95	19.98	16.50		pCi/g	EPA 900.0M	6/26/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
K-40	-2.63	-33.09	4.65	-33.09	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CO-60	0.07	0.14	0.12	0.14	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-134	0.00	0.00	0.08	0.00	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-137	0.21	0.19	0.07	0.19		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
EU-152	0.40	0.36	0.13	0.36	SI	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
PB-212	1.86	0.50	0.19	0.50		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
RA 226	0.72	0.73	0.32	0.73		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-235	1.08	0.95	0.40	0.98		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-238	5.80	2.88	1.02	3.17		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
AM-241	0.58	0.26	0.05	0.26		pCi/g	EPA 901.1M	6/26/2009	ME	

NOTES: % Moisture: 2.25

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2509 VALIDATION DATE: 8/4/09 LAB CODE: ALTC

CONTRACT LABORATORY NAME: Vista Analytical Laboratory

VALIDATOR: Linda Thal ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☒ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The sample was analyzed >30 days after the ICAL. No sample data were qualified as a result, based on professional judgment.
2. The ICV %D for 1,2,3,4,7,8-HxCDD was >20% with positive bias. The associated sample result was an ND and, thus, was not qualified. It should be noted that ICV standards are not available for 13C-OCDF and 13C-1,2,3,4-TCDF which are used in the quantitation of OCDF; 13C-2,3,7,8-TCDF; 13C-1,2,3,7,8-PeCDF and 13C-2,3,4,7,8-PeCDF. Thus, ICV %Ds could not be evaluated for these compounds. No sample data were qualified as a result.
3. It should be noted that laboratory ion abundance limits were used for the evaluation of the PeCDD compounds, since the laboratory uses an alternate ion for these masses due to interferences.
4. An MS/MSD was not analyzed. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 08/04/09

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

VALIDATOR'S SIGNATURE: R Neal

DATE: 8/4/09

Form 5116-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time and qualitative criteria for target compound identification were not met.	R, DF0	R, DF0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF0b	R, DF0b
☐	☒	☐	3. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF1d	R, DF1d
☐	☒	☐	4. The sample result is ≤5 times the concentration of the related analyte in the method blank.	N/A	U, DF4
☐	☒	☐	5. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, DF4a
☐	☐	☒	6. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	N/A	U, DF4d
☐	☒	☐	7. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF4e	R, DF4e
☐	☒	☐	8. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, DF7	J, DF7
☐	☒	☐	9. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria.	UJ, R, DF7a	J, DF7a
☐	☒	☐	10. The affected analytes were analyzed with an out of range ion abundance in the initial calibration and/or CCV.	R, DF7b	R, DF7b
☒	☐	☐	11. The ICV and/or CCV were recovered outside the method specific limits.	UJ, R, DF7c	J, R, DF7c
☐	☒	☐	12. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DF7d	J, DF7d

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DF7f	R, DF7f
☐	☒	☐	14. The affected analyte is considered rejected because the ion abundances did not meet specifications.	N/A	R, DF8
☐	☒	☐	15. The ion abundance documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF8a	R, DF8a
☐	☒	☐	16. If GC column performance was not evaluated at the required frequency or if method criteria were not met, qualify all associated detects as J and all associated non-detects as UJ.	UJ, DF8b	J, DF8b
☐	☐	☒	17. If 2, 3, 7, 8-TCDF was detected in a sample and the result was not confirmed on a second column with successful analysis of the GC column performance mix, qualify all associated detects as U.	N/A	U, DF8c
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, DF9	J-, DF9
☐	☒	☐	19. The holding time was >2 times the applicable holding time requirement.	R, DF9a	J-, DF9a
☐	☒	☐	20. The LCS percent recovery was <10%.	R, DF12	J-, DF12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, DF12a	J-, DF12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DF12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12c	R, DF12c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	24. The MS/MSD percent recovery was <10%.	R, DF12d	R, DF12d
☐	☐	☒	25. The MS/MSD percent recovery was >10% but <70%.	UJ, DF12e	J, DF12e
☐	☐	☒	26. The MS/MSD percent recovery was >70%	N/A	J+, DF12f
☐	☐	☒	27. The MS/MSD relative percent difference was >30%.	UJ, DF12g	J, DF12g
☐	☒	☐	28. The fortification sample percent recovery was <10%.	R, DF12h	J-, DF12h
☐	☒	☐	29. The fortification sample percent recovery was <40% but >10%	UJ, DF12i	J-, DF12i
☐	☒	☐	30. The fortification sample percent recovery was >135%.	N/A	J+, DF12j
☐	☒	☐	31. The fortification sample documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12k	R, DF12k
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference.	R, DF15	UJ, DF15
☐	☒	☐	33. Sample clean-up was not performed. If run log notations, spectral data and/or internal standard or labeled compound recoveries indicate interferences and extract cleanup was not performed, qualify all associated detects as J and all non-detects as UJ.	RJ, DF15a	J, DF15a
☐	☒	☐	34. The instrument performance sample did not pass method acceptance criteria.	R, DF16	R, DF16
☐	☒	☐	35. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, DF16c	R, DF16c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, DF19	J, R, DR19
☐	☒	☐	37. Duplicate, dilution, or reanalysis.	UJ, DF88	J, DF88

Sample ID: **CAMO-09-9946** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31846-001	Date Received:	30-Jun-09
Project:	09-2509	Sample Size:	12.7 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	25-Jun-09	%Solids:	80.0	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1450						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0483		
1,2,3,7,8-PeCDD	ND	0.102		
1,2,3,4,7,8-HxCDD	ND	0.240		
1,2,3,6,7,8-HxCDD	ND	0.231		
1,2,3,7,8,9-HxCDD	ND	0.226		
1,2,3,4,6,7,8-HpCDD	1.22			J
OCDD	8.85			
2,3,7,8-TCDF	ND	0.0600		
1,2,3,7,8-PeCDF	ND	0.0523		
2,3,4,7,8-PeCDF	ND	0.0503		
1,2,3,4,7,8-HxCDF	ND	0.0897		
1,2,3,6,7,8-HxCDF	ND	0.0978		
2,3,4,6,7,8-HxCDF	ND	0.117		
1,2,3,7,8,9-HxCDF	ND	0.147		
1,2,3,4,6,7,8-HpCDF	ND		0.221	
1,2,3,4,7,8,9-HpCDF	ND	0.163		
OCDF	0.662			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	97.1	40 - 135	
	13C-1,2,3,7,8-PeCDD	97.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	82.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	106	40 - 135	
	13C-2,3,7,8-TCDF	99.0	40 - 135	
	13C-1,2,3,7,8-PeCDF	92.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	92.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	78.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	87.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	80.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	92.1	40 - 135	
	13C-OCDF	87.6	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.7	40 - 135	

Totals			
Total TCDD	ND	0.0483	
Total PeCDD	ND	0.102	
Total HxCDD	ND	0.232	
Total HpCDD	2.57		
Total TCDF	0.121		
Total PeCDF	0.357		0.445
Total HxCDF	0.212		
Total HpCDF	ND		0.539

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.0217**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 11:08

LT 8/4/09

Monday, June 29, 2009

REQUEST NUMBER: 09-2509

31846 2.1c

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2509
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-9946	R	6/25/2009	
		2	CAMO-09-9946	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2509

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2509

REQUEST NUMBER: 09-2509

31846

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9946	1	GLASS	8290	Ice	R
CAMO-09-9946	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/29/09	1400	B. Benedict	B. Benedict	6/30/09	1224
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

Vista
Analytical Laboratory

July 07, 2009

Vista Project I.D.: 31846

Mr. Keith Greene
Los Alamos National Laboratory
ER Sample Management Office
TA-3, Building 271, DP O1-U
Los Alamos, NM 87545

Dear Mr. Greene,

Enclosed are the results for the one soil sample received at Vista Analytical Laboratory on June 30, 2009 under your Project Name "09-2509". This sample was extracted and analyzed using EPA Method 8290 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

For

Martha M. Maier
Laboratory Director

ACCREDITED IN ACCORDANCE WITH nelac

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Vista

Section I: Sample Inventory Report

Date Received: **6/30/2009**

Vista Lab. ID	Client Sample ID
31846-001	CAMO-09-9946

SECTION II

Vista

Method Blank — **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2214	Lab Sample:	0-MB001
Sample Size:	10.0 g	Date Extracted:	1-Jul-09	Date Analyzed DB-5:	2-Jul-09
				Date Analyzed DB-225:	NA

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0500		
1,2,3,7,8-PeCDD	ND	0.0717		
1,2,3,4,7,8-HxCDD	ND	0.133		
1,2,3,6,7,8-HxCDD	ND	0.133		
1,2,3,7,8,9-HxCDD	ND	0.128		
1,2,3,4,6,7,8-HpCDD	ND	0.247		
OCDD	ND	0.188		
2,3,7,8-TCDF	ND	0.0365		
1,2,3,7,8-PeCDF	ND	0.0403		
2,3,4,7,8-PeCDF	ND	0.0429		
1,2,3,4,7,8-HxCDF	ND	0.0470		
1,2,3,6,7,8-HxCDF	ND	0.0479		
2,3,4,6,7,8-HxCDF	ND	0.0614		
1,2,3,7,8,9-HxCDF	ND	0.0813		
1,2,3,4,6,7,8-HpCDF	ND	0.131		
1,2,3,4,7,8,9-HpCDF	ND	0.122		
OCDF	ND	0.109		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	97.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	96.3	40 - 135	
	13C-OCDD	91.5	40 - 135	
	13C-2,3,7,8-TCDF	99.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	96.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	91.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	96.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	87.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	83.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	90.6	40 - 135	
	13C-OCDF	86.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.0	40 - 135	

Totals		
Total TCDD	ND	0.0500
Total PeCDD	ND	0.0717
Total HxCDD	ND	0.131
Total HpCDD	ND	0.247
Total TCDF	ND	0.0365
Total PeCDF	ND	0.0416
Total HxCDF	ND	0.0594
Total HpCDF	ND	0.126

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 11:08

Vista

OPR Results **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2214	Lab Sample:	0-OPR001
Sample Size:	10.0 g	Date Extracted:	1-Jul-09	Date Analyzed DB-5:	2-Jul-09
				Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	9.32	7 - 13	IS	13C-2,3,7,8-TCDD	99.6	40 - 135	
1,2,3,7,8-PeCDD	50.0	45.6	35 - 65		13C-1,2,3,7,8-PeCDD	94.0	40 - 135	
1,2,3,4,7,8-HxCDD	50.0	45.9	35 - 65		13C-1,2,3,4,7,8-HxCDD	96.1	40 - 135	
1,2,3,6,7,8-HxCDD	50.0	44.8	35 - 65		13C-1,2,3,6,7,8-HxCDD	87.4	40 - 135	
1,2,3,7,8,9-HxCDD	50.0	46.6	35 - 65		13C-1,2,3,4,6,7,8-HpCDD	99.9	40 - 135	
1,2,3,4,6,7,8-HpCDD	50.0	44.2	35 - 65		13C-OCDD	94.2	40 - 135	
OCDD	100	88.9	70 - 130		13C-2,3,7,8-TCDF	102	40 - 135	
2,3,7,8-TCDF	10.0	8.40	7 - 13		13C-1,2,3,7,8-PeCDF	95.4	40 - 135	
1,2,3,7,8-PeCDF	50.0	41.6	35 - 65		13C-2,3,4,7,8-PeCDF	91.4	40 - 135	
2,3,4,7,8-PeCDF	50.0	41.3	35 - 65		13C-1,2,3,4,7,8-HxCDF	95.4	40 - 135	
1,2,3,4,7,8-HxCDF	50.0	44.3	35 - 65		13C-1,2,3,6,7,8-HxCDF	85.3	40 - 135	
1,2,3,6,7,8-HxCDF	50.0	43.7	35 - 65		13C-2,3,4,6,7,8-HxCDF	86.5	40 - 135	
2,3,4,6,7,8-HxCDF	50.0	44.7	35 - 65		13C-1,2,3,7,8,9-HxCDF	90.9	40 - 135	
1,2,3,7,8,9-HxCDF	50.0	44.9	35 - 65		13C-1,2,3,4,6,7,8-HpCDF	84.9	40 - 135	
1,2,3,4,6,7,8-HpCDF	50.0	44.9	35 - 65		13C-1,2,3,4,7,8,9-HpCDF	93.4	40 - 135	
1,2,3,4,7,8,9-HpCDF	50.0	45.9	35 - 65		13C-OCDF	89.3	40 - 135	
OCDF	100	88.0	70 - 130	CRS	37Cl-2,3,7,8-TCDD	92.8	40 - 135	

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 11:08

Vista

Sample ID: CAMO-09-9946 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31846-001	Date Received:	30-Jun-09
Project:	09-2509	Sample Size:	12.7 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	25-Jun-09	%Solids:	80.0	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1450						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0483		
1,2,3,7,8-PeCDD	ND	0.102		
1,2,3,4,7,8-HxCDD	ND	0.240		
1,2,3,6,7,8-HxCDD	ND	0.231		
1,2,3,7,8,9-HxCDD	ND	0.226		
1,2,3,4,6,7,8-HpCDD	1.22			J
OCDD	8.85			
2,3,7,8-TCDF	ND	0.0600		
1,2,3,7,8-PeCDF	ND	0.0523		
2,3,4,7,8-PeCDF	ND	0.0503		
1,2,3,4,7,8-HxCDF	ND	0.0897		
1,2,3,6,7,8-HxCDF	ND	0.0978		
2,3,4,6,7,8-HxCDF	ND	0.117		
1,2,3,7,8,9-HxCDF	ND	0.147		
1,2,3,4,6,7,8-HpCDF	ND		0.221	
1,2,3,4,7,8,9-HpCDF	ND	0.163		
OCDF	0.662			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	97.1	40 - 135	
	13C-1,2,3,7,8-PeCDD	97.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	82.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	106	40 - 135	
	13C-2,3,7,8-TCDF	99.0	40 - 135	
	13C-1,2,3,7,8-PeCDF	92.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	92.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	78.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	87.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	80.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	92.1	40 - 135	
	13C-OCDF	87.6	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.7	40 - 135	

Totals			
Total TCDD	ND	0.0483	
Total PeCDD	ND	0.102	
Total HxCDD	ND	0.232	
Total HpCDD	2.57		
Total TCDF	0.121		
Total PeCDF	0.357		0.445
Total HxCDF	0.212		
Total HpCDF	ND		0.539

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0217

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 11:08

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The amount detected is above the High Calibration Limit.**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
H	**The signal-to-noise ratio is greater than 10:1.**
I	**Chemical Interference**
J	**The amount detected is below the Low Calibration Limit.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

Monday, June 29, 2009

REQUEST NUMBER: 09-2509

31846 2.1°C

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2509
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-9946	R	6/25/2009	
		2	CAMO-09-9946	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2509

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2509

REQUEST NUMBER: 09-2509

31846

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9946	1	GLASS	8290	Ice	R
CAMO-09-9946	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/29/09	1400	B. Benedict	[illegible]	6/30/09	1224
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31846 TAT 15

Samples Arrival:	Date/Time 6/30/09 0859	Initials: VBB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 6/30/09 1211	Initials: VBB	Location: WR-2 Shelf/Rack: F 5

Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C 2.1	Time: 0925	Thermometer ID: IR-1				

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7209 7847 5767	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?	✓		
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	None		
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

	date	time	
CAMO-09-9946	6/25/09	1450	A & B jar

Sample Login 3/2007 rmh

EXTRACTION INFORMATION

PROCESS SHEET

Project No.-AR: 31846-1 of 1

RUSH!

Prep Due: 7/8/2009

Hold Due: 7/25/2009

Client: Los Alamos National Laboratory(LOANM01F

Client Manager: Rose Harrelson

Method: EPA Method 8290 | PCDD/F (Tetra - Octa)

Project Due: 7/14/2009

TAT: 14

2214

Split Type:

Matrix: Soil

LabID	Recon	Client-ID	Description	Date Received	SLoc	Shelf
001	☑	CAMO-09-9946 "A"		6/30/2009	WR-2	F-5

% Solids 6/30/09 BLB

Instructions:

Report Options

Report Level:

EDD Type:

Report Group: Dioxins NoMDL with %Solid

TEQ Type: EPA(Default) : Min

Samples Reconciled By: BLB 6 30 09

Vial Box ID: ice Cone

Date Requested 7/7/2009

Percent Solids

Vista Analytical Laboratory

Project: 31846 - 1 of 1

Sample ID	Chemist/Date: YBLB 6/30/09 — Boat Wt.	Sample + Boat Wt.	Chemist/Date: YBLB 7/1/09 — Residue + Boat Wt.	Comments
001	1.34	6.74	5.66	

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

%Solids 3/2007 rmh

Project: 31846

Extraction Set: 2214

Chemist: M. Caliso 7/1/09

Method(s): EPA Method 8290 | PCDD/F (Tetra - Octa)

C	ALTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/ WIT DATE	CRS CHEM/WIT DATE	AP CHEM/Date	ABSG CHEM/Date	AA CHEM/Date	Florisil CHEM/Date	RS CHEM/WIT DATE
☐	0_2214_MB001	10.00	10.00	MC TEH 7/1/09	MC FEB 7/2/09	N/A	MC 7/2/09	MC 7/2/09	MC 7/2/09	MC FEB 7/2/09
☐	0_2214_OPR001	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	31846_2214_001	12.50	12.70	↓	↓	↓	↓	↓	↓	↓

IS Name (WJ)	NS Name (WJ)	CRS Name (VB)	RS Name (WJ)
PCDD/F 080910A 10µl	PCDD/F 080916B 10µl	PCDD/F 080910C 10µl	PCDD/F 080910D 10µl
PCB	PCB	PCB	PCB
PAH	PAH	PAH	PAH

Cycle Time: ~~7/2~~ 7/1 MC 7/1/09
Start: 1505
Stop: 7/2 0705

APP.: SEFUN SOX (SDS)
SOLV: Toluene
Other: N/A
Final Volume(s): 20µl C14

Check Out: Chemist: MC 7/1/09
Check-In: Chemist: / /

Comments:

SAMPLE DATA

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Tuesday, July 07, 2009 09:13:21 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:13:43 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1	2,3,7,8-TCDD			NO	1.08	10.000					0.0500
2	1,2,3,7,8-PeCDD			NO	1.03	10.000					0.0717
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.133
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.133
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.128
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.247
7	OCDD			NO	1.18	10.000					0.188
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0365
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.0403
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0429
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.0470
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.0479
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.0614
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.0813
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.131
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.122
17	OCDF			NO	1.10	10.000					0.109
18	13C-2,3,7,8-TCDD	8.70e5	0.79	NO	1.01	10.000	26.05	1.023	194.77	97.4	0.279
19	13C-1,2,3,7,8-PeCDD	6.60e5	0.62	NO	0.827	10.000	30.69	1.205	181.17	90.6	0.232
20	13C-1,2,3,4,7,8-HxCDD	5.57e5	1.27	NO	0.916	10.000	34.14	0.988	188.94	94.5	0.468
21	13C-1,2,3,6,7,8-HxCDD	5.03e5	1.22	NO	0.921	10.000	34.25	0.991	169.85	84.9	0.466
22	13C-1,2,3,4,6,7,8-HpCDD	4.39e5	1.05	NO	0.708	10.000	38.18	1.105	192.67	96.3	0.850
23	13C-OCDD	5.92e5	0.89	NO	0.503	10.000	41.63	1.205	365.82	91.5	0.545
24	13C-2,3,7,8-TCDF	1.18e6	0.78	NO	0.977	10.000	25.28	0.993	198.95	99.5	0.209
25	13C-1,2,3,7,8-PeCDF	1.05e6	1.55	NO	0.896	10.000	29.47	1.157	193.06	96.5	0.352
26	13C-2,3,4,7,8-PeCDF	9.93e5	1.59	NO	0.900	10.000	30.42	1.194	182.51	91.3	0.350
27	13C-1,2,3,4,7,8-HxCDF	7.24e5	0.52	NO	1.17	10.000	33.21	0.961	192.47	96.2	0.586
28	13C-1,2,3,6,7,8-HxCDF	8.07e5	0.52	NO	1.52	10.000	33.34	0.965	165.10	82.6	0.451
29	13C-2,3,4,6,7,8-HxCDF	6.84e5	0.52	NO	1.25	10.000	33.96	0.983	170.14	85.1	0.548
30	13C-1,2,3,7,8,9-HxCDF	5.95e5	0.52	NO	1.05	10.000	34.95	1.012	175.67	87.8	0.651

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Tuesday, July 07, 2009 09:13:21 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:13:43 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

31	13C-1,2,3,4,6,7,8-HpCDF	4.67e5	0.44	NO	0.868	10.000	36.83	1.066	166.99	83.5	0.836
32	13C-1,2,3,4,7,8,9-HpCDF	4.24e5	0.43	NO	0.727	10.000	38.76	1.122	181.28	90.6	0.999
33	13C-OCDF	8.44e5	0.88	NO	0.760	10.000	41.86	1.212	345.35	86.3	0.289
34	37Cl-2,3,7,8-TCDD	2.21e5			0.668	10.000	26.06	1.023	75.231	94.0	0.0751
35	13C-1,2,3,4-TCDD	8.81e5	0.78	NO	1.00	10.000	25.47	0.000	200.00	100	0.283
36	13C-1,2,3,4-TCDF	1.21e6	0.77	NO	1.00	10.000	24.04	0.000	200.00	100	0.204
37	13C-1,2,3,7,8,9-HxCDD	6.44e5	1.25	NO	1.00	10.000	34.55	0.000	200.00	100	0.429
38	Total Tetra-Dioxins				1.08	10.000					0.0223
39	Total Penta-Dioxins				1.03	10.000					0.0296
40	Total Hexa-Dioxins				1.13	10.000					0.0693
41	Total Hepta-Dioxins				1.06	10.000					0.151
42	Total Tetra-Furans				1.09	10.000					0.0155
43	1st Func. Penta-Furans				1.16	10.000					0.0141
44	Total Penta-Furans				1.16	10.000					0.0139
45	Total Hexa-Furans				1.28	10.000					0.0344
46	Total Hepta-Furans				1.69	10.000					0.0735

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

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Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

2,3,7,8-TCDD

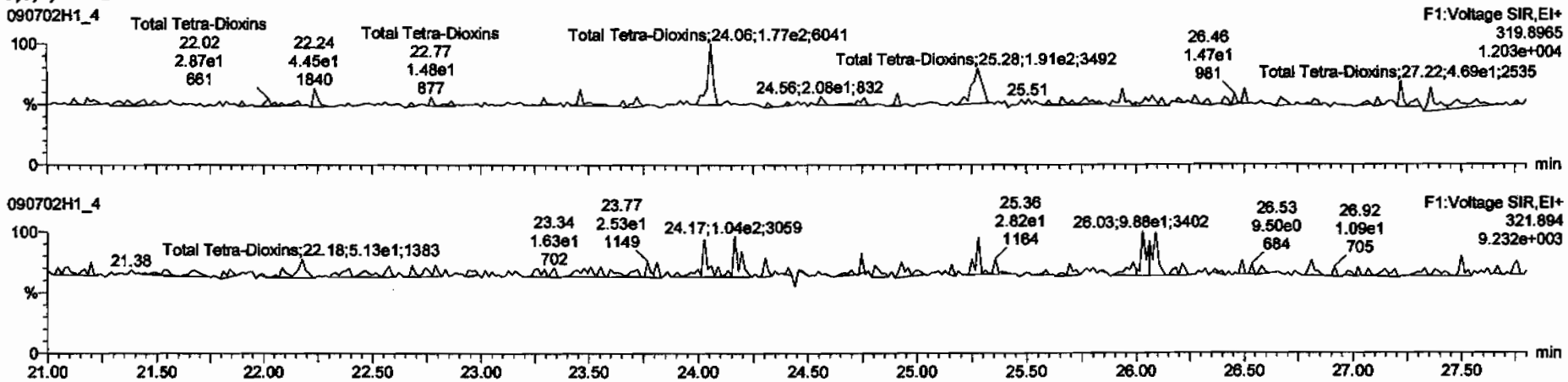

13C-2,3,7,8-TCDD

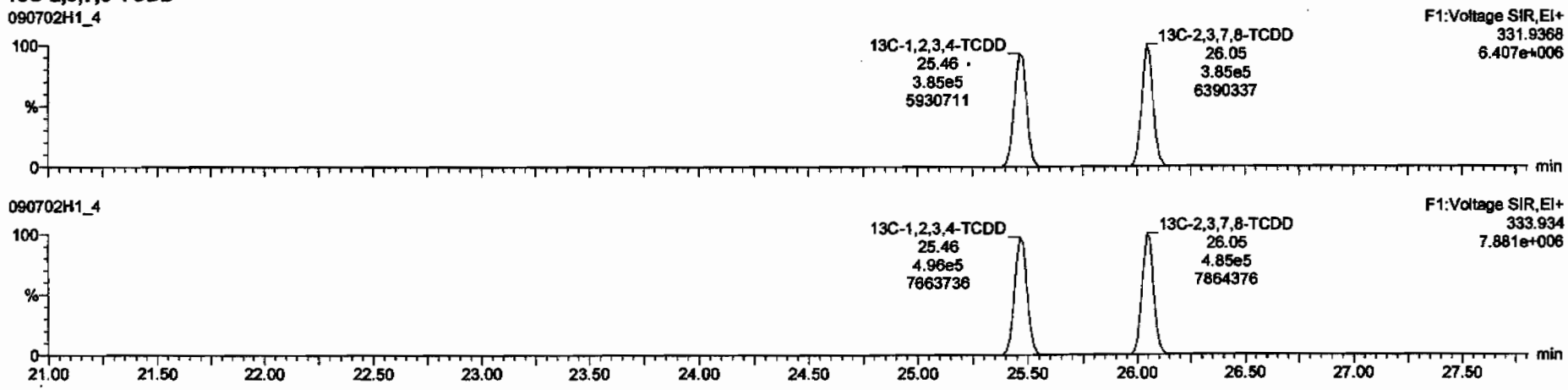

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Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

37Cl-2,3,7,8-TCDD

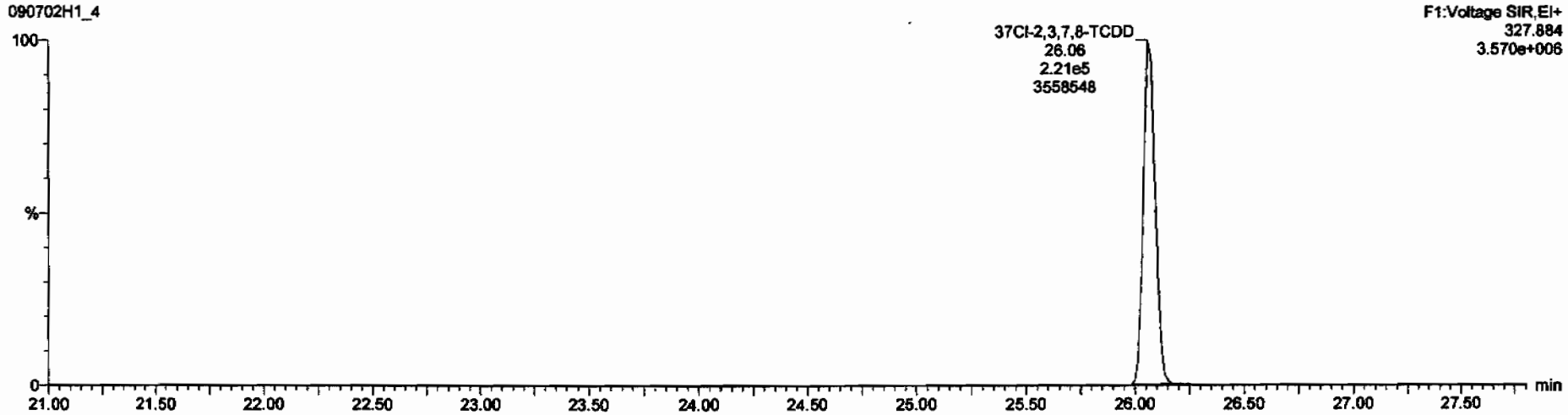

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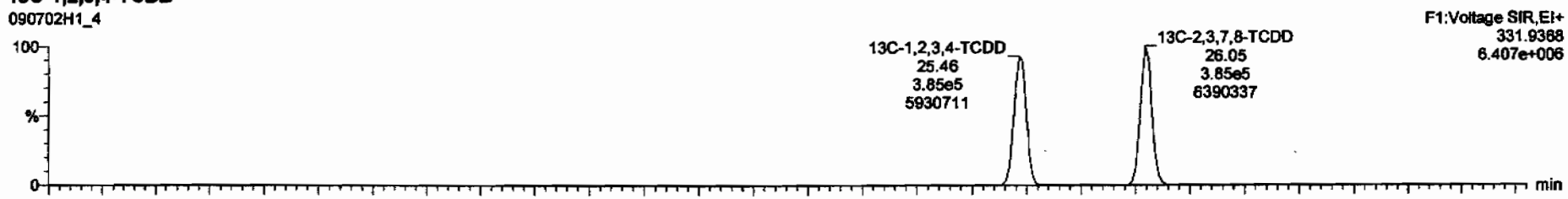

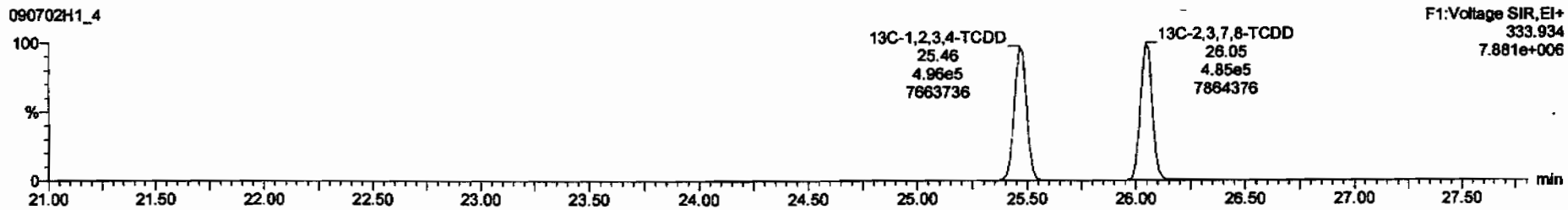

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,7,8-PeCDD

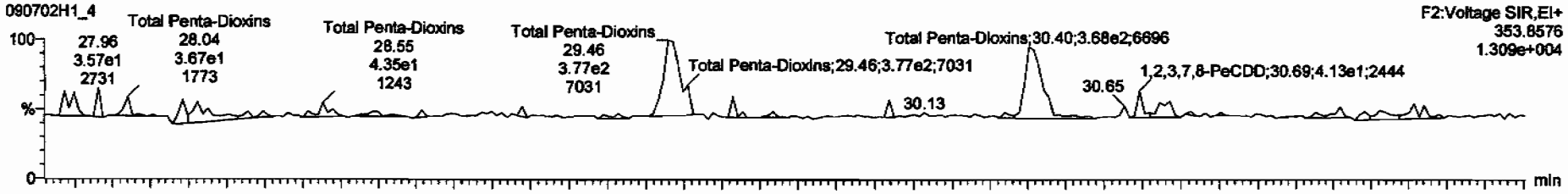

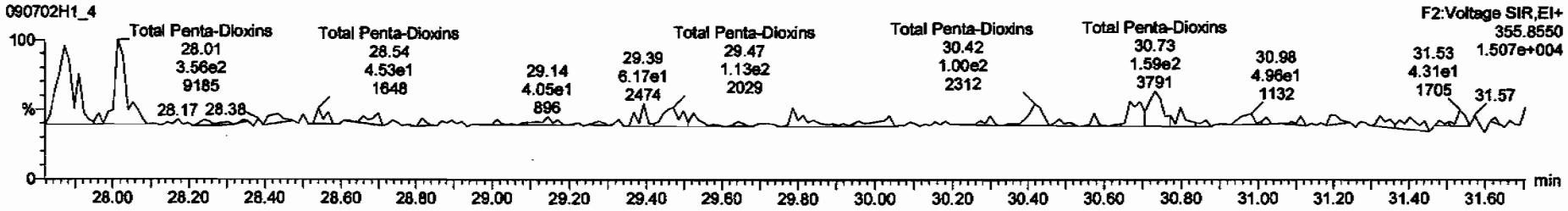

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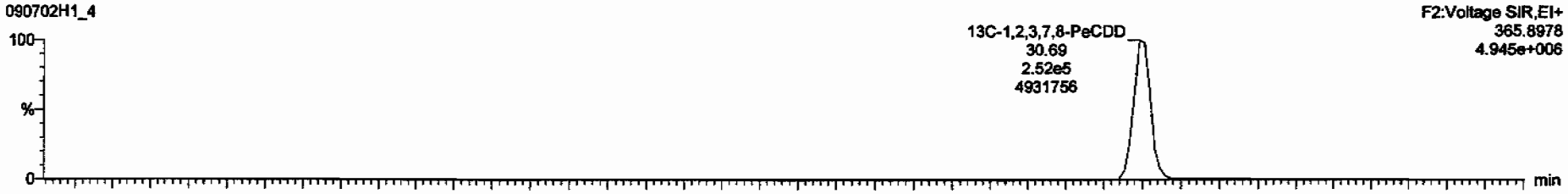

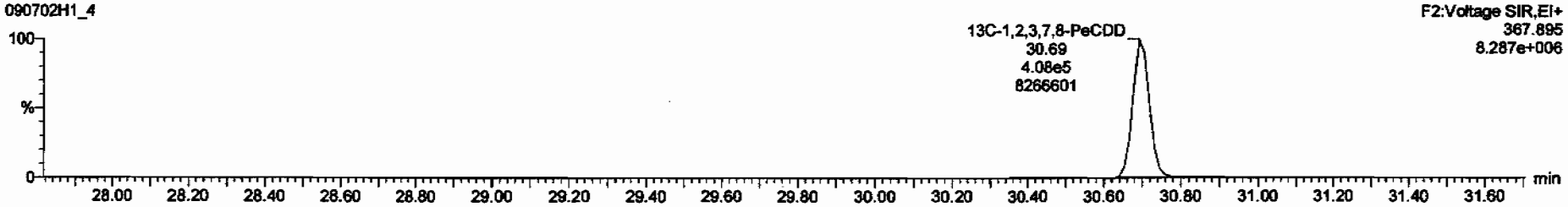

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Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,4,7,8-HxCDD

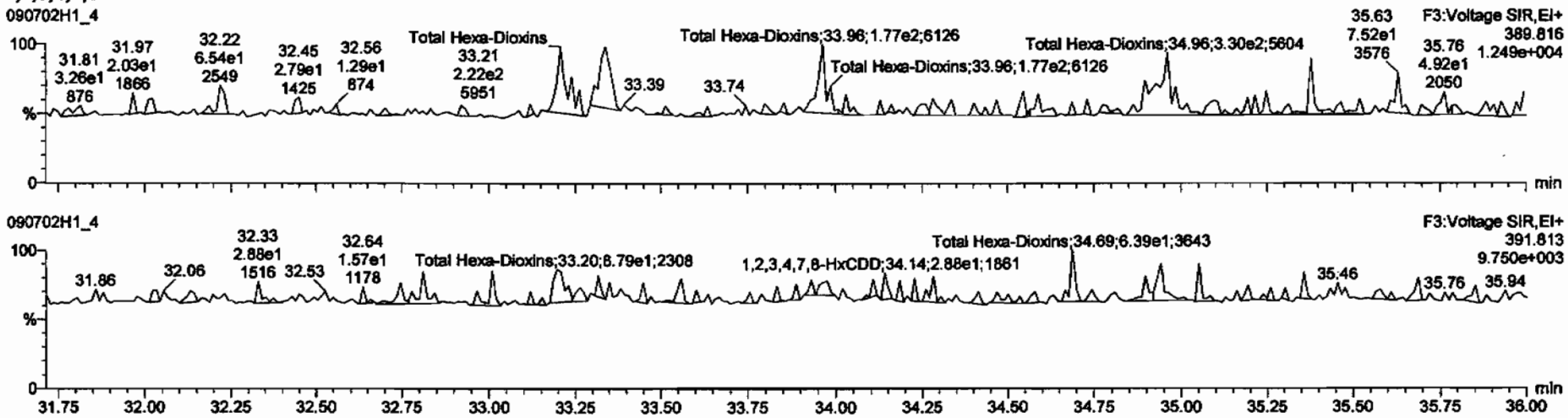

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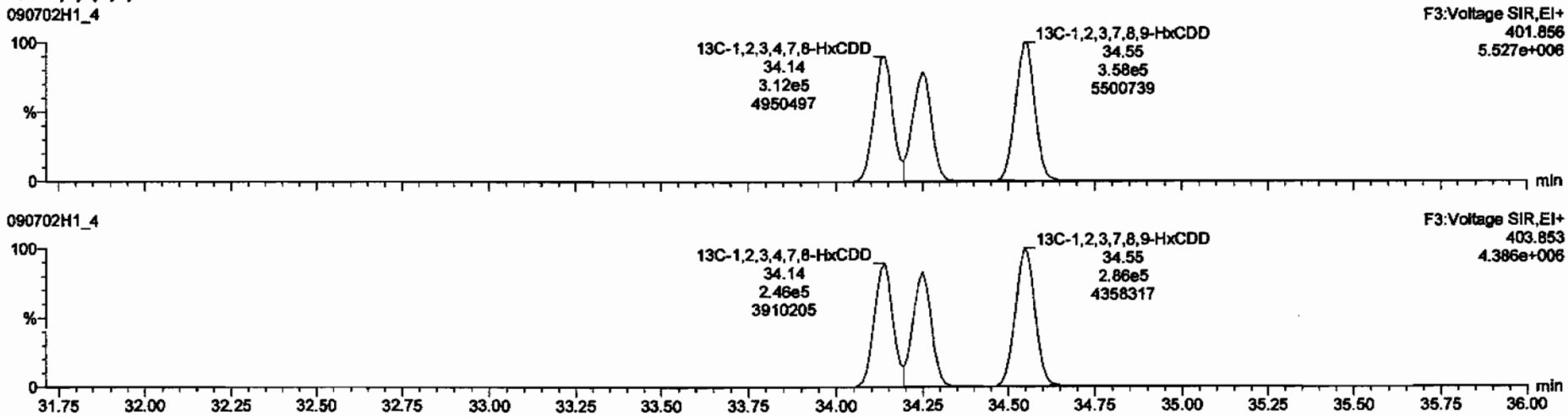

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,4,6,7,8-HpCDD

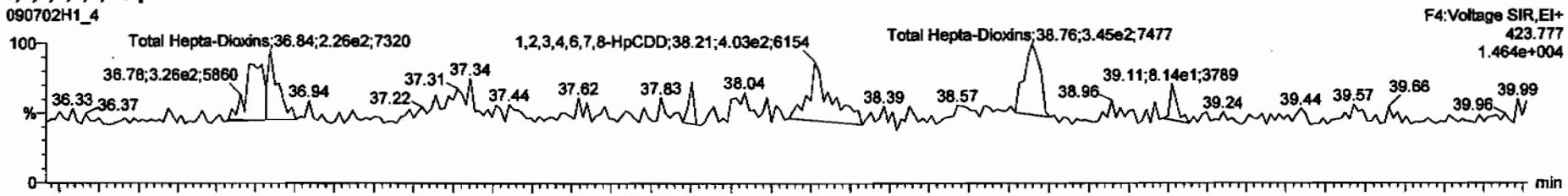

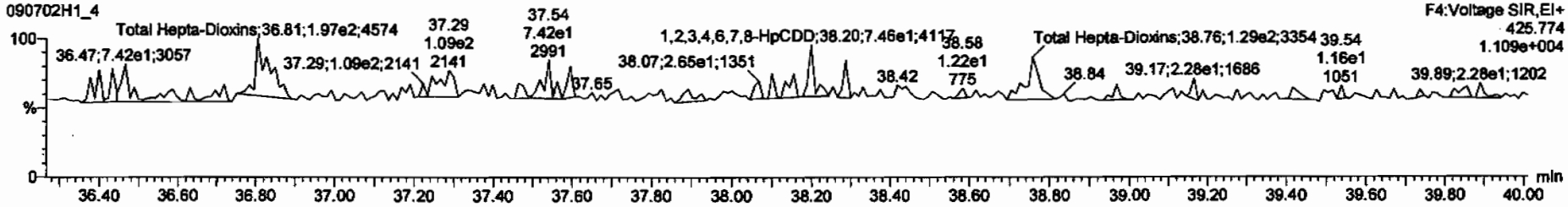

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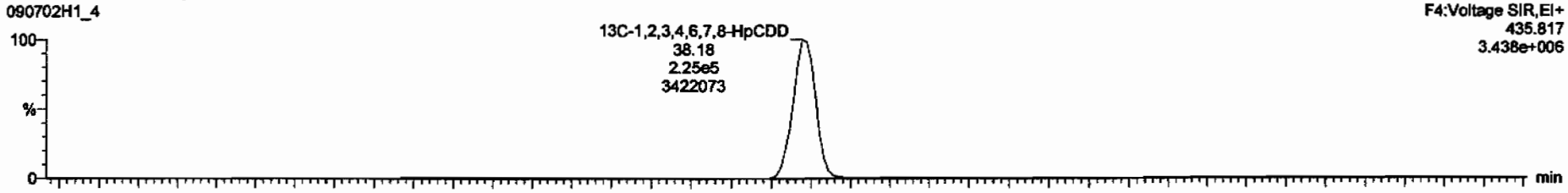

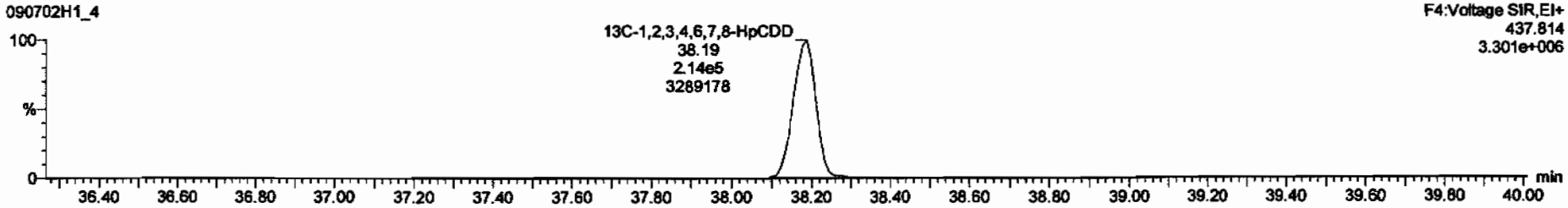

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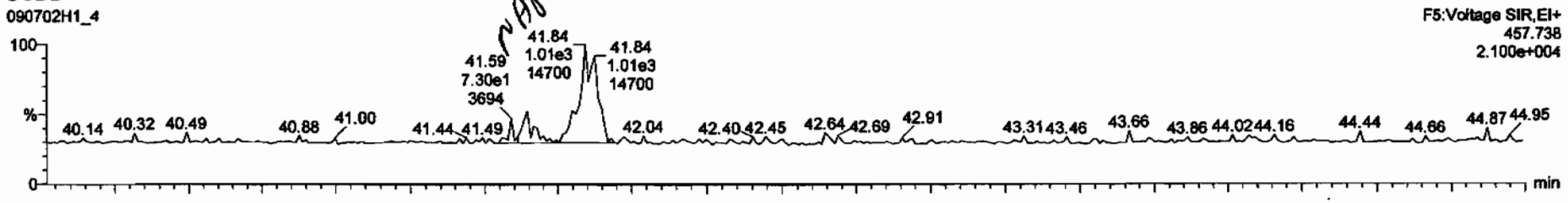

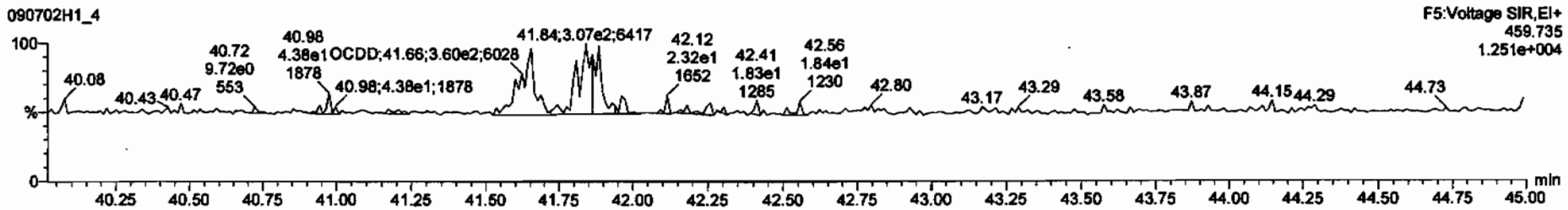

13C-OCDD

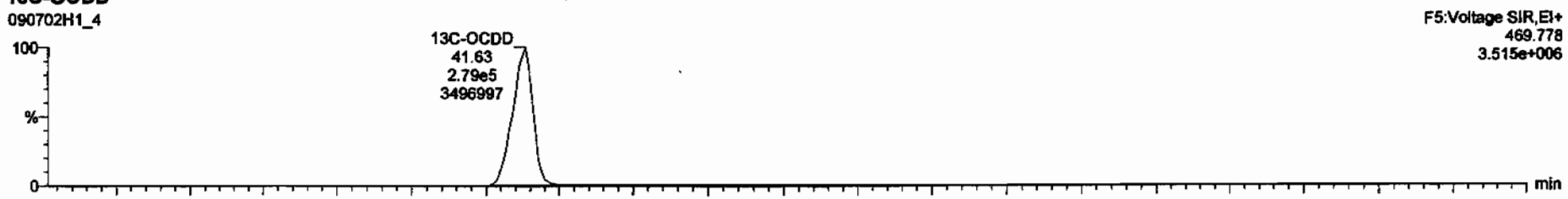

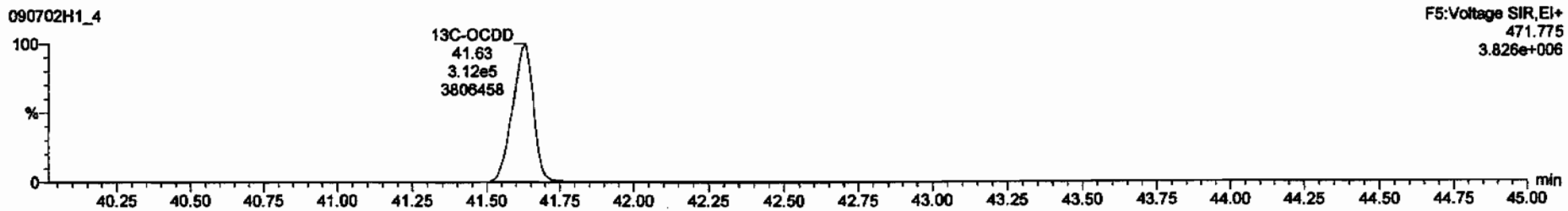

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

2,3,7,8-TCDF

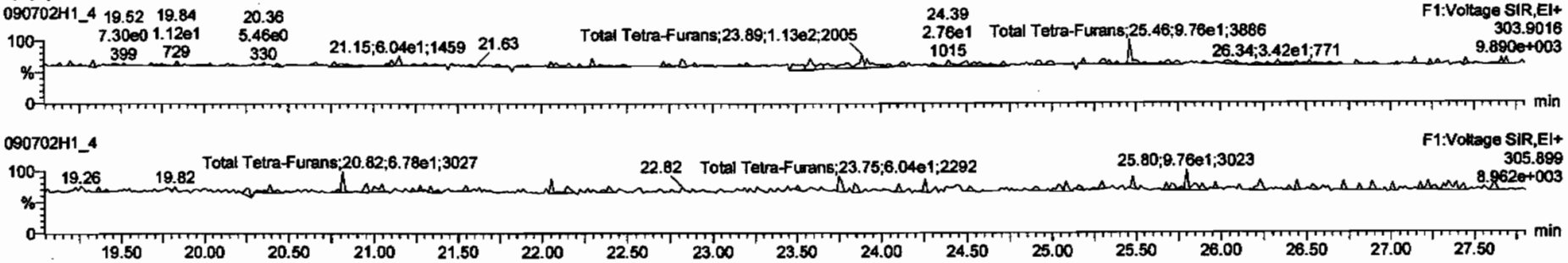

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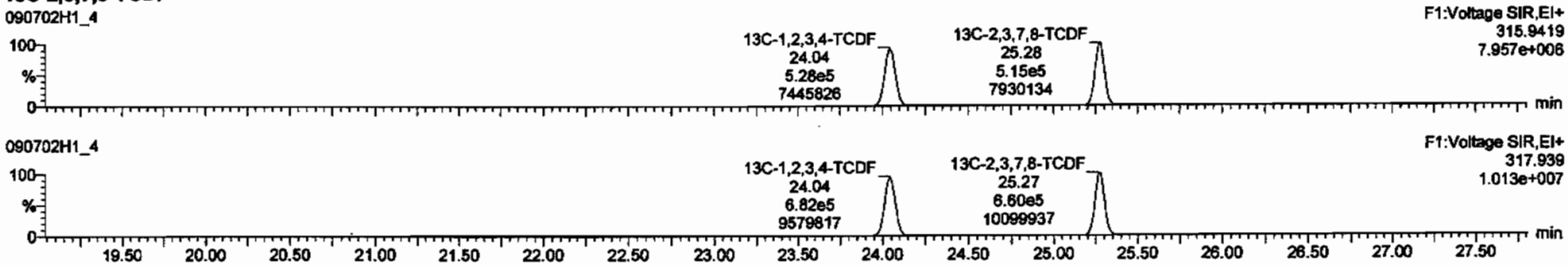

DPE1

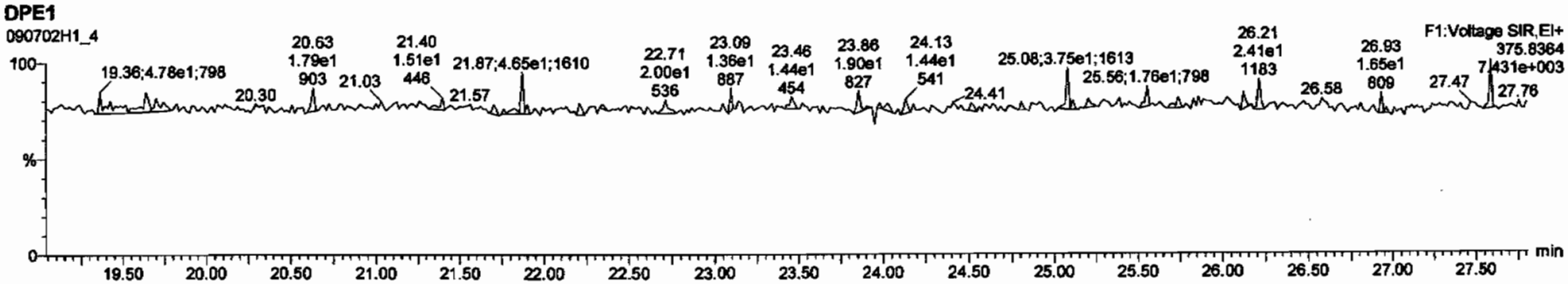

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

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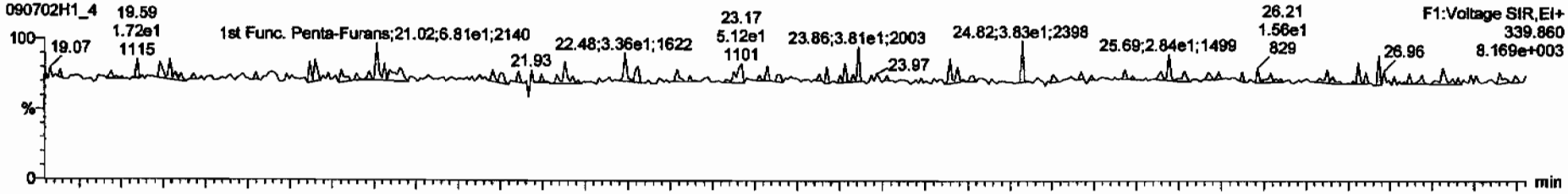

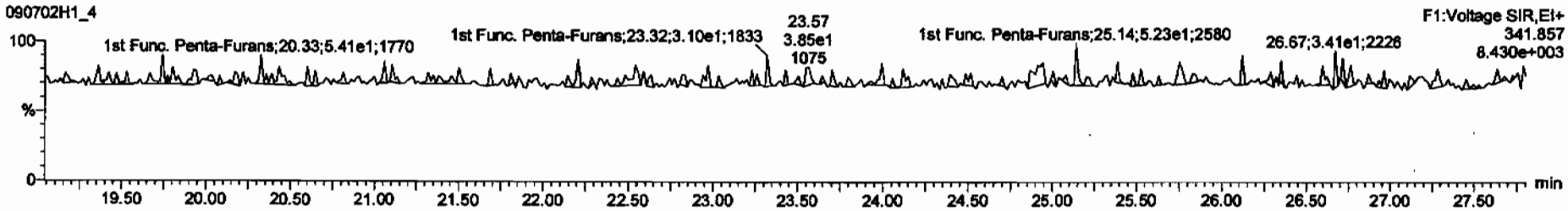

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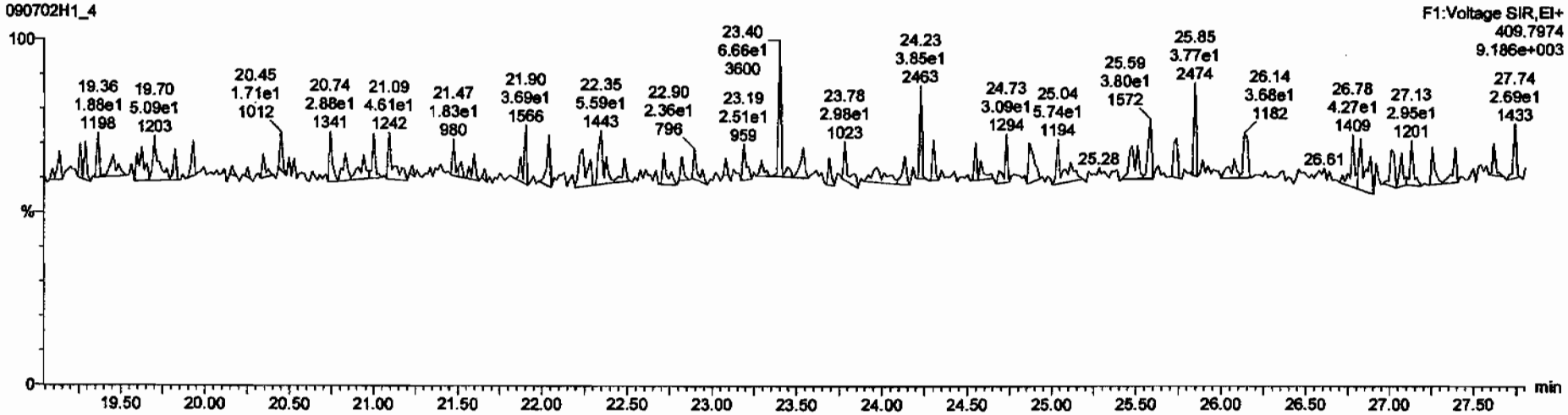

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,7,8-PeCDF

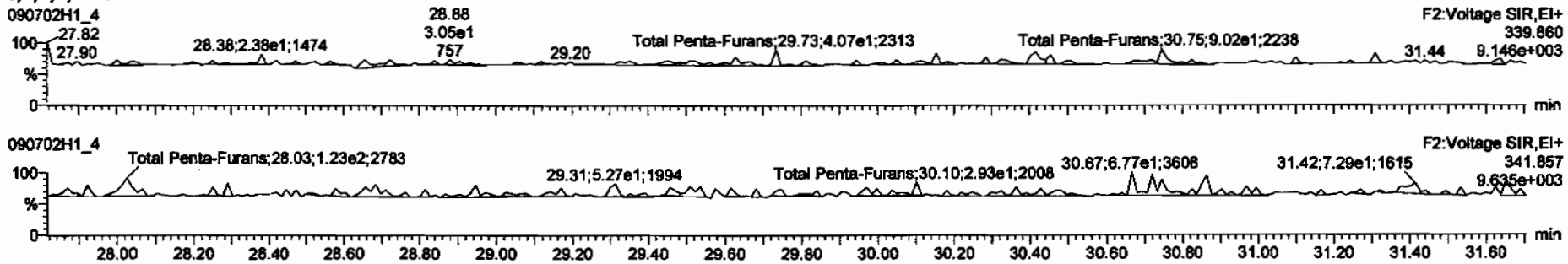

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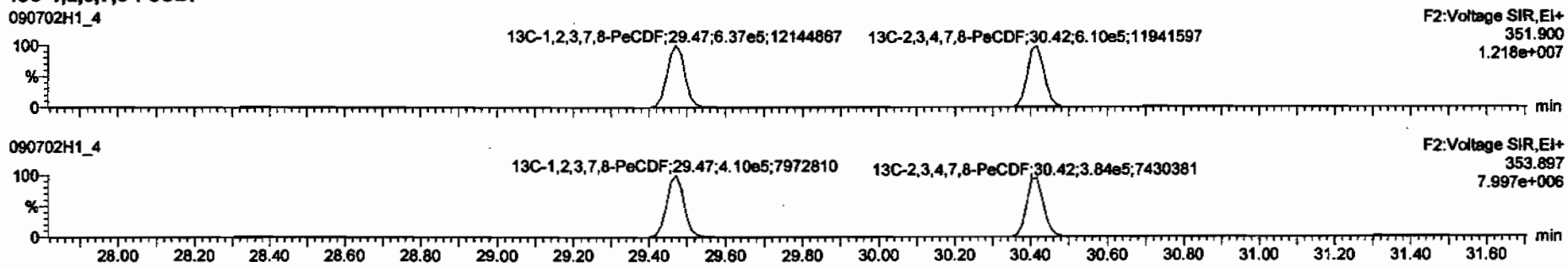

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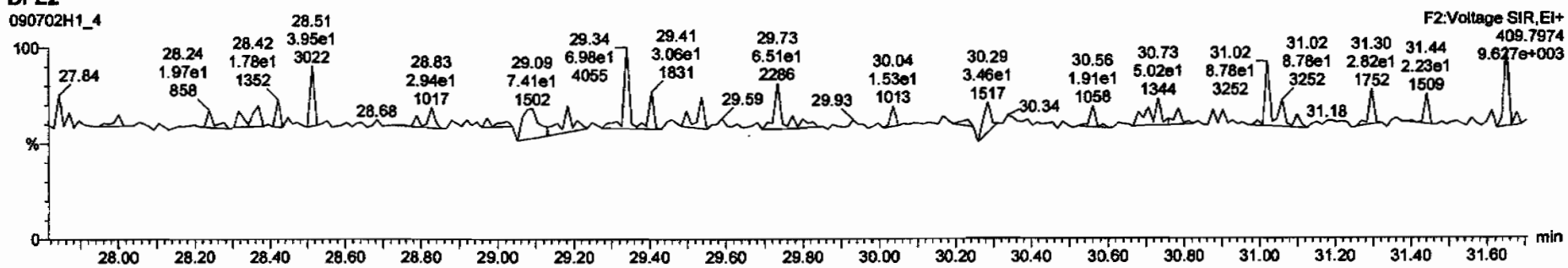

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,4,7,8-HxCDF

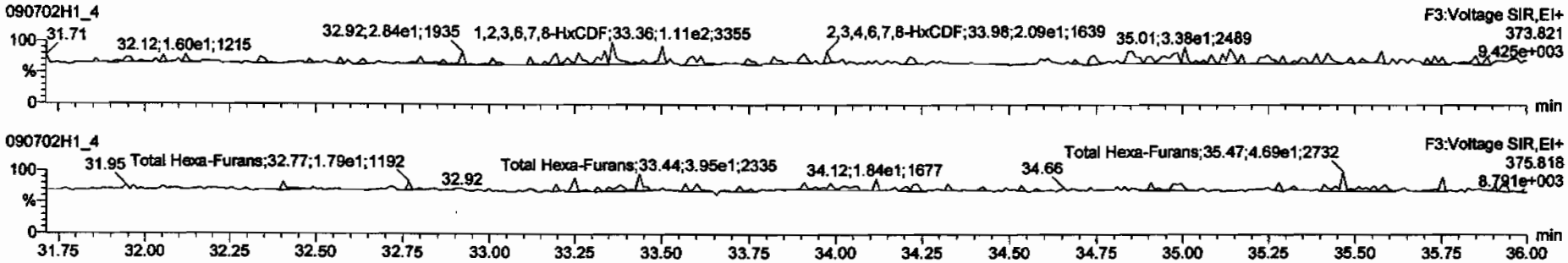

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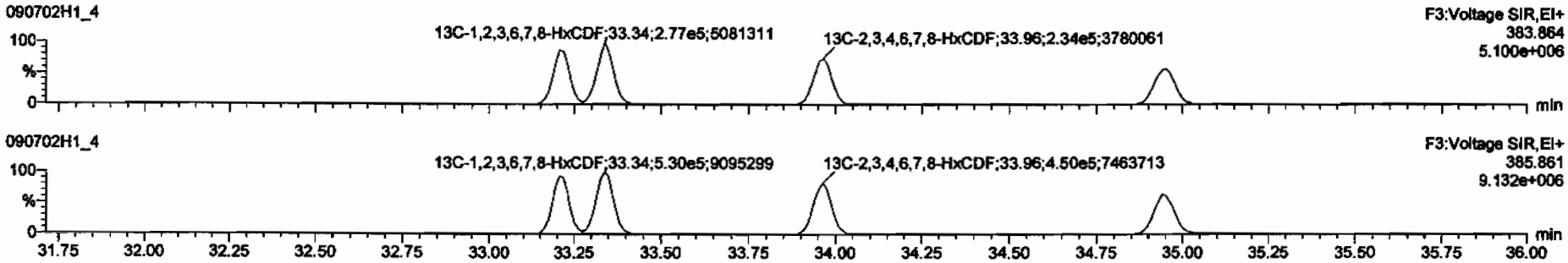

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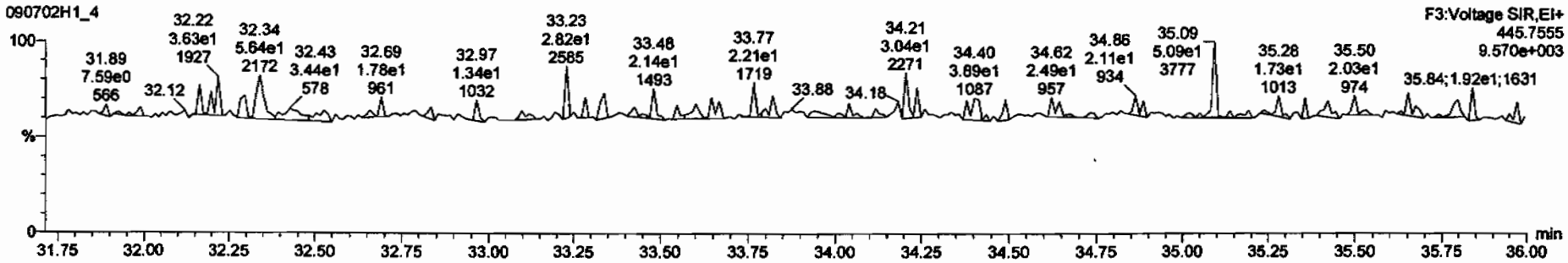

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1,2,3,4,6,7,8-HpCDF

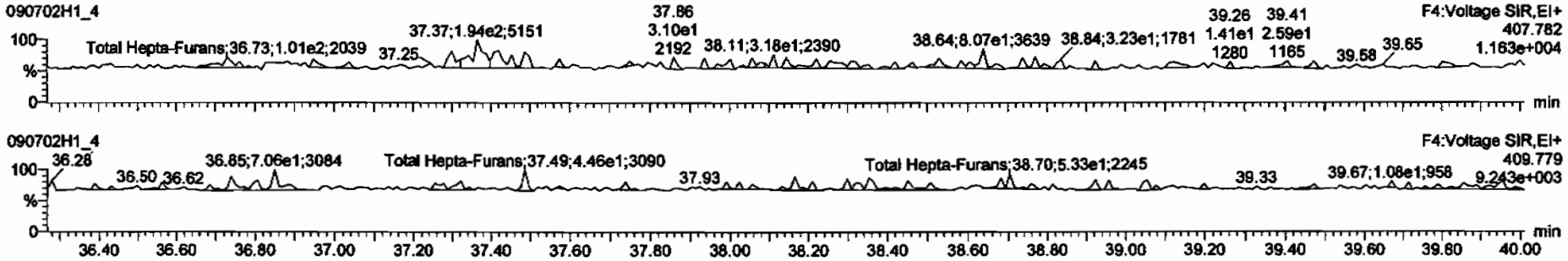

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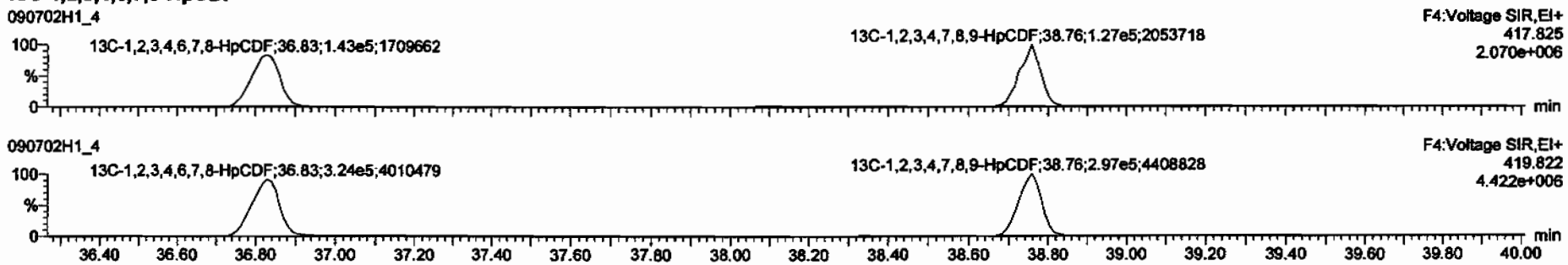

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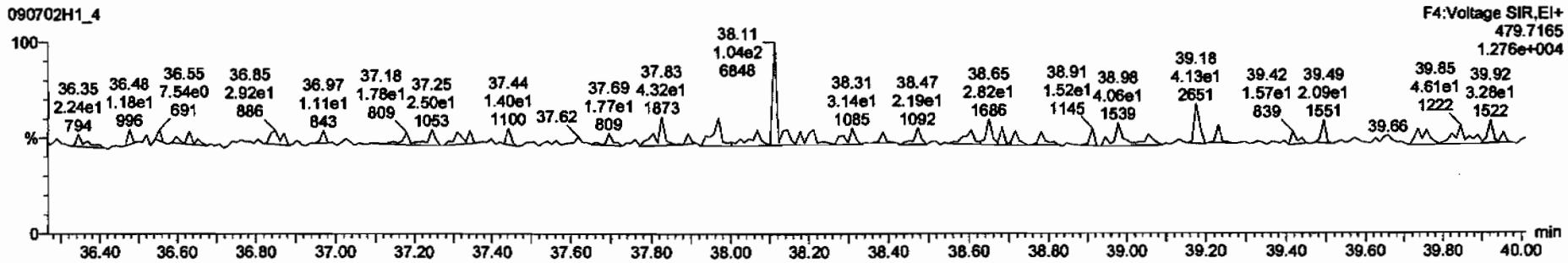

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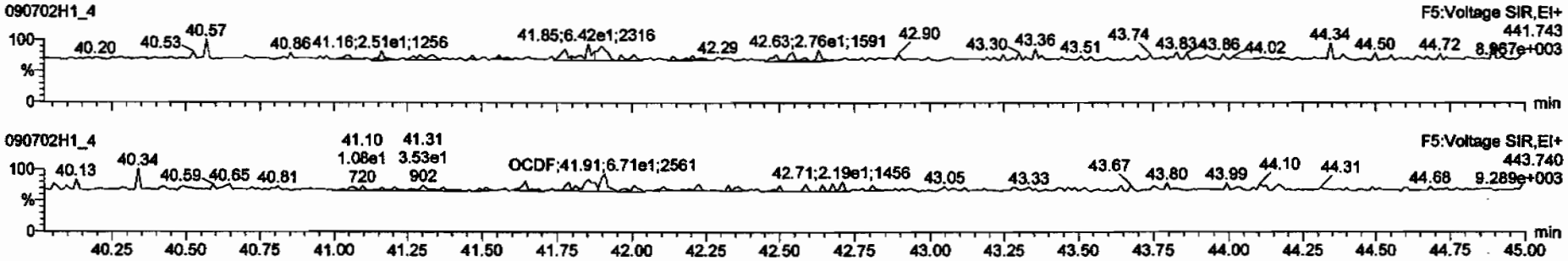

13C-OCDF

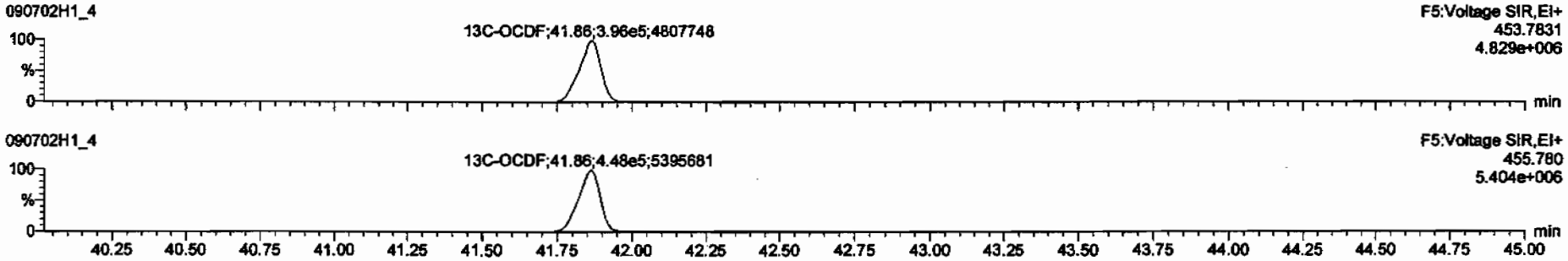

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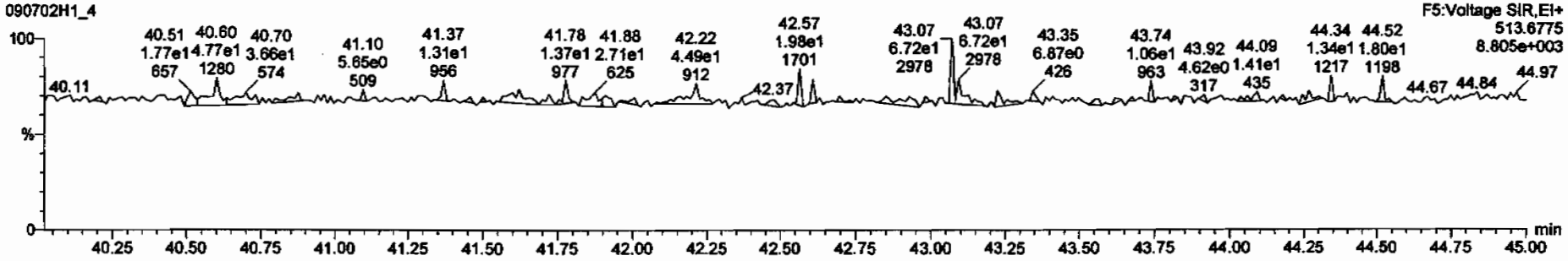

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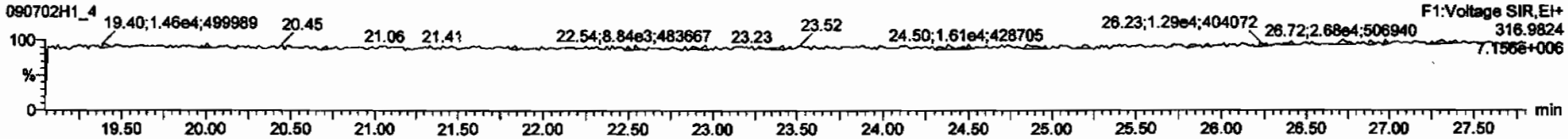

PFK2

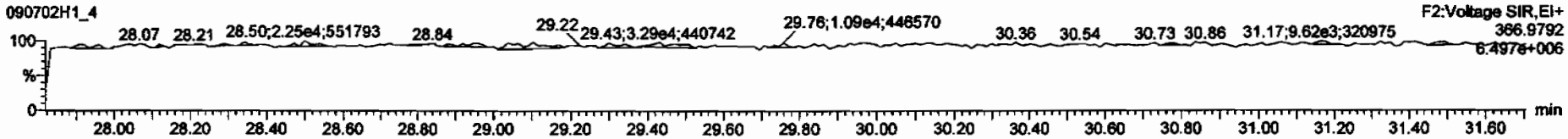

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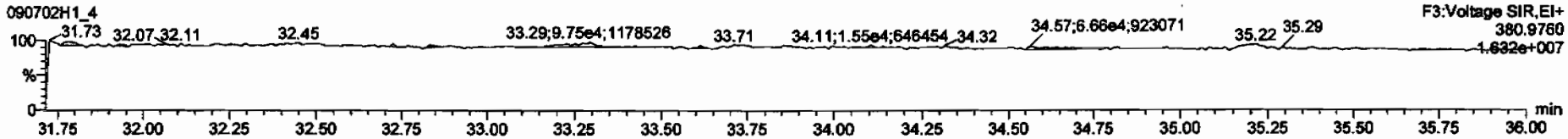

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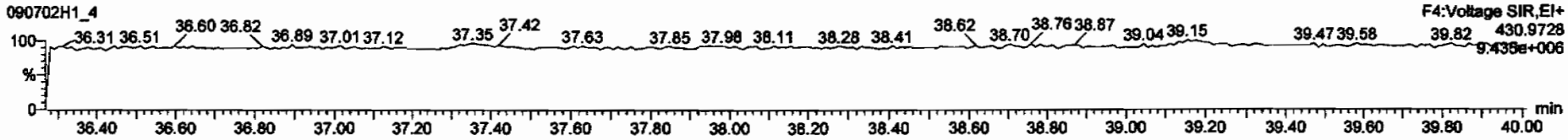

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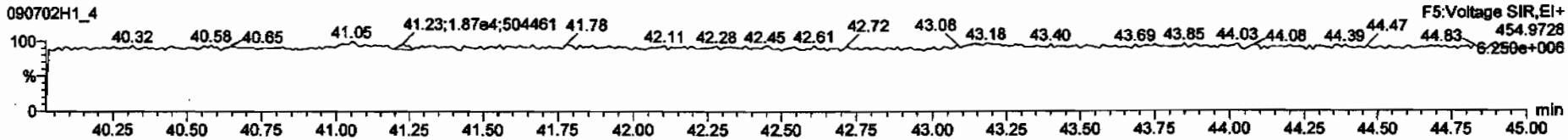

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:07:14 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

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2	1,2,3,7,8-PeCDD	3.04e5	0.62	NO	1.03	1.000	30.72	1.000	45.641	91.3	0.0578	45.641
3	1,2,3,4,7,8-HxCDD	2.50e5	1.26	NO	1.00	1.000	34.15	1.001	45.851	91.7	0.121	45.851
4	1,2,3,6,7,8-HxCDD	2.50e5	1.26	NO	1.13	1.000	34.26	1.000	44.751	89.5	0.123	44.751
5	1,2,3,7,8,9-HxCDD	2.67e5	1.23	NO	1.10	1.000	34.56	1.009	46.597	93.2	0.117	46.597
6	1,2,3,4,6,7,8-HpCDD	2.06e5	1.04	NO	1.06	1.000	38.19	1.000	44.249	88.5	0.226	44.249
7	OCDD	3.06e5	0.87	NO	1.18	1.000	41.65	1.000	88.869	88.9	0.142	88.869
8	2,3,7,8-TCDF	1.08e5	0.74	NO	1.09	1.000	25.31	1.001	8.4016	84.0	0.0196	8.4020
9	1,2,3,7,8-PeCDF	4.85e5	1.61	NO	1.16	1.000	29.49	1.000	41.587	83.2	0.0590	41.587
10	2,3,4,7,8-PeCDF	4.47e5	1.59	NO	1.12	1.000	30.43	1.000	41.315	82.6	0.0623	41.315
11	1,2,3,4,7,8-HxCDF	4.30e5	1.25	NO	1.41	1.000	33.23	1.000	44.258	88.5	0.0866	44.258
12	1,2,3,6,7,8-HxCDF	4.27e5	1.28	NO	1.22	1.000	33.36	1.001	43.689	87.4	0.0913	43.689
13	2,3,4,6,7,8-HxCDF	3.81e5	1.26	NO	1.28	1.000	33.97	1.000	44.683	89.4	0.108	44.683
14	1,2,3,7,8,9-HxCDF	3.33e5	1.28	NO	1.26	1.000	34.96	1.000	44.873	89.7	0.139	44.873
15	1,2,3,4,6,7,8-HpCDF	3.45e5	1.05	NO	1.69	1.000	36.85	1.001	44.914	89.8	0.198	44.914
16	1,2,3,4,7,8,9-HpCDF	2.85e5	1.05	NO	1.48	1.000	38.77	1.000	45.881	91.8	0.215	45.881
17	OCDF	4.04e5	0.91	NO	1.10	1.000	41.89	1.000	88.020	88.0	0.122	88.020
18	13C-2,3,7,8-TCDD	8.37e5	0.78	NO	1.01	1.000	26.06	1.023	99.620	99.6	0.121	
19	13C-1,2,3,7,8-PeCDD	6.44e5	0.62	NO	0.827	1.000	30.71	1.205	94.026	94.0	0.122	
20	13C-1,2,3,4,7,8-HxCDD	5.43e5	1.20	NO	0.916	1.000	34.13	0.988	96.107	96.1	0.239	
21	13C-1,2,3,6,7,8-HxCDD	4.97e5	1.33	NO	0.921	1.000	34.25	0.991	87.429	87.4	0.238	
22	13C-1,2,3,4,6,7,8-HpCDD	4.37e5	1.05	NO	0.708	1.000	38.18	1.105	99.866	99.9	0.463	
23	13C-OCDD	5.84e5	0.89	NO	0.503	1.000	41.62	1.205	188.32	94.2	0.275	
24	13C-2,3,7,8-TCDF	1.18e6	0.79	NO	0.977	1.000	25.28	0.992	102.41	102	0.0965	
25	13C-1,2,3,7,8-PeCDF	1.01e6	1.55	NO	0.896	1.000	29.47	1.157	95.404	95.4	0.205	
26	13C-2,3,4,7,8-PeCDF	9.68e5	1.55	NO	0.900	1.000	30.42	1.194	91.426	91.4	0.204	
27	13C-1,2,3,4,7,8-HxCDF	6.88e5	0.52	NO	1.17	1.000	33.22	0.962	95.390	95.4	0.321	
28	13C-1,2,3,6,7,8-HxCDF	8.00e5	0.52	NO	1.52	1.000	33.34	0.965	85.317	85.3	0.247	
29	13C-2,3,4,6,7,8-HxCDF	6.67e5	0.52	NO	1.25	1.000	33.97	0.983	86.459	86.5	0.301	
30	13C-1,2,3,7,8,9-HxCDF	5.91e5	0.51	NO	1.05	1.000	34.95	1.012	90.906	90.9	0.357	

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7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:07:14 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

31	13C-1,2,3,4,6,7,8-HpCDF	4.55e5	0.44	NO	0.868	1.000	36.83	1.066	84.855	84.9	0.521
32	13C-1,2,3,4,7,8,9-HpCDF	4.19e5	0.44	NO	0.727	1.000	38.76	1.122	93.449	93.4	0.623
33	13C-OCDF	8.37e5	0.88	NO	0.760	1.000	41.88	1.212	178.53	89.3	0.154
34	37Cl-2,3,7,8-TCDD	2.05e5			0.668	1.000	26.08	1.023	37.129	92.8	0.0420
35	13C-1,2,3,4-TCDD	8.28e5	0.79	NO	1.00	1.000	25.48	0.000	100.00	100	0.123
36	13C-1,2,3,4-TCDF	1.18e6	0.76	NO	1.00	1.000	24.06	0.000	100.00	100	0.0943
37	13C-1,2,3,7,8,9-HxCDD	6.17e5	1.25	NO	1.00	1.000	34.55	0.000	100.00	100	0.219

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

2,3,7,8-TCDD

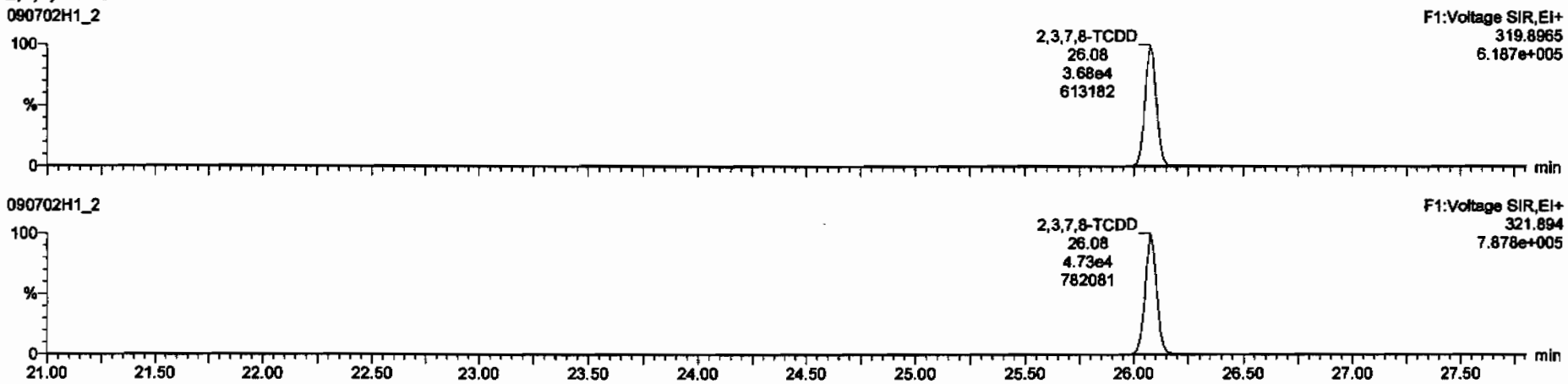

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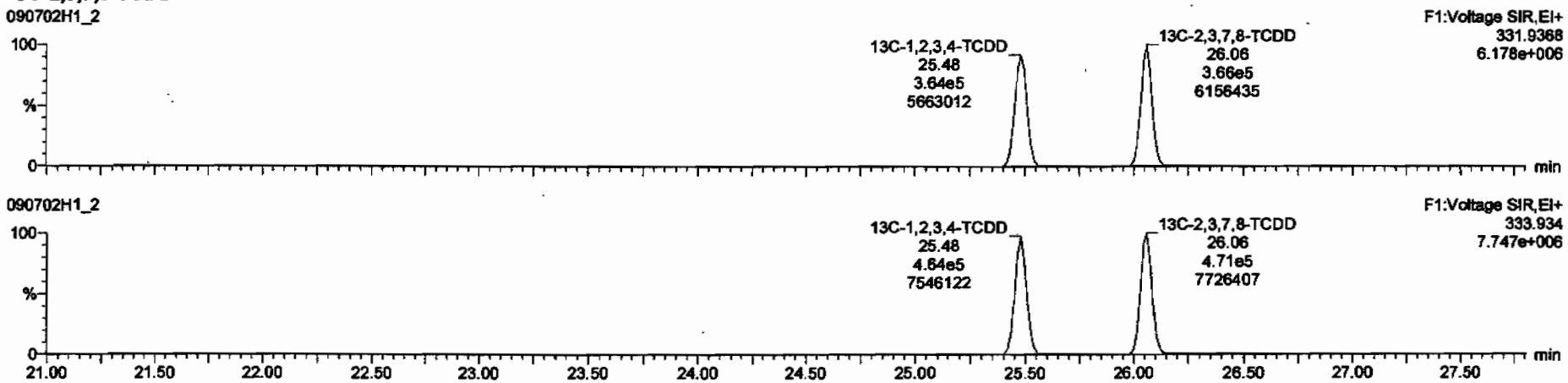

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

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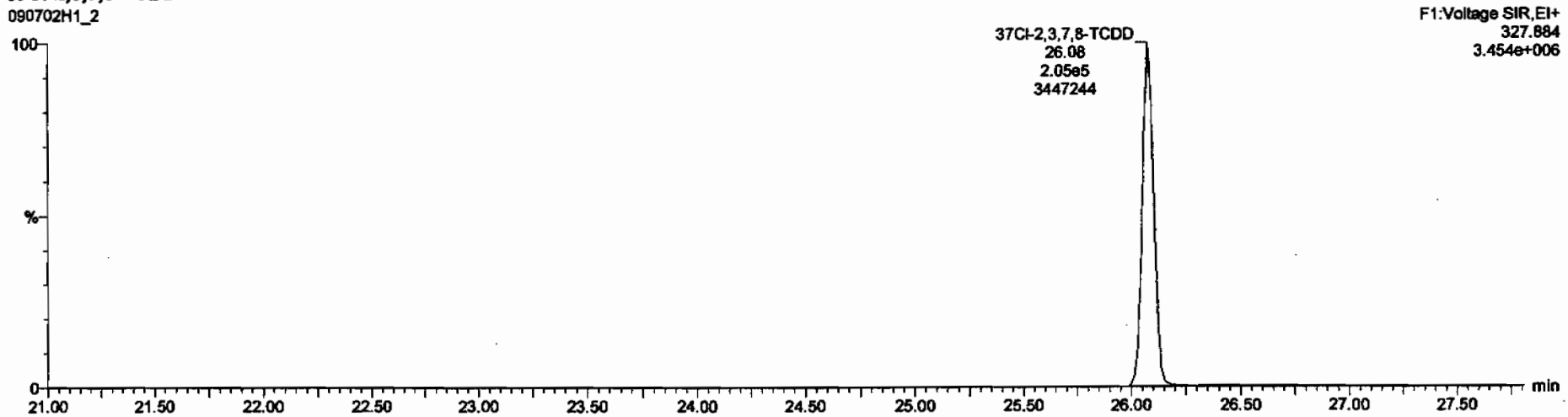

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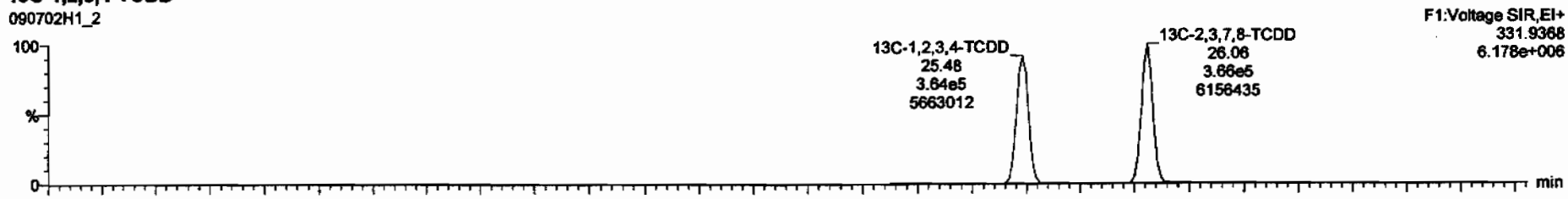

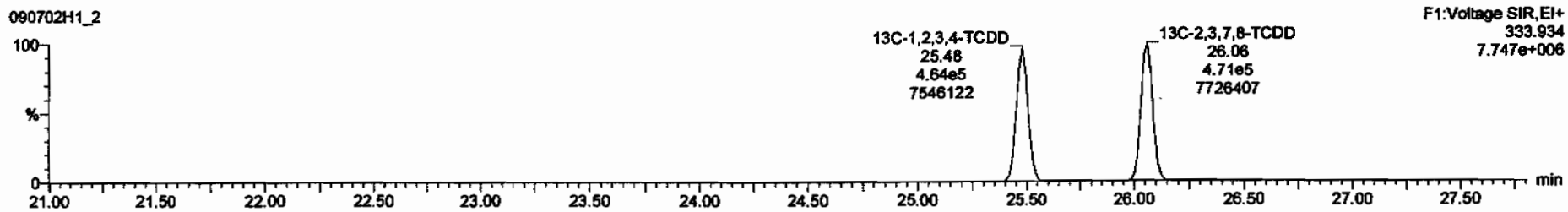

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,7,8-PeCDD

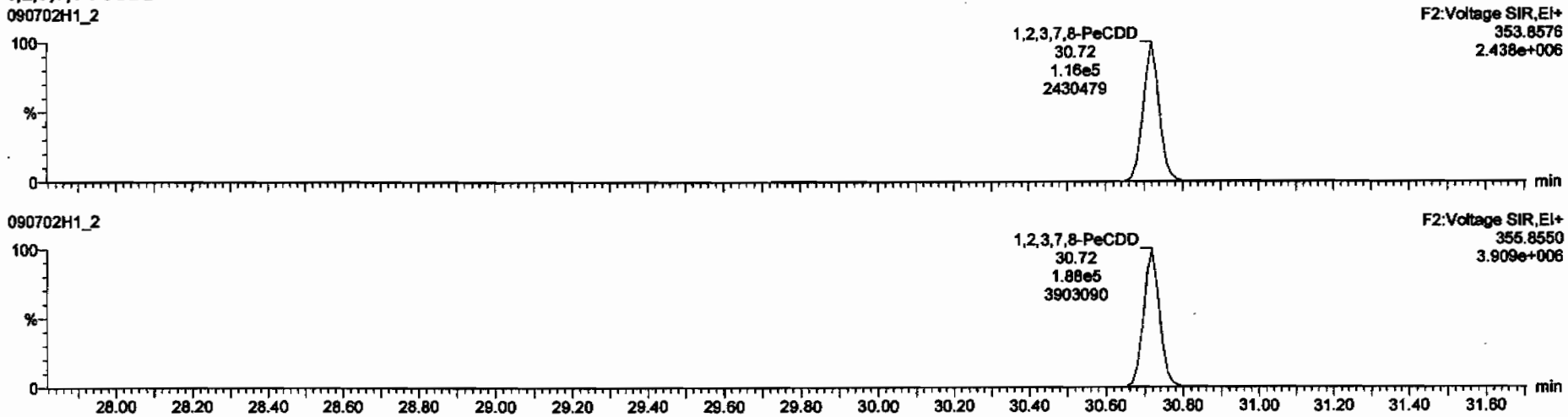

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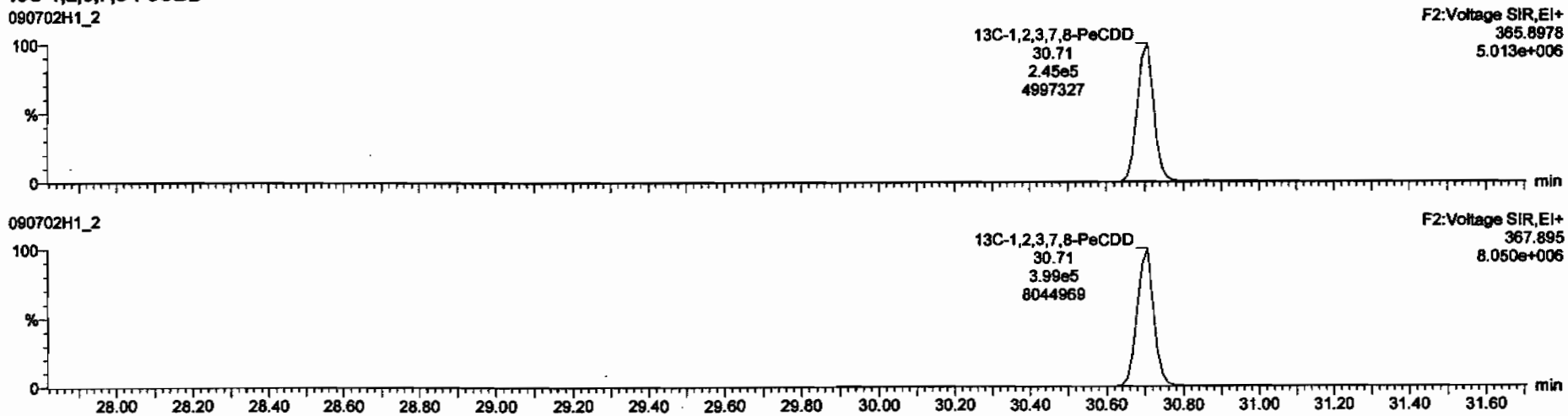

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,7,8-HxCDD

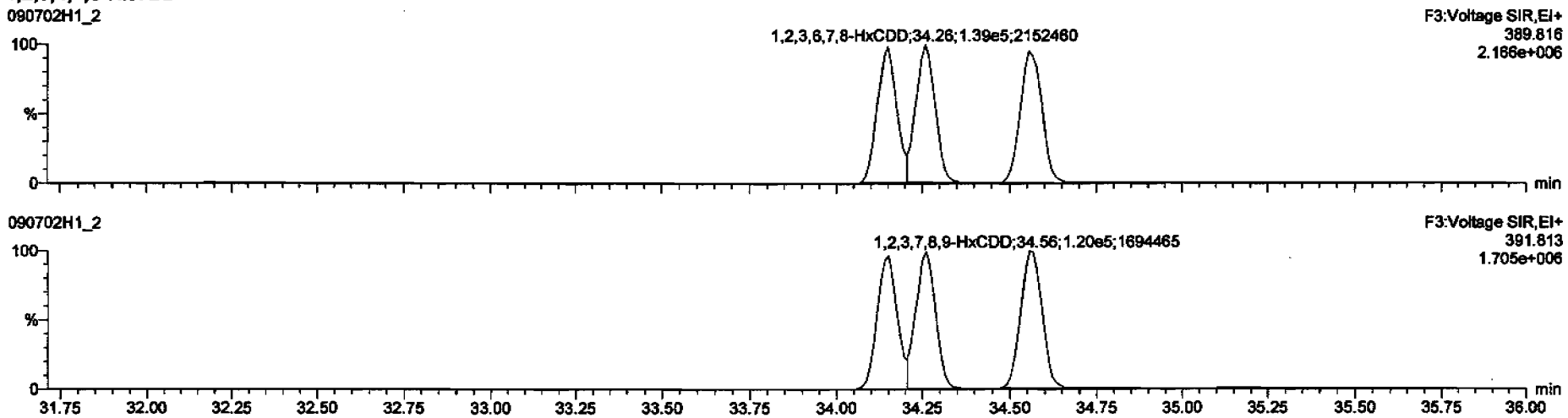

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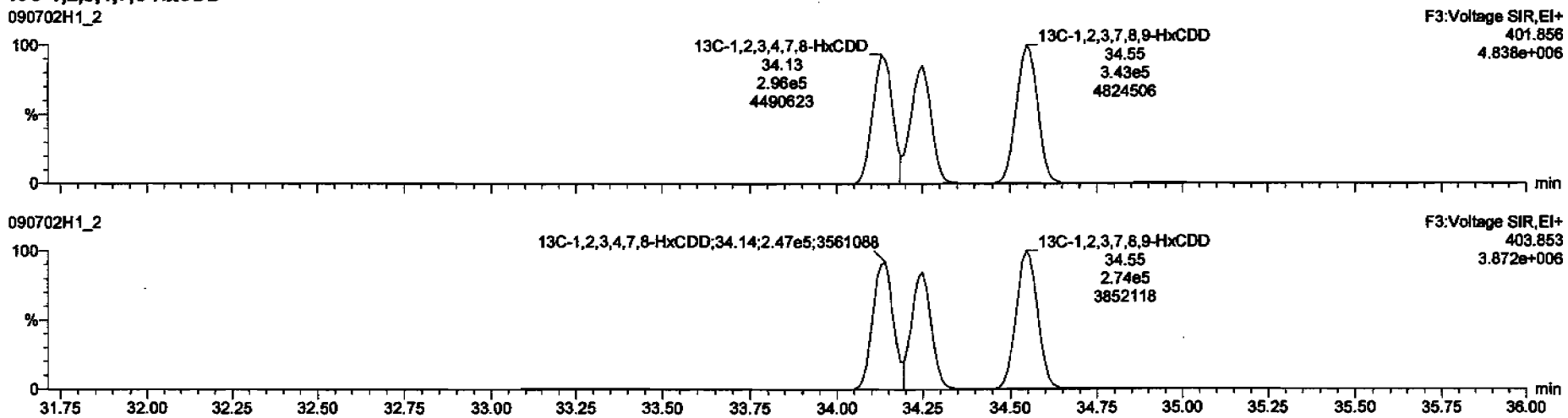

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,6,7,8-HpCDD

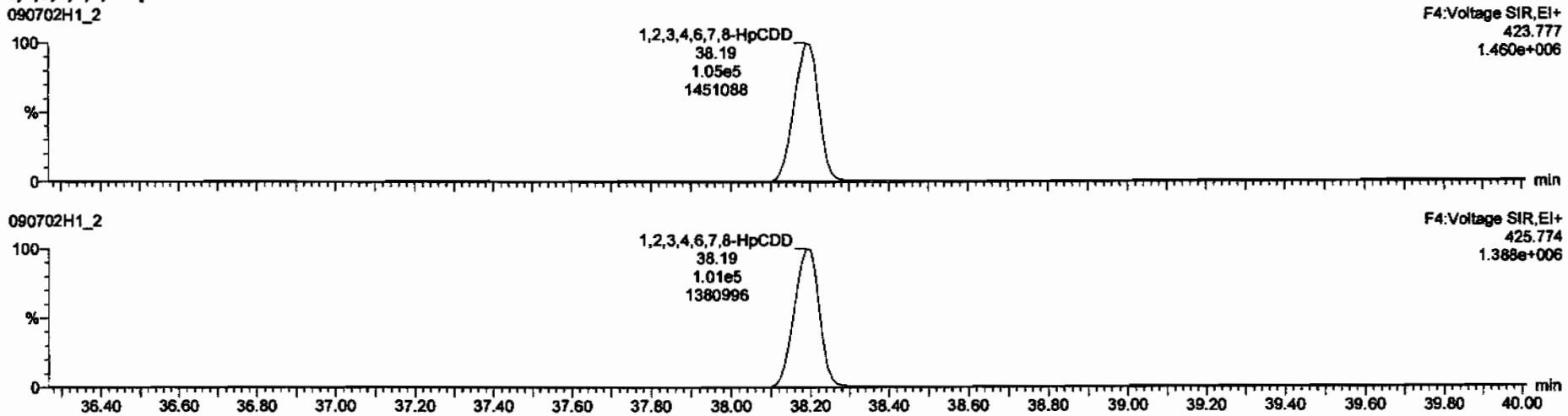

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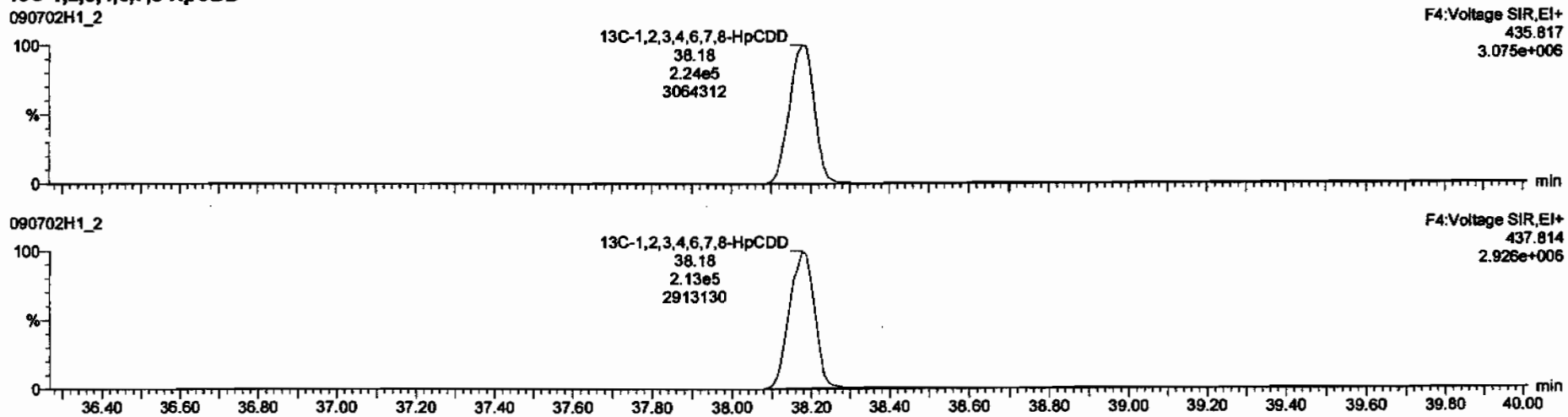

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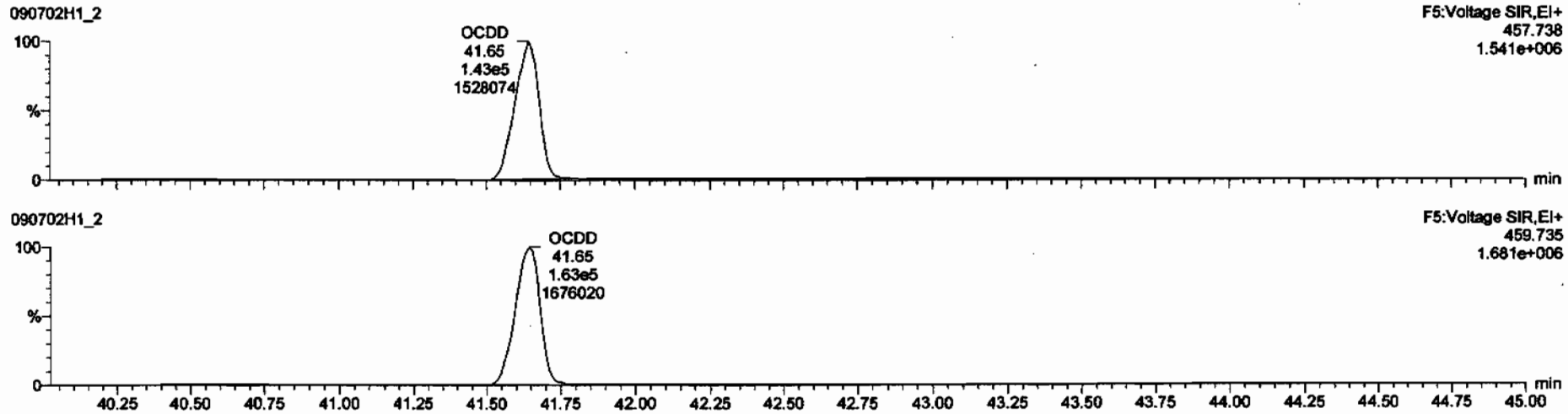

13C-OCDD

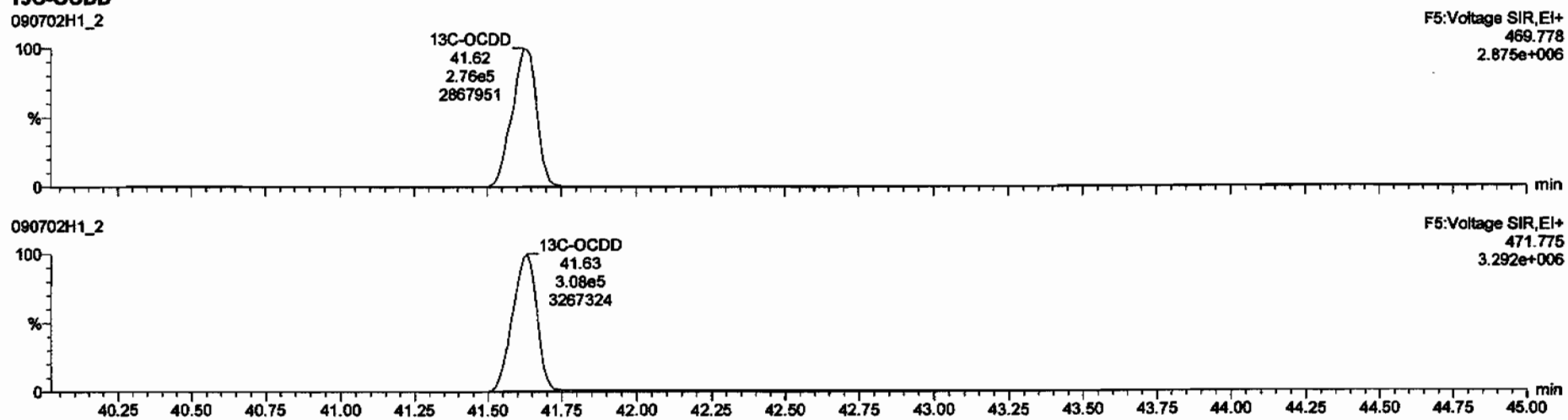

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

2,3,7,8-TCDF

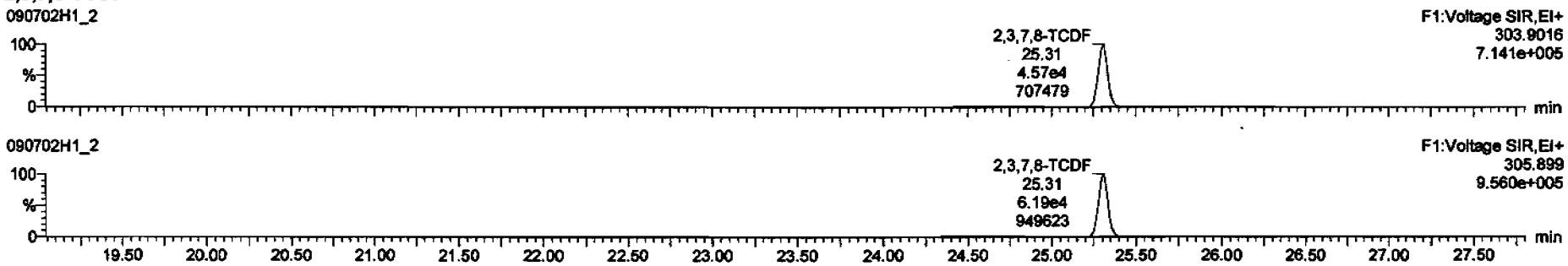

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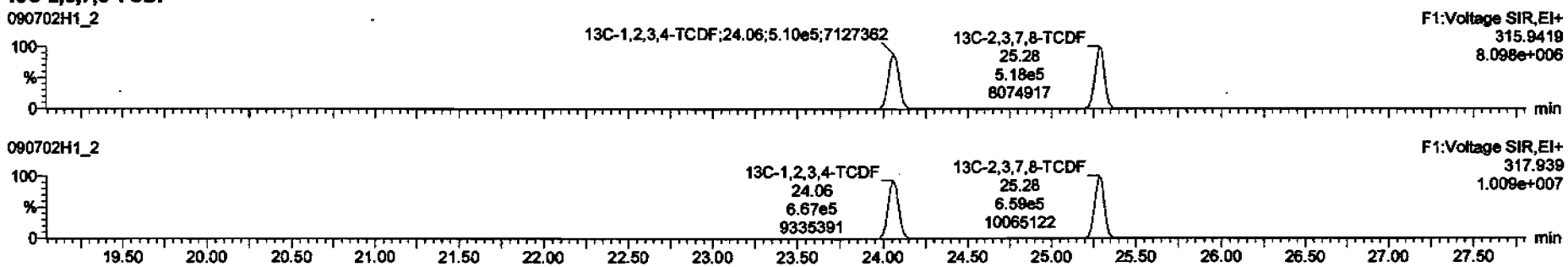

DPE1

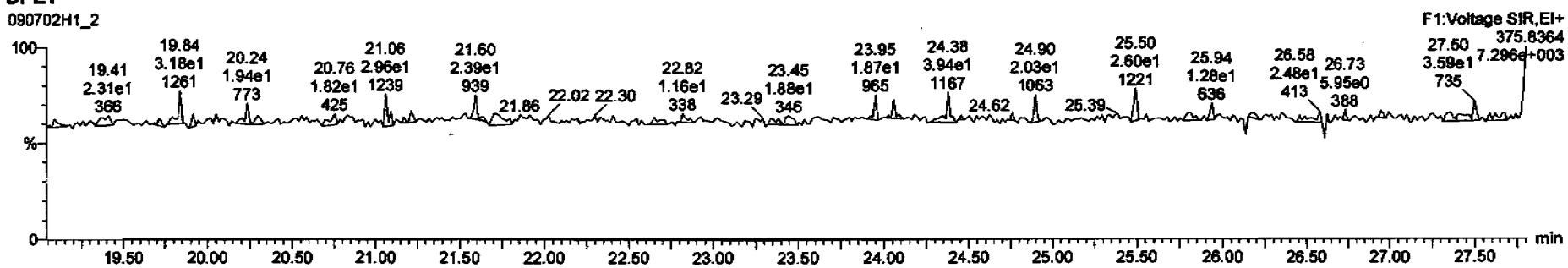

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

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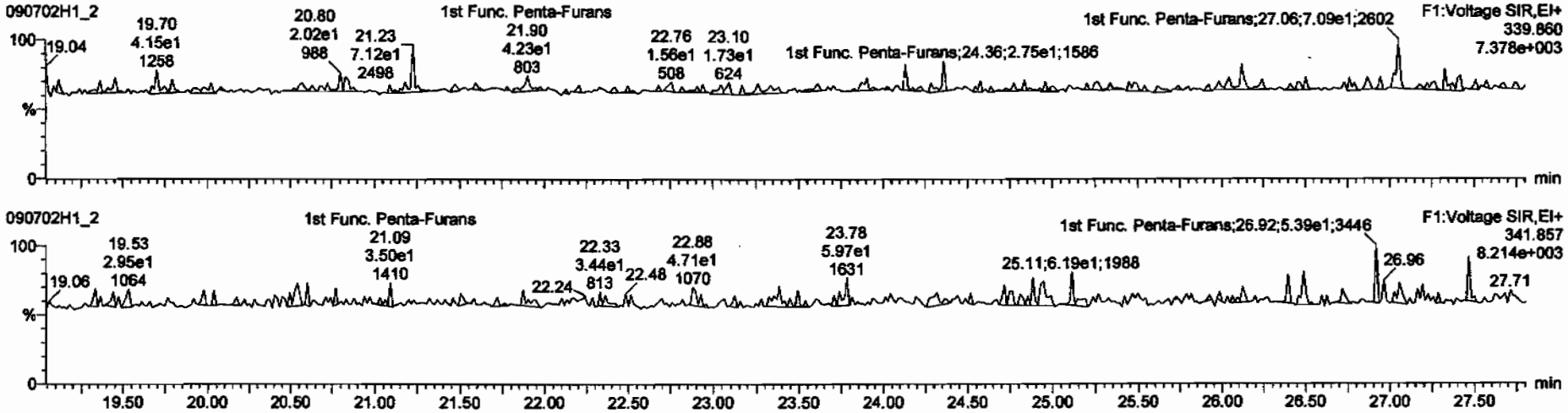

DPE6

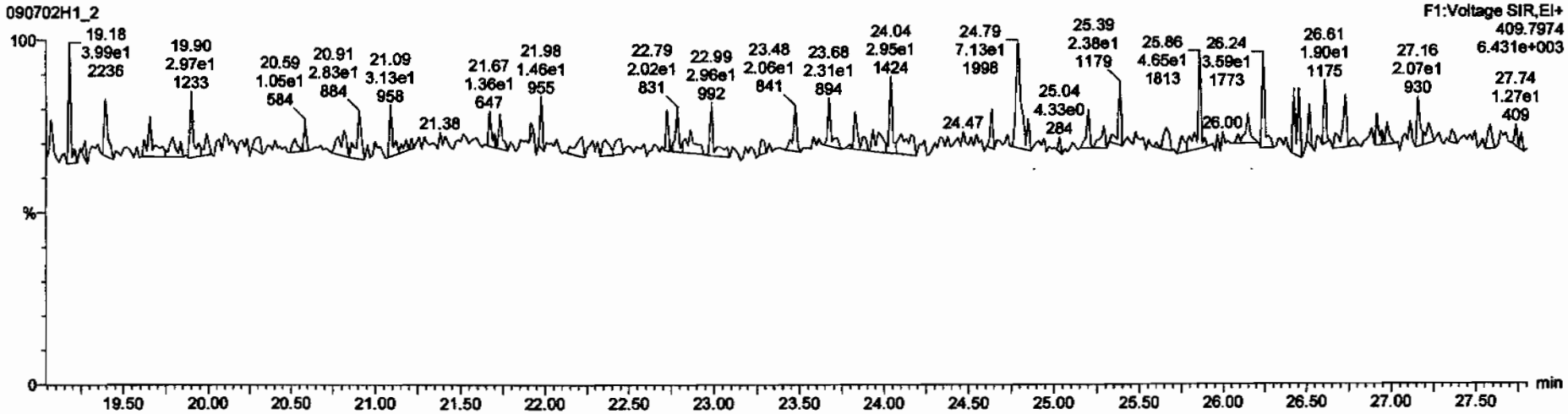

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,7,8-PeCDF

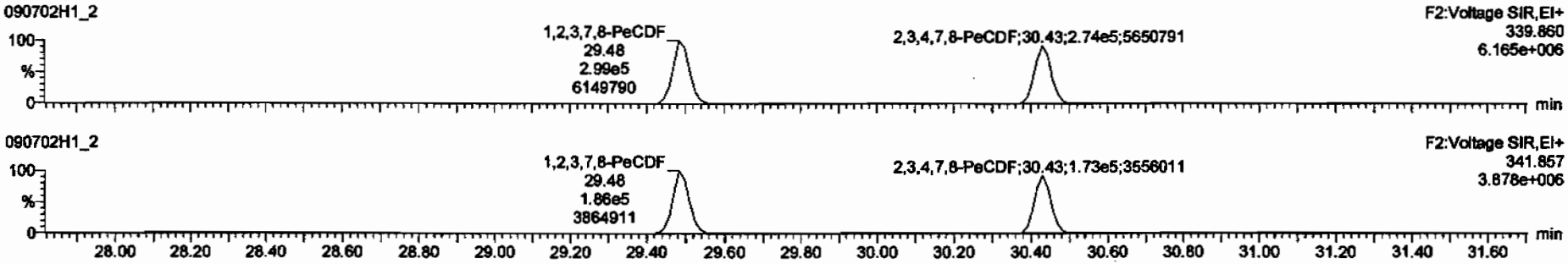

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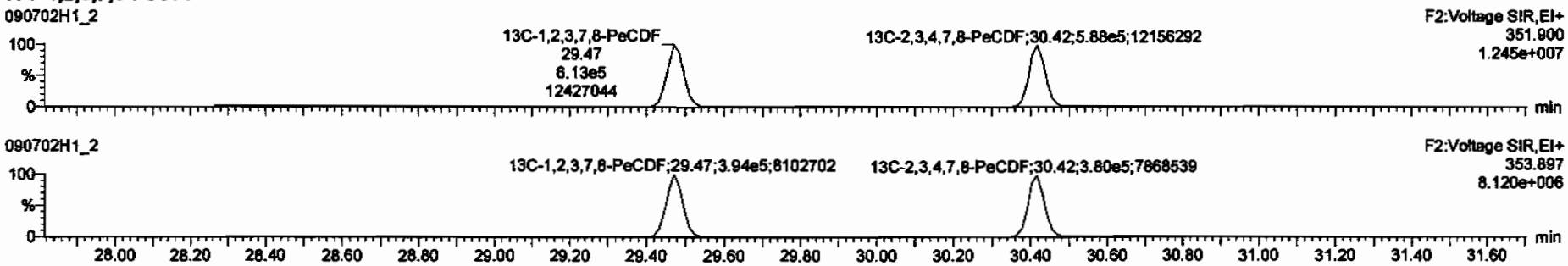

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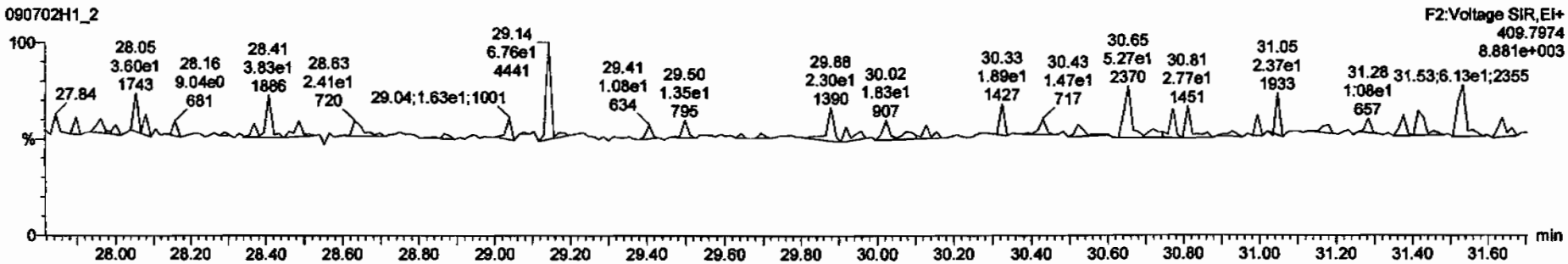

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,7,8-HxCDF

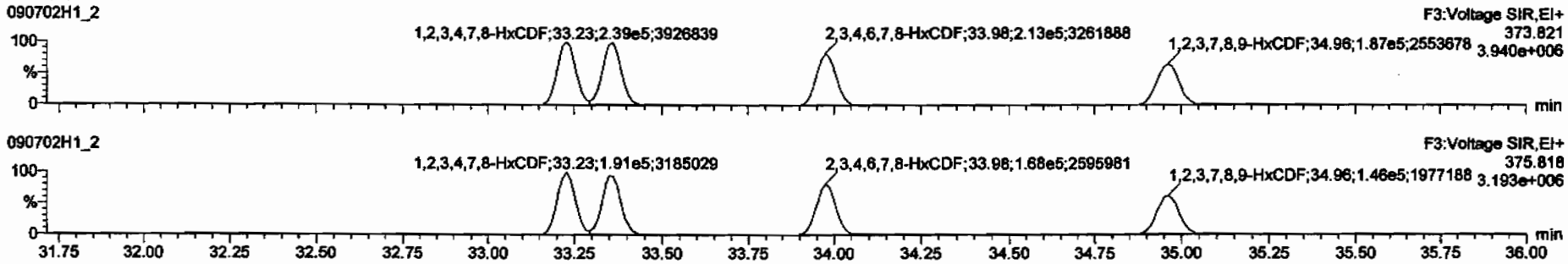

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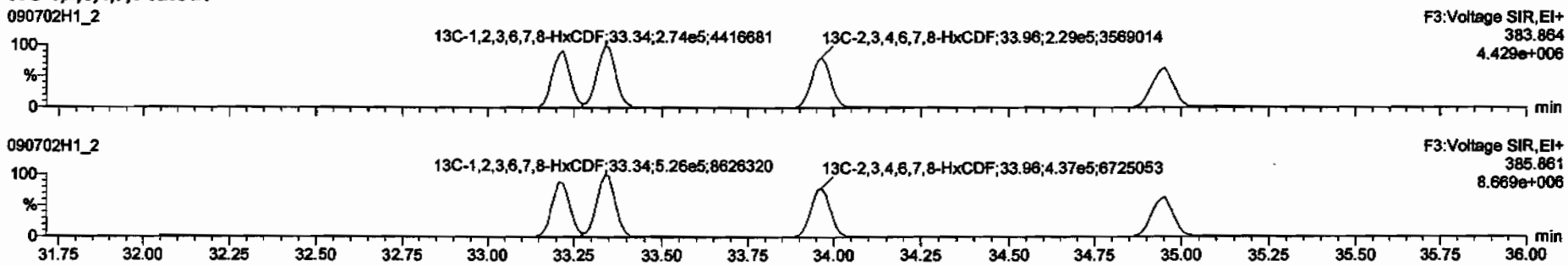

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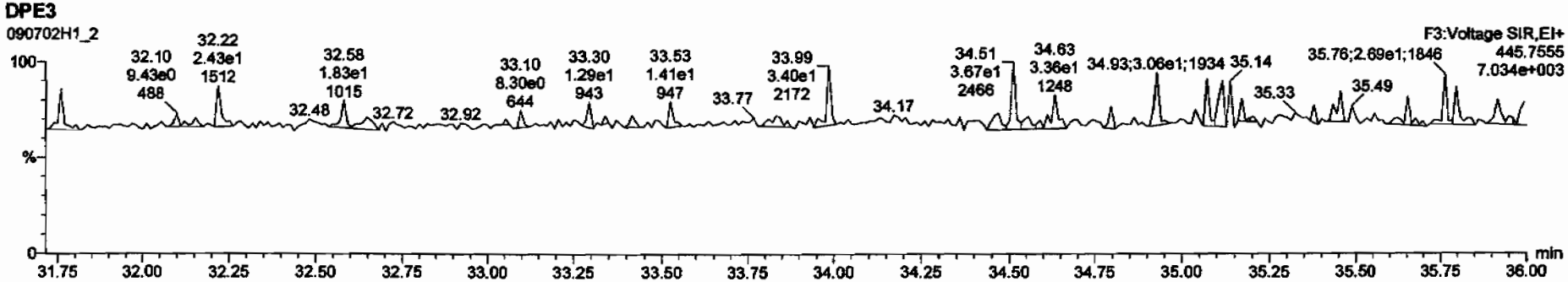

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1,2,3,4,6,7,8-HpCDF

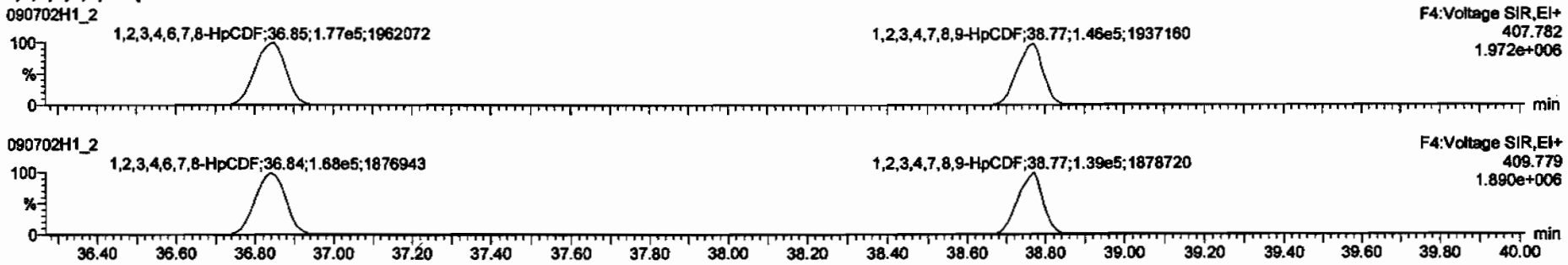

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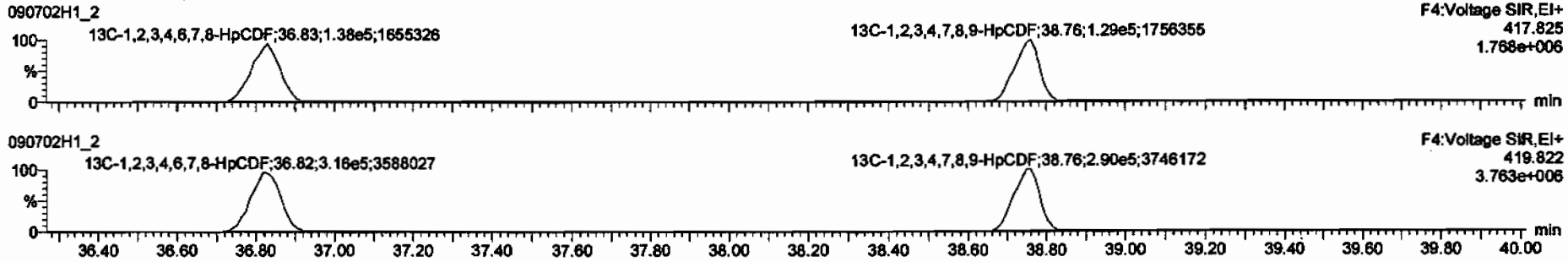

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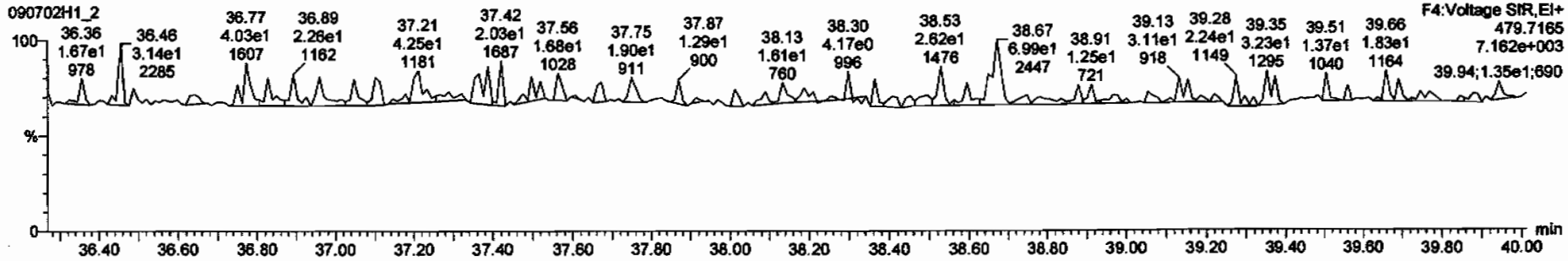

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OCDF

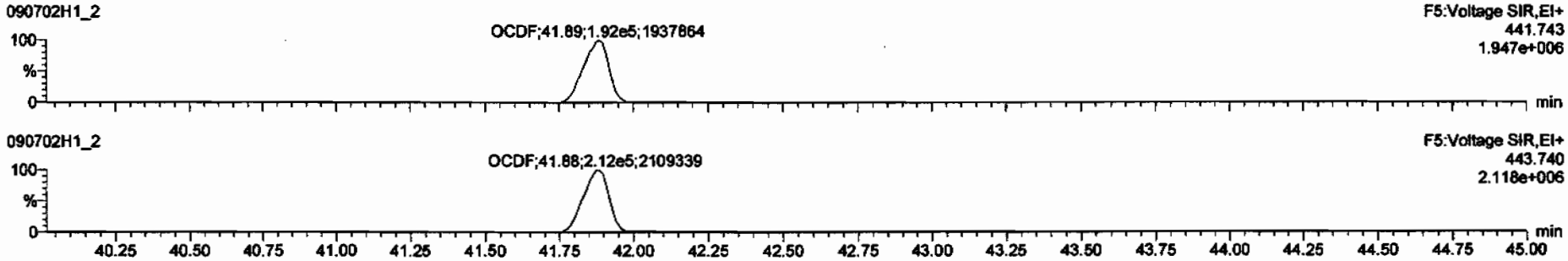

13C-OCDF

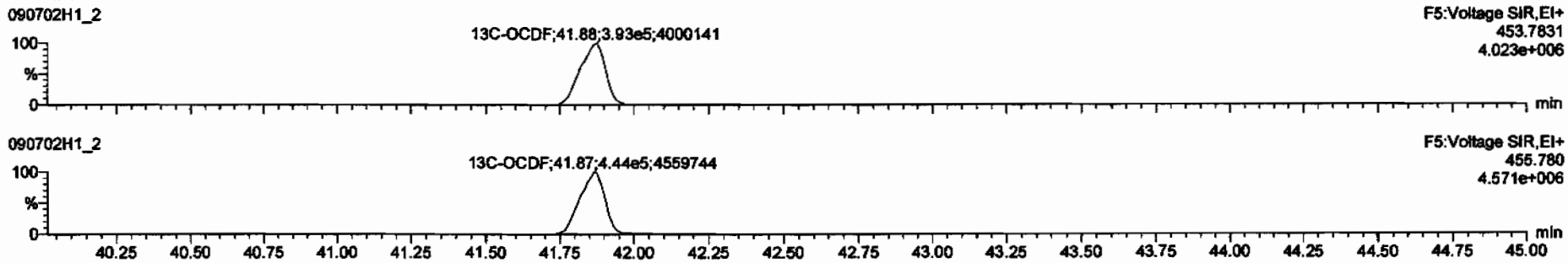

DPE5

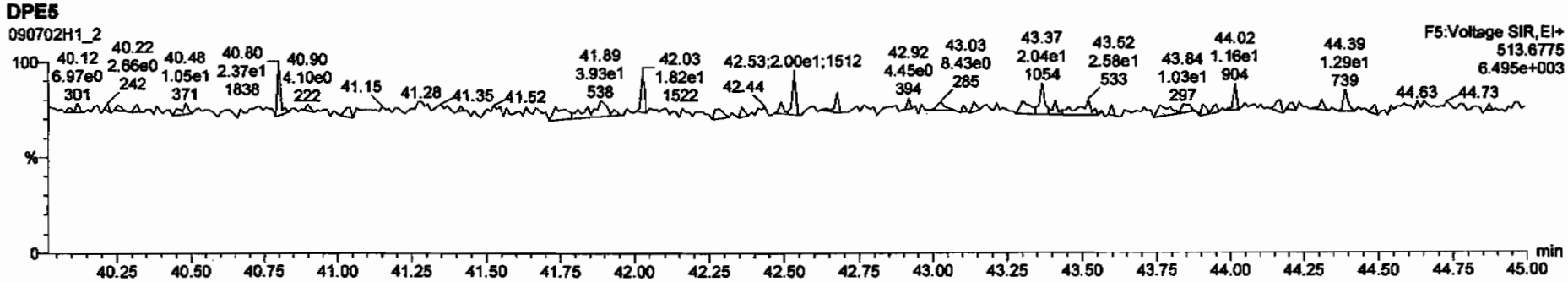

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

PFK1

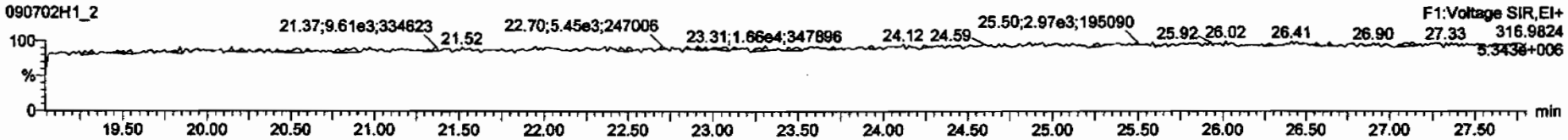

PFK2

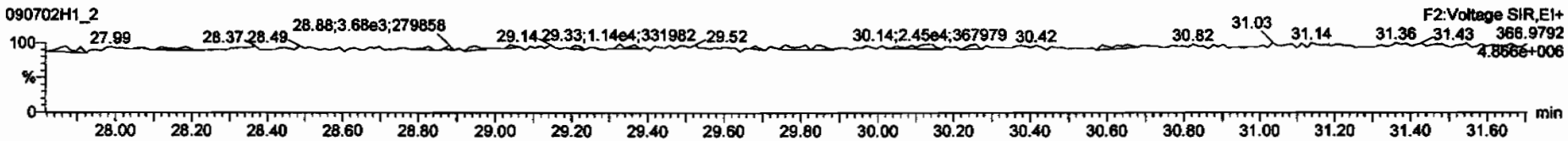

PFK3

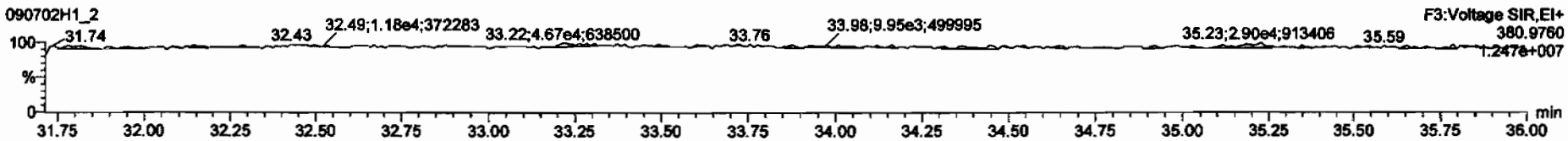

PFK4

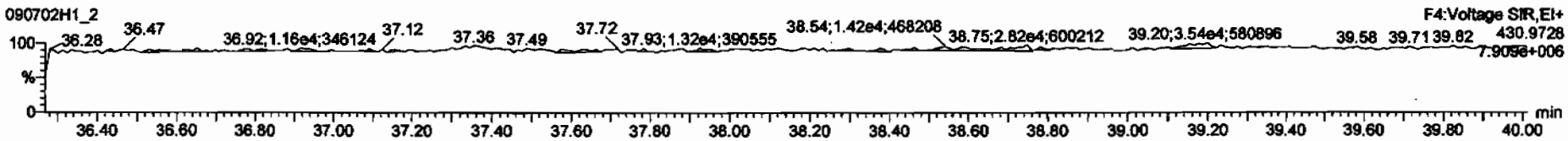

PFK5

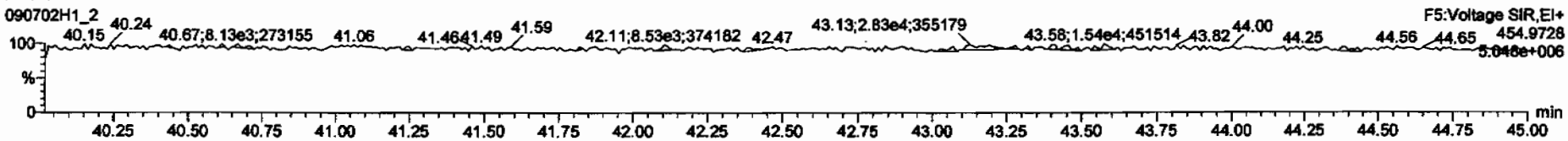

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Tuesday, July 07, 2009 09:41:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:41:51 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

1	2,3,7,8-TCDD			NO	1.08	10.160					0.0483	
2	1,2,3,7,8-PeCDD			NO	1.03	10.160					0.102	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.160					0.240	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.160					0.231	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.160					0.226	
6	1,2,3,4,6,7,8-HpCDD	3.42e3	1.19	NO	1.06	10.160	38.19	1.000	1.2156		0.319	~~1.2156~~
7	OCDD	2.04e4	0.90	NO	1.18	10.160	41.67	1.000	8.8544		0.172	~~8.8544~~
8	2,3,7,8-TCDF			NO	1.09	10.160					0.0600	
9	1,2,3,7,8-PeCDF			NO	1.16	10.160					0.0523	
10	2,3,4,7,8-PeCDF			NO	1.12	10.160					0.0503	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.160					0.0897	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.160					0.0978	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.160					0.117	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.160					0.147	
15	1,2,3,4,6,7,8-HpCDF	1.09e3	1.30	YES	1.69	10.160	36.85	1.000	~~0.24969~~ WD		0.161	0.22129
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.160					0.163	
17	OCDF	1.77e3	0.84	NO	1.10	10.160	41.89	1.000	0.66200		0.131	~~0.66200~~
18	13C-2,3,7,8-TCDD	9.44e5	0.79	NO	1.01	10.160	26.06	1.023	191.09	97.1	0.279	
19	13C-1,2,3,7,8-PeCDD	7.69e5	0.63	NO	0.827	10.160	30.71	1.205	190.91	97.0	0.293	
20	13C-1,2,3,4,7,8-HxCDD	6.12e5	1.25	NO	0.916	10.160	34.14	0.988	181.84	92.4	0.475	
21	13C-1,2,3,6,7,8-HxCDD	5.49e5	1.26	NO	0.921	10.160	34.26	0.991	162.28	82.4	0.472	
22	13C-1,2,3,4,6,7,8-HpCDD	5.20e5	1.05	NO	0.708	10.160	38.19	1.105	199.95	102	0.713	
23	13C-OCDD	7.71e5	0.88	NO	0.503	10.160	41.66	1.205	418.16	106	0.844	
24	13C-2,3,7,8-TCDF	1.28e6	0.77	NO	0.977	10.160	25.28	0.992	194.83	99.0	0.186	
25	13C-1,2,3,7,8-PeCDF	1.09e6	1.55	NO	0.896	10.160	29.49	1.157	181.37	92.1	0.341	
26	13C-2,3,4,7,8-PeCDF	1.18e6	1.54	NO	0.900	10.160	30.43	1.194	194.74	98.9	0.340	
27	13C-1,2,3,4,7,8-HxCDF	7.85e5	0.53	NO	1.17	10.160	33.23	0.962	182.97	92.9	0.523	
28	13C-1,2,3,6,7,8-HxCDF	8.63e5	0.54	NO	1.52	10.160	33.35	0.965	154.81	78.6	0.402	
29	13C-2,3,4,6,7,8-HxCDF	7.48e5	0.53	NO	1.25	10.160	33.98	0.983	163.20	82.9	0.489	
30	13C-1,2,3,7,8,9-HxCDF	6.66e5	0.51	NO	1.05	10.160	34.95	1.011	172.24	87.5	0.580	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Tuesday, July 07, 2009 09:41:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:41:51 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

31	13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.43	NO	0.868	10.160	36.84	1.066	159.03	80.8	0.944	
32	13C-1,2,3,4,7,8,9-HpCDF	4.83e5	0.44	NO	0.727	10.160	38.77	1.122	181.28	92.1	1.13	
33	13C-OCDF	9.62e5	0.89	NO	0.760	10.160	41.89	1.212	345.02	87.6	0.275	
34	37Cl-2,3,7,8-TCDD	2.27e5			0.668	10.160	26.08	1.023	69.851	88.7	0.0666	
35	13C-1,2,3,4-TCDD	9.59e5	0.80	NO	1.00	10.160	25.48	0.000	196.85	100	0.283	
36	13C-1,2,3,4-TCDF	1.32e6	0.78	NO	1.00	10.160	24.06	0.000	196.85	100	0.181	
37	13C-1,2,3,7,8,9-HxCDD	7.23e5	1.24	NO	1.00	10.160	34.56	0.000	196.85	100	0.435	
38	Total Tetra-Dioxins				1.08	10.160					0.0214	
39	Total Penta-Dioxins				1.03	10.160					0.0520	
40	Total Hexa-Dioxins				1.13	10.160					0.139	
41	Total Hepta-Dioxins				1.06	10.160			2.5671		0.319	~~2.5671~~
42	Total Tetra-Furans				1.09	10.160			0.12126		0.0600	~~0.12126~~
43	1st Func. Penta-Furans				1.16	10.160			~~0.44755~~ 0.357		0.0303	~~0.14755~~ 0.445
44	Total Penta-Furans				1.16	10.160			~~0.20957~~		0.0503	0.29786
45	Total Hexa-Furans				1.28	10.160			0.21170		0.112	~~0.21170~~
46	Total Hepta-Furans				1.69	10.160			~~0.00000~~ NA		0.0919	0.53889

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Tuesday, July 07, 2009 09:41:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:41:51 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Hepta-Dioxins

Total Hepta-Dioxins	37.28	2.184e4	2.503e4	1.979e3	1.819e3	1.09	NO	3.798e3	1.3514	1.3514	0.319
1,2,3,4,6,7,8-HpCDD	38.19	2.762e4	2.212e4	1.856e3	1.560e3	1.19	NO	3.416e3	1.2156	1.2156	0.319

Tetra-Furans

Total Tetra-Furans	21.84	4.091e3	8.011e3	3.482e2	5.089e2	0.68	NO	8.571e2	0.12126	0.12126	0.0600

Penta-Furans function 1

1st Func. Penta-Furans	27.07	9.587e3	6.823e3	5.949e2	3.909e2	1.52	NO	9.859e2	0.14755	0.14755	0.0303

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Tuesday, July 07, 2009 09:41:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:41:51 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

Penta-Furans

	Total Penta-Furans	28.45	6.467e3	6.406e3	3.586e2	2.965e2	1.21	YES	0.000e0	0.00000	0.088299	0.0503
	Total Penta-Furans	28.54	1.269e4	9.189e3	8.711e2	5.291e2	1.65	NO	1.400e3	0.20957	0.20957	0.0503

Hexa-Furans

	Total Hexa-Furans	32.19	1.218e4	8.843e3	5.633e2	4.907e2	1.15	NO	1.054e3	0.21170	0.21170	0.112

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.85	9.398e3	7.827e3	6.140e2	4.717e2	1.30	YES	1.086e3	0.00000	0.22129	0.161
	Total Hepta-Furans	37.48	1.039e4	9.741e3	8.017e2	6.613e2	1.21	YES	0.000e0	0.00000	0.31760	0.152

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

2,3,7,8-TCDD

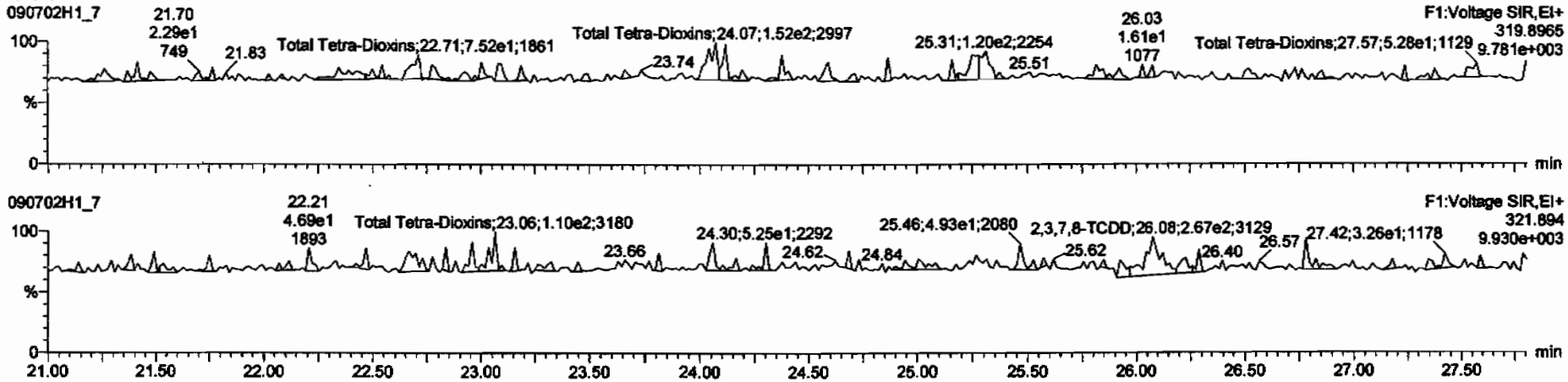

13C-2,3,7,8-TCDD

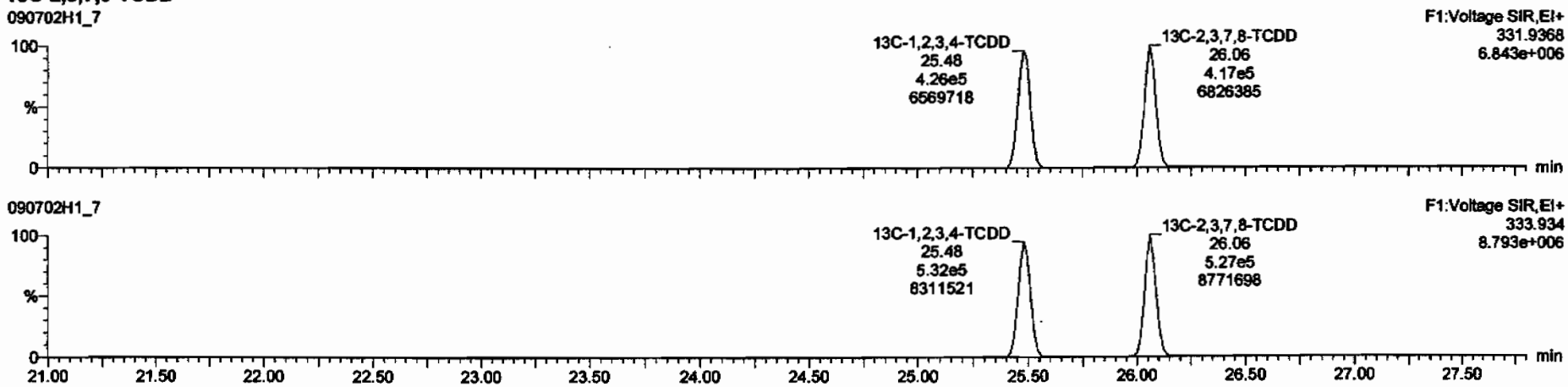

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

37Cl-2,3,7,8-TCDD

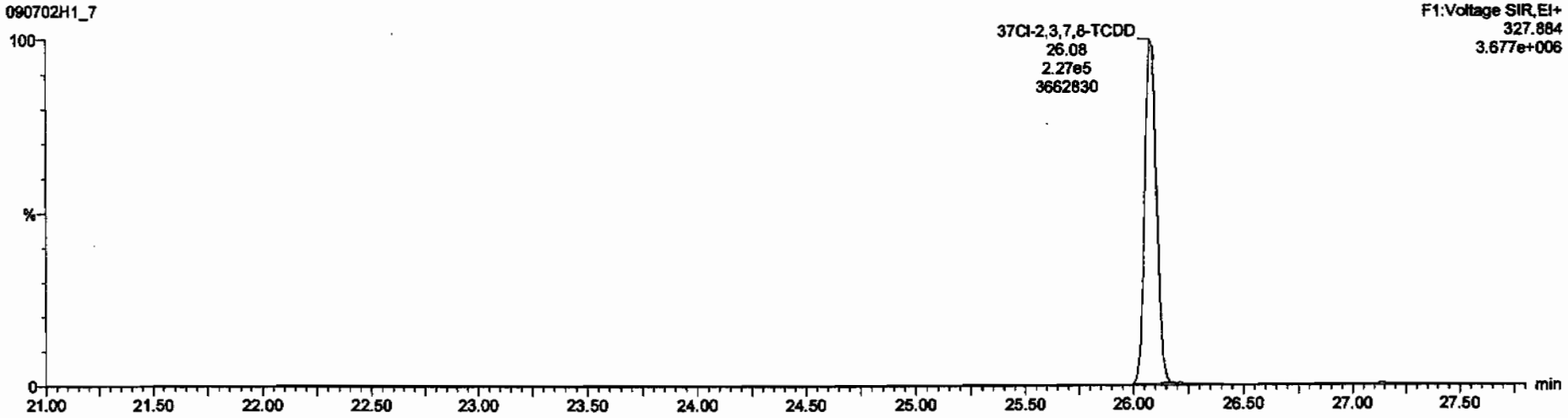

13C-1,2,3,4-TCDD

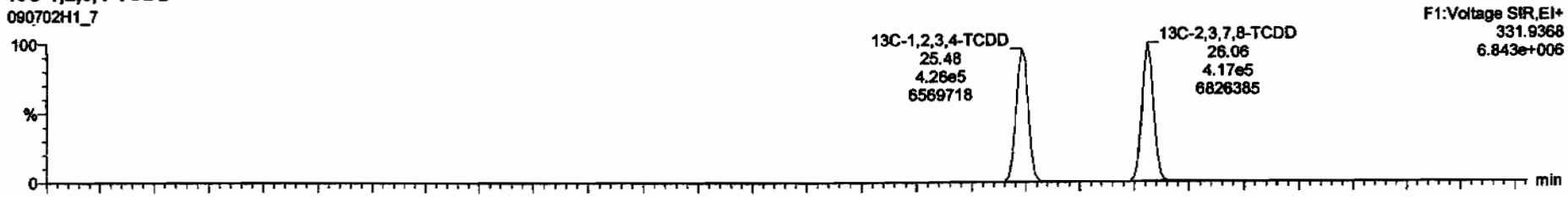

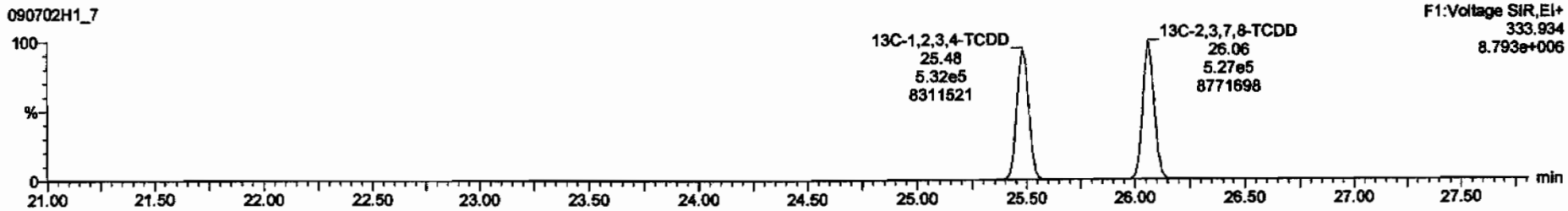

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

1,2,3,7,8-PeCDD

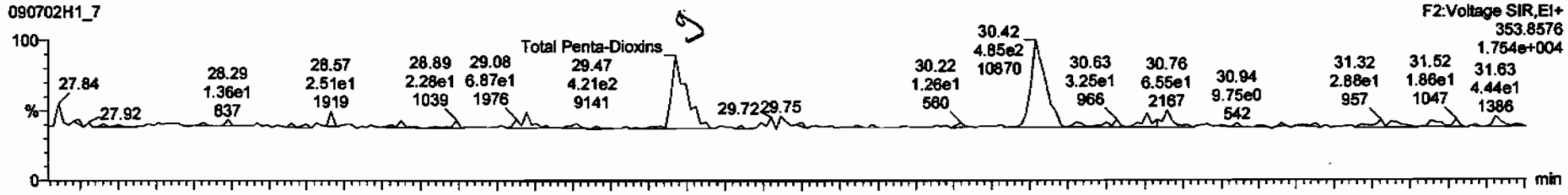

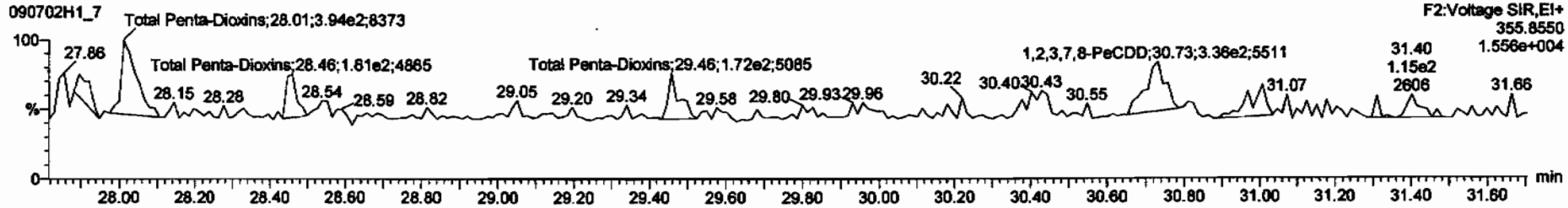

13C-1,2,3,7,8-PeCDD

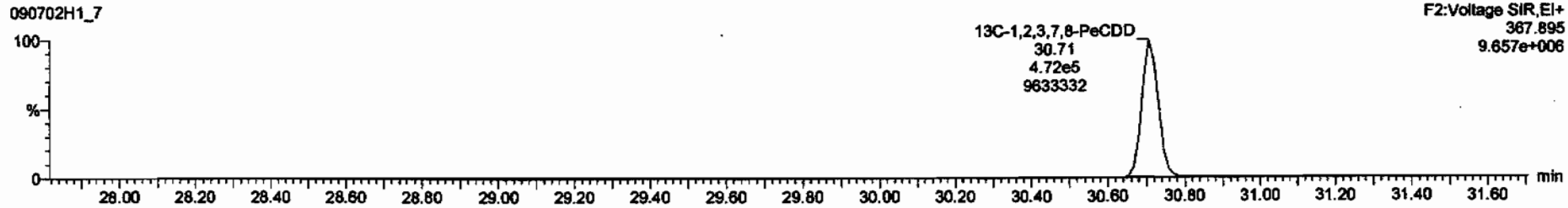

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

1,2,3,4,7,8-HxCDD

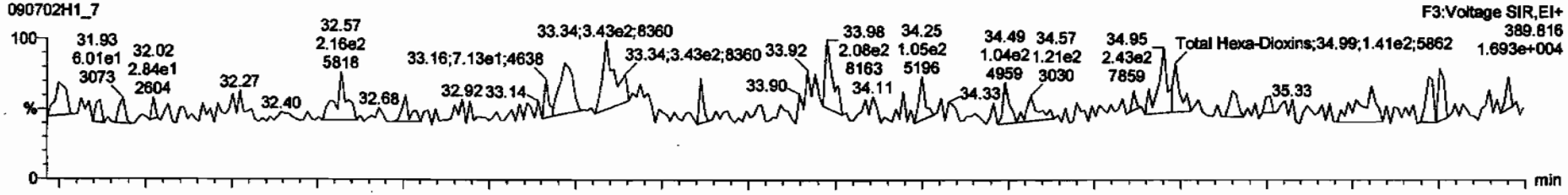

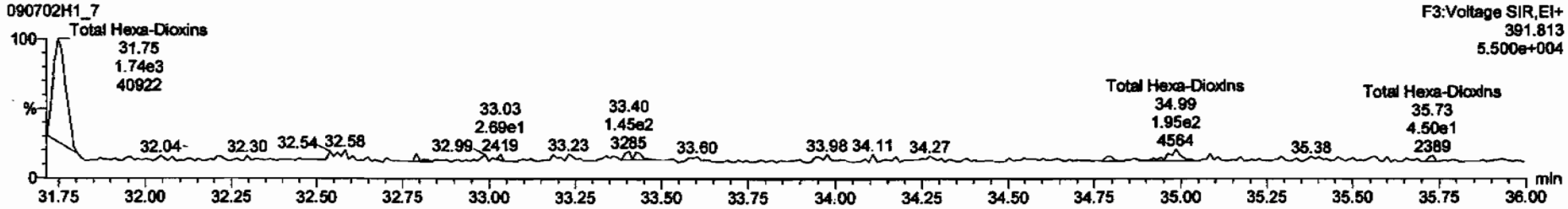

13C-1,2,3,4,7,8-HxCDD

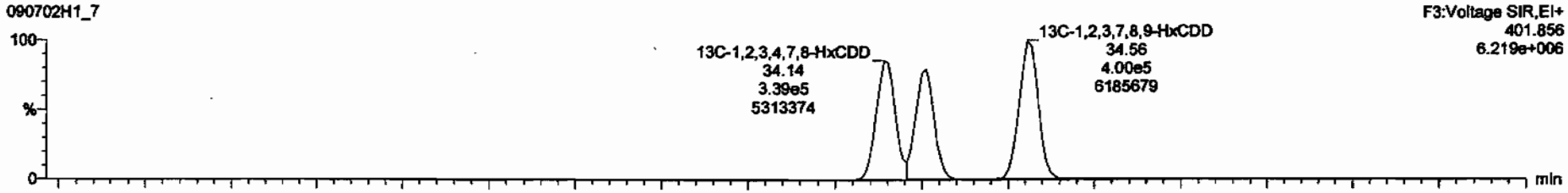

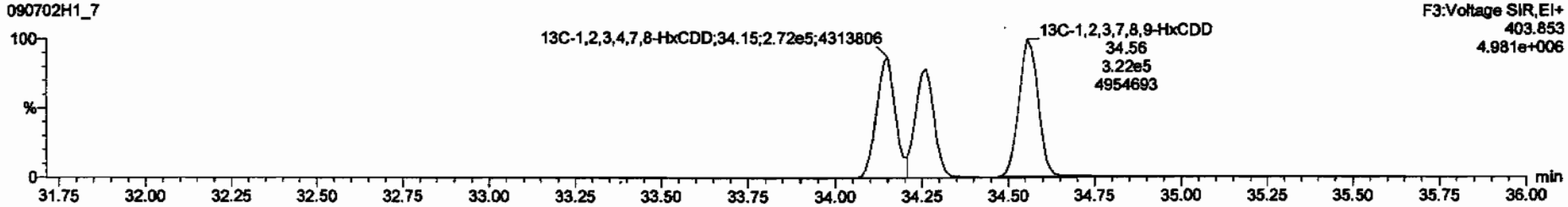

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

1,2,3,4,6,7,8-HpCDD

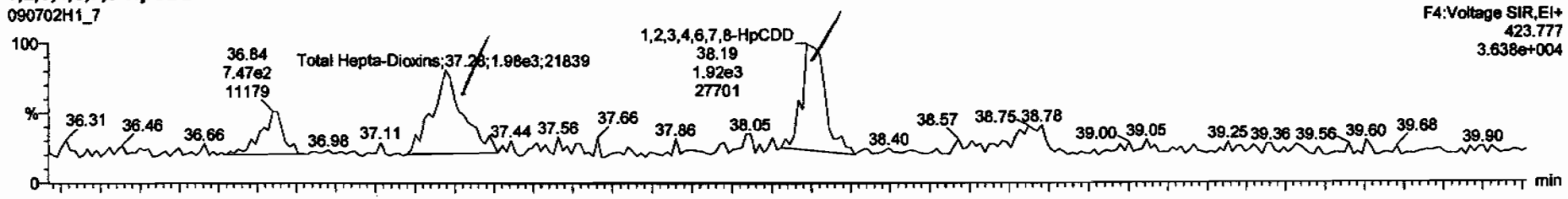

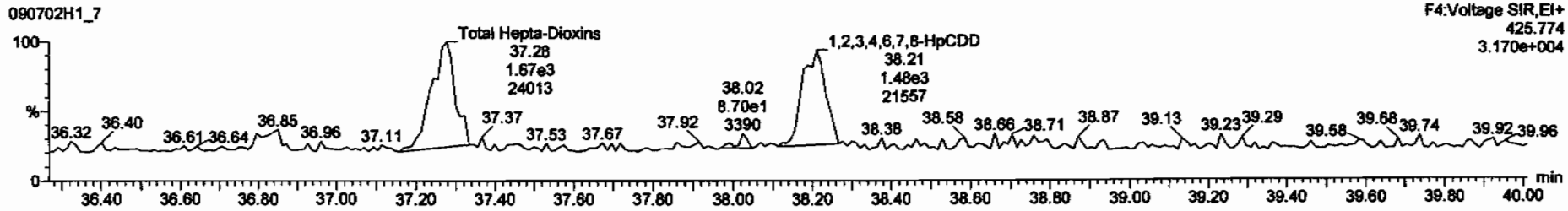

13C-1,2,3,4,6,7,8-HpCDD

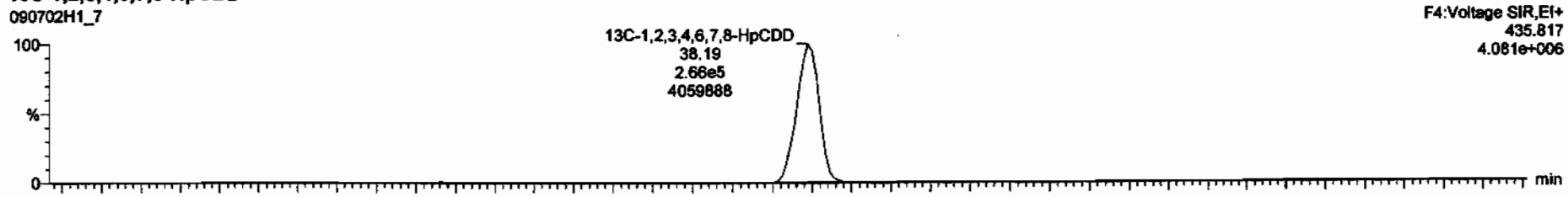

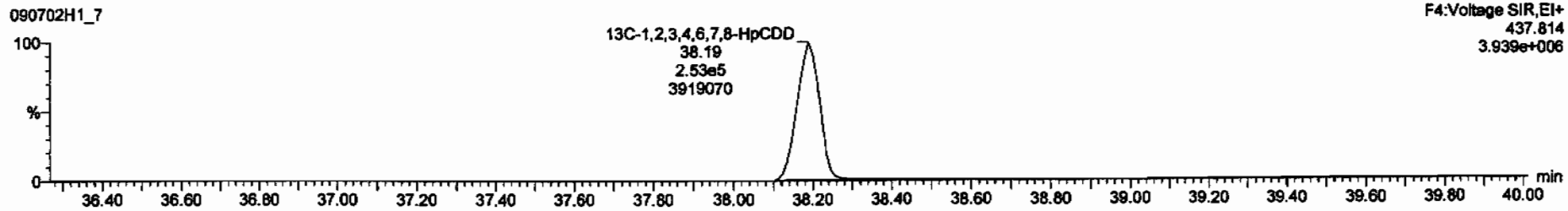

TargetLynx - 090702h1-7.qld * - [Chromatogram]

090702H1_7 - 31846_2214_001 CAMO-09-9946 12.7 - CAMO-09-9946

Name	RT	Area	Height	S/N	Flag	Conc.	Resp.
Total Hepta-Dioxins	37.28	1.979e3	1.819e3	1.09	NO	1.3514	1.3514
1,2,3,4,6,7,8-HpCDD	38.19	1.856e3	1.560e3	1.19	NO	1.2156	1.2156

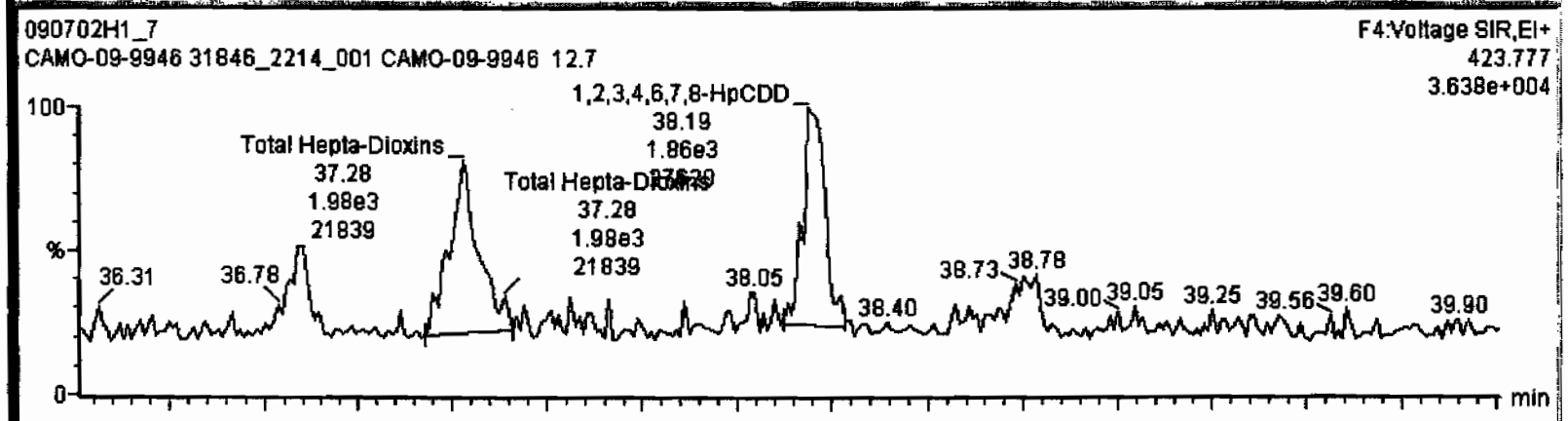

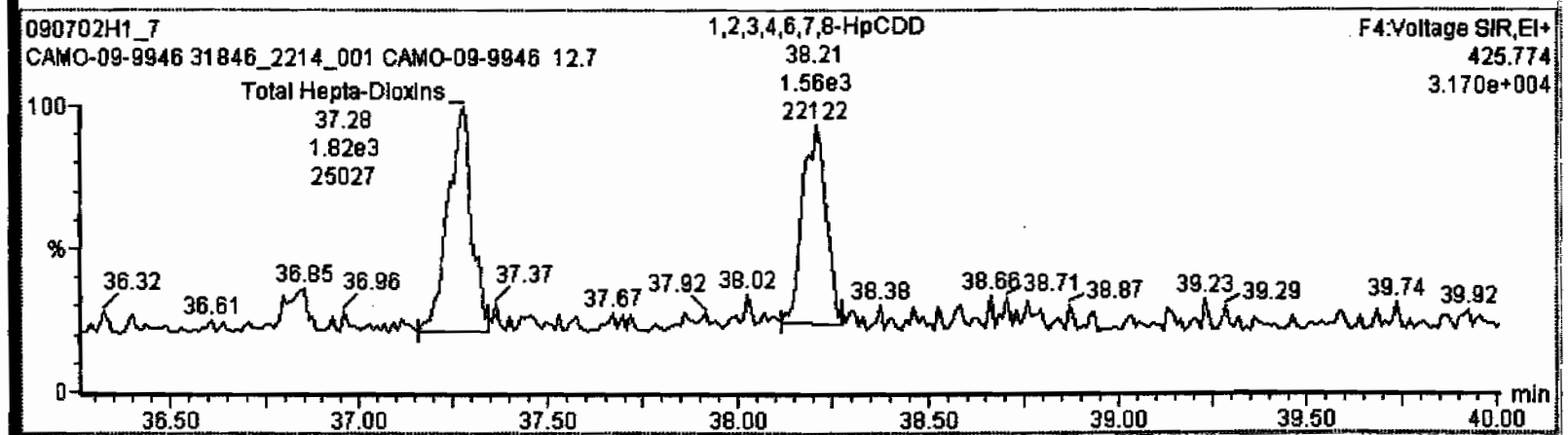

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

OCDD

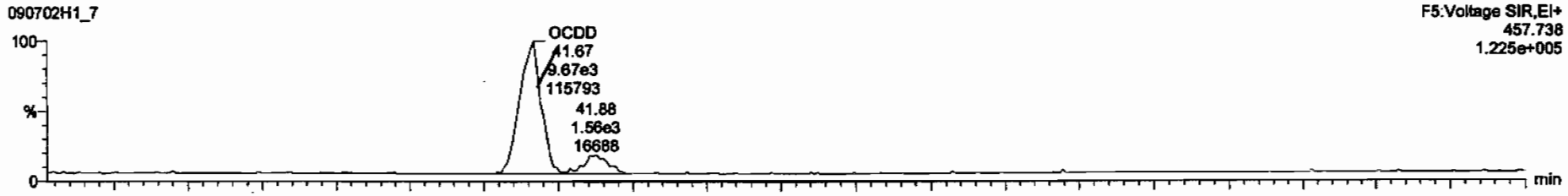

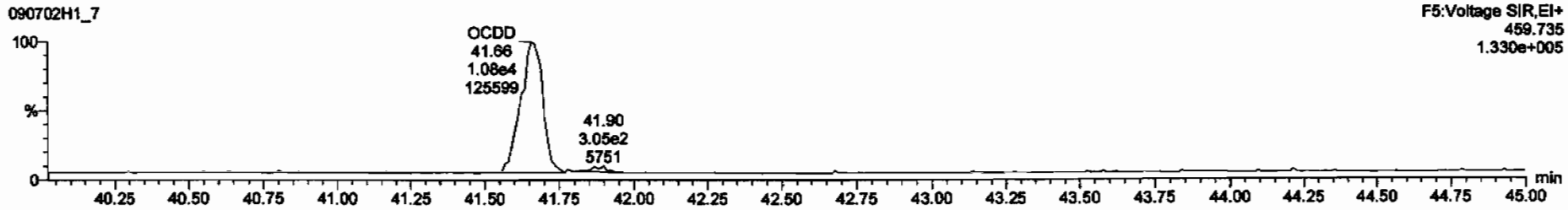

13C-OCDD

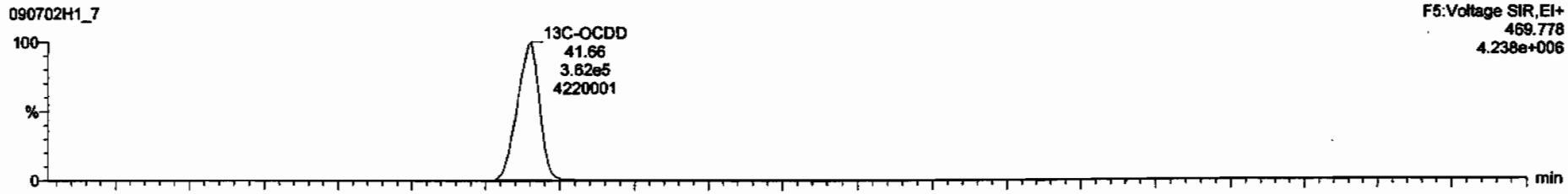

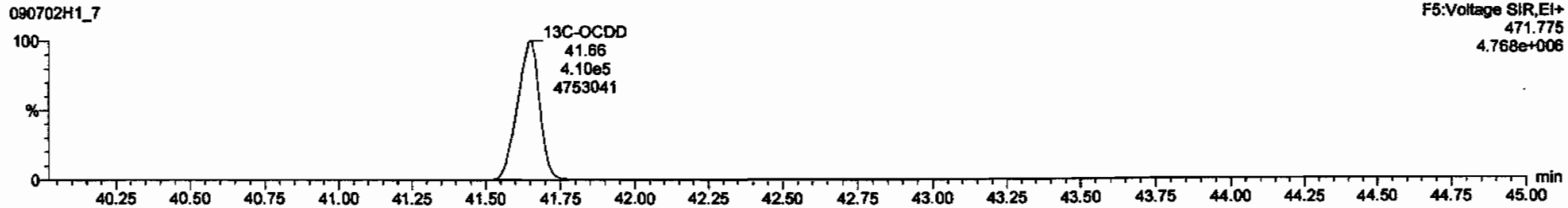

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

2,3,7,8-TCDF

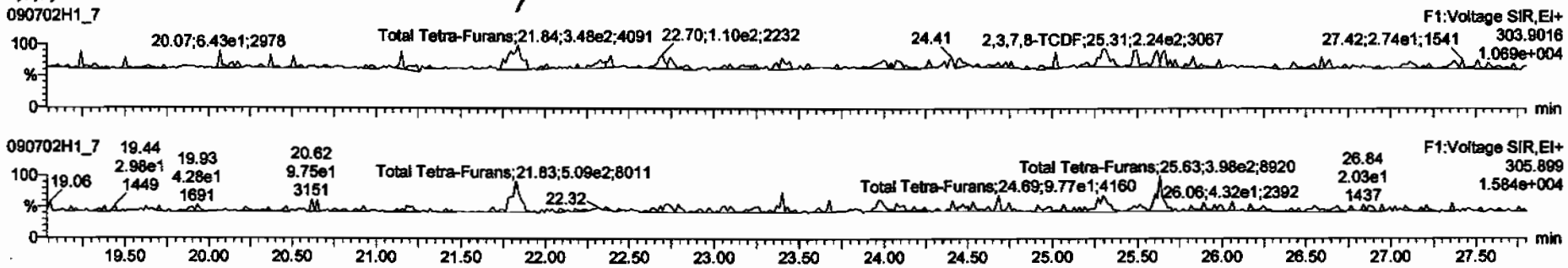

13C-2,3,7,8-TCDF

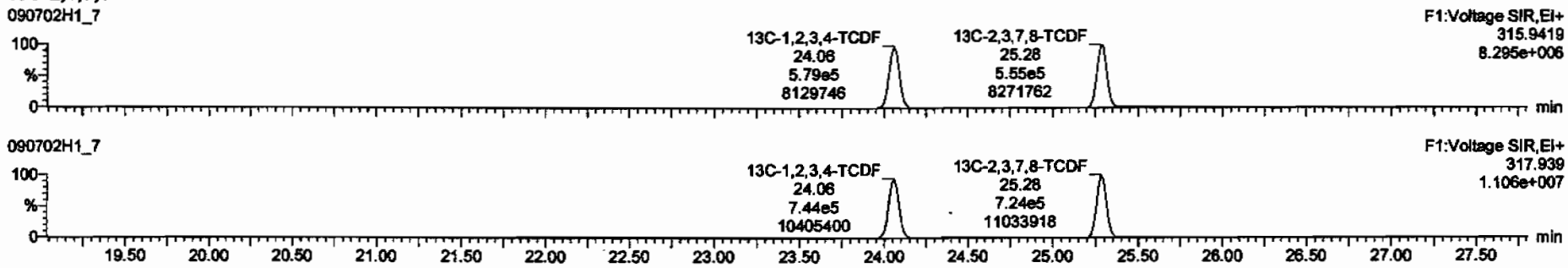

DPE1

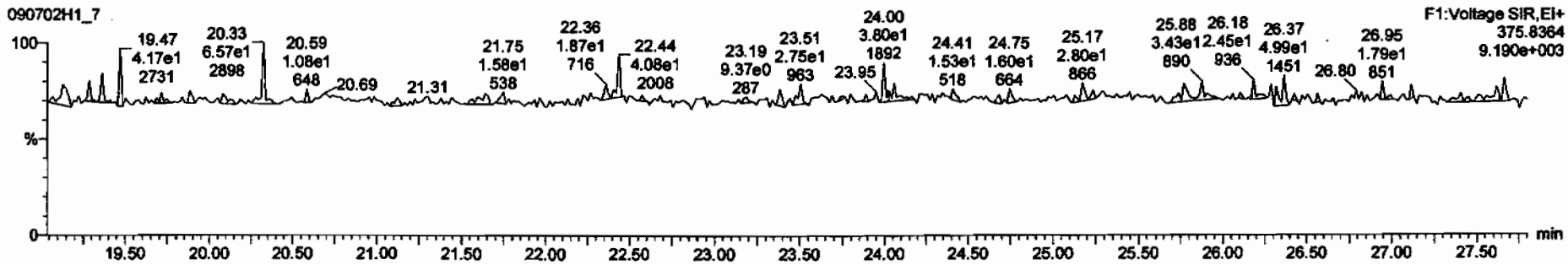

TargetLynx - 090702h1-7.qld * - [Chromatogram]

090702H1_7 - 31846_2214_001 CAMO-09-9946 12.7 - CAMO-09-9946

Total Tetra-Furans	21.84	3.482e2	5.089e2	0.68	NO	0.12126	0.12126

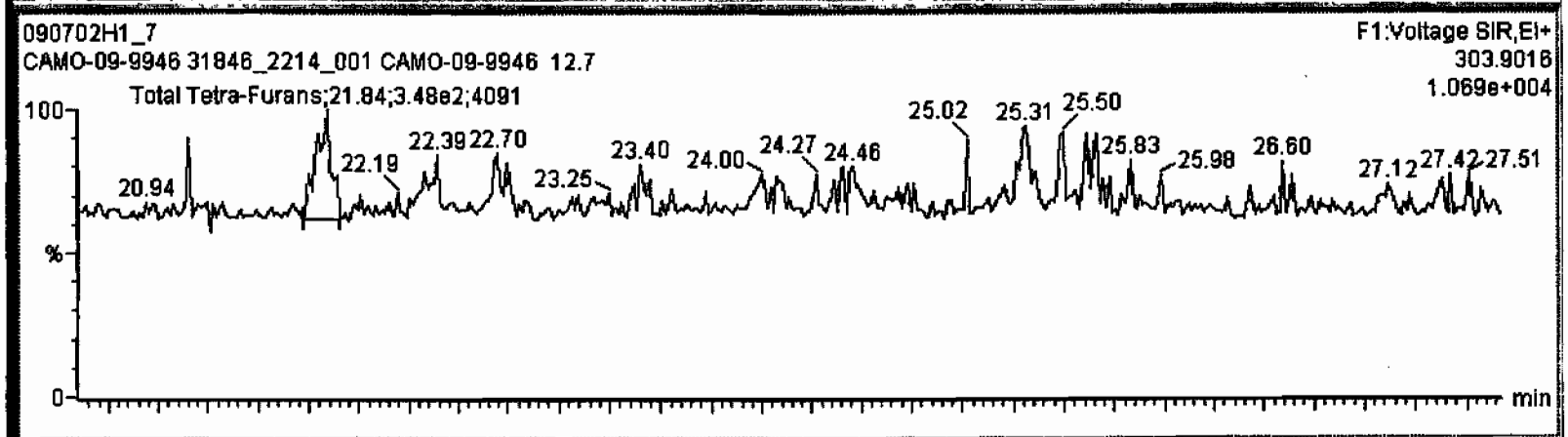

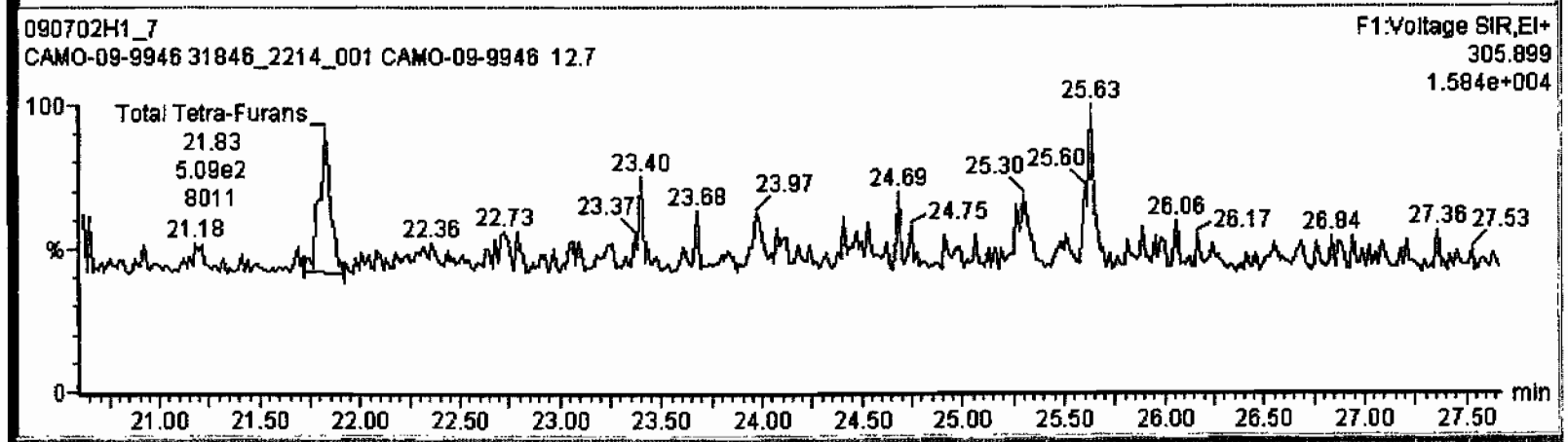

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

1st Func. Penta-Furans

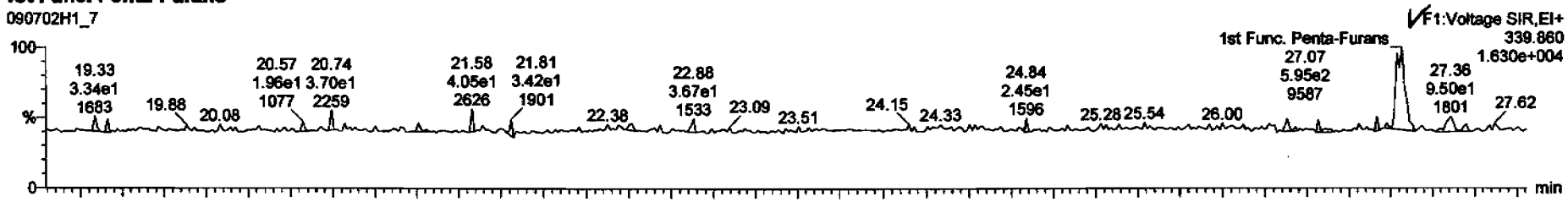

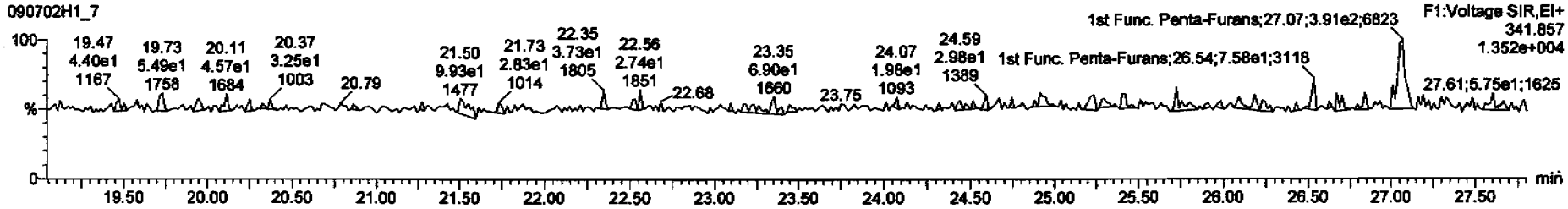

DPE6

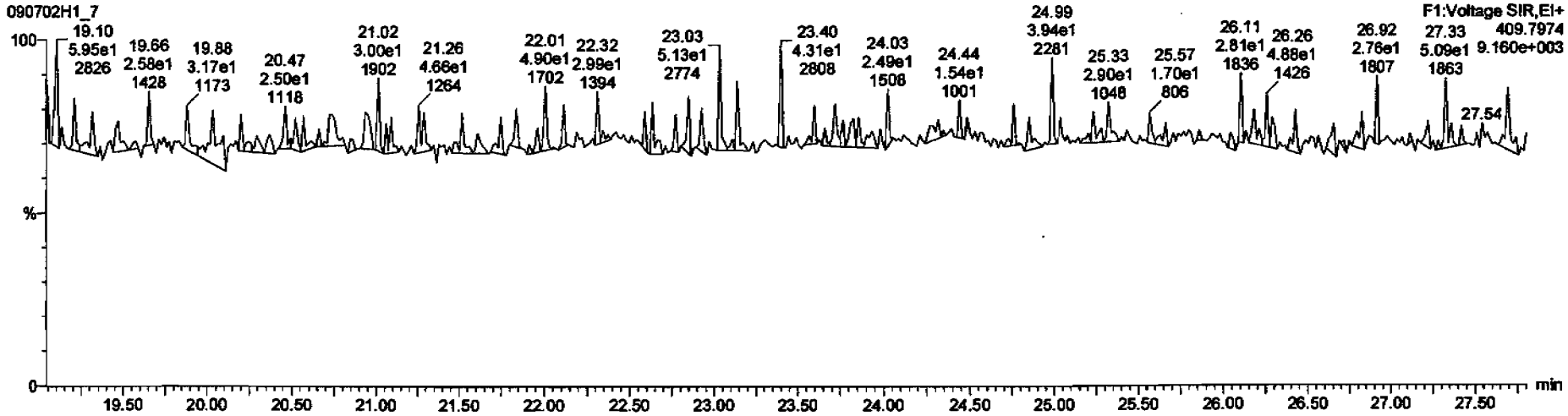

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

1,2,3,7,8-PeCDF

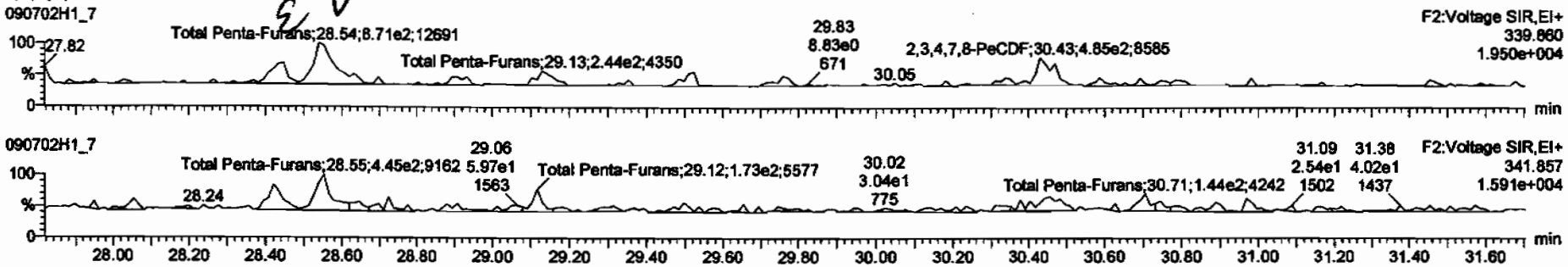

13C-1,2,3,7,8-PeCDF

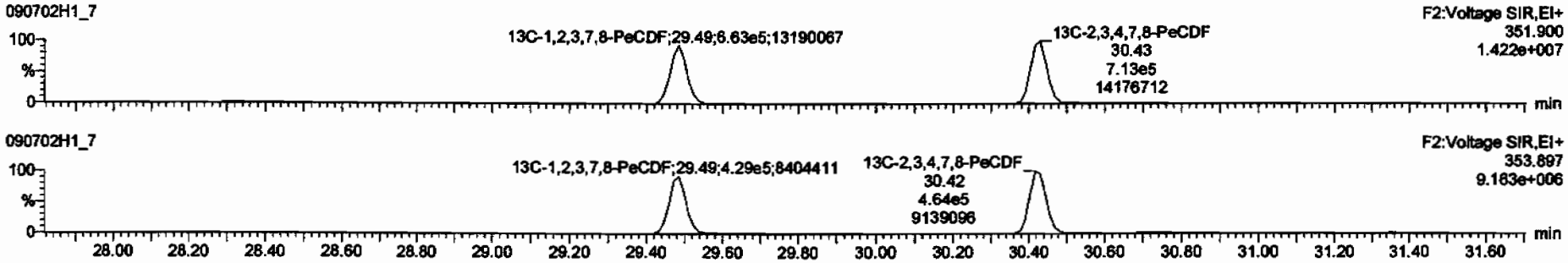

DPE2

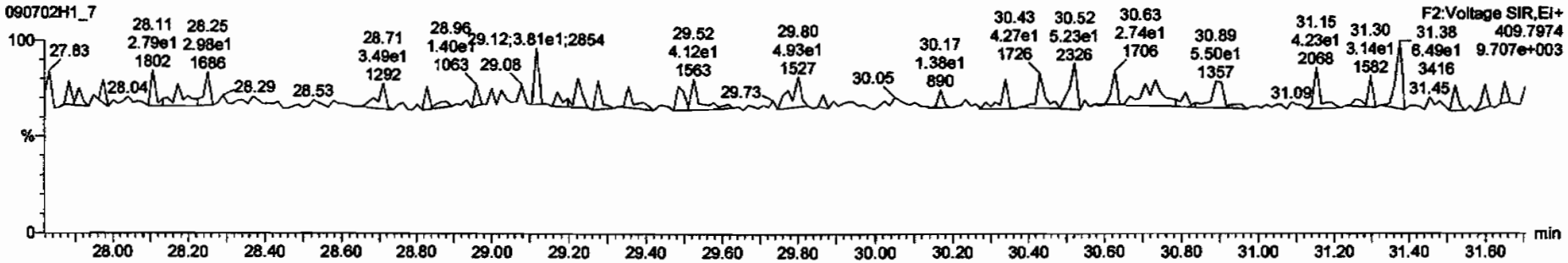

TargetLynx - 090702h1-7.qld * - [Chromatogram]

090702H1_7 - 31846_2214_001 CAMO-09-9946 12.7 - CAMO-09-9946

Name	RT	Area	Height	RA	PAV	Conc	Resp
Total Penta-Furans	28.45	3.586e2	2.965e2	1.21	YES	0.088299	0.00000
Total Penta-Furans	28.54	8.711e2	5.291e2	1.65	NO	0.20957	0.20957

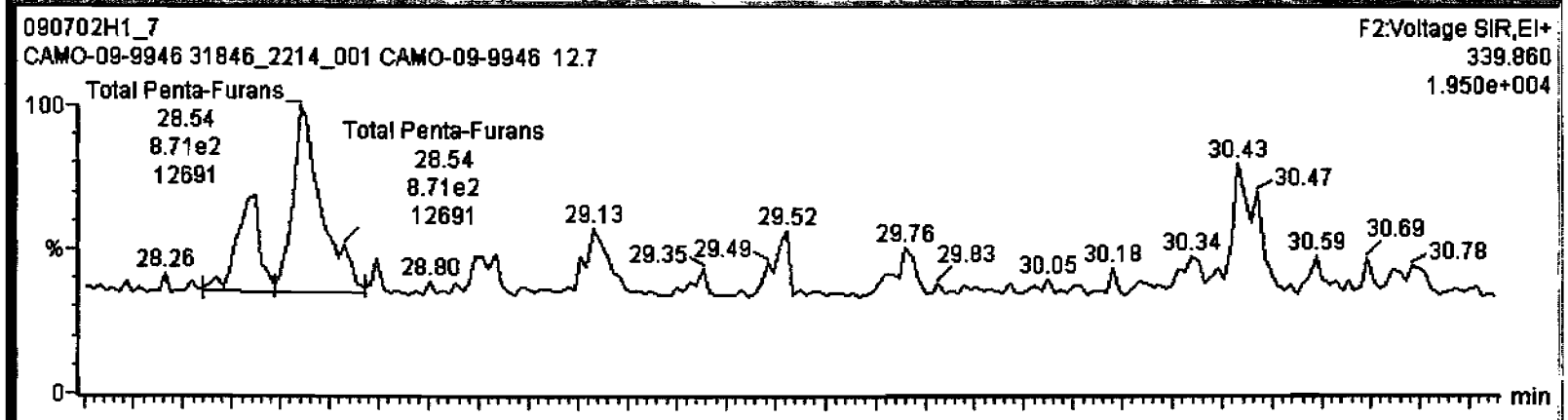

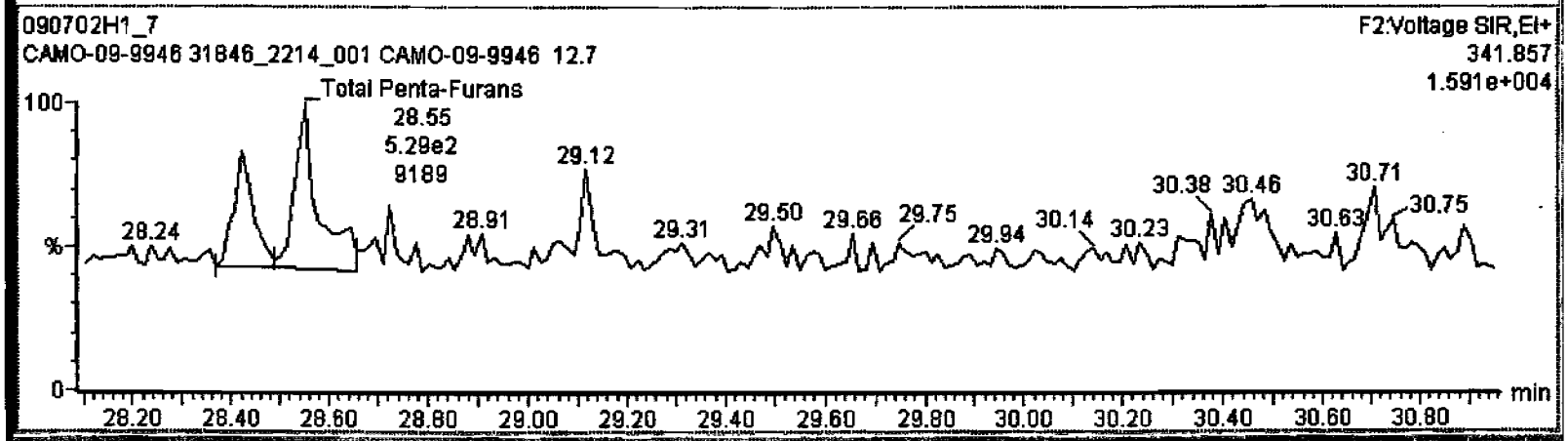

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

1,2,3,4,7,8-HxCDF ✓

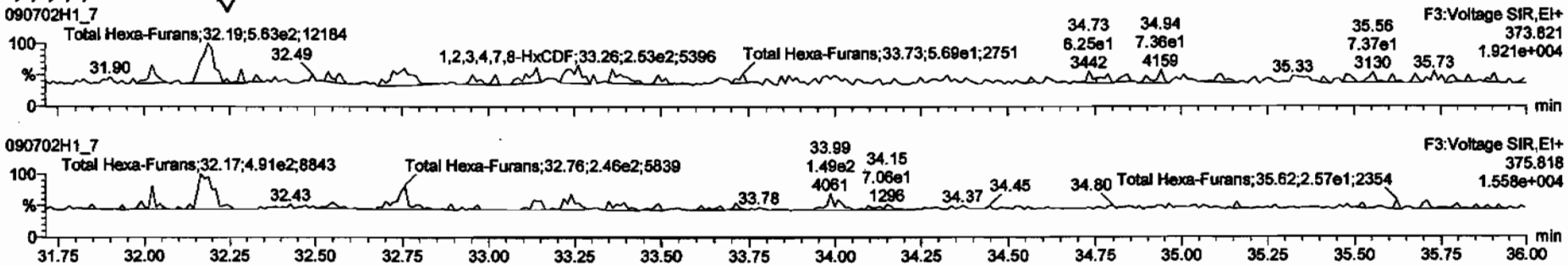

13C-1,2,3,4,7,8-HxCDF

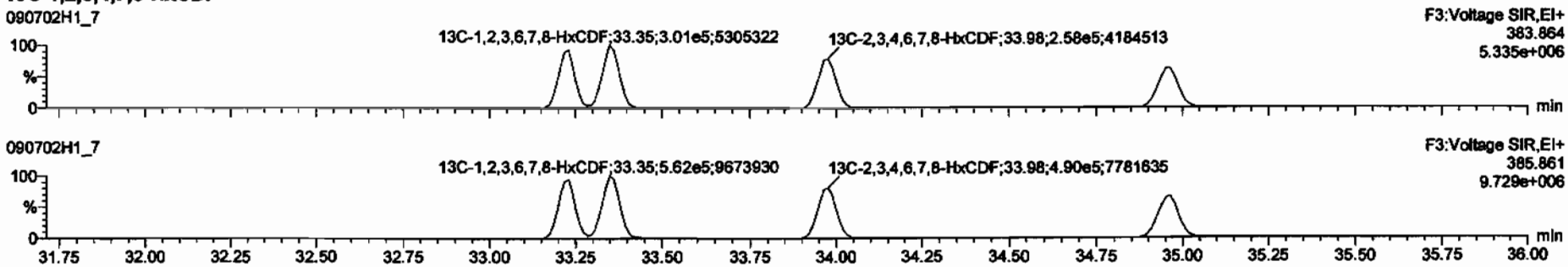

DPE3

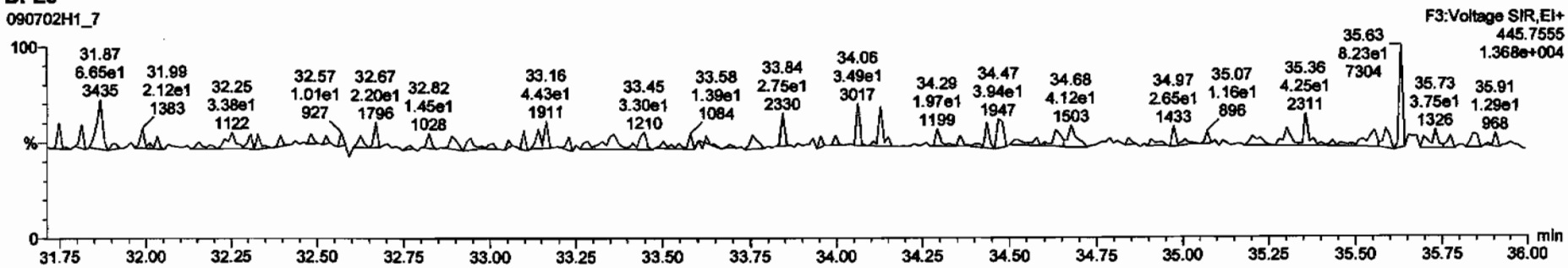

TargetLynx - 090702h1-7.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090702H1_7 - 31846_2214_001 CAMO-09-9946 12.7 - CAMO-09-9946

Total Hexa-Furans	32.19	5.633e2	4.907e2	1.15	NO	0.21170	0.21170

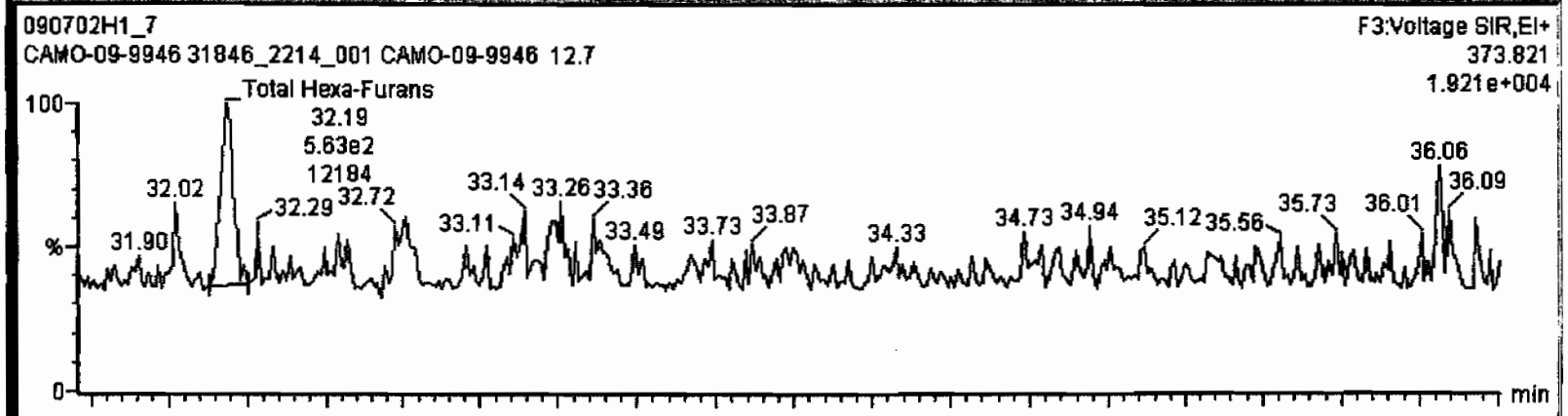

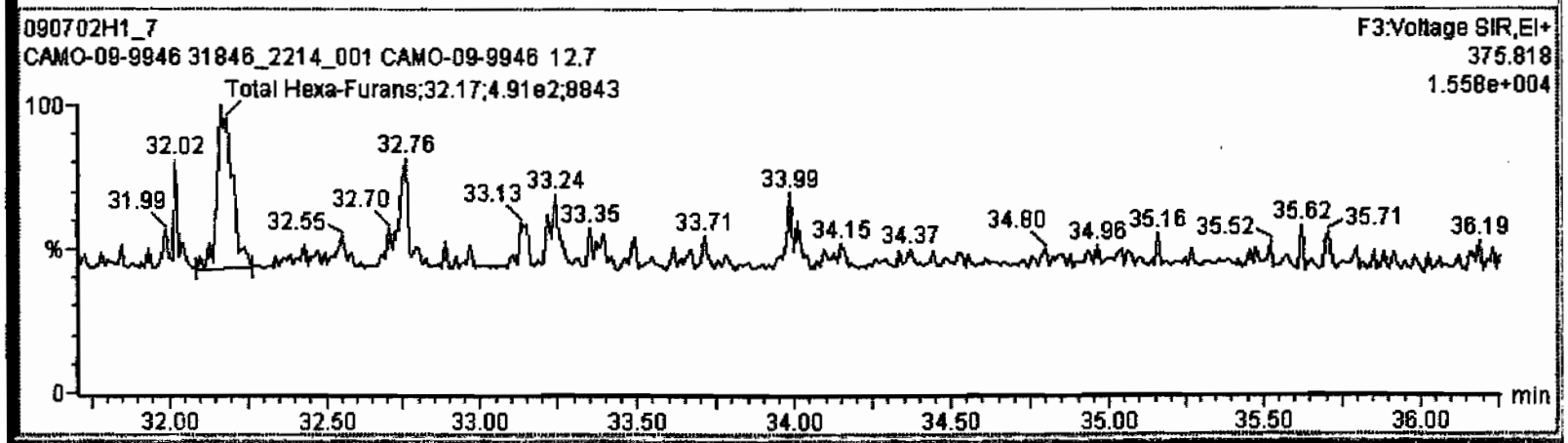

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

1,2,3,4,6,7,8-HpCDF

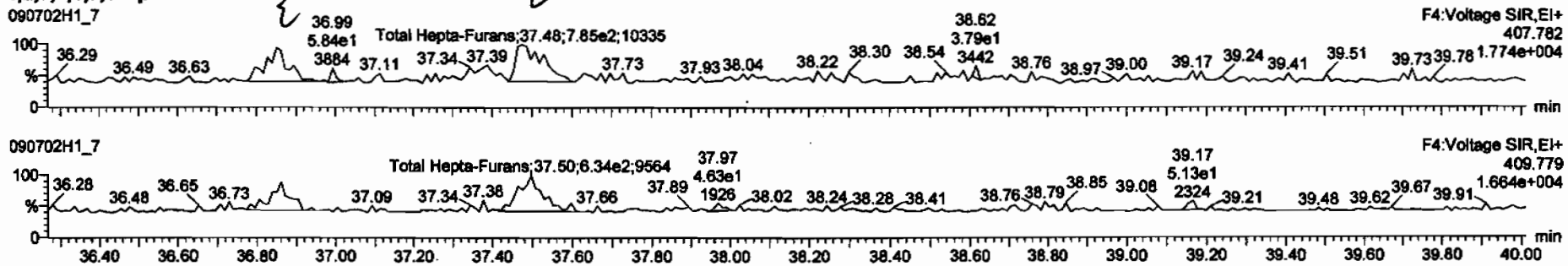

13C-1,2,3,4,6,7,8-HpCDF

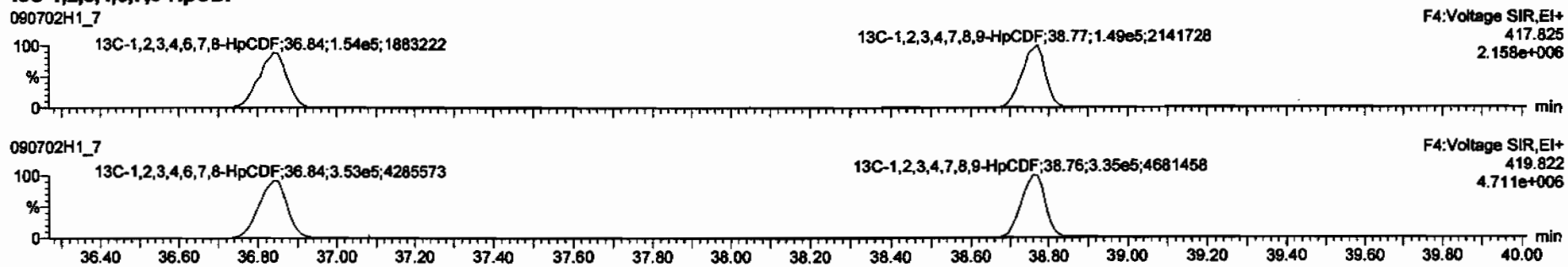

DPE4

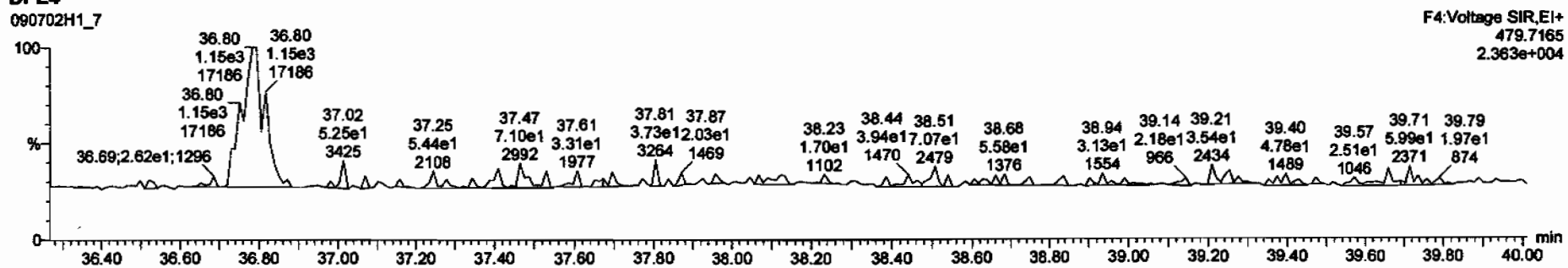

TargetLynx - 090702h1-7.qld * - [Chromatogram]

090702H1_7 - 31846_2214_001 CAMO-09-9946 12.7 - CAMO-09-9946

Name	RT	Area	Height	Ratio	Pass	Error	Conc
1,2,3,4,6,7,8-HpCDF	36.85	6.140e2	4.717e2	1.30	YES	0.22129	0.00000
Total Hepta-Furans	37.48	8.017e2	6.613e2	1.21	YES	0.31760	0.00000

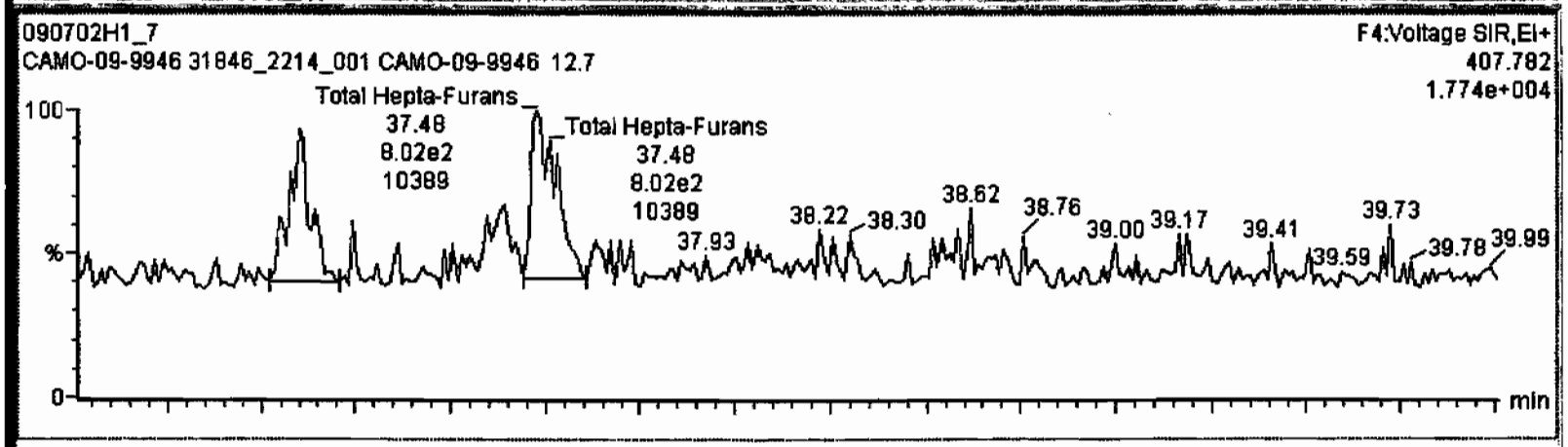

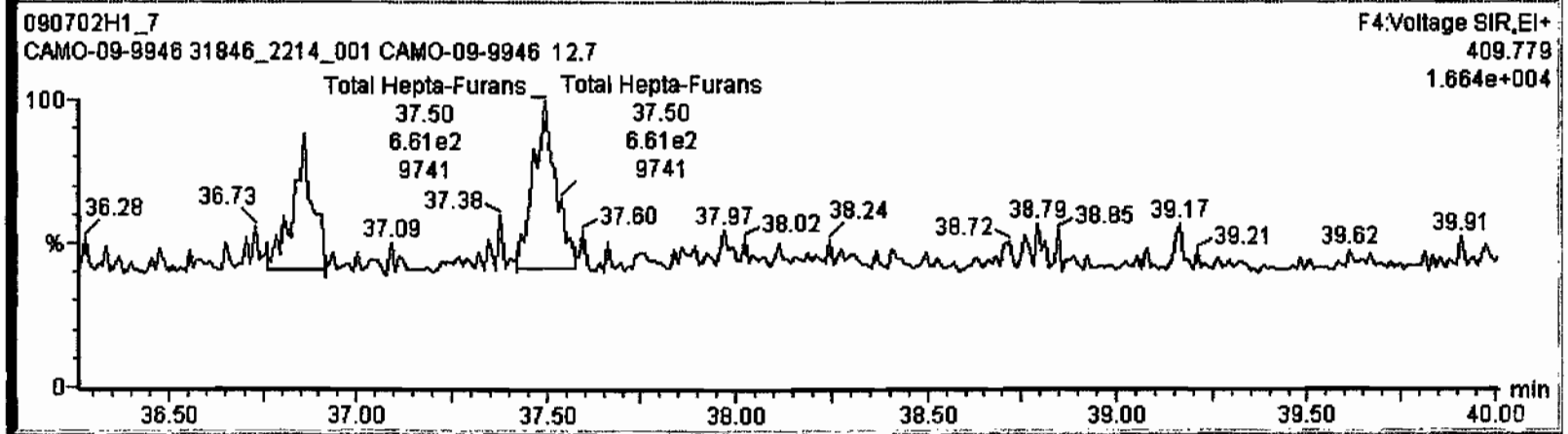

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

OCDF

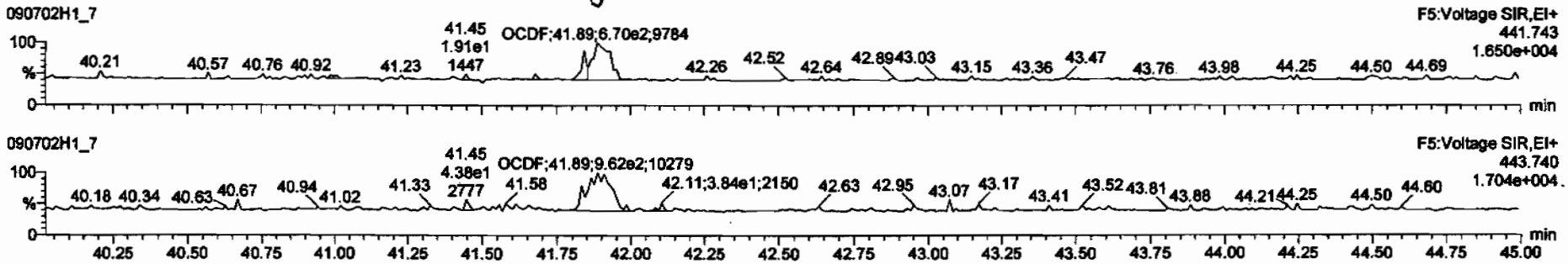

13C-OCDF

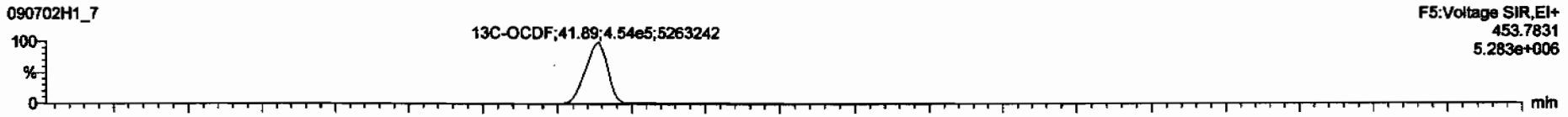

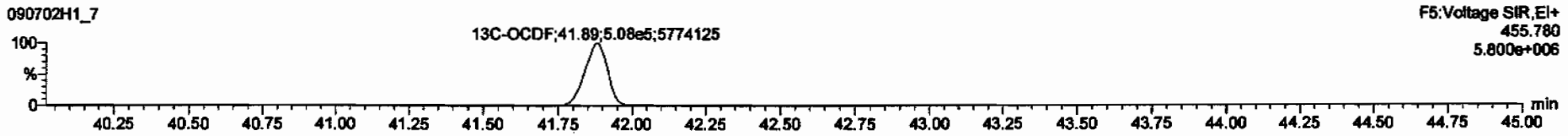

DPE5

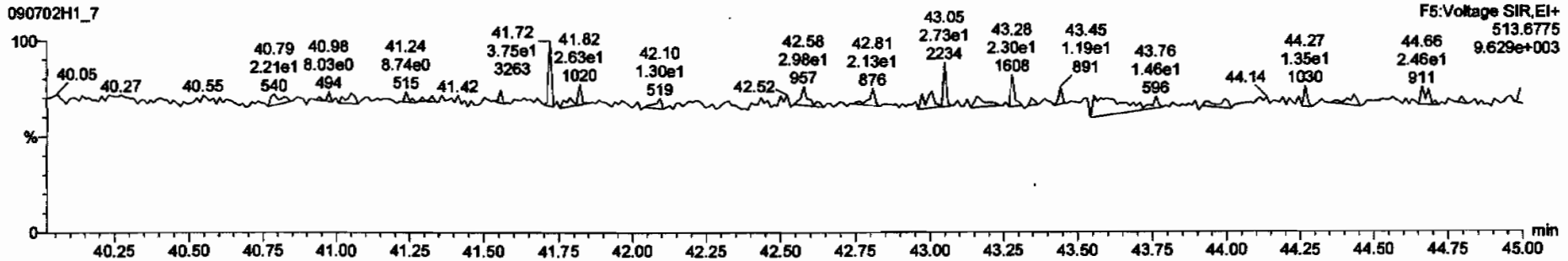

TargetLynx - 090702h1-7.qld * - [Chromatogram]

090702H1_7 - 31846_2214_001 CAMO-09-9946 12.7 - CAMO-09-9946

13C-2,3,7,8-TCDD	9.44e5	0.79	NO	1.01	10.160	26.06	1.023	191	97.1	0.279	
13C-1,2,3,7,8-PeCDD	7.69e5	0.63	NO	0.83	10.160	30.71	1.205	191	97.0	0.293	
13C-1,2,3,4,7,8-HxCDD	6.12e5	1.25	NO	0.92	10.160	34.14	0.988	162	92.4	0.475	
13C-1,2,3,6,7,8-HxCDD	5.49e5	1.26	NO	0.92	10.160	34.26	0.991	162	82.4	0.472	

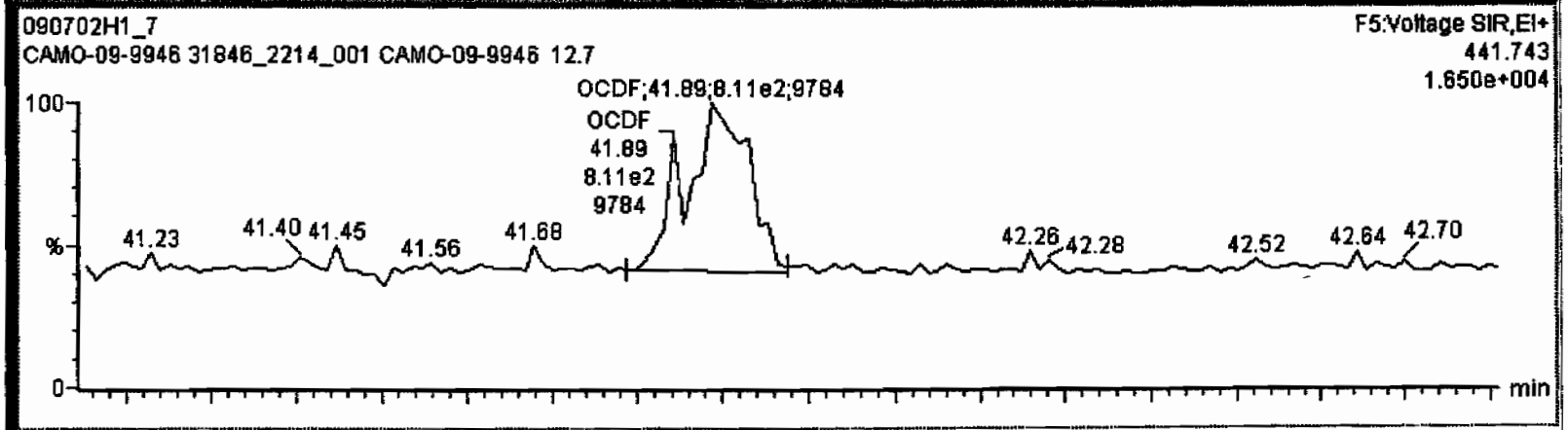

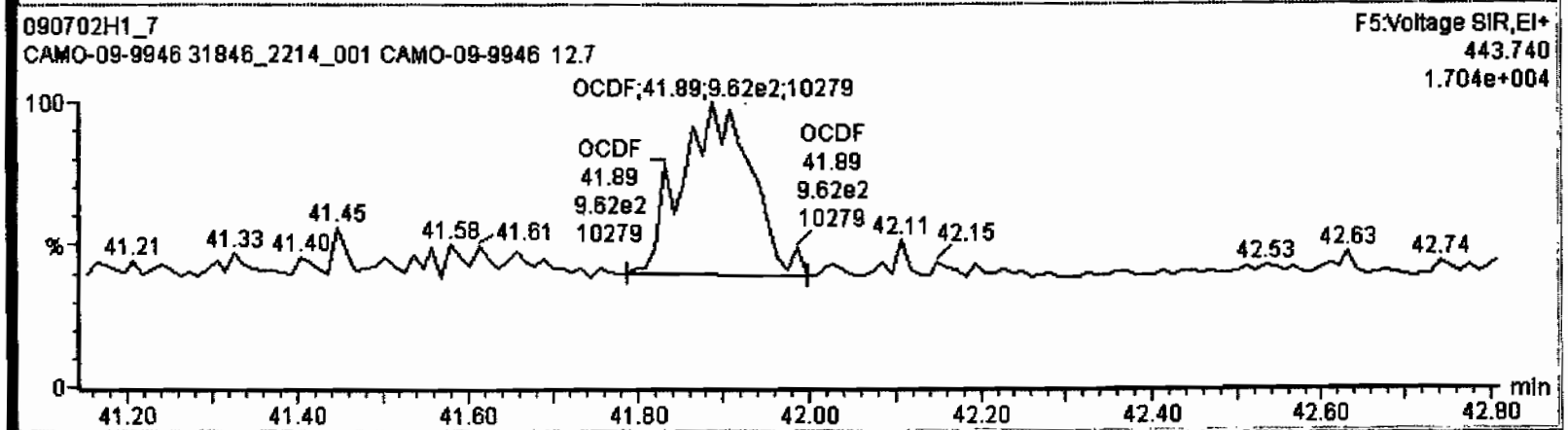

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-7.qld

Last Altered: Monday, July 06, 2009 13:15:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:02 Pacific Daylight Time

Name: 090702H1_7, Date: 02-Jul-2009, Time: 19:20:36, ID: 31846_2214_001 CAMO-09-9946 12.7, Description: CAMO-09-9946

PFK1

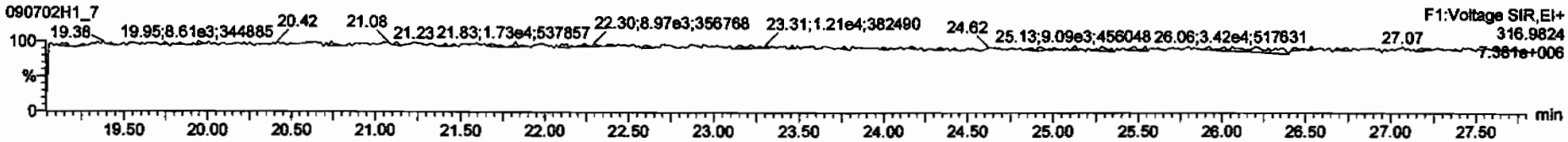

PFK2

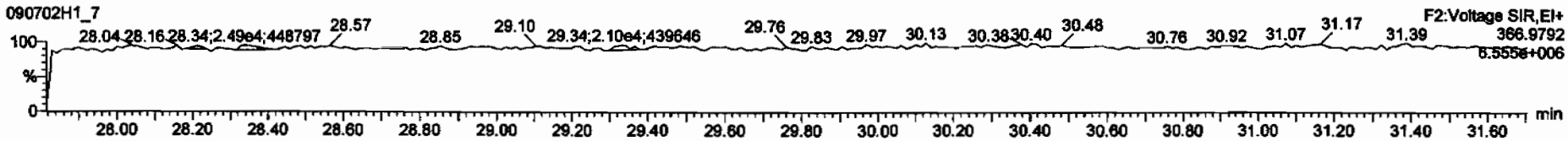

PFK3

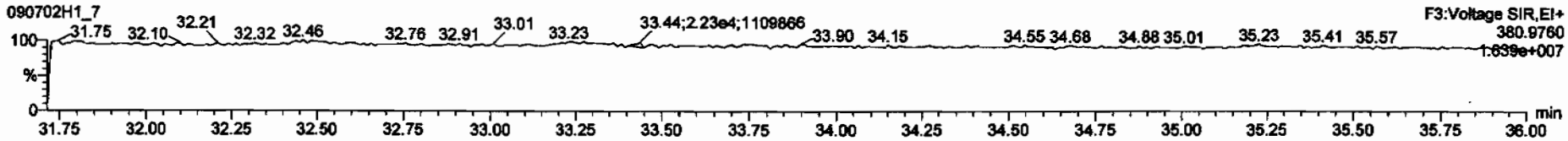

PFK4

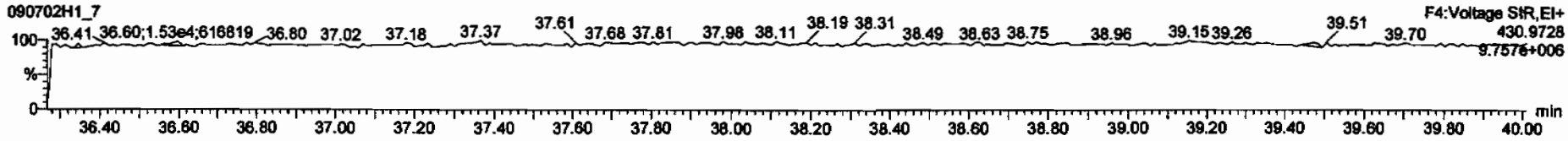

PFK5

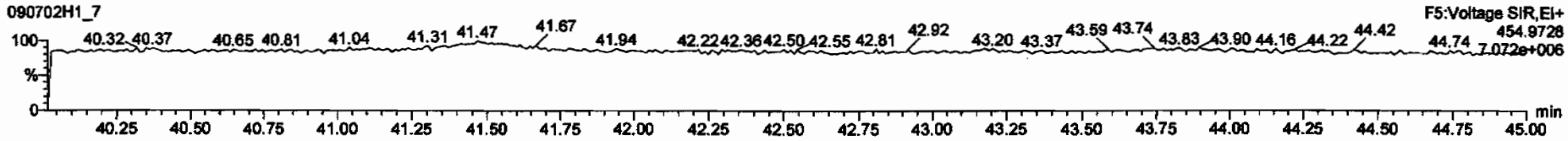

CALIBRATION DATA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

CCAL ID: ST090702H1-1

GC Column ID: DB-5
Analysis Date: 02-Jul-09 Analysis Time: 14:22:39

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	9.09	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	45.5	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	45.5	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	45.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	NO	43.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	90.1	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	NO	8.34	8.4	12.0	No	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	41.5	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	41.7	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	44.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.7	44.0	57.0	No	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.8	44.0	57.0	No	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.8	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.4	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	45.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.90	0.76-1.02	NO	87.8	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/2/09

8290 only

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

CCAL ID: ST090702H1-1

GC Column ID: DB-5
Analysis Date: 02-Jul-09 Analysis Time: 14:22:39

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	107	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	99.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	93.1	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	105	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.90	0.76-1.02	NO	226	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	NO	103	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	NO	97.5	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	104	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	93.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	94.8	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	96.5	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	NO	93.4	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	98.9	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.89	0.76-1.02	NO	206	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.96	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/2/09

8290 only

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:05:37 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:05:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.70
2	1,2,8,9-TCDD (Last)	26.95
3	1,2,4,7,9-PeCDD (First)	28.58
4	1,2,3,8,9-PeCDD (Last)	31.09
5	12,4,6,7,9-HxCDD (First)	32.56
6	1,2,3,7,8,9-HxCDD (Last)	34.57
7	1,2,3,4,6,7,9-HpCDD (First)	37.27
8	1,2,3,4,6,7,8-HpCDD (Last)	38.20
9	1,3,6,8-TCDF (First)	20.60
10	1,2,8,9-TCDF (Last)	27.12
11	1,3,4,6,8-PeCDF (First)	27.02
12	1,2,3,8,9-PeCDF (Last)	31.35
13	1,2,3,4,6,8-HxCDF (First)	32.01
14	1,2,3,4,8,9-HxCDF (Last)	34.96
15	1,2,3,4,6,7,8-HpCDF (First)	36.84
16	1,2,3,4,7,8,9-HpCDF (Last)	38.77

7/2/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090702H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090702H1_1

Analysis Date: 02-Jul-09

Analysis Time: 14:22:39

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/2/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

CCAL ID: ST090702H1-1

GC Column ID: DB-5
Analysis Date: 02-Jul-09

Analysis Time: 14:22:39

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.962	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.012	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/2/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:16:13 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	6.17e4	0.79	NO	1.08	1.000	26.08	1.001	9.0888	90.9	0.0376	9.0888
2	1,2,3,7,8-PeCDD	2.25e5	0.61	NO	1.03	1.000	30.72	1.000	45.521	91.0	0.0790	45.521
3	1,2,3,4,7,8-HxCDD	1.91e5	1.23	NO	1.00	1.000	34.15	1.001	45.479	91.0	0.198	45.479
4	1,2,3,6,7,8-HxCDD	1.96e5	1.26	NO	1.13	1.000	34.26	1.000	45.639	91.3	0.208	45.639
5	1,2,3,7,8,9-HxCDD	2.08e5	1.23	NO	1.10	1.000	34.57	1.009	47.045	94.1	0.196	47.045
6	1,2,3,4,6,7,8-HpCDD	1.54e5	1.02	NO	1.06	1.000	38.20	1.000	43.741	87.5	0.248	43.741
7	OCDD	2.69e5	0.90	NO	1.18	1.000	41.66	1.001	90.062	90.1	0.200	90.062
8	2,3,7,8-TCDF	8.19e4	0.75	NO	1.09	1.000	25.30	1.001	8.3365	83.4	0.0318	8.3365
9	1,2,3,7,8-PeCDF	3.82e5	1.58	NO	1.16	1.000	29.48	1.000	41.481	83.0	0.0940	41.481
10	2,3,4,7,8-PeCDF	3.53e5	1.57	NO	1.12	1.000	30.43	1.000	41.664	83.3	0.0968	41.664
11	1,2,3,4,7,8-HxCDF	3.37e5	1.25	NO	1.41	1.000	33.23	1.000	44.011	88.0	0.103	44.011
12	1,2,3,6,7,8-HxCDF	3.36e5	1.26	NO	1.22	1.000	33.36	1.001	43.657	87.3	0.108	43.657
13	2,3,4,6,7,8-HxCDF	2.96e5	1.27	NO	1.28	1.000	33.98	1.000	43.754	87.5	0.132	43.754
14	1,2,3,7,8,9-HxCDF	2.56e5	1.26	NO	1.26	1.000	34.96	1.000	44.823	89.6	0.172	44.823
15	1,2,3,4,6,7,8-HpCDF	2.71e5	1.05	NO	1.69	1.000	36.84	1.000	44.449	88.9	0.201	44.449
16	1,2,3,4,7,8,9-HpCDF	2.16e5	1.05	NO	1.48	1.000	38.77	1.000	45.539	91.1	0.218	45.539
17	OCDF	3.35e5	0.90	NO	1.10	1.000	41.89	1.001	87.818	87.8	0.124	87.818
18	13C-2,3,7,8-TCDD	6.30e5	0.79	NO	1.01	1.000	26.05	1.022	106.82	107	0.144	
19	13C-1,2,3,7,8-PeCDD	4.79e5	0.63	NO	0.827	1.000	30.71	1.205	99.713	99.7	0.123	
20	13C-1,2,3,4,7,8-HxCDD	4.20e5	1.27	NO	0.916	1.000	34.13	0.988	102.85	103	0.305	
21	13C-1,2,3,6,7,8-HxCDD	3.82e5	1.25	NO	0.921	1.000	34.25	0.991	93.129	93.1	0.303	
22	13C-1,2,3,4,6,7,8-HpCDD	3.31e5	1.05	NO	0.708	1.000	38.19	1.105	104.78	105	0.497	
23	13C-OCDD	5.07e5	0.90	NO	0.503	1.000	41.63	1.205	226.08	113	0.384	
24	13C-2,3,7,8-TCDF	9.03e5	0.78	NO	0.977	1.000	25.28	0.992	106.98	107	0.123	
25	13C-1,2,3,7,8-PeCDF	7.95e5	1.55	NO	0.896	1.000	29.47	1.157	102.56	103	0.208	
26	13C-2,3,4,7,8-PeCDF	7.58e5	1.54	NO	0.900	1.000	30.42	1.194	97.527	97.5	0.208	
27	13C-1,2,3,4,7,8-HxCDF	5.42e5	0.52	NO	1.17	1.000	33.22	0.962	104.03	104	0.386	
28	13C-1,2,3,6,7,8-HxCDF	6.30e5	0.51	NO	1.52	1.000	33.34	0.965	93.007	93.0	0.297	
29	13C-2,3,4,6,7,8-HxCDF	5.28e5	0.52	NO	1.25	1.000	33.96	0.983	94.807	94.8	0.361	
30	13C-1,2,3,7,8,9-HxCDF	4.53e5	0.51	NO	1.05	1.000	34.95	1.012	96.548	96.5	0.428	

7/2/07

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:16:13 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	3.62e5	0.45	NO	0.868	1.000	36.83	1.066	93.417	93.4	0.449
32	13C-1,2,3,4,7,8,9-HpCDF	3.20e5	0.45	NO	0.727	1.000	38.76	1.122	98.909	98.9	0.536
33	13C-OCDF	6.97e5	0.89	NO	0.760	1.000	41.86	1.212	205.67	103	0.232
34	37Cl-2,3,7,8-TCDD	3.86e4			0.668	1.000	26.08	1.023	9.9558	99.6	0.0608
35	13C-1,2,3,4-TCDD	5.81e5	0.78	NO	1.00	1.000	25.48	0.000	100.00	100	0.146
36	13C-1,2,3,4-TCDF	8.64e5	0.79	NO	1.00	1.000	24.06	0.000	100.00	100	0.120
37	13C-1,2,3,7,8,9-HxCDD	4.46e5	1.25	NO	1.00	1.000	34.55	0.000	100.00	100	0.279

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 06:54:46 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:05:01 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 2,3,7,8-TCDD

090702H1_1	ST090702H1-1 1613 CS3 080917I	02-Jul-09	14:22:39
090702H1_2	0_2214_OPR001	02-Jul-09	15:13:01
090702H1_3	solvent blank	02-Jul-09	16:02:37
090702H1_4	0_2214_MB001	02-Jul-09	16:52:06
090702H1_5	31845_2214_001 CAMO-09-10464 10.61	02-Jul-09	17:41:36
090702H1_6	31845_2214_002 CAMO-09-10465 10.5	02-Jul-09	18:31:05
090702H1_7	31846_2214_001 CAMO-09-9946 12.7	02-Jul-09	19:20:36
090702H1_8	31847_2214_001 CAMO-09-6518 11.68	02-Jul-09	20:10:06
090702H1_9	31847_2214_002 CAMO-09-6519 13.07	02-Jul-09	20:59:34
090702H1_10	31847_2214_003 CAMO-09-6531 11.58	02-Jul-09	21:49:03
090702H1_11	31850_2214_001 CAMO-09-9941 11.19	02-Jul-09	22:38:41
090702H1_12	31850_2214_002 CAMO-09-9942 11.32	02-Jul-09	23:28:16
090702H1_13	31850_2214_003 CAMO-09-9943 11.85	03-Jul-09	00:17:49
090702H1_14	31850_2214_004 CAMO-09-9989 12.48	03-Jul-09	01:07:22
090702H1_15	31850_2214_005 CAMO-09-10030 11.22	03-Jul-09	01:56:54
090702H1_16	solvent blank	03-Jul-09	02:46:25
090702H1_17	ST090702H1-2 1613 CS3 080917I	03-Jul-09	03:35:57

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090702HI-1

End Calibration ID: ST090702HI-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range?	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits	NA	
-S/N > 2.5:1		
-CS1 within 12-hour clock	✓	

Comments: 8290 only

Reviewed by: DMS 7/3/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 mh

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:20:01 Pacific Daylight Time

M 292.9824 R 14449

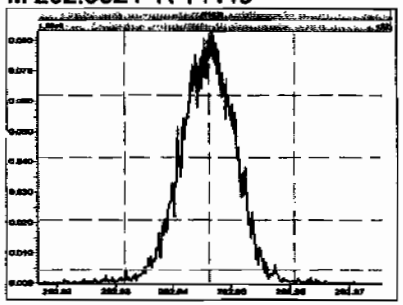

M 304.9824 R 14701

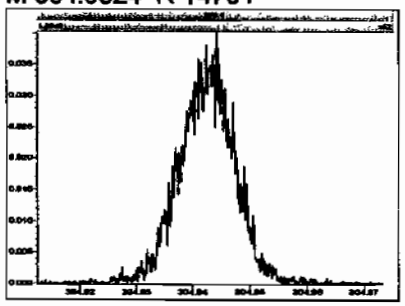

M 318.9792 R 14971

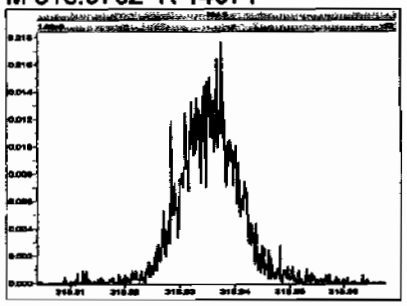

M 330.9792 R 13659

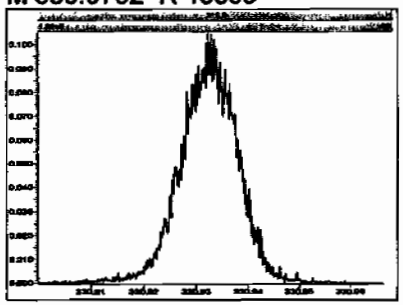

M 342.9792 R 12955

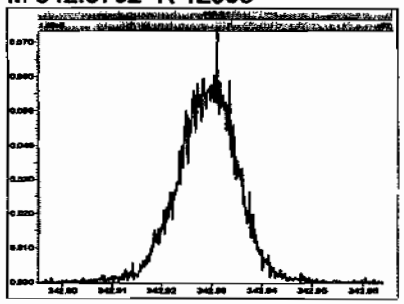

M 354.9792 R 13227

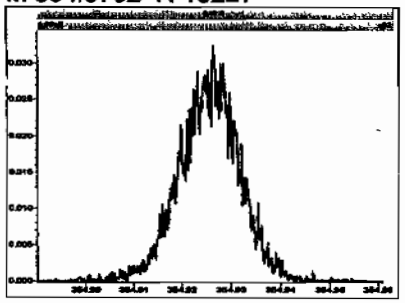

M 366.9792 R 13295

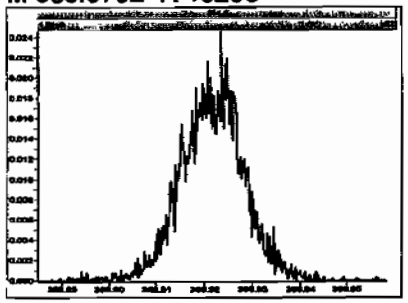

M 380.9760 R 13022

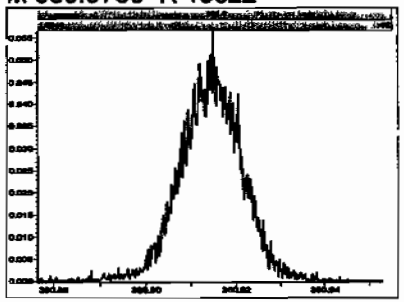

M 392.9760 R 12376

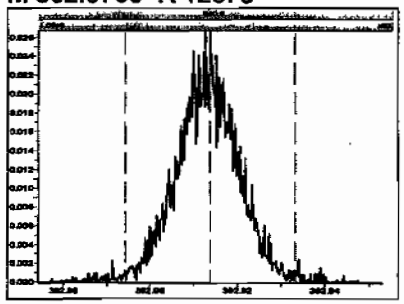

M 404.9760 R 13511

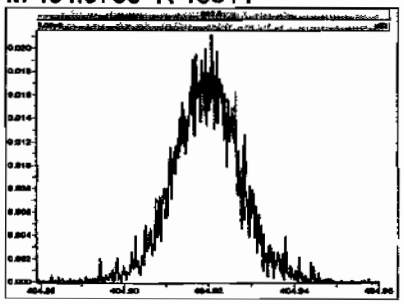

M 416.9760 R 12687

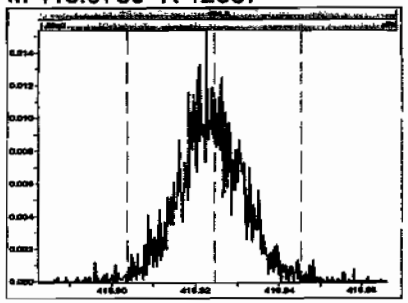

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:20:44 Pacific Daylight Time

M 330.9792 R 14285

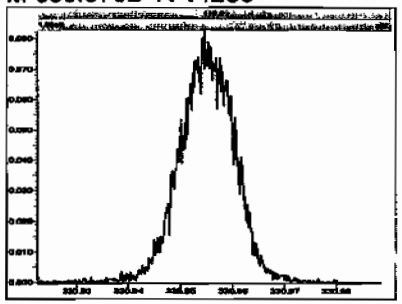

M 342.9792 R 14790

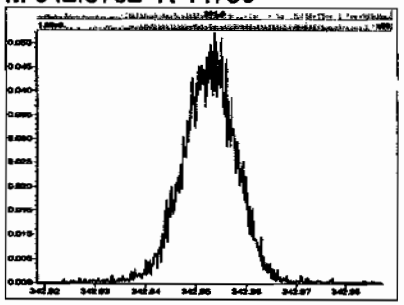

M 354.9792 R 14286

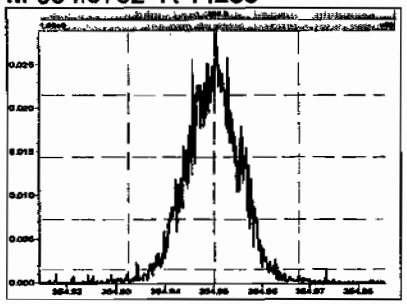

M 366.9792 R 14533

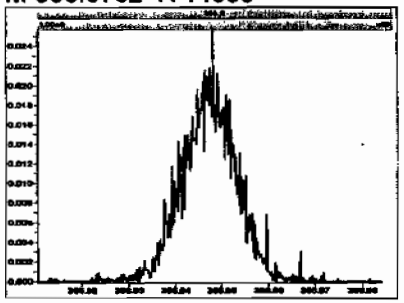

M 380.9760 R 14796

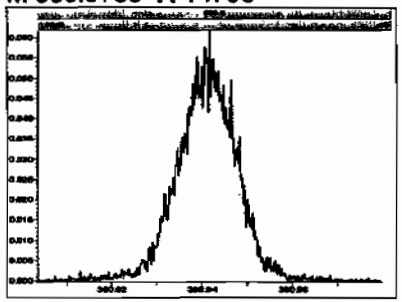

M 392.9760 R 13514

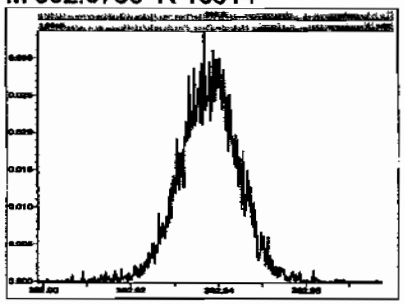

M 404.9760 R 13965

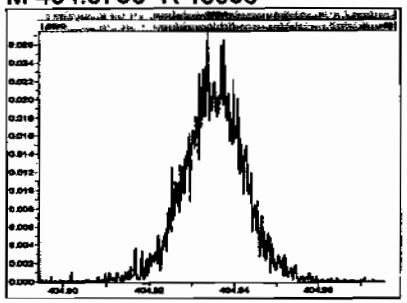

M 416.9760 R 14702

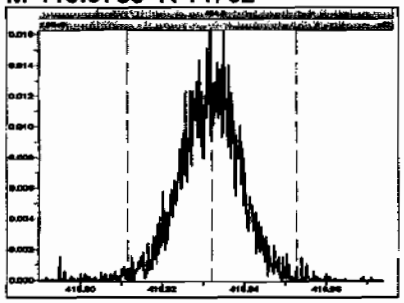

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:21:14 Pacific Daylight Time

M 366.9792 R 15527

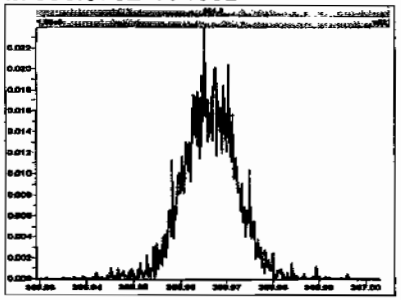

M 380.9760 R 14208

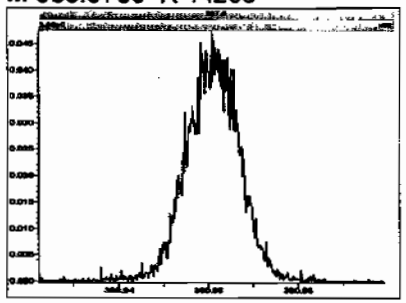

M 392.9760 R 14281

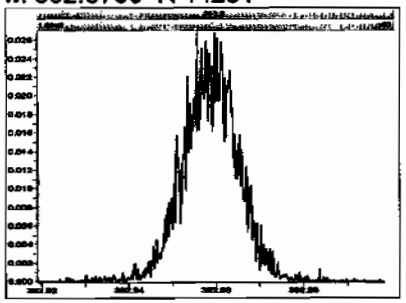

M 404.9760 R 16666

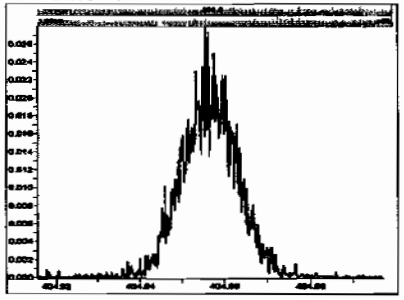

M 416.9760 R 13891

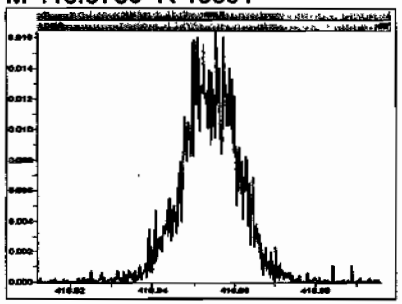

M 430.9728 R 13967

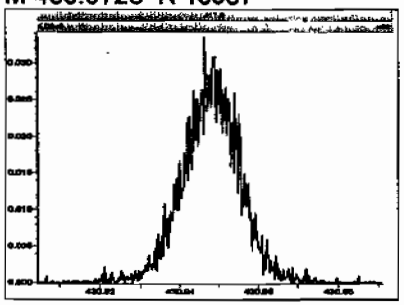

M 442.9728 R 14044

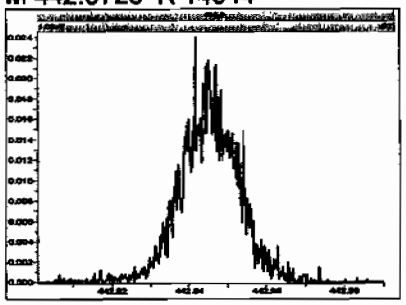

M 454.9728 R 15246

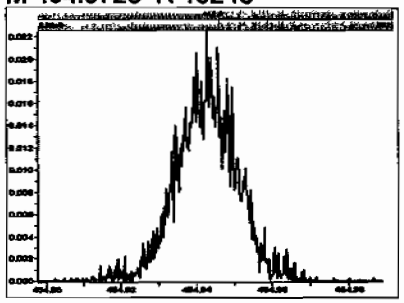

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:21:36 Pacific Daylight Time

M 404.9760 R 16887

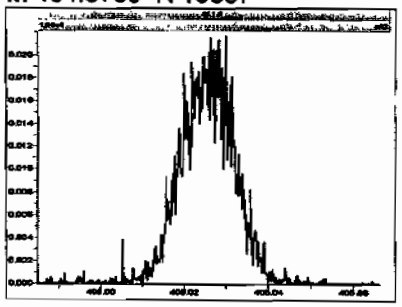

M 416.9760 R 16025

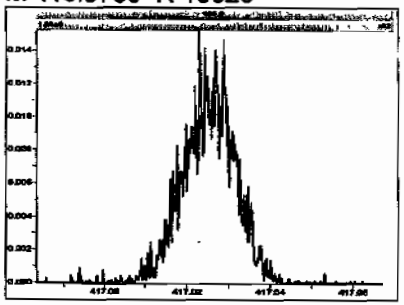

M 430.9728 R 15242

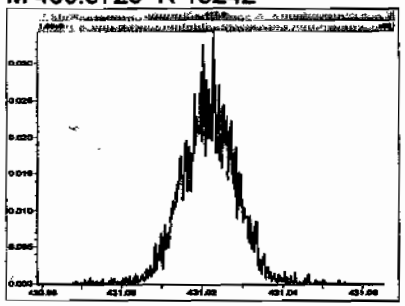

M 442.9728 R 15434

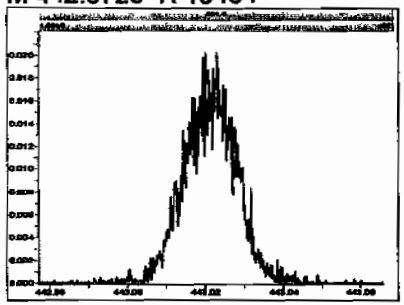

M 454.9728 R 15723

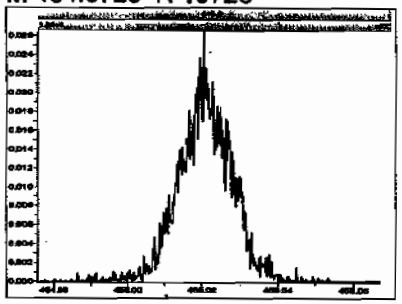

M 466.9728 R 16132

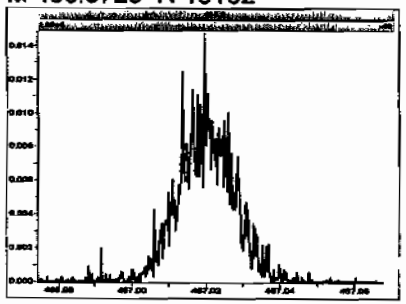

M 480.9696 R 16027

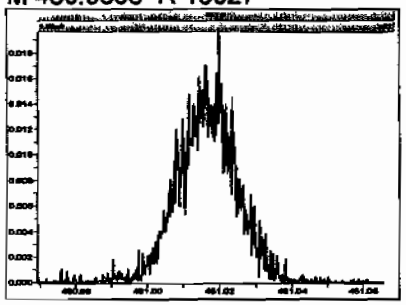

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:22:01 Pacific Daylight Time

M 430.9728 R 16025

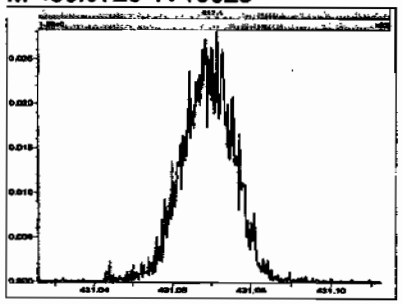

M 442.9728 R 14704

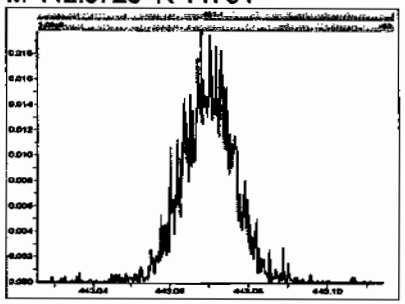

M 454.9728 R 16780

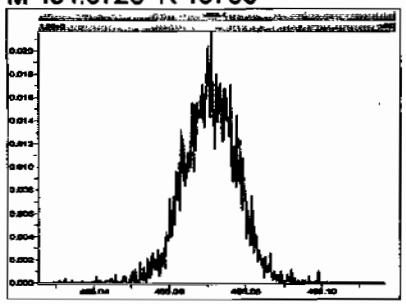

M 466.9728 R 17006

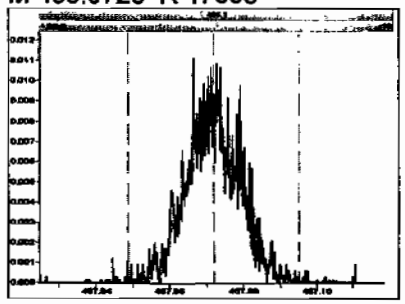

M 480.9696 R 14449

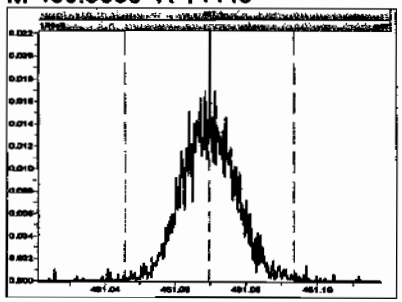

M 492.9696 R 14365

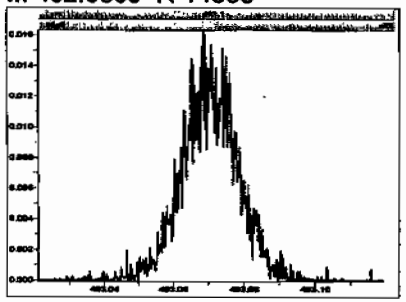

M 504.9696 R 16025

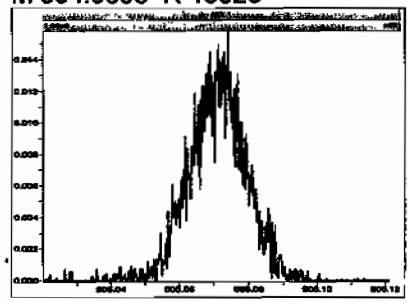

M 516.9697 R 15618

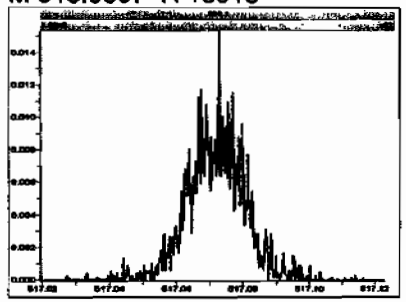

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:05:37 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:05:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

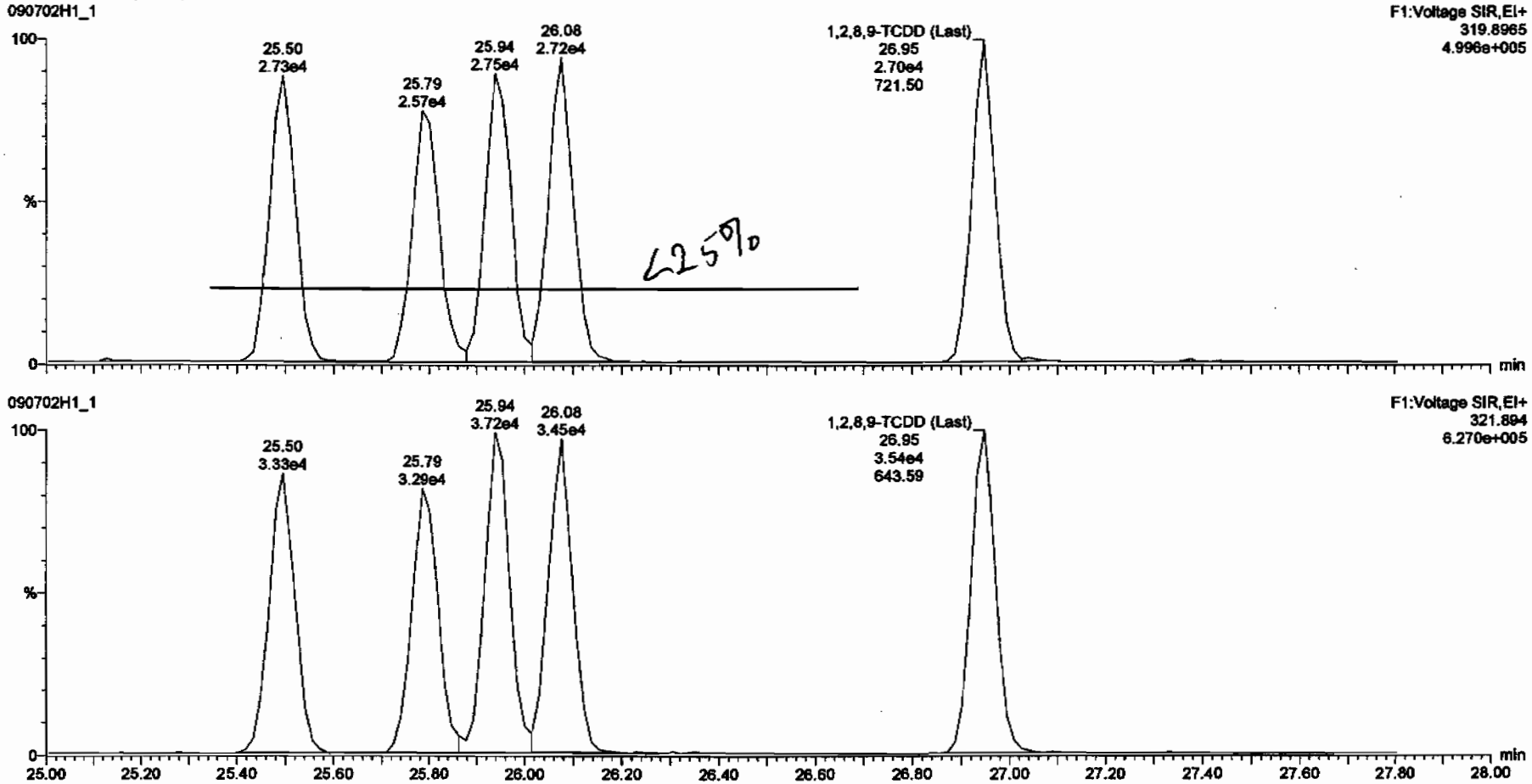

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

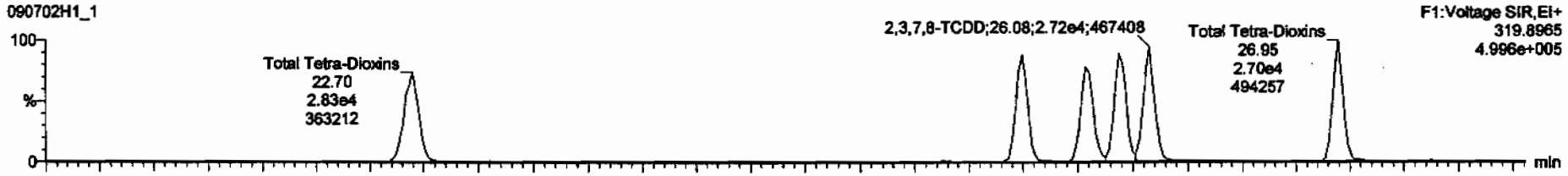

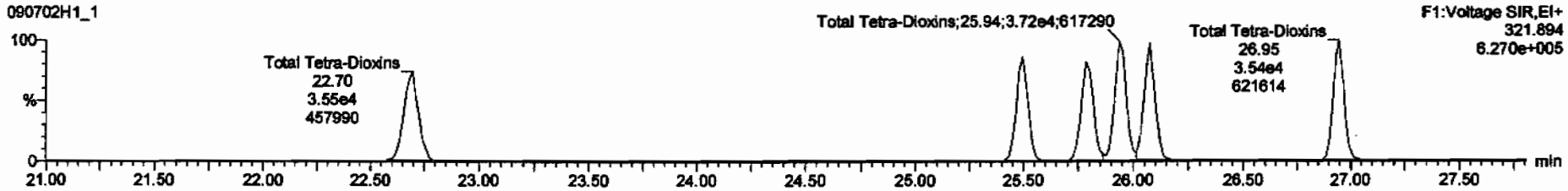

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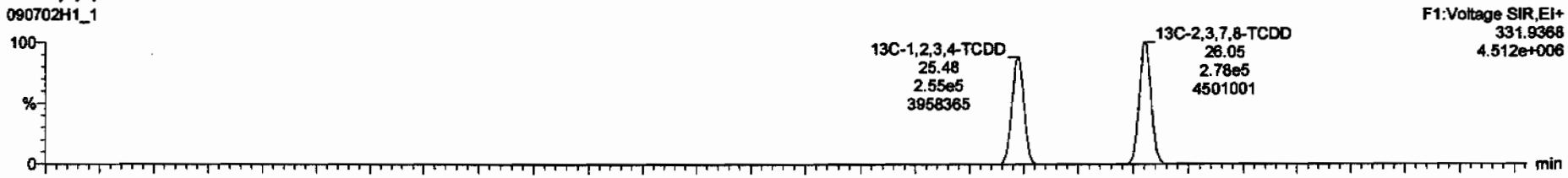

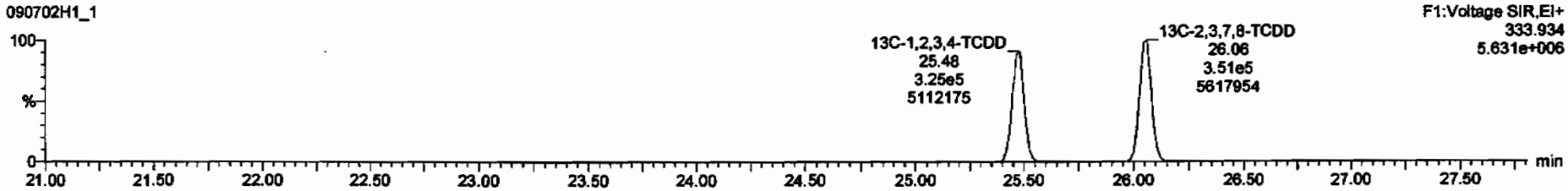

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Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

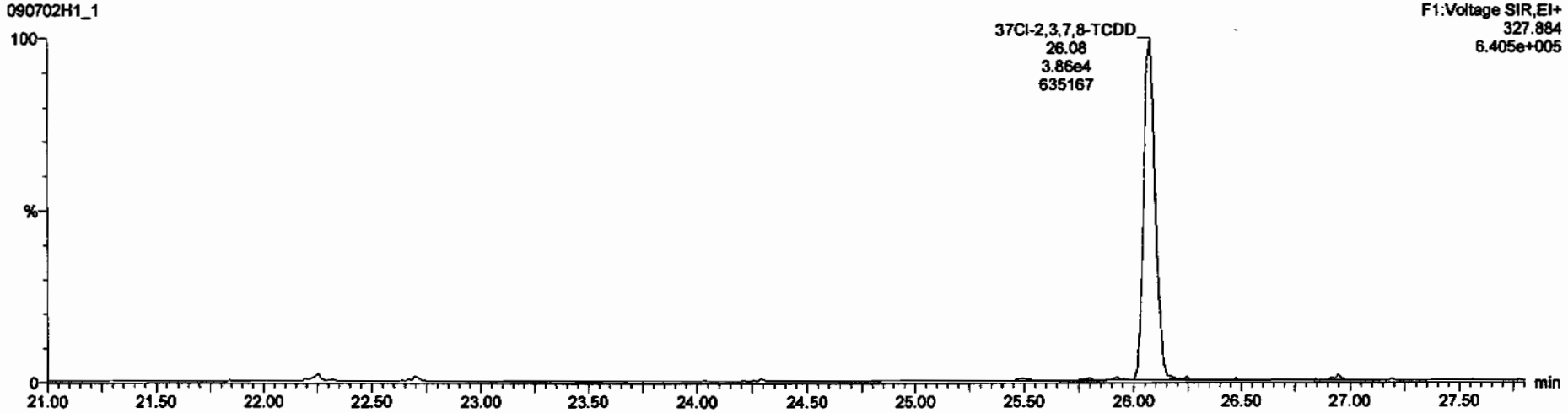

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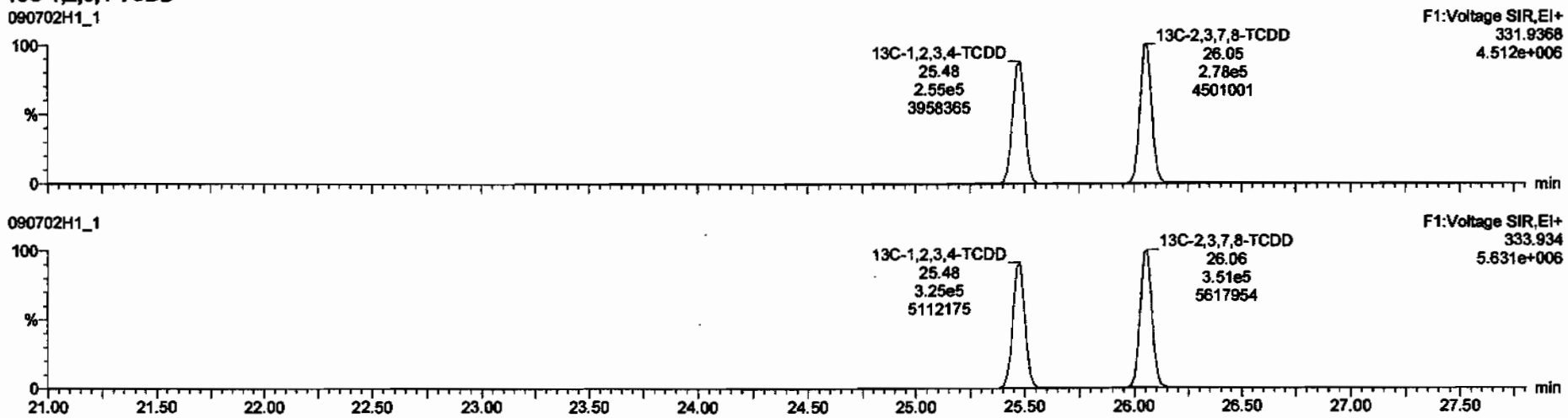

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Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

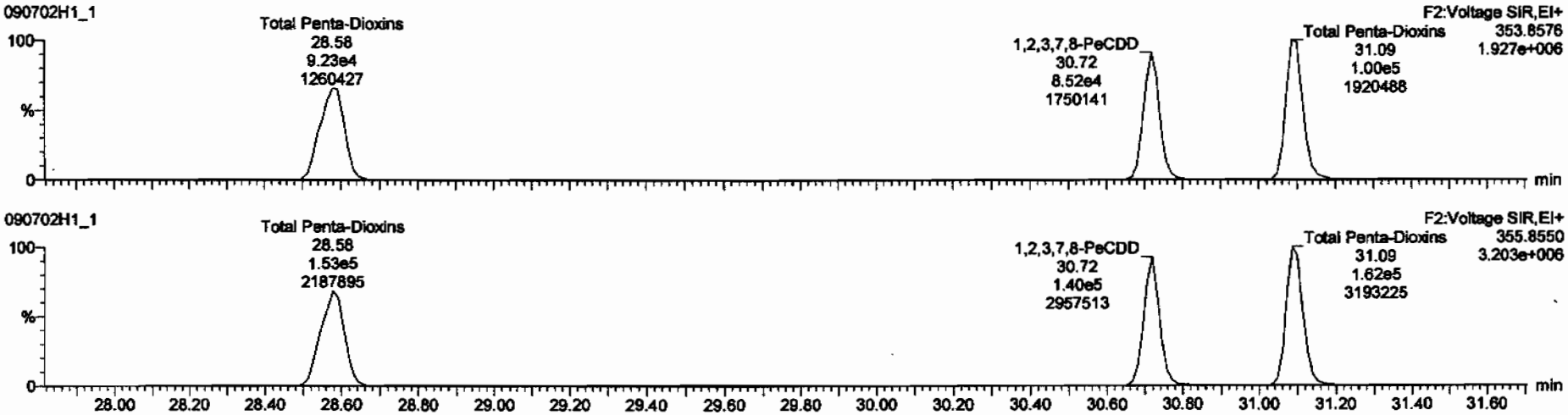

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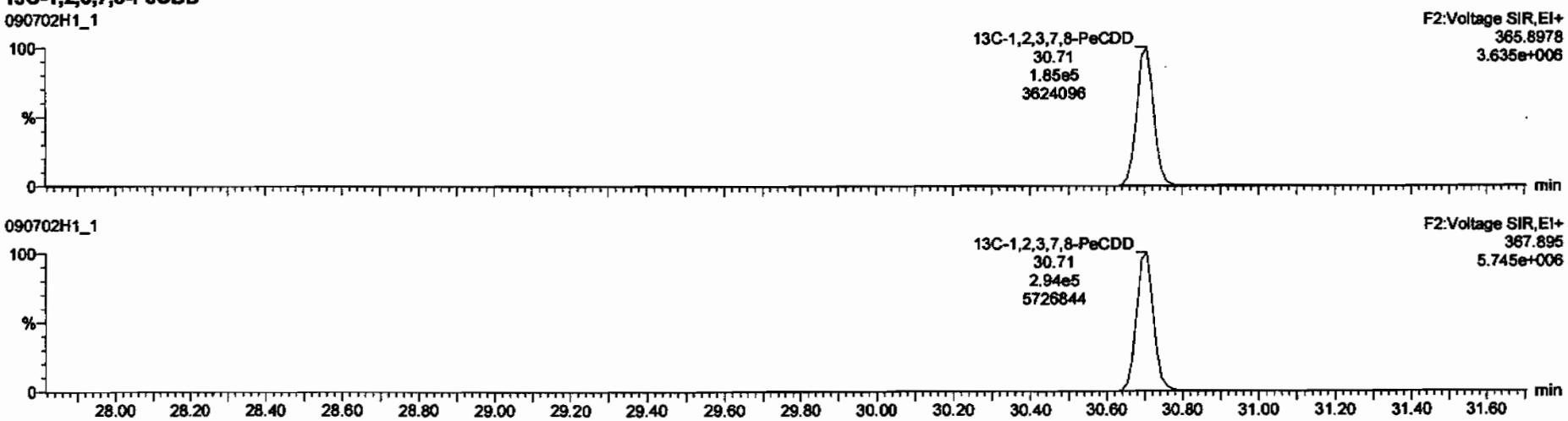

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1,2,3,4,7,8-HxCDD

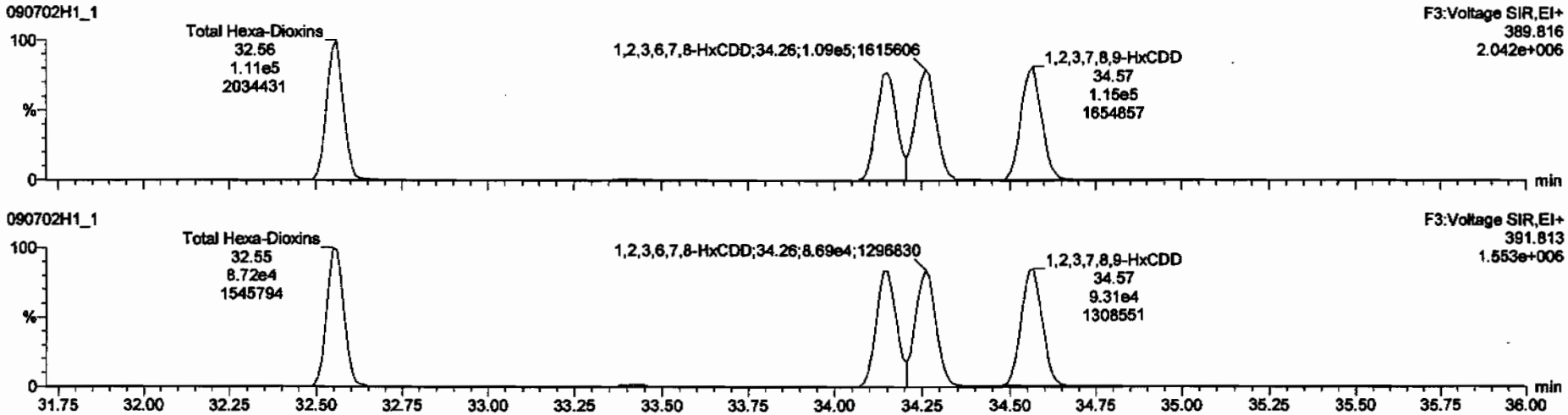

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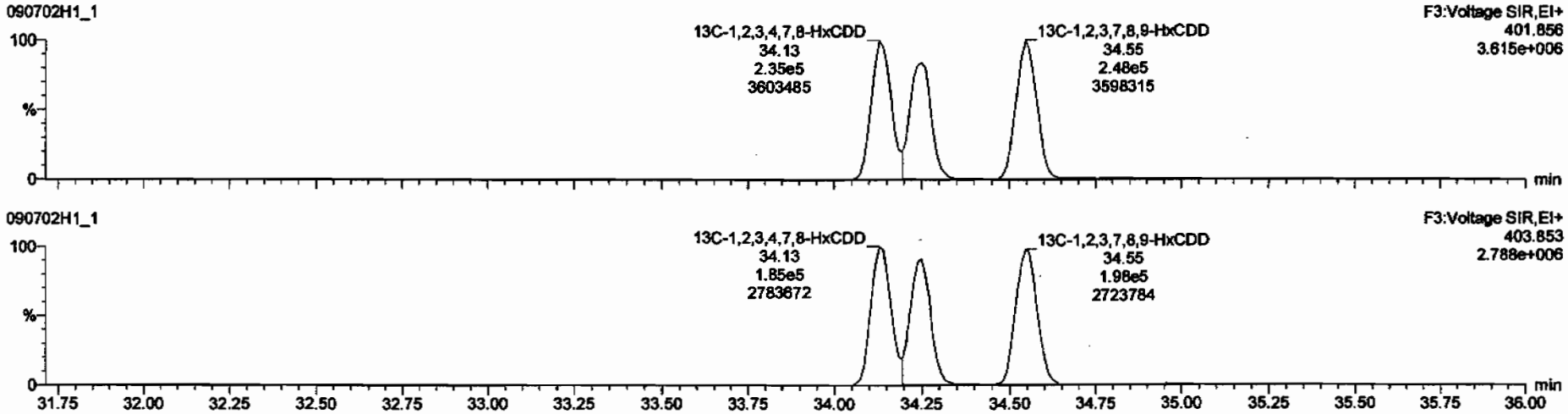

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1,2,3,4,6,7,8-HpCDD

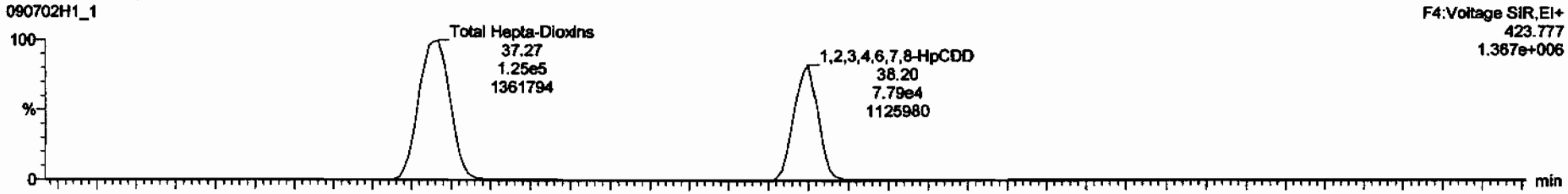

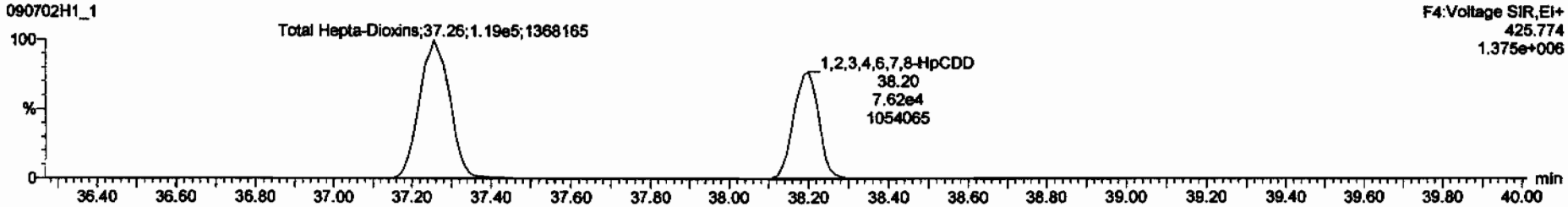

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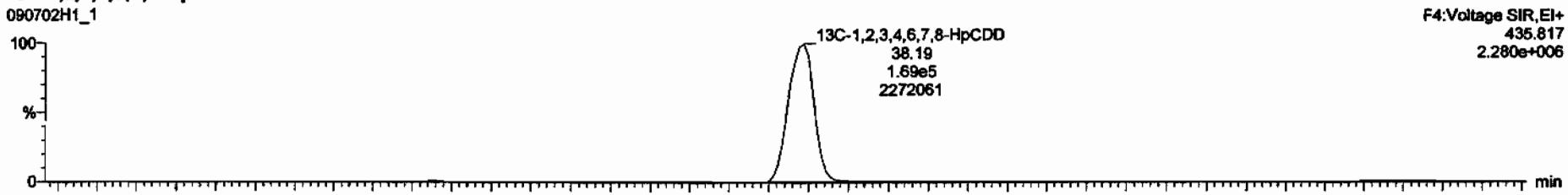

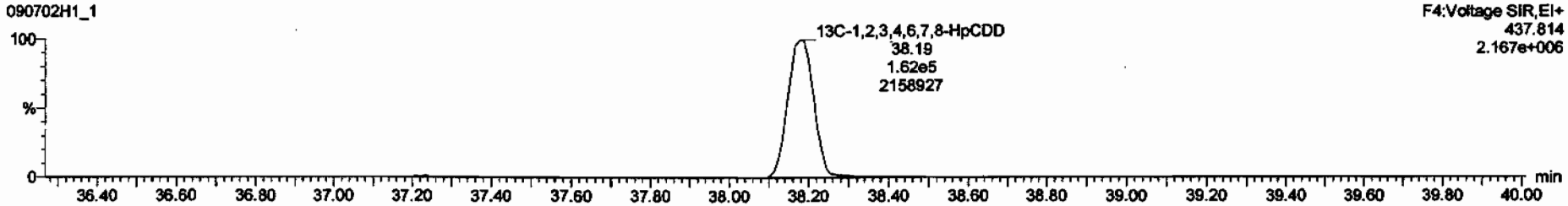

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Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

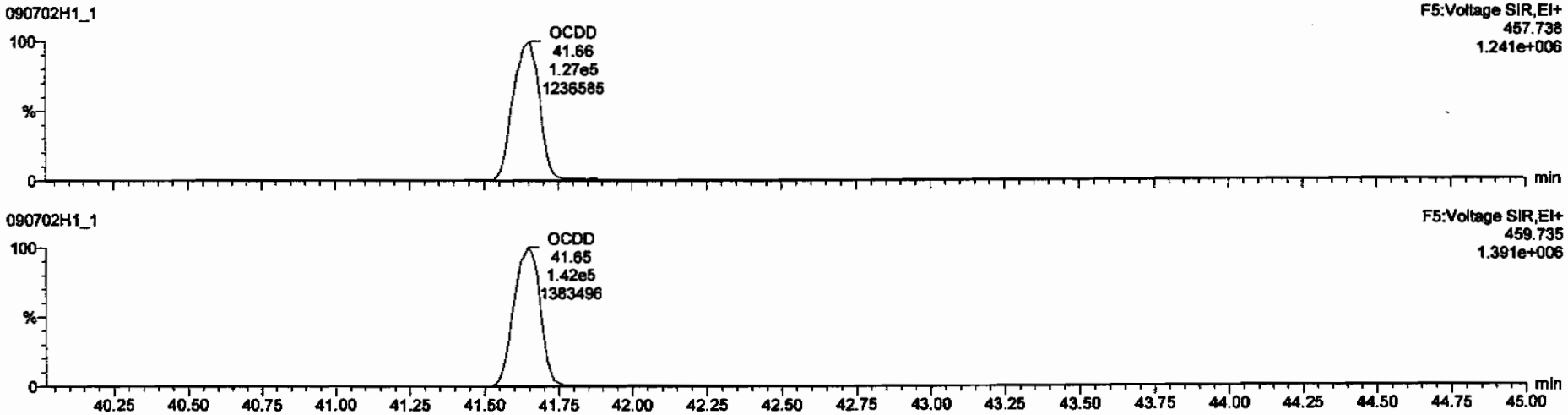

13C-OCDD

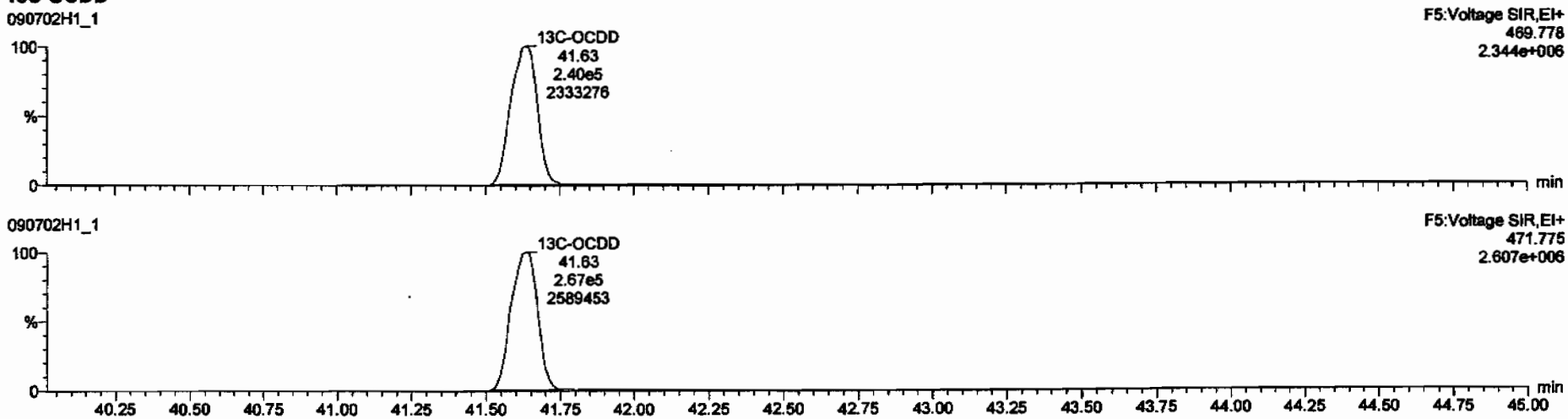

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2,3,7,8-TCDF

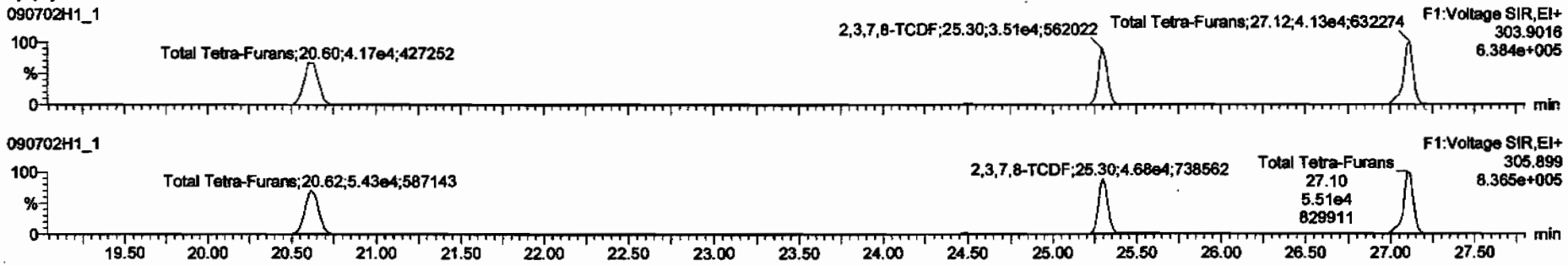

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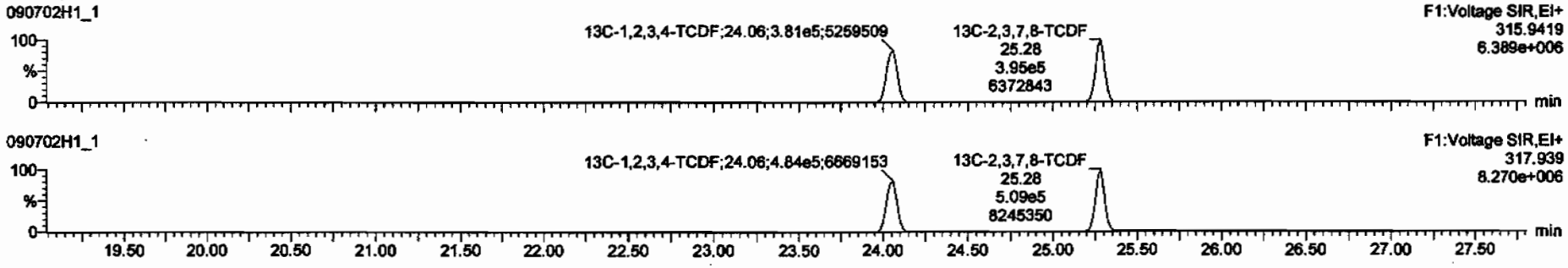

DPE1

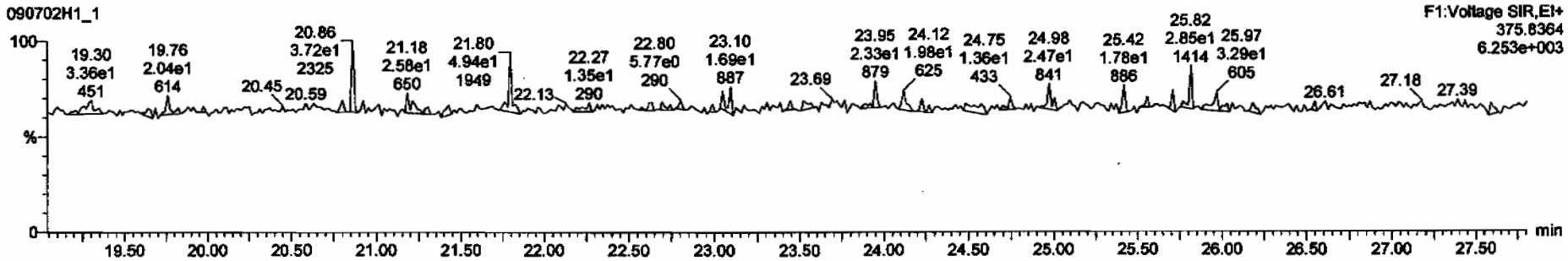

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Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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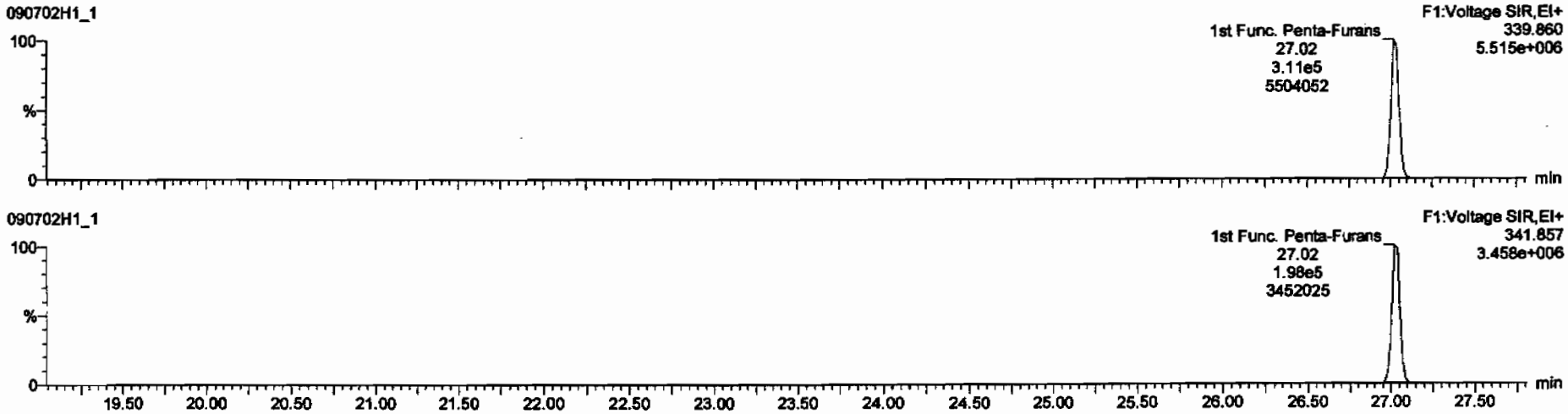

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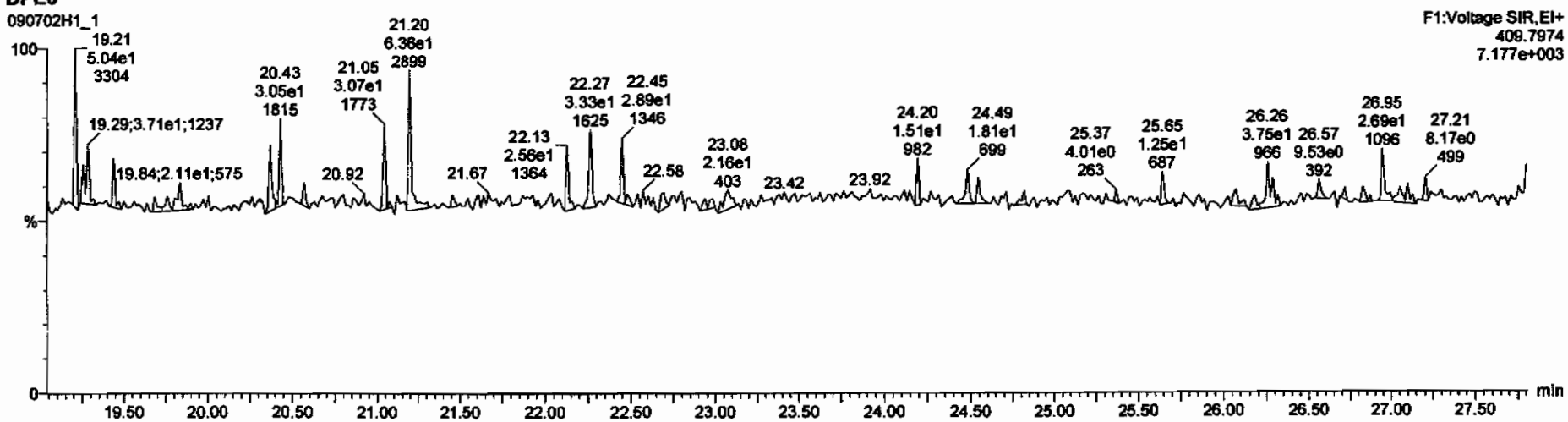

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1,2,3,7,8-PeCDF

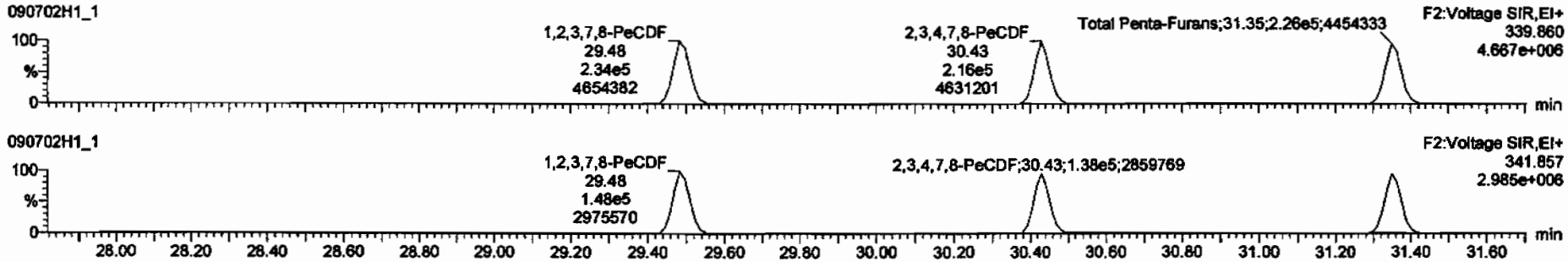

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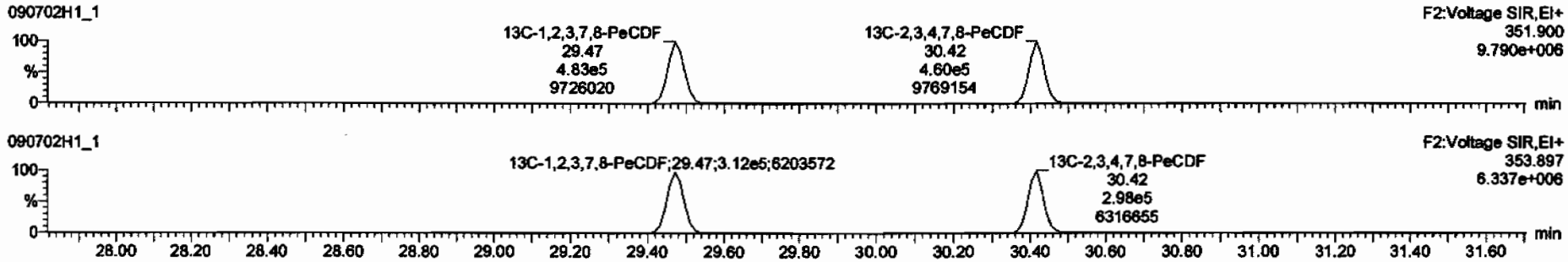

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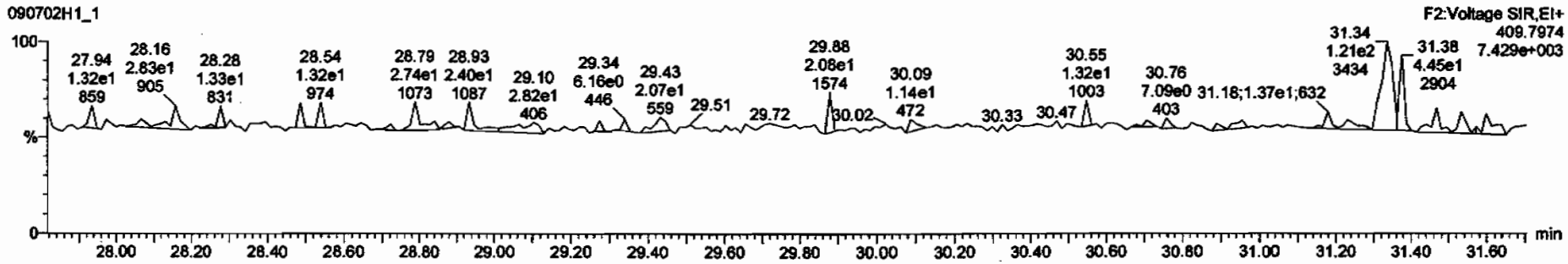

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1,2,3,4,7,8-HxCDF

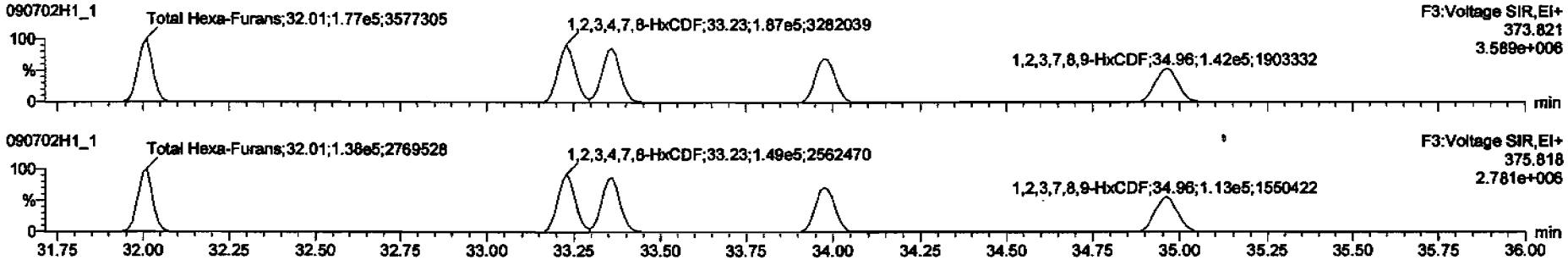

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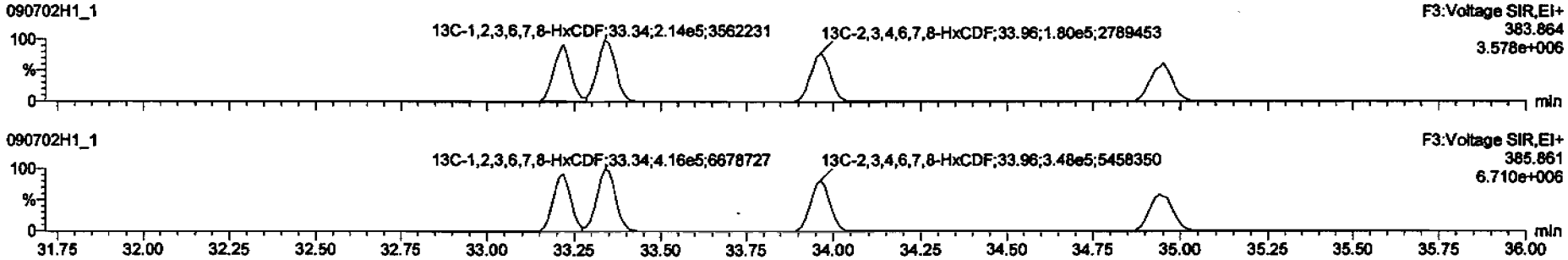

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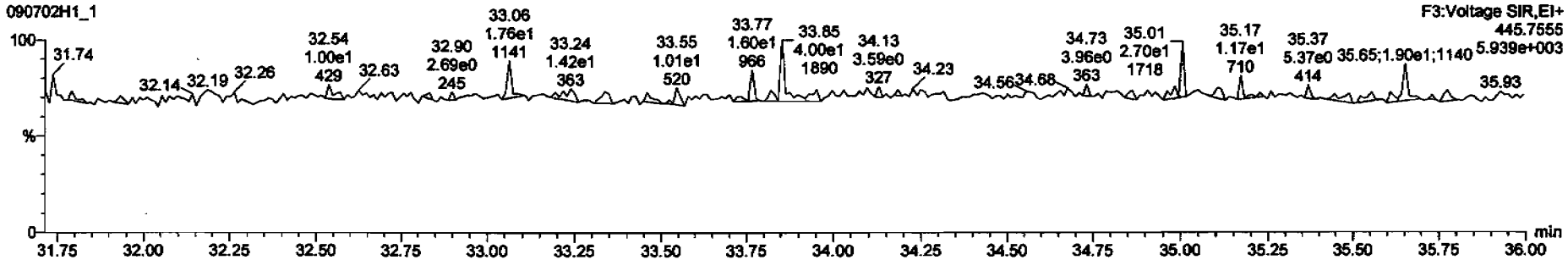

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1,2,3,4,6,7,8-HpCDF

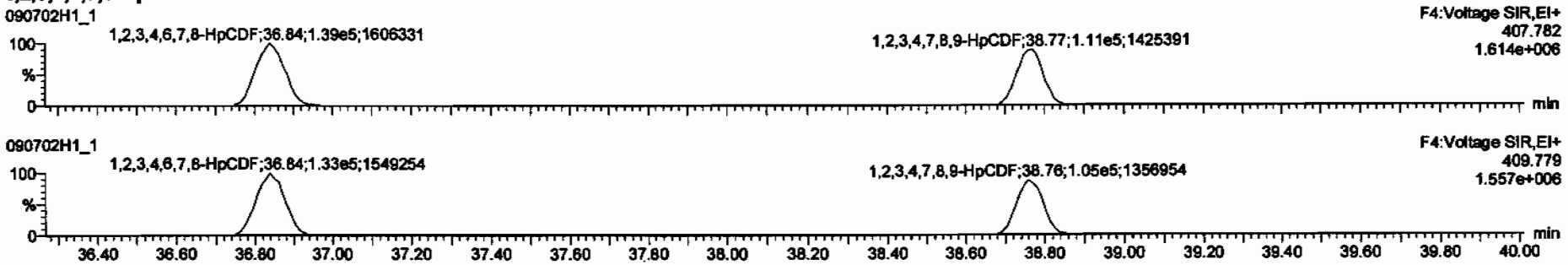

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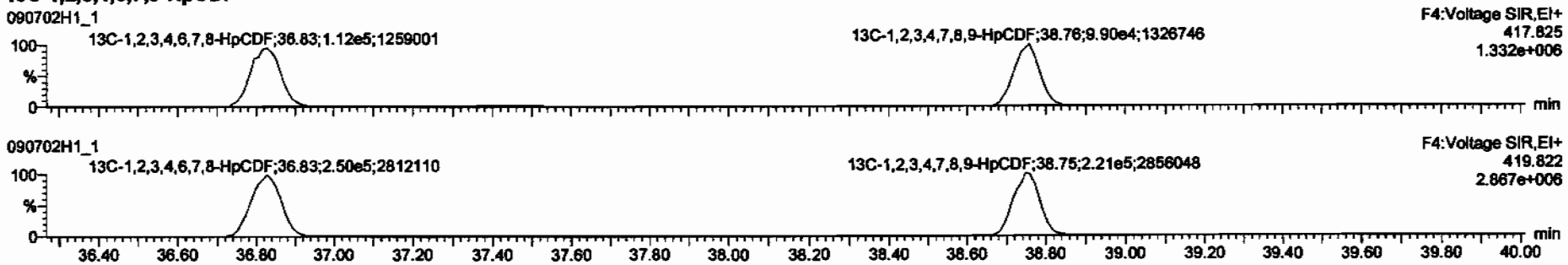

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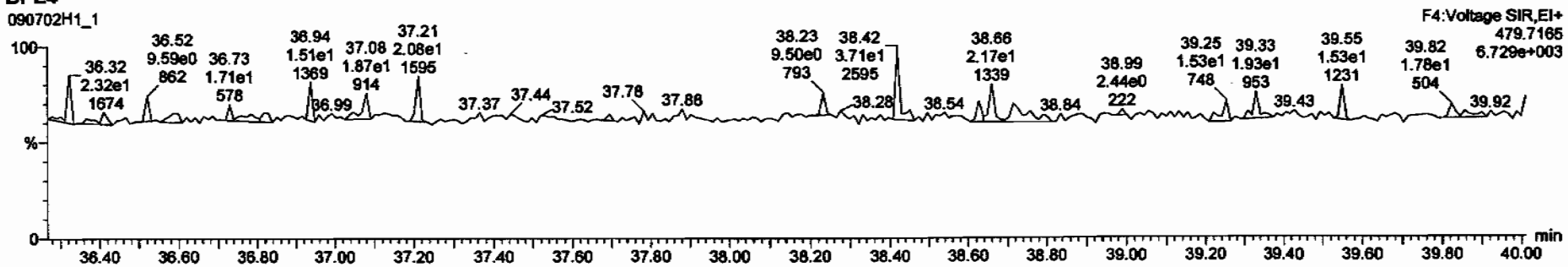

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OCDF

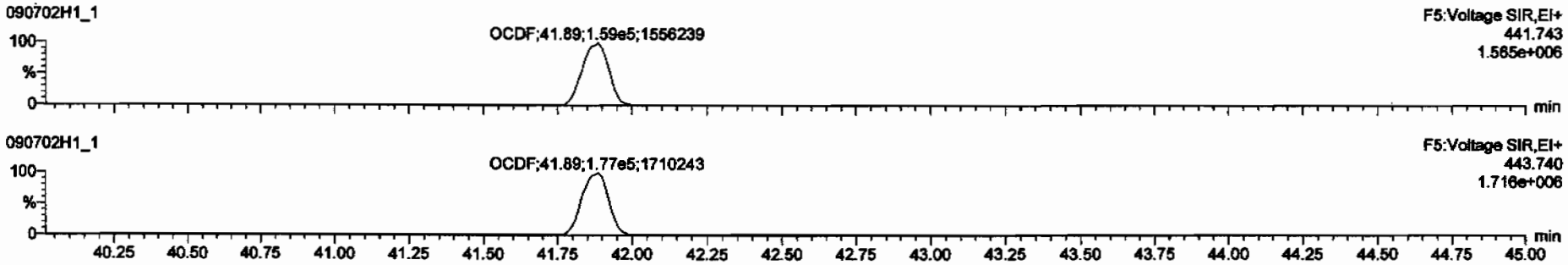

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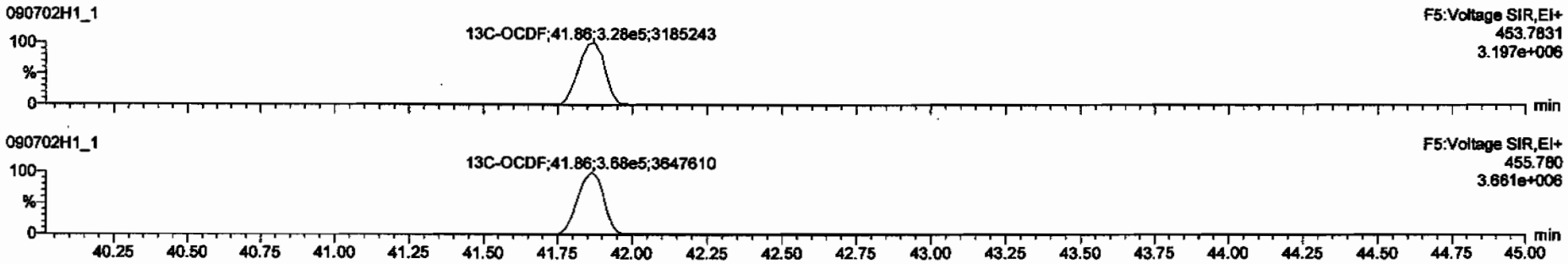

DPE5

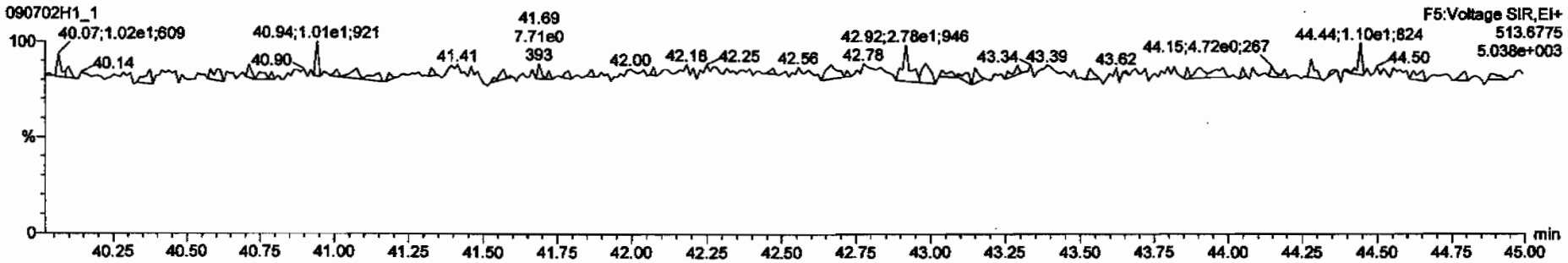

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PFK1

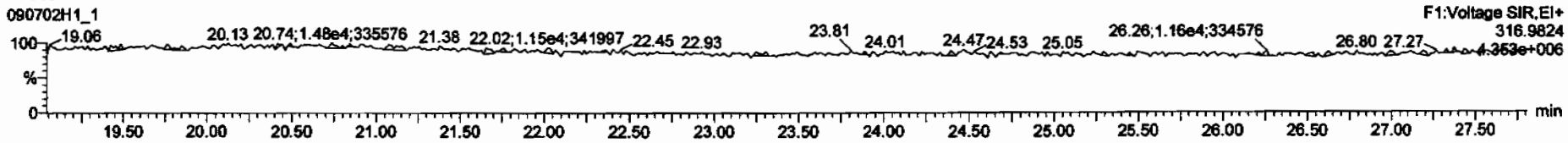

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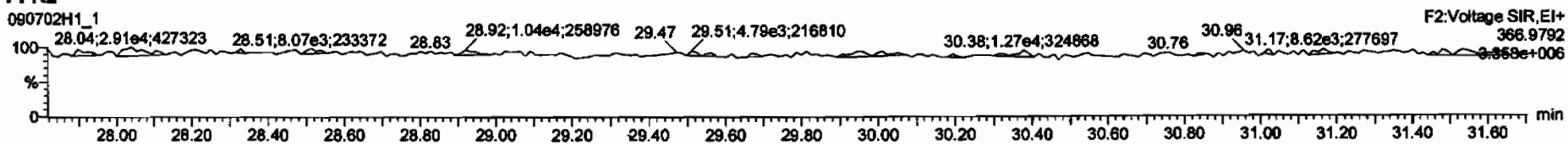

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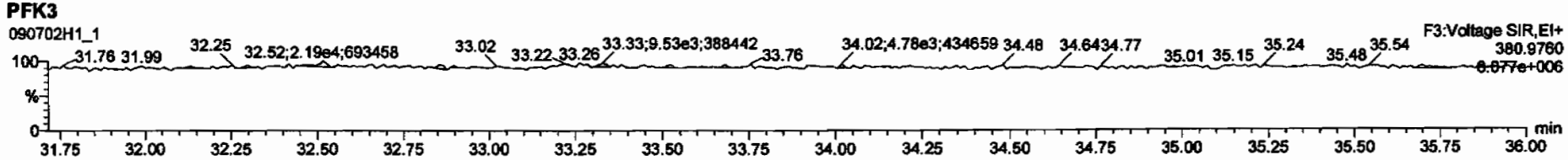

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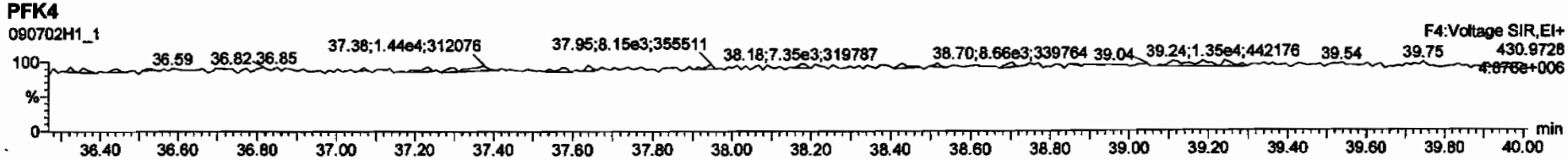

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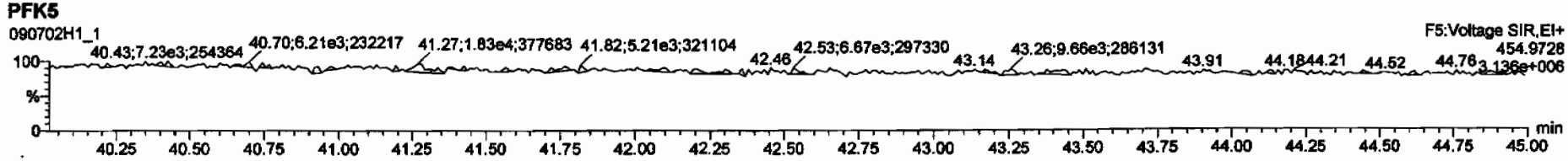

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_17

CCAL ID: ST090702H1-2

GC Column ID: DB-5
Analysis Date: 03-Jul-09 Analysis Time: 03:35:57

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	9.05	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	45.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	45.7	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	47.9	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	43.9	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	88.2	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	NO	8.40	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	41.5	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	40.7	41.0	60.0	No	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.2	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.4	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.9	44.0	57.0	No	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.7	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	43.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	45.3	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	86.1	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/3/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
CCAL ID: ST090702H1-2
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
GC Column ID: DB-5
VER Data file name: 090702H1_17
Analysis Date: 03-Jul-09
Analysis Time: 03:35:57

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	97.1	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	101	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	93.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	109	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.88	0.76-1.02	NO	238	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	99.2	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	102	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	87.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	93.1	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	NO	97.5	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	97.0	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.42	0.37-0.51	NO	98.5	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.33	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [illegible]

Date: 7/3/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 07:06:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:06:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.67
2	1,2,8,9-TCDD (Last)	26.93
3	1,2,4,7,9-PeCDD (First)	28.57
4	1,2,3,8,9-PeCDD (Last)	31.09
5	12,4,6,7,9-HxCDD (First)	32.55
6	1,2,3,7,8,9-HxCDD (Last)	34.56
7	1,2,3,4,6,7,9-HpCDD (First)	37.26
8	1,2,3,4,6,7,8-HpCDD (Last)	38.20
9	1,3,6,8-TCDF (First)	20.57
10	1,2,8,9-TCDF (Last)	27.10
11	1,3,4,6,8-PeCDF (First)	27.01
12	1,2,3,8,9-PeCDF (Last)	31.35
13	1,2,3,4,6,8-HxCDF (First)	32.00
14	1,2,3,4,8,9-HxCDF (Last)	34.95
15	1,2,3,4,6,7,8-HpCDF (First)	36.84
16	1,2,3,4,7,8,9-HpCDF (Last)	38.76

7/3/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090702H1-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090702H1_17

Analysis Date: 03-Jul-09

Analysis Time: 03:35:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.206	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.993	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [illegible]

Date: 7/3/07

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090702H1-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090702H1_17

Analysis Date: 03-Jul-09

Analysis Time: 03:35:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/3/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:48:20 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	6.08e4	0.78	NO	1.08	1.000	26.06	1.001	9.0452	90.5	0.0442	9.0452
2	1,2,3,7,8-PeCDD	2.25e5	0.62	NO	1.03	1.000	30.71	1.000	45.583	91.2	0.0902	45.583
3	1,2,3,4,7,8-HxCDD	1.92e5	1.27	NO	1.00	1.000	34.14	1.000	45.738	91.5	0.174	45.738
4	1,2,3,6,7,8-HxCDD	1.99e5	1.23	NO	1.13	1.000	34.26	1.001	45.298	90.6	0.168	45.298
5	1,2,3,7,8,9-HxCDD	2.14e5	1.25	NO	1.10	1.000	34.56	1.009	47.933	95.9	0.165	47.933
6	1,2,3,4,6,7,8-HpCDD	1.63e5	1.06	NO	1.06	1.000	38.20	1.001	43.917	87.8	0.199	43.917
7	OCDD	2.80e5	0.90	NO	1.18	1.000	41.66	1.000	88.239	88.2	0.0848	88.239
8	2,3,7,8-TCDF	8.10e4	0.76	NO	1.09	1.000	25.28	1.001	8.3960	84.0	0.0417	8.3960
9	1,2,3,7,8-PeCDF	3.61e5	1.57	NO	1.16	1.000	29.47	1.000	41.481	83.0	0.0753	41.481
10	2,3,4,7,8-PeCDF	3.33e5	1.58	NO	1.12	1.000	30.42	1.000	40.676	81.4	0.0736	40.676
11	1,2,3,4,7,8-HxCDF	3.29e5	1.27	NO	1.41	1.000	33.23	1.001	43.246	86.5	0.113	43.246
12	1,2,3,6,7,8-HxCDF	3.24e5	1.26	NO	1.22	1.000	33.35	1.000	44.446	88.9	0.116	44.446
13	2,3,4,6,7,8-HxCDF	2.95e5	1.27	NO	1.28	1.000	33.98	1.001	43.942	87.9	0.137	43.942
14	1,2,3,7,8,9-HxCDF	2.60e5	1.27	NO	1.26	1.000	34.95	1.000	44.729	89.5	0.172	44.729
15	1,2,3,4,6,7,8-HpCDF	2.81e5	1.06	NO	1.69	1.000	36.84	1.001	43.814	87.6	0.148	43.814
16	1,2,3,4,7,8,9-HpCDF	2.16e5	1.05	NO	1.48	1.000	38.76	1.000	45.270	90.5	0.166	45.270
17	OCDF	3.27e5	0.91	NO	1.10	1.000	41.89	1.000	86.142	86.1	0.107	86.142
18	13C-2,3,7,8-TCDD	6.24e5	0.78	NO	1.01	1.000	26.03	1.023	103.21	103	0.218	
19	13C-1,2,3,7,8-PeCDD	4.78e5	0.63	NO	0.827	1.000	30.69	1.206	97.071	97.1	0.178	
20	13C-1,2,3,4,7,8-HxCDD	4.19e5	1.25	NO	0.916	1.000	34.13	0.988	101.40	101	0.303	
21	13C-1,2,3,6,7,8-HxCDD	3.90e5	1.24	NO	0.921	1.000	34.24	0.991	93.814	93.8	0.302	
22	13C-1,2,3,4,6,7,8-HpCDD	3.48e5	1.06	NO	0.708	1.000	38.18	1.105	108.99	109	0.409	
23	13C-OCDD	5.39e5	0.88	NO	0.503	1.000	41.65	1.206	237.82	119	0.343	
24	13C-2,3,7,8-TCDF	8.87e5	0.78	NO	0.977	1.000	25.27	0.993	107.45	107	0.134	
25	13C-1,2,3,7,8-PeCDF	7.51e5	1.59	NO	0.896	1.000	29.47	1.158	99.231	99.2	0.217	
26	13C-2,3,4,7,8-PeCDF	7.31e5	1.57	NO	0.900	1.000	30.40	1.195	96.255	96.3	0.216	
27	13C-1,2,3,4,7,8-HxCDF	5.39e5	0.52	NO	1.17	1.000	33.21	0.961	102.08	102	0.347	
28	13C-1,2,3,6,7,8-HxCDF	5.97e5	0.52	NO	1.52	1.000	33.34	0.965	87.045	87.0	0.267	
29	13C-2,3,4,6,7,8-HxCDF	5.25e5	0.52	NO	1.25	1.000	33.95	0.983	93.072	93.1	0.325	
30	13C-1,2,3,7,8,9-HxCDF	4.63e5	0.52	NO	1.05	1.000	34.94	1.011	97.471	97.5	0.385	

7/3/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:48:20 Pacific Daylight Time

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

	31 13C-1,2,3,4,6,7,8-HpCDF	3.80e5	0.44	NO	0.868	1.000	36.82	1.066	96.972	97.0	0.382
	32 13C-1,2,3,4,7,8,9-HpCDF	3.23e5	0.42	NO	0.727	1.000	38.75	1.122	98.492	98.5	0.457
	33 13C-OCDF	6.92e5	0.88	NO	0.760	1.000	41.88	1.212	202.05	101	0.195

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 06:54:46 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:05:08 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 2,3,7,8-TCDD

090702H1_1	ST090702H1-1 1613 CS3 080917I	02-Jul-09	14:22:39
090702H1_2	0_2214_OPR001	02-Jul-09	15:13:01
090702H1_3	solvent blank	02-Jul-09	16:02:37
090702H1_4	0_2214_MB001	02-Jul-09	16:52:06
090702H1_5	31845_2214_001 CAMO-09-10464 10.61	02-Jul-09	17:41:36
090702H1_6	31845_2214_002 CAMO-09-10465 10.5	02-Jul-09	18:31:05
090702H1_7	31846_2214_001 CAMO-09-9946 12.7	02-Jul-09	19:20:36
090702H1_8	31847_2214_001 CAMO-09-6518 11.68	02-Jul-09	20:10:06
090702H1_9	31847_2214_002 CAMO-09-6519 13.07	02-Jul-09	20:59:34
090702H1_10	31847_2214_003 CAMO-09-6531 11.58	02-Jul-09	21:49:03
090702H1_11	31850_2214_001 CAMO-09-9941 11.19	02-Jul-09	22:38:41
090702H1_12	31850_2214_002 CAMO-09-9942 11.32	02-Jul-09	23:28:16
090702H1_13	31850_2214_003 CAMO-09-9943 11.85	03-Jul-09	00:17:49
090702H1_14	31850_2214_004 CAMO-09-9989 12.48	03-Jul-09	01:07:22
090702H1_15	31850_2214_005 CAMO-09-10030 11.22	03-Jul-09	01:56:54
090702H1_16	solvent blank	03-Jul-09	02:46:25
090702H1_17	ST090702H1-2 1613 CS3 080917I	03-Jul-09	03:35:57

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 07:06:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:06:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

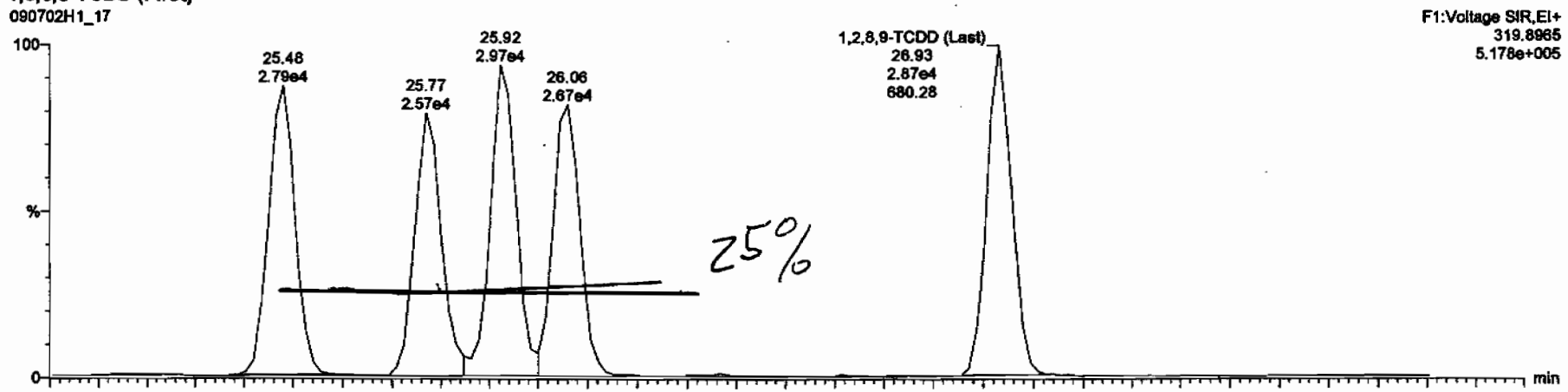

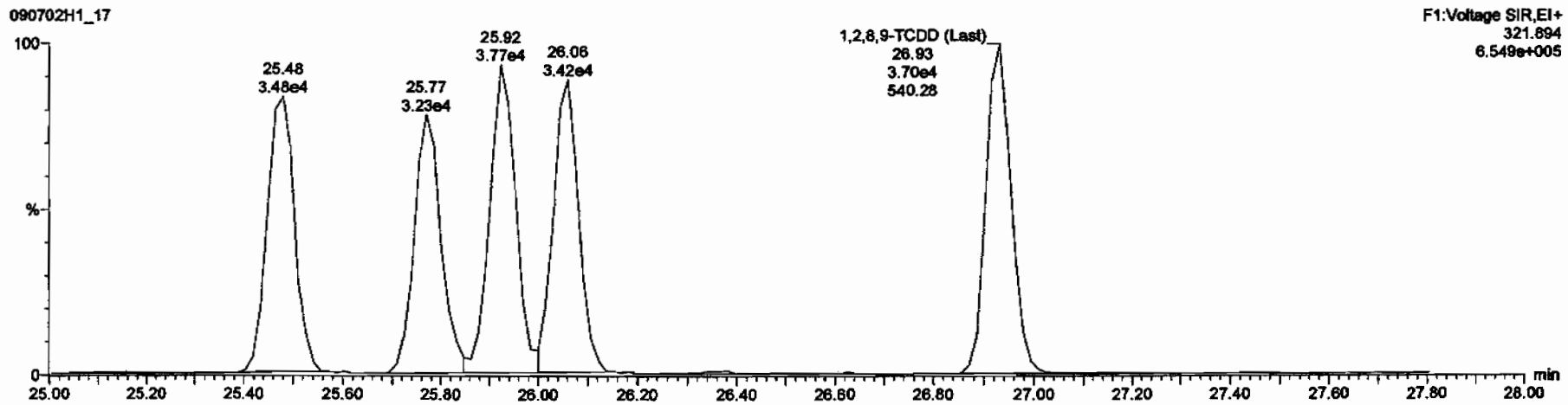

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:49:25 Pacific Daylight Time

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2,3,7,8-TCDD

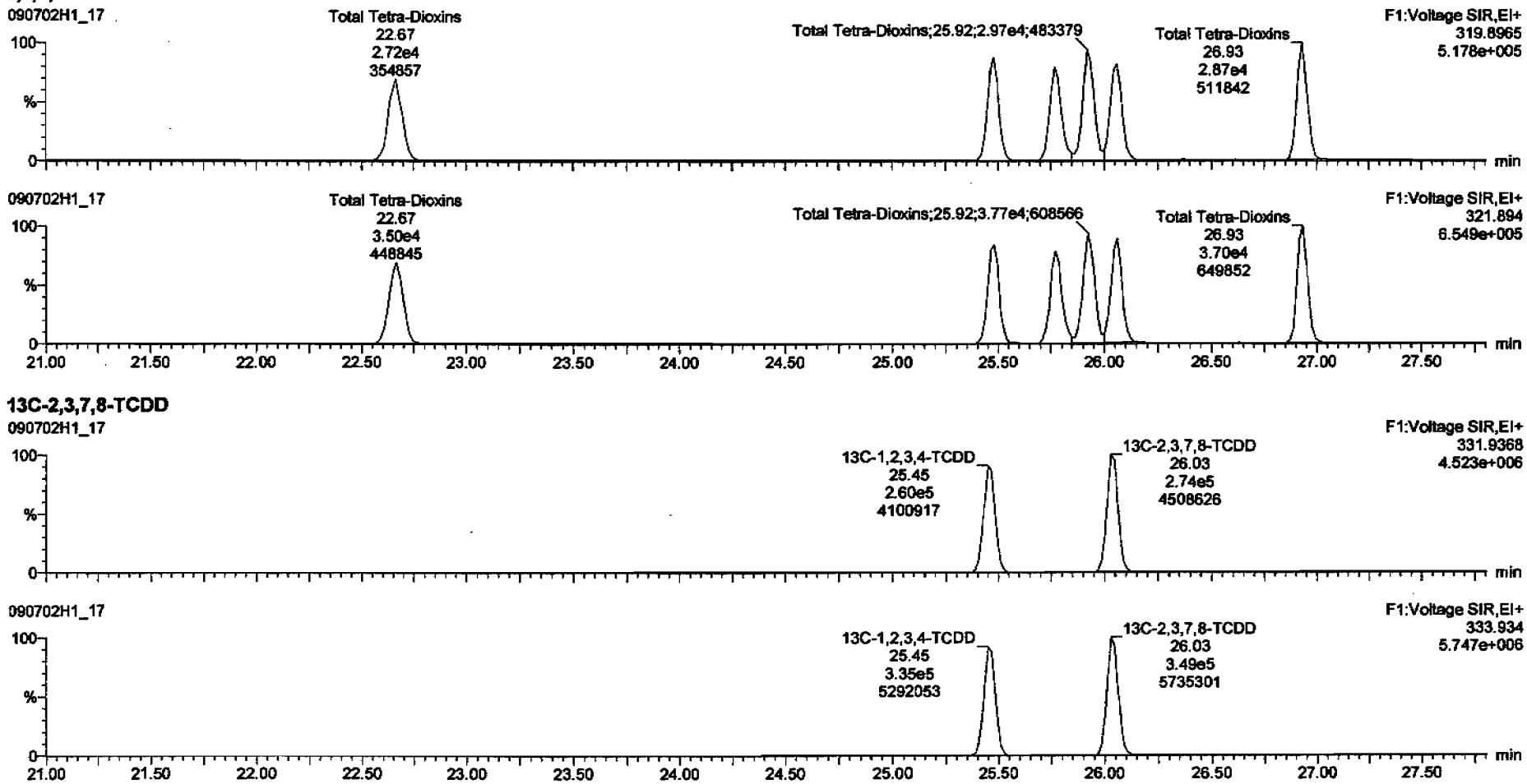

13C-2,3,7,8-TCDD

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37Cl-2,3,7,8-TCDD

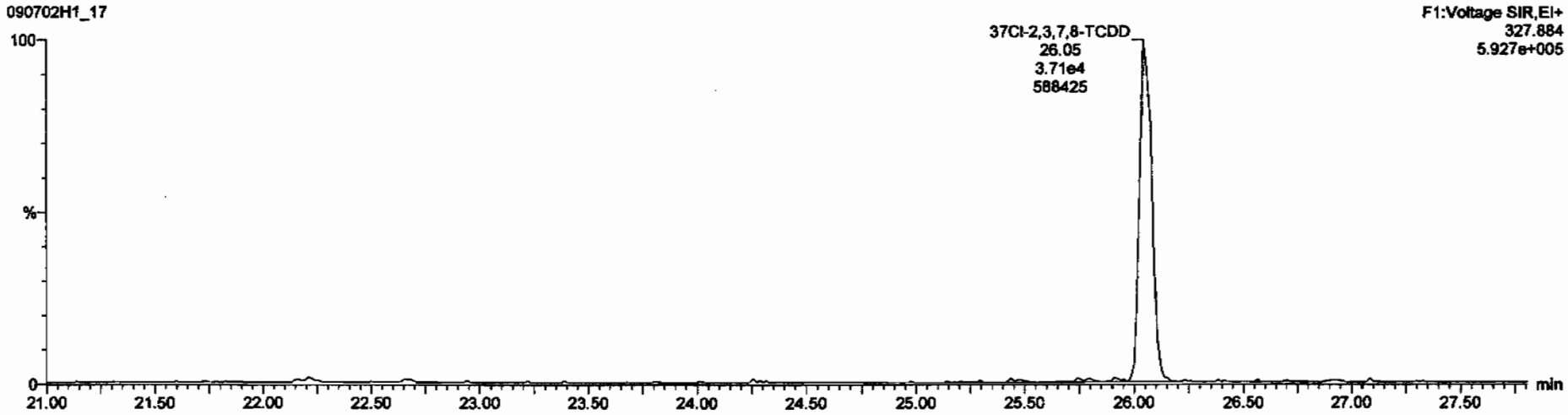

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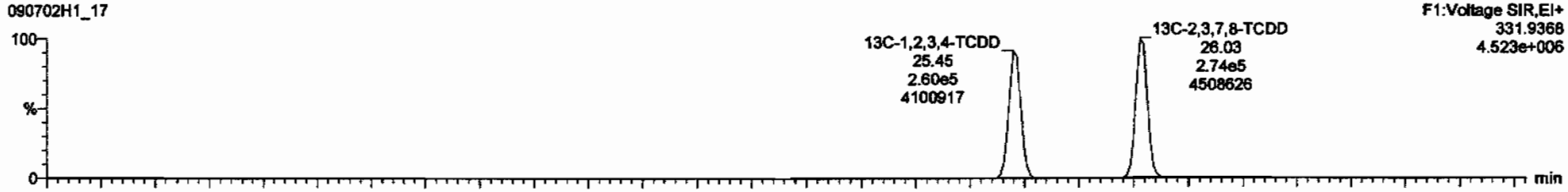

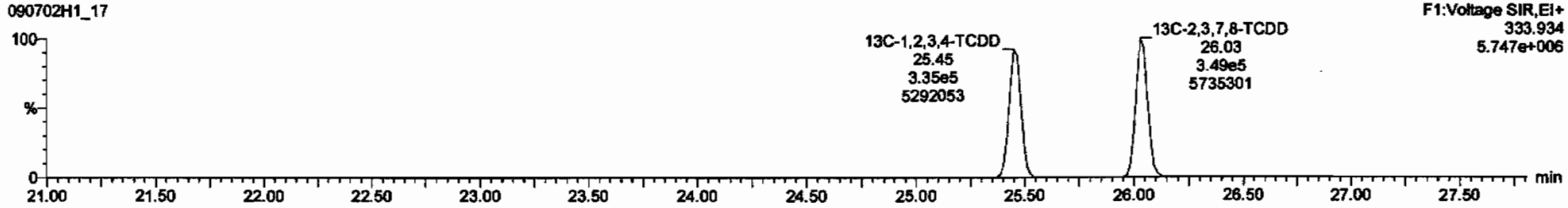

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

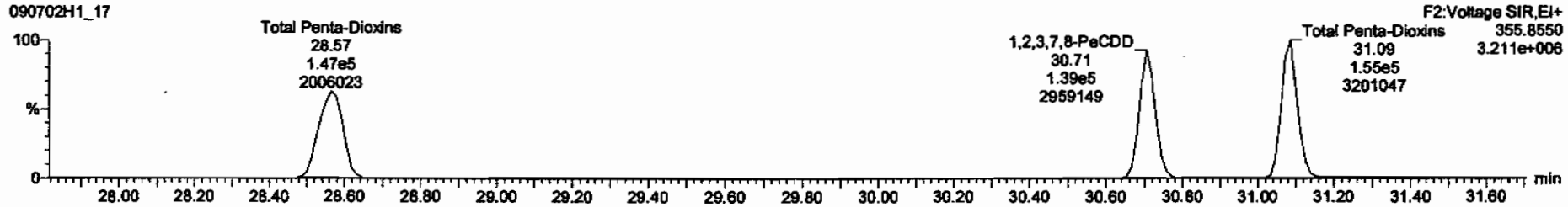

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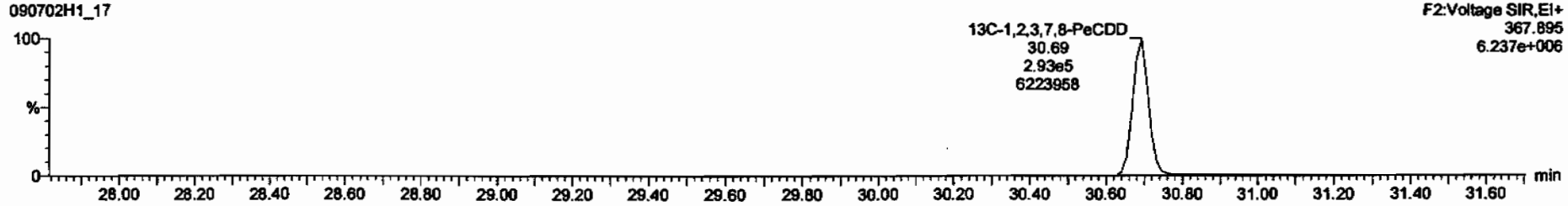

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1,2,3,4,7,8-HxCDD

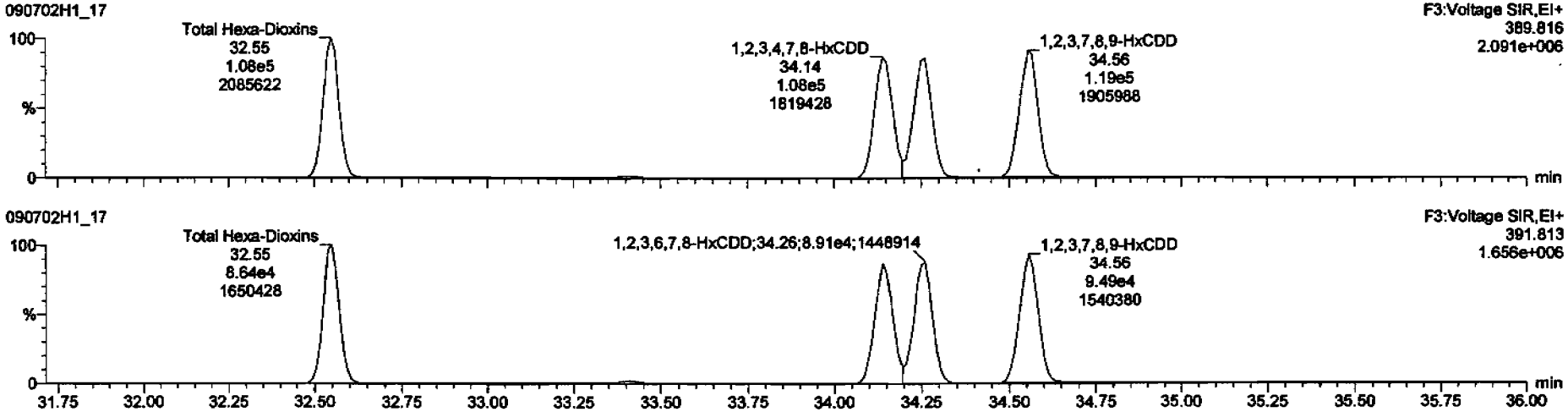

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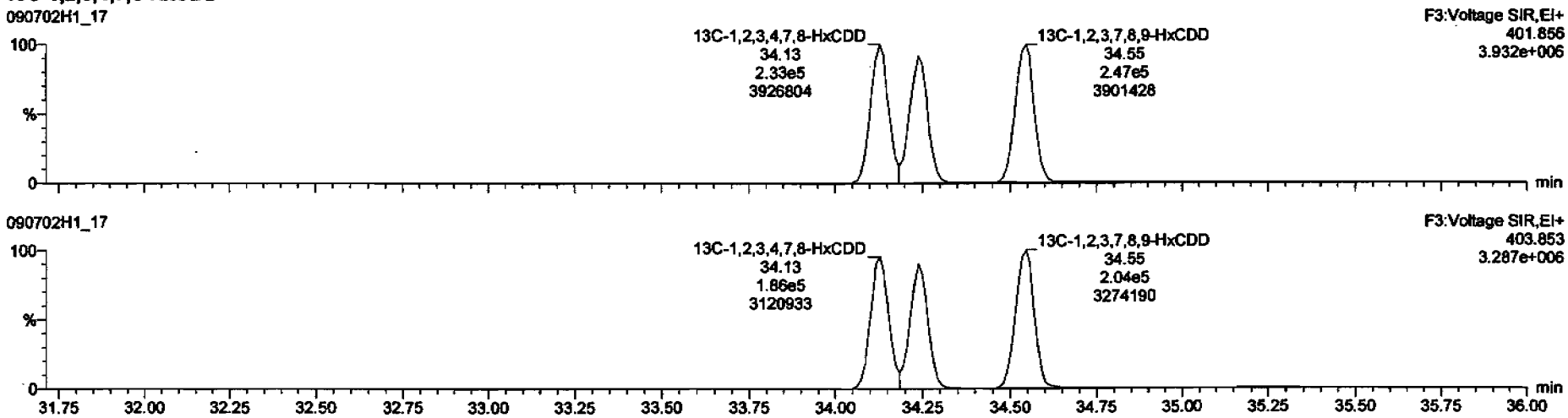

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1,2,3,4,6,7,8-HpCDD

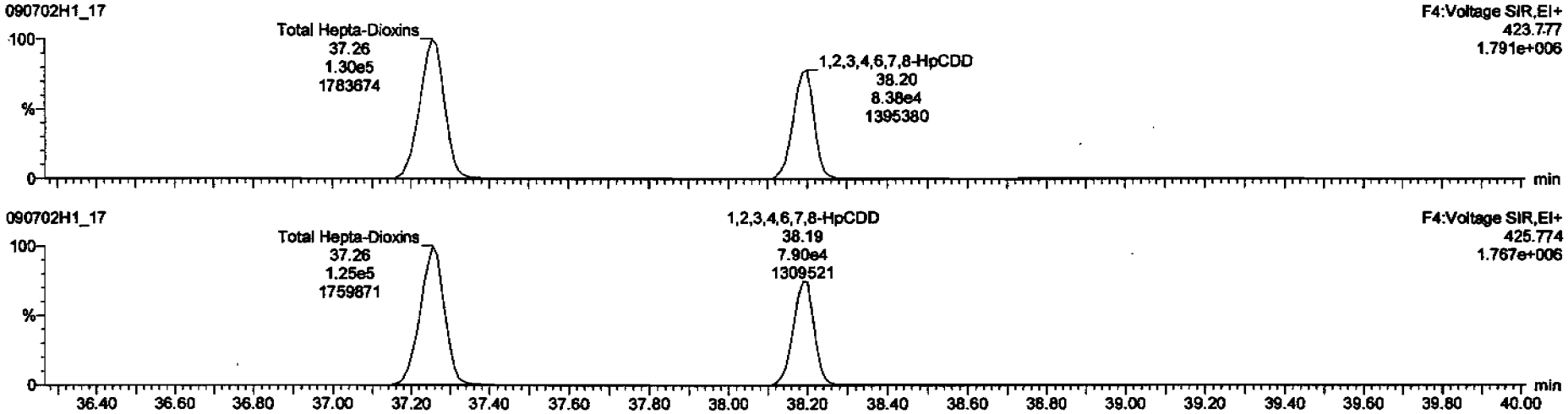

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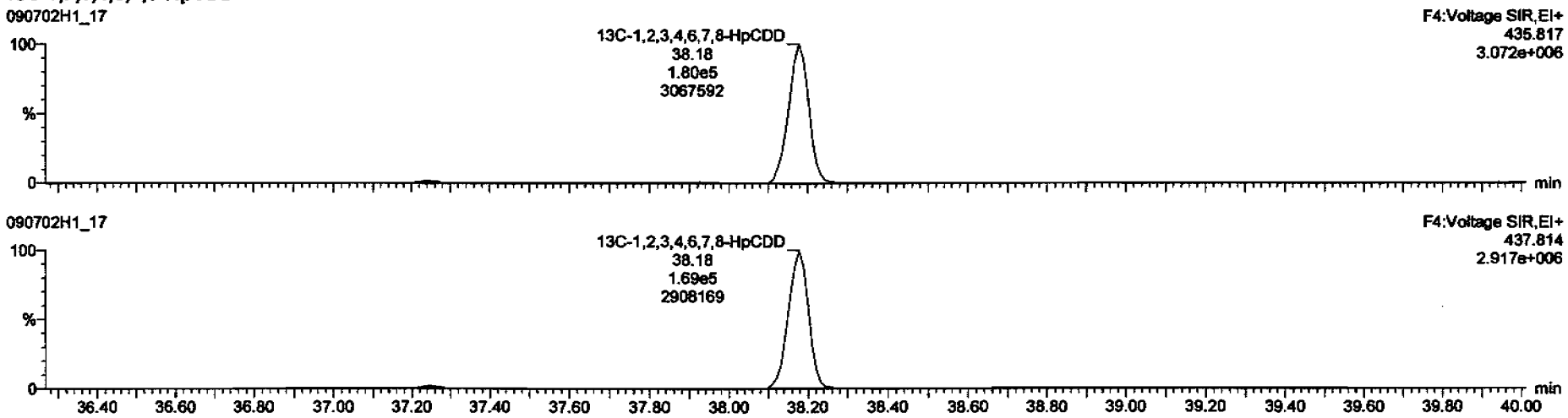

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

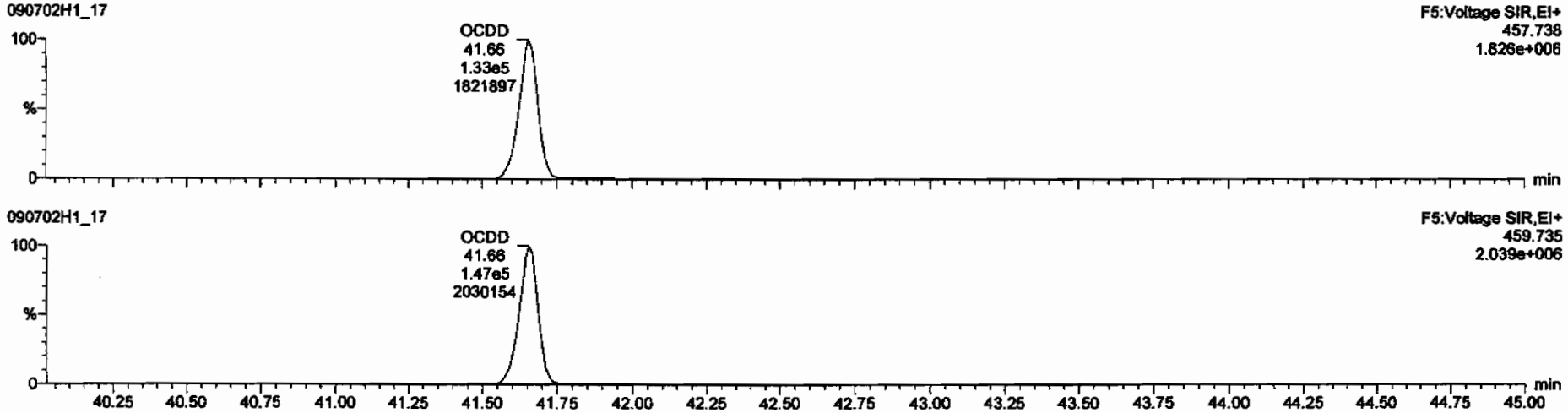

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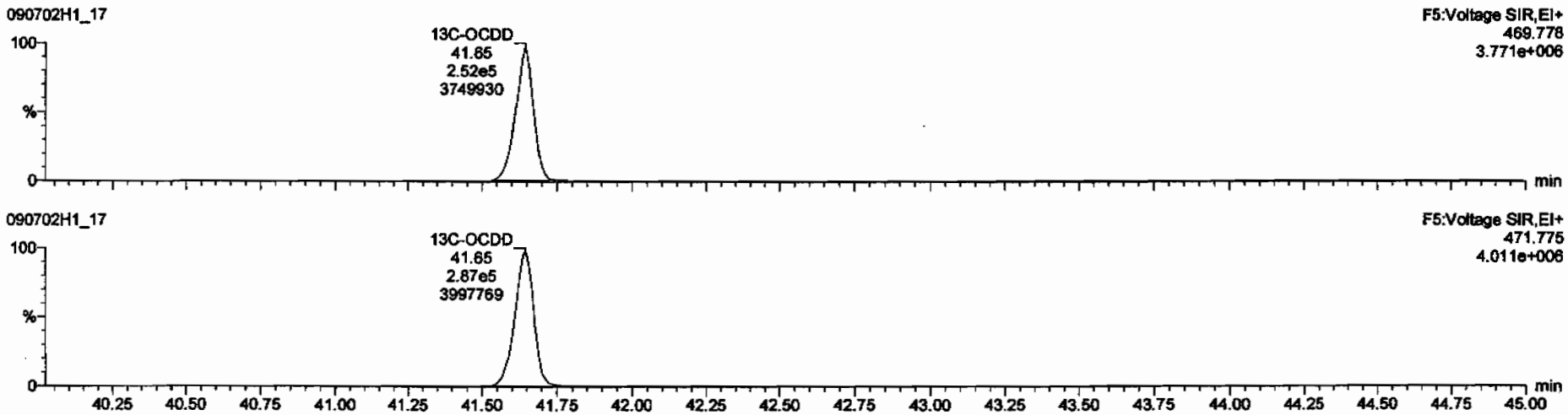

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2,3,7,8-TCDF

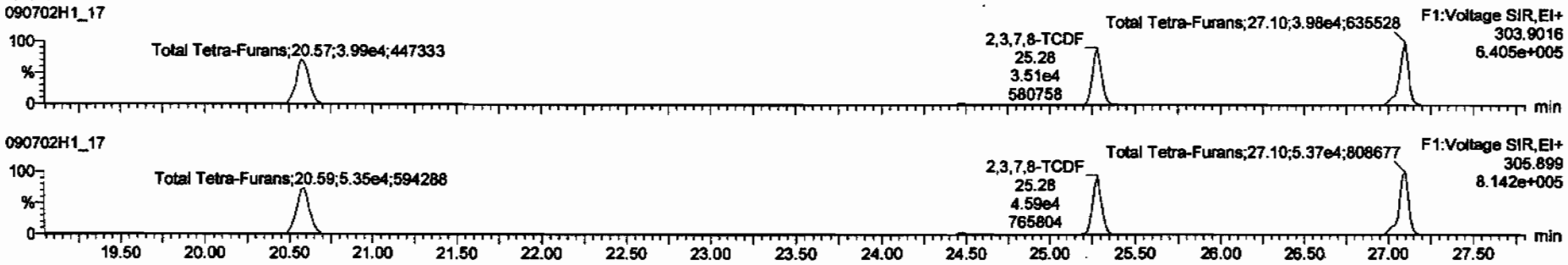

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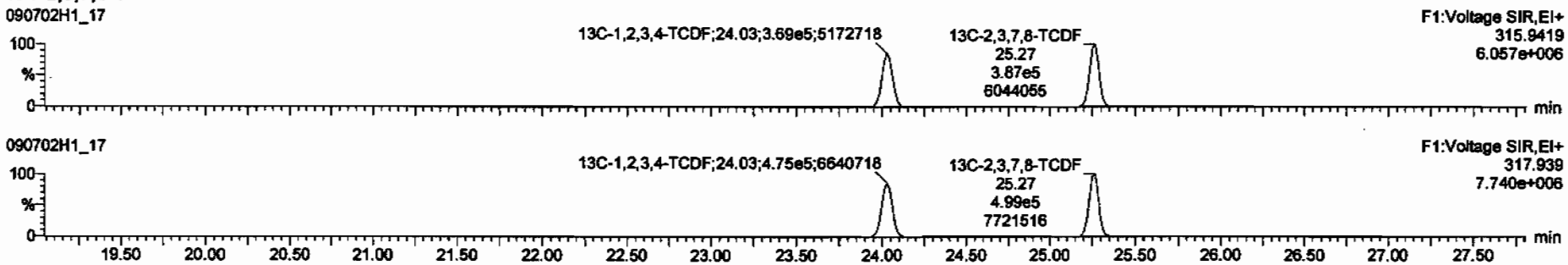

DPE1

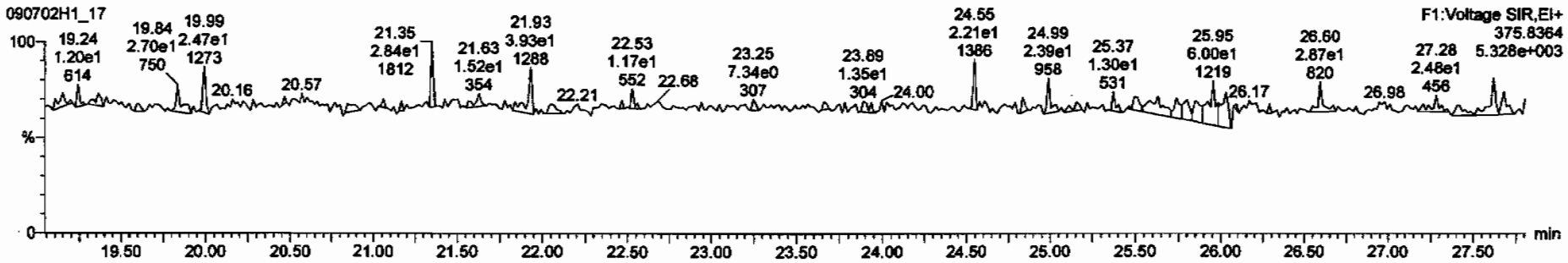

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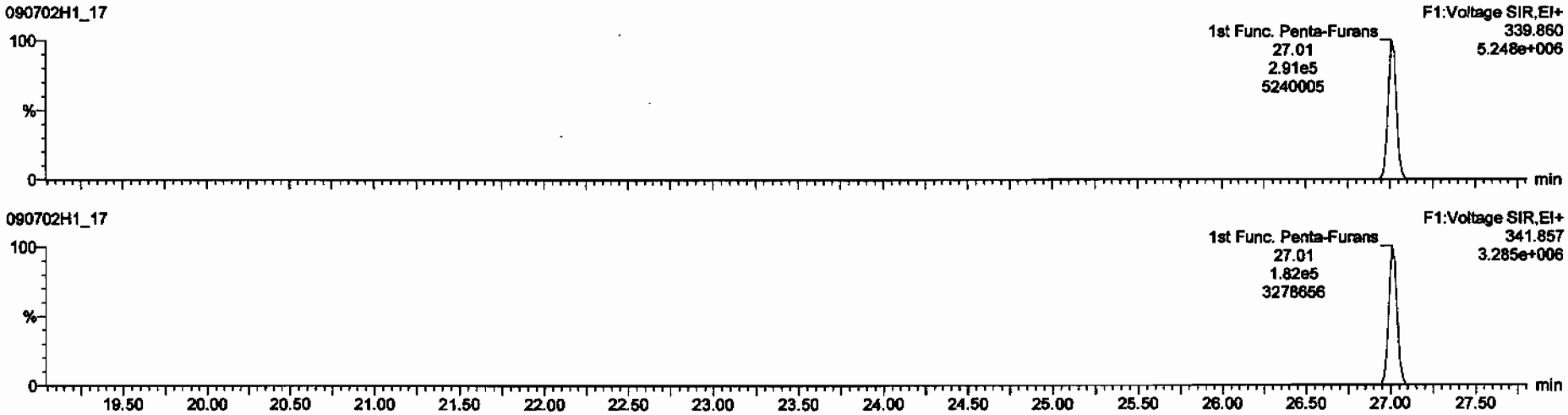

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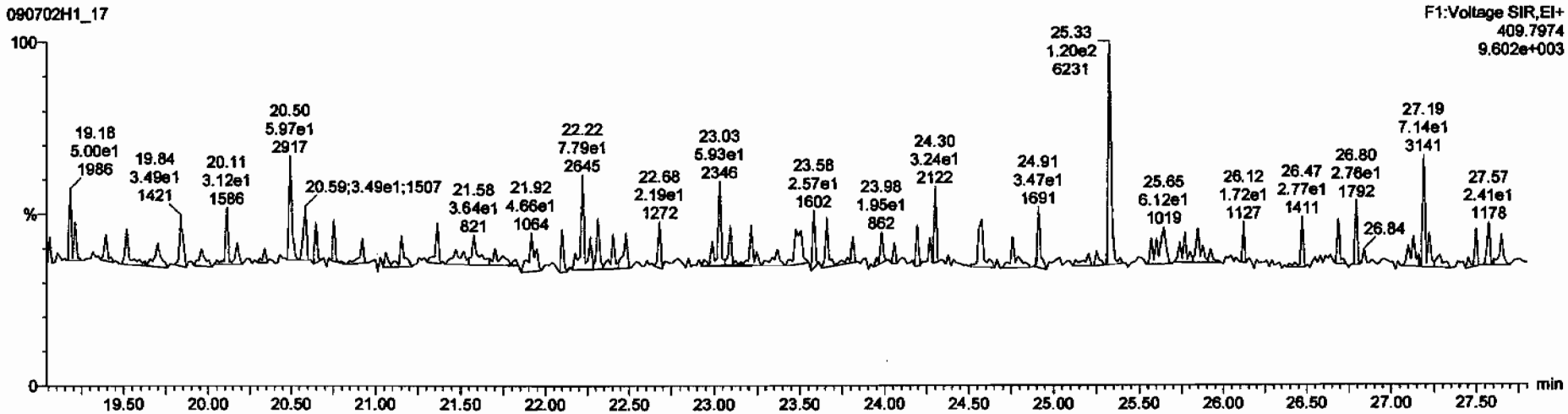

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1,2,3,7,8-PeCDF

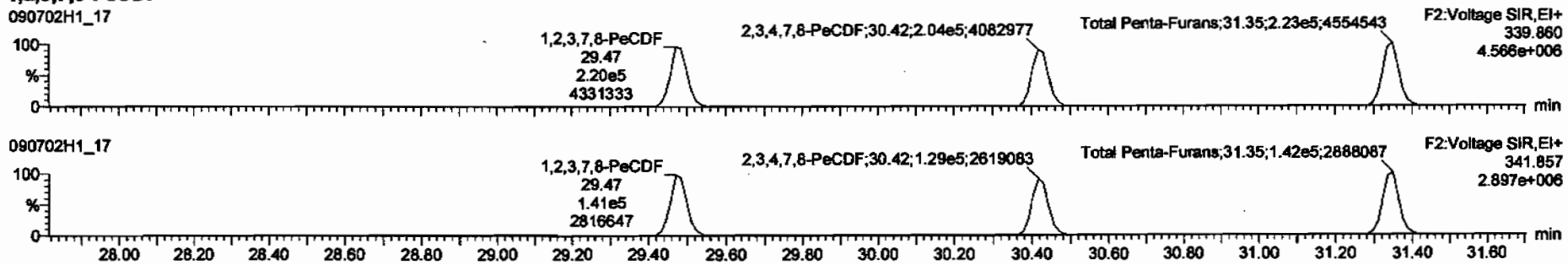

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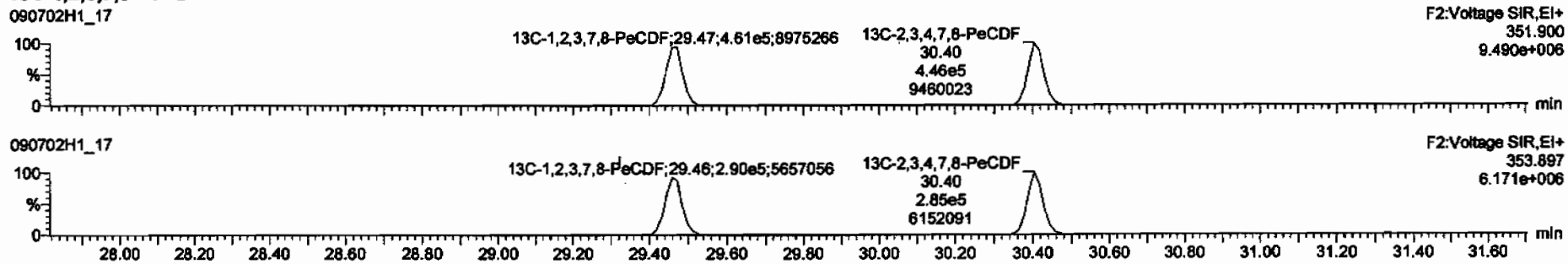

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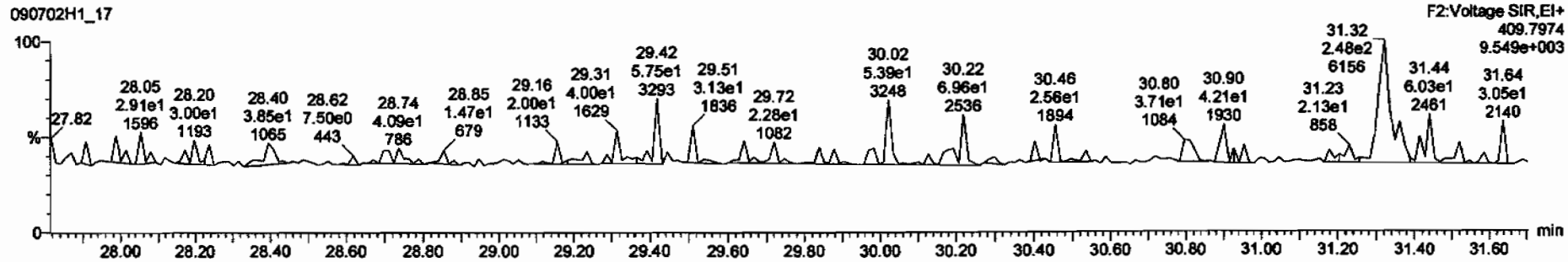

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1,2,3,4,7,8-HxCDF

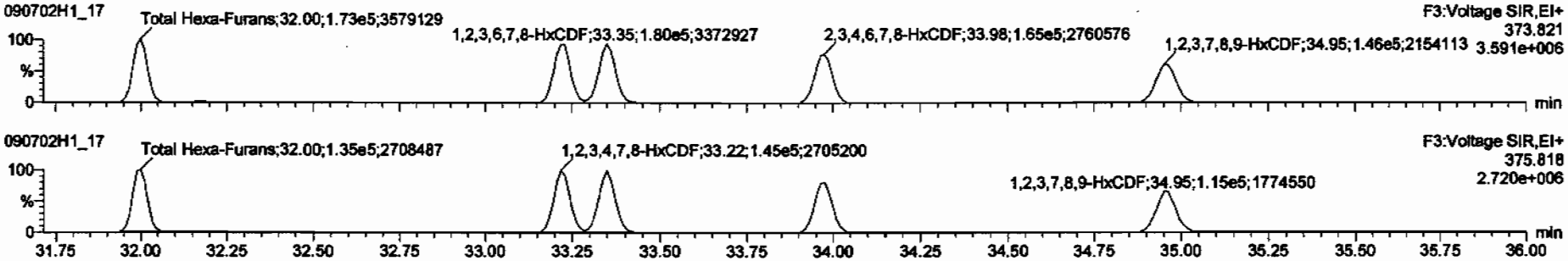

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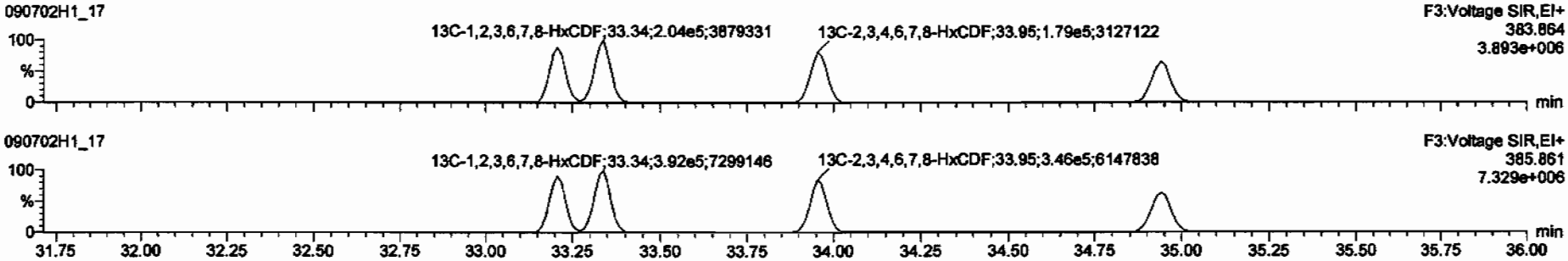

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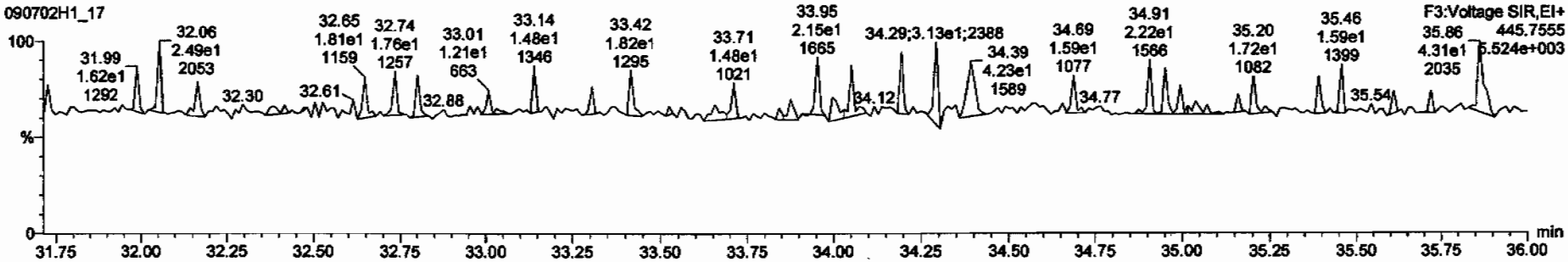

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1,2,3,4,6,7,8-HpCDF

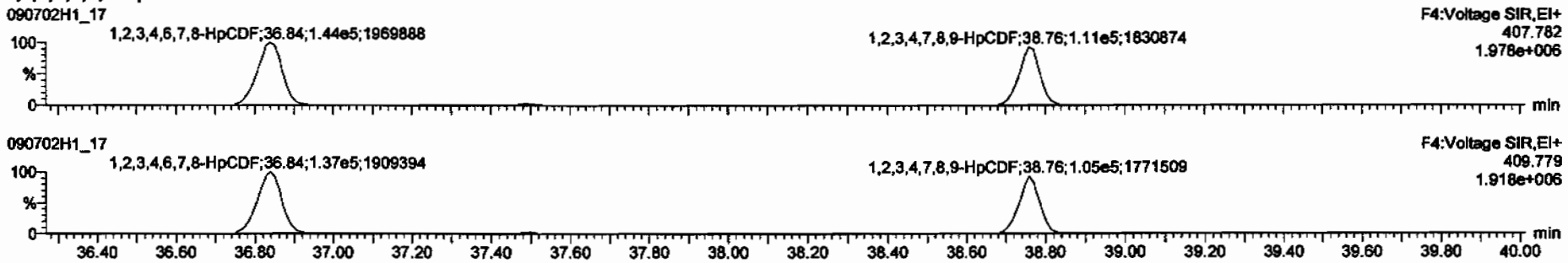

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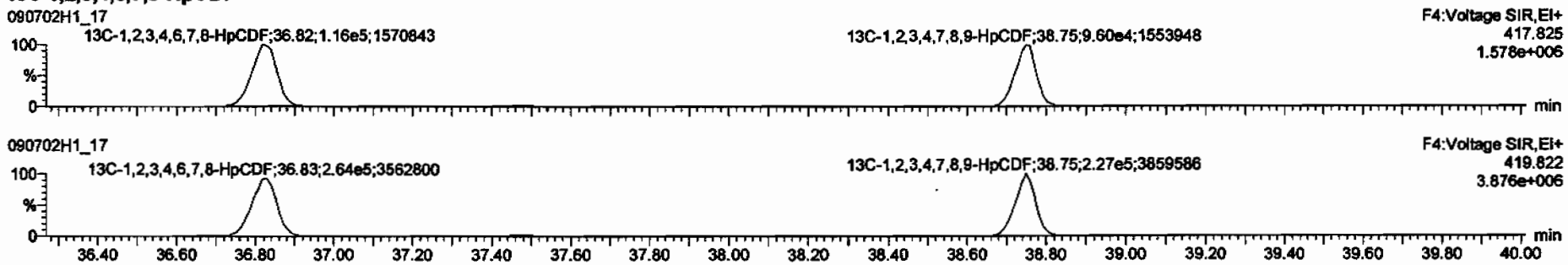

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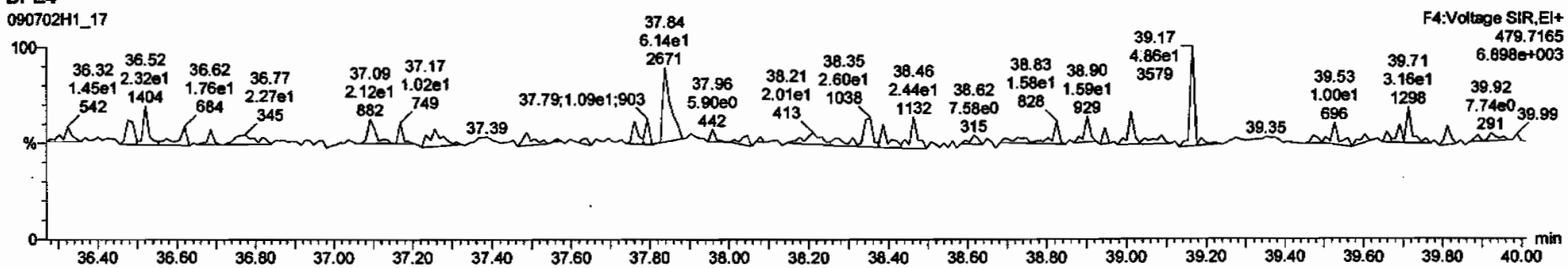

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OCDF

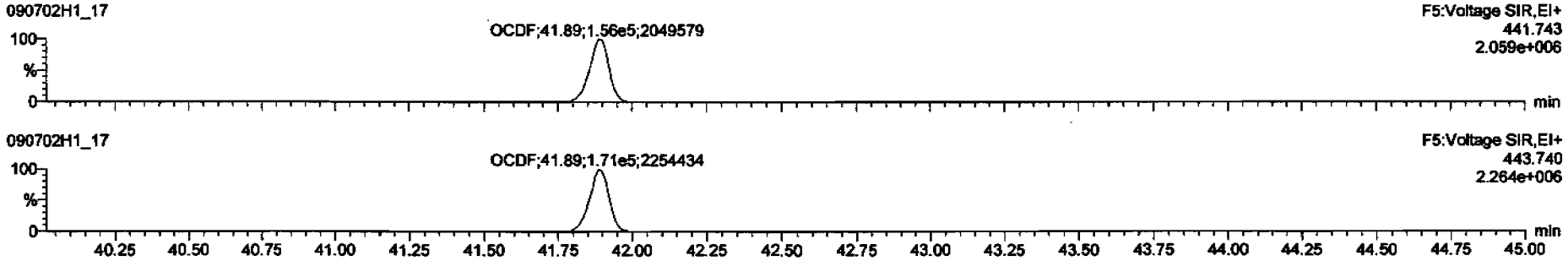

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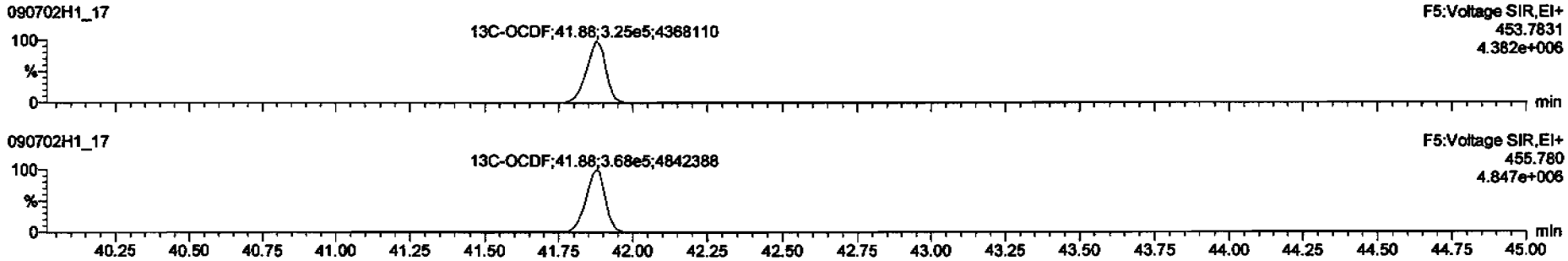

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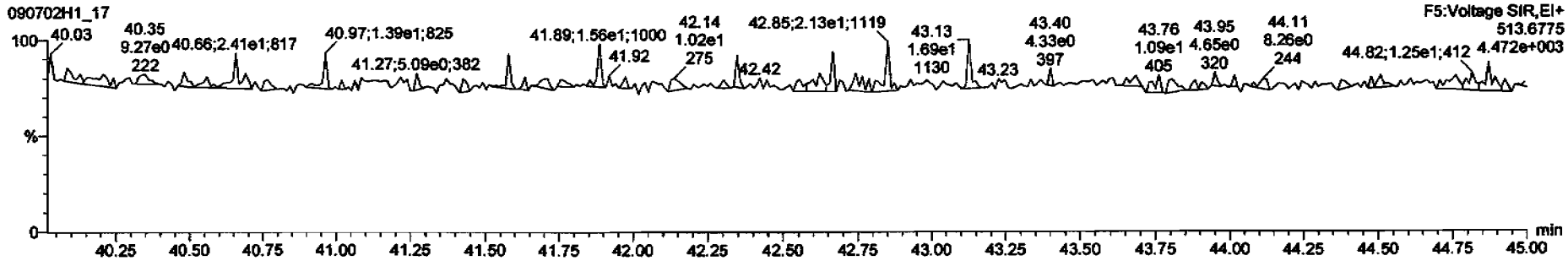

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

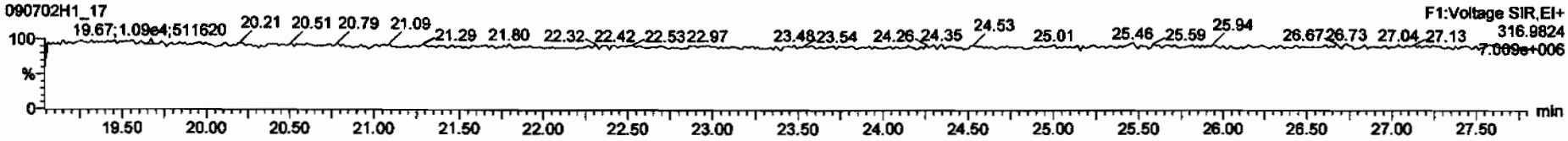

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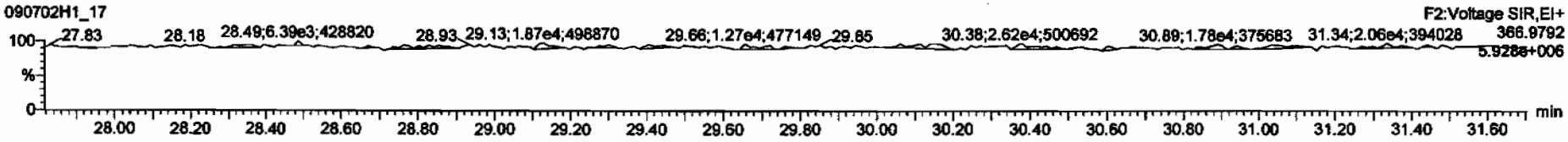

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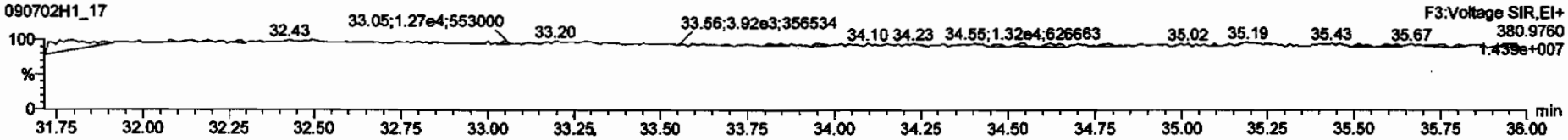

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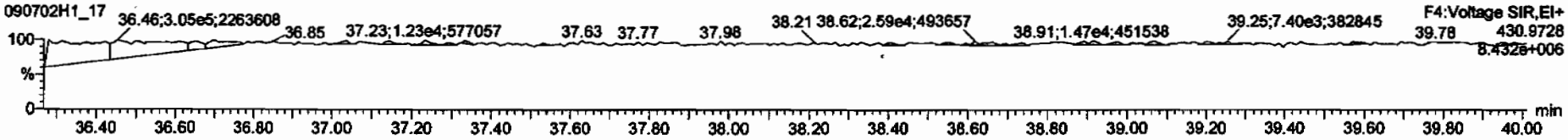

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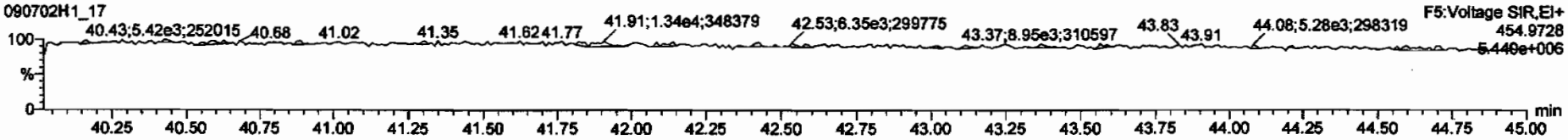

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M 292.9824 R 13746

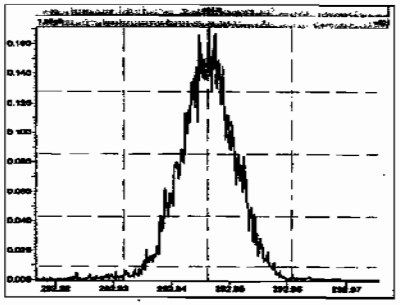

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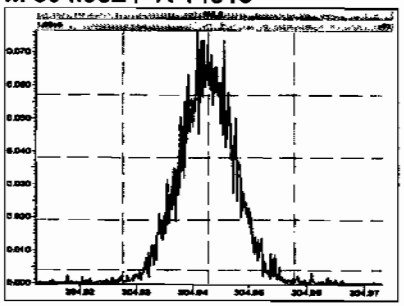

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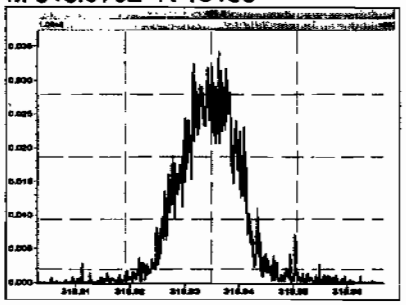

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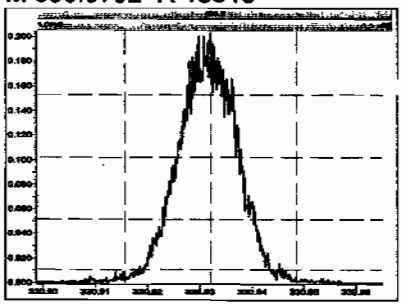

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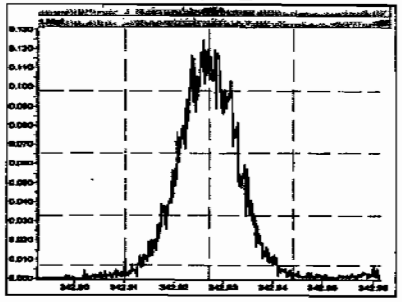

M 354.9792 R 13349

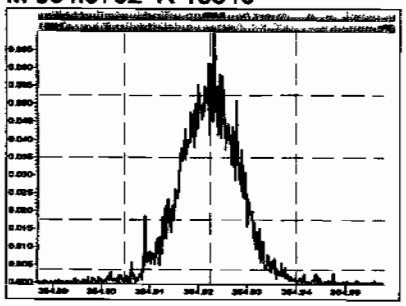

M 366.9792 R 13371

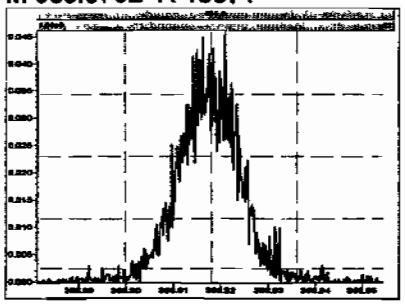

M 380.9760 R 12533

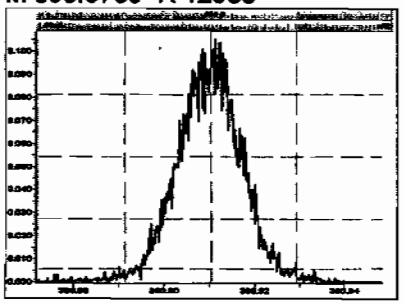

M 392.9760 R 13065

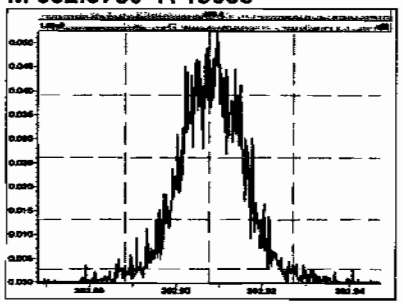

M 404.9760 R 13262

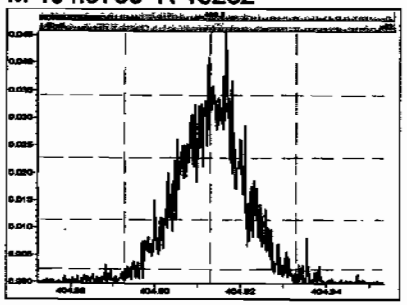

M 416.9760 R 13290

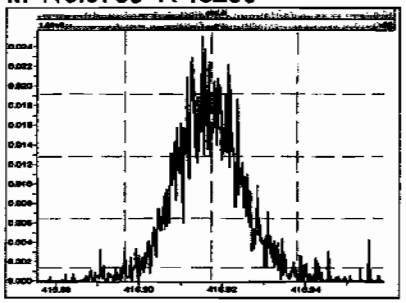

M 330.9792 R 14285

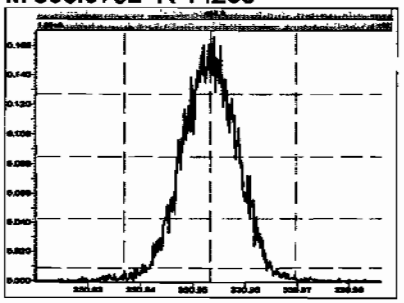

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M 342.9792 R 13624

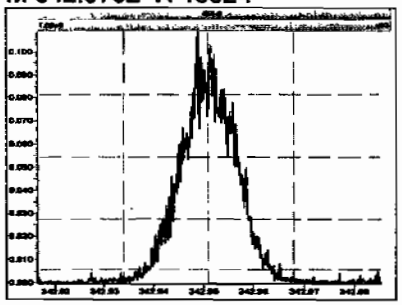

M 354.9792 R 14454

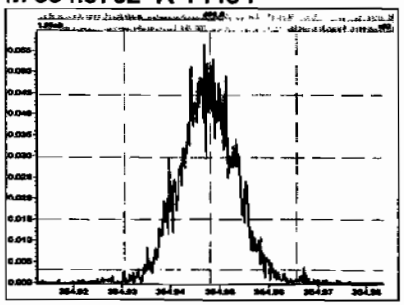

M 366.9792 R 14751

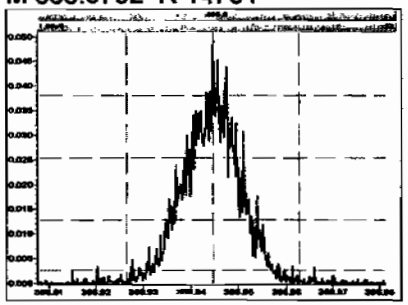

M 380.9760 R 13552

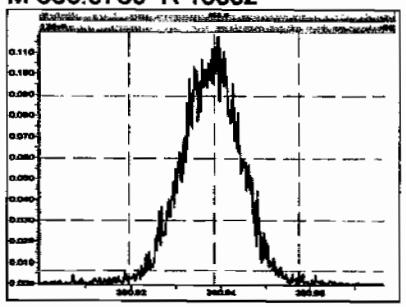

M 392.9760 R 13138

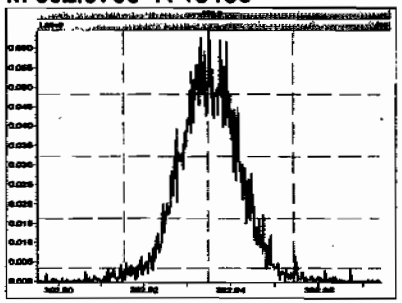

M 404.9760 R 13545

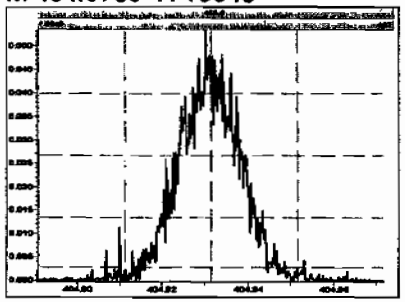

M 416.9760 R 14014

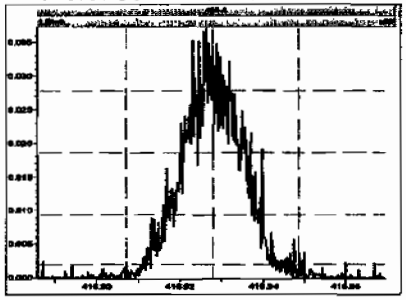

M 366.9792 R 15339

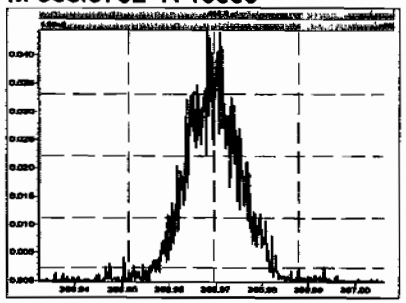

M 380.9760 R 14296

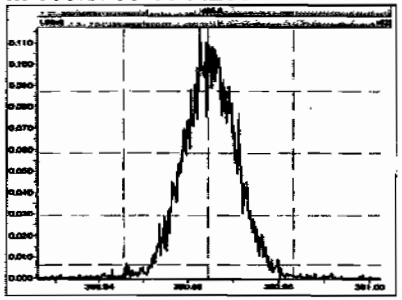

M 392.9760 R 15577

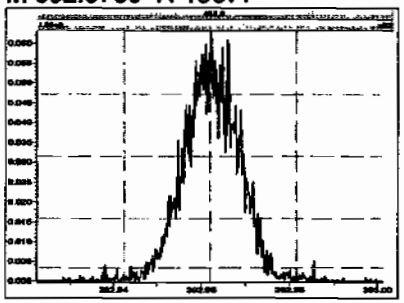

M 404.9760 R 14124

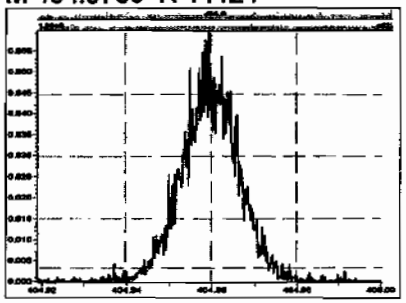

M 416.9760 R 14846

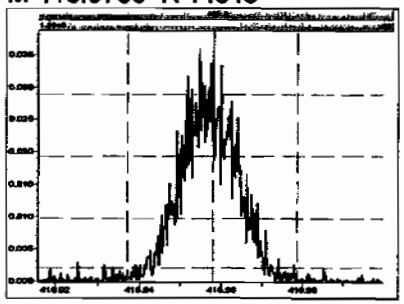

M 430.9728 R 13320

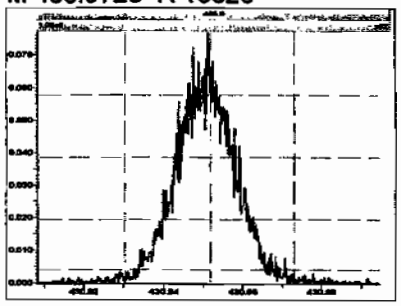

M 442.9728 R 14253

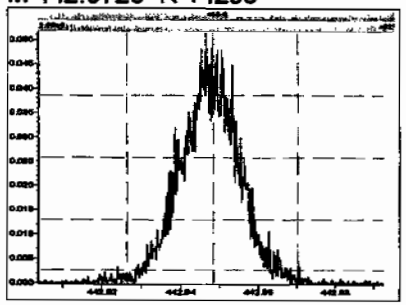

M 454.9728 R 13858

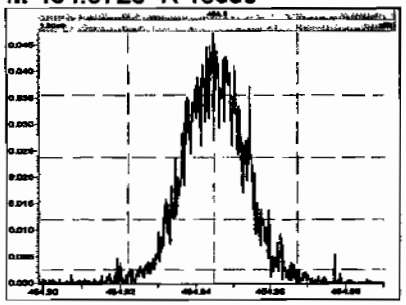

M 404.9760 R 15774

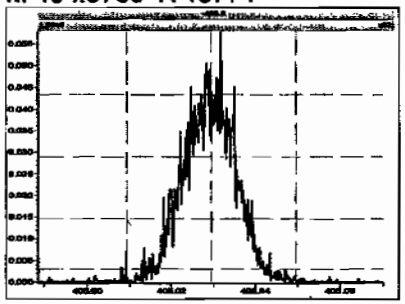

M 416.9760 R 16340

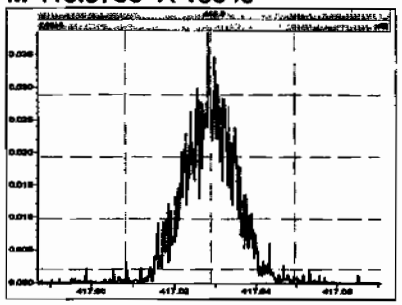

M 430.9728 R 15159

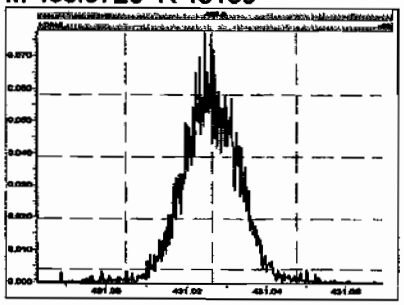

M 442.9728 R 15073

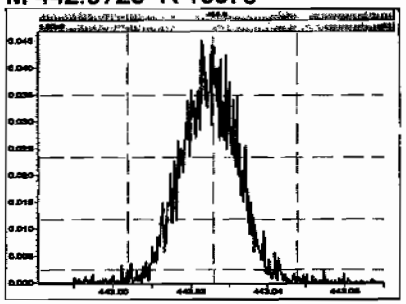

M 454.9728 R 14287

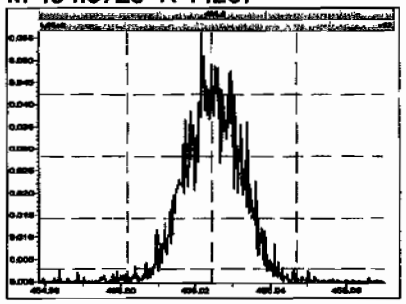

M 466.9728 R 15433

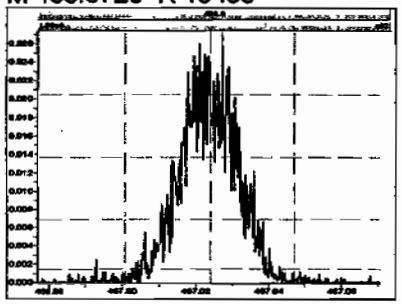

M 480.9696 R 14098

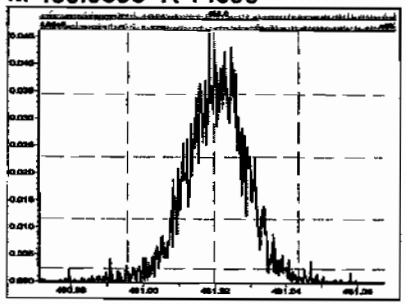

M 430.9728 R 14292

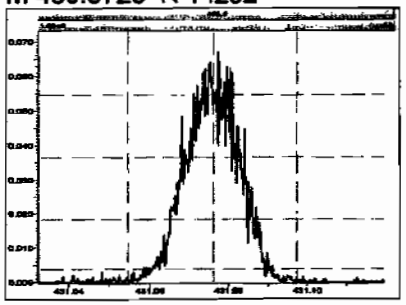

M 442.9728 R 15248

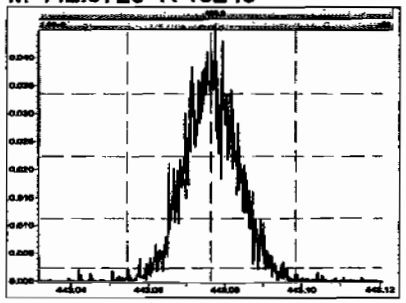

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M 454.9728 R 15214

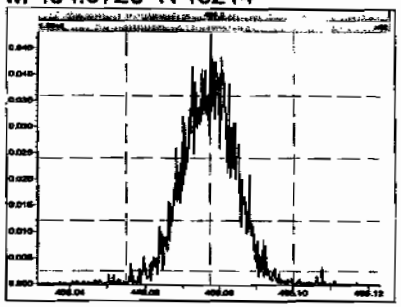

M 466.9728 R 16342

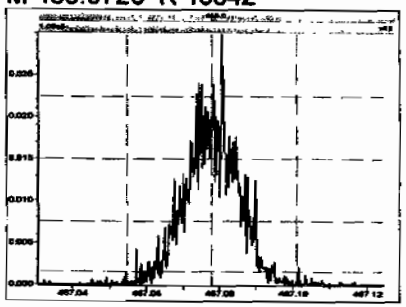

M 480.9696 R 14621

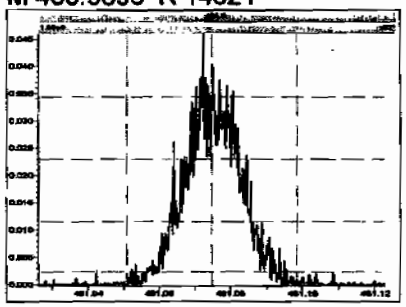

M 492.9696 R 16201

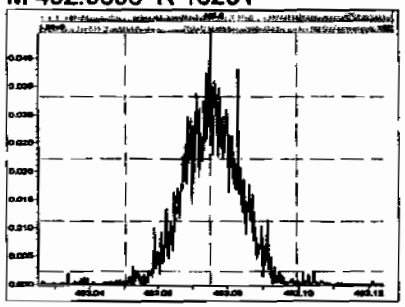

M 504.9696 R 15271

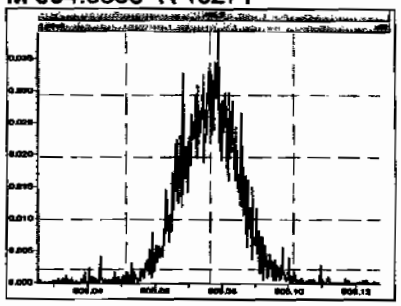

M 516.9697 R 16350

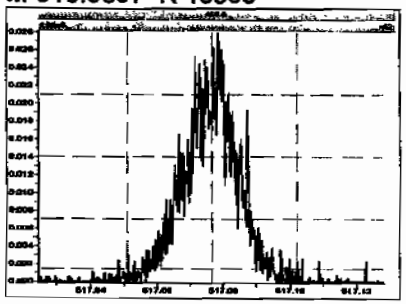

ICAL

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Compound name: 2,3,7,8-TCDD
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IA	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRT
090212H1_1	10.0	0.82	NO	25.98	1.001	7.90e4	7.49e5	9.78	-2.2	1.05
090212H1_3	0.250	0.85	NO	26.00	1.001	1.54e3	5.94e5	0.240	-4.1	1.03
090212H1_4	0.500	0.71	NO	25.98	1.001	3.65e3	6.33e5	0.536	7.1	1.16
090212H1_5	2.00	0.72	NO	26.00	1.001	1.40e4	6.64e5	1.95	-2.5	1.05
090212H1_6	40.0	0.77	NO	25.98	1.001	3.33e5	7.81e5	39.5	-1.3	1.06
090212H1_7	200	0.78	NO	26.00	1.001	1.92e6	8.66e5	206	3.0	1.11

Compound name: 1,2,3,7,8-PeCDD
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IA	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRT
090212H1_1	50.0	0.63	NO	30.65	1.000	3.03e5	6.02e5	48.6	-2.7	1.01
090212H1_3	1.25	0.69	NO	30.67	1.000	6.36e3	4.83e5	1.27	1.9	1.05
090212H1_4	2.50	0.60	NO	30.67	1.000	1.30e4	4.97e5	2.53	1.1	1.04
090212H1_5	10.0	0.61	NO	30.67	1.000	5.28e4	5.23e5	9.77	-2.3	1.01
090212H1_6	200	0.63	NO	30.67	1.000	1.31e6	6.35e5	200	-0.1	1.03
090212H1_7	1000	0.63	NO	30.67	1.000	8.09e6	7.66e5	1020	2.2	1.06

2/13/09
MS 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.00153
RRF SD: 0.0317187, Relative SD: 3.16702
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	ISResp	Conc	%D	RRF
090212H1_1	50.0	1.26	NO	34.10	1.000	2.54e5	5.27e5	48.0	-3.9	0.962
090212H1_3	1.25	1.42	NO	34.11	1.000	5.16e3	4.08e5	1.26	1.0	1.01
090212H1_4	2.50	1.28	NO	34.11	1.001	1.10e4	4.22e5	2.61	4.2	1.04
090212H1_5	10.0	1.32	NO	34.12	1.000	4.31e4	4.47e5	9.64	-3.6	0.965
090212H1_6	200	1.27	NO	34.11	1.000	1.12e6	5.53e5	203	1.4	1.02
090212H1_7	1000	1.25	NO	34.12	1.000	7.63e6	7.54e5	1010	1.0	1.01

Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	ISResp	Conc	%D	RRF
090212H1_1	50.0	1.27	NO	34.21	1.000	2.90e5	5.42e5	47.6	-4.8	1.07
090212H1_3	1.25	1.20	NO	34.23	1.001	6.02e3	4.14e5	1.29	3.4	1.16
090212H1_4	2.50	1.24	NO	34.23	1.001	1.23e4	4.20e5	2.60	3.9	1.17
090212H1_5	10.0	1.26	NO	34.24	1.001	4.91e4	4.60e5	9.46	-5.2	1.07
090212H1_6	200	1.30	NO	34.22	1.000	1.29e6	5.59e5	205	2.7	1.16
090212H1_7	1000	1.26	NO	34.23	1.000	8.08e6	7.18e5	1000	0.0	1.13

Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.10201
RRF SD: 0.0447729, Relative SD: 4.06282
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	ISResp	Conc	%D	RRF
090212H1_1	50.0	1.28	NO	34.51	1.009	2.83e5	0.00e0	48.1	-3.9	1.06
090212H1_3	1.25	1.27	NO	34.53	1.010	5.79e3	0.00e0	1.28	2.4	1.13

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1,2,3,7,8,9-HxCDD

Name	Std Conc	RA	IA	RT	RRT	RA	IS Area	Conc	Dev	RRF
090212H1_4	2.50	1.28	NO	34.52	1.009	1.21e4	0.00e0	2.60	4.0	1.15
090212H1_5	10.0	1.22	NO	34.53	1.009	4.70e4	0.00e0	9.41	-5.9	1.04
090212H1_6	200	1.32	NO	34.52	1.009	1.26e6	0.00e0	207	3.3	1.14
090212H1_7	1000	1.25	NO	34.53	1.009	8.13e6	0.00e0	1000	0.2	1.10

Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	RA	IS Area	Conc	Dev	RRF
090212H1_1	50.0	1.03	NO	38.17	1.000	2.11e5	4.13e5	48.0	-4.0	1.02
090212H1_3	1.25	1.15	NO	38.18	1.000	4.52e3	3.21e5	1.32	5.7	1.12
090212H1_4	2.50	1.07	NO	38.18	1.000	8.68e3	3.21e5	2.54	1.7	1.08
090212H1_5	10.0	1.07	NO	38.19	1.001	3.41e4	3.36e5	9.55	-4.5	1.02
090212H1_6	200	1.07	NO	38.19	1.000	9.19e5	4.29e5	201	0.7	1.07
090212H1_7	1000	1.05	NO	38.19	1.001	6.29e6	5.88e5	1000	0.5	1.07

Compound name: OCDD
Response Factor: 1.17831
RRF SD: 0.0736447, Relative SD: 6.25001
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	RA	IS Area	Conc	Dev	RRF
090212H1_1	100	0.91	NO	41.63	1.000	3.30e5	5.87e5	95.3	-4.7	1.12
090212H1_3	2.50	0.89	NO	41.67	1.001	7.09e3	4.40e5	2.74	9.5	1.29
090212H1_4	5.00	0.87	NO	41.65	1.000	1.25e4	4.37e5	4.85	-3.0	1.14
090212H1_5	20.0	0.85	NO	41.66	1.000	5.10e4	4.67e5	18.5	-7.3	1.09
090212H1_6	400	0.92	NO	41.68	1.000	1.48e6	6.21e5	404	1.1	1.19
090212H1_7	2000	0.89	NO	41.67	1.001	1.10e7	8.92e5	2090	4.4	1.23

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Compound name: 2,3,7,8-TCDF
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IQ	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0	0.78	NO	25.19	1.001	1.14e5	1.07e6	9.75	-2.5	1.06
090212H1_3	0.250	0.83	NO	25.19	1.001	2.44e3	8.63e5	0.260	4.1	1.13
090212H1_4	0.500	0.84	NO	25.20	1.001	4.98e3	9.06e5	0.506	1.2	1.10
090212H1_5	2.00	0.81	NO	25.20	1.001	1.97e4	9.70e5	1.87	-6.4	1.02
090212H1_6	40.0	0.79	NO	25.20	1.001	4.71e5	1.08e6	40.1	0.3	1.09
090212H1_7	200	0.79	NO	25.20	1.001	2.66e6	1.18e6	207	3.4	1.12

Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IQ	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.61	NO	29.42	1.000	5.65e5	9.82e5	49.6	-0.7	1.15
090212H1_3	1.25	1.63	NO	29.43	1.000	1.11e4	7.63e5	1.25	0.1	1.16
090212H1_4	2.50	1.74	NO	29.43	1.000	2.29e4	7.80e5	2.53	1.3	1.17
090212H1_5	10.0	1.61	NO	29.43	1.000	9.64e4	8.78e5	9.48	-5.2	1.10
090212H1_6	200	1.62	NO	29.43	1.000	2.36e6	9.96e5	204	2.0	1.18
090212H1_7	1000	1.60	NO	29.45	1.000	1.42e7	1.20e6	1030	2.5	1.19

Compound name: 2,3,4,7,8-PeCDF
Response Factor: 1.11789
RRF SD: 0.0264655, Relative SD: 2.36745
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IQ	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.56	NO	30.35	1.000	5.35e5	9.65e5	49.6	-0.8	1.11
090212H1_3	1.25	1.51	NO	30.36	1.000	1.08e4	7.68e5	1.25	0.4	1.12

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Compound name: 2,3,4,7,8-PeCDF

	Name	Std Conc	RA	IS	RT	RRT	Resp	S/N Resp	Conc	Dev	RRF
	090212H1_4	2.50	1.61	NO	30.36	1.000	2.28e4	7.94e5	2.57	2.6	1.15
	090212H1_5	10.0	1.64	NO	30.38	1.000	9.28e4	8.67e5	9.58	-4.2	1.07
	090212H1_6	200	1.60	NO	30.36	1.000	2.28e6	1.01e6	203	1.5	1.13
	090212H1_7	1000	1.59	NO	30.38	1.000	1.37e7	1.22e6	1010	0.5	1.12

Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.41088
RRF SD: 0.0512913, Relative SD: 3.6354
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	IS	RT	RRT	Resp	S/N Resp	Conc	Dev	RRF
	090212H1_1	50.0	1.27	NO	33.19	1.001	4.59e5	6.74e5	48.3	-3.3	1.36
	090212H1_3	1.25	1.35	NO	33.19	1.000	9.88e3	5.28e5	1.33	6.0	1.50
	090212H1_4	2.50	1.32	NO	33.19	1.000	1.96e4	5.45e5	2.54	1.8	1.44
	090212H1_5	10.0	1.31	NO	33.20	1.000	7.94e4	5.86e5	9.61	-3.9	1.36
	090212H1_6	200	1.27	NO	33.20	1.001	1.99e6	7.08e5	199	-0.5	1.40
	090212H1_7	1000	1.27	NO	33.20	1.000	1.28e7	9.05e5	1000	-0.0	1.41

Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.22218
RRF SD: 0.0229408, Relative SD: 1.87703
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	IS	RT	RRT	Resp	S/N Resp	Conc	Dev	RRF
	090212H1_1	50.0	1.25	NO	33.31	1.000	5.49e5	9.02e5	49.8	-0.4	1.22
	090212H1_3	1.25	1.21	NO	33.32	1.000	1.07e4	6.79e5	1.29	3.1	1.26
	090212H1_4	2.50	1.37	NO	33.31	1.000	2.16e4	6.99e5	2.52	1.0	1.23
	090212H1_5	10.0	1.34	NO	33.33	1.000	8.96e4	7.51e5	9.76	-2.4	1.19
	090212H1_6	200	1.27	NO	33.32	1.000	2.27e6	9.34e5	199	-0.5	1.22
	090212H1_7	1000	1.27	NO	33.33	1.001	1.41e7	1.17e6	992	-0.8	1.21

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Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	R²	IgV	RT	RRT	RS	IS RS	Conc	Dev	RRF
090212H1_1	50.0	1.29	NO	33.92	1.000	4.53e5	7.19e5	49.2	-1.6	1.26
090212H1_3	1.25	1.38	NO	33.93	1.000	9.11e3	5.78e5	1.23	-1.5	1.26
090212H1_4	2.50	1.28	NO	33.93	1.001	1.91e4	5.74e5	2.60	3.9	1.33
090212H1_5	10.0	1.25	NO	33.94	1.000	7.70e4	6.20e5	9.71	-2.9	1.24
090212H1_6	200	1.26	NO	33.93	1.000	1.95e6	7.64e5	200	-0.2	1.28
090212H1_7	1000	1.30	NO	33.94	1.000	1.26e7	9.59e5	1020	2.3	1.31

Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.25756
RRF SD: 0.0204635, Relative SD: 1.62723
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	R²	IgV	RT	RRT	RS	IS RS	Conc	Dev	RRF
090212H1_1	50.0	1.25	NO	34.91	1.000	3.76e5	6.05e5	49.5	-1.0	1.24
090212H1_3	1.25	1.37	NO	34.91	1.000	7.41e3	4.73e5	1.24	-0.4	1.25
090212H1_4	2.50	1.24	NO	34.92	1.001	1.51e4	4.79e5	2.50	0.2	1.26
090212H1_5	10.0	1.28	NO	34.93	1.000	6.29e4	5.10e5	9.81	-1.9	1.23
090212H1_6	200	1.25	NO	34.92	1.001	1.68e6	6.50e5	206	2.9	1.29
090212H1_7	1000	1.28	NO	34.92	1.000	1.08e7	8.57e5	1000	0.3	1.26

Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	R²	IgV	RT	RRT	RS	IS RS	Conc	Dev	RRF
090212H1_1	50.0	1.05	NO	36.81	1.000	4.18e5	5.07e5	48.8	-2.3	1.65
090212H1_3	1.25	1.05	NO	36.84	1.001	8.84e3	3.97e5	1.32	5.5	1.78

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Compound name: 1,2,3,4,6,7,8-HpCDF

Name	Std. Conc.	RA	IA	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_4	2.50	1.04	NO	36.82	1.000	1.73e4	3.94e5	2.60	4.0	1.76
090212H1_5	10.0	1.05	NO	36.84	1.001	6.64e4	4.25e5	9.25	-7.5	1.56
090212H1_6	200	1.06	NO	36.83	1.000	1.78e6	5.26e5	200	-0.1	1.69
090212H1_7	1000	1.06	NO	36.83	1.000	1.17e7	6.89e5	1010	0.5	1.70

Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.48054
RRF SD: 0.0286004, Relative SD: 1.93175
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IA	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0	1.05	NO	38.73	1.000	3.09e5	4.20e5	49.7	-0.5	1.47
090212H1_3	1.25	0.89	NO	38.75	1.001	6.11e3	3.26e5	1.27	1.3	1.50
090212H1_4	2.50	0.99	NO	38.73	1.000	1.20e4	3.25e5	2.49	-0.4	1.47
090212H1_5	10.0	1.07	NO	38.74	1.000	4.97e4	3.47e5	9.66	-3.4	1.43
090212H1_6	200	1.04	NO	38.75	1.000	1.34e6	4.47e5	202	0.9	1.49
090212H1_7	1000	1.03	NO	38.75	1.000	9.18e6	6.08e5	1020	2.1	1.51

Compound name: OCDF
Response Factor: 1.09622
RRF SD: 0.0644136, Relative SD: 5.87597
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IA	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.93	NO	41.88	1.001	4.66e5	8.78e5	96.7	-3.3	1.06
090212H1_3	2.50	0.90	NO	41.89	1.001	1.01e4	6.65e5	2.76	10.6	1.21
090212H1_4	5.00	0.84	NO	41.88	1.001	1.79e4	6.44e5	5.08	1.6	1.11
090212H1_5	20.0	0.95	NO	41.88	1.000	7.14e4	6.95e5	18.8	-6.2	1.03
090212H1_6	400	0.94	NO	41.90	1.000	2.10e6	9.52e5	402	0.4	1.10
090212H1_7	2000	0.92	NO	41.89	1.000	1.48e7	1.39e6	1940	-3.1	1.06

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Compound name: 13C-2,3,7,8-TCDD
Response Factor: 1.01489
RRF SD: 0.0275825, Relative SD: 2.71777
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Response	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.95	1.022	7.49e5	7.37e5	100	0.1	1.02
090212H1_3	100	0.80	NO	25.97	1.022	5.94e5	6.03e5	97.2	-2.8	0.986
090212H1_4	100	0.78	NO	25.97	1.022	6.33e5	6.33e5	98.5	-1.5	1.00
090212H1_5	100	0.78	NO	25.97	1.022	6.64e5	6.68e5	97.9	-2.1	0.994
090212H1_6	100	0.79	NO	25.97	1.022	7.81e5	7.54e5	102	2.0	1.04
090212H1_7	100	0.79	NO	25.97	1.022	8.66e5	8.18e5	104	4.3	1.06

Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.827461
RRF SD: 0.0577323, Relative SD: 6.97704
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Response	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.64	NO	30.64	1.207	6.02e5	7.37e5	98.7	-1.3	0.817
090212H1_3	100	0.63	NO	30.65	1.207	4.83e5	6.03e5	96.8	-3.2	0.801
090212H1_4	100	0.61	NO	30.65	1.207	4.97e5	6.33e5	94.9	-5.1	0.786
090212H1_5	100	0.64	NO	30.65	1.207	5.23e5	6.68e5	94.6	-5.4	0.783
090212H1_6	100	0.65	NO	30.65	1.207	6.35e5	7.54e5	102	1.7	0.842
090212H1_7	100	0.64	NO	30.65	1.207	7.66e5	8.18e5	113	13.2	0.937

Compound name: 13C-1,2,3,4,7,8-HxCDD
Response Factor: 0.916247
RRF SD: 0.0122736, Relative SD: 1.33955
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Response	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.08	0.988	5.27e5	5.79e5	99.4	-0.6	0.911
090212H1_3	100	1.26	NO	34.10	0.988	4.08e5	4.37e5	102	2.0	0.934

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Compound name: 13C-1,2,3,4,7,8-HxCDD

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	100	1.26	NO	34.08	0.988	4.22e5	4.66e5	98.7	-1.3	0.904
090212H1_5	100	1.24	NO	34.11	0.988	4.47e5	4.90e5	99.6	-0.4	0.913
090212H1_6	100	1.25	NO	34.10	0.988	5.53e5	6.10e5	98.9	-1.1	0.907
090212H1_7	100	1.25	NO	34.11	0.988	7.54e5	8.12e5	101	1.4	0.929

Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.920893
RRF SD: 0.0250009, Relative SD: 2.71486
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.19	0.991	5.42e5	5.79e5	102	1.7	0.936
090212H1_3	100	1.23	NO	34.21	0.991	4.14e5	4.37e5	103	2.9	0.948
090212H1_4	100	1.29	NO	34.21	0.991	4.20e5	4.66e5	97.7	-2.3	0.900
090212H1_5	100	1.25	NO	34.22	0.991	4.60e5	4.90e5	102	2.1	0.940
090212H1_6	100	1.27	NO	34.21	0.991	5.59e5	6.10e5	99.5	-0.5	0.916
090212H1_7	100	1.23	NO	34.22	0.991	7.18e5	8.12e5	96.0	-4.0	0.884

Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.708388
RRF SD: 0.019948, Relative SD: 2.81596
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.07	NO	38.16	1.106	4.13e5	5.79e5	101	0.7	0.713
090212H1_3	100	1.09	NO	38.17	1.106	3.21e5	4.37e5	104	3.9	0.736
090212H1_4	100	1.05	NO	38.17	1.106	3.21e5	4.66e5	97.1	-2.9	0.688
090212H1_5	100	1.06	NO	38.17	1.106	3.36e5	4.90e5	96.8	-3.2	0.686
090212H1_6	100	1.06	NO	38.16	1.106	4.29e5	6.10e5	99.3	-0.7	0.703
090212H1_7	100	1.04	NO	38.17	1.106	5.88e5	8.12e5	102	2.2	0.724

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Compound name: 13C-OCDD
Response Factor: 0.502588
RRF SD: 0.0283515, Relative SD: 5.6411
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	Int	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF
090212H1_1	200	0.89	NO	41.62	1.206	5.87e5	5.79e5	202	0.9	0.507
090212H1_3	200	0.92	NO	41.65	1.207	4.40e5	4.37e5	200	0.2	0.504
090212H1_4	200	0.90	NO	41.63	1.206	4.37e5	4.66e5	187	-6.7	0.469
090212H1_5	200	0.89	NO	41.65	1.206	4.67e5	4.90e5	190	-5.0	0.477
090212H1_6	200	0.91	NO	41.67	1.207	6.21e5	6.10e5	203	1.4	0.510
090212H1_7	200	0.93	NO	41.65	1.206	8.92e5	8.12e5	219	9.3	0.549

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.976814
RRF SD: 0.0185774, Relative SD: 1.90184
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	Int	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF
090212H1_1	100	0.77	NO	25.16	0.991	1.07e6	1.11e6	98.8	-1.2	0.965
090212H1_3	100	0.79	NO	25.17	0.991	8.63e5	9.05e5	97.5	-2.5	0.953
090212H1_4	100	0.78	NO	25.17	0.991	9.06e5	9.34e5	99.3	-0.7	0.970
090212H1_5	100	0.79	NO	25.17	0.991	9.70e5	9.83e5	101	1.1	0.987
090212H1_6	100	0.77	NO	25.17	0.991	1.08e6	1.10e6	100	0.4	0.980
090212H1_7	100	0.76	NO	25.17	0.991	1.18e6	1.18e6	103	2.9	1.01

Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 0.896189
RRF SD: 0.0663113, Relative SD: 7.39926
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	Int	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF
090212H1_1	100	1.58	NO	29.41	1.158	9.82e5	1.11e6	98.4	-1.6	0.882
090212H1_3	100	1.57	NO	29.42	1.158	7.63e5	9.05e5	94.0	-6.0	0.842

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Compound name: 13C-1,2,3,7,8-PeCDF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	100	1.57	NO	29.42	1.158	7.80e5	9.34e5	93.1	-6.9	0.835
090212H1_5	100	1.58	NO	29.42	1.158	8.78e5	9.83e5	99.7	-0.3	0.894
090212H1_6	100	1.56	NO	29.42	1.158	9.96e5	1.10e6	101	1.0	0.905
090212H1_7	100	1.52	NO	29.43	1.159	1.20e6	1.18e6	114	13.7	1.02

Compound name: 13C-2,3,4,7,8-PeCDF
Response Factor: 0.899625
RRF SD: 0.0716088, Relative SD: 7.95986
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	1.57	NO	30.34	1.195	9.65e5	1.11e6	96.3	-3.7	0.866
090212H1_3	100	1.54	NO	30.35	1.195	7.68e5	9.05e5	94.2	-5.8	0.848
090212H1_4	100	1.52	NO	30.35	1.195	7.94e5	9.34e5	94.5	-5.5	0.850
090212H1_5	100	1.59	NO	30.36	1.195	8.67e5	9.83e5	98.1	-1.9	0.882
090212H1_6	100	1.55	NO	30.35	1.195	1.01e6	1.10e6	102	1.6	0.914
090212H1_7	100	1.54	NO	30.36	1.195	1.22e6	1.18e6	115	15.3	1.04

Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.16919
RRF SD: 0.0331609, Relative SD: 2.83622
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.54	NO	33.16	0.961	6.74e5	5.79e5	99.5	-0.5	1.16
090212H1_3	100	0.54	NO	33.17	0.961	5.28e5	4.37e5	104	3.5	1.21
090212H1_4	100	0.52	NO	33.17	0.961	5.45e5	4.66e5	99.9	-0.1	1.17
090212H1_5	100	0.54	NO	33.19	0.961	5.86e5	4.90e5	102	2.3	1.20
090212H1_6	100	0.53	NO	33.17	0.961	7.08e5	6.10e5	99.4	-0.6	1.16
090212H1_7	100	0.53	NO	33.19	0.961	9.05e5	8.12e5	95.3	-4.7	1.11

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Compound name: 13C-1,2,3,6,7,8-HxCDF
Response Factor: 1.51914
RRF SD: 0.0457416, Relative SD: 3.01103
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsO	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.55	NO	33.29	0.965	9.02e5	5.79e5	103	2.5	1.56
090212H1_3	100	0.52	NO	33.31	0.965	6.79e5	4.37e5	102	2.4	1.56
090212H1_4	100	0.53	NO	33.29	0.965	6.99e5	4.66e5	98.7	-1.3	1.50
090212H1_5	100	0.53	NO	33.32	0.965	7.51e5	4.90e5	101	1.0	1.53
090212H1_6	100	0.52	NO	33.31	0.965	9.34e5	6.10e5	101	0.8	1.53
090212H1_7	100	0.54	NO	33.31	0.965	1.17e6	8.12e5	94.6	-5.4	1.44

Compound name: 13C-2,3,4,6,7,8-HxCDF
Response Factor: 1.24921
RRF SD: 0.0473005, Relative SD: 3.78643
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsO	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.54	NO	33.91	0.983	7.19e5	5.79e5	99.3	-0.7	1.24
090212H1_3	100	0.53	NO	33.92	0.983	5.78e5	4.37e5	106	6.0	1.32
090212H1_4	100	0.55	NO	33.91	0.983	5.74e5	4.66e5	98.4	-1.6	1.23
090212H1_5	100	0.55	NO	33.93	0.983	6.20e5	4.90e5	101	1.3	1.27
090212H1_6	100	0.53	NO	33.92	0.983	7.64e5	6.10e5	100	0.4	1.25
090212H1_7	100	0.53	NO	33.93	0.983	9.59e5	8.12e5	94.5	-5.5	1.18

Compound name: 13C-1,2,3,7,8,9-HxCDF
Response Factor: 1.05297
RRF SD: 0.0198461, Relative SD: 1.88477
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsO	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.53	NO	34.90	1.011	6.05e5	5.79e5	99.2	-0.8	1.04
090212H1_3	100	0.52	NO	34.90	1.011	4.73e5	4.37e5	103	2.9	1.08

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Compound name: 13C-1,2,3,7,8,9-HxCDF

Name	Std Conc	RA	IN	RT	RRT	Resp	ISResp	%Dev	%Dev	RRF
090212H1_4	100	0.53	NO	34.90	1.011	4.79e5	4.66e5	97.6	-2.4	1.03
090212H1_5	100	0.54	NO	34.92	1.011	5.10e5	4.90e5	98.9	-1.1	1.04
090212H1_6	100	0.52	NO	34.90	1.011	6.50e5	6.10e5	101	1.2	1.07
090212H1_7	100	0.53	NO	34.91	1.011	8.57e5	8.12e5	100	0.2	1.05

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 0.868264
RRF SD: 0.0231201, Relative SD: 2.6628
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	ISResp	%Dev	%Dev	RRF
090212H1_1	100	0.46	NO	36.80	1.066	5.07e5	5.79e5	101	0.8	0.875
090212H1_3	100	0.44	NO	36.81	1.066	3.97e5	4.37e5	105	4.7	0.909
090212H1_4	100	0.44	NO	36.81	1.066	3.94e5	4.66e5	97.3	-2.7	0.845
090212H1_5	100	0.44	NO	36.82	1.066	4.25e5	4.90e5	99.9	-0.1	0.868
090212H1_6	100	0.46	NO	36.82	1.066	5.26e5	6.10e5	99.5	-0.5	0.864
090212H1_7	100	0.45	NO	36.82	1.066	6.89e5	8.12e5	97.7	-2.3	0.849

Compound name: 13C-1,2,3,4,7,8,9-HpCDF
Response Factor: 0.726514
RRF SD: 0.0207066, Relative SD: 2.85014
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	ISResp	%Dev	%Dev	RRF
090212H1_1	100	0.46	NO	38.72	1.122	4.20e5	5.79e5	99.8	-0.2	0.725
090212H1_3	100	0.45	NO	38.73	1.122	3.26e5	4.37e5	103	2.8	0.747
090212H1_4	100	0.45	NO	38.72	1.122	3.25e5	4.66e5	95.9	-4.1	0.696
090212H1_5	100	0.44	NO	38.73	1.122	3.47e5	4.90e5	97.6	-2.4	0.709
090212H1_6	100	0.45	NO	38.74	1.122	4.47e5	6.10e5	101	1.0	0.734
090212H1_7	100	0.44	NO	38.74	1.122	6.08e5	8.12e5	103	3.0	0.748

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Compound name: 13C-OCDF
Response Factor: 0.759527
RRF SD: 0.058777, Relative SD: 7.73863
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IO	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	200	0.91	NO	41.85	1.213	8.78e5	5.79e5	200	-0.2	0.758
090212H1_3	200	0.88	NO	41.86	1.213	6.65e5	4.37e5	200	0.2	0.761
090212H1_4	200	0.90	NO	41.85	1.213	6.44e5	4.66e5	182	-9.1	0.690
090212H1_5	200	0.90	NO	41.86	1.213	6.95e5	4.90e5	187	-6.6	0.710
090212H1_6	200	0.90	NO	41.89	1.213	9.52e5	6.10e5	206	2.8	0.781
090212H1_7	200	0.90	NO	41.88	1.213	1.39e6	8.12e5	226	12.8	0.857

Compound name: 37Cl-2,3,7,8-TCDD
Response Factor: 0.668396
RRF SD: 0.0327668, Relative SD: 4.90231
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IO	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0			25.98	1.023	4.66e4	7.37e5	9.46	-5.4	0.632
090212H1_3	0.250			25.97	1.022	1.08e3	6.03e5	0.269	7.5	0.718
090212H1_4	0.500			25.98	1.023	2.17e3	6.33e5	0.512	2.4	0.685
090212H1_5	2.00			25.98	1.023	8.69e3	6.68e5	1.95	-2.7	0.650
090212H1_6	40.0			25.98	1.023	1.93e5	7.54e5	38.4	-4.1	0.641
090212H1_7	200			25.98	1.023	1.12e6	8.18e5	205	2.3	0.684

Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IO	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.81	NO	25.39	0.000	7.37e5	7.37e5	100	0.0	1.00
090212H1_3	100	0.79	NO	25.40	0.000	6.03e5	6.03e5	100	0.0	1.00

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Compound name: 13C-1,2,3,4-TCDD

Name	Sd. Conc.	RA	IM	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_4	100	0.79	NO	25.40	0.000	6.33e5	6.33e5	100	0.0	1.00
090212H1_5	100	0.78	NO	25.40	0.000	6.68e5	6.68e5	100	0.0	1.00
090212H1_6	100	0.78	NO	25.40	0.000	7.54e5	7.54e5	100	0.0	1.00
090212H1_7	100	0.79	NO	25.40	0.000	8.18e5	8.18e5	100	0.0	1.00

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 4.96507e-017, Relative SD: 4.96507e-015
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Sd. Conc.	RA	IM	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	100	0.78	NO	23.95	0.000	1.11e6	1.11e6	100	0.0	1.00
090212H1_3	100	0.77	NO	23.95	0.000	9.05e5	9.05e5	100	0.0	1.00
090212H1_4	100	0.77	NO	23.95	0.000	9.34e5	9.34e5	100	0.0	1.00
090212H1_5	100	0.76	NO	23.97	0.000	9.83e5	9.83e5	100	0.0	1.00
090212H1_6	100	0.77	NO	23.97	0.000	1.10e6	1.10e6	100	-0.0	1.00
090212H1_7	100	0.78	NO	23.97	0.000	1.18e6	1.18e6	100	0.0	1.00

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Sd. Conc.	RA	IM	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	100	1.22	NO	34.50	0.000	5.79e5	5.79e5	100	0.0	1.00
090212H1_3	100	1.23	NO	34.51	0.000	4.37e5	4.37e5	100	0.0	1.00
090212H1_4	100	1.25	NO	34.51	0.000	4.66e5	4.66e5	100	0.0	1.00
090212H1_5	100	1.18	NO	34.52	0.000	4.90e5	4.90e5	100	0.0	1.00
090212H1_6	100	1.26	NO	34.52	0.000	6.10e5	6.10e5	100	0.0	1.00
090212H1_7	100	1.22	NO	34.52	0.000	8.12e5	8.12e5	100	0.0	1.00

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Compound name: Total Tetra-Dioxins
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IS Area	Conc.
090212H1_1	10.0		7.49e5	60.1
090212H1_3	0.250		5.94e5	0.240
090212H1_4	0.500		6.33e5	0.536
090212H1_5	2.00		6.64e5	1.95
090212H1_6	40.0		7.81e5	39.5
090212H1_7	200		8.66e5	206

Compound name: Total Penta-Dioxins
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IS Area	Conc.
090212H1_1	50.0		6.02e5	159
090212H1_3	1.25		4.83e5	1.30
090212H1_4	2.50		4.97e5	2.53
090212H1_5	10.0		5.23e5	9.77
090212H1_6	200		6.35e5	200
090212H1_7	1000		7.66e5	1020

Compound name: Total Hexa-Dioxins
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IS Area	Conc.
090212H1_1	50.0		0.00e0	191
090212H1_3	1.25		0.00e0	3.85

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Compound name: Total Hexa-Dioxins

Name	Std Conc.	RA	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_4	2.50					0.00e0	7.81		
090212H1_5	10.0					0.00e0	28.5		
090212H1_6	200					0.00e0	615		
090212H1_7	1000					0.00e0	3010		

Compound name: Total Hepta-Dioxins
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	50.0					4.13e5	127		
090212H1_3	1.25					3.21e5	1.38		
090212H1_4	2.50					3.21e5	2.60		
090212H1_5	10.0					3.36e5	9.55		
090212H1_6	200					4.29e5	203		
090212H1_7	1000					5.88e5	1010		

Compound name: Total Tetra-Furans
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	10.0					1.07e6	35.3		
090212H1_3	0.250					8.63e5	0.269		
090212H1_4	0.500					9.06e5	0.506		
090212H1_5	2.00					9.70e5	1.88		
090212H1_6	40.0					1.08e6	40.6		
090212H1_7	200					1.18e6	209		

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Compound name: 1st Func. Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Rt	RRT	Resp	IS Resp	Conc	ID	RRF
090212H1_1	50.0					0.00e0	46.2		
090212H1_3	1.25					0.00e0	0.00241		
090212H1_4	2.50					0.00e0	0.0270		
090212H1_5	10.0					0.00e0	0.0198		
090212H1_6	200					0.00e0	0.00694		
090212H1_7	1000					0.00e0	0.00731		

Compound name: Total Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Rt	RRT	Resp	IS Resp	Conc	ID	RRF
090212H1_1	50.0					0.00e0	147		
090212H1_3	1.25					0.00e0	2.51		
090212H1_4	2.50					0.00e0	5.10		
090212H1_5	10.0					0.00e0	19.1		
090212H1_6	200					0.00e0	412		
090212H1_7	1000					0.00e0	2040		

Compound name: Total Hexa-Furans
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Rt	RRT	Resp	IS Resp	Conc	ID	RRF
090212H1_1	50.0					0.00e0	250		
090212H1_3	1.25					0.00e0	5.09		

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Compound name: Total Hexa-Furans

Name	Std Conc	RA	RV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50						0.00e0	10.2		
090212H1_5	10.0						0.00e0	38.9		
090212H1_6	200						0.00e0	804		
090212H1_7	1000						0.00e0	4020		

Compound name: Total Hepta-Furans
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0						0.00e0	98.6		
090212H1_3	1.25						0.00e0	2.59		
090212H1_4	2.50						0.00e0	5.09		
090212H1_5	10.0						0.00e0	18.9		
090212H1_6	200						0.00e0	403		
090212H1_7	1000						0.00e0	2030		

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: PFK2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sample Amount	RA	RT	RRT	Response	IS Response	Concentration	Deviation	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sample Amount	RA	RT	RRT	Response	IS Response	Concentration	Deviation	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sample Amount	RA	RT	RRT	Response	IS Response	Concentration	Deviation	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: PFK4

Name	Std. Conc.	RF	RT	RRT	Resp.	S/N	Conc.	CV	RRF
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RF	RT	RRT	Resp.	S/N	Conc.	CV	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RF	RT	RRT	Resp.	S/N	Conc.	CV	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	Area	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	Area	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	Area	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE4

Name	Response
090212H1_6	1.00
090212H1_7	1.00

Compound name: DPE5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Response
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

Compound name: DPE6
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Response
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	NO	9.78	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	48.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	48.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	48.1	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	48.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.91	0.76-1.02	NO	95.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	9.75	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	48.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	49.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	48.8	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	49.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.93	0.76-1.02	NO	96.7	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090212H1-1

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	100	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	98.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	99.4	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	102	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	98.8	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.5	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	NO	103	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	99.2	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	101	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	99.8	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	200	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.46	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: _____
Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.58
2	1,2,8,9-TCDD (Last)	26.86
3	1,2,4,7,9-PeCDD (First)	28.51
4	1,2,3,8,9-PeCDD (Last)	31.03
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.01
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.28
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.91
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

Jr 2/13/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/10/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qid

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	Name	Area					RT					
1	2,3,7,8-TCDD	7.90e4	0.82	NO	1.08	1.000	25.98	1.001	9.7764	97.8	0.0390	9.7764
2	1,2,3,7,8-PeCDD	3.03e5	0.63	NO	1.03	1.000	30.65	1.000	48.635	97.3	0.124	48.635
3	1,2,3,4,7,8-HxCDD	2.54e5	1.26	NO	1.00	1.000	34.10	1.000	48.035	96.1	0.187	48.035
4	1,2,3,6,7,8-HxCDD	2.90e5	1.27	NO	1.13	1.000	34.21	1.000	47.595	95.2	0.184	47.595
5	1,2,3,7,8,9-HxCDD	2.83e5	1.28	NO	1.10	1.000	34.51	1.009	48.051	96.1	0.180	48.051
6	1,2,3,4,6,7,8-HpCDD	2.11e5	1.03	NO	1.06	1.000	38.17	1.000	47.989	96.0	0.341	47.989
7	OCDD	3.30e5	0.91	NO	1.18	1.000	41.63	1.000	95.331	95.3	0.179	95.331
8	2,3,7,8-TCDF	1.14e5	0.78	NO	1.09	1.000	25.19	1.001	9.7515	97.5	0.0409	9.7515
9	1,2,3,7,8-PeCDF	5.65e5	1.61	NO	1.16	1.000	29.42	1.000	49.643	99.3	0.123	49.643
10	2,3,4,7,8-PeCDF	5.35e5	1.56	NO	1.12	1.000	30.35	1.000	49.591	99.2	0.120	49.591
11	1,2,3,4,7,8-HxCDF	4.59e5	1.27	NO	1.41	1.000	33.19	1.001	48.331	96.7	0.150	48.331
12	1,2,3,6,7,8-HxCDF	5.49e5	1.25	NO	1.22	1.000	33.31	1.000	49.809	99.6	0.137	49.809
13	2,3,4,6,7,8-HxCDF	4.53e5	1.29	NO	1.28	1.000	33.92	1.000	49.224	98.4	0.172	49.224
14	1,2,3,7,8,9-HxCDF	3.76e5	1.25	NO	1.26	1.000	34.91	1.000	49.483	99.0	0.252	49.483
15	1,2,3,4,6,7,8-HpCDF	4.18e5	1.05	NO	1.69	1.000	36.81	1.000	48.842	97.7	0.180	48.842
16	1,2,3,4,7,8,9-HpCDF	3.09e5	1.05	NO	1.48	1.000	38.73	1.000	49.738	99.5	0.251	49.738
17	OCDF	4.66e5	0.93	NO	1.10	1.000	41.88	1.001	96.743	96.7	0.177	96.743
18	13C-2,3,7,8-TCDD	7.49e5	0.77	NO	1.01	1.000	25.95	1.022	100.15	100	0.141	
19	13C-1,2,3,7,8-PeCDD	6.02e5	0.64	NO	0.827	1.000	30.64	1.207	98.735	98.7	0.269	
20	13C-1,2,3,4,7,8-HxCDD	5.27e5	1.26	NO	0.916	1.000	34.08	0.988	99.432	99.4	0.335	
21	13C-1,2,3,6,7,8-HxCDD	5.42e5	1.26	NO	0.921	1.000	34.19	0.991	101.67	102	0.334	
22	13C-1,2,3,4,6,7,8-HpCDD	4.13e5	1.07	NO	0.708	1.000	38.16	1.106	100.67	101	0.425	
23	13C-OCDD	5.87e5	0.89	NO	0.503	1.000	41.62	1.206	201.71	101	0.424	
24	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	0.977	1.000	25.16	0.991	98.780	98.8	0.129	
25	13C-1,2,3,7,8-PeCDF	9.82e5	1.58	NO	0.896	1.000	29.41	1.158	98.441	98.4	0.304	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.57	NO	0.900	1.000	30.34	1.195	96.306	96.3	0.303	
27	13C-1,2,3,4,7,8-HxCDF	6.74e5	0.54	NO	1.17	1.000	33.16	0.961	99.512	99.5	0.469	
28	13C-1,2,3,6,7,8-HxCDF	9.02e5	0.55	NO	1.52	1.000	33.29	0.965	102.54	103	0.361	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.54	NO	1.25	1.000	33.91	0.983	99.345	99.3	0.439	
30	13C-1,2,3,7,8,9-HxCDF	6.05e5	0.53	NO	1.05	1.000	34.90	1.011	99.208	99.2	0.521	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.46	NO	0.868	1.000	36.80	1.066	100.83	101	0.602
32	13C-1,2,3,4,7,8,9-HpCDF	4.20e5	0.46	NO	0.727	1.000	38.72	1.122	99.796	99.8	0.719
33	13C-OCDF	8.78e5	0.91	NO	0.760	1.000	41.85	1.213	199.65	99.8	0.296
34	37Cl-2,3,7,8-TCDD	4.66e4			0.668	1.000	25.98	1.023	9.4592	94.6	0.0533
35	13C-1,2,3,4-TCDD	7.37e5	0.81	NO	1.00	1.000	25.39	0.000	100.00	100	0.144
36	13C-1,2,3,4-TCDF	1.11e6	0.78	NO	1.00	1.000	23.95	0.000	100.00	100	0.126
37	13C-1,2,3,7,8,9-HxCDD	5.79e5	1.22	NO	1.00	1.000	34.50	0.000	100.00	100	0.307

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 7:21:09 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:21:55 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Compound name: 1,3,6,8-TCDD (First)

Name	ID	Acq Date	Acq Time
090212H1_1	ST090212H1-1 1613 CS3 080917I	12-Feb-09	11:10:11
090212H1_2	solvent blank	12-Feb-09	11:59:18
090212H1_3	ST090212H1-2 1613 CS0 080917F	12-Feb-09	12:49:08
090212H1_4	ST090212H1-3 1613 CS1 080917CG	12-Feb-09	13:38:34
090212H1_5	ST090212H1-4 1613 CS2 080917H	12-Feb-09	14:28:11
090212H1_6	ST090212H1-5 1613 CS4 080917J	12-Feb-09	15:17:39
090212H1_7	ST090212H1-6 1613 CS5 080917K	12-Feb-09	16:07:03
090212H1_8	solvent blank	12-Feb-09	16:56:26
090212H1_9	SSS090212H1-1 Sec Src Std L070913A	12-Feb-09	17:45:49

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:13 Pacific Standard Time

M 292.9824 R 13157

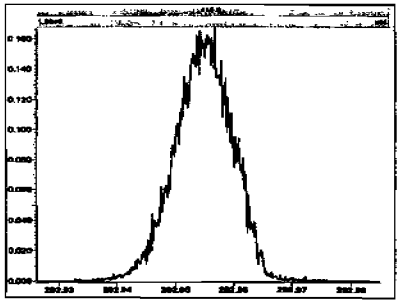

M 304.9824 R 14289

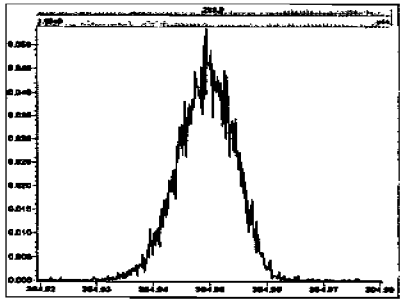

M 318.9792 R 13655

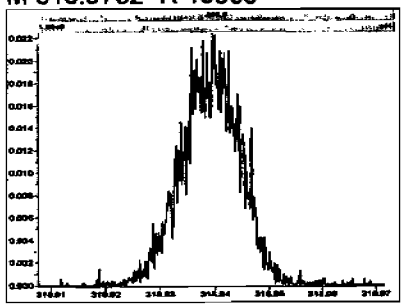

M 330.9792 R 12819

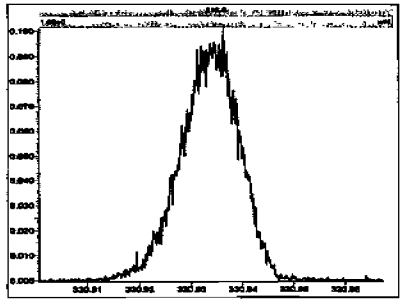

M 342.9792 R 13085

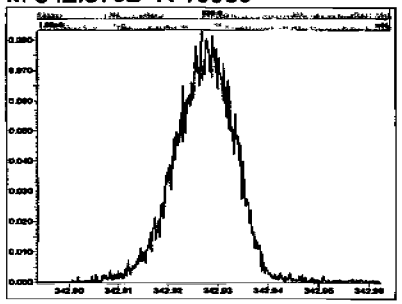

M 354.9792 R 13440

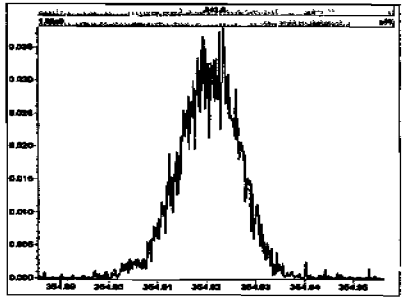

M 366.9792 R 11572

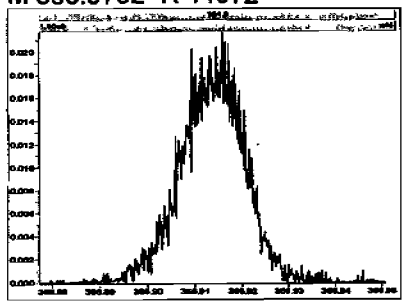

M 380.9760 R 13365

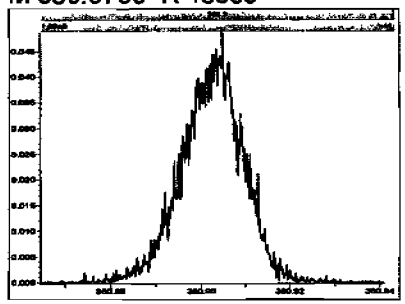

M 392.9760 R 13660

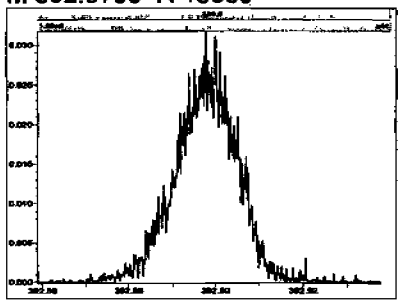

M 404.9760 R 13160

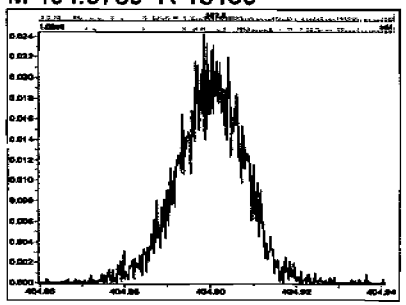

M 416.9760 R 15061

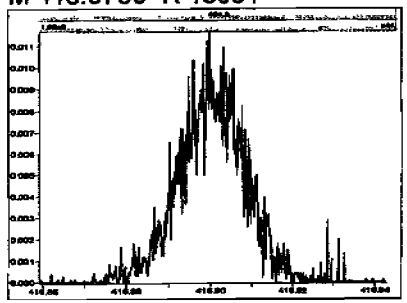

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:36 Pacific Standard Time

M 330.9792 R 13661

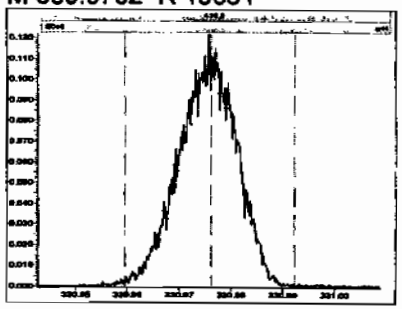

M 342.9792 R 12688

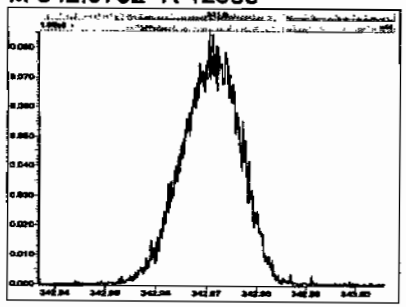

M 354.9792 R 13813

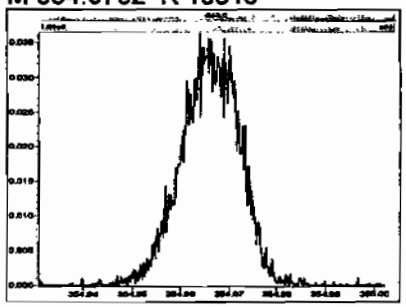

M 366.9792 R 13735

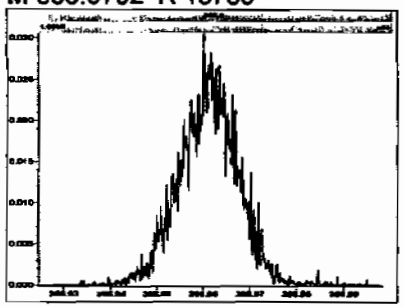

M 380.9760 R 13225

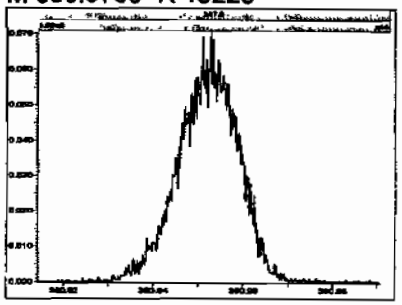

M 392.9760 R 13090

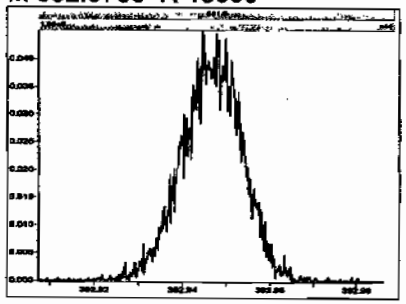

M 404.9760 R 13368

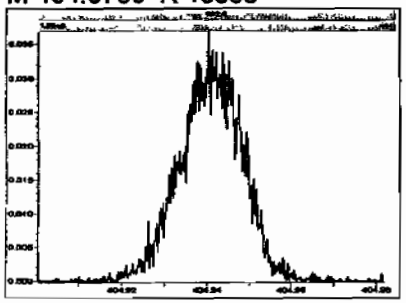

M 416.9760 R 13510

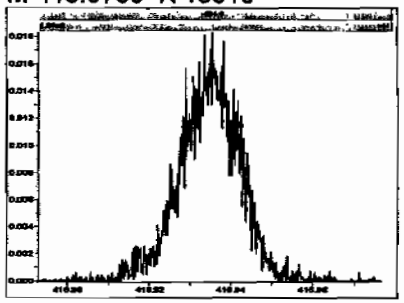

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:57 Pacific Standard Time

M 366.9792 R 13441

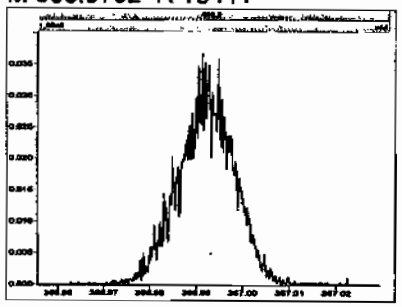

M 380.9760 R 13367

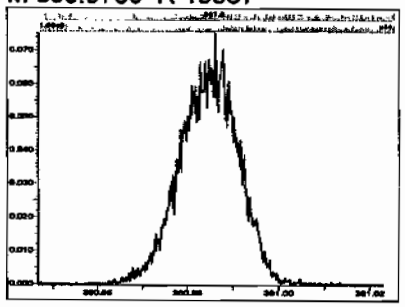

M 392.9760 R 13733

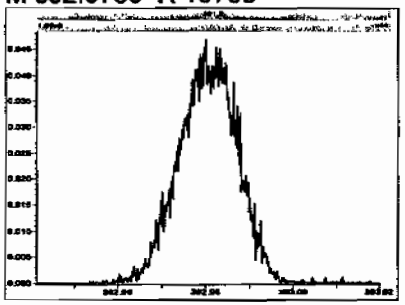

M 404.9760 R 12136

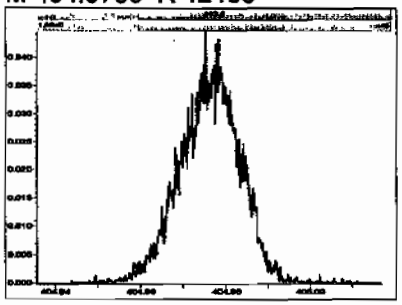

M 416.9760 R 13887

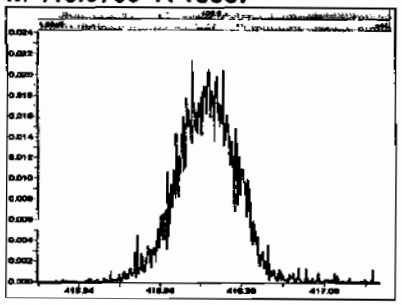

M 430.9728 R 13515

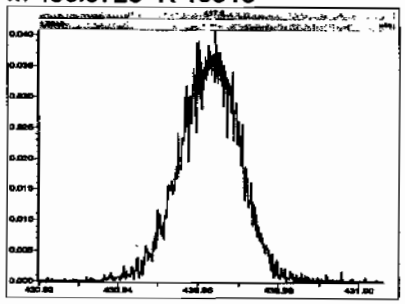

M 442.9728 R 14124

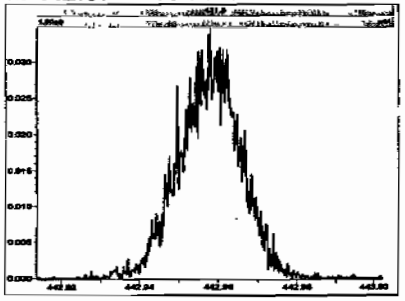

M 454.9728 R 13225

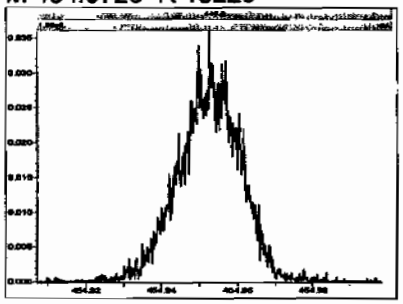

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:16 Pacific Standard Time

M 404.9760 R 13299

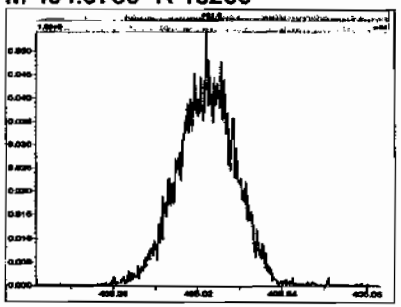

M 416.9760 R 14124

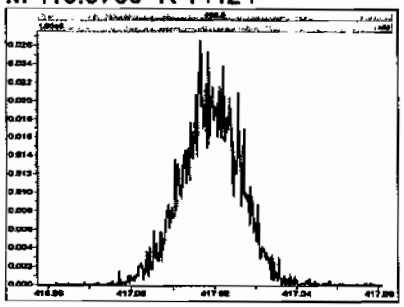

M 430.9728 R 13019

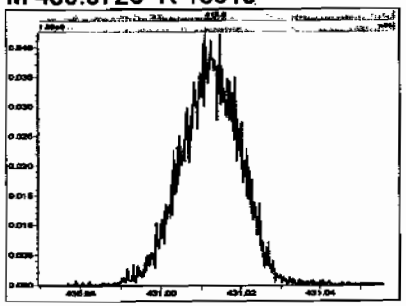

M 442.9728 R 13022

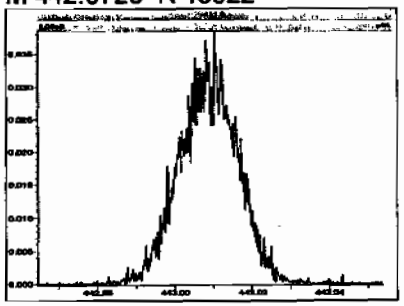

M 454.9728 R 12953

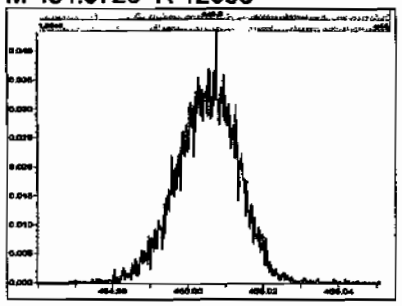

M 466.9728 R 12692

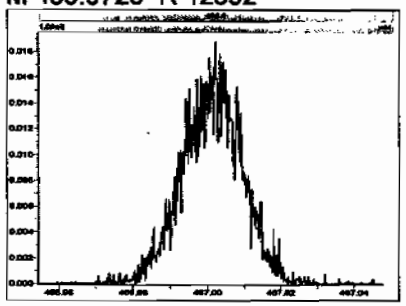

M 480.9696 R 14882

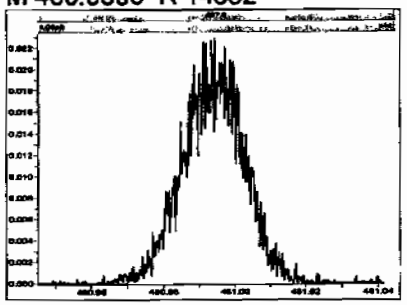

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:41 Pacific Standard Time

M 430.9728 R 12434

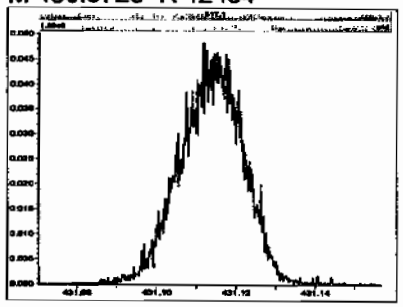

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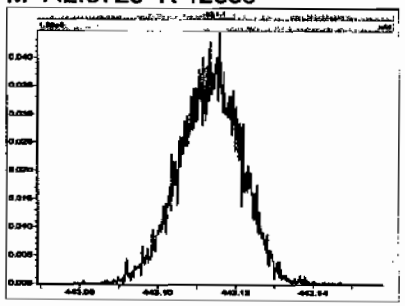

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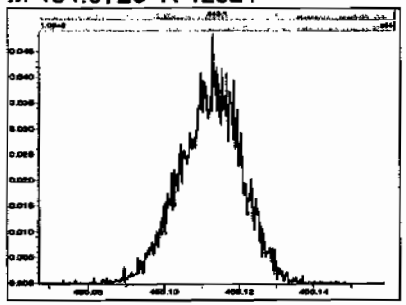

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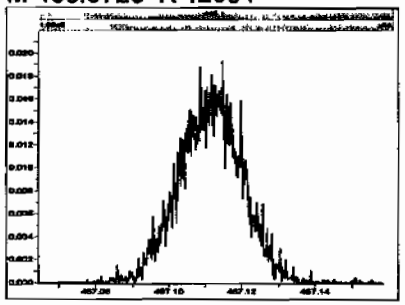

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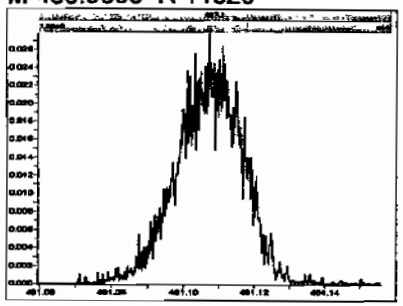

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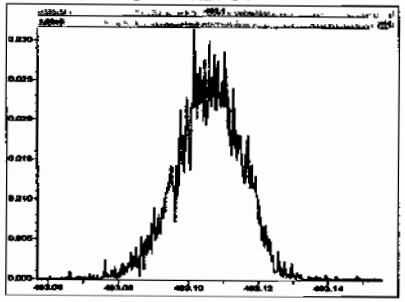

M 504.9696 R 11211

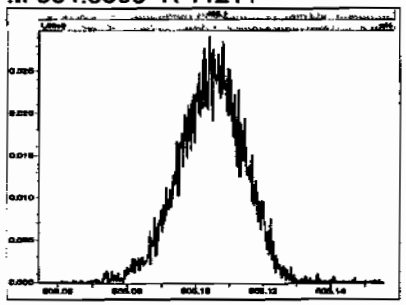

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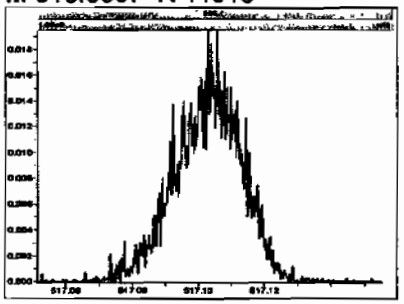

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Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

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Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

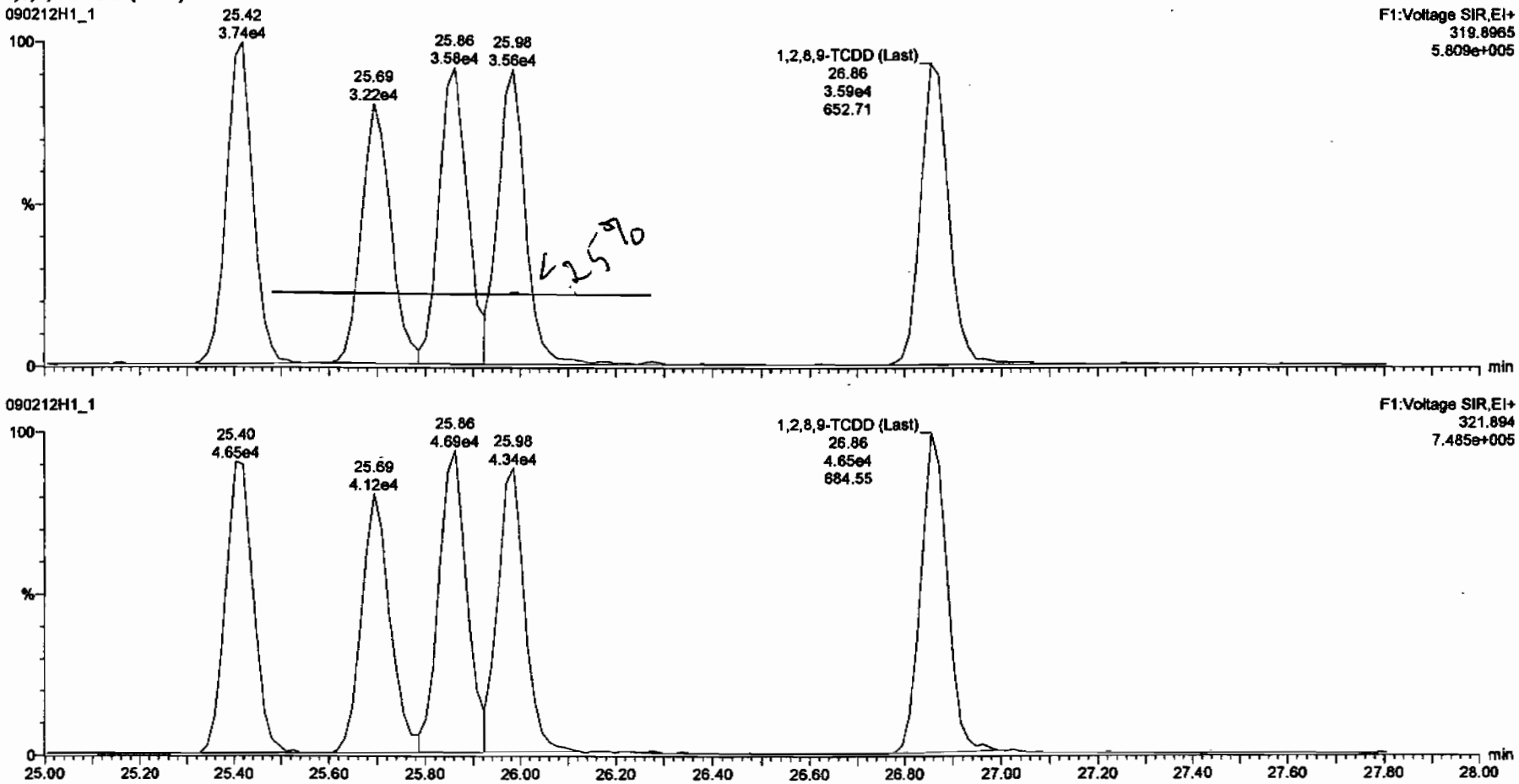

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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2,3,7,8-TCDD

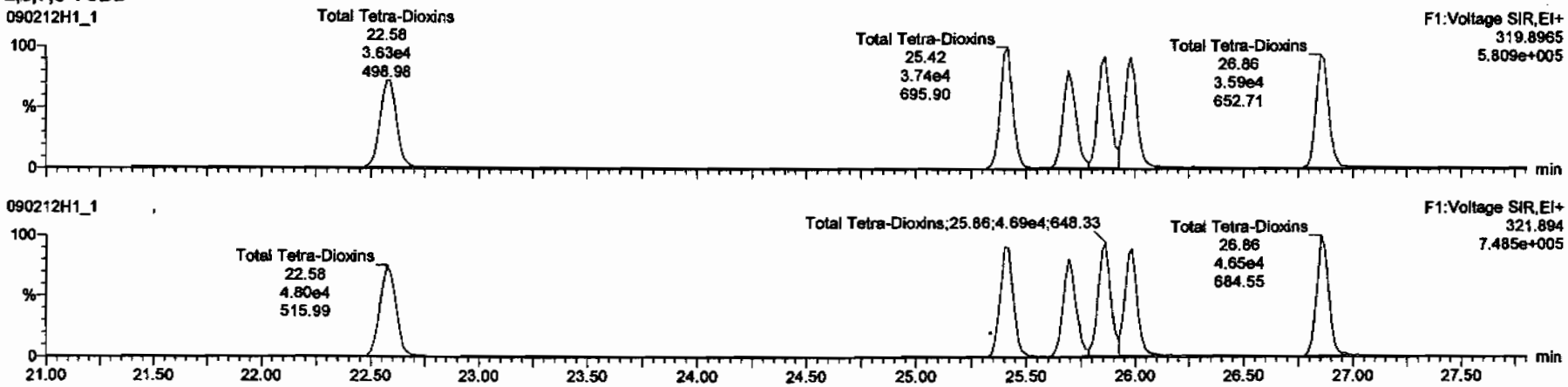

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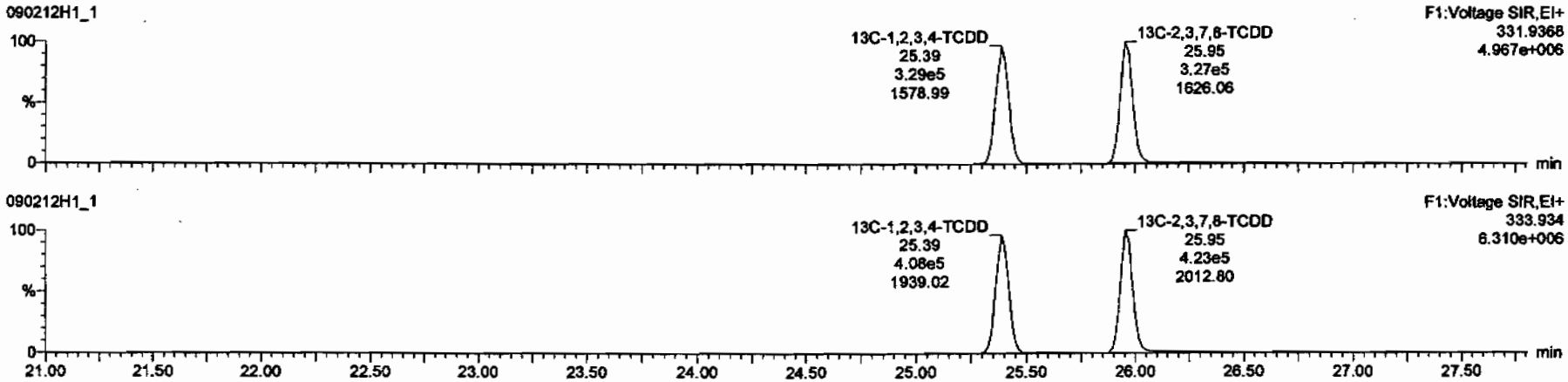

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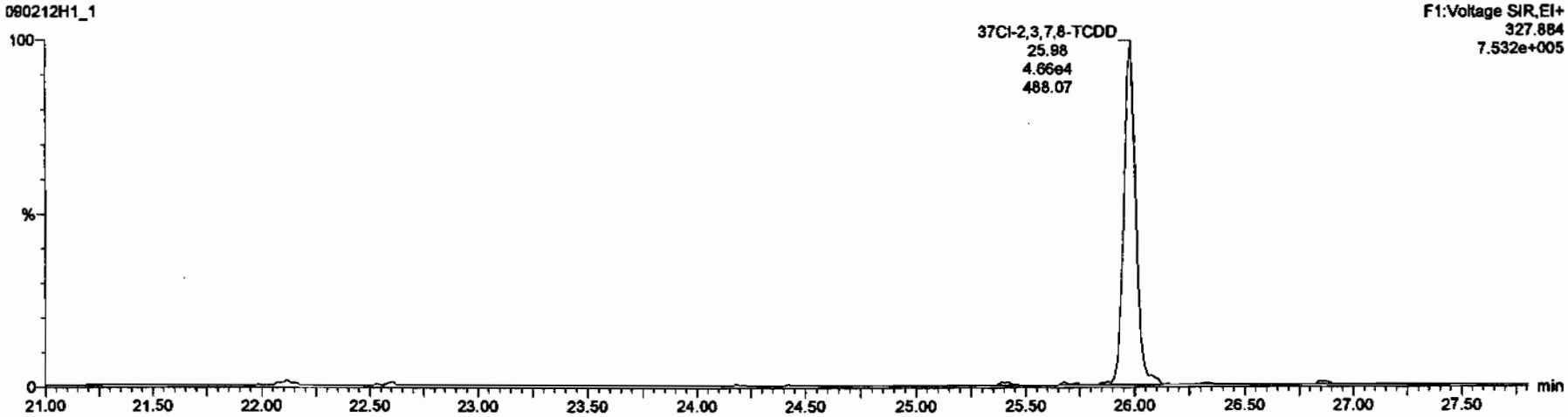

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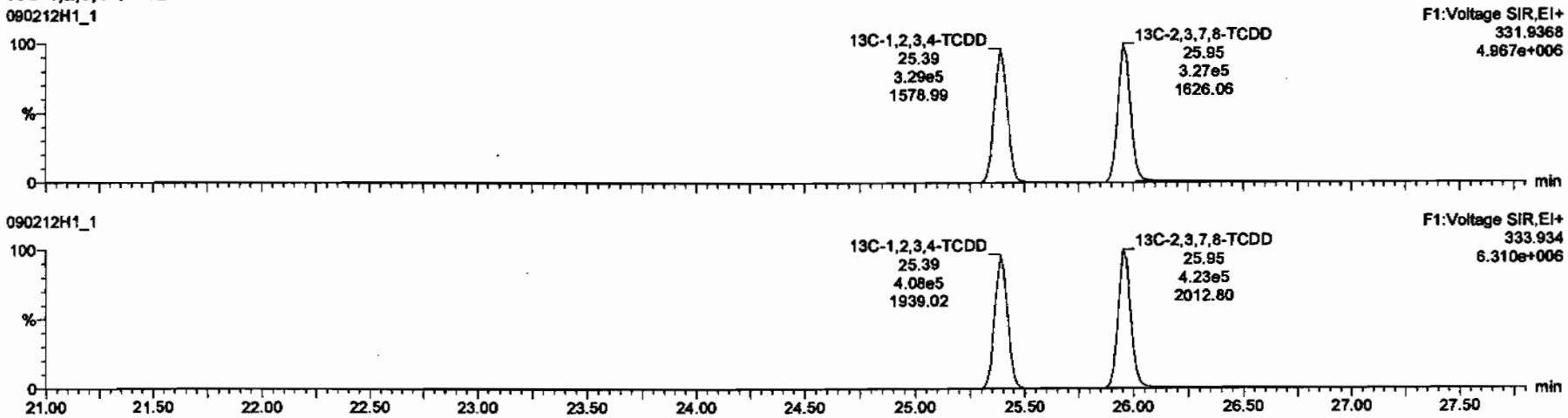

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1,2,3,7,8-PeCDD

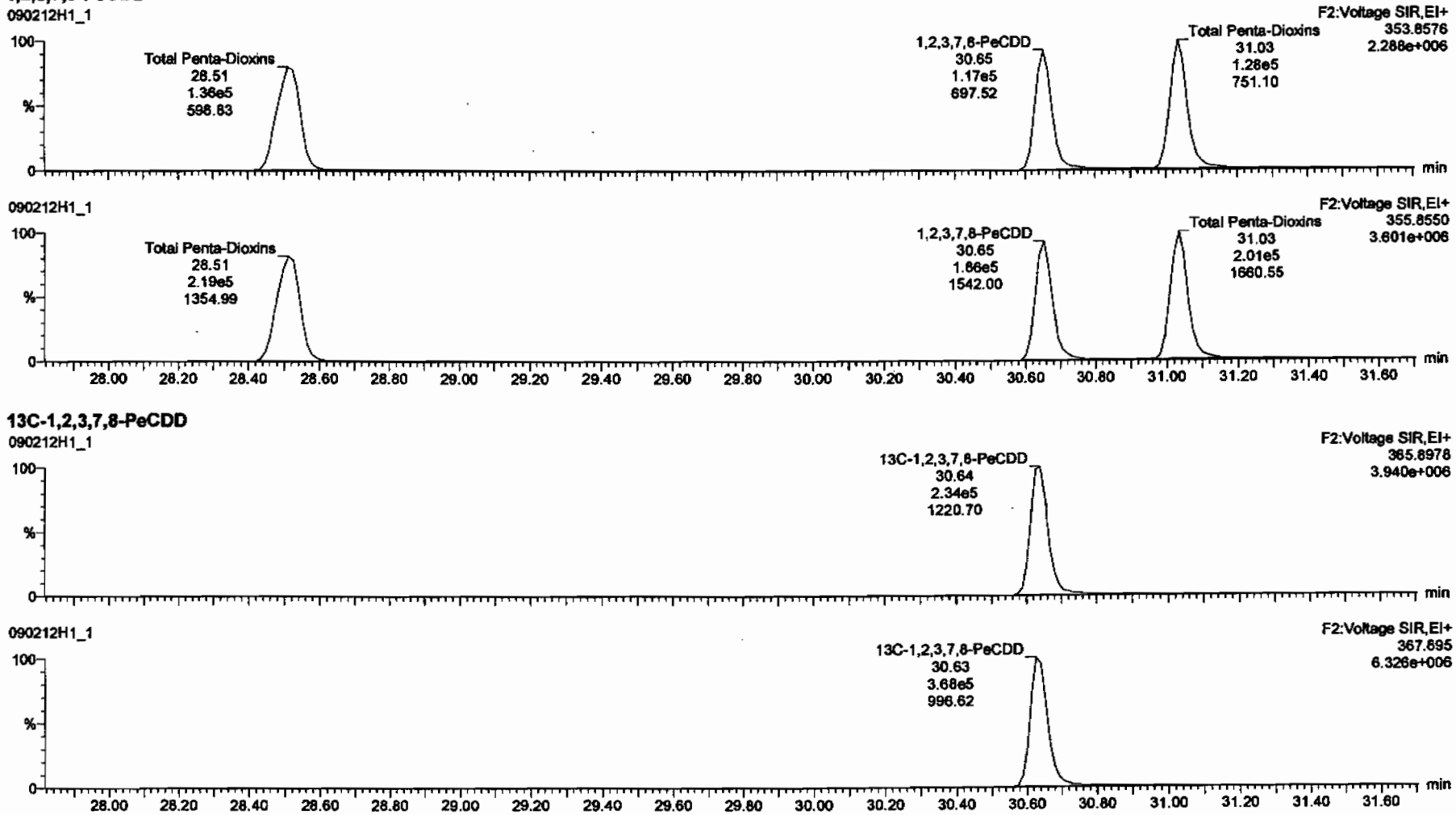

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1,2,3,4,7,8-HxCDD

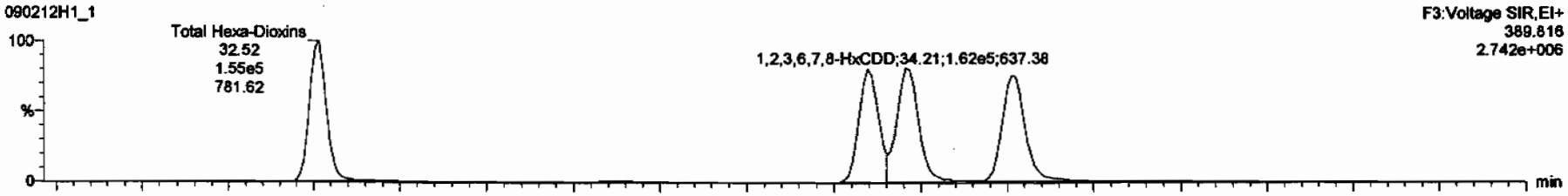

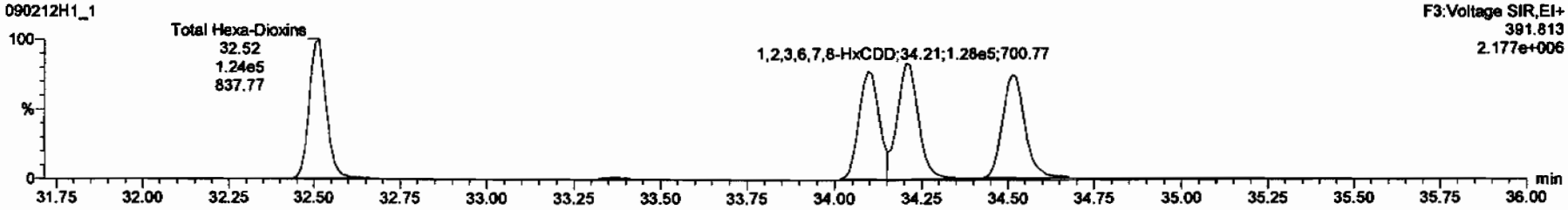

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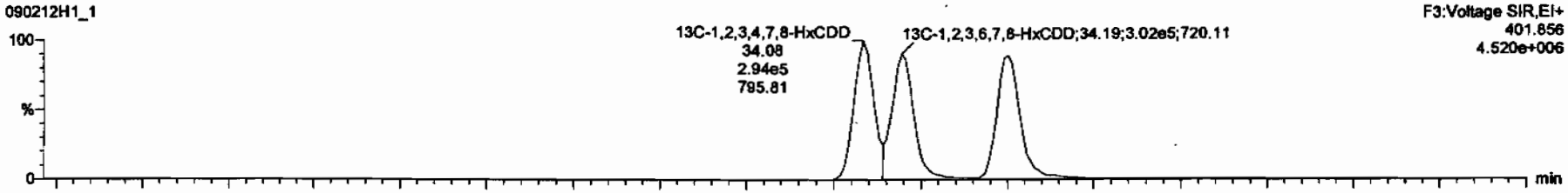

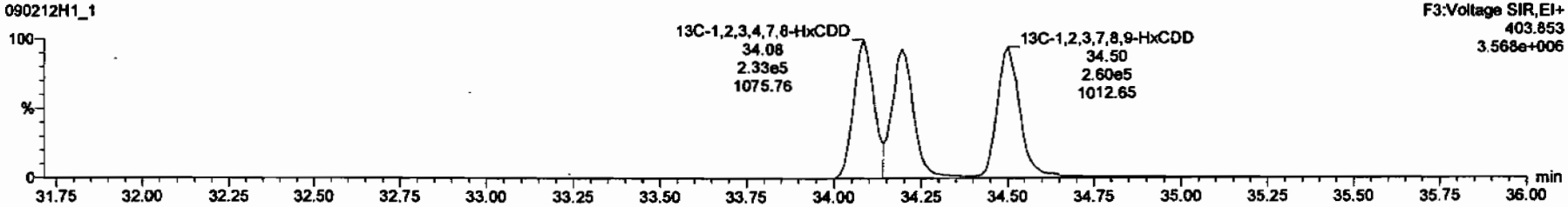

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1,2,3,4,6,7,8-HpCDD

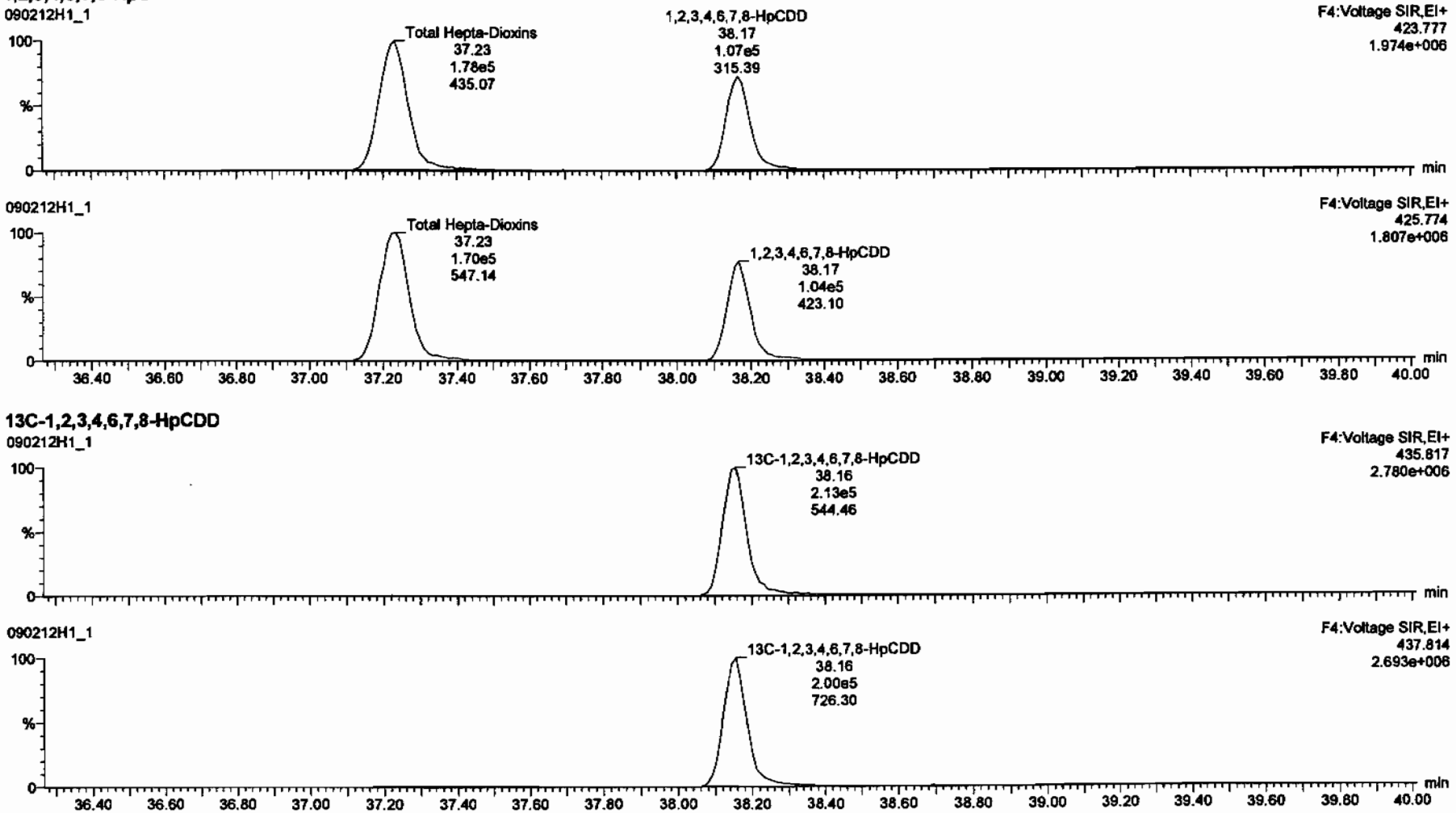

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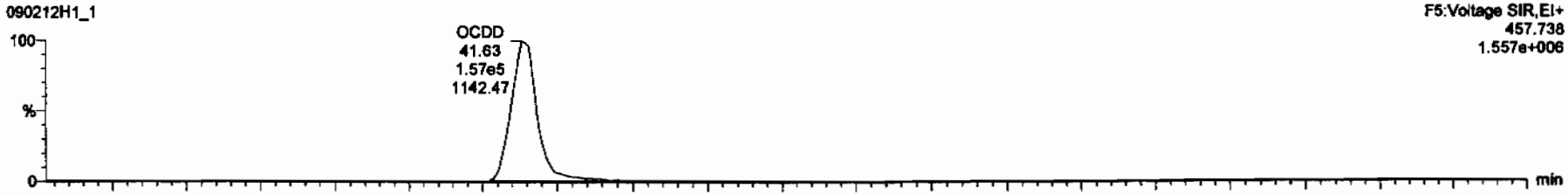

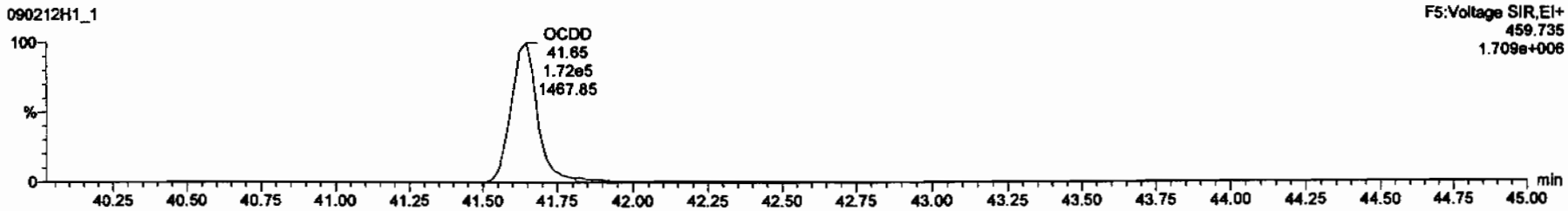

13C-OCDD

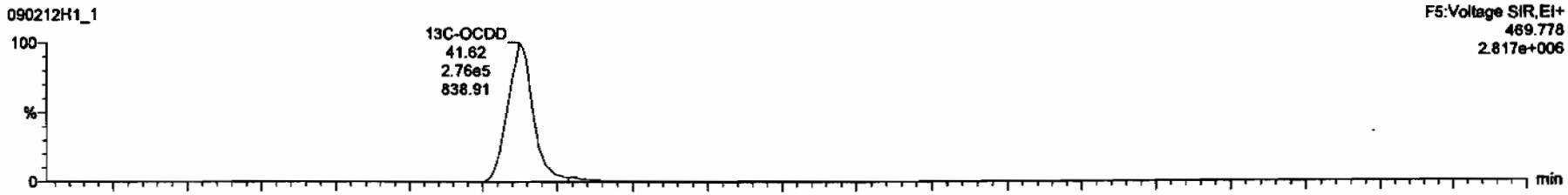

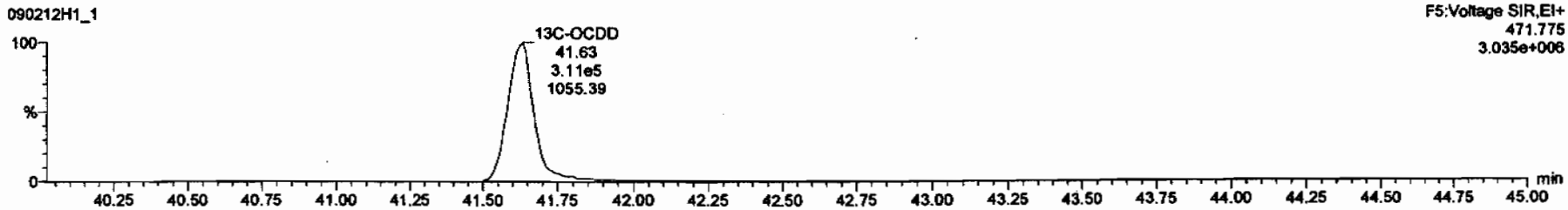

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2,3,7,8-TCDF

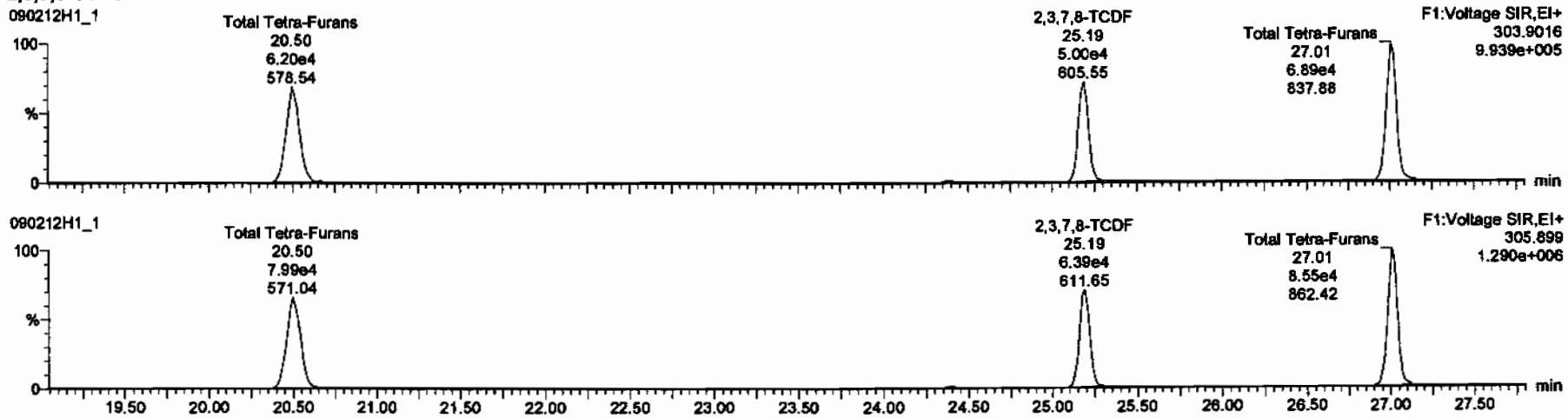

13C-2,3,7,8-TCDF

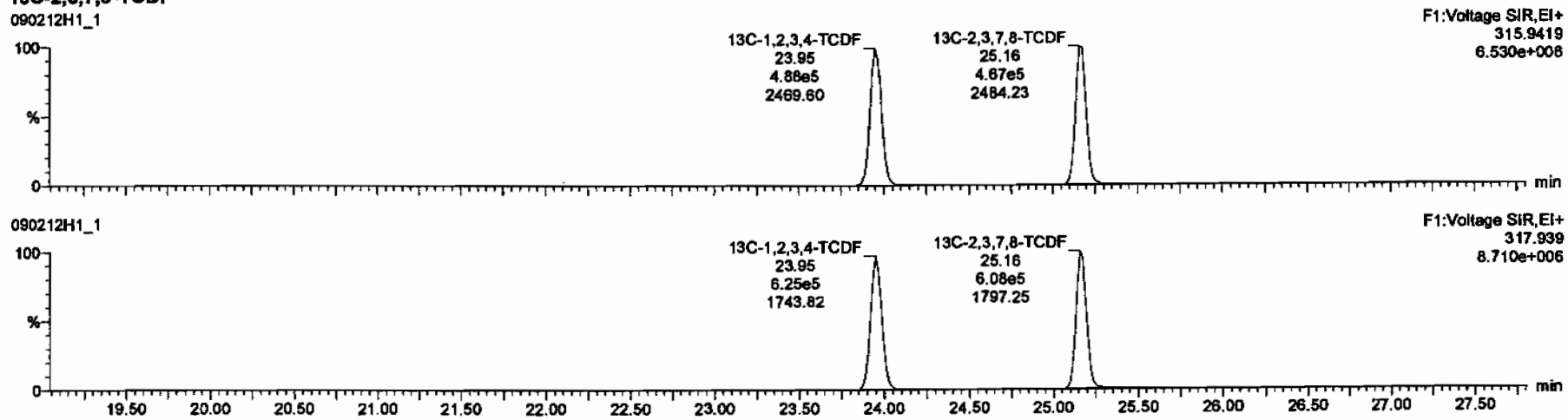

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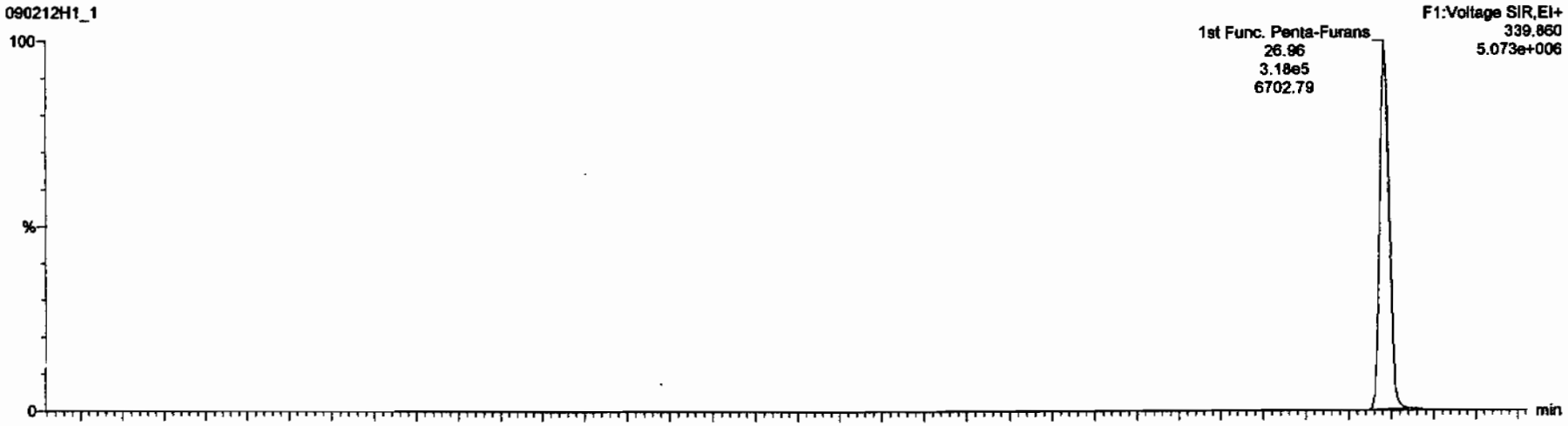

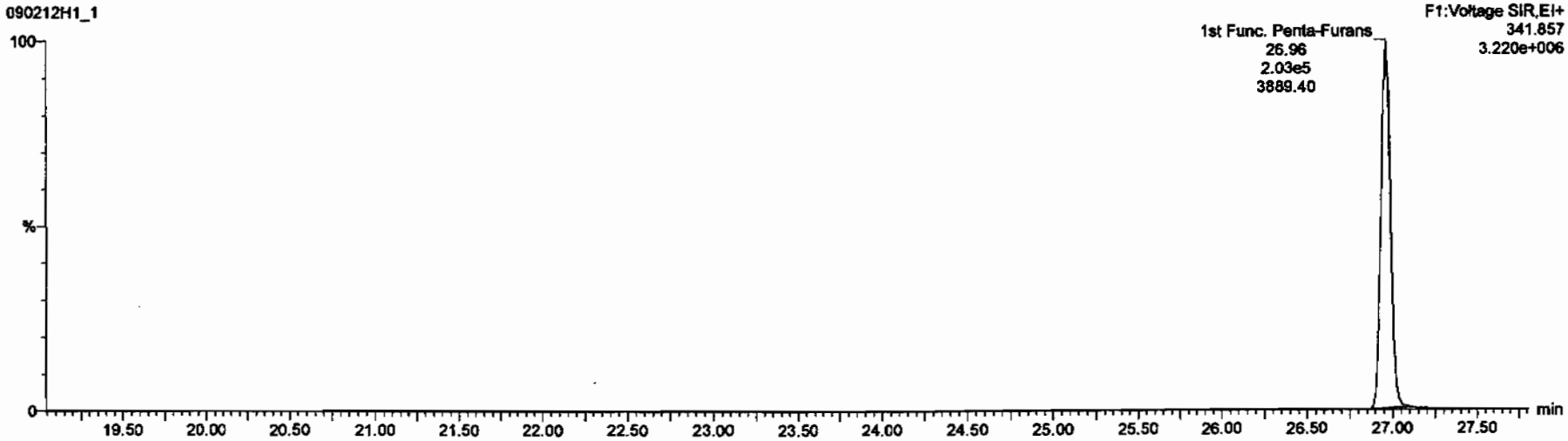

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1,2,3,7,8-PeCDF

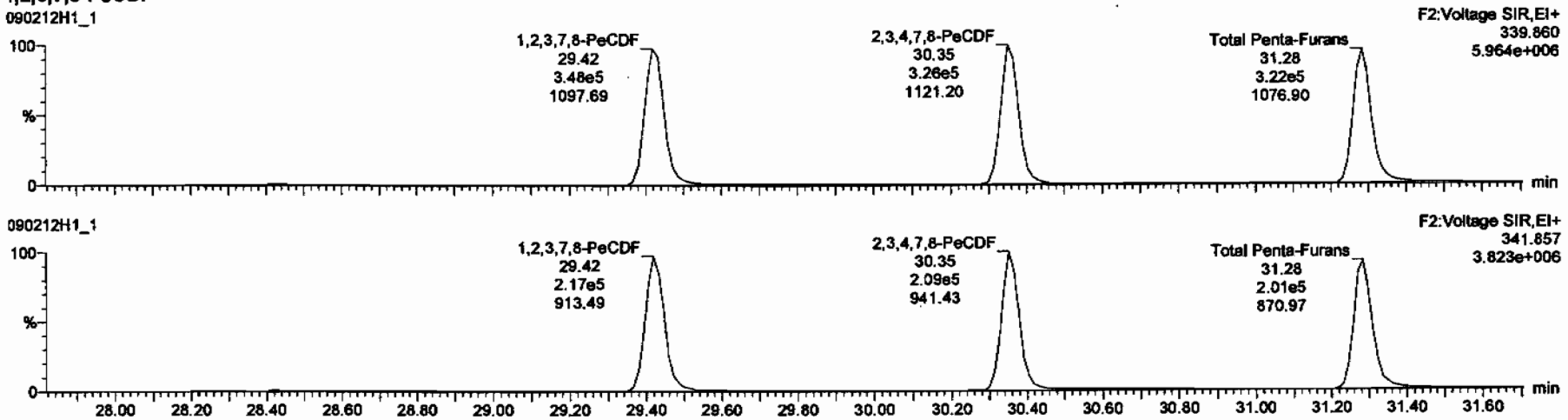

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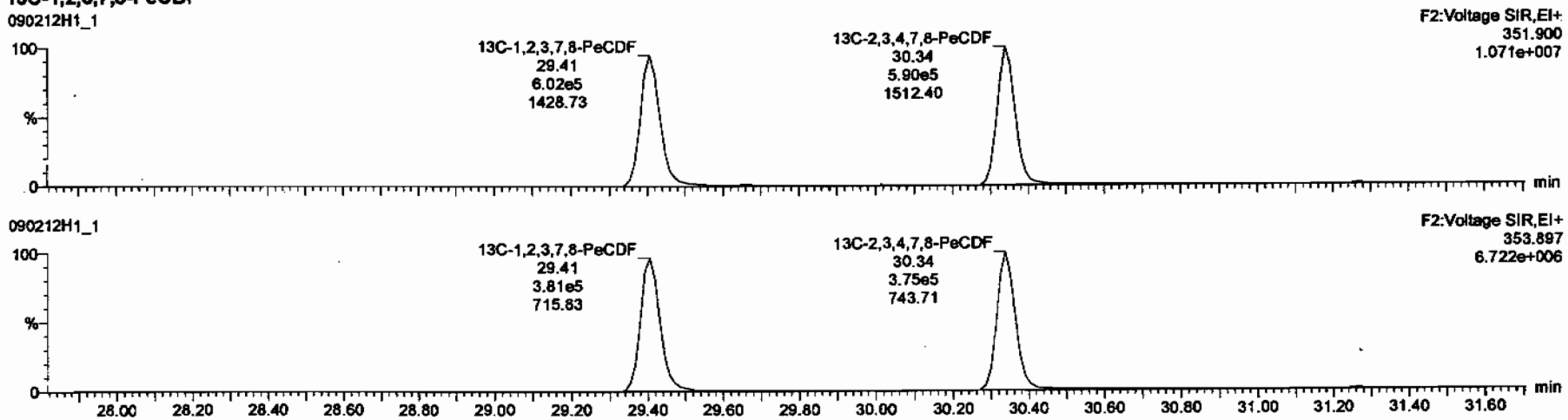

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1,2,3,4,7,8-HxCDF

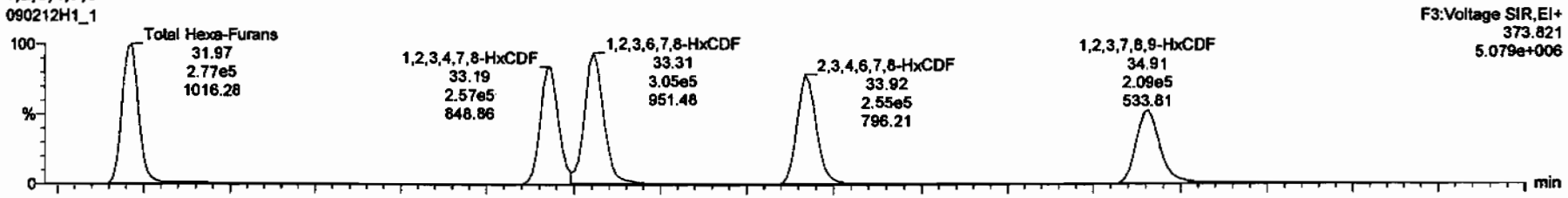

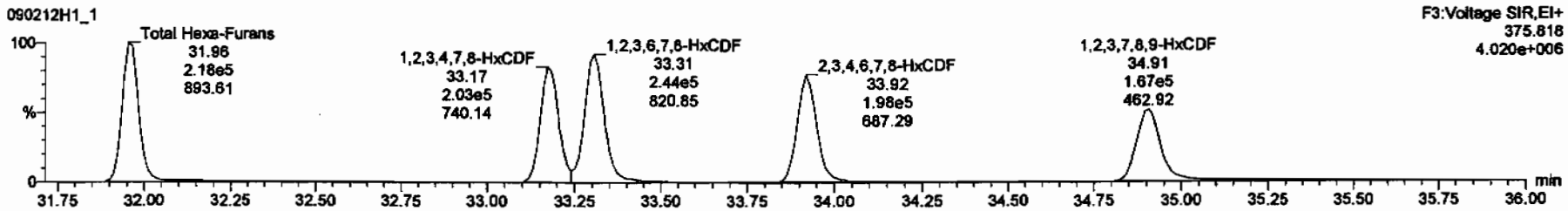

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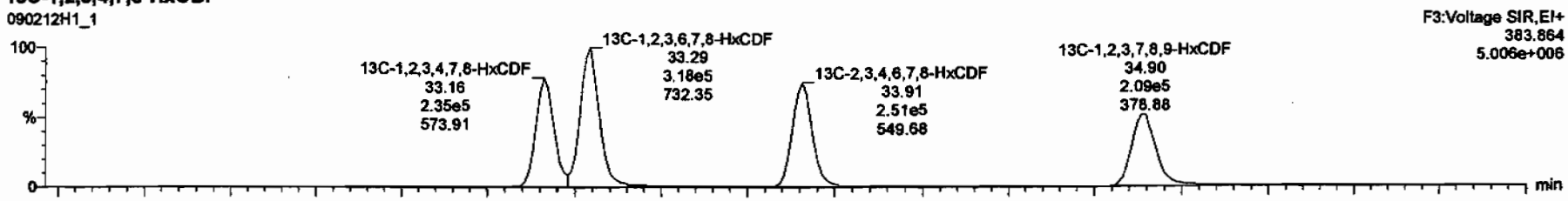

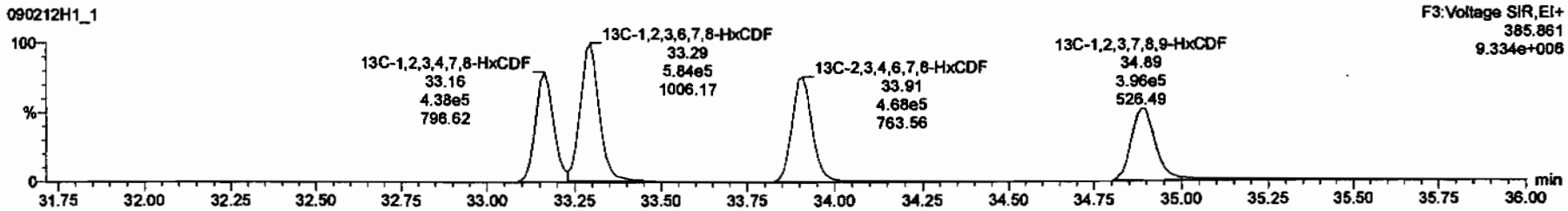

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1,2,3,4,6,7,8-HpCDF

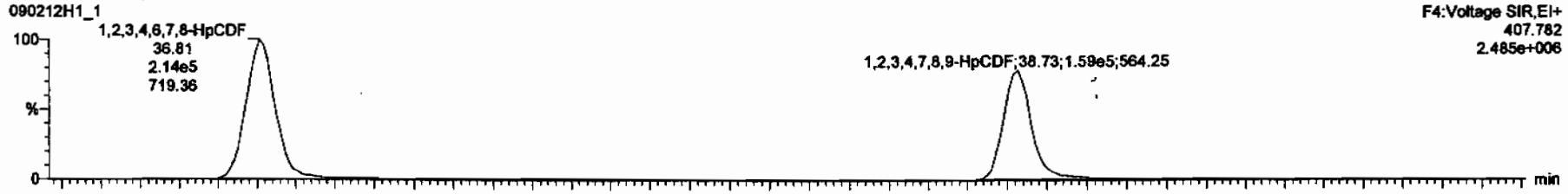

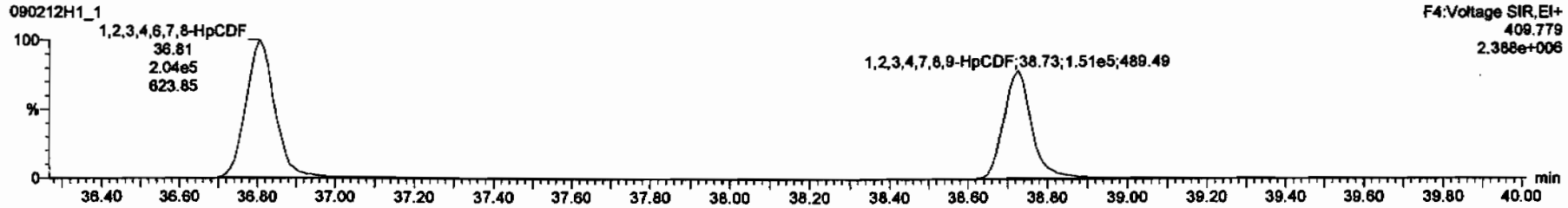

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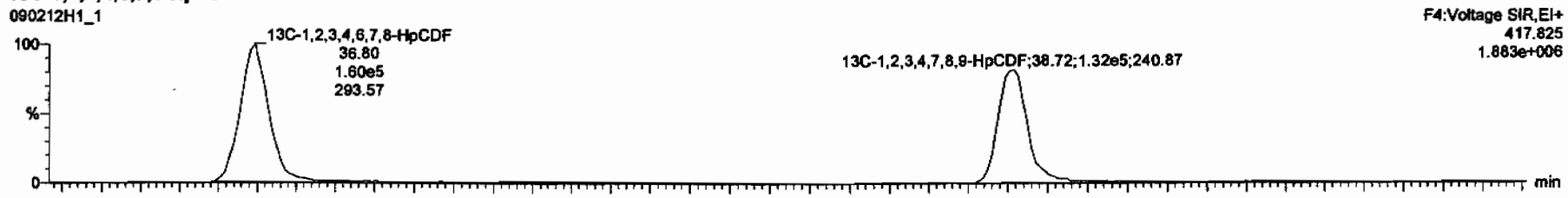

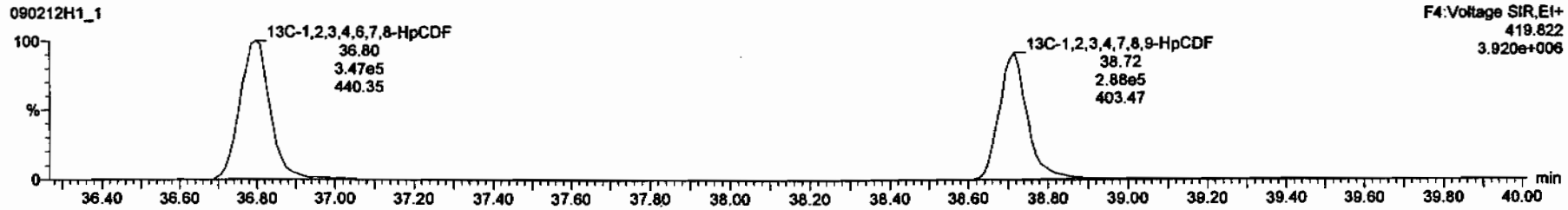

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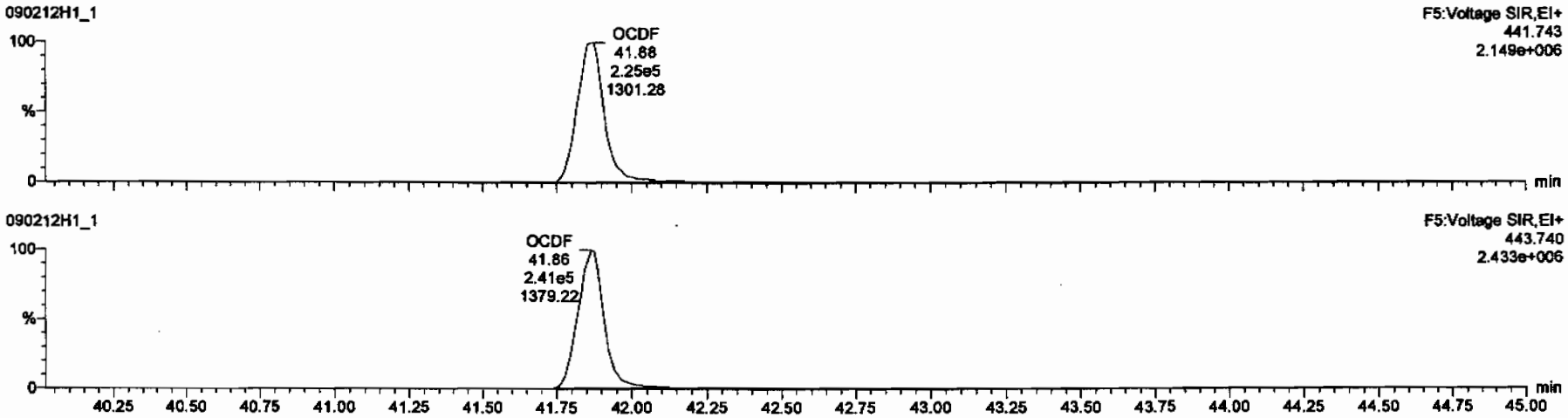

13C-OCDF

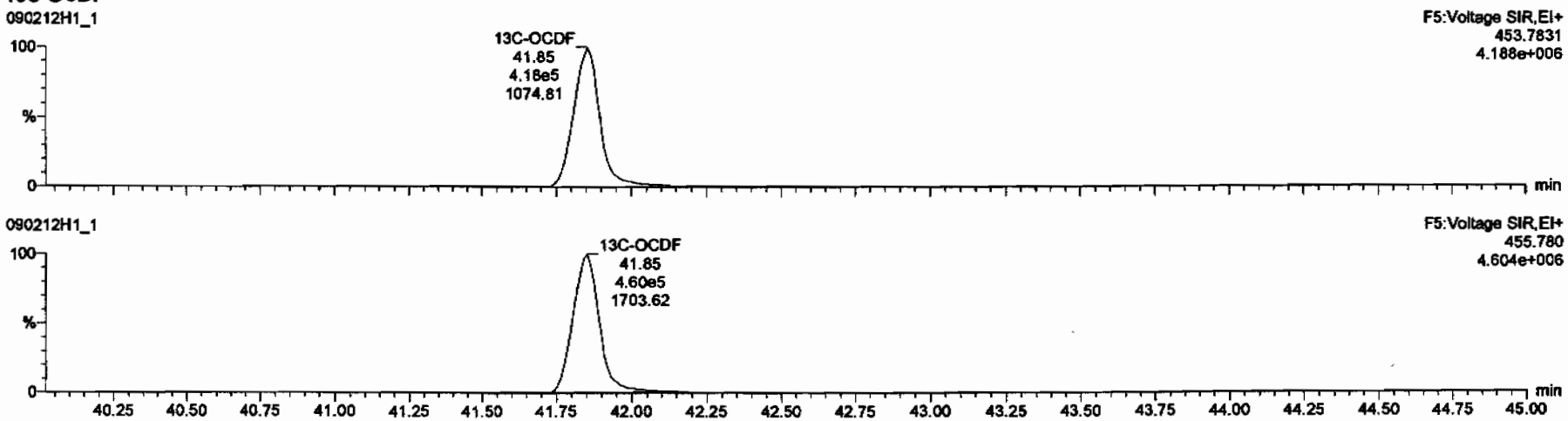

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PFK1

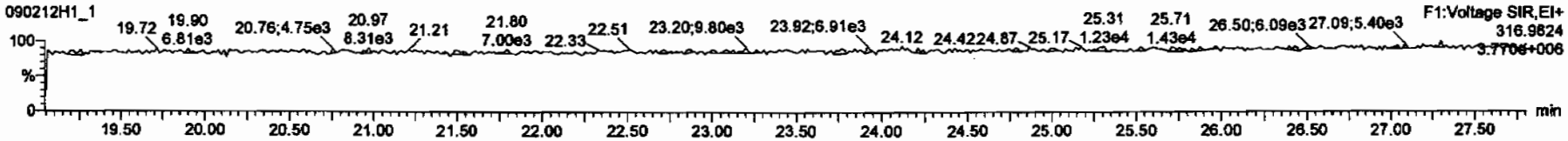

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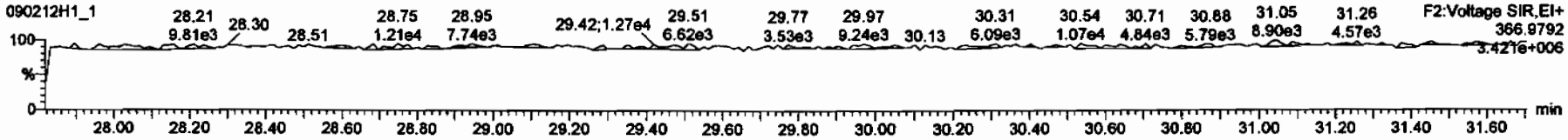

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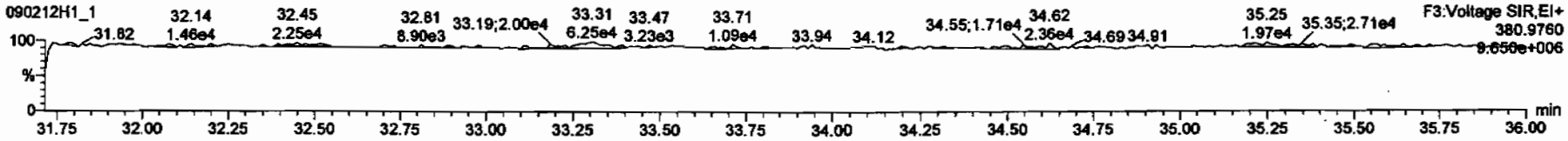

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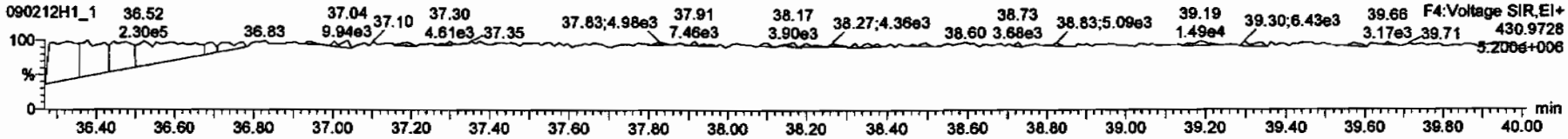

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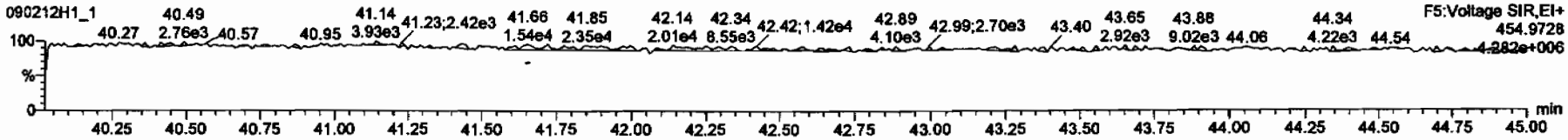

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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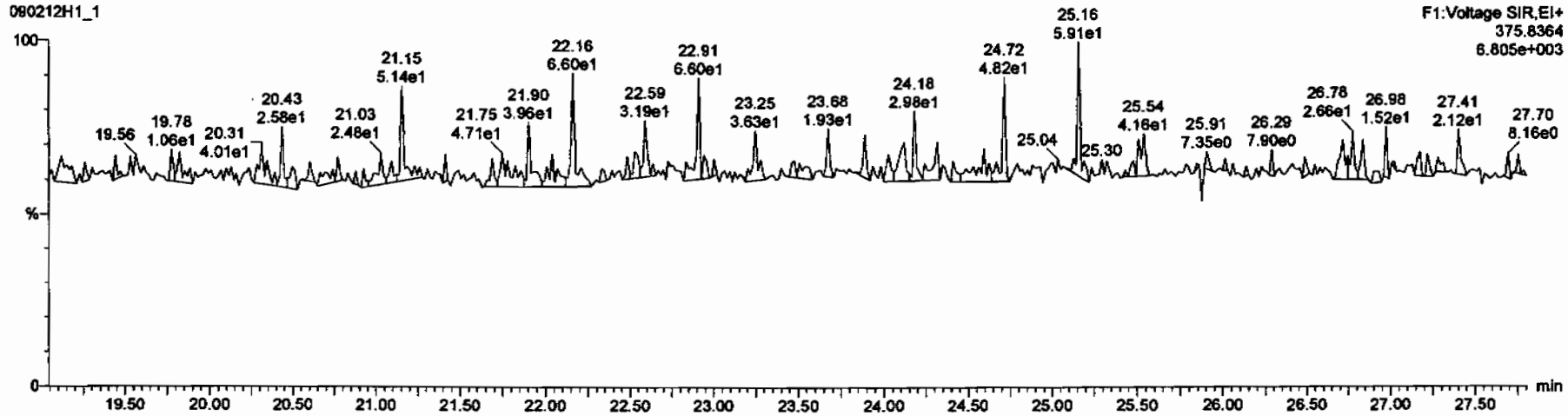

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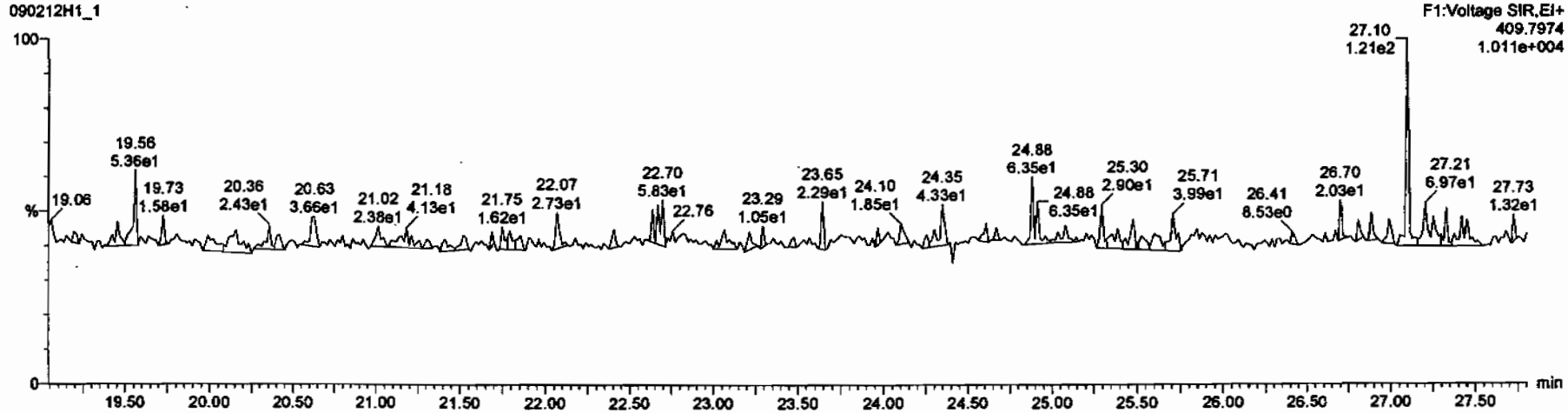

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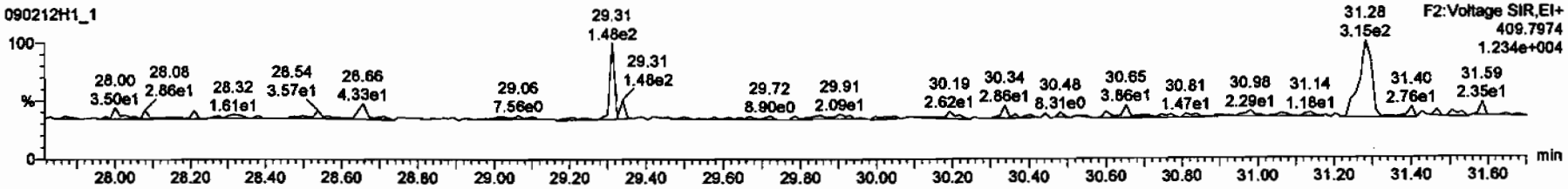

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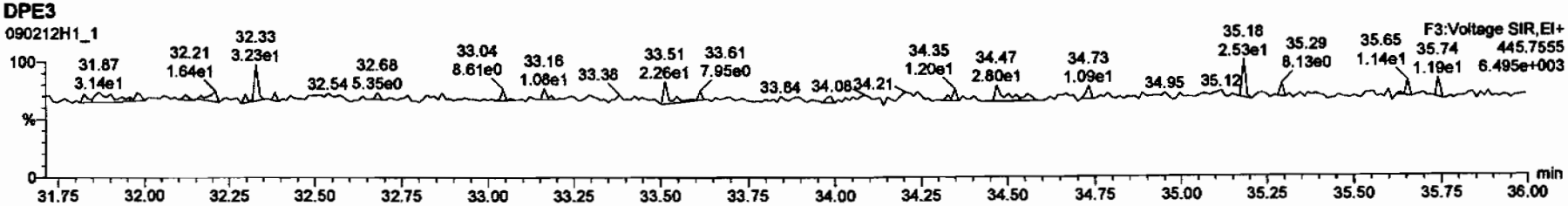

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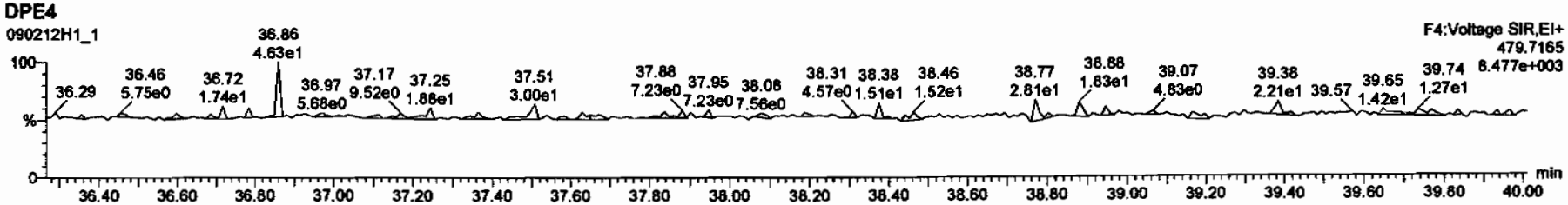

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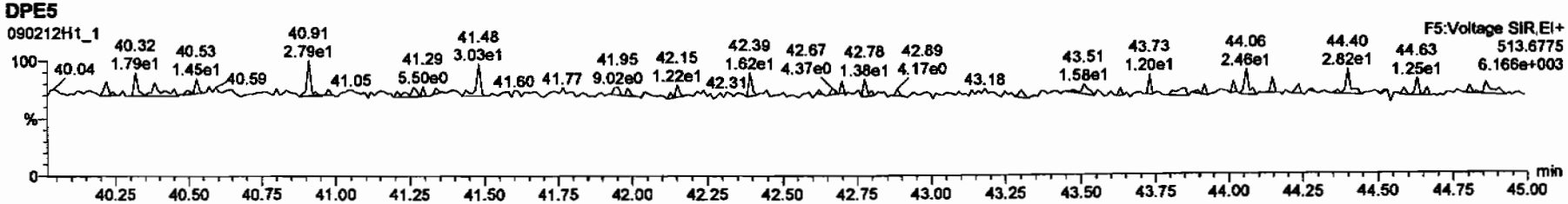

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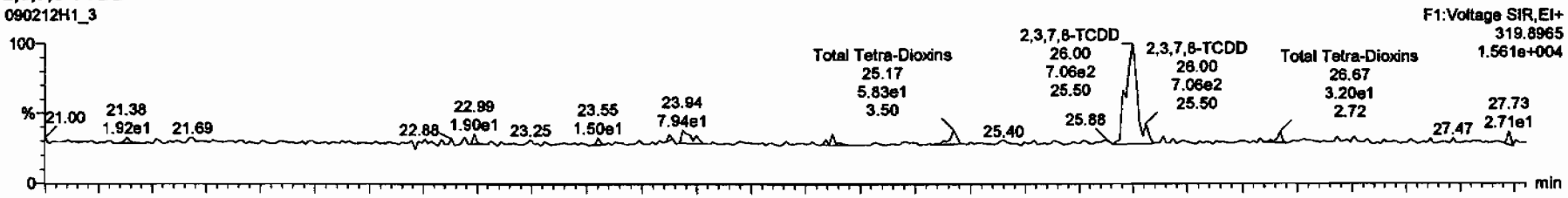

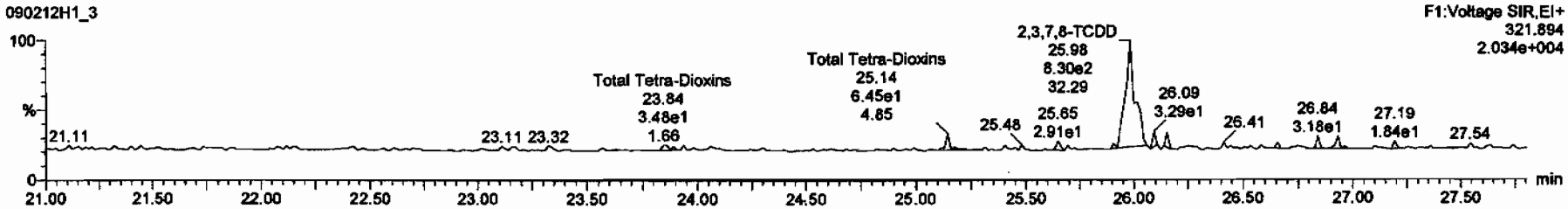

13C-2,3,7,8-TCDD

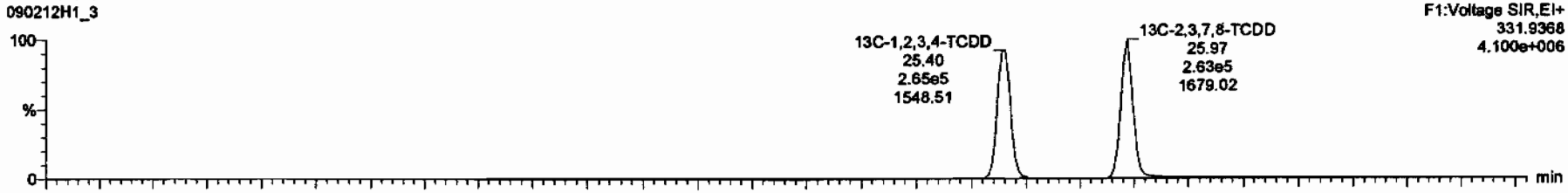

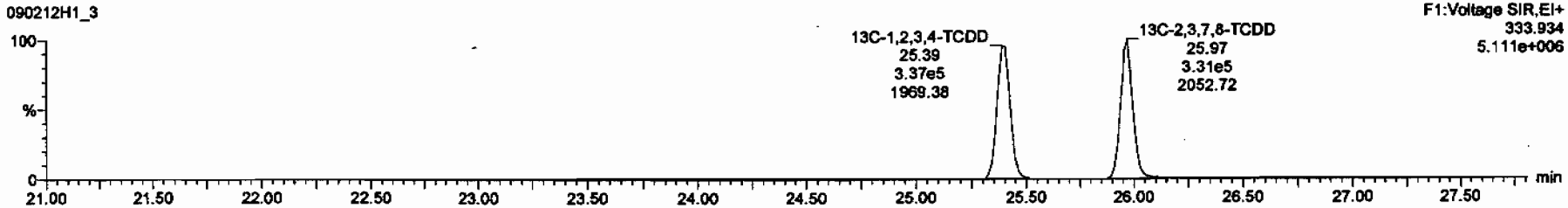

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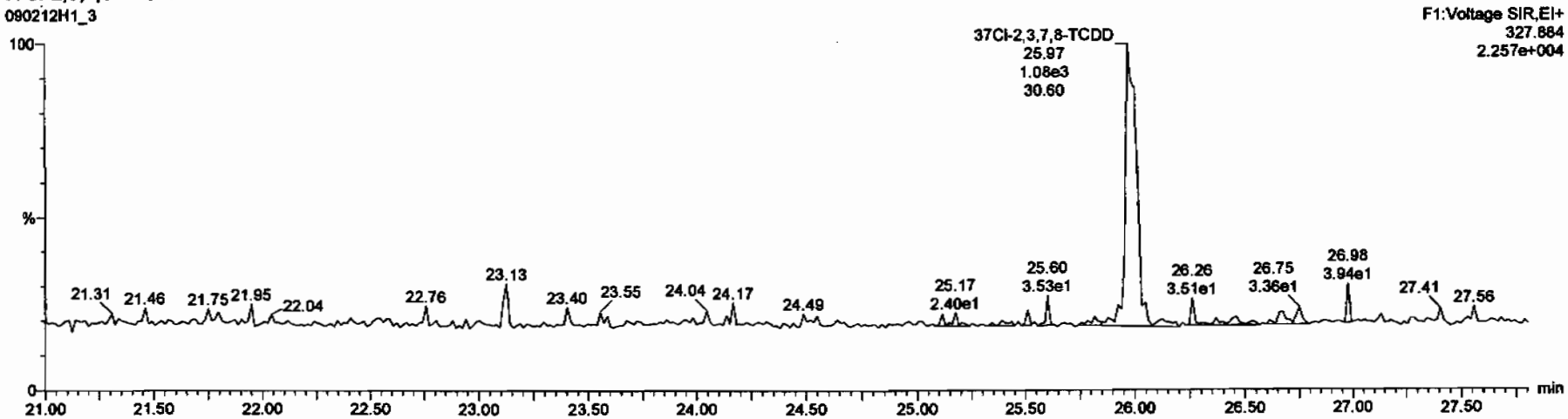

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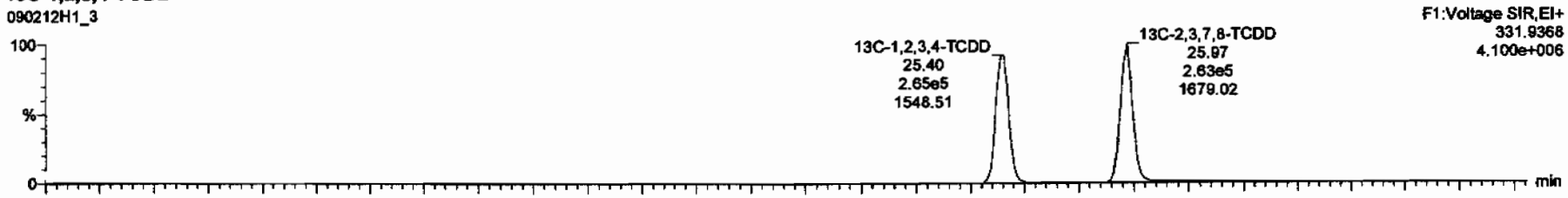

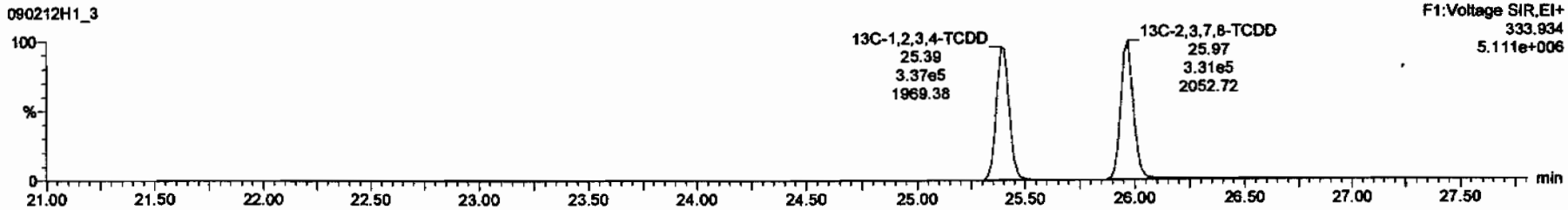

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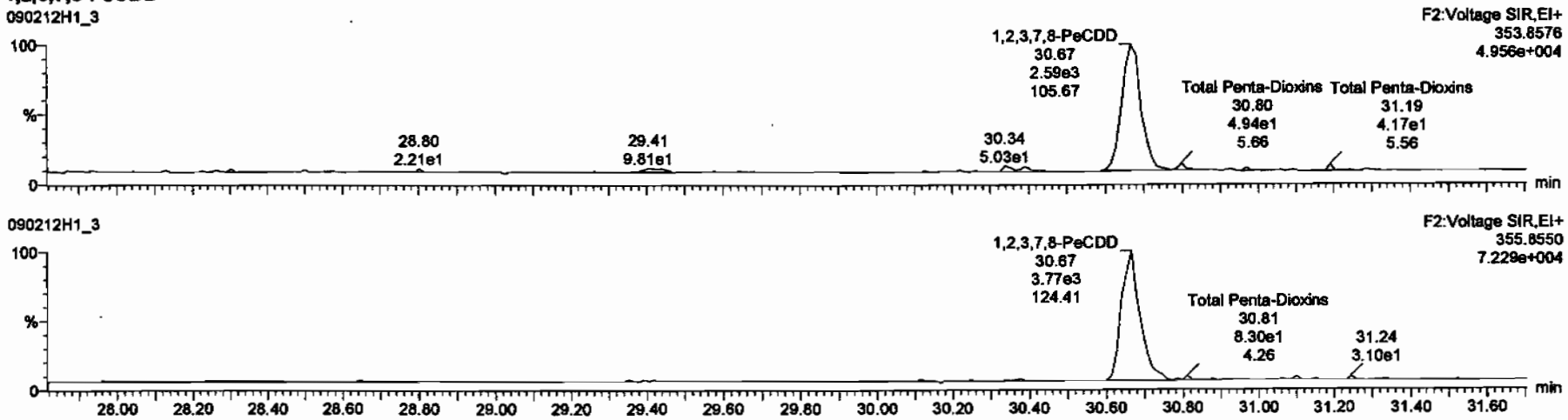

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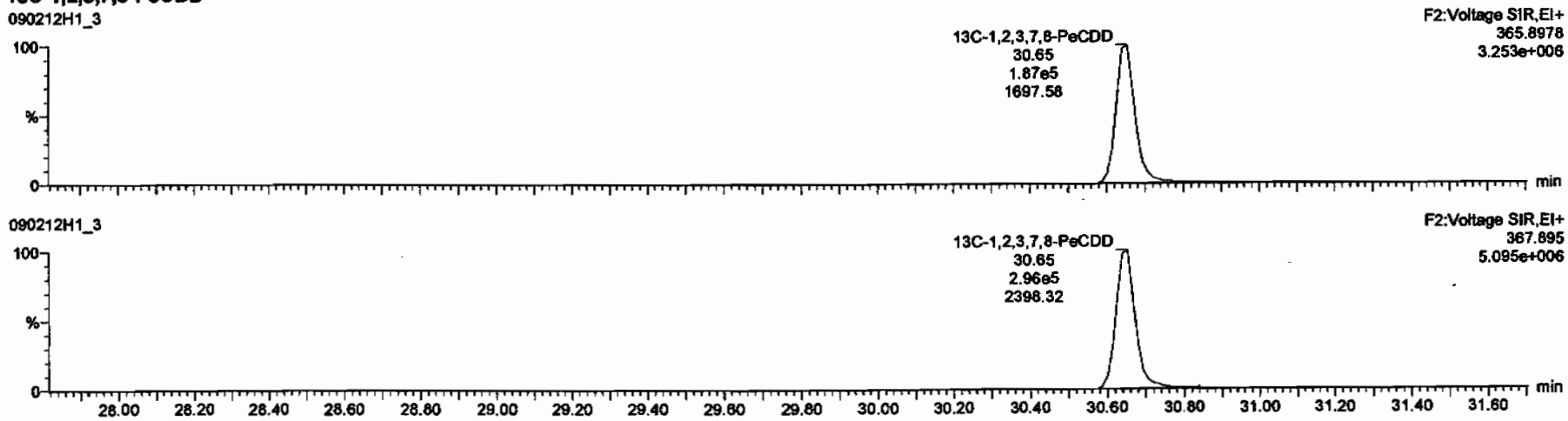

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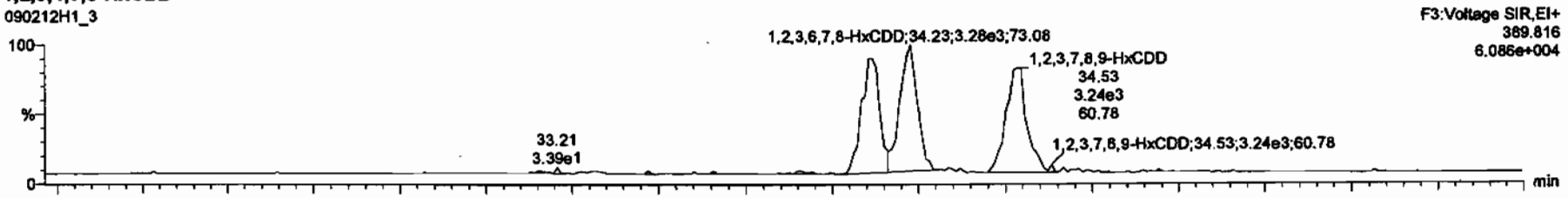

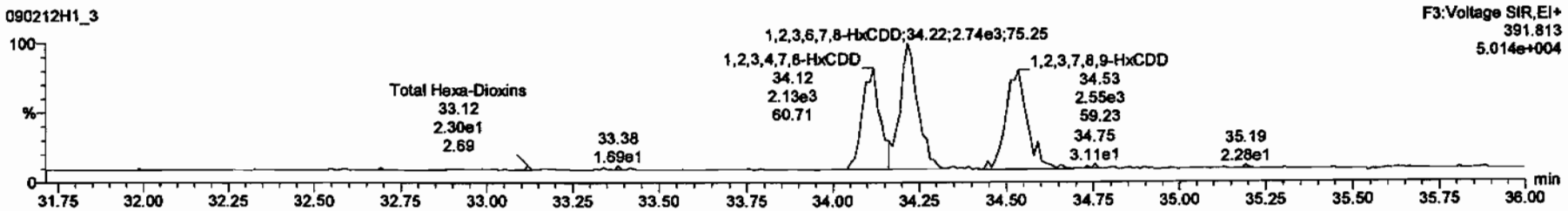

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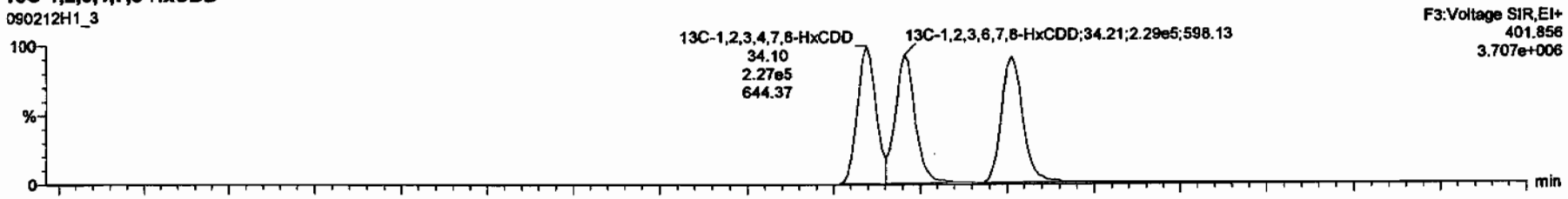

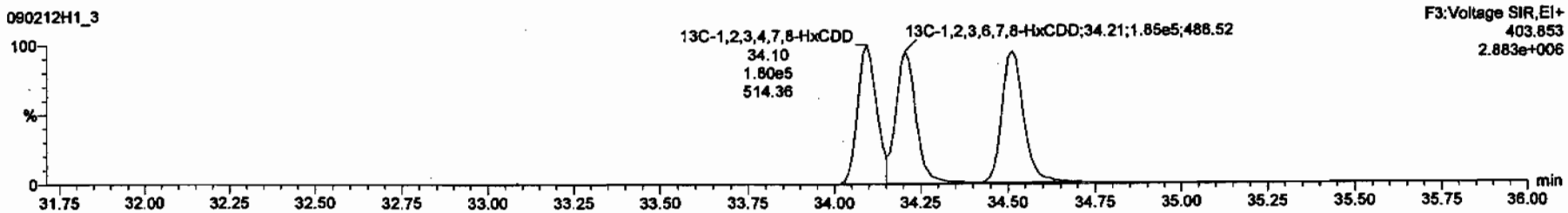

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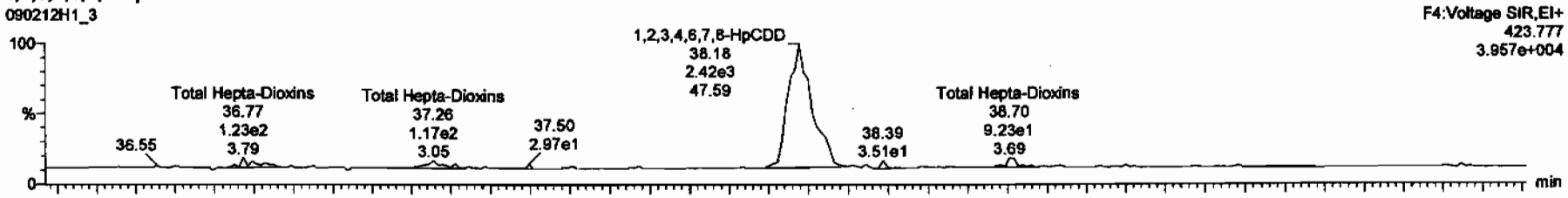

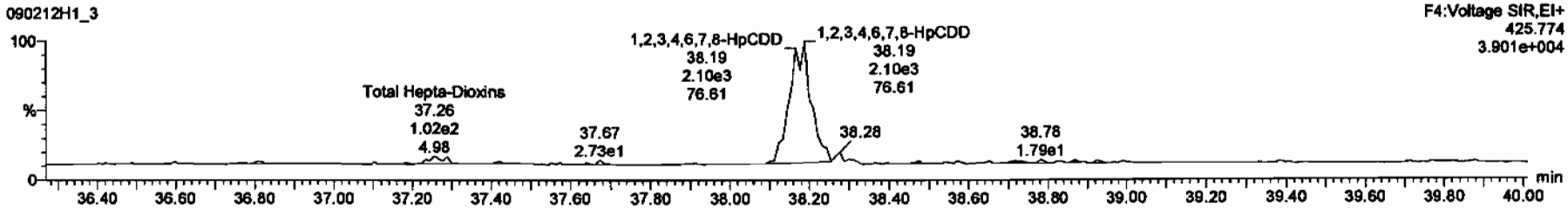

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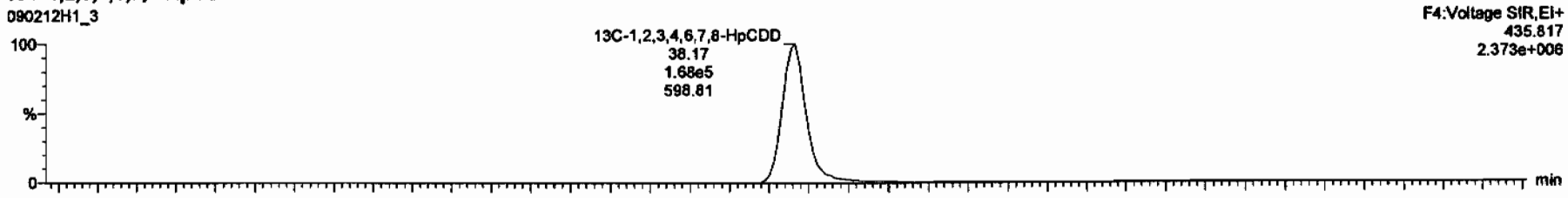

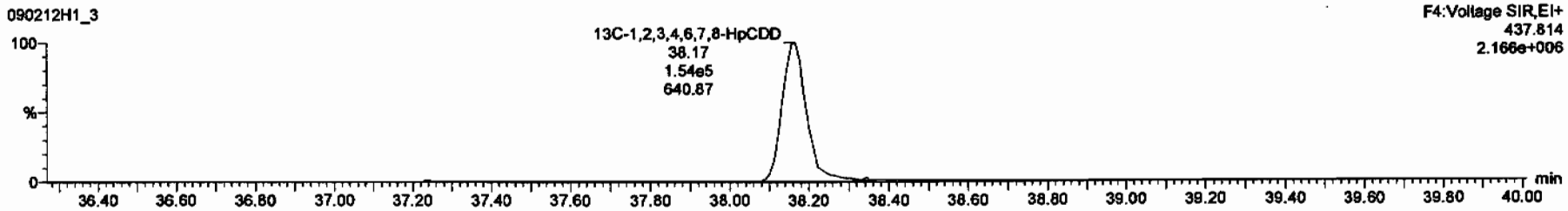

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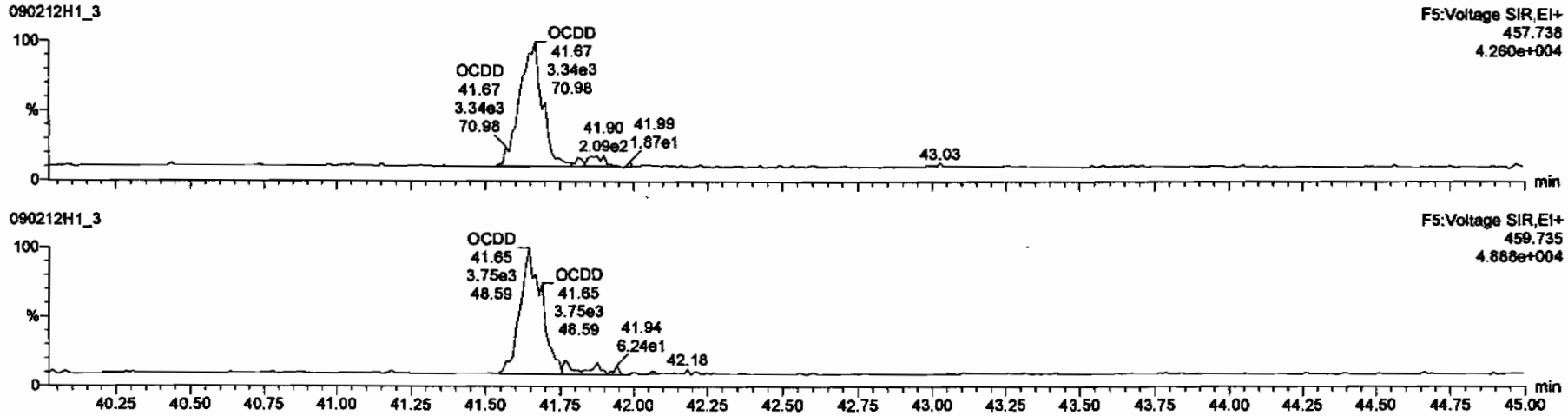

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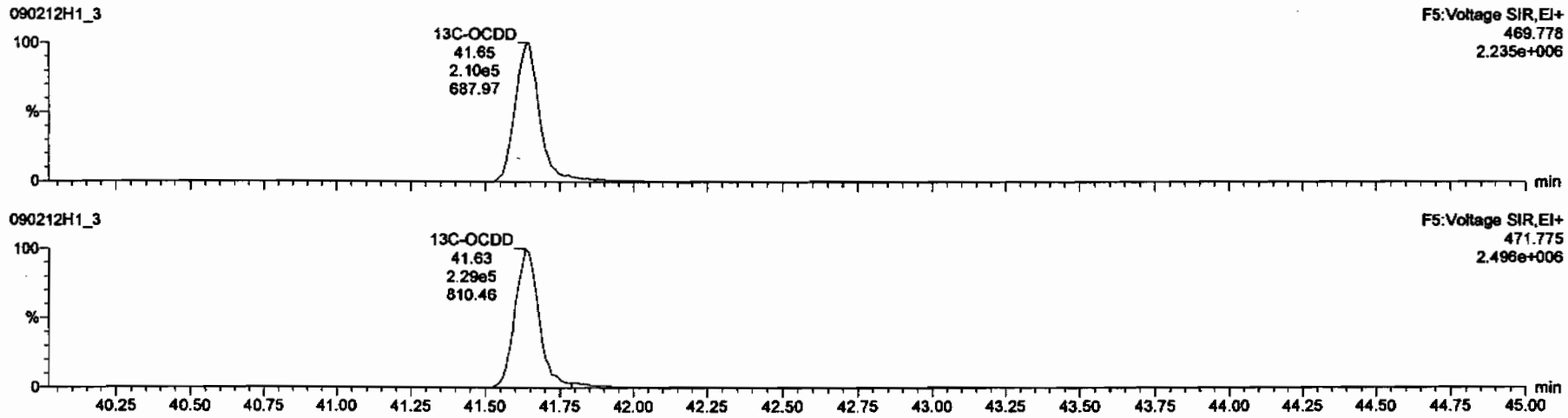

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2,3,7,8-TCDF

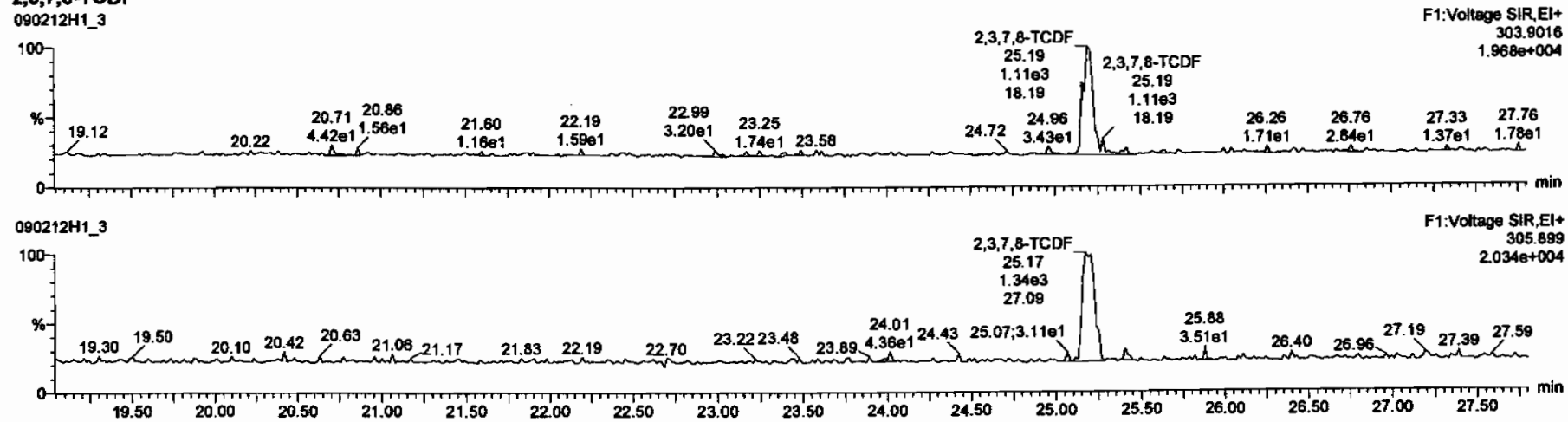

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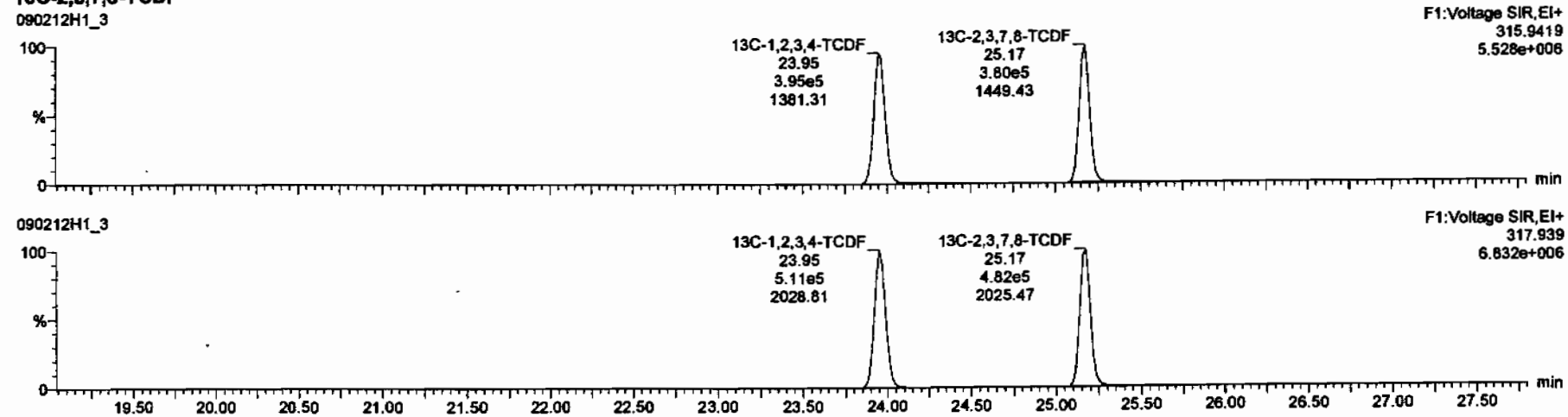

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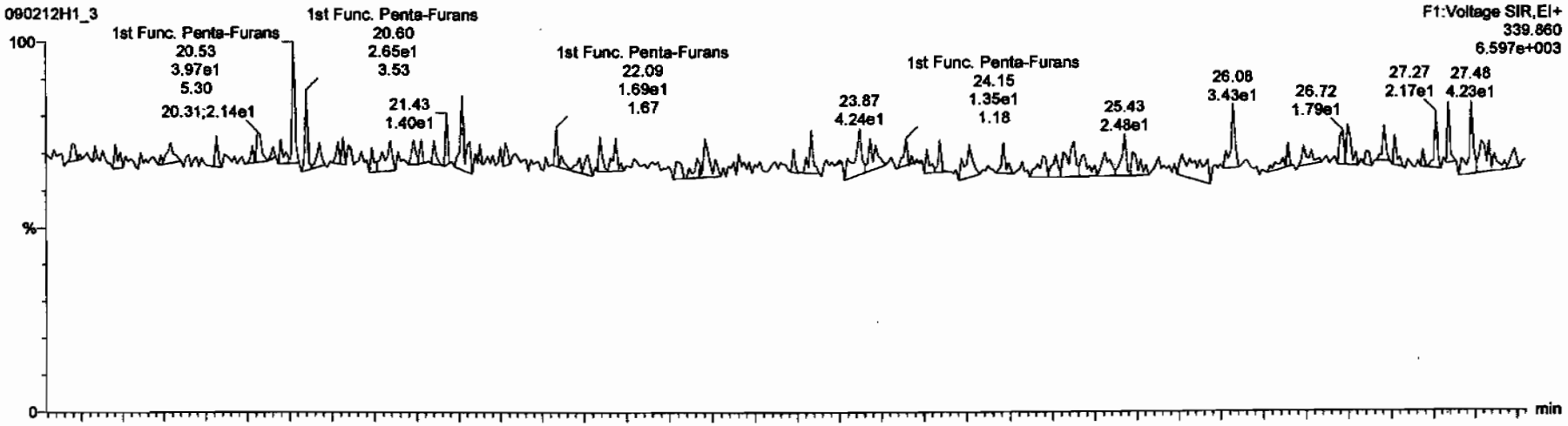

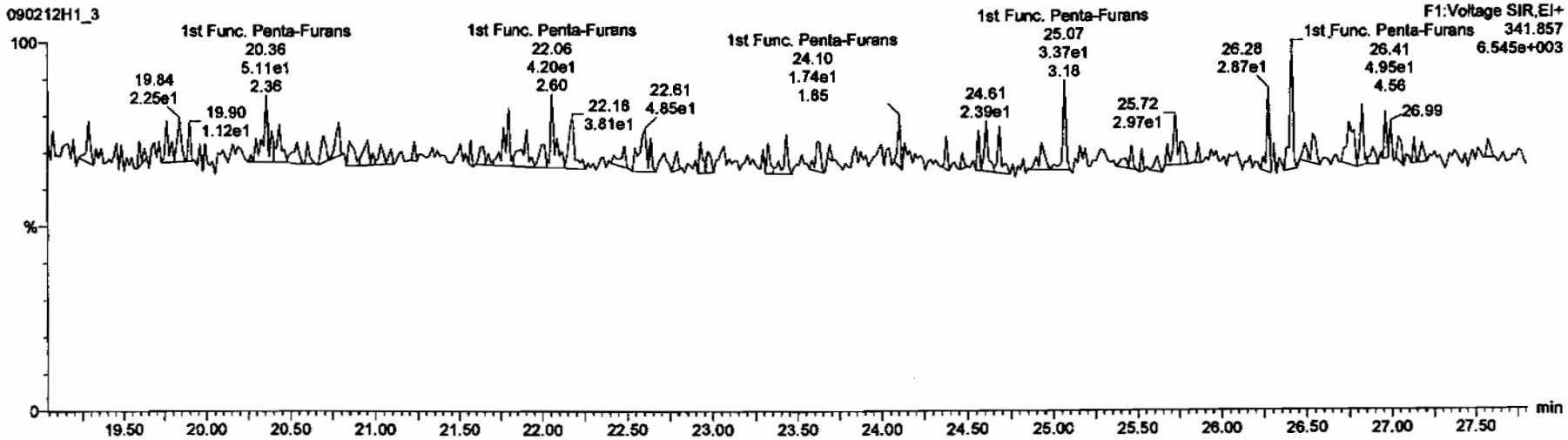

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1,2,3,7,8-PeCDF

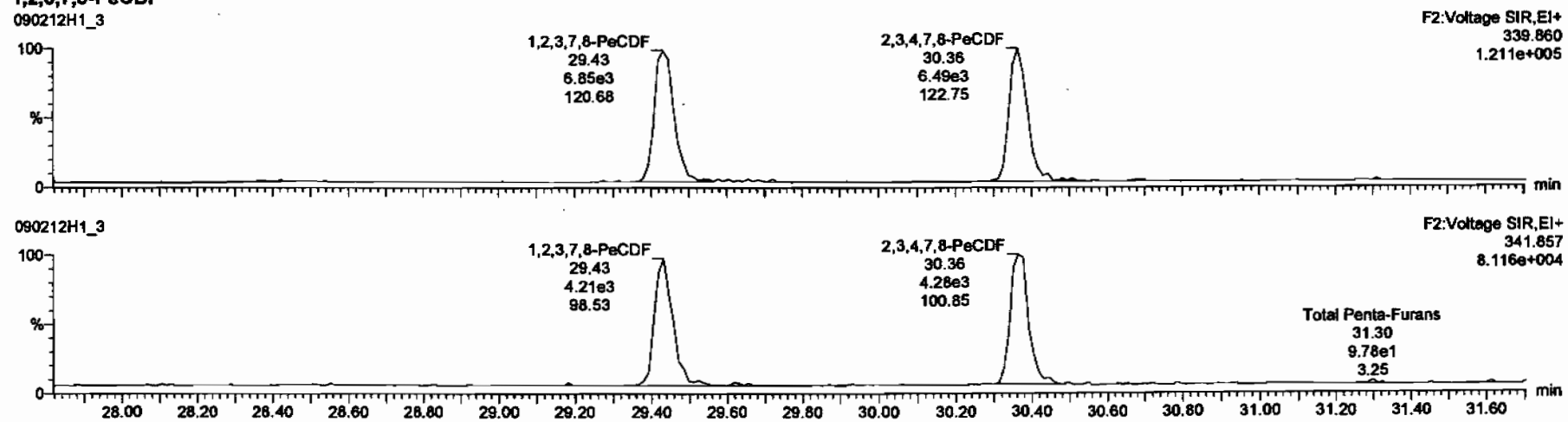

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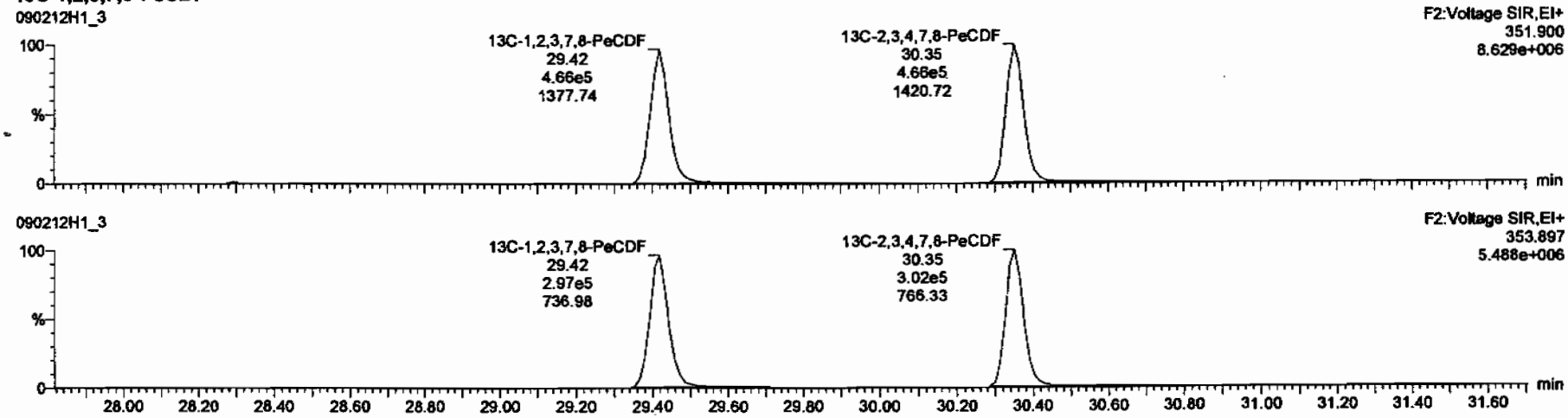

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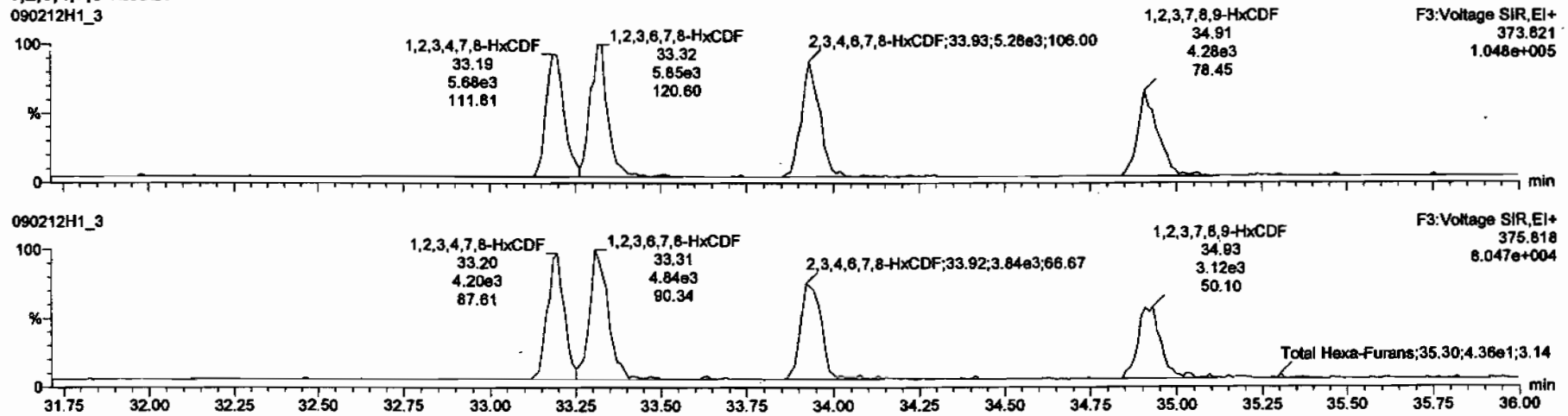

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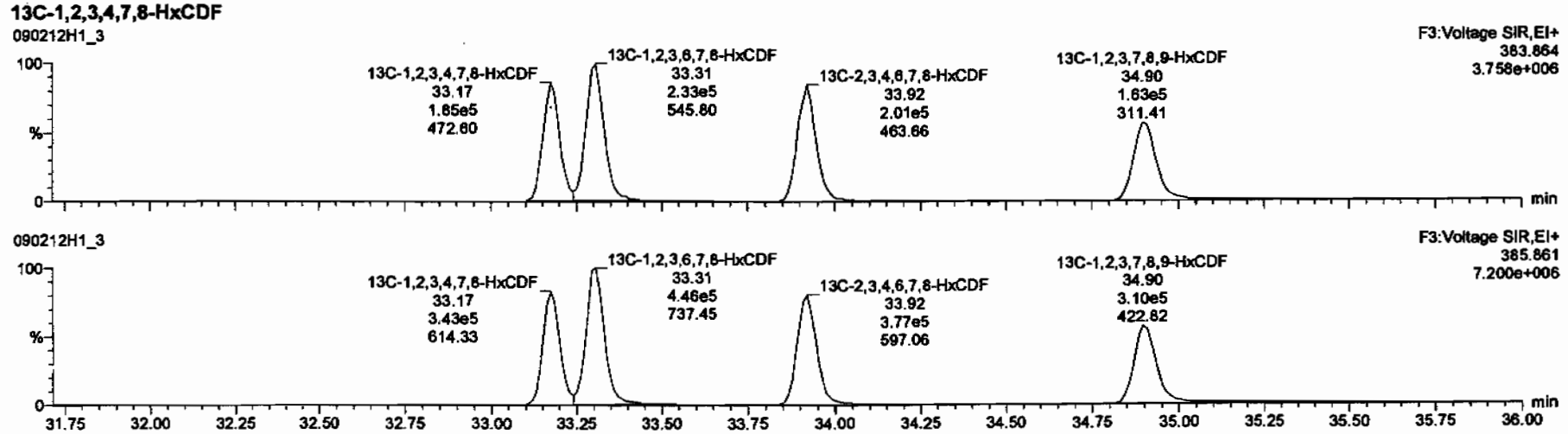

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1,2,3,4,6,7,8-HpCDF

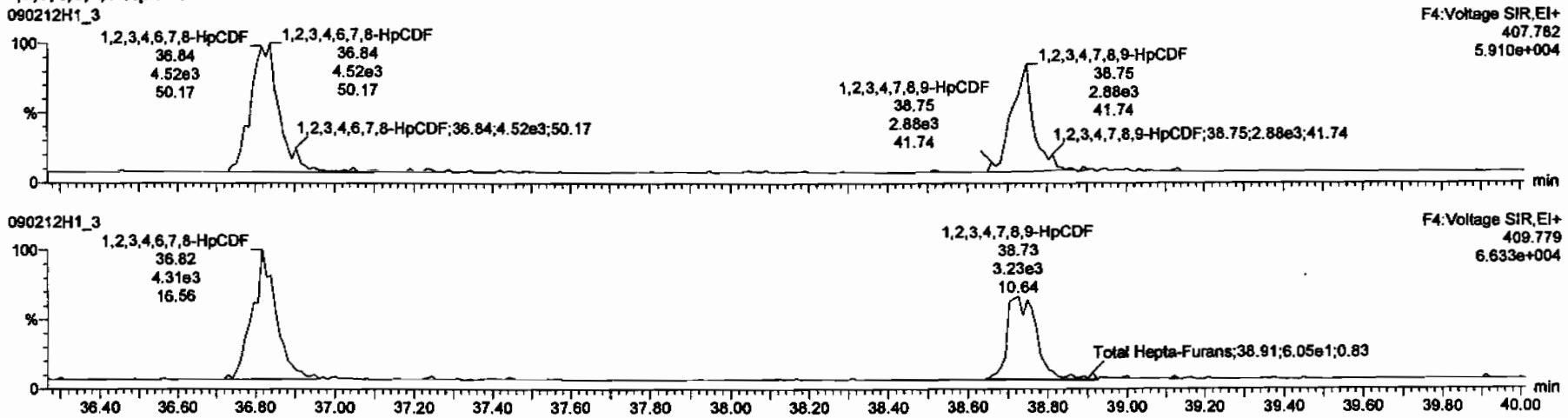

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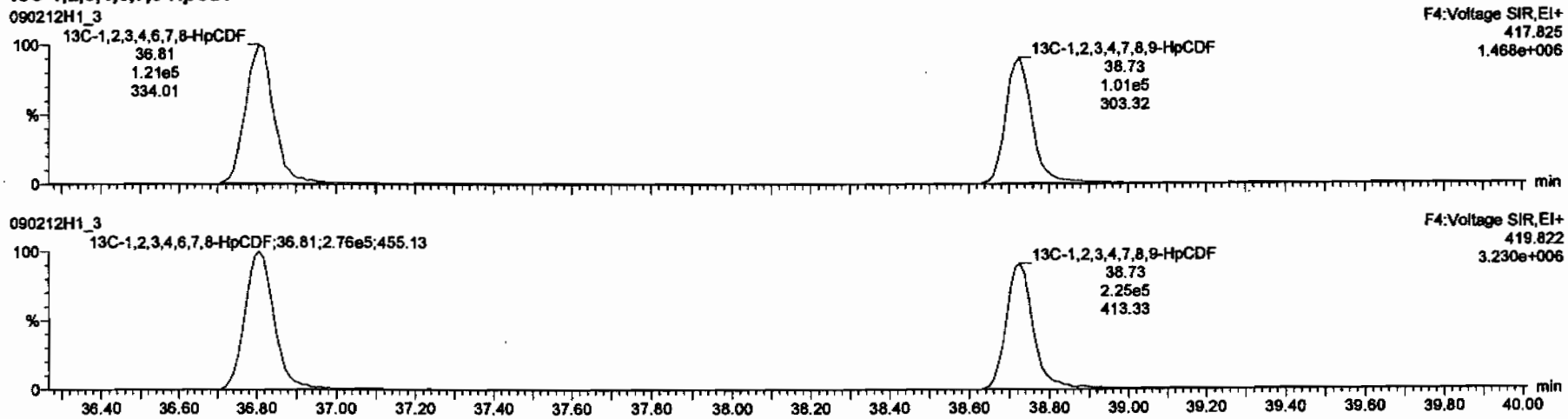

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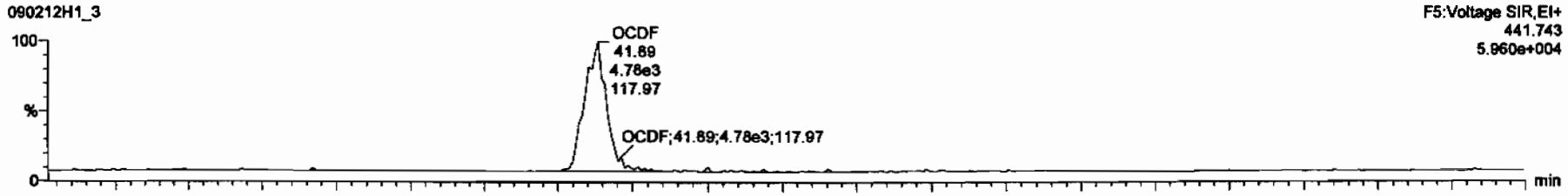

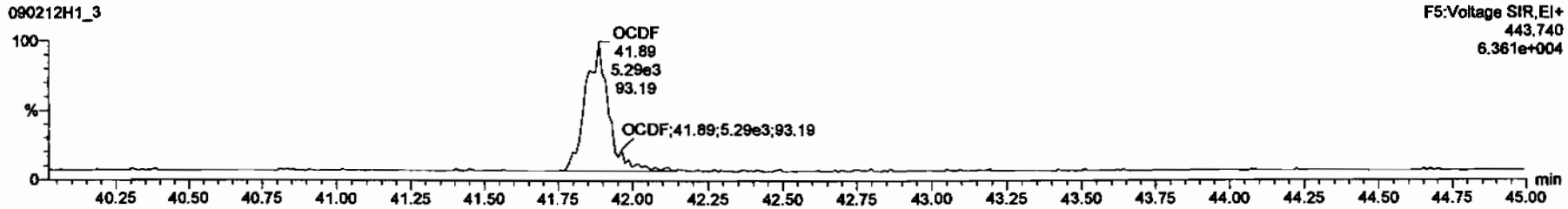

13C-OCDF

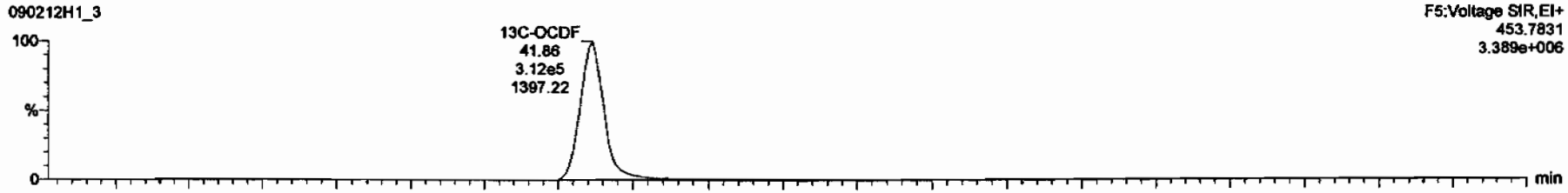

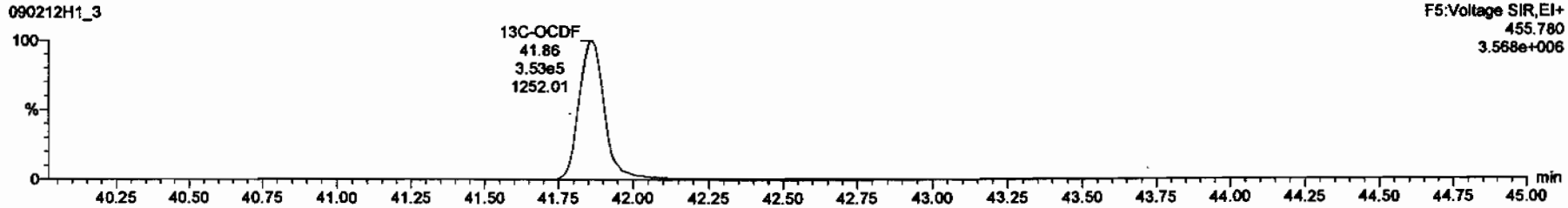

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_3, Date: 12-Feb-2009, Time: 12:49:08, ID: ST090212H1-2 1613 CS0 080917F, Description: 1613 CS0 080917F

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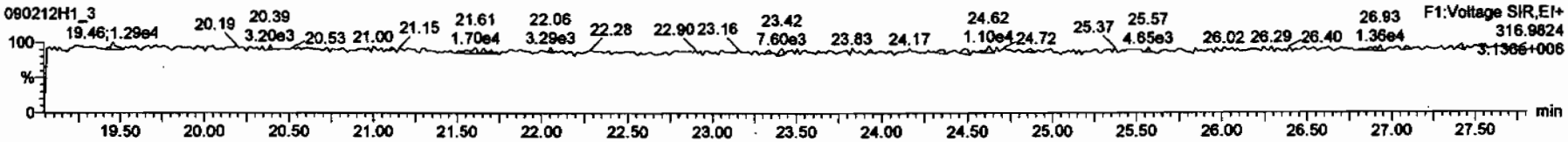

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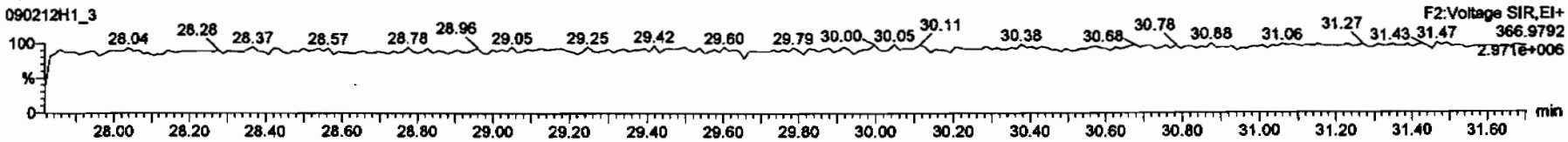

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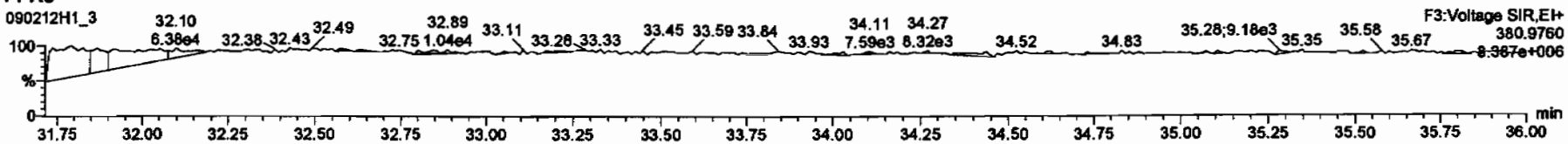

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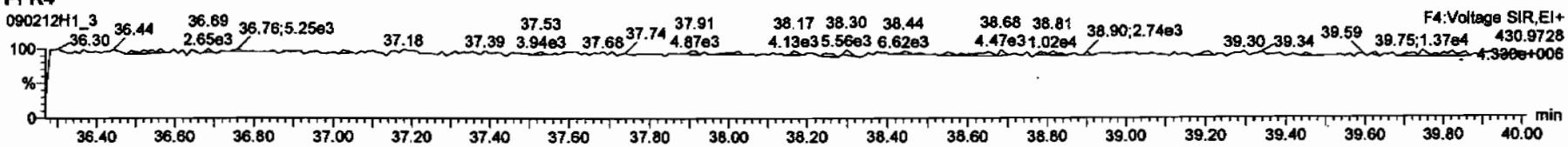

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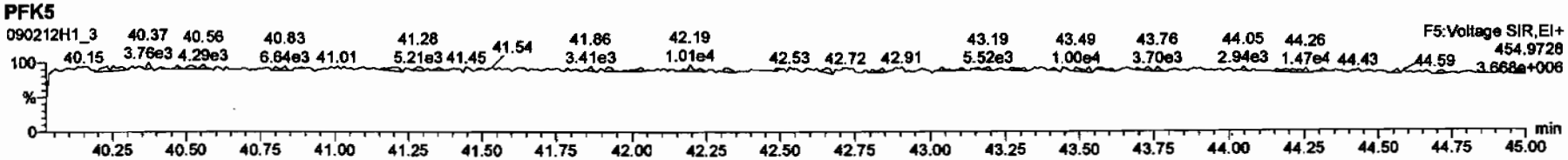

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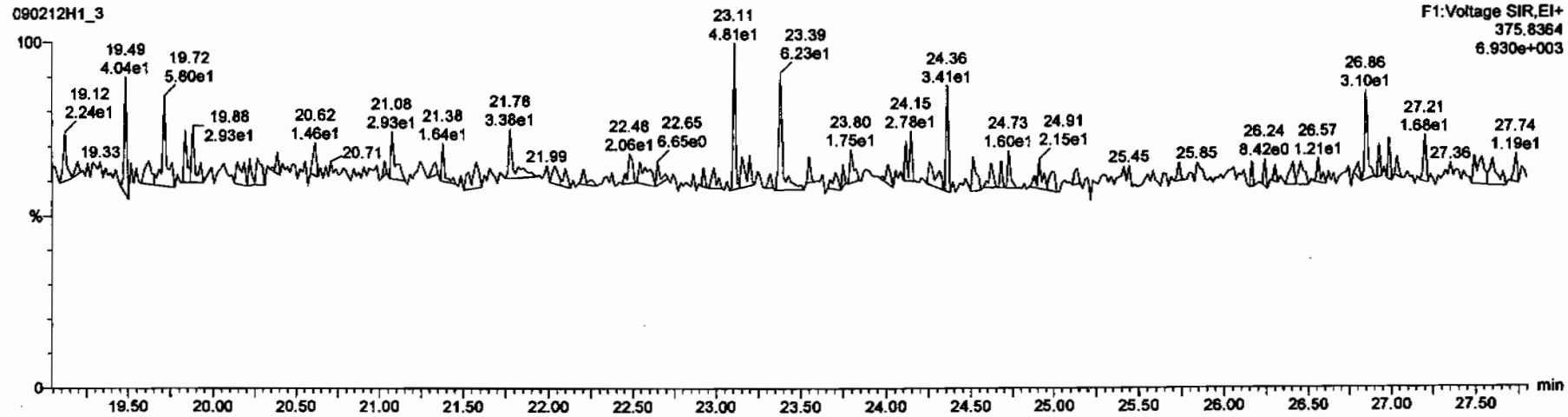

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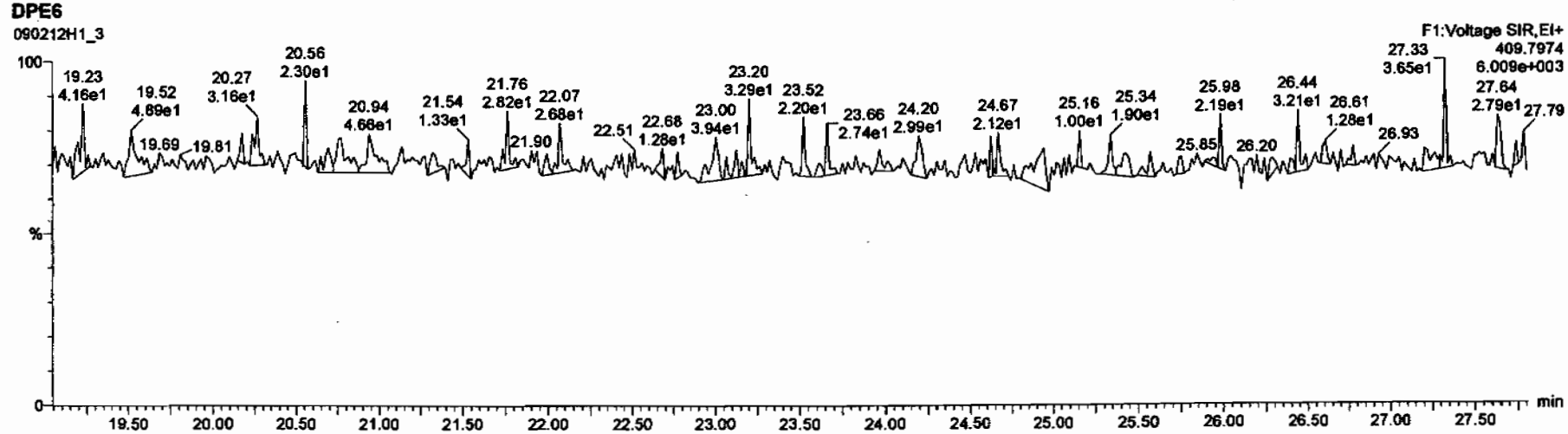

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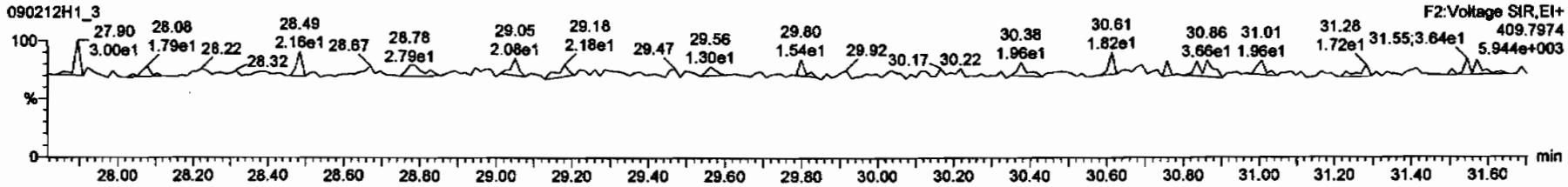

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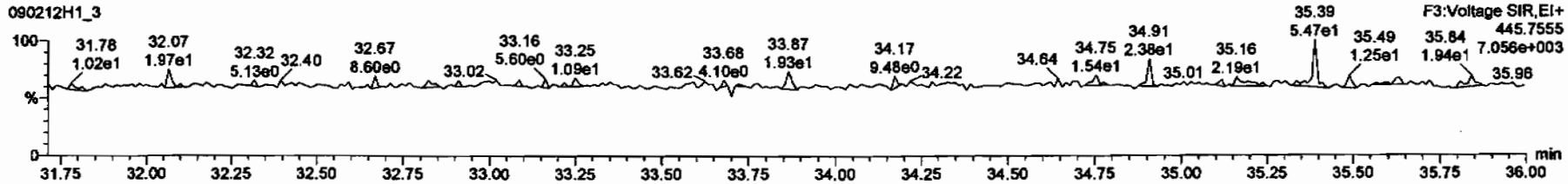

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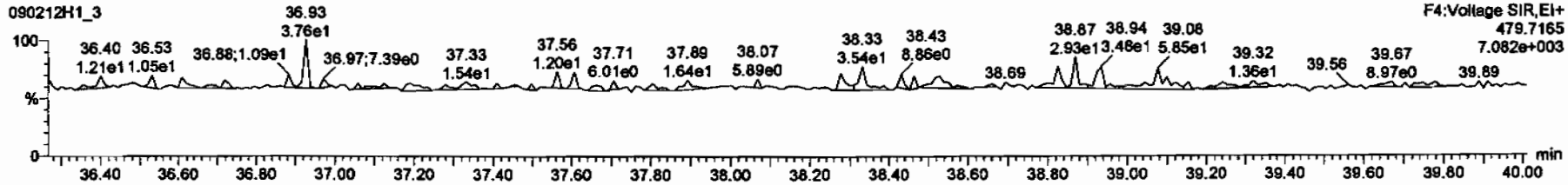

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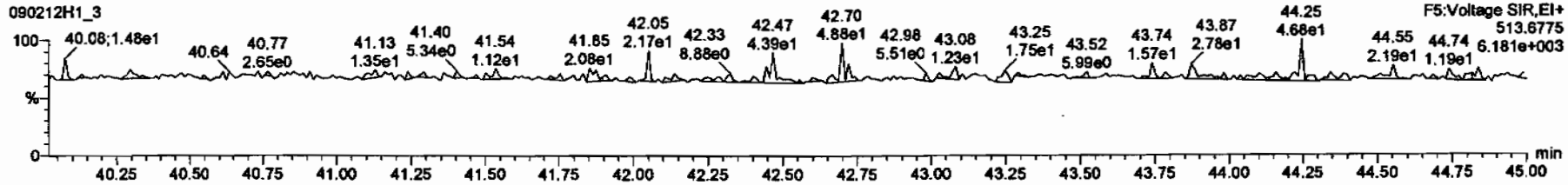

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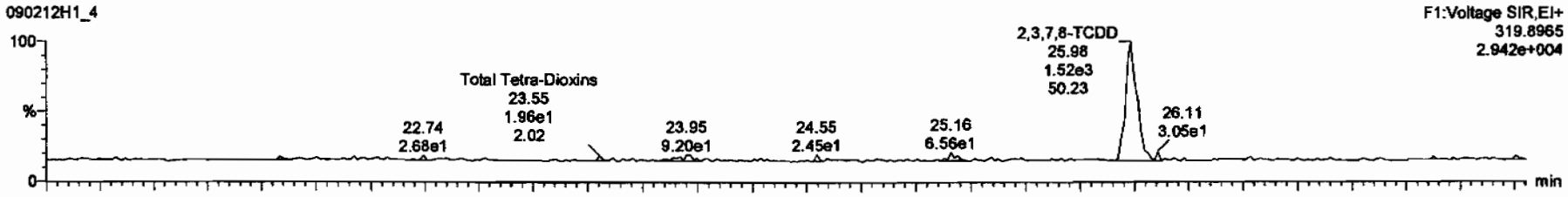

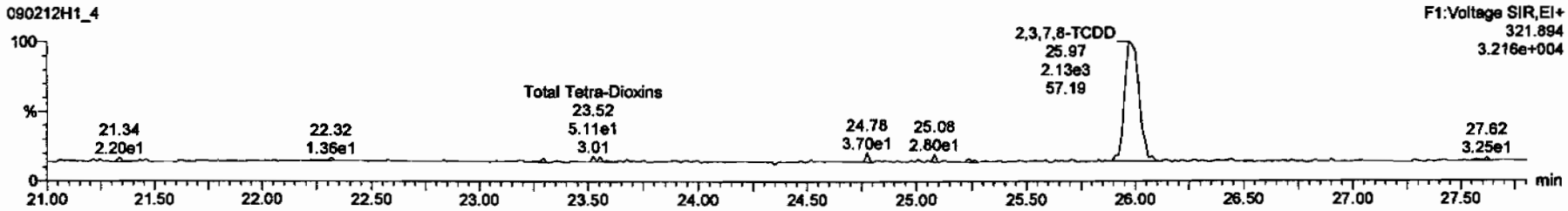

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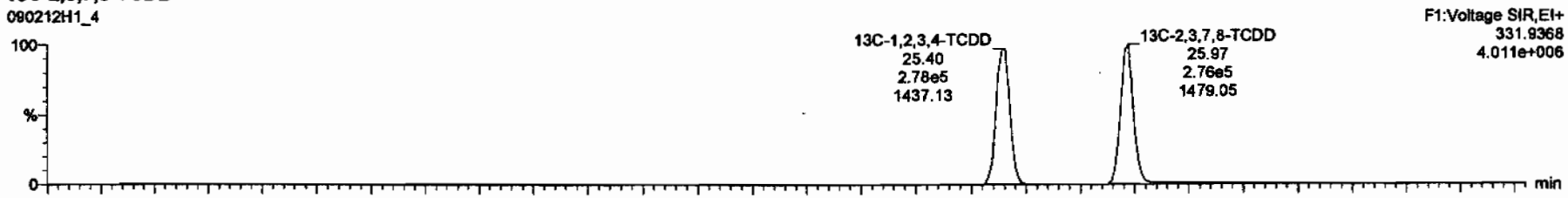

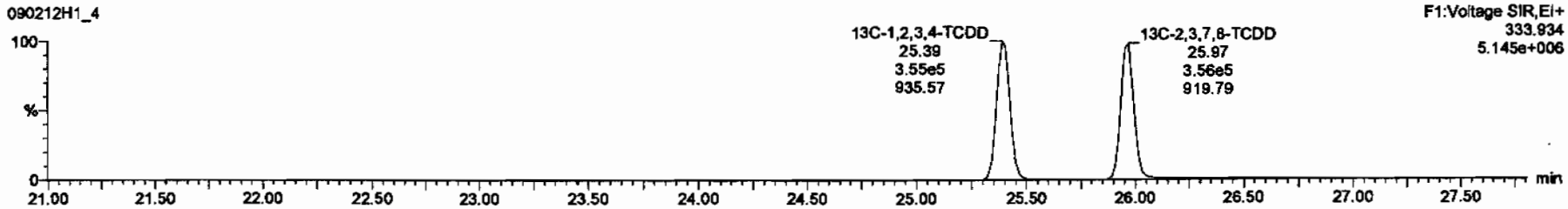

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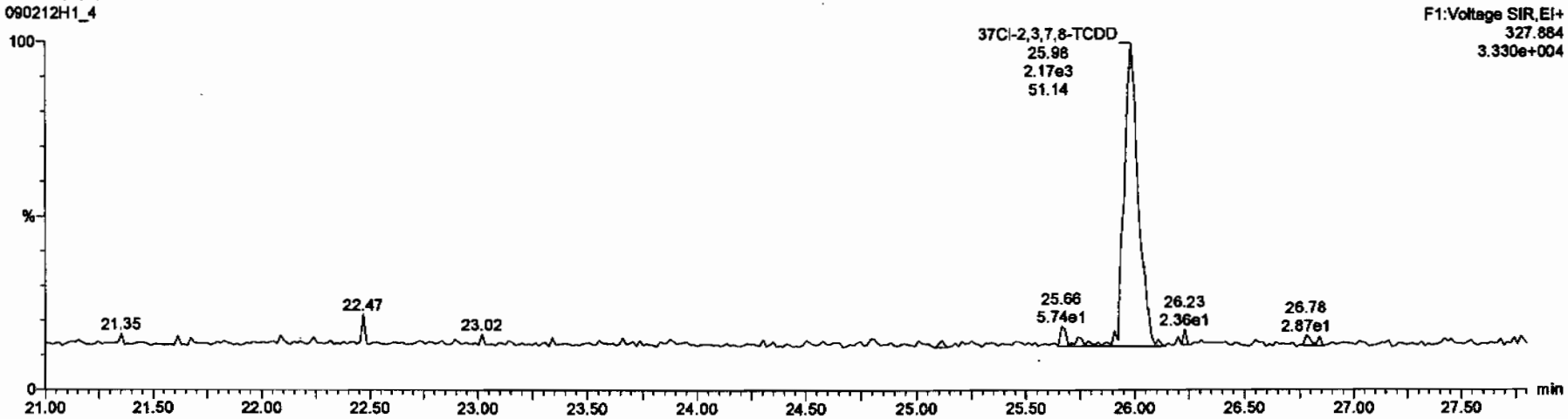

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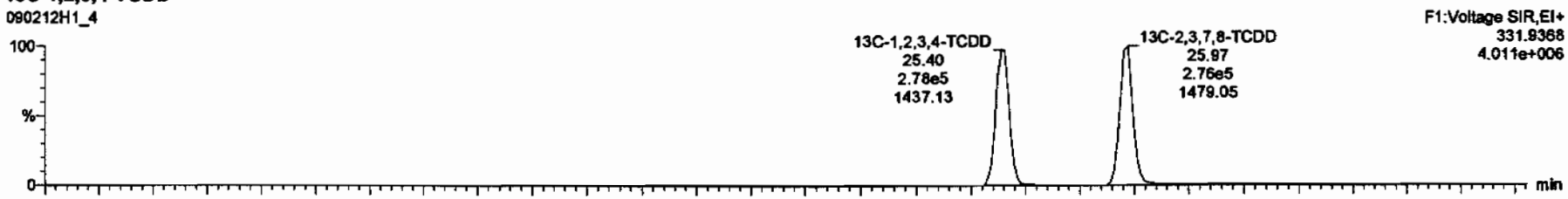

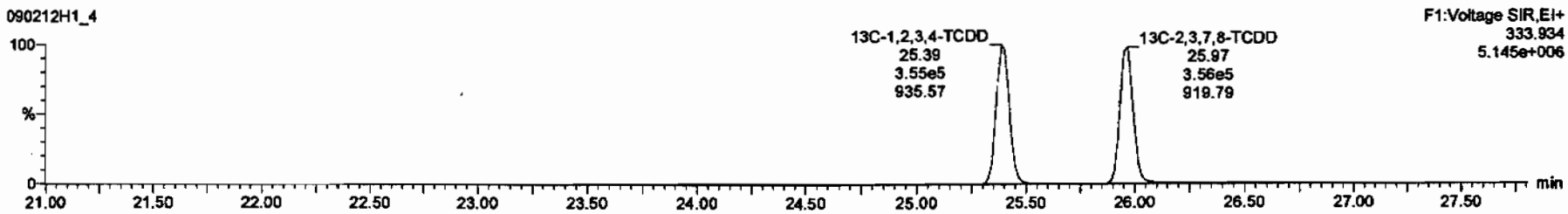

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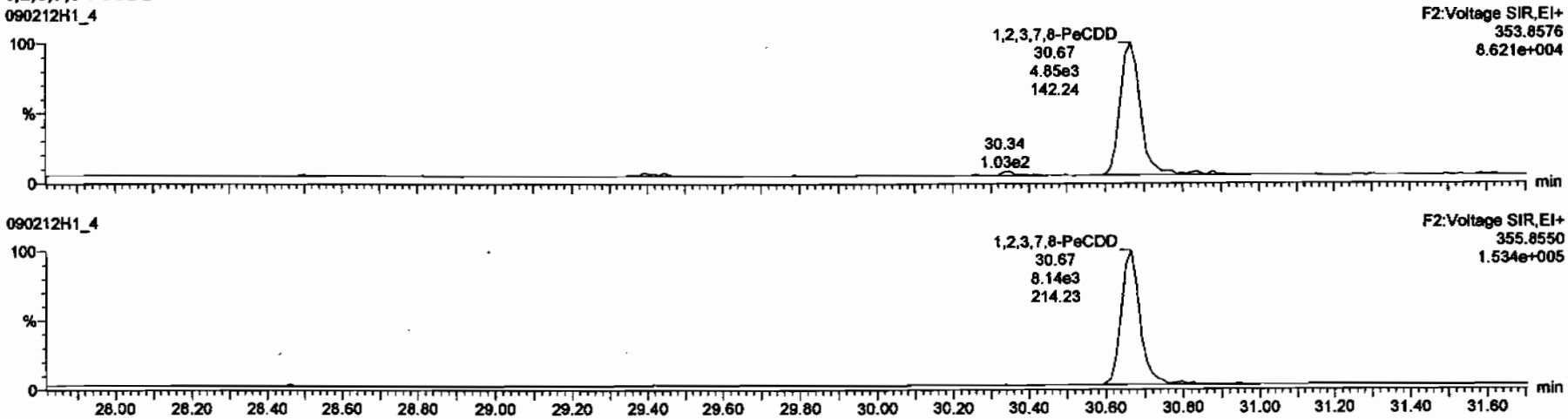

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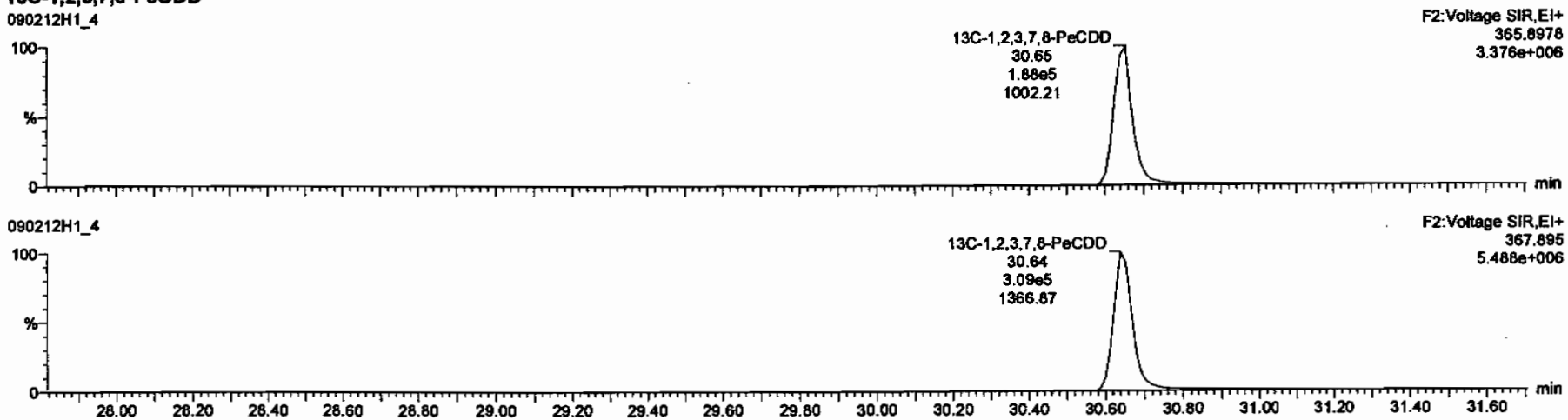

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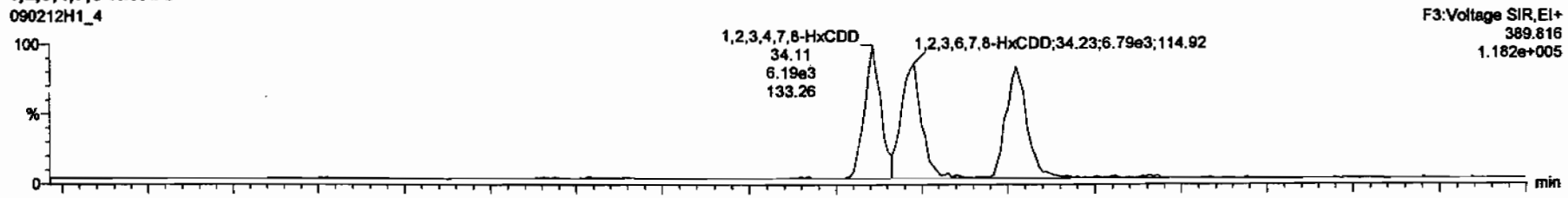

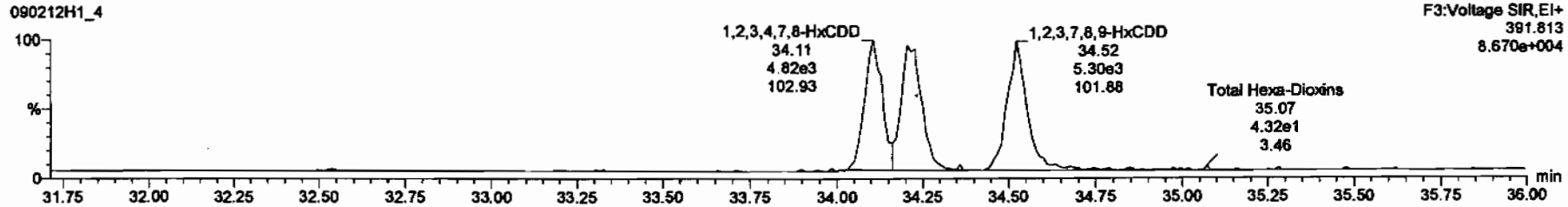

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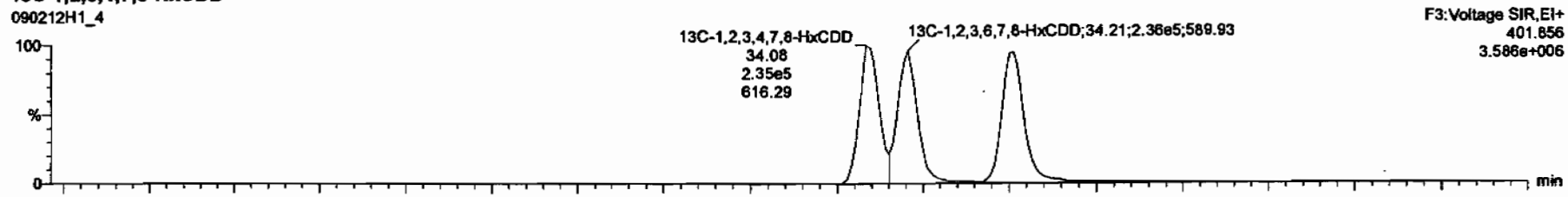

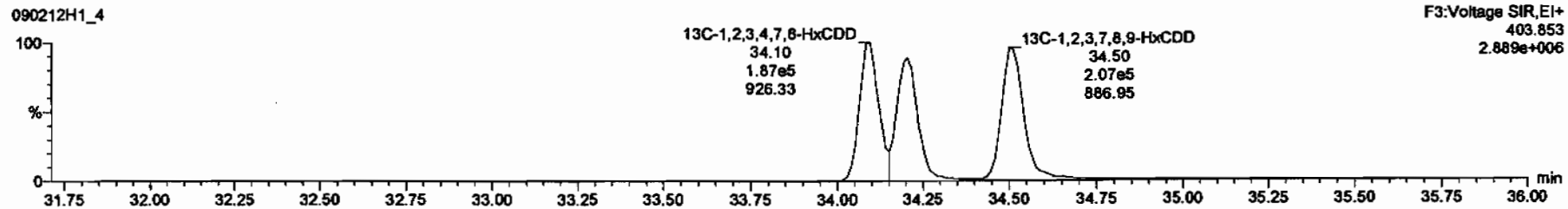

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1,2,3,4,6,7,8-HpCDD

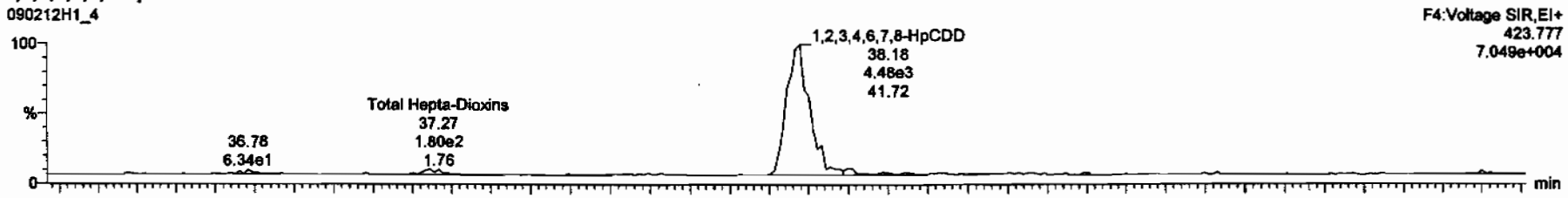

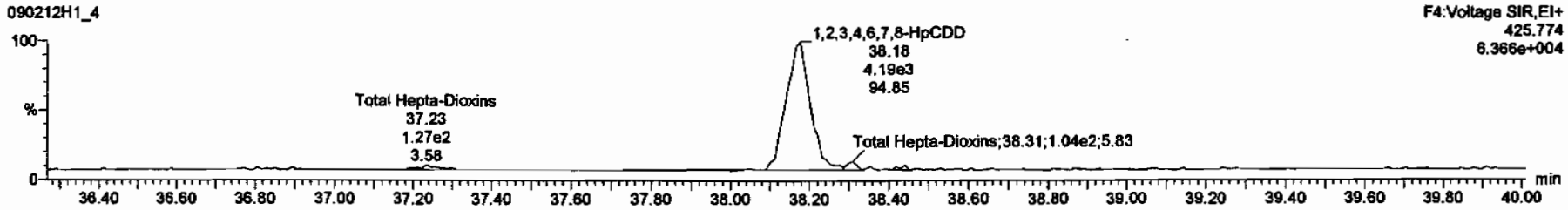

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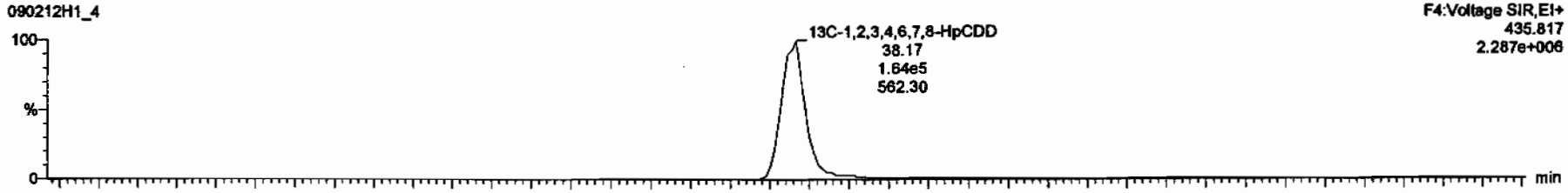

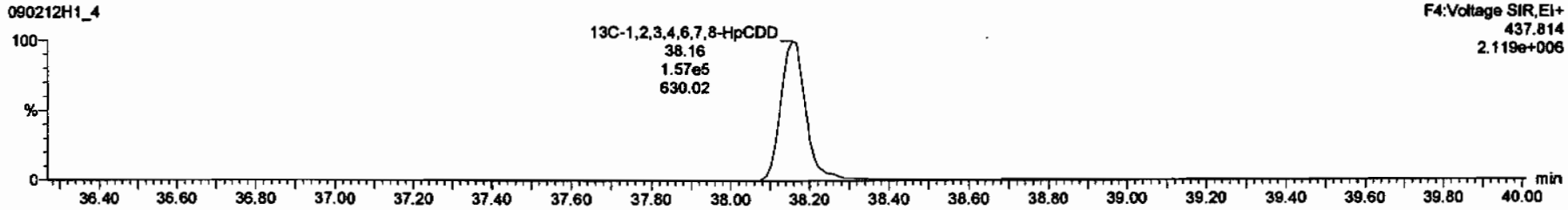

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OCDD

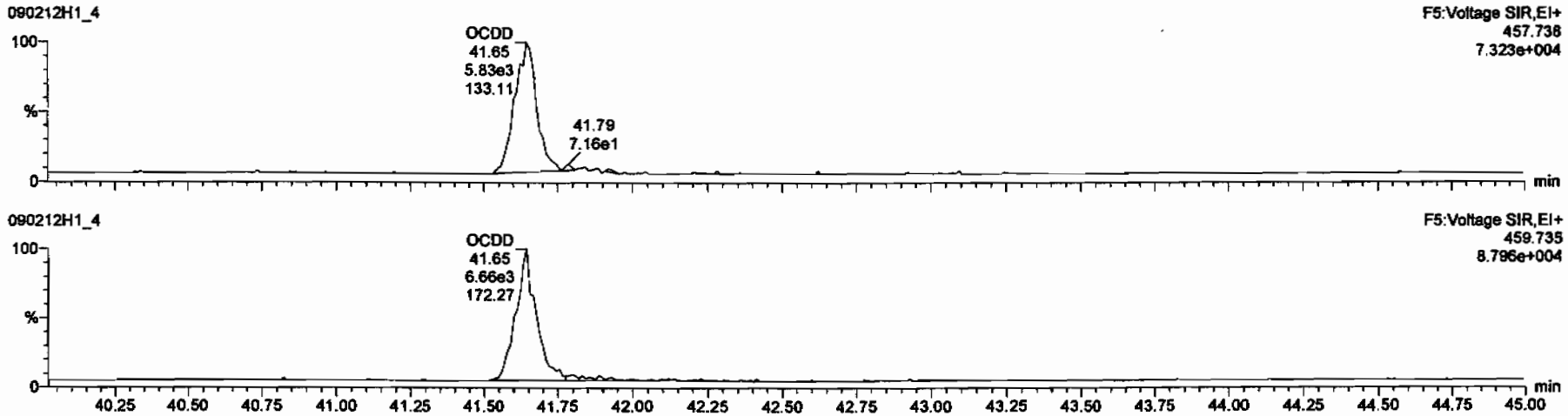

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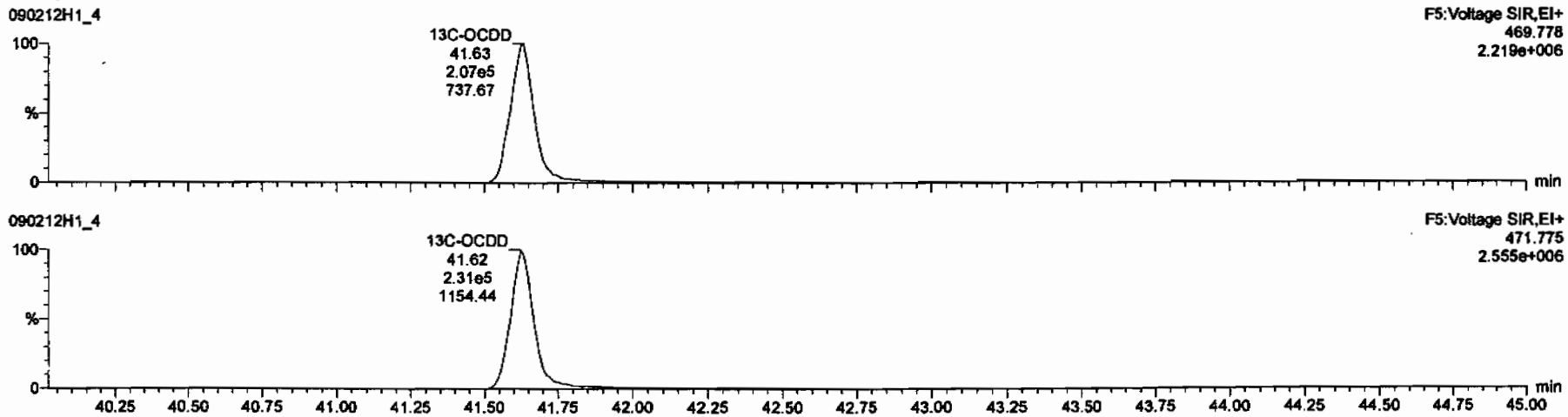

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2,3,7,8-TCDF

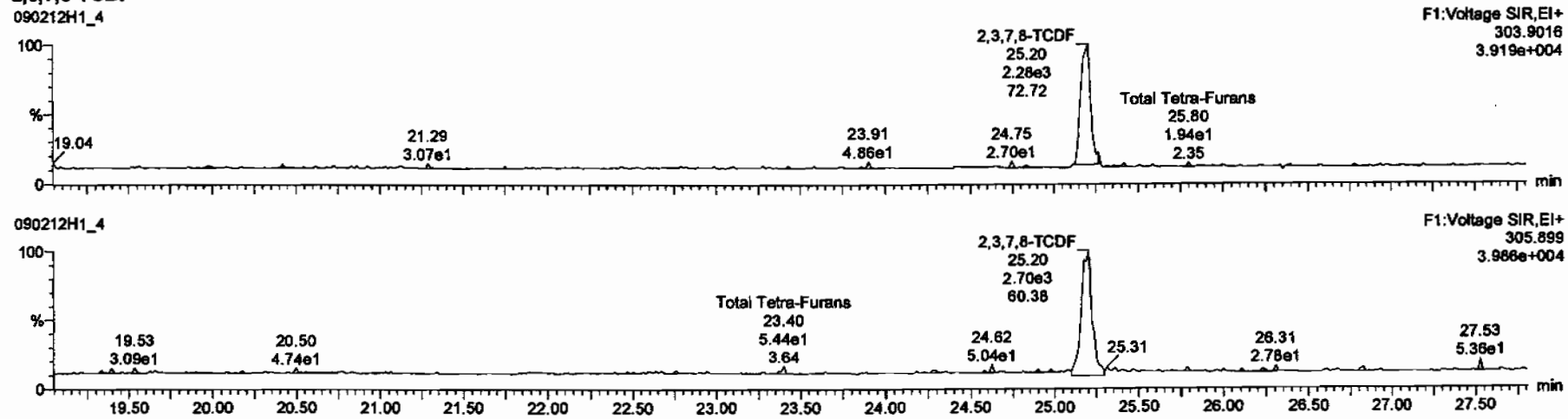

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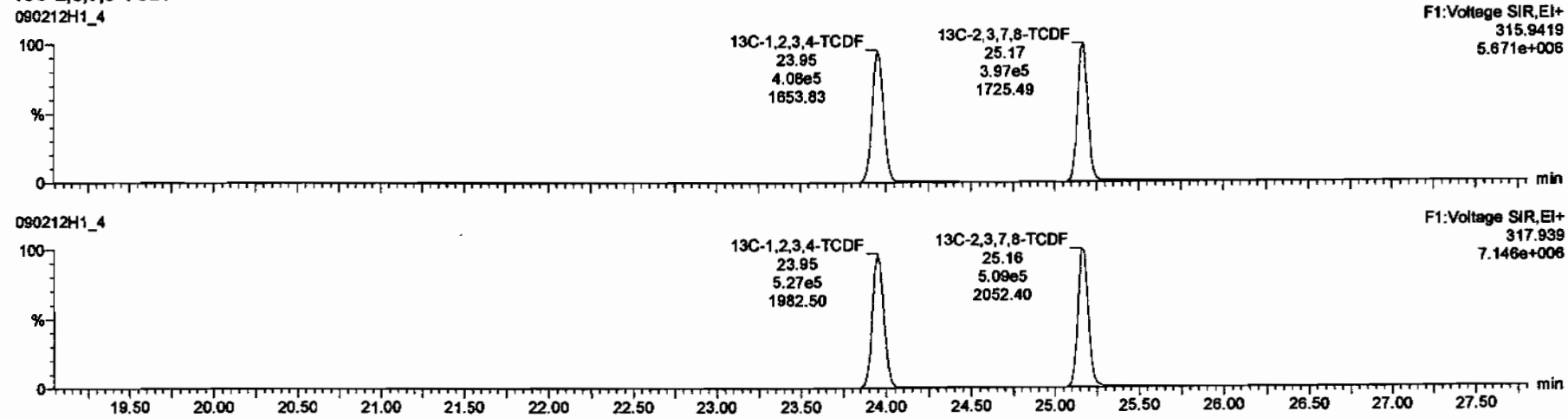

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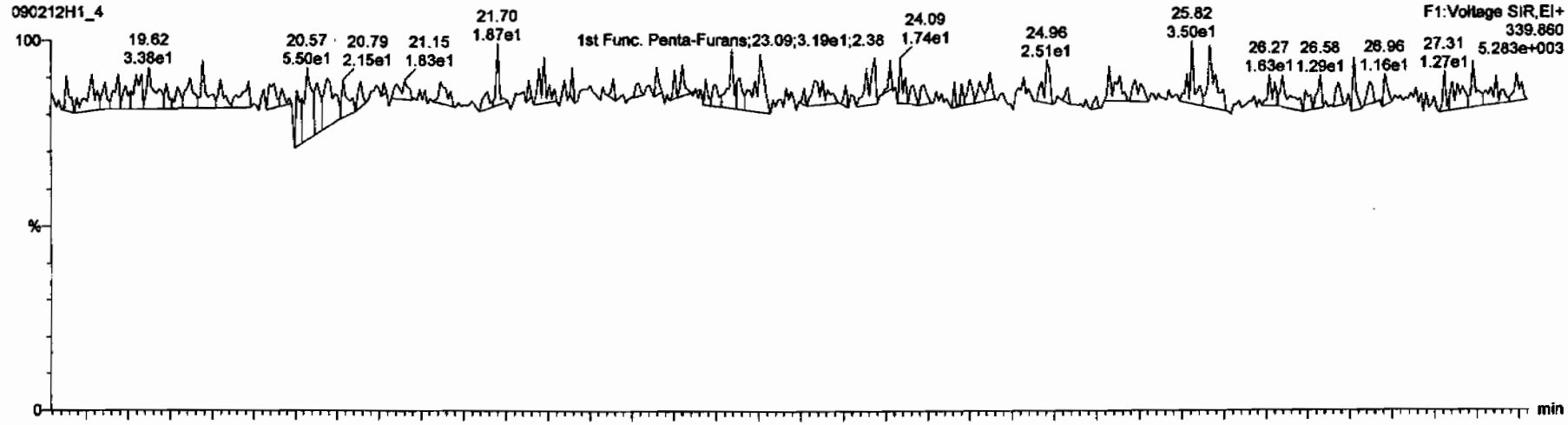

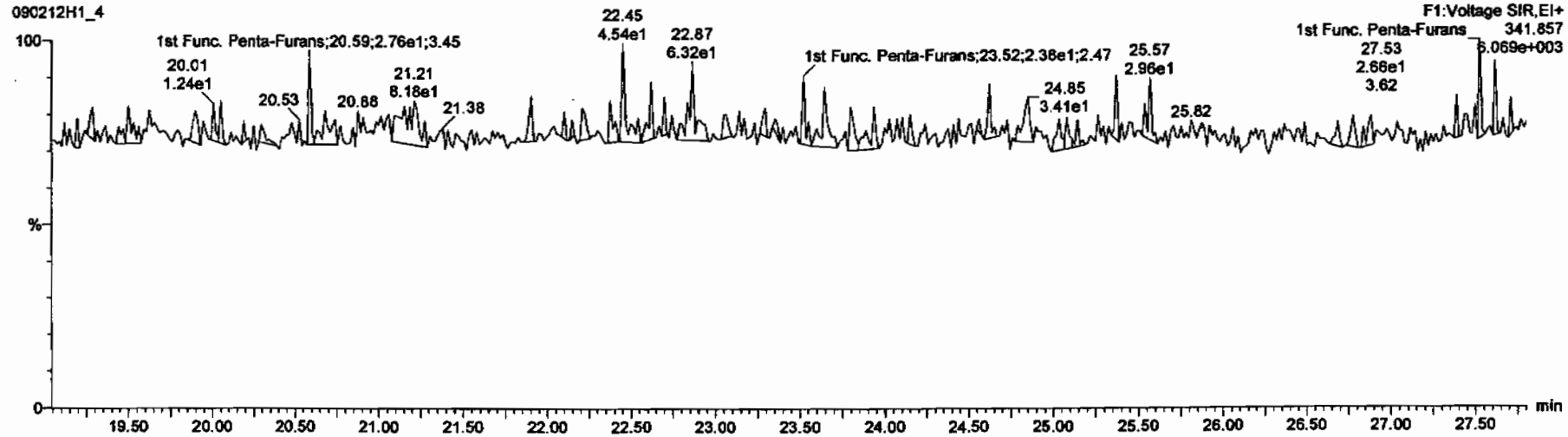

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1,2,3,7,8-PeCDF

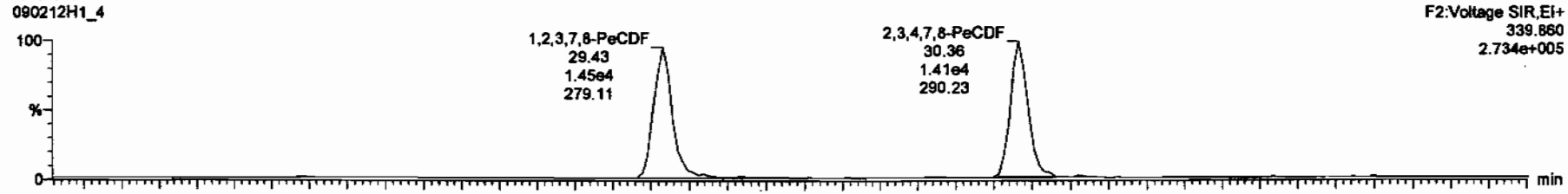

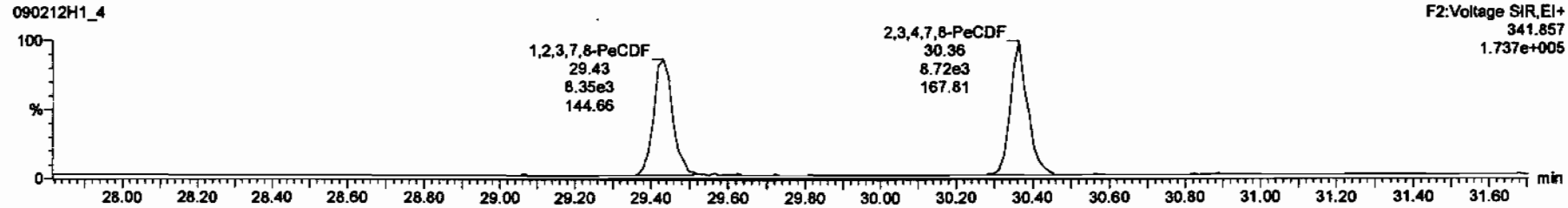

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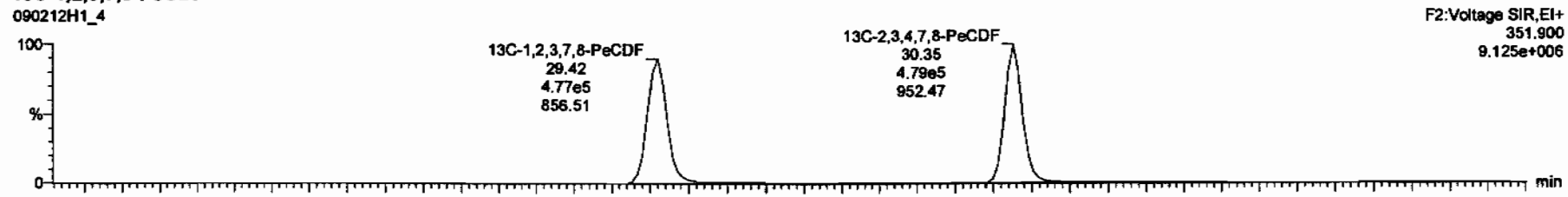

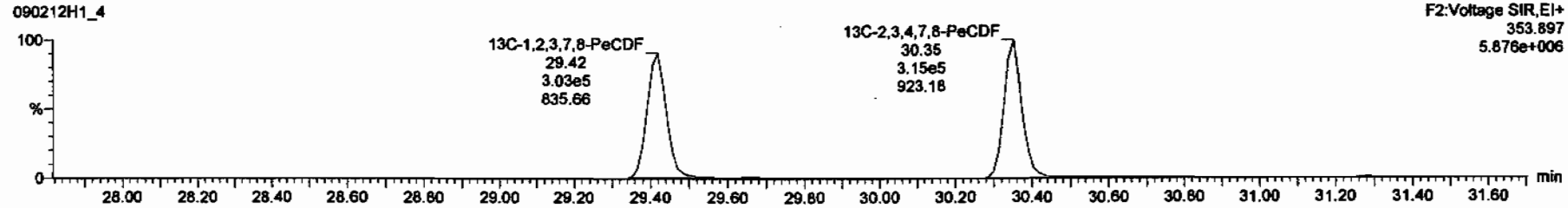

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1,2,3,4,7,8-HxCDF

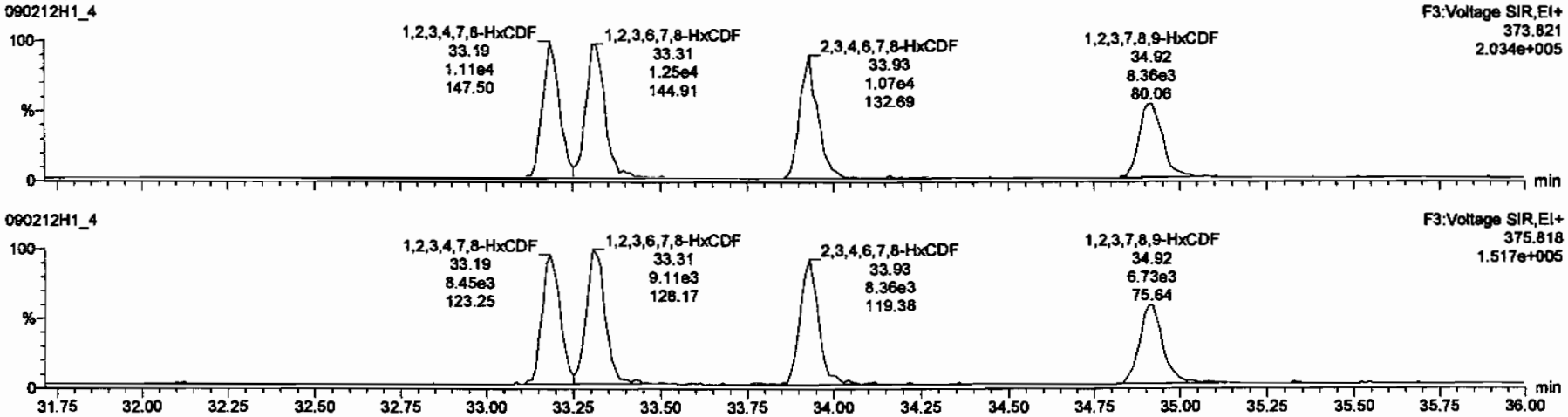

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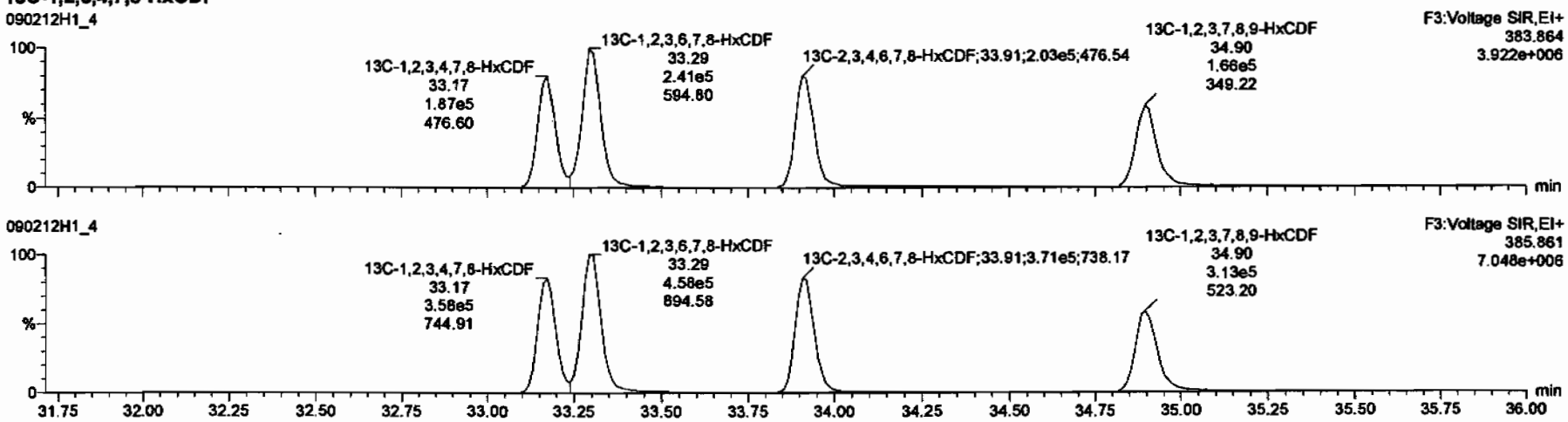

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_4, Date: 12-Feb-2009, Time: 13:38:34, ID: ST090212H1-3 1613 CS1 080917CG, Description: 1613 CS1 080917G

1,2,3,4,6,7,8-HpCDF

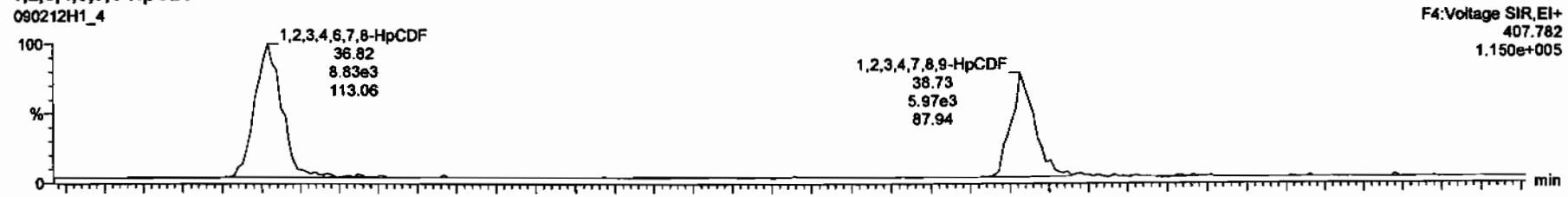

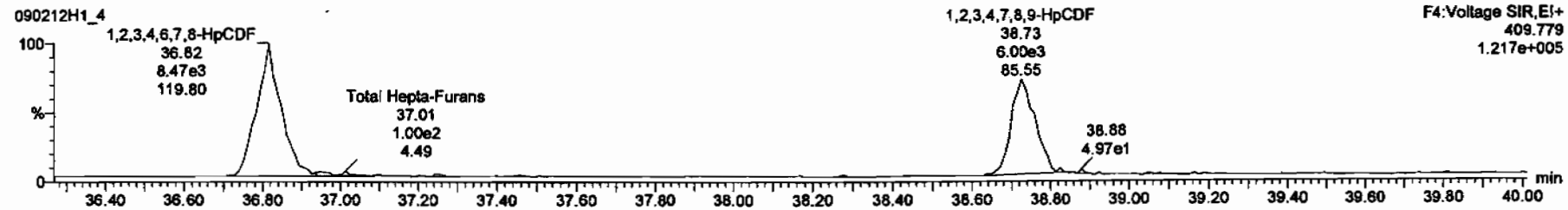

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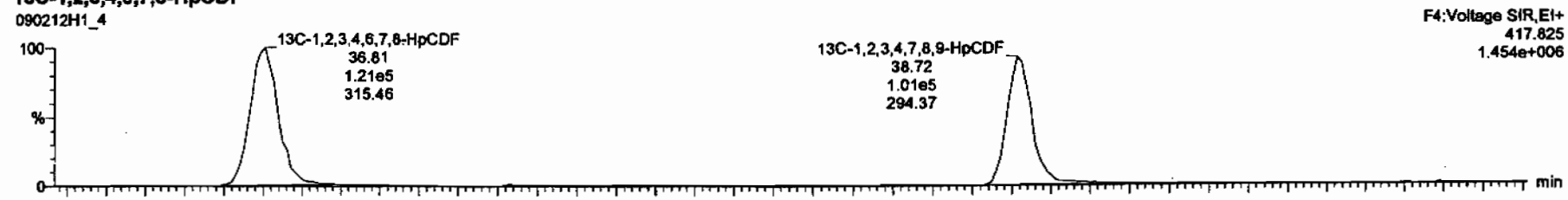

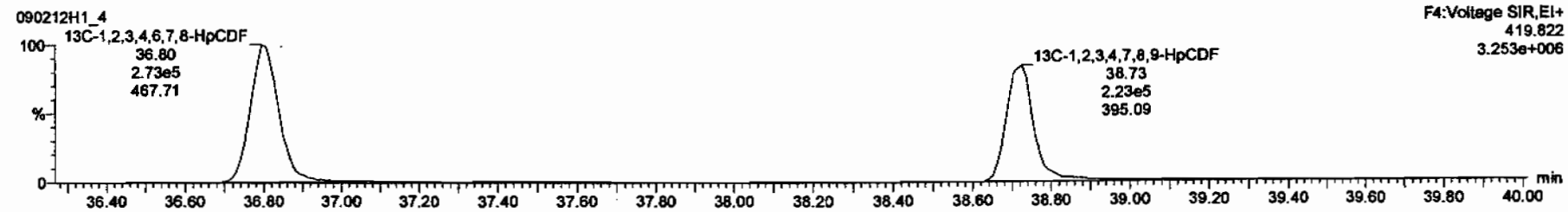

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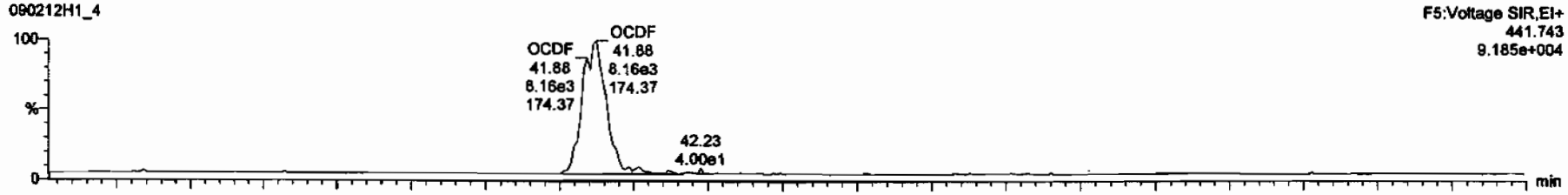

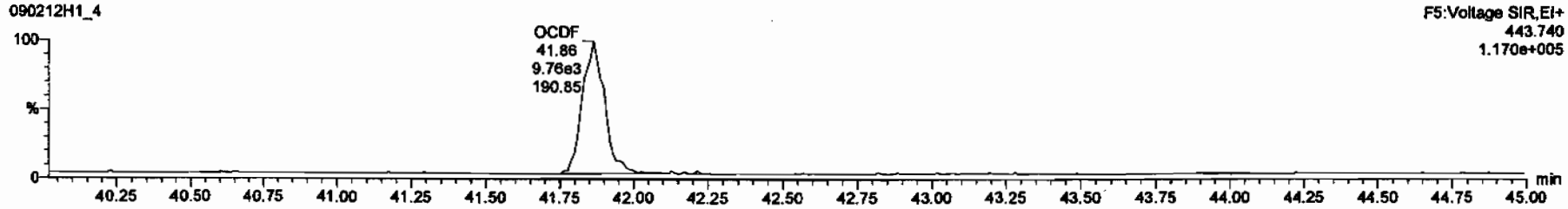

13C-OCDF

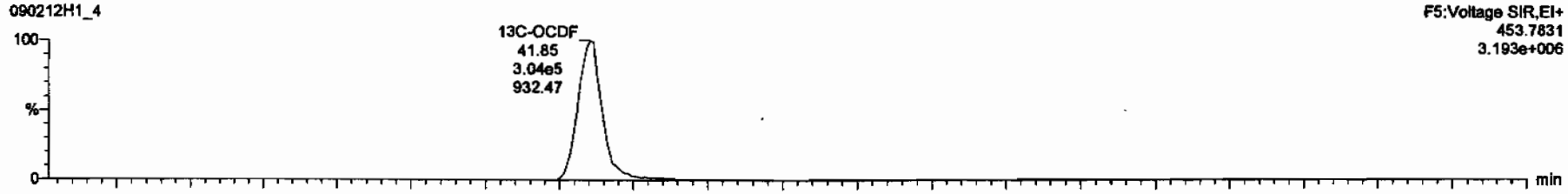

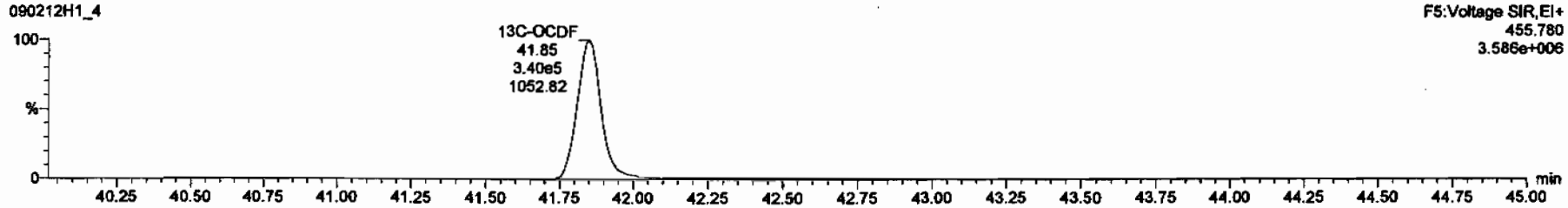

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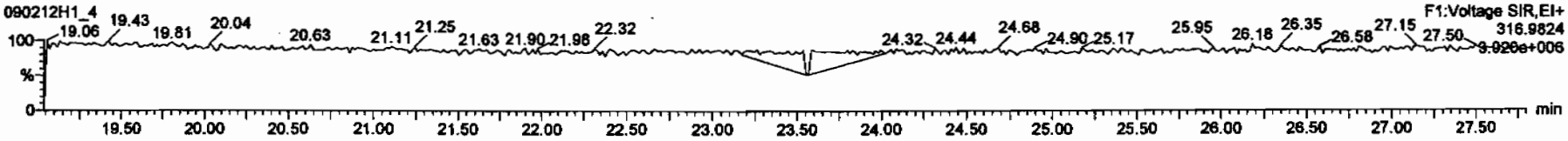

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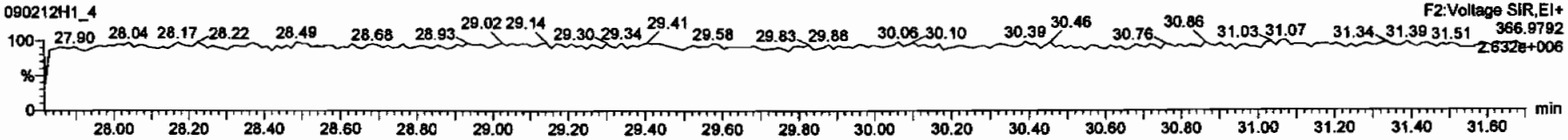

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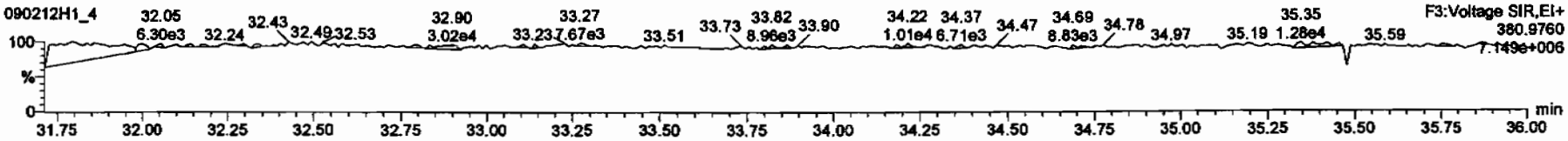

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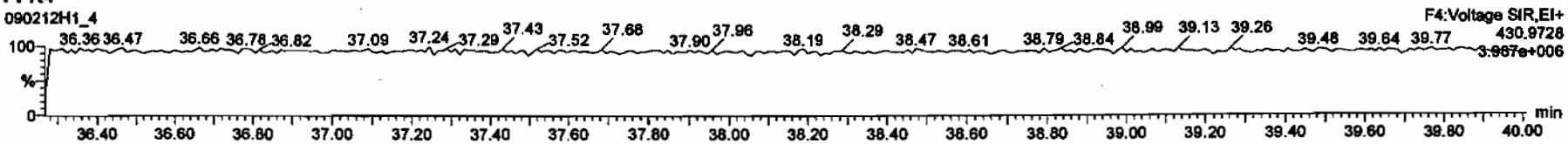

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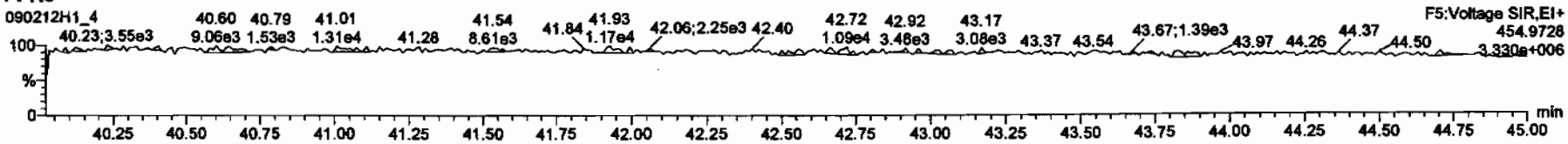

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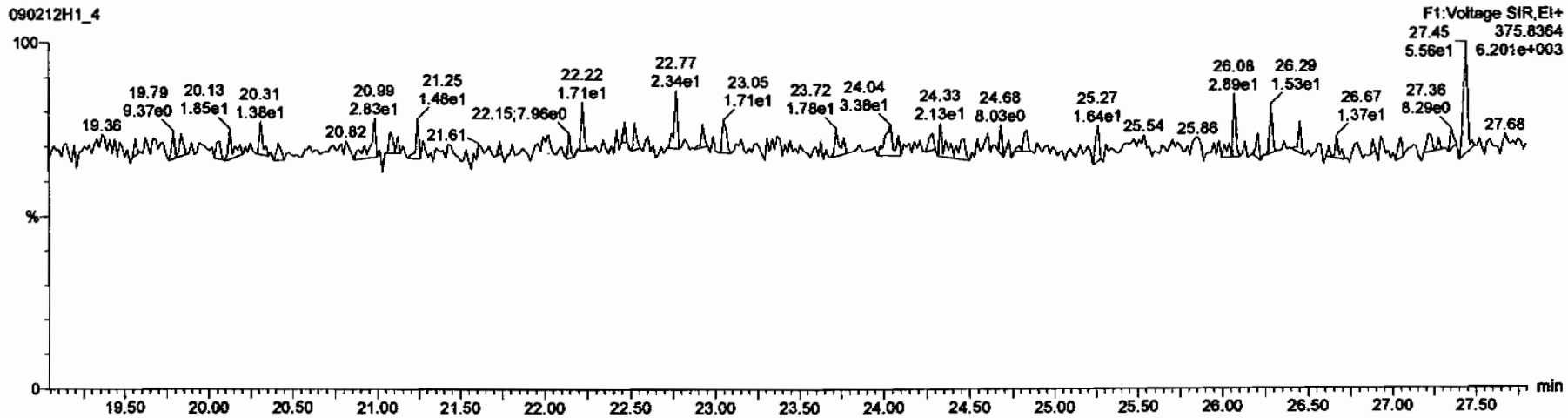

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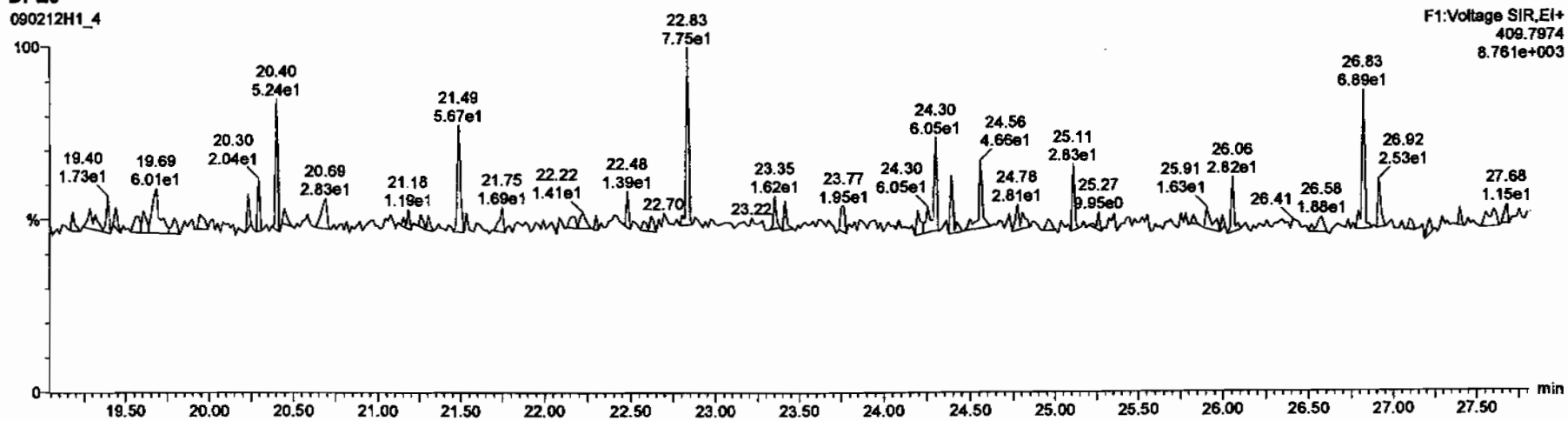

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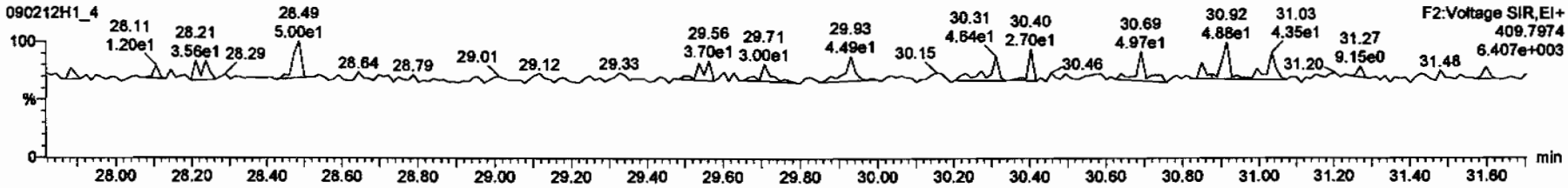

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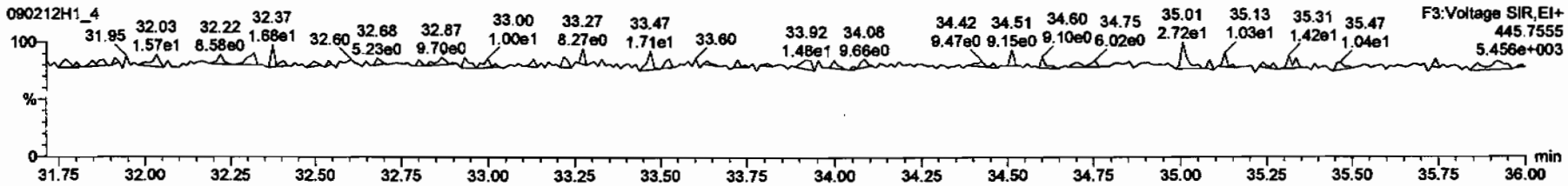

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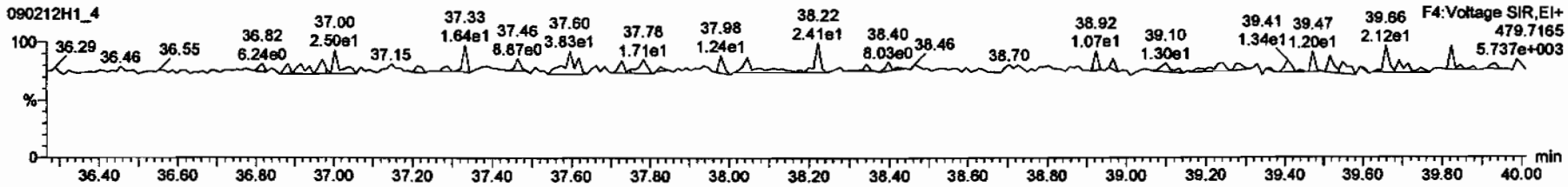

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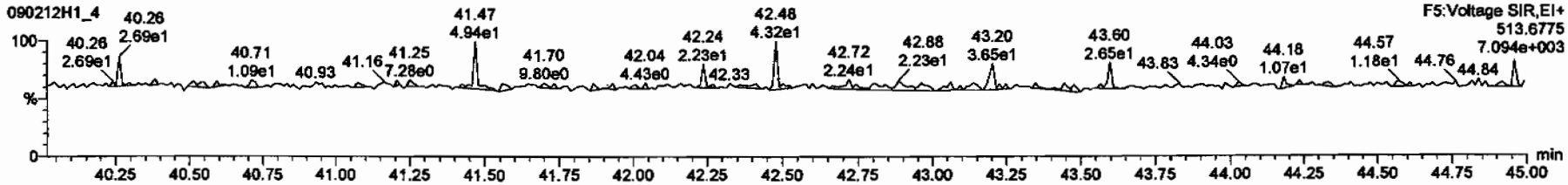

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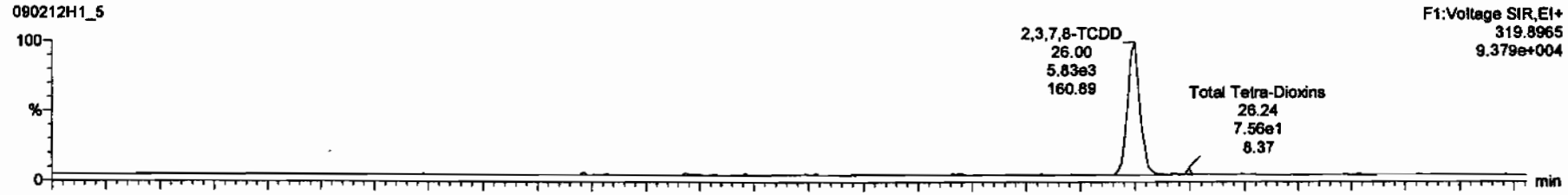

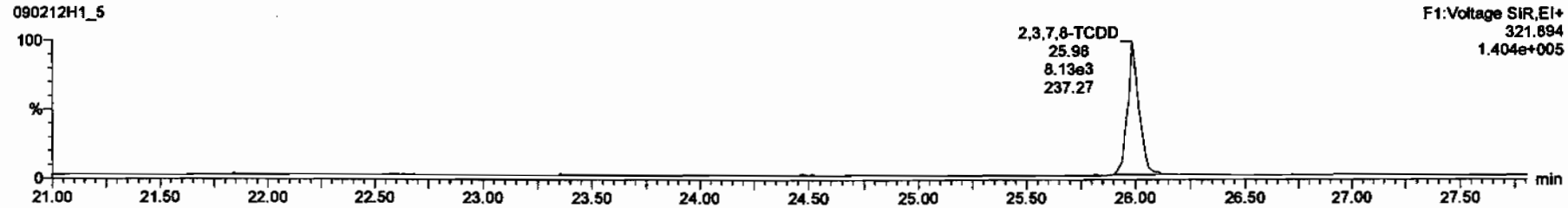

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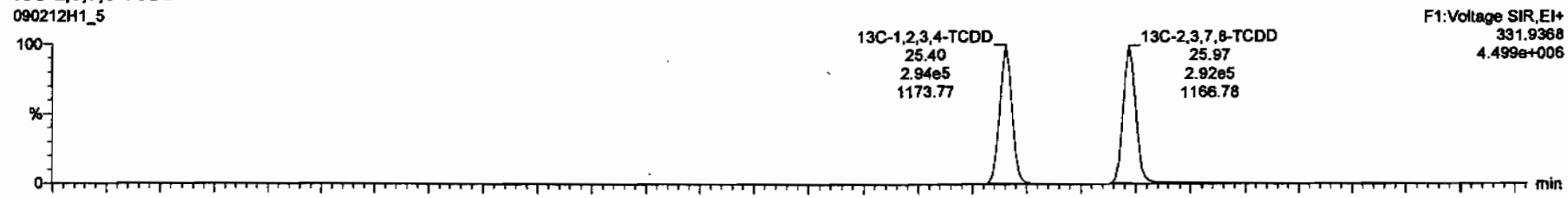

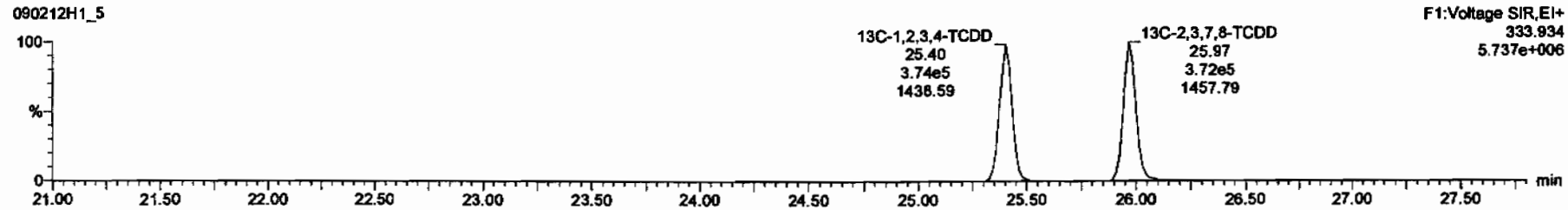

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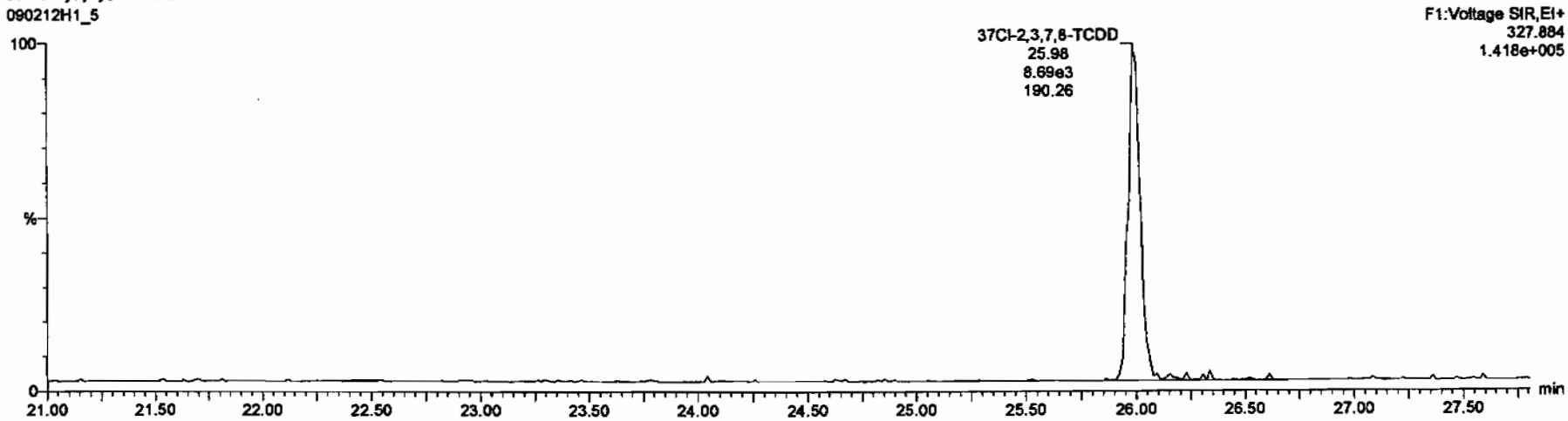

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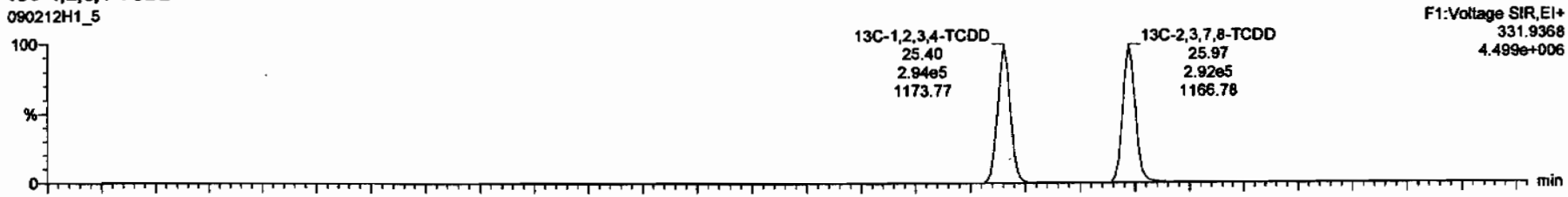

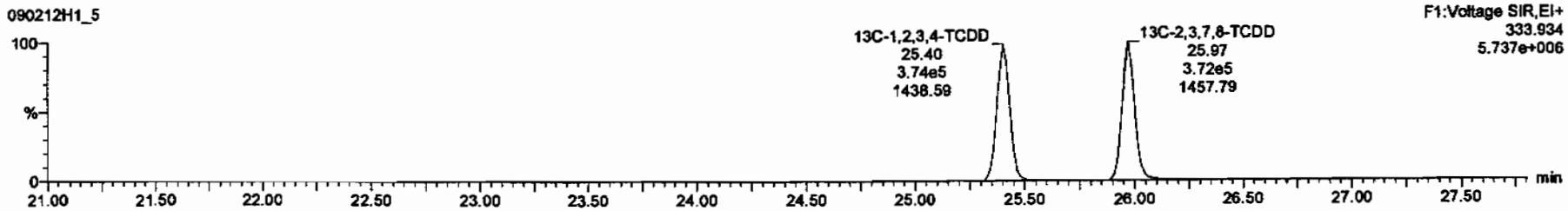

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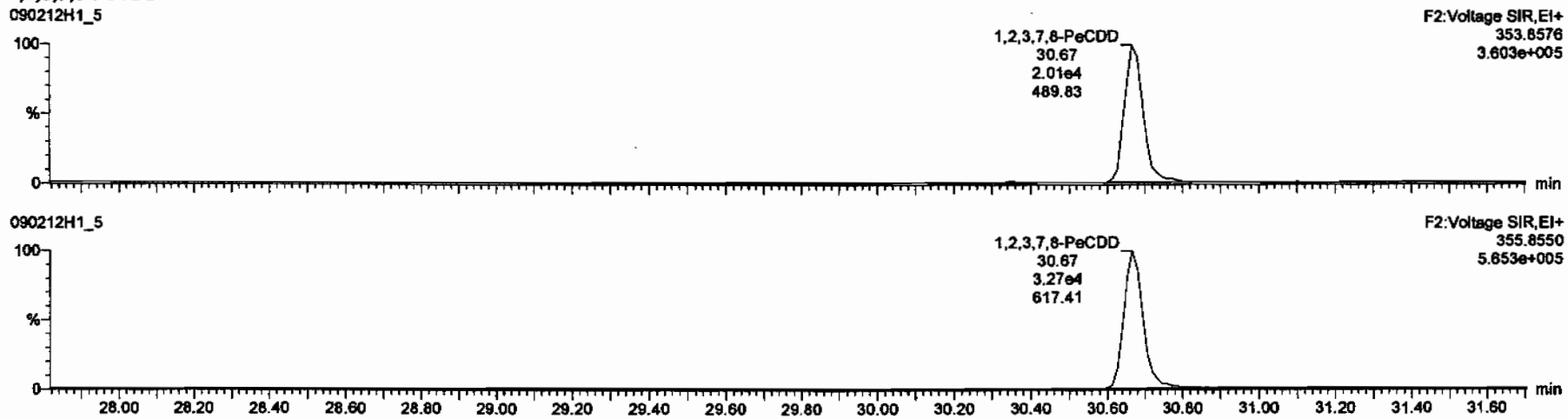

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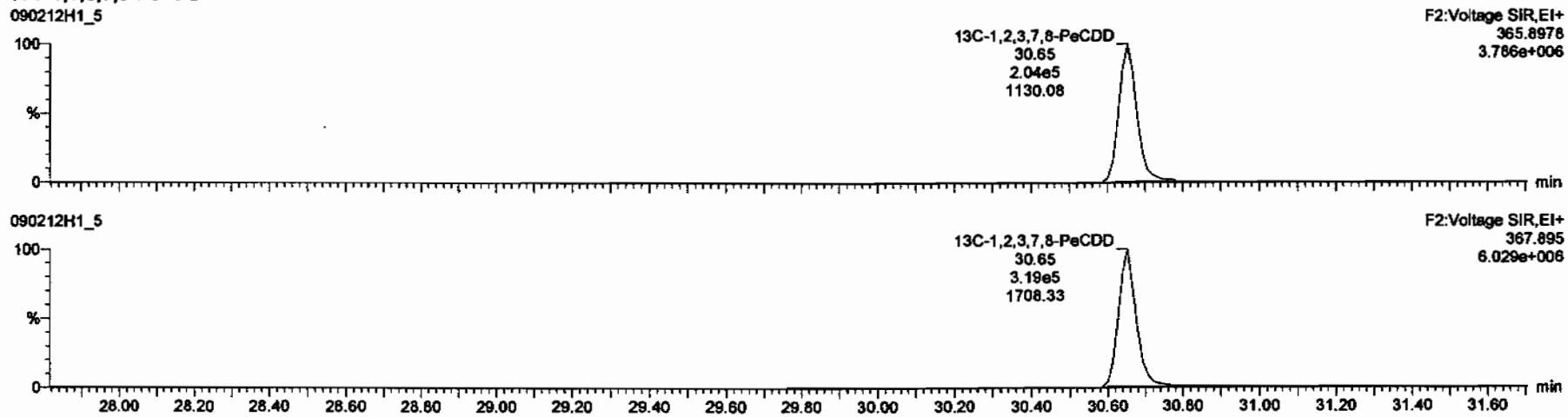

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1,2,3,4,7,8-HxCDD

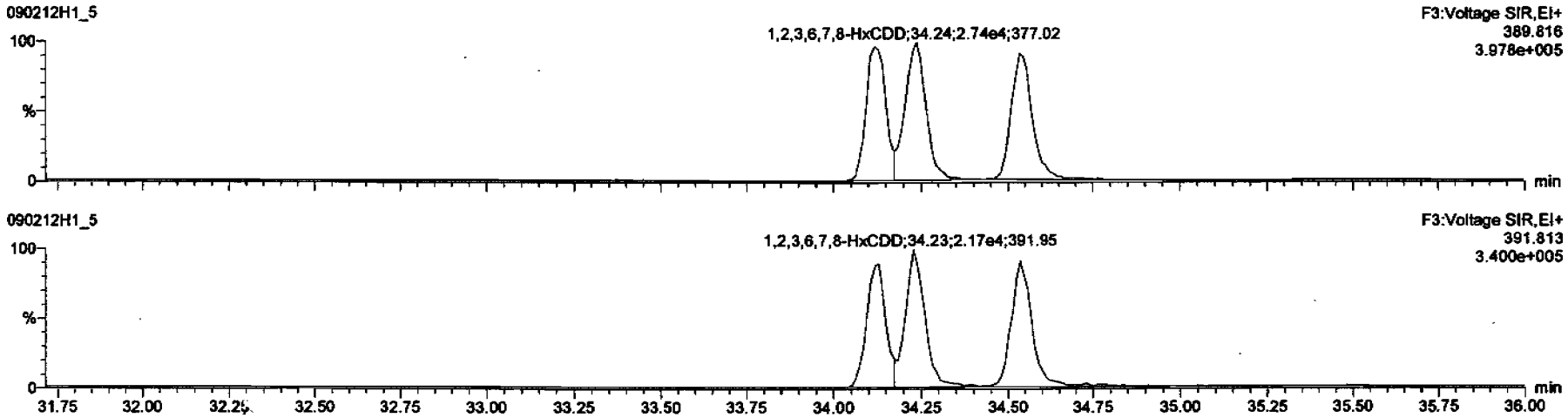

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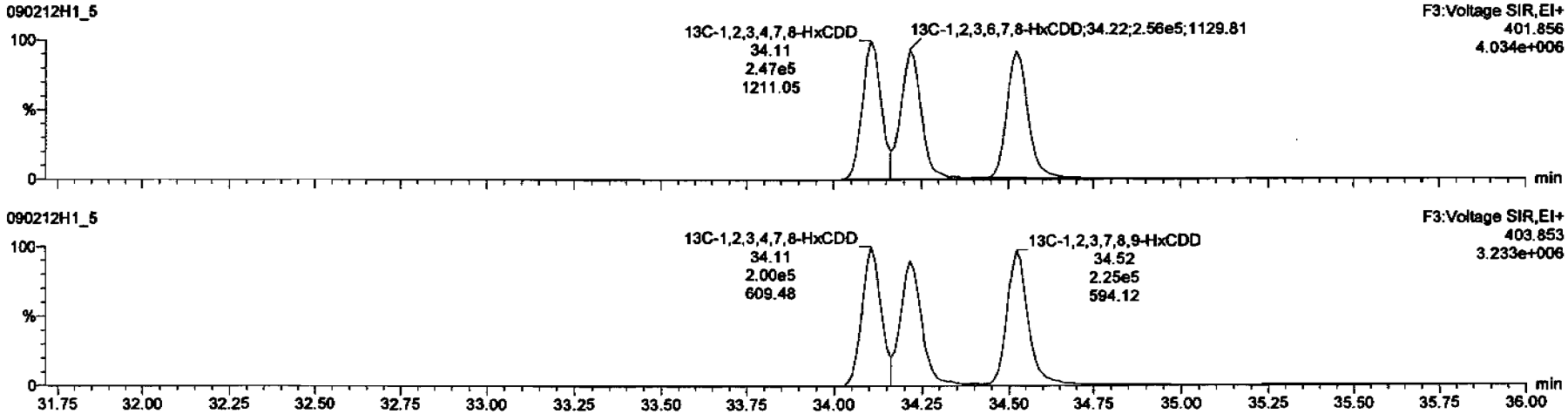

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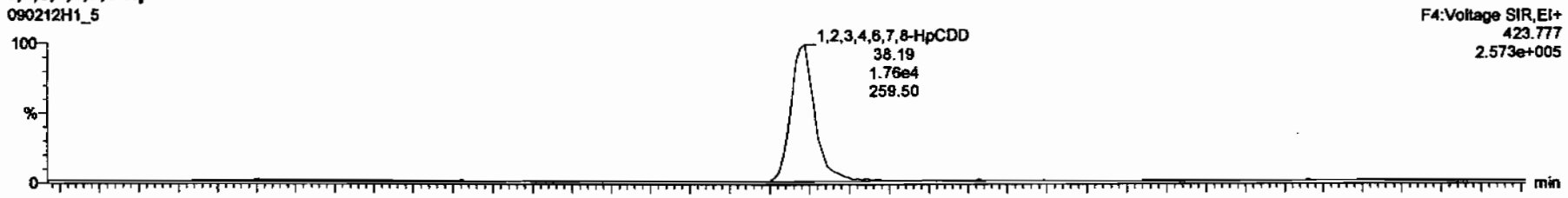

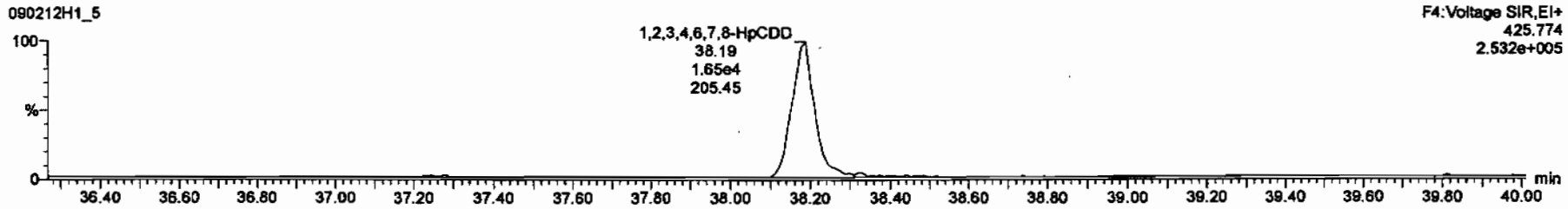

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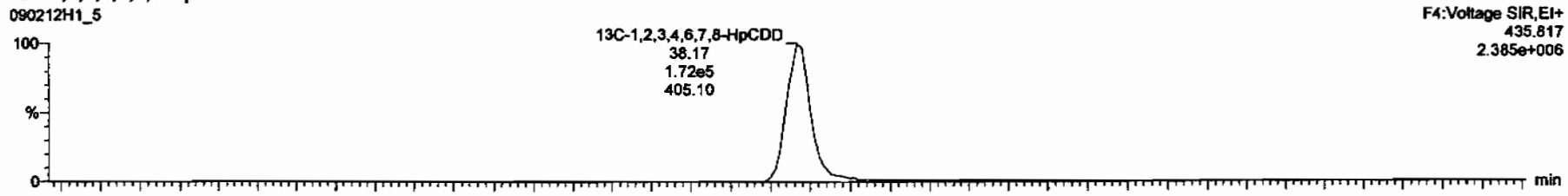

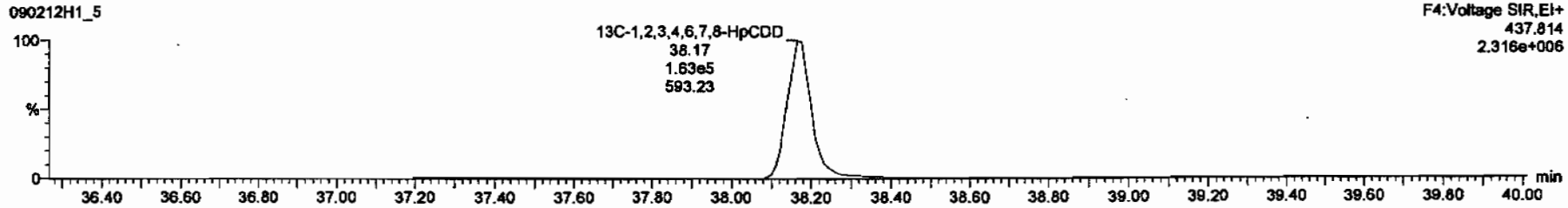

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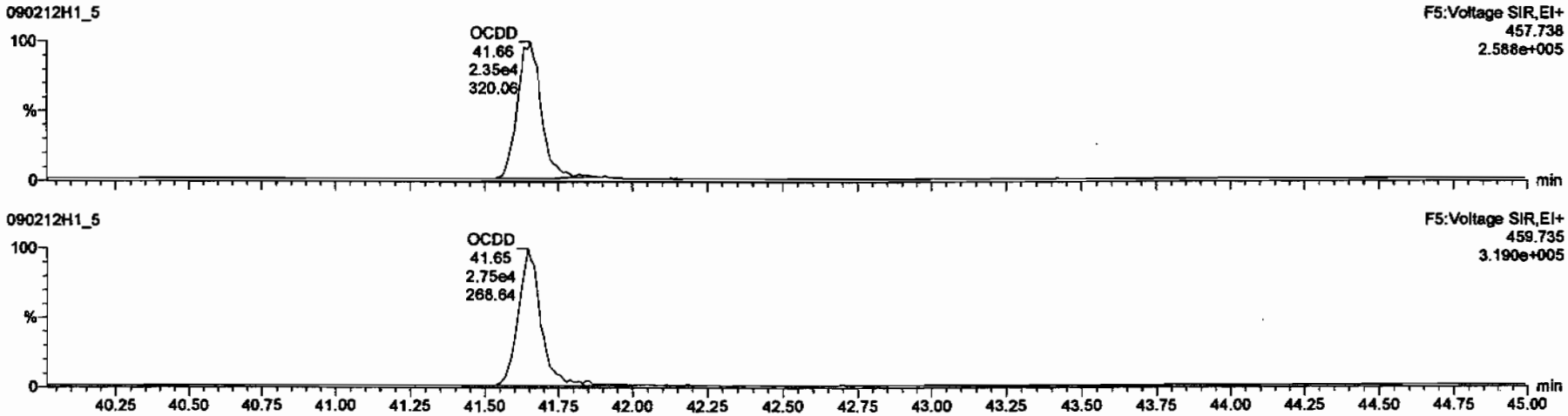

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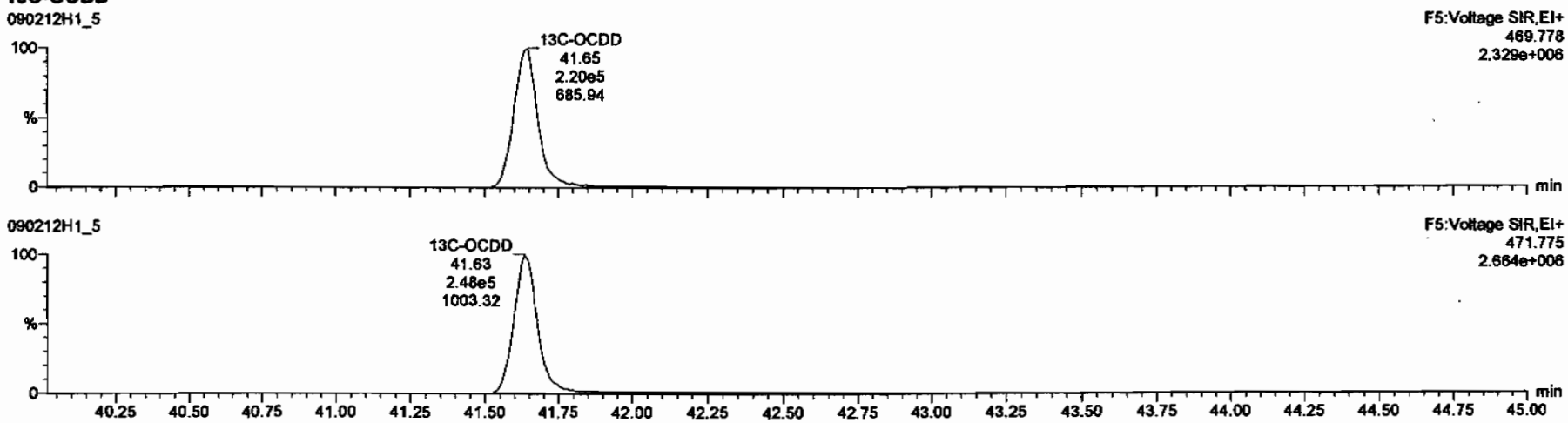

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2,3,7,8-TCDF

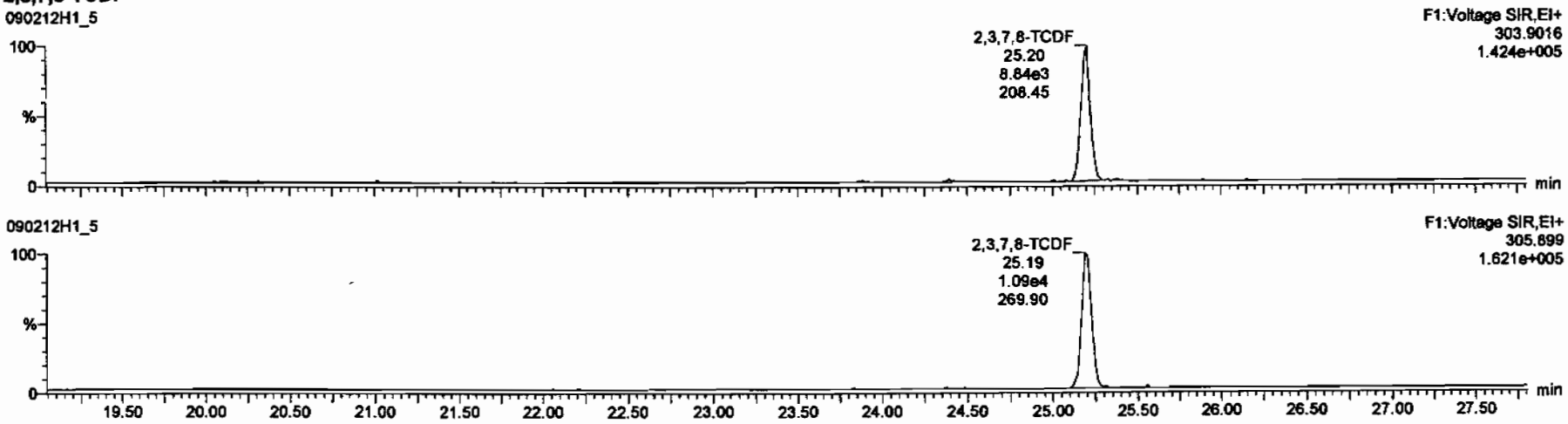

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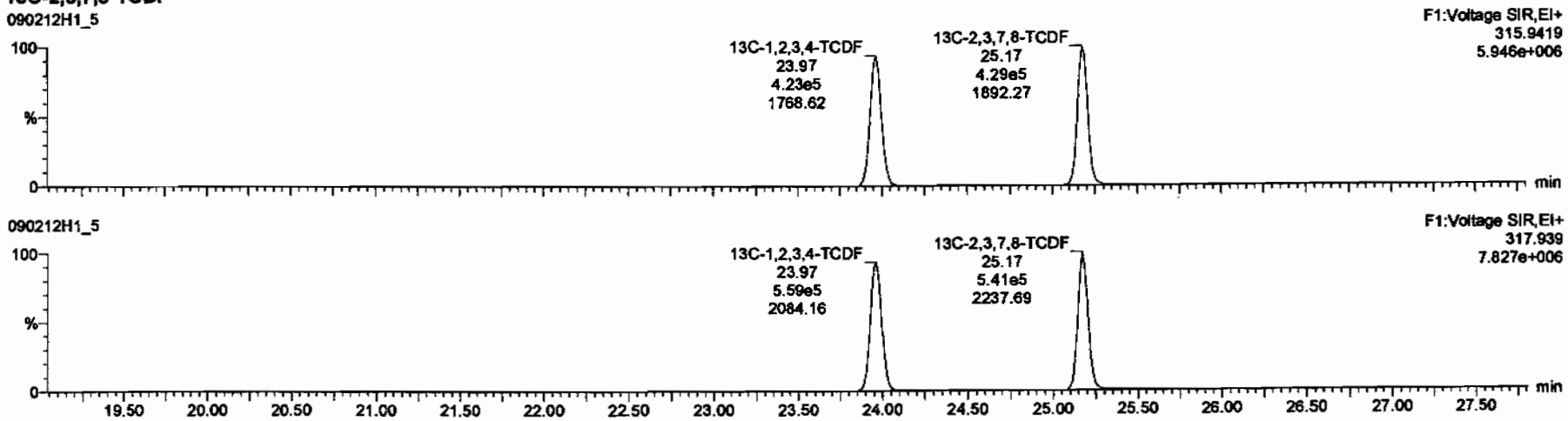

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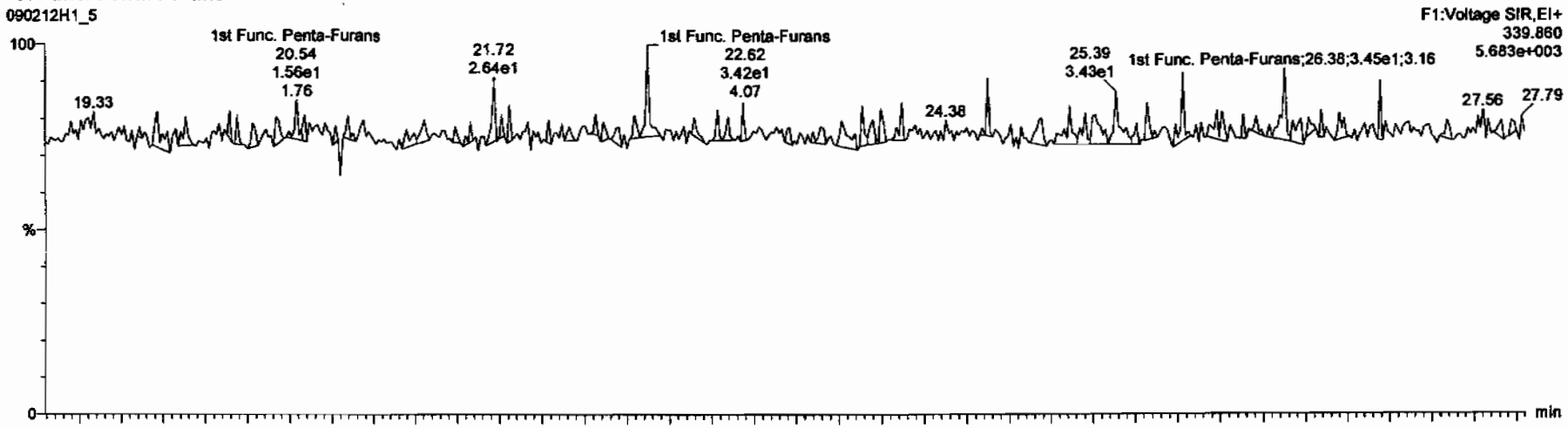

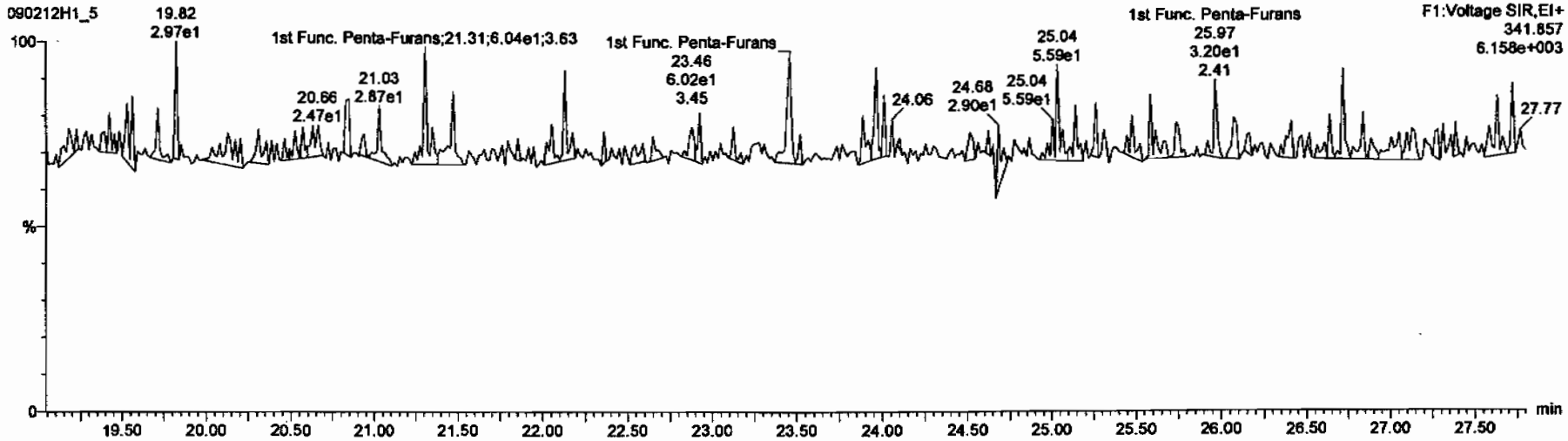

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1,2,3,7,8-PeCDF

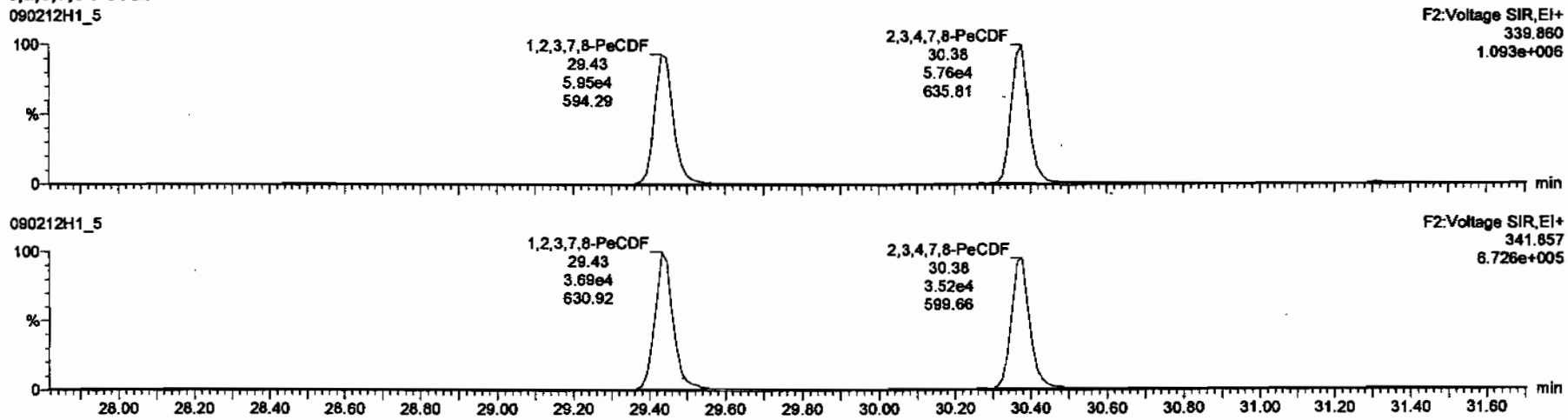

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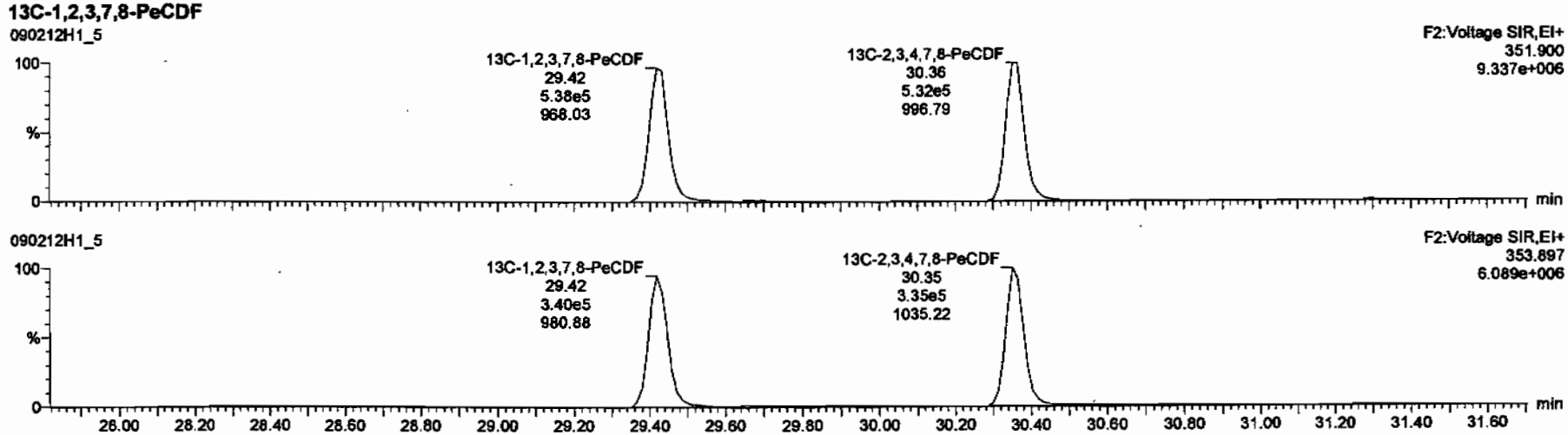

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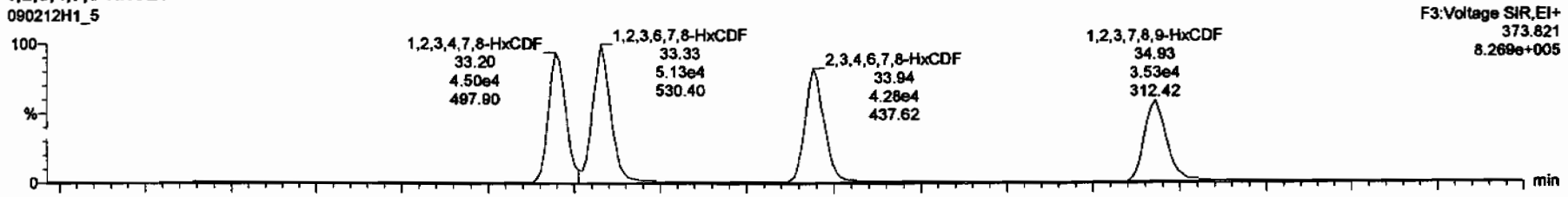

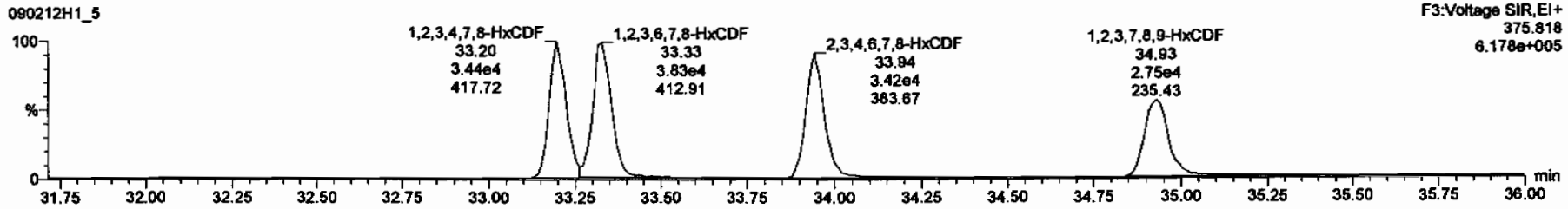

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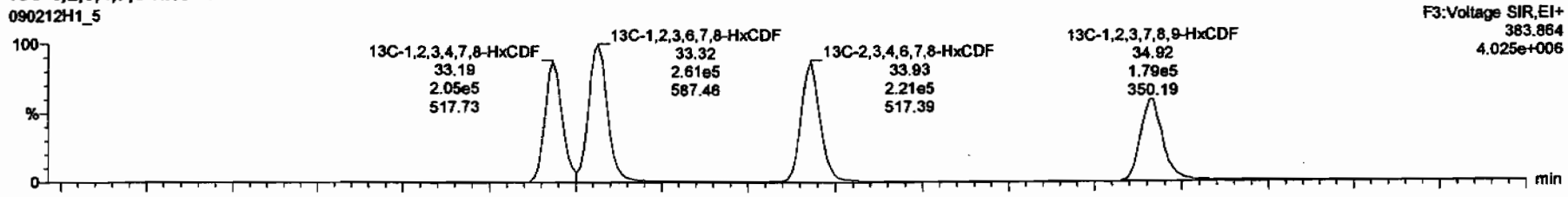

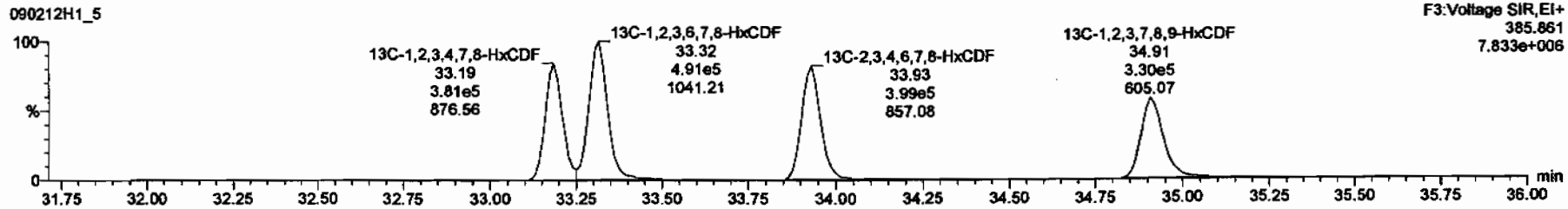

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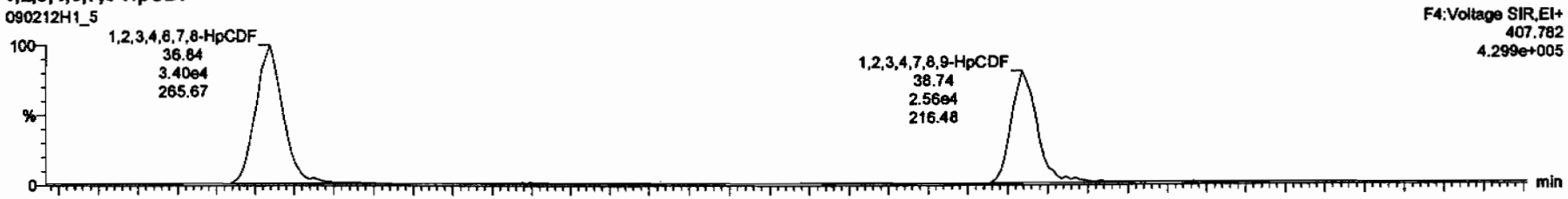

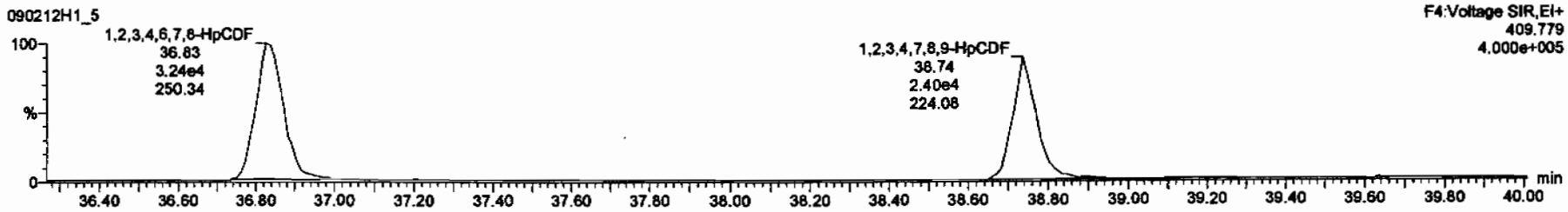

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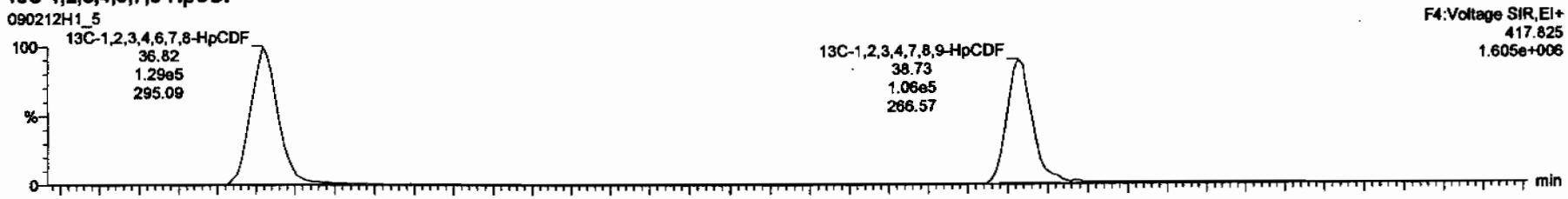

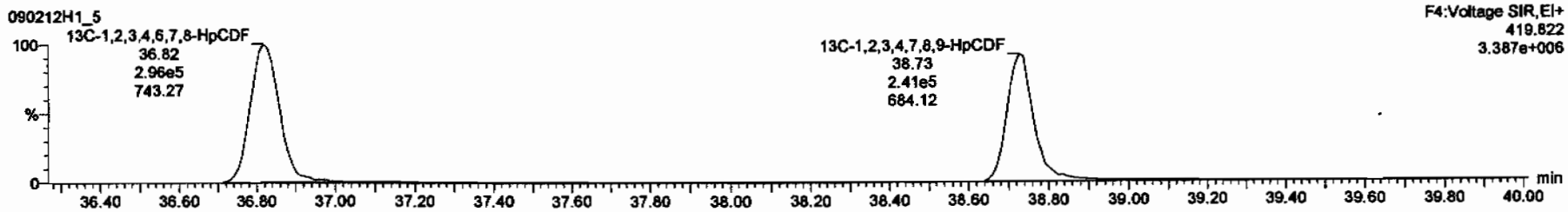

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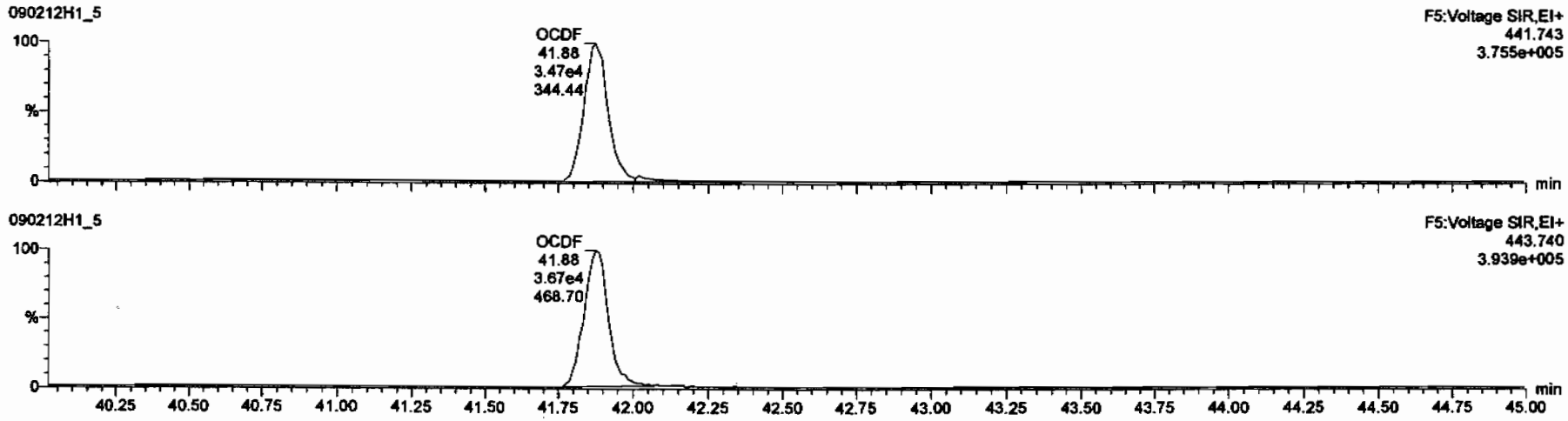

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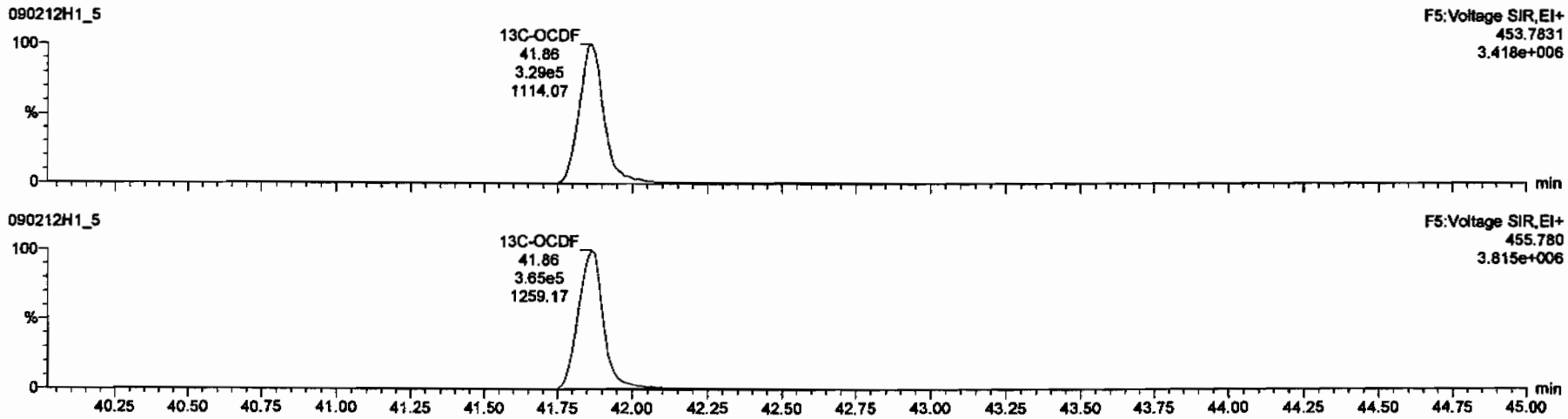

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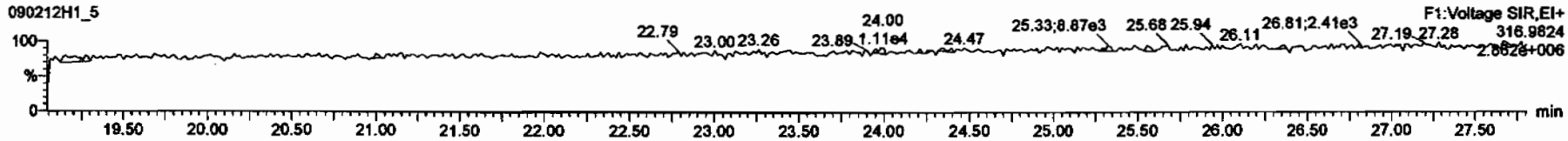

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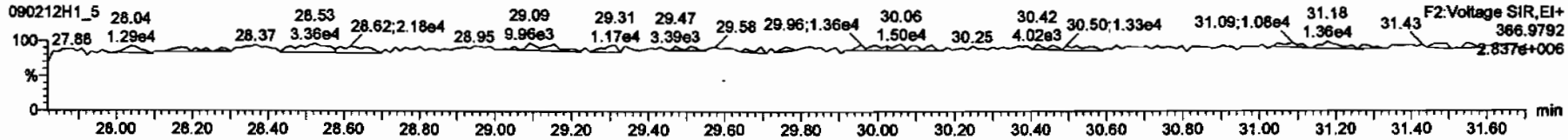

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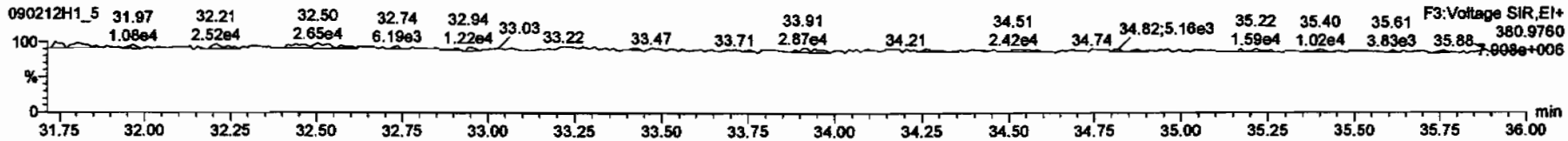

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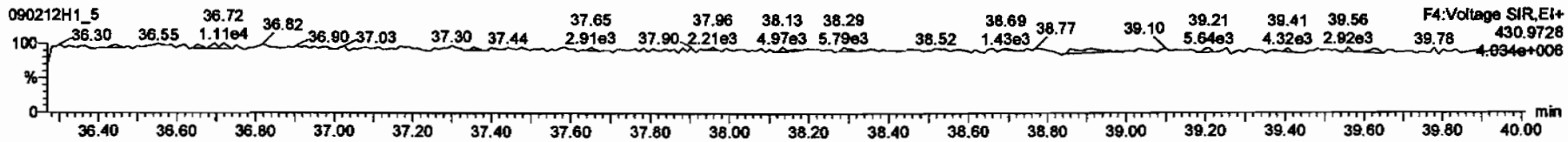

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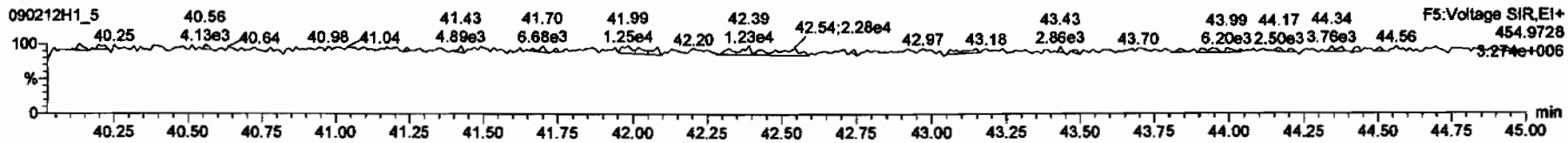

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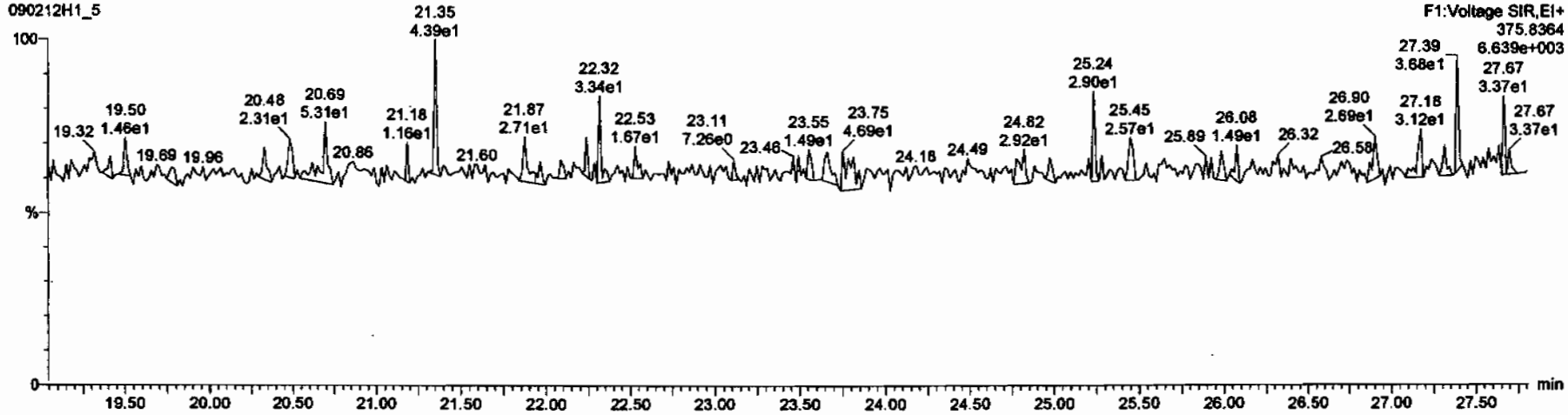

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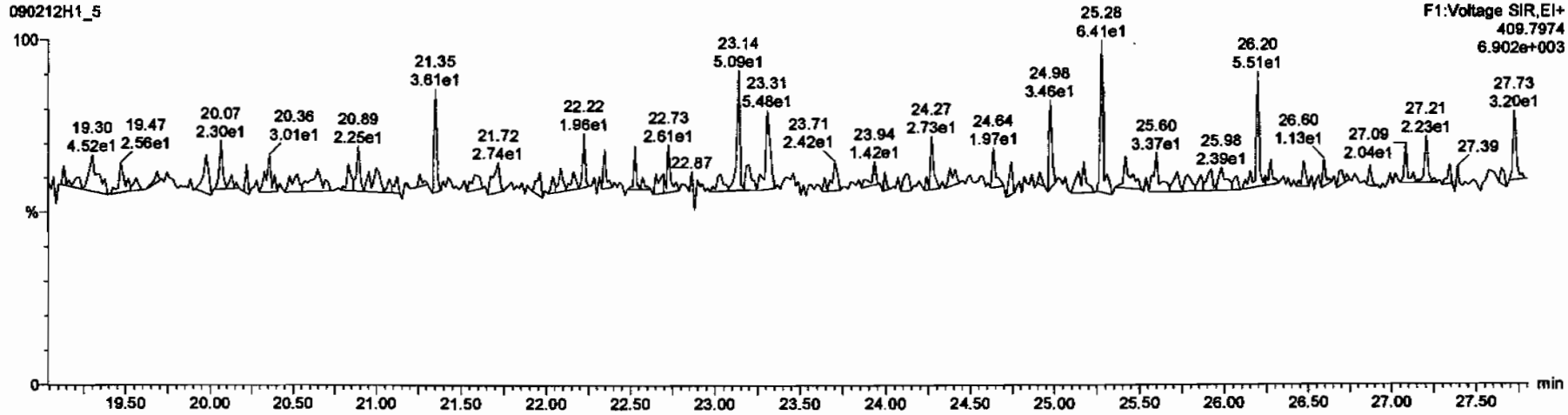

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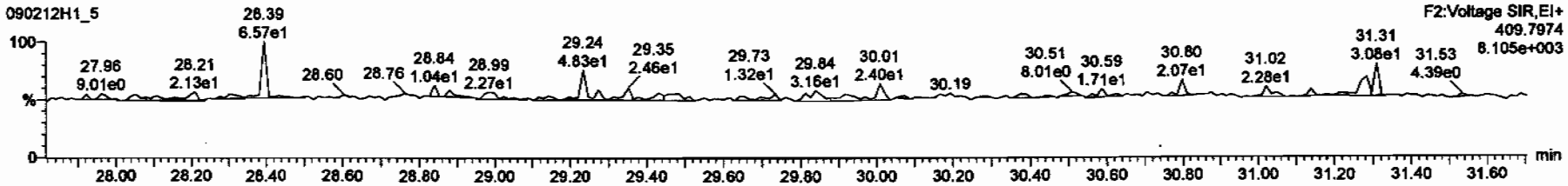

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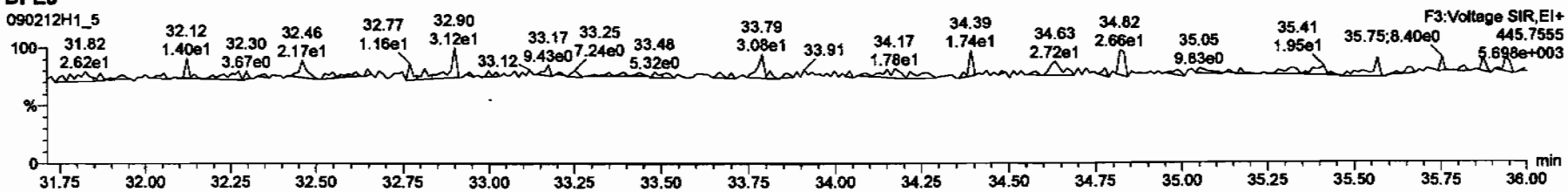

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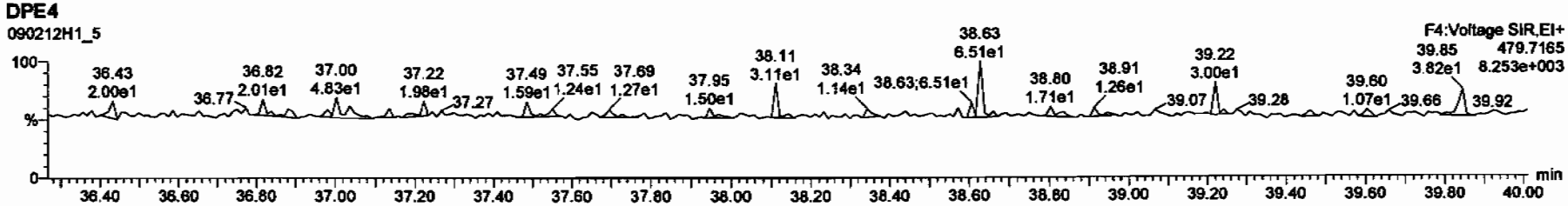

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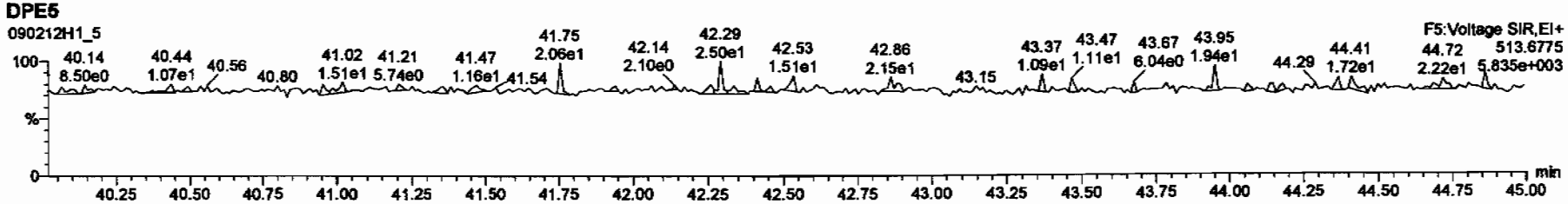

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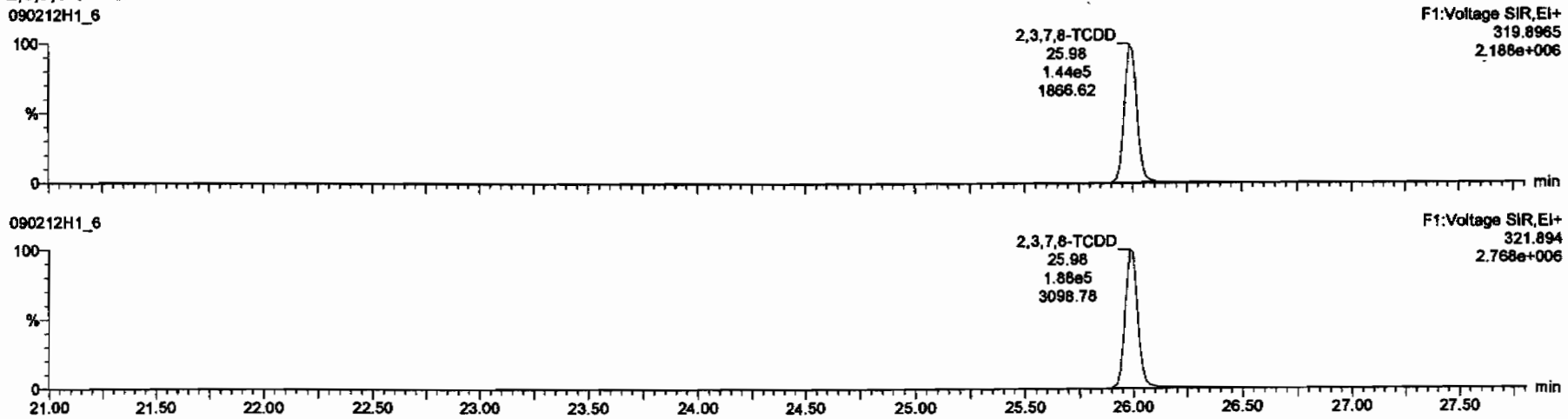

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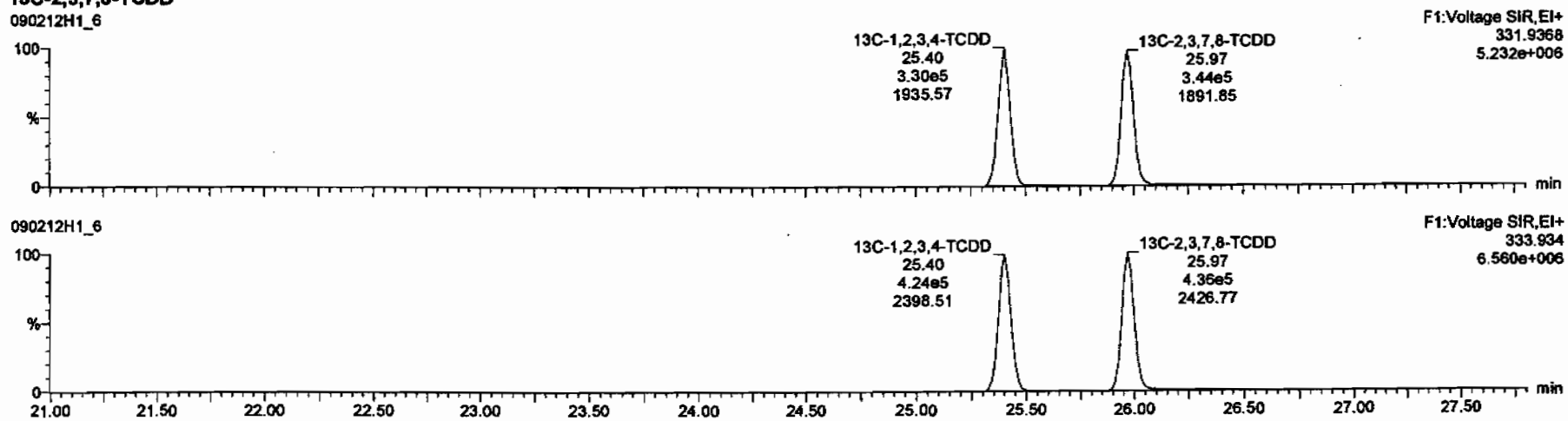

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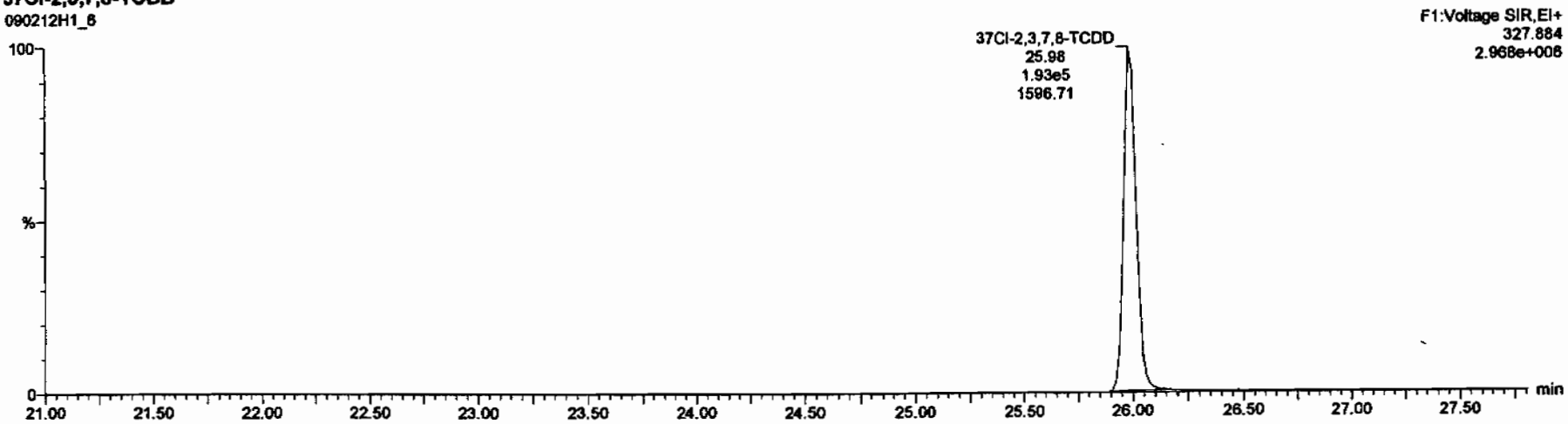

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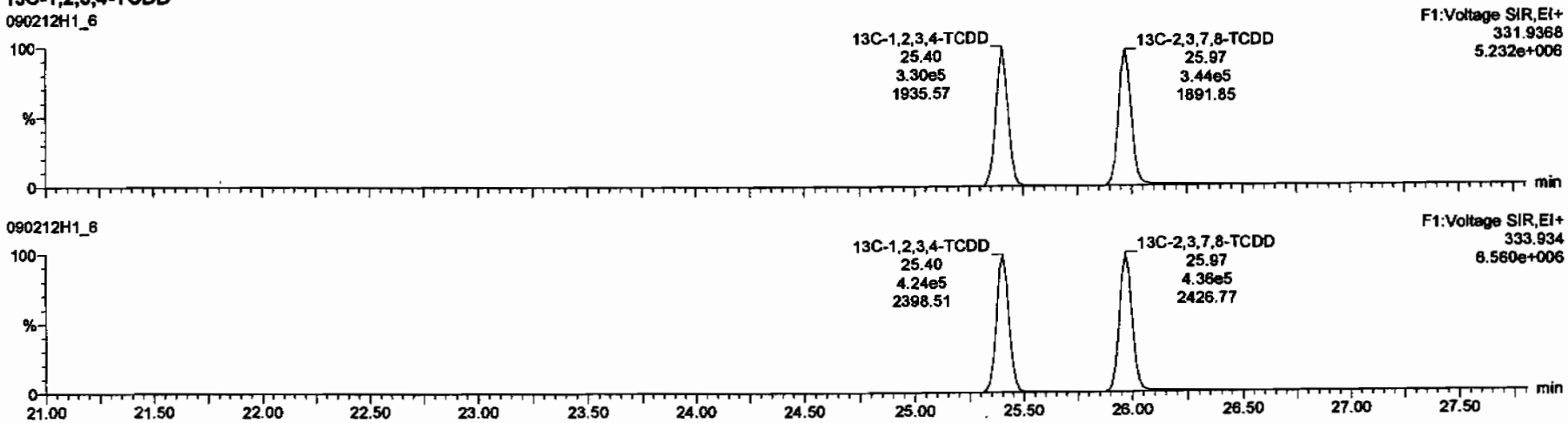

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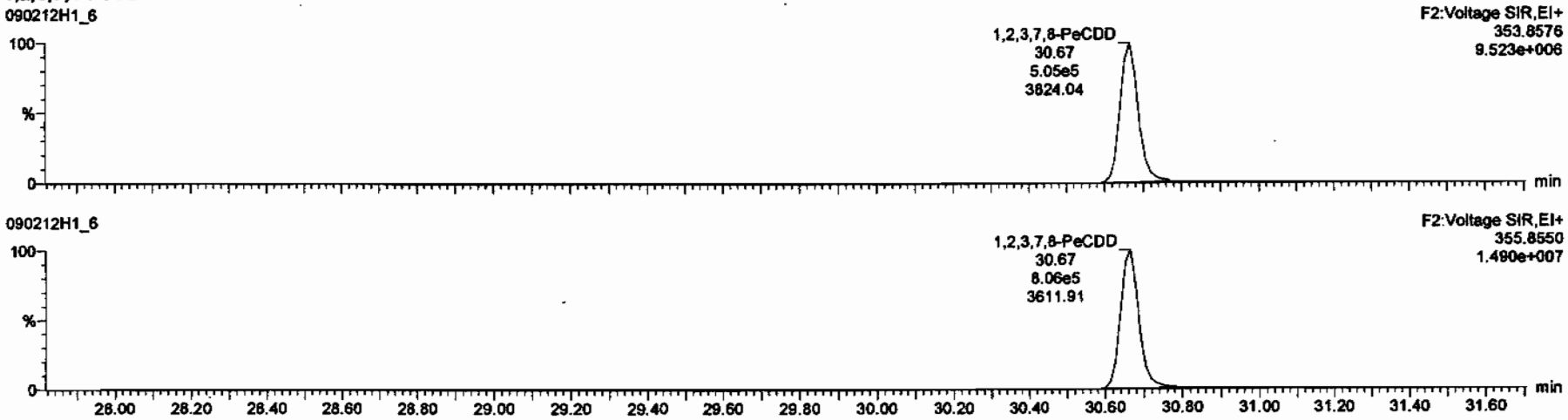

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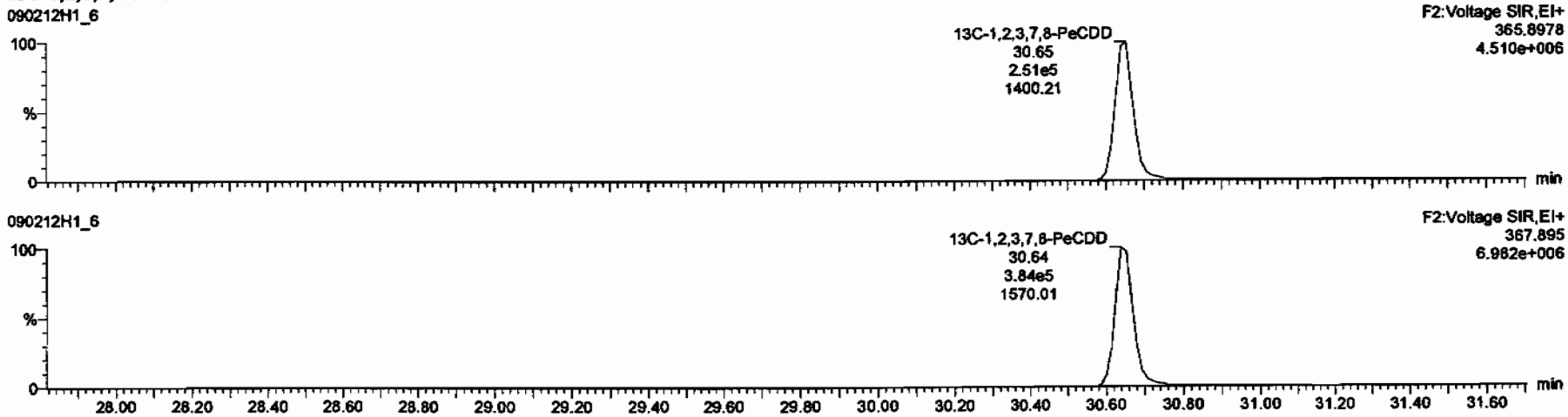

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1,2,3,4,7,8-HxCDD

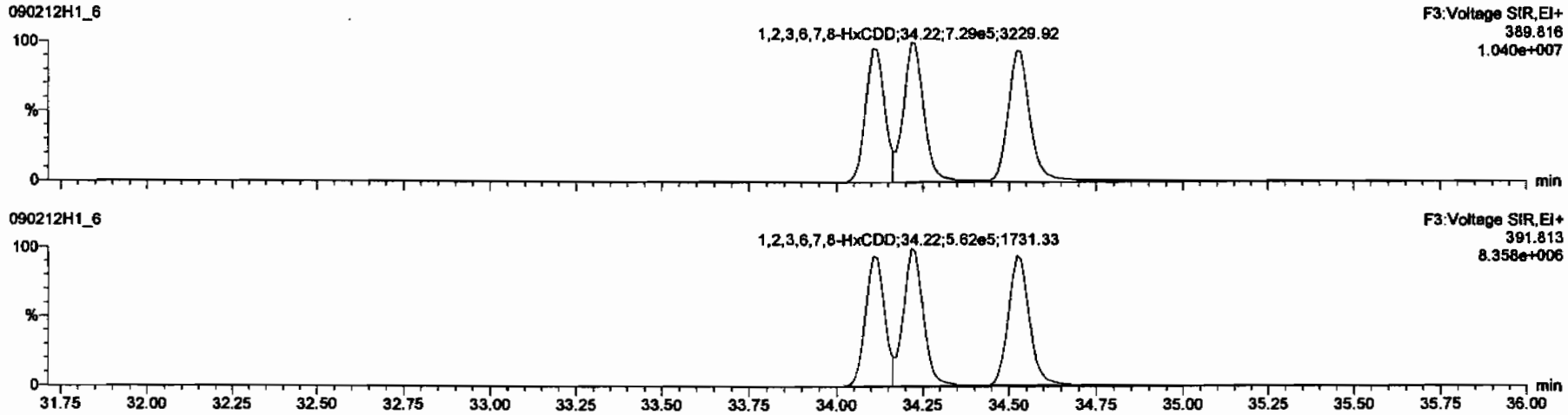

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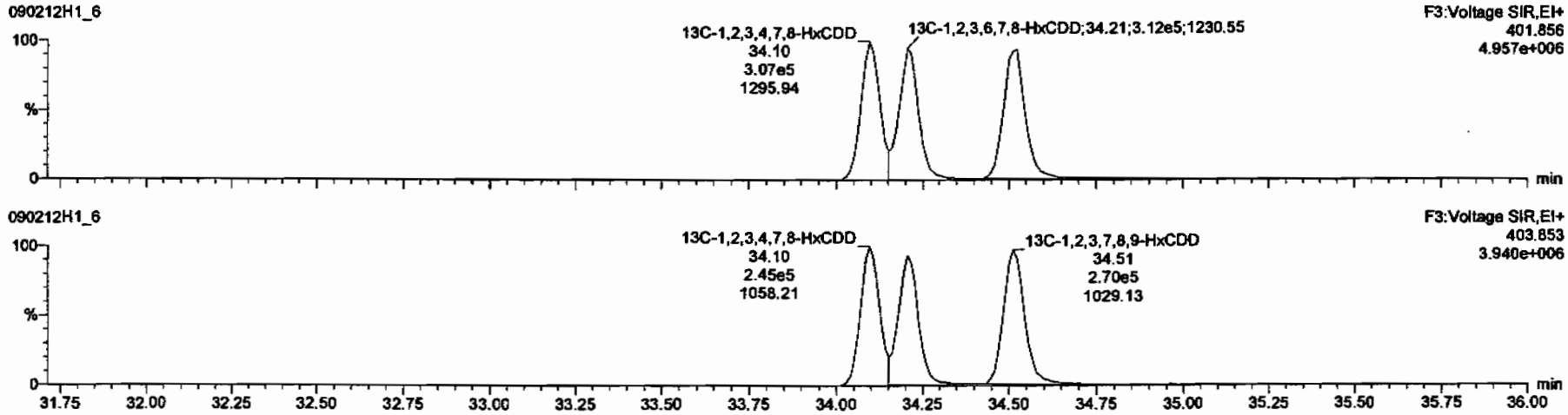

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1,2,3,4,6,7,8-HpCDD

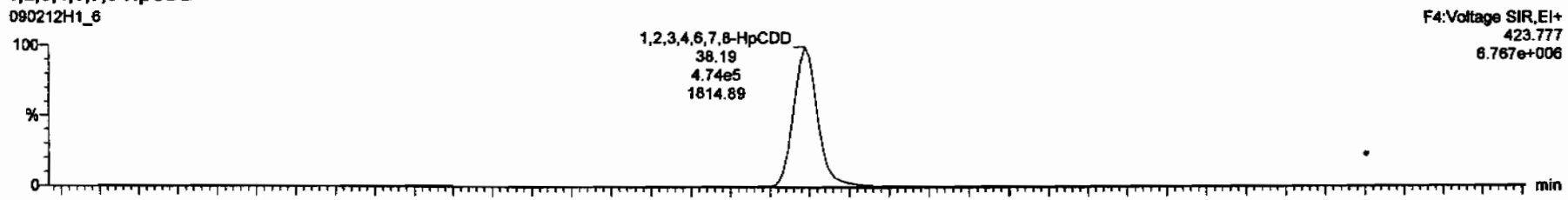

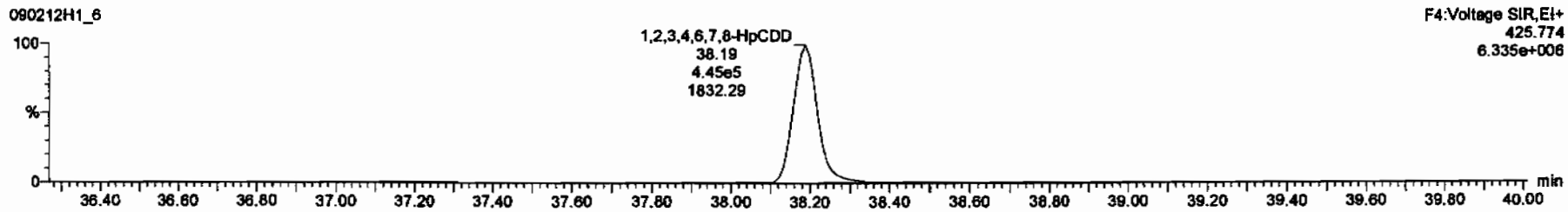

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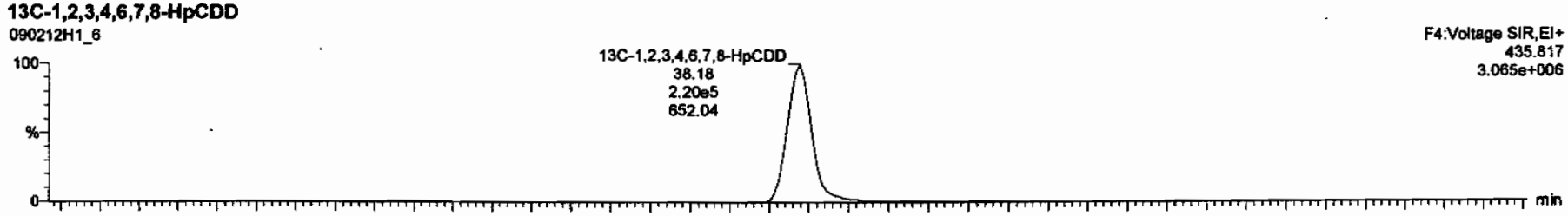

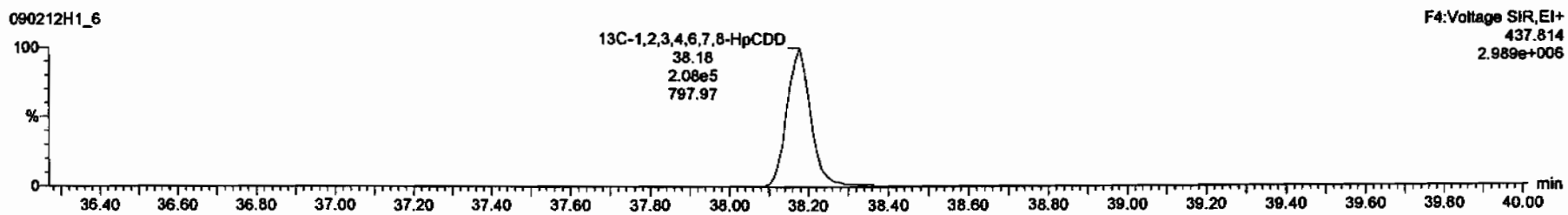

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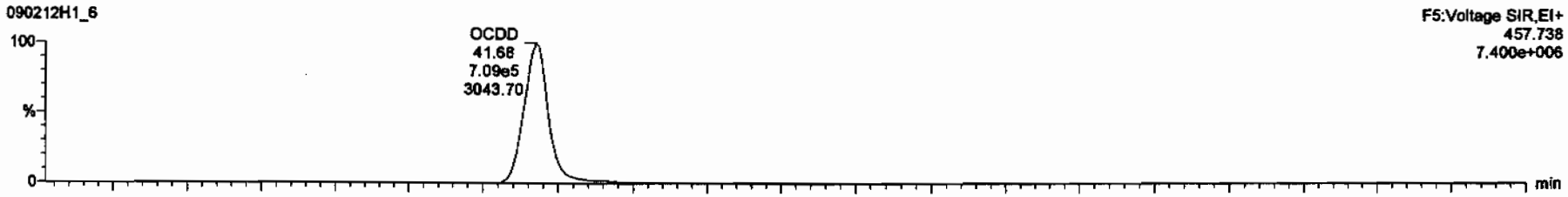

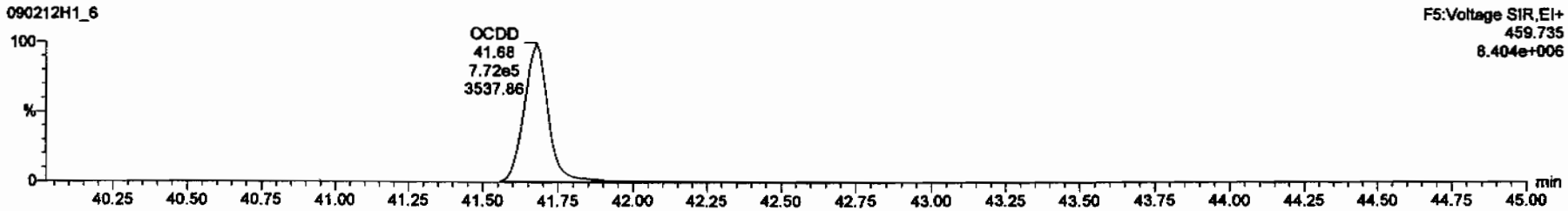

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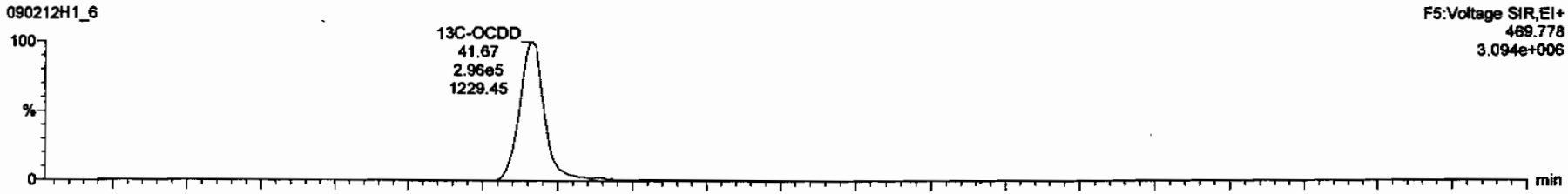

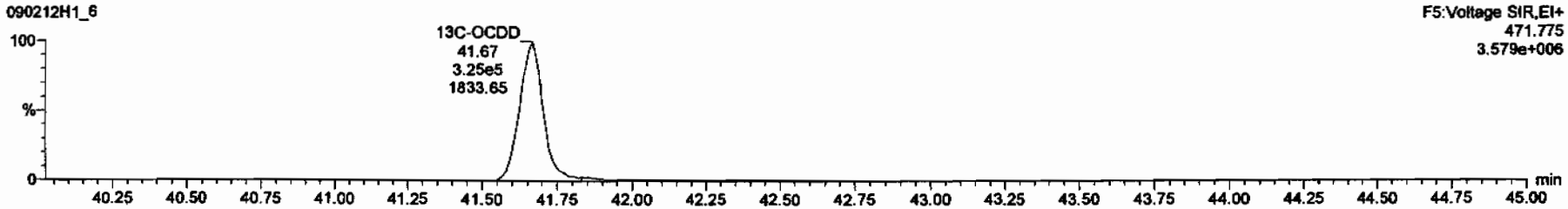

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2,3,7,8-TCDF

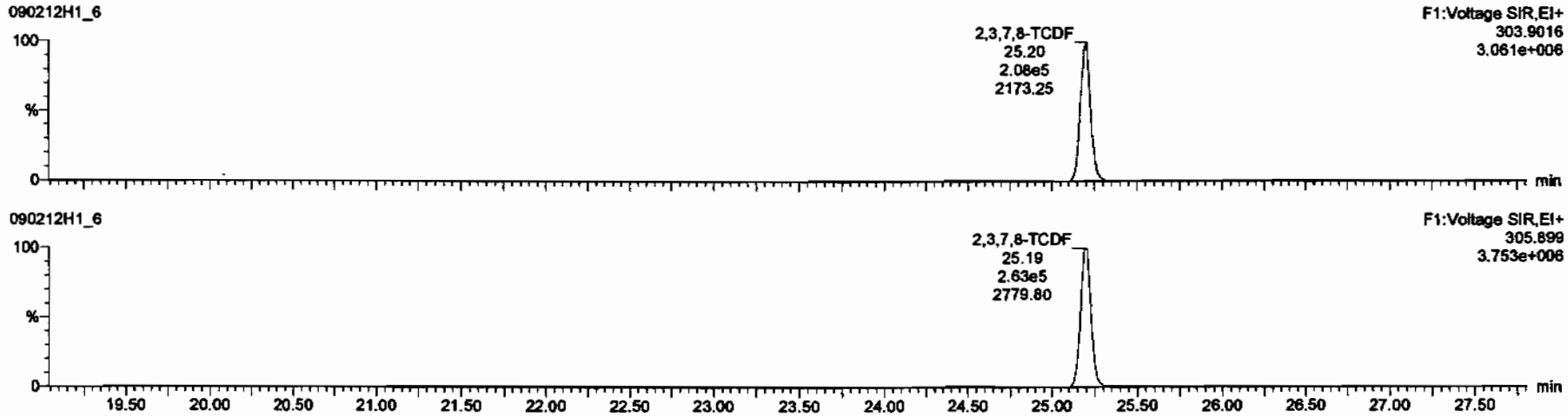

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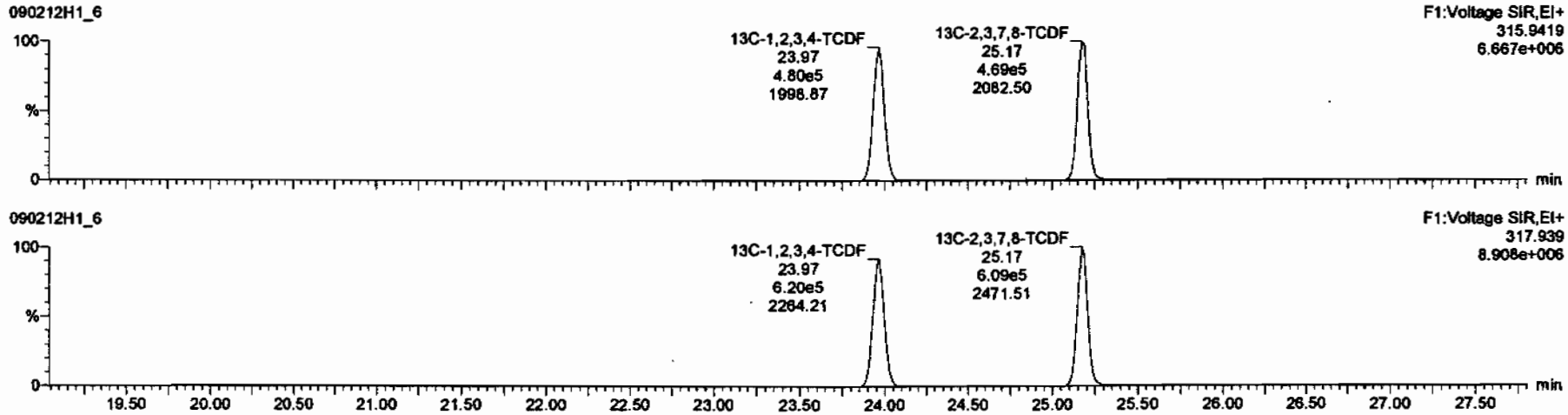

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1st Func. Penta-Furans

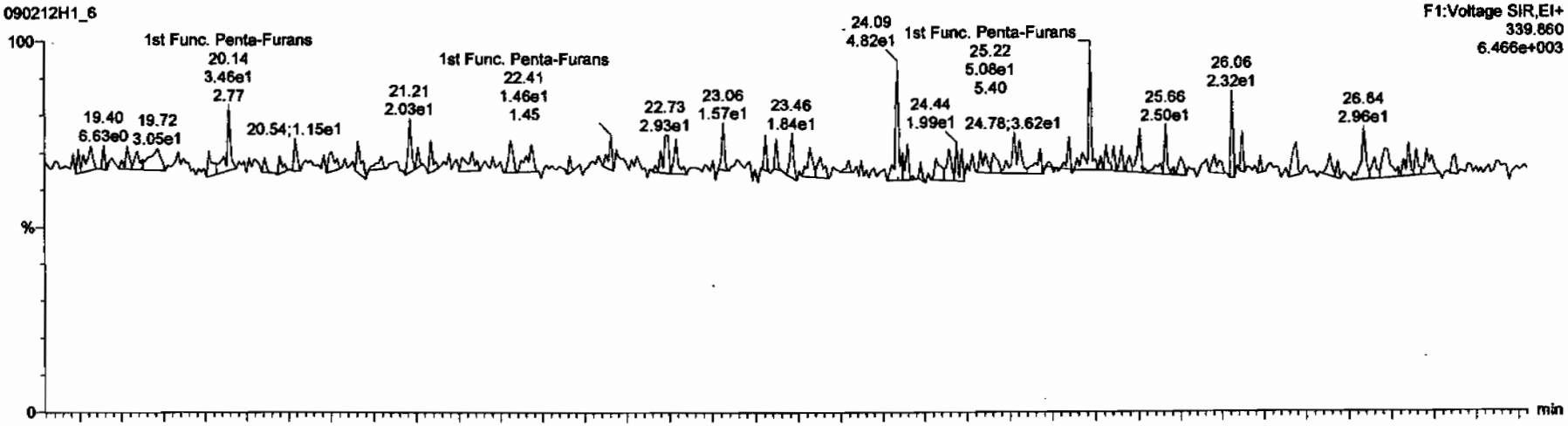

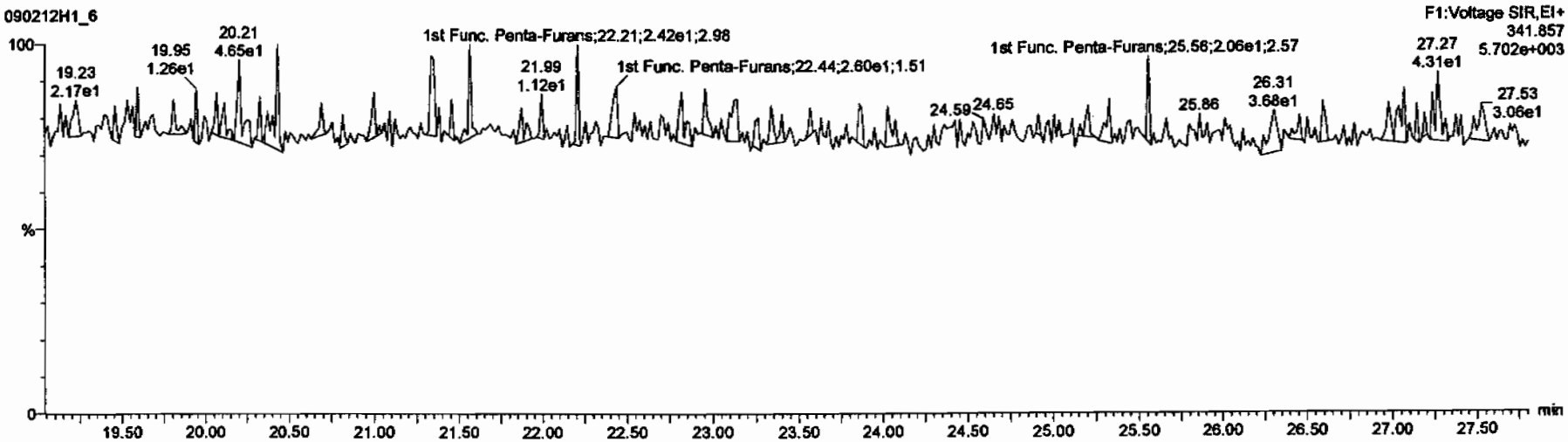

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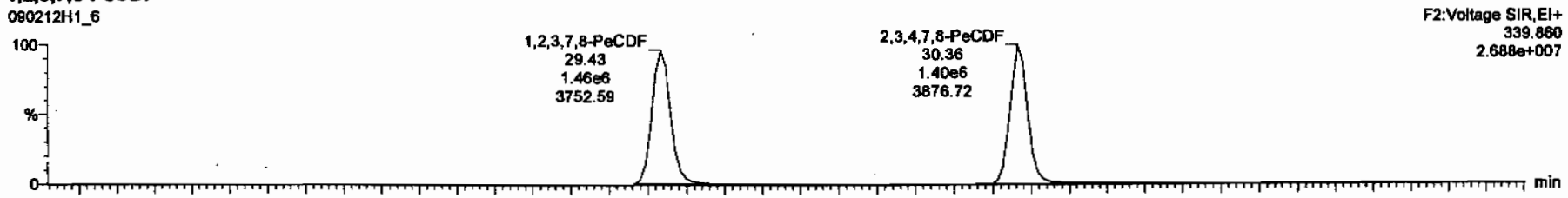

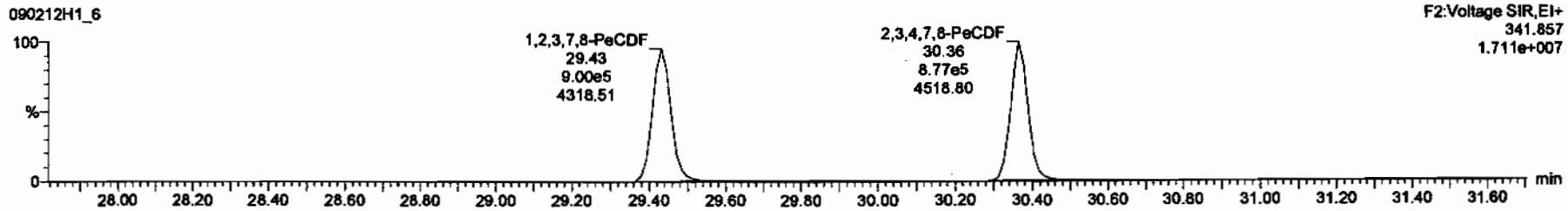

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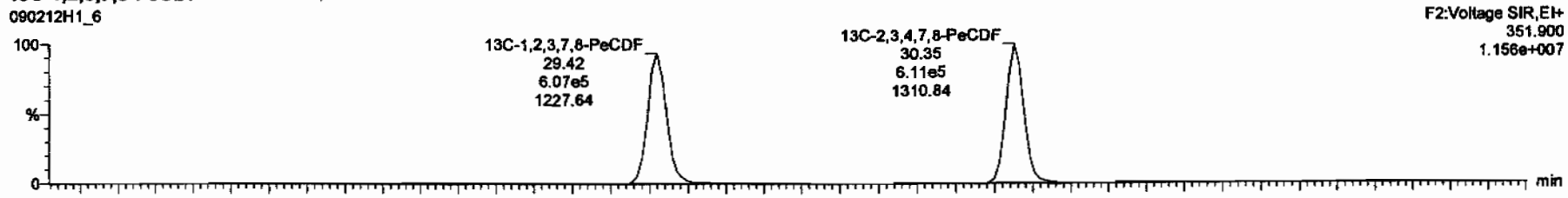

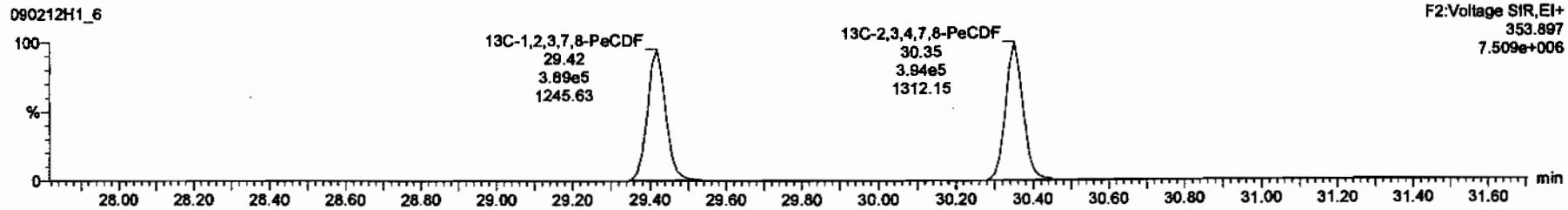

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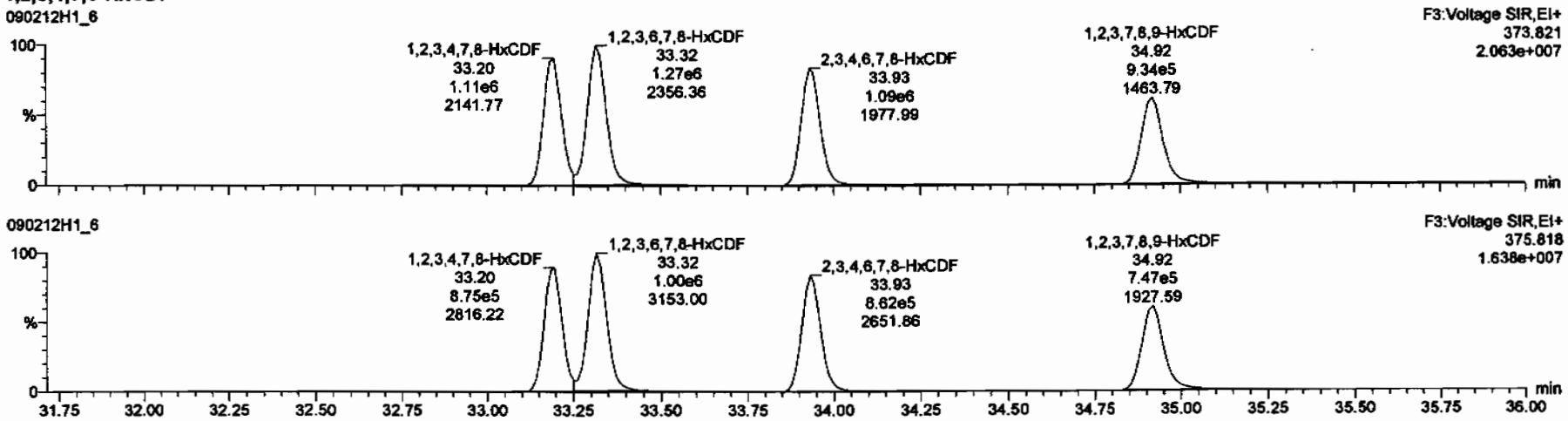

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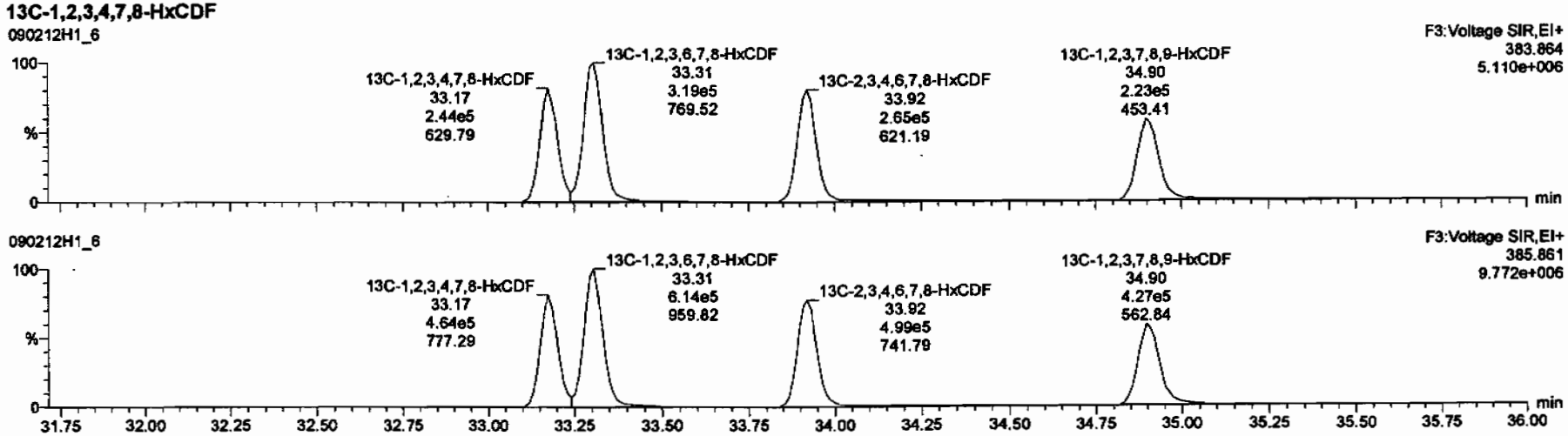

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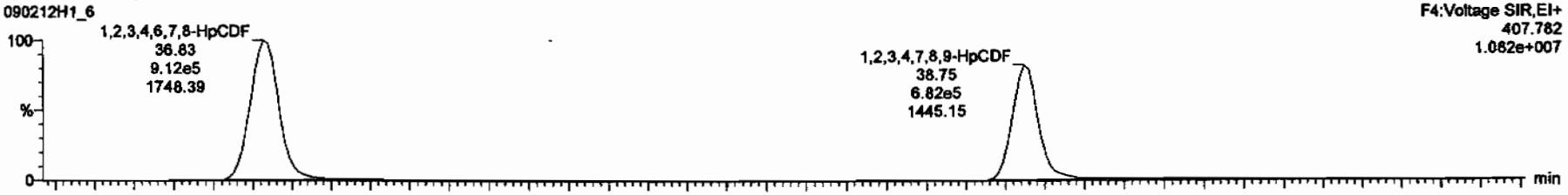

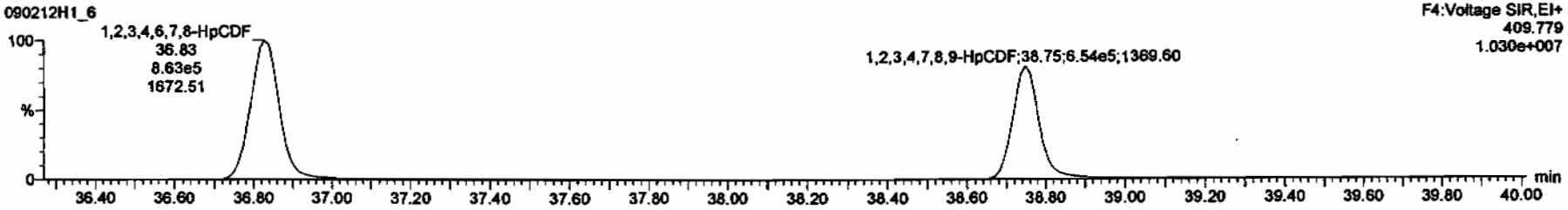

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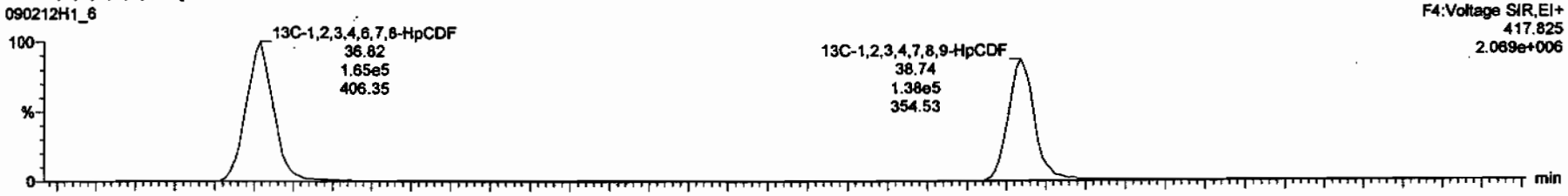

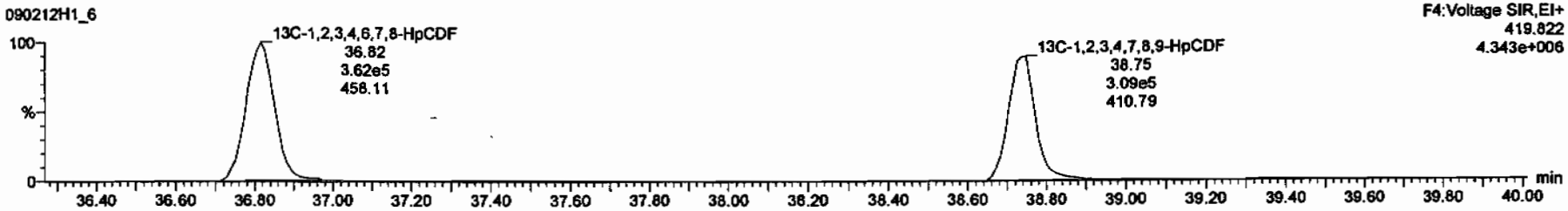

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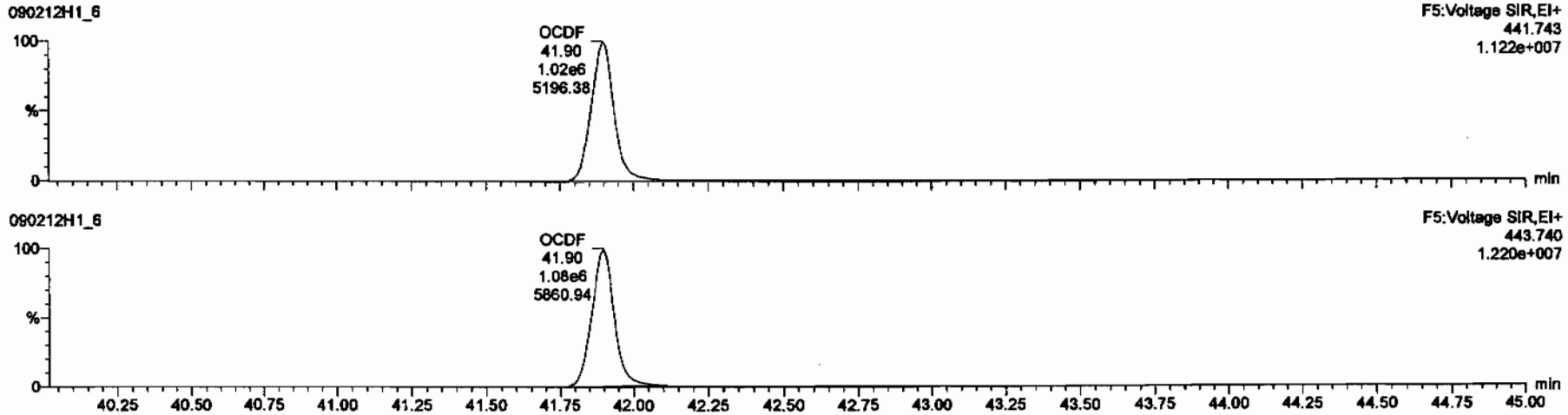

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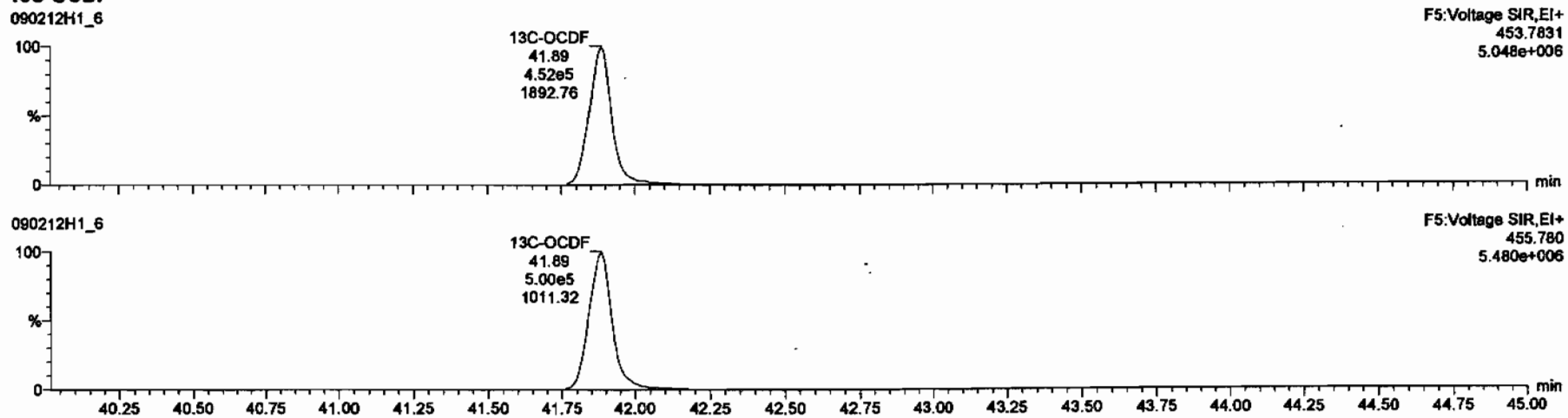

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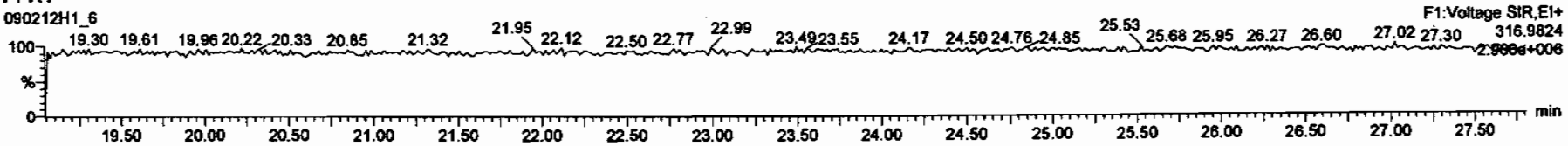

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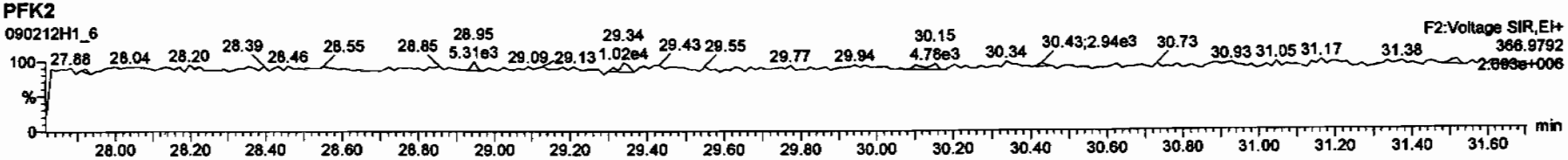

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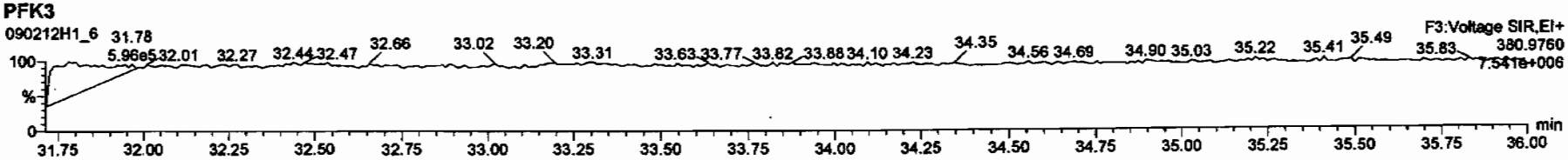

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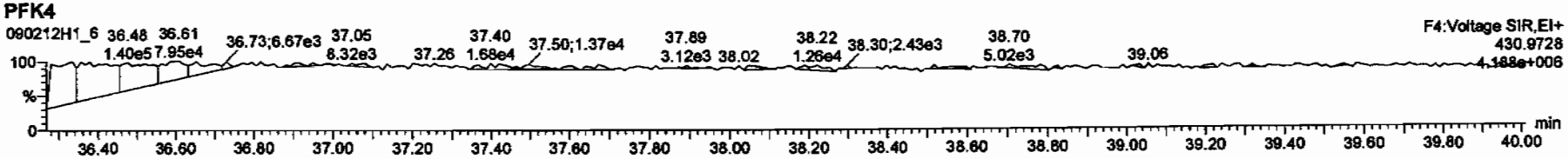

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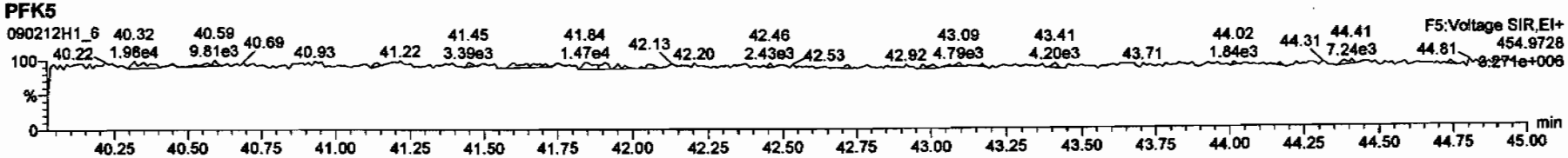

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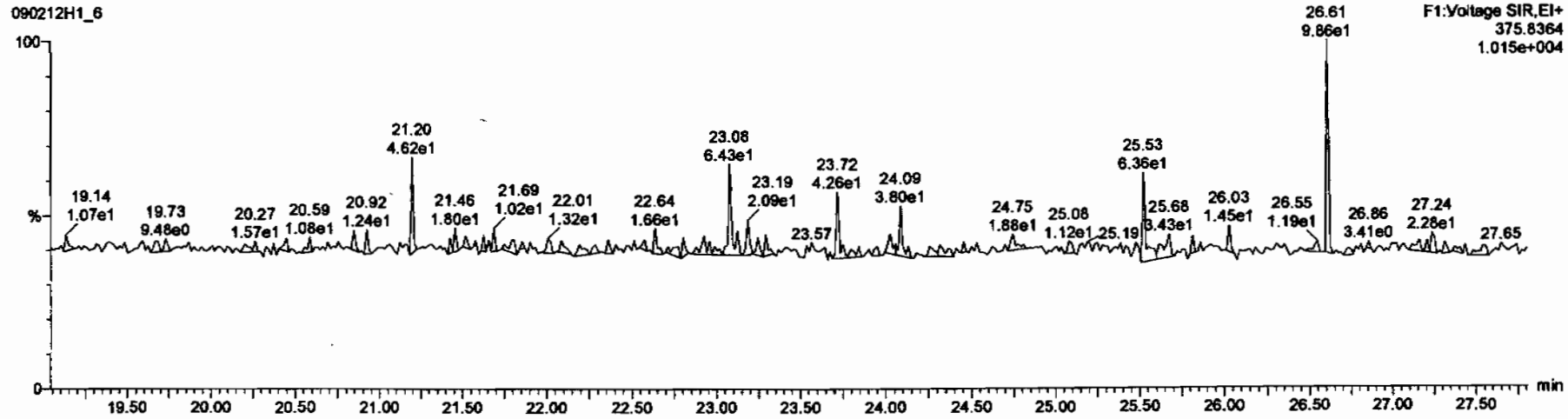

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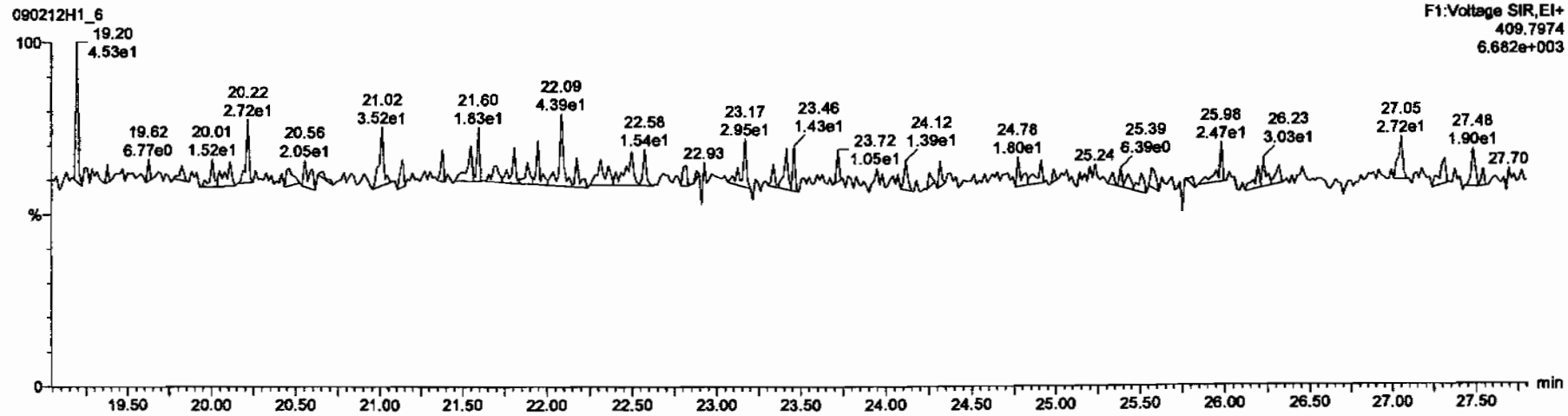

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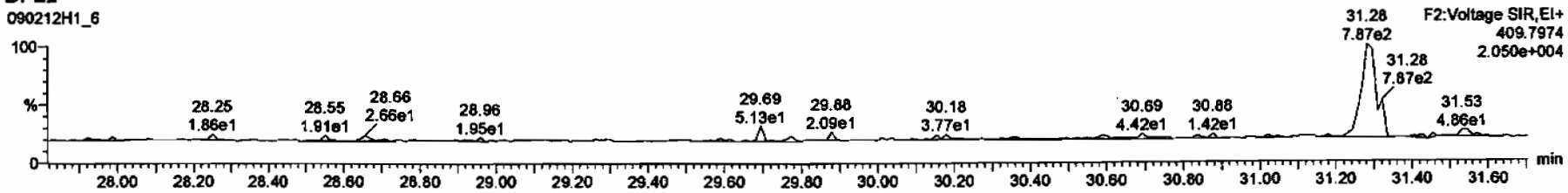

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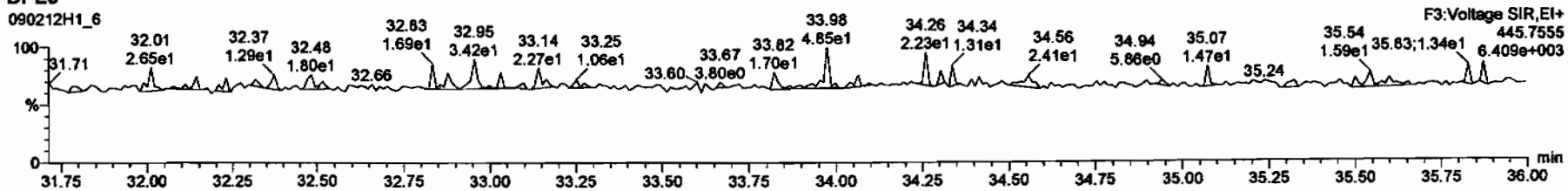

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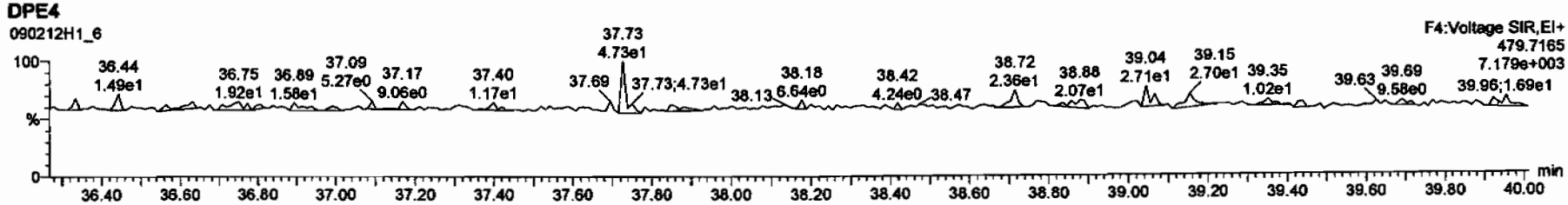

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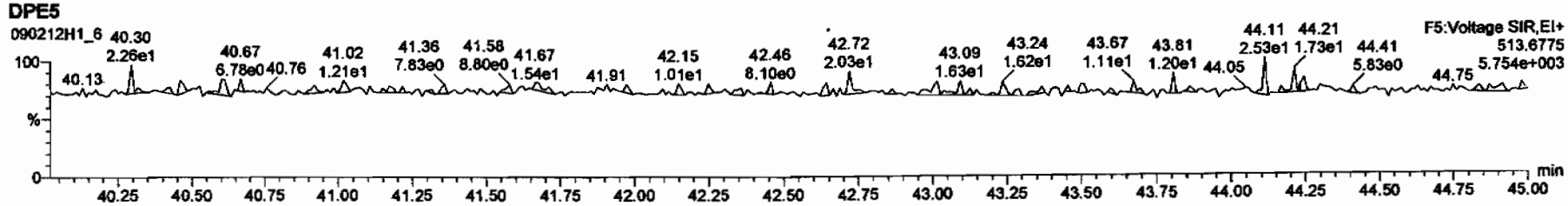

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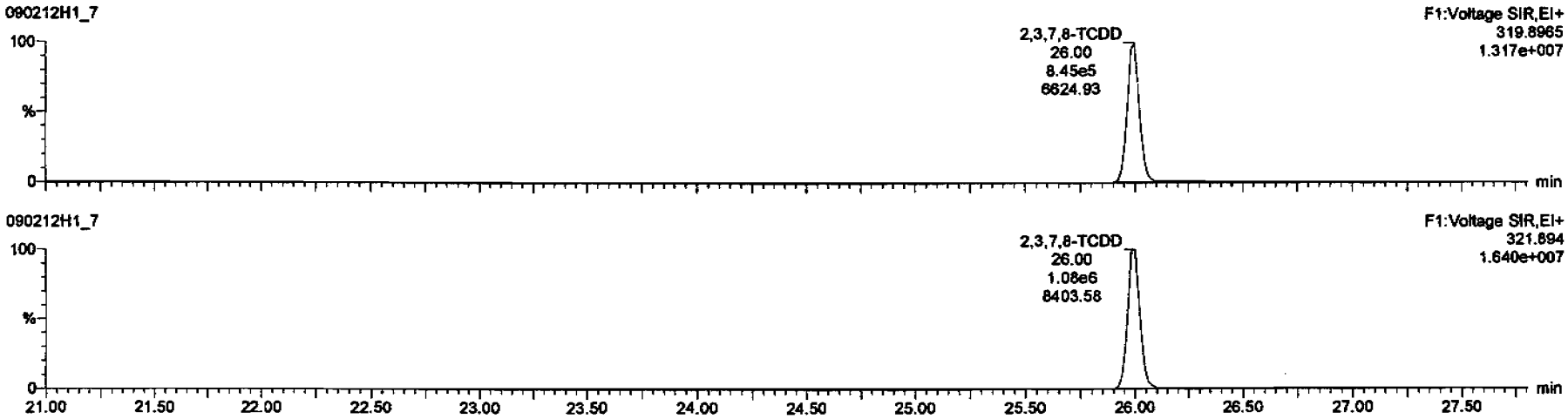

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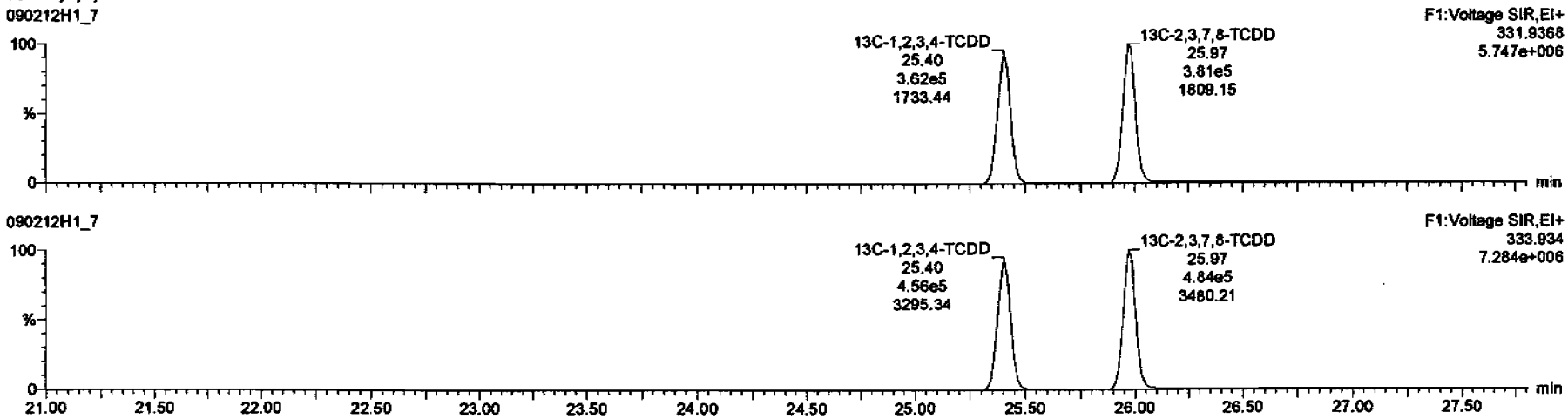

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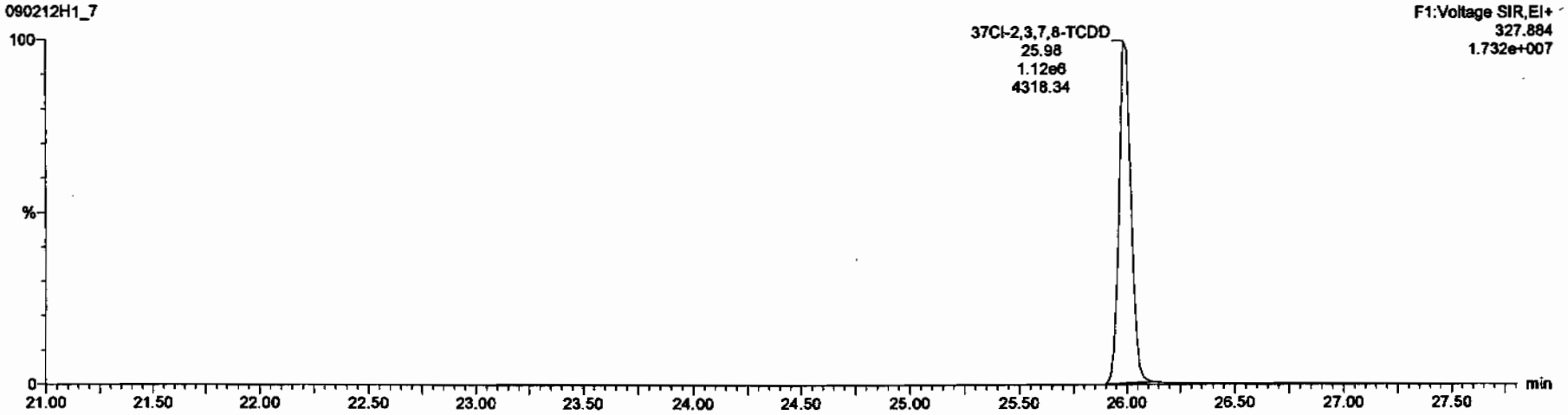

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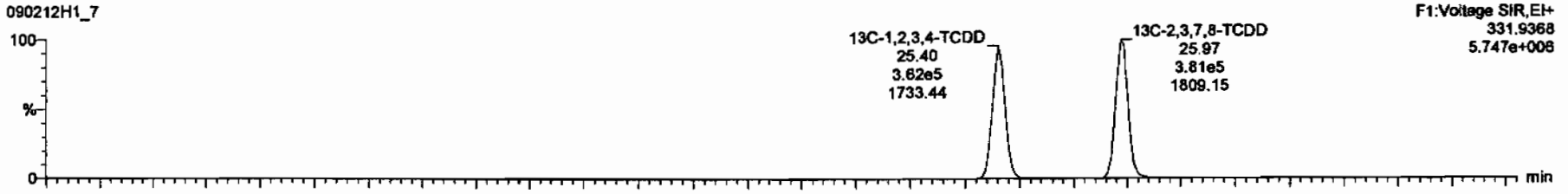

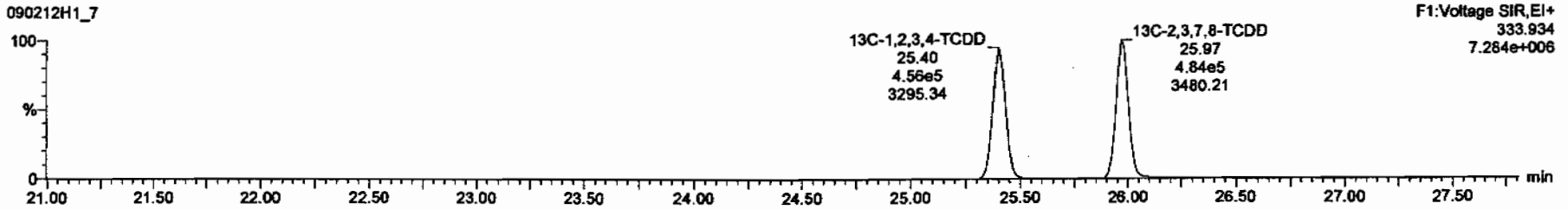

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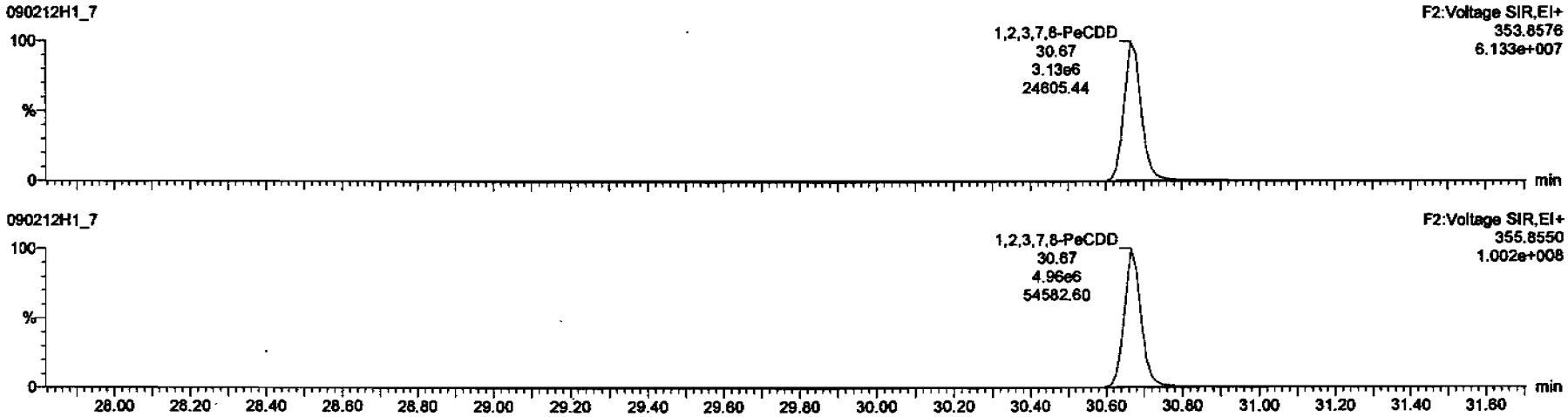

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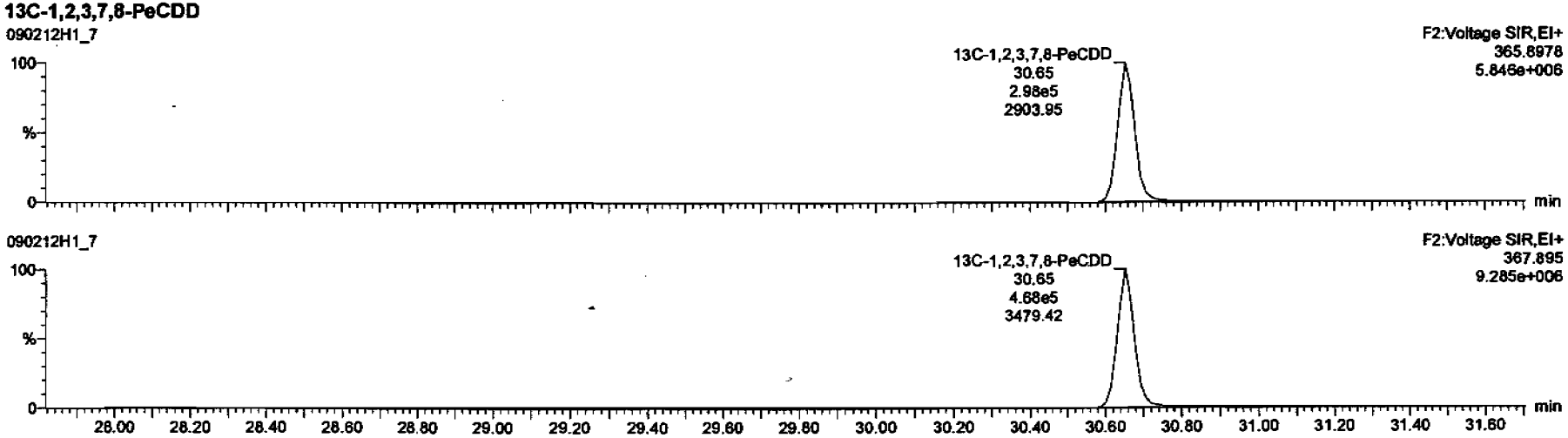

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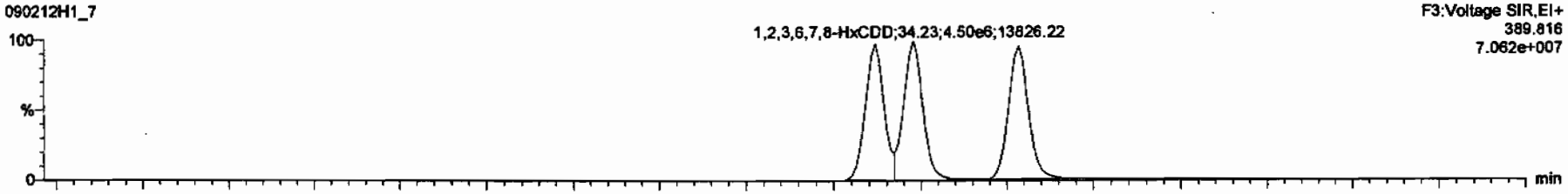

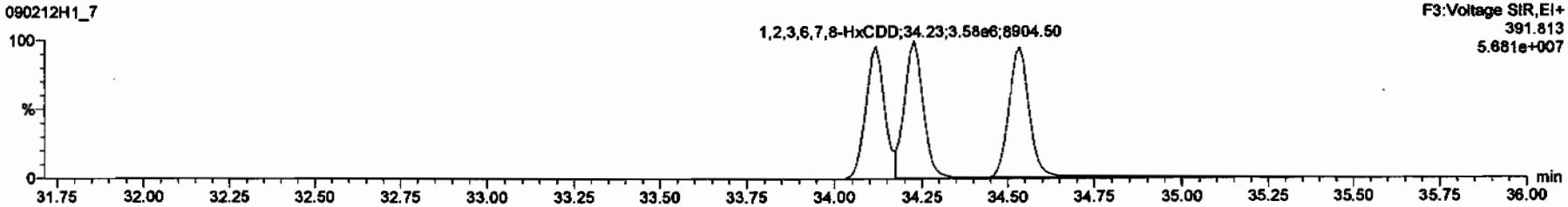

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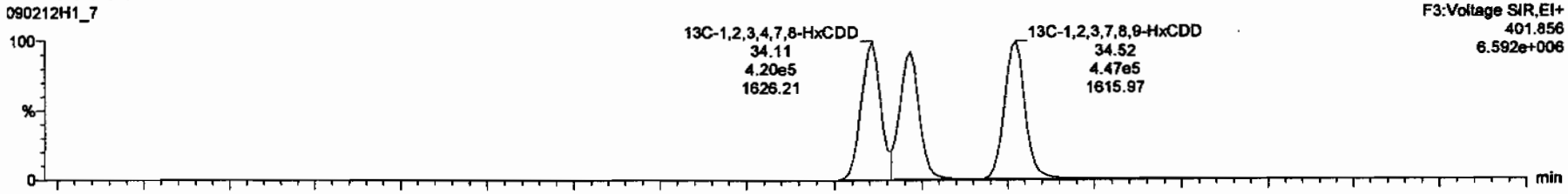

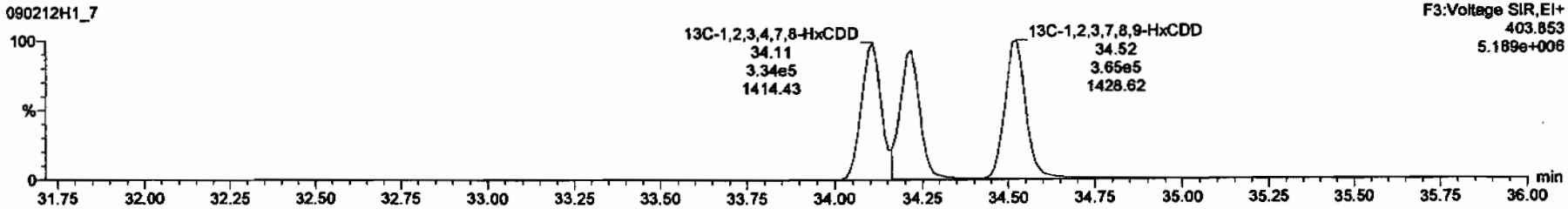

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1,2,3,4,6,7,8-HpCDD

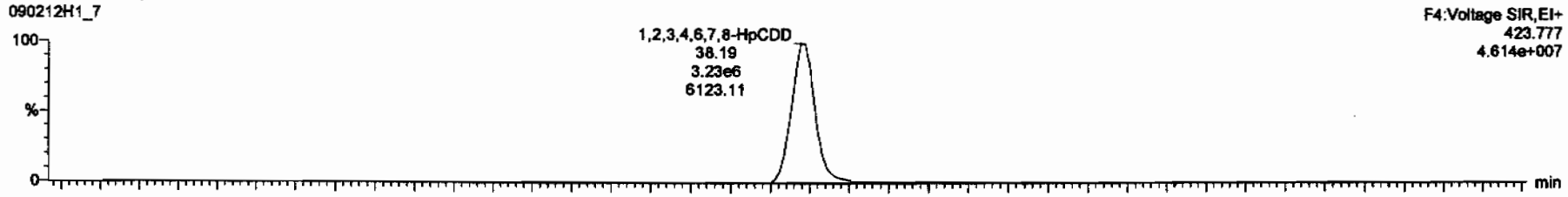

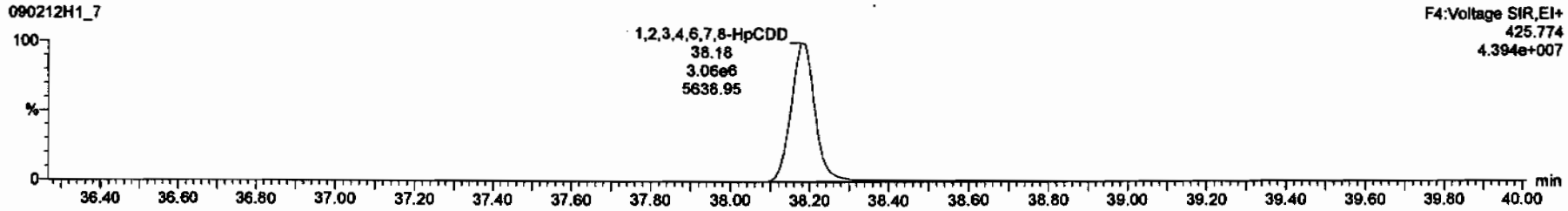

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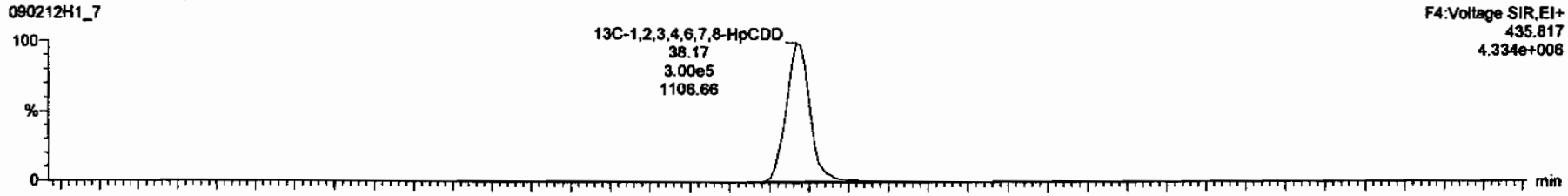

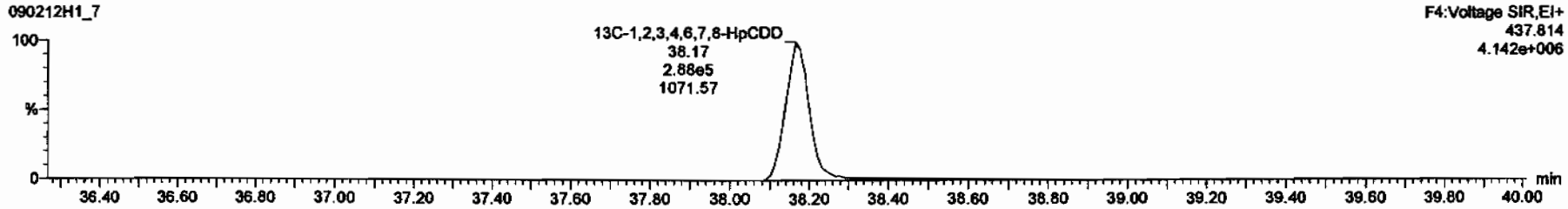

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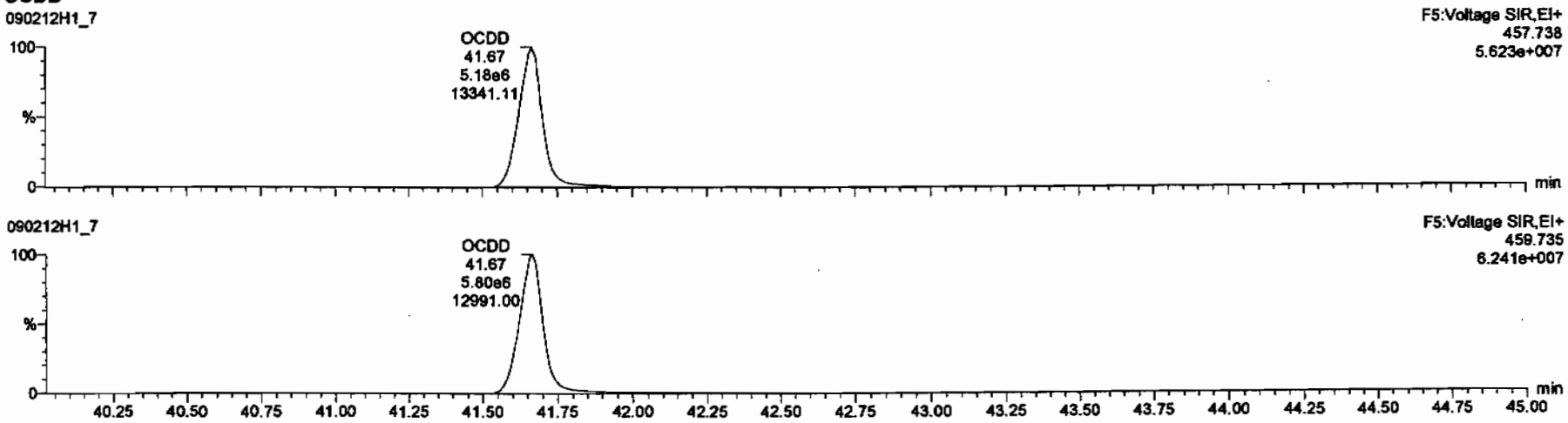

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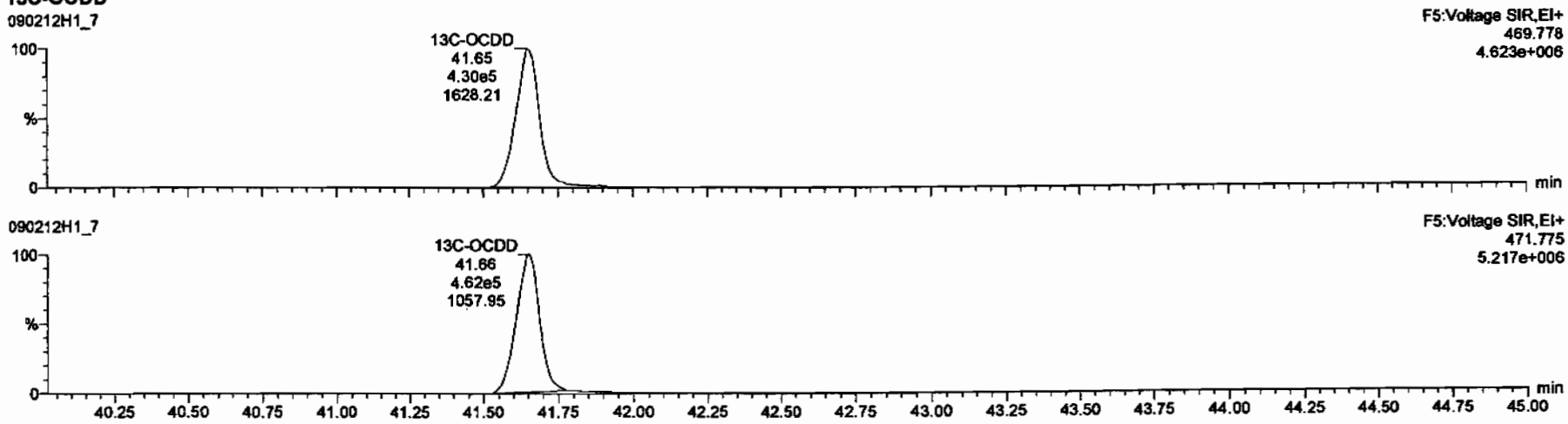

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Name: 090212H1_7, Date: 12-Feb-2009, Time: 16:07:03, ID: ST090212H1-6 1613 CS5 080917K, Description: 1613 CS5 080917K

2,3,7,8-TCDF

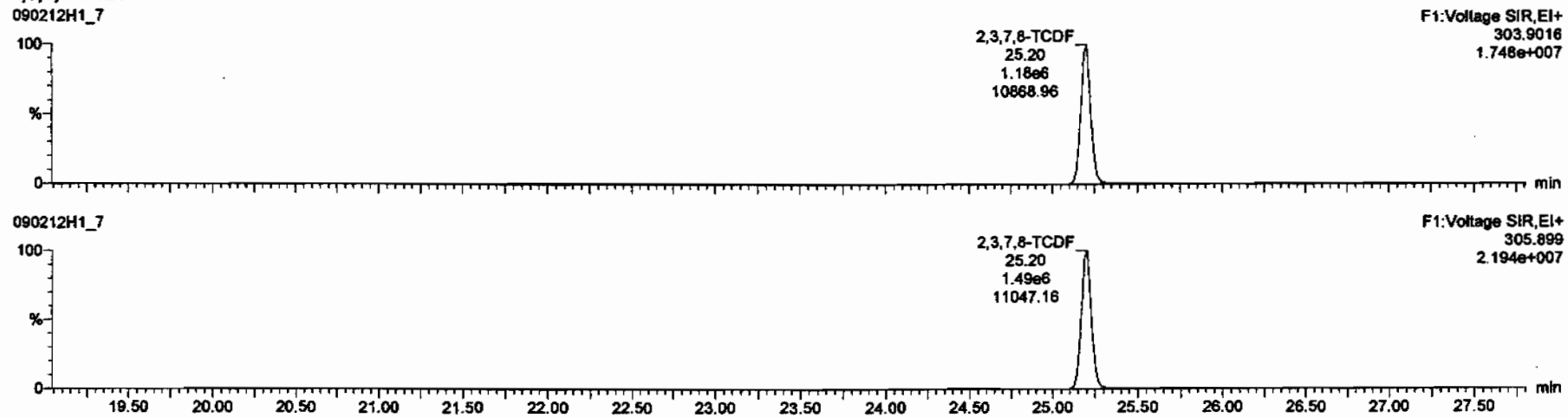

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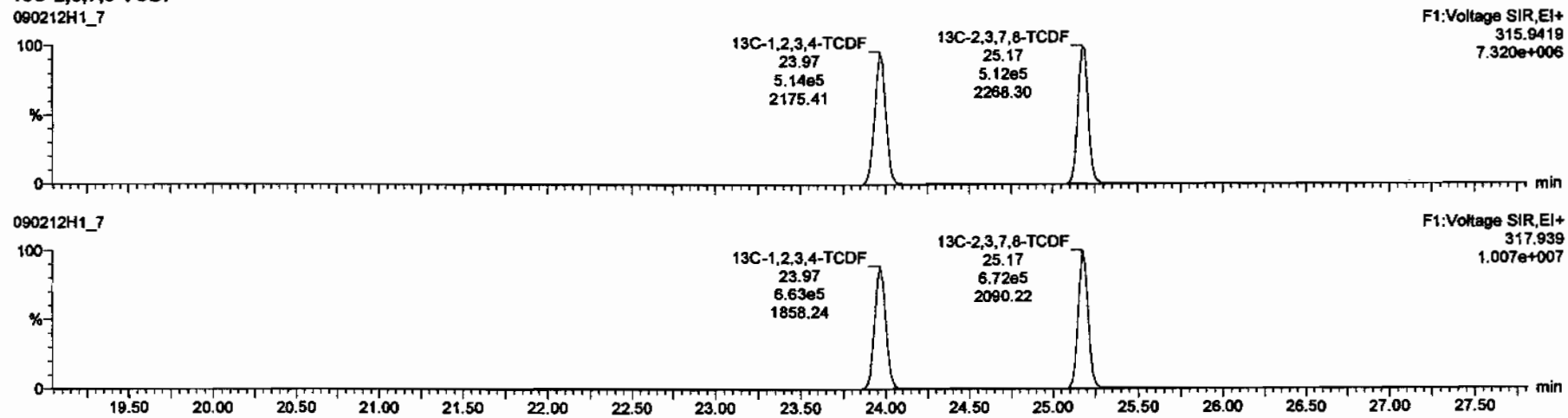

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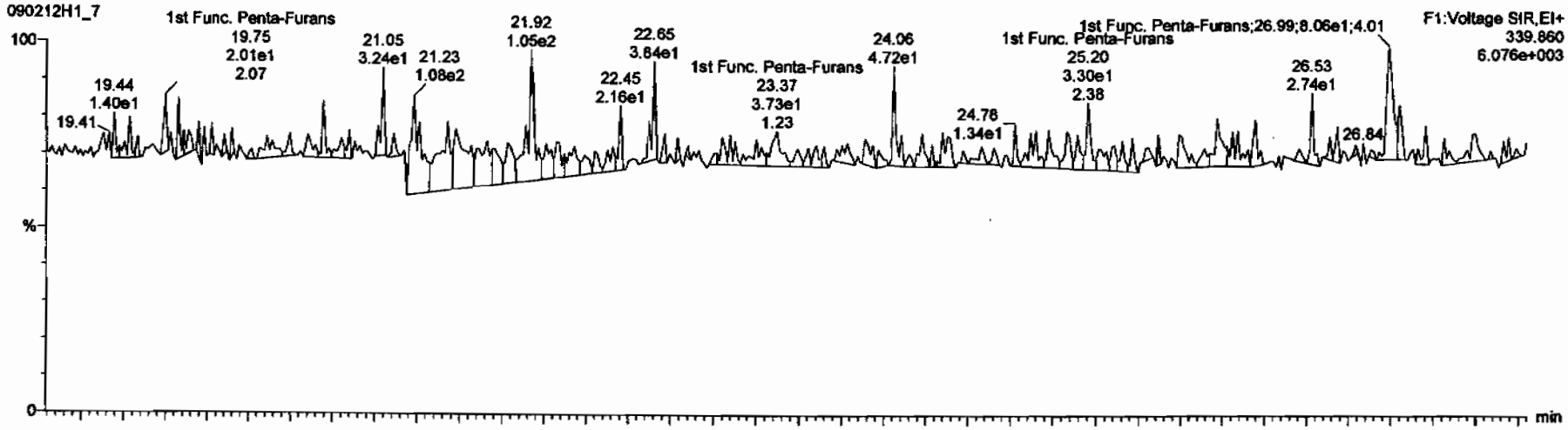

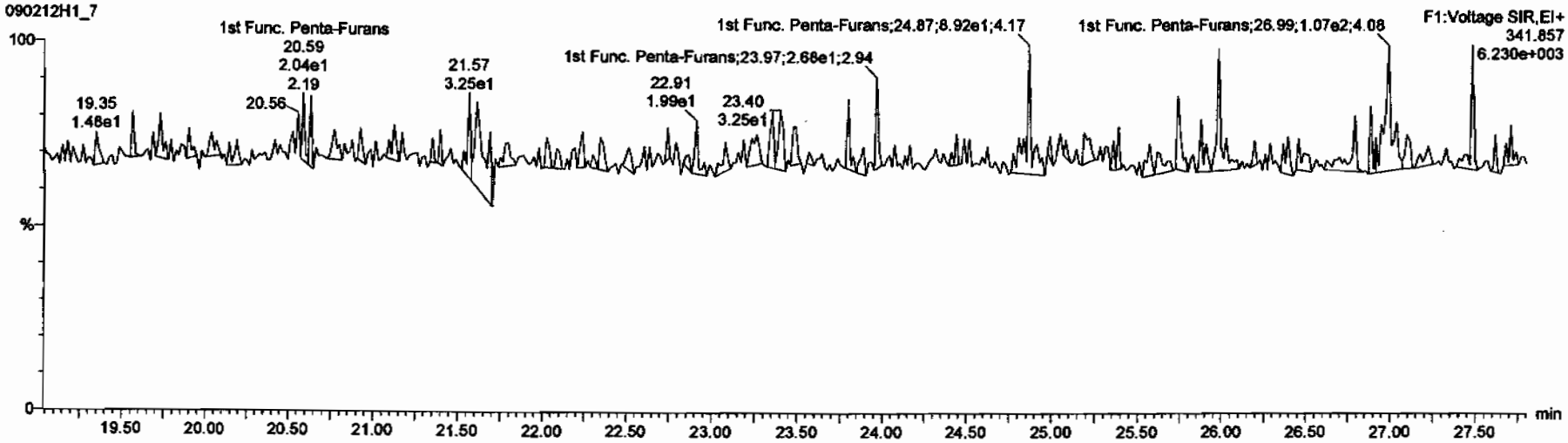

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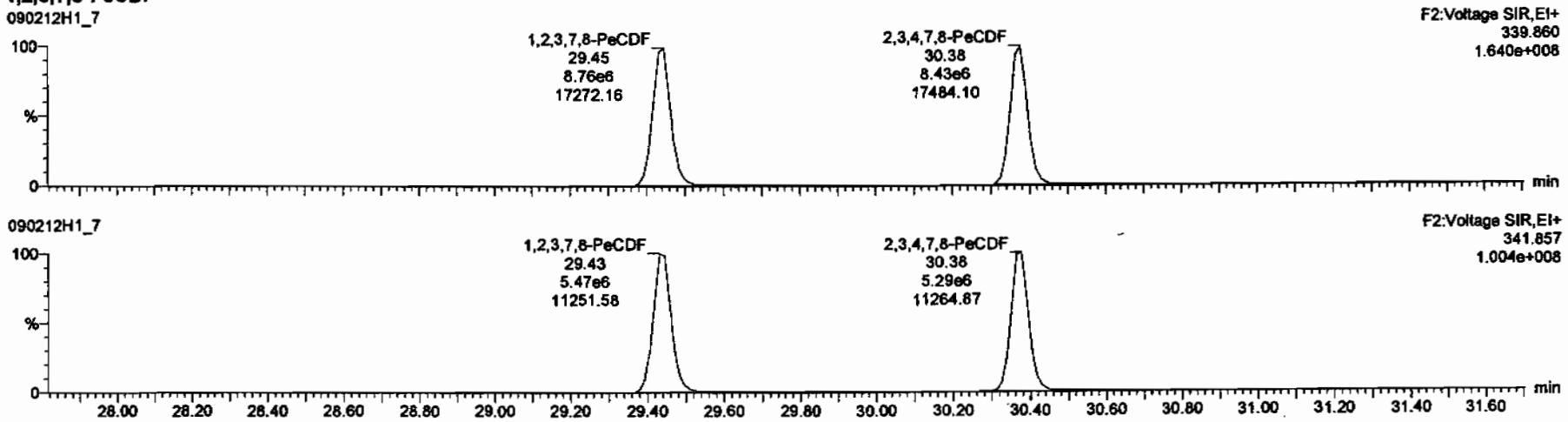

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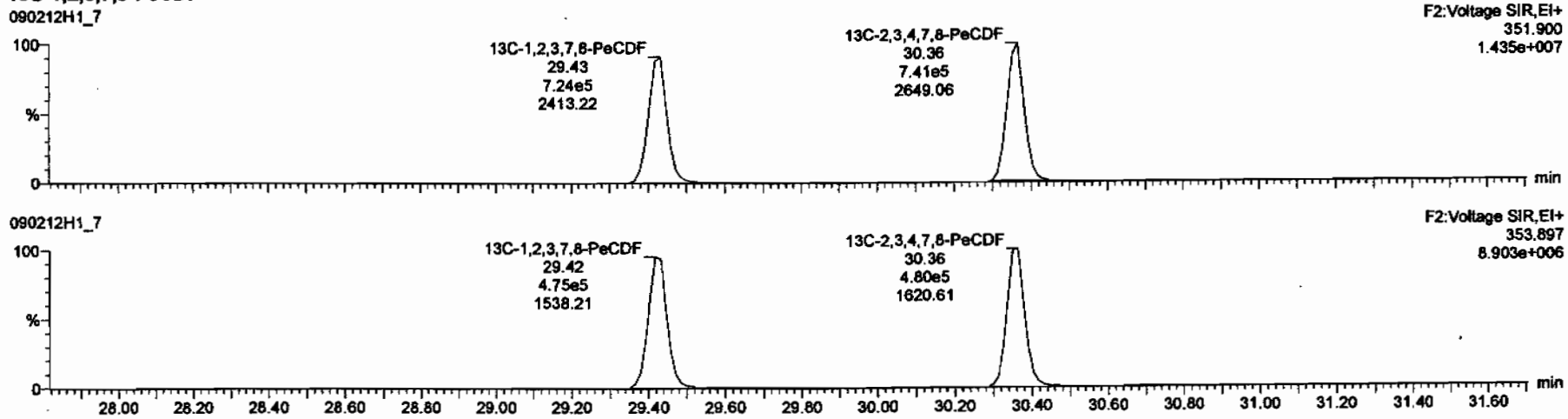

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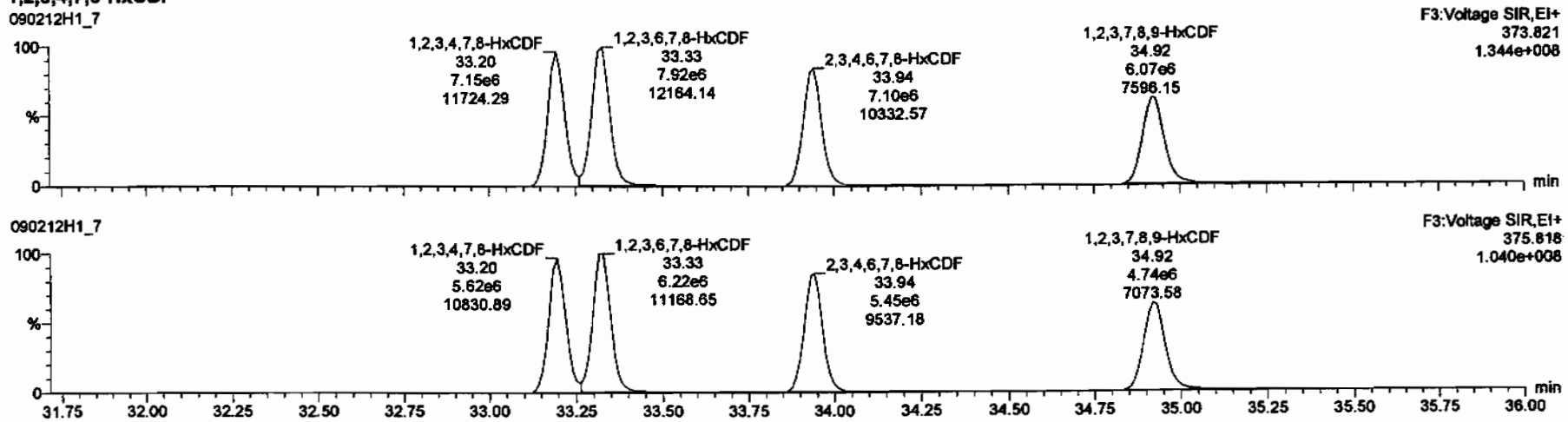

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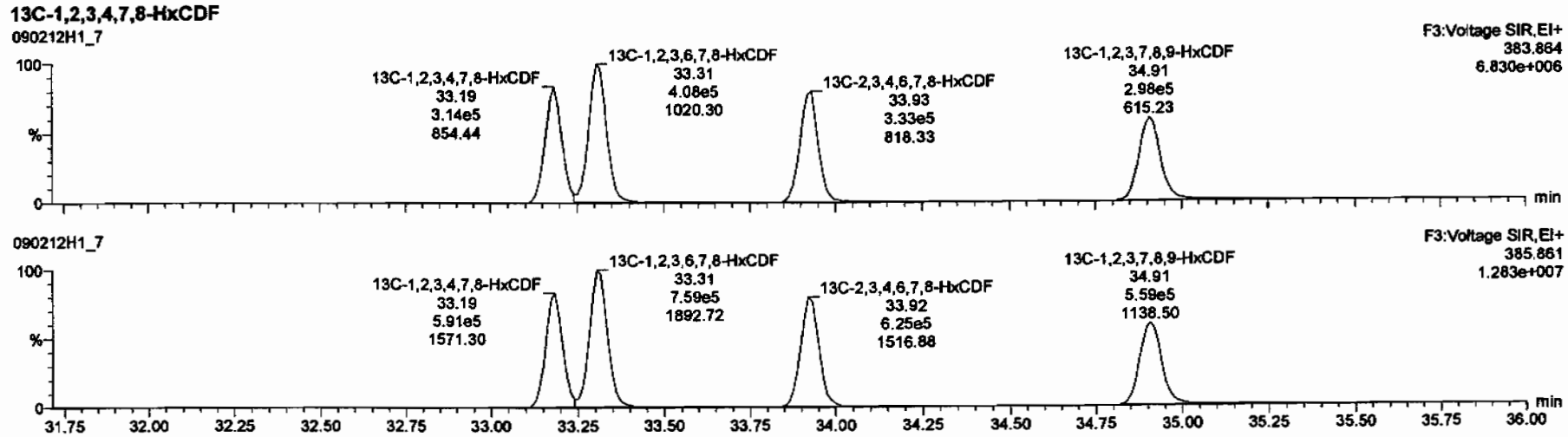

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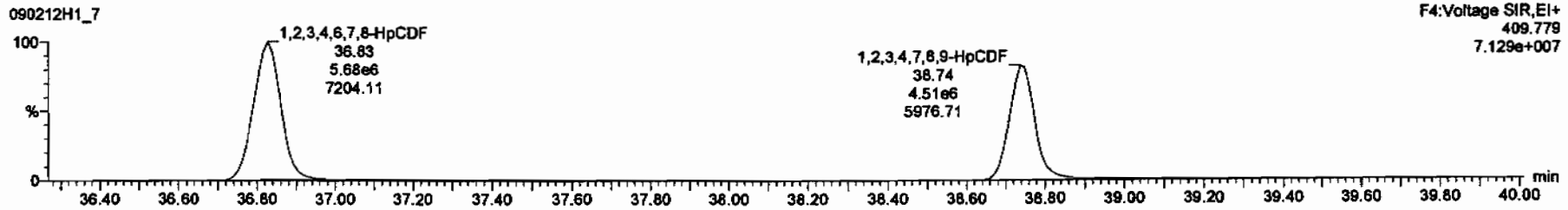

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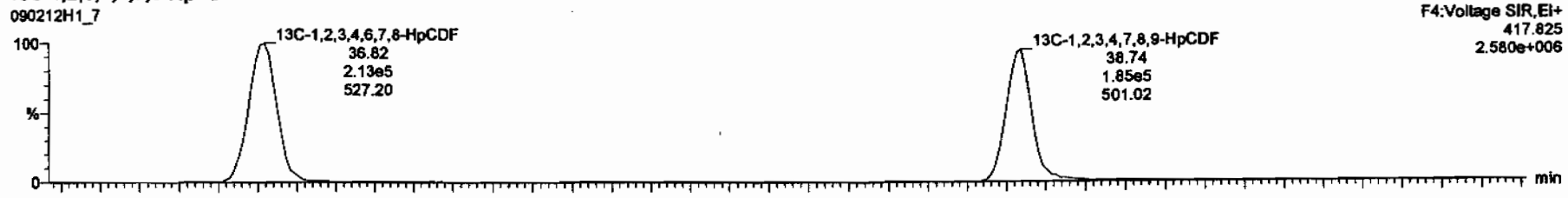

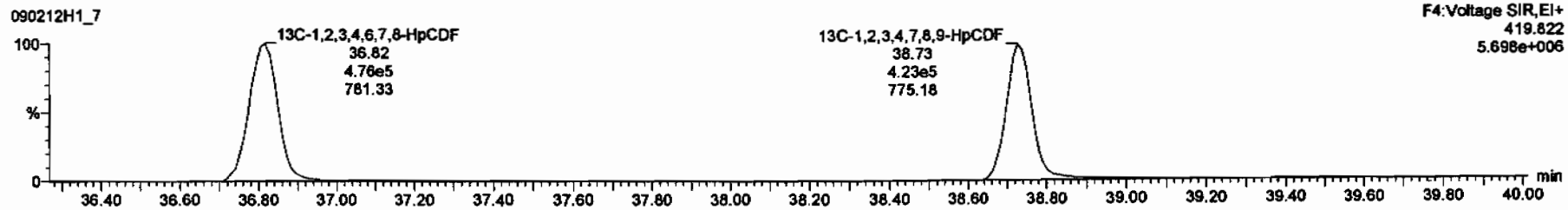

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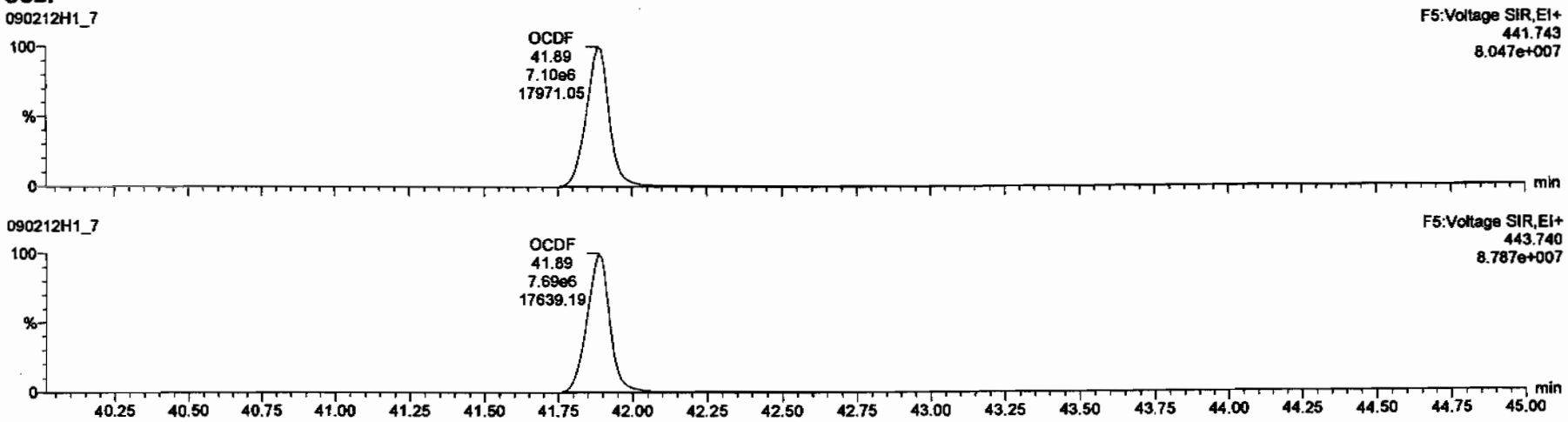

13C-OCDF

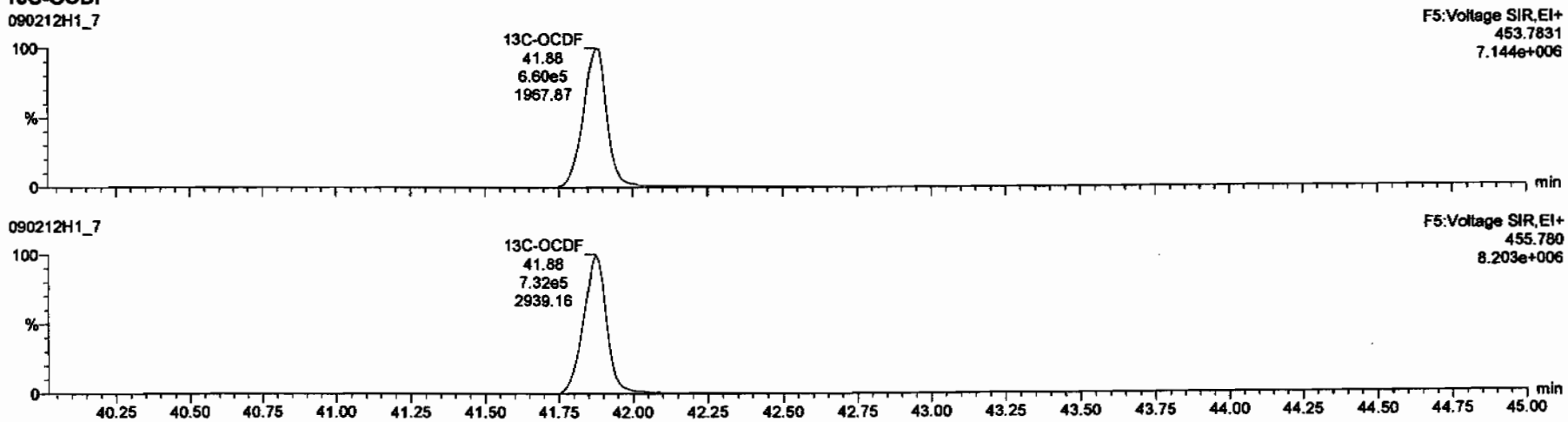

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PFK1

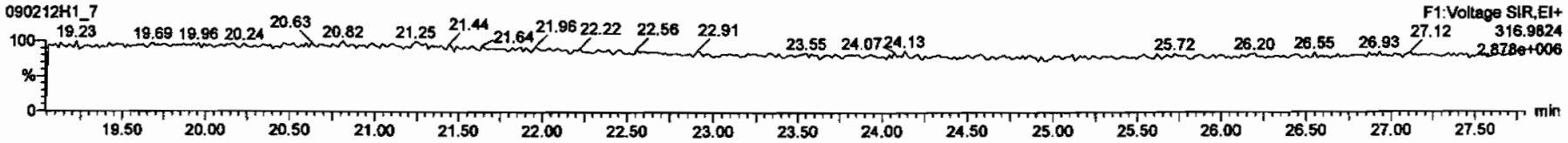

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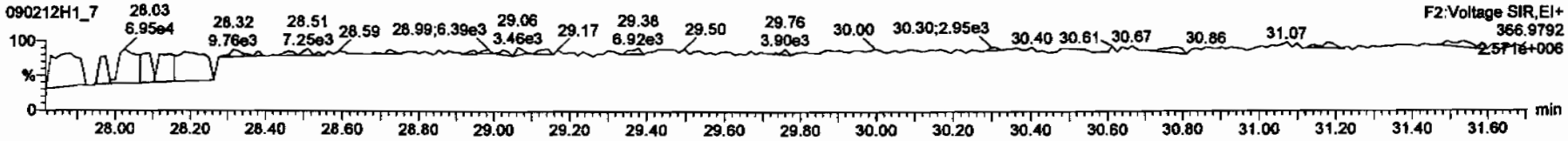

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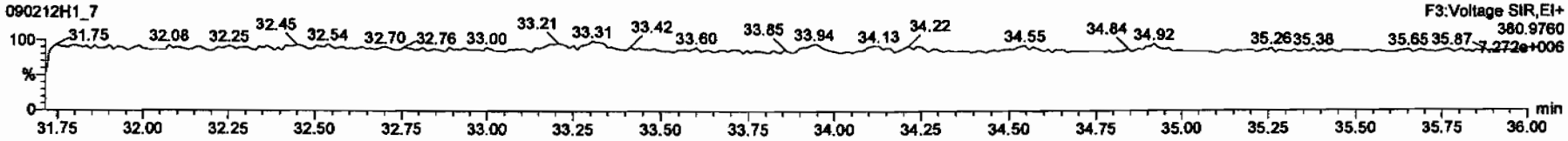

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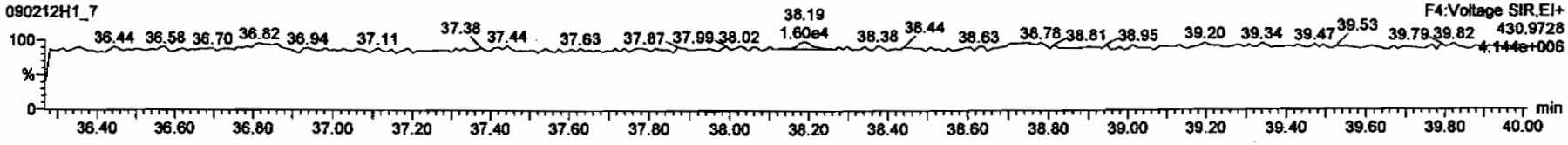

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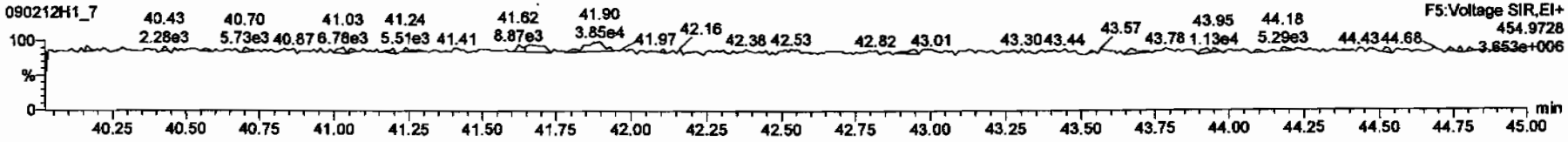

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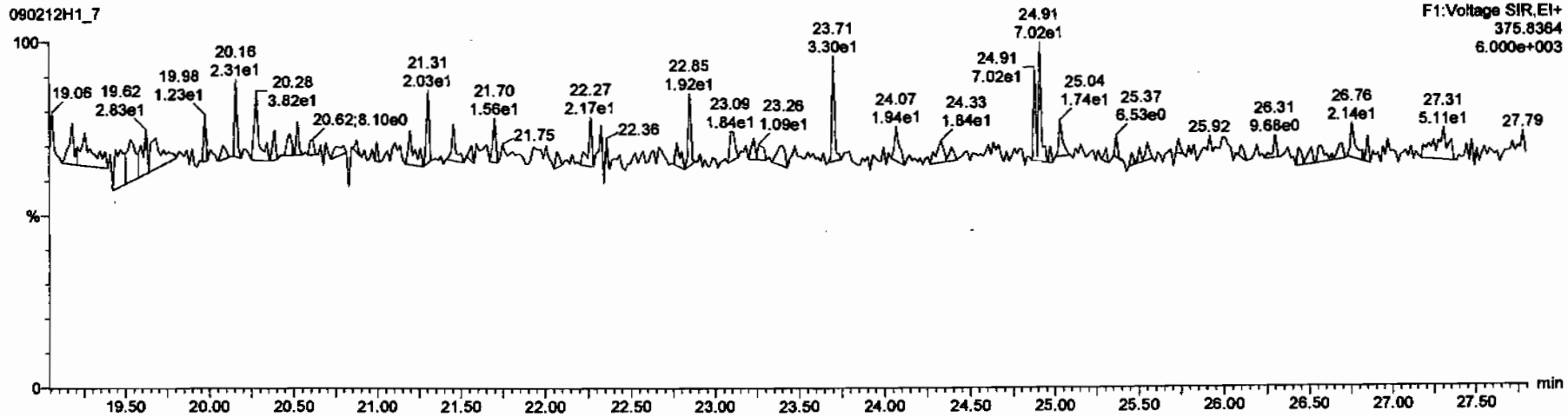

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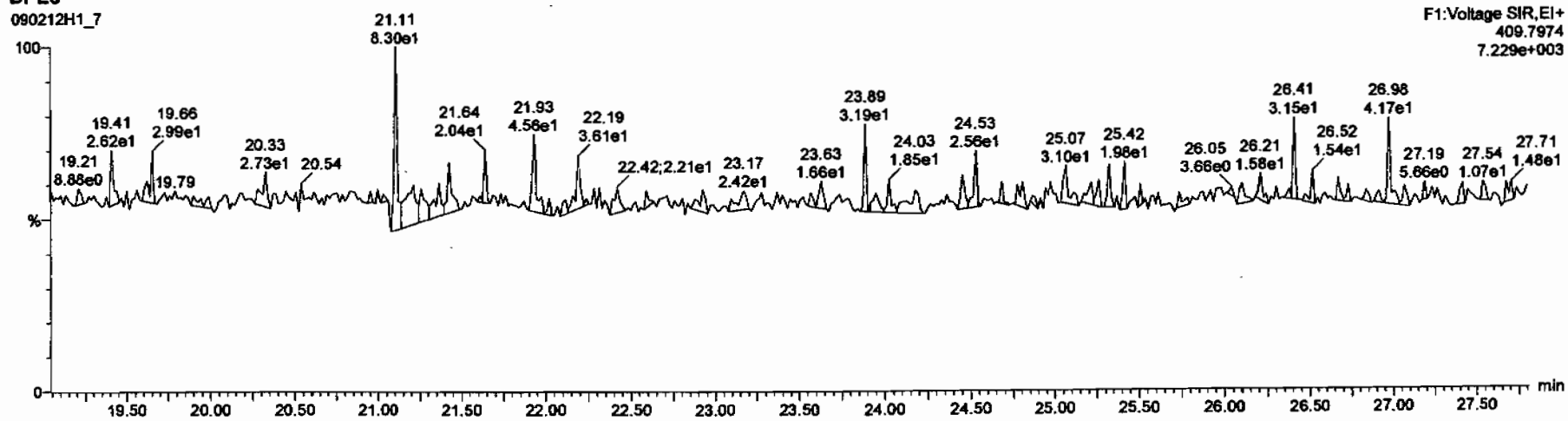

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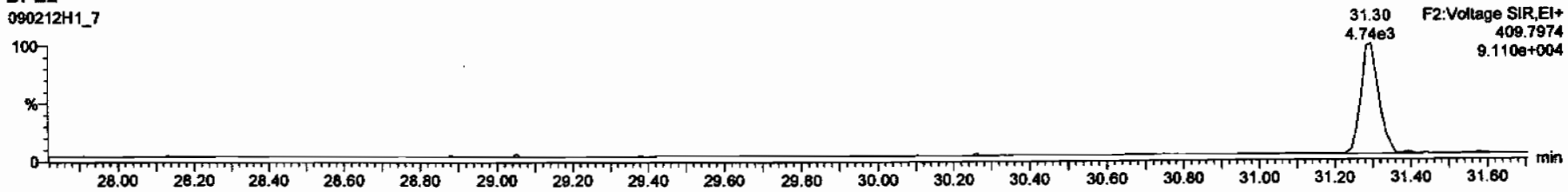

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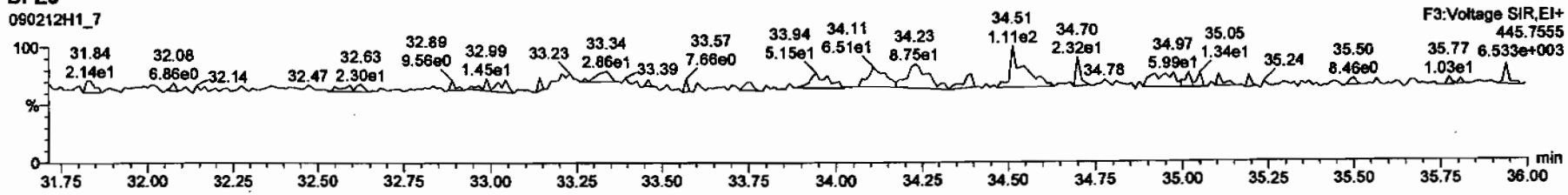

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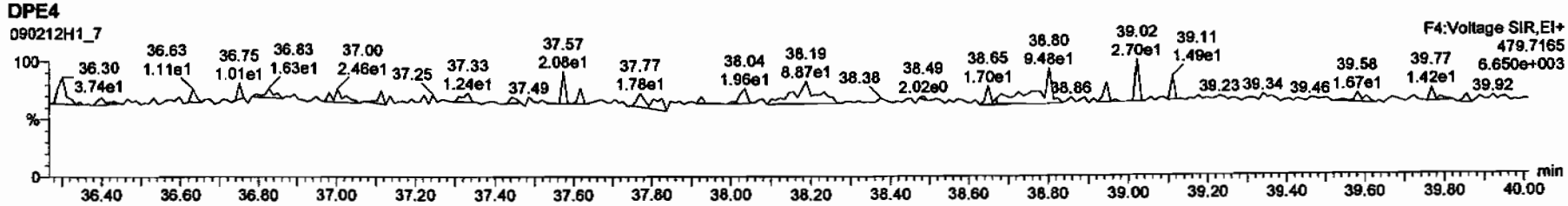

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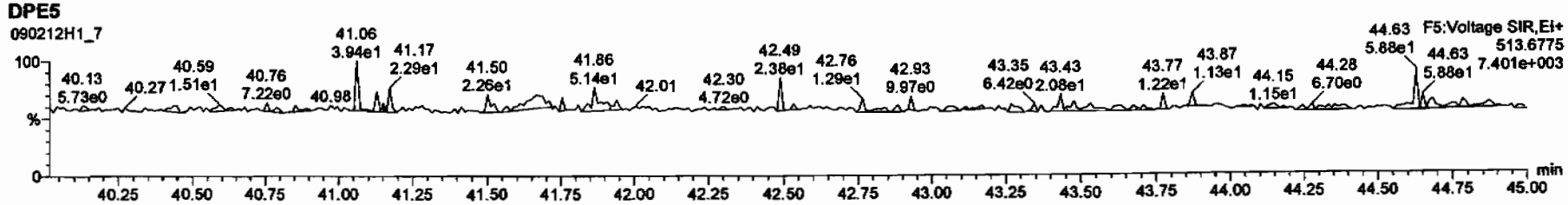

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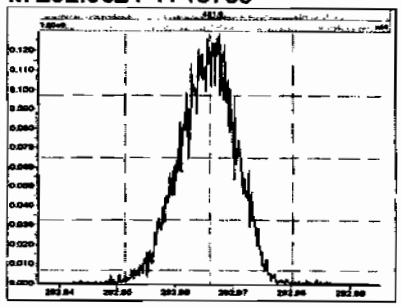

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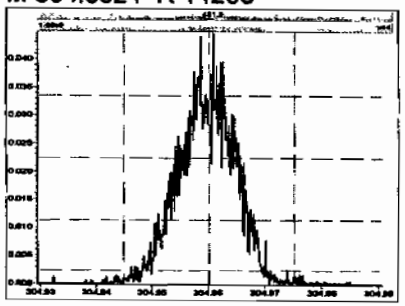

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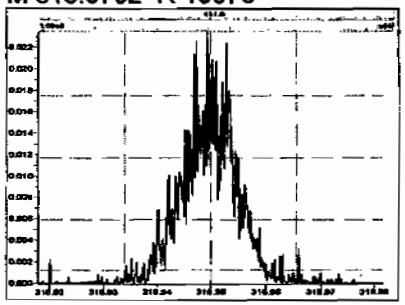

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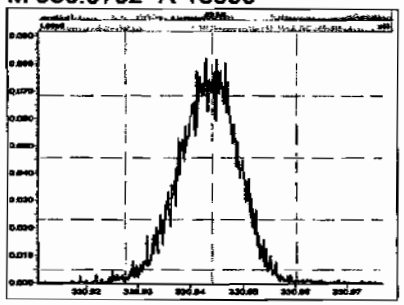

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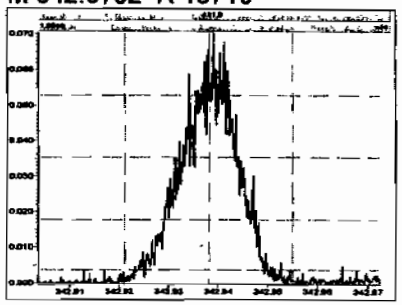

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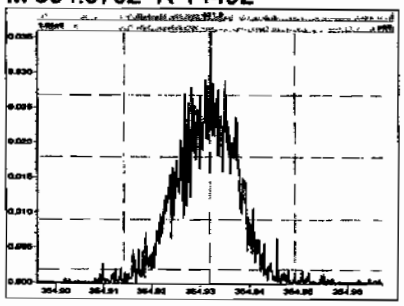

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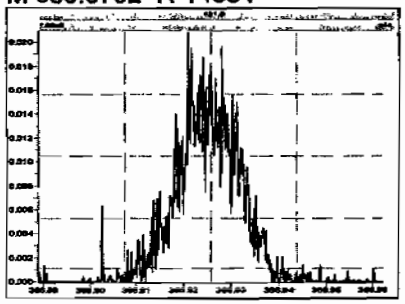

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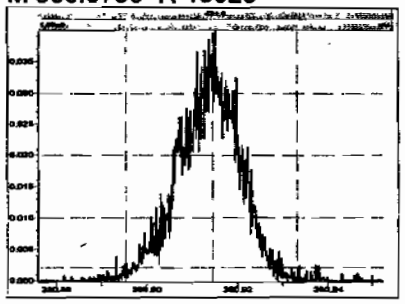

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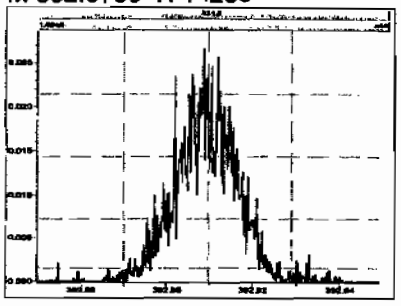

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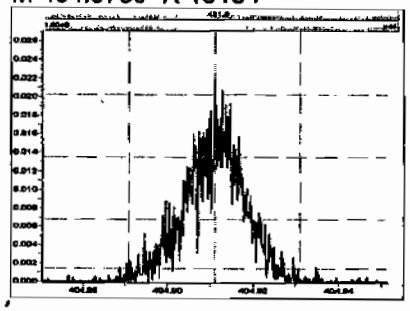

M 416.9760 R 15880

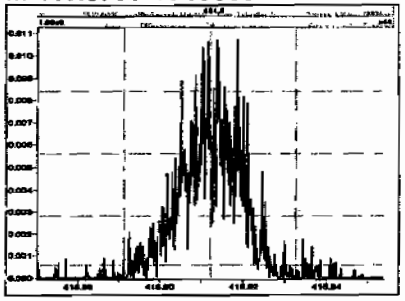

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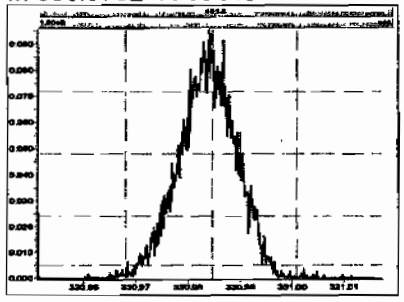

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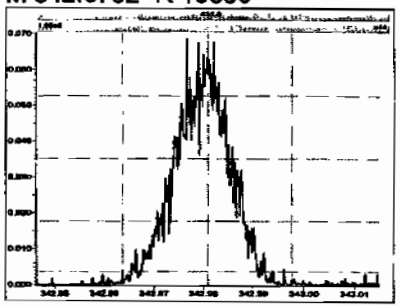

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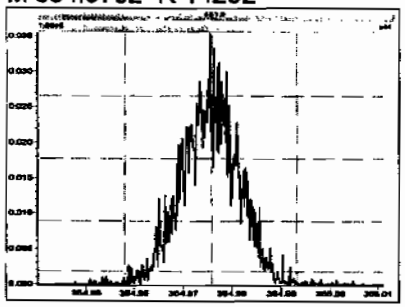

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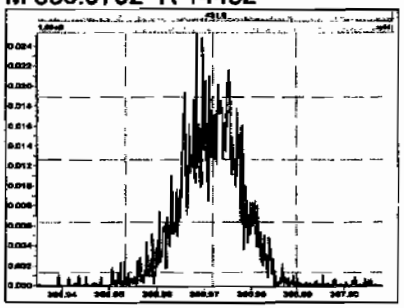

M 380.9760 R 13928

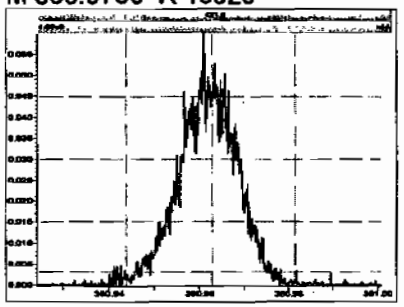

M 392.9760 R 14536

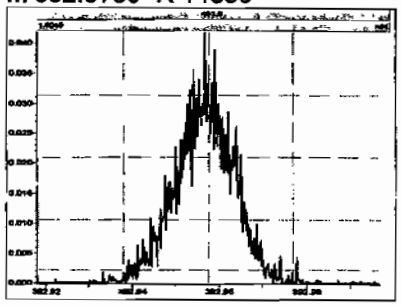

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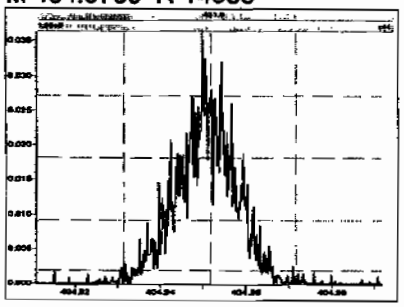

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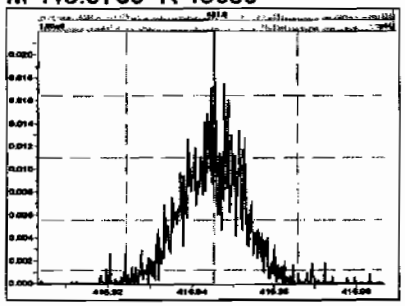

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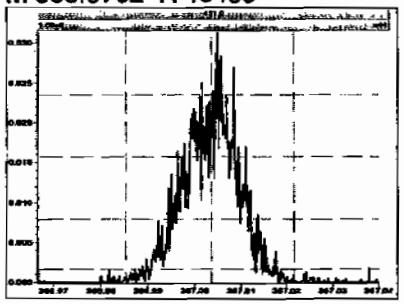

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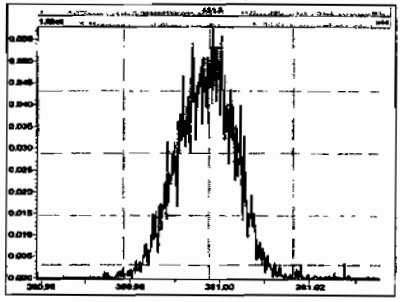

M 392.9760 R 14519

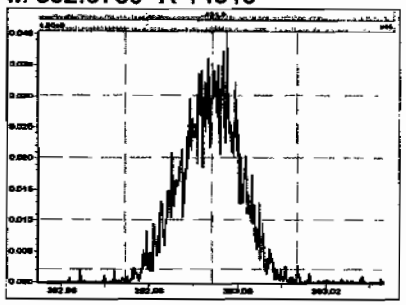

M 404.9760 R 14971

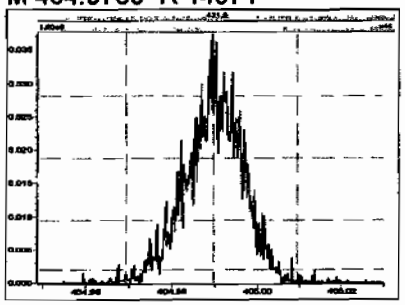

M 416.9760 R 15702

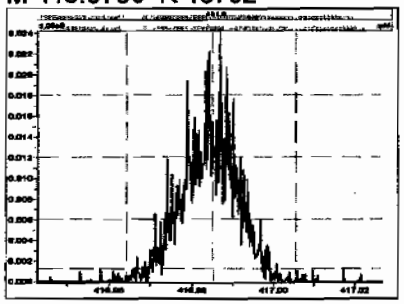

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M 430.9728 R 14874

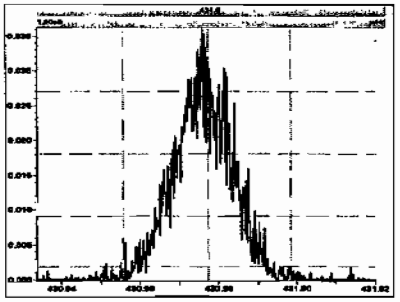

M 442.9728 R 15394

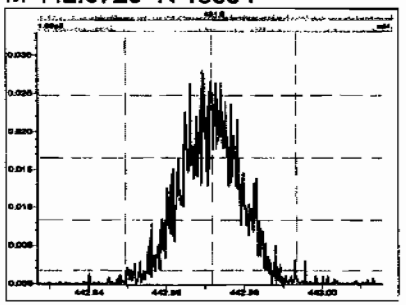

M 454.9728 R 13981

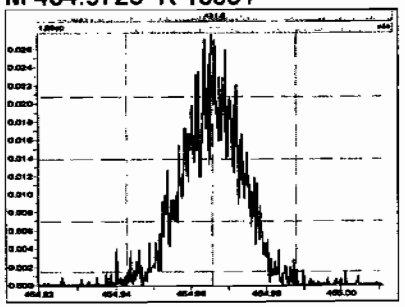

M 404.9760 R 14384

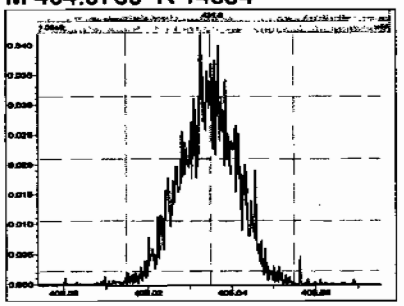

M 416.9760 R 16486

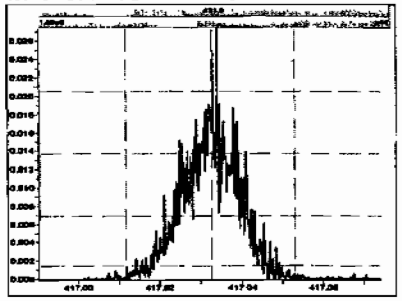

M 430.9728 R 14520

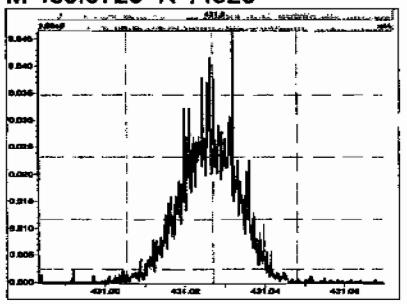

M 442.9728 R 14332

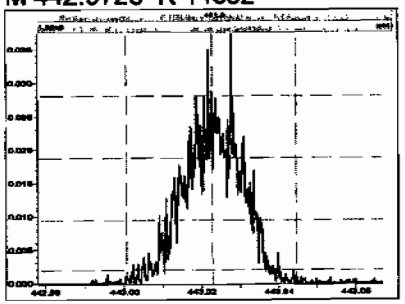

M 454.9728 R 13746

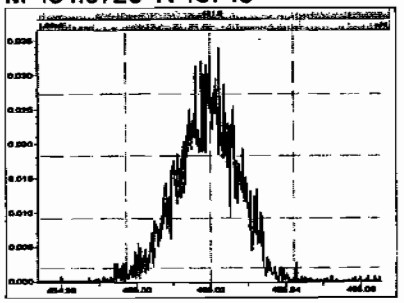

M 466.9728 R 16090

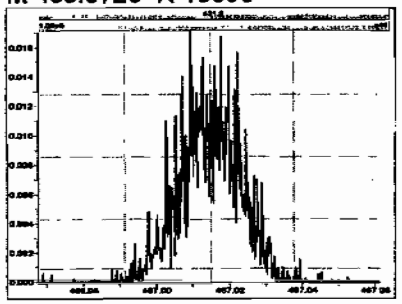

M 480.9696 R 13927

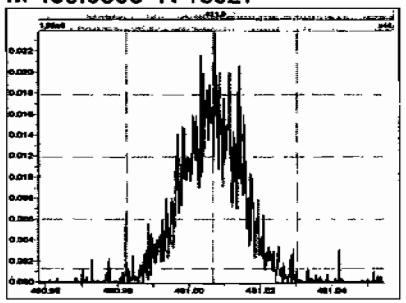

M 430.9728 R 12991

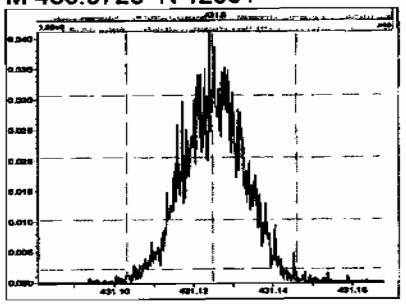

M 442.9728 R 13058

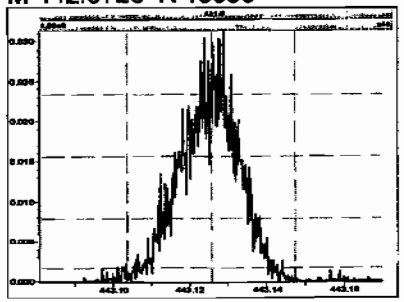

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M 454.9728 R 12791

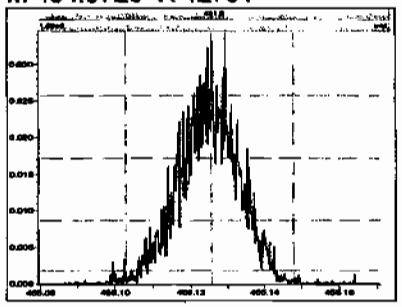

M 466.9728 R 14943

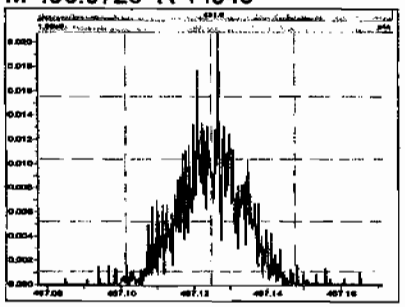

M 480.9696 R 12740

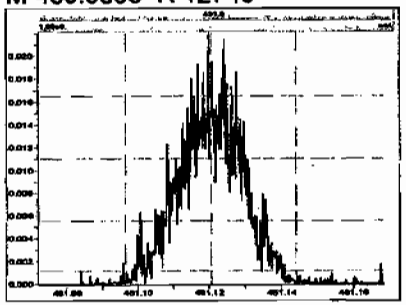

M 492.9696 R 15128

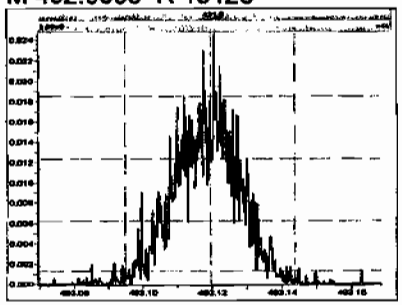

M 504.9696 R 13236

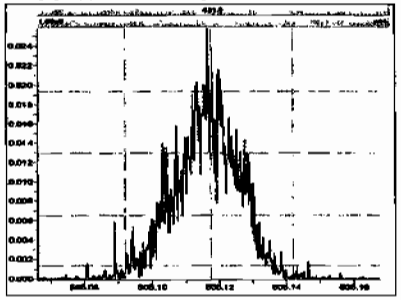

M 516.9697 R 17182

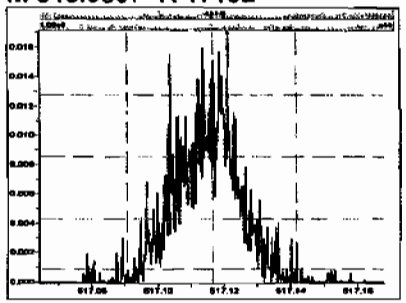

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1	2,3,7,8-TCDD	2.66e4	0.81	NO	1.08	1.000	25.98	1.001	9.5090		0.0723	9.5090
2	1,2,3,7,8-PeCDD	1.01e5	0.61	NO	1.03	1.000	30.65	1.000	47.444		0.172	47.444
3	1,2,3,4,7,8-HxCDD	9.43e4	1.26	NO	1.00	1.000	34.11	1.001	60.533		0.392	60.533
4	1,2,3,6,7,8-HxCDD	8.97e4	1.28	NO	1.13	1.000	34.22	1.000	41.292		0.312	41.292
5	1,2,3,7,8,9-HxCDD	9.40e4	1.29	NO	1.10	1.000	34.52	1.009	48.966		0.335	48.966
6	1,2,3,4,6,7,8-HpCDD	7.06e4	1.02	NO	1.06	1.000	38.18	1.001	47.757		0.360	47.757
7	OCDD	1.05e5	0.91	NO	1.18	1.000	41.66	1.000	87.851		0.375	87.851
8	2,3,7,8-TCDF	3.59e4	0.80	NO	1.09	1.000	25.20	1.001	9.2692		0.0713	9.2692
9	1,2,3,7,8-PeCDF	1.90e5	1.60	NO	1.16	1.000	29.43	1.001	47.569		0.197	47.569
10	2,3,4,7,8-PeCDF	1.76e5	1.60	NO	1.12	1.000	30.36	1.001	49.959		0.207	49.959
11	1,2,3,4,7,8-HxCDF	1.51e5	1.22	NO	1.41	1.000	33.19	1.000	47.242		0.234	47.242
12	1,2,3,6,7,8-HxCDF	1.99e5	1.24	NO	1.22	1.000	33.31	1.000	52.247		0.205	52.247
13	2,3,4,6,7,8-HxCDF	1.49e5	1.26	NO	1.28	1.000	33.93	1.001	48.194		0.285	48.194
14	1,2,3,7,8,9-HxCDF	1.18e5	1.28	NO	1.26	1.000	34.91	1.000	50.089		0.402	50.089
15	1,2,3,4,6,7,8-HpCDF	1.26e5	1.05	NO	1.69	1.000	36.81	1.000	45.609		0.324	45.609
16	1,2,3,4,7,8,9-HpCDF	9.92e4	1.09	NO	1.48	1.000	38.74	1.000	53.044		0.451	53.044
17	OCDF	1.36e5	0.92	NO	1.10	1.000	41.86	1.001	~~77825~~		102	77825
18	13C-2,3,7,8-TCDD	2.60e5	0.79	NO	1.01	1.000	25.97	1.022	100.68	101	0.251	
19	13C-1,2,3,7,8-PeCDD	2.07e5	0.62	NO	0.827	1.000	30.64	1.206	98.194	98.2	0.366	
20	13C-1,2,3,4,7,8-HxCDD	1.56e5	1.23	NO	0.916	1.000	34.08	0.988	96.272	96.3	1.12	
21	13C-1,2,3,6,7,8-HxCDD	1.93e5	1.30	NO	0.921	1.000	34.21	0.991	118.79	119	1.12	
22	13C-1,2,3,4,6,7,8-HpCDD	1.39e5	1.04	NO	0.708	1.000	38.16	1.106	111.12	111	0.936	
23	13C-OCDD	2.03e5	0.90	NO	0.503	1.000	41.65	1.207	229.27	115	1.10	
24	13C-2,3,7,8-TCDF	3.56e5	0.77	NO	0.977	1.000	25.17	0.991	47241	~~47200~~	47.8	
25	13C-1,2,3,7,8-PeCDF	3.45e5	1.53	NO	0.896	1.000	29.41	1.158	49875	~~49900~~	135	
26	13C-2,3,4,7,8-PeCDF	3.15e5	1.57	NO	0.900	1.000	30.34	1.194	45355	~~45400~~	135	
27	13C-1,2,3,4,7,8-HxCDF	2.27e5	0.52	NO	1.17	1.000	33.17	0.962	110.01	110	1.09	
28	13C-1,2,3,6,7,8-HxCDF	3.11e5	0.53	NO	1.52	1.000	33.29	0.965	116.12	116	0.841	
29	13C-2,3,4,6,7,8-HxCDF	2.41e5	0.53	NO	1.25	1.000	33.91	0.983	109.27	109	1.02	
30	13C-1,2,3,7,8,9-HxCDF	1.87e5	0.53	NO	1.05	1.000	34.90	1.011	100.48	100	1.21	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	NAME	RA2	R		RRF	WVol	RT	RR		Rc	
	31 13C-1,2,3,4,6,7,8-HpCDF	1.64e5	0.42	NO	0.868	1.000	36.80	1.066	107.17	107	0.875
	32 13C-1,2,3,4,7,8,9-HpCDF	1.26e5	0.43	NO	0.727	1.000	38.73	1.122	98.571	98.6	1.05
	33 13C-OCDF	3.18e2	0.17	YES	0.760	1.000	41.82	1.212	0.23753	~~9.440~~	0.197
	34 37Cl-2,3,7,8-TCDD	2.82e4			0.668	1.000	25.98	1.023	16.616	166	0.0976
	35 13C-1,2,3,4-TCDD	2.54e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.254
	36 13C-1,2,3,4-TCDF	7.72e2	0.44	YES	1.00	1.000	23.92	0.000	100.00	100	46.7
	37 13C-1,2,3,7,8,9-HxCDD	1.76e5	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	1.03

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDD

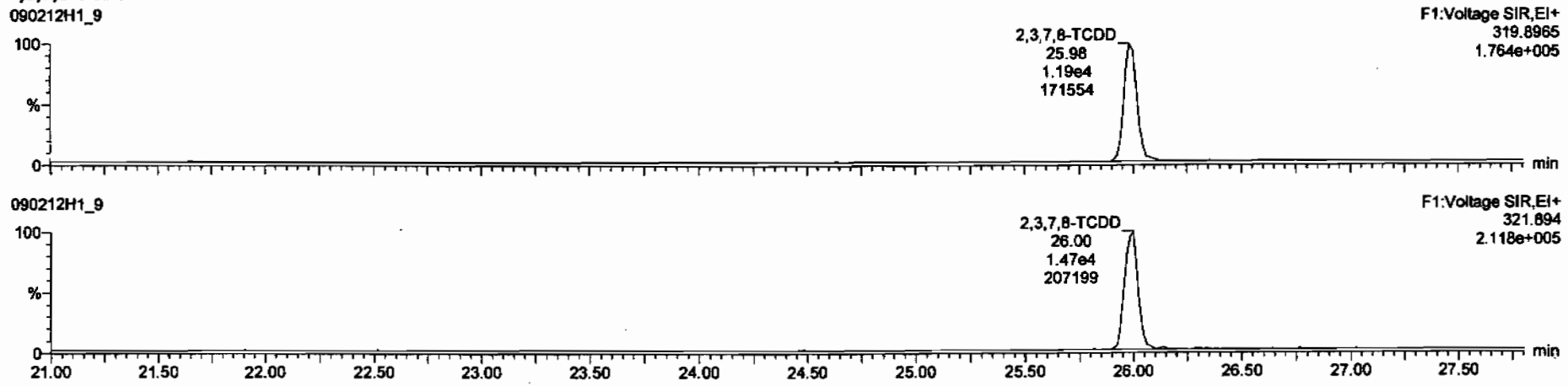

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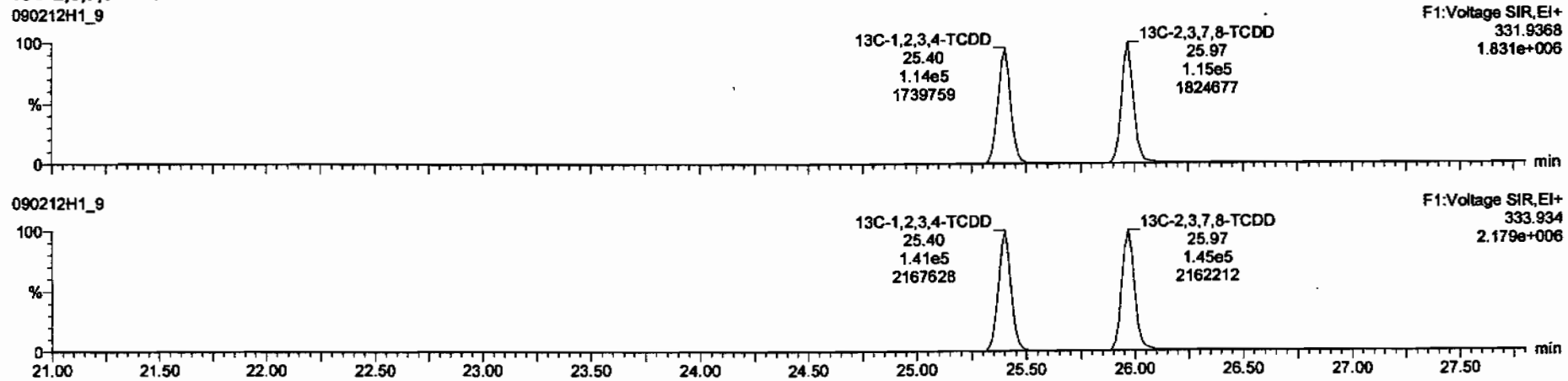

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

37Cl-2,3,7,8-TCDD

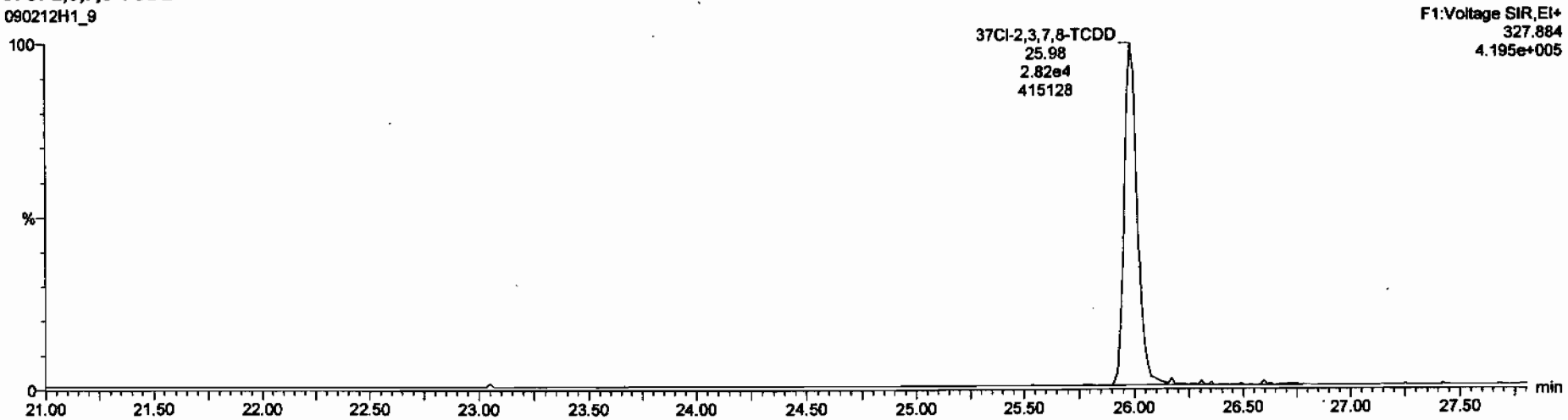

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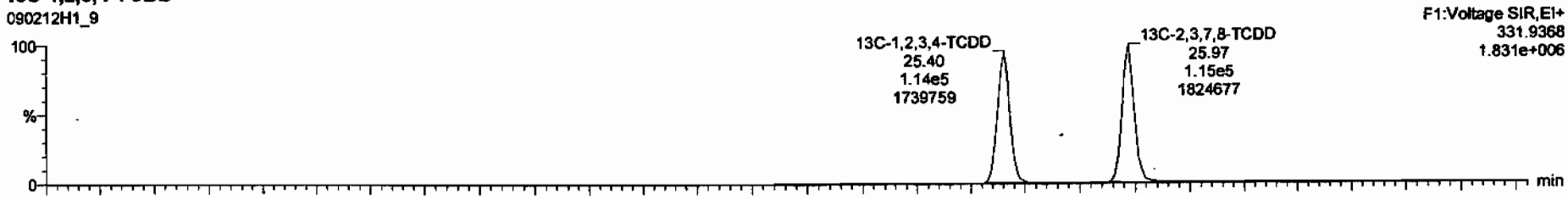

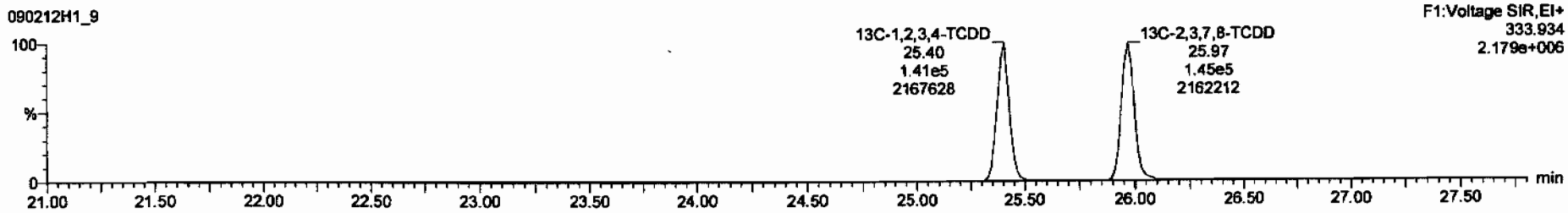

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1,2,3,7,8-PeCDD

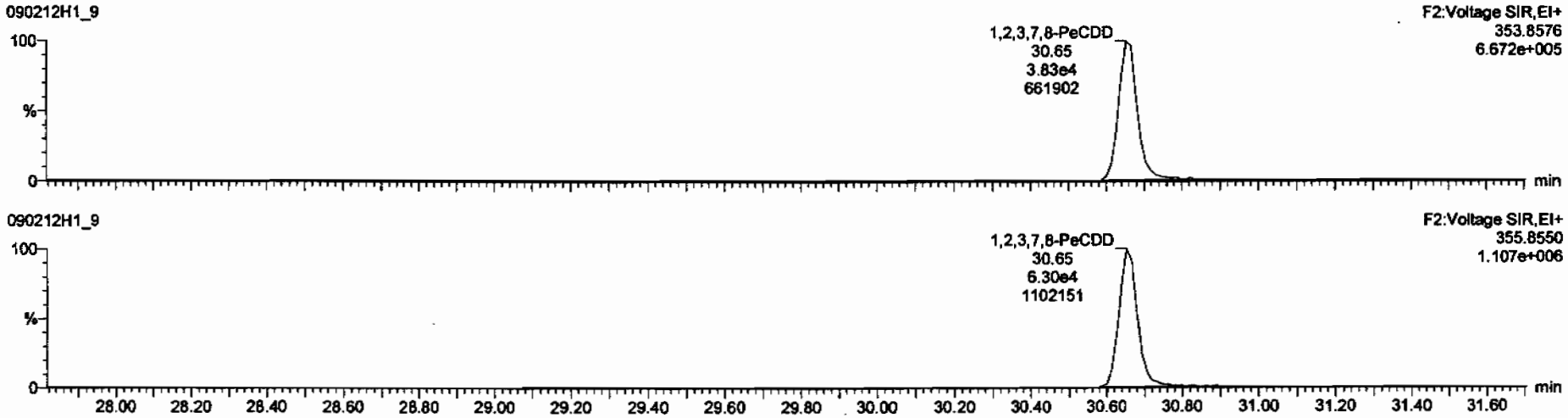

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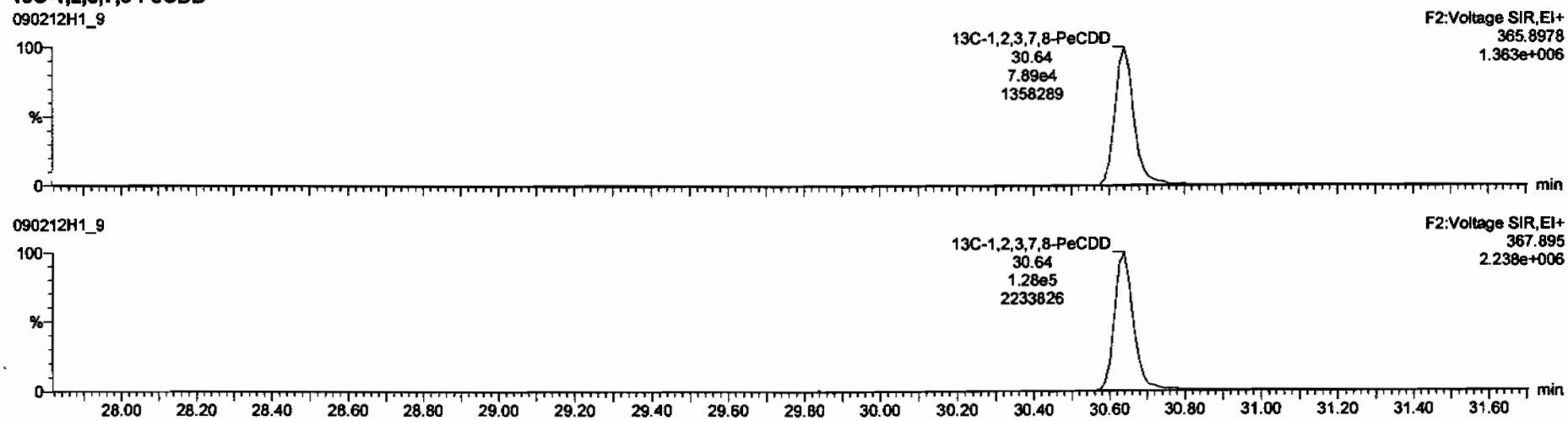

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1,2,3,4,7,8-HxCDD

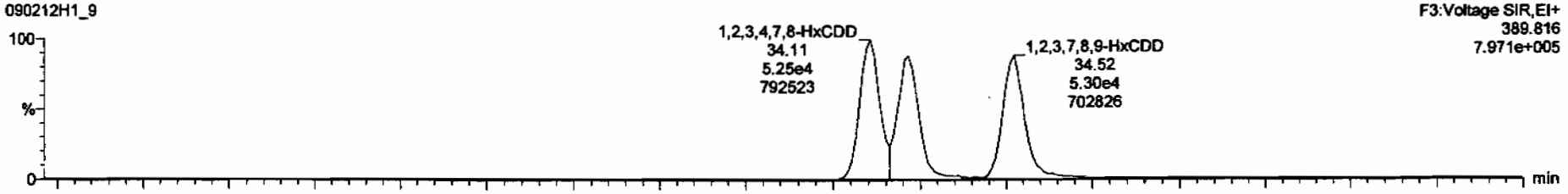

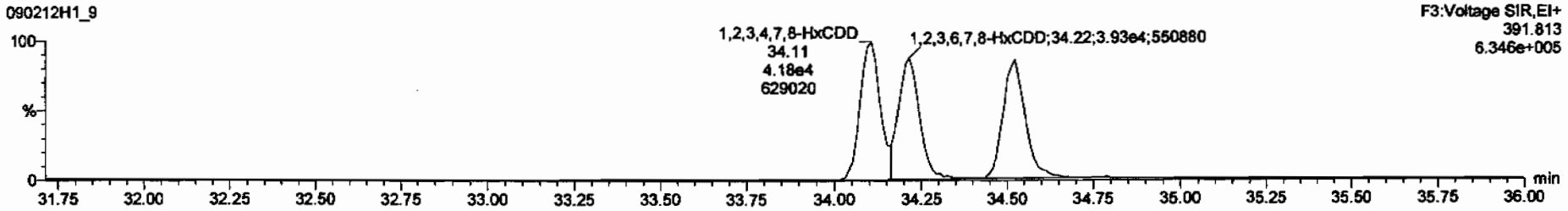

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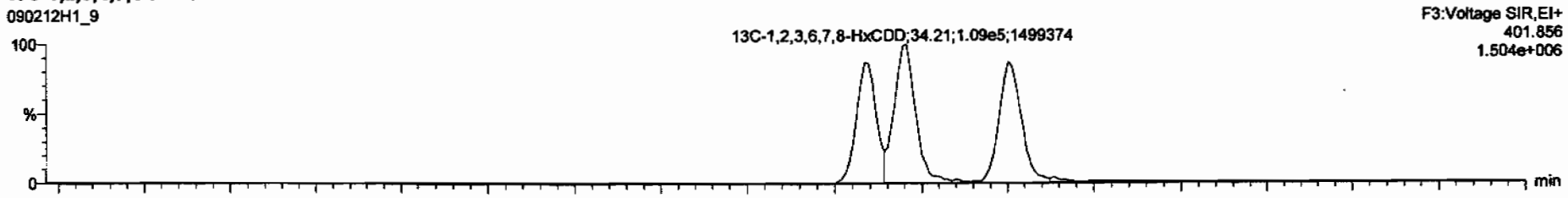

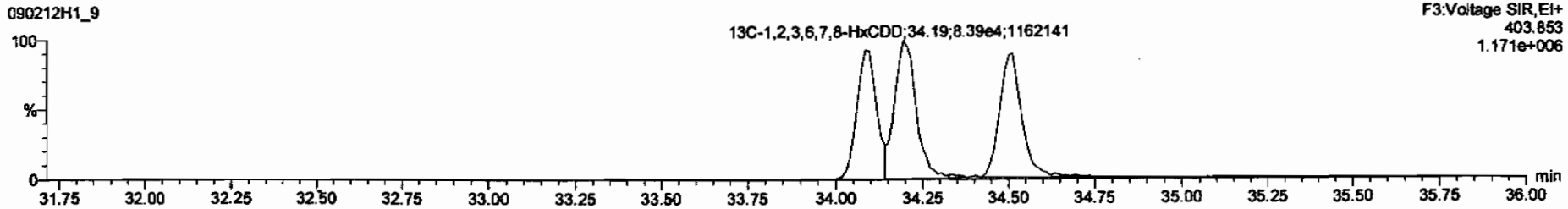

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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1,2,3,4,6,7,8-HpCDD

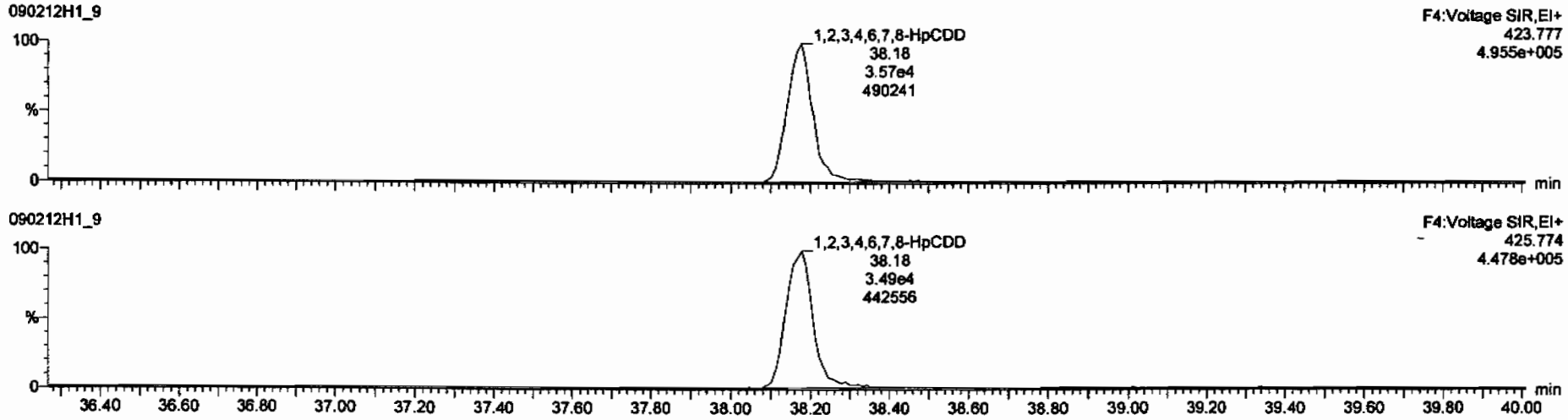

13C-1,2,3,4,6,7,8-HpCDD

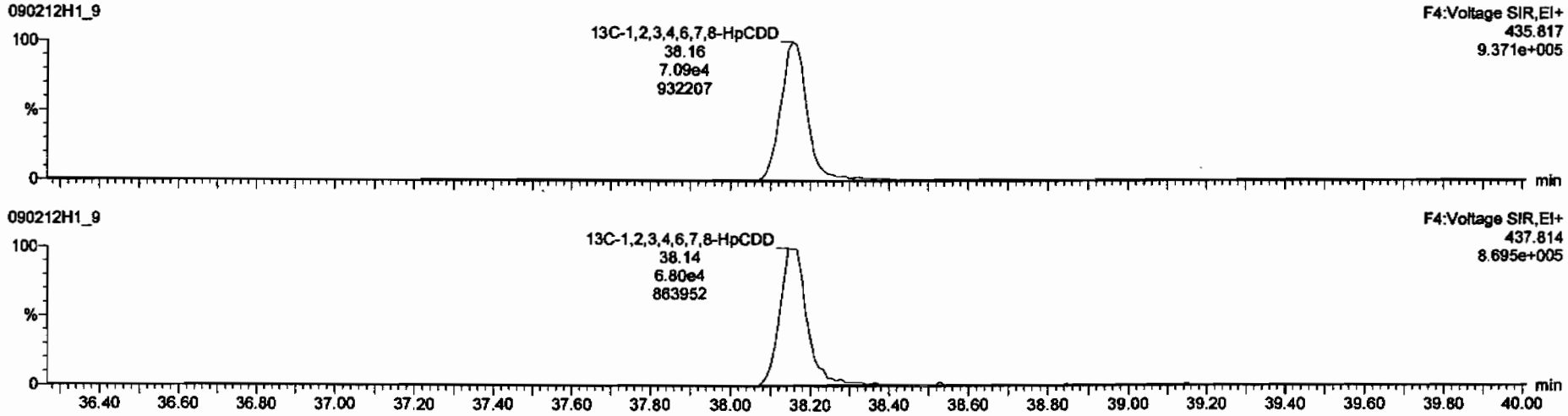

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OCDD

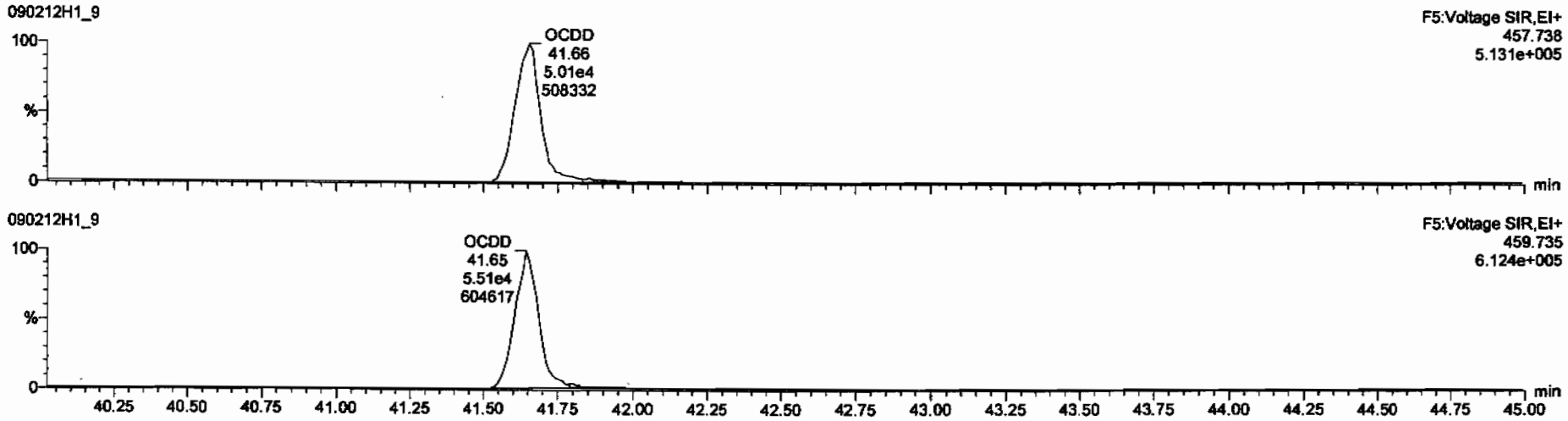

13C-OCDD

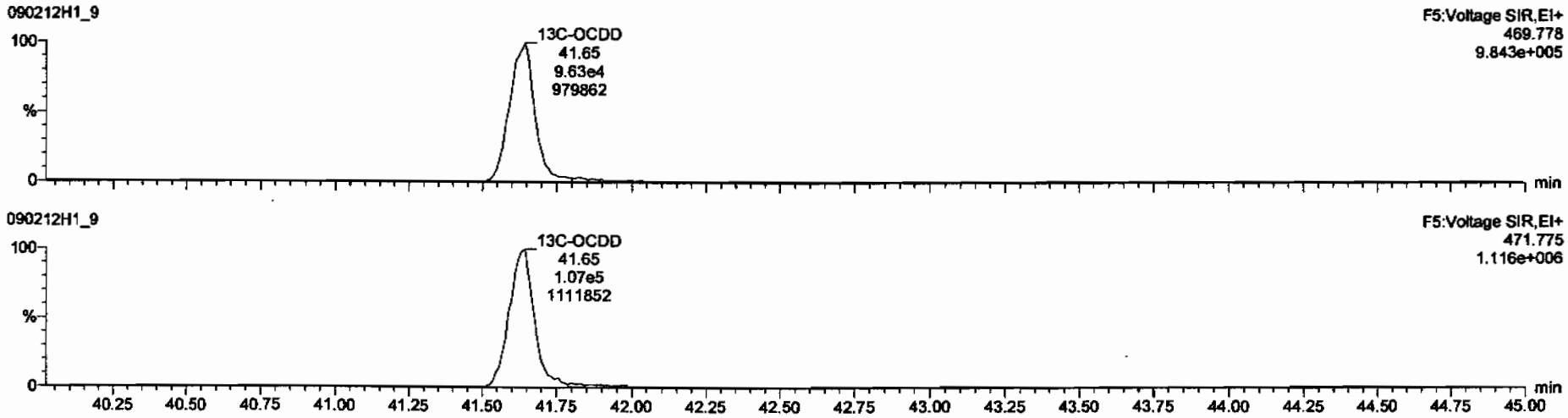

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2,3,7,8-TCDF

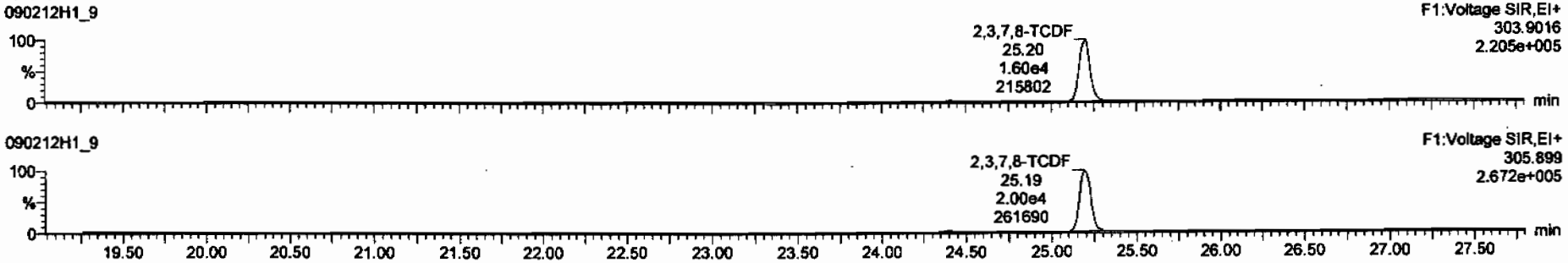

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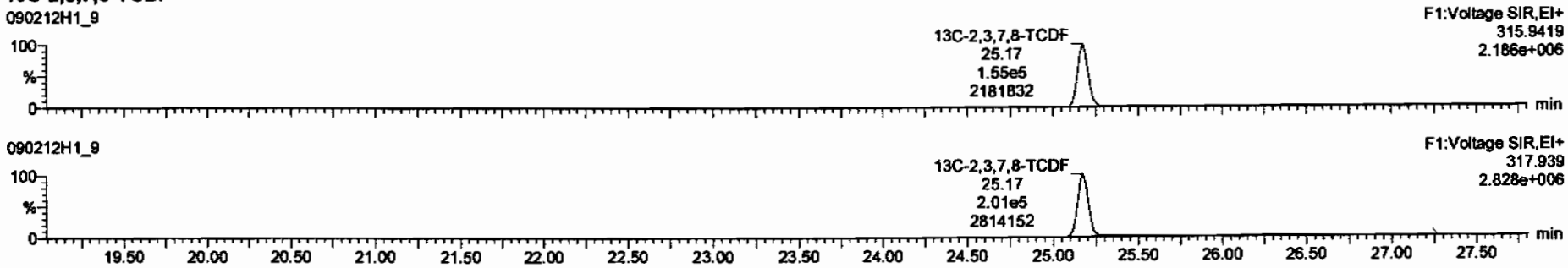

DPE1

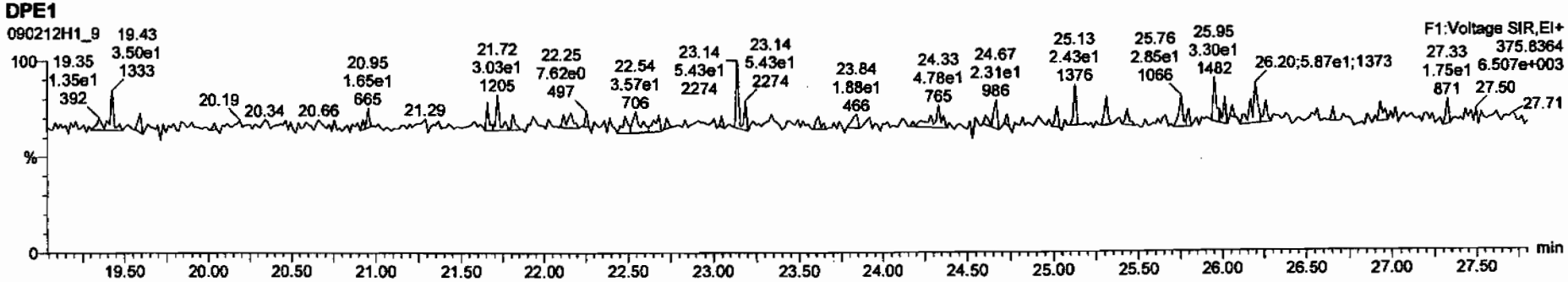

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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1st Func. Penta-Furans

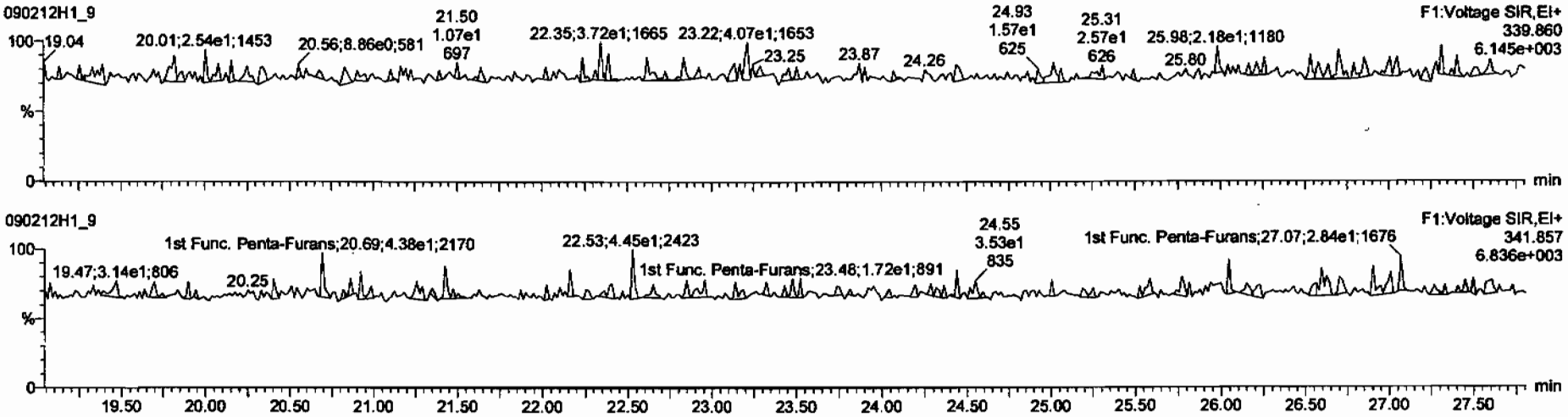

DPE6

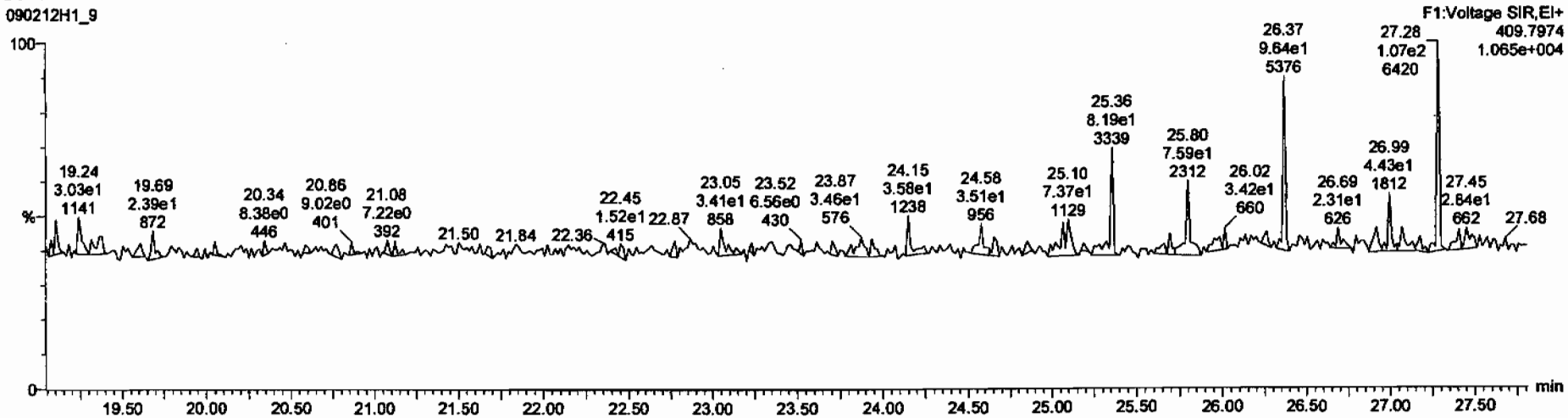

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1,2,3,7,8-PeCDF

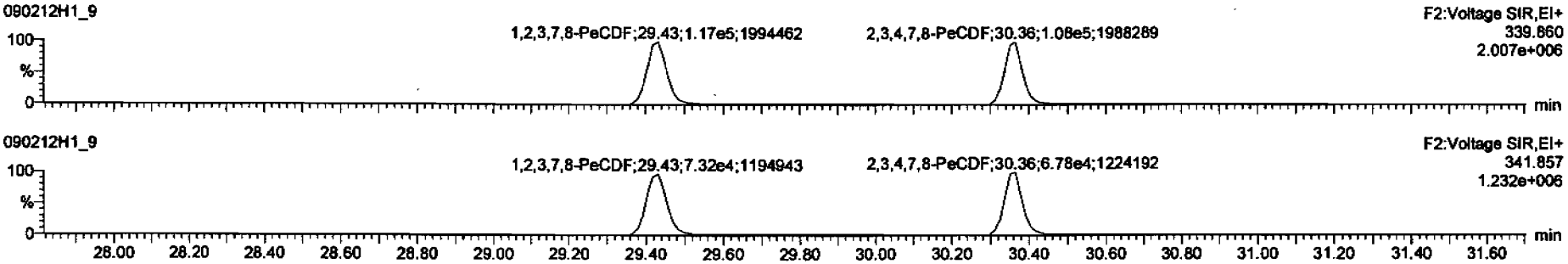

13C-1,2,3,7,8-PeCDF

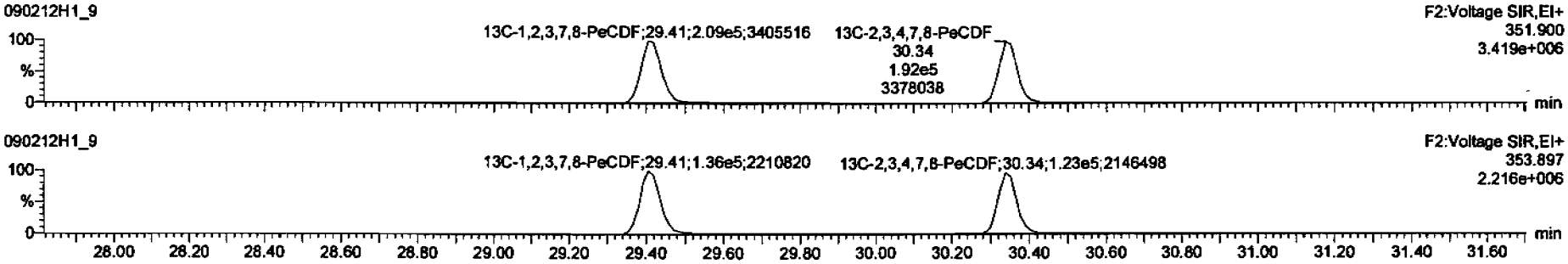

DPE2

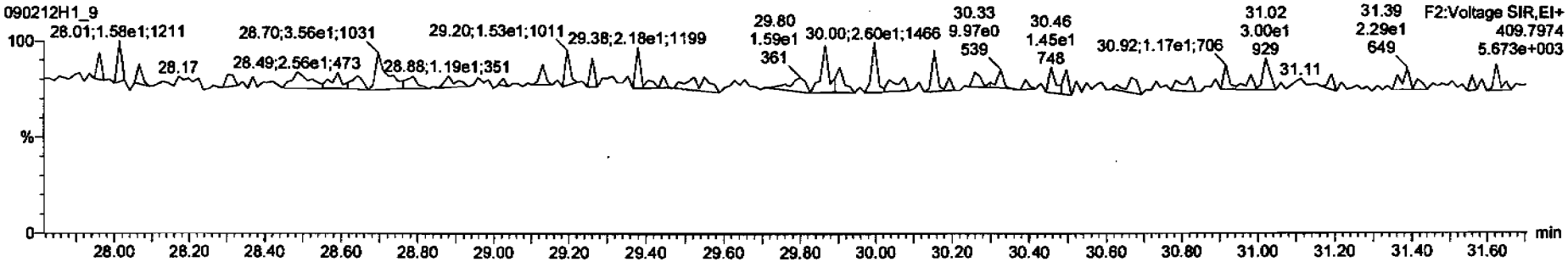

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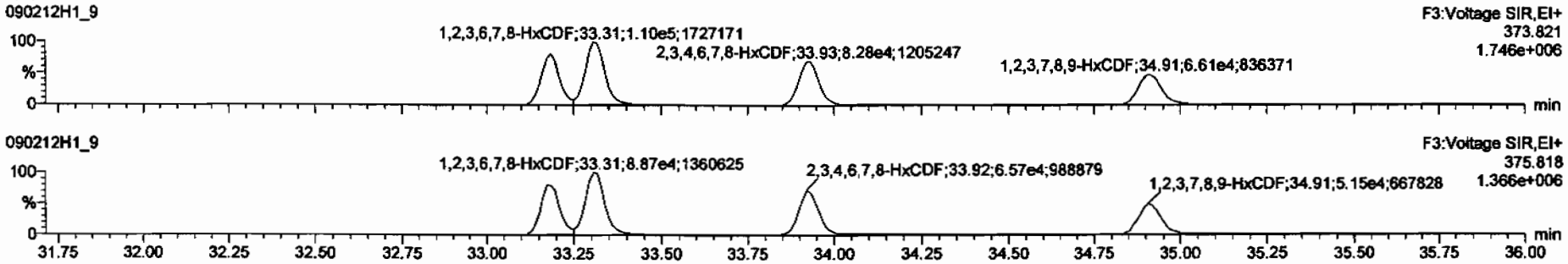

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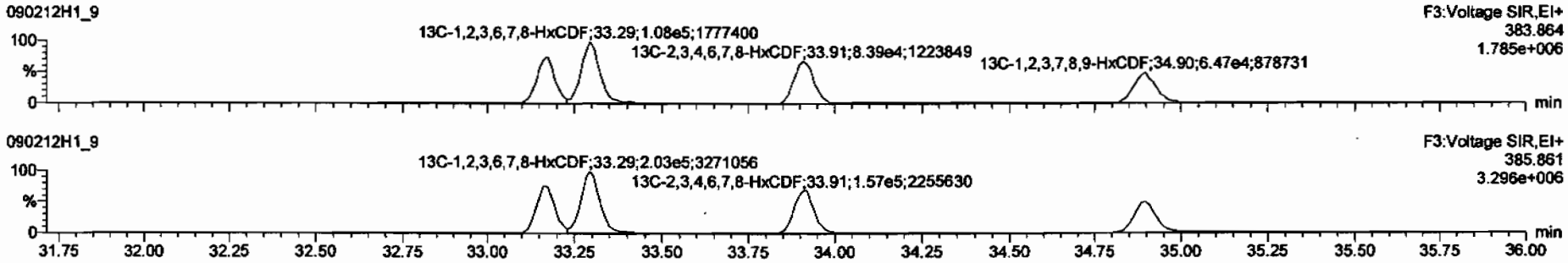

DPE3

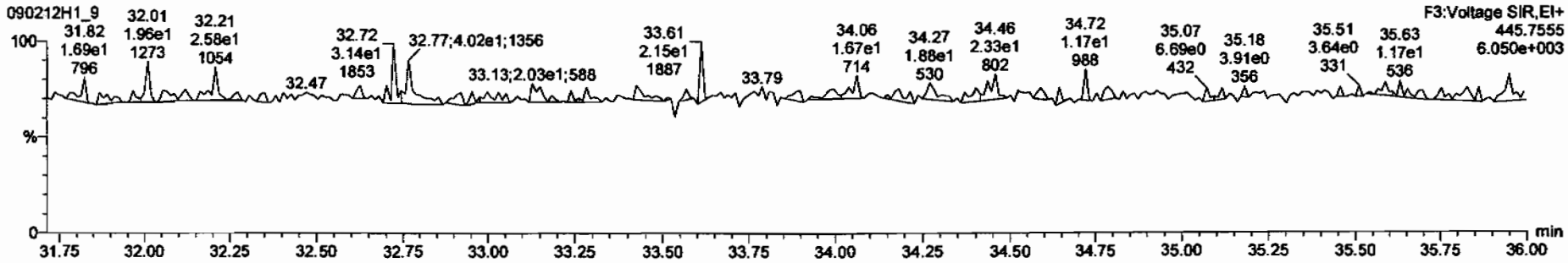

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1,2,3,4,6,7,8-HpCDF

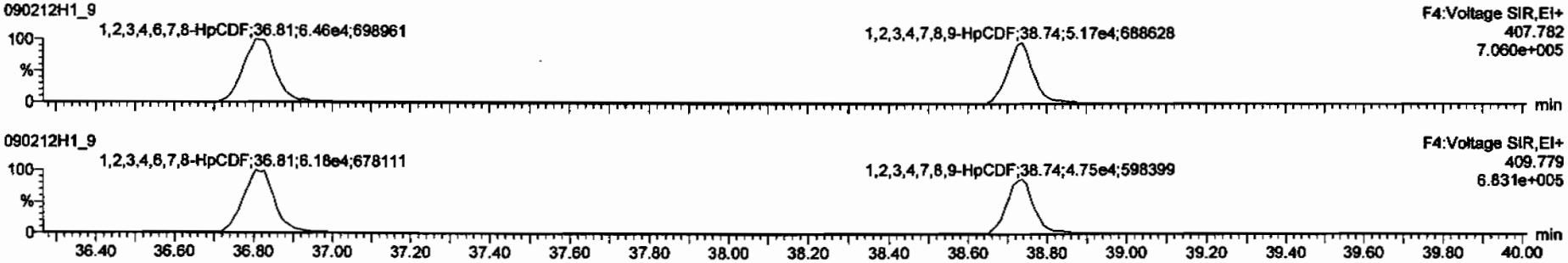

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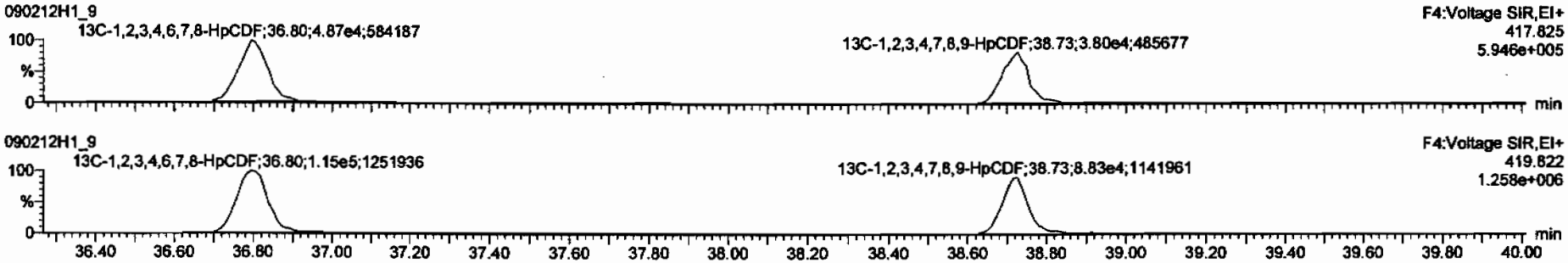

DPE4

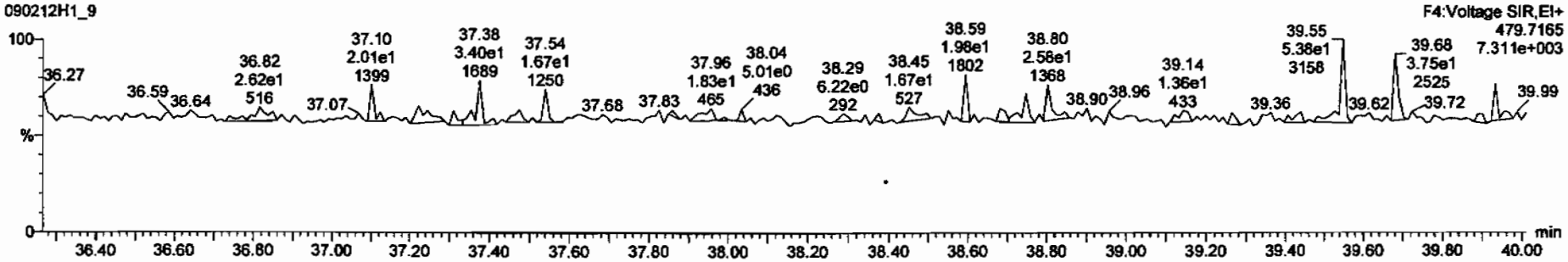

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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OCDF

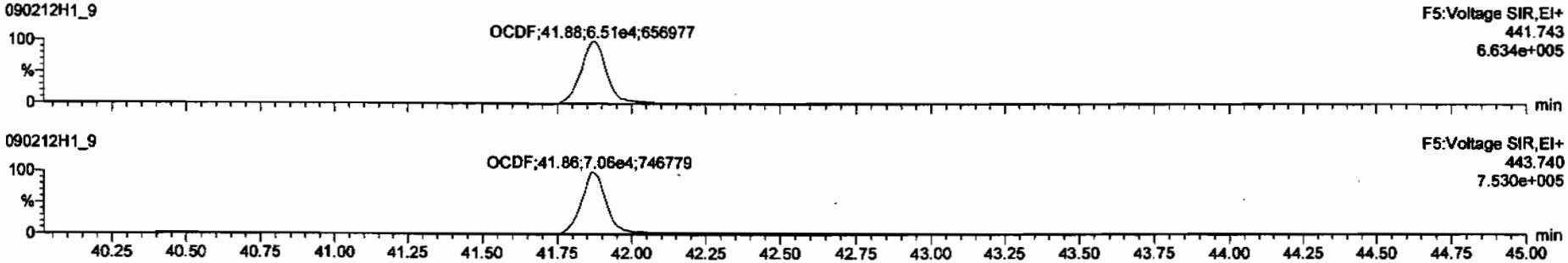

13C-OCDF

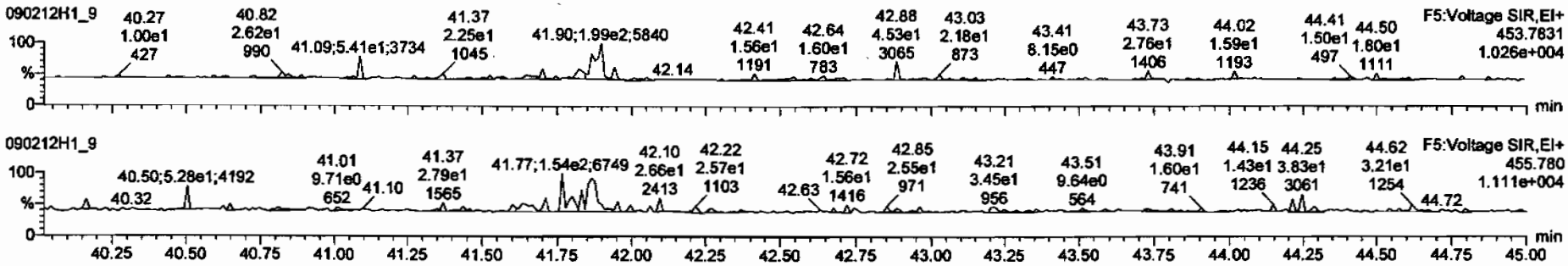

DPE5

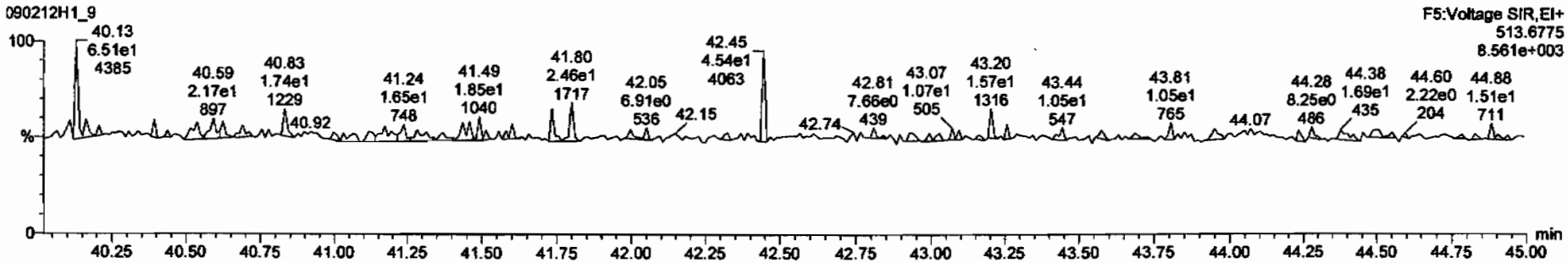

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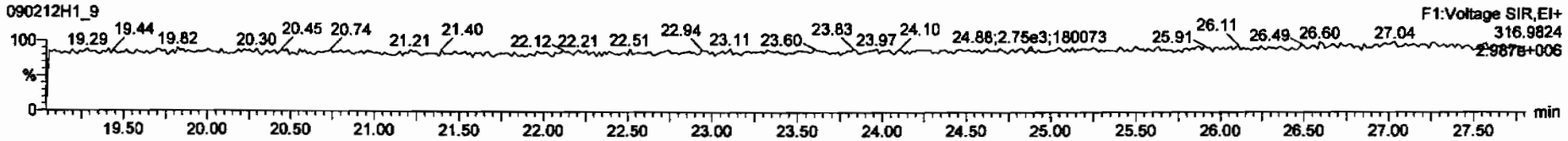

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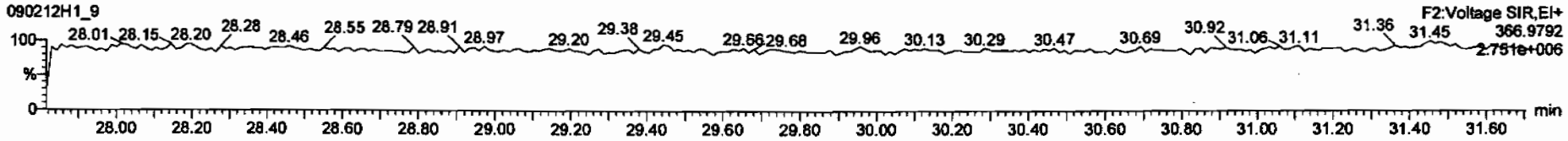

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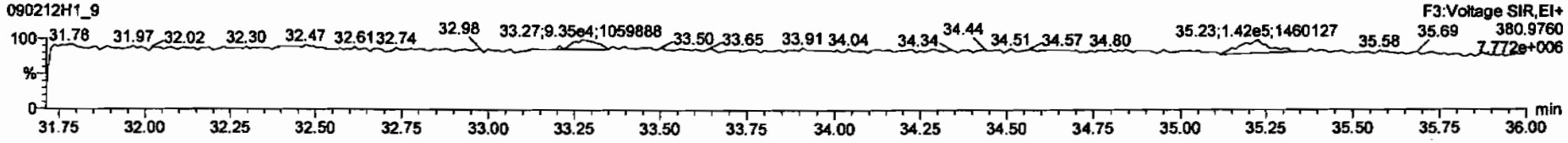

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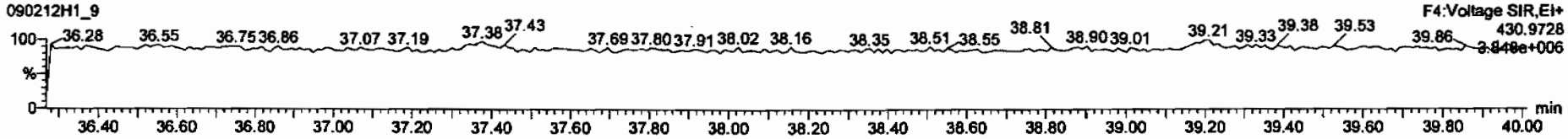

PFK5

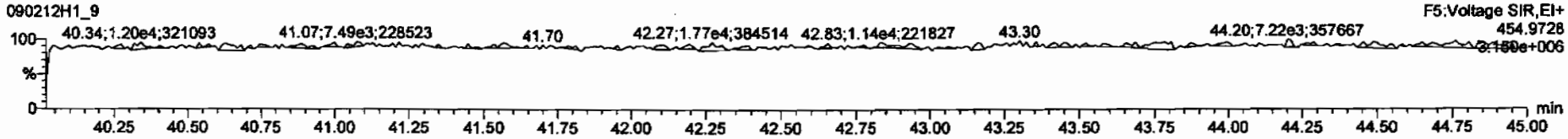

Monday, June 29, 2009

REQUEST NUMBER: 09-2508

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2508

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	EPA:906.0	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	HASL-300:ISOPU	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	HASL-300:ISOU	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:6010B	1	CAMO-09-10464	R	6/25/2009	

Monday, June 29, 2009

REQUEST NUMBER: 09-2508

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-10465	R	6/25/2009	
	SW-846:6850	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:8082	1	CAMO-09-10465	R	6/25/2009	
	SW-846:8260B	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:8270C	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:8321A_MOD	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:9012A	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:9045C	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2508

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2508

REQUEST NUMBER: 09-2508

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10464	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10464	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10464	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10464	1	POLY	H3	Ice	R
CAMO-09-10464	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10464	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10464	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10465	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10465	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10465	1	POLY	H3	Ice	R
CAMO-09-10465	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10465	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10465	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10465	1	AMBER GLASS	8270C+8082	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/29/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10464

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		09:15	SUB-MEDIA:	UA	↓
PRS ID:	03-007	ok	SAMPLE TECH CODE:	CBS	J.B. 6/25/09 H.A.
LOCATION ID:	MO-605525	MO-604998	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	6.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	7.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 Day Full data package	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	15 Day Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2		8290	125 ML GLASS	Ice		
		GS+TAL Metals	1 LITER POLY	Ice		
		H3	500 ML POLY	Ice		
		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	↓	↓

SAMPLE DESC: Tan / Grey / white, indurated, dry tuff.

SAMPLE COMMENTS: Tuff Interface @ 1.0' bgs. Sample collected 5.0' below interface ~~03-007-05 (E) of bldg. 03-159~~ J.B 6/25/09

LOCATION DESC: 03-007-05 (E) of bldg. 03-159

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

Bγ ≤ 855 dpm

PID ambient / reading 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) TL McFarland

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/25/09 1550	Sherri Sherwood	6/25/09 4:00

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10465

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	QBT4	ok
TIME COLLECTED (HH:MM)		1015	SUB-MEDIA:	UA	↓
PRS ID:	03-007	ok	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605526	MO-605170	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	6.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	7.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	15 Day Full Data Package
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+TAL Metals	1 LITER POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	ISOU+ISOPU+ISOTH	1 LITER POLY	None	↓	↓
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	↓

SAMPLE DESC: Grayish white dry indurated tuff

SAMPLE COMMENTS: Tuff interface at 1.0 bgs, sample collected 5 ft below interface

LOCATION DESC: 03-007.06 South of security fence

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 8 dpm PID ambient reading 0.0 / 0.0 dpm

βγ ≤ 1264 dpm

COLLECTED BY (PRINT) TLMcFarland **REVIEWED BY (PRINT)** J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch [signature]	6/25/09 1550	(Printed Name) Sherri Sherwood [signature]	6/25/09 4:00

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2508 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eric T. Mink ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): VOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. The ICV and/or CCV %Ds were >20% for bromomethane and 1,2-dibromo-3-chloropropane. All the associated sample results were NDs and, thus, were qualified UJ,V7c.
3. The bromofluorobenzene surrogate %Rs for both the samples were < the laboratory's LAL but ≤10%. The acetone sample results were detects and, thus, were qualified J-,V3a. All the other associated sample results were NDs and, thus, were qualified UJ,V3a. It should be noted that the bromofluorobenzene surrogate %Rs for the MS and MSD were < the laboratory's LAL but ≤10%. These are QC samples and, thus, not sample data were qualified.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: Eric T. Mik	DATE: 7/28/09
Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☐	☒	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☐	☐	☒	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☐	☒	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☒	☐	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☐	☒	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☒	☐	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☒	☐	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☐	☒	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10464	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 12:47	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T114.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.07	ug/kg	0.364	1.07	UJ,V3a
74-87-3	Chloromethane	U	1.07	ug/kg	0.322	1.07	
75-01-4	Vinyl chloride	U	1.07	ug/kg	0.322	1.07	
74-83-9	Bromomethane	U	1.07	ug/kg	0.322	1.07	UJ,V7c
75-00-3	Chloroethane	U	1.07	ug/kg	0.322	1.07	UJ,V3a
75-69-4	Trichlorofluoromethane	U	1.07	ug/kg	0.322	1.07	UJ,V3a
67-64-1	Acetone	J	2.10	ug/kg	1.78	5.36	J-,V3a
75-35-4	1,1-Dichloroethylene	U	1.07	ug/kg	0.322	1.07	UJ,V3a
74-88-4	Iodomethane	U	5.36	ug/kg	1.72	5.36	
75-09-2	Methylene chloride	U	5.36	ug/kg	2.14	5.36	
75-15-0	Carbon disulfide	U	5.36	ug/kg	1.34	5.36	
156-60-5	trans-1,2-Dichloroethylene	U	1.07	ug/kg	0.322	1.07	
75-34-3	1,1-Dichloroethane	U	1.07	ug/kg	0.322	1.07	
78-93-3	2-Butanone	U	5.36	ug/kg	1.61	5.36	
156-59-2	cis-1,2-Dichloroethylene	U	1.07	ug/kg	0.322	1.07	
594-20-7	2,2-Dichloropropane	U	1.07	ug/kg	0.322	1.07	
67-66-3	Chloroform	U	1.07	ug/kg	0.322	1.07	
74-97-5	Bromochloromethane	U	1.07	ug/kg	0.354	1.07	
71-55-6	1,1,1-Trichloroethane	U	1.07	ug/kg	0.322	1.07	
563-58-6	1,1-Dichloropropene	U	1.07	ug/kg	0.322	1.07	
56-23-5	Carbon tetrachloride	U	1.07	ug/kg	0.322	1.07	
107-06-2	1,2-Dichloroethane	U	1.07	ug/kg	0.322	1.07	
71-43-2	Benzene	U	1.07	ug/kg	0.322	1.07	
79-01-6	Trichloroethylene	U	1.07	ug/kg	0.354	1.07	
78-87-5	1,2-Dichloropropane	U	1.07	ug/kg	0.322	1.07	
75-27-4	Bromodichloromethane	U	1.07	ug/kg	0.322	1.07	
74-95-3	Dibromomethane	U	1.07	ug/kg	0.322	1.07	
108-10-1	4-Methyl-2-pentanone	U	5.36	ug/kg	1.34	5.36	
10061-01-5	cis-1,3-Dichloropropylene	U	1.07	ug/kg	0.322	1.07	
108-88-3	Toluene	U	1.07	ug/kg	0.322	1.07	
10061-02-6	trans-1,3-Dichloropropylene	U	1.07	ug/kg	0.322	1.07	
79-00-5	1,1,2-Trichloroethane	U	1.07	ug/kg	0.322	1.07	
591-78-6	2-Hexanone	U	5.36	ug/kg	1.61	5.36	
142-28-9	1,3-Dichloropropane	U	1.07	ug/kg	0.322	1.07	
127-18-4	Tetrachloroethylene	U	1.07	ug/kg	0.322	1.07	
124-48-1	Dibromochloromethane	U	1.07	ug/kg	0.322	1.07	
106-93-4	1,2-Dibromoethane	U	1.07	ug/kg	0.322	1.07	
108-90-7	Chlorobenzene	U	1.07	ug/kg	0.322	1.07	

ETM
7/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10464	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 12:47	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T114.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.07	ug/kg	0.322	1.07	UJ,V3a
179601-23-1	m,p-Xylenes	U	2.14	ug/kg	0.322	2.14	
95-47-6	o-Xylene	U	1.07	ug/kg	0.322	1.07	
100-42-5	Styrene	U	1.07	ug/kg	0.322	1.07	
75-25-2	Bromoform	U	1.07	ug/kg	0.322	1.07	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.07	ug/kg	0.322	1.07	
96-18-4	1,2,3-Trichloropropane	U	1.07	ug/kg	0.322	1.07	
108-86-1	Bromobenzene	U	1.07	ug/kg	0.322	1.07	
103-65-1	n-Propylbenzene	U	1.07	ug/kg	0.322	1.07	
95-49-8	2-Chlorotoluene	U	1.07	ug/kg	0.322	1.07	
98-82-8	Isopropylbenzene	U	1.07	ug/kg	0.322	1.07	
108-67-8	1,3,5-Trimethylbenzene	U	1.07	ug/kg	0.322	1.07	
106-43-4	4-Chlorotoluene	U	1.07	ug/kg	0.322	1.07	
98-06-6	tert-Butylbenzene	U	1.07	ug/kg	0.322	1.07	
95-63-6	1,2,4-Trimethylbenzene	U	1.07	ug/kg	0.322	1.07	
135-98-8	sec-Butylbenzene	U	1.07	ug/kg	0.322	1.07	
99-87-6	4-Isopropyltoluene	U	1.07	ug/kg	0.322	1.07	
541-73-1	1,3-Dichlorobenzene	U	1.07	ug/kg	0.322	1.07	
106-46-7	1,4-Dichlorobenzene	U	1.07	ug/kg	0.322	1.07	
104-51-8	n-Butylbenzene	U	1.07	ug/kg	0.322	1.07	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.07	ug/kg	0.322	1.07	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.36	ug/kg	1.72	5.36	UJ,V3a
630-20-6	1,1,1,2-Tetrachloroethane	U	1.07	ug/kg	0.322	1.07	
95-50-1	1,2-Dichlorobenzene	U	1.07	ug/kg	0.322	1.07	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	17.2	ug/kg	0	J
	unknown siloxane	17.2	807	ug/kg	0	J
	unknown siloxane	19.15	72.2	ug/kg	0	J
	unknown siloxane	21.25	9.42	ug/kg	0	J

ETM
7/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 13:16	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T115.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.357	1.05	UJ,V3a
74-87-3	Chloromethane	U	1.05	ug/kg	0.315	1.05	
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.315	1.05	
74-83-9	Bromomethane	U	1.05	ug/kg	0.315	1.05	UJ,V7c
75-00-3	Chloroethane	U	1.05	ug/kg	0.315	1.05	UJ,V3a
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.315	1.05	UJ,V3a
67-64-1	Acetone	J	2.03	ug/kg	1.74	5.26	J-,V3a
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.315	1.05	UJ,V3a
74-88-4	Iodomethane	U	5.26	ug/kg	1.68	5.26	
75-09-2	Methylene chloride	U	5.26	ug/kg	2.10	5.26	
75-15-0	Carbon disulfide	U	5.26	ug/kg	1.31	5.26	
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05	
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.315	1.05	
78-93-3	2-Butanone	U	5.26	ug/kg	1.58	5.26	
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05	
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05	
67-66-3	Chloroform	U	1.05	ug/kg	0.315	1.05	
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.347	1.05	
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.315	1.05	
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.315	1.05	
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.315	1.05	
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.315	1.05	
71-43-2	Benzene	U	1.05	ug/kg	0.315	1.05	
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.347	1.05	
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05	
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.315	1.05	
74-95-3	Dibromomethane	U	1.05	ug/kg	0.315	1.05	
108-10-1	4-Methyl-2-pentanone	U	5.26	ug/kg	1.31	5.26	
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05	
108-88-3	Toluene	U	1.05	ug/kg	0.315	1.05	
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05	
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.315	1.05	
591-78-6	2-Hexanone	U	5.26	ug/kg	1.58	5.26	
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.315	1.05	
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.315	1.05	
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.315	1.05	
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.315	1.05	
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.315	1.05	

ETM
7/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 13:16	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T115.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.315	1.05	UJ,V3a
179601-23-1	m,p-Xylenes	U	2.10	ug/kg	0.315	2.10	
95-47-6	o-Xylene	U	1.05	ug/kg	0.315	1.05	
100-42-5	Styrene	U	1.05	ug/kg	0.315	1.05	
75-25-2	Bromoform	U	1.05	ug/kg	0.315	1.05	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05	
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.315	1.05	
108-86-1	Bromobenzene	U	1.05	ug/kg	0.315	1.05	
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.315	1.05	
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.315	1.05	
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.315	1.05	
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05	
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.315	1.05	
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.315	1.05	
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05	
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.315	1.05	
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.315	1.05	
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05	
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05	
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.315	1.05	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.315	1.05	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.26	ug/kg	1.68	5.26	UJ,V3a
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05	
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	unknown	4.33	12.5	ug/kg	0	J
	unknown siloxane	17.2	644	ug/kg	0	J
	unknown siloxane	19.15	76.8	ug/kg	0	J
	unknown siloxane	21.24	25.4	ug/kg	0	J

ETM
7/28/09

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2508 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eric T. Mink ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ HIGH EXPLOSIVES
- ☐ DIOXIN FURANS
- ☐ LCMSMS PERCHLORATES
- ☐ TPH-DRO
- ☐ METALS
- ☐ PCB CONGENERS
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ GENERAL CHEMISTRY
- ☐ RADIOCHEMISTRY
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ OTHER (DESCRIBE): SVOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. The ICV and/or CCV %Ds were >20% for benzoic acid, p-nitroaniline and 2-methyl-4,6-dinitrophenol. The associated sample results were NDs and, thus, were qualified UJ,SV7c.
3. It should be noted that a few MS/MSD %Rs and RPDs were not within the laboratory's QC limits. It should also be noted that the MS/MSD analyses were performed on a LANL sample from a different RN and the raw data for the parent sample was not provided in the data package. However, MS/MSD analyses are not required for this analysis and, thus, no sample data were qualified.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: Eric T. Mik	DATE: 7/28/09
Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

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Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☐	☒	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☐	☒	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☐	☒	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232582001	Date Received:	06/30/2009 09:15	%Moisture:	6.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10464	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 17:16	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.07 g	Final Volume:	1 mL
Data File:	s6g0211.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	356	ug/kg	71.3	356	
108-95-2	Phenol	U	356	ug/kg	71.3	356	
95-57-8	2-Chlorophenol	U	356	ug/kg	71.3	356	
106-46-7	1,4-Dichlorobenzene	U	356	ug/kg	71.3	356	
621-64-7	N-Nitrosodipropylamine	U	356	ug/kg	71.3	356	
59-50-7	4-Chloro-3-methylphenol	U	356	ug/kg	71.3	356	
83-32-9	Acenaphthene	U	35.6	ug/kg	11.8	35.6	
121-14-2	2,4-Dinitrotoluene	U	356	ug/kg	35.6	356	
100-02-7	4-Nitrophenol	U	356	ug/kg	118	356	
87-86-5	Pentachlorophenol	U	356	ug/kg	89.1	356	
129-00-0	Pyrene	U	35.6	ug/kg	10.7	35.6	
110-86-1	Pyridine	U	356	ug/kg	71.3	356	
62-53-3	Aniline	U	356	ug/kg	107	356	
111-44-4	bis(2-Chloroethyl) ether	U	356	ug/kg	71.3	356	
541-73-1	1,3-Dichlorobenzene	U	356	ug/kg	71.3	356	
100-51-6	Benzyl alcohol	U	356	ug/kg	107	356	
95-50-1	1,2-Dichlorobenzene	U	356	ug/kg	71.3	356	
108-60-1	bis(2-Chloroisopropyl)ether	U	356	ug/kg	71.3	356	
95-48-7	o-Cresol	U	356	ug/kg	71.3	356	
65794-96-9	m,p-Cresols	U	356	ug/kg	107	356	
67-72-1	Hexachloroethane	U	356	ug/kg	71.3	356	
98-95-3	Nitrobenzene	U	356	ug/kg	71.3	356	
78-59-1	Isophorone	U	356	ug/kg	71.3	356	
88-75-5	2-Nitrophenol	U	356	ug/kg	71.3	356	
105-67-9	2,4-Dimethylphenol	U	356	ug/kg	125	356	
111-91-1	bis(2-Chloroethoxy)methane	U	356	ug/kg	71.3	356	
120-83-2	2,4-Dichlorophenol	U	356	ug/kg	71.3	356	
65-85-0	Benzoic acid	U	713	ug/kg	178	713	UJ,SV7c
91-20-3	Naphthalene	U	35.6	ug/kg	10.7	35.6	
106-47-8	4-Chloroaniline	U	356	ug/kg	71.3	356	
87-68-3	Hexachlorobutadiene	U	356	ug/kg	71.3	356	
91-57-6	2-Methylnaphthalene	U	35.6	ug/kg	7.13	35.6	
77-47-4	Hexachlorocyclopentadiene	U	356	ug/kg	71.3	356	
88-06-2	2,4,6-Trichlorophenol	U	356	ug/kg	71.3	356	
95-95-4	2,4,5-Trichlorophenol	U	356	ug/kg	71.3	356	
91-58-7	2-Chloronaphthalene	U	35.6	ug/kg	11.8	35.6	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	356	ug/kg	71.3	356	
99-09-2	3-Nitroaniline	U	356	ug/kg	71.3	356	

ETM
7/28/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2508**	**Date Collected:**	**06/25/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232582001**	**Date Received:**	**06/30/2009 09:15**	**%Moisture:**	**6.7**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10464**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881964**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/02/2009 17:16**	**Analyst:**	**JMB3**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/02/2009 13:47**	**Aliquot:**	**30.07 g**	**Final Volume:**	**1 mL**
Data File:	**s6g0211.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	356	ug/kg	71.3	356	
606-20-2	2,6-Dinitrotoluene	U	356	ug/kg	35.6	356	
208-96-8	Acenaphthylene	U	35.6	ug/kg	10.7	35.6	
51-28-5	2,4-Dinitrophenol	U	713	ug/kg	135	713	
132-64-9	Dibenzofuran	U	356	ug/kg	71.3	356	
84-66-2	Diethylphthalate	U	356	ug/kg	71.3	356	
86-73-7	Fluorene	U	35.6	ug/kg	10.7	35.6	
7005-72-3	4-Chlorophenylphenylether	U	356	ug/kg	71.3	356	
534-52-1	2-Methyl-4,6-dinitrophenol	U	356	ug/kg	71.3	356	UJ,SV7c
100-01-6	4-Nitroaniline	U	356	ug/kg	107	356	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	356	ug/kg	71.3	356	
122-66-7	Azobenzene	U	356	ug/kg	71.3	356	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	356	ug/kg	71.3	356	
118-74-1	Hexachlorobenzene	U	356	ug/kg	71.3	356	
85-01-8	Phenanthrene	U	35.6	ug/kg	10.7	35.6	
120-12-7	Anthracene	U	35.6	ug/kg	7.13	35.6	
84-74-2	Di-n-butylphthalate	U	356	ug/kg	71.3	356	
206-44-0	Fluoranthene	U	35.6	ug/kg	10.7	35.6	
85-68-7	Butylbenzylphthalate	U	356	ug/kg	71.3	356	
56-55-3	Benzo(a)anthracene	U	35.6	ug/kg	10.7	35.6	
91-94-1	3,3'-Dichlorobenzidine	U	356	ug/kg	107	356	
218-01-9	Chrysene	U	35.6	ug/kg	10.7	35.6	
117-81-7	bis(2-Ethylhexyl)phthalate	U	356	ug/kg	71.3	356	
117-84-0	Di-n-octylphthalate	U	356	ug/kg	71.3	356	
205-99-2	Benzo(b)fluoranthene	U	35.6	ug/kg	10.7	35.6	
207-08-9	Benzo(k)fluoranthene	U	35.6	ug/kg	10.7	35.6	
50-32-8	Benzo(a)pyrene	U	35.6	ug/kg	10.7	35.6	
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.6	ug/kg	10.7	35.6	
53-70-3	Dibenzo(a,h)anthracene	U	35.6	ug/kg	10.7	35.6	
191-24-2	Benzo(ghi)perylene	U	35.6	ug/kg	10.7	35.6	
120-82-1	1,2,4-Trichlorobenzene	U	356	ug/kg	71.3	356	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	416	ug/kg		JA

ETM
7/28/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 17:38	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.2 g	**Final Volume:**	1 mL
Data File:	s6g0212.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	348	ug/kg	69.6	348	
108-95-2	Phenol	U	348	ug/kg	69.6	348	
95-57-8	2-Chlorophenol	U	348	ug/kg	69.6	348	
106-46-7	1,4-Dichlorobenzene	U	348	ug/kg	69.6	348	
621-64-7	N-Nitrosodipropylamine	U	348	ug/kg	69.6	348	
59-50-7	4-Chloro-3-methylphenol	U	348	ug/kg	69.6	348	
83-32-9	Acenaphthene	U	34.8	ug/kg	11.5	34.8	
121-14-2	2,4-Dinitrotoluene	U	348	ug/kg	34.8	348	
100-02-7	4-Nitrophenol	U	348	ug/kg	115	348	
87-86-5	Pentachlorophenol	U	348	ug/kg	87.0	348	
129-00-0	Pyrene	U	34.8	ug/kg	10.4	34.8	
110-86-1	Pyridine	U	348	ug/kg	69.6	348	
62-53-3	Aniline	U	348	ug/kg	104	348	
111-44-4	bis(2-Chloroethyl) ether	U	348	ug/kg	69.6	348	
541-73-1	1,3-Dichlorobenzene	U	348	ug/kg	69.6	348	
100-51-6	Benzyl alcohol	U	348	ug/kg	104	348	
95-50-1	1,2-Dichlorobenzene	U	348	ug/kg	69.6	348	
108-60-1	bis(2-Chloroisopropyl)ether	U	348	ug/kg	69.6	348	
95-48-7	o-Cresol	U	348	ug/kg	69.6	348	
65794-96-9	m,p-Cresols	U	348	ug/kg	104	348	
67-72-1	Hexachloroethane	U	348	ug/kg	69.6	348	
98-95-3	Nitrobenzene	U	348	ug/kg	69.6	348	
78-59-1	Isophorone	U	348	ug/kg	69.6	348	
88-75-5	2-Nitrophenol	U	348	ug/kg	69.6	348	
105-67-9	2,4-Dimethylphenol	U	348	ug/kg	122	348	
111-91-1	bis(2-Chloroethoxy)methane	U	348	ug/kg	69.6	348	
120-83-2	2,4-Dichlorophenol	U	348	ug/kg	69.6	348	
65-85-0	Benzoic acid	U	696	ug/kg	174	696	UJ,SV7c
91-20-3	Naphthalene	U	34.8	ug/kg	10.4	34.8	
106-47-8	4-Chloroaniline	U	348	ug/kg	69.6	348	
87-68-3	Hexachlorobutadiene	U	348	ug/kg	69.6	348	
91-57-6	2-Methylnaphthalene	U	34.8	ug/kg	6.96	34.8	
77-47-4	Hexachlorocyclopentadiene	U	348	ug/kg	69.6	348	
88-06-2	2,4,6-Trichlorophenol	U	348	ug/kg	69.6	348	
95-95-4	2,4,5-Trichlorophenol	U	348	ug/kg	69.6	348	
91-58-7	2-Chloronaphthalene	U	34.8	ug/kg	11.5	34.8	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	348	ug/kg	69.6	348	
99-09-2	3-Nitroaniline	U	348	ug/kg	69.6	348	

ETM
7/28/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2508**	**Date Collected:**	**06/25/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232582002**	**Date Received:**	**06/30/2009 09:15**	**%Moisture:**	**4.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10465**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881964**	**Inst:**	**MSD6.I**	**Dilution:**	**1**
Run Date:	**07/02/2009 17:38**	**Analyst:**	**JMB3**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/02/2009 13:47**	**Aliquot:**	**30.2 g**	**Final Volume:**	**1 mL**
Data File:	**s6g0212.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	348	ug/kg	69.6	348	
606-20-2	2,6-Dinitrotoluene	U	348	ug/kg	34.8	348	
208-96-8	Acenaphthylene	U	34.8	ug/kg	10.4	34.8	
51-28-5	2,4-Dinitrophenol	U	696	ug/kg	132	696	
132-64-9	Dibenzofuran	U	348	ug/kg	69.6	348	
84-66-2	Diethylphthalate	U	348	ug/kg	69.6	348	
86-73-7	Fluorene	U	34.8	ug/kg	10.4	34.8	
7005-72-3	4-Chlorophenylphenylether	U	348	ug/kg	69.6	348	
534-52-1	2-Methyl-4,6-dinitrophenol	U	348	ug/kg	69.6	348	UJ,SV7c
100-01-6	4-Nitroaniline	U	348	ug/kg	104	348	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	348	ug/kg	69.6	348	
122-66-7	Azobenzene	U	348	ug/kg	69.6	348	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	348	ug/kg	69.6	348	
118-74-1	Hexachlorobenzene	U	348	ug/kg	69.6	348	
85-01-8	Phenanthrene	U	34.8	ug/kg	10.4	34.8	
120-12-7	Anthracene	U	34.8	ug/kg	6.96	34.8	
84-74-2	Di-n-butylphthalate	U	348	ug/kg	69.6	348	
206-44-0	Fluoranthene	U	34.8	ug/kg	10.4	34.8	
85-68-7	Butylbenzylphthalate	U	348	ug/kg	69.6	348	
56-55-3	Benzo(a)anthracene	U	34.8	ug/kg	10.4	34.8	
91-94-1	3,3'-Dichlorobenzidine	U	348	ug/kg	104	348	
218-01-9	Chrysene	U	34.8	ug/kg	10.4	34.8	
117-81-7	bis(2-Ethylhexyl)phthalate	U	348	ug/kg	69.6	348	
117-84-0	Di-n-octylphthalate	U	348	ug/kg	69.6	348	
205-99-2	Benzo(b)fluoranthene	U	34.8	ug/kg	10.4	34.8	
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.4	34.8	
50-32-8	Benzo(a)pyrene	U	34.8	ug/kg	10.4	34.8	
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.4	34.8	
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.4	34.8	
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.4	34.8	
120-82-1	1,2,4-Trichlorobenzene	U	348	ug/kg	69.6	348	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	332	ug/kg		JA

ETM
7/28/09

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2508 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eric T. Mink ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. It should be noted that the MS/MSD analyses were performed on a LANL sample from a different RN. Also, the raw data for the parent sample was not provided in the data package. No sample data were qualified.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: Eric T. Mink DATE: 7/28/09

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☒	☐	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☒	☐	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☒	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10464

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2508

GEL Sample ID: 232582001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 93.3

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.536	2.14	3.10	ug/kg		1	08-JUL-09 19:50	per0708057a
	Perchlorate-O(18)			5.46	ug/kg		1	08-JUL-09 19:50	per0708057a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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ETM
7/28/09

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10465

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2508

GEL Sample ID: 232582002

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 95.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.526	2.1	2.14	ug/kg		1	08-JUL-09 19:58	per0708058a
	Perchlorate-O(18)			5.30	ug/kg		1	08-JUL-09 19:58	per0708058a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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7/28/09

DATA VALIDATION COVER SHEET

5122-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2508 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eric T. Mink ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☒ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In a CCV, the %D for 2-amino-4,6-dinitrotoluene was >20% with a positive bias. The associated sample results were NDs and, thus, were not qualified.
2. It should be noted that the raw ICAL data from the instrument used for the secondary HE analysis was not reported in the data package. Thus, surrogate RT criteria could not be evaluated. In addition, the raw ICAL data from the instrument used for the primary HE analysis was not reported in the data package. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: 1 Date: 07/29/09

VALIDATOR'S SIGNATURE: Eric T. Mik	DATE: 7/28/09
Form 5122-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time has shifted by more than 30 seconds.	R, UJ, HE0	J, HE0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE0b	R, HE0b
☐	☒	☐	3. The quantitating IS area count is <25% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow the method-specific windows.	R, HE1a	J, HE1a
☐	☒	☐	4. The IS area count for the quantitating IS is <70% but >25% of the average of that obtained from the calibration standards.	UJ, HE1b	J+, HE1b
☐	☒	☐	5. The IS area count for the quantitating IS is >130% of the average of that obtained from the calibration standards.	UJ, HE1c	J-, HE1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE1d	R, HE1d
☐	☒	☐	7. The surrogate is <10%R. Follow the external laboratory limits.	R, HE3	J-, HE3
☐	☒	☐	8. The surrogate is < the Lower Acceptance Limit but ≥10% recovery. Follow the external laboratory limits.	UJ, HE3a	J-, HE3a
☐	☒	☐	9. The surrogate %R value is > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE3b
☐	☐	☒	10. At least one surrogate is > the Upper Acceptance Limit and one surrogate is < the Lower Acceptance Limit. Follow the external laboratory limits.	UJ, HE3c	J, HE3c

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2 LC/MS/MS High Explosive Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	11. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE3d	R, HE3d
☐	☒	☐	12. The sample result is ≤5 times the concentration of the related analyte in the method blank.	U, HE4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, HE4a
☐	☐	☒	14. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, HE4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE4e	R, HE4e
☐	☒	☐	16. The absence of sample carry-over must be determined and verified.	N/A	R, N, HE4f
☐	☒	☐	17. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, HE7	J, HE7
☐	☒	☐	18. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is less < 0.99.	UJ, R, HE7a	J, HE7a
☐	☒	☐	19. The affected analytes were analyzed with a RRF of <0.05 in the initial calibration and/or CCV.	UJ, R, HE7b	J, HE7b
☒	☐	☐	20. The ICV and/or CCV were recovered outside the method limits.	UJ, R, HE7c	J, HE7c
☐	☒	☐	21. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, HE7d	J, HE7d
☐	☒	☐	22. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, HE7f	R, HE7f

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	23. The mass spectral documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE8a	R, HE8a
☐	☒	☐	24. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, HE9	J-, HE9
☐	☒	☐	25. The holding time was >2 times the applicable holding time requirement.	R, HE9a	J-, HE9a
☐	☒	☐	26. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, HE12	J-, HE12
☐	☒	☐	27. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, HE12a	J-, HE12a
☐	☒	☐	28. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE12b
☐	☒	☐	29. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE12c	R, HE12c
☐	☒	☐	30. The MS/MSD percent recovery was <10%.	R, HE12d	R, HE12d
☐	☒	☐	31. The MS/MSD percent recovery was >10% but <70%.	UJ, HE12e	J, HE12e
☐	☒	☐	32. The MS/MSD percent recover was >70%.	N/A	J+, HE12f
☐	☒	☐	33. The MS/MSD relative percent difference was >30%.	UJ, HE12g	J, HE12g
☐	☒	☐	34. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. (Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.)	UJ, R, HE15	R, HE15
☐	☒	☐	35. The sample was diluted because target analytes were > the initial verification calibration.	UJ, HE15a	J, HE15a

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST	
5122-2 **LC/MS/MS High Explosive Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The Contract Required Detection Limit Check Standard (CRI) sample did not pass method acceptance criteria.	UJ, R, HE16	J, HE16
☐	☒	☐	37. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, HE16c	R, HE16c
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, HE19	J, R, HE19
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, HE88	J, HE88

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10464

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582001

Sample Amount 2

Moisture: 6.7

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713018a

Date Analyzed: 13-JUL-09 23:17

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

ETM
7/28/09

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10464

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582001

Sample Amount 2

Moisture: 6.7

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0708016.wiff

Date Analyzed: 08-JUL-09 14:30

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10465

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582002

Sample Amount 2

Moisture: 4.9

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713021a

Date Analyzed: 14-JUL-09 00:46

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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7/28/09

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10465

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582002

Sample Amount 2

Moisture: 4.9

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0708019.wiff

Date Analyzed: 08-JUL-09 15:19

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

ETM
7/28/09

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2508 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eric T. Mink ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☒ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE): PCB

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. It should be noted that the MS/MSD analyses were performed on a LANL sample from a different RN. Also, the raw data for the parent sample was not provided in the data package. No sample data were qualified.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: Eric T. Mik	DATE: 7/28/09
Form 5116-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, P9	J-, P9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, P9b	R, P9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, P7	J, P7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, P7a	J, P7a
☐	☒	☐	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, P7d	J, P7d
☐	☐	☒	8. The multicomponent standard was not analyzed within 72 hours of the initial analysis.	R, P7e	J, P7e
☐	☒	☐	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
☐	☐	☒	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	11. The breakdown criteria have been exceeded. This can cause high bias in the reported results and potential false positive results for the breakdown products Endrin ketone, Endrin aldehyde, DDD, and DDE.	UJ, P13a	J+, P13a
☐	☐	☒	12. The breakdown documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P13b	R, P13b
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, P4	N/A
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X.	N/A	J, P4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	UJ, P4b	N/A
☐	☐	☒	16. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, P4d	N/A
☐	☒	☐	17. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P4e	R, P4e
☐	☒	☐	18. The analyte RT shifted by more than 0.05 minutes from the mid-level standard of the initial calibration.	R, P0	J, P0
☐	☒	☐	19. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P0b	R, P0b
☐	☒	☐	20. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, P3	J-, P3

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, P3a	J-, P3a
☐	☒	☐	22. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P3b
☐	☒	☐	23. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, P3c	J, P3c
☐	☒	☐	24. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P3d	R, P3d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, P12	J-, P12
☐	☒	☐	26. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, P12a	J-, P12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P12c	R, P12c
☐	☐	☒	29. The analyte was not confirmed on a second dissimilar column.	N/A	R, P8
☐	☐	☒	30. The second dissimilar column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P8a	R, P8a
☐	☒	☐	31. Duplicate, Dilution, or reanalysis.	UJ, P88	J, P88

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2 Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, P15	R, P15
☒	☐	☐	33. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, P19	J, R, P19

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 10:41	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	023f2301.d	**Column:**	1 CLP1	**Level:**	LOW
	023b2301.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.50	ug/kg	1.17	3.50	1
11104-28-2	Aroclor-1221	U	3.50	ug/kg	1.17	3.50	1
11141-16-5	Aroclor-1232	U	3.50	ug/kg	1.17	3.50	1
53469-21-9	Aroclor-1242	U	3.50	ug/kg	1.17	3.50	1
12672-29-6	Aroclor-1248	U	3.50	ug/kg	1.17	3.50	1
11097-69-1	Aroclor-1254	U	3.50	ug/kg	1.17	3.50	1
11096-82-5	Aroclor-1260	U	3.50	ug/kg	1.17	3.50	1

ETM
7/28/09

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2508 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eric T. Mink ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☒ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB, Tl and Mg were detected. The Tl sample results were detects ≤5X the MB concentration and, thus, were qualified U,I4. The Mg sample results were detects >50X the MB concentration and, thus, were not qualified, based on professional judgment.
2. In a CCB, Tl was detected. The associated sample results were detects ≤5X the blank concentration and, thus, were qualified U,I4b.
3. The MS %Rs were > the laboratory's UAL for Mg and K. The associated sample results were detects and, thus, were qualified J+,I6b. The MS %R was < the laboratory's LAL but ≥10% for Ba. The associated sample results were detects and, thus, were qualified J-,I6a. The MS %Rs were also <10% for Fe and Mn, and > the laboratory's UAL for Al. However, the associated parent sample concentrations were >4X the spike concentrations. Thus, the associated sample results were not qualified, based on professional judgment.
4. The duplicate RPDs were >35% for Ba, Co, Fe and Mn, and both the parent sample and duplicate results were ≥5X

DATA VALIDATION COVER SHEET

5118-1

Records Use only

Data Validation Cover Sheet

the PQLs. The associated sample results were detects and, thus, were qualified J,I10a.

5. The sample results that were > the MDLs but < the PQLs were "J" flagged by the laboratory. Thus, they were not further qualified J,I1.
6. It should be noted that all the matrix QC analyses were performed on LANL samples from different RNs. No sample data were qualified.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: Eric T. Mick DATE: 7/28/09

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☒	☐	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☐	☒	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☒	☐	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☒	☐	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2508 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232582001 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-10464 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 93.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3730000	ug/Kg		7150	21000	21000	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-36-0	Antimony	1050	ug/Kg	U	347	1050	1050	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-38-2	Arsenic	1290	ug/kg		205	1020	1020	2	MS	RMJ	07/14/09 15:53	090713-2	881838
7440-39-3	Barium J-,I6a	36800	ug/Kg		105	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-41-7	Beryllium	676	ug/kg		20.5	102	102	2	MS	RMJ	07/14/09 15:53	090713-2	881838
7440-43-9	Cadmium	525	ug/Kg	U	105	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-70-2	Calcium	1400000	ug/Kg		8410	26300	26300	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-47-3	Chromium	17300	ug/Kg		158	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-48-4	Cobalt J,I10a	1470	ug/Kg		158	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-50-8	Copper	3720	ug/Kg		315	1050	1050	1	P	HSC	07/08/09 14:18	070809A-1	881859
7439-89-6	Iron J,I10a	10000000	ug/Kg		8410	26300	26300	1	P	HSC	07/08/09 14:18	070809A-1	881859
7439-92-1	Lead	14000	ug/Kg		263	1050	1050	1	P	HSC	07/08/09 14:18	070809A-1	881859
7439-95-4	Magnesium J+,I6b	1060000	ug/Kg		8930	31500	31500	1	P	HSC	07/08/09 14:18	070809A-1	881859
7439-96-5	Manganese J,I10a	239000	ug/Kg		210	1050	1050	1	P	HSC	07/08/09 14:18	070809A-1	881859
7439-97-6	Mercury	9.91	ug/kg	J	4.13	12.1	12.1	1	AV	JXL1	07/13/09 12:01	071309S2-4	881916
7440-02-0	Nickel	6070	ug/kg		102	409	409	2	MS	RMJ	07/14/09 15:53	090713-2	881838
7440-09-7	Potassium J+,I6b	605000	ug/Kg		6730	26300	26300	1	P	HSC	07/08/09 14:18	070809A-1	881859
7782-49-2	Selenium	583	ug/kg	J	511	1020	1020	2	MS	RMJ	07/14/09 23:12	090714-3	881838
7440-22-4	Silver	526	ug/Kg		105	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-23-5	Sodium	237000	ug/Kg		7360	26300	26300	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-28-0	Thallium U,I4	305	ug/kg		61.4	205	205	2	MS	RMJ	07/14/09 15:53	090713-2	881838
7440-62-2	Vanadium	10100	ug/Kg		105	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-66-6	Zinc	45300	ug/Kg		347	1050	1050	1	P	HSC	07/08/09 14:18	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.524	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.51	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.53	g	30	mL	07/10/09	AXG2

ETM
7/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2508 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232582002 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-10465 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1940000	ug/Kg		6950	20500	20500	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-36-0	Antimony	1020	ug/Kg	U	337	1020	1020	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-38-2	Arsenic	1360	ug/kg		205	1030	1030	2	MS	RMJ	07/14/09 15:59	090713-2	881838
7440-39-3	Barium J-,I6a	45100	ug/Kg		102	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-41-7	Beryllium	386	ug/kg		20.5	103	103	2	MS	RMJ	07/14/09 15:59	090713-2	881838
7440-43-9	Cadmium	511	ug/Kg	U	102	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-70-2	Calcium	1030000	ug/Kg		8180	25600	25600	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-47-3	Chromium	16100	ug/Kg		153	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-48-4	Cobalt J,I10a	1050	ug/Kg		153	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-50-8	Copper	2070	ug/Kg		307	1020	1020	1	P	HSC	07/08/09 14:25	070809A-1	881859
7439-89-6	Iron J,I10a	9230000	ug/Kg		8180	25600	25600	1	P	HSC	07/08/09 14:25	070809A-1	881859
7439-92-1	Lead	4120	ug/Kg		256	1020	1020	1	P	HSC	07/08/09 14:25	070809A-1	881859
7439-95-4	Magnesium J+,I6b	711000	ug/Kg		8690	30700	30700	1	P	HSC	07/08/09 14:25	070809A-1	881859
7439-96-5	Manganese J,I10a	239000	ug/Kg		205	1020	1020	1	P	HSC	07/08/09 14:25	070809A-1	881859
7439-97-6	Mercury	6.63	ug/kg	J	4.22	12.4	12.4	1	AV	JXL1	07/13/09 12:03	071309S2-4	881916
7440-02-0	Nickel	3890	ug/kg		103	411	411	2	MS	RMJ	07/14/09 15:59	090713-2	881838
7440-09-7	Potassium J+,I6b	440000	ug/Kg		6540	25600	25600	1	P	HSC	07/08/09 14:25	070809A-1	881859
7782-49-2	Selenium	625	ug/kg	J	513	1030	1030	2	MS	RMJ	07/14/09 23:16	090714-3	881838
7440-22-4	Silver	318	ug/Kg	J	102	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-23-5	Sodium	218000	ug/Kg		7160	25600	25600	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-28-0	Thallium U,I4	104	ug/kg	J	61.6	205	205	2	MS	RMJ	07/14/09 15:59	090713-2	881838
7440-62-2	Vanadium	6220	ug/Kg		102	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-66-6	Zinc	41200	ug/Kg		337	1020	1020	1	P	HSC	07/08/09 14:25	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.512	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.514	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.508	g	30	mL	07/10/09	AXG2

ETM
7/28/09

DATA VALIDATION COVER SHEET

5120-1

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Los Alamos NATIONAL LABORATORY

Data Validation Cover Sheet

Section I.

REQUEST NUMBER: 09-2508 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eric T. Mink ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☒ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB, total CN was detected. The associated result for sample CAMO-09-10465 was a detect ≤5X the MB concentration and, thus, was qualified U,I4. The other associated sample result was an ND and, thus, was not qualified.
2. It should be noted that the total CN and nitrate matrix QC analyses were performed on LANL parent samples from different RNs. No sample data were qualified.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: Eric T. Mink DATE: 7/28/09

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☐	☒	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☐	☒	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2508

Client Sample ID:	CAMO-09-10465	Project:	LANL01004
Sample ID:	232582002	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	4.86%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 22.2C	H	8.34		0.010	0.100	SU	1	TXT1 07/01/09	1244	881740	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	160	U,I4	68.7	253	ug/kg	1	AXC2 07/02/09	1001	881270	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND		0.315	1.05	mg/kg	1	MAR1 07/10/09	1837	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

ETM
7/28/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2508

Client Sample ID:	CAMO-09-10464	Project:	LANL01004
Sample ID:	232582001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	6.71%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.1C	H	7.57	0.010	0.100	SU	1	TXT1 07/01/09	1236	881740	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	67.5	248	ug/kg	1	AXC2 07/02/09	1000	881270	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.322	1.07	mg/kg	1	MAR1 07/10/09	1808	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

ETM
7/28/09

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2508 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eric T. Mink ORGANIZATION: Analytical Quality Associates, Inc

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☒ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The gamma spec sample results that were rejected by the laboratory due to spectral interference, no valid peak or low abundance were qualified R,R5a. In the QC samples, several results were also rejected by the laboratory. No sample data were qualified as a result.
2. The iso-Th tracer %R was < the laboratory's LAL for sample CAMO-09-10464. The associated alpha spec Th-230 sample result was an ND and, thus, was not qualified. All the other associated sample results were detects and, thus, were qualified J+,R3b.
3. The duplicate RER value for gamma spec Pb-212 was >1. The associated sample results were detects and, thus, were qualified J,R10.
4. The sample results that were ≤ the MDCs were qualified U,R5.
5. It should be noted that no MS analysis was performed for tritium. An LCS was analyzed and, thus, no sample data

DATA VALIDATION COVER SHEET

5119-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

were qualified.

6. It should be noted that the iso-U duplicate analysis associated with sample -10465 and iso-U, gamma spec, and tritium duplicate analyses associated with both samples were performed on LANL samples from different RNs. No sample data were qualified.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: Eric T. Mik DATE: 7/28/09

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☐	☒	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☒	☐	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☒	☐	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 21, 2009

Client Sample ID:	CAMO-09-10464	Project:	LANL01004
Sample ID:	232582001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	6.71%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00	U,R5	0.0223	+/-0.00132	0.050	pCi/g		MXE1	07/13/09	2154	884520	2
Plutonium-239/240	U	0.00263	U,R5	0.0272	+/-0.00187	0.050	pCi/g						
ISOTH "Dry Weight Corrected"													
Thorium-228		1.29	J+,R3b	0.905	+/-0.202	0.100	pCi/g		HAKB	07/17/09	1946	885114	5
Thorium-230	U	0.628	U,R5	0.693	+/-0.120	0.100	pCi/g						
Thorium-232		1.34	J+,R3b	0.256	+/-0.198	0.100	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.508		0.305	+/-0.0715	0.100	pCi/g		KXM4	07/09/09	2053	882673	8
Uranium-235/236	U	0.0254	U,R5	0.140	+/-0.0187	0.100	pCi/g						
Uranium-238		0.387		0.119	+/-0.0608	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0698	U,R5	0.326	+/-0.101	0.200	pCi/g		MXR1	07/09/09	0814	881931	9
Bismuth-211	UI	3.39	R,R5a	0.364	+/-0.275		pCi/g						
Bismuth-214		0.953		0.127	+/-0.081	0.200	pCi/g						
Cadmium-109	UI	2.04	R,R5a	1.33	+/-0.502		pCi/g						
Cerium-139	U	-0.0126	U,R5	0.0522	+/-0.0161	0.050	pCi/g						
Cesium-134	U	0.0297		0.0936	+/-0.0272	0.100	pCi/g						
Cesium-137	U	0.00337		0.0679	+/-0.0202	0.100	pCi/g						
Cobalt-60	U	0.0352		0.0823	+/-0.0231	0.100	pCi/g						
Europium-152	U	0.125		0.182	+/-0.0565	0.200	pCi/g						
Lanthanum-140	U	-0.0453		0.127	+/-0.0419		pCi/g						
Lead-212		1.43	J,R10	0.0967	+/-0.0903	0.100	pCi/g						
Lead-214		1.18		0.133	+/-0.100	0.100	pCi/g						
Mercury-203	U	0.0135	U,R5	0.081	+/-0.024	0.100	pCi/g						
Potassium-40		33.5		0.694	+/-1.63	1.00	pCi/g						
Radium-223	U	0.201	U,R5	1.22	+/-0.403		pCi/g						
Radium-224	UI	3.62	R,R5a	1.10	+/-0.657		pCi/g						
Radium-226		0.953		0.127	+/-0.081		pCi/g						
Radium-228		1.62		0.211	+/-0.178	0.500	pCi/g						
Ruthenium-106	U	-0.133	U,R5	0.568	+/-0.174	0.800	pCi/g						
Sodium-22	U	-0.0396		0.0834	+/-0.0275	0.080	pCi/g						
Strontium-85	U	0.028		0.0717	+/-0.024		pCi/g						

ETM
7/28/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 21, 2009

Client Sample ID: CAMO-09-10464
Sample ID: 232582001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Thallium-208		0.464		0.0645	+/-0.047	0.080	pCi/g						
Thorium-227	U	0.221	U.R5	0.751	+/-0.215		pCi/g						
Thorium-231	U	0.201		1.22	+/-0.403		pCi/g						
Thorium-234	U	0.0588		2.53	+/-1.34	2.00	pCi/g						
Tin-113	U	-0.0131		0.083	+/-0.0255	0.100	pCi/g						
Uranium-235	U	0.153		0.402	+/-0.122	0.500	pCi/g						
Yttrium-88	U	0.0257		0.071	+/-0.0192	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		542		213	+/-79.9	250	pCi/L		KXK2	07/15/09	0038	883020	10

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Pu-11-RC Modified
5	DOE EML HASL-300, Th-01-RC Modified
6	DOE EML HASL-300, Th-01-RC Modified
7	DOE EML HASL-300, Th-01-RC Modified
8	DOE EML HASL-300, U-02-RC Modified
9	EML HASL 300, 4.5.2.3
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	93.1	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	43.5 *	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	52.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported

ETM
7/28/09

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 21, 2009

Client Sample ID:	CAMO-09-10465	Project:	LANL01004
Sample ID:	232582002	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	4.86%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00118	U,R5	0.0195	+/-0.00243	0.050	pCi/g		KXM4	07/09/09	2051	882671	2
Plutonium-239/240	U	0.00	U,R5	0.0239	+/-0.0011	0.050	pCi/g						
ISOTH "Dry Weight Corrected"													
Thorium-228		1.01		0.347	+/-0.111	0.100	pCi/g		HAKB	07/08/09	1919	882541	3
Thorium-230		0.423		0.266	+/-0.0631	0.100	pCi/g						
Thorium-232		0.823		0.0979	+/-0.0956	0.100	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.334		0.244	+/-0.0532	0.100	pCi/g		KXM4	07/09/09	2053	882673	4
Uranium-235/236	U	0.0142	U,R5	0.112	+/-0.0187	0.100	pCi/g						
Uranium-238		0.428		0.095	+/-0.0586	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0353	U,R5	0.134	+/-0.0434	0.200	pCi/g		MXR1	07/09/09	0815	881931	5
Bismuth-211	UI	2.89	R,R5a	0.449	+/-0.271		pCi/g						
Bismuth-214		1.02		0.152	+/-0.106	0.200	pCi/g						
Cadmium-109	UI	3.94	R,R5a	1.12	+/-0.491		pCi/g						
Cerium-139	U	-0.000599	U,R5	0.0572	+/-0.0173	0.050	pCi/g						
Cesium-134	U	0.109		0.115	+/-0.0544	0.100	pCi/g						
Cesium-137	U	-0.0414		0.0783	+/-0.0262	0.100	pCi/g						
Cobalt-60	U	-0.0149		0.0855	+/-0.0275	0.100	pCi/g						
Europium-152	U	-0.0263		0.203	+/-0.0702	0.200	pCi/g						
Lanthanum-140	U	-0.0659		0.158	+/-0.0548		pCi/g						
Lead-212		1.26	J,R10	0.107	+/-0.0801	0.100	pCi/g						
Lead-214		1.01		0.138	+/-0.0977	0.100	pCi/g						
Mercury-203	UI	0.137	R,R5a	0.0801	+/-0.0381	0.100	pCi/g						
Potassium-40		34.8		0.531	+/-1.59	1.00	pCi/g						
Radium-223	U	-0.447	U,R5	1.36	+/-0.480		pCi/g						
Radium-224	UI	4.12	R,R5a	1.22	+/-0.727		pCi/g						
Radium-226		1.02		0.152	+/-0.106		pCi/g						
Radium-228		1.52		0.284	+/-0.207	0.500	pCi/g						
Ruthenium-106	U	0.0919	U,R5	0.681	+/-0.204	0.800	pCi/g						
Sodium-22	U	-0.0113	U,R5	0.119	+/-0.037	0.080	pCi/g						
Strontium-85	UI	0.105	R,R5a	0.0909	+/-0.0264		pCi/g						
Thallium-208		0.384		0.091	+/-0.0549	0.080	pCi/g						

ETM
7/28/09

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Certificate of Analysis

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Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 21, 2009

Client Sample ID: CAMO-09-10465
Sample ID: 232582002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Thorium-227	U	-0.177	U,R5	0.723	+/-0.229		pCi/g						
Thorium-231	U	-0.447	U,R5	1.36	+/-0.480		pCi/g						
Thorium-234		1.60		1.29	+/-0.505	2.00	pCi/g						
Tin-113	U	0.0218	U,R5	0.0932	+/-0.027	0.100	pCi/g						
Uranium-235	U	0.0583		0.426	+/-0.128	0.500	pCi/g						
Yttrium-88	U	-0.00393		0.087	+/-0.0269	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		357		217	+/-73.7	250	pCi/L		KXK2	07/15/09	0216	883020	6

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Th-01-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	87.3	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	97.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	70.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

ETM
7/28/09

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2508

REQUEST NUMBER: 09-2508

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232582

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10464	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10464	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10464	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10464	1	POLY	H3	Ice	R
CAMO-09-10464	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10464	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10464	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10465	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10465	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10465	1	POLY	H3	Ice	R
CAMO-09-10465	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10465	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10465	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10465	1	AMBER GLASS	8270C+8082	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/29/09	1400	Patricia Dent	[illegible]	6/30/09	09:15
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Monday, June 29, 2009

REQUEST NUMBER: 09-2508

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2508

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	EPA:906.0	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	HASL-300:ISOPU	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	HASL-300:ISOU	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:6010B	1	CAMO-09-10464	R	6/25/2009	

Monday, June 29, 2009

REQUEST NUMBER: 09-2508

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-10465	R	6/25/2009	
	SW-846:8850	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:8082	1	CAMO-09-10465	R	6/25/2009	
	SW-846:8260B	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:8270C	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:8321A_MOD	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:9012A	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:9045C	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2508

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 01, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232582
SDG: 09-2508

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 30, 2009, and analyzed for Explosives by LCMSMS, GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2508
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232582
SDG: 09-2508

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pH 1080

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Standards Data 1544
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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232582
SDG # : 09-2508

July 01, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 30, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Explosives by LCMSMS, GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for

Valerie Davis

Project Manager

List of current GEL Certifications as of 01 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2508

REQUEST NUMBER: 09-2508

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS: 232582%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10464	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10464	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10464	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10464	1	POLY	H3	Ice	R
CAMO-09-10464	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10464	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10464	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10465	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10465	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10465	1	POLY	H3	Ice	R
CAMO-09-10465	1	POLY	ISOU+ISOPU+ISOTH	None	R
CAMO-09-10465	1	AMBER GLASS	NMED Explosives list	Ice	R
CAMO-09-10465	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10465	1	AMBER GLASS	8270C+8082	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/29/09	1400	Patricia Dent	[illegible]	6/30/09	09:15
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Monday, June 29, 2009

REQUEST NUMBER: 09-2508

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2508

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	EPA:906.0	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	HASL-300:ISOPU	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	HASL-300:ISOU	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:6010B	1	CAMO-09-10464	R	6/25/2009	

Monday, June 29, 2009

REQUEST NUMBER: 09-2508

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-10465	R	6/25/2009	
	SW-846:6850	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:8082	1	CAMO-09-10465	R	6/25/2009	
	SW-846:8260B	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:8270C	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:8321A_MOD	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:9012A	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
	SW-846:9045C	1	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2508

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2508**
Received By: Patricia Dent	**Date Received: JUNE 30, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,23C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5789 3C
7209 7847 5778 23C

PM (or PMA) review: Initials PCa Date 1 Jul 09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 29JUN09
ActWgt: 52.0 LB MAN
System#: 8014176/CAFE2361
Account: 5 *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B010MR2A05128GD0

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5789 Form 0201

TUE
Deliver By:
30JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156140-434 NRT V3.04-05

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 29JUN09
ActWgt: 27.0 LB MAN
System#: 8014176/CAFE2361
Account: 5 *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B010MR2A05128GD0

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5789 Form 0201

TUE
Deliver By:
30JUN09

CHS A1

29407 -SC-US XX CHSA

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

Case Narrative

ChemStation Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2508

Method/Analysis Information

Procedure:	**Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method:	SW846 8260B
Prep Method:	SW846 5030
Analytical Batch Number:	882632
Prep Batch Number:	882630

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201874617	Method Blank (MB)
1201874620	Laboratory Control Sample (LCS)
1201874621	Laboratory Control Sample (LCS)
1201874618	232582001(CAMO-09-10464) Post Spike (PS)
1201874619	232582001(CAMO-09-10464) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Chemstation software package. False positives have been removed from the quantitation reports per standard operating procedures (SOP) section 19.1.2. False

positive analytes are designated on the quantitation report with a 'd' qualifier.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Samples 1201874618 (CAMO-09-10464MS), 1201874619 (CAMO-09-10464MSD), 232582001 (CAMO-09-10464) and 232582002 (CAMO-09-10465) did not pass surrogate recoveries. Sample re-analyses and/or confirmation by spike analysis confirmed the results. See NCR 709074.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232582001 (CAMO-09-10464) was designated for spike analysis in this SDG.

Matrix Spike (PS) Recovery Statement
The spike recoveries for this SDG were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate recoveries for this SDG were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system.

Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-analyses were required for samples in this SDG due to unacceptable surrogate recoveries and/or due to possible carry-over.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
NCR # 709074 was generated for samples in this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may have required manual integrations due to software limitations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG. Please note that non-requested target analytes that are reported on the quantitation reports will not be present as TICS on the Form I. These detected analytes are included in the calibrated method and as a result cannot be reported on the TIC quantitation report.

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA2.I	Gas Chromatograph/Mass Spectrometer	HP7890N/HP5975C	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2510 GEL Work Order: 232591

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

E Organics--Concentration of the target analyte exceeds the instrument calibration range

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this case narrative:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 21 JUL 2009 **Title: Data Validator**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10464	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 12:47	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T114.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.07	ug/kg	0.364	1.07
74-87-3	Chloromethane	U	1.07	ug/kg	0.322	1.07
75-01-4	Vinyl chloride	U	1.07	ug/kg	0.322	1.07
74-83-9	Bromomethane	U	1.07	ug/kg	0.322	1.07
75-00-3	Chloroethane	U	1.07	ug/kg	0.322	1.07
75-69-4	Trichlorofluoromethane	U	1.07	ug/kg	0.322	1.07
67-64-1	Acetone	J	2.10	ug/kg	1.78	5.36
75-35-4	1,1-Dichloroethylene	U	1.07	ug/kg	0.322	1.07
74-88-4	Iodomethane	U	5.36	ug/kg	1.72	5.36
75-09-2	Methylene chloride	U	5.36	ug/kg	2.14	5.36
75-15-0	Carbon disulfide	U	5.36	ug/kg	1.34	5.36
156-60-5	trans-1,2-Dichloroethylene	U	1.07	ug/kg	0.322	1.07
75-34-3	1,1-Dichloroethane	U	1.07	ug/kg	0.322	1.07
78-93-3	2-Butanone	U	5.36	ug/kg	1.61	5.36
156-59-2	cis-1,2-Dichloroethylene	U	1.07	ug/kg	0.322	1.07
594-20-7	2,2-Dichloropropane	U	1.07	ug/kg	0.322	1.07
67-66-3	Chloroform	U	1.07	ug/kg	0.322	1.07
74-97-5	Bromochloromethane	U	1.07	ug/kg	0.354	1.07
71-55-6	1,1,1-Trichloroethane	U	1.07	ug/kg	0.322	1.07
563-58-6	1,1-Dichloropropene	U	1.07	ug/kg	0.322	1.07
56-23-5	Carbon tetrachloride	U	1.07	ug/kg	0.322	1.07
107-06-2	1,2-Dichloroethane	U	1.07	ug/kg	0.322	1.07
71-43-2	Benzene	U	1.07	ug/kg	0.322	1.07
79-01-6	Trichloroethylene	U	1.07	ug/kg	0.354	1.07
78-87-5	1,2-Dichloropropane	U	1.07	ug/kg	0.322	1.07
75-27-4	Bromodichloromethane	U	1.07	ug/kg	0.322	1.07
74-95-3	Dibromomethane	U	1.07	ug/kg	0.322	1.07
108-10-1	4-Methyl-2-pentanone	U	5.36	ug/kg	1.34	5.36
10061-01-5	cis-1,3-Dichloropropylene	U	1.07	ug/kg	0.322	1.07
108-88-3	Toluene	U	1.07	ug/kg	0.322	1.07
10061-02-6	trans-1,3-Dichloropropylene	U	1.07	ug/kg	0.322	1.07
79-00-5	1,1,2-Trichloroethane	U	1.07	ug/kg	0.322	1.07
591-78-6	2-Hexanone	U	5.36	ug/kg	1.61	5.36
142-28-9	1,3-Dichloropropane	U	1.07	ug/kg	0.322	1.07
127-18-4	Tetrachloroethylene	U	1.07	ug/kg	0.322	1.07
124-48-1	Dibromochloromethane	U	1.07	ug/kg	0.322	1.07
106-93-4	1,2-Dibromoethane	U	1.07	ug/kg	0.322	1.07
108-90-7	Chlorobenzene	U	1.07	ug/kg	0.322	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2508**	**Date Collected:**	**06/25/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232582001**	**Date Received:**	**06/30/2009 09:15**	**%Moisture:**	**6.7**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10464**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 12:47**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 11:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T114.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.07	ug/kg	0.322	1.07
179601-23-1	m,p-Xylenes	U	2.14	ug/kg	0.322	2.14
95-47-6	o-Xylene	U	1.07	ug/kg	0.322	1.07
100-42-5	Styrene	U	1.07	ug/kg	0.322	1.07
75-25-2	Bromoform	U	1.07	ug/kg	0.322	1.07
79-34-5	1,1,2,2-Tetrachloroethane	U	1.07	ug/kg	0.322	1.07
96-18-4	1,2,3-Trichloropropane	U	1.07	ug/kg	0.322	1.07
108-86-1	Bromobenzene	U	1.07	ug/kg	0.322	1.07
103-65-1	n-Propylbenzene	U	1.07	ug/kg	0.322	1.07
95-49-8	2-Chlorotoluene	U	1.07	ug/kg	0.322	1.07
98-82-8	Isopropylbenzene	U	1.07	ug/kg	0.322	1.07
108-67-8	1,3,5-Trimethylbenzene	U	1.07	ug/kg	0.322	1.07
106-43-4	4-Chlorotoluene	U	1.07	ug/kg	0.322	1.07
98-06-6	tert-Butylbenzene	U	1.07	ug/kg	0.322	1.07
95-63-6	1,2,4-Trimethylbenzene	U	1.07	ug/kg	0.322	1.07
135-98-8	sec-Butylbenzene	U	1.07	ug/kg	0.322	1.07
99-87-6	4-Isopropyltoluene	U	1.07	ug/kg	0.322	1.07
541-73-1	1,3-Dichlorobenzene	U	1.07	ug/kg	0.322	1.07
106-46-7	1,4-Dichlorobenzene	U	1.07	ug/kg	0.322	1.07
104-51-8	n-Butylbenzene	U	1.07	ug/kg	0.322	1.07
96-12-8	1,2-Dibromo-3-chloropropane	U	1.07	ug/kg	0.322	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.36	ug/kg	1.72	5.36
630-20-6	1,1,1,2-Tetrachloroethane	U	1.07	ug/kg	0.322	1.07
95-50-1	1,2-Dichlorobenzene	U	1.07	ug/kg	0.322	1.07

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	17.2	ug/kg	0	J
	unknown siloxane	17.2	807	ug/kg	0	J
	unknown siloxane	19.15	72.2	ug/kg	0	J
	unknown siloxane	21.25	9.42	ug/kg	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232582002	Date Received:	06/30/2009 09:15	%Moisture:	4.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10465	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882632	Inst:	VOA2.I	Dilution:	1
Run Date:	07/06/2009 13:16	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/06/2009 11:01	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070609V2.b\2T115.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.357	1.05
74-87-3	Chloromethane	U	1.05	ug/kg	0.315	1.05
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.315	1.05
74-83-9	Bromomethane	U	1.05	ug/kg	0.315	1.05
75-00-3	Chloroethane	U	1.05	ug/kg	0.315	1.05
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.315	1.05
67-64-1	Acetone	J	2.03	ug/kg	1.74	5.26
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
74-88-4	Iodomethane	U	5.26	ug/kg	1.68	5.26
75-09-2	Methylene chloride	U	5.26	ug/kg	2.10	5.26
75-15-0	Carbon disulfide	U	5.26	ug/kg	1.31	5.26
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.315	1.05
78-93-3	2-Butanone	U	5.26	ug/kg	1.58	5.26
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05
67-66-3	Chloroform	U	1.05	ug/kg	0.315	1.05
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.347	1.05
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.315	1.05
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.315	1.05
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.315	1.05
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.315	1.05
71-43-2	Benzene	U	1.05	ug/kg	0.315	1.05
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.347	1.05
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.315	1.05
74-95-3	Dibromomethane	U	1.05	ug/kg	0.315	1.05
108-10-1	4-Methyl-2-pentanone	U	5.26	ug/kg	1.31	5.26
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05
108-88-3	Toluene	U	1.05	ug/kg	0.315	1.05
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.315	1.05
591-78-6	2-Hexanone	U	5.26	ug/kg	1.58	5.26
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.315	1.05
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.315	1.05
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.315	1.05
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.315	1.05
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.315	1.05

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 13:16	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T115.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.315	1.05
179601-23-1	m,p-Xylenes	U	2.10	ug/kg	0.315	2.10
95-47-6	o-Xylene	U	1.05	ug/kg	0.315	1.05
100-42-5	Styrene	U	1.05	ug/kg	0.315	1.05
75-25-2	Bromoform	U	1.05	ug/kg	0.315	1.05
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.315	1.05
108-86-1	Bromobenzene	U	1.05	ug/kg	0.315	1.05
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.315	1.05
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.315	1.05
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.315	1.05
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.315	1.05
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.315	1.05
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.315	1.05
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.315	1.05
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.315	1.05
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.315	1.05
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.26	ug/kg	1.68	5.26
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	12.5	ug/kg	0	J
	unknown siloxane	17.2	644	ug/kg	0	J
	unknown siloxane	19.15	76.8	ug/kg	0	J
	unknown siloxane	21.24	25.4	ug/kg	0	J

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2508

Matrix Type: SOLID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201874620	LCS for batch 882630	99	99	98
1201874621	LCS for batch 882630	98	97	97
1201874617	MB for batch 882630	102	102	102
232582001	CAMO-09-10464	100	97	44 *
232582002	CAMO-09-10465	103	96	49 *
1201874618	CAMO-09-10464PS	104	101	49 *
1201874619	CAMO-09-10464PSD	102	95	47 *

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-10464PS
Lab Sample ID: 1201874618
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:09
Prep Batch ID: 882630
Batch ID: 882632

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	38.7	77	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	42.3	85	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	43.1	86	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	40.3	81	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	44.2	88	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	44.1	88	51-151
67-64-1	PS	Acetone	250	1.96	J	186	74	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	45.1	90	61-125
74-88-4	PS	Iodomethane	250	0.00	U	234	93	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	43.2	86	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	230	92	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	43.2	86	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	44.7	89	62-125
78-93-3	PS	2-Butanone	250	0.00	U	183	73	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	44.3	89	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	46.9	94	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	44.3	89	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	43.2	86	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	46.3	93	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	44.1	88	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	46.7	93	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	44.0	88	58-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-10464PS
Lab Sample ID: 1201874618
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:09
Prep Batch ID: 882630
Batch ID: 882632

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	42.2	84	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	43.0	86	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	43.7	87	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	46.1	92	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	44.4	89	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	219	88	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	45.9	92	54-133
108-88-3	PS	Toluene	50.0	0.00	U	41.5	83	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	46.0	92	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	43.7	87	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	220	88	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	43.4	87	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	41.6	83	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	48.1	96	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	45.6	91	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	42.5	85	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	42.6	85	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	83.3	83	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	42.4	85	52-127
100-42-5	PS	Styrene	50.0	0.00	U	46.7	93	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	40.3	81	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	47.1	94	63-127

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	09-2508	**Sample Type:**	Post Spike
Client ID:	CAMO-09-10464PS	**Matrix:**	R
Lab Sample ID:	1201874618	**%Moisture:**	6.7
Instrument:	VOA2.I	**Analysis Date:**	07/06/2009 17:09
Analyst:	CDS1	**Prep Batch ID:**	882630
Purge Vol:	5 mL	**Batch ID:**	882632

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	45.3	91	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	43.5	87	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	42.9	86	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	43.3	87	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	42.8	86	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	42.8	86	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	42.5	85	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	43.2	86	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	42.8	86	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	42.6	85	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	41.4	83	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	41.5	83	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	40.7	81	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	41.1	82	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	54.9	110	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	45.2	90	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	41.6	83	43-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-10464PSD
Lab Sample ID: 1201874619
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:37
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	41.0	82	25-149	6	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	42.6	85	39-140	1	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	43.9	88	47-129	2	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	37.3	75	31-135	8	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	44.4	89	53-128	0	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	46.3	93	51-151	5	0-25
67-64-1	PSD	Acetone	250	1.96	J	190	75	21-153	2	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	45.9	92	61-125	2	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	235	94	53-142	0	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	42.0	84	59-136	3	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	237	95	46-129	3	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	43.3	87	56-126	0	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	44.1	88	62-125	2	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	188	75	26-152	2	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	43.2	86	60-130	3	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	44.2	88	55-135	6	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	43.3	87	60-127	2	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	42.9	86	61-131	1	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	45.8	92	59-131	1	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	45.5	91	57-128	3	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	47.1	94	58-136	1	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	42.9	86	58-126	2	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	**09-2508**	**Sample Type:**	**Post Spike Duplicate**
Client ID:	**CAMO-09-10464PSD**	**Matrix:**	**R**
Lab Sample ID:	**1201874619**	**%Moisture:**	**6.7**
Instrument:	**VOA2.I**	**Analysis Date:**	**07/06/2009 17:37**
Analyst:	**CDS1**	**Prep Batch ID:**	**882630**
Purge Vol:	**5 mL**	**Batch ID:**	**882632**

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	41.7	83	56-123	1	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	42.9	86	51-137	0	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	42.7	85	60-126	2	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	45.1	90	55-138	2	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	44.2	88	60-132	0	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	221	88	58-136	1	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	45.2	90	54-133	1	0-25
108-88-3	PSD	Toluene	50.0	0.00	U	41.1	82	52-128	1	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	44.6	89	53-137	3	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	42.9	86	59-130	2	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	222	89	31-148	1	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	42.4	85	57-127	3	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	42.2	84	51-128	1	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	47.1	94	59-139	2	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	45.0	90	57-133	1	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	41.5	83	53-122	2	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	41.7	83	51-125	2	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	81.8	82	50-126	2	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	41.2	82	52-127	3	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	45.4	91	49-135	3	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	40.2	80	57-149	0	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	47.1	94	63-127	0	0-25

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-10464PSD
Lab Sample ID: 1201874619
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:37
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	45.8	92	57-149	1	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	42.1	84	49-131	3	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	41.8	84	40-136	3	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	41.7	83	44-135	4	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	41.8	84	44-140	2	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	41.8	84	42-140	2	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	40.8	82	44-132	4	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	42.0	84	42-142	3	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	40.6	81	43-137	5	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	41.7	83	39-139	2	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	40.4	81	38-145	2	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	39.7	79	43-129	5	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	38.7	77	44-125	5	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	39.2	78	36-141	5	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	55.7	111	47-151	1	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	44.0	88	59-131	3	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	40.2	80	43-129	3	0-25

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: LCS for batch 882630
Lab Sample ID: 1201874620
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/06/2009 07:55
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	46.3	93	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	44.5	89	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	47.7	95	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	41.9	84	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	48.4	97	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	50.1	100	67-151
67-64-1	LCS	Acetone	250	0.0	235	94	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	48.9	98	70-125
74-88-4	LCS	Iodomethane	250	0.0	271	108	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	53.1	106	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	261	104	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	46.7	93	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	47.9	96	75-120
78-93-3	LCS	2-Butanone	250	0.0	226	90	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	47.2	94	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	51.0	102	74-135
67-66-3	LCS	Chloroform	50.0	0.0	47.9	96	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	49.5	99	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	51.1	102	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	49.7	99	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	53.0	106	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	45.9	92	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: LCS for batch 882630
Lab Sample ID: 1201874620
Instrument: VOA2.1
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/06/2009 07:55
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	46.7	93	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	49.0	98	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	47.1	94	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	50.6	101	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	49.2	98	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	239	96	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	51.9	104	80-125
108-88-3	LCS	Toluene	50.0	0.0	46.3	93	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	50.1	100	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	47.2	94	76-120
591-78-6	LCS	2-Hexanone	250	0.0	237	95	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	45.9	92	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	50.5	101	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	54.1	108	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	50.8	102	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	48.9	98	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	47.8	96	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	95.7	96	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	48.2	96	74-120
100-42-5	LCS	Styrene	50.0	0.0	53.5	107	76-125
75-25-2	LCS	Bromoform	50.0	0.0	46.6	93	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	49.0	98	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882630 **Matrix:** SOIL

Lab Sample ID: 1201874620

Instrument: VOA2.I **Analysis Date:** 07/06/2009 07:55 **Dilution:** 1

Analyst: CDS1 **Prep Batch ID:** 882630

Purge Vol: 5 mL **Batch ID:** 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	48.7	97	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	49.4	99	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	47.6	95	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	47.3	95	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	48.7	97	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	48.7	97	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	47.1	94	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	49.3	99	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	48.5	97	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	49.2	98	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	50.6	101	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	49.5	99	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	48.2	96	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	49.2	98	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	64.8	130	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	51.6	103	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	49.1	98	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882630 **Matrix:** SOIL

Lab Sample ID: 1201874621

Instrument: VOA2.I **Analysis Date:** 07/06/2009 08:53 **Dilution:** 1

Analyst: CDS1 **Prep Batch ID:** 882630

Purge Vol: 5 mL **Batch ID:** 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	237	95	52-139

Method Blank Summary

SDG Number:	09-2508	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882630	Instrument ID:	VOA2.I	Data File:	070609V2.b\2T113.D
Lab Sample ID:	1201874617	Prep Date:	07/06/2009 06:00	Analyzed:	07/06/09 12:19
Column:	DB-624				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 882630	1201874620	070609V2.b\2T104.D	07/06/09	0755
02	LCS for batch 882630	1201874621	070609V2.b\2T106.D	07/06/09	0853
03	CAMO-09-10464	232582001	070609V2.b\2T114.D	07/06/09	1247
04	CAMO-09-10465	232582002	070609V2.b\2T115.D	07/06/09	1316
05	CAMO-09-10464PS	1201874618	070609V2.b\2T123.D	07/06/09	1709
06	CAMO-09-10464PSD	1201874619	070609V2.b\2T124.D	07/06/09	1737

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2508

Instrument ID: VOA2.I **Injection Date/Time:** 01-JUL-09 09:58

Column Description: DB-624 **Lab File ID** 070109V2.b\2S301.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	25.2
75	30.0 - 60.0% of mass 95	47.2
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	71.5
175	5.0 -9.0% of mass 174	7.6
176	95.0 - 101.0% of mass 174	100.6
177	5.0 - 9.0% of mass 176	6.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALVSTD001 5ML MIX [A]	W2VM090701-01	070109V2.b\2S303.D	01-JUL-09 10:53
ICALVSTD002 5ML MIX [A]	W2VM090701-02	070109V2.b\2S304.D	01-JUL-09 11:22
ICALVSTD005 5ML MIX [A]	W2VM090701-03	070109V2.b\2S305.D	01-JUL-09 11:51
ICALVSTD010 5ML MIX [A]	W2VM090701-04	070109V2.b\2S306.D	01-JUL-09 12:21
ICALVSTD020 5ML MIX [A]	W2VM090701-05	070109V2.b\2S307.D	01-JUL-09 12:50
ICALVSTD050 5ML MIX [A]	W2VM090701-06	070109V2.b\2S308.D	01-JUL-09 13:19
ICALVSTD100 5ML MIX [A]	W2VM090701-07	070109V2.b\2S309.D	01-JUL-09 13:48
ICALVSTD0005 5ML MIX [A]	W2VM090701-08	070109V2.b\2S311.D	01-JUL-09 14:45
ICVLCS 5ML MIX [A] ULTRA(	W2VM090701-10	070109V2.b\2S313.D	01-JUL-09 15:44
ICALVSTD005S 5ML MIX [B]	W2VM090701-11	070109V2.b\2S315.D	01-JUL-09 16:41
ICALVSTD010S 5ML MIX [B]	W2VM090701-12	070109V2.b\2S316.D	01-JUL-09 17:10
ICALVSTD025S 5ML MIX [B]	W2VM090701-13	070109V2.b\2S317.D	01-JUL-09 17:39
ICALVSTD050S 5ML MIX [B]	W2VM090701-14	070109V2.b\2S318.D	01-JUL-09 18:08
ICALVSTD100S 5ML MIX [B]	W2VM090701-15	070109V2.b\2S319.D	01-JUL-09 18:37
ICALVSTD250S 5ML MIX [B]	W2VM090701-16	070109V2.b\2S320.D	01-JUL-09 19:07
ICALVSTD500S 5ML MIX [B]	W2VM090701-17	070109V2.b\2S321.D	01-JUL-09 19:36
ICVLCS 5ML MIX [B] 03	W2VM090701-18	070109V2.b\2S323.D	01-JUL-09 20:34

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2508

Instrument ID: VOA2.I **Injection Date/Time:** 06-JUL-09 06:57

Column Description: DB-624 **Lab File ID** 070609V2.b\2T102BFB.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	19.8
75	30.0 - 60.0% of mass 95	45.3
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	89.8
175	5.0 -9.0% of mass 174	7.6
176	95.0 - 101.0% of mass 174	100.8
177	5.0 - 9.0% of mass 176	6.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVVSTD050 5ML MIX [A] UV	W2VM090706-01	070609V2.b\2T102.D	06-JUL-09 06:57
BLK01LCS	1201874620	070609V2.b\2T104.D	06-JUL-09 07:55
CCVVSTD250S LCS 5ML MIX	UVM090701-08A	070609V2.b\2T105.D	06-JUL-09 08:24
BLK01SLCS	1201874621	070609V2.b\2T106.D	06-JUL-09 08:53
BLK01	1201874617	070609V2.b\2T113.D	06-JUL-09 12:19
CAMO-09-10464	232582001	070609V2.b\2T114.D	06-JUL-09 12:47
CAMO-09-10465	232582002	070609V2.b\2T115.D	06-JUL-09 13:16
CAMO-09-10464MS	1201874618	070609V2.b\2T123.D	06-JUL-09 17:09
CAMO-09-10464MSD	1201874619	070609V2.b\2T124.D	06-JUL-09 17:37

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA2.I

GC Column: DB-624

Client SDG: 09-2508

STD Analysis Time: 06-JUL-09 06:57

Data File: C:\msdchem\1\DATA\070609V2.b\2T102.D

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	1767232		12.4	1520020		16.0	957984		18.5
Upper Limit	3534464		12.9	3040040		16.5	1915968		19.0
Lower Limit	883616		11.9	760010		15.5	478992		18.0
Sample ID									
BLK01LCS	1717098		12.4	1483018		16.0	935834		18.5
BLK01SLCS	1749528		12.4	1519196		16.0	951777		18.5
BLK01	1648861		12.4	1385774		16.0	844664		18.5
CAMO-09-10464	1659365		12.4	1397403		16.0	868896		18.5
CAMO-09-10465	1713367		12.4	1451125		16.0	903499		18.5
CAMO-09-10464MS	1638626		12.4	1384078		16.0	861083		18.5
CAMO-09-10464MSD	1564606		12.4	1330232		16.0	819919		18.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10464	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 12:47	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T114.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.07	ug/kg	0.364	1.07
74-87-3	Chloromethane	U	1.07	ug/kg	0.322	1.07
75-01-4	Vinyl chloride	U	1.07	ug/kg	0.322	1.07
74-83-9	Bromomethane	U	1.07	ug/kg	0.322	1.07
75-00-3	Chloroethane	U	1.07	ug/kg	0.322	1.07
75-69-4	Trichlorofluoromethane	U	1.07	ug/kg	0.322	1.07
67-64-1	Acetone	J	2.10	ug/kg	1.78	5.36
75-35-4	1,1-Dichloroethylene	U	1.07	ug/kg	0.322	1.07
74-88-4	Iodomethane	U	5.36	ug/kg	1.72	5.36
75-09-2	Methylene chloride	U	5.36	ug/kg	2.14	5.36
75-15-0	Carbon disulfide	U	5.36	ug/kg	1.34	5.36
156-60-5	trans-1,2-Dichloroethylene	U	1.07	ug/kg	0.322	1.07
75-34-3	1,1-Dichloroethane	U	1.07	ug/kg	0.322	1.07
78-93-3	2-Butanone	U	5.36	ug/kg	1.61	5.36
156-59-2	cis-1,2-Dichloroethylene	U	1.07	ug/kg	0.322	1.07
594-20-7	2,2-Dichloropropane	U	1.07	ug/kg	0.322	1.07
67-66-3	Chloroform	U	1.07	ug/kg	0.322	1.07
74-97-5	Bromochloromethane	U	1.07	ug/kg	0.354	1.07
71-55-6	1,1,1-Trichloroethane	U	1.07	ug/kg	0.322	1.07
563-58-6	1,1-Dichloropropene	U	1.07	ug/kg	0.322	1.07
56-23-5	Carbon tetrachloride	U	1.07	ug/kg	0.322	1.07
107-06-2	1,2-Dichloroethane	U	1.07	ug/kg	0.322	1.07
71-43-2	Benzene	U	1.07	ug/kg	0.322	1.07
79-01-6	Trichloroethylene	U	1.07	ug/kg	0.354	1.07
78-87-5	1,2-Dichloropropane	U	1.07	ug/kg	0.322	1.07
75-27-4	Bromodichloromethane	U	1.07	ug/kg	0.322	1.07
74-95-3	Dibromomethane	U	1.07	ug/kg	0.322	1.07
108-10-1	4-Methyl-2-pentanone	U	5.36	ug/kg	1.34	5.36
10061-01-5	cis-1,3-Dichloropropylene	U	1.07	ug/kg	0.322	1.07
108-88-3	Toluene	U	1.07	ug/kg	0.322	1.07
10061-02-6	trans-1,3-Dichloropropylene	U	1.07	ug/kg	0.322	1.07
79-00-5	1,1,2-Trichloroethane	U	1.07	ug/kg	0.322	1.07
591-78-6	2-Hexanone	U	5.36	ug/kg	1.61	5.36
142-28-9	1,3-Dichloropropane	U	1.07	ug/kg	0.322	1.07
127-18-4	Tetrachloroethylene	U	1.07	ug/kg	0.322	1.07
124-48-1	Dibromochloromethane	U	1.07	ug/kg	0.322	1.07
106-93-4	1,2-Dibromoethane	U	1.07	ug/kg	0.322	1.07
108-90-7	Chlorobenzene	U	1.07	ug/kg	0.322	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10464	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 12:47	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T114.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.07	ug/kg	0.322	1.07
179601-23-1	m,p-Xylenes	U	2.14	ug/kg	0.322	2.14
95-47-6	o-Xylene	U	1.07	ug/kg	0.322	1.07
100-42-5	Styrene	U	1.07	ug/kg	0.322	1.07
75-25-2	Bromoform	U	1.07	ug/kg	0.322	1.07
79-34-5	1,1,2,2-Tetrachloroethane	U	1.07	ug/kg	0.322	1.07
96-18-4	1,2,3-Trichloropropane	U	1.07	ug/kg	0.322	1.07
108-86-1	Bromobenzene	U	1.07	ug/kg	0.322	1.07
103-65-1	n-Propylbenzene	U	1.07	ug/kg	0.322	1.07
95-49-8	2-Chlorotoluene	U	1.07	ug/kg	0.322	1.07
98-82-8	Isopropylbenzene	U	1.07	ug/kg	0.322	1.07
108-67-8	1,3,5-Trimethylbenzene	U	1.07	ug/kg	0.322	1.07
106-43-4	4-Chlorotoluene	U	1.07	ug/kg	0.322	1.07
98-06-6	tert-Butylbenzene	U	1.07	ug/kg	0.322	1.07
95-63-6	1,2,4-Trimethylbenzene	U	1.07	ug/kg	0.322	1.07
135-98-8	sec-Butylbenzene	U	1.07	ug/kg	0.322	1.07
99-87-6	4-Isopropyltoluene	U	1.07	ug/kg	0.322	1.07
541-73-1	1,3-Dichlorobenzene	U	1.07	ug/kg	0.322	1.07
106-46-7	1,4-Dichlorobenzene	U	1.07	ug/kg	0.322	1.07
104-51-8	n-Butylbenzene	U	1.07	ug/kg	0.322	1.07
96-12-8	1,2-Dibromo-3-chloropropane	U	1.07	ug/kg	0.322	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.36	ug/kg	1.72	5.36
630-20-6	1,1,1,2-Tetrachloroethane	U	1.07	ug/kg	0.322	1.07
95-50-1	1,2-Dichlorobenzene	U	1.07	ug/kg	0.322	1.07

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	17.2	ug/kg	0	J
	unknown siloxane	17.2	807	ug/kg	0	J
	unknown siloxane	19.15	72.2	ug/kg	0	J
	unknown siloxane	21.25	9.42	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
InstName : VOA2
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 17 07:14:43 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1659365	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1397403	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	868896	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1659365	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1397403	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	868896	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	463643	49.83 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 99.66%		
43) Toluene-d8	14.310	98	1597724	48.66 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 97.32%		
61) Bromofluorobenzene	17.216	95	297522	21.78 ug/L	0.01
Spiked Amount 50.000	Range 68 - 133		Recovery = 43.56%#		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.266	62	657	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.930	43	6693	1.96 ug/L	86
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.452	41	499	N.D.	
13) Methyl acetate	8.547	43	591	N.D.	
14) Carbon disulfide	8.251	76	1861	N.D.	
15) Methylene chloride	8.701	84	8480	Below Cal	94
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.812	43	489	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.239	83	743	N.D.	
25) 1,1,1-Trichloroethane	11.547	97	110	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.939	62	387	N.D.	
31) Benzene	12.033	78	696	N.D.	
32) Cyclohexene	12.389	67	385	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
InstName : VOA2
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 17 07:14:43 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D.	d
44) Toluene	14.381	91	3038	N.D.	
45) trans-1,3-Dichloroprop...	14.702	75	497	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.049	43	3280	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	260	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.196	91	1554	N.D.	
55) m,p-Xylenes	16.196	106	785	N.D.	
56) o-Xylene	16.635	106	244	N.D.	
57) Styrene	16.646	104	805	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.038	105	6472	N.D.	
62) 1,1,2,2-Tetrachloroethane	17.192	83	2601	N.D.	
63) 1,2,3-Trichloropropane	0.000		0m	N.D.	d
64) Bromobenzene	17.417	156	267	N.D.	
65) n-Propylbenzene	17.465	91	607	N.D.	
66) 1,3,5-Trimethylbenzene	17.631	105	141	N.D.	
67) 2-Chlorotoluene	17.702	91	841	N.D.	
68) 4-Chlorotoluene	17.702	91	841	N.D.	
69) tert-Butylbenzene	18.093	119	2947	N.D.	
70) 1,2,4-Trimethylbenzene	18.093	105	4928	N.D.	
71) sec-Butylbenzene	18.093	105	4928	N.D.	
72) 4-Isopropyltoluene	18.366	119	600	N.D.	
73) 1,3-Dichlorobenzene	18.401	146	724	N.D.	
74) 1,4-Dichlorobenzene	18.485	146	1299	N.D.	
75) n-Butylbenzene	18.805	91	117	N.D.	
76) 1,2-Dichlorobenzene	18.900	146	321	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	501	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.034	128	1554	N.D.	
81) 1,2,3-Trichlorobenzene	21.331	180	258	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.452	41	499	N.D.	
89) tert-Butyl Alcohol	8.879	59	1562	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	10.563	59	142	N.D.	
94) Ethyl acetate	10.812	43	489	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
InstName : VOA2
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 17 07:14:43 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95)	Propionitrile	0.000		0	N.D.	
96)	Methacrylonitrile	11.227	41	719	N.D.	
97)	Tetrahydrofuran	11.227	42	1162	N.D.	
98)	Isobutyl alcohol	11.927	41	227	N.D.	
99)	Methyl tert-amyl ether	0.000		0m	N.D. d	
100)	Methyl methacrylate	0.000		0	N.D.	
101)	1,4-Dioxane	0.000		0	N.D.	
102)	2-Nitropropane	0.000		0	N.D.	
104)	Ethyl methacrylate	0.000		0	N.D.	
106)	1-Chlorohexane	0.000		0m	N.D. d	
107)	cis-1,4-Dichloro-2-butene	0.000		0m	N.D. d	
108)	Cyclohexanone	17.192	42	1646	N.D.	
109)	trans-1,4-Dichloro-2-b...	17.204	53	805	N.D.	
110)	Pentachloroethane	0.000		0	N.D.	
111)	Benzyl chloride	18.603	91	595	N.D.	
112)	bis(2-Chloroisopropyl)...	0.000		0m	N.D. d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
InstName : VOA2
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 17 07:14:43 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

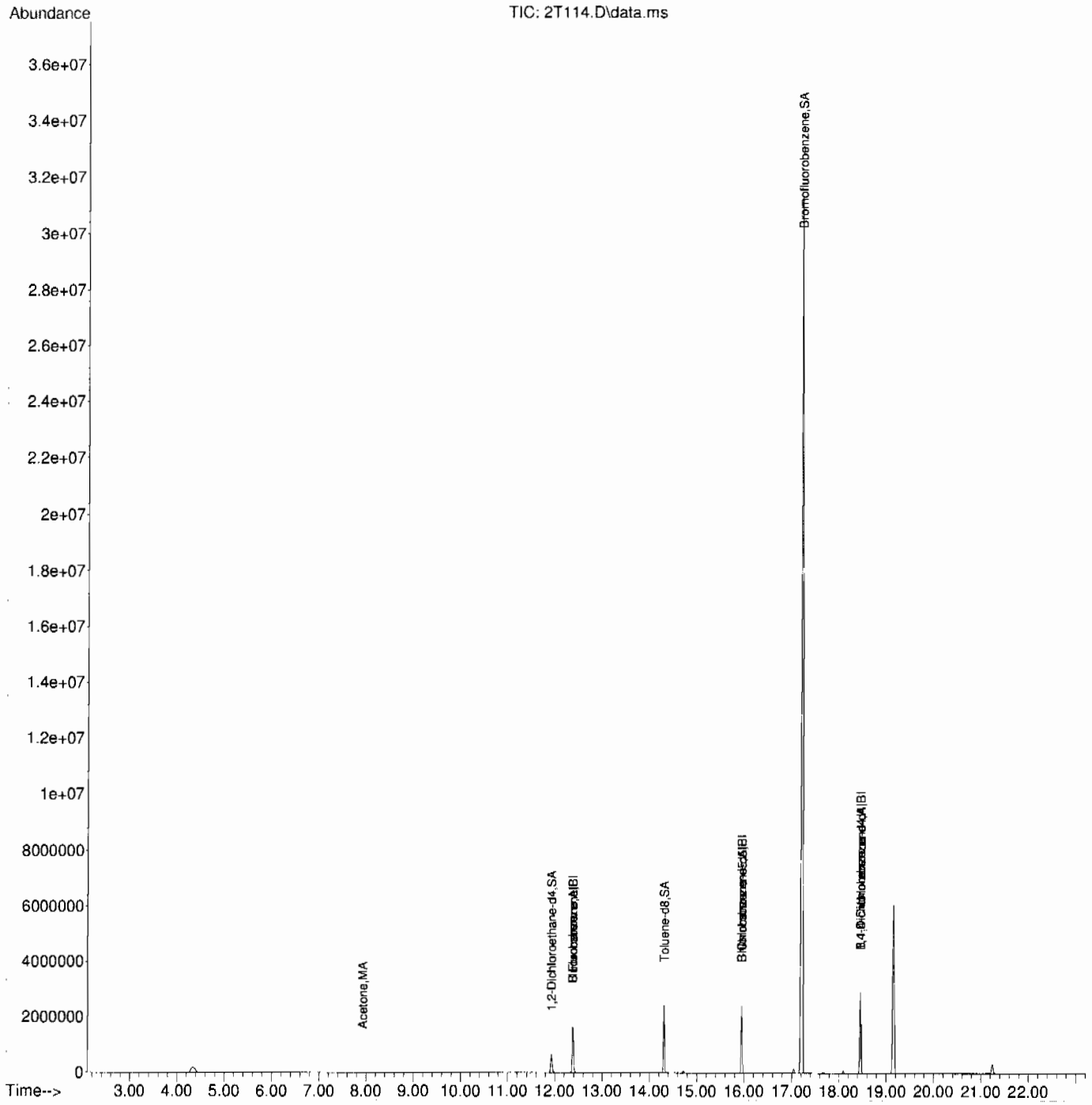

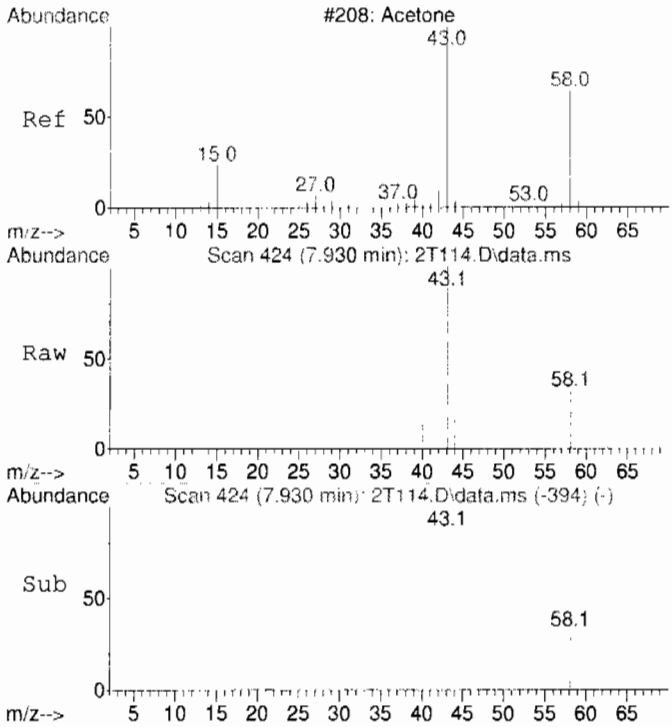

#9
Acetone
Concen: 1.96 ug/L
RT: 7.930 min Scan# 424
Delta R.T. 0.059 min
Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 43 Resp: 6693

Ion	Ratio	Lower	Upper
43	100		
58	21.6	0.0	59.3

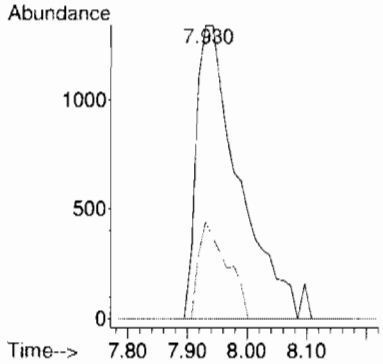

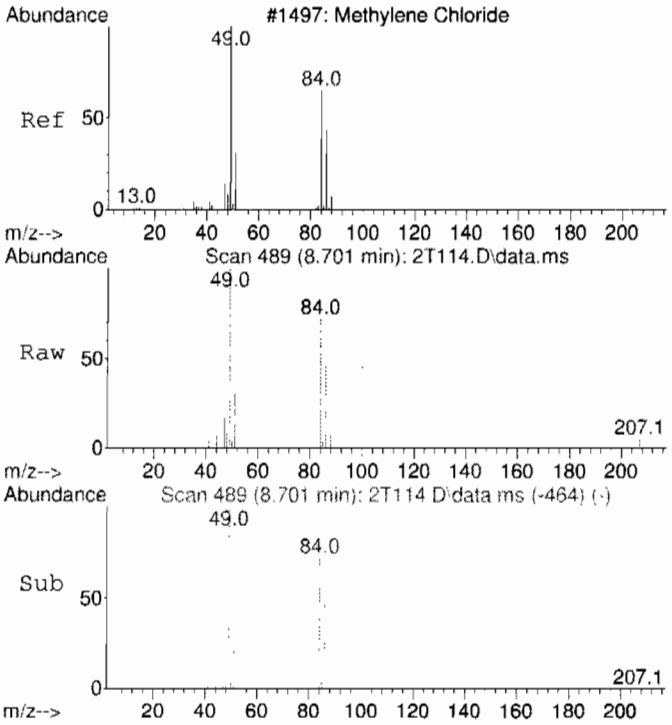

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 84 Resp: 8480

Ion	Ratio	Lower	Upper
84	100		
86	67.5	33.8	93.8
49	143.3	105.0	165.0

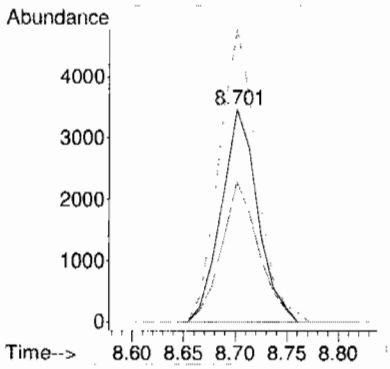

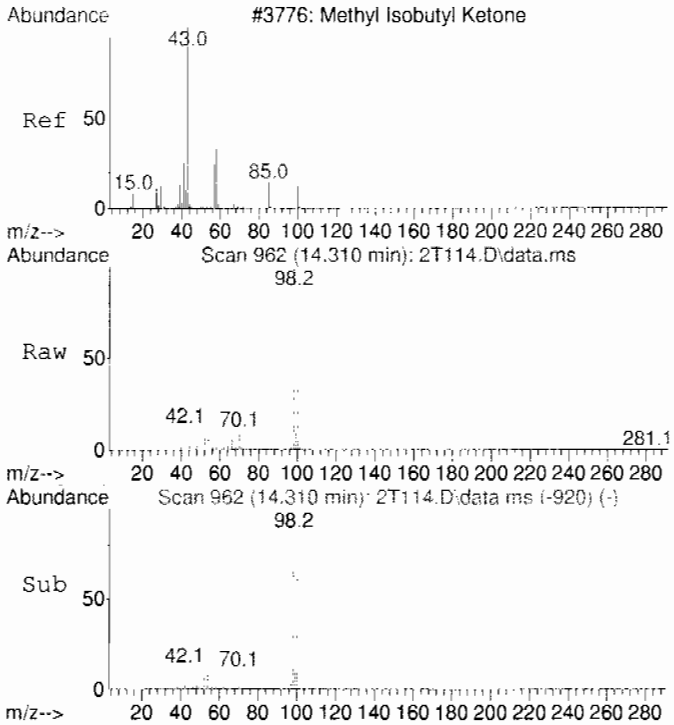

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.28 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 58 Resp: 13102

Ion	Ratio	Lower	Upper
58	100		
43	55.4	245.2	305.2#
100	8336.6	7.2	67.2#

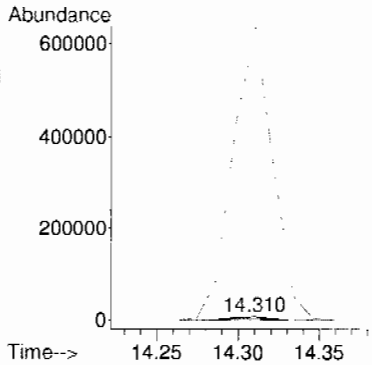

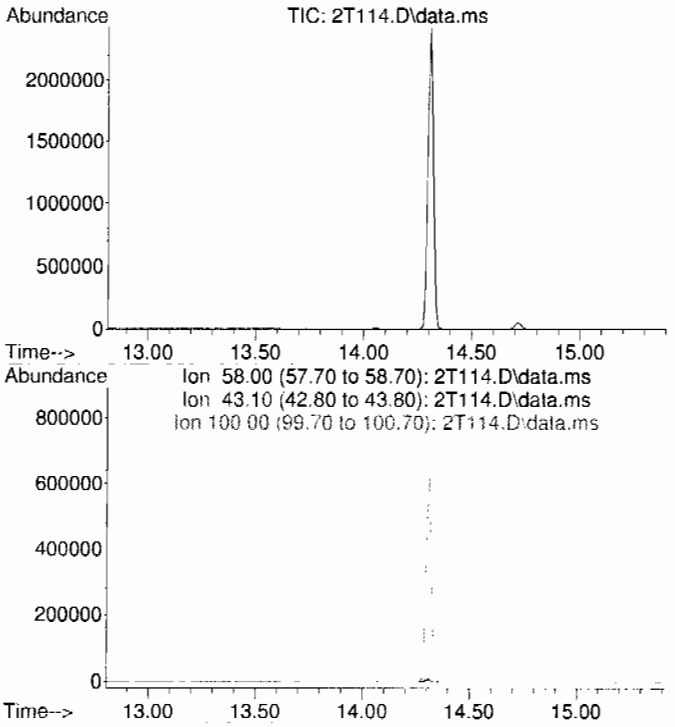

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

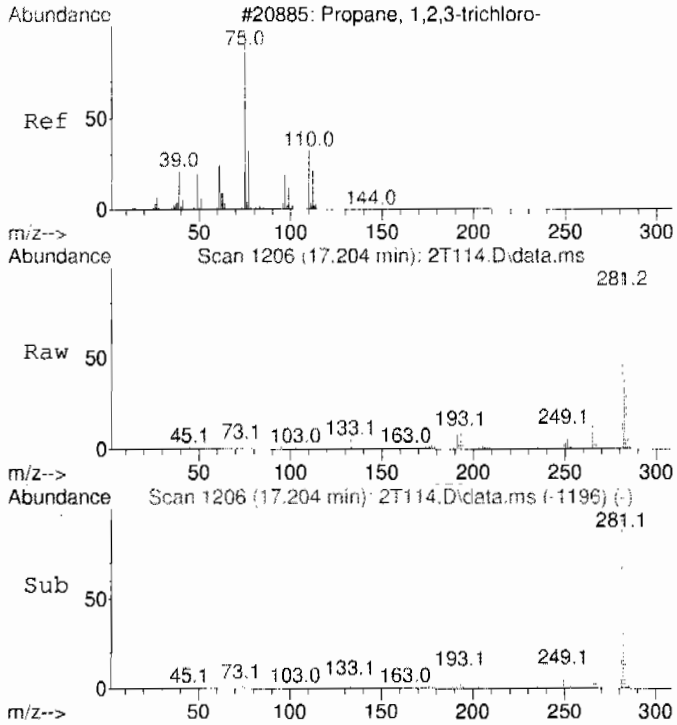

#63 BEFORE analyst integration
1,2,3-Trichloropropane
Concen: 16.74 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. -0.178 min
Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion:110 Resp: 41750

Ion	Ratio	Lower	Upper
110	100		
75	529.7	252.2	312.2#
77	16.5	629.3	689.3#

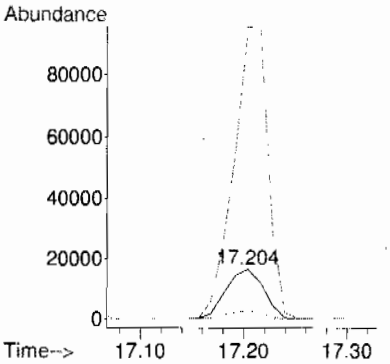

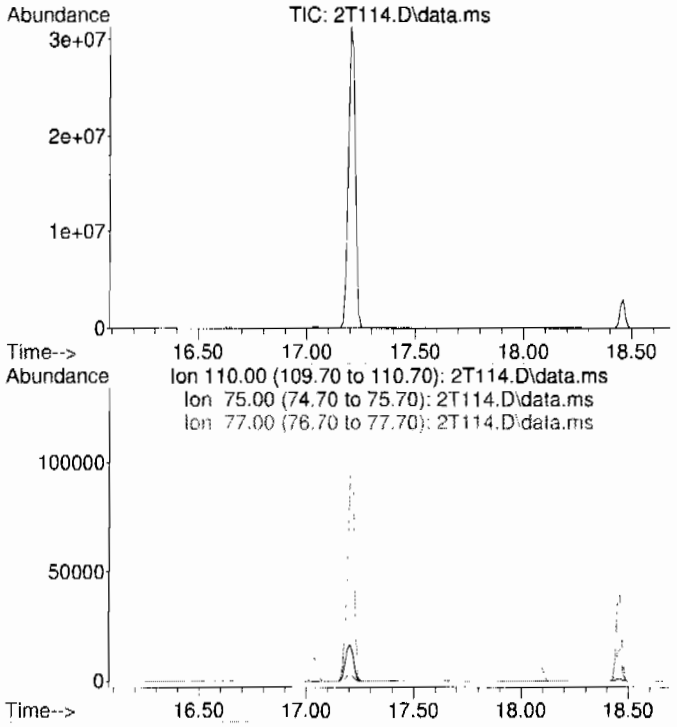

#63 AFTER analyst integration
1,2,3-Trichloropropane
Concen: N.D. DELETED
Expected RT: 17.38 min

Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 110

Sig	Exp Ratio
110	100
75	282.2
77	659.3

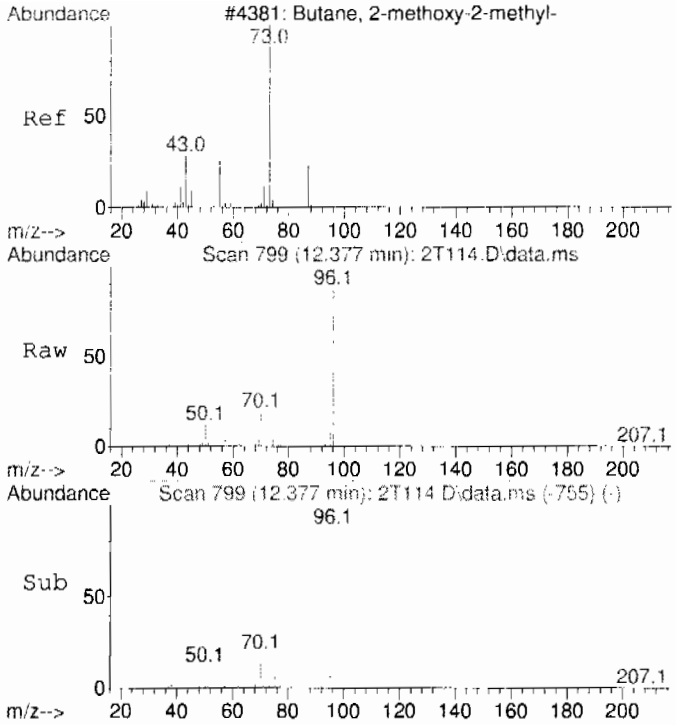

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.98 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 73 Resp: 18296

Ion	Ratio	Lower	Upper
73	100		
55	10.0	5.2	65.2
87	0.0	0.0	54.7

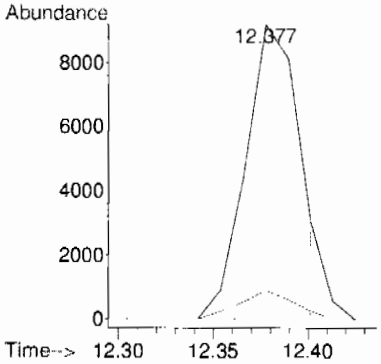

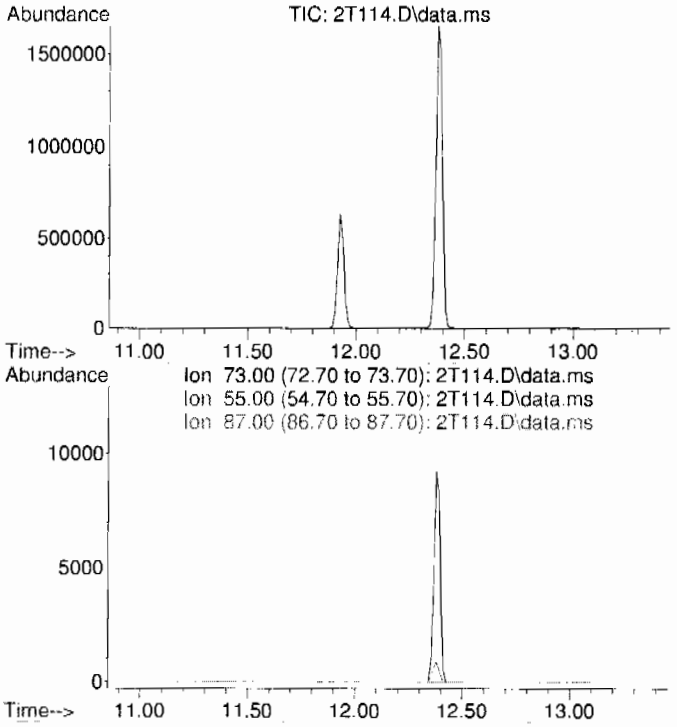

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

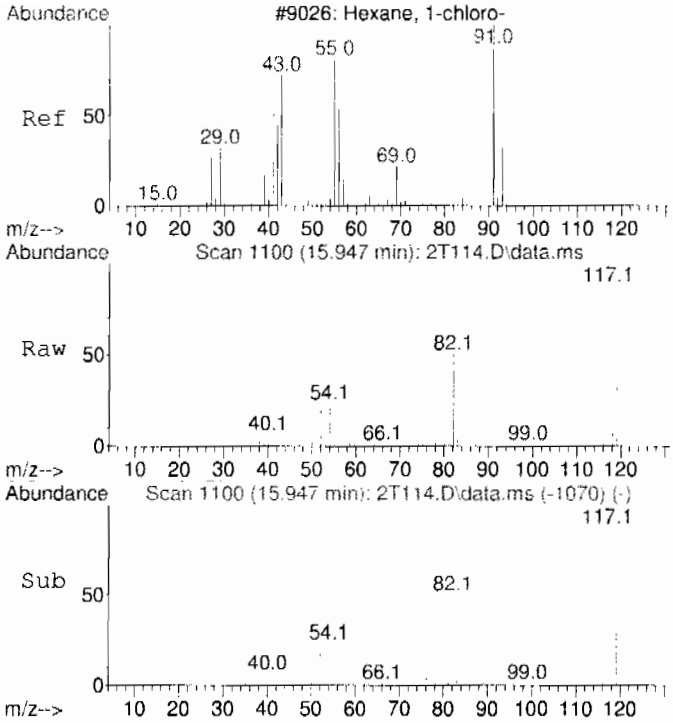

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 1.93 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 55 Resp: 13169

Ion	Ratio	Lower	Upper
55	100		
91	19.7	113.2	173.2#
56	58.3	30.3	90.3

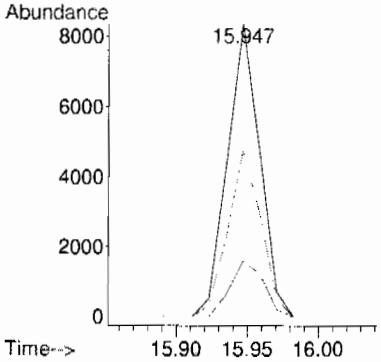

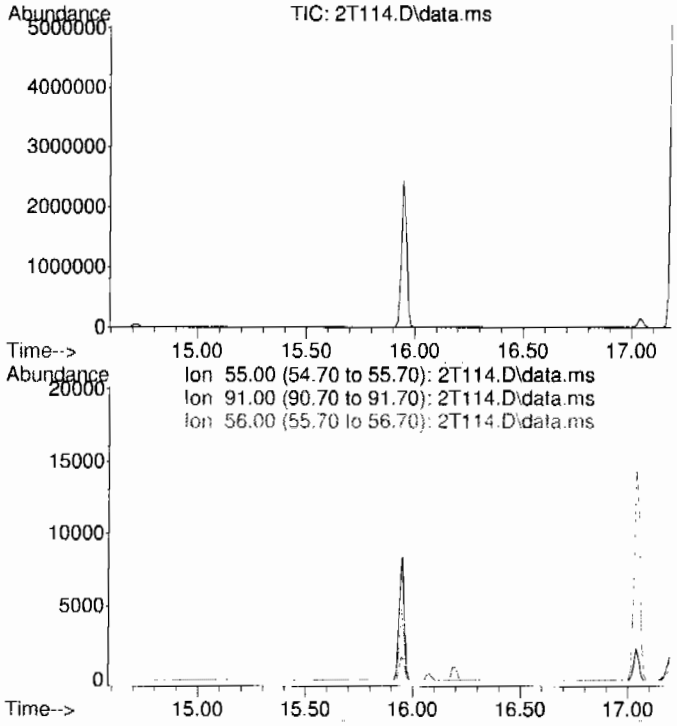

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

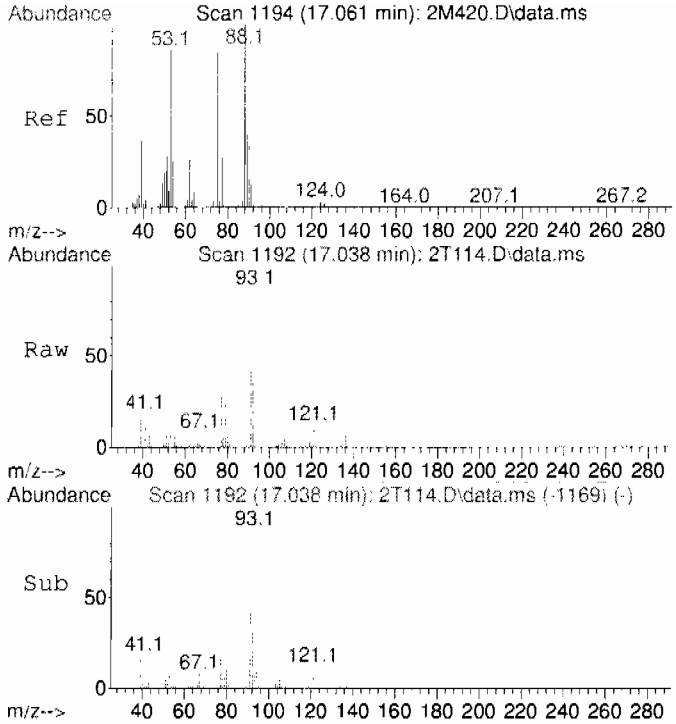

#107 BEFORE analyst integration
cis-1,4-Dichloro-2-butene
Concen: 2.05 ug/L
RT: 17.038 min Scan# 1192
Delta R.T. -0.024 min
Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 53 Resp: 5596

Ion	Ratio	Lower	Upper
53	100		
88	0.0	80.3	140.3#
77	318.6	1.2	61.2#

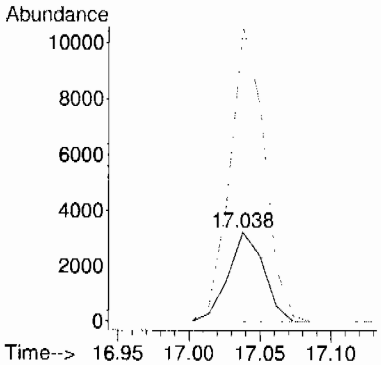

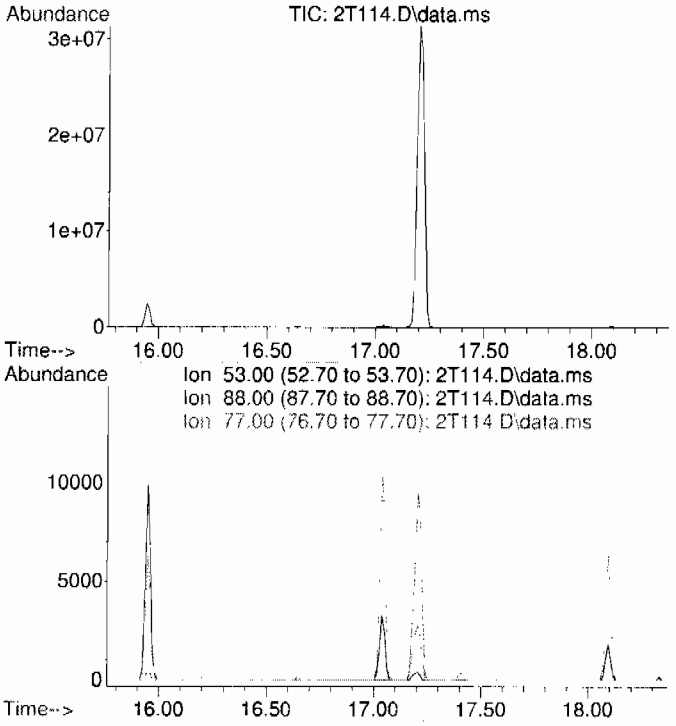

#107 AFTER analyst integration
cis-1,4-Dichloro-2-butene
Concen: N.D. DELETED
Expected RT: 17.06 min

Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	110.3
77	31.2

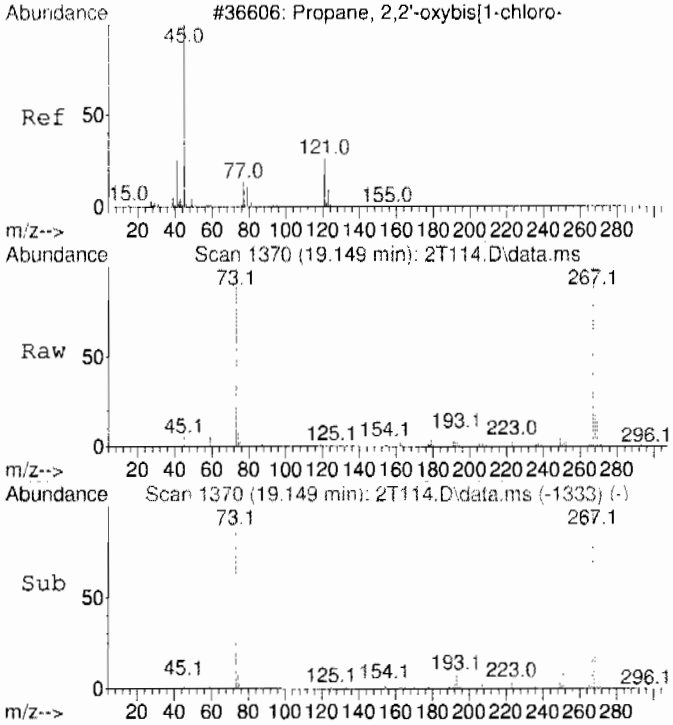

#112 BEFORE analyst integration
bis(2-Chloroisopropyl)ether
Concen: 40.53 ug/L
RT: 19.149 min Scan# 1370
Delta R.T. 0.142 min
Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 45 Resp: 187874

Ion	Ratio	Lower	Upper
45	100		
121	2.7	0.0	54.5

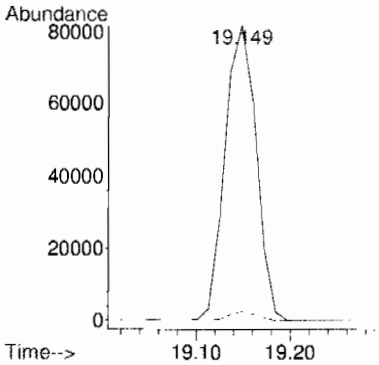

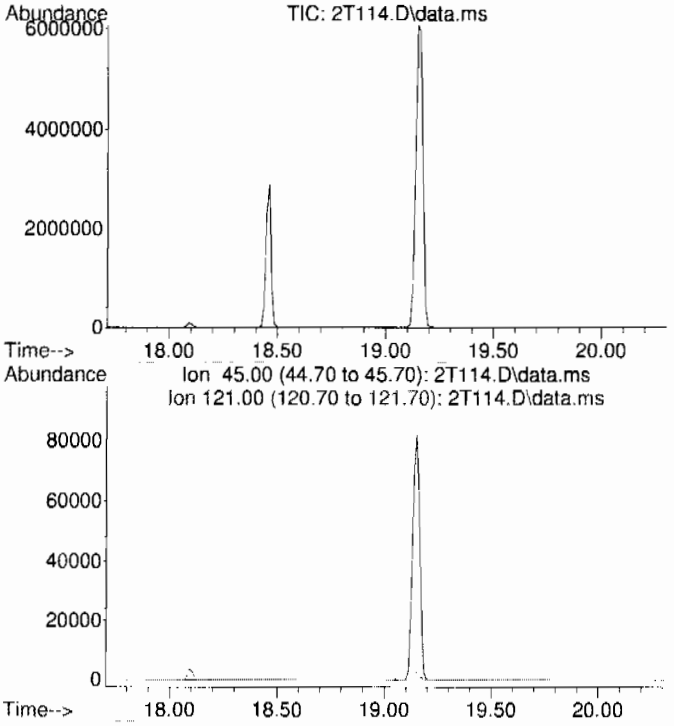

#112 AFTER analyst integration
bis(2-Chloroisopropyl)ether
Concen: N.D. DELETED
Expected RT: 19.01 min

Lab File: 2T114.D
Acq: 6 Jul 2009 12:47 pm

Tgt Ion: 45

Sig	Exp Ratio
45	100
121	24.5

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T114.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.330	143	151	165	rBV	174667	1108386	1.57%	1.061%
2	5.058	192	200	211	rBV	200	2896	0.00%	0.003%
3	6.021	261	263	265	rBV	603	1778	0.00%	0.002%
4	6.365	289	292	305	rVB2	1194	4083	0.01%	0.004%
5	7.421	378	381	388	rVB2	1030	2250	0.00%	0.002%
6	7.942	420	425	448	rVB2	2056	12968	0.02%	0.012%
7	8.701	485	489	500	rVB	14219	35519	0.05%	0.034%
8	9.685	568	572	576	rVB	3100	7445	0.01%	0.007%
9	11.227	699	702	716	rVB2	2113	5344	0.01%	0.005%
10	11.927	756	761	781	rBV	632676	1294327	1.83%	1.238%
11	12.377	793	799	830	rVB	1650908	3455241	4.89%	3.306%
12	14.061	936	941	947	rVB	5225	11889	0.02%	0.011%
13	14.310	956	962	967	rBV	2426353	4258041	6.03%	4.074%
14	14.714	992	996	1005	rVB	50429	104892	0.15%	0.100%
15	15.947	1094	1100	1109	rBV	2422787	3973252	5.62%	3.802%
16	16.196	1117	1121	1133	rBV2	1958	4660	0.01%	0.004%
17	16.646	1155	1159	1163	rBV2	1957	3268	0.00%	0.003%
18	17.038	1188	1192	1199	rVB	142023	245593	0.35%	0.235%
19	17.204	1199	1206	1241	rBV2	31293152	70657631	100.00%	67.608%
20	17.654	1241	1244	1251	rBV3	5470	13050	0.02%	0.012%
21	18.093	1278	1281	1287	rVB	89876	141395	0.20%	0.135%
22	18.461	1306	1312	1322	rVB	2879116	4694470	6.64%	4.492%
23	19.149	1364	1370	1390	rBV2	6056030	13647691	19.32%	13.059%
24	21.248	1541	1547	1708	rBV	295156	825180	1.17%	0.790%

Sum of corrected areas: 104511249

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

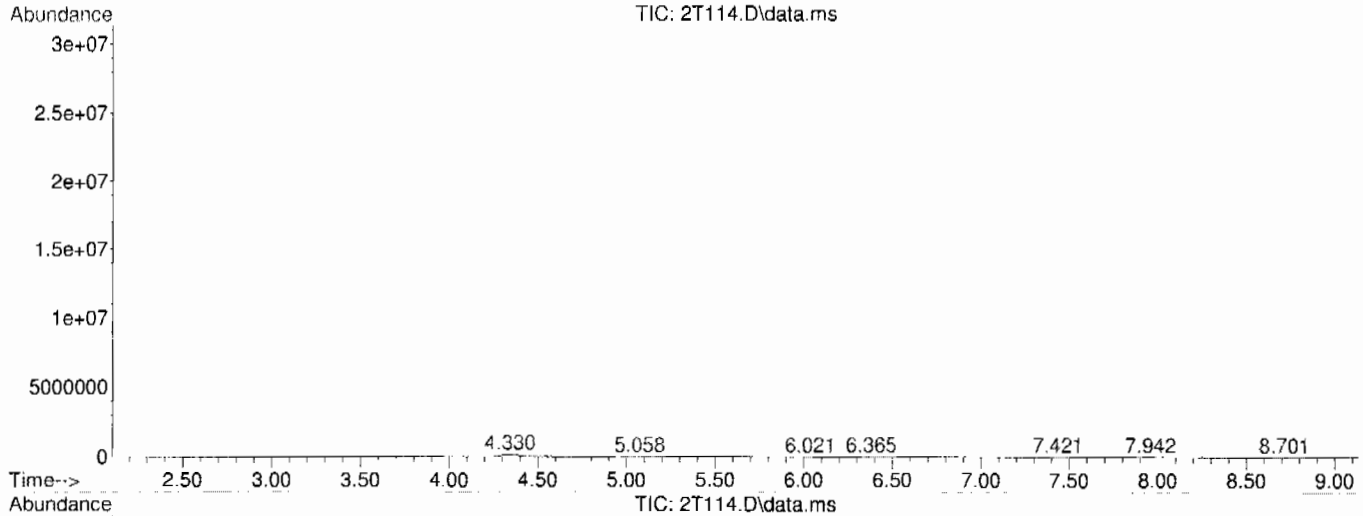

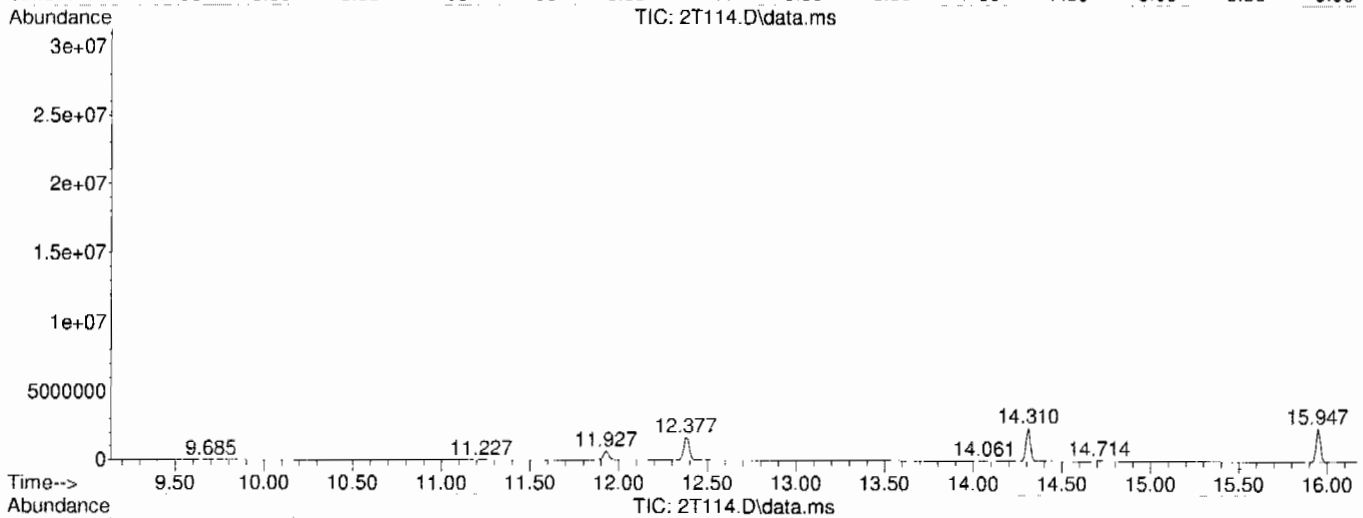

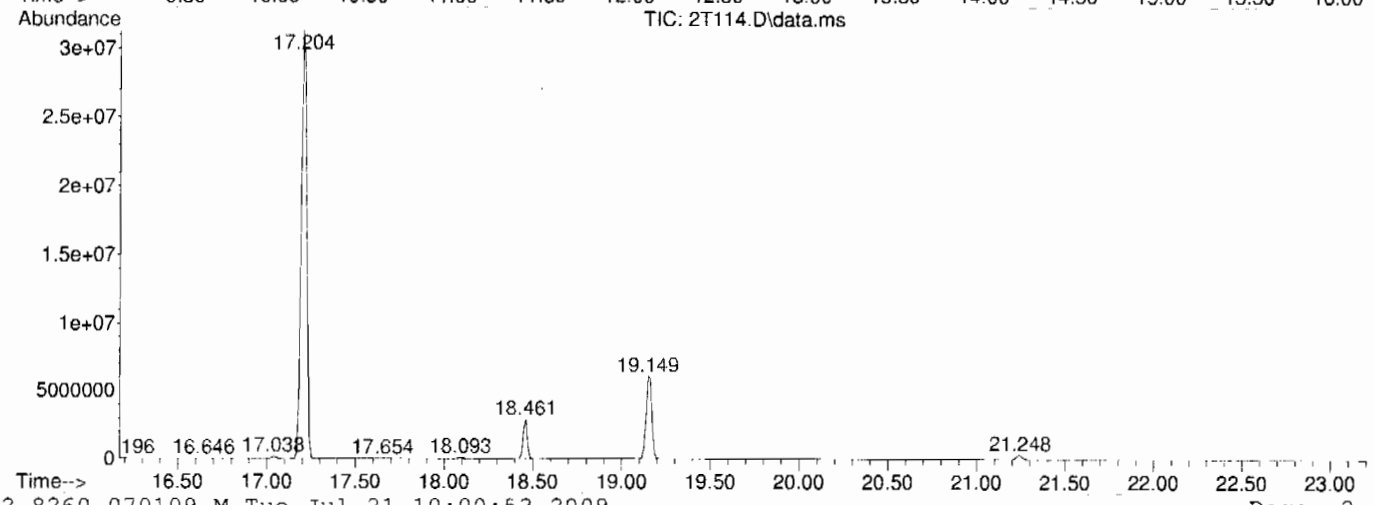

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g · SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.330	16.04 ug/L	1108390	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Dimethyl ether	46	C2H6O	000115-10-6	2

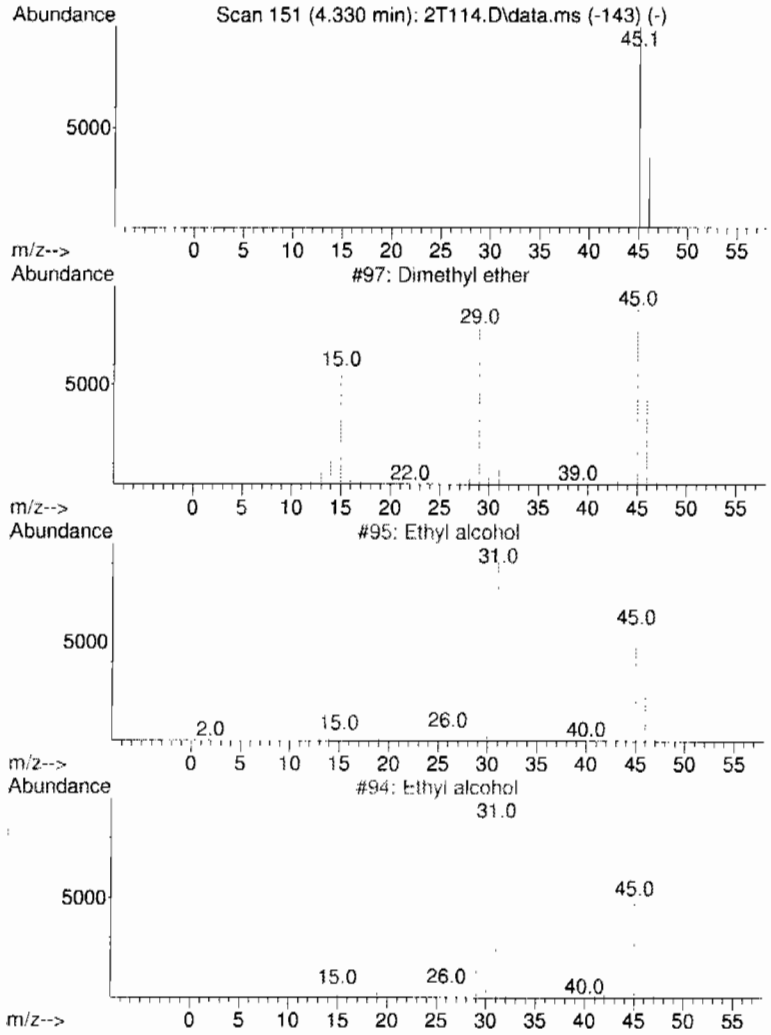

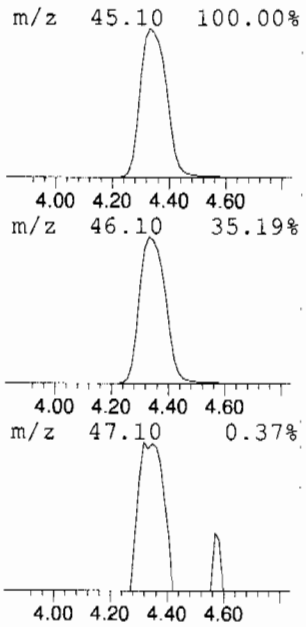

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 2 unknown siloxane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.149	67.35 ug/L	6323190	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	p-Trimethylsilyloxyphenyl-(trime...	398	C18H34O4Si3	1000079-05-1	56
2	4-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-53-3	50
3	Butanamide, 2,2,3,3,4,4,4-heptaf...	493	C18H26F7NO3Si2	055471-01-7	45
4	5-[Cyano(4,4-dimethyl-5-methylen...	282	C17H22N4	1000192-90-5	40
5	Benzaldehyde, 2,5-bis[(trimethyl...	282	C13H22O3Si2	056114-69-3	40

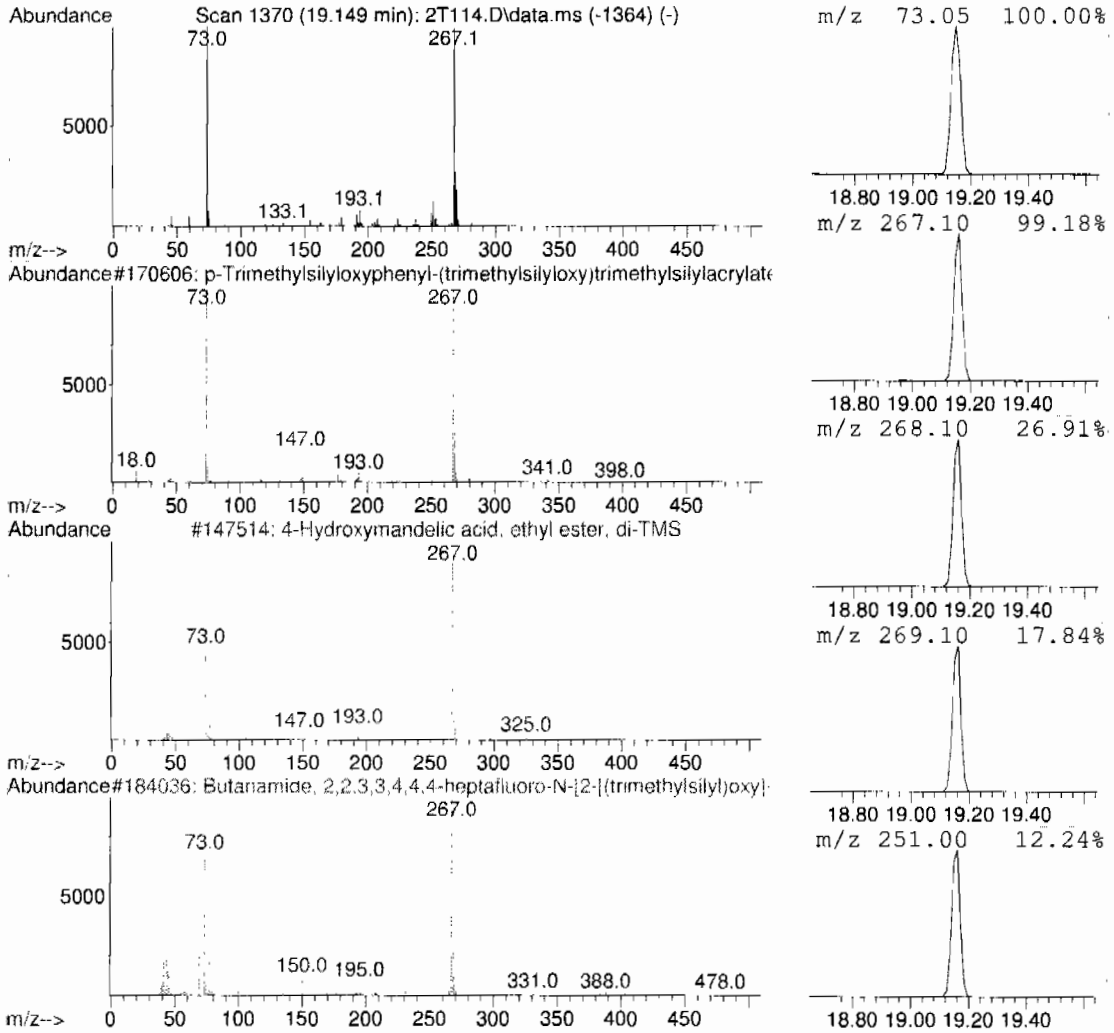

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g · SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 4 unknown siloxane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.247	8.79 ug/L	825180	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Oxa-6-thia-2,7-disilaoctane, 2...	222	C8H22OSSi2	078921-31-0	45
2	Benzenepropanoic acid, .alpha.-[...	310	C15H26O3Si2	027750-45-4	42
3	Malonic acid, bis(2-trimethylsil...	304	C13H28O4Si2	090744-45-9	42
4	Ribo-hexos-3-ulose, 2,4,5,6-tetr...	524	C20H48N2O6Si4	062108-14-9	38
5	2-Phenyl-2-trimethylsilyloxyprop...	310	C15H26O3Si2	082326-12-3	37

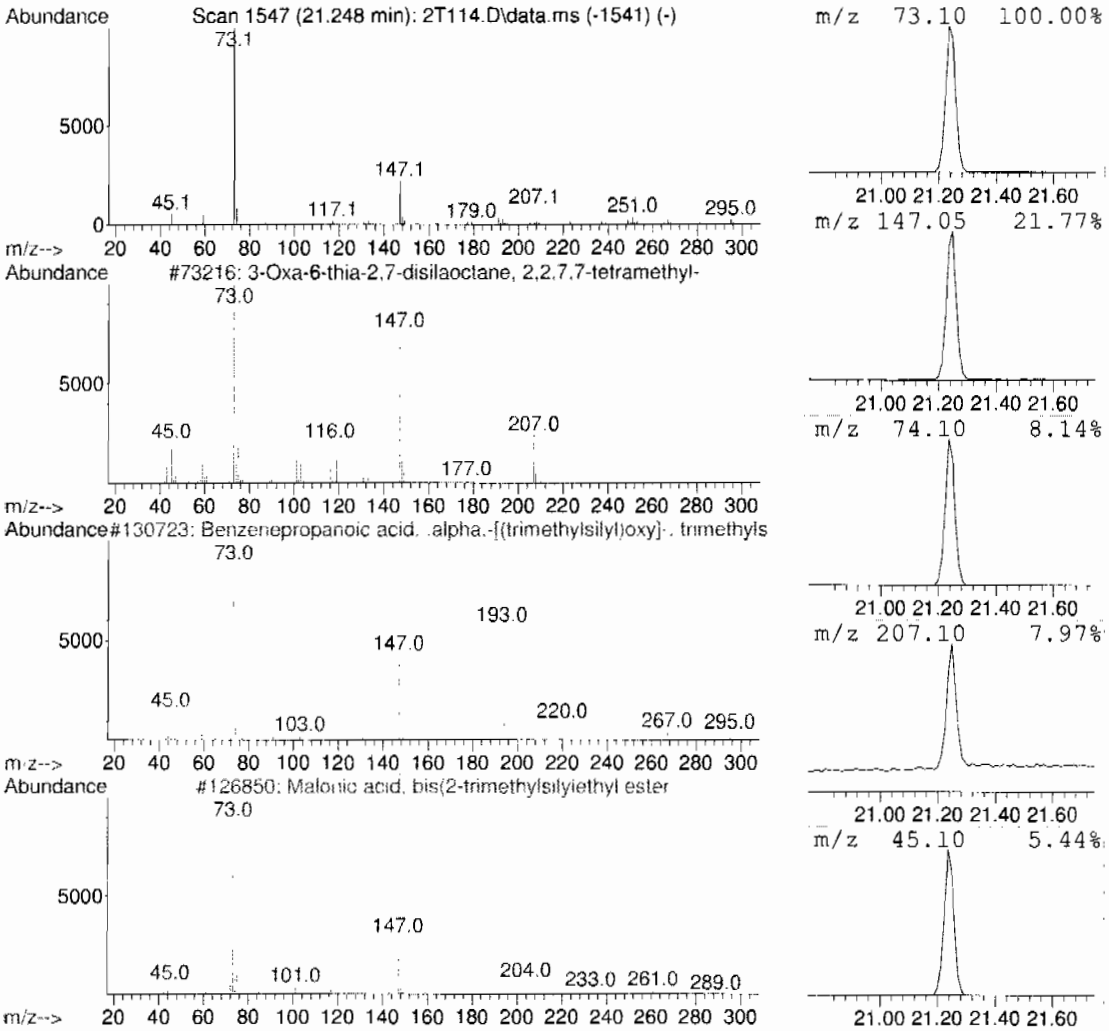

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 5 unknown siloxane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.204	752.56 ug/L	70657600	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	74
2	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	74
3	4-Nitro-4'-chlorodiphenylsulfoxide	281	C12H8ClNO3S	024535-53-3	60
4	Piperidine, 1-(2-chloro-4-nitrob...	282	C13H15ClN2O3	282104-35-2	59
5	Phenol, 4-[2-(5-nitro-2-benzoxaz...	282	C15H10N2O4	319490-19-2	50

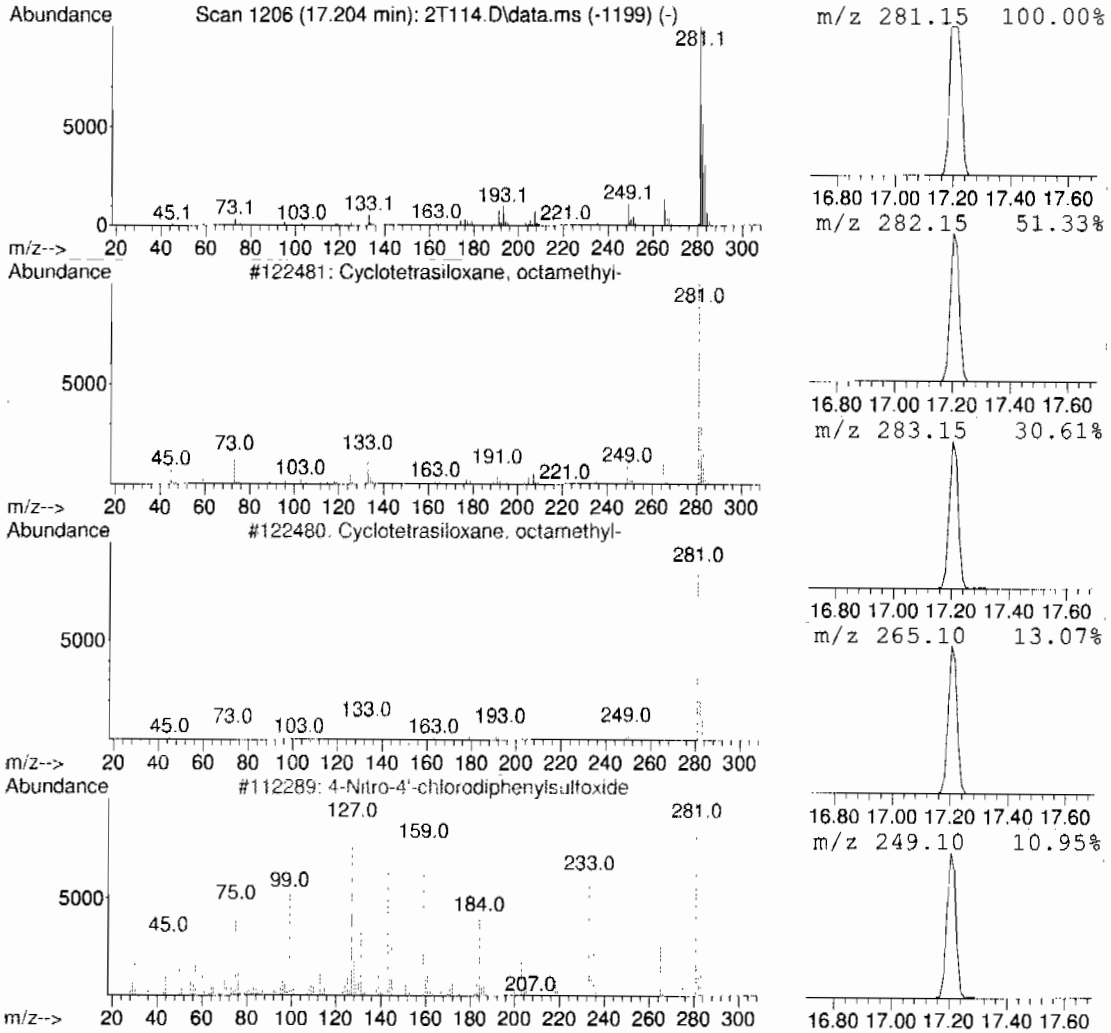

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T114.D
Acq On : 6 Jul 2009 12:47 pm
Operator : CDS1
Sample : |232582001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	|--Internal Standard---| #	RT	Resp	Conc|
unknown	4.330	16.0	ug/L	1108390	1	12.377	3455240	50.0
unknown siloxane	19.149	67.3	ug/L	6323190	6	18.461	4694470	50.0
unknown siloxane	21.247	8.8	ug/L	825180	6	18.461	4694470	50.0
unknown siloxane	17.204	752.6	ug/L	70657600	5	18.461	4694470	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 13:16	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T115.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.357	1.05
74-87-3	Chloromethane	U	1.05	ug/kg	0.315	1.05
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.315	1.05
74-83-9	Bromomethane	U	1.05	ug/kg	0.315	1.05
75-00-3	Chloroethane	U	1.05	ug/kg	0.315	1.05
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.315	1.05
67-64-1	Acetone	J	2.03	ug/kg	1.74	5.26
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
74-88-4	Iodomethane	U	5.26	ug/kg	1.68	5.26
75-09-2	Methylene chloride	U	5.26	ug/kg	2.10	5.26
75-15-0	Carbon disulfide	U	5.26	ug/kg	1.31	5.26
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.315	1.05
78-93-3	2-Butanone	U	5.26	ug/kg	1.58	5.26
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05
67-66-3	Chloroform	U	1.05	ug/kg	0.315	1.05
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.347	1.05
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.315	1.05
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.315	1.05
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.315	1.05
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.315	1.05
71-43-2	Benzene	U	1.05	ug/kg	0.315	1.05
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.347	1.05
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.315	1.05
74-95-3	Dibromomethane	U	1.05	ug/kg	0.315	1.05
108-10-1	4-Methyl-2-pentanone	U	5.26	ug/kg	1.31	5.26
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05
108-88-3	Toluene	U	1.05	ug/kg	0.315	1.05
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.315	1.05
591-78-6	2-Hexanone	U	5.26	ug/kg	1.58	5.26
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.315	1.05
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.315	1.05
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.315	1.05
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.315	1.05
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.315	1.05

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2508**	**Date Collected:**	**06/25/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232582002**	**Date Received:**	**06/30/2009 09:15**	**%Moisture:**	**4.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10465**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 13:16**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 11:01**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T115.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.315	1.05
179601-23-1	m,p-Xylenes	U	2.10	ug/kg	0.315	2.10
95-47-6	o-Xylene	U	1.05	ug/kg	0.315	1.05
100-42-5	Styrene	U	1.05	ug/kg	0.315	1.05
75-25-2	Bromoform	U	1.05	ug/kg	0.315	1.05
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.315	1.05
108-86-1	Bromobenzene	U	1.05	ug/kg	0.315	1.05
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.315	1.05
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.315	1.05
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.315	1.05
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.315	1.05
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.315	1.05
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.315	1.05
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.315	1.05
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.315	1.05
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.315	1.05
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.26	ug/kg	1.68	5.26
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	12.5	ug/kg	0	J
	unknown siloxane	17.2	644	ug/kg	0	J
	unknown siloxane	19.15	76.8	ug/kg	0	J
	unknown siloxane	21.24	25.4	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On : 6 Jul 2009 1:16 pm
Operator : CDS1
InstName : VOA2
Sample : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 17 07:18:37 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1713367	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1451125	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	903499	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1713367	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1451125	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	903499	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	492423	51.25 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 102.50%		
43) Toluene-d8	14.310	98	1635401	47.96 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 95.92%		
61) Bromofluorobenzene	17.216	95	347187	24.44 ug/L	0.01
Spiked Amount 50.000	Range 68 - 133		Recovery = 48.88%#		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.252	62	547	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.930	43	6737	1.93 ug/L	87
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.440	41	534	N.D.	
13) Methyl acetate	8.547	43	645	N.D.	
14) Carbon disulfide	8.251	76	1813	N.D.	
15) Methylene chloride	8.701	84	8199	Below Cal	96
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	620	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	791	N.D.	
25) 1,1,1-Trichloroethane	11.547	97	119	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.927	62	382	N.D.	
31) Benzene	12.034	78	527	N.D.	
32) Cyclohexene	12.389	67	503	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On : 6 Jul 2009 1:16 pm
Operator : CDS1
InstName : VOA2
Sample : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 17 07:18:37 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D.	d
44) Toluene	14.393	91	2608	N.D.	
45) trans-1,3-Dichloroprop...	14.714	75	557	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.049	43	1799	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	307	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.077	91	4064	N.D.	
55) m,p-Xylenes	16.196	106	1289	N.D.	
56) o-Xylene	16.635	106	122	N.D.	
57) Styrene	16.646	104	766	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	0.000		0m	N.D.	d
62) 1,1,2,2-Tetrachloroethane	17.192	83	2491	N.D.	
63) 1,2,3-Trichloropropane	0.000		0m	N.D.	d
64) Bromobenzene	17.405	156	257	N.D.	
65) n-Propylbenzene	17.465	91	506	N.D.	
66) 1,3,5-Trimethylbenzene	17.631	105	139	N.D.	
67) 2-Chlorotoluene	17.702	91	866	N.D.	
68) 4-Chlorotoluene	17.702	91	866	N.D.	
69) tert-Butylbenzene	18.093	119	139	N.D.	
70) 1,2,4-Trimethylbenzene	18.046	105	983	N.D.	
71) sec-Butylbenzene	18.046	105	983	N.D.	
72) 4-Isopropyltoluene	18.366	119	352	N.D.	
73) 1,3-Dichlorobenzene	18.402	146	483	N.D.	
74) 1,4-Dichlorobenzene	18.485	146	1248	N.D.	
75) n-Butylbenzene	18.805	91	112	N.D.	
76) 1,2-Dichlorobenzene	18.900	146	260	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	326	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	1394	N.D.	
81) 1,2,3-Trichlorobenzene	21.342	180	244	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.440	41	534	N.D.	
89) tert-Butyl Alcohol	8.879	59	4791	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	10.575	59	156	N.D.	
94) Ethyl acetate	10.800	43	620	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On : 6 Jul 2009 1:16 pm
Operator : CDS1
InstName : VOA2
Sample : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 17 07:18:37 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95)	Propionitrile	0.000		0	N.D.	
96)	Methacrylonitrile	11.310	41	355	N.D.	
97)	Tetrahydrofuran	11.227	42	1148	N.D.	
98)	Isobutyl alcohol	11.927	41	127	N.D.	
99)	Methyl tert-amyl ether	0.000		0m	N.D.	d
100)	Methyl methacrylate	0.000		0	N.D.	
101)	1,4-Dioxane	0.000		0	N.D.	
102)	2-Nitropropane	0.000		0	N.D.	
104)	Ethyl methacrylate	0.000		0	N.D.	
106)	1-Chlorohexane	0.000		0m	N.D.	d
107)	cis-1,4-Dichloro-2-butene	17.038	53	337	N.D.	
108)	Cyclohexanone	17.204	42	1490	N.D.	
109)	trans-1,4-Dichloro-2-b...	17.192	53	654	N.D.	
110)	Pentachloroethane	0.000		0	N.D.	
111)	Benzyl chloride	18.603	91	475	N.D.	
112)	bis(2-Chloroisopropyl)...	0.000		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On    :  6 Jul 2009   1:16 pm
Operator  : CDS1
InstName  : VOA2
Sample    : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5g -  soil
ALS Vial  : 14   Sample Multiplier: 1

Quant Time: Jul 17 07:18:37 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
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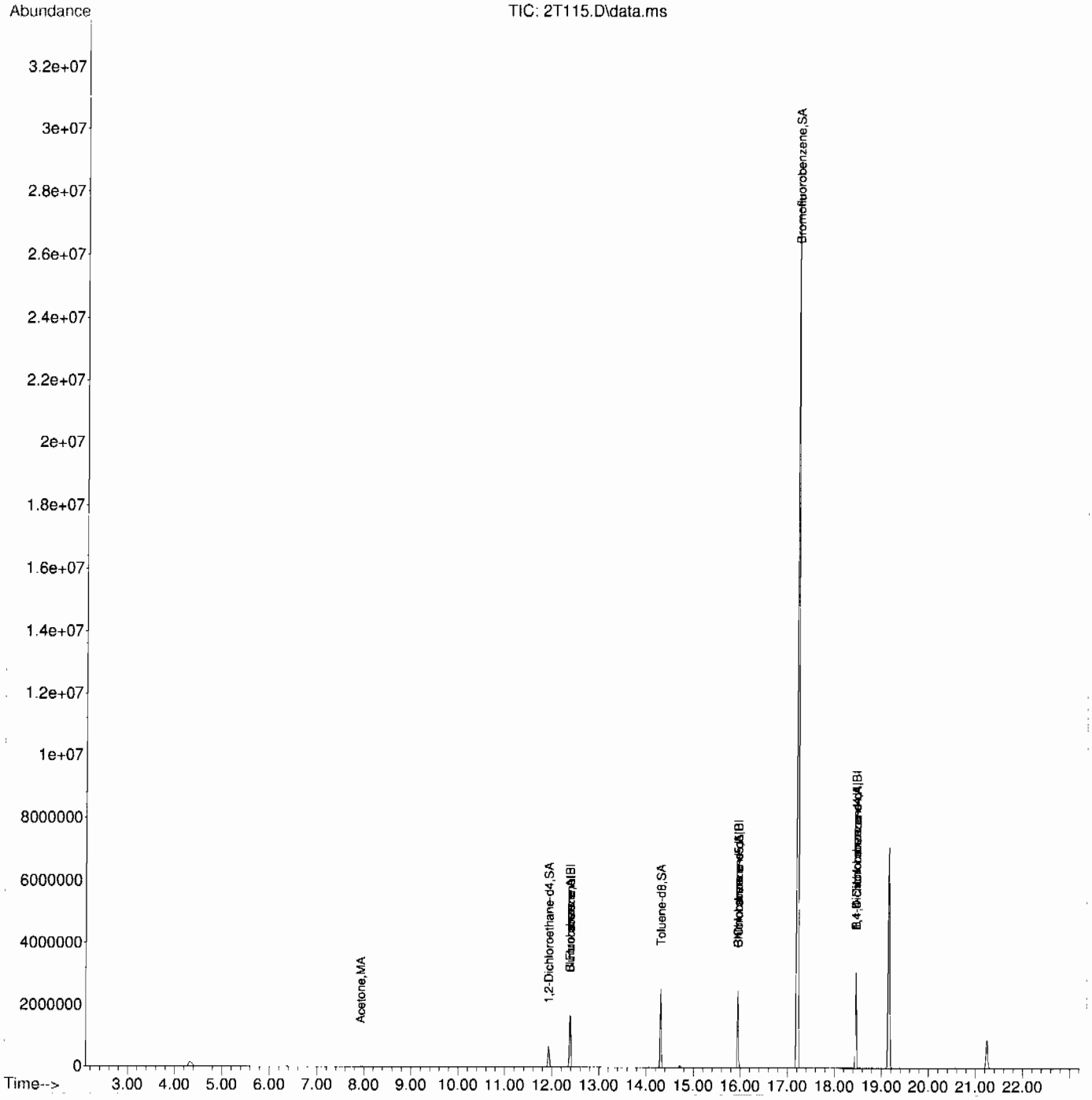

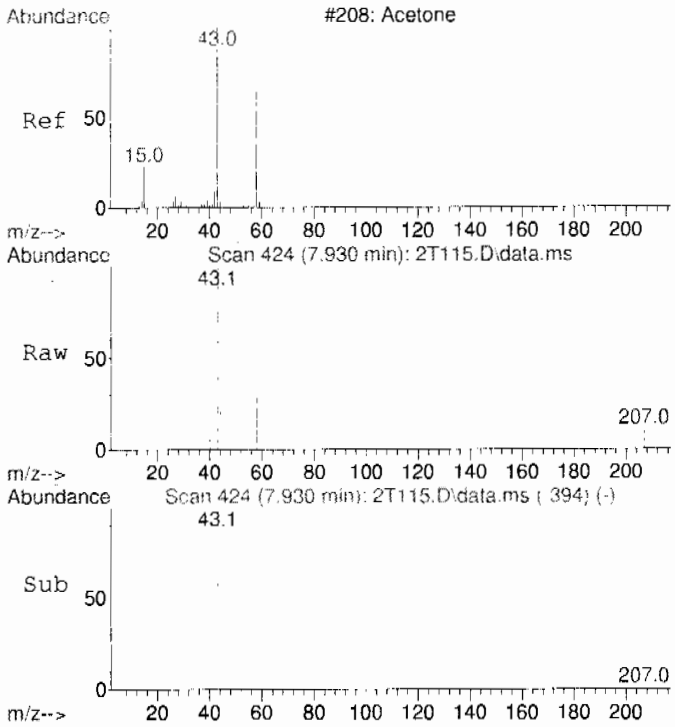

#9
Acetone
Concen: 1.93 ug/L
RT: 7.930 min Scan# 424
Delta R.T. 0.059 min
Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion: 43 Resp: 6737

Ion	Ratio	Lower	Upper
43	100		
58	22.4	0.0	59.3

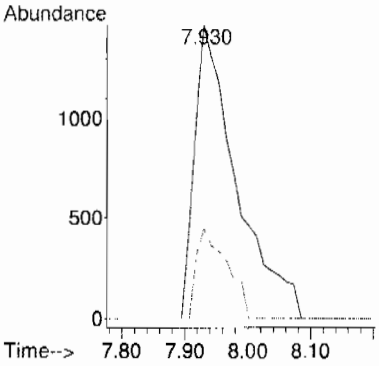

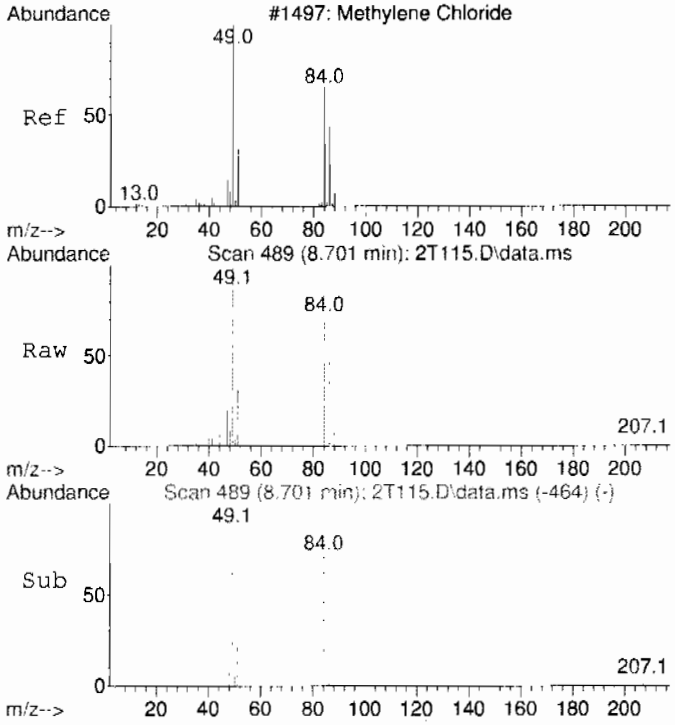

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion: 84 Resp: 8199

Ion	Ratio	Lower	Upper
84	100		
86	60.3	33.8	93.8
49	138.7	105.0	165.0

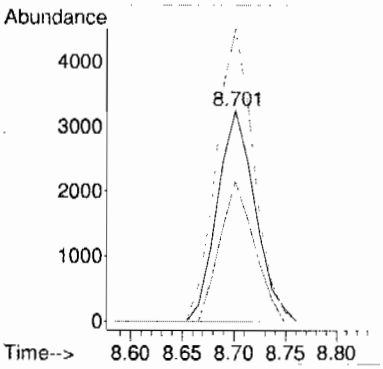

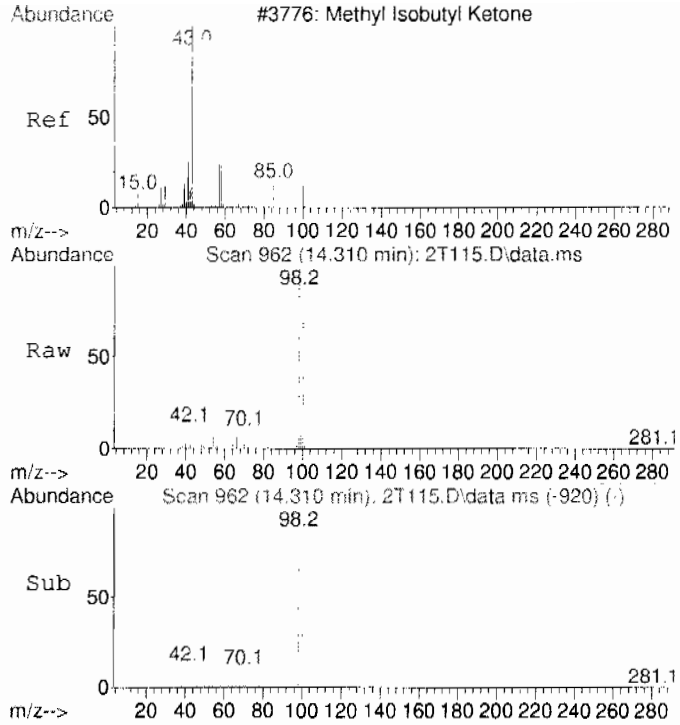


```
#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen:     4.29 ug/L
RT:  14.310 min  Scan# 962
Delta R.T.  0.201 min
Lab File:   2T115.D
Acq:  6 Jul 2009   1:16 pm

Tgt Ion: 58 Resp:   13616
Ion  Ratio  Lower  Upper
 58  100
 43   58.5  245.2  305.2#
100  8255.6    7.2   67.2#
```

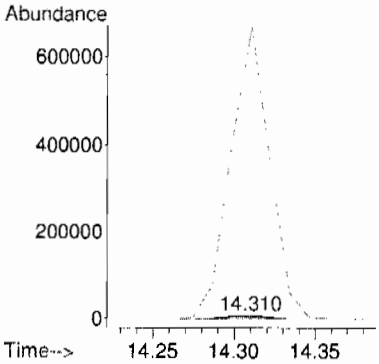

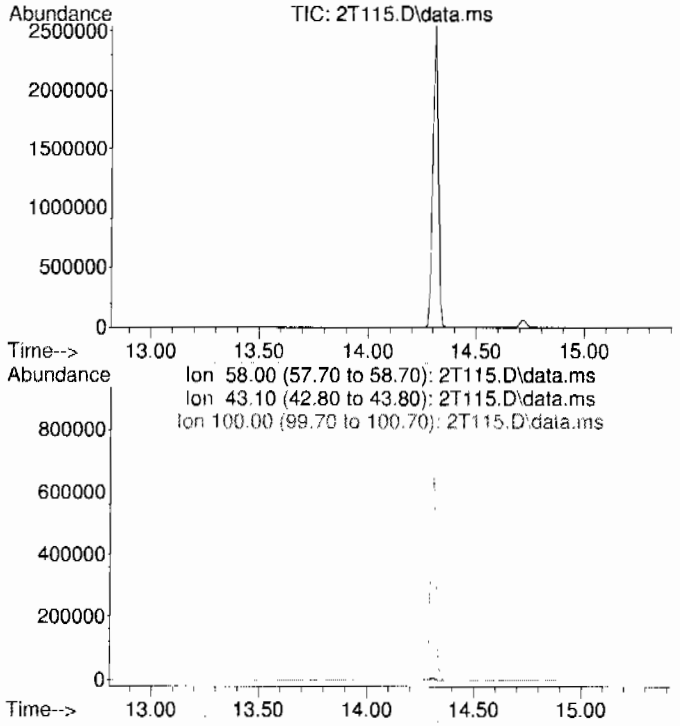


```
#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen:    N.D.   DELETED
Expected RT: 14.11 min

Lab File:   2T115.D
Acq:  6 Jul 2009   1:16 pm

Tgt Ion:  58
Sig     Exp Ratio
 58      100
 43      275.2
100       37.2
```

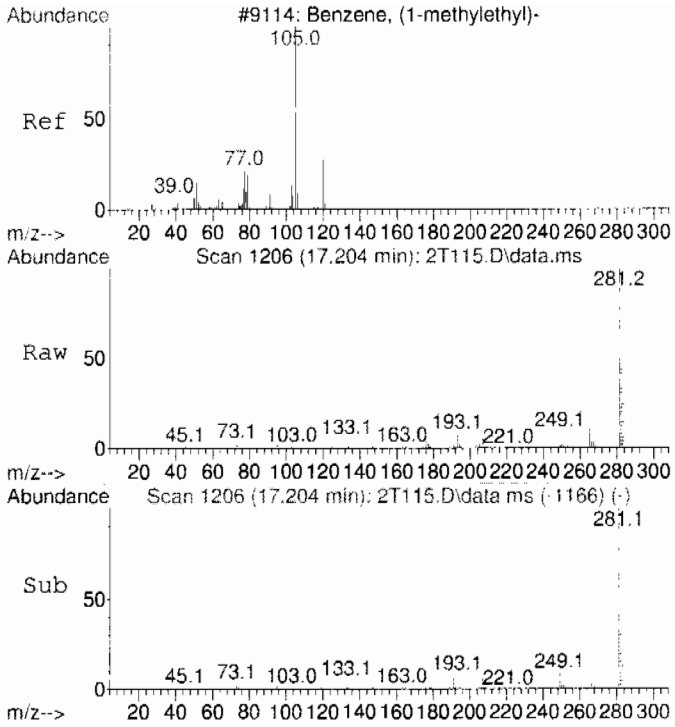

#60 BEFORE analyst integration
Isopropylbenzene
Concen: 0.88 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. 0.178 min
Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion:105 Resp: 33739

Ion	Ratio	Lower	Upper
105	100		
120	52.1	0.0	57.9

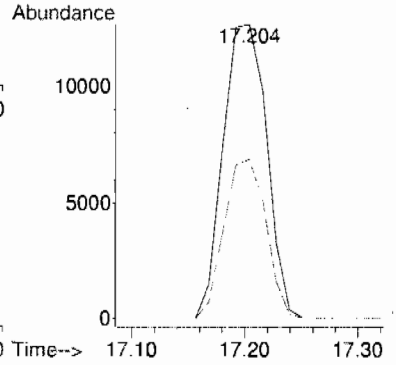

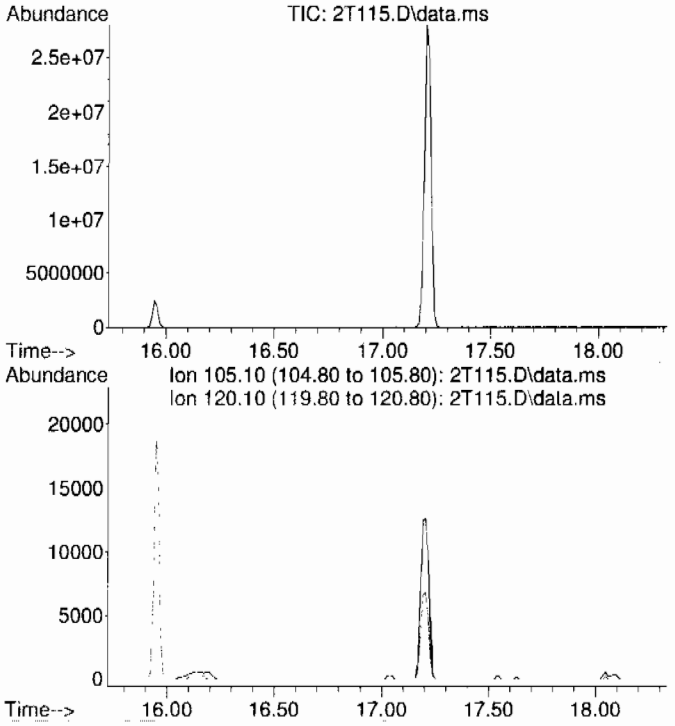

#60 AFTER analyst integration
Isopropylbenzene
Concen: N.D. DELETED
Expected RT: 17.03 min

Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	27.9

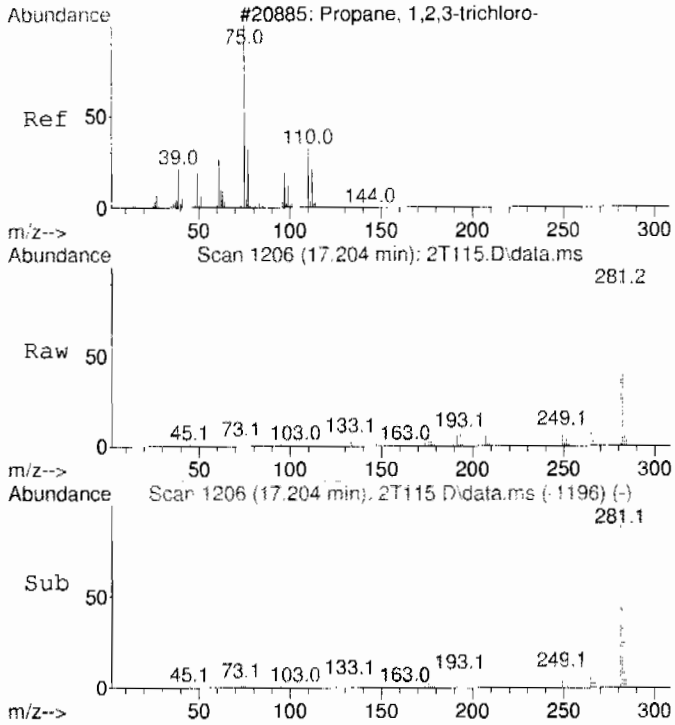

#63 BEFORE analyst integration
1,2,3-Trichloropropane
Concen: 13.74 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. -0.178 min
Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion:110 Resp: 35630

Ion	Ratio	Lower	Upper
110	100		
75	654.8	252.2	312.2#
77	18.9	629.3	689.3#

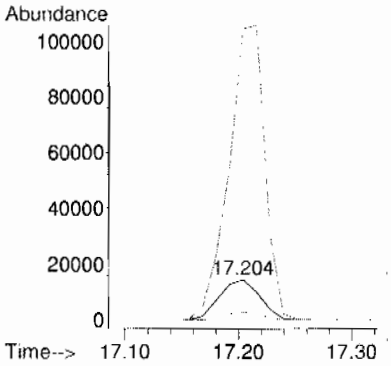

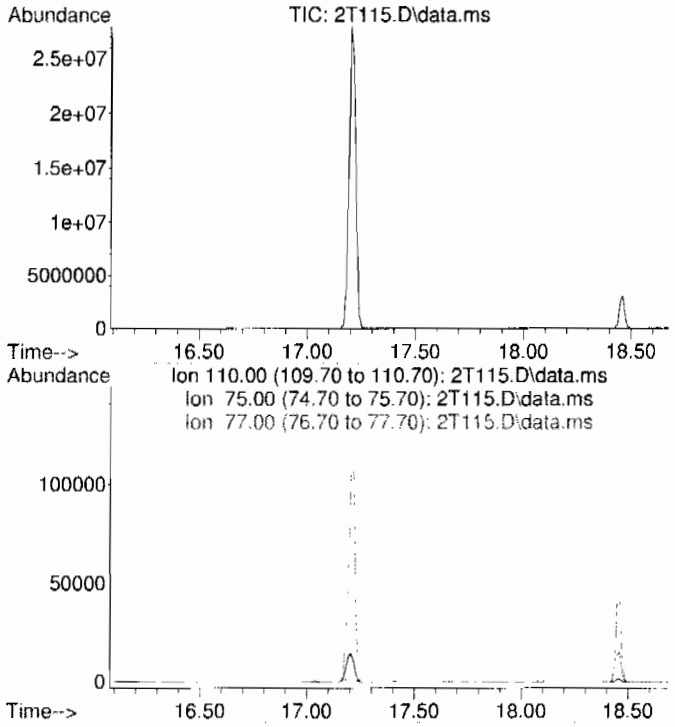

#63 AFTER analyst integration
1,2,3-Trichloropropane
Concen: N.D. DELETED
Expected RT: 17.38 min

Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion: 110

Sig	Exp Ratio
110	100
75	282.2
77	659.3

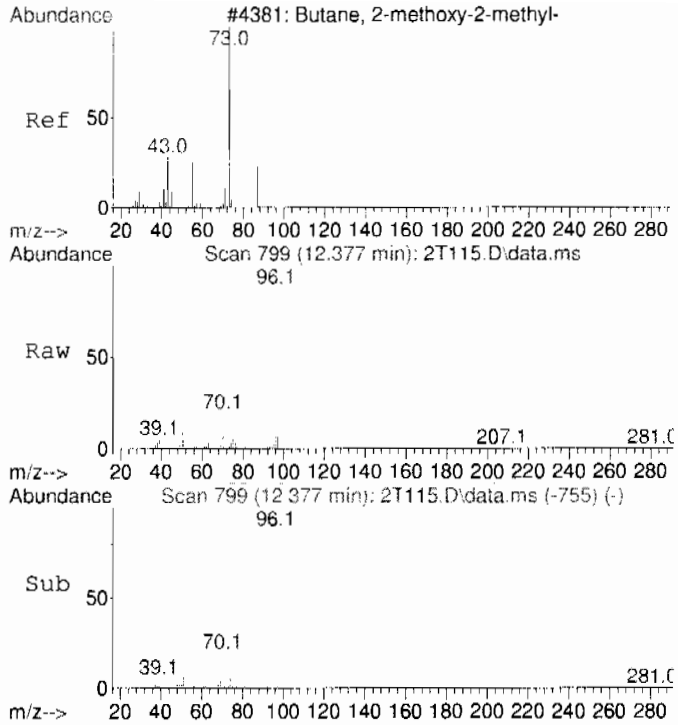

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.96 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.226 min
Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion: 73 Resp: 18444

Ion	Ratio	Lower	Upper
73	100		
55	7.9	5.2	65.2
87	0.0	0.0	54.7

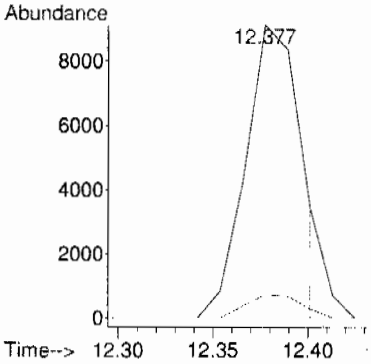

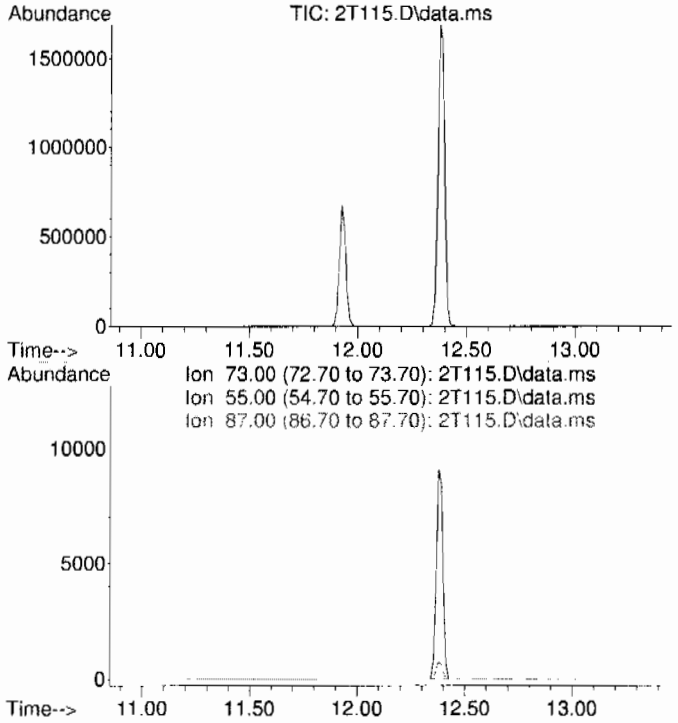

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

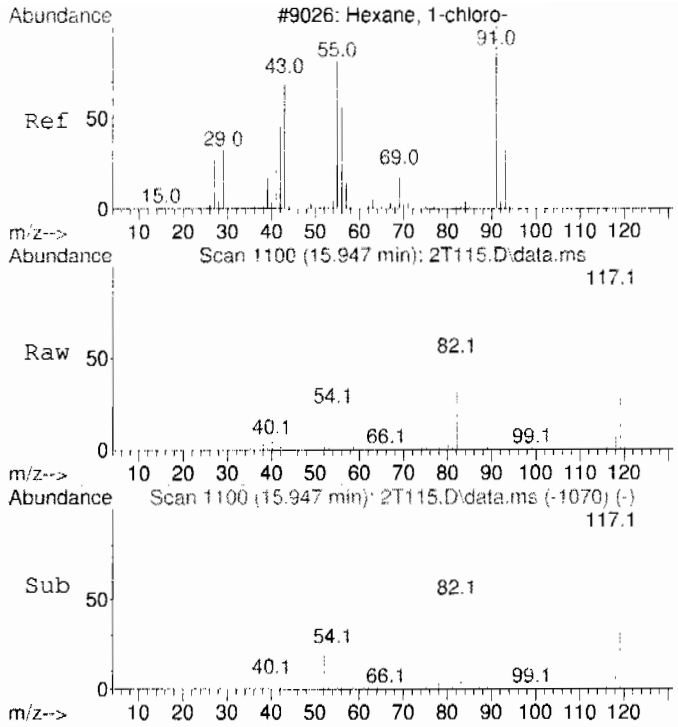

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 1.91 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.060 min
Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion: 55 Resp: 13535

Ion	Ratio	Lower	Upper
55	100		
91	18.8	113.2	173.2#
56	61.3	30.3	90.3

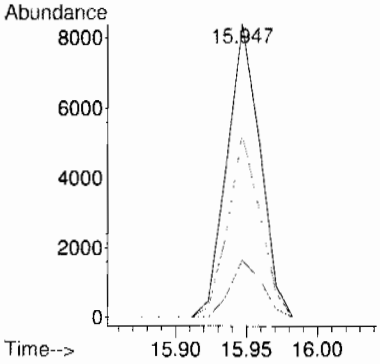

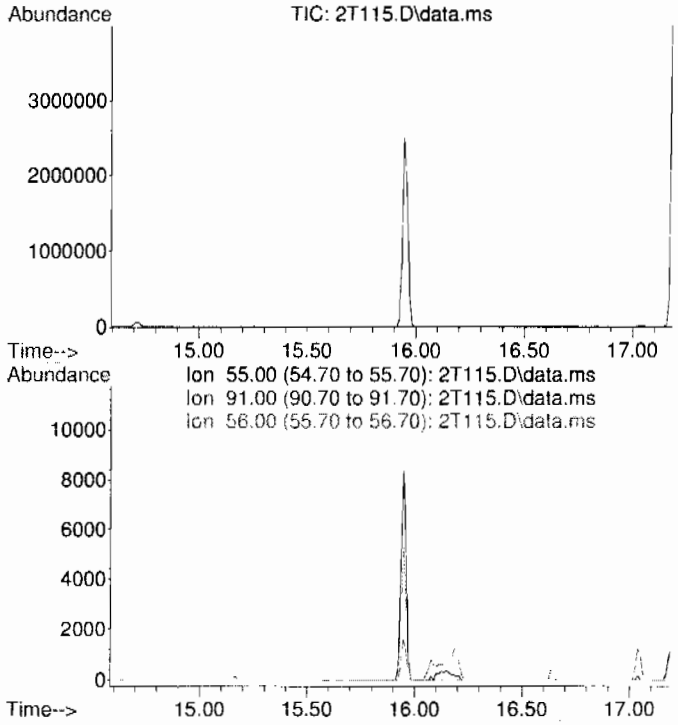

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

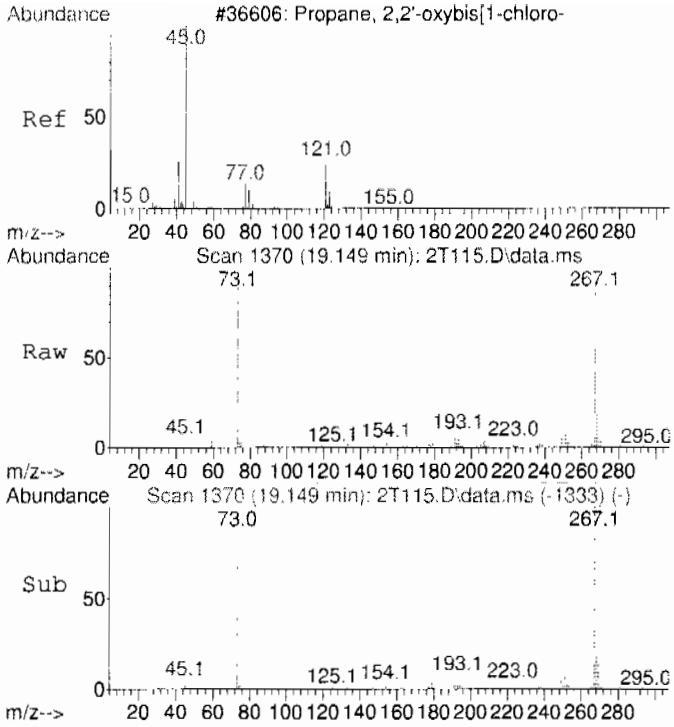

#112 BEFORE analyst integration
bis(2-Chloroisopropyl)ether
Concen: 44.60 ug/L
RT: 19.149 min Scan# 1370
Delta R.T. 0.143 min
Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion: 45 Resp: 214976

Ion	Ratio	Lower	Upper
45	100		
121	2.9	0.0	54.5

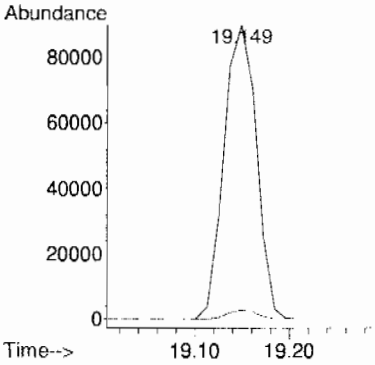

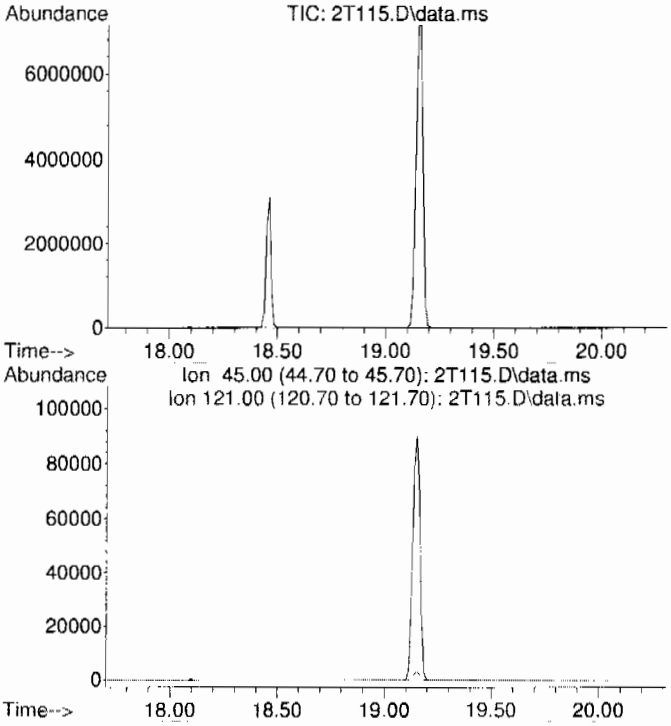

#112 AFTER analyst integration
bis(2-Chloroisopropyl)ether
Concen: N.D. DELETED
Expected RT: 19.01 min

Lab File: 2T115.D
Acq: 6 Jul 2009 1:16 pm

Tgt Ion: 45

Sig	Exp Ratio
45	100
121	24.5

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On : 6 Jul 2009 1:16 pm
Operator : CDS1
Sample : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T115.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.330	143	151	165	rBV	145322	841127	1.40%	0.856%
2	4.687	173	175	178	rBB	226	506	0.00%	0.001%
3	4.955	190	193	199	rBB	363	1703	0.00%	0.002%
4	6.104	261	270	288	rBV2	831	11330	0.02%	0.012%
5	7.930	420	424	439	rVB2	2319	11907	0.02%	0.012%
6	8.701	485	489	499	rBV	14029	35226	0.06%	0.036%
7	8.879	499	504	542	rVB2	2753	11921	0.02%	0.012%
8	9.686	567	572	589	rVB2	3228	10296	0.02%	0.010%
9	10.575	644	647	657	rVB	2259	5054	0.01%	0.005%
10	10.943	675	678	688	rVB	1758	5351	0.01%	0.005%
11	11.227	700	702	706	rBV2	1809	4001	0.01%	0.004%
12	11.927	756	761	793	rVB	671883	1369508	2.28%	1.394%
13	12.377	793	799	831	rBV	1685748	3538995	5.90%	3.604%
14	13.018	850	853	861	rVB2	1449	2420	0.00%	0.002%
15	14.061	938	941	951	rVB3	2775	6533	0.01%	0.007%
16	14.310	956	962	991	rVB	2541522	4380315	7.31%	4.460%
17	14.714	991	996	1004	rBV	62819	129515	0.22%	0.132%
18	15.069	1023	1026	1031	rBV3	1280	3212	0.01%	0.003%
19	15.947	1096	1100	1107	rBV	2496582	4143565	6.91%	4.219%
20	16.148	1108	1117	1126	rVB6	11091	69520	0.12%	0.071%
21	16.646	1157	1159	1168	rVB2	1814	3451	0.01%	0.004%
22	17.038	1189	1192	1199	rVB	10793	18279	0.03%	0.019%
23	17.204	1199	1206	1241	rBV	27914208	59940840	100.00%	61.034%
24	17.654	1241	1244	1251	rVV3	5851	13250	0.02%	0.013%
25	18.093	1278	1281	1287	rVB	8056	12432	0.02%	0.013%
26	18.366	1301	1304	1307	rBV	4009	8308	0.01%	0.008%
27	18.461	1308	1312	1344	rBV	3095775	4894333	8.17%	4.984%
28	19.161	1364	1371	1391	rBV2	7121163	16323459	27.23%	16.621%
29	20.572	1486	1490	1495	rBV	21054	42445	0.07%	0.043%
30	21.236	1540	1546	1708	rBV	893131	2369699	3.95%	2.413%

Sum of corrected areas: 98208501

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On : 6 Jul 2009 1:16 pm
Operator : CDS1
Sample : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

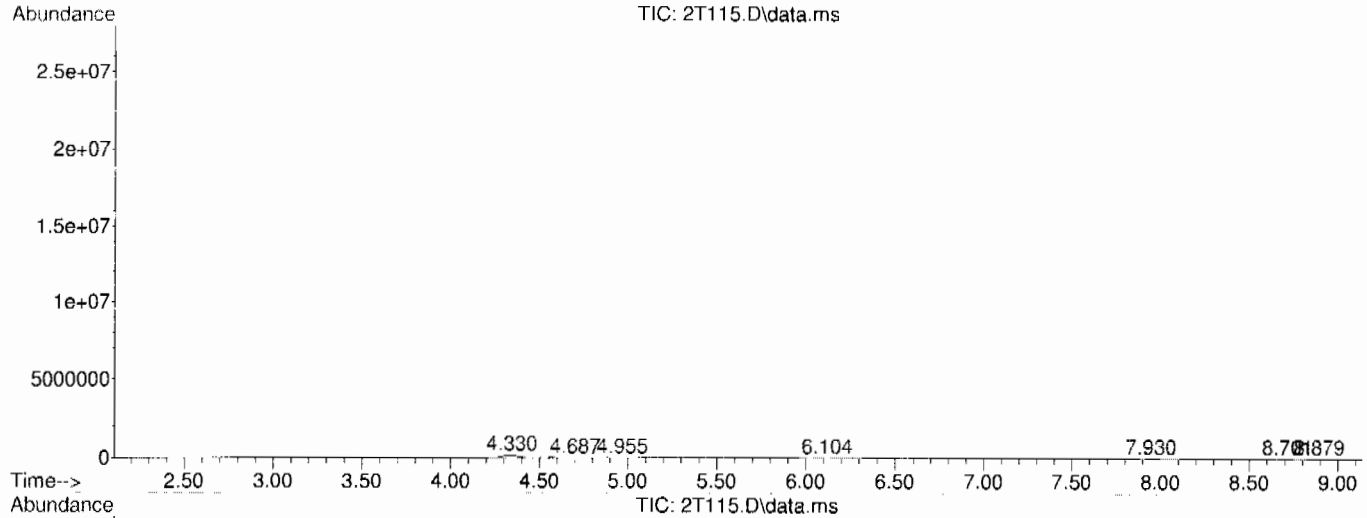

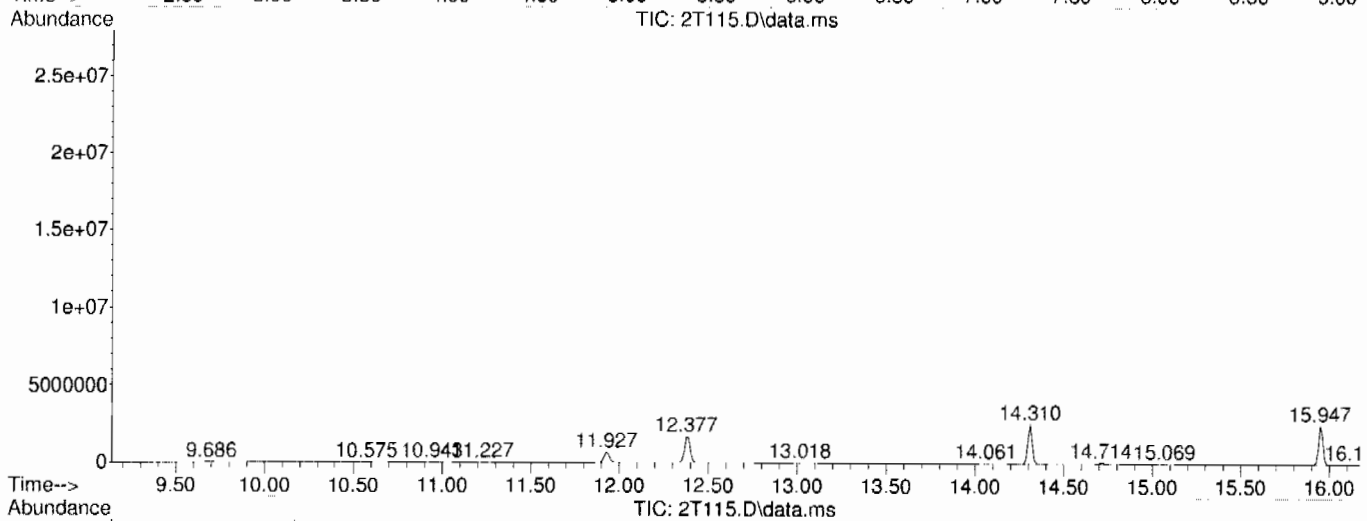

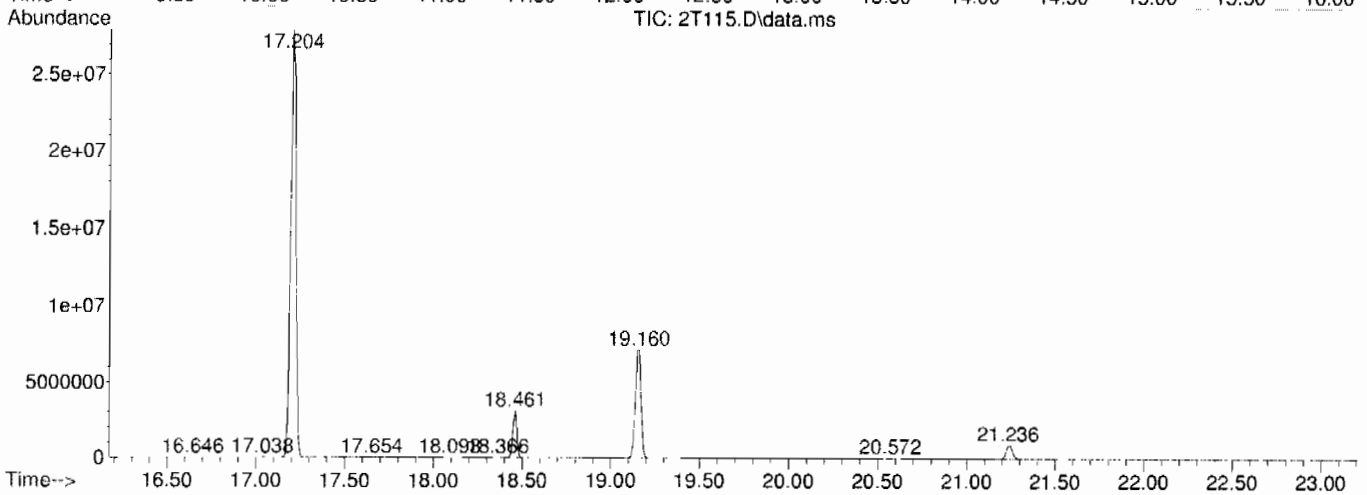

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On : 6 Jul 2009 1:16 pm
Operator : CDS1
Sample : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.330	11.88 ug/L	841127	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

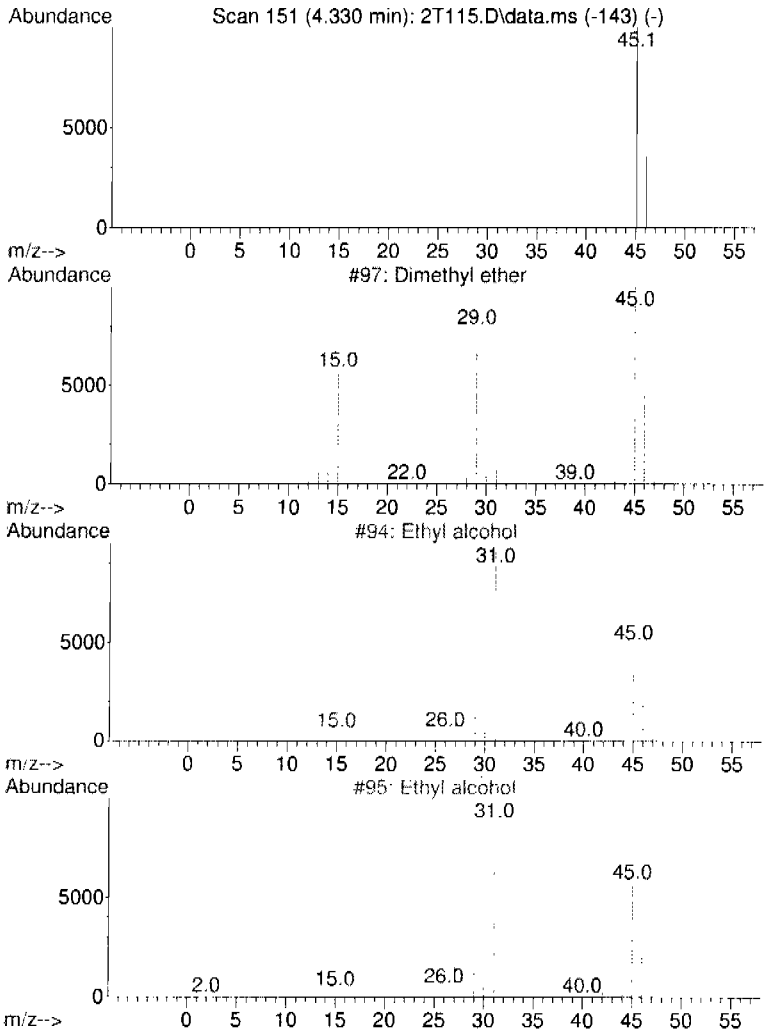

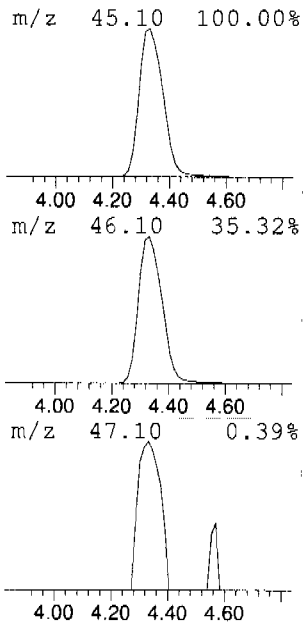

Library Search Compound Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On    :  6 Jul 2009   1:16 pm
Operator  : CDS1
Sample    : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5g -  soil
ALS Vial  : 14   Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B

TIC Library    : C:\Database\NIST05.L
TIC Integration Parameters: default.P
```

****

Peak Number 2 unknown siloxane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.149	73.02 ug/L	7147810	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-88-9	56
2	Butanamide, 2,2,3,3,4,4,4-heptaf...	493	C18H26F7NO3Si2	055471-01-7	56
3	p-Trimethylsilyloxyphenyl-bis(tr...	370	C17H34O3Si3	1000079-08-1	56
4	p-Trimethylsilyloxyphenyl-(trime...	398	C18H34O4Si3	1000079-05-1	56
5	4-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-53-3	50

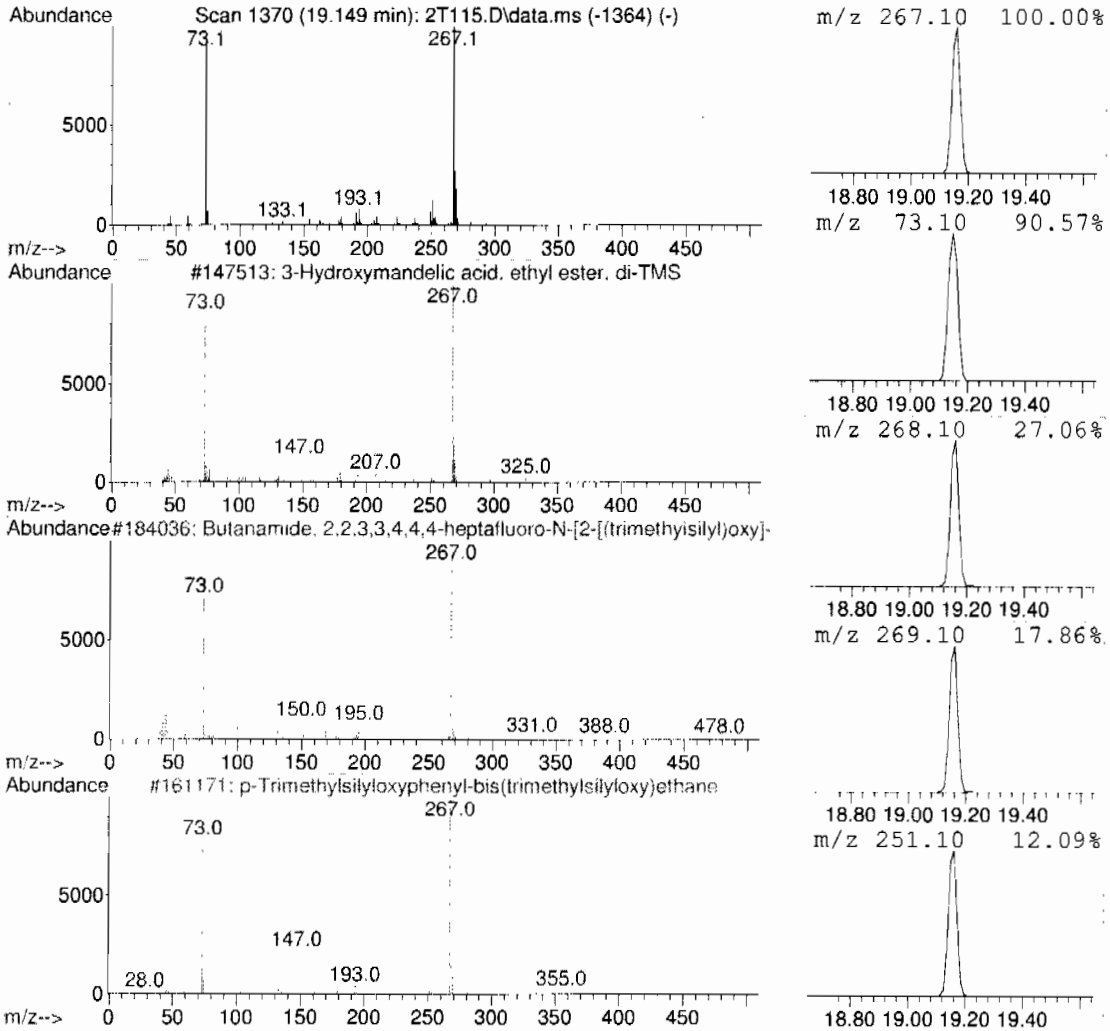

Library Search Compound Report
CEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On : 6 Jul 2009 1:16 pm
Operator : CDS1
Sample : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 4 unknown siloxane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.236	24.21 ug/L	2369700	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzenepropanoic acid, .alpha.-[...	310	C15H26O3Si2	027750-45-4	42
2	Malonic acid, bis(2-trimethylsil...	304	C13H28O4Si2	090744-45-9	42
3	2-Phenyl-2-trimethylsilyloxyprop...	310	C15H26O3Si2	082326-12-3	42
4	3-Oxa-6-thia-2,7-disilaoctane, 2...	222	C8H22OSSi2	078921-31-0	40
5	3,8-Dioxa-2,9-disiladec-5-ene, 2...	232	C10H24O2Si2	053326-59-3	36

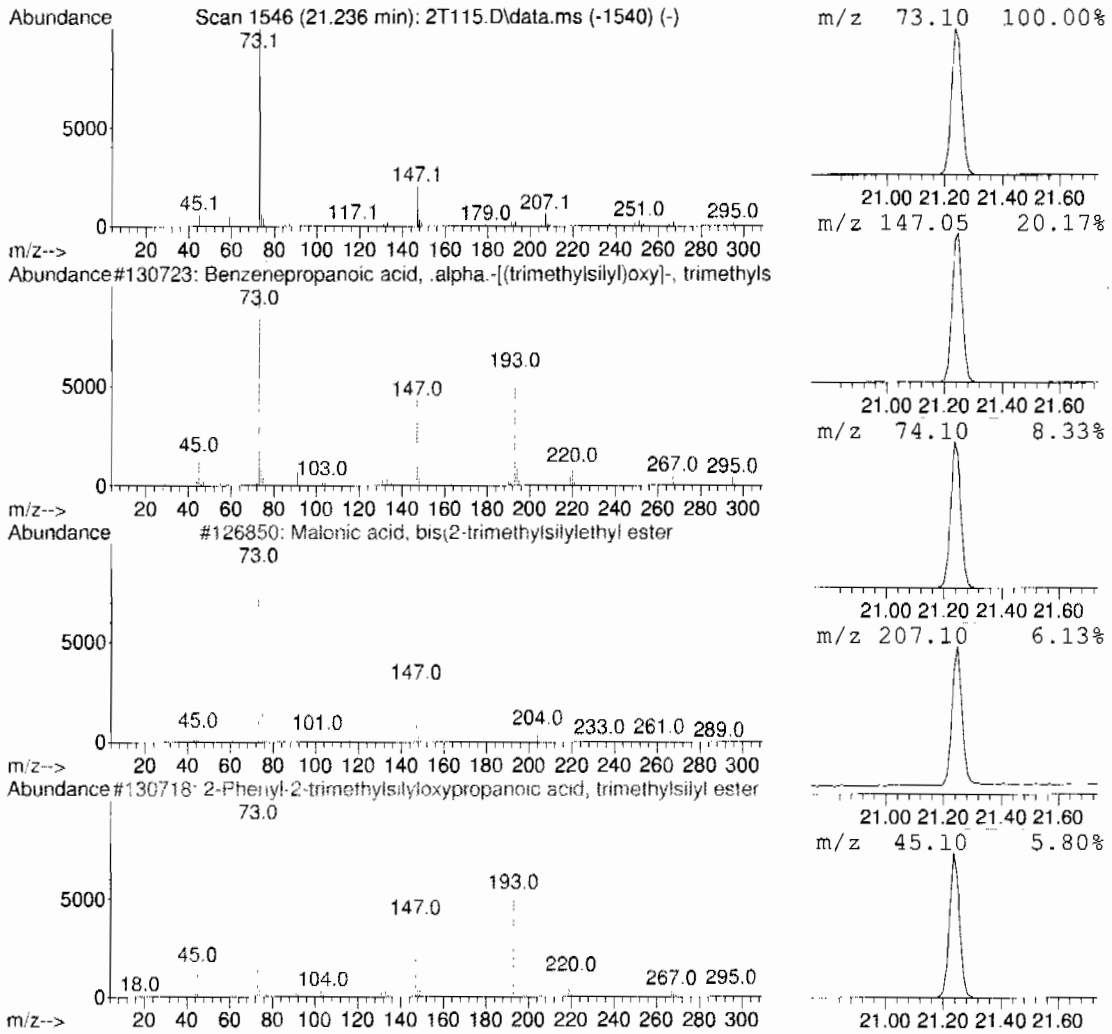

Library Search Compound Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On    :  6 Jul 2009   1:16 pm
Operator  : CDS1
Sample    : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5g -  soil
ALS Vial  : 14   Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B

TIC Library    : C:\Database\NIST05.L
TIC Integration Parameters: default.P
```

****

Peak Number 5 unknown siloxane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.204	612.35 ug/L	59940800	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	74
2	Piperidine, 1-(2-chloro-4-nitrob...	282	C13H15ClN2O3	282104-35-2	64
3	5-Amino-2-(4-chlorophenyl)-7-met...	281	C16H12ClN3	1000305-54-5	53
4	2-(4-Chlorophenyl)-5,7-dimethyli...	281	C16H12ClN3	1000305-50-9	53
5	Phenol, 4-[2-(5-nitro-2-benzoxaz...	282	C15H10N2O4	319490-19-2	53

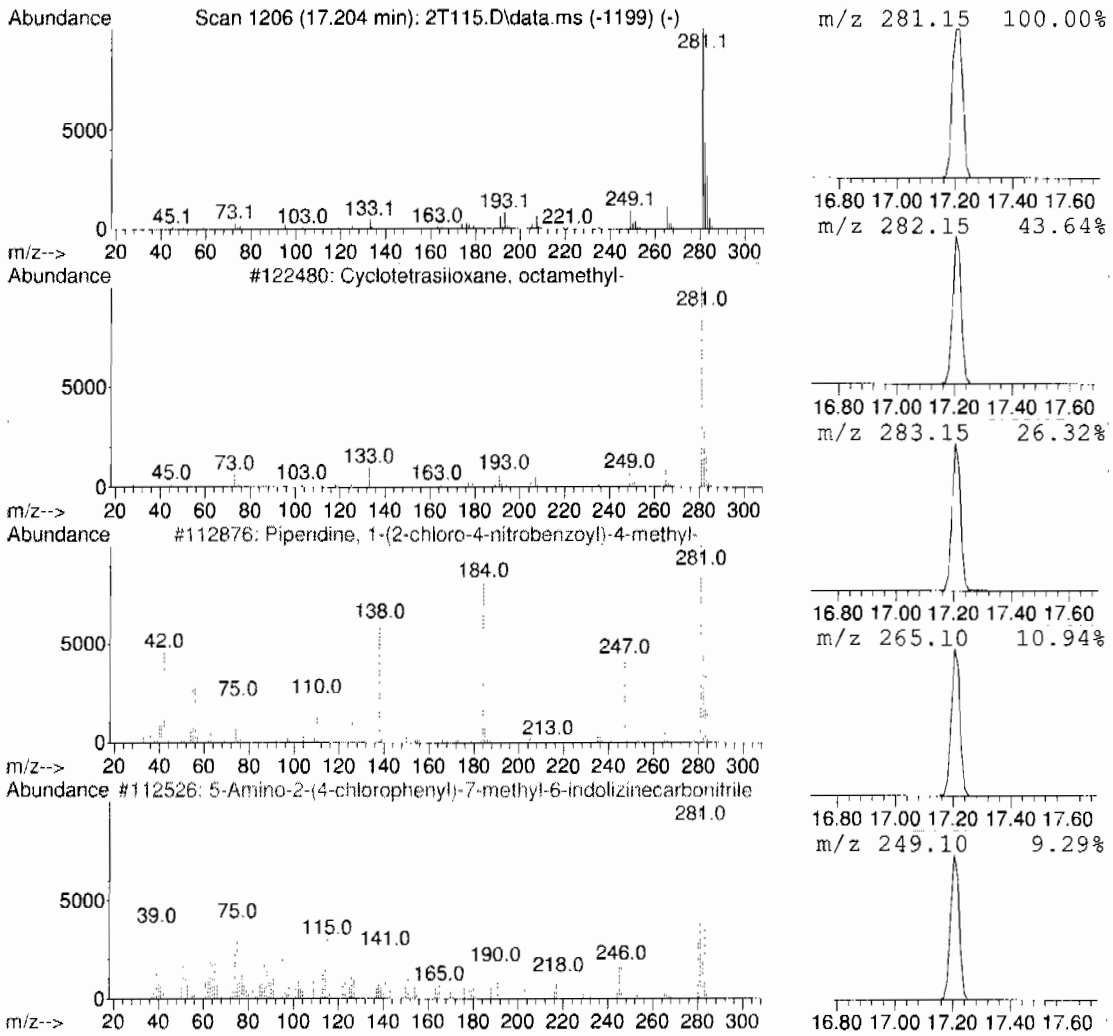

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T115.D
Acq On : 6 Jul 2009 1:16 pm
Operator : CDS1
Sample : |232582002|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.330	11.9	ug/L	841127	1	12.377	3539000	50.0
unknown siloxane	19.149	73.0	ug/L	7147810	6	18.461	4894330	50.0
unknown siloxane	21.236	24.2	ug/L	2369700	6	18.461	4894330	50.0
unknown siloxane	17.204	612.4	ug/L	59940800	5	18.461	4894330	50.0

Standards

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
Fluorobenzene (IS)									
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Chlorobenzene-d5 (IS)									
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
[illegible]									
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Method	PQL	Concentration range
EPA 524.2	Level 1a	Levels 1a -> 7a
SW 846 8260B low level	Level 1a	Levels 1-> 7a
EPA 624	Level 2	Levels 2-> 7a
SW846 8260B	Level 2	Levels 2-> 7a

#: Indicates calibration verification concentration level used for low level analysis

!: Indicates calibration verification concentration level used for regular level analysis

Calibration History Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009 Response via : Initial Calibration
Integrator : (RTE Integrator)

Cal Lvl:8 Amt:-1 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S311.D

Injection Date	Mix	Calibration File
1 Jul 2009 2:45 pm	A	C:\msdchem\1\DATA\070109V2.b\2S311.D

Cal Lvl:1 Amt:1 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S315.D

Injection Date	Mix	Calibration File
1 Jul 2009 10:53 am	A	C:\msdchem\1\DATA\070109V2.b\2S303.D
1 Jul 2009 4:41 pm	B	C:\msdchem\1\DATA\070109V2.b\2S315.D

Cal Lvl:2 Amt:2 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S316.D

Injection Date	Mix	Calibration File
1 Jul 2009 11:22 am	A	C:\msdchem\1\DATA\070109V2.b\2S304.D
1 Jul 2009 5:10 pm	B	C:\msdchem\1\DATA\070109V2.b\2S316.D

Cal Lvl:3 Amt:5 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S317.D

Injection Date	Mix	Calibration File
1 Jul 2009 11:51 am	A	C:\msdchem\1\DATA\070109V2.b\2S305.D
1 Jul 2009 5:39 pm	B	C:\msdchem\1\DATA\070109V2.b\2S317.D

Cal Lvl:4 Amt:10 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S318.D

Injection Date	Mix	Calibration File
1 Jul 2009 12:21 pm	A	C:\msdchem\1\DATA\070109V2.b\2S306.D
1 Jul 2009 6:08 pm	B	C:\msdchem\1\DATA\070109V2.b\2S318.D

Cal Lvl:5 Amt:20 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S319.D

Injection Date	Mix	Calibration File
1 Jul 2009 12:50 pm	A	C:\msdchem\1\DATA\070109V2.b\2S307.D
1 Jul 2009 6:37 pm	B	C:\msdchem\1\DATA\070109V2.b\2S319.D

Cal Lvl:6 Amt:50 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S320.D

Injection Date	Mix	Calibration File
1 Jul 2009 1:19 pm	A	C:\msdchem\1\DATA\070109V2.b\2S308.D
1 Jul 2009 7:07 pm	B	C:\msdchem\1\DATA\070109V2.b\2S320.D

Cal Lvl:7 Amt:100 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S321.D

Injection Date	Mix	Calibration File
1 Jul 2009 1:48 pm	A	C:\msdchem\1\DATA\070109V2.b\2S309.D
1 Jul 2009 7:36 pm	B	C:\msdchem\1\DATA\070109V2.b\2S321.D

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
2)MA Dichlorodifluoromethane		0.183	0.177	0.171	0.172	0.168				
	0.186	0.195					0.179	AVRG		5.4508
3)MPA Chloromethane		0.182	0.176	0.159	0.151	0.148				
	0.156	0.158					0.161	AVRG		7.8160
4)MCA Vinyl chloride		0.160	0.155	0.141	0.137	0.129				
	0.141	0.139					0.143	AVRG		7.4385
5)MA Bromomethane		0.151	0.168	0.153	0.157	0.135				
	0.124	0.120					0.144	AVRG		12.3745
6)MA Chloroethane		0.149	0.161	0.156	0.150	0.146				
	0.150	0.149					0.152	AVRG		3.3340
7)MA Trichlorofluoromethane		0.307	0.326	0.297	0.291	0.280				
	0.286	0.287					0.296	AVRG		5.2873
8)MA Ethyl ether		0.173	0.185	0.173	0.171	0.174				
	0.170	0.166					0.173	AVRG		3.4582
9)MA Acetone		0.252	0.195	0.174	0.168	0.169				
-0.0027 | 0.1723 | 0.00	0.165	0.174					0.185	LINR		0.9993
10)MCA 1,1-Dichloroethylene		0.314	0.293	0.315	0.306	0.296				
	0.284	0.296					0.301	AVRG		3.8444
11)MA Iodomethane		0.424	0.397	0.422	0.414	0.403				
	0.396	0.411					0.410	AVRG		2.7350
12)MA Acetonitrile		0.032	0.028	0.028	0.027	0.026				
	0.031	0.027					0.029	AVRG		7.6240
13)MA Methyl acetate		0.212	0.188	0.177	0.173	0.173				
	0.158	0.163					0.177	AVRG		10.1937
14)MA Carbon disulfide		0.735	0.683	0.712	0.693	0.659				
	0.623	0.624					0.676	AVRG		6.3069
15)MA Methylene chloride			0.638	0.456	0.261	0.270				
0.0167 | 0.2127 | 0.00	0.217	0.224					0.344	LINR		0.9974
16)MA tert-Butyl methyl ether		0.602	0.617	0.563	0.588	0.528				
	0.519	0.543					0.566	AVRG		6.6778
17)MA trans-1,2-Dichloroethyle		0.341	0.320	0.324	0.315	0.297				
	0.283	0.283					0.309	AVRG		7.0757
18)MA Vinyl acetate		0.298	0.391	0.379	0.388	0.362				
	0.396	0.377					0.370	AVRG		9.1248
19)MPA 1,1-Dichloroethane		0.414	0.389	0.403	0.390	0.371				
	0.361	0.371					0.386	AVRG		4.8799
20)MA 2-Butanone		0.222	0.207	0.198	0.198	0.210				
	0.205	0.209					0.207	AVRG		3.9501
21)MA cis-1,2-Dichloroethylene		0.380	0.357	0.364	0.347	0.330				
	0.309	0.305					0.342	AVRG		8.3485
22)MA 2,2-Dichloropropane		0.308	0.279	0.283	0.276	0.268				

Response Factor Report VOA2
GEL Laboratories, LLC

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Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
	0.253	0.267					0.276	AVRG		6.2651
23)MA Bromochloromethane		0.134	0.125	0.129	0.127	0.121				
	0.122	0.130					0.127	AVRG		3.6616
24)MCA Chloroform		0.430	0.400	0.405	0.399	0.376				
	0.371	0.383					0.395	AVRG		5.0591
25)MA 1,1,1-Trichloroethane		0.361	0.334	0.345	0.337	0.332				
	0.325	0.342					0.339	AVRG		3.3499
26)MA Cyclohexane		0.392	0.359	0.373	0.360	0.349				
	0.327	0.330					0.356	AVRG		6.4366
27)MA 1,1-Dichloropropene		0.302	0.283	0.291	0.285	0.275				
	0.263	0.265					0.281	AVRG		4.9125
28)MA Carbon tetrachloride		0.312	0.289	0.311	0.305	0.302				
	0.301	0.317					0.306	AVRG		3.0123
29)SA 1,2-Dichloroethane-d4		0.281	0.286	0.283	0.281	0.283				
	0.276	0.273					0.280	AVRG		1.6885
30)MA 1,2-Dichloroethane		0.337	0.305	0.311	0.305	0.284				
	0.277	0.279					0.300	AVRG		7.2456
31)MA Benzene	0.917	0.965	0.898	0.905	0.888	0.833				
	0.795	0.794					0.874	AVRG		6.9909
32)MA Cyclohexene		0.445	0.453	0.467	0.440	0.443				
	0.412	0.416					0.439	AVRG		4.4961
33)MA n-Butyl alcohol	0.005	0.005	0.005	0.006	0.006	0.006				
	0.006	0.006					0.006	AVRG	#	8.5391
34)MA Trichloroethylene		0.258	0.235	0.249	0.241	0.228				
	0.222	0.231					0.238	AVRG		5.1899
35)MCA 1,2-Dichloropropane		0.237	0.226	0.230	0.228	0.215				
	0.203	0.198					0.219	AVRG		6.6362
36)MA Methylcyclohexane		0.418	0.388	0.400	0.397	0.378				
	0.359	0.354					0.385	AVRG		5.9080
37)MA Dibromomethane		0.143	0.130	0.136	0.134	0.132				
	0.132	0.139					0.135	AVRG		3.3912
38)MA Bromodichloromethane		0.272	0.264	0.278	0.281	0.280				
	0.286	0.301					0.280	AVRG		4.1368
39)MA 2-Chloroethylvinyl ether		0.092	0.106	0.130	0.111	0.112				
	0.109	0.100					0.109	AVRG		10.9581
40)MA cis-1,3-Dichloropropylen		0.328	0.307	0.334	0.333	0.324				
	0.327	0.339					0.327	AVRG		3.1689
42)MA 4-Methyl-2-pentanone		0.109	0.106	0.108	0.114	0.113				
	0.108	0.108					0.109	AVRG		2.6106
43)SA Toluene-d8		1.175	1.190	1.179	1.188	1.178				
	1.157	1.157					1.175	AVRG		1.1311

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
44)MCA Toluene		1.301	1.184	1.190	1.149	1.076				
	1.048	1.053					1.143	AVRG		8.0216
45)MA trans-1,3-Dichloropropyl		0.340	0.330	0.357	0.372	0.353				
	0.361	0.373					0.355	AVRG		4.4458
46)MA 1,1,2-Trichloroethane		0.215	0.192	0.198	0.198	0.187				
	0.185	0.190					0.195	AVRG		5.3262
47)MA 2-Hexanone		0.296	0.291	0.298	0.313	0.306				
	0.296	0.296					0.300	AVRG		2.4725
48)MA 1,3-Dichloropropane		0.424	0.402	0.407	0.407	0.373				
	0.365	0.365					0.392	AVRG		6.0583
49)MA Tetrachloroethylene		0.323	0.302	0.306	0.296	0.283				
	0.277	0.275					0.295	AVRG		5.8638
50)MA Dibromochloromethane		0.236	0.228	0.250	0.268	0.269				
	0.289	0.316					0.265	AVRG		11.5426
51)MA 1,2-Dibromoethane		0.224	0.233	0.243	0.247	0.238				
	0.242	0.257					0.241	AVRG		4.3479
52)MPA Chlorobenzene		0.874	0.822	0.817	0.799	0.751				
	0.736	0.768					0.795	AVRG		5.9751
53)MA 1,1,1,2-Tetrachloroethan		0.280	0.273	0.289	0.297	0.286				
	0.291	0.310					0.289	AVRG		4.1463
54)MCA Ethylbenzene		1.386	1.309	1.349	1.326	1.243				
	1.209	1.214					1.291	AVRG		5.3918
55)MA m,p-Xylenes		0.560	0.529	0.548	0.538	0.504				
	0.483	0.470					0.519	AVRG		6.5331
56)MA o-Xylene		0.538	0.518	0.537	0.531	0.501				
	0.483	0.462					0.510	AVRG		5.7656
57)MA Styrene		0.669	0.659	0.747	0.799	0.795				
	0.801	0.791					0.752	AVRG		8.3323
59)MPA Bromoform -0.0193 | 0.4250 | 0.00		0.258	0.255	0.287	0.319	0.331				
	0.372	0.425					0.321	LINR		0.9960
60)MA Isopropylbenzene		2.237	2.089	2.196	2.185	2.094				
	2.033	2.058					2.127	AVRG		3.6665
61)SA Bromofluorobenzene		0.794	0.789	0.797	0.794	0.790				
	0.772	0.766					0.786	AVRG		1.5297
62)MPA 1,1,2,2-Tetrachloroethan		0.517	0.481	0.511	0.511	0.490				
	0.485	0.508					0.500	AVRG		2.8921
63)MA 1,2,3-Trichloropropane		0.155	0.143	0.140	0.147	0.138				
	0.137	0.145					0.143	AVRG		4.3388
64)MA Bromobenzene		0.711	0.618	0.646	0.638	0.602				
	0.602	0.636					0.636	AVRG		5.8687
65)MA n-Propylbenzene		2.665	2.494	2.631	2.593	2.446				
	2.370	2.378					2.511	AVRG		4.7881

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b m1 m2	6	7								
66)MA 1,3,5-Trimethylbenzene		1.774	1.731	1.837	1.832	1.751				
	1.698	1.713					1.762	AVRG		3.1311
67)MA 2-Chlorotoluene		1.876	1.723	1.790	1.755	1.645				
	1.573	1.577					1.706	AVRG		6.6254
68)MA 4-Chlorotoluene		1.718	1.574	1.622	1.587	1.488				
	1.441	1.441					1.553	AVRG		6.5898
69)MA tert-Butylbenzene		1.885	1.755	1.853	1.839	1.759				
	1.729	1.762					1.797	AVRG		3.3595
70)MA 1,2,4-Trimethylbenzene		1.903	1.776	1.910	1.894	1.786				
	1.742	1.761					1.825	AVRG		4.0567
71)MA sec-Butylbenzene		2.433	2.320	2.481	2.467	2.344				
	2.306	2.300					2.379	AVRG		3.3159
72)MA 4-Isopropyltoluene		1.886	1.840	1.981	1.993	1.907				
	1.886	1.911					1.915	AVRG		2.8469
73)MA 1,3-Dichlorobenzene		1.303	1.209	1.227	1.203	1.134				
	1.122	1.168					1.195	AVRG		5.1366
74)MA 1,4-Dichlorobenzene		1.395	1.299	1.272	1.226	1.157				
	1.142	1.184					1.239	AVRG		7.2379
75)MA n-Butylbenzene		1.881	1.764	1.907	1.917	1.809				
	1.750	1.717					1.821	AVRG		4.4542
76)MA 1,2-Dichlorobenzene		1.240	1.140	1.180	1.154	1.088				
	1.077	1.135					1.145	AVRG		4.8342
77)MA 1,2-Dibromo-3-chloroprop		0.084	0.087	0.093	0.104	0.105				
	0.119						0.099	AVRG		13.4369
78)MA 1,2,4-Trichlorobenzene		0.949	0.864	0.877	0.882	0.822				
	0.832	0.876					0.872	AVRG		4.7419
79)MA Hexachlorobutadiene		0.566	0.510	0.529	0.536	0.514				
	0.531	0.552					0.534	AVRG		3.7074
80)MA Naphthalene		1.834	1.730	1.803	1.853	1.788				
	1.826	1.940					1.825	AVRG		3.5381
81)MA 1,2,3-Trichlorobenzene		0.850	0.772	0.812	0.811	0.759				
	0.773	0.817					0.799	AVRG		4.0158
83)B Chlorotrifluoroethylene		0.157	0.133	0.162	0.138	0.160				
	0.195	0.186					0.162	AVRG		13.9956
84)B 2-Chloro-1,1,1-trifluoro		0.275	0.246	0.258	0.243	0.248				
	0.265	0.246					0.254	AVRG		4.7615
85)B Acrolein		0.030	0.031	0.032	0.033	0.035				
	0.040	0.040					0.034	AVRG		11.6625
86)B Trichlorotrifluoroethane		0.065	0.063	0.062	0.062	0.063				
	0.067	0.058					0.063	AVRG		4.4089
87)B Isopropyl Alcohol		0.014	0.013	0.015	0.013	0.014				

Response Factor Report VOA2
GFL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b m1 m2	6	7								
	0.014	0.015					0.014	AVRG		4.7550
88)B Allyl chloride		0.365	0.356	0.351	0.360	0.352				
	0.342	0.319					0.349	AVRG		4.3977
89)B tert-Butyl Alcohol		0.024	0.022	0.023	0.021	0.022				
	0.022	0.022					0.022	AVRG		4.1724
90)B Acrylonitrile		0.067	0.070	0.069	0.070	0.071				
	0.072	0.073					0.070	AVRG		3.0598
91)B Isopropyl ether		0.780	0.720	0.761	0.717	0.733				
	0.762	0.699					0.739	AVRG		3.9713
92)B 2-Chloro-1,3-butadiene		0.257	0.263	0.268	0.292	0.302				
	0.316	0.320					0.288	AVRG		9.0081
93)B Ethyl tert-butyl ether		0.663	0.613	0.659	0.631	0.650				
	0.668	0.621					0.644	AVRG		3.4033
94)B Ethyl acetate		0.206	0.215	0.209	0.206	0.205				
	0.206	0.205					0.208	AVRG		1.7815
95)B Propionitrile		0.028	0.029	0.028	0.029	0.028				
	0.028	0.028					0.028	AVRG		1.1052
96)B Methacrylonitrile		0.114	0.124	0.126	0.128	0.129				
	0.127	0.126					0.125	AVRG		4.1089
97)B Tetrahydrofuran		0.068	0.070	0.067	0.065	0.065				
	0.065	0.066					0.067	AVRG		2.8567
98)B Isobutyl alcohol		0.007	0.007	0.007	0.007	0.008				
	0.008	0.008					0.007	AVRG	#	2.9321
99)B Methyl tert-amyl ether		0.574	0.543	0.577	0.552	0.566				
	0.577	0.536					0.561	AVRG		3.0128
100)B Methyl methacrylate		0.105	0.113	0.122	0.128	0.132				
	0.129	0.123					0.122	AVRG		8.0488
101)B 1,4-Dioxane		0.001	0.002	0.002	0.002	0.002				
	0.002	0.002					0.002	AVRG	#	9.9647
102)B 2-Nitropropane		0.048	0.050	0.056	0.060	0.064				
	0.068						0.058	AVRG		13.8687
104)B Ethyl methacrylate		0.229	0.256	0.282	0.303	0.305				
	0.292	0.265					0.276	AVRG		10.0550
106)B 1-Chlorohexane		0.394	0.389	0.403	0.382	0.398				
	0.417	0.369					0.393	AVRG		3.9090
107)B cis-1,4-Dichloro-2-buten		0.135	0.150	0.158	0.164	0.169				
	0.167	0.159					0.157	AVRG		7.3579
108)B Cyclohexanone		0.048	0.056	0.062	0.060	0.062				
	0.069	0.059					0.059	AVRG		10.8542
109)B trans-1,4-Dichloro-2-but		0.138	0.152	0.158	0.159	0.161				
	0.157	0.149					0.154	AVRG		5.1007

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b / m1 / m2	6	7								
110)B Pentachloroethane		0.123	0.132	0.137	0.143	0.171				
-0.0071 / 0.1758 / 0.00	0.189	0.172					0.152	LINR		0.9970
111)B Benzyl chloride		0.698	0.785	0.823	0.865	0.878				
	0.862	0.823					0.819	AVRG		7.6038
112)B bis(2-Chloroisopropyl)et		0.248	0.261	0.268	0.264	0.275				
	0.273	0.278					0.267	AVRG		3.8659

(#) = Out of Range

Continuing Calibration Summary

Client SDG: 09-2508

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.2804	0.269		.01		-4.06562	60		Averaged	
S	Toluene-d8	1.1749	1.151		.01		-2.03422	60		Averaged	
S	Bromofluorobenzene	0.7862	0.765		.01		-2.69651	60		Averaged	
	Dichlorodifluoromethane	0.179	0.161		.01		-10.05587	60		Averaged	
	Chloromethane	0.1614	0.148		.1		-8.30235	60		Averaged	spcc
	Vinyl chloride	0.1433	0.135		.01		-5.79204	20		Averaged	ccc
	Bromomethane	0.1441	0.126		.01		-12.56072	60		Averaged	
	Chloroethane	0.1518	0.143		.01		-5.7971	60		Averaged	
	Trichlorofluoromethane	0.2964	0.287		.01		-3.17139	60		Averaged	
	Ethyl ether	0.1732	0.163		.01		-5.88915	60		Averaged	
	1,1-Dichloroethylene	0.3007	0.286		.01		-4.88859	20		Averaged	ccc
	Acetone	250	216.96	250			-13.216	60		Linear	
	Iodomethane	0.4096	0.432		.01		5.46875	60		Averaged	
	Carbon disulfide	0.6756	0.674		.01		-0.23683	60		Averaged	
	Acetonitrile	0.0286	0.032		.01		11.88811	60		Averaged	
	Methyl acetate	0.1775	0.214		.01		20.56338	60		Averaged	
	Methylene chloride	50	48.37	50			-3.26	60		Linear	
	trans-1,2-Dichloroethylene	0.3091	0.282		.01		-8.76739	60		Averaged	
	tert-Butyl methyl ether	0.5656	0.52		.01		-8.06223	60		Averaged	
	1,1-Dichloroethane	0.3855	0.367		.1		-4.79896	60		Averaged	spcc
	Vinyl acetate	0.3702	0.203		.01		-45.16478	60		Averaged	
	2-Butanone	0.207	0.172		.01		-16.90821	60		Averaged	
	cis-1,2-Dichloroethylene	0.3417	0.318		.01		-6.93591	60		Averaged	
	2,2-Dichloropropane	0.276	0.269		.01		-2.53623	60		Averaged	
	Bromochloromethane	0.1267	0.124		.01		-2.13102	60		Averaged	
	Chloroform	0.3949	0.375		.01		-5.03925	20		Averaged	ccc
	1,1,1-Trichloroethane	0.3395	0.335		.01		-1.32548	60		Averaged	
	Cyclohexane	0.3556	0.337		.01		-5.2306	60		Averaged	
	1,1-Dichloropropene	0.2806	0.269		.01		-4.134	60		Averaged	
	Carbon tetrachloride	0.3055	0.308		.01		0.81833	60		Averaged	
	1,2-Dichloroethane	0.2997	0.277		.01		-7.57424	60		Averaged	
	Benzene	0.8742	0.802		.01		-8.25898	60		Averaged	
	Cyclohexene	0.4394	0.403		.01		-8.28402	60		Averaged	
	n-Butyl alcohol	0.0058	0.006		.01		3.44828	60		Averaged	
	Trichloroethylene	0.2376	0.231		.01		-2.77778	60		Averaged	
	1,2-Dichloropropane	0.2194	0.206		.01		-6.10757	20		Averaged	ccc
	Methylcyclohexane	0.385	0.37		.01		-3.8961	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.1351	0.132		.01		-2.2946	60		Averaged	
Bromodichloromethane	0.2802	0.283		.01		0.99929	60		Averaged	
2-Chloroethylvinyl ether	0.1086	0.11		.01		1.28913	60		Averaged	
cis-1,3-Dichloropropylene	0.3273	0.333		.01		1.74152	60		Averaged	
4-Methyl-2-pentanone	0.1094	0.101		.01		-7.67824	60		Averaged	
2-Hexanone	0.2996	0.275		.01		-8.21095	60		Averaged	
Toluene	1.1428	1.047		.01		-8.38292	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.3552	0.358		.01		0.78829	60		Averaged	
1,1,2-Trichloroethane	0.1949	0.185		.01		-5.07953	60		Averaged	
1,3-Dichloropropane	0.3918	0.365		.01		-6.84022	60		Averaged	
Tetrachloroethylene	0.2946	0.289		.01		-1.90088	60		Averaged	
Dibromochloromethane	0.265	0.291		.01		9.81132	60		Averaged	
1,2-Dibromoethane	0.2408	0.244		.01		1.3289	60		Averaged	
Chlorobenzene	0.7955	0.772		.3		-2.95412	60		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.2894	0.299		.01		3.31721	60		Averaged	
Ethylbenzene	1.2909	1.221		.01		-5.41483	20		Averaged	ccc
m,p-Xylenes	0.5189	0.487		.01		-6.14762	60		Averaged	
o-Xylene	0.51	0.483		.01		-5.29412	60		Averaged	
Styrene	0.7515	0.8		.01		6.45376	60		Averaged	
Bromoform	50	46.79	50			-6.42	60		Linear	spcc
Isopropylbenzene	2.1274	2.052		.01		-3.54423	60		Averaged	
1,1,2,2-Tetrachloroethane	0.5005	0.481		.3		-3.8961	60		Averaged	spcc
1,2,3-Trichloropropane	0.1435	0.138		.01		-3.83275	60		Averaged	
Bromobenzene	0.6362	0.631		.01		-0.81735	60		Averaged	
n-Propylbenzene	2.5112	2.384		.01		-5.06531	60		Averaged	
2-Chlorotoluene	1.7056	1.621		.01		-4.96013	60		Averaged	
1,3,5-Trimethylbenzene	1.7622	1.713		.01		-2.79196	60		Averaged	
4-Chlorotoluene	1.5531	1.472		.01		-5.22181	60		Averaged	
tert-Butylbenzene	1.7973	1.762		.01		-1.96406	60		Averaged	
1,2,4-Trimethylbenzene	1.8246	1.756		.01		-3.75973	60		Averaged	
sec-Butylbenzene	2.3786	2.335		.01		-1.83301	60		Averaged	
4-Isopropyltoluene	1.9148	1.91		.01		-0.25068	60		Averaged	
1,3-Dichlorobenzene	1.1952	1.173		.01		-1.85743	60		Averaged	
1,4-Dichlorobenzene	1.2391	1.19		.01		-3.96255	60		Averaged	
n-Butylbenzene	1.8207	1.766		.01		-3.00434	60		Averaged	
1,2-Dichlorobenzene	1.1449	1.124		.01		-1.82549	60		Averaged	
1,2-Dibromo-3-chloropropane	0.0988	0.124		.01		25.50607	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	0.8718	0.857		.01		-1.69764	60		Averaged
Hexachlorobutadiene	0.5338	0.551		.01		3.22218	60		Averaged
Naphthalene	1.8249	1.829		.01		0.22467	60		Averaged
1,2,3-Trichlorobenzene	0.799	0.828		.01		3.62954	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1816013	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1540251	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	956988	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1816013	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1540251	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	956988	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	488579	47.98	ug/L	0.00
43) Toluene-d8	14.310	98	1773476	49.00	ug/L	0.00
61) Bromofluorobenzene	17.204	95	731905	48.64	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	292436	44.98	ug/L	100
3) Chloromethane	5.014	50	269572	46.00	ug/L	100
4) Vinyl chloride	5.252	62	245602	47.18	ug/L	100
5) Bromomethane	5.980	94	227963	43.56	ug/L	100
6) Chloroethane	6.199	64	259835	47.12	ug/L	99
7) Trichlorofluoromethane	6.756	101	521083	48.40	ug/L	100
8) Ethyl ether	7.349	59	296707	47.18	ug/L	100
9) Acetone	7.871	43	1352631	216.96	ug/L	100
10) 1,1-Dichloroethylene	7.812	61	518775	47.49	ug/L	98
11) Iodomethane	8.096	142	3920148	263.52	ug/L	100
12) Acetonitrile	8.381	41	1151204	1107.72	ug/L	99
13) Methyl acetate	8.500	43	1941955	301.24	ug/L	100
14) Carbon disulfide	8.251	76	6121756	249.48	ug/L	100
15) Methylene chloride	8.701	84	404082	48.37	ug/L	99
16) tert-Butyl methyl ether	9.199	73	944502	45.98	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	511649	45.58	ug/L	99
18) Vinyl acetate	9.935	43	1842087	137.02	ug/L	96
19) 1,1-Dichloroethane	9.887	63	665904	47.55	ug/L	100
20) 2-Butanone	10.765	43	1561738	207.76	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	578319	46.60	ug/L	98
22) 2,2-Dichloropropane	10.800	77	488266	48.70	ug/L	100
23) Bromochloromethane	11.132	128	226027	49.12	ug/L	99
24) Chloroform	11.227	83	680521	47.44	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	607548	49.27	ug/L	100
26) Cyclohexane	11.642	56	612261	47.41	ug/L	99
27) 1,1-Dichloropropene	11.749	75	488823	47.97	ug/L	100
28) Carbon tetrachloride	11.784	117	560221	50.49	ug/L	100
30) 1,2-Dichloroethane	12.033	62	502499	46.17	ug/L	100
31) Benzene	12.033	78	1455629	45.84	ug/L	100
32) Cyclohexene	12.188	67	732745	45.91	ug/L	99
33) n-Butyl alcohol	12.650	56	1121237	5342.87	ug/L	100
34) Trichloroethylene	12.852	95	419699	48.63	ug/L	99
35) 1,2-Dichloropropane	13.124	63	374518	47.00	ug/L	99
36) Methylcyclohexane	13.136	83	671359	48.01	ug/L	99
37) Dibromomethane	13.267	93	240040	48.92	ug/L	98
38) Bromodichloromethane	13.445	83	513660	50.47	ug/L	100
39) 2-Chloroethylvinyl ether	13.753	63	996561	252.57	ug/L	100
40) cis-1,3-Dichloropropylene	13.966	75	604045	50.81	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
42) 4-Methyl-2-pentanone	14.109	58	776007	230.18 ug/L	99	
44) Toluene	14.381	91	1612719	45.81 ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	552027	50.45 ug/L	100	
46) 1,1,2-Trichloroethane	14.808	83	285261	47.50 ug/L	99	
47) 2-Hexanone	14.109	43	2119224	229.66 ug/L	99	
48) 1,3-Dichloropropane	15.010	76	562287	46.59 ug/L	94	
49) Tetrachloroethylene	15.034	164	444818	49.01 ug/L	99	
50) Dibromochloromethane	15.295	129	447970	54.87 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	375747	50.66 ug/L	100	
52) Chlorobenzene	15.982	112	1188626	48.51 ug/L	99	
53) 1,1,1,2-Tetrachloroethane	16.054	131	460563	51.66 ug/L	100	
54) Ethylbenzene	16.077	91	1881100	47.31 ug/L	99	
55) m,p-Xylenes	16.196	106	1500055	93.84 ug/L	99	
56) o-Xylene	16.635	106	744228	47.37 ug/L	100	
57) Styrene	16.646	104	1232341	53.23 ug/L	99	
59) Bromoform	16.884	173	362113	46.79 ug/L	100	
60) Isopropylbenzene	17.026	105	1963566	48.22 ug/L	99	
62) 1,1,2,2-Tetrachloroethane	17.299	83	459904	48.01 ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	132333	48.18 ug/L	98	
64) Bromobenzene	17.417	156	603554	49.57 ug/L	95	
65) n-Propylbenzene	17.465	91	2281803	47.47 ug/L	99	
66) 1,3,5-Trimethylbenzene	17.631	105	1639584	48.61 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1551197	47.52 ug/L	98	
68) 4-Chlorotoluene	17.702	91	1408248	47.38 ug/L	99	
69) tert-Butylbenzene	17.998	119	1686280	49.02 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1680321	48.12 ug/L	99	
71) sec-Butylbenzene	18.235	105	2234304	49.08 ug/L	99	
72) 4-Isopropyltoluene	18.366	119	1827510	49.87 ug/L	100	
73) 1,3-Dichlorobenzene	18.401	146	1122218	49.06 ug/L	99	
74) 1,4-Dichlorobenzene	18.485	146	1139216	48.03 ug/L	99	
75) n-Butylbenzene	18.805	91	1690481	48.51 ug/L	99	
76) 1,2-Dichlorobenzene	18.900	146	1075319	49.07 ug/L	99	
77) 1,2-Dibromo-3-chloropr...	19.706	157	118302	62.56 ug/L	98	E
78) 1,2,4-Trichlorobenzene	20.690	180	820135	49.15 ug/L	100	
79) Hexachlorobutadiene	20.868	225	527406	51.62 ug/L	100	
80) Naphthalene	21.022	128	1750176	50.11 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	791976	51.79 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.539		0m	N.D. d		
86) Trichlorotrifluoroethane	0.000		0	N.D.		
87) Isopropyl Alcohol	8.239		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.903		0m	N.D. d		
90) Acrylonitrile	9.199		0m	N.D. d		
91) Isopropyl ether	10.053		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.148		0m	N.D. d		
93) Ethyl tert-butyl ether	10.788		0m	N.D. d		
94) Ethyl acetate	10.765		0m	N.D. d		
95) Propionitrile	10.765		0m	N.D. d		
96) Methacrylonitrile	11.061		0m	N.D. d		
97) Tetrahydrofuran	11.227		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
98)	Isobutyl alcohol	11.927		0m	N.D. d	
99)	Methyl tert-amyl ether	12.188		0m	N.D. d	
100)	Methyl methacrylate	13.136		0m	N.D. d	
101)	1,4-Dioxane	13.279		0m	N.D. d	
102)	2-Nitropropane	13.753		0m	N.D. d	
104)	Ethyl methacrylate	0.000		0	N.D.	
106)	1-Chlorohexane	15.947		0m	N.D. d	
107)	cis-1,4-Dichloro-2-butene	17.026		0m	N.D. d	
108)	Cyclohexanone	17.026		0m	N.D. d	
109)	trans-1,4-Dichloro-2-b...	17.465		0m	N.D. d	
110)	Pentachloroethane	18.058		0m	N.D. d	
111)	Benzyl chloride	18.805		0m	N.D. d	
112)	bis(2-Chloroisopropyl)...	19.149		0m	N.D. d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On    :  1 Jul 2009   3:44 pm
Operator  : CDS1
InstName  : VOA2
Sample    : |W2VM090701-10|ICV|1|VOAF|1|
Misc      : LCS  5ML  MIX [A] ULTRA
ALS Vial  : 12   Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
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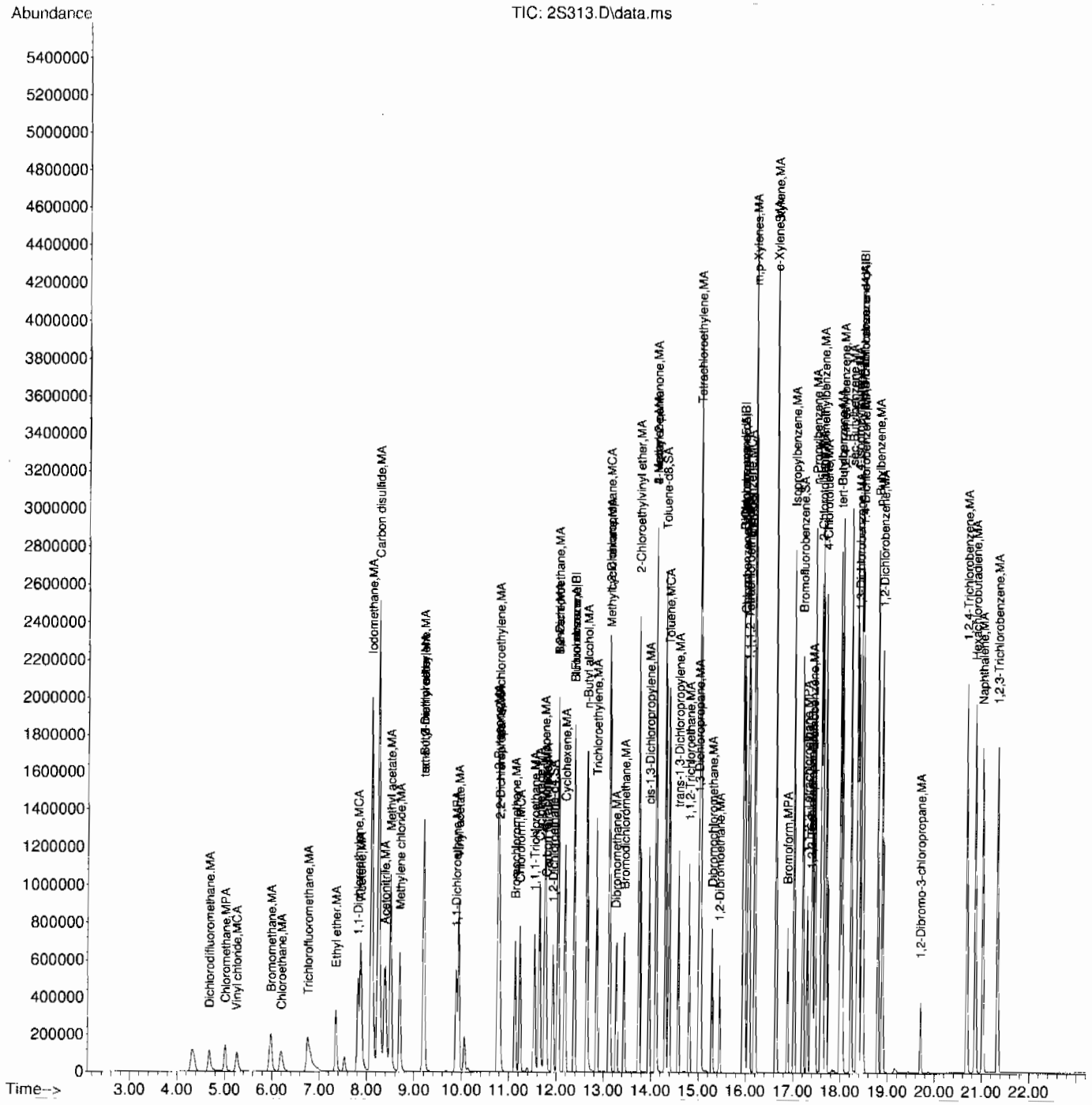

Continuing Calibration Summary

Client SDG: 09-2508

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 20:34

Data File: 070109V2.b\2S323.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090701-18 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.2804	0.272		.01		-2.99572	60		Averaged
S	Toluene-d8	1.1749	1.154		.01		-1.77887	60		Averaged
S	Bromofluorobenzene	0.7862	0.785		.01		-0.15263	60		Averaged
	Chlorotrifluoroethylene	0.1616	0.157		.01		-2.84653	60		Averaged
	2-Chloro-1,1,1-trifluoroethane	0.2543	0.26		.01		2.24145	60		Averaged
	Acrolein	0.0345	0.041		.01		18.84058	60		Averaged
	Trichlorotrifluoroethane	0.0628	0.066		.01		5.09554	60		Averaged
	Isopropyl Alcohol	0.0139	0.016		.01		15.10791	60		Averaged
	Allyl chloride	0.3493	0.311		.01		-10.96479	60		Averaged
	tert-Butyl Alcohol	0.022	0.024		.01		9.09091	60		Averaged
	Acrylonitrile	0.0703	0.077		.01		9.53058	60		Averaged
	Isopropyl ether	0.739	0.747		.01		1.08254	60		Averaged
	2-Chloro-1,3-butadiene	0.2881	0.33		.01		14.54356	60		Averaged
	Ethyl tert-butyl ether	0.6436	0.641		.01		-0.40398	60		Averaged
	Propionitrile	0.0284	0.031		.01		9.15493	60		Averaged
	Ethyl acetate	0.2075	0.22		.01		6.0241	60		Averaged
	Methacrylonitrile	0.1249	0.137		.01		9.68775	60		Averaged
	Tetrahydrofuran	0.0668	0.073		.01		9.28144	60		Averaged
	Isobutyl alcohol	0.0074	0.009		.01		21.62162	60		Averaged
	Methyl tert-amyl ether	0.5609	0.564		.01		0.55268	60		Averaged
	Methyl methacrylate	0.1218	0.139		.01		14.12151	60		Averaged
	1,4-Dioxane	0.0017	0.002		.01		17.64706	60		Averaged
	2-Nitropropane	0.0578	0.074		.01		28.02768	60		Averaged
	Ethyl methacrylate	0.2758	0.298		.01		8.04931	60		Averaged
	1-Chlorohexane	0.3931	0.426		.01		8.36937	60		Averaged
	cis-1,4-Dichloro-2-butene	0.1574	0.174		.01		10.54638	60		Averaged
	Cyclohexanone	0.0593	0.076		.01		28.16189	60		Averaged
	trans-1,4-Dichloro-2-butene	0.1536	0.166		.01		8.07292	60		Averaged
	Pentachloroethane	250	183.53	250			-26.588	60		Linear
	Benzyl chloride	0.8192	0.828		.01		1.07422	60		Averaged
	bis(2-Chloroisopropyl)ether	0.2668	0.3		.01		12.44378	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1776961	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1492904	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	910409	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1776961	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1492904	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	910409	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	483555	48.53 ug/L	0.00
43) Toluene-d8	14.310	98	1723019	49.12 ug/L	0.00
61) Bromofluorobenzene	17.204	95	714881	49.94 ug/L	0.00

Target Compounds				Qvalue
2) Dichlorodifluoromethane	4.613	0m	N.D. d	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.252	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	0.000	0	N.D.	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.859	0m	N.D. d	
10) 1,1-Dichloroethylene	7.871	0m	N.D. d	
11) Iodomethane	0.000	0	N.D.	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.251	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.211	0m	N.D. d	
17) trans-1,2-Dichloroethy...	0.000	0	N.D.	
18) Vinyl acetate	9.994	0m	N.D. d	
19) 1,1-Dichloroethane	10.053	0m	N.D. d	
20) 2-Butanone	10.777	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.860	0m	N.D. d	
22) 2,2-Dichloropropane	0.000	0	N.D.	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.239	0m	N.D. d	
25) 1,1,1-Trichloroethane	0.000	0	N.D.	
26) Cyclohexane	11.654	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	0.000	0	N.D.	
30) 1,2-Dichloroethane	11.939	0m	N.D. d	
31) Benzene	12.034	0m	N.D. d	
32) Cyclohexene	12.152	0m	N.D. d	
33) n-Butyl alcohol	12.662	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	0.000	0	N.D.	
36) Methylcyclohexane	13.196	0m	N.D. d	
37) Dibromomethane	0.000	0	N.D.	
38) Bromodichloromethane	13.196	0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000	0	N.D.	
40) cis-1,3-Dichloropropylene	13.966	0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42)	4-Methyl-2-pentanone	14.310		0m	N.D.	d	
44)	Toluene	14.382		0m	N.D.	d	
45)	trans-1,3-Dichloroprop...	14.583		0m	N.D.	d	
46)	1,1,2-Trichloroethane	14.642		0m	N.D.	d	
47)	2-Hexanone	14.073		0m	N.D.	d	
48)	1,3-Dichloropropane	15.057		0m	N.D.	d	
49)	Tetrachloroethylene	15.034		0m	N.D.	d	
50)	Dibromochloromethane	0.000		0	N.D.		
51)	1,2-Dibromoethane	15.449		0m	N.D.	d	
52)	Chlorobenzene	15.982		0m	N.D.	d	
53)	1,1,1,2-Tetrachloroethane	16.054		0m	N.D.	d	
54)	Ethylbenzene	16.196		0m	N.D.	d	
55)	m,p-Xylenes	16.196		0m	N.D.	d	
56)	o-Xylene	0.000		0	N.D.		
57)	Styrene	16.646		0m	N.D.	d	
59)	Bromoform	0.000		0	N.D.		
60)	Isopropylbenzene	17.026		0m	N.D.	d	
62)	1,1,2,2-Tetrachloroethane	17.358		0m	N.D.	d	
63)	1,2,3-Trichloropropane	17.204		0m	N.D.	d	
64)	Bromobenzene	17.405		0m	N.D.	d	
65)	n-Propylbenzene	17.595		0m	N.D.	d	
66)	1,3,5-Trimethylbenzene	17.631		0m	N.D.	d	
67)	2-Chlorotoluene	17.595		0m	N.D.	d	
68)	4-Chlorotoluene	17.702		0m	N.D.	d	
69)	tert-Butylbenzene	18.046		0m	N.D.	d	
70)	1,2,4-Trimethylbenzene	18.070		0m	N.D.	d	
71)	sec-Butylbenzene	18.236		0m	N.D.	d	
72)	4-Isopropyltoluene	18.366		0m	N.D.	d	
73)	1,3-Dichlorobenzene	18.402		0m	N.D.	d	
74)	1,4-Dichlorobenzene	18.402		0m	N.D.	d	
75)	n-Butylbenzene	18.603		0m	N.D.	d	
76)	1,2-Dichlorobenzene	18.900		0m	N.D.	d	
77)	1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
78)	1,2,4-Trichlorobenzene	20.690		0m	N.D.	d	
79)	Hexachlorobutadiene	20.868		0m	N.D.	d	
80)	Naphthalene	21.022		0m	N.D.	d	
81)	1,2,3-Trichlorobenzene	21.342		0m	N.D.	d	
83)	Chlorotrifluoroethylene	4.613	116	839045	146.12	ug/L	100
84)	2-Chloro-1,1,1-trifluo...	5.475	118	1386207	153.41	ug/L	100
85)	Acrolein	7.575	56	360031	293.76	ug/L	98
86)	Trichlorotrifluoroethane	7.859	85	586254	262.49	ug/L	100
87)	Isopropyl Alcohol	8.120	45	1408561	2847.02	ug/L	99
88)	Allyl chloride	8.488	41	2760549	222.37	ug/L	99
89)	tert-Butyl Alcohol	8.867	59	2117465	2710.98	ug/L	100
90)	Acrylonitrile	9.093	53	679988	272.29	ug/L	100
91)	Isopropyl ether	9.994	45	1327071	50.53	ug/L	100
92)	2-Chloro-1,3-butadiene	10.053	53	586086	57.25	ug/L	100
93)	Ethyl tert-butyl ether	10.563	59	1138335	49.77	ug/L	100
94)	Ethyl acetate	10.860	43	1951361	264.60	ug/L	100
95)	Propionitrile	10.848	54	273857	271.63	ug/L	100
96)	Methacrylonitrile	11.085	41	1215595	273.80	ug/L	100
97)	Tetrahydrofuran	11.203	42	651169	274.34	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
98) Isobutyl alcohol	11.796	41	765122	2899.44	ug/L	100	
99) Methyl tert-amyl ether	12.152	73	1002023	50.27	ug/L	94	
100) Methyl methacrylate	13.196	69	1233037	284.92	ug/L	99	
101) 1,4-Dioxane	13.267	88	177152	3018.22	ug/L	99	
102) 2-Nitropropane	13.682	43	659876	321.25	ug/L	100	E
104) Ethyl methacrylate	14.642	69	2224510	270.12	ug/L	100	
106) 1-Chlorohexane	15.888	55	387744	54.17	ug/L	100	
107) cis-1,4-Dichloro-2-butene	17.062	53	793463	276.81	ug/L	99	
108) Cyclohexanone	17.145	42	1719806	1591.54	ug/L	98	
109) trans-1,4-Dichloro-2-b...	17.358	53	757123	270.77	ug/L	99	
110) Pentachloroethane	18.058	167	581071	183.53	ug/L	100	
111) Benzyl chloride	18.603	91	3770433	252.77	ug/L	100	
112) bis(2-Chloroisopropyl)...	19.006	45	1363411	280.70	ug/L	99	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

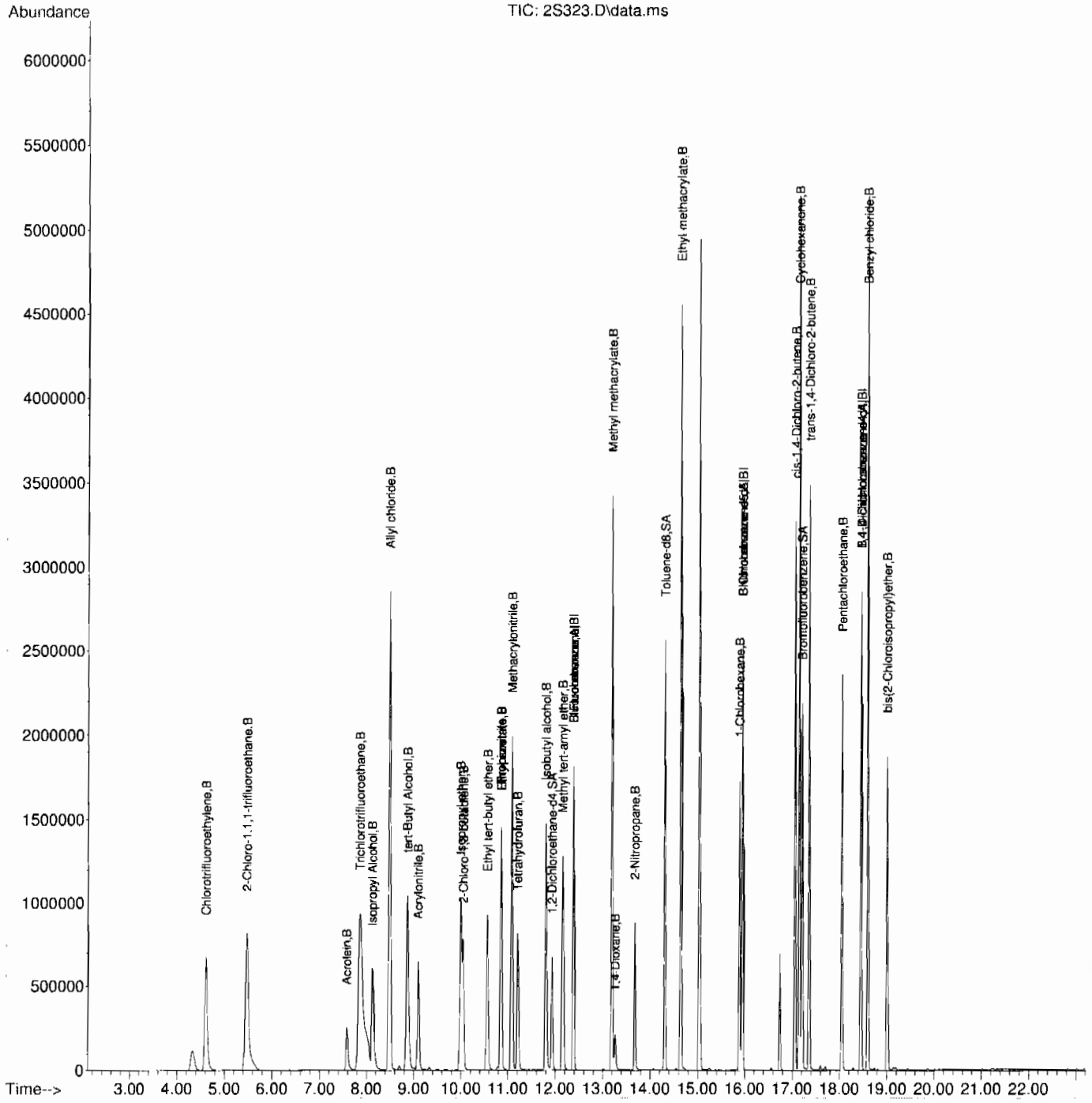

Continuing Calibration Summary

Client SDG: 09-2508

Instrument ID: VOA2.I **Injection Date** 06-JUL-09 06:57

Data File: 070609V2.b\2T102.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090706-01 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.2804	0.28		.01		-0.14265	60		Averaged	
S	Toluene-d8	1.1749	1.187		.01		1.02987	60		Averaged	
S	Bromofluorobenzene	0.7862	0.784		.01		-0.27983	60		Averaged	
	Dichlorodifluoromethane	0.179	0.151		.01		-15.64246	60		Averaged	
	Chloromethane	0.1614	0.15		.1		-7.0632	60		Averaged	spcc
	Vinyl chloride	0.1433	0.165		.01		15.14306	20		Averaged	ccc
	Bromomethane	0.1441	0.111		.01		-22.97016	60		Averaged	
	Chloroethane	0.1518	0.146		.01		-3.82082	60		Averaged	
	Trichlorofluoromethane	0.2964	0.272		.01		-8.23212	60		Averaged	
	Ethyl ether	0.1732	0.177		.01		2.194	60		Averaged	
	1,1-Dichloroethylene	0.3007	0.316		.01		5.08813	20		Averaged	ccc
	Acetone	250	271.93	250			8.772	60		Linear	
	Iodomethane	0.4096	0.443		.01		8.1543	60		Averaged	
	Carbon disulfide	0.6756	0.696		.01		3.01954	60		Averaged	
	Acetonitrile	0.0286	0.034		.01		18.88112	60		Averaged	
	Methyl acetate	0.1775	0.168		.01		-5.35211	60		Averaged	
	Methylene chloride	50	57.63	50			15.26	60		Linear	
	trans-1,2-Dichloroethylene	0.3091	0.313		.01		1.26173	60		Averaged	
	tert-Butyl methyl ether	0.5656	0.56		.01		-0.9901	60		Averaged	
	1,1-Dichloroethane	0.3855	0.398		.1		3.24254	60		Averaged	spcc
	Vinyl acetate	0.3702	0.464		.01		25.33766	60		Averaged	
	2-Butanone	0.207	0.23		.01		11.11111	60		Averaged	
	cis-1,2-Dichloroethylene	0.3417	0.339		.01		-0.79017	60		Averaged	
	2,2-Dichloropropane	0.276	0.292		.01		5.7971	60		Averaged	
	Bromochloromethane	0.1267	0.136		.01		7.34017	60		Averaged	
	Chloroform	0.3949	0.407		.01		3.06407	20		Averaged	ccc
	1,1,1-Trichloroethane	0.3395	0.364		.01		7.21649	60		Averaged	
	Cyclohexane	0.3556	0.363		.01		2.08099	60		Averaged	
	1,1-Dichloropropene	0.2806	0.296		.01		5.48824	60		Averaged	
	Carbon tetrachloride	0.3055	0.339		.01		10.96563	60		Averaged	
	1,2-Dichloroethane	0.2997	0.294		.01		-1.9019	60		Averaged	
	Benzene	0.8742	0.884		.01		1.12102	60		Averaged	
	Cyclohexene	0.4394	0.463		.01		5.37096	60		Averaged	
	n-Butyl alcohol	0.0058	0.007		.01		20.68966	60		Averaged	
	Trichloroethylene	0.2376	0.249		.01		4.79798	60		Averaged	
	1,2-Dichloropropane	0.2194	0.222		.01		1.18505	20		Averaged	ccc
	Methylcyclohexane	0.385	0.409		.01		6.23377	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 06-JUL-09 06:57

Data File: 070609V2.b\2T102.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090706-01 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.1351	0.143		.01		5.84752	60		Averaged	
Bromodichloromethane	0.2802	0.311		.01		10.99215	60		Averaged	
2-Chloroethylvinyl ether	0.1086	0.111		.01		2.20994	60		Averaged	
cis-1,3-Dichloropropylene	0.3273	0.361		.01		10.29636	60		Averaged	
4-Methyl-2-pentanone	0.1094	0.124		.01		13.34552	60		Averaged	
2-Hexanone	0.2996	0.338		.01		12.81709	60		Averaged	
Toluene	1.1428	1.154		.01		0.98005	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.3552	0.391		.01		10.07883	60		Averaged	
1,1,2-Trichloroethane	0.1949	0.197		.01		1.07748	60		Averaged	
1,3-Dichloropropane	0.3918	0.387		.01		-1.22511	60		Averaged	
Tetrachloroethylene	0.2946	0.316		.01		7.26409	60		Averaged	
Dibromochloromethane	0.265	0.315		.01		18.86792	60		Averaged	
1,2-Dibromoethane	0.2408	0.261		.01		8.3887	60		Averaged	
Chlorobenzene	0.7955	0.82		.3		3.07982	60		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.2894	0.321		.01		10.91914	60		Averaged	
Ethylbenzene	1.2909	1.346		.01		4.26834	20		Averaged	ccc
m,p-Xylenes	0.5189	0.541		.01		4.25901	60		Averaged	
o-Xylene	0.51	0.526		.01		3.13725	60		Averaged	
Styrene	0.7515	0.881		.01		17.2322	60		Averaged	
Bromoform	50	49.93	50			-0.14	60		Linear	spcc
Isopropylbenzene	2.1274	2.254		.01		5.95093	60		Averaged	
1,1,2,2-Tetrachloroethane	0.5005	0.524		.3		4.6953	60		Averaged	spcc
1,2,3-Trichloropropane	0.1435	0.145		.01		1.0453	60		Averaged	
Bromobenzene	0.6362	0.666		.01		4.68406	60		Averaged	
n-Propylbenzene	2.5112	2.615		.01		4.13348	60		Averaged	
2-Chlorotoluene	1.7056	1.725		.01		1.13743	60		Averaged	
1,3,5-Trimethylbenzene	1.7622	1.884		.01		6.91181	60		Averaged	
4-Chlorotoluene	1.5531	1.582		.01		1.86079	60		Averaged	
tert-Butylbenzene	1.7973	1.915		.01		6.54871	60		Averaged	
1,2,4-Trimethylbenzene	1.8246	1.92		.01		5.22854	60		Averaged	
sec-Butylbenzene	2.3786	2.551		.01		7.24796	60		Averaged	
4-Isopropyltoluene	1.9148	2.119		.01		10.6643	60		Averaged	
1,3-Dichlorobenzene	1.1952	1.271		.01		6.34203	60		Averaged	
1,4-Dichlorobenzene	1.2391	1.284		.01		3.6236	60		Averaged	
n-Butylbenzene	1.8207	1.971		.01		8.25507	60		Averaged	
1,2-Dichlorobenzene	1.1449	1.196		.01		4.46327	60		Averaged	
1,2-Dibromo-3-chloropropane	0.0988	0.131		.01		32.59109	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.1 **Injection Date** 06-JUL-09 06:57

Data File: 070609V2.b\2T102.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090706-01 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	0.8718	0.973		.01		11.60817	60		Averaged
Hexachlorobutadiene	0.5338	0.614		.01		15.02435	60		Averaged
Naphthalene	1.8249	1.948		.01		6.74558	60		Averaged
1,2,3-Trichlorobenzene	0.799	0.87		.01		8.88611	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1767232	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1520020	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	957984	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1767232	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1520020	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	957984	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	495409	49.99	ug/L	0.00
43) Toluene-d8	14.310	98	1804624	50.53	ug/L	0.00
61) Bromofluorobenzene	17.204	95	750704	49.84	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.687	85	267359	42.26	ug/L	100
3) Chloromethane	5.029	50	265597	46.57	ug/L	100
4) Vinyl chloride	5.266	62	291194	57.49	ug/L	100
5) Bromomethane	5.980	94	195690	38.43	ug/L	99
6) Chloroethane	6.211	64	258065	48.09	ug/L	100
7) Trichlorofluoromethane	6.756	101	481534	45.96	ug/L	100
8) Ethyl ether	7.349	59	312020	50.98	ug/L	100
9) Acetone	7.871	43	1650991	271.93	ug/L	99
10) 1,1-Dichloroethylene	7.824	61	558761	52.57	ug/L	99
11) Iodomethane	8.108	142	3913746	270.36	ug/L	99
12) Acetonitrile	8.381	41	1217400	1203.75	ug/L	100
13) Methyl acetate	8.511	43	1483053	236.40	ug/L	100
14) Carbon disulfide	8.251	76	6150005	257.55	ug/L	100
15) Methylene chloride	8.701	84	462831	57.63	ug/L	99
16) tert-Butyl methyl ether	9.199	73	989917	49.52	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	554025	50.72	ug/L	99
18) Vinyl acetate	9.946	43	4101187	313.47	ug/L	97
19) 1,1-Dichloroethane	9.887	63	703074	51.59	ug/L	100
20) 2-Butanone	10.765	43	2030359	277.55	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	599166	49.61	ug/L	98
22) 2,2-Dichloropropane	10.812	77	516166	52.91	ug/L	99
23) Bromochloromethane	11.132	128	240228	53.65	ug/L	98
24) Chloroform	11.239	83	718477	51.47	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	642756	53.57	ug/L	100
26) Cyclohexane	11.642	56	642270	51.11	ug/L	99
27) 1,1-Dichloropropene	11.761	75	523015	52.74	ug/L	99
28) Carbon tetrachloride	11.784	117	598978	55.47	ug/L	100
30) 1,2-Dichloroethane	12.033	62	520394	49.13	ug/L	100
31) Benzene	12.045	78	1562960	50.58	ug/L	100
32) Cyclohexene	12.188	67	817575	52.64	ug/L	99
33) n-Butyl alcohol	12.650	56	1171728	5737.59	ug/L	100
34) Trichloroethylene	12.852	95	440233	52.42	ug/L	99
35) 1,2-Dichloropropane	13.124	63	393020	50.69	ug/L	100
36) Methylcyclohexane	13.136	83	723587	53.18	ug/L	99
37) Dibromomethane	13.279	93	252732	52.93	ug/L	98
38) Bromodichloromethane	13.445	83	550300	55.56	ug/L	100
39) 2-Chloroethylvinyl ether	13.753	63	981662	255.66	ug/L	100
40) cis-1,3-Dichloropropylene	13.966	75	637139	55.07	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
42)	4-Methyl-2-pentanone	14.109	58	942739	283.36 ug/L	99	
44)	Toluene	14.393	91	1754074	50.49 ug/L	99	
45)	trans-1,3-Dichloroprop...	14.583	75	593684	54.98 ug/L	100	
46)	1,1,2-Trichloroethane	14.808	83	299541	50.55 ug/L	99	
47)	2-Hexanone	14.109	43	2568838	282.09 ug/L	99	
48)	1,3-Dichloropropane	15.010	76	588785	49.44 ug/L	94	
49)	Tetrachloroethylene	15.034	164	481023	53.70 ug/L	98	
50)	Dibromochloromethane	15.295	129	478986	59.45 ug/L	100	
51)	1,2-Dibromoethane	15.449	107	397003	54.24 ug/L	100	
52)	Chlorobenzene	15.982	112	1246441	51.54 ug/L	98	
53)	1,1,1,2-Tetrachloroethane	16.054	131	488055	55.47 ug/L	100	
54)	Ethylbenzene	16.077	91	2045873	52.13 ug/L	99	
55)	m,p-Xylenes	16.196	106	1644810	104.27 ug/L	98	
56)	o-Xylene	16.635	106	799408	51.56 ug/L	99	
57)	Styrene	16.646	104	1339655	58.64 ug/L	99	
59)	Bromoform	16.884	173	388089	49.93 ug/L	100	
60)	Isopropylbenzene	17.026	105	2159227	52.97 ug/L	99	
62)	1,1,2,2-Tetrachloroethane	17.299	83	502180	52.37 ug/L	100	
63)	1,2,3-Trichloropropane	17.382	110	138777	50.48 ug/L	98	
64)	Bromobenzene	17.417	156	637539	52.30 ug/L	95	
65)	n-Propylbenzene	17.465	91	2504912	52.06 ug/L	99	
66)	1,3,5-Trimethylbenzene	17.631	105	1804607	53.45 ug/L	53	
67)	2-Chlorotoluene	17.595	91	1652304	50.56 ug/L	98	
68)	4-Chlorotoluene	17.702	91	1515139	50.92 ug/L	98	
69)	tert-Butylbenzene	17.998	119	1834182	53.26 ug/L	99	
70)	1,2,4-Trimethylbenzene	18.046	105	1839735	52.63 ug/L	99	
71)	sec-Butylbenzene	18.235	105	2444244	53.63 ug/L	100	
72)	4-Isopropyltoluene	18.366	119	2029612	55.32 ug/L	100	
73)	1,3-Dichlorobenzene	18.401	146	1217404	53.16 ug/L	99	
74)	1,4-Dichlorobenzene	18.484	146	1230190	51.82 ug/L	99	
75)	n-Butylbenzene	18.805	91	1888626	54.14 ug/L	99	
76)	1,2-Dichlorobenzene	18.900	146	1145558	52.22 ug/L	100	
77)	1,2-Dibromo-3-chloropr...	19.706	157	125085	66.08 ug/L	97	E
78)	1,2,4-Trichlorobenzene	20.690	180	932323	55.82 ug/L	100	
79)	Hexachlorobutadiene	20.868	225	588678	57.56 ug/L	99	
80)	Naphthalene	21.022	128	1865794	53.36 ug/L	100	
81)	1,2,3-Trichlorobenzene	21.342	180	833741	54.46 ug/L	99	
83)	Chlorotrifluoroethylene	0.000		0	N.D.		
84)	2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85)	Acrolein	7.539		0m	N.D. d		
86)	Trichlorotrifluoroethane	0.000		0	N.D.		
87)	Isopropyl Alcohol	8.168		0m	N.D. d		
88)	Allyl chloride	8.381		0m	N.D. d		
89)	tert-Butyl Alcohol	8.915		0m	N.D. d		
90)	Acrylonitrile	9.104		0m	N.D. d		
91)	Isopropyl ether	9.946		0m	N.D. d		
92)	2-Chloro-1,3-butadiene	10.148		0m	N.D. d		
93)	Ethyl tert-butyl ether	10.788		0m	N.D. d		
94)	Ethyl acetate	10.765		0m	N.D. d		
95)	Propionitrile	10.859		0m	N.D. d		
96)	Methacrylonitrile	11.085		0m	N.D. d		
97)	Tetrahydrofuran	11.215		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98)	Isobutyl alcohol	11.642		0m	N.D.	d	
99)	Methyl tert-amyl ether	12.188		0m	N.D.	d	
100)	Methyl methacrylate	13.136		0m	N.D.	d	
101)	1,4-Dioxane	13.279		0m	N.D.	d	
102)	2-Nitropropane	13.753		0m	N.D.	d	
104)	Ethyl methacrylate	0.000		0	N.D.		
106)	1-Chlorohexane	15.947		0m	N.D.	d	
107)	cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108)	Cyclohexanone	17.144		0m	N.D.	d	
109)	trans-1,4-Dichloro-2-b...	17.465		0m	N.D.	d	
110)	Pentachloroethane	18.058		0m	N.D.	d	
111)	Benzyl chloride	18.805		0m	N.D.	d	
112)	bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On    :  6 Jul 2009   6:57 am
Operator  : CDS1
InstName  : VOA2
Sample    : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc      : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
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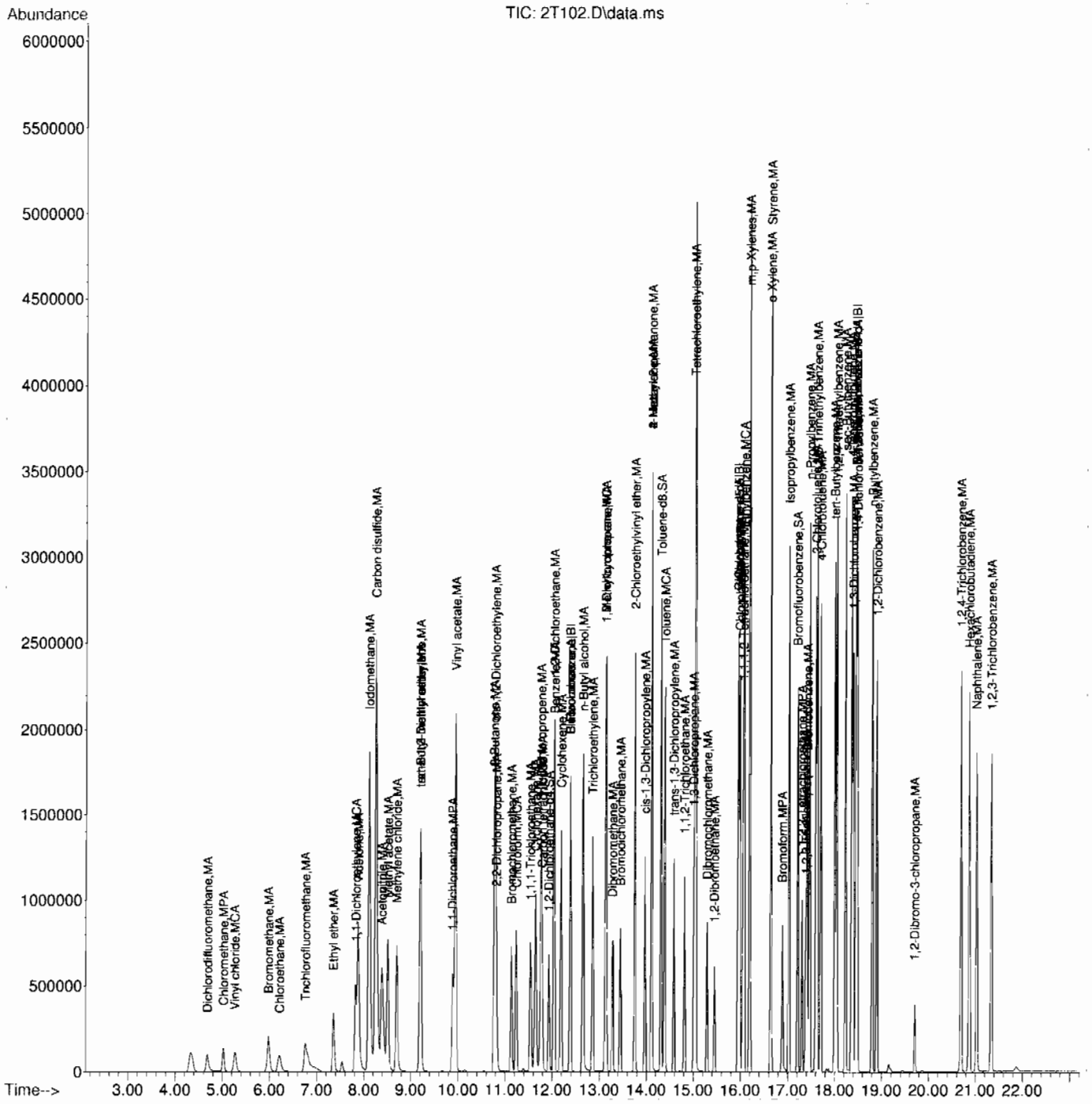

Continuing Calibration Summary

Client SDG: 09-2508

Instrument ID: VOA2.I **Injection Date** 06-JUL-09 08:24

Data File: 070609V2.b\2T105.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID UVM090701-08A **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.2804	0.267		.01		-4.77889	60		Averaged
S	Toluene-d8	1.1749	1.148		.01		-2.28956	60		Averaged
S	Bromofluorobenzene	0.7862	0.76		.01		-3.33249	60		Averaged
	Acrolein	0.0345	0.042		.01		21.73913	60		Averaged
	Trichlorotrifluoroethane	0.0628	0.063		.01		0.31847	60		Averaged
	Allyl chloride	0.3493	0.307		.01		-12.10993	60		Averaged
	Acrylonitrile	0.0703	0.069		.01		-1.84922	60		Averaged
	2-Chloro-1,3-butadiene	0.2881	0.323		.01		12.11385	60		Averaged
	Propionitrile	0.0284	0.027		.01		-4.92958	60		Averaged
	Ethyl acetate	0.2075	0.199		.01		-4.09639	60		Averaged
	Methacrylonitrile	0.1249	0.124		.01		-0.72058	60		Averaged
	Tetrahydrofuran	0.0668	0.067		.01		0.2994	60		Averaged
	Isobutyl alcohol	0.0074	0.008		.01		8.10811	60		Averaged
	Methyl tert-amyl ether	0.5609	0.01		.01		-98.21715	60	*	Averaged
	Methyl methacrylate	0.1218	0.129		.01		5.91133	60		Averaged
	1,4-Dioxane	0.0017	0.002		.01		17.64706	60		Averaged
	2-Nitropropane	0.0578	0.068		.01		17.64706	60		Averaged
	Ethyl methacrylate	0.2758	0.275		.01		-0.29007	60		Averaged
	1-Chlorohexane	0.3931	0.014		.01		-96.43857	60	*	Averaged
	cis-1,4-Dichloro-2-butene	0.1574	0.161		.01		2.28717	60		Averaged
	Cyclohexanone	0.0593	0.07		.01		18.04384	60		Averaged
	trans-1,4-Dichloro-2-butene	0.1536	0.154		.01		0.26042	60		Averaged
	Pentachloroethane	250	401.64	250			60.656	60	*	Linear
	Benzyl chloride	0.8192	0.986		.01		20.36133	60		Averaged
	bis(2-Chloroisopropyl)ether	0.2668	0.256		.01		-4.04798	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On : 6 Jul 2009 8:24 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1766847	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1518709	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	954184	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1766847	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1518709	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	954184	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	471253	47.56 ug/L	0.00
43) Toluene-d8	14.310	98	1743778	48.87 ug/L	0.00
61) Bromofluorobenzene	17.204	95	725005	48.32 ug/L	0.00

Target Compounds				Qvalue
2) Dichlorodifluoromethane	4.687	0m	N.D. d	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.252	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	6.745	0m	N.D. d	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.859	0m	N.D. d	
10) 1,1-Dichloroethylene	7.835	0m	N.D. d	
11) Iodomethane	8.108	0m	N.D. d	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.251	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.211	0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.199	0m	N.D. d	
18) Vinyl acetate	10.053	0m	N.D. d	
19) 1,1-Dichloroethane	10.053	0m	N.D. d	
20) 2-Butanone	10.859	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.859	0m	N.D. d	
22) 2,2-Dichloropropane	0.000	0	N.D.	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.239	0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535	0m	N.D. d	
26) Cyclohexane	11.642	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	0.000	0	N.D.	
30) 1,2-Dichloroethane	12.033	0m	N.D. d	
31) Benzene	12.045	0m	N.D. d	
32) Cyclohexene	12.389	0m	N.D. d	
33) n-Butyl alcohol	12.650	0m	N.D. d	
34) Trichloroethylene	12.864	0m	N.D. d	
35) 1,2-Dichloropropane	13.124	0m	N.D. d	
36) Methylcyclohexane	13.196	0m	N.D. d	
37) Dibromomethane	13.267	0m	N.D. d	
38) Bromodichloromethane	13.196	0m	N.D. d	
39) 2-Chloroethylvinyl ether	13.753	0m	N.D. d	
40) cis-1,3-Dichloropropylene	13.966	0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On : 6 Jul 2009 8:24 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 4-Methyl-2-pentanone	14.121		0m	N.D. d	
44) Toluene	14.381		0m	N.D. d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D. d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D. d	
47) 2-Hexanone	14.109		0m	N.D. d	
48) 1,3-Dichloropropane	15.010		0m	N.D. d	
49) Tetrachloroethylene	15.034		0m	N.D. d	
50) Dibromochloromethane	15.294		0m	N.D. d	
51) 1,2-Dibromoethane	15.449		0m	N.D. d	
52) Chlorobenzene	15.982		0m	N.D. d	
53) 1,1,1,2-Tetrachloroethane	16.053		0m	N.D. d	
54) Ethylbenzene	16.077		0m	N.D. d	
55) m,p-Xylenes	16.196		0m	N.D. d	
56) o-Xylene	16.646		0m	N.D. d	
57) Styrene	16.646		0m	N.D. d	
59) Bromoform	16.884		0m	N.D. d	
60) Isopropylbenzene	17.026		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.204		0m	N.D. d	
64) Bromobenzene	17.417		0m	N.D. d	
65) n-Propylbenzene	17.465		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D. d	
67) 2-Chlorotoluene	17.595		0m	N.D. d	
68) 4-Chlorotoluene	17.702		0m	N.D. d	
69) tert-Butylbenzene	18.058		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	18.069		0m	N.D. d	
71) sec-Butylbenzene	18.235		0m	N.D. d	
72) 4-Isopropyltoluene	18.366		0m	N.D. d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D. d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D. d	
75) n-Butylbenzene	18.603		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.899		0m	N.D. d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D. d	
79) Hexachlorobutadiene	20.868		0m	N.D. d	
80) Naphthalene	21.022		0m	N.D. d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D. d	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	7.575	56	375363	308.02 ug/L	99
86) Trichlorotrifluoroethane	7.859	85	553982	249.46 ug/L	97
87) Isopropyl Alcohol	8.156	45	18000	36.59 ug/L	86
88) Allyl chloride	8.488	41	2713975	219.87 ug/L	100
89) tert-Butyl Alcohol	8.879	59	275	N.D.	
90) Acrylonitrile	9.092	53	607922	244.83 ug/L	100
91) Isopropyl ether	10.006	45	113	N.D.	
92) 2-Chloro-1,3-butadiene	10.053	53	570741	56.07 ug/L	97
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.859	43	1761745	240.26 ug/L	100
95) Propionitrile	10.848	54	242542	241.95 ug/L	100
96) Methacrylonitrile	11.085	41	1092483	247.48 ug/L	100
97) Tetrahydrofuran	11.203	42	591447	250.61 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On : 6 Jul 2009 8:24 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)	
98)	Isobutyl alcohol	11.796	41	678977	2587.72	ug/L		100	
99)	Methyl tert-amyl ether	12.377	73	18254	0.92	ug/L	#	52	
100)	Methyl methacrylate	13.196	69	1135317	263.84	ug/L		98	
101)	1,4-Dioxane	13.267	88	169107	2897.65	ug/L		98	
102)	2-Nitropropane	13.682	43	599496	293.52	ug/L		99	E
104)	Ethyl methacrylate	14.642	69	2085233	248.90	ug/L		100	
106)	1-Chlorohexane	15.947	55	13104	1.75	ug/L	#	30	
107)	cis-1,4-Dichloro-2-butene	17.061	53	766922	255.28	ug/L		99	
108)	Cyclohexanone	17.144	42	1670142	1474.68	ug/L		98	
109)	trans-1,4-Dichloro-2-b...	17.358	53	733008	250.12	ug/L		98	
110)	Pentachloroethane	18.058	167	1340855	401.64	ug/L		96	
111)	Benzyl chloride	18.603	91	4702849	300.82	ug/L		99	
112)	bis(2-Chloroisopropyl)...	19.006	45	1220622	239.78	ug/L		98	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On    :  6 Jul 2009   8:24 am
Operator  : CDS1
InstName  : VOA2
Sample    : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc      : VSTD250S  LCS 5ML  MIX [B]
ALS Vial  : 4   Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
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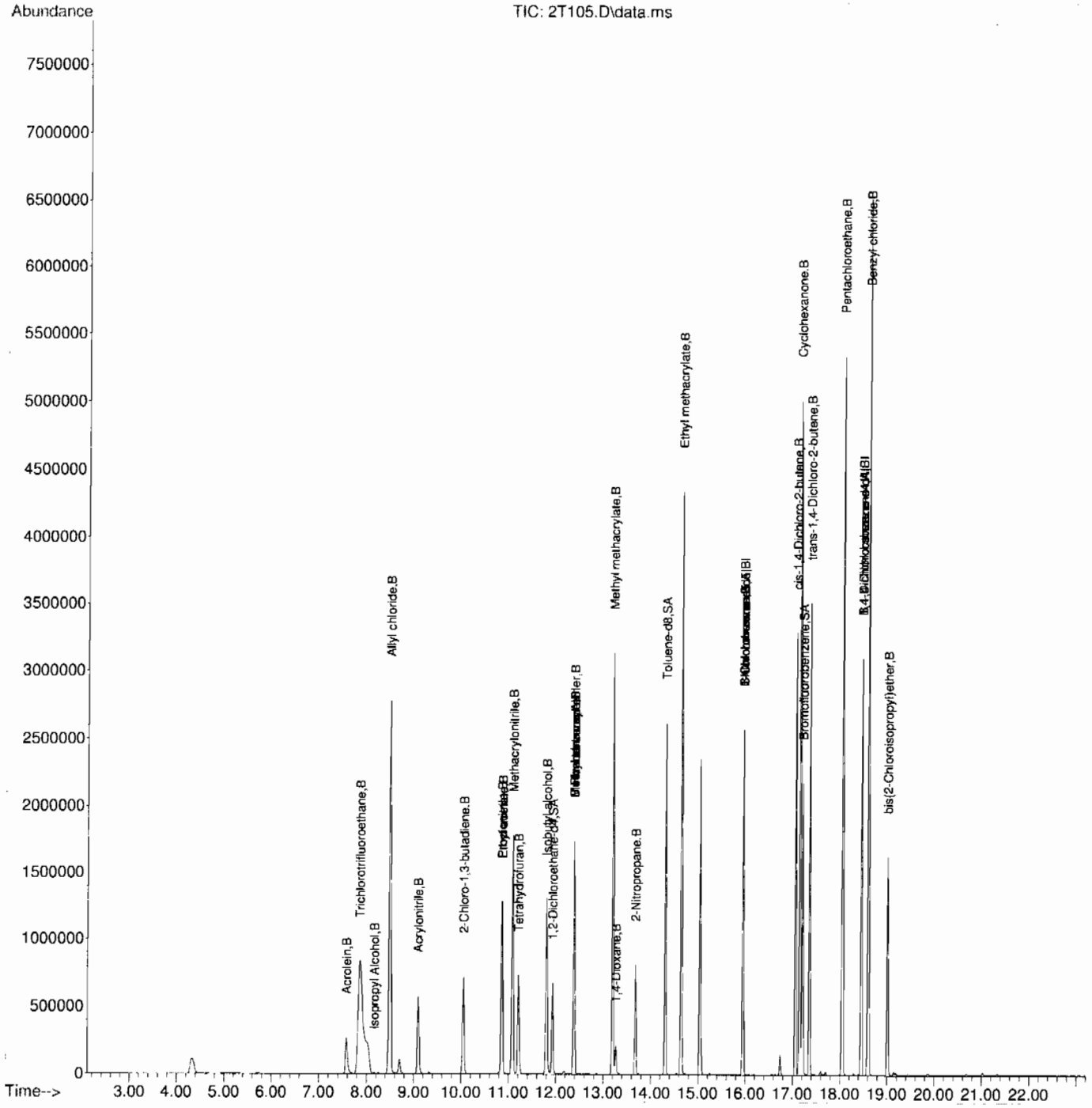

Quality Control Data

Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S301.D
Acq On : 1 Jul 2009 9:58 am
Operator : CDS1
Sample : |UVM090604-02|BFB|1|VOAF|1|
Misc : BFB01
ALS Vial : 1 Sample Multiplier: 1

Integration File: default.P

Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B
Last Update : Tue Jul 14 15:00:31 2009

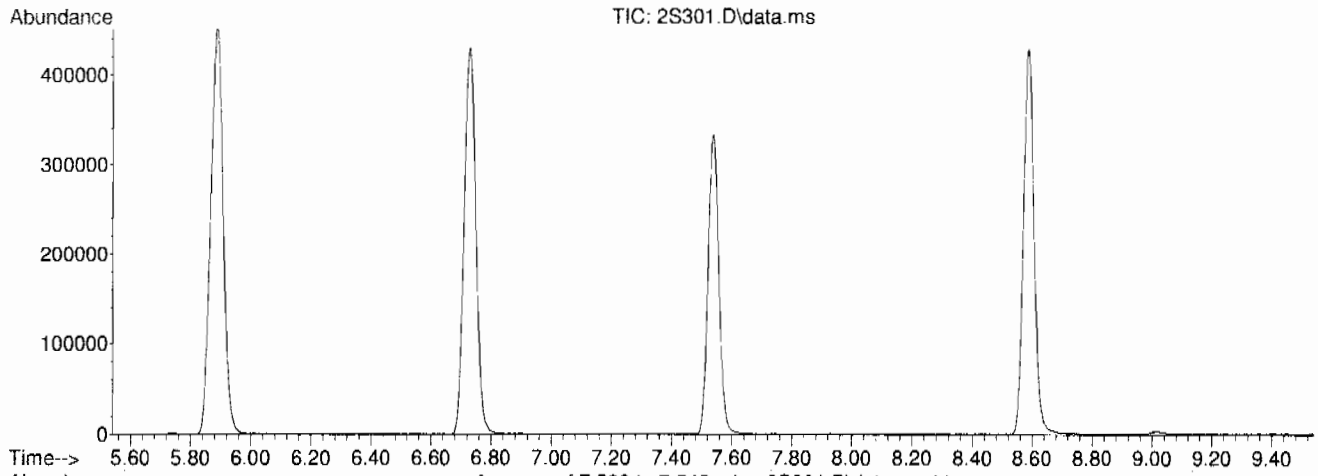

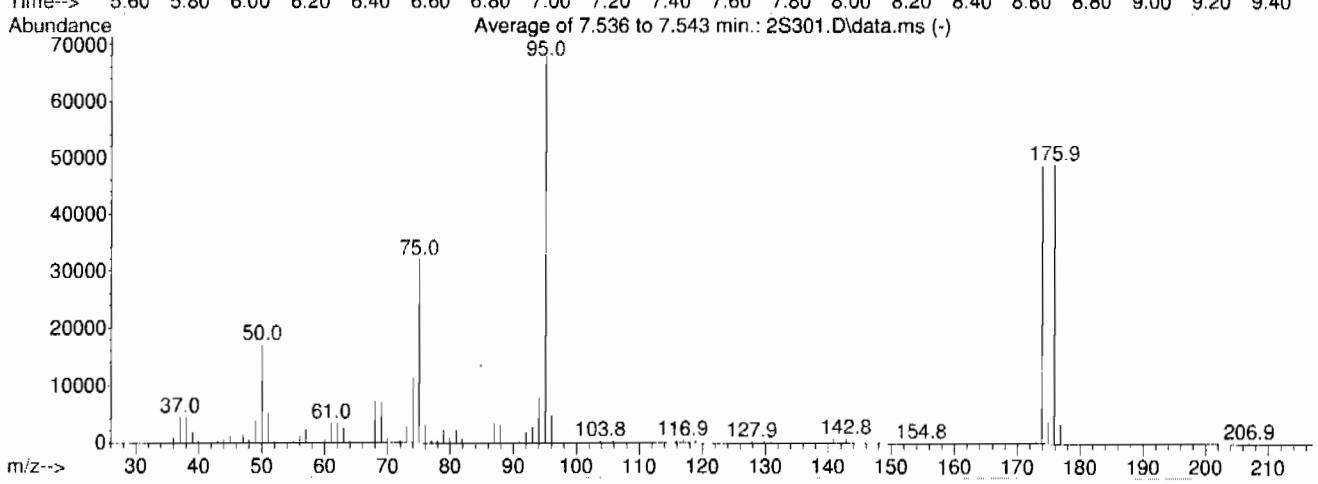

Spectrum Information: Average of 7.536 to 7.543 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.2	17106	PASS
75	95	30	60	47.2	32032	PASS
95	95	100	100	100.0	67893	PASS
96	95	5	9	7.0	4730	PASS
173	174	0.00	2	0.6	275	PASS
174	95	50	100	71.5	48512	PASS
175	174	5	9	7.6	3684	PASS
176	174	95	101	100.6	48792	PASS
177	176	5	9	6.8	3312	PASS

Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102BFB.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
Sample : |W2VM090706-01|BFB|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A]
ALS Vial : 1 Sample Multiplier: 1

Integration File: default.P

Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B
Last Update : Tue Jul 14 15:05:31 2009

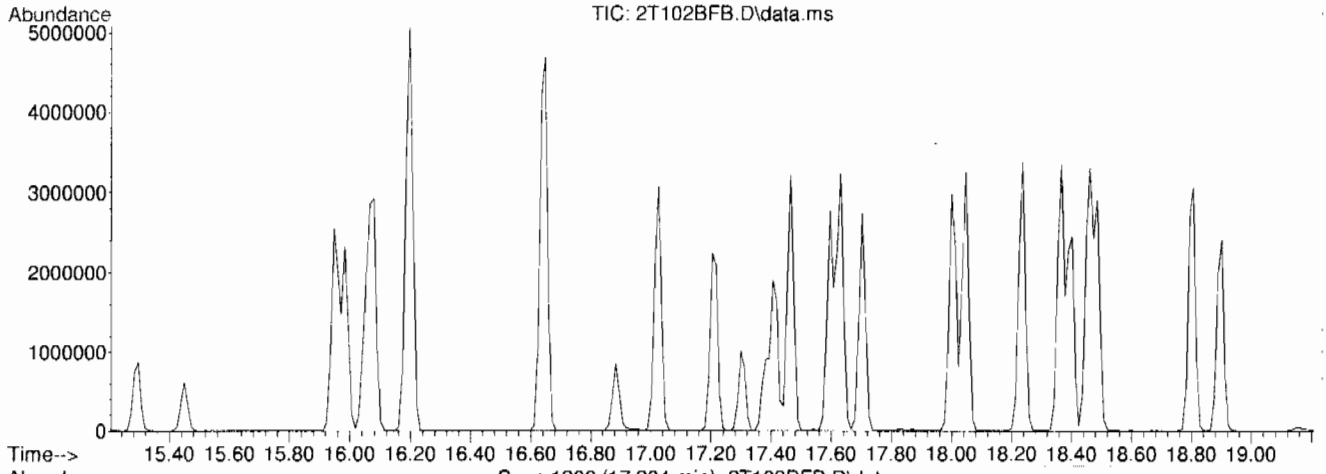

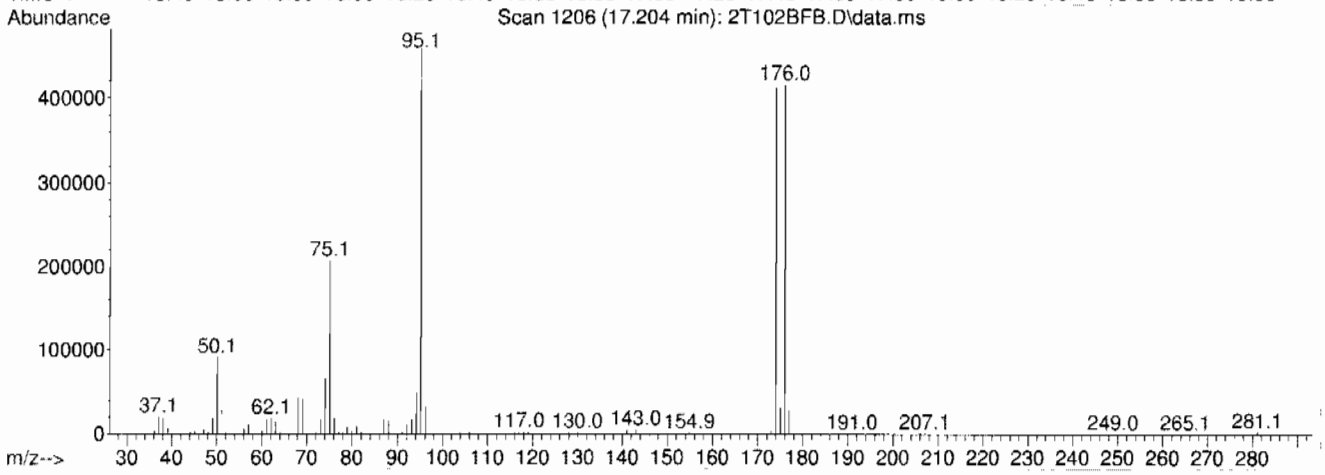

Spectrum Information: Scan 1206

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.8	90632	PASS
75	95	30	60	45.3	207168	PASS
95	95	100	100	100.0	457408	PASS
96	95	5	9	7.0	32048	PASS
173	174	0.00	2	0.7	2844	PASS
174	95	50	100	89.8	410944	PASS
175	174	5	9	7.6	31424	PASS
176	174	95	101	100.8	414208	PASS
177	176	5	9	6.7	27664	PASS

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508			**Matrix:**	SOIL
Lab Sample ID:	1201874617				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 12:19	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T113.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508			**Matrix:**	SOIL
Lab Sample ID:	1201874617				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 12:19	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T113.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.32	9.82	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1648861	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1385774	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	844664	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1648861	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1385774	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	844664	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	473118	51.17 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 102.34%		
43) Toluene-d8	14.310	98	1655996	50.86 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 101.72%		
61) Bromofluorobenzene	17.204	95	679038	51.13 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 102.26%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.266	62	528	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.942	43	3820	N.D.	
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.440	41	368	N.D.	
13) Methyl acetate	8.547	43	774	N.D.	
14) Carbon disulfide	8.250	76	1423	N.D.	
15) Methylene chloride	8.701	84	11168	Below Cal	98
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	561	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	574	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	379	N.D.	
31) Benzene	12.033	78	531	N.D.	
32) Cyclohexene	12.389	67	295	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D.	d
44) Toluene	14.381	91	943	N.D.	
45) trans-1,3-Dichloroprop...	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.310	43	7554	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	365	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.196	91	598	N.D.	
55) m,p-Xylenes	16.184	106	282	N.D.	
56) o-Xylene	0.000		0	N.D.	
57) Styrene	16.646	104	418	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.204	105	766	N.D.	
62) 1,1,2,2-Tetrachloroethane	17.204	83	136	N.D.	
63) 1,2,3-Trichloropropane	17.204	110	157	N.D.	
64) Bromobenzene	17.405	156	227	N.D.	
65) n-Propylbenzene	17.595	91	127	N.D.	
66) 1,3,5-Trimethylbenzene	0.000		0	N.D.	
67) 2-Chlorotoluene	17.702	91	709	N.D.	
68) 4-Chlorotoluene	17.702	91	709	N.D.	
69) tert-Butylbenzene	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	18.069	105	450	N.D.	
71) sec-Butylbenzene	18.069	105	450	N.D.	
72) 4-Isopropyltoluene	18.449	119	262	N.D.	
73) 1,3-Dichlorobenzene	18.401	146	675	N.D.	
74) 1,4-Dichlorobenzene	18.484	146	1245	N.D.	
75) n-Butylbenzene	18.603	91	402	N.D.	
76) 1,2-Dichlorobenzene	18.899	146	353	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	342	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	1279	N.D.	
81) 1,2,3-Trichlorobenzene	0.000		0	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.440	41	368	N.D.	
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.800	43	561	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	0.000		0	N.D.	
96) Methacrylonitrile	11.227	41	671	N.D.	
97) Tetrahydrofuran	11.227	42	963	N.D.	
98) Isobutyl alcohol	11.927	41	112	N.D.	
99) Methyl tert-amyl ether	0.000		0m	N.D.	d
100) Methyl methacrylate	0.000		0	N.D.	
101) 1,4-Dioxane	0.000		0	N.D.	
102) 2-Nitropropane	0.000		0	N.D.	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	0.000		0m	N.D.	d
107) cis-1,4-Dichloro-2-butene	0.000		0	N.D.	
108) Cyclohexanone	0.000		0	N.D.	
109) trans-1,4-Dichloro-2-b...	0.000		0	N.D.	
110) Pentachloroethane	0.000		0	N.D.	
111) Benzyl chloride	18.603	91	402	N.D.	
112) bis(2-Chloroisopropyl)...	0.000		0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

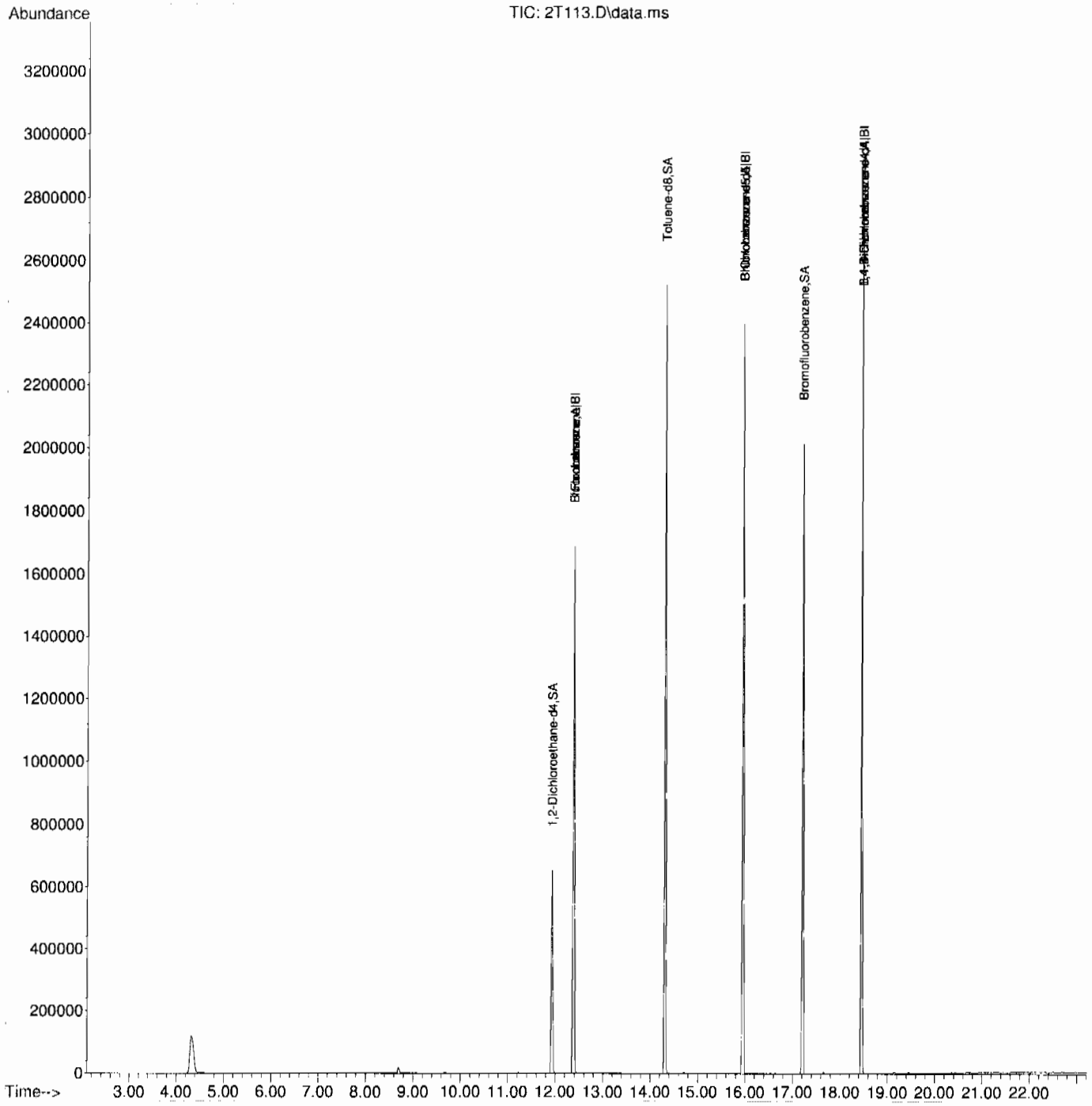

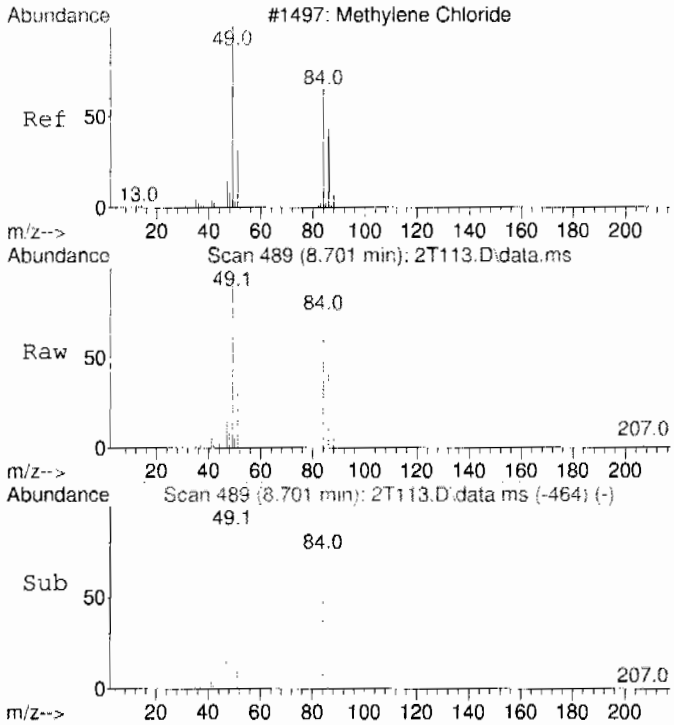

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 84 Resp: 11168

Ion	Ratio	Lower	Upper
84	100		
86	64.6	33.8	93.8
49	138.3	105.0	165.0

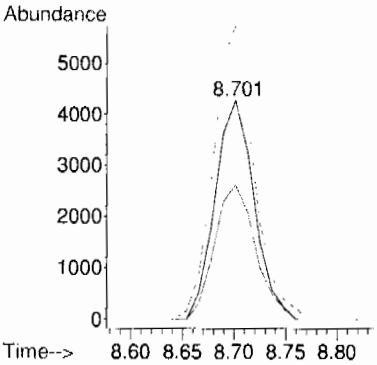

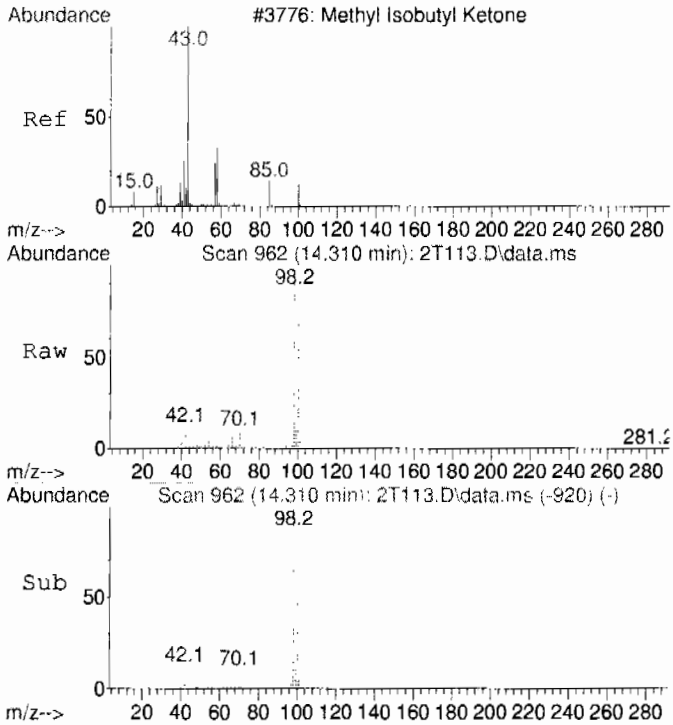

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.42 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 58 Resp: 13415

Ion	Ratio	Lower	Upper
58	100		
43	56.3	245.2	305.2#
100	8481.8	7.2	67.2#

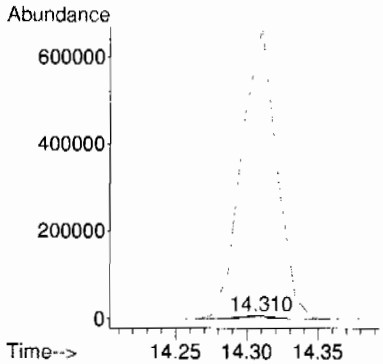

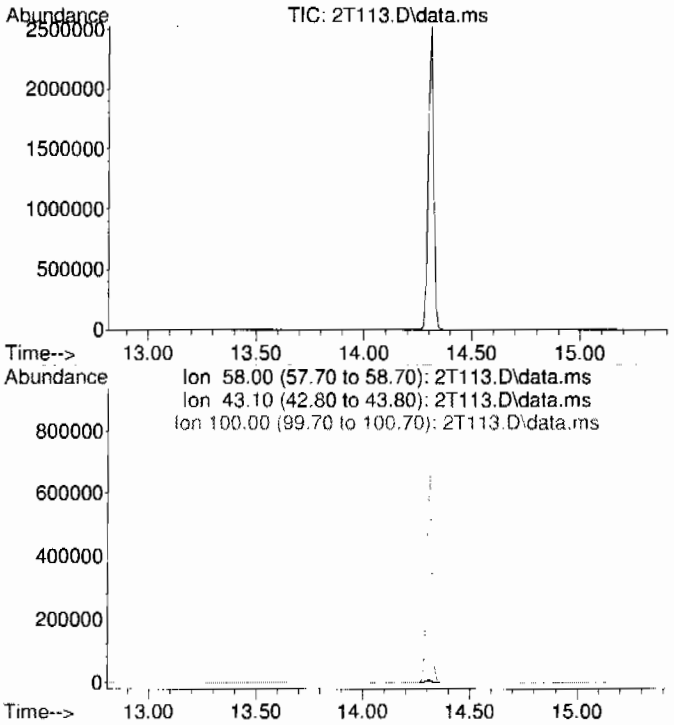

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

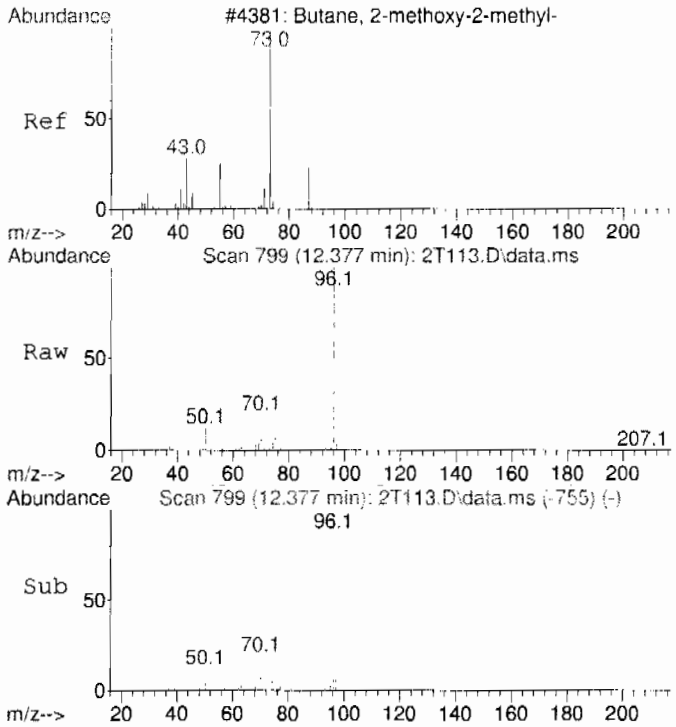

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.96 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 73 Resp: 17694

Ion	Ratio	Lower	Upper
73	100		
55	7.3	5.2	65.2
87	0.0	0.0	54.7

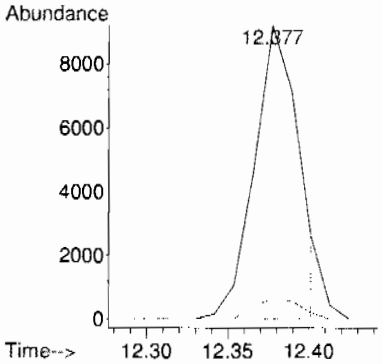

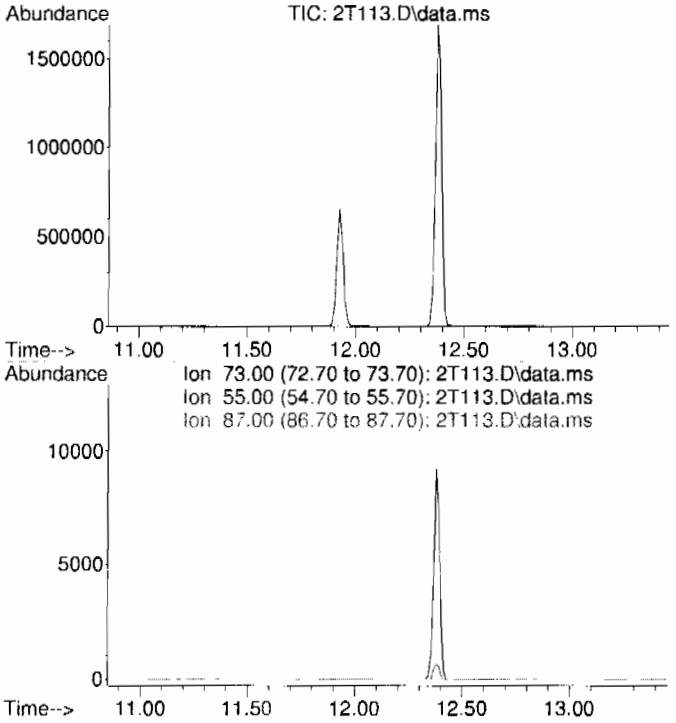

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

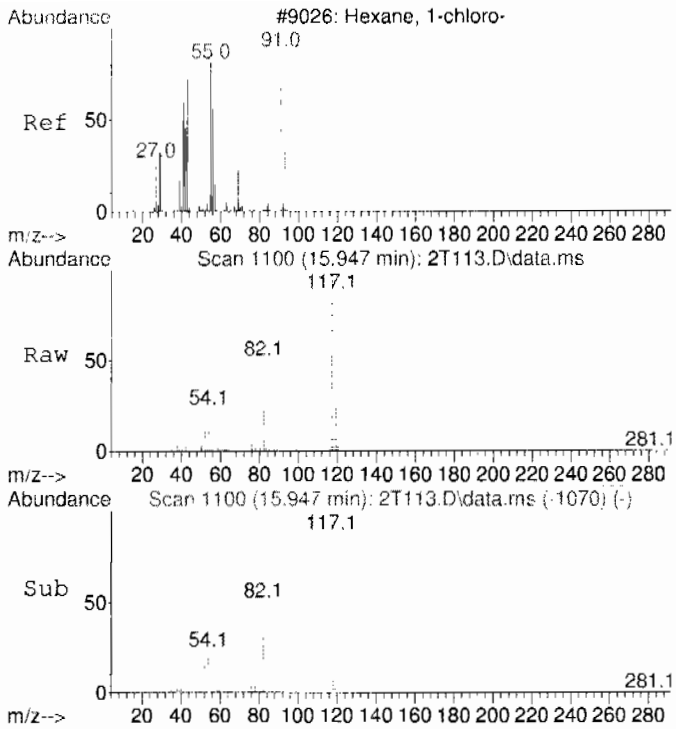

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 1.92 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 55 Resp: 12740

Ion	Ratio	Lower	Upper
55	100		
91	19.4	113.2	173.2#
56	60.3	30.3	90.3

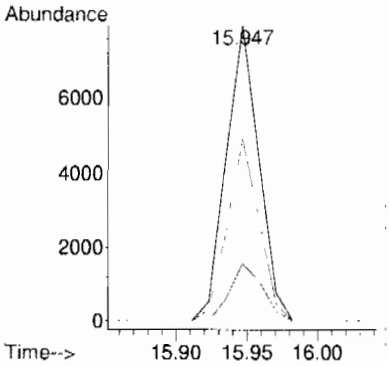

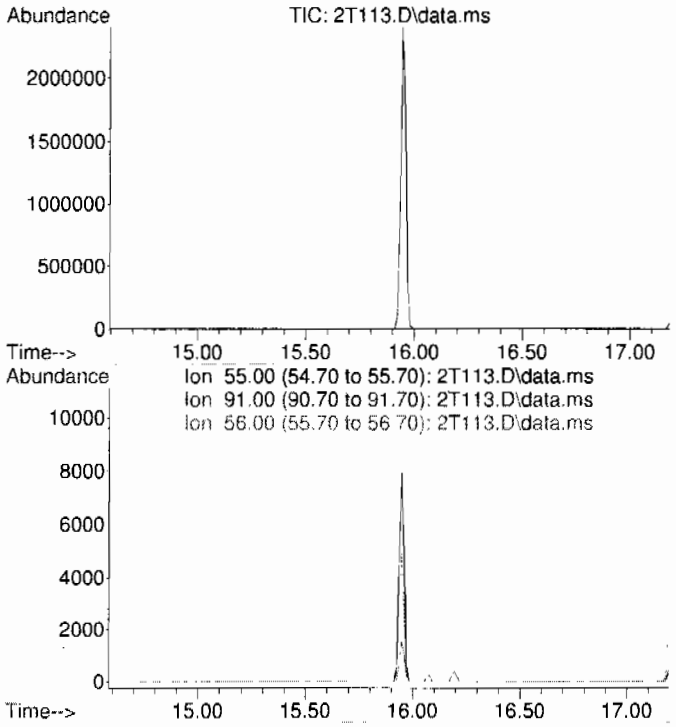

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T113.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.315	143	150	164	rBV	120085	664724	14.60%	3.035%
2	4.568	164	167	173	rVB	4196	11200	0.25%	0.051%
3	4.925	189	191	192	rBB	163	145	0.00%	0.001%
4	5.147	193	206	208	rBB	211	2276	0.05%	0.010%
5	5.727	243	245	247	rBB	153	136	0.00%	0.001%
6	6.045	261	265	268	rBV	564	2909	0.06%	0.013%
7	6.353	289	291	300	rBV3	1160	3647	0.08%	0.017%
8	7.409	378	380	390	rVB2	1006	3281	0.07%	0.015%
9	7.942	422	425	445	rVB3	1413	8746	0.19%	0.040%
10	8.701	483	489	499	rVB	17935	48797	1.07%	0.223%
11	9.685	567	572	587	rVB2	3257	8522	0.19%	0.039%
12	11.227	699	702	717	rVB2	2057	5084	0.11%	0.023%
13	11.927	756	761	777	rVB	653123	1318911	28.97%	6.022%
14	12.377	794	799	817	rBV	1685323	3384745	74.36%	15.453%
15	14.310	956	962	978	rVB	2521093	4403810	96.74%	20.106%
16	14.713	992	996	1002	rVB	3008	6562	0.14%	0.030%
17	15.947	1094	1100	1109	rBV	2394378	3939952	86.55%	17.988%
18	16.196	1119	1121	1125	rVB	772	1269	0.03%	0.006%
19	17.204	1201	1206	1220	rVB	2011376	3513250	77.18%	16.040%
20	17.654	1241	1244	1253	rVB3	5075	9327	0.20%	0.043%
21	18.461	1306	1312	1346	rVB	2796302	4552126	100.00%	20.783%
22	19.148	1367	1370	1392	rBV2	4379	13698	0.30%	0.063%

Sum of corrected areas: 21903117

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

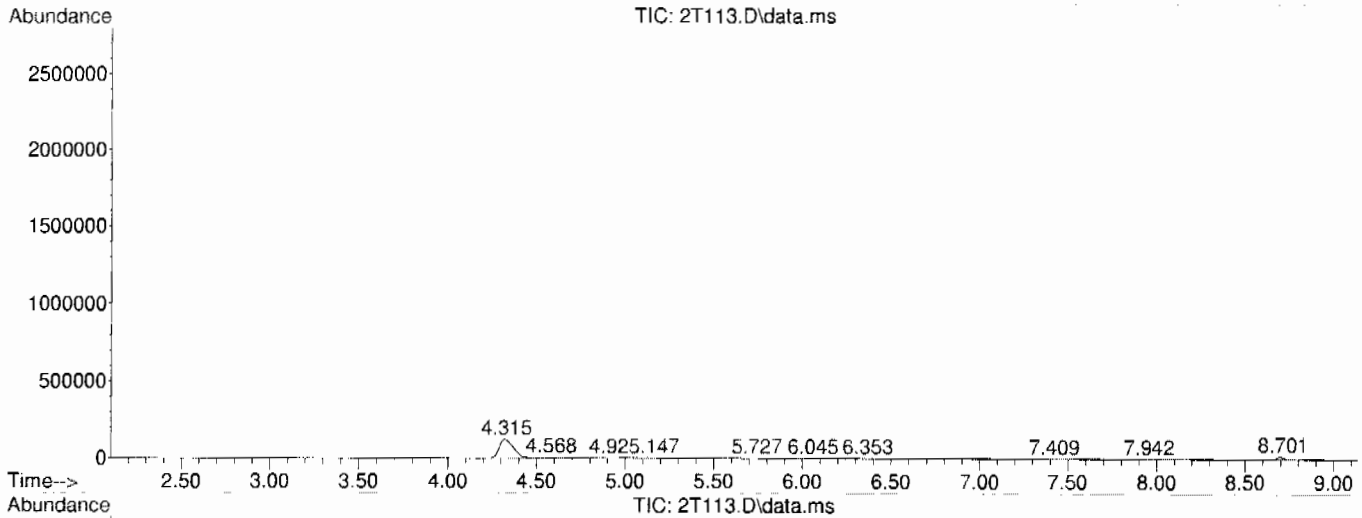

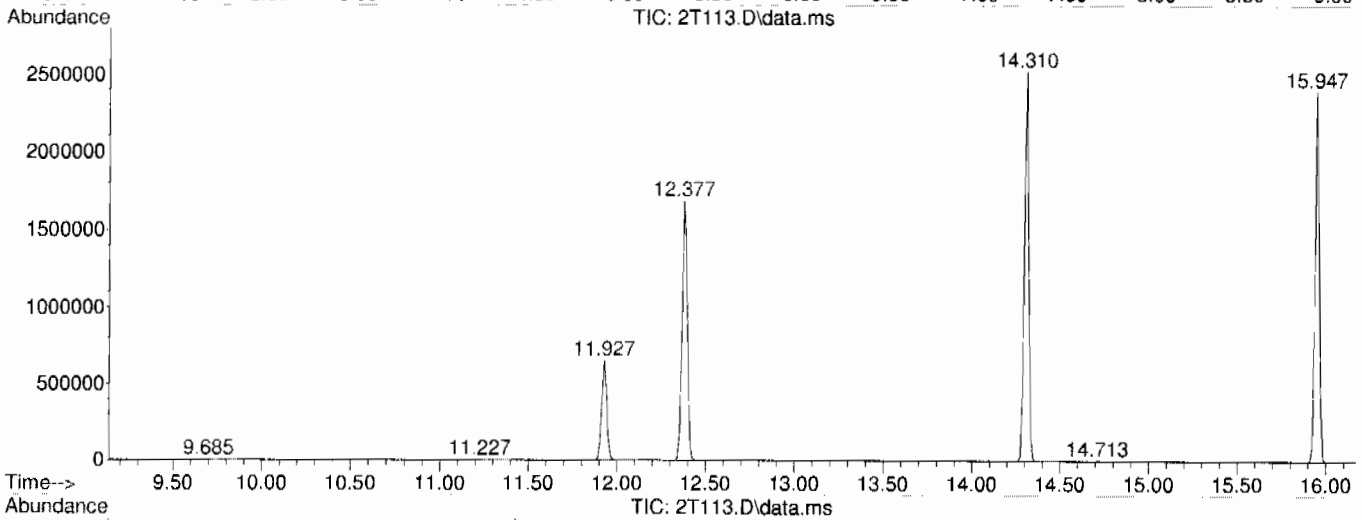

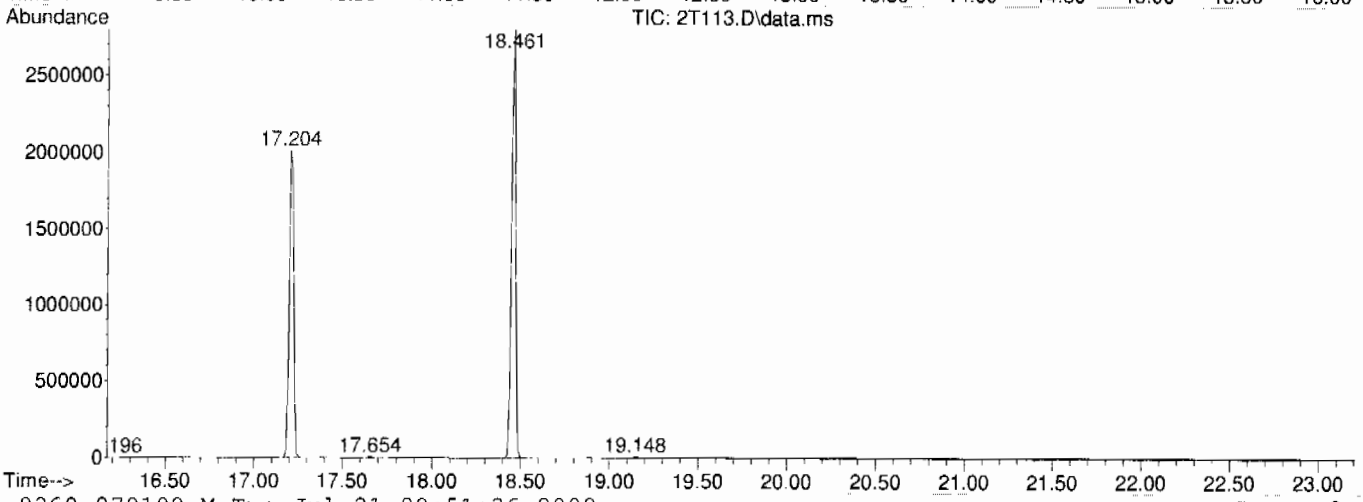

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.315	9.82 ug/L	664724	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

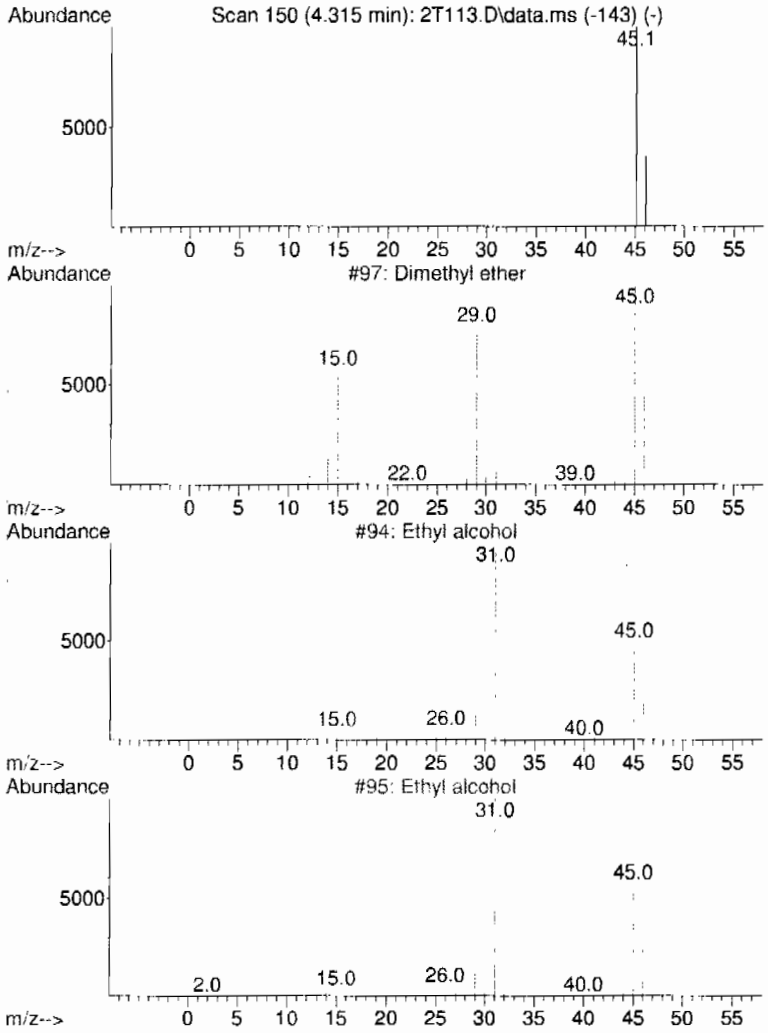

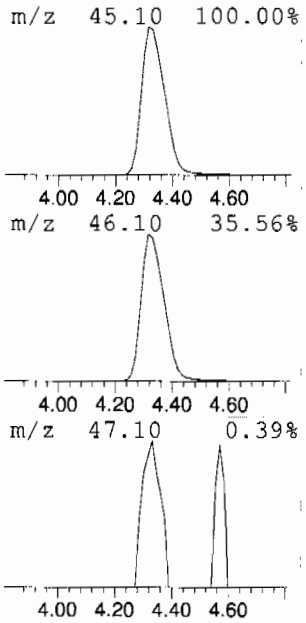

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.315	9.8	ug/L	664724	1	12.377	3384750	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2508**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874620**				
Client Sample:	**QC for batch 882630**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882630**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 07:55**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 06:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T104.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		46.3	ug/kg	0.340	1.00
74-87-3	Chloromethane		44.5	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		47.7	ug/kg	0.300	1.00
74-83-9	Bromomethane		41.9	ug/kg	0.300	1.00
75-00-3	Chloroethane		48.4	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		50.1	ug/kg	0.570	1.00
67-64-1	Acetone		235	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		48.9	ug/kg	0.300	1.00
74-88-4	Iodomethane		271	ug/kg	1.60	5.00
75-09-2	Methylene chloride		53.1	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		261	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		46.7	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		47.9	ug/kg	0.300	1.00
78-93-3	2-Butanone		226	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		47.2	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		51.0	ug/kg	0.300	1.00
67-66-3	Chloroform		47.9	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		49.5	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		51.1	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		49.7	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		53.0	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		45.9	ug/kg	0.300	1.00
71-43-2	Benzene		46.7	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		49.0	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		47.1	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		50.6	ug/kg	0.300	1.00
74-95-3	Dibromomethane		49.2	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		239	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		51.9	ug/kg	0.300	1.00
108-88-3	Toluene		46.3	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		50.1	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		47.2	ug/kg	0.300	1.00
591-78-6	2-Hexanone		237	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		45.9	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		50.5	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		54.1	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		50.8	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		48.9	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508			**Matrix:**	SOIL
Lab Sample ID:	1201874620				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 07:55	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T104.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		47.8	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		95.7	ug/kg	0.300	2.00
95-47-6	o-Xylene		48.2	ug/kg	0.300	1.00
100-42-5	Styrene		53.5	ug/kg	0.300	1.00
75-25-2	Bromoform		46.6	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		49.0	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		48.7	ug/kg	0.300	1.00
108-86-1	Bromobenzene		49.4	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		47.6	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		47.3	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		48.7	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		48.7	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		47.1	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		49.3	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		48.5	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		49.2	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		50.6	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		49.5	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		48.2	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		49.2	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	E	64.8	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		51.6	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		49.1	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDS1
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1717098	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1483018	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	935834	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1717098	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1483018	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	935834	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	475483	49.38	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 98.76%			
43) Toluene-d8	14.310	98	1718449	49.31	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 98.62%			
61) Bromofluorobenzene	17.204	95	721741	49.05	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 98.10%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.687	85	284282	46.25	ug/L	100
3) Chloromethane	5.014	50	246713	44.52	ug/L	100
4) Vinyl chloride	5.266	62	234852	47.72	ug/L	100
5) Bromomethane	5.979	94	207307	41.90	ug/L	100
6) Chloroethane	6.211	64	252549	48.44	ug/L	99
7) Trichlorofluoromethane	6.756	101	510079	50.11	ug/L	100
8) Ethyl ether	7.349	59	281232	47.29	ug/L	100
9) Acetone	7.871	43	1385912	235.04	ug/L	100
10) 1,1-Dichloroethylene	7.812	61	505461	48.94	ug/L	99
11) Iodomethane	8.096	142	3807971	270.73	ug/L	99
12) Acetonitrile	8.381	41	1141548	1161.71	ug/L	100
13) Methyl acetate	8.499	43	1897415	311.29	ug/L	100
14) Carbon disulfide	8.250	76	6045790	260.57	ug/L	100
15) Methylene chloride	8.701	84	416701	53.12	ug/L	99
16) tert-Butyl methyl ether	9.199	73	865459	44.56	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	495671	46.70	ug/L	98
18) Vinyl acetate	9.934	43	1979542	155.72	ug/L	97
19) 1,1-Dichloroethane	9.887	63	634220	47.90	ug/L	100
20) 2-Butanone	10.764	43	1607187	226.12	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	553952	47.21	ug/L	98
22) 2,2-Dichloropropane	10.800	77	483230	50.98	ug/L	100
23) Bromochloromethane	11.132	128	215565	49.54	ug/L	98
24) Chloroform	11.227	83	649464	47.89	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	595273	51.06	ug/L	100
26) Cyclohexane	11.642	56	600980	49.22	ug/L	98
27) 1,1-Dichloropropene	11.749	75	478710	49.68	ug/L	99
28) Carbon tetrachloride	11.784	117	556373	53.03	ug/L	99
30) 1,2-Dichloroethane	12.021	62	472247	45.89	ug/L	99
31) Benzene	12.033	78	1401308	46.68	ug/L	100
32) Cyclohexene	12.187	67	728491	48.27	ug/L	100
33) n-Butyl alcohol	12.650	56	1126752	5678.45	ug/L	99
34) Trichloroethylene	12.852	95	399865	49.00	ug/L	97
35) 1,2-Dichloropropane	13.124	63	355141	47.14	ug/L	99
36) Methylcyclohexane	13.136	83	653590	49.44	ug/L	99
37) Dibromomethane	13.267	93	228437	49.24	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDS1
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
38) Bromodichloromethane	13.444	83	487122	50.62 ug/L	100	
39) 2-Chloroethylvinyl ether	13.753	63	804686	215.69 ug/L	99	
40) cis-1,3-Dichloropropylene	13.966	75	583118	51.88 ug/L	99	
42) 4-Methyl-2-pentanone	14.109	58	776428	239.19 ug/L	98	
44) Toluene	14.381	91	1570279	46.33 ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	527741	50.09 ug/L	100	
46) 1,1,2-Trichloroethane	14.808	83	272945	47.21 ug/L	100	
47) 2-Hexanone	14.109	43	2109768	237.46 ug/L	99	
48) 1,3-Dichloropropane	15.010	76	533740	45.93 ug/L	97	
49) Tetrachloroethylene	15.034	164	441132	50.48 ug/L	99	
50) Dibromochloromethane	15.294	129	425404	54.12 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	363081	50.84 ug/L	100	
52) Chlorobenzene	15.982	112	1153783	48.90 ug/L	98	
53) 1,1,1,2-Tetrachloroethane	16.053	131	442779	51.58 ug/L	99	
54) Ethylbenzene	16.077	91	1830579	47.81 ug/L	99	
55) m,p-Xylenes	16.196	106	1473198	95.72 ug/L	98	
56) o-Xylene	16.634	106	728875	48.18 ug/L	99	
57) Styrene	16.646	104	1191314	53.45 ug/L	99	
59) Bromoform	16.883	173	352215	46.55 ug/L	100	
60) Isopropylbenzene	17.026	105	1937164	48.65 ug/L	99	
62) 1,1,2,2-Tetrachloroethane	17.298	83	458948	49.00 ug/L	100	
63) 1,2,3-Trichloropropane	17.381	110	130664	48.65 ug/L	93	
64) Bromobenzene	17.417	156	588153	49.39 ug/L	94	
65) n-Propylbenzene	17.464	91	2238818	47.63 ug/L	99	
66) 1,3,5-Trimethylbenzene	17.631	105	1604343	48.64 ug/L	54	
67) 2-Chlorotoluene	17.595	91	1510900	47.33 ug/L	98	
68) 4-Chlorotoluene	17.702	91	1368611	47.08 ug/L	98	
69) tert-Butylbenzene	17.998	119	1658474	49.30 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1657239	48.53 ug/L	99	
71) sec-Butylbenzene	18.235	105	2191471	49.23 ug/L	99	
72) 4-Isopropyltoluene	18.366	119	1814371	50.63 ug/L	99	
73) 1,3-Dichlorobenzene	18.401	146	1107473	49.51 ug/L	99	
74) 1,4-Dichlorobenzene	18.484	146	1118534	48.23 ug/L	99	
75) n-Butylbenzene	18.805	91	1676100	49.19 ug/L	99	
76) 1,2-Dichlorobenzene	18.899	146	1051700	49.08 ug/L	100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	119792	64.78 ug/L	97	E
78) 1,2,4-Trichlorobenzene	20.690	180	839899	51.47 ug/L	100	
79) Hexachlorobutadiene	20.868	225	517696	51.82 ug/L	100	
80) Naphthalene	21.022	128	1749446	51.22 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	782151	52.30 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.622		0m	N.D. d		
86) Trichlorotrifluoroethane	7.824		0m	N.D. d		
87) Isopropyl Alcohol	8.250		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.903		0m	N.D. d		
90) Acrylonitrile	9.104		0m	N.D. d		
91) Isopropyl ether	10.053		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.041		0m	N.D. d		
93) Ethyl tert-butyl ether	10.776		0m	N.D. d		
94) Ethyl acetate	10.764		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDS1
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	Qion	Response	Conc	Units	Dev(Min)
95)	Propionitrile	10.764		0m	N.D.	d	
96)	Methacrylonitrile	11.085		0m	N.D.	d	
97)	Tetrahydrofuran	11.215		0m	N.D.	d	
98)	Isobutyl alcohol	11.915		0m	N.D.	d	
99)	Methyl tert-amyl ether	12.187		0m	N.D.	d	
100)	Methyl methacrylate	13.136		0m	N.D.	d	
101)	1,4-Dioxane	13.278		0m	N.D.	d	
102)	2-Nitropropane	13.753		0m	N.D.	d	
104)	Ethyl methacrylate	14.642		0m	N.D.	d	
106)	1-Chlorohexane	15.947		0m	N.D.	d	
107)	cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108)	Cyclohexanone	17.144		0m	N.D.	d	
109)	trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110)	Pentachloroethane	18.057		0m	N.D.	d	
111)	Benzyl chloride	18.603		0m	N.D.	d	
112)	bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On    :  6 Jul 2009   7:55 am
Operator  : CDS1
InstName  : VOA2
Sample    : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc      : LCS  5G  MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial  : 3   Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
```

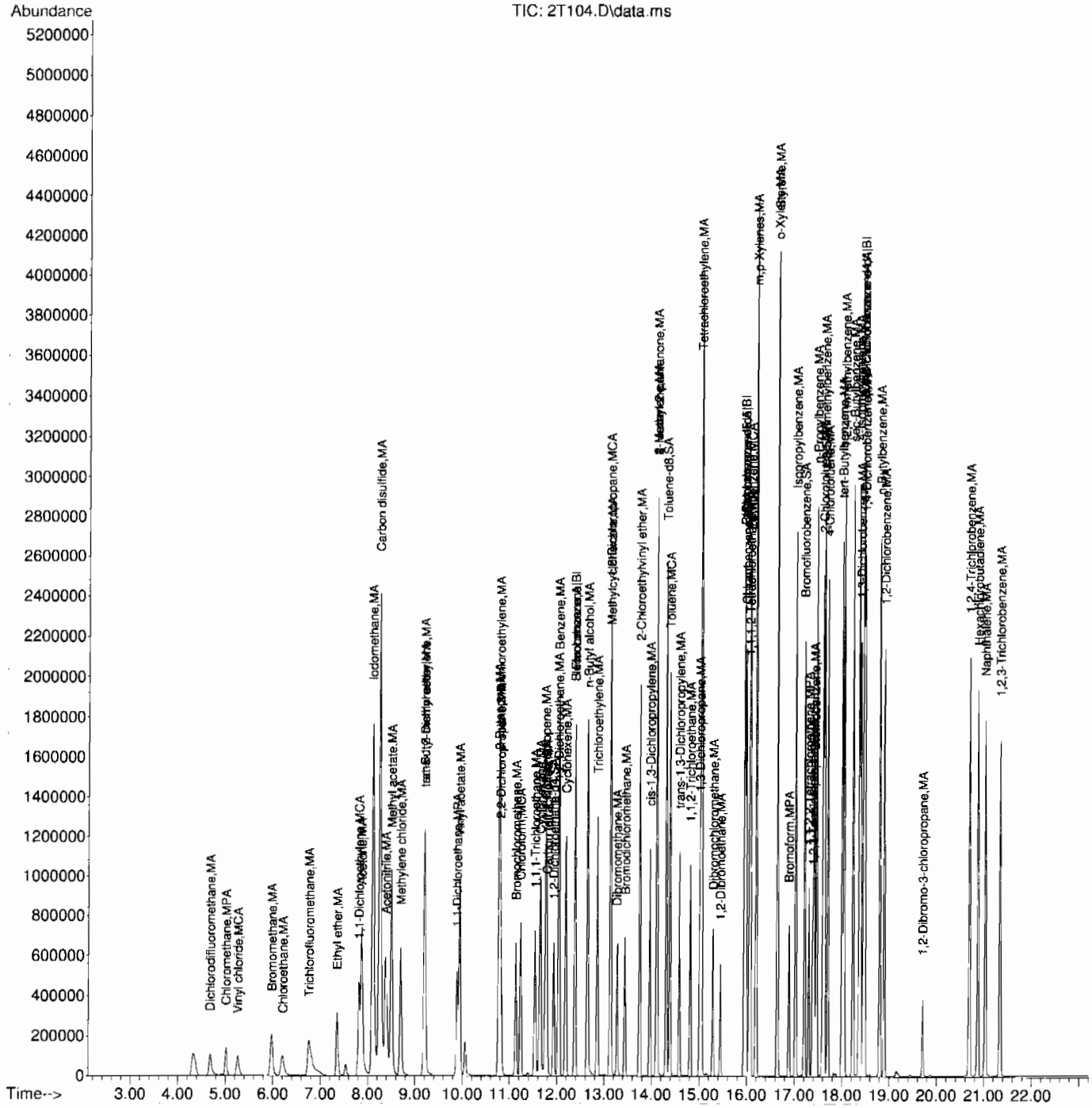

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2508**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874621**				
Client Sample:	**QC for batch 882630**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882630**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 08:53**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 06:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T106.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2508**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874621**				
Client Sample:	**QC for batch 882630**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882630**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 08:53**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 06:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T106.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2.4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		237	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1749528	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1519196	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	951777	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1749528	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1519196	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	951777	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	480979	49.03	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 98.06%			
43) Toluene-d8	14.310	98	1726974	48.38	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 96.76%			
61) Bromofluorobenzene	17.204	95	728289	48.67	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 97.34%			

Target Compounds				Qvalue
2) Dichlorodifluoromethane	4.687	0m	N.D. d	
3) Chloromethane	5.014	0m	N.D. d	
4) Vinyl chloride	5.266	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	6.756	0m	N.D. d	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.859	0m	N.D. d	
10) 1,1-Dichloroethylene	7.824	0m	N.D. d	
11) Iodomethane	8.096	0m	N.D. d	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.250	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.223	0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.187	0m	N.D. d	
18) Vinyl acetate	9.946	0m	N.D. d	
19) 1,1-Dichloroethane	10.041	0m	N.D. d	
20) 2-Butanone	10.859	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.859	0m	N.D. d	
22) 2,2-Dichloropropane	0.000	0	N.D.	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.227	0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535	0m	N.D. d	
26) Cyclohexane	11.642	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	11.772	0m	N.D. d	
30) 1,2-Dichloroethane	12.033	0m	N.D. d	
31) Benzene	12.045	0m	N.D. d	
32) Cyclohexene	12.187	0m	N.D. d	
33) n-Butyl alcohol	12.662	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	0.000	0	N.D.	
36) Methylcyclohexane	13.136	0m	N.D. d	
37) Dibromomethane	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	13.195		0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	13.966		0m	N.D. d	
42) 4-Methyl-2-pentanone	14.310		0m	N.D. d	
44) Toluene	14.393		0m	N.D. d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D. d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D. d	
47) 2-Hexanone	14.168		0m	N.D. d	
48) 1,3-Dichloropropane	15.010		0m	N.D. d	
49) Tetrachloroethylene	15.034		0m	N.D. d	
50) Dibromochloromethane	15.294		0m	N.D. d	
51) 1,2-Dibromoethane	15.449		0m	N.D. d	
52) Chlorobenzene	15.982		0m	N.D. d	
53) 1,1,1,2-Tetrachloroethane	16.053		0m	N.D. d	
54) Ethylbenzene	16.077		0m	N.D. d	
55) m,p-Xylenes	16.196		0m	N.D. d	
56) o-Xylene	16.634		0m	N.D. d	
57) Styrene	16.646		0m	N.D. d	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.026		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.204		0m	N.D. d	
64) Bromobenzene	17.405		0m	N.D. d	
65) n-Propylbenzene	17.465		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D. d	
67) 2-Chlorotoluene	17.595		0m	N.D. d	
68) 4-Chlorotoluene	17.702		0m	N.D. d	
69) tert-Butylbenzene	18.057		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	18.046		0m	N.D. d	
71) sec-Butylbenzene	18.235		0m	N.D. d	
72) 4-Isopropyltoluene	18.366		0m	N.D. d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D. d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D. d	
75) n-Butylbenzene	18.805		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.899		0m	N.D. d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D. d	
79) Hexachlorobutadiene	20.868		0m	N.D. d	
80) Naphthalene	21.022		0m	N.D. d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D. d	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	7.586	56	374377	310.26 ug/L	100
86) Trichlorotrifluoroethane	7.859	85	521229	237.04 ug/L	97
87) Isopropyl Alcohol	0.000		0m	N.D. d	
88) Allyl chloride	8.488	41	2617696	214.17 ug/L	100
89) tert-Butyl Alcohol	8.879	59	110	N.D.	
90) Acrylonitrile	9.092	53	610681	248.37 ug/L	100
91) Isopropyl ether	10.053	45	307	N.D.	
92) 2-Chloro-1,3-butadiene	10.053	53	552832	54.85 ug/L	97
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.859	43	1757936	242.11 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
95) Propionitrile	10.847	54	245689	247.51 ug/L	100	
96) Methacrylonitrile	11.085	41	1088359	248.99 ug/L	100	
97) Tetrahydrofuran	11.203	42	583471	249.67 ug/L	100	
98) Isobutyl alcohol	11.796	41	687491	2646.11 ug/L	100	
99) Methyl tert-amyl ether	0.000		0m	N.D. d		
100) Methyl methacrylate	13.195	69	1109403	260.37 ug/L	99	
101) 1,4-Dioxane	13.267	88	169837	2938.96 ug/L	99	
102) 2-Nitropropane	13.682	43	599585	296.47 ug/L	100	E
104) Ethyl methacrylate	14.642	69	2028431	242.05 ug/L	100	
106) 1-Chlorohexane	0.000		0m	N.D. d		
107) cis-1,4-Dichloro-2-butene	17.061	53	759569	253.47 ug/L	99	
108) Cyclohexanone	17.144	42	1736982	1537.57 ug/L	98	
109) trans-1,4-Dichloro-2-b...	17.358	53	722971	247.32 ug/L	99	
110) Pentachloroethane	18.057	167	1070506	321.88 ug/L	97	
111) Benzyl chloride	18.603	91	4512470	289.37 ug/L	99	
112) bis(2-Chloroisopropyl)...	19.006	45	1241349	244.47 ug/L	98	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On    :  6 Jul 2009   8:53 am
Operator  : CDS1
InstName  : VOA2
Sample    : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc      : LCS  5G  MIX [B] SOIL
ALS Vial  : 5   Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
```

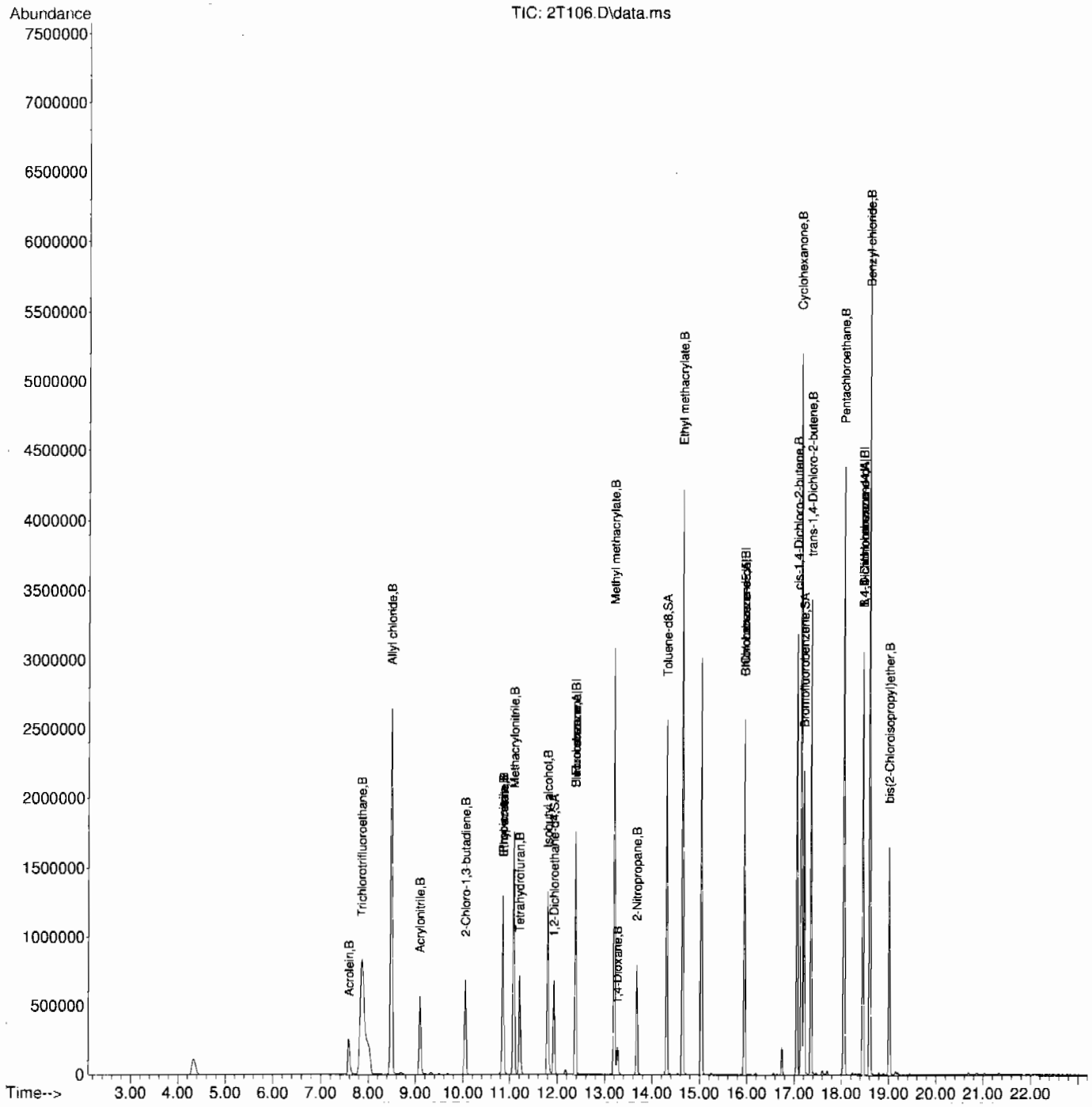

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874618	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10464PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 17:09	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:06	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T123.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		41.5	ug/kg	0.364	1.07
74-87-3	Chloromethane		45.3	ug/kg	0.322	1.07
75-01-4	Vinyl chloride		46.2	ug/kg	0.322	1.07
74-83-9	Bromomethane		43.2	ug/kg	0.322	1.07
75-00-3	Chloroethane		47.3	ug/kg	0.322	1.07
75-69-4	Trichlorofluoromethane		47.3	ug/kg	0.611	1.07
67-64-1	Acetone		200	ug/kg	1.78	5.36
75-35-4	1,1-Dichloroethylene		48.4	ug/kg	0.322	1.07
74-88-4	Iodomethane		250	ug/kg	1.72	5.36
75-09-2	Methylene chloride		46.4	ug/kg	2.14	5.36
75-15-0	Carbon disulfide		246	ug/kg	1.34	5.36
156-60-5	trans-1,2-Dichloroethylene		46.3	ug/kg	0.322	1.07
75-34-3	1,1-Dichloroethane		48.0	ug/kg	0.322	1.07
78-93-3	2-Butanone		196	ug/kg	1.61	5.36
156-59-2	cis-1,2-Dichloroethylene		47.5	ug/kg	0.322	1.07
594-20-7	2,2-Dichloropropane		50.2	ug/kg	0.322	1.07
67-66-3	Chloroform		47.5	ug/kg	0.322	1.07
74-97-5	Bromochloromethane		46.4	ug/kg	0.354	1.07
71-55-6	1,1,1-Trichloroethane		49.7	ug/kg	0.322	1.07
563-58-6	1,1-Dichloropropene		47.3	ug/kg	0.322	1.07
56-23-5	Carbon tetrachloride		50.0	ug/kg	0.322	1.07
107-06-2	1,2-Dichloroethane		47.1	ug/kg	0.322	1.07
71-43-2	Benzene		45.2	ug/kg	0.322	1.07
79-01-6	Trichloroethylene		46.1	ug/kg	0.354	1.07
78-87-5	1,2-Dichloropropane		46.8	ug/kg	0.322	1.07
75-27-4	Bromodichloromethane		49.4	ug/kg	0.322	1.07
74-95-3	Dibromomethane		47.6	ug/kg	0.322	1.07
108-10-1	4-Methyl-2-pentanone		235	ug/kg	1.34	5.36
10061-01-5	cis-1,3-Dichloropropylene		49.2	ug/kg	0.322	1.07
108-88-3	Toluene		44.5	ug/kg	0.322	1.07
10061-02-6	trans-1,3-Dichloropropylene		49.3	ug/kg	0.322	1.07
79-00-5	1,1,2-Trichloroethane		46.9	ug/kg	0.322	1.07
591-78-6	2-Hexanone		236	ug/kg	1.61	5.36
142-28-9	1,3-Dichloropropane		46.6	ug/kg	0.322	1.07
127-18-4	Tetrachloroethylene		44.6	ug/kg	0.322	1.07
124-48-1	Dibromochloromethane		51.6	ug/kg	0.322	1.07
106-93-4	1,2-Dibromoethane		48.9	ug/kg	0.322	1.07
108-90-7	Chlorobenzene		45.5	ug/kg	0.322	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874618	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10464PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 17:09	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:06	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T123.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		45.7	ug/kg	0.322	1.07
179601-23-1	m,p-Xylenes		89.3	ug/kg	0.322	2.14
95-47-6	o-Xylene		45.4	ug/kg	0.322	1.07
100-42-5	Styrene		50.0	ug/kg	0.322	1.07
75-25-2	Bromoform		43.2	ug/kg	0.322	1.07
79-34-5	1,1,2,2-Tetrachloroethane		50.5	ug/kg	0.322	1.07
96-18-4	1,2,3-Trichloropropane		48.6	ug/kg	0.322	1.07
108-86-1	Bromobenzene		46.6	ug/kg	0.322	1.07
103-65-1	n-Propylbenzene		46.0	ug/kg	0.322	1.07
95-49-8	2-Chlorotoluene		46.4	ug/kg	0.322	1.07
98-82-8	Isopropylbenzene		45.9	ug/kg	0.322	1.07
108-67-8	1,3,5-Trimethylbenzene		45.9	ug/kg	0.322	1.07
106-43-4	4-Chlorotoluene		45.6	ug/kg	0.322	1.07
98-06-6	tert-Butylbenzene		46.3	ug/kg	0.322	1.07
95-63-6	1,2,4-Trimethylbenzene		45.9	ug/kg	0.322	1.07
135-98-8	sec-Butylbenzene		45.7	ug/kg	0.322	1.07
99-87-6	4-Isopropyltoluene		44.4	ug/kg	0.322	1.07
541-73-1	1,3-Dichlorobenzene		44.5	ug/kg	0.322	1.07
106-46-7	1,4-Dichlorobenzene		43.6	ug/kg	0.322	1.07
104-51-8	n-Butylbenzene		44.0	ug/kg	0.322	1.07
96-12-8	1,2-Dibromo-3-chloropropane	E	58.9	ug/kg	0.322	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.36	ug/kg	1.72	5.36
630-20-6	1,1,1,2-Tetrachloroethane		48.5	ug/kg	0.322	1.07
95-50-1	1,2-Dichlorobenzene		44.6	ug/kg	0.322	1.07

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1638626	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1384078	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	861083	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1638626	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1384078	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	861083	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	475621	51.76	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 103.52%			
43) Toluene-d8	14.310	98	1637070	50.34	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 100.68%			
61) Bromofluorobenzene	17.216	95	328864	24.29	ug/L	0.01
Spiked Amount 50.000	Range 68 - 133		Recovery = 48.58%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	227096	38.72	ug/L	100
3) Chloromethane	5.014	50	223513	42.26	ug/L	100
4) Vinyl chloride	5.252	62	202318	43.08	ug/L	100
5) Bromomethane	5.980	94	190183	40.28	ug/L	99
6) Chloroethane	6.199	64	219752	44.16	ug/L	100
7) Trichlorofluoromethane	6.756	101	428804	44.14	ug/L	100
8) Ethyl ether	7.349	59	247415	43.60	ug/L	100
9) Acetone	7.871	43	1047033	186.24	ug/L	99
10) 1,1-Dichloroethylene	7.812	61	444600	45.11	ug/L	99
11) Iodomethane	8.096	142	3134325	233.51	ug/L	98
12) Acetonitrile	8.381	41	977135	1042.01	ug/L	100
13) Methyl acetate	8.500	43	1818963	312.71	ug/L	99
14) Carbon disulfide	8.251	76	5083133	229.58	ug/L	100
15) Methylene chloride	8.701	84	328851	43.24	ug/L	99
16) tert-Butyl methyl ether	9.199	73	771570	41.63	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	437927	43.23	ug/L	98
18) Vinyl acetate	9.946	43	713076	58.78	ug/L	94
19) 1,1-Dichloroethane	9.887	63	565261	44.74	ug/L	100
20) 2-Butanone	10.765	43	1242993	183.26	ug/L	99
21) cis-1,2-Dichloroethylene	10.788	61	496332	44.32	ug/L	99
22) 2,2-Dichloropropane	10.812	77	424012	46.87	ug/L	99
23) Bromochloromethane	11.132	128	179544	43.24	ug/L	97
24) Chloroform	11.239	83	573926	44.34	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	515379	46.32	ug/L	99
26) Cyclohexane	11.642	56	506013	43.42	ug/L	99
27) 1,1-Dichloropropene	11.761	75	405504	44.10	ug/L	99
28) Carbon tetrachloride	11.784	117	467181	46.66	ug/L	99
30) 1,2-Dichloroethane	12.033	62	431614	43.95	ug/L	100
31) Benzene	12.045	78	1208822	42.19	ug/L	99
32) Cyclohexene	12.188	67	615466	42.74	ug/L	99
33) n-Butyl alcohol	12.650	56	873355	4612.19	ug/L	98
34) Trichloroethylene	12.852	95	335094	43.03	ug/L	98
35) 1,2-Dichloropropane	13.124	63	313880	43.66	ug/L	100
36) Methylcyclohexane	13.136	83	527460	41.81	ug/L	99
37) Dibromomethane	13.279	93	196579	44.40	ug/L	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
38) Bromodichloromethane	13.445	83	423059	46.06 ug/L	100	
39) 2-Chloroethylvinyl ether	13.753	63	786595	220.94 ug/L	99	
40) cis-1,3-Dichloropropylene	13.966	75	491926	45.86 ug/L	99	
42) 4-Methyl-2-pentanone	14.109	58	664873	219.47 ug/L	100	
44) Toluene	14.393	91	1313225	41.51 ug/L	100	
45) trans-1,3-Dichloroprop...	14.583	75	451792	45.95 ug/L	99	
46) 1,1,2-Trichloroethane	14.808	83	236047	43.74 ug/L	99	
47) 2-Hexanone	14.109	43	1828262	220.48 ug/L	100	
48) 1,3-Dichloropropane	15.010	76	470942	43.43 ug/L	93	
49) Tetrachloroethylene	15.034	164	339473	41.62 ug/L	99	
50) Dibromochloromethane	15.295	129	352769	48.09 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	304005	45.61 ug/L	99	
52) Chlorobenzene	15.982	112	935169	42.47 ug/L	99	
53) 1,1,1,2-Tetrachloroethane	16.054	131	362311	45.22 ug/L	100	
54) Ethylbenzene	16.077	91	1521868	42.59 ug/L	100	
55) m,p-Xylenes	16.196	106	1196646	83.31 ug/L	99	
56) o-Xylene	16.635	106	598471	42.39 ug/L	98	
57) Styrene	16.646	104	970529	46.65 ug/L	98	
59) Bromoform	16.884	173	278131	40.27 ug/L	100	
60) Isopropylbenzene	17.026	105	1569668	42.84 ug/L	99	
62) 1,1,2,2-Tetrachloroethane	17.299	83	405803	47.08 ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	112024	45.33 ug/L	94	
64) Bromobenzene	17.417	156	476691	43.51 ug/L	99	
65) n-Propylbenzene	17.465	91	1855008	42.89 ug/L	100	
66) 1,3,5-Trimethylbenzene	17.631	105	1317487	43.41 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1270616	43.26 ug/L	100	
68) 4-Chlorotoluene	17.702	91	1137050	42.51 ug/L	100	
69) tert-Butylbenzene	17.998	119	1337684	43.22 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1345651	42.82 ug/L	99	
71) sec-Butylbenzene	18.235	105	1746030	42.62 ug/L	100	
72) 4-Isopropyltoluene	18.366	119	1365024	41.40 ug/L	99	
73) 1,3-Dichlorobenzene	18.401	146	854376	41.51 ug/L	99	
74) 1,4-Dichlorobenzene	18.485	146	867803	40.67 ug/L	99	
75) n-Butylbenzene	18.805	91	1286963	41.05 ug/L	100	
76) 1,2-Dichlorobenzene	18.900	146	820684	41.62 ug/L	99	
77) 1,2-Dibromo-3-chloropr...	19.706	157	93469	54.94 ug/L	100	E
78) 1,2,4-Trichlorobenzene	20.690	180	580397	38.66 ug/L	100	
79) Hexachlorobutadiene	20.868	225	350030	38.08 ug/L	100	
80) Naphthalene	21.022	128	1315650	41.86 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	556571	40.45 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.610		0m	N.D. d		
86) Trichlorotrifluoroethane	7.836		0m	N.D. d		
87) Isopropyl Alcohol	8.251		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.891		0m	N.D. d		
90) Acrylonitrile	9.104		0m	N.D. d		
91) Isopropyl ether	10.053		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.053		0m	N.D. d		
93) Ethyl tert-butyl ether	10.563		0m	N.D. d		
94) Ethyl acetate	10.765		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Propionitrile	10.860		0m	N.D.	d	
96) Methacrylonitrile	11.085		0m	N.D.	d	
97) Tetrahydrofuran	11.239		0m	N.D.	d	
98) Isobutyl alcohol	11.927		0m	N.D.	d	
99) Methyl tert-amyl ether	12.188		0m	N.D.	d	
100) Methyl methacrylate	13.136		0m	N.D.	d	
101) 1,4-Dioxane	13.267		0m	N.D.	d	
102) 2-Nitropropane	13.753		0m	N.D.	d	
104) Ethyl methacrylate	14.642		0m	N.D.	d	
106) 1-Chlorohexane	15.947		0m	N.D.	d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108) Cyclohexanone	17.145		0m	N.D.	d	
109) trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110) Pentachloroethane	18.058		0m	N.D.	d	
111) Benzyl chloride	18.603		0m	N.D.	d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On    :  6 Jul 2009   5:09 pm
Operator  : CDS1
InstName  : VOA2
Sample    : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial  : 22   Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
```

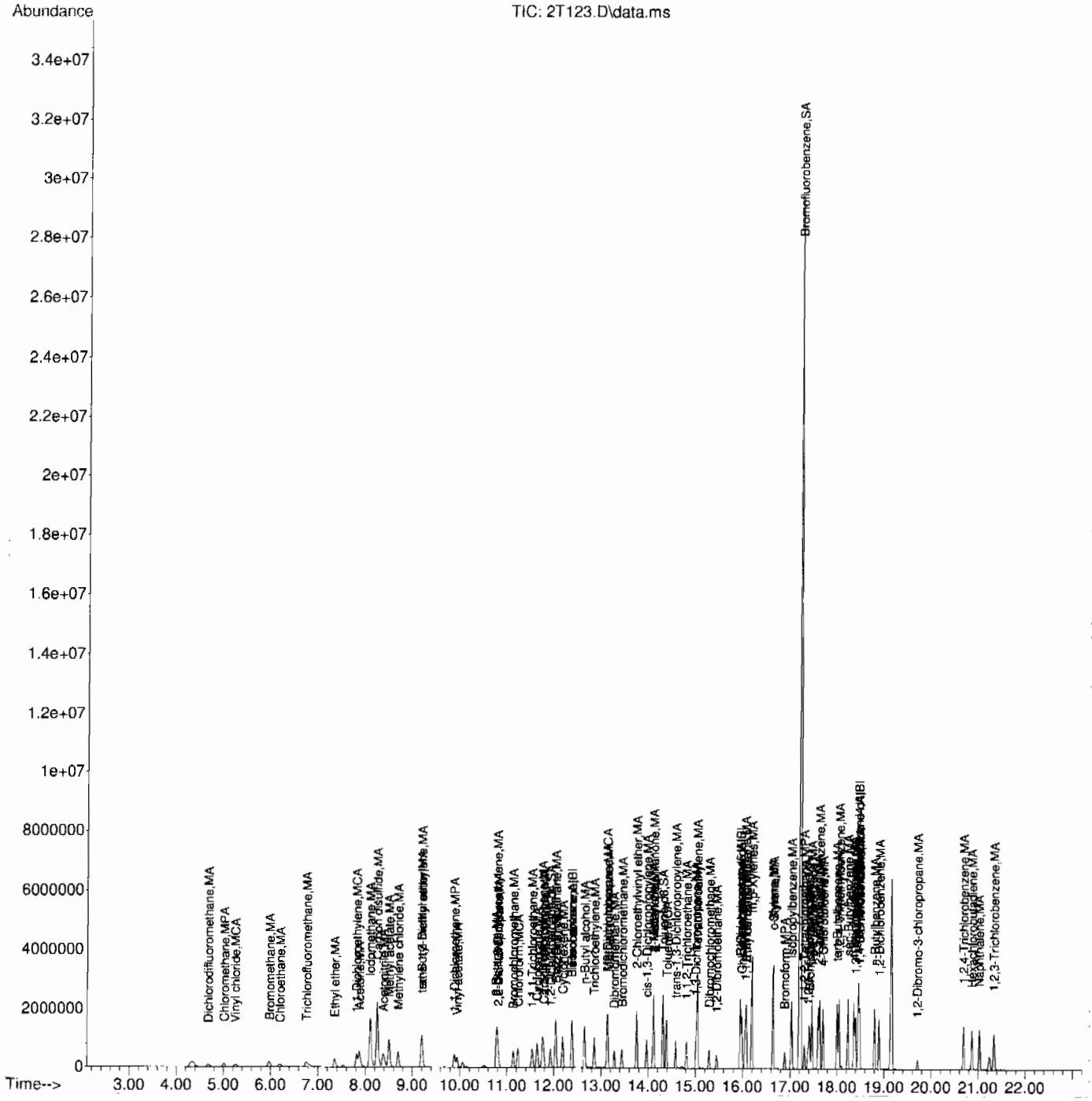

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874619	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10464PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 17:37	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:07	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T124.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		44.0	ug/kg	0.364	1.07
74-87-3	Chloromethane		45.7	ug/kg	0.322	1.07
75-01-4	Vinyl chloride		47.0	ug/kg	0.322	1.07
74-83-9	Bromomethane		40.0	ug/kg	0.322	1.07
75-00-3	Chloroethane		47.6	ug/kg	0.322	1.07
75-69-4	Trichlorofluoromethane		49.6	ug/kg	0.611	1.07
67-64-1	Acetone		203	ug/kg	1.78	5.36
75-35-4	1,1-Dichloroethylene		49.2	ug/kg	0.322	1.07
74-88-4	Iodomethane		251	ug/kg	1.72	5.36
75-09-2	Methylene chloride		45.0	ug/kg	2.14	5.36
75-15-0	Carbon disulfide		254	ug/kg	1.34	5.36
156-60-5	trans-1,2-Dichloroethylene		46.4	ug/kg	0.322	1.07
75-34-3	1,1-Dichloroethane		47.2	ug/kg	0.322	1.07
78-93-3	2-Butanone		201	ug/kg	1.61	5.36
156-59-2	cis-1,2-Dichloroethylene		46.3	ug/kg	0.322	1.07
594-20-7	2,2-Dichloropropane		47.3	ug/kg	0.322	1.07
67-66-3	Chloroform		46.4	ug/kg	0.322	1.07
74-97-5	Bromochloromethane		46.0	ug/kg	0.354	1.07
71-55-6	1,1,1-Trichloroethane		49.1	ug/kg	0.322	1.07
563-58-6	1,1-Dichloropropene		48.8	ug/kg	0.322	1.07
56-23-5	Carbon tetrachloride		50.4	ug/kg	0.322	1.07
107-06-2	1,2-Dichloroethane		46.0	ug/kg	0.322	1.07
71-43-2	Benzene		44.7	ug/kg	0.322	1.07
79-01-6	Trichloroethylene		46.0	ug/kg	0.354	1.07
78-87-5	1,2-Dichloropropane		45.8	ug/kg	0.322	1.07
75-27-4	Bromodichloromethane		48.3	ug/kg	0.322	1.07
74-95-3	Dibromomethane		47.4	ug/kg	0.322	1.07
108-10-1	4-Methyl-2-pentanone		237	ug/kg	1.34	5.36
10061-01-5	cis-1,3-Dichloropropylene		48.4	ug/kg	0.322	1.07
108-88-3	Toluene		44.0	ug/kg	0.322	1.07
10061-02-6	trans-1,3-Dichloropropylene		47.8	ug/kg	0.322	1.07
79-00-5	1,1,2-Trichloroethane		46.0	ug/kg	0.322	1.07
591-78-6	2-Hexanone		238	ug/kg	1.61	5.36
142-28-9	1,3-Dichloropropane		45.4	ug/kg	0.322	1.07
127-18-4	Tetrachloroethylene		45.2	ug/kg	0.322	1.07
124-48-1	Dibromochloromethane		50.4	ug/kg	0.322	1.07
106-93-4	1,2-Dibromoethane		48.2	ug/kg	0.322	1.07
108-90-7	Chlorobenzene		44.4	ug/kg	0.322	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874619	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10464PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 17:37	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:07	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T124.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		44.7	ug/kg	0.322	1.07
179601-23-1	m,p-Xylenes		87.7	ug/kg	0.322	2.14
95-47-6	o-Xylene		44.1	ug/kg	0.322	1.07
100-42-5	Styrene		48.6	ug/kg	0.322	1.07
75-25-2	Bromoform		43.1	ug/kg	0.322	1.07
79-34-5	1,1,2,2-Tetrachloroethane		50.5	ug/kg	0.322	1.07
96-18-4	1,2,3-Trichloropropane		49.1	ug/kg	0.322	1.07
108-86-1	Bromobenzene		45.2	ug/kg	0.322	1.07
103-65-1	n-Propylbenzene		44.8	ug/kg	0.322	1.07
95-49-8	2-Chlorotoluene		44.7	ug/kg	0.322	1.07
98-82-8	Isopropylbenzene		44.8	ug/kg	0.322	1.07
108-67-8	1,3,5-Trimethylbenzene		44.8	ug/kg	0.322	1.07
106-43-4	4-Chlorotoluene		43.7	ug/kg	0.322	1.07
98-06-6	tert-Butylbenzene		45.1	ug/kg	0.322	1.07
95-63-6	1,2,4-Trimethylbenzene		43.5	ug/kg	0.322	1.07
135-98-8	sec-Butylbenzene		44.7	ug/kg	0.322	1.07
99-87-6	4-Isopropyltoluene		43.3	ug/kg	0.322	1.07
541-73-1	1,3-Dichlorobenzene		42.5	ug/kg	0.322	1.07
106-46-7	1,4-Dichlorobenzene		41.5	ug/kg	0.322	1.07
104-51-8	n-Butylbenzene		42.1	ug/kg	0.322	1.07
96-12-8	1,2-Dibromo-3-chloropropane	E	59.7	ug/kg	0.322	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.36	ug/kg	1.72	5.36
630-20-6	1,1,1,2-Tetrachloroethane		47.2	ug/kg	0.322	1.07
95-50-1	1,2-Dichlorobenzene		43.1	ug/kg	0.322	1.07

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1564606	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1330232	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	819919	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1564606	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1330232	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	819919	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	445440	50.77	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 101.54%			
43) Toluene-d8	14.310	98	1492265	47.74	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 95.48%			
61) Bromofluorobenzene	17.216	95	302924	23.50	ug/L	0.01
Spiked Amount 50.000	Range 68 - 133		Recovery = 47.00%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	229698	41.01	ug/L	100
3) Chloromethane	5.014	50	215134	42.60	ug/L	100
4) Vinyl chloride	5.267	62	196785	43.88	ug/L	100
5) Bromomethane	5.980	94	168248	37.32	ug/L	99
6) Chloroethane	6.211	64	210790	44.37	ug/L	100
7) Trichlorofluoromethane	6.757	101	429399	46.29	ug/L	100
8) Ethyl ether	7.349	59	232038	42.82	ug/L	99
9) Acetone	7.871	43	1018949	189.80	ug/L	100
10) 1,1-Dichloroethylene	7.824	61	432344	45.94	ug/L	99
11) Iodomethane	8.108	142	3006363	234.57	ug/L	99
12) Acetonitrile	8.381	41	1004918	1122.34	ug/L	100
13) Methyl acetate	8.512	43	1810573	325.99	ug/L	99
14) Carbon disulfide	8.251	76	5000825	236.54	ug/L	100
15) Methylene chloride	8.701	84	305751	42.01	ug/L	99
16) tert-Butyl methyl ether	9.211	73	688701	38.91	ug/L	99
17) trans-1,2-Dichloroethy...	9.199	61	418340	43.25	ug/L	99
18) Vinyl acetate	9.946	43	714926	61.72	ug/L	94
19) 1,1-Dichloroethane	9.887	63	531620	44.06	ug/L	100
20) 2-Butanone	10.777	43	1216245	187.79	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	461422	43.16	ug/L	100
22) 2,2-Dichloropropane	10.812	77	381483	44.17	ug/L	98
23) Bromochloromethane	11.132	128	170066	42.90	ug/L	99
24) Chloroform	11.239	83	535531	43.33	ug/L	99
25) 1,1,1-Trichloroethane	11.535	97	486262	45.77	ug/L	100
26) Cyclohexane	11.642	56	491048	44.13	ug/L	100
27) 1,1-Dichloropropene	11.761	75	399280	45.48	ug/L	99
28) Carbon tetrachloride	11.785	117	449852	47.05	ug/L	99
30) 1,2-Dichloroethane	12.034	62	402000	42.87	ug/L	100
31) Benzene	12.045	78	1141648	41.73	ug/L	99
32) Cyclohexene	12.188	67	605950	44.07	ug/L	99
33) n-Butyl alcohol	12.650	56	983273	5438.33	ug/L	98
34) Trichloroethylene	12.852	95	319093	42.92	ug/L	100
35) 1,2-Dichloropropane	13.125	63	292974	42.68	ug/L	100
36) Methylcyclohexane	13.136	83	520734	43.23	ug/L	99
37) Dibromomethane	13.279	93	186866	44.20	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)	
38) Bromodichloromethane	13.445	83	395098	45.06	ug/L		100	
39) 2-Chloroethylvinyl ether	13.753	63	734693	216.12	ug/L		99	
40) cis-1,3-Dichloropropylene	13.966	75	462762	45.18	ug/L		99	
42) 4-Methyl-2-pentanone	14.109	58	643124	220.88	ug/L		100	
44) Toluene	14.393	91	1248012	41.05	ug/L		100	
45) trans-1,3-Dichloroprop...	14.583	75	421034	44.55	ug/L		99	
46) 1,1,2-Trichloroethane	14.808	83	222374	42.88	ug/L		100	
47) 2-Hexanone	14.109	43	1766306	221.63	ug/L		100	
48) 1,3-Dichloropropane	15.010	76	441428	42.35	ug/L		93	
49) Tetrachloroethylene	15.034	164	330734	42.19	ug/L		100	
50) Dibromochloromethane	15.295	129	331812	47.06	ug/L		100	
51) 1,2-Dibromoethane	15.449	107	288305	45.01	ug/L		100	
52) Chlorobenzene	15.982	112	877415	41.46	ug/L		100	
53) 1,1,1,2-Tetrachloroethane	16.054	131	338784	44.00	ug/L		98	
54) Ethylbenzene	16.077	91	1430952	41.67	ug/L		100	
55) m,p-Xylenes	16.196	106	1129455	81.81	ug/L		100	
56) o-Xylene	16.635	106	558727	41.18	ug/L		99	
57) Styrene	16.647	104	907120	45.37	ug/L		99	
59) Bromoform	16.884	173	264119	40.17	ug/L		99	
60) Isopropylbenzene	17.026	105	1459433	41.83	ug/L		100	
62) 1,1,2,2-Tetrachloroethane	17.299	83	386886	47.14	ug/L		100	
63) 1,2,3-Trichloropropane	17.382	110	107851	45.83	ug/L	#	90	
64) Bromobenzene	17.417	156	439482	42.13	ug/L		100	
65) n-Propylbenzene	17.465	91	1720256	41.77	ug/L		100	
66) 1,3,5-Trimethylbenzene	17.631	105	1207874	41.80	ug/L		55	
67) 2-Chlorotoluene	17.595	91	1165247	41.66	ug/L		100	
68) 4-Chlorotoluene	17.702	91	1038583	40.78	ug/L		100	
69) tert-Butylbenzene	17.998	119	1239176	42.04	ug/L		99	
70) 1,2,4-Trimethylbenzene	18.046	105	1214442	40.59	ug/L		99	
71) sec-Butylbenzene	18.236	105	1626745	41.71	ug/L		100	
72) 4-Isopropyltoluene	18.366	119	1268104	40.39	ug/L		99	
73) 1,3-Dichlorobenzene	18.402	146	777753	39.68	ug/L		99	
74) 1,4-Dichlorobenzene	18.485	146	786346	38.70	ug/L		100	
75) n-Butylbenzene	18.805	91	1171446	39.24	ug/L		100	
76) 1,2-Dichlorobenzene	18.900	146	754662	40.20	ug/L		100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	90187	55.67	ug/L		99	E
78) 1,2,4-Trichlorobenzene	20.690	180	509087	35.61	ug/L		100	
79) Hexachlorobutadiene	20.868	225	309728	35.38	ug/L		100	
80) Naphthalene	21.022	128	1224985	40.94	ug/L		100	
81) 1,2,3-Trichlorobenzene	21.342	180	493210	37.64	ug/L		99	
83) Chlorotrifluoroethylene	0.000		0	N.D.				
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.				
85) Acrolein	7.622		0m	N.D.	d			
86) Trichlorotrifluoroethane	7.847		0m	N.D.	d			
87) Isopropyl Alcohol	8.251		0m	N.D.	d			
88) Allyl chloride	8.381		0m	N.D.	d			
89) tert-Butyl Alcohol	8.891		0m	N.D.	d			
90) Acrylonitrile	9.116		0m	N.D.	d			
91) Isopropyl ether	9.946		0m	N.D.	d			
92) 2-Chloro-1,3-butadiene	10.053		0m	N.D.	d			
93) Ethyl tert-butyl ether	10.788		0m	N.D.	d			
94) Ethyl acetate	10.777		0m	N.D.	d			

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Propionitrile	10.860		0m	N.D.	d	
96) Methacrylonitrile	11.085		0m	N.D.	d	
97) Tetrahydrofuran	11.239		0m	N.D.	d	
98) Isobutyl alcohol	11.642		0m	N.D.	d	
99) Methyl tert-amyl ether	12.188		0m	N.D.	d	
100) Methyl methacrylate	13.136		0m	N.D.	d	
101) 1,4-Dioxane	13.267		0m	N.D.	d	
102) 2-Nitropropane	13.753		0m	N.D.	d	
104) Ethyl methacrylate	14.642		0m	N.D.	d	
106) 1-Chlorohexane	15.947		0m	N.D.	d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108) Cyclohexanone	17.145		0m	N.D.	d	
109) trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110) Pentachloroethane	18.058		0m	N.D.	d	
111) Benzyl chloride	18.603		0m	N.D.	d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

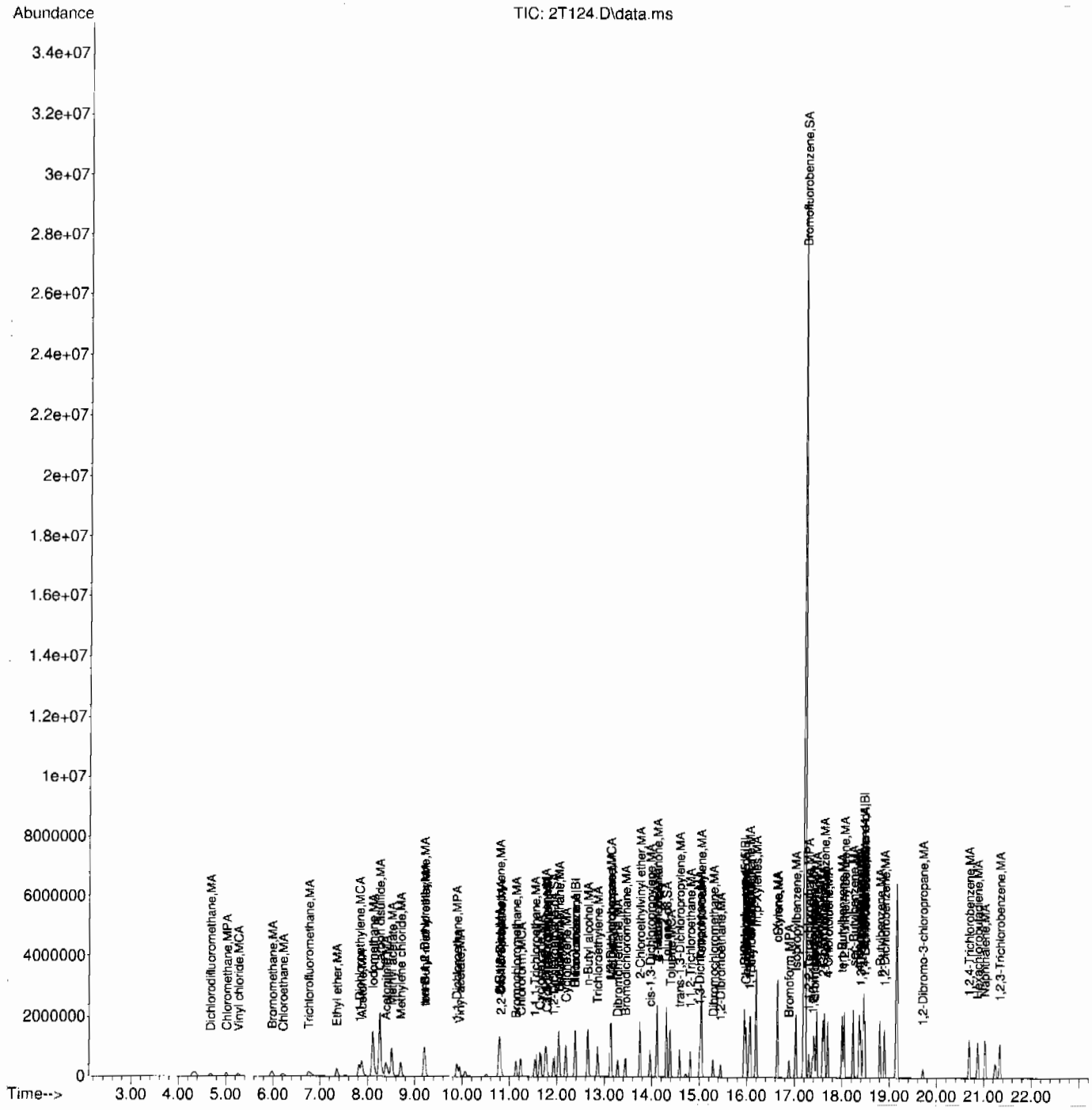

Miscellaneous

Prep LogBook

Analyst: CDS1 Verified by:_____

Batch: 882630

Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201874617		SW846 5030	06-JUL-2009 06:00	5 g	5 mL	1	SOIL
MB	1201876171		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201874620		SW846 5030	06-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201874621		SW846 5030	06-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201876172		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201876173		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
SAMPLE	232582001		SW846 5030	06-JUL-2009 11:00	5 g	5 mL	1	SOIL
PS	1201874618	232582001	SW846 5030	06-JUL-2009 11:06	5 g	5 mL	1	SOIL
PSD	1201874619	232582001	SW846 5030	06-JUL-2009 11:07	5 g	5 mL	1	SOIL
SAMPLE	232582002		SW846 5030	06-JUL-2009 11:01	5 g	5 mL	1	SOIL
SAMPLE	232585001		SW846 5030	06-JUL-2009 11:02	5 g	5 mL	1	SOIL
SAMPLE	232585003		SW846 5030	06-JUL-2009 14:03	5 g	5 mL	1	SOIL
SAMPLE	232585003		SW846 5030	07-JUL-2009 08:31	2 g	5 mL	2.5	SOIL
SAMPLE	232585004		SW846 5030	07-JUL-2009 08:32	5 g	5 mL	1	SOIL
SAMPLE	232591001		SW846 5030	06-JUL-2009 11:05	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/1/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: _____

(See pg. _____ for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 070109V2

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
Long ICV	W2VM090701-10			5+5	
BFB	UVM090604-02				1
Short ICV	W2VM090701-18			5+5	

Purge Amount	
5	Water Purge Vol:
	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
1 Jul 2009 09:58	2S301.D	UVM090604-02	--------	BFB	5ML	1	N/A	1	w	CDS1	N/A	O	
1 Jul 2009 10:25	2S302.D	120189------	--------	BLANK	5ML	1	N/A	2	w	CDS1	N/A	X	instrument blank
1 Jul 2009 10:53	2S303.D	W2VM090701-01	VSTD001	ICAL	5uL ea.	1	N/A	3	w	CDS1	N/A	O	UVM090603-02B+UVM090617-02C
1 Jul 2009 11:22	2S304.D	W2VM090701-02	VSTD002	ICAL	5uL ea.	1	N/A	4	w	CDS1	N/A	O	UVM090603-03B+UVM090617-03C
1 Jul 2009 11:51	2S305.D	W2VM090701-03	VSTD005	ICAL	5uL ea.	1	N/A	5	w	CDS1	N/A	O	UVM090603-04B+UVM090617-04C
1 Jul 2009 12:21	2S306.D	W2VM090701-04	VSTD010	ICAL	5uL ea.	1	N/A	6	w	CDS1	N/A	O	UVM090603-05B+UVM090617-05C
1 Jul 2009 12:50	2S307.D	W2VM090701-05	VSTD020	ICAL	5uL ea.	1	N/A	6	w	CDS1	N/A	O	UVM090603-06B+UVM090617-06C
1 Jul 2009 13:19	2S308.D	W2VM090701-06	VSTD050	ICAL	5uL ea.	1	N/A	7	w	CDS1	N/A	O	UVM090603-07B+UVM090617-07C
1 Jul 2009 13:48	2S309.D	W2VM090701-07	VSTD100	ICAL	5uL ea.	1	N/A	8	w	CDS1	N/A	O	UVM090603-07B+UVM090617-08C
1 Jul 2009 14:17	2S310.D	120146------	--------	BLANK	5ML	1	N/A	9	w	CDS1	N/A	X	instrument blank
1 Jul 2009 14:45	2S311.D	W2VM090701-08	VSTD0005	ICAL	5uL ea.	1	N/A	10	w	CDS1	N/A	O	UVM090603-01B+UVM090617-01C
1 Jul 2009 15:15	2S312.D	W2VM090701-09	LCS	ICV	5uL ea.	1	N/A	11	w	CDS1	N/A	X	UVM090605-01D+IVM090630-01 passes but see 2S313 for ICV
1 Jul 2009 15:44	2S313.D	W2VM090701-10	LCS	ICV	5uL ea.	1	N/A	12	w	CDS1	N/A	O	UVM090527-01E+IVM090630-01
1 Jul 2009 16:12	2S314.D	120146------	--------	BLANK	5ML	1	N/A	13	w	CDS1	N/A	X	instrument blank
1 Jul 2009 16:41	2S315.D	W2VM090701-11	VSTD005S	ICAL	5uL ea.	1	N/A	14	w	CDS1	N/A	O	UVM090701-01+UVM090625-01A
1 Jul 2009 17:10	2S316.D	W2VM090701-12	VSTD010S	ICAL	5uL ea.	1	N/A	15	w	CDS1	N/A	O	UVM090701-02+UVM090625-02A
1 Jul 2009 17:39	2S317.D	W2VM090701-13	VSTD025S	ICAL	5uL ea.	1	N/A	16	w	CDS1	N/A	O	UVM090701-03+UVM090625-03A
1 Jul 2009 18:08	2S318.D	W2VM090701-14	VSTD050S	ICAL	5uL ea.	1	N/A	17	w	CDS1	N/A	O	UVM090701-04+UVM090625-04A
1 Jul 2009 18:37	2S319.D	W2VM090701-15	VSTD100S	ICAL	5uL ea.	1	N/A	18	w	CDS1	N/A	O	UVM090701-05+UVM090625-05A
1 Jul 2009 19:07	2S320.D	W2VM090701-16	VSTD250S	ICAL	5uL ea.	1	N/A	19	w	CDS1	N/A	O	UVM090701-06+UVM090625-06A
1 Jul 2009 19:36	2S321.D	W2VM090701-17	VSTD500S	ICAL	5uL ea.	1	N/A	20	w	CDS1	N/A	O	UVM090701-07+UVM090625-07A
1 Jul 2009 20:05	2S322.D	120146-----	--------	BLANK	5ML	1	N/A	21	w	CDS1	N/A	X	instrument blank
1 Jul 2009 20:34	2S323.D	W2VM090701-18	LCS	ICV	5uL ea.	1	N/A	22	w	CDS1	N/A	O	UVM090701-08A+UVM090624-02A

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/6/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 25 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: _____

Daily Standard Volume Added for Purge (ul)

Solution ID#		Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	UVM090701-08A		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
LCS/MS	UVM090701-08A			5+5	
BFB	UVM090604-02				1
SHORT			5		
DHEC				5	

Purge Amount

5	Water Purge Vol:
	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
CV646	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
6 Jul 2009	06:43	2T101.D	UVM090604-02	--------	BFB	5mL	1	N/A	1	w	CDS1	N/A		
6 Jul 2009	06:57	2T102.D	W2VM090706-01	--------	CCV	5mL	1	N/A	1	w	CDS1	N/A		[A] UVM090617-017C+UVM0
6 Jul 2009	06:57	2T102BFB.D	W2VM090706-01	--------	CCV	5mL	1	N/A	1	w	CDS1	N/A		[A]
6 Jul 2009	07:27	2T103.D	W2VM090706-02	--------	LCS	5g	1	N/A	2	s	CDS1	N/A		MIX [A] UVM090527-01E+IVM0906
6 Jul 2009	07:55	2T104.D	W2VM090706-03	--------	LCS	5mL	1	N/A	3	w	CDS1	N/A		MIX [A] SOIL UVM090527-01E+IVM
6 Jul 2009	08:24	2T105.D	UVM090701-08A	--------	CCV	5mL	1	N/A	4	s	CDS1	N/A		5ML MIX [B]
6 Jul 2009	08:24	2T105SL.D	UVM090701-08A	--------	CCV	5mL	1	N/A	4	w	CDS1	N/A		5ML MIX [B]
6 Jul 2009	08:53	2T106.D	UVM090701-08A	--------	LCS	5g	1	N/A	5	s	CDS1	N/A		MIX [B] SOIL
6 Jul 2009	09:23	2T107.D	120182-----		----		1		6					
6 Jul 2009	09:52	2T108.D	120182-----	BLANK	----	5G	1	SOIL	7	s				
6 Jul 2009	10:21	2T109.D	120182-----	GEL	----	5ml	1	-	6	w				Tygon tubing
6 Jul 2009	10:51	2T110.D	120182-----	GEL	----	100uml	50	-	7	w				Fisher methanol lot 091463
6 Jul 2009	11:20	2T111.D	120182-----	GEL	----	100uml	50	-	10	w				B&J lot CY840
6 Jul 2009	11:50	2T112.D	120182-----	BLANK	----	5ml	1		11	w				
6 Jul 2009	12:19	2T113.D	120182-----	BLANK	----	5G	1	SOIL	12	s				
6 Jul 2009	12:47	2T114.D	232582001	LANL	882632	5g	1	-	13	s				SOIL
6 Jul 2009	13:16	2T115.D	232582002	LANL	882632	5g	1	-	14	s				soil
6 Jul 2009	13:45	2T116.D	232585001	LANL	882632	5g	1	-	15	s				soil
6 Jul 2009	14:14	2T117.D	232585003	LANL	882632	5g	1	-	16	s				SOIL
6 Jul 2009	14:43	2T118.D	232585004	LANL	882632	5g	1	-	17	s				SOIL
6 Jul 2009	15:13	2T119.D	232591001	LANL	882632	5g	1	-	18	s				SOIL
6 Jul 2009	15:41	2T120.D	232671001	LANL	882633	5mL	1	pH2	19	w				
6 Jul 2009	16:11	2T121.D	232671002	LANL	882633	5mL	1	pH2	20	w				
6 Jul 2009	16:40	2T122.D	232671005	LANL	882633	5mL	1	pH2	21	w				
6 Jul 2009	17:09	2T123.D	1201874618	LANL	882632	5g	1	-	22	s				ms 232582001 SOIL

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/6/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

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Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 25 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: _____

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	UVM090701-08A		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
LCS/MS	UVM090701-08A			5+5	
BFB	UVM090604-02				1
SHORT			5		
DHEC				5	

Purge Amount

5	Water Purge Vol:
	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
CV646	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
6 Jul 2009	17:37	2T124.D	1201874619	LANL	882632	5g	1	-	23	s				msd 232582001 SOIL
6 Jul 2009	18:06	2T125.D	1201874625	LANL	882633	5mL	1	pH2	24	w				ms 232671002
6 Jul 2009	18:35	2T126.D	1201874626	LANL	882633	5mL	1	pH2	25	w				msd 232671002
6 Jul 2009	19:04	2T127.D	120182-----	BLANK	----	5ml	1		26	w				
6 Jul 2009	19:33	2T128.D	120182-----	GEL	----	5ml	1	-	27	w				ZHE water

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
07-JUL-09	Federal	SOP	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
VOA GC/MS	8260	Solid	LANL010
Batch ID:	**Sample Numbers:**		
882632	232582001, 232585002		

Potentially affected work order(s)(SDG): 232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

Failed Recovery for Surrogate or Tracer

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The recovery for the surrogate, bromofluorobenzene, was outside of acceptance limits in sample 232582001 and in the MS and MSD performed on this sample. 2. The recovery for the surrogate, bromofluorobenzene, was outside of acceptance limits in sample 232582002. The sample was re-analyzed with similar results for surrogate recovery.	1,2. Narrate and report data. It is believed that matrix interference was demonstrated.

Originator's Name:

Crystal Stacey 07-JUL-09

Data Validator/Group Leader:

Kelle Bellamy 08-JUL-09

GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2508

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	881964
Prep Batch Number:	881962

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201873125	Method Blank (MB)
1201873126	Laboratory Control Sample (LCS)
1201873127	232591001(CAMO-09-9946) Matrix Spike (MS)
1201873128	232591001(CAMO-09-9946) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
The non-SDG sample 232591001 (CAMO-09-9946) was selected for analysis as the matrix spike and matrix spike duplicate. Please see the associated raw data files located in the Miscellaneous Section of the data report.

Matrix Spike (MS) Recovery Statement
The MS recoveries were not within the acceptance limits. The failures confirmed in the MSD and were attributed to matrix interference.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were not within the acceptance limits. The failures confirmed in the MS and were attributed to matrix interference.

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent differences (RPD) were not within the acceptance limits. The failures were attributed to matrix interference.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for confirmations and/or dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
A non-conformance report was not required for the samples reported in this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration
The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD6.I	HP Mass Spectrometer	HP6890/HP5973	DB-5MS	25m x 0.20mm x 0.33 um (5% Phenylmethylpolysiloxane)

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: Dan Benkeny **Date:** 7-20-09

Roadmap for LANL 09-2508 SVOA

This roadmap was analyzed by jos00786 on 07-06-2009, 08:53.
This roadmap was reviewed by dan01134 on 07-07-2009, 09:39.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD6.i/s070209.b/s6g0211.d	232582001	02-JUL-2009	17:16	09-2508.sub	CAMO-09-10464	1	881964	USE
☐	N	/chem/MSD6.i/s070209.b/s6g0212.d	232582002	02-JUL-2009	17:38	09-2508.sub	CAMO-09-10465	1	881964	USE

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD6.i/s070209.b/s6g0209.d	1201873125	mb	02-JUL-2009	16:31	09-2508.sub	SBLK01	1	881964	USE
☐	N	/chem/MSD6.i/s070209.b/s6g0210.d	1201873126	lcs	02-JUL-2009	16:54	09-2508.sub	SBLK01LCS	1	881964	USE

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232582001	Date Received:	06/30/2009 09:15	%Moisture:	6.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10464	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 17:16	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.07 g	Final Volume:	1 mL
Data File:	s6g0211.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	356	ug/kg	71.3	356
108-95-2	Phenol	U	356	ug/kg	71.3	356
95-57-8	2-Chlorophenol	U	356	ug/kg	71.3	356
106-46-7	1,4-Dichlorobenzene	U	356	ug/kg	71.3	356
621-64-7	N-Nitrosodipropylamine	U	356	ug/kg	71.3	356
59-50-7	4-Chloro-3-methylphenol	U	356	ug/kg	71.3	356
83-32-9	Acenaphthene	U	35.6	ug/kg	11.8	35.6
121-14-2	2,4-Dinitrotoluene	U	356	ug/kg	35.6	356
100-02-7	4-Nitrophenol	U	356	ug/kg	118	356
87-86-5	Pentachlorophenol	U	356	ug/kg	89.1	356
129-00-0	Pyrene	U	35.6	ug/kg	10.7	35.6
110-86-1	Pyridine	U	356	ug/kg	71.3	356
62-53-3	Aniline	U	356	ug/kg	107	356
111-44-4	bis(2-Chloroethyl) ether	U	356	ug/kg	71.3	356
541-73-1	1,3-Dichlorobenzene	U	356	ug/kg	71.3	356
100-51-6	Benzyl alcohol	U	356	ug/kg	107	356
95-50-1	1,2-Dichlorobenzene	U	356	ug/kg	71.3	356
108-60-1	bis(2-Chloroisopropyl)ether	U	356	ug/kg	71.3	356
95-48-7	o-Cresol	U	356	ug/kg	71.3	356
65794-96-9	m,p-Cresols	U	356	ug/kg	107	356
67-72-1	Hexachloroethane	U	356	ug/kg	71.3	356
98-95-3	Nitrobenzene	U	356	ug/kg	71.3	356
78-59-1	Isophorone	U	356	ug/kg	71.3	356
88-75-5	2-Nitrophenol	U	356	ug/kg	71.3	356
105-67-9	2,4-Dimethylphenol	U	356	ug/kg	125	356
111-91-1	bis(2-Chloroethoxy)methane	U	356	ug/kg	71.3	356
120-83-2	2,4-Dichlorophenol	U	356	ug/kg	71.3	356
65-85-0	Benzoic acid	U	713	ug/kg	178	713
91-20-3	Naphthalene	U	35.6	ug/kg	10.7	35.6
106-47-8	4-Chloroaniline	U	356	ug/kg	71.3	356
87-68-3	Hexachlorobutadiene	U	356	ug/kg	71.3	356
91-57-6	2-Methylnaphthalene	U	35.6	ug/kg	7.13	35.6
77-47-4	Hexachlorocyclopentadiene	U	356	ug/kg	71.3	356
88-06-2	2,4,6-Trichlorophenol	U	356	ug/kg	71.3	356
95-95-4	2,4,5-Trichlorophenol	U	356	ug/kg	71.3	356
91-58-7	2-Chloronaphthalene	U	35.6	ug/kg	11.8	35.6
88-74-4	2-Nitroaniline	U	356	ug/kg	71.3	356
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	356	ug/kg	71.3	356

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10464	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 17:16	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.07 g	**Final Volume:**	1 mL
Data File:	s6g0211.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	356	ug/kg	71.3	356
606-20-2	2,6-Dinitrotoluene	U	356	ug/kg	35.6	356
208-96-8	Acenaphthylene	U	35.6	ug/kg	10.7	35.6
51-28-5	2,4-Dinitrophenol	U	713	ug/kg	135	713
132-64-9	Dibenzofuran	U	356	ug/kg	71.3	356
84-66-2	Diethylphthalate	U	356	ug/kg	71.3	356
86-73-7	Fluorene	U	35.6	ug/kg	10.7	35.6
7005-72-3	4-Chlorophenylphenylether	U	356	ug/kg	71.3	356
534-52-1	2-Methyl-4,6-dinitrophenol	U	356	ug/kg	71.3	356
100-01-6	4-Nitroaniline	U	356	ug/kg	107	356
	p-Nitroaniline					
122-39-4	Diphenylamine	U	356	ug/kg	71.3	356
122-66-7	Azobenzene	U	356	ug/kg	71.3	356
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	356	ug/kg	71.3	356
118-74-1	Hexachlorobenzene	U	356	ug/kg	71.3	356
85-01-8	Phenanthrene	U	35.6	ug/kg	10.7	35.6
120-12-7	Anthracene	U	35.6	ug/kg	7.13	35.6
84-74-2	Di-n-butylphthalate	U	356	ug/kg	71.3	356
206-44-0	Fluoranthene	U	35.6	ug/kg	10.7	35.6
85-68-7	Butylbenzylphthalate	U	356	ug/kg	71.3	356
56-55-3	Benzo(a)anthracene	U	35.6	ug/kg	10.7	35.6
91-94-1	3,3'-Dichlorobenzidine	U	356	ug/kg	107	356
218-01-9	Chrysene	U	35.6	ug/kg	10.7	35.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	356	ug/kg	71.3	356
117-84-0	Di-n-octylphthalate	U	356	ug/kg	71.3	356
205-99-2	Benzo(b)fluoranthene	U	35.6	ug/kg	10.7	35.6
207-08-9	Benzo(k)fluoranthene	U	35.6	ug/kg	10.7	35.6
50-32-8	Benzo(a)pyrene	U	35.6	ug/kg	10.7	35.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.6	ug/kg	10.7	35.6
53-70-3	Dibenzo(a,h)anthracene	U	35.6	ug/kg	10.7	35.6
191-24-2	Benzo(ghi)perylene	U	35.6	ug/kg	10.7	35.6
120-82-1	1,2,4-Trichlorobenzene	U	356	ug/kg	71.3	356

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	416	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 17:38	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.2 g	**Final Volume:**	1 mL
Data File:	s6g0212.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	348	ug/kg	69.6	348
108-95-2	Phenol	U	348	ug/kg	69.6	348
95-57-8	2-Chlorophenol	U	348	ug/kg	69.6	348
106-46-7	1,4-Dichlorobenzene	U	348	ug/kg	69.6	348
621-64-7	N-Nitrosodipropylamine	U	348	ug/kg	69.6	348
59-50-7	4-Chloro-3-methylphenol	U	348	ug/kg	69.6	348
83-32-9	Acenaphthene	U	34.8	ug/kg	11.5	34.8
121-14-2	2,4-Dinitrotoluene	U	348	ug/kg	34.8	348
100-02-7	4-Nitrophenol	U	348	ug/kg	115	348
87-86-5	Pentachlorophenol	U	348	ug/kg	87.0	348
129-00-0	Pyrene	U	34.8	ug/kg	10.4	34.8
110-86-1	Pyridine	U	348	ug/kg	69.6	348
62-53-3	Aniline	U	348	ug/kg	104	348
111-44-4	bis(2-Chloroethyl) ether	U	348	ug/kg	69.6	348
541-73-1	1,3-Dichlorobenzene	U	348	ug/kg	69.6	348
100-51-6	Benzyl alcohol	U	348	ug/kg	104	348
95-50-1	1,2-Dichlorobenzene	U	348	ug/kg	69.6	348
108-60-1	bis(2-Chloroisopropyl)ether	U	348	ug/kg	69.6	348
95-48-7	o-Cresol	U	348	ug/kg	69.6	348
65794-96-9	m,p-Cresols	U	348	ug/kg	104	348
67-72-1	Hexachloroethane	U	348	ug/kg	69.6	348
98-95-3	Nitrobenzene	U	348	ug/kg	69.6	348
78-59-1	Isophorone	U	348	ug/kg	69.6	348
88-75-5	2-Nitrophenol	U	348	ug/kg	69.6	348
105-67-9	2,4-Dimethylphenol	U	348	ug/kg	122	348
111-91-1	bis(2-Chloroethoxy)methane	U	348	ug/kg	69.6	348
120-83-2	2,4-Dichlorophenol	U	348	ug/kg	69.6	348
65-85-0	Benzoic acid	U	696	ug/kg	174	696
91-20-3	Naphthalene	U	34.8	ug/kg	10.4	34.8
106-47-8	4-Chloroaniline	U	348	ug/kg	69.6	348
87-68-3	Hexachlorobutadiene	U	348	ug/kg	69.6	348
91-57-6	2-Methylnaphthalene	U	34.8	ug/kg	6.96	34.8
77-47-4	Hexachlorocyclopentadiene	U	348	ug/kg	69.6	348
88-06-2	2,4,6-Trichlorophenol	U	348	ug/kg	69.6	348
95-95-4	2,4,5-Trichlorophenol	U	348	ug/kg	69.6	348
91-58-7	2-Chloronaphthalene	U	34.8	ug/kg	11.5	34.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	348	ug/kg	69.6	348
99-09-2	3-Nitroaniline	U	348	ug/kg	69.6	348

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 17:38	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.2 g	**Final Volume:**	1 mL
Data File:	s6g0212.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	348	ug/kg	69.6	348
606-20-2	2,6-Dinitrotoluene	U	348	ug/kg	34.8	348
208-96-8	Acenaphthylene	U	34.8	ug/kg	10.4	34.8
51-28-5	2,4-Dinitrophenol	U	696	ug/kg	132	696
132-64-9	Dibenzofuran	U	348	ug/kg	69.6	348
84-66-2	Diethylphthalate	U	348	ug/kg	69.6	348
86-73-7	Fluorene	U	34.8	ug/kg	10.4	34.8
7005-72-3	4-Chlorophenylphenylether	U	348	ug/kg	69.6	348
534-52-1	2-Methyl-4,6-dinitrophenol	U	348	ug/kg	69.6	348
100-01-6	4-Nitroaniline	U	348	ug/kg	104	348
	p-Nitroaniline					
122-39-4	Diphenylamine	U	348	ug/kg	69.6	348
122-66-7	Azobenzene	U	348	ug/kg	69.6	348
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	348	ug/kg	69.6	348
118-74-1	Hexachlorobenzene	U	348	ug/kg	69.6	348
85-01-8	Phenanthrene	U	34.8	ug/kg	10.4	34.8
120-12-7	Anthracene	U	34.8	ug/kg	6.96	34.8
84-74-2	Di-n-butylphthalate	U	348	ug/kg	69.6	348
206-44-0	Fluoranthene	U	34.8	ug/kg	10.4	34.8
85-68-7	Butylbenzylphthalate	U	348	ug/kg	69.6	348
56-55-3	Benzo(a)anthracene	U	34.8	ug/kg	10.4	34.8
91-94-1	3,3'-Dichlorobenzidine	U	348	ug/kg	104	348
218-01-9	Chrysene	U	34.8	ug/kg	10.4	34.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	348	ug/kg	69.6	348
117-84-0	Di-n-octylphthalate	U	348	ug/kg	69.6	348
205-99-2	Benzo(b)fluoranthene	U	34.8	ug/kg	10.4	34.8
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.4	34.8
50-32-8	Benzo(a)pyrene	U	34.8	ug/kg	10.4	34.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.4	34.8
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.4	34.8
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.4	34.8
120-82-1	1,2,4-Trichlorobenzene	U	348	ug/kg	69.6	348

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	332	ug/kg		JA

QC Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 09-2508

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201873125	MB for batch 881962	65	70	65	68	57	90
1201873126	LCS for batch 881962	66	65	70	70	61	81
232582001	CAMO-09-10464	61	66	61	61	58	77
232582002	CAMO-09-10465	50	54	51	50	48	73

Surrogate			Acceptance Limits
2FP	=	2-Fluorophenol	(35%-96%)
PHL	=	Phenol-d5	(36%-96%)
NBZ	=	Nitrobenzene-d5	(34%-104%)
FBP	=	2-Fluorobiphenyl	(36%-100%)
TBP	=	2,4,6-Tribromophenol	(37%-106%)
TPH	=	p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: LCS for batch 881962
Lab Sample ID: 1201873126
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 16:54
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1130	68	31-95
108-95-2	LCS	Phenol	1670	0.0	1090	65	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1160	69	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	1090	65	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1140	68	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1160	70	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1100	66	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1170	70	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1070	64	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	966	58	38-116
129-00-0	LCS	Pyrene	1670	0.0	1220	73	43-108
110-86-1	LCS	Pyridine	1670	0.0	1100	66	13-129
62-53-3	LCS	Aniline	1670	0.0	1300	78	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1130	68	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	1100	66	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	727	44	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	1160	70	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1290	77	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1150	69	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1300	78	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	1080	65	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1210	73	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 881962
Matrix: SOIL
Lab Sample ID: 1201873126
Instrument: MSD6.I
Analysis Date: 07/02/2009 16:54
Dilution: 1
Analyst: JMB3
Prep Batch ID: 881962
Inj. Vol: .5 uL
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1190	72	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1200	72	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1180	71	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1200	72	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1160	70	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	1060	64	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1030	62	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1210	72	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1130	68	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1260	76	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1060	64	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1040	62	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1180	71	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1160	69	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1230	74	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1310	79	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1170	70	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1180	71	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1180	71	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	818	49	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1190	71	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1200	72	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: LCS for batch 881962
Lab Sample ID: 1201873126
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 16:54
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1040	62	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1150	69	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	993	60	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	1390	84	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1200	72	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1280	77	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1130	68	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1150	69	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1120	67	45-107
120-12-7	LCS	Anthracene	1670	0.0	1170	70	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1250	75	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1180	71	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1310	79	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1170	70	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1200	72	45-98
218-01-9	LCS	Chrysene	1670	0.0	1240	74	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1360	81	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1340	81	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1210	73	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1280	77	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1250	75	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1200	72	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 881962
Matrix: SOIL
Lab Sample ID: 1201873126
Instrument: MSD6.I
Analysis Date: 07/02/2009 16:54
Dilution: 1
Analyst: JMB3
Prep Batch ID: 881962
Inj. Vol: .5 uL
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1190	71	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1170	70	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1170	70	36-109

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2508

Client ID: CAMO-09-9946MS

Lab Sample ID: 1201873127

Instrument: MSD6.I

Analyst: JMB3

Inj. Vol: .5 uL

Sample Type: Matrix Spike

Matrix: R

%Moisture: 18.7

Analysis Date: 07/02/2009 19:30

Dilution: 1

Prep Batch ID: 881962

Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	2040	0.00	U	888	44	32-90
108-95-2	MS	Phenol	2040	0.00	U	911	45	32-105
95-57-8	MS	2-Chlorophenol	2040	0.00	U	915	45	33-106
106-46-7	MS	1,4-Dichlorobenzene	2040	0.00	U	457	22 *	33-95
621-64-7	MS	N-Nitrosodipropylamine	2040	0.00	U	881	43	31-109
59-50-7	MS	4-Chloro-3-methylphenol	2040	0.00	U	1120	55	38-119
83-32-9	MS	Acenaphthene	2040	0.00	U	929	46	39-100
121-14-2	MS	2,4-Dinitrotoluene	2040	0.00	U	1130	56	42-107
100-02-7	MS	4-Nitrophenol	2040	0.00	U	1330	65	24-120
87-86-5	MS	Pentachlorophenol	2040	0.00	U	1040	51	26-121
129-00-0	MS	Pyrene	2040	0.00	U	1130	55	34-120
110-86-1	MS	Pyridine	2040	0.00	U	845	41	30-95
62-53-3	MS	Aniline	2040	0.00	U	752	37	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	2040	0.00	U	824	40	34-101
541-73-1	MS	1,3-Dichlorobenzene	2040	0.00	U	427	21 *	31-97
100-51-6	MS	Benzyl alcohol	2040	0.00	U	1900	93	17-120
95-50-1	MS	1,2-Dichlorobenzene	2040	0.00	U	555	27 *	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	2040	0.00	U	882	43	32-113
95-48-7	MS	o-Cresol	2040	0.00	U	1380	68	31-119
65794-96-9	MS	m,p-Cresols	2040	0.00	U	1130	55	35-125
67-72-1	MS	Hexachloroethane	2040	0.00	U	354	17 *	30-100
98-95-3	MS	Nitrobenzene	2040	0.00	U	940	46	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-9946MS
Lab Sample ID: 1201873127
Instrument: MSD6.1
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:30
Prep Batch ID: 881962
Batch ID: 881964
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	2040	0.00	U	1000	49	34-110
88-75-5	MS	2-Nitrophenol	2040	0.00	U	941	46	32-108
105-67-9	MS	2,4-Dimethylphenol	2040	0.00	U	903	44	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	2040	0.00	U	966	47	35-108
120-83-2	MS	2,4-Dichlorophenol	2040	0.00	U	1010	50	38-110
65-85-0	MS	Benzoic acid	2040	0.00	U	913	45	18-134
91-20-3	MS	Naphthalene	2040	0.00	U	729	36	31-105
106-47-8	MS	4-Chloroaniline	2040	0.00	U	975	48	29-123
87-68-3	MS	Hexachlorobutadiene	2040	0.00	U	516	25 *	31-109
91-57-6	MS	2-Methylnaphthalene	2040	0.00	U	935	46	32-110
77-47-4	MS	Hexachlorocyclopentadiene	2040	0.00	U	461	23	21-122
88-06-2	MS	2,4,6-Trichlorophenol	2040	0.00	U	981	48	37-108
95-95-4	MS	2,4,5-Trichlorophenol	2040	0.00	U	1070	52	37-116
91-58-7	MS	2-Chloronaphthalene	2040	0.00	U	922	45	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	2040	0.00	U	1160	57	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	2040	0.00	U	1260	62	39-117
131-11-3	MS	Dimethylphthalate	2040	0.00	U	1080	53	41-105
606-20-2	MS	2,6-Dinitrotoluene	2040	0.00	U	1090	54	41-103
208-96-8	MS	Acenaphthylene	2040	0.00	U	1000	49	41-103
51-28-5	MS	2,4-Dinitrophenol	2040	0.00	U	600	29	25-104
132-64-9	MS	Dibenzofuran	2040	0.00	U	1040	51	40-114
84-66-2	MS	Diethylphthalate	2040	0.00	U	1120	55	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-9946MS
Lab Sample ID: 1201873127
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:30
Prep Batch ID: 881962
Batch ID: 881964
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	2040	0.00	U	946	46 *	48-99
7005-72-3	MS	4-Chlorophenylphenylether	2040	0.00	U	1010	50	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	2040	0.00	U	847	42	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	2040	0.00	U	1390	68	35-139
122-39-4	MS	Diphenylamine	2040	0.00	U	965	47	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	2040	0.00	U	1140	56	37-118
101-55-3	MS	4-Bromophenylphenylether	2040	0.00	U	1020	50	39-112
118-74-1	MS	Hexachlorobenzene	2040	0.00	U	1050	51	38-113
85-01-8	MS	Phenanthrene	2040	0.00	U	1060	52	38-110
120-12-7	MS	Anthracene	2040	0.00	U	1100	54	38-112
84-74-2	MS	Di-n-butylphthalate	2040	0.00	U	1170	58	42-119
206-44-0	MS	Fluoranthene	2040	0.00	U	1130	55	38-119
85-68-7	MS	Butylbenzylphthalate	2040	0.00	U	1200	59	39-126
56-55-3	MS	Benzo(a)anthracene	2040	0.00	U	1100	54	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	2040	0.00	U	533	26 *	35-106
218-01-9	MS	Chrysene	2040	0.00	U	1120	55	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	2040	0.00	U	1230	61	40-125
117-84-0	MS	Di-n-octylphthalate	2040	0.00	U	1210	59	30-147
205-99-2	MS	Benzo(b)fluoranthene	2040	0.00	U	1070	53	38-117
207-08-9	MS	Benzo(k)fluoranthene	2040	0.00	U	1200	59	39-120
50-32-8	MS	Benzo(a)pyrene	2040	0.00	U	1140	56	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	2040	0.00	U	1070	53	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-9946MS
Lab Sample ID: 1201873127
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:30
Prep Batch ID: 881962
Batch ID: 881964

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	2040	0.00	U	1070	52	32-124
191-24-2	MS	Benzo(ghi)perylene	2040	0.00	U	993	49	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	2040	0.00	U	696	34	31-105

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Prep Batch ID: 881962
Batch ID: 881964
Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD N-Methyl-N-nitrosomethylam	2040	0.00	U	1130	55	32-90	24	0-30
108-95-2	MSD Phenol	2040	0.00	U	1190	58	32-105	27	0-30
95-57-8	MSD 2-Chlorophenol	2040	0.00	U	1190	58	33-106	26	0-30
106-46-7	MSD 1,4-Dichlorobenzene	2040	0.00	U	513	25 *	33-95	12	0-30
621-64-7	MSD N-Nitrosodipropylamine	2040	0.00	U	1140	56	31-109	25	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	2040	0.00	U	1360	67	38-119	19	0-30
83-32-9	MSD Acenaphthene	2040	0.00	U	1120	55	39-100	19	0-30
121-14-2	MSD 2,4-Dinitrotoluene	2040	0.00	U	1300	64	42-107	14	0-30
100-02-7	MSD 4-Nitrophenol	2040	0.00	U	1520	75	24-120	14	0-30
87-86-5	MSD Pentachlorophenol	2040	0.00	U	1260	62	26-121	19	0-30
129-00-0	MSD Pyrene	2040	0.00	U	1300	64	34-120	14	0-30
110-86-1	MSD Pyridine	2040	0.00	U	982	48	30-95	15	0-30
62-53-3	MSD Aniline	2040	0.00	U	918	45	34-111	20	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	2040	0.00	U	1030	50	34-101	22	0-30
541-73-1	MSD 1,3-Dichlorobenzene	2040	0.00	U	475	23 *	31-97	11	0-30
100-51-6	MSD Benzyl alcohol	2040	0.00	U	315	15 *	17-120	143 *	0-30
95-50-1	MSD 1,2-Dichlorobenzene	2040	0.00	U	627	31 *	32-102	12	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	2040	0.00	U	1070	53	32-113	19	0-30
95-48-7	MSD o-Cresol	2040	0.00	U	1270	62	31-119	8	0-30
65794-96-9	MSD m,p-Cresols	2040	0.00	U	1390	68	35-125	21	0-30
67-72-1	MSD Hexachloroethane	2040	0.00	U	375	18 *	30-100	6	0-30
98-95-3	MSD Nitrobenzene	2040	0.00	U	1170	57	33-108	22	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD	Isophorone	2040	0.00	U	1230	60	34-110	21	0-30
88-75-5	MSD	2-Nitrophenol	2040	0.00	U	1150	57	32-108	20	0-30
105-67-9	MSD	2,4-Dimethylphenol	2040	0.00	U	1100	54	32-115	20	0-30
111-91-1	MSD	bis(2-Chloroethoxy)methane	2040	0.00	U	1190	59	35-108	21	0-30
120-83-2	MSD	2,4-Dichlorophenol	2040	0.00	U	1270	62	38-110	22	0-30
65-85-0	MSD	Benzoic acid	2040	0.00	U	1120	55	18-134	20	0-30
91-20-3	MSD	Naphthalene	2040	0.00	U	868	43	31-105	17	0-30
106-47-8	MSD	4-Chloroaniline	2040	0.00	U	1200	59	29-123	21	0-30
87-68-3	MSD	Hexachlorobutadiene	2040	0.00	U	576	28 *	31-109	11	0-30
91-57-6	MSD	2-Methylnaphthalene	2040	0.00	U	1120	55	32-110	18	0-30
77-47-4	MSD	Hexachlorocyclopentadiene	2040	0.00	U	602	30	21-122	27	0-30
88-06-2	MSD	2,4,6-Trichlorophenol	2040	0.00	U	1210	59	37-108	21	0-30
95-95-4	MSD	2,4,5-Trichlorophenol	2040	0.00	U	1270	62	37-116	17	0-30
91-58-7	MSD	2-Chloronaphthalene	2040	0.00	U	1120	55	37-103	19	0-30
88-74-4	MSD	2-Nitroaniline *o-Nitroaniline*	2040	0.00	U	1400	69	36-115	19	0-30
99-09-2	MSD	3-Nitroaniline *m-Nitroaniline*	2040	0.00	U	1520	74	39-117	19	0-30
131-11-3	MSD	Dimethylphthalate	2040	0.00	U	1290	63	41-105	17	0-30
606-20-2	MSD	2,6-Dinitrotoluene	2040	0.00	U	1300	64	41-103	17	0-30
208-96-8	MSD	Acenaphthylene	2040	0.00	U	1210	59	41-103	19	0-30
51-28-5	MSD	2,4-Dinitrophenol	2040	0.00	U	869	43	25-104	37 *	0-30
132-64-9	MSD	Dibenzofuran	2040	0.00	U	1240	61	40-114	18	0-30
84-66-2	MSD	Diethylphthalate	2040	0.00	U	1310	64	43-110	15	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	2040	0.00	U	1110	55	48-99	16	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	2040	0.00	U	1210	59	42-111	18	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	2040	0.00	U	1080	53	19-118	25	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	2040	0.00	U	1620	80	35-139	15	0-30
122-39-4	MSD	Diphenylamine	2040	0.00	U	1130	56	41-112	16	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	2040	0.00	U	1330	65	37-118	16	0-30
101-55-3	MSD	4-Bromophenylphenylether	2040	0.00	U	1220	60	39-112	17	0-30
118-74-1	MSD	Hexachlorobenzene	2040	0.00	U	1240	61	38-113	17	0-30
85-01-8	MSD	Phenanthrene	2040	0.00	U	1260	62	38-110	17	0-30
120-12-7	MSD	Anthracene	2040	0.00	U	1250	61	38-112	13	0-30
84-74-2	MSD	Di-n-butylphthalate	2040	0.00	U	1340	66	42-119	13	0-30
206-44-0	MSD	Fluoranthene	2040	0.00	U	1290	63	38-119	13	0-30
85-68-7	MSD	Butylbenzylphthalate	2040	0.00	U	1380	68	39-126	14	0-30
56-55-3	MSD	Benzo(a)anthracene	2040	0.00	U	1280	63	39-110	15	0-30
91-94-1	MSD	3,3'-Dichlorobenzidine	2040	0.00	U	643	32 *	35-106	19	0-30
218-01-9	MSD	Chrysene	2040	0.00	U	1310	64	39-109	16	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	2040	0.00	U	1430	70	40-125	15	0-30
117-84-0	MSD	Di-n-octylphthalate	2040	0.00	U	1400	69	30-147	15	0-30
205-99-2	MSD	Benzo(b)fluoranthene	2040	0.00	U	1350	66	38-117	23	0-30
207-08-9	MSD	Benzo(k)fluoranthene	2040	0.00	U	1280	63	39-120	7	0-30
50-32-8	MSD	Benzo(a)pyrene	2040	0.00	U	1330	65	40-115	15	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	2040	0.00	U	1330	65	32-120	21	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD Dibenzo(a,h)anthracene	2040	0.00	U	1360	67	32-124	25	0-30
191-24-2	MSD Benzo(ghi)perylene	2040	0.00	U	1260	62	28-119	24	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	2040	0.00	U	809	40	31-105	15	0-30

Method Blank Summary

SDG Number:	09-2508	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881962	Instrument ID:	MSD6.I	Data File:	s6g0209-1.d
Lab Sample ID:	1201873125	Prep Date:	07/02/2009 13:47	Analyzed:	07/02/09 16:31
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 881962	1201873126	s6g0210-1.d	07/02/09	1654
02 CAMO-09-10464	232582001	s6g0211.d	07/02/09	1716
03 CAMO-09-10465	232582002	s6g0212.d	07/02/09	1738

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2508

Instrument ID: MSD6.I **Injection Date/Time:** 02-JUL-09 15:10

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD6.i/s070209.b/s6g0205.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	57
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	47.2
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	50.9
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	7
275	10 - 30% of mass 198	24.1
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	74.7
442	Greater than 40% of mass 198	82.6
443	17 - 23% of mass 442	19.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090626-05.3	/chem/MSD6.i/s070209.b/s6g020	02-JUL-09 15:23
APCVS	WBN090619-01.2	/chem/MSD6.i/s070209.b/s6g020	02-JUL-09 15:46
SBLK01	1201873125	/chem/MSD6.i/s070209.b/s6g020	02-JUL-09 16:31
SBLK01LCS	1201873126	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 16:54
CAMO-09-10464	232582001	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 17:16
CAMO-09-10465	232582002	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 17:38

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2508

Instrument ID: MSD6.I **Injection Date/Time:** 25-JUN-09 17:33

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD6.i/s062509.b/s6f2501.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	50.8
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	43.7
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	49.2
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	24.6
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	75.6
442	Greater than 40% of mass 198	95
443	17 - 23% of mass 442	19.1

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICAL	WBN090602-08	/chem/MSD6.i/s062509.b/s6f2503	25-JUN-09 18:09
MEGAICAL	WBN090602-07	/chem/MSD6.i/s062509.b/s6f2504	25-JUN-09 18:37
MEGAICAL	WBN090602-06	/chem/MSD6.i/s062509.b/s6f2505	25-JUN-09 19:04
MEGAICAL	WBN090602-05.1	/chem/MSD6.i/s062509.b/s6f2506	25-JUN-09 19:33
MEGAICAL	WBN090602-04	/chem/MSD6.i/s062509.b/s6f2507	25-JUN-09 20:01
MEGAICAL	WBN090602-03	/chem/MSD6.i/s062509.b/s6f2508	25-JUN-09 20:29
MEGAICAL	WBN090602-02	/chem/MSD6.i/s062509.b/s6f2509	25-JUN-09 20:56
MEGAICAL	WBN090602-01	/chem/MSD6.i/s062509.b/s6f2510	25-JUN-09 21:25
APICAL	WBN090528-07	/chem/MSD6.i/s062509.b/s6f2511	25-JUN-09 21:54
APICAL	WBN090528-06	/chem/MSD6.i/s062509.b/s6f2512	25-JUN-09 22:17
APICAL	WBN090528-05.1	/chem/MSD6.i/s062509.b/s6f2513	25-JUN-09 22:39
APICAL	WBN090528-04	/chem/MSD6.i/s062509.b/s6f2514	25-JUN-09 23:02
APICAL	WBN090528-03	/chem/MSD6.i/s062509.b/s6f2515	25-JUN-09 23:24
APICAL	WBN090528-02	/chem/MSD6.i/s062509.b/s6f2516	25-JUN-09 23:47
APICAL	WBN090528-01	/chem/MSD6.i/s062509.b/s6f2517	26-JUN-09 00:08
MEGAICV	WBN090602-09.1	/chem/MSD6.i/s062509.b/s6f2525	26-JUN-09 03:11

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2508

Instrument ID: MSD6.I **Injection Date/Time:** 25-JUN-09 17:33

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD6.i/s062509.b/s6f2501.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	50.8
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	43.7
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	49.2
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	24.6
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	75.6
442	Greater than 40% of mass 198	95
443	17 - 23% of mass 442	19.1

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
APICV	WBN090528-08.1	/chem/MSD6.i/s062509.b/s6f2526	26-JUN-09 03:39

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 09-2508

Instrument: MSD6.I

STD Analysis Time: 02-JUL-09 15:23

GC Column: J&W DB-5MS

Data File: s6g0206.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	532813		4	1990426		4.88	1102206		6.13	1854401		7.32	1763017		9.75	1624774		11.5
Upper Limit	1065626		4.5	3980852		5.38	2204412		6.63	3708802		7.82	3526034		10.3	3249548		12.0
Lower Limit	266407		3.5	995213		4.38	551103		5.63	927201		6.82	881509		9.25	812387		11.0
Sample ID																		
BLK01	385534		4	1450103		4.87	843657		6.13	1460742		7.31	1292833		9.74	1018273		11.5
BLK01LCS	373584		4	1481824		4.87	843469		6.13	1482578		7.31	1335253		9.74	1213021		11.5
CAMO-09-10464	421886		3.99	1562802		4.86	897476		6.13	1546656		7.31	1425966		9.74	1219754		11.5
CAMO-09-10465	464233		4	1728927		4.87	1011890		6.13	1744853		7.31	1585656		9.74	1317892		11.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10464	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 17:16	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.07 g	**Final Volume:**	1 mL
Data File:	s6g0211.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	356	ug/kg	71.3	356
108-95-2	Phenol	U	356	ug/kg	71.3	356
95-57-8	2-Chlorophenol	U	356	ug/kg	71.3	356
106-46-7	1,4-Dichlorobenzene	U	356	ug/kg	71.3	356
621-64-7	N-Nitrosodipropylamine	U	356	ug/kg	71.3	356
59-50-7	4-Chloro-3-methylphenol	U	356	ug/kg	71.3	356
83-32-9	Acenaphthene	U	35.6	ug/kg	11.8	35.6
121-14-2	2,4-Dinitrotoluene	U	356	ug/kg	35.6	356
100-02-7	4-Nitrophenol	U	356	ug/kg	118	356
87-86-5	Pentachlorophenol	U	356	ug/kg	89.1	356
129-00-0	Pyrene	U	35.6	ug/kg	10.7	35.6
110-86-1	Pyridine	U	356	ug/kg	71.3	356
62-53-3	Aniline	U	356	ug/kg	107	356
111-44-4	bis(2-Chloroethyl) ether	U	356	ug/kg	71.3	356
541-73-1	1,3-Dichlorobenzene	U	356	ug/kg	71.3	356
100-51-6	Benzyl alcohol	U	356	ug/kg	107	356
95-50-1	1,2-Dichlorobenzene	U	356	ug/kg	71.3	356
108-60-1	bis(2-Chloroisopropyl)ether	U	356	ug/kg	71.3	356
95-48-7	o-Cresol	U	356	ug/kg	71.3	356
65794-96-9	m,p-Cresols	U	356	ug/kg	107	356
67-72-1	Hexachloroethane	U	356	ug/kg	71.3	356
98-95-3	Nitrobenzene	U	356	ug/kg	71.3	356
78-59-1	Isophorone	U	356	ug/kg	71.3	356
88-75-5	2-Nitrophenol	U	356	ug/kg	71.3	356
105-67-9	2,4-Dimethylphenol	U	356	ug/kg	125	356
111-91-1	bis(2-Chloroethoxy)methane	U	356	ug/kg	71.3	356
120-83-2	2,4-Dichlorophenol	U	356	ug/kg	71.3	356
65-85-0	Benzoic acid	U	713	ug/kg	178	713
91-20-3	Naphthalene	U	35.6	ug/kg	10.7	35.6
106-47-8	4-Chloroaniline	U	356	ug/kg	71.3	356
87-68-3	Hexachlorobutadiene	U	356	ug/kg	71.3	356
91-57-6	2-Methylnaphthalene	U	35.6	ug/kg	7.13	35.6
77-47-4	Hexachlorocyclopentadiene	U	356	ug/kg	71.3	356
88-06-2	2,4,6-Trichlorophenol	U	356	ug/kg	71.3	356
95-95-4	2,4,5-Trichlorophenol	U	356	ug/kg	71.3	356
91-58-7	2-Chloronaphthalene	U	35.6	ug/kg	11.8	35.6
88-74-4	2-Nitroaniline	U	356	ug/kg	71.3	356
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	356	ug/kg	71.3	356

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10464	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 17:16	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.07 g	**Final Volume:**	1 mL
Data File:	s6g0211.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	356	ug/kg	71.3	356
606-20-2	2,6-Dinitrotoluene	U	356	ug/kg	35.6	356
208-96-8	Acenaphthylene	U	35.6	ug/kg	10.7	35.6
51-28-5	2,4-Dinitrophenol	U	713	ug/kg	135	713
132-64-9	Dibenzofuran	U	356	ug/kg	71.3	356
84-66-2	Diethylphthalate	U	356	ug/kg	71.3	356
86-73-7	Fluorene	U	35.6	ug/kg	10.7	35.6
7005-72-3	4-Chlorophenylphenylether	U	356	ug/kg	71.3	356
534-52-1	2-Methyl-4,6-dinitrophenol	U	356	ug/kg	71.3	356
100-01-6	4-Nitroaniline	U	356	ug/kg	107	356
	p-Nitroaniline					
122-39-4	Diphenylamine	U	356	ug/kg	71.3	356
122-66-7	Azobenzene	U	356	ug/kg	71.3	356
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	356	ug/kg	71.3	356
118-74-1	Hexachlorobenzene	U	356	ug/kg	71.3	356
85-01-8	Phenanthrene	U	35.6	ug/kg	10.7	35.6
120-12-7	Anthracene	U	35.6	ug/kg	7.13	35.6
84-74-2	Di-n-butylphthalate	U	356	ug/kg	71.3	356
206-44-0	Fluoranthene	U	35.6	ug/kg	10.7	35.6
85-68-7	Butylbenzylphthalate	U	356	ug/kg	71.3	356
56-55-3	Benzo(a)anthracene	U	35.6	ug/kg	10.7	35.6
91-94-1	3,3'-Dichlorobenzidine	U	356	ug/kg	107	356
218-01-9	Chrysene	U	35.6	ug/kg	10.7	35.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	356	ug/kg	71.3	356
117-84-0	Di-n-octylphthalate	U	356	ug/kg	71.3	356
205-99-2	Benzo(b)fluoranthene	U	35.6	ug/kg	10.7	35.6
207-08-9	Benzo(k)fluoranthene	U	35.6	ug/kg	10.7	35.6
50-32-8	Benzo(a)pyrene	U	35.6	ug/kg	10.7	35.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.6	ug/kg	10.7	35.6
53-70-3	Dibenzo(a,h)anthracene	U	35.6	ug/kg	10.7	35.6
191-24-2	Benzo(ghi)perylene	U	35.6	ug/kg	10.7	35.6
120-82-1	1,2,4-Trichlorobenzene	U	356	ug/kg	71.3	356

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	416	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0211.d
Lab Smp Id: 232582001 Client Smp ID: CAMO-09-10464
Inj Date : 02-JUL-2009 17:16
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232582001|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2508.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.07000	weight of sample
M	6.71470	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.993	3.999	(1.000)	421886	40.0000	
* 29 Naphthalene-d8	136	4.863	4.875	(1.000)	1562802	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	897476	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1546656	40.0000	
* 91 Chrysene-d12	240	9.739	9.745	(1.000)	1425966	40.0000	
* 98 Perylene-d12	264	11.480	11.492	(1.000)	1219754	40.0000	
$ 3 2-Fluorophenol	112	3.175	3.175	(0.795)	697209	60.8267	2170
$ 5 Phenol-d5	99	3.704	3.710	(0.928)	1006523	65.5514	2340
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.896)	424608	30.6693	1090
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	692582	30.3842	1080
$ 60 2,4,6-Tribromophenol	329	6.728	6.734	(1.098)	191117	57.6025	2050
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	872329	38.3058	1360

ION RATIO REPORT

SV REPORT

Data file: s6g0211.d
Report Date: 07/02/2009 18:17
Lab. ID: 232582001 SampleType: SAMPLE
Injection Date: 02-JUL-2009 17:16
Operator: JMB3 Instrument: MSD6.i
Sample Info: |232582001|881964|1|SVM|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2508
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
1 N-Methyl-N-nitrosomethylamine				CAS#: 62-75-9		
74	14939	2.18	2.47	80-120	100	(T)
42	2080	2.18	2.47	87-147	14	(QT)
43	32892	2.14	2.47	22- 82	220	(QT)
4 Aniline				CAS#: 62-53-3		
66	54547	3.70	3.78	80-120	100	(T)
93	1655	3.76	3.79	361-421	3	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	60461	4.36	4.24	80-120	100	(T)
42	41965	4.36	4.24	57-117	69	(T)
22 Isophorone				CAS#: 78-59-1		
82	424608	4.36	4.53	80-120	100	(T)
138	8752	4.86	4.53	0- 47	2	(T)
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	836332	6.13	5.72	80-120	100	(T)
164	897476	6.13	5.72	4- 64	107	(QT)
127	233	5.72	5.72	9- 69	0	(Q)
43 Dimethylphthalate				CAS#: 131-11-3		
163	196040	6.13	5.89	80-120	100	(T)
164	897476	6.13	5.89	0- 41	458	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
45 Acenaphthylene			CAS#: 208-96-8			
152	39157	5.61	6.03	80-120	100	(T)
151	36807	5.61	6.03	0- 50	94	(QT)
153	11946	5.61	6.03	0- 44	31	(T)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	117048	6.13	6.25	80-120	100	(T)
89	2432	6.13	6.25	50-110	2	(QT)
63	2082	6.13	6.25	31- 91	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	11582	6.73	6.55	80-120	100	(T)
165	12013	6.73	6.55	60-120	104	(T)
167	3971	6.73	6.55	0- 44	34	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	542	6.73	6.56	80-120	100	(T)
105	1441	6.73	6.56	15- 75	266	(QT)
51	2248	6.73	6.56	63-123	414	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0211.d
Lab Smp Id: 232582001 Client Smp ID: CAMO-09-10464
Inj Date : 02-JUL-2009 17:16
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232582001|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2508.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.07000	weight of sample
M	6.71470	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.993	2842491	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.010	829038	11.6663598	416	0		0	10

Data File: /chem/MSD6.i/s070209.b/s6g0211.d

Page 1

Date : 02-JUL-2009 17:16

Client ID: CAMD-09-10464

Instrument: MSD6.i

Sample Info: 1232582001|881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

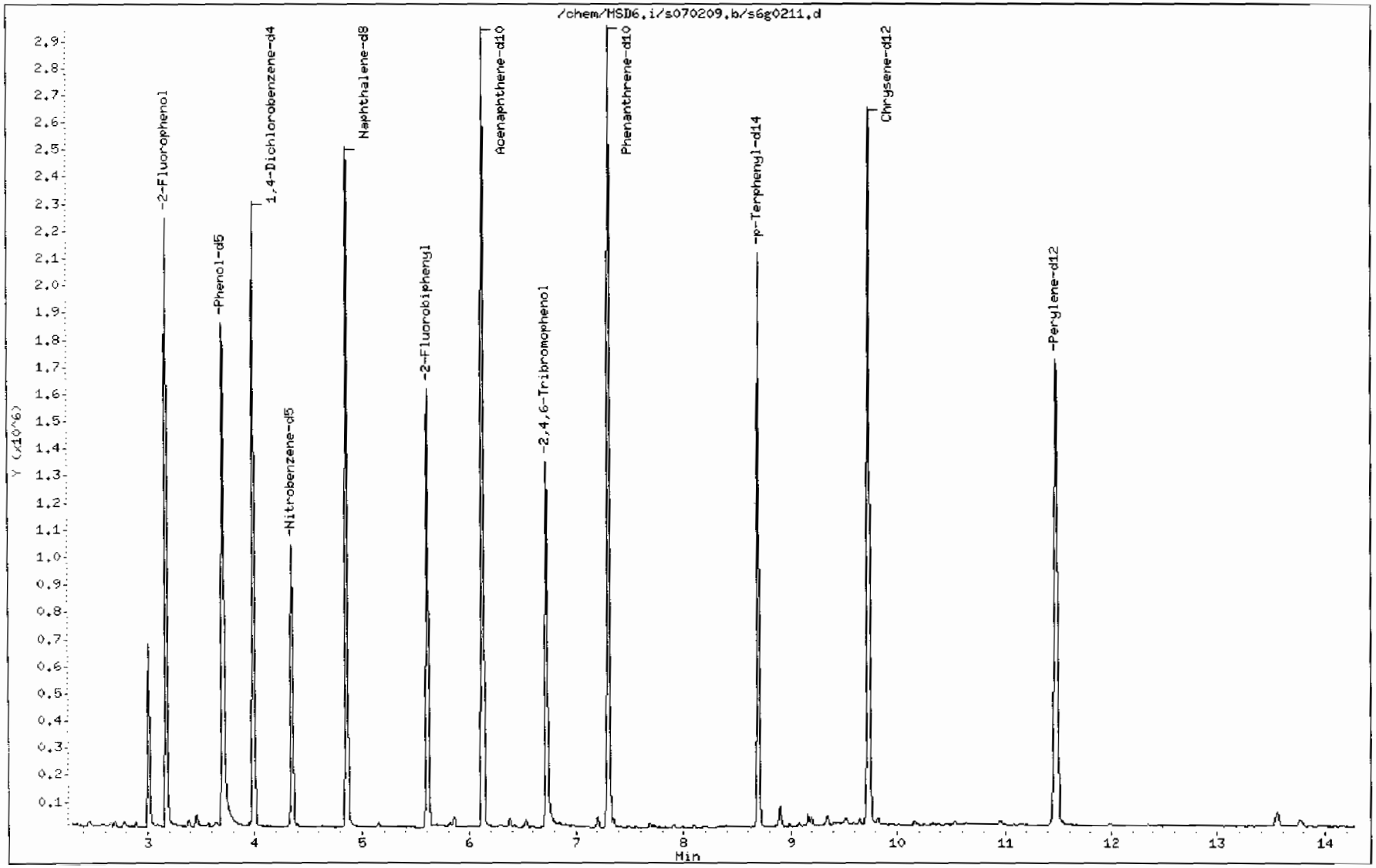

200

Data File: /chem/MSD6.i/s070209.b/s6g0211.d

Date : 02-JUL-2009 17:16

Client ID: CAMO-09-10464

Instrument: MSD6.i

Sample Info: |232582001|881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JHB3

Column phase: J&W DB-5HS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	64	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
Formamide, N,N-diethyl-	617-84-5	NIST05.L	4002	9	C5H11NO	101

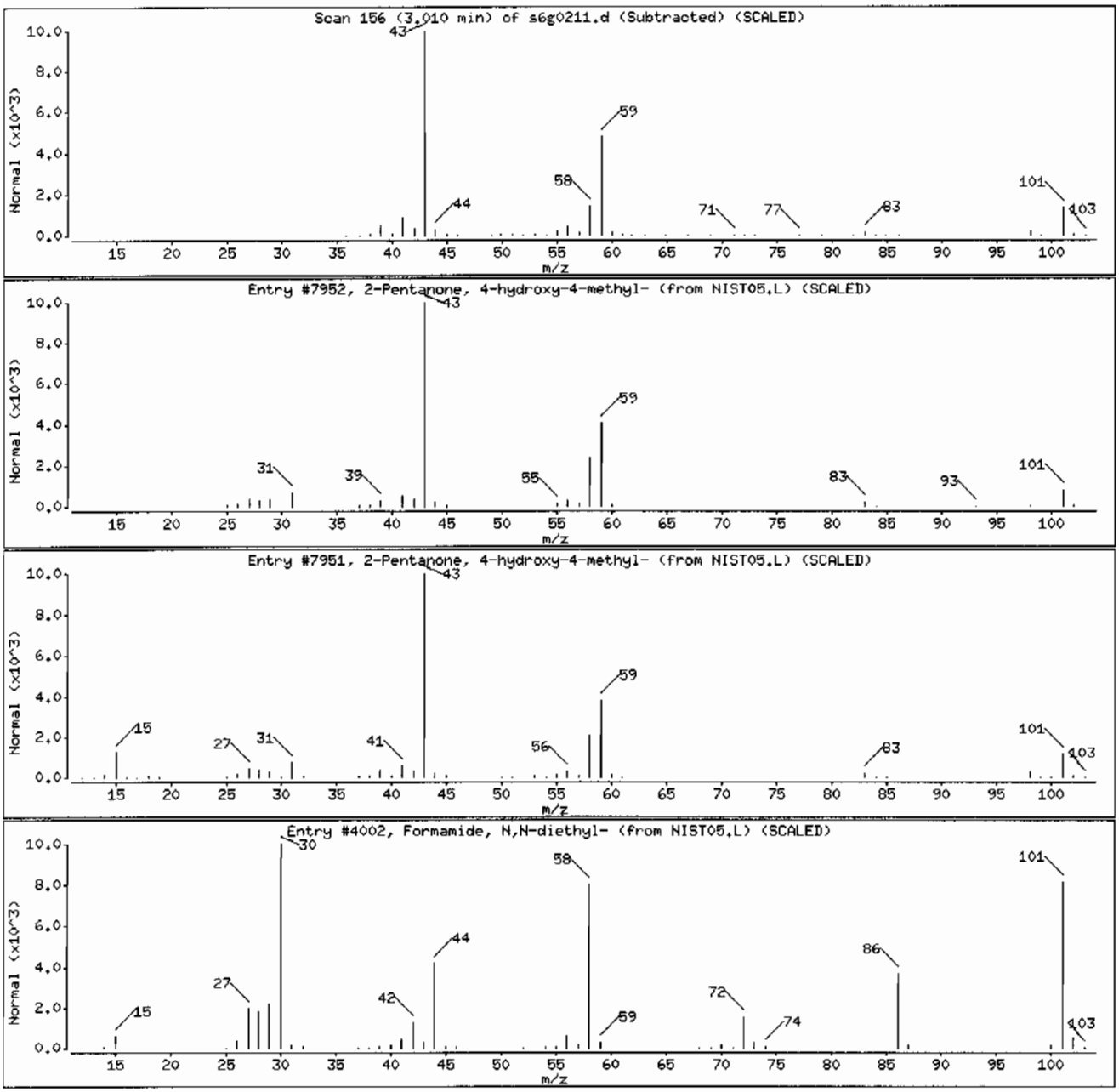

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 17:38	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.2 g	**Final Volume:**	1 mL
Data File:	s6g0212.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	348	ug/kg	69.6	348
108-95-2	Phenol	U	348	ug/kg	69.6	348
95-57-8	2-Chlorophenol	U	348	ug/kg	69.6	348
106-46-7	1,4-Dichlorobenzene	U	348	ug/kg	69.6	348
621-64-7	N-Nitrosodipropylamine	U	348	ug/kg	69.6	348
59-50-7	4-Chloro-3-methylphenol	U	348	ug/kg	69.6	348
83-32-9	Acenaphthene	U	34.8	ug/kg	11.5	34.8
121-14-2	2,4-Dinitrotoluene	U	348	ug/kg	34.8	348
100-02-7	4-Nitrophenol	U	348	ug/kg	115	348
87-86-5	Pentachlorophenol	U	348	ug/kg	87.0	348
129-00-0	Pyrene	U	34.8	ug/kg	10.4	34.8
110-86-1	Pyridine	U	348	ug/kg	69.6	348
62-53-3	Aniline	U	348	ug/kg	104	348
111-44-4	bis(2-Chloroethyl) ether	U	348	ug/kg	69.6	348
541-73-1	1,3-Dichlorobenzene	U	348	ug/kg	69.6	348
100-51-6	Benzyl alcohol	U	348	ug/kg	104	348
95-50-1	1,2-Dichlorobenzene	U	348	ug/kg	69.6	348
108-60-1	bis(2-Chloroisopropyl)ether	U	348	ug/kg	69.6	348
95-48-7	o-Cresol	U	348	ug/kg	69.6	348
65794-96-9	m,p-Cresols	U	348	ug/kg	104	348
67-72-1	Hexachloroethane	U	348	ug/kg	69.6	348
98-95-3	Nitrobenzene	U	348	ug/kg	69.6	348
78-59-1	Isophorone	U	348	ug/kg	69.6	348
88-75-5	2-Nitrophenol	U	348	ug/kg	69.6	348
105-67-9	2,4-Dimethylphenol	U	348	ug/kg	122	348
111-91-1	bis(2-Chloroethoxy)methane	U	348	ug/kg	69.6	348
120-83-2	2,4-Dichlorophenol	U	348	ug/kg	69.6	348
65-85-0	Benzoic acid	U	696	ug/kg	174	696
91-20-3	Naphthalene	U	34.8	ug/kg	10.4	34.8
106-47-8	4-Chloroaniline	U	348	ug/kg	69.6	348
87-68-3	Hexachlorobutadiene	U	348	ug/kg	69.6	348
91-57-6	2-Methylnaphthalene	U	34.8	ug/kg	6.96	34.8
77-47-4	Hexachlorocyclopentadiene	U	348	ug/kg	69.6	348
88-06-2	2,4,6-Trichlorophenol	U	348	ug/kg	69.6	348
95-95-4	2,4,5-Trichlorophenol	U	348	ug/kg	69.6	348
91-58-7	2-Chloronaphthalene	U	34.8	ug/kg	11.5	34.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	348	ug/kg	69.6	348
99-09-2	3-Nitroaniline	U	348	ug/kg	69.6	348

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 17:38	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.2 g	**Final Volume:**	1 mL
Data File:	s6g0212.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	348	ug/kg	69.6	348
606-20-2	2,6-Dinitrotoluene	U	348	ug/kg	34.8	348
208-96-8	Acenaphthylene	U	34.8	ug/kg	10.4	34.8
51-28-5	2,4-Dinitrophenol	U	696	ug/kg	132	696
132-64-9	Dibenzofuran	U	348	ug/kg	69.6	348
84-66-2	Diethylphthalate	U	348	ug/kg	69.6	348
86-73-7	Fluorene	U	34.8	ug/kg	10.4	34.8
7005-72-3	4-Chlorophenylphenylether	U	348	ug/kg	69.6	348
534-52-1	2-Methyl-4.6-dinitrophenol	U	348	ug/kg	69.6	348
100-01-6	4-Nitroaniline	U	348	ug/kg	104	348
	p-Nitroaniline					
122-39-4	Diphenylamine	U	348	ug/kg	69.6	348
122-66-7	Azobenzene	U	348	ug/kg	69.6	348
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	348	ug/kg	69.6	348
118-74-1	Hexachlorobenzene	U	348	ug/kg	69.6	348
85-01-8	Phenanthrene	U	34.8	ug/kg	10.4	34.8
120-12-7	Anthracene	U	34.8	ug/kg	6.96	34.8
84-74-2	Di-n-butylphthalate	U	348	ug/kg	69.6	348
206-44-0	Fluoranthene	U	34.8	ug/kg	10.4	34.8
85-68-7	Butylbenzylphthalate	U	348	ug/kg	69.6	348
56-55-3	Benzo(a)anthracene	U	34.8	ug/kg	10.4	34.8
91-94-1	3,3'-Dichlorobenzidine	U	348	ug/kg	104	348
218-01-9	Chrysene	U	34.8	ug/kg	10.4	34.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	348	ug/kg	69.6	348
117-84-0	Di-n-octylphthalate	U	348	ug/kg	69.6	348
205-99-2	Benzo(b)fluoranthene	U	34.8	ug/kg	10.4	34.8
207-08-9	Benzo(k)fluoranthene	U	34.8	ug/kg	10.4	34.8
50-32-8	Benzo(a)pyrene	U	34.8	ug/kg	10.4	34.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	34.8	ug/kg	10.4	34.8
53-70-3	Dibenzo(a,h)anthracene	U	34.8	ug/kg	10.4	34.8
191-24-2	Benzo(ghi)perylene	U	34.8	ug/kg	10.4	34.8
120-82-1	1,2,4-Trichlorobenzene	U	348	ug/kg	69.6	348

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	332	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0212.d
Lab Smp Id: 232582002 Client Smp ID: CAMO-09-10465
Inj Date : 02-JUL-2009 17:38
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232582002|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2508.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.20000	weight of sample
M	4.86460	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.999	3.999	(1.000)	464233	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1728927	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	1011890	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1744853	40.0000	
* 91 Chrysene-d12	240	9.739	9.745	(1.000)	1585656	40.0000	
* 98 Perylene-d12	264	11.486	11.492	(1.000)	1317892	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.796)	634397	50.2981	1750
$ 5 Phenol-d5	99	3.710	3.710	(0.928)	915553	54.1877	1890
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	389295	25.4169	885
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	639054	24.8659	865
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.099)	180197	48.1703	1680
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	920113	36.3350	1260

ION RATIO REPORT

SV REPORT

Data file: s6g0212.d
Report Date: 07/02/2009 18:17
Lab. ID: 232582002 SampleType: SAMPLE
Injection Date: 02-JUL-2009 17:38
Operator: JMB3 Instrument: MSD6.i
Sample Info: |232582002|881964|1|SVM|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2508
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	50632	3.71	3.78	80-120	100	(T)
93	344	3.68	3.79	361-421	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	54652	4.36	4.24	80-120	100	(T)
42	39875	4.36	4.24	57-117	73	(T)
22 Isophorone			CAS#: 78-59-1			
82	389295	4.36	4.53	80-120	100	(T)
138	9520	4.87	4.53	0- 47	2	(T)
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	944665	6.13	5.72	80-120	100	(T)
164	1011890	6.13	5.72	4- 64	107	(QT)
127	104	6.13	5.72	9- 69	0	(QT)
43 Dimethylphthalate				CAS#: 131-11-3		
163	222651	6.13	5.89	80-120	100	(T)
164	1011890	6.13	5.89	0- 41	454	(QT)
45 Acenaphthylene				CAS#: 208-96-8		
152	36533	5.61	6.03	80-120	100	(T)
151	34530	5.61	6.03	0- 50	95	(QT)
153	11368	5.61	6.03	0- 44	31	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	133272	6.13	6.25	80-120	100	(T)
89	2365	6.13	6.25	50-110	2	(QT)
63	2079	6.13	6.25	31- 91	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	10005	6.73	6.55	80-120	100	(T)
165	11215	6.73	6.55	60-120	112	(T)
167	3204	6.73	6.55	0- 44	32	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	441	6.73	6.56	80-120	100	(T)
105	1200	6.73	6.56	15- 75	272	(QT)
51	1919	6.73	6.56	63-123	435	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0212.d
Lab Smp Id: 232582002 Client Smp ID: CAMO-09-10465
Inj Date : 02-JUL-2009 17:38
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232582002|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2508.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.20000	weight of sample
M	4.86460	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.999	3186210	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.010	758931	9.52/69815	332	0		0	10

Data File: /chem/MSD6.i/s070209.b/s6g0212.d
Date : 02-JUL-2009 17:38
Client ID: CAMO-09-10465
Sample Info: |2325820021881964|1|SVM|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

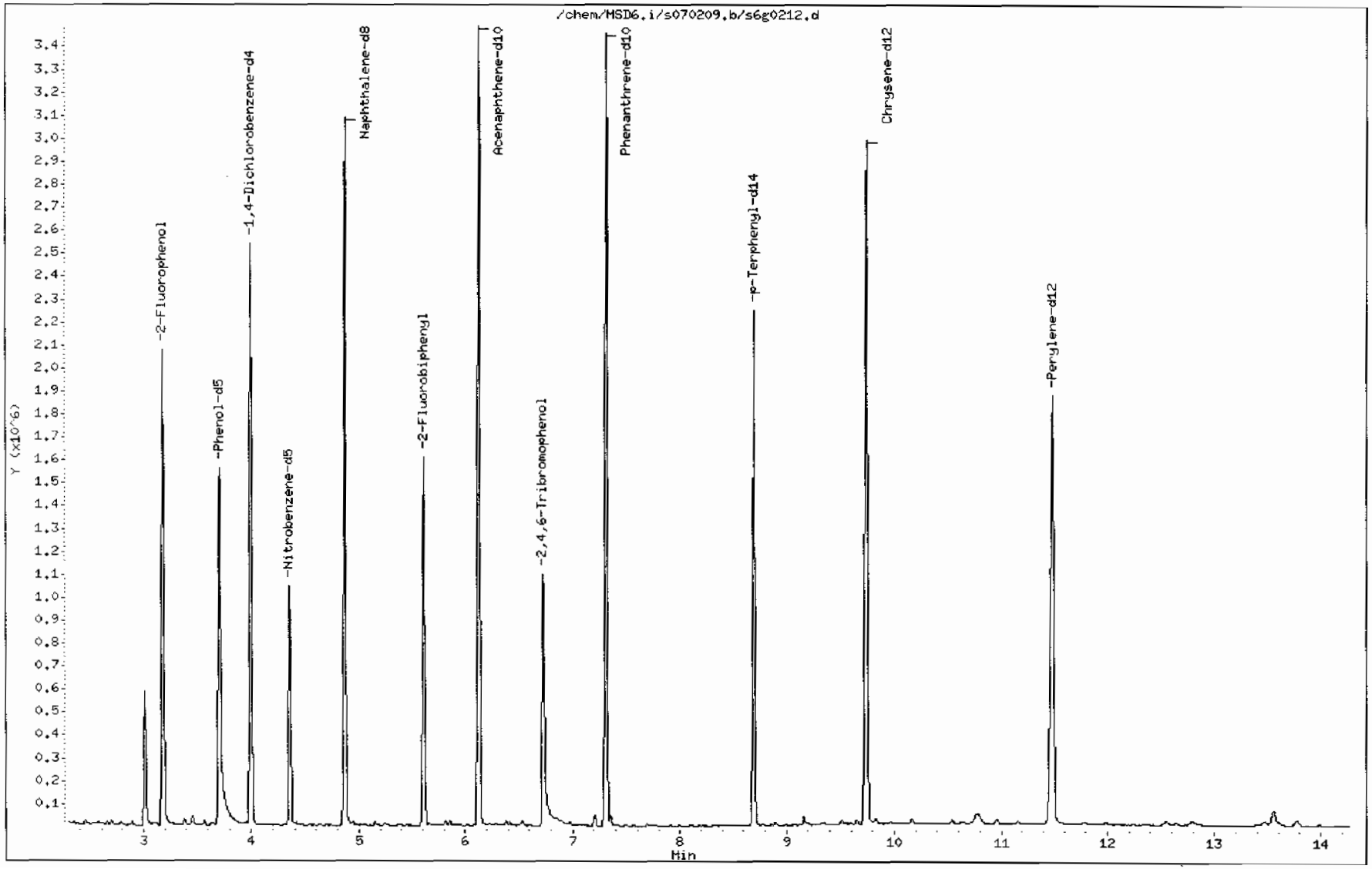

Data File: /chem/MSD6.i/s070209.b/s6g0212.d

Date : 02-JUL-2009 17:38

Client ID: CAMO-09-10465

Instrument: MSD6.i

Sample Info: |2325820021881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7950	25	C6H12O2	116

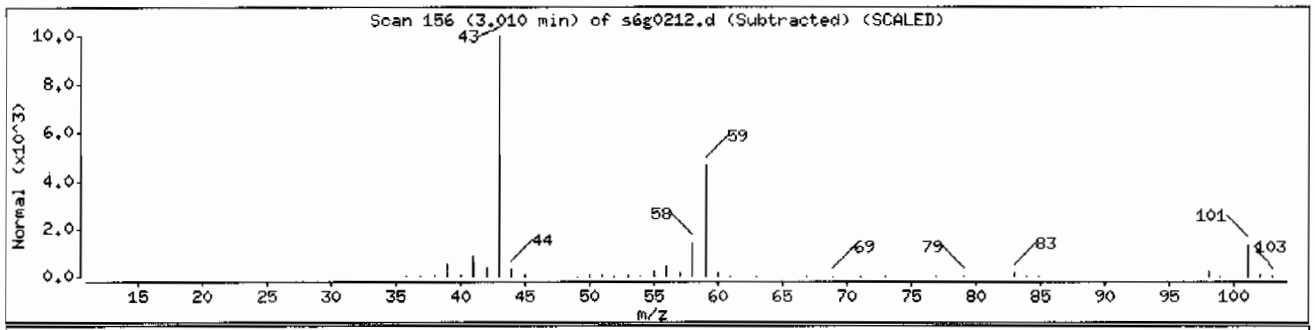

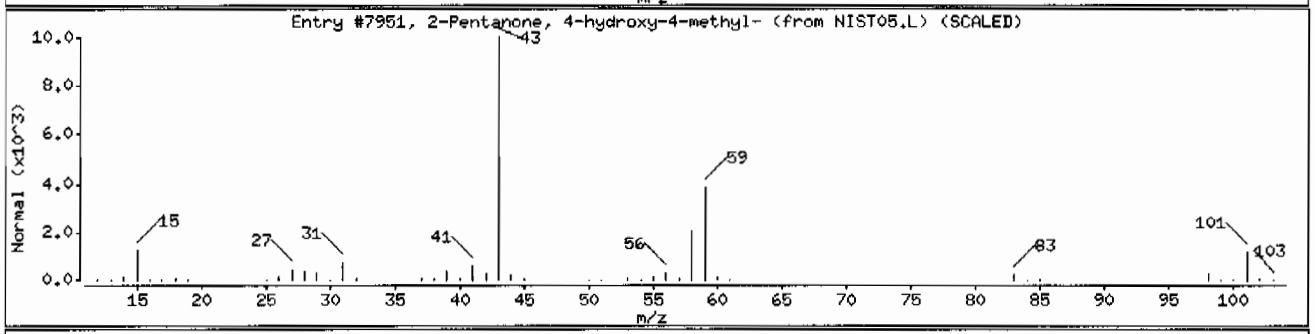

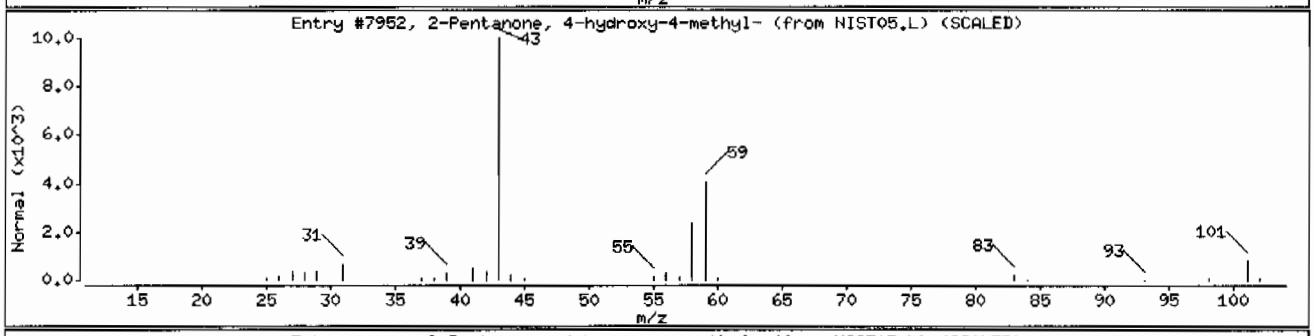

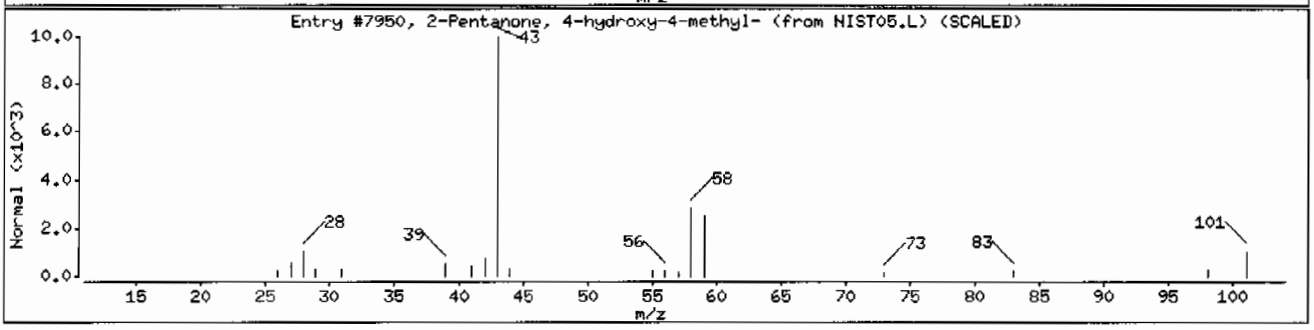

Standard Data

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 02-Jul-2009 16:06

Calibration History

Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Start Cal Date: 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
25-JUN-2009 18:09	MEGA	/chem/MSD6.i/s062509.b/s6f2503.d
Cal Level: 2 , Cal Amount: 10.00000		
26-JUN-2009 07:24	NEV	/chem/MSD6.i/s062509.b/s6f2536.d
26-JUN-2009 05:09	HEX	/chem/MSD6.i/s062509.b/s6f2530.d
26-JUN-2009 00:31	PEST	/chem/MSD6.i/s062509.b/s6f2518.d
25-JUN-2009 21:54	AP12	/chem/MSD6.i/s062509.b/s6f2511.d
25-JUN-2009 18:37	MEGA	/chem/MSD6.i/s062509.b/s6f2504.d
Cal Level: 3 , Cal Amount: 20.00000		
26-JUN-2009 07:47	NEV	/chem/MSD6.i/s062509.b/s6f2537.d
26-JUN-2009 05:32	HEX	/chem/MSD6.i/s062509.b/s6f2531.d
26-JUN-2009 00:54	PEST	/chem/MSD6.i/s062509.b/s6f2519.d
25-JUN-2009 22:17	AP12	/chem/MSD6.i/s062509.b/s6f2512.d
25-JUN-2009 19:04	MEGA	/chem/MSD6.i/s062509.b/s6f2505.d
Cal Level: 4 , Cal Amount: 40.00000		
26-JUN-2009 08:09	NEV	/chem/MSD6.i/s062509.b/s6f2538.d
26-JUN-2009 05:54	HEX	/chem/MSD6.i/s062509.b/s6f2532.d
26-JUN-2009 01:17	PEST	/chem/MSD6.i/s062509.b/s6f2520.d
25-JUN-2009 22:39	AP12	/chem/MSD6.i/s062509.b/s6f2513.d
25-JUN-2009 19:33	MEGA	/chem/MSD6.i/s062509.b/s6f2506.d
Cal Level: 5 , Cal Amount: 50.00000		
26-JUN-2009 08:31	NEV	/chem/MSD6.i/s062509.b/s6f2539.d
26-JUN-2009 06:18	HEX	/chem/MSD6.i/s062509.b/s6f2533.d
26-JUN-2009 01:40	PEST	/chem/MSD6.i/s062509.b/s6f2521.d
25-JUN-2009 23:02	AP12	/chem/MSD6.i/s062509.b/s6f2514.d
25-JUN-2009 20:01	MEGA	/chem/MSD6.i/s062509.b/s6f2507.d
Cal Level: 6 , Cal Amount: 80.00000		
26-JUN-2009 08:54	NEV	/chem/MSD6.i/s062509.b/s6f2540.d
26-JUN-2009 06:40	HEX	/chem/MSD6.i/s062509.b/s6f2534.d
26-JUN-2009 02:02	PEST	/chem/MSD6.i/s062509.b/s6f2522.d
25-JUN-2009 23:24	AP12	/chem/MSD6.i/s062509.b/s6f2515.d
25-JUN-2009 20:29	MEGA	/chem/MSD6.i/s062509.b/s6f2508.d
Cal Level: 7 , Cal Amount: 100.00000		

26-JUN-2009 09:17	NEV	/chem/MSD6.i/s062509.b/s6f2541.d
26-JUN-2009 07:02	HEX	/chem/MSD6.i/s062509.b/s6f2535.d
26-JUN-2009 02:25	PEST	/chem/MSD6.i/s062509.b/s6f2523.d
25-JUN-2009 23:47	AP12	/chem/MSD6.i/s062509.b/s6f2516.d
25-JUN-2009 20:56	MEGA	/chem/MSD6.i/s062509.b/s6f2509.d

Cal Level: 8 , Cal Amount: 120.00000		
26-JUN-2009 09:39	NEV	/chem/MSD6.i/s062509.b/s6f2542.d
26-JUN-2009 02:48	PEST	/chem/MSD6.i/s062509.b/s6f2524.d
26-JUN-2009 00:08	AP12	/chem/MSD6.i/s062509.b/s6f2517.d
25-JUN-2009 21:25	MEGA	/chem/MSD6.i/s062509.b/s6f2510.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 15:46	AP12	/chem/MSD6.i/s070209.b/s6g0207.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 15:23	MEGA	/chem/MSD6.i/s070209.b/s6g0206.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 08:30	MEGA	/chem/MSD6.i/s070209.b/s6g0202.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 09:21	PEST	/chem/MSD6.i/s070209.b/s6g0204.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 08:58	AP12	/chem/MSD6.i/s070209.b/s6g0203.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 11o00884

Calibration File Names:
Level 1: /chem/MSD6.i/s062509.b/s6f2503.d
Level 2: /chem/MSD6.i/s062509.b/s6f2536.d
Level 3: /chem/MSD6.i/s062509.b/s6f2537.d
Level 4: /chem/MSD6.i/s062509.b/s6f2538.d
Level 5: /chem/MSD6.i/s062509.b/s6f2539.d
Level 6: /chem/MSD6.i/s062509.b/s6f2540.d
Level 7: /chem/MSD6.i/s062509.b/s6f2541.d
Level 8: /chem/MSD6.i/s062509.b/s6f2542.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.63238	0.73990	0.67318	0.69361	0.63927					
	0.67481	0.66658					AVRG		0.67425		5.32083
2 Pyridine	+-+++	0.89908	1.05617	1.04091	0.98502	0.84792					
	0.99774	0.99755					AVRG		0.97491		7.71839
4 Aniline	+++++	0.61922	0.70141	0.65650	0.65708	0.63524					
	0.64072	0.63526					AVRG		0.64934		4.07488
209 Benzaldehyde	++++-	1.09138	1.13361	0.96812	0.99945	0.93736					
	0.87088	0.82930					AVRG		0.97573		11.29153
6 Phenol	++++-	1.47658	1.62941	1.45952	1.43821	1.36229					
	1.35462	1.37334					AVRG		1.44200		6.66032

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Cal Date : 02-Jul-2009 15:59 llo00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	1.22043	1.12403	1.23954	1.14115	1.13328	1.05431					
	1.03435	1.02016					AVRG		1.12091		7.28122
8 2-Chlorophenol	++++-	1.11737	1.25274	1.13361	1.11969	1.06744					
	1.06241	1.06439					AVRG		1.11681		5.99703
203 n-Decane	-++++	1.96253	2.07733	1.73409	1.66770	1.48844					
	++++-	+++++					AVRG		1.78602		13.16870
9 1,3-Dichlorobenzene	+++++	1.33990	1.45795	1.29316	1.27395	1.18026					
	1.18100	1.14017					AVRG		1.26663		8.73889
11 1,4-Dichlorobenzene	+++++	1.29097	1.40125	1.26310	1.22752	1.16060					
	1.14473	1.12740					AVRG		1.23080		7.90198
12 Benzyl alcohol	+++++	0.70036	0.83012	0.78578	0.79077	0.74765					
	0.74896	0.77876					AVRG		0.76892		5.35051
13 1,2-Dichlorobenzene	++-++	1.25150	1.33180	1.14508	1.11789	1.04037					
	1.00839	0.98256					AVRG		1.12537		11.48739
14 bis(2-Chloroisopropyl)ether	+++++	2.66469	2.89578	2.58397	2.53373	2.34040					
	2.19885	2.08192					AVRG		2.47134		11.41098
15 o-Cresol	++-++	0.89019	0.98604	0.86828	0.85479	0.80508					
	0.79451	0.77266					AVRG		0.85308		8.49227

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
16 Acetophenone	+++++	1.39887	1.44475	1.23553	1.27881	1.20070					
	1.15679	1.12815					AVRG		1.26337		9.46771
17 N-Nitrosodipropylamine	0.79102	0.79932	0.94251	0.88832	0.90450	0.80701					
	0.82176	0.85235					AVRG		0.85085		6.54215
18 m,p-Cresols	+++++	1.13347	1.30237	1.23018	1.22211	1.15366					
	1.16247	1.19084					AVRG		1.19930		4.80697
19 Hexachloroethane	+++++	0.49257	0.55214	0.50513	0.49924	0.46948					
	0.47529	0.47152					AVRG		0.49505		5.82124
21 Nitrobenzene	+++++	0.34673	0.37307	0.33623	0.33251	0.29324					
	0.29158	0.28515					AVRG		0.32264		10.31000
22 Isophorone	+++++	0.63552	0.68160	0.62967	0.62747	0.56153					
	0.56328	0.55319					AVRG		0.60747		8.00399
23 2-Nitrophenol	+++++	0.14310	0.16355	0.14738	0.14434	0.12728					
	0.12352	0.12042					AVRG		0.13851		11.18023
24 2,4-Dimethylphenol	+++++	0.36654	0.45730	0.43271	0.43039	0.39398					
	0.40025	0.39904					AVRG		0.41146		7.36820
25 bis(2-Chloroethoxy)methane	+++++	0.37680	0.39766	0.35155	0.34440	0.30311					
	0.30215	0.29609					AVRG		0.33882		11.77117

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
26 2,4-Dichlorophenol	++-++	0.24243	0.27366	0.24060	0.24186	0.21621					
	0.21044	0.21142					AVRG		0.23380		9.76984
27 Benzoic acid	-++++	+++++	0.20719	0.21760	0.22633	0.20373					
	0.21623	0.23652					AVRG		0.21793		5.56771
28 1,2,4-Trichlorobenzene	+-+++	0.29641	0.31292	0.27213	0.26797	0.23908					
	0.23667	0.23062					AVRG		0.26511		11.92681
30 Naphthalene	1.05660	0.91934	0.94767	0.81076	0.78496	+++++					
	++-++	+++++					AVRG		0.90387		12.15635
204 alpha-Terpineol	+-+++	0.32829	0.35279	0.30932	0.30322	0.26803					
	0.25451	0.24093					AVRG		0.29387		13.89383
31 4-Chloroaniline	-++++	0.39692	0.43329	0.40027	0.39276	0.35030					
	0.34600	0.33896					AVRG		0.37979		9.26083
189 Caprolactam	+++++	0.09653	0.10516	0.09075	0.09598	0.09109					
	0.09196	0.08872					AVRG		0.09432		5.89285
32 Hexachlorobutadiene	+-+++	0.17466	0.18478	0.16639	0.16258	0.14597					
	0.14659	0.14276					AVRG		0.16053		10.00655
33 4-Chloro-3-methylphenol	-++++	0.25394	0.28695	0.26318	0.25814	0.23584					
	0.23011	0.22741					AVRG		0.25080		8.49300

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.59901	0.53117	0.56501	0.49717	0.48140	0.42787					
	0.41481	0.40259					AVRG		0.48988		14.73728
35 1-Methylnaphthalene	0.63482	0.55611	0.58496	0.50370	0.48920	0.43330					
	+++++	+++++					AVRG		0.53368		13.59333
36 Hexachlorocyclopentadiene	+++++	0.15486	0.23705	0.22304	0.22443	0.17556					
	0.22833	0.20920					AVRG		0.20750		14.76227
208 1,1'-Biphenyl	+++++	1.34972	1.33011	1.08660	1.13652	1.05329					
	1.02023	0.97836					AVRG		1.13640		12.99693
205 2,3-Dichloroaniline	+++++	0.53146	0.58307	0.51668	0.51473	0.46598					
	0.45488	0.44984					AVRG		0.50238		9.63382
37 2,4,6-Trichlorophenol	+++++	0.33808	0.38712	0.32436	0.31922	0.28629					
	0.31080	0.29305					AVRG		0.32270		10.39191
38 2,4,5-Trichlorophenol	+++++	0.31059	0.36692	0.35695	0.36141	0.34591					
	0.30840	0.32982					AVRG		0.34000		7.07586
40 2-Chloronaphthalene	1.08311	0.96625	1.08309	0.95458	0.95054	0.85459					
	0.83946	0.81611					AVRG		0.94346		10.94370
42 o-Nitroaniline	+++++	0.32048	0.39114	0.38026	0.38066	0.35541					
	0.35712	0.35999					AVRG		0.36358		6.45864

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
41 m-Nitroaniline	+++++	0.19621	0.24704	0.24753	0.24746	0.22586					
	0.23559	0.23726					AVRG		0.23385		7.88833
43 Dimethylphthalate	+++++	1.11892	1.22487	1.11340	1.09849	1.00483					
	0.98565	0.98456					AVRG		1.07582		8.27040
44 2,6-Dinitrotoluene	+++++	0.24806	0.29035	0.26917	0.26165	0.24535					
	0.23888	0.23798					AVRG		0.25592		7.44772
45 Acenaphthylene	1.60659	1.53781	1.67432	1.47738	1.44338	1.32386					
	1.28502	1.24642					AVRG		1.44935		10.68612
47 Acenaphthene	1.17616	0.93028	1.03086	0.90765	0.88512	0.80414					
	0.79484	0.78201					AVRG		0.91388		14.75125
48 2,4-Dinitrophenol	+++++	+++++	0.09751	0.12076	0.12130	0.11065					
	0.12950	0.12854					AVRG		0.11804		10.27624
49 Dibenzofuran	+++++	1.34254	1.48066	1.30108	1.27535	1.15363					
	1.12634	1.10565					AVRG		1.25504		10.80137
50 2,4-Dinitrotoluene	+++++	0.30954	0.36989	0.35299	0.35627	0.33300					
	0.33191	0.33687					AVRG		0.34150		5.81138
51 Diethylphthalate	+++++	1.12629	1.23552	1.11421	1.07838	0.99981					
	0.96813	0.96038					AVRG		1.06896		9.34734

GEL Laboratories LLC

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
52 4-Nitrophenol	+++++	0.12172	0.18977	0.18570	0.17891	0.16720						
	0.17999	0.18374					AVRG		0.17244		13.60633	
53 Fluorene	1.23458	1.10959	1.21151	1.04844	1.02561	0.94472						
	0.93277	0.92854					AVRG		1.05447		11.54391	
54 4-Chlorophenylphenylether	+++++	0.52592	0.58667	0.52981	0.52080	0.48188						
	0.47877	0.47522					AVRG		0.51415		7.73736	
55 2-Methyl-4,6-dinitrophenol	+++++	14673	54481	130546	176239	210062						
	323694	446775					LINR	0.06881	0.10874		0.99699	
56 p-Nitroaniline	+++++	0.15417	0.20937	0.22775	0.21681	0.19467						
	0.21378	0.21660					AVRG		0.20474		11.92703	
133 Diphenylamine	+++++	0.50284	0.56842	0.49877	0.50679	0.46297						
	0.47091	0.47387					AVRG		0.49779		7.15126	
58 1,2-Diphenylhydrazine	+++++	0.69277	0.78732	0.68204	0.69087	0.63077						
	0.62255	0.60230					AVRG		0.67266		9.24165	
59 Tributylphosphate	+++++	1.49739	1.49809	1.41024	1.35731	1.27906						
	++-++	1.16092					AVRG		1.36717		9.61235	<-
61 4-Bromophenylphenylether	+++++	0.17001	0.19429	0.17374	0.17586	0.16392						
	0.16534	0.16821					AVRG		0.17305		5.94476	

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End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
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Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 llo00884

Compound	1 Level 1 / 100 Level 7	10 Level 2 / 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
63 Hexachlorobenzene	++++	0.17966	0.20383	0.18218	0.18753	0.17462						
	0.17443	0.17775					AVRG		0.18286		5.63687	
207 Atrazine	+++++	0.04948	0.05016	0.04056	0.04359	0.03922						
	0.03784	0.03776					AVRG		0.04266		12.37688	
65 Pentachlorophenol	++++	0.08955	0.11829	0.11235	0.11551	0.10833						
	0.11174	0.11017					AVRG		0.10942		8.55946	
206 n-Octadecane	+++++	0.59740	0.64721	0.54596	0.52896	0.47156						
	0.42954	+++++					AVRG		0.53677		14.84979	
68 Phenanthrene	1.10228	0.93626	1.01017	0.87070	0.86565	0.79407						
	0.78281	0.75605					AVRG		0.88975		13.51659	
69 Anthracene	1.03372	0.92010	1.02735	0.89651	0.88820	0.81272						
	0.78841	0.77473					AVRG		0.89272		11.20129	
72 Di-n-butylphthalate	++++	1.04790	1.18853	1.03601	1.01509	0.92636						
	0.88661	0.83125					AVRG		0.99025		12.05154	
76 Fluoranthene	0.97712	0.94165	1.04211	0.90609	0.89912	0.83116						
	0.80860	0.77399					AVRG		0.89748		10.04012	
77 Benzidine	+++++	0.34155	0.35663	0.31039	0.33428	0.40588						
	0.42170	0.35685					AVRG		0.36104		10.95672	<-

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
79 Pyrene	1.12547	1.05446	1.14289	0.99253	0.99961	0.91613					
	0.87703	0.86376					AVRG		0.99649		10.71467
85 Butylbenzylphthalate	+++++	0.44811	0.53082	0.48275	0.48534	0.45605					
	0.43387	0.42670					AVRG		0.46624		7.75863
89 Benzo(a)anthracene	1.06878	0.93271	1.04455	0.95285	0.94970	0.90136					
	0.91962	0.90813					AVRG		0.95971		6.54790
90 3,3'-Dichlorobenzidine	++-++	0.30276	0.31909	0.28981	0.30002	0.29727					
	0.30592	0.28683					AVRG		0.30024		3.57517 <-
92 Chrysene	1.05133	0.91009	1.03072	0.91463	0.91130	0.86864					
	0.83552	0.81734					AVRG		0.91745		9.20942
93 bis(2-Ethylhexyl)phthalate	0.49158	0.63811	0.75021	0.66325	0.65721	0.61652					
	0.58257	0.55871					AVRG		0.61977		12.52725
94 Di-n-octylphthalate	-+++-+	1.08312	1.31488	1.20254	1.20913	1.12717					
	1.05515	1.07887					AVRG		1.15298		8.10764
95 Benzo(b)fluoranthene	0.89395	0.87170	1.07203	0.93108	0.99781	0.90434					
	0.98279	0.96748					AVRG		0.95265		6.89667
96 Benzo(k)fluoranthene	0.98876	0.95294	1.04515	0.98327	0.93287	0.93963					
	0.82454	0.88260					AVRG		0.94372		7.16897

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	ml	m2	%RSD or R^2
	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	0.68623	0.75974	0.91770	0.85651	0.87746	0.83819					
	0.82888	0.82925					AVRG		0.82425		8.70730
99 Indeno(1,2,3-cd)pyrene	0.58566	0.69956	0.88899	0.84947	0.84012	0.81240					
	0.83280	0.75233					AVRG		0.78267		12.69466
100 Dibenzo(a,h)anthracene	9132	108272	345404	788225	974912	1248454					
	1878464	2222689					LINR	-0.02288	0.63862		0.99559
101 Benzo(ghi)perylene	0.58949	0.64245	0.78144	0.73455	0.72810	0.70603					
	0.71181	0.63056					AVRG		0.69055		9.22805
102 1,4-Dioxane	+++++	0.44847	0.46726	0.38659	0.40160	0.37556					
	0.36587	0.35293					AVRG		0.39975		10.72715
103 Methyl methacrylate	+++++	0.23840	0.24200	0.20244	0.20616	0.19137					
	0.18583	0.18163					AVRG		0.20683		11.79096
104 Ethyl methacrylate	+++++	0.94259	0.99321	0.85643	0.86935	0.83614					
	0.80918	0.79053					AVRG		0.87106		8.35594
105 2-Picoline	+++++	1.50203	1.56115	1.34043	1.36793	1.27566					
	1.23483	1.21493					AVRG		1.35671		9.74281
106 N-Nitrosomethylethylamine	+++++	0.56111	0.60482	0.54639	0.56485	0.56666					
	0.56403	0.53265					AVRG		0.56293		3.95047

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	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.64855	0.67082	0.59769	0.61259	0.60332					
	0.59897	0.55969					AVRG		0.61309		5.94648
108 N-Nitrosodiethylamine	++++-	0.56089	0.58157	0.51753	0.53600	0.52499					
	0.51871	0.48195					AVRG		0.53166		6.06915
109 Ethyl Methanesulfonate	+++++	0.75479	0.81335	0.71282	0.74358	0.73772					
	0.72871	0.69036					AVRG		0.74019		5.21699
110 Pentachloroethane	+-+++	0.35241	0.36665	0.32462	0.33602	0.32435					
	0.31917	0.30641					AVRG		0.33280		6.20805
111 N-Nitrosopyrrolidine	-++++	0.56374	0.62352	0.54696	0.57663	0.55625					
	0.52695	0.50737					AVRG		0.55735		6.68229
113 N-Nitrosomorpholine	++-++	0.91613	0.98944	0.84178	0.87856	0.86554					
	0.79892	0.78054					AVRG		0.86727		8.19219
114 o-Toluidine	+++++	2.08041	2.12438	1.80435	1.84634	1.73950					
	1.64321	1.60168					AVRG		1.83427		11.02501
115 N-Nitrosopiperidine	+++++	0.16009	0.17196	0.14921	0.15676	0.15141					
	0.15201	0.14355					AVRG		0.15500		5.90728
116 a,a-Dimethylphenethylamine	+++++	1.04169	1.18296	1.07224	1.15686	1.09722					
	1.09706	1.08056					AVRG		1.10408		4.46213

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
117 Triethylphosphorothioate	-++++	0.16948	0.16571	0.15341	0.14957	0.14414					
	+++++	0.13241					AVRG		0.15245		9.02058 <-
118 2,6-Dichlorophenol	+++++	0.25500	0.26825	0.23342	0.24444	0.23410					
	0.22873	0.21899					AVRG		0.24042		6.97744
119 Hexachloropropene	+-+++	0.11484	0.12831	0.12230	0.12741	0.12792					
	0.13619	0.11809					AVRG		0.12501		5.74024
120 p-Phenylenediamine	+++++	0.25894	0.30780	0.27024	0.28461	0.26455					
	0.24836	0.23651					AVRG		0.26729		8.81751
121 N-Nitrosodi-n-butylamine	+++++	87162	186621	284343	380139	620307					
	847671	+++++					LINR	-0.13918	0.20871		0.99453
122 Safrole	+++++	0.22777	0.23847	0.20280	0.21182	0.19756					
	0.19223	0.18415					AVRG		0.20783		9.39540
123 1,2,4,5-Tetrachlorobenzene	+++++	0.49795	0.49761	0.41805	0.43378	0.41177					
	0.41519	0.38880					AVRG		0.43759		9.86893
124 Isosafrole	+++++	0.38693	0.41188	0.34610	0.36809	0.34872					
	0.34982	0.32815					AVRG		0.36281		7.84845
125 1,4-Naphthoquinone	++-++	0.39078	0.41091	0.32495	0.33865	0.28785					
	+++++	+++++					AVRG		0.35063		14.25240

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
126 m-Dinitrobenzene	+++++	0.16097	0.19752	0.19351	0.19372	0.17999						
	0.18095	0.18444					AVRG		0.18444		6.72107	
127 Pentachlorobenzene	++--+	0.43540	0.43757	0.36606	0.39115	0.36688						
	0.36403	0.35232					AVRG		0.38763		9.11345	
128 1-Naphthylamine	+++++	0.97305	1.01861	0.85254	0.90031	0.85212						
	0.83379	0.80334					AVRG		0.89054		8.82414	
129 2-Naphthylamine	+-+++	1.07322	1.14238	0.91698	0.97159	0.93421						
	0.90628	0.87417					AVRG		0.97412		10.05716	
130 2,3,4,6-Tetrachlorophenol	+++++	0.29368	0.34460	0.30483	0.30498	0.29138						
	0.27715	0.29969					AVRG		0.30233		6.93290	
131 5-Nitro-o-toluidine	+++++	0.29432	0.32388	0.28613	0.30788	0.30538						
	0.30976	0.29802					AVRG		0.30362		4.01840	
132 Thionazin	++--+	0.20129	0.20194	0.19423	0.18811	0.18439						
	+++++	0.16980					AVRG		0.18996		6.36401	<-
134 Sulfotepp	-++++	0.10066	0.09687	0.09515	0.09465	0.09522						
	+++++	0.09446					AVRG		0.09617		2.45134	<-
135 Phorate	+++++	0.44875	0.44740	0.42095	0.41385	0.39361						
	+++++	0.36053					AVRG		0.41418		8.11363	<-

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	100 Level 7	120 Level 8										
136 1,3,5-Trinitrobenzene	++--+	0.12191	0.14390	0.13612	0.15261	0.14765						
	0.14546	0.13994					AVRG		0.14108		7.06662	
137 Phenacetin	+++++	0.30142	0.31838	0.27624	0.29648	0.29352						
	0.29487	0.28222					AVRG		0.29473		4.60847	
138 Diallate	++--+	0.28510	0.28840	0.24021	0.25212	0.23986						
	0.23658	0.22590					AVRG		0.25260		9.72911	
139 Dimethoate	+-+++	0.27503	0.28336	0.27756	0.27624	0.27526						
	+++++	0.26264					AVRG		0.27501		2.47074	<-
140 4-Aminobiphenyl	+++-+	0.60580	0.59069	0.55478	0.60921	0.56737						
	0.53741	0.51964					AVRG		0.56927		6.03455	
141 Pentachloronitrobenzene	+++++	0.08223	0.08464	0.07383	0.07728	0.07209						
	0.06879	0.06554					AVRG		0.07491		9.25205	
142 Pronamide	+++++	0.29474	0.29145	0.24443	0.25109	0.22669						
	0.21208	0.20918					AVRG		0.24710		14.15492	
143 Dinoseb	-++++	20780	84804	205850	273073	322340						
	491810	679849					LINR	0.05568	0.16509		0.99662	
144 Disulfoton	+-+++	0.39188	0.38851	0.36073	0.35401	0.33180						
	+++++	0.30490					AVRG		0.35531		9.38910	<-

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	100 Level 7	120 Level 8									
145 Methyl parathion	+-+++-	0.18836	0.20650	0.20923	0.20867	0.21162					
	++-++	0.19926					AVRG		0.20394		4.27815 <-
146 4-Nitroquinoline-1-oxide	+-+++	0.02893	0.02787	0.02388	0.02735	0.02367					
	0.02320	0.01981					AVRG		0.02496		12.92664
147 Methapyrilene	+++++	0.69107	0.70459	0.55190	0.58929	0.50570					
	+++++	+++++					AVRG		0.60851		14.27692
148 Isodrin	-++++	0.11695	0.12074	0.10177	0.10473	0.09801					
	0.09618	0.09359					AVRG		0.10457		10.00337
149 Aramite	++++-	0.05314	0.05789	0.05104	0.05438	0.05075					
	0.04902	0.04800					AVRG		0.05203		6.52073
150 Kepone	+++++	0.07997	0.08705	0.07407	0.07973	0.07823					
	0.07875	0.07626					AVRG		0.07915		5.12259
151 p-(Dimethylamino)azobenzene	+++++	0.31526	0.33187	0.27995	0.29674	0.27031					
	0.26417	0.25598					AVRG		0.28775		9.74134
152 Chlorobenzilate	++-++	0.29629	0.31044	0.26389	0.27419	0.25693					
	0.25231	0.24702					AVRG		0.27158		8.73379
153 3,3'-Dimethylbenzidine	+++++	0.57410	0.58403	0.49595	0.50722	0.51863					
	0.52241	0.47909					AVRG		0.52592		7.44714

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	100 Level 7	120 Level 8										
154 Famphur	++++++	0.36885	0.37657	0.37753	0.36804	0.36180						
	++++++	0.33829					AVRG		0.36518		3.94658	<-
155 2-Acetylaminofluorene	+++++	0.29294	0.33610	0.33343	0.34644	0.34833						
	0.36163	0.34690					AVRG		0.33797		6.47209	
157 7,12Dimethylbenz(a)anthracene	+++++	0.47747	0.51000	0.45134	0.47249	0.45022						
	0.43701	0.43448					AVRG		0.46186		5.78794	
158 3-Methylcholanthrene	+++++	0.40088	0.43440	0.40840	0.42321	0.42138						
	0.43256	0.41738					AVRG		0.41975		2.89156	
26 Phthalic anhydride	+++++	23445	60720	197326	265845	337032						
	482099	+++++					LINR	0.07179	0.15263		0.99507	
173 Carbazole	0.81196	0.72552	0.79566	0.73346	0.74862	0.67642						
	0.68473	0.67787					AVRG		0.73178		7.12317	
174 Hexachlorophene	+++++	0.06404	0.06876	+++++	0.06992	0.06842						
	0.06841	+++++					AVRG		0.06791		3.31731	<-
179 Dibenzo(a,e)pyrene	+++++	54048	207036	542567	609541	796137						
	1234418	+++++					LINR	0.04574	0.44281		0.99342	
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

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	100 Level 7	120 Level 8										
184 p-Benzoquinone	++++	0.11972	0.13520	0.18226	0.19503	0.24392						
	0.18617	0.20906					AVRG		0.18162		23.38261	<-
191 Parathion	++++	0.06720	0.07286	0.07495	0.07278	0.07512						
	++++	0.07143					AVRG		0.07239		4.01730	<-
192 Methoxychlor	++++	0.48449	0.63447	0.60076	0.57342	0.52057						
	0.52989	0.49268					AVRG		0.54804		10.28990	
210 m-Toluidine	++++	1.27161	1.50282	1.83240	1.62568	1.67827						
	1.76658	1.71497					AVRG		1.62748		11.59788	
211 p-Toluidine	++++	1.26022	1.29823	1.04873	1.26022	1.08002						
	0.96663	0.99825					AVRG		1.13033		12.26753	
212 Cis Diallate	++++	0.28580	0.31986	0.26808	0.29504	0.28492						
	0.29015	0.27596					AVRG		0.28854		5.70060	
213 Trans Diallate	++++	0.33542	0.33930	0.28260	0.29661	0.28219						
	0.27833	0.26577					AVRG		0.29717		9.72911	
214 1,4-Dinitrobenzene	++++	0.20112	0.26188	0.25947	0.26034	0.24600						
	0.24565	0.25711					AVRG		0.24737		8.67601	
215 2-Ethoxyethanol	++++	0.83491	0.96676	0.87277	0.89696	0.84090						
	0.87270	0.83176					AVRG		0.87382		5.43680	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 llo00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
216 Methylenebis(2-chloroaniline)	+++++	0.12685	0.15239	0.15319	0.15535	0.14874						
	0.15769	0.15392					AVRG		0.14973		6.98291	
229 2,2'-Dichlorobenzil	+++++	0.63573	0.64426	+++++	0.60092	0.57475						
	0.53886	0.54002					AVRG		0.58909		7.77747	<-
230 4-Chlorothioanisole	+++++	0.25846	0.25468	+++++	0.24095	0.23047						
	0.22529	0.21821					AVRG		0.23801		6.81449	<-
231 4-Chlorothiophenol	+++++	38130	81557	+++++	295018	478312						
	546488	749391					LINR	0.12977	0.18954		0.99850	<-
232 bis(p-Chlorophenyl)sulfone	+++++	0.39228	0.38647	+++++	0.34476	0.32622						
	0.31133	0.31226					AVRG		0.34555		10.44268	<-
233 bis(p-Chlorophenyl)disulfide	+++++	0.13457	0.14423	+++++	0.16084	0.14151						
	0.12869	0.13535					AVRG		0.14086		7.96301	<-
234 Diphenyl disulfide	+++++	0.24323	0.25434	+++++	0.24239	0.22501						
	0.21705	0.21291					AVRG		0.23249		7.11578	<-
235 Diphenyl sulfide	+++++	0.80808	0.81365	+++++	0.71378	0.65007						
	0.65795	0.61957					AVRG		0.71052		11.75053	<-
236 Phenyl sulfone	+++++	0.48879	0.48533	+++++	0.43294	0.41526						
	0.41473	0.39582					AVRG		0.43881		8.93060	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 llo00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
237 Hydroxymethyl phthalimide	+++++	0.20330	0.20564	+++++	0.15263	0.18504						
	0.15200	0.17312					AVRG		0.17862		13.23528	<-
238 Phthalic acid	+++++	0.08556	0.08708	+-+++	0.06350	0.08083						
	0.06350	0.07171					AVRG		0.07537		14.11566	<-
239 Thiophenol	-++++	0.80251	0.91225	+++++	1.03227	1.05598						
	1.08387	1.02922					AVRG		0.98602		10.88473	<-
240 bis(Chloromethyl)ether	+++++	0.01688	0.01613	+++++	0.01507	0.01457						
	0.01518	0.01559					AVRG		0.01557		5.32579	<-
241 Octachlorostyrene	+++-+	0.07992	0.08243	+++++	0.07682	0.07832						
	0.07523	0.07697					AVRG		0.07828		3.28717	<-
M 225 Trichlorophenols	+-+++	0.32433	0.37702	0.34065	0.34032	0.31610						
	0.30960	0.31143					AVRG		0.33135		7.18860	
M 226 Tetrachlorophenols	+++++	0.29368	0.34460	0.30483	0.30498	0.29138						
	0.27715	0.29969					AVRG		0.30233		6.93290	
M 227 Benzo(b,k)fluoranthene	0.94136	0.91232	1.05859	0.95718	0.96534	0.92198						
	0.90366	0.92504					AVRG		0.94818		5.21284	
M 228 TIO Sum Semivolatiles	-++++	+++++	++-++	+++++	+++++	+++++						
	+-+++	+++++					AVRG		0.000e+00		0.000e+00	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 llo00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
$ 3 2-Fluorophenol	+++++	1.09198	1.23633	1.09570	1.08835	1.02368					
	1.04716	1.02413					AVRG		1.08676		6.71486
$ 5 Phenol-d5	+-+++	1.45254	1.60814	1.48373	1.47158	1.38721					
	1.38525	1.40226					AVRG		1.45582		5.37925
$ 187 2-Chlorophenol-d4	++++-	+-+++	+-++-	+++++	+++++	+++++					
	+-+++	+++++					AVRG		0.000e+00		0.000e+00 <-
$ 188 1,2-Dichlorobenzene-d4	-++++	+++++	+++++	+++++	++-++	+++++					
	++++-	+-+++					AVRG		0.000e+00		0.000e+00 <-
$ 20 Nitrobenzene-d5	++-++	0.37314	0.40736	0.36335	0.36220	0.32849					
	0.32847	0.31748					AVRG		0.35436		8.92683
$ 39 2-Fluorobiphenyl	+++++	1.10264	1.17960	1.05051	1.02767	0.93874					
	0.91574	0.89656					AVRG		1.01592		10.31484
$ 60 2,4,6-Tribromophenol	+++++	0.12592	0.15525	0.15136	0.15448	0.14416					
	0.14889	0.15506					AVRG		0.14788		7.08436
$ 81 p-Terphenyl-d14	+++++	0.64037	0.71369	0.64682	0.65851	0.61137					
	0.59847	0.60238					AVRG		0.63880		6.31654

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 11o00884

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:11
Lab File ID: s6f2525.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$	3 2-Fluorophenol	1.08676	1.12507	1.12507	0.000	3.52505	60.00000	Averaged
$	5 Phenol-d5	1.45582	1.43831	1.43831	0.000	-1.20235	60.00000	Averaged
$	20 Nitrobenzene-d5	0.35436	0.37614	0.37614	0.000	6.14854	60.00000	Averaged
$	39 2-Fluorobiphenyl	1.01592	1.04828	1.04828	0.000	3.18501	60.00000	Averaged
$	60 2,4,6-Tribromophenol	0.14788	0.14760	0.14760	0.000	-0.18414	60.00000	Averaged
$	81 p-Terphenyl-d14	0.63880	0.68459	0.68459	0.000	7.16687	60.00000	Averaged
	1 N-Methyl-N-nitrosomethylami	0.67425	0.74773	0.74773	0.000	10.89825	60.00000	Averaged
	2 Pyridine	0.97491	0.98397	0.98397	0.000	0.92879	60.00000	Averaged
	4 Aniline	0.64934	0.64911	0.64911	0.000	-0.03594	60.00000	Averaged
	6 Phenol	1.44200	1.43586	1.43586	0.001	-0.42533	20.00000	Averaged ccc
	7 bis(2-Chloroethyl) ether	1.12091	1.11791	1.11791	0.000	-0.26752	60.00000	Averaged
	8 2-Chlorophenol	1.11681	1.13103	1.13103	0.000	1.27363	60.00000	Averaged
	203 n-Decane	1.78602	1.72523	1.72523	0.000	-3.40342	60.00000	Averaged
	9 1,3-Dichlorobenzene	1.26663	1.30576	1.30576	0.000	3.08936	60.00000	Averaged
	11 1,4-Dichlorobenzene	1.23080	1.24134	1.24134	0.001	0.85660	20.00000	Averaged ccc
	13 1,2-Dichlorobenzene	1.12537	1.10040	1.10040	0.000	-2.21905	60.00000	Averaged
	14 bis(2-Chloroisopropyl)ether	2.47134	2.67528	2.67528	0.000	8.25224	60.00000	Averaged
	12 Benzyl alcohol	0.76891	0.79640	0.79640	0.000	3.57469	60.00000	Averaged
	15 o-Cresol	0.85308	0.80325	0.80325	0.000	-5.84059	60.00000	Averaged
	18 m,p-Cresols	1.19930	1.21301	1.21301	0.000	1.14345	60.00000	Averaged
	17 N-Nitrosodipropylamine	0.85085	0.89258	0.89258	0.050	4.90475	60.00000	Averaged spec
	19 Hexachloroethane	0.49505	0.50346	0.50346	0.000	1.69837	60.00000	Averaged
	21 Nitrobenzene	0.32264	0.37193	0.37193	0.000	15.27721	60.00000	Averaged
	22 Isophorone	0.60747	0.68441	0.68441	0.000	12.66691	60.00000	Averaged
	23 2-Nitrophenol	0.13851	0.15084	0.15084	0.001	8.89680	20.00000	Averaged ccc
	24 2,4-Dimethylphenol	0.41146	0.47557	0.47557	0.000	15.58142	60.00000	Averaged
	25 bis(2-Chloroethoxy)methane	0.33882	0.34977	0.34977	0.000	3.23129	60.00000	Averaged
	26 2,4-Dichlorophenol	0.23380	0.24920	0.24920	0.001	6.58756	20.00000	Averaged ccc
	27 Benzoic acid	0.21793	0.26929	0.26929	0.000	23.56667	60.00000	Averaged
	28 1,2,4-Trichlorobenzene	0.26511	0.26543	0.26543	0.000	0.11934	60.00000	Averaged
	30 Naphthalene	0.90387	0.79867	0.79867	0.000	-11.63895	60.00000	Averaged
	204 alpha-Terpineol	0.29387	0.29863	0.29863	0.000	1.62032	60.00000	Averaged
	31 4-Chloroaniline	0.37979	0.40231	0.40231	0.000	5.93203	60.00000	Averaged
	32 Hexachlorobutadiene	0.16053	0.16187	0.16187	0.001	0.83340	20.00000	Averaged ccc
	33 4-Chloro-3-methylphenol	0.25080	0.26631	0.26631	0.001	6.18457	20.00000	Averaged ccc
	34 2-Methylnaphthalene	0.48988	0.53642	0.53642	0.000	9.50067	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:11
Lab File ID: s6f2525.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35	1-Methylnaphthalene	0.53368	0.49710	0.49710	0.000	-6.85521	60.00000	Averaged
36	Hexachlorocyclopentadiene	0.20750	0.22408	0.22408	0.050	7.98984	60.00000	Averaged spcc
205	2,3-Dichloroaniline	0.50238	0.51351	0.51351	0.000	2.21657	60.00000	Averaged
37	2,4,6-Trichlorophenol	0.32270	0.32519	0.32519	0.001	0.76942	20.00000	Averaged ccc
38	2,4,5-Trichlorophenol	0.34000	0.36478	0.36478	0.000	7.28927	60.00000	Averaged
40	2-Chloronaphthalene	0.94346	0.96190	0.96190	0.000	1.95373	60.00000	Averaged
42	o-Nitroaniline	0.36358	0.37616	0.37616	0.000	3.46183	60.00000	Averaged
41	m-Nitroaniline	0.23385	0.25713	0.25713	0.000	9.95646	60.00000	Averaged
43	Dimethylphthalate	1.07582	1.08470	1.08470	0.000	0.82586	60.00000	Averaged
44	2,6-Dinitrotoluene	0.25592	0.27912	0.27912	0.000	9.06572	60.00000	Averaged
50	2,4-Dinitrotoluene	0.34150	0.38329	0.38329	0.000	12.23916	60.00000	Averaged
45	Acenaphthylene	1.44935	1.47434	1.47434	0.000	1.72472	60.00000	Averaged
47	Acenaphthene	0.91388	0.86637	0.86637	0.001	-5.19856	20.00000	Averaged ccc
48	2,4-Dinitrophenol	0.11804	0.11708	0.11708	0.050	-0.81658	60.00000	Averaged spcc
49	Dibenzofuran	1.25504	1.29079	1.29079	0.000	2.84851	60.00000	Averaged
51	Diethylphthalate	1.06896	1.07295	1.07295	0.000	0.37315	60.00000	Averaged
52	4-Nitrophenol	0.17244	0.18029	0.18029	0.050	4.55579	60.00000	Averaged spcc
53	Fluorene	1.05447	1.02093	1.02093	0.000	-3.18079	60.00000	Averaged
54	4-Chlorophenylphenylether	0.51415	0.52659	0.52659	0.000	2.41880	60.00000	Averaged
55	2-Methyl-4,6-dinitrophenol	51.22713	40.00000	0.13178	0.000	28.06783	60.00000	Linear
56	p-Nitroaniline	0.20474	0.23325	0.23325	0.000	13.92997	60.00000	Averaged
133	Diphenylamine	0.49779	0.51316	0.51316	0.001	3.08663	20.00000	Averaged ccc
58	1,2-Diphenylhydrazine	0.67266	0.70527	0.70527	0.000	4.84845	60.00000	Averaged
61	4-Bromophenylphenylether	0.17305	0.17270	0.17270	0.000	-0.20251	60.00000	Averaged
63	Hexachlorobenzene	0.18286	0.18012	0.18012	0.000	-1.49843	60.00000	Averaged
65	Pentachlorophenol	0.10942	0.11892	0.11892	0.001	8.68470	20.00000	Averaged ccc
206	n-Octadecane	0.53677	0.54324	0.54324	0.000	1.20503	60.00000	Averaged
68	Phenanthrene	0.88975	0.85790	0.85790	0.000	-3.57959	60.00000	Averaged
69	Anthracene	0.89272	0.89781	0.89781	0.000	0.56971	60.00000	Averaged
72	Di-n-butylphthalate	0.99025	1.02820	1.02820	0.000	3.83261	60.00000	Averaged
76	Fluoranthene	0.89748	0.92468	0.92468	0.001	3.03116	20.00000	Averaged ccc
79	Pyrene	0.99649	0.96249	0.96249	0.000	-3.41158	60.00000	Averaged
85	Butylbenzylphthalate	0.46624	0.47820	0.47820	0.000	2.56535	60.00000	Averaged
89	Benzo(a)anthracene	0.95971	0.94279	0.94279	0.000	-1.76323	60.00000	Averaged
92	Chrysene	0.91745	0.89686	0.89686	0.000	-2.24414	60.00000	Averaged
93	bis(2-Ethylhexyl)phthalate	0.61977	0.63489	0.63489	0.000	2.43875	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:11
Lab File ID: s6f2525.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	1.15298	1.14240	1.14240	0.001	-0.91773	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.95265	0.91362	0.91362	0.000	-4.09634	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.94372	0.94646	0.94646	0.000	0.28993	60.00000	Averaged	
	97 Benzo(a)pyrene	0.82425	0.86191	0.86191	0.001	4.56914	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78267	0.80771	0.80771	0.000	3.19938	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	41.39676	40.00000	0.67553	0.000	3.49191	60.00000	Linear	
	101 Benzo(ghi)perylene	0.69055	0.71790	0.71790	0.000	3.96077	60.00000	Averaged	
	126 m-Dinitrobenzene	0.18444	0.19364	0.19364	0.000	4.98399	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30233	0.28586	0.28586	0.000	-5.44729	60.00000	Averaged	
	143 Dinoseb	39.55810	40.00000	0.15407	0.000	-1.10476	60.00000	Linear	
	173 Carbazole	0.73178	0.86805	0.86805	0.000	18.62108	60.00000	Averaged	
	184 p-Benzoquinone	0.18162	0.15622	0.15622	0.000	-13.98438	60.00000	Averaged	
	192 Methoxychlor	0.54804	0.60208	0.60208	0.000	9.86094	60.00000	Averaged	
	211 p-Toluidine	1.13033	1.01568	1.01568	0.000	-10.14264	60.00000	Averaged	
	210 m-Toluidine	1.62748	1.75274	1.75274	0.000	7.69678	60.00000	Averaged	
	26 Phthalic anhydride	48.38615	40.00000	0.17367	0.000	20.96537	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	25.73629	40.00000	0.26466	0.000	-35.65928	60.00000	Linear	
	214 1,4-Dinitrobenzene	0.24737	0.26229	0.26229	0.000	6.03366	60.00000	Averaged	
	215 2-Ethoxyethanol	0.87382	0.93917	0.93917	0.000	7.47790	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.14973	0.16493	0.16493	0.000	10.14881	60.00000	Averaged	
M	225 Trichlorophenols	0.33135	0.34498	0.34498	0.000	4.11443	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30233	0.28586	0.28586	0.000	-5.44729	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.94818	0.93004	0.93004	0.000	-1.91352	60.00000	Averaged	

GEL Laboratories LLC

Data file : /chem/MSD6.i/s062509.b/s6f2525.d
Lab Smp Id: WBN090602-09.1 Client Smp ID: MEGAICV
Inj Date : 26-JUN-2009 03:11
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090602-09.1|40 PPM|1|SVM|1|MEGAICV
Misc Info : |MSD8270|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m
Meth Date : 26-Jun-2009 14:49 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 02:48 Cal File: s6f2524.d
Als bottle: 25 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGA.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.087	4.087	(1.000)	354067	40.0000	
* 29 Naphthalene-d8	136	4.957	4.957	(1.000)	1383449	40.0000	
* 46 Acenaphthene-d10	164	6.228	6.228	(1.000)	765412	40.0000	
* 67 Phenanthrene-d10	188	7.422	7.422	(1.000)	1322524	40.0000	
* 91 Chrysene-d12	240	9.875	9.875	(1.000)	1289318	40.0000	
* 98 Perylene-d12	264	11.698	11.698	(1.000)	1228266	40.0000	
$ 3 2-Fluorophenol	112	3.251	3.251	(0.796)	398350	40.0000	41.4
$ 5 Phenol-d5	99	3.787	3.787	(0.927)	509259	40.0000	39.5
$ 20 Nitrobenzene-d5	82	4.451	4.451	(0.898)	520376	40.0000	42.4
$ 39 2-Fluorobiphenyl	172	5.704	5.704	(0.916)	802365	40.0000	41.3
$ 60 2,4,6-Tribromophenol	329	6.834	6.834	(1.097)	112977	40.0000	39.9
$ 81 p-Terphenyl-d14	244	8.810	8.810	(0.892)	882648	40.0000	42.9
1 N-Methyl-N-nitrosomethylamine	74	2.540	2.540	(0.621)	264746	40.0000	44.4
2 Pyridine	79	2.581	2.581	(0.632)	348391	40.0000	40.4
4 Aniline	66	3.863	3.863	(0.945)	229829	40.0000	40.0
6 Phenol	94	3.798	3.798	(0.929)	508392	40.0000	39.8(Q)
7 bis(2-Chloroethyl) ether	63	3.875	3.875	(0.948)	395815	40.0000	39.9
8 2-Chlorophenol	128	3.946	3.946	(0.965)	400461	40.0000	40.5
203 n-Decane	43	3.928	3.928	(0.961)	610847	40.0000	38.6
9 1,3-Dichlorobenzene	146	4.051	4.051	(0.991)	462325	40.0000	41.2
11 1,4-Dichlorobenzene	146	4.098	4.098	(1.003)	439517	40.0000	40.3
13 1,2-Dichlorobenzene	146	4.204	4.204	(1.029)	389615	40.0000	39.1
14 bis(2-Chloroisopropyl)ether	45	4.228	4.228	(1.035)	947227	40.0000	43.3
12 Benzyl alcohol	108	4.145	4.145	(1.014)	281979	40.0000	41.4
15 o-Cresol	107	4.193	4.193	(1.026)	284406	40.0000	37.7
18 m,p-Cresols	107	4.298	4.298	(1.052)	429488	40.0000	40.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.322	4.322	(1.058)	316033	40.0000	42.0
19 Hexachloroethane	117	4.434	4.434	(1.085)	178259	40.0000	40.7
21 Nitrobenzene	77	4.463	4.463	(0.900)	514553	40.0000	46.1
22 Isophorone	82	4.616	4.616	(0.931)	946851	40.0000	45.1
23 2-Nitrophenol	139	4.681	4.681	(0.944)	208674	40.0000	43.6
24 2,4-Dimethylphenol	122	4.663	4.663	(0.941)	657926	40.0000	46.2
25 bis(2-Chloroethoxy)methane	93	4.734	4.734	(0.955)	483889	40.0000	41.3
26 2,4-Dichlorophenol	162	4.840	4.840	(0.976)	344759	40.0000	42.6
27 Benzoic acid	105	4.722	4.722	(0.953)	372552	40.0000	49.4
28 1,2,4-Trichlorobenzene	180	4.904	4.904	(0.989)	367210	40.0000	40.0
30 Naphthalene	128	4.975	4.975	(1.004)	1104913	40.0000	35.3(Q)
204 alpha-Terpineol	59	4.945	4.945	(0.998)	413141	40.0000	40.6
31 4-Chloroaniline	127	4.987	4.987	(1.006)	556582	40.0000	42.4
32 Hexachlorobutadiene	225	5.040	5.040	(1.017)	223939	40.0000	40.3
33 4-Chloro-3-methylphenol	107	5.292	5.292	(1.068)	368422	40.0000	42.5
34 2-Methylnaphthalene	142	5.457	5.457	(1.101)	742112	40.0000	43.8
35 1-Methylnaphthalene	142	5.534	5.534	(1.116)	687710	40.0000	37.2
36 Hexachlorocyclopentadiene	237	5.563	5.563	(0.893)	171510	40.0000	43.2
205 2,3-Dichloroaniline	161	5.651	5.651	(0.907)	393048	40.0000	40.9
37 2,4,6-Trichlorophenol	196	5.645	5.645	(0.906)	248901	40.0000	40.3
38 2,4,5-Trichlorophenol	196	5.669	5.669	(0.910)	279210	40.0000	42.9
40 2-Chloronaphthalene	162	5.816	5.816	(0.934)	736248	40.0000	40.8
42 o-Nitroaniline	65	5.869	5.869	(0.942)	287920	40.0000	41.4
41 m-Nitroaniline	138	6.169	6.169	(0.991)	196814	40.0000	44.0
43 Dimethylphthalate	163	5.975	5.975	(0.959)	830243	40.0000	40.3
44 2,6-Dinitrotoluene	165	6.034	6.034	(0.969)	213643	40.0000	43.6
50 2,4-Dinitrotoluene	165	6.334	6.334	(1.017)	293377	40.0000	44.9
45 Acenaphthylene	152	6.128	6.128	(0.984)	1128481	40.0000	40.7
47 Acenaphthene	154	6.251	6.251	(1.004)	663132	40.0000	37.9
48 2,4-Dinitrophenol	184	6.239	6.239	(1.002)	89613	40.0000	39.7
49 Dibenzofuran	168	6.381	6.381	(1.025)	987984	40.0000	41.1
51 Diethylphthalate	149	6.492	6.492	(1.042)	821249	40.0000	40.1
52 4-Nitrophenol	139	6.251	6.251	(1.004)	137997	40.0000	41.8
53 Fluorene	166	6.645	6.645	(1.067)	781431	40.0000	38.7
54 4-Chlorophenylphenylether	204	6.616	6.616	(1.062)	403058	40.0000	41.0
55 2-Methyl-4,6-dinitrophenol	198	6.657	6.657	(0.897)	174281	40.0000	51.2
56 p-Nitroaniline	138	6.639	6.639	(1.066)	178536	40.0000	45.6
133 Diphenylamine	169	6.704	6.704	(0.903)	678665	40.0000	41.2
58 1,2-Diphenylhydrazine	77	6.745	6.745	(0.909)	932740	40.0000	41.9
61 4-Bromophenylphenylether	248	7.010	7.010	(0.945)	228404	40.0000	39.9
63 Hexachlorobenzene	284	7.086	7.086	(0.955)	238209	40.0000	39.4
65 Pentachlorophenol	266	7.234	7.234	(0.975)	157280	40.0000	43.5
206 n-Octadecane	57	7.216	7.216	(0.972)	718448	40.0000	40.5
68 Phenanthrene	178	7.439	7.439	(1.002)	1134592	40.0000	38.6
69 Anthracene	178	7.486	7.486	(1.009)	118369	40.0000	40.2
72 Di-n-butylphthalate	149	7.833	7.833	(1.055)	1359822	40.0000	41.5
76 Fluoranthene	202	8.498	8.498	(1.145)	1222916	40.0000	41.2

Compounds	QUANT SIC MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	8.716	8.716	(0.883)	1240958	40.0000	38.6
85 Butylbenzylphthalate	149	9.245	9.245	(0.936)	616547	40.0000	41.0
89 Benzo(a)anthracene	228	9.857	9.857	(0.998)	1215558	40.0000	39.3
92 Chrysene	228	9.898	9.898	(1.002)	1156333	40.0000	39.1
93 bis(2-Ethylhexyl)phthalate	149	9.775	9.775	(0.990)	818569	40.0000	41.0
94 Di-n-octylphthalate	149	10.474	10.474	(0.895)	1403169	40.0000	39.6
95 Benzo(b)fluoranthene	252	11.127	11.127	(0.951)	1122171	40.0000	38.4(H)
96 Benzo(k)fluoranthene	252	11.169	11.169	(0.955)	1162499	40.0000	40.1
97 Benzo(a)pyrene	252	11.610	11.610	(0.992)	1058650	40.0000	41.8
99 Indeno(1,2,3-cd)pyrene	276	13.657	13.657	(1.167)	992079	40.0000	41.3
100 Dibenzo(a,h)anthracene	278	13.674	13.674	(1.169)	829731	40.0000	41.4
101 Benzo(ghi)perylene	276	14.257	14.257	(1.219)	881777	40.0000	41.6
126 m-Dinitrobenzene	168	6.016	6.016	(0.966)	148211	40.0000	42.0
130 2,3,4,6-Tetrachlorophenol	232	6.457	6.457	(1.037)	218802	40.0000	37.8
143 Dinoseb	211	7.357	7.357	(0.991)	203767	40.0000	39.6
173 Carbazole	167	7.598	7.598	(1.024)	1148011	40.0000	47.4
184 p-Benzoquinone	54	3.557	3.557	(0.870)	55314	40.0000	34.4
192 Methoxychlor	227	9.727	9.727	(0.985)	776273	40.0000	43.9
211 p-Toluidine	106	4.363	4.363	(1.068)	359620	40.0000	35.9(H)
210 m-Toluidine	106	4.381	4.381	(1.072)	620587	40.0000	43.1
26 Phthalic anhydride	104	5.492	5.492	(1.108)	240268	40.0000	48.4
179 Dibenzo(a,e)pyrene	302	18.845	18.845	(1.611)	325067	40.0000	25.7
214 1,4-Dinitrobenzene	75	5.957	5.957	(0.957)	200762	40.0000	42.4
215 2-Ethoxyethanol	59	2.381	2.381	(0.583)	332528	40.0000	43.0
216 Methylenebis(2-chloroaniline)	231	9.792	9.792	(0.992)	212648	40.0000	44.0(Q)
M 225 Trichlorophenols	196				528111	80.0000	83.3
M 226 Tetrachlorophenols	232				218802	40.0000	37.8
M 227 Benzo(b,k)fluoranthene	252				2284670	80.0000	78.5

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD6.i/s062509.b/s6f2525.d

Date : 26-JUN-2009 03:11

Client ID: MEGAICV

Sample Info: IWBN090602-09,1140 PPMI1ISVMI1IMEGAICV

Column phase: J&W DB-5MS

Instrument: MSD6.i

Operator: JMB3

Column diameter: 0.20

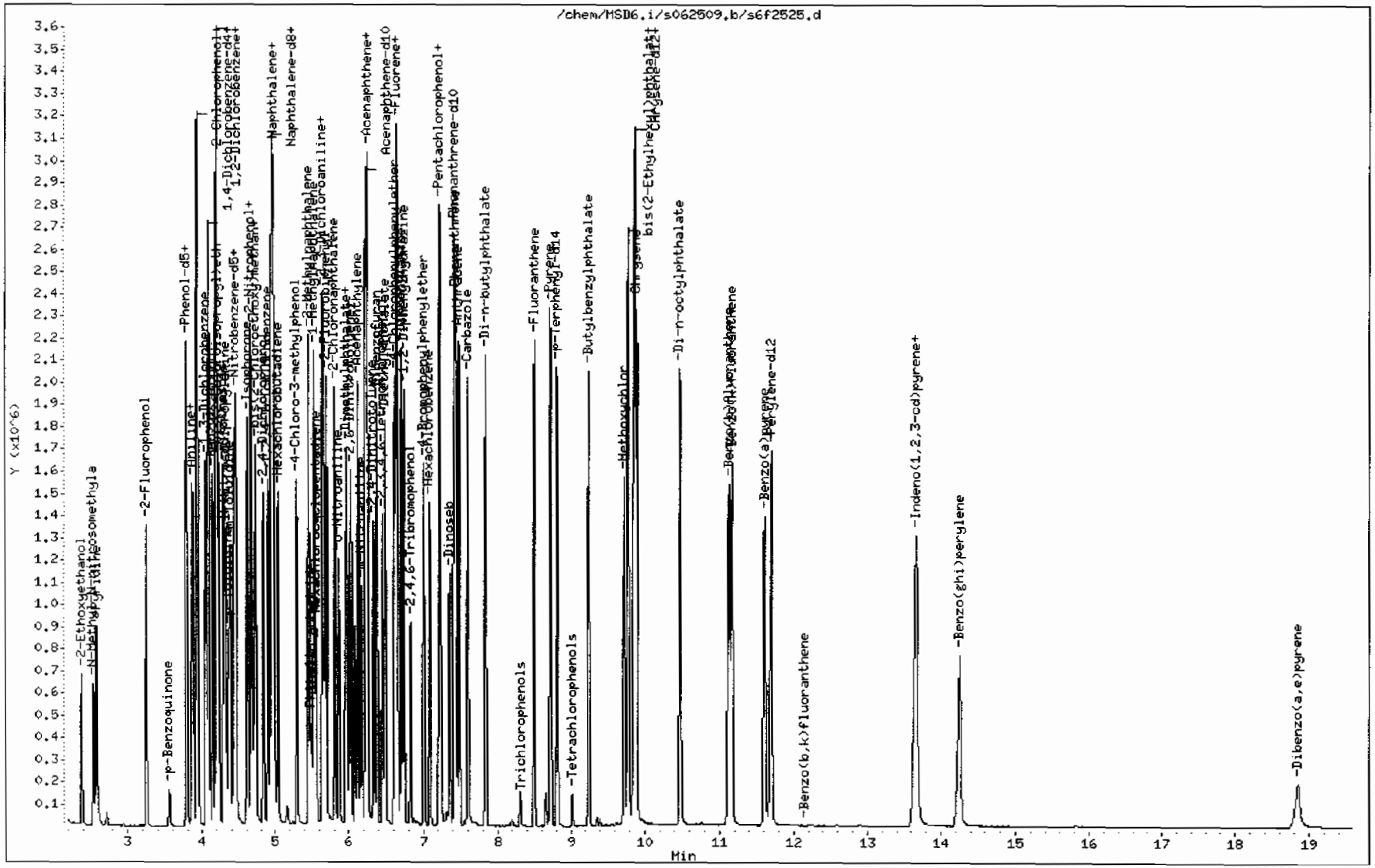

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:39
Lab File ID: s6f2526.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090528-08.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.97573	0.85474	0.85474	0.000	-12.39909	60.00000	Averaged
16 Acetophenone	1.26337	1.26773	1.26773	0.000	0.34482	60.00000	Averaged
189 Caprolactam	0.09432	0.09882	0.09882	0.000	4.78143	60.00000	Averaged
208 1,1'-Biphenyl	1.13640	1.15541	1.15541	0.000	1.67248	60.00000	Averaged
207 Atrazine	0.04266	0.04589	0.04589	0.000	7.56664	60.00000	Averaged
77 Benzidine	0.36104	0.32162	0.32162	0.000	-10.91903	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.30024	0.32436	0.32436	0.000	8.03186	60.00000	Averaged
102 1,4-Dioxane	0.39975	0.51116	0.51116	0.000	27.86716	60.00000	Averaged
103 Methyl methacrylate	0.20683	0.26052	0.26052	0.000	25.95766	60.00000	Averaged
104 Ethyl methacrylate	0.87106	1.06719	1.06719	0.000	22.51586	60.00000	Averaged
105 2-Picoline	1.35671	1.40000	1.40000	0.000	3.19115	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.56293	0.57743	0.57743	0.000	2.57564	60.00000	Averaged
107 Methyl methanesulfonate	0.61309	0.63913	0.63913	0.000	4.24822	60.00000	Averaged
108 N-Nitrosodiethylamine	0.53166	0.53602	0.53602	0.000	0.81888	60.00000	Averaged
109 Ethyl Methanesulfonate	0.74019	0.88027	0.88027	0.000	18.92575	60.00000	Averaged
110 Pentachloroethane	0.33280	0.45452	0.45452	0.000	36.57239	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.55735	0.55511	0.55511	0.000	-0.40075	60.00000	Averaged
113 N-Nitrosomorpholine	0.86727	0.88353	0.88353	0.000	1.87499	60.00000	Averaged
114 o-Toluidine	1.83427	1.88300	1.88300	0.000	2.65656	60.00000	Averaged
115 N-Nitrosopiperidine	0.15500	0.15559	0.15559	0.000	0.38169	60.00000	Averaged
116 a,a-Dimethylphenethylamine	1.10408	1.17215	1.17215	0.000	6.16470	60.00000	Averaged
118 2,6-Dichlorophenol	0.24042	0.24211	0.24211	0.000	0.70381	60.00000	Averaged
119 Hexachloropropene	0.12501	0.18290	0.18290	0.000	46.31422	60.00000	Averaged
120 p-Phenylenediamine	0.26729	0.28686	0.28686	0.000	7.32163	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	39.88942	40.00000	0.23719	0.000	-0.27646	60.00000	Linear
122 Safrole	0.20783	0.24376	0.24376	0.000	17.29032	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.43759	0.46722	0.46722	0.000	6.77091	60.00000	Averaged
124 Isosafrole	0.36281	0.47792	0.47792	0.000	31.72494	60.00000	Averaged
125 1,4-Naphthoquinone	0.35063	0.35471	0.35471	0.000	1.16483	60.00000	Averaged
127 Pentachlorobenzene	0.38763	0.40301	0.40301	0.000	3.96753	60.00000	Averaged
128 1-Naphthylamine	0.89054	0.93465	0.93465	0.000	4.95356	60.00000	Averaged
129 2-Naphthylamine	0.97412	0.97382	0.97382	0.000	-0.03014	60.00000	Averaged
131 5-Nitro-o-toluidine	0.30362	0.31239	0.31239	0.000	2.88681	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.14108	0.18201	0.18201	0.000	29.01178	60.00000	Averaged
137 Phenacetin	0.29473	0.31290	0.31290	0.000	6.16301	60.00000	Averaged
138 Diallate	0.25260	0.25908	0.25908	0.000	2.56483	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:39
Lab File ID: s6f2526.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090528-08.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
140 4-Aminobiphenyl	0.56927	0.63568	0.63568	0.000	11.66505	60.00000	Averaged
141 Pentachloronitrobenzene	0.07491	0.07940	0.07940	0.000	5.98449	60.00000	Averaged
142 Pronamide	0.24710	0.26338	0.26338	0.000	6.59100	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.02496	0.03127	0.03127	0.000	25.30185	60.00000	Averaged
147 Methapyrilene	0.60851	0.60510	0.60510	0.000	-0.55987	60.00000	Averaged
148 Isodrin	0.10457	0.10307	0.10307	0.000	-1.42951	60.00000	Averaged
149 Aramite	0.05203	0.04863	0.04863	0.000	-6.54350	60.00000	Averaged
150 Kepone	0.07915	0.08086	0.08086	0.000	2.16027	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28775	0.29792	0.29792	0.000	3.53436	60.00000	Averaged
152 Chlorobenzilate	0.27158	0.28026	0.28026	0.000	3.19449	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.52592	0.54011	0.54011	0.000	2.69836	60.00000	Averaged
155 2-Acetylaminofluorene	0.33797	0.36567	0.36567	0.000	8.19644	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.46186	0.43514	0.43514	0.000	-5.78438	60.00000	Averaged
158 3-Methylcholanthrene	0.41975	0.42534	0.42534	0.000	1.33299	60.00000	Averaged
212 Cis Diallate	0.28854	0.31803	0.31803	0.000	10.21791	60.00000	Averaged
213 Trans Diallate	0.29717	0.30480	0.30480	0.000	2.56483	60.00000	Averaged

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Data file : /chem/MSD6.i/s062509.b/s6f2526.d
Lab Smp Id: WBN090528-08.1 Client Smp ID: APICV
Inj Date : 26-JUN-2009 03:39
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090528-08.1|40 PPM|1|SVM|1|APICV
Misc Info : |MSD8270|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m
Meth Date : 26-Jun-2009 14:49 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 02:48 Cal File: s6f2524.d
Als bottle: 26 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.081	4.081	(1.000)	304698	40.0000	
* 29 Naphthalene-d8	136	4.957	4.957	(1.000)	1096680	40.0000	
* 46 Acenaphthene-d10	164	6.222	6.222	(1.000)	642057	40.0000	
* 67 Phenanthrene-d10	188	7.416	7.416	(1.000)	1121204	40.0000	
* 91 Chrysene-d12	240	9.863	9.863	(1.000)	1119311	40.0000	
* 98 Perylene-d12	264	11.686	11.686	(1.000)	997466	40.0000	
209 Benzaldehyde	77	3.805	3.805	(0.932)	260439	40.0000	35.0
16 Acetophenone	105	4.334	4.334	(1.062)	386274	40.0000	40.1
189 Caprolactam	113	5.228	5.228	(1.055)	108379	40.0000	41.9
208 1,1'-Biphenyl	154	5.781	5.781	(0.929)	741838	40.0000	40.7
207 Atrazine	173	7.104	7.104	(0.958)	51448	40.0000	43.0
77 Benzidine	184	8.581	8.581	(0.870)	359991	40.0000	35.6
90 3,3'-Dichlorobenzidine	252	9.792	9.792	(0.993)	363058	40.0000	43.2
102 1,4-Dioxane	88	2.381	2.381	(0.583)	155748	40.0000	51.1
103 Methyl methacrylate	100	2.375	2.375	(0.582)	79380	40.0000	50.4
104 Ethyl methacrylate	69	2.758	2.758	(0.676)	325170	40.0000	49.0
105 2-Picoline	93	2.958	2.958	(0.725)	426578	40.0000	41.3
106 N-Nitrosomethylethylamine	88	2.999	2.999	(0.735)	175941	40.0000	41.0
107 Methyl methanesulfonate	80	3.158	3.158	(0.774)	194743	40.0000	41.7
108 N-Nitrosodiethylamine	102	3.399	3.399	(0.833)	163323	40.0000	40.3
109 Ethyl Methanesulfonate	79	3.558	3.558	(0.872)	268218	40.0000	47.6
110 Pentachloroethane	167	3.905	3.905	(0.957)	138491	40.0000	54.6
111 N-Nitrosopyrrolidine	100	4.322	4.322	(1.059)	169142	40.0000	39.8(Q)
113 N-Nitrosomorpholine	56	4.340	4.340	(1.063)	269211	40.0000	40.7
114 o-Toluidine	106	4.357	4.357	(1.068)	573745	40.0000	41.1
115 N-Nitrosopiperidine	114	4.563	4.563	(0.920)	170631	40.0000	40.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.834	4.834	(0.975)	1285469	40.0000	42.5
118 2,6-Dichlorophenol	162	4.999	4.999	(1.008)	265518	40.0000	40.3
119 Hexachloropropene	213	5.028	5.028	(1.014)	200586	40.0000	58.5
120 p-Phenylenediamine	108	5.234	5.234	(1.056)	314590	40.0000	42.9
121 N-Nitrosodi-n-butylamine	84	5.199	5.199	(1.049)	260119	40.0000	39.9(T)
122 Safrole	162	5.369	5.369	(1.083)	267328	40.0000	46.9
123 1,2,4,5 Tetrachlorobenzene	216	5.575	5.575	(0.896)	299983	40.0000	42.7
124 Isosafrole	162	5.740	5.740	(0.922)	306850	40.0000	52.7
125 1,4-Naphthoquinone	158	5.928	5.928	(0.953)	227745	40.0000	40.5
127 Pentachlorobenzene	250	6.340	6.340	(1.019)	258754	40.0000	41.6
128 1-Naphthylamine	143	6.434	6.434	(1.034)	600100	40.0000	42.0
129 2-Naphthylamine	143	6.487	6.487	(1.043)	625251	40.0000	40.0
131 5-Nitro-o-toluidine	152	6.628	6.628	(1.065)	200571	40.0000	41.2
136 1,3,5-Trinitrobenzene	75	6.875	6.875	(0.927)	204074	40.0000	51.6
137 Phenacetin	108	6.922	6.922	(0.933)	350821	40.0000	42.5(Q)
138 Diallate	86	6.916	6.916	(0.933)	290478	40.0000	41.0
140 4-Aminobiphenyl	169	7.222	7.222	(0.974)	712723	40.0000	44.7
141 Pentachloronitrobenzene	237	7.246	7.246	(0.977)	89021	40.0000	42.4(Q)
142 Pronamide	173	7.234	7.234	(0.975)	295305	40.0000	42.6
146 4-Nitroquinoline-1-oxide	101	8.093	8.093	(1.091)	35063	40.0000	50.1
147 Methapyrilene	58	8.128	8.128	(1.096)	678443	40.0000	39.8
148 Isodrin	193	8.363	8.363	(1.128)	115566	40.0000	39.4
149 Aramite	185	8.751	8.751	(1.180)	54521	40.0000	37.4
150 Kepone	272	9.363	9.363	(1.263)	90661	40.0000	40.9
151 p-(Dimethylamino)azobenzene	120	8.940	8.940	(0.906)	333470	40.0000	41.4
152 Chlorobenzilate	251	8.969	8.969	(0.909)	313695	40.0000	41.3
153 3,3'-Dimethylbenzidine	212	9.257	9.257	(0.939)	604549	40.0000	41.1
155 2-Acetylaminofluorene	181	9.504	9.504	(0.964)	409299	40.0000	43.3
157 7,12Dimethylbenz(a)anthracene	256	11.092	11.092	(0.949)	434041	40.0000	37.7
158 3-Methylcholanthrene	268	12.139	12.139	(1.039)	424263	40.0000	40.5(Q)
212 Cis Diallate	86	6.993	6.993	(0.943)	53486	6.00000	6.6
213 Trans Diallate	86	6.916	6.916	(0.933)	290478	34.0000	34.9

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD6.i/s062509.b/s6f2526.d
Date : 26-JUN-2009 03:39
Client ID: APICV
Sample Info: IWBN090528-08,1:40 PPM:1:SVM:1:APICV
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

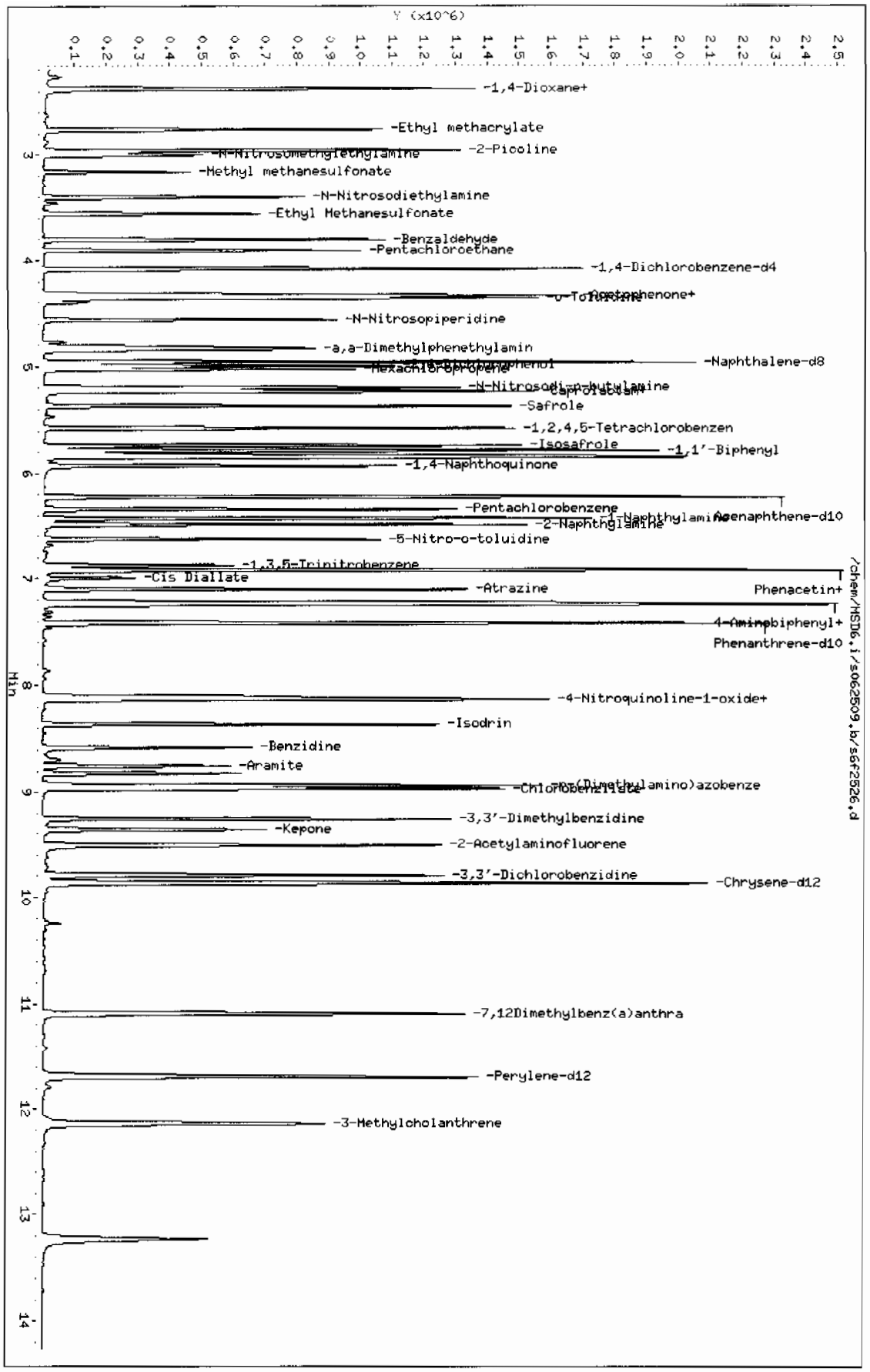

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:23
Lab File ID: s6g0206.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 3 2-Fluorophenol	1.08676	1.12831	1.12831	0.000	3.82353	60.00000	Averaged	
$ 5 Phenol-d5	1.45582	1.49227	1.49227	0.000	2.50400	60.00000	Averaged	
$ 20 Nitrobenzene-d5	0.35436	0.39407	0.39407	0.000	11.20643	60.00000	Averaged	
$ 39 2-Fluorobiphenyl	1.01592	1.04471	1.04471	0.000	2.83333	60.00000	Averaged	
$ 60 2,4,6-Tribromophenol	0.14788	0.13810	0.13810	0.000	-6.60896	60.00000	Averaged	
$ 81 p-Terphenyl-d14	0.63880	0.66247	0.66247	0.000	3.70482	60.00000	Averaged	
1 N-Methyl-N-nitrosomethylami	0.67425	0.73310	0.73310	0.000	8.72858	60.00000	Averaged	
2 Pyridine	0.97491	1.02832	1.02832	0.000	5.47813	60.00000	Averaged	
4 Aniline	0.64934	0.70312	0.70312	0.000	8.28216	60.00000	Averaged	
6 Phenol	1.44200	1.40711	1.40711	0.001	-2.41942	20.00000	Averaged	ccc
7 bis(2-Chloroethyl) ether	1.12091	1.17938	1.17938	0.000	5.21677	60.00000	Averaged	
8 2-Chlorophenol	1.11681	1.13042	1.13042	0.000	1.21929	60.00000	Averaged	
203 n-Decane	1.78602	1.91923	1.91923	0.000	7.45900	60.00000	Averaged	
9 1,3-Dichlorobenzene	1.26663	1.29412	1.29412	0.000	2.17103	60.00000	Averaged	
11 1,4-Dichlorobenzene	1.23080	1.24722	1.24722	0.001	1.33431	20.00000	Averaged	ccc
13 1,2-Dichlorobenzene	1.12537	1.12714	1.12714	0.000	0.15733	60.00000	Averaged	
14 bis(2-Chloroisopropyl)ether	2.47134	2.82765	2.82765	0.000	14.41807	60.00000	Averaged	
12 Benzyl alcohol	0.76891	0.63216	0.63216	0.000	-17.78510	60.00000	Averaged	
15 o-Cresol	0.85308	0.83588	0.83588	0.000	-2.01656	60.00000	Averaged	
18 m,p-Cresols	1.19930	1.15750	1.15750	0.000	-3.48553	60.00000	Averaged	
17 N-Nitrosodipropylamine	0.85085	0.90475	0.90475	0.050	6.33522	60.00000	Averaged	spcc
19 Hexachloroethane	0.49505	0.51342	0.51342	0.000	3.70932	60.00000	Averaged	
21 Nitrobenzene	0.32264	0.36425	0.36425	0.000	12.89478	60.00000	Averaged	
22 Isophorone	0.60747	0.66831	0.66831	0.000	10.01587	60.00000	Averaged	
23 2-Nitrophenol	0.13851	0.15527	0.15527	0.001	12.09447	20.00000	Averaged	ccc
24 2,4-Dimethylphenol	0.41146	0.44124	0.44124	0.000	7.23886	60.00000	Averaged	
25 bis(2-Chloroethoxy)methane	0.33882	0.36971	0.36971	0.000	9.11544	60.00000	Averaged	
26 2,4-Dichlorophenol	0.23380	0.25904	0.25904	0.001	10.79542	20.00000	Averaged	ccc
27 Benzoic acid	0.21793	0.19751	0.19751	0.000	-9.37180	60.00000	Averaged	
28 1,2,4-Trichlorobenzene	0.26511	0.28363	0.28363	0.000	6.98256	60.00000	Averaged	
30 Naphthalene	0.90387	0.82015	0.82015	0.000	-9.26165	60.00000	Averaged	
204 alpha-Terpineol	0.29387	0.31444	0.31444	0.000	7.00079	60.00000	Averaged	
31 4-Chloroaniline	0.37979	0.41570	0.41570	0.000	9.45722	60.00000	Averaged	
32 Hexachlorobutadiene	0.16053	0.17089	0.17089	0.001	6.45345	20.00000	Averaged	ccc
33 4-Chloro-3-methylphenol	0.25080	0.27325	0.27325	0.001	8.95121	20.00000	Averaged	ccc
34 2-Methylnaphthalene	0.48988	0.50965	0.50965	0.000	4.03536	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:23
Lab File ID: s6g0206.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35	1-Methylnaphthalene	0.53368	0.52183	0.52183	0.000	-2.22170	60.00000	Averaged	
36	Hexachlorocyclopentadiene	0.20750	0.23431	0.23431	0.050	12.92275	60.00000	Averaged	spcc
205	2,3-Dichloroaniline	0.50238	0.51906	0.51906	0.000	3.32134	60.00000	Averaged	
37	2,4,6-Trichlorophenol	0.32270	0.32113	0.32113	0.001	-0.48691	20.00000	Averaged	ccc
38	2,4,5-Trichlorophenol	0.34000	0.35213	0.35213	0.000	3.56705	60.00000	Averaged	
40	2-Chloronaphthalene	0.94346	0.97660	0.97660	0.000	3.51231	60.00000	Averaged	
42	o-Nitroaniline	0.36358	0.40457	0.40457	0.000	11.27602	60.00000	Averaged	
41	m-Nitroaniline	0.23385	0.26672	0.26672	0.000	14.05402	60.00000	Averaged	
43	Dimethylphthalate	1.07582	1.11310	1.11310	0.000	3.46535	60.00000	Averaged	
44	2,6-Dinitrotoluene	0.25592	0.27155	0.27155	0.000	6.10537	60.00000	Averaged	
50	2,4-Dinitrotoluene	0.34150	0.36231	0.36231	0.000	6.09442	60.00000	Averaged	
45	Acenaphthylene	1.44935	1.50434	1.50434	0.000	3.79414	60.00000	Averaged	
47	Acenaphthene	0.91388	0.92113	0.92113	0.001	0.79367	20.00000	Averaged	ccc
48	2,4-Dinitrophenol	0.11804	0.11374	0.11374	0.050	-3.64134	60.00000	Averaged	spcc
49	Dibenzofuran	1.25504	1.31103	1.31103	0.000	4.46149	60.00000	Averaged	
51	Diethylphthalate	1.06896	1.10009	1.10009	0.000	2.91189	60.00000	Averaged	
52	4-Nitrophenol	0.17244	0.19304	0.19304	0.050	11.94824	60.00000	Averaged	spcc
53	Fluorene	1.05447	1.05139	1.05139	0.000	-0.29229	60.00000	Averaged	
54	4-Chlorophenylphenylether	0.51415	0.53477	0.53477	0.000	4.00901	60.00000	Averaged	
55	2-Methyl-4,6-dinitrophenol	42.29887	40.00000	0.10751	0.000	5.74716	60.00000	Linear	
56	p-Nitroaniline	0.20474	0.24991	0.24991	0.000	22.06351	60.00000	Averaged	
133	Diphenylamine	0.49779	0.53755	0.53755	0.001	7.98719	20.00000	Averaged	ccc
58	1,2-Diphenylhydrazine	0.67266	0.74729	0.74729	0.000	11.09423	60.00000	Averaged	
61	4-Bromophenylphenylether	0.17305	0.18267	0.18267	0.000	5.55959	60.00000	Averaged	
63	Hexachlorobenzene	0.18286	0.19234	0.19234	0.000	5.18591	60.00000	Averaged	
65	Pentachlorophenol	0.10942	0.10683	0.10683	0.001	-2.37139	20.00000	Averaged	ccc
206	n-Octadecane	0.53677	0.59933	0.59933	0.000	11.65511	60.00000	Averaged	
68	Phenanthrene	0.88975	0.91089	0.91089	0.000	2.37649	60.00000	Averaged	
69	Anthracene	0.89272	0.90931	0.90931	0.000	1.85866	60.00000	Averaged	
72	Di-n-butylphthalate	0.99025	1.06352	1.06352	0.000	7.39958	60.00000	Averaged	
76	Fluoranthene	0.89748	0.92407	0.92407	0.001	2.96243	20.00000	Averaged	ccc
79	Pyrene	0.99649	1.02035	1.02035	0.000	2.39472	60.00000	Averaged	
85	Butylbenzylphthalate	0.46624	0.50215	0.50215	0.000	7.70208	60.00000	Averaged	
89	Benzo(a)anthracene	0.95971	0.99455	0.99455	0.000	3.63016	60.00000	Averaged	
92	Chrysene	0.91745	0.92376	0.92376	0.000	0.68859	60.00000	Averaged	
93	bis(2-Ethylhexyl)phthalate	0.61977	0.67699	0.67699	0.000	9.23263	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:23
Lab File ID: s6g0206.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	1.15298	1.28440	1.28440	0.001	11.39792	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.95265	1.03463	1.03463	0.000	8.60609	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.94372	0.94756	0.94756	0.000	0.40705	60.00000	Averaged	
	97 Benzo(a)pyrene	0.82425	0.87958	0.87958	0.001	6.71371	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78267	0.80601	0.80601	0.000	2.98287	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	39.72438	40.00000	0.64883	0.000	-0.68905	60.00000	Linear	
	101 Benzo(ghi)perylene	0.69055	0.67356	0.67356	0.000	-2.46054	60.00000	Averaged	
	126 m-Dinitrobenzene	0.18444	0.20039	0.20039	0.000	8.64357	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30233	0.32744	0.32744	0.000	8.30430	60.00000	Averaged	
	143 Dinoseb	42.21911	40.00000	0.16506	0.000	5.54778	60.00000	Linear	
	173 Carbazole	0.73178	0.87747	0.87747	0.000	19.90939	60.00000	Averaged	
	184 p-Benzoquinone	0.18162	0.15324	0.15324	0.000	-15.62694	60.00000	Averaged	
	192 Methoxychlor	0.54804	0.58810	0.58810	0.000	7.31014	60.00000	Averaged	
	211 p-Toluidine	1.13033	1.07232	1.07232	0.000	-5.13235	60.00000	Averaged	
	210 m-Toluidine	1.62748	1.68076	1.68076	0.000	3.27396	60.00000	Averaged	
	26 Phthalic anhydride	29.77353	40.00000	0.10265	0.000	-25.56617	60.00000	Linear	
	214 1,4-Dinitrobenzene	0.24737	0.28015	0.28015	0.000	13.25405	60.00000	Averaged	
	215 2-Ethoxyethanol	0.87382	0.89123	0.89123	0.000	1.99160	60.00000	Averaged	
	216 Methylenebis(2-chloroaniline	0.14973	0.14106	0.14106	0.000	-5.79437	60.00000	Averaged	
M	225 Trichlorophenols	0.33135	0.33663	0.33663	0.000	1.59298	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30233	0.32744	0.32744	0.000	8.30430	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.94818	0.99110	0.99110	0.000	4.52587	60.00000	Averaged	

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Data file : /chem/MSD6.i/s070209.b/s6g0206.d
Lab Smp Id: WBN090626-05.3 Client Smp ID: MEGACVS
Inj Date : 02-JUL-2009 15:23
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090626-05.3|40 PPM|1|SVM|1|MEGACVS
Misc Info : |MSD8270|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 03-Jul-2009 09:01 jen00986 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGA.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.999	3.999	(1.000)	532813	40.0000	
* 29 Naphthalene-d8	136	4.875	4.875	(1.000)	1990426	40.0000	
* 46 Acenaphthene-d10	164	6.134	6.134	(1.000)	1102206	40.0000	
* 67 Phenanthrene-d10	188	7.316	7.316	(1.000)	1854401	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1763017	40.0000	
* 98 Perylene-d12	264	11.492	11.492	(1.000)	1624774	40.0000	
$ 3 2-Fluorophenol	112	3.175	3.175	(0.794)	601180	40.0000	41.5
$ 5 Phenol-d5	99	3.710	3.710	(0.928)	795101	40.0000	41.0
$ 20 Nitrobenzene-d5	82	4.363	4.363	(0.895)	784361	40.0000	44.5
$ 39 2-Fluorobiphenyl	172	5.616	5.616	(0.916)	1151481	40.0000	41.1
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.098)	152217	40.0000	37.4
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	1167945	40.0000	41.5
1 N-Methyl-N-nitrosomethylamine	74	2.469	2.469	(0.618)	390605	40.0000	43.5
2 Pyridine	79	2.505	2.505	(0.626)	547903	40.0000	42.2
4 Aniline	66	3.781	3.781	(0.946)	374634	40.0000	43.3
6 Phenol	94	3.722	3.722	(0.931)	749726	40.0000	39.0
7 bis(2-Chloroethyl) ether	63	3.799	3.799	(0.950)	628391	40.0000	42.1
8 2-Chlorophenol	128	3.863	3.863	(0.966)	602305	40.0000	40.5
203 n-Decane	43	3.846	3.846	(0.962)	1022593	40.0000	43.0
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.993)	689526	40.0000	40.9
11 1,4-Dichlorobenzene	146	4.010	4.010	(1.003)	664534	40.0000	40.5
13 1,2-Dichlorobenzene	146	4.116	4.116	(1.029)	600556	40.0000	40.1
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.035)	1506611	40.0000	45.8
12 Benzyl alcohol	108	4.069	4.069	(1.018)	336824	40.0000	32.9
15 o-Cresol	107	4.116	4.116	(1.029)	445366	40.0000	39.2
18 m,p-Cresols	107	4.222	4.222	(1.056)	616730	40.0000	38.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.240	4.240	(1.060)	482063	40.0000	42.5
19 Hexachloroethane	117	4.346	4.346	(1.087)	273555	40.0000	41.5
21 Nitrobenzene	77	4.381	4.381	(0.899)	725009	40.0000	45.2
22 Isophorone	82	4.534	4.534	(0.930)	1330220	40.0000	44.0
23 2-Nitrophenol	139	4.593	4.593	(0.942)	309044	40.0000	44.8
24 2,4-Dimethylphenol	122	4.599	4.599	(0.943)	878262	40.0000	42.9
25 bis(2-Chloroethoxy)methane	93	4.652	4.652	(0.954)	735874	40.0000	43.6
26 2,4-Dichlorophenol	162	4.763	4.763	(0.977)	515601	40.0000	44.3
27 Benzoic acid	105	4.640	4.640	(0.952)	393126	40.0000	36.2
28 1,2,4-Trichlorobenzene	180	4.822	4.822	(0.989)	564537	40.0000	42.8
30 Naphthalene	128	4.887	4.887	(1.002)	1632454	40.0000	36.3
204 alpha-Terpineol	59	4.863	4.863	(0.998)	625875	40.0000	42.8
31 4-Chloroaniline	127	4.899	4.899	(1.005)	827426	40.0000	43.8
32 Hexachlorobutadiene	225	4.951	4.951	(1.016)	340148	40.0000	42.6
33 4-Chloro-3-methylphenol	107	5.216	5.216	(1.070)	543875	40.0000	43.6
34 2-Methylnaphthalene	142	5.369	5.369	(1.101)	1014417	40.0000	41.6
35 1-Methylnaphthalene	142	5.446	5.446	(1.117)	1038657	40.0000	39.1
36 Hexachlorocyclopentadiene	237	5.475	5.475	(0.893)	258259	40.0000	45.2
205 2,3-Dichloroaniline	161	5.563	5.563	(0.907)	572113	40.0000	41.3
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.906)	353953	40.0000	39.8
38 2,4,5-Trichlorophenol	196	5.587	5.587	(0.911)	388118	40.0000	41.4
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	1076417	40.0000	41.4
42 o-Nitroaniline	65	5.781	5.781	(0.942)	445924	40.0000	44.5
41 m-Nitroaniline	138	6.081	6.081	(0.991)	293977	40.0000	45.6
43 Dimethylphthalate	163	5.887	5.887	(0.960)	1226862	40.0000	41.4
44 2,6-Dinitrotoluene	165	5.946	5.946	(0.969)	299299	40.0000	42.4
50 2,4-Dinitrotoluene	165	6.245	6.245	(1.018)	399339	40.0000	42.4
45 Acenaphthylene	152	6.034	6.034	(0.984)	1658090	40.0000	41.5
47 Acenaphthene	154	6.157	6.157	(1.004)	1015280	40.0000	40.3
48 2,4-Dinitrophenol	184	6.151	6.151	(1.003)	125369	40.0000	38.5
49 Dibenzofuran	168	6.281	6.281	(1.024)	1445026	40.0000	41.8
51 Diethylphthalate	149	6.398	6.398	(1.043)	1212524	40.0000	41.2
52 4-Nitrophenol	139	6.175	6.175	(1.007)	212768	40.0000	44.8
53 Fluorene	166	6.545	6.545	(1.067)	1158845	40.0000	39.9
54 4-Chlorophenylphenylether	204	6.522	6.522	(1.063)	589422	40.0000	41.6
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.896)	199362	40.0000	42.3
56 p-Nitroaniline	138	6.545	6.545	(1.067)	275449	40.0000	48.8
133 Diphenylamine	169	6.610	6.610	(0.904)	996840	40.0000	43.2
58 1,2-Diphenylhydrazine	77	6.645	6.645	(0.908)	1385767	40.0000	44.4
61 4-Bromophenylphenylether	248	6.910	6.910	(0.945)	338752	40.0000	42.2
63 Hexachlorobenzene	284	6.987	6.987	(0.955)	356675	40.0000	42.1
65 Pentachlorophenol	266	7.140	7.140	(0.976)	198099	40.0000	39.0
206 n-Octadecane	57	7.116	7.116	(0.973)	1111404	40.0000	44.7
68 Phenanthrene	178	7.334	7.334	(1.002)	1689161	40.0000	41.0
69 Anthracene	178	7.375	7.375	(1.008)	1686229	40.0000	40.7
72 Di-n-butylphthalate	149	7.728	7.728	(1.056)	1972200	40.0000	43.0
76 Fluoranthene	202	8.381	8.381	(1.146)	1713590	40.0000	41.2

Compounds	QUANT STD MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	8.598	8.598	(0.882)	1798896	40.0000	41.0
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	885291	40.0000	43.1
89 Benzo(a)anthracene	228	9.728	9.728	(0.998)	1753413	40.0000	41.4
92 Chrysene	228	9.769	9.769	(1.002)	1628609	40.0000	40.3
93 bis(2-Ethylhexyl)phthalate	149	9.651	9.651	(0.990)	1193548	40.0000	43.7
94 Di-n-octylphthalate	149	10.333	10.333	(0.899)	2086852	40.0000	44.6
95 Benzo(b)fluoranthene	252	10.951	10.951	(0.953)	1681042	40.0000	43.4
96 Benzo(k)fluoranthene	252	10.986	10.986	(0.956)	1539572	40.0000	40.2
97 Benzo(a)pyrene	252	11.410	11.410	(0.993)	1429123	40.0000	42.7
99 Indeno(1,2,3-cd)pyrene	276	13.357	13.357	(1.162)	1309588	40.0000	41.2
100 Dibenzo(a,h)anthracene	278	13.374	13.374	(1.164)	1054202	40.0000	39.7
101 Benzo(ghi)perylene	276	13.927	13.927	(1.212)	1094385	40.0000	39.0
126 m-Dinitrobenzene	168	5.928	5.928	(0.966)	220866	40.0000	43.4
130 2,3,4,6-Tetrachlorophenol	232	6.363	6.363	(1.037)	360903	40.0000	43.3
143 Dinoseb	211	7.257	7.257	(0.992)	306082	40.0000	42.2
173 Carbazole	167	7.492	7.492	(1.024)	1627187	40.0000	48.0
184 p-Benzoquinone	54	3.481	3.481	(0.871)	81649	40.0000	33.7
192 Methoxychlor	227	9.604	9.604	(0.986)	1036832	40.0000	42.9
211 p-Toluidine	106	4.281	4.281	(1.071)	571344	40.0000	37.9
210 m-Toluidine	106	4.299	4.299	(1.075)	895530	40.0000	41.3
26 Phthalic anhydride	104	5.404	5.404	(1.109)	204320	40.0000	29.8
214 1,4-Dinitrobenzene	75	5.869	5.869	(0.957)	308787	40.0000	45.3
215 2-Ethoxyethanol	59	2.310	2.310	(0.578)	474857	40.0000	40.8
216 Methylenebis(2-chloroaniline)	231	9.669	9.669	(0.992)	248688	40.0000	37.7
M 225 Trichlorophenols	196				742071	80.0000	81.3
M 226 Tetrachlorophenols	232				360903	40.0000	43.3
M 227 Benzo(b,k)fluoranthene	252				3220614	80.0000	83.6

Data File: /chem/MSD6.i/s070209.b/s6g0206.d
Date : 02-JUL-2009 15:23
Client ID: MEGACVS
Sample Info: IWBN090626-05,3140 PPM11ISVM11MEGACVS
Column phase: J&W DB-5HS

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

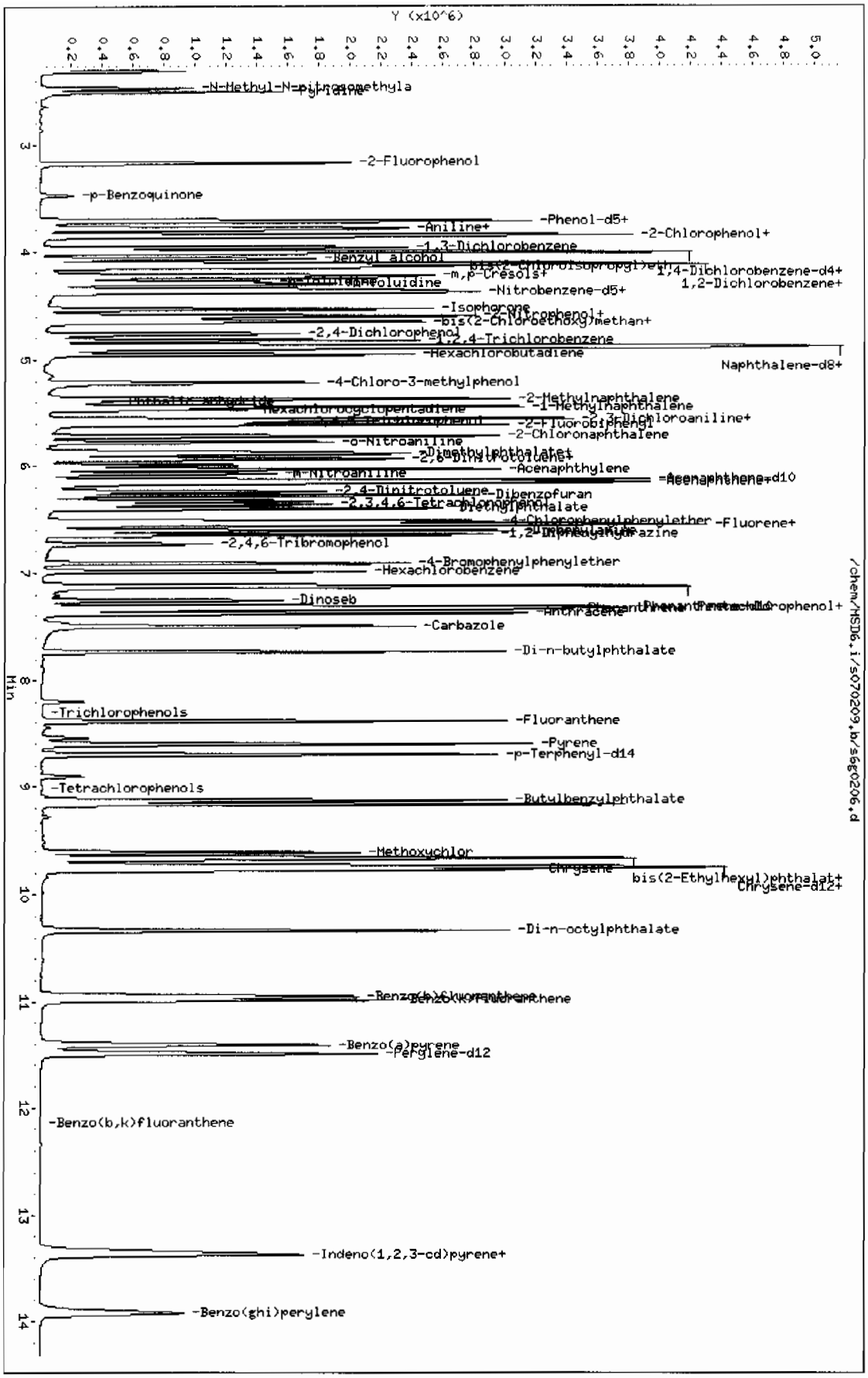

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:46
Lab File ID: s6g0207.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090619-01.2 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.97573	1.03187	1.03187	0.000	5.75443	60.00000	Averaged
16 Acetophenone	1.26337	1.26297	1.26297	0.000	-0.03191	60.00000	Averaged
189 Caprolactam	0.09432	0.09953	0.09953	0.000	5.52832	60.00000	Averaged
208 1,1'-Biphenyl	1.13640	1.18279	1.18279	0.000	4.08182	60.00000	Averaged
207 Atrazine	0.04266	0.04348	0.04348	0.000	1.91761	60.00000	Averaged
77 Benzidine	0.36104	0.33583	0.33583	0.000	-6.98298	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.30024	0.30754	0.30754	0.000	2.43123	60.00000	Averaged
102 1,4-Dioxane	0.39975	0.40522	0.40522	0.000	1.36663	60.00000	Averaged
103 Methyl methacrylate	0.20683	0.20550	0.20550	0.000	-0.64360	60.00000	Averaged
104 Ethyl methacrylate	0.87106	0.89774	0.89774	0.000	3.06323	60.00000	Averaged
105 2-Picoline	1.35671	1.34961	1.34961	0.000	-0.52344	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.56293	0.57673	0.57673	0.000	2.45212	60.00000	Averaged
107 Methyl methanesulfonate	0.61309	0.60978	0.60978	0.000	-0.53948	60.00000	Averaged
108 N-Nitrosodiethylamine	0.53166	0.53462	0.53462	0.000	0.55558	60.00000	Averaged
109 Ethyl Methanesulfonate	0.74019	0.73954	0.73954	0.000	-0.08808	60.00000	Averaged
110 Pentachloroethane	0.33280	0.34067	0.34067	0.000	2.36301	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.55735	0.58087	0.58087	0.000	4.22073	60.00000	Averaged
113 N-Nitrosomorpholine	0.86727	0.89584	0.89584	0.000	3.29424	60.00000	Averaged
114 o-Toluidine	1.83427	1.82655	1.82655	0.000	-0.42090	60.00000	Averaged
115 N-Nitrosopiperidine	0.15500	0.16433	0.16433	0.000	6.02393	60.00000	Averaged
116 a,a-Dimethylphenethylamine	1.10408	1.02914	1.02914	0.000	-6.78737	60.00000	Averaged
118 2,6-Dichlorophenol	0.24042	0.23816	0.23816	0.000	-0.94037	60.00000	Averaged
119 Hexachloropropene	0.12501	0.13512	0.13512	0.000	8.08915	60.00000	Averaged
120 p-Phenylenediamine	0.26729	0.11686	0.11686	0.000	-56.27932	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	40.55536	40.00000	0.24066	0.000	1.38840	60.00000	Linear
122 Safrole	0.20783	0.21373	0.21373	0.000	2.84081	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.43759	0.44987	0.44987	0.000	2.80615	60.00000	Averaged
124 Isosafrole	0.36281	0.37654	0.37654	0.000	3.78265	60.00000	Averaged
125 1,4-Naphthoquinone	0.35063	0.37868	0.37868	0.000	7.99976	60.00000	Averaged
127 Pentachlorobenzene	0.38763	0.39994	0.39994	0.000	3.17578	60.00000	Averaged
128 1-Naphthylamine	0.89054	0.92251	0.92251	0.000	3.59017	60.00000	Averaged
129 2-Naphthylamine	0.97412	1.02369	1.02369	0.000	5.08909	60.00000	Averaged
131 5-Nitro-o-toluidine	0.30362	0.32164	0.32164	0.000	5.93339	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.14108	0.16767	0.16767	0.000	18.84568	60.00000	Averaged
137 Phenacetin	0.29473	0.31778	0.31778	0.000	7.82078	60.00000	Averaged
138 Diallate	0.25260	0.27826	0.27826	0.000	10.15770	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:46
Lab File ID: s6g0207.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090619-01.2 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
140 4-Aminobiphenyl	0.56927	0.60710	0.60710	0.000	6.64578	60.00000	Averaged
141 Pentachloronitrobenzene	0.07491	0.07646	0.07646	0.000	2.06416	60.00000	Averaged
142 Pronamide	0.24710	0.25909	0.25909	0.000	4.85452	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.02496	0.02193	0.02193	0.000	-12.13855	60.00000	Averaged
147 Methapyrilene	0.60851	0.60164	0.60164	0.000	-1.12915	60.00000	Averaged
148 Isodrin	0.10457	0.10704	0.10704	0.000	2.36022	60.00000	Averaged
149 Aramite	0.05203	0.05543	0.05543	0.000	6.52426	60.00000	Averaged
150 Kepone	0.07915	0.03649	0.03649	0.000	-53.90031	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28775	0.30970	0.30970	0.000	7.62643	60.00000	Averaged
152 Chlorobenzilate	0.27158	0.29308	0.29308	0.000	7.91547	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.52592	0.53622	0.53622	0.000	1.95851	60.00000	Averaged
155 2-Acetylaminofluorene	0.33797	0.35084	0.35084	0.000	3.80702	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.46186	0.50569	0.50569	0.000	9.49022	60.00000	Averaged
158 3-Methylcholanthrene	0.41975	0.42089	0.42089	0.000	0.27175	60.00000	Averaged
212 Cis Diallate	0.28854	0.31206	0.31206	0.000	8.14908	60.00000	Averaged
213 Trans Diallate	0.29717	0.32736	0.32736	0.000	10.15770	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0207.d
Lab Smp Id: WBN090619-01.2 Client Smp ID: APCVS
Inj Date : 02-JUL-2009 15:46
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090619-01.2|40 PPM|1|SVM|1|APCVS
Misc Info : |MSD8270|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 16:07 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.998	3.998	(1.000)	551809	40.0000	
* 29 Naphthalene-d8	136	4.869	4.869	(1.000)	1923187	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.128	(1.000)	1106992	40.0000	
* 67 Phenanthrene-d10	188	7.316	7.316	(1.000)	1902426	40.0000	
* 91 Chrysene-d12	240	9.739	9.739	(1.000)	1761637	40.0000	
* 98 Perylene-d12	264	11.486	11.486	(1.000)	1422731	40.0000	
209 Benzaldehyde	77	3.722	3.722	(0.931)	569397	40.0000	42.3
16 Acetophenone	105	4.251	4.251	(1.063)	696917	40.0000	40.0
189 Caprolactam	113	5.145	5.145	(1.057)	191413	40.0000	42.2
208 1,1'-Biphenyl	154	5.692	5.692	(0.929)	1309337	40.0000	41.6
207 Atrazine	173	7.004	7.004	(0.957)	82711	40.0000	40.8
77 Benzidine	184	8.475	8.475	(0.870)	591609	40.0000	37.2
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	541779	40.0000	41.0
102 1,4-Dioxane	88	2.316	2.316	(0.579)	223603	40.0000	40.5
103 Methyl methacrylate	100	2.310	2.310	(0.578)	113397	40.0000	39.7
104 Ethyl methacrylate	69	2.687	2.687	(0.672)	495383	40.0000	41.2
105 2-Picoline	93	2.887	2.887	(0.722)	744725	40.0000	39.8
106 N-Nitrosomethylethylamine	88	2.922	2.922	(0.731)	318246	40.0000	41.0
107 Methyl methanesulfonate	80	3.081	3.081	(0.770)	336483	40.0000	39.8
108 N-Nitrosodiethylamine	102	3.322	3.322	(0.831)	295006	40.0000	40.2
109 Ethyl Methanesulfonate	79	3.481	3.481	(0.871)	408083	40.0000	40.0
110 Pentachloroethane	167	3.822	3.822	(0.956)	187984	40.0000	40.9
111 N-Nitrosopyrrolidine	100	4.240	4.240	(1.060)	320530	40.0000	41.7(Q)
113 N-Nitrosomorpholine	56	4.257	4.257	(1.065)	494334	40.0000	41.3
114 o-Toluidine	106	4.281	4.281	(1.071)	1007905	40.0000	39.8
115 N-Nitrosopiperidine	114	4.481	4.481	(0.920)	316045	40.0000	42.4

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.728	4.728	(0.971)	1979237	40.0000	37.3
118 2,6-Dichlorophenol	162	4.916	4.916	(1.010)	458022	40.0000	39.6
119 Hexachloropropene	213	4.940	4.940	(1.014)	259859	40.0000	43.2
120 p-Phenylenediamine	108	4.869	4.869	(1.000)	224743	40.0000	17.5
121 N-Nitrosodi-n-butylamine	84	5.110	5.110	(1.050)	462839	40.0000	40.6(T)
122 Safrole	162	5.281	5.281	(1.085)	411045	40.0000	41.1
123 1,2,4,5-Tetrachlorobenzene	216	5.487	5.487	(0.895)	498005	40.0000	41.1
124 Isosafrole	162	5.651	5.651	(0.922)	416825	40.0000	41.5
125 1,4-Naphthoquinone	158	5.840	5.840	(0.953)	419192	40.0000	43.2
127 Pentachlorobenzene	250	6.251	6.251	(1.020)	442729	40.0000	41.3
128 1-Naphthylamine	143	6.340	6.340	(1.035)	1021212	40.0000	41.4
129 2-Naphthylamine	143	6.398	6.398	(1.044)	1133219	40.0000	42.0
131 5-Nitro-o-toluidine	152	6.534	6.534	(1.066)	356051	40.0000	42.4
136 1,3,5-Trinitrobenzene	75	6.787	6.787	(0.928)	318981	40.0000	47.5
137 Phenacetin	108	6.828	6.828	(0.933)	604558	40.0000	43.1(Q)
138 Diallate	86	6.816	6.816	(0.932)	529362	40.0000	44.1
140 4-Aminobiphenyl	169	7.128	7.128	(0.974)	1154969	40.0000	42.6
141 Pentachloronitrobenzene	237	7.145	7.145	(0.977)	145461	40.0000	40.8(Q)
142 Pronamide	173	7.139	7.139	(0.976)	492902	40.0000	41.9
146 4-Nitroquinoline-1-oxide	101	7.986	7.986	(1.092)	41717	40.0000	35.1
147 Methapyrilene	58	8.016	8.016	(1.096)	1144572	40.0000	39.5
148 Isodrin	193	8.245	8.245	(1.127)	203628	40.0000	40.9
149 Aramite	185	8.639	8.639	(1.181)	105445	40.0000	42.6
150 Kepone	272	9.239	9.239	(1.263)	69416	40.0000	18.4
151 p-(Dimethylamino)azobenzene	120	8.828	8.828	(0.906)	545578	40.0000	43.0
152 Chlorobenzilate	251	8.857	8.857	(0.909)	516298	40.0000	43.2
153 3,3'-Dimethylbenzidine	212	9.145	9.145	(0.939)	944620	40.0000	40.8
155 2-Acetylaminofluorene	181	9.392	9.392	(0.964)	618045	40.0000	41.5
157 7,12Dimethylbenz(a)anthracene	256	10.922	10.922	(0.951)	719462	40.0000	43.8
158 3-Methylcholanthrene	268	11.916	11.916	(1.037)	598808	40.0000	40.1(Q)
212 Cis Diallate	86	6.892	6.892	(0.942)	89050	6.00000	6.5
213 Trans Diallate	86	6.816	6.816	(0.932)	529362	34.0000	37.4

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD6.i/s070209.b/s6g0207.d
Date : 02-JUL-2009 15:46
Client ID: APCVS
Sample Info: MWBN090619-01,2|40 PPM11|SVM11|APCVS
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

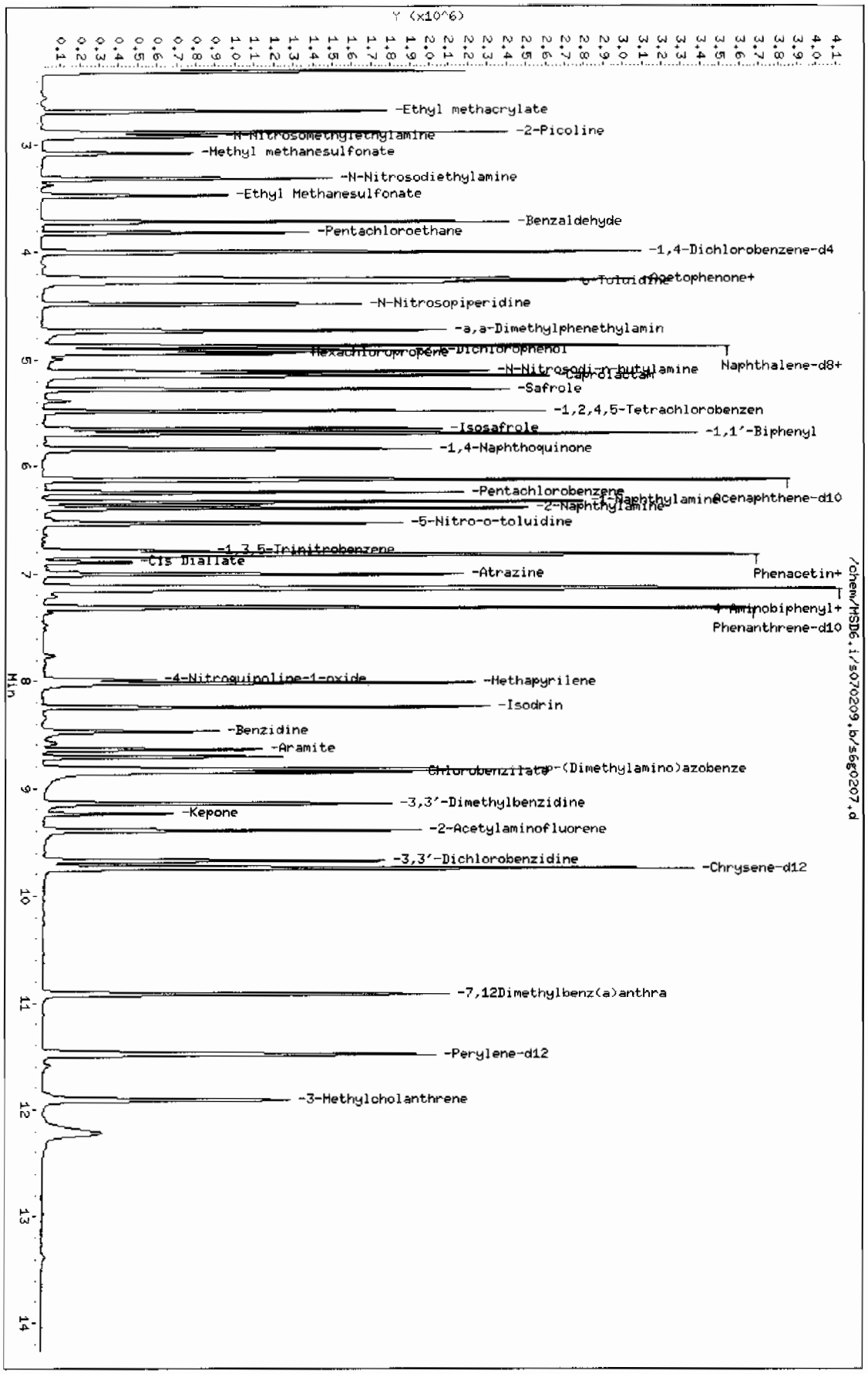

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QC Data

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVHF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

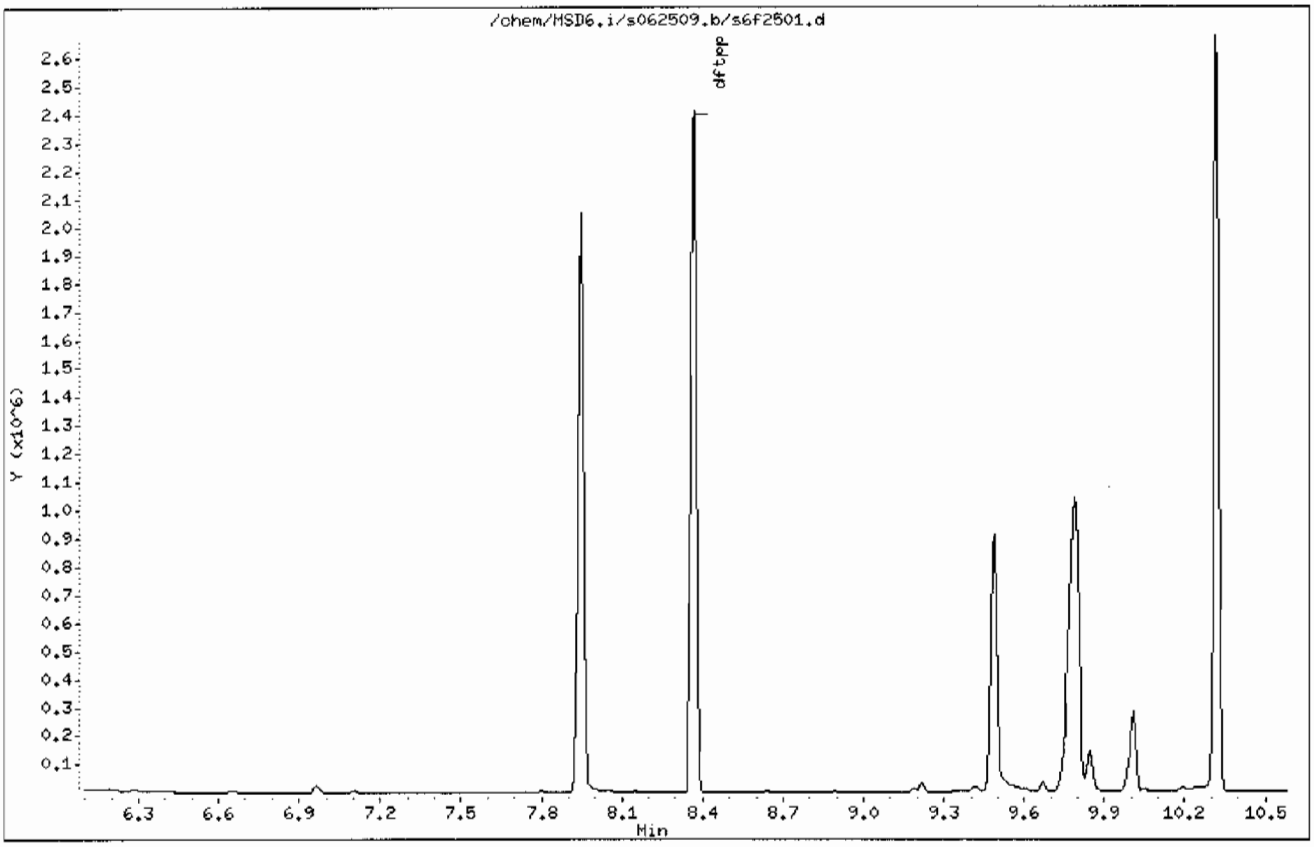

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

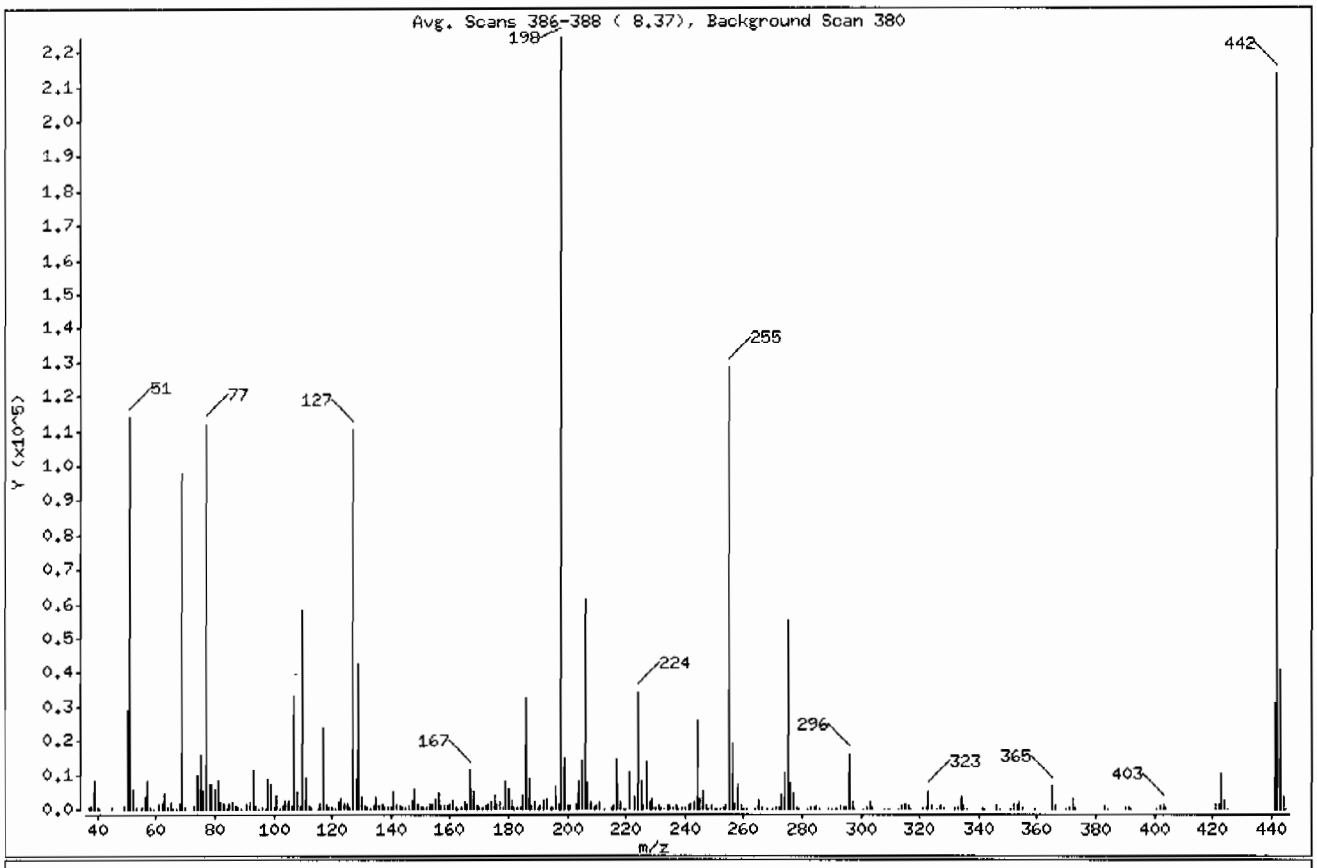

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	50.84
68	Less than 2.00% of mass 69	0.67 (1.54)
69	Mass 69 relative abundance	43.71
70	Less than 2.00% of mass 69	0.23 (0.52)
127	40.00 - 60.00% of mass 198	49.23
197	Less than 1.00% of mass 198	0.63
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 30.00% of mass 198	24.65
365	Greater than 1.00% of mass 198	3.08
441	Present, but less than mass 443	13.75
442	Greater than 40.00% of mass 198	95.04
443	17.00 - 23.00% of mass 442	18.18 (19.13)

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2501.d
Spectrum: Avg. Scans 386-388 (8.37), Background Scan 380
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	380	124.00	1407	199.00	15144	284.00	383
38.00	1194	125.00	1361	200.00	1160	285.00	878
39.00	8314	126.00	524	201.00	948	286.00	208
40.00	384	127.00	110392	203.00	1577	289.00	229
41.00	169	128.00	8539	204.00	8178	290.00	184
45.00	319	129.00	42552	205.00	13970	291.00	113
49.00	818	130.00	3564	206.00	61440	292.00	210
50.00	28640	131.00	777	207.00	7658	293.00	1007
51.00	114008	132.00	427	208.00	2082	294.00	327
52.00	5589	133.00	184	209.00	714	295.00	329
53.00	269	134.00	1125	210.00	964	296.00	15746
55.00	600	135.00	3598	211.00	2306	297.00	2256
56.00	3395	136.00	1287	213.00	140	298.00	102
57.00	8050	137.00	1683	215.00	662	301.00	201
58.00	382	138.00	443	216.00	1197	302.00	291
59.00	88	139.00	273	217.00	14470	303.00	2047
61.00	1368	140.00	528	218.00	2045	304.00	504
62.00	1576	141.00	5154	219.00	209	308.00	241
63.00	4421	142.00	1628	220.00	112	309.00	117
64.00	585	143.00	1204	221.00	11008	310.00	236
65.00	2030	144.00	314	223.00	3513	313.00	103
66.00	106	145.00	276	224.00	34016	314.00	838
67.00	47	146.00	1015	225.00	8500	315.00	1688
68.00	1508	147.00	2825	226.00	936	316.00	908
69.00	98016	148.00	5867	227.00	14012	317.00	147
70.00	508	149.00	1333	228.00	1985	321.00	588
73.00	834	150.00	353	229.00	3012	322.00	306
74.00	10005	151.00	729	230.00	417	323.00	5244
75.00	15723	152.00	303	231.00	1159	324.00	1139
76.00	5327	153.00	1698	232.00	315	326.00	44
77.00	111928	154.00	1345	233.00	210	327.00	881
78.00	7309	155.00	2915	234.00	840	328.00	497
79.00	7052	156.00	4517	235.00	902	332.00	357
80.00	5499	157.00	834	236.00	624	333.00	456
81.00	8440	158.00	964	237.00	1050	334.00	3461

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SWMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2501.d

Spectrum: Avg. Scans 386-388 (8.37), Background Scan 380

Location of Maximum: 198.00

Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	2146	159.00	790	238.00	124	335.00	852
83.00	1796	160.00	1763	239.00	467	336.00	92
84.00	211	161.00	2583	240.00	407	341.00	583
85.00	1335	162.00	743	241.00	794	342.00	104
86.00	2075	163.00	153	242.00	1781	346.00	1054
87.00	1073	164.00	278	243.00	1830	347.00	201
88.00	393	165.00	2121	244.00	25896	351.00	41
89.00	217	166.00	1593	245.00	3280	352.00	1702
91.00	1667	167.00	11253	246.00	4927	353.00	1159
92.00	1971	168.00	5111	247.00	1028	354.00	1868
93.00	11581	169.00	895	248.00	249	355.00	313
94.00	797	170.00	344	249.00	998	359.00	110
95.00	253	171.00	437	250.00	183	365.00	6910
96.00	561	172.00	1023	251.00	251	366.00	1010
97.00	230	173.00	1312	252.00	253	370.00	172
98.00	8937	174.00	2281	253.00	475	371.00	441
99.00	7279	175.00	4324	254.00	922	372.00	3125
100.00	668	176.00	1318	255.00	128088	373.00	714
101.00	4052	177.00	2047	256.00	18968	383.00	855
102.00	250	178.00	673	257.00	1390	384.00	244
103.00	1258	179.00	8395	258.00	7408	390.00	319
104.00	2462	180.00	5434	259.00	1207	391.00	303
105.00	2668	181.00	2410	260.00	171	392.00	169
106.00	834	182.00	477	261.00	241	401.00	159
107.00	32792	183.00	279	264.00	243	402.00	1125
108.00	5081	184.00	657	265.00	2623	403.00	1616
109.00	777	185.00	4121	266.00	496	404.00	580
110.00	58376	186.00	32256	268.00	46	421.00	1682
111.00	9066	187.00	8733	270.00	187	422.00	1471
112.00	1049	188.00	963	271.00	325	423.00	10525
113.00	339	189.00	1896	272.00	365	424.00	2479
115.00	127	190.00	361	273.00	4007	425.00	188
116.00	1669	191.00	974	274.00	10206	441.00	30840
117.00	23752	192.00	2616	275.00	55264	442.00	213120
118.00	1667	193.00	2857	276.00	7518	443.00	40776

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2501.d

Spectrum: Avg. Scans 386-388 (8.37), Background Scan 380

Location of Maximum: 198.00

Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	261	194.00	630	277.00	4827	444.00	3584
120.00	336	195.00	444	278.00	743	445.00	212
121.00	106	196.00	6470	279.00	105		
122.00	2090	197.00	1406	282.00	122		
123.00	3100	198.00	224192	283.00	497		

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Page 1

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

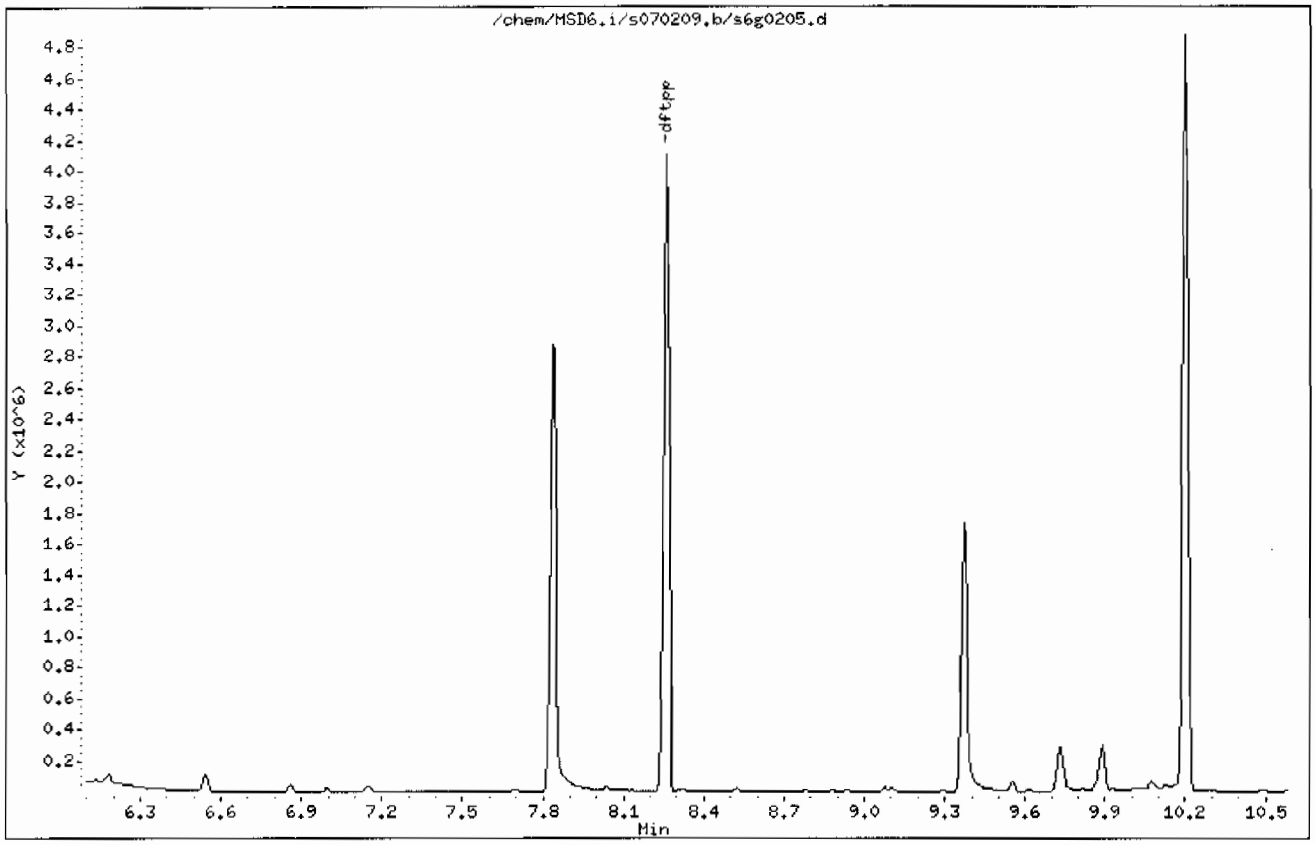

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

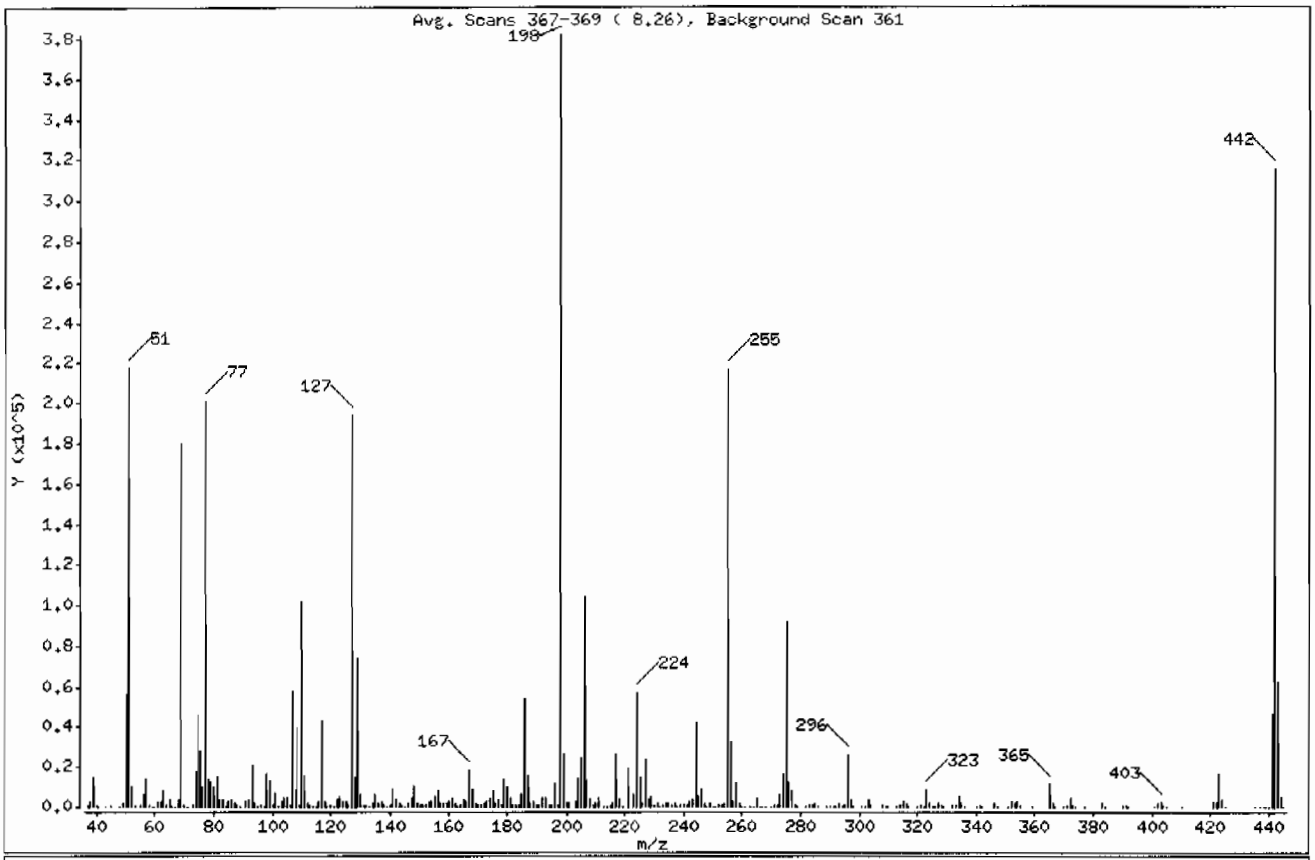

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	57.01
68	Less than 2.00% of mass 69	0.83 (1.76)
69	Mass 69 relative abundance	47.19
70	Less than 2.00% of mass 69	0.25 (0.54)
127	40.00 - 60.00% of mass 198	50.87
197	Less than 1.00% of mass 198	0.16
199	5.00 - 9.00% of mass 198	6.98
275	10.00 - 30.00% of mass 198	24.14
365	Greater than 1.00% of mass 198	3.09
441	Present, but less than mass 443	12.25
442	Greater than 40.00% of mass 198	82.59
443	17.00 - 23.00% of mass 442	16.39 (19.85)

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6g0205.d

Spectrum: Avg. Scans 367-369 (8.26), Background Scan 361

Location of Maximum: 198.00

Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	833	124.00	2365	205.00	24880	294.00	421
38.00	2585	125.00	2415	206.00	104112	295.00	520
39.00	15251	126.00	748	207.00	13523	296.00	26624
40.00	617	127.00	194240	208.00	3480	297.00	3659
41.00	377	128.00	14516	209.00	1072	298.00	313
43.00	22	129.00	74112	210.00	1701	301.00	407
45.00	491	130.00	6290	211.00	4429	302.00	400
48.00	42	131.00	1283	213.00	319	303.00	3155
49.00	1317	132.00	745	214.00	100	304.00	780
50.00	56160	133.00	300	215.00	1105	308.00	440
51.00	217664	134.00	2122	216.00	2186	309.00	304
52.00	10779	135.00	5841	217.00	26072	310.00	313
53.00	530	136.00	2150	218.00	3085	313.00	228
55.00	806	137.00	2930	219.00	355	314.00	1247
56.00	6210	138.00	688	221.00	19424	315.00	2987
57.00	13996	139.00	408	223.00	5905	316.00	1822
58.00	633	140.00	750	224.00	57336	317.00	342
59.00	203	141.00	8565	225.00	15195	320.00	43
60.00	37	142.00	3075	226.00	1554	321.00	763
61.00	2559	143.00	1955	227.00	24032	322.00	437
62.00	2960	144.00	624	228.00	3678	323.00	8545
63.00	7903	145.00	413	229.00	5251	324.00	1624
64.00	975	146.00	1650	230.00	741	325.00	94
65.00	3626	147.00	4705	231.00	1764	326.00	135
66.00	208	148.00	10670	232.00	384	327.00	1541
67.00	195	149.00	2183	233.00	477	328.00	826
68.00	3174	150.00	609	234.00	1466	329.00	168
69.00	180224	151.00	1148	235.00	1769	332.00	633
70.00	973	152.00	684	236.00	1137	333.00	867
71.00	164	153.00	2894	237.00	1902	334.00	5514
73.00	1239	154.00	2267	238.00	277	335.00	1541
74.00	17504	155.00	5143	239.00	960	336.00	179
75.00	28344	156.00	7953	240.00	860	340.00	98
76.00	9392	157.00	1353	241.00	1314	341.00	893
77.00	200704	158.00	1679	242.00	3025	342.00	266

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6g0205.d

Spectrum: Avg. Scans 367-369 (8.26), Background Scan 361

Location of Maximum: 198.00

Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	14191	159.00	1529	243.00	3159	346.00	1658
79.00	12417	160.00	2908	244.00	42168	347.00	332
80.00	9640	161.00	4483	245.00	5477	351.00	180
81.00	14653	162.00	1388	246.00	9025	352.00	2590
82.00	3411	163.00	430	247.00	1746	353.00	1916
83.00	3379	164.00	513	248.00	371	354.00	2863
84.00	333	165.00	3517	249.00	1406	355.00	621
85.00	2547	166.00	2880	250.00	279	359.00	208
86.00	3872	167.00	18640	251.00	297	365.00	11813
87.00	1949	168.00	9033	252.00	477	366.00	1661
88.00	707	169.00	1888	253.00	921	367.00	115
89.00	362	170.00	582	254.00	1562	370.00	291
91.00	2859	171.00	807	255.00	216576	371.00	635
92.00	3122	172.00	1669	256.00	32344	372.00	4691
93.00	21208	173.00	2213	257.00	2322	373.00	1168
94.00	1611	174.00	4321	258.00	12277	374.00	112
95.00	343	175.00	8142	259.00	1840	377.00	152
96.00	1072	176.00	2160	260.00	374	383.00	1318
97.00	431	177.00	3436	261.00	294	384.00	314
98.00	16544	178.00	1195	263.00	91	390.00	584
99.00	13351	179.00	13894	264.00	277	391.00	446
100.00	1116	180.00	9876	265.00	4577	392.00	260
101.00	7374	181.00	4483	266.00	370	401.00	218
102.00	424	182.00	746	267.00	53	402.00	1826
103.00	2426	183.00	506	268.00	83	403.00	2734
104.00	4622	184.00	1083	270.00	245	404.00	994
105.00	4428	185.00	6809	271.00	586	405.00	102
106.00	1283	186.00	54448	272.00	597	410.00	42
107.00	57672	187.00	15438	273.00	6394	421.00	2444
108.00	8936	188.00	1489	274.00	16480	422.00	2400
109.00	1236	189.00	2990	275.00	92208	423.00	16992
110.00	101992	190.00	621	276.00	12593	424.00	3592
111.00	15808	191.00	1309	277.00	8109	425.00	338
112.00	1902	192.00	4496	278.00	1255	435.00	140
113.00	667	193.00	4607	279.00	261	437.00	87

Date : 02-JUL-2009 15:10

Client ID: DFTPP Instrument: MSD6.i

Sample Info: !WBN090624-01!50 PPM!1!SVMF!1!DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS Column diameter: 0.20

Data File: s6g0205.d
Spectrum: Avg. Scans 367-369 (8.26), Background Scan 361
Location of Maximum: 198.00
Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
114.00	172	194.00	905	282.00	191	438.00	134
115.00	220	195.00	564	283.00	935	439.00	135
116.00	2953	196.00	11074	284.00	734	440.00	103
117.00	42760	197.00	592	285.00	1468	441.00	46768
118.00	3037	198.00	381888	286.00	246	442.00	315392
119.00	359	199.00	26656	289.00	295	443.00	62592
120.00	740	200.00	2126	290.00	255	444.00	5690
121.00	244	201.00	1693	291.00	174	445.00	405
122.00	3399	203.00	2743	292.00	414		
123.00	5680	204.00	13914	293.00	2026		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508			**Matrix:**	SOIL
Lab Sample ID:	1201873125				
Client Sample:	QC for batch 881962	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881962	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 16:31	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s6g0209-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	66.7	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	110	333
87-86-5	Pentachlorophenol	U	333	ug/kg	83.3	333
129-00-0	Pyrene	U	33.3	ug/kg	10.0	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	100	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline	U	333	ug/kg	66.7	333
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508			Matrix:	SOIL
Lab Sample ID:	1201873125				
Client Sample:	QC for batch 881962	Client:	LANL010	Project:	QC
Client ID:	MB for batch 881962	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 16:31	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s6g0209-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	66.7	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	66.7	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	478	ug/kg		JA

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Data file : /chem/MSD6.i/s070209.b/s6g0209.d
Lab Smp Id: 1201873125 Client Smp ID: SBLK01
Inj Date : 02-JUL-2009 16:31
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873125|881964|1|SVM|1|SBLK01
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2508.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	3.999	(1.000)	385534	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1450103	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	843657	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1460742	40.0000	
* 91 Chrysene-d12	240	9.739	9.745	(1.000)	1292833	40.0000	
* 98 Perylene-d12	264	11.480	11.492	(1.000)	1018273	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.796)	679032	64.8267	2160
$ 5 Phenol-d5	99	3.704	3.710	(0.926)	975979	69.5554	2320
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	418240	32.5572	1080
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	723214	33.7521	1120
$ 60 2,4,6-Tribromophenol	329	6.728	6.734	(1.098)	178630	57.2734	1910
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	931989	45.1400	1500

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Data file : /chem/MSD6.i/s070209.b/s6g0209.d
Lab Smp Id: 1201873125 Client Smp ID: SBLK01
Inj Date : 02-JUL-2009 16:31
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873125|881964|1|SVM|1|SBLK01
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2508.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2610732	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.010	936678	14.3511859	478	0		0	10

Data File: /chem/MSD6.i/s070209.b/s6g0209.d

Date : 02-JUL-2009 16:31

Client ID: SBLK01

Sample Info: |1201873125|881964|1|SVM|1|SBLK01

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD6.i

Operator: JMB3

Column diameter: 0.20

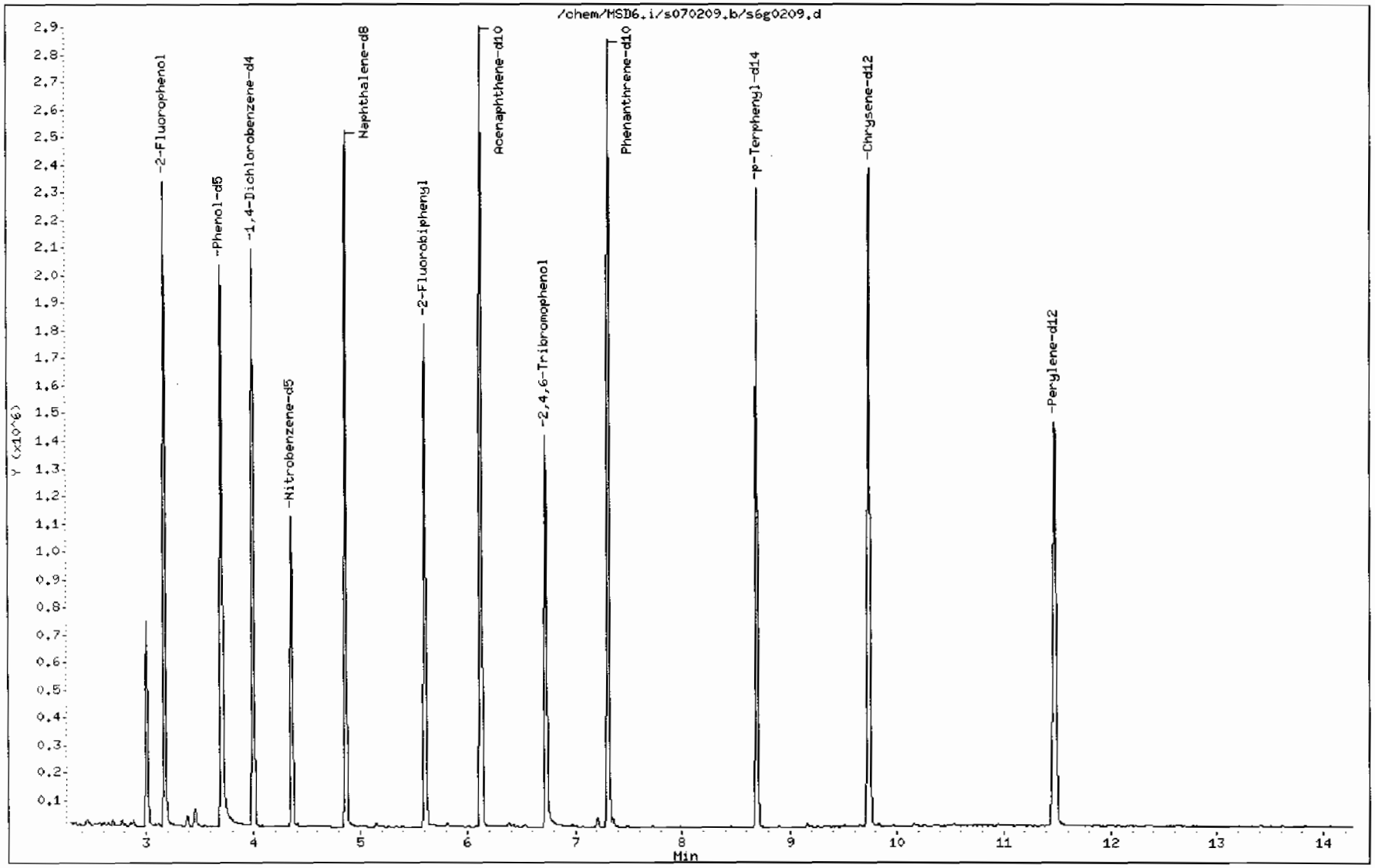

Data File: /chem/MSD6.i/s070209.b/s6g0209.d

Date : 02-JUL-2009 16:31

Client ID: SBLK01

Instrument: MSD6.i

Sample Info: |1201873125188196411|SVM|1|SBLK01

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

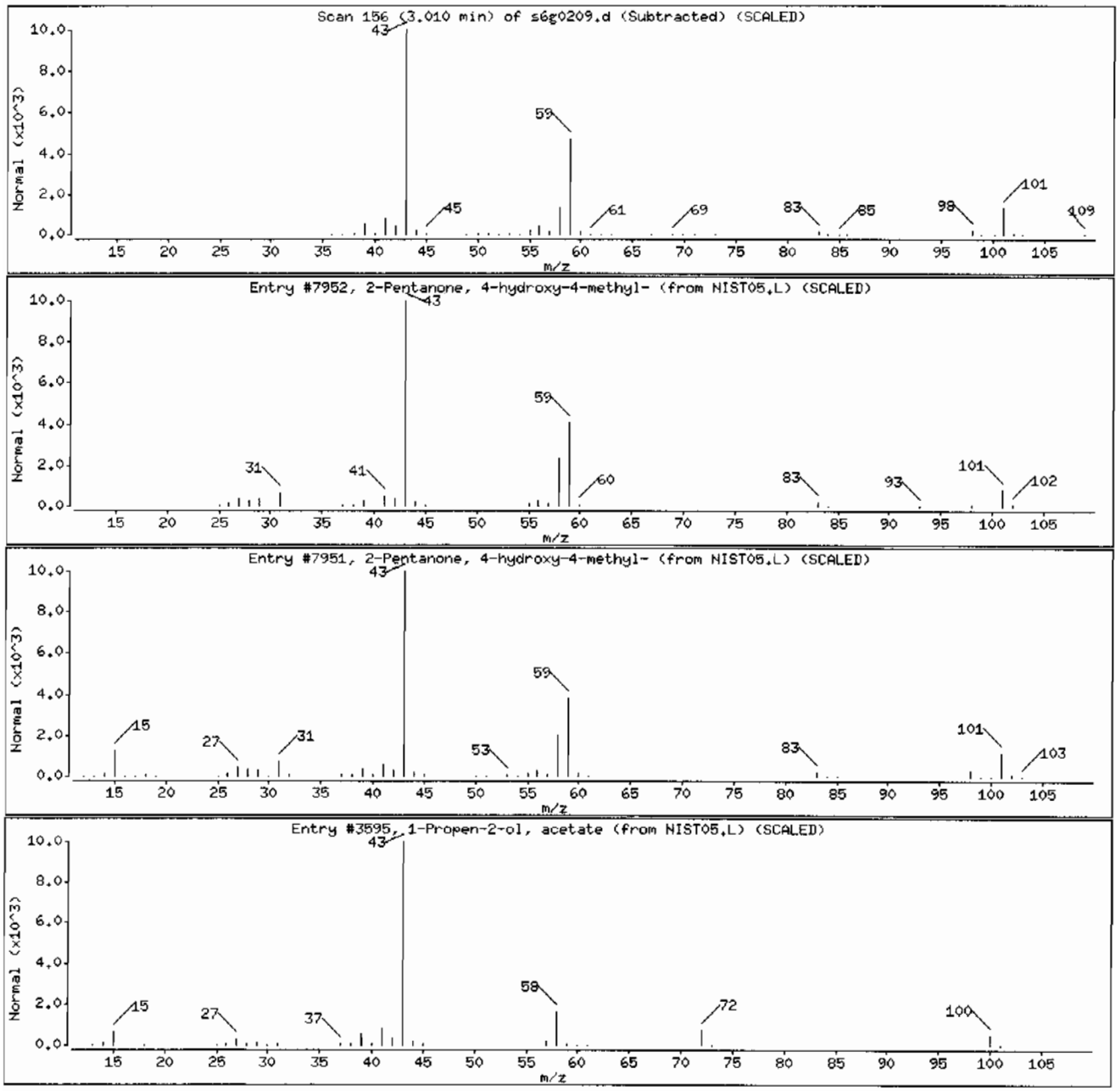

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508			Matrix:	SOIL
Lab Sample ID:	1201873126				
Client Sample:	QC for batch 881962	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 881962	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 16:54	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s6g0210-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1130	ug/kg	66.7	333
108-95-2	Phenol		1090	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1160	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1090	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1140	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1160	ug/kg	66.7	333
83-32-9	Acenaphthene		1100	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene		1170	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1070	ug/kg	110	333
87-86-5	Pentachlorophenol		966	ug/kg	83.3	333
129-00-0	Pyrene		1220	ug/kg	10.0	33.3
110-86-1	Pyridine		1100	ug/kg	66.7	333
62-53-3	Aniline		1300	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether		1130	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1100	ug/kg	66.7	333
100-51-6	Benzyl alcohol		727	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1160	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1290	ug/kg	66.7	333
95-48-7	o-Cresol		1150	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1300	ug/kg	100	333
67-72-1	Hexachloroethane		1080	ug/kg	66.7	333
98-95-3	Nitrobenzene		1210	ug/kg	66.7	333
78-59-1	Isophorone		1190	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1200	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol		1180	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane		1200	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1160	ug/kg	66.7	333
65-85-0	Benzoic acid		1060	ug/kg	167	667
91-20-3	Naphthalene		1030	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1210	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1130	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1260	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1060	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1040	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1180	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1160	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline		1230	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline		1310	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2508			Matrix:	SOIL
Lab Sample ID:	1201873126				
Client Sample:	QC for batch 881962	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 881962	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 16:54	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s6g0210-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1170	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1180	ug/kg	33.3	333
208-96-8	Acenaphthylene		1180	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		818	ug/kg	127	667
132-64-9	Dibenzofuran		1190	ug/kg	66.7	333
84-66-2	Diethylphthalate		1200	ug/kg	66.7	333
86-73-7	Fluorene		1040	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1150	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol		993	ug/kg	66.7	333
100-01-6	4-Nitroaniline		1390	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1200	ug/kg	66.7	333
122-66-7	Azobenzene		1280	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1130	ug/kg	66.7	333
118-74-1	Hexachlorobenzene		1150	ug/kg	66.7	333
85-01-8	Phenanthrene		1120	ug/kg	10.0	33.3
120-12-7	Anthracene		1170	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1250	ug/kg	66.7	333
206-44-0	Fluoranthene		1180	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1310	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1170	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1200	ug/kg	100	333
218-01-9	Chrysene		1240	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1360	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1340	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1210	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1280	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1250	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1200	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1190	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1170	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1170	ug/kg	66.7	333

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0210.d
Lab Smp Id: 1201873126 Client Smp ID: SBLK01LCS
Inj Date : 02-JUL-2009 16:54
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873126|881964|1|SVM|1|SBLK01LCS
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2508.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.999	3.999	(1.000)	373584	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1481824	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	843469	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1482578	40.0000	
* 91 Chrysene-d12	240	9.739	9.745	(1.000)	1335253	40.0000	
* 98 Perylene-d12	264	11.486	11.492	(1.000)	1213021	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.796)	672953	66.3014	2210
$ 5 Phenol-d5	99	3.710	3.710	(0.928)	879576	64.6902	2160
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	462432	35.2266	1170
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	746455	34.8445	1160
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.099)	191160	61.3045	2040
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	865727	40.5985	1350

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.722	3.722	(0.931)	440433	32.7030	1090
8 2-Chlorophenol	128	3.863	3.863	(0.966)	362223	34.7272	1160
11 1,4-Dichlorobenzene	146	4.010	4.010	(1.003)	374967	32.6196	1090
17 N-Nitrosodipropylamine	70	4.228	4.240	(1.057)	270640	34.0574	1140(Q)
28 1,2,4-Trichlorobenzene	180	4.816	4.822	(0.989)	344653	35.0923	1170
33 4-Chloro-3-methylphenol	107	5.222	5.216	(1.072)	323922	34.8644	1160
47 Acenaphthene	154	6.151	6.157	(1.004)	635290	32.9665	1100
50 2,4-Dinitrotoluene	165	6.240	6.245	(1.018)	253739	35.2364	1170
52 4-Nitrophenol	139	6.181	6.175	(1.009)	116785	32.1182	1070
65 Pentachlorophenol	266	7.140	7.140	(0.977)	117589	28.9940	966
79 Pyrene	202	8.598	8.598	(0.883)	1220650	36.6957	1220
2 Pyridine	79	2.522	2.505	(0.631)	301745	33.1395	1100
4 Aniline	66	3.775	3.781	(0.944)	236286	38.9614	1300
7 bis(2-Chloroethyl) ether	63	3.787	3.799	(0.947)	353650	33.7812	1130
9 1,3-Dichlorobenzene	146	3.963	3.969	(0.991)	390447	33.0055	1100
12 Benzyl alcohol	108	4.063	4.069	(1.016)	156588	21.8048	727
13 1,2-Dichlorobenzene	146	4.110	4.116	(1.028)	366674	34.8864	1160
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.035)	893275	38.7013	1290
15 o-Cresol	107	4.116	4.116	(1.029)	275745	34.6091	1150
18 m,p-Cresols	107	4.216	4.222	(1.054)	437431	39.0529	1300
19 Hexachloroethane	117	4.346	4.346	(1.087)	150404	32.5296	1080
21 Nitrobenzene	77	4.375	4.381	(0.899)	434041	36.3137	1210
22 Isophorone	82	4.528	4.534	(0.930)	805560	35.7964	1190
23 2-Nitrophenol	139	4.587	4.593	(0.942)	184261	35.9093	1200
24 2,4-Dimethylphenol	122	4.604	4.599	(0.946)	539831	35.4157	1180
25 bis(2-Chloroethoxy)methane	93	4.646	4.652	(0.954)	451898	36.0025	1200
26 2,4-Dichlorophenol	162	4.757	4.763	(0.977)	302661	34.9441	1160
27 Benzoic acid	105	4.628	4.640	(0.950)	257376	31.8793	1060(Q)
30 Naphthalene	128	4.887	4.887	(1.004)	1036183	30.9454	1030
31 4-Chloroaniline	127	4.899	4.899	(1.006)	508737	36.1591	1200
32 Hexachlorobutadiene	225	4.946	4.951	(1.016)	201349	33.8572	1130
34 2-Methylnaphthalene	142	5.369	5.369	(1.103)	686739	37.8413	1260
36 Hexachlorocyclopentadiene	237	5.469	5.475	(0.892)	139368	31.8524	1060
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.907)	211753	31.1184	1040
38 2,4,5-Trichlorophenol	196	5.593	5.587	(0.913)	252929	35.2785	1180
40 2-Chloronaphthalene	162	5.722	5.722	(0.934)	690475	34.7067	1160
42 o-Nitroaniline	65	5.775	5.781	(0.942)	283763	37.0126	1230
41 m-Nitroaniline	138	6.075	6.081	(0.991)	193628	39.2662	1310
43 Dimethylphthalate	163	5.881	5.887	(0.960)	796727	35.1206	1170
44 2,6-Dinitrotoluene	165	5.940	5.946	(0.969)	191347	35.4574	1180
45 Acenaphthylene	152	6.028	6.034	(0.984)	1084481	35.4846	1180
48 2,4-Dinitrophenol	184	6.146	6.151	(1.003)	61109	24.5504	818(Q)
49 Dibenzofuran	168	6.281	6.281	(1.025)	945478	35.7261	1190
51 Diethylphthalate	149	6.398	6.398	(1.044)	812099	36.0278	1200
53 Fluorene	166	6.545	6.545	(1.068)	693761	31.2009	1040
54 4-Chlorophenylphenylether	204	6.516	6.522	(1.063)	373893	34.4862	1150
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.897)	108986	29.7934	993

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56	p-Nitroaniline	138	6.540	6.545	(1.067)	180488	41.8068	1390
133	Diphenylamine	169	6.604	6.610	(0.903)	661574	35.8568	1200
58	1,2-Diphenylhydrazine	77	6.645	6.645	(0.909)	954615	38.2891	1280
61	4-Bromophenylphenylether	248	6.910	6.910	(0.945)	217012	33.8334	1130
63	Hexachlorobenzene	284	6.981	6.987	(0.955)	233612	34.4688	1150
68	Phenanthrene	178	7.334	7.334	(1.003)	1112413	33.7319	1120
69	Anthracene	178	7.375	7.375	(1.009)	1156483	34.9516	1160
72	Di-n-butylphthalate	149	7.728	7.728	(1.057)	1375243	37.4694	1250
76	Fluoranthene	202	8.381	8.381	(1.146)	1178824	35.4378	1180
85	Butylbenzylphthalate	149	9.128	9.128	(0.937)	611649	39.3001	1310
89	Benzo(a)anthracene	228	9.728	9.728	(0.999)	1123480	35.0687	1170
90	3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	361776	36.0963	1200
92	Chrysene	228	9.769	9.769	(1.003)	1139459	37.2062	1240
93	bis(2-Ethylhexyl)phthalate	149	9.651	9.651	(0.991)	842499	40.7225	1360
94	Di-n-octylphthalate	149	10.328	10.333	(0.899)	1409923	40.3242	1340
95	Benzo(b)fluoranthene	252	10.945	10.951	(0.953)	1050038	36.3467	1210
96	Benzo(k)fluoranthene	252	10.980	10.986	(0.956)	1097093	38.3347	1280
97	Benzo(a)pyrene	252	11.404	11.410	(0.993)	939400	37.5825	1250
99	Indeno(1,2,3-cd)pyrene	276	13.345	13.357	(1.162)	852868	35.9333	1200
100	Dibenzo(a,h)anthracene	278	13.363	13.374	(1.163)	706208	35.5504	1180
101	Benzo(ghi)perylene	276	13.916	13.927	(1.211)	735940	35.1429	1170
1	N-Methyl-N-nitrosomethylamine	74	2.475	2.469	(0.619)	212737	33.7828	1130

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD6.i/s070209.b/s6g0210.d
Date : 02-JUL-2009 16:54
Client ID: SBLK01LCS
Sample Info: |1201873126|88196411|SVM|1|SBLK01LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JHB3
Column diameter: 0.20

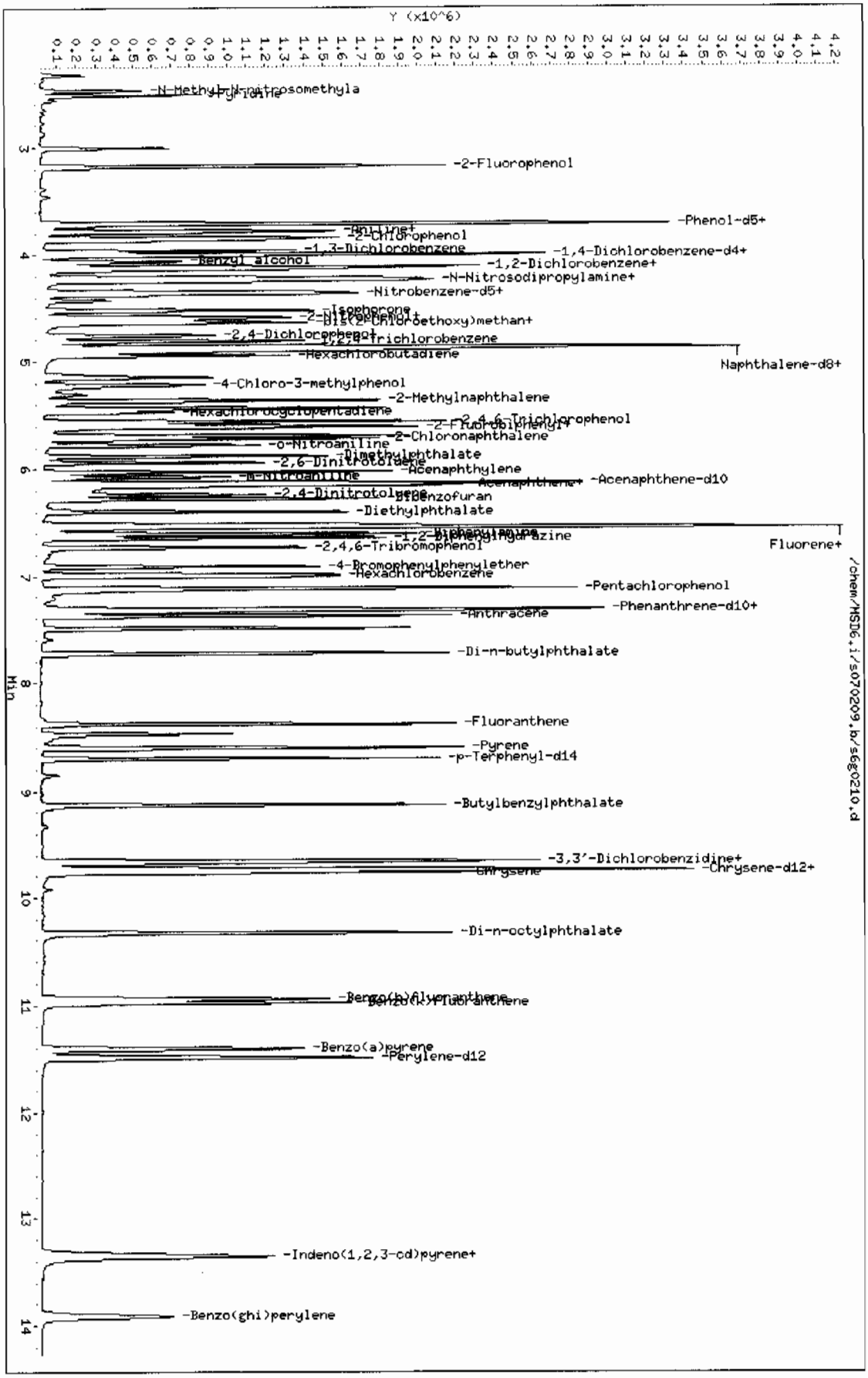

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 881962 **Verified by:** _____

Analyst: Robin Hunt

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201873125 MB	02-JUL-2009 13:47:46	30	1	0.03333
1201873126 LCS	02-JUL-2009 13:47:46	30	1	0.03333
232582001	02-JUL-2009 13:47:46	30.07	1	0.03326
232582002	02-JUL-2009 13:47:46	30.2	1	0.03311
232585001	02-JUL-2009 13:47:46	30.11	1	0.03321
232585002	02-JUL-2009 13:47:46	30.22	1	0.03309
232585003	02-JUL-2009 13:47:46	30.17	1	0.03315
232591001	02-JUL-2009 13:47:46	30.02	1	0.03331
1201873127 MS (232591001)	02-JUL-2009 13:47:46	30.19	1	0.03312
1201873128 MSD (232591001)	02-JUL-2009 13:47:46	30.17	1	0.03315
232634001	02-JUL-2009 13:47:46	30.05	1	0.03328
232634002	02-JUL-2009 13:47:46	30.17	1	0.03315

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201873126	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
LCS	1201873126	BENZIDINE LCS	UE090622-18	1	mL
MS	1201873127	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MS	1201873127	BENZIDINE LCS	UE090622-18	1	mL
MSD	1201873128	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MSD	1201873128	BENZIDINE LCS	UE090622-18	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1143854-D	150	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: RLC

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD6

DATE: 07/02/2009 METHOD: See raw data OPERATOR: JMB3 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:116462-D
Multiplier Voltage: 1482 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090628-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD6.i/s070209.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s6g0201.d	WBN090624-01	JMB3	02-JUL-2009 08:15	50 PPM	s070209	1.0	DFTPP	DUSE
s6g0202.d	WBN090626-05.3	JMB3	02-JUL-2009 08:30	40 PPM	s070209	1.0	MEGACVS	DUSE
s6g0203.d	WBN090619-01.2	JMB3	02-JUL-2009 08:58	40 PPM	s070209	1.0	APCVS	DUSE
s6g0204.d	WBN090609-22.5	JMB3	02-JUL-2009 09:21	40 PPM	s070209	1.0	PESTCVS	DUSE; **NO SAMPLES TO RUN**RE-STARTING SEQUENCE AT 15:10
s6g0205.d	WBN090624-01	JMB3	02-JUL-2009 15:10	50 PPM	s070209	1.0	DFTPP	USE
s6g0206.d	WBN090626-05.3	JMB3	02-JUL-2009 15:23	40 PPM	s070209	1.0	MEGACVS	USE; 537020
s6g0207.d	WBN090619-01.2	JMB3	02-JUL-2009 15:46	40 PPM	s070209	1.0	APCVS	USE
s6g0208.d	WBN090609-22.5	JMB3	02-JUL-2009 16:08	40 PPM	s070209	1.0	PESTCVS	USE
s6g0209-1.d	1201873125	JMB3	02-JUL-2009 16:31	881964	09-2506	1.0	SBLK01	USE
s6g0209-2.d	1201873125	JMB3	02-JUL-2009 16:31	881964	09-2510	1.0	SBLK01	USE
s6g0209-3.d	1201873125	JMB3	02-JUL-2009 16:31	881964	232634	1.0	SBLK01	USE
s6g0209.d	1201873125	JMB3	02-JUL-2009 16:31	881964	09-2508	1.0	SBLK01	USE
s6g0210-1.d	1201873126	JMB3	02-JUL-2009 16:54	881964	09-2506	1.0	SBLK01LCS	USE
s6g0210-2.d	1201873126	JMB3	02-JUL-2009 16:54	881964	09-2510	1.0	SBLK01LCS	USE
s6g0210-3.d	1201873126	JMB3	02-JUL-2009 16:54	881964	232634	1.0	SBLK01LCS	USE
s6g0210.d	1201873126	JMB3	02-JUL-2009 16:54	881964	09-2508	1.0	SBLK01LCS	USE
s6g0211.d	232582001	JMB3	02-JUL-2009 17:16	881964	09-2508	1.0	LANL	USE
s6g0212.d	232582002	JMB3	02-JUL-2009 17:38	881964	09-2508	1.0	LANL	USE
s6g0213.d	232585001	JMB3	02-JUL-2009 18:00	881964	09-2506	1.0	LANL	USE

s6g0214.d	232585002	JMB3	02-JUL-2009 18:23	881964	09-2506		1.0 LANL	USE
s6g0215.d	232585003	JMB3	02-JUL-2009 18:46	881964	09-2506		1.0 LANL	USE
s6g0216.d	232591001	JMB3	02-JUL-2009 19:08	881964	09-2510		1.0 LANL	USE
s6g0217.d	1201873127	JMB3	02-JUL-2009 19:30	881964	09-2510		1.0 MS	USE; SPIKE LOW
s6g0218.d	1201873128	JMB3	02-JUL-2009 19:53	881964	09-2510		1.0 MSD	USE; SPIKE LOW
s6g0219.d	232634001	JMB3	02-JUL-2009 20:15	881964	232634		4.0 MECP	DUSE: SURR LOW; RR NEAT - SEE S6G0314
s6g0220.d	232634002	JMB3	02-JUL-2009 20:38	881964	232634		4.0 MECP	DUSE: SURR LOW; RR NEAT - SEE S6G0315

Instrument Batch: /chem/MSD6.i/s070209.b

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD6

DATE: 06/25/2009 METHOD: See raw data OPERATOR: lof REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1116462-D
Multiplier Voltage: 1482 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD6.i/s062509.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s6f2501-d.d	WBN090624-01	JMB3	25-JUN-2009 17:33	50 PPM	s062509	1.0	DFTPP	8270d TUNE: MEGA - AP - PEST
s6f2501.d	WBN090624-01	JMB3	25-JUN-2009 17:33	50 PPM	s062509	1.0	DFTPP	8270c TUNE: MEGA - AP - PEST
s6f2502.d	INST BLK	JMB3	25-JUN-2009 17:46	-----	s062509	1.0	INST BLK	
s6f2503.d	WBN090602-08	JMB3	25-JUN-2009 18:09	1 PPM	s062509	1.0	MEGAICAL	
s6f2504.d	WBN090602-07	JMB3	25-JUN-2009 18:37	10 PPM	s062509	1.0	MEGAICAL	
s6f2505.d	WBN090602-06	JMB3	25-JUN-2009 19:04	20 PPM	s062509	1.0	MEGAICAL	
s6f2506.d	WBN090602-05.1	JMB3	25-JUN-2009 19:33	40 PPM	s062509	1.0	MEGAICAL	
s6f2507.d	WBN090602-04	JMB3	25-JUN-2009 20:01	50 PPM	s062509	1.0	MEGAICAL	
s6f2508.d	WBN090602-03	JMB3	25-JUN-2009 20:29	80 PPM	s062509	1.0	MEGAICAL	
s6f2509.d	WBN090602-02	JMB3	25-JUN-2009 20:56	100 PPM	s062509	1.0	MEGAICAL	
s6f2510.d	WBN090602-01	JMB3	25-JUN-2009 21:25	120 PPM	s062509	1.0	MEGAICAL	
s6f2511.d	WBN090528-07	JMB3	25-JUN-2009 21:54	10 PPM	s062509	1.0	APICAL	
s6f2512.d	WBN090528-06	JMB3	25-JUN-2009 22:17	20 PPM	s062509	1.0	APICAL	
s6f2513.d	WBN090528-05.1	JMB3	25-JUN-2009 22:39	40 PPM	s062509	1.0	APICAL	
s6f2514.d	WBN090528-04	JMB3	25-JUN-2009 23:02	50 PPM	s062509	1.0	APICAL	
s6f2515.d	WBN090528-03	JMB3	25-JUN-2009 23:24	80 PPM	s062509	1.0	APICAL	
s6f2516.d	WBN090528-02	JMB3	25-JUN-2009 23:47	100 PPM	s062509	1.0	APICAL	
s6f2517.d	WBN090528-01	JMB3	26-JUN-2009 00:08	120 PPM	s062509	1.0	APICAL	
s6f2518.d	WBN090609-24	JMB3	26-JUN-2009 00:31	10 PPM	s062509	1.0	PESTICAL	

s6f2519.d	WBN090609-23	JMB3	26-JUN-2009 00:54	20 PPM	s062509	1.0	PESTICAL	
s6f2520.d	WBN090609-22.1	JMB3	26-JUN-2009 01:17	40 PPM	s062509	1.0	PESTICAL	
s6f2521.d	WBN090609-21	JMB3	26-JUN-2009 01:40	50 PPM	s062509	1.0	PESTICAL	
s6f2522.d	WBN090609-20	JMB3	26-JUN-2009 02:02	80 PPM	s062509	1.0	PESTICAL	
s6f2523.d	WBN090609-19	JMB3	26-JUN-2009 02:25	100 PPM	s062509	1.0	PESTICAL	DUSE bad injection
s6f2524.d	WBN090609-18	JMB3	26-JUN-2009 02:48	120 PPM	s062509	1.0	PESTICAL	
s6f2525-BOE.d	WBN090602-09.1	JMB3	26-JUN-2009 03:11	40 PPM	s062509	1.0	MEGAICV	pass
s6f2525-D.d	WBN090602-09.1	JMB3	26-JUN-2009 03:11	40 PPM	s062509	1.0	MEGAICV	pass except c55,c26,c179 (>30%)
s6f2525.d	WBN090602-09.1	JMB3	26-JUN-2009 03:11	40 PPM	s062509	1.0	MEGAICV	pass 354067
s6f2526-D.d	WBN090528-08.1	JMB3	26-JUN-2009 03:39	40 PPM	s062509	1.0	APICV	pass except c110,c119,c124 (>30%)
s6f2526.d	WBN090528-08.1	JMB3	26-JUN-2009 03:39	40 PPM	s062509	1.0	APICV	pass
s6f2527-D.d	WBN090609-25.1	JMB3	26-JUN-2009 04:02	40 PPM	s062509	1.0	PESTICV	pass
s6f2527.d	WBN090609-25.1	JMB3	26-JUN-2009 04:02	40 PPM	s062509	1.0	PESTICV	pass
s6f2528-d.d	WBN090624-01	JMB3	26-JUN-2009 04:26	50 PPM	s062509	1.0	DFTPP	8270d TUNE: HEX - NEV
s6f2528.d	WBN090624-01	JMB3	26-JUN-2009 04:26	50 PPM	s062509	1.0	DFTPP	8270c TUNE: HEX - NEV
s6f2529.d	INST BLK	JMB3	26-JUN-2009 04:40	-----	s062509	1.0	INST BLK	
s6f2530.d	WBN090624-16	JMB3	26-JUN-2009 05:09	500 PPM	s062509	1.0	HEXICAL	
s6f2531.d	WBN090624-15	JMB3	26-JUN-2009 05:32	1000 PPM	s062509	1.0	HEXICAL	
s6f2532.d	WBN090624-14	JMB3	26-JUN-2009 05:54	1250 PPM	s062509	1.0	HEXICAL	DUSE bad inject
s6f2533.d	WBN090624-13	JMB3	26-JUN-2009 06:18	1500 PPM	s062509	1.0	HEXICAL	
s6f2534.d	WBN090624-12	JMB3	26-JUN-2009 06:40	1750 PPM	s062509	1.0	HEXICAL	
s6f2535.d	JBN090317-02.6	JMB3	26-JUN-2009 07:02	2000 PPM	s062509	1.0	HEXICAL	
s6f2536.d	JBN090428-01	JMB3	26-JUN-2009 07:24	10 PPM	s062509	1.0	NEVICAL	
s6f2537.d	JBN090428-02	JMB3	26-JUN-2009 07:47	20 PPM	s062509	1.0	NEVICAL	
s6f2538.d	JBN090428-03	JMB3	26-JUN-2009 08:09	40 PPM	s062509	1.0	NEVICAL	DUSE bad inject
s6f2539.d	JBN090428-04	JMB3	26-JUN-2009 08:31	50 PPM	s062509	1.0	NEVICAL	
s6f2540.d	JBN090428-05	JMB3	26-JUN-2009 08:54	80 PPM	s062509	1.0	NEVICAL	

s6f2541.d	UBN090428-06	JMB3	26-JUN-2009 09:17	100 PPM	s062509	1.0	NEVICAL	
s6f2542.d	UBN090428-07	JMB3	26-JUN-2009 09:39	120 PPM	s062509	1.0	NEVICAL	
s6f2543-D.d	WBN090624-10.1	JMB3	26-JUN-2009 10:01	1250 PPM	s062509	1.0	HEXICV	pass
s6f2543.d	WBN090624-10.1	JMB3	26-JUN-2009 10:01	1250 PPM	s062509	1.0	HEXICV	pass

Instrument Batch: /chem/MSD6.i/s062509.b

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0217.d
Lab Smp Id: 1201873127 Client Smp ID: CAMO-09-9946MS
Inj Date : 02-JUL-2009 19:30
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873127|881964|1|SVM|1|MS
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.19000	weight of sample
M	18.74130	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.993	3.999	(1.000)	434735	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1644563	40.0000	
* 46 Acenaphthene-d10	164	6.134	6.134	(1.000)	931304	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1661789	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1548770	40.0000	
* 98 Perylene-d12	264	11.492	11.492	(1.000)	1413918	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.797)	503434	42.6230	1740
$ 5 Phenol-d5	99	3.710	3.710	(0.929)	685412	43.3192	1760
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	318143	21.8369	890
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.915)	516368	21.8307	890
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.098)	166175	48.2657	1970
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	735579	29.7396	1210

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.722	3.722	(0.932)	350212	22.3461	911
8 2-Chlorophenol	128	3.863	3.863	(0.968)	272442	22.4456	915
11 1,4-Dichlorobenzene	146	4.004	4.010	(1.003)	149913	11.2070	457(R)
17 N-Nitrosodipropylamine	70	4.228	4.240	(1.059)	199912	21.6183	881(Q)
28 1,2,4-Trichlorobenzene	180	4.816	4.822	(0.989)	186002	17.0645	696
33 4-Chloro-3-methylphenol	107	5.222	5.216	(1.072)	283882	27.5313	1120
47 Acenaphthene	154	6.157	6.157	(1.004)	484810	22.7851	929
50 2,4-Dinitrotoluene	165	6.240	6.245	(1.017)	220752	27.7643	1130
52 4-Nitrophenol	139	6.187	6.175	(1.009)	131057	32.6439	1330
65 Pentachlorophenol	266	7.139	7.140	(0.977)	115700	25.4516	1040
79 Pyrene	202	8.598	8.598	(0.882)	1069763	27.7261	1130
2 Pyridine	79	2.534	2.505	(0.635)	219702	20.7349	845
4 Aniline	66	3.775	3.781	(0.945)	130146	18.4413	752(Q)
7 bis(2-Chloroethyl) ether	63	3.787	3.799	(0.948)	246317	20.2190	824
9 1,3-Dichlorobenzene	146	3.963	3.969	(0.993)	144211	10.4758	427(R)
12 Benzyl alcohol	108	4.122	4.069	(1.032)	390114	46.6820	1900(Q)
13 1,2-Dichlorobenzene	146	4.110	4.116	(1.029)	166509	13.6137	555(R)
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.037)	581360	21.6446	882(Q)
15 o-Cresol	107	4.122	4.116	(1.032)	313687	33.8331	1380(Q)
18 m,p-Cresols	107	4.216	4.222	(1.056)	361429	27.7288	1130
19 Hexachloroethane	117	4.346	4.346	(1.088)	46764	8.69151	354(aR)
21 Nitrobenzene	77	4.375	4.381	(0.899)	305928	23.0624	940
22 Isophorone	82	4.528	4.534	(0.930)	613310	24.5566	1000
23 2-Nitrophenol	139	4.593	4.593	(0.943)	131409	23.0751	941
24 2,4-Dimethylphenol	122	4.587	4.599	(0.942)	374943	22.1640	903
25 bis(2-Chloroethoxy)methane	93	4.646	4.652	(0.954)	330150	23.7001	966
26 2,4-Dichlorophenol	162	4.757	4.763	(0.977)	239258	24.8903	1010
27 Benzoic acid	105	4.628	4.640	(0.950)	200605	22.3887	913(Q)
30 Naphthalene	128	4.887	4.887	(1.004)	664727	17.8875	729
31 4-Chloroaniline	127	4.898	4.899	(1.006)	373653	23.9298	975
32 Hexachlorobutadiene	225	4.951	4.951	(1.017)	83553	12.6593	516(R)
34 2-Methylnaphthalene	142	5.369	5.369	(1.103)	461985	22.9376	935
36 Hexachlorocyclopentadiene	237	5.469	5.475	(0.892)	54577	11.2971	460
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.906)	180791	24.0626	981
38 2,4,5-Trichlorophenol	196	5.593	5.587	(0.912)	207608	26.2261	1070
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	497011	22.6261	922
42 o-Nitroaniline	65	5.781	5.781	(0.942)	240821	28.4490	1160
41 m-Nitroaniline	138	6.075	6.081	(0.990)	168345	30.9192	1260
43 Dimethylphthalate	163	5.881	5.887	(0.959)	664628	26.5344	1080
44 2,6-Dinitrotoluene	165	5.940	5.946	(0.968)	159762	26.8125	1090
45 Acenaphthylene	152	6.028	6.034	(0.983)	829345	24.5771	1000
48 2,4-Dinitrophenol	184	6.151	6.151	(1.003)	40466	14.7239	600(aQ)
49 Dibenzofuran	168	6.281	6.281	(1.024)	742251	25.4017	1040
51 Diethylphthalate	149	6.398	6.398	(1.043)	684965	27.5217	1120
53 Fluorene	166	6.545	6.545	(1.067)	570057	23.2195	946(R)
54 4-Chlorophenylphenylether	204	6.522	6.522	(1.063)	297596	24.8601	1010
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.897)	81423	20.7759	847

Compounds	QUANT STD MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.066)	162922	34.1787	1390
133 Diphenylamine	169	6.604	6.610	(0.903)	489736	23.6808	965
58 1,2-Diphenylhydrazine	77	6.645	6.645	(0.909)	778161	27.8457	1140
61 4-Bromophenylphenylether	248	6.910	6.910	(0.945)	180454	25.0998	1020
63 Hexachlorobenzene	284	6.987	6.987	(0.956)	195007	25.6698	1050
68 Phenanthrene	178	7.334	7.334	(1.003)	964900	26.1035	1060
69 Anthracene	178	7.375	7.375	(1.009)	1000512	26.9769	1100
72 Di-n-butylphthalate	149	7.734	7.728	(1.058)	1184760	28.7985	1170
76 Fluoranthene	202	8.381	8.381	(1.146)	1032729	27.6978	1130
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	530088	29.3640	1200
89 Benzo(a)anthracene	228	9.728	9.728	(0.998)	1006134	27.0762	1100
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	152141	13.0872	533(R)
92 Chrysene	228	9.769	9.769	(1.002)	973622	27.4084	1120
93 bis(2-Ethylhexyl)phthalate	149	9.657	9.651	(0.991)	726750	30.2850	1230
94 Di-n-octylphthalate	149	10.333	10.333	(0.899)	1206436	29.6018	1210
95 Benzo(b)fluoranthene	252	10.945	10.951	(0.952)	886939	26.3389	1070
96 Benzo(k)fluoranthene	252	10.980	10.986	(0.955)	980391	29.3895	1200
97 Benzo(a)pyrene	252	11.410	11.410	(0.993)	814962	27.9716	1140
99 Indeno(1,2,3-cd)pyrene	276	13.351	13.357	(1.162)	728677	26.3387	1070
100 Dibenzo(a,h)anthracene	278	13.369	13.374	(1.163)	610631	26.1352	1060
101 Benzo(ghi)perylene	276	13.921	13.927	(1.211)	594577	24.3583	993
1 N-Methyl-N-nitrosomethylamine	74	2.499	2.469	(0.626)	159555	21.7734	888

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD6.i/s070209.b/s6g0217.d
Date : 02-JUL-2009 19:30
Client ID: CAMD-09-9946MS
Sample Info: 1120187312718819641|1|SVH11|MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JHB3
Column diameter: 0.20

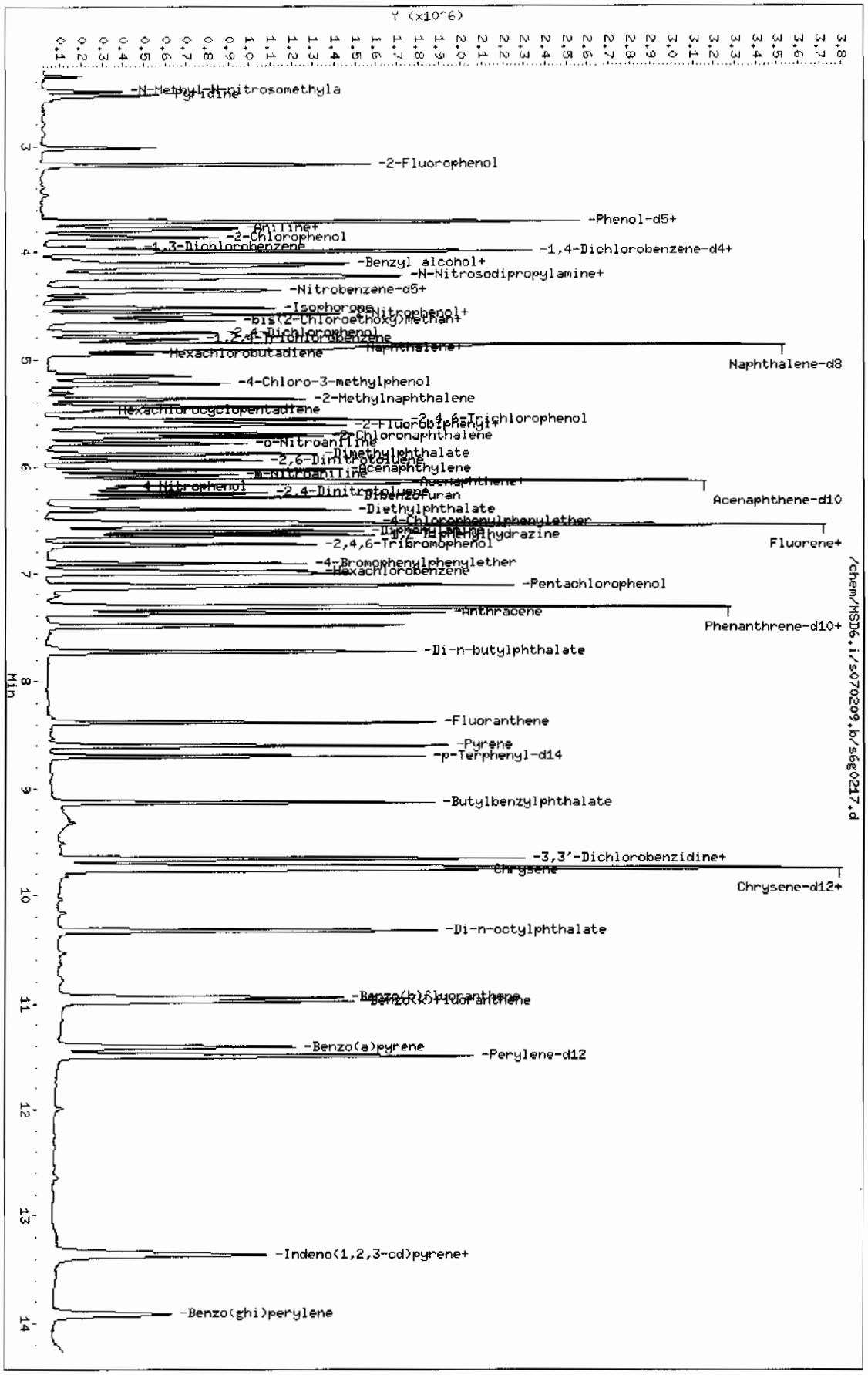

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GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0218.d
Lab Smp Id: 1201873128 Client Smp ID: CAMO-09-9946MSD
Inj Date : 02-JUL-2009 19:53
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873128|881964|1|SVM|1|MSD
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 14 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.17000	weight of sample
M	18.74130	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.993	3.999	(1.000)	440612	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1719388	40.0000	
* 46 Acenaphthene-d10	164	6.134	6.134	(1.000)	968859	40.0000	
* 67 Phenanthrene-d10	188	7.316	7.316	(1.000)	1683763	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1551911	40.0000	
* 98 Perylene-d12	264	11.492	11.492	(1.000)	1427959	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.797)	626183	52.3083	2130
$ 5 Phenol-d5	99	3.710	3.710	(0.929)	867531	54.0981	2210
$ 20 Nitrobenzene-d5	82	4.363	4.363	(0.896)	395059	25.9363	1060
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.915)	645632	26.2376	1070
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.098)	199798	55.7823	2280
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	812600	32.7871	1340

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.722	3.722	(0.932)	464493	29.2428	1190
8 2-Chlorophenol	128	3.863	3.863	(0.968)	357766	29.0820	1190
11 1,4-Dichlorobenzene	146	4.005	4.010	(1.003)	170417	12.5699	513(R)
17 N-Nitrosodipropylamine	70	4.234	4.240	(1.060)	261225	27.8719	1140(Q)
28 1,2,4-Trichlorobenzene	180	4.816	4.822	(0.989)	225980	19.8301	809
33 4-Chloro-3-methylphenol	107	5.222	5.216	(1.072)	360108	33.4040	1360
47 Acenaphthene	154	6.157	6.157	(1.004)	608077	27.4706	1120
50 2,4-Dinitrotoluene	165	6.240	6.245	(1.017)	264208	31.9418	1300
52 4-Nitrophenol	139	6.187	6.175	(1.009)	156120	37.3794	1520
65 Pentachlorophenol	266	7.140	7.140	(0.976)	141769	30.7795	1260
79 Pyrene	202	8.598	8.598	(0.882)	1235992	31.9696	1300
2 Pyridine	79	2.528	2.505	(0.633)	258463	24.0678	982
4 Aniline	66	3.775	3.781	(0.945)	161036	22.5140	918(Q)
7 bis(2-Chloroethyl) ether	63	3.787	3.799	(0.948)	311170	25.2018	1030
9 1,3-Dichlorobenzene	146	3.957	3.969	(0.991)	162607	11.6545	475(R)
12 Benzyl alcohol	108	4.075	4.069	(1.021)	65344	7.71498	315(aR)
13 1,2-Dichlorobenzene	146	4.110	4.116	(1.029)	190446	15.3631	627(R)
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.037)	714675	26.2531	1070
15 o-Cresol	107	4.122	4.116	(1.032)	291888	31.0620	1270
18 m,p-Cresols	107	4.216	4.222	(1.056)	450029	34.0656	1390(Q)
19 Hexachloroethane	117	4.340	4.346	(1.087)	50141	9.19487	375(aR)
21 Nitrobenzene	77	4.375	4.381	(0.899)	398372	28.7244	1170
22 Isophorone	82	4.528	4.534	(0.930)	788198	30.1856	1230
23 2-Nitrophenol	139	4.593	4.593	(0.943)	168246	28.2581	1150
24 2,4-Dimethylphenol	122	4.587	4.599	(0.942)	477237	26.9833	1100
25 bis(2-Chloroethoxy)methane	93	4.646	4.652	(0.954)	426000	29.2500	1190
26 2,4-Dichlorophenol	162	4.757	4.763	(0.977)	311846	31.0299	1260
27 Benzoic acid	105	4.634	4.640	(0.952)	256949	27.4291	1120(Q)
30 Naphthalene	128	4.887	4.887	(1.004)	827086	21.2879	868
31 4-Chloroaniline	127	4.899	4.899	(1.006)	480825	29.4534	1200
32 Hexachlorobutadiene	225	4.952	4.951	(1.017)	97426	14.1189	576(R)
34 2-Methylnaphthalene	142	5.369	5.369	(1.103)	579247	27.5081	1120
36 Hexachlorocyclopentadiene	237	5.469	5.475	(0.892)	74192	14.7620	602
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.906)	232464	29.7409	1210
38 2,4,5-Trichlorophenol	196	5.593	5.587	(0.912)	257005	31.2078	1270
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	625194	27.3583	1120
42 o-Nitroaniline	65	5.781	5.781	(0.942)	301935	34.2860	1400
41 m-Nitroaniline	138	6.075	6.081	(0.990)	210987	37.2492	1520
43 Dimethylphthalate	163	5.881	5.887	(0.959)	822307	31.5570	1290
44 2,6-Dinitrotoluene	165	5.940	5.946	(0.968)	197723	31.8972	1300
45 Acenaphthylene	152	6.028	6.034	(0.983)	1039101	29.5995	1210
48 2,4-Dinitrophenol	184	6.151	6.151	(1.003)	60890	21.2965	869(Q)
49 Dibenzofuran	168	6.281	6.281	(1.024)	927181	30.5005	1240
51 Diethylphthalate	149	6.399	6.398	(1.043)	830080	32.0596	1310
53 Fluorene	166	6.546	6.545	(1.067)	696531	27.2713	1110
54 4-Chlorophenylphenylether	204	6.522	6.522	(1.063)	369237	29.6491	1210
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.896)	108932	26.5507	1080

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.066)	197361	39.7987	1620
133 Diphenylamine	169	6.610	6.610	(0.904)	582025	27.7761	1130
58 1,2-Diphenylhydrazine	77	6.646	6.645	(0.908)	922442	32.5779	1330
61 4-Bromophenylphenyletner	248	6.910	6.910	(0.945)	227115	29.8051	1220
63 Hexachlorobenzene	284	6.987	6.987	(0.955)	234826	30.5080	1240
68 Phenanthrene	178	7.334	7.334	(1.002)	1155886	30.8622	1260
69 Anthracene	178	7.375	7.375	(1.008)	1148339	30.5587	1250
72 Di-n-butylphthalate	149	7.734	7.728	(1.057)	1366437	32.7811	1340
76 Fluoranthene	202	8.381	8.381	(1.146)	1196365	31.6678	1290
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	613373	33.9088	1380
89 Benzo(a)anthracene	228	9.728	9.728	(0.998)	1172607	31.4923	1280
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	183493	15.7522	642(R)
92 Chrysene	228	9.769	9.769	(1.002)	1142038	32.0844	1310
93 bis(2-Ethylhexyl)phthalate	149	9.651	9.651	(0.990)	842887	35.0535	1430
94 Di-n-octylphthalate	149	10.334	10.333	(0.899)	1416717	34.4196	1400
95 Benzo(b)fluoranthene	252	10.945	10.951	(0.952)	1126897	33.1358	1350
96 Benzo(k)fluoranthene	252	10.986	10.986	(0.956)	1060436	31.4765	1280
97 Benzo(a)pyrene	252	11.410	11.410	(0.993)	958190	32.5641	1330
99 Indeno(1,2,3-cd)pyrene	276	13.357	13.357	(1.162)	908384	32.5115	1330
100 Dibenzo(a,h)anthracene	278	13.369	13.374	(1.163)	783404	33.4476	1360
101 Benzo(ghi)perylene	276	13.922	13.927	(1.211)	762176	30.9174	1260
1 N-Methyl-N-nitrosomethylamine	74	2.493	2.469	(0.624)	204994	27.6011	1120

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD6.i/s070209.b/s6g0218.d
Date : 02-JUL-2009 19:53
Client ID: CAMO-09-9946MSD
Sample Info: 1120187312818819641|SVM|1|MSD
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

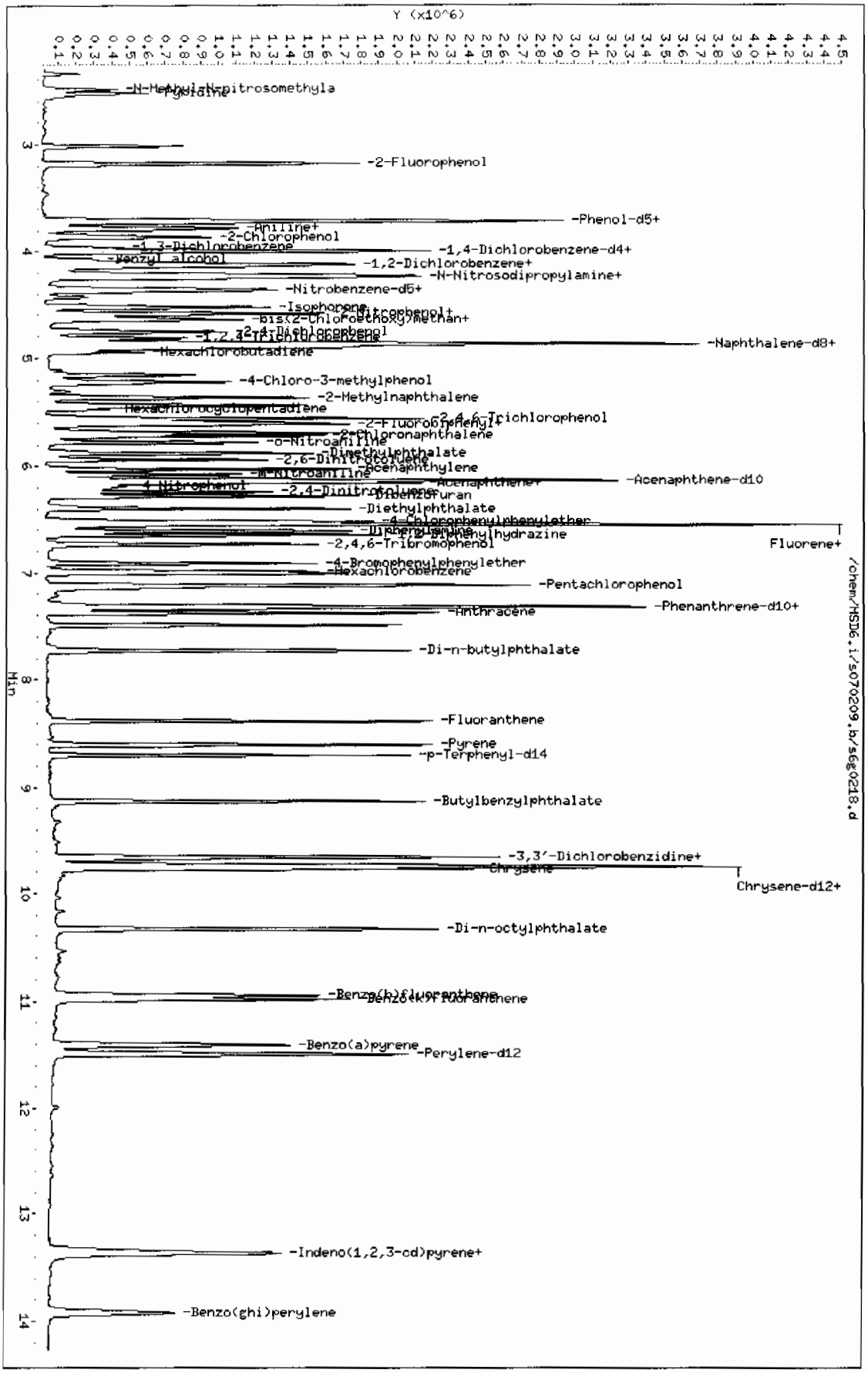

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2508

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881646
Prep Batch Number:	881643

Sample Analysis

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201872346	Interference Check Sample (ICS)
1201872342	Method Blank (MB)
1201872343	Laboratory Control Sample (LCS)
1201872344	232591001(CAMO-09-9946) Matrix Spike (MS)
1201872345	232591001(CAMO-09-9946) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

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Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232591001 (CAMO-09-9946) from SDG 09-2510 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

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Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert M Mack **Date:** 07/13/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10464

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2508

GEL Sample ID: 232582001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 93.3

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.536	2.14	3.10	ug/kg		1	08-JUL-09 19:50	per0708057a
	Perchlorate-O(18)			5.46	ug/kg		1	08-JUL-09 19:50	per0708057a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10465

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2508

GEL Sample ID: 232582002

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 95.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.526	2.1	2.14	ug/kg		1	08-JUL-09 19:58	per0708058a
	Perchlorate-O(18)			5.30	ug/kg		1	08-JUL-09 19:58	per0708058a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2508

Extract Batch Code: 881643

Date Filtered: 01–JUL–09

Matrix: SOIL

Sample ID: 1201872343

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.04	ug/kg	102		70 – 130
Perchlorate–O(18)		4.78	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09-2508

Extract Batch Code: 881643

Date Filtered: 01-JUL-09

Matrix: SOIL

Sample ID: 1201872346

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.15	ug/kg	108		70 – 130
Perchlorate-O(18)		5.09	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708047a
Date: 08-Jul-2009
Time: 18:32:44
ID: 1201872346
Vial: 2:1,C

|LANL|881646|50020|ICS|1|

CWW 07-09-09

Perchlorate

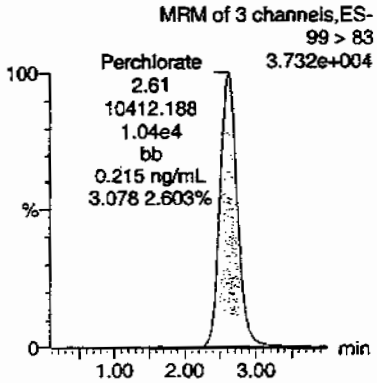

Perchlorate

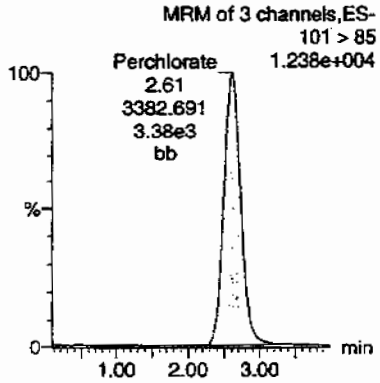

Perchlorate-101

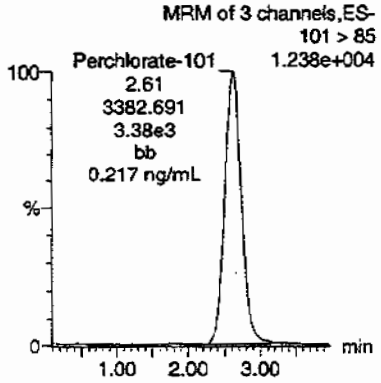

Perchlorate-O(18)

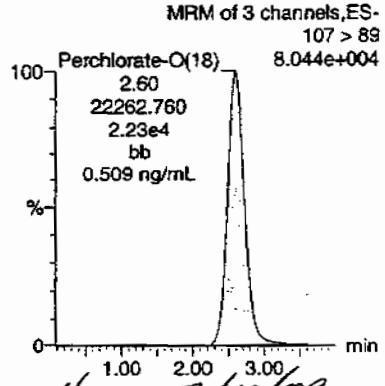

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872346	Perchlorate	99 > 83	2.61	10412.188	10412.188	bb			0.2154	107.71	7.71	2796.1...	3.08
1201872346	Perchlorate-101	101 > 85	2.61	3382.691	3382.691	bb			0.2173	108.63	8.63	1805.9...	
1201872346	Perchlorate-O(18)	107 > 89	2.60	22262.760	22262.760	bb			0.5086	101.72	1.72	10354....	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2508

Extract Batch Code: 881643

Date Extracted: 01–JUL–09

GEL MS/PS ID: 1201872344

Client ID: CAMO–09–9946

GEL MSD/PSD ID: 1201872345

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.46	0.218	ug/kg	2.74	102	2.79	105	1.92	30	75 – 125
Perchlorate–O(18)	0	6.38	ug/kg	6.24		6.22		.283		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2508

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08–JUL–09	per0708001a	IPB001
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708001a	IPB001
Perchlorate	0.00	0	NA	08–JUL–09	per0708002a	IPB001
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708002a	IPB001

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Name: per0708001a
Date: 08-Jul-2009
Time: 12:35:59
ID: IPB001
Vial: 1:1,A

CWW 07-09-09

Perchlorate

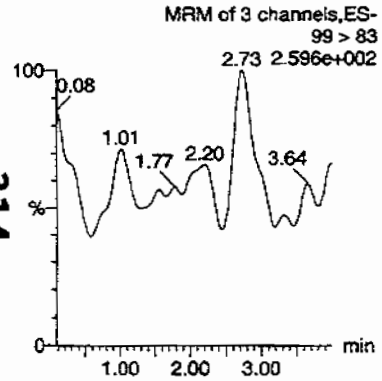

Perchlorate

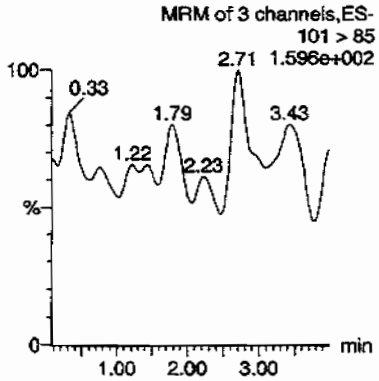

Perchlorate-101

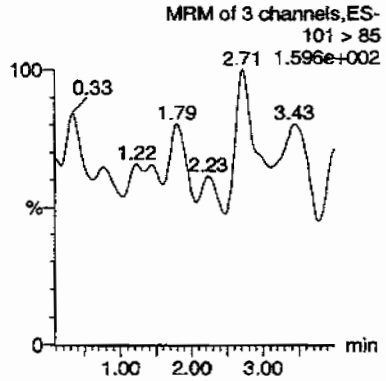

Perchlorate-O(18)

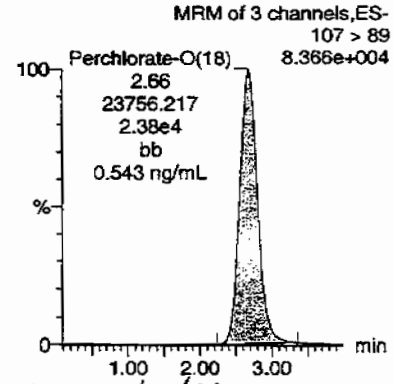

thaw 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.66	23756.217	23756.217	bb			0.5427	108.54	8.54	2563.6...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708002a
Date: 08-Jul-2009
Time: 12:43:43
ID: IPB001
Vial: 1:1,A

AWJ
07-09-09

Perchlorate

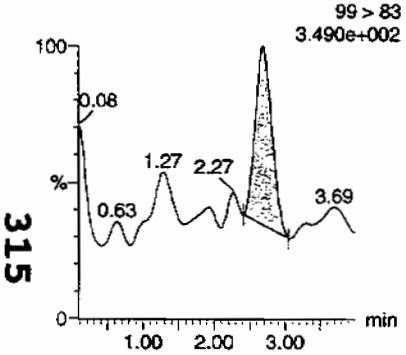

Perchlorate

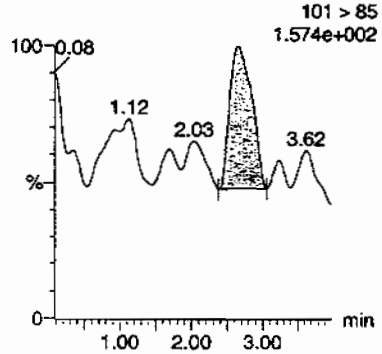

Perchlorate-101

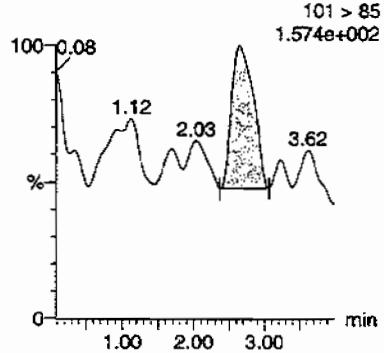

Perchlorate-O(18)

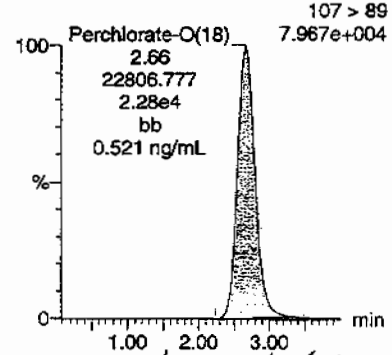

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.68	62.756	62.756	bb			0.0013			9.964	2.10
IPB001	Perchlorate-101	101 > 85	2.64	29.952	29.952	bb			0.0019			7.781	
IPB001	Perchlorate-O(18)	107 > 89	2.66	22806.777	22806.777	bb			0.5210	104.21	4.21	7277.3...	

DLAY
LO.0500

315

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2508

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08-JUL-09	per0708008a	IPB002
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708008a	IPB002
Perchlorate	0.00	0	NA	08-JUL-09	per0708010a	IPB003
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708010a	IPB003
Perchlorate	0.00	0	NA	08-JUL-09	per0708023a	IPB004
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708023a	IPB004
Perchlorate	0.00	0	NA	08-JUL-09	per0708034a	IPB005
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708034a	IPB005
Perchlorate	0.00	0	NA	08-JUL-09	per0708043a	IPB006
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708043a	IPB006
Perchlorate	0.00	0	NA	08-JUL-09	per0708055a	IPB007
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708055a	IPB007
Perchlorate	0.00	0	NA	08-JUL-09	per0708066a	IPB008

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2508

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708066a	IPB008

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qid

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708008a
Date: 08-Jul-2009
Time: 13:30:03
ID: IPB002
Vial: 1:1,A

CWW 07-07-09

Perchlorate

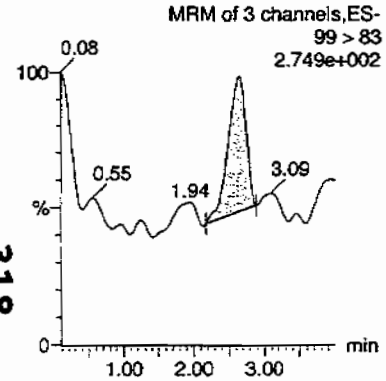

Perchlorate

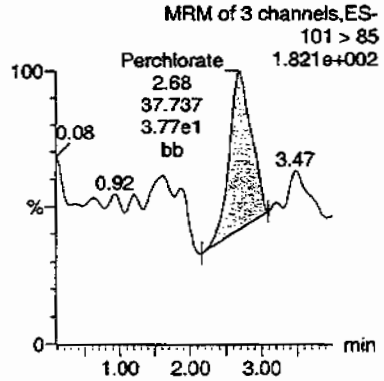

Perchlorate-101

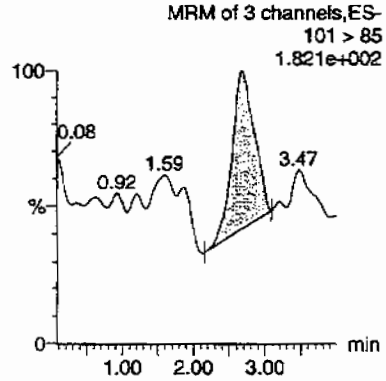

Perchlorate-O(18)

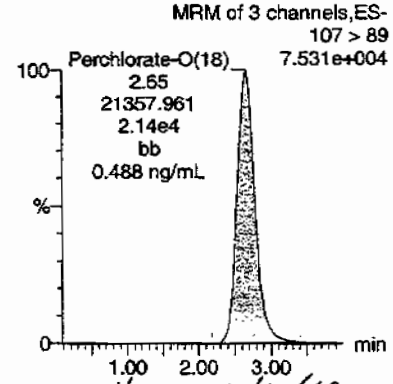

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio	
IPB002	Perchlorate	99 > 83	2.64	40.789	40.789	bb			0.0008			16.642	1.08	OKAY
IPB002	Perchlorate-101	101 > 85	2.68	37.737	37.737	bb			0.0024			9.640		LO-3500
IPB002	Perchlorate-O(18)	107 > 89	2.65	21357.961	21357.961	bb			0.4879	97.59	-2.41	8484.7...		

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708010a
Date: 08-Jul-2009
Time: 13:45:31
ID: IPB003
Vial: 1:1,A

CWW 07-09-09

Perchlorate

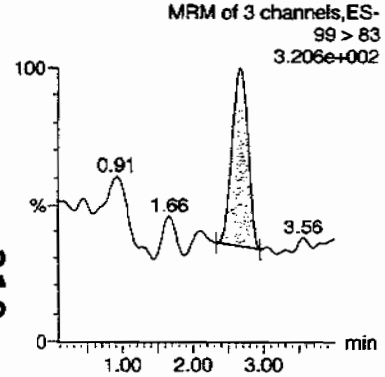

Perchlorate

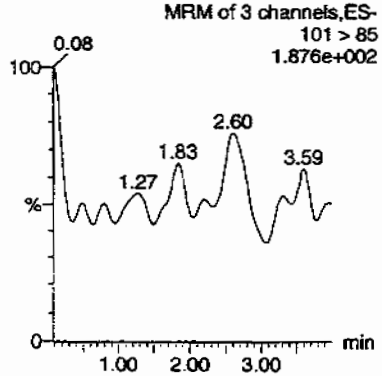

Perchlorate-101

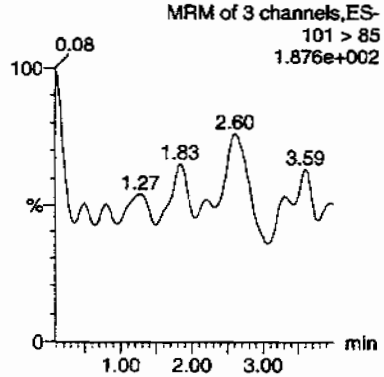

Perchlorate-O(18)

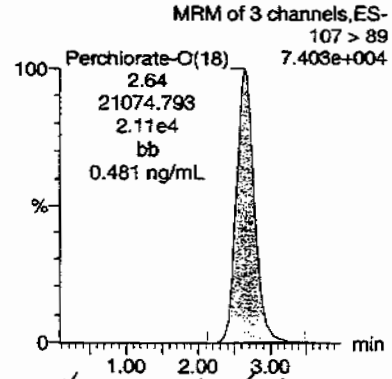

dhm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.66	56.577	56.577	bb			0.0012			14.377	0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	2.64	21074.793	21074.793	bb			0.4815	96.29	-3.71	1018.8...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708023a
Date: 08-Jul-2009
Time: 15:26:24
ID: IPB004
Vial: 1:1,A

CWW 07-09-09

Perchlorate

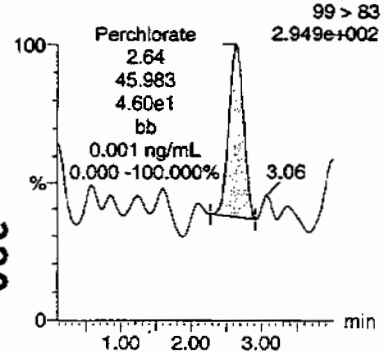

Perchlorate

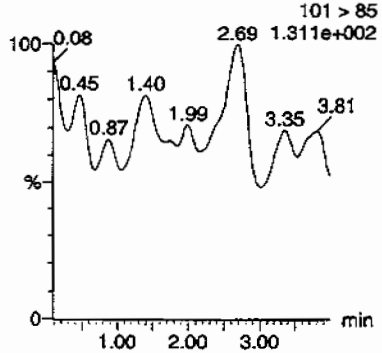

Perchlorate-101

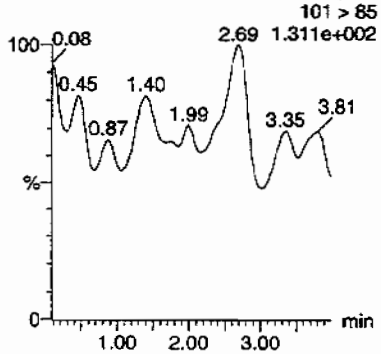

Perchlorate-O(18)

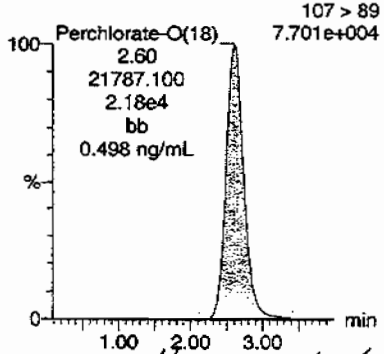

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.64	45.983	45.983	bb			0.0010			14.762	0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	2.60	21787.100	21787.100	bb			0.4977	99.55	-0.45	5673.5...	

320

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708034a
Date: 08-Jul-2009
Time: 16:51:46
ID: IPB005
Vial: 1:1,A

CWW 07-09-09

Perchlorate

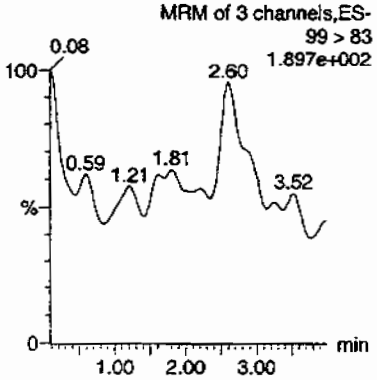

Perchlorate

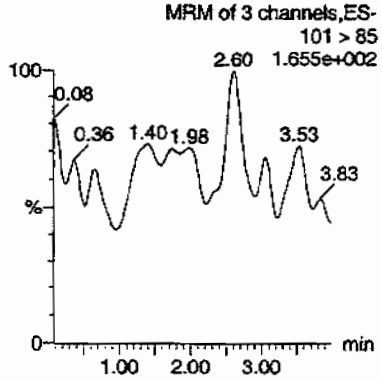

Perchlorate-101

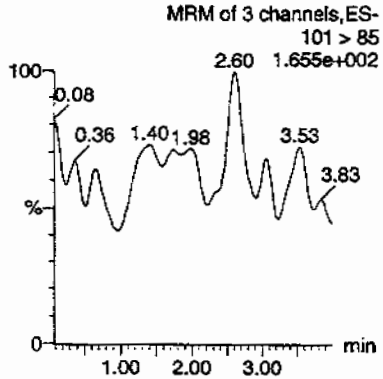

Perchlorate-O(18)

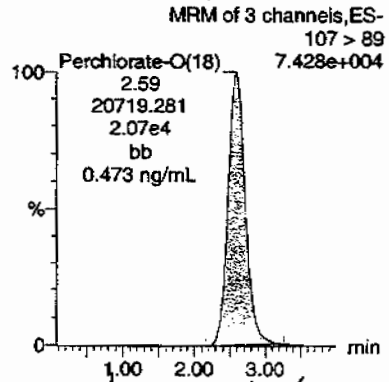

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.59	20719.281	20719.281	bb			0.4733	94.67	-5.33	6050.7...	

321

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708043a
Date: 08-Jul-2009
Time: 18:01:32
ID: IPB006
Vial: 1:1,A

CWW 07-09-09

Perchlorate

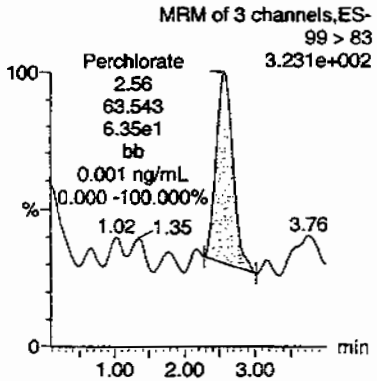

Perchlorate

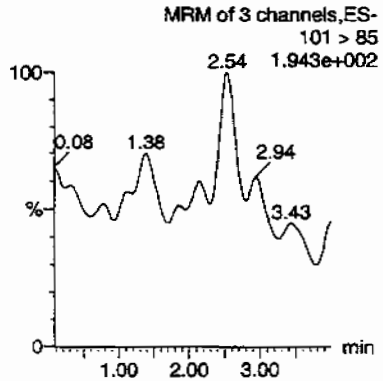

Perchlorate-101

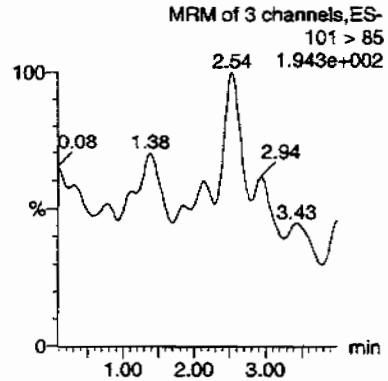

Perchlorate-O(18)

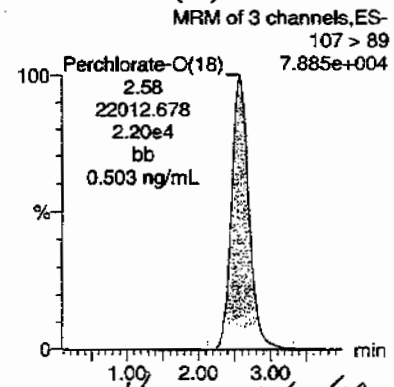

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	2.56	63.543	63.543	bb			0.0013			22.698	0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	2.58	22012.678	22012.678	bb			0.5029	100.58	0.58	3651.4...	

322

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708055a
Date: 08-Jul-2009
Time: 19:34:48
ID: IPB007
Vial: 1:1,A

AWD 07-09-09

Perchlorate

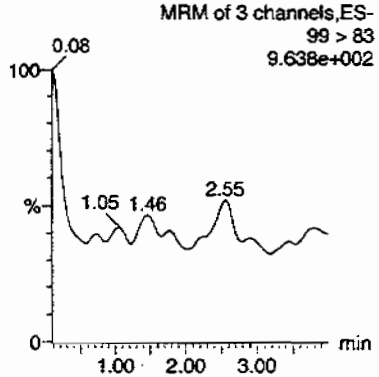

Perchlorate

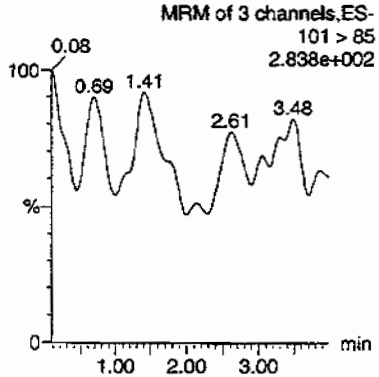

Perchlorate-101

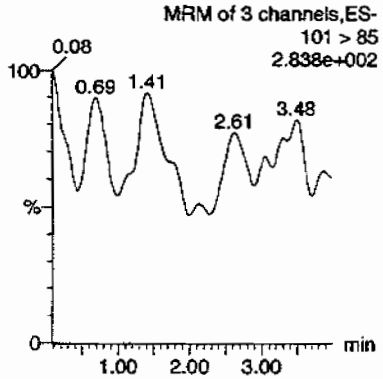

Perchlorate-O(18)

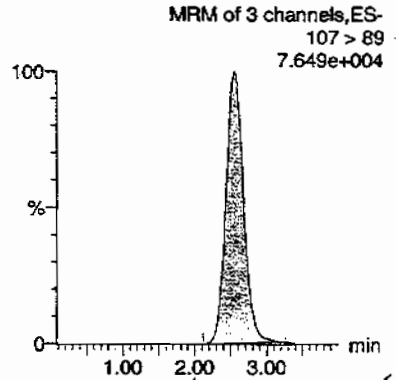

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83											0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	2.54	21404.643	21404.643	bb			0.4890	97.80	-2.20	2876.2...	

323

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708066a
Date: 08-Jul-2009
Time: 21:00:22
ID: IPB008
Vial: 1:1,A

07-01-09

Perchlorate

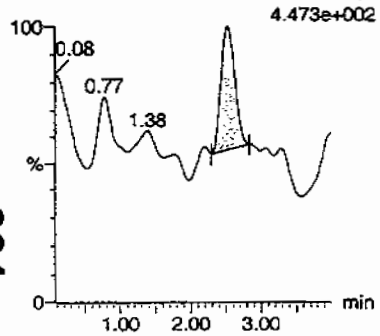

Perchlorate

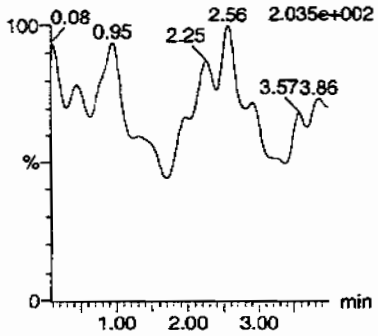

Perchlorate-101

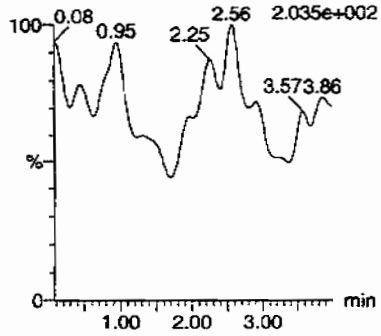

Perchlorate-O(18)

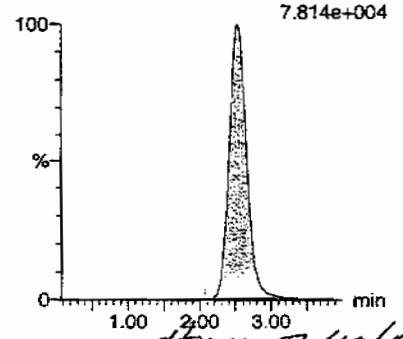

Hmc 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83	2.53	48.016	48.016	bb			0.0010			5.114	0.00
IPB008	Perchlorate-101	101 > 85											
IPB008	Perchlorate-O(18)	107 > 89	2.53	21856.988	21856.988	bb			0.4993	99.87	-0.13	4600.7...	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PARTS HIGHLIGHTED BY [illegible] 01-09-08

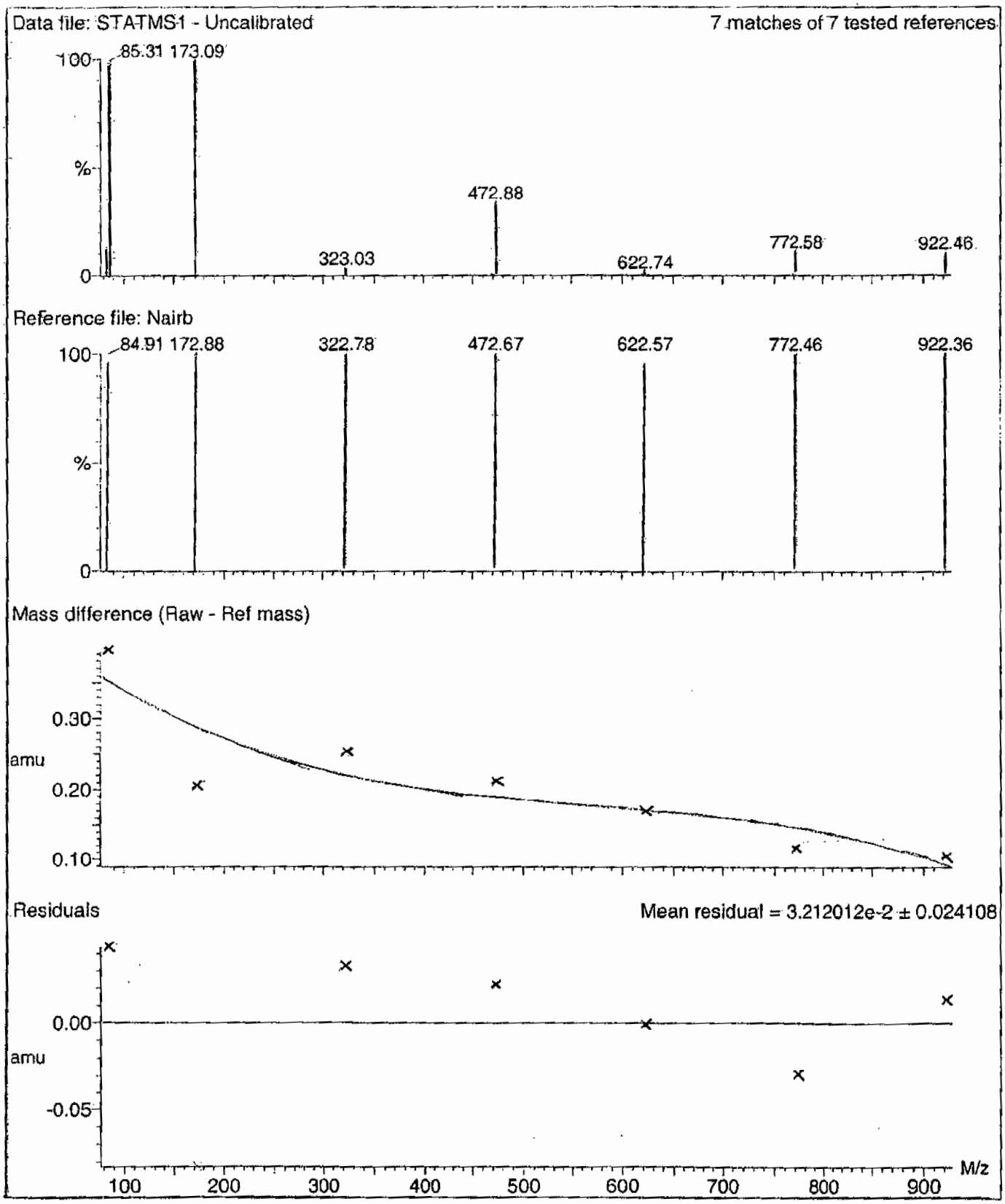

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

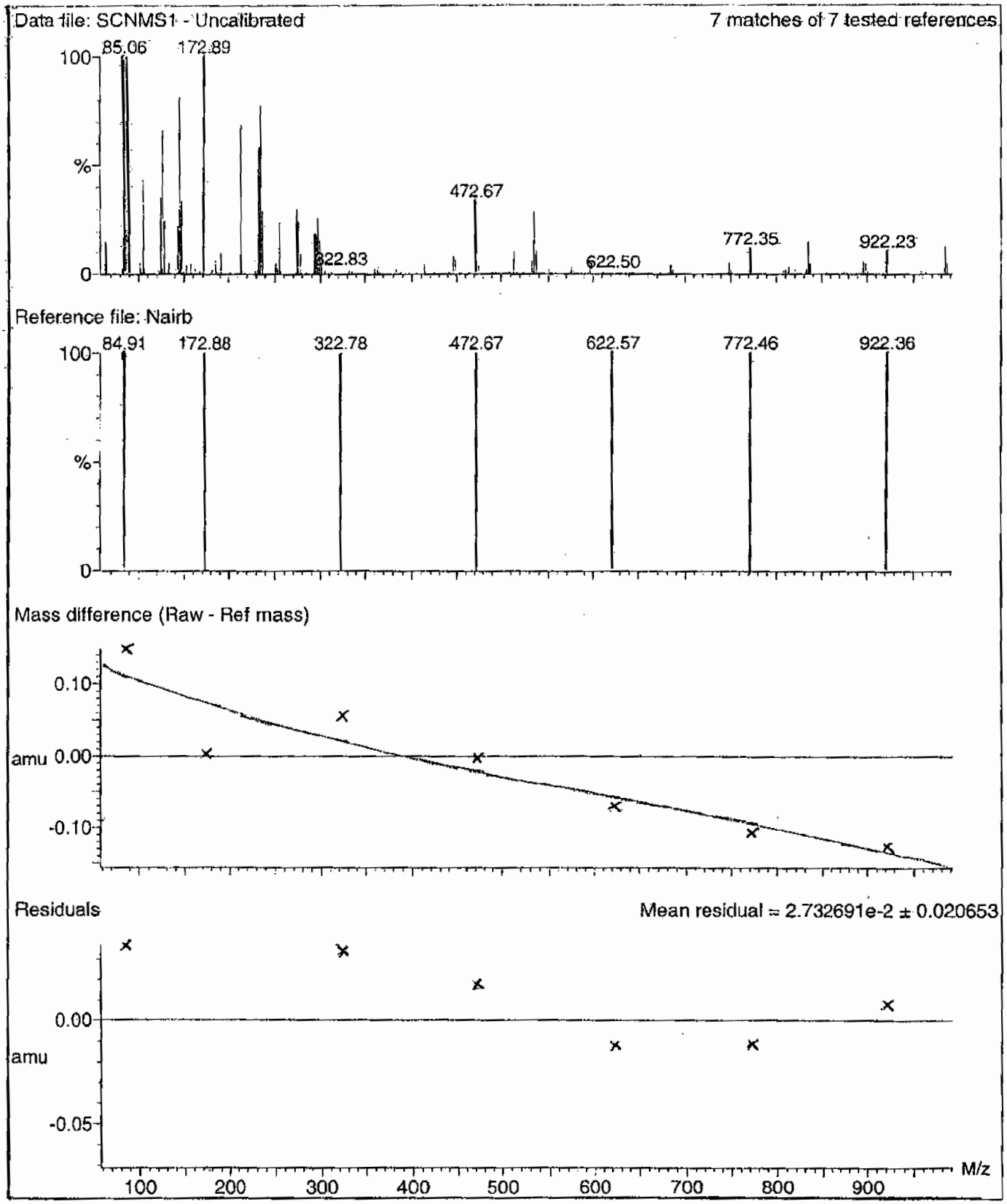

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Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

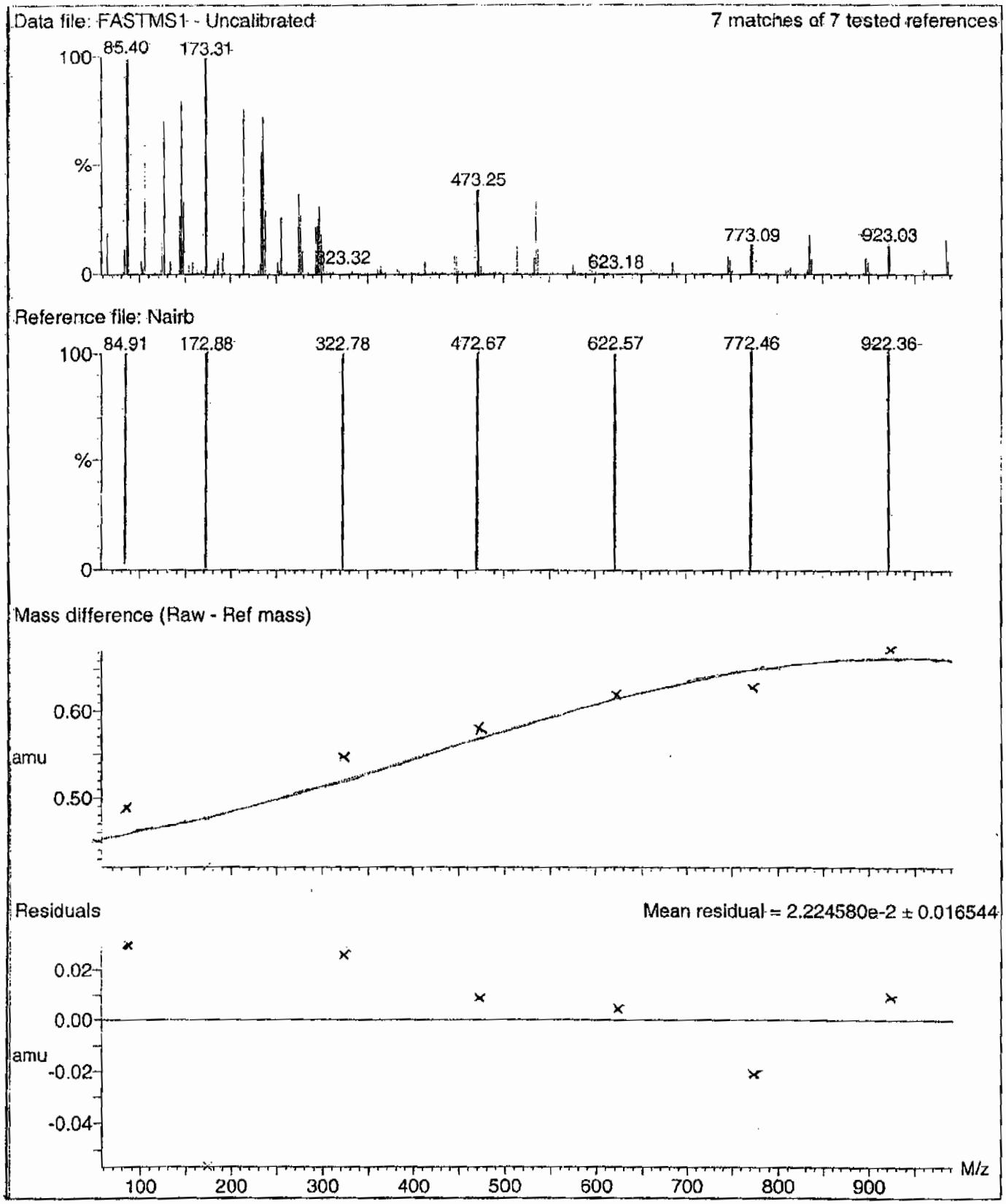

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

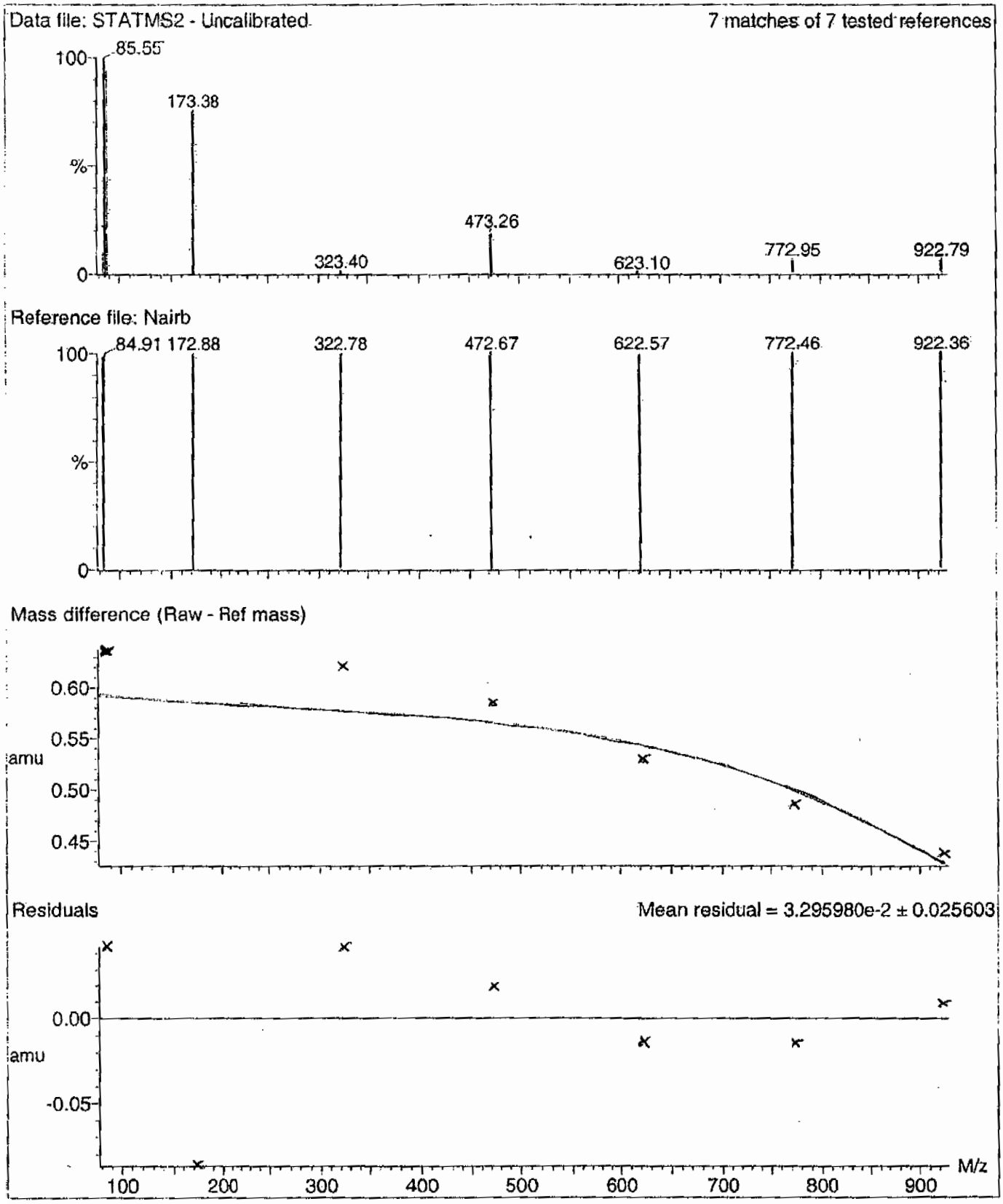

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Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

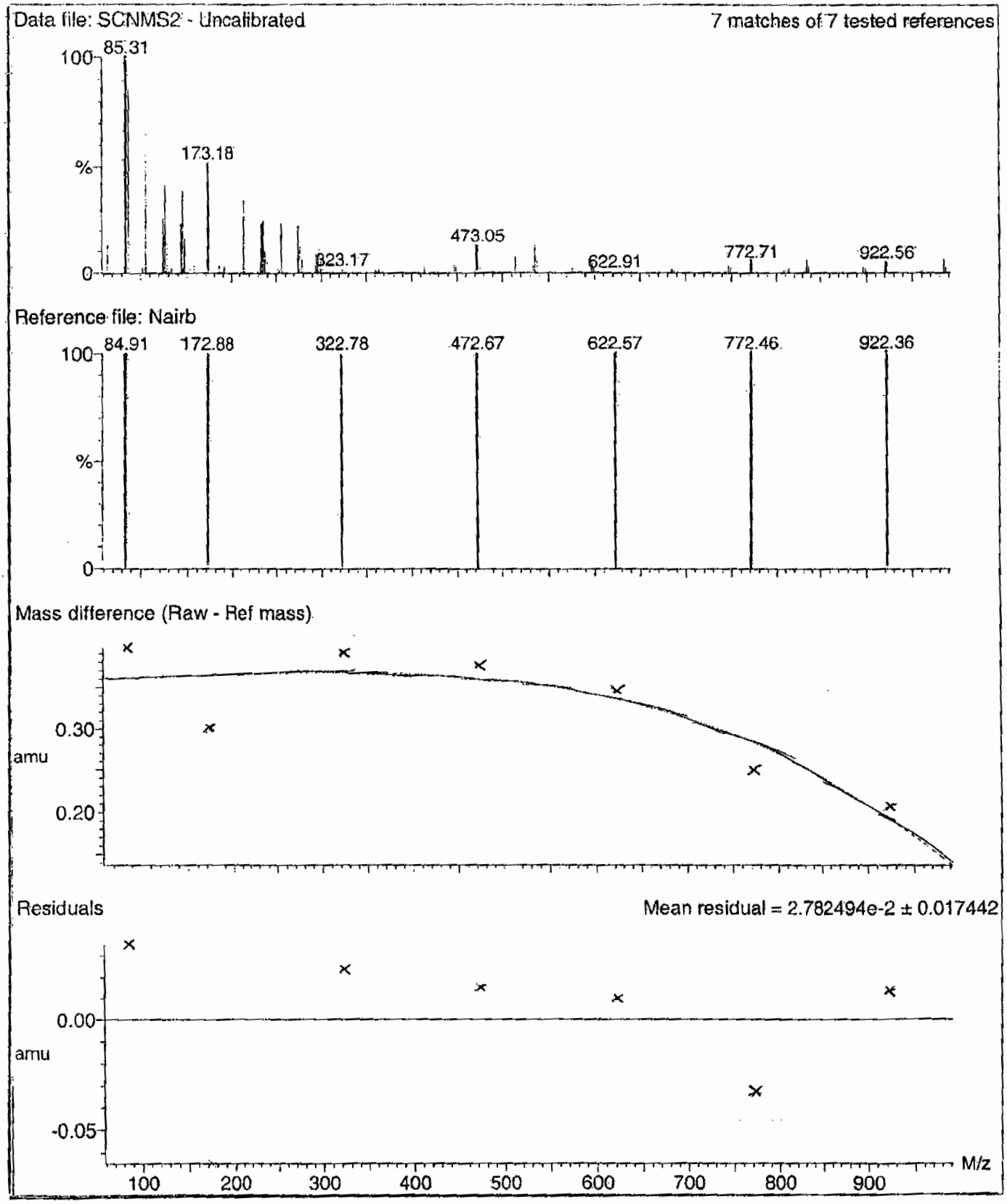

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Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

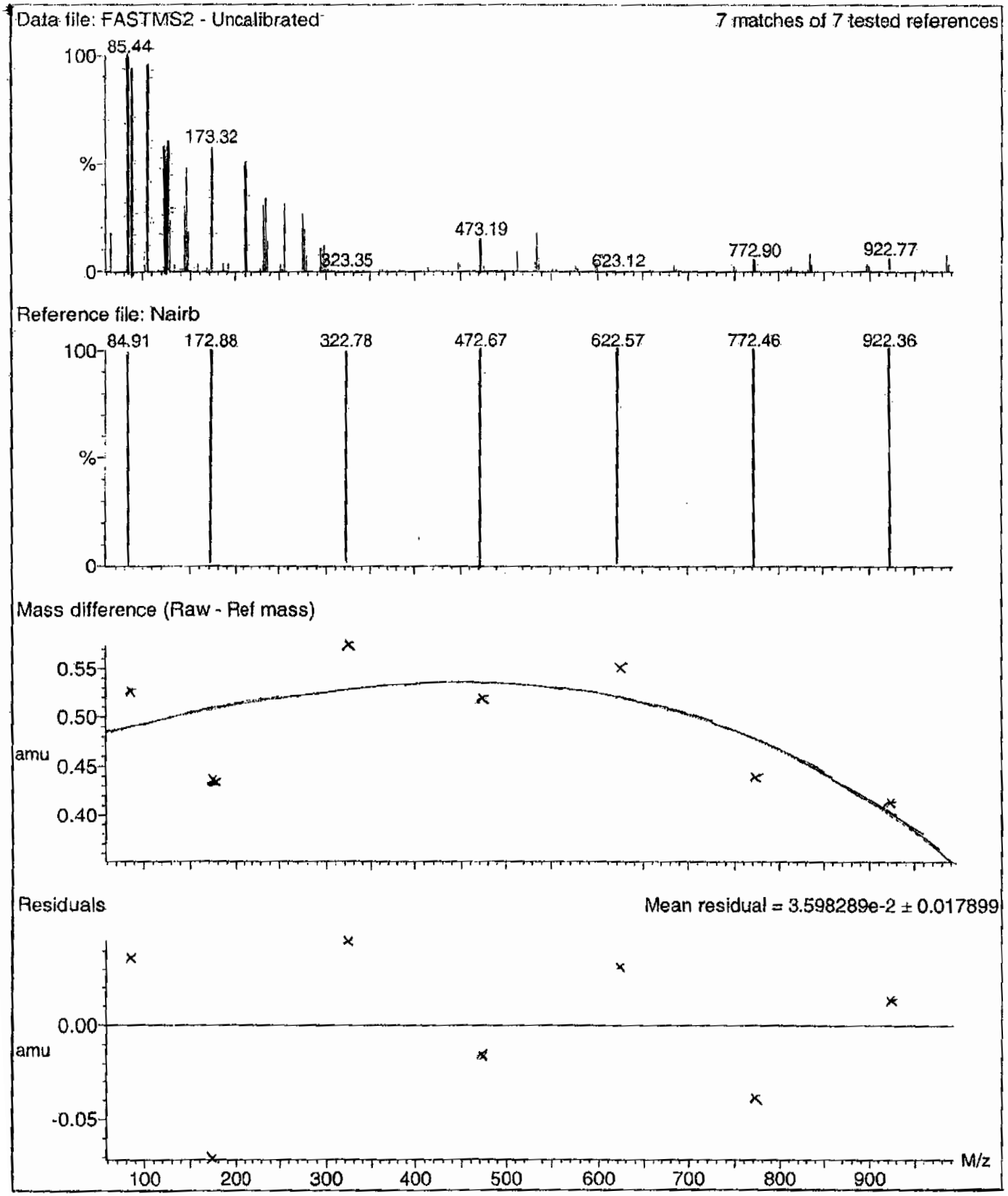

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Wednesday, July 08, 2009 11:04:53 Eastern Daylight Time

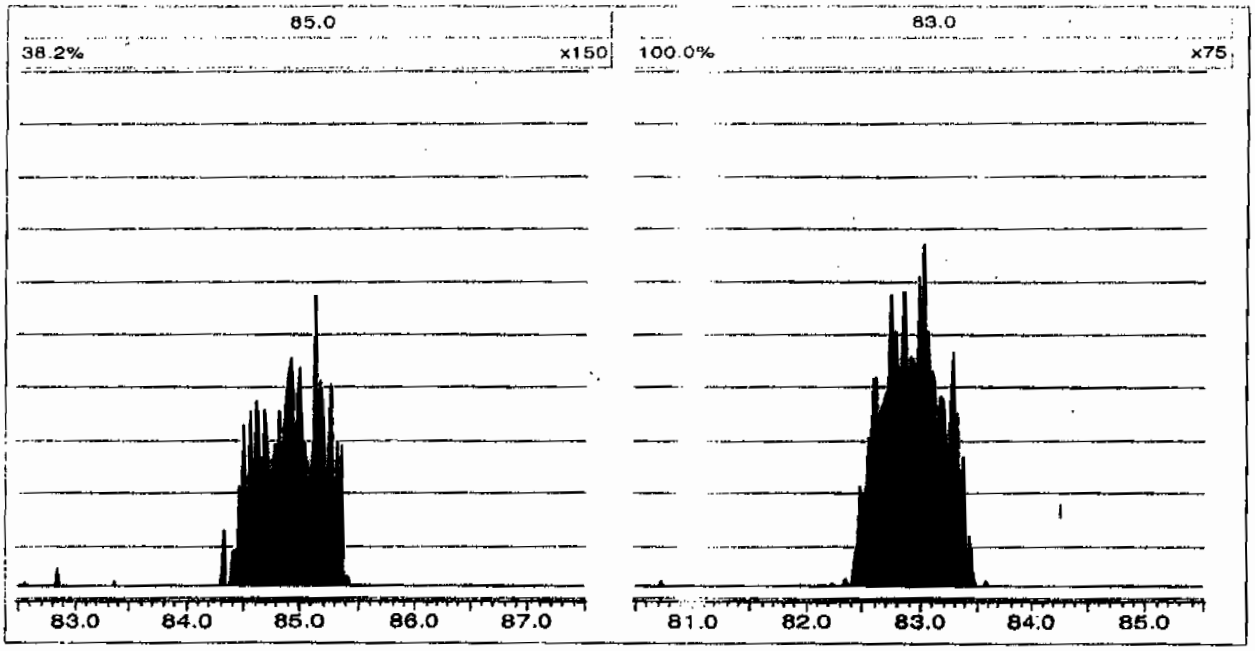

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2508

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0708006a**	**08–JUL–09**	**20767.2**				
Lower Area Limit			**10383.6**				
Upper Area Limit			**41534.4**				
1201872342	per0708045a	08–JUL–09 18:17	20710.1	2.56	2.5884	1.011	
1201872343	per0708046a	08–JUL–09 18:25	20944.1	2.58	2.5884	1.003	
1201872346	per0708047a	08–JUL–09 18:32	22262.8	2.6	2.6134	1.005	
232582001	per0708057a	08–JUL–09 19:50	22285.8	2.5	2.51388	1.006	
232582002	per0708058a	08–JUL–09 19:58	22080.2	2.54	2.55113	1.004	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10464

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2508

GEL Sample ID: 232582001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 93.3

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.536	2.14	3.10	ug/kg		1	08-JUL-09 19:50	per0708057a
	Perchlorate-O(18)			5.46	ug/kg		1	08-JUL-09 19:50	per0708057a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708057a
Date: 08-Jul-2009
Time: 19:50:18
ID: 232582001
Vial: 2:2,D

|LANL|881646|50120|1|

CWW 07-09-09

Perchlorate

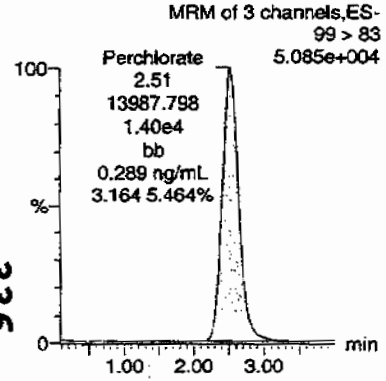

Perchlorate

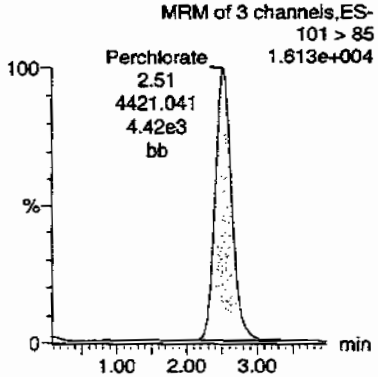

Perchlorate-101

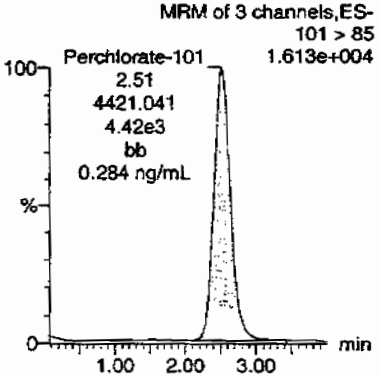

Perchlorate-O(18)

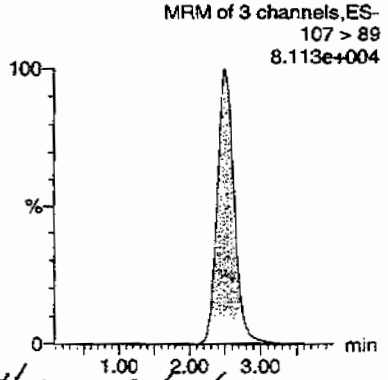

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232582001	Perchlorate	99 > 83	2.51	13987.798	13987.798	bb			0.2894			1884.2...	3.16
232582001	Perchlorate-101	101 > 85	2.51	4421.041	4421.041	bb			0.2839			504.847	
232582001	Perchlorate-O(18)	107 > 89	2.50	22285.797	22285.797	bb			0.5091	101.83	1.83	3310.7...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10465

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2508

GEL Sample ID: 232582002

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 95.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.526	2.1	2.14	ug/kg		1	08-JUL-09 19:58	per0708058a
	Perchlorate-O(18)			5.30	ug/kg		1	08-JUL-09 19:58	per0708058a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708058a
Date: 08-Jul-2009
Time: 19:58:13
ID: 232582002
Vial: 2:2,E

|LANL|881646|SOLID|1|

CWW 07-09-09

Perchlorate

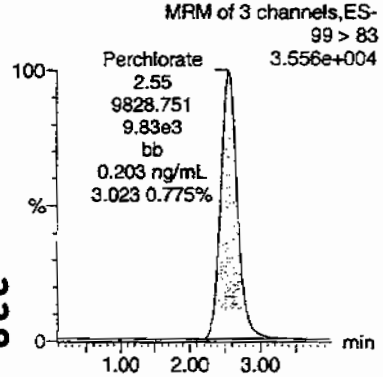

Perchlorate

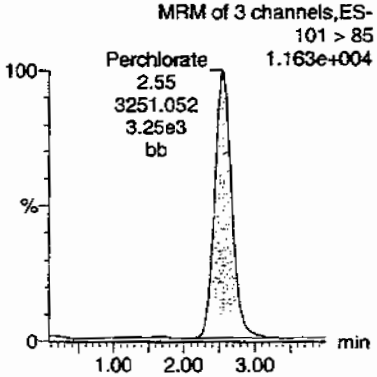

Perchlorate-101

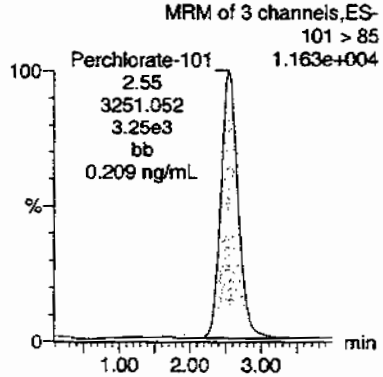

Perchlorate-O(18)

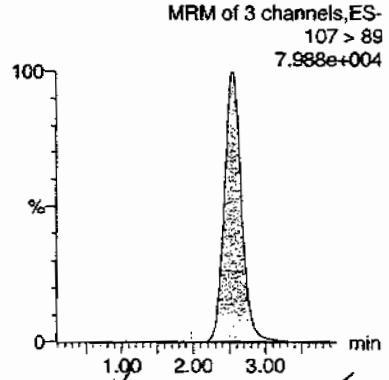

HMM 03/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232582002	Perchlorate	99 > 83	2.55	9828.751	9828.751	bb			0.2034			2264.0...	3.02
232582002	Perchlorate-101	101 > 85	2.55	3251.052	3251.052	bb			0.2088			522.587	
232582002	Perchlorate-O(18)	107 > 89	2.54	22080.205	22080.205	bb			0.5044	100.89	0.89	2921.1...	

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2508

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 48333.4

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2508

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 15570.4

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Compound name: Perchlorate
Response Factor: 48333.4
RRF SD: 3128.21, % Relative SD: 6.47216
Response type: External Std, Area
Curve type: RF

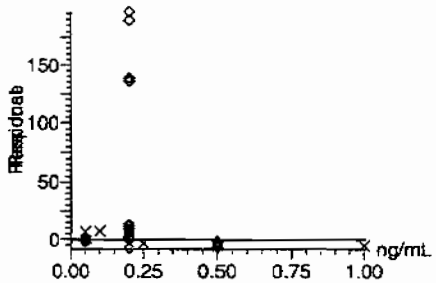

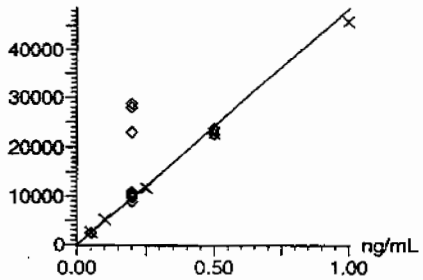

CWW
07-09-09

342

Compound name: Perchlorate-101
Response Factor: 15570.4
RRF SD: 1259.19, % Relative SD: 8.08705
Response type: External Std, Area
Curve type: RF

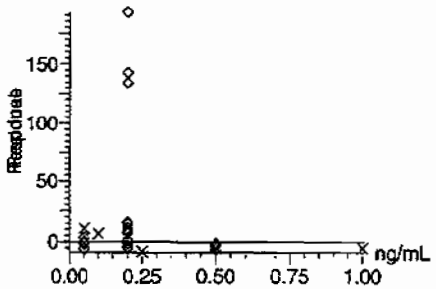

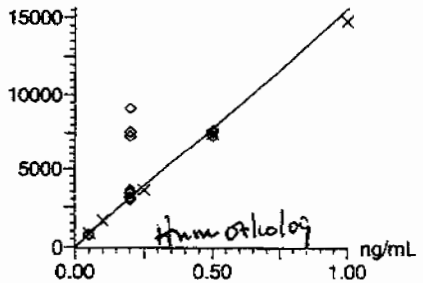

Hm 07/10/09

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 43772.6
RRF SD: 1463.7, % Relative SD: 3.34387
Response type: External Std, Area
Curve type: RF

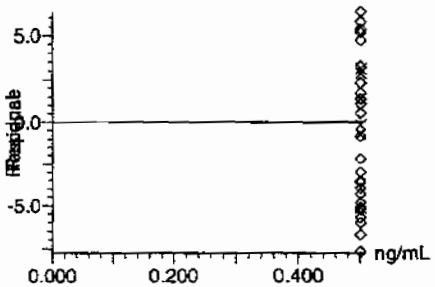

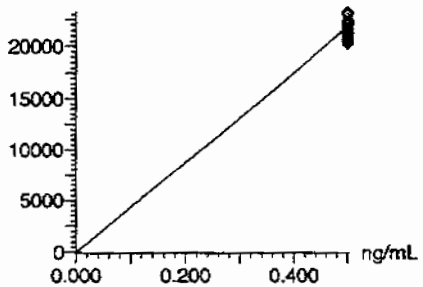

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2508

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	93.91	08–JUL–09 13:37	per0708009a
Perchlorate Isotope Ratio		2.99		08–JUL–09 13:37	per0708009a
Perchlorate–101	.5	.49	97.64	08–JUL–09 13:37	per0708009a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708009a
Date: 08-Jul-2009
Time: 13:37:46
ID: WCL090706-06ICV
Vial: 1:2,A

Pass
CWW
07-09-09

Perchlorate

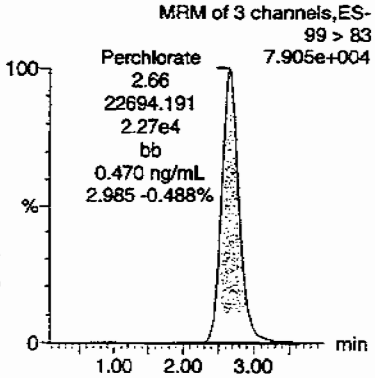

Perchlorate

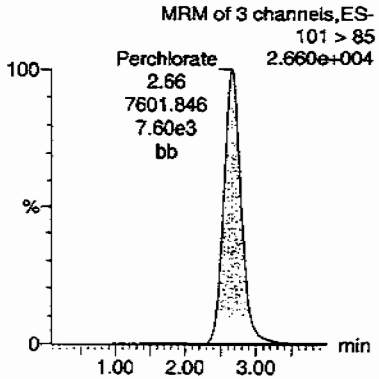

Perchlorate-101

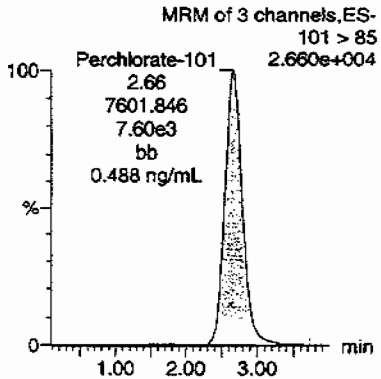

Perchlorate-O(18)

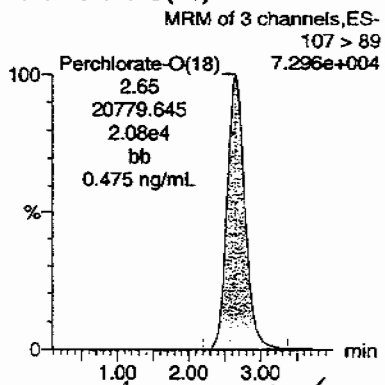

Hrm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06ICV	Perchlorate	99 > 83	2.66	22694.191	22694.191	bb			0.4695	93.91	-6.09	2453.8...	2.99
WCL090706-06ICV	Perchlorate-101	101 > 85	2.66	7601.846	7601.846	bb			0.4882	97.64	-2.36	2701.9...	
WCL090706-06ICV	Perchlorate-O(18)	107 > 89	2.65	20779.645	20779.645	bb			0.4747	94.94	-5.06	3233.6...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2508

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.46	92.96	08-JUL-09 15:18	per0708022a
Perchlorate Isotope Ratio		3.07		08-JUL-09 15:18	per0708022a
Perchlorate-101	.5	.47	94.1	08-JUL-09 15:18	per0708022a
Perchlorate	.5	.49	97.48	08-JUL-09 16:44	per0708033a
Perchlorate Isotope Ratio		3.09		08-JUL-09 16:44	per0708033a
Perchlorate-101	.5	.49	97.78	08-JUL-09 16:44	per0708033a
Perchlorate	.5	.49	97.63	08-JUL-09 17:53	per0708042a
Perchlorate Isotope Ratio		3.08		08-JUL-09 17:53	per0708042a
Perchlorate-101	.5	.49	98.44	08-JUL-09 17:53	per0708042a
Perchlorate	.5	.49	98.38	08-JUL-09 19:26	per0708054a
Perchlorate Isotope Ratio		3.1		08-JUL-09 19:26	per0708054a
Perchlorate-101	.5	.49	98.62	08-JUL-09 19:26	per0708054a
Perchlorate	.5	.48	95.92	08-JUL-09 20:52	per0708065a

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2508

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate Isotope Ratio		3.08		08–JUL–09 20:52	per0708065a
Perchlorate–101	.5	.48	96.73	08–JUL–09 20:52	per0708065a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708022a
Date: 08-Jul-2009
Time: 15:18:39
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
aw
07-09-09

Perchlorate

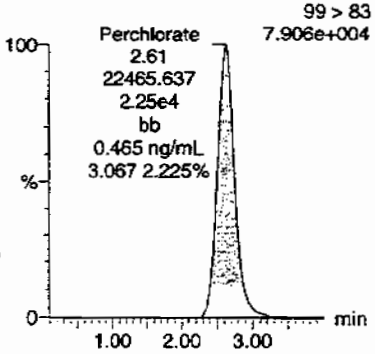

Perchlorate

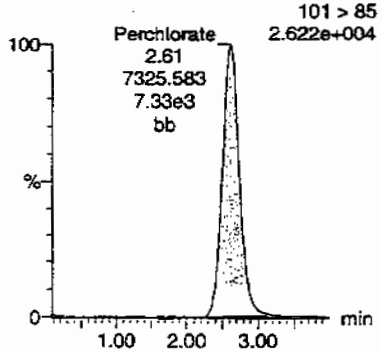

Perchlorate-101

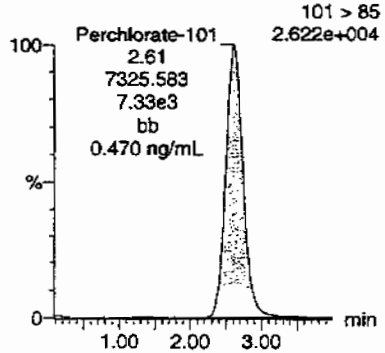

Perchlorate-O(18)

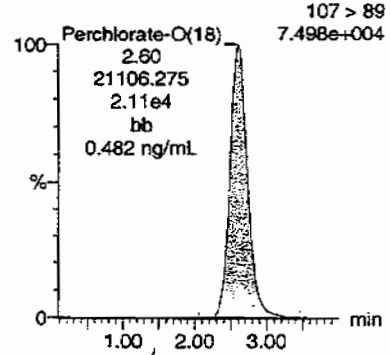

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.61	22465.637	22465.637	bb			0.4648	92.96	-7.04	5659.4...	3.07
WCL090706-06CCV	Perchlorate-101	101 > 85	2.61	7325.583	7325.583	bb			0.4705	94.10	-5.90	675.146	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.60	21106.275	21106.275	bb			0.4822	96.44	-3.56	2111.2...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708033a
Date: 08-Jul-2009
Time: 16:44:02
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
and
07-09-09

Perchlorate

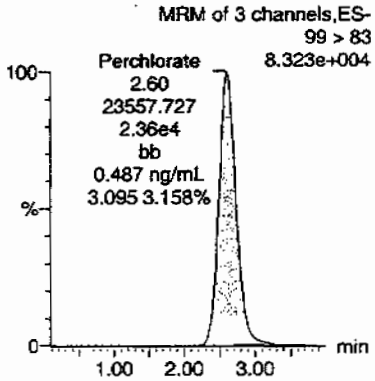

Perchlorate

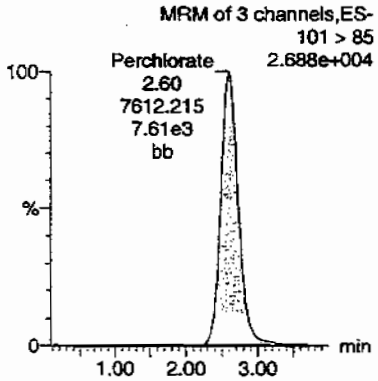

Perchlorate-101

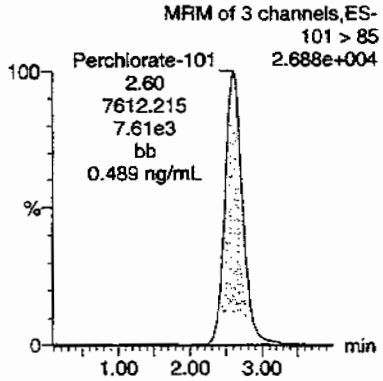

Perchlorate-O(18)

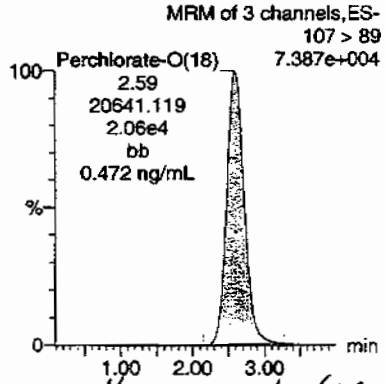

Hnm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.60	23557.727	23557.727	bb			0.4874	97.48	-2.52	5212.1...	3.09
WCL090706-06CCV	Perchlorate-101	101 > 85	2.60	7612.215	7612.215	bb			0.4889	97.78	-2.22	3842.9...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.59	20641.119	20641.119	bb			0.4716	94.31	-5.69	4254.1...	

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Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708042a
Date: 08-Jul-2009
Time: 17:53:47
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
and
07-09-09

Perchlorate

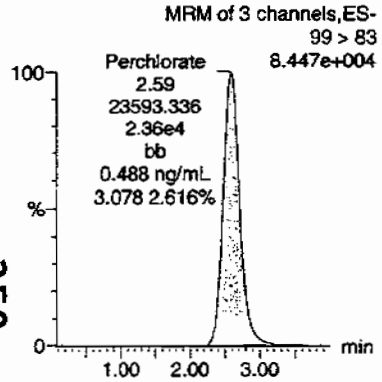

Perchlorate

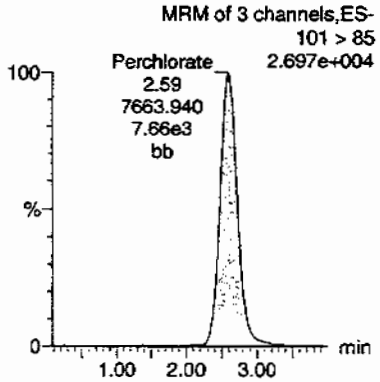

Perchlorate-101

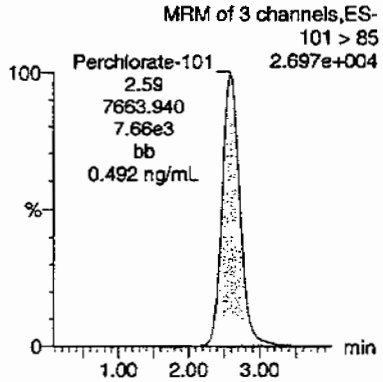

Perchlorate-O(18)

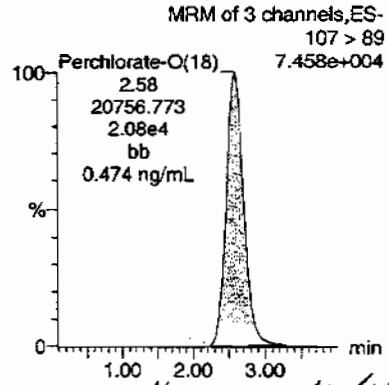

Hmc 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.59	23593.336	23593.336	bb			0.4881	97.63	-2.37	5344.7...	3.08
WCL090706-06CCV	Perchlorate-101	101 > 85	2.59	7663.940	7663.940	bb			0.4922	98.44	-1.56	1302.8...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.58	20756.773	20756.773	bb			0.4742	94.84	-5.16	6634.2...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708054a
Date: 08-Jul-2009
Time: 19:26:49
ID: WCL090706-06CCV
Vial: 1:2,A

Pres
GWO
07-09-09

Perchlorate

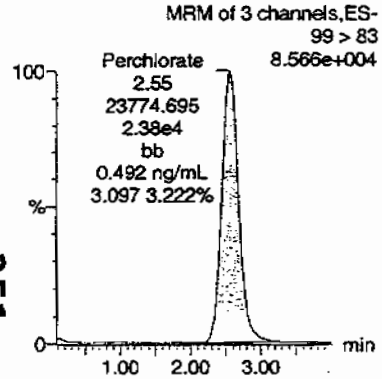

Perchlorate

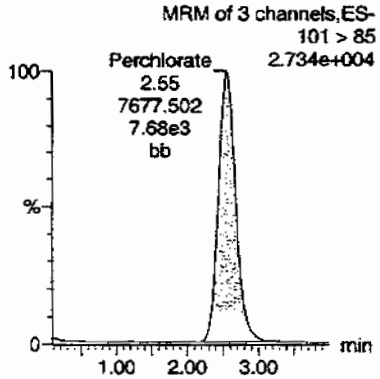

Perchlorate-101

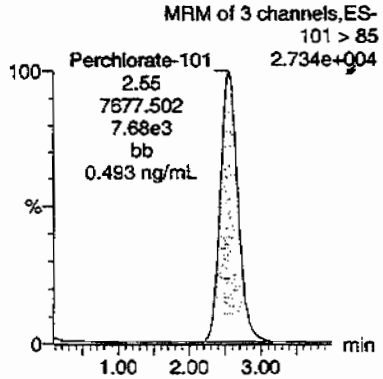

Perchlorate-O(18)

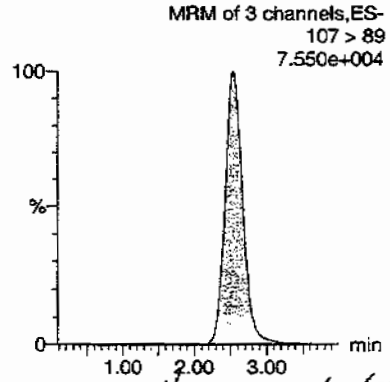

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.55	23774.695	23774.695	bb			0.4919	98.38	-1.62	3999.8...	3.10
WCL090706-06CCV	Perchlorate-101	101 > 85	2.55	7677.502	7677.502	bb			0.4931	98.62	-1.38	1650.2...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.54	21119.523	21119.523	bb			0.4825	96.50	-3.50	4934.7...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708065a
Date: 08-Jul-2009
Time: 20:52:23
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
07-31-09

Perchlorate

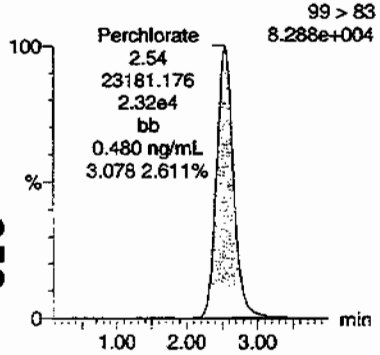

Perchlorate

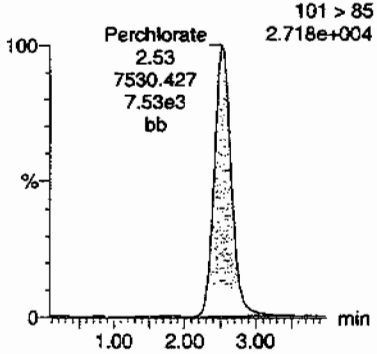

Perchlorate-101

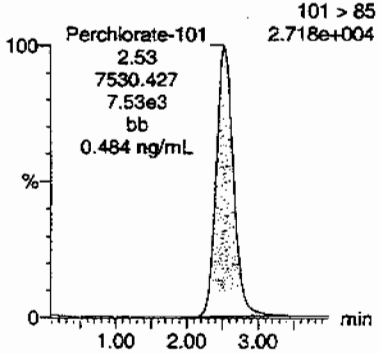

Perchlorate-O(18)

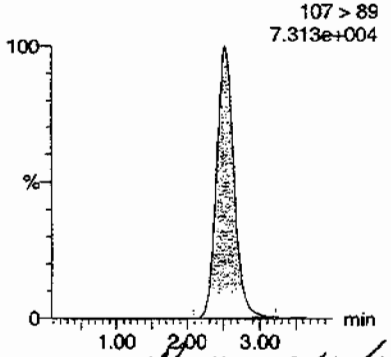

HM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.54	23181.176	23181.176	bb			0.4796	95.92	-4.08	358.773	3.08
WCL090706-06CCV	Perchlorate-101	101 > 85	2.53	7530.427	7530.427	bb			0.4836	96.73	-3.27	1346.6...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.51	20197.914	20197.914	bb			0.4614	92.29	-7.71	7608.4...	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2508

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	102.31	08–JUL–09 13:53	per0708011a
Perchlorate Isotope Ratio		3.35		08–JUL–09 13:53	per0708011a
Perchlorate–101	.05	.05	94.69	08–JUL–09 13:53	per0708011a
Perchlorate	.05	.05	97.69	08–JUL–09 15:34	per0708024a
Perchlorate Isotope Ratio		3.08		08–JUL–09 15:34	per0708024a
Perchlorate–101	.05	.05	98.51	08–JUL–09 15:34	per0708024a
Perchlorate	.05	.05	99.89	08–JUL–09 16:59	per0708035a
Perchlorate Isotope Ratio		3.25		08–JUL–09 16:59	per0708035a
Perchlorate–101	.05	.05	95.4	08–JUL–09 16:59	per0708035a
Perchlorate	.05	.05	101.76	08–JUL–09 18:09	per0708044a
Perchlorate Isotope Ratio		3.06		08–JUL–09 18:09	per0708044a

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2508

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate–101	.05	.05	103.31	08–JUL–09 18:09	per0708044a
Perchlorate	.05	.05	99.09	08–JUL–09 19:42	per0708056a
Perchlorate Isotope Ratio		3.09		08–JUL–09 19:42	per0708056a
Perchlorate–101	.05	.05	99.47	08–JUL–09 19:42	per0708056a
Perchlorate	.05	.05	99.3	08–JUL–09 21:08	per0708067a
Perchlorate Isotope Ratio		3.07		08–JUL–09 21:08	per0708067a
Perchlorate–101	.05	.05	100.33	08–JUL–09 21:08	per0708067a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708011a
Date: 08-Jul-2009
Time: 13:53:16
ID: WCL090706-07CRI
Vial: 1:2,B

CWW
07-09-09

Perchlorate

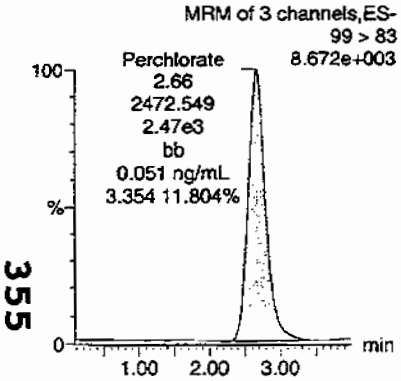

Perchlorate

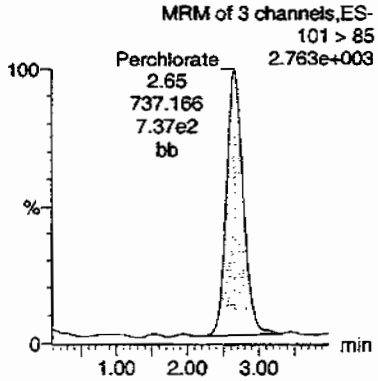

Perchlorate-101

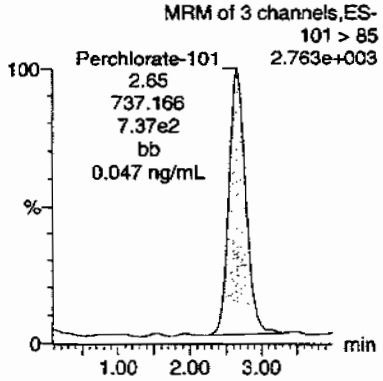

Perchlorate-O(18)

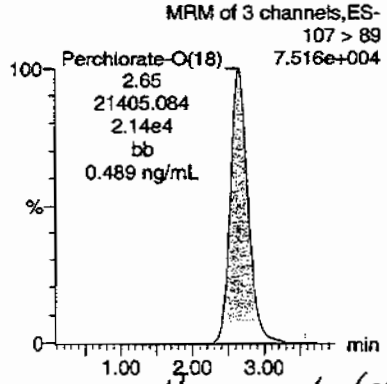

355

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.66	2472.549	2472.549	bb			0.0512	102.31	2.31	911.588	3.35
WCL090706-07CRI	Perchlorate-101	101 > 85	2.65	737.166	737.166	bb			0.0473	94.69	-5.31	141.523	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.65	21405.084	21405.084	bb			0.4890	97.80	-2.20	1236.3...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708024a
Date: 08-Jul-2009
Time: 15:34:09
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
ans
07-31-09

Perchlorate

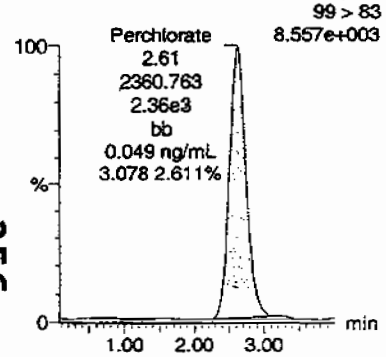

Perchlorate

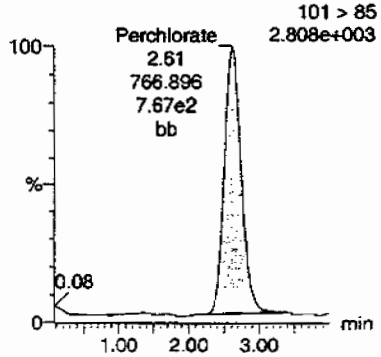

Perchlorate-101

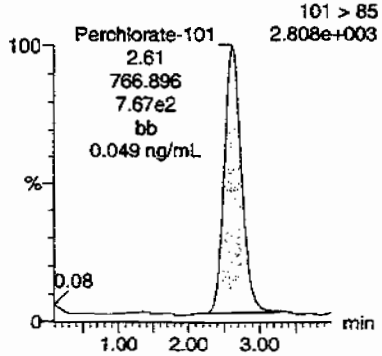

Perchlorate-O(18)

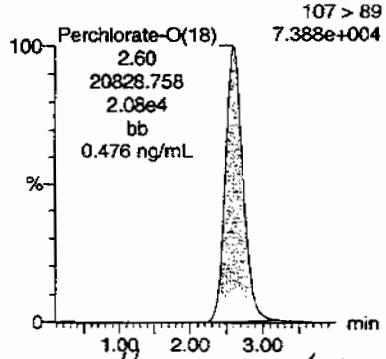

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.61	2360.763	2360.763	bb			0.0488	97.69	-2.31	448.651	3.08
WCL090706-07CRI	Perchlorate-101	101 > 85	2.61	766.896	766.896	bb			0.0493	98.51	-1.49	215.016	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.60	20828.758	20828.758	bb			0.4758	95.17	-4.83	12080....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708035a
Date: 08-Jul-2009
Time: 16:59:31
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
aw
07-09-09

Perchlorate

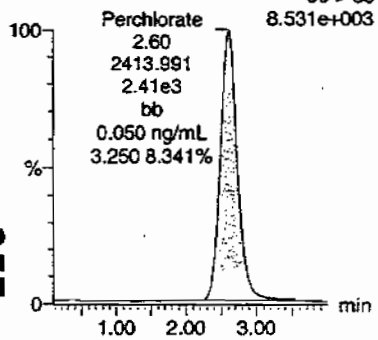

Perchlorate

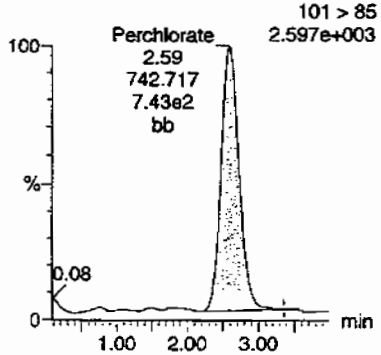

Perchlorate-101

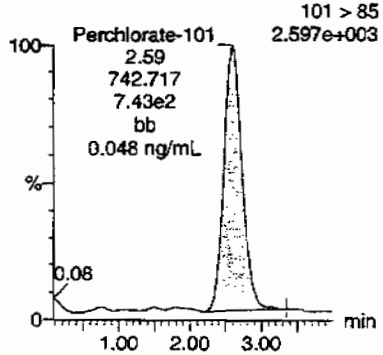

Perchlorate-O(18)

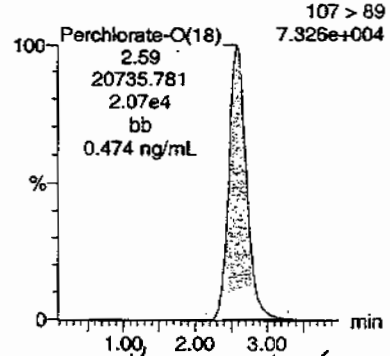

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.60	2413.991	2413.991	bb			0.0499	99.89	-0.11	1123.0...	3.25
WCL090706-07CRI	Perchlorate-101	101 > 85	2.59	742.717	742.717	bb			0.0477	95.40	-4.60	195.036	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.59	20735.781	20735.781	bb			0.4737	94.74	-5.26	10141....	

357

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708044a
Date: 08-Jul-2009
Time: 18:09:17
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
CNO
07-09-09

Perchlorate

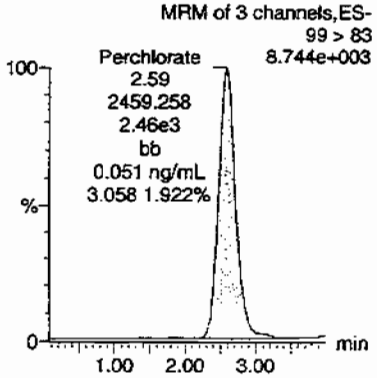

Perchlorate

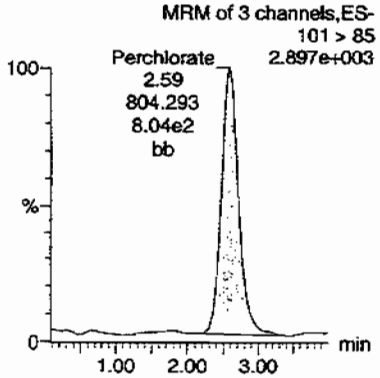

Perchlorate-101

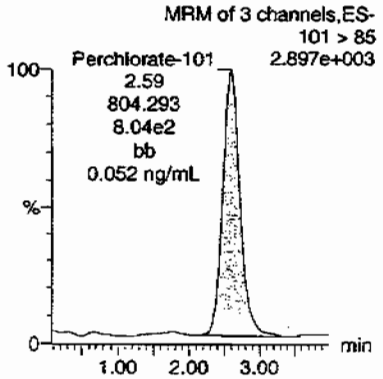

Perchlorate-O(18)

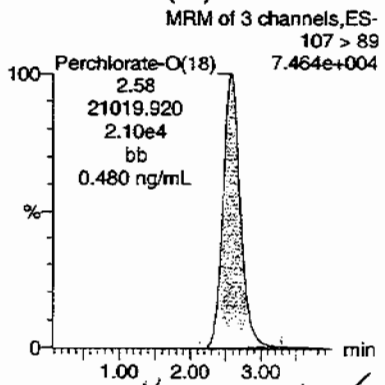

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.59	2459.258	2459.258	bb			0.0509	101.76	1.76	195.218	3.06
WCL090706-07CRI	Perchlorate-101	101 > 85	2.59	804.293	804.293	bb			0.0517	103.31	3.31	216.046	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.58	21019.920	21019.920	bb			0.4802	96.04	-3.96	3753.1...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708056a
Date: 08-Jul-2009
Time: 19:42:33
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
ans
07-09-09

Perchlorate

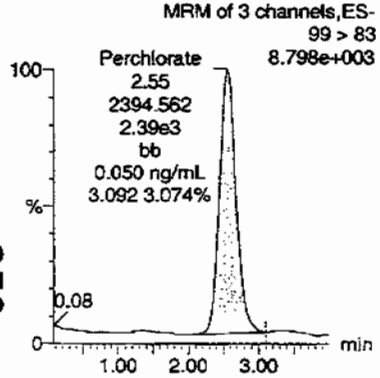

Perchlorate

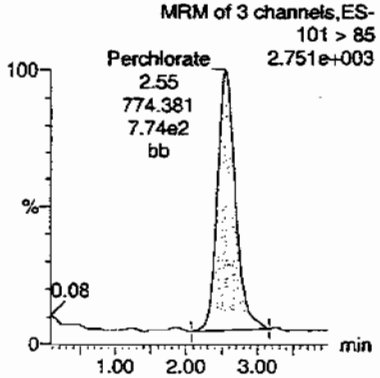

Perchlorate-101

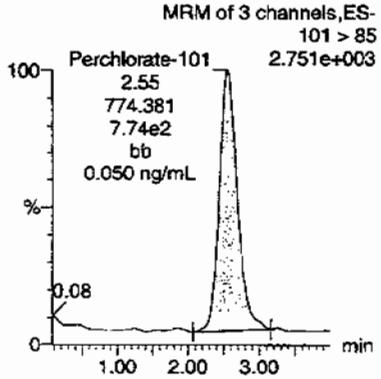

Perchlorate-O(18)

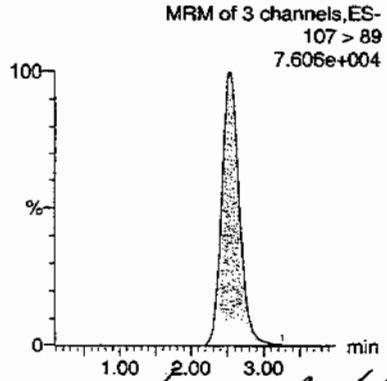

gmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.55	2394.562	2394.562	bb			0.0495	99.09	-0.91	283.551	3.09
WCL090706-07CRI	Perchlorate-101	101 > 85	2.55	774.381	774.381	bb			0.0497	99.47	-0.53	232.638	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.54	21226.893	21226.893	bb			0.4849	96.99	-3.01	4679.5...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708067a
Date: 08-Jul-2009
Time: 21:08:07
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
CWW
07-31-09

Perchlorate

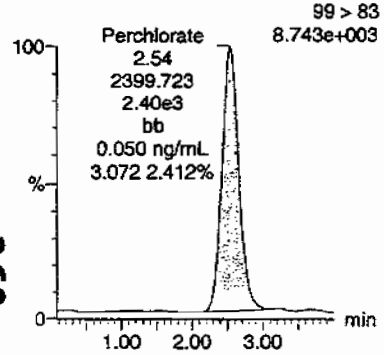

Perchlorate

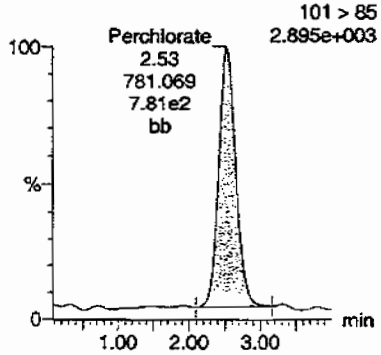

Perchlorate-101

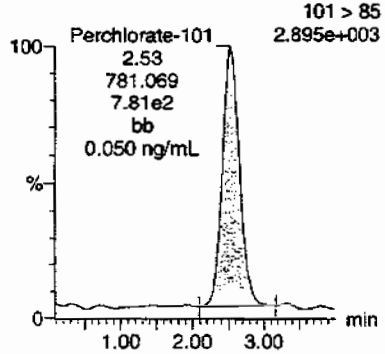

Perchlorate-O(18)

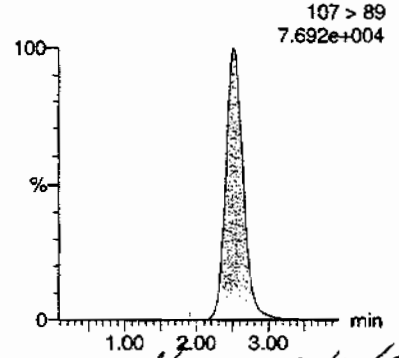

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.54	2399.723	2399.723	bb			0.0496	99.30	-0.70	206.912	3.07
WCL090706-07CRI	Perchlorate-101	101 > 85	2.53	781.069	781.069	bb			0.0502	100.33	0.33	112.139	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.51	21702.402	21702.402	bb			0.4958	99.16	-0.84	1034.6...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2508

GEL Sample ID: 1201872342

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	08-JUL-09 18:17	per0708045a
	Perchlorate-O(18)			4.73	ug/kg		1	08-JUL-09 18:17	per0708045a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708045a
Date: 08-Jul-2009
Time: 18:17:05
ID: 1201872342
Vial: 2:1,A

|LANL|881646|SDWD|MB|11|

CWW 07-09-09

Perchlorate

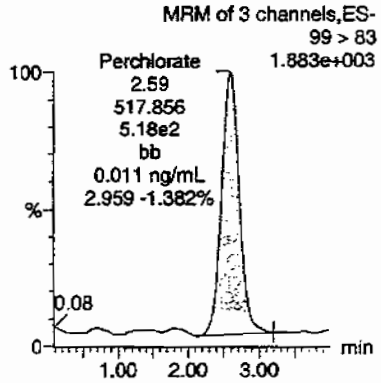

Perchlorate

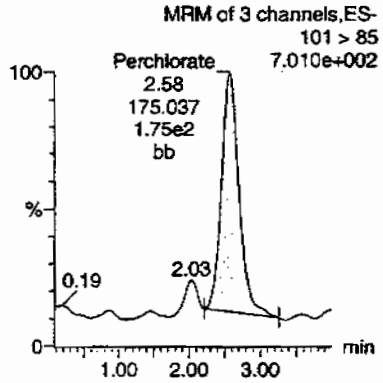

Perchlorate-101

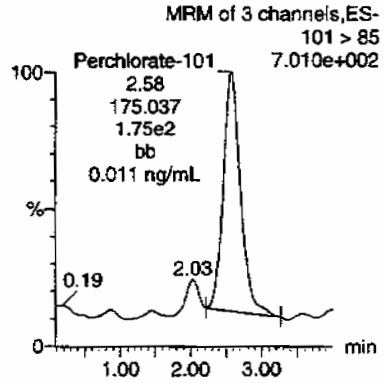

Perchlorate-O(18)

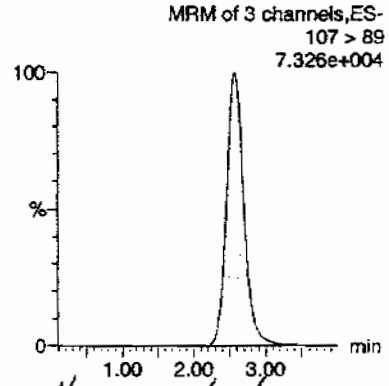

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872342	Perchlorate	99 > 83	2.59	517.856	517.856	bb			0.0107			140.764	2.96
1201872342	Perchlorate-101	101 > 85	2.58	175.037	175.037	bb			0.0112			80.373	
1201872342	Perchlorate-O(18)	107 > 89	2.56	20710.131	20710.131	bb			0.4731	94.63	-5.37	413.279	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

LCS

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2508

GEL Sample ID: 1201872343

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.04	ug/kg		1	08-JUL-09 18:25	per0708046a
	Perchlorate-O(18)			4.78	ug/kg		1	08-JUL-09 18:25	per0708046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708046a
Date: 08-Jul-2009
Time: 18:25:00
ID: 1201872343
Vial: 2:1,B

|LANL| 881646 | 50620 | LCS | 1|

LMW 07-09-09

Perchlorate

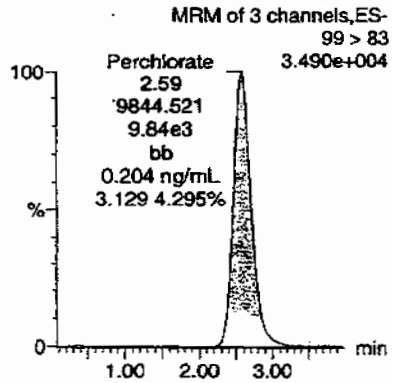

Perchlorate

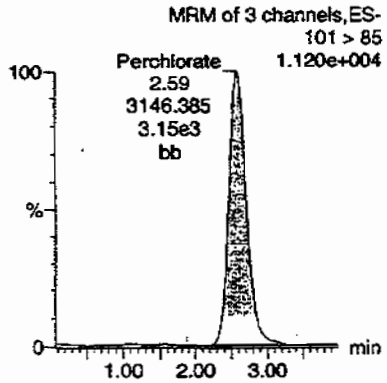

Perchlorate-101

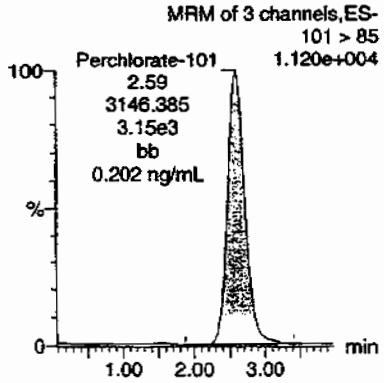

Perchlorate-O(18)

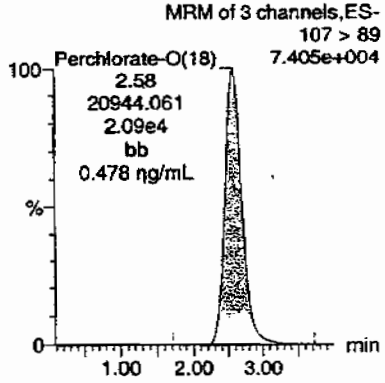

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872343	Perchlorate	99 > 83	2.59	9844.521	9844.521	bb			0.2037	101.84	1.84	733.467	3.13
1201872343	Perchlorate-101	101 > 85	2.59	3146.385	3146.385	bb			0.2021	101.04	1.04	1504.8...	
1201872343	Perchlorate-O(18)	107 > 89	2.58	20944.061	20944.061	bb			0.4785	95.69	-4.31	2058.2...	

$$\frac{9844.521}{48333.4} = 0.2037$$

HMW 07/10/09

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MISCELLANEOUS DATA

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708063a
Date: 08-Jul-2009
Time: 20:36:55
ID: 1201872344
Vial: 2:3,D

|LANL|881646|SOLID|MS|11|

07-09-09

Perchlorate

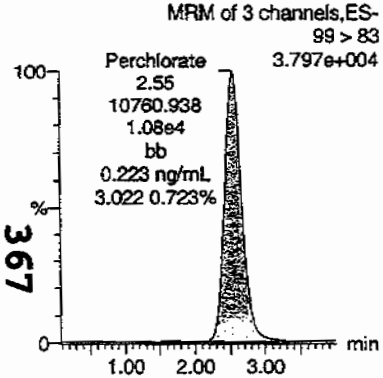

Perchlorate

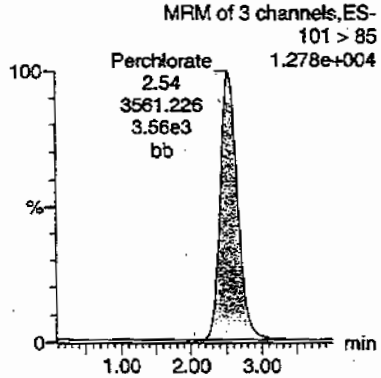

Perchlorate-101

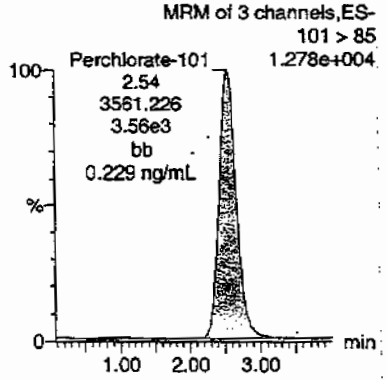

Perchlorate-O(18)

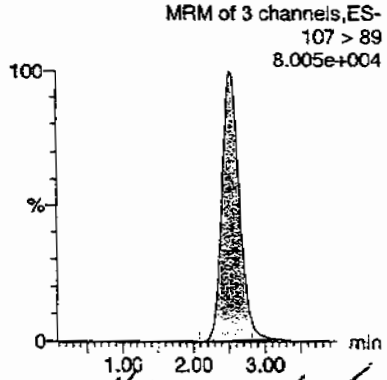

HMM 07/10/09

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ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	(ng/mL)	%Rec	%Dev	S/N	Ion Ratio
1201872344	Perchlorate	99 > 83	2.55	10760.938	10760.938	bb			0.2226	111.32	11.32	1778.7...	3.02
1201872344	Perchlorate-101	101 > 85	2.54	3561.226	3561.226	bb			0.2287	114.36	14.36	409.957	
1201872344	Perchlorate-O(18)	107 > 89	2.53	22184.420	22184.420	bb			0.5068	101.36	1.36	7341.0...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708064a
Date: 08-Jul-2009
Time: 20:44:39
ID: 1201872345
Vial: 2:3,E

|LANL|881646|5020|MSO|1|

07 09

Perchlorate

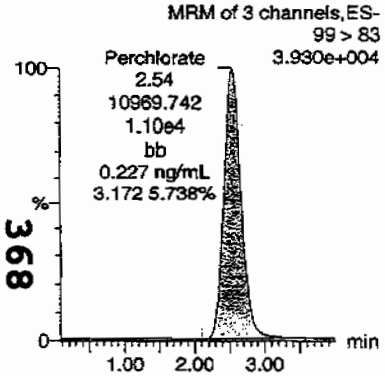

Perchlorate

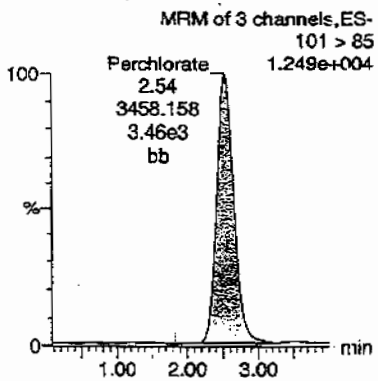

Perchlorate-101

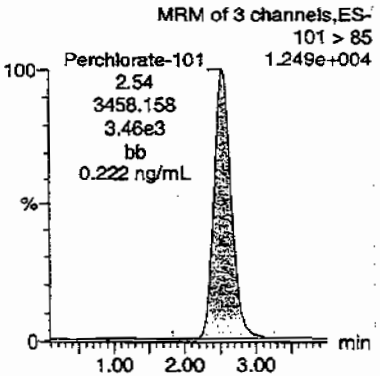

Perchlorate-O(18)

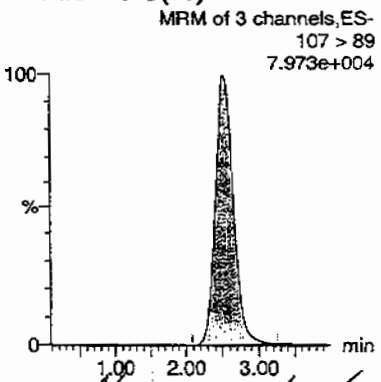

368

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872345	Perchlorate	99 > 83	2.54	10969.742	10969.742	bb			0.2270	113.48	13.48	2005.0...	3.17
1201872345	Perchlorate-101	101 > 85	2.54	3458.158	3458.158	bb			0.2221	111.05	11.05	2356.5...	
1201872345	Perchlorate-O(18)	107 > 89	2.53	22121.789	22121.789	bb			0.5054	101.08	1.08	4214.8...	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

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LC/MS/MS EXPLOSIVES ANALYSIS

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LC/MS/MS Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2508

Method/Analysis Information

Procedure:	**Definitive Low Level Analysis of Nitroaromatic Explosives Utilizing Liquid Chromatography / Mass Spectrometry / Mass Spectrometry (LC/MS/MS) by SW-846 Method 8321 Modified (8321M)**
Analytical Method:	SW846 8321A Modified
Prep Method:	SW846 8330 PREP
Analytical Batch Number:	881635
Prep Batch Number:	881634

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8321A Modified:

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201872315	Method Blank (MB)
1201872316	Laboratory Control Sample (LCS)
1201872317	232582001(CAMO-09-10464) Matrix Spike (MS)
1201872318	232582001(CAMO-09-10464) Matrix Spike Duplicate (MSD)

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-056 REV# 11.

Primary Analyte Analysis

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG.

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Calibration Verification Standard Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Calibration Blank Requirements
All initial or continuing calibration blanks (ICB or CCB) bracketing the analyses associated with this batch were within acceptance criteria. Due to software limitations, the CCBs and/or the ICBs may have a concentration for target analytes in the Found column. These values should be zero.

CRI Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards and may be based off the grand mean average percent recovery of all target analytes.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria in this SDG in this analytical batch for this analysis.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation
Sample 232582001 (CAMO-09-10464) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS spike recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD spike recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

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Sample Dilutions
According to the GEL SOP for Method 8321A, all sample and QC extracts are diluted 1:1 v/v with acidified HPLC grade water. The samples in this SDG in this analytical batch for this analysis did not require any additional dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG in this analytical batch for this analysis except for dilutions.

Secondary Analyte Analysis

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG.

Calibration Verification Standard Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Calibration Blank Requirements
All initial or continuing calibration blanks (ICB or CCB) bracketing the analyses associated with this batch were within acceptance criteria. Due to software limitations, the CCBs and/or the ICBs may have a concentration for target analytes in the Found column. These values should be zero.

CRI Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards and may be based off the grand mean average percent recovery of all target analytes.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria in this SDG in this analytical batch for this analysis.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation
Sample 232582001 (CAMO-09-10464) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS spike recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD spike recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

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Internal Standard (ISTD) Acceptance
The internal standards were not added to the secondary analyte extracts.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
According to the GEL SOP for Method 8321A, all sample and QC extracts are diluted 1:1 v/v with acidified HPLC grade water. The samples in this SDG in this analytical batch for this analysis did not require any additional dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG in this analytical batch for this analysis except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples required manual integrations due to software limitations.

Flagging Convention
The samples were not originally analyzed using SW-846 Method 8330.

Additional Comments
Due to software limitations, all initial calibration blanks must be designated as XIB001 in order for the forms to be correct.

Due to software limitations in the secondary analyte analysis, false positives and analytes detected below the MDL cannot be deleted from the raw data.

Due to software limitations, file extensions such as DL, RE, etc. may not appear on the generated forms and/or raw data.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for primary analyte analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for the primary analyte analysis. The laboratory also utilizes an Agilent 1100 liquid chromatography instrument for either primary or secondary analyte analysis. It is coupled with a Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as either LCMSMS #3 or LCMSMS #4. It is fitted with a APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for both the primary and secondary analyte analysis.

Chromatographic Columns

The detection of the primary analyte nitroaromatic and nitramines is accomplished through analysis on the following reversed phase column:

Phenomenex: Ultracarb 5u ODS (20), 250 x 4.60 mm ID.

The detection of the secondary analytes is accomplished through analysis on the following reversed phase column:

YMC: J'sphere ODS-H80, 150 x 4.6mm I.D.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert M Maier **Date:** 07/14/09

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SAMPLE DATA SUMMARY

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10464

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582001

Sample Amount 2

Moisture: 6.7

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713018a

Date Analyzed: 13-JUL-09 23:17

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10464

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582001

Sample Amount 2

Moisture: 6.7

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0708016.wiff

Date Analyzed: 08-JUL-09 14:30

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10465

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582002

Sample Amount 2

Moisture: 4.9

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713021a

Date Analyzed: 14-JUL-09 00:46

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10465

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582002

Sample Amount 2

Moisture: 4.9

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0708019.wiff

Date Analyzed: 08-JUL-09 15:19

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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QUALITY CONTROL SUMMARY

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High Explosives Surrogate Recovery Summary

Lab Name: GEL Laboratories LLC **GEL Job No (SDG):** 09--2508

Lab Code: GEL **HPLC Column:** Phenomenex Ultracarb 5u ODS(20)

Lab Sample ID	Client Sample ID	DNT	QC Limits	Flg
232582001	CAMO-09-10464	100	73.7 – 133.3	
232582001	CAMO-09-10464	103	73.7 – 133.3	
232582002	CAMO-09-10465	98.2	73.7 – 133.3	
232582002	CAMO-09-10465	102	73.7 – 133.3	
1201872315	MB for batch 881634	111	73.7 – 133.3	
1201872315	MB for batch 881634	91.9	73.7 – 133.3	
1201872316	LCS for batch 881634	101	73.7 – 133.3	
1201872316	LCS for batch 881634	94.4	73.7 – 133.3	
1201872317	CAMO-09-10464(232582001MS)	100	73.7 – 133.3	
1201872317	CAMO-09-10464(232582001MS)	103	73.7 – 133.3	
1201872318	CAMO-09-10464(232582001MSD)	90	73.7 – 133.3	
1201872318	CAMO-09-10464(232582001MSD)	88.3	73.7 – 133.3	

DNT = 3,4-Dinitrotoluene

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3B

High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 09-2508

Extract Batch Code: 881634

Date Extracted: 06-JUL-09

GEL LCS ID: 1201872316

GEL LCSDUP ID:

Analysis Date/Time: 13-JUL-09 22:48

DUP Analysis Date/Time:

Reporting Units: ug/kg

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
4-Amino-2,6-dinitrotoluene	5000	5120	102					85.6 - 133
1,3,5-Trinitrobenzene	5000	5000	99.9					62.1 - 124
2,4,6-Trinitrotoluene	5000	5770	115					78.3 - 132
2,4-Dinitrotoluene	5000	5530	111					82.7 - 132
2,6-Dinitrotoluene	5000	4880	97.7					86.9 - 122
2-Amino-4,6-dinitrotoluene	5000	5300	106					84.2 - 149
HMX	5000	4760	95.3					66.5 - 142
Nitrobenzene	5000	4470	89.4					71.8 - 126
PETN	5000	4540	90.7					64.6 - 147
RDX	5000	5110	102					78.7 - 144
Tetryl	5000	4580	91.6					31.2 - 119
m-Dinitrobenzene	5000	5190	104					80.9 - 127
m-Nitrotoluene	5000	4460	89.2					71.9 - 126
o-Nitrotoluene	5000	4330	86.6					75 - 123
p-Nitrotoluene	5000	4560	91.1					73.7 - 124

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

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3B

High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 09-2508

Extract Batch Code: 881634

Date Extracted: 06-JUL-09

GEL LCS ID: 1201872316

GEL LCSDUP ID:

Analysis Date/Time: 08-JUL-09 14:14

DUP Analysis Date/Time:

Reporting Units: ug/kg

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
2,4-Diamino-6-nitrotoluene	5000	4530	90.6					64.8 – 128
2,6-Diamino-4-nitrotoluene	5000	4900	98					69.6 – 133
3,5-Dinitroaniline	5000	5390	108					77.3 – 123
tris(o-cresyl) phosphate	5000	5520	110					84.3 – 120
TATB	5000	4810	96.2					46.8 – 166

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

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High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: CAMO-09-10464

Lab Code: GEL

GEL Job No (SDG) 09-2508

Extract Batch Code: 881634

Date Extracted: 06-JUL-09

GEL Spike ID: 1201872317

GEL SpikeDup ID: 1201872318

Analysis Date/Time: 13-JUL-09 23:47

MSD Analysis Date/Time:

Reporting Units: ug/kg

QC Type: MS/MSD

Compound	Spike Added	Sample Conc	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Rec Limits
1,3,5-Trinitrobenzene	5000	0	5420	108	4580	91.5	16.9	30	70.7 - 130
2,4,6-Trinitrotoluene	5000	0	5600	112	5040	101	10.4	30	83.4 - 138
2,4-Dinitrotoluene	5000	0	5630	113	4590	91.9	20.4	30	79.1 - 137
2,6-Dinitrotoluene	5000	0	4890	97.7	4300	86.1	12.7	30	85.4 - 125
2-Amino-4,6-dinitrotoluene	5000	0	5270	105	4920	98.4	6.79	30	77.4 - 154
4-Amino-2,6-dinitrotoluene	5000	0	5300	106	4800	96.1	9.87	30	77.3 - 140
HMX	5000	0	5550	111	4320	86.4	24.9	30	66.7 - 144
Nitrobenzene	5000	0	4550	91	3910	78.3	15	30	70.4 - 129
PETN	5000	0	5160	103	4510	90.3	13.4	30	61.9 - 153
RDX	5000	0	5530	111	4510	90.2	20.3	30	73 - 140
Tetryl	5000	0	4500	90.1	4120	82.4	8.86	30	46.8 - 138
m-Dinitrobenzene	5000	0	5290	106	4630	92.6	13.2	30	83.5 - 126
m-Nitrotoluene	5000	0	4550	91	3720	74.3	20.2	30	68.6 - 135
o-Nitrotoluene	5000	0	4400	88	3820	76.4	14.1	30	71.2 - 131
p-Nitrotoluene	5000	0	4660	93.2	4070	81.4	13.5	30	69.3 - 133

#Column to be used to flag recovery and RPD values with an asterisk

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High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: CAMO-09-10464

Lab Code: GEL

GEL Job No (SDG) 09-2508

Extract Batch Code: 881634

Date Extracted: 06-JUL-09

GEL Spike ID: 1201872317

GEL SpikeDup ID: 1201872318

Analysis Date/Time: 08-JUL-09 14:46

MSD Analysis Date/Time:

Reporting Units: ug/kg

QC Type: MS/MSD

Compound	Spike Added	Sample Conc	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Rec Limits
2,4-Diamino-6-nitrotoluene	5000	0	5140	103	4040	80.8	24	30	51.6 – 127
2,6-Diamino-4-nitrotoluene	5000	0	5450	109	4280	85.6	24	30	58.9 – 135
3,5-Dinitroaniline	5000	0	5220	104	4600	92	12.6	30	72.8 – 125
TATB	5000	0	4240	84.8	3760	75.2	12	30	43.9 – 166
tris(o-cresyl) phosphate	5000	0	5330	107	4430	88.6	18.4	30	79.1 – 124

#Column to be used to flag recovery and RPD values with an asterisk

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 13-JUL-09 14:54

GEL Data File: EXP0713001a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	381.015
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	386.045
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\071309expa.mdb, Time: Tue Jul 14 10:07:51 2009
Calibration: Untitled, Time: Tue Jul 14 10:21:04 2009

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Date: 13-Jul-2009
Time: 14:54:51
ID: XIBLK01
Vial: 1:1,A

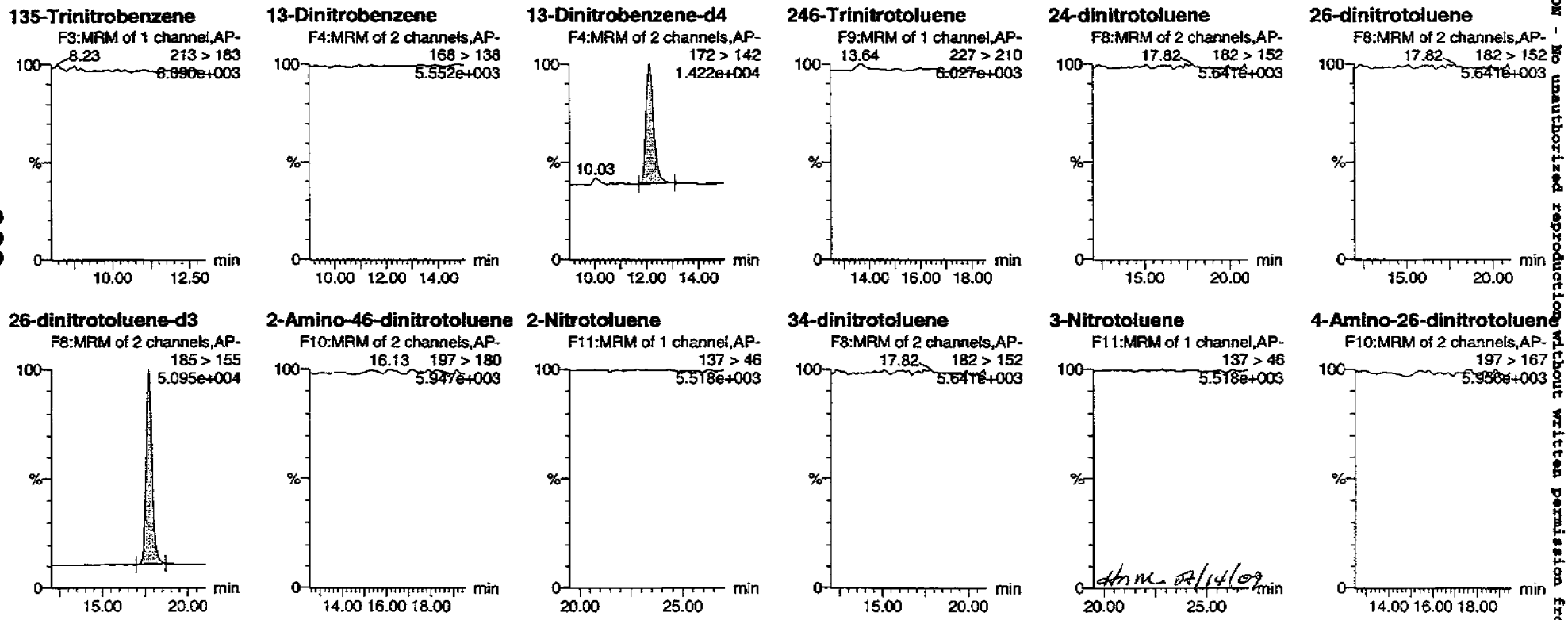

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

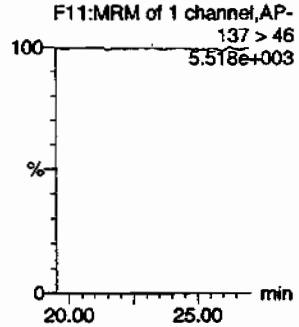

HMX

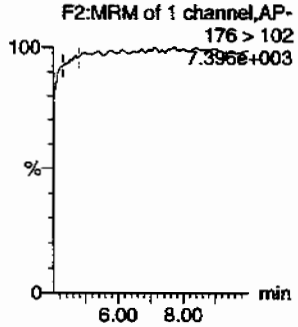

Nitrobenzene

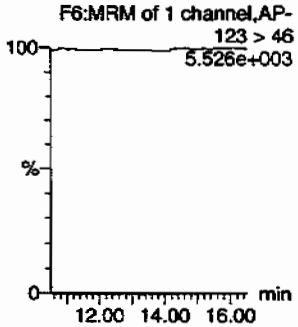

PETN

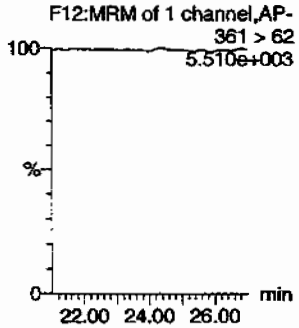

RDX

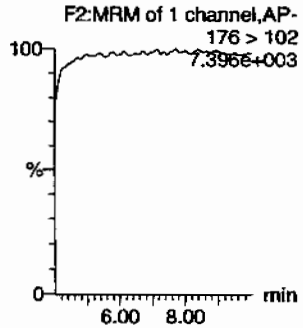

Tetryl

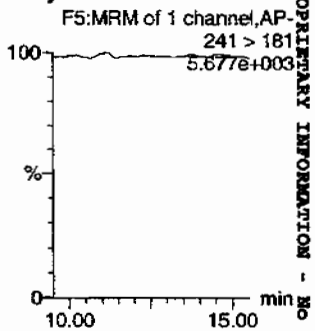

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Rel Response	Flags	Modified	Modified	Amount	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			3003.309			MM-	14-Jul-09	10:22:19				
XIBLK01	RDX	176 > 102			3003.309									
XIBLK01	135-Trinitrobenzene	213 > 183			3003.309									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	12.14	3003.309		3003.309	3003.309	bb			381.0148	76.2	-23.8	216.9
XIBLK01	13-Dinitrobenzene	168 > 138			3003.309									
XIBLK01	Tetryl	241 > 181			3003.309									
XIBLK01	Nitrobenzene	123 > 46			3003.309									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			18462.215									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			18462.215									
XIBLK01	246-Trinitrotoluene	227 > 210			18462.215									
XIBLK01	34-dinitrotoluene	182 > 152			18462.215									
XIBLK01	26-dinitrotoluene	182 > 152			18462.215									
XIBLK01	24-dinitrotoluene	182 > 152			18462.215									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.71	18462.215		18462.215	18462.215	bb			386.0448	77.2	-22.8	1327.3
XIBLK01	2-Nitrotoluene	137 > 46			18462.215									
XIBLK01	4-Nitrotoluene	137 > 46			18462.215									
XIBLK01	3-Nitrotoluene	137 > 46			18462.215									
XIBLK01	PETN	361 > 62			18462.215									

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 13-JUL-09 15:25

GEL Data File: EXP0713002a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	425.613
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	430.859
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713002a
Date: 13-Jul-2009
Time: 15:25:20
ID: XIBLK01
Vial: 1:1,A

MMP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.876e+003

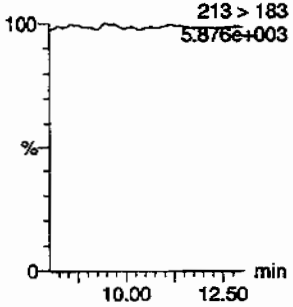

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.591e+003

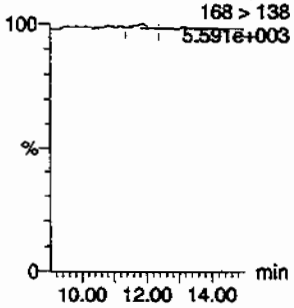

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.524e+004

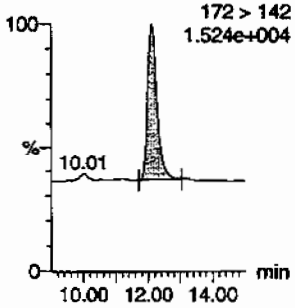

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.809e+003

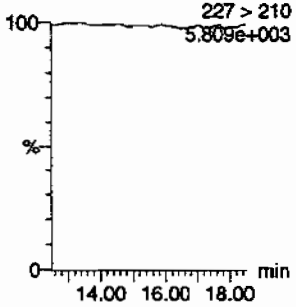

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.627e+003

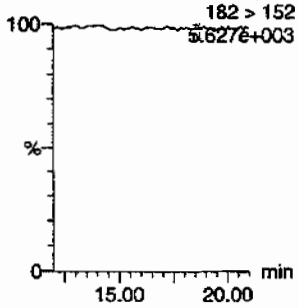

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.627e+003

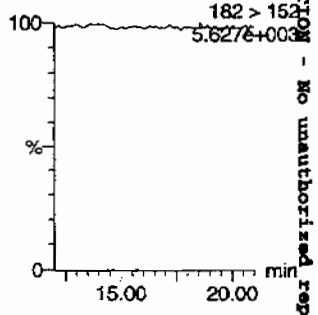

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
5.679e+004

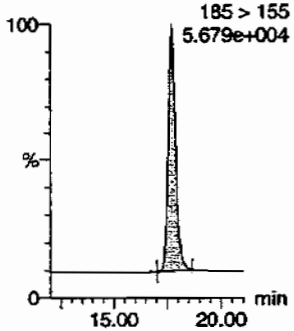

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.952e+003

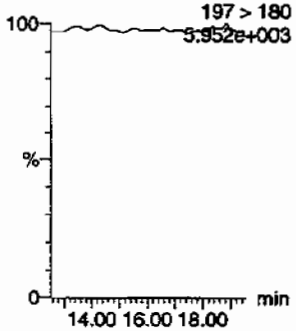

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.518e+003

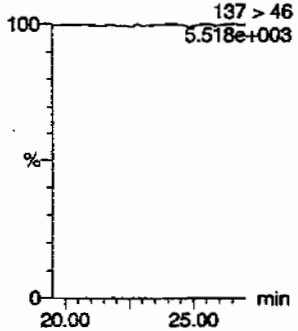

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.627e+003

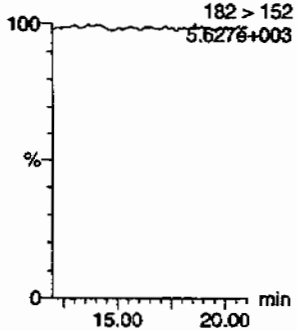

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.518e+003

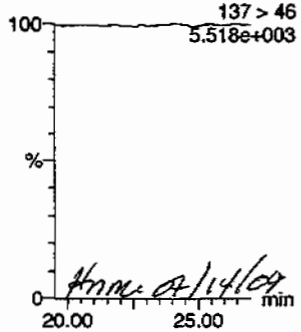

Hmm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.892e+003

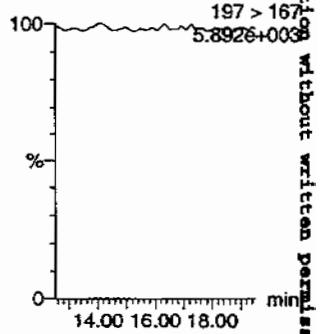

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

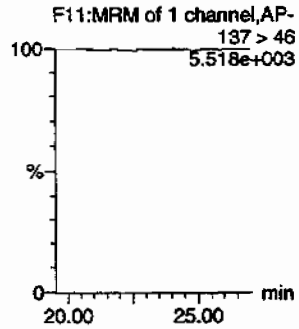

HMX

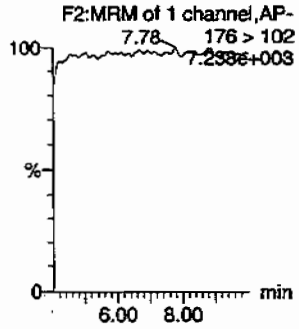

Nitrobenzene

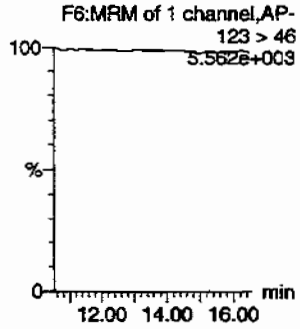

PETN

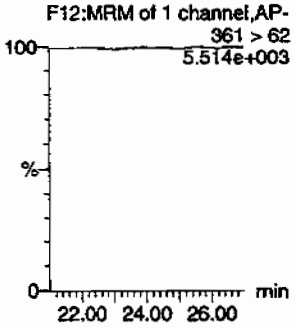

RDX

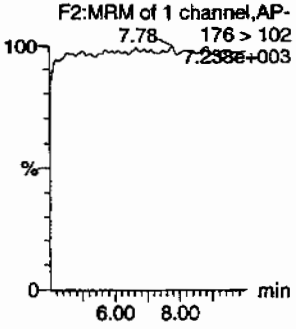

Tetryl

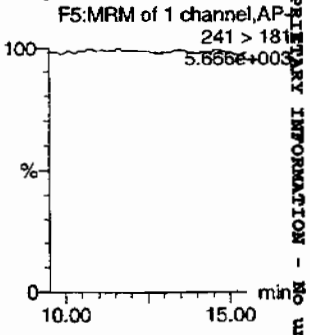

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flag	Modifiers	Mod Time	Amount	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			3354.853									
XIBLK01	RDX	176 > 102			3354.853									
XIBLK01	135-Trinitrobenzene	213 > 183			3354.853									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	12.14	3354.853		3354.853	3354.853	bb			425.6134	85.1	-14.9	186.6
XIBLK01	13-Dinitrobenzene	168 > 138			3354.853			MM-	14-Jul-09	10:21:25				
XIBLK01	Tetryl	241 > 181			3354.853									
XIBLK01	Nitrobenzene	123 > 46			3354.853									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			20605.398									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			20605.398									
XIBLK01	246-Trinitrotoluene	227 > 210			20605.398									
XIBLK01	34-dinitrotoluene	182 > 152			20605.398									
XIBLK01	26-dinitrotoluene	182 > 152			20605.398									
XIBLK01	24-dinitrotoluene	182 > 152			20605.398			MM-	14-Jul-09	10:10:31				
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.68	20605.398		20605.398	20605.398	bb			430.8588	86.2	-13.8	1070.1
XIBLK01	2-Nitrotoluene	137 > 46			20605.398									
XIBLK01	4-Nitrotoluene	137 > 46			20605.398									
XIBLK01	3-Nitrotoluene	137 > 46			20605.398									
XIBLK01	PETN	361 > 62			20605.398									

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 08-JUL-09 10:27

GEL Data File: EXS0708001.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	6.02
tris(o-cresyl) phosphate	0	0
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0708001.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 10:27:32 AM

Modified: No

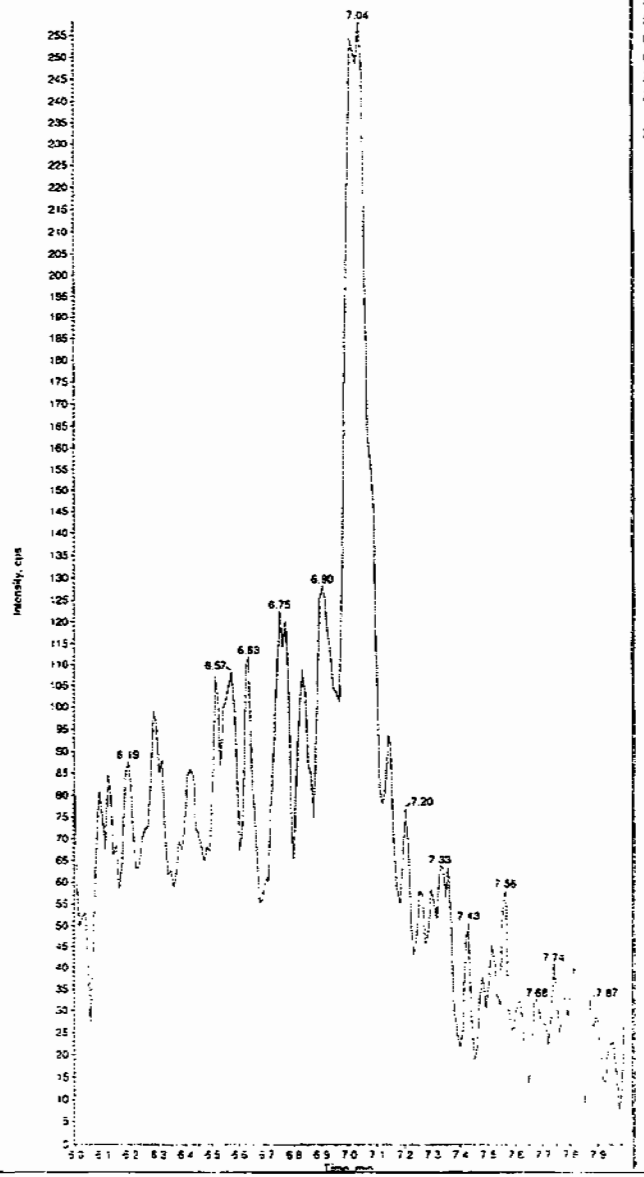

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0708001.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 10:27:32 AM

Modified: No

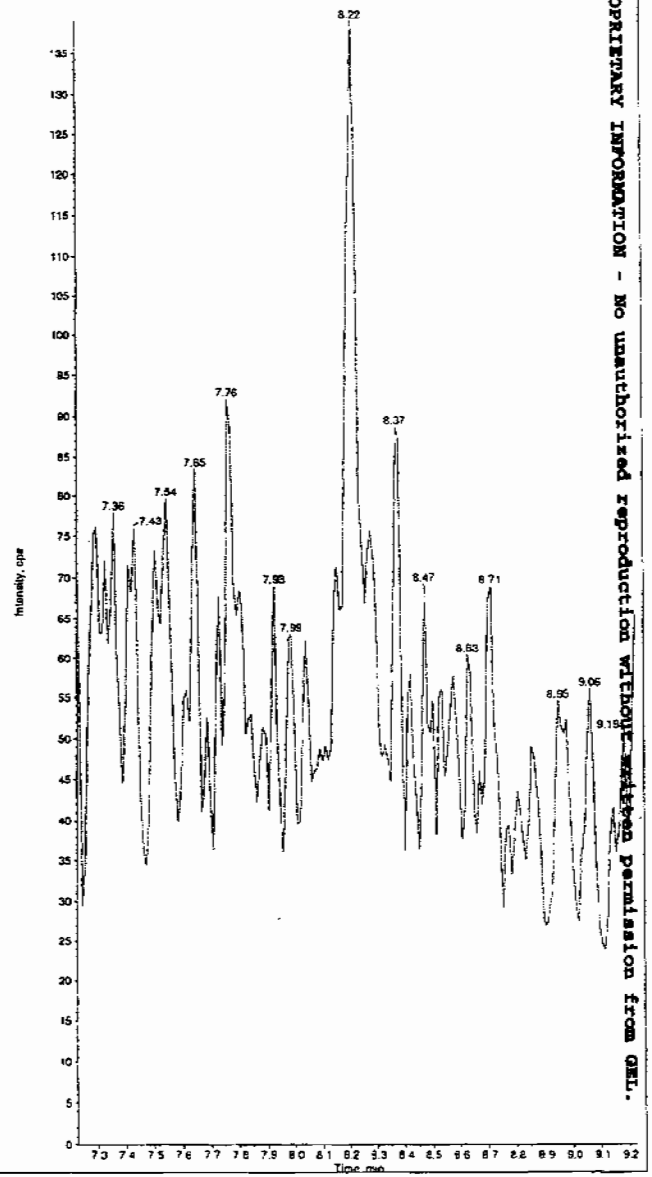

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0708001.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 6.02 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 10:27:32 AM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.38 min
Area: 1.84e+002 counts
Height: 42.000 cps
Start Time: 8.34 min
End Time: 8.46 min

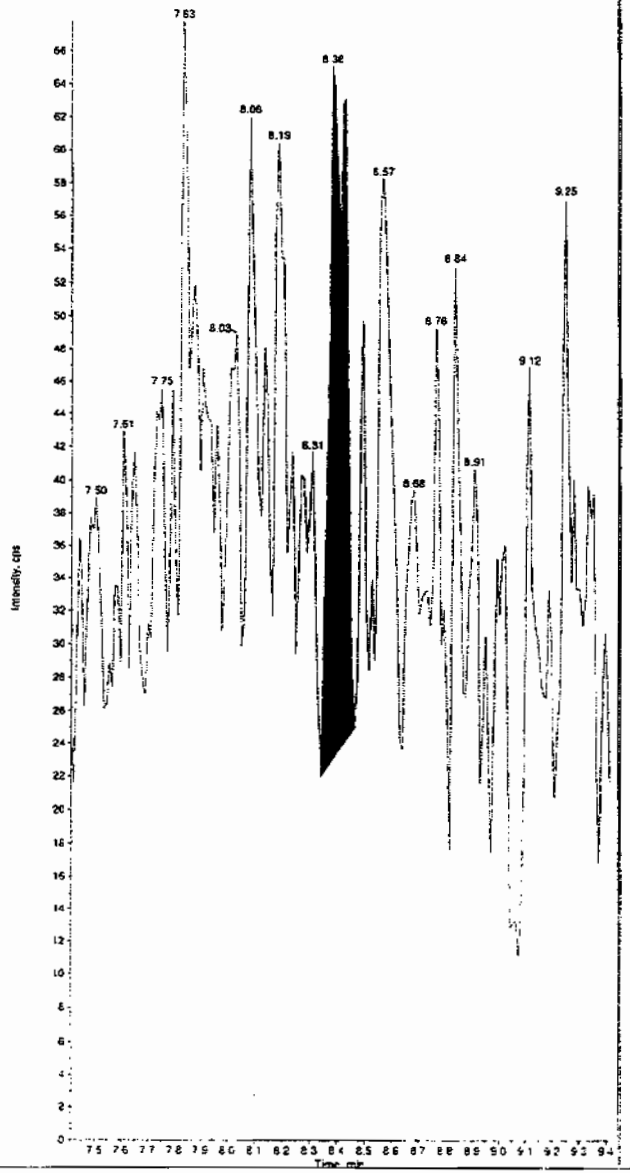

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0708001.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 10:27:32 AM

Modified: No

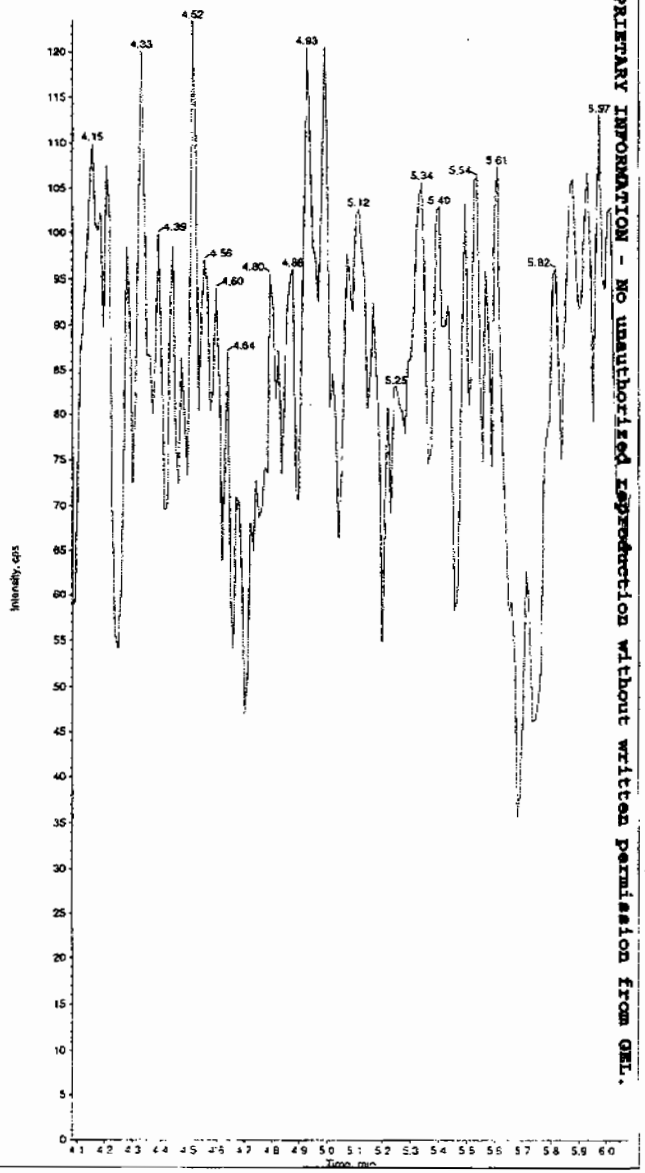

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0708001.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 10:27:32 AM

Modified: No

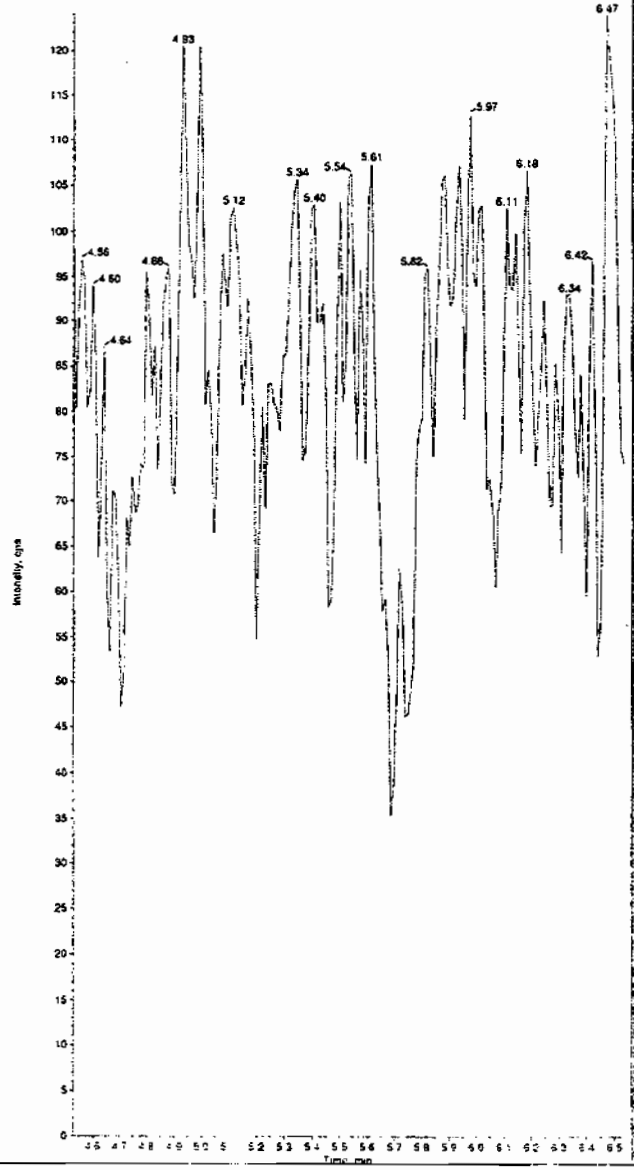

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0708001.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 10:27:32 AM

Modified: No

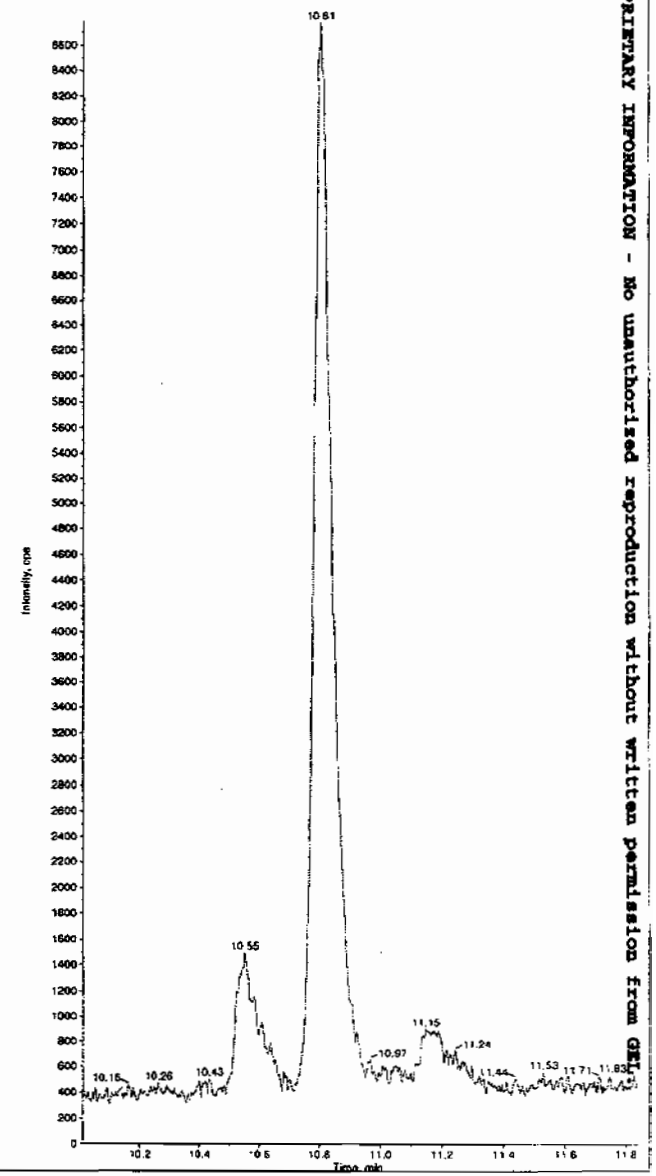

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 08-JUL-09 10:43

GEL Data File: EXS0708002.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	6.08
tris(o-cresyl) phosphate	0	0
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0708002.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 10:43:50 AM

Modified: No

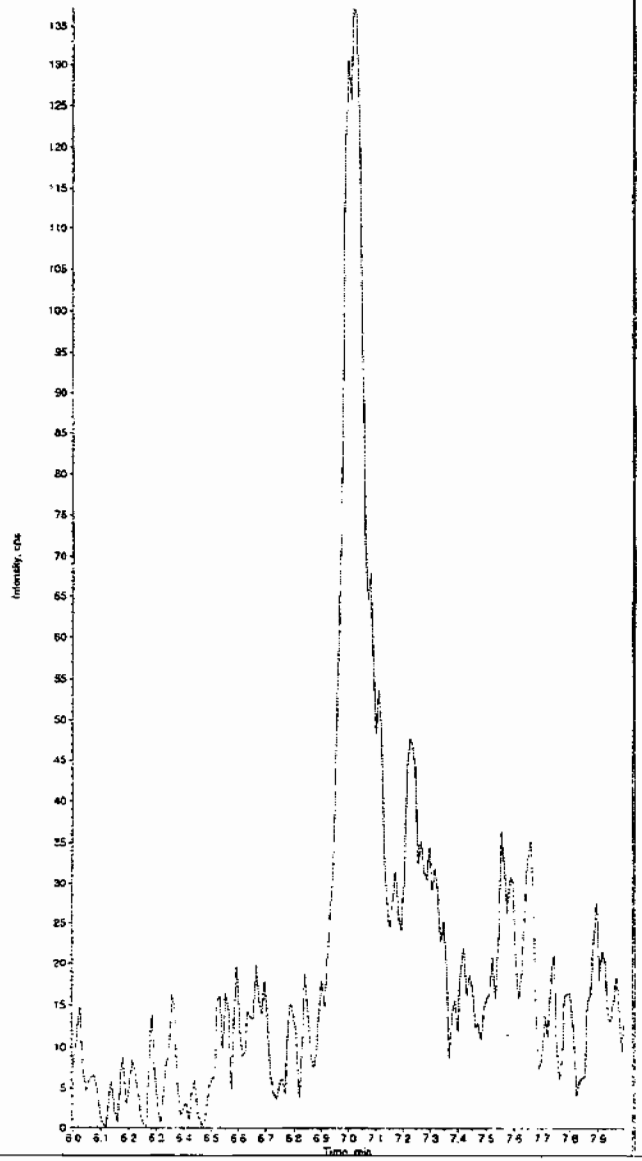

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0708002.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 10:43:50 AM

Modified: No

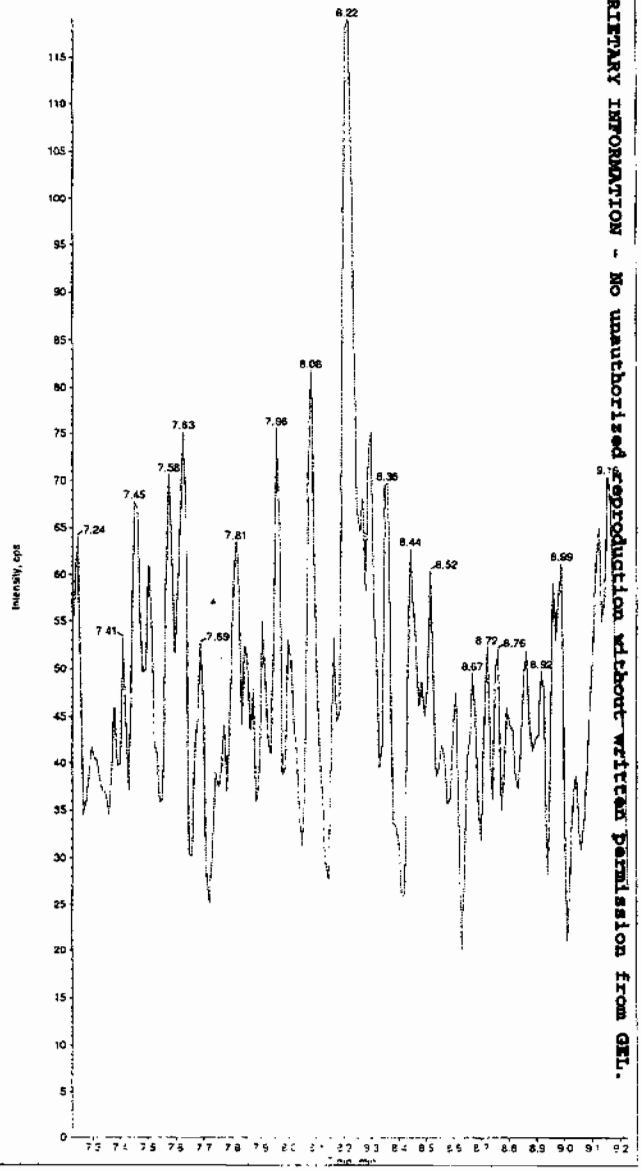

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0708002.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

```
Sample Index:        1
Sample Type:     Unknown
Concentration:       N/A
Calculated Conc:     6.08     ng/mL
Acq. Date:       7/8/2009
Acq. Time:       10:43:50 AM

Modified:            No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height:    0.00    cps
Min. Peak Width:     0.00    sec
Smoothing Width:  3        points
RT Window:          30.0     sec
Expected RT:         8.41    min
Use Relative RT:     No

Int. Type:       Valley
Retention Time:      8.38    min
Area:        3.36e+002    counts
Height:         39.124   cps
Start Time:          8.29    min
End Time:            8.63    min
```

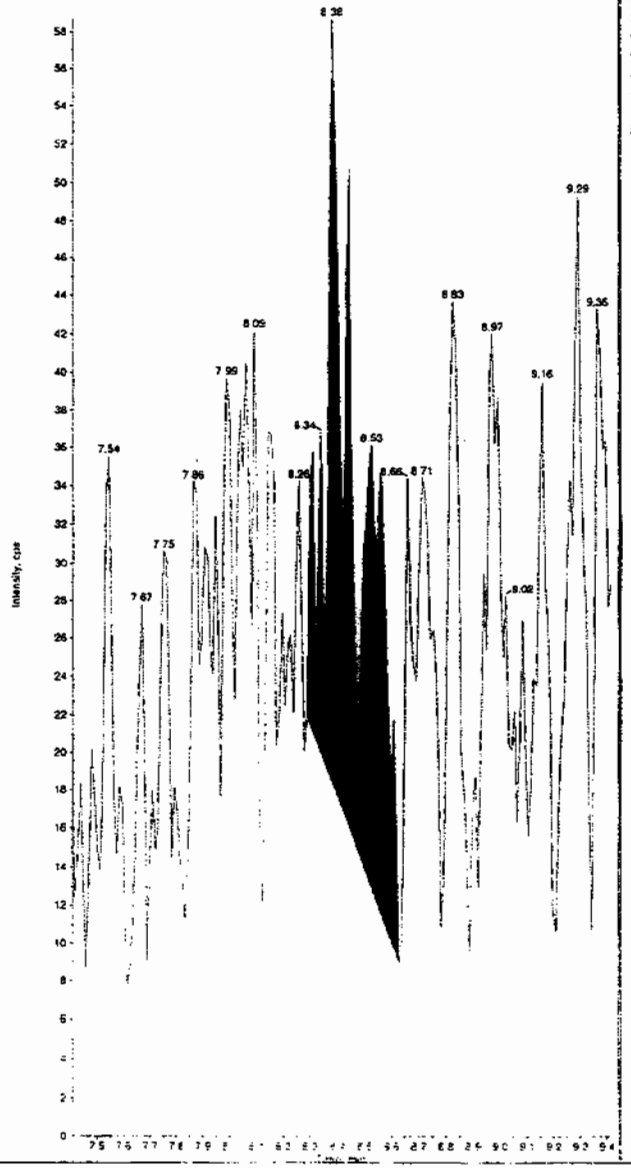

Sample Name: "XIBLK01" Sample ID: "|1|LER" File: "EXS0708002.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

```
Sample Index:        1
Sample Type:     Unknown
Concentration:       N/A
Calculated Conc:     0.00     ng/mL
Acq. Date:       7/8/2009
Acq. Time:       10:43:50 AM

Modified:            No
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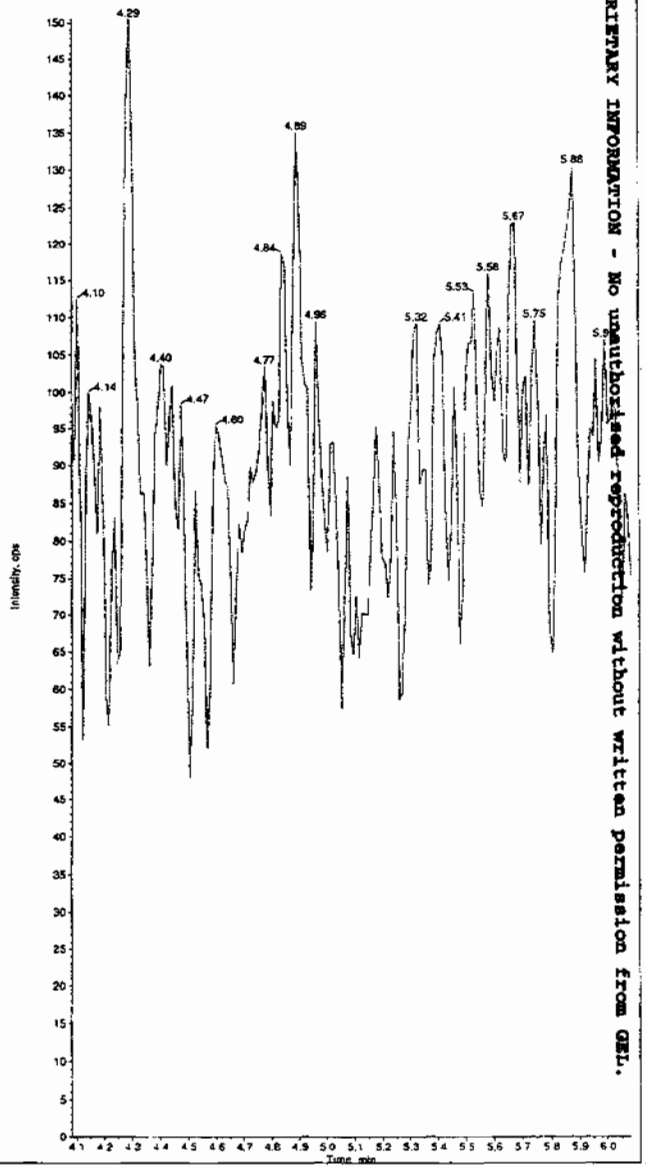

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0708002.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 10:43:50 AM

Modified: No

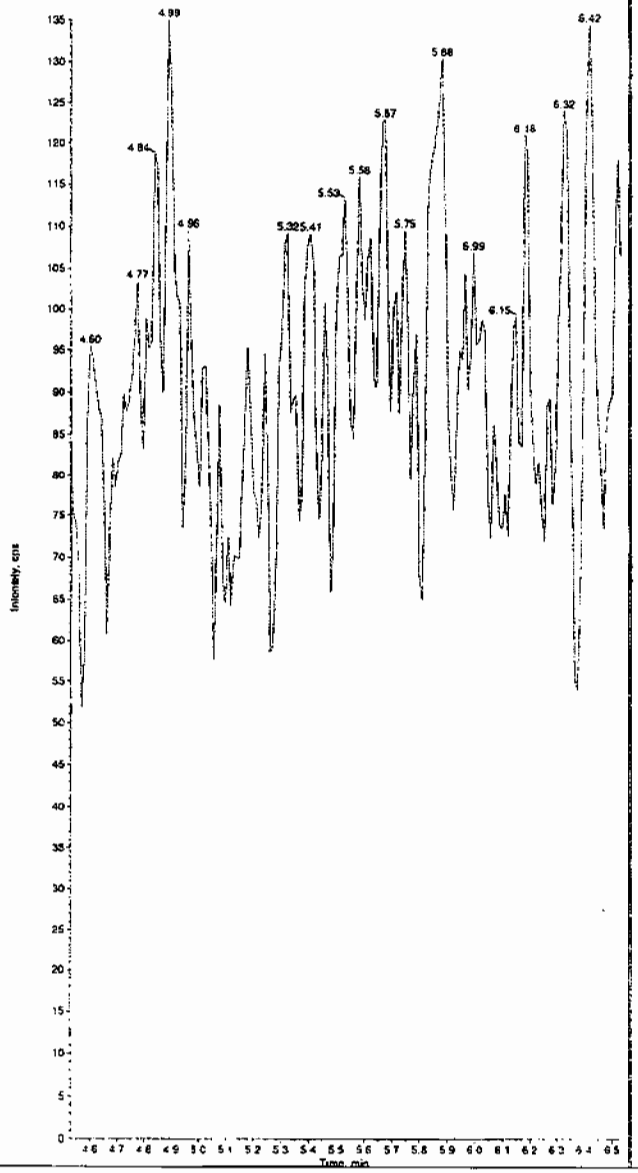

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS0708002.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 10:43:50 AM

Modified: No

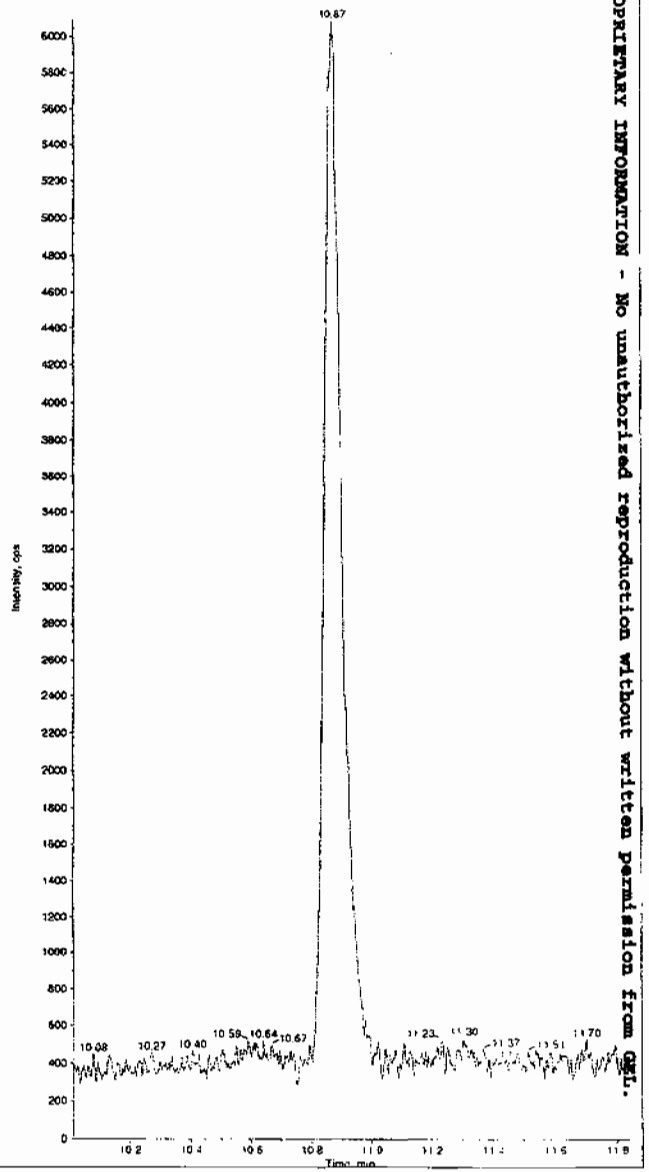

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 13-JUL-09 18:52

GEL Data File: EXP0713009a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	521.619
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	534.002
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

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Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713009a
Date: 13-Jul-2009
Time: 18:52:18
ID: XIBLK02
Vial: 1:1,A

MAP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.710e+003

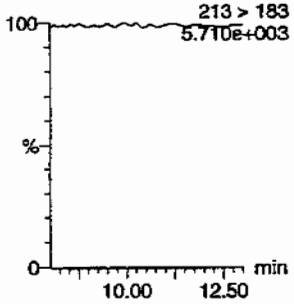

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.575e+003

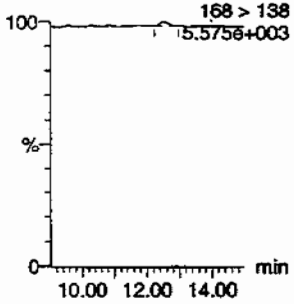

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.699e+004

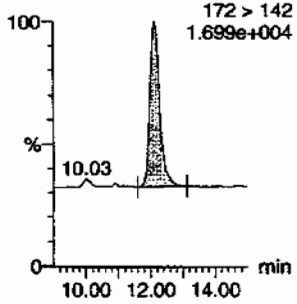

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.733e+003

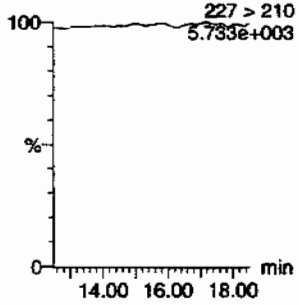

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.611e+003

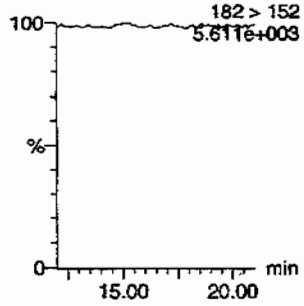

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.611e+003

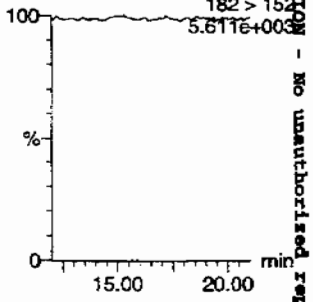

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.981e+004

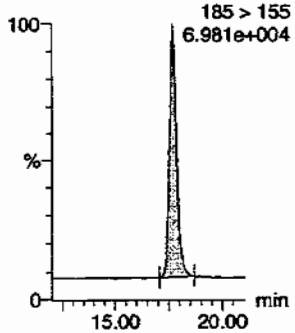

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.843e+003

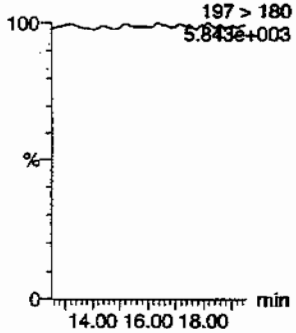

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.554e+003

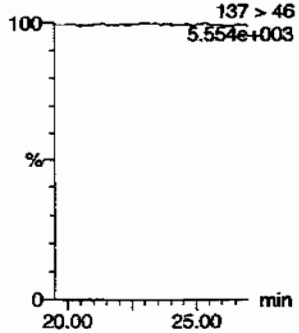

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.611e+003

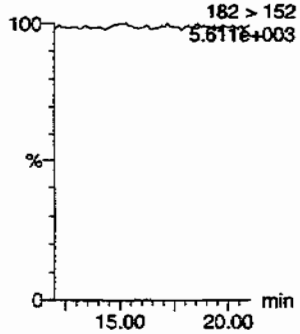

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.554e+003

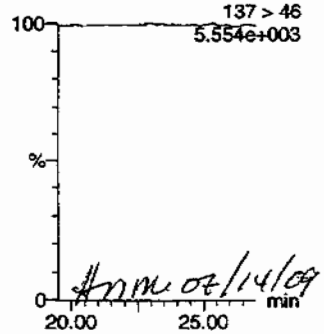

Amm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.835e+003

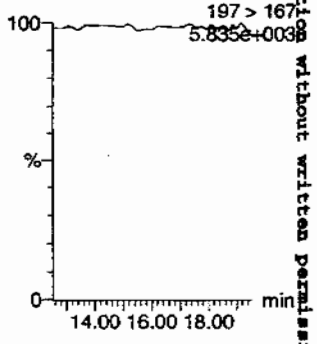

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

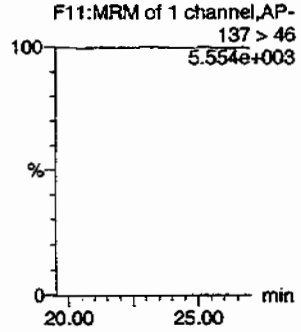

HMX

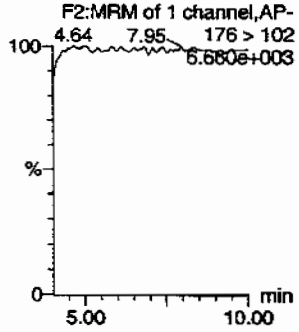

Nitrobenzene

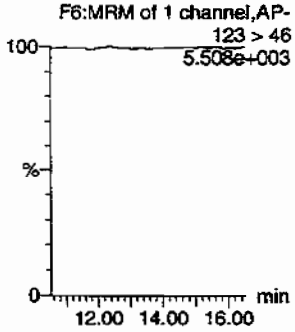

PETN

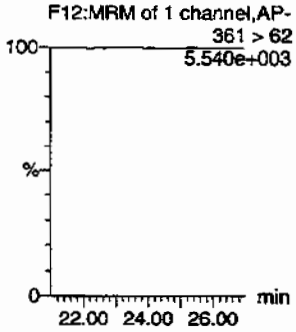

RDX

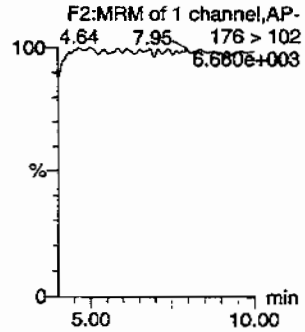

Tetryl

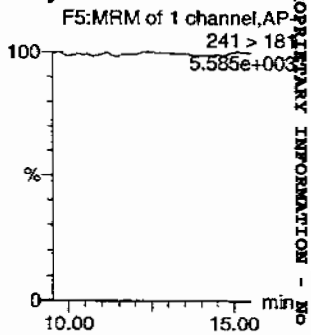

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
XIBLK02	HMX	176 > 102			4111.610									
XIBLK02	RDX	176 > 102			4111.610									
XIBLK02	135-Trinitrobenzene	213 > 183			4111.610									
XIBLK02	13-Dinitrobenzene-d4	172 > 142	12.14	4111.610		4111.610	4111.610	bb			521.6194	104.3	4.3	408.3
XIBLK02	13-Dinitrobenzene	168 > 138			4111.610			MM-	14-Jul-09	10:21:28				
XIBLK02	Tetryl	241 > 181			4111.610									
XIBLK02	Nitrobenzene	123 > 46			4111.610									
XIBLK02	4-Amino-26-dinitrotoluene	197 > 167			25538.109									
XIBLK02	2-Amino-46-dinitrotoluene	197 > 180			25538.109									
XIBLK02	246-Trinitrotoluene	227 > 210			25538.109									
XIBLK02	34-dinitrotoluene	182 > 152			25538.109									
XIBLK02	26-dinitrotoluene	182 > 152			25538.109									
XIBLK02	24-dinitrotoluene	182 > 152			25538.109									
XIBLK02	26-dinitrotoluene-d3	185 > 155	17.68	25538.109		25538.109	25538.109	bb			534.0018	106.8	6.8	1104.7
XIBLK02	2-Nitrotoluene	137 > 46			25538.109									
XIBLK02	4-Nitrotoluene	137 > 46			25538.109									
XIBLK02	3-Nitrotoluene	137 > 46			25538.109									
XIBLK02	PETN	361 > 62			25538.109									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 13-JUL-09 19:51

GEL Data File: EXP0713011a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	572.542
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	574.682
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713011a
Date: 13-Jul-2009
Time: 19:51:17
ID: XIBLK03
Vial: 1:1,A

LMT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
8.42
5.710e+003

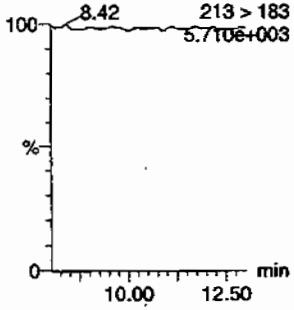

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.503e+003

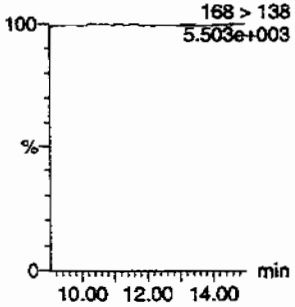

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.830e+004

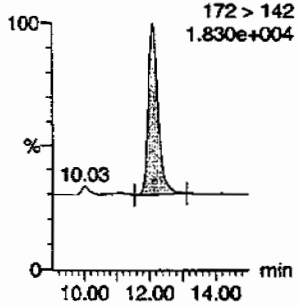

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.709e+003

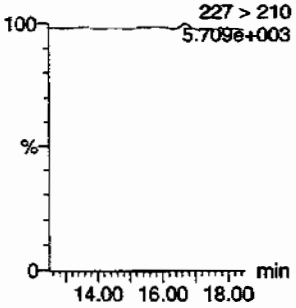

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
6.563e+003

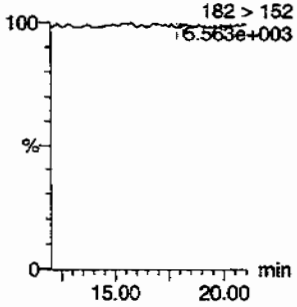

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
6.563e+003

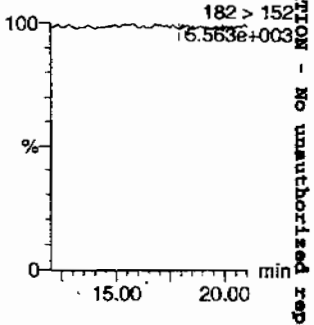

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.539e+004

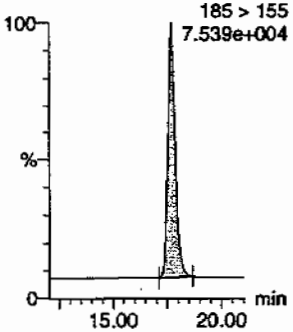

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.774e+003

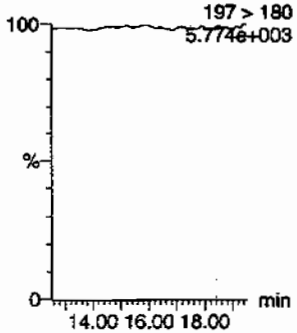

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.521e+003

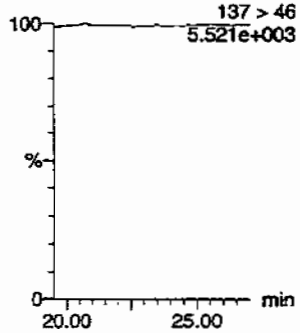

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.563e+003

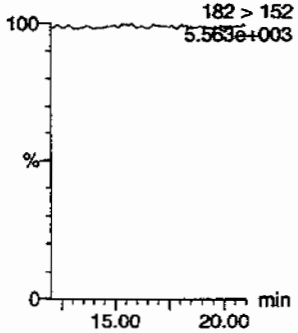

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.521e+003

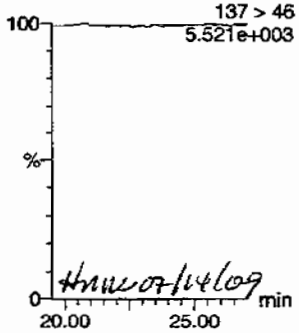

HMW 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
14.62
197 > 167
5.741e+003

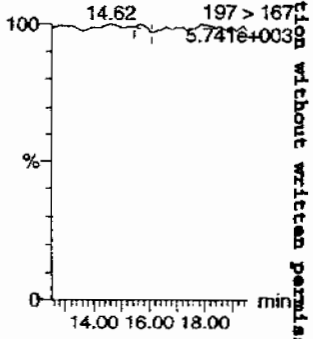

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4-Nitrotoluene

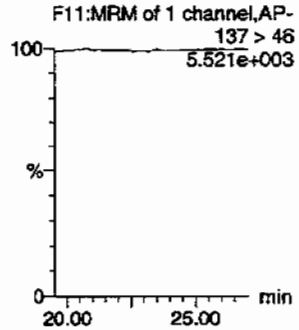

HMX

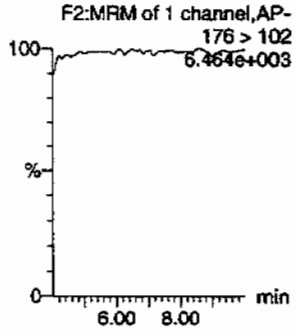

Nitrobenzene

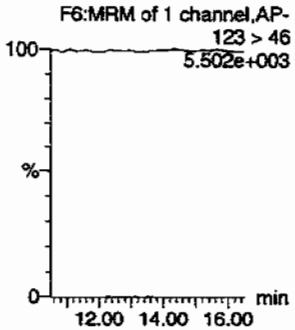

PETN

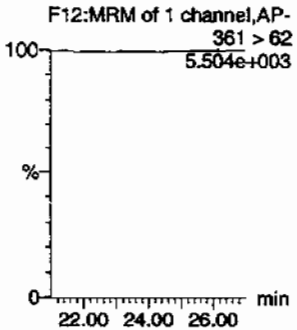

RDX

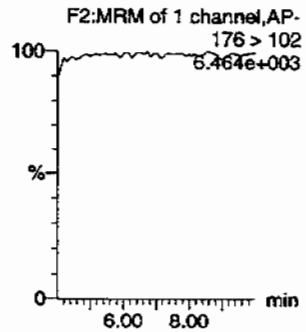

Tetryl

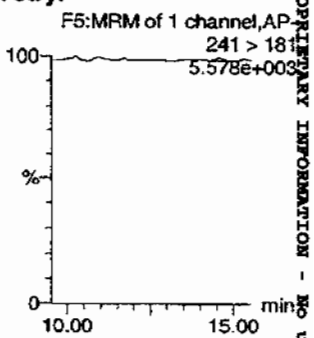

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK03	HMX	176 > 102			4513.001									
XIBLK03	RDX	176 > 102			4513.001									
XIBLK03	135-Trinitrobenzene	213 > 183			4513.001									
XIBLK03	13-Dinitrobenzene-d4	172 > 142	12.14	4513.001		4513.001	4513.001	bb			572.5419	114.5	14.5	297.7
XIBLK03	13-Dinitrobenzene	168 > 138			4513.001									
XIBLK03	Tetryl	241 > 181			4513.001									
XIBLK03	Nitrobenzene	123 > 46			4513.001									
XIBLK03	4-Amino-26-dinitrotoluene	197 > 167			27483.588			MM-	14-Jul-09	10:18:35				
XIBLK03	2-Amino-46-dinitrotoluene	197 > 180			27483.588									
XIBLK03	246-Trinitrotoluene	227 > 210			27483.588									
XIBLK03	34-dinitrotoluene	182 > 152			27483.588									
XIBLK03	26-dinitrotoluene	182 > 152			27483.588			MM-	14-Jul-09	10:15:08				
XIBLK03	24-dinitrotoluene	182 > 152			27483.588			MM-	14-Jul-09	10:11:39				
XIBLK03	26-dinitrotoluene-d3	185 > 155	17.68	27483.588		27483.588	27483.588	bb			574.6817	114.9	14.9	603.4
XIBLK03	2-Nitrotoluene	137 > 46			27483.588									
XIBLK03	4-Nitrotoluene	137 > 46			27483.588									
XIBLK03	3-Nitrotoluene	137 > 46			27483.588									
XIBLK03	PETN	361 > 62			27483.588									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 13-JUL-09 21:49

GEL Data File: EXP0713015a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	630.06
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	594.608
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713015a
Date: 13-Jul-2009
Time: 21:49:18
ID: XIBLK04
Vial: 1:1,A

MPT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.776e+003

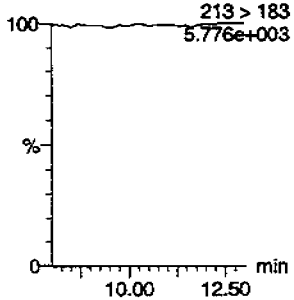

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.705e+003

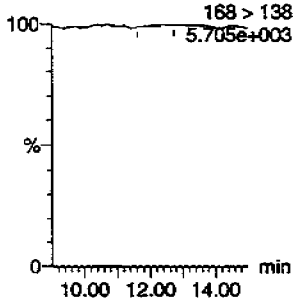

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
2.037e+004

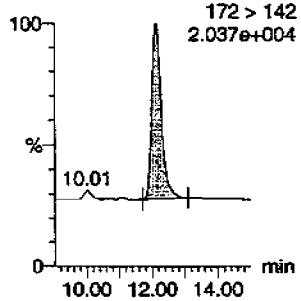

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.795e+003

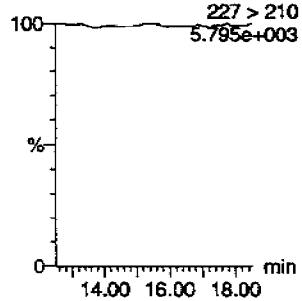

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.757e+003

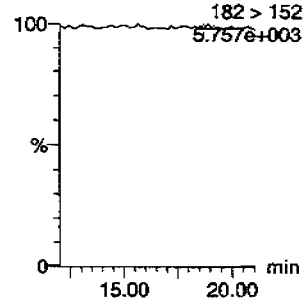

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.757e+003

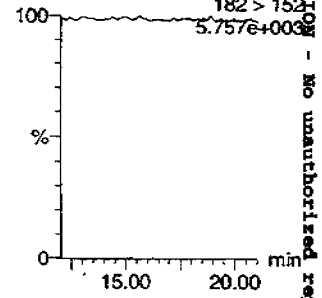

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.949e+004

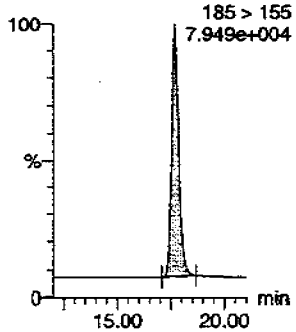

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.825e+003

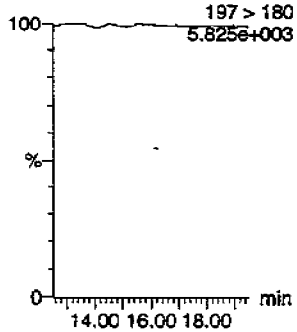

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.694e+003

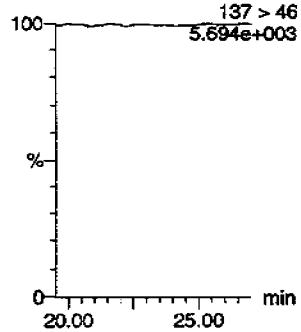

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.757e+003

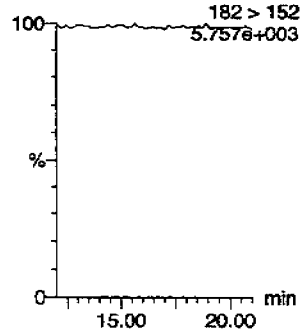

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.694e+003

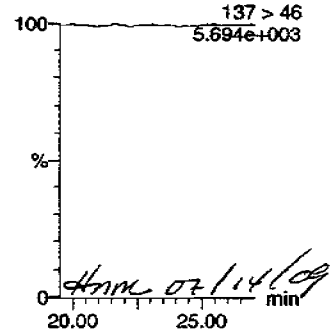

Hmm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.819e+003

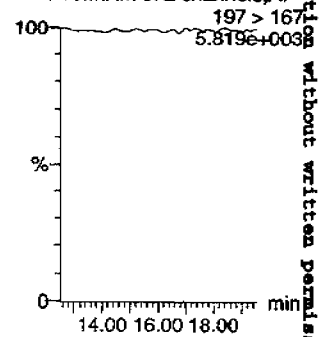

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

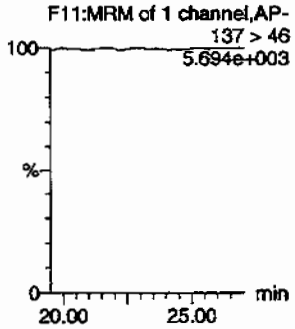

HMX

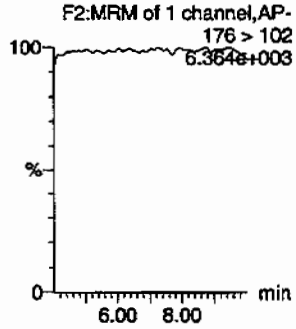

Nitrobenzene

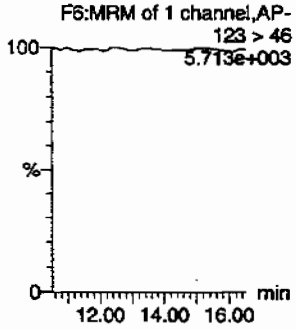

PETN

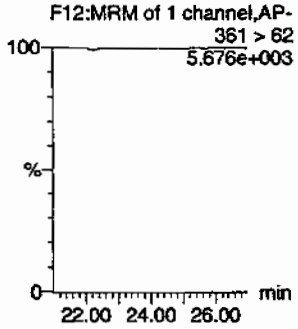

RDX

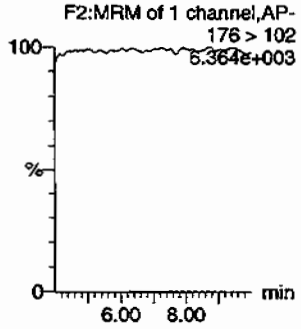

Tetryl

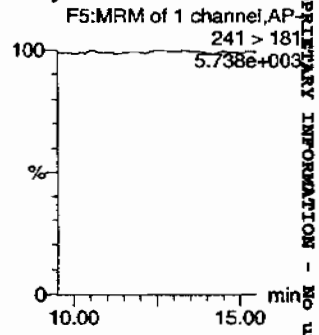

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Modified	Modtime	Amount	%RSD	%Dev	S/N
XIBLK04	HMX	176 > 102			4966.385									
XIBLK04	RDX	176 > 102			4966.385									
XIBLK04	135-Trinitrobenzene	213 > 183			4966.385									
XIBLK04	13-Dinitrobenzene-d4	172 > 142	12.14	4966.385		4966.385	4966.385	bb			630.0605	126.0	26.0	439.2
XIBLK04	13-Dinitrobenzene	168 > 138			4966.385			MM-	14-Jul-09	10:21:36				
XIBLK04	Tetryl	241 > 181			4966.385									
XIBLK04	Nitrobenzene	123 > 46			4966.385									
XIBLK04	4-Amino-26-dinitrotoluene	197 > 167			28436.547									
XIBLK04	2-Amino-46-dinitrotoluene	197 > 180			28436.547									
XIBLK04	246-Trinitrotoluene	227 > 210			28436.547									
XIBLK04	34-dinitrotoluene	182 > 152			28436.547									
XIBLK04	26-dinitrotoluene	182 > 152			28436.547									
XIBLK04	24-dinitrotoluene	182 > 152			28436.547			MM-	14-Jul-09	10:11:55				
XIBLK04	26-dinitrotoluene-d3	185 > 155	17.68	28436.547		28436.547	28436.547	bb			594.6081	118.9	18.9	1170.6
XIBLK04	2-Nitrotoluene	137 > 46			28436.547									
XIBLK04	4-Nitrotoluene	137 > 46			28436.547									
XIBLK04	3-Nitrotoluene	137 > 46			28436.547									
XIBLK04	PETN	361 > 62			28436.547									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 14-JUL-09 01:45

GEL Data File: EXP0713023a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	525.527
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	534.353
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713023a
Date: 14-Jul-2009
Time: 01:45:16
ID: XIBLK05
Vial: 1:1,A

MM 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.937e+003

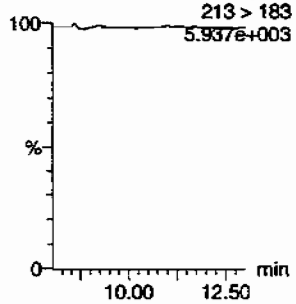

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.813e+003

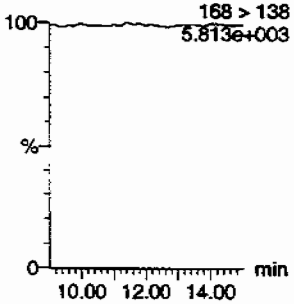

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.792e+004

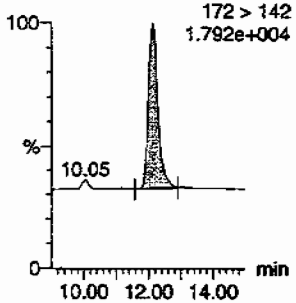

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.900e+003

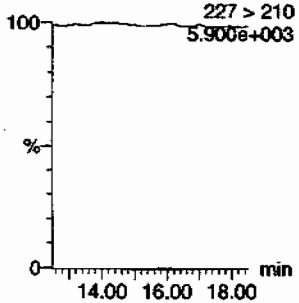

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.873e+003

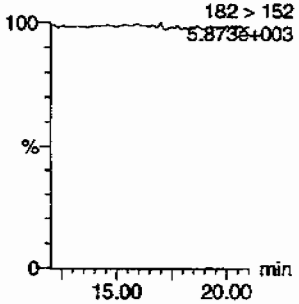

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.873e+003

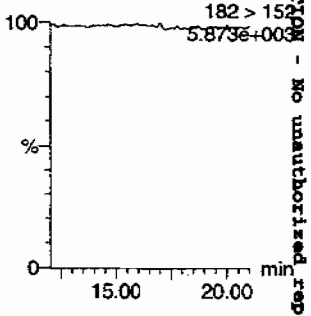

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.974e+004

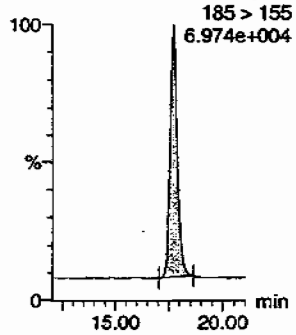

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.934e+003

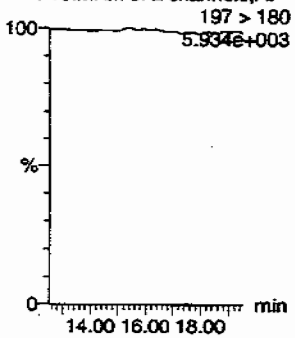

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.787e+003

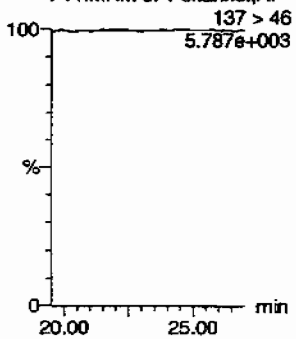

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
5.873e+003

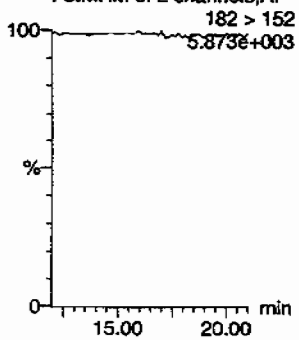

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.787e+003

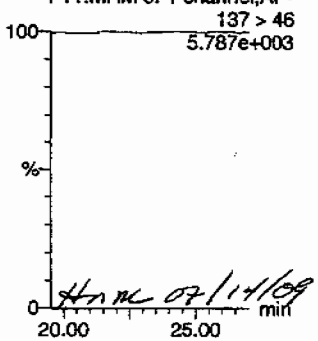

HMC 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.951e+003

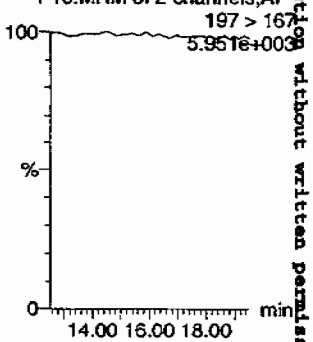

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

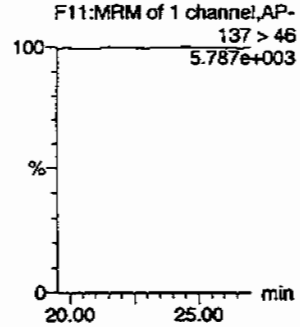

HMX

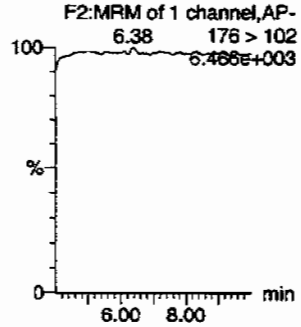

Nitrobenzene

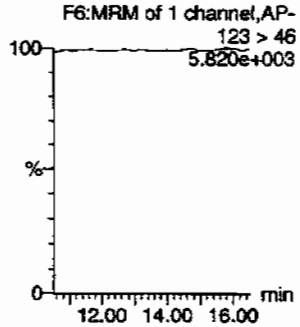

PETN

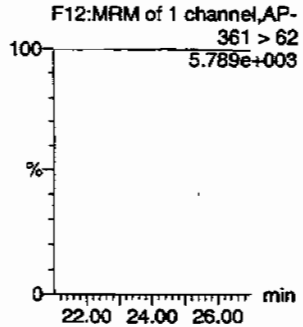

RDX

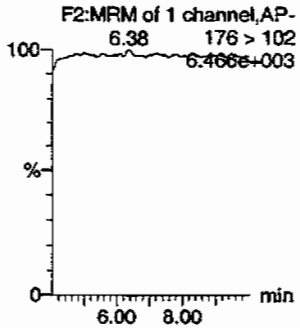

Tetryl

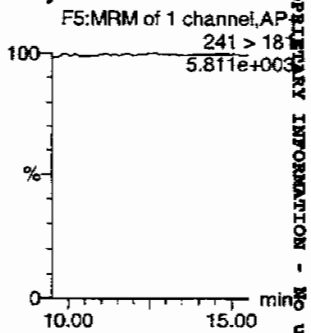

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Dilu	Mod	Mod Name	Conc	%Rec	%RSD	S/N
XIBLK05	HMX	176 > 102			4142.414									
XIBLK05	RDX	176 > 102			4142.414									
XIBLK05	135-Trinitrobenzene	213 > 183			4142.414									
XIBLK05	13-Dinitrobenzene-d4	172 > 142	12.14	4142.414		4142.414	4142.414	bb			525.5274	105.1	5.1	466.8
XIBLK05	13-Dinitrobenzene	168 > 138			4142.414									
XIBLK05	Tetryl	241 > 181			4142.414									
XIBLK05	Nitrobenzene	123 > 46			4142.414									
XIBLK05	4-Amino-26-dinitrotoluene	197 > 167			25554.914									
XIBLK05	2-Amino-46-dinitrotoluene	197 > 180			25554.914									
XIBLK05	246-Trinitrotoluene	227 > 210			25554.914									
XIBLK05	34-dinitrotoluene	182 > 152			25554.914									
XIBLK05	26-dinitrotoluene	182 > 152			25554.914									
XIBLK05	24-dinitrotoluene	182 > 152			25554.914									
XIBLK05	26-dinitrotoluene-d3	185 > 155	17.68	25554.914		25554.914	25554.914	bb			534.3531	106.9	6.9	1416.5
XIBLK05	2-Nitrotoluene	137 > 46			25554.914									
XIBLK05	4-Nitrotoluene	137 > 46			25554.914									
XIBLK05	3-Nitrotoluene	137 > 46			25554.914									
XIBLK05	PETN	361 > 62			25554.914									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 08-JUL-09 12:53

GEL Data File: EXS0708010.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	6.21
tris(o-cresyl) phosphate	0	6.49
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Lam 7/9/09

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0708010.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 12:53:25 PM

Modified: No

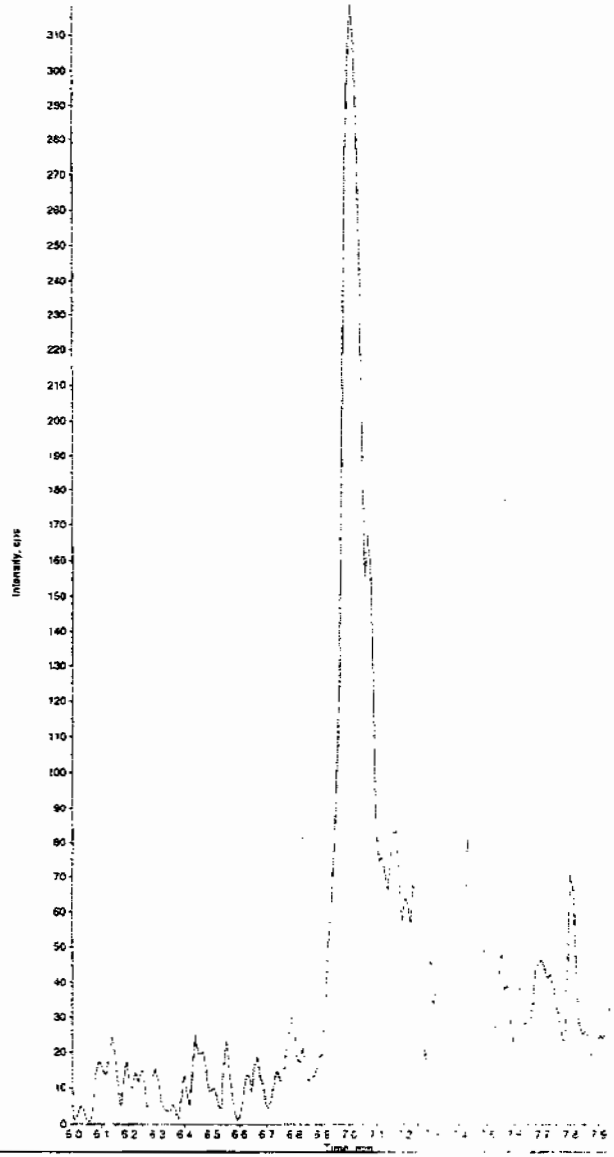

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0708010.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 12:53:25 PM

Modified: No

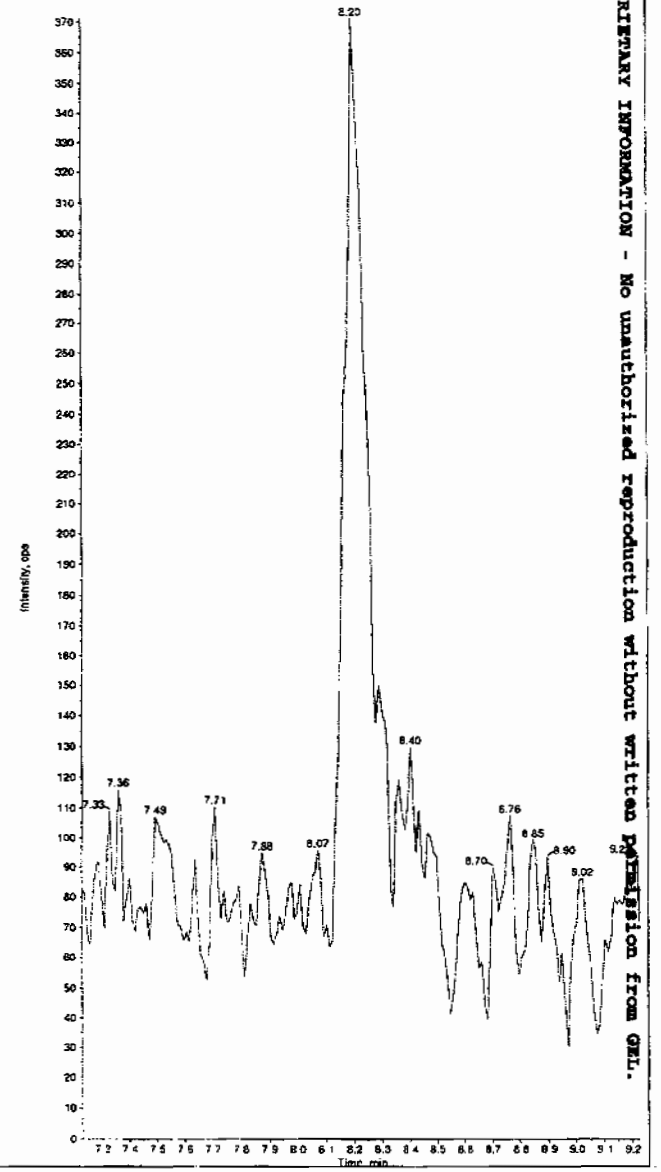

Hmm 07/09/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0708010.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 6.21 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 12:53:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.40 min
Area: 6.28e+002 counts
Height: 149.933 cps
Start Time: 8.33 min
End Time: 8.48 min

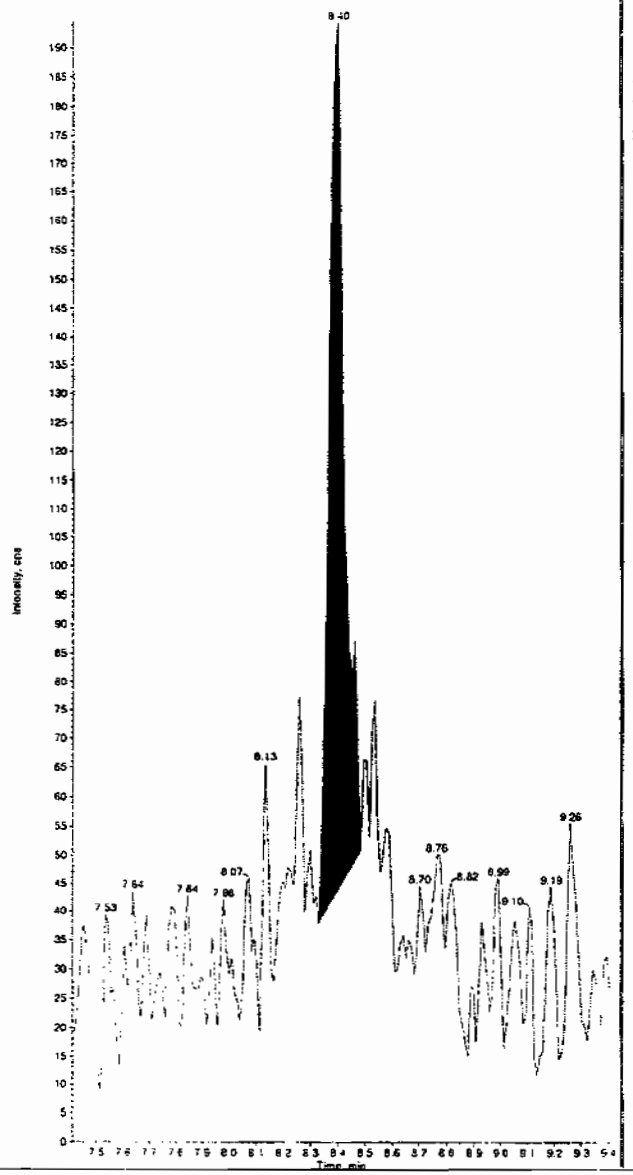

415

Sample Name: "XIBLK02" Sample ID: "|1|LER" File: "EXS0708010.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 12:53:25 PM

Modified: No

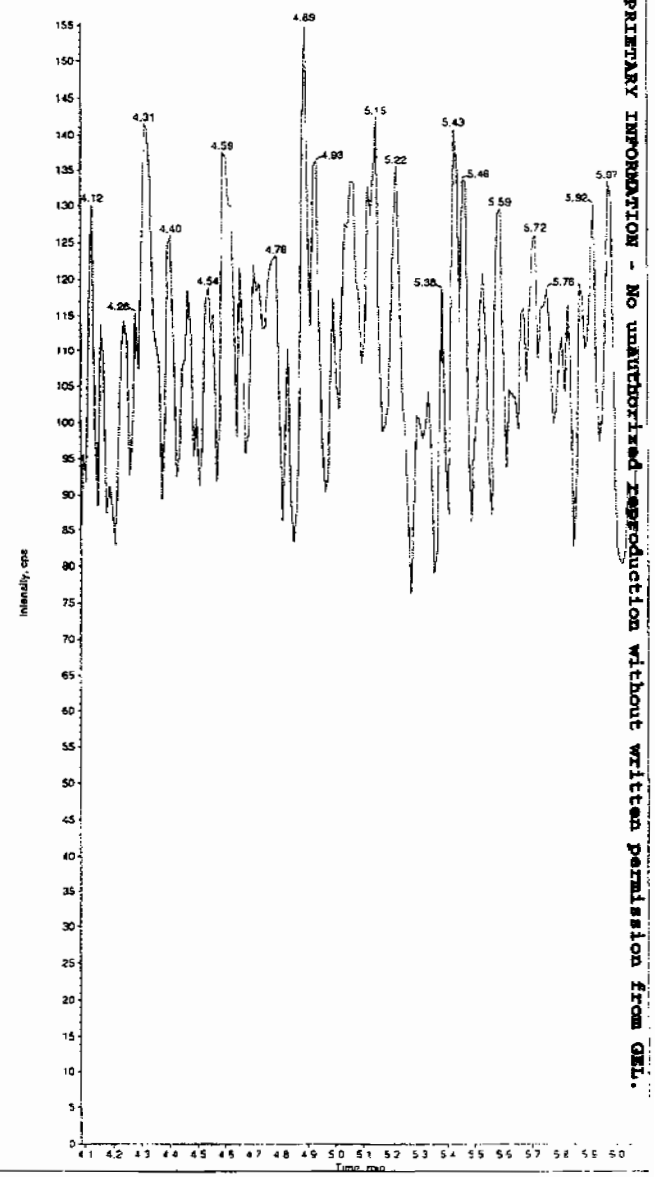

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS0708010.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 12:53:25 PM

Modified: No

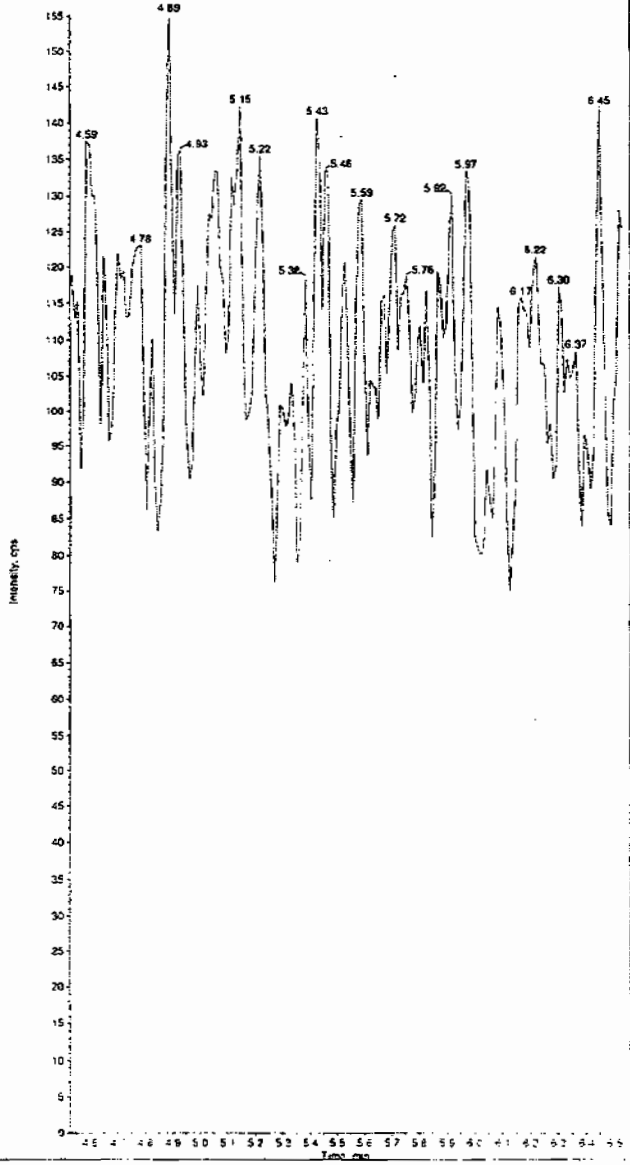

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS0708010.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 6.49 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 12:53:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 1.32e+005 counts
Height: 30842.970 cps
Start Time: 10.7 min
End Time: 11.1 min

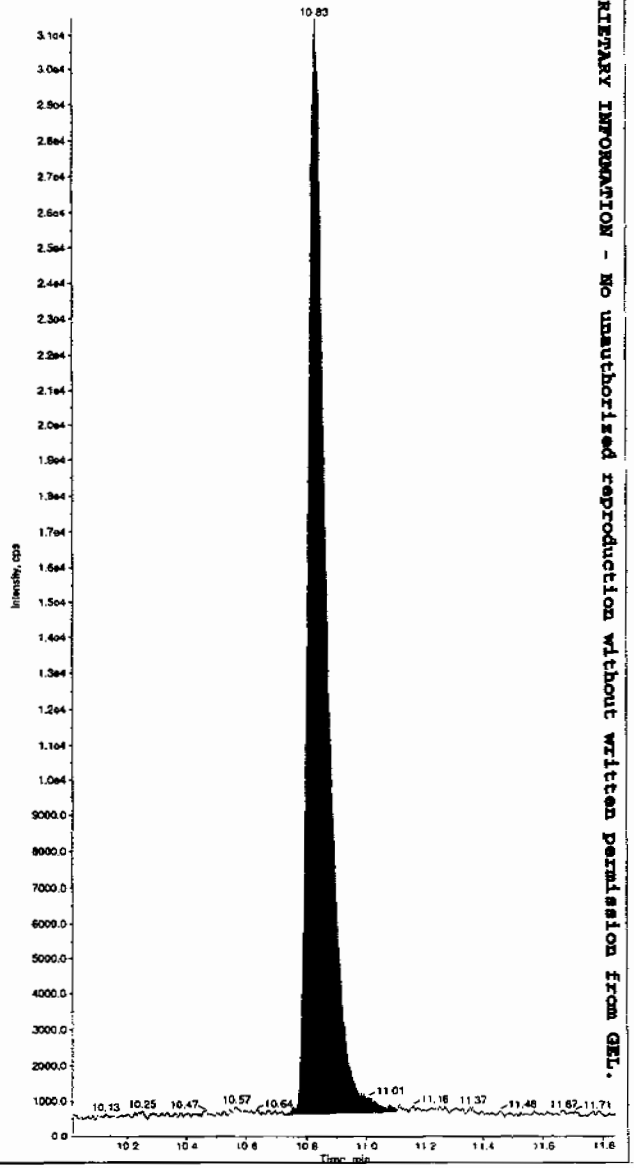

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 08-JUL-09 13:25

GEL Data File: EXS0708012.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	6.08
tris(o-cresyl) phosphate	0	2.18
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Ler 7/9/09

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS0708012.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:25:49 PM

Modified: No

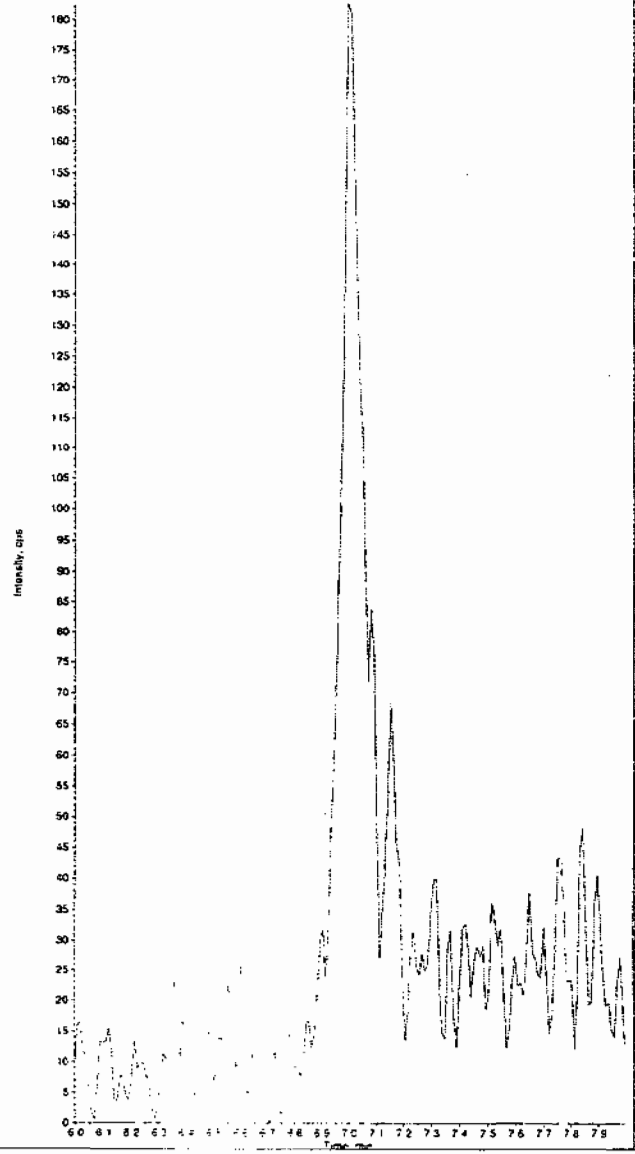

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS0708012.wiff"
Peak Name: "3S-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:25:49 PM

Modified: No

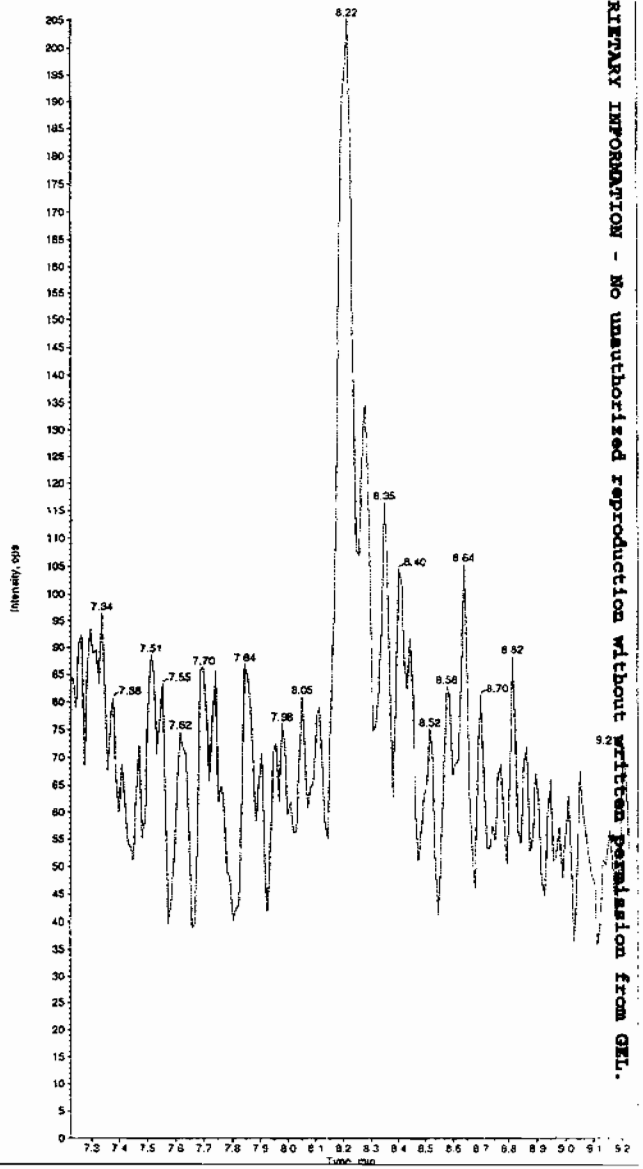

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HMC 07/09/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS0708012.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 6.08 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:25:49 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.40 min
Area: 3.28e+002 counts
Height: 94.312 cps
Start Time: 8.29 min
End Time: 8.45 min

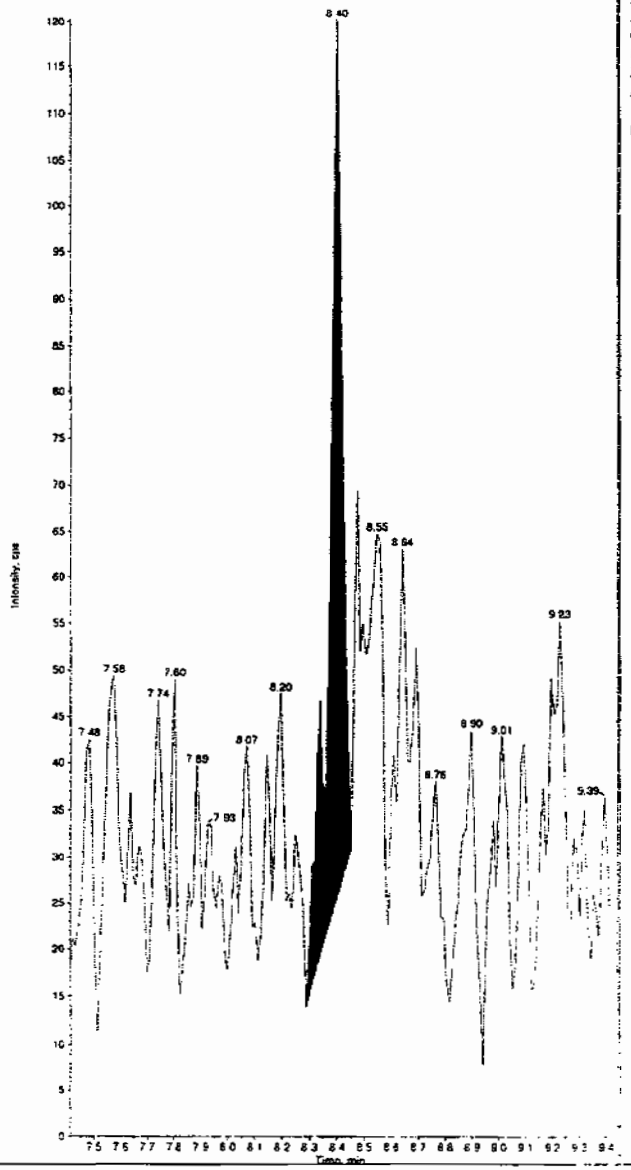

Sample Name: "XIBLK03" Sample ID: "|1|LER" File: "EXS0708012.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:25:49 PM

Modified: No

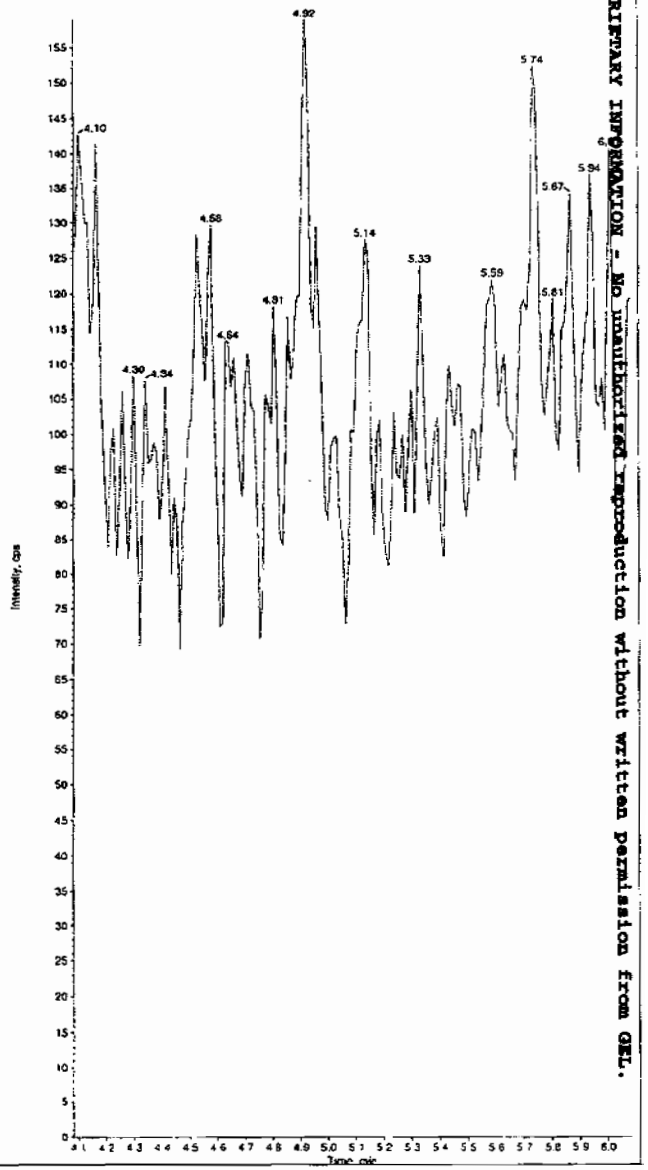

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0708012.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:25:49 PM

Modified: No

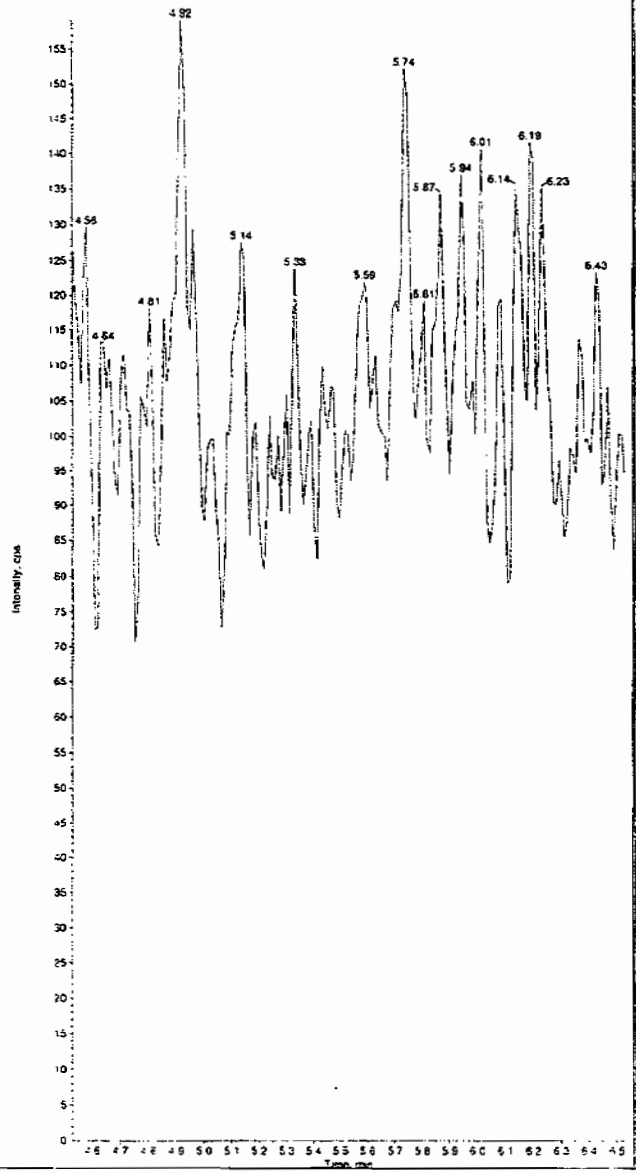

Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS0708012.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 2.18 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:25:49 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 7.83e+004 counts
Height: 17872.328 cps
Start Time: 10.7 min
End Time: 11.1 min

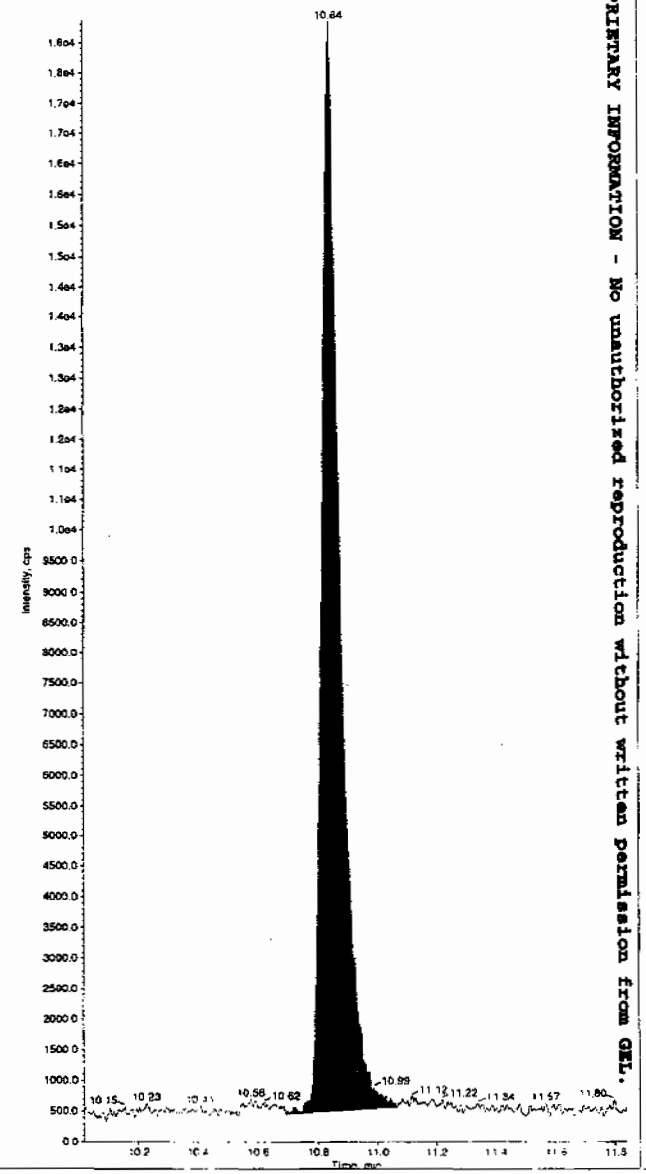

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 09-2508

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 08-JUL-09 15:51

GEL Data File: EXS0708021.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	6.15
tris(o-cresyl) phosphate	0	1.23
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS0708021.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:51:36 PM

Modified: No

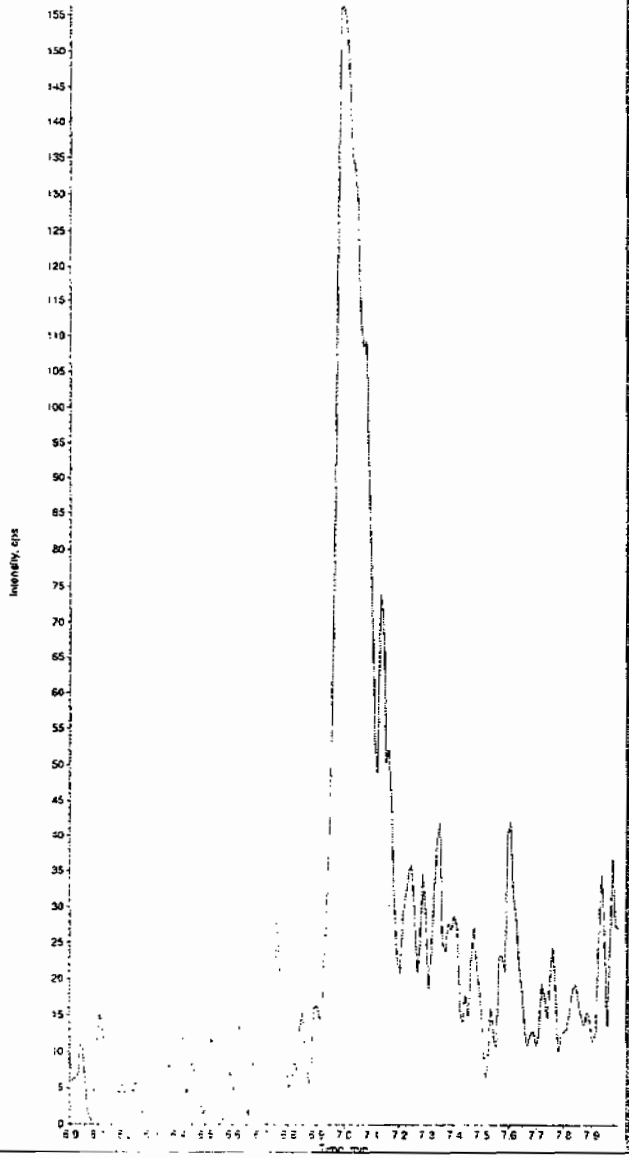

Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS0708021.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:51:36 PM

Modified: No

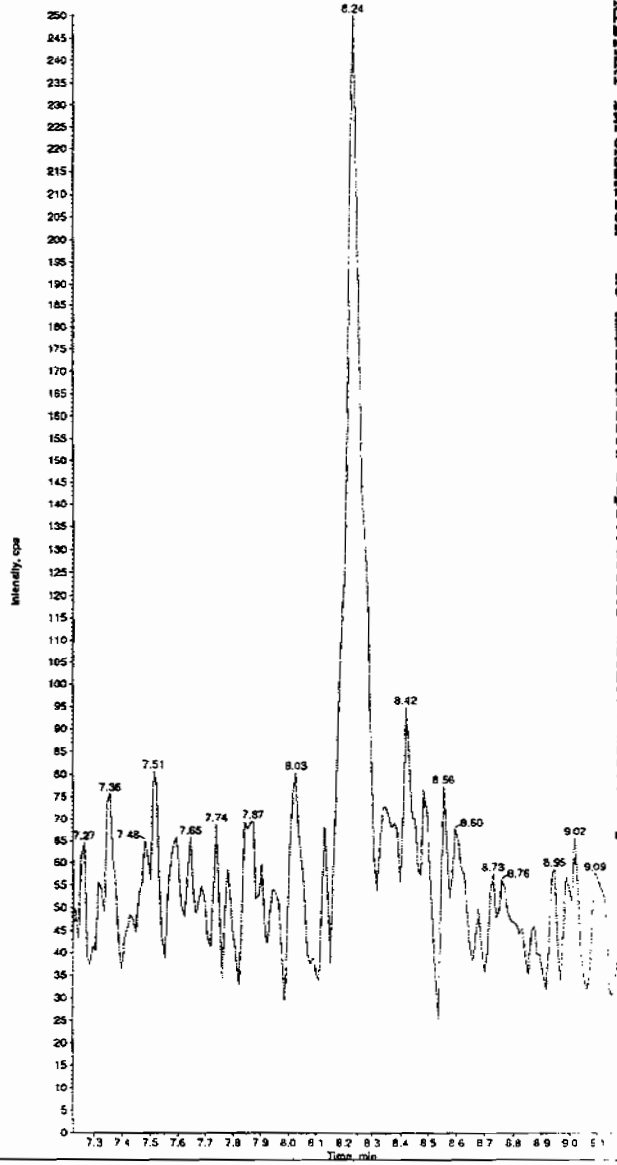

422

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS0708021.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 6.15 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:51:36 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.42 min
Area: 4.80e+002 counts
Height: 90.273 cps
Start Time: 8.34 min
End Time: 8.57 min

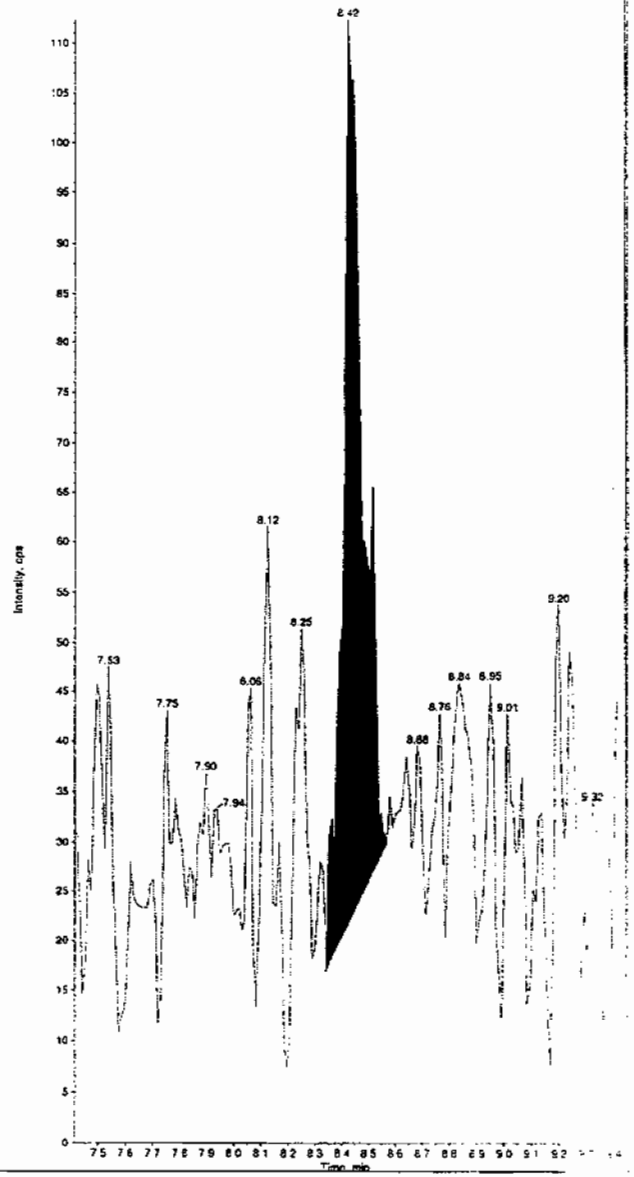

Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS0708021.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:51:36 PM

Modified: No

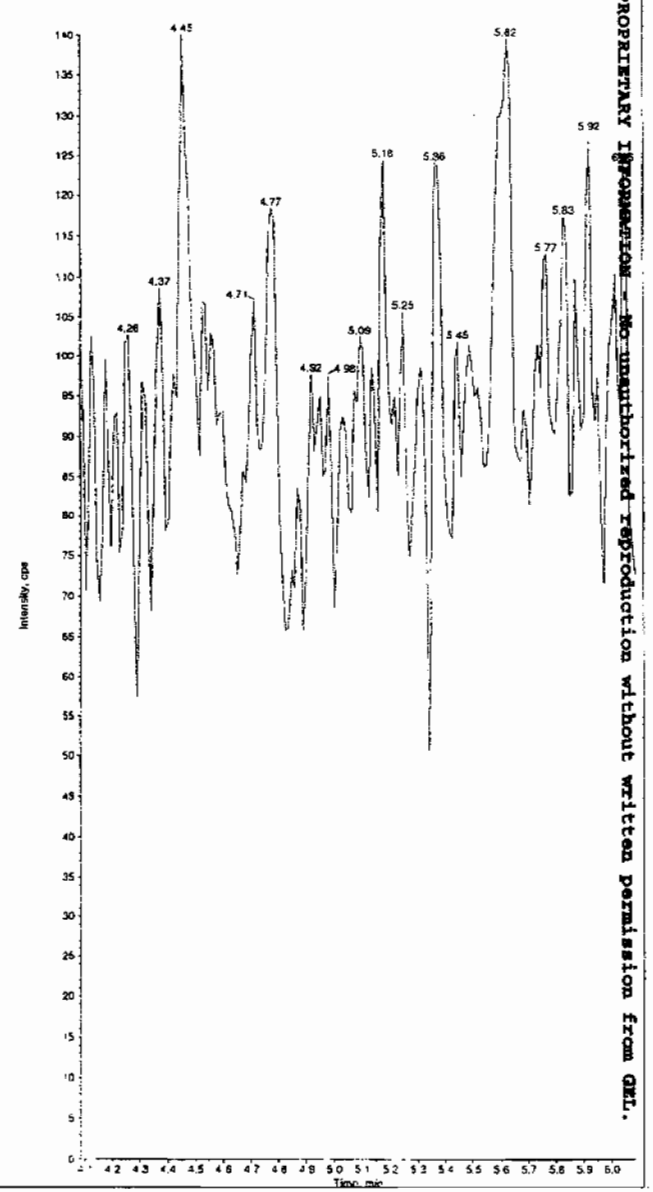

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS0708021.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:51:36 PM

Modified: No

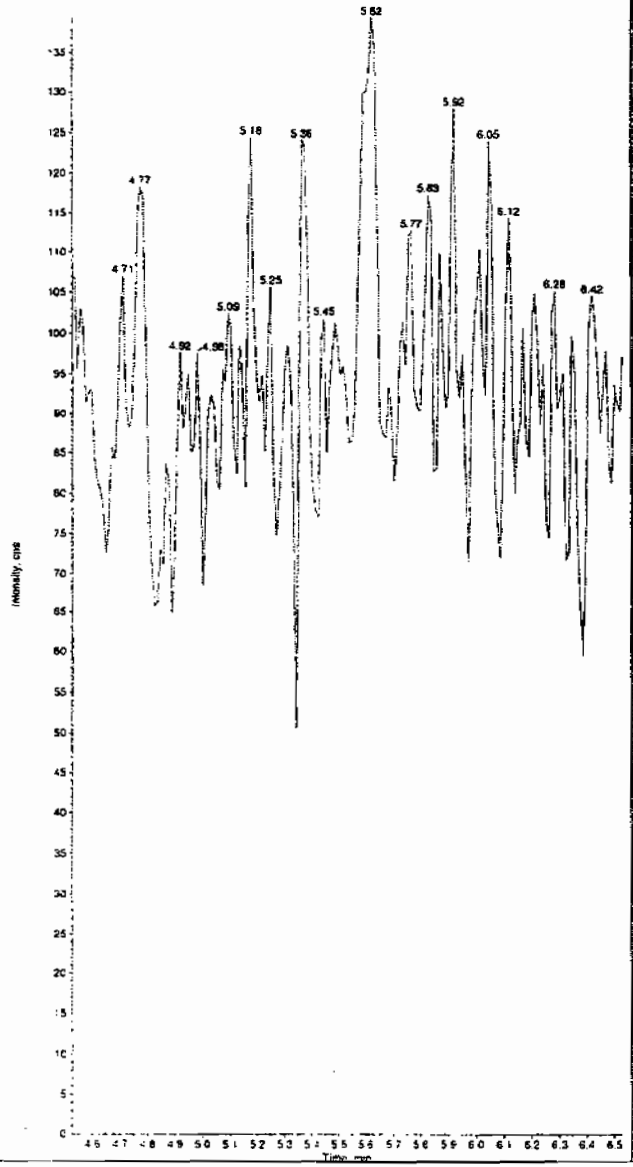

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS0708021.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 1.23 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:51:36 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.65e+004 counts
Height: 15276.093 cps
Start Time: 10.8 min
End Time: 11.1 min

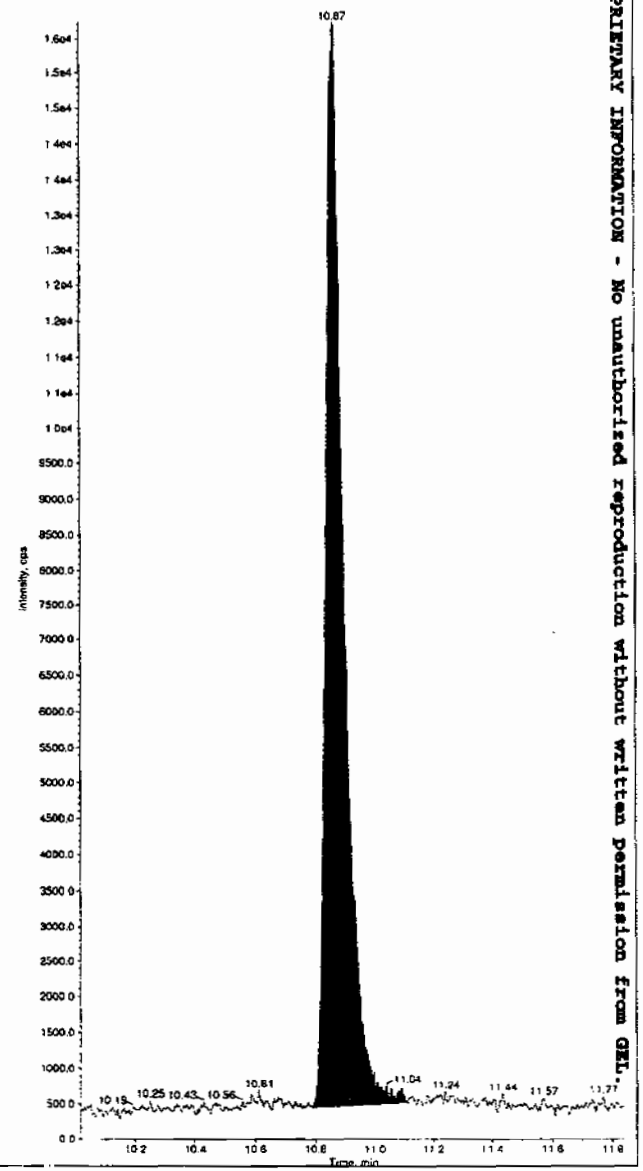

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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Calibration Report - MS1 Static

Printed: Fri Aug 25 10:50:01 2006

Data file: STATMS1 - Calibrated

15 matches of 15 tested references

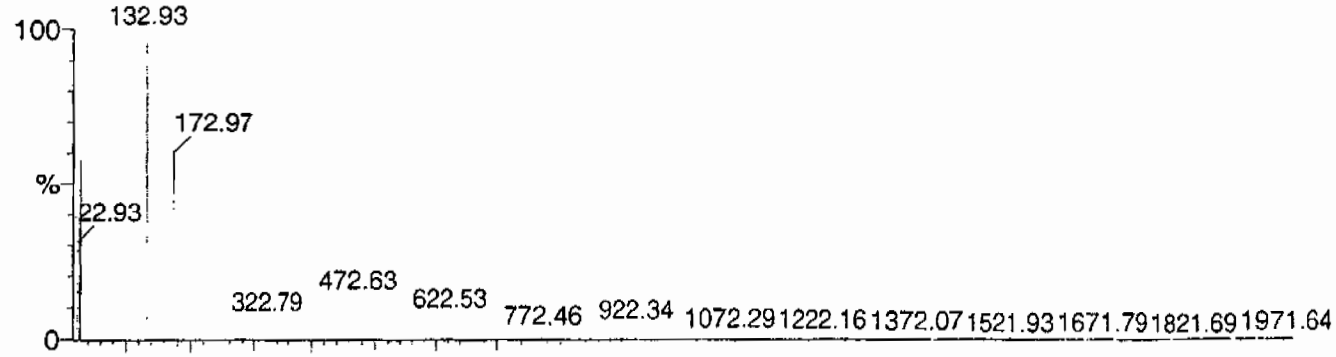

Reference file: Naics2

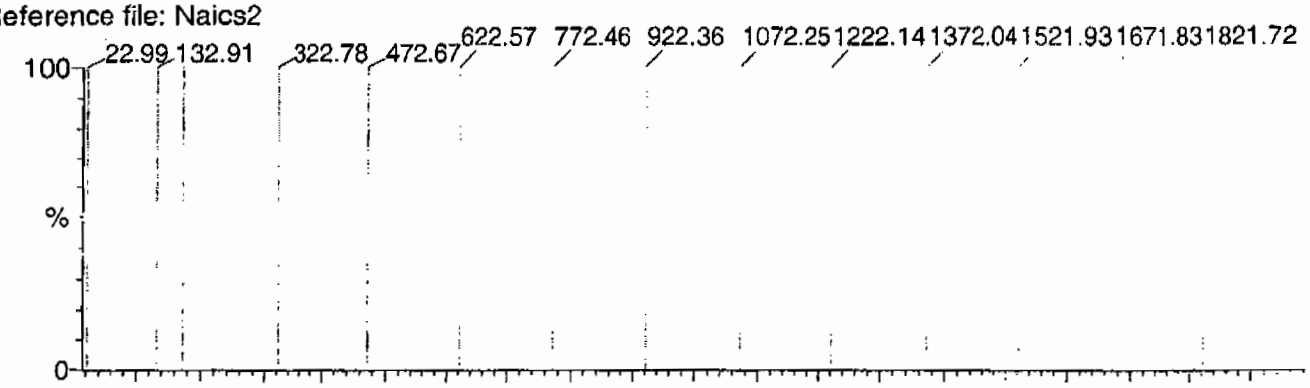

Mass difference (Raw - Ref mass)

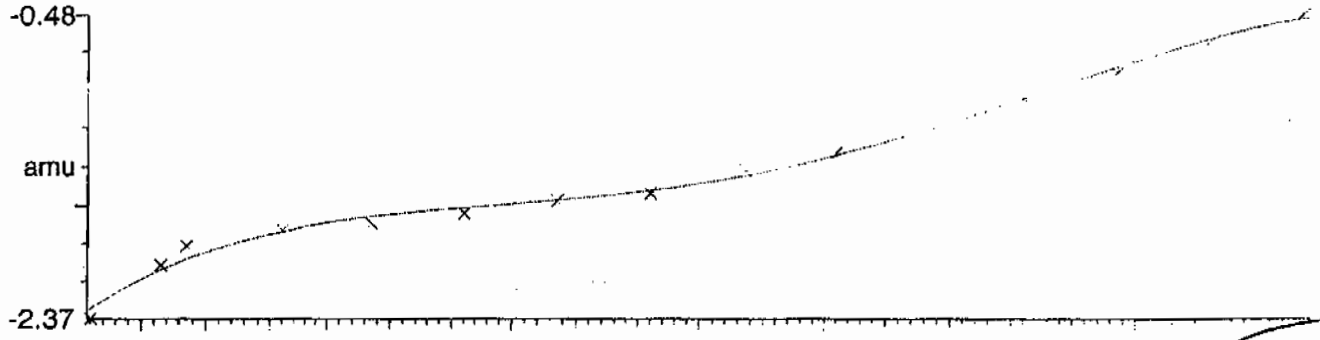

Residuals

Mean residual = -1.673470e-9 ± 0.036953

ok
hm

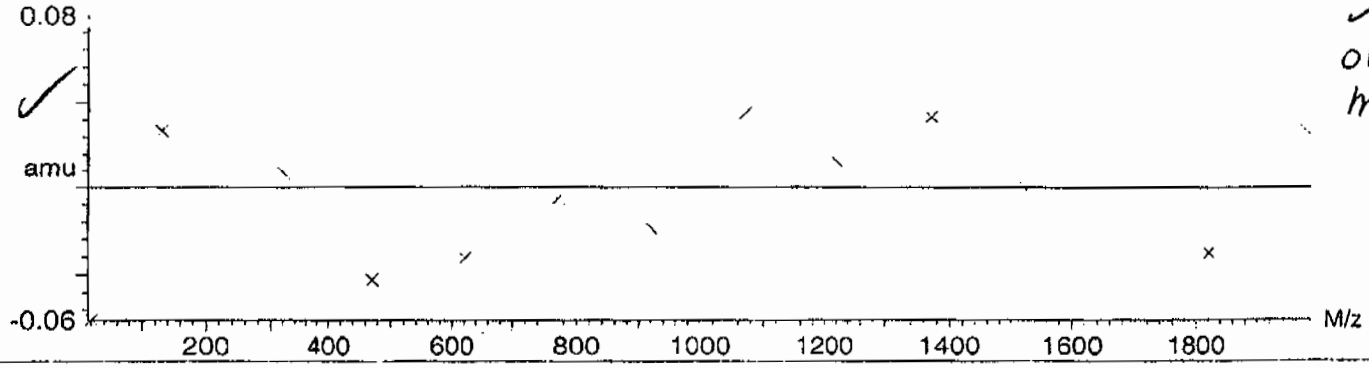

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Calibration Report - MS1 Scanning

Printed: Fri Aug 25 10:51:06 2006

Data file: SCNMS1 - Calibrated

15 matches of 15 tested references

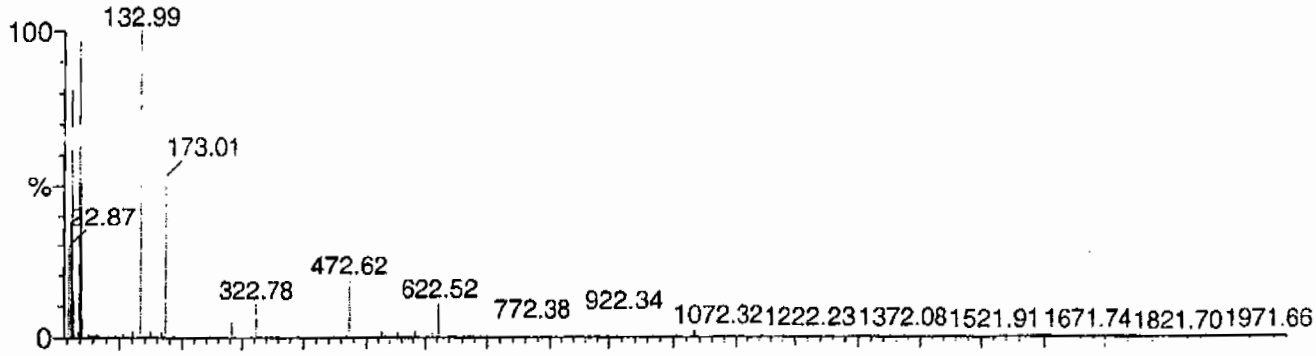

Reference file: Naics2

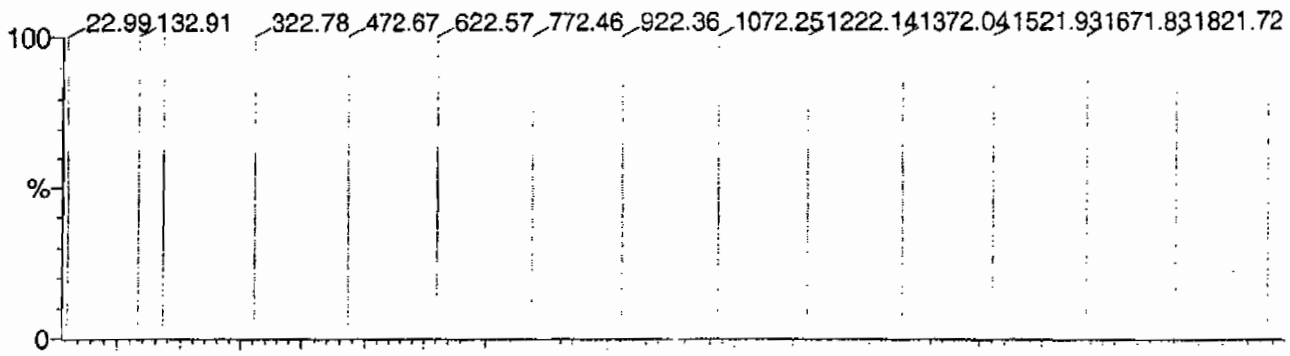

Mass difference (Raw - Ref mass)

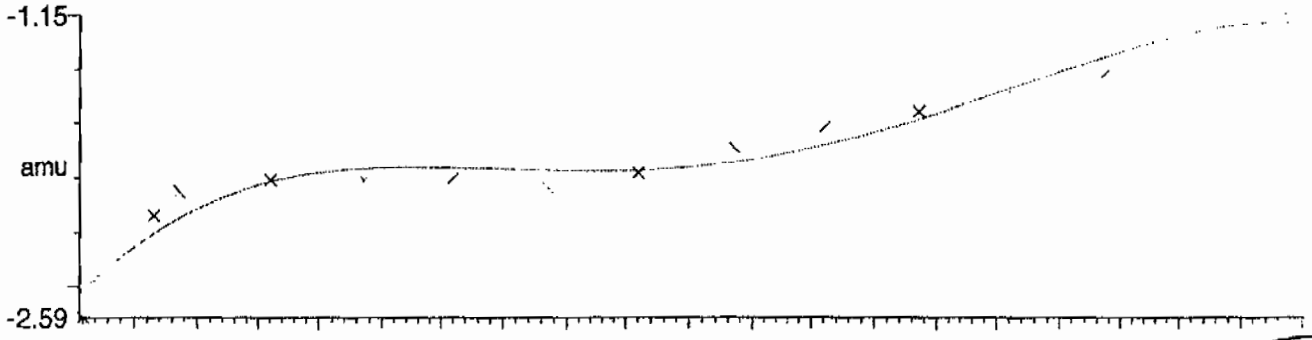

Residuals

Mean residual = -5.432715e-9 ± 0.069858

ok
mm

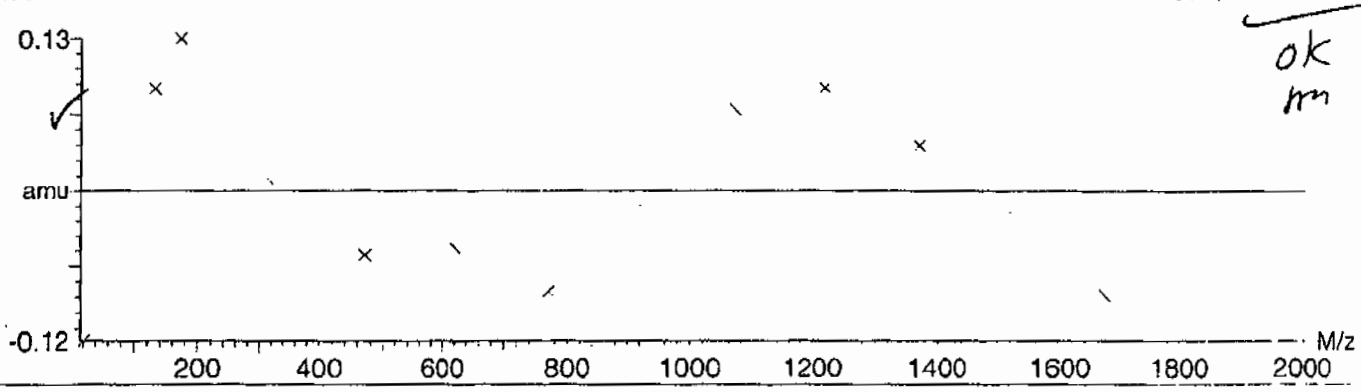

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Calibration Report - MS1 Scan Speed Compensation

Printed: Fri Aug 25 10:52:01 2006

Data file: FASTMS1 - Calibrated

15 matches of 15 tested references

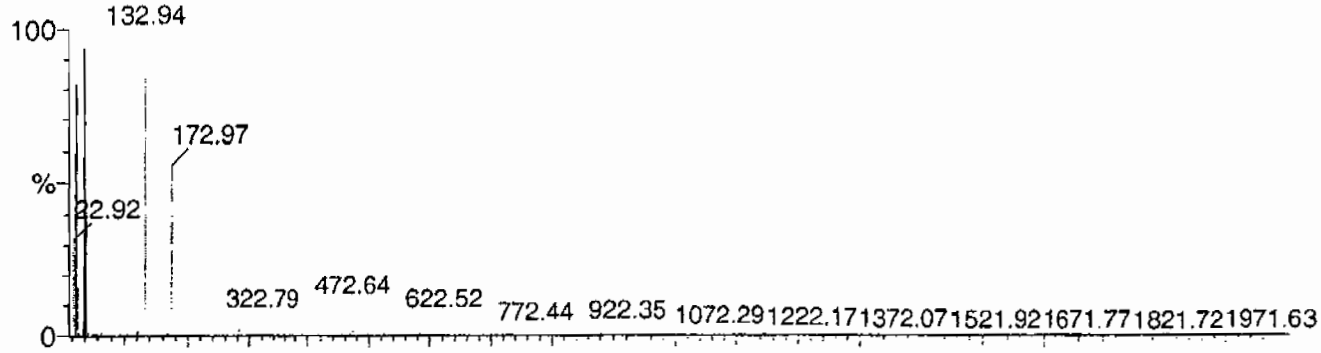

Reference file: Naics2

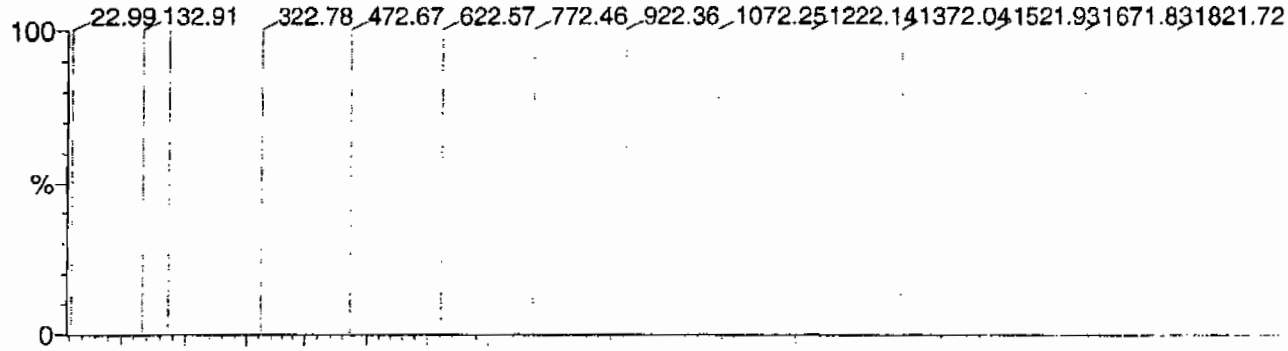

Mass difference (Raw - Ref mass)

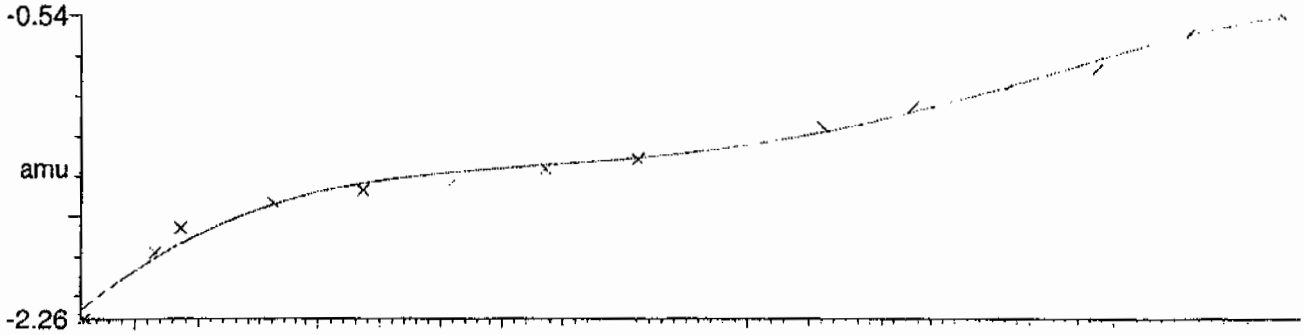

Residuals

Mean residual = 3.486639e-9 ± 0.040487

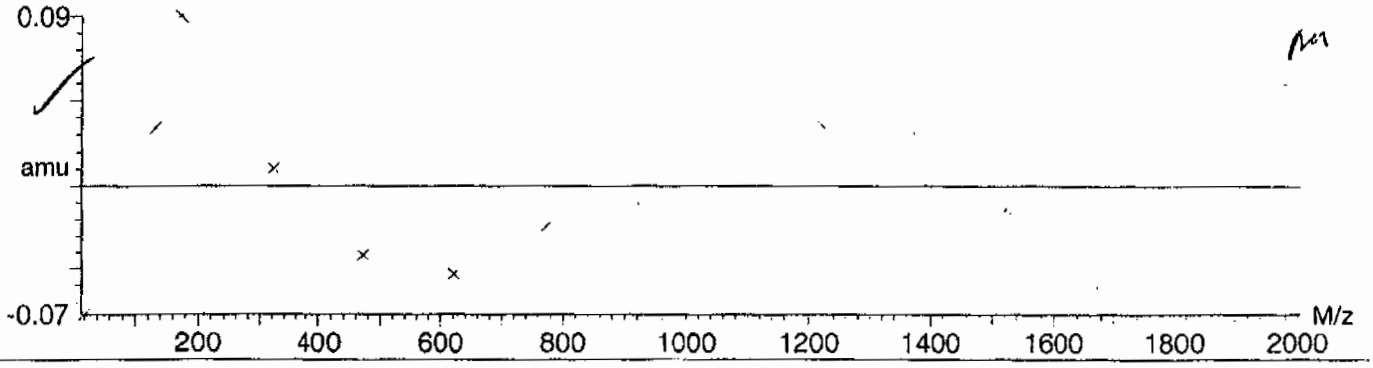

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Calibration Report - MS2 Static

Printed: Fri Aug 25 10:52:54 2006

Data file: STATMS2 - Calibrated

15 matches of 15 tested references

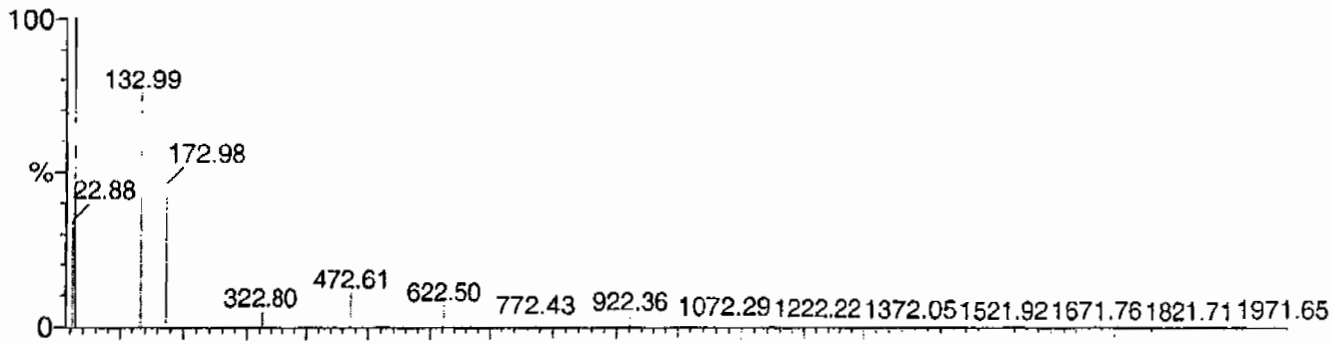

Reference file: Naics2

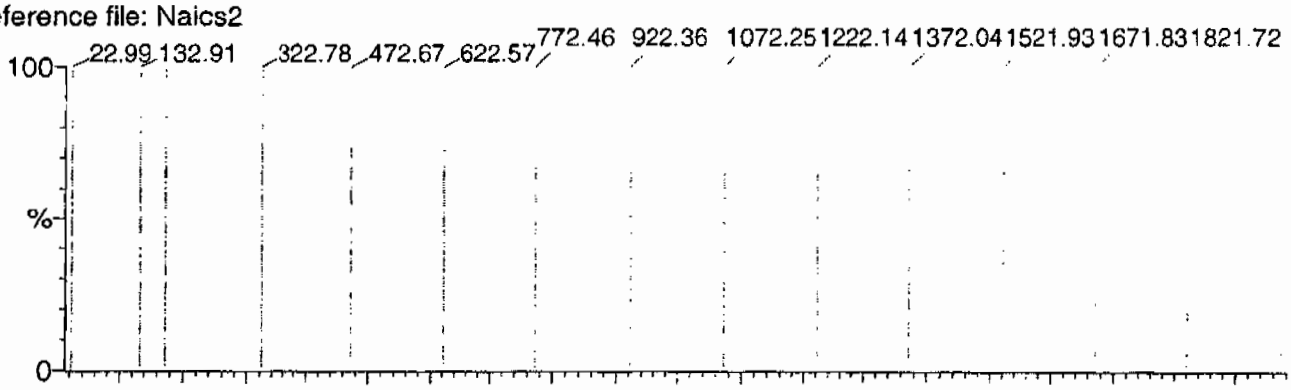

Mass difference (Raw - Ref mass)

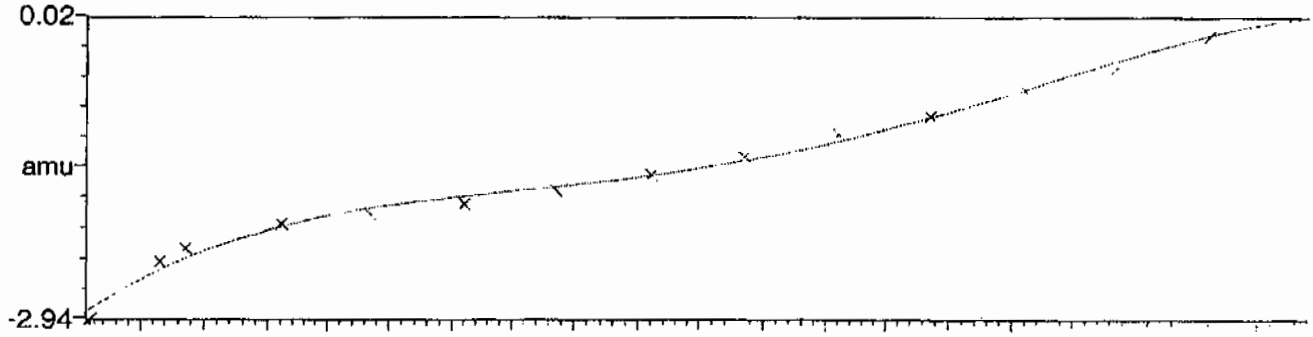

Residuals

Mean residual = 2.048910e-9 ± 0.057803

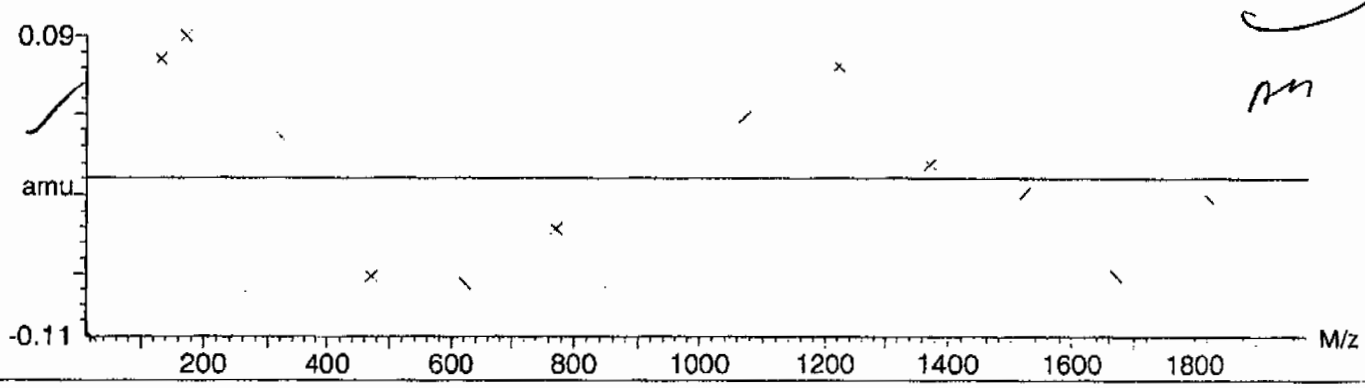

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Calibration Report - MS2 Scanning

Printed: Fri Aug 25 10:54:00 2006

Data file: SCNMS2 - Calibrated

14 matches of 15 tested references

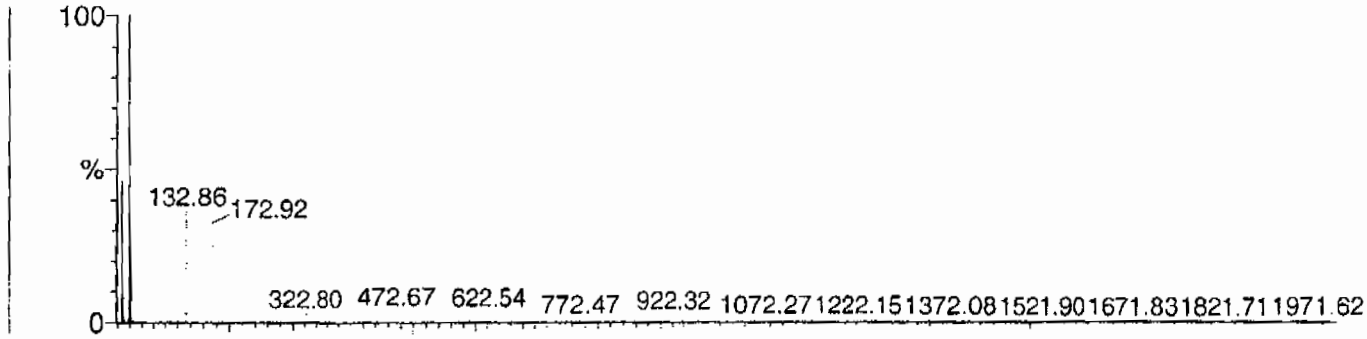

Reference file: Naics2

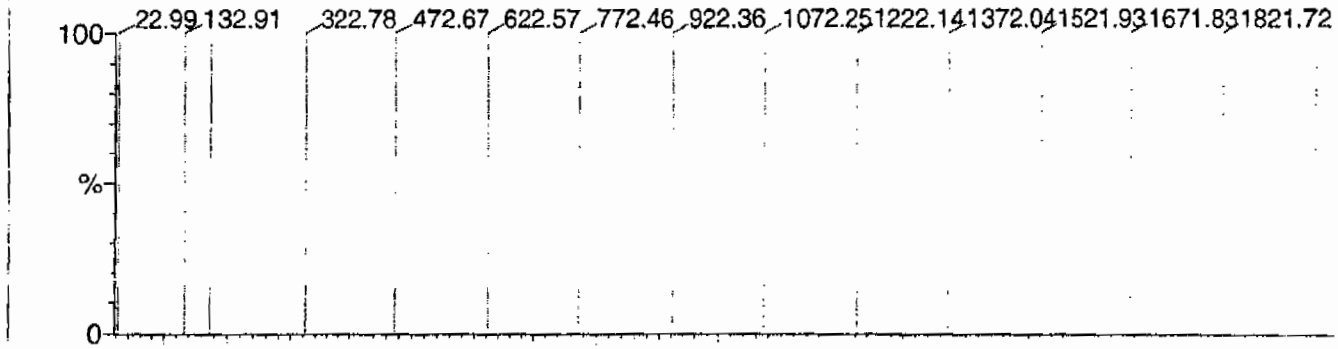

Mass difference (Raw - Ref mass)

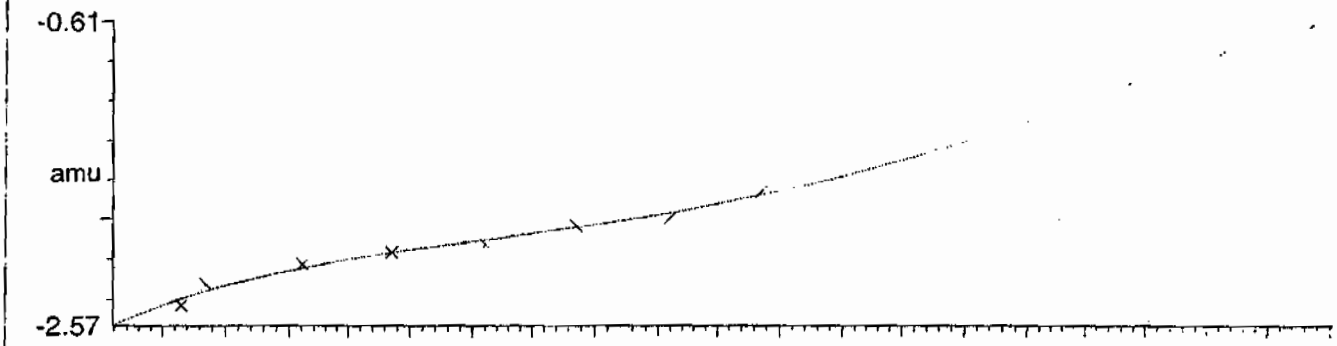

Residuals

Mean residual = -2.623502e-9 ± 0.025622

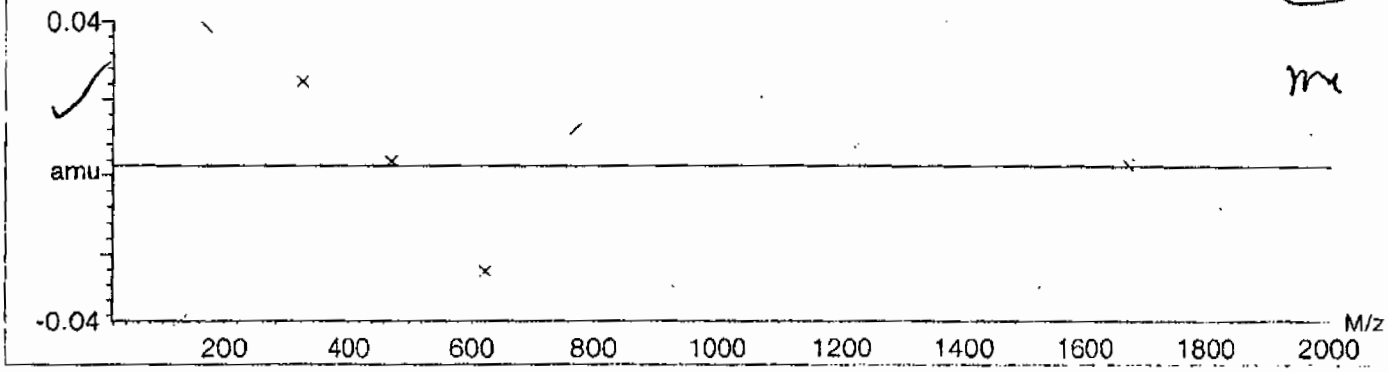

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Calibration Report - MS2 Scan Speed Compensation

Printed: Fri Aug 25 10:54:54 2006

Data file: FASTMS2 - Calibrated

14 matches of 15 tested references

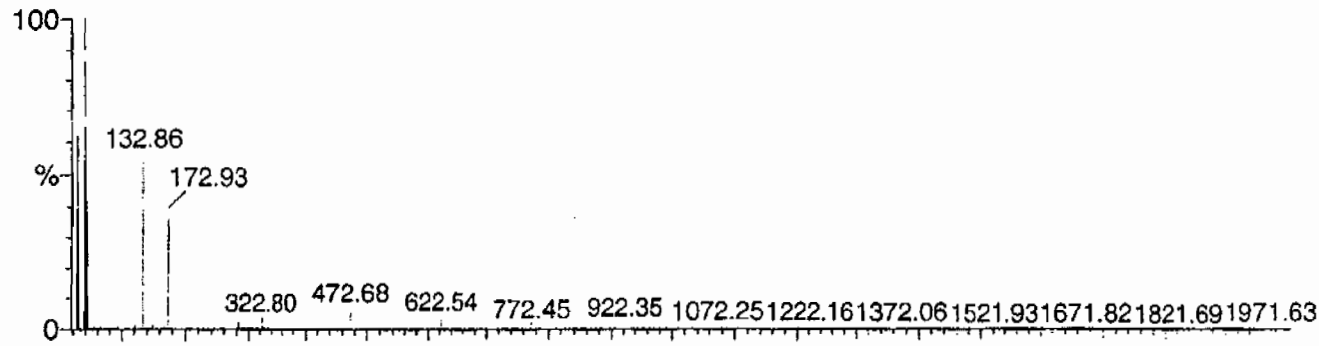

Reference file: Naics2

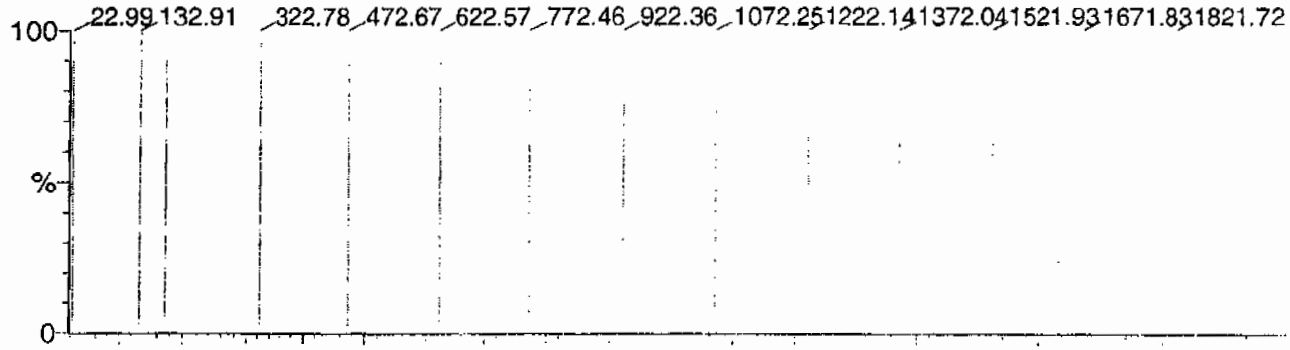

Mass difference (Raw - Ref mass)

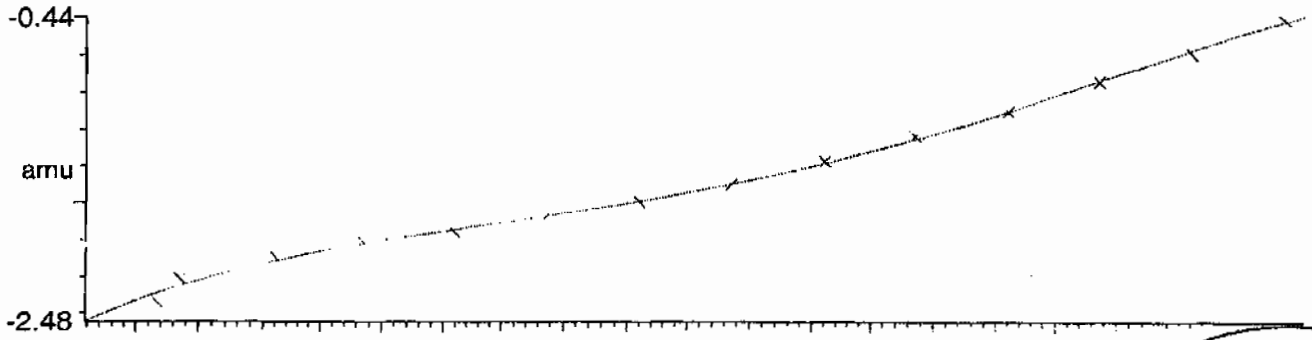

Residuals

Mean residual = -6.785350e-9 ± 0.023134

m

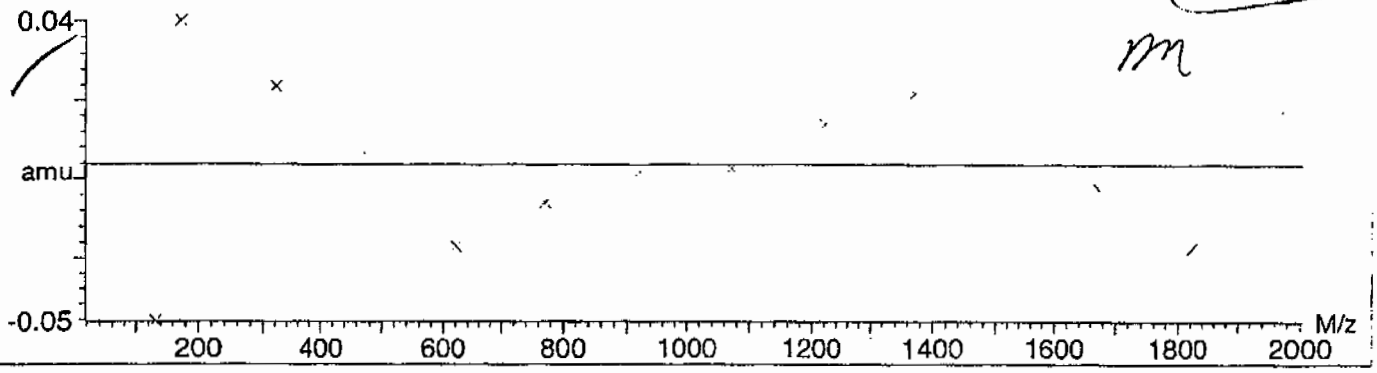

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Quattro Micro Tune Parameters

Parameter File: C:\MASSLYNX\NEW_EXP.PRO\ACQUDB\explosives04.ipr

Printed : Mon Jul 13 10:31:58 2009

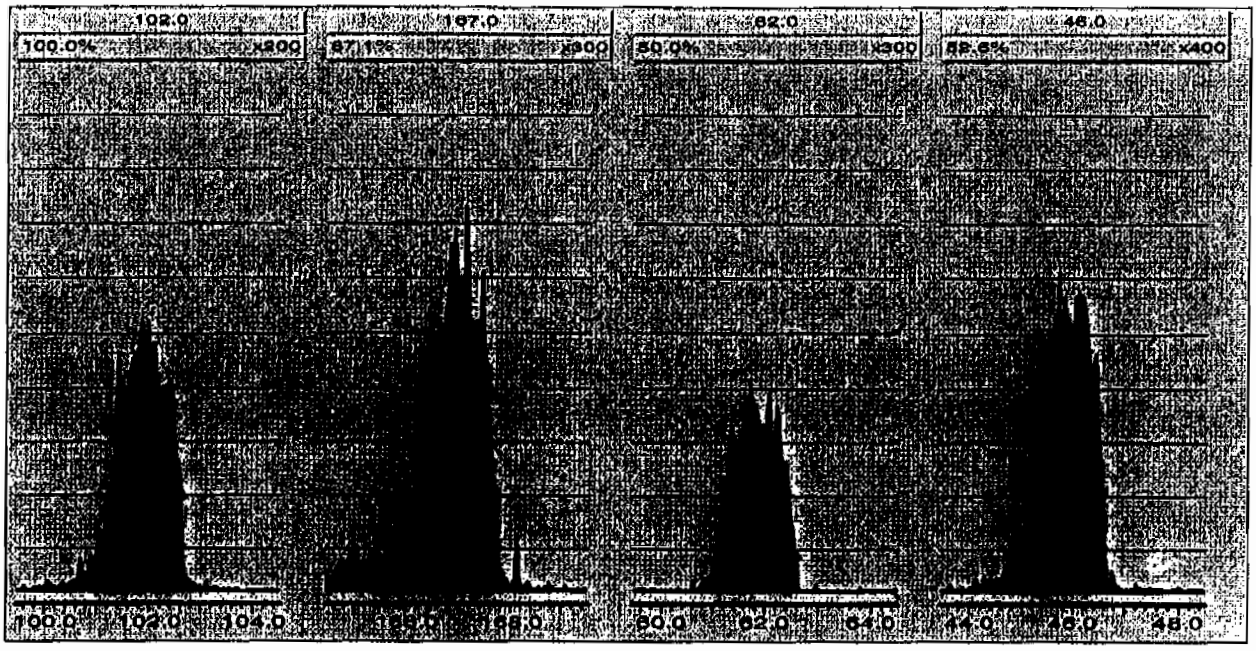

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High Explosives Internal Standard Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2508

Lab Code: GEL

HPLC Column: Phenomenex Ultracarb 5u ODS(20)

Instrument ID: LCMSMS

	Analysis Date/Time	GEL Data File	IS1 (DNB) (Area) #	RT (min) #	IS2 (DNT) (Area) #	RT2 (min) #
			3941.197	12.13	23911.983	17.684
Upper Limit			5123.5561	12.63	31085.5779	18.184
Lower Limit			2758.8379	11.63	16738.3881	17.184
MB for batch 881634	13-jul-09 22:18	EXP0713016a	4459.48	12.136	27118.9	17.706
LCS for batch 881634	13-jul-09 22:48	EXP0713017a	4435.42	12.136	28199.5	17.706
CAMO-09-10464	13-jul-09 23:17	EXP0713018a	4345.57	12.103	24907	17.699
CAMO-09-10464(232582001MS	13-jul-09 23:47	EXP0713019a	4409.57	12.136	26115.9	17.662
CAMO-09-10464(232582001MS	14-jul-09 00:16	EXP0713020a	4647.89	12.136	26948.1	17.684
CAMO-09-10465	14-jul-09 00:46	EXP0713021a	3607.72	12.138	21422.1	17.699

IS1 (DNB) = 1,3-Dinitrobenzene-d4
IS2 (DNT) = 2,6-Dinitrotoluene-d3

Area Upper Limit = + 30% of average IS area from multipoint calibration
Area Lower Limit = – 30% of average IS area from multipoint calibratio

RT Upper Limit = +0.5 of average multipoint RT
RT Lower Limit = –0.5 of average multipoint RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits

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SAMPLE DATA

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10464

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582001

Sample Amount 2

Moisture: 6.7

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713018a

Date Analyzed: 13-JUL-09 23:17

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713018a
Date: 13-Jul-2009
Time: 23:17:49
ID: 232582001 | LANL | 881635 | Soil | 21
Vial: 1:5,C

MAP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.949e+003

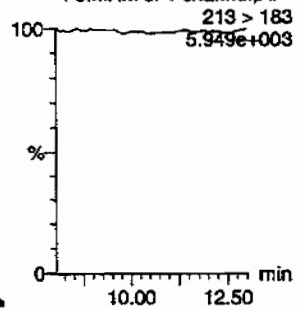

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.826e+003

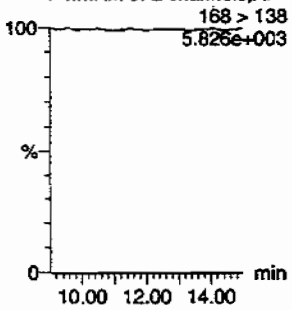

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.840e+004

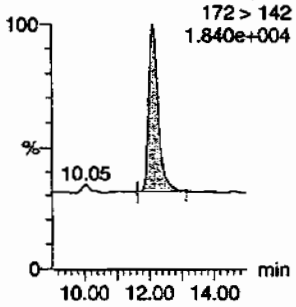

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.929e+003

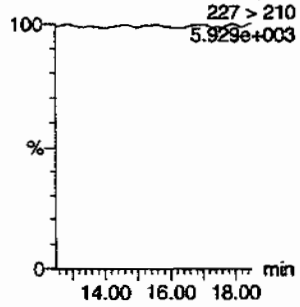

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
3.250e+004

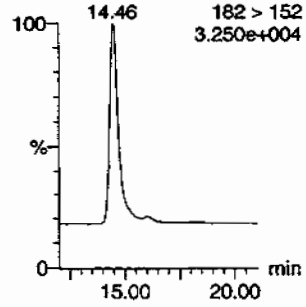

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
3.250e+004

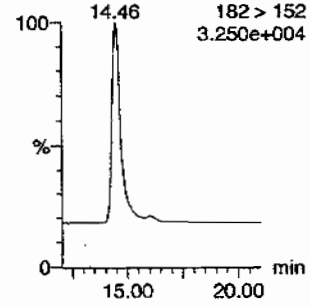

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.860e+004

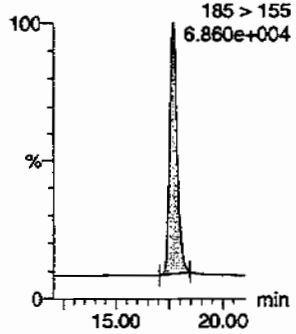

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.994e+003

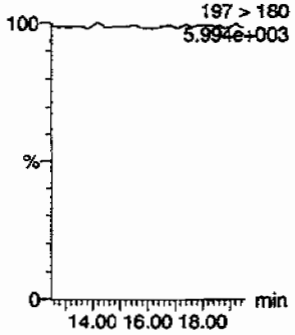

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.816e+003

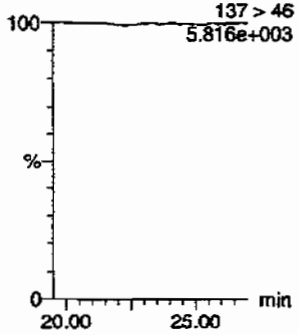

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
3.250e+004

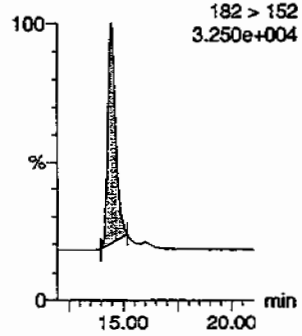

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.816e+003

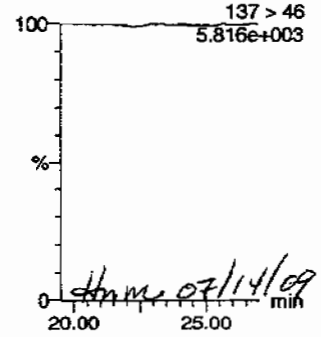

dmm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.990e+003

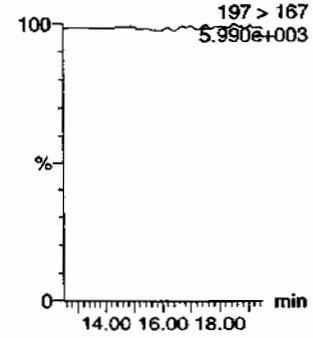

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

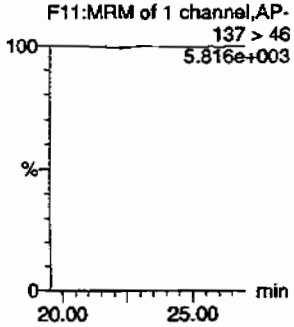

HMX

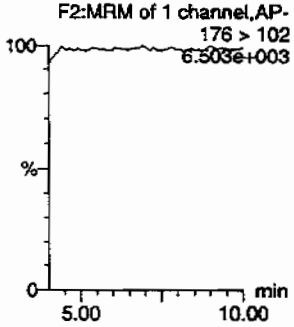

Nitrobenzene

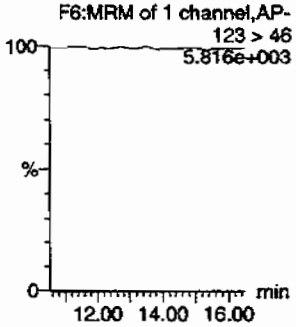

PETN

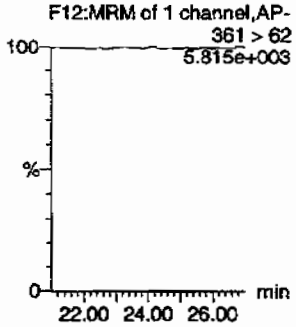

RDX

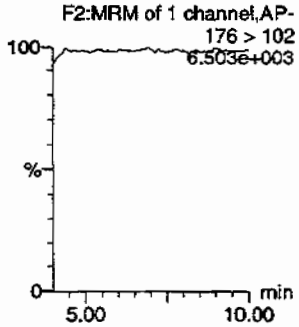

Tetryl

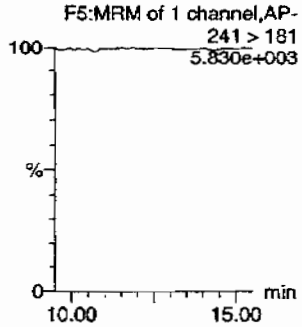

ID	Name	Trace	RT	Area	IS Area	Abs Resp	% Response	Flags	Mod Date	Mod Time	Amount	%Rec	%Dev	S/N
232582001	HMX	176 > 102			4345.574									
232582001	RDX	176 > 102			4345.574									
232582001	135-Trinitrobenzene	213 > 183			4345.574									
232582001	13-Dinitrobenzene-d4	172 > 142	12.10	4345.574		4345.574	4345.574	bb			551.3013	110.3	10.3	241.4
232582001	13-Dinitrobenzene	168 > 138			4345.574									
232582001	Tetryl	241 > 181			4345.574									
232582001	Nitrobenzene	123 > 46			4345.574									
232582001	4-Amino-26-dinitrotoluene	197 > 167			24907.037									
232582001	2-Amino-46-dinitrotoluene	197 > 180			24907.037									
232582001	246-Trinitrotoluene	227 > 210			24907.037									
232582001	34-dinitrotoluene	182 > 152	14.46	10886.849	24907.037	10886.849	218.550	bb			250.9041	100.4	0.4	250.0
232582001	26-dinitrotoluene	182 > 152			24907.037									
232582001	24-dinitrotoluene	182 > 152			24907.037									
232582001	26-dinitrotoluene-d3	185 > 155	17.70	24907.037		24907.037	24907.037	bb			520.8060	104.2	4.2	1346.9
232582001	2-Nitrotoluene	137 > 46			24907.037									
232582001	4-Nitrotoluene	137 > 46			24907.037									
232582001	3-Nitrotoluene	137 > 46			24907.037									
232582001	PETN	361 > 62			24907.037									

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10464

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582001

Sample Amount 2

Moisture: 6.7

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0708016.wiff

Date Analyzed: 08-JUL-09 14:30

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sam 7/9/09

Sample Name: "232582001" Sample ID: "881635|2|LER" File: "EXS0708016.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:30:38 PM

Modified: No

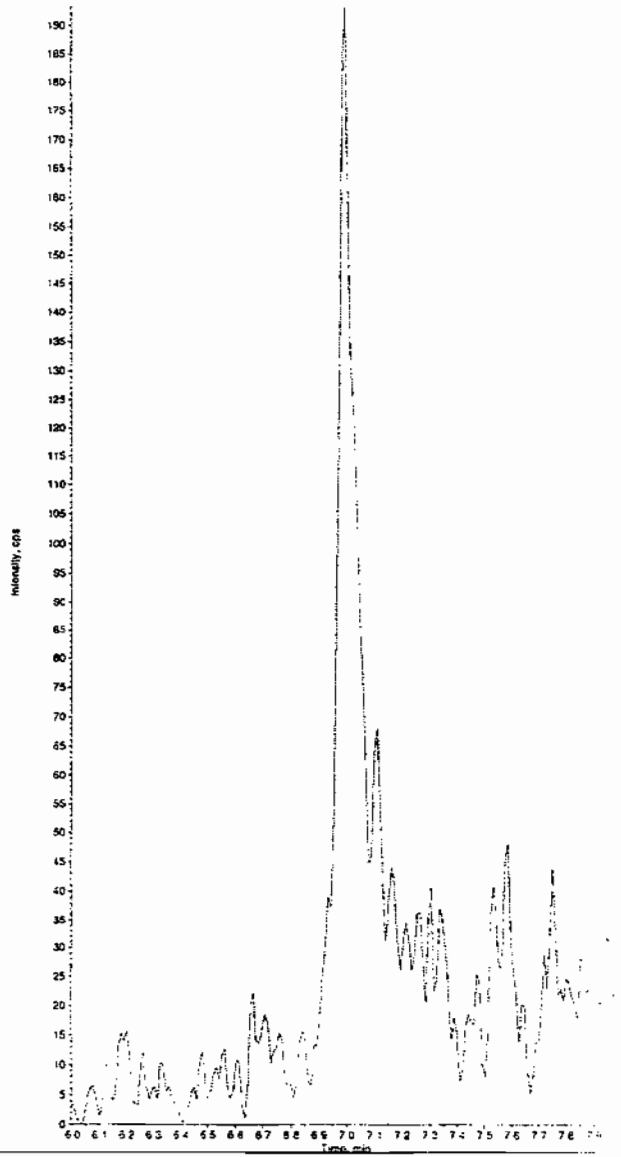

Sample Name: "232582001" Sample ID: "881635|2|LER" File: "EXS0708016.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:30:38 PM

Modified: No

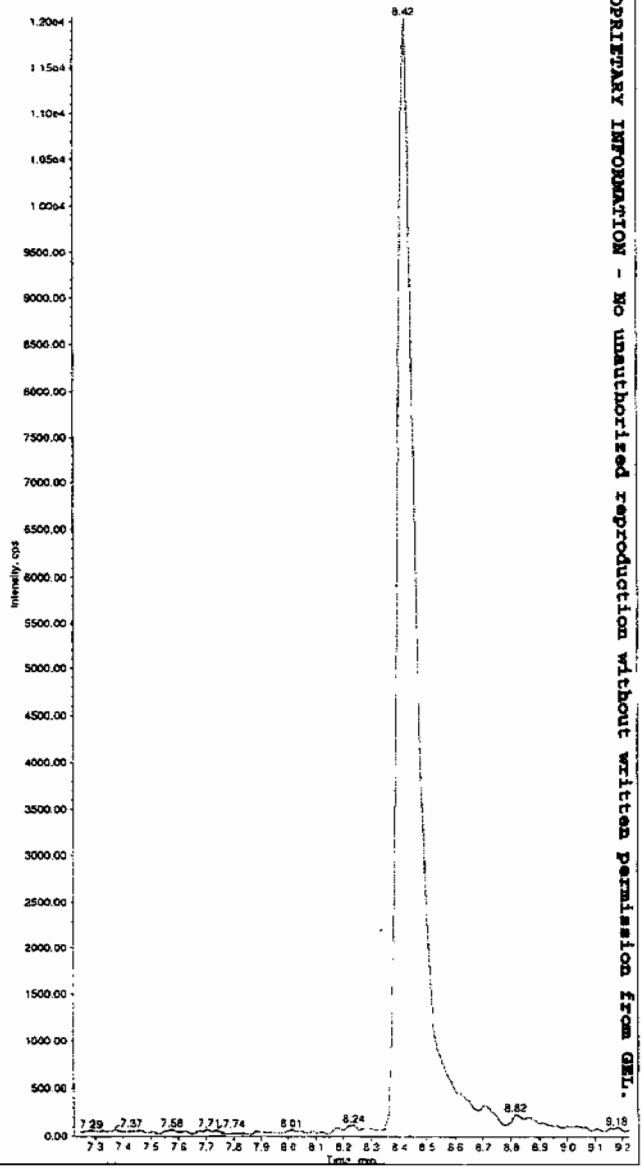

dmx 07/09/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232582001" Sample ID: "881635|2|LER" File: "EXS0708016.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 258. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:30:38 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.42 min
Area: 5.59e+005 counts
Height: 105827.049 cps
Start Time: 8.28 min
End Time: 9.20 min

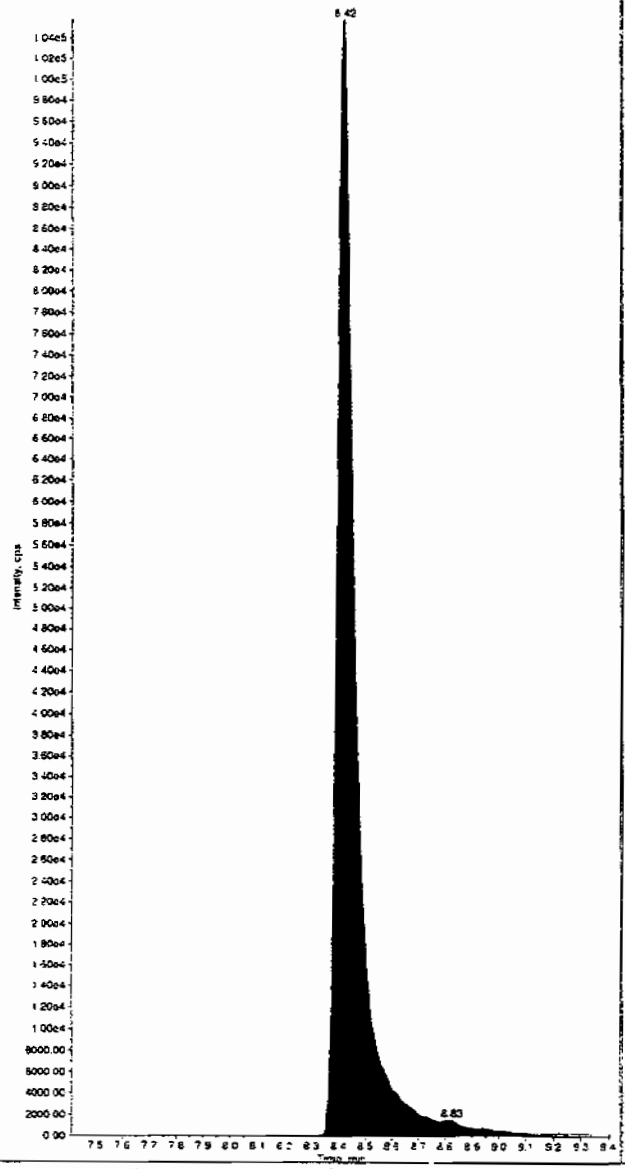

Sample Name: "232582001" Sample ID: "881635|2|LER" File: "EXS0708016.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:30:38 PM

Modified: No

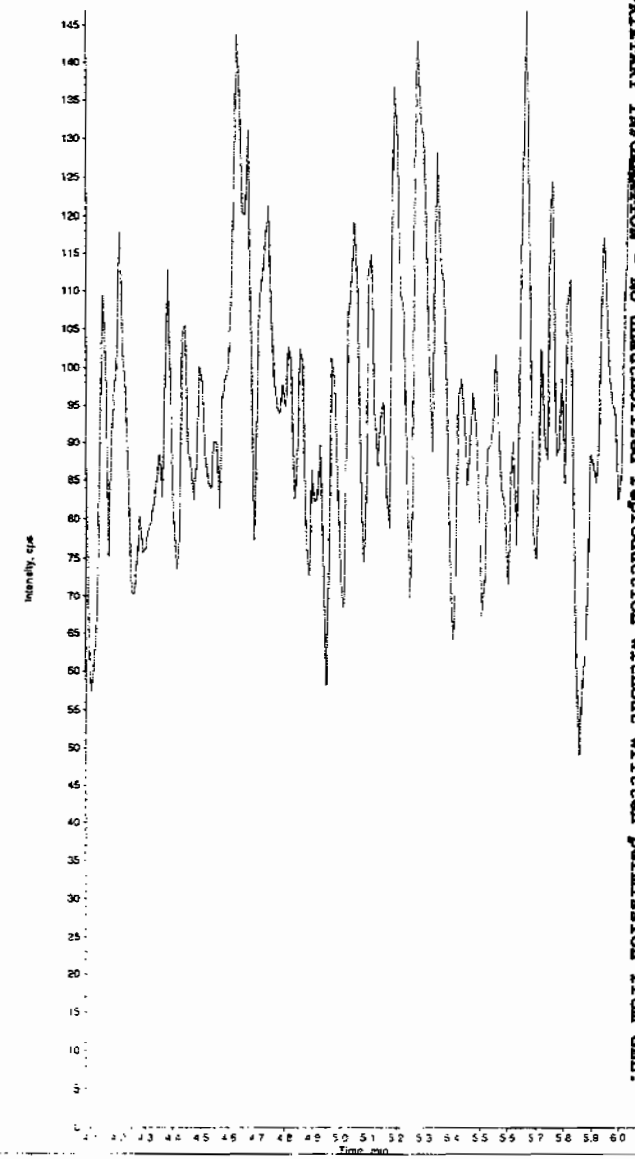

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Sample Name: "232582001" Sample ID: "881635|2|LER" File: "EXS0708016.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:30:38 PM

Modified: No

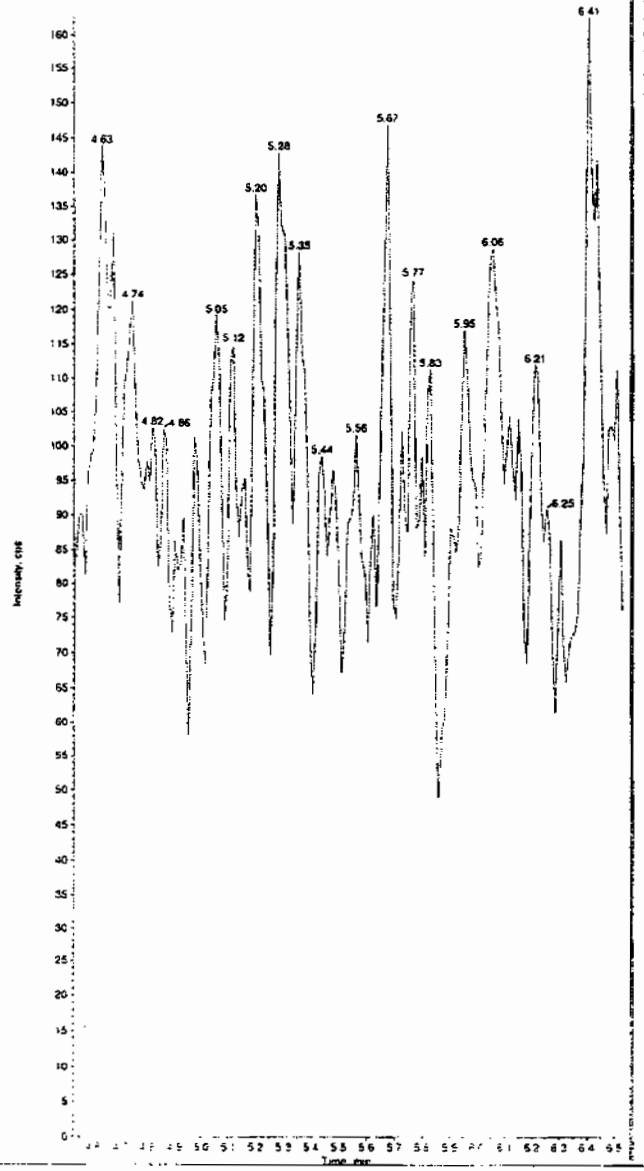

Sample Name: "232582001" Sample ID: "881635|2|LER" File: "EXS0708016.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:30:38 PM

Modified: No

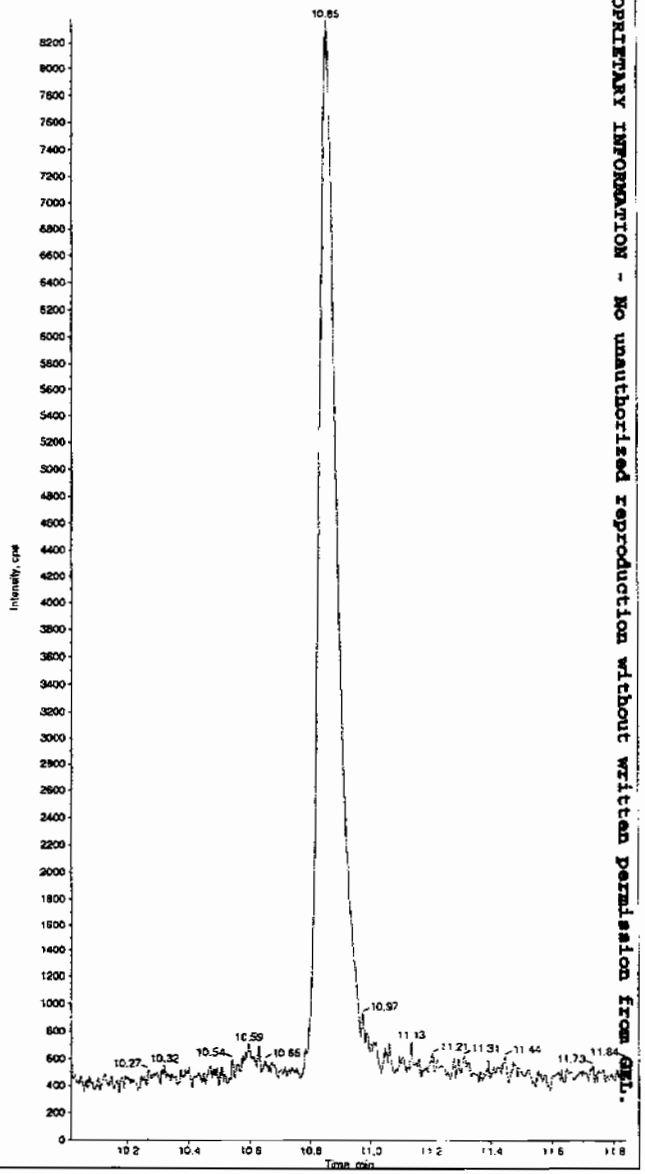

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10465

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582002

Sample Amount 2

Moisture: 4.9

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713021a

Date Analyzed: 14-JUL-09 00:46

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713021a
Date: 14-Jul-2009
Time: 00:46:18
ID: 232582002 | LANL | 881635 | Soil | 2 |
Vial: 1:5,F

MAP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.824e+003

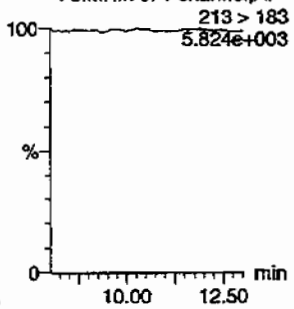

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.742e+003

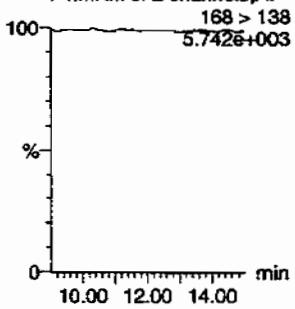

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.610e+004

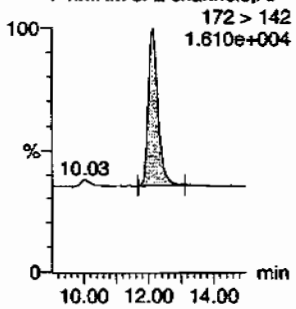

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.810e+003

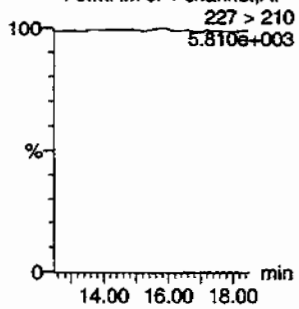

24-dinitrotoluene
F8:MRM of 2 channels,AP-
14.51
182 > 152
2.783e+004

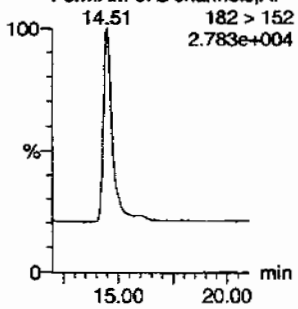

26-dinitrotoluene
F8:MRM of 2 channels,AP-
14.51
182 > 152
2.783e+004

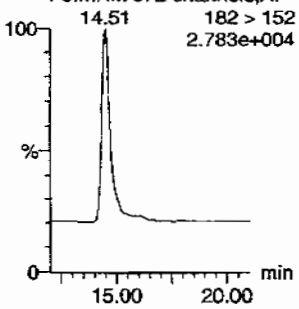

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.053e+004

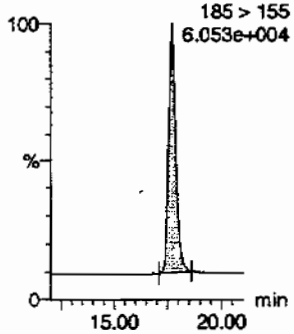

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.902e+003

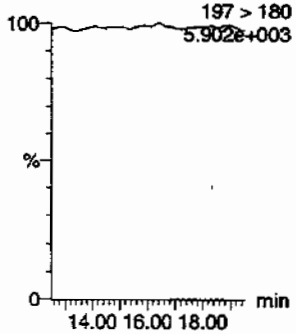

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.741e+003

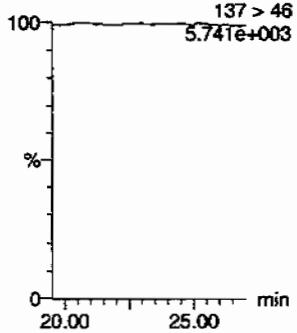

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
2.783e+004

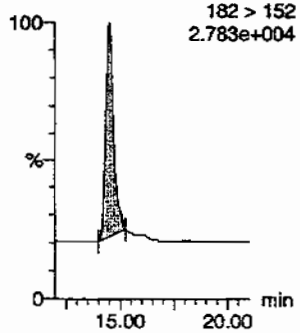

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.741e+003

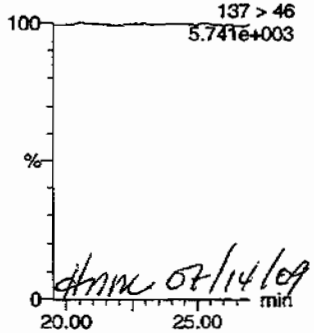

dmm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.855e+003

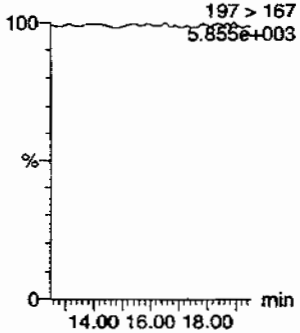

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

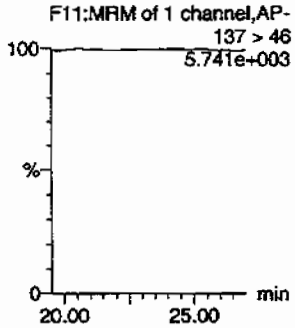

HMX

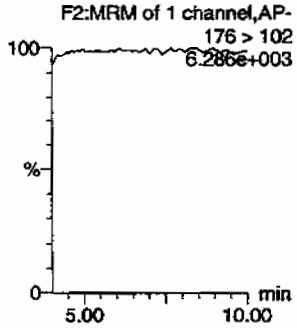

Nitrobenzene

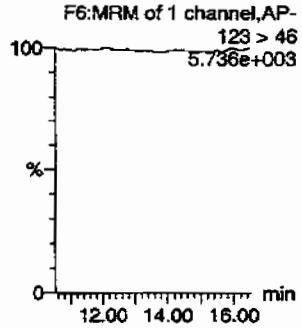

PETN

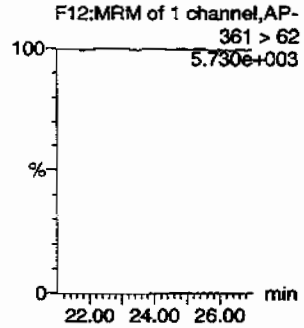

RDX

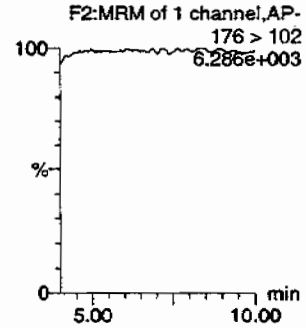

Tetryl

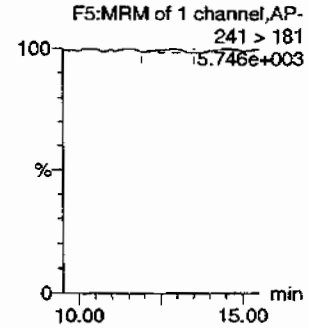

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
232582002	HMX	176 > 102			3607.720									
232582002	RDX	176 > 102			3607.720									
232582002	135-Trinitrobenzene	213 > 183			3607.720									
232582002	13-Dinitrobenzene-d4	172 > 142	12.14	3607.720		3607.720	3607.720	bb			457.6934	91.5	-8.5	235.5
232582002	13-Dinitrobenzene	168 > 138			3607.720									
232582002	Tetryl	241 > 181			3607.720			MM-	14-Jul-09	10:21:13				
232582002	Nitrobenzene	123 > 46			3607.720									
232582002	4-Amino-26-dinitrotoluene	197 > 167			21422.139									
232582002	2-Amino-46-dinitrotoluene	197 > 180			21422.139									
232582002	246-Trinitrotoluene	227 > 210			21422.139									
232582002	34-dinitrotoluene	182 > 152	14.51	9162.370	21422.139	9162.370	213.853	bb			245.5119	98.2	-1.8	252.0
232582002	26-dinitrotoluene	182 > 152			21422.139									
232582002	24-dinitrotoluene	182 > 152			21422.139									
232582002	26-dinitrotoluene-d3	185 > 155	17.70	21422.139		21422.139	21422.139	bb			447.9368	89.6	-10.4	915.8
232582002	2-Nitrotoluene	137 > 46			21422.139									
232582002	4-Nitrotoluene	137 > 46			21422.139									
232582002	3-Nitrotoluene	137 > 46			21422.139									
232582002	PETN	361 > 62			21422.139									

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10465

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 232582002

Sample Amount 2

Moisture: 4.9

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0708019.wiff

Date Analyzed: 08-JUL-09 15:19

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Lan 7/9/09

Sample Name: "232582002" Sample ID: "881635|2|LER" File: "EXS0708019.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:19:13 PM

Modified: No

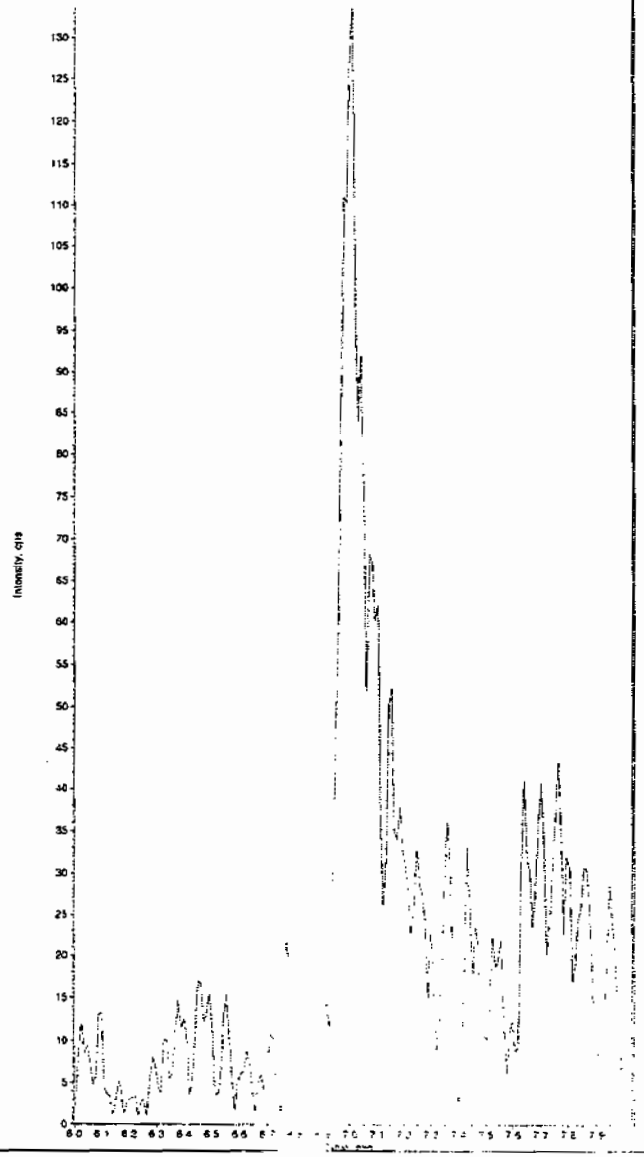

Sample Name: "232582002" Sample ID: "881635|2|LER" File: "EXS0708019.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:19:13 PM

Modified: No

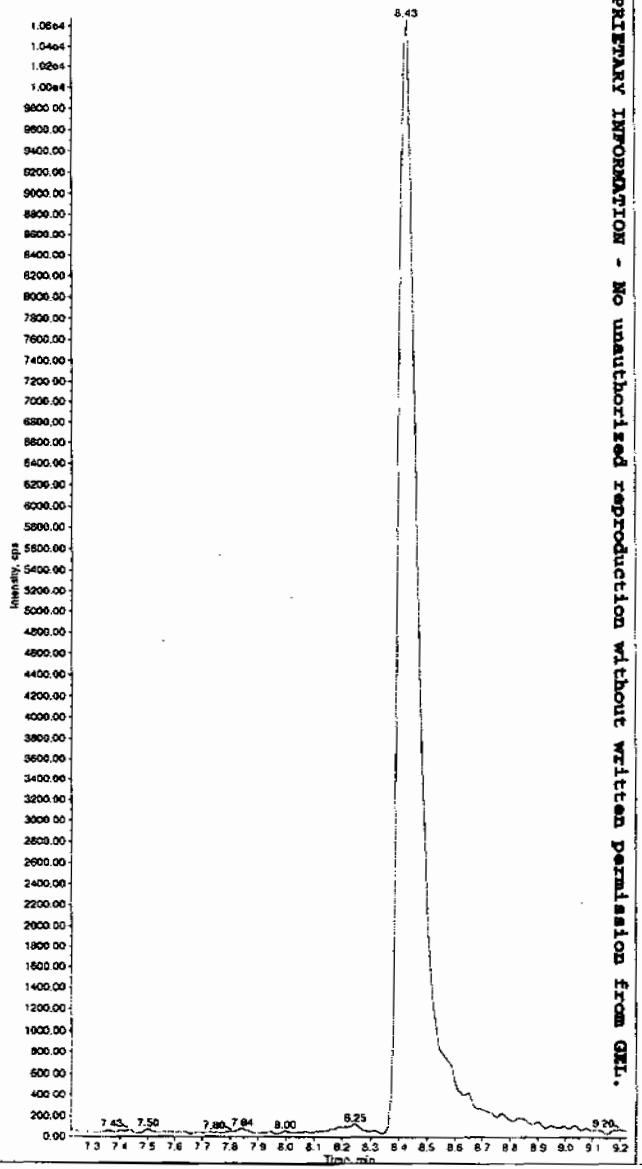

Hnm 07/09/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232582002" Sample ID: "881635|2|LER" File: "EXS0708019.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

```
Sample Index:        1
Sample Type:      Unknown
Concentration:      N/A
Calculated Conc:    256.     ng/mL
Acq. Date:        7/8/2009
Acq. Time:        3:19:13 PM

Modified:           No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height:   0.00    cps
Min. Peak Width:    0.00    sec
Smoothing Width:  3         points
RT Window:          30.0    sec
Expected RT:        8.41    min
Use Relative RT:    No

Int. Type:        Valley
Retention Time:     8.42    min
Area:         5.53e+005   counts
Height:        103198.631   cps
Start Time:         8.34    min
End Time:           9.27    min
```

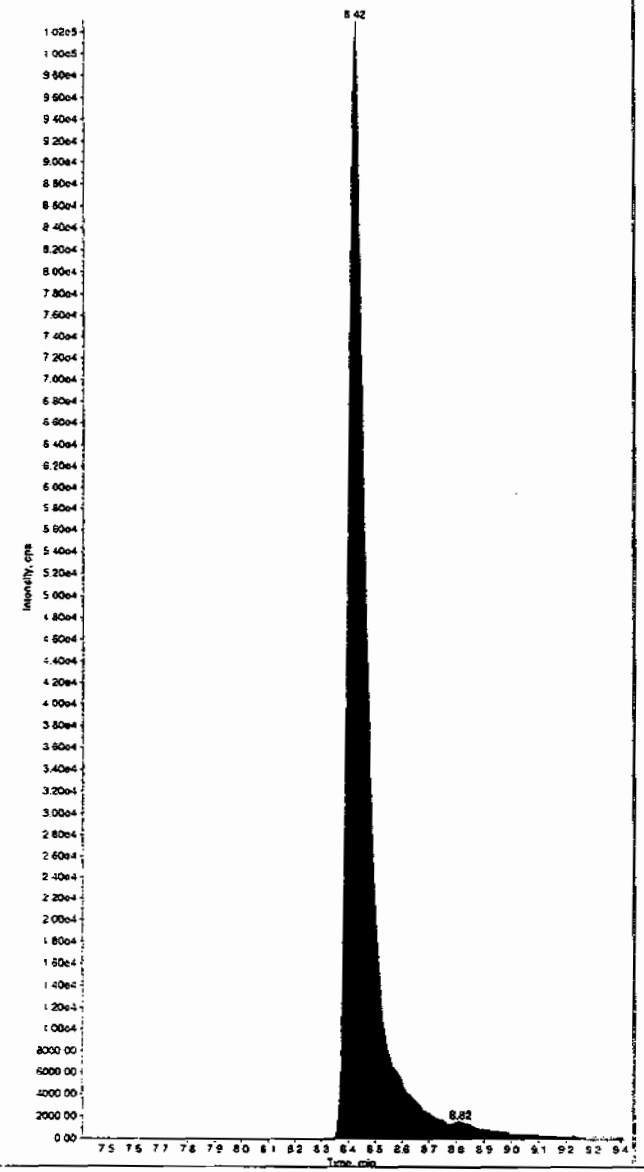

Sample Name: "232582002" Sample ID: "881635|2|LER" File: "EXS0708019.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

```
Sample Index:        1
Sample Type:      Unknown
Concentration:      N/A
Calculated Conc:    0.00     ng/mL
Acq. Date:        7/8/2009
Acq. Time:        3:19:13 PM

Modified:           No
```

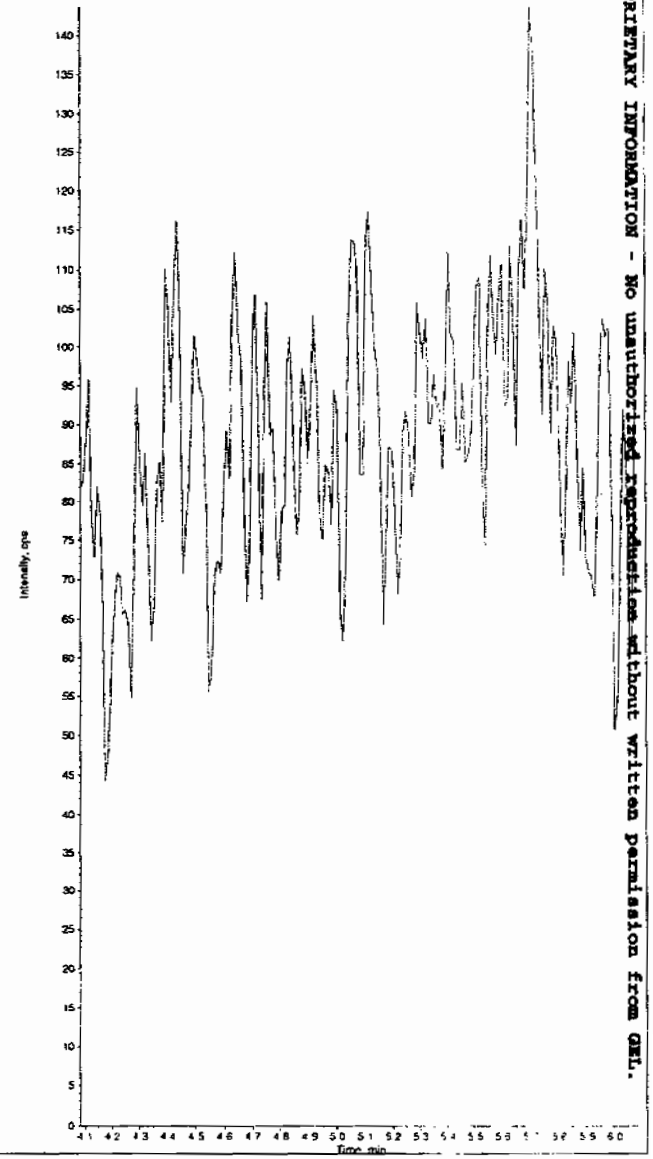

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "232582002" Sample ID: "881635|2|LER" File: "EXS0708019.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:19:13 PM

Modified: No

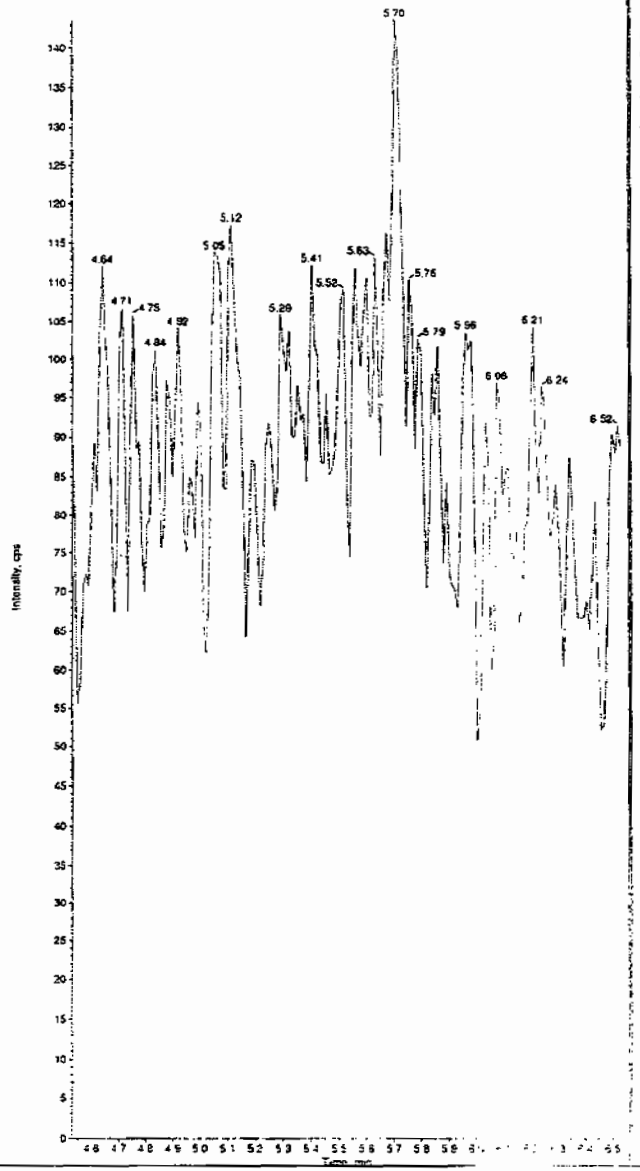

Sample Name: "232582002" Sample ID: "881635|2|LER" File: "EXS0708019.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:19:13 PM

Modified: No

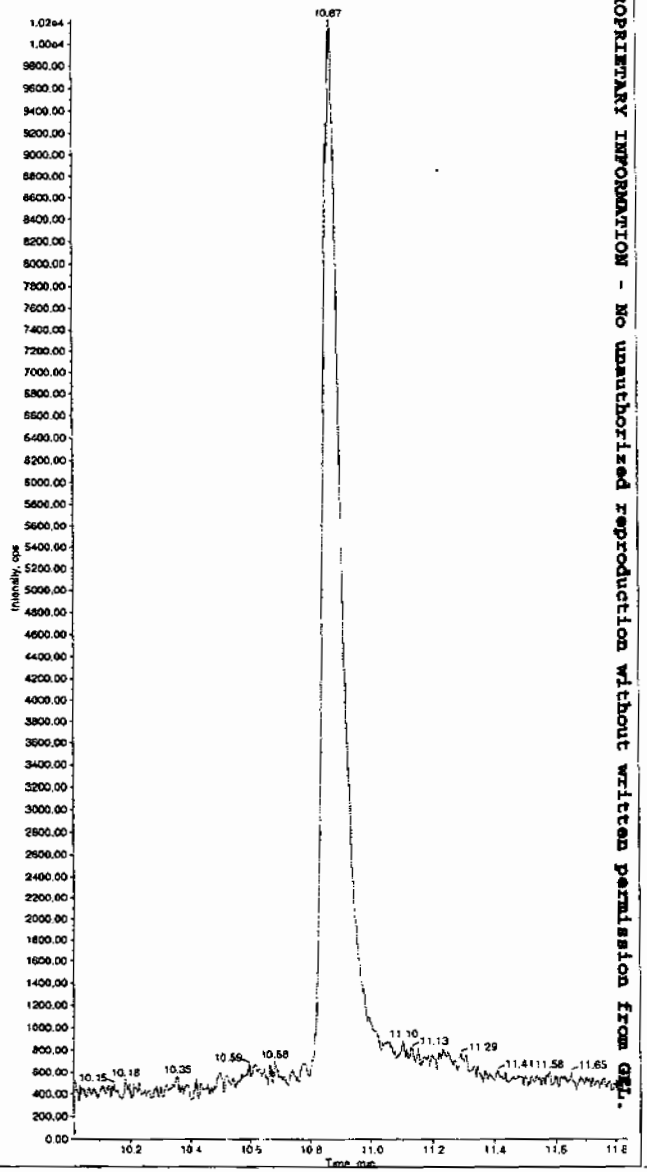

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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STANDARDS DATA

SW846 8321A Modified-Explosives
Calibration Standard Concentration Levels

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	CCV
3,4-Dinitrotoluene (Surrogate)	12.5	25	100	200	400	500	[illegible]	300
Primary Analytes								
HMX	25	50	200	400	800	1000	na	600
RDX	25	50	200	400	800	1000	na	600
1,3,5-Trinitrobenzene	25	50	200	400	800	1000	na	600
1,3-Dinitrobenzene	25	50	200	400	800	1000	na	600
Nitrobenzene	25	50	200	400	800	1000	na	600
Tetryl	25	50	200	400	800	1000	na	600
Nitroglycerin	50	100	200	400	800	1000	na	600
2,4,6-Trinitrotoluene	25	50	200	400	800	1000	na	600
2-Amino-4,6-dinitrotoluene	25	50	200	400	800	1000	na	600
4-Amino-2,6-dinitrotoluene	25	50	200	400	800	1000	na	600
2,4-Dinitrotoluene	25	50	200	400	800	1000	na	600
2,6-Dinitrotoluene	25	50	200	400	800	1000	na	600
2-Nitrotoluene	25	50	200	400	800	1000	na	600
4-Nitrotoluene	25	50	200	400	800	1000	an	600
3-Nitrotoluene	25	50	200	400	800	1000	na	600
PETN	25	50	200	400	800	1000	na	600
Picric Acid	200	400	1600	3200	6400	8000	na	4800
3,4-Dinitrotoluene (Surrogate)	25	50	125	250	375	500	1000	250
Secondary Analytes								
2,4-Diamino-6-nitrotoluene	50	100	250	500	750	1000	2000	500
2,6-Diamino-4-nitrotoluene	50	100	250	500	750	1000	2000	500
3,5-Dinitroaniline	50	100	250	500	750	1000	2000	500
TATB	50	100	250	500	750	1000	2000	500
tris(o-Cresyl)phosphate	50	100	250	500	750	1000	2000	500

All values are ug/L without the prep factor

Calibration Levels 8321A-Modified-EXPL.xls (01/09)

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Form 6

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2508

Lab Code: GEL

Run Date: 08-JUL-09,13-JUL-09

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	Ave RF	RSD	Q
Data File:	EXP0713003a	EXP0713004a	EXP0713005a	EXP0713006a	EXP0713007a	EXP0713008a			
Parmname									
1,3,5-Trinitrobenzene	5.388	5.525	5.545	5.361	5.653	5.743	5.536	2.668	
1,3-Dinitrobenzene-d4	7.755	8.052	8.123	8.26	7.821	7.282	7.882	4.43	
2,4,6-Trinitrotoluene	.954	1.117	1.091	1.133	1.166	1.243	1.117	8.563	
2,4-Dinitrotoluene	.238	.25	.242	.256	.268	.255	0.252	4.234	
2,6-Dinitrotoluene	1.114	1.153	1.126	1.154	1.132	1.157	1.139	1.562	
2,6-Dinitrotoluene-d3	47.356	49.612	49.742	48.578	47.932	43.724	47.824	4.627	
2-Amino-4,6-dinitrotoluene	.329	.344	.364	.384	.384	.4	0.368	7.293	
3,4-Dinitrotoluene	.884	.887	.809	.852	.893	.901	0.871	3.978	
4-Amino-2,6-dinitrotoluene	.304	.258	.3	.302	.317	.329	0.302	8.007	
HMX	2.801	2.852	2.975	3.109	3.155	3.311	3.034	6.39	
Nitrobenzene	1.095	1.017	.931	.945	.972	.913	0.979	6.892	
PETN	.734	.766	.697	.656	.547	.537	0.656	14.599	
RDX	1.821	2.06	2.093	2.11	2.232	2.25	2.094	7.38	
m-Dinitrobenzene	1.266	1.344	1.304	1.285	1.368	1.358	1.321	3.158	
m-Nitrotoluene	.083	.095	.087	.089	.086	.089	0.088	4.339	
o-Nitrotoluene	.141	.141	.144	.142	.137	.139	0.141	1.633	
p-Nitrotoluene	.069	.067	.071	.072	.066	.067	0.069	3.787	

Q column used to flag RSD values outside of Limit (>20%)
* Values outside of QC Limit

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Form 6

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2508

Lab Code: GEL

Run Date: 08-JUL-09,13-JUL-09

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: 2nd Order

Calibration Level:	1	2	3	4	5	6	X	X^2	Intercept	COD	Q
Data File:	EXP0713003a	EXP0713004a	EXP0713005a	EXP0713006a	EXP0713007a	EXP0713008a					
Parmname:											
Tetryl	544.229	1174.83	3758.71	6459.02	11333.2	13210.4	1.92	-.0001692	47.345	.9988	

Quadradic Fit: y = Ax^2 + Bx + C
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\071309expa.mdb, Time: Tue Jul 14 10:07:51 2009
Calibration: Untitled, Time: Tue Jul 14 10:21:04 2009

Compound name: HMX
Response Factor: 3.03385
RRF SD: 0.193849, % Relative SD: 6.38953
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

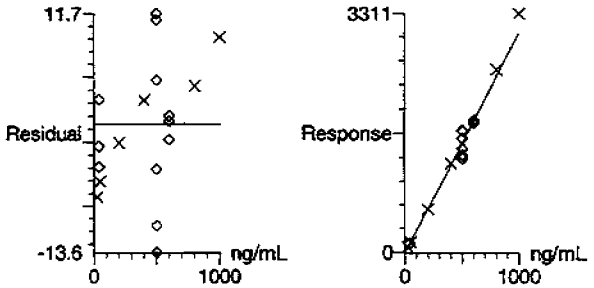

MTT 7/14/09

Compound name: RDX
Response Factor: 2.09431
RRF SD: 0.154559, % Relative SD: 7.37996
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

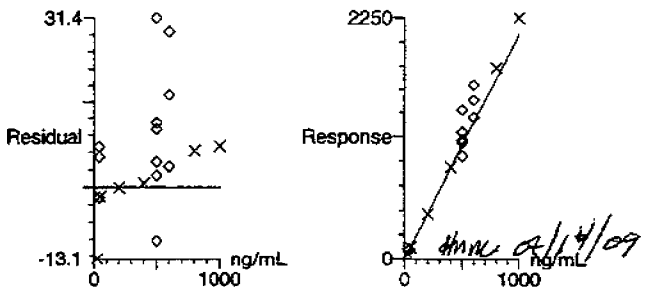

MMC 07/14/09

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 135-Trinitrobenzene
Response Factor: 5.53571
RRF SD: 0.147719, % Relative SD: 2.66848
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

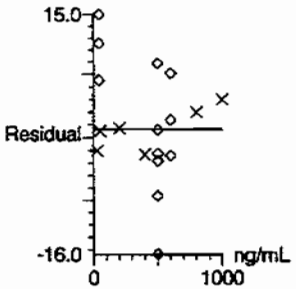

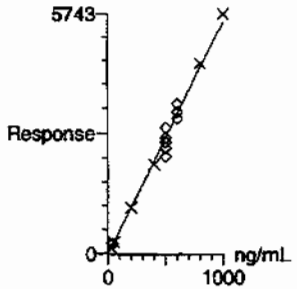

Compound name: 13-Dinitrobenzene-d4
Response Factor: 7.88239
RRF SD: 0.349213, % Relative SD: 4.43029
Response type: External Std, Area
Curve type: RF

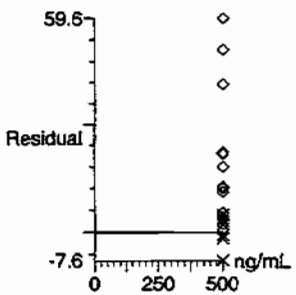

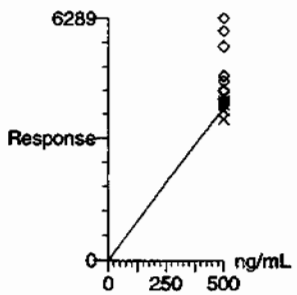

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 13-Dinitrobenzene
Response Factor: 1.32093
RRF SD: 0.0417136, % Relative SD: 3.15789
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

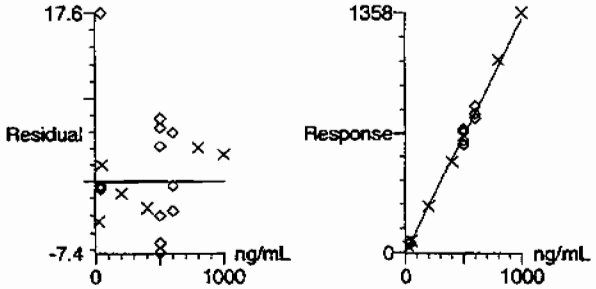

Compound name: Tetryl
Coefficient of Determination: 0.998789
Calibration curve: -0.000169195 * x^2 + 1.91984 * x + 47.345
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: Null, Axis trans: None

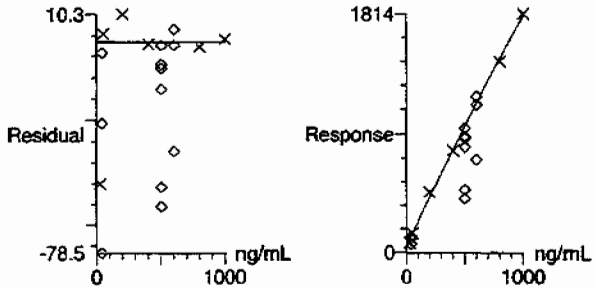

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: Nitrobenzene
Response Factor: 0.97865
RRF SD: 0.0674452, % Relative SD: 6.89166
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF

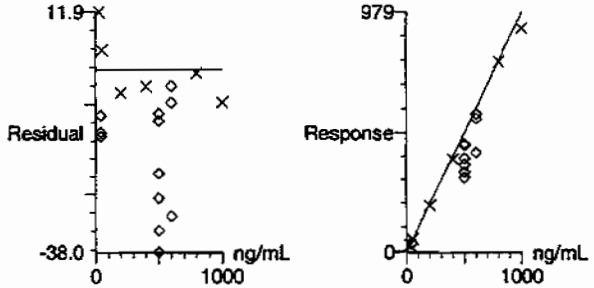

Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.301728
RRF SD: 0.0241594, % Relative SD: 8.00703
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

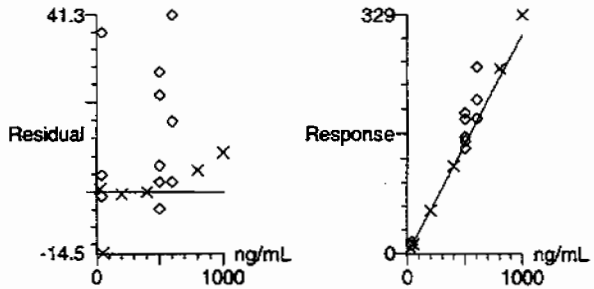

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 2-Amino-46-dinitrotoluene
Response Factor: 0.367608
RRF SD: 0.0268111, % Relative SD: 7.29338
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

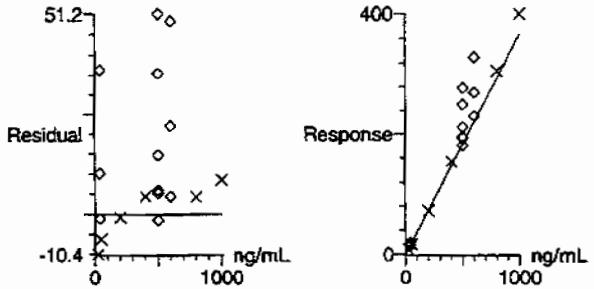

Compound name: 246-Trinitrotoluene
Response Factor: 1.11757
RRF SD: 0.0956942, % Relative SD: 8.5627
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

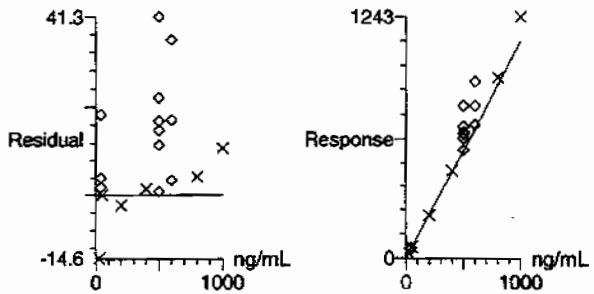

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 34-dinitrotoluene
Response Factor: 0.871049
RRF SD: 0.0346537, % Relative SD: 3.97839
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

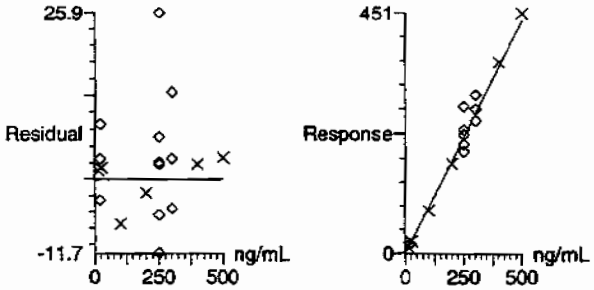

Compound name: 26-dinitrotoluene
Response Factor: 1.13947
RRF SD: 0.0178005, % Relative SD: 1.56218
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

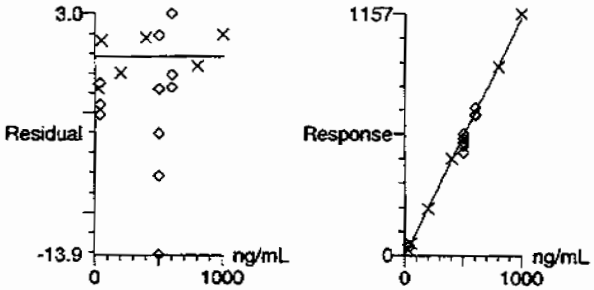

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 24-dinitrotoluene
Response Factor: 0.251398
RRF SD: 0.0106446, % Relative SD: 4.23418
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

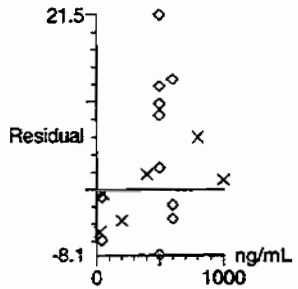

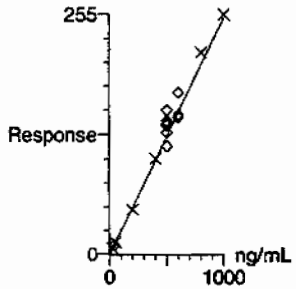

Compound name: 26-dinitrotoluene-d3
Response Factor: 47.824
RRF SD: 2.21281, % Relative SD: 4.62699
Response type: External Std, Area
Curve type: RF

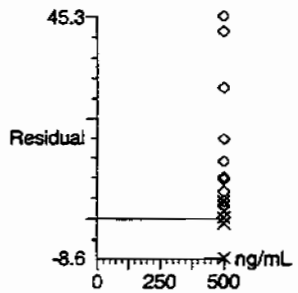

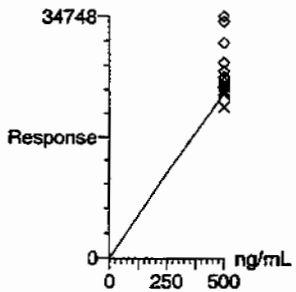

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 2-Nitrotoluene
Response Factor: 0.140666
RRF SD: 0.00229699, % Relative SD: 1.63293
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

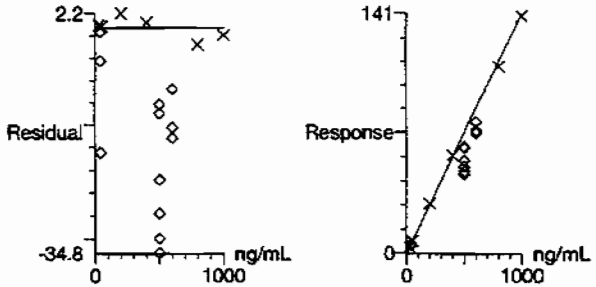

Compound name: 4-Nitrotoluene
Response Factor: 0.0684833
RRF SD: 0.00259338, % Relative SD: 3.78688
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

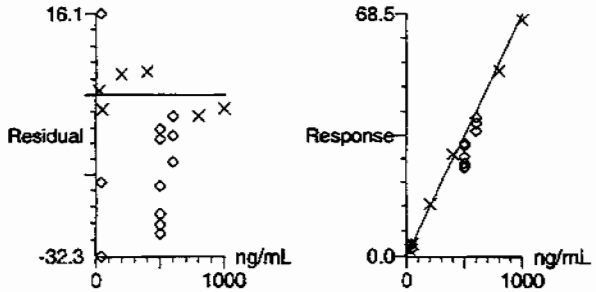

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Compound name: 3-Nitrotoluene
Response Factor: 0.0882614
RRF SD: 0.00382945, % Relative SD: 4.33876
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

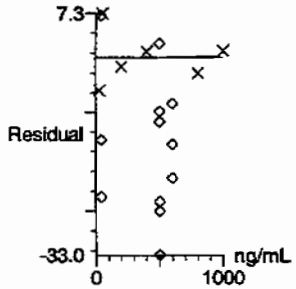

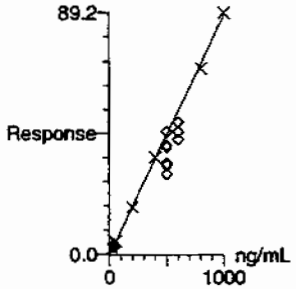

Compound name: PETN
Response Factor: 0.65614
RRF SD: 0.0957864, % Relative SD: 14.5985
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

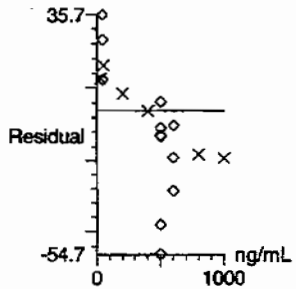

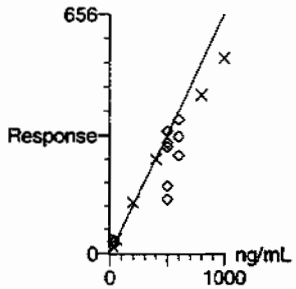

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Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2508

Lab Code: GEI

GEL Sample ID: WXXICV

GEL Data File EXP0713010a

Analysis Date: 13-JUL-09 19:21

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	580.032	97	
1,3-Dinitrobenzene-d4	500	511.821	102	
2,4,6-Trinitrotoluene	600	621.358	104	
2,4-Dinitrotoluene	600	589.208	98	
2,6-Dinitrotoluene	600	587.044	98	
2,6-Dinitrotoluene-d3	500	542.957	109	
2-Amino-4,6-dinitrotoluene	600	627.163	105	
3,4-Dinitrotoluene	300	286.144	95	
4-Amino-2,6-dinitrotoluene	600	614.782	102	
HMX	600	605.231	101	
Nitrobenzene	600	579.57	97	
PETN	600	493.649	82	
RDX	600	622.42	104	
Tetryl	600	591.608	99	
m-Dinitrobenzene	600	597.156	100	
m-Nitrotoluene	600	553.922	92	
o-Nitrotoluene	600	542.932	90	
p-Nitrotoluene	600	575.156	96	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713010a
Date: 13-Jul-2009
Time: 19:21:47
ID: WXX090713-07ICV
Vial: 1:1,B

MMT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
8.937e+004

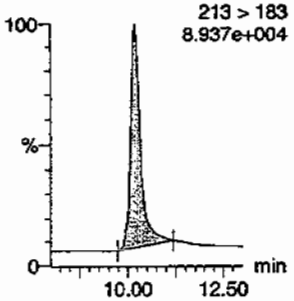

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.112e+004

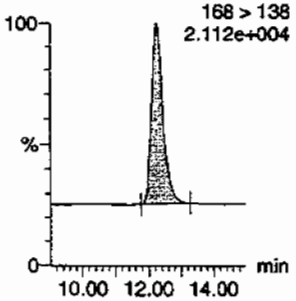

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.670e+004

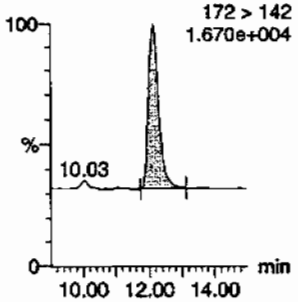

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
8.426e+004

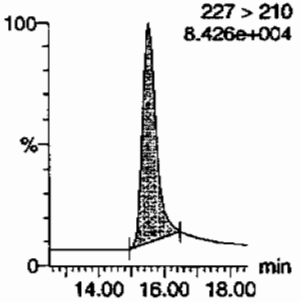

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.367e+004

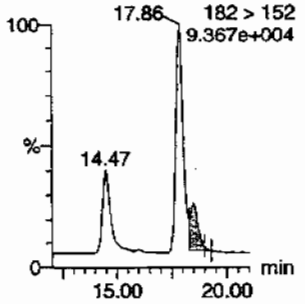

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.367e+004

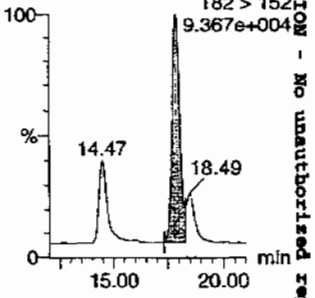

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.086e+004

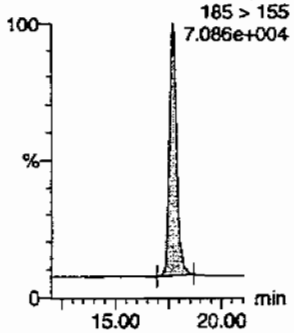

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.450e+004

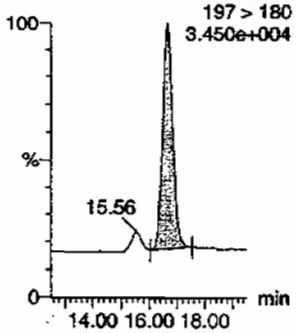

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.399e+004

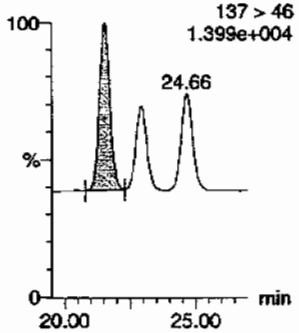

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.367e+004

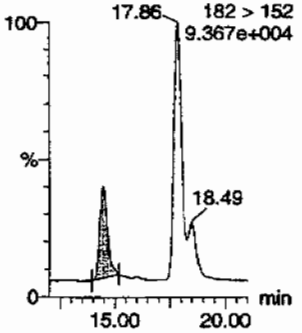

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.399e+004

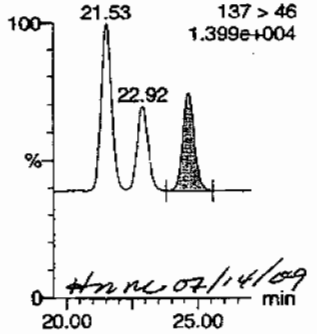

HMC 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.724e+004

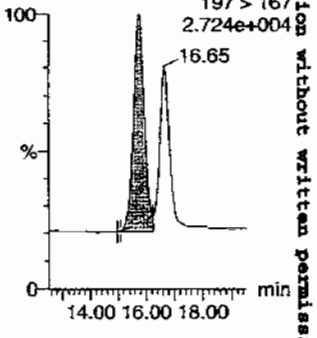

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

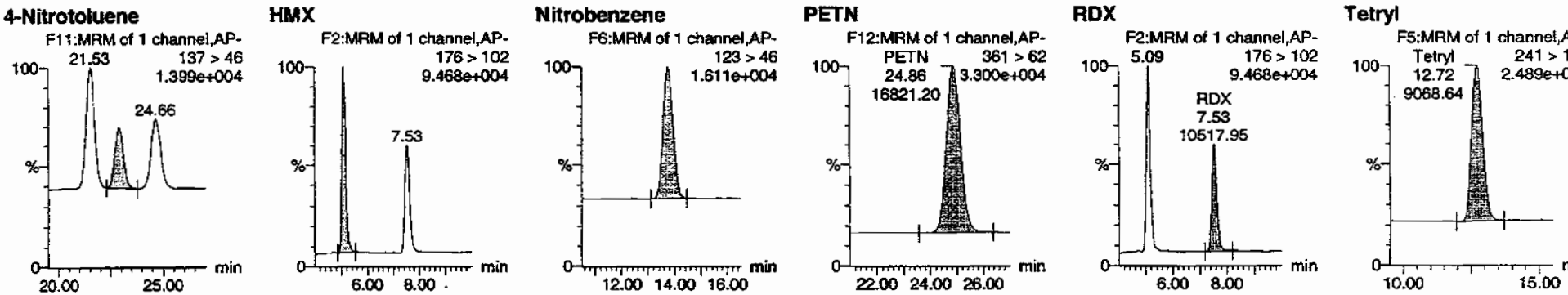

ID	Name	Trace	RT	Area	IS Area	RF*IS Resp	Response	Flags	Modified	Modified	Conc/mL	%Rec	%Dev	S/N
WXX090713-07ICV	HMX	176 > 102	5.09	14815.656	4034.376	14815.656	1836.177	bb			605.2308	100.9	0.9	1474.7
WXX090713-07ICV	RDX	176 > 102	7.53	10517.949	4034.376	10517.949	1303.541	bb			622.4196	103.7	3.7	843.1
WXX090713-07ICV	135-Trinitrobenzene	213 > 183	10.20	25907.861	4034.376	25907.861	3210.888	bb			580.0323	96.7	-3.3	1645.7
WXX090713-07ICV	13-Dinitrobenzene-d4	172 > 142	12.14	4034.376		4034.376	4034.376	bb			511.8211	102.4	2.4	243.4
WXX090713-07ICV	13-Dinitrobenzene	168 > 138	12.27	6364.646	4034.376	6364.646	788.802	bb			597.1561	99.5	-0.5	513.3
WXX090713-07ICV	Tetryl	241 > 181	12.72	9068.635	4034.376	9068.635	1123.920	bb			591.6085	98.6	-1.4	655.9
WXX090713-07ICV	Nitrobenzene	123 > 46	13.76	4576.560	4034.376	4576.560	567.196	bb			579.5696	96.6	-3.4	764.5
WXX090713-07ICV	4-Amino-26-dinitrotoluene	197 > 167	15.77	9633.361	25966.389	9633.361	185.497	MM	14-Jul-09	10:18:30	614.7818	102.5	2.5	272.4
WXX090713-07ICV	2-Amino-46-dinitrotoluene	197 > 180	16.65	11973.124	25966.389	11973.124	230.550	bb			627.1631	104.5	4.5	403.6
WXX090713-07ICV	246-Trinitrotoluene	227 > 210	15.55	36062.738	25966.389	36062.738	694.412	bb			621.3583	103.6	3.6	1352.1
WXX090713-07ICV	34-dinitrotoluene	182 > 152	14.47	12944.023	25966.389	12944.023	249.246	bb			286.1444	95.4	-4.6	266.8
WXX090713-07ICV	26-dinitrotoluene	182 > 152	17.86	34738.852	25966.389	34738.852	668.920	MM	14-Jul-09	10:15:04	587.0440	97.8	-2.2	747.1
WXX090713-07ICV	24-dinitrotoluene	182 > 152	18.49	7692.565	25966.389	7692.565	148.125	MM	14-Jul-09	10:11:35	589.2076	98.2	-1.8	159.2
WXX090713-07ICV	26-dinitrotoluene-d3	185 > 155	17.68	25966.389		25966.389	25966.389	bb			542.9571	108.6	8.6	1092.5
WXX090713-07ICV	2-Nitrotoluene	137 > 46	21.53	3966.221	25966.389	3966.221	76.372	bb			542.9317	90.5	-9.5	520.0
WXX090713-07ICV	4-Nitrotoluene	137 > 46	22.92	2045.559	25966.389	2045.559	39.389	bb			575.1561	95.9	-4.1	258.2
WXX090713-07ICV	3-Nitrotoluene	137 > 46	24.66	2538.991	25966.389	2538.991	48.890	bb			553.9223	92.3	-7.7	299.6
WXX090713-07ICV	PETN	361 > 62	24.86	16821.195	25966.389	16821.195	323.903	bb			493.6494	82.3	-17.7	4055.4

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/13/09
Time of Injection 1921
Standard Number WXX090713-07ICV
Data File EXP0713010a

HMX		100.9
RDX		103.7
135-TNB		96.7
13-DNB		99.5
Tetryl		98.6
Nitrobenzene		96.6
4A-26-DNT		102.5
2A-46-DNT		104.5
246-TNT		103.6
34-DNT(surr)		95.4
26-DNT		97.8
24-DNT		98.2
2-NT		90.5
4-NT		95.9
3-NT		92.3
PETN		82.3
Total		1559.0
Average		97.4

MTP 7/14/09

HMK 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 09-2508

Lab Code: GEL

Run Date: 08-JUL-09,13-JUL-09

LCMSMS Instrument ID: LCMSMS4

Method: 8321A Modified

HPLC Column: YMC J-Sphere ODS-H8O

Calibration Type: 2nd Order

Calibration Level:	19	20	21	22	23	24	25	X	X^2	Intercept	COD	Q
Data File:	EXS0708003.wiff	EXS0708004.wiff	EXS0708005.wiff	EXS0708006.wiff	EXS0708007.wiff	EXS0708008.wiff	EXS0708009.wiff					
Parmname:												
2,4-Diamino-6-nitrotoluene	13200	25200	64100	129000	171000	268000	520000	418	247	.007	.9986	
2,6-Diamino-4-nitrotoluene	9380	17600	45000	88000	132000	179000	364000	676	173	.004	1	
3,4-Dinitrotoluene	47300	103000	252000	502000	777000	1030000	2020000	-13500	2280	-.247	.9985	
3,5-Dinitroaniline	65600	128000	298000	708000	1170000	1670000	3130000	-68600	1720	-.057	.9987	
TATB	28600	59800	156000	326000	514000	690000	1310000	-15500	725	-.03	.9998	
tris(o-cresyl) phosphate	656000	1260000	3140000	6040000	8750000	11300000	20400000	51200	12500	-1.17	1	

Quadradic Fit: y = Ax^2 + Bx + C
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-1.55e+004			
a1	725			
a2	-0.0295			

Correlation coefficient 0.9998
Use Area

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-6.86e+004			
a1	1.72e+003			
a2	-0.0568			

Correlation coefficient 0.9987
Use Area

Peak Name: 34-Dinitrotoluene
No Internal Standard
Q1/Q3 Masses: 182.08/151.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-1.35e+004			
a1	2.28e+003			
a2	-0.247			

Correlation coefficient 0.9985
Use Area

Peak Name: 26-Diamino-4-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	676			
a1	173			
a2	0.00427			

Correlation coefficient 1.0000
Use Area

Rev 7/8/09

dmm 07/09/09

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Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	418			
a1	247			
a2	0.00661			

Correlation coefficient 0.9986
Use Area

Peak Name: tris(o-cresyl) phosphate
No Internal Standard
Q1/Q3 Masses: 369.15/91.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	5.12e+004			
a1	1.25e+004			
a2	-1.17			

Correlation coefficient 1.0000
Use Area

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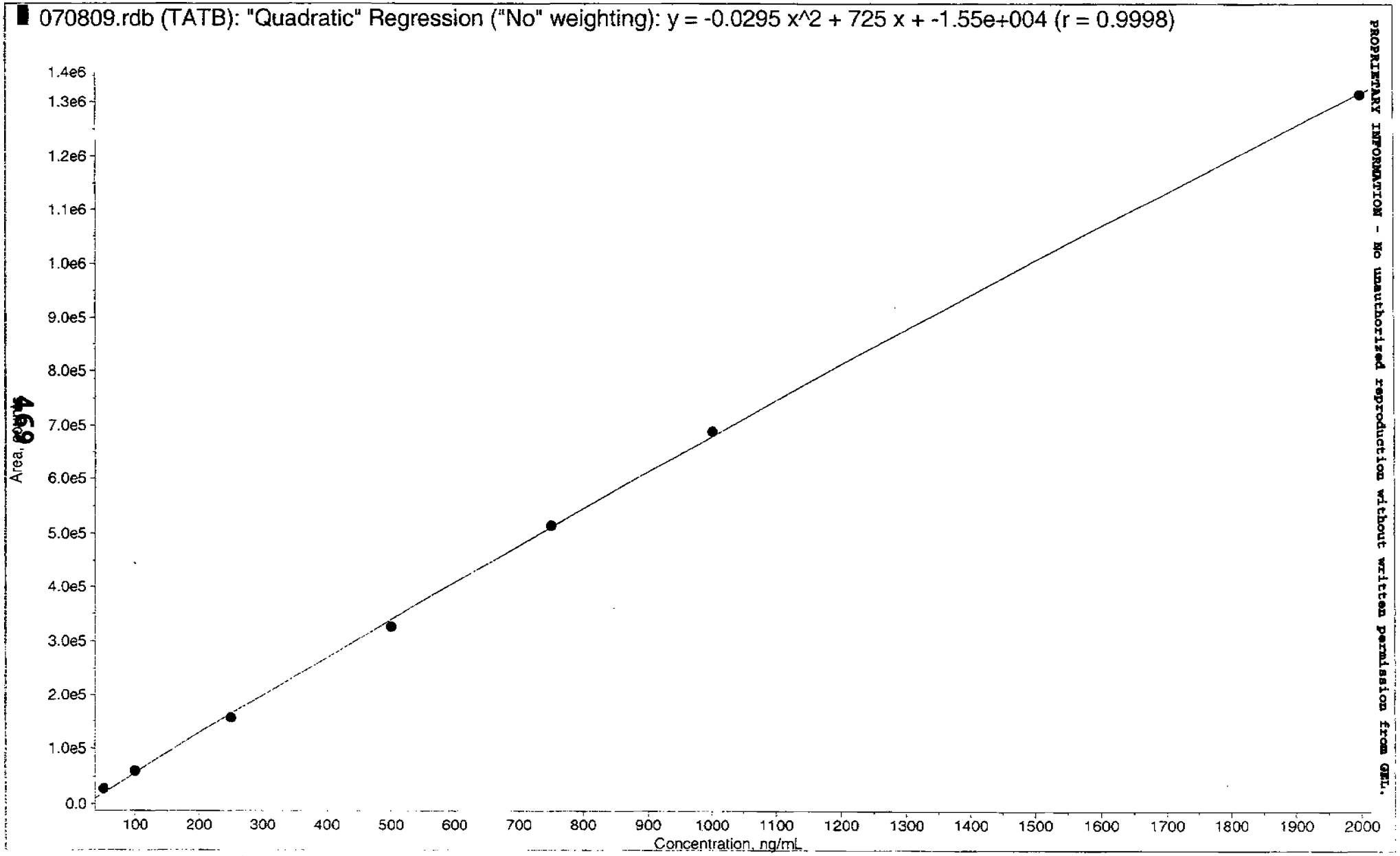

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

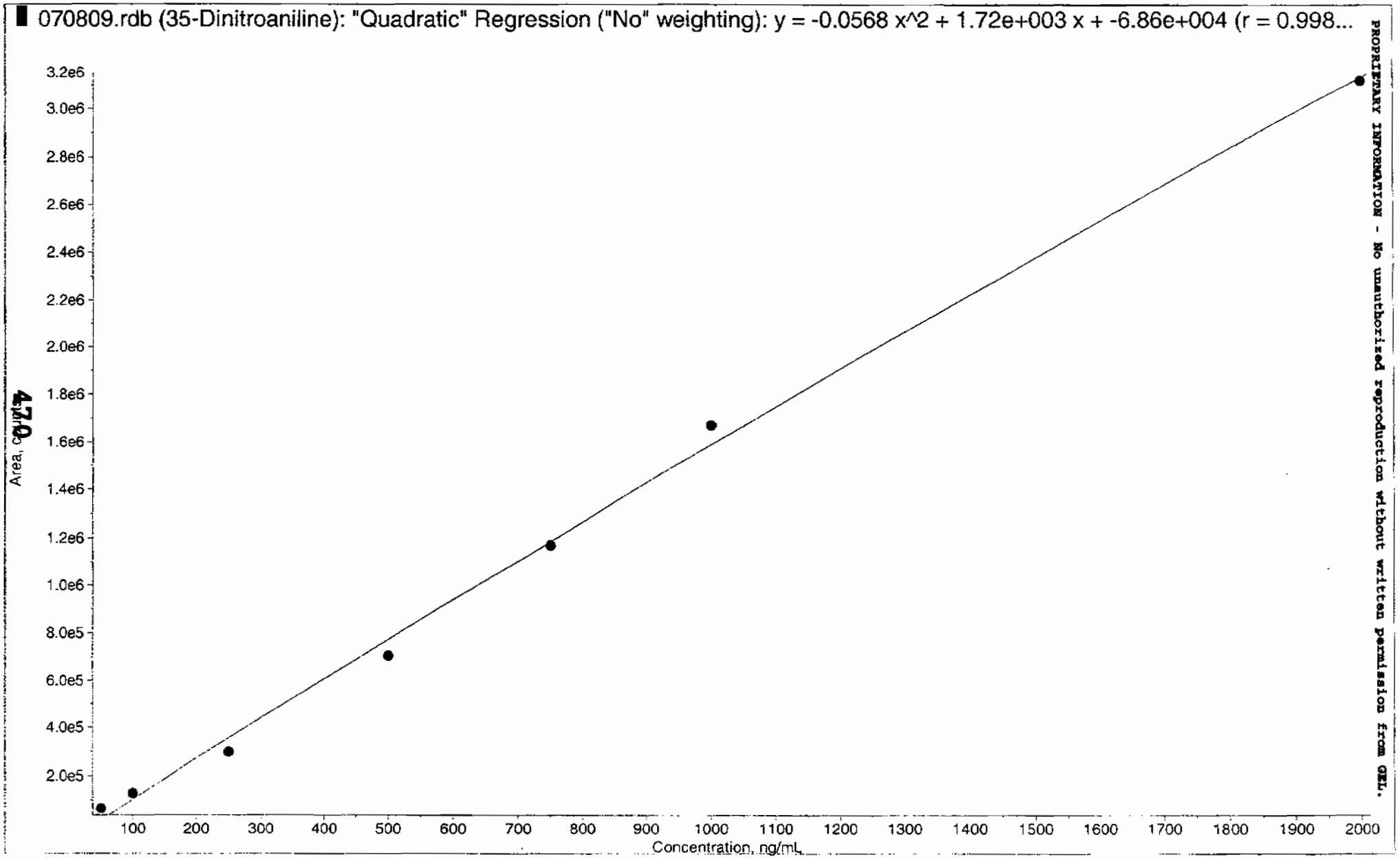

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

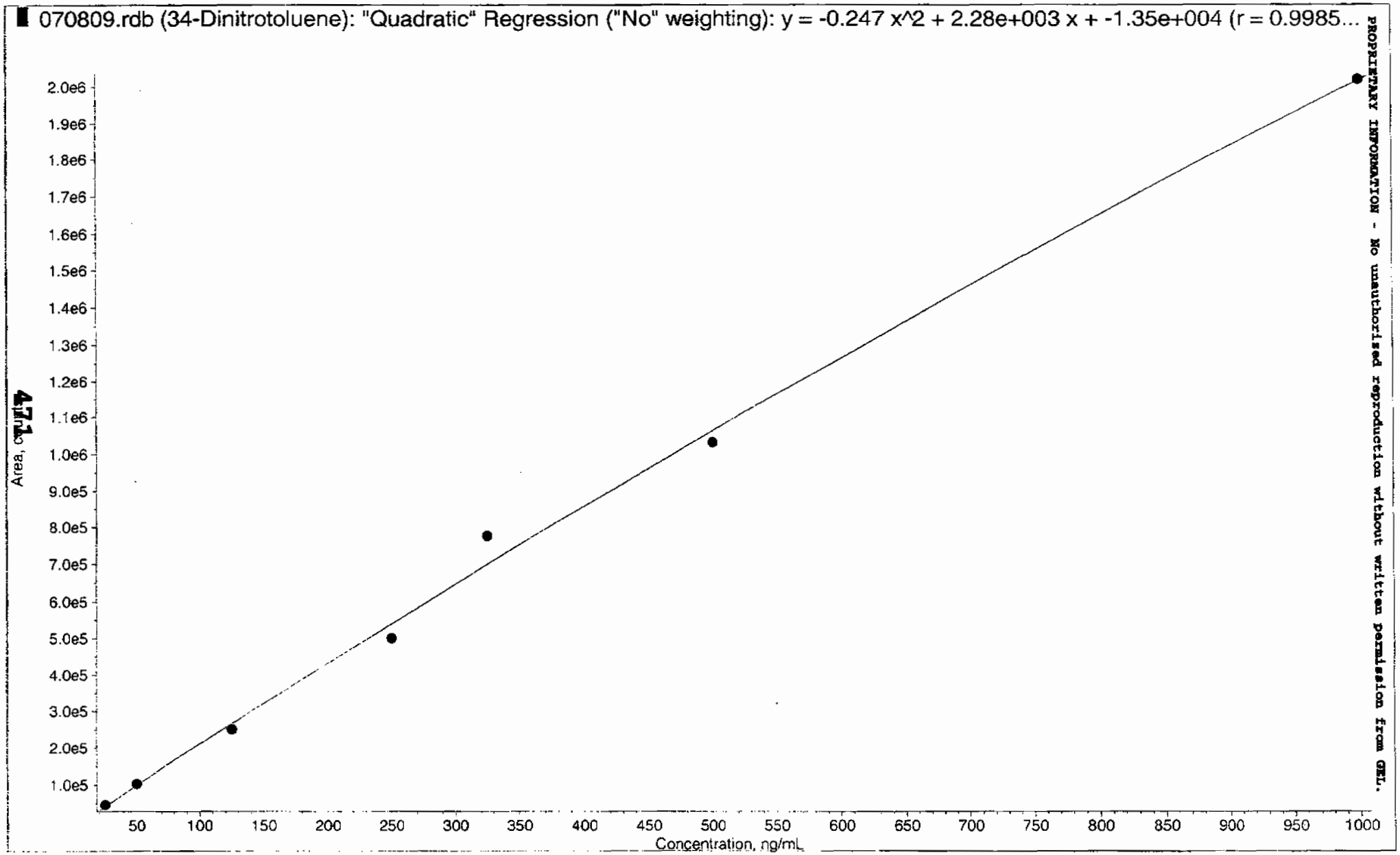

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

PROPRIETARY INFORMATION - NO unauthorized reproduction without written permission from GEL.

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

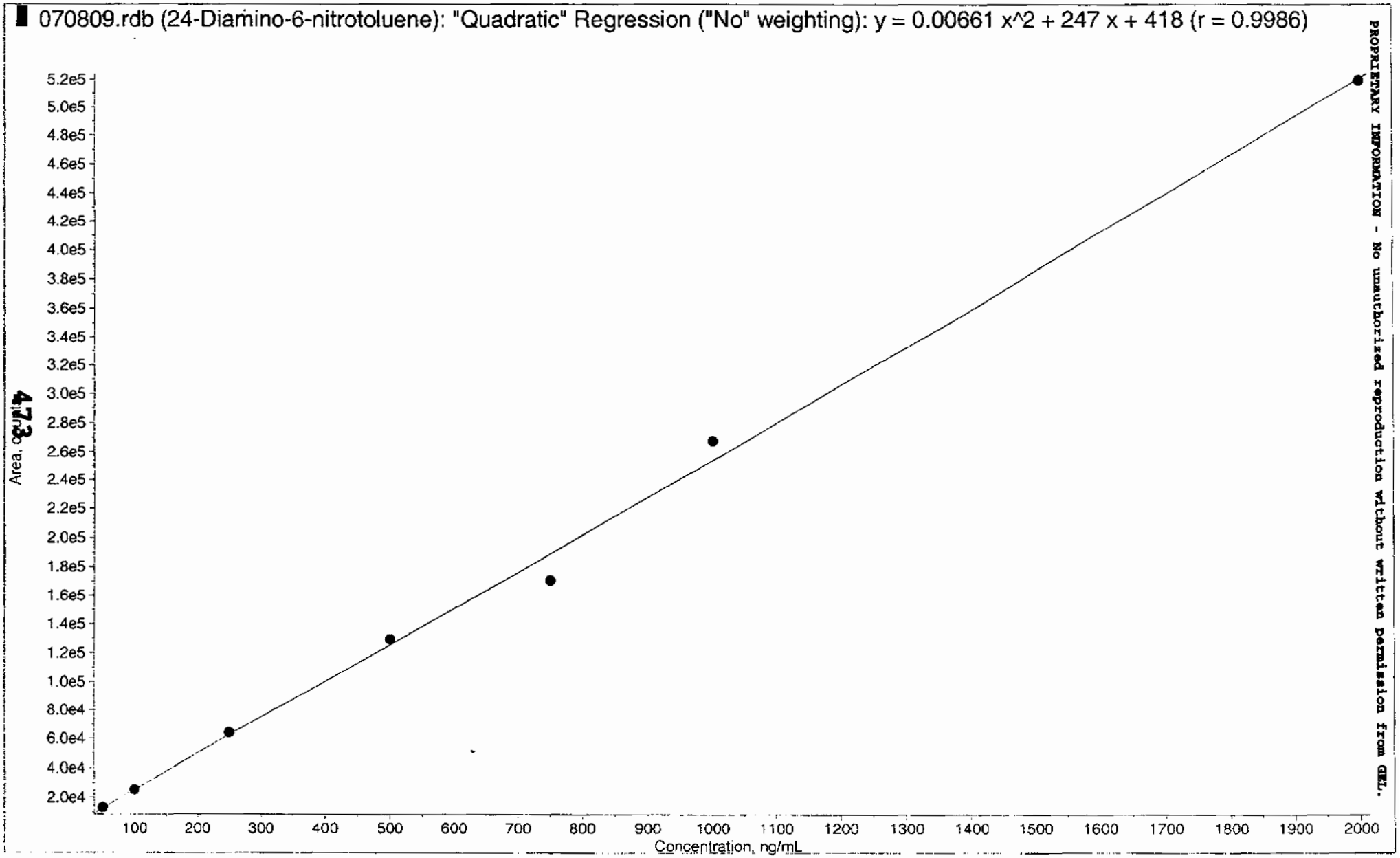

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

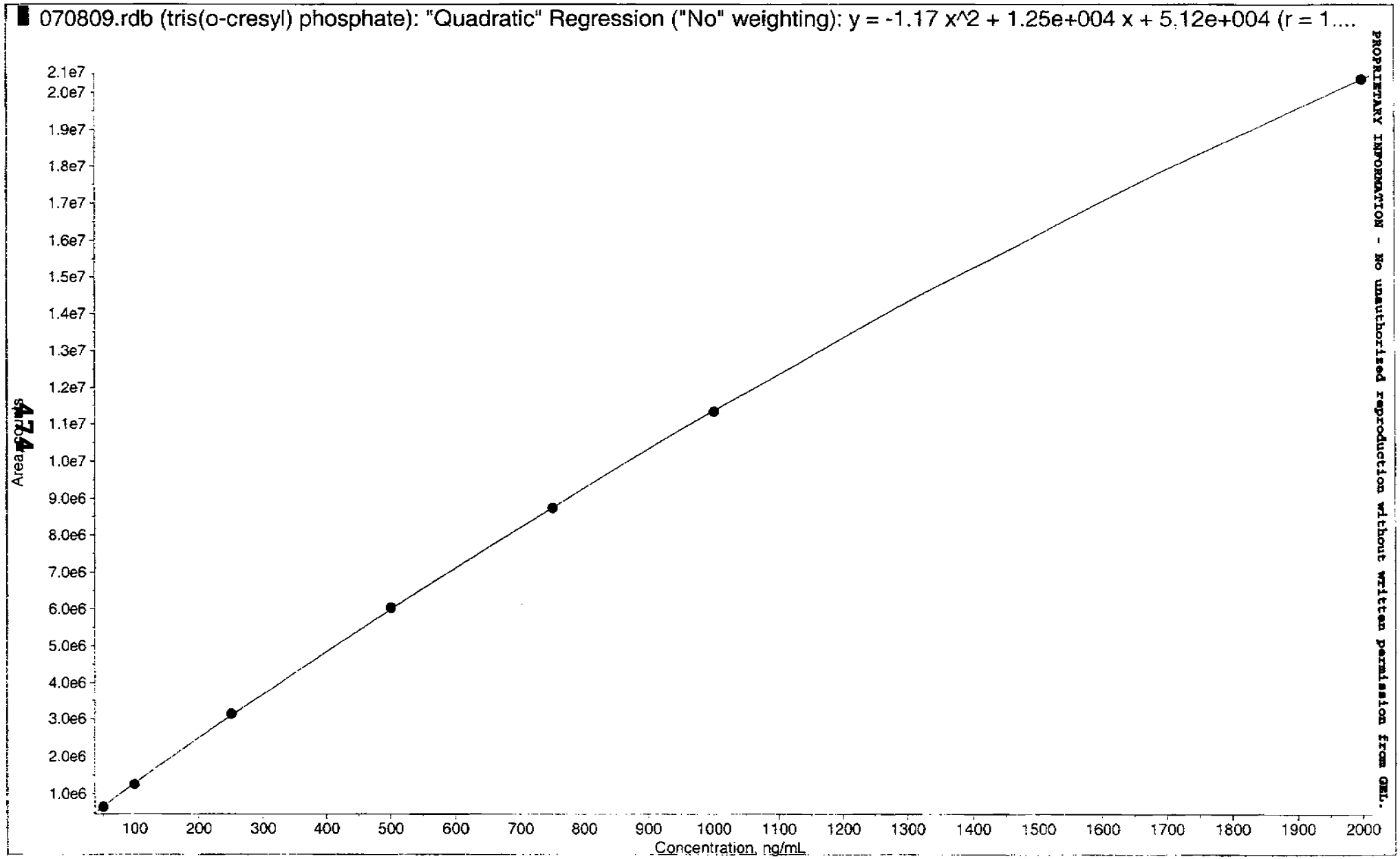

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2508

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXS0708011.wiff

Analysis Date: 08-JUL-09 13:09

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	525	105	
2,6-Diamino-4-nitrotoluene	500	528	106	
3,4-Dinitrotoluene	250	215	86	
3,5-Dinitroaniline	500	512	102	
TATB	500	484	97	
tris(o-cresyl) phosphate	500	510	102	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090708-26ICV" Sample ID: "|1|LER" File: "EXS0708011.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 484. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:09:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.00 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 3.29e+005 counts
Height: 65168.457 cps
Start Time: 6.85 min
End Time: 7.59 min

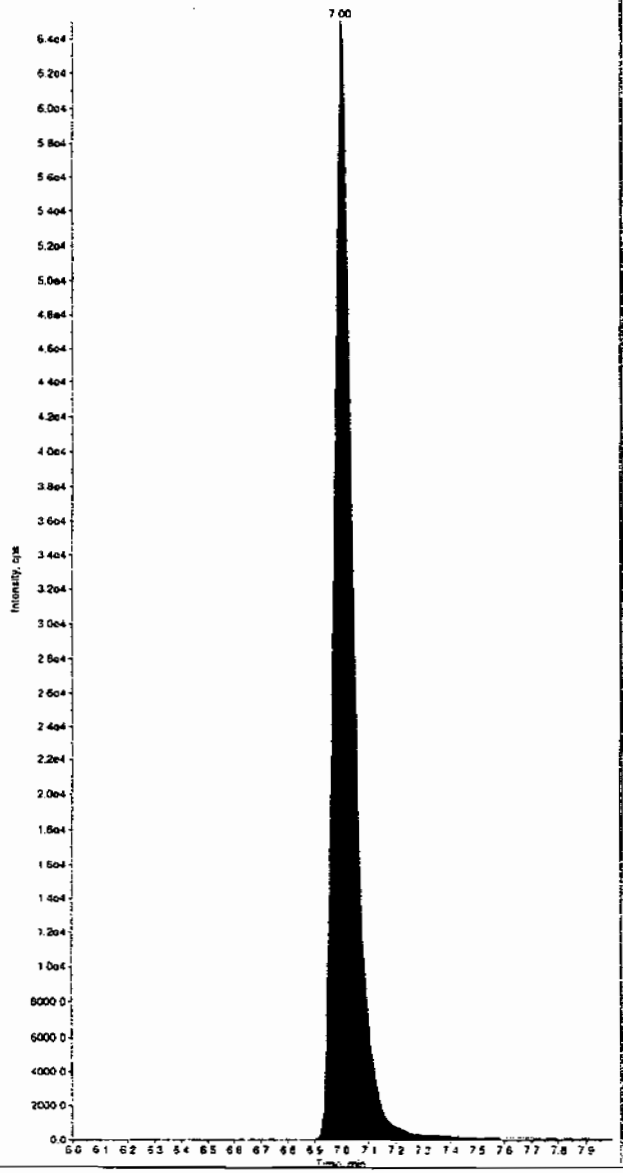

Sample Name: "WXX090708-26ICV" Sample ID: "|1|LER" File: "EXS0708011.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 512. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:09:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.23 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.23 min
Area: 7.96e+005 counts
Height: 172724.915 cps
Start Time: 8.10 min
End Time: 8.36 min

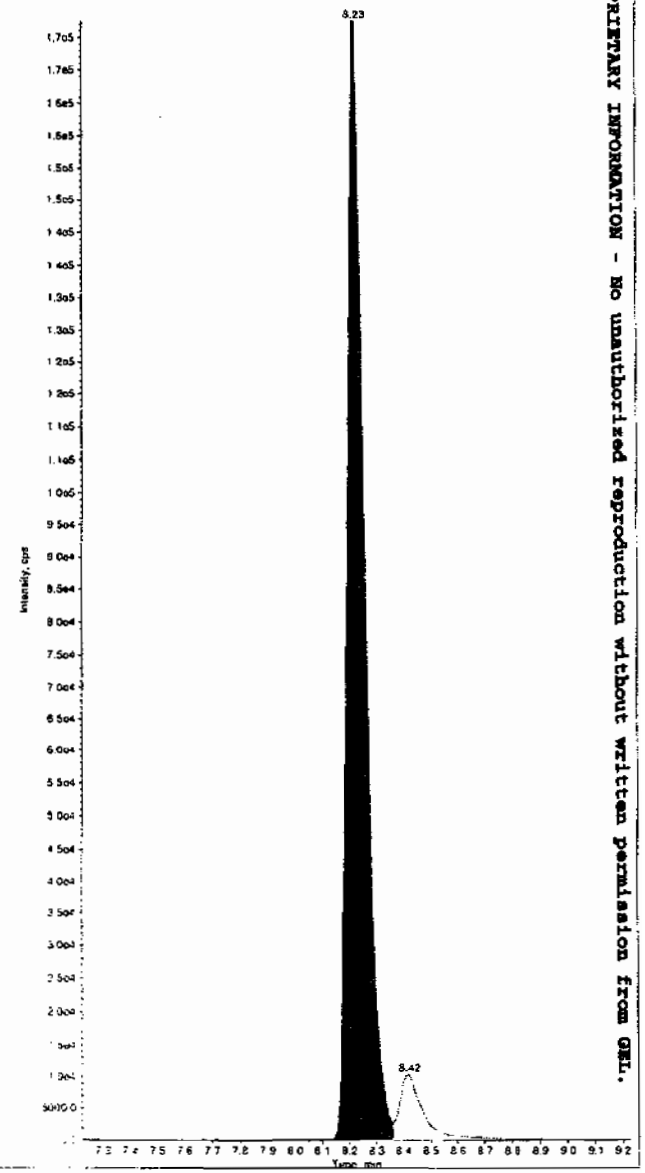

Fael 7/9/09

#mm 07/09/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090708-26ICV" Sample ID: "|1|LER" File: "EXS0708011.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 215. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:09:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.41 min
Area: 4.64e+005 counts
Height: 83104.286 cps
Start Time: 8.33 min
End Time: 9.02 min

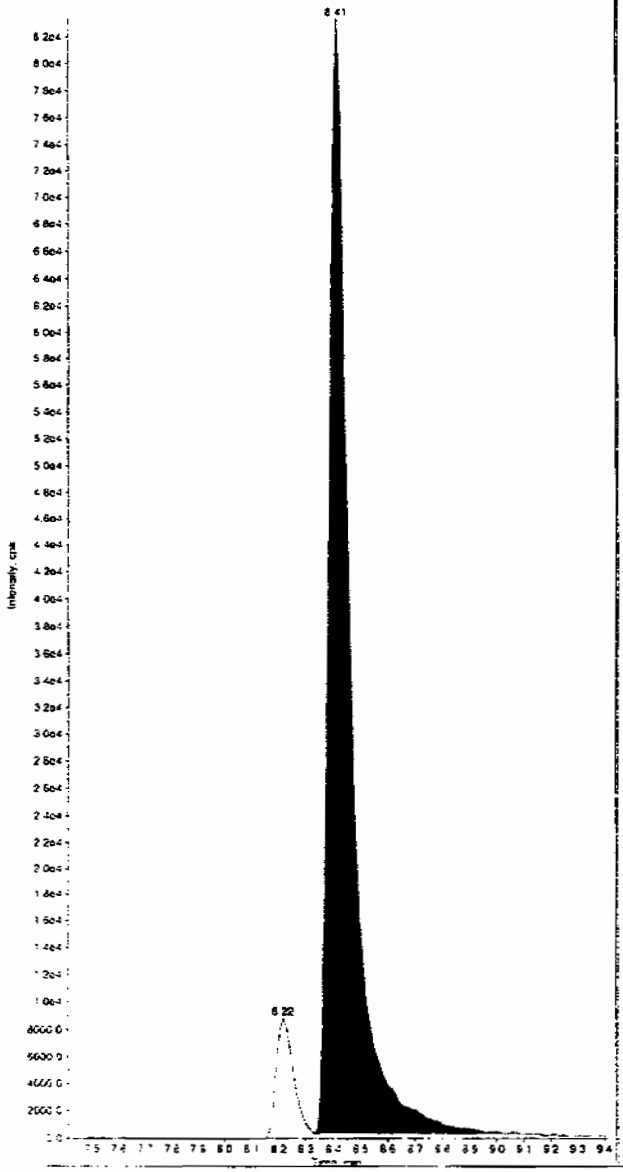

Sample Name: "WXX090708-26ICV" Sample ID: "|1|LER" File: "EXS0708011.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 528. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:09:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.08 min
Area: 9.32e+004 counts
Height: 21041.321 cps
Start Time: 4.98 min
End Time: 5.32 min

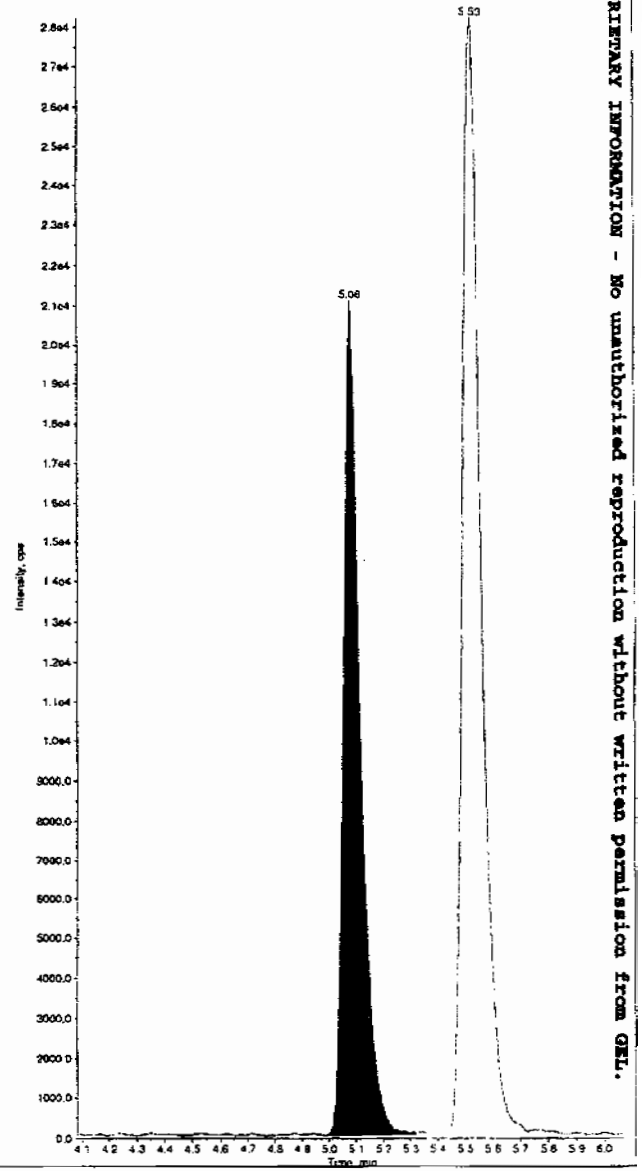

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090708-26ICV" Sample ID: "[1]LER" File: "EXS0708011.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 525. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:09:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 1.32e+005 counts
Height: 28081.934 cps
Start Time: 5.44 min
End Time: 5.73 min

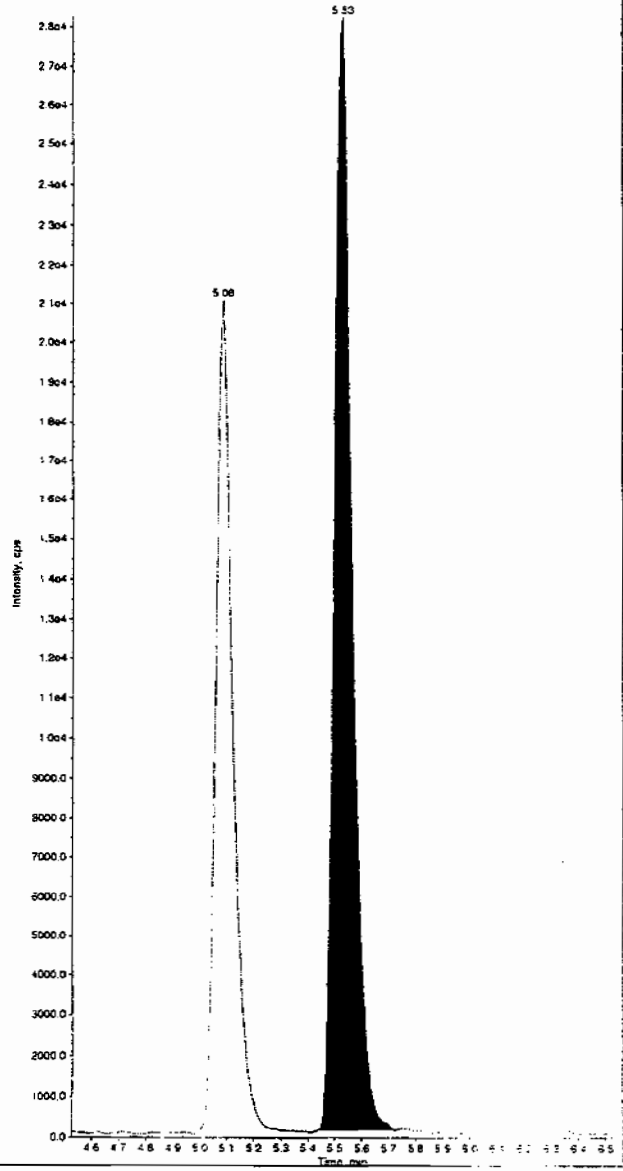

Sample Name: "WXX090708-26ICV" Sample ID: "[1]LER" File: "EXS0708011.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 510. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:09:37 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 6.12e+006 counts
Height: 1346403.198 cps
Start Time: 10.8 min
End Time: 11.2 min

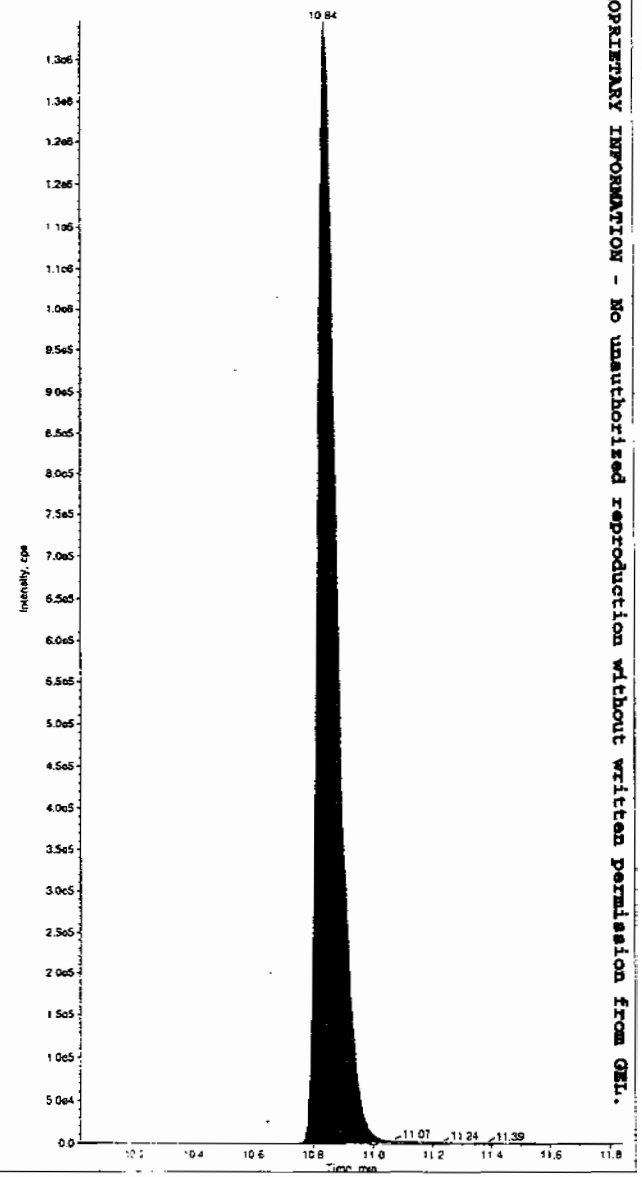

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2508

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0713012a

Analysis Date: 13-JUL-09 20:20

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	42.474	106	
1,3-Dinitrobenzene-d4	500	520.066	104	
2,4,6-Trinitrotoluene	40	40.709	102	
2,4-Dinitrotoluene	40	37.457	94	
2,6-Dinitrotoluene	40	39.261	98	
2,6-Dinitrotoluene-d3	500	519.262	104	
2-Amino-4,6-dinitrotoluene	40	39.55	99	
3,4-Dinitrotoluene	20	21.709	109	
4-Amino-2,6-dinitrotoluene	40	41.587	104	
HMX	40	38.223	96	
Nitrobenzene	40	36.232	91	
PETN	40	44.624	112	
RDX	40	42.183	105	
Tetryl	40	38.347	96	
m-Dinitrobenzene	40	47.028	118	
m-Nitrotoluene	40	34.455	86	
o-Nitrotoluene	40	39.765	99	
p-Nitrotoluene	40	46.423	116	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713012a
Date: 13-Jul-2009
Time: 20:20:46
ID: WXX090713-08CRI
Vial: 1:1,C

MAP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.222e+004

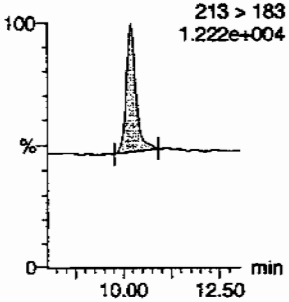

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.765e+003

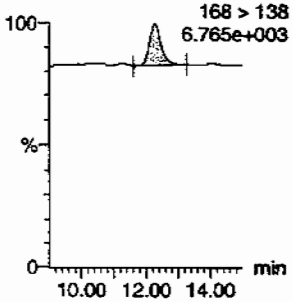

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.743e+004

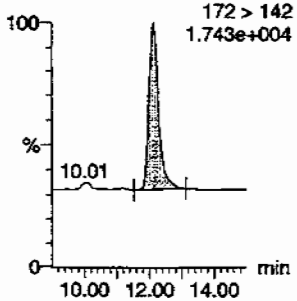

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.058e+004

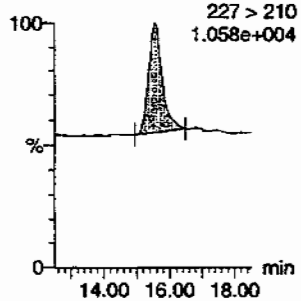

24-dinitrotoluene
F8:MRM of 2 channels,AP-
17.86
182 > 152
1.096e+004

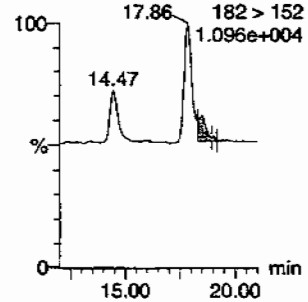

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.096e+004

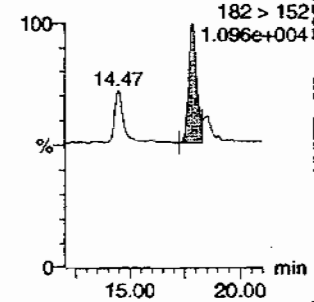

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.892e+004

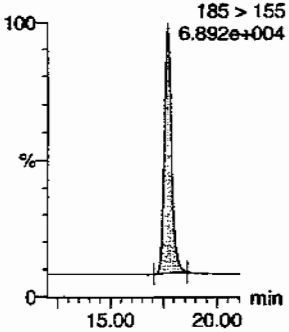

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.411e+003

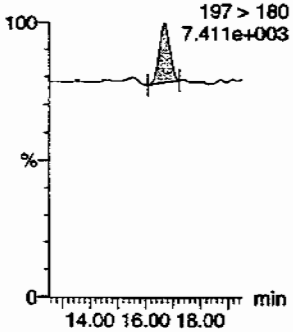

2-Nitrotoluene
F11:MRM of 1 channel,AP-
24.66
137 > 46
6.206e+003

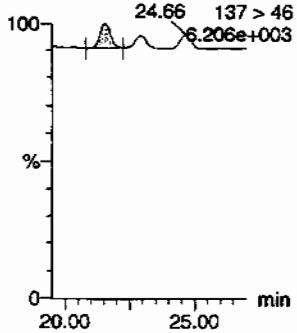

34-dinitrotoluene
F8:MRM of 2 channels,AP-
17.86
182 > 152
1.096e+004

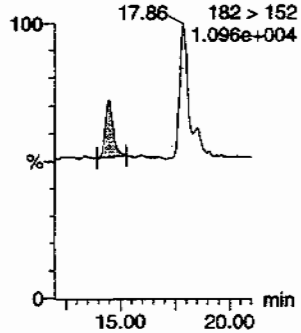

3-Nitrotoluene
F11:MRM of 1 channel,AP-
21.53
137 > 46
6.206e+003

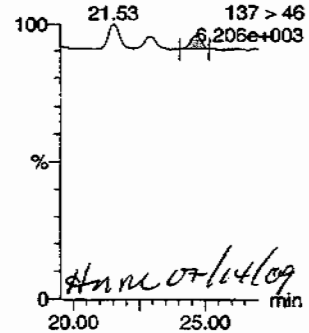

HMM 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.015e+003

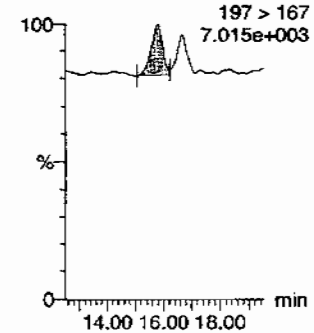

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

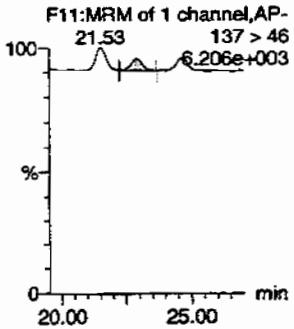

HMX

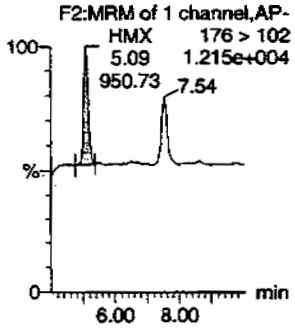

Nitrobenzene

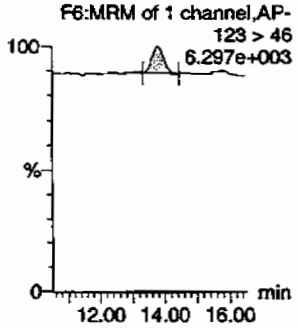

PETN

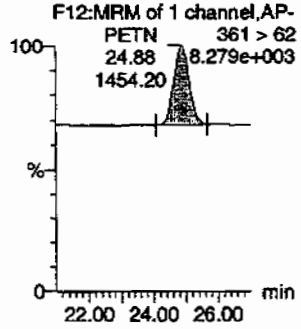

RDX

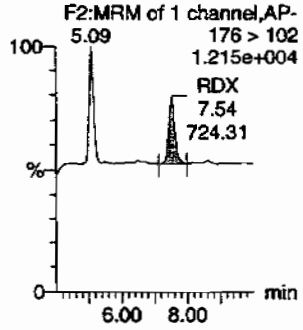

Tetryl

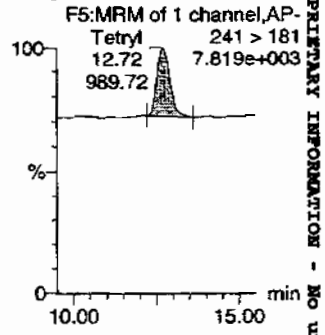

ID	Name	Trace	RT	Analyte Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Amount	%Rec	%dev	S/N
WXX090713-08CRI	HMX	176 > 102	5.09	950.734	4099.368	950.734	115.961	bb			38.2225	95.6	-4.4	111.6
WXX090713-08CRI	RDX	176 > 102	7.54	724.314	4099.368	724.314	88.345	bb			42.1831	105.5	5.5	63.5
WXX090713-08CRI	135-Trinitrobenzene	213 > 183	10.20	1927.722	4099.368	1927.722	235.124	bb			42.4741	106.2	6.2	272.2
WXX090713-08CRI	13-Dinitrobenzene-d4	172 > 142	12.14	4099.368		4099.368	4099.368	bb			520.0663	104.0	4.0	408.9
WXX090713-08CRI	13-Dinitrobenzene	168 > 138	12.27	509.316	4099.368	509.316	62.121	bb			47.0284	117.6	17.6	38.3
WXX090713-08CRI	Tetryl	241 > 181	12.72	989.718	4099.368	989.718	120.716	bb			38.3468	95.9	-4.1	64.5
WXX090713-08CRI	Nitrobenzene	123 > 46	13.80	290.713	4099.368	290.713	35.458	bb			36.2318	90.6	-9.4	24.4
WXX090713-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.80	623.213	24833.205	623.213	12.548	MM	14-Jul-09	10:18:40	41.5871	104.0	4.0	26.3
WXX090713-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.68	722.091	24833.205	722.091	14.539	bb			39.5497	98.9	-1.1	50.5
WXX090713-08CRI	246-Trinitrotoluene	227 > 210	15.55	2259.581	24833.205	2259.581	45.495	bb			40.7090	101.8	1.8	83.0
WXX090713-08CRI	34-dinitrotoluene	182 > 152	14.47	939.169	24833.205	939.169	18.910	bb			21.7089	108.5	8.5	57.6
WXX090713-08CRI	26-dinitrotoluene	182 > 152	17.86	2221.925	24833.205	2221.925	44.737	MM	14-Jul-09	10:15:16	39.2612	98.2	-1.8	135.7
WXX090713-08CRI	24-dinitrotoluene	182 > 152	18.53	467.683	24833.205	467.683	9.416	MM	14-Jul-09	10:11:47	37.4565	93.6	-6.4	28.0
WXX090713-08CRI	26-dinitrotoluene-d3	185 > 155	17.68	24833.205		24833.205	24833.205	bb			519.2622	103.9	3.9	1092.6
WXX090713-08CRI	2-Nitrotoluene	137 > 46	21.53	277.811	24833.205	277.811	5.594	bb			39.7646	99.4	-0.6	32.2
WXX090713-08CRI	4-Nitrotoluene	137 > 46	22.91	157.901	24833.205	157.901	3.179	bb			46.4234	116.1	16.1	16.6
WXX090713-08CRI	3-Nitrotoluene	137 > 46	24.66	151.039	24833.205	151.039	3.041	bb			34.4553	86.1	-13.9	17.2
WXX090713-08CRI	PETN	361 > 62	24.88	1454.199	24833.205	1454.199	29.279	bb			44.6236	111.6	11.6	296.6

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/13/09
Time of Injection 2020
Standard Number WXX090713-08CRI
Data File EXP0713012a

HMX		95.6
RDX		105.5
135-TNB		106.2
13-DNB		117.6
Tetryl		95.9
Nitrobenzene		90.6
4A-26-DNT		104.0
2A-46-DNT		98.9
246-TNT		101.8
34-DNT(surr)		108.5
26-DNT		98.2
24-DNT		93.6
2-NT		99.4
4-NT		116.1
3-NT		86.1
PETN		111.6
Total		1629.6
Average		101.9

MMT 7/14/09

MMT 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2508

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0713022a

Analysis Date: 14-JUL-09 01:15

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	642.794	107	
1,3-Dinitrobenzene-d4	500	526.454	105	
2,4,6-Trinitrotoluene	600	706.609	118	
2,4-Dinitrotoluene	600	578.41	96	
2,6-Dinitrotoluene	600	592.39	99	
2,6-Dinitrotoluene-d3	500	515.313	103	
2-Amino-4,6-dinitrotoluene	600	735.592	123	*
3,4-Dinitrotoluene	300	310.133	103	
4-Amino-2,6-dinitrotoluene	600	697.626	116	
HMX	600	602.051	100	
Nitrobenzene	600	559.141	93	
PETN	600	565.352	94	
RDX	600	702.253	117	
Tetryl	600	627.983	105	
m-Dinitrobenzene	600	631.063	105	
m-Nitrotoluene	600	478.601	80	*
o-Nitrotoluene	600	506.419	84	
p-Nitrotoluene	600	551.079	92	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713022a
Date: 14-Jul-2009
Time: 01:15:47
ID: WXX090713-07CCV
Vial: 1:1,B

MAT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.010e+005

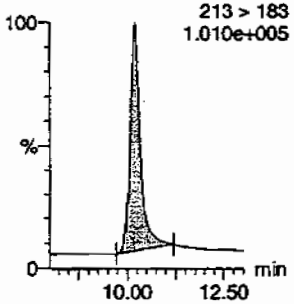

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.329e+004

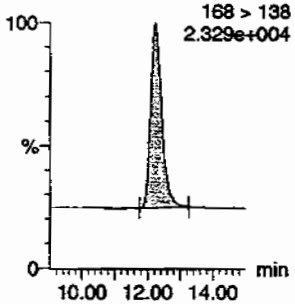

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.803e+004

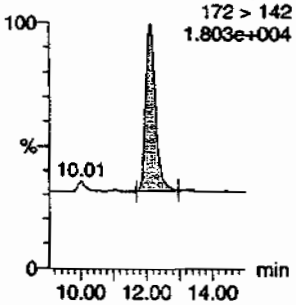

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
9.053e+004

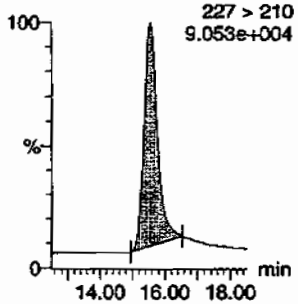

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.071e+004

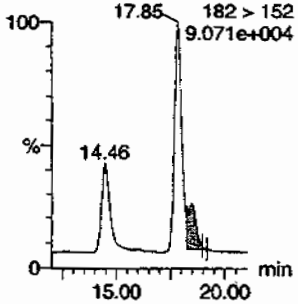

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.071e+004

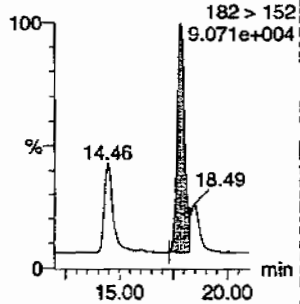

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.748e+004

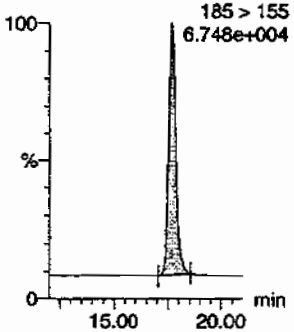

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.780e+004

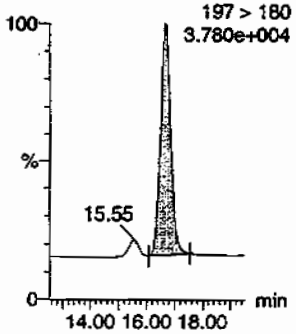

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.333e+004

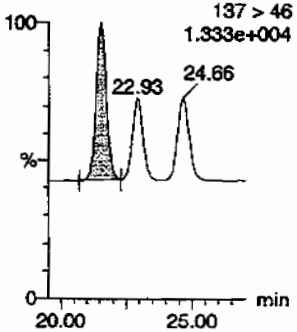

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
9.071e+004

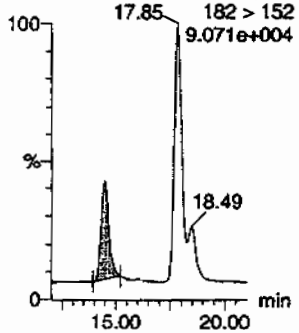

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.333e+004

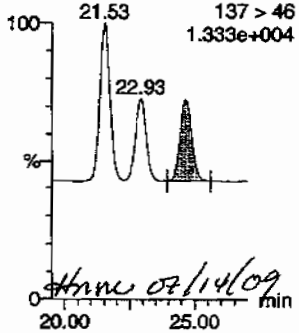

HMM 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.954e+004

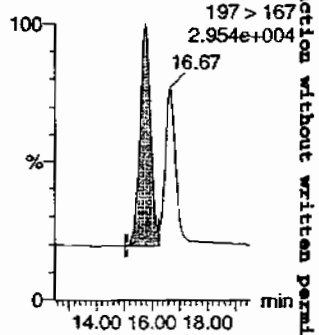

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

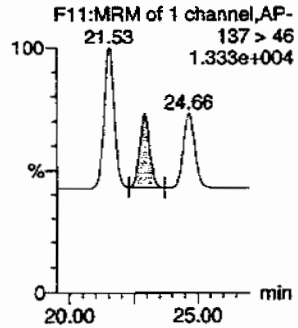

HMX

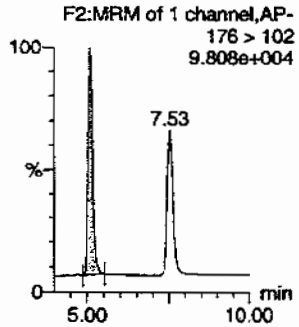

Nitrobenzene

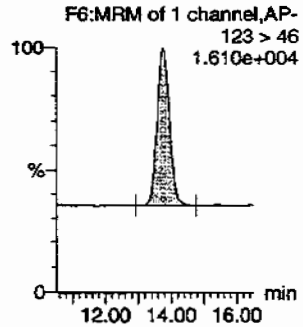

PETN

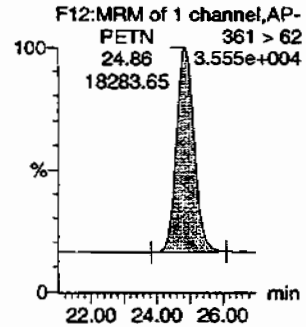

RDX

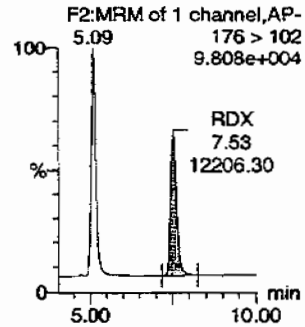

Tetryl

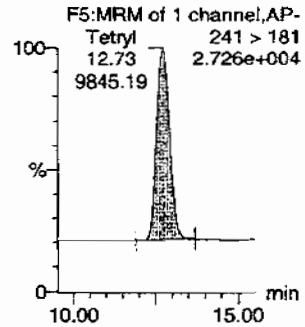

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc	%Rec	%Dev	S/N
WXX090713-07CCV	HMX	176 > 102	5.09	15159.184	4149.721	15159.184	1826.531	bb			602.0512	100.3	0.3	1792.1
WXX090713-07CCV	RDX	176 > 102	7.53	12206.297	4149.721	12206.297	1470.737	bb			702.2530	117.0	17.0	1144.0
WXX090713-07CCV	135-Trinitrobenzene	213 > 183	10.18	29532.057	4149.721	29532.057	3558.318	bb			642.7939	107.1	7.1	4631.2
WXX090713-07CCV	13-Dinitrobenzene-d4	172 > 142	12.10	4149.721		4149.721	4149.721	bb			526.4544	105.3	5.3	466.1
WXX090713-07CCV	13-Dinitrobenzene	168 > 138	12.24	6918.331	4149.721	6918.331	833.590	bb			631.0626	105.2	5.2	590.5
WXX090713-07CCV	Tetryl	241 > 181	12.73	9845.190	4149.721	9845.190	1186.247	bb			627.9826	104.7	4.7	853.9
WXX090713-07CCV	Nitrobenzene	123 > 46	13.75	4541.480	4149.721	4541.480	547.203	bb			559.1410	93.2	-6.8	322.9
WXX090713-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.76	10374.928	24644.340	10374.928	210.493	MM	14-Jul-09	10:19:30	697.6259	116.3	16.3	277.9
WXX090713-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.67	13328.149	24644.340	13328.149	270.410	bb			735.5924	122.6	22.6	519.4
WXX090713-07CCV	246-Trinitrotoluene	227 > 210	15.57	38922.586	24644.340	38922.586	789.686	bb			706.6094	117.8	17.8	1815.3
WXX090713-07CCV	34-dinitrotoluene	182 > 152	14.46	13314.886	24644.340	13314.886	270.141	bb			310.1329	103.4	3.4	271.9
WXX090713-07CCV	26-dinitrotoluene	182 > 152	17.85	33270.398	24644.340	33270.398	675.011	MM	14-Jul-09	10:15:56	592.3897	98.7	-1.3	712.7
WXX090713-07CCV	24-dinitrotoluene	182 > 152	18.49	7167.119	24644.340	7167.119	145.411	MM	14-Jul-09	10:12:37	578.4104	96.4	-3.6	142.3
WXX090713-07CCV	26-dinitrotoluene-d3	185 > 155	17.68	24644.340		24644.340	24644.340	bb			515.3130	103.1	3.1	1142.5
WXX090713-07CCV	2-Nitrotoluene	137 > 46	21.53	3511.135	24644.340	3511.135	71.236	bb			506.4193	84.4	-15.6	161.7
WXX090713-07CCV	4-Nitrotoluene	137 > 46	22.93	1860.142	24644.340	1860.142	37.740	bb			551.0794	91.8	-8.2	84.9
WXX090713-07CCV	3-Nitrotoluene	137 > 46	24.66	2082.052	24644.340	2082.052	42.242	bb			478.6010	79.8	-20.2	84.9
WXX090713-07CCV	PETN	361 > 62	24.86	18283.646	24644.340	18283.646	370.950	bb			565.3520	94.2	-5.8	3442.6

485

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis 07/14/09
Time of Injection 0115
Standard Number WXX090713-07CCV
Data File EXP0713022a

HMX		100.3
RDX		117.0
135-TNB		107.1
13-DNB		105.2
Tetryl		104.7
Nitrobenzene		93.2
4A-26-DNT		116.3
2A-46-DNT		122.6
246-TNT		117.8
34-DNT(surr)		103.4
26-DNT		98.7
24-DNT		96.4
2-NT		84.4
4-NT		91.8
3-NT		79.8
PETN		94.2
Total		1632.9
Average		102.1

WTP 7/14/09

Hmm 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2508

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0713024a

Analysis Date: 14-JUL-09 02:14

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	45.982	115	
1,3-Dinitrobenzene-d4	500	555.109	111	
2,4,6-Trinitrotoluene	40	41.657	104	
2,4-Dinitrotoluene	40	39.648	99	
2,6-Dinitrotoluene	40	38.348	96	
2,6-Dinitrotoluene-d3	500	529.624	106	
2-Amino-4,6-dinitrotoluene	40	44.149	110	
3,4-Dinitrotoluene	20	19.341	97	
4-Amino-2,6-dinitrotoluene	40	39.608	99	
HMX	40	39.085	98	
Nitrobenzene	40	34.813	87	
PETN	40	50.517	126	
RDX	40	39.257	98	
Tetryl	40	27.953	70	*
m-Dinitrobenzene	40	39.703	99	
m-Nitrotoluene	40	42.769	107	
o-Nitrotoluene	40	37.963	95	
p-Nitrotoluene	40	32.873	82	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713024a
Date: 14-Jul-2009
Time: 02:14:45
ID: WXX090713-08CRI
Vial: 1:1,C

MMT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
1.331e+004

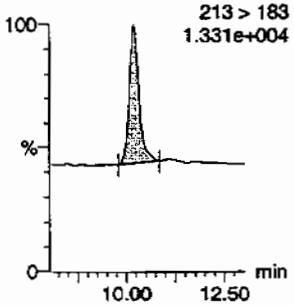

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
6.663e+003

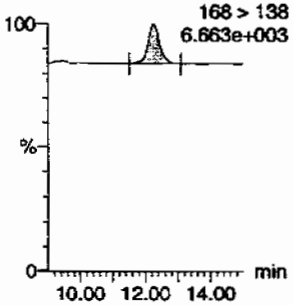

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.821e+004

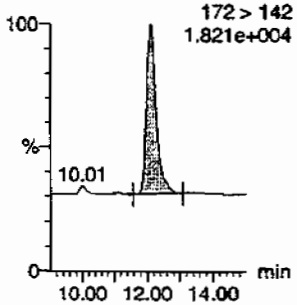

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
1.081e+004

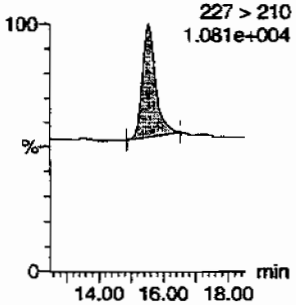

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.104e+004

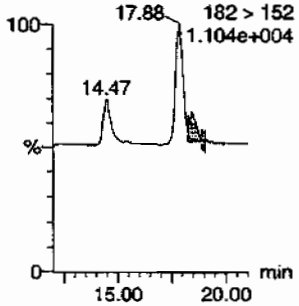

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.104e+004

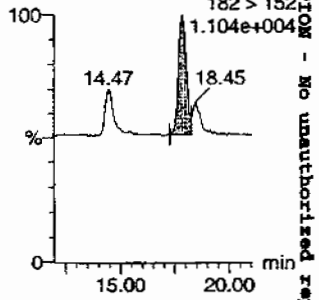

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
6.917e+004

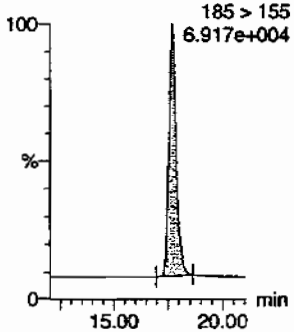

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
7.493e+003

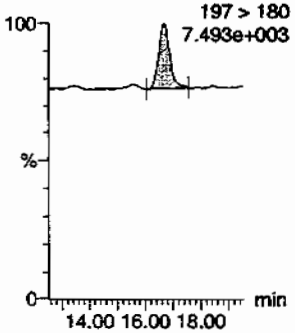

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.219e+003

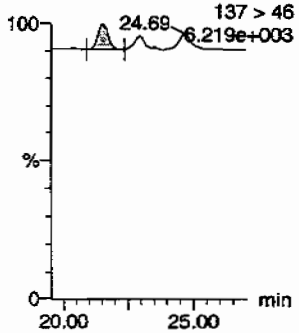

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
1.104e+004

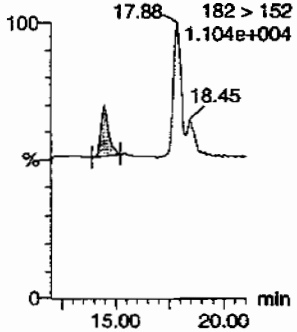

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
6.219e+003

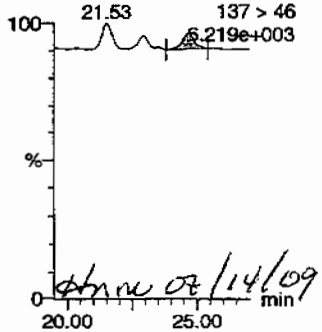

dhm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
7.088e+003

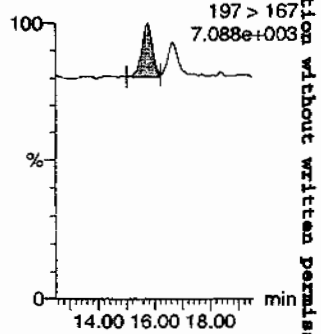

488

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

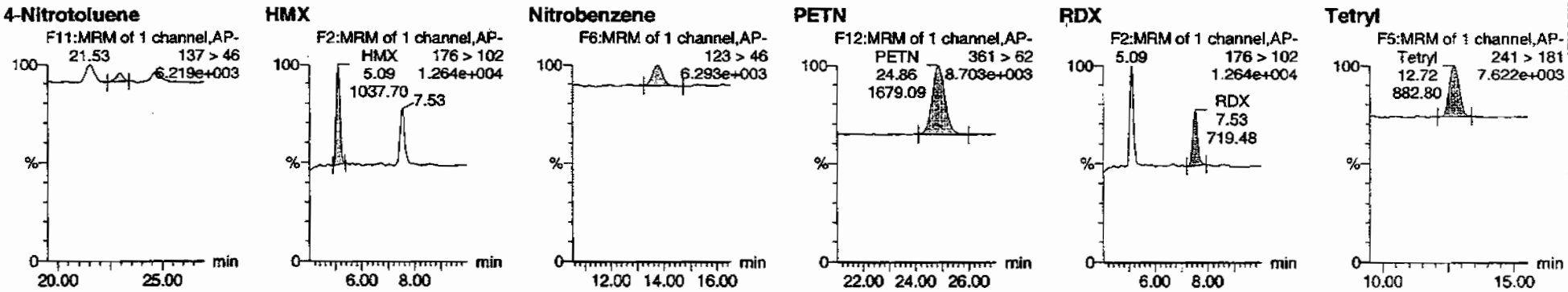

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Amount	%Rec	%Dev	S/N
WXX090713-08CRI	HMX	176 > 102	5.09	1037.703	4375.591	1037.703	118.579	bb			39.0852	97.7	-2.3	96.5
WXX090713-08CRI	RDX	176 > 102	7.53	719.484	4375.591	719.484	82.216	bb			39.2566	98.1	-1.9	53.1
WXX090713-08CRI	135-Trinitrobenzene	213 > 183	10.20	2227.525	4375.591	2227.525	254.540	bb			45.9815	115.0	15.0	235.9
WXX090713-08CRI	13-Dinitrobenzene-d4	172 > 142	12.14	4375.591		4375.591	4375.591	bb			555.1094	111.0	11.0	454.2
WXX090713-08CRI	13-Dinitrobenzene	168 > 138	12.27	458.950	4375.591	458.950	52.444	bb			39.7026	99.3	-0.7	50.5
WXX090713-08CRI	Tetryl	241 > 181	12.72	882.804	4375.591	882.804	100.878	bb			27.9531	69.9	-30.1	63.3
WXX090713-08CRI	Nitrobenzene	123 > 46	13.76	298.146	4375.591	298.146	34.069	bb			34.8125	87.0	-13.0	18.8
WXX090713-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.77	605.406	25328.754	605.406	11.951	MM	14-Jul-09	10:19:37	39.6084	99.0	-1.0	45.8
WXX090713-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.65	822.149	25328.754	822.149	16.230	bb			44.1490	110.4	10.4	29.5
WXX090713-08CRI	246-Trinitrotoluene	227 > 210	15.55	2358.355	25328.754	2358.355	46.555	bb			41.6572	104.1	4.1	103.7
WXX090713-08CRI	34-dinitrotoluene	182 > 152	14.47	853.434	25328.754	853.434	16.847	bb			19.3412	96.7	-3.3	63.5
WXX090713-08CRI	26-dinitrotoluene	182 > 152	17.88	2213.560	25328.754	2213.560	43.697	MM	14-Jul-09	10:16:04	38.3481	95.9	-4.1	166.2
WXX090713-08CRI	24-dinitrotoluene	182 > 152	18.45	504.918	25328.754	504.918	9.967	MM	14-Jul-09	10:12:52	39.6475	99.1	-0.9	41.5
WXX090713-08CRI	26-dinitrotoluene-d3	185 > 155	17.68	25328.754		25328.754	25328.754	bb			529.6241	105.9	5.9	1137.3
WXX090713-08CRI	2-Nitrotoluene	137 > 46	21.53	270.514	25328.754	270.514	5.340	bb			37.9626	94.9	-5.1	33.7
WXX090713-08CRI	4-Nitrotoluene	137 > 46	22.95	114.041	25328.754	114.041	2.251	bb			32.8725	82.2	-17.8	16.3
WXX090713-08CRI	3-Nitrotoluene	137 > 46	24.69	191.225	25328.754	191.225	3.775	bb			42.7691	106.9	6.9	20.0
WXX090713-08CRI	PETN	361 > 62	24.86	1679.089	25328.754	1679.089	33.146	bb			50.5165	126.3	26.3	618.5

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GRAND MEAN AVERAGE

Vendor: UltraScientific
Date of Analysis 07/14/09
Time of Injection 0214
Standard Number WXX090713-08CRI
Data File EXP0713024a

HMX		97.7
RDX		98.1
135-TNB		115.0
13-DNB		99.3
Tetryl		69.9
Nitrobenzene		87.0
4A-26-DNT		99.0
2A-46-DNT		110.4
246-TNT		104.1
34-DNT(surr)		96.7
26-DNT		95.9
24-DNT		99.1
2-NT		94.9
4-NT		82.2
3-NT		106.9
PETN		126.3
Total		1582.5
Average		98.9

MJT 7/14/09

Hmm 07/14/09

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2508

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS0708013.wiff

Analysis Date: 08-JUL-09 13:42

LCMSMS ID: 1358

Column ID JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	100	100	
2,6-Diamino-4-nitrotoluene	100	91.7	92	
3,4-Dinitrotoluene	50	51.9	104	
3,5-Dinitroaniline	100	135	135	
TATB	100	108	108	
tris(o-cresyl) phosphate	100	101	101	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sam 7/9/09

Sample Name: "WXX090708-27CRI" Sample ID: "|1|LER" File: "EXS0708013.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 108. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:42:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.00 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 6.22e+004 counts
Height: 12311.793 cps
Start Time: 6.85 min
End Time: 7.44 min

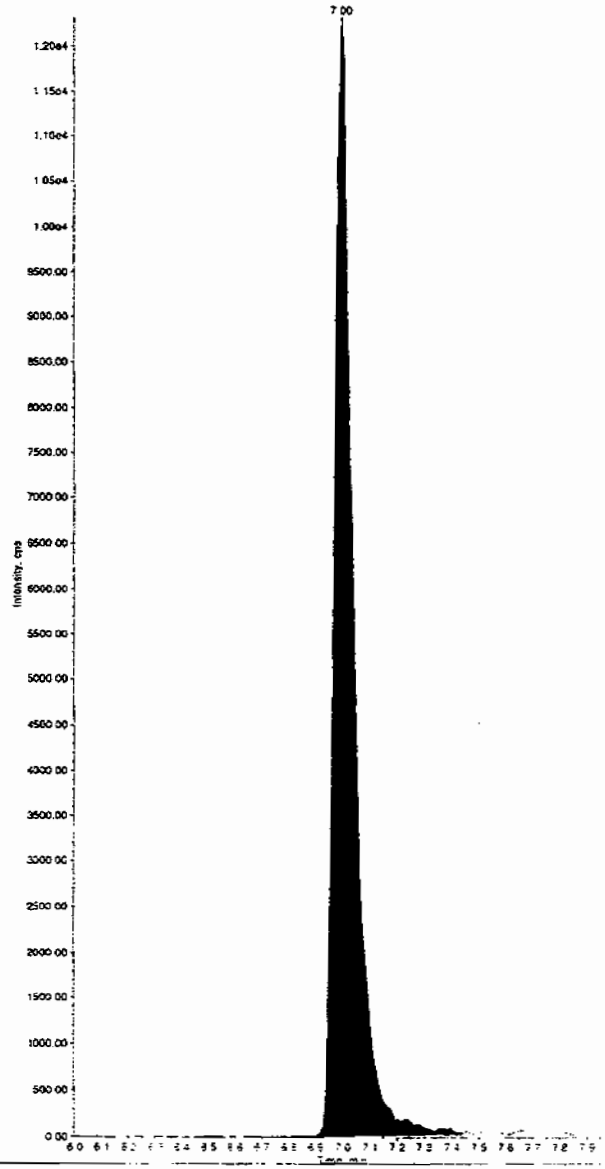

492

Sample Name: "WXX090708-27CRI" Sample ID: "|1|LER" File: "EXS0708013.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 135. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:42:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.23 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.21 min
Area: 1.62e+005 counts
Height: 35660.637 cps
Start Time: 8.11 min
End Time: 8.35 min

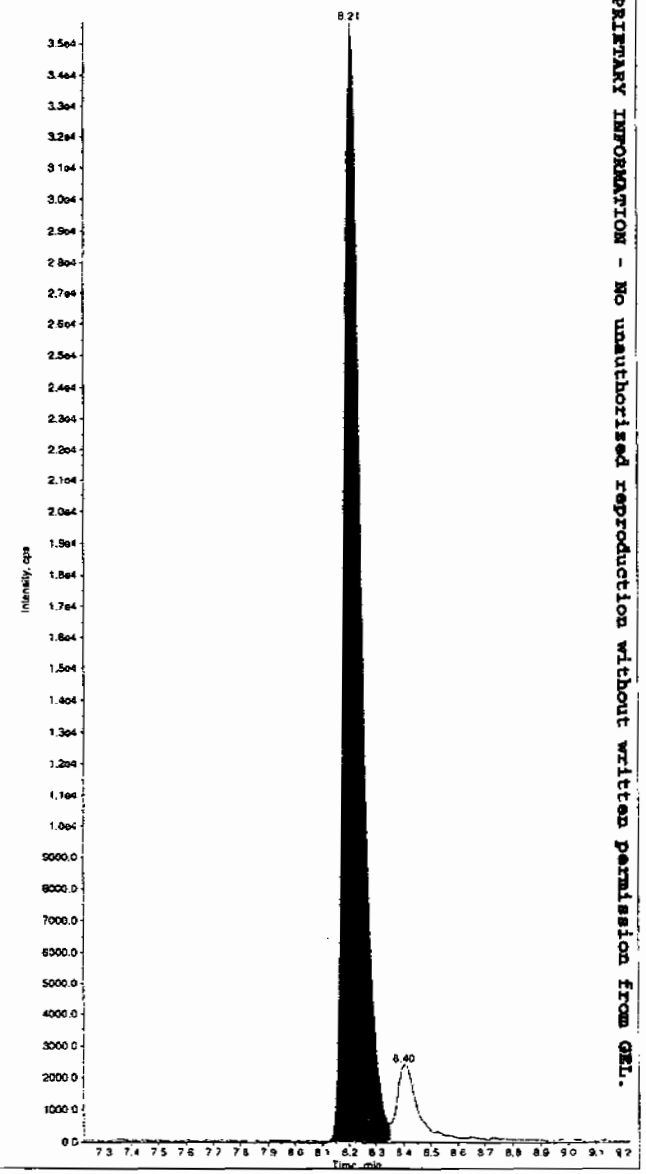

Anm 07/09/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090708-27CRI" Sample ID: "[1]LER" File: "EXS0708013.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 51.9 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:42:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.40 min
Area: 1.0¢e+005 counts
Height: 20617.191 cps
Start Time: 8.32 min
End Time: 8.97 min

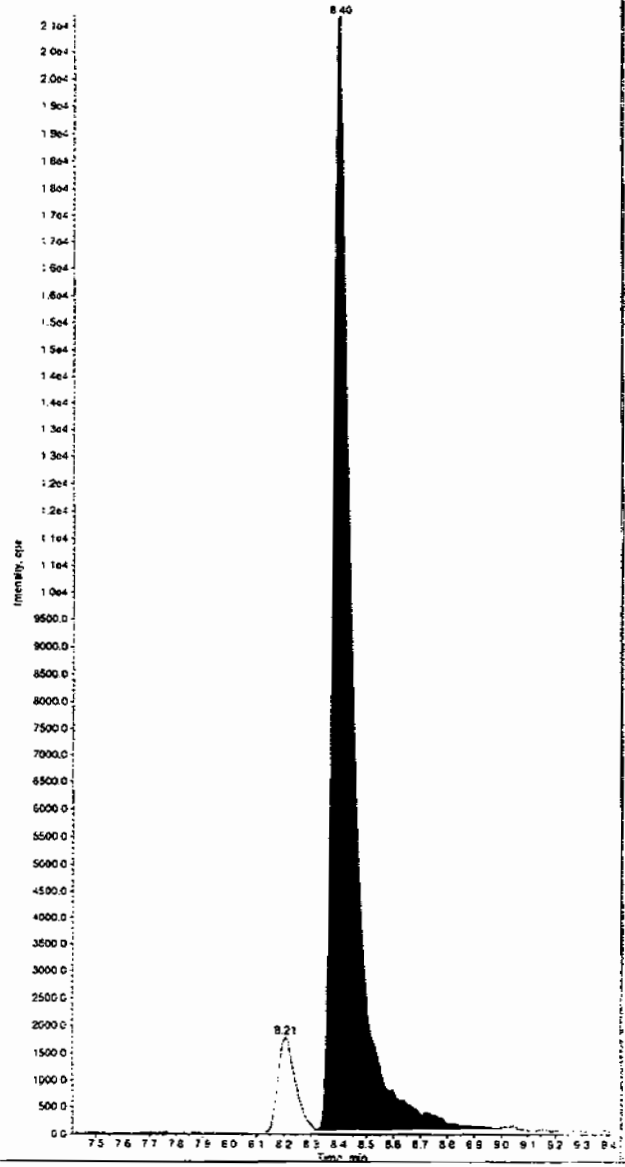

Sample Name: "WXX090708-27CRI" Sample ID: "[1]LER" File: "EXS0708013.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 91.7 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:42:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.09 min
Area: 1.66e+004 counts
Height: 3654.296 cps
Start Time: 5.00 min
End Time: 5.28 min

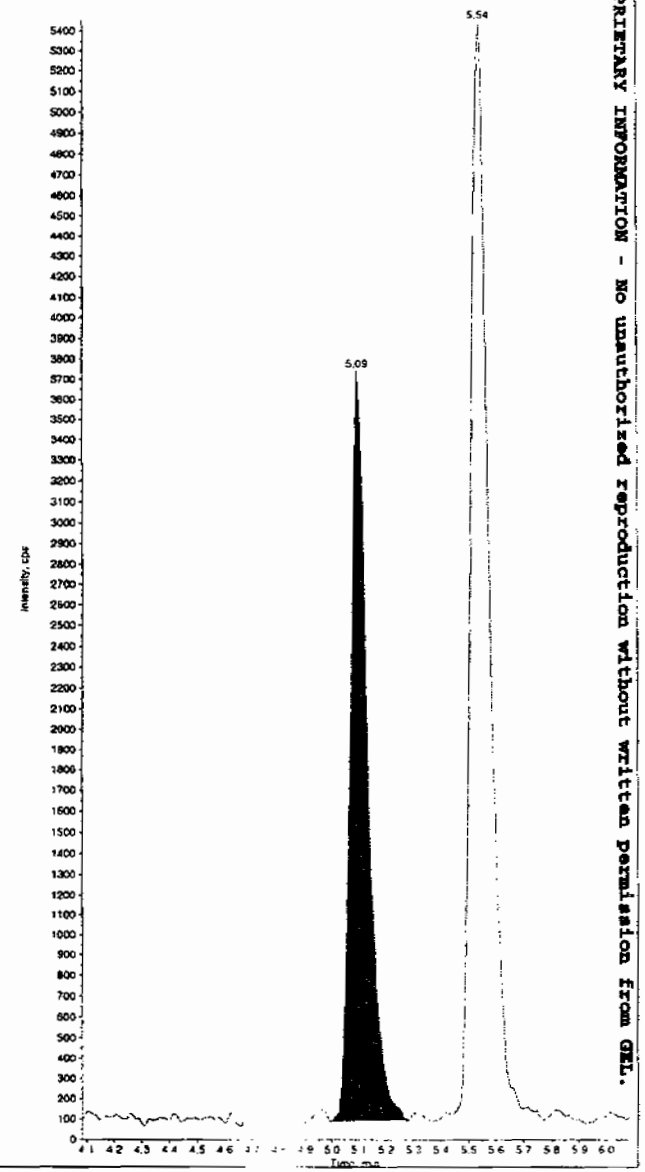

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090708-27CRI" Sample ID: "[1]LER" File: "EXS0708013.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 100. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:42:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.54 min
Area: 2.52e+004 counts
Height: 5358.089 cps
Start Time: 5.41 min
End Time: 5.77 min

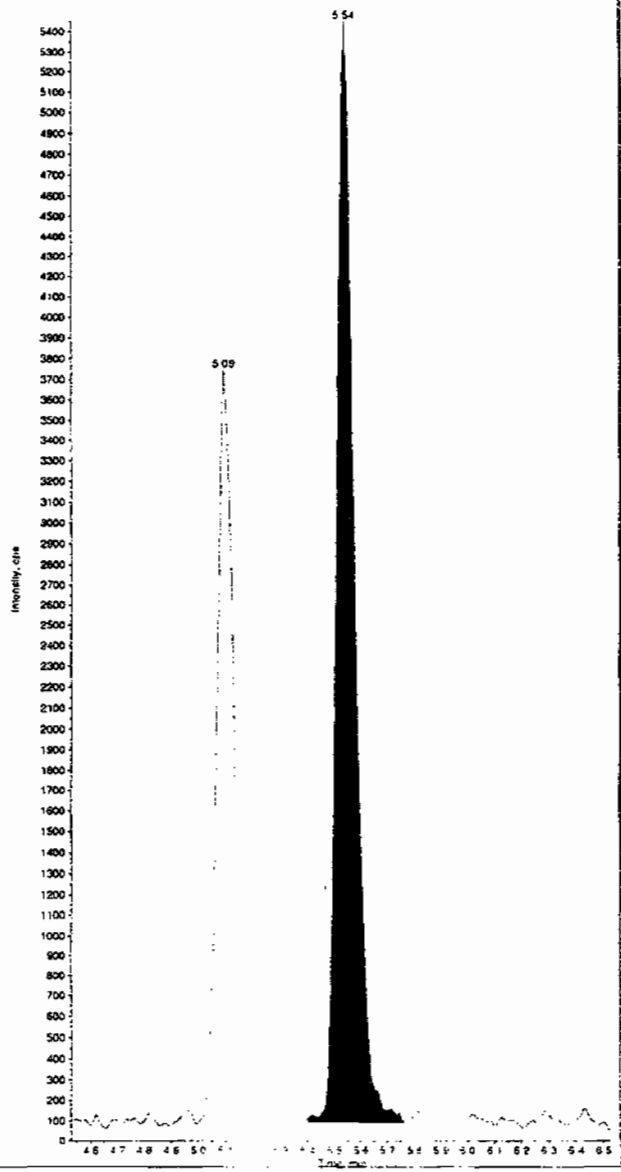

Sample Name: "WXX090708-27CRI" Sample ID: "[1]LER" File: "EXS0708013.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 101. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:42:02 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.30e+006 counts
Height: 304241.119 cps
Start Time: 10.8 min
End Time: 11.1 min

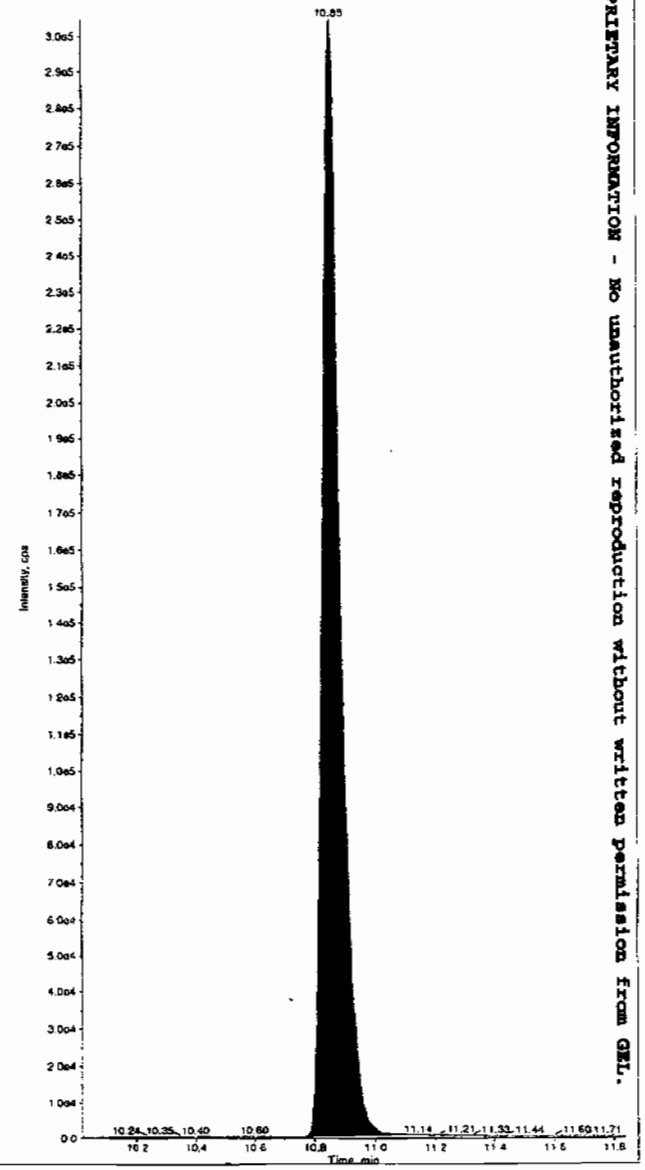

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2508

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS0708020.wiff

Analysis Date: 08-JUL-09 15:35

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	451	90	
2,6-Diamino-4-nitrotoluene	500	401	80	
3,4-Dinitrotoluene	250	231	93	
3,5-Dinitroaniline	500	529	106	
TATB	500	492	98	
tris(o-cresyl) phosphate	500	523	105	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090708-26CCV" Sample ID: "|1|LER" File: "EXS0708020.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 492. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:35:24 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.00 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 3.34e+005 counts
Height: 68366.554 cps
Start Time: 6.82 min
End Time: 7.45 min

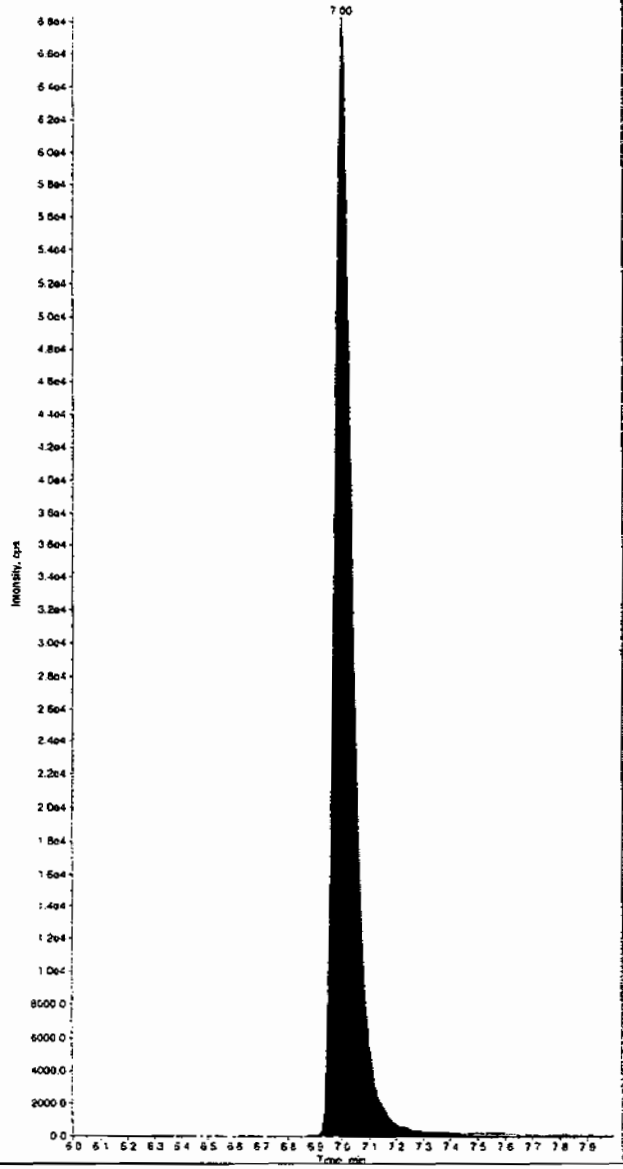

496

Sample Name: "WXX090708-26CCV" Sample ID: "|1|LER" File: "EXS0708020.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 529. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:35:24 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.23 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.23 min
Area: 8.24e+005 counts
Height: 193953.339 cps
Start Time: 8.12 min
End Time: 8.37 min

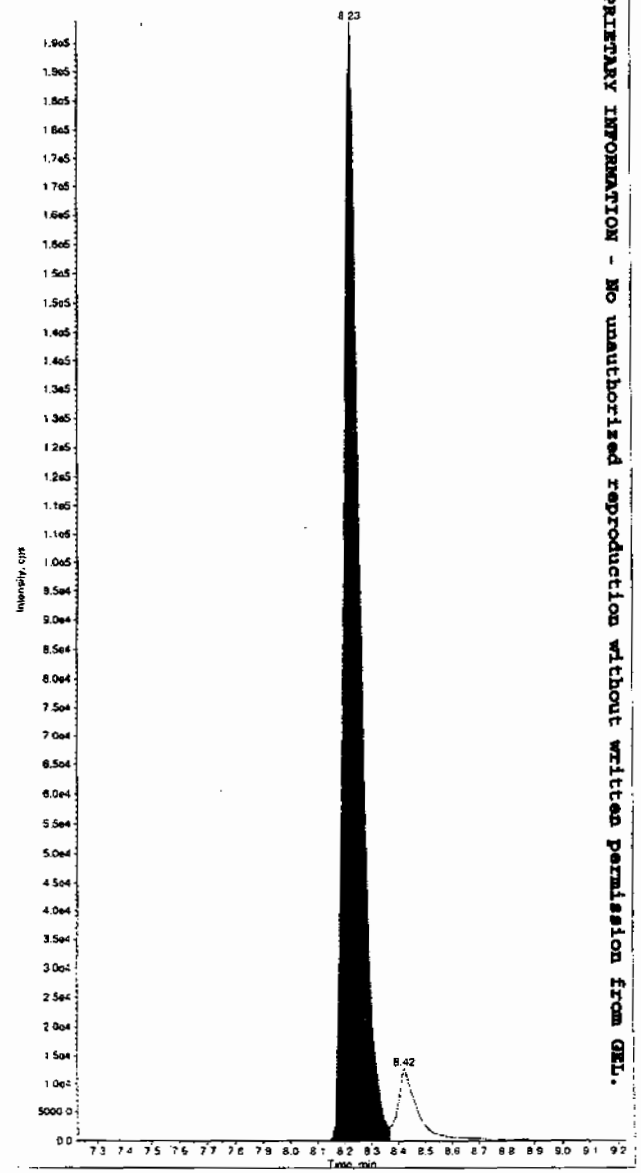

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090708-26CCV" Sample ID: "[1]LER" File: "EXS0708020.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 231. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:35:24 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.42 min
Area: 5.01e+005 counts
Height: 91755.592 cps
Start Time: 8.34 min
End Time: 9.40 min

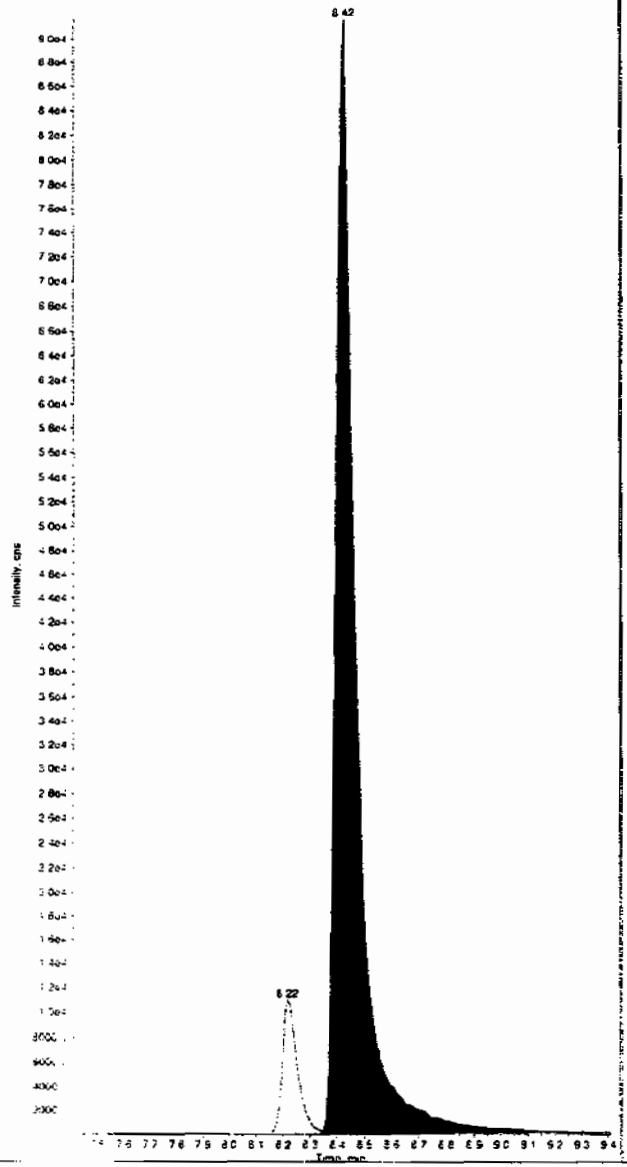

Sample Name: "WXX090708-26CCV" Sample ID: "[1]LER" File: "EXS0708020.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 401. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:35:24 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.08 min
Area: 7.07e+004 counts
Height: 14827.855 cps
Start Time: 4.96 min
End Time: 5.34 min

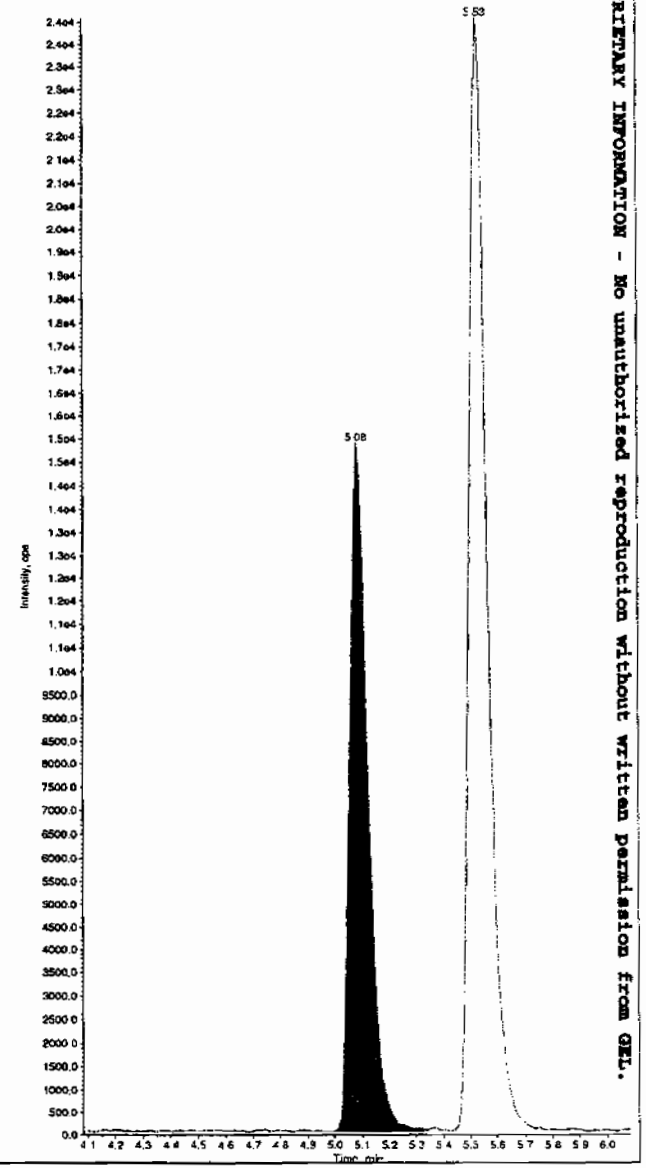

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090708-26CCV" Sample ID: "[1]LER" File: "EXS0708020.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "168.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 451. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:35:24 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 1.13e+005 counts
Height: 23980.219 cps
Start Time: 5.44 min
End Time: 5.77 min

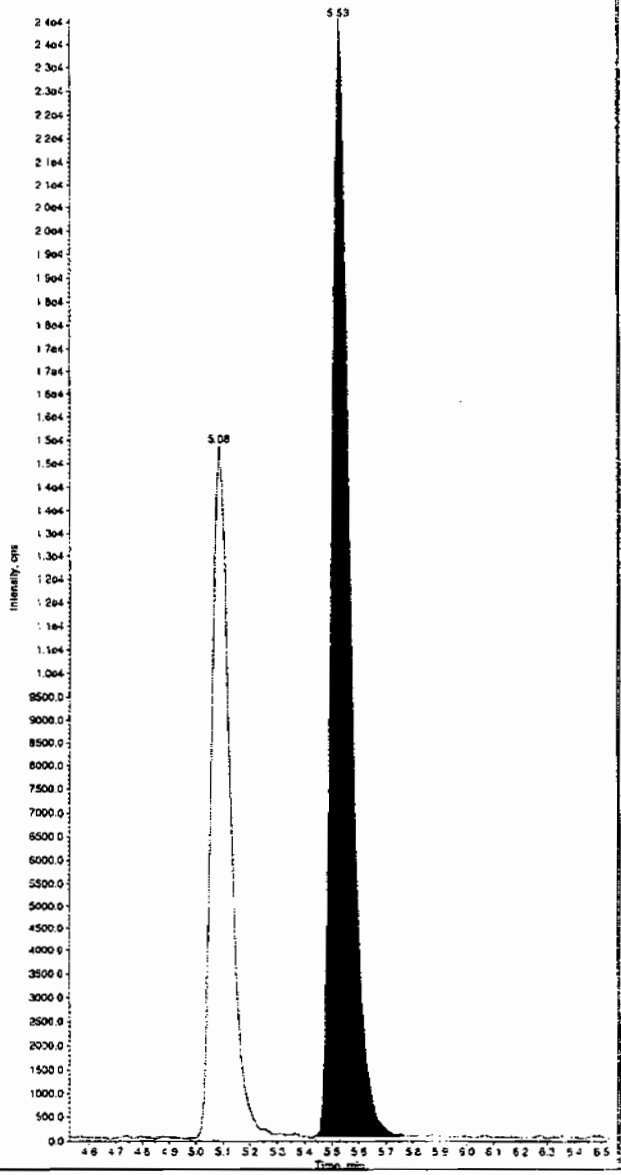

Sample Name: "WXX090708-26CCV" Sample ID: "[1]LER" File: "EXS0708020.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 523. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:35:24 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.27e+006 counts
Height: 1432082.153 cps
Start Time: 10.8 min
End Time: 11.2 min

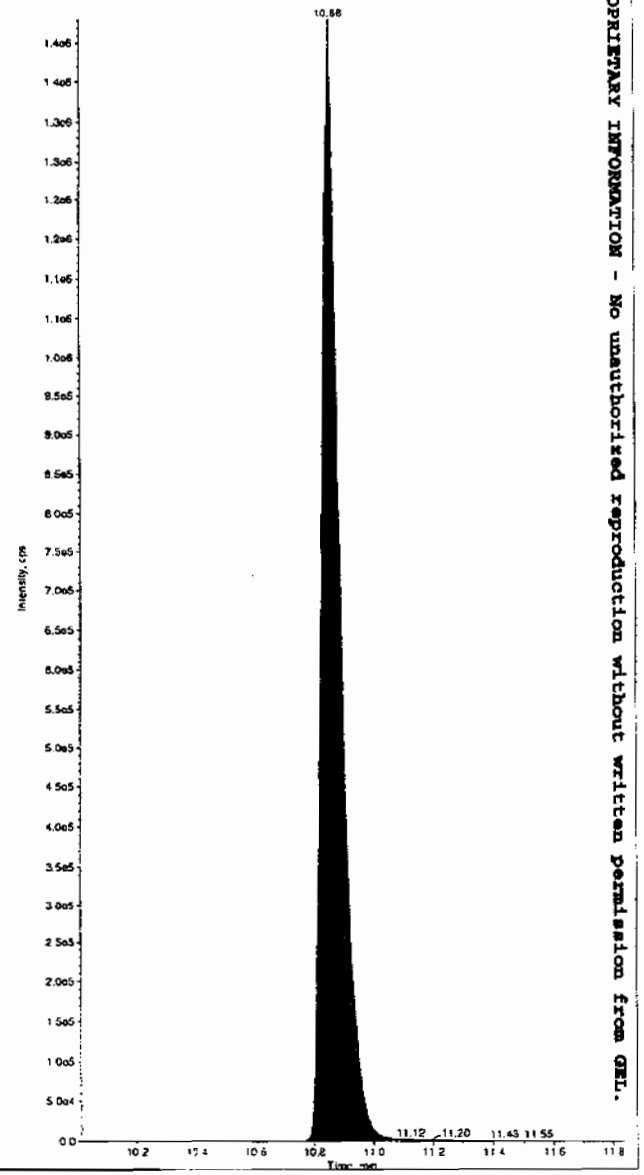

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 09-2508

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS0708022.wiff

Analysis Date: 08-JUL-09 16:07

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	98.9	99	
2,6-Diamino-4-nitrotoluene	100	84	84	
3,4-Dinitrotoluene	50	49.8	100	
3,5-Dinitroaniline	100	126	126	
TATB	100	111	111	
tris(o-cresyl) phosphate	100	104	104	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Sample Name: "WXX090708-27CRI" Sample ID: "[1]LER" File: "EXS0708022.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 111. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 4:07:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.00 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 6.44e+004 counts
Height: 14607.576 cps
Start Time: 6.84 min
End Time: 7.29 min

500

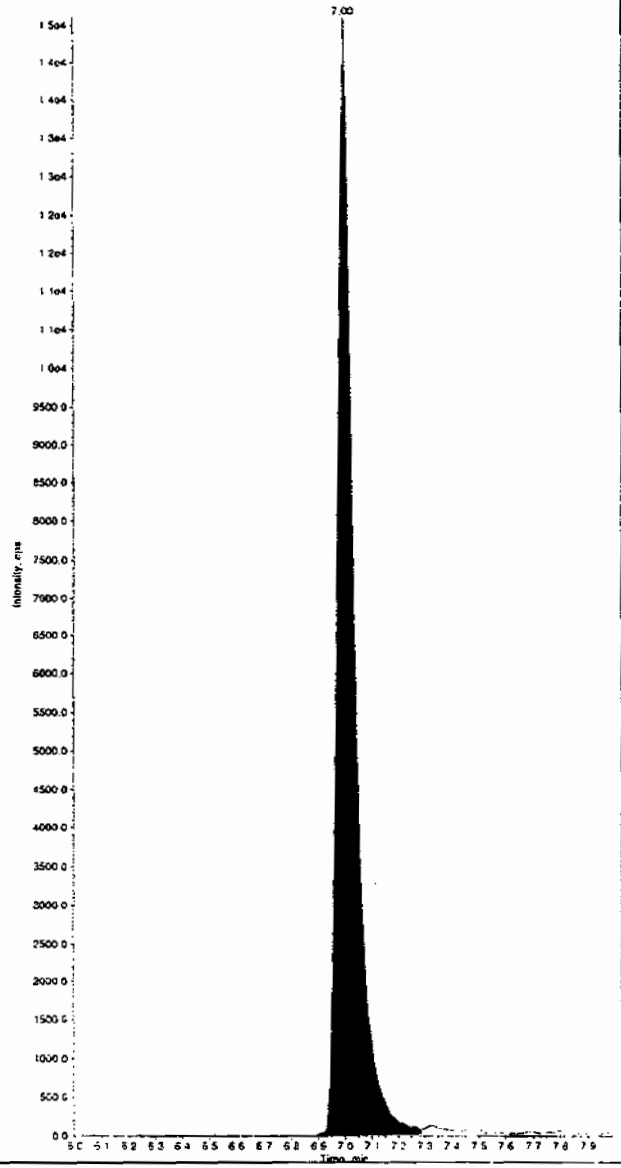

Sample Name: "WXX090708-27CRI" Sample ID: "[1]LER" File: "EXS0708022.wiff"
Peak Name: "3S-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 126. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 4:07:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.23 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.24 min
Area: 1.48e+005 counts
Height: 31708.298 cps
Start Time: 8.07 min
End Time: 8.37 min

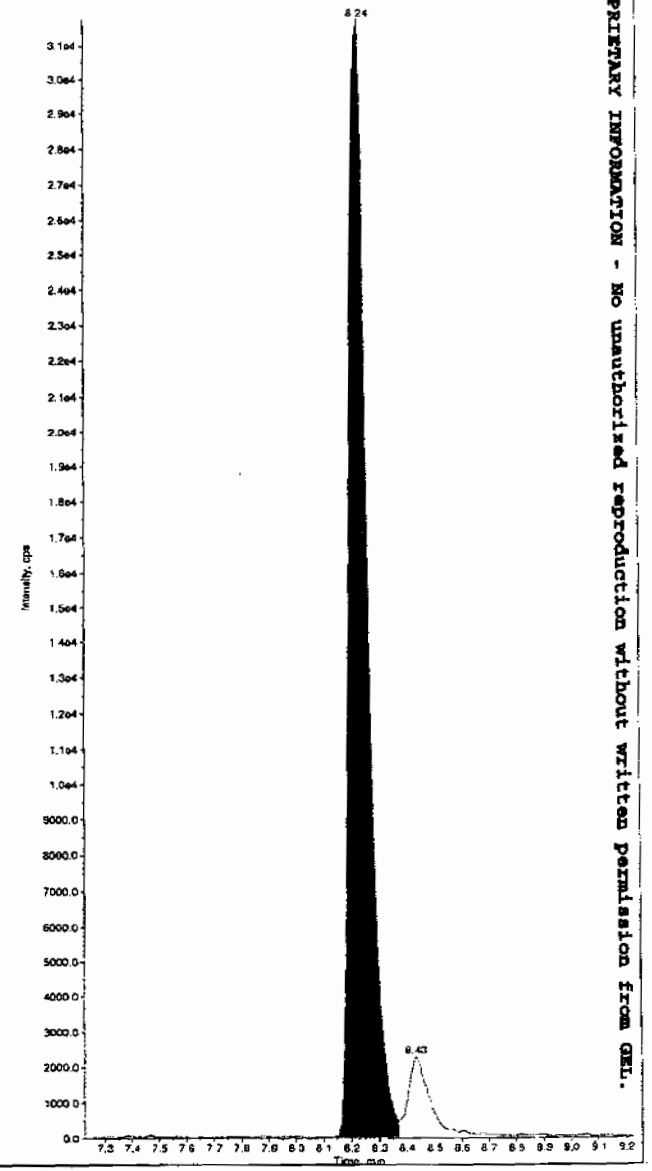

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090708-27CRI" Sample ID: "|1|LER" File: "EXS0708022.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 49.8 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 4:07:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.42 min
Area: 9.94e+004 counts
Height: 18864.538 cps
Start Time: 8.34 min
End Time: 9.01 min

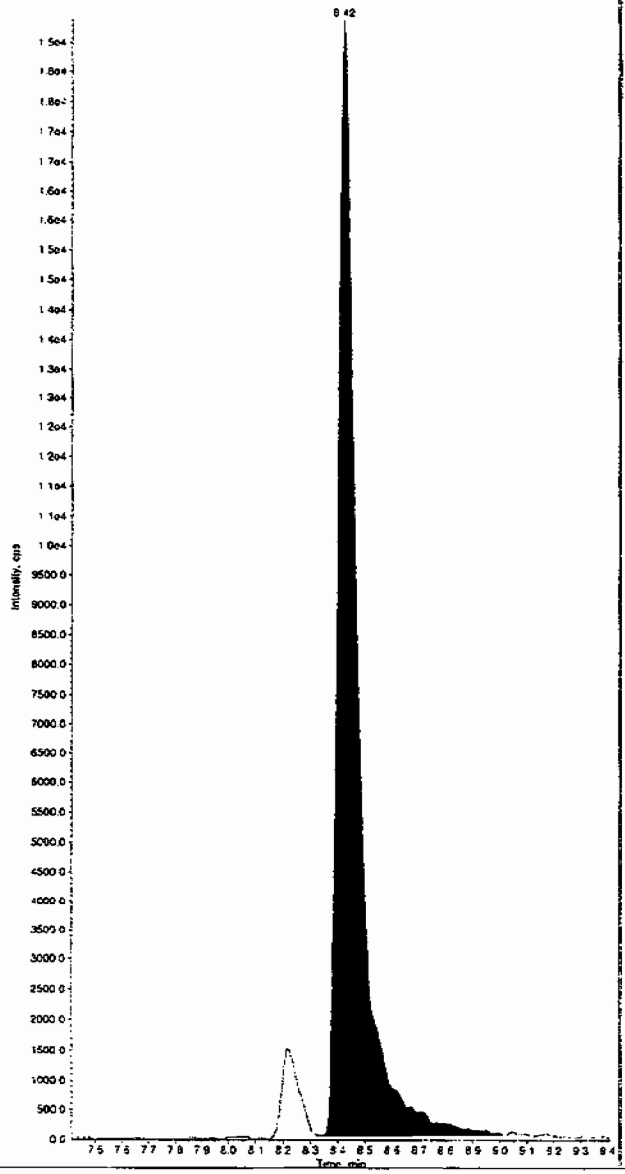

Sample Name: "WXX090708-27CRI" Sample ID: "|1|LER" File: "EXS0708022.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 84.0 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 4:07:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.08 min
Area: 1.52e+004 counts
Height: 3438.369 cps
Start Time: 4.97 min
End Time: 5.32 min

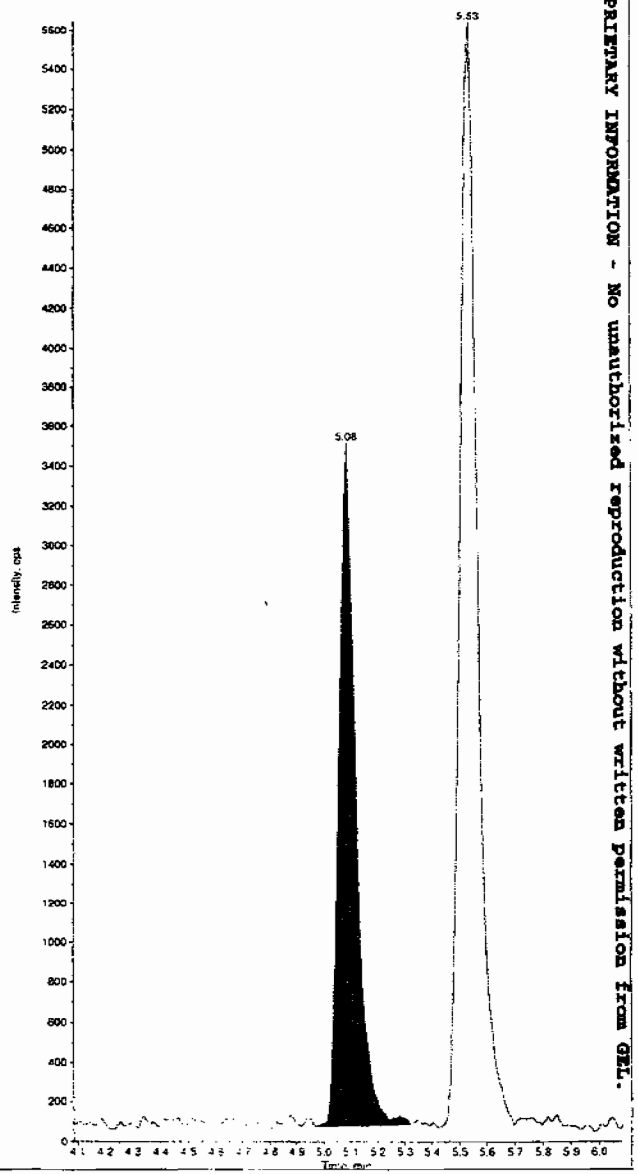

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX090708-27CRI" Sample ID: "[1]LER" File: "EXS0708022.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 98.9 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 4:07:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 2.49e+004 counts
Height: 5561.689 cps
Start Time: 5.45 min
End Time: 5.69 min

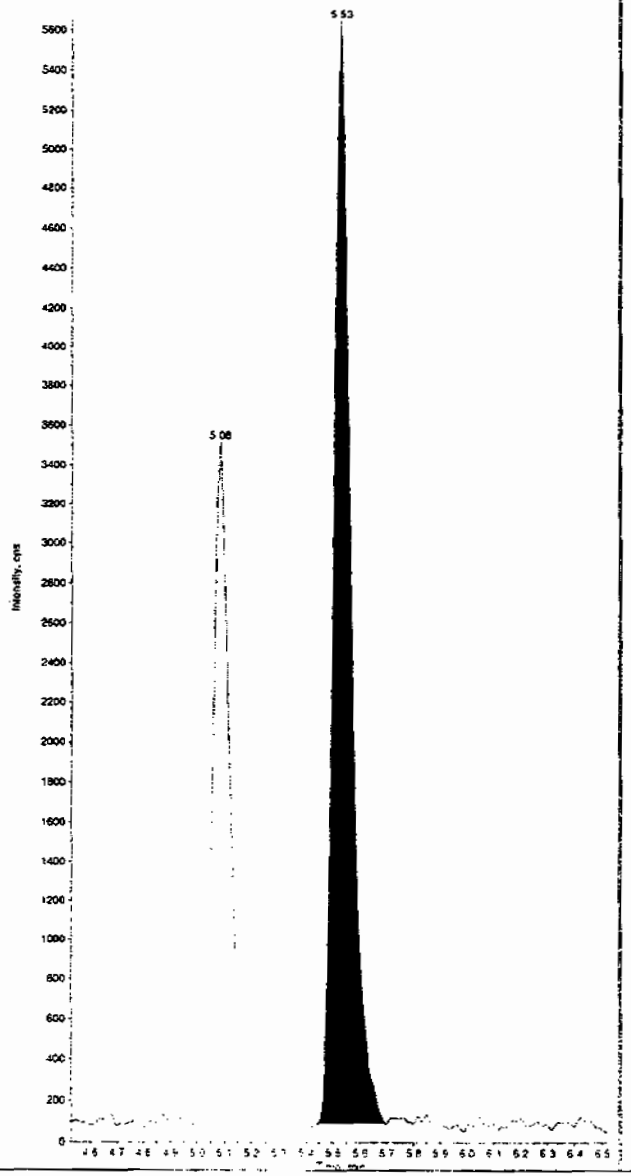

Sample Name: "WXX090708-27CRI" Sample ID: "[1]LER" File: "EXS0708022.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 104. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 4:07:48 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 1.34e+006 counts
Height: 317686.157 cps
Start Time: 10.8 min
End Time: 11.1 min

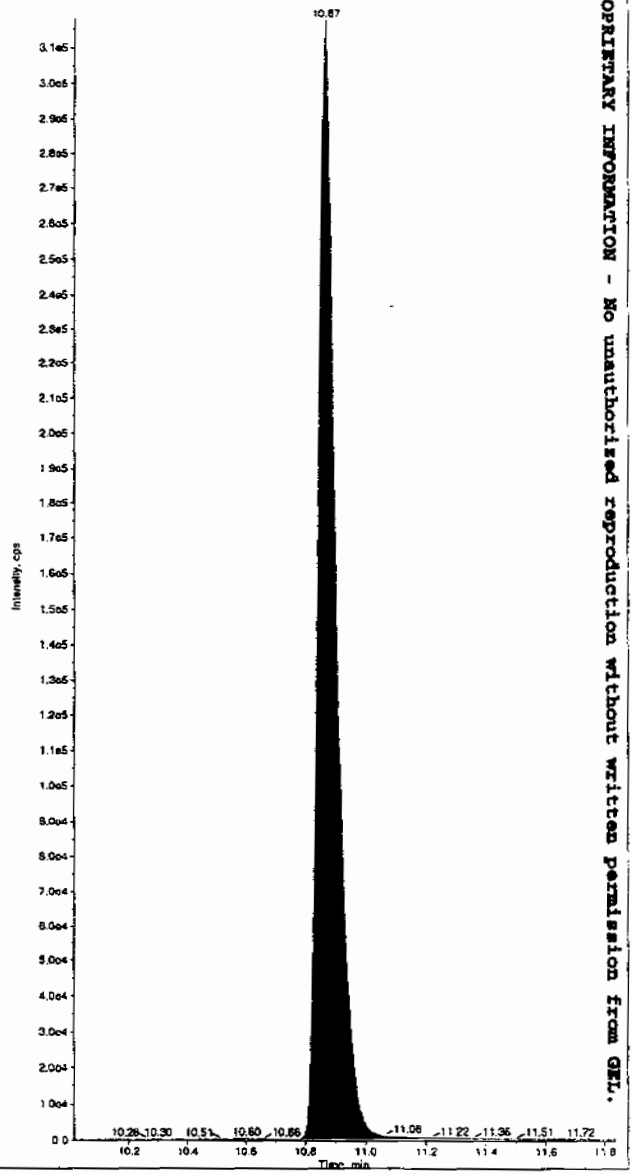

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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QUALITY CONTROL DATA

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 881634

Lab Code: GEI

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 1201872315

Sample Amount 2

Moisture:

Amount Units g

Date Received: 01-JUL-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713016a

Date Analyzed: 13-JUL-09 22:18

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713016a
Date: 13-Jul-2009
Time: 22:18:48
ID: 1201872315 | LANJ | 881635 | Solids | MB | 2 |
Vial: 1:5,A

MAT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
5.947e+003

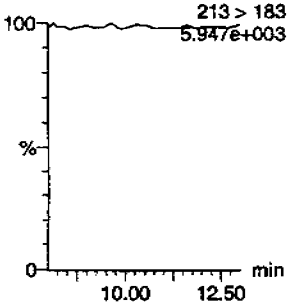

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
5.823e+003

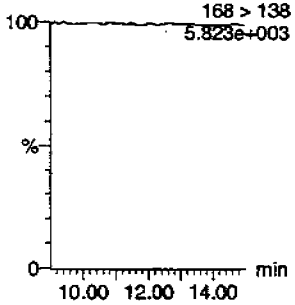

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.850e+004

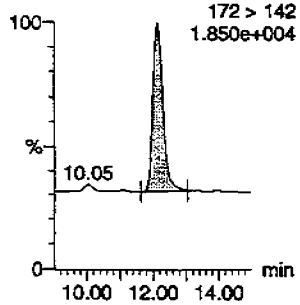

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
5.935e+003

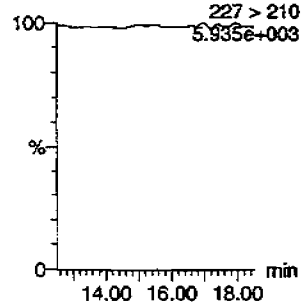

24-dinitrotoluene
F8:MRM of 2 channels,AP-
14.51
182 > 152
3.177e+004

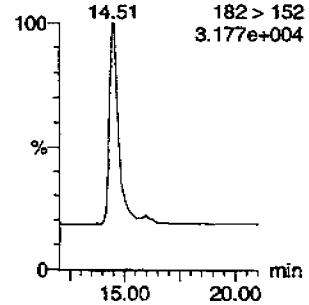

26-dinitrotoluene
F8:MRM of 2 channels,AP-
14.51
182 > 152
3.177e+004

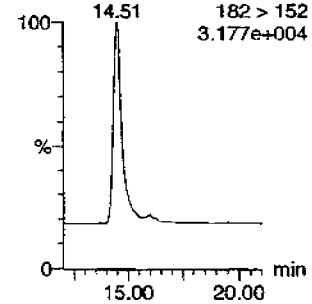

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.347e+004

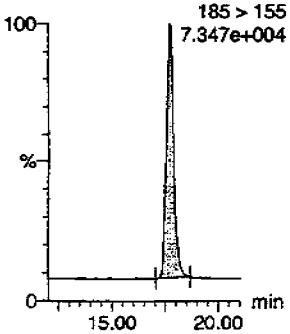

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
5.836e+003

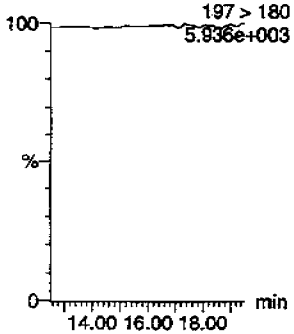

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.793e+003

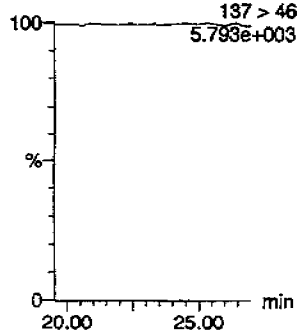

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
3.177e+004

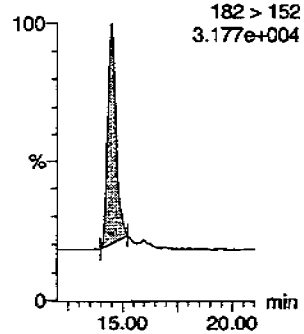

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
5.793e+003

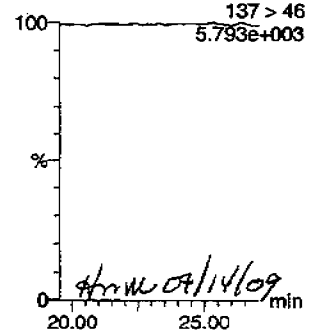

HMW 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
5.934e+003

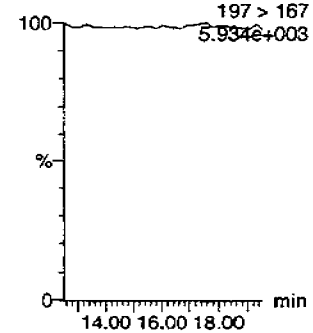

505

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

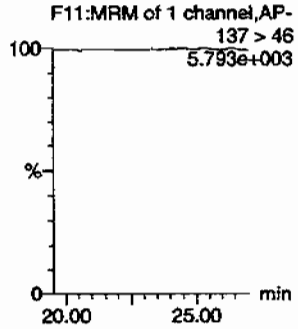

HMX

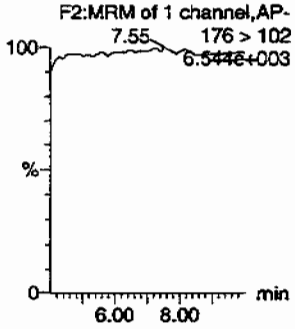

Nitrobenzene

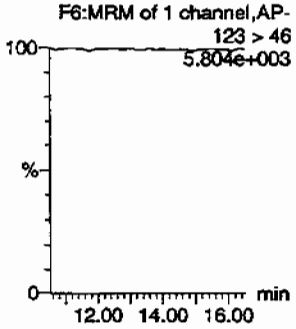

PETN

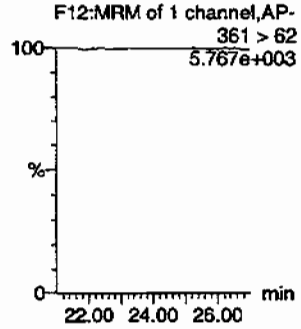

RDX

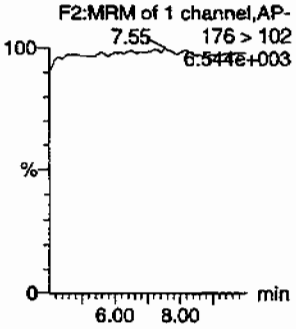

Tetryl

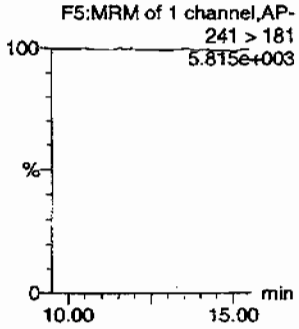

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Area	Amount	%Rec	%Dev	S/N
1201872315	HMX	176 > 102			4459.475									
1201872315	RDX	176 > 102			4459.475									
1201872315	135-Trinitrobenzene	213 > 183			4459.475									
1201872315	13-Dinitrobenzene-d4	172 > 142	12.14	4459.475		4459.475	4459.475	bb			565.7513	113.2	13.2	476.2
1201872315	13-Dinitrobenzene	168 > 138			4459.475									
1201872315	Tetryl	241 > 181			4459.475									
1201872315	Nitrobenzene	123 > 46			4459.475									
1201872315	4-Amino-26-dinitrotoluene	197 > 167			27118.906									
1201872315	2-Amino-46-dinitrotoluene	197 > 180			27118.906									
1201872315	246-Trinitrotoluene	227 > 210			27118.906									
1201872315	34-dinitrotoluene	182 > 152	14.51	10855.021	27118.906	10855.021	200.138	bb			229.7662	91.9	-8.1	292.4
1201872315	26-dinitrotoluene	182 > 152			27118.906									
1201872315	24-dinitrotoluene	182 > 152			27118.906									
1201872315	26-dinitrotoluene-d3	185 > 155	17.71	27118.906		27118.906	27118.906	bb			567.0562	113.4	13.4	1173.3
1201872315	2-Nitrotoluene	137 > 46			27118.906									
1201872315	4-Nitrotoluene	137 > 46			27118.906									
1201872315	3-Nitrotoluene	137 > 46			27118.906									
1201872315	PETN	361 > 62			27118.906									

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 881634

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 1201872315

Sample Amount 2

Moisture:

Amount Units g

Date Received: 01-JUL-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0708014.wiff

Date Analyzed: 08-JUL-09 13:58

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sample Name: "1201872315" Sample ID: "881635|2|LER" File: "EXS0708014.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:58:14 PM

Modified: No

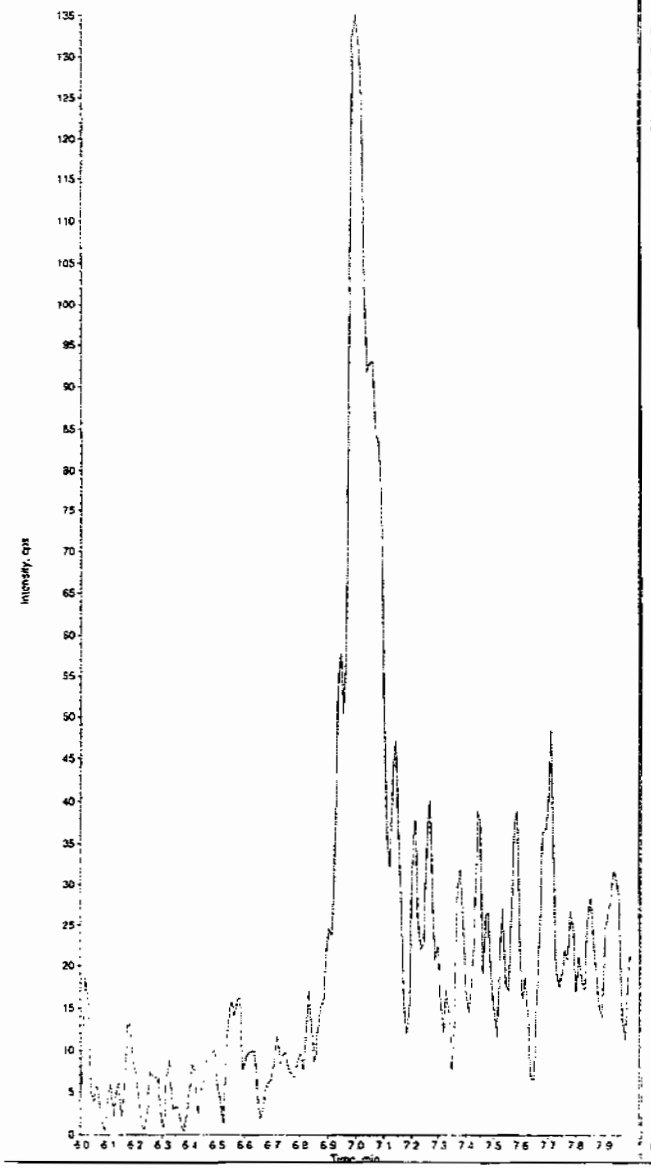

Sample Name: "1201872315" Sample ID: "881635|2|LER" File: "EXS0708014.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:58:14 PM

Modified: No

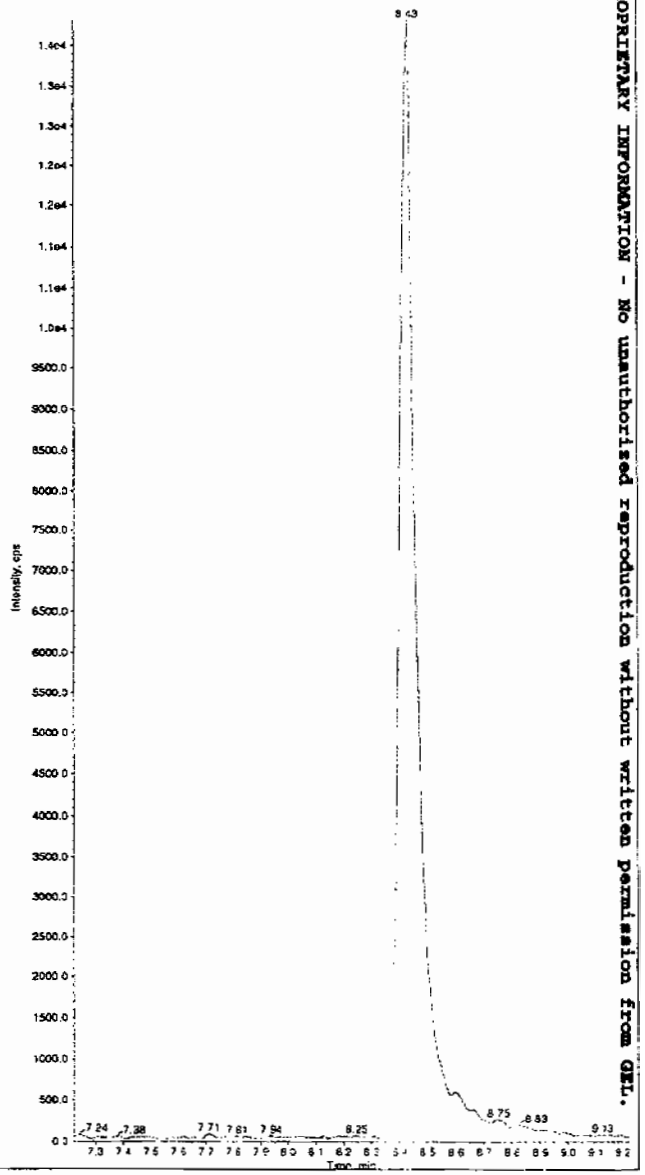

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508

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201872315" Sample ID: "881635|2|LER" File: "EXS0708014.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 277. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:58:14 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.42 min
Area: 5.98e+005 counts
Height: 111054.703 cps
Start Time: 8.29 min
End Time: 9.28 min

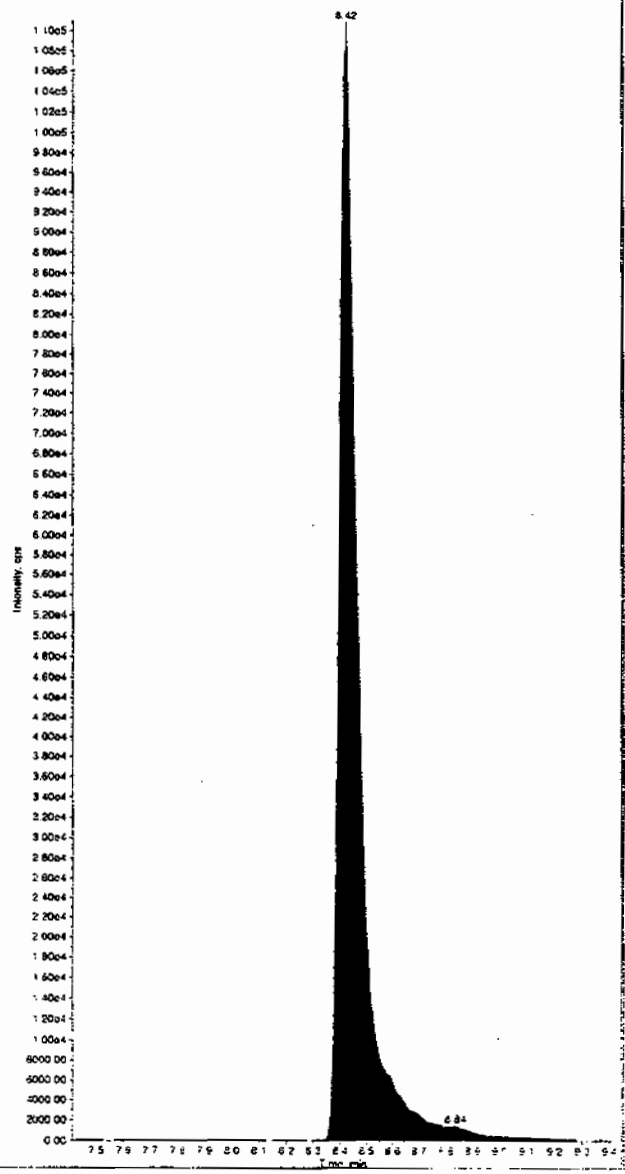

509

Sample Name: "1201872315" Sample ID: "881635|2|LER" File: "EXS0708014.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:58:14 PM

Modified: No

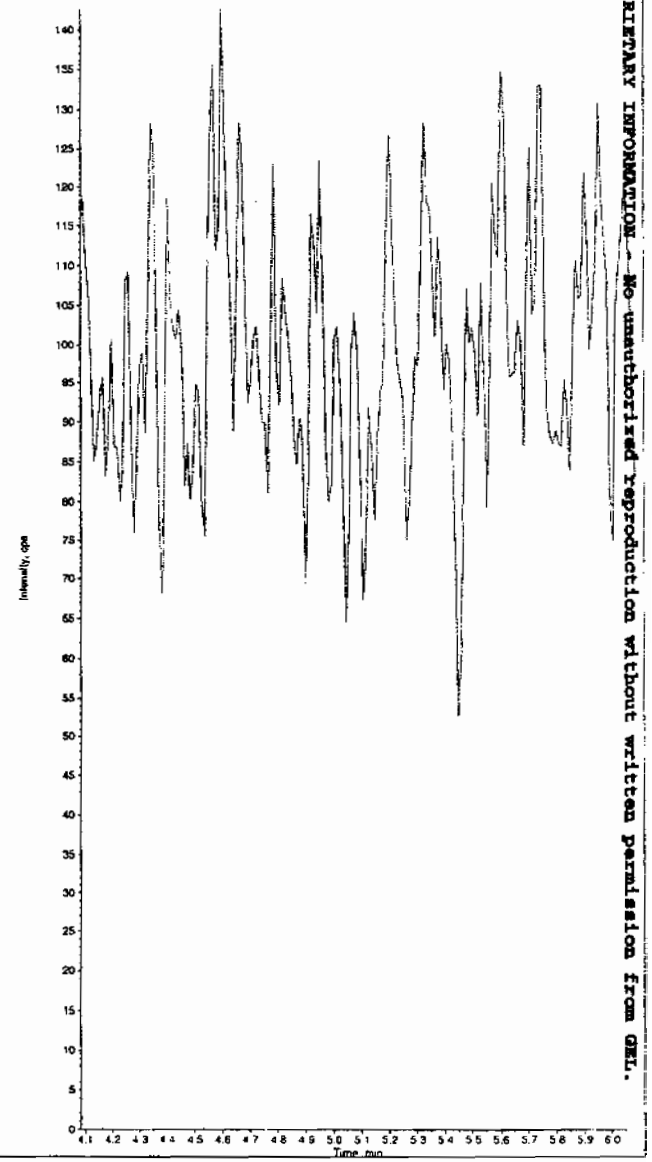

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201872315" Sample ID: "881635|2|LER" File: "EXS0708014.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:58:14 PM

Modified: No

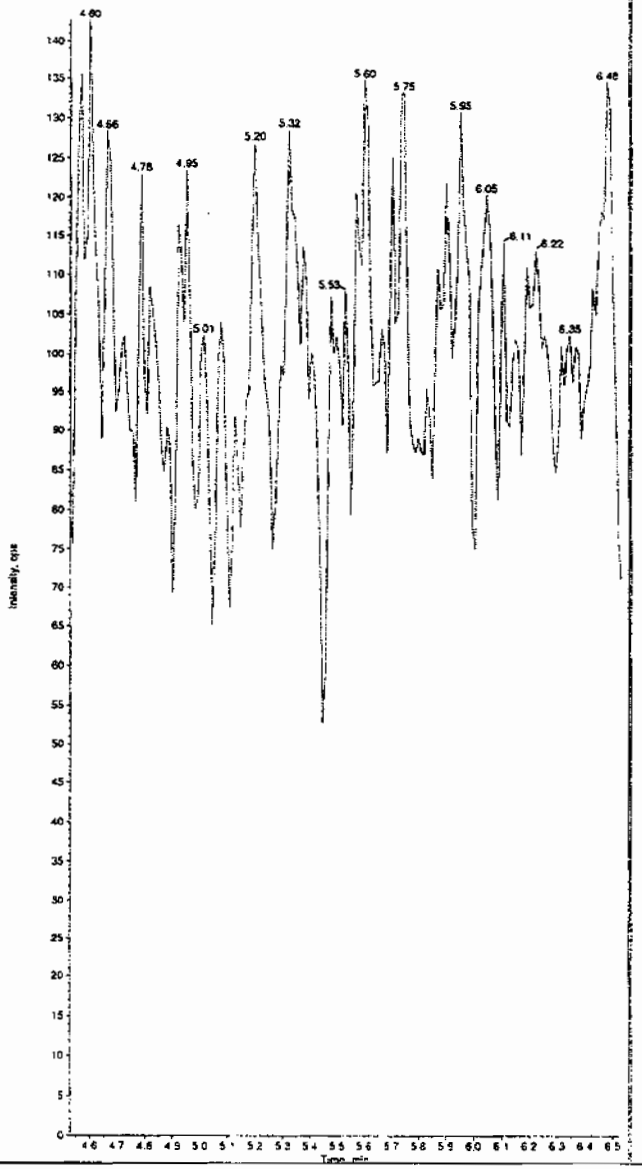

Sample Name: "1201872315" Sample ID: "881635|2|LER" File: "EXS0708014.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 7/8/2009
Acq. Time: 1:58:14 PM

Modified: No

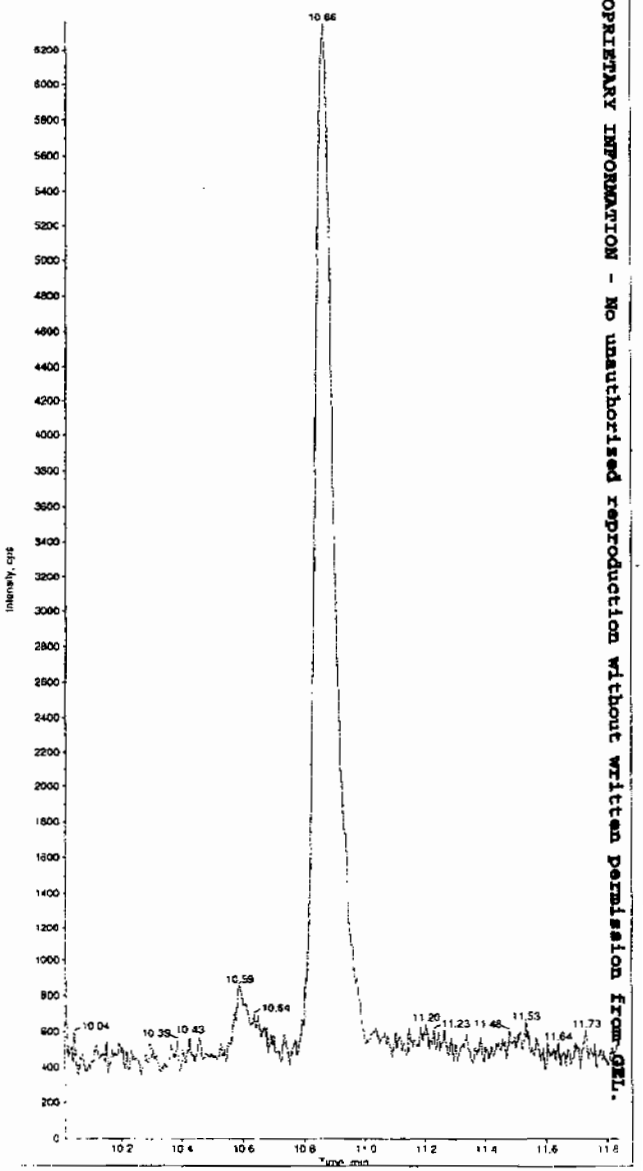

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 881634

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 1201872316

Sample Amount 2

Moisture:

Amount Units g

Date Received: 01-JUL-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713017a

Date Analyzed: 13-JUL-09 22:48

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5770	
121-14-2	2,4-Dinitrotoluene	5530	
121-82-4	RDX	5110	
19406-51-0	4-Amino-2,6-dinitrotoluene	5120	
2691-41-0	HMX	4760	
35572-78-2	2-Amino-4,6-dinitrotoluene	5300	
479-45-8	Tetryl	4580	
606-20-2	2,6-Dinitrotoluene	4880	
78-11-5	PETN	4540	
88-72-2	o-Nitrotoluene	4330	
98-95-3	Nitrobenzene	4470	
99-08-1	m-Nitrotoluene	4460	
99-35-4	1,3,5-Trinitrobenzene	5000	
99-65-0	m-Dinitrobenzene	5190	
99-99-0	p-Nitrotoluene	4560	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713017a
Date: 13-Jul-2009
Time: 22:48:19
ID: 1201872316 | LAW | 881635 | Soil | LC8 | 2 |
Vial: 1:5,B

MAP 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
8.484e+004

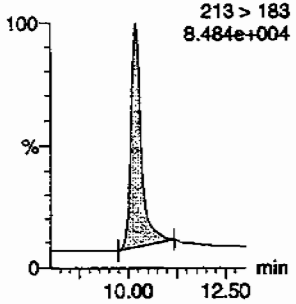

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.061e+004

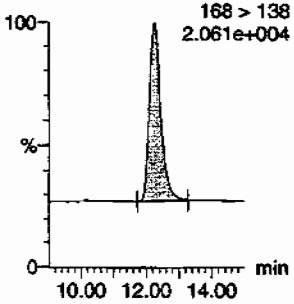

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.821e+004

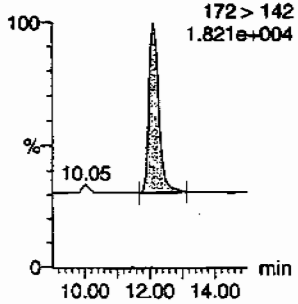

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
8.435e+004

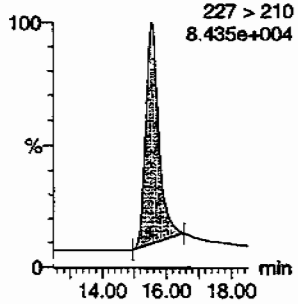

24-dinitrotoluene
F8:MRM of 2 channels,AP-
17.88
182 > 152
8.510e+004

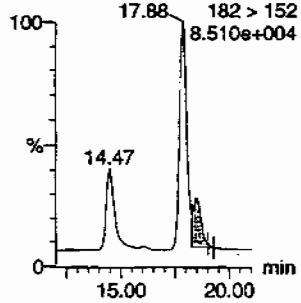

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
8.510e+004

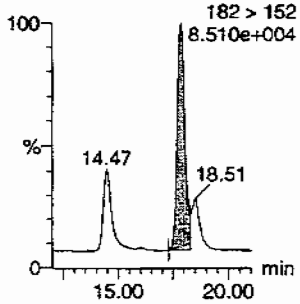

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.517e+004

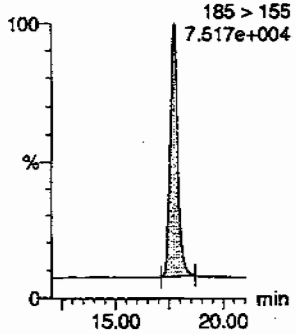

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.239e+004

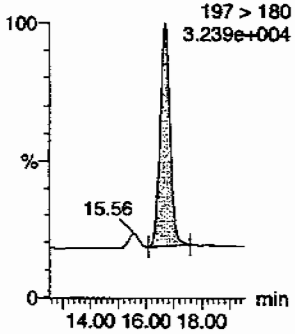

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.320e+004

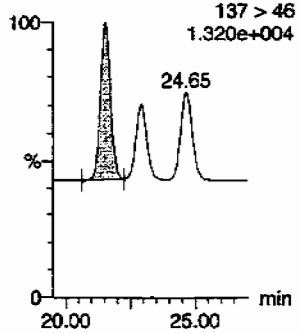

34-dinitrotoluene
F8:MRM of 2 channels,AP-
17.88
182 > 152
8.510e+004

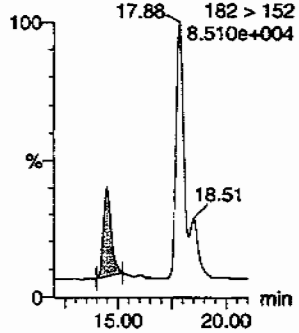

3-Nitrotoluene
F11:MRM of 1 channel,AP-
21.53
137 > 46
1.320e+004

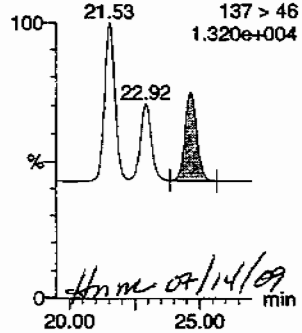

Hnm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.499e+004

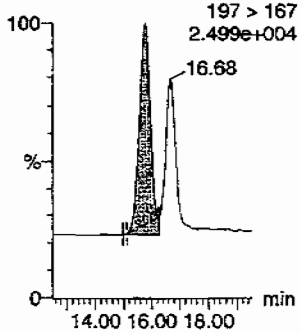

512

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

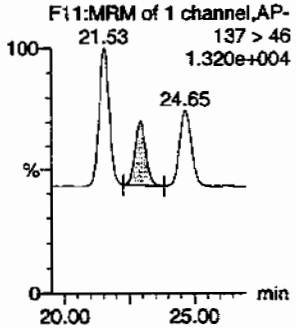

HMX

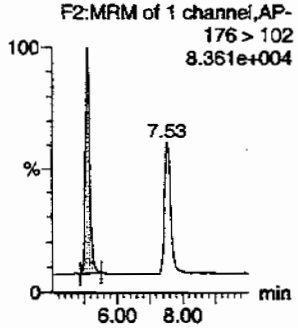

Nitrobenzene

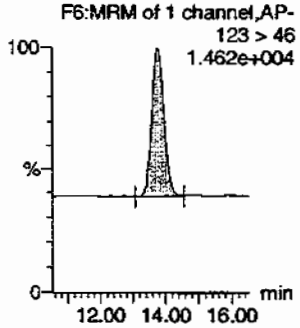

PETN

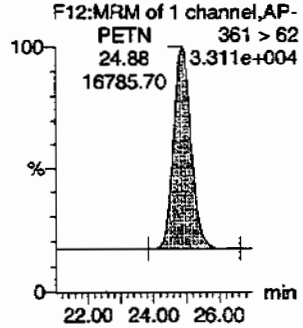

RDX

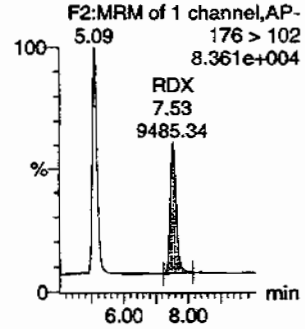

Tetryl

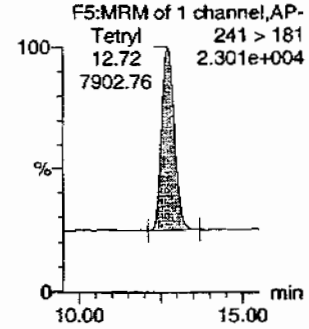

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Amount	%Rec	%Dev	S/N
1201872316	HMX	176 > 102	5.09	12823.178	4435.421	12823.178	1445.542	bb			476.4719	95.3	-4.7	1483.8
1201872316	RDX	176 > 102	7.53	9485.337	4435.421	9485.337	1069.271	bb			510.5596	102.1	2.1	864.5
1201872316	135-Trinitrobenzene	213 > 183	10.20	24537.850	4435.421	24537.850	2766.124	bb			499.6877	99.9	-0.1	746.0
1201872316	13-Dinitrobenzene-d4	172 > 142	12.14	4435.421		4435.421	4435.421	bb			562.6997	112.5	12.5	304.8
1201872316	13-Dinitrobenzene	168 > 138	12.27	6077.783	4435.421	6077.783	685.142	bb			518.6810	103.7	3.7	509.0
1201872316	Tetryl	241 > 181	12.72	7902.764	4435.421	7902.764	890.870	bb			457.8463	91.6	-8.4	408.4
1201872316	Nitrobenzene	123 > 46	13.76	3882.645	4435.421	3882.645	437.686	bb			447.2348	89.4	-10.6	518.7
1201872316	4-Amino-26-dinitrotoluene	197 > 167	15.77	8717.742	28199.477	8717.742	154.573	MM	14-Jul-09	10:19:04	512.2921	102.5	2.5	278.9
1201872316	2-Amino-46-dinitrotoluene	197 > 180	16.68	10997.818	28199.477	10997.818	195.000	bb			530.4568	106.1	6.1	466.4
1201872316	246-Trinitrotoluene	227 > 210	15.58	36364.672	28199.477	36364.672	644.776	bb			576.9439	115.4	15.4	729.0
1201872316	34-dinitrotoluene	182 > 152	14.47	11588.732	28199.477	11588.732	205.478	bb			235.8970	94.4	-5.6	282.6
1201872316	26-dinitrotoluene	182 > 152	17.88	31387.170	28199.477	31387.170	556.520	MM	14-Jul-09	10:15:32	488.4024	97.7	-2.3	792.1
1201872316	24-dinitrotoluene	182 > 152	18.51	7835.140	28199.477	7835.140	138.923	MM	14-Jul-09	10:12:05	552.6045	110.5	10.5	178.6
1201872316	26-dinitrotoluene-d3	185 > 155	17.71	28199.477		28199.477	28199.477	bb			589.6509	117.9	17.9	1575.2
1201872316	2-Nitrotoluene	137 > 46	21.53	3434.393	28199.477	3434.393	60.895	bb			432.9012	86.6	-13.4	208.7
1201872316	4-Nitrotoluene	137 > 46	22.92	1759.447	28199.477	1759.447	31.196	bb			455.5336	91.1	-8.9	100.2
1201872316	3-Nitrotoluene	137 > 46	24.65	2219.885	28199.477	2219.885	39.360	bb			445.9526	89.2	-10.8	116.8
1201872316	PETN	361 > 62	24.88	16785.699	28199.477	16785.699	297.624	bb			453.5986	90.7	-9.3	1585.6

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 881634

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 1201872316

Sample Amount 2

Moisture:

Amount Units g

Date Received: 01-JUL-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0708015.wiff

Date Analyzed: 08-JUL-09 14:14

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	4810	
59229-75-3	2,6-Diamino-4-nitrotoluene	4900	
618-87-1	3,5-Dinitroaniline	5390	
6629-29-4	2,4-Diamino-6-nitrotoluene	4530	
78-30-8	tris(o-cresyl) phosphate	5520	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sam 7/9/09

Sample Name: "1201872316" Sample ID: "881635|2|LER" File: "EXS0708015.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 481. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:14:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.00 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 3.26e+005 counts
Height: 69690.231 cps
Start Time: 6.85 min
End Time: 7.44 min

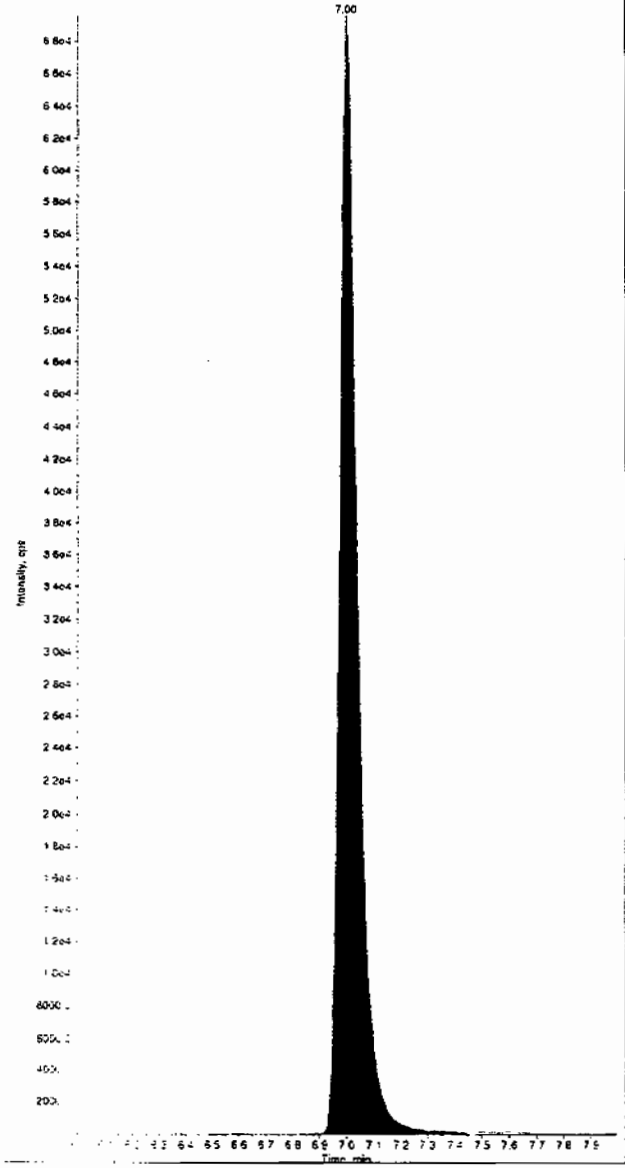

515

Sample Name: "1201872316" Sample ID: "881635|2|LER" File: "EXS0708015.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 539. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:14:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.23 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.23 min
Area: 8.41e+005 counts
Height: 207004.181 cps
Start Time: 8.15 min
End Time: 8.36 min

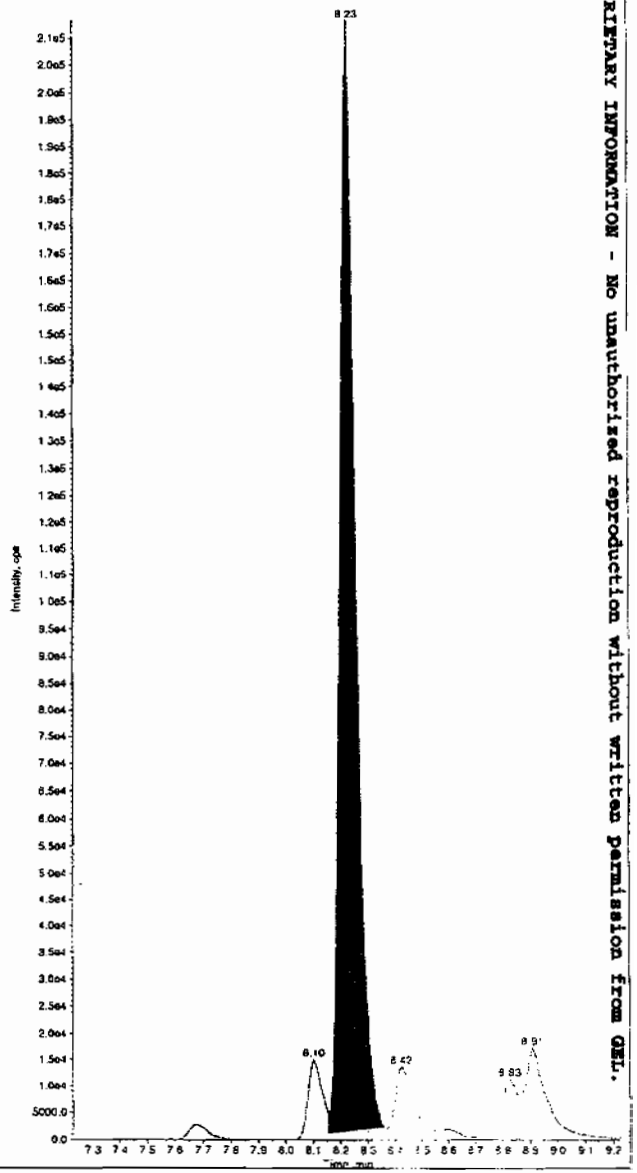

Hmm 07/09/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201872316" Sample ID: "881635|2|LER" File: "EXS0708015.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 252. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:14:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.42 min
Area: 5.46e+005 counts
Height: 106503.151 cps
Start Time: 8.34 min
End Time: 8.74 min

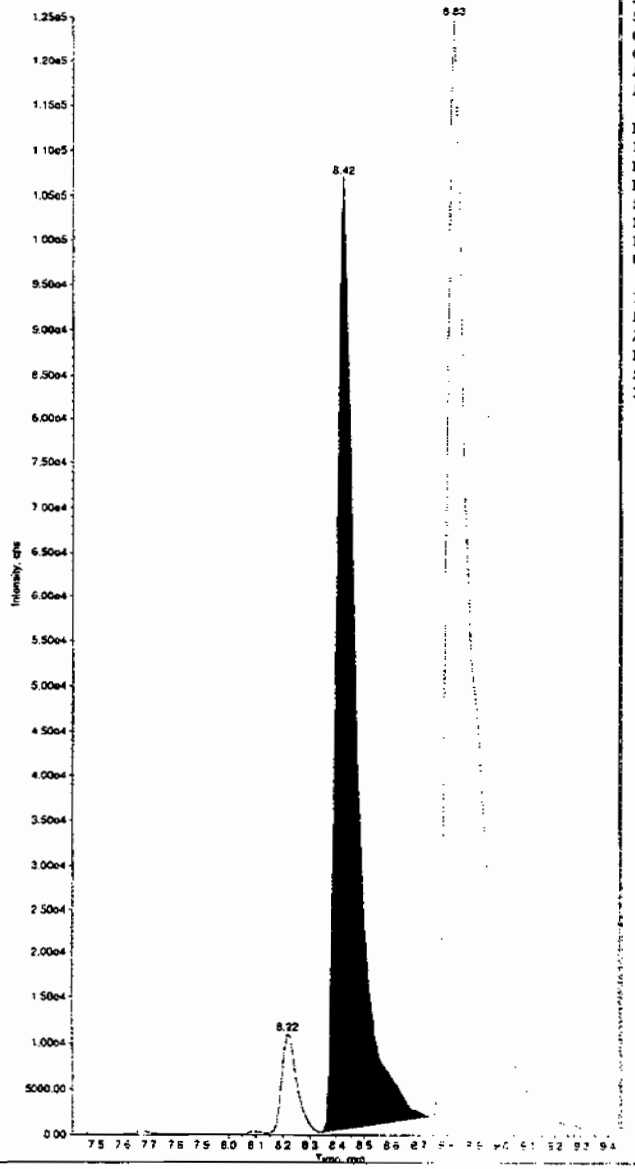

Sample Name: "1201872316" Sample ID: "881635|2|LER" File: "EXS0708015.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 490. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:14:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.10 min
Area: 8.64e+004 counts
Height: 18275.589 cps
Start Time: 4.95 min
End Time: 5.31 min

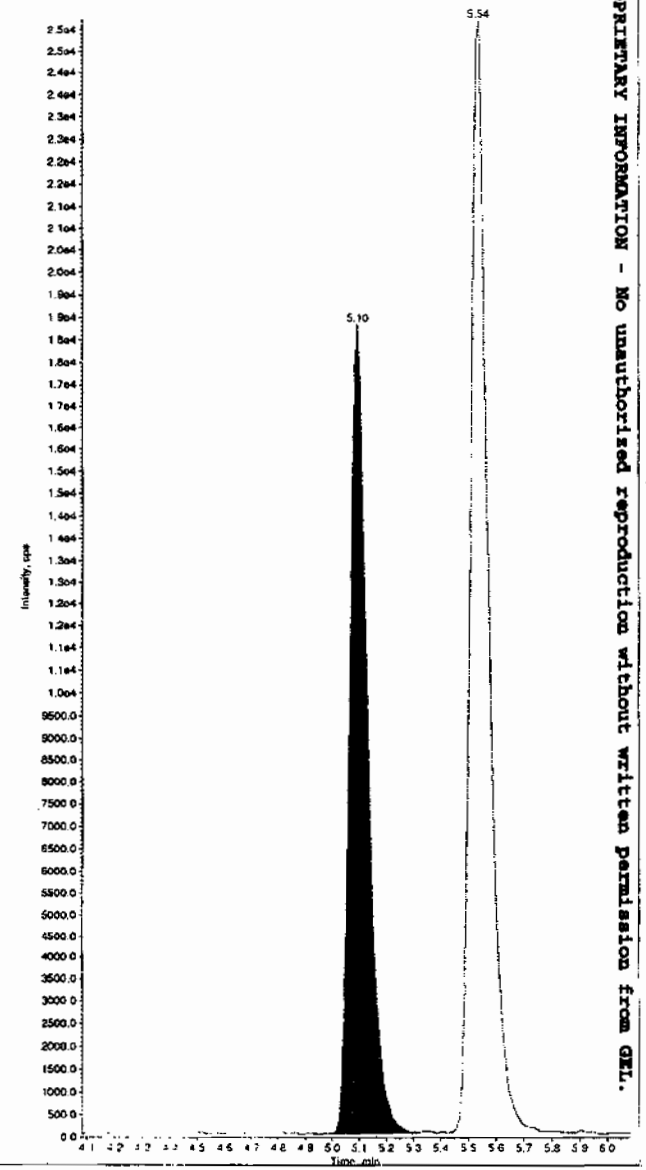

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201872316" Sample ID: "881635|2|LER" File: "EXS0708015.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 453. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:14:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.54 min
Area: 1.14e+005 counts
Height: 25126.328 cps
Start Time: 5.44 min
End Time: 5.86 min

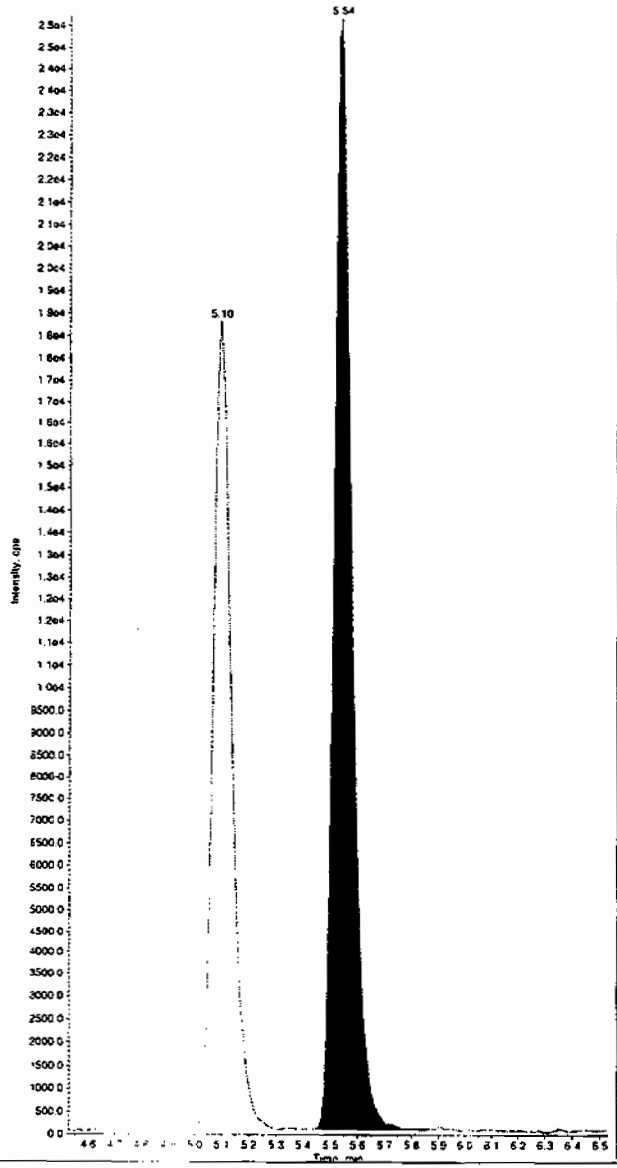

Sample Name: "1201872316" Sample ID: "881635|2|LER" File: "EXS0708015.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 552. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:14:25 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.58e+006 counts
Height: 1456935.425 cps
Start Time: 10.8 min
End Time: 11.2 min

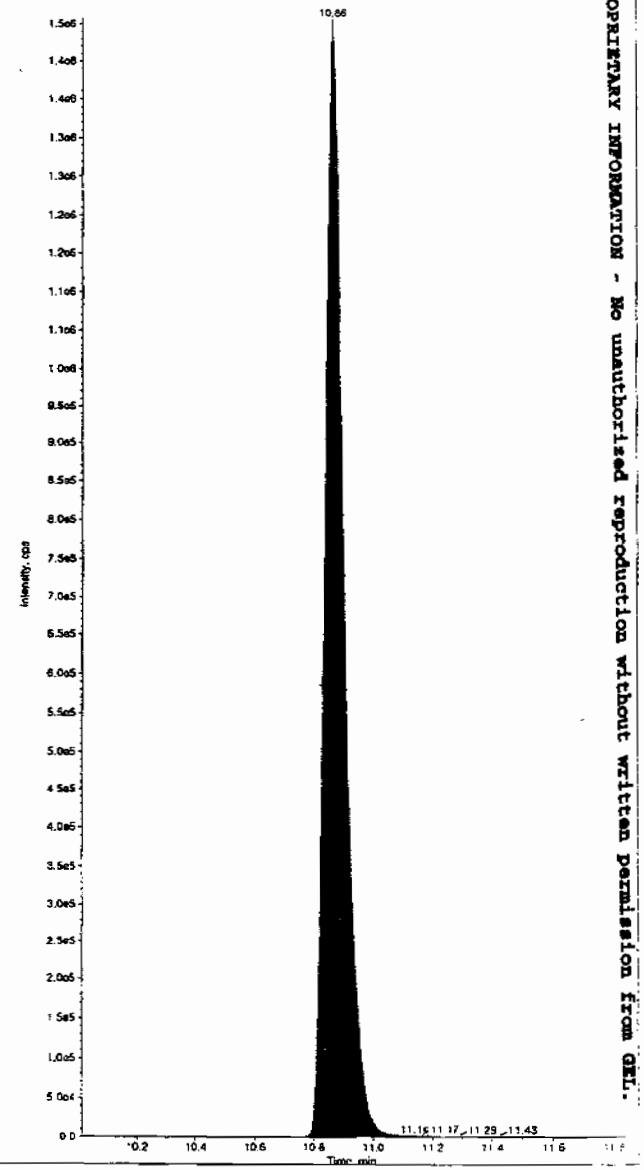

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10464(232582001MS)

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 1201872317

Sample Amount 2

Moisture: 6.7

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713019a

Date Analyzed: 13-JUL-09 23:47

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5600	
121-14-2	2,4-Dinitrotoluene	5630	
121-82-4	RDX	5530	
19406-51-0	4-Amino-2,6-dinitrotoluene	5300	
2691-41-0	HMX	5550	
35572-78-2	2-Amino-4,6-dinitrotoluene	5270	
479-45-8	Tetryl	4500	
606-20-2	2,6-Dinitrotoluene	4890	
78-11-5	PETN	5160	
88-72-2	o-Nitrotoluene	4400	
98-95-3	Nitrobenzene	4550	
99-08-1	m-Nitrotoluene	4550	
99-35-4	1,3,5-Trinitrobenzene	5420	
99-65-0	m-Dinitrobenzene	5290	
99-99-0	p-Nitrotoluene	4660	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713019a
Date: 13-Jul-2009
Time: 23:47:19
ID: 1201872317 | LANL | 881635 | Solid | 232582001MS | 21
Vial: 1:5,D

MAT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
9.255e+004

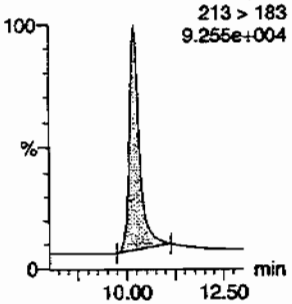

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
2.078e+004

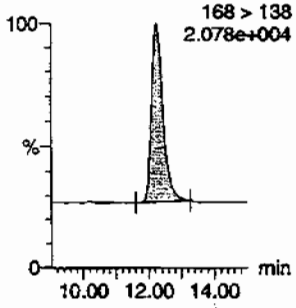

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.785e+004

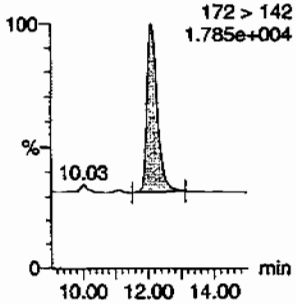

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
7.776e+004

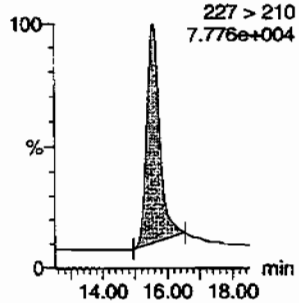

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
7.689e+004

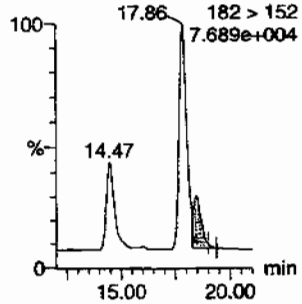

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
7.689e+004

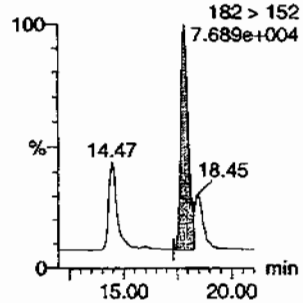

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.215e+004

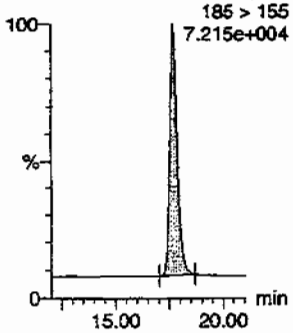

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
3.015e+004

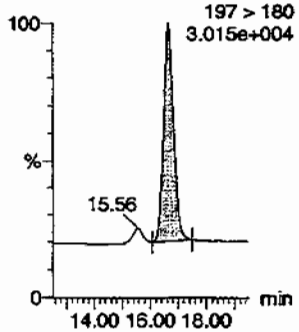

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.266e+004

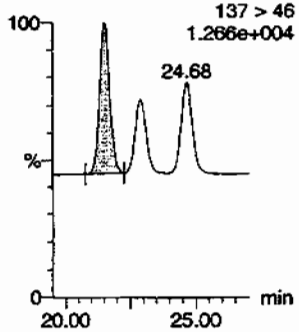

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
7.689e+004

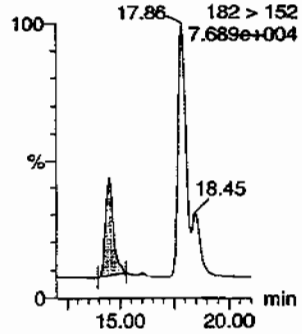

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.266e+004

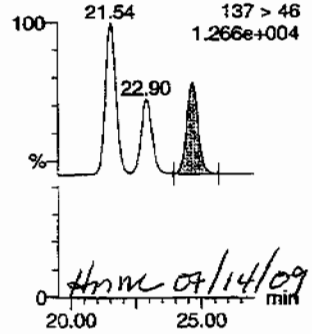

HMM 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.471e+004

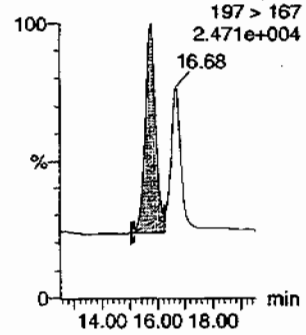

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

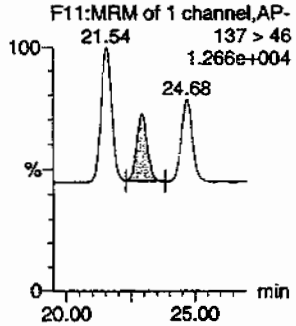

HMX

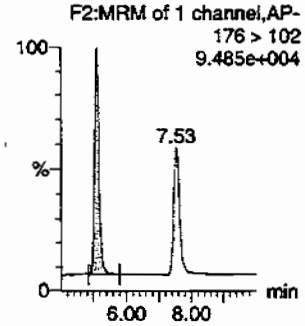

Nitrobenzene

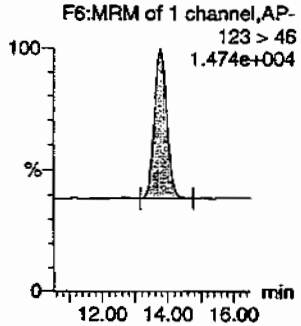

PETN

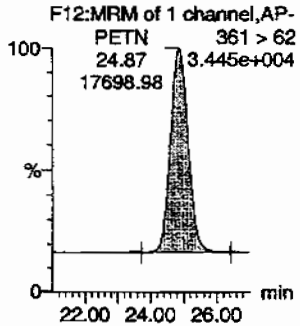

RDX

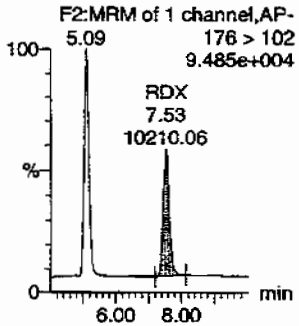

Tetryl

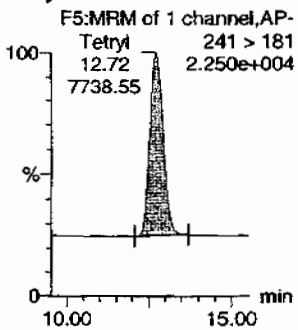

ID	Name	Trace	RT	Area	IS Area	Adj Resp	Response	Flags	Modifier	Modtime	ug/mL	%Rec	%Dev	S/N
1201872317	HMX	176 > 102	5.09	14849.404	4409.571	14849.404	1683.770	db			554.9951	111.0	11.0	93.4
1201872317	RDX	176 > 102	7.53	10210.057	4409.571	10210.057	1157.715	bb			552.7902	110.6	10.6	51.8
1201872317	135-Trinitrobenzene	213 > 183	10.20	26456.150	4409.571	26456.150	2999.855	bb			541.9101	108.4	8.4	1296.9
1201872317	13-Dinitrobenzene-d4	172 > 142	12.14	4409.571		4409.571	4409.571	bb			559.4202	111.9	11.9	313.1
1201872317	13-Dinitrobenzene	168 > 138	12.27	6158.280	4409.571	6158.280	698.286	bb			528.6315	105.7	5.7	659.8
1201872317	Tetryl	241 > 181	12.72	7738.547	4409.571	7738.547	877.472	bb			450.2605	90.1	-9.9	678.2
1201872317	Nitrobenzene	123 > 46	13.76	3926.035	4409.571	3926.035	445.172	bb			454.8840	91.0	-9.0	318.8
1201872317	4-Amino-26-dinitrotoluene	197 > 167	15.77	8358.750	26115.924	8358.750	160.032	MM	14-Jul-09	10:19:13	530.3843	106.1	6.1	580.0
1201872317	2-Amino-46-dinitrotoluene	197 > 180	16.66	10111.141	26115.924	10111.141	193.582	bb			526.5982	105.3	5.3	594.8
1201872317	246-Trinitrotoluene	227 > 210	15.58	32673.307	26115.924	32673.307	625.544	bb			559.7352	111.9	11.9	549.9
1201872317	34-dinitrotoluene	182 > 152	14.47	11690.940	26115.924	11690.940	223.828	bb			256.9636	102.8	2.8	180.2
1201872317	26-dinitrotoluene	182 > 152	17.86	29085.848	26115.924	29085.848	556.860	MM	14-Jul-09	10:15:39	488.7008	97.7	-2.3	463.8
1201872317	24-dinitrotoluene	182 > 152	18.45	7398.013	26115.924	7398.013	141.638	MM	14-Jul-09	10:12:13	563.4020	112.7	12.7	112.1
1201872317	26-dinitrotoluene-d3	185 > 155	17.66	26115.924		26115.924	26115.924	bb			546.0839	109.2	9.2	1948.4
1201872317	2-Nitrotoluene	137 > 46	21.54	3232.754	26115.924	3232.754	61.892	bb			439.9944	88.0	-12.0	766.3
1201872317	4-Nitrotoluene	137 > 46	22.90	1667.033	26115.924	1667.033	31.916	bb			466.0409	93.2	-6.8	375.1
1201872317	3-Nitrotoluene	137 > 46	24.68	2098.125	26115.924	2098.125	40.169	bb			455.1193	91.0	-9.0	462.0
1201872317	PETN	361 > 62	24.87	17698.982	26115.924	17698.982	338.854	bb			516.4356	103.3	3.3	2469.1

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10464(232582001MS)

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 1201872317

Sample Amount 2

Moisture: 6.7

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0708017.wiff

Date Analyzed: 08-JUL-09 14:46

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	4240	
59229-75-3	2,6-Diamino-4-nitrotoluene	5450	
618-87-1	3,5-Dinitroaniline	5220	
6629-29-4	2,4-Diamino-6-nitrotoluene	5140	
78-30-8	tris(o-cresyl) phosphate	5330	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Lam 7/9/09

Sample Name: "1201872317" Sample ID: "881635|2|LER" File: "EXS0708017.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 424. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:46:49 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.00 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 2.86e+005 counts
Height: 58417.377 cps
Start Time: 6.87 min
End Time: 7.54 min

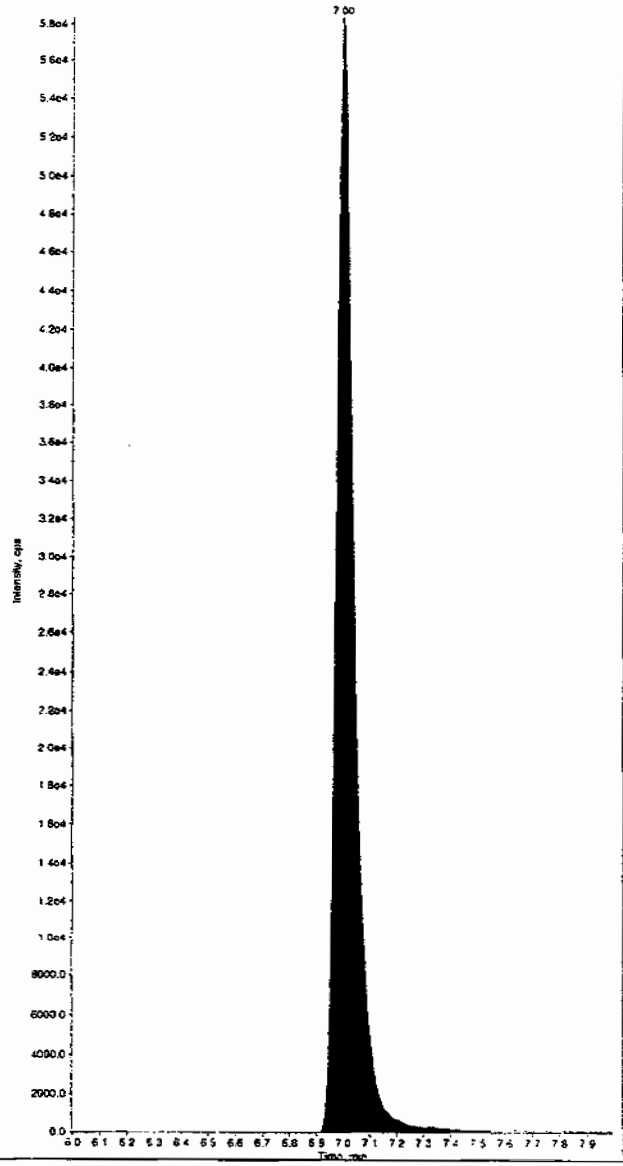

522

Sample Name: "1201872317" Sample ID: "881635|2|LER" File: "EXS0708017.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 522. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:46:49 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.23 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.23 min
Area: 8.12e+005 counts
Height: 195037.582 cps
Start Time: 8.16 min
End Time: 8.36 min

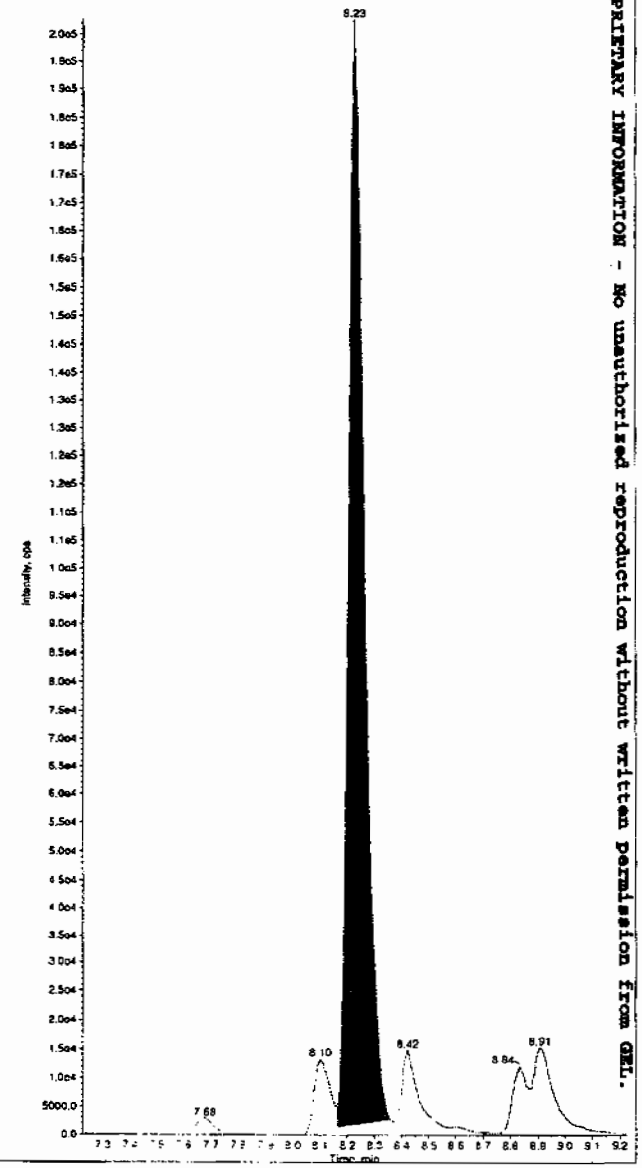

Hmm 07/09/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201872317" Sample ID: "881635|2|LER" File: "EXS0708017.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 250. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:46:49 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.42 min
Area: 5.41e+005 counts
Height: 110715.195 cps
Start Time: 8.34 min
End Time: 8.73 min

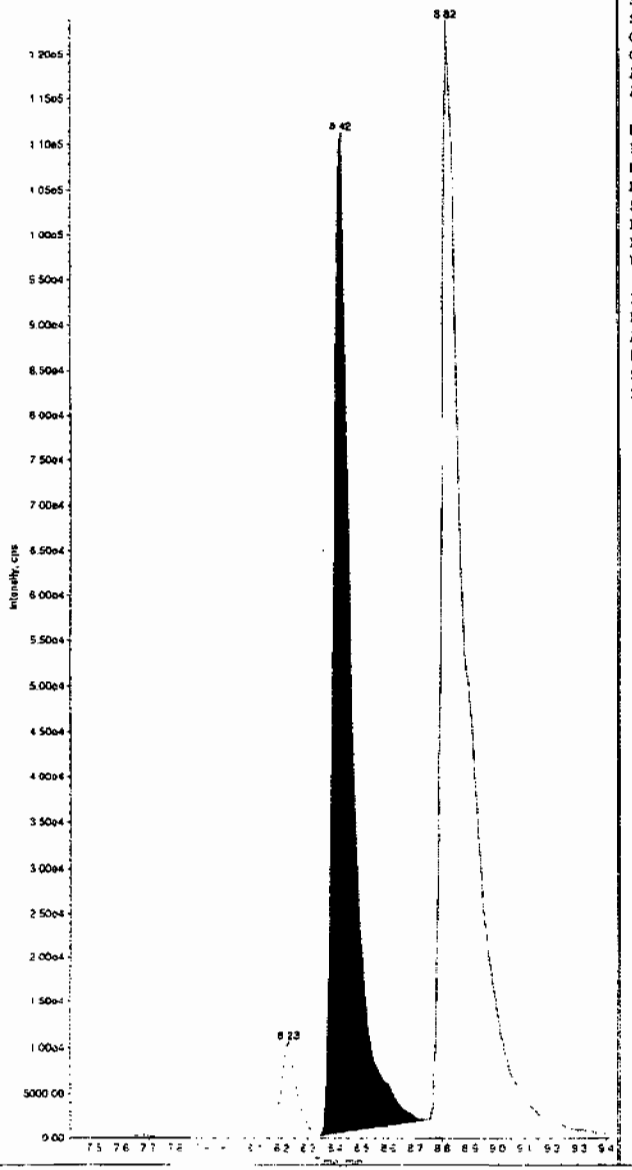

Sample Name: "1201872317" Sample ID: "881635|2|LER" File: "EXS0708017.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 545. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:46:49 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.10 min
Area: 9.62e+004 counts
Height: 20127.340 cps
Start Time: 4.96 min
End Time: 5.32 min

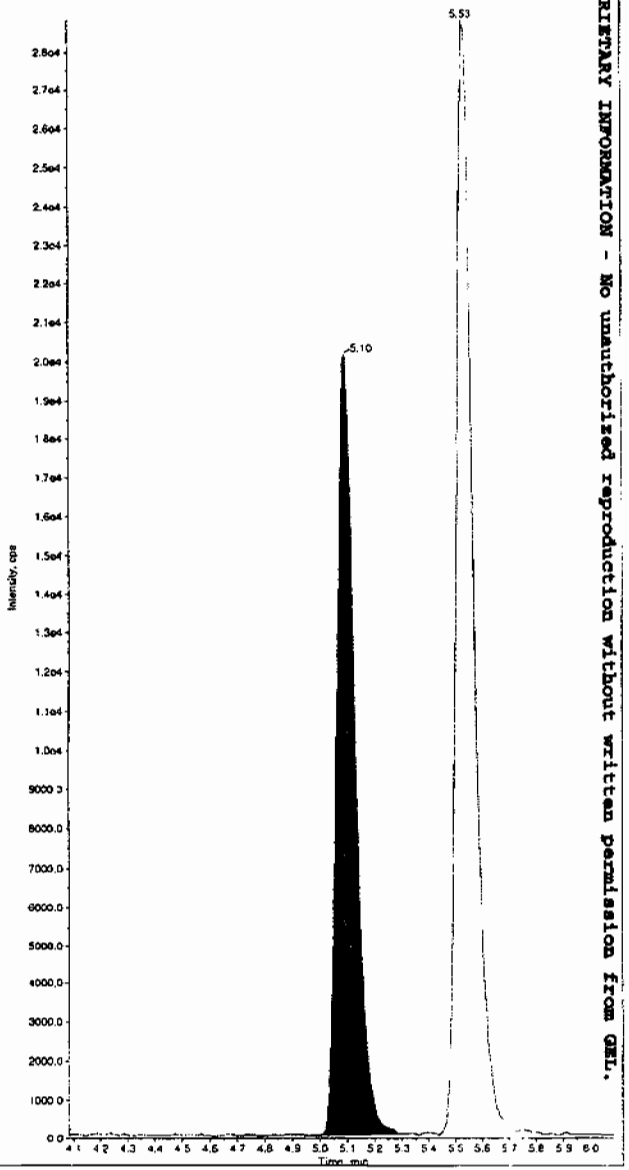

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*GEL SOP GL-OA-E-056, Method 8321A Modified LCMSMS#4

Sample Name: "1201872317" Sample ID: "881635|2|LER" File: "EXS0708017.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "156.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 514. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:46:49 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 1.29e+005 counts
Height: 28761.229 cps
Start Time: 5.44 min
End Time: 5.83 min

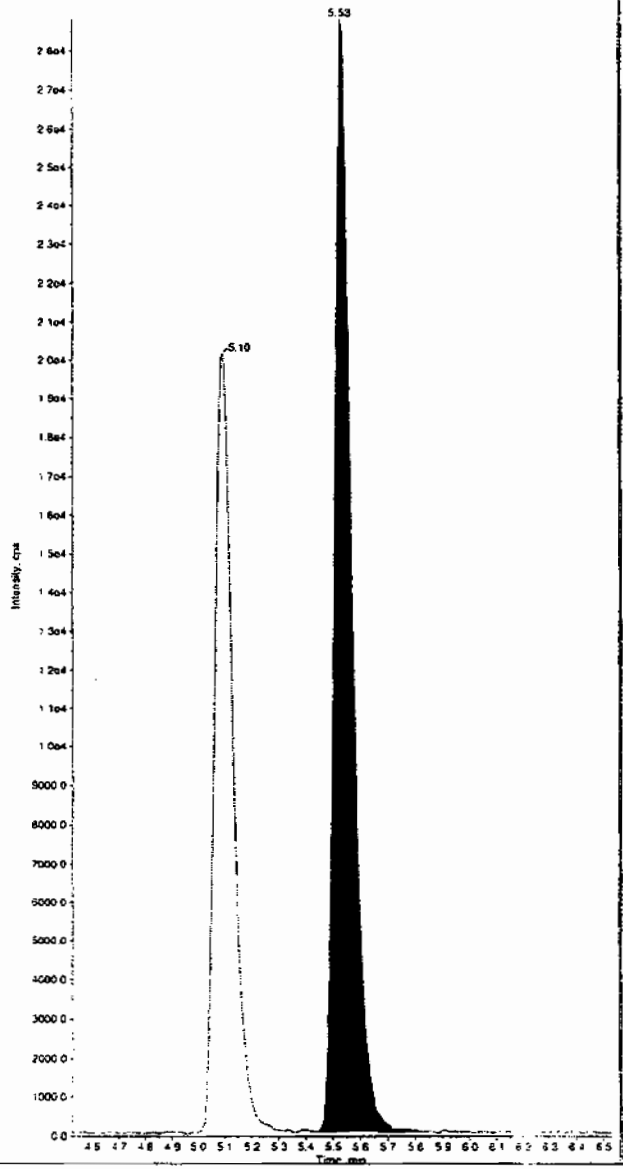

Sample Name: "1201872317" Sample ID: "881635|2|LER" File: "EXS0708017.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 533. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 2:46:49 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 6.37e+006 counts
Height: 1474067.383 cps
Start Time: 10.8 min
End Time: 11.1 min

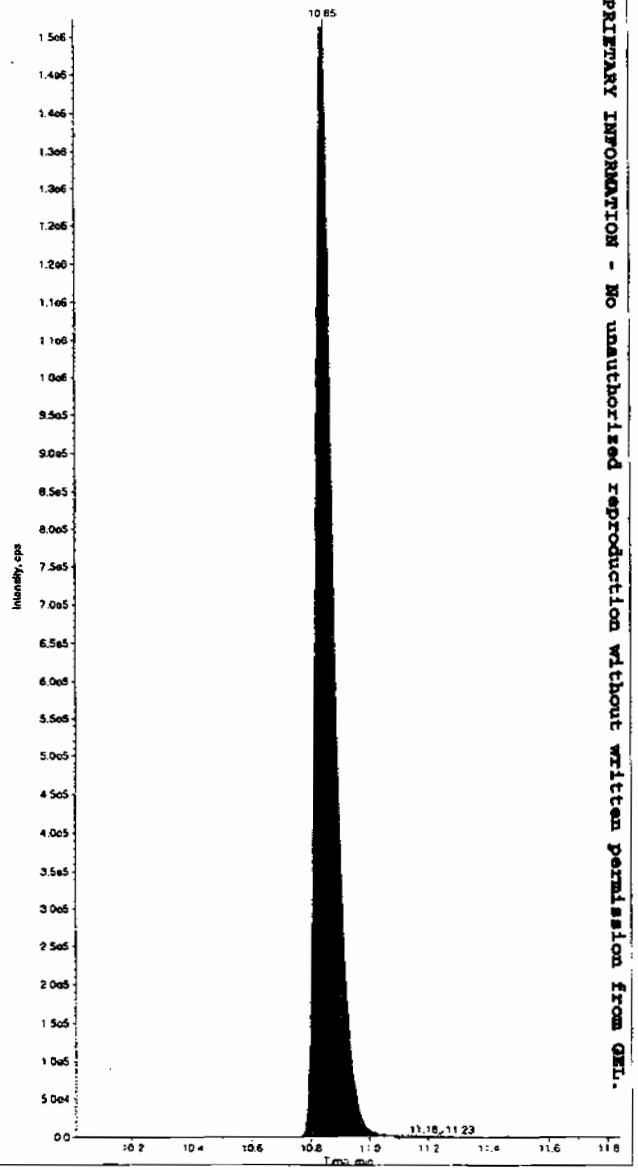

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10464(232582001MSD)

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 1201872318

Sample Amount 2

Moisture: 6.7

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0713020a

Date Analyzed: 14-JUL-09 00:16

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5040	
121-14-2	2,4-Dinitrotoluene	4590	
121-82-4	RDX	4510	
19406-51-0	4-Amino-2,6-dinitrotoluene	4800	
2691-41-0	HMX	4320	
35572-78-2	2-Amino-4,6-dinitrotoluene	4920	
479-45-8	Tetryl	4120	
606-20-2	2,6-Dinitrotoluene	4300	
78-11-5	PETN	4510	
88-72-2	o-Nitrotoluene	3820	
98-95-3	Nitrobenzene	3910	
99-08-1	m-Nitrotoluene	3720	
99-35-4	1,3,5-Trinitrobenzene	4580	
99-65-0	m-Dinitrobenzene	4630	
99-99-0	p-Nitrotoluene	4070	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0713020a
Date: 14-Jul-2009
Time: 00:16:48
ID: 1201872318 | LANL | 881635 | Soil | 232582001 MSD | 21
Vial: 1:5,E

MMT 7/14/09

135-Trinitrobenzene
F3:MRM of 1 channel,AP-
213 > 183
8.198e+004

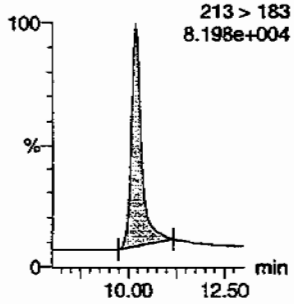

13-Dinitrobenzene
F4:MRM of 2 channels,AP-
168 > 138
1.957e+004

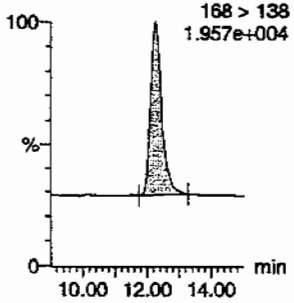

13-Dinitrobenzene-d4
F4:MRM of 2 channels,AP-
172 > 142
1.920e+004

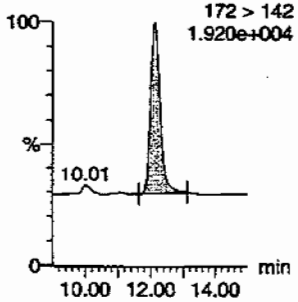

246-Trinitrotoluene
F9:MRM of 1 channel,AP-
227 > 210
7.051e+004

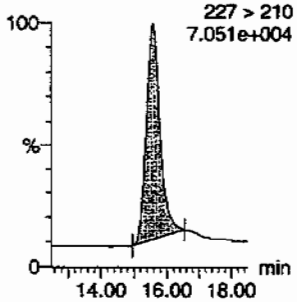

24-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
7.061e+004

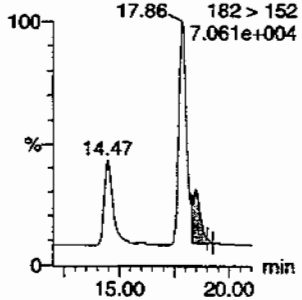

26-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
7.061e+004

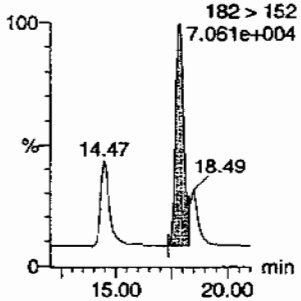

26-dinitrotoluene-d3
F8:MRM of 2 channels,AP-
185 > 155
7.680e+004

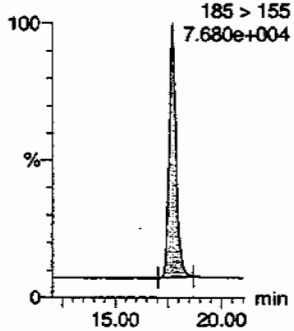

2-Amino-46-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 180
2.901e+004

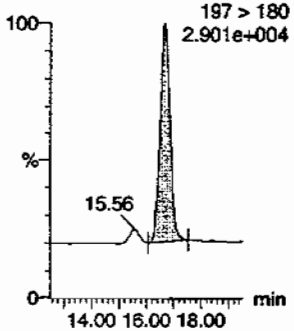

2-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.196e+004

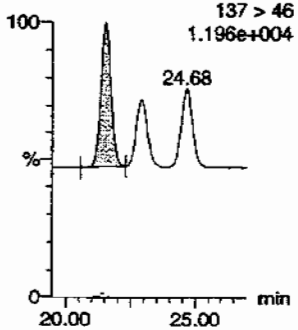

34-dinitrotoluene
F8:MRM of 2 channels,AP-
182 > 152
7.061e+004

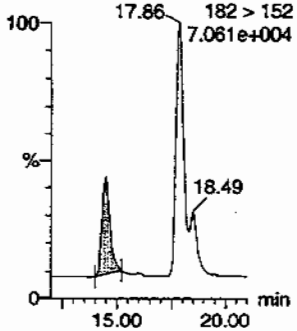

3-Nitrotoluene
F11:MRM of 1 channel,AP-
137 > 46
1.196e+004

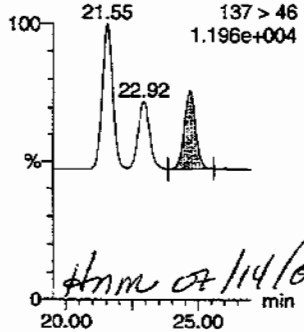

Hnm 07/14/09

4-Amino-26-dinitrotoluene
F10:MRM of 2 channels,AP-
197 > 167
2.408e+004

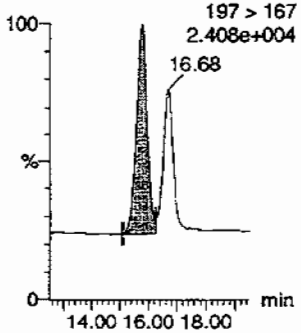

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Dataset: C:\MASSLYNX\New_Exp.PRO\071309expA.qld, Time: Tue Jul 14 10:22:19 2009

4-Nitrotoluene

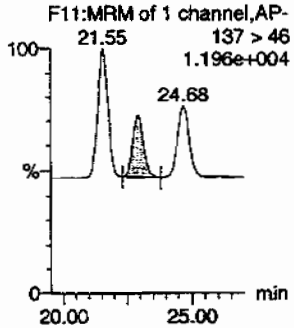

HMX

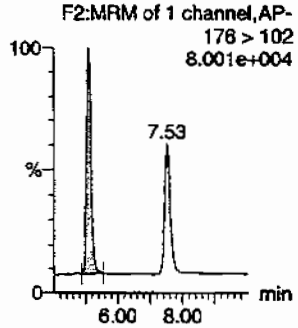

Nitrobenzene

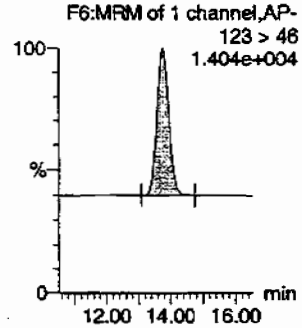

PETN

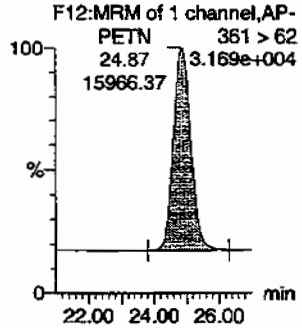

RDX

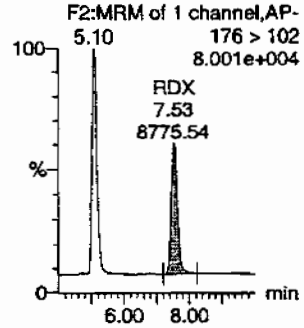

Tetryl

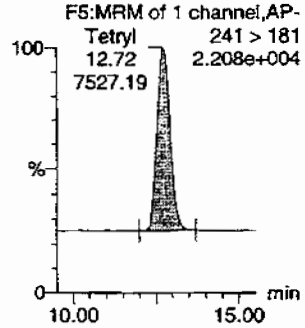

ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc	%Rec	%Dev	S/N
1201872318	HMX	176 > 102	5.10	12189.865	4647.894	12189.865	1311.332	bb			432.2342	86.4	-13.6	1469.7
1201872318	RDX	176 > 102	7.53	8775.538	4647.894	8775.538	944.034	bb			450.7607	90.2	-9.8	844.6
1201872318	135-Trinitrobenzene	213 > 183	10.20	23549.758	4647.894	23549.758	2533.379	bb			457.6434	91.5	-8.5	1914.9
1201872318	13-Dinitrobenzene-d4	172 > 142	12.14	4647.894		4647.894	4647.894	bb			589.6551	117.9	17.9	473.3
1201872318	13-Dinitrobenzene	168 > 138	12.24	5686.327	4647.894	5686.327	611.710	bb			463.0902	92.6	-7.4	684.7
1201872318	Tetryl	241 > 181	12.72	7527.193	4647.894	7527.193	809.742	bb			412.0803	82.4	-17.6	997.5
1201872318	Nitrobenzene	123 > 46	13.76	3560.000	4647.894	3560.000	382.969	bb			391.3241	78.3	-21.7	343.9
1201872318	4-Amino-26-dinitrotoluene	197 > 167	15.77	7813.517	26948.059	7813.517	144.974	MM	14-Jul-09	10:19:21	480.4783	96.1	-3.9	170.6
1201872318	2-Amino-46-dinitrotoluene	197 > 180	16.68	9748.032	26948.059	9748.032	180.867	bb			492.0101	98.4	-1.6	549.9
1201872318	246-Trinitrotoluene	227 > 210	15.58	30376.168	26948.059	30376.168	563.606	bb			504.3133	100.9	0.9	1257.3
1201872318	34-dinitrotoluene	182 > 152	14.47	10366.610	26948.059	10366.610	192.344	bb			220.8192	88.3	-11.7	440.5
1201872318	26-dinitrotoluene	182 > 152	17.86	26433.232	26948.059	26433.232	490.448	MM	14-Jul-09	10:15:46	430.4171	86.1	-13.9	1155.3
1201872318	24-dinitrotoluene	182 > 152	18.49	6223.702	26948.059	6223.702	115.476	MM	14-Jul-09	10:12:22	459.3355	91.9	-8.1	280.6
1201872318	26-dinitrotoluene-d3	185 > 155	17.68	26948.059		26948.059	26948.059	bb			563.4838	112.7	12.7	478.3
1201872318	2-Nitrotoluene	137 > 46	21.55	2895.748	26948.059	2895.748	53.728	bb			381.9558	76.4	-23.6	339.0
1201872318	4-Nitrotoluene	137 > 46	22.92	1502.244	26948.059	1502.244	27.873	bb			407.0036	81.4	-18.6	160.5
1201872318	3-Nitrotoluene	137 > 46	24.68	1767.914	26948.059	1767.914	32.802	bb			371.6489	74.3	-25.7	186.3
1201872318	PETN	361 > 62	24.87	15966.370	26948.059	15966.370	296.243	bb			451.4940	90.3	-9.7	2528.8

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: CAMO-09-10464(232582001MSD)

Lab Code: GEL

GEL Job No (SDG) 09-2508

Matrix: SOIL

GEL Sample ID: 1201872318

Sample Amount 2

Moisture: 6.7

Amount Units g

Date Received: 30-JUN-09

Extraction Type Sonication

Extraction Batch ID: 881634

Concentrated Extract Volume (mL) 10

Date Extracted: 06-JUL-09

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0708018.wiff

Date Analyzed: 08-JUL-09 15:03

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	3760	
59229-75-3	2,6-Diamino-4-nitrotoluene	4280	
618-87-1	3,5-Dinitroaniline	4600	
6629-29-4	2,4-Diamino-6-nitrotoluene	4040	
78-30-8	tris(o-cresyl) phosphate	4430	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Sfan 7/9/09

Sample Name: "1201872318" Sample ID: "881635[2]LER" File: "EXS0708018.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 376. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:03:01 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.00 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 7.00 min
Area: 2.53e+005 counts
Height: 53741.936 cps
Start Time: 6.85 min
End Time: 7.46 min

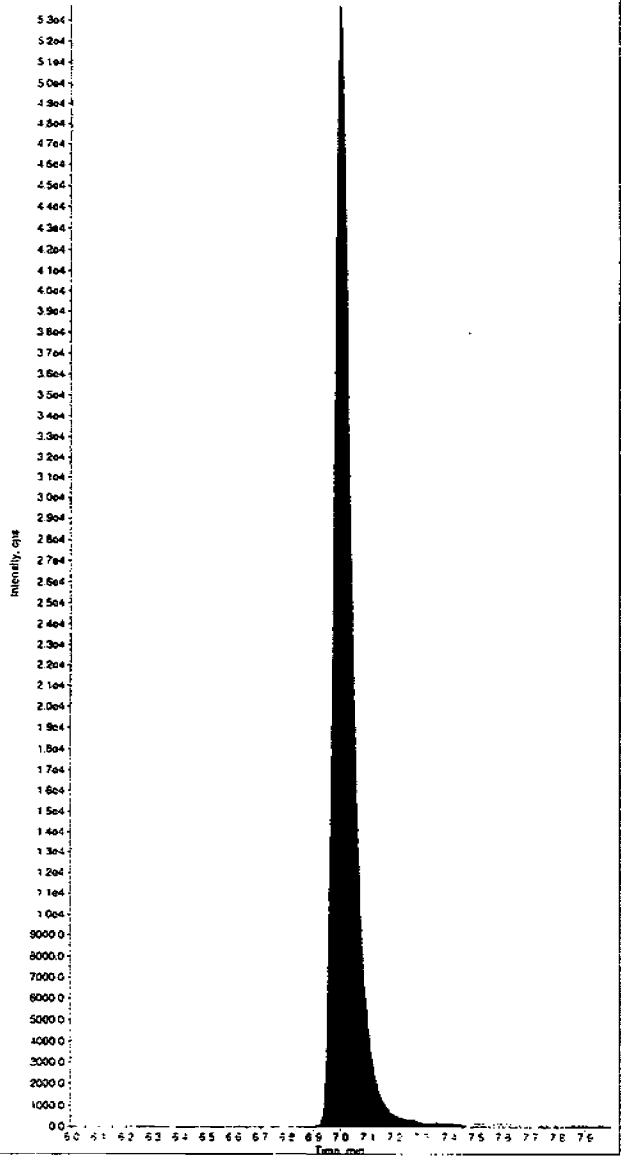

529

Sample Name: "1201872318" Sample ID: "881635[2]LER" File: "EXS0708018.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 460. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:03:01 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.23 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.23 min
Area: 7.10e+005 counts
Height: 170766.296 cps
Start Time: 8.15 min
End Time: 8.36 min

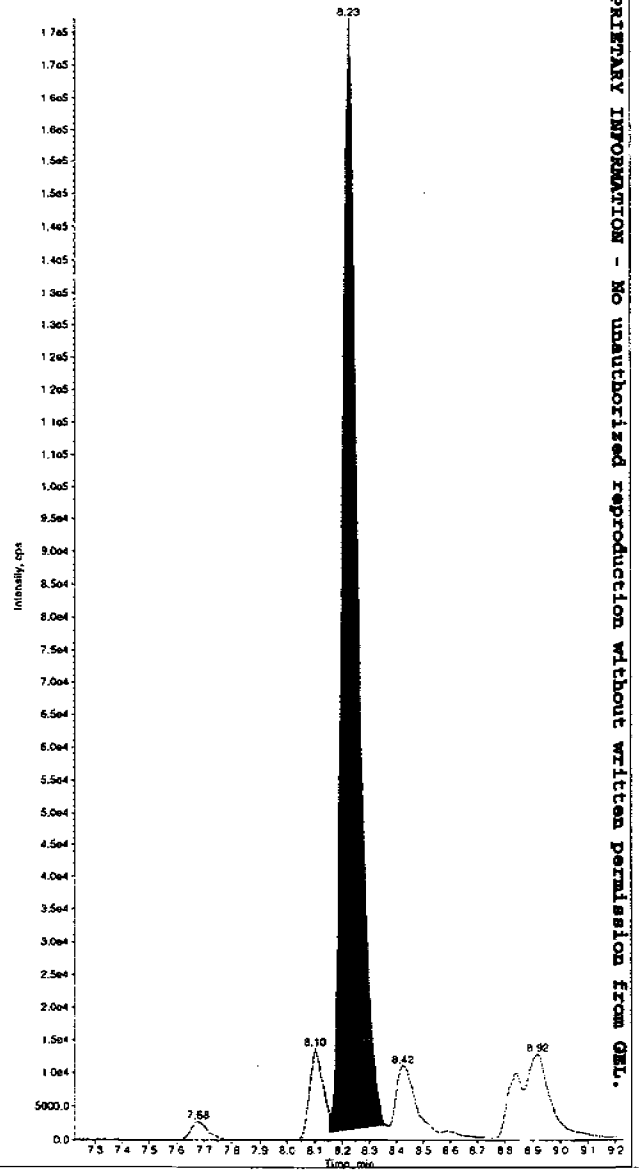

Hmm 07/09/09

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201872318" Sample ID: "881635|2|LER" File: "EXS0708018.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 225. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:03:01 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 8.41 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.42 min
Area: 4.87e+005 counts
Height: 105373.421 cps
Start Time: 8.34 min
End Time: 8.74 min

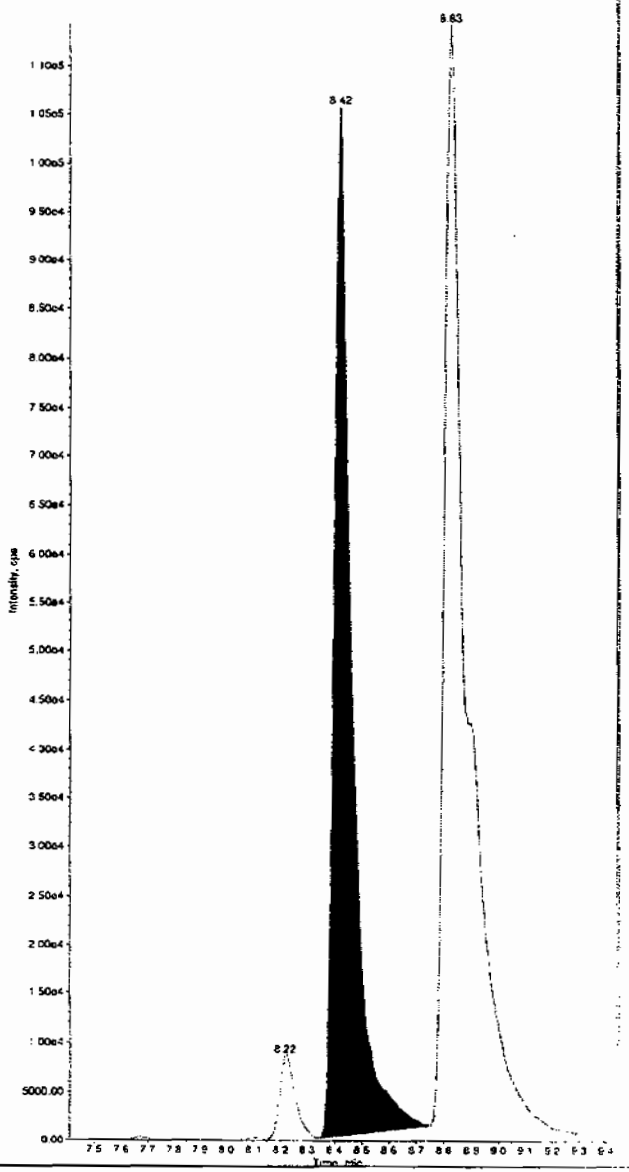

530

Sample Name: "1201872318" Sample ID: "881635|2|LER" File: "EXS0708018.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 428. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:03:01 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.08 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.08 min
Area: 7.55e+004 counts
Height: 16093.235 cps
Start Time: 4.98 min
End Time: 5.34 min

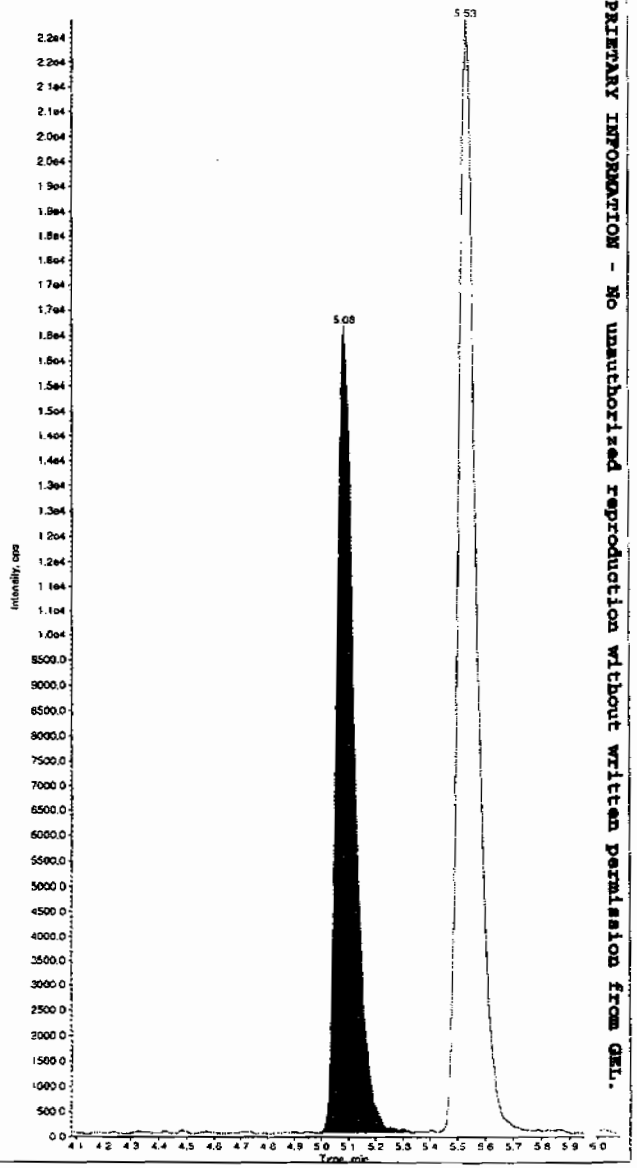

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "1201872318" Sample ID: "881635|2|LER" File: "EXS0708018.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 404. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:03:01 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.53 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.53 min
Area: 1.01e+005 counts
Height: 22274.166 cps
Start Time: 5.44 min
End Time: 5.91 min

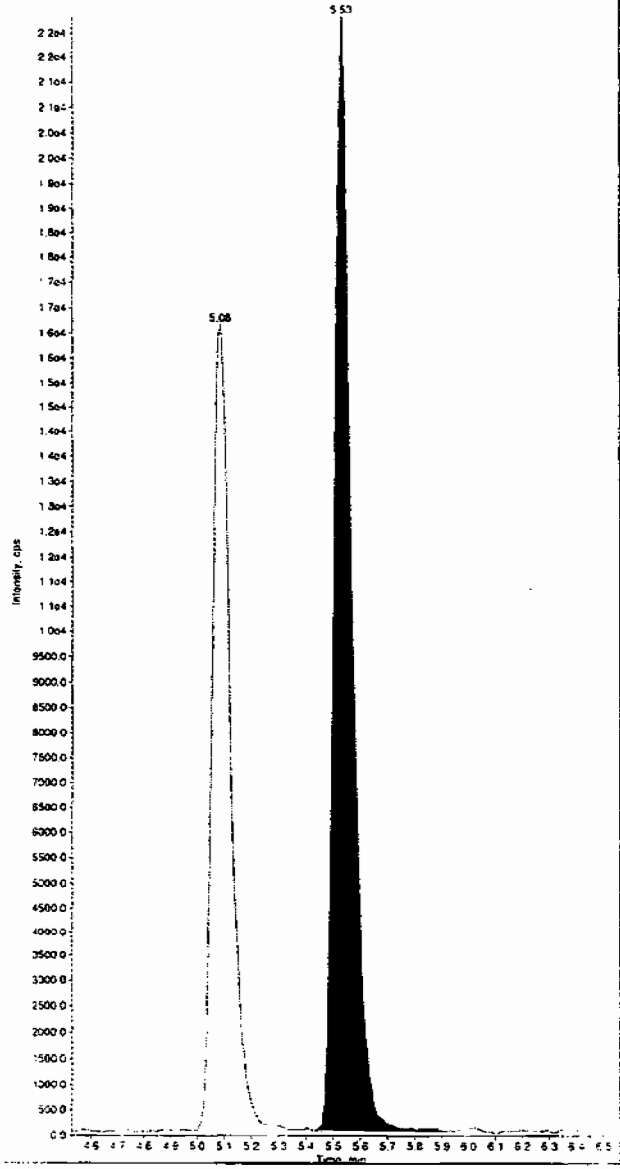

Sample Name: "1201872318" Sample ID: "881635|2|LER" File: "EXS0708018.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212SF" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 443. ng/mL
Acq. Date: 7/8/2009
Acq. Time: 3:03:01 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 5.36e+006 counts
Height: 1235085.449 cps
Start Time: 10.8 min
End Time: 11.2 min

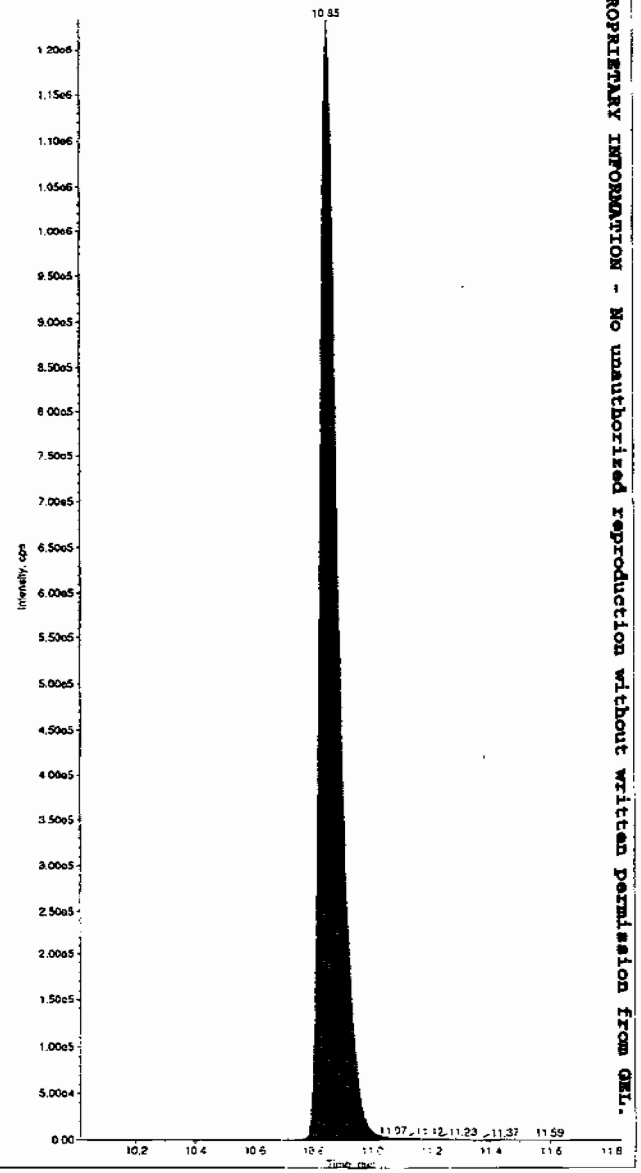

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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MISCELLANEOUS DATA

Prep Logbook

Nitroaromatics and Nitramines by High Performance Liquid Chromatography (HPLC)

Batch ID: 881634 **Verified by:** _____

Analyst: James Allnutt

Method: SW846 8330 PREP

Lab SOP: GL-OA-E-033 REV# 17

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201872315 MB	06-JUL-2009 07:43:00	2	10	5
1201872316 LCS	06-JUL-2009 07:43:00	2	10	5
232582001	06-JUL-2009 07:43:00	2	10	5
1201872317 MS (232582001)	06-JUL-2009 07:43:00	2	10	5
1201872318 MSD (232582001)	06-JUL-2009 07:43:00	2	10	5
232582002	06-JUL-2009 07:43:00	2	10	5

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201872316	8321 Explosives LCS	IXX090514-01	.1	mL
LCS	1201872316	8321 LANL Explosives Mix 10mg/L	UXX090616-02.2	1	mL
MS	1201872317	8321 Explosives LCS	IXX090514-01	.1	mL
MS	1201872317	8321 LANL Explosives Mix 10mg/L	UXX090616-02.2	1	mL
MSD	1201872318	8321 Explosives LCS	IXX090514-01	.1	mL
MSD	1201872318	8321 LANL Explosives Mix 10mg/L	UXX090616-02.2	1	mL
SURR	All	3,4-Dinitrotoluene (8330 Surr.) 100ppm	IXP090622-02	.05	mL

Comments:

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS #1

Date: 07/13/09
Extr. Injection Volume: 50uL
Sequence Number: 071309expA
Initial Calibration Date: 07/13/09

Method: SW846 8321A-Modified
Int. Std.: UXX090506-01.4
Mobile Phase Lot#: 1151871, 1134419
Standard-Samp Reagent Lot#: 115179, 1141273

Reviewed BY: HMM
Date: 07/14/09
SOP: GL-OA-E-056Rev.11
Alt Check Std. ID: WXX090713-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP0713001a	XIBLK01	MAP	7/13/09 14:54			1		USE	B
EXP0713002a	XIBLK01	MAP	7/13/09 15:25			1		USE	B
EXP0713003a	WXXICAL-01	MAP	7/13/09 15:55			1		USE	I
EXP0713004a	WXXICAL-02	MAP	7/13/09 16:24			1		USE	I
EXP0713005a	WXXICAL-03	MAP	7/13/09 16:54			1		USE	I
EXP0713006a	WXXICAL-04	MAP	7/13/09 17:23			1		USE	I
EXP0713007a	WXXICAL-05	MAP	7/13/09 17:53			1		USE	I
EXP0713008a	WXXICAL-06	MAP	7/13/09 18:22			1		USE	I
EXP0713009a	XIBLK02	MAP	7/13/09 18:52			1		USE	B
EXP0713010a	WXXICV	MAP	7/13/09 19:21			1		USE	C
EXP0713011a	XIBLK03	MAP	7/13/09 19:51			1		USE	B
EXP0713012a	WXXCRI	MAP	7/13/09 20:20			1		USE	C
EXP0713013a	232348001	MAP	7/13/09 20:50	880642	09-2457	2	LANL	USE	S
EXP0713014a	232424001	MAP	7/13/09 21:19	880975	09-2473	2	LANL	USE	S
EXP0713015a	XIBLK04	MAP	7/13/09 21:49			1		USE	B
EXP0713016a	1201872315	MAP	7/13/09 22:18	881635	09-2508	2	LANL	USE	S
EXP0713017a	1201872316	MAP	7/13/09 22:48	881635	09-2508	2	LANL	USE	S
EXP0713018a	232582001	MAP	7/13/09 23:17	881635	09-2508	2	LANL	USE	S
EXP0713019a	1201872317	MAP	7/13/09 23:47	881635	09-2508	2	LANL	USE	S
EXP0713020a	1201872318	MAP	7/14/09 0:16	881635	09-2508	2	LANL	USE	S
EXP0713021a	232582002	MAP	7/14/09 0:46	881635	09-2508	2	LANL	USE	S
EXP0713022a	WXXCCV	MAP	7/14/09 1:15			1		USE	C
EXP0713023a	XIBLK05	MAP	7/14/09 1:45			1		USE	B
EXP0713024a	WXXCRI	MAP	7/14/09 2:14			1		USE	C
EXP0713025a	1201874292	MAP	7/14/09 2:44	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713026a	1201874293	MAP	7/14/09 3:13	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713027a	232752005	MAP	7/14/09 3:43	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713028a	1201874294	MAP	7/14/09 4:12	882489	09-2530	2	LANL	DUSE-RA	S
EXP0713029a	1201874295	MAP	7/14/09 4:42	882489	09-2530	2	LANL	DUSE-RA	S

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EXP0713030a	WXXCCV	MAP	7/14/09 5:11	1	USE	C
EXP0713031a	XIBLK06	MAP	7/14/09 5:41	1	USE	B
EXP0713032a	WXXCRI	MAP	7/14/09 6:10	1	USE	C

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS4

Date: 07/08/09 Method: 8321A-Modified Reviewed By: [illegible]
Extr. Injection Volume: 10uL Int. Std.: N/A Date: 07/09/09
Sequence Number: 070809exs Mobile Phase Lot#:1118668, 1130432 SOP: GL-OA-E-056Rev.11
Initial Calibration Date: 070809 Standard-Samp Reagent Lot# :1135125, 1128740 Alt Check Std. ID: WXX090708-26

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS0708001.wiff	XIBLK01	LER	7/8/2009 10:27			1		USE	B
EXS0708002.wiff	XIBLK01	LER	7/8/2009 10:43			1		USE	B
EXS0708003.wiff	WXXICAL-19	LER	7/8/2009 11:00			1		USE	I
EXS0708004.wiff	WXXICAL-20	LER	7/8/2009 11:16			1		USE	I
EXS0708005.wiff	WXXICAL-21	LER	7/8/2009 11:32			1		USE	I
EXS0708006.wiff	WXXICAL-22	LER	7/8/2009 11:48			1		USE	I
EXS0708007.wiff	WXXICAL-23	LER	7/8/2009 12:04			1		USE	I
EXS0708008.wiff	WXXICAL-24	LER	7/8/2009 12:21			1		USE	I
EXS0708009.wiff	WXXICAL-25	LER	7/8/2009 12:37			1		USE	I
EXS0708010.wiff	XIBLK02	LER	7/8/2009 12:53			1		USE	B
EXS0708011.wiff	WXXICV	LER	7/8/2009 13:09			1		USE	C
EXS0708012.wiff	XIBLK03	LER	7/8/2009 13:25			1		USE	B
EXS0708013.wiff	WXXCRI	LER	7/8/2009 13:42			1		USE	C
EXS0708014.wiff	1201872315	LER	7/8/2009 13:58	881635	09-2508	2	LANL	USE	S
EXS0708015.wiff	1201872316	LER	7/8/2009 14:14	881635	09-2508	2	LANL	USE	S
EXS0708016.wiff	232582001	LER	7/8/2009 14:30	881635	09-2508	2	LANL	USE	S
EXS0708017.wiff	1201872317	LER	7/8/2009 14:46	881635	09-2508	2	LANL	USE	S
EXS0708018.wiff	1201872318	LER	7/8/2009 15:03	881635	09-2508	2	LANL	USE	S
EXS0708019.wiff	232582002	LER	7/8/2009 15:19	881635	09-2508	2	LANL	USE	S
EXS0708020.wiff	WXXCCV	LER	7/8/2009 15:35			1		USE	C
EXS0708021.wiff	XIBLK04	LER	7/8/2009 15:51			1		USE	B
EXS0708022.wiff	WXXCRI	LER	7/8/2009 16:07			1		USE	C
EXS0708023.wiff	1201874292	LER	7/8/2009 16:24	882489	09-2530	2	LANL	USE	S
EXS0708024.wiff	1201874293	LER	7/8/2009 16:40	882489	09-2530	2	LANL	USE	S
EXS0708025.wiff	232752005	LER	7/8/2009 16:56	882489	09-2530	2	LANL	USE	S
EXS0708026.wiff	1201874294	LER	7/8/2009 17:12	882489	09-2530	2	LANL	USE	S
EXS0708027.wiff	1201874295	LER	7/8/2009 17:28	882489	09-2530	2	LANL	USE	S
EXS0708028.wiff	WXXCCV	LER	7/8/2009 17:44			1		USE	C
EXS0708029.wiff	XIBLK05	LER	7/8/2009 18:01			1		USE	B
EXS0708030.wiff	WXXCRI	LER	7/8/2009 18:17			1		USE	C

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GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2508

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3550B
Analytical Batch Number:	884634
Prep Batch Number:	884632

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
232582002	CAMO-09-10465
1201879447	Method Blank (MB)
1201879448	Laboratory Control Sample (LCS)
1201879449	232661005(CAMO-09-10030) Matrix Spike (MS)
1201879450	232661005(CAMO-09-10030) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 13.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear

equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

One of the five quantified peaks did not meet the acceptance criteria in Aroclor-1016 standard analyzed for this SDG; however, the average concentration of the five peaks met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
A LANL sample of similar matrix associated with another SDG (#09-2515) was selected for the matrix spike and matrix spike duplicate analysis. A Form III and QC raw data are included in the package summarizing the results.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
Nonconformance report (NCR) is for documentation of any procedural anomalies that may deviate from referenced SOP or contractual document. A NCR was not required for this SDG.

Manual Integration
Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD1A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide)
ECD1A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticideII)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Jimmi Cao Date: 7/20/09

Roadmap for LANL 09-2508 PCB

This roadmap was analyzed by yip00818 on 07-14-2009, 14:11.
This roadmap was reviewed by rob01090 on 07-14-2009, 15:40.
This roadmap was packaged by yml on 07-17-2009, 14:10.
This roadmap was validated by jim01140 on 07-20-2009, 08:27.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/023f2301.d	232582002	sample	14-JUL-2009	10:41	09-2508.sub	CAMO-09-10465	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/023b2301.d	232582002	sample	14-JUL-2009	10:41	09-2508.sub	CAMO-09-10465	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/021f2101-1.d	1201879447	mb	14-JUL-2009	10:21	09-2508.sub	PBLK01	1.00000	884634	
☐	N	/chem/ecd1a.i/071409.b/022f2201-1.d	1201879448	lcs	14-JUL-2009	10:31	09-2508.sub	PBLK01LCS	1.00000	884634	

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/021b2101-1.d	1201879447	mb	14-JUL-2009	10:21	09-2508.sub	PBLK01	1.00000	884634	
☐	N	/chem/ecd1a.i/071409.b/022b2201-1.d	1201879448	lcs	14-JUL-2009	10:31	09-2508.sub	PBLK01LCS	1.00000	884634	

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2508	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232582002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10465	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 10:41	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	023f2301.d	**Column:**	1 CLP1	**Level:**	LOW
	023b2301.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.50	ug/kg	1.17	3.50	1
11104-28-2	Aroclor-1221	U	3.50	ug/kg	1.17	3.50	1
11141-16-5	Aroclor-1232	U	3.50	ug/kg	1.17	3.50	1
53469-21-9	Aroclor-1242	U	3.50	ug/kg	1.17	3.50	1
12672-29-6	Aroclor-1248	U	3.50	ug/kg	1.17	3.50	1
11097-69-1	Aroclor-1254	U	3.50	ug/kg	1.17	3.50	1
11096-82-5	Aroclor-1260	U	3.50	ug/kg	1.17	3.50	1

QUALITY CONTROL SUMMARY

PCB

Surrogate Recovery Report

SDG Number: 09-2508

Matrix Type: SOLID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1201879447	MB for batch 884632	90	90	86	84
1201879448	LCS for batch 884632	89	89	88	85
232582002	CAMO-09-10465	69	71	70	69

Surrogate	Acceptance Limits
4CMX = 4cmx	(34%-105%)
DCB = Decachlorobiphenyl	(33%-115%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2508
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 884632
Matrix: SOIL
Lab Sample ID: 1201879448
Instrument: ECD1A.I
Analysis Date: 07/14/2009 10:31
Dilution: 1
Analyst: YS1
Prep Batch ID: 884632
Inj. Vol: 1 uL
Batch ID: 884634

CAS No	Parmname		Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	LCS	Aroclor-1016	33.3	0.0	27.0	81	41-110
11096-82-5	LCS	Aroclor-1260	33.3	0.0	30.8	92	48-110

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-10030MS
Lab Sample ID: 1201879449
Instrument: ECD1A.I
Analyst: YS1
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 10
Analysis Date: 07/14/2009 11:32
Prep Batch ID: 884632
Batch ID: 884634

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	MS	Aroclor-1016	37.0	0.00	U	20.6	56	23-117
11096-82-5	MS	Aroclor-1260	37.0	8.90		32.9	65	27-116

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-10030MSD
Lab Sample ID: 1201879450
Instrument: ECD1A.I
Analyst: YS1
Inj. Vol: 1 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 10
Analysis Date: 07/14/2009 11:43
Prep Batch ID: 884632
Batch ID: 884634
Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674-11-2	MSD Aroclor-1016	37.0	0.00	U	22.9	62	23-117	11	0-30
11096-82-5	MSD Aroclor-1260	37.0	8.90		37.1	76	27-116	12	0-30

Method Blank Summary

SDG Number:	09-2508	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 884632	Instrument ID:	ECD1A.I_2 ECD1A.I_1	Data File:	021b2101-1.d 021f2101-1.d
Lab Sample ID:	1201879447				
Column:	CLP2 CLP1	Prep Date:	07/13/2009 20:17	Analyzed:	07/14/09 10:21
		Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 884632	1201879448	022f2201-1.d 022b2201-1.d	07/14/09	1031
02 CAMO-09-10465	232582002	023f2301.d 023b2301.d	07/14/09	1041

SAMPLE DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2508**	**Date Collected:**	**06/25/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232582002**	**Date Received:**	**06/30/2009 09:15**	**%Moisture:**	**4.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10465**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**884634**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 10:41**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/13/2009 20:17**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**023f2301.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	023b2301.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.50	ug/kg	1.17	3.50	1
11104-28-2	Aroclor-1221	U	3.50	ug/kg	1.17	3.50	1
11141-16-5	Aroclor-1232	U	3.50	ug/kg	1.17	3.50	1
53469-21-9	Aroclor-1242	U	3.50	ug/kg	1.17	3.50	1
12672-29-6	Aroclor-1248	U	3.50	ug/kg	1.17	3.50	1
11097-69-1	Aroclor-1254	U	3.50	ug/kg	1.17	3.50	1
11096-82-5	Aroclor-1260	U	3.50	ug/kg	1.17	3.50	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/023f2301.d
Lab Smp Id: 232582002 Client Smp ID: CAMO-09-10465
Inj Date : 14-JUL-2009 10:41
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232582002|1|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-10465|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 11:21 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2508.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	4.86460	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.110	2.112	-0.002	4609/216	138.689	4.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	32599597	140.763	4.9	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/023f2301.d

Date : 14-JUL-2009 10:41

Client ID: CAMO-09-10465

Sample Info: |23258200211|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

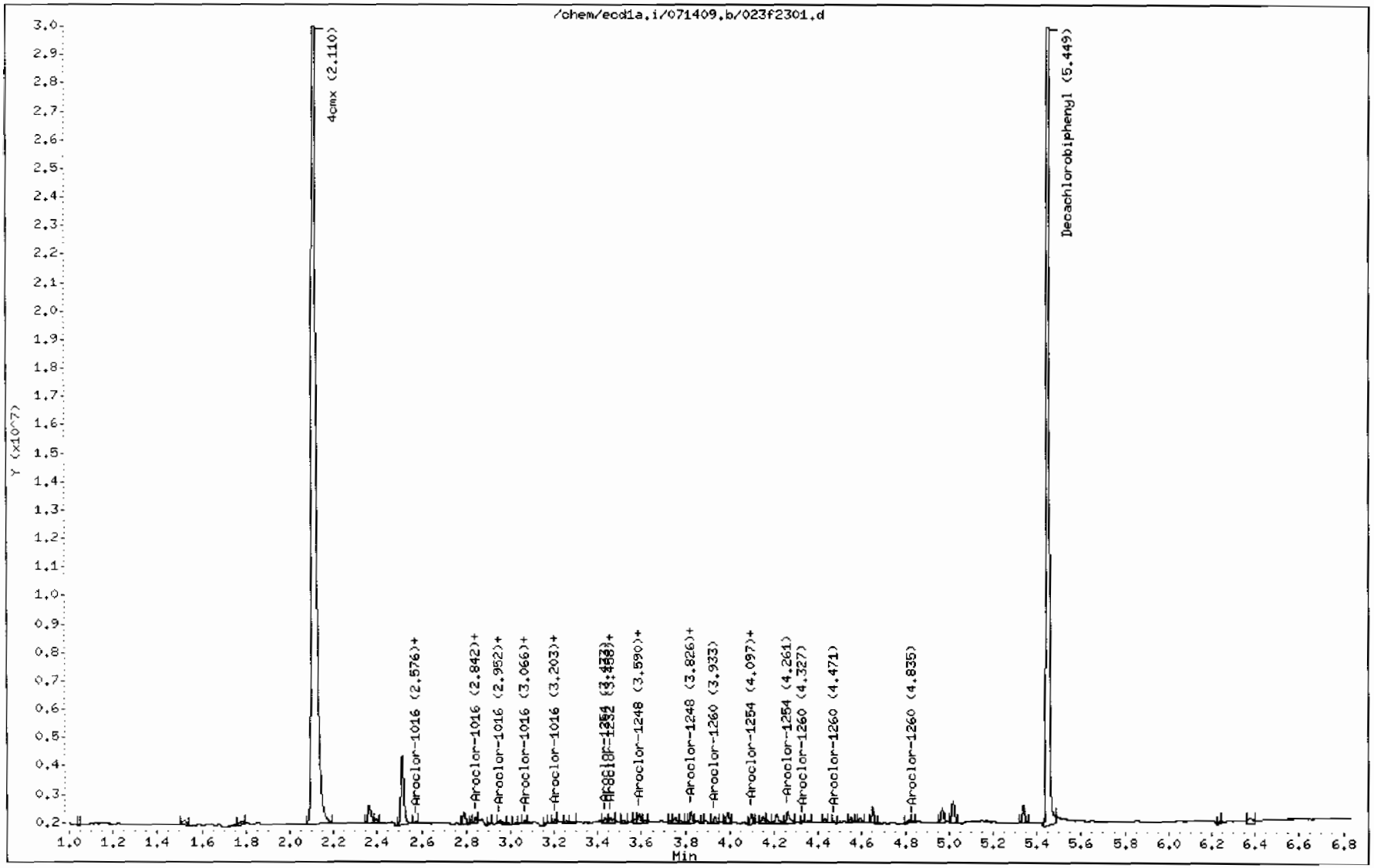

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/023b2301.d
Lab Smp Id: 232582002 Client Smp ID: CAMO-09-10465
Inj Date : 14-JUL-2009 10:41
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232582002|1|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-10465|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 11:20 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2508.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	4.86460	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	37972068	141.810	5.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	18048142	137.955	4.8	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/023b2301.d
Date : 14-JUL-2009 10:41
Client ID: CAMO-09-10465
Sample Info: 1232582002|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

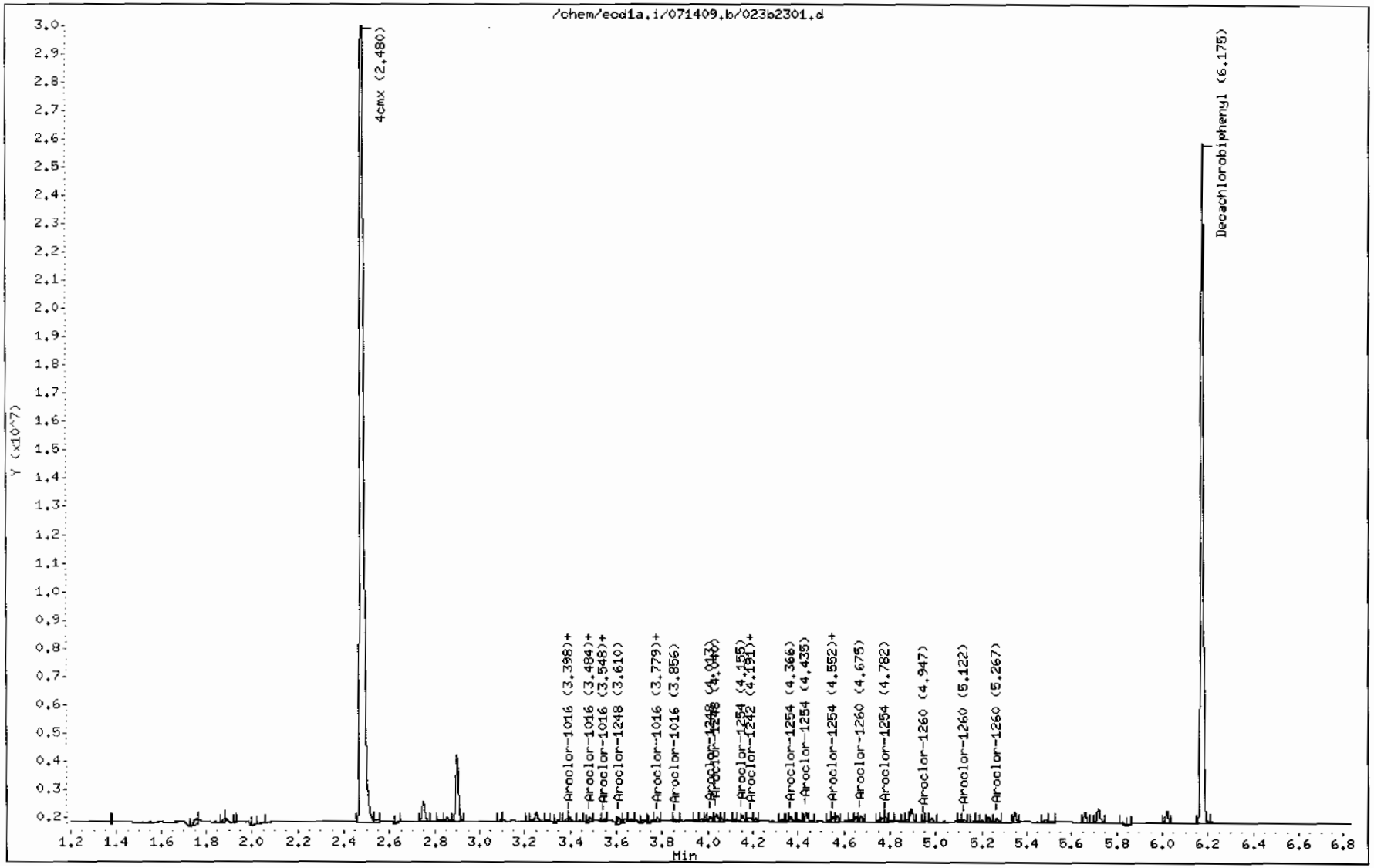

STANDARDS DATA

Report Date: 14-Jul-2009 13:21

Calibration History

Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Start Cal Date: 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
12-JUL-2009 20:14	AR1248	/chem/ecd1a.i/071109.b/020f2001.d
13-JUL-2009 10:14	AR1242	/chem/ecd1a.i/071309.b/004f0401.d
13-JUL-2009 12:28	AR1254	/chem/ecd1a.i/071309.b/017f1701.d
13-JUL-2009 11:27	AR1660	/chem/ecd1a.i/071309.b/011f1101.d
Cal Level: 2 , Cal Amount: 250.00000		
12-JUL-2009 20:24	AR1248	/chem/ecd1a.i/071109.b/021f2101.d
13-JUL-2009 10:25	AR1242	/chem/ecd1a.i/071309.b/005f0501.d
13-JUL-2009 12:39	AR1254	/chem/ecd1a.i/071309.b/018f1801.d
13-JUL-2009 11:37	AR1660	/chem/ecd1a.i/071309.b/012f1201.d
Cal Level: 3 , Cal Amount: 500.00000		
12-JUL-2009 20:34	AR1248	/chem/ecd1a.i/071109.b/022f2201.d
13-JUL-2009 10:35	AR1242	/chem/ecd1a.i/071309.b/006f0601.d
13-JUL-2009 12:49	AR1254	/chem/ecd1a.i/071309.b/019f1901.d
13-JUL-2009 11:47	AR1660	/chem/ecd1a.i/071309.b/013f1301.d
Cal Level: 4 , Cal Amount: 1000.00000		
13-JUL-2009 11:58	AR1660	/chem/ecd1a.i/071309.b/014f1401.d
13-JUL-2009 14:11	DDTANALOGSTD	/chem/ecd1a.i/071309.b/027f2701.d
13-JUL-2009 14:01	AR1268	/chem/ecd1a.i/071309.b/026f2601.d
13-JUL-2009 13:51	AR1262	/chem/ecd1a.i/071309.b/025f2501.d
13-JUL-2009 13:40	AR1221	/chem/ecd1a.i/071309.b/024f2401.d
13-JUL-2009 13:30	AR1232	/chem/ecd1a.i/071309.b/023f2301.d
12-JUL-2009 20:45	AR1248	/chem/ecd1a.i/071109.b/023f2301.d
13-JUL-2009 10:45	AR1242	/chem/ecd1a.i/071309.b/007f0701.d
13-JUL-2009 12:59	AR1254	/chem/ecd1a.i/071309.b/020f2001.d
Cal Level: 5 , Cal Amount: 4000.00000		
12-JUL-2009 20:55	AR1248	/chem/ecd1a.i/071109.b/024f2401.d
13-JUL-2009 10:56	AR1242	/chem/ecd1a.i/071309.b/008f0801.d
13-JUL-2009 13:10	AR1254	/chem/ecd1a.i/071309.b/021f2101.d
13-JUL-2009 12:08	AR1660	/chem/ecd1a.i/071309.b/015f1501.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 12:14	AR1660	/chem/ecd1a.i/071409.b/031f3101.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 10:00	AR1660	/chem/ecd1a.i/071409.b/019f1901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 08:06	AR1268	/chem/ecd1a.i/071409.b/009f0901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:56	AR1262	/chem/ecd1a.i/071409.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:46	AR1221	/chem/ecd1a.i/071409.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:36	AR1232	/chem/ecd1a.i/071409.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:25	AR1248	/chem/ecd1a.i/071409.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:15	AR1242	/chem/ecd1a.i/071409.b/004f0401.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:05	AR1254	/chem/ecd1a.i/071409.b/003f0301.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 06:54	AR1660	/chem/ecd1a.i/071409.b/002f0201.d

Report Date: 14-Jul-2009 13:21

Calibration History

Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Start Cal Date: 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
12-JUL-2009 20:14	AR1248	/chem/ecd1a.i/071109.b/020b2001.d
13-JUL-2009 10:14	AR1242	/chem/ecd1a.i/071309.b/004b0401.d
13-JUL-2009 12:28	AR1254	/chem/ecd1a.i/071309.b/017b1701.d
13-JUL-2009 11:27	AR1660	/chem/ecd1a.i/071309.b/011b1101.d
Cal Level: 2 , Cal Amount: 250.00000		
12-JUL-2009 20:24	AR1248	/chem/ecd1a.i/071109.b/021b2101.d
13-JUL-2009 10:25	AR1242	/chem/ecd1a.i/071309.b/005b0501.d
13-JUL-2009 12:39	AR1254	/chem/ecd1a.i/071309.b/018b1801.d
13-JUL-2009 11:37	AR1660	/chem/ecd1a.i/071309.b/012b1201.d
Cal Level: 3 , Cal Amount: 500.00000		
12-JUL-2009 20:34	AR1248	/chem/ecd1a.i/071109.b/022b2201.d
13-JUL-2009 10:35	AR1242	/chem/ecd1a.i/071309.b/006b0601.d
13-JUL-2009 12:49	AR1254	/chem/ecd1a.i/071309.b/019b1901.d
13-JUL-2009 11:47	AR1660	/chem/ecd1a.i/071309.b/013b1301.d
Cal Level: 4 , Cal Amount: 1000.00000		
13-JUL-2009 14:11	DDTANALOGSTD	/chem/ecd1a.i/071309.b/027b2701.d
13-JUL-2009 14:01	AR1268	/chem/ecd1a.i/071309.b/026b2601.d
13-JUL-2009 13:51	AR1262	/chem/ecd1a.i/071309.b/025b2501.d
13-JUL-2009 13:40	AR1221	/chem/ecd1a.i/071309.b/024b2401.d
13-JUL-2009 13:30	AR1232	/chem/ecd1a.i/071309.b/023b2301.d
12-JUL-2009 20:45	AR1248	/chem/ecd1a.i/071109.b/023b2301.d
13-JUL-2009 10:45	AR1242	/chem/ecd1a.i/071309.b/007b0701.d
13-JUL-2009 12:59	AR1254	/chem/ecd1a.i/071309.b/020b2001.d
13-JUL-2009 11:58	AR1660	/chem/ecd1a.i/071309.b/014b1401.d
Cal Level: 5 , Cal Amount: 4000.00000		
12-JUL-2009 20:55	AR1248	/chem/ecd1a.i/071109.b/024b2401.d
13-JUL-2009 10:56	AR1242	/chem/ecd1a.i/071309.b/008b0801.d
13-JUL-2009 13:10	AR1254	/chem/ecd1a.i/071309.b/021b2101.d
13-JUL-2009 12:08	AR1660	/chem/ecd1a.i/071309.b/015b1501.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 12:14	AR1660	/chem/ecd1a.i/071409.b/031b3101.d

Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 10:00	AR1660	/chem/ecd1a.i/071409.b/019b1901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 08:06	AR1268	/chem/ecd1a.i/071409.b/009b0901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:56	AR1262	/chem/ecd1a.i/071409.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:46	AR1221	/chem/ecd1a.i/071409.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:36	AR1232	/chem/ecd1a.i/071409.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:25	AR1248	/chem/ecd1a.i/071409.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:15	AR1242	/chem/ecd1a.i/071409.b/004b0401.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:05	AR1254	/chem/ecd1a.i/071409.b/003b0301.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 06:54	AR1660	/chem/ecd1a.i/071409.b/002b0201.d

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COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 14-Jul-2009 11:21 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	12031.000000
Initial:End Threshold	6015.500000
Initial:Area Threshold	15489.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	2.100000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.577	2.547-2.607	1.420e+04
	2.871	2.841-2.901	1.658e+04
	2.953	2.923-2.983	1.176e+04
	3.067	3.037-3.097	6.386e+03
	3.204	3.174-3.234	8.786e+03
63 4,4-DDD	4.113	4.093-4.133	1.737e+05
64 4,4-DDE	3.760	3.740-3.780	2.824e+05
62 4,4-DDT	4.277	4.257-4.297	1.087e+05
2 Aroclor-1221	2.226	2.196-2.256	3.603e+03
	2.323	2.293-2.353	2.093e+03
	2.350	2.320-2.380	8.763e+03
3 Aroclor-1232	2.578	2.548-2.608	5.881e+03
	2.871	2.841-2.901	6.649e+03
	2.953	2.923-2.983	4.841e+03
	3.204	3.174-3.234	3.329e+03
	3.475	3.445-3.505	3.163e+03
4 Aroclor-1242	2.871	2.841-2.901	1.180e+04
	2.953	2.923-2.983	8.492e+03
	3.083	3.053-3.113	4.671e+03
	3.204	3.174-3.234	6.573e+03
	3.476	3.446-3.506	6.305e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m

Compound	RT	RT Window	RF
5 Aroclor-1248	2.871	2.841-2.901	6.859e+03
	3.083	3.053-3.113	7.086e+03
	3.476	3.446-3.506	1.081e+04
	3.592	3.562-3.622	9.929e+03
	3.826	3.796-3.856	6.674e+03
6 Aroclor-1254	3.434	3.404-3.464	1.031e+04
	3.589	3.559-3.619	1.375e+04
	3.826	3.796-3.856	1.705e+04
	4.098	4.068-4.128	1.257e+04
	4.261	4.231-4.291	1.717e+04
7 Aroclor-1260	3.933	3.903-3.963	1.529e+04
	4.096	4.066-4.126	2.309e+04
	4.326	4.296-4.356	1.164e+04
	4.470	4.440-4.500	1.267e+04
	4.835	4.805-4.865	5.873e+03
8 Aroclor-1262	4.096	4.066-4.126	1.362e+04
	4.327	4.297-4.357	1.673e+04
	4.471	4.441-4.501	1.541e+04
	4.651	4.621-4.681	3.022e+04
	4.836	4.806-4.866	1.174e+04
9 Aroclor-1268	4.836	4.806-4.866	3.793e+04
	4.858	4.828-4.888	3.567e+04
	4.972	4.942-5.002	2.851e+04
	5.020	4.990-5.050	1.026e+04
	5.340	5.310-5.370	8.118e+04
M 10 Aroclor-Total	1.000	0.980-1.020	
$ 11 4cmx	2.112	2.082-2.142	3.324e+05
$ 12 Decachlorobiphenyl	5.450	5.420-5.480	2.316e+05

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 14-Jul-2009 11:20 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	7222.000000
Initial:End Threshold	3611.000000
Initial:Area Threshold	6833.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	1.500000

Compound	RT	RT Window	RF
1 Aroclor-1016	3.399	3.369-3.429	1.056e+04
	3.484	3.454-3.514	8.404e+03
	3.549	3.519-3.579	4.949e+03
	3.779	3.749-3.809	6.810e+03
	3.855	3.825-3.885	5.449e+03
62 4,4-DDT	4.889	4.869-4.909	1.398e+04
63 4,4-DDE	4.351	4.331-4.371	1.578e+05
64 4,4-DDD	4.699	4.680-4.720	1.020e+05
2 Aroclor-1221	2.684	2.654-2.714	2.867e+03
	2.781	2.751-2.811	1.893e+03
	2.823	2.793-2.853	6.284e+03
3 Aroclor-1232	3.387	3.357-3.417	3.439e+03
	3.484	3.454-3.514	3.620e+03
	3.550	3.520-3.580	2.104e+03
	3.779	3.749-3.809	2.601e+03
	4.042	4.012-4.072	2.590e+03
4 Aroclor-1242	3.399	3.369-3.429	7.855e+03
	3.484	3.454-3.514	6.237e+03
	3.549	3.519-3.579	3.663e+03
	3.779	3.749-3.809	5.090e+03
	4.184	4.154-4.214	5.348e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m

Compound	RT	RT Window	RF
5 Aroclor-1248	3.610	3.580-3.640	6.881e+03
	3.779	3.749-3.809	8.383e+03
	4.014	3.984-4.044	8.254e+03
	4.042	4.012-4.072	9.027e+03
	4.182	4.152-4.212	9.382e+03
6 Aroclor-1254	4.154	4.124-4.184	9.279e+03
	4.365	4.335-4.395	6.928e+03
	4.435	4.405-4.465	1.217e+04
	4.553	4.523-4.583	5.261e+03
	4.782	4.752-4.812	6.299e+03
7 Aroclor-1260	4.551	4.521-4.581	1.133e+04
	4.675	4.645-4.705	1.245e+04
	4.944	4.914-4.974	8.467e+03
	5.121	5.091-5.151	8.776e+03
	5.267	5.237-5.297	1.708e+04
8 Aroclor-1262	4.676	4.646-4.706	8.226e+03
	4.945	4.915-4.975	1.144e+04
	5.122	5.092-5.152	1.058e+04
	5.267	5.237-5.297	1.817e+04
	5.483	5.453-5.513	1.296e+04
9 Aroclor-1268	5.481	5.451-5.511	2.315e+04
	5.510	5.480-5.540	2.066e+04
	5.661	5.631-5.691	1.659e+04
	5.825	5.795-5.855	7.750e+03
	6.019	5.989-6.049	4.217e+04
M 10 Aroclor-Total	1.000	0.980-1.020	
$ 11 4cmx	2.481	2.451-2.511	2.678e+05
$ 12 Decachlorobiphenyl	6.175	6.145-6.205	1.308e+05

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : None
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Cal Date : 14-Jul-2009 11:21 yip00818
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd1a.i/071109.b/020f2001.d
Level 2: /chem/ecd1a.i/071109.b/021f2101.d
Level 3: /chem/ecd1a.i/071109.b/022f2201.d
Level 4: /chem/ecd1a.i/071309.b/014f1401.d
Level 5: /chem/ecd1a.i/071109.b/024f2401.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	16924	14564	13967	13438	12123	14203	12.449
(2)	18513	16515	16449	15988	15411	16575	7.058
(3)	13921	11878	11559	11159	10300	11763	11.420
(4)	7402	6602	6331	5895	5698	6386	10.494
(5)	10087	9011	8652	8280	7902	8786	9.518
63 4,4-DDD	+++++	+++++	+++++	173744	+++++	173744	0.000
64 4,4-DDE	+++++	+++++	+++++	282407	+++++	282407	0.000
62 4,4-DDT	+++++	+++++	+++++	108721	+++++	108721	0.000
2 Aroclor-1221(1)	+++++	+++++	+++++	3603	+++++	3603	0.000
(2)	+++++	+++++	+++++	2093	+++++	2093	0.000
(3)	+++++	+++++	+++++	8763	+++++	8763	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	5881	+++++	5881	0.000
(2)	+++++	+++++	+++++	6649	+++++	6649	0.000
(3)	+++++	+++++	+++++	4841	+++++	4841	0.000
(4)	+++++	+++++	+++++	3329	+++++	3329	0.000
(5)	+++++	+++++	+++++	3163	+++++	3163	0.000
4 Aroclor-1242(1)	12953	12079	12027	11524	10436	11804	7.804
(2)	9555	8853	8571	8115	7366	8492	9.631
(3)	5342	4870	4817	4469	3858	4671	11.791
(4)	7471	6850	6670	6304	5573	6573	10.662
(5)	7057	6557	6463	6010	5437	6305	9.694
5 Aroclor-1248(1)	6834	7144	7199	6590	6528	6859	4.489
(2)	7502	7359	7611	6506	6453	7086	7.920
(3)	10800	11014	11526	10636	10059	10807	4.960
(4)	10197	10234	10465	9642	9106	9929	5.543
(5)	6905	6860	7077	6483	6045	6674	6.187

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : None
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Cal Date : 14-Jul-2009 11:21 yip00818
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
6 Aroclor-1254(1)	11907	10934	10030	9520	9154	10309	10.821
(2)	15730	14504	13344	12844	12317	13748	9.981
(3)	18697	18035	16757	16177	15575	17048	7.595
(4)	14120	13596	12332	11789	11033	12574	10.125
(5)	18902	18436	16710	16149	15635	17166	8.346
7 Aroclor-1260(1)	17216	15216	15153	14709	14135	15286	7.607
(2)	25598	23029	23141	22211	21485	23093	6.724
(3)	13137	11670	11572	10959	10858	11639	7.830
(4)	14210	12690	12564	12011	11860	12667	7.357
(5)	6811	5968	5843	5315	5430	5873	10.062
8 Aroclor-1262(1)	+++++	+++++	+++++	13625	+++++	13625	0.000
(2)	+++++	+++++	+++++	16733	+++++	16733	0.000
(3)	+++++	+++++	+++++	15410	+++++	15410	0.000
(4)	+++++	+++++	+++++	30218	+++++	30218	0.000
(5)	+++++	+++++	+++++	11738	+++++	11738	0.000
9 Aroclor-1268(1)	+++++	+++++	+++++	37931	+++++	37931	0.000
(2)	+++++	+++++	+++++	35669	+++++	35669	0.000
(3)	+++++	+++++	+++++	28512	+++++	28512	0.000
(4)	+++++	+++++	+++++	10258	+++++	10258	0.000
(5)	+++++	+++++	+++++	81177	+++++	81177	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 11 4cmx	362221	322647	328629	330870	317524	332379	5.259
$ 12 Decachlorobiphenyl	254649	231990	231979	217250	222089	231591	6.212

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Cal Date : 14-Jul-2009 11:20 yip00818
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd1a.i/071109.b/020b2001.d
Level 2: /chem/ecd1a.i/071109.b/021b2101.d
Level 3: /chem/ecd1a.i/071109.b/022b2201.d
Level 4: /chem/ecd1a.i/071309.b/027b2701.d
Level 5: /chem/ecd1a.i/071109.b/024b2401.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	12372	10905	10724	9871	8926	10560	12.143
(2)	10554	8794	8237	7723	6710	8404	16.972
(3)	6020	5202	4919	4479	4124	4949	14.691
(4)	8364	7127	6732	6230	5598	6810	15.271
(5)	6766	5701	5407	4890	4481	5449	16.027
62 4,4-DDT	+++++	+++++	+++++	13984	+++++	13984	0.000
63 4,4-DDE	+++++	+++++	+++++	157795	+++++	157795	0.000
64 4,4-DDD	+++++	+++++	+++++	101978	+++++	101978	0.000
2 Aroclor-1221(1)	+++++	+++++	+++++	2867	+++++	2867	0.000
(2)	+++++	+++++	+++++	1893	+++++	1893	0.000
(3)	+++++	+++++	+++++	6284	+++++	6284	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	3439	+++++	3439	0.000
(2)	+++++	+++++	+++++	3620	+++++	3620	0.000
(3)	+++++	+++++	+++++	2104	+++++	2104	0.000
(4)	+++++	+++++	+++++	2601	+++++	2601	0.000
(5)	+++++	+++++	+++++	2590	+++++	2590	0.000
4 Aroclor-1242(1)	9217	8405	7931	7533	6192	7855	14.276
(2)	7778	6628	6169	5698	4912	6237	17.151
(3)	4478	3953	3677	3364	2843	3663	16.776
(4)	6197	5476	5107	4726	3943	5090	16.507
(5)	6587	5781	5394	4896	4082	5348	17.568
5 Aroclor-1248(1)	7568	7947	7100	6300	5491	6881	14.397
(2)	9176	9490	8664	7756	6830	8383	12.983
(3)	9183	9455	8421	7099	7113	8254	13.503
(4)	10315	10032	9379	7417	7989	9027	14.083
(5)	10004	10641	9758	8795	7712	9382	12.207

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Cal Date : 14-Jul-2009 11:20 yip00818
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
6 Aroclor-1254 (1)	11228	10287	9085	8338	7457	9279	16.219
(2)	8282	7597	6851	6194	5715	6928	14.962
(3)	14447	13279	11987	11068	10071	12170	14.271
(4)	6500	5749	5240	4606	4211	5261	17.285
(5)	7341	7064	6143	5754	5193	6299	14.239
7 Aroclor-1260 (1)	13958	11743	11149	10501	9303	11331	15.228
(2)	15079	12881	12435	11458	10411	12453	14.048
(3)	10349	8880	8366	7731	7008	8467	14.933
(4)	10513	9207	8743	8019	7396	8776	13.583
(5)	19838	17735	17267	15755	14821	17083	11.309
8 Aroclor-1262 (1)	+++++	+++++	+++++	8226	+++++	8226	0.000
(2)	+++++	+++++	+++++	11437	+++++	11437	0.000
(3)	+++++	+++++	+++++	10579	+++++	10579	0.000
(4)	+++++	+++++	+++++	18172	+++++	18172	0.000
(5)	+++++	+++++	+++++	12963	+++++	12963	0.000
9 Aroclor-1268 (1)	+++++	+++++	+++++	23151	+++++	23151	0.000
(2)	+++++	+++++	+++++	20662	+++++	20662	0.000
(3)	+++++	+++++	+++++	16588	+++++	16588	0.000
(4)	+++++	+++++	+++++	7750	+++++	7750	0.000
(5)	+++++	+++++	+++++	42173	+++++	42173	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 11 4cmx	309513	269887	264377	259792	235267	267767	10.018
$ 12 Decachlorobiphenyl	157032	136728	130596	117157	112618	130826	13.458

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2508

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 0654

Lab File ID: 002F0201 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	14203.241	13076.108	0.01	-7.9	15.0
(2)	16575.200	15186.652	0.01	-8.4	15.0
(3)	11763.386	10734.692	0.01	-8.7	15.0
(4)	6385.917	5640.692	0.01	-11.7	15.0
(5)	8786.443	7951.909	0.01	-9.5	15.0
Aroclor-1260	15285.677	14227.461	0.01	-6.9	15.0
(2)	23092.700	21553.043	0.01	-6.7	15.0
(3)	11639.153	10600.269	0.01	-8.9	15.0
(4)	12667.045	11656.883	0.01	-8.0	15.0
(5)	5873.295	5352.330	0.01	-8.9	15.0
4cmx	332378.50	321590.67	0.01	-3.2	15.0
Decachlorobiphenyl	231591.28	215001.14	0.01	-7.2	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2508

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 0654

Lab File ID: 002B0201 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	10559.500	9947.304	0.01	-5.8	15.0
(2)	8403.626	7716.737	0.01	-8.2	15.0
(3)	4948.505	4496.304	0.01	-9.1	15.0
(4)	6810.219	6210.739	0.01	-8.8	15.0
(5)	5449.030	4946.016	0.01	-9.2	15.0
Aroclor-1260	11330.884	10390.957	0.01	-8.3	15.0
(2)	12452.888	11322.174	0.01	-9.1	15.0
(3)	8466.689	7671.382	0.01	-9.4	15.0
(4)	8775.756	7929.019	0.01	-9.6	15.0
(5)	17083.207	15729.544	0.01	-7.9	15.0
4cmx	267767.10	261384.60	0.01	-2.4	15.0
Decachlorobiphenyl	130826.14	116586.63	0.01	-10.9	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2508

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1000

Lab File ID: 019F1901 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	14203.241	13623.921	0.01	-4.1	15.0
(2)	16575.200	17122.131	0.01	3.3	15.0
(3)	11763.386	11364.367	0.01	-3.4	15.0
(4)	6385.917	6093.521	0.01	-4.6	15.0
(5)	8786.443	8685.457	0.01	-1.1	15.0
Aroclor-1260	15285.677	15114.016	0.01	-1.1	15.0
(2)	23092.700	23255.466	0.01	0.7	15.0
(3)	11639.153	11537.482	0.01	-0.9	15.0
(4)	12667.045	12563.517	0.01	-0.8	15.0
(5)	5873.295	5688.421	0.01	-3.1	15.0
4cmx	332378.50	334439.59	0.01	0.6	15.0
Decachlorobiphenyl	231591.28	234979.91	0.01	1.5	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2508

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1000

Lab File ID: 019B1901 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	10559.500	11323.881	0.01	7.2	15.0
(2)	8403.626	8421.726	0.01	0.2	15.0
(3)	4948.505	5075.640	0.01	2.6	15.0
(4)	6810.219	6842.460	0.01	0.5	15.0
(5)	5449.030	5491.288	0.01	0.8	15.0
Aroclor-1260	11330.884	11292.830	0.01	-0.3	15.0
(2)	12452.888	12734.567	0.01	2.3	15.0
(3)	8466.689	8366.958	0.01	-1.2	15.0
(4)	8775.756	8773.824	0.01	-0.0	15.0
(5)	17083.207	17736.968	0.01	3.8	15.0
4cmx	267767.10	273990.38	0.01	2.3	15.0
Decachlorobiphenyl	130826.14	130995.57	0.01	0.1	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2508

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1214

Lab File ID: 031F3101 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	14203.241	13704.784	0.01	-3.5	15.0
(2)	16575.200	17150.581	0.01	3.5	15.0
(3)	11763.386	11437.580	0.01	-2.8	15.0
(4)	6385.917	6119.922	0.01	-4.2	15.0
(5)	8786.443	8707.678	0.01	-0.9	15.0
Aroclor-1260	15285.677	15218.428	0.01	-0.4	15.0
(2)	23092.700	23615.122	0.01	2.3	15.0
(3)	11639.153	11700.924	0.01	0.5	15.0
(4)	12667.045	12795.401	0.01	1.0	15.0
(5)	5873.295	5792.099	0.01	-1.4	15.0
4cmx	332378.50	333214.10	0.01	0.2	15.0
Decachlorobiphenyl	231591.28	240180.81	0.01	3.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2508

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1214

Lab File ID: 031B3101 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D	
Aroclor-1016	10559.500	12210.940	0.01	15.6	15.0	<-
(2)	8403.626	8750.467	0.01	4.1	15.0	
(3)	4948.505	5288.968	0.01	6.9	15.0	
(4)	6810.219	7094.884	0.01	4.2	15.0	
(5)	5449.030	5697.831	0.01	4.6	15.0	
Aroclor-1260	11330.884	11691.029	0.01	3.2	15.0	
(2)	12452.888	13289.261	0.01	6.7	15.0	
(3)	8466.689	8686.954	0.01	2.6	15.0	
(4)	8775.756	9136.766	0.01	4.1	15.0	
(5)	17083.207	18710.100	0.01	9.5	15.0	
4cmx	267767.10	276548.86	0.01	3.3	15.0	
Decachlorobiphenyl	130826.14	137306.68	0.01	5.0	15.0	

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/002f0201.d
Lab Smp Id: WAR090623-60 01 Client Smp ID: AR166001
Inj Date : 14-JUL-2009 06:54
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 01
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	32159067	100.000	96.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	21500114	100.000	92.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	13076108	1000.00	921	80.00- 120.00	100.00
2.871	2.871	0.000	15186657	1000.00	916	96.14- 136.14	116.14
2.953	2.953	0.000	10734692	1000.00	912	62.09- 102.09	82.09
3.067	3.067	0.000	5640692	1000.00	883	23.14- 63.14	43.14
3.204	3.204	0.000	7951909	1000.00	905	40.81- 80.81	60.81
Average of Peak Amounts =					908		
7 Aroclor-1260					CAS #: 11096-82-5		
3.933	3.933	0.000	14227461	1000.00	931	80.00- 120.00	100.00
4.096	4.096	0.000	21553043	1000.00	933	131.49- 171.49	151.49
4.326	4.326	0.000	10600269	1000.00	911	54.51- 94.51	74.51
4.470	4.470	0.000	11656883	1000.00	920	61.93- 101.93	81.93
4.835	4.835	0.000	5352330	1000.00	911	17.62- 57.62	37.62
Average of Peak Amounts =					921		

Data File: /chem/ecd1a.i/071409.b/002f0201.d

Date : 14-JUL-2009 06:54

Client ID: AR166001

Sample Info: IWAR090623-60 01

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

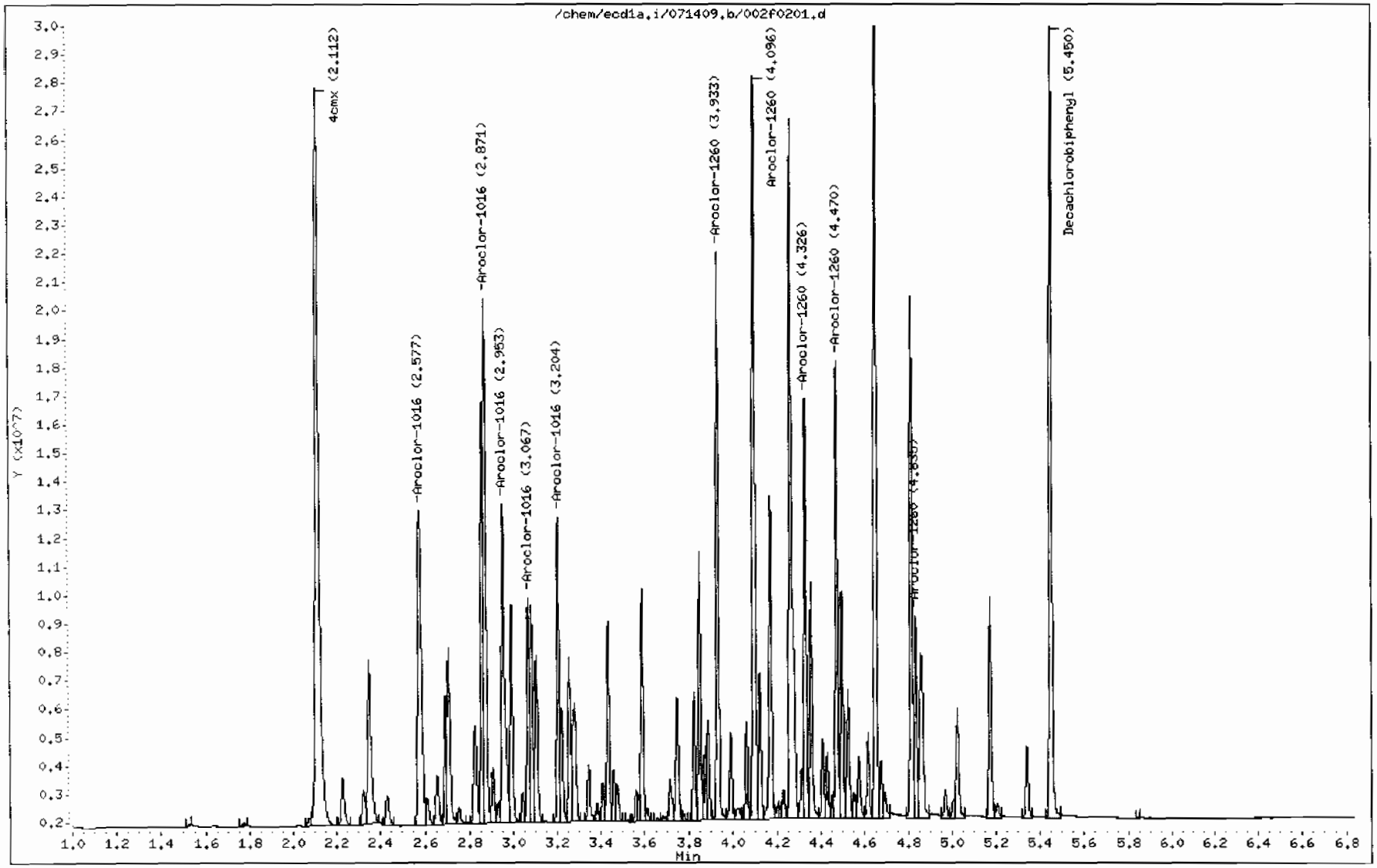

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/002b0201.d
Lab Smp Id: WAR090623-60 01 Client Smp ID: AR166001
Inj Date : 14-JUL-2009 06:54
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 01
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	26138460	100.000	97.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	11658663	100.000	89.1	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.399	3.399	0.000	9947304	1000.00	942	80.00- 120.00	100.00
3.484	3.484	0.000	7716737	1000.00	918	57.58- 97.58	77.58
3.549	3.549	0.000	4496304	1000.00	909	25.20- 65.20	45.20
3.779	3.779	0.000	6210739	1000.00	912	42.44- 82.44	62.44
3.855	3.855	0.000	4946016	1000.00	908	29.72- 69.72	49.72
Average of Peak Amounts =					918		
7 Aroclor-1260					CAS #: 11096-82-5		
4.551	4.551	0.000	10390957	1000.00	917	80.00- 120.00	100.00
4.675	4.675	0.000	11322174	1000.00	909	88.96- 128.96	108.96
4.944	4.944	0.000	7671382	1000.00	906	53.83- 93.83	73.83
5.121	5.121	0.000	7979019	1000.00	904	56.31- 96.31	76.31
5.267	5.267	0.000	15729544	1000.00	921	131.38- 171.38	151.38
Average of Peak Amounts =					911		

Data File: /chem/ecd1a.i/071409.b/002b0201.d
Date : 14-JUL-2009 06:54
Client ID: AR166001
Sample Info: IWAR090623-60 01

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

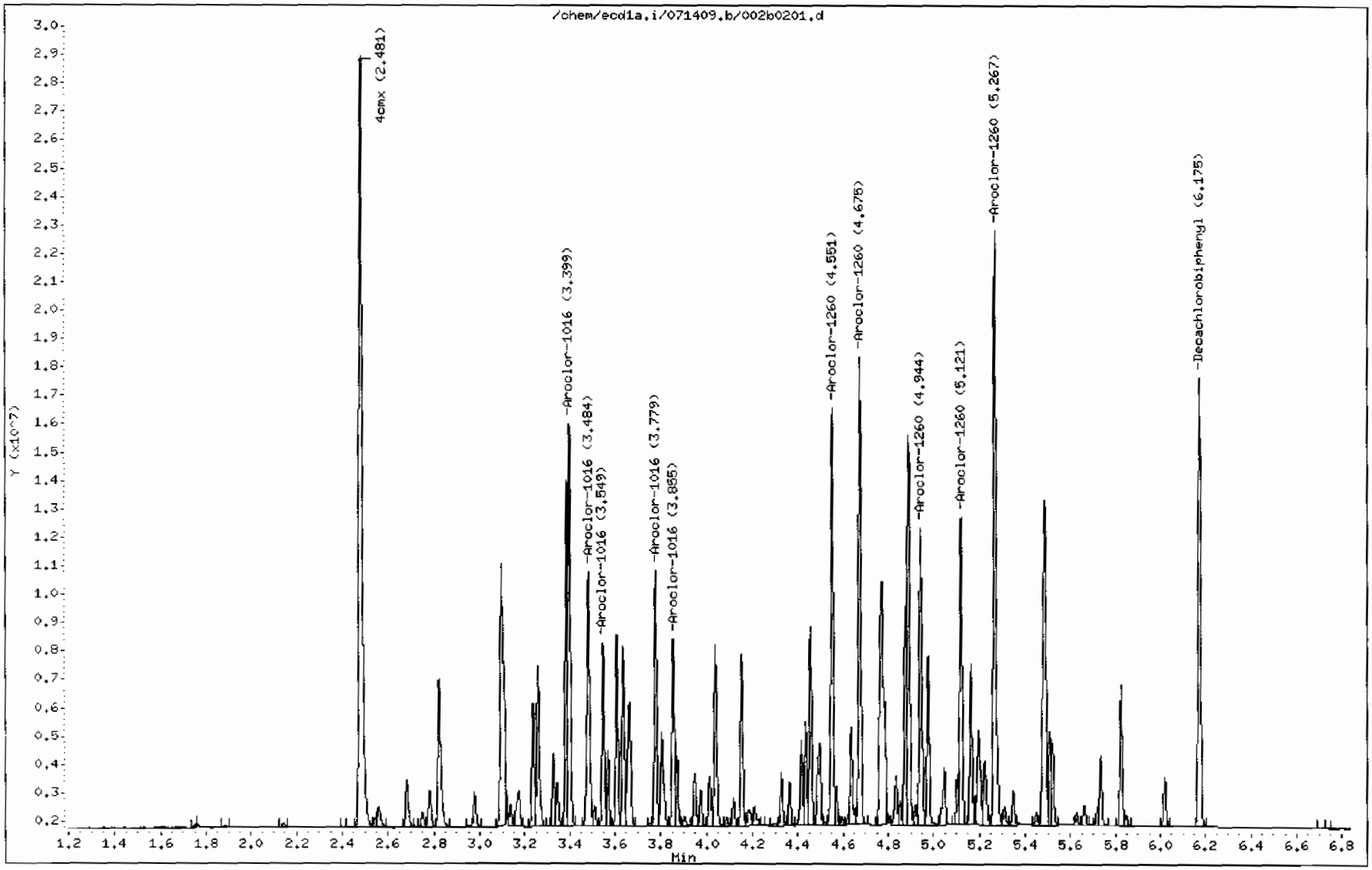

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/003f0301.d
Lab Smp Id: WAR090630-54 54 Client Smp ID: AR125401
Inj Date : 14-JUL-2009 07:05
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090630-54 54
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	31675454	100.000	95.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	21100892	100.000	91.1	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.434	3.434	0.000	9565161	1000.00	928	80.00- 120.00	100.00
3.589	3.589	0.000	12743688	1000.00	927	113.23- 153.23	133.23
3.826	3.826	0.000	16103412	1000.00	944	148.35- 188.35	168.35
4.098	4.098	0.000	11741256	1000.00	934	102.75- 142.75	122.75
4.261	4.261	0.000	16083550	1000.00	937	148.15- 188.15	168.15

Average of Peak Amounts = 934

Data File: /chem/ecd1a.i/071409.b/003f0301.d
Date : 14-JUL-2009 07:05
Client ID: AR125401
Sample Info: IWAR090630-54 54

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

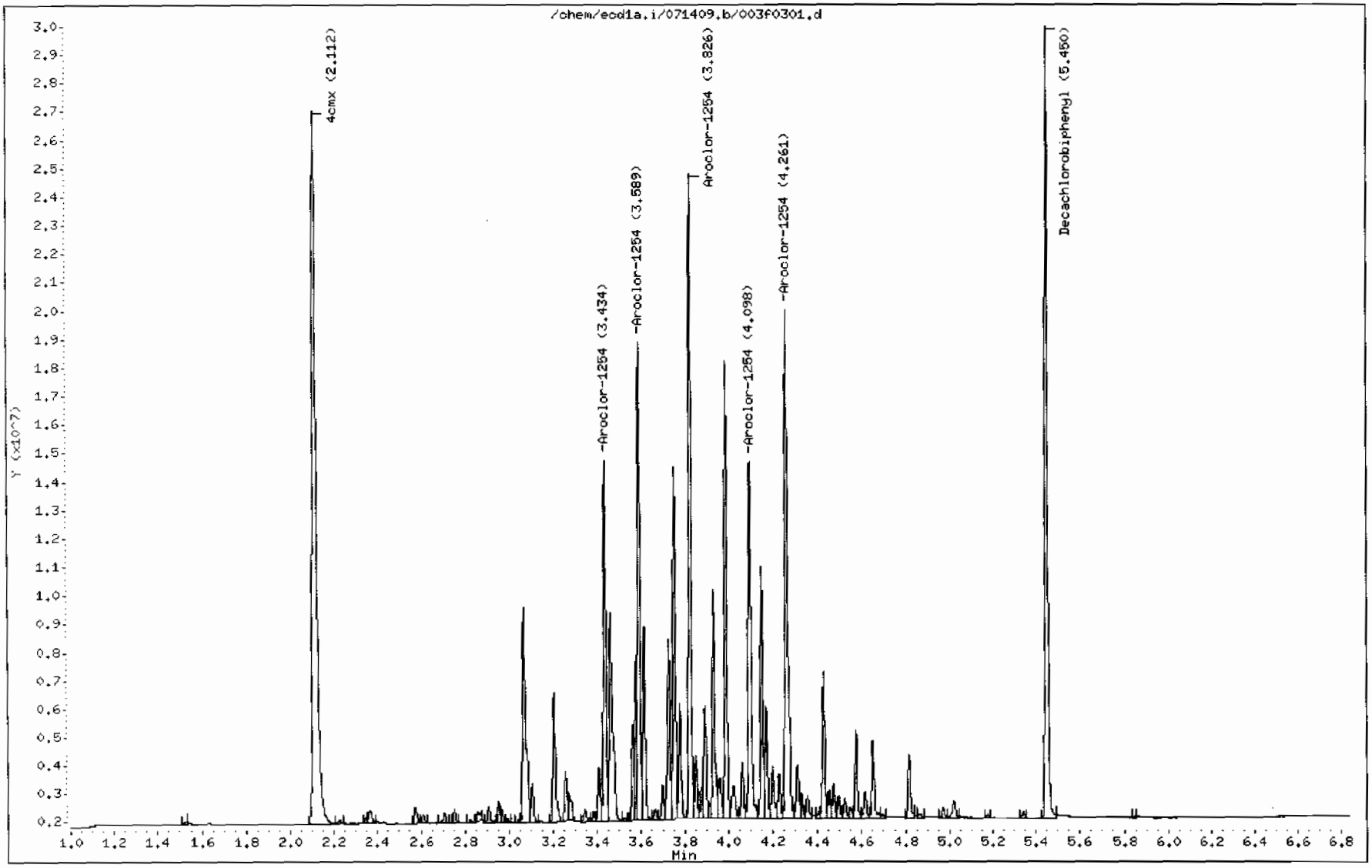

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/003b0301.d
Lab Smp Id: WAR090630-54 54 Client Smp ID: AR125401
Inj Date : 14-JUL-2009 07:05
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090630-54 54
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	25905797	100.000	96.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	11488712	100.000	87.8	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.154	4.154	0.000	8393889	1000.00	905	80.00- 120.00	100.00
4.365	4.365	0.000	6349023	1000.00	916	55.64- 95.64	75.64
4.435	4.435	0.000	11248393	1000.00	924	114.01- 154.01	134.01
4.553	4.553	0.000	4769142	1000.00	906	36.82- 76.82	56.82
4.782	4.782	0.000	5747266	1000.00	912	48.47- 88.47	68.47
Average of Peak Amounts =					913		

Data File: /chem/ecd1a.i/071409.b/003b0301.d

Date : 14-JUL-2009 07:05

Client ID: AR125401

Sample Info: IWAR090630-54 54

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

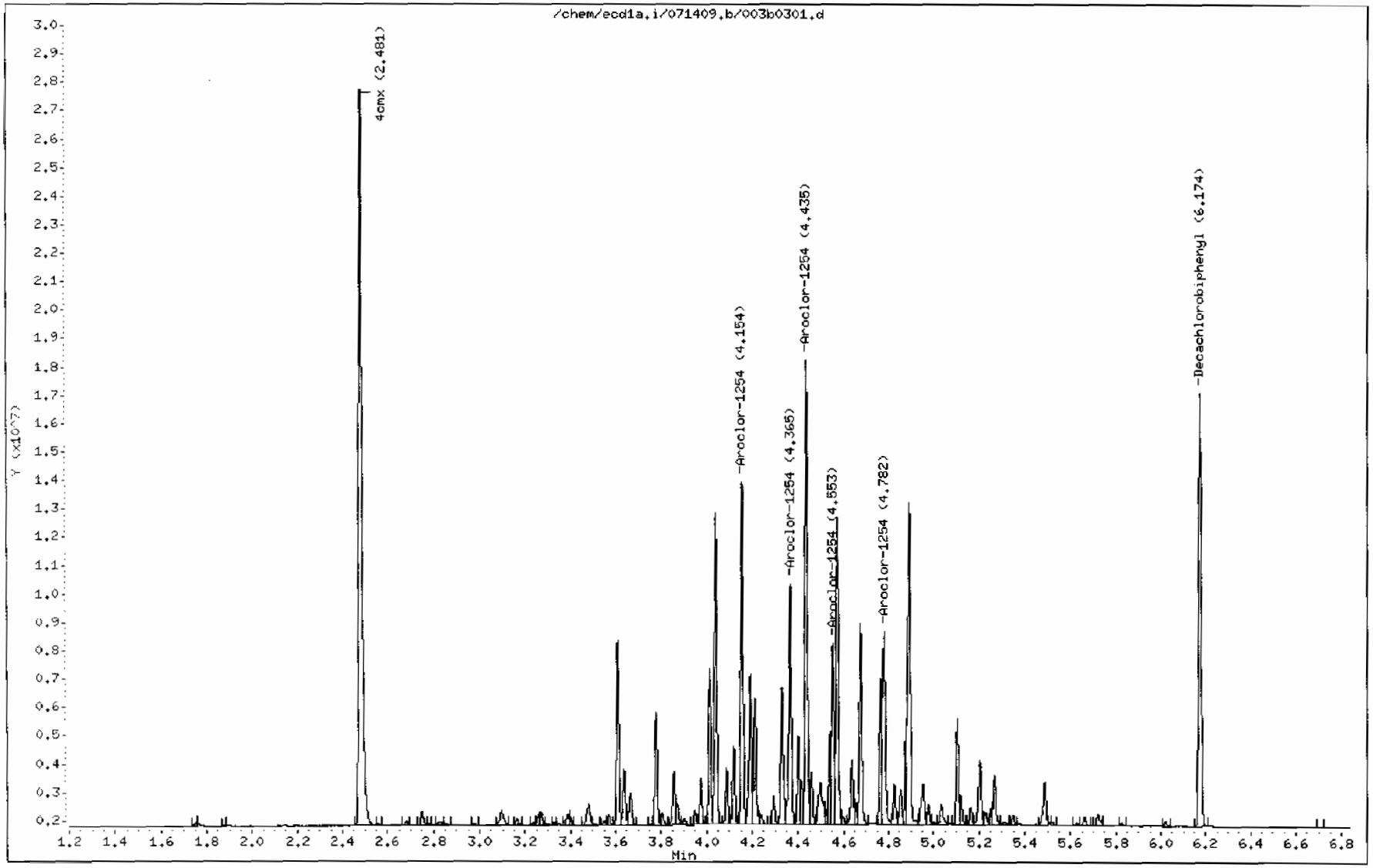

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/004f0401.d
Lab Smp Id: WAR090519-42 42 Client Smp ID: AR124201
Inj Date : 14-JUL-2009 07:15
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090519-42 42
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	38183470	100.000	115	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.452	5.450	0.002	23487290	100.000	101	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.871	2.871	0.000	11039219	1000.00	935	80.00- 120.00	100.00
2.953	2.953	0.000	8204654	1000.00	966	54.32- 94.32	74.32
3.083	3.083	0.000	4130118	1000.00	884	17.41- 57.41	37.41
3.204	3.204	0.000	6014120	1000.00	915	34.48- 74.48	54.48
3.476	3.476	0.000	5681233	1000.00	901	31.46- 71.46	51.46
Average of Peak Amounts =					920		

Data File: /chem/ecd1a.i/071409.b/004f0401.d

Date : 14-JUL-2009 07:15

Client ID: AR124201

Sample Info: IWAR090519-42 42

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

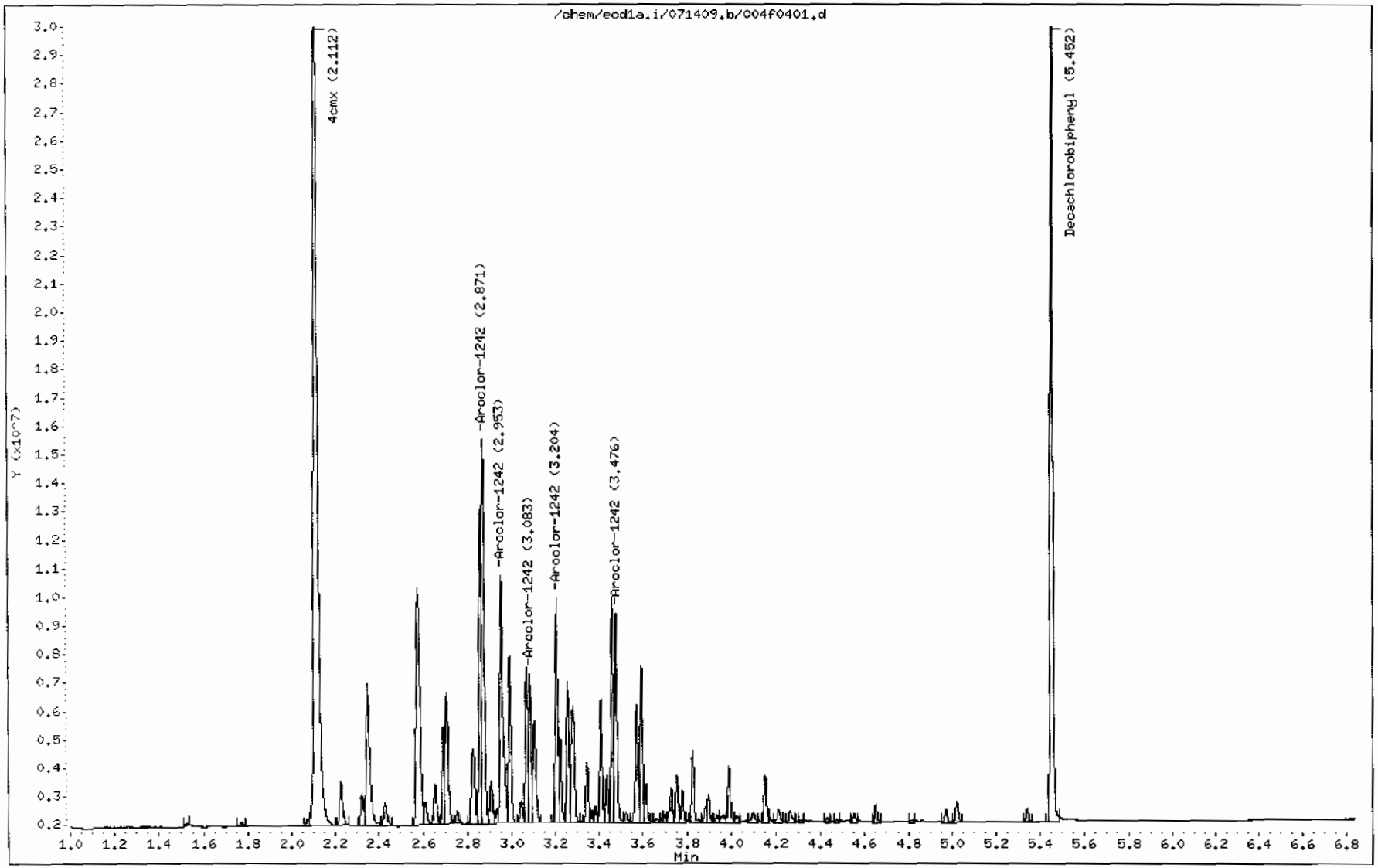

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/004b0401.d
Lab Smp Id: WAR090519-42 42 Client Smp ID: AR124201
Inj Date : 14-JUL-2009 07:15
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090519-42 42
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	30509789	100.000	114	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	12722039	100.000	97.2	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
3.399	3.399	0.000	7268225	1000.00	925	80.00- 120.00	100.00
3.484	3.484	0.000	6012073	1000.00	964	62.72- 102.72	82.72
3.549	3.549	0.000	3422273	1000.00	934	27.09- 67.09	47.09
3.779	3.779	0.000	4597945	1000.00	903	43.26- 83.26	63.26
4.184	4.184	0.000	4630615	1000.00	866	43.71- 83.71	63.71
Average of Peak Amounts =					919		

Data File: /chem/ecd1a.i/071409.b/004b0401.d
Date : 14-JUL-2009 07:15
Client ID: AR124201
Sample Info: IWAR090519-42 42

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

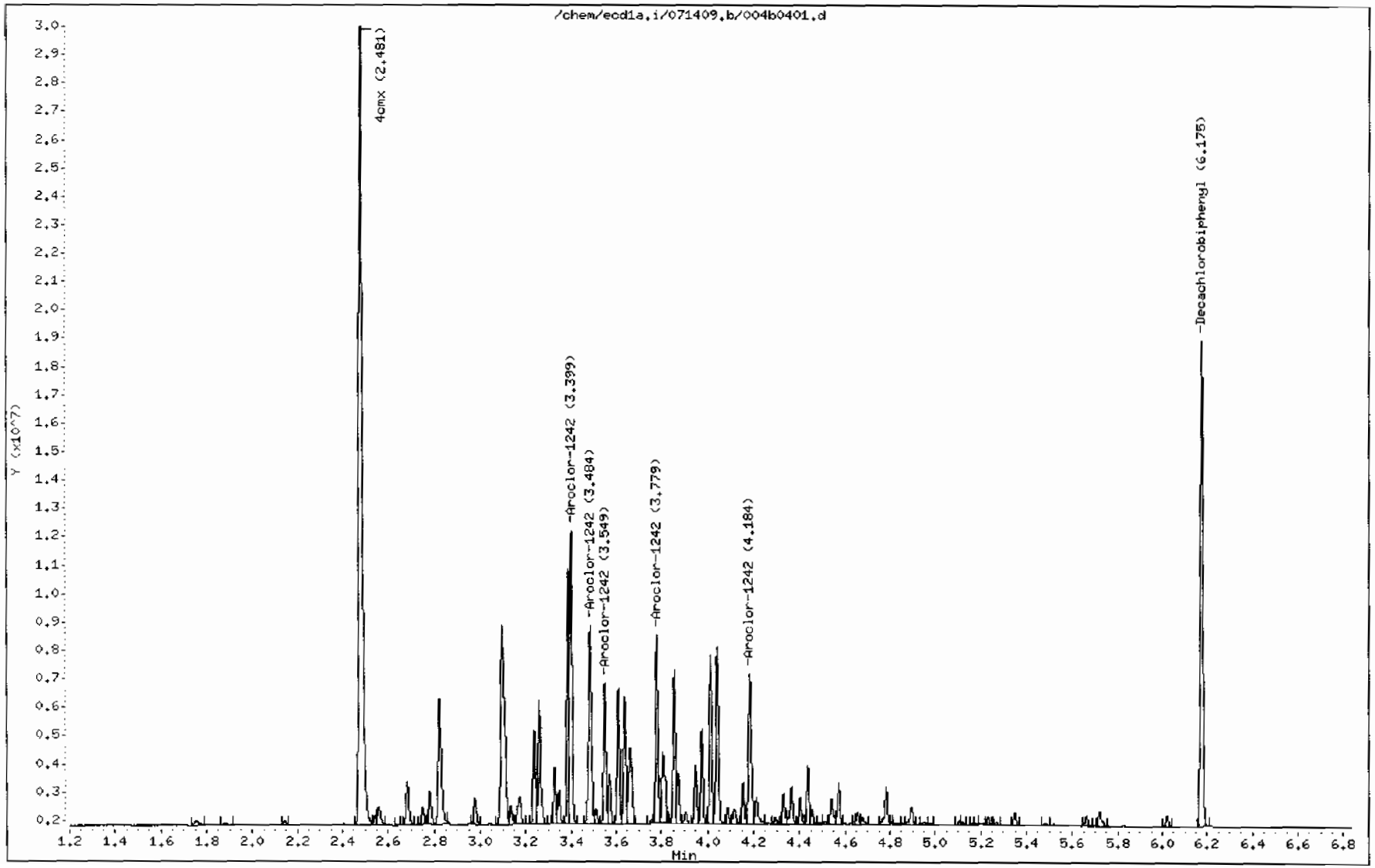

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/005f0501.d
Lab Smp Id: WAR090521-48 48 Client Smp ID: AR124801
Inj Date : 14-JUL-2009 07:25
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090521-48 48
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	35658363	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	23053211	100.000	99.5	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
2.871	2.871	0.000	6035408	1000.00	880	80.00- 120.00	100.00
3.083	3.083	0.000	6584538	1000.00	929	89.10- 129.10	109.10
3.476	3.476	0.000	9551014	1000.00	884	138.25- 178.25	158.25
3.592	3.592	0.000	8879871	1000.00	894	127.13- 167.13	147.13
3.826	3.826	0.000	5780985	1000.00	866	75.78- 115.78	95.78
Average of Peak Amounts =					891		

Data File: /chem/ecd1a.i/071409.b/005f0501.d
Date : 14-JUL-2009 07:25
Client ID: AR124801
Sample Info: IWAR090521-48 48

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

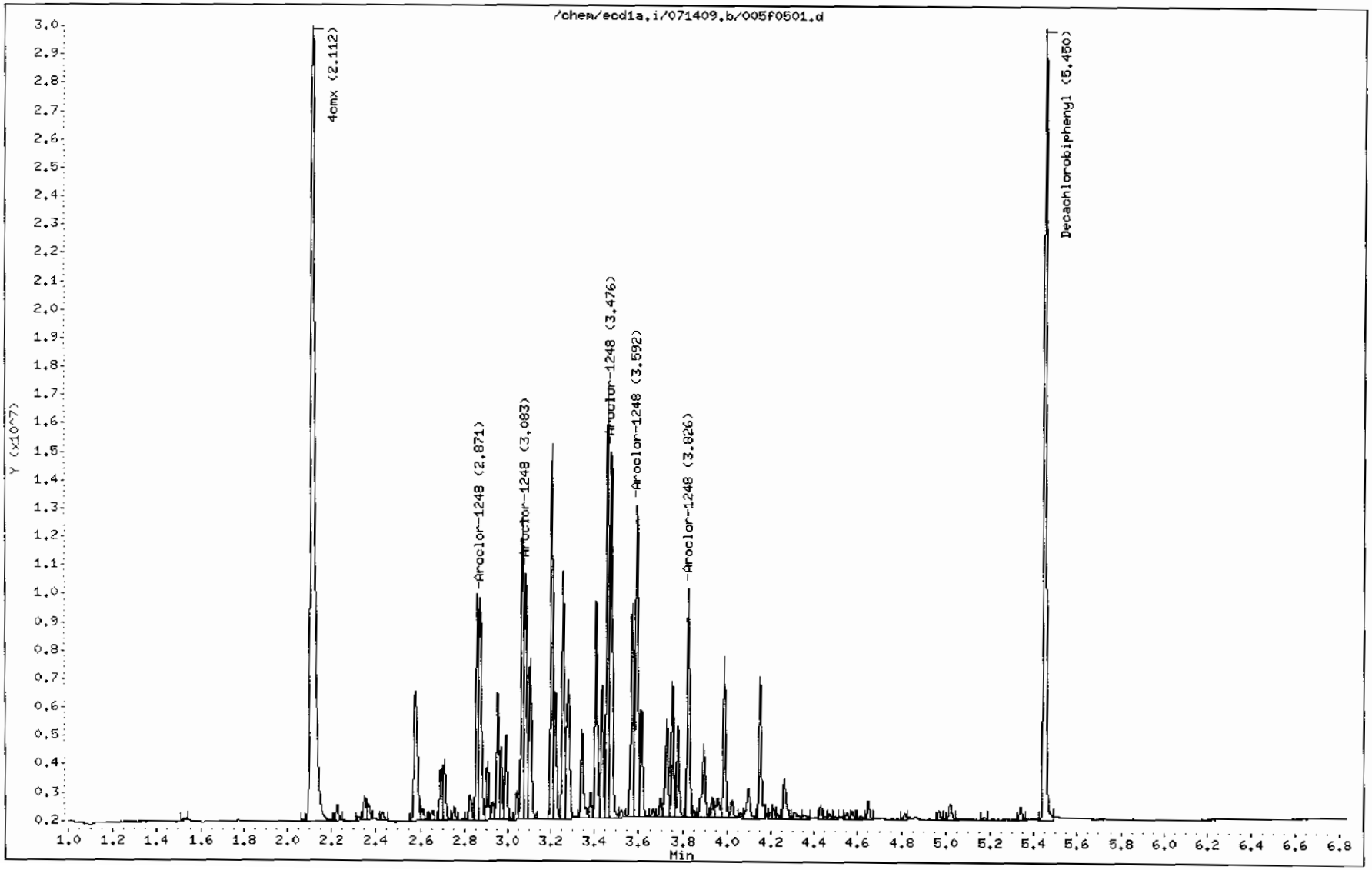

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/005b0501.d
Lab Smp Id: WAR090521-48 48 Client Smp ID: AR124801
Inj Date : 14-JUL-2009 07:25
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090521-48 48
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpc1p1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	28597785	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	12419027	100.000	94.9	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.610	3.610	0.000	6105006	1000.00	887	80.00- 120.00	100.00
3.779	3.779	0.000	7526110	1000.00	898	103.28- 143.28	123.28
4.014	4.014	0.000	7668276	1000.00	929	105.61- 145.61	125.61
4.042	4.042	0.000	8625235	1000.00	956	121.28- 161.28	141.28
4.182	4.182	0.000	8191750	1000.00	873	114.18- 154.18	134.18
Average of Peak Amounts =					909		

Data File: /chem/ecd1a.i/071409.b/005b0501.d
Date : 14-JUL-2009 07:25
Client ID: AR124801
Sample Info: IWAR090521-48 48

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

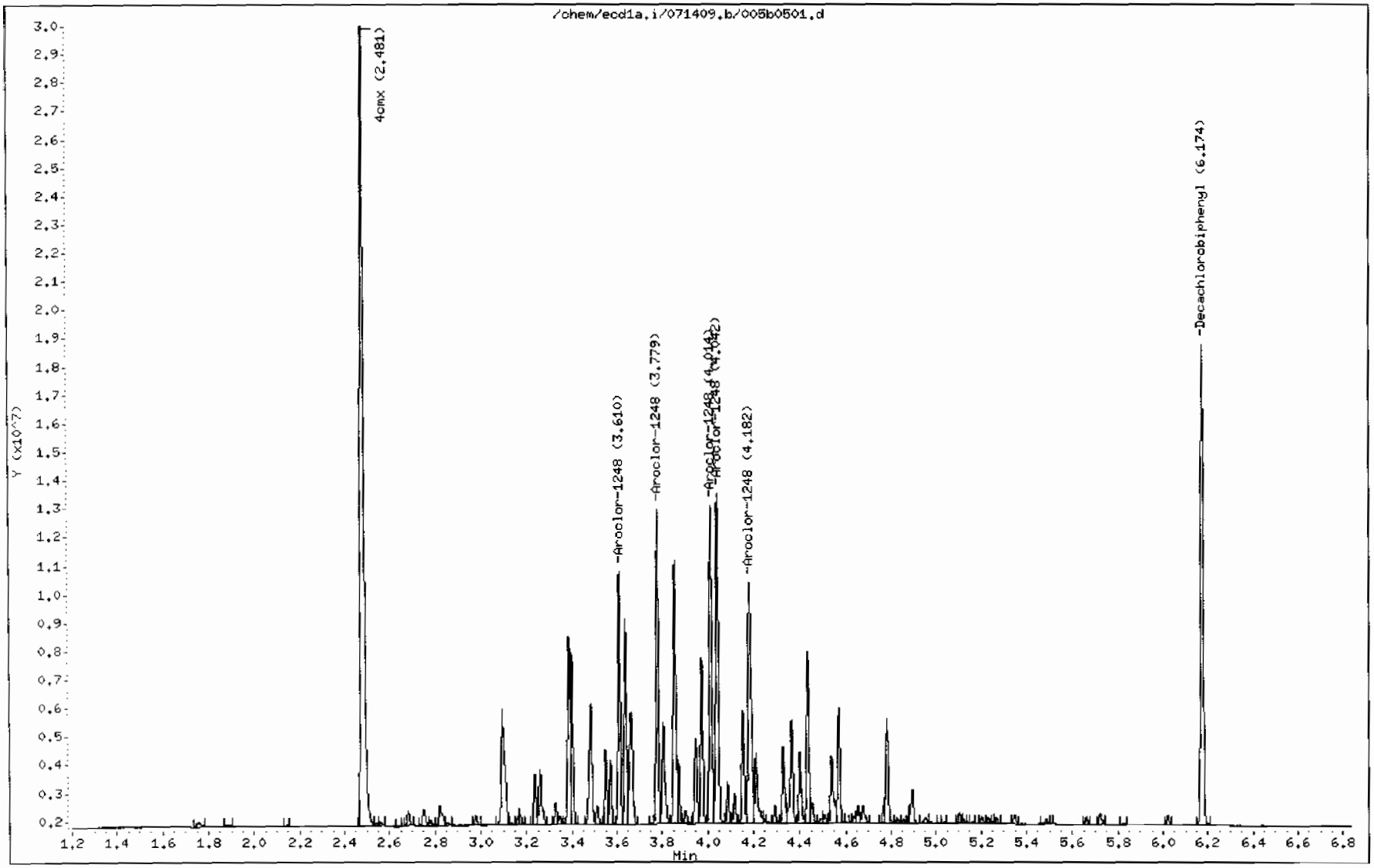

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/006f0601.d
Lab Smp Id: WAR090618-32 32 Client Smp ID: AR123201
Inj Date : 14-JUL-2009 07:36
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-32 32
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	35017783	100.000	105	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	23259425	100.000	100	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.578	2.578	0.000	5839184	1000.00	993	80.00- 120.00	100.00
2.871	2.871	0.000	6685163	1000.00	1000	94.49- 134.49	114.49
2.953	2.953	0.000	4781577	1000.00	988	61.89- 101.89	81.89
3.204	3.204	0.000	3277549	1000.00	985	36.13- 76.13	56.13
3.475	3.475	0.000	3068968	1000.00	970	32.56- 72.56	52.56

Average of Peak Amounts = 988

Data File: /chem/ecd1a.i/071409.b/006f0601.d
Date : 14-JUL-2009 07:36
Client ID: AR123201
Sample Info: IWAR090618-32 32

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

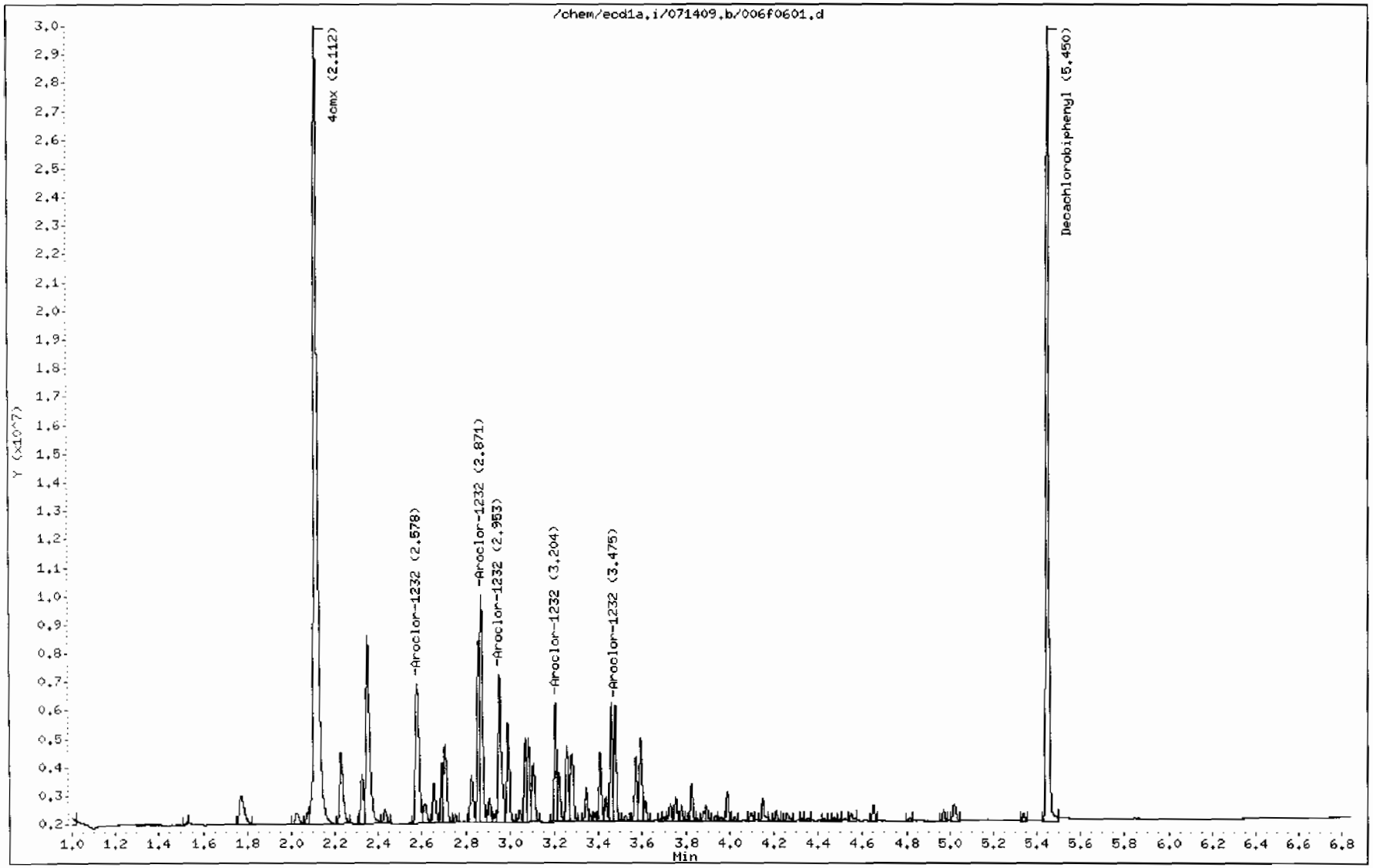

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/006b0601.d
Lab Smp Id: WAR090618-32 32 Client Smp ID: AR123201
Inj Date : 14-JUL-2009 07:36
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-32 32
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	27702633	100.000	103	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	12462199	100.000	95.2	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
3.387	3.387	0.000	3356033	1000.00	976	80.00- 120.00	100.00
3.484	3.484	0.000	3582746	1000.00	990	86.76- 126.76	106.76
3.550	3.550	0.000	2070080	1000.00	984	41.68- 81.68	61.68
3.779	3.779	0.000	2546736	1000.00	979	55.89- 95.89	75.89
4.042	4.042	0.000	2593997	1000.00	1000	57.29- 97.29	77.29
Average of Peak Amounts =					986		

Data File: /chem/ecd1a.i/071409.b/006b0601.d

Date : 14-JUL-2009 07:36

Client ID: AR123201

Sample Info: IWAR090618-32 32

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

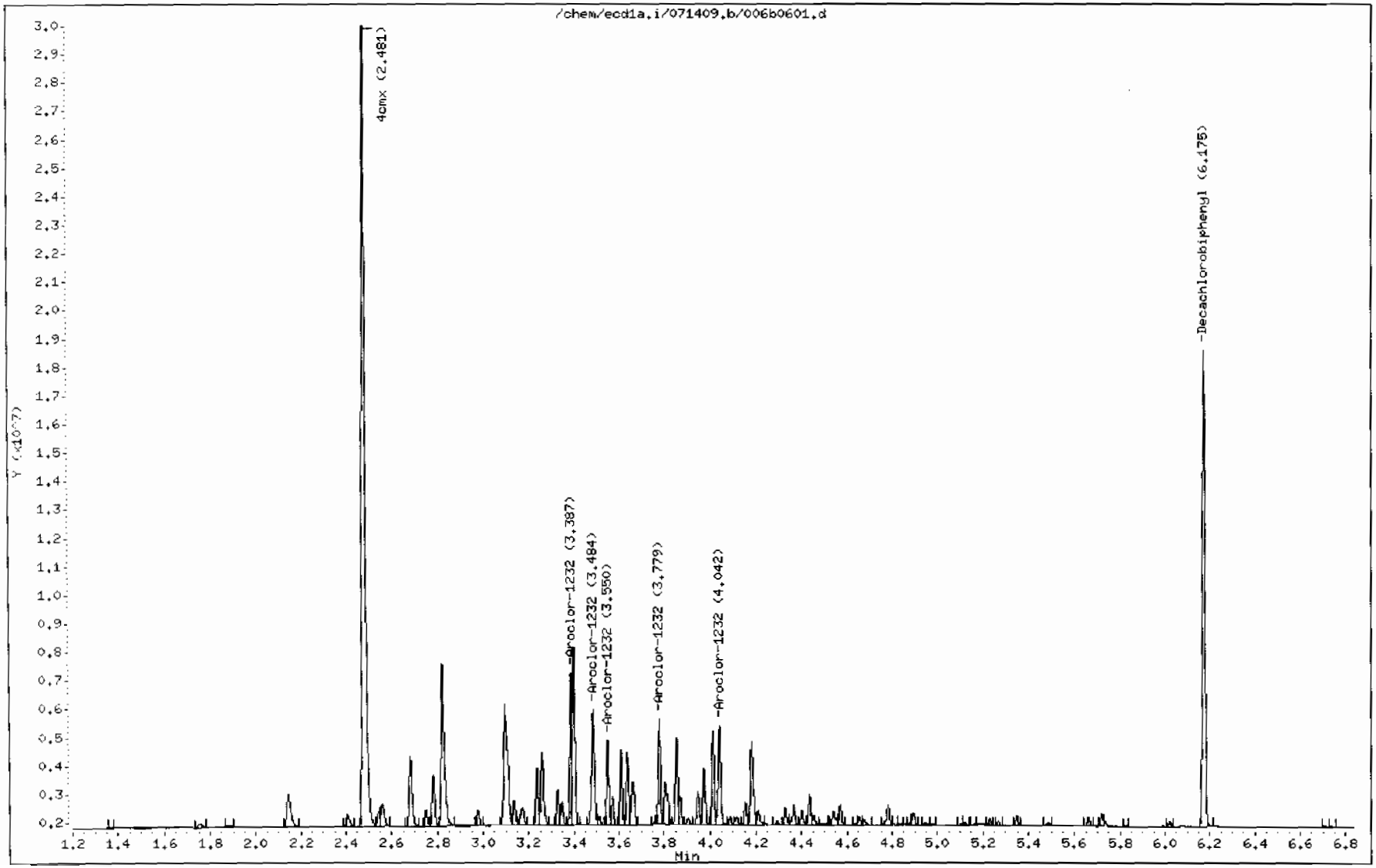

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 1NJ VOL

Data file : /chem/ecd1a.i/071409.b/007f0701.d
Lab Smp Id: WAR090618-21 21 Client Smp ID: AR122101
Inj Date : 14-JUL-2009 07:46
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-21 21
Misc Info : |CVS|1221|
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:47 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	36179109	100.000	109	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	23485598	100.000	101	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.226	2.226	0.000	3701247	1000.00	1030	80.00- 120.00	100.00
2.323	2.323	0.000	2073773	1000.00	991	36.03- 76.03	56.03
2.350	2.350	0.000	8757350	1000.00	999	216.61- 256.61	236.61

Average of Peak Amounts = 1.01e+03

Data File: /chem/ecd1a.i/071409.b/007f0701.d

Date : 14-JUL-2009 07:46

Client ID: AR122101

Sample Info: IWAR090618-21 21

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

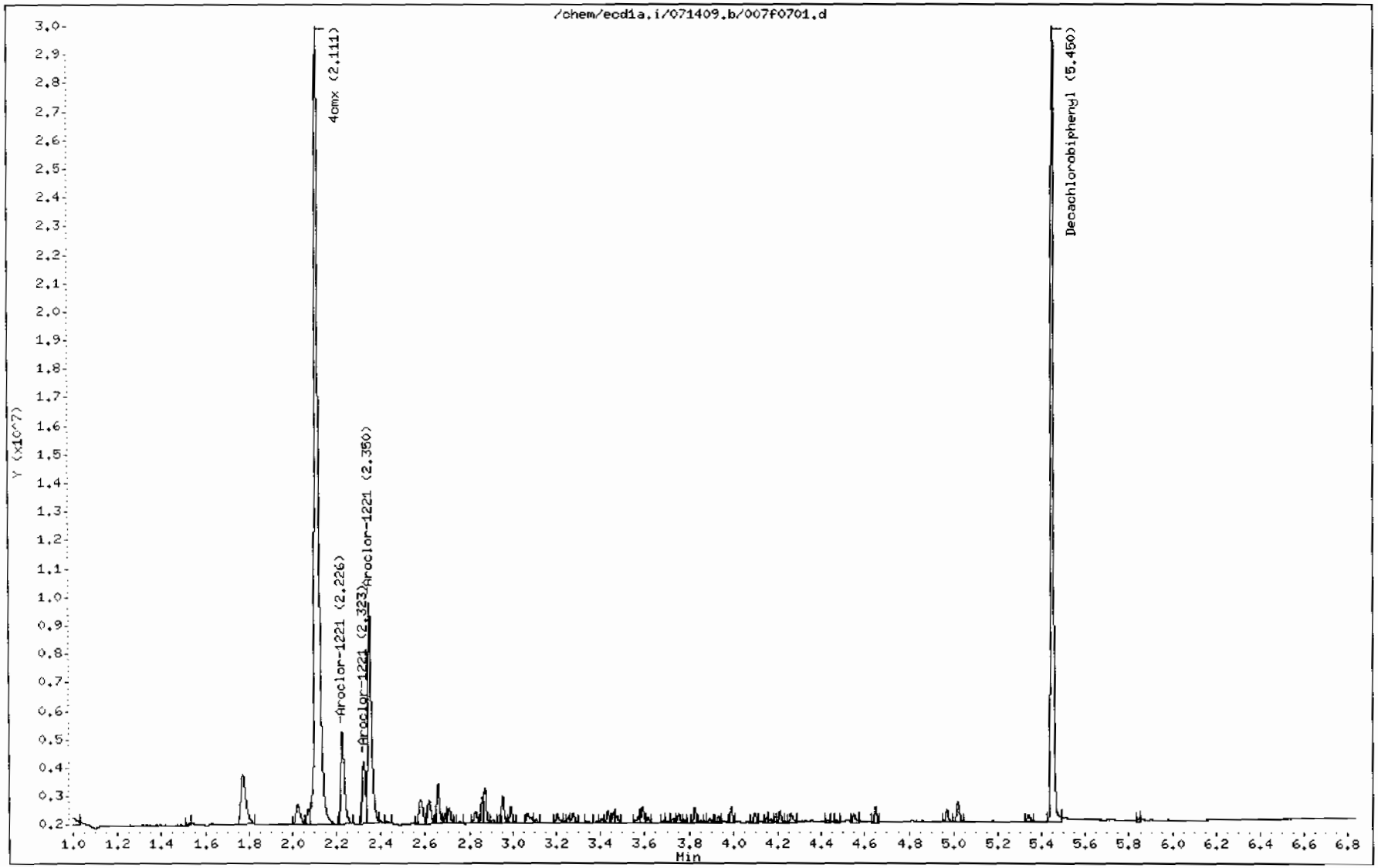

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/007b0701.d
Lab Smp Id: WAR090618-21 21 Client Smp ID: AR122101
Inj Date : 14-JUL-2009 07:46
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-21 21
Misc Info : |CVS|1221|
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	28526825	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	12651006	100.000	96.7	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.684	2.684	0.000	3181154	1000.00	1110	80.00- 120.00	100.00
2.781	2.781	0.000	1969114	1000.00	1040	41.90- 81.90	61.90
2.823	2.823	0.000	6360540	1000.00	1030	179.94- 219.94	199.94

Average of Peak Amounts = 1.05e+03

Data File: /chem/ecd1a.i/071409.b/007b0701.d
Date : 14-JUL-2009 07:46
Client ID: AR122101
Sample Info: IWAR090618-21 21

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

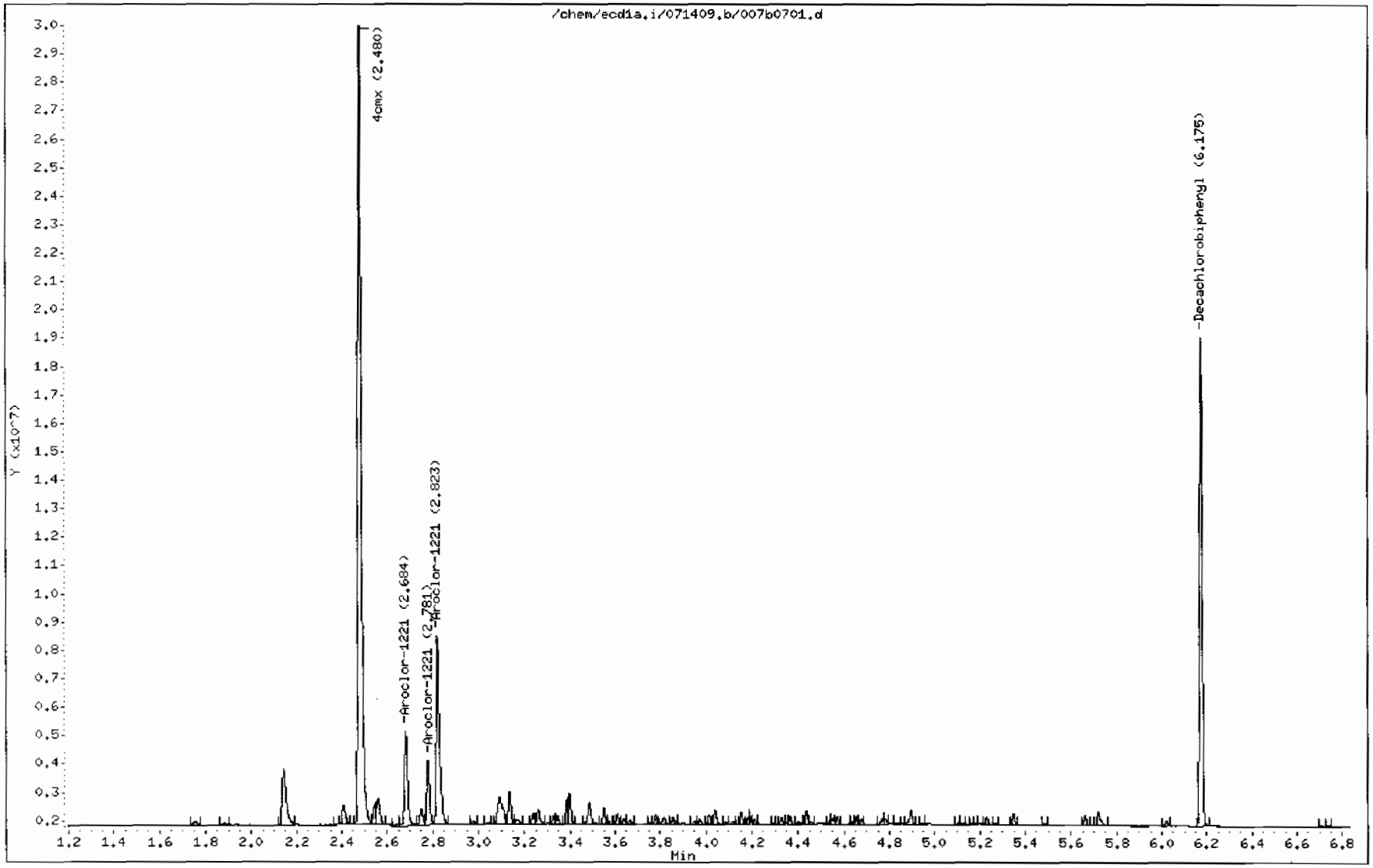

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/019f1901.d
Lab Smp Id: WAR090623-60 02 Client Smp ID: AR166002
Inj Date : 14-JUL-2009 10:00
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 02
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 11:21 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.109	2.112	-0.003	33443959	100.000	101	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.446	5.450	-0.004	23497991	100.000	101	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.573	2.577	-0.004	13623921	1000.00	959	80.00- 120.00	100.00
2.867	2.871	-0.004	17122131	1000.00	1030	105.68- 145.68	125.68
2.950	2.953	-0.003	11364367	1000.00	966	63.41- 103.41	83.41
3.064	3.067	-0.003	6093521	1000.00	954	24.73- 64.73	44.73
3.201	3.204	-0.003	8685457	1000.00	988	43.75- 83.75	63.75
Average of Peak Amounts =					980		
7 Aroclor-1260					CAS #: 11096-82-5		
3.930	3.933	-0.003	15114016	1000.00	989	80.00- 120.00	100.00
4.092	4.096	-0.004	23255466	1000.00	1010	133.87- 173.87	153.87
4.324	4.326	-0.002	11537482	1000.00	991	56.34- 96.34	76.34
4.468	4.470	-0.002	12563517	1000.00	992	63.12- 103.12	83.12
4.832	4.835	-0.003	5688421	1000.00	968	17.64- 57.64	37.64
Average of Peak Amounts =					989		

Data File: /chem/ecd1a.i/071409.b/019f1901.d

Date : 14-JUL-2009 10:00

Client ID: AR166002

Sample Info: IWAR090623-60 02

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

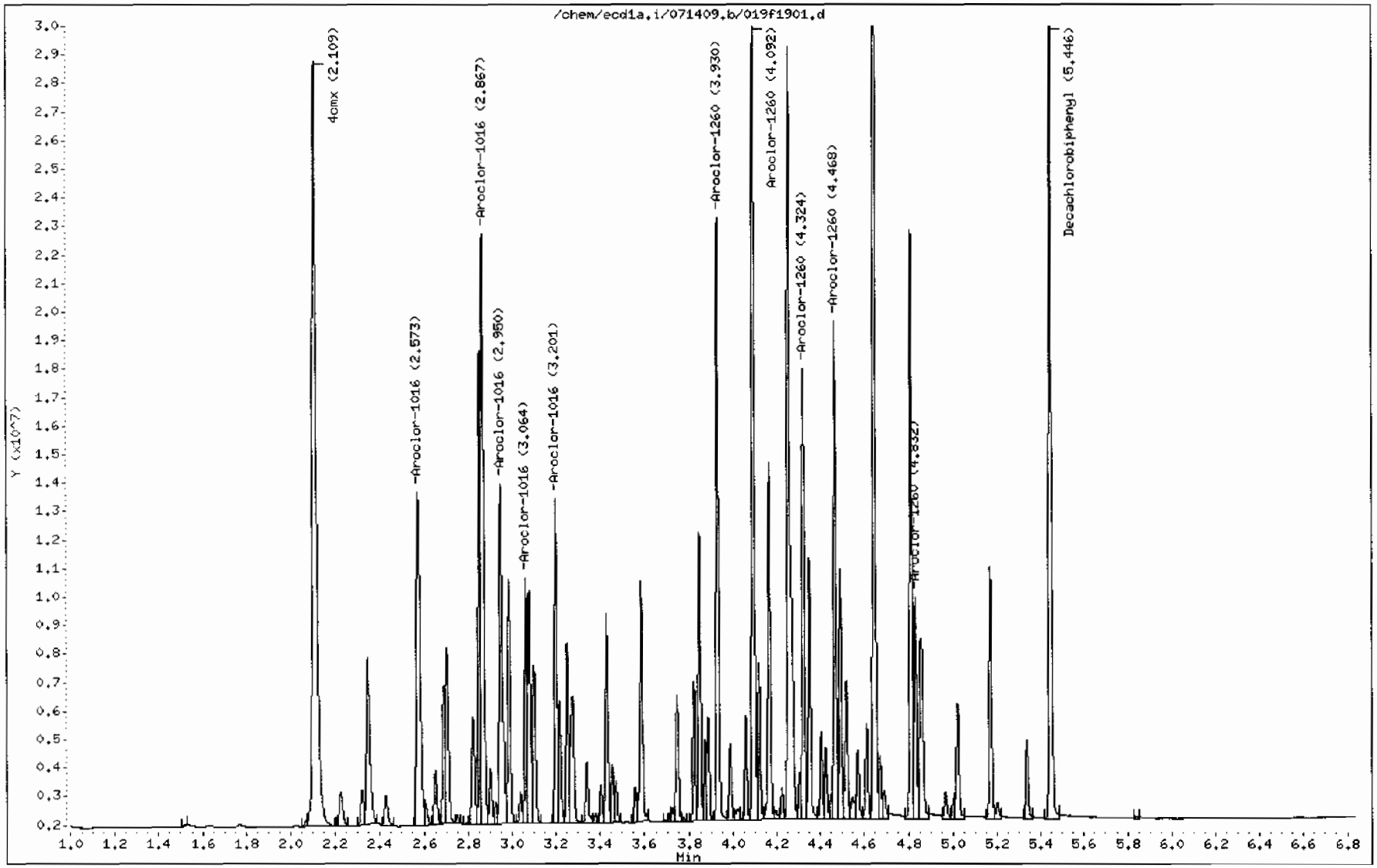

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/019b1901.d
Lab Smp Id: WAR090623-60 02 Client Smp ID: AR166002
Inj Date : 14-JUL-2009 10:00
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 02
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 11:20 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.478	2.481	-0.003	27399038	100.000	102	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.171	6.175	-0.004	13099557	100.000	100	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.396	3.399	-0.003	11323881	1000.00	1070	80.00- 120.00	100.00
3.480	3.484	-0.004	8421726	1000.00	1000	54.37- 94.37	74.37
3.546	3.549	-0.003	5075640	1000.00	1020	24.82- 64.82	44.82
3.775	3.779	-0.004	6842460	1000.00	1000	40.43- 80.43	60.43
3.852	3.855	-0.003	5491288	1000.00	1010	28.49- 68.49	48.49
Average of Peak Amounts =					1.02e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.549	4.551	-0.002	11292830	1000.00	997	80.00- 120.00	100.00
4.672	4.675	-0.003	12734567	1000.00	1020	92.77- 132.77	112.77
4.942	4.944	-0.002	8366958	1000.00	988	54.09- 94.09	74.09
5.118	5.121	-0.003	8773824	1000.00	1000	57.69- 97.69	77.69
5.263	5.267	-0.004	17736968	1000.00	1040	137.06- 177.06	157.06
Average of Peak Amounts =					1.01e+03		

Data File: /chem/ecd1a.i/071409.b/019b1901.d

Date : 14-JUL-2009 10:00

Client ID: AR166002

Sample Info: IWAR090623-60 02

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

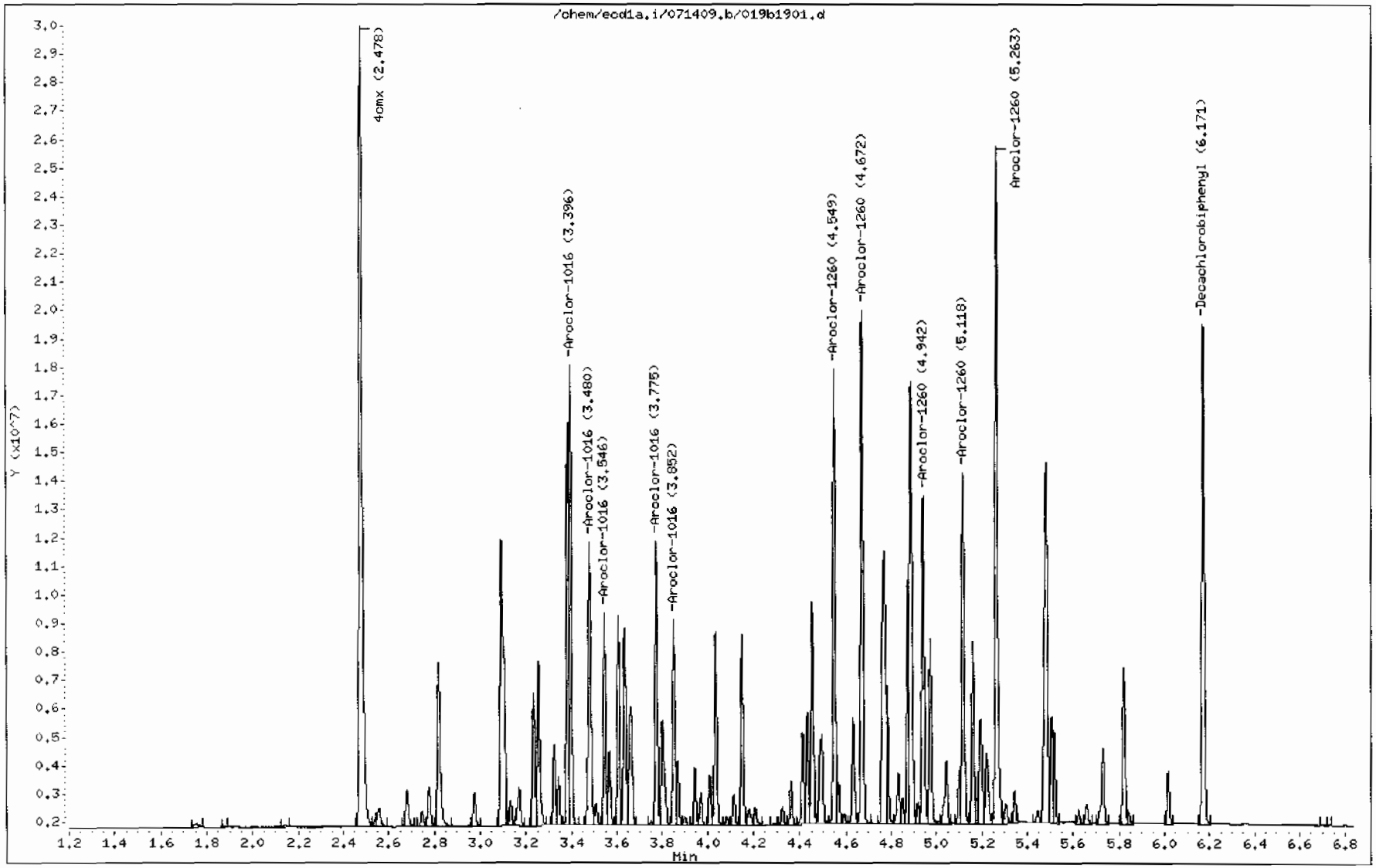

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/031f3101.d
Lab Smp Id: WAR090623-60 03 Client Smp ID: AR166003
Inj Date : 14-JUL-2009 12:14
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 03
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.110	2.112	-0.002	33321410	100.000	100	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.448	5.450	-0.002	24018081	100.000	104	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.575	2.577	-0.002	13704784	1000.00	965	80.00- 120.00	100.00
2.868	2.871	-0.003	17150580	1000.00	1030	105.14- 145.14	125.14
2.950	2.953	-0.003	11437579	1000.00	972	63.46- 103.46	83.46
3.064	3.067	-0.003	6119921	1000.00	958	24.66- 64.66	44.66
3.201	3.204	-0.003	8707677	1000.00	991	43.54- 83.54	63.54
Average of Peak Amounts =					984		
7 Aroclor-1260					CAS #: 11096-82-5		
3.930	3.933	-0.003	15218428	1000.00	996	80.00- 120.00	100.00
4.093	4.096	-0.003	23615122	1000.00	1020	135.17- 175.17	155.17
4.324	4.326	-0.002	11700924	1000.00	1000	56.89- 96.89	76.89
4.468	4.470	-0.002	12795401	1000.00	1010	64.08- 104.08	84.08
4.833	4.835	-0.002	5792099	1000.00	986	18.06- 58.06	38.06
Average of Peak Amounts =					1e+03		

Data File: /chem/ecd1a.i/071409.b/031f3101.d
Date : 14-JUL-2009 12:14
Client ID: AR166003
Sample Info: IWAR090623-60 03

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

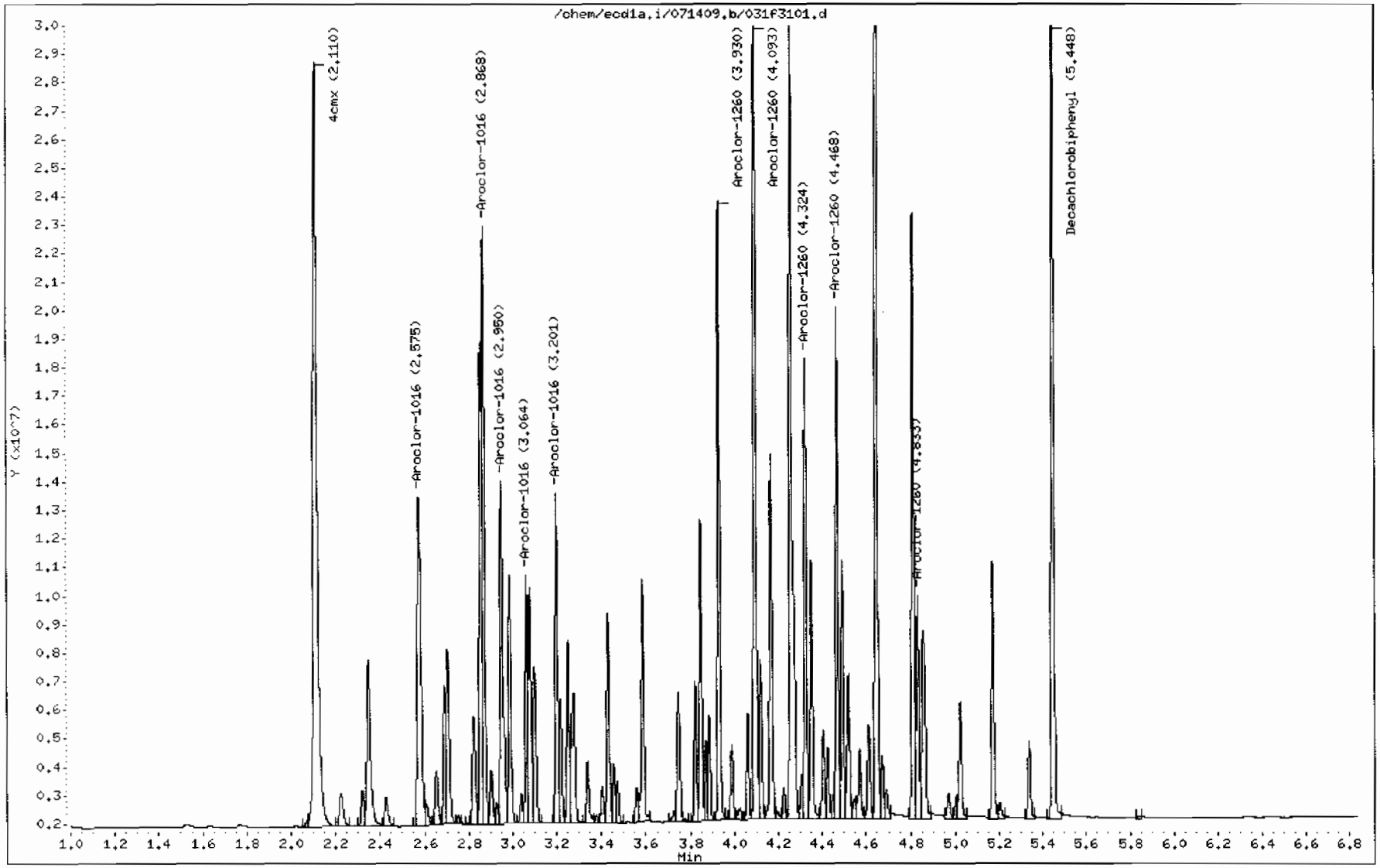

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/031b3101.d
Lab Smp Id: WAR090623-60 03 Client Smp ID: AR166003
Inj Date : 14-JUL-2009 12:14
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 03
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.479	2.481	-0.002	27654886	100.000	103	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.172	6.175	-0.003	13730668	100.000	105	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.396	3.399	-0.003	12210940	1000.00	1160	80.00- 120.00	100.00
3.481	3.484	-0.003	8750467	1000.00	1040	51.66- 91.66	71.66
3.546	3.549	-0.003	5288968	1000.00	1070	23.31- 63.31	43.31
3.776	3.779	-0.003	7094884	1000.00	1040	38.10- 78.10	58.10
3.853	3.855	-0.002	5697830	1000.00	1040	26.66- 66.66	46.66
Average of Peak Amounts =					1.07e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.549	4.551	-0.002	11691028	1000.00	1030	80.00- 120.00	100.00
4.673	4.675	-0.002	13289261	1000.00	1070	93.67- 133.67	113.67
4.943	4.944	-0.001	8686953	1000.00	1030	54.30- 94.30	74.30
5.119	5.121	-0.002	9136766	1000.00	1040	58.15- 98.15	78.15
5.265	5.267	-0.002	18710100	1000.00	1100	140.04- 180.04	160.04
Average of Peak Amounts =					1.05e+03		

Data File: /chem/ecd1a.i/071409.b/031b3101.d

Date : 14-JUL-2009 12:14

Client ID: AR166003

Sample Info: IWAR090623-60 03

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

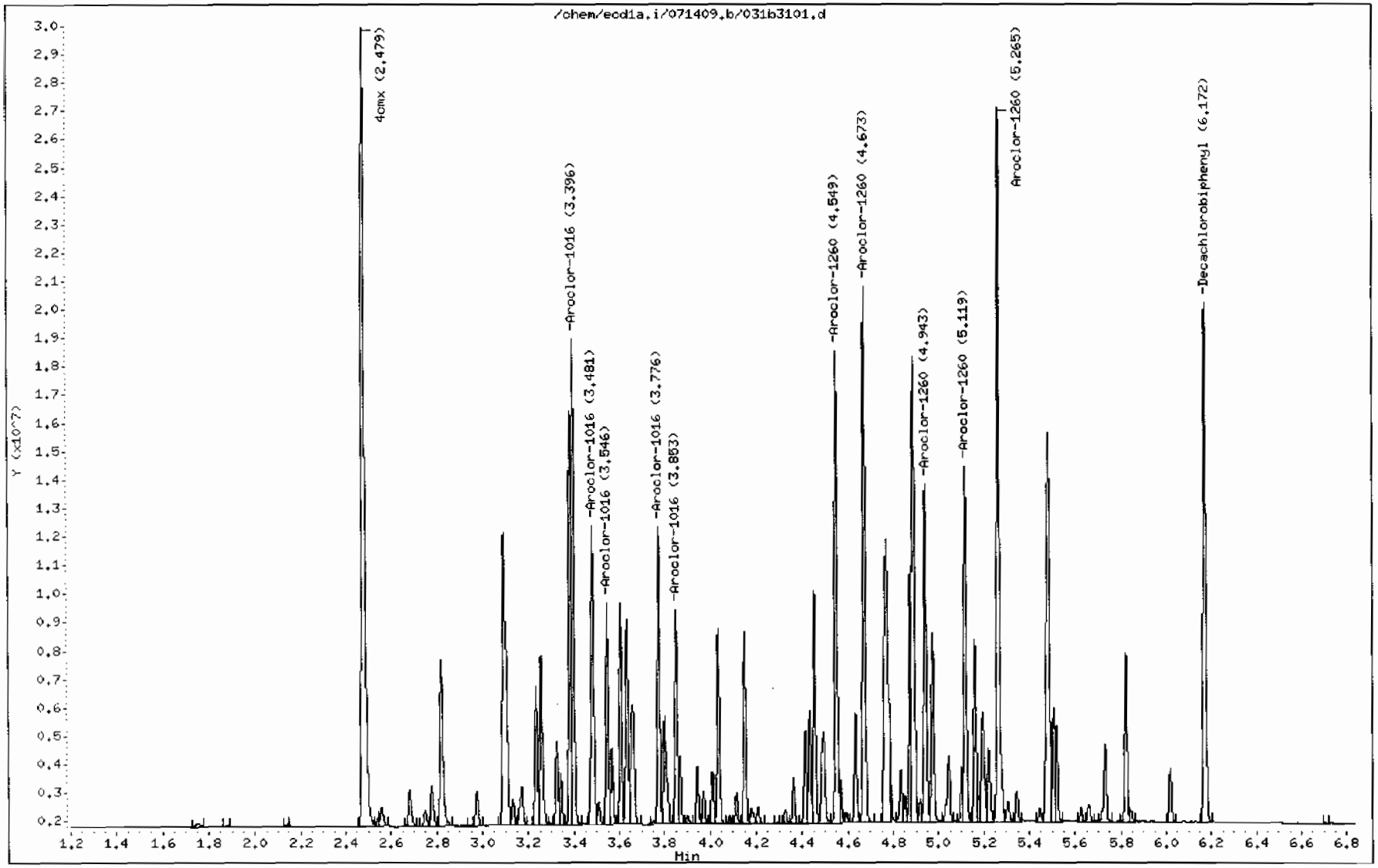

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2508

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.11 DCB: 5.45

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/13/09	0944	2.11	5.45
02	ZZZZZ	ZZZZZ	07/13/09	0954	2.11	5.45
03	ZZZZZ	ZZZZZ	07/13/09	1004	2.11	5.45
04	AR124201	WAR090713-09	07/13/09	1014	2.11	5.45
05	AR124202	WAR090713-10	07/13/09	1025	2.11	5.45
06	AR124203	WAR090713-11	07/13/09	1035	2.11	5.45
07	AR124204	WAR090713-12	07/13/09	1045	2.11	5.45
08	AR124205	IAR090711-01	07/13/09	1056	2.11	5.45
09	AR124201	WAR090519-42	07/13/09	1106	2.11	5.45
10	AR124801	WAR090521-48	07/13/09	1116	2.11	5.45
11	AR166001	WAR090713-01	07/13/09	1127	2.11	5.45
12	AR166002	WAR090713-02	07/13/09	1137	2.11	5.45
13	AR166003	WAR090713-03	07/13/09	1147	2.11	5.45
14	AR166004	WAR090713-04	07/13/09	1158	2.11	5.45
15	AR166005	IAR090623-01	07/13/09	1208	2.11	5.45
16	AR166001	WAR090623-60	07/13/09	1218	2.11	5.45
17	AR125401	WAR090713-05	07/13/09	1228	2.11	5.45
18	AR125402	WAR090713-06	07/13/09	1239	2.11	5.45
19	AR125403	WAR090713-07	07/13/09	1249	2.11	5.45
20	AR125404	WAR090713-08	07/13/09	1259	2.11	5.45
21	AR125405	IAR0900505-0	07/13/09	1310	2.11	5.45
22	AR125401	WAR090630-54	07/13/09	1320	2.11	5.45
23	AR123201	WAR090618-32	07/13/09	1330	2.11	5.45
24	AR122101	WAR090618-21	07/13/09	1340	2.11	5.45
25	AR126201	WAR090608-62	07/13/09	1351	2.11	5.45
26	AR126801	WAR090424-68	07/13/09	1401	2.11	5.45
27	DDTANALOGSTD	WAR090623-DD	07/13/09	1411		
28	PIBLK02	WAR090703-99	07/13/09	1514	2.11	5.46
29	ZZZZZ	ZZZZZ	07/13/09	1524	2.11	5.45
30	ZZZZZ	ZZZZZ	07/13/09	1534	2.11	5.45
31	ZZZZZ	ZZZZZ	07/13/09	1544	2.11	5.45
32	ZZZZZ	ZZZZZ	07/13/09	1555	2.11	5.45

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2508

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.48 DCB: 6.18

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/13/09	0944	2.48	6.17
02	ZZZZZ	ZZZZZ	07/13/09	0954	2.48	6.17
03	ZZZZZ	ZZZZZ	07/13/09	1004	2.48	6.17
04	AR124201	WAR090713-09	07/13/09	1014	2.48	6.17
05	AR124202	WAR090713-10	07/13/09	1025	2.48	6.17
06	AR124203	WAR090713-11	07/13/09	1035	2.48	6.18
07	AR124204	WAR090713-12	07/13/09	1045	2.48	6.18
08	AR124205	IAR090711-01	07/13/09	1056	2.48	6.18
09	AR124201	WAR090519-42	07/13/09	1106	2.48	6.17
10	AR124801	WAR090521-48	07/13/09	1116	2.48	6.18
11	AR166001	WAR090713-01	07/13/09	1127	2.48	6.18
12	AR166002	WAR090713-02	07/13/09	1137	2.48	6.17
13	AR166003	WAR090713-03	07/13/09	1147	2.48	6.18
14	AR166004	WAR090713-04	07/13/09	1158	2.48	6.18
15	AR166005	IAR090623-01	07/13/09	1208	2.48	6.18
16	AR166005	WAR090623-60	07/13/09	1218	2.48	6.18
17	AR125401	WAR090713-05	07/13/09	1228	2.48	6.17
18	AR125402	WAR090713-06	07/13/09	1239	2.48	6.17
19	AR125403	WAR090713-07	07/13/09	1249	2.48	6.18
20	AR125404	WAR090713-08	07/13/09	1259	2.48	6.17
21	AR125405	IAR0900505-0	07/13/09	1310	2.48	6.18
22	AR125401	WAR090630-54	07/13/09	1320	2.48	6.17
23	AR123201	WAR090618-32	07/13/09	1330	2.48	6.17
24	AR122101	WAR090618-21	07/13/09	1340	2.48	6.18
25	AR126201	WAR090608-62	07/13/09	1351	2.48	6.18
26	AR126801	WAR090424-68	07/13/09	1401	2.48	6.17
27	DDTANALOGSTD	WAR090623-DD	07/13/09	1411		
28	PIBLK02	WAR090703-99	07/13/09	1514	2.49	6.18
29	ZZZZZ	ZZZZZ	07/13/09	1524	2.48	6.18
30	ZZZZZ	ZZZZZ	07/13/09	1534	2.48	6.18
31	ZZZZZ	ZZZZZ	07/13/09	1544	2.48	6.18
32	ZZZZZ	ZZZZZ	07/13/09	1555	2.48	6.18

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

page 1 of 1

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2508

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.11 DCB: 5.45

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/14/09	0644	2.11	5.45
02	AR166001	WAR090623-60	07/14/09	0654	2.11	5.45
03	AR125401	WAR090630-54	07/14/09	0705	2.11	5.45
04	AR124201	WAR090519-42	07/14/09	0715	2.11	5.45
05	AR124801	WAR090521-48	07/14/09	0725	2.11	5.45
06	AR123201	WAR090618-32	07/14/09	0736	2.11	5.45
07	AR122101	WAR090618-21	07/14/09	0746	2.11	5.45
08	AR126201	WAR090608-62	07/14/09	0756	2.11	5.45
09	AR126801	WAR090424-68	07/14/09	0806	2.11	5.45
10	ZZZZZ	ZZZZZ	07/14/09	0817		
11	PIBLK02	WAR090703-99	07/14/09	0827	2.11	5.45
12	ZZZZZ	ZZZZZ	07/14/09	0837	2.11	5.45
13	ZZZZZ	ZZZZZ	07/14/09	0848	2.11	5.45
14	ZZZZZ	ZZZZZ	07/14/09	0858	2.11	5.45
15	ZZZZZ	ZZZZZ	07/14/09	0908	2.11	5.45
16	ZZZZZ	ZZZZZ	07/14/09	0919	2.11	5.45
17	ZZZZZ	ZZZZZ	07/14/09	0929	2.11	5.45
18	ZZZZZ	ZZZZZ	07/14/09	0944	2.11	5.45
19	AR166002	WAR090623-60	07/14/09	1000	2.11	5.45
20	PIBLK03	WAR090730-99	07/14/09	1010	2.11	5.45
21	PBLK01	1201879447	07/14/09	1021	2.11	5.45
22	PBLK01LCS	1201879448	07/14/09	1031	2.11	5.45
23	CAMO-09-10465	232582002	07/14/09	1041	2.11	5.45
24	ZZZZZ	ZZZZZ	07/14/09	1051	2.11	5.45
25	ZZZZZ	ZZZZZ	07/14/09	1102	2.11	5.45
26	ZZZZZ	ZZZZZ	07/14/09	1112	2.11	5.45
27	ZZZZZ	ZZZZZ	07/14/09	1122	2.11	5.45
28	ZZZZZ	ZZZZZ	07/14/09	1132	2.11	5.45
29	ZZZZZ	ZZZZZ	07/14/09	1143	2.11	5.45
30	ZZZZZ	ZZZZZ	07/14/09	1158	2.11	5.45
31	AR166003	WAR090623-60	07/14/09	1214	2.11	5.45
32	PIBLK04	WAR090730-99	07/14/09	1224	2.11	5.45

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2508

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.48 DCB: 6.17

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/14/09	0644	2.48	6.17
02	AR166001	WAR090623-60	07/14/09	0654	2.48	6.17
03	AR125401	WAR090630-54	07/14/09	0705	2.48	6.17
04	AR124201	WAR090519-42	07/14/09	0715	2.48	6.18
05	AR124801	WAR090521-48	07/14/09	0725	2.48	6.17
06	AR123201	WAR090618-32	07/14/09	0736	2.48	6.17
07	AR122101	WAR090618-21	07/14/09	0746	2.48	6.17
08	AR126201	WAR090608-62	07/14/09	0756	2.48	6.17
09	AR126801	WAR090424-68	07/14/09	0806	2.48	6.17
10	DDTANALOGSTD	WAR090623-DD	07/14/09	0817		
11	PIBLK02	WAR090703-99	07/14/09	0827	2.48	6.18
12	ZZZZZ	ZZZZZ	07/14/09	0837	2.48	6.17
13	ZZZZZ	ZZZZZ	07/14/09	0848	2.48	6.17
14	ZZZZZ	ZZZZZ	07/14/09	0858	2.48	6.17
15	ZZZZZ	ZZZZZ	07/14/09	0908	2.48	6.18
16	ZZZZZ	ZZZZZ	07/14/09	0919	2.48	6.18
17	ZZZZZ	ZZZZZ	07/14/09	0929	2.48	6.17
18	ZZZZZ	ZZZZZ	07/14/09	0944	2.48	6.17
19	AR166002	WAR090623-60	07/14/09	1000	2.48	6.17
20	PIBLK03	WAR090730-99	07/14/09	1010	2.48	6.17
21	PBLK01	1201879447	07/14/09	1021	2.48	6.17
22	PBLK01LCS	1201879448	07/14/09	1031	2.48	6.18
23	CAMO-09-10465	232582002	07/14/09	1041	2.48	6.17
24	ZZZZZ	ZZZZZ	07/14/09	1051	2.48	6.17
25	ZZZZZ	ZZZZZ	07/14/09	1102	2.48	6.18
26	ZZZZZ	ZZZZZ	07/14/09	1112	2.48	6.17
27	ZZZZZ	ZZZZZ	07/14/09	1122	2.48	6.17
28	ZZZZZ	ZZZZZ	07/14/09	1132	2.48	6.17
29	ZZZZZ	ZZZZZ	07/14/09	1143	2.48	6.17
30	ZZZZZ	ZZZZZ	07/14/09	1158	2.48	6.17
31	AR166003	WAR090623-60	07/14/09	1214	2.48	6.17
32	PIBLK04	WAR090730-99	07/14/09	1224	2.48	6.17

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

Identification Summary

SDG Number: 09-2508

Client ID: LCS for batch 884632

Lab Sample ID: 1201879448

Data File:	022f2201.d	**Data File:**	022b2201.d
Inst:	ECD1A.I_1	**Inst:**	ECD1A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	14-JUL-09 10:31	**Analyzed:**	14-JUL-09 10:31

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							5.55
Column 1	1	2.58	2.55 – 2.61	24.8		ug/kg	
	2	2.87	2.84 – 2.9	26.8		ug/kg	
	3	2.95	2.92 – 2.98	25.1		ug/kg	
	4	3.07	3.04 – 3.1	25.4		ug/kg	
	5	3.2	3.17 – 3.23	25.5		ug/kg	
					25.5		
Column 2	1	3.4	3.37 – 3.43	28.6		ug/kg	
	2	3.48	3.45 – 3.51	26.4		ug/kg	
	3	3.55	3.52 – 3.58	26.8		ug/kg	
	4	3.78	3.75 – 3.81	26.6		ug/kg	
	5	3.86	3.83 – 3.89	26.5		ug/kg	
					27		
Aroclor-1260							1.91
Column 1	1	3.93	3.9 – 3.96	26.8		ug/kg	
	2	4.1	4.07 – 4.13	27.1		ug/kg	
	3	4.33	4.3 – 4.36	32.5		ug/kg	
	4	4.47	4.44 – 4.5	30.4		ug/kg	
	5	4.84	4.81 – 4.87	33.9		ug/kg	
					30.2		
Column 2	1	4.55	4.52 – 4.58	27.6		ug/kg	
	2	4.68	4.64 – 4.7	29		ug/kg	
	3	4.94	4.91 – 4.97	32.7		ug/kg	
	4	5.12	5.09 – 5.15	31.6		ug/kg	
	5	5.27	5.24 – 5.3	32.9		ug/kg	
					30.7		

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2508**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201879447**				
Client Sample:	**QC for batch 884632**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 884632**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**884634**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 10:21**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/13/2009 20:17**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**021f2101-1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	021b2101-1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.33	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/021f2101-1.d
Lab Smp Id: 1201879447 Client Smp ID: PBLK01
Inj Date : 14-JUL-2009 10:21
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879447|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2508.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.110	2.112	-0.002	59713402	179.655	6.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.448	5.450	-0.002	39856330	172.098	5.7	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/021f2101-1.d

Date : 14-JUL-2009 10:21

Client ID: PBLK01

Sample Info: |120187944711|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

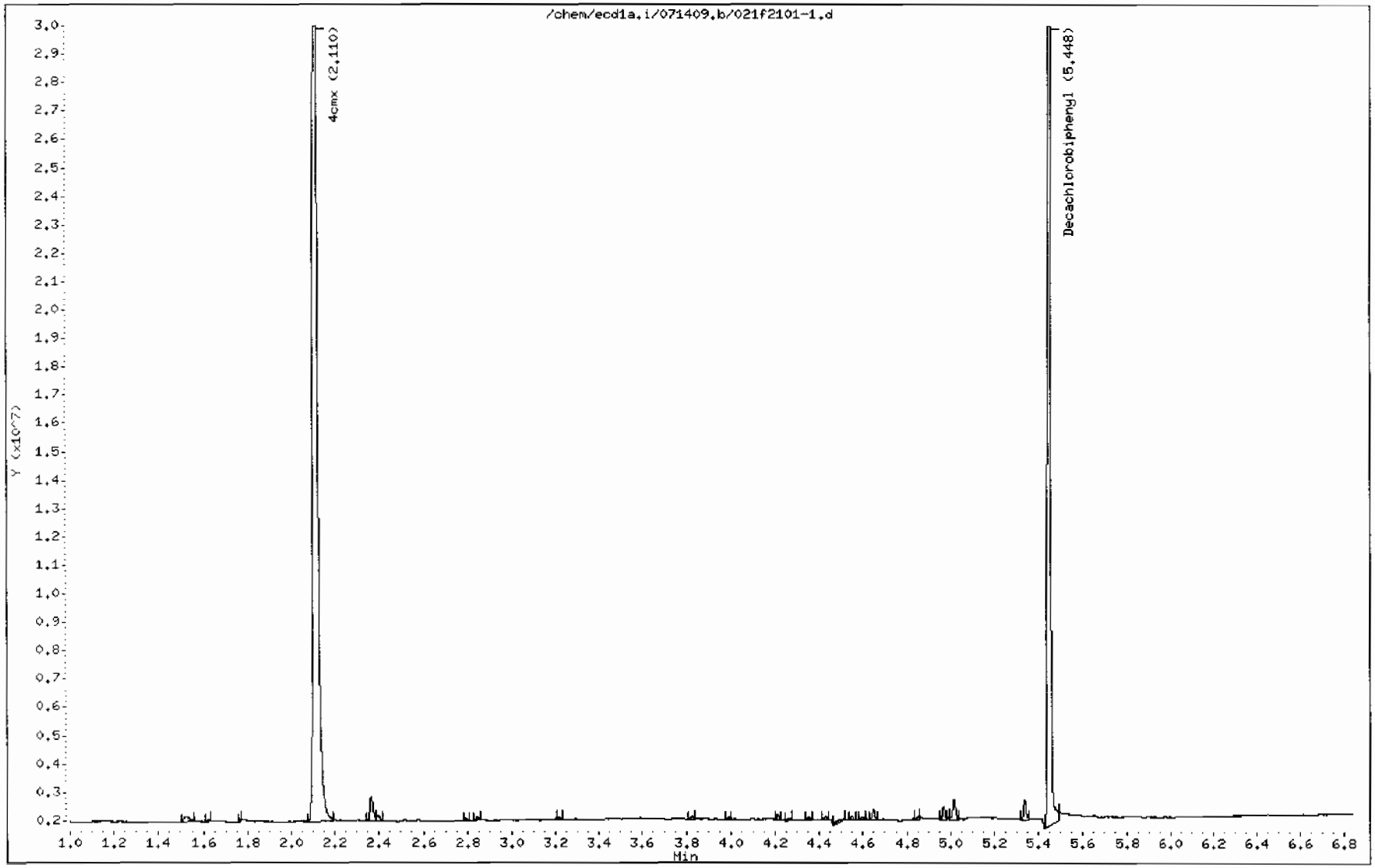

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/021b2101-1.d
Lab Smp Id: 1201879447 Client Smp ID: PBLK01
Inj Date : 14-JUL-2009 10:21
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879447|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2508.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	48222483	180.091	6.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	220892/6	168.845	5.6	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/021b2101-1.d

Date : 14-JUL-2009 10:21

Client ID: PBLK01

Sample Info: |120187944711|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

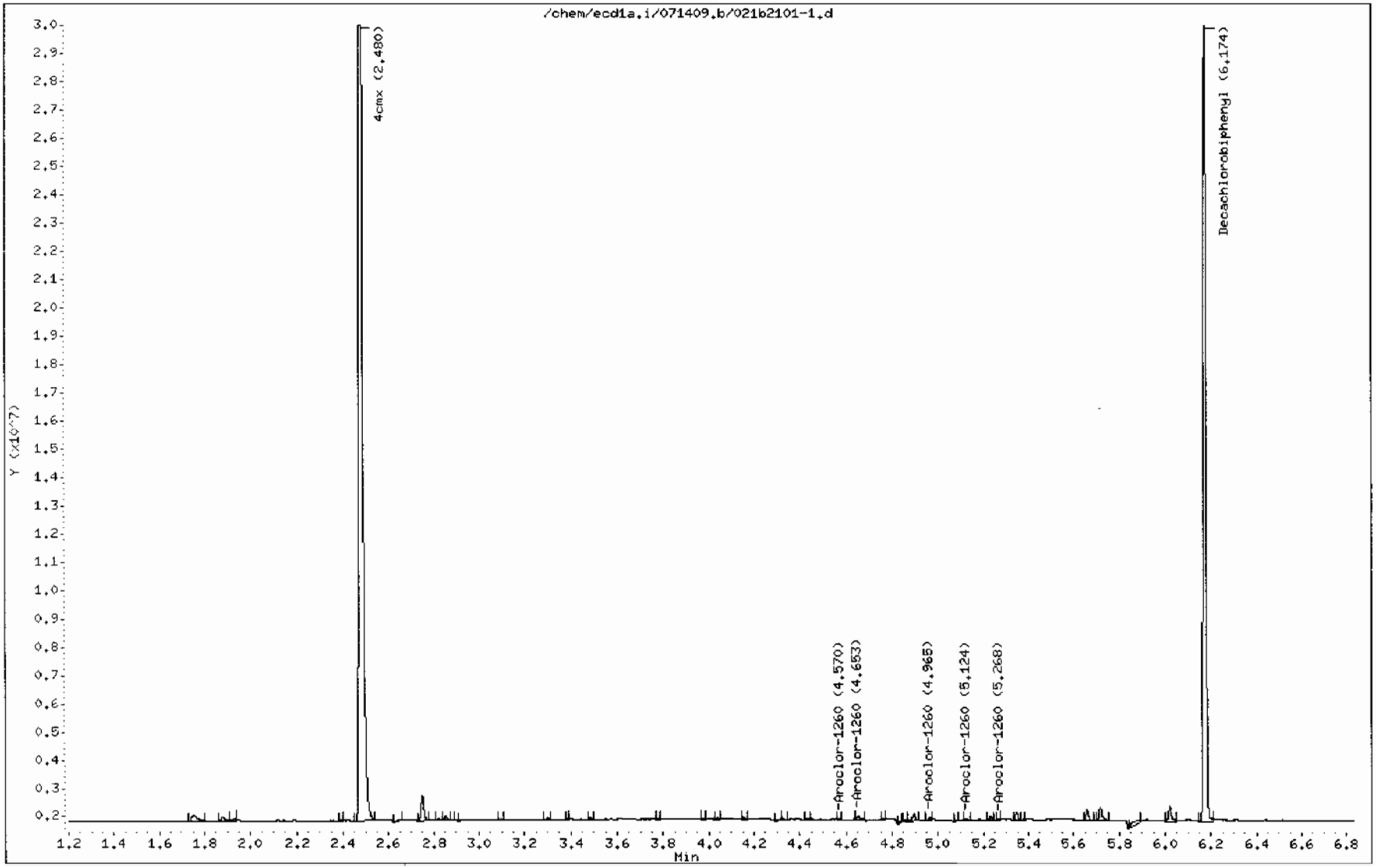

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2508**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201879448**				
Client Sample:	**QC for batch 884632**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 884632**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**884634**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 10:31**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/13/2009 20:17**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**022f2201-1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	022b2201-1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		27.0	ug/kg	1.11	3.33	2
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260		30.8	ug/kg	1.11	3.33	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/022f2201-1.d
Lab Smp Id: 1201879448 Client Smp ID: PBLK01LCS
Inj Date : 14-JUL-2009 10:31
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879448|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2508.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	59003244	177.518	5.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	40963678	176.879	5.9	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	10574381	744.505	24.8	80.00- 120.00	100.00
2.871	2.871	0.000	13309920	803.002	26.8	105.14- 145.14	125.87
2.953	2.953	0.000	8844267	751.847	25.1	63.46- 103.46	83.64
3.068	3.067	0.001	4868383	762.362	25.4	24.66- 64.66	46.04

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.204	3.204	0.000	6728937	765.832	25.5	43.54- 83.54	63.63
Average of Peak Concentrations =					25.5		
7 Aroclor-1260					CAS #: 11096-82-5		
3.934	3.933	0.001	12303572	804.909	26.8	80.00- 120.00	100.00
4.096	4.096	0.000	18767782	812.715	27.1	135.17- 175.17	152.54
4.327	4.326	0.001	11351598	975.294	32.5	56.89- 96.89	92.26
4.471	4.470	0.001	11569480	913.353	30.4	64.08- 104.08	94.03
4.835	4.835	0.000	5979829	1018.14	33.9	18.06- 58.06	48.60
Average of Peak Concentrations =					30.1		

Data File: /chem/ecd1a.i/071409.b/022f2201-1.d

Date : 14-JUL-2009 10:31

Client ID: PBLK01LCS

Sample Info: |120187944811|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

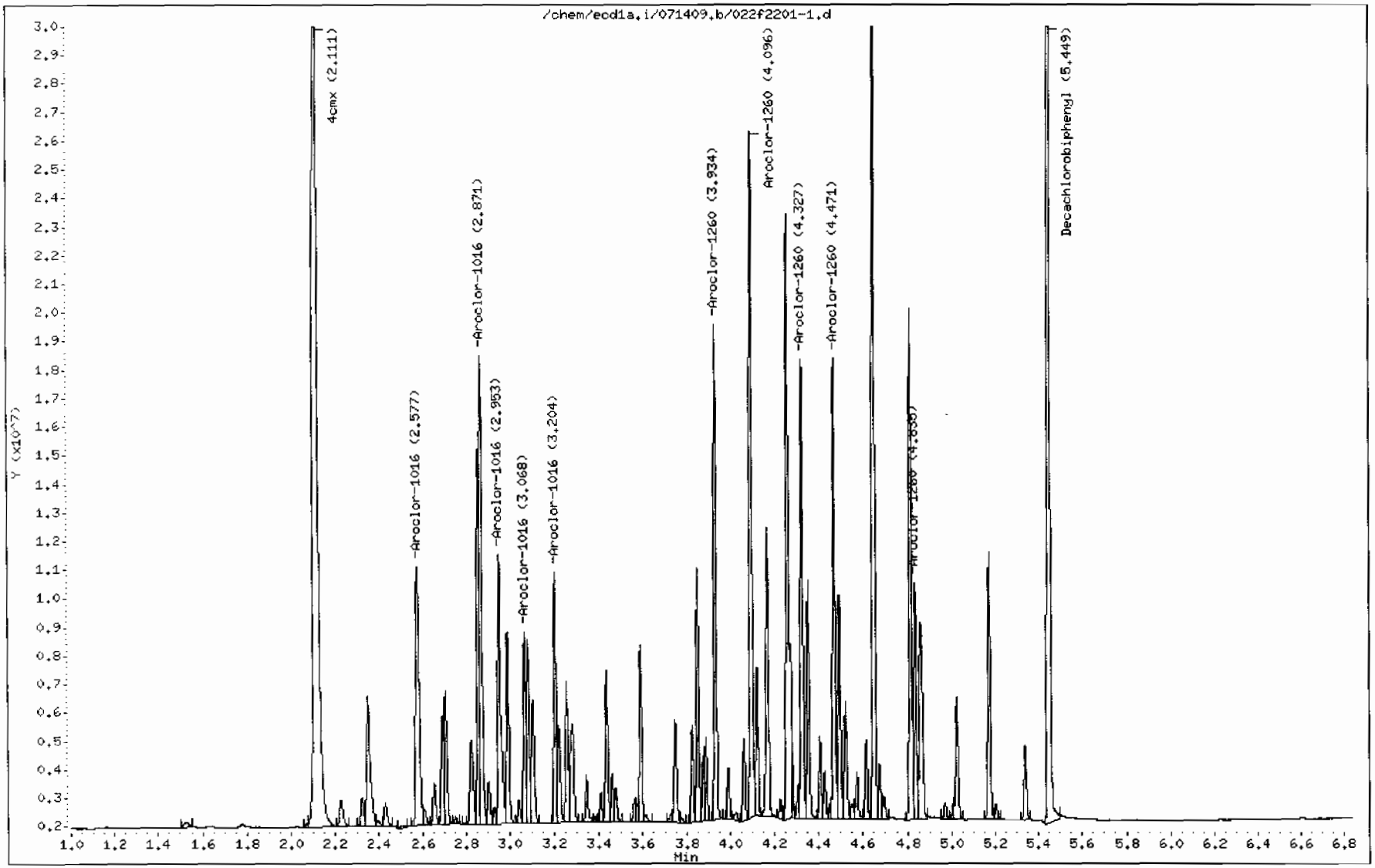

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/022b2201-1.d
Lab Smp Id: 1201879448 Client Smp ID: PBLK01LCS
Inj Date : 14-JUL-2009 10:31
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879448|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2508.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	47474534	177.298	5.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	22187769	169.597	5.6	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.399	3.399	0.000	9048836	856.938	28.6	80.00- 120.00	100.00
3.484	3.484	0.000	6663643	792.949	26.4	51.66- 91.66	73.64
3.549	3.549	0.000	3974316	803.135	26.8	23.31- 63.31	43.92
3.779	3.779	0.000	5441015	798.949	26.6	38.10- 78.10	60.13

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.856	3.855	0.001	4326487	793.992	26.5	26.66- 66.66	47.81
Average of Peak Concentrations =					27.0		
7 Aroclor-1260					CAS #: 11096-82-5		
4.553	4.551	0.002	9388284	828.557	27.6	80.00- 120.00	100.00
4.676	4.675	0.001	10833907	869.991	29.0	93.67- 133.67	115.40
4.944	4.944	0.000	8298200	980.100	32.7	54.30- 94.30	88.39
5.122	5.121	0.001	8313829	947.363	31.6	58.15- 98.15	88.56
5.268	5.267	0.001	16841603	985.857	32.9	140.04- 180.04	179.39
Average of Peak Concentrations =					30.8		

Data File: /chem/ecd1a.i/071409.b/022b2201-1.d
Date : 14-JUL-2009 10:31
Client ID: PBLK01LCS
Sample Info: |120187944811|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

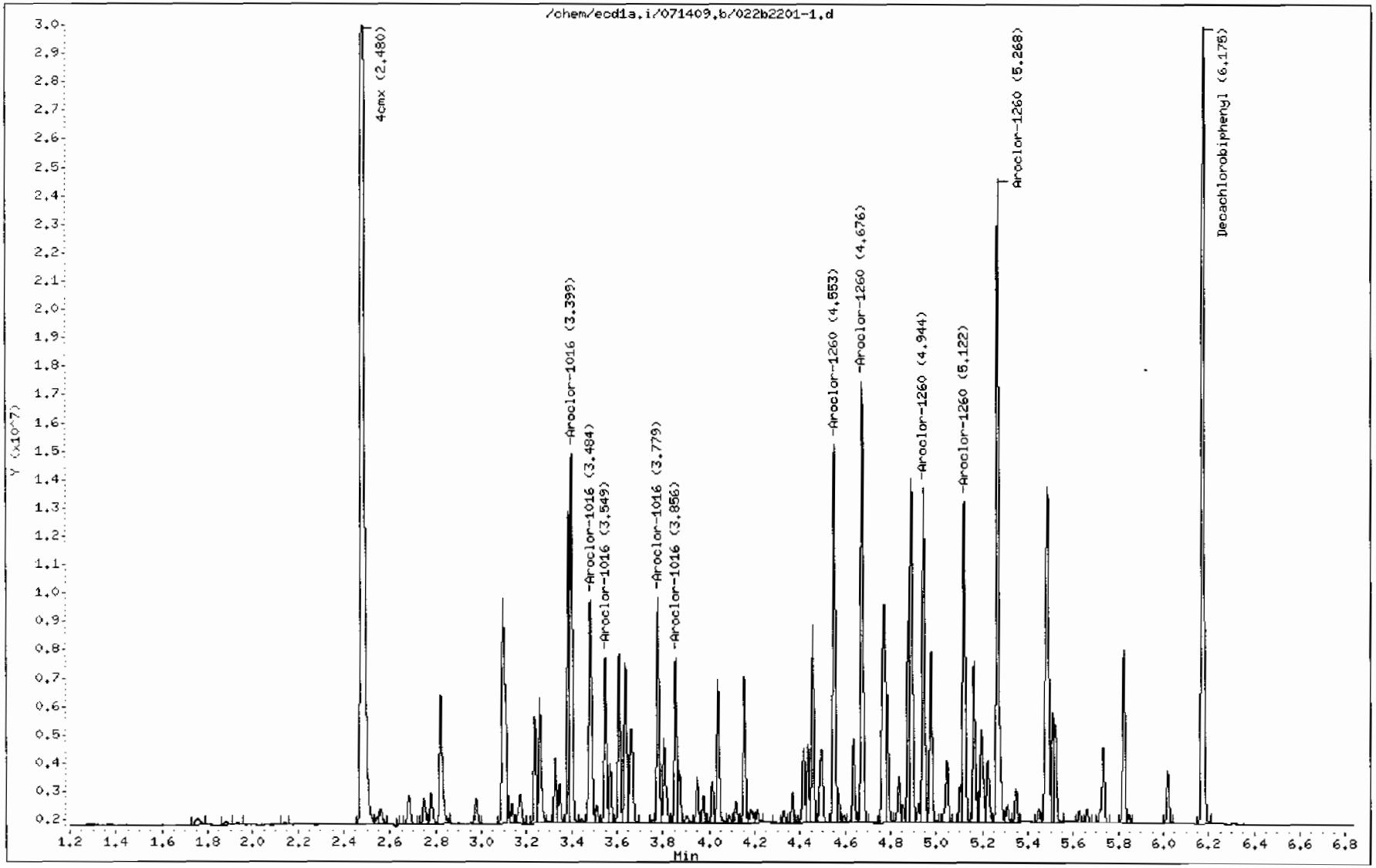

MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD1

DATE: 07/13/2009 METHOD: ECD1-F-8082-071109.m OPERATOR:YS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1

SOLVENT LOT CY613
ALUMINA LOT 1143678-A
COPPER LOT 090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
GEL SOP GL-OA-E-040 Polychlorinated Biphenyl: EPA 8082
Chromatogram Abbreviation Legend: AB-Assign Baseline, AP-Assign Peak,
DNC-Do Not Call, DMP-Doesn't Match Pattern, NC-Not Confirmed, RT-Retention Time,
BF-Before, AF-After.

Sequence Number: /chem/ecd1a.i/071309.b Injection Volume: 0.5 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090730-99 01	YS1	13-JUL-2009 09:44		071309	1.0		CLEAN
002f0201.d	WAR090623-60 01	YS1	13-JUL-2009 09:54		071309	1.0		DUSE RE-ICAL
003f0301.d	WAR090630-54 54	YS1	13-JUL-2009 10:04		071309	1.0		DUSE RE-ICAL
004f0401.d	WAR090713-09	YS1	13-JUL-2009 10:14		071309	1.0		AR1242 I-CAL LEVEL 1
005f0501.d	WAR090713-10	YS1	13-JUL-2009 10:25		071309	1.0		AR1242 I-CAL LEVEL 2
006f0601.d	WAR090713-11	YS1	13-JUL-2009 10:35		071309	1.0		AR1242 I-CAL LEVEL 3
007f0701.d	WAR090713-12	YS1	13-JUL-2009 10:45		071309	1.0		AR1242 I-CAL LEVEL 4
008f0801.d	IAR090711-01	YS1	13-JUL-2009 10:56		071309	1.0		AR1242 I-CAL LEVEL 5
009f0901.d	WAR090519-42 42	YS1	13-JUL-2009 11:06		071309	1.0		PASSED ON BOTH COLUMNS
010f1001.d	WAR090521-48 48	YS1	13-JUL-2009 11:16		071309	1.0		PASSED ON BOTH COLUMNS
011f1101.d	WAR090713-01	YS1	13-JUL-2009 11:27		071309	1.0		AR1660 I-CAL LEVEL 1
012f1201.d	WAR090713-02	YS1	13-JUL-2009 11:37		071309	1.0		AR1660 I-CAL LEVEL 2
013f1301.d	WAR090713-03	YS1	13-JUL-2009 11:47		071309	1.0		AR1660 I-CAL LEVEL 3
014f1401.d	WAR090713-04	YS1	13-JUL-2009 11:58		071309	1.0		AR1660 I-CAL LEVEL 4
015f1501.d	IAR090623-01	YS1	13-JUL-2009 12:08		071309	1.0		AR1660 I-CAL LEVEL 5

Instrument Batch: /chem/ecd1a.i/071309.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments

016f1601.d	WAR090623-60 01	YS1	13-JUL-2009 12:18		071309		1.0		PASSED ON BOTH COLUMNS
017f1701.d	WAR090713-05	YS1	13-JUL-2009 12:28		071309		1.0		AR1254 I-CAL LEVEL 1
018f1801.d	WAR090713-06	YS1	13-JUL-2009 12:39		071309		1.0		AR1254 I-CAL LEVEL 2
019f1901.d	WAR090713-07	YS1	13-JUL-2009 12:49		071309		1.0		AR1254 I-CAL LEVEL 3
020f2001.d	WAR090713-08	YS1	13-JUL-2009 12:59		071309		1.0		AR1254 I-CAL LEVEL 4
021f2101.d	IAR0900505-01	YS1	13-JUL-2009 13:10		071309		1.0		AR1254 I-CAL LEVEL 5
022f2201.d	WAR090630-54 54	YS1	13-JUL-2009 13:20		071309		1.0		PASSED ON BOTH COLUMNS
023f2301.d	WAR090618-32 32	YS1	13-JUL-2009 13:30		071309		1.0		PATTERN ONLY
024f2401.d	WAR090618-21 21	YS1	13-JUL-2009 13:40		071309		1.0		PATTERN ONLY
025f2501.d	WAR090608-62 62	YS1	13-JUL-2009 13:51		071309		1.0		PATTERN ONLY
026f2601.d	WAR090424-68 68	YS1	13-JUL-2009 14:01		071309		1.0		PATTERN ONLY
027f2701.d	WAR090623-DDT	YS1	13-JUL-2009 14:11		071309		1.0		DDT ANALOG STANDARD
028f2801.d	WAR090703-99 02	YS1	13-JUL-2009 15:14		071309		1.0		CLEAN
029f2901.d	1201878528	YS1	13-JUL-2009 15:24	884242	233214		1.0	MB	UPLOAD BOTH COLUMNS, USE HIGHER
030f3001.d	1201878529	YS1	13-JUL-2009 15:34	884242	233214		1.0	LCS	UPLOAD BOTH COLUMNS, USE HIGHER
031f3101.d	233214001	YS1	13-JUL-2009 15:44	884242	233214		5.0	WSRB	UPLOAD BOTH COLUMNS, USE HIGHER
032f3201.d	1201878530	YS1	13-JUL-2009 15:55	884242	233214		5.0	MS	UPLOAD BOTH COLUMNS, USE HIGHER
033f3301.d	1201878531	YS1	13-JUL-2009 16:05	884242	233214		5.0	MSD	UPLOAD BOTH COLUMNS, USE HIGHER
034f3401.d	233214002	YS1	13-JUL-2009 16:15	884242	233214		100.0	WSRB	UPLOAD BOTH COLUMNS, USE HIGHER
035f3501.d	233214003	YS1	13-JUL-2009 16:31	884242	233214		5.0	WSRB	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecd1a.i/071309.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	WAR090623-60 02	YS1	13-JUL-2009 16:46		071309	1.0		PASSED ON BOTH COLUMNS

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD1

DATE: 07/15/2009 METHOD: ECD1-F-8082-071109.m OPERATOR:YS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1

SOLVENT LOT CY613
ALUMINA LOT 1143678-A
COPPER LOT 090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
GEL SOP GL-OA-E-040 Polychlorinated Biphenyl: EPA 8082
Chromatogram Abbreviation Legend: AB-Assign Baseline, AP-Assign Peak,
DNC-Do Not Call, DMP-Doesn't Match Pattern, NC-Not Confirmed, RT-Retention Time,
BF-Before, AF-After.

Sequence Number: /chem/ecd1a.i/071409.b Injection Volume: 0.5 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090730-99 01	YS1	14-JUL-2009 06:44		071409	1.0		CLEAN
002f0201.d	WAR090623-60 01	YS1	14-JUL-2009 06:54		071409	1.0		PASSED ON BOTH COLUMNS
003f0301.d	WAR090630-54 54	YS1	14-JUL-2009 07:05		071409	1.0		PASSED ON BOTH COLUMNS
004f0401.d	WAR090519-42 42	YS1	14-JUL-2009 07:15		071409	1.0		PASSED ON BOTH COLUMNS
005f0501.d	WAR090521-48 48	YS1	14-JUL-2009 07:25		071409	1.0		PASSED ON BOTH COLUMNS
006f0601.d	WAR090618-32 32	YS1	14-JUL-2009 07:36		071409	1.0		PATTREN ONLY
007f0701.d	WAR090618-21 21	YS1	14-JUL-2009 07:46		071409	1.0		PATTREN ONLY
008f0801.d	WAR090608-62 62	YS1	14-JUL-2009 07:56		071409	1.0		PATTREN ONLY
009f0901.d	WAR090424-68 68	YS1	14-JUL-2009 08:06		071409	1.0		PATTREN ONLY
010f1001.d	WAR090623-DDT	YS1	14-JUL-2009 08:17		071409	1.0		DDT ANALOG STANDARD
011f1101.d	WAR090703-99 02	YS1	14-JUL-2009 08:27		071409	1.0		CLEAN
012f1201.d	1201878519	YS1	14-JUL-2009 08:37	884237	233254	1.0	MB	UPLOAD BOTH COLUMNS, USE FRONT
013f1301.d	1201878520	YS1	14-JUL-2009 08:48	884237	233254	1.0	LCS	UPLOAD BOTH COLUMNS, USE FRONT
014f1401.d	233254002	YS1	14-JUL-2009 08:58	884237	233254	5.0	BRKL	UPLOAD BOTH COLUMNS, USE FRONT
015f1501.d	1201878521	YS1	14-JUL-2009 09:08	884237	233254	5.0	MS	UPLOAD BOTH COLUMNS, USE FRONT

10H
Instrument Batch: /chem/ecd1a.i/071409.b Page: 1
10H16.6H

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments

016f1601.d	1201878522	YS1	14-JUL-2009 09:19	884237	233254	5.0	MSD	UPLOAD BOTH COLUMNS, USE FRONT
017f1701.d	233254004	YS1	14-JUL-2009 09:29	884237	233254	5.0	BRKL	UPLOAD BOTH COLUMNS, USE FRONT
018f1801.d	233254006	YS1	14-JUL-2009 09:44	884237	233254	5.0	BRKL	UPLOAD BOTH COLUMNS, USE FRONT
019f1901.d	WAR090623-60 02	YS1	14-JUL-2009 10:00		071409	1.0		PASSED ON BOTH COLUMNS
020f2001.d	WAR090730-99 03	YS1	14-JUL-2009 10:10		071409	1.0		CLEAN
021f2101.d	1201879447	YS1	14-JUL-2009 10:21	884634	071409	1.0	MB	UPLOAD BOTH COLUMNS, USE HIGHER
022f2201.d	1201879448	YS1	14-JUL-2009 10:31	884634	09-2506	1.0	LCS	UPLOAD BOTH COLUMNS, USE HIGHER
023f2301.d	232582002	YS1	14-JUL-2009 10:41	884634	09-2508	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
024f2401.d	232585001	YS1	14-JUL-2009 10:51	884634	09-2506	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
025f2501.d	232585002	YS1	14-JUL-2009 11:02	884634	09-2506	5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
026f2601.d	232585003	YS1	14-JUL-2009 11:12	884634	09-2506	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
027f2701.d	232661005	YS1	14-JUL-2009 11:22	884634	09-2515	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
028f2801.d	1201879449	YS1	14-JUL-2009 11:32	884634	09-2515	1.0	MS	UPLOAD BOTH COLUMNS, USE HIGHER
029f2901.d	1201879450	YS1	14-JUL-2009 11:43	884634	09-2515	1.0	MSD	UPLOAD BOTH COLUMNS, USE HIGHER
030f3001.d	232661006	YS1	14-JUL-2009 11:58	884634	09-2515	5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
031f3101.d	WAR090623-60 03	YS1	14-JUL-2009 12:14		071409	1.0		PASSED ON BOTH COLUMNS
032f3201.d	WAR090730-99 04	YS1	14-JUL-2009 12:24		071409	1.0		CLEAN
033f3301.d	WAR090623-60 04	YS1	14-JUL-2009 14:56		071409	1.0		PASSED ON BOTH COLUMNS
034f3401.d	WAR090730-99 05	YS1	14-JUL-2009 15:17		071409	1.0		CLEAN
035f3501.d	1201880244	YS1	14-JUL-2009 15:27	884939	233110	1.0	QC A	HAS 1242, 1254 AND 1260 HITS

Instrument Batch: /chem/ecd1a.i/071409.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	1201880245	YS1	14-JUL-2009 15:38	884939	233110	1.0	QC A	UPLOAD BOTH, USE HIGHER
037f3701.d	233110001	YS1	14-JUL-2009 15:48	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION
038f3801.d	233110002	YS1	14-JUL-2009 16:04	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION
039f3901.d	233110003	YS1	14-JUL-2009 16:19	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION
040f4001.d	233110004	YS1	14-JUL-2009 16:35	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION

041f4101.d	233317001	YS1	14-JUL-2009 16:50	884939	233317		1.0	PCGE	UPLOAD BOTH, USE HIGHER NO HITS
042f4201.d	1201880246	YS1	14-JUL-2009 17:06	884939	233317		1.0	QC A	UPLOAD BOTH, USE HIGHER
043f4301.d	1201880247	YS1	14-JUL-2009 17:21	884939	233317		1.0	QC A	UPLOAD BOTH, USE HIGHER
044f4401.d	WAR090730-99 06	YS1	14-JUL-2009 17:37		071409		1.0		CLEAN
045f4501.d	WAR090623-60 05	YS1	14-JUL-2009 17:47		071409		1.0		BACK FAILS HIGH, FRONT PASSING
046f4601.d	WAR090730-99 07	YS1	14-JUL-2009 17:57		071409		1.0		CLEAN
047f4701.d	GPC DCS SCR	YS1	14-JUL-2009 18:52		071409		1.0		DUSE

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/028b2801.d
Lab Smp Id: 1201879449 Client Smp ID: CAMO-09-10030MS
Inj Date : 14-JUL-2009 11:32
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879449|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 28 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.07000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	32715100	122.177	4.5	80.00- 120.00	100.00
$ 12 Decachlorobipheny!					CAS #: 2051-24-3		
6.175	6.175	0.000	16847133	128.775	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.399	3.399	0.000	6803138	644.267	23.8	80.00- 120.00	100.00
3.484	3.484	0.000	5005912	595.685	22.0	51.66- 91.66	73.58
3.549	3.549	0.000	2987182	603.653	22.3	23.31- 63.31	43.91
3.779	3.779	0.000	4094035	601.161	22.2	38.10- 78.10	60.18

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.855	3.855	0.000	3320623	609.397	22.5	26.66- 66.66	48.81
Average of Peak Concentrations =					22.6		
6 Aroclor-1254					CAS #: 11097-69-1		
4.154	4.154	0.000	3144645	338.900	12.5	80.00- 120.00	100.00(M)
4.365	4.365	0.000	879777	126.994	4.7	55.64- 95.64	27.98
4.435	4.435	0.000	2323069	190.879	7.0	114.01- 154.01	73.87
4.552	4.553	-0.001	8888424	1689.45	62.4	36.82- 76.82	282.65
4.785	4.782	0.003	2448862	388.771	14.4	48.47- 88.47	77.87
Average of Peak Concentrations =					20.2		
7 Aroclor-1260					CAS #: 11096-82-5		
4.552	4.551	0.001	8888424	784.442	29.0	80.00- 120.00	100.00
4.675	4.675	0.000	10661150	856.119	31.6	93.67- 133.67	119.94
4.945	4.944	0.001	8147484	962.299	35.6	54.30- 94.30	91.66
5.121	5.121	0.000	7863655	896.066	33.1	58.15- 98.15	88.47
5.267	5.267	0.000	16344473	956.757	35.4	140.04- 180.04	183.88
Average of Peak Concentrations =					32.9		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecdia.i/071409.b/028b2801.d
Date : 14-JUL-2009 11:32
Client ID: CAMD-09-10030MS
Sample Info: 1120187944911
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecdia.i
Operator: YSI
Column diameter: 0.25

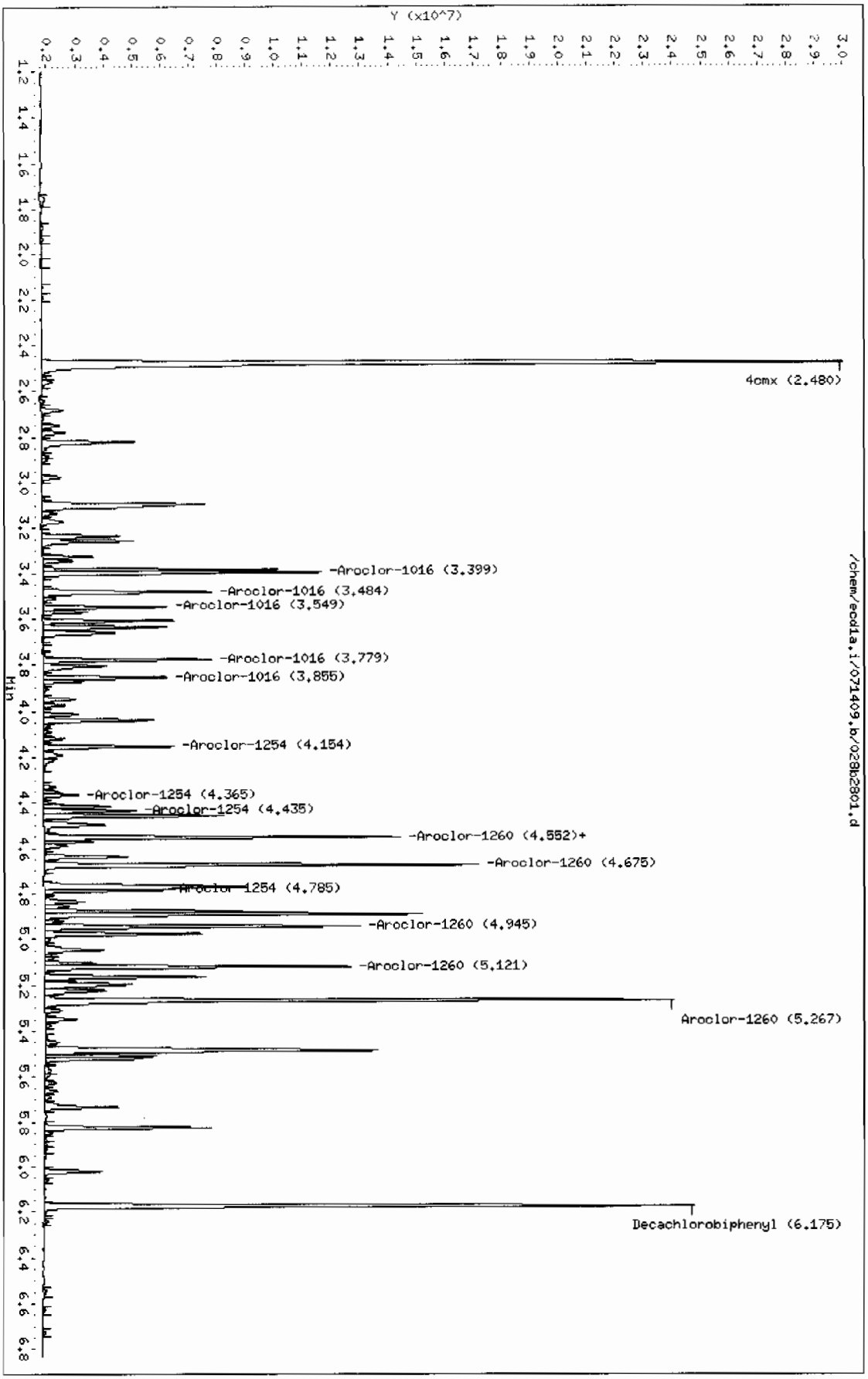

Page 1

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/028f2801.d
Lab Smp Id: 1201879449 Client Smp ID: CAMO-09-10030MS
Inj Date : 14-JUL-2009 11:32
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879449|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 28 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.07000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	39557345	119.013	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	29987390	129.484	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	7742922	545.152	20.1	80.00- 120.00	100.00
2.870	2.871	-0.001	9420535	568.351	21.0	105.14- 145.14	121.67
2.952	2.953	-0.001	6374075	541.857	20.0	63.46- 103.46	82.32
3.067	3.067	0.000	3646296	570.990	21.1	24.66- 64.66	47.09

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.203	3.204	-0.001	4930431	561.141	20.7	43.54- 83.54	63.68
Average of Peak Concentrations =					20.6		
6 Aroclor-1254					CAS #: 11097-69-1		
3.434	3.434	0.000	3350299	324.987	12.0	80.00- 120.00	100.00
3.589	3.589	0.000	4389133	319.261	11.8	113.23- 153.23	131.01
3.825	3.826	-0.001	2780125	163.074	6.0	148.35- 188.35	82.98
4.095	4.098	-0.003	18056462	1436.02	53.1	102.75- 142.75	538.95
4.260	4.261	-0.001	20412016	1189.08	43.9	148.15- 188.15	609.26
Average of Peak Concentrations =					25.4		
7 Aroclor-1260					CAS #: 11096-82-5		
3.933	3.933	0.000	11437635	748.258	27.6	80.00- 120.00	100.00
4.095	4.096	-0.001	18056462	781.912	28.9	135.17- 175.17	157.87
4.326	4.326	0.000	10794042	927.391	34.3	56.89- 96.89	94.37
4.470	4.470	0.000	10628685	839.082	31.0	64.08- 104.08	92.93
4.835	4.835	0.000	5916293	1007.32	37.2	18.06- 58.06	51.73
Average of Peak Concentrations =					31.8		

Data File: /chem/ecd1a.i/071409.b/028f2801.d
Date : 14-JUL-2009 11:32
Client ID: CAMO-09-10030MS
Sample Info: |120187944911|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

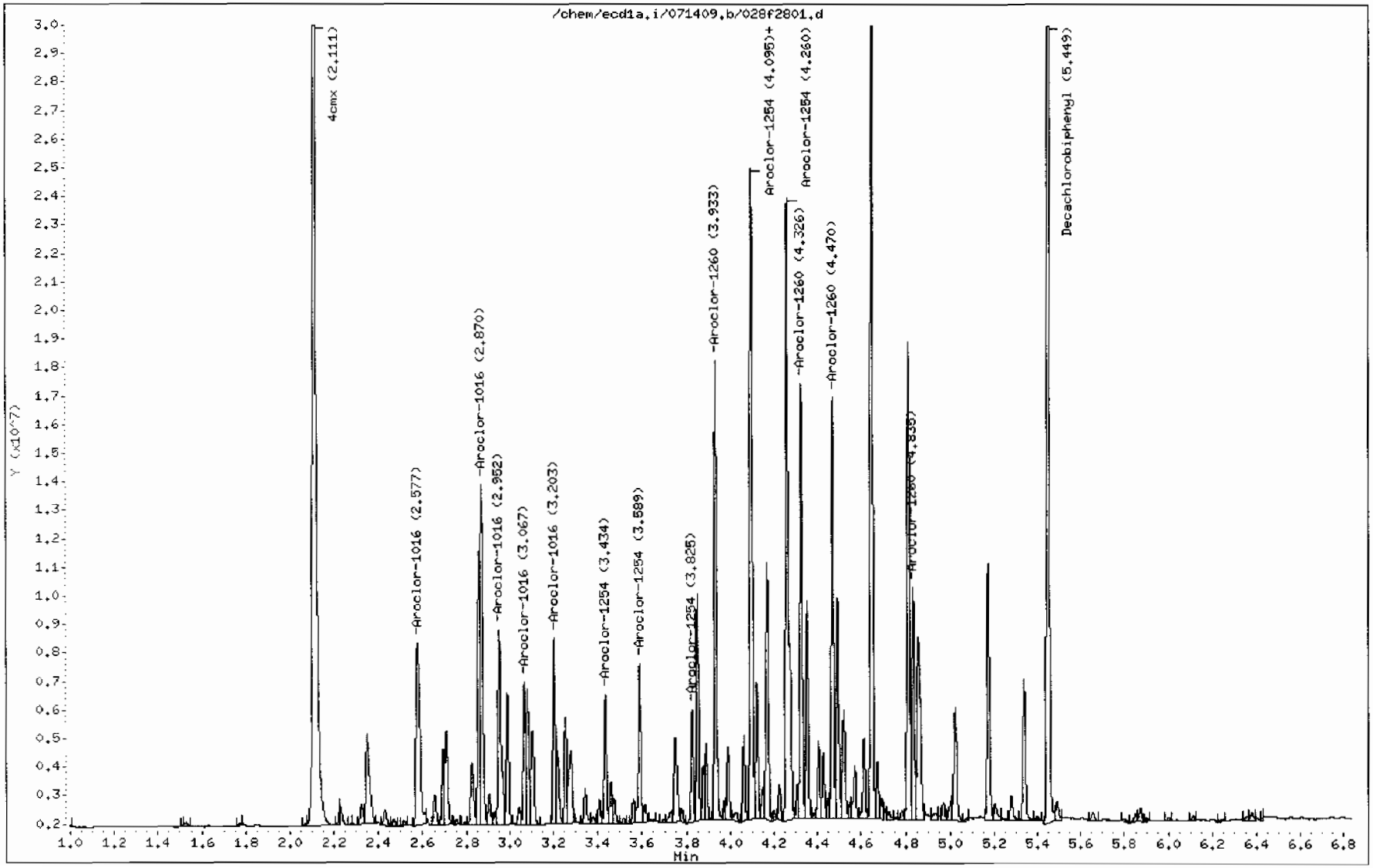

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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/029b2901.d
Lab Smp Id: 1201879450 Client Smp ID: CAMO-09-10030MSD
Inj Date : 14-JUL-2009 11:43
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879450|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 29 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	36974153	138.083	5.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.173	6.175	-0.002	18637318	142.459	5.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.398	3.399	-0.001	7504153	710.654	26.3	80.00- 120.00	100.00
3.483	3.484	-0.001	5507162	655.332	24.2	51.66- 91.66	73.39
3.548	3.549	-0.001	3289940	664.835	24.6	23.31- 63.31	43.84
3.777	3.779	-0.002	4611261	677.109	25.0	38.10- 78.10	61.45

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.855	3.855	0.000	3701939	679.376	25.1	26.66- 66.66	49.33
Average of Peak Concentrations =					25.0		
6 Aroclor-1254					CAS #: 11097-69-1		
4.153	4.154	-0.001	3459280	372.809	13.8	80.00- 120.00	100.00(M)
4.364	4.365	-0.001	1029329	148.581	5.5	55.64- 95.64	29.76
4.434	4.435	-0.001	2675742	219.857	8.1	114.01- 154.01	77.35
4.551	4.553	-0.002	9898016	1881.35	69.6	36.82- 76.82	286.13
4.783	4.782	0.001	2758934	437.997	16.2	48.47- 88.47	79.75
Average of Peak Concentrations =					22.6		
7 Aroclor-1260					CAS #: 11096-82-5		
4.551	4.551	0.000	9898016	873.543	32.3	80.00- 120.00	100.00
4.674	4.675	-0.001	11981383	962.137	35.6	93.67- 133.67	121.05
4.943	4.944	-0.001	9198584	1086.44	40.2	54.30- 94.30	92.93
5.121	5.121	0.000	8903458	1014.55	37.5	58.15- 98.15	89.95
5.266	5.267	-0.001	18540621	1085.31	40.1	140.04- 180.04	187.32
Average of Peak Concentrations =					37.1		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd1a.i/071409.b/029b2901.d
Date : 14-JUL-2009 11:43
Client ID: CAMO-09-10030MSD
Sample Info: {1201879450111
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

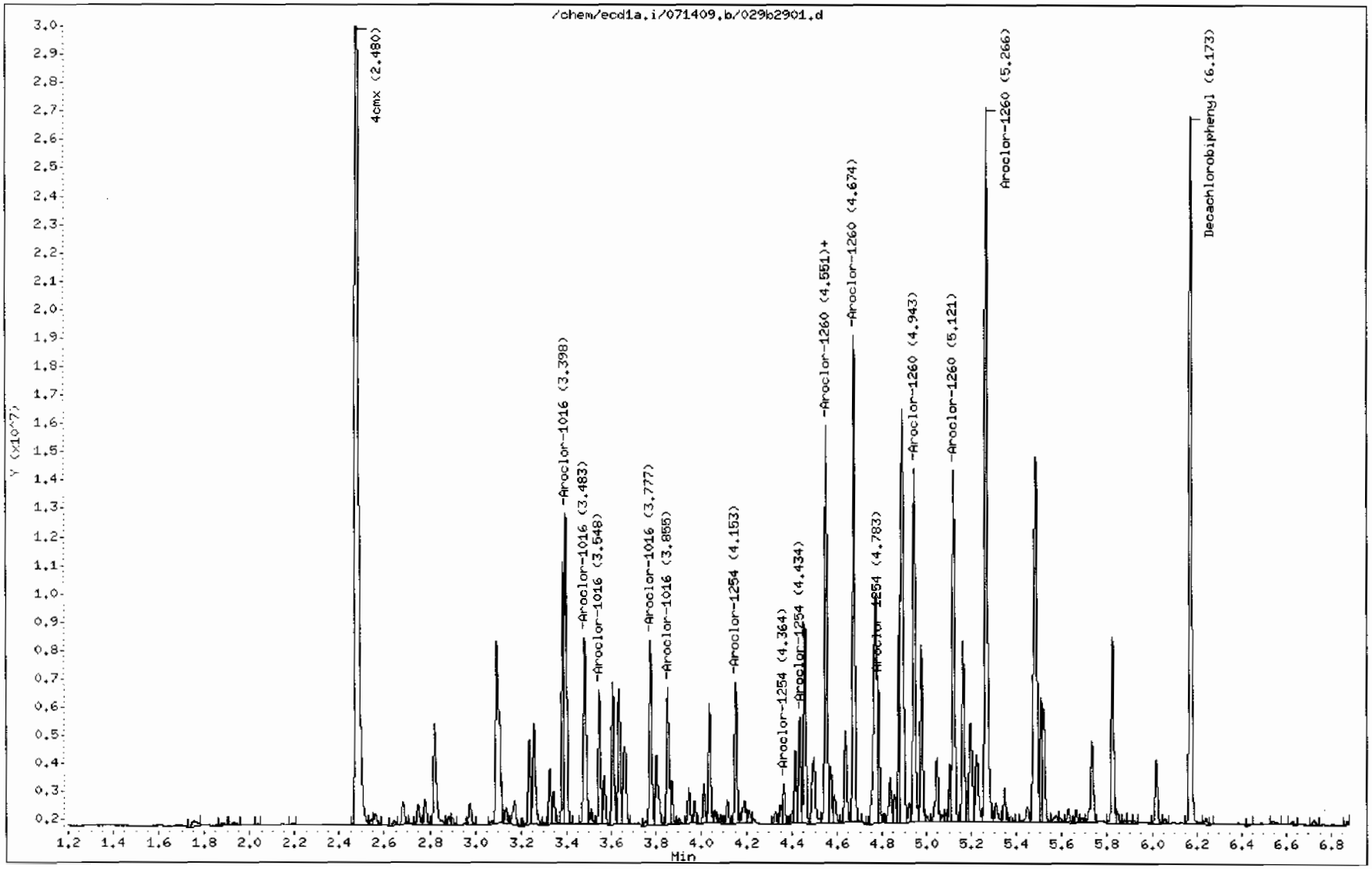

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/029f2901.d
Lab Smp Id: 1201879450 Client Smp ID: CAMO-09-10030MSD
Inj Date : 14-JUL-2009 11:43
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879450|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 29 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	44915075	135.132	5.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.447	5.450	-0.003	33179032	143.265	5.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	8706818	613.016	22.7	80.00- 120.00	100.00
2.870	2.871	-0.001	10626981	641.137	23.7	105.14- 145.14	122.05
2.952	2.953	-0.001	7011753	596.066	22.0	63.46- 103.46	80.53
3.067	3.067	0.000	4036913	632.159	23.4	24.66- 64.66	46.36

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.203	3.204	-0.001	5437028	618.797	22.9	43.54- 83.54	62.45
Average of Peak Concentrations =					22.9		
6 Aroclor-1254					CAS #: 11097-69-1		
3.433	3.434	-0.001	3694281	358.354	13.2	80.00- 120.00	100.00
3.588	3.589	-0.001	4899776	356.404	13.2	113.23- 153.23	132.63
3.824	3.826	-0.002	3272216	191.939	7.1	148.35- 188.35	88.58
4.094	4.098	-0.004	20533826	1633.04	60.4	102.75- 142.75	555.83
4.258	4.261	-0.003	23405843	1363.48	50.4	148.15- 188.15	633.57
Average of Peak Concentrations =					28.9		
7 Aroclor-1260					CAS #: 11096-82-5		
3.932	3.933	-0.001	13061538	854.495	31.6	80.00- 120.00	100.00
4.094	4.096	-0.002	20533826	889.191	32.9	135.17- 175.17	157.21
4.325	4.326	-0.001	12459657	1070.50	39.6	56.89- 96.89	95.39
4.469	4.470	-0.001	12448104	982.716	36.3	64.08- 104.08	95.30
4.833	4.835	-0.002	6937164	1181.14	43.7	18.06- 58.06	53.11
Average of Peak Concentrations =					36.8		

Data File: /chem/ecd1a.i/071409.b/029f2901.d
Date : 14-JUL-2009 11:43
Client ID: CAMO-09-10030MSD
Sample Info: |120187945O|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

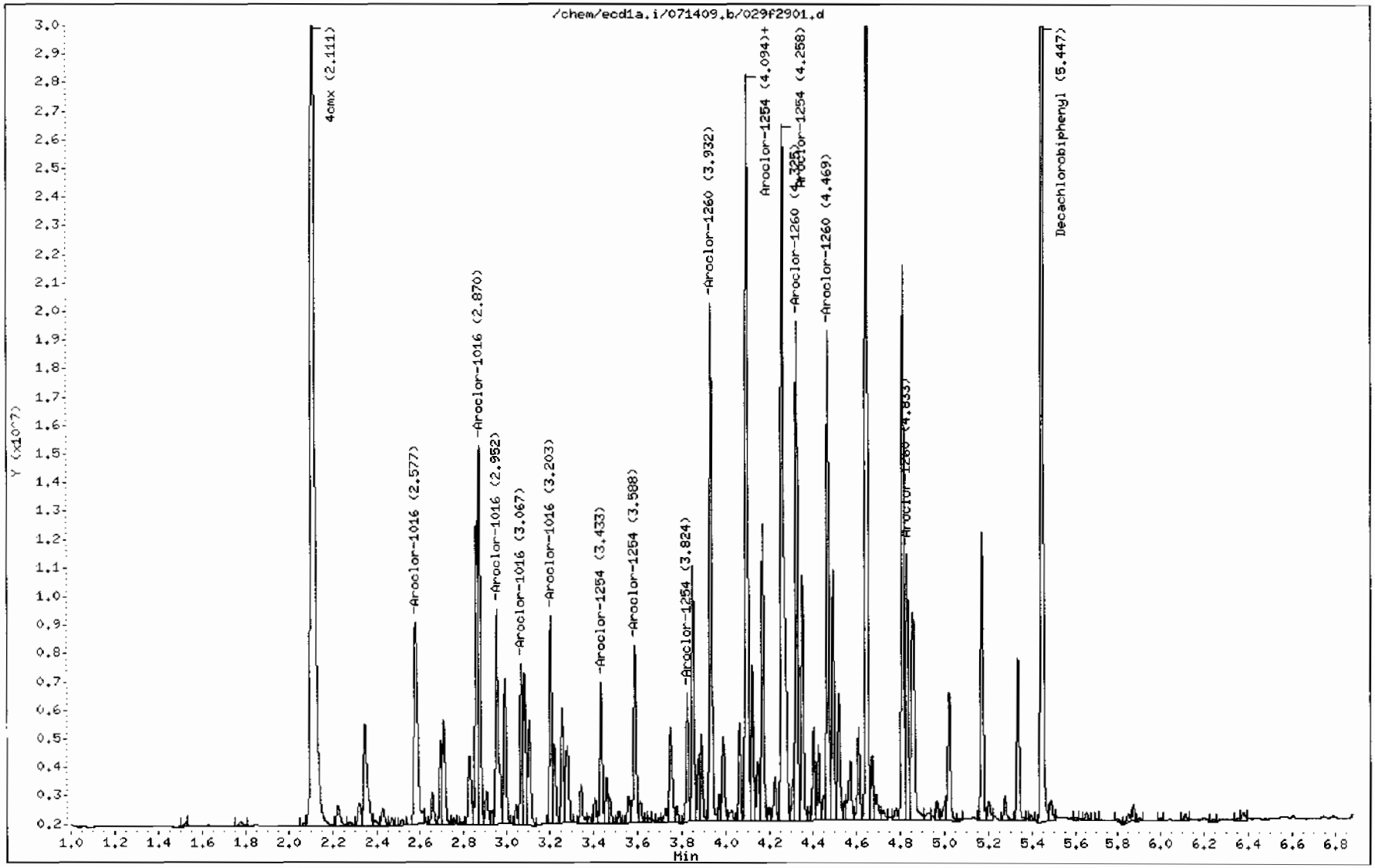

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 884632 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL–OA–E–010 REV# 18

Instrument: Semi–Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201879447 MB	13–JUL–2009 20:17:12	30	H2SO4/KMl2		2	9	1	0.03333
1201879448 LCS	13–JUL–2009 20:17:12	30	H2SO4/KMl2		2	9	1	0.03333
232582002 – 2	13–JUL–2009 20:17:12	30.03	H2SO4/KMl2		2	9	1	0.0333
232585001 – 2	13–JUL–2009 20:17:12	30.02	H2SO4/KMl2		2	9	1	0.03331
232585002 – 2	13–JUL–2009 20:17:12	30.01	H2SO4/KMl2		2	9	1	0.03332
232585003 – 2	13–JUL–2009 20:17:12	30.08	H2SO4/KMl2		2	9	1	0.03324
232661005 – 2	13–JUL–2009 20:17:12	30	H2SO4/KMl2		2	9	1	0.03333
1201879449 – 2 MS (232661005)	13–JUL–2009 20:17:12	30.07	H2SO4/KMl2		2	9	1	0.03326
1201879450 – 2 MSD (232661005)	13–JUL–2009 20:17:12	30.05	H2SO4/KMl2		2	9	1	0.03328
232661006 – 2	13–JUL–2009 20:17:12	30.08	H2SO4/KMl2		2	9	1	0.03324

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201879448	PCB Laboratory Control	WE090624–07	1	mL
MS	1201879449	PCB Laboratory Control	WE090624–07	1	mL
MSD	1201879450	PCB Laboratory Control	WE090624–07	1	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE090702–14	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	1:1 sulfuric acid	1133264a	5	mL
REGNT	All	Hexane	1149624–B2	150	mL
REGNT	All	5% Potassium Permanganate	B1133159–F	5	mL
SOURC	All	SODIUM SULFATE	1149626	30	g

Comments:

Clean up Date: 7/13/09

Clean up Initials: NBP

Verified By: AV

Final Solvent: Hexane

Clean Up SOP: GL–OA–E–037

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2508

Sample Analysis

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201872897	Method Blank (MB) **ICP**
1201872898	Laboratory Control Sample (LCS)
1201872901	232591001(CAMO-09-9946L) Serial Dilution (SD)
1201872899	232591001(CAMO-09-9946D) Sample Duplicate (DUP)
1201872900	232591001(CAMO-09-9946S) Matrix Spike (MS)
1201872902	232591001(CAMO-09-9946SD) Matrix Spike Duplicate (MSD)
1201872852	Method Blank (MB) **ICP-MS**
1201872853	Laboratory Control Sample (LCS)
1201872856	232591001(CAMO-09-9946L) Serial Dilution (SD)
1201872854	232591001(CAMO-09-9946D) Sample Duplicate (DUP)
1201872855	232591001(CAMO-09-9946S) Matrix Spike (MS)
1201872859	232591001(CAMO-09-9946SD) Matrix Spike Duplicate (MSD)
1201873038	Method Blank (MB) **CVAA**
1201873039	Laboratory Control Sample (LCS)
1201873042	232591001(CAMO-09-9946L) Serial Dilution (SD)
1201873040	232591001(CAMO-09-9946D) Sample Duplicate (DUP)
1201873041	232591001(CAMO-09-9946S) Matrix Spike (MS)
1201873043	232591001(CAMO-09-9946SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	881859, 881838 and 881916
Prep Batch :	881858, 881836 and 881915
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following sample was selected as the quality control (QC) sample for this SDG: 232591001 (CAMO-09-9946)-ICP, ICP-MS and CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of barium, magnesium and potassium, as indicated by the "N" qualifiers.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of barium and calcium, as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All

applicable analytes met these requirements with the exceptions of aluminum, barium, calcium, cobalt, iron, magnesium, manganese and potassium, as indicated by the "*" qualifiers.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 710443. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Parson **Date:** 7/20/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2508 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232582001 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-10464 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 93.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3730000	ug/Kg		7150	21000	21000	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-36-0	Antimony	1050	ug/Kg	U	347	1050	1050	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-38-2	Arsenic	1290	ug/kg		205	1020	1020	2	MS	RMJ	07/14/09 15:53	090713-2	881838
7440-39-3	Barium	36800	ug/Kg		105	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-41-7	Beryllium	676	ug/kg		20.5	102	102	2	MS	RMJ	07/14/09 15:53	090713-2	881838
7440-43-9	Cadmium	525	ug/Kg	U	105	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-70-2	Calcium	1400000	ug/Kg		8410	26300	26300	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-47-3	Chromium	17300	ug/Kg		158	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-48-4	Cobalt	1470	ug/Kg		158	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-50-8	Copper	3720	ug/Kg		315	1050	1050	1	P	HSC	07/08/09 14:18	070809A-1	881859
7439-89-6	Iron	10000000	ug/Kg		8410	26300	26300	1	P	HSC	07/08/09 14:18	070809A-1	881859
7439-92-1	Lead	14000	ug/Kg		263	1050	1050	1	P	HSC	07/08/09 14:18	070809A-1	881859
7439-95-4	Magnesium	1060000	ug/Kg		8930	31500	31500	1	P	HSC	07/08/09 14:18	070809A-1	881859
7439-96-5	Manganese	239000	ug/Kg		210	1050	1050	1	P	HSC	07/08/09 14:18	070809A-1	881859
7439-97-6	Mercury	9.91	ug/kg	J	4.13	12.1	12.1	1	AV	JXL1	07/13/09 12:01	071309S2-4	881916
7440-02-0	Nickel	6070	ug/kg		102	409	409	2	MS	RMJ	07/14/09 15:53	090713-2	881838
7440-09-7	Potassium	605000	ug/Kg		6730	26300	26300	1	P	HSC	07/08/09 14:18	070809A-1	881859
7782-49-2	Selenium	583	ug/kg	J	511	1020	1020	2	MS	RMJ	07/14/09 23:12	090714-3	881838
7440-22-4	Silver	526	ug/Kg		105	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-23-5	Sodium	237000	ug/Kg		7360	26300	26300	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-28-0	Thallium	305	ug/kg		61.4	205	205	2	MS	RMJ	07/14/09 15:53	090713-2	881838
7440-62-2	Vanadium	10100	ug/Kg		105	525	525	1	P	HSC	07/08/09 14:18	070809A-1	881859
7440-66-6	Zinc	45300	ug/Kg		347	1050	1050	1	P	HSC	07/08/09 14:18	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.524	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.51	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.53	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2508 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232582002 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-10465 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1940000	ug/Kg		6950	20500	20500	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-36-0	Antimony	1020	ug/Kg	U	337	1020	1020	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-38-2	Arsenic	1360	ug/kg		205	1030	1030	2	MS	RMJ	07/14/09 15:59	090713-2	881838
7440-39-3	Barium	45100	ug/Kg		102	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-41-7	Beryllium	386	ug/kg		20.5	103	103	2	MS	RMJ	07/14/09 15:59	090713-2	881838
7440-43-9	Cadmium	511	ug/Kg	U	102	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-70-2	Calcium	1030000	ug/Kg		8180	25600	25600	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-47-3	Chromium	16100	ug/Kg		153	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-48-4	Cobalt	1050	ug/Kg		153	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-50-8	Copper	2070	ug/Kg		307	1020	1020	1	P	HSC	07/08/09 14:25	070809A-1	881859
7439-89-6	Iron	9230000	ug/Kg		8180	25600	25600	1	P	HSC	07/08/09 14:25	070809A-1	881859
7439-92-1	Lead	4120	ug/Kg		256	1020	1020	1	P	HSC	07/08/09 14:25	070809A-1	881859
7439-95-4	Magnesium	711000	ug/Kg		8690	30700	30700	1	P	HSC	07/08/09 14:25	070809A-1	881859
7439-96-5	Manganese	239000	ug/Kg		205	1020	1020	1	P	HSC	07/08/09 14:25	070809A-1	881859
7439-97-6	Mercury	6.63	ug/kg	J	4.22	12.4	12.4	1	AV	JXL1	07/13/09 12:03	071309S2-4	881916
7440-02-0	Nickel	3890	ug/kg		103	411	411	2	MS	RMJ	07/14/09 15:59	090713-2	881838
7440-09-7	Potassium	440000	ug/Kg		6540	25600	25600	1	P	HSC	07/08/09 14:25	070809A-1	881859
7782-49-2	Selenium	625	ug/kg	J	513	1030	1030	2	MS	RMJ	07/14/09 23:16	090714-3	881838
7440-22-4	Silver	318	ug/Kg	J	102	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-23-5	Sodium	218000	ug/Kg		7160	25600	25600	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-28-0	Thallium	104	ug/kg	J	61.6	205	205	2	MS	RMJ	07/14/09 15:59	090713-2	881838
7440-62-2	Vanadium	6220	ug/Kg		102	511	511	1	P	HSC	07/08/09 14:25	070809A-1	881859
7440-66-6	Zinc	41200	ug/Kg		337	1020	1020	1	P	HSC	07/08/09 14:25	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.512	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.514	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.508	g	30	mL	07/10/09	AXG2

Quality Control Summary

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2508

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Antimony	535	ug/L	500	ug/L	107.1	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Barium	539	ug/L	500	ug/L	107.8	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Cadmium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Chromium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Cobalt	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Copper	527	ug/L	500	ug/L	105.3	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Iron	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Lead	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Magnesium	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Manganese	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Potassium	2510	ug/L	2500	ug/L	100.4	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Silver	256	ug/L	250	ug/L	102.4	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Sodium	2550	ug/L	2500	ug/L	101.9	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Mercury	5.22	ug/L	5	ug/L	104.4	90.0 – 110.0	AV	13–JUL–09 09:48	071309S2–4
	Arsenic	50.5	ug/L	50	ug/L	101.1	90.0 – 110.0	MS	14–JUL–09 15:00	090713–2
	Beryllium	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	14–JUL–09 15:00	090713–2
	Nickel	52.7	ug/L	50	ug/L	105.4	90.0 – 110.0	MS	14–JUL–09 15:00	090713–2
	Thallium	48.8	ug/L	50	ug/L	97.5	90.0 – 110.0	MS	14–JUL–09 15:00	090713–2
	Selenium	49.1	ug/L	50	ug/L	98.3	90.0 – 110.0	MS	14–JUL–09 22:36	090714–3
CCV01										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Antimony	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Barium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Cadmium	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2508

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Lead	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Manganese	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Potassium	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Sodium	9980	ug/L	10000	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Mercury	5.16	ug/L	5	ug/L	103.2	80.0 – 120.0	AV	13-JUL-09 09:54	071309S2-4
	Arsenic	51	ug/L	50	ug/L	101.9	90.0 – 110.0	MS	14-JUL-09 15:29	090713-2
	Beryllium	52.9	ug/L	50	ug/L	105.8	90.0 – 110.0	MS	14-JUL-09 15:29	090713-2
	Nickel	53.3	ug/L	50	ug/L	106.7	90.0 – 110.0	MS	14-JUL-09 15:29	090713-2
	Thallium	49	ug/L	50	ug/L	97.9	90.0 – 110.0	MS	14-JUL-09 15:29	090713-2
	Selenium	50.6	ug/L	50	ug/L	101.3	90.0 – 110.0	MS	14-JUL-09 22:56	090714-3
CCV02										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Antimony	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Cadmium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Chromium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Cobalt	485	ug/L	500	ug/L	97	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Copper	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Lead	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Magnesium	5200	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Manganese	495	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2508

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Silver	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Sodium	9940	ug/L	10000	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 – 120.0	AV	13-JUL-09 10:18	071309S2-4
	Arsenic	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Beryllium	54.3	ug/L	50	ug/L	108.6	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Nickel	53.5	ug/L	50	ug/L	107	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Thallium	49.5	ug/L	50	ug/L	99	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Selenium	51.1	ug/L	50	ug/L	102.2	90.0 – 110.0	MS	14-JUL-09 23:32	090714-3
CCV03										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Antimony	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Cobalt	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Iron	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Lead	505	ug/L	500	ug/L	101	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Potassium	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Sodium	10300	ug/L	10000	ug/L	102.9	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Mercury	5.04	ug/L	5	ug/L	100.9	80.0 – 120.0	AV	13-JUL-09 10:42	071309S2-4

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2508

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Arsenic	51.8	ug/L	50	ug/L	103.6	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Beryllium	54.8	ug/L	50	ug/L	109.7	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Nickel	54.6	ug/L	50	ug/L	109.3	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Thallium	50.6	ug/L	50	ug/L	101.3	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Selenium	52.2	ug/L	50	ug/L	104.5	90.0 – 110.0	MS	15-JUL-09 00:00	090714-3
CCV04										
	Aluminum	4910	ug/L	5000	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Antimony	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Iron	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Lead	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Magnesium	5130	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Manganese	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Potassium	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Sodium	10700	ug/L	10000	ug/L	106.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Mercury	5.1	ug/L	5	ug/L	102	80.0 – 120.0	AV	13-JUL-09 11:06	071309S2-4
CCV05										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Antimony	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Calcium	4900	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2508

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Iron	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Lead	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 – 120.0	AV	13-JUL-09 11:29	071309S2-4
CCV06										
	Aluminum	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Antimony	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Silver	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2508

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Zinc	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Mercury	5.13	ug/L	5	ug/L	102.6	80.0 – 120.0	AV	13-JUL-09 11:53	071309S2-4
CCV07										
	Aluminum	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Antimony	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.3	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Lead	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Manganese	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Potassium	5110	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Mercury	5.01	ug/L	5	ug/L	100.2	80.0 – 120.0	AV	13-JUL-09 12:17	071309S2-4
CCV08										
	Mercury	5.15	ug/L	5	ug/L	103	80.0 – 120.0	AV	13-JUL-09 12:41	071309S2-4

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2508

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.146	ug/L	.2	ug/L	72.8	70.0 – 130.0	AV	13-JUL-09 09:52	071309S2-4
	Arsenic	4.48	ug/L	5	ug/L	89.5	70.0 – 130.0	MS	14-JUL-09 15:12	090713-2
	Beryllium	.487	ug/L	.5	ug/L	97.4	70.0 – 130.0	MS	14-JUL-09 15:12	090713-2
	Thallium	1.05	ug/L	1	ug/L	104.6	70.0 – 130.0	MS	14-JUL-09 15:12	090713-2
	Nickel	2.02	ug/L	2	ug/L	100.9	70.0 – 130.0	MS	14-JUL-09 15:12	090713-2
	Selenium	5.04	ug/L	5	ug/L	100.8	70.0 – 130.0	MS	14-JUL-09 22:44	090714-3
PQL01										
	Manganese	10.4	ug/L	10	ug/L	104.4	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Antimony	11.1	ug/L	10	ug/L	111.2	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Cadmium	4.87	ug/L	5	ug/L	97.4	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Magnesium	326	ug/L	300	ug/L	108.5	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Lead	11.3	ug/L	10	ug/L	113.1	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Iron	102	ug/L	100	ug/L	102.1	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Copper	9.77	ug/L	10	ug/L	97.7	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Cobalt	5	ug/L	5	ug/L	100	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Chromium	4.84	ug/L	5	ug/L	96.8	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Calcium	198	ug/L	200	ug/L	99	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Barium	5.03	ug/L	5	ug/L	100.6	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Aluminum	200	ug/L	200	ug/L	99.8	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Potassium	172	ug/L	150	ug/L	114.5	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Silver	5.23	ug/L	5	ug/L	104.6	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Sodium	281	ug/L	300	ug/L	93.6	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Vanadium	5.27	ug/L	5	ug/L	105.3	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1
	Zinc	9.6	ug/L	10	ug/L	96	70.0 – 130.0	P	08-JUL-09 10:15	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2508

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 10:08	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 10:08	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Mercury	-0.121	+/-.2	J	0.068	0.2	SOL	AV	13-JUL-09 09:50	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 15:06	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 15:06	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 15:06	090713-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 15:06	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 22:40	090714-3
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 11:10	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:10	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2508

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:10	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Potassium	146.16	+/-250	J	64.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 09:56	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 15:35	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 15:35	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 15:35	090713-2
	Thallium	0.351	+/-1	J	0.3	1.0	SOL	MS	14-JUL-09 15:35	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 23:00	090714-3
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 11:31	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:31	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2508

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:20	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 16:28	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 16:28	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 16:28	090713-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 16:28	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 23:36	090714-3
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 12:44	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 12:44	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Potassium	65.21	+/-250	J	64.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:44	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 17:10	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 17:10	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 17:10	090713-2

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2508

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 17:10	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	15-JUL-09 00:04	090714-3
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 13:37	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 13:37	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:08	071309S2-4
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 13:57	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:57	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:57	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2508

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 13:57	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 13:57	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 13:57	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:31	071309S2-4
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 14:53	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 14:53	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:55	071309S2-4
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 15:48	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 15:48	070809A-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2508

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 15:48	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 15:48	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 15:48	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 15:48	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 15:48	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 15:48	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 15:48	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 15:48	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 15:48	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 15:48	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 15:48	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 15:48	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 15:48	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 15:48	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 15:48	070809A–1
	Mercury	–0.114	+/–.2	J	0.068	0.2	SOL	AV	13–JUL–09 12:19	071309S2–4
CCB08	Mercury	–0.127	+/–.2	J	0.068	0.2	SOL	AV	13–JUL–09 12:43	071309S2–4

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 09-2508

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201872852								
	Arsenic	193	ug/kg	+/-965.251	U	MS	193	965
	Beryllium	19.3	ug/kg	+/-96.525	U	MS	19.3	96.5
	Nickel	96.5	ug/kg	+/-386.1	U	MS	96.5	386
	Thallium	66.4	ug/kg	+/-193.05	J	MS	57.9	193
	Selenium	483	ug/kg	+/-965.251	U	MS	483	965
1201872897								
	Cadmium	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Calcium	7770	ug/Kg	+/-24271.845	U	P	7770	24300
	Chromium	146	ug/Kg	+/-485.437	U	P	146	485
	Cobalt	146	ug/Kg	+/-485.437	U	P	146	485
	Copper	291	ug/Kg	+/-970.874	U	P	291	971
	Iron	7770	ug/Kg	+/-24271.845	U	P	7770	24300
	Lead	243	ug/Kg	+/-970.874	U	P	243	971
	Magnesium	8410	ug/Kg	+/-29126.214	J	P	8250	29100
	Barium	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Antimony	320	ug/Kg	+/-970.874	U	P	320	971
	Aluminum	6600	ug/Kg	+/-19417.476	U	P	6600	19400
	Manganese	194	ug/Kg	+/-970.874	U	P	194	971
	Potassium	6210	ug/Kg	+/-24271.845	U	P	6210	24300
	Silver	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Sodium	6800	ug/Kg	+/-24271.845	U	P	6800	24300
	Vanadium	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Zinc	320	ug/Kg	+/-970.874	U	P	320	971
1201873038								
	Mercury	-7.18	ug/kg	+/-11.516	J	AV	3.92	11.5

METALS
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Interference Check Sample

SDG No: 09-2508

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 – 120.0	08-JUL-09 10:22	070809A-1
	Antimony	0.994	ug/L					08-JUL-09 10:22	070809A-1
	Barium	1.28	ug/L					08-JUL-09 10:22	070809A-1
	Cadmium	-1.01	ug/L					08-JUL-09 10:22	070809A-1
	Calcium	470000	ug/L	500000	ug/L	93.9	80.0 – 120.0	08-JUL-09 10:22	070809A-1
	Chromium	0.679	ug/L					08-JUL-09 10:22	070809A-1
	Cobalt	-1.77	ug/L					08-JUL-09 10:22	070809A-1
	Copper	4.61	ug/L					08-JUL-09 10:22	070809A-1
	Iron	185000	ug/L	200000	ug/L	92.3	80.0 – 120.0	08-JUL-09 10:22	070809A-1
	Lead	-1.9	ug/L					08-JUL-09 10:22	070809A-1
	Magnesium	493000	ug/L	500000	ug/L	98.6	80.0 – 120.0	08-JUL-09 10:22	070809A-1
	Manganese	11.9	ug/L					08-JUL-09 10:22	070809A-1
	Potassium	0.032	ug/L					08-JUL-09 10:22	070809A-1
	Silver	1.27	ug/L					08-JUL-09 10:22	070809A-1
	Sodium	-23.6	ug/L					08-JUL-09 10:22	070809A-1
	Vanadium	-2.21	ug/L					08-JUL-09 10:22	070809A-1
	Zinc	-8.84	ug/L					08-JUL-09 10:22	070809A-1
ICSAB01									
	Aluminum	513000	ug/L	500000	ug/L	103	80.0 – 120.0	08-JUL-09 10:29	070809A-1
	Antimony	568	ug/L	500	ug/L	114	80.0 – 120.0	08-JUL-09 10:29	070809A-1
	Barium	500	ug/L	500	ug/L	100	80.0 – 120.0	08-JUL-09 10:29	070809A-1
	Cadmium	462	ug/L	500	ug/L	92.4	80.0 – 120.0	08-JUL-09 10:29	070809A-1
	Calcium	471000	ug/L	500000	ug/L	94.2	80.0 – 120.0	08-JUL-09 10:29	070809A-1
	Chromium	483	ug/L	500	ug/L	96.5	80.0 – 120.0	08-JUL-09 10:29	070809A-1
	Cobalt	456	ug/L	500	ug/L	91.3	80.0 – 120.0	08-JUL-09 10:29	070809A-1
	Copper	571	ug/L	500	ug/L	114	80.0 – 120.0	08-JUL-09 10:29	070809A-1
	Iron	184000	ug/L	200000	ug/L	91.9	80.0 – 120.0	08-JUL-09 10:29	070809A-1
	Lead	475	ug/L	500	ug/L	95	80.0 – 120.0	08-JUL-09 10:29	070809A-1
	Magnesium	494000	ug/L	500000	ug/L	98.8	80.0 – 120.0	08-JUL-09 10:29	070809A-1

METALS
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Interference Check Sample

SDG No: 09–2508

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	494	ug/L	500	ug/L	98.7	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Potassium	5890	ug/L	5000	ug/L	118	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Silver	284	ug/L	250	ug/L	114	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Sodium	5600	ug/L	5000	ug/L	112	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Vanadium	523	ug/L	500	ug/L	105	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Zinc	491	ug/L	500	ug/L	98.2	80.0 – 120.0	08–JUL–09 10:29	070809A–1

METALS
–4–
Interference Check Sample

SDG No: 09–2508

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	1.39	ug/L					14–JUL–09 15:18	090713–2
	Beryllium	0.062	ug/L					14–JUL–09 15:18	090713–2
	Nickel	4.36	ug/L					14–JUL–09 15:18	090713–2
	Thallium	0.026	ug/L					14–JUL–09 15:18	090713–2
ICSAB01									
	Arsenic	23.1	ug/L	20	ug/L	115	80.0 – 120.0	14–JUL–09 15:24	090713–2
	Beryllium	20.7	ug/L	20	ug/L	103	80.0 – 120.0	14–JUL–09 15:24	090713–2
	Nickel	23.3	ug/L	22.1	ug/L	105	80.0 – 120.0	14–JUL–09 15:24	090713–2
	Thallium	18.0	ug/L	20	ug/L	89.8	80.0 – 120.0	14–JUL–09 15:24	090713–2

METALS
-4-
Interference Check Sample

SDG No: 09-2508

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Selenium	-1.09	ug/L					14-JUL-09 22:48	090714-3
ICSAB01									
	Selenium	20.8	ug/L	20	ug/L	104	80.0 - 120.0	14-JUL-09 22:52	090714-3

METALS
-5a-

Matrix Spike Summary

SDG NO. 09-2508 **Client ID** CAMO-09-9946S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872855

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	11700		2020		9450	102		MS
Beryllium	ug/kg	75-125	6890		746		5910	104		MS
Nickel	ug/kg	75-125	10200		3610		5910	112		MS
Selenium	ug/kg	75-125	2170		612	U	2360	84.5		MS
Thallium	ug/kg	75-125	11100		138	J	11800	92.7		MS

METALS
--5a--

Matrix Spike Duplicate Summary

SDG NO. 09-2508 **Client ID** CAMO-09-9946SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872859

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	12100		2020		9430	107		MS
Beryllium	ug/kg	75-125	7040		746		5890	107		MS
Nickel	ug/kg	75-125	10200		3610		5890	111		MS
Selenium	ug/kg	75-125	2230		612	U	2360	87.3		MS
Thallium	ug/kg	75-125	11400		138	J	11800	95.4		MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2508 **Client ID** CAMO-09-9946S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872900

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/Kg	75-125	57700		389	U	61000	94.5		P
Barium	ug/Kg	75-125	128000		96100		61000	52.1	N	P
Cadmium	ug/Kg	75-125	58300		118	U	61000	95.4		P
Calcium	ug/Kg	75-125	1510000		993000		610000	85.2		P
Chromium	ug/Kg	75-125	72000		15900		61000	91.9		P
Cobalt	ug/Kg	75-125	59300		6950		61000	85.7		P
Copper	ug/Kg	75-125	77500		12700		61000	106		P
Iron	ug/Kg		11200000		16800000		610000	-912	N/A	P
Lead	ug/Kg	75-125	66900		8690		61000	95.4		P
Aluminum	ug/Kg		8360000		4550000		610000	623	N/A	P
Magnesium	ug/Kg	75-125	1580000		747000		610000	137	N	P
Manganese	ug/Kg		391000		790000		61000	-653	N/A	P
Potassium	ug/Kg	75-125	1500000		703000		610000	131	N	P
Silver	ug/Kg	75-125	60700		527	J	61000	98.6		P
Sodium	ug/Kg	75-125	692000		95500		610000	97.8		P
Vanadium	ug/Kg	75-125	70700		12200		61000	95.8		P
Zinc	ug/Kg	75-125	123000		57500		61000	107		P

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO. 09-2508 **Client ID** CAMO-09-9946SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872902

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		7780000		4550000		589000	548	N/A	P
Antimony	ug/Kg	75-125	55900		389	U	58900	94.7		P
Barium	ug/Kg	75-125	120000		96100		58900	40.7	N	P
Cadmium	ug/Kg	75-125	56200		118	U	58900	95.3		P
Calcium	ug/Kg	75-125	1400000		993000		589000	69.5	N	P
Chromium	ug/Kg	75-125	67800		15900		58900	88.1		P
Cobalt	ug/Kg	75-125	57200		6950		58900	85.3		P
Copper	ug/Kg	75-125	77300		12700		58900	110		P
Iron	ug/Kg		10700000		16800000		589000	-1020	N/A	P
Lead	ug/Kg	75-125	64700		8690		58900	94.9		P
Magnesium	ug/Kg	75-125	1450000		747000		589000	119		P
Manganese	ug/Kg		373000		790000		58900	-707	N/A	P
Potassium	ug/Kg	75-125	1400000		703000		589000	118		P
Silver	ug/Kg	75-125	58500		527	J	58900	98.4		P
Sodium	ug/Kg	75-125	651000		95500		589000	94.3		P
Vanadium	ug/Kg	75-125	67900		12200		58900	94.4		P
Zinc	ug/Kg	75-125	109000		57500		58900	87.6		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2508 **Client ID** CAMO-09-9946S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201873041

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	157		7.77	J	143	104		AV

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO. 09-2508 **Client ID** CAMO-09-9946SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201873043

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	166		7.77	J	145	110		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2508

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946D

Sample ID: 232591001 **Duplicate ID:** 1201872854 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-1200	2020		2160		6.93		MS
Beryllium	ug/kg	+/-20%	746		726		2.76		MS
Nickel	ug/kg	+/-20%	3610		3730		3.51		MS
Selenium	ug/kg		612	U	602	U			MS
Thallium	ug/kg	+/-241	138	J	129	J	7.02		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2508

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946SD

Sample ID: 1201872855 **Duplicate ID:** 1201872859 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-20	11700		12100		3.38		MS
Beryllium	ug/kg	+/-20	6890		7040		2.1		MS
Nickel	ug/kg	+/-20	10200		10200		.328		MS
Selenium	ug/kg	+/-20	2170		2230		2.87		MS
Thallium	ug/kg	+/-20	11100		11400		2.68		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2508

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–9946D

Sample ID: 232591001 **Duplicate ID:** 1201872899 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	4550000		3490000		26.3	*	P
Antimony	ug/Kg		389	U	406	U			P
Barium	ug/Kg	+/–20%	96100		56700		51.6	*	P
Cadmium	ug/Kg		118	U	123	U			P
Calcium	ug/Kg	+/–20%	993000		778000		24.3	*	P
Chromium	ug/Kg	+/–20%	15900		18200		13.3		P
Cobalt	ug/Kg	+/–20%	6950		2290		101	*	P
Copper	ug/Kg	+/–20%	12700		15100		17.4		P
Iron	ug/Kg	+/–20%	16800000		9760000		52.8	*	P
Lead	ug/Kg	+/–20%	8690		7750		11.5		P
Magnesium	ug/Kg	+/–20%	747000		579000		25.4	*	P
Manganese	ug/Kg	+/–20%	790000		334000		81.1	*	P
Potassium	ug/Kg	+/–20%	703000		568000		21.3	*	P
Silver	ug/Kg	+/–615	527	J	321	J	48.7		P
Sodium	ug/Kg	+/–30800	95500		87400		8.9		P
Vanadium	ug/Kg	+/–20%	12200		10700		13.2		P
Zinc	ug/Kg	+/–20%	57500		54100		6.05		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2508

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–9946SD

Sample ID: 1201872900 **Duplicate ID:** 1201872902 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	8360000		7780000		7.11		P
Antimony	ug/Kg	+/–20	57700		55900		3.26		P
Barium	ug/Kg	+/–20	128000		120000		6.32		P
Cadmium	ug/Kg	+/–20	58300		56200		3.65		P
Calcium	ug/Kg	+/–20	1510000		1400000		7.59		P
Chromium	ug/Kg	+/–20	72000		67800		5.97		P
Cobalt	ug/Kg	+/–20	59300		57200		3.55		P
Copper	ug/Kg	+/–20	77500		77300		.22		P
Iron	ug/Kg	+/–20	11200000		10700000		4.04		P
Lead	ug/Kg	+/–20	66900		64700		3.42		P
Magnesium	ug/Kg	+/–20	1580000		1450000		9.02		P
Manganese	ug/Kg	+/–20	391000		373000		4.73		P
Potassium	ug/Kg	+/–20	1500000		1400000		7.14		P
Silver	ug/Kg	+/–20	60700		58500		3.69		P
Sodium	ug/Kg	+/–20	692000		651000		6.06		P
Vanadium	ug/Kg	+/–20	70700		67900		4.14		P
Zinc	ug/Kg	+/–20	123000		109000		11.7		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2508

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946D

Sample ID: 232591001 **Duplicate ID:** 1201873040 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-12.5	7.77	J	12.2	J	44.3		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2508

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–9946SD

Sample ID: 1201873041 **Duplicate ID:** 1201873043 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/–20	157		166		5.58		AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2508

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201872853								
	Arsenic	ug/kg	255000	258000		101	83-120	MS
	Beryllium	ug/kg	86400	92400		107	81.2-126.8	MS
	Nickel	ug/kg	101000	108000		107	83.3-121.4	MS
	Selenium	ug/kg	171000	185000		108	80.2-125.9	MS
	Thallium	ug/kg	203000	205000		101	78-123.2	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2508

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201872898								
	Aluminum	ug/Kg	7290000	6410000		87.9	63.5-118	P
	Antimony	ug/Kg	121000	107000		88	39.1-132.1	P
	Barium	ug/Kg	475000	461000		97.1	82-110.6	P
	Cadmium	ug/Kg	116000	113000		97.5	77.9-115.2	P
	Calcium	ug/Kg	3720000	3420000		92	77.4-111.7	P
	Chromium	ug/Kg	84000	75100		89.4	66.6-116.5	P
	Cobalt	ug/Kg	83000	80200		96.6	79-113.9	P
	Copper	ug/Kg	105000	103000		97.7	77.6-112	P
	Iron	ug/Kg	20000000	18200000		91.2	51.5-145.5	P
	Lead	ug/Kg	161000	164000		102	83.1-114.7	P
	Magnesium	ug/Kg	2980000	2860000		95.9	81-114.3	P
	Manganese	ug/Kg	398000	365000		91.8	76.6-106.6	P
	Potassium	ug/Kg	2390000	2270000		95.2	72.2-111.1	P
	Silver	ug/Kg	133000	131000		98.6	81.7-115.7	P
	Sodium	ug/Kg	614000	573000		93.2	71.5-109.3	P
	Vanadium	ug/Kg	166000	147000		88.9	65-118.6	P
	Zinc	ug/Kg	195000	198000		101	82.8-111.9	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2508

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873039								
	Mercury	ug/kg	5150	5110		99.2	71.6-128.3	AV

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 09–2508 **Client ID** CAMO–09–9946L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232591001 **Serial Dilution ID:** 1201872856

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	8.25		5.1	J	38.2			MS
Beryllium	3.05		2.75		9.84			MS
Nickel	14.7		15.4		4.76			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.566	J	1.5	U	100			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2508 **Client ID** CAMO-09-9946L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232591001 **Serial Dilution ID:** 1201872901

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	38600		38400		.648		10	P
Antimony	3.3	U	16.5	U				P
Barium	816		835		2.33		10	P
Cadmium	1	U	5	U				P
Calcium	8430		8750		3.8		10	P
Chromium	135		139		2.59		10	P
Cobalt	59		61		3.39			P
Copper	108		104		4.17			P
Iron	142000		154000		8.1		10	P
Lead	73.7		78		5.83			P
Magnesium	6340		6650		4.89		10	P
Manganese	6700		7050		5.22		10	P
Potassium	5970		6050		1.34		10	P
Silver	4.47	J	6.35	J	42.1			P
Sodium	810		735	J	9.26			P
Vanadium	104		105		.481		10	P
Zinc	488		495		1.33		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2508 **Client ID** CAMO-09-9946L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232591001 **Serial Dilution ID:** 1201873042

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.116	J	.34	U	100			AV

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09–2508 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881858						
1201872897	MB for batch 881858	MB	S	06–JUL–09	.515g	50mL	
1201872898	LCS for batch 881858	LCS	S	06–JUL–09	.514g	50mL	
1201872900	CAMO–09–9946S	MS	S	06–JUL–09	.504g	50mL	
1201872902	CAMO–09–9946SD	MSD	S	06–JUL–09	.522g	50mL	
1201872899	CAMO–09–9946D	DUP	S	06–JUL–09	.5g	50mL	
232582001	CAMO–09–10464	SAMPLE	S	06–JUL–09	.51g	50mL	
232582002	CAMO–09–10465	SAMPLE	S	06–JUL–09	.514g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2508 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881836						
1201872852	MB for batch 881836	MB	S	06-JUL-09	.518g	50mL	
1201872853	LCS for batch 881836	LCS	S	06-JUL-09	.518g	50mL	
1201872855	CAMO-09-9946S	MS	S	06-JUL-09	.521g	50mL	
1201872859	CAMO-09-9946SD	MSD	S	06-JUL-09	.522g	50mL	
1201872854	CAMO-09-9946D	DUP	S	06-JUL-09	.511g	50mL	
232582001	CAMO-09-10464	SAMPLE	S	06-JUL-09	.524g	50mL	
232582002	CAMO-09-10465	SAMPLE	S	06-JUL-09	.512g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2508 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881915						
1201873038	MB for batch 881915	MB	S	10-JUL-09	.521g	30mL	
1201873039	LCS for batch 881915	LCS	S	10-JUL-09	.204g	30mL	
1201873041	CAMO-09-9946S	MS	S	10-JUL-09	.515g	30mL	
1201873043	CAMO-09-9946SD	MSD	S	10-JUL-09	.51g	30mL	
1201873040	CAMO-09-9946D	DUP	S	10-JUL-09	.593g	30mL	
232582001	CAMO-09-10464	SAMPLE	S	10-JUL-09	.53g	30mL	
232582002	CAMO-09-10465	SAMPLE	S	10-JUL-09	.508g	30mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 14-JUL-09 **End Date:** 14-JUL-09

Client Sdg: 09-2508
Method MS
Data File: 090713-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	14:42			X		X											X					X		
S10	1	14:48			X		X											X					X		
S100	1	14:54			X		X											X					X		
ICV01	1	15:00			X		X											X					X		
ICB01	1	15:06			X		X											X					X		
CRDL01	1	15:12			X		X											X					X		
ICSA01	1	15:18			X		X											X					X		
ICSAB01	1	15:24			X		X											X					X		
CCV01	1	15:29			X		X											X					X		
CCB01	1	15:35			X		X											X					X		
1201872852	2	15:41			X		X											X					X		
1201872853	40	15:47			X		X											X					X		
232582001	2	15:53			X		X											X					X		
232582002	2	15:59			X		X											X					X		
ZZZZZZ	2	16:05																							
ZZZZZZ	2	16:11																							
ZZZZZZ	2	16:17																							
CCV02	1	16:22			X		X											X					X		
CCB02	1	16:28			X		X											X					X		
ZZZZZZ	2	16:34																							
1201872854	2	16:40			X		X											X					X		
1201872855	2	16:46			X		X											X					X		
1201872859	2	16:52			X		X											X					X		
1201872856	10	16:58			X		X											X					X		
CCV03	1	17:04			X		X											X					X		
CCB03	1	17:10			X		X											X					X		

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 14-JUL-09 **End Date:** 15-JUL-09

Client Sdg: 09-2508
Method MS
Data File: 090714-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	22:24																		X					
S10	1	22:28																		X					
S100	1	22:32																		X					
ICV01	1	22:36																		X					
ICB01	1	22:40																		X					
CRDL01	1	22:44																		X					
ICSA01	1	22:48																		X					
ICSAB01	1	22:52																		X					
CCV01	1	22:56																		X					
CCB01	1	23:00																		X					
1201872852	2	23:04																		X					
1201872853	40	23:08																		X					
232582001	2	23:12																		X					
232582002	2	23:16																		X					
ZZZZZZ	2	23:20																							
ZZZZZZ	2	23:24																							
ZZZZZZ	2	23:28																							
CCV02	1	23:32																		X					
CCB02	1	23:36																		X					
ZZZZZZ	2	23:40																							
1201872854	2	23:44																		X					
1201872855	2	23:48																		X					
1201872859	2	23:52																		X					
1201872856	10	23:56																		X					
CCV03	1	00:00																		X					
CCB03	1	00:04																		X					

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 08-JUL-09 **End Date:** 08-JUL-09

Client Sdg: 09-2508
Method P
Data File: 070809A-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	09:35		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	09:41	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	09:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	09:55	X						X				X		X							X			
ICV01	1	10:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	10:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	10:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	10:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	10:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	10:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	10:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	10:47																							
ZZZZZZ	1	10:54																							
CCV01	1	11:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	11:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR03	1	11:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV02	1	11:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	11:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	11:42																							
ZZZZZZ	2	11:49																							
ZZZZZZ	1	11:56																							
ZZZZZZ	1	12:03																							
ZZZZZZ	1	12:10																							
ZZZZZZ	1	12:17																							
ZZZZZZ	5	12:23																							
ZZZZZZ	1	12:30																							
CCV03	1	12:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	12:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	5	12:49																							
ZZZZZZ	5	12:56																							
ZZZZZZ	5	13:03																							
ZZZZZZ	5	13:10																							
ZZZZZZ	25	13:16																							
ZZZZZZ	5	13:23																							
CCV04	1	13:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	13:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV05	1	13:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	13:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872897	1	14:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
1201872898	2	14:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232582001	1	14:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232582002	1	14:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	14:32																							
ZZZZZZ	1	14:39																							
CCV06	1	14:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	14:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	15:00																							
ZZZZZZ	1	15:07																							
1201872899	1	15:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872900	1	15:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872902	1	15:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872901	5	15:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV07	1	15:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	15:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 13-JUL-09 **End Date:** 13-JUL-09

Client Sdg: 09-2508
Method AV
Data File: 071309S2-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:36															X								
S0.2	1	09:38															X								
S0.5	1	09:40															X								
S2.0	1	09:42															X								
S5.0	1	09:44															X								
S10	1	09:46															X								
ICV01	1	09:48															X								
ICB01	1	09:50															X								
CRDL01	1	09:52															X								
CCV01	1	09:54															X								
CCB01	1	09:56															X								
ZZZZZZ	1	09:58																							
ZZZZZZ	10	10:00																							
ZZZZZZ	1	10:02																							
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
ZZZZZZ	1	10:08																							
ZZZZZZ	1	10:10																							
ZZZZZZ	1	10:12																							
ZZZZZZ	1	10:14																							
ZZZZZZ	5	10:16																							
CCV02	1	10:18															X								
CCB02	1	10:20															X								
ZZZZZZ	1	10:22																							
ZZZZZZ	1	10:24																							
ZZZZZZ	1	10:26																							
ZZZZZZ	1	10:28																							
ZZZZZZ	1	10:30																							
ZZZZZZ	1	10:32																							
ZZZZZZ	1	10:34																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:38																							
ZZZZZZ	1	10:40																							
CCV03	1	10:42															X								
CCB03	1	10:44															X								
ZZZZZZ	1	10:46																							
ZZZZZZ	1	10:48																							
ZZZZZZ	1	10:50																							
ZZZZZZ	1	10:52																							
ZZZZZZ	1	10:54																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	10	10:56																						
ZZZZZZ	1	10:58																						
ZZZZZZ	1	11:00																						
ZZZZZZ	1	11:02																						
ZZZZZZ	1	11:04																						
CCV04	1	11:06														X								
CCB04	1	11:08														X								
ZZZZZZ	1	11:10																						
ZZZZZZ	1	11:12																						
ZZZZZZ	1	11:14																						
ZZZZZZ	1	11:16																						
ZZZZZZ	1	11:18																						
ZZZZZZ	1	11:20																						
ZZZZZZ	1	11:22																						
ZZZZZZ	1	11:24																						
ZZZZZZ	1	11:26																						
ZZZZZZ	1	11:27																						
CCV05	1	11:29														X								
CCB05	1	11:31														X								
ZZZZZZ	1	11:33																						
ZZZZZZ	1	11:35																						
ZZZZZZ	1	11:37																						
ZZZZZZ	1	11:39																						
ZZZZZZ	5	11:41																						
ZZZZZZ	1	11:43																						
ZZZZZZ	1	11:45																						
ZZZZZZ	1	11:47																						
ZZZZZZ	1	11:49																						
ZZZZZZ	1	11:51																						
CCV06	1	11:53														X								
CCB06	1	11:55														X								
1201873038	1	11:57														X								
1201873039	10	11:59														X								
232582001	1	12:01														X								
232582002	1	12:03														X								
ZZZZZZ	1	12:05																						
ZZZZZZ	1	12:07																						
ZZZZZZ	1	12:09																						
ZZZZZZ	1	12:11																						
1201873040	1	12:13														X								

Metals
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Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
1201873041	1	12:15															X								
CCV07	1	12:17															X								
CCB07	1	12:19															X								
1201873043	1	12:21															X								
1201873042	5	12:23															X								
ZZZZZZ	1	12:25																							
ZZZZZZ	1	12:27																							
ZZZZZZ	1	12:29																							
ZZZZZZ	1	12:31																							
ZZZZZZ	1	12:33																							
ZZZZZZ	1	12:35																							
ZZZZZZ	5	12:37																							
ZZZZZZ	1	12:39																							
CCV08	1	12:41															X								
CCB08	1	12:43															X								

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2508

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2508

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2508

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 09-2508
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-MAY-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2508
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2508
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2508
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2508
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2508
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2508

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS6

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2508

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09
Aluminum	20	500000	ug/L	01-MAY-09

Raw Data

Unable to move autosampler arm to correct position.

The problem may be simple or it may due to a problem with the autosampler requiring a service visit.

Check the following:
» Make sure the autosampler is powered on.
» Make sure the cable is connected between the autosampler and the computer.
» Make sure there is nothing that is physically obstructing the arm from moving freely.
» Go to the Diagnostics window and click on the Reconnect button on the Autosampler page.

If these suggestions do not fix the problem after several attempts, contact PerkinElmer service and arrange a service visit.
[0607]

Reprocessing Begun
Logged In Analyst: Optima3 Technique: ICP Continuous

Results Data Set (original): 070809
Results Library (original): C:\pe\Optima3\Results\Results.mdb
Results Data Set (reprocessed): 070809A
Results Library (reprocessed): C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX Method Last Saved: 7/8/2009 11:38:58
IEC File: 070309.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 8
Sample ID: S0 Date Collected: 7/8/2009 09:28:56
Analyst: Data Type: Reprocessed on 7/8/2009 11:40:03
Logged In Analyst (Original) : Optima3
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1059810.6	1059810.6	99.899	%	09:32:05
1	Sc Radial	5668.6	5668.6	102	%	09:30:49
1	Y 371.029	851543.7	851543.7	99.804	%	09:32:05
1	Y RADIAL	4889.8	4889.8	101.5	%	09:30:49
1	Ag 328.068†	593.9	594.5	[0.00]	ug/L	09:32:10

1	Al 396.153Radial†	-88.0	-86.4	[0.00]	ug/L	09:30:49
1	As 188.979†	-33.0	-33.0	[0.00]	ug/L	09:32:31
1	B 249.677†	-395.5	-395.9	[0.00]	ug/L	09:32:31
1	Ba 233.527†	22.7	22.7	[0.00]	ug/L	09:32:31
1	Be 313.107†	-7253.6	-7260.9	[0.00]	ug/L	09:32:10
1	Ca 317.933Radial†	19.9	19.6	[0.00]	ug/L	09:31:09
1	Cd 226.502†	-262.6	-262.9	[0.00]	ug/L	09:32:31
1	Co 228.616†	-86.2	-86.3	[0.00]	ug/L	09:32:31
1	Cr 267.716†	-35.2	-35.2	[0.00]	ug/L	09:32:31
1	Cu 324.752†	10171.2	10181.5	[0.00]	ug/L	09:32:10
1	Fe 238.204 Radial†	0.0	0.0	[0.00]	ug/L	09:31:09
1	K 766.490 Radial†	1428.1	1402.0	[0.00]	ug/L	09:30:49
1	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:09
1	Mn 257.610†	823.1	823.9	[0.00]	ug/L	09:32:31
1	Mo 202.031†	40.3	40.4	[0.00]	ug/L	09:32:31
1	Na 589.592 Radial†	-169.9	-166.8	[0.00]	ug/L	09:31:09
1	Ni 231.604†	160.5	160.7	[0.00]	ug/L	09:32:31
1	P 214.914†	340.8	341.2	[0.00]	ug/L	09:32:31
1	Pb 220.353†	-23.8	-23.8	[0.00]	ug/L	09:32:31
1	S 181.975 Axial†	74.8	74.8	[0.00]	ug/L	09:32:31
1	Sb 206.836†	39.3	39.4	[0.00]	ug/L	09:32:31
1	Se 196.026†	-21.9	-21.9	[0.00]	ug/L	09:32:31
1	Si 251.611†	569.0	569.6	[0.00]	ug/L	09:32:31
1	Sn 189.927†	4.8	4.8	[0.00]	ug/L	09:32:31
1	Sr 421.552†	-1.3	-1.3	[0.00]	ug/L	09:31:09
1	Ti 334.940†	-1079.9	-1081.0	[0.00]	ug/L	09:32:10
1	Tl 190.801†	-58.7	-58.8	[0.00]	ug/L	09:32:31
1	U 409.014†	-3815.0	-3818.9	[0.00]	ug/L	09:32:05
1	V 292.402†	-1684.3	-1686.1	[0.00]	ug/L	09:32:10
1	Zn 213.857†	1110.4	1111.5	[0.00]	ug/L	09:32:31
1	SiO2†	589.5	590.1	[0.00]	ug/L	09:33:36
2	Sc 361.383	1062041.1	1062041.1	100.11	%	09:32:36
2	Sc Radial	5550.5	5550.5	99.7	%	09:31:14
2	Y 371.029	854666.6	854666.6	100.17	%	09:32:36
2	Y RADIAL	4806.6	4806.6	99.81	%	09:31:14
2	Ag 328.068†	684.5	683.8	[0.00]	ug/L	09:32:41
2	Al 396.153Radial†	-103.1	-103.4	[0.00]	ug/L	09:31:14
2	As 188.979†	-37.3	-37.3	[0.00]	ug/L	09:33:01
2	B 249.677†	-376.8	-376.4	[0.00]	ug/L	09:33:01
2	Ba 233.527†	27.0	27.0	[0.00]	ug/L	09:33:01
2	Be 313.107†	-7342.2	-7334.2	[0.00]	ug/L	09:32:41
2	Ca 317.933Radial†	15.3	15.3	[0.00]	ug/L	09:31:34
2	Cd 226.502†	-297.3	-297.0	[0.00]	ug/L	09:33:01
2	Co 228.616†	-91.0	-90.9	[0.00]	ug/L	09:33:01
2	Cr 267.716†	-33.4	-33.4	[0.00]	ug/L	09:33:01
2	Cu 324.752†	10260.8	10249.6	[0.00]	ug/L	09:32:41
2	Fe 238.204 Radial†	0.2	0.2	[0.00]	ug/L	09:31:34
2	K 766.490 Radial†	1490.1	1493.9	[0.00]	ug/L	09:31:14
2	Mg 279.077 IEC†	-0.2	-0.2	[0.00]	ug/L	09:31:34
2	Mn 257.610†	833.3	832.3	[0.00]	ug/L	09:33:01
2	Mo 202.031†	24.6	24.6	[0.00]	ug/L	09:33:01
2	Na 589.592 Radial†	-169.2	-169.6	[0.00]	ug/L	09:31:34
2	Ni 231.604†	145.4	145.2	[0.00]	ug/L	09:33:01
2	P 214.914†	336.1	335.8	[0.00]	ug/L	09:33:01
2	Pb 220.353†	-39.7	-39.7	[0.00]	ug/L	09:33:01
2	S 181.975 Axial†	63.8	63.7	[0.00]	ug/L	09:33:01
2	Sb 206.836†	49.0	48.9	[0.00]	ug/L	09:33:01
2	Se 196.026†	-25.3	-25.3	[0.00]	ug/L	09:33:01
2	Si 251.611†	569.7	569.1	[0.00]	ug/L	09:33:01
2	Sn 189.927†	5.1	5.0	[0.00]	ug/L	09:33:01
2	Sr 421.552†	11.5	11.5	[0.00]	ug/L	09:31:34
2	Ti 334.940†	-1116.4	-1115.1	[0.00]	ug/L	09:32:41
2	Tl 190.801†	-57.5	-57.4	[0.00]	ug/L	09:33:01
2	U 409.014†	-3873.4	-3869.2	[0.00]	ug/L	09:32:36
2	V 292.402†	-1699.0	-1697.1	[0.00]	ug/L	09:32:41
2	Zn 213.857†	1115.6	1114.3	[0.00]	ug/L	09:33:01
2	SiO2†	600.0	599.4	[0.00]	ug/L	09:33:42
3	Sc 361.383	1060796.0	1060796.0	99.992	%	09:33:06
3	Sc Radial	5475.5	5475.5	98.4	%	09:31:39
3	Y 371.029	853433.0	853433.0	100.03	%	09:33:06
3	Y RADIAL	4750.8	4750.8	98.65	%	09:31:39

3	Ag 328.068†	637.4	637.5	[0.00]	ug/L	09:33:11
3	Al 396.153Radial†	-85.4	-86.8	[0.00]	ug/L	09:31:39
3	As 188.979†	-40.4	-40.4	[0.00]	ug/L	09:33:31
3	B 249.677†	-372.3	-372.3	[0.00]	ug/L	09:33:31
3	Ba 233.527†	23.1	23.1	[0.00]	ug/L	09:33:31
3	Be 313.107†	-7353.0	-7353.6	[0.00]	ug/L	09:33:11
3	Ca 317.933Radial†	15.7	15.9	[0.00]	ug/L	09:31:59
3	Cd 226.502†	-273.1	-273.1	[0.00]	ug/L	09:33:31
3	Co 228.616†	-94.1	-94.1	[0.00]	ug/L	09:33:31
3	Cr 267.716†	-17.2	-17.2	[0.00]	ug/L	09:33:31
3	Cu 324.752†	10141.9	10142.7	[0.00]	ug/L	09:33:11
3	Fe 238.204 Radial†	0.8	0.8	[0.00]	ug/L	09:31:59
3	K 766.490 Radial†	1498.9	1523.4	[0.00]	ug/L	09:31:39
3	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:59
3	Mn 257.610†	824.8	824.9	[0.00]	ug/L	09:33:31
3	Mo 202.031†	30.4	30.4	[0.00]	ug/L	09:33:31
3	Na 589.592 Radial†	-172.0	-174.9	[0.00]	ug/L	09:31:59
3	Ni 231.604†	138.9	138.9	[0.00]	ug/L	09:33:31
3	P 214.914†	333.9	333.9	[0.00]	ug/L	09:33:31
3	Pb 220.353†	-23.7	-23.8	[0.00]	ug/L	09:33:31
3	S 181.975 Axial†	64.9	64.9	[0.00]	ug/L	09:33:31
3	Sb 206.836†	48.0	48.0	[0.00]	ug/L	09:33:31
3	Se 196.026†	-17.7	-17.7	[0.00]	ug/L	09:33:31
3	Si 251.611†	541.6	541.6	[0.00]	ug/L	09:33:31
3	Sn 189.927†	6.6	6.6	[0.00]	ug/L	09:33:31
3	Sr 421.552†	6.1	6.2	[0.00]	ug/L	09:31:59
3	Ti 334.940†	-1131.5	-1131.6	[0.00]	ug/L	09:33:11
3	Tl 190.801†	-67.9	-67.9	[0.00]	ug/L	09:33:31
3	U 409.014†	-3815.9	-3816.2	[0.00]	ug/L	09:33:06
3	V 292.402†	-1575.1	-1575.2	[0.00]	ug/L	09:33:11
3	Zn 213.857†	1141.3	1141.4	[0.00]	ug/L	09:33:31
3	SiO2†	617.5	617.6	[0.00]	ug/L	09:33:47

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1060882.6	1117.80	0.11%	100.00	%
Sc Radial	5564.8	97.34	1.75%	100	%
Y 371.029	853214.5	1572.88	0.18%	100.000	%
Y RADIAL	4815.7	69.94	1.45%	100.0	%
Ag 328.068†	638.6	44.64	6.99%	[0.00]	ug/L
Al 396.153Radial†	-92.2	9.68	10.50%	[0.00]	ug/L
As 188.979†	-36.9	3.70	10.03%	[0.00]	ug/L
B 249.677†	-381.5	12.62	3.31%	[0.00]	ug/L
Ba 233.527†	24.3	2.36	9.74%	[0.00]	ug/L
Be 313.107†	-7316.2	48.87	0.67%	[0.00]	ug/L
Ca 317.933Radial†	16.9	2.30	13.61%	[0.00]	ug/L
Cd 226.502†	-277.6	17.49	6.30%	[0.00]	ug/L
Co 228.616†	-90.4	3.95	4.37%	[0.00]	ug/L
Cr 267.716†	-28.6	9.91	34.66%	[0.00]	ug/L
Cu 324.752†	10191.3	54.11	0.53%	[0.00]	ug/L
Fe 238.204 Radial†	0.3	0.40	120.31%	[0.00]	ug/L
K 766.490 Radial†	1473.1	63.31	4.30%	[0.00]	ug/L
Mg 279.077 IEC†	0.2	0.34	192.62%	[0.00]	ug/L
Mn 257.610†	827.0	4.63	0.56%	[0.00]	ug/L
Mo 202.031†	31.8	8.00	25.18%	[0.00]	ug/L
Na 589.592 Radial†	-170.4	4.09	2.40%	[0.00]	ug/L
Ni 231.604†	148.3	11.22	7.57%	[0.00]	ug/L
P 214.914†	336.9	3.77	1.12%	[0.00]	ug/L
Pb 220.353†	-29.1	9.17	31.52%	[0.00]	ug/L
S 181.975 Axial†	67.8	6.10	8.99%	[0.00]	ug/L
Sb 206.836†	45.4	5.28	11.62%	[0.00]	ug/L
Se 196.026†	-21.6	3.82	17.66%	[0.00]	ug/L
Si 251.611†	560.1	16.01	2.86%	[0.00]	ug/L
Sn 189.927†	5.5	0.95	17.40%	[0.00]	ug/L
Sr 421.552†	5.5	6.43	117.38%	[0.00]	ug/L
Ti 334.940†	-1109.3	25.82	2.33%	[0.00]	ug/L
Tl 190.801†	-61.4	5.70	9.29%	[0.00]	ug/L
U 409.014†	-3834.7	29.86	0.78%	[0.00]	ug/L
V 292.402†	-1652.8	67.41	4.08%	[0.00]	ug/L

Zn 213.857†	1122.4	16.48	1.47%	[0.00] ug/L
SiO2†	602.4	13.95	2.32%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/8/2009 09:35:57
Data Type: Reprocessed on 7/8/2009 11:40:04

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1043904.5	1043904.5	98.400	%	09:38:07
1	Sc Radial	5586.9	5586.9	100	%	09:37:49
1	Y 371.029	838768.8	838768.8	98.307	%	09:38:07
1	Y RADIAL	4867.7	4867.7	101.1	%	09:37:49
1	Ag 328.068†	25884.2	25666.6	[100]	ug/L	09:38:07
1	As 188.979†	393.4	436.7	[100]	ug/L	09:38:27
1	B 249.677†	5686.4	6160.4	[100]	ug/L	09:38:07
1	Ba 233.527†	20371.1	20678.1	[100]	ug/L	09:38:07
1	Be 313.107†	314654.5	327088.3	[100]	ug/L	09:38:07
1	Cd 226.502†	13132.5	13623.8	[100]	ug/L	09:38:27
1	Co 228.616†	8083.3	8305.1	[100]	ug/L	09:38:27
1	Cr 267.716†	11753.9	11973.6	[100]	ug/L	09:38:07
1	Cu 324.752†	50132.0	40756.1	[100]	ug/L	09:38:07
1	K 766.490 Radial†	3887.5	2399.0	[1000]	ug/L	09:37:49
1	Mn 257.610†	129366.8	130643.8	[100]	ug/L	09:38:07
1	Mo 202.031†	2580.5	2590.7	[100]	ug/L	09:38:27
1	Ni 231.604†	6525.4	6483.3	[100]	ug/L	09:38:27
1	P 214.914†	1779.1	1471.1	[500]	ug/L	09:38:27
1	Pb 220.353†	1342.2	1393.1	[100]	ug/L	09:38:27
1	S 181.975 Axial†	300.2	237.3	[200]	ug/L	09:38:27
1	Sb 206.836†	547.4	510.9	[100]	ug/L	09:38:27
1	Se 196.026†	295.6	322.0	[100]	ug/L	09:38:27
1	Si 251.611†	24511.6	24350.2	[500]	ug/L	09:38:07
1	Sn 189.927†	971.4	981.7	[100]	ug/L	09:38:27
1	Sr 421.552†	6665.1	6633.3	[100]	ug/L	09:37:49
1	Ti 334.940†	74671.4	76995.2	[100]	ug/L	09:38:07
1	Tl 190.801†	543.4	613.6	[100]	ug/L	09:38:27
1	U 409.014†	237.6	4076.2	[100]	ug/L	09:38:07
1	V 292.402†	15937.1	17849.1	[100]	ug/L	09:38:07
1	Zn 213.857†	19207.8	18397.8	[100]	ug/L	09:38:07
1	SiO2†	24699.0	24498.4	[1069.5]	ug/L	09:39:24
2	Sc 361.383	1055210.6	1055210.6	99.465	%	09:38:33
2	Sc Radial	5609.2	5609.2	101	%	09:37:55
2	Y 371.029	845639.6	845639.6	99.112	%	09:38:33
2	Y RADIAL	4877.8	4877.8	101.3	%	09:37:55
2	Ag 328.068†	26093.0	25594.7	[100]	ug/L	09:38:33
2	As 188.979†	391.5	430.5	[100]	ug/L	09:38:53
2	B 249.677†	5785.4	6198.0	[100]	ug/L	09:38:33
2	Ba 233.527†	20469.8	20555.5	[100]	ug/L	09:38:33
2	Be 313.107†	317338.9	326360.9	[100]	ug/L	09:38:33
2	Cd 226.502†	13157.8	13506.1	[100]	ug/L	09:38:53
2	Co 228.616†	8095.3	8229.3	[100]	ug/L	09:38:53
2	Cr 267.716†	11903.1	11995.7	[100]	ug/L	09:38:33
2	Cu 324.752†	50854.5	40936.6	[100]	ug/L	09:38:33
2	K 766.490 Radial†	3819.2	2315.9	[1000]	ug/L	09:37:55
2	Mn 257.610†	130782.0	130658.0	[100]	ug/L	09:38:33
2	Mo 202.031†	2603.2	2585.4	[100]	ug/L	09:38:53
2	Ni 231.604†	6538.1	6425.0	[100]	ug/L	09:38:53
2	P 214.914†	1796.1	1468.9	[500]	ug/L	09:38:53
2	Pb 220.353†	1350.1	1386.4	[100]	ug/L	09:38:53
2	S 181.975 Axial†	299.5	233.3	[200]	ug/L	09:38:53
2	Sb 206.836†	557.9	515.5	[100]	ug/L	09:38:53
2	Se 196.026†	303.1	326.3	[100]	ug/L	09:38:53
2	Si 251.611†	24790.1	24363.3	[500]	ug/L	09:38:33
2	Sn 189.927†	961.1	960.8	[100]	ug/L	09:38:53
2	Sr 421.552†	6653.8	6595.7	[100]	ug/L	09:37:55
2	Ti 334.940†	75608.5	77124.2	[100]	ug/L	09:38:33
2	Tl 190.801†	543.4	607.7	[100]	ug/L	09:38:53

2	U 409.014†	413.3	4250.3	[100]	ug/L	09:38:33
2	V 292.402†	16008.2	17747.0	[100]	ug/L	09:38:33
2	Zn 213.857†	19396.4	18378.2	[100]	ug/L	09:38:33
2	SiO2†	24456.8	23985.9	[1069.5]	ug/L	09:39:29
3	Sc 361.383	1055128.5	1055128.5	99.458	%	09:38:59
3	Sc Radial	5546.9	5546.9	99.7	%	09:38:00
3	Y 371.029	846188.4	846188.4	99.177	%	09:38:59
3	Y RADIAL	4841.3	4841.3	100.5	%	09:38:00
3	Ag 328.068†	26072.8	25576.4	[100]	ug/L	09:38:59
3	As 188.979†	395.1	434.2	[100]	ug/L	09:39:19
3	B 249.677†	5816.4	6229.6	[100]	ug/L	09:38:59
3	Ba 233.527†	20495.9	20583.4	[100]	ug/L	09:38:59
3	Be 313.107†	317444.7	326492.1	[100]	ug/L	09:38:59
3	Cd 226.502†	13125.5	13474.7	[100]	ug/L	09:39:19
3	Co 228.616†	8079.1	8213.6	[100]	ug/L	09:39:19
3	Cr 267.716†	11888.0	11981.4	[100]	ug/L	09:38:59
3	Cu 324.752†	50658.9	40743.9	[100]	ug/L	09:38:59
3	K 766.490 Radial†	3845.0	2384.3	[1000]	ug/L	09:38:00
3	Mn 257.610†	131078.2	130966.0	[100]	ug/L	09:38:59
3	Mo 202.031†	2603.9	2586.4	[100]	ug/L	09:39:19
3	Ni 231.604†	6537.8	6425.2	[100]	ug/L	09:39:19
3	P 214.914†	1782.9	1455.7	[500]	ug/L	09:39:19
3	Pb 220.353†	1365.6	1402.1	[100]	ug/L	09:39:19
3	S 181.975 Axial†	309.0	242.8	[200]	ug/L	09:39:19
3	Sb 206.836†	556.1	513.7	[100]	ug/L	09:39:19
3	Se 196.026†	279.5	302.7	[100]	ug/L	09:39:19
3	Si 251.611†	24805.8	24381.0	[500]	ug/L	09:38:59
3	Sn 189.927†	963.2	962.9	[100]	ug/L	09:39:19
3	Sr 421.552†	6580.5	6596.3	[100]	ug/L	09:38:00
3	Ti 334.940†	75559.4	77080.7	[100]	ug/L	09:38:59
3	Tl 190.801†	539.9	604.2	[100]	ug/L	09:39:19
3	U 409.014†	236.8	4072.8	[100]	ug/L	09:38:59
3	V 292.402†	16050.8	17791.1	[100]	ug/L	09:38:59
3	Zn 213.857†	19356.9	18340.1	[100]	ug/L	09:38:59
3	SiO2†	24872.7	24406.0	[1069.5]	ug/L	09:39:34

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051414.5	6504.03	0.62%	99.108	%
Sc Radial	5581.0	31.57	0.57%	100	%
Y 371.029	843532.3	4134.44	0.49%	98.865	%
Y RADIAL	4862.3	18.86	0.39%	101.0	%
Ag 328.068†	25612.5	47.66	0.19%	[100]	ug/L
As 188.979†	433.8	3.14	0.72%	[100]	ug/L
B 249.677†	6196.0	34.67	0.56%	[100]	ug/L
Ba 233.527†	20605.7	64.24	0.31%	[100]	ug/L
Be 313.107†	326647.1	387.66	0.12%	[100]	ug/L
Cd 226.502†	13534.9	78.59	0.58%	[100]	ug/L
Co 228.616†	8249.3	48.95	0.59%	[100]	ug/L
Cr 267.716†	11983.6	11.20	0.09%	[100]	ug/L
Cu 324.752†	40812.2	107.89	0.26%	[100]	ug/L
K 766.490 Radial†	2366.4	44.37	1.88%	[1000]	ug/L
Mn 257.610†	130755.9	182.06	0.14%	[100]	ug/L
Mo 202.031†	2587.5	2.81	0.11%	[100]	ug/L
Ni 231.604†	6444.5	33.62	0.52%	[100]	ug/L
P 214.914†	1465.2	8.32	0.57%	[500]	ug/L
Pb 220.353†	1393.9	7.86	0.56%	[100]	ug/L
S 181.975 Axial†	237.8	4.79	2.02%	[200]	ug/L
Sb 206.836†	513.3	2.30	0.45%	[100]	ug/L
Se 196.026†	317.0	12.62	3.98%	[100]	ug/L
Si 251.611†	24364.8	15.45	0.06%	[500]	ug/L
Sn 189.927†	968.5	11.51	1.19%	[100]	ug/L
Sr 421.552†	6608.4	21.50	0.33%	[100]	ug/L
Ti 334.940†	77066.7	65.66	0.09%	[100]	ug/L
Tl 190.801†	608.5	4.73	0.78%	[100]	ug/L
U 409.014†	4133.1	101.47	2.46%	[100]	ug/L
V 292.402†	17795.7	51.23	0.29%	[100]	ug/L
Zn 213.857†	18372.0	29.33	0.16%	[100]	ug/L
SiO2†	24296.8	273.12	1.12%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/8/2009 09:41:45
Data Type: Reprocessed on 7/8/2009 11:40:06

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1064607.4	1064607.4	100.35	%	09:44:57
1	Sc Radial	5461.3	5461.3	98.1	%	09:43:38
1	Y 371.029	846628.0	846628.0	99.228	%	09:44:57
1	Y RADIAL	4696.9	4696.9	97.53	%	09:43:38
1	Ag 328.068†	126803.5	125721.3	[500]	ug/L	09:44:57
1	Al 396.153Radial†	5174.4	5364.7	[5000]	ug/L	09:43:38
1	As 188.979†	2072.9	2102.5	[500]	ug/L	09:45:17
1	B 249.677†	31257.3	31529.4	[500]	ug/L	09:44:57
1	Ba 233.527†	98225.0	97857.1	[500]	ug/L	09:44:57
1	Be 313.107†	1595363.0	1597097.3	[500]	ug/L	09:44:57
1	Ca 317.933Radial†	1956.1	1976.3	[5000]	ug/L	09:43:58
1	Cd 226.502†	66327.4	66373.0	[500]	ug/L	09:44:57
1	Co 228.616†	39082.0	39035.6	[500]	ug/L	09:45:17
1	Cr 267.716†	58209.2	58034.2	[500]	ug/L	09:44:57
1	Cu 324.752†	212770.9	201835.2	[500]	ug/L	09:44:57
1	K 766.490 Radial†	12752.1	11520.9	[5000]	ug/L	09:43:38
1	Mg 279.077 IEC†	62.9	63.9	[5000]	ug/L	09:43:58
1	Mn 257.610†	630898.9	627864.5	[500]	ug/L	09:44:57
1	Mo 202.031†	12608.3	12532.4	[500]	ug/L	09:45:17
1	Ni 231.604†	30724.5	30468.8	[500]	ug/L	09:45:17
1	P 214.914†	7382.5	7019.8	[2500]	ug/L	09:45:17
1	Pb 220.353†	6649.1	6654.9	[500]	ug/L	09:45:17
1	S 181.975 Axial†	1242.8	1170.6	[1000]	ug/L	09:45:17
1	Sb 206.836†	2606.1	2551.6	[500]	ug/L	09:45:17
1	Se 196.026†	1514.2	1530.5	[500]	ug/L	09:45:17
1	Si 251.611†	122499.0	121510.3	[2500]	ug/L	09:44:57
1	Sn 189.927†	4778.2	4756.0	[500]	ug/L	09:45:17
1	Sr 421.552†	28452.4	28986.5	[500]	ug/L	09:43:38
1	Ti 334.940†	380085.1	379864.5	[500]	ug/L	09:44:57
1	Tl 190.801†	2870.2	2921.5	[500]	ug/L	09:45:17
1	U 409.014†	15794.5	19574.0	[500]	ug/L	09:44:57
1	V 292.402†	85607.5	86960.7	[500]	ug/L	09:44:57
1	Zn 213.857†	90358.1	88919.6	[500]	ug/L	09:44:57
1	SiO2†	122852.3	121820.1	[5347.5]	ug/L	09:46:17
2	Sc 361.383	1044221.1	1044221.1	98.429	%	09:45:24
2	Sc Radial	5389.0	5389.0	96.8	%	09:44:03
2	Y 371.029	829032.4	829032.4	97.166	%	09:45:24
2	Y RADIAL	4652.3	4652.3	96.61	%	09:44:03
2	Ag 328.068†	124967.2	126322.6	[500]	ug/L	09:45:24
2	Al 396.153Radial†	5096.7	5355.2	[5000]	ug/L	09:44:03
2	As 188.979†	2073.2	2143.2	[500]	ug/L	09:45:44
2	B 249.677†	30724.1	31595.8	[500]	ug/L	09:45:24
2	Ba 233.527†	97214.1	98740.9	[500]	ug/L	09:45:24
2	Be 313.107†	1569041.1	1601392.7	[500]	ug/L	09:45:24
2	Ca 317.933Radial†	1923.3	1969.1	[5000]	ug/L	09:44:23
2	Cd 226.502†	65506.0	66828.8	[500]	ug/L	09:45:24
2	Co 228.616†	39155.7	39870.9	[500]	ug/L	09:45:44
2	Cr 267.716†	57418.9	58363.7	[500]	ug/L	09:45:24
2	Cu 324.752†	208685.4	201823.9	[500]	ug/L	09:45:24
2	K 766.490 Radial†	12541.0	11477.1	[5000]	ug/L	09:44:03
2	Mg 279.077 IEC†	61.0	62.8	[5000]	ug/L	09:44:23
2	Mn 257.610†	623183.7	632300.1	[500]	ug/L	09:45:24
2	Mo 202.031†	12645.3	12815.3	[500]	ug/L	09:45:44
2	Ni 231.604†	30816.1	31159.5	[500]	ug/L	09:45:44
2	P 214.914†	7382.7	7163.6	[2500]	ug/L	09:45:44
2	Pb 220.353†	6652.5	6787.7	[500]	ug/L	09:45:44
2	S 181.975 Axial†	1248.0	1200.1	[1000]	ug/L	09:45:44
2	Sb 206.836†	2600.7	2596.7	[500]	ug/L	09:45:44

2	Se 196.026†	1507.7	1553.3	[500]	ug/L	09:45:44
2	Si 251.611†	120777.2	122144.2	[2500]	ug/L	09:45:24
2	Sn 189.927†	4796.7	4867.8	[500]	ug/L	09:45:44
2	Sr 421.552†	27876.2	28780.3	[500]	ug/L	09:44:03
2	Ti 334.940†	374439.3	381523.0	[500]	ug/L	09:45:24
2	Tl 190.801†	2885.2	2992.7	[500]	ug/L	09:45:44
2	U 409.014†	15437.6	19518.7	[500]	ug/L	09:45:24
2	V 292.402†	84337.2	87335.7	[500]	ug/L	09:45:24
2	Zn 213.857†	89070.9	89369.7	[500]	ug/L	09:45:24
2	SiO2†	121800.6	123141.7	[5347.5]	ug/L	09:46:22
3	Sc 361.383	1046590.0	1046590.0	98.653	%	09:45:52
3	Sc Radial	5352.8	5352.8	96.2	%	09:44:28
3	Y 371.029	832934.3	832934.3	97.623	%	09:45:52
3	Y RADIAL	4634.7	4634.7	96.24	%	09:44:28
3	Ag 328.068†	125631.5	126708.6	[500]	ug/L	09:45:52
3	Al 396.153Radial†	5102.6	5396.9	[5000]	ug/L	09:44:28
3	As 188.979†	2098.8	2164.3	[500]	ug/L	09:46:12
3	B 249.677†	30976.6	31781.2	[500]	ug/L	09:45:52
3	Ba 233.527†	97581.9	98890.3	[500]	ug/L	09:45:52
3	Be 313.107†	1579797.0	1608687.5	[500]	ug/L	09:45:52
3	Ca 317.933Radial†	1928.2	1987.6	[5000]	ug/L	09:44:48
3	Cd 226.502†	65857.4	67034.4	[500]	ug/L	09:45:52
3	Co 228.616†	39345.8	39973.6	[500]	ug/L	09:46:12
3	Cr 267.716†	57872.1	58691.1	[500]	ug/L	09:45:52
3	Cu 324.752†	210164.3	202843.1	[500]	ug/L	09:45:52
3	K 766.490 Radial†	12562.3	11586.7	[5000]	ug/L	09:44:28
3	Mg 279.077 IEC†	60.6	62.8	[5000]	ug/L	09:44:48
3	Mn 257.610†	626191.1	633915.6	[500]	ug/L	09:45:52
3	Mo 202.031†	12686.5	12828.0	[500]	ug/L	09:46:12
3	Ni 231.604†	31017.8	31293.1	[500]	ug/L	09:46:12
3	P 214.914†	7417.6	7182.0	[2500]	ug/L	09:46:12
3	Pb 220.353†	6707.4	6828.1	[500]	ug/L	09:46:12
3	S 181.975 Axial†	1249.2	1198.4	[1000]	ug/L	09:46:12
3	Sb 206.836†	2624.9	2615.3	[500]	ug/L	09:46:12
3	Se 196.026†	1511.8	1554.0	[500]	ug/L	09:46:12
3	Si 251.611†	121349.2	122446.3	[2500]	ug/L	09:45:52
3	Sn 189.927†	4809.3	4869.5	[500]	ug/L	09:46:12
3	Sr 421.552†	27833.2	28930.1	[500]	ug/L	09:44:28
3	Ti 334.940†	376623.4	382875.9	[500]	ug/L	09:45:52
3	Tl 190.801†	2901.3	3002.3	[500]	ug/L	09:46:12
3	U 409.014†	15617.2	19665.2	[500]	ug/L	09:45:52
3	V 292.402†	84908.9	87721.2	[500]	ug/L	09:45:52
3	Zn 213.857†	89582.5	89683.5	[500]	ug/L	09:45:52
3	SiO2†	122195.3	123261.7	[5347.5]	ug/L	09:46:27

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051806.2	11149.30	1.06%	99.144	%
Sc Radial	5401.0	55.21	1.02%	97.1	%
Y 371.029	836198.2	9240.74	1.11%	98.006	%
Y RADIAL	4661.3	32.06	0.69%	96.79	%
Ag 328.068†	126250.8	497.54	0.39%	[500]	ug/L
Al 396.153Radial†	5372.3	21.86	0.41%	[5000]	ug/L
As 188.979†	2136.7	31.42	1.47%	[500]	ug/L
B 249.677†	31635.5	130.46	0.41%	[500]	ug/L
Ba 233.527†	98496.1	558.43	0.57%	[500]	ug/L
Be 313.107†	1602392.5	5859.39	0.37%	[500]	ug/L
Ca 317.933Radial†	1977.7	9.33	0.47%	[5000]	ug/L
Cd 226.502†	66745.4	338.47	0.51%	[500]	ug/L
Co 228.616†	39626.7	514.43	1.30%	[500]	ug/L
Cr 267.716†	58363.0	328.45	0.56%	[500]	ug/L
Cu 324.752†	202167.4	585.22	0.29%	[500]	ug/L
K 766.490 Radial†	11528.2	55.20	0.48%	[5000]	ug/L
Mg 279.077 IEC†	63.2	0.61	0.97%	[5000]	ug/L
Mn 257.610†	631360.0	3133.16	0.50%	[500]	ug/L
Mo 202.031†	12725.2	167.14	1.31%	[500]	ug/L
Ni 231.604†	30973.8	442.43	1.43%	[500]	ug/L
P 214.914†	7121.8	88.83	1.25%	[2500]	ug/L
Pb 220.353†	6756.9	90.64	1.34%	[500]	ug/L

S 181.975 Axial†	1189.7	16.55	1.39%	[1000]	ug/L
Sb 206.836†	2587.9	32.79	1.27%	[500]	ug/L
Se 196.026†	1546.0	13.38	0.87%	[500]	ug/L
Si 251.611†	122033.6	477.69	0.39%	[2500]	ug/L
Sn 189.927†	4831.1	65.06	1.35%	[500]	ug/L
Sr 421.552†	28899.0	106.56	0.37%	[500]	ug/L
Ti 334.940†	381421.2	1508.28	0.40%	[500]	ug/L
Tl 190.801†	2972.2	44.12	1.48%	[500]	ug/L
U 409.014†	19586.0	73.99	0.38%	[500]	ug/L
V 292.402†	87339.2	380.24	0.44%	[500]	ug/L
Zn 213.857†	89324.3	383.98	0.43%	[500]	ug/L
SiO2†	122741.2	799.91	0.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/8/2009 09:48:38
Data Type: Reprocessed on 7/8/2009 11:40:07

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1052663.5	1052663.5	99.225	%	09:51:50
1	Sc Radial	5805.9	5805.9	104	%	09:50:31
1	Y 371.029	835045.6	835045.6	97.871	%	09:51:50
1	Y RADIAL	5007.7	5007.7	104.0	%	09:50:31
1	Ag 328.068†	252879.2	254215.1	[1000]	ug/L	09:51:55
1	Al 396.153Radial†	10753.9	10399.5	[10000]	ug/L	09:50:31
1	As 188.979†	4213.7	4283.5	[1000]	ug/L	09:52:15
1	B 249.677†	63888.7	64769.0	[1000]	ug/L	09:51:55
1	Ba 233.527†	197687.1	199206.4	[1000]	ug/L	09:51:55
1	Be 313.107†	3194923.7	3227185.7	[1000]	ug/L	09:51:50
1	Ca 317.933Radial†	4055.7	3870.4	[10000]	ug/L	09:50:31
1	Cd 226.502†	133744.7	135066.6	[1000]	ug/L	09:51:55
1	Co 228.616†	80516.0	81235.0	[1000]	ug/L	09:51:55
1	Cr 267.716†	117606.8	118553.7	[1000]	ug/L	09:51:55
1	Cu 324.752†	414400.4	407444.8	[1000]	ug/L	09:51:55
1	Fe 238.204 Radial†	287.2	275.0	[10000]	ug/L	09:50:51
1	K 766.490 Radial†	24918.9	22410.9	[10000]	ug/L	09:50:31
1	Mg 279.077 IEC†	131.8	126.2	[10000]	ug/L	09:50:51
1	Mn 257.610†	1260730.8	1269747.4	[1000]	ug/L	09:51:50
1	Mo 202.031†	24798.5	24960.4	[1000]	ug/L	09:52:15
1	Na 589.592 Radial†	3522.0	3546.2	[10000]	ug/L	09:50:31
1	Ni 231.604†	62750.5	63092.2	[1000]	ug/L	09:51:55
1	P 214.914†	14401.2	14176.7	[5000]	ug/L	09:52:15
1	Pb 220.353†	13201.7	13333.9	[1000]	ug/L	09:52:15
1	S 181.975 Axial†	2419.1	2370.2	[2000]	ug/L	09:52:15
1	Sb 206.836†	5119.1	5113.6	[1000]	ug/L	09:52:15
1	Se 196.026†	3047.7	3093.1	[1000]	ug/L	09:52:15
1	Si 251.611†	242154.4	243485.1	[5000]	ug/L	09:51:55
1	Sn 189.927†	9581.3	9650.6	[1000]	ug/L	09:52:15
1	Sr 421.552†	68083.4	65250.5	[1000]	ug/L	09:50:31
1	Ti 334.940†	758941.9	765976.9	[1000]	ug/L	09:51:50
1	Tl 190.801†	5824.9	5931.8	[1000]	ug/L	09:52:15
1	U 409.014†	36638.9	40759.8	[1000]	ug/L	09:51:55
1	V 292.402†	175178.4	178199.0	[1000]	ug/L	09:51:55
1	Zn 213.857†	180211.9	180496.5	[1000]	ug/L	09:51:55
1	SiO2†	241738.8	243023.9	[10695]	ug/L	09:53:25
2	Sc 361.383	1058804.9	1058804.9	99.804	%	09:52:22
2	Sc Radial	5593.3	5593.3	101	%	09:50:56
2	Y 371.029	839441.5	839441.5	98.386	%	09:52:22
2	Y RADIAL	4835.2	4835.2	100.4	%	09:50:56
2	Ag 328.068†	252282.7	252139.2	[1000]	ug/L	09:52:27
2	Al 396.153Radial†	10627.1	10665.3	[10000]	ug/L	09:50:56
2	As 188.979†	4198.8	4244.0	[1000]	ug/L	09:52:48
2	B 249.677†	63795.4	64302.1	[1000]	ug/L	09:52:27
2	Ba 233.527†	196404.5	196765.7	[1000]	ug/L	09:52:27
2	Be 313.107†	3201165.9	3214763.8	[1000]	ug/L	09:52:22
2	Ca 317.933Radial†	4012.0	3974.7	[10000]	ug/L	09:50:56
2	Cd 226.502†	132496.4	133034.0	[1000]	ug/L	09:52:27
2	Co 228.616†	79902.6	80149.8	[1000]	ug/L	09:52:27
2	Cr 267.716†	116813.2	117071.0	[1000]	ug/L	09:52:27
2	Cu 324.752†	414708.3	405330.8	[1000]	ug/L	09:52:27
2	Fe 238.204 Radial†	289.6	287.8	[10000]	ug/L	09:51:16
2	K 766.490 Radial†	24624.2	23025.9	[10000]	ug/L	09:50:56
2	Mg 279.077 IEC†	127.7	126.9	[10000]	ug/L	09:51:16
2	Mn 257.610†	1263110.3	1264761.9	[1000]	ug/L	09:52:22
2	Mo 202.031†	24699.2	24715.9	[1000]	ug/L	09:52:48
2	Na 589.592 Radial†	3465.5	3618.3	[10000]	ug/L	09:50:56
2	Ni 231.604†	62172.3	62146.1	[1000]	ug/L	09:52:27

2	P 214.914†	14342.8	14034.0	[5000]	ug/L	09:52:48
2	Pb 220.353†	13188.3	13243.2	[1000]	ug/L	09:52:48
2	S 181.975 Axial†	2410.9	2347.8	[2000]	ug/L	09:52:48
2	Sb 206.836†	5080.8	5045.3	[1000]	ug/L	09:52:48
2	Se 196.026†	3016.0	3043.5	[1000]	ug/L	09:52:48
2	Si 251.611†	241232.5	241145.8	[5000]	ug/L	09:52:27
2	Sn 189.927†	9534.0	9547.2	[1000]	ug/L	09:52:48
2	Sr 421.552†	66922.4	66576.7	[1000]	ug/L	09:50:56
2	Ti 334.940†	761509.7	764113.3	[1000]	ug/L	09:52:22
2	Tl 190.801†	5811.7	5884.5	[1000]	ug/L	09:52:48
2	U 409.014†	36579.5	40486.0	[1000]	ug/L	09:52:27
2	V 292.402†	173954.8	175949.0	[1000]	ug/L	09:52:27
2	Zn 213.857†	179274.3	178503.7	[1000]	ug/L	09:52:27
2	SiO2†	237359.4	237222.8	[10695]	ug/L	09:53:31
3	Sc 361.383	1057400.6	1057400.6	99.672	%	09:52:54
3	Sc Radial	5464.1	5464.1	98.2	%	09:51:21
3	Y 371.029	838883.9	838883.9	98.320	%	09:52:54
3	Y RADIAL	4771.4	4771.4	99.08	%	09:51:21
3	Ag 328.068†	251287.3	251476.2	[1000]	ug/L	09:53:00
3	Al 396.153Radial†	10656.6	10945.2	[10000]	ug/L	09:51:21
3	As 188.979†	4194.8	4245.6	[1000]	ug/L	09:53:20
3	B 249.677†	63568.3	64159.1	[1000]	ug/L	09:53:00
3	Ba 233.527†	196293.8	196915.9	[1000]	ug/L	09:53:00
3	Be 313.107†	3195458.9	3213297.7	[1000]	ug/L	09:52:54
3	Ca 317.933Radial†	4035.9	4093.3	[10000]	ug/L	09:51:21
3	Cd 226.502†	132396.2	133109.8	[1000]	ug/L	09:53:00
3	Co 228.616†	79823.3	80176.5	[1000]	ug/L	09:53:00
3	Cr 267.716†	116636.7	117049.4	[1000]	ug/L	09:53:00
3	Cu 324.752†	412621.4	403788.9	[1000]	ug/L	09:53:00
3	Fe 238.204 Radial†	285.3	290.2	[10000]	ug/L	09:51:41
3	K 766.490 Radial†	24699.5	23681.6	[10000]	ug/L	09:51:21
3	Mg 279.077 IEC†	125.8	127.9	[10000]	ug/L	09:51:41
3	Mn 257.610†	1259027.5	1262346.4	[1000]	ug/L	09:52:54
3	Mo 202.031†	24845.2	24895.3	[1000]	ug/L	09:53:20
3	Na 589.592 Radial†	3441.7	3675.5	[10000]	ug/L	09:51:21
3	Ni 231.604†	62152.7	62209.1	[1000]	ug/L	09:53:00
3	P 214.914†	14439.3	14149.9	[5000]	ug/L	09:53:20
3	Pb 220.353†	13219.9	13292.5	[1000]	ug/L	09:53:20
3	S 181.975 Axial†	2417.3	2357.4	[2000]	ug/L	09:53:20
3	Sb 206.836†	5111.4	5082.8	[1000]	ug/L	09:53:20
3	Se 196.026†	3040.7	3072.3	[1000]	ug/L	09:53:20
3	Si 251.611†	240711.3	240943.9	[5000]	ug/L	09:53:00
3	Sn 189.927†	9583.2	9609.3	[1000]	ug/L	09:53:20
3	Sr 421.552†	66963.1	68191.7	[1000]	ug/L	09:51:21
3	Ti 334.940†	758629.2	762236.6	[1000]	ug/L	09:52:54
3	Tl 190.801†	5861.7	5942.4	[1000]	ug/L	09:53:20
3	U 409.014†	36527.5	40482.6	[1000]	ug/L	09:53:00
3	V 292.402†	173694.3	175919.0	[1000]	ug/L	09:53:00
3	Zn 213.857†	178849.9	178316.4	[1000]	ug/L	09:53:00
3	SiO2†	243076.9	243275.0	[10695]	ug/L	09:53:36

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1056289.6	3217.89	0.30%	99.567	%
Sc Radial	5621.1	172.60	3.07%	101	%
Y 371.029	837790.3	2393.27	0.29%	98.192	%
Y RADIAL	4871.4	122.27	2.51%	101.2	%
Ag 328.068†	252610.2	1428.92	0.57%	[1000]	ug/L
Al 396.153Radial†	10670.0	272.89	2.56%	[10000]	ug/L
As 188.979†	4257.7	22.40	0.53%	[1000]	ug/L
B 249.677†	64410.1	318.97	0.50%	[1000]	ug/L
Ba 233.527†	197629.3	1367.84	0.69%	[1000]	ug/L
Be 313.107†	3218415.7	7630.29	0.24%	[1000]	ug/L
Ca 317.933Radial†	3979.5	111.54	2.80%	[10000]	ug/L
Cd 226.502†	133736.8	1152.25	0.86%	[1000]	ug/L
Co 228.616†	80520.5	618.97	0.77%	[1000]	ug/L
Cr 267.716†	117558.0	862.30	0.73%	[1000]	ug/L
Cu 324.752†	405521.5	1835.38	0.45%	[1000]	ug/L
Fe 238.204 Radial†	284.3	8.19	2.88%	[10000]	ug/L

K 766.490 Radial†	23039.5	635.42	2.76%	[10000]	ug/L
Mg 279.077 1EC†	127.0	0.88	0.69%	[10000]	ug/L
Mn 257.610†	1265618.6	3774.16	0.30%	[1000]	ug/L
Mo 202.031†	24857.2	126.63	0.51%	[1000]	ug/L
Na 589.592 Radial†	3613.3	64.84	1.79%	[10000]	ug/L
Ni 231.604†	62482.4	529.00	0.85%	[1000]	ug/L
P 214.914†	14120.2	75.84	0.54%	[5000]	ug/L
Pb 220.353†	13289.9	45.38	0.34%	[1000]	ug/L
S 181.975 Axial†	2358.5	11.23	0.48%	[2000]	ug/L
Sb 206.836†	5080.6	34.22	0.67%	[1000]	ug/L
Se 196.026†	3069.7	24.93	0.81%	[1000]	ug/L
Si 251.611†	241858.2	1412.48	0.58%	[5000]	ug/L
Sn 189.927†	9602.4	52.05	0.54%	[1000]	ug/L
Sr 421.552†	66673.0	1472.96	2.21%	[1000]	ug/L
Ti 334.940†	764108.9	1870.18	0.24%	[1000]	ug/L
Tl 190.801†	5919.6	30.81	0.52%	[1000]	ug/L
U 409.014†	40576.1	159.04	0.39%	[1000]	ug/L
V 292.402†	176689.0	1307.77	0.74%	[1000]	ug/L
Zn 213.857†	179105.5	1208.27	0.67%	[1000]	ug/L
SiO2†	241173.9	3424.04	1.42%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/8/2009 09:55:46
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1045205.1	1045205.1	98.522	%	09:58:57
1	Sc Radial	5445.4	5445.4	97.9	%	09:58:00
1	Y 371.029	824719.2	824719.2	96.660	%	09:58:57
1	Y RADIAL	4697.0	4697.0	97.54	%	09:58:00
1	Al 396.153Radial†	53617.0	54885.6	[50000]	ug/L	09:57:40
1	Ca 317.933Radial†	19630.1	20043.9	[50000]	ug/L	09:57:40
1	Fe 238.204 Radial†	559.3	571.2	[20000]	ug/L	09:58:00
1	Mg 279.077 IEC†	611.6	624.9	[50000]	ug/L	09:58:00
1	Na 589.592 Radial†	7093.1	7419.2	[20000]	ug/L	09:57:40
2	Sc 361.383	1039938.4	1039938.4	98.026	%	09:59:03
2	Sc Radial	5322.6	5322.6	95.6	%	09:58:25
2	Y 371.029	821364.5	821364.5	96.267	%	09:59:03
2	Y RADIAL	4573.5	4573.5	94.97	%	09:58:25
2	Al 396.153Radial†	52922.6	55423.3	[50000]	ug/L	09:58:05
2	Ca 317.933Radial†	19349.8	20213.5	[50000]	ug/L	09:58:05
2	Fe 238.204 Radial†	548.4	573.0	[20000]	ug/L	09:58:25
2	Mg 279.077 IEC†	611.0	638.7	[50000]	ug/L	09:58:25
2	Na 589.592 Radial†	6990.6	7479.1	[20000]	ug/L	09:58:05
3	Sc 361.383	1037774.1	1037774.1	97.822	%	09:59:09
3	Sc Radial	5437.5	5437.5	97.7	%	09:58:50
3	Y 371.029	819757.6	819757.6	96.079	%	09:59:09
3	Y RADIAL	4679.6	4679.6	97.17	%	09:58:50
3	Al 396.153Radial†	53368.0	54709.6	[50000]	ug/L	09:58:30
3	Ca 317.933Radial†	19552.5	19993.3	[50000]	ug/L	09:58:30
3	Fe 238.204 Radial†	554.5	567.2	[20000]	ug/L	09:58:50
3	Mg 279.077 IEC†	615.8	630.0	[50000]	ug/L	09:58:50
3	Na 589.592 Radial†	7083.3	7419.6	[20000]	ug/L	09:58:30

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1040972.5	3821.89	0.37%	98.123	%
Sc Radial	5401.8	68.73	1.27%	97.1	%
Y 371.029	821947.1	2531.58	0.31%	96.335	%
Y RADIAL	4650.1	66.85	1.44%	96.56	%
Al 396.153Radial†	55006.2	371.83	0.68%	[50000]	ug/L
Ca 317.933Radial†	20083.6	115.30	0.57%	[50000]	ug/L
Fe 238.204 Radial†	570.5	2.97	0.52%	[20000]	ug/L
Mg 279.077 IEC†	631.2	6.96	1.10%	[50000]	ug/L
Na 589.592 Radial†	7439.3	34.51	0.46%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	252.6	0.00000	0.999999	
Al 396.153Radial	3	Lin Thru 0	0.0	1.099	0.00000	0.999981	
As 188.979	3	Lin Thru 0	0.0	4.261	0.00000	0.999998	
B 249.677	3	Lin Thru 0	0.0	64.16	0.00000	0.999970	
Ba 233.527	3	Lin Thru 0	0.0	197.6	0.00000	0.999992	
Be 313.107	3	Lin Thru 0	0.0	3216	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.4015	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	133.7	0.00000	0.999999	
Co 228.616	3	Lin Thru 0	0.0	80.28	0.00000	0.999977	
Cr 267.716	3	Lin Thru 0	0.0	117.4	0.00000	0.999994	
Cu 324.752	3	Lin Thru 0	0.0	405.3	0.00000	0.999999	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0285	0.00000	0.999999	

K 766.490 Radial	3	Lin Thru 0	0.0	2.305	0.00000	0.999997
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0126	0.00000	0.999999
Mn 257.610	3	Lin Thru 0	0.0	1265	0.00000	0.999995
Mo 202.031	3	Lin Thru 0	0.0	24.98	0.00000	0.999950
Na 589.592 Radia	2	Lin Thru 0	0.0	0.3698	0.00000	0.999934
Ni 231.604	3	Lin Thru 0	0.0	62.39	0.00000	0.999990
P 214.914	3	Lin Thru 0	0.0	2.830	0.00000	0.999989
Pb 220.353	3	Lin Thru 0	0.0	13.34	0.00000	0.999970
S 181.975 Axial	3	Lin Thru 0	0.0	1.181	0.00000	0.999994
Sb 206.836	3	Lin Thru 0	0.0	5.100	0.00000	0.999972
Se 196.026	3	Lin Thru 0	0.0	3.075	0.00000	0.999992
Si 251.611	3	Lin Thru 0	0.0	48.46	0.00000	0.999993
Sn 189.927	3	Lin Thru 0	0.0	9.615	0.00000	0.999997
Sr 421.552	3	Lin Thru 0	0.0	64.91	0.00000	0.998518
Ti 334.940	3	Lin Thru 0	0.0	763.9	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	5.926	0.00000	0.999996
U 409.014	3	Lin Thru 0	0.0	40.30	0.00000	0.999901
V 292.402	3	Lin Thru 0	0.0	176.3	0.00000	0.999989
Zn 213.857	3	Lin Thru 0	0.0	179.1	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	22.63	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/8/2009 10:01:20
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1055963.1	1055963.1	99.536	%			10:04:31
1	Sc Radial	5613.9	5613.9	101	%			10:03:13
1	Y 371.029	843980.3	843980.3	98.918	%			10:04:31
1	Y RADIAL	4850.5	4850.5	100.7	%			10:03:13
1	Ag 328.068†	64392.7	64054.1	256.65	ug/L	256.65	ppb	10:04:31
1	Al 396.153Radial†	5477.4	5521.7	5003.5	ug/L	5003.5	ppb	10:03:13
1	As 188.979†	2018.5	2064.8	487.93	ug/L	487.93	ppb	10:04:51
1	B 249.677†	32013.9	32544.6	505.32	ug/L	505.32	ppb	10:04:31
1	Ba 233.527†	105864.5	106333.4	539.45	ug/L	539.45	ppb	10:04:31
1	Be 313.107†	824616.8	835774.7	261.06	ug/L	261.06	ppb	10:04:31
1	Ca 317.933Radial†	1980.0	1945.8	4846.6	ug/L	4846.6	ppb	10:03:33
1	Cd 226.502†	67172.4	67763.0	506.57	ug/L	506.57	ppb	10:04:31
1	Co 228.616†	37965.2	38232.5	476.49	ug/L	476.49	ppb	10:04:51
1	Cr 267.716†	59214.9	59519.4	507.63	ug/L	507.63	ppb	10:04:31
1	Cu 324.752†	223133.1	213981.3	528.24	ug/L	528.24	ppb	10:04:31
1	Fe 238.204 Radial†	145.6	144.0	5067.1	ug/L	5067.1	ppb	10:03:33
1	K 766.490 Radial†	7308.0	5771.0	2501.1	ug/L	2501.1	ppb	10:03:13
1	Mg 279.077 IEC†	65.6	64.8	5140.2	ug/L	5140.2	ppb	10:03:33
1	Mn 257.610†	657421.5	659657.3	521.87	ug/L	521.87	ppb	10:04:31
1	Mo 202.031†	13087.3	13116.5	525.36	ug/L	525.36	ppb	10:04:51
1	Na 589.592 Radial†	775.6	939.2	2539.6	ug/L	2539.6	ppb	10:03:33
1	Ni 231.604†	33519.4	33527.3	537.06	ug/L	537.06	ppb	10:04:31
1	P 214.914†	7515.0	7213.0	2469.3	ug/L	2469.3	ppb	10:04:51
1	Pb 220.353†	6757.4	6817.9	512.49	ug/L	512.49	ppb	10:04:51
1	S 181.975 Axial†	3135.7	3082.5	2608.2	ug/L	2608.2	ppb	10:04:51
1	Sb 206.836†	2711.8	2679.0	533.63	ug/L	533.63	ppb	10:04:51
1	Se 196.026†	7950.7	8009.4	2624.5	ug/L	2624.5	ppb	10:04:51
1	Si 251.611†	241856.0	242422.6	4990.7	ug/L	4990.7	ppb	10:04:31
1	Sn 189.927†	5102.2	5120.5	533.02	ug/L	533.02	ppb	10:04:51
1	Sr 421.552†	33892.8	33591.0	517.48	ug/L	517.48	ppb	10:03:13
1	Ti 334.940†	386933.6	389845.5	510.25	ug/L	510.25	ppb	10:04:31
1	Tl 190.801†	2870.1	2944.9	498.92	ug/L	498.92	ppb	10:04:51
1	U 409.014†	16738.6	20651.3	510.79	ug/L	510.79	ppb	10:04:31
1	V 292.402†	86386.8	88442.0	507.92	ug/L	507.92	ppb	10:04:31
1	Zn 213.857†	92798.7	92108.6	509.43	ug/L	509.43	ppb	10:04:31
1	SiO2†	240647.4	241166.2	10631	ug/L	10631	ppb	10:05:48
2	Sc 361.383	1061154.8	1061154.8	100.03	%			10:04:57
2	Sc Radial	5574.6	5574.6	100	%			10:03:38
2	Y 371.029	847082.8	847082.8	99.281	%			10:04:57
2	Y RADIAL	4828.4	4828.4	100.3	%			10:03:38
2	Ag 328.068†	64498.9	63843.8	255.81	ug/L	255.81	ppb	10:04:57
2	Al 396.153Radial†	5433.4	5516.1	4998.6	ug/L	4998.6	ppb	10:03:38
2	As 188.979†	2002.8	2039.2	481.91	ug/L	481.91	ppb	10:05:17
2	B 249.677†	32167.6	32540.8	505.28	ug/L	505.28	ppb	10:04:57
2	Ba 233.527†	106144.9	106093.4	538.23	ug/L	538.23	ppb	10:04:57
2	Be 313.107†	824477.0	831581.7	259.75	ug/L	259.75	ppb	10:04:57
2	Ca 317.933Radial†	1968.2	1947.8	4851.6	ug/L	4851.6	ppb	10:03:58
2	Cd 226.502†	67276.9	67537.3	504.89	ug/L	504.89	ppb	10:04:57
2	Co 228.616†	37893.6	37974.3	473.26	ug/L	473.26	ppb	10:05:17
2	Cr 267.716†	59208.0	59221.4	505.09	ug/L	505.09	ppb	10:04:57
2	Cu 324.752†	224086.8	213838.1	527.89	ug/L	527.89	ppb	10:04:57
2	Fe 238.204 Radial†	144.3	143.7	5055.6	ug/L	5055.6	ppb	10:03:58
2	K 766.490 Radial†	7330.2	5844.2	2532.9	ug/L	2532.9	ppb	10:03:38
2	Mg 279.077 IEC†	68.0	67.7	5365.3	ug/L	5365.3	ppb	10:03:58
2	Mn 257.610†	658788.7	657792.7	520.39	ug/L	520.39	ppb	10:04:57
2	Mo 202.031†	13056.1	13020.9	521.54	ug/L	521.54	ppb	10:05:17
2	Na 589.592 Radial†	764.6	933.7	2524.5	ug/L	2524.5	ppb	10:03:58
2	Ni 231.604†	33627.1	33470.2	536.15	ug/L	536.15	ppb	10:04:57

2	P 214.914†	7509.3	7170.5	2454.3 ug/L	2454.3 ppb	10:05:17
2	Pb 220.353†	6755.8	6783.1	509.87 ug/L	509.87 ppb	10:05:17
2	S 181.975 Axial†	3111.7	3043.1	2574.9 ug/L	2574.9 ppb	10:05:17
2	Sb 206.836†	2721.3	2675.2	532.82 ug/L	532.82 ppb	10:05:17
2	Se 196.026†	7952.2	7971.8	2612.2 ug/L	2612.2 ppb	10:05:17
2	Si 251.611†	242445.6	241823.3	4978.4 ug/L	4978.4 ppb	10:04:57
2	Sn 189.927†	5103.9	5097.1	530.59 ug/L	530.59 ppb	10:05:17
2	Sr 421.552†	33672.4	33607.8	517.74 ug/L	517.74 ppb	10:03:38
2	Ti 334.940†	387671.3	388681.1	508.73 ug/L	508.73 ppb	10:04:57
2	Tl 190.801†	2874.3	2934.9	497.25 ug/L	497.25 ppb	10:05:17
2	U 409.014†	16726.6	20557.1	508.46 ug/L	508.46 ppb	10:04:57
2	V 292.402†	86445.6	88076.2	505.80 ug/L	505.80 ppb	10:04:57
2	Zn 213.857†	92897.2	91751.0	507.43 ug/L	507.43 ppb	10:04:57
2	SiO2†	237580.2	236916.9	10443 ug/L	10443 ppb	10:05:54
3	Sc 361.383	1046189.2	1046189.2	98.615 %		10:05:23
3	Sc Radial	5513.6	5513.6	99.1 %		10:04:03
3	Y 371.029	834847.1	834847.1	97.847 %		10:05:23
3	Y RADIAL	4760.8	4760.8	98.86 %		10:04:03
3	Ag 328.068†	63545.9	63799.7	255.72 ug/L	255.72 ppb	10:05:23
3	Al 396.153Radial†	5377.5	5519.7	5001.6 ug/L	5001.6 ppb	10:04:03
3	As 188.979†	2001.8	2066.8	488.43 ug/L	488.43 ppb	10:05:43
3	B 249.677†	31566.1	32390.9	502.89 ug/L	502.89 ppb	10:05:23
3	Ba 233.527†	104823.4	106271.3	539.14 ug/L	539.14 ppb	10:05:23
3	Be 313.107†	812519.1	831246.8	259.64 ug/L	259.64 ppb	10:05:23
3	Ca 317.933Radial†	1993.1	1994.7	4968.4 ug/L	4968.4 ppb	10:04:23
3	Cd 226.502†	66540.9	67753.1	506.47 ug/L	506.47 ppb	10:05:23
3	Co 228.616†	37778.7	38399.7	478.58 ug/L	478.58 ppb	10:05:43
3	Cr 267.716†	58457.7	59307.3	505.83 ug/L	505.83 ppb	10:05:23
3	Cu 324.752†	219384.3	212274.2	524.04 ug/L	524.04 ppb	10:05:23
3	Fe 238.204 Radial†	150.5	151.5	5330.8 ug/L	5330.8 ppb	10:04:23
3	K 766.490 Radial†	7160.3	5753.8	2493.9 ug/L	2493.9 ppb	10:04:03
3	Mg 279.077 IEC†	66.6	67.1	5318.0 ug/L	5318.0 ppb	10:04:23
3	Mn 257.610†	650091.5	658394.7	520.91 ug/L	520.91 ppb	10:05:23
3	Mo 202.031†	13030.1	13181.3	527.98 ug/L	527.98 ppb	10:05:43
3	Na 589.592 Radial†	777.1	954.8	2581.6 ug/L	2581.6 ppb	10:04:23
3	Ni 231.604†	33207.7	33525.8	537.04 ug/L	537.04 ppb	10:05:23
3	P 214.914†	7486.1	7254.4	2484.4 ug/L	2484.4 ppb	10:05:43
3	Pb 220.353†	6694.0	6817.1	512.41 ug/L	512.41 ppb	10:05:43
3	S 181.975 Axial†	3113.7	3089.6	2614.2 ug/L	2614.2 ppb	10:05:43
3	Sb 206.836†	2715.5	2708.2	539.48 ug/L	539.48 ppb	10:05:43
3	Se 196.026†	7890.8	8023.3	2629.9 ug/L	2629.9 ppb	10:05:43
3	Si 251.611†	238657.3	241449.0	4970.5 ug/L	4970.5 ppb	10:05:23
3	Sn 189.927†	5067.2	5132.9	534.33 ug/L	534.33 ppb	10:05:43
3	Sr 421.552†	33182.0	33485.1	515.84 ug/L	515.84 ppb	10:04:03
3	Ti 334.940†	381414.1	387880.2	507.69 ug/L	507.69 ppb	10:05:23
3	Tl 190.801†	2873.4	2975.2	504.01 ug/L	504.01 ppb	10:05:43
3	U 409.014†	16428.1	20493.6	506.85 ug/L	506.85 ppb	10:05:23
3	V 292.402†	84994.3	87840.8	504.50 ug/L	504.50 ppb	10:05:23
3	Zn 213.857†	91642.8	91807.5	507.72 ug/L	507.72 ppb	10:05:23
3	SiO2†	239859.9	242626.3	10695 ug/L	10695 ppb	10:05:59

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054435.7	99.392	%	0.7163				0.72%
Sc Radial	5567.4	100	%	0.9				0.91%
Y 371.029	841970.1	98.682	%	0.7455				0.76%
Y RADIAL	4813.2	99.95	%	0.971				0.97%
Ag 328.068†	63899.2	256.06	ug/L	0.515	256.06	ppb	0.515	0.20%
QC value within limits for Ag 328.068 Recovery = 102.42%								
Al 396.153Radial†	5519.1	5001.2	ug/L	2.50	5001.2	ppb	2.50	0.05%
QC value within limits for Al 396.153Radial Recovery = 100.02%								
As 188.979†	2056.9	486.09	ug/L	3.628	486.09	ppb	3.628	0.75%
QC value within limits for As 188.979 Recovery = 97.22%								
B 249.677†	32492.1	504.50	ug/L	1.392	504.50	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.90%								
Ba 233.527†	106232.7	538.94	ug/L	0.633	538.94	ppb	0.633	0.12%
QC value within limits for Ba 233.527 Recovery = 107.79%								
Be 313.107†	832867.8	260.15	ug/L	0.787	260.15	ppb	0.787	0.30%
QC value within limits for Be 313.107 Recovery = 104.06%								

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Ca 317.933Radial†        1962.7      4888.9 ug/L         68.91      4888.9 ppb          68.91   1.41%
   QC value within limits for Ca 317.933Radial  Recovery = 97.78%
Cd 226.502†             67684.5      505.98 ug/L         0.945      505.98 ppb          0.945   0.19%
   QC value within limits for Cd 226.502  Recovery = 101.20%
Co 228.616†             38202.2      476.11 ug/L         2.677      476.11 ppb          2.677   0.56%
   QC value within limits for Co 228.616  Recovery = 95.22%
Cr 267.716†             59349.4      506.19 ug/L         1.307      506.19 ppb          1.307   0.26%
   QC value within limits for Cr 267.716  Recovery = 101.24%
Cu 324.752†            213364.5      526.72 ug/L         2.327      526.72 ppb          2.327   0.44%
   QC value within limits for Cu 324.752  Recovery = 105.34%
Fe 238.204 Radial†        146.4      5151.2 ug/L        155.66      5151.2 ppb         155.66   3.02%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.02%
K 766.490 Radial†        5789.7      2509.3 ug/L         20.76      2509.3 ppb          20.76   0.83%
   QC value within limits for K 766.490 Radial  Recovery = 100.37%
Mg 279.077 IEC†           66.5      5274.5 ug/L        118.66      5274.5 ppb         118.66   2.25%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.49%
Mn 257.610†            658614.9      521.06 ug/L         0.751      521.06 ppb          0.751   0.14%
   QC value within limits for Mn 257.610  Recovery = 104.21%
Mo 202.031†             13106.2      524.96 ug/L         3.238      524.96 ppb          3.238   0.62%
   QC value within limits for Mo 202.031  Recovery = 104.99%
Na 589.592 Radial†        942.6      2548.6 ug/L         29.60      2548.6 ppb          29.60   1.16%
   QC value within limits for Na 589.592 Radial  Recovery = 101.94%
Ni 231.604†             33507.8      536.75 ug/L         0.520      536.75 ppb          0.520   0.10%
   QC value within limits for Ni 231.604  Recovery = 107.35%
P 214.914†               7212.6      2469.3 ug/L         15.04      2469.3 ppb          15.04   0.61%
   QC value within limits for P 214.914  Recovery = 98.77%
Pb 220.353†              6806.1      511.59 ug/L         1.490      511.59 ppb          1.490   0.29%
   QC value within limits for Pb 220.353  Recovery = 102.32%
S 181.975 Axial†         3071.7      2599.1 ug/L         21.20      2599.1 ppb          21.20   0.82%
   QC value within limits for S 181.975 Axial  Recovery = 103.96%
Sb 206.836†              2687.5      535.31 ug/L         3.632      535.31 ppb          3.632   0.68%
   QC value within limits for Sb 206.836  Recovery = 107.06%
Se 196.026†              8001.5      2622.2 ug/L          9.08      2622.2 ppb           9.08   0.35%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†            241898.3      4979.9 ug/L         10.15      4979.9 ppb          10.15   0.20%
   QC value within limits for Si 251.611  Recovery = 99.60%
Sn 189.927†              5116.8      532.64 ug/L         1.897      532.64 ppb          1.897   0.36%
   QC value within limits for Sn 189.927  Recovery = 106.53%
Sr 421.552†             33561.3      517.02 ug/L         1.026      517.02 ppb          1.026   0.20%
   QC value within limits for Sr 421.552  Recovery = 103.40%
Ti 334.940†            388802.3      508.89 ug/L         1.289      508.89 ppb          1.289   0.25%
   QC value within limits for Ti 334.940  Recovery = 101.78%
Tl 190.801†              2951.7      500.06 ug/L         3.524      500.06 ppb          3.524   0.70%
   QC value within limits for Tl 190.801  Recovery = 100.01%
U 409.014†              20567.3      508.70 ug/L         1.982      508.70 ppb          1.982   0.39%
   QC value within limits for U 409.014  Recovery = 101.74%
V 292.402†              88119.7      506.07 ug/L         1.724      506.07 ppb          1.724   0.34%
   QC value within limits for V 292.402  Recovery = 101.21%
Zn 213.857†             91889.0      508.19 ug/L         1.080      508.19 ppb          1.080   0.21%
   QC value within limits for Zn 213.857  Recovery = 101.64%
SiO2†                  240236.5       10590 ug/L         130.9       10590 ppb          130.9   1.24%
   QC value within limits for SiO2  Recovery = 99.02%
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/8/2009 10:08:09
Data Type: Reprocessed on 7/8/2009 11:40:09

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1062518.9	1062518.9	100.15	%			10:11:19
1	Sc Radial	5619.2	5619.2	101	%			10:10:02
1	Y 371.029	855063.0	855063.0	100.22	%			10:11:19
1	Y RADIAL	4891.2	4891.2	101.6	%			10:10:02
1	Ag 328.068†	686.9	47.3	0.1796	ug/L	0.1796	ppb	10:11:24
1	Al 396.153Radial†	-95.5	-2.4	-2.1842	ug/L	-2.1842	ppb	10:10:02
1	As 188.979†	-51.6	-14.6	-3.4416	ug/L	-3.4416	ppb	10:11:44
1	B 249.677†	-113.0	268.7	4.1899	ug/L	4.1899	ppb	10:11:24
1	Ba 233.527†	27.7	3.4	0.0163	ug/L	0.0163	ppb	10:11:44
1	Be 313.107†	-7419.2	-91.5	-0.0284	ug/L	-0.0284	ppb	10:11:24
1	Ca 317.933Radial†	20.0	2.8	7.0382	ug/L	7.0382	ppb	10:10:22
1	Cd 226.502†	-268.6	9.5	0.0735	ug/L	0.0735	ppb	10:11:44
1	Co 228.616†	-84.2	6.3	0.0795	ug/L	0.0795	ppb	10:11:44
1	Cr 267.716†	-63.7	-35.0	-0.2989	ug/L	-0.2989	ppb	10:11:24
1	Cu 324.752†	10404.8	197.5	0.4861	ug/L	0.4861	ppb	10:11:24
1	Fe 238.204 Radial†	-0.3	-0.6	-22.095	ug/L	-22.095	ppb	10:10:22
1	K 766.490 Radial†	1537.8	49.9	21.622	ug/L	21.622	ppb	10:10:02
1	Mg 279.077 IEC†	-0.3	-0.5	-40.804	ug/L	-40.804	ppb	10:10:22
1	Mn 257.610†	863.6	35.2	0.0257	ug/L	0.0257	ppb	10:11:44
1	Mo 202.031†	34.2	2.4	0.0952	ug/L	0.0952	ppb	10:11:44
1	Na 589.592 Radial†	-172.2	-0.1	-0.2094	ug/L	-0.2094	ppb	10:10:22
1	Ni 231.604†	165.5	17.0	0.2724	ug/L	0.2724	ppb	10:11:44
1	P 214.914†	359.3	21.8	7.6434	ug/L	7.6434	ppb	10:11:44
1	Pb 220.353†	-14.3	14.8	1.1103	ug/L	1.1103	ppb	10:11:44
1	S 181.975 Axial†	61.3	-6.6	-5.6162	ug/L	-5.6162	ppb	10:11:44
1	Sb 206.836†	50.7	5.2	1.0374	ug/L	1.0374	ppb	10:11:44
1	Se 196.026†	-15.1	6.5	2.0343	ug/L	2.0343	ppb	10:11:44
1	Si 251.611†	605.7	44.7	0.9121	ug/L	0.9121	ppb	10:11:44
1	Sn 189.927†	10.2	4.7	0.4889	ug/L	0.4889	ppb	10:11:44
1	Sr 421.552†	8.2	2.6	0.0401	ug/L	0.0401	ppb	10:10:22
1	Ti 334.940†	-1098.3	12.6	0.0172	ug/L	0.0172	ppb	10:11:24
1	Tl 190.801†	-61.2	0.3	0.0480	ug/L	0.0480	ppb	10:11:44
1	U 409.014†	-3850.0	-9.3	-0.2275	ug/L	-0.2275	ppb	10:11:19
1	V 292.402†	-1677.0	-21.6	-0.1194	ug/L	-0.1194	ppb	10:11:24
1	Zn 213.857†	1258.4	134.0	0.7499	ug/L	0.7499	ppb	10:11:44
1	SiO2†	620.8	17.5	0.7492	ug/L	0.7492	ppb	10:12:50
2	Sc 361.383	1069316.7	1069316.7	100.80	%			10:11:49
2	Sc Radial	5629.3	5629.3	101	%			10:10:27
2	Y 371.029	858517.5	858517.5	100.62	%			10:11:49
2	Y RADIAL	4855.9	4855.9	100.8	%			10:10:27
2	Ag 328.068†	676.2	32.3	0.1208	ug/L	0.1208	ppb	10:11:54
2	Al 396.153Radial†	-91.2	2.0	1.8521	ug/L	1.8521	ppb	10:10:27
2	As 188.979†	-44.8	-7.5	-1.7654	ug/L	-1.7654	ppb	10:12:14
2	B 249.677†	-123.3	259.2	4.0408	ug/L	4.0408	ppb	10:11:54
2	Ba 233.527†	23.9	-0.6	-0.0030	ug/L	-0.0030	ppb	10:12:14
2	Be 313.107†	-7510.8	-135.4	-0.0419	ug/L	-0.0419	ppb	10:11:54
2	Ca 317.933Radial†	16.0	-1.1	-2.7930	ug/L	-2.7930	ppb	10:10:47
2	Cd 226.502†	-288.6	-8.6	-0.0630	ug/L	-0.0630	ppb	10:12:14
2	Co 228.616†	-88.3	2.8	0.0352	ug/L	0.0352	ppb	10:12:14
2	Cr 267.716†	-28.7	0.1	0.0000	ug/L	0.0000	ppb	10:11:54
2	Cu 324.752†	10297.6	25.1	0.0611	ug/L	0.0611	ppb	10:11:54
2	Fe 238.204 Radial†	-0.0	-0.4	-13.229	ug/L	-13.229	ppb	10:10:47
2	K 766.490 Radial†	1552.5	61.7	26.759	ug/L	26.759	ppb	10:10:27
2	Mg 279.077 IEC†	2.2	2.0	160.02	ug/L	160.02	ppb	10:10:47
2	Mn 257.610†	868.0	34.2	0.0222	ug/L	0.0222	ppb	10:12:14
2	Mo 202.031†	38.9	6.8	0.2725	ug/L	0.2725	ppb	10:12:14
2	Na 589.592 Radial†	-186.1	-13.6	-36.706	ug/L	-36.706	ppb	10:10:47
2	Ni 231.604†	162.3	12.7	0.2043	ug/L	0.2043	ppb	10:12:14

2	P 214.914†	334.4	-5.1	-1.8065	ug/L	-1.8065	ppb	10:12:14
2	Pb 220.353†	-20.2	9.0	0.6783	ug/L	0.6783	ppb	10:12:14
2	S 181.975 Axial†	69.9	1.5	1.2588	ug/L	1.2588	ppb	10:12:14
2	Sb 206.836†	55.1	9.2	1.8205	ug/L	1.8205	ppb	10:12:14
2	Se 196.026†	-16.1	5.6	1.7877	ug/L	1.7877	ppb	10:12:14
2	Si 251.611†	597.5	32.7	0.6587	ug/L	0.6587	ppb	10:12:14
2	Sn 189.927†	12.0	6.5	0.6728	ug/L	0.6728	ppb	10:12:14
2	Sr 421.552†	-0.3	-5.8	-0.0892	ug/L	-0.0892	ppb	10:10:47
2	Ti 334.940†	-1058.2	59.4	0.0757	ug/L	0.0757	ppb	10:11:54
2	Tl 190.801†	-64.4	-2.5	-0.4195	ug/L	-0.4195	ppb	10:12:14
2	U 409.014†	-3694.3	169.6	4.2087	ug/L	4.2087	ppb	10:11:49
2	V 292.402†	-1628.9	36.7	0.2243	ug/L	0.2243	ppb	10:11:54
2	Zn 213.857†	1236.8	104.6	0.5788	ug/L	0.5788	ppb	10:12:14
2	SiO2†	605.7	-1.5	-0.0994	ug/L	-0.0994	ppb	10:12:55
3	Sc 361.383	1062135.4	1062135.4	100.12	%			10:12:20
3	Sc Radial	5726.3	5726.3	103	%			10:10:52
3	Y 371.029	854170.1	854170.1	100.11	%			10:12:20
3	Y RADIAL	4978.7	4978.7	103.4	%			10:10:52
3	Ag 328.068†	596.6	-42.7	-0.1739	ug/L	-0.1739	ppb	10:12:25
3	Al 396.153Radial†	-64.8	29.2	26.595	ug/L	26.595	ppb	10:10:52
3	As 188.979†	-48.3	-11.4	-2.6739	ug/L	-2.6739	ppb	10:12:45
3	B 249.677†	-137.5	244.2	3.8077	ug/L	3.8077	ppb	10:12:25
3	Ba 233.527†	32.8	8.5	0.0434	ug/L	0.0434	ppb	10:12:45
3	Be 313.107†	-7462.3	-137.3	-0.0426	ug/L	-0.0426	ppb	10:12:25
3	Ca 317.933Radial†	21.3	3.8	9.4766	ug/L	9.4766	ppb	10:11:12
3	Cd 226.502†	-293.9	-15.9	-0.1159	ug/L	-0.1159	ppb	10:12:45
3	Co 228.616†	-77.2	13.3	0.1659	ug/L	0.1659	ppb	10:12:45
3	Cr 267.716†	9.4	38.0	0.3245	ug/L	0.3245	ppb	10:12:25
3	Cu 324.752†	10285.9	82.5	0.2022	ug/L	0.2022	ppb	10:12:25
3	Fe 238.204 Radial†	-0.3	-0.6	-22.364	ug/L	-22.364	ppb	10:11:12
3	K 766.490 Radial†	1501.0	-14.5	-6.2704	ug/L	-6.2704	ppb	10:10:52
3	Mg 279.077 IEC†	-1.8	-1.9	-151.32	ug/L	-151.32	ppb	10:11:12
3	Mn 257.610†	857.0	29.0	0.0229	ug/L	0.0229	ppb	10:12:45
3	Mo 202.031†	36.6	4.8	0.1888	ug/L	0.1888	ppb	10:12:45
3	Na 589.592 Radial†	-183.0	-7.4	-20.091	ug/L	-20.091	ppb	10:11:12
3	Ni 231.604†	155.8	7.4	0.1180	ug/L	0.1180	ppb	10:12:45
3	P 214.914†	337.7	0.4	0.1410	ug/L	0.1410	ppb	10:12:45
3	Pb 220.353†	-5.3	23.7	1.7877	ug/L	1.7877	ppb	10:12:45
3	S 181.975 Axial†	71.0	3.0	2.5743	ug/L	2.5743	ppb	10:12:45
3	Sb 206.836†	52.0	6.6	1.2846	ug/L	1.2846	ppb	10:12:45
3	Se 196.026†	-12.9	8.7	2.7668	ug/L	2.7668	ppb	10:12:45
3	Si 251.611†	618.9	58.0	1.1952	ug/L	1.1952	ppb	10:12:45
3	Sn 189.927†	7.7	2.3	0.2347	ug/L	0.2347	ppb	10:12:45
3	Sr 421.552†	-1.2	-6.6	-0.1023	ug/L	-0.1023	ppb	10:11:12
3	Ti 334.940†	-1088.2	22.3	0.0301	ug/L	0.0301	ppb	10:12:25
3	Tl 190.801†	-57.0	4.4	0.7456	ug/L	0.7456	ppb	10:12:45
3	U 409.014†	-3872.6	-33.3	-0.8247	ug/L	-0.8247	ppb	10:12:20
3	V 292.402†	-1572.8	81.8	0.4653	ug/L	0.4653	ppb	10:12:25
3	Zn 213.857†	1256.5	132.6	0.7473	ug/L	0.7473	ppb	10:12:45
3	SiO2†	684.3	81.2	3.5825	ug/L	3.5825	ppb	10:13:00

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1064657.0	100.36	%	0.381				0.38%
Sc Radial	5658.3	102	%	1.1				1.05%
Y 371.029	855916.8	100.32	%	0.269				0.27%
Y RADIAL	4908.6	101.9	%	1.31				1.29%
Ag 328.068†	12.3	0.0422	ug/L	0.18942	0.0422	ppb	0.18942	448.85%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.6	8.7543	ug/L	15.58188	8.7543	ppb	15.58188	177.99%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.2	-2.6270	ug/L	0.83913	-2.6270	ppb	0.83913	31.94%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	257.3	4.0128	ug/L	0.19262	4.0128	ppb	0.19262	4.80%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.7	0.0189	ug/L	0.02328	0.0189	ppb	0.02328	123.18%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.4	-0.0376	ug/L	0.00800	-0.0376	ppb	0.00800	21.25%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          1.8      4.5739 ug/L       6.49541      4.5739 ppb        6.49541 142.01%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -5.0     -0.0351 ug/L       0.09773     -0.0351 ppb        0.09773 278.26%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                7.5      0.0936 ug/L       0.06649      0.0936 ppb        0.06649  71.07%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                1.1      0.0085 ug/L       0.31178      0.0085 ppb        0.31178 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              101.7      0.2498 ug/L       0.21648      0.2498 ppb        0.21648  86.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5    -19.229 ug/L        5.1983    -19.229 ppb         5.1983  27.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         32.4     14.037 ug/L       17.7734     14.037 ppb        17.7734 126.62%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.1    -10.703 ug/L      157.8385    -10.703 ppb       157.8385 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               32.8      0.0236 ug/L       0.00188      0.0236 ppb        0.00188   7.96%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.7      0.1855 ug/L       0.08870      0.1855 ppb        0.08870  47.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -7.0    -19.002 ug/L       18.2728    -19.002 ppb        18.2728  96.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               12.4      0.1983 ug/L       0.07739      0.1983 ppb        0.07739  39.03%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 5.7      1.9926 ug/L       4.98968      1.9926 ppb        4.98968 250.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               15.9      1.1921 ug/L       0.55921      1.1921 ppb        0.55921  46.91%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.7     -0.5944 ug/L       4.39850     -0.5944 ppb        4.39850 740.05%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.0      1.3808 ug/L       0.40029      1.3808 ppb        0.40029  28.99%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                7.0      2.1962 ug/L       0.50925      2.1962 ppb        0.50925  23.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               45.1      0.9220 ug/L       0.26841      0.9220 ppb        0.26841  29.11%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.5      0.4655 ug/L       0.22000      0.4655 ppb        0.22000  47.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -3.3     -0.0505 ug/L       0.07870     -0.0505 ppb        0.07870 155.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               31.5      0.0410 ug/L       0.03074      0.0410 ppb        0.03074  74.91%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.7      0.1247 ug/L       0.58632      0.1247 ppb        0.58632 470.17%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                42.3      1.0522 ug/L       2.74987      1.0522 ppb        2.74987 261.36%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                32.3      0.1900 ug/L       0.29386      0.1900 ppb        0.29386 154.62%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              123.8      0.6920 ug/L       0.09801      0.6920 ppb        0.09801  14.16%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     32.4      1.4108 ug/L       1.92802      1.4108 ppb        1.92802 136.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/8/2009 10:15:11
Data Type: Reprocessed on 7/8/2009 11:40:11

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1047868.8	1047868.8	98.773	%			10:18:21
1	Sc Radial	5489.2	5489.2	98.6	%			10:17:05
1	Y 371.029	843324.4	843324.4	98.841	%			10:18:21
1	Y RADIAL	4749.6	4749.6	98.63	%			10:17:05
1	Ag 328.068†	1908.9	1294.0	5.1281	ug/L	5.1281	ppb	10:18:26
1	Al 396.153Radial†	137.4	231.5	210.24	ug/L	210.24	ppb	10:17:05
1	As 188.979†	70.2	108.0	25.354	ug/L	25.354	ppb	10:18:47
1	B 249.677†	2924.9	3342.8	52.070	ug/L	52.070	ppb	10:18:26
1	Ba 233.527†	1019.6	1008.0	5.1161	ug/L	5.1161	ppb	10:18:47
1	Be 313.107†	8654.4	16078.1	5.0107	ug/L	5.0107	ppb	10:18:26
1	Ca 317.933Radial†	95.1	79.5	197.91	ug/L	197.91	ppb	10:17:25
1	Cd 226.502†	377.6	659.9	4.9265	ug/L	4.9265	ppb	10:18:47
1	Co 228.616†	298.6	392.8	4.9073	ug/L	4.9073	ppb	10:18:47
1	Cr 267.716†	559.7	595.3	5.0626	ug/L	5.0626	ppb	10:18:47
1	Cu 324.752†	13982.0	3964.4	9.7874	ug/L	9.7874	ppb	10:18:26
1	Fe 238.204 Radial†	3.4	3.1	108.63	ug/L	108.63	ppb	10:17:25
1	K 766.490 Radial†	1881.1	433.9	188.09	ug/L	188.09	ppb	10:17:05
1	Mg 279.077 IEC†	3.4	3.3	260.55	ug/L	260.55	ppb	10:17:25
1	Mn 257.610†	13937.0	13283.1	10.506	ug/L	10.506	ppb	10:18:26
1	Mo 202.031†	283.1	254.8	10.207	ug/L	10.207	ppb	10:18:47
1	Na 589.592 Radial†	-73.9	95.5	258.17	ug/L	258.17	ppb	10:17:25
1	Ni 231.604†	470.7	328.3	5.2585	ug/L	5.2585	ppb	10:18:47
1	P 214.914†	747.0	419.3	146.74	ug/L	146.74	ppb	10:18:47
1	Pb 220.353†	129.9	160.5	12.084	ug/L	12.084	ppb	10:18:47
1	S 181.975 Axial†	177.5	111.8	94.633	ug/L	94.633	ppb	10:18:47
1	Sb 206.836†	107.1	63.0	12.627	ug/L	12.627	ppb	10:18:47
1	Se 196.026†	79.0	101.6	33.458	ug/L	33.458	ppb	10:18:47
1	Si 251.611†	5379.4	4886.1	100.55	ug/L	100.55	ppb	10:18:26
1	Sn 189.927†	102.0	97.8	10.192	ug/L	10.192	ppb	10:18:47
1	Sr 421.552†	343.2	342.5	5.2744	ug/L	5.2744	ppb	10:17:25
1	Ti 334.940†	2629.6	3771.5	4.9245	ug/L	4.9245	ppb	10:18:26
1	Tl 190.801†	45.6	107.5	18.194	ug/L	18.194	ppb	10:18:47
1	U 409.014†	-1614.8	2199.9	54.559	ug/L	54.559	ppb	10:18:21
1	V 292.402†	-733.6	910.1	5.3790	ug/L	5.3790	ppb	10:18:26
1	Zn 213.857†	2833.5	1746.3	9.6832	ug/L	9.6832	ppb	10:18:47
1	SiO2†	5363.4	4827.7	212.72	ug/L	212.72	ppb	10:19:53
2	Sc 361.383	1047486.5	1047486.5	98.737	%			10:18:52
2	Sc Radial	5556.3	5556.3	99.8	%			10:17:30
2	Y 371.029	843422.2	843422.2	98.852	%			10:18:52
2	Y RADIAL	4839.9	4839.9	100.5	%			10:17:30
2	Ag 328.068†	1979.1	1365.8	5.4057	ug/L	5.4057	ppb	10:18:57
2	Al 396.153Radial†	131.7	224.1	203.50	ug/L	203.50	ppb	10:17:30
2	As 188.979†	79.1	117.0	27.460	ug/L	27.460	ppb	10:19:17
2	B 249.677†	2837.5	3255.3	50.709	ug/L	50.709	ppb	10:18:57
2	Ba 233.527†	999.5	988.0	5.0149	ug/L	5.0149	ppb	10:19:17
2	Be 313.107†	8590.8	16016.9	4.9918	ug/L	4.9918	ppb	10:18:57
2	Ca 317.933Radial†	97.2	80.4	200.20	ug/L	200.20	ppb	10:17:50
2	Cd 226.502†	375.2	657.6	4.9119	ug/L	4.9119	ppb	10:19:17
2	Co 228.616†	313.3	407.7	5.0943	ug/L	5.0943	ppb	10:19:17
2	Cr 267.716†	522.4	557.7	4.7420	ug/L	4.7420	ppb	10:19:17
2	Cu 324.752†	14012.6	4000.6	9.8754	ug/L	9.8754	ppb	10:18:57
2	Fe 238.204 Radial†	2.8	2.4	85.690	ug/L	85.690	ppb	10:17:50
2	K 766.490 Radial†	1891.7	421.5	182.69	ug/L	182.69	ppb	10:17:30
2	Mg 279.077 IEC†	3.4	3.3	259.03	ug/L	259.03	ppb	10:17:50
2	Mn 257.610†	13825.0	13174.8	10.418	ug/L	10.418	ppb	10:18:57
2	Mo 202.031†	288.8	260.7	10.442	ug/L	10.442	ppb	10:19:17
2	Na 589.592 Radial†	-60.0	110.3	298.35	ug/L	298.35	ppb	10:17:50
2	Ni 231.604†	467.6	325.3	5.2109	ug/L	5.2109	ppb	10:19:17

2	P 214.914†	747.1	419.7	146.89 ug/L	146.89 ppb	10:19:17
2	Pb 220.353†	109.3	139.8	10.531 ug/L	10.531 ppb	10:19:17
2	S 181.975 Axial†	174.7	109.1	92.292 ug/L	92.292 ppb	10:19:17
2	Sb 206.836†	103.9	59.8	12.037 ug/L	12.037 ppb	10:19:17
2	Se 196.026†	78.5	101.1	33.226 ug/L	33.226 ppb	10:19:17
2	Si 251.611†	5425.5	4934.8	101.55 ug/L	101.55 ppb	10:18:57
2	Sn 189.927†	110.5	106.5	11.091 ug/L	11.091 ppb	10:19:17
2	Sr 421.552†	350.2	345.2	5.3169 ug/L	5.3169 ppb	10:17:50
2	Ti 334.940†	2664.9	3808.2	4.9728 ug/L	4.9728 ppb	10:18:57
2	Tl 190.801†	64.2	126.4	21.375 ug/L	21.375 ppb	10:19:17
2	U 409.014†	-1616.1	2197.9	54.515 ug/L	54.515 ppb	10:18:52
2	V 292.402†	-696.6	947.3	5.5964 ug/L	5.5964 ppb	10:18:57
2	Zn 213.857†	2826.6	1740.4	9.6528 ug/L	9.6528 ppb	10:19:17
2	SiO2†	5326.0	4791.8	211.13 ug/L	211.13 ppb	10:19:58
3	Sc 361.383	1064715.9	1064715.9	100.36 %		10:19:22
3	Sc Radial	5636.0	5636.0	101 %		10:17:55
3	Y 371.029	857151.8	857151.8	100.46 %		10:19:22
3	Y RADIAL	4900.5	4900.5	101.8 %		10:17:55
3	Ag 328.068†	1947.8	1302.2	5.1615 ug/L	5.1615 ppb	10:19:27
3	Al 396.153Radial†	113.0	203.8	185.06 ug/L	185.06 ppb	10:17:55
3	As 188.979†	78.8	115.4	27.092 ug/L	27.092 ppb	10:19:47
3	B 249.677†	2917.2	3288.2	51.219 ug/L	51.219 ppb	10:19:27
3	Ba 233.527†	1004.9	977.0	4.9582 ug/L	4.9582 ppb	10:19:47
3	Be 313.107†	8767.1	16051.7	5.0025 ug/L	5.0025 ppb	10:19:27
3	Ca 317.933Radial†	96.9	78.7	196.13 ug/L	196.13 ppb	10:18:15
3	Cd 226.502†	363.6	640.0	4.7768 ug/L	4.7768 ppb	10:19:47
3	Co 228.616†	310.3	399.6	4.9919 ug/L	4.9919 ppb	10:19:47
3	Cr 267.716†	528.2	554.9	4.7188 ug/L	4.7188 ppb	10:19:47
3	Cu 324.752†	14146.2	3904.0	9.6387 ug/L	9.6387 ppb	10:19:27
3	Fe 238.204 Radial†	3.6	3.2	111.85 ug/L	111.85 ppb	10:18:15
3	K 766.490 Radial†	1829.8	333.6	144.57 ug/L	144.57 ppb	10:17:55
3	Mg 279.077 IEC†	6.0	5.8	456.93 ug/L	456.93 ppb	10:18:15
3	Mn 257.610†	14031.0	13153.4	10.401 ug/L	10.401 ppb	10:19:27
3	Mo 202.031†	277.9	245.2	9.8210 ug/L	9.8210 ppb	10:19:47
3	Na 589.592 Radial†	-65.4	105.8	286.15 ug/L	286.15 ppb	10:18:15
3	Ni 231.604†	473.1	323.1	5.1761 ug/L	5.1761 ppb	10:19:47
3	P 214.914†	766.3	426.6	149.31 ug/L	149.31 ppb	10:19:47
3	Pb 220.353†	121.9	150.5	11.326 ug/L	11.326 ppb	10:19:47
3	S 181.975 Axial†	173.4	104.9	88.788 ug/L	88.788 ppb	10:19:47
3	Sb 206.836†	88.6	42.9	8.6819 ug/L	8.6819 ppb	10:19:47
3	Se 196.026†	79.8	101.1	33.313 ug/L	33.313 ppb	10:19:47
3	Si 251.611†	5402.9	4823.3	99.277 ug/L	99.277 ppb	10:19:27
3	Sn 189.927†	103.1	97.3	10.137 ug/L	10.137 ppb	10:19:47
3	Sr 421.552†	361.1	351.1	5.4073 ug/L	5.4073 ppb	10:18:15
3	Ti 334.940†	2655.9	3755.6	4.9047 ug/L	4.9047 ppb	10:19:27
3	Tl 190.801†	61.2	122.4	20.700 ug/L	20.700 ppb	10:19:47
3	U 409.014†	-1729.9	2111.1	52.358 ug/L	52.358 ppb	10:19:22
3	V 292.402†	-842.5	813.3	4.8240 ug/L	4.8240 ppb	10:19:27
3	Zn 213.857†	2842.9	1710.3	9.4754 ug/L	9.4754 ppb	10:19:47
3	SiO2†	5379.4	4757.6	209.68 ug/L	209.68 ppb	10:20:03

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1053357.1	99.291	%	0.9274				0.93%
Sc Radial	5560.5	99.9	%	1.32				1.32%
Y 371.029	847966.2	99.385	%	0.9324				0.94%
Y RADIAL	4830.0	100.3	%	1.58				1.57%
Ag 328.068†	1320.7	5.2318	ug/L	0.15157	5.2318	ppb	0.15157	2.90%
QC value within limits for Ag 328.068 Recovery = 104.64%								
Al 396.153Radial†	219.8	199.60	ug/L	13.038	199.60	ppb	13.038	6.53%
QC value within limits for Al 396.153Radial Recovery = 99.80%								
As 188.979†	113.5	26.635	ug/L	1.1249	26.635	ppb	1.1249	4.22%
QC value within limits for As 188.979 Recovery = 88.78%								
B 249.677†	3295.4	51.333	ug/L	0.6874	51.333	ppb	0.6874	1.34%
QC value within limits for B 249.677 Recovery = 102.67%								
Ba 233.527†	991.0	5.0297	ug/L	0.08000	5.0297	ppb	0.08000	1.59%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	16048.9	5.0017	ug/L	0.00949	5.0017	ppb	0.00949	0.19%
QC value within limits for Be 313.107 Recovery = 100.03%								

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Ca 317.933Radial†          79.5      198.08 ug/L        2.042      198.08 ppb        2.042   1.03%
   QC value within limits for Ca 317.933Radial  Recovery = 99.04%
Cd 226.502†               652.5      4.8717 ug/L      0.08254      4.8717 ppb      0.08254   1.69%
   QC value within limits for Cd 226.502  Recovery = 97.43%
Co 228.616†               400.0      4.9978 ug/L      0.09363      4.9978 ppb      0.09363   1.87%
   QC value within limits for Co 228.616  Recovery = 99.96%
Cr 267.716†               569.3      4.8411 ug/L      0.19215      4.8411 ppb      0.19215   3.97%
   QC value within limits for Cr 267.716  Recovery = 96.82%
Cu 324.752†              3956.3      9.7672 ug/L      0.11961      9.7672 ppb      0.11961   1.22%
   QC value within limits for Cu 324.752  Recovery = 97.67%
Fe 238.204 Radial†         2.9      102.06 ug/L       14.266      102.06 ppb       14.266  13.98%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.06%
K 766.490 Radial†         396.3      171.78 ug/L       23.724      171.78 ppb       23.724  13.81%
   QC value within limits for K 766.490 Radial  Recovery = 114.52%
Mg 279.077 IEC†            4.1      325.50 ug/L      113.822      325.50 ppb      113.822  34.97%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.50%
Mn 257.610†            13203.8      10.442 ug/L       0.0568      10.442 ppb       0.0568   0.54%
   QC value within limits for Mn 257.610  Recovery = 104.42%
Mo 202.031†               253.6      10.157 ug/L       0.3133      10.157 ppb       0.3133   3.09%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†        103.9      280.89 ug/L       20.599      280.89 ppb       20.599   7.33%
   QC value within limits for Na 589.592 Radial  Recovery = 93.63%
Ni 231.604†               325.6      5.2152 ug/L      0.04137      5.2152 ppb      0.04137   0.79%
   QC value within limits for Ni 231.604  Recovery = 104.30%
P 214.914†                421.9      147.65 ug/L        1.445      147.65 ppb        1.445   0.98%
   QC value within limits for P 214.914  Recovery = 98.43%
Pb 220.353†               150.3      11.314 ug/L       0.7766      11.314 ppb       0.7766   6.86%
   QC value within limits for Pb 220.353  Recovery = 113.14%
S 181.975 Axial†          108.6      91.904 ug/L       2.9414      91.904 ppb       2.9414   3.20%
   QC value within limits for S 181.975 Axial  Recovery = 91.90%
Sb 206.836†                55.2      11.115 ug/L       2.1279      11.115 ppb       2.1279  19.14%
   QC value within limits for Sb 206.836  Recovery = 111.15%
Se 196.026†               101.3      33.332 ug/L       0.1173      33.332 ppb       0.1173   0.35%
   QC value within limits for Se 196.026  Recovery = 111.11%
Si 251.611†              4881.4      100.46 ug/L        1.140      100.46 ppb        1.140   1.13%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†               100.5      10.473 ug/L       0.5359      10.473 ppb       0.5359   5.12%
   QC value within limits for Sn 189.927  Recovery = 104.73%
Sr 421.552†               346.3      5.3328 ug/L      0.06788      5.3328 ppb      0.06788   1.27%
   QC value within limits for Sr 421.552  Recovery = 106.66%
Ti 334.940†              3778.5      4.9340 ug/L      0.03506      4.9340 ppb      0.03506   0.71%
   QC value within limits for Ti 334.940  Recovery = 98.68%
Tl 190.801†               118.8      20.090 ug/L       1.6764      20.090 ppb       1.6764   8.34%
   QC value within limits for Tl 190.801  Recovery = 100.45%
U 409.014†               2169.6      53.811 ug/L       1.2585      53.811 ppb       1.2585   2.34%
   QC value within limits for U 409.014  Recovery = 107.62%
V 292.402†                890.2      5.2665 ug/L      0.39826      5.2665 ppb      0.39826   7.56%
   QC value within limits for V 292.402  Recovery = 105.33%
Zn 213.857†              1732.3      9.6038 ug/L      0.11224      9.6038 ppb      0.11224   1.17%
   QC value within limits for Zn 213.857  Recovery = 96.04%
SiO2†                    4792.4      211.18 ug/L        1.524      211.18 ppb        1.524   0.72%
   QC value within limits for SiO2  Recovery = 99.14%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: ICSA
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/8/2009 10:22:14
Data Type: Reprocessed on 7/8/2009 11:40:12

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	895501.5	895501.5	84.411	%			10:25:25
1	Sc Radial	5081.7	5081.7	91.3	%			10:24:27
1	Y 371.029	714523.0	714523.0	83.745	%			10:25:25
1	Y RADIAL	4391.8	4391.8	91.20	%			10:24:27
1	Ag 328.068†	-10393.0	-12951.0	1.0699	ug/L	1.0699	ppb	10:25:25
1	Al 396.153Radial†	511366.0	560078.8	509800	ug/L	509800	ppb	10:24:07
1	As 188.979†	-139.2	-128.0	6.5707	ug/L	6.5707	ppb	10:25:45
1	B 249.677†	908.6	1457.9	-1.6992	ug/L	-1.6992	ppb	10:25:25
1	Ba 233.527†	-495.8	-611.7	1.2025	ug/L	1.2025	ppb	10:25:45
1	Be 313.107†	-7530.9	-1605.5	-0.5734	ug/L	-0.5734	ppb	10:25:25
1	Ca 317.933Radial†	172461.7	188842.4	470380	ug/L	470380	ppb	10:24:07
1	Cd 226.502†	2108.2	2775.1	-0.9878	ug/L	-0.9878	ppb	10:25:45
1	Co 228.616†	-24.7	61.1	-1.8391	ug/L	-1.8391	ppb	10:25:45
1	Cr 267.716†	-320.2	-350.7	0.5961	ug/L	0.5961	ppb	10:25:45
1	Cu 324.752†	6421.7	-2583.6	4.2681	ug/L	4.2681	ppb	10:25:25
1	Fe 238.204 Radial†	4791.8	5247.1	184080	ug/L	184080	ppb	10:24:27
1	K 766.490 Radial†	1268.1	-84.4	17.211	ug/L	17.211	ppb	10:24:07
1	Mg 279.077 IEC†	5667.1	6205.7	491320	ug/L	491320	ppb	10:24:27
1	Mn 257.610†	-1965.4	-3155.4	12.011	ug/L	12.011	ppb	10:25:25
1	Mo 202.031†	-328.7	-421.2	-4.2268	ug/L	-4.2268	ppb	10:25:45
1	Na 589.592 Radial†	-173.4	-19.4	-52.528	ug/L	-52.528	ppb	10:24:27
1	Ni 231.604†	337.4	251.5	4.0300	ug/L	4.0300	ppb	10:25:45
1	P 214.914†	293.5	10.8	28.559	ug/L	28.559	ppb	10:25:45
1	Pb 220.353†	-942.6	-1087.6	0.6717	ug/L	0.6717	ppb	10:25:45
1	S 181.975 Axial†	128.7	84.6	-28.638	ug/L	-28.638	ppb	10:25:45
1	Sb 206.836†	101.4	74.7	-0.8382	ug/L	-0.8382	ppb	10:25:45
1	Se 196.026†	-1802.9	-2114.3	-13.357	ug/L	-13.357	ppb	10:25:45
1	Si 251.611†	614.8	168.2	3.9128	ug/L	3.9128	ppb	10:25:45
1	Sn 189.927†	-348.4	-418.3	-4.5225	ug/L	-4.5225	ppb	10:25:45
1	Sr 421.552†	258.7	277.9	-0.0791	ug/L	-0.0791	ppb	10:24:27
1	Ti 334.940†	-21523.1	-24388.8	-0.4475	ug/L	-0.4475	ppb	10:25:25
1	Tl 190.801†	-123.2	-84.6	-11.647	ug/L	-11.647	ppb	10:25:45
1	U 409.014†	-2645.4	700.7	-5.2282	ug/L	-5.2282	ppb	10:25:25
1	V 292.402†	867.3	2680.3	-1.8957	ug/L	-1.8957	ppb	10:25:45
1	Zn 213.857†	5199.0	5036.8	-8.7856	ug/L	-8.7856	ppb	10:25:45
1	SiO2†	554.5	54.6	3.3717	ug/L	3.3717	ppb	10:26:41
2	Sc 361.383	894719.3	894719.3	84.337	%			10:25:50
2	Sc Radial	5092.9	5092.9	91.5	%			10:24:53
2	Y 371.029	715579.1	715579.1	83.869	%			10:25:50
2	Y RADIAL	4406.9	4406.9	91.51	%			10:24:53
2	Ag 328.068†	-10345.8	-12905.8	1.4483	ug/L	1.4483	ppb	10:25:50
2	Al 396.153Radial†	515497.0	563358.3	512790	ug/L	512790	ppb	10:24:33
2	As 188.979†	-138.6	-127.5	6.8312	ug/L	6.8312	ppb	10:26:10
2	B 249.677†	761.2	1284.1	-4.5082	ug/L	-4.5082	ppb	10:25:50
2	Ba 233.527†	-460.6	-570.4	1.4270	ug/L	1.4270	ppb	10:26:10
2	Be 313.107†	-7458.7	-1527.7	-0.5517	ug/L	-0.5517	ppb	10:25:50
2	Ca 317.933Radial†	173876.6	189972.1	473190	ug/L	473190	ppb	10:24:33
2	Cd 226.502†	2120.9	2792.4	-0.9470	ug/L	-0.9470	ppb	10:26:10
2	Co 228.616†	-11.2	77.1	-1.6492	ug/L	-1.6492	ppb	10:26:10
2	Cr 267.716†	-331.2	-364.1	0.4968	ug/L	0.4968	ppb	10:26:10
2	Cu 324.752†	6524.1	-2455.6	4.6269	ug/L	4.6269	ppb	10:25:50
2	Fe 238.204 Radial†	4821.9	5268.4	184820	ug/L	184820	ppb	10:24:53
2	K 766.490 Radial†	1216.4	-143.9	-8.5744	ug/L	-8.5744	ppb	10:24:33
2	Mg 279.077 IEC†	5711.8	6240.9	494110	ug/L	494110	ppb	10:24:53
2	Mn 257.610†	-2242.7	-3486.2	11.793	ug/L	11.793	ppb	10:25:50
2	Mo 202.031†	-331.9	-425.4	-4.3417	ug/L	-4.3417	ppb	10:26:10
2	Na 589.592 Radial†	-158.9	-3.3	-8.8064	ug/L	-8.8064	ppb	10:24:53
2	Ni 231.604†	322.8	234.5	3.7578	ug/L	3.7578	ppb	10:26:10

2	P 214.914†	282.3	-2.2	24.298 ug/L	24.298 ppb	10:26:10
2	Pb 220.353†	-980.2	-1133.2	-2.2283 ug/L	-2.2283 ppb	10:26:10
2	S 181.975 Axial†	133.9	90.9	-23.927 ug/L	-23.927 ppb	10:26:10
2	Sb 206.836†	107.1	81.5	0.3983 ug/L	0.3983 ppb	10:26:10
2	Se 196.026†	-1828.8	-2146.8	-21.144 ug/L	-21.144 ppb	10:26:10
2	Si 251.611†	621.0	176.2	4.0917 ug/L	4.0917 ppb	10:26:10
2	Sn 189.927†	-354.8	-426.2	-5.1179 ug/L	-5.1179 ppb	10:26:10
2	Sr 421.552†	253.4	271.4	-0.2039 ug/L	-0.2039 ppb	10:24:53
2	Ti 334.940†	-22184.0	-25194.7	-1.3121 ug/L	-1.3121 ppb	10:25:50
2	Tl 190.801†	-105.2	-63.3	-8.0480 ug/L	-8.0480 ppb	10:26:10
2	U 409.014†	-2792.9	523.2	-9.7248 ug/L	-9.7248 ppb	10:25:50
2	V 292.402†	765.0	2559.9	-2.6434 ug/L	-2.6434 ppb	10:26:10
2	Zn 213.857†	5183.7	5024.0	-9.0326 ug/L	-9.0326 ppb	10:26:10
2	SiO2†	499.4	-10.2	0.5414 ug/L	0.5414 ppb	10:26:46
3	Sc 361.383	893780.1	893780.1	84.249 %		10:26:15
3	Sc Radial	5118.7	5118.7	92.0 %		10:25:18
3	Y 371.029	713970.1	713970.1	83.680 %		10:26:15
3	Y RADIAL	4426.1	4426.1	91.91 %		10:25:18
3	Ag 328.068†	-10409.3	-12994.0	1.2796 ug/L	1.2796 ppb	10:26:15
3	Al 396.153Radial†	508361.4	552762.3	503140 ug/L	503140 ppb	10:24:58
3	As 188.979†	-128.5	-115.7	9.6416 ug/L	9.6416 ppb	10:26:36
3	B 249.677†	835.5	1373.2	-3.1464 ug/L	-3.1464 ppb	10:26:15
3	Ba 233.527†	-496.7	-613.9	1.2131 ug/L	1.2131 ppb	10:26:36
3	Be 313.107†	-7571.9	-1671.3	-0.5963 ug/L	-0.5963 ppb	10:26:15
3	Ca 317.933Radial†	171828.3	186787.9	465260 ug/L	465260 ppb	10:24:58
3	Cd 226.502†	2103.7	2774.7	-1.1037 ug/L	-1.1037 ppb	10:26:36
3	Co 228.616†	-21.9	64.4	-1.8116 ug/L	-1.8116 ppb	10:26:36
3	Cr 267.716†	-287.1	-312.1	0.9428 ug/L	0.9428 ppb	10:26:36
3	Cu 324.752†	6618.2	-2335.7	4.9347 ug/L	4.9347 ppb	10:26:15
3	Fe 238.204 Radial†	4851.7	5274.3	185030 ug/L	185030 ppb	10:25:18
3	K 766.490 Radial†	1220.8	-145.9	-8.5400 ug/L	-8.5400 ppb	10:24:58
3	Mg 279.077 IEC†	5734.1	6233.7	493540 ug/L	493540 ppb	10:25:18
3	Mn 257.610†	-2195.1	-3432.5	11.873 ug/L	11.873 ppb	10:26:15
3	Mo 202.031†	-345.3	-441.6	-4.9774 ug/L	-4.9774 ppb	10:26:36
3	Na 589.592 Radial†	-160.0	-3.5	-9.5568 ug/L	-9.5568 ppb	10:25:18
3	Ni 231.604†	344.5	260.6	4.1763 ug/L	4.1763 ppb	10:26:36
3	P 214.914†	258.2	-30.4	10.851 ug/L	10.851 ppb	10:26:36
3	Pb 220.353†	-979.4	-1133.4	-4.1545 ug/L	-4.1545 ppb	10:26:36
3	S 181.975 Axial†	130.4	86.9	-25.395 ug/L	-25.395 ppb	10:26:36
3	Sb 206.836†	118.6	95.4	3.4218 ug/L	3.4218 ppb	10:26:36
3	Se 196.026†	-1802.6	-2118.0	-11.599 ug/L	-11.599 ppb	10:26:36
3	Si 251.611†	555.6	99.4	2.5199 ug/L	2.5199 ppb	10:26:36
3	Sn 189.927†	-358.0	-430.4	-6.1399 ug/L	-6.1399 ppb	10:26:36
3	Sr 421.552†	264.5	282.1	0.0330 ug/L	0.0330 ppb	10:25:18
3	Ti 334.940†	-22156.0	-25189.1	-1.8382 ug/L	-1.8382 ppb	10:26:15
3	Tl 190.801†	-115.0	-75.1	-10.083 ug/L	-10.083 ppb	10:26:36
3	U 409.014†	-2610.1	736.7	-4.4537 ug/L	-4.4537 ppb	10:26:15
3	V 292.402†	851.7	2663.7	-2.0904 ug/L	-2.0904 ppb	10:26:36
3	Zn 213.857†	5227.2	5082.1	-8.7142 ug/L	-8.7142 ppb	10:26:36
3	SiO2†	573.2	78.0	4.4641 ug/L	4.4641 ppb	10:26:51

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	894667.0	84.332	%	0.0812				0.10%
Sc Radial	5097.8	91.6	%	0.34				0.37%
Y 371.029	714690.7	83.764	%	0.0958				0.11%
Y RADIAL	4408.3	91.54	%	0.357				0.39%
Ag 328.068†	-12950.3	1.2659	ug/L	0.18957	1.2659	ppb	0.18957	14.97%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	558733.1	508580	ug/L	4937.7	508580	ppb	4937.7	0.97%
QC value within limits for Al 396.153Radial Recovery = 101.72%								
As 188.979†	-123.7	7.6812	ug/L	1.70280	7.6812	ppb	1.70280	22.17%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1371.7	-3.1179	ug/L	1.40468	-3.1179	ppb	1.40468	45.05%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-598.7	1.2809	ug/L	0.12664	1.2809	ppb	0.12664	9.89%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1601.5	-0.5738	ug/L	0.02233	-0.5738	ppb	0.02233	3.89%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†     188534.1      469610 ug/L        4021.0      469610 ppb        4021.0   0.86%
   QC value within limits for Ca 317.933Radial  Recovery = 93.92%
Cd 226.502†             2780.7     -1.0128 ug/L       0.08129     -1.0128 ppb       0.08129   8.03%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               67.6     -1.7666 ug/L       0.10262     -1.7666 ppb       0.10262   5.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -342.3      0.6786 ug/L       0.23414      0.6786 ppb       0.23414  34.51%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -2458.3      4.6099 ug/L       0.33361      4.6099 ppb       0.33361   7.24%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†      5263.2      184640 ug/L         500.8      184640 ppb         500.8   0.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 92.32%
K 766.490 Radial†       -124.8      0.0323 ug/L      14.87743      0.0323 ppb      14.87743 >999.9%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†         6226.8      492990 ug/L        1472.2      492990 ppb        1472.2   0.30%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.60%
Mn 257.610†            -3358.1      11.893 ug/L        0.1103      11.893 ppb        0.1103   0.93%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -429.4     -4.5153 ug/L       0.40430     -4.5153 ppb       0.40430   8.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.630 ug/L       25.0287     -23.630 ppb       25.0287 105.92%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              248.9      3.9880 ug/L       0.21242      3.9880 ppb       0.21242   5.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -7.3      21.236 ug/L        9.2429      21.236 ppb        9.2429  43.52%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -1118.1     -1.9037 ug/L       2.42937     -1.9037 ppb       2.42937 127.61%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          87.5     -25.987 ug/L        2.4107     -25.987 ppb        2.4107   9.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               83.9      0.9940 ug/L       2.19156      0.9940 ppb       2.19156 220.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†            -2126.4     -15.367 ug/L        5.0800     -15.367 ppb        5.0800  33.06%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              148.0      3.5081 ug/L       0.86048      3.5081 ppb       0.86048  24.53%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -424.9     -5.2601 ug/L       0.81802     -5.2601 ppb       0.81802  15.55%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              277.1     -0.0833 ug/L       0.11853     -0.0833 ppb       0.11853 142.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†           -24924.2     -1.1993 ug/L       0.70220     -1.1993 ppb       0.70220  58.55%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -74.3     -9.9258 ug/L       1.80446     -9.9258 ppb       1.80446  18.18%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               653.6     -6.4689 ug/L       2.84611     -6.4689 ppb       2.84611  44.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              2634.7     -2.2098 ug/L       0.38789     -2.2098 ppb       0.38789  17.55%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             5047.6     -8.8442 ug/L       0.16704     -8.8442 ppb       0.16704   1.89%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    40.8      2.7924 ug/L       2.02453      2.7924 ppb       2.02453  72.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/8/2009 10:29:02
Data Type: Reprocessed on 7/8/2009 11:40:13

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	922949.8	922949.8	86.998	%			10:31:27
1	Sc Radial	5088.8	5088.8	91.4	%			10:30:59
1	Y 371.029	724486.5	724486.5	84.913	%			10:31:27
1	Y RADIAL	4396.5	4396.5	91.29	%			10:30:59
1	Ag 328.068†	51134.8	58138.2	284.08	ug/L	284.08	ppb	10:31:27
1	Al 396.153Radial†	511214.8	559124.8	508910	ug/L	508910	ppb	10:30:54
1	As 188.979†	1778.1	2080.7	527.29	ug/L	527.29	ppb	10:31:32
1	B 249.677†	30305.4	35216.0	523.28	ug/L	523.28	ppb	10:31:27
1	Ba 233.527†	84926.5	97594.3	499.43	ug/L	499.43	ppb	10:31:27
1	Be 313.107†	685114.1	794819.0	248.28	ug/L	248.28	ppb	10:31:27
1	Ca 317.933Radial†	171487.2	187510.8	467060	ug/L	467060	ppb	10:30:54
1	Cd 226.502†	56191.8	64867.2	463.74	ug/L	463.74	ppb	10:31:32
1	Co 228.616†	32068.4	36951.4	457.93	ug/L	457.93	ppb	10:31:32
1	Cr 267.716†	48976.1	56324.0	483.93	ug/L	483.93	ppb	10:31:32
1	Cu 324.752†	206474.7	227140.6	571.05	ug/L	571.05	ppb	10:31:27
1	Fe 238.204 Radial†	4792.9	5240.9	183870	ug/L	183870	ppb	10:30:59
1	K 766.490 Radial†	13633.7	13435.9	5876.8	ug/L	5876.8	ppb	10:30:59
1	Mg 279.077 IEC†	5720.0	6254.8	495220	ug/L	495220	ppb	10:30:59
1	Mn 257.610†	527932.1	606003.4	493.31	ug/L	493.31	ppb	10:31:27
1	Mo 202.031†	10741.5	12315.0	505.56	ug/L	505.56	ppb	10:31:32
1	Na 589.592 Radial†	1742.5	2075.9	5612.9	ug/L	5612.9	ppb	10:30:59
1	Ni 231.604†	24947.6	28527.7	456.94	ug/L	456.94	ppb	10:31:32
1	P 214.914†	6681.5	7343.1	2535.6	ug/L	2535.6	ppb	10:31:32
1	Pb 220.353†	4555.0	5264.8	477.54	ug/L	477.54	ppb	10:31:32
1	S 181.975 Axial†	2933.7	3304.3	2696.9	ug/L	2696.9	ppb	10:31:32
1	Sb 206.836†	2595.0	2937.4	568.65	ug/L	568.65	ppb	10:31:32
1	Se 196.026†	4971.6	5736.2	2540.6	ug/L	2540.6	ppb	10:31:32
1	Si 251.611†	227538.2	260983.1	5373.3	ug/L	5373.3	ppb	10:31:27
1	Sn 189.927†	3829.4	4396.2	495.92	ug/L	495.92	ppb	10:31:32
1	Sr 421.552†	32732.9	35789.2	547.06	ug/L	547.06	ppb	10:30:59
1	Ti 334.940†	325076.1	374767.2	521.46	ug/L	521.46	ppb	10:31:27
1	Tl 190.801†	2320.9	2729.1	464.98	ug/L	464.98	ppb	10:31:32
1	U 409.014†	14389.0	20374.2	482.00	ug/L	482.00	ppb	10:31:27
1	V 292.402†	80410.6	94080.6	523.26	ug/L	523.26	ppb	10:31:27
1	Zn 213.857†	83783.0	95181.8	490.76	ug/L	490.76	ppb	10:31:27
1	SiO2†	225071.9	258106.1	11379	ug/L	11379	ppb	10:31:59
2	Sc 361.383	922512.9	922512.9	86.957	%			10:31:38
2	Sc Radial	5114.2	5114.2	91.9	%			10:31:09
2	Y 371.029	723615.1	723615.1	84.810	%			10:31:38
2	Y RADIAL	4434.0	4434.0	92.07	%			10:31:09
2	Ag 328.068†	51203.8	58245.4	284.11	ug/L	284.11	ppb	10:31:38
2	Al 396.153Radial†	516287.7	561868.9	511410	ug/L	511410	ppb	10:31:04
2	As 188.979†	1781.2	2085.2	528.14	ug/L	528.14	ppb	10:31:43
2	B 249.677†	30212.2	35125.3	522.01	ug/L	522.01	ppb	10:31:38
2	Ba 233.527†	84896.2	97605.7	499.46	ug/L	499.46	ppb	10:31:38
2	Be 313.107†	684415.6	794388.8	248.15	ug/L	248.15	ppb	10:31:38
2	Ca 317.933Radial†	173685.3	188971.4	470700	ug/L	470700	ppb	10:31:04
2	Cd 226.502†	56169.1	64871.7	463.90	ug/L	463.90	ppb	10:31:43
2	Co 228.616†	32009.7	36901.3	457.33	ug/L	457.33	ppb	10:31:43
2	Cr 267.716†	48984.7	56360.6	484.22	ug/L	484.22	ppb	10:31:43
2	Cu 324.752†	206739.8	227557.9	572.02	ug/L	572.02	ppb	10:31:38
2	Fe 238.204 Radial†	4789.5	5211.1	182830	ug/L	182830	ppb	10:31:09
2	K 766.490 Radial†	13696.8	13430.5	5873.6	ug/L	5873.6	ppb	10:31:09
2	Mg 279.077 IEC†	5700.6	6202.7	491090	ug/L	491090	ppb	10:31:09
2	Mn 257.610†	527491.9	605784.5	493.08	ug/L	493.08	ppb	10:31:38
2	Mo 202.031†	10795.6	12383.1	508.21	ug/L	508.21	ppb	10:31:43
2	Na 589.592 Radial†	1739.5	2063.2	5578.5	ug/L	5578.5	ppb	10:31:09
2	Ni 231.604†	25007.5	28610.2	458.26	ug/L	458.26	ppb	10:31:43

2	P 214.914†	6657.3	7318.9	2528.5	ug/L	2528.5 ppb	10:31:43
2	Pb 220.353†	4521.9	5229.2	475.47	ug/L	475.47 ppb	10:31:43
2	S 181.975 Axial†	2966.6	3343.8	2729.8	ug/L	2729.8 ppb	10:31:43
2	Sb 206.836†	2571.5	2911.7	563.53	ug/L	563.53 ppb	10:31:43
2	Se 196.026†	5128.9	5919.8	2596.7	ug/L	2596.7 ppb	10:31:43
2	Si 251.611†	227663.7	261251.4	5378.8	ug/L	5378.8 ppb	10:31:38
2	Sn 189.927†	3812.8	4379.2	494.42	ug/L	494.42 ppb	10:31:43
2	Sr 421.552†	32971.9	35871.6	548.29	ug/L	548.29 ppb	10:31:09
2	Ti 334.940†	325093.7	374964.5	521.96	ug/L	521.96 ppb	10:31:38
2	Tl 190.801†	2278.3	2681.4	456.94	ug/L	456.94 ppb	10:31:43
2	U 409.014†	14518.6	20531.0	486.02	ug/L	486.02 ppb	10:31:38
2	V 292.402†	80202.9	93885.5	522.26	ug/L	522.26 ppb	10:31:38
2	Zn 213.857†	83836.4	95288.9	491.61	ug/L	491.61 ppb	10:31:38
2	SiO2†	226952.2	260390.9	11480	ug/L	11480 ppb	10:32:04
3	Sc 361.383	916394.6	916394.6	86.380	%		10:31:49
3	Sc Radial	5092.1	5092.1	91.5	%		10:31:20
3	Y 371.029	718336.1	718336.1	84.192	%		10:31:49
3	Y RADIAL	4424.4	4424.4	91.87	%		10:31:20
3	Ag 328.068†	50974.6	58373.2	285.14	ug/L	285.14 ppb	10:31:49
3	Al 396.153Radial†	519866.9	568222.7	517200	ug/L	517200 ppb	10:31:15
3	As 188.979†	1750.1	2062.9	523.28	ug/L	523.28 ppb	10:31:54
3	B 249.677†	30095.4	35222.0	523.28	ug/L	523.28 ppb	10:31:49
3	Ba 233.527†	84510.6	97811.1	500.55	ug/L	500.55 ppb	10:31:49
3	Be 313.107†	680536.4	795152.9	248.38	ug/L	248.38 ppb	10:31:49
3	Ca 317.933Radial†	174798.8	191009.9	475780	ug/L	475780 ppb	10:31:15
3	Cd 226.502†	55239.4	64226.6	458.85	ug/L	458.85 ppb	10:31:54
3	Co 228.616†	31559.8	36626.3	453.86	ug/L	453.86 ppb	10:31:54
3	Cr 267.716†	48208.5	55838.2	479.81	ug/L	479.81 ppb	10:31:54
3	Cu 324.752†	204835.2	226940.4	570.60	ug/L	570.60 ppb	10:31:49
3	Fe 238.204 Radial†	4816.3	5263.1	184650	ug/L	184650 ppb	10:31:20
3	K 766.490 Radial†	13730.6	13532.3	5918.2	ug/L	5918.2 ppb	10:31:20
3	Mg 279.077 IEC†	5726.3	6257.7	495450	ug/L	495450 ppb	10:31:20
3	Mn 257.610†	525190.6	607170.3	494.33	ug/L	494.33 ppb	10:31:49
3	Mo 202.031†	10571.3	12206.3	501.26	ug/L	501.26 ppb	10:31:54
3	Na 589.592 Radial†	1746.4	2079.0	5621.3	ug/L	5621.3 ppb	10:31:20
3	Ni 231.604†	24590.8	28319.8	453.61	ug/L	453.61 ppb	10:31:54
3	P 214.914†	6490.6	7177.1	2479.1	ug/L	2479.1 ppb	10:31:54
3	Pb 220.353†	4444.7	5174.6	472.31	ug/L	472.31 ppb	10:31:54
3	S 181.975 Axial†	2922.3	3315.2	2704.5	ug/L	2704.5 ppb	10:31:54
3	Sb 206.836†	2597.2	2961.2	572.95	ug/L	572.95 ppb	10:31:54
3	Se 196.026†	4938.2	5738.4	2544.4	ug/L	2544.4 ppb	10:31:54
3	Si 251.611†	226292.7	261412.2	5382.3	ug/L	5382.3 ppb	10:31:49
3	Sn 189.927†	3753.4	4339.7	490.73	ug/L	490.73 ppb	10:31:54
3	Sr 421.552†	32971.1	36026.6	550.64	ug/L	550.64 ppb	10:31:20
3	Ti 334.940†	322933.2	374959.4	522.30	ug/L	522.30 ppb	10:31:49
3	Tl 190.801†	2336.1	2765.8	471.25	ug/L	471.25 ppb	10:31:54
3	U 409.014†	14229.3	20307.5	480.26	ug/L	480.26 ppb	10:31:49
3	V 292.402†	79923.8	94178.2	523.65	ug/L	523.65 ppb	10:31:49
3	Zn 213.857†	83231.3	95232.0	490.97	ug/L	490.97 ppb	10:31:49
3	SiO2†	228890.9	264377.8	11656	ug/L	11656 ppb	10:32:10

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	920619.1	86.779	%	0.3455				0.40%
Sc Radial	5098.4	91.6	%	0.25				0.27%
Y 371.029	722145.9	84.638	%	0.3901				0.46%
Y RADIAL	4418.3	91.75	%	0.405				0.44%
Ag 328.068†	58252.3	284.44	ug/L	0.602	284.44	ppb	0.602	0.21%
QC value within limits for Ag 328.068 Recovery = 113.78%								
Al 396.153Radial†	563072.2	512510	ug/L	4248.0	512510	ppb	4248.0	0.83%
QC value within limits for Al 396.153Radial Recovery = 102.50%								
As 188.979†	2076.3	526.24	ug/L	2.594	526.24	ppb	2.594	0.49%
QC value within limits for As 188.979 Recovery = 105.25%								
B 249.677†	35187.8	522.85	ug/L	0.735	522.85	ppb	0.735	0.14%
QC value within limits for B 249.677 Recovery = 104.57%								
Ba 233.527†	97670.4	499.82	ug/L	0.636	499.82	ppb	0.636	0.13%
QC value within limits for Ba 233.527 Recovery = 99.96%								
Be 313.107†	794786.9	248.27	ug/L	0.119	248.27	ppb	0.119	0.05%
QC value within limits for Be 313.107 Recovery = 99.31%								

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Ca 317.933Radial†     189164.0      471180 ug/L        4377.5      471180 ppb         4377.5   0.93%
   QC value within limits for Ca 317.933Radial  Recovery = 94.24%
Cd 226.502†            64655.2      462.16 ug/L         2.867      462.16 ppb          2.867   0.62%
   QC value within limits for Cd 226.502  Recovery = 92.43%
Co 228.616†            36826.3      456.37 ug/L         2.197      456.37 ppb          2.197   0.48%
   QC value within limits for Co 228.616  Recovery = 91.27%
Cr 267.716†            56174.3      482.66 ug/L         2.467      482.66 ppb          2.467   0.51%
   QC value within limits for Cr 267.716  Recovery = 96.53%
Cu 324.752†           227213.0      571.22 ug/L         0.725      571.22 ppb          0.725   0.13%
   QC value within limits for Cu 324.752  Recovery = 114.24%
Fe 238.204 Radial†      5238.4      183780 ug/L         913.9      183780 ppb          913.9   0.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.89%
K 766.490 Radial†      13466.2      5889.5 ug/L         24.91      5889.5 ppb          24.91   0.42%
   QC value within limits for K 766.490 Radial  Recovery = 117.79%
Mg 279.077 IEC†         6238.4      493920 ug/L        2453.5      493920 ppb         2453.5   0.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.78%
Mn 257.610†           606319.4      493.58 ug/L         0.664      493.58 ppb          0.664   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.72%
Mo 202.031†            12301.5      505.01 ug/L         3.509      505.01 ppb          3.509   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.00%
Na 589.592 Radial†      2072.7      5604.3 ug/L         22.66      5604.3 ppb          22.66   0.40%
   QC value within limits for Na 589.592 Radial  Recovery = 112.09%
Ni 231.604†            28485.9      456.27 ug/L         2.398      456.27 ppb          2.398   0.53%
   QC value within limits for Ni 231.604  Recovery = 91.25%
P 214.914†              7279.7      2514.4 ug/L         30.79      2514.4 ppb          30.79   1.22%
   QC value within limits for P 214.914  Recovery = 100.58%
Pb 220.353†             5222.9      475.11 ug/L         2.633      475.11 ppb          2.633   0.55%
   QC value within limits for Pb 220.353  Recovery = 95.02%
S 181.975 Axial†        3321.1      2710.4 ug/L         17.23      2710.4 ppb          17.23   0.64%
   QC value within limits for S 181.975 Axial  Recovery = 108.42%
Sb 206.836†             2936.8      568.38 ug/L         4.717      568.38 ppb          4.717   0.83%
   QC value within limits for Sb 206.836  Recovery = 113.68%
Se 196.026†             5798.1      2560.6 ug/L         31.38      2560.6 ppb          31.38   1.23%
   QC value within limits for Se 196.026  Recovery = 102.42%
Si 251.611†           261215.6      5378.2 ug/L          4.51      5378.2 ppb           4.51   0.08%
   QC value within limits for Si 251.611  Recovery = 107.56%
Sn 189.927†             4371.7      493.69 ug/L         2.669      493.69 ppb          2.669   0.54%
   QC value within limits for Sn 189.927  Recovery = 98.74%
Sr 421.552†            35895.8      548.66 ug/L         1.817      548.66 ppb          1.817   0.33%
   QC value within limits for Sr 421.552  Recovery = 109.73%
Ti 334.940†           374897.0      521.91 ug/L         0.421      521.91 ppb          0.421   0.08%
   QC value within limits for Ti 334.940  Recovery = 104.38%
Tl 190.801†             2725.5      464.39 ug/L         7.171      464.39 ppb          7.171   1.54%
   QC value within limits for Tl 190.801  Recovery = 92.88%
U 409.014†             20404.2      482.76 ug/L         2.954      482.76 ppb          2.954   0.61%
   QC value within limits for U 409.014  Recovery = 96.55%
V 292.402†             94048.1      523.06 ug/L         0.714      523.06 ppb          0.714   0.14%
   QC value within limits for V 292.402  Recovery = 104.61%
Zn 213.857†            95234.2      491.11 ug/L         0.439      491.11 ppb          0.439   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.22%
SiO2†                 260958.2       11505 ug/L         140.4       11505 ppb          140.4   1.22%
   QC value within limits for SiO2  Recovery = 107.57%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: LR1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/8/2009 10:34:19
Data Type: Reprocessed on 7/8/2009 11:40:14

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	903068.1	903068.1	85.124	%			10:37:30
1	Sc Radial	4907.1	4907.1	88.2	%			10:36:32
1	Y 371.029	711048.9	711048.9	83.338	%			10:37:30
1	Y RADIAL	4267.0	4267.0	88.60	%			10:36:32
1	Ag 328.068†	-24652.6	-29599.4	5.2180	ug/L	5.2180	ppb	10:37:30
1	Al 396.153Radial†	501001.0	568251.7	517240	ug/L	517240	ppb	10:36:12
1	As 188.979†	-286.0	-299.1	17.474	ug/L	17.474	ppb	10:37:35
1	B 249.677†	2112.7	2863.4	-13.637	ug/L	-13.637	ppb	10:37:30
1	Ba 233.527†	-1436.5	-1711.8	1.5622	ug/L	1.5622	ppb	10:37:35
1	Be 313.107†	-14446.8	-9655.2	-3.0542	ug/L	-3.0542	ppb	10:37:35
1	Ca 317.933Radial†	166917.5	189275.7	471460	ug/L	471460	ppb	10:36:12
1	Cd 226.502†	5594.5	6849.8	-0.6386	ug/L	-0.6386	ppb	10:37:35
1	Co 228.616†	294.3	436.1	-0.8830	ug/L	-0.8830	ppb	10:37:35
1	Cr 267.716†	-12.1	14.4	4.1493	ug/L	4.1493	ppb	10:37:35
1	Cu 324.752†	3503.0	-6076.1	10.395	ug/L	10.395	ppb	10:37:30
1	Fe 238.204 Radial†	11037.4	12516.6	439100	ug/L	439100	ppb	10:36:32
1	K 766.490 Radial†	1318.5	22.1	26.226	ug/L	26.226	ppb	10:36:12
1	Mg 279.077 IEC†	5521.4	6261.4	495510	ug/L	495510	ppb	10:36:32
1	Mn 257.610†	-38315.8	-45838.6	11.430	ug/L	11.430	ppb	10:37:30
1	Mo 202.031†	-778.9	-946.7	-7.7594	ug/L	-7.7594	ppb	10:37:35
1	Na 589.592 Radial†	171624.9	194801.4	526720	ug/L	526720	ppb	10:36:12
1	Ni 231.604†	465.6	398.7	6.3863	ug/L	6.3863	ppb	10:37:35
1	P 214.914†	838.8	648.5	52.119	ug/L	52.119	ppb	10:37:35
1	Pb 220.353†	-640.5	-723.3	5.3786	ug/L	5.3786	ppb	10:37:35
1	S 181.975 Axial†	149.8	108.1	-10.229	ug/L	-10.229	ppb	10:37:35
1	Sb 206.836†	146.8	127.0	13.157	ug/L	13.157	ppb	10:37:35
1	Se 196.026†	-4401.3	-5148.9	-103.95	ug/L	-103.95	ppb	10:37:35
1	Si 251.611†	-979.0	-1710.1	-34.481	ug/L	-34.481	ppb	10:37:35
1	Sn 189.927†	-388.8	-462.3	-4.5333	ug/L	-4.5333	ppb	10:37:35
1	Sr 421.552†	319.3	356.6	1.1243	ug/L	1.1243	ppb	10:36:32
1	Ti 334.940†	-15490.5	-17088.2	2.9945	ug/L	2.9945	ppb	10:37:35
1	Tl 190.801†	-133.6	-95.5	-13.648	ug/L	-13.648	ppb	10:37:35
1	U 409.014†	478080.9	565462.0	13976	ug/L	13976	ppb	10:37:30
1	V 292.402†	2200.9	4238.3	-0.8487	ug/L	-0.8487	ppb	10:37:35
1	Zn 213.857†	10091.7	10732.9	-4.6503	ug/L	-4.6503	ppb	10:37:35
1	SiO2†	-858.7	-1611.1	-69.439	ug/L	-69.439	ppb	10:38:03
2	Sc 361.383	901598.6	901598.6	84.986	%			10:37:41
2	Sc Radial	4913.8	4913.8	88.3	%			10:36:57
2	Y 371.029	709120.5	709120.5	83.112	%			10:37:41
2	Y RADIAL	4292.7	4292.7	89.14	%			10:36:57
2	Ag 328.068†	-24814.9	-29837.5	4.1617	ug/L	4.1617	ppb	10:37:41
2	Al 396.153Radial†	499453.7	565720.2	514940	ug/L	514940	ppb	10:36:37
2	As 188.979†	-323.1	-343.3	7.0255	ug/L	7.0255	ppb	10:37:46
2	B 249.677†	2057.8	2802.9	-14.529	ug/L	-14.529	ppb	10:37:41
2	Ba 233.527†	-1538.0	-1834.0	0.9343	ug/L	0.9343	ppb	10:37:46
2	Be 313.107†	-14278.5	-9484.8	-2.9994	ug/L	-2.9994	ppb	10:37:46
2	Ca 317.933Radial†	166575.3	188628.5	469840	ug/L	469840	ppb	10:36:37
2	Cd 226.502†	5560.2	6820.2	-0.8124	ug/L	-0.8124	ppb	10:37:46
2	Co 228.616†	329.8	478.5	-0.3494	ug/L	-0.3494	ppb	10:37:46
2	Cr 267.716†	64.5	104.5	4.9068	ug/L	4.9068	ppb	10:37:46
2	Cu 324.752†	3384.0	-6209.4	10.043	ug/L	10.043	ppb	10:37:41
2	Fe 238.204 Radial†	11042.3	12505.0	438690	ug/L	438690	ppb	10:36:57
2	K 766.490 Radial†	1363.1	70.6	47.960	ug/L	47.960	ppb	10:36:37
2	Mg 279.077 IEC†	5523.4	6255.1	495010	ug/L	495010	ppb	10:36:57
2	Mn 257.610†	-38665.9	-46324.0	11.003	ug/L	11.003	ppb	10:37:41
2	Mo 202.031†	-762.0	-928.4	-7.0553	ug/L	-7.0553	ppb	10:37:46
2	Na 589.592 Radial†	171230.3	194087.6	524790	ug/L	524790	ppb	10:36:37
2	Ni 231.604†	460.5	393.6	6.3048	ug/L	6.3048	ppb	10:37:46

2	P 214.914†	942.4	772.0	95.294	ug/L	95.294 ppb	10:37:46
2	Pb 220.353†	-620.4	-700.9	6.6499	ug/L	6.6499 ppb	10:37:46
2	S 181.975 Axial†	185.9	150.9	26.429	ug/L	26.429 ppb	10:37:46
2	Sb 206.836†	108.8	82.6	4.4435	ug/L	4.4435 ppb	10:37:46
2	Se 196.026†	-4291.9	-5028.5	-66.360	ug/L	-66.360 ppb	10:37:46
2	Si 251.611†	-923.9	-1647.3	-33.191	ug/L	-33.191 ppb	10:37:46
2	Sn 189.927†	-421.4	-501.3	-8.7146	ug/L	-8.7146 ppb	10:37:46
2	Sr 421.552†	322.3	359.5	1.1835	ug/L	1.1835 ppb	10:36:57
2	Ti 334.940†	-14961.4	-16495.3	3.6589	ug/L	3.6589 ppb	10:37:46
2	Tl 190.801†	-157.6	-124.0	-18.471	ug/L	-18.471 ppb	10:37:46
2	U 409.014†	477587.6	565796.9	13984	ug/L	13984 ppb	10:37:41
2	V 292.402†	2214.6	4258.6	-0.6621	ug/L	-0.6621 ppb	10:37:46
2	Zn 213.857†	9931.6	10563.8	-5.5320	ug/L	-5.5320 ppb	10:37:46
2	SiO2†	-947.4	-1717.2	-74.141	ug/L	-74.141 ppb	10:38:08
3	Sc 361.383	901333.6	901333.6	84.961	%		10:37:52
3	Sc Radial	4898.6	4898.6	88.0	%		10:37:23
3	Y 371.029	709314.8	709314.8	83.134	%		10:37:52
3	Y RADIAL	4273.7	4273.7	88.74	%		10:37:23
3	Ag 328.068†	-24785.9	-29811.9	3.2059	ug/L	3.2059 ppb	10:37:52
3	Al 396.153Radial†	500210.2	568328.0	517310	ug/L	517310 ppb	10:37:02
3	As 188.979†	-299.6	-315.7	12.839	ug/L	12.839 ppb	10:37:57
3	B 249.677†	2166.2	2931.2	-12.096	ug/L	-12.096 ppb	10:37:52
3	Ba 233.527†	-1531.2	-1826.5	0.8994	ug/L	0.8994 ppb	10:37:57
3	Be 313.107†	-14414.9	-9650.3	-3.0517	ug/L	-3.0517 ppb	10:37:57
3	Ca 317.933Radial†	166348.8	188954.3	470650	ug/L	470650 ppb	10:37:02
3	Cd 226.502†	5540.8	6799.3	-0.5842	ug/L	-0.5842 ppb	10:37:57
3	Co 228.616†	326.0	474.1	-0.3588	ug/L	-0.3588 ppb	10:37:57
3	Cr 267.716†	-19.8	5.3	3.9998	ug/L	3.9998 ppb	10:37:57
3	Cu 324.752†	3399.1	-6190.5	9.9012	ug/L	9.9012 ppb	10:37:52
3	Fe 238.204 Radial†	10926.4	12412.0	435430	ug/L	435430 ppb	10:37:23
3	K 766.490 Radial†	1311.1	16.4	22.386	ug/L	22.386 ppb	10:37:02
3	Mg 279.077 IEC†	5483.5	6229.0	492950	ug/L	492950 ppb	10:37:23
3	Mn 257.610†	-38504.0	-46146.8	10.758	ug/L	10.758 ppb	10:37:52
3	Mo 202.031†	-779.9	-949.7	-8.1288	ug/L	-8.1288 ppb	10:37:57
3	Na 589.592 Radial†	170529.0	193890.3	524260	ug/L	524260 ppb	10:37:02
3	Ni 231.604†	397.1	319.1	5.1105	ug/L	5.1105 ppb	10:37:57
3	P 214.914†	880.7	699.7	73.222	ug/L	73.222 ppb	10:37:57
3	Pb 220.353†	-643.4	-728.2	5.3697	ug/L	5.3697 ppb	10:37:57
3	S 181.975 Axial†	158.0	118.1	-1.7772	ug/L	-1.7772 ppb	10:37:57
3	Sb 206.836†	116.9	92.2	6.2449	ug/L	6.2449 ppb	10:37:57
3	Se 196.026†	-4293.9	-5032.4	-78.955	ug/L	-78.955 ppb	10:37:57
3	Si 251.611†	-893.4	-1611.7	-32.442	ug/L	-32.442 ppb	10:37:57
3	Sn 189.927†	-398.8	-474.9	-5.9803	ug/L	-5.9803 ppb	10:37:57
3	Sr 421.552†	302.5	338.2	0.8478	ug/L	0.8478 ppb	10:37:23
3	Ti 334.940†	-15207.4	-16790.1	3.3272	ug/L	3.3272 ppb	10:37:57
3	Tl 190.801†	-172.7	-141.9	-21.477	ug/L	-21.477 ppb	10:37:57
3	U 409.014†	477482.3	565838.3	13986	ug/L	13986 ppb	10:37:52
3	V 292.402†	2380.5	4454.7	0.8529	ug/L	0.8529 ppb	10:37:57
3	Zn 213.857†	9939.8	10576.9	-5.0280	ug/L	-5.0280 ppb	10:37:57
3	SiO2†	-939.4	-1708.1	-73.708	ug/L	-73.708 ppb	10:38:13

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	902000.1	85.024	%	0.0881				0.10%
Sc Radial	4906.5	88.2	%	0.14				0.15%
Y 371.029	709828.1	83.195	%	0.1244				0.15%
Y RADIAL	4277.8	88.83	%	0.277				0.31%
Ag 328.068†	-29749.6	4.1952	ug/L	1.00645	4.1952	ppb	1.00645	23.99%
Al 396.153Radial†	567433.3	516500	ug/L	1350.9	516500	ppb	1350.9	0.26%
QC value within limits for Al 396.153Radial Recovery = 103.30%								
As 188.979†	-319.4	12.446	ug/L	5.2351	12.446	ppb	5.2351	42.06%
B 249.677†	2865.8	-13.421	ug/L	1.2309	-13.421	ppb	1.2309	9.17%
Ba 233.527†	-1790.8	1.1320	ug/L	0.37301	1.1320	ppb	0.37301	32.95%
Be 313.107†	-9596.8	-3.0351	ug/L	0.03096	-3.0351	ppb	0.03096	1.02%
Ca 317.933Radial†	188952.8	470650	ug/L	805.9	470650	ppb	805.9	0.17%
QC value within limits for Ca 317.933Radial Recovery = 94.13%								
Cd 226.502†	6823.1	-0.6784	ug/L	0.11915	-0.6784	ppb	0.11915	17.56%
Co 228.616†	462.9	-0.5304	ug/L	0.30543	-0.5304	ppb	0.30543	57.59%
Cr 267.716†	41.4	4.3520	ug/L	0.48630	4.3520	ppb	0.48630	11.17%

Cu 324.752†	-6158.7	10.113 ug/L	0.2544	10.113 ppb	0.2544	2.52%
Fe 238.204 Radial†	12477.9	437740 ug/L	2010.7	437740 ppb	2010.7	0.46%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.55%						
K 766.490 Radial†	36.3	32.190 ug/L	13.7909	32.190 ppb	13.7909	42.84%
Mg 279.077 IEC†	6248.5	494490 ug/L	1357.9	494490 ppb	1357.9	0.27%
QC value within limits for Mg 279.077 IEC Recovery = 98.90%						
Mn 257.610†	-46103.1	11.063 ug/L	0.3401	11.063 ppb	0.3401	3.07%
Mo 202.031†	-941.6	-7.6478 ug/L	0.54541	-7.6478 ppb	0.54541	7.13%
Na 589.592 Radial†	194259.8	525260 ug/L	1296.0	525260 ppb	1296.0	0.25%
QC value within limits for Na 589.592 Radial Recovery = 105.05%						
Ni 231.604†	370.5	5.9339 ug/L	0.71420	5.9339 ppb	0.71420	12.04%
P 214.914†	706.7	73.545 ug/L	21.5891	73.545 ppb	21.5891	29.35%
Pb 220.353†	-717.5	5.7994 ug/L	0.73655	5.7994 ppb	0.73655	12.70%
S 181.975 Axial†	125.7	4.8073 ug/L	19.19563	4.8073 ppb	19.19563	399.30%
Sb 206.836†	100.6	7.9483 ug/L	4.59954	7.9483 ppb	4.59954	57.87%
Se 196.026†	-5069.9	-83.089 ug/L	19.1336	-83.089 ppb	19.1336	23.03%
Si 251.611†	-1656.4	-33.371 ug/L	1.0313	-33.371 ppb	1.0313	3.09%
Sn 189.927†	-479.5	-6.4094 ug/L	2.12342	-6.4094 ppb	2.12342	33.13%
Sr 421.552†	351.4	1.0519 ug/L	0.17919	1.0519 ppb	0.17919	17.04%
Ti 334.940†	-16791.2	3.3269 ug/L	0.33215	3.3269 ppb	0.33215	9.98%
Tl 190.801†	-120.5	-17.865 ug/L	3.9499	-17.865 ppb	3.9499	22.11%
U 409.014†	565699.1	13982 ug/L	5.3	13982 ppb	5.3	0.04%
QC value within limits for U 409.014 Recovery = 93.21%						
V 292.402†	4317.2	-0.2193 ug/L	0.93321	-0.2193 ppb	0.93321	425.48%
Zn 213.857†	10624.5	-5.0701 ug/L	0.44239	-5.0701 ppb	0.44239	8.73%
SiO2†	-1678.8	-72.429 ug/L	2.5989	-72.429 ppb	2.5989	3.59%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/8/2009 10:40:22
Data Type: Reprocessed on 7/8/2009 11:40:15

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1014953.4	1014953.4	95.671	%			10:43:57
1	Sc Radial	5417.4	5417.4	97.3	%			10:42:20
1	Y 371.029	800941.5	800941.5	93.873	%			10:43:57
1	Y RADIAL	4706.4	4706.4	97.73	%			10:42:20
1	Ag 328.068†	-7110.5	-8070.8	7.1415	ug/L	7.1415	ppb	10:44:02
1	Al 396.153Radial†	449.0	553.4	87.615	ug/L	87.615	ppb	10:42:20
1	As 188.979†	40482.4	42351.3	9989.0	ug/L	9989.0	ppb	10:44:02
1	B 249.677†	309866.7	324270.4	5029.0	ug/L	5029.0	ppb	10:43:57
1	Ba 233.527†	2664318.6	2784861.5	14118	ug/L	14118	ppb	10:43:57
1	Be 313.107†	8856992.8	9265110.5	2903.5	ug/L	2903.5	ppb	10:43:50
1	Ca 317.933Radial†	25.7	9.5	23.698	ug/L	23.698	ppb	10:42:40
1	Cd 226.502†	1280128.2	1338334.9	10016	ug/L	10016	ppb	10:43:57
1	Co 228.616†	749635.6	783648.9	9762.7	ug/L	9762.7	ppb	10:43:57
1	Cr 267.716†	2711737.5	2834479.1	24157	ug/L	24157	ppb	10:43:57
1	Cu 324.752†	7865610.7	8211358.3	20260	ug/L	20260	ppb	10:43:50
1	Fe 238.204 Radial†	-7.6	-8.1	23.148	ug/L	23.148	ppb	10:42:40
1	K 766.490 Radial†	684372.6	701529.4	304300	ug/L	304300	ppb	10:42:15
1	Mg 279.077 IEC†	-2.9	-3.1	-51.980	ug/L	-51.980	ppb	10:42:40
1	Mn 257.610†	11427294.3	11943581.3	9438.7	ug/L	9438.7	ppb	10:43:50
1	Mo 202.031†	232338.7	242820.8	9719.4	ug/L	9719.4	ppb	10:44:02
1	Na 589.592 Radial†	-122.5	44.6	120.62	ug/L	120.62	ppb	10:42:40
1	Ni 231.604†	591314.2	617924.4	9897.7	ug/L	9897.7	ppb	10:43:57
1	P 214.914†	48706.9	50574.1	14767	ug/L	14767	ppb	10:44:02
1	Pb 220.353†	309384.9	323414.5	24253	ug/L	24253	ppb	10:44:02
1	S 181.975 Axial†	58295.0	60865.2	51520	ug/L	51520	ppb	10:44:02
1	Sb 206.836†	53440.0	55812.8	10745	ug/L	10745	ppb	10:44:02
1	Se 196.026†	29668.4	31032.6	10122	ug/L	10122	ppb	10:44:02
1	Si 251.611†	2155853.2	2252850.9	46184	ug/L	46184	ppb	10:43:57
1	Sn 189.927†	95946.9	100283.2	10430	ug/L	10430	ppb	10:44:02
1	Sr 421.552†	646073.6	663655.5	10225	ug/L	10225	ppb	10:42:15
1	Ti 334.940†	7127693.7	7451349.2	9745.7	ug/L	9745.7	ppb	10:43:50
1	Tl 190.801†	55066.4	57619.7	9753.1	ug/L	9753.1	ppb	10:44:02
1	U 409.014†	-2611.3	1105.2	-19.174	ug/L	-19.174	ppb	10:44:02
1	V 292.402†	1681684.2	1759437.4	10082	ug/L	10082	ppb	10:43:57
1	Zn 213.857†	2418310.9	2526623.2	14016	ug/L	14016	ppb	10:43:57
1	SiO2†	2181096.5	2279194.3	100050	ug/L	100050	ppb	10:44:49
2	Sc 361.383	1029870.2	1029870.2	97.077	%			10:44:17
2	Sc Radial	5497.9	5497.9	98.8	%			10:42:50
2	Y 371.029	811966.1	811966.1	95.166	%			10:44:17
2	Y RADIAL	4740.4	4740.4	98.44	%			10:42:50
2	Ag 328.068†	-7088.1	-7940.1	6.7301	ug/L	6.7301	ppb	10:44:22
2	Al 396.153Radial†	473.1	571.1	109.77	ug/L	109.77	ppb	10:42:50
2	As 188.979†	40474.1	41729.8	9842.3	ug/L	9842.3	ppb	10:44:22
2	B 249.677†	307090.3	316719.2	4911.8	ug/L	4911.8	ppb	10:44:17
2	Ba 233.527†	2644634.7	2724248.1	13811	ug/L	13811	ppb	10:44:17
2	Be 313.107†	8832006.5	9105280.2	2853.4	ug/L	2853.4	ppb	10:44:10
2	Ca 317.933Radial†	28.1	11.5	28.754	ug/L	28.754	ppb	10:43:10
2	Cd 226.502†	1271277.6	1309837.1	9803.0	ug/L	9803.0	ppb	10:44:17
2	Co 228.616†	743954.7	766447.7	9548.5	ug/L	9548.5	ppb	10:44:17
2	Cr 267.716†	2688484.5	2769471.3	23603	ug/L	23603	ppb	10:44:17
2	Cu 324.752†	7842993.7	8068977.9	19908	ug/L	19908	ppb	10:44:10
2	Fe 238.204 Radial†	-5.8	-6.2	84.443	ug/L	84.443	ppb	10:43:10
2	K 766.490 Radial†	684716.9	691584.4	299980	ug/L	299980	ppb	10:42:45
2	Mg 279.077 IEC†	-2.0	-2.2	19.126	ug/L	19.126	ppb	10:43:10
2	Mn 257.610†	11404692.0	11747293.6	9283.6	ug/L	9283.6	ppb	10:44:10
2	Mo 202.031†	232311.4	239275.2	9577.5	ug/L	9577.5	ppb	10:44:22
2	Na 589.592 Radial†	-129.4	39.4	106.58	ug/L	106.58	ppb	10:43:10
2	Ni 231.604†	586038.5	603537.6	9667.2	ug/L	9667.2	ppb	10:44:17

2	P 214.914†	48755.1	49886.4	14579	ug/L	14579 ppb	10:44:22
2	Pb 220.353†	309441.3	318788.5	23906	ug/L	23906 ppb	10:44:22
2	S 181.975 Axial†	58411.2	60102.3	50874	ug/L	50874 ppb	10:44:22
2	Sb 206.836†	53362.1	54923.6	10578	ug/L	10578 ppb	10:44:22
2	Se 196.026†	29761.5	30679.3	10007	ug/L	10007 ppb	10:44:22
2	Si 251.611†	2138710.2	2202552.9	45150	ug/L	45150 ppb	10:44:17
2	Sn 189.927†	95957.5	98841.5	10280	ug/L	10280 ppb	10:44:22
2	Sr 421.552†	646581.7	654452.3	10083	ug/L	10083 ppb	10:42:45
2	Ti 334.940†	7109976.4	7325187.8	9580.8	ug/L	9580.8 ppb	10:44:10
2	Tl 190.801†	55268.7	56994.4	9647.5	ug/L	9647.5 ppb	10:44:22
2	U 409.014†	-2581.0	1176.0	-16.357	ug/L	-16.357 ppb	10:44:22
2	V 292.402†	1665056.2	1716848.7	9839.4	ug/L	9839.4 ppb	10:44:17
2	Zn 213.857†	2400720.5	2471890.8	13712	ug/L	13712 ppb	10:44:17
2	SiO2†	2194108.9	2259577.6	99188	ug/L	99188 ppb	10:44:57
3	Sc 361.383	1027984.8	1027984.8	96.899	%		10:44:37
3	Sc Radial	5311.1	5311.1	95.4	%		10:43:20
3	Y 371.029	810508.3	810508.3	94.995	%		10:44:37
3	Y RADIAL	4586.5	4586.5	95.24	%		10:43:20
3	Ag 328.068†	-7268.9	-8140.1	6.0153	ug/L	6.0153 ppb	10:44:42
3	Al 396.153Radial†	472.0	586.8	121.54	ug/L	121.54 ppb	10:43:20
3	As 188.979†	40697.9	42037.3	9914.2	ug/L	9914.2 ppb	10:44:42
3	B 249.677†	308195.5	318440.0	4938.5	ug/L	4938.5 ppb	10:44:37
3	Ba 233.527†	2647831.5	2732543.7	13853	ug/L	13853 ppb	10:44:37
3	Be 313.107†	8792922.6	9081631.8	2846.1	ug/L	2846.1 ppb	10:44:30
3	Ca 317.933Radial†	29.0	13.4	33.386	ug/L	33.386 ppb	10:43:40
3	Cd 226.502†	1272287.1	1313280.7	9828.8	ug/L	9828.8 ppb	10:44:37
3	Co 228.616†	745426.9	769372.6	9585.2	ug/L	9585.2 ppb	10:44:37
3	Cr 267.716†	2688412.8	2774476.6	23645	ug/L	23645 ppb	10:44:37
3	Cu 324.752†	7782720.1	8021593.1	19791	ug/L	19791 ppb	10:44:30
3	Fe 238.204 Radial†	-6.7	-7.3	44.771	ug/L	44.771 ppb	10:43:40
3	K 766.490 Radial†	683971.3	715172.9	310220	ug/L	310220 ppb	10:43:15
3	Mg 279.077 IEC†	-3.7	-4.1	-128.19	ug/L	-128.19 ppb	10:43:40
3	Mn 257.610†	11381446.6	11744851.0	9281.7	ug/L	9281.7 ppb	10:44:30
3	Mo 202.031†	233312.1	240746.8	9636.4	ug/L	9636.4 ppb	10:44:42
3	Na 589.592 Radial†	-122.9	41.6	112.55	ug/L	112.55 ppb	10:43:40
3	Ni 231.604†	587015.1	605652.6	9701.1	ug/L	9701.1 ppb	10:44:37
3	P 214.914†	49152.9	50388.9	14776	ug/L	14776 ppb	10:44:42
3	Pb 220.353†	310539.8	320506.8	24035	ug/L	24035 ppb	10:44:42
3	S 181.975 Axial†	58718.6	60529.9	51236	ug/L	51236 ppb	10:44:42
3	Sb 206.836†	53615.8	55286.2	10651	ug/L	10651 ppb	10:44:42
3	Se 196.026†	29842.3	30818.9	10053	ug/L	10053 ppb	10:44:42
3	Si 251.611†	2145121.2	2213209.7	45366	ug/L	45366 ppb	10:44:37
3	Sn 189.927†	96345.6	99423.4	10341	ug/L	10341 ppb	10:44:42
3	Sr 421.552†	646025.5	676882.0	10428	ug/L	10428 ppb	10:43:15
3	Ti 334.940†	7084549.3	7312379.8	9564.0	ug/L	9564.0 ppb	10:44:30
3	Tl 190.801†	55398.8	57233.1	9687.5	ug/L	9687.5 ppb	10:44:42
3	U 409.014†	-2499.7	1255.0	-14.474	ug/L	-14.474 ppb	10:44:42
3	V 292.402†	1665986.8	1720954.9	9863.5	ug/L	9863.5 ppb	10:44:37
3	Zn 213.857†	2405918.3	2481790.6	13767	ug/L	13767 ppb	10:44:37
3	SiO2†	2167381.8	2236140.5	98142	ug/L	98142 ppb	10:45:04

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1024269.4	96.549	%	0.7657				0.79%
Sc Radial	5408.8	97.2	%	1.68				1.73%
Y 371.029	807805.3	94.678	%	0.7019				0.74%
Y RADIAL	4677.8	97.14	%	1.679				1.73%
Ag 328.068†	-8050.3	6.6290	ug/L	0.56988	6.6290	ppb	0.56988	8.60%
Al 396.153Radial†	570.4	106.31	ug/L	17.224	106.31	ppb	17.224	16.20%
As 188.979†	42039.5	9915.2	ug/L	73.36	9915.2	ppb	73.36	0.74%
QC value within limits for As 188.979 Recovery = 99.15%								
B 249.677†	319809.9	4959.8	ug/L	61.39	4959.8	ppb	61.39	1.24%
QC value within limits for B 249.677 Recovery = 99.20%								
Ba 233.527†	2747217.8	13927	ug/L	166.6	13927	ppb	166.6	1.20%
QC value within limits for Ba 233.527 Recovery = 92.85%								
Be 313.107†	9150674.2	2867.7	ug/L	31.27	2867.7	ppb	31.27	1.09%
QC value within limits for Be 313.107 Recovery = 95.59%								
Ca 317.933Radial†	11.5	28.613	ug/L	4.8452	28.613	ppb	4.8452	16.93%
Cd 226.502†	1320484.3	9882.7	ug/L	116.42	9882.7	ppb	116.42	1.18%

```
   QC value within limits for Cd 226.502  Recovery = 98.83%
Co 228.616†          773156.4      9632.2 ug/L        114.57      9632.2 ppb        114.57   1.19%
   QC value within limits for Co 228.616  Recovery = 96.32%
Cr 267.716†         2792809.0       23802 ug/L         308.3       23802 ppb         308.3   1.30%
   QC value within limits for Cr 267.716  Recovery = 95.21%
Cu 324.752†         8100643.1       19986 ug/L         243.7       19986 ppb         243.7   1.22%
   QC value within limits for Cu 324.752  Recovery = 99.93%
Fe 238.204 Radial†        -7.2      50.787 ug/L       31.0875      50.787 ppb       31.0875  61.21%
K 766.490 Radial†     702762.2      304830 ug/L        5138.4      304830 ppb        5138.4   1.69%
   QC value within limits for K 766.490 Radial  Recovery = 101.61%
Mg 279.077 IEC†           -3.1     -53.681 ug/L       73.6715     -53.681 ppb       73.6715 137.24%
Mn 257.610†         11811908.6      9334.7 ug/L         90.12      9334.7 ppb         90.12   0.97%
   QC value within limits for Mn 257.610  Recovery = 93.35%
Mo 202.031†          240947.6      9644.5 ug/L         71.30      9644.5 ppb         71.30   0.74%
   QC value within limits for Mo 202.031  Recovery = 96.44%
Na 589.592 Radial†        41.9      113.25 ug/L         7.046      113.25 ppb         7.046   6.22%
Ni 231.604†          609038.2      9755.3 ug/L        124.43      9755.3 ppb        124.43   1.28%
   QC value within limits for Ni 231.604  Recovery = 97.55%
P 214.914†            50283.1       14707 ug/L         111.5       14707 ppb         111.5   0.76%
   QC value within limits for P 214.914  Recovery = 98.05%
Pb 220.353†          320903.3       24065 ug/L         175.3       24065 ppb         175.3   0.73%
   QC value within limits for Pb 220.353  Recovery = 96.26%
S 181.975 Axial†      60499.1       51210 ug/L         323.6       51210 ppb         323.6   0.63%
   QC value within limits for S 181.975 Axial  Recovery = 102.42%
Sb 206.836†           55340.9       10658 ug/L          83.6       10658 ppb          83.6   0.78%
   QC value within limits for Sb 206.836  Recovery = 106.58%
Se 196.026†           30843.6       10061 ug/L          58.0       10061 ppb          58.0   0.58%
   QC value within limits for Se 196.026  Recovery = 100.61%
Si 251.611†         2222871.2       45567 ug/L         545.3       45567 ppb         545.3   1.20%
   QC value within limits for Si 251.611  Recovery = 91.13%
Sn 189.927†           99516.1       10350 ug/L          75.4       10350 ppb          75.4   0.73%
   QC value within limits for Sn 189.927  Recovery = 103.50%
Sr 421.552†          664996.6       10245 ug/L         173.7       10245 ppb         173.7   1.70%
   QC value within limits for Sr 421.552  Recovery = 102.45%
Ti 334.940†         7362972.3      9630.2 ug/L        100.43      9630.2 ppb        100.43   1.04%
   QC value within limits for Ti 334.940  Recovery = 96.30%
Tl 190.801†           57282.4      9696.0 ug/L         53.30      9696.0 ppb         53.30   0.55%
   QC value within limits for Tl 190.801  Recovery = 96.96%
U 409.014†             1178.7     -16.669 ug/L        2.3653     -16.669 ppb        2.3653  14.19%
V 292.402†          1732413.7      9928.4 ug/L        133.88      9928.4 ppb        133.88   1.35%
   QC value within limits for V 292.402  Recovery = 99.28%
Zn 213.857†         2493434.9       13832 ug/L         161.7       13832 ppb         161.7   1.17%
   QC value within limits for Zn 213.857  Recovery = 92.21%
SiO2†               2258304.1       99125 ug/L         953.1       99125 ppb         953.1   0.96%
   QC value within limits for SiO2  Recovery = 92.64%
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:03:37
Data Type: Reprocessed on 7/8/2009 11:40:18

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1067409.9	1067409.9	100.62	%			11:06:48
1	Sc Radial	5545.0	5545.0	99.6	%			11:05:29
1	Y 371.029	849738.5	849738.5	99.593	%			11:06:48
1	Y RADIAL	4788.0	4788.0	99.42	%			11:05:29
1	Ag 328.068†	127524.3	126105.9	502.25	ug/L	502.25	ppb	11:06:48
1	Al 396.153Radial†	5299.4	5410.6	4903.4	ug/L	4903.4	ppb	11:05:29
1	As 188.979†	2078.4	2102.6	496.72	ug/L	496.72	ppb	11:07:08
1	B 249.677†	31751.6	31939.0	495.88	ug/L	495.88	ppb	11:06:48
1	Ba 233.527†	98259.2	97634.0	495.40	ug/L	495.40	ppb	11:06:48
1	Be 313.107†	1589957.2	1587550.7	494.78	ug/L	494.78	ppb	11:06:48
1	Ca 317.933Radial†	2000.8	1991.0	4959.2	ug/L	4959.2	ppb	11:05:49
1	Cd 226.502†	66514.3	66385.2	496.24	ug/L	496.24	ppb	11:06:48
1	Co 228.616†	38913.1	38765.6	483.08	ug/L	483.08	ppb	11:07:08
1	Cr 267.716†	58344.9	58016.7	494.83	ug/L	494.83	ppb	11:06:48
1	Cu 324.752†	211137.7	199655.3	492.89	ug/L	492.89	ppb	11:06:48
1	Fe 238.204 Radial†	142.3	142.5	5015.0	ug/L	5015.0	ppb	11:05:49
1	K 766.490 Radial†	13511.2	12086.4	5238.2	ug/L	5238.2	ppb	11:05:29
1	Mg 279.077 IEC†	62.2	62.2	4932.1	ug/L	4932.1	ppb	11:05:49
1	Mn 257.610†	629929.2	625250.1	494.68	ug/L	494.68	ppb	11:06:48
1	Mo 202.031†	12643.5	12534.4	502.06	ug/L	502.06	ppb	11:07:08
1	Na 589.592 Radial†	3490.6	3673.5	9932.6	ug/L	9932.6	ppb	11:05:29
1	Ni 231.604†	30743.5	30407.2	487.05	ug/L	487.05	ppb	11:07:08
1	P 214.914†	7354.4	6972.5	2389.5	ug/L	2389.5	ppb	11:07:08
1	Pb 220.353†	6693.1	6681.2	502.20	ug/L	502.20	ppb	11:07:08
1	S 181.975 Axial†	1258.3	1182.8	1000.2	ug/L	1000.2	ppb	11:07:08
1	Sb 206.836†	2588.5	2527.3	503.10	ug/L	503.10	ppb	11:07:08
1	Se 196.026†	1499.7	1512.2	511.22	ug/L	511.22	ppb	11:07:08
1	Si 251.611†	122687.2	121376.8	2492.5	ug/L	2492.5	ppb	11:06:48
1	Sn 189.927†	4831.3	4796.3	499.31	ug/L	499.31	ppb	11:07:08
1	Sr 421.552†	33822.5	33937.9	522.82	ug/L	522.82	ppb	11:05:29
1	Ti 334.940†	380487.1	379269.6	496.43	ug/L	496.43	ppb	11:06:48
1	Tl 190.801†	2880.1	2923.9	495.14	ug/L	495.14	ppb	11:07:08
1	U 409.014†	15659.6	19398.6	479.74	ug/L	479.74	ppb	11:06:48
1	V 292.402†	85512.2	86642.1	497.38	ug/L	497.38	ppb	11:06:48
1	Zn 213.857†	90296.7	88622.2	490.34	ug/L	490.34	ppb	11:06:48
1	SiO2†	123097.1	121742.0	5353.1	ug/L	5353.1	ppb	11:08:09
2	Sc 361.383	1057828.3	1057828.3	99.712	%			11:07:16
2	Sc Radial	5453.0	5453.0	98.0	%			11:05:54
2	Y 371.029	842848.9	842848.9	98.785	%			11:07:16
2	Y RADIAL	4734.2	4734.2	98.31	%			11:05:54
2	Ag 328.068†	126253.5	125979.4	501.76	ug/L	501.76	ppb	11:07:16
2	Al 396.153Radial†	5204.3	5403.2	4896.6	ug/L	4896.6	ppb	11:05:54
2	As 188.979†	2077.1	2120.0	500.82	ug/L	500.82	ppb	11:07:36
2	B 249.677†	31594.9	32067.6	497.87	ug/L	497.87	ppb	11:07:16
2	Ba 233.527†	97420.0	97677.0	495.62	ug/L	495.62	ppb	11:07:16
2	Be 313.107†	1578761.2	1590635.7	495.74	ug/L	495.74	ppb	11:07:16
2	Ca 317.933Radial†	1973.0	1996.5	4973.1	ug/L	4973.1	ppb	11:06:14
2	Cd 226.502†	65741.0	66208.5	494.92	ug/L	494.92	ppb	11:07:16
2	Co 228.616†	38917.3	39120.1	487.50	ug/L	487.50	ppb	11:07:36
2	Cr 267.716†	57810.8	58006.3	494.74	ug/L	494.74	ppb	11:07:16
2	Cu 324.752†	209446.8	199860.3	493.40	ug/L	493.40	ppb	11:07:16
2	Fe 238.204 Radial†	140.5	143.1	5035.0	ug/L	5035.0	ppb	11:06:14
2	K 766.490 Radial†	13401.9	12203.6	5289.1	ug/L	5289.1	ppb	11:05:54
2	Mg 279.077 IEC†	61.6	62.7	4968.4	ug/L	4968.4	ppb	11:06:14
2	Mn 257.610†	623982.1	624956.7	494.45	ug/L	494.45	ppb	11:07:16
2	Mo 202.031†	12615.6	12620.3	505.50	ug/L	505.50	ppb	11:07:36
2	Na 589.592 Radial†	3446.1	3687.2	9969.7	ug/L	9969.7	ppb	11:05:54
2	Ni 231.604†	30735.8	30676.3	491.36	ug/L	491.36	ppb	11:07:36

2	P 214.914†	7337.1	7021.4	2406.8 ug/L	2406.8 ppb	11:07:36
2	Pb 220.353†	6673.6	6722.0	505.26 ug/L	505.26 ppb	11:07:36
2	S 181.975 Axial†	1264.2	1200.1	1014.8 ug/L	1014.8 ppb	11:07:36
2	Sb 206.836†	2593.9	2556.0	508.91 ug/L	508.91 ppb	11:07:36
2	Se 196.026†	1503.2	1529.2	516.82 ug/L	516.82 ppb	11:07:36
2	Si 251.611†	121455.1	121245.6	2489.7 ug/L	2489.7 ppb	11:07:16
2	Sn 189.927†	4839.5	4848.0	504.69 ug/L	504.69 ppb	11:07:36
2	Sr 421.552†	33228.1	33904.0	522.30 ug/L	522.30 ppb	11:05:54
2	Ti 334.940†	377267.8	379466.3	496.69 ug/L	496.69 ppb	11:07:16
2	Tl 190.801†	2881.9	2951.6	499.79 ug/L	499.79 ppb	11:07:36
2	U 409.014†	15609.8	19489.6	482.00 ug/L	482.00 ppb	11:07:16
2	V 292.402†	84902.2	86800.1	498.32 ug/L	498.32 ppb	11:07:16
2	Zn 213.857†	89406.2	88541.9	489.86 ug/L	489.86 ppb	11:07:16
2	SiO2†	122640.5	122392.2	5381.6 ug/L	5381.6 ppb	11:08:14
3	Sc 361.383	1055071.7	1055071.7	99.452 %		11:07:43
3	Sc Radial	5432.7	5432.7	97.6 %		11:06:19
3	Y 371.029	840276.0	840276.0	98.484 %		11:07:43
3	Y RADIAL	4696.8	4696.8	97.53 %		11:06:19
3	Ag 328.068†	126120.7	126176.7	502.55 ug/L	502.55 ppb	11:07:43
3	Al 396.153Radial†	5181.8	5400.1	4893.7 ug/L	4893.7 ppb	11:06:19
3	As 188.979†	2085.4	2133.8	504.06 ug/L	504.06 ppb	11:08:03
3	B 249.677†	31427.7	31982.3	496.53 ug/L	496.53 ppb	11:07:43
3	Ba 233.527†	97457.1	97969.6	497.10 ug/L	497.10 ppb	11:07:43
3	Be 313.107†	1576182.4	1592179.6	496.22 ug/L	496.22 ppb	11:07:43
3	Ca 317.933Radial†	1975.0	2006.1	4996.9 ug/L	4996.9 ppb	11:06:39
3	Cd 226.502†	65930.8	66571.6	497.63 ug/L	497.63 ppb	11:07:43
3	Co 228.616†	38836.3	39140.6	487.76 ug/L	487.76 ppb	11:08:03
3	Cr 267.716†	57863.2	58210.5	496.48 ug/L	496.48 ppb	11:07:43
3	Cu 324.752†	208532.5	199489.8	492.49 ug/L	492.49 ppb	11:07:43
3	Fe 238.204 Radial†	141.4	144.5	5084.1 ug/L	5084.1 ppb	11:06:39
3	K 766.490 Radial†	13356.4	12208.3	5291.1 ug/L	5291.1 ppb	11:06:19
3	Mg 279.077 IEC†	60.3	61.6	4883.3 ug/L	4883.3 ppb	11:06:39
3	Mn 257.610†	623827.7	626436.5	495.63 ug/L	495.63 ppb	11:07:43
3	Mo 202.031†	12607.0	12644.6	506.48 ug/L	506.48 ppb	11:08:03
3	Na 589.592 Radial†	3459.6	3714.2	10043 ug/L	10043 ppb	11:06:19
3	Ni 231.604†	30656.7	30677.3	491.38 ug/L	491.38 ppb	11:08:03
3	P 214.914†	7338.8	7042.2	2414.3 ug/L	2414.3 ppb	11:08:03
3	Pb 220.353†	6655.9	6721.6	505.23 ug/L	505.23 ppb	11:08:03
3	S 181.975 Axial†	1273.7	1212.9	1025.7 ug/L	1025.7 ppb	11:08:03
3	Sb 206.836†	2578.9	2547.6	507.27 ug/L	507.27 ppb	11:08:03
3	Se 196.026†	1491.2	1521.0	514.35 ug/L	514.35 ppb	11:08:03
3	Si 251.611†	121268.2	121376.0	2492.4 ug/L	2492.4 ppb	11:07:43
3	Sn 189.927†	4839.7	4860.9	506.04 ug/L	506.04 ppb	11:08:03
3	Sr 421.552†	33109.5	33909.5	522.38 ug/L	522.38 ppb	11:06:19
3	Ti 334.940†	376709.4	379893.4	497.25 ug/L	497.25 ppb	11:07:43
3	Tl 190.801†	2882.8	2960.1	501.23 ug/L	501.23 ppb	11:08:03
3	U 409.014†	15694.8	19616.0	485.13 ug/L	485.13 ppb	11:07:43
3	V 292.402†	84699.0	86818.3	498.43 ug/L	498.43 ppb	11:07:43
3	Zn 213.857†	89588.7	88959.8	492.20 ug/L	492.20 ppb	11:07:43
3	SiO2†	121565.4	121632.6	5348.0 ug/L	5348.0 ppb	11:08:19

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060103.3	99.927	%	0.6104				0.61%
Sc Radial	5476.9	98.4	%	1.08				1.09%
Y 371.029	844287.8	98.954	%	0.5734				0.58%
Y RADIAL	4739.7	98.42	%	0.952				0.97%
Ag 328.068†	126087.3	502.19	ug/L	0.401	502.19	ppb	0.401	0.08%
QC value within limits for Ag 328.068 Recovery = 100.44%								
Al 396.153Radial†	5404.6	4897.9	ug/L	5.00	4897.9	ppb	5.00	0.10%
QC value within limits for Al 396.153Radial Recovery = 97.96%								
As 188.979†	2118.8	500.53	ug/L	3.674	500.53	ppb	3.674	0.73%
QC value within limits for As 188.979 Recovery = 100.11%								
B 249.677†	31996.3	496.76	ug/L	1.015	496.76	ppb	1.015	0.20%
QC value within limits for B 249.677 Recovery = 99.35%								
Ba 233.527†	97760.2	496.04	ug/L	0.926	496.04	ppb	0.926	0.19%
QC value within limits for Ba 233.527 Recovery = 99.21%								
Be 313.107†	1590122.0	495.58	ug/L	0.734	495.58	ppb	0.734	0.15%
QC value within limits for Be 313.107 Recovery = 99.12%								

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Ca 317.933Radial†        1997.9      4976.4 ug/L        19.05      4976.4 ppb        19.05   0.38%
   QC value within limits for Ca 317.933Radial  Recovery = 99.53%
Cd 226.502†             66388.4      496.27 ug/L        1.355      496.27 ppb        1.355   0.27%
   QC value within limits for Cd 226.502  Recovery = 99.25%
Co 228.616†             39008.8      486.11 ug/L        2.631      486.11 ppb        2.631   0.54%
   QC value within limits for Co 228.616  Recovery = 97.22%
Cr 267.716†             58077.8      495.35 ug/L        0.980      495.35 ppb        0.980   0.20%
   QC value within limits for Cr 267.716  Recovery = 99.07%
Cu 324.752†            199668.4      492.93 ug/L        0.457      492.93 ppb        0.457   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†        143.4      5044.7 ug/L        35.56      5044.7 ppb        35.56   0.70%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.89%
K 766.490 Radial†       12166.1      5272.8 ug/L        29.98      5272.8 ppb        29.98   0.57%
   QC value within limits for K 766.490 Radial  Recovery = 105.46%
Mg 279.077 IEC†            62.1      4927.9 ug/L        42.66      4927.9 ppb        42.66   0.87%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.56%
Mn 257.610†            625547.8      494.92 ug/L        0.624      494.92 ppb        0.624   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.98%
Mo 202.031†             12599.8      504.68 ug/L        2.320      504.68 ppb        2.320   0.46%
   QC value within limits for Mo 202.031  Recovery = 100.94%
Na 589.592 Radial†       3691.6      9981.7 ug/L        56.08      9981.7 ppb        56.08   0.56%
   QC value within limits for Na 589.592 Radial  Recovery = 99.82%
Ni 231.604†             30586.9      489.93 ug/L        2.493      489.93 ppb        2.493   0.51%
   QC value within limits for Ni 231.604  Recovery = 97.99%
P 214.914†               7012.0      2403.5 ug/L        12.69      2403.5 ppb        12.69   0.53%
   QC value within limits for P 214.914  Recovery = 96.14%
Pb 220.353†              6708.3      504.23 ug/L        1.758      504.23 ppb        1.758   0.35%
   QC value within limits for Pb 220.353  Recovery = 100.85%
S 181.975 Axial†         1198.6      1013.6 ug/L        12.78      1013.6 ppb        12.78   1.26%
   QC value within limits for S 181.975 Axial  Recovery = 101.36%
Sb 206.836†              2543.6      506.43 ug/L        2.994      506.43 ppb        2.994   0.59%
   QC value within limits for Sb 206.836  Recovery = 101.29%
Se 196.026†              1520.8      514.13 ug/L        2.806      514.13 ppb        2.806   0.55%
   QC value within limits for Se 196.026  Recovery = 102.83%
Si 251.611†            121332.8      2491.6 ug/L         1.58      2491.6 ppb         1.58   0.06%
   QC value within limits for Si 251.611  Recovery = 99.66%
Sn 189.927†              4835.1      503.35 ug/L        3.557      503.35 ppb        3.557   0.71%
   QC value within limits for Sn 189.927  Recovery = 100.67%
Sr 421.552†             33917.1      522.50 ug/L        0.280      522.50 ppb        0.280   0.05%
   QC value within limits for Sr 421.552  Recovery = 104.50%
Ti 334.940†            379543.1      496.79 ug/L        0.417      496.79 ppb        0.417   0.08%
   QC value within limits for Ti 334.940  Recovery = 99.36%
Tl 190.801†              2945.2      498.72 ug/L        3.184      498.72 ppb        3.184   0.64%
   QC value within limits for Tl 190.801  Recovery = 99.74%
U 409.014†              19501.4      482.29 ug/L        2.703      482.29 ppb        2.703   0.56%
   QC value within limits for U 409.014  Recovery = 96.46%
V 292.402†              86753.5      498.04 ug/L        0.579      498.04 ppb        0.579   0.12%
   QC value within limits for V 292.402  Recovery = 99.61%
Zn 213.857†             88708.0      490.80 ug/L        1.232      490.80 ppb        1.232   0.25%
   QC value within limits for Zn 213.857  Recovery = 98.16%
SiO2†                  121922.3      5360.9 ug/L        18.12      5360.9 ppb        18.12   0.34%
   QC value within limits for SiO2  Recovery = 100.25%
All analyte(s) passed QC.
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Sequence No.: 16
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:10:29
Data Type: Reprocessed on 7/8/2009 11:40:19

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1056286.1	1056286.1	99.567	%			11:13:38
1	Sc Radial	5577.8	5577.8	100	%			11:12:21
1	Y 371.029	851747.2	851747.2	99.828	%			11:13:38
1	Y RADIAL	4867.5	4867.5	101.1	%			11:12:21
1	Ag 328.068†	792.7	157.6	0.6291	ug/L	0.6291	ppb	11:13:43
1	Al 396.153Radial†	-60.0	32.4	29.446	ug/L	29.446	ppb	11:12:21
1	As 188.979†	-47.8	-11.1	-2.5990	ug/L	-2.5990	ppb	11:14:03
1	B 249.677†	436.8	820.2	12.780	ug/L	12.780	ppb	11:13:43
1	Ba 233.527†	31.5	7.4	0.0373	ug/L	0.0373	ppb	11:14:03
1	Be 313.107†	-7422.8	-138.9	-0.0432	ug/L	-0.0432	ppb	11:13:43
1	Ca 317.933Radial†	33.6	16.5	41.209	ug/L	41.209	ppb	11:12:41
1	Cd 226.502†	-287.1	-10.7	-0.0827	ug/L	-0.0827	ppb	11:14:03
1	Co 228.616†	-82.2	7.8	0.0972	ug/L	0.0972	ppb	11:14:03
1	Cr 267.716†	-32.4	-4.0	-0.0341	ug/L	-0.0341	ppb	11:14:03
1	Cu 324.752†	10356.0	209.8	0.5189	ug/L	0.5189	ppb	11:13:43
1	Fe 238.204 Radial†	1.0	0.7	23.570	ug/L	23.570	ppb	11:12:41
1	K 766.490 Radial†	1855.2	377.8	163.93	ug/L	163.93	ppb	11:12:21
1	Mg 279.077 IEC†	1.4	1.2	93.519	ug/L	93.519	ppb	11:12:41
1	Mn 257.610†	821.4	-2.0	-0.0003	ug/L	-0.0003	ppb	11:14:03
1	Mo 202.031†	33.3	1.7	0.0702	ug/L	0.0702	ppb	11:14:03
1	Na 589.592 Radial†	-185.2	-14.4	-38.901	ug/L	-38.901	ppb	11:12:41
1	Ni 231.604†	168.8	21.3	0.3412	ug/L	0.3412	ppb	11:14:03
1	P 214.914†	333.0	-2.5	-0.9562	ug/L	-0.9562	ppb	11:14:03
1	Pb 220.353†	11.5	40.6	3.0505	ug/L	3.0505	ppb	11:14:03
1	S 181.975 Axial†	72.5	5.0	4.2399	ug/L	4.2399	ppb	11:14:03
1	Sb 206.836†	55.9	10.7	2.1229	ug/L	2.1229	ppb	11:14:03
1	Se 196.026†	-17.3	4.3	1.4749	ug/L	1.4749	ppb	11:14:03
1	Si 251.611†	665.9	108.7	2.1852	ug/L	2.1852	ppb	11:14:03
1	Sn 189.927†	14.7	9.3	0.9689	ug/L	0.9689	ppb	11:14:03
1	Sr 421.552†	24.7	19.1	0.2942	ug/L	0.2942	ppb	11:12:41
1	Ti 334.940†	-1110.3	-5.8	-0.0052	ug/L	-0.0052	ppb	11:13:43
1	Tl 190.801†	-57.1	4.0	0.6835	ug/L	0.6835	ppb	11:14:03
1	U 409.014†	-3785.0	33.2	0.8217	ug/L	0.8217	ppb	11:13:38
1	V 292.402†	-1685.0	-39.6	-0.2237	ug/L	-0.2237	ppb	11:13:43
1	Zn 213.857†	1105.7	-11.9	-0.0751	ug/L	-0.0751	ppb	11:14:03
1	SiO2†	681.4	82.0	3.4918	ug/L	3.4918	ppb	11:15:09
2	Sc 361.383	1055939.4	1055939.4	99.534	%			11:14:08
2	Sc Radial	5379.7	5379.7	96.7	%			11:12:46
2	Y 371.029	851096.0	851096.0	99.752	%			11:14:08
2	Y RADIAL	4702.4	4702.4	97.65	%			11:12:46
2	Ag 328.068†	776.8	141.8	0.5427	ug/L	0.5427	ppb	11:14:13
2	Al 396.153Radial†	-76.7	12.9	11.716	ug/L	11.716	ppb	11:12:46
2	As 188.979†	-40.2	-3.5	-0.8491	ug/L	-0.8491	ppb	11:14:33
2	B 249.677†	486.5	870.3	13.572	ug/L	13.572	ppb	11:14:13
2	Ba 233.527†	62.3	38.3	0.1924	ug/L	0.1924	ppb	11:14:33
2	Be 313.107†	-7290.4	-8.3	-0.0025	ug/L	-0.0025	ppb	11:14:13
2	Ca 317.933Radial†	28.6	12.6	31.463	ug/L	31.463	ppb	11:13:06
2	Cd 226.502†	-289.0	-12.7	-0.0867	ug/L	-0.0867	ppb	11:14:33
2	Co 228.616†	-77.8	12.3	0.1535	ug/L	0.1535	ppb	11:14:33
2	Cr 267.716†	-16.8	11.7	0.0997	ug/L	0.0997	ppb	11:14:33
2	Cu 324.752†	10238.9	95.6	0.2319	ug/L	0.2319	ppb	11:14:13
2	Fe 238.204 Radial†	-1.5	-1.9	-67.871	ug/L	-67.871	ppb	11:13:06
2	K 766.490 Radial†	1812.4	401.6	174.21	ug/L	174.21	ppb	11:12:46
2	Mg 279.077 IEC†	1.0	0.8	66.268	ug/L	66.268	ppb	11:13:06
2	Mn 257.610†	855.6	32.6	0.0157	ug/L	0.0157	ppb	11:14:33
2	Mo 202.031†	30.0	-1.6	-0.0706	ug/L	-0.0706	ppb	11:14:33
2	Na 589.592 Radial†	-174.9	-10.5	-28.379	ug/L	-28.379	ppb	11:13:06
2	Ni 231.604†	168.3	20.8	0.3332	ug/L	0.3332	ppb	11:14:33

2	P 214.914†	337.1	1.8	0.6504	ug/L	0.6504	ppb	11:14:33
2	Pb 220.353†	5.9	23.2	1.7452	ug/L	1.7452	ppb	11:14:33
2	S 181.975 Axial†	79.7	12.3	10.368	ug/L	10.368	ppb	11:14:33
2	Sb 206.836†	62.7	17.5	3.4466	ug/L	3.4466	ppb	11:14:33
2	Se 196.026†	-10.1	11.5	3.4915	ug/L	3.4915	ppb	11:14:33
2	Si 251.611†	654.2	97.1	1.9448	ug/L	1.9448	ppb	11:14:33
2	Sn 189.927†	12.6	7.2	0.7527	ug/L	0.7527	ppb	11:14:33
2	Sr 421.552†	34.7	30.4	0.4675	ug/L	0.4675	ppb	11:13:06
2	Ti 334.940†	-1082.3	21.9	0.0326	ug/L	0.0326	ppb	11:14:13
2	Tl 190.801†	-39.2	22.0	3.7138	ug/L	3.7138	ppb	11:14:33
2	U 409.014†	-3991.4	-175.3	-4.3425	ug/L	-4.3425	ppb	11:14:08
2	V 292.402†	-1651.7	-6.6	-0.0367	ug/L	-0.0367	ppb	11:14:13
2	Zn 213.857†	1118.7	1.5	0.0109	ug/L	0.0109	ppb	11:14:33
2	SiO2†	678.0	78.8	3.3488	ug/L	3.3488	ppb	11:15:14
3	Sc 361.383	1066175.5	1066175.5	100.50	%			11:14:39
3	Sc Radial	5571.9	5571.9	100	%			11:13:11
3	Y 371.029	858182.7	858182.7	100.58	%			11:14:39
3	Y RADIAL	4847.5	4847.5	100.7	%			11:13:11
3	Ag 328.068†	733.0	90.7	0.3451	ug/L	0.3451	ppb	11:14:44
3	Al 396.153Radial†	-63.8	28.4	25.885	ug/L	25.885	ppb	11:13:11
3	As 188.979†	-36.2	0.9	0.1978	ug/L	0.1978	ppb	11:15:04
3	B 249.677†	438.0	817.4	12.743	ug/L	12.743	ppb	11:14:44
3	Ba 233.527†	45.2	20.7	0.1045	ug/L	0.1045	ppb	11:15:04
3	Be 313.107†	-7375.6	-22.8	-0.0070	ug/L	-0.0070	ppb	11:14:44
3	Ca 317.933Radial†	31.4	14.4	35.975	ug/L	35.975	ppb	11:13:31
3	Cd 226.502†	-275.1	4.0	0.0342	ug/L	0.0342	ppb	11:15:04
3	Co 228.616†	-85.2	5.6	0.0709	ug/L	0.0709	ppb	11:15:04
3	Cr 267.716†	-11.4	17.3	0.1457	ug/L	0.1457	ppb	11:15:04
3	Cu 324.752†	10202.8	-39.1	-0.0986	ug/L	-0.0986	ppb	11:14:44
3	Fe 238.204 Radial†	-0.7	-1.1	-36.971	ug/L	-36.971	ppb	11:13:31
3	K 766.490 Radial†	1706.6	231.3	100.35	ug/L	100.35	ppb	11:13:11
3	Mg 279.077 IEC†	0.4	0.2	14.946	ug/L	14.946	ppb	11:13:31
3	Mn 257.610†	832.1	0.9	-0.0044	ug/L	-0.0044	ppb	11:15:04
3	Mo 202.031†	38.5	6.5	0.2593	ug/L	0.2593	ppb	11:15:04
3	Na 589.592 Radial†	-180.8	-10.1	-27.397	ug/L	-27.397	ppb	11:13:31
3	Ni 231.604†	170.2	21.1	0.3376	ug/L	0.3376	ppb	11:15:04
3	P 214.914†	362.2	23.5	8.3827	ug/L	8.3827	ppb	11:15:04
3	Pb 220.353†	-20.1	9.1	0.6925	ug/L	0.6925	ppb	11:15:04
3	S 181.975 Axial†	80.7	12.5	10.586	ug/L	10.586	ppb	11:15:04
3	Sb 206.836†	62.0	16.3	3.2114	ug/L	3.2114	ppb	11:15:04
3	Se 196.026†	-17.5	4.2	1.2231	ug/L	1.2231	ppb	11:15:04
3	Si 251.611†	661.8	98.4	1.9887	ug/L	1.9887	ppb	11:15:04
3	Sn 189.927†	17.9	12.4	1.2868	ug/L	1.2868	ppb	11:15:04
3	Sr 421.552†	29.8	24.3	0.3745	ug/L	0.3745	ppb	11:13:31
3	Ti 334.940†	-1085.5	29.2	0.0391	ug/L	0.0391	ppb	11:14:44
3	Tl 190.801†	-66.9	-5.2	-0.8818	ug/L	-0.8818	ppb	11:15:04
3	U 409.014†	-3721.1	132.1	3.2823	ug/L	3.2823	ppb	11:14:39
3	V 292.402†	-1611.3	49.5	0.2955	ug/L	0.2955	ppb	11:14:44
3	Zn 213.857†	1113.1	-14.8	-0.0813	ug/L	-0.0813	ppb	11:15:04
3	SiO2†	689.8	84.0	3.6182	ug/L	3.6182	ppb	11:15:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1059467.0	99.867	%	0.5479				0.55%
Sc Radial	5509.8	99.0	%	2.03				2.05%
Y 371.029	853675.3	100.05	%	0.459				0.46%
Y RADIAL	4805.8	99.79	%	1.872				1.88%
Ag 328.068†	130.0	0.5056	ug/L	0.14559	0.5056	ppb	0.14559	28.79%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	24.6	22.349	ug/L	9.3789	22.349	ppb	9.3789	41.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.6	-1.0834	ug/L	1.41306	-1.0834	ppb	1.41306	130.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	836.0	13.032	ug/L	0.4684	13.032	ppb	0.4684	3.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.1	0.1114	ug/L	0.07778	0.1114	ppb	0.07778	69.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-56.7	-0.0176	ug/L	0.02232	-0.0176	ppb	0.02232	127.00%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          14.5      36.216 ug/L        4.8774      36.216 ppb        4.8774  13.47%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.5     -0.0451 ug/L       0.06867     -0.0451 ppb       0.06867 152.40%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 8.6      0.1072 ug/L       0.04222      0.1072 ppb       0.04222  39.39%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 8.3      0.0704 ug/L       0.09343      0.0704 ppb       0.09343 132.64%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                88.8      0.2174 ug/L       0.30899      0.2174 ppb       0.30899 142.11%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.8     -27.091 ug/L       46.5144     -27.091 ppb       46.5144 171.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         336.9      146.16 ug/L        40.010      146.16 ppb        40.010  27.37%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.7      58.244 ug/L       39.8965      58.244 ppb       39.8965  68.50%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                10.5      0.0036 ug/L       0.01059      0.0036 ppb       0.01059 290.42%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.2      0.0863 ug/L       0.16552      0.0863 ppb       0.16552 191.79%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -11.7     -31.559 ug/L        6.3772     -31.559 ppb        6.3772  20.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.1      0.3373 ug/L       0.00401      0.3373 ppb       0.00401   1.19%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  7.6      2.6923 ug/L       4.99307      2.6923 ppb       4.99307 185.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                24.3      1.8294 ug/L       1.18127      1.8294 ppb       1.18127  64.57%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            9.9      8.3978 ug/L       3.60254      8.3978 ppb       3.60254  42.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                14.8      2.9269 ug/L       0.70621      2.9269 ppb       0.70621  24.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 6.6      2.0632 ug/L       1.24335      2.0632 ppb       1.24335  60.26%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               101.4      2.0396 ug/L       0.12804      2.0396 ppb       0.12804   6.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.6      1.0028 ug/L       0.26867      1.0028 ppb       0.26867  26.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                24.6      0.3787 ug/L       0.08674      0.3787 ppb       0.08674  22.90%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                15.1      0.0222 ug/L       0.02395      0.0222 ppb       0.02395 107.99%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.1719 ug/L       2.33641      1.1719 ppb       2.33641 199.38%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 -3.3     -0.0795 ug/L       3.89151     -0.0795 ppb       3.89151 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  1.1      0.0117 ug/L       0.26296      0.0117 ppb       0.26296 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                -8.4     -0.0485 ug/L       0.05156     -0.0485 ppb       0.05156 106.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      81.6      3.4863 ug/L       0.13480      3.4863 ppb       0.13480   3.87%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: LR1
Analyst: HSC
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/8/2009 11:17:30
Data Type: Reprocessed on 7/8/2009 11:40:20

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1046705.1	1046705.1	98.664	%			11:20:42
1	Sc Radial	5285.9	5285.9	95.0	%			11:19:24
1	Y 371.029	838520.8	838520.8	98.278	%			11:20:42
1	Y RADIAL	4594.7	4594.7	95.41	%			11:19:24
1	Ag 328.068†	-28259.2	-29280.5	9.7367	ug/L	9.7367	ppb	11:20:42
1	Al 396.153Radial†	-104.1	-17.4	-14.625	ug/L	-14.625	ppb	11:19:24
1	As 188.979†	-375.6	-343.8	-2.6523	ug/L	-2.6523	ppb	11:21:02
1	B 249.677†	2868.7	3289.1	-0.5237	ug/L	-0.5237	ppb	11:20:42
1	Ba 233.527†	-1751.7	-1799.7	0.0492	ug/L	0.0492	ppb	11:21:02
1	Be 313.107†	-7239.6	-21.4	-0.0064	ug/L	-0.0064	ppb	11:20:42
1	Ca 317.933Radial†	22.3	6.5	16.305	ug/L	16.305	ppb	11:19:44
1	Cd 226.502†	5204.4	5552.6	-4.5755	ug/L	-4.5755	ppb	11:21:02
1	Co 228.616†	250.1	343.9	-1.3538	ug/L	-1.3538	ppb	11:21:02
1	Cr 267.716†	-824.6	-807.2	0.7505	ug/L	0.7505	ppb	11:21:02
1	Cu 324.752†	802.5	-9377.9	-0.5740	ug/L	-0.5740	ppb	11:20:42
1	Fe 238.204 Radial†	10567.5	11124.8	390270	ug/L	390270	ppb	11:19:24
1	K 766.490 Radial†	1599.4	210.8	389.48	ug/L	389.48	ppb	11:19:24
1	Mg 279.077 IEC†	6.2	6.3	166.70	ug/L	166.70	ppb	11:19:44
1	Mn 257.610†	-57355.3	-58959.2	4.2573	ug/L	4.2573	ppb	11:20:42
1	Mo 202.031†	-642.9	-683.4	-0.5684	ug/L	-0.5684	ppb	11:20:42
1	Na 589.592 Radial†	-176.8	-15.7	-42.375	ug/L	-42.375	ppb	11:19:44
1	Ni 231.604†	294.0	149.8	2.3977	ug/L	2.3977	ppb	11:21:02
1	P 214.914†	1226.8	906.5	9.2980	ug/L	9.2980	ppb	11:21:02
1	Pb 220.353†	427.8	462.7	-2.1099	ug/L	-2.1099	ppb	11:21:02
1	S 181.975 Axial†	88.8	22.2	18.788	ug/L	18.788	ppb	11:21:02
1	Sb 206.836†	15.9	-29.3	0.9649	ug/L	0.9649	ppb	11:21:02
1	Se 196.026†	-3818.0	-3848.1	119.57	ug/L	119.57	ppb	11:21:02
1	Si 251.611†	-912.5	-1484.9	-30.180	ug/L	-30.180	ppb	11:21:02
1	Sn 189.927†	-36.6	-42.6	2.5556	ug/L	2.5556	ppb	11:21:02
1	Sr 421.552†	22.5	18.2	0.2804	ug/L	0.2804	ppb	11:19:44
1	Ti 334.940†	-991.5	104.3	0.1206	ug/L	0.1206	ppb	11:21:02
1	Tl 190.801†	-76.4	-16.1	-3.1221	ug/L	-3.1221	ppb	11:21:02
1	U 409.014†	-2034.4	1772.8	-3.9602	ug/L	-3.9602	ppb	11:20:42
1	V 292.402†	7424.0	9177.3	-1.4441	ug/L	-1.4441	ppb	11:21:02
1	Zn 213.857†	8001.3	6987.3	-3.0916	ug/L	-3.0916	ppb	11:21:02
1	SiO2†	-992.8	-1608.6	-70.084	ug/L	-70.084	ppb	11:22:00
2	Sc 361.383	1052226.2	1052226.2	99.184	%			11:21:08
2	Sc Radial	5401.8	5401.8	97.1	%			11:19:49
2	Y 371.029	842665.3	842665.3	98.764	%			11:21:08
2	Y RADIAL	4714.0	4714.0	97.89	%			11:19:49
2	Ag 328.068†	-28377.9	-29249.9	9.3733	ug/L	9.3733	ppb	11:21:08
2	Al 396.153Radial†	-122.8	-34.3	-30.134	ug/L	-30.134	ppb	11:19:49
2	As 188.979†	-364.1	-330.2	0.2438	ug/L	0.2438	ppb	11:21:28
2	B 249.677†	3058.2	3464.9	2.4165	ug/L	2.4165	ppb	11:21:08
2	Ba 233.527†	-1739.0	-1777.6	0.1263	ug/L	0.1263	ppb	11:21:28
2	Be 313.107†	-7287.8	-31.5	-0.0094	ug/L	-0.0094	ppb	11:21:08
2	Ca 317.933Radial†	23.0	6.7	16.789	ug/L	16.789	ppb	11:20:09
2	Cd 226.502†	5255.4	5576.3	-4.2206	ug/L	-4.2206	ppb	11:21:28
2	Co 228.616†	235.9	328.3	-1.5227	ug/L	-1.5227	ppb	11:21:28
2	Cr 267.716†	-795.1	-773.0	1.0118	ug/L	1.0118	ppb	11:21:28
2	Cu 324.752†	938.3	-9245.3	-0.3338	ug/L	-0.3338	ppb	11:21:08
2	Fe 238.204 Radial†	10757.5	11081.9	388770	ug/L	388770	ppb	11:19:49
2	K 766.490 Radial†	1494.6	66.6	325.81	ug/L	325.81	ppb	11:19:49
2	Mg 279.077 IEC†	5.9	5.9	130.42	ug/L	130.42	ppb	11:20:09
2	Mn 257.610†	-57434.3	-58733.8	4.2400	ug/L	4.2400	ppb	11:21:08
2	Mo 202.031†	-612.5	-649.3	0.6913	ug/L	0.6913	ppb	11:21:08
2	Na 589.592 Radial†	-180.6	-15.6	-42.212	ug/L	-42.212	ppb	11:20:09
2	Ni 231.604†	278.0	132.1	2.1139	ug/L	2.1139	ppb	11:21:28

2	P 214.914†	1227.8	901.0	8.4921	ug/L	8.4921 ppb	11:21:28
2	Pb 220.353†	449.1	481.9	-0.5307	ug/L	-0.5307 ppb	11:21:28
2	S 181.975 Axial†	80.8	13.6	11.530	ug/L	11.530 ppb	11:21:28
2	Sb 206.836†	33.2	-12.0	4.3505	ug/L	4.3505 ppb	11:21:28
2	Se 196.026†	-3813.6	-3823.4	122.34	ug/L	122.34 ppb	11:21:28
2	Si 251.611†	-923.6	-1491.3	-30.313	ug/L	-30.313 ppb	11:21:28
2	Sn 189.927†	-40.9	-46.7	2.1032	ug/L	2.1032 ppb	11:21:28
2	Sr 421.552†	35.7	31.3	0.4814	ug/L	0.4814 ppb	11:20:09
2	Ti 334.940†	-974.5	126.7	0.1495	ug/L	0.1495 ppb	11:21:28
2	Tl 190.801†	-70.5	-9.6	-2.0337	ug/L	-2.0337 ppb	11:21:28
2	U 409.014†	-2005.9	1812.3	-2.7948	ug/L	-2.7948 ppb	11:21:08
2	V 292.402†	7472.6	9186.8	-1.1665	ug/L	-1.1665 ppb	11:21:28
2	Zn 213.857†	8017.0	6960.5	-3.0760	ug/L	-3.0760 ppb	11:21:28
2	SiO2†	-1024.5	-1635.3	-71.266	ug/L	-71.266 ppb	11:22:05
3	Sc 361.383	1038864.2	1038864.2	97.925	%		11:21:35
3	Sc Radial	5569.7	5569.7	100	%		11:20:14
3	Y 371.029	832242.4	832242.4	97.542	%		11:21:35
3	Y RADIAL	4850.2	4850.2	100.7	%		11:20:14
3	Ag 328.068†	-28102.1	-29336.3	7.7693	ug/L	7.7693 ppb	11:21:35
3	Al 396.153Radial†	-102.4	-10.1	-8.1423	ug/L	-8.1423 ppb	11:20:14
3	As 188.979†	-361.3	-332.1	-0.9980	ug/L	-0.9980 ppb	11:21:55
3	B 249.677†	2847.5	3289.3	0.2032	ug/L	0.2032 ppb	11:21:35
3	Ba 233.527†	-1784.8	-1846.9	-0.3157	ug/L	-0.3157 ppb	11:21:55
3	Be 313.107†	-7215.4	-52.1	-0.0159	ug/L	-0.0159 ppb	11:21:35
3	Ca 317.933Radial†	20.5	3.5	8.8182	ug/L	8.8182 ppb	11:20:34
3	Cd 226.502†	5264.7	5654.0	-3.1736	ug/L	-3.1736 ppb	11:21:55
3	Co 228.616†	244.1	339.7	-1.3213	ug/L	-1.3213 ppb	11:21:55
3	Cr 267.716†	-801.4	-789.8	0.7943	ug/L	0.7943 ppb	11:21:55
3	Cu 324.752†	902.1	-9270.0	-0.6227	ug/L	-0.6227 ppb	11:21:35
3	Fe 238.204 Radial†	10979.5	10969.5	384830	ug/L	384830 ppb	11:20:14
3	K 766.490 Radial†	1427.0	-47.3	273.35	ug/L	273.35 ppb	11:20:14
3	Mg 279.077 IEC†	6.1	5.9	137.86	ug/L	137.86 ppb	11:20:34
3	Mn 257.610†	-56773.9	-58804.2	3.6706	ug/L	3.6706 ppb	11:21:35
3	Mo 202.031†	-575.4	-619.4	1.6175	ug/L	1.6175 ppb	11:21:35
3	Na 589.592 Radial†	-177.6	-7.0	-19.058	ug/L	-19.058 ppb	11:20:34
3	Ni 231.604†	287.7	145.5	2.3298	ug/L	2.3298 ppb	11:21:55
3	P 214.914†	1224.2	913.2	16.013	ug/L	16.013 ppb	11:21:55
3	Pb 220.353†	422.9	460.9	-1.7263	ug/L	-1.7263 ppb	11:21:55
3	S 181.975 Axial†	81.7	15.6	13.165	ug/L	13.165 ppb	11:21:55
3	Sb 206.836†	38.2	-6.4	5.3941	ug/L	5.3941 ppb	11:21:55
3	Se 196.026†	-3850.1	-3910.1	80.299	ug/L	80.299 ppb	11:21:55
3	Si 251.611†	-924.9	-1504.6	-30.592	ug/L	-30.592 ppb	11:21:55
3	Sn 189.927†	-42.3	-48.7	1.8220	ug/L	1.8220 ppb	11:21:55
3	Sr 421.552†	28.6	23.1	0.3559	ug/L	0.3559 ppb	11:20:34
3	Ti 334.940†	-986.5	101.9	0.1187	ug/L	0.1187 ppb	11:21:55
3	Tl 190.801†	-94.3	-34.9	-6.3034	ug/L	-6.3034 ppb	11:21:55
3	U 409.014†	-2185.9	1602.5	-7.5175	ug/L	-7.5175 ppb	11:21:35
3	V 292.402†	7401.4	9211.1	-0.4859	ug/L	-0.4859 ppb	11:21:55
3	Zn 213.857†	8037.4	7085.4	-1.9547	ug/L	-1.9547 ppb	11:21:55
3	SiO2†	-936.7	-1558.9	-67.898	ug/L	-67.898 ppb	11:22:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1045931.8	98.591	%	0.6329				0.64%
Sc Radial	5419.1	97.4	%	2.56				2.63%
Y 371.029	837809.5	98.194	%	0.6151				0.63%
Y RADIAL	4719.6	98.00	%	2.655				2.71%
Ag 328.068†	-29288.9	8.9598	ug/L	1.04683	8.9598	ppb	1.04683	11.68%
Al 396.153Radial†	-20.6	-17.634	ug/L	11.3004	-17.634	ppb	11.3004	64.08%
As 188.979†	-335.4	-1.1355	ug/L	1.45294	-1.1355	ppb	1.45294	127.95%
B 249.677†	3347.8	0.6987	ug/L	1.53142	0.6987	ppb	1.53142	219.19%
Ba 233.527†	-1808.0	-0.0467	ug/L	0.23610	-0.0467	ppb	0.23610	505.55%
Be 313.107†	-35.0	-0.0105	ug/L	0.00487	-0.0105	ppb	0.00487	46.13%
Ca 317.933Radial†	5.6	13.971	ug/L	4.4688	13.971	ppb	4.4688	31.99%
Cd 226.502†	5594.3	-3.9899	ug/L	0.72889	-3.9899	ppb	0.72889	18.27%
Co 228.616†	337.3	-1.3993	ug/L	0.10812	-1.3993	ppb	0.10812	7.73%
Cr 267.716†	-790.0	0.8522	ug/L	0.13996	0.8522	ppb	0.13996	16.42%
Cu 324.752†	-9297.7	-0.5102	ug/L	0.15464	-0.5102	ppb	0.15464	30.31%
Fe 238.204 Radial†	11058.7	387960	ug/L	2812.7	387960	ppb	2812.7	0.72%

K 766.490 Radial†	76.7	329.55	ug/L	58.152	329.55	ppb	58.152	17.65%
Mg 279.077 IEC†	6.0	144.99	ug/L	19.161	144.99	ppb	19.161	13.21%
Mn 257.610†	-58832.4	4.0559	ug/L	0.33383	4.0559	ppb	0.33383	8.23%
Mo 202.031†	-650.7	0.5801	ug/L	1.09717	0.5801	ppb	1.09717	189.12%
Na 589.592 Radial†	-12.8	-34.548	ug/L	13.4155	-34.548	ppb	13.4155	38.83%
Ni 231.604†	142.4	2.2805	ug/L	0.14816	2.2805	ppb	0.14816	6.50%
P 214.914†	906.9	11.268	ug/L	4.1293	11.268	ppb	4.1293	36.65%
Pb 220.353†	468.5	-1.4556	ug/L	0.82364	-1.4556	ppb	0.82364	56.58%
S 181.975 Axial†	17.1	14.494	ug/L	3.8072	14.494	ppb	3.8072	26.27%
Sb 206.836†	-15.9	3.5699	ug/L	2.31548	3.5699	ppb	2.31548	64.86%
Se 196.026†	-3860.5	107.40	ug/L	23.512	107.40	ppb	23.512	21.89%
Si 251.611†	-1493.6	-30.362	ug/L	0.2100	-30.362	ppb	0.2100	0.69%
Sn 189.927†	-46.0	2.1603	ug/L	0.37012	2.1603	ppb	0.37012	17.13%
Sr 421.552†	24.2	0.3726	ug/L	0.10154	0.3726	ppb	0.10154	27.25%
Ti 334.940†	111.0	0.1296	ug/L	0.01724	0.1296	ppb	0.01724	13.30%
Tl 190.801†	-20.2	-3.8197	ug/L	2.21870	-3.8197	ppb	2.21870	58.09%
U 409.014†	1729.2	-4.7575	ug/L	2.46022	-4.7575	ppb	2.46022	51.71%
V 292.402†	9191.8	-1.0321	ug/L	0.49303	-1.0321	ppb	0.49303	47.77%
Zn 213.857†	7011.0	-2.7074	ug/L	0.65195	-2.7074	ppb	0.65195	24.08%
SiO2†	-1600.9	-69.749	ug/L	1.7089	-69.749	ppb	1.7089	2.45%

Sequence No.: 18
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:24:21
Data Type: Reprocessed on 7/8/2009 11:40:21

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1059944.6	1059944.6	99.912	%			11:27:33
1	Sc Radial	5479.4	5479.4	98.5	%			11:26:14
1	Y 371.029	844640.7	844640.7	98.995	%			11:27:33
1	Y RADIAL	4754.7	4754.7	98.73	%			11:26:14
1	Ag 328.068†	125630.8	125103.4	498.29	ug/L	498.29	ppb	11:27:33
1	Al 396.153Radial†	5189.1	5362.2	4859.2	ug/L	4859.2	ppb	11:26:14
1	As 188.979†	2086.1	2124.9	501.95	ug/L	501.95	ppb	11:27:53
1	B 249.677†	31012.2	31421.1	487.79	ug/L	487.79	ppb	11:27:33
1	Ba 233.527†	97648.8	97711.0	495.79	ug/L	495.79	ppb	11:27:33
1	Be 313.107†	1580190.1	1588904.8	495.20	ug/L	495.20	ppb	11:27:33
1	Ca 317.933Radial†	1996.6	2010.8	5008.6	ug/L	5008.6	ppb	11:26:34
1	Cd 226.502†	66244.6	66580.8	497.71	ug/L	497.71	ppb	11:27:33
1	Co 228.616†	39192.8	39317.9	489.98	ug/L	489.98	ppb	11:27:53
1	Cr 267.716†	57869.2	57949.0	494.25	ug/L	494.25	ppb	11:27:33
1	Cu 324.752†	208005.6	197998.5	488.80	ug/L	488.80	ppb	11:27:33
1	Fe 238.204 Radial†	141.0	142.8	5026.5	ug/L	5026.5	ppb	11:26:34
1	K 766.490 Radial†	13180.0	11912.5	5162.7	ug/L	5162.7	ppb	11:26:14
1	Mg 279.077 IEC†	65.0	65.8	5216.9	ug/L	5216.9	ppb	11:26:34
1	Mn 257.610†	624970.8	624696.8	494.24	ug/L	494.24	ppb	11:27:33
1	Mo 202.031†	12690.5	12670.0	507.49	ug/L	507.49	ppb	11:27:53
1	Na 589.592 Radial†	3480.4	3705.1	10018	ug/L	10018	ppb	11:26:14
1	Ni 231.604†	30935.7	30814.9	493.58	ug/L	493.58	ppb	11:27:53
1	P 214.914†	7423.2	7092.8	2432.7	ug/L	2432.7	ppb	11:27:53
1	Pb 220.353†	6700.4	6735.4	506.26	ug/L	506.26	ppb	11:27:53
1	S 181.975 Axial†	1257.4	1190.7	1006.9	ug/L	1006.9	ppb	11:27:53
1	Sb 206.836†	2570.6	2527.4	503.36	ug/L	503.36	ppb	11:27:53
1	Se 196.026†	1498.7	1521.6	514.33	ug/L	514.33	ppb	11:27:53
1	Si 251.611†	121332.8	120880.1	2482.2	ug/L	2482.2	ppb	11:27:33
1	Sn 189.927†	4849.4	4848.2	504.72	ug/L	504.72	ppb	11:27:53
1	Sr 421.552†	33394.2	33909.5	522.38	ug/L	522.38	ppb	11:26:14
1	Ti 334.940†	376930.4	378373.2	495.26	ug/L	495.26	ppb	11:27:33
1	Tl 190.801†	2903.5	2967.5	502.45	ug/L	502.45	ppb	11:27:53
1	U 409.014†	15423.9	19272.3	476.61	ug/L	476.61	ppb	11:27:33
1	V 292.402†	84907.4	86635.3	497.41	ug/L	497.41	ppb	11:27:33
1	Zn 213.857†	89673.2	88630.1	490.34	ug/L	490.34	ppb	11:27:33
1	SiO2†	121738.4	121243.8	5330.9	ug/L	5330.9	ppb	11:28:53
2	Sc 361.383	1066729.6	1066729.6	100.55	%			11:28:00
2	Sc Radial	5456.8	5456.8	98.1	%			11:26:39
2	Y 371.029	848088.2	848088.2	99.399	%			11:28:00
2	Y RADIAL	4734.1	4734.1	98.31	%			11:26:39
2	Ag 328.068†	126873.6	125539.5	500.03	ug/L	500.03	ppb	11:28:00
2	Al 396.153Radial†	5194.2	5389.3	4884.0	ug/L	4884.0	ppb	11:26:39
2	As 188.979†	2073.2	2098.8	495.85	ug/L	495.85	ppb	11:28:20
2	B 249.677†	31532.7	31741.4	492.78	ug/L	492.78	ppb	11:28:00
2	Ba 233.527†	98315.7	97752.5	496.00	ug/L	496.00	ppb	11:28:00
2	Be 313.107†	1590346.7	1588945.7	495.21	ug/L	495.21	ppb	11:28:00
2	Ca 317.933Radial†	1979.2	2001.5	4985.4	ug/L	4985.4	ppb	11:26:59
2	Cd 226.502†	66641.4	66553.8	497.50	ug/L	497.50	ppb	11:28:00
2	Co 228.616†	39043.6	38920.0	485.00	ug/L	485.00	ppb	11:28:20
2	Cr 267.716†	58361.0	58069.7	495.28	ug/L	495.28	ppb	11:28:00
2	Cu 324.752†	210274.7	198930.9	491.11	ug/L	491.11	ppb	11:28:00
2	Fe 238.204 Radial†	141.8	144.2	5075.0	ug/L	5075.0	ppb	11:26:59
2	K 766.490 Radial†	13045.1	11830.3	5127.1	ug/L	5127.1	ppb	11:26:39
2	Mg 279.077 IEC†	64.4	65.5	5190.8	ug/L	5190.8	ppb	11:26:59
2	Mn 257.610†	630407.8	626125.3	495.37	ug/L	495.37	ppb	11:28:00
2	Mo 202.031†	12642.8	12541.7	502.36	ug/L	502.36	ppb	11:28:20
2	Na 589.592 Radial†	3436.0	3674.5	9935.3	ug/L	9935.3	ppb	11:26:39
2	Ni 231.604†	30760.2	30443.3	487.63	ug/L	487.63	ppb	11:28:20

2	P 214.914†	7393.8	7016.4	2405.2	ug/L	2405.2 ppb	11:28:20
2	Pb 220.353†	6660.2	6652.8	500.06	ug/L	500.06 ppb	11:28:20
2	S 181.975 Axial†	1241.1	1166.5	986.41	ug/L	986.41 ppb	11:28:20
2	Sb 206.836†	2563.0	2503.6	498.42	ug/L	498.42 ppb	11:28:20
2	Se 196.026†	1509.3	1522.7	514.83	ug/L	514.83 ppb	11:28:20
2	Si 251.611†	122522.7	121291.0	2490.8	ug/L	2490.8 ppb	11:28:00
2	Sn 189.927†	4810.7	4778.9	497.51	ug/L	497.51 ppb	11:28:20
2	Sr 421.552†	33200.1	33852.0	521.50	ug/L	521.50 ppb	11:26:39
2	Ti 334.940†	380050.3	379076.4	496.18	ug/L	496.18 ppb	11:28:00
2	Tl 190.801†	2886.0	2931.6	496.43	ug/L	496.43 ppb	11:28:20
2	U 409.014†	15484.1	19233.9	475.65	ug/L	475.65 ppb	11:28:00
2	V 292.402†	85441.7	86626.2	497.28	ug/L	497.28 ppb	11:28:00
2	Zn 213.857†	90424.6	88806.6	491.36	ug/L	491.36 ppb	11:28:00
2	SiO2†	122259.9	120987.4	5319.9	ug/L	5319.9 ppb	11:28:58
3	Sc 361.383	1082048.6	1082048.6	102.00	%		11:28:28
3	Sc Radial	5526.8	5526.8	99.3	%		11:27:04
3	Y 371.029	860676.7	860676.7	100.87	%		11:28:28
3	Y RADIAL	4799.7	4799.7	99.67	%		11:27:04
3	Ag 328.068†	128584.5	125430.6	499.55	ug/L	499.55 ppb	11:28:28
3	Al 396.153Radial†	5214.3	5342.4	4841.4	ug/L	4841.4 ppb	11:27:04
3	As 188.979†	2101.0	2096.8	495.36	ug/L	495.36 ppb	11:28:48
3	B 249.677†	31978.4	31734.4	492.71	ug/L	492.71 ppb	11:28:28
3	Ba 233.527†	99589.5	97617.2	495.31	ug/L	495.31 ppb	11:28:28
3	Be 313.107†	1612564.5	1588337.3	495.03	ug/L	495.03 ppb	11:28:28
3	Ca 317.933Radial†	1986.9	1983.6	4940.9	ug/L	4940.9 ppb	11:27:24
3	Cd 226.502†	67416.7	66375.6	496.18	ug/L	496.18 ppb	11:28:28
3	Co 228.616†	39220.9	38544.1	480.32	ug/L	480.32 ppb	11:28:48
3	Cr 267.716†	58998.1	57872.6	493.60	ug/L	493.60 ppb	11:28:28
3	Cu 324.752†	213337.9	198973.6	491.20	ug/L	491.20 ppb	11:28:28
3	Fe 238.204 Radial†	139.2	139.9	4921.4	ug/L	4921.4 ppb	11:27:24
3	K 766.490 Radial†	13032.9	11649.4	5048.6	ug/L	5048.6 ppb	11:27:04
3	Mg 279.077 IEC†	65.0	65.3	5178.3	ug/L	5178.3 ppb	11:27:24
3	Mn 257.610†	638129.7	624820.2	494.32	ug/L	494.32 ppb	11:28:28
3	Mo 202.031†	12745.8	12464.7	499.27	ug/L	499.27 ppb	11:28:48
3	Na 589.592 Radial†	3456.2	3650.4	9870.2	ug/L	9870.2 ppb	11:27:04
3	Ni 231.604†	30951.5	30197.8	483.70	ug/L	483.70 ppb	11:28:48
3	P 214.914†	7425.2	6943.1	2379.4	ug/L	2379.4 ppb	11:28:48
3	Pb 220.353†	6701.0	6599.0	496.02	ug/L	496.02 ppb	11:28:48
3	S 181.975 Axial†	1257.6	1165.2	985.32	ug/L	985.32 ppb	11:28:48
3	Sb 206.836†	2594.2	2498.0	497.25	ug/L	497.25 ppb	11:28:48
3	Se 196.026†	1502.3	1494.6	505.14	ug/L	505.14 ppb	11:28:48
3	Si 251.611†	124261.8	121271.0	2490.5	ug/L	2490.5 ppb	11:28:28
3	Sn 189.927†	4852.5	4752.1	494.71	ug/L	494.71 ppb	11:28:48
3	Sr 421.552†	33364.0	33587.9	517.43	ug/L	517.43 ppb	11:27:04
3	Ti 334.940†	385685.4	379250.3	496.41	ug/L	496.41 ppb	11:28:28
3	Tl 190.801†	2899.8	2904.5	491.88	ug/L	491.88 ppb	11:28:48
3	U 409.014†	15696.4	19224.1	475.43	ug/L	475.43 ppb	11:28:28
3	V 292.402†	86520.6	86480.9	496.44	ug/L	496.44 ppb	11:28:28
3	Zn 213.857†	91402.4	88492.1	489.64	ug/L	489.64 ppb	11:28:28
3	SiO2†	123096.2	120085.9	5280.2	ug/L	5280.2 ppb	11:29:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1069574.3	100.82	%	1.067				1.06%
Sc Radial	5487.7	98.6	%	0.64				0.65%
Y 371.029	851135.2	99.756	%	0.9893				0.99%
Y RADIAL	4762.9	98.90	%	0.696				0.70%
Ag 328.068†	125357.9	499.29	ug/L	0.900	499.29	ppb	0.900	0.18%
QC value within limits for Ag 328.068 Recovery = 99.86%								
Al 396.153Radial†	5364.6	4861.5	ug/L	21.38	4861.5	ppb	21.38	0.44%
QC value within limits for Al 396.153Radial Recovery = 97.23%								
As 188.979†	2106.8	497.72	ug/L	3.671	497.72	ppb	3.671	0.74%
QC value within limits for As 188.979 Recovery = 99.54%								
B 249.677†	31632.3	491.09	ug/L	2.863	491.09	ppb	2.863	0.58%
QC value within limits for B 249.677 Recovery = 98.22%								
Ba 233.527†	97693.6	495.70	ug/L	0.354	495.70	ppb	0.354	0.07%
QC value within limits for Ba 233.527 Recovery = 99.14%								
Be 313.107†	1588729.2	495.15	ug/L	0.105	495.15	ppb	0.105	0.02%
QC value within limits for Be 313.107 Recovery = 99.03%								

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Ca 317.933Radial†        1998.7      4978.3 ug/L        34.43      4978.3 ppb        34.43   0.69%
   QC value within limits for Ca 317.933Radial  Recovery = 99.57%
Cd 226.502†             66503.4      497.13 ug/L         0.828      497.13 ppb         0.828  0.17%
   QC value within limits for Cd 226.502  Recovery = 99.43%
Co 228.616†             38927.4      485.10 ug/L         4.831      485.10 ppb         4.831  1.00%
   QC value within limits for Co 228.616  Recovery = 97.02%
Cr 267.716†             57963.8      494.38 ug/L         0.848      494.38 ppb         0.848  0.17%
   QC value within limits for Cr 267.716  Recovery = 98.88%
Cu 324.752†            198634.3      490.37 ug/L         1.359      490.37 ppb         1.359  0.28%
   QC value within limits for Cu 324.752  Recovery = 98.07%
Fe 238.204 Radial†        142.3      5007.6 ug/L        78.49      5007.6 ppb        78.49   1.57%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.15%
K 766.490 Radial†       11797.4      5112.8 ug/L        58.43      5112.8 ppb        58.43   1.14%
   QC value within limits for K 766.490 Radial  Recovery = 102.26%
Mg 279.077 IEC†            65.5      5195.3 ug/L        19.71      5195.3 ppb        19.71   0.38%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.91%
Mn 257.610†            625214.1      494.64 ug/L         0.633      494.64 ppb         0.633  0.13%
   QC value within limits for Mn 257.610  Recovery = 98.93%
Mo 202.031†             12558.8      503.04 ug/L         4.154      503.04 ppb         4.154  0.83%
   QC value within limits for Mo 202.031  Recovery = 100.61%
Na 589.592 Radial†       3676.6      9941.2 ug/L        74.10      9941.2 ppb        74.10   0.75%
   QC value within limits for Na 589.592 Radial  Recovery = 99.41%
Ni 231.604†             30485.3      488.30 ug/L         4.976      488.30 ppb         4.976  1.02%
   QC value within limits for Ni 231.604  Recovery = 97.66%
P 214.914†               7017.4      2405.8 ug/L        26.68      2405.8 ppb        26.68   1.11%
   QC value within limits for P 214.914  Recovery = 96.23%
Pb 220.353†              6662.4      500.78 ug/L         5.161      500.78 ppb         5.161  1.03%
   QC value within limits for Pb 220.353  Recovery = 100.16%
S 181.975 Axial†         1174.1      992.89 ug/L        12.183      992.89 ppb        12.183  1.23%
   QC value within limits for S 181.975 Axial  Recovery = 99.29%
Sb 206.836†              2509.7      499.68 ug/L         3.243      499.68 ppb         3.243  0.65%
   QC value within limits for Sb 206.836  Recovery = 99.94%
Se 196.026†              1512.9      511.43 ug/L         5.455      511.43 ppb         5.455  1.07%
   QC value within limits for Se 196.026  Recovery = 102.29%
Si 251.611†            121147.3      2487.8 ug/L         4.88      2487.8 ppb          4.88  0.20%
   QC value within limits for Si 251.611  Recovery = 99.51%
Sn 189.927†              4793.1      498.98 ug/L         5.163      498.98 ppb         5.163  1.03%
   QC value within limits for Sn 189.927  Recovery = 99.80%
Sr 421.552†             33783.1      520.44 ug/L         2.642      520.44 ppb         2.642  0.51%
   QC value within limits for Sr 421.552  Recovery = 104.09%
Ti 334.940†            378899.9      495.95 ug/L         0.606      495.95 ppb         0.606  0.12%
   QC value within limits for Ti 334.940  Recovery = 99.19%
Tl 190.801†              2934.5      496.92 ug/L         5.303      496.92 ppb         5.303  1.07%
   QC value within limits for Tl 190.801  Recovery = 99.38%
U 409.014†              19243.5      475.90 ug/L         0.628      475.90 ppb         0.628  0.13%
   QC value within limits for U 409.014  Recovery = 95.18%
V 292.402†              86580.8      497.04 ug/L         0.527      497.04 ppb         0.527  0.11%
   QC value within limits for V 292.402  Recovery = 99.41%
Zn 213.857†             88642.9      490.45 ug/L         0.862      490.45 ppb         0.862  0.18%
   QC value within limits for Zn 213.857  Recovery = 98.09%
SiO2†                  120772.4      5310.3 ug/L        26.66      5310.3 ppb        26.66   0.50%
   QC value within limits for SiO2  Recovery = 99.30%
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:31:14
Data Type: Reprocessed on 7/8/2009 11:40:22

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1063802.9	1063802.9	100.28	%			11:34:23
1	Sc Radial	5561.9	5561.9	99.9	%			11:33:06
1	Y 371.029	855860.4	855860.4	100.31	%			11:34:23
1	Y RADIAL	4822.6	4822.6	100.1	%			11:33:06
1	Ag 328.068†	690.4	49.9	0.1978	ug/L	0.1978	ppb	11:34:28
1	Al 396.153Radial†	-87.8	4.4	3.9546	ug/L	3.9546	ppb	11:33:06
1	As 188.979†	-50.4	-13.3	-3.1357	ug/L	-3.1357	ppb	11:34:48
1	B 249.677†	268.9	649.6	10.124	ug/L	10.124	ppb	11:34:28
1	Ba 233.527†	37.8	13.4	0.0677	ug/L	0.0677	ppb	11:34:48
1	Be 313.107†	-7293.5	42.7	0.0128	ug/L	0.0128	ppb	11:34:28
1	Ca 317.933Radial†	28.8	11.8	29.483	ug/L	29.483	ppb	11:33:26
1	Cd 226.502†	-277.0	1.4	0.0100	ug/L	0.0100	ppb	11:34:48
1	Co 228.616†	-86.2	4.5	0.0585	ug/L	0.0585	ppb	11:34:48
1	Cr 267.716†	-5.4	23.2	0.1973	ug/L	0.1973	ppb	11:34:48
1	Cu 324.752†	10006.5	-212.2	-0.5235	ug/L	-0.5235	ppb	11:34:28
1	Fe 238.204 Radial†	0.4	0.1	3.2855	ug/L	3.2855	ppb	11:33:26
1	K 766.490 Radial†	1523.7	51.4	22.290	ug/L	22.290	ppb	11:33:06
1	Mg 279.077 IEC†	-1.0	-1.1	-89.992	ug/L	-89.992	ppb	11:33:26
1	Mn 257.610†	795.0	-34.2	-0.0249	ug/L	-0.0249	ppb	11:34:48
1	Mo 202.031†	53.0	21.1	0.8462	ug/L	0.8462	ppb	11:34:48
1	Na 589.592 Radial†	-162.4	7.9	21.478	ug/L	21.478	ppb	11:33:26
1	Ni 231.604†	144.6	-4.1	-0.0650	ug/L	-0.0650	ppb	11:34:48
1	P 214.914†	355.6	17.7	6.3689	ug/L	6.3689	ppb	11:34:48
1	Pb 220.353†	-11.4	17.7	1.3309	ug/L	1.3309	ppb	11:34:48
1	S 181.975 Axial†	60.0	-8.0	-6.7972	ug/L	-6.7972	ppb	11:34:48
1	Sb 206.836†	53.2	7.6	1.5394	ug/L	1.5394	ppb	11:34:48
1	Se 196.026†	-14.3	7.3	2.4023	ug/L	2.4023	ppb	11:34:48
1	Si 251.611†	618.5	56.7	1.1410	ug/L	1.1410	ppb	11:34:48
1	Sn 189.927†	25.8	20.2	2.1070	ug/L	2.1070	ppb	11:34:48
1	Sr 421.552†	21.5	16.0	0.2468	ug/L	0.2468	ppb	11:33:26
1	Ti 334.940†	-1262.3	-149.6	-0.1941	ug/L	-0.1941	ppb	11:34:28
1	Tl 190.801†	-62.7	-1.1	-0.1937	ug/L	-0.1937	ppb	11:34:48
1	U 409.014†	-3836.3	9.0	0.2216	ug/L	0.2216	ppb	11:34:23
1	V 292.402†	-1663.5	-6.2	-0.0256	ug/L	-0.0256	ppb	11:34:28
1	Zn 213.857†	1135.7	10.2	0.0608	ug/L	0.0608	ppb	11:34:48
1	SiO2†	634.2	30.1	1.2681	ug/L	1.2681	ppb	11:35:54
2	Sc 361.383	1062791.4	1062791.4	100.18	%			11:34:53
2	Sc Radial	5538.6	5538.6	99.5	%			11:33:31
2	Y 371.029	855845.5	855845.5	100.31	%			11:34:53
2	Y RADIAL	4808.4	4808.4	99.85	%			11:33:31
2	Ag 328.068†	769.1	129.1	0.5079	ug/L	0.5079	ppb	11:34:58
2	Al 396.153Radial†	-67.1	24.8	22.522	ug/L	22.522	ppb	11:33:31
2	As 188.979†	-45.9	-8.9	-2.0961	ug/L	-2.0961	ppb	11:35:18
2	B 249.677†	275.1	656.1	10.227	ug/L	10.227	ppb	11:34:58
2	Ba 233.527†	41.5	17.1	0.0865	ug/L	0.0865	ppb	11:35:18
2	Be 313.107†	-7364.6	-35.1	-0.0111	ug/L	-0.0111	ppb	11:34:58
2	Ca 317.933Radial†	27.0	10.2	25.462	ug/L	25.462	ppb	11:33:51
2	Cd 226.502†	-277.0	1.1	0.0093	ug/L	0.0093	ppb	11:35:18
2	Co 228.616†	-96.9	-6.3	-0.0770	ug/L	-0.0770	ppb	11:35:18
2	Cr 267.716†	3.5	32.1	0.2730	ug/L	0.2730	ppb	11:35:18
2	Cu 324.752†	10207.0	-2.6	-0.0068	ug/L	-0.0068	ppb	11:34:58
2	Fe 238.204 Radial†	0.1	-0.2	-6.6396	ug/L	-6.6396	ppb	11:33:51
2	K 766.490 Radial†	1591.7	126.2	54.709	ug/L	54.709	ppb	11:33:31
2	Mg 279.077 IEC†	3.9	3.7	294.15	ug/L	294.15	ppb	11:33:51
2	Mn 257.610†	810.3	-18.2	-0.0209	ug/L	-0.0209	ppb	11:35:18
2	Mo 202.031†	40.3	8.4	0.3367	ug/L	0.3367	ppb	11:35:18
2	Na 589.592 Radial†	-165.4	4.2	11.404	ug/L	11.404	ppb	11:33:51
2	Ni 231.604†	155.5	7.0	0.1119	ug/L	0.1119	ppb	11:35:18

2	P 214.914†	350.7	13.1	4.6724	ug/L	4.6724 ppb	11:35:18
2	Pb 220.353†	1.3	30.4	2.2862	ug/L	2.2862 ppb	11:35:18
2	S 181.975 Axial†	62.4	-5.5	-4.6975	ug/L	-4.6975 ppb	11:35:18
2	Sb 206.836†	46.9	1.4	0.3030	ug/L	0.3030 ppb	11:35:18
2	Se 196.026†	-24.0	-2.3	-0.7802	ug/L	-0.7802 ppb	11:35:18
2	Si 251.611†	641.1	79.9	1.6204	ug/L	1.6204 ppb	11:35:18
2	Sn 189.927†	17.4	11.9	1.2429	ug/L	1.2429 ppb	11:35:18
2	Sr 421.552†	27.5	22.2	0.3413	ug/L	0.3413 ppb	11:33:51
2	Ti 334.940†	-1173.5	-62.1	-0.0801	ug/L	-0.0801 ppb	11:34:58
2	Tl 190.801†	-57.3	4.2	0.7097	ug/L	0.7097 ppb	11:35:18
2	U 409.014†	-3809.4	32.2	0.7987	ug/L	0.7987 ppb	11:34:53
2	V 292.402†	-1655.4	0.3	0.0135	ug/L	0.0135 ppb	11:34:58
2	Zn 213.857†	1139.0	14.5	0.0708	ug/L	0.0708 ppb	11:35:18
2	SiO2†	668.5	65.0	2.8084	ug/L	2.8084 ppb	11:35:59
3	Sc 361.383	1063088.1	1063088.1	100.21	%		11:35:23
3	Sc Radial	5440.7	5440.7	97.8	%		11:33:56
3	Y 371.029	856947.0	856947.0	100.44	%		11:35:23
3	Y RADIAL	4756.3	4756.3	98.77	%		11:33:56
3	Ag 328.068†	752.9	112.7	0.4282	ug/L	0.4282 ppb	11:35:29
3	Al 396.153Radial†	-61.7	29.0	26.426	ug/L	26.426 ppb	11:33:56
3	As 188.979†	-51.0	-14.0	-3.3000	ug/L	-3.3000 ppb	11:35:49
3	B 249.677†	248.8	629.8	9.8225	ug/L	9.8225 ppb	11:35:29
3	Ba 233.527†	49.3	24.9	0.1240	ug/L	0.1240 ppb	11:35:49
3	Be 313.107†	-7424.6	-93.0	-0.0288	ug/L	-0.0288 ppb	11:35:29
3	Ca 317.933Radial†	29.0	12.8	31.771	ug/L	31.771 ppb	11:34:16
3	Cd 226.502†	-284.9	-6.6	-0.0439	ug/L	-0.0439 ppb	11:35:49
3	Co 228.616†	-101.2	-10.6	-0.1306	ug/L	-0.1306 ppb	11:35:49
3	Cr 267.716†	-30.9	-2.2	-0.0206	ug/L	-0.0206 ppb	11:35:49
3	Cu 324.752†	10236.2	23.7	0.0558	ug/L	0.0558 ppb	11:35:29
3	Fe 238.204 Radial†	-1.0	-1.4	-48.298	ug/L	-48.298 ppb	11:34:16
3	K 766.490 Radial†	1505.5	66.8	28.927	ug/L	28.927 ppb	11:33:56
3	Mg 279.077 IEC†	0.6	0.4	33.239	ug/L	33.239 ppb	11:34:16
3	Mn 257.610†	805.7	-23.0	-0.0251	ug/L	-0.0251 ppb	11:35:49
3	Mo 202.031†	36.0	4.1	0.1614	ug/L	0.1614 ppb	11:35:49
3	Na 589.592 Radial†	-166.0	0.6	1.7302	ug/L	1.7302 ppb	11:34:16
3	Ni 231.604†	154.3	5.8	0.0925	ug/L	0.0925 ppb	11:35:49
3	P 214.914†	333.2	-4.4	-1.5177	ug/L	-1.5177 ppb	11:35:49
3	Pb 220.353†	8.6	37.6	2.8325	ug/L	2.8325 ppb	11:35:49
3	S 181.975 Axial†	65.9	-2.0	-1.7280	ug/L	-1.7280 ppb	11:35:49
3	Sb 206.836†	54.2	8.7	1.7131	ug/L	1.7131 ppb	11:35:49
3	Se 196.026†	-34.5	-12.8	-4.3231	ug/L	-4.3231 ppb	11:35:49
3	Si 251.611†	617.8	56.4	1.1483	ug/L	1.1483 ppb	11:35:49
3	Sn 189.927†	12.9	7.4	0.7752	ug/L	0.7752 ppb	11:35:49
3	Sr 421.552†	24.1	19.1	0.2946	ug/L	0.2946 ppb	11:34:16
3	Ti 334.940†	-1056.8	54.6	0.0735	ug/L	0.0735 ppb	11:35:29
3	Tl 190.801†	-54.8	6.7	1.1352	ug/L	1.1352 ppb	11:35:49
3	U 409.014†	-3836.0	6.7	0.1717	ug/L	0.1717 ppb	11:35:23
3	V 292.402†	-1740.9	-84.5	-0.4699	ug/L	-0.4699 ppb	11:35:29
3	Zn 213.857†	1112.0	-12.7	-0.0677	ug/L	-0.0677 ppb	11:35:49
3	SiO2†	666.7	63.0	2.7492	ug/L	2.7492 ppb	11:36:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1063227.5	100.22	%	0.049				0.05%
Sc Radial	5513.8	99.1	%	1.16				1.17%
Y 371.029	856217.6	100.35	%	0.074				0.07%
Y RADIAL	4795.8	99.59	%	0.725				0.73%
Ag 328.068†	97.2	0.3779	ug/L	0.16103	0.3779	ppb	0.16103	42.61%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.4	17.634	ug/L	12.0065	17.634	ppb	12.0065	68.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.1	-2.8439	ug/L	0.65284	-2.8439	ppb	0.65284	22.96%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	645.2	10.058	ug/L	0.2102	10.058	ppb	0.2102	2.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	18.5	0.0927	ug/L	0.02864	0.0927	ppb	0.02864	30.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-28.5	-0.0090	ug/L	0.02087	-0.0090	ppb	0.02087	231.41%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          11.6      28.906 ug/L        3.1943      28.906 ppb        3.1943  11.05%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -1.4      -0.0082 ug/L       0.03088     -0.0082 ppb       0.03088 375.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -4.1      -0.0497 ug/L       0.09746     -0.0497 ppb       0.09746 196.02%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.7       0.1499 ug/L       0.15243      0.1499 ppb       0.15243 101.68%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -63.7      -0.1582 ug/L       0.31790     -0.1582 ppb       0.31790 200.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.5      -17.217 ug/L       27.3704     -17.217 ppb       27.3704 158.97%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          81.4      35.309 ug/L        17.1254      35.309 ppb       17.1254  48.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.0      79.132 ug/L       196.1394      79.132 ppb      196.1394 247.86%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -25.1      -0.0236 ug/L       0.00236     -0.0236 ppb       0.00236   9.98%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                11.2       0.4481 ug/L       0.35572      0.4481 ppb       0.35572  79.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†          4.3      11.538 ug/L        9.8746      11.538 ppb        9.8746  85.59%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 2.9       0.0465 ug/L       0.09700      0.0465 ppb       0.09700 208.67%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  8.8       3.1745 ug/L       4.15119      3.1745 ppb       4.15119 130.77%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                28.6       2.1499 ug/L       0.76002      2.1499 ppb       0.76002  35.35%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.2      -4.4076 ug/L       2.54698     -4.4076 ppb       2.54698  57.79%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 5.9       1.1852 ug/L       0.76889      1.1852 ppb       0.76889  64.88%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.6      -0.9003 ug/L       3.36431     -0.9003 ppb       3.36431 373.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                64.3       1.3033 ug/L       0.27467      1.3033 ppb       0.27467  21.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                13.2       1.3751 ug/L       0.67567      1.3751 ppb       0.67567  49.14%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                19.1       0.2942 ug/L       0.04727      0.2942 ppb       0.04727  16.07%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -52.4      -0.0669 ug/L       0.13429     -0.0669 ppb       0.13429 200.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.3       0.5504 ug/L       0.67863      0.5504 ppb       0.67863 123.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 15.9       0.3973 ug/L       0.34848      0.3973 ppb       0.34848  87.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -30.1      -0.1607 ug/L       0.26848     -0.1607 ppb       0.26848 167.11%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 4.0       0.0213 ug/L       0.07726      0.0213 ppb       0.07726 362.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      52.7       2.2752 ug/L       0.87275      2.2752 ppb       0.87275  38.36%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 12:37:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5606.1	5606.1	101	%			12:39:25
1	Y RADIAL	4851.1	4851.1	100.7	%			12:39:25
1	Al 396.153Radial†	5378.2	5430.8	4921.6	ug/L	4921.6	ppb	12:39:25
1	Ca 317.933Radial†	2021.2	1989.4	4955.2	ug/L	4955.2	ppb	12:39:45
1	Fe 238.204 Radial†	140.8	139.5	4908.3	ug/L	4908.3	ppb	12:39:45
1	K 766.490 Radial†	13453.7	11881.6	5149.1	ug/L	5149.1	ppb	12:39:25
1	Mg 279.077 IEC†	63.3	62.7	4971.3	ug/L	4971.3	ppb	12:39:45
1	Na 589.592 Radial†	3647.9	3791.5	10252	ug/L	10252	ppb	12:39:25
1	Sr 421.552†	35108.7	34844.6	536.79	ug/L	536.79	ppb	12:39:25
1	Sc 361.383	1058412.2	1058412.2	99.767	%			12:40:44
1	Y 371.029	842280.3	842280.3	98.718	%			12:40:44
1	Ag 328.068†	126383.3	126039.7	501.96	ug/L	501.96	ppb	12:40:44
1	As 188.979†	2067.2	2108.9	498.21	ug/L	498.21	ppb	12:41:04
1	B 249.677†	31249.4	31703.9	492.21	ug/L	492.21	ppb	12:40:44
1	Ba 233.527†	97896.4	98100.6	497.76	ug/L	497.76	ppb	12:40:44
1	Be 313.107†	1582299.5	1593308.9	496.58	ug/L	496.58	ppb	12:40:44
1	Cd 226.502†	66319.2	66751.6	499.00	ug/L	499.00	ppb	12:40:44
1	Co 228.616†	39106.2	39287.9	489.60	ug/L	489.60	ppb	12:41:04
1	Cr 267.716†	58017.2	58181.2	496.23	ug/L	496.23	ppb	12:40:44
1	Cu 324.752†	209452.1	199749.8	493.12	ug/L	493.12	ppb	12:40:44
1	Mn 257.610†	627242.3	627879.2	496.74	ug/L	496.74	ppb	12:40:44
1	Mo 202.031†	12652.8	12650.6	506.70	ug/L	506.70	ppb	12:41:04
1	Ni 231.604†	30863.4	30787.2	493.14	ug/L	493.14	ppb	12:41:04
1	P 214.914†	7409.4	7089.8	2431.0	ug/L	2431.0	ppb	12:41:04
1	Pb 220.353†	6655.3	6699.9	503.62	ug/L	503.62	ppb	12:41:04
1	S 181.975 Axial†	1267.1	1202.2	1016.6	ug/L	1016.6	ppb	12:41:04
1	Sb 206.836†	2567.2	2527.8	503.31	ug/L	503.31	ppb	12:41:04
1	Se 196.026†	1499.0	1524.1	514.74	ug/L	514.74	ppb	12:41:04
1	Si 251.611†	123740.7	123469.4	2535.6	ug/L	2535.6	ppb	12:40:44
1	Sn 189.927†	4813.6	4819.3	501.70	ug/L	501.70	ppb	12:41:04
1	Ti 334.940†	379065.1	381059.1	498.77	ug/L	498.77	ppb	12:40:44
1	Tl 190.801†	2892.3	2960.4	501.29	ug/L	501.29	ppb	12:41:04
1	U 409.014†	15455.7	19326.6	477.97	ug/L	477.97	ppb	12:40:44
1	V 292.402†	85007.9	86859.1	498.67	ug/L	498.67	ppb	12:40:44
1	Zn 213.857†	90043.3	89131.1	493.16	ug/L	493.16	ppb	12:40:44
1	SiO2†	124276.3	123964.1	5451.2	ug/L	5451.2	ppb	12:42:04
2	Sc Radial	5585.7	5585.7	100	%			12:39:50
2	Y RADIAL	4837.6	4837.6	100.5	%			12:39:50
2	Al 396.153Radial†	5301.2	5373.6	4869.5	ug/L	4869.5	ppb	12:39:50
2	Ca 317.933Radial†	2018.6	1994.2	4967.2	ug/L	4967.2	ppb	12:40:10
2	Fe 238.204 Radial†	146.6	145.8	5129.1	ug/L	5129.1	ppb	12:40:10
2	K 766.490 Radial†	13445.7	11922.5	5167.1	ug/L	5167.1	ppb	12:39:50
2	Mg 279.077 IEC†	62.9	62.5	4955.1	ug/L	4955.1	ppb	12:40:10
2	Na 589.592 Radial†	3631.8	3788.6	10244	ug/L	10244	ppb	12:39:50
2	Sr 421.552†	34927.0	34791.2	535.97	ug/L	535.97	ppb	12:39:50
2	Sc 361.383	1052564.2	1052564.2	99.216	%			12:41:12
2	Y 371.029	837846.1	837846.1	98.199	%			12:41:12
2	Ag 328.068†	125844.2	126200.1	502.67	ug/L	502.67	ppb	12:41:12
2	As 188.979†	2073.2	2126.5	502.37	ug/L	502.37	ppb	12:41:32
2	B 249.677†	31117.5	31744.9	492.82	ug/L	492.82	ppb	12:41:12
2	Ba 233.527†	97205.3	97949.3	496.99	ug/L	496.99	ppb	12:41:12
2	Be 313.107†	1572088.7	1591829.1	496.11	ug/L	496.11	ppb	12:41:12
2	Cd 226.502†	65885.5	66683.9	498.47	ug/L	498.47	ppb	12:41:12
2	Co 228.616†	38903.8	39301.7	489.77	ug/L	489.77	ppb	12:41:32
2	Cr 267.716†	57670.9	58155.3	496.01	ug/L	496.01	ppb	12:41:12
2	Cu 324.752†	208260.2	199714.8	493.05	ug/L	493.05	ppb	12:41:12
2	Mn 257.610†	622713.6	626807.8	495.92	ug/L	495.92	ppb	12:41:12
2	Mo 202.031†	12649.0	12717.2	509.38	ug/L	509.38	ppb	12:41:32
2	Ni 231.604†	30707.2	30801.6	493.37	ug/L	493.37	ppb	12:41:32

2	P 214.914†	7360.8	7082.0	2428.1 ug/L	2428.1 ppb	12:41:32
2	Pb 220.353†	6668.7	6750.4	507.38 ug/L	507.38 ppb	12:41:32
2	S 181.975 Axial†	1268.3	1210.5	1023.7 ug/L	1023.7 ppb	12:41:32
2	Sb 206.836†	2554.2	2529.0	503.61 ug/L	503.61 ppb	12:41:32
2	Se 196.026†	1489.9	1523.3	515.24 ug/L	515.24 ppb	12:41:32
2	Si 251.611†	122736.1	123146.0	2528.9 ug/L	2528.9 ppb	12:41:12
2	Sn 189.927†	4784.8	4817.1	501.48 ug/L	501.48 ppb	12:41:32
2	Ti 334.940†	376326.4	380409.8	497.92 ug/L	497.92 ppb	12:41:12
2	Tl 190.801†	2869.4	2953.4	500.11 ug/L	500.11 ppb	12:41:32
2	U 409.014†	15348.9	19304.9	477.40 ug/L	477.40 ppb	12:41:12
2	V 292.402†	84354.4	86673.8	497.63 ug/L	497.63 ppb	12:41:12
2	Zn 213.857†	89243.2	88826.1	491.43 ug/L	491.43 ppb	12:41:12
2	SiO2†	123446.6	123819.8	5444.7 ug/L	5444.7 ppb	12:42:10
3	Sc Radial	5622.4	5622.4	101 %		12:40:15
3	Y RADIAL	4895.1	4895.1	101.6 %		12:40:15
3	Al 396.153Radial†	5385.6	5422.7	4914.2 ug/L	4914.2 ppb	12:40:15
3	Ca 317.933Radial†	2021.8	1984.1	4942.2 ug/L	4942.2 ppb	12:40:35
3	Fe 238.204 Radial†	143.1	141.3	4973.4 ug/L	4973.4 ppb	12:40:35
3	K 766.490 Radial†	13475.9	11864.8	5141.9 ug/L	5141.9 ppb	12:40:15
3	Mg 279.077 IEC†	64.9	64.0	5076.8 ug/L	5076.8 ppb	12:40:35
3	Na 589.592 Radial†	3704.4	3836.9	10375 ug/L	10375 ppb	12:40:15
3	Sr 421.552†	35367.4	34999.8	539.18 ug/L	539.18 ppb	12:40:15
3	Sc 361.383	1055266.8	1055266.8	99.471 %		12:41:39
3	Y 371.029	840466.9	840466.9	98.506 %		12:41:39
3	Ag 328.068†	125875.6	125906.9	501.45 ug/L	501.45 ppb	12:41:39
3	As 188.979†	2070.2	2118.1	500.36 ug/L	500.36 ppb	12:41:59
3	B 249.677†	31096.7	31643.7	491.26 ug/L	491.26 ppb	12:41:39
3	Ba 233.527†	97326.4	97820.1	496.34 ug/L	496.34 ppb	12:41:39
3	Be 313.107†	1575608.3	1591309.3	495.95 ug/L	495.95 ppb	12:41:39
3	Cd 226.502†	65831.5	66459.5	496.81 ug/L	496.81 ppb	12:41:39
3	Co 228.616†	38937.8	39235.4	488.94 ug/L	488.94 ppb	12:41:59
3	Cr 267.716†	57725.3	58061.1	495.21 ug/L	495.21 ppb	12:41:39
3	Cu 324.752†	208650.8	199569.9	492.68 ug/L	492.68 ppb	12:41:39
3	Mn 257.610†	623476.5	625967.4	495.24 ug/L	495.24 ppb	12:41:39
3	Mo 202.031†	12620.8	12656.2	506.93 ug/L	506.93 ppb	12:41:59
3	Ni 231.604†	30715.0	30730.2	492.22 ug/L	492.22 ppb	12:41:59
3	P 214.914†	7373.4	7075.7	2426.1 ug/L	2426.1 ppb	12:41:59
3	Pb 220.353†	6643.3	6707.8	504.20 ug/L	504.20 ppb	12:41:59
3	S 181.975 Axial†	1267.5	1206.4	1020.2 ug/L	1020.2 ppb	12:41:59
3	Sb 206.836†	2557.1	2525.3	502.87 ug/L	502.87 ppb	12:41:59
3	Se 196.026†	1494.6	1524.2	514.98 ug/L	514.98 ppb	12:41:59
3	Si 251.611†	122713.6	122806.5	2522.0 ug/L	2522.0 ppb	12:41:39
3	Sn 189.927†	4806.5	4826.6	502.46 ug/L	502.46 ppb	12:41:59
3	Ti 334.940†	376677.4	379791.2	497.11 ug/L	497.11 ppb	12:41:39
3	Tl 190.801†	2887.1	2963.8	501.86 ug/L	501.86 ppb	12:41:59
3	U 409.014†	15446.1	19363.0	478.87 ug/L	478.87 ppb	12:41:39
3	V 292.402†	84553.0	86655.7	497.52 ug/L	497.52 ppb	12:41:39
3	Zn 213.857†	89401.2	88754.6	491.05 ug/L	491.05 ppb	12:41:39
3	SiO2†	122933.1	122984.9	5407.9 ug/L	5407.9 ppb	12:42:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055414.4	99.485	%	0.2759				0.28%
Sc Radial	5604.7	101	%	0.3				0.33%
Y 371.029	840197.8	98.474	%	0.2613				0.27%
Y RADIAL	4861.2	100.9	%	0.62				0.62%
Ag 328.068†	126048.9	502.03	ug/L	0.609	502.03	ppb	0.609	0.12%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5409.0	4901.8	ug/L	28.21	4901.8	ppb	28.21	0.58%
QC value within limits for Al 396.153Radial Recovery = 98.04%								
As 188.979†	2117.9	500.31	ug/L	2.082	500.31	ppb	2.082	0.42%
QC value within limits for As 188.979 Recovery = 100.06%								
B 249.677†	31697.5	492.10	ug/L	0.784	492.10	ppb	0.784	0.16%
QC value within limits for B 249.677 Recovery = 98.42%								
Ba 233.527†	97956.7	497.03	ug/L	0.711	497.03	ppb	0.711	0.14%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1592149.1	496.21	ug/L	0.324	496.21	ppb	0.324	0.07%
QC value within limits for Be 313.107 Recovery = 99.24%								
Ca 317.933Radial†	1989.2	4954.9	ug/L	12.52	4954.9	ppb	12.52	0.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.10%
Cd 226.502†            66631.7      498.09 ug/L         1.144      498.09 ppb          1.144   0.23%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39275.0      489.44 ug/L         0.436      489.44 ppb          0.436   0.09%
   QC value within limits for Co 228.616  Recovery = 97.89%
Cr 267.716†            58132.5      495.82 ug/L         0.539      495.82 ppb          0.539   0.11%
   QC value within limits for Cr 267.716  Recovery = 99.16%
Cu 324.752†           199678.2      492.95 ug/L         0.236      492.95 ppb          0.236   0.05%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†       142.2      5003.6 ug/L        113.48      5003.6 ppb         113.48   2.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.07%
K 766.490 Radial†      11889.6      5152.7 ug/L         12.97      5152.7 ppb          12.97   0.25%
   QC value within limits for K 766.490 Radial  Recovery = 103.05%
Mg 279.077 IEC†           63.1      5001.1 ug/L         66.09      5001.1 ppb          66.09   1.32%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.02%
Mn 257.610†           626884.8      495.97 ug/L         0.753      495.97 ppb          0.753   0.15%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†            12674.6      507.67 ug/L         1.485      507.67 ppb          1.485   0.29%
   QC value within limits for Mo 202.031  Recovery = 101.53%
Na 589.592 Radial†      3805.7       10290 ug/L          73.3       10290 ppb           73.3   0.71%
   QC value within limits for Na 589.592 Radial  Recovery = 102.90%
Ni 231.604†            30773.0      492.91 ug/L         0.605      492.91 ppb          0.605   0.12%
   QC value within limits for Ni 231.604  Recovery = 98.58%
P 214.914†              7082.5      2428.4 ug/L          2.49      2428.4 ppb           2.49   0.10%
   QC value within limits for P 214.914  Recovery = 97.14%
Pb 220.353†             6719.4      505.07 ug/L         2.026      505.07 ppb          2.026   0.40%
   QC value within limits for Pb 220.353  Recovery = 101.01%
S 181.975 Axial†        1206.4      1020.2 ug/L          3.51      1020.2 ppb           3.51   0.34%
   QC value within limits for S 181.975 Axial  Recovery = 102.02%
Sb 206.836†             2527.4      503.26 ug/L         0.369      503.26 ppb          0.369   0.07%
   QC value within limits for Sb 206.836  Recovery = 100.65%
Se 196.026†             1523.9      514.99 ug/L         0.251      514.99 ppb          0.251   0.05%
   QC value within limits for Se 196.026  Recovery = 103.00%
Si 251.611†           123140.6      2528.8 ug/L          6.84      2528.8 ppb           6.84   0.27%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†             4821.0      501.88 ug/L         0.511      501.88 ppb          0.511   0.10%
   QC value within limits for Sn 189.927  Recovery = 100.38%
Sr 421.552†            34878.5      537.31 ug/L         1.669      537.31 ppb          1.669   0.31%
   QC value within limits for Sr 421.552  Recovery = 107.46%
Ti 334.940†           380420.0      497.94 ug/L         0.830      497.94 ppb          0.830   0.17%
   QC value within limits for Ti 334.940  Recovery = 99.59%
Tl 190.801†             2959.2      501.08 ug/L         0.893      501.08 ppb          0.893   0.18%
   QC value within limits for Tl 190.801  Recovery = 100.22%
U 409.014†             19331.5      478.08 ug/L         0.738      478.08 ppb          0.738   0.15%
   QC value within limits for U 409.014  Recovery = 95.62%
V 292.402†             86729.6      497.94 ug/L         0.638      497.94 ppb          0.638   0.13%
   QC value within limits for V 292.402  Recovery = 99.59%
Zn 213.857†            88903.9      491.88 ug/L         1.123      491.88 ppb          1.123   0.23%
   QC value within limits for Zn 213.857  Recovery = 98.38%
SiO2†                 123589.6      5434.6 ug/L         23.34      5434.6 ppb          23.34   0.43%
   QC value within limits for SiO2  Recovery = 101.63%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 12:44:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5518.3	5518.3	99.2	%			12:46:17
1	Y RADIAL	4806.7	4806.7	99.81	%			12:46:17
1	Al 396.153Radial†	-80.6	10.9	9.9589	ug/L	9.9589	ppb	12:46:17
1	Ca 317.933Radial†	44.1	27.5	68.573	ug/L	68.573	ppb	12:46:37
1	Fe 238.204 Radial†	0.0	-0.3	-9.9293	ug/L	-9.9293	ppb	12:46:37
1	K 766.490 Radial†	1698.7	239.9	104.08	ug/L	104.08	ppb	12:46:17
1	Mg 279.077 IEC†	-1.8	-2.0	-155.04	ug/L	-155.04	ppb	12:46:37
1	Na 589.592 Radial†	-174.1	-5.2	-13.943	ug/L	-13.943	ppb	12:46:37
1	Sr 421.552†	32.4	27.2	0.4180	ug/L	0.4180	ppb	12:46:37
1	Sc 361.383	1052130.1	1052130.1	99.175	%			12:47:34
1	Y 371.029	846654.6	846654.6	99.231	%			12:47:34
1	Ag 328.068†	745.4	113.0	0.4445	ug/L	0.4445	ppb	12:47:39
1	As 188.979†	-50.6	-14.1	-3.3222	ug/L	-3.3222	ppb	12:47:59
1	B 249.677†	375.6	760.3	11.850	ug/L	11.850	ppb	12:47:39
1	Ba 233.527†	45.5	21.6	0.1076	ug/L	0.1076	ppb	12:47:59
1	Be 313.107†	-7407.1	-152.6	-0.0474	ug/L	-0.0474	ppb	12:47:39
1	Cd 226.502†	-302.4	-27.3	-0.2026	ug/L	-0.2026	ppb	12:47:59
1	Co 228.616†	-78.2	11.6	0.1438	ug/L	0.1438	ppb	12:47:59
1	Cr 267.716†	-24.3	4.1	0.0351	ug/L	0.0351	ppb	12:47:59
1	Cu 324.752†	10111.8	4.6	0.0108	ug/L	0.0108	ppb	12:47:39
1	Mn 257.610†	869.1	49.3	0.0406	ug/L	0.0406	ppb	12:47:59
1	Mo 202.031†	26.7	-4.8	-0.1934	ug/L	-0.1934	ppb	12:47:59
1	Ni 231.604†	157.5	10.6	0.1698	ug/L	0.1698	ppb	12:47:59
1	P 214.914†	363.5	29.6	10.483	ug/L	10.483	ppb	12:47:59
1	Pb 220.353†	-2.2	26.8	2.0130	ug/L	2.0130	ppb	12:47:59
1	S 181.975 Axial†	74.3	7.1	5.9751	ug/L	5.9751	ppb	12:47:59
1	Sb 206.836†	39.2	-5.9	-1.1554	ug/L	-1.1554	ppb	12:47:59
1	Se 196.026†	-23.4	-2.0	-0.6703	ug/L	-0.6703	ppb	12:47:59
1	Si 251.611†	1253.7	704.0	14.495	ug/L	14.495	ppb	12:47:59
1	Sn 189.927†	8.5	3.1	0.3237	ug/L	0.3237	ppb	12:47:59
1	Ti 334.940†	-1083.2	17.0	0.0287	ug/L	0.0287	ppb	12:47:39
1	Tl 190.801†	-53.7	7.3	1.2282	ug/L	1.2282	ppb	12:47:59
1	U 409.014†	-3965.4	-163.6	-4.0586	ug/L	-4.0586	ppb	12:47:34
1	V 292.402†	-1733.9	-95.6	-0.5536	ug/L	-0.5536	ppb	12:47:39
1	Zn 213.857†	1100.4	-12.8	-0.0663	ug/L	-0.0663	ppb	12:47:59
1	SiO2†	1196.6	604.2	26.624	ug/L	26.624	ppb	12:49:05
2	Sc Radial	5530.0	5530.0	99.4	%			12:46:42
2	Y RADIAL	4804.0	4804.0	99.76	%			12:46:42
2	Al 396.153Radial†	-46.8	45.1	41.028	ug/L	41.028	ppb	12:46:42
2	Ca 317.933Radial†	43.2	26.6	66.161	ug/L	66.161	ppb	12:47:02
2	Fe 238.204 Radial†	0.2	-0.1	-3.2086	ug/L	-3.2086	ppb	12:47:02
2	K 766.490 Radial†	1500.2	36.5	15.864	ug/L	15.864	ppb	12:46:42
2	Mg 279.077 IEC†	0.1	-0.0	-2.9802	ug/L	-2.9802	ppb	12:47:02
2	Na 589.592 Radial†	-185.3	-16.0	-43.367	ug/L	-43.367	ppb	12:47:02
2	Sr 421.552†	24.3	19.0	0.2916	ug/L	0.2916	ppb	12:47:02
2	Sc 361.383	1055228.2	1055228.2	99.467	%			12:48:04
2	Y 371.029	850024.5	850024.5	99.626	%			12:48:04
2	Ag 328.068†	646.4	11.3	0.0443	ug/L	0.0443	ppb	12:48:09
2	As 188.979†	-42.6	-5.9	-1.4010	ug/L	-1.4010	ppb	12:48:29
2	B 249.677†	320.9	704.1	10.974	ug/L	10.974	ppb	12:48:09
2	Ba 233.527†	61.0	37.0	0.1867	ug/L	0.1867	ppb	12:48:29
2	Be 313.107†	-7402.9	-126.4	-0.0393	ug/L	-0.0393	ppb	12:48:09
2	Cd 226.502†	-287.6	-11.5	-0.0851	ug/L	-0.0851	ppb	12:48:29
2	Co 228.616†	-95.0	-5.1	-0.0621	ug/L	-0.0621	ppb	12:48:29
2	Cr 267.716†	-27.2	1.3	0.0113	ug/L	0.0113	ppb	12:48:29
2	Cu 324.752†	10074.9	-62.4	-0.1541	ug/L	-0.1541	ppb	12:48:09
2	Mn 257.610†	873.6	51.3	0.0402	ug/L	0.0402	ppb	12:48:29
2	Mo 202.031†	40.5	8.9	0.3563	ug/L	0.3563	ppb	12:48:29
2	Ni 231.604†	174.4	27.0	0.4336	ug/L	0.4336	ppb	12:48:29

2	P 214.914†	361.0	26.0	9.2291	ug/L	9.2291 ppb	12:48:29
2	Pb 220.353†	10.0	19.1	1.4379	ug/L	1.4379 ppb	12:48:29
2	S 181.975 Axial†	81.6	14.2	11.973	ug/L	11.973 ppb	12:48:29
2	Sb 206.836†	42.3	-2.9	-0.5447	ug/L	-0.5447 ppb	12:48:29
2	Se 196.026†	-24.2	-2.7	-0.8785	ug/L	-0.8785 ppb	12:48:29
2	Si 251.611†	1175.1	621.2	12.805	ug/L	12.805 ppb	12:48:29
2	Sn 189.927†	14.8	9.4	0.9833	ug/L	0.9833 ppb	12:48:29
2	Ti 334.940†	-1119.7	-16.5	-0.0158	ug/L	-0.0158 ppb	12:48:09
2	Tl 190.801†	-65.4	-4.3	-0.7287	ug/L	-0.7287 ppb	12:48:29
2	U 409.014†	-3934.1	-120.4	-2.9874	ug/L	-2.9874 ppb	12:48:04
2	V 292.402†	-1688.4	-44.7	-0.2542	ug/L	-0.2542 ppb	12:48:09
2	Zn 213.857†	1094.3	-22.2	-0.1261	ug/L	-0.1261 ppb	12:48:29
2	SiO2†	1154.6	558.4	24.643	ug/L	24.643 ppb	12:49:10
3	Sc Radial	5536.9	5536.9	99.5	%		12:47:07
3	Y RADIAL	4795.3	4795.3	99.58	%		12:47:07
3	Al 396.153Radial†	-88.7	3.1	2.7784	ug/L	2.7784 ppb	12:47:07
3	Ca 317.933Radial†	38.0	21.3	52.934	ug/L	52.934 ppb	12:47:27
3	Fe 238.204 Radial†	0.3	-0.0	-1.5937	ug/L	-1.5937 ppb	12:47:27
3	K 766.490 Radial†	1639.2	174.4	75.680	ug/L	75.680 ppb	12:47:07
3	Mg 279.077 IEC†	-0.9	-1.1	-89.124	ug/L	-89.124 ppb	12:47:27
3	Na 589.592 Radial†	-174.5	-4.9	-13.365	ug/L	-13.365 ppb	12:47:27
3	Sr 421.552†	25.1	19.8	0.3045	ug/L	0.3045 ppb	12:47:27
3	Sc 361.383	1057181.0	1057181.0	99.651	%		12:48:34
3	Y 371.029	851270.4	851270.4	99.772	%		12:48:34
3	Ag 328.068†	674.9	38.7	0.1554	ug/L	0.1554 ppb	12:48:39
3	As 188.979†	-44.5	-7.8	-1.8396	ug/L	-1.8396 ppb	12:48:59
3	B 249.677†	378.7	761.6	11.869	ug/L	11.869 ppb	12:48:39
3	Ba 233.527†	63.9	39.8	0.2017	ug/L	0.2017 ppb	12:48:59
3	Be 313.107†	-7375.2	-84.8	-0.0266	ug/L	-0.0266 ppb	12:48:39
3	Cd 226.502†	-299.1	-22.5	-0.1676	ug/L	-0.1676 ppb	12:48:59
3	Co 228.616†	-94.7	-4.6	-0.0558	ug/L	-0.0558 ppb	12:48:59
3	Cr 267.716†	-31.6	-3.1	-0.0251	ug/L	-0.0251 ppb	12:48:59
3	Cu 324.752†	10184.5	28.9	0.0711	ug/L	0.0711 ppb	12:48:39
3	Mn 257.610†	910.4	86.5	0.0699	ug/L	0.0699 ppb	12:48:59
3	Mo 202.031†	44.9	13.3	0.5325	ug/L	0.5325 ppb	12:48:59
3	Ni 231.604†	167.2	19.5	0.3133	ug/L	0.3133 ppb	12:48:59
3	P 214.914†	336.4	0.6	0.2154	ug/L	0.2154 ppb	12:48:59
3	Pb 220.353†	-22.4	6.6	0.4997	ug/L	0.4997 ppb	12:48:59
3	S 181.975 Axial†	69.3	1.8	1.4809	ug/L	1.4809 ppb	12:48:59
3	Sb 206.836†	57.9	12.6	2.5004	ug/L	2.5004 ppb	12:48:59
3	Se 196.026†	-30.6	-9.1	-2.9626	ug/L	-2.9626 ppb	12:48:59
3	Si 251.611†	1139.2	583.1	11.995	ug/L	11.995 ppb	12:48:59
3	Sn 189.927†	11.6	6.1	0.6428	ug/L	0.6428 ppb	12:48:59
3	Ti 334.940†	-1167.7	-62.5	-0.0766	ug/L	-0.0766 ppb	12:48:39
3	Tl 190.801†	-61.2	0.0	0.0020	ug/L	0.0020 ppb	12:48:59
3	U 409.014†	-3975.3	-154.5	-3.8330	ug/L	-3.8330 ppb	12:48:34
3	V 292.402†	-1637.3	9.7	0.0534	ug/L	0.0534 ppb	12:48:39
3	Zn 213.857†	1125.6	7.1	0.0408	ug/L	0.0408 ppb	12:48:59
3	SiO2†	1173.0	574.8	25.317	ug/L	25.317 ppb	12:49:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054846.5	99.431	%	0.2401				0.24%
Sc Radial	5528.4	99.3	%	0.17				0.17%
Y 371.029	849316.5	99.543	%	0.2799				0.28%
Y RADIAL	4802.0	99.72	%	0.125				0.12%
Ag 328.068†	54.3	0.2147	ug/L	0.20658	0.2147	ppb	0.20658	96.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.7	17.922	ug/L	20.3303	17.922	ppb	20.3303	113.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-9.3	-2.1876	ug/L	1.00674	-2.1876	ppb	1.00674	46.02%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	742.0	11.565	ug/L	0.5111	11.565	ppb	0.5111	4.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.8	0.1653	ug/L	0.05052	0.1653	ppb	0.05052	30.56%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.3	-0.0378	ug/L	0.01050	-0.0378	ppb	0.01050	27.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	25.1	62.556	ug/L	8.4198	62.556	ppb	8.4198	13.46%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -20.4     -0.1518 ug/L       0.06032     -0.1518 ppb        0.06032  39.74%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                0.6      0.0086 ug/L       0.11710      0.0086 ppb        0.11710 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                0.8      0.0071 ug/L       0.03031      0.0071 ppb        0.03031 424.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -9.6     -0.0240 ug/L       0.11658     -0.0240 ppb        0.11658 485.05%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.1     -4.9105 ug/L       4.42071     -4.9105 ppb        4.42071  90.02%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        150.3      65.208 ug/L       45.0299      65.208 ppb        45.0299  69.06%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.0     -82.381 ug/L       76.2536     -82.381 ppb        76.2536  92.56%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               62.3      0.0502 ug/L       0.01702      0.0502 ppb        0.01702  33.90%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                5.8      0.2318 ug/L       0.37863      0.2318 ppb        0.37863 163.36%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.558 ug/L       17.1571     -23.558 ppb        17.1571  72.83%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               19.1      0.3055 ug/L       0.13208      0.3055 ppb        0.13208  43.23%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                18.7      6.6426 ug/L       5.60129      6.6426 ppb        5.60129  84.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               17.5      1.3169 ug/L       0.76385      1.3169 ppb        0.76385  58.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           7.7      6.4762 ug/L       5.26375      6.4762 ppb        5.26375  81.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                1.3      0.2668 ug/L       1.95832      0.2668 ppb        1.95832 734.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.6     -1.5038 ug/L       1.26762     -1.5038 ppb        1.26762  84.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              636.1      13.098 ug/L        1.2757      13.098 ppb         1.2757   9.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.2      0.6499 ug/L       0.32985      0.6499 ppb        0.32985  50.75%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               22.0      0.3380 ug/L       0.06959      0.3380 ppb        0.06959  20.59%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -20.6     -0.0212 ug/L       0.05284     -0.0212 ppb        0.05284 248.77%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.0      0.1672 ug/L       0.98883      0.1672 ppb        0.98883 591.54%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -146.2     -3.6263 ug/L       0.56469     -3.6263 ppb        0.56469  15.57%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -43.5     -0.2515 ug/L       0.30350     -0.2515 ppb        0.30350 120.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -9.3     -0.0505 ug/L       0.08455     -0.0505 ppb        0.08455 167.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    579.1      25.528 ug/L        1.0068      25.528 ppb         1.0068   3.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 13:30:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5593.8	5593.8	101	%			13:32:15
1	Y RADIAL	4842.5	4842.5	100.6	%			13:32:15
1	Al 396.153Radial†	5375.4	5439.8	4930.0	ug/L	4930.0	ppb	13:32:15
1	Ca 317.933Radial†	2030.0	2002.6	4988.1	ug/L	4988.1	ppb	13:32:35
1	Fe 238.204 Radial†	143.1	142.0	4997.8	ug/L	4997.8	ppb	13:32:35
1	K 766.490 Radial†	13576.3	12032.8	5214.6	ug/L	5214.6	ppb	13:32:15
1	Mg 279.077 IEC†	64.5	64.0	5074.9	ug/L	5074.9	ppb	13:32:35
1	Na 589.592 Radial†	3820.6	3971.3	10738	ug/L	10738	ppb	13:32:15
1	Sr 421.552†	36184.6	35991.7	554.46	ug/L	554.46	ppb	13:32:15
1	Sc 361.383	1067935.1	1067935.1	100.66	%			13:33:34
1	Y 371.029	850350.6	850350.6	99.664	%			13:33:34
1	Ag 328.068†	127384.2	125904.4	501.45	ug/L	501.45	ppb	13:33:34
1	As 188.979†	2071.9	2095.1	494.98	ug/L	494.98	ppb	13:33:49
1	B 249.677†	31471.2	31644.9	491.29	ug/L	491.29	ppb	13:33:34
1	Ba 233.527†	98516.8	97841.9	496.45	ug/L	496.45	ppb	13:33:34
1	Be 313.107†	1595916.3	1592693.3	496.38	ug/L	496.38	ppb	13:33:34
1	Cd 226.502†	66618.5	66456.2	496.78	ug/L	496.78	ppb	13:33:34
1	Co 228.616†	39113.3	38945.4	485.32	ug/L	485.32	ppb	13:33:49
1	Cr 267.716†	58357.9	58001.1	494.70	ug/L	494.70	ppb	13:33:34
1	Cu 324.752†	211740.1	200150.5	494.11	ug/L	494.11	ppb	13:33:34
1	Mn 257.610†	631157.2	626162.1	495.39	ug/L	495.39	ppb	13:33:34
1	Mo 202.031†	12651.2	12535.9	502.12	ug/L	502.12	ppb	13:33:49
1	Ni 231.604†	30868.2	30516.1	488.79	ug/L	488.79	ppb	13:33:49
1	P 214.914†	7390.5	7004.7	2400.7	ug/L	2400.7	ppb	13:33:49
1	Pb 220.353†	6658.3	6643.4	499.37	ug/L	499.37	ppb	13:33:49
1	S 181.975 Axial†	1261.6	1185.4	1002.5	ug/L	1002.5	ppb	13:33:49
1	Sb 206.836†	2570.5	2508.1	499.32	ug/L	499.32	ppb	13:33:49
1	Se 196.026†	1503.6	1515.3	512.16	ug/L	512.16	ppb	13:33:49
1	Si 251.611†	123414.2	122039.0	2506.2	ug/L	2506.2	ppb	13:33:34
1	Sn 189.927†	4826.6	4789.2	498.58	ug/L	498.58	ppb	13:33:49
1	Ti 334.940†	381885.1	380472.4	498.01	ug/L	498.01	ppb	13:33:34
1	Tl 190.801†	2890.2	2932.5	496.60	ug/L	496.60	ppb	13:33:49
1	U 409.014†	15716.9	19447.9	480.97	ug/L	480.97	ppb	13:33:34
1	V 292.402†	85492.2	86580.4	497.03	ug/L	497.03	ppb	13:33:34
1	Zn 213.857†	90459.6	88739.9	490.98	ug/L	490.98	ppb	13:33:34
1	SiO2†	121080.0	119678.0	5261.9	ug/L	5261.9	ppb	13:34:50
2	Sc Radial	5672.4	5672.4	102	%			13:32:40
2	Y RADIAL	4945.5	4945.5	102.7	%			13:32:40
2	Al 396.153Radial†	5436.6	5425.7	4917.2	ug/L	4917.2	ppb	13:32:40
2	Ca 317.933Radial†	2037.9	1982.3	4937.6	ug/L	4937.6	ppb	13:33:00
2	Fe 238.204 Radial†	144.7	141.6	4983.6	ug/L	4983.6	ppb	13:33:00
2	K 766.490 Radial†	13656.0	11923.8	5167.3	ug/L	5167.3	ppb	13:32:40
2	Mg 279.077 IEC†	65.5	64.0	5077.9	ug/L	5077.9	ppb	13:33:00
2	Na 589.592 Radial†	3830.1	3927.9	10620	ug/L	10620	ppb	13:32:40
2	Sr 421.552†	36620.5	35920.3	553.36	ug/L	553.36	ppb	13:32:40
2	Sc 361.383	1070653.1	1070653.1	100.92	%			13:33:57
2	Y 371.029	851300.7	851300.7	99.776	%			13:33:57
2	Ag 328.068†	127724.7	125920.6	501.52	ug/L	501.52	ppb	13:33:57
2	As 188.979†	2076.5	2094.5	494.83	ug/L	494.83	ppb	13:34:17
2	B 249.677†	31609.9	31703.0	492.20	ug/L	492.20	ppb	13:33:57
2	Ba 233.527†	98878.2	97951.6	497.00	ug/L	497.00	ppb	13:33:57
2	Be 313.107†	1599999.7	1592714.8	496.39	ug/L	496.39	ppb	13:33:57
2	Cd 226.502†	67082.9	66748.4	498.96	ug/L	498.96	ppb	13:33:57
2	Co 228.616†	39157.1	38890.2	484.63	ug/L	484.63	ppb	13:34:17
2	Cr 267.716†	58566.4	58060.5	495.20	ug/L	495.20	ppb	13:33:57
2	Cu 324.752†	211700.3	199577.1	492.70	ug/L	492.70	ppb	13:33:57
2	Mn 257.610†	634065.3	627452.0	496.41	ug/L	496.41	ppb	13:33:57
2	Mo 202.031†	12650.3	12503.1	500.81	ug/L	500.81	ppb	13:34:17
2	Ni 231.604†	30868.0	30438.0	487.54	ug/L	487.54	ppb	13:34:17

2	P 214.914†	7401.9	6997.4	2398.4	ug/L	2398.4 ppb	13:34:17
2	Pb 220.353†	6676.9	6645.0	499.48	ug/L	499.48 ppb	13:34:17
2	S 181.975 Axial†	1250.3	1171.1	990.32	ug/L	990.32 ppb	13:34:17
2	Sb 206.836†	2582.9	2513.9	500.41	ug/L	500.41 ppb	13:34:17
2	Se 196.026†	1510.6	1518.4	513.14	ug/L	513.14 ppb	13:34:17
2	Si 251.611†	123797.7	122107.8	2507.7	ug/L	2507.7 ppb	13:33:57
2	Sn 189.927†	4829.4	4779.9	497.60	ug/L	497.60 ppb	13:34:17
2	Ti 334.940†	383068.5	380682.0	498.28	ug/L	498.28 ppb	13:33:57
2	Tl 190.801†	2883.4	2918.5	494.24	ug/L	494.24 ppb	13:34:17
2	U 409.014†	15572.6	19265.3	476.44	ug/L	476.44 ppb	13:33:57
2	V 292.402†	85872.5	86741.7	497.92	ug/L	497.92 ppb	13:33:57
2	Zn 213.857†	90799.4	88848.4	491.60	ug/L	491.60 ppb	13:33:57
2	SiO2†	123201.1	121474.4	5341.4	ug/L	5341.4 ppb	13:34:55
3	Sc Radial	5530.2	5530.2	99.4	%		13:33:05
3	Y RADIAL	4824.8	4824.8	100.2	%		13:33:05
3	Al 396.153Radial†	5269.6	5394.8	4888.9	ug/L	4888.9 ppb	13:33:05
3	Ca 317.933Radial†	2016.5	2012.2	5012.0	ug/L	5012.0 ppb	13:33:25
3	Fe 238.204 Radial†	142.0	142.6	5017.8	ug/L	5017.8 ppb	13:33:25
3	K 766.490 Radial†	13240.5	11850.4	5135.5	ug/L	5135.5 ppb	13:33:05
3	Mg 279.077 IEC†	66.0	66.2	5249.4	ug/L	5249.4 ppb	13:33:25
3	Na 589.592 Radial†	3727.2	3921.0	10602	ug/L	10602 ppb	13:33:05
3	Sr 421.552†	35503.6	35720.6	550.29	ug/L	550.29 ppb	13:33:05
3	Sc 361.383	1058446.8	1058446.8	99.770	%		13:34:24
3	Y 371.029	840681.7	840681.7	98.531	%		13:34:24
3	Ag 328.068†	126248.3	125900.3	501.44	ug/L	501.44 ppb	13:34:24
3	As 188.979†	2075.8	2117.5	500.23	ug/L	500.23 ppb	13:34:44
3	B 249.677†	31241.6	31695.0	492.06	ug/L	492.06 ppb	13:34:24
3	Ba 233.527†	97802.6	98003.4	497.27	ug/L	497.27 ppb	13:34:24
3	Be 313.107†	1580830.6	1591784.7	496.10	ug/L	496.10 ppb	13:34:24
3	Cd 226.502†	66147.2	66577.1	497.68	ug/L	497.68 ppb	13:34:24
3	Co 228.616†	38965.8	39145.9	487.83	ug/L	487.83 ppb	13:34:44
3	Cr 267.716†	57808.5	57970.1	494.43	ug/L	494.43 ppb	13:34:24
3	Cu 324.752†	209941.6	200233.4	494.32	ug/L	494.32 ppb	13:34:24
3	Mn 257.610†	627495.4	628112.4	496.93	ug/L	496.93 ppb	13:34:24
3	Mo 202.031†	12657.7	12655.1	506.89	ug/L	506.89 ppb	13:34:44
3	Ni 231.604†	30736.2	30658.7	491.08	ug/L	491.08 ppb	13:34:44
3	P 214.914†	7364.3	7044.3	2414.7	ug/L	2414.7 ppb	13:34:44
3	Pb 220.353†	6650.9	6695.3	503.26	ug/L	503.26 ppb	13:34:44
3	S 181.975 Axial†	1250.1	1185.1	1002.2	ug/L	1002.2 ppb	13:34:44
3	Sb 206.836†	2580.3	2540.8	505.92	ug/L	505.92 ppb	13:34:44
3	Se 196.026†	1500.2	1525.3	515.51	ug/L	515.51 ppb	13:34:44
3	Si 251.611†	122421.6	122143.2	2508.3	ug/L	2508.3 ppb	13:34:24
3	Sn 189.927†	4816.0	4821.6	501.94	ug/L	501.94 ppb	13:34:44
3	Ti 334.940†	378995.5	380976.9	498.67	ug/L	498.67 ppb	13:34:24
3	Tl 190.801†	2891.6	2959.6	501.16	ug/L	501.16 ppb	13:34:44
3	U 409.014†	15388.1	19258.2	476.26	ug/L	476.26 ppb	13:34:24
3	V 292.402†	84860.2	86708.3	497.81	ug/L	497.81 ppb	13:34:24
3	Zn 213.857†	89990.4	89075.1	492.83	ug/L	492.83 ppb	13:34:24
3	SiO2†	121574.6	121252.0	5331.3	ug/L	5331.3 ppb	13:35:00

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065678.3	100.45	%	0.604				0.60%
Sc Radial	5598.8	101	%	1.3				1.27%
Y 371.029	847444.4	99.324	%	0.6887				0.69%
Y RADIAL	4870.9	101.1	%	1.35				1.34%
Ag 328.068†	125908.4	501.47	ug/L	0.040	501.47	ppb	0.040	0.01%
QC value within limits for Ag 328.068 Recovery = 100.29%								
Al 396.153Radial†	5420.1	4912.0	ug/L	21.04	4912.0	ppb	21.04	0.43%
QC value within limits for Al 396.153Radial Recovery = 98.24%								
As 188.979†	2102.3	496.68	ug/L	3.073	496.68	ppb	3.073	0.62%
QC value within limits for As 188.979 Recovery = 99.34%								
B 249.677†	31681.0	491.85	ug/L	0.490	491.85	ppb	0.490	0.10%
QC value within limits for B 249.677 Recovery = 98.37%								
Ba 233.527†	97932.3	496.91	ug/L	0.418	496.91	ppb	0.418	0.08%
QC value within limits for Ba 233.527 Recovery = 99.38%								
Be 313.107†	1592397.6	496.29	ug/L	0.164	496.29	ppb	0.164	0.03%
QC value within limits for Be 313.107 Recovery = 99.26%								
Ca 317.933Radial†	1999.0	4979.2	ug/L	37.99	4979.2	ppb	37.99	0.76%

```
   QC value within limits for Ca 317.933Radial  Recovery = 99.58%
Cd 226.502†            66593.9      497.81 ug/L         1.099      497.81 ppb          1.099   0.22%
   QC value within limits for Cd 226.502  Recovery = 99.56%
Co 228.616†            38993.8      485.92 ug/L         1.684      485.92 ppb          1.684   0.35%
   QC value within limits for Co 228.616  Recovery = 97.18%
Cr 267.716†            58010.6      494.78 ug/L         0.391      494.78 ppb          0.391   0.08%
   QC value within limits for Cr 267.716  Recovery = 98.96%
Cu 324.752†           199987.0      493.71 ug/L         0.883      493.71 ppb          0.883   0.18%
   QC value within limits for Cu 324.752  Recovery = 98.74%
Fe 238.204 Radial†       142.1      4999.7 ug/L         17.21      4999.7 ppb          17.21   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.99%
K 766.490 Radial†      11935.7      5172.5 ug/L         39.80      5172.5 ppb          39.80   0.77%
   QC value within limits for K 766.490 Radial  Recovery = 103.45%
Mg 279.077 IEC†           64.8      5134.0 ug/L         99.90      5134.0 ppb          99.90   1.95%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.68%
Mn 257.610†           627242.2      496.25 ug/L         0.783      496.25 ppb          0.783   0.16%
   QC value within limits for Mn 257.610  Recovery = 99.25%
Mo 202.031†            12564.7      503.27 ug/L         3.202      503.27 ppb          3.202   0.64%
   QC value within limits for Mo 202.031  Recovery = 100.65%
Na 589.592 Radial†      3940.0       10653 ug/L          73.7       10653 ppb           73.7   0.69%
   QC value within limits for Na 589.592 Radial  Recovery = 106.53%
Ni 231.604†            30537.6      489.14 ug/L         1.792      489.14 ppb          1.792   0.37%
   QC value within limits for Ni 231.604  Recovery = 97.83%
P 214.914†              7015.5      2404.6 ug/L          8.82      2404.6 ppb           8.82   0.37%
   QC value within limits for P 214.914  Recovery = 96.18%
Pb 220.353†             6661.2      500.70 ug/L         2.213      500.70 ppb          2.213   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.14%
S 181.975 Axial†        1180.6      998.33 ug/L         6.940      998.33 ppb          6.940   0.70%
   QC value within limits for S 181.975 Axial  Recovery = 99.83%
Sb 206.836†             2520.9      501.88 ug/L         3.538      501.88 ppb          3.538   0.70%
   QC value within limits for Sb 206.836  Recovery = 100.38%
Se 196.026†             1519.7      513.60 ug/L         1.722      513.60 ppb          1.722   0.34%
   QC value within limits for Se 196.026  Recovery = 102.72%
Si 251.611†           122096.7      2507.4 ug/L          1.07      2507.4 ppb           1.07   0.04%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4796.9      499.37 ug/L         2.279      499.37 ppb          2.279   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.87%
Sr 421.552†            35877.5      552.70 ug/L         2.165      552.70 ppb          2.165   0.39%
   QC value greater than the upper limit for Sr 421.552  Recovery = 110.54%
Ti 334.940†           380710.4      498.32 ug/L         0.334      498.32 ppb          0.334   0.07%
   QC value within limits for Ti 334.940  Recovery = 99.66%
Tl 190.801†             2936.9      497.33 ug/L         3.520      497.33 ppb          3.520   0.71%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19323.8      477.89 ug/L         2.668      477.89 ppb          2.668   0.56%
   QC value within limits for U 409.014  Recovery = 95.58%
V 292.402†             86676.8      497.59 ug/L         0.485      497.59 ppb          0.485   0.10%
   QC value within limits for V 292.402  Recovery = 99.52%
Zn 213.857†            88887.8      491.81 ug/L         0.941      491.81 ppb          0.941   0.19%
   QC value within limits for Zn 213.857  Recovery = 98.36%
SiO2†                 120801.5      5311.6 ug/L         43.27      5311.6 ppb          43.27   0.81%
   QC value within limits for SiO2  Recovery = 99.33%
QC Failed.  Continue with analysis.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:37:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5413.7	5413.7	97.3	%			13:39:02
1	Y RADIAL	4722.7	4722.7	98.07	%			13:39:02
1	Al 396.153Radial†	-76.0	14.1	12.785	ug/L	12.785	ppb	13:39:02
1	Ca 317.933Radial†	35.2	19.2	47.934	ug/L	47.934	ppb	13:39:22
1	Fe 238.204 Radial†	1.2	0.9	31.911	ug/L	31.911	ppb	13:39:22
1	K 766.490 Radial†	1580.2	151.2	65.626	ug/L	65.626	ppb	13:39:02
1	Mg 279.077 IEC†	-0.2	-0.4	-31.882	ug/L	-31.882	ppb	13:39:22
1	Na 589.592 Radial†	-172.1	-6.5	-17.590	ug/L	-17.590	ppb	13:39:22
1	Sr 421.552†	25.9	21.2	0.3255	ug/L	0.3255	ppb	13:39:22
1	Sc 361.383	1053963.2	1053963.2	99.348	%			13:40:19
1	Y 371.029	848397.9	848397.9	99.435	%			13:40:19
1	Ag 328.068†	697.3	63.3	0.2597	ug/L	0.2597	ppb	13:40:24
1	As 188.979†	-43.2	-6.6	-1.5430	ug/L	-1.5430	ppb	13:40:44
1	B 249.677†	186.7	569.4	8.8696	ug/L	8.8696	ppb	13:40:24
1	Ba 233.527†	25.2	1.1	0.0062	ug/L	0.0062	ppb	13:40:44
1	Be 313.107†	-7423.5	-156.0	-0.0488	ug/L	-0.0488	ppb	13:40:24
1	Cd 226.502†	-280.8	-5.0	-0.0412	ug/L	-0.0412	ppb	13:40:44
1	Co 228.616†	-84.6	5.2	0.0655	ug/L	0.0655	ppb	13:40:44
1	Cr 267.716†	-15.0	13.5	0.1154	ug/L	0.1154	ppb	13:40:44
1	Cu 324.752†	10214.2	90.0	0.2240	ug/L	0.2240	ppb	13:40:24
1	Mn 257.610†	861.8	40.4	0.0367	ug/L	0.0367	ppb	13:40:44
1	Mo 202.031†	34.4	2.9	0.1183	ug/L	0.1183	ppb	13:40:44
1	Ni 231.604†	156.3	9.1	0.1453	ug/L	0.1453	ppb	13:40:44
1	P 214.914†	354.0	19.4	6.7924	ug/L	6.7924	ppb	13:40:44
1	Pb 220.353†	-16.7	12.3	0.9181	ug/L	0.9181	ppb	13:40:44
1	S 181.975 Axial†	70.6	3.2	2.7071	ug/L	2.7071	ppb	13:40:44
1	Sb 206.836†	39.9	-5.3	-1.0467	ug/L	-1.0467	ppb	13:40:44
1	Se 196.026†	-22.9	-1.5	-0.3668	ug/L	-0.3668	ppb	13:40:44
1	Si 251.611†	869.2	314.8	6.4745	ug/L	6.4745	ppb	13:40:44
1	Sn 189.927†	0.9	-4.6	-0.4731	ug/L	-0.4731	ppb	13:40:44
1	Ti 334.940†	-1211.1	-109.8	-0.1404	ug/L	-0.1404	ppb	13:40:24
1	Tl 190.801†	-59.9	1.1	0.1786	ug/L	0.1786	ppb	13:40:44
1	U 409.014†	-3817.1	-7.5	-0.1890	ug/L	-0.1890	ppb	13:40:19
1	V 292.402†	-1664.4	-22.5	-0.1316	ug/L	-0.1316	ppb	13:40:24
1	Zn 213.857†	1133.9	18.9	0.1021	ug/L	0.1021	ppb	13:40:44
1	SiO2†	854.9	258.2	11.358	ug/L	11.358	ppb	13:41:50
2	Sc Radial	5529.6	5529.6	99.4	%			13:39:27
2	Y RADIAL	4800.3	4800.3	99.68	%			13:39:27
2	Al 396.153Radial†	-66.9	24.8	22.617	ug/L	22.617	ppb	13:39:27
2	Ca 317.933Radial†	32.0	15.3	38.110	ug/L	38.110	ppb	13:39:47
2	Fe 238.204 Radial†	-0.4	-0.7	-24.391	ug/L	-24.391	ppb	13:39:47
2	K 766.490 Radial†	1456.8	-7.0	-3.0184	ug/L	-3.0184	ppb	13:39:27
2	Mg 279.077 IEC†	-1.1	-1.3	-105.28	ug/L	-105.28	ppb	13:39:47
2	Na 589.592 Radial†	-182.7	-13.4	-36.229	ug/L	-36.229	ppb	13:39:47
2	Sr 421.552†	13.5	8.1	0.1251	ug/L	0.1251	ppb	13:39:47
2	Sc 361.383	1050298.1	1050298.1	99.002	%			13:40:49
2	Y 371.029	845092.6	845092.6	99.048	%			13:40:49
2	Ag 328.068†	722.6	91.3	0.3522	ug/L	0.3522	ppb	13:40:54
2	As 188.979†	-47.8	-11.4	-2.6790	ug/L	-2.6790	ppb	13:41:14
2	B 249.677†	113.4	496.1	7.7347	ug/L	7.7347	ppb	13:40:54
2	Ba 233.527†	39.8	15.9	0.0791	ug/L	0.0791	ppb	13:41:14
2	Be 313.107†	-7481.4	-240.6	-0.0748	ug/L	-0.0748	ppb	13:40:54
2	Cd 226.502†	-281.1	-6.3	-0.0443	ug/L	-0.0443	ppb	13:41:14
2	Co 228.616†	-106.2	-16.8	-0.2105	ug/L	-0.2105	ppb	13:41:14
2	Cr 267.716†	-17.2	11.3	0.0951	ug/L	0.0951	ppb	13:41:14
2	Cu 324.752†	10211.9	123.5	0.3033	ug/L	0.3033	ppb	13:40:54
2	Mn 257.610†	849.4	30.9	0.0233	ug/L	0.0233	ppb	13:41:14
2	Mo 202.031†	18.3	-13.3	-0.5352	ug/L	-0.5352	ppb	13:41:14
2	Ni 231.604†	164.4	17.8	0.2854	ug/L	0.2854	ppb	13:41:14

2	P 214.914†	350.8	17.5	6.1379	ug/L	6.1379 ppb	13:41:14
2	Pb 220.353†	-10.6	18.4	1.3861	ug/L	1.3861 ppb	13:41:14
2	S 181.975 Axial†	62.6	-4.6	-3.8702	ug/L	-3.8702 ppb	13:41:14
2	Sb 206.836†	45.8	0.8	0.1341	ug/L	0.1341 ppb	13:41:14
2	Se 196.026†	-24.4	-3.1	-1.0828	ug/L	-1.0828 ppb	13:41:14
2	Si 251.611†	863.1	311.7	6.4431	ug/L	6.4431 ppb	13:41:14
2	Sn 189.927†	0.2	-5.3	-0.5453	ug/L	-0.5453 ppb	13:41:14
2	Ti 334.940†	-1096.8	1.4	0.0048	ug/L	0.0048 ppb	13:40:54
2	Tl 190.801†	-63.6	-2.9	-0.4817	ug/L	-0.4817 ppb	13:41:14
2	U 409.014†	-3840.4	-44.4	-1.0988	ug/L	-1.0988 ppb	13:40:49
2	V 292.402†	-1708.7	-73.1	-0.4221	ug/L	-0.4221 ppb	13:40:54
2	Zn 213.857†	1132.6	21.6	0.1245	ug/L	0.1245 ppb	13:41:14
2	SiO2†	832.1	238.2	10.549	ug/L	10.549 ppb	13:41:55
3	Sc Radial	5577.9	5577.9	100	%		13:39:52
3	Y RADIAL	4835.1	4835.1	100.4	%		13:39:52
3	Al 396.153Radial†	-70.3	22.1	20.104	ug/L	20.104 ppb	13:39:52
3	Ca 317.933Radial†	35.5	18.5	45.957	ug/L	45.957 ppb	13:40:12
3	Fe 238.204 Radial†	0.8	0.4	15.248	ug/L	15.248 ppb	13:40:12
3	K 766.490 Radial†	1595.4	118.6	51.472	ug/L	51.472 ppb	13:39:52
3	Mg 279.077 IEC†	1.1	0.9	72.486	ug/L	72.486 ppb	13:40:12
3	Na 589.592 Radial†	-180.7	-9.9	-26.682	ug/L	-26.682 ppb	13:40:12
3	Sr 421.552†	20.5	15.0	0.2301	ug/L	0.2301 ppb	13:40:12
3	Sc 361.383	1059808.1	1059808.1	99.899	%		13:41:19
3	Y 371.029	852835.7	852835.7	99.956	%		13:41:19
3	Ag 328.068†	652.2	14.3	0.0614	ug/L	0.0614 ppb	13:41:24
3	As 188.979†	-45.4	-8.6	-2.0185	ug/L	-2.0185 ppb	13:41:44
3	B 249.677†	65.4	446.9	6.9635	ug/L	6.9635 ppb	13:41:24
3	Ba 233.527†	22.1	-2.1	-0.0105	ug/L	-0.0105 ppb	13:41:44
3	Be 313.107†	-7445.6	-136.9	-0.0427	ug/L	-0.0427 ppb	13:41:24
3	Cd 226.502†	-289.9	-12.6	-0.0960	ug/L	-0.0960 ppb	13:41:44
3	Co 228.616†	-93.1	-2.8	-0.0344	ug/L	-0.0344 ppb	13:41:44
3	Cr 267.716†	-11.2	17.4	0.1485	ug/L	0.1485 ppb	13:41:44
3	Cu 324.752†	10243.7	62.8	0.1558	ug/L	0.1558 ppb	13:41:24
3	Mn 257.610†	848.9	22.8	0.0186	ug/L	0.0186 ppb	13:41:44
3	Mo 202.031†	37.0	5.3	0.2126	ug/L	0.2126 ppb	13:41:44
3	Ni 231.604†	140.9	-7.2	-0.1159	ug/L	-0.1159 ppb	13:41:44
3	P 214.914†	339.1	2.5	0.8606	ug/L	0.8606 ppb	13:41:44
3	Pb 220.353†	-19.1	9.9	0.7469	ug/L	0.7469 ppb	13:41:44
3	S 181.975 Axial†	72.1	4.4	3.7018	ug/L	3.7018 ppb	13:41:44
3	Sb 206.836†	45.8	0.4	0.0909	ug/L	0.0909 ppb	13:41:44
3	Se 196.026†	-18.5	3.1	1.0727	ug/L	1.0727 ppb	13:41:44
3	Si 251.611†	817.6	258.4	5.3084	ug/L	5.3084 ppb	13:41:44
3	Sn 189.927†	11.2	5.7	0.5975	ug/L	0.5975 ppb	13:41:44
3	Ti 334.940†	-1138.5	-30.4	-0.0364	ug/L	-0.0364 ppb	13:41:24
3	Tl 190.801†	-59.9	1.4	0.2410	ug/L	0.2410 ppb	13:41:44
3	U 409.014†	-3866.5	-35.7	-0.8885	ug/L	-0.8885 ppb	13:41:19
3	V 292.402†	-1658.7	-7.6	-0.0432	ug/L	-0.0432 ppb	13:41:24
3	Zn 213.857†	1144.7	23.5	0.1274	ug/L	0.1274 ppb	13:41:44
3	SiO2†	856.3	254.8	11.208	ug/L	11.208 ppb	13:42:00

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054689.8	99.416	%	0.4521				0.45%
Sc Radial	5507.0	99.0	%	1.52				1.53%
Y 371.029	848775.4	99.480	%	0.4554				0.46%
Y RADIAL	4786.0	99.38	%	1.195				1.20%
Ag 328.068†	56.3	0.2244	ug/L	0.14858	0.2244	ppb	0.14858	66.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.3	18.502	ug/L	5.1080	18.502	ppb	5.1080	27.61%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-8.9	-2.0802	ug/L	0.57051	-2.0802	ppb	0.57051	27.43%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	504.1	7.8559	ug/L	0.95880	7.8559	ppb	0.95880	12.20%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.0	0.0249	ug/L	0.04766	0.0249	ppb	0.04766	191.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-177.8	-0.0554	ug/L	0.01705	-0.0554	ppb	0.01705	30.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	17.7	44.000	ug/L	5.1960	44.000	ppb	5.1960	11.81%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -8.0     -0.0605 ug/L       0.03078     -0.0605 ppb        0.03078  50.88%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -4.8     -0.0598 ug/L       0.13974     -0.0598 ppb        0.13974 233.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.0      0.1197 ug/L       0.02695      0.1197 ppb        0.02695  22.52%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                92.1      0.2277 ug/L       0.07381      0.2277 ppb        0.07381  32.42%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.2      7.5897 ug/L      28.92162      7.5897 ppb       28.92162 381.07%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          87.6     38.027 ug/L       36.2437      38.027 ppb        36.2437  95.31%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3    -21.559 ug/L       89.3317     -21.559 ppb        89.3317 414.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                31.4      0.0262 ug/L       0.00940      0.0262 ppb        0.00940  35.89%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -1.7     -0.0681 ug/L       0.40727     -0.0681 ppb        0.40727 597.93%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -9.9     -26.834 ug/L        9.3203     -26.834 ppb         9.3203  34.73%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 6.5      0.1049 ug/L       0.20368      0.1049 ppb        0.20368 194.15%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 13.1      4.5970 ug/L       3.25230      4.5970 ppb        3.25230  70.75%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                13.5      1.0170 ug/L       0.33087      1.0170 ppb        0.33087  32.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            1.0      0.8462 ug/L       4.11469      0.8462 ppb        4.11469 486.24%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -1.4     -0.2739 ug/L       0.66961     -0.2739 ppb        0.66961 244.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -0.5     -0.1256 ug/L       1.09782     -0.1256 ppb        1.09782 873.95%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               295.0      6.0753 ug/L       0.66436      6.0753 ppb        0.66436  10.94%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.4     -0.1403 ug/L       0.63995     -0.1403 ppb        0.63995 456.09%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                14.8      0.2269 ug/L       0.10024      0.2269 ppb        0.10024  44.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -46.3     -0.0574 ug/L       0.07484     -0.0574 ppb        0.07484 130.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -0.1     -0.0207 ug/L       0.40044     -0.0207 ppb        0.40044 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -29.2     -0.7254 ug/L       0.47631     -0.7254 ppb        0.47631  65.66%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -34.4     -0.1990 ug/L       0.19822     -0.1990 ppb        0.19822  99.63%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                21.3      0.1180 ug/L       0.01386      0.1180 ppb        0.01386  11.75%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     250.4     11.038 ug/L        0.4304     11.038 ppb         0.4304   3.90%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/8/2009 13:50:46
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601
Plasma On Time: 00:00:00
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070809A.sif
Batch ID:
Results Data Set: 070809A
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 7
Date Collected: 7/8/2009 13:50:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5532.4	5532.4	99.4	%			13:52:39
1	Y RADIAL	4797.0	4797.0	99.61	%			13:52:39
1	Al 396.153Radial†	5229.0	5351.8	4849.9	ug/L	4849.9	ppb	13:52:39
1	Ca 317.933Radial†	1958.2	1952.7	4863.9	ug/L	4863.9	ppb	13:52:59
1	Fe 238.204 Radial†	138.6	139.1	4894.2	ug/L	4894.2	ppb	13:52:59
1	K 766.490 Radial†	13095.3	11698.9	5070.2	ug/L	5070.2	ppb	13:52:39
1	Mg 279.077 IEC†	62.6	62.8	4978.5	ug/L	4978.5	ppb	13:52:59
1	Na 589.592 Radial†	3365.0	3555.1	9612.7	ug/L	9612.7	ppb	13:52:39
1	Sr 421.552†	32629.9	32815.6	505.53	ug/L	505.53	ppb	13:52:39
1	Sc 361.383	1065706.7	1065706.7	100.45	%			13:53:58
1	Y 371.029	846819.9	846819.9	99.251	%			13:53:58
1	Ag 328.068†	126960.9	125747.6	500.80	ug/L	500.80	ppb	13:53:58
1	As 188.979†	2061.4	2089.0	493.53	ug/L	493.53	ppb	13:54:18
1	B 249.677†	31314.7	31554.4	489.90	ug/L	489.90	ppb	13:53:58
1	Ba 233.527†	98387.1	97917.5	496.83	ug/L	496.83	ppb	13:53:58
1	Be 313.107†	1590293.1	1590410.5	495.67	ug/L	495.67	ppb	13:53:58
1	Cd 226.502†	66680.2	66656.0	498.28	ug/L	498.28	ppb	13:53:58
1	Co 228.616†	38914.5	38828.7	483.86	ug/L	483.86	ppb	13:54:18
1	Cr 267.716†	58123.4	57888.9	493.74	ug/L	493.74	ppb	13:53:58
1	Cu 324.752†	211262.3	200114.7	494.02	ug/L	494.02	ppb	13:53:58
1	Mn 257.610†	631066.9	627383.2	496.35	ug/L	496.35	ppb	13:53:58
1	Mo 202.031†	12608.8	12520.0	501.47	ug/L	501.47	ppb	13:54:18
1	Ni 231.604†	30720.7	30433.4	487.47	ug/L	487.47	ppb	13:54:18
1	P 214.914†	7349.3	6979.1	2391.7	ug/L	2391.7	ppb	13:54:18
1	Pb 220.353†	6619.8	6619.0	497.53	ug/L	497.53	ppb	13:54:18
1	S 181.975 Axial†	1249.9	1176.4	994.81	ug/L	994.81	ppb	13:54:18
1	Sb 206.836†	2566.6	2509.6	499.57	ug/L	499.57	ppb	13:54:18
1	Se 196.026†	1498.0	1512.8	511.00	ug/L	511.00	ppb	13:54:18
1	Si 251.611†	122865.0	121748.7	2500.3	ug/L	2500.3	ppb	13:53:58
1	Sn 189.927†	4783.6	4756.4	495.16	ug/L	495.16	ppb	13:54:18
1	Ti 334.940†	381207.0	380590.6	498.15	ug/L	498.15	ppb	13:53:58
1	Tl 190.801†	2869.1	2917.5	494.08	ug/L	494.08	ppb	13:54:18
1	U 409.014†	15602.1	19366.2	478.96	ug/L	478.96	ppb	13:53:58
1	V 292.402†	85431.5	86697.6	497.70	ug/L	497.70	ppb	13:53:58
1	Zn 213.857†	90487.4	88955.4	492.21	ug/L	492.21	ppb	13:53:58
1	SiO2†	122908.9	121750.2	5353.7	ug/L	5353.7	ppb	13:55:18
2	Sc Radial	5478.6	5478.6	98.5	%			13:53:04
2	Y RADIAL	4737.8	4737.8	98.38	%			13:53:04
2	Al 396.153Radial†	5218.1	5392.4	4886.9	ug/L	4886.9	ppb	13:53:04
2	Ca 317.933Radial†	1985.5	1999.9	4981.3	ug/L	4981.3	ppb	13:53:24
2	Fe 238.204 Radial†	138.0	139.8	4919.3	ug/L	4919.3	ppb	13:53:24
2	K 766.490 Radial†	13047.9	11780.2	5105.5	ug/L	5105.5	ppb	13:53:04
2	Mg 279.077 IEC†	63.8	64.6	5122.0	ug/L	5122.0	ppb	13:53:24
2	Na 589.592 Radial†	3309.4	3531.9	9549.8	ug/L	9549.8	ppb	13:53:04
2	Sr 421.552†	32384.5	32888.7	506.66	ug/L	506.66	ppb	13:53:04
2	Sc 361.383	1063461.6	1063461.6	100.24	%			13:54:25
2	Y 371.029	846126.2	846126.2	99.169	%			13:54:25

2	Ag 328.068†	126811.5	125865.3	501.27 ug/L	501.27 ppb	13:54:25
2	As 188.979†	2058.4	2090.4	493.85 ug/L	493.85 ppb	13:54:45
2	B 249.677†	31323.3	31628.9	491.05 ug/L	491.05 ppb	13:54:25
2	Ba 233.527†	98085.9	97823.8	496.36 ug/L	496.36 ppb	13:54:25
2	Be 313.107†	1587952.8	1591418.1	495.99 ug/L	495.99 ppb	13:54:25
2	Cd 226.502†	66376.1	66492.8	497.06 ug/L	497.06 ppb	13:54:25
2	Co 228.616†	38816.9	38813.2	483.67 ug/L	483.67 ppb	13:54:45
2	Cr 267.716†	58135.0	58022.7	494.88 ug/L	494.88 ppb	13:54:25
2	Cu 324.752†	210177.7	199476.8	492.45 ug/L	492.45 ppb	13:54:25
2	Mn 257.610†	628370.5	626019.6	495.27 ug/L	495.27 ppb	13:54:25
2	Mo 202.031†	12579.9	12517.6	501.38 ug/L	501.38 ppb	13:54:45
2	Ni 231.604†	30677.7	30455.1	487.82 ug/L	487.82 ppb	13:54:45
2	P 214.914†	7338.8	6984.1	2393.7 ug/L	2393.7 ppb	13:54:45
2	Pb 220.353†	6619.2	6632.2	498.52 ug/L	498.52 ppb	13:54:45
2	S 181.975 Axial†	1248.9	1178.1	996.23 ug/L	996.23 ppb	13:54:45
2	Sb 206.836†	2544.9	2493.3	496.34 ug/L	496.34 ppb	13:54:45
2	Se 196.026†	1498.5	1516.5	512.27 ug/L	512.27 ppb	13:54:45
2	Si 251.611†	122326.0	121469.2	2494.5 ug/L	2494.5 ppb	13:54:25
2	Sn 189.927†	4769.0	4752.0	494.70 ug/L	494.70 ppb	13:54:45
2	Ti 334.940†	380132.8	380320.2	497.81 ug/L	497.81 ppb	13:54:25
2	Tl 190.801†	2870.3	2924.7	495.28 ug/L	495.28 ppb	13:54:45
2	U 409.014†	15658.2	19455.0	481.15 ug/L	481.15 ppb	13:54:25
2	V 292.402†	85307.7	86753.6	498.02 ug/L	498.02 ppb	13:54:25
2	Zn 213.857†	90245.0	88903.8	491.92 ug/L	491.92 ppb	13:54:25
2	SiO2†	123285.6	122384.3	5381.7 ug/L	5381.7 ppb	13:55:23
3	Sc Radial	5573.7	5573.7	100 %		13:53:29
3	Y RADIAL	4812.9	4812.9	99.94 %		13:53:29
3	Al 396.153Radial†	5255.8	5339.6	4838.8 ug/L	4838.8 ppb	13:53:29
3	Ca 317.933Radial†	1973.1	1953.0	4864.6 ug/L	4864.6 ppb	13:53:49
3	Fe 238.204 Radial†	139.2	138.6	4878.6 ug/L	4878.6 ppb	13:53:49
3	K 766.490 Radial†	13120.0	11626.0	5038.5 ug/L	5038.5 ppb	13:53:29
3	Mg 279.077 IEC†	64.1	63.8	5056.8 ug/L	5056.8 ppb	13:53:49
3	Na 589.592 Radial†	3353.7	3518.8	9514.4 ug/L	9514.4 ppb	13:53:29
3	Sr 421.552†	32719.5	32661.7	503.16 ug/L	503.16 ppb	13:53:29
3	Sc 361.383	1058179.3	1058179.3	99.745 %		13:54:53
3	Y 371.029	842497.6	842497.6	98.744 %		13:54:53
3	Ag 328.068†	126330.4	126014.5	501.86 ug/L	501.86 ppb	13:54:53
3	As 188.979†	2057.5	2099.7	496.03 ug/L	496.03 ppb	13:55:13
3	B 249.677†	31210.0	31671.2	491.71 ug/L	491.71 ppb	13:54:53
3	Ba 233.527†	97758.5	97984.0	497.17 ug/L	497.17 ppb	13:54:53
3	Be 313.107†	1583127.1	1594487.7	496.94 ug/L	496.94 ppb	13:54:53
3	Cd 226.502†	66127.5	66574.1	497.67 ug/L	497.67 ppb	13:54:53
3	Co 228.616†	38831.5	39021.1	486.27 ug/L	486.27 ppb	13:55:13
3	Cr 267.716†	57986.8	58163.5	496.08 ug/L	496.08 ppb	13:54:53
3	Cu 324.752†	209484.3	199828.2	493.31 ug/L	493.31 ppb	13:54:53
3	Mn 257.610†	626333.1	627106.1	496.12 ug/L	496.12 ppb	13:54:53
3	Mo 202.031†	12578.2	12578.6	503.82 ug/L	503.82 ppb	13:55:13
3	Ni 231.604†	30631.5	30561.5	489.52 ug/L	489.52 ppb	13:55:13
3	P 214.914†	7330.3	7012.1	2403.5 ug/L	2403.5 ppb	13:55:13
3	Pb 220.353†	6608.7	6654.6	500.21 ug/L	500.21 ppb	13:55:13
3	S 181.975 Axial†	1242.9	1178.2	996.34 ug/L	996.34 ppb	13:55:13
3	Sb 206.836†	2548.0	2509.1	499.55 ug/L	499.55 ppb	13:55:13
3	Se 196.026†	1496.7	1522.2	513.99 ug/L	513.99 ppb	13:55:13
3	Si 251.611†	122075.1	121826.8	2501.8 ug/L	2501.8 ppb	13:54:53
3	Sn 189.927†	4792.6	4799.3	499.62 ug/L	499.62 ppb	13:55:13
3	Ti 334.940†	378543.4	380619.7	498.19 ug/L	498.19 ppb	13:54:53
3	Tl 190.801†	2875.5	2944.2	498.57 ug/L	498.57 ppb	13:55:13
3	U 409.014†	15463.5	19337.7	478.25 ug/L	478.25 ppb	13:54:53
3	V 292.402†	84999.2	86869.1	498.70 ug/L	498.70 ppb	13:54:53
3	Zn 213.857†	89816.3	88923.4	492.02 ug/L	492.02 ppb	13:54:53
3	SiO2†	121842.0	121550.9	5344.7 ug/L	5344.7 ppb	13:55:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1062449.2	100.15	%	0.364				0.36%
Sc Radial	5528.3	99.3	%	0.86				0.86%
Y 371.029	845147.9	99.055	%	0.2721				0.27%
Y RADIAL	4782.6	99.31	%	0.822				0.83%
Ag 328.068†	125875.8	501.31	ug/L	0.529	501.31	ppb	0.529	0.11%

```
   QC value within limits for Ag 328.068  Recovery = 100.26%
Al 396.153Radial†       5361.3      4858.5 ug/L        25.19      4858.5 ppb        25.19   0.52%
   QC value within limits for Al 396.153Radial  Recovery = 97.17%
As 188.979†             2093.0      494.47 ug/L        1.360      494.47 ppb        1.360   0.27%
   QC value within limits for As 188.979  Recovery = 98.89%
B 249.677†             31618.2      490.89 ug/L        0.920      490.89 ppb        0.920   0.19%
   QC value within limits for B 249.677  Recovery = 98.18%
Ba 233.527†            97908.4      496.78 ug/L        0.408      496.78 ppb        0.408   0.08%
   QC value within limits for Ba 233.527  Recovery = 99.36%
Be 313.107†          1592105.4      496.20 ug/L        0.661      496.20 ppb        0.661   0.13%
   QC value within limits for Be 313.107  Recovery = 99.24%
Ca 317.933Radial†       1968.5      4903.3 ug/L        67.61      4903.3 ppb        67.61   1.38%
   QC value within limits for Ca 317.933Radial  Recovery = 98.07%
Cd 226.502†            66574.3      497.67 ug/L        0.612      497.67 ppb        0.612   0.12%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            38887.7      484.60 ug/L        1.446      484.60 ppb        1.446   0.30%
   QC value within limits for Co 228.616  Recovery = 96.92%
Cr 267.716†            58025.0      494.90 ug/L        1.170      494.90 ppb        1.170   0.24%
   QC value within limits for Cr 267.716  Recovery = 98.98%
Cu 324.752†           199806.6      493.26 ug/L        0.788      493.26 ppb        0.788   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.65%
Fe 238.204 Radial†       139.2      4897.4 ug/L        20.54      4897.4 ppb        20.54   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.95%
K 766.490 Radial†      11701.7      5071.4 ug/L        33.47      5071.4 ppb        33.47   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 101.43%
Mg 279.077 IEC†           63.7      5052.4 ug/L        71.88      5052.4 ppb        71.88   1.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.05%
Mn 257.610†           626836.3      495.91 ug/L        0.569      495.91 ppb        0.569   0.11%
   QC value within limits for Mn 257.610  Recovery = 99.18%
Mo 202.031†            12538.7      502.23 ug/L        1.381      502.23 ppb        1.381   0.27%
   QC value within limits for Mo 202.031  Recovery = 100.45%
Na 589.592 Radial†      3535.3      9559.0 ug/L        49.77      9559.0 ppb        49.77   0.52%
   QC value within limits for Na 589.592 Radial  Recovery = 95.59%
Ni 231.604†            30483.3      488.27 ug/L        1.098      488.27 ppb        1.098   0.22%
   QC value within limits for Ni 231.604  Recovery = 97.65%
P 214.914†              6991.7      2396.3 ug/L         6.34      2396.3 ppb         6.34   0.26%
   QC value within limits for P 214.914  Recovery = 95.85%
Pb 220.353†             6635.3      498.75 ug/L        1.354      498.75 ppb        1.354   0.27%
   QC value within limits for Pb 220.353  Recovery = 99.75%
S 181.975 Axial†        1177.6      995.80 ug/L        0.853      995.80 ppb        0.853   0.09%
   QC value within limits for S 181.975 Axial  Recovery = 99.58%
Sb 206.836†             2504.0      498.48 ug/L        1.857      498.48 ppb        1.857   0.37%
   QC value within limits for Sb 206.836  Recovery = 99.70%
Se 196.026†             1517.2      512.42 ug/L        1.501      512.42 ppb        1.501   0.29%
   QC value within limits for Se 196.026  Recovery = 102.48%
Si 251.611†           121681.6      2498.9 ug/L         3.87      2498.9 ppb         3.87   0.15%
   QC value within limits for Si 251.611  Recovery = 99.96%
Sn 189.927†             4769.3      496.49 ug/L        2.717      496.49 ppb        2.717   0.55%
   QC value within limits for Sn 189.927  Recovery = 99.30%
Sr 421.552†            32788.7      505.12 ug/L        1.785      505.12 ppb        1.785   0.35%
   QC value within limits for Sr 421.552  Recovery = 101.02%
Ti 334.940†           380510.2      498.05 ug/L        0.212      498.05 ppb        0.212   0.04%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2928.8      495.98 ug/L        2.322      495.98 ppb        2.322   0.47%
   QC value within limits for Tl 190.801  Recovery = 99.20%
U 409.014†             19386.3      479.45 ug/L        1.515      479.45 ppb        1.515   0.32%
   QC value within limits for U 409.014  Recovery = 95.89%
V 292.402†             86773.4      498.14 ug/L        0.513      498.14 ppb        0.513   0.10%
   QC value within limits for V 292.402  Recovery = 99.63%
Zn 213.857†            88927.5      492.05 ug/L        0.150      492.05 ppb        0.150   0.03%
   QC value within limits for Zn 213.857  Recovery = 98.41%
SiO2†                 121895.1      5360.0 ug/L        19.26      5360.0 ppb        19.26   0.36%
   QC value within limits for SiO2  Recovery = 100.23%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:57:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5512.4	5512.4	99.1	%			13:59:32
1	Y RADIAL	4836.2	4836.2	100.4	%			13:59:32
1	Al 396.153Radial†	-55.4	36.2	32.965	ug/L	32.965	ppb	13:59:32
1	Ca 317.933Radial†	28.9	12.2	30.392	ug/L	30.392	ppb	13:59:52
1	Fe 238.204 Radial†	1.4	1.1	39.203	ug/L	39.203	ppb	13:59:52
1	K 766.490 Radial†	1556.0	97.7	42.443	ug/L	42.443	ppb	13:59:32
1	Mg 279.077 IEC†	-0.5	-0.7	-54.448	ug/L	-54.448	ppb	13:59:52
1	Na 589.592 Radial†	-170.4	-1.6	-4.3331	ug/L	-4.3331	ppb	13:59:52
1	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431	ppb	13:59:52
1	Sc 361.383	1045095.6	1045095.6	98.512	%			14:00:48
1	Y 371.029	840297.9	840297.9	98.486	%			14:00:48
1	Ag 328.068†	669.1	40.6	0.1714	ug/L	0.1714	ppb	14:00:53
1	As 188.979†	-47.0	-10.8	-2.5308	ug/L	-2.5308	ppb	14:01:14
1	B 249.677†	41.0	423.1	6.5884	ug/L	6.5884	ppb	14:00:53
1	Ba 233.527†	26.8	2.9	0.0152	ug/L	0.0152	ppb	14:01:14
1	Be 313.107†	-7456.8	-253.3	-0.0788	ug/L	-0.0788	ppb	14:00:53
1	Cd 226.502†	-287.1	-13.8	-0.1077	ug/L	-0.1077	ppb	14:01:14
1	Co 228.616†	-82.7	6.5	0.0810	ug/L	0.0810	ppb	14:01:14
1	Cr 267.716†	-22.8	5.4	0.0463	ug/L	0.0463	ppb	14:01:14
1	Cu 324.752†	10117.6	79.2	0.1976	ug/L	0.1976	ppb	14:00:53
1	Mn 257.610†	832.3	17.8	0.0203	ug/L	0.0203	ppb	14:01:14
1	Mo 202.031†	36.8	5.6	0.2251	ug/L	0.2251	ppb	14:01:14
1	Ni 231.604†	175.4	29.8	0.4780	ug/L	0.4780	ppb	14:01:14
1	P 214.914†	347.7	16.0	5.6120	ug/L	5.6120	ppb	14:01:14
1	Pb 220.353†	-10.0	18.9	1.4202	ug/L	1.4202	ppb	14:01:14
1	S 181.975 Axial†	68.0	1.2	0.9994	ug/L	0.9994	ppb	14:01:14
1	Sb 206.836†	66.3	21.9	4.3017	ug/L	4.3017	ppb	14:01:14
1	Se 196.026†	-16.7	4.6	1.6497	ug/L	1.6497	ppb	14:01:14
1	Si 251.611†	727.7	178.6	3.6667	ug/L	3.6667	ppb	14:01:14
1	Sn 189.927†	7.0	1.6	0.1723	ug/L	0.1723	ppb	14:01:14
1	Ti 334.940†	-1108.8	-16.3	-0.0199	ug/L	-0.0199	ppb	14:00:53
1	Tl 190.801†	-63.4	-2.9	-0.4929	ug/L	-0.4929	ppb	14:01:14
1	U 409.014†	-3726.3	52.2	1.2899	ug/L	1.2899	ppb	14:00:48
1	V 292.402†	-1652.5	-24.6	-0.1406	ug/L	-0.1406	ppb	14:00:53
1	Zn 213.857†	1130.3	25.0	0.1340	ug/L	0.1340	ppb	14:01:14
1	SiO2†	726.7	135.3	5.9362	ug/L	5.9362	ppb	14:02:19
2	Sc Radial	5511.5	5511.5	99.0	%			13:59:57
2	Y RADIAL	4786.2	4786.2	99.39	%			13:59:57
2	Al 396.153Radial†	-72.0	19.5	17.796	ug/L	17.796	ppb	13:59:57
2	Ca 317.933Radial†	29.7	13.1	32.554	ug/L	32.554	ppb	14:00:17
2	Fe 238.204 Radial†	-0.3	-0.7	-23.581	ug/L	-23.581	ppb	14:00:17
2	K 766.490 Radial†	1595.9	138.3	59.989	ug/L	59.989	ppb	13:59:57
2	Mg 279.077 IEC†	-0.0	-0.2	-16.582	ug/L	-16.582	ppb	14:00:17
2	Na 589.592 Radial†	-181.5	-12.8	-34.604	ug/L	-34.604	ppb	14:00:17
2	Sr 421.552†	12.3	7.0	0.1070	ug/L	0.1070	ppb	14:00:17
2	Sc 361.383	1050518.5	1050518.5	99.023	%			14:01:19
2	Y 371.029	845673.2	845673.2	99.116	%			14:01:19
2	Ag 328.068†	645.1	12.9	0.0438	ug/L	0.0438	ppb	14:01:24
2	As 188.979†	-49.5	-13.1	-3.0770	ug/L	-3.0770	ppb	14:01:44
2	B 249.677†	118.8	501.5	7.8188	ug/L	7.8188	ppb	14:01:24
2	Ba 233.527†	40.4	16.5	0.0832	ug/L	0.0832	ppb	14:01:44
2	Be 313.107†	-7364.0	-120.4	-0.0373	ug/L	-0.0373	ppb	14:01:24
2	Cd 226.502†	-300.7	-26.0	-0.1917	ug/L	-0.1917	ppb	14:01:44
2	Co 228.616†	-75.1	14.6	0.1807	ug/L	0.1807	ppb	14:01:44
2	Cr 267.716†	-8.5	20.0	0.1703	ug/L	0.1703	ppb	14:01:44
2	Cu 324.752†	10243.6	153.4	0.3772	ug/L	0.3772	ppb	14:01:24
2	Mn 257.610†	843.7	25.0	0.0170	ug/L	0.0170	ppb	14:01:44
2	Mo 202.031†	21.8	-9.8	-0.3926	ug/L	-0.3926	ppb	14:01:44
2	Ni 231.604†	171.6	25.1	0.4014	ug/L	0.4014	ppb	14:01:44

2	P 214.914†	348.3	14.8	5.2050	ug/L	5.2050 ppb	14:01:44
2	Pb 220.353†	-12.7	16.3	1.2244	ug/L	1.2244 ppb	14:01:44
2	S 181.975 Axial†	60.3	-6.9	-5.8538	ug/L	-5.8538 ppb	14:01:44
2	Sb 206.836†	37.3	-7.8	-1.5329	ug/L	-1.5329 ppb	14:01:44
2	Se 196.026†	-18.7	2.7	0.8056	ug/L	0.8056 ppb	14:01:44
2	Si 251.611†	723.3	170.4	3.5003	ug/L	3.5003 ppb	14:01:44
2	Sn 189.927†	11.3	6.0	0.6230	ug/L	0.6230 ppb	14:01:44
2	Ti 334.940†	-1056.9	41.9	0.0571	ug/L	0.0571 ppb	14:01:24
2	Tl 190.801†	-56.2	4.7	0.7874	ug/L	0.7874 ppb	14:01:44
2	U 409.014†	-3810.6	-13.5	-0.3320	ug/L	-0.3320 ppb	14:01:19
2	V 292.402†	-1611.2	25.7	0.1429	ug/L	0.1429 ppb	14:01:24
2	Zn 213.857†	1136.7	25.5	0.1424	ug/L	0.1424 ppb	14:01:44
2	SiO2†	739.3	144.2	6.3394	ug/L	6.3394 ppb	14:02:24
3	Sc Radial	5518.7	5518.7	99.2	%		14:00:22
3	Y RADIAL	4792.7	4792.7	99.52	%		14:00:22
3	Al 396.153Radial†	-86.9	4.6	4.1447	ug/L	4.1447 ppb	14:00:22
3	Ca 317.933Radial†	25.9	9.2	22.974	ug/L	22.974 ppb	14:00:42
3	Fe 238.204 Radial†	-0.1	-0.4	-15.497	ug/L	-15.497 ppb	14:00:42
3	K 766.490 Radial†	1555.4	95.3	41.343	ug/L	41.343 ppb	14:00:22
3	Mg 279.077 IEC†	-0.0	-0.2	-17.227	ug/L	-17.227 ppb	14:00:42
3	Na 589.592 Radial†	-174.6	-5.6	-15.194	ug/L	-15.194 ppb	14:00:42
3	Sr 421.552†	23.6	18.4	0.2827	ug/L	0.2827 ppb	14:00:42
3	Sc 361.383	1057245.8	1057245.8	99.657	%		14:01:49
3	Y 371.029	850037.2	850037.2	99.628	%		14:01:49
3	Ag 328.068†	694.9	58.7	0.2256	ug/L	0.2256 ppb	14:01:54
3	As 188.979†	-47.5	-10.8	-2.5338	ug/L	-2.5338 ppb	14:02:14
3	B 249.677†	68.0	449.8	7.0124	ug/L	7.0124 ppb	14:01:54
3	Ba 233.527†	35.7	11.5	0.0574	ug/L	0.0574 ppb	14:02:14
3	Be 313.107†	-7483.5	-193.0	-0.0600	ug/L	-0.0600 ppb	14:01:54
3	Cd 226.502†	-289.4	-12.7	-0.0931	ug/L	-0.0931 ppb	14:02:14
3	Co 228.616†	-98.9	-8.8	-0.1094	ug/L	-0.1094 ppb	14:02:14
3	Cr 267.716†	5.9	34.5	0.2927	ug/L	0.2927 ppb	14:02:14
3	Cu 324.752†	10251.7	95.7	0.2352	ug/L	0.2352 ppb	14:01:54
3	Mn 257.610†	869.3	45.2	0.0341	ug/L	0.0341 ppb	14:02:14
3	Mo 202.031†	34.7	3.0	0.1197	ug/L	0.1197 ppb	14:02:14
3	Ni 231.604†	157.2	9.4	0.1515	ug/L	0.1515 ppb	14:02:14
3	P 214.914†	335.6	-0.2	-0.0906	ug/L	-0.0906 ppb	14:02:14
3	Pb 220.353†	2.8	31.9	2.3909	ug/L	2.3909 ppb	14:02:14
3	S 181.975 Axial†	65.8	-1.8	-1.5179	ug/L	-1.5179 ppb	14:02:14
3	Sb 206.836†	43.4	-1.9	-0.3829	ug/L	-0.3829 ppb	14:02:14
3	Se 196.026†	-16.8	4.8	1.5002	ug/L	1.5002 ppb	14:02:14
3	Si 251.611†	726.0	168.4	3.4599	ug/L	3.4599 ppb	14:02:14
3	Sn 189.927†	2.6	-2.9	-0.3010	ug/L	-0.3010 ppb	14:02:14
3	Ti 334.940†	-1099.9	5.6	0.0087	ug/L	0.0087 ppb	14:01:54
3	Tl 190.801†	-56.6	4.6	0.7834	ug/L	0.7834 ppb	14:02:14
3	U 409.014†	-3812.4	9.3	0.2316	ug/L	0.2316 ppb	14:01:49
3	V 292.402†	-1702.0	-55.1	-0.3086	ug/L	-0.3086 ppb	14:01:54
3	Zn 213.857†	1134.7	16.2	0.0914	ug/L	0.0914 ppb	14:02:14
3	SiO2†	754.5	154.7	6.8042	ug/L	6.8042 ppb	14:02:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1050953.3	99.064	%	0.5737				0.58%
Sc Radial	5514.2	99.1	%	0.07				0.07%
Y 371.029	845336.1	99.077	%	0.5718				0.58%
Y RADIAL	4805.0	99.78	%	0.565				0.57%
Ag 328.068†	37.4	0.1469	ug/L	0.09332	0.1469	ppb	0.09332	63.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.1	18.302	ug/L	14.4166	18.302	ppb	14.4166	78.77%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.5	-2.7138	ug/L	0.31447	-2.7138	ppb	0.31447	11.59%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	458.1	7.1399	ug/L	0.62502	7.1399	ppb	0.62502	8.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.3	0.0519	ug/L	0.03434	0.0519	ppb	0.03434	66.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-188.9	-0.0587	ug/L	0.02078	-0.0587	ppb	0.02078	35.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.5	28.640	ug/L	5.0242	28.640	ppb	5.0242	17.54%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -17.5     -0.1308 ug/L       0.05322     -0.1308 ppb        0.05322  40.67%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.1      0.0508 ug/L       0.14740      0.0508 ppb        0.14740 290.21%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               20.0      0.1698 ug/L       0.12323      0.1698 ppb        0.12323  72.58%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              109.4      0.2700 ug/L       0.09473      0.2700 ppb        0.09473  35.09%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.0      0.0417 ug/L      34.15450      0.0417 ppb       34.15450 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.4     47.925 ug/L       10.4622     47.925 ppb        10.4622  21.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4    -29.419 ug/L       21.6782    -29.419 ppb        21.6782  73.69%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               29.4      0.0238 ug/L       0.00904      0.0238 ppb        0.00904  38.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.4     -0.0160 ug/L       0.33043     -0.0160 ppb        0.33043 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -6.7    -18.043 ug/L       15.3353    -18.043 ppb        15.3353  84.99%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.4      0.3436 ug/L       0.17075      0.3436 ppb        0.17075  49.69%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                10.2      3.5755 ug/L       3.18145      3.5755 ppb        3.18145  88.98%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               22.3      1.6785 ug/L       0.62466      1.6785 ppb        0.62466  37.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -2.5     -2.1241 ug/L       3.46659     -2.1241 ppb        3.46659 163.20%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.1      0.7953 ug/L       3.09058      0.7953 ppb        3.09058 388.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.1      1.3185 ug/L       0.45042      1.3185 ppb        0.45042  34.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              172.4      3.5423 ug/L       0.10965      3.5423 ppb        0.10965   3.10%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.6      0.1647 ug/L       0.46206      0.1647 ppb        0.46206 280.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               15.9      0.2443 ug/L       0.12268      0.2443 ppb        0.12268  50.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               10.4      0.0153 ug/L       0.03894      0.0153 ppb        0.03894 254.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                2.1      0.3593 ug/L       0.73803      0.3593 ppb        0.73803 205.41%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                16.0      0.3965 ug/L       0.82342      0.3965 ppb        0.82342 207.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -18.0     -0.1021 ug/L       0.22820     -0.1021 ppb        0.22820 223.47%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               22.2      0.1226 ug/L       0.02735      0.1226 ppb        0.02735  22.32%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    144.8      6.3599 ug/L       0.43437      6.3599 ppb        0.43437   6.83%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: 1201872897|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 38
Date Collected: 7/8/2009 14:04:40
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872897|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5504.9	5504.9	98.9	%			14:06:32
1	Y RADIAL	4784.7	4784.7	99.36	%			14:06:32
1	Al 396.153Radial†	-64.6	26.9	24.470	ug/L	24.470	ppb	14:06:32
1	Ca 317.933Radial†	20.6	3.9	9.8127	ug/L	9.8127	ppb	14:06:53
1	Fe 238.204 Radial†	0.3	-0.0	-1.2944	ug/L	-1.2944	ppb	14:06:53
1	K 766.490 Radial†	1531.7	75.2	32.625	ug/L	32.625	ppb	14:06:32
1	Mg 279.077 IEC†	2.4	2.2	177.56	ug/L	177.56	ppb	14:06:53
1	Na 589.592 Radial†	-172.0	-3.5	-9.4695	ug/L	-9.4695	ppb	14:06:53
1	Sr 421.552†	10.0	4.6	0.0706	ug/L	0.0706	ppb	14:06:53
1	Sc 361.383	1062639.7	1062639.7	100.17	%			14:07:49
1	Y 371.029	852972.0	852972.0	99.972	%			14:07:49
1	Ag 328.068†	710.6	70.8	0.2807	ug/L	0.2807	ppb	14:07:54
1	As 188.979†	-48.2	-11.2	-2.6342	ug/L	-2.6342	ppb	14:08:14
1	B 249.677†	-45.1	336.5	5.2445	ug/L	5.2445	ppb	14:07:54
1	Ba 233.527†	49.0	24.7	0.1259	ug/L	0.1259	ppb	14:08:14
1	Be 313.107†	-7572.9	-244.1	-0.0752	ug/L	-0.0752	ppb	14:07:54
1	Cd 226.502†	-280.8	-2.7	-0.0198	ug/L	-0.0198	ppb	14:08:14
1	Co 228.616†	-85.4	5.1	0.0624	ug/L	0.0624	ppb	14:08:14
1	Cr 267.716†	-20.3	8.4	0.0717	ug/L	0.0717	ppb	14:07:54
1	Cu 324.752†	10306.8	98.5	0.2429	ug/L	0.2429	ppb	14:07:54
1	Mn 257.610†	1540.2	710.6	0.5580	ug/L	0.5580	ppb	14:07:54
1	Mo 202.031†	24.7	-7.1	-0.2859	ug/L	-0.2859	ppb	14:08:14
1	Ni 231.604†	168.8	20.2	0.3245	ug/L	0.3245	ppb	14:08:14
1	P 214.914†	336.4	-1.1	-0.3766	ug/L	-0.3766	ppb	14:08:14
1	Pb 220.353†	7.8	36.8	2.7663	ug/L	2.7663	ppb	14:08:14
1	S 181.975 Axial†	68.4	0.4	0.3506	ug/L	0.3506	ppb	14:08:14
1	Sb 206.836†	57.7	12.2	2.4208	ug/L	2.4208	ppb	14:08:14
1	Se 196.026†	-33.3	-11.6	-3.7842	ug/L	-3.7842	ppb	14:08:14
1	Si 251.611†	1538.2	975.6	20.119	ug/L	20.119	ppb	14:08:14
1	Sn 189.927†	24.1	18.6	1.9356	ug/L	1.9356	ppb	14:08:14
1	Ti 334.940†	-874.2	236.5	0.3098	ug/L	0.3098	ppb	14:07:54
1	Tl 190.801†	-51.7	9.8	1.6513	ug/L	1.6513	ppb	14:08:14
1	U 409.014†	-3803.4	37.6	0.9329	ug/L	0.9329	ppb	14:07:49
1	V 292.402†	-1577.4	78.0	0.4435	ug/L	0.4435	ppb	14:07:54
1	Zn 213.857†	1169.7	45.4	0.2451	ug/L	0.2451	ppb	14:08:14
1	SiO2†	1635.6	1030.6	45.510	ug/L	45.510	ppb	14:09:20
2	Sc Radial	5453.4	5453.4	98.0	%			14:06:58
2	Y RADIAL	4732.3	4732.3	98.27	%			14:06:58
2	Al 396.153Radial†	-47.5	43.7	39.779	ug/L	39.779	ppb	14:06:58
2	Ca 317.933Radial†	20.6	4.1	10.254	ug/L	10.254	ppb	14:07:18
2	Fe 238.204 Radial†	0.8	0.5	17.176	ug/L	17.176	ppb	14:07:18
2	K 766.490 Radial†	1458.2	14.9	6.4519	ug/L	6.4519	ppb	14:06:58
2	Mg 279.077 IEC†	0.4	0.3	20.619	ug/L	20.619	ppb	14:07:18
2	Na 589.592 Radial†	-166.0	1.0	2.8109	ug/L	2.8109	ppb	14:07:18
2	Sr 421.552†	7.6	2.3	0.0357	ug/L	0.0357	ppb	14:07:18
2	Sc 361.383	1048830.6	1048830.6	98.864	%			14:08:20
2	Y 371.029	841877.7	841877.7	98.671	%			14:08:20
2	Ag 328.068†	653.9	22.8	0.0959	ug/L	0.0959	ppb	14:08:25
2	As 188.979†	-50.5	-14.2	-3.3239	ug/L	-3.3239	ppb	14:08:45
2	B 249.677†	-103.5	276.9	4.3130	ug/L	4.3130	ppb	14:08:25
2	Ba 233.527†	50.8	27.1	0.1373	ug/L	0.1373	ppb	14:08:45
2	Be 313.107†	-7547.9	-318.4	-0.0984	ug/L	-0.0984	ppb	14:08:25
2	Cd 226.502†	-282.1	-7.7	-0.0595	ug/L	-0.0595	ppb	14:08:45
2	Co 228.616†	-102.6	-13.3	-0.1682	ug/L	-0.1682	ppb	14:08:45
2	Cr 267.716†	51.0	80.2	0.6832	ug/L	0.6832	ppb	14:08:25
2	Cu 324.752†	10372.8	300.7	0.7429	ug/L	0.7429	ppb	14:08:25
2	Mn 257.610†	1663.9	856.0	0.6783	ug/L	0.6783	ppb	14:08:25
2	Mo 202.031†	20.6	-10.9	-0.4346	ug/L	-0.4346	ppb	14:08:45
2	Ni 231.604†	177.9	31.7	0.5080	ug/L	0.5080	ppb	14:08:45

2	P 214.914†	346.1	13.1	4.5598	ug/L	4.5598	ppb	14:08:45
2	Pb 220.353†	-18.9	10.0	0.7505	ug/L	0.7505	ppb	14:08:45
2	S 181.975 Axial†	70.7	3.6	3.0677	ug/L	3.0677	ppb	14:08:45
2	Sb 206.836†	57.3	12.5	2.4701	ug/L	2.4701	ppb	14:08:45
2	Se 196.026†	-23.2	-1.8	-0.5257	ug/L	-0.5257	ppb	14:08:45
2	Si 251.611†	1542.1	999.8	20.627	ug/L	20.627	ppb	14:08:45
2	Sn 189.927†	31.9	26.8	2.7852	ug/L	2.7852	ppb	14:08:45
2	Ti 334.940†	-904.8	194.1	0.2548	ug/L	0.2548	ppb	14:08:25
2	Tl 190.801†	-55.9	4.9	0.8301	ug/L	0.8301	ppb	14:08:45
2	U 409.014†	-3818.7	-27.8	-0.6935	ug/L	-0.6935	ppb	14:08:20
2	V 292.402†	-1652.1	-18.3	-0.1129	ug/L	-0.1129	ppb	14:08:25
2	Zn 213.857†	1176.2	67.4	0.3692	ug/L	0.3692	ppb	14:08:45
2	SiO2†	1673.9	1090.7	48.188	ug/L	48.188	ppb	14:09:25
3	Sc Radial	5463.6	5463.6	98.2	%			14:07:23
3	Y RADIAL	4757.9	4757.9	98.80	%			14:07:23
3	Al 396.153Radial†	-69.6	21.3	19.382	ug/L	19.382	ppb	14:07:23
3	Ca 317.933Radial†	21.6	5.0	12.575	ug/L	12.575	ppb	14:07:43
3	Fe 238.204 Radial†	0.1	-0.2	-8.1710	ug/L	-8.1710	ppb	14:07:43
3	K 766.490 Radial†	1659.8	217.5	94.353	ug/L	94.353	ppb	14:07:23
3	Mg 279.077 IEC†	0.9	0.8	61.641	ug/L	61.641	ppb	14:07:43
3	Na 589.592 Radial†	-163.6	3.8	10.206	ug/L	10.206	ppb	14:07:43
3	Sr 421.552†	0.6	-4.9	-0.0755	ug/L	-0.0755	ppb	14:07:43
3	Sc 361.383	1057777.2	1057777.2	99.707	%			14:08:50
3	Y 371.029	848980.8	848980.8	99.504	%			14:08:50
3	Ag 328.068†	745.9	109.5	0.4330	ug/L	0.4330	ppb	14:08:55
3	As 188.979†	-49.7	-12.9	-3.0366	ug/L	-3.0366	ppb	14:09:15
3	B 249.677†	-147.6	233.5	3.6396	ug/L	3.6396	ppb	14:08:55
3	Ba 233.527†	44.1	19.9	0.1017	ug/L	0.1017	ppb	14:09:15
3	Be 313.107†	-7560.9	-266.9	-0.0819	ug/L	-0.0819	ppb	14:08:55
3	Cd 226.502†	-278.1	-1.3	-0.0081	ug/L	-0.0081	ppb	14:09:15
3	Co 228.616†	-82.5	7.7	0.0951	ug/L	0.0951	ppb	14:09:15
3	Cr 267.716†	17.3	45.9	0.3918	ug/L	0.3918	ppb	14:08:55
3	Cu 324.752†	10240.7	79.5	0.1958	ug/L	0.1958	ppb	14:08:55
3	Mn 257.610†	1667.0	844.9	0.6654	ug/L	0.6654	ppb	14:08:55
3	Mo 202.031†	37.1	5.4	0.2163	ug/L	0.2163	ppb	14:09:15
3	Ni 231.604†	193.4	45.7	0.7328	ug/L	0.7328	ppb	14:09:15
3	P 214.914†	346.5	10.6	3.7725	ug/L	3.7725	ppb	14:09:15
3	Pb 220.353†	-13.9	15.2	1.1425	ug/L	1.1425	ppb	14:09:15
3	S 181.975 Axial†	74.2	6.6	5.5607	ug/L	5.5607	ppb	14:09:15
3	Sb 206.836†	58.5	13.3	2.6452	ug/L	2.6452	ppb	14:09:15
3	Se 196.026†	-20.8	0.7	0.2047	ug/L	0.2047	ppb	14:09:15
3	Si 251.611†	1525.3	969.7	19.966	ug/L	19.966	ppb	14:09:15
3	Sn 189.927†	32.9	27.5	2.8651	ug/L	2.8651	ppb	14:09:15
3	Ti 334.940†	-752.8	354.3	0.4648	ug/L	0.4648	ppb	14:08:55
3	Tl 190.801†	-60.8	0.4	0.0793	ug/L	0.0793	ppb	14:09:15
3	U 409.014†	-3849.6	-26.2	-0.6499	ug/L	-0.6499	ppb	14:08:50
3	V 292.402†	-1569.1	79.1	0.4518	ug/L	0.4518	ppb	14:08:55
3	Zn 213.857†	1149.9	30.9	0.1661	ug/L	0.1661	ppb	14:09:15
3	SiO2†	1628.5	1030.9	45.456	ug/L	45.456	ppb	14:09:30

Mean Data: 1201872897|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056415.8	99.579	%	0.6603				0.66%
Sc Radial	5473.9	98.4	%	0.49				0.50%
Y 371.029	847943.5	99.382	%	0.6586				0.66%
Y RADIAL	4758.3	98.81	%	0.544				0.55%
Ag 328.068†	67.7	0.2699	ug/L	0.16879	0.2699	ppb	0.16879	62.54%
Al 396.153Radial†	30.6	27.877	ug/L	10.6168	27.877	ppb	10.6168	38.08%
As 188.979†	-12.8	-2.9982	ug/L	0.34648	-2.9982	ppb	0.34648	11.56%
B 249.677†	282.3	4.3990	ug/L	0.80590	4.3990	ppb	0.80590	18.32%
Ba 233.527†	23.9	0.1216	ug/L	0.01820	0.1216	ppb	0.01820	14.96%
Be 313.107†	-276.5	-0.0852	ug/L	0.01194	-0.0852	ppb	0.01194	14.02%
Ca 317.933Radial†	4.4	10.880	ug/L	1.4838	10.880	ppb	1.4838	13.64%
Cd 226.502†	-3.9	-0.0292	ug/L	0.02695	-0.0292	ppb	0.02695	92.44%
Co 228.616†	-0.2	-0.0036	ug/L	0.14350	-0.0036	ppb	0.14350	>999.9%
Cr 267.716†	44.8	0.3822	ug/L	0.30587	0.3822	ppb	0.30587	80.02%
Cu 324.752†	159.6	0.3939	ug/L	0.30322	0.3939	ppb	0.30322	76.98%
Fe 238.204 Radial†	0.1	2.5702	ug/L	13.10795	2.5702	ppb	13.10795	510.00%
K 766.490 Radial†	102.5	44.477	ug/L	45.1333	44.477	ppb	45.1333	101.48%

Mg 279.077 IEC†	1.1	86.607	ug/L	81.3956	86.607	ppb	81.3956 93.98%
Mn 257.610†	803.8	0.6339	ug/L	0.06607	0.6339	ppb	0.06607 10.42%
Mo 202.031†	-4.2	-0.1681	ug/L	0.34108	-0.1681	ppb	0.34108 202.96%
Na 589.592 Radial†	0.4	1.1824	ug/L	9.93825	1.1824	ppb	9.93825 840.49%
Ni 231.604†	32.6	0.5218	ug/L	0.20448	0.5218	ppb	0.20448 39.19%
P 214.914†	7.6	2.6519	ug/L	2.65214	2.6519	ppb	2.65214 100.01%
Pb 220.353†	20.7	1.5531	ug/L	1.06880	1.5531	ppb	1.06880 68.82%
S 181.975 Axial†	3.5	2.9930	ug/L	2.60587	2.9930	ppb	2.60587 87.07%
Sb 206.836†	12.7	2.5120	ug/L	0.11792	2.5120	ppb	0.11792 4.69%
Se 196.026†	-4.2	-1.3684	ug/L	2.12381	-1.3684	ppb	2.12381 155.20%
Si 251.611†	981.7	20.237	ug/L	0.3459	20.237	ppb	0.3459 1.71%
Sn 189.927†	24.3	2.5286	ug/L	0.51515	2.5286	ppb	0.51515 20.37%
Sr 421.552†	0.7	0.0102	ug/L	0.07628	0.0102	ppb	0.07628 744.23%
Ti 334.940†	261.6	0.3431	ug/L	0.10886	0.3431	ppb	0.10886 31.73%
Tl 190.801†	5.0	0.8536	ug/L	0.78623	0.8536	ppb	0.78623 92.11%
U 409.014†	-5.5	-0.1368	ug/L	0.92665	-0.1368	ppb	0.92665 677.25%
V 292.402†	46.3	0.2608	ug/L	0.32371	0.2608	ppb	0.32371 124.12%
Zn 213.857†	47.9	0.2602	ug/L	0.10237	0.2602	ppb	0.10237 39.35%
SiO2†	1050.7	46.385	ug/L	1.5621	46.385	ppb	1.5621 3.37%

Sequence No.: 4
Sample ID: 1201872898|881859|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 39
Date Collected: 7/8/2009 14:11:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872898|881859|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5813.9	5813.9	104	%			14:13:33
1	Y RADIAL	5396.0	5396.0	112.0	%			14:13:33
1	Al 396.153Radial†	37735.0	36210.8	32942	ug/L	32942	ppb	14:13:33
1	Ca 317.933Radial†	7391.1	7057.5	17579	ug/L	17579	ppb	14:13:33
1	Fe 238.204 Radial†	2737.8	2620.2	91933	ug/L	91933	ppb	14:13:54
1	K 766.490 Radial†	29433.4	26699.5	11630	ug/L	11630	ppb	14:13:33
1	Mg 279.077 IEC†	191.6	183.2	14439	ug/L	14439	ppb	14:13:54
1	Na 589.592 Radial†	954.0	1083.5	2929.8	ug/L	2929.8	ppb	14:13:33
1	Sr 421.552†	60112.5	57532.0	886.21	ug/L	886.21	ppb	14:13:33
1	Sc 361.383	1076768.0	1076768.0	101.50	%			14:14:53
1	Y 371.029	912800.2	912800.2	106.98	%			14:14:53
1	Ag 328.068†	164734.1	161665.2	672.43	ug/L	672.43	ppb	14:14:53
1	As 188.979†	5577.8	5532.4	1327.1	ug/L	1327.1	ppb	14:15:13
1	B 249.677†	44893.2	44612.4	682.03	ug/L	682.03	ppb	14:14:53
1	Ba 233.527†	474729.7	467701.8	2371.1	ug/L	2371.1	ppb	14:14:53
1	Be 313.107†	1479814.6	1465299.3	459.73	ug/L	459.73	ppb	14:14:53
1	Cd 226.502†	80061.0	79157.5	581.53	ug/L	581.53	ppb	14:14:53
1	Co 228.616†	33805.0	33396.7	412.93	ug/L	412.93	ppb	14:15:13
1	Cr 267.716†	45606.3	44962.0	385.96	ug/L	385.96	ppb	14:14:53
1	Cu 324.752†	224812.0	211304.1	526.66	ug/L	526.66	ppb	14:14:53
1	Mn 257.610†	2397013.7	2360823.9	1877.4	ug/L	1877.4	ppb	14:14:53
1	Mo 202.031†	10634.4	10445.7	424.42	ug/L	424.42	ppb	14:15:13
1	Ni 231.604†	33353.3	32713.0	524.05	ug/L	524.05	ppb	14:14:53
1	P 214.914†	10970.2	10471.4	3561.5	ug/L	3561.5	ppb	14:15:13
1	Pb 220.353†	11407.4	11268.2	843.12	ug/L	843.12	ppb	14:15:13
1	S 181.975 Axial†	1314.6	1227.3	1032.4	ug/L	1032.4	ppb	14:15:13
1	Sb 206.836†	2846.8	2759.4	548.21	ug/L	548.21	ppb	14:15:13
1	Se 196.026†	2017.0	2008.8	979.36	ug/L	979.36	ppb	14:15:13
1	Si 251.611†	363978.2	358048.4	7375.4	ug/L	7375.4	ppb	14:14:53
1	Sn 189.927†	5374.1	5289.4	552.92	ug/L	552.92	ppb	14:15:13
1	Ti 334.940†	1370165.8	1351061.2	1769.7	ug/L	1769.7	ppb	14:14:53
1	Tl 190.801†	5739.1	5715.8	980.36	ug/L	980.36	ppb	14:15:13
1	U 409.014†	-11211.0	-7210.8	-190.95	ug/L	-190.95	ppb	14:14:53
1	V 292.402†	135747.3	135397.4	758.53	ug/L	758.53	ppb	14:14:53
1	Zn 213.857†	188145.9	184247.8	1014.4	ug/L	1014.4	ppb	14:14:53
1	SiO2†	364794.2	358810.1	15826	ug/L	15826	ppb	14:16:13
2	Sc Radial	5773.4	5773.4	104	%			14:13:59
2	Y RADIAL	5336.8	5336.8	110.8	%			14:13:59
2	Al 396.153Radial†	37366.6	36108.9	32850	ug/L	32850	ppb	14:13:59
2	Ca 317.933Radial†	7361.8	7079.0	17633	ug/L	17633	ppb	14:13:59
2	Fe 238.204 Radial†	2747.8	2648.2	92916	ug/L	92916	ppb	14:14:19
2	K 766.490 Radial†	29307.4	26775.6	11663	ug/L	11663	ppb	14:13:59
2	Mg 279.077 IEC†	191.7	184.6	14552	ug/L	14552	ppb	14:14:19
2	Na 589.592 Radial†	958.4	1094.2	2958.7	ug/L	2958.7	ppb	14:13:59
2	Sr 421.552†	59570.4	57412.9	884.37	ug/L	884.37	ppb	14:13:59
2	Sc 361.383	1078422.7	1078422.7	101.65	%			14:15:20
2	Y 371.029	914296.8	914296.8	107.16	%			14:15:20
2	Ag 328.068†	165375.4	162047.1	674.25	ug/L	674.25	ppb	14:15:20
2	As 188.979†	5612.6	5558.2	1333.4	ug/L	1333.4	ppb	14:15:40
2	B 249.677†	45071.3	44719.8	683.57	ug/L	683.57	ppb	14:15:20
2	Ba 233.527†	475248.7	467494.7	2370.1	ug/L	2370.1	ppb	14:15:20
2	Be 313.107†	1480385.5	1463623.7	459.21	ug/L	459.21	ppb	14:15:20
2	Cd 226.502†	80217.6	79190.6	581.66	ug/L	581.66	ppb	14:15:20
2	Co 228.616†	33928.4	33467.0	413.79	ug/L	413.79	ppb	14:15:40
2	Cr 267.716†	45747.6	45032.1	386.58	ug/L	386.58	ppb	14:15:20
2	Cu 324.752†	225500.9	211642.0	527.55	ug/L	527.55	ppb	14:15:20
2	Mn 257.610†	2401708.1	2361818.2	1878.3	ug/L	1878.3	ppb	14:15:20
2	Mo 202.031†	10672.1	10466.8	425.33	ug/L	425.33	ppb	14:15:40
2	Ni 231.604†	33419.6	32727.8	524.29	ug/L	524.29	ppb	14:15:20

2	P 214.914†	11020.6	10504.5	3572.3	ug/L	3572.3 ppb	14:15:40
2	Pb 220.353†	11436.7	11279.8	843.88	ug/L	843.88 ppb	14:15:40
2	S 181.975 Axial†	1322.6	1233.3	1037.4	ug/L	1037.4 ppb	14:15:40
2	Sb 206.836†	2861.2	2769.3	550.23	ug/L	550.23 ppb	14:15:40
2	Se 196.026†	2035.9	2024.4	987.87	ug/L	987.87 ppb	14:15:40
2	Si 251.611†	365006.4	358509.6	7384.8	ug/L	7384.8 ppb	14:15:20
2	Sn 189.927†	5415.8	5322.3	556.37	ug/L	556.37 ppb	14:15:40
2	Ti 334.940†	1373598.5	1352366.7	1771.4	ug/L	1771.4 ppb	14:15:20
2	Tl 190.801†	5734.3	5702.4	978.11	ug/L	978.11 ppb	14:15:40
2	U 409.014†	-11180.6	-7164.0	-189.91	ug/L	-189.91 ppb	14:15:20
2	V 292.402†	135922.1	135364.2	758.22	ug/L	758.22 ppb	14:15:20
2	Zn 213.857†	188904.2	184709.4	1016.9	ug/L	1016.9 ppb	14:15:20
2	SiO2†	366938.9	360368.4	15895	ug/L	15895 ppb	14:16:19
3	Sc Radial	5598.9	5598.9	101	%		14:14:24
3	Y RADIAL	5189.2	5189.2	107.8	%		14:14:24
3	Al 396.153Radial†	36453.9	36324.4	33046	ug/L	33046 ppb	14:14:24
3	Ca 317.933Radial†	7120.5	7060.3	17586	ug/L	17586 ppb	14:14:24
3	Fe 238.204 Radial†	2743.0	2726.0	95645	ug/L	95645 ppb	14:14:44
3	K 766.490 Radial†	28597.7	26950.7	11741	ug/L	11741 ppb	14:14:24
3	Mg 279.077 IEC†	192.4	191.1	15058	ug/L	15058 ppb	14:14:44
3	Na 589.592 Radial†	922.6	1087.4	2940.3	ug/L	2940.3 ppb	14:14:24
3	Sr 421.552†	57772.2	57415.3	884.41	ug/L	884.41 ppb	14:14:24
3	Sc 361.383	1080956.7	1080956.7	101.89	%		14:15:48
3	Y 371.029	916798.2	916798.2	107.45	%		14:15:48
3	Ag 328.068†	165825.4	162107.3	675.36	ug/L	675.36 ppb	14:15:48
3	As 188.979†	5592.3	5525.4	1326.2	ug/L	1326.2 ppb	14:16:08
3	B 249.677†	45250.8	44792.0	684.34	ug/L	684.34 ppb	14:15:48
3	Ba 233.527†	476791.7	467913.1	2372.3	ug/L	2372.3 ppb	14:15:48
3	Be 313.107†	1484068.0	1463824.0	459.27	ug/L	459.27 ppb	14:15:48
3	Cd 226.502†	80441.0	79224.8	581.59	ug/L	581.59 ppb	14:15:48
3	Co 228.616†	33688.8	33153.6	409.83	ug/L	409.83 ppb	14:16:08
3	Cr 267.716†	45759.0	44937.8	385.82	ug/L	385.82 ppb	14:15:48
3	Cu 324.752†	226248.3	211855.5	528.23	ug/L	528.23 ppb	14:15:48
3	Mn 257.610†	2406494.6	2360977.2	1878.0	ug/L	1878.0 ppb	14:15:48
3	Mo 202.031†	10589.8	10361.4	421.30	ug/L	421.30 ppb	14:16:08
3	Ni 231.604†	33460.9	32691.3	523.70	ug/L	523.70 ppb	14:15:48
3	P 214.914†	10952.5	10412.2	3537.3	ug/L	3537.3 ppb	14:16:08
3	Pb 220.353†	11362.5	11180.6	836.22	ug/L	836.22 ppb	14:16:08
3	S 181.975 Axial†	1306.4	1214.3	1021.4	ug/L	1021.4 ppb	14:16:08
3	Sb 206.836†	2837.1	2739.0	544.16	ug/L	544.16 ppb	14:16:08
3	Se 196.026†	2022.3	2006.4	991.60	ug/L	991.60 ppb	14:16:08
3	Si 251.611†	365674.5	358323.5	7381.1	ug/L	7381.1 ppb	14:15:48
3	Sn 189.927†	5371.7	5266.5	550.61	ug/L	550.61 ppb	14:16:08
3	Ti 334.940†	1377628.0	1353153.7	1772.5	ug/L	1772.5 ppb	14:15:48
3	Tl 190.801†	5717.8	5673.1	973.18	ug/L	973.18 ppb	14:16:08
3	U 409.014†	-10950.5	-6912.4	-184.00	ug/L	-184.00 ppb	14:15:48
3	V 292.402†	136211.6	135334.8	757.65	ug/L	757.65 ppb	14:15:48
3	Zn 213.857†	188950.2	184318.8	1014.4	ug/L	1014.4 ppb	14:15:48
3	SiO2†	363527.9	356174.6	15710	ug/L	15710 ppb	14:16:24

Mean Data: 1201872898|881859|2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1078715.8	101.68	%	0.199				0.20%
Sc Radial	5728.7	103	%	2.1				1.99%
Y 371.029	914631.7	107.20	%	0.237				0.22%
Y RADIAL	5307.3	110.2	%	2.21				2.01%
Ag 328.068†	161939.9	674.02	ug/L	1.482	674.02	ppb	1.482	0.22%
Al 396.153Radial†	36214.7	32946	ug/L	98.2	32946	ppb	98.2	0.30%
As 188.979†	5538.7	1328.9	ug/L	3.90	1328.9	ppb	3.90	0.29%
B 249.677†	44708.1	683.31	ug/L	1.178	683.31	ppb	1.178	0.17%
Ba 233.527†	467703.2	2371.2	ug/L	1.09	2371.2	ppb	1.09	0.05%
Be 313.107†	1464249.0	459.40	ug/L	0.282	459.40	ppb	0.282	0.06%
Ca 317.933Radial†	7065.6	17599	ug/L	29.0	17599	ppb	29.0	0.16%
Cd 226.502†	79190.9	581.59	ug/L	0.066	581.59	ppb	0.066	0.01%
Co 228.616†	33339.1	412.18	ug/L	2.080	412.18	ppb	2.080	0.50%
Cr 267.716†	44977.3	386.12	ug/L	0.401	386.12	ppb	0.401	0.10%
Cu 324.752†	211600.5	527.48	ug/L	0.790	527.48	ppb	0.790	0.15%
Fe 238.204 Radial†	2664.8	93498	ug/L	1923.5	93498	ppb	1923.5	2.06%
K 766.490 Radial†	26808.6	11678	ug/L	57.3	11678	ppb	57.3	0.49%

Mg 279.077 IEC†	186.3	14683	ug/L	329.6	14683	ppb	329.6	2.24%
Mn 257.610†	2361206.4	1877.9	ug/L	0.46	1877.9	ppb	0.46	0.02%
Mo 202.031†	10424.6	423.68	ug/L	2.115	423.68	ppb	2.115	0.50%
Na 589.592 Radial†	1088.4	2942.9	ug/L	14.64	2942.9	ppb	14.64	0.50%
Ni 231.604†	32710.7	524.01	ug/L	0.293	524.01	ppb	0.293	0.06%
P 214.914†	10462.7	3557.0	ug/L	17.88	3557.0	ppb	17.88	0.50%
Pb 220.353†	11242.8	841.07	ug/L	4.223	841.07	ppb	4.223	0.50%
S 181.975 Axial†	1225.0	1030.4	ug/L	8.22	1030.4	ppb	8.22	0.80%
Sb 206.836†	2755.9	547.53	ug/L	3.093	547.53	ppb	3.093	0.56%
Se 196.026†	2013.2	986.28	ug/L	6.276	986.28	ppb	6.276	0.64%
Si 251.611†	358293.8	7380.4	ug/L	4.77	7380.4	ppb	4.77	0.06%
Sn 189.927†	5292.7	553.30	ug/L	2.900	553.30	ppb	2.900	0.52%
Sr 421.552†	57453.4	885.00	ug/L	1.049	885.00	ppb	1.049	0.12%
Ti 334.940†	1352193.9	1771.2	ug/L	1.38	1771.2	ppb	1.38	0.08%
Tl 190.801†	5697.1	977.22	ug/L	3.672	977.22	ppb	3.672	0.38%
U 409.014†	-7095.8	-188.29	ug/L	3.748	-188.29	ppb	3.748	1.99%
V 292.402†	135365.5	758.13	ug/L	0.448	758.13	ppb	0.448	0.06%
Zn 213.857†	184425.3	1015.2	ug/L	1.43	1015.2	ppb	1.43	0.14%
SiO2†	358451.0	15811	ug/L	93.6	15811	ppb	93.6	0.59%

Sequence No.: 5
Sample ID: 232582001|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 40
Date Collected: 7/8/2009 14:18:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232582001|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5663.3	5663.3	102	%			14:20:26
1	Y RADIAL	6347.6	6347.6	131.8	%			14:20:26
1	Al 396.153Radial†	39478.4	38884.1	35394	ug/L	35394	ppb	14:20:26
1	Ca 317.933Radial†	5471.7	5359.6	13350	ug/L	13350	ppb	14:20:26
1	Fe 238.204 Radial†	2745.8	2697.8	94642	ug/L	94642	ppb	14:20:46
1	K 766.490 Radial†	14867.1	13135.5	5741.7	ug/L	5741.7	ppb	14:20:26
1	Mg 279.077 IEC†	128.9	126.5	9937.0	ug/L	9937.0	ppb	14:20:46
1	Na 589.592 Radial†	670.7	829.4	2242.7	ug/L	2242.7	ppb	14:20:46
1	Sr 421.552†	6378.1	6261.8	96.349	ug/L	96.349	ppb	14:20:26
1	Sc 361.383	1076507.1	1076507.1	101.47	%			14:21:45
1	Y 371.029	1108210.8	1108210.8	129.89	%			14:21:45
1	Ag 328.068†	-6076.0	-6626.4	4.7697	ug/L	4.7697	ppb	14:22:05
1	As 188.979†	-69.1	-31.2	33.858	ug/L	33.858	ppb	14:22:05
1	B 249.677†	1057.7	1423.9	9.5792	ug/L	9.5792	ppb	14:21:45
1	Ba 233.527†	69765.5	68728.7	350.32	ug/L	350.32	ppb	14:21:45
1	Be 313.107†	-17826.7	-10251.8	4.8642	ug/L	4.8642	ppb	14:21:45
1	Cd 226.502†	1202.0	1462.2	-0.1800	ug/L	-0.1800	ppb	14:22:05
1	Co 228.616†	1743.3	1808.4	13.907	ug/L	13.907	ppb	14:22:05
1	Cr 267.716†	19371.2	19118.6	164.96	ug/L	164.96	ppb	14:22:05
1	Cu 324.752†	22533.6	12015.3	35.117	ug/L	35.117	ppb	14:21:45
1	Mn 257.610†	2905113.0	2862120.8	2274.0	ug/L	2274.0	ppb	14:21:45
1	Mo 202.031†	67.8	35.0	7.8980	ug/L	7.8980	ppb	14:22:05
1	Ni 231.604†	6474.2	6232.0	99.870	ug/L	99.870	ppb	14:22:05
1	P 214.914†	5981.5	5557.7	1895.0	ug/L	1895.0	ppb	14:22:05
1	Pb 220.353†	1820.2	1822.9	134.63	ug/L	134.63	ppb	14:22:05
1	S 181.975 Axial†	1604.1	1512.9	1273.7	ug/L	1273.7	ppb	14:22:05
1	Sb 206.836†	109.5	62.5	-0.6576	ug/L	-0.6576	ppb	14:22:05
1	Se 196.026†	-958.5	-923.0	34.239	ug/L	34.239	ppb	14:22:05
1	Si 251.611†	687021.4	676489.7	13957	ug/L	13957	ppb	14:21:45
1	Sn 189.927†	65.8	59.4	8.6169	ug/L	8.6169	ppb	14:22:05
1	Ti 334.940†	2684260.0	2646409.6	3465.3	ug/L	3465.3	ppb	14:21:45
1	Tl 190.801†	-300.5	-234.8	-9.7983	ug/L	-9.7983	ppb	14:22:05
1	U 409.014†	-19223.9	-15110.2	-386.85	ug/L	-386.85	ppb	14:21:45
1	V 292.402†	18703.5	20084.9	96.588	ug/L	96.588	ppb	14:22:05
1	Zn 213.857†	81535.9	79230.0	431.25	ug/L	431.25	ppb	14:21:45
1	SiO2†	685427.2	674876.4	29816	ug/L	29816	ppb	14:23:04
2	Sc Radial	5671.5	5671.5	102	%			14:20:52
2	Y RADIAL	6418.3	6418.3	133.3	%			14:20:52
2	Al 396.153Radial†	39712.9	39058.5	35552	ug/L	35552	ppb	14:20:52
2	Ca 317.933Radial†	5478.1	5358.2	13346	ug/L	13346	ppb	14:20:52
2	Fe 238.204 Radial†	2771.9	2719.5	95404	ug/L	95404	ppb	14:21:12
2	K 766.490 Radial†	14904.5	13151.2	5749.1	ug/L	5749.1	ppb	14:20:52
2	Mg 279.077 IEC†	134.3	131.6	10340	ug/L	10340	ppb	14:21:12
2	Na 589.592 Radial†	671.9	829.7	2243.5	ug/L	2243.5	ppb	14:21:12
2	Sr 421.552†	6438.8	6312.3	97.127	ug/L	97.127	ppb	14:20:52
2	Sc 361.383	1090390.4	1090390.4	102.78	%			14:22:12
2	Y 371.029	1120009.1	1120009.1	131.27	%			14:22:12
2	Ag 328.068†	-6155.5	-6627.6	5.0032	ug/L	5.0032	ppb	14:22:32
2	As 188.979†	-65.6	-26.9	35.039	ug/L	35.039	ppb	14:22:32
2	B 249.677†	1023.9	1377.7	8.7570	ug/L	8.7570	ppb	14:22:12
2	Ba 233.527†	70446.4	68515.7	349.26	ug/L	349.26	ppb	14:22:12
2	Be 313.107†	-17923.5	-10122.3	4.9164	ug/L	4.9164	ppb	14:22:12
2	Cd 226.502†	1181.5	1427.2	-0.5328	ug/L	-0.5328	ppb	14:22:32
2	Co 228.616†	1786.3	1828.4	14.134	ug/L	14.134	ppb	14:22:32
2	Cr 267.716†	19444.1	18946.5	163.51	ug/L	163.51	ppb	14:22:32
2	Cu 324.752†	23027.2	12212.8	35.648	ug/L	35.648	ppb	14:22:12
2	Mn 257.610†	2942287.9	2861837.6	2273.9	ug/L	2273.9	ppb	14:22:12
2	Mo 202.031†	65.7	32.2	7.8345	ug/L	7.8345	ppb	14:22:32
2	Ni 231.604†	6499.4	6175.2	98.961	ug/L	98.961	ppb	14:22:32

2	P 214.914†	5998.0	5498.7	1873.5 ug/L	1873.5 ppb	14:22:32
2	Pb 220.353†	1818.2	1798.1	132.73 ug/L	132.73 ppb	14:22:32
2	S 181.975 Axial†	1609.1	1497.8	1260.8 ug/L	1260.8 ppb	14:22:32
2	Sb 206.836†	104.3	56.1	-1.9046 ug/L	-1.9046 ppb	14:22:32
2	Se 196.026†	-968.5	-920.7	37.685 ug/L	37.685 ppb	14:22:32
2	Si 251.611†	697169.8	677743.1	13983 ug/L	13983 ppb	14:22:12
2	Sn 189.927†	63.6	56.4	8.3147 ug/L	8.3147 ppb	14:22:32
2	Ti 334.940†	2722919.5	2650342.0	3470.4 ug/L	3470.4 ppb	14:22:12
2	Tl 190.801†	-290.1	-220.9	-7.4270 ug/L	-7.4270 ppb	14:22:32
2	U 409.014†	-19390.4	-15030.9	-384.98 ug/L	-384.98 ppb	14:22:12
2	V 292.402†	18704.6	19851.2	95.162 ug/L	95.162 ppb	14:22:32
2	Zn 213.857†	82563.4	79206.7	431.03 ug/L	431.03 ppb	14:22:12
2	SiO2†	689529.7	670267.5	29612 ug/L	29612 ppb	14:23:10
3	Sc Radial	5651.2	5651.2	102 %		14:21:17
3	Y RADIAL	6371.9	6371.9	132.3 %		14:21:17
3	Al 396.153Radial†	39547.3	39035.2	35531 ug/L	35531 ppb	14:21:17
3	Ca 317.933Radial†	5458.9	5358.6	13347 ug/L	13347 ppb	14:21:17
3	Fe 238.204 Radial†	2785.9	2743.0	96228 ug/L	96228 ppb	14:21:37
3	K 766.490 Radial†	14905.0	13204.1	5772.7 ug/L	5772.7 ppb	14:21:17
3	Mg 279.077 IEC†	130.4	128.2	10070 ug/L	10070 ppb	14:21:37
3	Na 589.592 Radial†	680.0	840.0	2271.2 ug/L	2271.2 ppb	14:21:37
3	Sr 421.552†	6362.2	6259.6	96.315 ug/L	96.315 ppb	14:21:17
3	Sc 361.383	1078208.2	1078208.2	101.63 %		14:22:38
3	Y 371.029	1108504.4	1108504.4	129.92 %		14:22:38
3	Ag 328.068†	-6095.6	-6636.2	5.2403 ug/L	5.2403 ppb	14:22:58
3	As 188.979†	-72.2	-34.2	33.497 ug/L	33.497 ppb	14:22:58
3	B 249.677†	897.3	1264.4	6.8829 ug/L	6.8829 ppb	14:22:38
3	Ba 233.527†	69717.5	68572.9	349.57 ug/L	349.57 ppb	14:22:38
3	Be 313.107†	-17876.0	-10272.6	4.8668 ug/L	4.8668 ppb	14:22:38
3	Cd 226.502†	1195.7	1454.1	-0.4284 ug/L	-0.4284 ppb	14:22:58
3	Co 228.616†	1742.5	1805.0	13.833 ug/L	13.833 ppb	14:22:58
3	Cr 267.716†	19371.5	19088.9	164.74 ug/L	164.74 ppb	14:22:58
3	Cu 324.752†	22709.0	12152.9	35.548 ug/L	35.548 ppb	14:22:38
3	Mn 257.610†	2908779.6	2861211.7	2273.5 ug/L	2273.5 ppb	14:22:38
3	Mo 202.031†	71.2	38.3	8.1355 ug/L	8.1355 ppb	14:22:58
3	Ni 231.604†	6464.4	6212.3	99.554 ug/L	99.554 ppb	14:22:58
3	P 214.914†	5986.1	5552.9	1892.0 ug/L	1892.0 ppb	14:22:58
3	Pb 220.353†	1783.3	1783.7	131.58 ug/L	131.58 ppb	14:22:58
3	S 181.975 Axial†	1599.3	1505.8	1267.6 ug/L	1267.6 ppb	14:22:58
3	Sb 206.836†	109.9	62.7	-0.6208 ug/L	-0.6208 ppb	14:22:58
3	Se 196.026†	-957.7	-920.7	40.577 ug/L	40.577 ppb	14:22:58
3	Si 251.611†	685758.0	674178.5	13910 ug/L	13910 ppb	14:22:38
3	Sn 189.927†	57.2	50.8	7.7508 ug/L	7.7508 ppb	14:22:58
3	Ti 334.940†	2691525.2	2649384.6	3469.2 ug/L	3469.2 ppb	14:22:38
3	Tl 190.801†	-296.8	-230.7	-9.0907 ug/L	-9.0907 ppb	14:22:58
3	U 409.014†	-19273.1	-15128.7	-387.51 ug/L	-387.51 ppb	14:22:38
3	V 292.402†	18700.5	20052.8	96.188 ug/L	96.188 ppb	14:22:58
3	Zn 213.857†	81572.8	79139.6	430.57 ug/L	430.57 ppb	14:22:38
3	SiO2†	691691.3	679974.2	30041 ug/L	30041 ppb	14:23:15

Mean Data: 232582001|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1081701.9	101.96	%	0.714				0.70%
Sc Radial	5662.0	102	%	0.2				0.18%
Y 371.029	1112241.4	130.36	%	0.789				0.60%
Y RADIAL	6379.3	132.5	%	0.75				0.56%
Ag 328.068†	-6630.0	5.0044	ug/L	0.23533	5.0044	ppb	0.23533	4.70%
Al 396.153Radial†	38992.6	35492	ug/L	86.2	35492	ppb	86.2	0.24%
As 188.979†	-30.8	34.131	ug/L	0.8067	34.131	ppb	0.8067	2.36%
B 249.677†	1355.3	8.4063	ug/L	1.38193	8.4063	ppb	1.38193	16.44%
Ba 233.527†	68605.8	349.71	ug/L	0.547	349.71	ppb	0.547	0.16%
Be 313.107†	-10215.5	4.8824	ug/L	0.02944	4.8824	ppb	0.02944	0.60%
Ca 317.933Radial†	5358.8	13348	ug/L	1.8	13348	ppb	1.8	0.01%
Cd 226.502†	1447.8	-0.3804	ug/L	0.18123	-0.3804	ppb	0.18123	47.64%
Co 228.616†	1813.9	13.958	ug/L	0.1569	13.958	ppb	0.1569	1.12%
Cr 267.716†	19051.3	164.40	ug/L	0.783	164.40	ppb	0.783	0.48%
Cu 324.752†	12127.0	35.437	ug/L	0.2824	35.437	ppb	0.2824	0.80%
Fe 238.204 Radial†	2720.1	95425	ug/L	793.1	95425	ppb	793.1	0.83%
K 766.490 Radial†	13163.6	5754.5	ug/L	16.19	5754.5	ppb	16.19	0.28%

Mg 279.077 IEC†	128.8	10116	ug/L	205.6	10116	ppb	205.6	2.03%
Mn 257.610†	2861723.4	2273.8	ug/L	0.27	2273.8	ppb	0.27	0.01%
Mo 202.031†	35.2	7.9560	ug/L	0.15863	7.9560	ppb	0.15863	1.99%
Na 589.592 Radial†	833.0	2252.4	ug/L	16.28	2252.4	ppb	16.28	0.72%
Ni 231.604†	6206.5	99.462	ug/L	0.4620	99.462	ppb	0.4620	0.46%
P 214.914†	5536.5	1886.9	ug/L	11.64	1886.9	ppb	11.64	0.62%
Pb 220.353†	1801.5	132.98	ug/L	1.545	132.98	ppb	1.545	1.16%
S 181.975 Axial†	1505.5	1267.4	ug/L	6.44	1267.4	ppb	6.44	0.51%
Sb 206.836†	60.4	-1.0610	ug/L	0.73082	-1.0610	ppb	0.73082	68.88%
Se 196.026†	-921.5	37.501	ug/L	3.1730	37.501	ppb	3.1730	8.46%
Si 251.611†	676137.1	13950	ug/L	37.3	13950	ppb	37.3	0.27%
Sn 189.927†	55.5	8.2275	ug/L	0.43955	8.2275	ppb	0.43955	5.34%
Sr 421.552†	6277.9	96.597	ug/L	0.4593	96.597	ppb	0.4593	0.48%
Ti 334.940†	2648712.1	3468.3	ug/L	2.68	3468.3	ppb	2.68	0.08%
Tl 190.801†	-228.8	-8.7720	ug/L	1.21737	-8.7720	ppb	1.21737	13.88%
U 409.014†	-15089.9	-386.45	ug/L	1.313	-386.45	ppb	1.313	0.34%
V 292.402†	19996.3	95.979	ug/L	0.7352	95.979	ppb	0.7352	0.77%
Zn 213.857†	79192.1	430.95	ug/L	0.347	430.95	ppb	0.347	0.08%
SiO2†	675039.4	29823	ug/L	214.5	29823	ppb	214.5	0.72%

Sequence No.: 6
Sample ID: 232582002|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 41
Date Collected: 7/8/2009 14:25:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232582002|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5597.6	5597.6	101	%			14:27:18
1	Y RADIAL	6055.0	6055.0	125.7	%			14:27:18
1	Al 396.153Radial†	20888.9	20859.0	18986	ug/L	18986	ppb	14:27:18
1	Ca 317.933Radial†	4102.3	4061.4	10116	ug/L	10116	ppb	14:27:18
1	Fe 238.204 Radial†	2571.4	2556.0	89670	ug/L	89670	ppb	14:27:38
1	K 766.490 Radial†	11387.0	9847.3	4310.2	ug/L	4310.2	ppb	14:27:18
1	Mg 279.077 IEC†	87.7	87.0	6810.6	ug/L	6810.6	ppb	14:27:38
1	Na 589.592 Radial†	618.6	785.4	2123.6	ug/L	2123.6	ppb	14:27:38
1	Sr 421.552†	4139.6	4109.9	63.225	ug/L	63.225	ppb	14:27:18
1	Sc 361.383	1079659.3	1079659.3	101.77	%			14:28:36
1	Y 371.029	1069826.6	1069826.6	125.39	%			14:28:36
1	Ag 328.068†	-6128.7	-6660.7	2.9096	ug/L	2.9096	ppb	14:28:41
1	As 188.979†	-100.1	-61.4	31.161	ug/L	31.161	ppb	14:29:02
1	B 249.677†	831.0	1198.1	6.7249	ug/L	6.7249	ppb	14:28:41
1	Ba 233.527†	88916.2	87345.5	444.35	ug/L	444.35	ppb	14:28:41
1	Be 313.107†	-31395.4	-23533.2	2.6892	ug/L	2.6892	ppb	14:28:41
1	Cd 226.502†	1141.1	1398.9	-0.0741	ug/L	-0.0741	ppb	14:29:02
1	Co 228.616†	1583.9	1646.8	10.224	ug/L	10.224	ppb	14:29:02
1	Cr 267.716†	18613.6	18318.5	157.99	ug/L	157.99	ppb	14:28:41
1	Cu 324.752†	16680.7	6199.4	20.480	ug/L	20.480	ppb	14:28:41
1	Mn 257.610†	2993141.0	2940259.3	2335.2	ug/L	2335.2	ppb	14:28:36
1	Mo 202.031†	93.1	59.7	8.5447	ug/L	8.5447	ppb	14:29:02
1	Ni 231.604†	5692.6	5445.4	87.264	ug/L	87.264	ppb	14:29:02
1	P 214.914†	5150.9	4724.4	1601.4	ug/L	1601.4	ppb	14:29:02
1	Pb 220.353†	588.5	607.3	40.789	ug/L	40.789	ppb	14:29:02
1	S 181.975 Axial†	504.8	428.1	358.67	ug/L	358.67	ppb	14:29:02
1	Sb 206.836†	132.7	85.0	2.0483	ug/L	2.0483	ppb	14:29:02
1	Se 196.026†	-919.3	-881.7	29.326	ug/L	29.326	ppb	14:29:02
1	Si 251.611†	409123.9	401448.6	8282.3	ug/L	8282.3	ppb	14:28:36
1	Sn 189.927†	126.7	119.0	14.645	ug/L	14.645	ppb	14:29:02
1	Ti 334.940†	3345939.1	3288858.1	4306.1	ug/L	4306.1	ppb	14:28:36
1	Tl 190.801†	-334.5	-267.3	-10.861	ug/L	-10.861	ppb	14:29:02
1	U 409.014†	-17539.9	-13400.1	-343.80	ug/L	-343.80	ppb	14:28:36
1	V 292.402†	12510.4	13945.6	61.563	ug/L	61.563	ppb	14:28:41
1	Zn 213.857†	76937.6	74477.2	405.46	ug/L	405.46	ppb	14:28:41
1	SiO2†	412093.0	404323.8	17862	ug/L	17862	ppb	14:30:11
2	Sc Radial	5602.4	5602.4	101	%			14:27:43
2	Y RADIAL	6041.6	6041.6	125.5	%			14:27:43
2	Al 396.153Radial†	20914.0	20866.0	18993	ug/L	18993	ppb	14:27:43
2	Ca 317.933Radial†	4082.5	4038.2	10058	ug/L	10058	ppb	14:27:43
2	Fe 238.204 Radial†	2603.9	2586.1	90725	ug/L	90725	ppb	14:28:03
2	K 766.490 Radial†	11359.5	9810.3	4294.9	ug/L	4294.9	ppb	14:27:43
2	Mg 279.077 IEC†	88.8	88.1	6897.4	ug/L	6897.4	ppb	14:28:03
2	Na 589.592 Radial†	627.1	793.3	2145.1	ug/L	2145.1	ppb	14:28:03
2	Sr 421.552†	4122.3	4089.2	62.907	ug/L	62.907	ppb	14:27:43
2	Sc 361.383	1077246.7	1077246.7	101.54	%			14:29:08
2	Y 371.029	1067094.8	1067094.8	125.07	%			14:29:08
2	Ag 328.068†	-6174.3	-6719.1	3.0218	ug/L	3.0218	ppb	14:29:13
2	As 188.979†	-116.4	-77.8	27.568	ug/L	27.568	ppb	14:29:34
2	B 249.677†	783.1	1152.7	5.8778	ug/L	5.8778	ppb	14:29:13
2	Ba 233.527†	88998.8	87622.6	445.78	ug/L	445.78	ppb	14:29:13
2	Be 313.107†	-31649.5	-23852.5	2.5993	ug/L	2.5993	ppb	14:29:13
2	Cd 226.502†	1152.0	1412.1	-0.1002	ug/L	-0.1002	ppb	14:29:34
2	Co 228.616†	1589.1	1655.3	10.308	ug/L	10.308	ppb	14:29:34
2	Cr 267.716†	18666.9	18411.9	158.80	ug/L	158.80	ppb	14:29:13
2	Cu 324.752†	16716.1	6270.9	20.717	ug/L	20.717	ppb	14:29:13
2	Mn 257.610†	2987466.1	2941257.5	2336.1	ug/L	2336.1	ppb	14:29:08
2	Mo 202.031†	98.7	65.5	8.8473	ug/L	8.8473	ppb	14:29:34
2	Ni 231.604†	5698.3	5463.5	87.554	ug/L	87.554	ppb	14:29:34

2	P 214.914†	5168.4	4753.0	1610.6	ug/L	1610.6 ppb	14:29:34
2	Pb 220.353†	586.2	606.4	40.622	ug/L	40.622 ppb	14:29:34
2	S 181.975 Axial†	514.1	438.4	367.38	ug/L	367.38 ppb	14:29:34
2	Sb 206.836†	121.9	74.6	0.0353	ug/L	0.0353 ppb	14:29:34
2	Se 196.026†	-914.1	-878.6	34.045	ug/L	34.045 ppb	14:29:34
2	Si 251.611†	408376.8	401613.2	8285.7	ug/L	8285.7 ppb	14:29:08
2	Sn 189.927†	141.7	134.1	16.226	ug/L	16.226 ppb	14:29:34
2	Ti 334.940†	3341613.7	3291961.6	4310.1	ug/L	4310.1 ppb	14:29:08
2	Tl 190.801†	-352.3	-285.6	-13.926	ug/L	-13.926 ppb	14:29:34
2	U 409.014†	-17585.8	-13483.9	-346.01	ug/L	-346.01 ppb	14:29:08
2	V 292.402†	12556.8	14018.9	61.830	ug/L	61.830 ppb	14:29:13
2	Zn 213.857†	77202.1	74907.0	407.74	ug/L	407.74 ppb	14:29:13
2	SiO2†	406900.7	400117.3	17676	ug/L	17676 ppb	14:30:17
3	Sc Radial	5584.3	5584.3	100	%		14:28:08
3	Y RADIAL	6034.8	6034.8	125.3	%		14:28:08
3	Al 396.153Radial†	20894.5	20913.9	19036	ug/L	19036 ppb	14:28:08
3	Ca 317.933Radial†	4090.0	4058.9	10110	ug/L	10110 ppb	14:28:08
3	Fe 238.204 Radial†	2589.2	2579.9	90506	ug/L	90506 ppb	14:28:28
3	K 766.490 Radial†	11337.5	9824.9	4301.1	ug/L	4301.1 ppb	14:28:08
3	Mg 279.077 IEC†	91.7	91.2	7143.4	ug/L	7143.4 ppb	14:28:28
3	Na 589.592 Radial†	621.5	789.7	2135.3	ug/L	2135.3 ppb	14:28:28
3	Sr 421.552†	4107.7	4087.9	62.887	ug/L	62.887 ppb	14:28:08
3	Sc 361.383	1095171.0	1095171.0	103.23	%		14:29:40
3	Y 371.029	1085508.1	1085508.1	127.23	%		14:29:40
3	Ag 328.068†	-6155.5	-6601.4	3.3989	ug/L	3.3989 ppb	14:29:45
3	As 188.979†	-103.0	-62.9	30.963	ug/L	30.963 ppb	14:30:06
3	B 249.677†	839.7	1194.9	6.5645	ug/L	6.5645 ppb	14:29:45
3	Ba 233.527†	87872.5	85097.1	432.99	ug/L	432.99 ppb	14:29:45
3	Be 313.107†	-31386.9	-23088.0	2.8195	ug/L	2.8195 ppb	14:29:45
3	Cd 226.502†	1144.3	1386.1	-0.2700	ug/L	-0.2700 ppb	14:30:06
3	Co 228.616†	1603.9	1644.1	10.183	ug/L	10.183 ppb	14:30:06
3	Cr 267.716†	18412.7	17864.8	154.13	ug/L	154.13 ppb	14:29:45
3	Cu 324.752†	16472.7	5765.7	19.458	ug/L	19.458 ppb	14:29:45
3	Mn 257.610†	3028339.8	2932699.2	2329.3	ug/L	2329.3 ppb	14:29:40
3	Mo 202.031†	103.4	68.4	8.9502	ug/L	8.9502 ppb	14:30:06
3	Ni 231.604†	5664.5	5338.9	85.558	ug/L	85.558 ppb	14:30:06
3	P 214.914†	5148.5	4650.4	1574.8	ug/L	1574.8 ppb	14:30:06
3	Pb 220.353†	579.7	590.6	39.470	ug/L	39.470 ppb	14:30:06
3	S 181.975 Axial†	513.6	429.7	359.98	ug/L	359.98 ppb	14:30:06
3	Sb 206.836†	122.4	73.1	-0.1457	ug/L	-0.1457 ppb	14:30:06
3	Se 196.026†	-926.3	-875.7	34.220	ug/L	34.220 ppb	14:30:06
3	Si 251.611†	414022.8	400500.1	8262.7	ug/L	8262.7 ppb	14:29:40
3	Sn 189.927†	137.4	127.6	15.554	ug/L	15.554 ppb	14:30:06
3	Ti 334.940†	3391265.2	3286198.1	4302.6	ug/L	4302.6 ppb	14:29:40
3	Tl 190.801†	-344.7	-272.5	-11.790	ug/L	-11.790 ppb	14:30:06
3	U 409.014†	-17558.6	-13174.1	-338.29	ug/L	-338.29 ppb	14:29:40
3	V 292.402†	12239.0	13508.6	58.996	ug/L	58.996 ppb	14:29:45
3	Zn 213.857†	76161.7	72654.8	395.19	ug/L	395.19 ppb	14:29:45
3	SiO2†	410909.5	397442.0	17558	ug/L	17558 ppb	14:30:22

Mean Data: 232582002|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1084025.7	102.18	%	0.917				0.90%
Sc Radial	5594.8	101	%	0.2				0.17%
Y 371.029	1074143.2	125.89	%	1.165				0.93%
Y RADIAL	6043.8	125.5	%	0.21				0.17%
Ag 328.068†	-6660.4	3.1101	ug/L	0.25632	3.1101	ppb	0.25632	8.24%
Al 396.153Radial†	20879.6	19005	ug/L	27.2	19005	ppb	27.2	0.14%
As 188.979†	-67.4	29.897	ug/L	2.0197	29.897	ppb	2.0197	6.76%
B 249.677†	1181.9	6.3891	ug/L	0.44999	6.3891	ppb	0.44999	7.04%
Ba 233.527†	86688.4	441.04	ug/L	7.011	441.04	ppb	7.011	1.59%
Be 313.107†	-23491.2	2.7027	ug/L	0.11071	2.7027	ppb	0.11071	4.10%
Ca 317.933Radial†	4052.8	10095	ug/L	31.7	10095	ppb	31.7	0.31%
Cd 226.502†	1399.1	-0.1481	ug/L	0.10637	-0.1481	ppb	0.10637	71.82%
Co 228.616†	1648.7	10.238	ug/L	0.0635	10.238	ppb	0.0635	0.62%
Cr 267.716†	18198.4	156.97	ug/L	2.494	156.97	ppb	2.494	1.59%
Cu 324.752†	6078.7	20.218	ug/L	0.6690	20.218	ppb	0.6690	3.31%
Fe 238.204 Radial†	2574.0	90300	ug/L	557.0	90300	ppb	557.0	0.62%
K 766.490 Radial†	9827.5	4302.1	ug/L	7.68	4302.1	ppb	7.68	0.18%

Mg 279.077 TEC†	88.7	6950.5	ug/L	172.67	6950.5	ppb	172.67	2.48%
Mn 257.610†	2938072.0	2333.5	ug/L	3.69	2333.5	ppb	3.69	0.16%
Mo 202.031†	64.5	8.7807	ug/L	0.21081	8.7807	ppb	0.21081	2.40%
Na 589.592 Radial†	789.5	2134.7	ug/L	10.75	2134.7	ppb	10.75	0.50%
Ni 231.604†	5415.9	86.792	ug/L	1.0787	86.792	ppb	1.0787	1.24%
P 214.914†	4709.2	1595.6	ug/L	18.62	1595.6	ppb	18.62	1.17%
Pb 220.353†	601.5	40.294	ug/L	0.7181	40.294	ppb	0.7181	1.78%
S 181.975 Axial†	432.1	362.01	ug/L	4.699	362.01	ppb	4.699	1.30%
Sb 206.836†	77.6	0.6460	ug/L	1.21781	0.6460	ppb	1.21781	188.52%
Se 196.026†	-878.7	32.531	ug/L	2.7763	32.531	ppb	2.7763	8.53%
Si 251.611†	401187.3	8276.9	ug/L	12.40	8276.9	ppb	12.40	0.15%
Sn 189.927†	126.9	15.475	ug/L	0.7931	15.475	ppb	0.7931	5.13%
Sr 421.552†	4095.7	63.006	ug/L	0.1899	63.006	ppb	0.1899	0.30%
Ti 334.940†	3289005.9	4306.3	ug/L	3.78	4306.3	ppb	3.78	0.09%
Tl 190.801†	-275.1	-12.192	ug/L	1.5719	-12.192	ppb	1.5719	12.89%
U 409.014†	-13352.7	-342.70	ug/L	3.977	-342.70	ppb	3.977	1.16%
V 292.402†	13824.4	60.796	ug/L	1.5646	60.796	ppb	1.5646	2.57%
Zn 213.857†	74013.0	402.79	ug/L	6.685	402.79	ppb	6.685	1.66%
SiO2†	400627.7	17699	ug/L	153.3	17699	ppb	153.3	0.87%

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 14:46:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5663.2	5663.2	102	%			14:48:38
1	Y RADIAL	4921.9	4921.9	102.2	%			14:48:38
1	Al 396.153Radial†	5410.9	5409.1	4902.2	ug/L	4902.2	ppb	14:48:38
1	Ca 317.933Radial†	1995.4	1943.8	4841.7	ug/L	4841.7	ppb	14:48:58
1	Fe 238.204 Radial†	141.6	138.8	4883.9	ug/L	4883.9	ppb	14:48:58
1	K 766.490 Radial†	13474.7	11767.5	5099.6	ug/L	5099.6	ppb	14:48:38
1	Mg 279.077 IEC†	63.7	62.4	4947.6	ug/L	4947.6	ppb	14:48:58
1	Na 589.592 Radial†	3686.9	3793.3	10257	ug/L	10257	ppb	14:48:38
1	Sr 421.552†	35305.4	34686.6	534.36	ug/L	534.36	ppb	14:48:38
1	Sc 361.383	1067499.7	1067499.7	100.62	%			14:49:57
1	Y 371.029	849118.5	849118.5	99.520	%			14:49:57
1	Ag 328.068†	127285.3	125857.7	501.23	ug/L	501.23	ppb	14:49:57
1	As 188.979†	2071.6	2095.7	495.11	ug/L	495.11	ppb	14:50:17
1	B 249.677†	31156.7	31345.1	486.64	ug/L	486.64	ppb	14:49:57
1	Ba 233.527†	98393.7	97759.6	496.03	ug/L	496.03	ppb	14:49:57
1	Be 313.107†	1596893.7	1594311.3	496.89	ug/L	496.89	ppb	14:49:57
1	Cd 226.502†	66558.7	66423.8	496.55	ug/L	496.55	ppb	14:49:57
1	Co 228.616†	38907.9	38757.1	482.97	ug/L	482.97	ppb	14:50:17
1	Cr 267.716†	58242.4	57910.0	493.92	ug/L	493.92	ppb	14:49:57
1	Cu 324.752†	211606.8	200103.9	493.99	ug/L	493.99	ppb	14:49:57
1	Mn 257.610†	631676.1	626933.6	495.99	ug/L	495.99	ppb	14:49:57
1	Mo 202.031†	12587.0	12477.2	499.76	ug/L	499.76	ppb	14:50:17
1	Ni 231.604†	30647.6	30309.4	485.48	ug/L	485.48	ppb	14:50:17
1	P 214.914†	7375.2	6992.6	2396.5	ug/L	2396.5	ppb	14:50:17
1	Pb 220.353†	6646.8	6634.7	498.71	ug/L	498.71	ppb	14:50:17
1	S 181.975 Axial†	1245.2	1169.7	989.10	ug/L	989.10	ppb	14:50:17
1	Sb 206.836†	2573.9	2512.6	500.11	ug/L	500.11	ppb	14:50:17
1	Se 196.026†	1503.7	1516.0	511.99	ug/L	511.99	ppb	14:50:17
1	Si 251.611†	123652.9	122326.3	2512.2	ug/L	2512.2	ppb	14:49:57
1	Sn 189.927†	4790.4	4755.2	495.03	ug/L	495.03	ppb	14:50:17
1	Ti 334.940†	382199.7	380939.8	498.61	ug/L	498.61	ppb	14:49:57
1	Tl 190.801†	2862.4	2906.0	492.14	ug/L	492.14	ppb	14:50:17
1	U 409.014†	15590.1	19328.2	478.01	ug/L	478.01	ppb	14:49:57
1	V 292.402†	85513.5	86636.2	497.33	ug/L	497.33	ppb	14:49:57
1	Zn 213.857†	90612.3	88928.3	492.08	ug/L	492.08	ppb	14:49:57
1	SiO2†	124200.5	122828.2	5401.3	ug/L	5401.3	ppb	14:51:17
2	Sc Radial	5446.9	5446.9	97.9	%			14:49:03
2	Y RADIAL	4712.8	4712.8	97.86	%			14:49:03
2	Al 396.153Radial†	5213.9	5419.0	4910.9	ug/L	4910.9	ppb	14:49:03
2	Ca 317.933Radial†	1989.6	2015.7	5020.8	ug/L	5020.8	ppb	14:49:23
2	Fe 238.204 Radial†	140.2	142.9	5030.3	ug/L	5030.3	ppb	14:49:23
2	K 766.490 Radial†	13037.0	11846.3	5133.9	ug/L	5133.9	ppb	14:49:03
2	Mg 279.077 IEC†	62.1	63.2	5014.8	ug/L	5014.8	ppb	14:49:23
2	Na 589.592 Radial†	3542.3	3789.5	10246	ug/L	10246	ppb	14:49:03
2	Sr 421.552†	33787.9	34514.2	531.70	ug/L	531.70	ppb	14:49:03
2	Sc 361.383	1055183.8	1055183.8	99.463	%			14:50:24
2	Y 371.029	838651.5	838651.5	98.293	%			14:50:24
2	Ag 328.068†	126214.7	126257.7	502.87	ug/L	502.87	ppb	14:50:24
2	As 188.979†	2075.2	2123.3	501.61	ug/L	501.61	ppb	14:50:44
2	B 249.677†	30917.9	31466.4	488.49	ug/L	488.49	ppb	14:50:24
2	Ba 233.527†	97565.5	98068.1	497.60	ug/L	497.60	ppb	14:50:24
2	Be 313.107†	1577953.1	1593791.5	496.73	ug/L	496.73	ppb	14:50:24
2	Cd 226.502†	66051.4	66685.8	498.49	ug/L	498.49	ppb	14:50:24
2	Co 228.616†	39043.3	39344.5	490.30	ug/L	490.30	ppb	14:50:44
2	Cr 267.716†	57589.2	57928.8	494.08	ug/L	494.08	ppb	14:50:24
2	Cu 324.752†	209513.9	200454.2	494.86	ug/L	494.86	ppb	14:50:24
2	Mn 257.610†	625453.1	628004.0	496.86	ug/L	496.86	ppb	14:50:24
2	Mo 202.031†	12625.4	12661.8	507.16	ug/L	507.16	ppb	14:50:44
2	Ni 231.604†	30744.2	30762.0	492.73	ug/L	492.73	ppb	14:50:44

2	P 214.914†	7400.3	7103.3	2435.4	ug/L	2435.4 ppb	14:50:44
2	Pb 220.353†	6622.3	6687.2	502.65	ug/L	502.65 ppb	14:50:44
2	S 181.975 Axial†	1258.3	1197.3	1012.5	ug/L	1012.5 ppb	14:50:44
2	Sb 206.836†	2580.0	2548.5	507.42	ug/L	507.42 ppb	14:50:44
2	Se 196.026†	1502.6	1532.3	517.83	ug/L	517.83 ppb	14:50:44
2	Si 251.611†	122528.7	122630.3	2518.3	ug/L	2518.3 ppb	14:50:24
2	Sn 189.927†	4790.5	4810.9	500.83	ug/L	500.83 ppb	14:50:44
2	Ti 334.940†	378341.9	381494.5	499.35	ug/L	499.35 ppb	14:50:24
2	Tl 190.801†	2870.9	2947.8	499.17	ug/L	499.17 ppb	14:50:44
2	U 409.014†	15257.4	19174.6	474.18	ug/L	474.18 ppb	14:50:24
2	V 292.402†	84668.4	86778.5	498.20	ug/L	498.20 ppb	14:50:24
2	Zn 213.857†	89929.9	89293.2	494.05	ug/L	494.05 ppb	14:50:24
2	SiO2†	124500.2	124570.2	5478.0	ug/L	5478.0 ppb	14:51:22
3	Sc Radial	5449.0	5449.0	97.9	%		14:49:28
3	Y RADIAL	4751.1	4751.1	98.66	%		14:49:28
3	Al 396.153Radial†	5174.8	5377.0	4872.7	ug/L	4872.7 ppb	14:49:28
3	Ca 317.933Radial†	2014.0	2039.9	5081.0	ug/L	5081.0 ppb	14:49:48
3	Fe 238.204 Radial†	143.3	146.0	5137.0	ug/L	5137.0 ppb	14:49:48
3	K 766.490 Radial†	13008.8	11812.4	5119.3	ug/L	5119.3 ppb	14:49:28
3	Mg 279.077 IEC†	65.2	66.4	5266.1	ug/L	5266.1 ppb	14:49:48
3	Na 589.592 Radial†	3500.5	3745.4	10127	ug/L	10127 ppb	14:49:28
3	Sr 421.552†	33740.1	34452.0	530.74	ug/L	530.74 ppb	14:49:28
3	Sc 361.383	1058649.0	1058649.0	99.789	%		14:50:52
3	Y 371.029	841526.8	841526.8	98.630	%		14:50:52
3	Ag 328.068†	126556.5	126184.9	502.61	ug/L	502.61 ppb	14:50:52
3	As 188.979†	2067.1	2108.3	498.11	ug/L	498.11 ppb	14:51:12
3	B 249.677†	31071.1	31518.1	489.29	ug/L	489.29 ppb	14:50:52
3	Ba 233.527†	97563.9	97745.5	495.96	ug/L	495.96 ppb	14:50:52
3	Be 313.107†	1581052.4	1591704.4	496.08	ug/L	496.08 ppb	14:50:52
3	Cd 226.502†	66155.8	66573.0	497.64	ug/L	497.64 ppb	14:50:52
3	Co 228.616†	38962.9	39135.5	487.69	ug/L	487.69 ppb	14:51:12
3	Cr 267.716†	57794.8	57945.3	494.22	ug/L	494.22 ppb	14:50:52
3	Cu 324.752†	210072.8	200324.8	494.55	ug/L	494.55 ppb	14:50:52
3	Mn 257.610†	626128.3	626622.3	495.77	ug/L	495.77 ppb	14:50:52
3	Mo 202.031†	12621.3	12616.2	505.34	ug/L	505.34 ppb	14:51:12
3	Ni 231.604†	30683.7	30600.2	490.14	ug/L	490.14 ppb	14:51:12
3	P 214.914†	7387.7	7066.4	2422.3	ug/L	2422.3 ppb	14:51:12
3	Pb 220.353†	6644.7	6687.8	502.68	ug/L	502.68 ppb	14:51:12
3	S 181.975 Axial†	1254.7	1189.5	1005.9	ug/L	1005.9 ppb	14:51:12
3	Sb 206.836†	2576.1	2536.1	504.89	ug/L	504.89 ppb	14:51:12
3	Se 196.026†	1509.7	1534.5	518.90	ug/L	518.90 ppb	14:51:12
3	Si 251.611†	122635.6	122334.2	2512.3	ug/L	2512.3 ppb	14:50:52
3	Sn 189.927†	4780.2	4784.8	498.13	ug/L	498.13 ppb	14:51:12
3	Ti 334.940†	379019.7	380928.6	498.61	ug/L	498.61 ppb	14:50:52
3	Tl 190.801†	2889.3	2956.8	500.68	ug/L	500.68 ppb	14:51:12
3	U 409.014†	15553.0	19420.5	480.27	ug/L	480.27 ppb	14:50:52
3	V 292.402†	84924.5	86756.4	498.05	ug/L	498.05 ppb	14:50:52
3	Zn 213.857†	89838.3	88905.4	491.88	ug/L	491.88 ppb	14:50:52
3	SiO2†	123331.7	122989.5	5408.2	ug/L	5408.2 ppb	14:51:27

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060444.2	99.959	%	0.5987				0.60%
Sc Radial	5519.7	99.2	%	2.23				2.25%
Y 371.029	843098.9	98.814	%	0.6338				0.64%
Y RADIAL	4795.3	99.58	%	2.312				2.32%
Ag 328.068†	126100.1	502.23	ug/L	0.878	502.23	ppb	0.878	0.17%
QC value within limits for Ag 328.068 Recovery = 100.45%								
Al 396.153Radial†	5401.7	4895.3	ug/L	19.99	4895.3	ppb	19.99	0.41%
QC value within limits for Al 396.153Radial Recovery = 97.91%								
As 188.979†	2109.1	498.28	ug/L	3.254	498.28	ppb	3.254	0.65%
QC value within limits for As 188.979 Recovery = 99.66%								
B 249.677†	31443.2	488.14	ug/L	1.360	488.14	ppb	1.360	0.28%
QC value within limits for B 249.677 Recovery = 97.63%								
Ba 233.527†	97857.7	496.53	ug/L	0.924	496.53	ppb	0.924	0.19%
QC value within limits for Ba 233.527 Recovery = 99.31%								
Be 313.107†	1593269.0	496.56	ug/L	0.429	496.56	ppb	0.429	0.09%
QC value within limits for Be 313.107 Recovery = 99.31%								
Ca 317.933Radial†	1999.8	4981.2	ug/L	124.51	4981.2	ppb	124.51	2.50%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.62%
Cd 226.502†            66560.8      497.56 ug/L         0.976      497.56 ppb          0.976   0.20%
   QC value within limits for Cd 226.502  Recovery = 99.51%
Co 228.616†            39079.1      486.99 ug/L         3.717      486.99 ppb          3.717   0.76%
   QC value within limits for Co 228.616  Recovery = 97.40%
Cr 267.716†            57928.0      494.08 ug/L         0.153      494.08 ppb          0.153   0.03%
   QC value within limits for Cr 267.716  Recovery = 98.82%
Cu 324.752†           200294.3      494.47 ug/L         0.442      494.47 ppb          0.442   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.89%
Fe 238.204 Radial†       142.6      5017.1 ug/L        127.10      5017.1 ppb         127.10   2.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.34%
K 766.490 Radial†      11808.7      5117.6 ug/L         17.20      5117.6 ppb          17.20   0.34%
   QC value within limits for K 766.490 Radial  Recovery = 102.35%
Mg 279.077 IEC†           64.0      5076.2 ug/L        167.87      5076.2 ppb         167.87   3.31%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.52%
Mn 257.610†           627186.6      496.21 ug/L         0.573      496.21 ppb          0.573   0.12%
   QC value within limits for Mn 257.610  Recovery = 99.24%
Mo 202.031†            12585.1      504.09 ug/L         3.856      504.09 ppb          3.856   0.76%
   QC value within limits for Mo 202.031  Recovery = 100.82%
Na 589.592 Radial†      3776.0       10210 ug/L          71.9       10210 ppb           71.9   0.70%
   QC value within limits for Na 589.592 Radial  Recovery = 102.10%
Ni 231.604†            30557.2      489.45 ug/L         3.673      489.45 ppb          3.673   0.75%
   QC value within limits for Ni 231.604  Recovery = 97.89%
P 214.914†              7054.1      2418.1 ug/L         19.82      2418.1 ppb          19.82   0.82%
   QC value within limits for P 214.914  Recovery = 96.72%
Pb 220.353†             6669.9      501.35 ug/L         2.283      501.35 ppb          2.283   0.46%
   QC value within limits for Pb 220.353  Recovery = 100.27%
S 181.975 Axial†        1185.5      1002.5 ug/L         12.05      1002.5 ppb          12.05   1.20%
   QC value within limits for S 181.975 Axial  Recovery = 100.25%
Sb 206.836†             2532.4      504.14 ug/L         3.715      504.14 ppb          3.715   0.74%
   QC value within limits for Sb 206.836  Recovery = 100.83%
Se 196.026†             1527.6      516.24 ug/L         3.717      516.24 ppb          3.717   0.72%
   QC value within limits for Se 196.026  Recovery = 103.25%
Si 251.611†           122430.3      2514.3 ug/L          3.52      2514.3 ppb           3.52   0.14%
   QC value within limits for Si 251.611  Recovery = 100.57%
Sn 189.927†             4783.6      498.00 ug/L         2.905      498.00 ppb          2.905   0.58%
   QC value within limits for Sn 189.927  Recovery = 99.60%
Sr 421.552†            34550.9      532.27 ug/L         1.873      532.27 ppb          1.873   0.35%
   QC value within limits for Sr 421.552  Recovery = 106.45%
Ti 334.940†           381121.0      498.86 ug/L         0.427      498.86 ppb          0.427   0.09%
   QC value within limits for Ti 334.940  Recovery = 99.77%
Tl 190.801†             2936.9      497.33 ug/L         4.557      497.33 ppb          4.557   0.92%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19307.8      477.49 ug/L         3.078      477.49 ppb          3.078   0.64%
   QC value within limits for U 409.014  Recovery = 95.50%
V 292.402†             86723.7      497.86 ug/L         0.468      497.86 ppb          0.468   0.09%
   QC value within limits for V 292.402  Recovery = 99.57%
Zn 213.857†            89042.3      492.67 ug/L         1.200      492.67 ppb          1.200   0.24%
   QC value within limits for Zn 213.857  Recovery = 98.53%
SiO2†                 123462.7      5429.2 ug/L         42.40      5429.2 ppb          42.40   0.78%
   QC value within limits for SiO2  Recovery = 101.53%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 14:53:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5472.3	5472.3	98.3	%			14:55:30
1	Y RADIAL	4760.3	4760.3	98.85	%			14:55:30
1	Al 396.153Radial†	-81.1	9.7	8.8083	ug/L	8.8083	ppb	14:55:30
1	Ca 317.933Radial†	30.8	14.4	35.761	ug/L	35.761	ppb	14:55:50
1	Fe 238.204 Radial†	0.5	0.2	5.6899	ug/L	5.6899	ppb	14:55:50
1	K 766.490 Radial†	1569.9	123.4	53.550	ug/L	53.550	ppb	14:55:30
1	Mg 279.077 IEC†	-0.7	-0.9	-68.768	ug/L	-68.768	ppb	14:55:50
1	Na 589.592 Radial†	-177.5	-10.1	-27.266	ug/L	-27.266	ppb	14:55:50
1	Sr 421.552†	35.3	30.4	0.4686	ug/L	0.4686	ppb	14:55:50
1	Sc 361.383	1053868.2	1053868.2	99.339	%			14:56:47
1	Y 371.029	847547.6	847547.6	99.336	%			14:56:47
1	Ag 328.068†	611.0	-23.5	-0.0912	ug/L	-0.0912	ppb	14:56:52
1	As 188.979†	-59.7	-23.1	-5.4331	ug/L	-5.4331	ppb	14:57:12
1	B 249.677†	-115.7	265.0	4.1295	ug/L	4.1295	ppb	14:56:52
1	Ba 233.527†	39.3	15.3	0.0772	ug/L	0.0772	ppb	14:57:12
1	Be 313.107†	-7467.3	-200.8	-0.0623	ug/L	-0.0623	ppb	14:56:52
1	Cd 226.502†	-282.8	-7.0	-0.0528	ug/L	-0.0528	ppb	14:57:12
1	Co 228.616†	-98.5	-8.7	-0.1082	ug/L	-0.1082	ppb	14:57:12
1	Cr 267.716†	-17.9	10.6	0.0901	ug/L	0.0901	ppb	14:57:12
1	Cu 324.752†	10191.0	67.6	0.1671	ug/L	0.1671	ppb	14:56:52
1	Mn 257.610†	957.5	136.8	0.1102	ug/L	0.1102	ppb	14:57:12
1	Mo 202.031†	35.6	4.1	0.1634	ug/L	0.1634	ppb	14:57:12
1	Ni 231.604†	164.1	16.9	0.2714	ug/L	0.2714	ppb	14:57:12
1	P 214.914†	332.8	-1.9	-0.6902	ug/L	-0.6902	ppb	14:57:12
1	Pb 220.353†	-0.7	28.4	2.1276	ug/L	2.1276	ppb	14:57:12
1	S 181.975 Axial†	64.3	-3.1	-2.6380	ug/L	-2.6380	ppb	14:57:12
1	Sb 206.836†	50.1	5.0	0.9831	ug/L	0.9831	ppb	14:57:12
1	Se 196.026†	-20.4	1.0	0.3567	ug/L	0.3567	ppb	14:57:12
1	Si 251.611†	771.9	216.9	4.4555	ug/L	4.4555	ppb	14:57:12
1	Sn 189.927†	3.4	-2.0	-0.2090	ug/L	-0.2090	ppb	14:57:12
1	Ti 334.940†	-1048.8	53.5	0.0729	ug/L	0.0729	ppb	14:56:52
1	Tl 190.801†	-48.9	12.2	2.0617	ug/L	2.0617	ppb	14:57:12
1	U 409.014†	-3860.6	-51.6	-1.2803	ug/L	-1.2803	ppb	14:56:47
1	V 292.402†	-1672.4	-30.8	-0.1770	ug/L	-0.1770	ppb	14:56:52
1	Zn 213.857†	1170.2	55.5	0.3100	ug/L	0.3100	ppb	14:57:12
1	SiO2†	796.6	199.5	8.7725	ug/L	8.7725	ppb	14:58:18
2	Sc Radial	5640.5	5640.5	101	%			14:55:55
2	Y RADIAL	4909.7	4909.7	102.0	%			14:55:55
2	Al 396.153Radial†	-62.3	30.8	28.013	ug/L	28.013	ppb	14:55:55
2	Ca 317.933Radial†	30.3	12.9	32.245	ug/L	32.245	ppb	14:56:15
2	Fe 238.204 Radial†	-0.5	-0.8	-29.760	ug/L	-29.760	ppb	14:56:15
2	K 766.490 Radial†	1516.6	23.1	10.017	ug/L	10.017	ppb	14:55:55
2	Mg 279.077 IEC†	0.3	0.1	8.2285	ug/L	8.2285	ppb	14:56:15
2	Na 589.592 Radial†	-177.1	-4.3	-11.518	ug/L	-11.518	ppb	14:56:15
2	Sr 421.552†	6.1	0.6	0.0086	ug/L	0.0086	ppb	14:56:15
2	Sc 361.383	1063342.1	1063342.1	100.23	%			14:57:17
2	Y 371.029	854778.4	854778.4	100.18	%			14:57:17
2	Ag 328.068†	643.4	3.4	0.0032	ug/L	0.0032	ppb	14:57:22
2	As 188.979†	-51.2	-14.2	-3.3303	ug/L	-3.3303	ppb	14:57:42
2	B 249.677†	-29.0	352.6	5.4981	ug/L	5.4981	ppb	14:57:22
2	Ba 233.527†	26.1	1.8	0.0085	ug/L	0.0085	ppb	14:57:42
2	Be 313.107†	-7456.4	-123.0	-0.0382	ug/L	-0.0382	ppb	14:57:22
2	Cd 226.502†	-288.4	-10.1	-0.0717	ug/L	-0.0717	ppb	14:57:42
2	Co 228.616†	-70.3	20.3	0.2517	ug/L	0.2517	ppb	14:57:42
2	Cr 267.716†	-12.6	16.0	0.1359	ug/L	0.1359	ppb	14:57:42
2	Cu 324.752†	10255.5	40.5	0.0983	ug/L	0.0983	ppb	14:57:22
2	Mn 257.610†	981.3	152.0	0.1161	ug/L	0.1161	ppb	14:57:42
2	Mo 202.031†	22.2	-9.6	-0.3874	ug/L	-0.3874	ppb	14:57:42
2	Ni 231.604†	156.9	8.2	0.1321	ug/L	0.1321	ppb	14:57:42

2	P 214.914†	349.2	11.4	4.0629	ug/L	4.0629 ppb	14:57:42
2	Pb 220.353†	-26.9	2.3	0.1761	ug/L	0.1761 ppb	14:57:42
2	S 181.975 Axial†	69.4	1.4	1.1802	ug/L	1.1802 ppb	14:57:42
2	Sb 206.836†	51.9	6.4	1.2457	ug/L	1.2457 ppb	14:57:42
2	Se 196.026†	-27.8	-6.2	-2.1074	ug/L	-2.1074 ppb	14:57:42
2	Si 251.611†	798.7	236.8	4.8879	ug/L	4.8879 ppb	14:57:42
2	Sn 189.927†	9.7	4.2	0.4366	ug/L	0.4366 ppb	14:57:42
2	Ti 334.940†	-1103.0	8.8	0.0133	ug/L	0.0133 ppb	14:57:22
2	Tl 190.801†	-47.5	14.0	2.3645	ug/L	2.3645 ppb	14:57:42
2	U 409.014†	-3819.8	23.8	0.5932	ug/L	0.5932 ppb	14:57:17
2	V 292.402†	-1637.6	19.0	0.1084	ug/L	0.1084 ppb	14:57:22
2	Zn 213.857†	1144.2	19.2	0.1089	ug/L	0.1089 ppb	14:57:42
2	SiO2†	764.0	159.9	7.0706	ug/L	7.0706 ppb	14:58:23
3	Sc Radial	5502.0	5502.0	98.9	%		14:56:20
3	Y RADIAL	4784.6	4784.6	99.35	%		14:56:20
3	Al 396.153Radial†	-79.0	12.3	11.188	ug/L	11.188 ppb	14:56:20
3	Ca 317.933Radial†	25.1	8.5	21.069	ug/L	21.069 ppb	14:56:40
3	Fe 238.204 Radial†	1.2	0.9	30.106	ug/L	30.106 ppb	14:56:40
3	K 766.490 Radial†	1574.7	119.6	51.922	ug/L	51.922 ppb	14:56:20
3	Mg 279.077 IEC†	2.6	2.5	197.62	ug/L	197.62 ppb	14:56:40
3	Na 589.592 Radial†	-180.3	-11.9	-32.235	ug/L	-32.235 ppb	14:56:40
3	Sr 421.552†	15.5	10.2	0.1562	ug/L	0.1562 ppb	14:56:40
3	Sc 361.383	1051449.5	1051449.5	99.111	%		14:57:47
3	Y 371.029	846638.2	846638.2	99.229	%		14:57:47
3	Ag 328.068†	588.3	-45.1	-0.1673	ug/L	-0.1673 ppb	14:57:52
3	As 188.979†	-54.8	-18.3	-4.3026	ug/L	-4.3026 ppb	14:58:13
3	B 249.677†	-85.6	295.2	4.5964	ug/L	4.5964 ppb	14:57:52
3	Ba 233.527†	31.6	7.6	0.0395	ug/L	0.0395 ppb	14:58:13
3	Be 313.107†	-7461.5	-212.2	-0.0661	ug/L	-0.0661 ppb	14:57:52
3	Cd 226.502†	-273.8	1.4	0.0072	ug/L	0.0072 ppb	14:58:13
3	Co 228.616†	-94.2	-4.7	-0.0576	ug/L	-0.0576 ppb	14:58:13
3	Cr 267.716†	-11.6	16.9	0.1449	ug/L	0.1449 ppb	14:58:13
3	Cu 324.752†	10178.7	78.7	0.1959	ug/L	0.1959 ppb	14:57:52
3	Mn 257.610†	987.9	169.8	0.1343	ug/L	0.1343 ppb	14:58:13
3	Mo 202.031†	39.6	8.2	0.3293	ug/L	0.3293 ppb	14:58:13
3	Ni 231.604†	164.9	18.1	0.2903	ug/L	0.2903 ppb	14:58:13
3	P 214.914†	362.0	28.3	9.9383	ug/L	9.9383 ppb	14:58:13
3	Pb 220.353†	-9.5	19.5	1.4654	ug/L	1.4654 ppb	14:58:13
3	S 181.975 Axial†	64.0	-3.2	-2.7432	ug/L	-2.7432 ppb	14:58:13
3	Sb 206.836†	52.1	7.2	1.4070	ug/L	1.4070 ppb	14:58:13
3	Se 196.026†	-24.8	-3.4	-0.9905	ug/L	-0.9905 ppb	14:58:13
3	Si 251.611†	779.4	226.3	4.6478	ug/L	4.6478 ppb	14:58:13
3	Sn 189.927†	2.2	-3.2	-0.3355	ug/L	-0.3355 ppb	14:58:13
3	Ti 334.940†	-1145.5	-46.5	-0.0588	ug/L	-0.0588 ppb	14:57:52
3	Tl 190.801†	-50.5	10.5	1.7647	ug/L	1.7647 ppb	14:58:13
3	U 409.014†	-3862.5	-62.4	-1.5531	ug/L	-1.5531 ppb	14:57:47
3	V 292.402†	-1624.6	13.6	0.0773	ug/L	0.0773 ppb	14:57:52
3	Zn 213.857†	1159.9	47.9	0.2551	ug/L	0.2551 ppb	14:58:13
3	SiO2†	806.9	211.8	9.3098	ug/L	9.3098 ppb	14:58:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056219.9	99.560	%	0.5925				0.60%
Sc Radial	5538.3	99.5	%	1.61				1.62%
Y 371.029	849654.7	99.583	%	0.5228				0.52%
Y RADIAL	4818.2	100.1	%	1.66				1.66%
Ag 328.068†	-21.7	-0.0851	ug/L	0.08542	-0.0851	ppb	0.08542	100.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.6	16.003	ug/L	10.4684	16.003	ppb	10.4684	65.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-18.6	-4.3553	ug/L	1.05239	-4.3553	ppb	1.05239	24.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	304.2	4.7413	ug/L	0.69569	4.7413	ppb	0.69569	14.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.2	0.0417	ug/L	0.03442	0.0417	ppb	0.03442	82.50%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-178.7	-0.0555	ug/L	0.01513	-0.0555	ppb	0.01513	27.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.9	29.692	ug/L	7.6715	29.692	ppb	7.6715	25.84%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -5.2     -0.0391 ug/L      0.04120     -0.0391 ppb       0.04120 105.48%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               2.3      0.0286 ug/L      0.19481      0.0286 ppb       0.19481 680.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              14.5      0.1236 ug/L      0.02938      0.1236 ppb       0.02938  23.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              62.3      0.1538 ug/L      0.05016      0.1538 ppb       0.05016  32.62%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.1      2.0121 ug/L     30.10210      2.0121 ppb      30.10210 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        88.7     38.496 ug/L      24.6777     38.496 ppb       24.6777  64.10%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.6     45.694 ug/L     137.0902     45.694 ppb      137.0902 300.02%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             152.9      0.1202 ug/L      0.01255      0.1202 ppb       0.01255  10.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               0.9      0.0351 ug/L      0.37516      0.0351 ppb       0.37516 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -8.8    -23.673 ug/L      10.8153    -23.673 ppb       10.8153  45.69%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              14.4      0.2313 ug/L      0.08644      0.2313 ppb       0.08644  37.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               12.6      4.4370 ug/L      5.32411      4.4370 ppb       5.32411 119.99%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              16.7      1.2563 ug/L      0.99239      1.2563 ppb       0.99239  78.99%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -1.7     -1.4003 ug/L      2.23542     -1.4003 ppb       2.23542 159.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               6.2      1.2119 ug/L      0.21396      1.2119 ppb       0.21396  17.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -2.8     -0.9137 ug/L      1.23385     -0.9137 ppb       1.23385 135.04%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             226.7      4.6637 ug/L      0.21666      4.6637 ppb       0.21666   4.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -0.4     -0.0360 ug/L      0.41410     -0.0360 ppb       0.41410 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              13.7      0.2112 ug/L      0.23488      0.2112 ppb       0.23488 111.23%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               5.2      0.0091 ug/L      0.06596      0.0091 ppb       0.06596 721.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              12.2      2.0636 ug/L      0.29992      2.0636 ppb       0.29992  14.53%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -30.1     -0.7468 ug/L      1.16839     -0.7468 ppb       1.16839 156.46%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                0.6      0.0029 ug/L      0.15653      0.0029 ppb       0.15653 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              40.9      0.2247 ug/L      0.10391      0.2247 ppb       0.10391  46.25%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   190.4      8.3843 ug/L      1.16902      8.3843 ppb       1.16902  13.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 13
Sample ID: 1201872899|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 46
Date Collected: 7/8/2009 15:14:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872899|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5642.7	5642.7	101	%			15:16:48
1	Y RADIAL	5772.0	5772.0	119.9	%			15:16:48
1	Al 396.153Radial†	31493.9	31151.3	28355	ug/L	28355	ppb	15:16:48
1	Ca 317.933Radial†	2607.1	2554.2	6362.0	ug/L	6362.0	ppb	15:17:08
1	Fe 238.204 Radial†	2312.8	2280.5	80005	ug/L	80005	ppb	15:17:08
1	K 766.490 Radial†	12221.7	10579.9	4618.1	ug/L	4618.1	ppb	15:16:48
1	Mg 279.077 IEC†	62.5	61.4	4797.3	ug/L	4797.3	ppb	15:17:08
1	Na 589.592 Radial†	95.1	264.2	714.50	ug/L	714.50	ppb	15:17:08
1	Sr 421.552†	4203.3	4139.8	63.721	ug/L	63.721	ppb	15:16:48
1	Sc 361.383	1077997.6	1077997.6	101.61	%			15:18:06
1	Y 371.029	1011721.1	1011721.1	118.58	%			15:18:06
1	Ag 328.068†	-5414.1	-5966.7	2.5865	ug/L	2.5865	ppb	15:18:12
1	As 188.979†	-35.2	2.2	31.880	ug/L	31.880	ppb	15:18:32
1	B 249.677†	794.2	1163.1	7.4507	ug/L	7.4507	ppb	15:18:12
1	Ba 233.527†	92385.6	90894.6	462.14	ug/L	462.14	ppb	15:18:12
1	Be 313.107†	-11434.9	-3937.1	4.3355	ug/L	4.3355	ppb	15:18:12
1	Cd 226.502†	954.0	1216.5	-0.3042	ug/L	-0.3042	ppb	15:18:32
1	Co 228.616†	1926.2	1986.0	18.680	ug/L	18.680	ppb	15:18:32
1	Cr 267.716†	17492.4	17243.3	148.63	ug/L	148.63	ppb	15:18:12
1	Cu 324.752†	59186.3	48055.4	123.19	ug/L	123.19	ppb	15:18:12
1	Mn 257.610†	3471145.0	3415207.6	2709.3	ug/L	2709.3	ppb	15:18:06
1	Mo 202.031†	218.1	182.9	12.810	ug/L	12.810	ppb	15:18:32
1	Ni 231.604†	4935.9	4709.3	75.464	ug/L	75.464	ppb	15:18:32
1	P 214.914†	2732.0	2351.7	757.22	ug/L	757.22	ppb	15:18:32
1	Pb 220.353†	852.6	868.2	63.014	ug/L	63.014	ppb	15:18:32
1	S 181.975 Axial†	440.4	365.5	303.84	ug/L	303.84	ppb	15:18:32
1	Sb 206.836†	106.4	59.3	2.2483	ug/L	2.2483	ppb	15:18:32
1	Se 196.026†	-806.2	-771.8	31.634	ug/L	31.634	ppb	15:18:32
1	Si 251.611†	529721.2	520750.9	10744	ug/L	10744	ppb	15:18:06
1	Sn 189.927†	79.7	73.0	9.2299	ug/L	9.2299	ppb	15:18:32
1	Ti 334.940†	1855685.6	1827332.7	2392.5	ug/L	2392.5	ppb	15:18:06
1	Tl 190.801†	-260.7	-195.2	-5.7602	ug/L	-5.7602	ppb	15:18:32
1	U 409.014†	-12568.6	-8534.3	-221.87	ug/L	-221.87	ppb	15:18:06
1	V 292.402†	16381.7	17774.4	86.973	ug/L	86.973	ppb	15:18:12
1	Zn 213.857†	83128.9	80686.7	441.16	ug/L	441.16	ppb	15:18:12
1	SiO2†	527379.3	518403.9	22903	ug/L	22903	ppb	15:19:41
2	Sc Radial	5682.9	5682.9	102	%			15:17:13
2	Y RADIAL	5838.7	5838.7	121.2	%			15:17:13
2	Al 396.153Radial†	31871.9	31301.6	28492	ug/L	28492	ppb	15:17:13
2	Ca 317.933Radial†	2583.7	2513.1	6259.7	ug/L	6259.7	ppb	15:17:33
2	Fe 238.204 Radial†	2287.3	2239.4	78564	ug/L	78564	ppb	15:17:33
2	K 766.490 Radial†	12345.0	10615.3	4632.4	ug/L	4632.4	ppb	15:17:13
2	Mg 279.077 IEC†	62.4	61.0	4760.7	ug/L	4760.7	ppb	15:17:33
2	Na 589.592 Radial†	92.2	260.7	704.94	ug/L	704.94	ppb	15:17:33
2	Sr 421.552†	4209.3	4116.4	63.361	ug/L	63.361	ppb	15:17:13
2	Sc 361.383	1076250.4	1076250.4	101.45	%			15:18:38
2	Y 371.029	1007927.0	1007927.0	118.13	%			15:18:38
2	Ag 328.068†	-5391.7	-5953.3	2.1827	ug/L	2.1827	ppb	15:18:44
2	As 188.979†	-45.6	-8.0	29.208	ug/L	29.208	ppb	15:19:04
2	B 249.677†	845.3	1214.7	8.4470	ug/L	8.4470	ppb	15:18:44
2	Ba 233.527†	92594.7	91248.2	463.90	ug/L	463.90	ppb	15:18:44
2	Be 313.107†	-11301.2	-3823.6	4.3788	ug/L	4.3788	ppb	15:18:44
2	Cd 226.502†	937.9	1202.2	-0.2419	ug/L	-0.2419	ppb	15:19:04
2	Co 228.616†	1910.7	1973.8	18.540	ug/L	18.540	ppb	15:19:04
2	Cr 267.716†	17452.1	17231.5	148.51	ug/L	148.51	ppb	15:18:44
2	Cu 324.752†	59272.6	48235.0	123.55	ug/L	123.55	ppb	15:18:44
2	Mn 257.610†	3473558.2	3423132.2	2715.4	ug/L	2715.4	ppb	15:18:38
2	Mo 202.031†	203.1	168.5	12.135	ug/L	12.135	ppb	15:19:04
2	Ni 231.604†	4866.9	4649.1	74.499	ug/L	74.499	ppb	15:19:04

2	P 214.914†	2718.0	2342.3	755.03 ug/L	755.03 ppb	15:19:04
2	Pb 220.353†	844.8	861.9	62.701 ug/L	62.701 ppb	15:19:04
2	S 181.975 Axial†	423.8	349.9	290.60 ug/L	290.60 ppb	15:19:04
2	Sb 206.836†	100.3	53.5	1.0368 ug/L	1.0368 ppb	15:19:04
2	Se 196.026†	-792.5	-759.6	30.547 ug/L	30.547 ppb	15:19:04
2	Si 251.611†	530935.7	522794.4	10786 ug/L	10786 ppb	15:18:38
2	Sn 189.927†	69.4	63.0	8.1511 ug/L	8.1511 ppb	15:19:04
2	Ti 334.940†	1855340.3	1829957.1	2396.0 ug/L	2396.0 ppb	15:18:38
2	Tl 190.801†	-253.5	-188.5	-4.5703 ug/L	-4.5703 ppb	15:19:04
2	U 409.014†	-12669.2	-8653.6	-224.65 ug/L	-224.65 ppb	15:18:38
2	V 292.402†	16471.6	17889.2	87.803 ug/L	87.803 ppb	15:18:44
2	Zn 213.857†	83116.2	80807.0	441.99 ug/L	441.99 ppb	15:18:44
2	SiO2†	534304.3	526072.5	23242 ug/L	23242 ppb	15:19:47
3	Sc Radial	5667.0	5667.0	102 %		15:17:38
3	Y RADIAL	5780.9	5780.9	120.0 %		15:17:38
3	Al 396.153Radial†	31573.1	31095.9	28304 ug/L	28304 ppb	15:17:38
3	Ca 317.933Radial†	2611.2	2547.2	6344.6 ug/L	6344.6 ppb	15:17:58
3	Fe 238.204 Radial†	2301.9	2260.0	79286 ug/L	79286 ppb	15:17:58
3	K 766.490 Radial†	12229.9	10536.2	4598.6 ug/L	4598.6 ppb	15:17:38
3	Mg 279.077 IEC†	59.6	58.4	4555.2 ug/L	4555.2 ppb	15:17:58
3	Na 589.592 Radial†	94.0	262.7	710.32 ug/L	710.32 ppb	15:17:58
3	Sr 421.552†	4174.4	4093.7	63.011 ug/L	63.011 ppb	15:17:38
3	Sc 361.383	1087003.8	1087003.8	102.46 %		15:19:10
3	Y 371.029	1017791.3	1017791.3	119.29 %		15:19:10
3	Ag 328.068†	-5278.3	-5790.0	3.0511 ug/L	3.0511 ppb	15:19:16
3	As 188.979†	-42.1	-4.1	30.258 ug/L	30.258 ppb	15:19:36
3	B 249.677†	766.4	1129.5	7.0225 ug/L	7.0225 ppb	15:19:16
3	Ba 233.527†	92059.9	89823.4	456.70 ug/L	456.70 ppb	15:19:16
3	Be 313.107†	-11347.7	-3758.8	4.3978 ug/L	4.3978 ppb	15:19:16
3	Cd 226.502†	959.8	1214.4	-0.2360 ug/L	-0.2360 ppb	15:19:36
3	Co 228.616†	1928.6	1972.7	18.514 ug/L	18.514 ppb	15:19:36
3	Cr 267.716†	17376.4	16987.4	146.44 ug/L	146.44 ppb	15:19:16
3	Cu 324.752†	59022.8	47413.2	121.56 ug/L	121.56 ppb	15:19:16
3	Mn 257.610†	3505151.6	3420093.9	2713.1 ug/L	2713.1 ppb	15:19:10
3	Mo 202.031†	194.5	158.0	11.767 ug/L	11.767 ppb	15:19:36
3	Ni 231.604†	4897.1	4631.1	74.211 ug/L	74.211 ppb	15:19:36
3	P 214.914†	2725.8	2323.3	748.03 ug/L	748.03 ppb	15:19:36
3	Pb 220.353†	860.2	868.6	63.103 ug/L	63.103 ppb	15:19:36
3	S 181.975 Axial†	419.4	341.5	283.49 ug/L	283.49 ppb	15:19:36
3	Sb 206.836†	82.2	34.8	-2.5571 ug/L	-2.5571 ppb	15:19:36
3	Se 196.026†	-804.8	-763.8	31.693 ug/L	31.693 ppb	15:19:36
3	Si 251.611†	535281.2	521858.0	10767 ug/L	10767 ppb	15:19:10
3	Sn 189.927†	76.6	69.3	8.8317 ug/L	8.8317 ppb	15:19:36
3	Ti 334.940†	1873474.0	1829562.7	2395.5 ug/L	2395.5 ppb	15:19:10
3	Tl 190.801†	-265.1	-197.3	-6.0823 ug/L	-6.0823 ppb	15:19:36
3	U 409.014†	-12627.8	-8489.6	-220.66 ug/L	-220.66 ppb	15:19:10
3	V 292.402†	16373.0	17632.3	86.248 ug/L	86.248 ppb	15:19:16
3	Zn 213.857†	82871.5	79757.6	436.07 ug/L	436.07 ppb	15:19:16
3	SiO2†	527978.3	514688.3	22739 ug/L	22739 ppb	15:19:52

Mean Data: 1201872899|881859|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1080417.3	101.84	%	0.544				0.53%
Sc Radial	5664.2	102	%	0.4				0.36%
Y 371.029	1012479.8	118.67	%	0.583				0.49%
Y RADIAL	5797.2	120.4	%	0.75				0.63%
Ag 328.068†	-5903.4	2.6068	ug/L	0.43458	2.6068	ppb	0.43458	16.67%
Al 396.153Radial†	31183.0	28384	ug/L	96.9	28384	ppb	96.9	0.34%
As 188.979†	-3.3	30.449	ug/L	1.3459	30.449	ppb	1.3459	4.42%
B 249.677†	1169.1	7.6401	ug/L	0.73090	7.6401	ppb	0.73090	9.57%
Ba 233.527†	90655.4	460.92	ug/L	3.753	460.92	ppb	3.753	0.81%
Be 313.107†	-3839.8	4.3707	ug/L	0.03190	4.3707	ppb	0.03190	0.73%
Ca 317.933Radial†	2538.1	6322.1	ug/L	54.76	6322.1	ppb	54.76	0.87%
Cd 226.502†	1211.0	-0.2607	ug/L	0.03781	-0.2607	ppb	0.03781	14.50%
Co 228.616†	1977.5	18.578	ug/L	0.0893	18.578	ppb	0.0893	0.48%
Cr 267.716†	17154.1	147.86	ug/L	1.232	147.86	ppb	1.232	0.83%
Cu 324.752†	47901.2	122.77	ug/L	1.058	122.77	ppb	1.058	0.86%
Fe 238.204 Radial†	2260.0	79285	ug/L	720.7	79285	ppb	720.7	0.91%
K 766.490 Radial†	10577.1	4616.4	ug/L	16.95	4616.4	ppb	16.95	0.37%

Mg 279.077 IEC†	60.3	4704.4	ug/L	130.48	4704.4	ppb	130.48	2.77%
Mn 257.610†	3419477.9	2712.6	ug/L	3.07	2712.6	ppb	3.07	0.11%
Mo 202.031†	169.8	12.237	ug/L	0.5293	12.237	ppb	0.5293	4.33%
Na 589.592 Radial†	262.6	709.92	ug/L	4.793	709.92	ppb	4.793	0.68%
Ni 231.604†	4663.2	74.725	ug/L	0.6562	74.725	ppb	0.6562	0.88%
P 214.914†	2339.1	753.43	ug/L	4.800	753.43	ppb	4.800	0.64%
Pb 220.353†	866.2	62.939	ug/L	0.2108	62.939	ppb	0.2108	0.33%
S 181.975 Axial†	352.3	292.65	ug/L	10.331	292.65	ppb	10.331	3.53%
Sb 206.836†	49.2	0.2426	ug/L	2.49918	0.2426	ppb	2.49918	>999.9%
Se 196.026†	-765.1	31.291	ug/L	0.6451	31.291	ppb	0.6451	2.06%
Si 251.611†	521801.1	10766	ug/L	21.1	10766	ppb	21.1	0.20%
Sn 189.927†	68.4	8.7376	ug/L	0.54555	8.7376	ppb	0.54555	6.24%
Sr 421.552†	4116.6	63.364	ug/L	0.3549	63.364	ppb	0.3549	0.56%
Ti 334.940†	1828950.8	2394.7	ug/L	1.85	2394.7	ppb	1.85	0.08%
Tl 190.801†	-193.7	-5.4709	ug/L	0.79643	-5.4709	ppb	0.79643	14.56%
U 409.014†	-8559.2	-222.39	ug/L	2.043	-222.39	ppb	2.043	0.92%
V 292.402†	17765.3	87.008	ug/L	0.7779	87.008	ppb	0.7779	0.89%
Zn 213.857†	80417.1	439.74	ug/L	3.208	439.74	ppb	3.208	0.73%
SiO2†	519721.6	22961	ug/L	256.5	22961	ppb	256.5	1.12%

Sequence No.: 14
Sample ID: 1201872900|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 47
Date Collected: 7/8/2009 15:22:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872900|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5540.9	5540.9	99.6	%			15:23:57
1	Y RADIAL	5700.5	5700.5	118.4	%			15:23:57
1	Al 396.153Radial†	75109.5	75525.8	68726	ug/L	68726	ppb	15:23:57
1	Ca 317.933Radial†	4990.2	4994.8	12441	ug/L	12441	ppb	15:23:57
1	Fe 238.204 Radial†	2647.2	2658.3	93271	ug/L	93271	ppb	15:24:17
1	K 766.490 Radial†	29823.0	28478.6	12389	ug/L	12389	ppb	15:23:57
1	Mg 279.077 IEC†	169.7	170.3	13416	ug/L	13416	ppb	15:24:17
1	Na 589.592 Radial†	1922.2	2100.9	5680.6	ug/L	5680.6	ppb	15:23:57
1	Sr 421.552†	37980.7	38139.1	587.48	ug/L	587.48	ppb	15:23:57
1	Sc 361.383	1084770.4	1084770.4	102.25	%			15:25:18
1	Y 371.029	1010939.2	1010939.2	118.49	%			15:25:18
1	Ag 328.068†	120873.4	117573.1	497.29	ug/L	497.29	ppb	15:25:18
1	As 188.979†	2048.6	2040.4	518.28	ug/L	518.28	ppb	15:25:23
1	B 249.677†	32326.7	31996.4	485.04	ug/L	485.04	ppb	15:25:18
1	Ba 233.527†	210968.4	206298.4	1047.7	ug/L	1047.7	ppb	15:25:18
1	Be 313.107†	1605277.2	1577243.6	498.25	ug/L	498.25	ppb	15:25:18
1	Cd 226.502†	66436.9	65251.6	477.37	ug/L	477.37	ppb	15:25:23
1	Co 228.616†	40369.9	39571.3	485.86	ug/L	485.86	ppb	15:25:23
1	Cr 267.716†	70360.4	68839.6	588.93	ug/L	588.93	ppb	15:25:18
1	Cu 324.752†	271286.3	255121.1	634.84	ug/L	634.84	ppb	15:25:18
1	Mn 257.610†	4130821.2	4039029.1	3203.9	ug/L	3203.9	ppb	15:25:18
1	Mo 202.031†	11860.9	11567.9	469.43	ug/L	469.43	ppb	15:25:23
1	Ni 231.604†	34300.5	33396.9	534.96	ug/L	534.96	ppb	15:25:23
1	P 214.914†	4649.8	4210.4	1341.7	ug/L	1341.7	ppb	15:25:23
1	Pb 220.353†	7337.0	7204.5	545.38	ug/L	545.38	ppb	15:25:23
1	S 181.975 Axial†	6376.4	6168.1	5207.6	ug/L	5207.6	ppb	15:25:23
1	Sb 206.836†	2566.3	2464.4	478.84	ug/L	478.84	ppb	15:25:23
1	Se 196.026†	620.6	628.6	537.25	ug/L	537.25	ppb	15:25:23
1	Si 251.611†	897298.9	876979.4	18082	ug/L	18082	ppb	15:25:18
1	Sn 189.927†	4752.0	4641.9	484.69	ug/L	484.69	ppb	15:25:23
1	Ti 334.940†	2630214.7	2573403.8	3369.2	ug/L	3369.2	ppb	15:25:18
1	Tl 190.801†	2584.8	2589.3	468.45	ug/L	468.45	ppb	15:25:23
1	U 409.014†	7690.6	11356.0	269.17	ug/L	269.17	ppb	15:25:18
1	V 292.402†	104391.5	103745.5	578.41	ug/L	578.41	ppb	15:25:18
1	Zn 213.857†	187789.8	182532.0	1004.5	ug/L	1004.5	ppb	15:25:18
1	SiO2†	898095.0	877715.7	38753	ug/L	38753	ppb	15:25:58
2	Sc Radial	5687.9	5687.9	102	%			15:24:22
2	Y RADIAL	5805.7	5805.7	120.6	%			15:24:22
2	Al 396.153Radial†	76762.1	75193.3	68424	ug/L	68424	ppb	15:24:22
2	Ca 317.933Radial†	5098.6	4971.4	12383	ug/L	12383	ppb	15:24:22
2	Fe 238.204 Radial†	2664.2	2606.2	91446	ug/L	91446	ppb	15:24:42
2	K 766.490 Radial†	30393.1	28262.3	12294	ug/L	12294	ppb	15:24:22
2	Mg 279.077 IEC†	166.1	162.3	12788	ug/L	12788	ppb	15:24:42
2	Na 589.592 Radial†	1963.3	2091.3	5654.6	ug/L	5654.6	ppb	15:24:22
2	Sr 421.552†	38670.4	37828.2	582.69	ug/L	582.69	ppb	15:24:22
2	Sc 361.383	1081688.1	1081688.1	101.96	%			15:25:32
2	Y 371.029	1007673.6	1007673.6	118.10	%			15:25:32
2	Ag 328.068†	120765.4	117804.0	497.63	ug/L	497.63	ppb	15:25:32
2	As 188.979†	2021.4	2019.4	513.00	ug/L	513.00	ppb	15:25:37
2	B 249.677†	32283.7	32044.2	486.02	ug/L	486.02	ppb	15:25:32
2	Ba 233.527†	210351.7	206281.5	1047.5	ug/L	1047.5	ppb	15:25:32
2	Be 313.107†	1600902.1	1577426.0	498.31	ug/L	498.31	ppb	15:25:32
2	Cd 226.502†	66520.6	65518.8	479.58	ug/L	479.58	ppb	15:25:37
2	Co 228.616†	40455.0	39767.3	488.33	ug/L	488.33	ppb	15:25:37
2	Cr 267.716†	70278.3	68955.2	589.88	ug/L	589.88	ppb	15:25:32
2	Cu 324.752†	270712.4	255314.1	635.21	ug/L	635.21	ppb	15:25:32
2	Mn 257.610†	4118901.9	4038850.5	3203.5	ug/L	3203.5	ppb	15:25:32
2	Mo 202.031†	11888.5	11628.0	471.71	ug/L	471.71	ppb	15:25:37
2	Ni 231.604†	34326.8	33518.3	536.91	ug/L	536.91	ppb	15:25:37

2	P 214.914†	4624.2	4198.3	1338.7 ug/L	1338.7 ppb	15:25:37
2	Pb 220.353†	7394.3	7281.1	551.24 ug/L	551.24 ppb	15:25:37
2	S 181.975 Axial†	6331.1	6141.5	5185.1 ug/L	5185.1 ppb	15:25:37
2	Sb 206.836†	2533.1	2439.0	473.88 ug/L	473.88 ppb	15:25:37
2	Se 196.026†	627.4	636.9	533.54 ug/L	533.54 ppb	15:25:37
2	Si 251.611†	895695.8	877907.6	18102 ug/L	18102 ppb	15:25:32
2	Sn 189.927†	4744.5	4647.7	485.26 ug/L	485.26 ppb	15:25:37
2	Ti 334.940†	2624352.1	2574983.7	3371.3 ug/L	3371.3 ppb	15:25:32
2	Tl 190.801†	2589.3	2600.9	470.40 ug/L	470.40 ppb	15:25:37
2	U 409.014†	7420.5	11112.5	263.35 ug/L	263.35 ppb	15:25:32
2	V 292.402†	104292.9	103939.7	579.77 ug/L	579.77 ppb	15:25:32
2	Zn 213.857†	187523.5	182794.2	1006.2 ug/L	1006.2 ppb	15:25:32
2	SiO2†	882975.7	865389.9	38208 ug/L	38208 ppb	15:26:04
3	Sc Radial	5711.4	5711.4	103 %		15:24:47
3	Y RADIAL	5831.0	5831.0	121.1 %		15:24:47
3	Al 396.153Radial†	76802.3	74923.5	68178 ug/L	68178 ppb	15:24:47
3	Ca 317.933Radial†	5110.5	4962.4	12361 ug/L	12361 ppb	15:24:47
3	Fe 238.204 Radial†	2633.5	2565.6	90020 ug/L	90020 ppb	15:25:07
3	K 766.490 Radial†	30284.5	28034.2	12193 ug/L	12193 ppb	15:24:47
3	Mg 279.077 IEC†	166.0	161.6	12730 ug/L	12730 ppb	15:25:07
3	Na 589.592 Radial†	1979.0	2098.6	5674.4 ug/L	5674.4 ppb	15:24:47
3	Sr 421.552†	38726.1	37726.8	581.13 ug/L	581.13 ppb	15:24:47
3	Sc 361.383	1080555.3	1080555.3	101.85 %		15:25:47
3	Y 371.029	1008101.8	1008101.8	118.15 %		15:25:47
3	Ag 328.068†	120551.5	117718.2	496.83 ug/L	496.83 ppb	15:25:47
3	As 188.979†	1985.7	1986.5	504.99 ug/L	504.99 ppb	15:25:52
3	B 249.677†	32093.2	31890.5	483.83 ug/L	483.83 ppb	15:25:47
3	Ba 233.527†	210478.4	206622.1	1049.2 ug/L	1049.2 ppb	15:25:47
3	Be 313.107†	1601180.5	1579345.5	498.91 ug/L	498.91 ppb	15:25:47
3	Cd 226.502†	65758.4	64838.8	474.66 ug/L	474.66 ppb	15:25:52
3	Co 228.616†	39908.4	39272.2	482.17 ug/L	482.17 ppb	15:25:52
3	Cr 267.716†	70309.3	69057.8	590.73 ug/L	590.73 ppb	15:25:47
3	Cu 324.752†	269950.6	254844.6	633.97 ug/L	633.97 ppb	15:25:47
3	Mn 257.610†	4116256.3	4040488.2	3204.6 ug/L	3204.6 ppb	15:25:47
3	Mo 202.031†	11765.1	11519.1	467.26 ug/L	467.26 ppb	15:25:52
3	Ni 231.604†	33861.2	33096.5	530.15 ug/L	530.15 ppb	15:25:52
3	P 214.914†	4615.3	4194.3	1338.6 ug/L	1338.6 ppb	15:25:52
3	Pb 220.353†	7331.4	7227.0	547.26 ug/L	547.26 ppb	15:25:52
3	S 181.975 Axial†	6216.2	6035.1	5095.1 ug/L	5095.1 ppb	15:25:52
3	Sb 206.836†	2489.4	2398.6	465.83 ug/L	465.83 ppb	15:25:52
3	Se 196.026†	669.8	679.3	542.28 ug/L	542.28 ppb	15:25:52
3	Si 251.611†	893579.0	876750.3	18078 ug/L	18078 ppb	15:25:47
3	Sn 189.927†	4738.8	4647.0	485.17 ug/L	485.17 ppb	15:25:52
3	Ti 334.940†	2620847.7	2574241.5	3370.3 ug/L	3370.3 ppb	15:25:47
3	Tl 190.801†	2535.7	2550.9	462.00 ug/L	462.00 ppb	15:25:52
3	U 409.014†	7407.0	11106.9	263.38 ug/L	263.38 ppb	15:25:47
3	V 292.402†	104142.5	103899.3	579.68 ug/L	579.68 ppb	15:25:47
3	Zn 213.857†	187212.0	182681.2	1005.7 ug/L	1005.7 ppb	15:25:47
3	SiO2†	888355.3	871579.4	38482 ug/L	38482 ppb	15:26:10

Mean Data: 1201872900|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1082337.9	102.02	%	0.206				0.20%
Sc Radial	5646.7	101	%	1.7				1.64%
Y 371.029	1008904.8	118.25	%	0.208				0.18%
Y RADIAL	5779.1	120.0	%	1.44				1.20%
Ag 328.068†	117698.4	497.25	ug/L	0.401	497.25	ppb	0.401	0.08%
Al 396.153Radial†	75214.2	68443	ug/L	274.6	68443	ppb	274.6	0.40%
As 188.979†	2015.4	512.09	ug/L	6.692	512.09	ppb	6.692	1.31%
B 249.677†	31977.0	484.96	ug/L	1.098	484.96	ppb	1.098	0.23%
Ba 233.527†	206400.7	1048.1	ug/L	0.94	1048.1	ppb	0.94	0.09%
Be 313.107†	1578005.0	498.49	ug/L	0.362	498.49	ppb	0.362	0.07%
Ca 317.933Radial†	4976.2	12395	ug/L	41.7	12395	ppb	41.7	0.34%
Cd 226.502†	65203.0	477.21	ug/L	2.465	477.21	ppb	2.465	0.52%
Co 228.616†	39536.9	485.45	ug/L	3.098	485.45	ppb	3.098	0.64%
Cr 267.716†	68950.9	589.85	ug/L	0.900	589.85	ppb	0.900	0.15%
Cu 324.752†	255093.2	634.68	ug/L	0.637	634.68	ppb	0.637	0.10%
Fe 238.204 Radial†	2610.0	91579	ug/L	1629.7	91579	ppb	1629.7	1.78%
K 766.490 Radial†	28258.4	12292	ug/L	97.7	12292	ppb	97.7	0.79%

Mg 279.077 IEC†	164.7	12978	ug/L	380.1	12978	ppb	380.1	2.93%
Mn 257.610†	4039456.0	3204.0	ug/L	0.57	3204.0	ppb	0.57	0.02%
Mo 202.031†	11571.7	469.47	ug/L	2.229	469.47	ppb	2.229	0.47%
Na 589.592 Radial†	2096.9	5669.9	ug/L	13.59	5669.9	ppb	13.59	0.24%
Ni 231.604†	33337.2	534.01	ug/L	3.479	534.01	ppb	3.479	0.65%
P 214.914†	4201.0	1339.7	ug/L	1.77	1339.7	ppb	1.77	0.13%
Pb 220.353†	7237.6	547.96	ug/L	2.993	547.96	ppb	2.993	0.55%
S 181.975 Axial†	6114.9	5162.6	ug/L	59.50	5162.6	ppb	59.50	1.15%
Sb 206.836†	2434.0	472.85	ug/L	6.567	472.85	ppb	6.567	1.39%
Se 196.026†	648.3	537.69	ug/L	4.386	537.69	ppb	4.386	0.82%
Si 251.611†	877212.4	18087	ug/L	12.6	18087	ppb	12.6	0.07%
Sn 189.927†	4645.6	485.04	ug/L	0.308	485.04	ppb	0.308	0.06%
Sr 421.552†	37898.0	583.76	ug/L	3.310	583.76	ppb	3.310	0.57%
Ti 334.940†	2574209.7	3370.3	ug/L	1.03	3370.3	ppb	1.03	0.03%
Tl 190.801†	2580.4	466.95	ug/L	4.395	466.95	ppb	4.395	0.94%
U 409.014†	11191.8	265.30	ug/L	3.349	265.30	ppb	3.349	1.26%
V 292.402†	103861.5	579.29	ug/L	0.758	579.29	ppb	0.758	0.13%
Zn 213.857†	182669.1	1005.5	ug/L	0.87	1005.5	ppb	0.87	0.09%
SiO2†	871561.7	38481	ug/L	272.3	38481	ppb	272.3	0.71%

Sequence No.: 15
Sample ID: 1201872902|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 48
Date Collected: 7/8/2009 15:28:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872902|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5583.4	5583.4	100	%			15:30:14
1	Y RADIAL	5790.9	5790.9	120.3	%			15:30:14
1	Al 396.153Radial†	73241.5	73090.6	66510	ug/L	66510	ppb	15:30:14
1	Ca 317.933Radial†	4839.3	4806.3	11972	ug/L	11972	ppb	15:30:14
1	Fe 238.204 Radial†	2632.9	2623.8	92062	ug/L	92062	ppb	15:30:34
1	K 766.490 Radial†	28960.9	27391.7	11917	ug/L	11917	ppb	15:30:14
1	Mg 279.077 IEC†	158.0	157.3	12386	ug/L	12386	ppb	15:30:34
1	Na 589.592 Radial†	1903.7	2067.8	5591.1	ug/L	5591.1	ppb	15:30:14
1	Sr 421.552†	37761.5	37630.7	579.65	ug/L	579.65	ppb	15:30:14
1	Sc 361.383	1087220.9	1087220.9	102.48	%			15:31:35
1	Y 371.029	1026354.9	1026354.9	120.29	%			15:31:35
1	Ag 328.068†	120887.5	117320.4	495.91	ug/L	495.91	ppb	15:31:35
1	As 188.979†	2028.0	2015.8	511.20	ug/L	511.20	ppb	15:31:40
1	B 249.677†	32547.7	32140.7	487.46	ug/L	487.46	ppb	15:31:35
1	Ba 233.527†	205741.7	200733.3	1019.5	ug/L	1019.5	ppb	15:31:35
1	Be 313.107†	1616551.9	1584706.6	500.19	ug/L	500.19	ppb	15:31:35
1	Cd 226.502†	66034.1	64712.0	473.47	ug/L	473.47	ppb	15:31:40
1	Co 228.616†	40082.1	39201.5	481.61	ug/L	481.61	ppb	15:31:40
1	Cr 267.716†	68906.6	67266.0	575.51	ug/L	575.51	ppb	15:31:35
1	Cu 324.752†	280368.1	263384.8	655.16	ug/L	655.16	ppb	15:31:35
1	Mn 257.610†	4088876.6	3988995.2	3164.2	ug/L	3164.2	ppb	15:31:35
1	Mo 202.031†	11861.8	11542.7	468.34	ug/L	468.34	ppb	15:31:40
1	Ni 231.604†	33673.3	32709.3	523.94	ug/L	523.94	ppb	15:31:40
1	P 214.914†	4370.8	3927.9	1238.7	ug/L	1238.7	ppb	15:31:40
1	Pb 220.353†	7360.9	7211.7	545.58	ug/L	545.58	ppb	15:31:40
1	S 181.975 Axial†	6292.1	6071.9	5126.5	ug/L	5126.5	ppb	15:31:40
1	Sb 206.836†	2524.9	2418.3	470.46	ug/L	470.46	ppb	15:31:40
1	Se 196.026†	630.9	637.3	535.70	ug/L	535.70	ppb	15:31:40
1	Si 251.611†	878164.7	856330.8	17657	ug/L	17657	ppb	15:31:35
1	Sn 189.927†	4661.2	4542.8	474.35	ug/L	474.35	ppb	15:31:40
1	Ti 334.940†	2506711.6	2447095.0	3203.9	ug/L	3203.9	ppb	15:31:35
1	Tl 190.801†	2571.3	2570.4	464.24	ug/L	464.24	ppb	15:31:40
1	U 409.014†	7034.4	10698.8	253.04	ug/L	253.04	ppb	15:31:35
1	V 292.402†	104047.5	103179.7	575.50	ug/L	575.50	ppb	15:31:35
1	Zn 213.857†	173618.2	168289.9	925.14	ug/L	925.14	ppb	15:31:35
1	SiO2†	858838.0	837430.0	36974	ug/L	36974	ppb	15:32:15
2	Sc Radial	5705.4	5705.4	103	%			15:30:39
2	Y RADIAL	5904.3	5904.3	122.6	%			15:30:39
2	Al 396.153Radial†	74259.7	72522.4	65992	ug/L	65992	ppb	15:30:39
2	Ca 317.933Radial†	4933.8	4795.3	11944	ug/L	11944	ppb	15:30:39
2	Fe 238.204 Radial†	2622.5	2557.6	89740	ug/L	89740	ppb	15:30:59
2	K 766.490 Radial†	29439.8	27241.4	11850	ug/L	11850	ppb	15:30:39
2	Mg 279.077 IEC†	158.7	154.6	12178	ug/L	12178	ppb	15:30:59
2	Na 589.592 Radial†	1925.2	2048.2	5538.0	ug/L	5538.0	ppb	15:30:39
2	Sr 421.552†	38291.3	37342.5	575.21	ug/L	575.21	ppb	15:30:39
2	Sc 361.383	1075949.9	1075949.9	101.42	%			15:31:50
2	Y 371.029	1015444.3	1015444.3	119.01	%			15:31:50
2	Ag 328.068†	119813.9	117497.5	495.87	ug/L	495.87	ppb	15:31:50
2	As 188.979†	2018.9	2027.5	513.48	ug/L	513.48	ppb	15:31:55
2	B 249.677†	32256.5	32186.3	488.46	ug/L	488.46	ppb	15:31:50
2	Ba 233.527†	203497.9	200623.9	1018.9	ug/L	1018.9	ppb	15:31:50
2	Be 313.107†	1599397.7	1584316.4	500.07	ug/L	500.07	ppb	15:31:50
2	Cd 226.502†	66092.8	65444.9	479.23	ug/L	479.23	ppb	15:31:55
2	Co 228.616†	40216.4	39743.6	488.41	ug/L	488.41	ppb	15:31:55
2	Cr 267.716†	68245.8	67318.7	575.91	ug/L	575.91	ppb	15:31:50
2	Cu 324.752†	277666.4	263586.8	655.53	ug/L	655.53	ppb	15:31:50
2	Mn 257.610†	4049189.8	3991659.0	3166.0	ug/L	3166.0	ppb	15:31:50
2	Mo 202.031†	11875.4	11677.3	473.57	ug/L	473.57	ppb	15:31:55
2	Ni 231.604†	33683.6	33063.6	529.62	ug/L	529.62	ppb	15:31:55

2	P 214.914†	4334.9	3937.3	1243.8	ug/L	1243.8 ppb	15:31:55
2	Pb 220.353†	7372.0	7297.8	552.17	ug/L	552.17 ppb	15:31:55
2	S 181.975 Axial†	6319.9	6163.6	5204.2	ug/L	5204.2 ppb	15:31:55
2	Sb 206.836†	2546.0	2464.9	479.88	ug/L	479.88 ppb	15:31:55
2	Se 196.026†	656.0	668.5	537.68	ug/L	537.68 ppb	15:31:55
2	Si 251.611†	869389.5	856654.7	17663	ug/L	17663 ppb	15:31:50
2	Sn 189.927†	4723.0	4651.4	485.60	ug/L	485.60 ppb	15:31:55
2	Ti 334.940†	2480432.5	2446806.4	3203.5	ug/L	3203.5 ppb	15:31:50
2	Tl 190.801†	2580.4	2605.7	470.17	ug/L	470.17 ppb	15:31:55
2	U 409.014†	6844.4	10583.3	250.46	ug/L	250.46 ppb	15:31:50
2	V 292.402†	102943.9	103155.1	575.73	ug/L	575.73 ppb	15:31:50
2	Zn 213.857†	171988.0	168457.1	926.30	ug/L	926.30 ppb	15:31:50
2	SiO2†	878228.5	865327.7	38206	ug/L	38206 ppb	15:32:21
3	Sc Radial	5608.7	5608.7	101	%		15:31:04
3	Y RADIAL	5759.7	5759.7	119.6	%		15:31:04
3	Al 396.153Radial†	72520.6	72045.6	65559	ug/L	65559 ppb	15:31:04
3	Ca 317.933Radial†	4784.4	4730.0	11782	ug/L	11782 ppb	15:31:04
3	Fe 238.204 Radial†	2628.5	2607.6	91494	ug/L	91494 ppb	15:31:24
3	K 766.490 Radial†	28801.7	27103.3	11791	ug/L	11791 ppb	15:31:04
3	Mg 279.077 IEC†	157.3	155.9	12280	ug/L	12280 ppb	15:31:24
3	Na 589.592 Radial†	1860.4	2016.2	5451.7	ug/L	5451.7 ppb	15:31:04
3	Sr 421.552†	37355.1	37057.4	570.82	ug/L	570.82 ppb	15:31:04
3	Sc 361.383	1082947.7	1082947.7	102.08	%		15:32:04
3	Y 371.029	1021512.4	1021512.4	119.73	%		15:32:04
3	Ag 328.068†	120820.1	117719.8	497.31	ug/L	497.31 ppb	15:32:04
3	As 188.979†	2047.1	2042.3	517.32	ug/L	517.32 ppb	15:32:09
3	B 249.677†	32599.7	32317.0	490.27	ug/L	490.27 ppb	15:32:04
3	Ba 233.527†	204763.0	200566.6	1018.6	ug/L	1018.6 ppb	15:32:04
3	Be 313.107†	1608274.7	1582822.2	499.61	ug/L	499.61 ppb	15:32:04
3	Cd 226.502†	66234.2	65162.4	476.91	ug/L	476.91 ppb	15:32:09
3	Co 228.616†	40266.2	39536.2	485.79	ug/L	485.79 ppb	15:32:09
3	Cr 267.716†	68579.1	67210.4	575.02	ug/L	575.02 ppb	15:32:04
3	Cu 324.752†	280050.6	264153.3	657.03	ug/L	657.03 ppb	15:32:04
3	Mn 257.610†	4073637.2	3989809.4	3164.7	ug/L	3164.7 ppb	15:32:04
3	Mo 202.031†	11846.9	11573.8	469.54	ug/L	469.54 ppb	15:32:09
3	Ni 231.604†	33781.7	32945.1	527.72	ug/L	527.72 ppb	15:32:09
3	P 214.914†	4421.6	3994.5	1262.2	ug/L	1262.2 ppb	15:32:09
3	Pb 220.353†	7362.3	7241.4	547.68	ug/L	547.68 ppb	15:32:09
3	S 181.975 Axial†	6345.7	6148.6	5191.6	ug/L	5191.6 ppb	15:32:09
3	Sb 206.836†	2520.8	2424.0	471.81	ug/L	471.81 ppb	15:32:09
3	Se 196.026†	625.5	634.4	532.72	ug/L	532.72 ppb	15:32:09
3	Si 251.611†	876856.4	858430.2	17700	ug/L	17700 ppb	15:32:04
3	Sn 189.927†	4748.4	4646.2	485.09	ug/L	485.09 ppb	15:32:09
3	Ti 334.940†	2498337.1	2448542.5	3205.7	ug/L	3205.7 ppb	15:32:04
3	Tl 190.801†	2580.8	2589.6	467.47	ug/L	467.47 ppb	15:32:09
3	U 409.014†	7066.8	10757.6	254.57	ug/L	254.57 ppb	15:32:04
3	V 292.402†	103651.8	103192.7	575.66	ug/L	575.66 ppb	15:32:04
3	Zn 213.857†	173141.7	168491.6	926.31	ug/L	926.31 ppb	15:32:04
3	SiO2†	871980.1	853611.1	37688	ug/L	37688 ppb	15:32:27

Mean Data: 1201872902|881859|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1082039.5	101.99	%	0.536				0.53%
Sc Radial	5632.5	101	%	1.2				1.14%
Y 371.029	1021103.8	119.68	%	0.641				0.54%
Y RADIAL	5818.3	120.8	%	1.58				1.31%
Ag 328.068†	117512.5	496.36	ug/L	0.821	496.36	ppb	0.821	0.17%
Al 396.153Radial†	72552.9	66020	ug/L	476.3	66020	ppb	476.3	0.72%
As 188.979†	2028.5	514.00	ug/L	3.095	514.00	ppb	3.095	0.60%
B 249.677†	32214.7	488.73	ug/L	1.425	488.73	ppb	1.425	0.29%
Ba 233.527†	200641.3	1019.0	ug/L	0.44	1019.0	ppb	0.44	0.04%
Be 313.107†	1583948.4	499.95	ug/L	0.307	499.95	ppb	0.307	0.06%
Ca 317.933Radial†	4777.2	11899	ug/L	102.7	11899	ppb	102.7	0.86%
Cd 226.502†	65106.4	476.53	ug/L	2.898	476.53	ppb	2.898	0.61%
Co 228.616†	39493.8	485.27	ug/L	3.430	485.27	ppb	3.430	0.71%
Cr 267.716†	67265.0	575.48	ug/L	0.446	575.48	ppb	0.446	0.08%
Cu 324.752†	263708.3	655.90	ug/L	0.988	655.90	ppb	0.988	0.15%
Fe 238.204 Radial†	2596.3	91098	ug/L	1210.4	91098	ppb	1210.4	1.33%
K 766.490 Radial†	27245.5	11853	ug/L	62.8	11853	ppb	62.8	0.53%

Mg 279.077 IEC†	155.9	12282	ug/L	103.9	12282	ppb	103.9	0.85%
Mn 257.610†	3990154.5	3165.0	ug/L	0.92	3165.0	ppb	0.92	0.03%
Mo 202.031†	11597.9	470.48	ug/L	2.738	470.48	ppb	2.738	0.58%
Na 589.592 Radial†	2044.1	5526.9	ug/L	70.34	5526.9	ppb	70.34	1.27%
Ni 231.604†	32906.0	527.09	ug/L	2.889	527.09	ppb	2.889	0.55%
P 214.914†	3953.2	1248.2	ug/L	12.37	1248.2	ppb	12.37	0.99%
Pb 220.353†	7250.3	548.47	ug/L	3.367	548.47	ppb	3.367	0.61%
S 181.975 Axial†	6128.0	5174.1	ug/L	41.70	5174.1	ppb	41.70	0.81%
Sb 206.836†	2435.7	474.05	ug/L	5.093	474.05	ppb	5.093	1.07%
Se 196.026†	646.7	535.37	ug/L	2.497	535.37	ppb	2.497	0.47%
Si 251.611†	857138.6	17673	ug/L	23.3	17673	ppb	23.3	0.13%
Sn 189.927†	4613.5	481.68	ug/L	6.355	481.68	ppb	6.355	1.32%
Sr 421.552†	37343.5	575.23	ug/L	4.415	575.23	ppb	4.415	0.77%
Ti 334.940†	2447481.3	3204.4	ug/L	1.21	3204.4	ppb	1.21	0.04%
Tl 190.801†	2588.5	467.29	ug/L	2.968	467.29	ppb	2.968	0.64%
U 409.014†	10679.9	252.69	ug/L	2.078	252.69	ppb	2.078	0.82%
V 292.402†	103175.9	575.63	ug/L	0.121	575.63	ppb	0.121	0.02%
Zn 213.857†	168412.8	925.92	ug/L	0.669	925.92	ppb	0.669	0.07%
SiO2†	852122.9	37623	ug/L	618.9	37623	ppb	618.9	1.64%

Sequence No.: 16
Sample ID: 1201872901|881859|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 49
Date Collected: 7/8/2009 15:34:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872901|881859|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5615.1	5615.1	101	%			15:36:31
1	Y RADIAL	5016.5	5016.5	104.2	%			15:36:31
1	Al 396.153Radial†	8390.5	8407.5	7652.7	ug/L	7652.7	ppb	15:36:31
1	Ca 317.933Radial†	727.4	703.9	1753.4	ug/L	1753.4	ppb	15:36:51
1	Fe 238.204 Radial†	892.5	884.2	31020	ug/L	31020	ppb	15:36:51
1	K 766.490 Radial†	4296.5	2785.0	1214.6	ug/L	1214.6	ppb	15:36:31
1	Mg 279.077 IEC†	16.1	15.8	1221.0	ug/L	1221.0	ppb	15:36:51
1	Na 589.592 Radial†	-122.4	49.1	132.68	ug/L	132.68	ppb	15:36:51
1	Sr 421.552†	1214.0	1197.6	18.435	ug/L	18.435	ppb	15:36:31
1	Sc 361.383	1087781.7	1087781.7	102.54	%			15:37:48
1	Y 371.029	899296.3	899296.3	105.40	%			15:37:48
1	Ag 328.068†	-1653.4	-2251.1	1.1704	ug/L	1.1704	ppb	15:37:54
1	As 188.979†	-38.6	-0.8	9.4668	ug/L	9.4668	ppb	15:38:14
1	B 249.677†	201.5	578.1	4.8596	ug/L	4.8596	ppb	15:37:54
1	Ba 233.527†	33350.7	32501.8	165.28	ug/L	165.28	ppb	15:37:54
1	Be 313.107†	-8193.4	-674.6	1.0376	ug/L	1.0376	ppb	15:37:54
1	Cd 226.502†	188.3	461.2	-0.2043	ug/L	-0.2043	ppb	15:38:14
1	Co 228.616†	1027.2	1092.2	12.089	ug/L	12.089	ppb	15:38:14
1	Cr 267.716†	3194.3	3143.9	27.429	ug/L	27.429	ppb	15:38:14
1	Cu 324.752†	18014.9	7378.1	19.997	ug/L	19.997	ppb	15:37:54
1	Mn 257.610†	1822004.0	1776121.7	1407.6	ug/L	1407.6	ppb	15:37:48
1	Mo 202.031†	76.2	42.5	3.8310	ug/L	3.8310	ppb	15:38:14
1	Ni 231.604†	1194.1	1016.3	16.280	ug/L	16.280	ppb	15:38:14
1	P 214.914†	1179.0	812.9	261.91	ug/L	261.91	ppb	15:38:14
1	Pb 220.353†	203.7	227.7	15.636	ug/L	15.636	ppb	15:38:14
1	S 181.975 Axial†	174.1	101.9	84.763	ug/L	84.763	ppb	15:38:14
1	Sb 206.836†	47.2	0.6	-1.6786	ug/L	-1.6786	ppb	15:38:14
1	Se 196.026†	-325.2	-295.5	13.288	ug/L	13.288	ppb	15:38:14
1	Si 251.611†	116606.7	113163.1	2334.7	ug/L	2334.7	ppb	15:37:54
1	Sn 189.927†	-0.7	-6.2	-0.0297	ug/L	-0.0297	ppb	15:38:14
1	Ti 334.940†	419231.8	409974.1	536.80	ug/L	536.80	ppb	15:37:48
1	Tl 190.801†	-117.5	-53.2	1.7511	ug/L	1.7511	ppb	15:38:14
1	U 409.014†	-5557.5	-1585.3	-43.198	ug/L	-43.198	ppb	15:37:54
1	V 292.402†	2930.4	4510.7	20.717	ug/L	20.717	ppb	15:38:14
1	Zn 213.857†	19726.4	18116.2	97.655	ug/L	97.655	ppb	15:37:54
1	SiO2†	115100.0	111651.4	4932.5	ug/L	4932.5	ppb	15:39:21
2	Sc Radial	5460.2	5460.2	98.1	%			15:36:56
2	Y RADIAL	4876.4	4876.4	101.3	%			15:36:56
2	Al 396.153Radial†	8206.7	8456.2	7697.1	ug/L	7697.1	ppb	15:36:56
2	Ca 317.933Radial†	721.3	718.2	1788.9	ug/L	1788.9	ppb	15:37:16
2	Fe 238.204 Radial†	874.9	891.3	31269	ug/L	31269	ppb	15:37:16
2	K 766.490 Radial†	4218.1	2825.9	1232.5	ug/L	1232.5	ppb	15:36:56
2	Mg 279.077 IEC†	17.9	18.1	1407.7	ug/L	1407.7	ppb	15:37:16
2	Na 589.592 Radial†	-110.2	58.1	156.99	ug/L	156.99	ppb	15:37:16
2	Sr 421.552†	1169.9	1186.9	18.269	ug/L	18.269	ppb	15:36:56
2	Sc 361.383	1071002.7	1071002.7	100.95	%			15:38:19
2	Y 371.029	884378.6	884378.6	103.65	%			15:38:19
2	Ag 328.068†	-1598.0	-2221.4	1.3699	ug/L	1.3699	ppb	15:38:25
2	As 188.979†	-36.2	1.0	9.9392	ug/L	9.9392	ppb	15:38:45
2	B 249.677†	192.1	571.8	4.7289	ug/L	4.7289	ppb	15:38:25
2	Ba 233.527†	33619.8	33277.8	169.22	ug/L	169.22	ppb	15:38:25
2	Be 313.107†	-8293.6	-899.0	0.9679	ug/L	0.9679	ppb	15:38:25
2	Cd 226.502†	172.6	448.6	-0.3280	ug/L	-0.3280	ppb	15:38:45
2	Co 228.616†	1020.8	1101.6	12.204	ug/L	12.204	ppb	15:38:45
2	Cr 267.716†	3202.4	3200.7	27.920	ug/L	27.920	ppb	15:38:45
2	Cu 324.752†	18248.2	7884.5	21.261	ug/L	21.261	ppb	15:38:25
2	Mn 257.610†	1798592.1	1780769.9	1411.4	ug/L	1411.4	ppb	15:38:19
2	Mo 202.031†	72.3	39.9	3.7426	ug/L	3.7426	ppb	15:38:45
2	Ni 231.604†	1218.3	1058.5	16.956	ug/L	16.956	ppb	15:38:45

2	P 214.914†	1181.2	833.1	268.69	ug/L	268.69 ppb	15:38:45
2	Pb 220.353†	184.3	211.6	14.411	ug/L	14.411 ppb	15:38:45
2	S 181.975 Axial†	192.4	122.8	102.42	ug/L	102.42 ppb	15:38:45
2	Sb 206.836†	60.7	14.7	1.1028	ug/L	1.1028 ppb	15:38:45
2	Se 196.026†	-300.8	-276.3	20.404	ug/L	20.404 ppb	15:38:45
2	Si 251.611†	117305.4	115636.9	2385.7	ug/L	2385.7 ppb	15:38:25
2	Sn 189.927†	7.9	2.4	0.8698	ug/L	0.8698 ppb	15:38:45
2	Ti 334.940†	412774.3	409983.2	536.82	ug/L	536.82 ppb	15:38:19
2	Tl 190.801†	-119.0	-56.5	1.2152	ug/L	1.2152 ppb	15:38:45
2	U 409.014†	-5536.8	-1649.7	-44.827	ug/L	-44.827 ppb	15:38:25
2	V 292.402†	2939.4	4564.4	20.986	ug/L	20.986 ppb	15:38:45
2	Zn 213.857†	19838.2	18528.3	99.917	ug/L	99.917 ppb	15:38:25
2	SiO2†	116183.4	114483.2	5057.6	ug/L	5057.6 ppb	15:39:26
3	Sc Radial	5696.0	5696.0	102	%		15:37:21
3	Y RADIAL	5089.9	5089.9	105.7	%		15:37:21
3	Al 396.153Radial†	8510.9	8407.2	7652.4	ug/L	7652.4 ppb	15:37:21
3	Ca 317.933Radial†	719.4	685.9	1708.6	ug/L	1708.6 ppb	15:37:41
3	Fe 238.204 Radial†	874.0	853.5	29942	ug/L	29942 ppb	15:37:41
3	K 766.490 Radial†	4282.5	2710.8	1181.6	ug/L	1181.6 ppb	15:37:21
3	Mg 279.077 IEC†	18.2	17.6	1367.3	ug/L	1367.3 ppb	15:37:41
3	Na 589.592 Radial†	-117.4	55.8	150.78	ug/L	150.78 ppb	15:37:41
3	Sr 421.552†	1223.4	1189.8	18.315	ug/L	18.315 ppb	15:37:21
3	Sc 361.383	1072873.8	1072873.8	101.13	%		15:38:50
3	Y 371.029	884785.5	884785.5	103.70	%		15:38:50
3	Ag 328.068†	-1517.1	-2138.8	1.2739	ug/L	1.2739 ppb	15:38:56
3	As 188.979†	-33.1	4.2	10.413	ug/L	10.413 ppb	15:39:16
3	B 249.677†	220.6	599.7	5.3388	ug/L	5.3388 ppb	15:38:56
3	Ba 233.527†	33392.2	32994.7	167.75	ug/L	167.75 ppb	15:38:56
3	Be 313.107†	-8235.6	-827.4	0.9915	ug/L	0.9915 ppb	15:38:56
3	Cd 226.502†	163.1	439.0	-0.2434	ug/L	-0.2434 ppb	15:39:16
3	Co 228.616†	1036.2	1115.1	12.389	ug/L	12.389 ppb	15:39:16
3	Cr 267.716†	3208.3	3201.0	27.897	ug/L	27.897 ppb	15:39:16
3	Cu 324.752†	18118.8	7725.0	20.791	ug/L	20.791 ppb	15:38:56
3	Mn 257.610†	1802975.3	1781996.8	1412.1	ug/L	1412.1 ppb	15:38:50
3	Mo 202.031†	75.1	42.5	3.7576	ug/L	3.7576 ppb	15:39:16
3	Ni 231.604†	1211.5	1049.7	16.816	ug/L	16.816 ppb	15:39:16
3	P 214.914†	1170.7	820.6	265.40	ug/L	265.40 ppb	15:39:16
3	Pb 220.353†	212.6	239.3	16.606	ug/L	16.606 ppb	15:39:16
3	S 181.975 Axial†	183.3	113.4	94.470	ug/L	94.470 ppb	15:39:16
3	Sb 206.836†	59.2	13.2	0.7809	ug/L	0.7809 ppb	15:39:16
3	Se 196.026†	-320.2	-295.0	9.6678	ug/L	9.6678 ppb	15:39:16
3	Si 251.611†	116528.9	114666.3	2365.7	ug/L	2365.7 ppb	15:38:56
3	Sn 189.927†	13.5	7.9	1.4084	ug/L	1.4084 ppb	15:39:16
3	Ti 334.940†	413937.3	410420.0	537.39	ug/L	537.39 ppb	15:38:50
3	Tl 190.801†	-132.5	-69.6	-0.9822	ug/L	-0.9822 ppb	15:39:16
3	U 409.014†	-5663.6	-1765.6	-47.539	ug/L	-47.539 ppb	15:38:56
3	V 292.402†	2917.7	4537.9	21.012	ug/L	21.012 ppb	15:39:16
3	Zn 213.857†	19715.8	18373.1	99.196	ug/L	99.196 ppb	15:38:56
3	SiO2†	116568.8	114663.6	5065.6	ug/L	5065.6 ppb	15:39:31

Mean Data: 1201872901|881859|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1077219.4	101.54	%	0.867				0.85%
Sc Radial	5590.4	100	%	2.2				2.14%
Y 371.029	889486.8	104.25	%	0.996				0.96%
Y RADIAL	4994.3	103.7	%	2.25				2.17%
Ag 328.068†	-2203.8	1.2714	ug/L	0.09976	1.2714	ppb	0.09976	7.85%
Al 396.153Radial†	8423.6	7667.4	ug/L	25.70	7667.4	ppb	25.70	0.34%
As 188.979†	1.5	9.9398	ug/L	0.47328	9.9398	ppb	0.47328	4.76%
B 249.677†	583.2	4.9757	ug/L	0.32111	4.9757	ppb	0.32111	6.45%
Ba 233.527†	32924.8	167.42	ug/L	1.989	167.42	ppb	1.989	1.19%
Be 313.107†	-800.3	0.9990	ug/L	0.03548	0.9990	ppb	0.03548	3.55%
Ca 317.933Radial†	702.7	1750.3	ug/L	40.24	1750.3	ppb	40.24	2.30%
Cd 226.502†	449.6	-0.2586	ug/L	0.06324	-0.2586	ppb	0.06324	24.46%
Co 228.616†	1102.9	12.227	ug/L	0.1513	12.227	ppb	0.1513	1.24%
Cr 267.716†	3181.9	27.749	ug/L	0.2768	27.749	ppb	0.2768	1.00%
Cu 324.752†	7662.5	20.683	ug/L	0.6388	20.683	ppb	0.6388	3.09%
Fe 238.204 Radial†	876.3	30744	ug/L	704.9	30744	ppb	704.9	2.29%
K 766.490 Radial†	2773.9	1209.6	ug/L	25.85	1209.6	ppb	25.85	2.14%

Mg 279.077 IEC†	17.2	1332.0	ug/L	98.23	1332.0	ppb	98.23	7.37%
Mn 257.610†	1779629.5	1410.4	ug/L	2.40	1410.4	ppb	2.40	0.17%
Mo 202.031†	41.7	3.7771	ug/L	0.04730	3.7771	ppb	0.04730	1.25%
Na 589.592 Radial†	54.3	146.82	ug/L	12.629	146.82	ppb	12.629	8.60%
Ni 231.604†	1041.5	16.684	ug/L	0.3570	16.684	ppb	0.3570	2.14%
P 214.914†	822.2	265.34	ug/L	3.394	265.34	ppb	3.394	1.28%
Pb 220.353†	226.2	15.551	ug/L	1.0999	15.551	ppb	1.0999	7.07%
S 181.975 Axial†	112.7	93.885	ug/L	8.8434	93.885	ppb	8.8434	9.42%
Sb 206.836†	9.5	0.0684	ug/L	1.52148	0.0684	ppb	1.52148	>999.9%
Se 196.026†	-289.0	14.453	ug/L	5.4623	14.453	ppb	5.4623	37.79%
Si 251.611†	114488.8	2362.0	ug/L	25.72	2362.0	ppb	25.72	1.09%
Sn 189.927†	1.3	0.7495	ug/L	0.72656	0.7495	ppb	0.72656	96.94%
Sr 421.552†	1191.4	18.340	ug/L	0.0860	18.340	ppb	0.0860	0.47%
Ti 334.940†	410125.8	537.00	ug/L	0.332	537.00	ppb	0.332	0.06%
Tl 190.801†	-59.8	0.6614	ug/L	1.44839	0.6614	ppb	1.44839	219.00%
U 409.014†	-1666.9	-45.188	ug/L	2.1929	-45.188	ppb	2.1929	4.85%
V 292.402†	4537.7	20.905	ug/L	0.1630	20.905	ppb	0.1630	0.78%
Zn 213.857†	18339.2	98.922	ug/L	1.1555	98.922	ppb	1.1555	1.17%
SiO2†	113599.4	5018.6	ug/L	74.65	5018.6	ppb	74.65	1.49%

Sequence No.: 17
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 15:41:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5550.0	5550.0	99.7	%			15:43:35
1	Y RADIAL	4798.2	4798.2	99.64	%			15:43:35
1	Al 396.153Radial†	5250.4	5356.7	4854.3	ug/L	4854.3	ppb	15:43:35
1	Ca 317.933Radial†	1970.4	1958.7	4878.8	ug/L	4878.8	ppb	15:43:55
1	Fe 238.204 Radial†	137.3	137.4	4834.0	ug/L	4834.0	ppb	15:43:55
1	K 766.490 Radial†	13208.1	11770.2	5101.0	ug/L	5101.0	ppb	15:43:35
1	Mg 279.077 IEC†	62.7	62.7	4968.1	ug/L	4968.1	ppb	15:43:55
1	Na 589.592 Radial†	3392.0	3571.5	9656.9	ug/L	9656.9	ppb	15:43:35
1	Sr 421.552†	32852.9	32935.1	507.37	ug/L	507.37	ppb	15:43:35
1	Sc 361.383	1064992.1	1064992.1	100.39	%			15:44:54
1	Y 371.029	848241.6	848241.6	99.417	%			15:44:54
1	Ag 328.068†	127421.5	126291.3	502.94	ug/L	502.94	ppb	15:44:54
1	As 188.979†	2061.8	2090.8	493.94	ug/L	493.94	ppb	15:45:14
1	B 249.677†	31095.4	31357.0	486.83	ug/L	486.83	ppb	15:44:54
1	Ba 233.527†	98115.4	97712.5	495.79	ug/L	495.79	ppb	15:44:54
1	Be 313.107†	1594280.0	1595444.2	497.24	ug/L	497.24	ppb	15:44:54
1	Cd 226.502†	66508.1	66529.1	497.34	ug/L	497.34	ppb	15:44:54
1	Co 228.616†	38950.3	38890.4	484.63	ug/L	484.63	ppb	15:45:14
1	Cr 267.716†	58229.3	58033.2	494.97	ug/L	494.97	ppb	15:44:54
1	Cu 324.752†	211193.1	200186.9	494.19	ug/L	494.19	ppb	15:44:54
1	Mn 257.610†	629952.0	626694.1	495.80	ug/L	495.80	ppb	15:44:54
1	Mo 202.031†	12627.7	12547.2	502.56	ug/L	502.56	ppb	15:45:14
1	Ni 231.604†	30770.4	30503.4	488.59	ug/L	488.59	ppb	15:45:14
1	P 214.914†	7365.6	7000.2	2399.2	ug/L	2399.2	ppb	15:45:14
1	Pb 220.353†	6628.4	6631.9	498.51	ug/L	498.51	ppb	15:45:14
1	S 181.975 Axial†	1254.4	1181.7	999.29	ug/L	999.29	ppb	15:45:14
1	Sb 206.836†	2567.0	2511.7	499.99	ug/L	499.99	ppb	15:45:14
1	Se 196.026†	1506.6	1522.4	513.89	ug/L	513.89	ppb	15:45:14
1	Si 251.611†	123069.6	122034.6	2506.1	ug/L	2506.1	ppb	15:44:54
1	Sn 189.927†	4784.8	4760.9	495.62	ug/L	495.62	ppb	15:45:14
1	Ti 334.940†	381087.6	380726.3	498.33	ug/L	498.33	ppb	15:44:54
1	Tl 190.801†	2886.0	2936.3	497.24	ug/L	497.24	ppb	15:45:14
1	U 409.014†	15577.1	19351.8	478.60	ug/L	478.60	ppb	15:44:54
1	V 292.402†	85505.0	86827.9	498.46	ug/L	498.46	ppb	15:44:54
1	Zn 213.857†	90597.9	89125.9	493.16	ug/L	493.16	ppb	15:44:54
1	SiO2†	122068.2	120994.8	5320.2	ug/L	5320.2	ppb	15:46:14
2	Sc Radial	5447.3	5447.3	97.9	%			15:44:00
2	Y RADIAL	4711.7	4711.7	97.84	%			15:44:00
2	Al 396.153Radial†	5172.6	5376.3	4872.0	ug/L	4872.0	ppb	15:44:00
2	Ca 317.933Radial†	1978.6	2004.4	4992.5	ug/L	4992.5	ppb	15:44:20
2	Fe 238.204 Radial†	139.0	141.6	4983.9	ug/L	4983.9	ppb	15:44:20
2	K 766.490 Radial†	12957.8	11764.2	5098.5	ug/L	5098.5	ppb	15:44:00
2	Mg 279.077 IEC†	62.4	63.6	5042.1	ug/L	5042.1	ppb	15:44:20
2	Na 589.592 Radial†	3337.3	3579.7	9679.1	ug/L	9679.1	ppb	15:44:00
2	Sr 421.552†	32178.4	32867.1	506.32	ug/L	506.32	ppb	15:44:00
2	Sc 361.383	1051068.9	1051068.9	99.075	%			15:45:22
2	Y 371.029	835857.7	835857.7	97.966	%			15:45:22
2	Ag 328.068†	126172.9	126712.4	504.65	ug/L	504.65	ppb	15:45:22
2	As 188.979†	2053.8	2109.9	498.46	ug/L	498.46	ppb	15:45:42
2	B 249.677†	30728.4	31396.9	487.41	ug/L	487.41	ppb	15:45:22
2	Ba 233.527†	97233.2	98116.8	497.84	ug/L	497.84	ppb	15:45:22
2	Be 313.107†	1574216.1	1596230.6	497.49	ug/L	497.49	ppb	15:45:22
2	Cd 226.502†	65742.7	66634.2	498.11	ug/L	498.11	ppb	15:45:22
2	Co 228.616†	38877.4	39330.9	490.13	ug/L	490.13	ppb	15:45:42
2	Cr 267.716†	57664.8	58231.8	496.66	ug/L	496.66	ppb	15:45:22
2	Cu 324.752†	208926.4	200685.8	495.43	ug/L	495.43	ppb	15:45:22
2	Mn 257.610†	623851.7	628849.5	497.52	ug/L	497.52	ppb	15:45:22
2	Mo 202.031†	12603.0	12688.9	508.24	ug/L	508.24	ppb	15:45:42
2	Ni 231.604†	30731.8	30870.5	494.47	ug/L	494.47	ppb	15:45:42

2	P 214.914†	7351.1	7082.8	2428.1 ug/L	2428.1 ppb	15:45:42
2	Pb 220.353†	6620.8	6711.7	504.49 ug/L	504.49 ppb	15:45:42
2	S 181.975 Axial†	1262.4	1206.4	1020.2 ug/L	1020.2 ppb	15:45:42
2	Sb 206.836†	2541.1	2519.4	501.67 ug/L	501.67 ppb	15:45:42
2	Se 196.026†	1500.7	1536.3	518.98 ug/L	518.98 ppb	15:45:42
2	Si 251.611†	121951.6	122530.2	2516.3 ug/L	2516.3 ppb	15:45:22
2	Sn 189.927†	4769.9	4808.9	500.63 ug/L	500.63 ppb	15:45:42
2	Ti 334.940†	377304.3	381936.4	499.92 ug/L	499.92 ppb	15:45:22
2	Tl 190.801†	2878.0	2966.2	502.28 ug/L	502.28 ppb	15:45:42
2	U 409.014†	15599.1	19579.5	484.23 ug/L	484.23 ppb	15:45:22
2	V 292.402†	84556.2	86998.4	499.49 ug/L	499.49 ppb	15:45:22
2	Zn 213.857†	89634.5	89349.0	494.35 ug/L	494.35 ppb	15:45:22
2	SiO2†	124157.3	124714.2	5484.3 ug/L	5484.3 ppb	15:46:20
3	Sc Radial	5536.4	5536.4	99.5 %		15:44:25
3	Y RADIAL	4822.5	4822.5	100.1 %		15:44:25
3	Al 396.153Radial†	5265.5	5384.7	4879.5 ug/L	4879.5 ppb	15:44:25
3	Ca 317.933Radial†	1962.2	1955.4	4870.5 ug/L	4870.5 ppb	15:44:45
3	Fe 238.204 Radial†	137.2	137.6	4842.9 ug/L	4842.9 ppb	15:44:45
3	K 766.490 Radial†	13216.2	11810.9	5118.7 ug/L	5118.7 ppb	15:44:25
3	Mg 279.077 IEC†	62.7	62.8	4983.0 ug/L	4983.0 ppb	15:44:45
3	Na 589.592 Radial†	3349.3	3536.8	9563.2 ug/L	9563.2 ppb	15:44:25
3	Sr 421.552†	32669.2	32831.2	505.77 ug/L	505.77 ppb	15:44:25
3	Sc 361.383	1057782.7	1057782.7	99.708 %		15:45:49
3	Y 371.029	842128.4	842128.4	98.701 %		15:45:49
3	Ag 328.068†	126824.6	126557.6	504.00 ug/L	504.00 ppb	15:45:49
3	As 188.979†	2088.9	2131.9	503.59 ug/L	503.59 ppb	15:46:09
3	B 249.677†	31037.4	31509.9	489.19 ug/L	489.19 ppb	15:45:49
3	Ba 233.527†	97777.3	98039.6	497.45 ug/L	497.45 ppb	15:45:49
3	Be 313.107†	1585103.6	1597065.1	497.75 ug/L	497.75 ppb	15:45:49
3	Cd 226.502†	66249.3	66721.1	498.78 ug/L	498.78 ppb	15:45:49
3	Co 228.616†	39095.7	39300.7	489.76 ug/L	489.76 ppb	15:46:09
3	Cr 267.716†	57940.4	58138.8	495.87 ug/L	495.87 ppb	15:45:49
3	Cu 324.752†	210463.9	200889.4	495.93 ug/L	495.93 ppb	15:45:49
3	Mn 257.610†	627057.2	628067.8	496.88 ug/L	496.88 ppb	15:45:49
3	Mo 202.031†	12692.2	12697.7	508.58 ug/L	508.58 ppb	15:46:09
3	Ni 231.604†	30844.9	30787.0	493.13 ug/L	493.13 ppb	15:46:09
3	P 214.914†	7405.1	7089.9	2430.6 ug/L	2430.6 ppb	15:46:09
3	Pb 220.353†	6652.2	6700.8	503.69 ug/L	503.69 ppb	15:46:09
3	S 181.975 Axial†	1250.4	1186.2	1003.1 ug/L	1003.1 ppb	15:46:09
3	Sb 206.836†	2566.7	2528.8	503.51 ug/L	503.51 ppb	15:46:09
3	Se 196.026†	1528.1	1554.1	524.28 ug/L	524.28 ppb	15:46:09
3	Si 251.611†	122522.5	122321.5	2511.9 ug/L	2511.9 ppb	15:45:49
3	Sn 189.927†	4781.4	4789.9	498.63 ug/L	498.63 ppb	15:46:09
3	Ti 334.940†	379146.9	381367.2	499.17 ug/L	499.17 ppb	15:45:49
3	Tl 190.801†	2882.7	2952.6	499.96 ug/L	499.96 ppb	15:46:09
3	U 409.014†	15482.2	19362.3	478.86 ug/L	478.86 ppb	15:45:49
3	V 292.402†	85105.0	87007.2	499.55 ug/L	499.55 ppb	15:45:49
3	Zn 213.857†	90130.2	89272.0	493.95 ug/L	493.95 ppb	15:45:49
3	SiO2†	121770.0	121524.5	5343.3 ug/L	5343.3 ppb	15:46:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1057947.9	99.723	%	0.6563				0.66%
Sc Radial	5511.3	99.0	%	1.00				1.01%
Y 371.029	842075.9	98.695	%	0.7257				0.74%
Y RADIAL	4777.5	99.21	%	1.210				1.22%
Ag 328.068†	126520.4	503.86	ug/L	0.864	503.86	ppb	0.864	0.17%
QC value within limits for Ag 328.068 Recovery = 100.77%								
Al 396.153Radial†	5372.6	4868.6	ug/L	12.94	4868.6	ppb	12.94	0.27%
QC value within limits for Al 396.153Radial Recovery = 97.37%								
As 188.979†	2110.9	498.66	ug/L	4.828	498.66	ppb	4.828	0.97%
QC value within limits for As 188.979 Recovery = 99.73%								
B 249.677†	31421.2	487.81	ug/L	1.234	487.81	ppb	1.234	0.25%
QC value within limits for B 249.677 Recovery = 97.56%								
Ba 233.527†	97956.3	497.03	ug/L	1.089	497.03	ppb	1.089	0.22%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1596246.7	497.49	ug/L	0.253	497.49	ppb	0.253	0.05%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	1972.8	4913.9	ug/L	68.18	4913.9	ppb	68.18	1.39%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.28%
Cd 226.502†            66628.1      498.08 ug/L          0.720      498.08 ppb          0.720   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39174.0      488.17 ug/L          3.072      488.17 ppb          3.072   0.63%
   QC value within limits for Co 228.616  Recovery = 97.63%
Cr 267.716†            58134.6      495.83 ug/L          0.848      495.83 ppb          0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 99.17%
Cu 324.752†           200587.4      495.18 ug/L          0.893      495.18 ppb          0.893   0.18%
   QC value within limits for Cu 324.752  Recovery = 99.04%
Fe 238.204 Radial†       138.9      4886.9 ug/L         84.13      4886.9 ppb          84.13   1.72%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.74%
K 766.490 Radial†      11781.8      5106.1 ug/L         11.02      5106.1 ppb          11.02   0.22%
   QC value within limits for K 766.490 Radial  Recovery = 102.12%
Mg 279.077 IEC†           63.0      4997.8 ug/L         39.10      4997.8 ppb          39.10   0.78%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.96%
Mn 257.610†           627870.5      496.73 ug/L          0.871      496.73 ppb          0.871   0.18%
   QC value within limits for Mn 257.610  Recovery = 99.35%
Mo 202.031†            12644.6      506.46 ug/L          3.383      506.46 ppb          3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.29%
Na 589.592 Radial†      3562.7      9633.1 ug/L         61.49      9633.1 ppb          61.49   0.64%
   QC value within limits for Na 589.592 Radial  Recovery = 96.33%
Ni 231.604†            30720.3      492.07 ug/L          3.082      492.07 ppb          3.082   0.63%
   QC value within limits for Ni 231.604  Recovery = 98.41%
P 214.914†              7057.6      2419.3 ug/L         17.48      2419.3 ppb          17.48   0.72%
   QC value within limits for P 214.914  Recovery = 96.77%
Pb 220.353†             6681.5      502.23 ug/L          3.248      502.23 ppb          3.248   0.65%
   QC value within limits for Pb 220.353  Recovery = 100.45%
S 181.975 Axial†        1191.4      1007.5 ug/L         11.14      1007.5 ppb          11.14   1.11%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             2520.0      501.72 ug/L          1.761      501.72 ppb          1.761   0.35%
   QC value within limits for Sb 206.836  Recovery = 100.34%
Se 196.026†             1537.6      519.05 ug/L          5.195      519.05 ppb          5.195   1.00%
   QC value within limits for Se 196.026  Recovery = 103.81%
Si 251.611†           122295.4      2511.5 ug/L           5.07      2511.5 ppb           5.07   0.20%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†             4786.6      498.30 ug/L          2.522      498.30 ppb          2.522   0.51%
   QC value within limits for Sn 189.927  Recovery = 99.66%
Sr 421.552†            32877.8      506.49 ug/L          0.813      506.49 ppb          0.813   0.16%
   QC value within limits for Sr 421.552  Recovery = 101.30%
Ti 334.940†           381343.3      499.14 ug/L          0.795      499.14 ppb          0.795   0.16%
   QC value within limits for Ti 334.940  Recovery = 99.83%
Tl 190.801†             2951.7      499.83 ug/L          2.522      499.83 ppb          2.522   0.50%
   QC value within limits for Tl 190.801  Recovery = 99.97%
U 409.014†             19431.2      480.57 ug/L          3.177      480.57 ppb          3.177   0.66%
   QC value within limits for U 409.014  Recovery = 96.11%
V 292.402†             86944.5      499.16 ug/L          0.613      499.16 ppb          0.613   0.12%
   QC value within limits for V 292.402  Recovery = 99.83%
Zn 213.857†            89249.0      493.82 ug/L          0.604      493.82 ppb          0.604   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.76%
SiO2†                 122411.2      5382.6 ug/L         88.82      5382.6 ppb          88.82   1.65%
   QC value within limits for SiO2  Recovery = 100.66%
All analyte(s) passed QC.
```

Sequence No.: 18
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 15:48:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5444.7	5444.7	97.8	%			15:50:26
1	Y RADIAL	4754.6	4754.6	98.73	%			15:50:26
1	Al 396.153Radial†	-89.0	1.3	1.1300	ug/L	1.1300	ppb	15:50:26
1	Ca 317.933Radial†	24.6	8.2	20.486	ug/L	20.486	ppb	15:50:46
1	Fe 238.204 Radial†	1.6	1.3	45.016	ug/L	45.016	ppb	15:50:46
1	K 766.490 Radial†	1541.6	102.5	44.484	ug/L	44.484	ppb	15:50:26
1	Mg 279.077 IEC†	0.2	0.0	0.5452	ug/L	0.5452	ppb	15:50:46
1	Na 589.592 Radial†	-165.9	0.9	2.3237	ug/L	2.3237	ppb	15:50:46
1	Sr 421.552†	27.6	22.8	0.3506	ug/L	0.3506	ppb	15:50:46
1	Sc 361.383	1056924.6	1056924.6	99.627	%			15:51:43
1	Y 371.029	852084.4	852084.4	99.868	%			15:51:43
1	Ag 328.068†	677.5	41.4	0.1786	ug/L	0.1786	ppb	15:51:48
1	As 188.979†	-48.7	-12.0	-2.7987	ug/L	-2.7987	ppb	15:52:08
1	B 249.677†	-15.3	366.2	5.7014	ug/L	5.7014	ppb	15:51:48
1	Ba 233.527†	58.9	34.8	0.1773	ug/L	0.1773	ppb	15:52:08
1	Be 313.107†	-7518.0	-229.9	-0.0713	ug/L	-0.0713	ppb	15:51:48
1	Cd 226.502†	-272.1	4.5	0.0287	ug/L	0.0287	ppb	15:52:08
1	Co 228.616†	-101.3	-11.3	-0.1398	ug/L	-0.1398	ppb	15:52:08
1	Cr 267.716†	-33.1	-4.6	-0.0380	ug/L	-0.0380	ppb	15:51:48
1	Cu 324.752†	10167.5	14.3	0.0379	ug/L	0.0379	ppb	15:51:48
1	Mn 257.610†	919.8	96.2	0.0819	ug/L	0.0819	ppb	15:52:08
1	Mo 202.031†	42.0	10.4	0.4188	ug/L	0.4188	ppb	15:52:08
1	Ni 231.604†	169.3	21.7	0.3482	ug/L	0.3482	ppb	15:52:08
1	P 214.914†	354.3	18.7	6.5814	ug/L	6.5814	ppb	15:52:08
1	Pb 220.353†	-16.7	12.4	0.9234	ug/L	0.9234	ppb	15:52:08
1	S 181.975 Axial†	61.6	-6.0	-5.0843	ug/L	-5.0843	ppb	15:52:08
1	Sb 206.836†	53.3	8.1	1.6077	ug/L	1.6077	ppb	15:52:08
1	Se 196.026†	-12.1	9.5	3.2413	ug/L	3.2413	ppb	15:52:08
1	Si 251.611†	756.7	199.4	4.0905	ug/L	4.0905	ppb	15:52:08
1	Sn 189.927†	12.1	6.6	0.6931	ug/L	0.6931	ppb	15:52:08
1	Ti 334.940†	-1028.7	76.7	0.1021	ug/L	0.1021	ppb	15:51:48
1	Tl 190.801†	-51.6	9.6	1.6197	ug/L	1.6197	ppb	15:52:08
1	U 409.014†	-3848.7	-28.4	-0.7103	ug/L	-0.7103	ppb	15:51:43
1	V 292.402†	-1650.6	-3.9	-0.0247	ug/L	-0.0247	ppb	15:51:48
1	Zn 213.857†	1092.3	-26.1	-0.1527	ug/L	-0.1527	ppb	15:52:08
1	SiO2†	812.7	213.4	9.3760	ug/L	9.3760	ppb	15:53:14
2	Sc Radial	5363.3	5363.3	96.4	%			15:50:52
2	Y RADIAL	4689.7	4689.7	97.38	%			15:50:52
2	Al 396.153Radial†	-93.9	-5.3	-4.8063	ug/L	-4.8063	ppb	15:50:52
2	Ca 317.933Radial†	33.6	17.9	44.640	ug/L	44.640	ppb	15:51:12
2	Fe 238.204 Radial†	-0.5	-0.8	-29.258	ug/L	-29.258	ppb	15:51:12
2	K 766.490 Radial†	1469.5	51.7	22.381	ug/L	22.381	ppb	15:50:52
2	Mg 279.077 IEC†	0.5	0.4	29.965	ug/L	29.965	ppb	15:51:12
2	Na 589.592 Radial†	-167.6	-3.4	-9.2756	ug/L	-9.2756	ppb	15:51:12
2	Sr 421.552†	18.3	13.5	0.2083	ug/L	0.2083	ppb	15:51:12
2	Sc 361.383	1064727.6	1064727.6	100.36	%			15:52:14
2	Y 371.029	856448.2	856448.2	100.38	%			15:52:14
2	Ag 328.068†	654.6	13.6	0.0456	ug/L	0.0456	ppb	15:52:19
2	As 188.979†	-55.1	-18.0	-4.2429	ug/L	-4.2429	ppb	15:52:39
2	B 249.677†	-27.0	354.6	5.5302	ug/L	5.5302	ppb	15:52:19
2	Ba 233.527†	26.3	1.9	0.0090	ug/L	0.0090	ppb	15:52:39
2	Be 313.107†	-7608.1	-264.4	-0.0820	ug/L	-0.0820	ppb	15:52:19
2	Cd 226.502†	-292.9	-14.2	-0.1025	ug/L	-0.1025	ppb	15:52:39
2	Co 228.616†	-105.7	-14.9	-0.1859	ug/L	-0.1859	ppb	15:52:39
2	Cr 267.716†	-9.5	19.1	0.1627	ug/L	0.1627	ppb	15:52:19
2	Cu 324.752†	10209.3	-18.8	-0.0481	ug/L	-0.0481	ppb	15:52:19
2	Mn 257.610†	890.8	60.5	0.0435	ug/L	0.0435	ppb	15:52:39
2	Mo 202.031†	30.8	-1.1	-0.0470	ug/L	-0.0470	ppb	15:52:39
2	Ni 231.604†	166.7	17.8	0.2862	ug/L	0.2862	ppb	15:52:39

2	P 214.914†	351.3	13.1	4.6814	ug/L	4.6814 ppb	15:52:39
2	Pb 220.353†	0.4	29.5	2.2147	ug/L	2.2147 ppb	15:52:39
2	S 181.975 Axial†	58.3	-9.7	-8.2376	ug/L	-8.2376 ppb	15:52:39
2	Sb 206.836†	44.7	-0.9	-0.1791	ug/L	-0.1791 ppb	15:52:39
2	Se 196.026†	-22.7	-1.0	-0.4269	ug/L	-0.4269 ppb	15:52:39
2	Si 251.611†	732.9	170.1	3.5028	ug/L	3.5028 ppb	15:52:39
2	Sn 189.927†	9.3	3.8	0.3997	ug/L	0.3997 ppb	15:52:39
2	Ti 334.940†	-1052.4	60.6	0.0833	ug/L	0.0833 ppb	15:52:19
2	Tl 190.801†	-73.7	-12.1	-2.0323	ug/L	-2.0323 ppb	15:52:39
2	U 409.014†	-3937.4	-88.5	-2.1916	ug/L	-2.1916 ppb	15:52:14
2	V 292.402†	-1664.6	-5.8	-0.0333	ug/L	-0.0333 ppb	15:52:19
2	Zn 213.857†	1086.7	-39.7	-0.2212	ug/L	-0.2212 ppb	15:52:39
2	SiO2†	810.0	204.8	9.0296	ug/L	9.0296 ppb	15:53:19
3	Sc Radial	5503.9	5503.9	98.9	%		15:51:17
3	Y RADIAL	4786.1	4786.1	99.38	%		15:51:17
3	Al 396.153Radial†	-55.5	36.1	32.846	ug/L	32.846 ppb	15:51:17
3	Ca 317.933Radial†	29.6	13.0	32.437	ug/L	32.437 ppb	15:51:37
3	Fe 238.204 Radial†	1.1	0.8	28.650	ug/L	28.650 ppb	15:51:37
3	K 766.490 Radial†	1444.0	-13.2	-5.6858	ug/L	-5.6858 ppb	15:51:17
3	Mg 279.077 IEC†	-0.3	-0.5	-38.345	ug/L	-38.345 ppb	15:51:37
3	Na 589.592 Radial†	-167.4	1.1	3.0210	ug/L	3.0210 ppb	15:51:37
3	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431 ppb	15:51:37
3	Sc 361.383	1059763.4	1059763.4	99.895	%		15:52:44
3	Y 371.029	853150.8	853150.8	99.993	%		15:52:44
3	Ag 328.068†	638.8	0.9	0.0116	ug/L	0.0116 ppb	15:52:49
3	As 188.979†	-47.8	-11.0	-2.5746	ug/L	-2.5746 ppb	15:53:09
3	B 249.677†	-68.1	313.4	4.8798	ug/L	4.8798 ppb	15:52:49
3	Ba 233.527†	39.3	15.1	0.0771	ug/L	0.0771 ppb	15:53:09
3	Be 313.107†	-7522.3	-214.0	-0.0666	ug/L	-0.0666 ppb	15:52:49
3	Cd 226.502†	-285.9	-8.6	-0.0673	ug/L	-0.0673 ppb	15:53:09
3	Co 228.616†	-84.6	5.7	0.0719	ug/L	0.0719 ppb	15:53:09
3	Cr 267.716†	-51.0	-22.5	-0.1911	ug/L	-0.1911 ppb	15:52:49
3	Cu 324.752†	9963.6	-217.1	-0.5340	ug/L	-0.5340 ppb	15:52:49
3	Mn 257.610†	951.3	125.3	0.1035	ug/L	0.1035 ppb	15:53:09
3	Mo 202.031†	38.3	6.6	0.2645	ug/L	0.2645 ppb	15:53:09
3	Ni 231.604†	159.8	11.7	0.1876	ug/L	0.1876 ppb	15:53:09
3	P 214.914†	347.1	10.6	3.7978	ug/L	3.7978 ppb	15:53:09
3	Pb 220.353†	-25.4	3.7	0.2791	ug/L	0.2791 ppb	15:53:09
3	S 181.975 Axial†	64.7	-3.1	-2.6014	ug/L	-2.6014 ppb	15:53:09
3	Sb 206.836†	43.5	-1.9	-0.3719	ug/L	-0.3719 ppb	15:53:09
3	Se 196.026†	-24.2	-2.6	-0.7417	ug/L	-0.7417 ppb	15:53:09
3	Si 251.611†	723.7	164.4	3.3914	ug/L	3.3914 ppb	15:53:09
3	Sn 189.927†	-1.8	-7.3	-0.7591	ug/L	-0.7591 ppb	15:53:09
3	Ti 334.940†	-1125.7	-17.7	-0.0213	ug/L	-0.0213 ppb	15:52:49
3	Tl 190.801†	-47.4	13.9	2.3508	ug/L	2.3508 ppb	15:53:09
3	U 409.014†	-3791.5	39.2	0.9702	ug/L	0.9702 ppb	15:52:44
3	V 292.402†	-1640.9	10.2	0.0584	ug/L	0.0584 ppb	15:52:49
3	Zn 213.857†	1086.8	-34.5	-0.1947	ug/L	-0.1947 ppb	15:53:09
3	SiO2†	778.6	177.1	7.8246	ug/L	7.8246 ppb	15:53:24

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060471.9	99.961	%	0.3723				0.37%
Sc Radial	5437.3	97.7	%	1.27				1.30%
Y 371.029	853894.4	100.08	%	0.267				0.27%
Y RADIAL	4743.4	98.50	%	1.020				1.04%
Ag 328.068†	18.6	0.0786	ug/L	0.08825	0.0786	ppb	0.08825	112.24%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	10.7	9.7234	ug/L	20.24395	9.7234	ppb	20.24395	208.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-13.7	-3.2054	ug/L	0.90543	-3.2054	ppb	0.90543	28.25%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	344.7	5.3705	ug/L	0.43345	5.3705	ppb	0.43345	8.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	17.3	0.0878	ug/L	0.08464	0.0878	ppb	0.08464	96.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-236.1	-0.0733	ug/L	0.00791	-0.0733	ppb	0.00791	10.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.1	32.521	ug/L	12.0776	32.521	ppb	12.0776	37.14%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -6.1     -0.0470 ug/L       0.06789     -0.0470 ppb        0.06789 144.30%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -6.8     -0.0846 ug/L       0.13746     -0.0846 ppb        0.13746 162.45%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -2.7     -0.0221 ug/L       0.17746     -0.0221 ppb        0.17746 801.61%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -73.9     -0.1814 ug/L       0.30837     -0.1814 ppb        0.30837 170.01%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.4      14.803 ug/L      39.0249      14.803 ppb       39.0249 263.64%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        47.0      20.393 ug/L      25.1438      20.393 ppb       25.1438 123.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.0      -2.6115 ug/L     34.26394     -2.6115 ppb      34.26394 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              94.0       0.0763 ug/L      0.03041      0.0763 ppb       0.03041  39.87%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.3       0.2121 ug/L      0.23732      0.2121 ppb       0.23732 111.89%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -0.5      -1.3103 ug/L      6.90696     -1.3103 ppb       6.90696 527.13%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              17.1       0.2740 ug/L      0.08098      0.2740 ppb       0.08098  29.55%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               14.1       5.0202 ug/L      1.42236      5.0202 ppb       1.42236  28.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              15.2       1.1391 ug/L      0.98566      1.1391 ppb       0.98566  86.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -6.3      -5.3078 ug/L      2.82471     -5.3078 ppb       2.82471  53.22%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               1.8       0.3522 ug/L      1.09156      0.3522 ppb       1.09156 309.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               2.0       0.6909 ug/L      2.21432      0.6909 ppb       2.21432 320.50%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             178.0       3.6616 ug/L      0.37560      3.6616 ppb       0.37560  10.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.0       0.1112 ug/L      0.76790      0.1112 ppb       0.76790 690.45%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              19.5       0.3006 ug/L      0.08009      0.3006 ppb       0.08009  26.64%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              39.9       0.0547 ug/L      0.06651      0.0547 ppb       0.06651 121.59%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               3.8       0.6461 ug/L      2.34820      0.6461 ppb       2.34820 363.46%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -25.9      -0.6439 ug/L      1.58194     -0.6439 ppb       1.58194 245.69%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                0.1       0.0001 ug/L      0.05062      0.0001 ppb       0.05062 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -33.4      -0.1895 ug/L      0.03453     -0.1895 ppb       0.03453  18.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   198.4       8.7434 ug/L      0.81433      8.7434 ppb       0.81433   9.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Monday, July 13, 2009 21:52:36
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090704\Sample.060
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	813.4	813.423	35.566	4.4
	Mg	24.0	13233.5	13233.528	231.778	1.8
	Co	58.9	16639.5	16639.489	380.771	2.3
	Rh	102.9	26958.8	26958.823	586.949	2.2
	In	114.9	28207.6	28207.626	441.465	1.6
	Pb	208.0	15069.1	15069.144	161.587	1.1
⌈>	Ba	137.9	23069.3	23069.340	298.488	1.3
⌊	Ba++	69.0	787.2	0.034	0.001	2.6
⌈>	Ce	139.9	31217.7	31217.679	499.349	1.6
⌊	CeO	155.9	652.0	0.021	0.000	1.8
	Bkgd	220.0	2.5	2.500	0.612	24.5

Current Optimization File Data

Current Value	Description
0.89	Nebulizer Gas Flow
6.50	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	9.0	2062.8
Co	59	25	10.3	23764.8
In	115	25	11.8	35194.3

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	585	2080	0.631
Be	9.0	9.1	2051	2080	0.639
Mg	24.0	24.0	5690	2120	0.584
Mg	25.0	24.9	5912	2080	0.665
Mg	26.0	25.9	6145	2120	0.658
Co	58.9	58.9	14169	2170	0.632
Rh	102.9	103.0	24867	2230	0.697
In	114.9	115.0	27803	2260	0.687
Ce	139.9	140.0	33869	2280	0.763
Pb	206.0	206.0	49936	2420	0.663
Pb	207.0	206.9	50183	2385	0.775
Pb	208.0	208.0	50427	2430	0.720
U	238.1	238.0	57732	2470	0.709

Report Date/Time: Monday, July 13, 2009 21:51:10

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 14:42:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Blank.172

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		43	
	Be	9		ug/L		4	
	B	11		ug/L		345	
	Na	23		ug/L		9670	
	Mg	24		ug/L		1667	
	Al	27		ug/L		4334	
	P	31		ug/L		2996	
	K	39		ug/L		240341	
	Ca	43		ug/L		150	
>	Sc	45		ug/L		611775	
	V	51		ug/L		3052	
	Cr	52		ug/L		1534	
	Cr	53		ug/L		34600	
	Mn	55		ug/L		598	
	Fe	57		ug/L		2081	
	Co	59		ug/L		106	
	Ni	60		ug/L		39	
	Cu	63		ug/L		168	
	Cu	65		ug/L		31	
	Zn	66		ug/L		238	
	Zn	67		ug/L		3209	
	Zn	68		ug/L		334	
>	Ge	74		ug/L		68213	
	As	75		ug/L		152	
	Se	77		ug/L		1519	
	Se	82		ug/L		-6	
	Kr	83		ug/L		28	
	Sr	88		ug/L		59	
	Y	89		ug/L		10	
	Ag	107		ug/L		13	
	Cd	111		ug/L		8	
	Cd	114		ug/L		17	
>	In	115		ug/L		30621	
	Sn	120		ug/L		192	
	Sb	121		ug/L		63	
	Sb	123		ug/L		59	
	Ba	135		ug/L		5	
	Ba	137		ug/L		11	
	Ho	165		ug/L		5	
>	Lu	175		ug/L		33228	
	Tl	205		ug/L		359	
	Pb	208		ug/L		1360	
	Bi	209		ug/L		56	
	U	238		ug/L		32	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 14:48:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Standard 1.173

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	3.718	3601	0.006
	Be	9	**10.000**	**ug/L**	2.664	1216	0.002
	B	11	**20.000**	**ug/L**	4.448	2423	0.003
	Na	23	**1000.000**	**ug/L**	4.906	1225238	1.978
	Mg	24	**1000.000**	**ug/L**	6.541	827013	1.344
	Al	27	**1000.000**	**ug/L**	0.929	1193540	1.938
	P	31	**1000.000**	**ug/L**	0.662	68920	0.107
	K	39	**1000.000**	**ug/L**	7.330	1522134	2.088
	Ca	43	**1000.000**	**ug/L**	3.096	2850	0.004
>	Sc	45		**ug/L**		613828	613827.680
	V	51	**10.000**	**ug/L**	5.856	15535	0.020
	Cr	52	**10.000**	**ug/L**	1.463	12502	0.018
	Cr	53		**ug/L**		36034	0.002
	Mn	55	**10.000**	**ug/L**	2.100	16343	0.026
	Fe	57	**1000.000**	**ug/L**	1.256	32629	0.050
	Co	59	**10.000**	**ug/L**	1.412	11509	0.019
	Ni	60	**10.000**	**ug/L**	4.697	2328	0.004
	Cu	63		**ug/L**		5454	0.009
	Cu	65	**10.000**	**ug/L**	0.975	2548	0.004
	Zn	66	**10.000**	**ug/L**	2.118	1795	0.023
	Zn	67		**ug/L**		3460	0.004
	Zn	68		**ug/L**		1479	0.017
>	Ge	74		**ug/L**		67548	67547.675
	As	75	**10.000**	**ug/L**	6.032	1768	0.024
	Se	77		**ug/L**		1686	0.003
	Se	82	**10.000**	**ug/L**	6.152	160	0.002
	Kr	83		**ug/L**		29	0.000
	Sr	88	**10.000**	**ug/L**	1.334	18603	0.606
	Y	89		**ug/L**		13	0.000
	Ag	107	**10.000**	**ug/L**	0.527	6995	0.228
	Cd	111	**10.000**	**ug/L**	4.566	1612	0.052
	Cd	114		**ug/L**		3708	0.121
>	In	115		**ug/L**		30599	30598.594
	Sn	120	**10.000**	**ug/L**	3.150	6806	0.216
	Sb	121	**10.000**	**ug/L**	5.195	5499	0.178
	Sb	123		**ug/L**		4126	0.133
	Ba	135		**ug/L**		1416	0.042
	Ba	137	**10.000**	**ug/L**	3.872	2498	0.074
	Ho	165		**ug/L**		5	0.000
>	Lu	175		**ug/L**		33669	33668.633
	Tl	205	**10.000**	**ug/L**	3.447	10592	0.304
	Pb	208	**10.000**	**ug/L**	0.499	16273	0.442
	Bi	209		**ug/L**		47	-0.000
	U	238	**10.000**	**ug/L**	0.746	15226	0.451

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 14:54:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Standard 2.174

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.028**	**ug/L**	3.455	35918	0.060
	Be	9	**100.022**	**ug/L**	1.892	12134	0.020
	B	11	**200.038**	**ug/L**	1.971	21085	0.035
	Na	23	**9997.440**	**ug/L**	10.537	11612681	19.285
	Mg	24	**10000.093**	**ug/L**	7.180	8094019	13.457
	Al	27	**10002.767**	**ug/L**	5.641	11980037	19.934
	P	31	**9996.580**	**ug/L**	0.363	626968	1.038
	K	39	**10002.575**	**ug/L**	2.341	13125196	21.440
	Ca	43	**9998.155**	**ug/L**	0.715	26082	0.043
>	Sc	45		**ug/L**		601124	601123.943
	V	51	**100.058**	**ug/L**	1.683	132622	0.216
	Cr	52	**99.979**	**ug/L**	0.063	106617	0.175
	Cr	53		**ug/L**		45963	0.020
	Mn	55	**99.978**	**ug/L**	0.384	151354	0.251
	Fe	57	**9998.054**	**ug/L**	0.692	295390	0.488
	Co	59	**99.972**	**ug/L**	0.557	108720	0.181
	Ni	60	**100.001**	**ug/L**	0.528	22486	0.037
	Cu	63		**ug/L**		50588	0.084
	Cu	65	**99.974**	**ug/L**	0.246	24051	0.040
	Zn	66	**99.981**	**ug/L**	0.455	15196	0.226
	Zn	67		**ug/L**		5646	0.038
	Zn	68		**ug/L**		11243	0.165
>	Ge	74		**ug/L**		66088	66087.516
	As	75	**100.103**	**ug/L**	0.998	17799	0.267
	Se	77		**ug/L**		2903	0.022
	Se	82	**99.974**	**ug/L**	0.509	1579	0.024
	Kr	83		**ug/L**		29	0.000
	Sr	88	**100.005**	**ug/L**	2.173	182133	6.094
	Y	89		**ug/L**		31	0.001
	Ag	107	**100.003**	**ug/L**	1.238	68416	2.289
	Cd	111	**100.005**	**ug/L**	1.078	15749	0.527
	Cd	114		**ug/L**		36066	1.206
>	In	115		**ug/L**		29880	29880.429
	Sn	120	**100.005**	**ug/L**	0.968	65079	2.172
	Sb	121	**100.064**	**ug/L**	4.672	56818	1.900
	Sb	123		**ug/L**		43306	1.448
	Ba	135		**ug/L**		13924	0.418
	Ba	137	**99.989**	**ug/L**	2.228	24350	0.731
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		33303	33303.117
	Tl	205	**99.997**	**ug/L**	2.642	101170	3.028
	Pb	208	**99.984**	**ug/L**	1.553	146394	4.356
	Bi	209		**ug/L**		105	0.001
	U	238	**99.993**	**ug/L**	2.161	149169	4.479

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 15:00:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 1.175

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.547**	ug/L	5.656	18366	0.031
	Be	9	**50.922**	ug/L	4.909	6125	0.010
	B	11	**103.528**	ug/L	4.433	10980	0.018
	Na	23	**5250.664**	ug/L	7.026	6041488	10.128
	Mg	24	**5074.585**	ug/L	2.648	4074365	6.829
	Al	27	**4913.706**	ug/L	6.512	5835709	9.792
	P	31	**5130.564**	ug/L	1.038	320592	0.533
	K	39	**4744.805**	ug/L	4.422	6304787	10.170
	Ca	43	**4944.423**	ug/L	0.973	12872	0.021
>	Sc	45		ug/L		596397	596397.425
	V	51	**50.580**	ug/L	3.212	67930	0.109
	Cr	52	**52.275**	ug/L	1.213	56006	0.091
	Cr	53		ug/L		40544	0.011
	Mn	55	**49.475**	ug/L	0.769	74597	0.124
	Fe	57	**5068.071**	ug/L	1.637	149506	0.247
	Co	59	**52.490**	ug/L	1.397	56663	0.095
	Ni	60	**52.720**	ug/L	1.784	11776	0.020
	Cu	63		ug/L		24897	0.041
	Cu	65	**49.825**	ug/L	2.143	11902	0.020
	Zn	66	**51.506**	ug/L	2.205	7892	0.117
	Zn	67		ug/L		4391	0.020
	Zn	68		ug/L		6024	0.087
>	Ge	74		ug/L		65705	65705.138
	As	75	**50.532**	ug/L	2.039	9009	0.135
	Se	77		ug/L		2253	0.012
	Se	82	**52.413**	ug/L	0.721	820	0.013
	Kr	83		ug/L		28	0.000
	Sr	88	**51.242**	ug/L	0.788	92810	3.122
	Y	89		ug/L		24	0.001
	Ag	107	**50.719**	ug/L	1.058	34503	1.161
	Cd	111	**53.161**	ug/L	2.046	8326	0.280
	Cd	114		ug/L		19069	0.641
>	In	115		ug/L		29705	29705.289
	Sn	120	**49.914**	ug/L	0.402	32386	1.084
	Sb	121	**49.047**	ug/L	3.460	27727	0.931
	Sb	123		ug/L		20958	0.703
	Ba	135		ug/L		7063	0.214
	Ba	137	**51.526**	ug/L	2.077	12423	0.377
	Ho	165		ug/L		7	0.000
>	Lu	175		ug/L		32950	32949.618
	Tl	205	**48.755**	ug/L	3.625	48996	1.476
	Pb	208	**51.879**	ug/L	0.698	75815	2.260
	Bi	209		ug/L		65	0.000
	U	238	**52.414**	ug/L	2.093	77393	2.348

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	103.093				
	Be	9	101.845				
	B	11	103.528				
	Na	23	105.013				
	Mg	24	101.492				
	Al	27	97.301				
	P	31	102.611				
	K	39	94.896				
	Ca	43	98.888				
>	Sc	45		97.5			
	V	51	101.161				
	Cr	52	104.550				
	Cr	53					
	Mn	55	98.951				
	Fe	57	101.361				
	Co	59	104.980				
	Ni	60	105.440				
	Cu	63					
	Cu	65	99.651				
	Zn	66	103.012				
	Zn	67					
	Zn	68					
>	Ge	74		96.3			
	As	75	101.063				
	Se	77					
	Se	82	104.825				
	Kr	83					
	Sr	88	102.484				
	Y	89					
	Ag	107	101.438				
	Cd	111	106.322				
	Cd	114					
>	In	115		97.0			
	Sn	120	99.827				
	Sb	121	98.094				
	Sb	123					
	Ba	135					
	Ba	137	103.052				
	Ho	165					
>	Lu	175		99.2			
	Tl	205	97.511				
	Pb	208	103.757				
	Bi	209					
	U	238	104.828				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 15:06:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 2.176

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.054**	ug/L	74.326	61	0.000
	Be	9	**0.019**	ug/L	144.611	6	0.000
	B	11	**3.066**	ug/L	16.005	657	0.001
	Na	23	**-1.460**	ug/L	414.458	7670	-0.003
	Mg	24	**0.922**	ug/L	326.322	2334	0.001
	Al	27	**-1.345**	ug/L	67.462	2667	-0.003
	P	31	**0.313**	ug/L	468.250	2971	0.000
	K	39	**-0.634**	ug/L	464.789	235935	-0.001
	Ca	43	**4.720**	ug/L	203.743	160	0.000
>	Sc	45		ug/L		602450	602450.222
	V	51	**0.448**	ug/L	106.313	3601	0.001
	Cr	52	**0.049**	ug/L	202.714	1560	0.000
	Cr	53		ug/L		34784	0.001
	Mn	55	**-0.011**	ug/L	19.864	572	-0.000
	Fe	57	**2.533**	ug/L	74.926	2124	0.000
	Co	59	**0.014**	ug/L	27.721	120	0.000
	Ni	60	**0.010**	ug/L	243.314	41	0.000
	Cu	63		ug/L		163	-0.000
	Cu	65	**0.023**	ug/L	161.947	36	0.000
	Zn	66	**-0.040**	ug/L	147.872	227	-0.000
	Zn	67		ug/L		3183	0.001
	Zn	68		ug/L		340	0.000
>	Ge	74		ug/L		66661	66660.902
	As	75	**0.092**	ug/L	850.679	164	0.000
	Se	77		ug/L		1582	0.001
	Se	82	**0.411**	ug/L	41.400	1	0.000
	Kr	83		ug/L		25	-0.000
	Sr	88	**0.000**	ug/L	2873.639	58	0.000
	Y	89		ug/L		12	0.000
	Ag	107	**0.008**	ug/L	72.154	18	0.000
	Cd	111	**0.017**	ug/L	49.745	11	0.000
	Cd	114		ug/L		17	0.000
>	In	115		ug/L		30095	30094.765
	Sn	120	**0.254**	ug/L	9.585	354	0.006
	Sb	121	**0.534**	ug/L	20.074	367	0.010
	Sb	123		ug/L		291	0.008
	Ba	135		ug/L		8	0.000
	Ba	137	**-0.001**	ug/L	184.268	10	-0.000
	Ho	165		ug/L		6	0.000
>	Lu	175		ug/L		33178	33177.816
	Tl	205	**0.261**	ug/L	35.993	621	0.008
	Pb	208	**-0.154**	ug/L	5.162	1135	-0.007
	Bi	209		ug/L		43	-0.000
	U	238	**0.038**	ug/L	33.584	89	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		98.5			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 15:12:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 3.177

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**9.987**	ug/L	6.325	3676	0.006
	Be	9	**0.487**	ug/L	15.478	64	0.000
	B	11	**15.588**	ug/L	1.417	1986	0.003
	Na	23	**259.976**	ug/L	16.917	315157	0.501
	Mg	24	**22.824**	ug/L	19.097	20348	0.031
	Al	27	**31.952**	ug/L	14.968	43065	0.064
	P	31	**57.315**	ug/L	4.865	6625	0.006
	K	39	**294.724**	ug/L	3.785	625413	0.632
	Ca	43	**208.804**	ug/L	4.472	700	0.001
>	Sc	45		ug/L		610326	610325.637
	V	51	**10.064**	ug/L	3.329	16287	0.022
	Cr	52	**10.012**	ug/L	2.221	12218	0.018
	Cr	53		ug/L		36412	0.003
	Mn	55	**5.187**	ug/L	1.269	8535	0.013
	Fe	57	**111.639**	ug/L	5.057	5404	0.005
	Co	59	**1.042**	ug/L	1.600	1255	0.002
	Ni	60	**2.017**	ug/L	5.034	499	0.001
	Cu	63		ug/L		734	0.001
	Cu	65	**1.037**	ug/L	2.385	284	0.000
	Zn	66	**9.939**	ug/L	3.570	1763	0.023
	Zn	67		ug/L		3397	0.003
	Zn	68		ug/L		1464	0.017
>	Ge	74		ug/L		67776	67775.784
	As	75	**4.477**	ug/L	15.004	963	0.012
	Se	77		ug/L		1651	0.002
	Se	82	**5.835**	ug/L	11.775	89	0.001
	Kr	83		ug/L		25	-0.000
	Sr	88	**10.097**	ug/L	0.716	18892	0.615
	Y	89		ug/L		14	0.000
	Ag	107	**0.986**	ug/L	1.810	704	0.023
	Cd	111	**0.969**	ug/L	6.956	165	0.005
	Cd	114		ug/L		377	0.012
>	In	115		ug/L		30610	30610.355
	Sn	120	**4.993**	ug/L	3.184	3512	0.108
	Sb	121	**2.592**	ug/L	7.686	1570	0.049
	Sb	123		ug/L		1200	0.037
	Ba	135		ug/L		289	0.008
	Ba	137	**2.018**	ug/L	4.448	504	0.015
	Ho	165		ug/L		7	0.000
>	Lu	175		ug/L		33437	33437.087
	Tl	205	**1.046**	ug/L	2.532	1421	0.032
	Pb	208	**1.823**	ug/L	3.668	4025	0.079
	Bi	209		ug/L		50	-0.000
	U	238	**0.224**	ug/L	3.678	367	0.010

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	99.871				
	Be	9	97.431				
	B	11	103.919				
	Na	23	103.991				
	Mg	24	152.162				
	Al	27	106.505				
	P	31	114.631				
	K	39	98.241				
	Ca	43	104.402				
>	Sc	45		99.8			
	V	51	100.643				
	Cr	52	100.125				
	Cr	53					
	Mn	55	103.736				
	Fe	57	111.639				
	Co	59	104.198				
	Ni	60	100.831				
	Cu	63					
	Cu	65	103.656				
	Zn	66	99.388				
	Zn	67					
	Zn	68					
>	Ge	74		99.4			
	As	75	89.545				
	Se	77					
	Se	82	116.698				
	Kr	83					
	Sr	88	100.968				
	Y	89					
	Ag	107	98.611				
	Cd	111	96.855				
	Cd	114					
>	In	115		100.0			
	Sn	120	99.869				
	Sb	121	86.397				
	Sb	123					
	Ba	135					
	Ba	137	100.884				
	Ho	165					
>	Lu	175		100.6			
	Tl	205	104.641				
	Pb	208	91.155				
	Bi	209					
	U	238	111.880				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Mg	24	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 15:18:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 4.178

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.231**	ug/L	13.563	117	0.000
	Be	9	**0.062**	ug/L	70.170	11	0.000
	B	11	**1.732**	ug/L	18.507	487	0.000
	Na	23	**105969.456**	ug/L	2.967	115554565	204.410
	Mg	24	**99363.215**	ug/L	1.809	75591383	133.714
	Al	27	**97038.889**	ug/L	4.528	109332259	193.383
	P	31	**99968.856**	ug/L	2.210	5871451	10.381
	K	39	**100083.882**	ug/L	5.726	121526166	214.529
	Ca	43	**95541.804**	ug/L	0.551	233161	0.412
>	Sc	45		ug/L		565208	565208.445
	V	51	**0.106**	ug/L	1122.765	2964	0.000
	Cr	52	**4.252**	ug/L	0.981	5620	0.007
	Cr	53		ug/L		30986	-0.002
	Mn	55	**5.766**	ug/L	0.578	8727	0.014
	Fe	57	**96477.786**	ug/L	0.408	2663324	4.709
	Co	59	**0.420**	ug/L	12.206	527	0.001
	Ni	60	**4.355**	ug/L	4.161	955	0.002
	Cu	63		ug/L		1357	0.002
	Cu	65	**4.742**	ug/L	1.545	1100	0.002
	Zn	66	**5.781**	ug/L	1.410	1004	0.013
	Zn	67		ug/L		3373	0.009
	Zn	68		ug/L		432	0.002
>	Ge	74		ug/L		60551	60550.991
	As	75	**1.390**	ug/L	53.101	360	0.004
	Se	77		ug/L		1786	0.007
	Se	82	**8.565**	ug/L	20.259	119	0.002
	Kr	83		ug/L		58	0.001
	Sr	88	**1.200**	ug/L	3.687	2068	0.073
	Y	89		ug/L		76	0.002
	Ag	107	**0.415**	ug/L	57.030	274	0.010
	Cd	111	**1.588**	ug/L	57.661	238	0.008
	Cd	114		ug/L		1142	0.041
>	In	115		ug/L		27568	27567.722
	Sn	120	**0.233**	ug/L	20.937	312	0.005
	Sb	121	**0.234**	ug/L	15.211	180	0.004
	Sb	123		ug/L		147	0.003
	Ba	135		ug/L		96	0.003
	Ba	137	**0.664**	ug/L	1.736	158	0.005
	Ho	165		ug/L		78	0.002
>	Lu	175		ug/L		30477	30477.117
	Tl	205	**0.026**	ug/L	72.758	354	0.001
	Pb	208	**1.181**	ug/L	5.676	2816	0.051
	Bi	209		ug/L		82	0.001
	U	238	**-0.003**	ug/L	69.168	26	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	105.969				
	Mg	24	99.363				
	Al	27	97.039				
	P	31	99.969				
	K	39	100.084				
	Ca	43	95.542				
>	Sc	45		92.4			
	V	51					
	Cr	52	114.922				
	Cr	53					
	Mn	55	99.407				
	Fe	57	96.478				
	Co	59	168.197				
	Ni	60	161.290				
	Cu	63					
	Cu	65	163.511				
	Zn	66	160.592				
	Zn	67					
	Zn	68					
>	Ge	74		88.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	99.983				
	Y	89					
	Ag	107					
	Cd	111	396.895				
	Cd	114					
>	In	115		90.0			
	Sn	120					
	Sb	121	234.303				
	Sb	123					
	Ba	135					
	Ba	137	99.070				
	Ho	165					
>	Lu	175		91.7			
	Tl	205					
	Pb	208	590.467				
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 15:24:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 5.179

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**20.769**	**ug/L**	6.436	6760	0.012
	Be	9	**20.698**	**ug/L**	3.644	2269	0.004
	B	11	**21.656**	**ug/L**	3.809	2333	0.004
	Na	23	**107360.828**	**ug/L**	2.070	112397336	207.094
	Mg	24	**106324.697**	**ug/L**	7.903	77651094	143.083
	Al	27	**96762.489**	**ug/L**	5.331	104743496	192.832
	P	31	**100445.030**	**ug/L**	1.813	5665803	10.430
	K	39	**102370.861**	**ug/L**	3.372	119352527	219.431
	Ca	43	**94830.500**	**ug/L**	1.498	222284	0.409
>	Sc	45		**ug/L**		542809	542809.463
	V	51	**19.097**	**ug/L**	5.824	25065	0.041
	Cr	52	**23.582**	**ug/L**	0.904	23747	0.041
	Cr	53		**ug/L**		31819	0.002
	Mn	55	**25.611**	**ug/L**	0.784	35408	0.064
	Fe	57	**98078.171**	**ug/L**	0.308	2600162	4.787
	Co	59	**20.254**	**ug/L**	1.269	19961	0.037
	Ni	60	**23.266**	**ug/L**	0.856	4751	0.009
	Cu	63		**ug/L**		9816	0.018
	Cu	65	**23.577**	**ug/L**	2.238	5141	0.009
	Zn	66	**24.752**	**ug/L**	1.870	3487	0.056
	Zn	67		**ug/L**		3681	0.016
	Zn	68		**ug/L**		2268	0.034
>	Ge	74		**ug/L**		58555	58555.347
	As	75	**23.056**	**ug/L**	3.849	3733	0.062
	Se	77		**ug/L**		1923	0.011
	Se	82	**25.585**	**ug/L**	5.301	354	0.006
	Kr	83		**ug/L**		50	0.000
	Sr	88	**21.694**	**ug/L**	0.976	35214	1.322
	Y	89		**ug/L**		69	0.002
	Ag	107	**19.536**	**ug/L**	1.735	11908	0.447
	Cd	111	**19.869**	**ug/L**	1.868	2792	0.105
	Cd	114		**ug/L**		7432	0.279
>	In	115		**ug/L**		26601	26600.503
	Sn	120	**20.248**	**ug/L**	0.575	11864	0.440
	Sb	121	**21.211**	**ug/L**	0.487	10766	0.403
	Sb	123		**ug/L**		8326	0.311
	Ba	135		**ug/L**		2531	0.086
	Ba	137	**22.769**	**ug/L**	12.402	4910	0.166
	Ho	165		**ug/L**		76	0.002
>	Lu	175		**ug/L**		29417	29417.223
	Tl	205	**17.963**	**ug/L**	5.224	16311	0.544
	Pb	208	**20.659**	**ug/L**	1.315	27676	0.900
	Bi	209		**ug/L**		87	0.001
	U	238	**20.366**	**ug/L**	1.924	26862	0.912

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	103.846				
	Be	9	103.492				
	B	11	108.281				
	Na	23	107.361				
	Mg	24	106.325				
	Al	27	96.762				
	P	31	100.445				
	K	39	102.371				
	Ca	43	94.830				
>	Sc	45		88.7			
	V	51	95.483				
	Cr	52	99.503				
	Cr	53					
	Mn	55	99.269				
	Fe	57	98.078				
	Co	59	100.021				
	Ni	60	102.494				
	Cu	63					
	Cu	65	102.958				
	Zn	66	104.881				
	Zn	67					
	Zn	68					
>	Ge	74		85.8			
	As	75	115.280				
	Se	77					
	Se	82	127.927				
	Kr	83					
	Sr	88	102.328				
	Y	89					
	Ag	107	97.680				
	Cd	111	97.398				
	Cd	114					
>	In	115		86.9			
	Sn	120	101.242				
	Sb	121	105.526				
	Sb	123					
	Ba	135					
	Ba	137	110.155				
	Ho	165					
>	Lu	175		88.5			
	Tl	205	89.813				
	Pb	208	102.274				
	Bi	209					
	U	238	101.828				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Se	82	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 15:29:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.180

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.743**	**ug/L**	4.706	17774	0.031
	Be	9	**52.889**	**ug/L**	3.096	6017	0.011
	B	11	**104.923**	**ug/L**	1.843	10523	0.018
	Na	23	**5117.498**	**ug/L**	3.754	5577770	9.871
	Mg	24	**5033.112**	**ug/L**	7.456	3826556	6.773
	Al	27	**4887.371**	**ug/L**	0.872	5495916	9.740
	P	31	**5123.540**	**ug/L**	0.496	302746	0.532
	K	39	**5082.747**	**ug/L**	1.602	6363451	10.895
	Ca	43	**5033.740**	**ug/L**	1.033	12387	0.022
>	Sc	45		**ug/L**		563898	563898.248
	V	51	**50.967**	**ug/L**	2.261	64766	0.110
	Cr	52	**51.705**	**ug/L**	0.664	52412	0.090
	Cr	53		**ug/L**		37276	0.010
	Mn	55	**48.820**	**ug/L**	0.531	69617	0.122
	Fe	57	**5076.650**	**ug/L**	1.482	141671	0.248
	Co	59	**52.075**	**ug/L**	0.681	53167	0.094
	Ni	60	**53.329**	**ug/L**	0.987	11266	0.020
	Cu	63		**ug/L**		23535	0.041
	Cu	65	**49.341**	**ug/L**	2.150	11144	0.020
	Zn	66	**51.772**	**ug/L**	1.011	7412	0.117
	Zn	67		**ug/L**		4189	0.021
	Zn	68		**ug/L**		5624	0.087
>	Ge	74		**ug/L**		61388	61388.239
	As	75	**50.969**	**ug/L**	1.808	8487	0.136
	Se	77		**ug/L**		1998	0.010
	Se	82	**50.978**	**ug/L**	3.685	745	0.012
	Kr	83		**ug/L**		23	-0.000
	Sr	88	**50.850**	**ug/L**	1.242	87451	3.099
	Y	89		**ug/L**		23	0.000
	Ag	107	**50.353**	**ug/L**	0.741	32525	1.153
	Cd	111	**52.479**	**ug/L**	0.080	7805	0.276
	Cd	114		**ug/L**		18196	0.645
>	In	115		**ug/L**		28205	28204.700
	Sn	120	**48.975**	**ug/L**	0.794	30176	1.064
	Sb	121	**48.495**	**ug/L**	3.235	26028	0.921
	Sb	123		**ug/L**		19885	0.703
	Ba	135		**ug/L**		6544	0.216
	Ba	137	**51.463**	**ug/L**	2.595	11421	0.376
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		30329	30329.465
	Tl	205	**48.949**	**ug/L**	2.938	45285	1.482
	Pb	208	**51.505**	**ug/L**	1.008	69296	2.244
	Bi	209		**ug/L**		55	0.000
	U	238	**52.370**	**ug/L**	0.093	71184	2.346

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Inl Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	105.486				
	Be	9	105.778				
	B	11	104.923				
	Na	23	102.350				
	Mg	24	100.662				
	Al	27	96.780				
	P	31	102.471				
	K	39	101.655				
	Ca	43	100.675				
>	Sc	45		92.2			
	V	51	101.935				
	Cr	52	103.410				
	Cr	53					
	Mn	55	97.641				
	Fe	57	101.533				
	Co	59	104.149				
	Ni	60	106.658				
	Cu	63					
	Cu	65	98.681				
	Zn	66	103.544				
	Zn	67					
	Zn	68					
>	Ge	74		90.0			
	As	75	101.937				
	Se	77					
	Se	82	101.956				
	Kr	83					
	Sr	88	101.700				
	Y	89					
	Ag	107	100.707				
	Cd	111	104.959				
	Cd	114					
>	In	115		92.1			
	Sn	120	97.950				
	Sb	121	96.990				
	Sb	123					
	Ba	135					
	Ba	137	102.926				
	Ho	165					
>	Lu	175		91.3			
	Tl	205	97.899				
	Pb	208	103.010				
	Bi	209					
	U	238	104.739				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 15:35:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.181

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.167**	ug/L	10.181	96	0.000
	Be	9	**-0.006**	ug/L	270.071	3	-0.000
	B	11	**2.272**	ug/L	18.903	538	0.000
	Na	23	**5.511**	ug/L	69.369	15008	0.011
	Mg	24	**0.593**	ug/L	377.031	2000	0.001
	Al	27	**1.133**	ug/L	229.531	5335	0.002
	P	31	**0.613**	ug/L	94.385	2800	0.000
	K	39	**20.174**	ug/L	182.050	245806	0.043
	Ca	43	**-0.593**	ug/L	1396.506	137	-0.000
>	Sc	45		ug/L		564338	564337.700
	V	51	**0.018**	ug/L	2854.598	2850	0.000
	Cr	52	**-0.127**	ug/L	20.089	1289	-0.000
	Cr	53		ug/L		32355	0.001
	Mn	55	**-0.059**	ug/L	3.411	467	-0.000
	Fe	57	**2.854**	ug/L	82.657	1997	0.000
	Co	59	**0.014**	ug/L	41.944	112	0.000
	Ni	60	**-0.031**	ug/L	106.273	29	-0.000
	Cu	63		ug/L		98	-0.000
	Cu	65	**0.028**	ug/L	61.027	35	0.000
	Zn	66	**0.076**	ug/L	120.957	227	0.000
	Zn	67		ug/L		2992	0.001
	Zn	68		ug/L		325	0.000
>	Ge	74		ug/L		62060	62060.490
	As	75	**-0.070**	ug/L	784.294	126	-0.000
	Se	77		ug/L		1474	0.001
	Se	82	**1.179**	ug/L	17.542	12	0.000
	Kr	83		ug/L		18	-0.000
	Sr	88	**0.006**	ug/L	65.144	64	0.000
	Y	89		ug/L		9	0.000
	Ag	107	**0.013**	ug/L	15.955	20	0.000
	Cd	111	**-0.036**	ug/L	47.292	2	-0.000
	Cd	114		ug/L		16	0.000
>	In	115		ug/L		28003	28003.098
	Sn	120	**0.093**	ug/L	28.075	232	0.002
	Sb	121	**0.395**	ug/L	31.452	267	0.007
	Sb	123		ug/L		213	0.006
	Ba	135		ug/L		8	0.000
	Ba	137	**-0.011**	ug/L	88.480	7	-0.000
	Ho	165		ug/L		3	-0.000
>	Lu	175		ug/L		30420	30420.331
	Tl	205	**0.351**	ug/L	17.395	653	0.011
	Pb	208	**-0.299**	ug/L	4.929	850	-0.013
	Bi	209		ug/L		46	-0.000
	U	238	**0.032**	ug/L	15.376	73	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		92.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		91.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.6			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872852
Sample Date/Time: Tuesday, July 14, 2009 15:41:44
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872852.182

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.159**	ug/L	100.006	89	0.000
	Be	9	**-0.001**	ug/L	8733.463	3	-0.000
	B	11	**1.423**	ug/L	15.029	438	0.000
	Na	23	**17.704**	ug/L	25.193	27026	0.034
	Mg	24	**2.113**	ug/L	128.678	3000	0.003
	Al	27	**8.254**	ug/L	49.096	12673	0.016
	P	31	**43.006**	ug/L	4.207	5070	0.004
	K	39	**-8.806**	ug/L	87.318	202425	-0.019
	Ca	43	**-1.799**	ug/L	520.346	128	-0.000
>	Sc	45		ug/L		541758	541758.180
	V	51	**-0.757**	ug/L	18.030	1815	-0.002
	Cr	52	**0.091**	ug/L	74.773	1442	0.000
	Cr	53		ug/L		24288	-0.012
	Mn	55	**0.234**	ug/L	4.013	847	0.001
	Fe	57	**10.872**	ug/L	40.249	2127	0.001
	Co	59	**0.137**	ug/L	9.081	228	0.000
	Ni	60	**0.167**	ug/L	13.765	68	0.000
	Cu	63		ug/L		132	-0.000
	Cu	65	**0.110**	ug/L	56.625	51	0.000
	Zn	66	**0.137**	ug/L	125.072	225	0.000
	Zn	67		ug/L		2345	-0.007
	Zn	68		ug/L		324	0.001
>	Ge	74		ug/L		59150	59149.507
	As	75	**0.064**	ug/L	752.548	143	0.000
	Se	77		ug/L		988	-0.006
	Se	82	**0.541**	ug/L	155.660	2	0.000
	Kr	83		ug/L		20	-0.000
	Sr	88	**0.006**	ug/L	78.172	63	0.000
	Y	89		ug/L		20	0.000
	Ag	107	**-0.002**	ug/L	154.306	10	-0.000
	Cd	111	**0.007**	ug/L	797.194	8	0.000
	Cd	114		ug/L		12	-0.000
>	In	115		ug/L		27656	27656.059
	Sn	120	**0.091**	ug/L	72.133	228	0.002
	Sb	121	**0.075**	ug/L	45.016	96	0.001
	Sb	123		ug/L		74	0.001
	Ba	135		ug/L		10	0.000
	Ba	137	**0.050**	ug/L	51.394	21	0.000
	Ho	165		ug/L		6	0.000
>	Lu	175		ug/L		29993	29993.088
	Tl	205	**0.344**	ug/L	9.399	637	0.010
	Pb	208	**0.370**	ug/L	19.626	1711	0.016
	Bi	209		ug/L		63	0.000
	U	238	**0.120**	ug/L	173.284	189	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		88.6			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		86.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		90.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		90.3			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872853
Sample Date/Time: Tuesday, July 14, 2009 15:47:38
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881838|40|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872853.183

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.238**	ug/L	8.378	810	0.001
	Be	9	**23.932**	ug/L	1.292	2791	0.005
	B	11	**37.764**	ug/L	3.911	4084	0.007
	Na	23	**166.110**	ug/L	8.525	194322	0.320
	Mg	24	**823.499**	ug/L	6.171	640742	1.108
	Al	27	**2218.608**	ug/L	6.102	2553123	4.421
	P	31	**200.544**	ug/L	1.333	14851	0.021
	K	39	**693.308**	ug/L	7.340	1085958	1.486
	Ca	43	**980.004**	ug/L	3.549	2581	0.004
>	Sc	45		ug/L		577297	577297.259
	V	51	**35.775**	ug/L	2.776	47393	0.077
	Cr	52	**18.278**	ug/L	0.670	19904	0.032
	Cr	53		ug/L		33718	0.002
	Mn	55	**97.047**	ug/L	1.163	141067	0.243
	Fe	57	**2773.679**	ug/L	1.479	80089	0.135
	Co	59	**22.498**	ug/L	0.762	23575	0.041
	Ni	60	**27.985**	ug/L	2.800	6067	0.010
	Cu	63		ug/L		13043	0.022
	Cu	65	**26.692**	ug/L	3.281	6184	0.011
	Zn	66	**54.083**	ug/L	0.596	7974	0.122
	Zn	67		ug/L		4201	0.019
	Zn	68		ug/L		6176	0.093
>	Ge	74		ug/L		63295	63294.567
	As	75	**66.751**	ug/L	0.533	11415	0.178
	Se	77		ug/L		1981	0.009
	Se	82	**48.549**	ug/L	3.515	731	0.012
	Kr	83		ug/L		24	-0.000
	Sr	88	**43.193**	ug/L	0.865	75741	2.632
	Y	89		ug/L		6920	0.240
	Ag	107	**4.487**	ug/L	0.253	2966	0.103
	Cd	111	**31.931**	ug/L	0.582	4845	0.168
	Cd	114		ug/L		11078	0.385
>	In	115		ug/L		28757	28756.940
	Sn	120	**9.480**	ug/L	1.137	6100	0.206
	Sb	121	**7.872**	ug/L	1.711	4358	0.149
	Sb	123		ug/L		3403	0.116
	Ba	135		ug/L		17003	0.546
	Ba	137	**130.341**	ug/L	0.107	29693	0.953
	Ho	165		ug/L		248	0.008
>	Lu	175		ug/L		31148	31148.236
	Tl	205	**53.020**	ug/L	2.134	50352	1.606
	Pb	208	**46.196**	ug/L	1.374	63953	2.012
	Bi	209		ug/L		141	0.003
	U	238	**0.458**	ug/L	3.533	670	0.021

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		94.4			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		93.7			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232582001
Sample Date/Time: Tuesday, July 14, 2009 15:53:33
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\232582001.184

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**102.632**	ug/L	6.978	32657	0.061
	Be	9	**3.304**	ug/L	4.156	359	0.001
	B	11	**10.058**	ug/L	6.315	1225	0.002
	Na	23	**1561.417**	ug/L	5.195	1615788	3.012
	Mg	24	**8110.676**	ug/L	4.332	5825119	10.915
	Al	27	**33372.194**	ug/L	6.388	35513033	66.505
	P	31	**877.148**	ug/L	1.528	51191	0.091
	K	39	**5129.268**	ug/L	11.695	6079396	10.995
	Ca	43	**7594.370**	ug/L	1.170	17602	0.033
>	Sc	45		ug/L		533248	533248.006
	V	51	**57.290**	ug/L	0.656	68484	0.123
	Cr	52	**31.792**	ug/L	0.312	30988	0.056
	Cr	53		ug/L		25129	-0.009
	Mn	55	**1117.696**	ug/L	0.648	1495495	2.804
	Fe	57	**42706.782**	ug/L	0.185	1113272	2.084
	Co	59	**10.891**	ug/L	1.231	10590	0.020
	Ni	60	**29.680**	ug/L	0.956	5944	0.011
	Cu	63		ug/L		9984	0.018
	Cu	65	**22.628**	ug/L	1.716	4849	0.009
	Zn	66	**192.490**	ug/L	0.731	24706	0.436
	Zn	67		ug/L		6207	0.063
	Zn	68		ug/L		18169	0.318
>	Ge	74		ug/L		56227	56226.705
	As	75	**6.304**	ug/L	9.634	1070	0.017
	Se	77		ug/L		952	-0.005
	Se	82	**3.369**	ug/L	30.913	41	0.001
	Kr	83		ug/L		53	0.001
	Sr	88	**57.045**	ug/L	1.574	94139	3.476
	Y	89		ug/L		241321	8.915
	Ag	107	**0.298**	ug/L	5.955	196	0.007
	Cd	111	**1.223**	ug/L	1.861	182	0.006
	Cd	114		ug/L		41	0.001
>	In	115		ug/L		27068	27067.604
	Sn	120	**4.318**	ug/L	1.152	2708	0.094
	Sb	121	**0.258**	ug/L	14.764	189	0.005
	Sb	123		ug/L		151	0.004
	Ba	135		ug/L		29759	0.936
	Ba	137	**224.854**	ug/L	1.881	52293	1.644
	Ho	165		ug/L		8766	0.275
>	Lu	175		ug/L		31805	31804.684
	Tl	205	**1.492**	ug/L	2.118	1780	0.045
	Pb	208	**56.493**	ug/L	1.356	79571	2.461
	Bi	209		ug/L		1713	0.052
	U	238	**1.529**	ug/L	2.411	2210	0.069

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		87.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		82.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		88.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		95.7			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232582002
Sample Date/Time: Tuesday, July 14, 2009 15:59:25
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\232582002.185

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**63.004**	**ug/L**	4.371	20005	0.038
	Be	9	**1.878**	**ug/L**	11.926	204	0.000
	B	11	**3.061**	**ug/L**	7.660	580	0.001
	Na	23	**1338.543**	**ug/L**	7.604	1378938	2.582
	Mg	24	**4057.035**	**ug/L**	4.178	2906123	5.460
	Al	27	**9775.330**	**ug/L**	2.914	10352772	19.481
	P	31	**884.719**	**ug/L**	0.635	51433	0.092
	K	39	**2642.534**	**ug/L**	3.343	3217232	5.664
	Ca	43	**4144.906**	**ug/L**	1.584	9636	0.018
>	Sc	45		**ug/L**		531553	531553.431
	V	51	**17.652**	**ug/L**	5.387	22873	0.038
	Cr	52	**19.633**	**ug/L**	1.251	19584	0.034
	Cr	53		**ug/L**		22977	-0.013
	Mn	55	**918.295**	**ug/L**	0.895	1224717	2.304
	Fe	57	**32769.142**	**ug/L**	0.855	851746	1.599
	Co	59	**4.255**	**ug/L**	4.702	4176	0.008
	Ni	60	**18.965**	**ug/L**	2.580	3796	0.007
	Cu	63		**ug/L**		4275	0.008
	Cu	65	**10.120**	**ug/L**	2.048	2176	0.004
	Zn	66	**139.642**	**ug/L**	2.349	18243	0.316
	Zn	67		**ug/L**		4929	0.039
	Zn	68		**ug/L**		13422	0.230
>	Ge	74		**ug/L**		57052	57051.609
	As	75	**6.624**	**ug/L**	14.864	1135	0.018
	Se	77		**ug/L**		857	-0.007
	Se	82	**2.191**	**ug/L**	44.838	25	0.001
	Kr	83		**ug/L**		46	0.000
	Sr	88	**26.779**	**ug/L**	1.303	44913	1.632
	Y	89		**ug/L**		207234	7.538
	Ag	107	**0.903**	**ug/L**	4.821	580	0.021
	Cd	111	**1.498**	**ug/L**	5.214	224	0.008
	Cd	114		**ug/L**		134	0.004
>	In	115		**ug/L**		27490	27490.468
	Sn	120	**10.345**	**ug/L**	0.999	6348	0.225
	Sb	121	**0.151**	**ug/L**	19.750	136	0.003
	Sb	123		**ug/L**		110	0.002
	Ba	135		**ug/L**		19309	0.597
	Ba	137	**140.907**	**ug/L**	0.837	33320	1.030
	Ho	165		**ug/L**		7934	0.245
>	Lu	175		**ug/L**		32333	32332.541
	Tl	205	**0.505**	**ug/L**	4.092	845	0.015
	Pb	208	**13.833**	**ug/L**	1.056	20807	0.603
	Bi	209		**ug/L**		937	0.027
	U	238	**1.608**	**ug/L**	1.045	2361	0.072

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		86.9			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		83.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		89.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.3			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 16:22:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.189

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.721**	ug/L	2.434	17869	0.032
	Be	9	**54.294**	ug/L	4.369	6094	0.011
	B	11	**104.977**	ug/L	1.577	10388	0.018
	Na	23	**5409.349**	ug/L	3.581	5814563	10.434
	Mg	24	**5281.969**	ug/L	5.019	3958507	7.108
	Al	27	**4903.249**	ug/L	0.471	5439804	9.771
	P	31	**5149.329**	ug/L	1.246	300269	0.535
	K	39	**5246.163**	ug/L	8.536	6483866	11.245
	Ca	43	**4978.417**	ug/L	0.968	12085	0.021
>	Sc	45		ug/L		556333	556332.751
	V	51	**51.258**	ug/L	1.257	64231	0.110
	Cr	52	**51.867**	ug/L	0.657	51865	0.091
	Cr	53		ug/L		35368	0.007
	Mn	55	**49.355**	ug/L	1.214	69438	0.124
	Fe	57	**5071.933**	ug/L	0.850	139600	0.248
	Co	59	**52.347**	ug/L	0.386	52727	0.095
	Ni	60	**53.501**	ug/L	1.682	11154	0.020
	Cu	63		ug/L		23485	0.042
	Cu	65	**49.602**	ug/L	0.768	11057	0.020
	Zn	66	**51.667**	ug/L	0.846	7370	0.117
	Zn	67		ug/L		4040	0.019
	Zn	68		ug/L		5580	0.086
>	Ge	74		ug/L		61156	61155.930
	As	75	**51.747**	ug/L	2.972	8582	0.138
	Se	77		ug/L		1917	0.009
	Se	82	**49.926**	ug/L	1.390	727	0.012
	Kr	83		ug/L		22	-0.000
	Sr	88	**51.633**	ug/L	1.276	87910	3.146
	Y	89		ug/L		39	0.001
	Ag	107	**51.037**	ug/L	0.214	32637	1.168
	Cd	111	**53.839**	ug/L	2.029	7928	0.284
	Cd	114		ug/L		18352	0.657
>	In	115		ug/L		27922	27922.409
	Sn	120	**49.809**	ug/L	1.071	30381	1.082
	Sb	121	**48.806**	ug/L	4.243	25936	0.927
	Sb	123		ug/L		19812	0.708
	Ba	135		ug/L		6589	0.215
	Ba	137	**51.731**	ug/L	1.499	11566	0.378
	Ho	165		ug/L		9	0.000
>	Lu	175		ug/L		30558	30557.955
	Tl	205	**49.519**	ug/L	2.808	46158	1.499
	Pb	208	**52.204**	ug/L	0.850	70745	2.274
	Bi	209		ug/L		62	0.000
	U	238	**53.470**	ug/L	0.536	73225	2.395

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	107.442				
	Be	9	108.587				
	B	11	104.977				
	Na	23	108.187				
	Mg	24	105.639				
	Al	27	97.094				
	P	31	102.987				
	K	39	104.923				
	Ca	43	99.568				
>	Sc	45		90.9			
	V	51	102.515				
	Cr	52	103.734				
	Cr	53					
	Mn	55	98.710				
	Fe	57	101.439				
	Co	59	104.695				
	Ni	60	107.002				
	Cu	63					
	Cu	65	99.203				
	Zn	66	103.334				
	Zn	67					
	Zn	68					
>	Ge	74		89.7			
	As	75	103.494				
	Se	77					
	Se	82	99.852				
	Kr	83					
	Sr	88	103.267				
	Y	89					
	Ag	107	102.073				
	Cd	111	107.677				
	Cd	114					
>	In	115		91.2			
	Sn	120	99.619				
	Sb	121	97.612				
	Sb	123					
	Ba	135					
	Ba	137	103.463				
	Ho	165					
>	Lu	175		92.0			
	Tl	205	99.038				
	Pb	208	104.408				
	Bi	209					
	U	238	106.941				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 16:28:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.190

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.057**	ug/L	69.534	57	0.000
	Be	9	**0.006**	ug/L	208.472	4	0.000
	B	11	**1.907**	ug/L	28.261	494	0.000
	Na	23	**-1.062**	ug/L	166.187	7669	-0.002
	Mg	24	**0.273**	ug/L	1068.655	1667	0.000
	Al	27	**0.656**	ug/L	410.139	4668	0.001
	P	31	**3.072**	ug/L	35.580	2898	0.000
	K	39	**8.429**	ug/L	306.635	227475	0.018
	Ca	43	**3.566**	ug/L	60.540	145	0.000
>	Sc	45		ug/L		555287	555287.441
	V	51	**-0.260**	ug/L	240.975	2468	-0.001
	Cr	52	**-0.055**	ug/L	97.101	1338	-0.000
	Cr	53		ug/L		30764	-0.001
	Mn	55	**0.069**	ug/L	16.198	638	0.000
	Fe	57	**2.563**	ug/L	78.733	1958	0.000
	Co	59	**0.023**	ug/L	23.944	120	0.000
	Ni	60	**-0.027**	ug/L	61.293	30	-0.000
	Cu	63		ug/L		113	-0.000
	Cu	65	**0.028**	ug/L	128.583	34	0.000
	Zn	66	**0.012**	ug/L	895.728	217	0.000
	Zn	67		ug/L		3000	0.002
	Zn	68		ug/L		309	0.000
>	Ge	74		ug/L		61688	61688.200
	As	75	**-0.098**	ug/L	677.838	122	-0.000
	Se	77		ug/L		1336	-0.001
	Se	82	**0.161**	ug/L	385.184	-3	0.000
	Kr	83		ug/L		26	0.000
	Sr	88	**0.002**	ug/L	503.934	57	0.000
	Y	89		ug/L		13	0.000
	Ag	107	**0.008**	ug/L	55.130	17	0.000
	Cd	111	**0.014**	ug/L	376.666	10	0.000
	Cd	114		ug/L		16	0.000
>	In	115		ug/L		28220	28219.783
	Sn	120	**0.083**	ug/L	10.475	228	0.002
	Sb	121	**0.459**	ug/L	28.864	303	0.009
	Sb	123		ug/L		227	0.006
	Ba	135		ug/L		7	0.000
	Ba	137	**-0.003**	ug/L	353.555	9	-0.000
	Ho	165		ug/L		5	0.000
>	Lu	175		ug/L		30918	30918.065
	Tl	205	**0.208**	ug/L	27.535	529	0.006
	Pb	208	**-0.289**	ug/L	16.715	877	-0.013
	Bi	209		ug/L		52	-0.000
	U	238	**0.025**	ug/L	35.695	65	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		90.8			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		90.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		93.0			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872854
Sample Date/Time: Tuesday, July 14, 2009 16:40:43
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872854.192

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**47.982**	ug/L	7.841	15252	0.029
	Be	9	**3.015**	ug/L	0.933	327	0.001
	B	11	**7.643**	ug/L	3.513	1001	0.001
	Na	23	**556.618**	ug/L	6.458	579185	1.074
	Mg	24	**3851.292**	ug/L	3.425	2758081	5.183
	Al	27	**25356.739**	ug/L	7.628	26958981	50.532
	P	31	**420.832**	ug/L	1.840	25860	0.044
	K	39	**3848.579**	ug/L	3.196	4600457	8.249
	Ca	43	**3390.607**	ug/L	0.224	7920	0.015
>	Sc	45		ug/L		532377	532376.974
	V	51	**38.281**	ug/L	1.500	46586	0.082
	Cr	52	**19.627**	ug/L	1.132	19604	0.034
	Cr	53		ug/L		22761	-0.014
	Mn	55	**1205.019**	ug/L	1.551	1609174	3.023
	Fe	57	**28235.936**	ug/L	1.061	735254	1.378
	Co	59	**9.737**	ug/L	1.317	9461	0.018
	Ni	60	**15.505**	ug/L	2.101	3115	0.006
	Cu	63		ug/L		30270	0.057
	Cu	65	**68.333**	ug/L	1.802	14561	0.027
	Zn	66	**203.434**	ug/L	0.099	26044	0.461
	Zn	67		ug/L		6417	0.067
	Zn	68		ug/L		19463	0.342
>	Ge	74		ug/L		56101	56101.199
	As	75	**8.977**	ug/L	1.537	1469	0.024
	Se	77		ug/L		822	-0.008
	Se	82	**1.948**	ug/L	37.116	21	0.000
	Kr	83		ug/L		38	0.000
	Sr	88	**36.049**	ug/L	1.472	59076	2.197
	Y	89		ug/L		122968	4.576
	Ag	107	**0.263**	ug/L	11.707	173	0.006
	Cd	111	**1.147**	ug/L	3.023	170	0.006
	Cd	114		ug/L		95	0.003
>	In	115		ug/L		26871	26870.543
	Sn	120	**1.770**	ug/L	5.434	1201	0.038
	Sb	121	**0.257**	ug/L	11.926	187	0.005
	Sb	123		ug/L		139	0.003
	Ba	135		ug/L		31538	1.042
	Ba	137	**252.209**	ug/L	1.265	55809	1.844
	Ho	165		ug/L		4277	0.141
>	Lu	175		ug/L		30263	30263.329
	Tl	205	**0.536**	ug/L	6.417	819	0.016
	Pb	208	**29.906**	ug/L	1.817	40660	1.303
	Bi	209		ug/L		1889	0.061
	U	238	**4.680**	ug/L	0.867	6374	0.210

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		87.0			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		82.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		87.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201872855
Sample Date/Time: Tuesday, July 14, 2009 16:46:37
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872855.193

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**73.101**	ug/L	6.208	22891	0.044
	Be	9	**29.176**	ug/L	1.449	3090	0.006
	B	11	**62.863**	ug/L	1.940	5983	0.011
	Na	23	**1556.808**	ug/L	6.407	1585870	3.003
	Mg	24	**5919.560**	ug/L	8.813	4174132	7.966
	Al	27	**38755.377**	ug/L	5.826	40500818	77.233
	P	31	**1482.507**	ug/L	1.830	83355	0.154
	K	39	**6202.737**	ug/L	6.581	7190916	13.296
	Ca	43	**5083.430**	ug/L	0.409	11635	0.022
>	Sc	45		ug/L		524553	524552.689
	V	51	**75.090**	ug/L	1.616	87517	0.162
	Cr	52	**50.045**	ug/L	0.971	47237	0.088
	Cr	53		ug/L		25731	-0.007
	Mn	55	**1269.432**	ug/L	1.321	1670470	3.184
	Fe	57	**39403.716**	ug/L	1.145	1010311	1.923
	Co	59	**38.403**	ug/L	0.380	36496	0.069
	Ni	60	**43.208**	ug/L	1.586	8495	0.016
	Cu	63		ug/L		36854	0.070
	Cu	65	**84.255**	ug/L	1.176	17688	0.034
	Zn	66	**302.295**	ug/L	0.619	38179	0.685
	Zn	67		ug/L		8335	0.103
	Zn	68		ug/L		28205	0.504
>	Ge	74		ug/L		55478	55477.777
	As	75	**49.483**	ug/L	1.239	7450	0.132
	Se	77		ug/L		892	-0.006
	Se	82	**9.532**	ug/L	10.561	122	0.002
	Kr	83		ug/L		42	0.000
	Sr	88	**69.568**	ug/L	0.394	112204	4.239
	Y	89		ug/L		129465	4.893
	Ag	107	**24.444**	ug/L	0.937	14816	0.560
	Cd	111	**7.046**	ug/L	1.104	989	0.037
	Cd	114		ug/L		1714	0.064
>	In	115		ug/L		26457	26456.843
	Sn	120	**17.379**	ug/L	1.336	10152	0.377
	Sb	121	**49.528**	ug/L	1.426	24929	0.940
	Sb	123		ug/L		19249	0.726
	Ba	135		ug/L		40873	1.349
	Ba	137	**321.430**	ug/L	0.644	71201	2.350
	Ho	165		ug/L		4541	0.150
>	Lu	175		ug/L		30292	30292.387
	Tl	205	**46.912**	ug/L	1.907	43363	1.421
	Pb	208	**126.561**	ug/L	0.065	168258	5.514
	Bi	209		ug/L		1921	0.062
	U	238	**30.650**	ug/L	0.672	41622	1.373

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		85.7			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		81.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		86.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.2			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201872859
Sample Date/Time: Tuesday, July 14, 2009 16:52:31
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872859.194

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**71.306**	ug/L	6.199	21946	0.043
	Be	9	**29.853**	ug/L	2.337	3107	0.006
	B	11	**64.334**	ug/L	1.593	6011	0.011
	Na	23	**1591.443**	ug/L	5.810	1589142	3.070
	Mg	24	**4698.432**	ug/L	3.508	3263354	6.323
	Al	27	**31282.846**	ug/L	2.354	32146278	62.342
	P	31	**1465.578**	ug/L	0.737	80980	0.152
	K	39	**4843.969**	ug/L	3.960	5557599	10.383
	Ca	43	**4299.868**	ug/L	1.449	9695	0.019
>	Sc	45		ug/L		515537	515536.979
	V	51	**65.640**	ug/L	1.662	75495	0.141
	Cr	52	**44.886**	ug/L	0.966	41764	0.079
	Cr	53		ug/L		24655	-0.009
	Mn	55	**3677.763**	ug/L	0.124	4756880	9.226
	Fe	57	**37361.626**	ug/L	0.913	941640	1.823
	Co	59	**46.798**	ug/L	1.027	43683	0.085
	Ni	60	**43.149**	ug/L	2.531	8336	0.016
	Cu	63		ug/L		40046	0.077
	Cu	65	**93.783**	ug/L	0.899	19348	0.037
	Zn	66	**248.906**	ug/L	0.940	31070	0.564
	Zn	67		ug/L		7232	0.085
	Zn	68		ug/L		23337	0.421
>	Ge	74		ug/L		54786	54786.446
	As	75	**51.282**	ug/L	0.469	7619	0.137
	Se	77		ug/L		822	-0.007
	Se	82	**10.123**	ug/L	5.705	128	0.002
	Kr	83		ug/L		42	0.000
	Sr	88	**61.553**	ug/L	0.855	98443	3.751
	Y	89		ug/L		131223	5.002
	Ag	107	**24.744**	ug/L	1.875	14870	0.566
	Cd	111	**7.036**	ug/L	5.090	979	0.037
	Cd	114		ug/L		1642	0.062
>	In	115		ug/L		26232	26231.836
	Sn	120	**20.332**	ug/L	0.891	11748	0.442
	Sb	121	**56.852**	ug/L	0.300	28366	1.079
	Sb	123		ug/L		21530	0.819
	Ba	135		ug/L		50629	1.693
	Ba	137	**406.013**	ug/L	1.716	88768	2.969
	Ho	165		ug/L		4554	0.152
>	Lu	175		ug/L		29900	29899.891
	Tl	205	**48.279**	ug/L	1.172	44034	1.462
	Pb	208	**124.852**	ug/L	0.953	163849	5.439
	Bi	209		ug/L		1946	0.063
	U	238	**29.952**	ug/L	1.043	40147	1.342

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		84.3			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		80.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		85.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		90.0			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201872856
Sample Date/Time: Tuesday, July 14, 2009 16:58:25
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881838|10|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872856.195

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**7.367**	**ug/L**	6.391	2402	0.004
	Be	9	**0.550**	**ug/L**	8.099	63	0.000
	B	11	**2.524**	**ug/L**	15.694	537	0.000
	Na	23	**92.830**	**ug/L**	5.881	105053	0.179
	Mg	24	**738.712**	**ug/L**	4.798	536215	0.994
	Al	27	**5563.289**	**ug/L**	7.317	5979108	11.087
	P	31	**86.810**	**ug/L**	3.926	7487	0.009
	K	39	**720.022**	**ug/L**	6.002	1042434	1.543
	Ca	43	**692.209**	**ug/L**	4.944	1739	0.003
>	Sc	45		**ug/L**		538457	538457.228
	V	51	**7.825**	**ug/L**	5.814	11761	0.017
	Cr	52	**3.781**	**ug/L**	1.957	4910	0.007
	Cr	53		**ug/L**		26359	-0.008
	Mn	55	**189.892**	**ug/L**	0.753	256986	0.476
	Fe	57	**5945.090**	**ug/L**	1.088	158034	0.290
	Co	59	**1.761**	**ug/L**	3.043	1808	0.003
	Ni	60	**3.083**	**ug/L**	4.678	654	0.001
	Cu	63		**ug/L**		4626	0.008
	Cu	65	**10.253**	**ug/L**	1.994	2234	0.004
	Zn	66	**37.926**	**ug/L**	1.430	5303	0.086
	Zn	67		**ug/L**		3432	0.011
	Zn	68		**ug/L**		4108	0.064
>	Ge	74		**ug/L**		59322	59322.205
	As	75	**1.019**	**ug/L**	55.469	293	0.003
	Se	77		**ug/L**		997	-0.005
	Se	82	**0.461**	**ug/L**	69.429	1	0.000
	Kr	83		**ug/L**		24	-0.000
	Sr	88	**7.139**	**ug/L**	0.841	11962	0.435
	Y	89		**ug/L**		22831	0.834
	Ag	107	**0.041**	**ug/L**	21.278	37	0.001
	Cd	111	**0.158**	**ug/L**	10.596	30	0.001
	Cd	114		**ug/L**		29	0.001
>	In	115		**ug/L**		27377	27377.423
	Sn	120	**0.272**	**ug/L**	12.669	334	0.006
	Sb	121	**0.079**	**ug/L**	35.014	98	0.002
	Sb	123		**ug/L**		79	0.001
	Ba	135		**ug/L**		6013	0.200
	Ba	137	**48.102**	**ug/L**	2.746	10586	0.352
	Ho	165		**ug/L**		761	0.025
>	Lu	175		**ug/L**		30078	30077.934
	Tl	205	**0.238**	**ug/L**	14.738	542	0.007
	Pb	208	**5.505**	**ug/L**	1.307	8444	0.240
	Bi	209		**ug/L**		362	0.010
	U	238	**1.029**	**ug/L**	1.161	1416	0.046

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			88.0		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			87.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			89.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			90.5		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 17:04:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.196

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.919**	**ug/L**	6.410	17207	0.032
	Be	9	**54.843**	**ug/L**	1.820	5916	0.011
	B	11	**108.476**	**ug/L**	2.848	10298	0.019
	Na	23	**5468.215**	**ug/L**	4.115	5643546	10.548
	Mg	24	**5192.128**	**ug/L**	2.690	3739662	6.987
	Al	27	**5142.074**	**ug/L**	8.580	5483447	10.247
	P	31	**5248.839**	**ug/L**	1.066	293913	0.545
	K	39	**4932.597**	**ug/L**	5.250	5872530	10.573
	Ca	43	**5035.777**	**ug/L**	1.322	11744	0.022
>	Sc	45		**ug/L**		534634	534634.036
	V	51	**52.445**	**ug/L**	2.690	63028	0.113
	Cr	52	**53.255**	**ug/L**	1.409	51112	0.093
	Cr	53		**ug/L**		34500	0.008
	Mn	55	**50.223**	**ug/L**	1.965	67835	0.126
	Fe	57	**5202.995**	**ug/L**	2.866	137450	0.254
	Co	59	**53.741**	**ug/L**	2.620	51975	0.097
	Ni	60	**54.635**	**ug/L**	3.331	10930	0.020
	Cu	63		**ug/L**		22880	0.043
	Cu	65	**51.097**	**ug/L**	2.128	10939	0.020
	Zn	66	**52.237**	**ug/L**	4.014	7232	0.118
	Zn	67		**ug/L**		4045	0.021
	Zn	68		**ug/L**		5529	0.088
>	Ge	74		**ug/L**		59443	59443.167
	As	75	**51.784**	**ug/L**	0.710	8345	0.138
	Se	77		**ug/L**		1820	0.008
	Se	82	**50.310**	**ug/L**	5.085	712	0.012
	Kr	83		**ug/L**		30	0.000
	Sr	88	**52.709**	**ug/L**	3.750	86074	3.212
	Y	89		**ug/L**		34	0.001
	Ag	107	**52.406**	**ug/L**	4.577	32135	1.200
	Cd	111	**55.669**	**ug/L**	5.658	7857	0.293
	Cd	114		**ug/L**		17892	0.668
>	In	115		**ug/L**		26819	26818.880
	Sn	120	**51.268**	**ug/L**	5.180	29979	1.113
	Sb	121	**50.360**	**ug/L**	1.385	25688	0.956
	Sb	123		**ug/L**		19625	0.730
	Ba	135		**ug/L**		6609	0.225
	Ba	137	**53.845**	**ug/L**	3.247	11538	0.394
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		29304	29304.343
	Tl	205	**50.636**	**ug/L**	0.253	45252	1.533
	Pb	208	**53.735**	**ug/L**	3.895	69737	2.341
	Bi	209		**ug/L**		51	0.000
	U	238	**54.667**	**ug/L**	3.788	71731	2.449

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	107.839				
	Be	9	109.686				
	B	11	108.476				
	Na	23	109.364				
	Mg	24	103.843				
	Al	27	101.823				
	P	31	104.977				
	K	39	98.652				
	Ca	43	100.716				
>	Sc	45		87.4			
	V	51	104.890				
	Cr	52	106.509				
	Cr	53					
	Mn	55	100.446				
	Fe	57	104.060				
	Co	59	107.481				
	Ni	60	109.269				
	Cu	63					
	Cu	65	102.194				
	Zn	66	104.473				
	Zn	67					
	Zn	68					
>	Ge	74		87.1			
	As	75	103.568				
	Se	77					
	Se	82	100.620				
	Kr	83					
	Sr	88	105.417				
	Y	89					
	Ag	107	104.811				
	Cd	111	111.339				
	Cd	114					
>	In	115		87.6			
	Sn	120	102.535				
	Sb	121	100.719				
	Sb	123					
	Ba	135					
	Ba	137	107.690				
	Ho	165					
>	Lu	175		88.2			
	Tl	205	101.273				
	Pb	208	107.470				
	Bi	209					
	U	238	109.334				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Cd	111	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 17:10:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.197

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.057**	ug/L	21.924	57	0.000
	Be	9	**0.010**	ug/L	143.757	5	0.000
	B	11	**2.103**	ug/L	21.688	507	0.000
	Na	23	**-1.282**	ug/L	292.138	7336	-0.002
	Mg	24	**0.261**	ug/L	817.365	1667	0.000
	Al	27	**-1.115**	ug/L	168.542	2667	-0.002
	P	31	**1.770**	ug/L	66.105	2788	0.000
	K	39	**17.161**	ug/L	64.299	235596	0.037
	Ca	43	**1.921**	ug/L	423.510	139	0.000
>	Sc	45		ug/L		548825	548825.465
	V	51	**-0.918**	ug/L	36.992	1661	-0.002
	Cr	52	**-0.201**	ug/L	22.424	1183	-0.000
	Cr	53		ug/L		29729	-0.002
	Mn	55	**0.127**	ug/L	25.490	710	0.000
	Fe	57	**3.311**	ug/L	68.990	1954	0.000
	Co	59	**0.011**	ug/L	90.639	106	0.000
	Ni	60	**0.005**	ug/L	545.329	36	0.000
	Cu	63		ug/L		97	-0.000
	Cu	65	**0.024**	ug/L	13.865	33	0.000
	Zn	66	**-0.002**	ug/L	953.717	211	-0.000
	Zn	67		ug/L		2969	0.002
	Zn	68		ug/L		348	0.001
>	Ge	74		ug/L		60487	60486.735
	As	75	**-0.229**	ug/L	412.924	100	-0.001
	Se	77		ug/L		1191	-0.003
	Se	82	**0.459**	ug/L	136.846	1	0.000
	Kr	83		ug/L		22	-0.000
	Sr	88	**-0.000**	ug/L	610.028	53	-0.000
	Y	89		ug/L		17	0.000
	Ag	107	**0.004**	ug/L	146.616	14	0.000
	Cd	111	**-0.014**	ug/L	248.996	5	-0.000
	Cd	114		ug/L		17	0.000
>	In	115		ug/L		27764	27763.733
	Sn	120	**0.135**	ug/L	49.600	255	0.003
	Sb	121	**0.465**	ug/L	19.822	302	0.009
	Sb	123		ug/L		233	0.006
	Ba	135		ug/L		12	0.000
	Ba	137	**-0.007**	ug/L	310.791	8	-0.000
	Ho	165		ug/L		2	-0.000
>	Lu	175		ug/L		30026	30026.490
	Tl	205	**0.229**	ug/L	5.810	533	0.007
	Pb	208	**-0.321**	ug/L	8.890	810	-0.014
	Bi	209		ug/L		40	-0.000
	U	238	**0.032**	ug/L	5.554	72	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		89.7			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		88.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		90.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		90.4			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, July 14, 2009 19:53:01
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090704\Sample.062
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	820.4	820.424	38.923	4.7
	Mg	24.0	13528.4	13528.403	144.156	1.1
	Co	58.9	20541.2	20541.160	298.001	1.5
	Rh	102.9	32961.2	32961.187	455.921	1.4
	In	114.9	36375.7	36375.658	432.887	1.2
	Pb	208.0	16323.7	16323.722	232.178	1.4
⌈>	Ba	137.9	31346.3	31346.326	459.318	1.5
⌊	Ba++	69.0	1245.3	0.040	0.000	1.2
⌈>	Ce	139.9	42282.1	42282.081	197.657	0.5
⌊	CeO	155.9	884.0	0.021	0.000	2.0
	Bkgd	220.0	4.3	4.300	1.441	33.5

Current Optimization File Data

Current Value	Description
0.86	Nebulizer Gas Flow
6.50	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	9.3	2341.9
Co	59	25	10.5	32482.6
In	115	25	12.5	43915.1

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	587	2080	0.616
Be	9.0	9.0	2043	2080	0.614
Mg	24.0	24.0	5700	2120	0.603
Mg	25.0	25.0	5922	2080	0.689
Mg	26.0	26.1	6167	2120	0.663
Co	58.9	58.9	14167	2170	0.630
Rh	102.9	102.9	24872	2230	0.697
In	114.9	114.8	27784	2260	0.707
Ce	139.9	139.9	33862	2280	0.775
Pb	206.0	206.0	49936	2420	0.660
Pb	207.0	207.0	50183	2385	0.734
Pb	208.0	208.0	50439	2430	0.738
U	238.1	238.1	57737	2470	0.720

Report Date/Time: Tuesday, July 14, 2009 10:50:13

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 22:24:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Blank.098

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		657008	
⌊	Ni	60		ug/L		199	
⌈>	Ge	74		ug/L		139642	
|	As	75		ug/L		433	
|	Se	77		ug/L		4579	
|	Se	82		ug/L		-30	
⌊	Kr	83		ug/L		75	
⌈>	Lu	175		ug/L		62258	
⌊	Tl	205		ug/L		612	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 22:28:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Standard 1.099

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		625204	625203.538
	Ni	60	**10.000**	**ug/L**	2.103	5180	0.008
>	Ge	74		**ug/L**		138863	138862.562
	As	75	**10.000**	**ug/L**	7.356	4250	0.028
	Se	77		**ug/L**		4993	0.003
	Se	82	**10.000**	**ug/L**	2.294	273	0.002
	Kr	83		**ug/L**		89	0.000
>	Lu	175		**ug/L**		62108	62108.009
	Tl	205	**10.000**	**ug/L**	1.705	21724	0.340

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 22:32:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Standard 2.100

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		625395	625394.863
⌊	Ni	60	**99.981**	**ug/L**	6.692	49086	0.078
⌈>	Ge	74		**ug/L**		138384	138383.549
|	As	75	**100.050**	**ug/L**	2.493	40530	0.290
|	Se	77		**ug/L**		7887	0.024
|	Se	82	**100.049**	**ug/L**	2.656	3149	0.023
⌊	Kr	83		**ug/L**		84	0.000
⌈>	Lu	175		**ug/L**		61801	61800.677
⌊	Tl	205	**99.992**	**ug/L**	1.819	209020	3.372

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 22:36:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 1.101

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		621903	621902.817
	Ni	60	**53.641**	**ug/L**	6.065	26280	0.042
>	Ge	74		**ug/L**		137728	137727.518
	As	75	**49.430**	**ug/L**	2.066	20142	0.143
	Se	77		**ug/L**		6835	0.017
	Se	82	**49.144**	**ug/L**	2.595	1524	0.011
	Kr	83		**ug/L**		86	0.000
>	Lu	175		**ug/L**		62219	62218.898
	Tl	205	**50.970**	**ug/L**	2.434	107526	1.719

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		94.7			
	Ni	60	107.283				
>	Ge	74		98.6			
	As	75	98.859				
	Se	77					
	Se	82	98.288				
	Kr	83					
>	Lu	175		99.9			
	Tl	205	101.940				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 22:40:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 2.102

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		638028	638028.154
	Ni	60	**0.021**	**ug/L**	15.899	204	0.000
>	Ge	74		**ug/L**		138914	138913.830
	As	75	**0.514**	**ug/L**	100.192	640	0.001
	Se	77		**ug/L**		5620	0.008
	Se	82	**0.081**	**ug/L**	231.553	-27	0.000
	Kr	83		**ug/L**		79	0.000
>	Lu	175		**ug/L**		61573	61572.703
	Tl	205	**0.030**	**ug/L**	26.830	668	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		97.1			
	Ni	60					
>	Ge	74		99.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		98.9			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 22:44:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 3.103

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		672410	672409.502
⌊	Ni	60	**1.935**	**ug/L**	3.900	1222	0.002
⌈>	Ge	74		**ug/L**		139193	139192.553
|	As	75	**6.170**	**ug/L**	9.997	2919	0.018
|	Se	77		**ug/L**		5443	0.006
|	Se	82	**5.039**	**ug/L**	10.843	131	0.001
⌊	Kr	83		**ug/L**		71	-0.000
⌈>	Lu	175		**ug/L**		62075	62074.939
⌊	Tl	205	**1.043**	**ug/L**	4.211	2792	0.035

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		102.3			
⌊	Ni	60	96.758				
⌈>	Ge	74		99.7			
|	As	75	123.408				
|	Se	77					
|	Se	82	100.772				
⌊	Kr	83					
⌈>	Lu	175		99.7			
⌊	Tl	205	104.270				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 22:48:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 4.104

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		593709	593709.396
	Ni	60	**4.248**	**ug/L**	0.888	2155	0.003
>	Ge	74		**ug/L**		126707	126706.888
	As	75	**2.085**	**ug/L**	32.591	1155	0.006
	Se	77		**ug/L**		6543	0.019
	Se	82	**-1.091**	**ug/L**	36.458	-59	-0.000
	Kr	83		**ug/L**		137	0.001
>	Lu	175		**ug/L**		59433	59432.644
	Tl	205	**-0.000**	**ug/L**	2029.393	584	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		90.4			
⌊	Ni	60	157.343				
⌈>	Ge	74		90.7			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		95.5			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 22:52:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 5.105

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		581319	581319.085
⌊	Ni	60	**22.668**	**ug/L**	1.325	10497	0.018
⌈>	Ge	74		**ug/L**		125137	125136.997
|	As	75	**22.580**	**ug/L**	4.145	8572	0.065
|	Se	77		**ug/L**		6637	0.020
|	Se	82	**20.745**	**ug/L**	2.965	569	0.005
⌊	Kr	83		**ug/L**		129	0.000
⌈>	Lu	175		**ug/L**		59386	59385.775
⌊	Tl	205	**17.962**	**ug/L**	0.466	36559	0.606

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		88.5			
	Ni	60	99.860				
>	Ge	74		89.6			
	As	75	112.901				
	Se	77					
	Se	82	103.726				
	Kr	83					
>	Lu	175		95.4			
	Tl	205	89.811				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 22:56:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.106

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		623646	623645.642
	Ni	60	**53.457**	**ug/L**	2.546	26291	0.042
>	Ge	74		**ug/L**		135006	135006.379
	As	75	**48.647**	**ug/L**	1.214	19448	0.141
	Se	77		**ug/L**		7079	0.020
	Se	82	**50.626**	**ug/L**	1.623	1540	0.012
	Kr	83		**ug/L**		**74**	0.000
>	Lu	175		**ug/L**		60927	60926.599
	Tl	205	**49.647**	**ug/L**	2.083	102595	1.674

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		94.9			
	Ni	60	106.914				
>	Ge	74		96.7			
	As	75	97.294				
	Se	77					
	Se	82	101.253				
	Kr	83					
>	Lu	175		97.9			
	Tl	205	99.294				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 23:00:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.107

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		ug/L		623407	623407.475
	Ni	60	**-0.024**	ug/L	223.586	177	-0.000
>	Ge	74		ug/L		137165	137164.983
	As	75	**0.403**	ug/L	199.518	587	0.001
	Se	77		ug/L		6289	0.013
	Se	82	**-0.087**	ug/L	570.190	-32	-0.000
	Kr	83		ug/L		80	0.000
>	Lu	175		ug/L		61198	61198.427
	Tl	205	**0.007**	ug/L	188.729	616	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		94.9			
	Ni	60					
>	Ge	74		98.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		98.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872852
Sample Date/Time: Tuesday, July 14, 2009 23:04:42
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872852.108

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		656617	656617.301
	Ni	60	**0.162**	**ug/L**	40.244	281	0.000
>	Ge	74		**ug/L**		135207	135206.881
	As	75	**0.046**	**ug/L**	1554.634	440	0.000
	Se	77		**ug/L**		4571	0.001
	Se	82	**-0.148**	**ug/L**	162.716	-34	-0.000
	Kr	83		**ug/L**		79	0.000
>	Lu	175		**ug/L**		62186	62186.351
	Tl	205	**0.214**	**ug/L**	2.849	1061	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		99.9			
	Ni	60					
>	Ge	74		96.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		99.9			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872853
Sample Date/Time: Tuesday, July 14, 2009 23:08:41
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881838|40|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872853.109

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		629928	629927.659
	Ni	60	**27.948**	**ug/L**	3.616	13976	0.022
>	Ge	74		**ug/L**		137456	137455.728
	As	75	**67.220**	**ug/L**	2.629	27185	0.195
	Se	77		**ug/L**		7315	0.020
	Se	82	**47.852**	**ug/L**	1.730	1481	0.011
	Kr	83		**ug/L**		83	0.000
>	Lu	175		**ug/L**		62363	62363.479
	Tl	205	**47.611**	**ug/L**	5.125	100726	1.606

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		95.9			
	Ni	60					
>	Ge	74		98.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.2			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232582001
Sample Date/Time: Tuesday, July 14, 2009 23:12:40
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\232582001.110

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		654148	654147.886
	Ni	60	**28.275**	**ug/L**	3.692	14682	0.022
>	Ge	74		**ug/L**		133434	133433.996
	As	75	**6.598**	**ug/L**	1.216	2965	0.019
	Se	77		**ug/L**		3857	-0.004
	Se	82	**2.848**	**ug/L**	10.600	59	0.001
	Kr	83		**ug/L**		166	0.001
>	Lu	175		**ug/L**		67698	67697.720
	Tl	205	**1.392**	**ug/L**	2.666	3844	0.047

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		99.6			
⌊	Ni	60					
⌈>	Ge	74		95.6			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		108.7			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232582002
Sample Date/Time: Tuesday, July 14, 2009 23:16:39
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\232582002.111

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		644268	644268.141
	Ni	60	**17.975**	**ug/L**	5.164	9254	0.014
>	Ge	74		**ug/L**		133410	133409.711
	As	75	**6.889**	**ug/L**	11.354	3078	0.020
	Se	77		**ug/L**		3507	-0.007
	Se	82	**3.046**	**ug/L**	16.900	65	0.001
	Kr	83		**ug/L**		150	0.001
>	Lu	175		**ug/L**		67514	67514.268
	Tl	205	**0.485**	**ug/L**	4.572	1768	0.016

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		98.1			
	Ni	60					
>	Ge	74		95.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		108.4			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 23:32:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.115

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		639620	639619.673
	Ni	60	**50.965**	**ug/L**	1.773	25729	0.040
>	Ge	74		**ug/L**		132949	132948.783
	As	75	**49.172**	**ug/L**	2.618	19350	0.142
	Se	77		**ug/L**		6005	0.012
	Se	82	**51.118**	**ug/L**	2.412	1531	0.012
	Kr	83		**ug/L**		78	0.000
>	Lu	175		**ug/L**		61428	61428.114
	Tl	205	**47.386**	**ug/L**	1.524	98782	1.598

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		97.4			
⌊	Ni	60	101.929				
⌈>	Ge	74		95.2			
|	As	75	98.344				
|	Se	77					
|	Se	82	102.235				
⌊	Kr	83					
⌈>	Lu	175		98.7			
⌊	Tl	205	94.771				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 23:36:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.116

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		665749	665749.038
	Ni	60	**0.040**	**ug/L**	50.394	222	0.000
>	Ge	74		**ug/L**		137288	137288.069
	As	75	**0.679**	**ug/L**	215.234	695	0.002
	Se	77		**ug/L**		4997	0.004
	Se	82	**0.132**	**ug/L**	389.412	-25	0.000
	Kr	83		**ug/L**		74	0.000
>	Lu	175		**ug/L**		61419	61418.742
	Tl	205	**0.127**	**ug/L**	11.783	867	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		101.3			
⌊	Ni	60					
⌈>	Ge	74		98.3			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		98.7			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872854
Sample Date/Time: Tuesday, July 14, 2009 23:44:32
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872854.118

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		664451	664450.730
	Ni	60	**14.618**	**ug/L**	5.280	7801	0.011
>	Ge	74		**ug/L**		129667	129666.865
	As	75	**8.226**	**ug/L**	8.305	3492	0.024
	Se	77		**ug/L**		2877	-0.011
	Se	82	**1.058**	**ug/L**	93.832	4	0.000
	Kr	83		**ug/L**		121	0.000
>	Lu	175		**ug/L**		64317	64317.121
	Tl	205	**0.455**	**ug/L**	3.323	1619	0.015

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		101.1			
⌊	Ni	60					
⌈>	Ge	74		92.9			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		103.3			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872855
Sample Date/Time: Tuesday, July 14, 2009 23:48:31
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872855.119

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		652467	652466.704
⌊	Ni	60	**40.805**	**ug/L**	1.330	21053	0.032
⌈>	Ge	74		**ug/L**		130186	130186.475
|	As	75	**48.353**	**ug/L**	2.185	18641	0.140
|	Se	77		**ug/L**		3036	-0.009
|	Se	82	**9.177**	**ug/L**	10.620	246	0.002
⌊	Kr	83		**ug/L**		126	0.000
⌈>	Lu	175		**ug/L**		64348	64347.593
⌊	Tl	205	**44.274**	**ug/L**	2.140	96710	1.493

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		99.3			
⌊	Ni	60					
⌈>	Ge	74		93.2			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		103.4			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872859
Sample Date/Time: Tuesday, July 14, 2009 23:52:30
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872859.120

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		667009	667008.928
	Ni	60	**39.297**	**ug/L**	5.508	20709	0.031
>	Ge	74		**ug/L**		130477	130476.859
	As	75	**50.004**	**ug/L**	0.806	19309	0.145
	Se	77		**ug/L**		3016	-0.010
	Se	82	**9.462**	**ug/L**	7.844	256	0.002
	Kr	83		**ug/L**		123	0.000
>	Lu	175		**ug/L**		64951	64951.324
	Tl	205	**45.459**	**ug/L**	0.806	100217	1.533

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		101.5			
⌊	Ni	60					
⌈>	Ge	74		93.4			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		104.3			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872856
Sample Date/Time: Tuesday, July 14, 2009 23:56:29
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881838|10|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872856.121

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		635635	635635.271
⌊	Ni	60	**3.098**	**ug/L**	7.416	1734	0.002
⌈>	Ge	74		**ug/L**		130839	130839.181
|	As	75	**1.921**	**ug/L**	31.857	1132	0.006
|	Se	77		**ug/L**		3460	-0.006
|	Se	82	**0.065**	**ug/L**	706.903	-26	0.000
⌊	Kr	83		**ug/L**		84	0.000
⌈>	Lu	175		**ug/L**		61607	61607.188
⌊	Tl	205	**0.270**	**ug/L**	5.910	1167	0.009

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		96.7			
	Ni	60					
>	Ge	74		93.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		99.0			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 15, 2009 00:00:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.122

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		664694	664694.302
	Ni	60	**48.496**	**ug/L**	3.407	25441	0.038
>	Ge	74		**ug/L**		129524	129523.731
	As	75	**48.978**	**ug/L**	2.888	18775	0.142
	Se	77		**ug/L**		5593	0.010
	Se	82	**52.232**	**ug/L**	1.816	1525	0.012
	Kr	83		**ug/L**		79	0.000
>	Lu	175		**ug/L**		60100	60099.823
	Tl	205	**48.249**	**ug/L**	1.863	98382	1.627

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		101.2			
⌊	Ni	60	96.992				
⌈>	Ge	74		92.8			
|	As	75	97.955				
|	Se	77					
|	Se	82	104.465				
⌊	Kr	83					
⌈>	Lu	175		96.5			
⌊	Tl	205	96.498				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 15, 2009 00:04:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.123

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		657563	657563.488
⌊	Ni	60	**0.065**	**ug/L**	158.866	232	0.000
⌈>	Ge	74		**ug/L**		134753	134752.611
|	As	75	**0.709**	**ug/L**	53.863	695	0.002
|	Se	77		**ug/L**		4604	0.001
|	Se	82	**-0.277**	**ug/L**	244.659	-37	-0.000
⌊	Kr	83		**ug/L**		86	0.000
⌈>	Lu	175		**ug/L**		60276	60275.942
⌊	Tl	205	**0.133**	**ug/L**	7.473	863	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		100.1			
	Ni	60					
>	Ge	74		96.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		96.8			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL
Method Description: 7471A, ILM04 ANALYST JXL1
Element: Hg

Date: 07/13/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 071309S1.SIF Results Data Set Name: 071309S2

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/13/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0026	0.0026	09:36:04	No
2			0.0025	0.0025	09:36:39	No
Mean:			0.0025			
SD :			0.0001			
%RSD:			2.0116			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/13/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0047	0.0072	09:38:01	No
2			0.0046	0.0071	09:38:35	No
Mean:			0.0046			
SD :			0.0001			
%RSD:			1.1672			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.02310
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/13/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0089	0.0114	09:39:58	No
2			0.0089	0.0115	09:40:33	No
Mean:			0.0089			
SD :			0.0001			
%RSD:			0.5682			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99055 Slope: 0.01750
Intercept : 0.00042

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/13/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0294	0.0320	09:41:58	No
2			0.0290	0.0315	09:42:33	No
Mean:			0.0292			
SD :			0.0003			
%RSD:			1.1424			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99775 Slope: 0.01416
Intercept : 0.00112

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/13/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0650	0.0676	09:43:58	No
2			0.0670	0.0695	09:44:32	No
Mean:			0.0660			
SD :			0.0014			
%RSD:			2.0933			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99895 Slope: 0.01299
Intercept : 0.00174

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/13/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1277	0.1302	09:45:59	No
2			0.1281	0.1306	09:46:33	No
Mean:			0.1279			
SD :			0.0003			
%RSD:			0.1987			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99964 Slope: 0.01265
Intercept : 0.00213

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0025	---	----	----	----
S0.2	0.0046	0.200	0.197	0.0001	1.2
S0.5	0.0089	0.500	0.535	0.0001	0.6
S2.0	0.0292	2.000	2.141	0.0003	1.1
S5.0	0.0660	5.000	5.051	0.0014	2.1
S10	0.1279	10.000	9.945	0.0003	0.2
Calib Blank	0.0025	---	----	----	----

Correlation Coefficient: 0.99964 Slope: 0.01265 Intercept: 0.0021

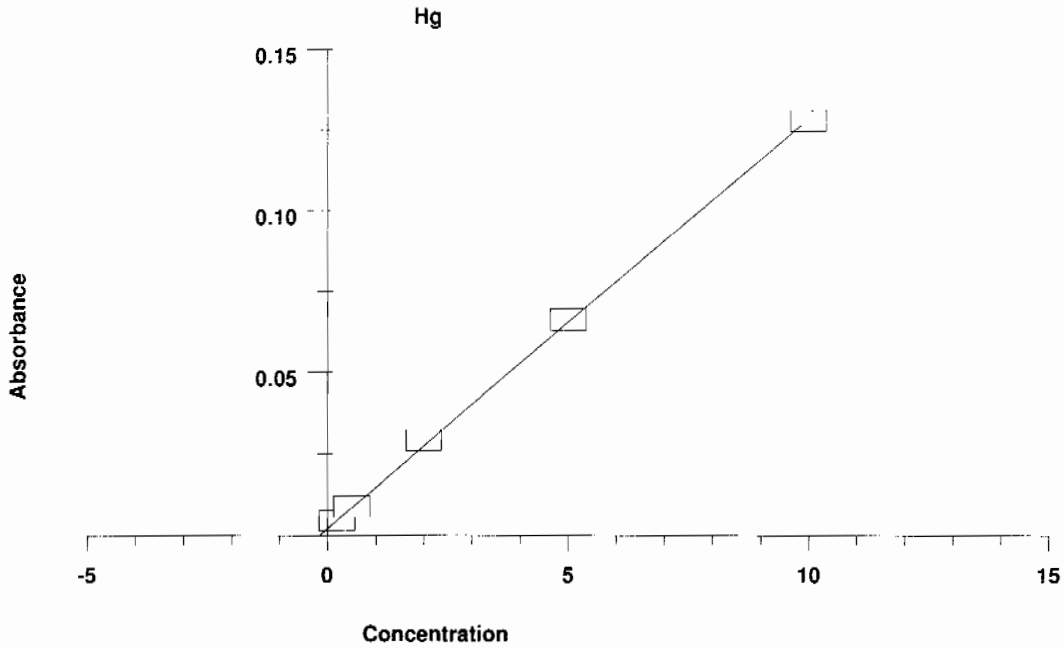

==========

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/13/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.179	5.179	0.0676	0.0702	09:48:02	No
2	5.264	5.264	0.0687	0.0712	09:48:37	No
Mean:	5.221	5.221	0.0682			
SD :	0.0602	0.0602	0.0008			
%RSD:	1.2	1.2	1.1171			

QC value within specified limits.

==========

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/13/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.117	-0.117	0.0007	0.0032	09:49:59	No
2	-0.126	-0.126	0.0005	0.0031	09:50:34	No
Mean:	-0.121	-0.121	0.0006			
SD :	0.0064	0.0064	0.0001			
%RSD:	5.3	5.3	13.7540			

QC value within specified limits.

==========

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/13/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.156	0.156	0.0041	0.0066	09:51:56	No
2	0.135	0.135	0.0038	0.0064	09:52:31	No
Mean:	0.146	0.146	0.0040			
SD :	0.0146	0.0146	0.0002			
%RSD:	10.0	10.0	4.6526			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	09:53:56	No
2	5.219	5.219	0.0681	0.0707	09:54:31	No
Mean:	5.160	5.160	0.0674			
SD :	0.0831	0.0831	0.0011			
%RSD:	1.6	1.6	1.5602			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.014	0.014	0.0023	0.0048	09:55:59	No
2	0.023	0.023	0.0024	0.0050	09:56:34	No
Mean:	0.019	0.019	0.0024			
SD :	0.0063	0.0063	0.0001			
%RSD:	33.8	33.8	3.3712			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/13/2009
Sample ID: 1201870737|i||880997|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.145	-0.145	0.0003	0.0028	09:58:00	No
2	-0.154	-0.154	0.0002	0.0027	09:58:35	No
Mean:	-0.150	-0.150	0.0002			
SD :	0.0066	0.0066	0.0001			
%RSD:	4.4	4.4	35.8425			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/13/2009
Sample ID: 1201870738|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.783	3.783	0.0500	0.0525	10:00:01	No
2	3.816	3.816	0.0504	0.0529	10:00:35	No
Mean:	3.800	3.800	0.0502			
SD :	0.0230	0.0230	0.0003			
%RSD:	0.6	0.6	0.5806			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/13/2009
Sample ID: 232424001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.002	-0.002	0.0021	0.0046	10:02:01	No
2	-0.007	-0.007	0.0020	0.0046	10:02:35	No
Mean:	-0.005	-0.005	0.0021			
SD :	0.0040	0.0040	0.0001			
%RSD:	86.6	86.6	2.4535			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/13/2009
Sample ID: 232426001|i|||

%RSD: 1.7 1.7 1.5996

==========

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/13/2009
Sample ID: 1201870745|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.025	0.025	0.0024	0.0050	10:15:50	No
2	-0.002	-0.002	0.0021	0.0046	10:16:25	No
Mean:	0.012	0.012	0.0023			
SD :	0.0185	0.0185	0.0002			
%RSD:	159.8	159.8	10.3056			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	10:17:50	No
2	4.942	4.942	0.0646	0.0672	10:18:24	No
Mean:	5.022	5.022	0.0656			
SD :	0.1122	0.1122	0.0014			
%RSD:	2.2	2.2	2.1625			

QC value within specified limits.

==========

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.043	-0.043	0.0016	0.0041	10:19:52	No
2	-0.052	-0.052	0.0015	0.0040	10:20:27	No
Mean:	-0.048	-0.048	0.0015			
SD :	0.0057	0.0057	0.0001			
%RSD:	11.9	11.9	4.7042			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/13/2009
Sample ID: 232429002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.240	0.240	0.0052	0.0077	10:21:52	No
2	0.235	0.235	0.0051	0.0076	10:22:27	No
Mean:	0.238	0.238	0.0051			
SD :	0.0035	0.0035	0.0000			
%RSD:	1.5	1.5	0.8527			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/13/2009
Sample ID: 232429003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.189	0.189	0.0045	0.0070	10:23:51	No
2	0.176	0.176	0.0044	0.0069	10:24:26	No
Mean:	0.183	0.183	0.0044			
SD :	0.0087	0.0087	0.0001			
%RSD:	4.8	4.8	2.4733			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/13/2009
Sample ID: 232429004|i|||

%RSD: 1.7 1.7 1.4172

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/13/2009
Sample ID: 232429010|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.233	0.233	0.0051	0.0076	10:37:52	No
2	0.223	0.223	0.0049	0.0075	10:38:27	No
Mean:	0.228	0.228	0.0050			
SD :	0.0069	0.0069	0.0001			
%RSD:	3.0	3.0	1.7516			

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/13/2009
Sample ID: 232429011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.044	0.044	0.0027	0.0052	10:39:54	No
2	0.039	0.039	0.0026	0.0052	10:40:28	No
Mean:	0.042	0.042	0.0027			
SD :	0.0041	0.0041	0.0001			
%RSD:	9.8	9.8	1.9407			

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.042	5.042	0.0659	0.0684	10:41:55	No
2	5.045	5.045	0.0659	0.0685	10:42:29	No
Mean:	5.044	5.044	0.0659			
SD :	0.0015	0.0015	0.0000			
%RSD:						

QC value within specified limits.

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.064	-0.064	0.0013	0.0039	10:43:58	No
2	-0.060	-0.060	0.0014	0.0039	10:44:32	No
Mean:	-0.062	-0.062	0.0013			
SD :	0.0028	0.0028	0.0000			
%RSD:	4.5	4.5	2.6158			

QC value within specified limits.

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/13/2009
Sample ID: 232429012|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.371	0.371	0.0068	0.0093	10:45:57	No
2	0.372	0.372	0.0068	0.0094	10:46:32	No
Mean:	0.371	0.371	0.0068			
SD :	0.0010	0.0010	0.0000			
%RSD:	0.3	0.3	0.1822			

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/13/2009
Sample ID: 232429013|i|||

```
%RSD:        2.2         2.2     0.9016

==========================================================================
Element: Hg    Seq. No.: 43       AS Loc.: 39   Date: 07/13/2009
Sample ID: 232504002|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.105     0.105    0.0035     0.0060   10:59:32  No
 2        0.090     0.090    0.0033     0.0058   11:00:07  No
Mean:     0.097     0.097    0.0034
SD  :    0.0108    0.0108    0.0001
%RSD:      11.0      11.0    4.0497

==========================================================================
Element: Hg    Seq. No.: 44       AS Loc.: 40   Date: 07/13/2009
Sample ID: 232504003|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.390     0.390    0.0071     0.0096   11:01:30  No
 2        0.372     0.372    0.0068     0.0094   11:02:05  No
Mean:     0.381     0.381    0.0069
SD  :    0.0123    0.0123    0.0002
%RSD:       3.2       3.2    2.2337

==========================================================================
Element: Hg    Seq. No.: 45       AS Loc.: 41   Date: 07/13/2009
Sample ID: 232504004|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.166     0.166    0.0042     0.0068   11:03:29  No
 2        0.150     0.150    0.0040     0.0066   11:04:04  No
Mean:     0.158     0.158    0.0041
SD  :    0.0114    0.0114    0.0001
%RSD:       7.2       7.2    3.4993

==========================================================================
Element: Hg    Seq. No.: 46       AS Loc.: 7    Date: 07/13/2009
Sample ID: CCV
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        5.130     5.130    0.0670     0.0695   11:05:30  No
 2        5.073     5.073    0.0663     0.0688   11:06:05  No
Mean:     5.101     5.101    0.0666
SD  :    0.0403    0.0403    0.0005
%RSD:       0.8       0.8    0.7652
QC value within specified limits.

==========================================================================
Element: Hg    Seq. No.: 47       AS Loc.: 8    Date: 07/13/2009
Sample ID: CCB
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1       -0.056    -0.056    0.0014     0.0040   11:07:33  No
 2       -0.058    -0.058    0.0014     0.0039   11:08:08  No
Mean:    -0.057    -0.057    0.0014
SD  :    0.0014    0.0014    0.0000
%RSD:       2.4       2.4    1.2413
QC value within specified limits.

==========================================================================
Element: Hg    Seq. No.: 48       AS Loc.: 42   Date: 07/13/2009
Sample ID: 232504005|i|||
```

```
%RSD:        6.0        6.0    2.5541

==========================================================================================
Element: Hg    Seq. No.: 54       AS Loc.: 48   Date: 07/13/2009
Sample ID: 232504011|i|||
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1       -0.022    -0.022     0.0019     0.0044   11:21:35  No
 2       -0.036    -0.036     0.0017     0.0042   11:22:10  No
Mean:    -0.029    -0.029     0.0018
SD  :    0.0101    0.0101     0.0001
%RSD:      35.2      35.2     7.2230

==========================================================================================
Element: Hg    Seq. No.: 55       AS Loc.: 49   Date: 07/13/2009
Sample ID: 232504012|i|||
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.073     0.073     0.0030     0.0056   11:23:30  No
 2        0.069     0.069     0.0030     0.0055   11:24:05  No
Mean:     0.071     0.071     0.0030
SD  :    0.0030    0.0030     0.0000
%RSD:       4.3       4.3     1.2653

==========================================================================================
Element: Hg    Seq. No.: 56       AS Loc.: 50   Date: 07/13/2009
Sample ID: 232504013|i|||
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.132     0.132     0.0038     0.0063   11:25:25  No
 2        0.124     0.124     0.0037     0.0062   11:26:00  No
Mean:     0.128     0.128     0.0037
SD  :    0.0058    0.0058     0.0001
%RSD:       4.5       4.5     1.9637

==========================================================================================
Element: Hg    Seq. No.: 57       AS Loc.: 51   Date: 07/13/2009
Sample ID: 232504014|i|||
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1       -0.072    -0.072     0.0012     0.0037   11:27:22  No
 2       -0.079    -0.079     0.0011     0.0037   11:27:57  No
Mean:    -0.075    -0.075     0.0012
SD  :    0.0047    0.0047     0.0001
%RSD:       6.2       6.2     5.0576

==========================================================================================
Element: Hg    Seq. No.: 58       AS Loc.: 7    Date: 07/13/2009
Sample ID: CCV
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        4.976     4.976     0.0651     0.0676   11:29:22  No
 2        5.108     5.108     0.0667     0.0693   11:29:57  No
Mean:     5.042     5.042     0.0659
SD  :    0.0927    0.0927     0.0012
%RSD:       1.8       1.8     1.7799
QC value within specified limits.

==========================================================================================
Element: Hg    Seq. No.: 59       AS Loc.: 8    Date: 07/13/2009
Sample ID: CCB
------------------------------------------------------------------------------------------
```

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	0.0015	0.0040	11:31:25	No
2	-0.046	-0.046	0.0015	0.0041	11:31:59	No
Mean:	-0.050	-0.050	0.0015			
SD :	0.0051	0.0051	0.0001			
%RSD:	10.2	10.2	4.2953			

QC value within specified limits.

==========

Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 07/13/2009
Sample ID: 232509001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.787	1.787	0.0247	0.0273	11:33:23	No
2	1.785	1.785	0.0247	0.0272	11:33:58	No
Mean:	1.786	1.786	0.0247			
SD :	0.0015	0.0015	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 07/13/2009
Sample ID: 1201873033|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.961	0.961	0.0143	0.0168	11:35:20	No
2	0.924	0.924	0.0138	0.0163	11:35:55	No
Mean:	0.942	0.942	0.0140			
SD :	0.0259	0.0259	0.0003			
%RSD:	2.8	2.8	2.3359			

==========

Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 07/13/2009
Sample ID: 1201873034|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.725	3.725	0.0492	0.0518	11:37:17	No
2	3.714	3.714	0.0491	0.0516	11:37:52	No
Mean:	3.720	3.720	0.0492			
SD :	0.0083	0.0083	0.0001			
%RSD:	0.2	0.2	0.2132			

==========

Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 07/13/2009
Sample ID: 1201873037|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.892	3.892	0.0514	0.0539	11:39:15	No
2	3.893	3.893	0.0514	0.0539	11:39:49	No
Mean:	3.893	3.893	0.0514			
SD :	0.0008	0.0008	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 07/13/2009
Sample ID: 1201873036|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.267	0.267	0.0055	0.0080	11:41:13	No
2	0.248	0.248	0.0053	0.0078	11:41:48	No
Mean:	0.258	0.258	0.0054			
SD :	0.0134	0.0134	0.0002			

%RSD: 5.2 5.2 3.1457

Element: Hg Seq. No.: 65 AS Loc.: 57 Date: 07/13/2009
Sample ID: 232509002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.313	0.313	0.0061	0.0086	11:43:12	No
2	0.292	0.292	0.0058	0.0084	11:43:47	No
Mean:	0.303	0.303	0.0060			
SD :	0.0145	0.0145	0.0002			
%RSD:	4.8	4.8	3.0720			

Element: Hg Seq. No.: 66 AS Loc.: 58 Date: 07/13/2009
Sample ID: 232509003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	0.0013	0.0038	11:45:11	No
2	-0.067	-0.067	0.0013	0.0038	11:45:46	No
Mean:	-0.067	-0.067	0.0013			
SD :	0.0003	0.0003	0.0000			
%RSD:	0.5	0.5	0.3351			

Element: Hg Seq. No.: 67 AS Loc.: 59 Date: 07/13/2009
Sample ID: 232509004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.344	1.344	0.0191	0.0217	11:47:11	No
2	1.328	1.328	0.0189	0.0215	11:47:45	No
Mean:	1.336	1.336	0.0190			
SD :	0.0116	0.0116	0.0001			
%RSD:	0.9	0.9	0.7745			

Element: Hg Seq. No.: 68 AS Loc.: 60 Date: 07/13/2009
Sample ID: 232509005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.566	0.566	0.0093	0.0118	11:49:10	No
2	0.563	0.563	0.0093	0.0118	11:49:45	No
Mean:	0.565	0.565	0.0093			
SD :	0.0016	0.0016	0.0000			
%RSD:	0.3	0.3	0.2214			

Element: Hg Seq. No.: 69 AS Loc.: 61 Date: 07/13/2009
Sample ID: 232509006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.184	0.184	0.0045	0.0070	11:51:12	No
2	0.171	0.171	0.0043	0.0068	11:51:47	No
Mean:	0.178	0.178	0.0044			
SD :	0.0089	0.0089	0.0001			
%RSD:	5.0	5.0	2.5778			

Element: Hg Seq. No.: 70 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	5.144	5.144	0.0672	0.0697	11:53:13	No
2	5.119	5.119	0.0669	0.0694	11:53:48	No
Mean:	5.131	5.131	0.0670			
SD :	0.0183	0.0183	0.0002			
%RSD:	0.4	0.4	0.3449			

QC value within specified limits.

==========

Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	0.0014	0.0039	11:55:16	No
2	-0.064	-0.064	0.0013	0.0038	11:55:51	No
Mean:	-0.061	-0.061	0.0014			
SD :	0.0051	0.0051	0.0001			
%RSD:	8.4	8.4	4.7284			

QC value within specified limits.

==========

Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 07/13/2009
Sample ID: 1201873038|i||881916|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.121	-0.121	0.0006	0.0031	11:57:18	No
2	-0.129	-0.129	0.0005	0.0030	11:57:53	No
Mean:	-0.125	-0.125	0.0006			
SD :	0.0055	0.0055	0.0001			
%RSD:	4.4	4.4	12.7065			

==========

Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 07/13/2009
Sample ID: 1201873039|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.532	3.532	0.0468	0.0493	11:59:16	No
2	3.416	3.416	0.0453	0.0479	11:59:50	No
Mean:	3.474	3.474	0.0461			
SD :	0.0817	0.0817	0.0010			
%RSD:	2.4	2.4	2.2434			

==========

Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 07/13/2009
Sample ID: 232582001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.170	0.170	0.0043	0.0068	12:01:10	No
2	0.157	0.157	0.0041	0.0066	12:01:46	No
Mean:	0.163	0.163	0.0042			
SD :	0.0090	0.0090	0.0001			
%RSD:	5.5	5.5	2.7076			

==========

Element: Hg Seq. No.: 75 AS Loc.: 65 Date: 07/13/2009
Sample ID: 232582002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.106	0.106	0.0035	0.0060	12:03:06	No
2	0.108	0.108	0.0035	0.0060	12:03:40	No
Mean:	0.107	0.107	0.0035			
SD :	0.0013	0.0013	0.0000			

```
%RSD:        1.2        1.2    0.4770

==========================================================================
Element: Hg    Seq. No.: 76       AS Loc.: 66   Date: 07/13/2009
Sample ID: 232585001|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1       -0.047    -0.047    0.0015     0.0041   12:05:01  No
 2       -0.050    -0.050    0.0015     0.0040   12:05:36  No
Mean:    -0.048    -0.048    0.0015
SD  :    0.0022    0.0022    0.0000
%RSD:       4.5       4.5    1.7908

==========================================================================
Element: Hg    Seq. No.: 77       AS Loc.: 67   Date: 07/13/2009
Sample ID: 232585002|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.282     0.282    0.0057     0.0082   12:06:57  No
 2        0.292     0.292    0.0058     0.0084   12:07:32  No
Mean:     0.287     0.287    0.0058
SD  :    0.0073    0.0073    0.0001
%RSD:       2.6       2.6    1.6139

==========================================================================
Element: Hg    Seq. No.: 78       AS Loc.: 68   Date: 07/13/2009
Sample ID: 232585003|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.276     0.276    0.0056     0.0082   12:08:54  No
 2        0.274     0.274    0.0056     0.0081   12:09:29  No
Mean:     0.275     0.275    0.0056
SD  :    0.0013    0.0013    0.0000
%RSD:       0.5       0.5    0.2824

==========================================================================
Element: Hg    Seq. No.: 79       AS Loc.: 69   Date: 07/13/2009
Sample ID: 232591001|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.119     0.119    0.0036     0.0062   12:10:51  No
 2        0.112     0.112    0.0035     0.0061   12:11:26  No
Mean:     0.116     0.116    0.0036
SD  :    0.0047    0.0047    0.0001
%RSD:       4.1       4.1    1.6549

==========================================================================
Element: Hg    Seq. No.: 80       AS Loc.: 70   Date: 07/13/2009
Sample ID: 1201873040|i|||DUP
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.204     0.204    0.0047     0.0072   12:12:48  No
 2        0.188     0.188    0.0045     0.0070   12:13:22  No
Mean:     0.196     0.196    0.0046
SD  :    0.0116    0.0116    0.0001
%RSD:       5.9       5.9    3.1890

==========================================================================
Element: Hg    Seq. No.: 81       AS Loc.: 71   Date: 07/13/2009
Sample ID: 1201873041|i|||MS
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
```

#	µg/L	µg/L	Signal	Height		Stored
1	2.167	2.167	0.0295	0.0321	12:14:46	No
2	2.222	2.222	0.0302	0.0328	12:15:21	No
Mean:	2.194	2.194	0.0299			
SD :	0.0391	0.0391	0.0005			
%RSD:	1.8	1.8	1.6559			

==========

Element: Hg Seq. No.: 82 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.016	5.016	0.0656	0.0681	12:16:46	No
2	5.000	5.000	0.0654	0.0679	12:17:21	No
Mean:	5.008	5.008	0.0655			
SD :	0.0112	0.0112	0.0001			
%RSD:	0.2	0.2	0.2155			

QC value within specified limits.

==========

Element: Hg Seq. No.: 83 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.111	-0.111	0.0007	0.0033	12:18:49	No
2	-0.116	-0.116	0.0007	0.0032	12:19:24	No
Mean:	-0.114	-0.114	0.0007			
SD :	0.0038	0.0038	0.0000			
%RSD:	3.4	3.4	7.0276			

QC value within specified limits.

==========

Element: Hg Seq. No.: 84 AS Loc.: 72 Date: 07/13/2009
Sample ID: 1201873043|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.305	2.305	0.0313	0.0338	12:20:50	No
2	2.291	2.291	0.0311	0.0336	12:21:25	No
Mean:	2.298	2.298	0.0312			
SD :	0.0099	0.0099	0.0001			
%RSD:	0.4	0.4	0.4008			

==========

Element: Hg Seq. No.: 85 AS Loc.: 73 Date: 07/13/2009
Sample ID: 1201873042|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.081	-0.081	0.0011	0.0036	12:22:49	No
2	-0.094	-0.094	0.0009	0.0035	12:23:24	No
Mean:	-0.087	-0.087	0.0010			
SD :	0.0093	0.0093	0.0001			
%RSD:	10.7	10.7	11.5399			

==========

Element: Hg Seq. No.: 86 AS Loc.: 74 Date: 07/13/2009
Sample ID: 1201877904|i||883966|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.087	-0.087	0.0010	0.0036	12:24:48	No
2	-0.106	-0.106	0.0008	0.0033	12:25:23	No
Mean:	-0.096	-0.096	0.0009			
SD :	0.0137	0.0137	0.0002			

#	µg/L	µg/L	Signal	Height		Stored
1	-0.100	-0.100	0.0009	0.0034	12:36:36	No
2	-0.113	-0.113	0.0007	0.0032	12:37:12	No
Mean:	-0.106	-0.106	0.0008			
SD :	0.0093	0.0093	0.0001			
%RSD:	8.7	8.7	14.9573			

==========

Element: Hg Seq. No.: 93 AS Loc.: 81 Date: 07/13/2009
Sample ID: 233081003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.184	0.184	0.0045	0.0070	12:38:31	No
2	0.164	0.164	0.0042	0.0067	12:39:07	No
Mean:	0.174	0.174	0.0043			
SD :	0.0138	0.0138	0.0002			
%RSD:	7.9	7.9	4.0292			

==========

Element: Hg Seq. No.: 94 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.133	5.133	0.0670	0.0696	12:40:30	No
2	5.164	5.164	0.0674	0.0700	12:41:05	No
Mean:	5.148	5.148	0.0672			
SD :	0.0216	0.0216	0.0003			
%RSD:	0.4	0.4	0.4055			

QC value within specified limits.

==========

Element: Hg Seq. No.: 95 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.129	-0.129	0.0005	0.0030	12:42:33	No
2	-0.125	-0.125	0.0005	0.0031	12:43:08	No
Mean:	-0.127	-0.127	0.0005			
SD :	0.0026	0.0026	0.0000			
%RSD:	2.0	2.0	6.2605			

QC value within specified limits.

==========

Element: Hg Seq. No.: 96 AS Loc.: 82 Date: 07/13/2009
Sample ID: 233081004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.216	0.216	0.0049	0.0074	12:44:32	No
2	0.211	0.211	0.0048	0.0073	12:45:07	No
Mean:	0.214	0.214	0.0048			
SD :	0.0034	0.0034	0.0000			
%RSD:	1.6	1.6	0.8786			

==========

Element: Hg Seq. No.: 97 AS Loc.: 83 Date: 07/13/2009
Sample ID: 233081005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.140	0.140	0.0039	0.0064	12:46:28	No
2	0.154	0.154	0.0041	0.0066	12:47:03	No
Mean:	0.147	0.147	0.0040			
SD :	0.0098	0.0098	0.0001			

Miscellaneous

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 881836

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201872853	UI647733-01	.518	g
MS	1201872855	UI042709-A	.5	mL
MS	1201872855	UI042709-B	.5	mL
MSD	1201872859	UI042709-A	.5	mL
MSD	1201872859	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872852		SW846 3050B	06-JUL-2009 07:45	0.518 g	50 mL	96.5251	SOIL
LCS	1201872853		SW846 3050B	06-JUL-2009 07:45	0.518 g	50 mL	96.5251	SOIL
SAMPLE	232582001		SW846 3050B	06-JUL-2009 07:45	0.524 g	50 mL	95.41985	SOIL
SAMPLE	232582002		SW846 3050B	06-JUL-2009 07:45	0.512 g	50 mL	97.65625	SOIL
SAMPLE	232585001		SW846 3050B	06-JUL-2009 07:45	0.524 g	50 mL	95.41985	SOIL
SAMPLE	232585002		SW846 3050B	06-JUL-2009 07:45	0.516 g	50 mL	96.89922	SOIL
SAMPLE	232585003		SW846 3050B	06-JUL-2009 07:45	0.525 g	50 mL	95.2381	SOIL
SAMPLE	232591001		SW846 3050B	06-JUL-2009 07:45	0.503 g	50 mL	99.40358	SOIL
DUP	1201872854	232591001	SW846 3050B	06-JUL-2009 07:45	0.511 g	50 mL	97.84736	SOIL
MS	1201872855	232591001	SW846 3050B	06-JUL-2009 07:45	0.521 g	50 mL	95.96929	SOIL
MSD	1201872859	232591001	SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL
SDILT	1201872856	232591001	SW846 3050B	06-JUL-2009 07:45	0.503 g	50 mL	99.40358	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments QC Sample #232591001 is a tan soil.

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 881858

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201872898	UI652380	.514	g
MS	1201872900	UI090622-01	.25	mL
MS	1201872900	UI090622-06	.25	mL
MSD	1201872902	UI090622-01	.25	mL
MSD	1201872902	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872897		SW846 3050B	06-JUL-2009 07:45	0.515 g	50 mL	97.08738	SOIL
LCS	1201872898		SW846 3050B	06-JUL-2009 07:45	0.514 g	50 mL	97.27626	SOIL
SAMPLE	232582001		SW846 3050B	06-JUL-2009 07:45	0.51 g	50 mL	98.03922	SOIL
SAMPLE	232582002		SW846 3050B	06-JUL-2009 07:45	0.514 g	50 mL	97.27626	SOIL
SAMPLE	232585001		SW846 3050B	06-JUL-2009 07:45	0.502 g	50 mL	99.60159	SOIL
SAMPLE	232585002		SW846 3050B	06-JUL-2009 07:45	0.506 g	50 mL	98.81423	SOIL
SAMPLE	232585003		SW846 3050B	06-JUL-2009 07:45	0.513 g	50 mL	97.46589	SOIL
SAMPLE	232591001		SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL
DUP	1201872899	232591001	SW846 3050B	06-JUL-2009 07:45	0.5 g	50 mL	100	SOIL
MS	1201872900	232591001	SW846 3050B	06-JUL-2009 07:45	0.504 g	50 mL	99.20635	SOIL
MSD	1201872902	232591001	SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL
SDILT	1201872901	232591001	SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881915

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873039	UI031809A	.204	g
MS	1201873041	WHG090710-14	.3	mL
MSD	1201873043	WHG090710-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873038		SW846 7471A Prep	10-JUL-2009 14:20	0.521 g	30 mL	57.58157	SOIL
LCS	1201873039		SW846 7471A Prep	10-JUL-2009 14:20	0.204 g	30 mL	147.05882	SOIL
SAMPLE	232582001		SW846 7471A Prep	10-JUL-2009 14:20	0.53 g	30 mL	56.60377	SOIL
SAMPLE	232582002		SW846 7471A Prep	10-JUL-2009 14:20	0.508 g	30 mL	59.05512	SOIL
SAMPLE	232585001		SW846 7471A Prep	10-JUL-2009 14:20	0.53 g	30 mL	56.60377	SOIL
SAMPLE	232585002		SW846 7471A Prep	10-JUL-2009 14:20	0.578 g	30 mL	51.90311	SOIL
SAMPLE	232585003		SW846 7471A Prep	10-JUL-2009 14:20	0.572 g	30 mL	52.44755	SOIL
SAMPLE	232591001		SW846 7471A Prep	10-JUL-2009 14:20	0.55 g	30 mL	54.54545	SOIL
DUP	1201873040	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.593 g	30 mL	50.59022	SOIL
MS	1201873041	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.515 g	30 mL	58.25243	SOIL
MSD	1201873043	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.51 g	30 mL	58.82353	SOIL
SDILT	1201873042	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.55 g	30 mL	54.54545	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution
1144356-C	2 mL	Hg reducing agent
WHG090710-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090710-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG090710-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090710-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090710-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090710-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

Comments Sample 232591001 consist of brown, clumpy soil.
Digestion Start Date: 10-JUL-09 14:20
Digestion End Date: 10-JUL-09 14:50

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
10-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
881859	See Below		

Potentially affected work order(s)(SDG): 232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201872900MS 2. Failed RPD for DUP: QC 1201872899DUP 3. Failed Recovery for MSD/PSD: QC 1201872902MSD	1. The matrix spike recovery failed outside of the control limits for barium,magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The sample and sample duplicate % RPD failed outside the control limits for aluminum,barium,calcium,cobalt,iron,magnesium,manganese and potassium due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike duplicate recovery failed outside of the control limits for barium and calcium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Helen Camello 10-JUL-09

Data Validator/Group Leader:

Louise Smith 13-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.18 **Opened:** 08-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 09-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L

Analyte	Concentration	Analyte	Concentration
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L

Analyte	Concentration	Analyte	Concentration
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI647733-01 **Opened:** 02-APR-07 **Amount :** 80 g
Name: ICPMSSOILSRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis
Supplier: ERA
Description: ICPMS Soil LCS (Reference)
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	8270 mg/kg	Antimony	55.8 mg/kg
Arsenic	255 mg/kg	Barium	469 mg/kg
Beryllium	86.4 mg/kg	Boron	138 mg/kg
Cadmium	119 mg/kg	Calcium	3760 mg/kg
Chromium	71.2 mg/kg	Cobalt	79.6 mg/kg
Copper	96.2 mg/kg	Iron	13200 mg/kg
Lead	169 mg/kg	Lithium	8.01 mg/kg
Magnesium	2990 mg/kg	Manganese	364 mg/kg
Mercury	4.18 mg/kg	Molybdenum	79.6 mg/kg
Nickel	101 mg/kg	Phosphorous	752 mg/kg
Potassium	2420 mg/kg	Selenium	171 mg/kg

Analyte	Concentration	Analyte	Concentration
Silver	116 mg/kg	Sodium	575 mg/kg
Strontium	144 mg/kg	Thallium	203 mg/kg
Thorium	17.2 mg/kg	Titanium	255 mg/kg
Uranium	2.12 mg/kg	Uranium-235	.0153 mg/kg
Uranium-238	2.105 mg/kg	Vanadium	134 mg/kg
Zinc	202 mg/kg	Zirconium	6.83 mg/kg

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090710-01 **Opened:** 10-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 10-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: IHG090710-02 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 10-JUL-09
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090710-07 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090710-08 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090710-09 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Standard Logbook

Serial ID: WHG090710-10 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-11 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090710-12 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-14 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: WI090708-42 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090708-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090708-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090708-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Serial ID: WI090708-43 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Standard Logbook

Serial ID: WI090708-44 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1150990
Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Serial ID: WI090708-45 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1150990
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090708-46 **Opened:** 08-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1150990
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090708-47 **Opened:** 08-JUL-09 **Solvent :** 3%HCL &1%HNO3-1150990
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090713-04AB **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090713-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090713-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090713-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090713-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090713-04B **Opened:** 13-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090713-05B **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS090713-06B
Name: ICPMS CRDL
Type: Working
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Opened: 13-JUL-09
Received: 13-JUL-09
Expires: 14-JUL-09

Solvent : 2%HNO3/1%HCl - 1143705

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS090713-07B **Opened:** 13-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090713-08B **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-04AB **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090714-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090714-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090714-04B **Opened:** 14-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090714-05B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090714-06B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090714-07B **Opened:** 14-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-08B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Standard Logbook

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1150990 **Opened:** 06-JUL-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 06-JUL-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 13-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Louise Smith
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1153776 **Opened:** 13-JUL-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 13-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Standard Logbook

Serial ID:	908024-A	**Opened:**	22-DEC-08	**Lot Number :**	48053817
Name:	B-NH2OH.HCl-MER	**Received:**	22-DEC-08		
Type:	Reagent/Solvent	**Expires:**	22-DEC-09		
Employee:	Tara Griffin				
Supplier:	Fisher Scientific				
Description:	Hydroxlyamine Hydrochloride				
Comments:	None				

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2508

Method/Analysis Information

Product: **pH**

Analytical Batch: 881740 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201872623	232582001(CAMO-09-10464) Sample Duplicate (DUP)
1201872624	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHect pH Meter Orion 370.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232582001 (CAMO-09-10464).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 1201872623 (CAMO-09-10464), 232582001 (CAMO-09-10464) and 232582002 (CAMO-09-10465).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881270	**Method:**	SW846 9012A
Prep Batch :	881268	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201871532	Method Blank (MB)
1201871533	232509006(CAMO-09-6531) Sample Duplicate (DUP)
1201871534	232509006(CAMO-09-6531) Matrix Spike (MS)
1201871535	232509006(CAMO-09-6531) Matrix Spike Duplicate (MSD)
1201871536	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232509006 (CAMO-09-6531).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recovery for this sample set was within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recovery for this sample set was within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1201871536 (LCS).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	881671	**Method:**	EPA 300.0
Prep Batch :	881669	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201872402	Method Blank (MB)
1201872403	232585001(CAMO-09-6605) Sample Duplicate (DUP)
1201872404	232585001(CAMO-09-6605) Matrix Spike (MS)
1201872405	232585001(CAMO-09-6605) Matrix Spike Duplicate (MSD)
1201872406	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232585001 (CAMO-09-6605).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recovery for this sample set was within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recovery for this sample set was within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232582001 (CAMO-09-10464) and 232582002 (CAMO-09-10465).

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Manual Integrations
Manual integrations were not required for the samples in this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 20July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2508 GEL Work Order: 232582

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2508

Client Sample ID:	CAMO-09-10465	Project:	LANL01004
Sample ID:	232582002	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	4.86%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.2C	H	8.34	0.010	0.100	SU	1	TXT1 07/01/09	1244	881740	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	160	68.7	253	ug/kg	1	AXC2 07/02/09	1001	881270	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.315	1.05	mg/kg	1	MAR1 07/10/09	1837	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2508

Client Sample ID:	CAMO-09-10464	Project:	LANL01004
Sample ID:	232582001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	6.71%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.1C	H	7.57	0.010	0.100	SU	1	TXT1 07/01/09	1236	881740	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	67.5	248	ug/kg	1	AXC2 07/02/09	1000	881270	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.322	1.07	mg/kg	1	MAR1 07/10/09	1808	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 14, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232582

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis											
Batch 881740											
QC1201872623 232582001 DUP											
pH		H	7.57	H	7.60	SU	0.396		(0%-10%)	TXT1	07/01/09 12:39
QC1201872624 LCS											
pH	7.00				7.02	SU		100	(95%-105%)		07/01/09 12:33
Flow Injection Analysis											
Batch 881270											
QC1201871533 232509006 DUP											
Cyanide, Total		J	208	J	212	ug/kg	N/A ^		(+/-263)	AXC2	07/02/09 09:54
QC1201871536 LCS											
Cyanide, Total	174000				175000	ug/kg		101	(46%-145%)		07/02/09 09:51
QC1201871532 MB											
Cyanide, Total				J	167	ug/kg					07/02/09 09:50
QC1201871534 232509006 MS											
Cyanide, Total	5350	J	208		5610	ug/kg		101	(50%-130%)		07/02/09 09:55
QC1201871535 232509006 MSD											
Cyanide, Total	5350	J	208		5300	ug/kg	5.68	95.3	(0%-30%)		07/02/09 09:59
Ion Chromatography											
Batch 881671											
QC1201872403 232585001 DUP											
Nitrate-N		HUh	ND	HUh	ND	mg/kg	N/A		(+/-1.07)	MAR1	07/10/09 19:35
QC1201872406 LCS											
Nitrate-N	50.0				46.6	mg/kg		93.3	(90%-110%)		07/10/09 17:39
QC1201872402 MB											
Nitrate-N				U	1.00	mg/kg					07/10/09 17:10
QC1201872404 232585001 MS											
Nitrate-N	53.5	HUh	ND	Hh	49.0	mg/kg		91.6	(90%-110%)		07/10/09 20:04
QC1201872405 232585001 MSD											
Nitrate-N	53.5	HUh	ND	Hh	49.0	mg/kg	0.0611	91.6	(0%-20%)		07/10/09 20:33

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

QC Summary

Workorder: 232582

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UJ	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 14-JUL-2009 16:32

GEL Laboratories LLC
Contract: LANL01004
SDG #: 09-2508

Flow Injection Analysis
Method: SW846 9012A Concentration Units:ug/L
Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**02-JUL-2009 09:29:22**	**OM_7-2-2009_09-19-36**	**143**	**150**	**95**	**(90%-110%)**	**Yes**
CCV	02-JUL-2009 09:43:39	OM_7-2-2009_09-19-36	95.6	100	96	(90%-110%)	Yes
CCV	02-JUL-2009 09:56:05	OM_7-2-2009_09-19-36	103	100	103	(90%-110%)	Yes
CCV	02-JUL-2009 10:08:28	OM_7-2-2009_09-19-36	102	100	102	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**02-JUL-2009 09:31:12**	**OM_7-2-2009_09-19-36**	**-1.5**	**5**	**Yes**
CCB	02-JUL-2009 09:45:29	OM_7-2-2009_09-19-36	-1.03	5	Yes
CCB	02-JUL-2009 09:57:55	OM_7-2-2009_09-19-36	-0.586	5	Yes
CCB	02-JUL-2009 10:10:18	OM_7-2-2009_09-19-36	-1.57	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 14-JUL-2009 16:32

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2508

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**10-JUL-2009 10:55:00**	**090710**	**4.6565**	**5**	**93**	**(90%-110%)**	**Yes**
CCV	10-JUL-2009 16:12:00	090710	7.2904	7.5	97	(90%-110%)	Yes
CCV	10-JUL-2009 21:01:00	090710	4.6637	5	93	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**10-JUL-2009 11:24:00**	**090710**	**0**	**0.1**	**Yes**
CCB	10-JUL-2009 16:41:00	090710	0	0.1	Yes
CCB	10-JUL-2009 21:30:00	090710	0	0.1	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881268

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871536	URF071009-01	.25	g
MS	1201871534	URF1091135-02	.025	mL
MSD	1201871535	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871532		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	MISC SOLID
LCS	1201871536		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.25 g	25 mL	100	MISC SOLID
SAMPLE	232465001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	MISC SOLID
SAMPLE	232509006		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.54 g	25 mL	46.2963	SOIL
DUP	1201871533	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.56 g	25 mL	44.64286	SOIL
MS	1201871534	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.55 g	25 mL	45.45455	SOIL
MSD	1201871535	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232582001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232582002		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232585001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232585002		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232585003		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232591001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.56 g	25 mL	44.64286	SOIL

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090702-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/2/2009 9:22:13	OM_7-2-2009_09-19-36
150 ppb		1	axc2	7/2/2009 9:23:04	OM_7-2-2009_09-19-36
100 ppb		1	axc2	7/2/2009 9:23:57	OM_7-2-2009_09-19-36
50 ppb		1	axc2	7/2/2009 9:24:50	OM_7-2-2009_09-19-36
10 ppb		1	axc2	7/2/2009 9:25:43	OM_7-2-2009_09-19-36
CRDL 5.0 ppb		1	axc2	7/2/2009 9:26:37	OM_7-2-2009_09-19-36
ICAL-00		1	axc2	7/2/2009 9:27:31	OM_7-2-2009_09-19-36
ICV		1	axc2	7/2/2009 9:29:22	OM_7-2-2009_09-19-36
ICB		1	axc2	7/2/2009 9:31:12	OM_7-2-2009_09-19-36
CRDL		1	axc2	7/2/2009 9:33:01	OM_7-2-2009_09-19-36
1201870882	881036	1	axc2	7/2/2009 9:34:51	OM_7-2-2009_09-19-36
1201870889	881036	1	axc2	7/2/2009 9:35:44	OM_7-2-2009_09-19-36
232341002	881036	1	axc2	7/2/2009 9:36:37	OM_7-2-2009_09-19-36
1201870884	881036	1	axc2	7/2/2009 9:37:31	OM_7-2-2009_09-19-36
1201870886	881036	1	axc2	7/2/2009 9:38:24	OM_7-2-2009_09-19-36
1201870888	881036	1	axc2	7/2/2009 9:39:17	OM_7-2-2009_09-19-36
232370001	881036	1	axc2	7/2/2009 9:40:09	OM_7-2-2009_09-19-36
1201870883	881036	1	axc2	7/2/2009 9:41:02	OM_7-2-2009_09-19-36
1201870885	881036	1	axc2	7/2/2009 9:41:55	OM_7-2-2009_09-19-36
1201870887	881036	1	axc2	7/2/2009 9:42:47	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:43:39	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:45:29	OM_7-2-2009_09-19-36
232425001	881036	1	axc2	7/2/2009 9:47:17	OM_7-2-2009_09-19-36
232432001	881036	1	axc2	7/2/2009 9:48:10	OM_7-2-2009_09-19-36
232482002	881036	1	axc2	7/2/2009 9:49:02	OM_7-2-2009_09-19-36
232510001	881036	1	axc2	7/2/2009 9:49:54	OM_7-2-2009_09-19-36
1201871532	881270	1	axc2	7/2/2009 9:50:45	OM_7-2-2009_09-19-36
1201871536	881270	50	axc2	7/2/2009 9:51:39	OM_7-2-2009_09-19-36
232465001	881270	1	axc2	7/2/2009 9:52:32	OM_7-2-2009_09-19-36
232509006	881270	1	axc2	7/2/2009 9:53:26	OM_7-2-2009_09-19-36
1201871533	881270	1	axc2	7/2/2009 9:54:19	OM_7-2-2009_09-19-36
1201871534	881270	1	axc2	7/2/2009 9:55:12	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:56:05	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:57:55	OM_7-2-2009_09-19-36
1201871535	881270	1	axc2	7/2/2009 9:59:45	OM_7-2-2009_09-19-36
232582001	881270	1	axc2	7/2/2009 10:00:37	OM_7-2-2009_09-19-36
232582002	881270	1	axc2	7/2/2009 10:01:30	OM_7-2-2009_09-19-36
232585001	881270	1	axc2	7/2/2009 10:02:23	OM_7-2-2009_09-19-36
232585002	881270	1	axc2	7/2/2009 10:03:15	OM_7-2-2009_09-19-36
232585003	881270	1	axc2	7/2/2009 10:04:07	OM_7-2-2009_09-19-36
232591001	881270	1	axc2	7/2/2009 10:05:00	OM_7-2-2009_09-19-36
1201871541	881272	1	axc2	7/2/2009 10:05:51	OM_7-2-2009_09-19-36
1201871543	881272	1	axc2	7/2/2009 10:06:44	OM_7-2-2009_09-19-36
232465001	881272	1	axc2	7/2/2009 10:07:35	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:08:28	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:10:18	OM_7-2-2009_09-19-36
1201871542	881272	1	axc2	7/2/2009 10:12:09	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:13:01	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:14:52	OM_7-2-2009_09-19-36

Author: axc2 Date : 7/2/2009

Original Run Filename: OM_7-2-2009_09-19 36.OMN created 7/2/2009 09:19:36
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-2-2009_09-19-36.OMN last modified 7/2/2009 10:15:57
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090702-01	1	S1	200	8.98	7/2/2009@09:22:13			200 ppb
WCN090702-02	1	S2	150	6.83	7/2/2009@09:23:04			150 ppb
WCN090702-03	1	S3	100	4.37	7/2/2009@09:23:57			100 ppb
WCN090702-04	1	S4	50.0	2.32	7/2/2009@09:24:50			50 ppb
WCN090702-05	1	S5	10.0	0.586	7/2/2009@09:25:43			10 ppb
WCN090702-06	1	S6	5.00	0.295	7/2/2009@09:26:37			CRDL 5.0 ppb
WCN090702-08	1	S7	0.00	0.0308	7/2/2009@09:27:31			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99974 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090702-07	1	S8	143	6.45	7/2/2009@09:29:22			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090702-08	1	S7	-1.50	-3.75e-4	7/2/2009@09:31:12			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.50 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.50 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090702-06	1	S6	5.03	0.291	7/2/2009@09:33:01			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	5.03 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	5.03 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870882|881036|MB	1	1	0.440	0.0860	7/2/2009@09:34:51			
1201870889||LCS	1	2	51.2	2.35	7/2/2009@09:35:44			
232341002	1	3	-0.350	0.0509	7/2/2009@09:36:37			
1201870884||DUP	1	4	0.739	0.0994	7/2/2009@09:37:31			
1201870886||MS	1	5	102	4.60	7/2/2009@09:38:24			
1201870888||MSD	1	6	106	4.80	7/2/2009@09:39:17			
232370001	1	7	0.145	0.0729	7/2/2009@09:40:09			
1201870883||DUP	1	8	-0.522	0.0432	7/2/2009@09:41:02			
1201870885||MS	1	9	103	4.66	7/2/2009@09:41:55			
1201870887||MSD	1	10	106	4.79	7/2/2009@09:42:47			
WCN090702-03	1	S3	95.6	4.32	7/2/2009@09:43:39			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-4.4 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.03	0.0204	7/2/2009@09:45:29			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.03 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.03 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232425001	1	11	2.25	0.167	7/2/2009@09:47:17			
232432001	1	12	0.839	0.104	7/2/2009@09:48:10			
232482002	1	13	3.65	0.229	7/2/2009@09:49:02			
232510001	1	14	-0.112	0.0615	7/2/2009@09:49:54			
1201871532|881270|MB	1	15	3.33	0.215	7/2/2009@09:50:45			
1201871536||LCS	1	16	35.0	1.62	7/2/2009@09:51:39		50.00	
232465001	1	17	7.81	0.414	7/2/2009@09:52:32			
232509006	1	18	3.82	0.237	7/2/2009@09:53:26			
1201871533||DUP	1	19	4.04	0.246	7/2/2009@09:54:19			
1201871534||MS	1	20	105	4.73	7/2/2009@09:55:12			
WCN090702-03	1	S3	103	4.64	7/2/2009@09:56:05			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-0.586	0.0403	7/2/2009@09:57:55			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.586 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.586 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201871535||MSD	1	21	99.2	4.49	7/2/2009@09:59:45			
232582001	1	22	0.545	0.0907	7/2/2009@10:00:37			
232582002	1	23	3.17	0.208	7/2/2009@10:01:30			
232585001	1	24	0.846	0.104	7/2/2009@10:02:23			
232585002	1	25	4.51	0.267	7/2/2009@10:03:15			
232585003	1	26	1.34	0.126	7/2/2009@10:04:07			
232591001	1	27	1.16	0.118	7/2/2009@10:05:00			
1201871541|881272|MB	1	28	-0.342	0.0512	7/2/2009@10:05:51			
1201871543||LCS	1	29	0.253	0.0777	7/2/2009@10:06:44			
232465001	1	30	27.3	1.28	7/2/2009@10:07:35			
WCN090702-03	1	S3	102	4.62	7/2/2009@10:08:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.57	-0.00337	7/2/2009@10:10:18			CCB
		Known Conc:	0.00					

DQM Test: > + Concentration Limit								
Result:			-1.57 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.57 > -5.00					
Message			CCB Passed					
Action			Continue					
1201871542||DUP	1	31	48.0	2.20	7/2/2009@10:12:09			
WCN090702-03	1	S3	108	4.87	7/2/2009@10:13:01			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			7.7 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			7.7 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN090702-08	1	S7	-0.342	0.0512	7/2/2009@10:14:52			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-0.342 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-0.342 > -5.00					
Message			CCB Passed					
Action			Continue					

Analyte Properties Table for OM_7-2-2009_09-19-36.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2

Date : 7/2/2009

Channel 1: Current View

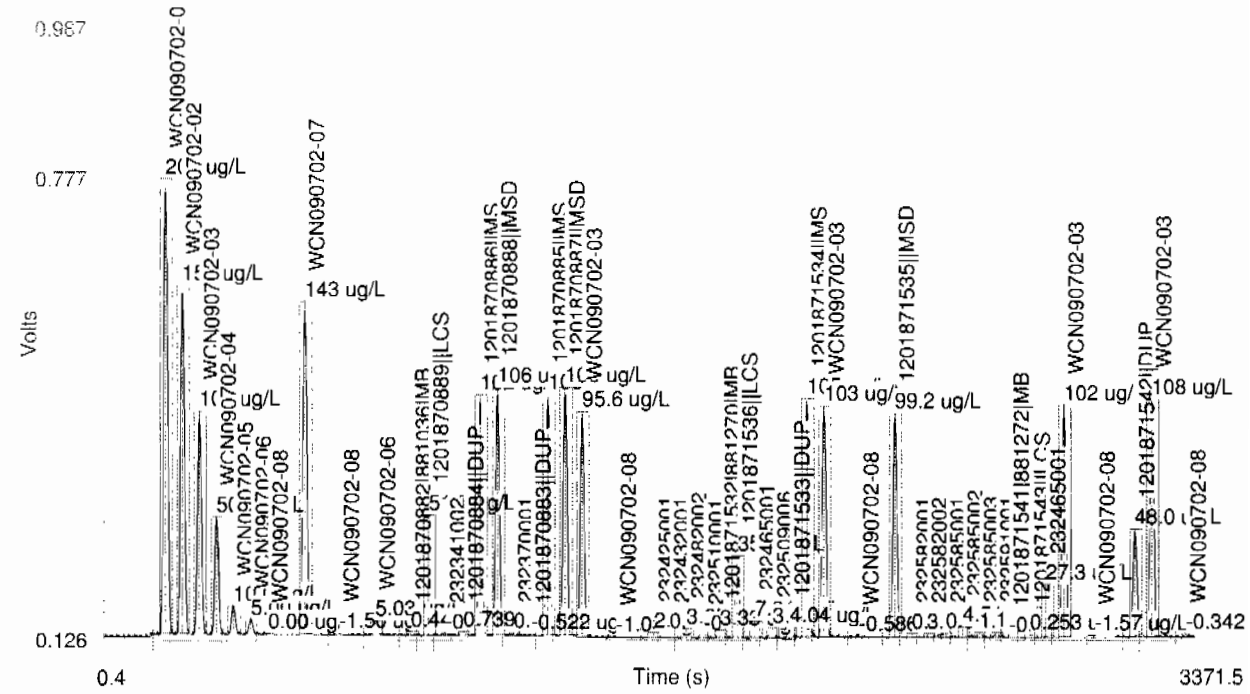

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.98	0.640	-0.0	7/2/2009	09:23:15
2	150	1	6.83	0.489	-1.3	7/2/2009	09:24:07
3	100	1	4.37	0.313	3.4	7/2/2009	09:25:00
4	50.0	1	2.32	0.165	-1.2	7/2/2009	09:25:53
5	10.0	1	0.586	0.0398	-14.0	7/2/2009	09:26:46
6	5.00	1	0.295	0.0201	-1.4	7/2/2009	09:27:40
7	0.00	1	0.0308	8.07e-4		7/2/2009	09:28:34

Figure 1: TCYANIDE

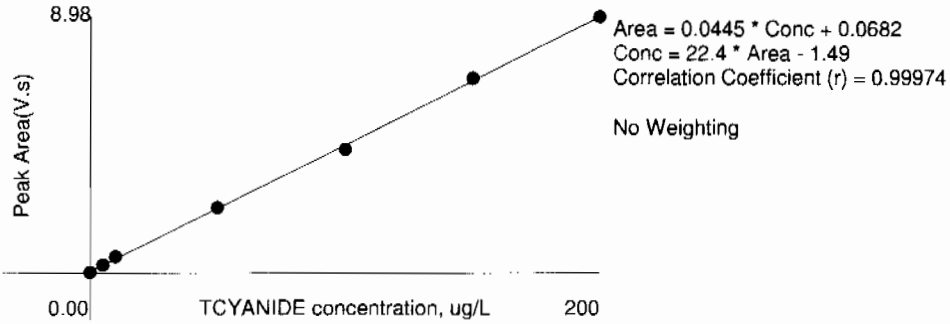

Ion Chromatography

Prep LogBook

Analyst: MAR1 Verified by:_____

Batch: 881669

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201872406	UIC090627SPK	.8	mL
MS	1201872404	UIC090627SPK	.8	mL
MSD	1201872405	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872402		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
LCS	1201872406		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232582001		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232582002		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232585001		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
DUP	1201872403	232585001	EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
MS	1201872404	232585001	EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
MSD	1201872405	232585001	EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232585002		EPA 300.0 PREP	10-JUL-2009 08:50	4.01 g	40 mL	9.97506	SOIL
SAMPLE	232585003		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232591001		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL

Comments

This is runlog for Sequence 090707.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	07/03/09 22:08		1	090707	MAR1
ICAL-06	07/03/09 22:41		1	090707	MAR1
ICAL-05	07/03/09 23:14		1	090707	MAR1
ICAL-04	07/03/09 23:47		1	090707	MAR1

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

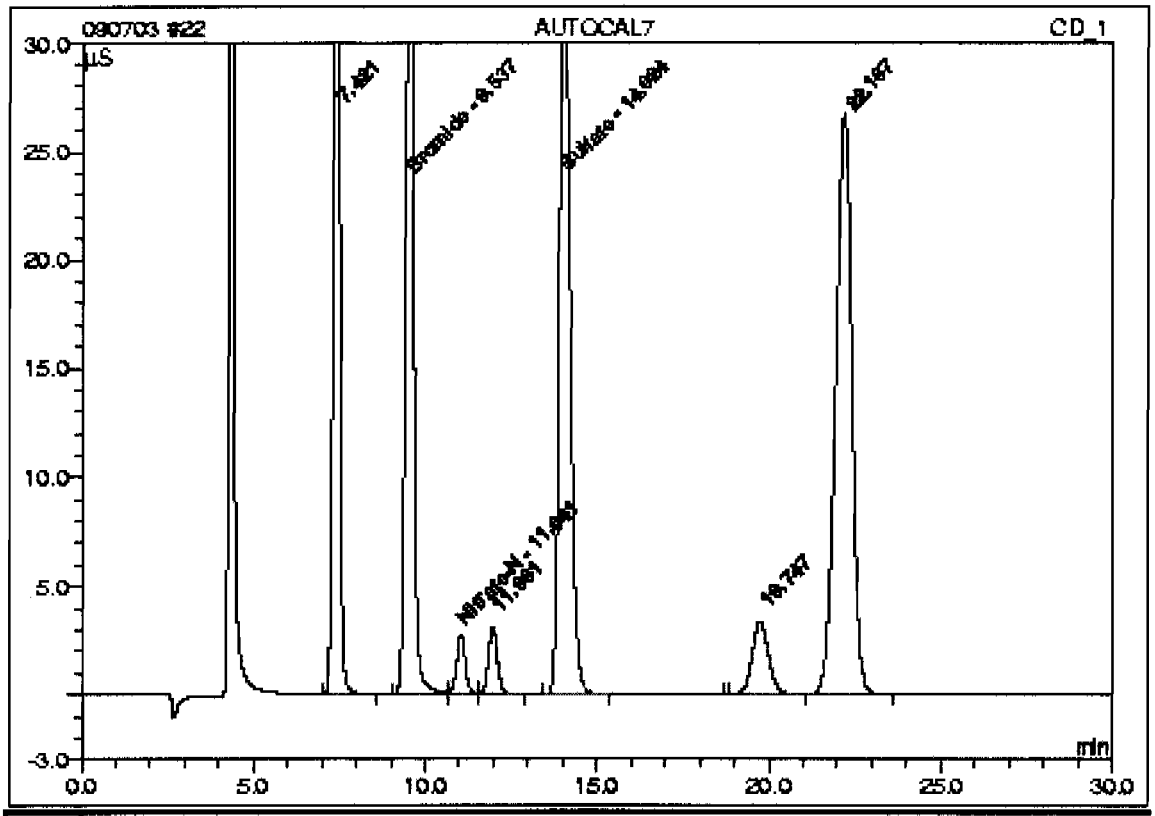

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	20.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	5.0000	n.a.	n.a.	n.a.	n.a.
2	9.54	Bromide	5.0000	5.0000		10.49618	20.17
n.a.	n.a.	Chlorate	5.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	10.0000	10.0000		0.81946	1.59
5	14.02	Sulfate	40.0000	40.0000		12.51803	24.06
Total:				55.0000	0.000	23.834	45.81

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

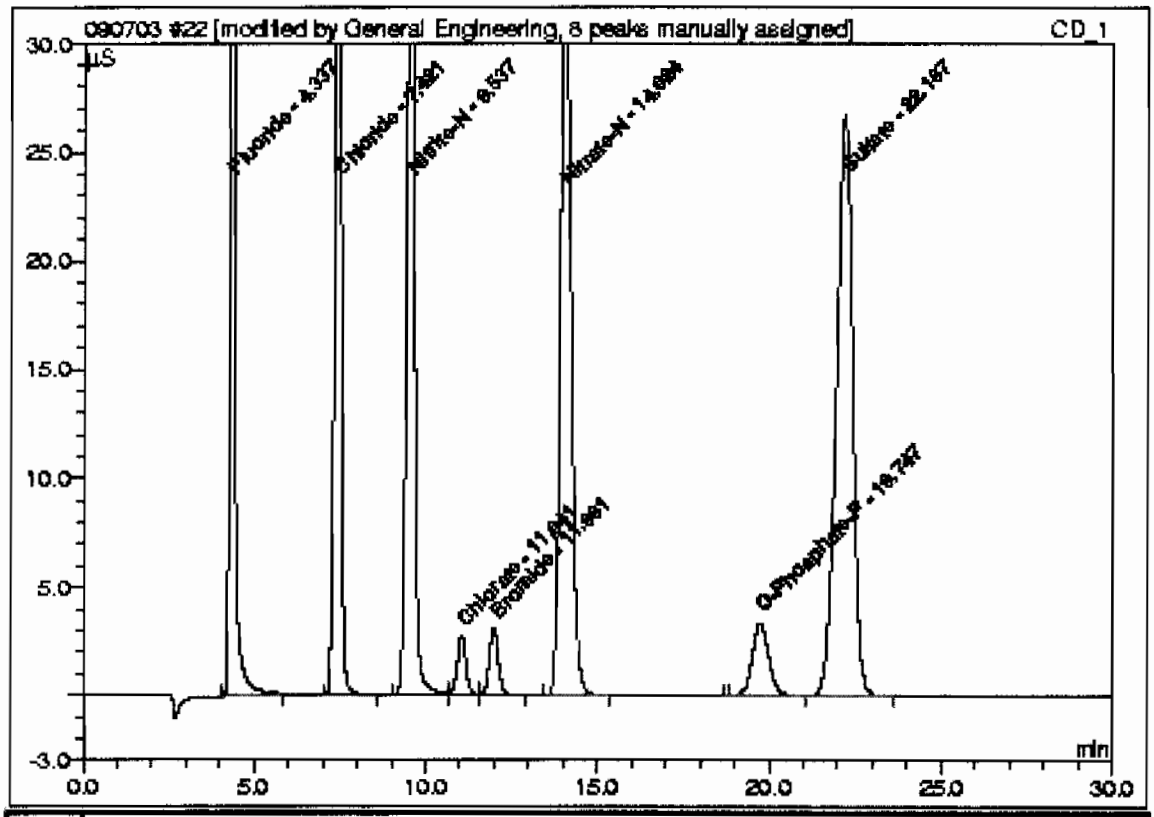

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	10.0000	10.0444	*	6.95356	11.79
2	7.42	Chloride	20.0000	20.3404		10.85875	18.41
3	9.54	Nitrite-N	10.0000	10.0541		10.49618	17.80
4	11.04	Chlorate	5.0000	4.9982		0.81946	1.39
5	11.98	Bromide	5.0000	5.0134		0.92846	1.57
6	14.02	Nitrate-N	10.0000	10.1573		12.51803	21.22
7	19.75	O-Phosphate-P	5.0000	5.0143		1.85201	3.14
8	22.19	Sulfate	40.0000	40.5382		14.55536	24.68
Total:				106.1605	0.000	58.992	100.00

23 AUTOCAL6

Sample Name:	**AUTOCAL6**	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE086;300;9056

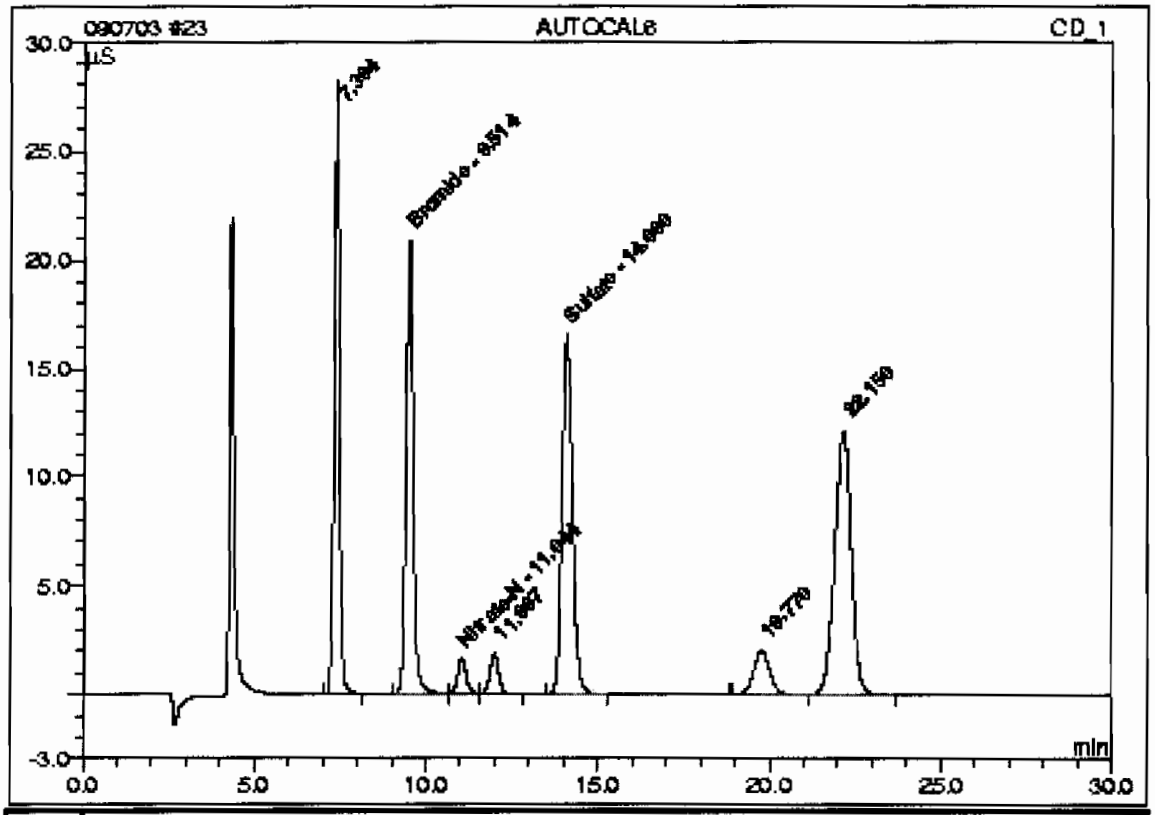

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	3.0000	n.a.	n.a.	n.a.	n.a.
2	9.51	Bromide	3.0000	2.6148		5.09735	20.64
n.a.	n.a.	Chlorate	3.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	5.0000	5.6894		0.49447	2.01
5	14.09	Sulfate	20.0000	18.8591		5.72345	23.22
Total:				27.1634	0.000	11.305	45.87

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE086;300;9058

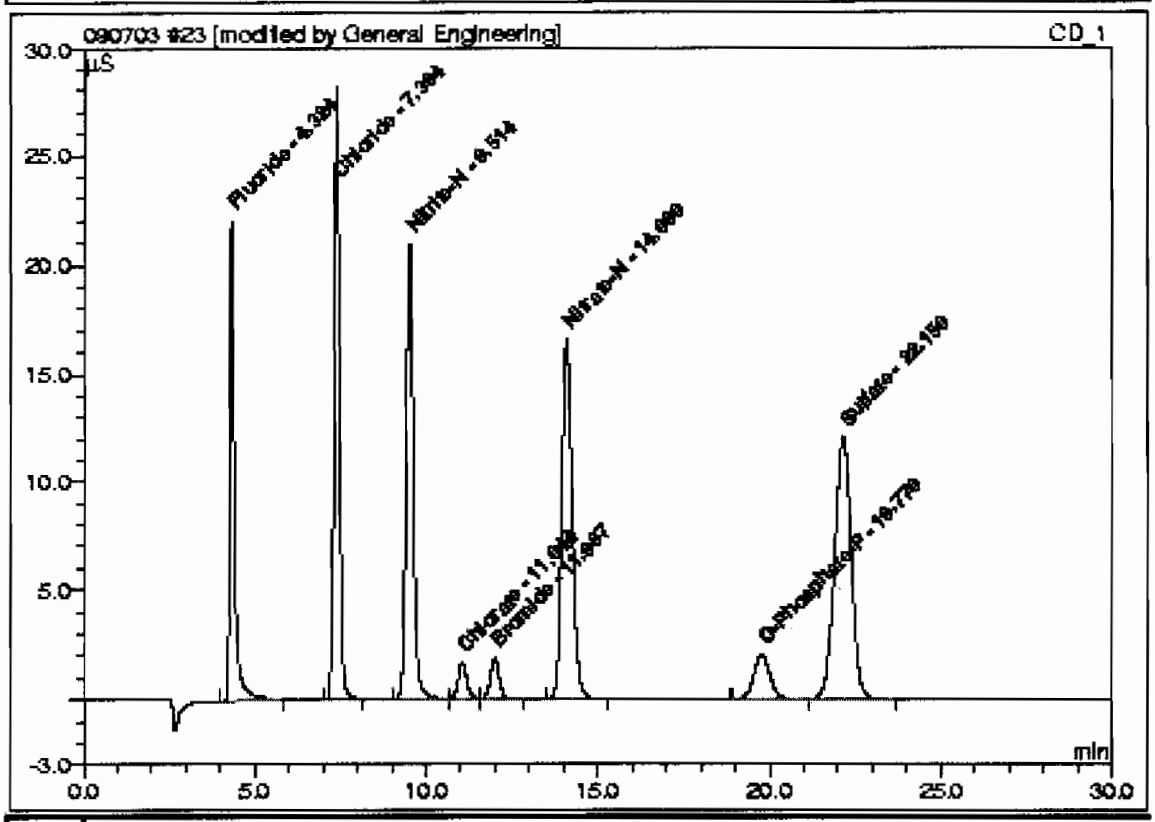

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	5.0000	4.9254	*	3.38643	12.08
2	7.39	Chloride	10.0000	9.3510		4.93051	17.59
3	9.51	Nitrite-N	5.0000	4.9036		5.08735	18.15
4	11.04	Chlorate	3.0000	3.0238		0.49447	1.76
5	11.99	Bromide	3.0000	3.0288		0.55878	1.99
6	14.08	Nitrate-N	5.0000	4.6989		5.72345	20.42
7	19.77	O-Phosphate-P	3.0000	3.0156		1.10727	3.95
8	22.15	Sulfate	20.0000	18.9608		6.74477	24.06
Total:				51.9078	0.000	28.033	100.00

24 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

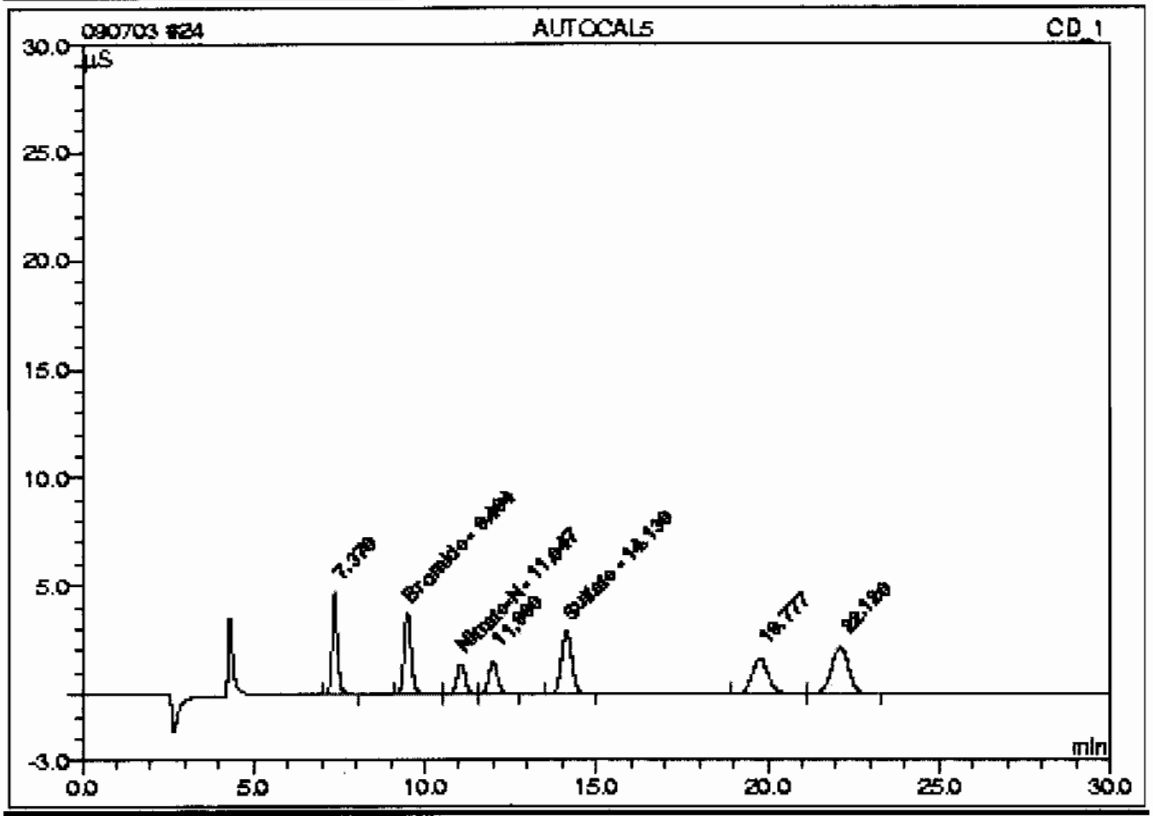

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	2.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	2.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	2.5000	1.1051		0.92663	15.99
n.a.	n.a.	Chlorate	2.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	1.0000	3.6480		0.40624	7.01
5	14.13	Sulfate	4.0000	3.8794		1.01074	17.44
Total:				8.6325	0.000	2.344	40.43

24 AUTOCAL5

Sample Name:	**AUTOCAL5**	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	**AS23_HC**	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

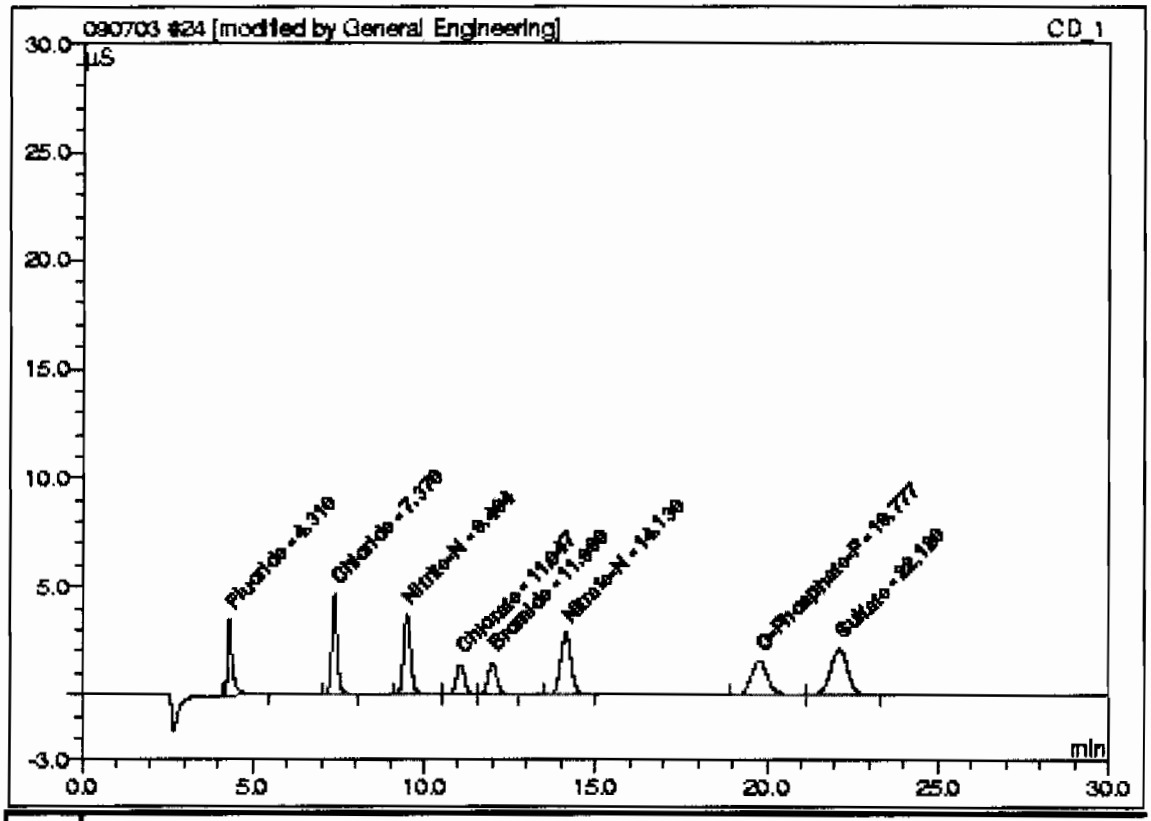

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	1.0000	0.9326 *		0.60409	9.44
2	7.37	Chloride	2.0000	1.7967		0.85540	13.36
3	9.49	Nitrite-N	1.0000	0.9416		0.92663	14.49
4	11.05	Chlorate	2.5000	2.4878		0.40624	6.35
5	11.99	Bromide	2.5000	2.4502		0.45103	7.05
6	14.13	Nitrate-N	1.0000	0.9129		1.01074	15.79
7	19.78	O-Phosphate-P	2.5000	2.4771		0.90660	14.16
8	22.12	Sulfate	4.0000	3.7545		1.24042	19.38
Total:				15.7534	0.000	6.401	100.00

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

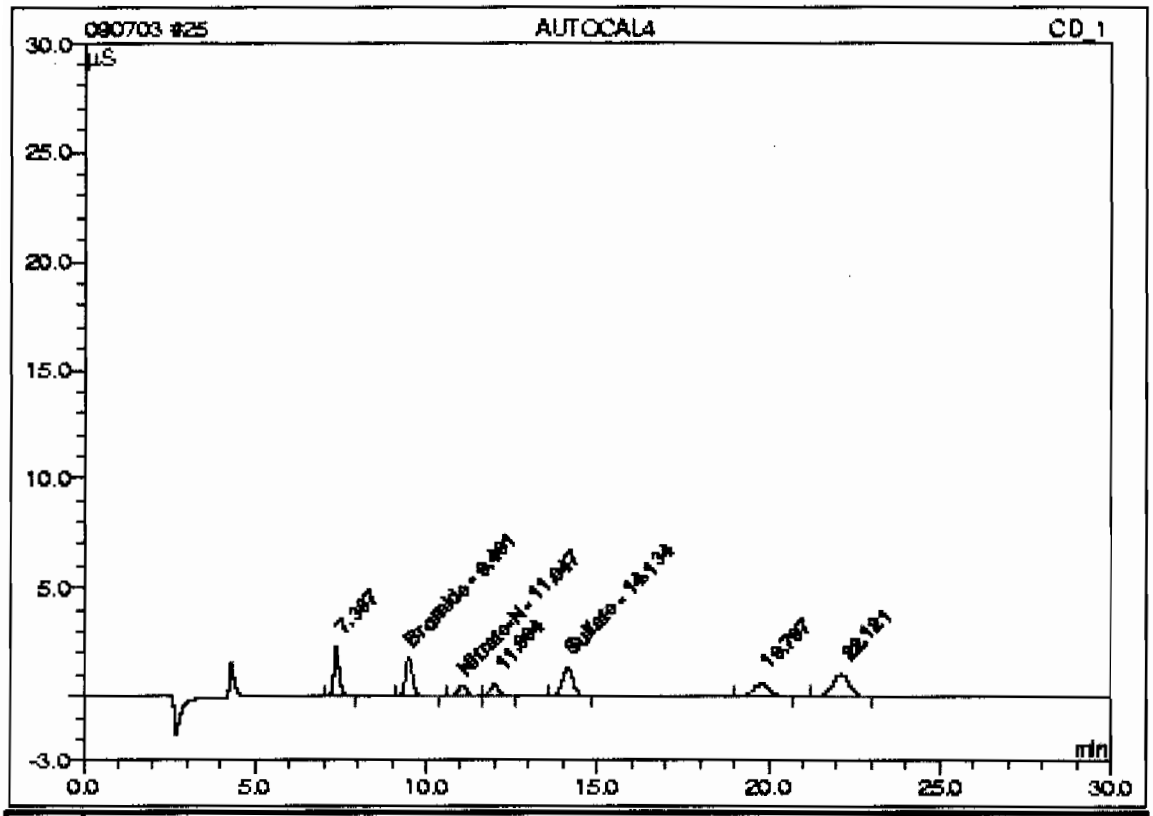

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	1.0000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	1.0000	0.9160		0.44459	16.98
n.a.	n.a.	Chlorate	1.0000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.5000	0.1296		0.15634	5.97
5	14.13	Sulfate	2.0000	2.1573		0.49242	18.79
Total:				3.2029	0.000	1.093	41.72

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

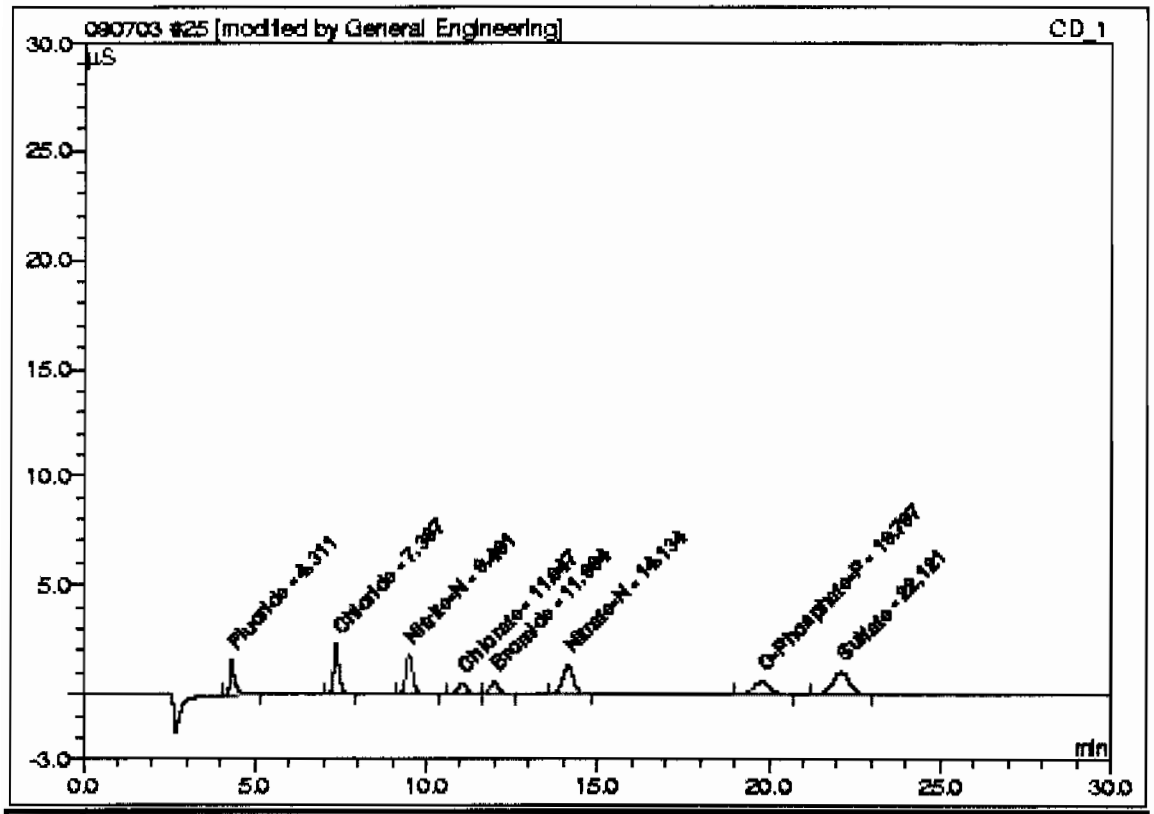

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.5000	0.4772	*	0.28671	9.86
2	7.37	Chloride	1.0000	0.9976		0.41893	14.41
3	9.49	Nitrite-N	0.5000	0.4826		0.44459	15.29
4	11.05	Chlorate	1.0000	0.9695		0.15634	5.38
5	11.99	Bromide	1.0000	0.9693		0.17517	6.02
6	14.13	Nitrate-N	0.5000	0.4966		0.49242	16.94
7	19.80	O-Phosphate-P	1.0000	0.9414		0.33440	11.50
8	22.12	Sulfate	2.0000	1.9924		0.59899	20.60
Total:				7.3065	0.000	2.908	100.00

This is runlog for Sequence 090703.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-03	07/04/09 00:20		1	090703	MAR1
ICAL-02	07/04/09 00:53		1	090703	MAR1
ICAL-01	07/04/09 01:26		1	090703	MAR1
ICV	07/04/09 01:59		1	090703	MAR1
ICB	07/04/09 02:32		1	090703	MAR1

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

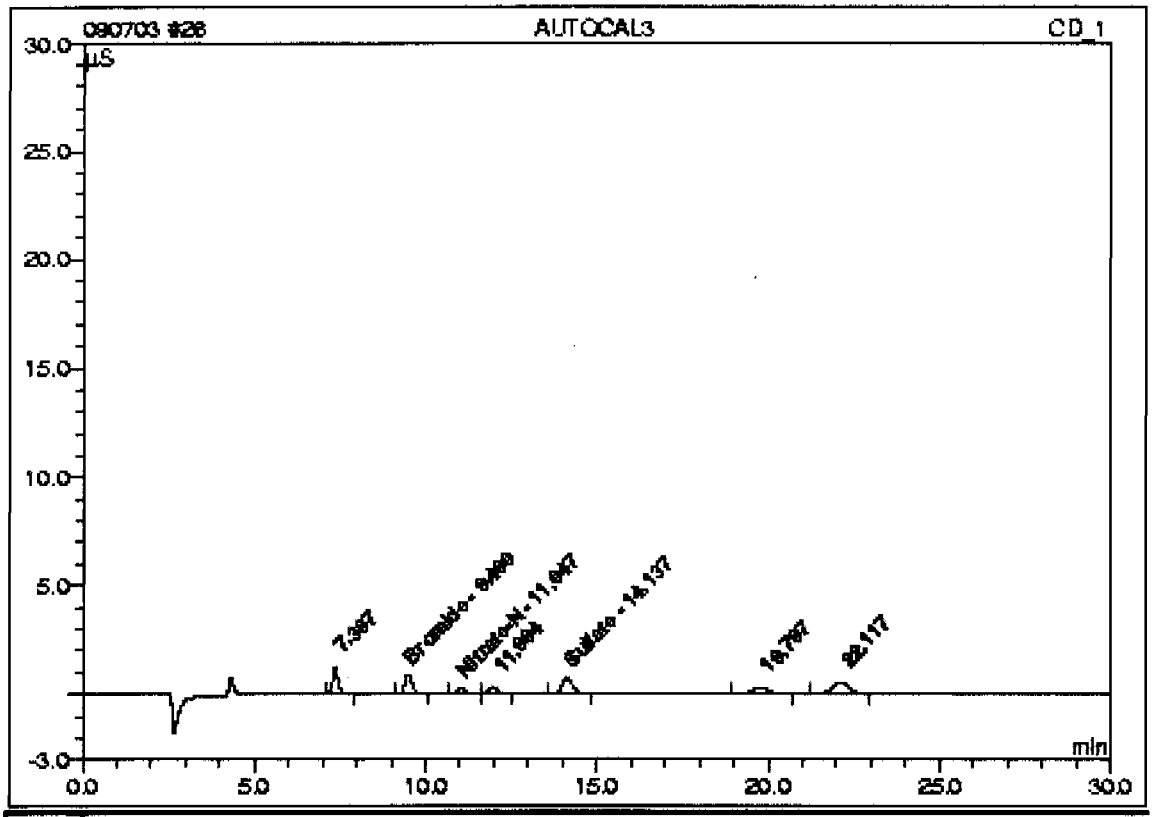

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.5000	0.7242		0.21812	16.45
n.a.	n.a.	Chlorate	0.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.2500	-0.6565		0.07808	5.89
5	14.14	Sulfate	1.0000	1.2880		0.24968	18.83
Total:				1.3557	0.000	0.546	41.17

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

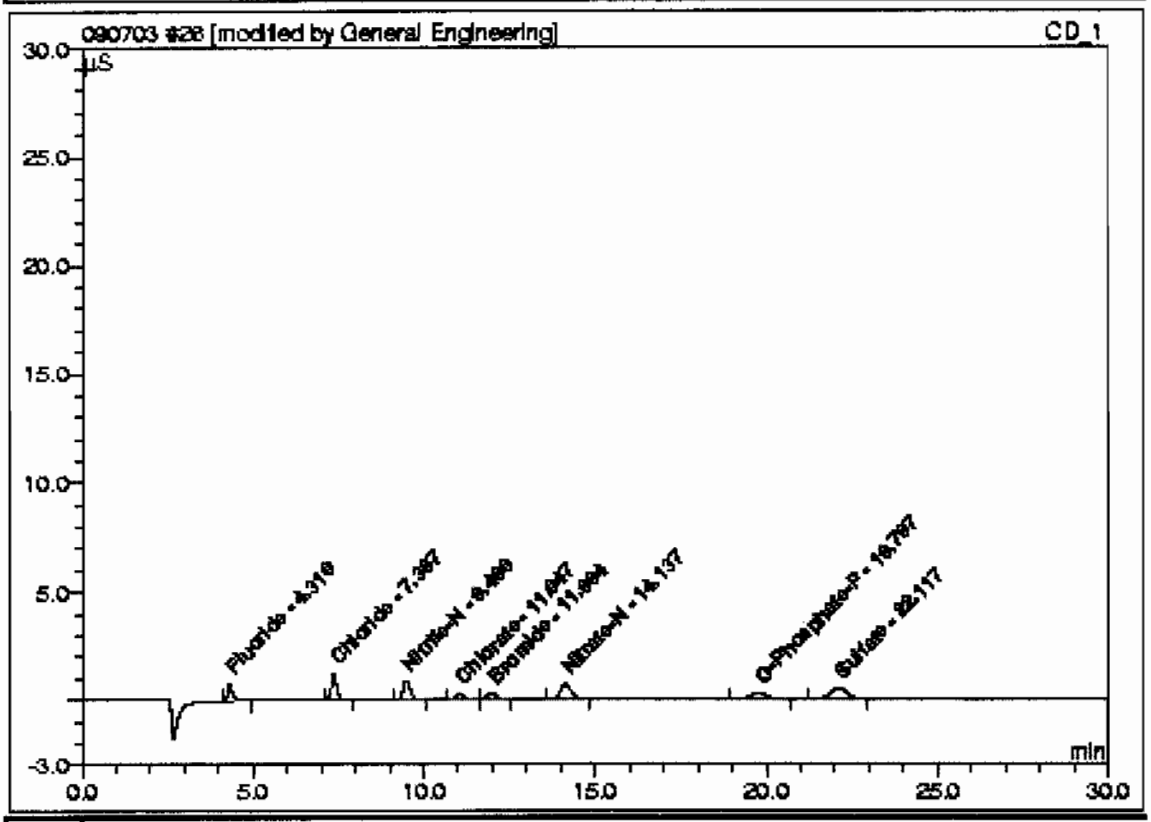

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.2500	0.2639	*	0.13800	9.43
2	7.37	Chloride	0.5000	0.6284		0.22515	15.39
3	9.49	Nitrite-N	0.2500	0.2669		0.21812	14.90
4	11.05	Chlorate	0.5000	0.4940		0.07808	5.33
5	11.99	Bromide	0.5000	0.4991		0.08759	5.98
6	14.14	Nitrate-N	0.2500	0.3016		0.24968	17.05
7	19.80	O-Phosphate-P	0.5000	0.4865		0.16491	11.26
8	22.12	Sulfate	1.0000	1.1634		0.30252	20.66
Total:				4.1037	0.000	1.464	100.00

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

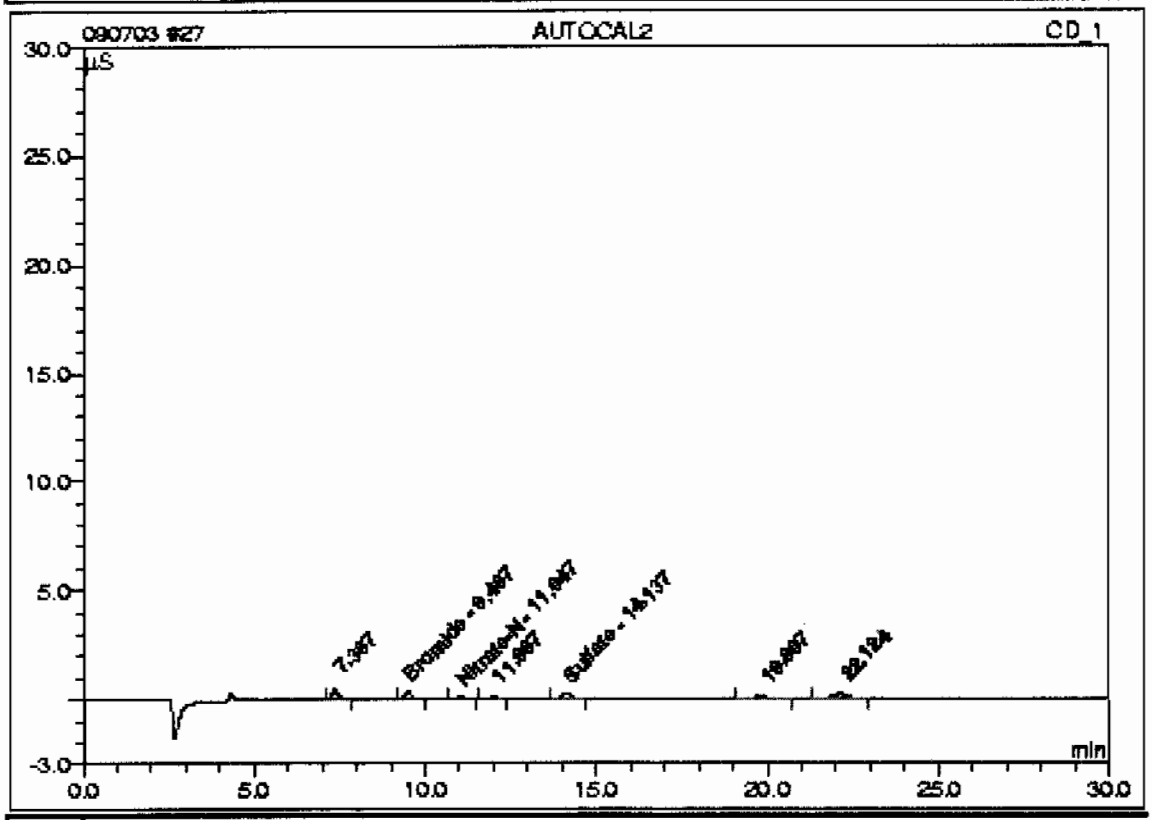

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.2000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.2000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.2000	0.5534		0.09703	16.21
n.a.	n.a.	Chlorate	0.2000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.1000	-0.9832		0.03093	5.74
5	14.14	Sulfate	0.4000	0.7269		0.10053	18.72
Total:				0.2971	0.000	0.218	40.67

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

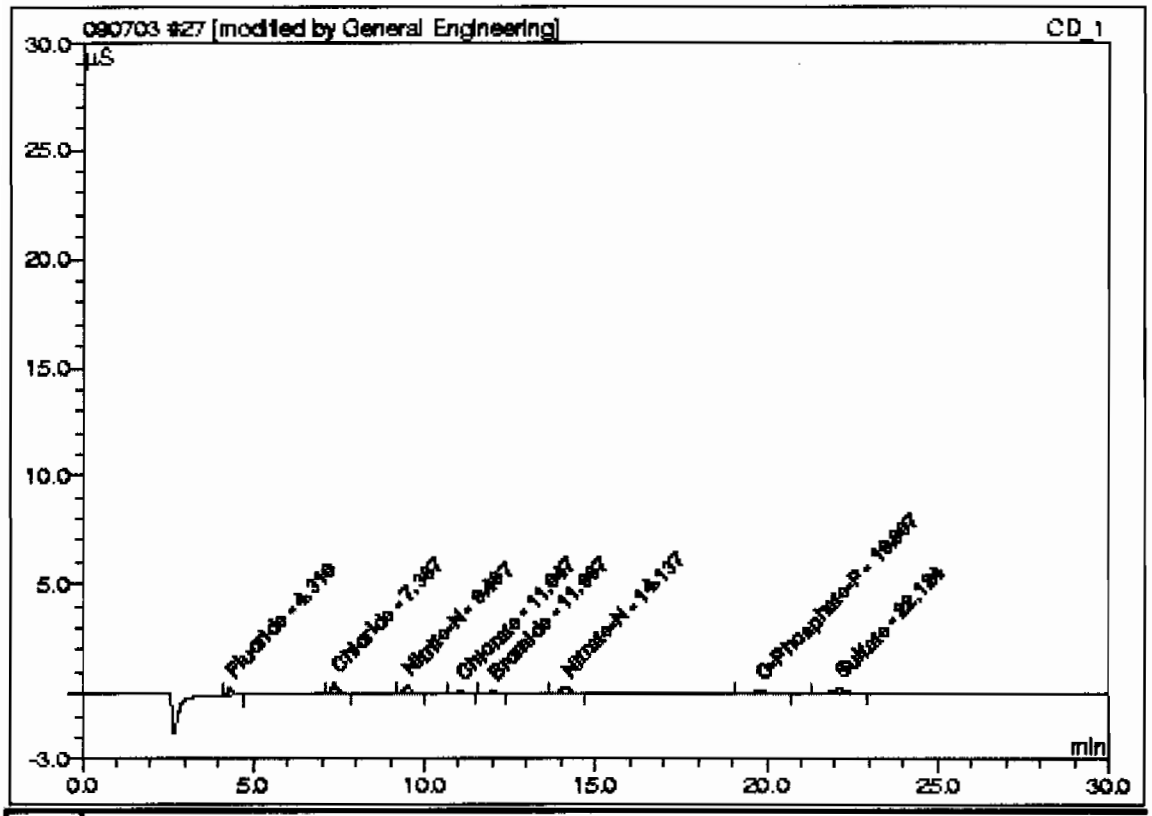

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.1000	0.1408	*	0.05234	8.88
2	7.37	Chloride	0.2000	0.3948		0.09372	15.91
3	9.49	Nitrite-N	0.1000	0.1421		0.08703	14.77
4	11.05	Chlorate	0.2000	0.2070		0.03083	5.23
5	11.99	Bromide	0.2000	0.2104		0.03382	5.74
6	14.14	Nitrate-N	0.1000	0.1817		0.10053	17.06
7	19.81	O-Phosphate-P	0.2000	0.2212		0.06603	11.21
8	22.12	Sulfate	0.4000	0.6729		0.12497	21.21
Total:				2.1609	0.000	0.589	100.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE085;300;9058

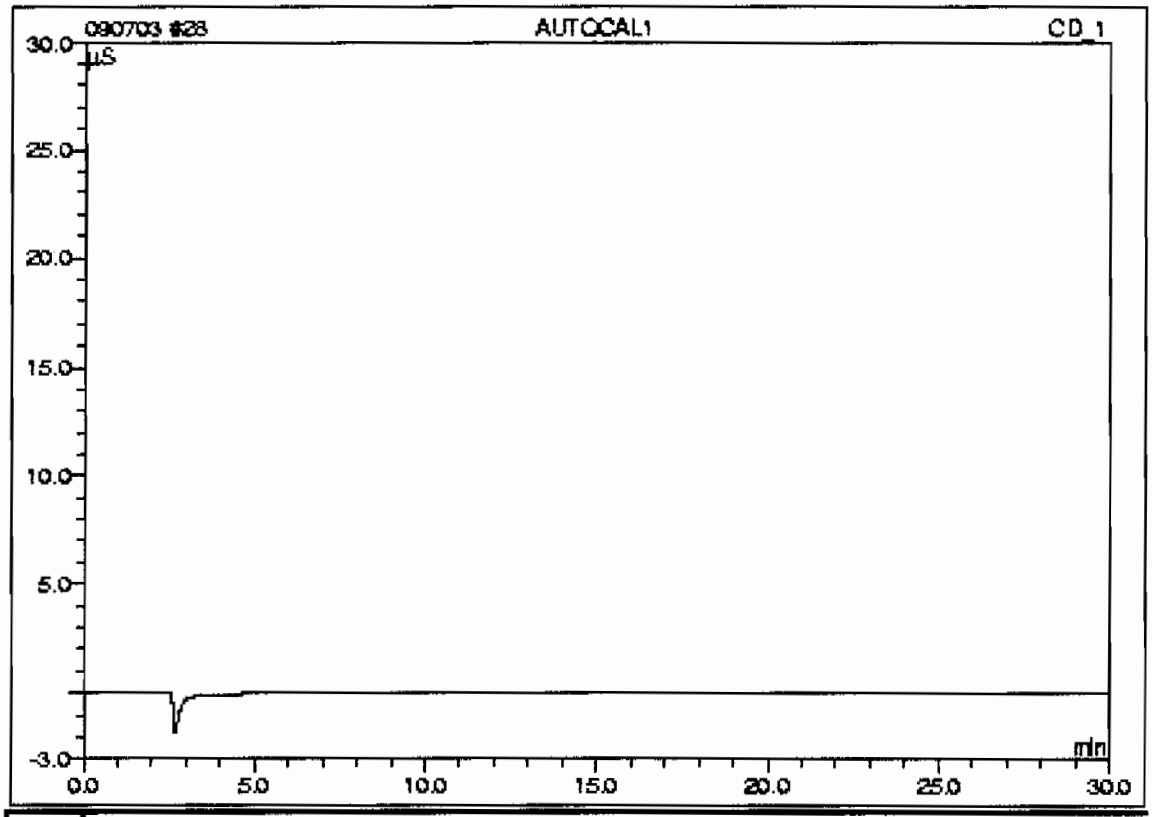

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-015880;GLGCE088;300;9056

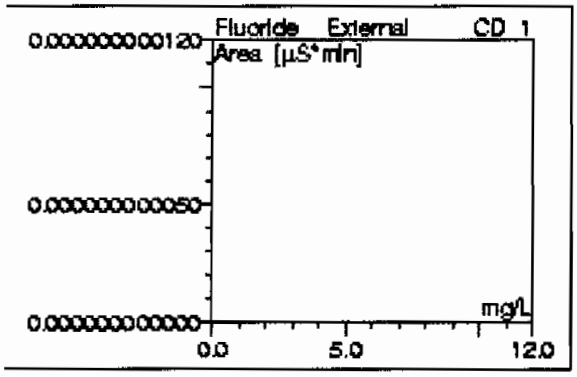

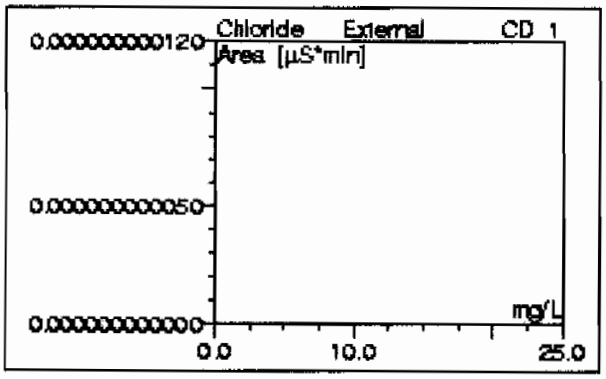

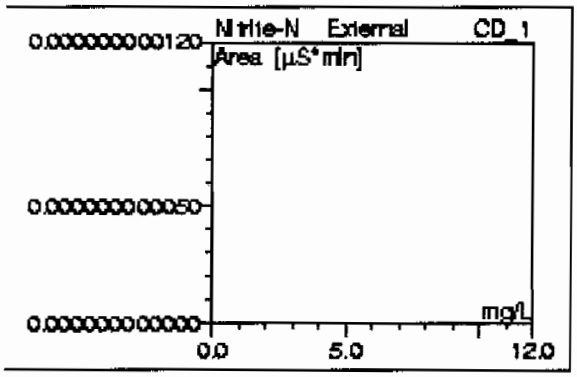

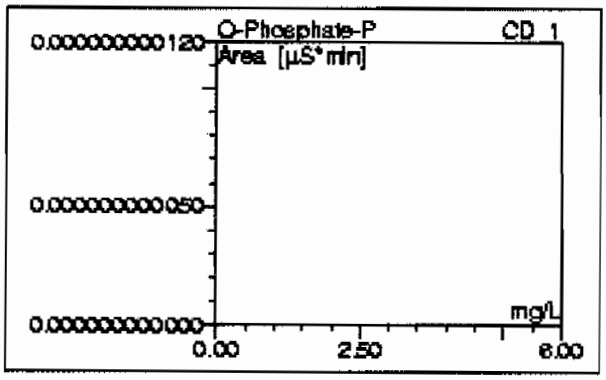

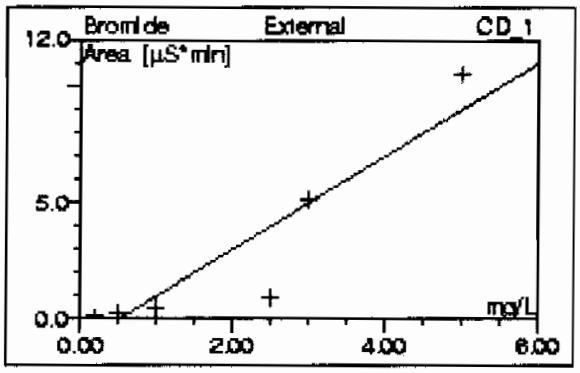

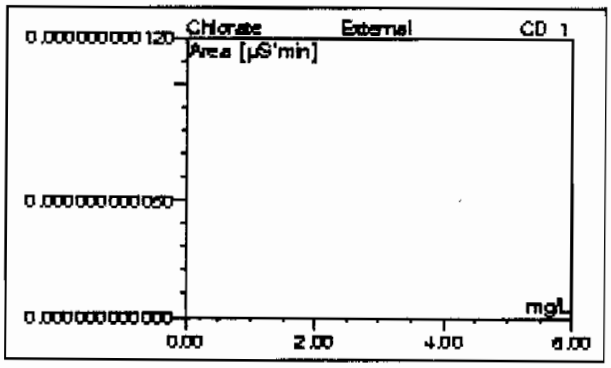

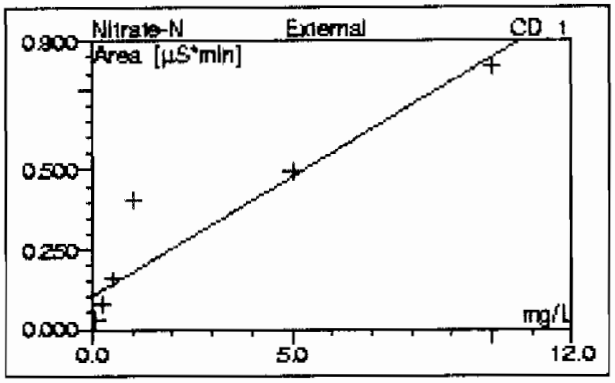

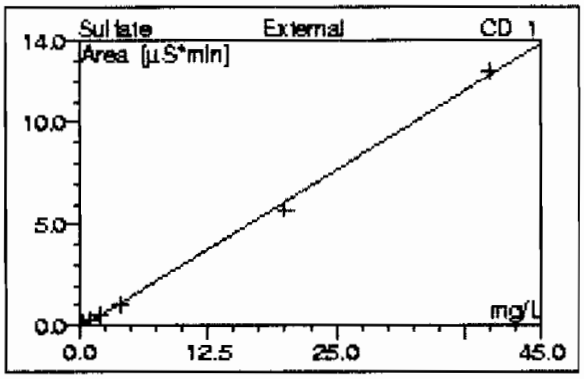

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Chloride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrite-N	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Bromide	0LOff	85.7419	-1.0196	1.9997	0.0000
n.a.	n.a.	Chlorate	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrate-N	0LOff	86.4468	0.1041	0.0746	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8340	-0.1257	0.3112	0.0000
Average:				90.6742	-0.1301	0.2982	0.0000

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

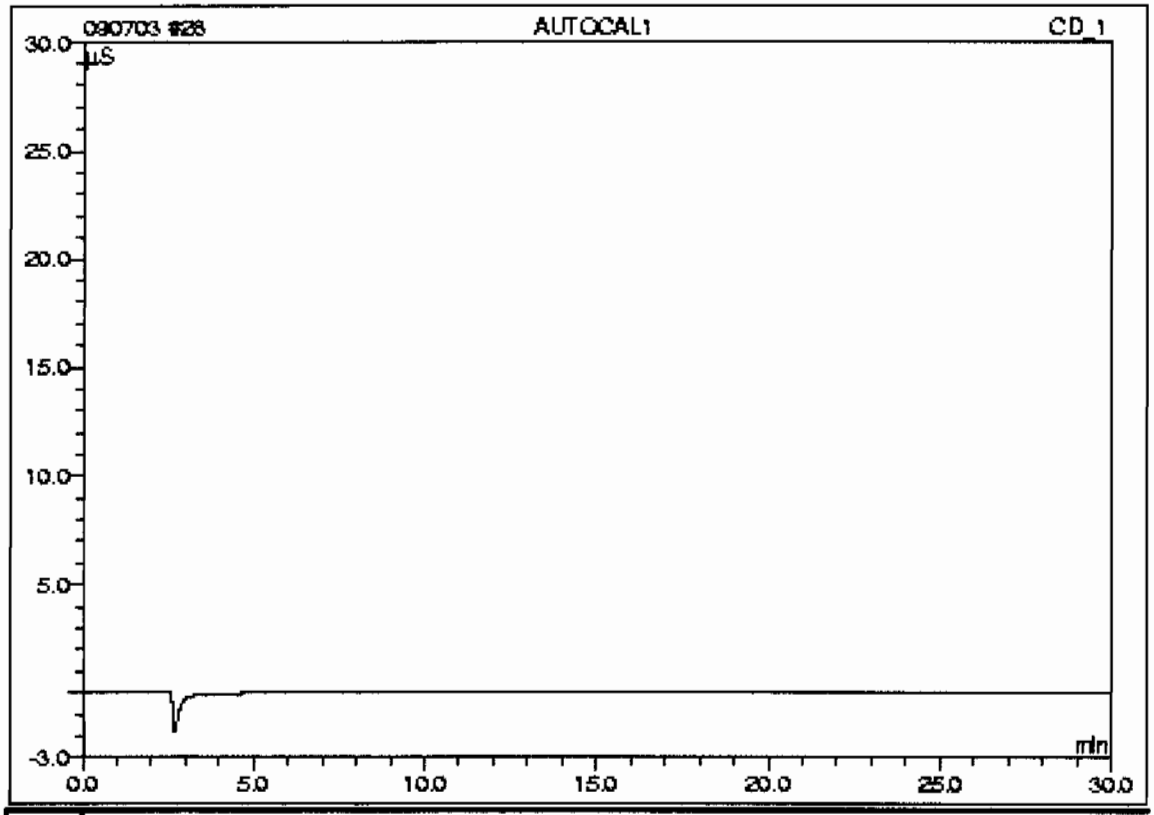

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:26	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

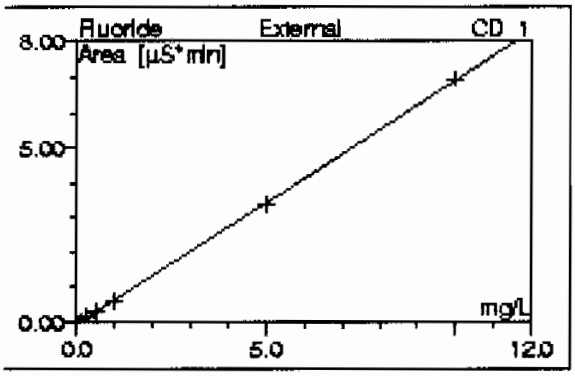

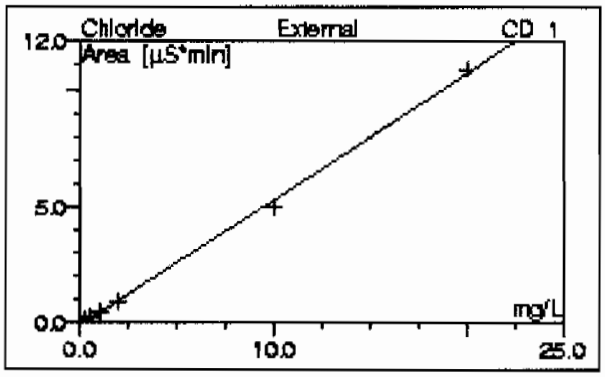

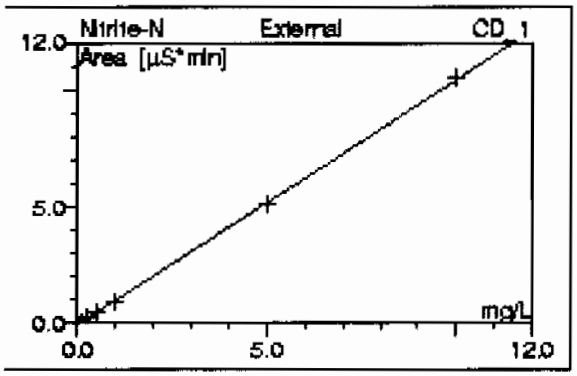

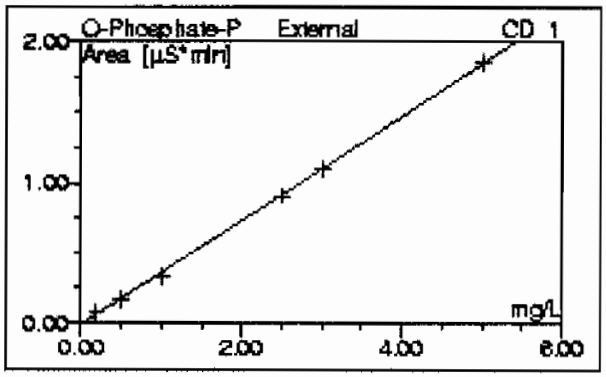

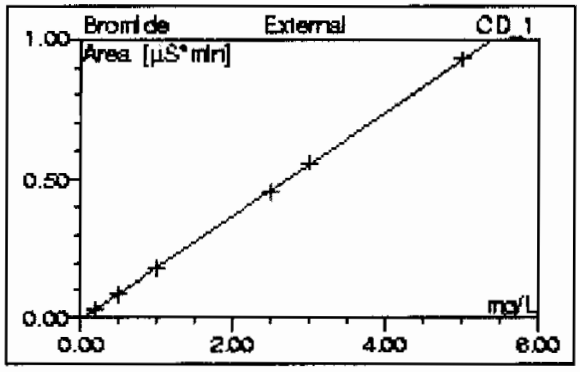

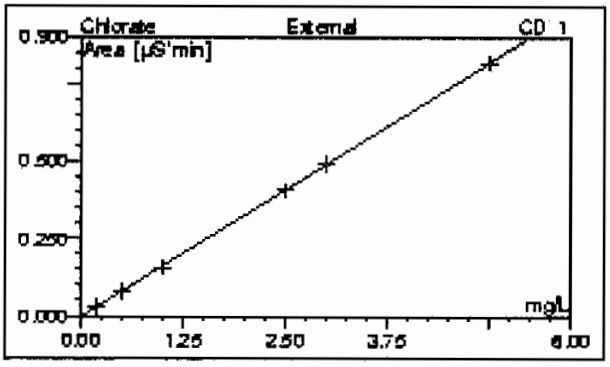

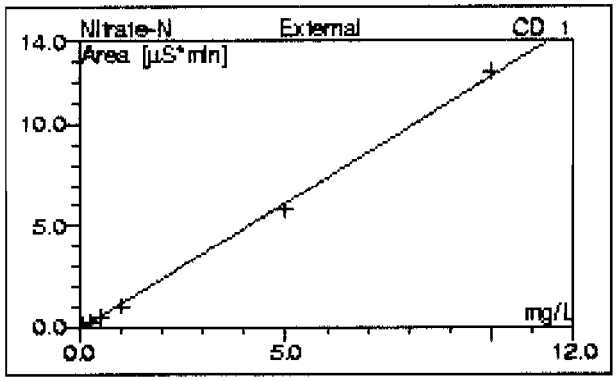

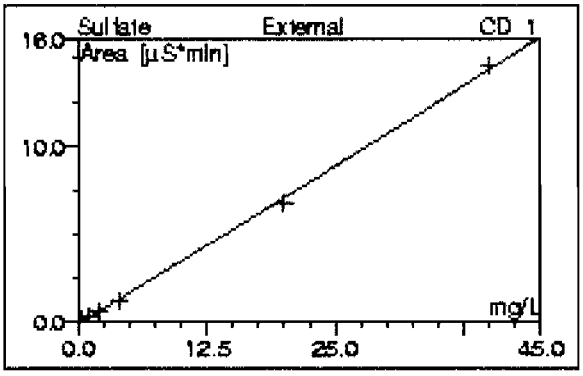

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9818	-0.0458	0.6968	0.0000
n.a.	n.a.	Chloride	0LOff	99.8028	-0.1138	0.5394	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9773	-0.0622	1.0502	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	99.9702	-0.0164	0.3726	0.0000
n.a.	n.a.	Bromide	0LOff	99.9731	-0.0054	0.1863	0.0000
n.a.	n.a.	Chlorate	0LOff	99.9897	-0.0032	0.1646	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.8340	-0.1257	1.2448	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8797	-0.1186	0.3620	0.0000
Average:				99.9261	-0.0614	0.5771	0.0000

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

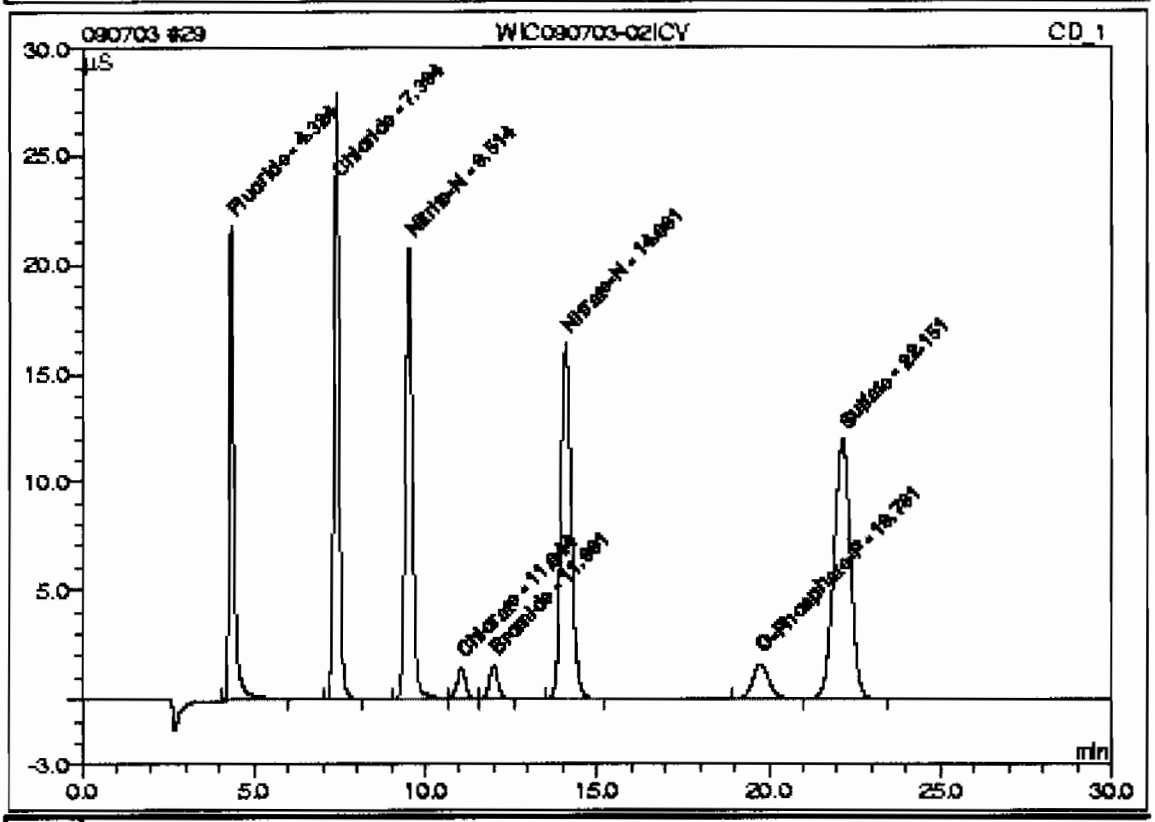

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.08	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65338	24.40
Total:				49.6694	0.000	27.271	100.00

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9055

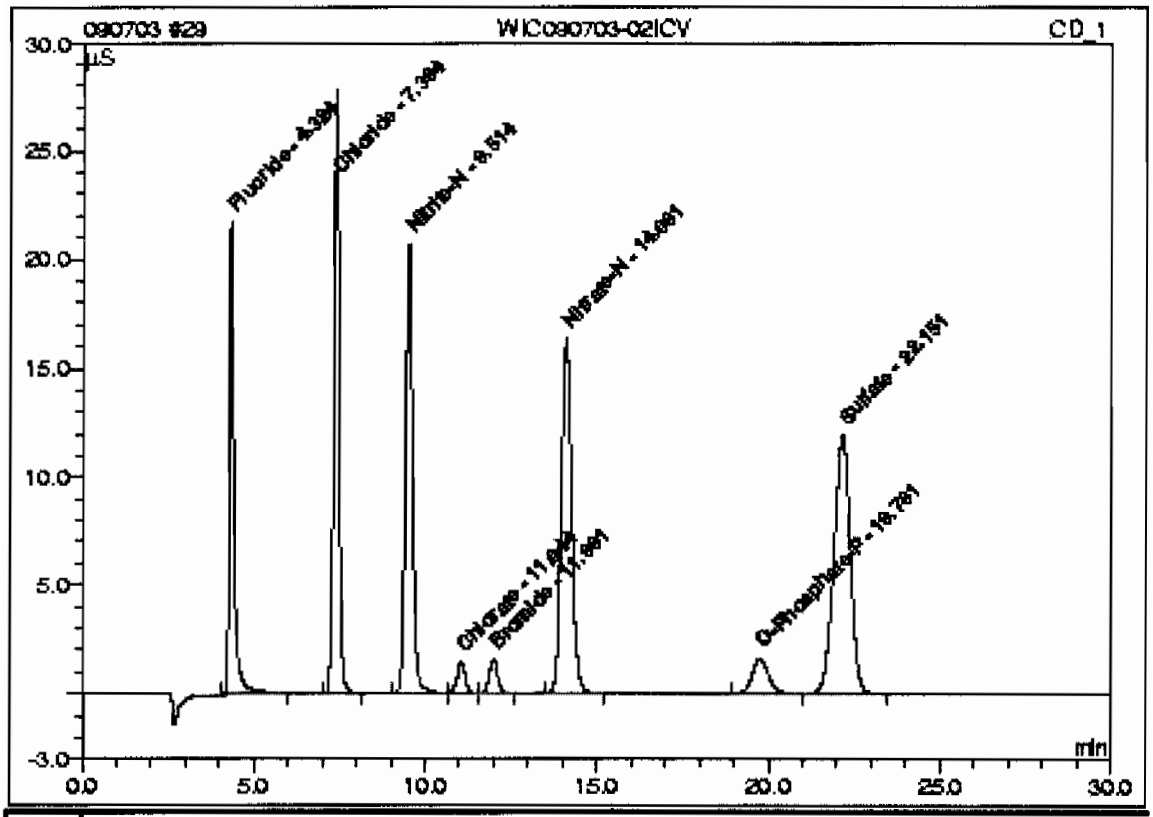

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.09	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7089		6.65338	24.40
Total:				49.6694	0.000	27.271	100.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

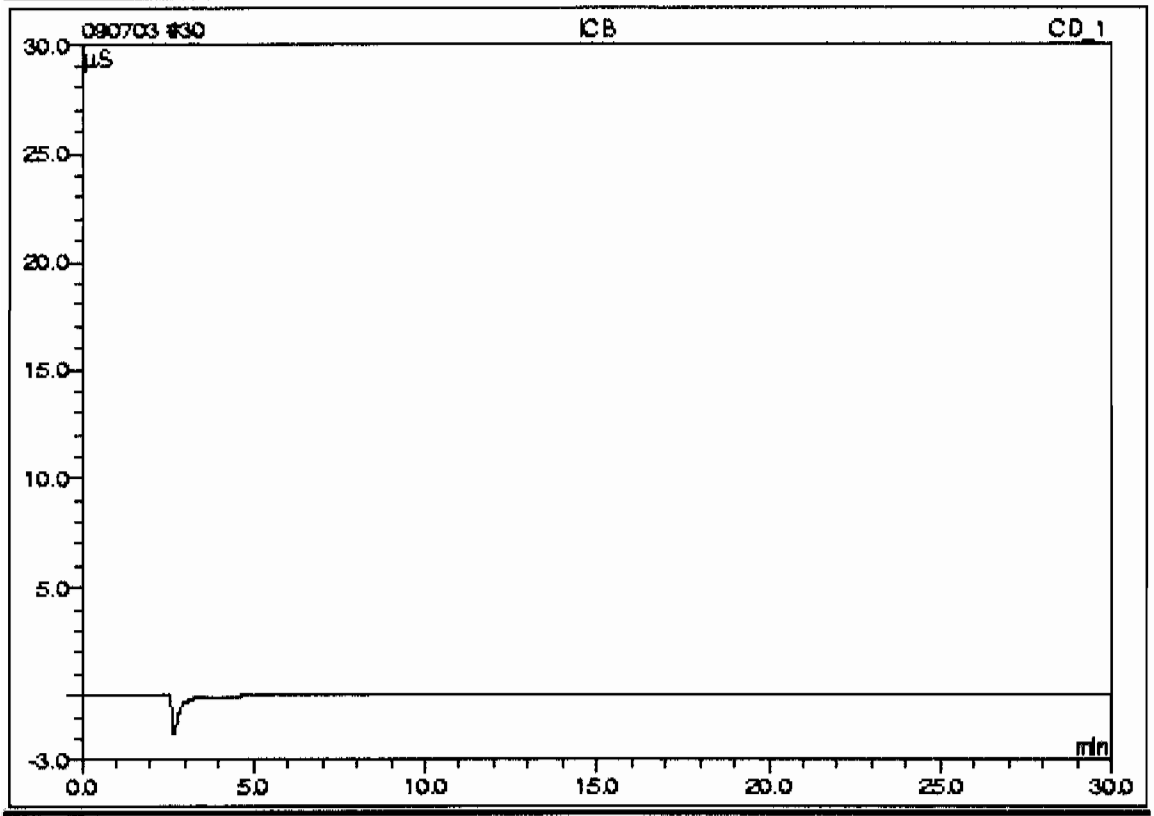

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

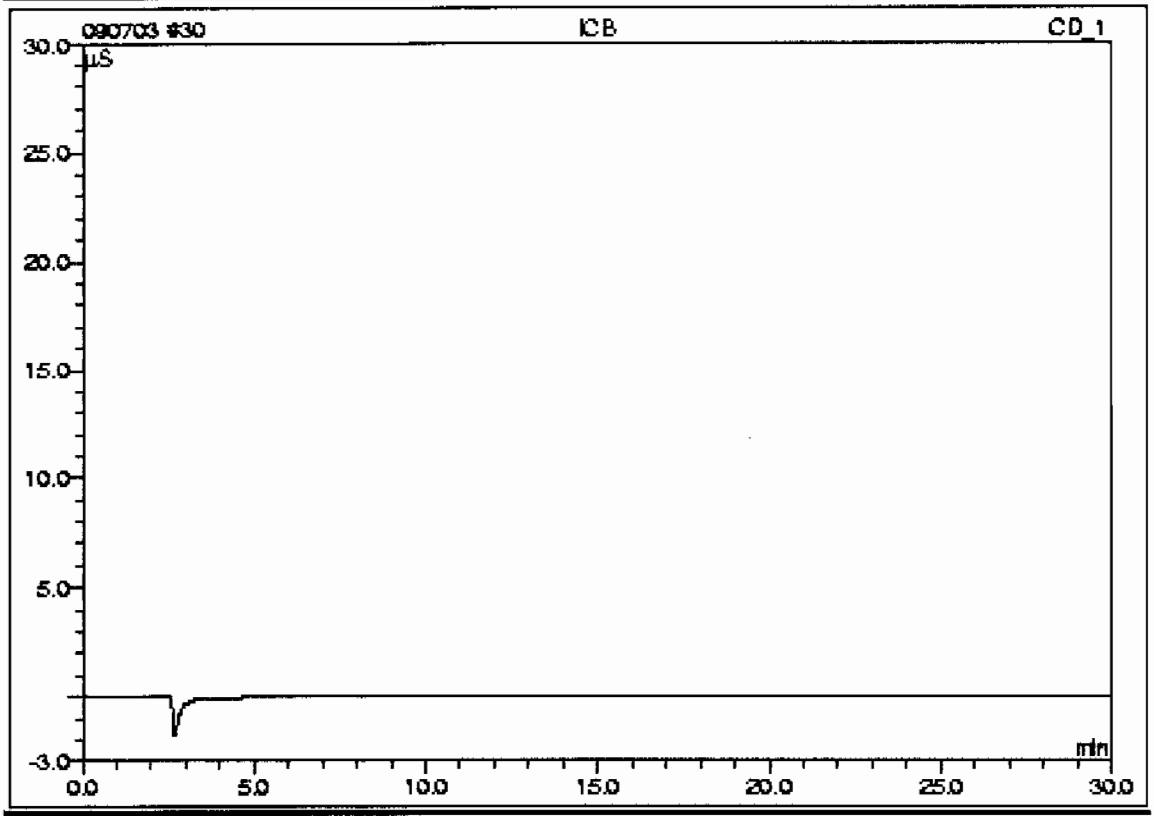

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 090710.seq for 1C6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/10/09 10:27		1	090710	MAR1
ICV	07/10/09 10:55		1	090710	MAR1
ICB	07/10/09 11:24		1	090710	MAR1
1201869897	07/10/09 11:53	880627	1	090710	MAR1
1201869901	07/10/09 12:22	880627	1	090710	MAR1
232347001	07/10/09 12:50	880627	1	090710	MAR1
1201869898	07/10/09 13:19	880627	1	090710	MAR1
1201869899	07/10/09 13:48	880627	1	090710	MAR1
1201869900	07/10/09 14:17	880627	1	090710	MAR1
232347002	07/10/09 14:46	880627	1	090710	MAR1
232347003	07/10/09 15:15	880627	1	090710	MAR1
232347004	07/10/09 15:43	880627	1	090710	MAR1
CVH	07/10/09 16:12		1	090710	MAR1
CCB	07/10/09 16:41		1	090710	MAR1
1201872402	07/10/09 17:10	881671	1	090710	MAR1
1201872406	07/10/09 17:39	881671	1	090710	MAR1
232582001	07/10/09 18:08	881671	1	090710	MAR1
232582002	07/10/09 18:37	881671	1	090710	MAR1
232585001	07/10/09 19:06	881671	1	090710	MAR1
1201872403	07/10/09 19:35	881671	1	090710	MAR1
1201872404	07/10/09 20:04	881671	1	090710	MAR1
1201872405	07/10/09 20:33	881671	1	090710	MAR1
CCV	07/10/09 21:01		1	090710	MAR1
CCB	07/10/09 21:30		1	090710	MAR1
232585002	07/10/09 21:59	881671	1	090710	MAR1
232585003	07/10/09 22:28	881671	1	090710	MAR1
232591001	07/10/09 22:57	881671	1	090710	MAR1
CVH	07/10/09 23:26		1	090710	MAR1

9 WIC090710-02ICV

Sample Name:	WIC090710-02ICV	*Injection Volume:*	1.0
Vial Number:	2	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10.09 10:55	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

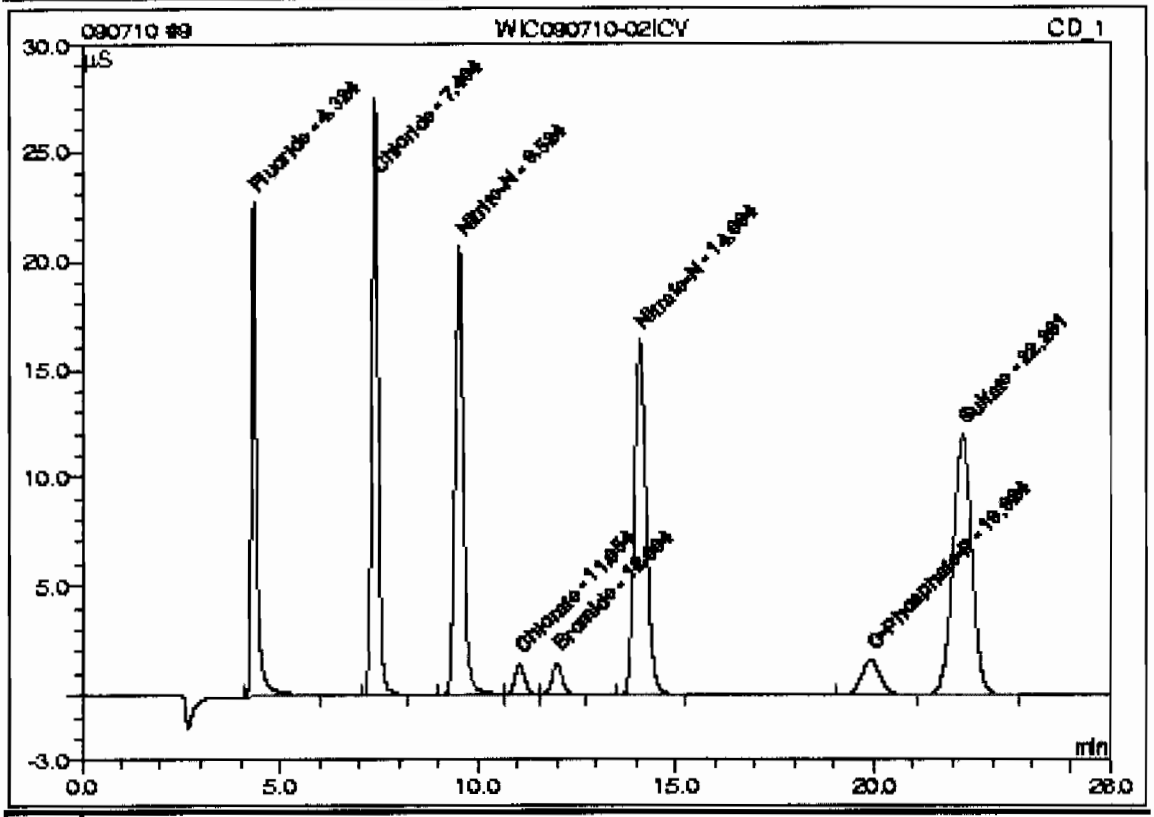

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.9513		3.40445	12.40
2	7.40	Chloride	n.a.	9.2589		4.88087	17.78
3	9.52	Nitrite-N	n.a.	4.8602		5.04179	18.37
4	11.05	Chlorate	n.a.	2.5352		0.41404	1.51
5	12.00	Bromide	n.a.	2.4394		0.44900	1.64
6	14.09	Nitrate-N	n.a.	4.6565		5.67065	20.66
7	19.92	O-Phosphate-P	n.a.	2.4520		0.89726	3.27
8	22.26	Sulfate	n.a.	18.8047		6.68826	24.37
Total:				49.9581	0.000	27.446	100.00

10 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	3	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703sn	*Sample Amount:*	1.0000
Recording Time:	7/10/09 11:24	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE085;300;9058

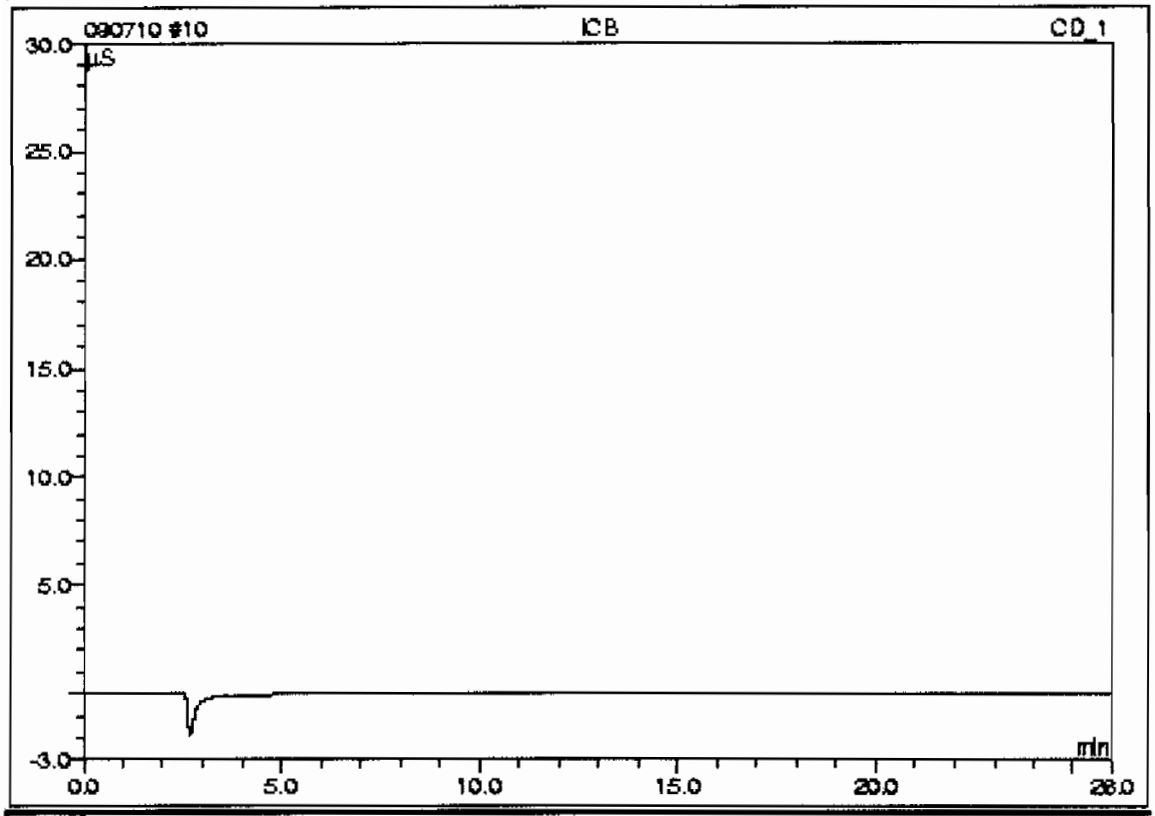

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

20 WIC090710-02CVH

Sample Name:	WIC090710-02CVH	*Injection Volume:*	1.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 16:12	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

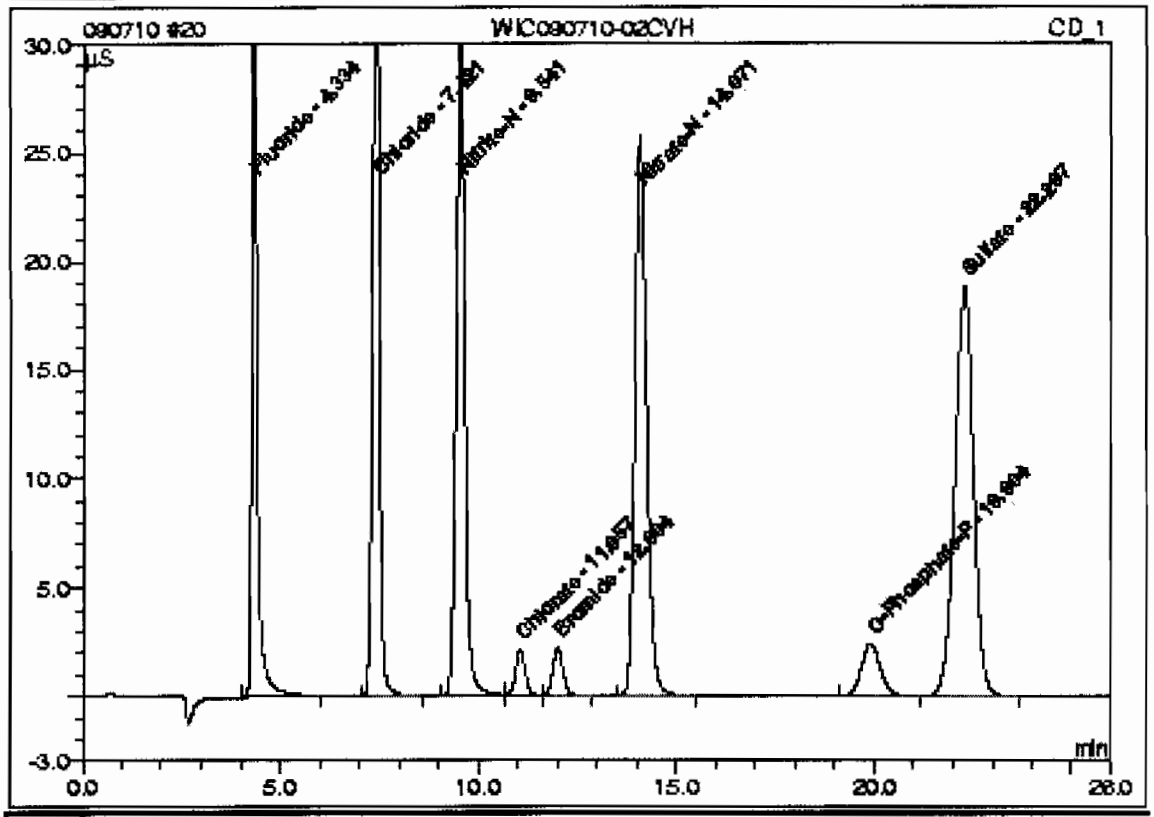

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	7.5118		5.18871	12.15
2	7.42	Chloride	n.a.	14.5867		7.75491	18.16
3	9.54	Nitrite-N	n.a.	7.4133		7.72299	18.08
4	11.06	Chlorate	n.a.	3.8270		0.62667	1.47
5	12.00	Bromide	n.a.	3.6753		0.67921	1.59
6	14.07	Nitrate-N	n.a.	7.2904		8.94931	20.95
7	19.90	O-Phosphate-P	n.a.	3.6723		1.35196	3.17
8	22.30	Sulfate	n.a.	29.1672		10.43929	24.44
Total:				77.1440	0.000	42.713	100.00

21 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	14	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 15:41	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

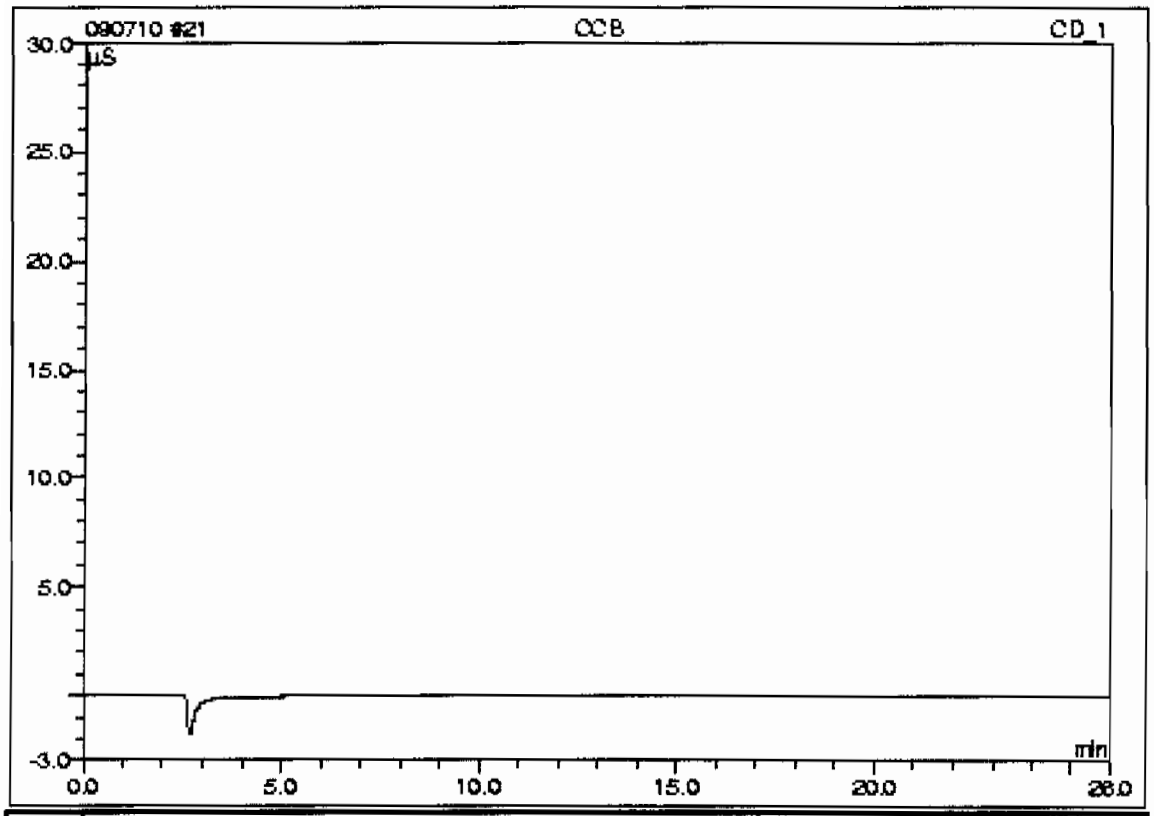

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

22 1201872402/881671/1/1/MB

Sample Name:	1201872402/881671/1/1/MB	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 17:10	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

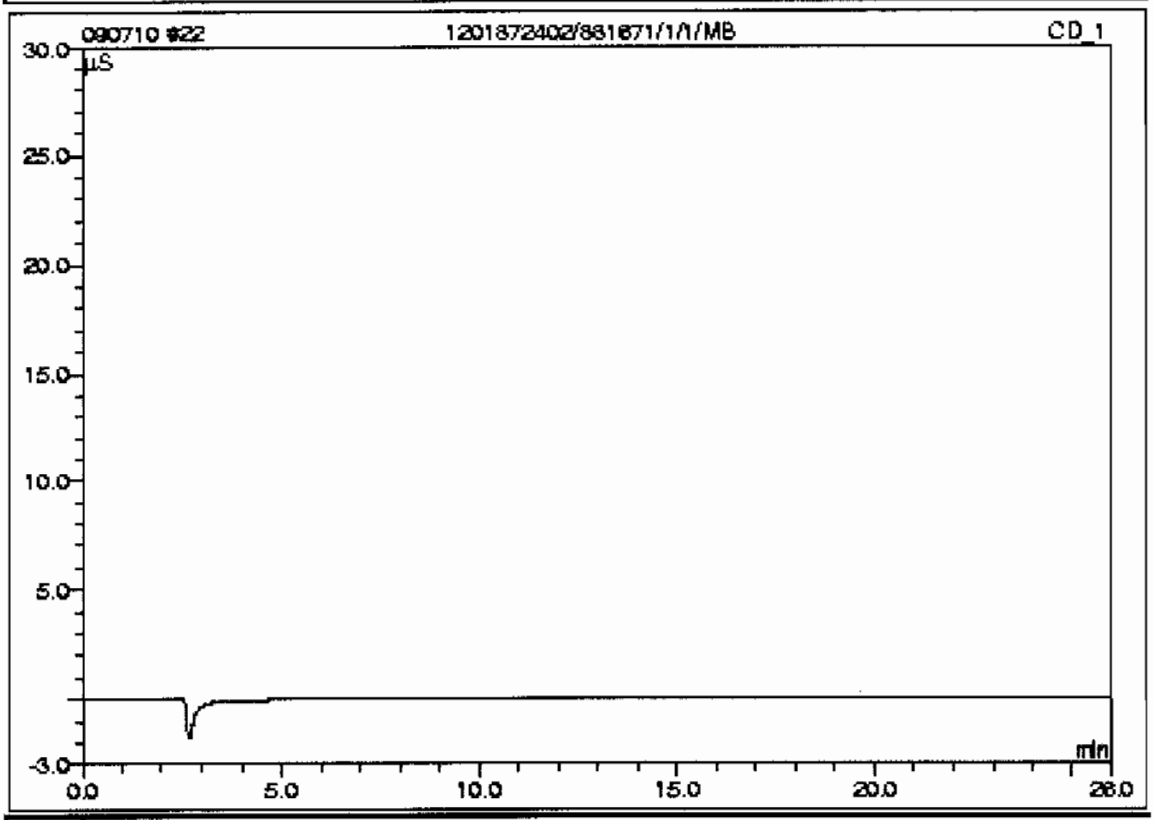

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

23 1201872406/881671/1/1/LCS

Sample Name:	1201872406/881671/1/1/LCS	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantit. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 17:39	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9055

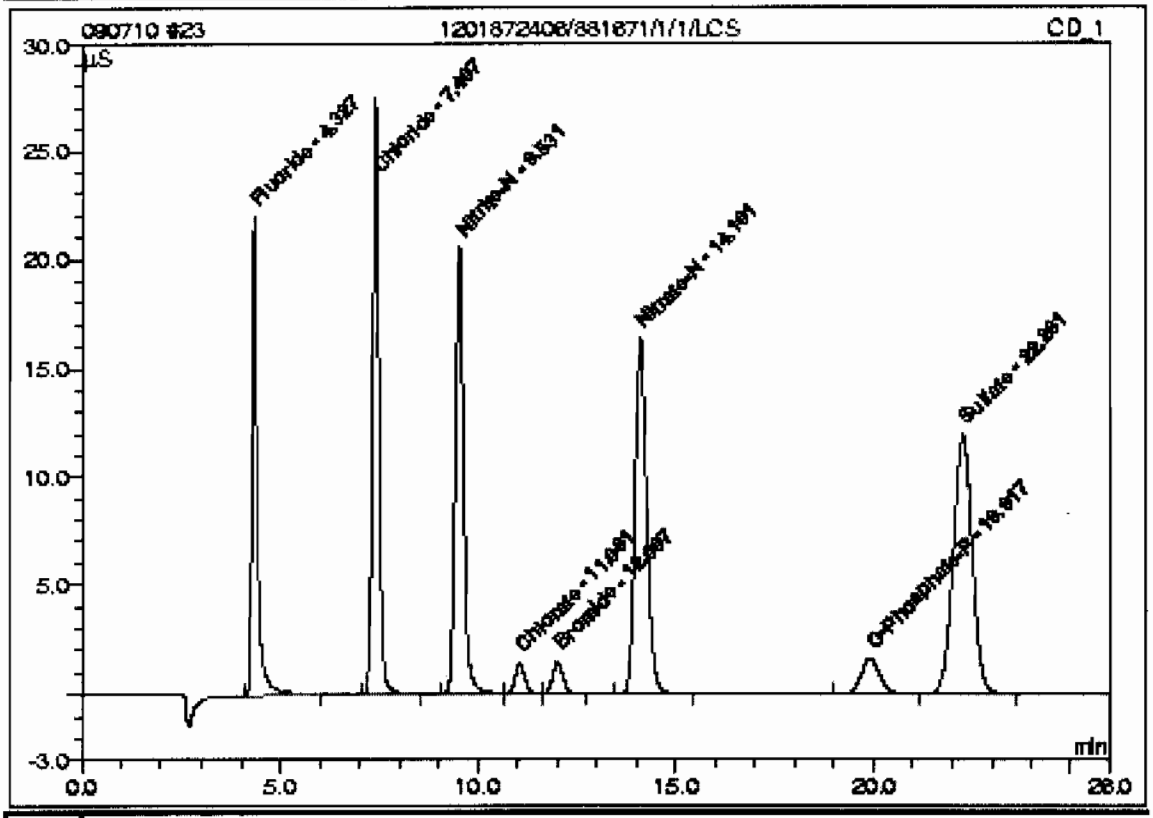

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9238		3.38533	12.33
2	7.41	Chloride	n.a.	9.2994		4.90269	17.85
3	9.53	Nitrite-N	n.a.	4.8611		5.04275	18.36
4	11.06	Chlorate	n.a.	2.5548		0.41727	1.52
5	12.01	Bromide	n.a.	2.4424		0.44957	1.64
6	14.10	Nitrate-N	n.a.	4.6625		5.67819	20.68
7	19.92	O-Phosphate-P	n.a.	2.4455		0.89486	3.26
8	22.28	Sulfate	n.a.	18.8109		6.69052	24.36
Total:				50.0006	0.000	27.461	100.00

24 232582001/881671/1/1/

Sample Name:	232582001/881671/1/1/	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 18:08	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

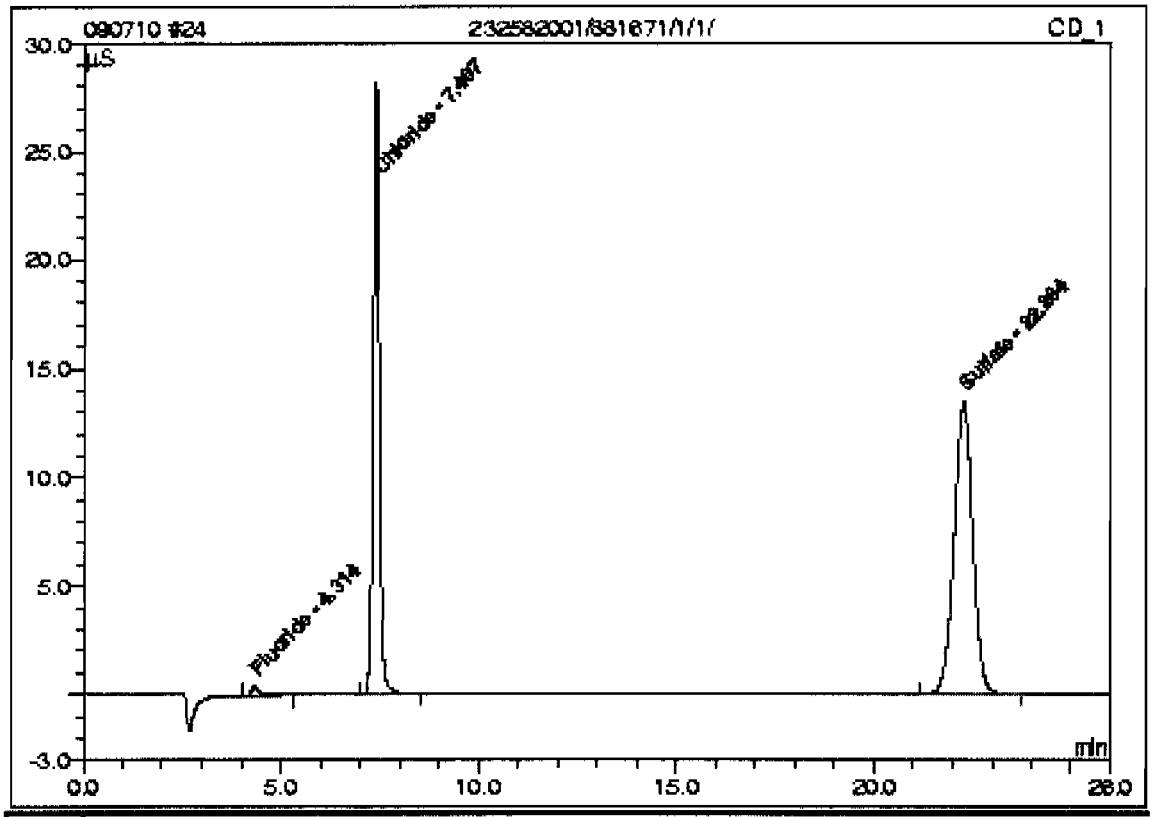

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.1976		0.09187	0.73
2	7.41	Chloride	n.a.	9.4544		4.98632	39.43
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.28	Sulfate	n.a.	21.2326		7.56713	59.84
Total:				30.8846	0.000	12.645	100.00

25 232582002/881671/1/1/

Sample Name:	232582002/881671/1/1/	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 18:37	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

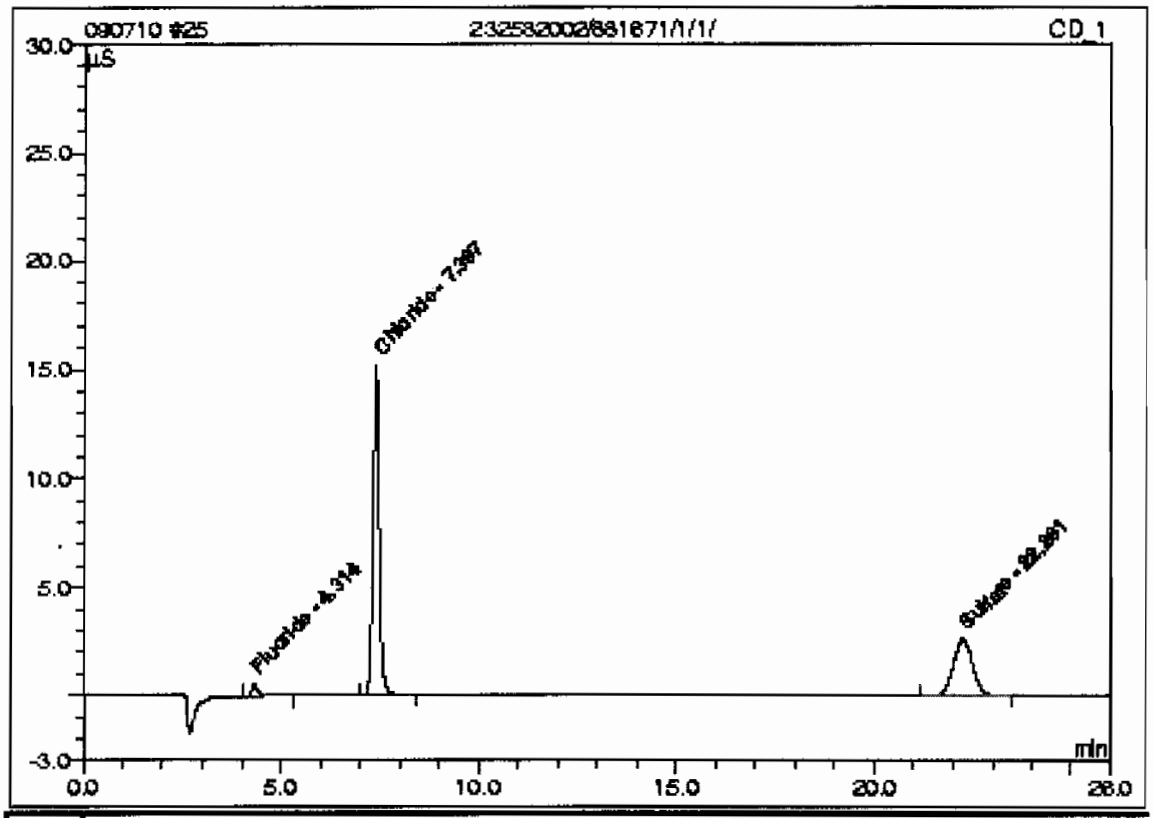

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.2219		0.10880	2.49
2	7.40	Chloride	n.a.	5.2914		2.74059	62.67
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.26	Sulfate	n.a.	4.5374		1.52384	34.84
Total:				10.0507	0.000	4.373	100.00

26 232585001/881671/1/1/

Sample Name:	232585001/881671/1/1/	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 19:08	Analyst:	**MAR1**
Run Time (min):	25.00 Column:	**AS9HC-014108;GLGCE085;300;9058**	

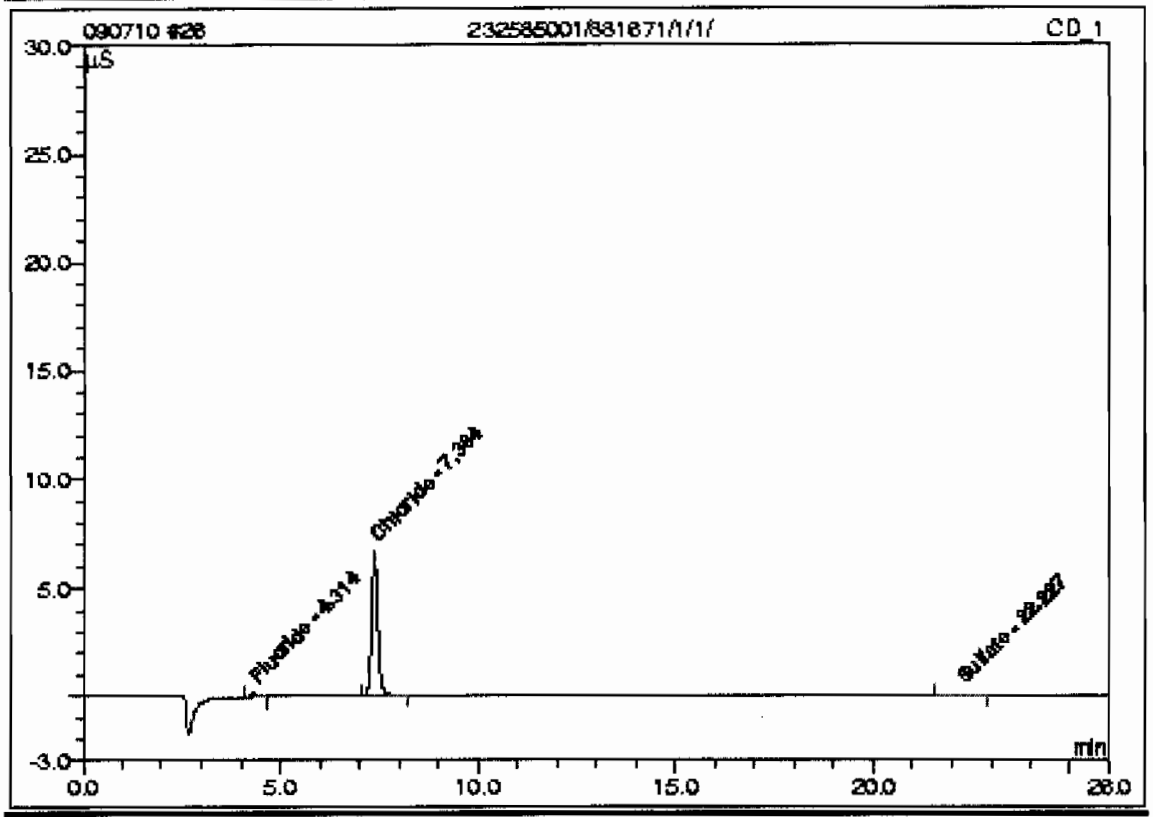

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.1102		0.03098	2.38
2	7.38	Chloride	n.a.	2.4952		1.23216	94.54
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.23	Sulfate	n.a.	0.4385		0.04011	3.08
Total:				3.0439	0.000	1.303	100.00

27 1201872403/881671/1/1/DUP

Sample Name:	1201872403/881671/1/1/**DUP**	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 19:35	Analyst:	**MAR1**
Run Time (min):	25.00	Column:	**AS9HC-014108;GLGCE088;300;9058**

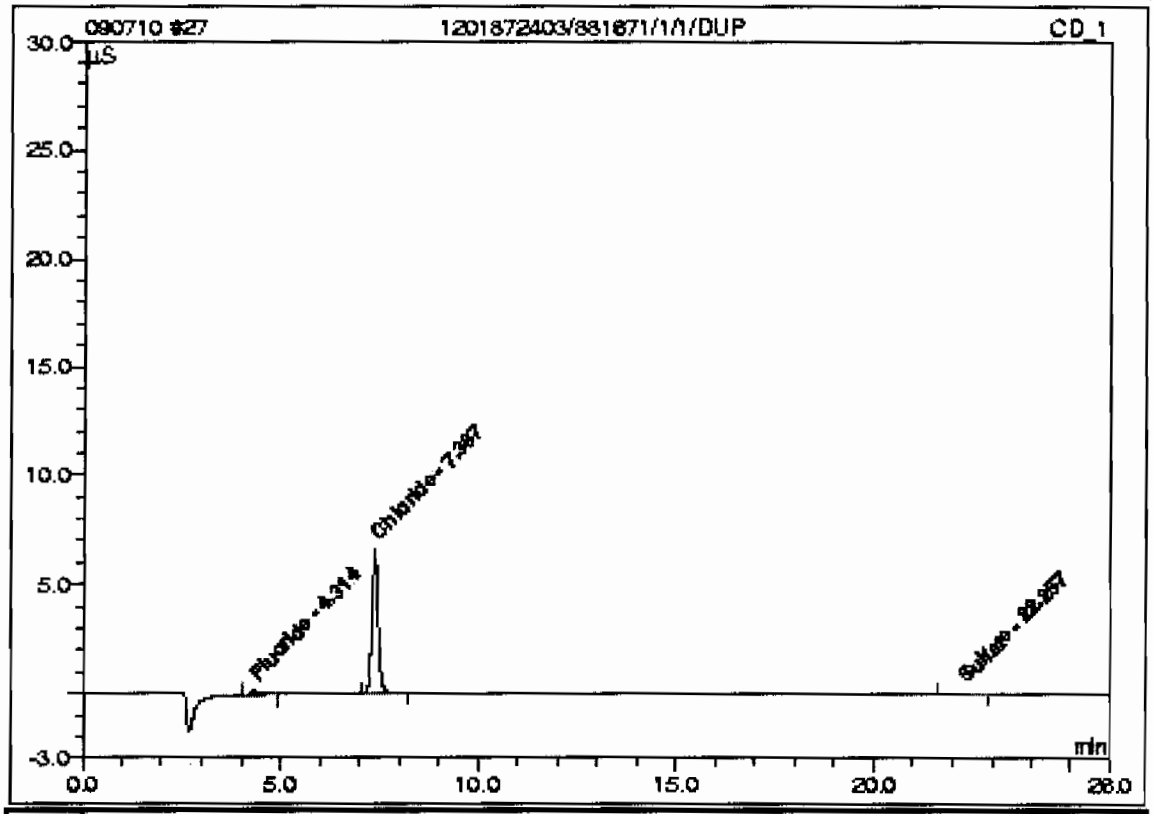

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.1193		0.03732	2.89
2	7.39	Chloride	n.a.	2.4674		1.21721	94.33
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.26	Sulfate	n.a.	0.4266		0.03592	2.78
Total:				3.0134	0.000	1.290	100.00

28 1201872404/881671/1/1/MS

Sample Name:	1201872404/881671/1/1/MS	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 20:04	Analyst:	MAR1
Run Time (min):	28.00 Column:	AS9HC-014108;GLGCE088;300;9058	

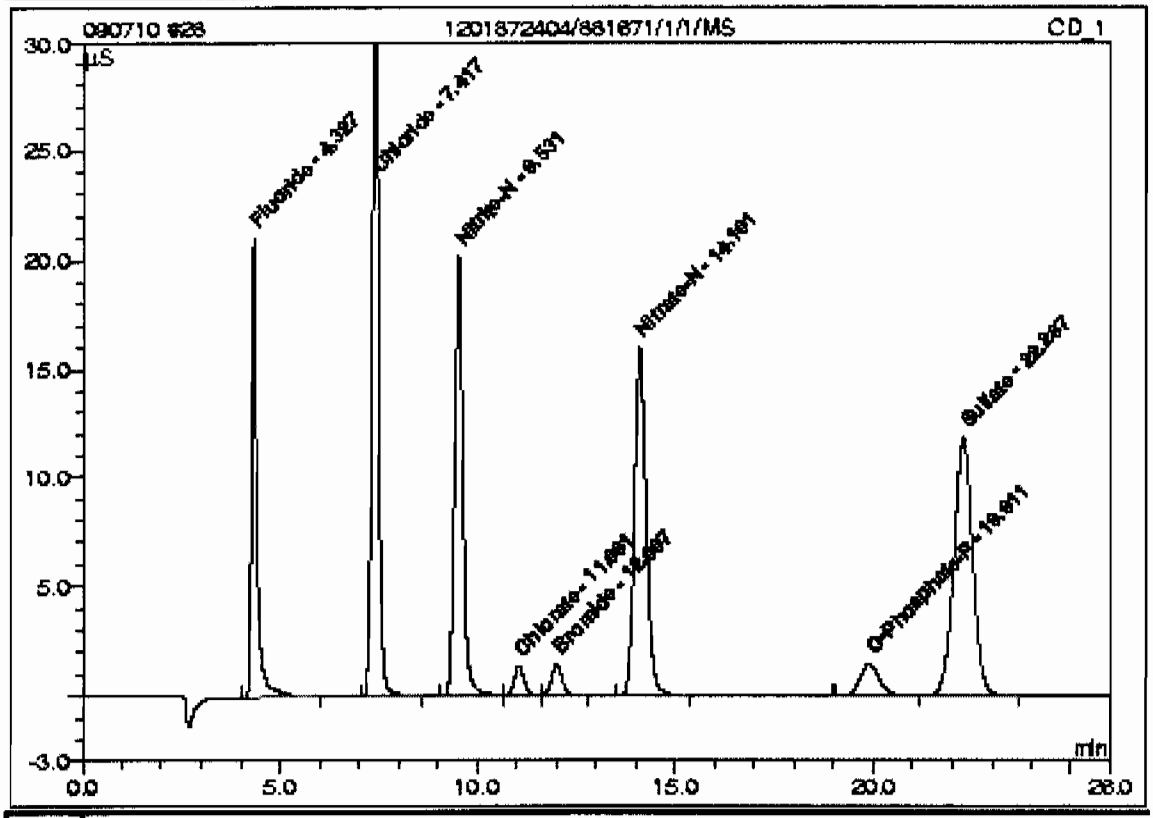

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.7485		3.26313	11.39
2	7.42	Chloride	n.a.	12.4254		6.58900	22.97
3	9.53	Nitrite-N	n.a.	4.7764		4.95392	17.27
4	11.06	Chlorate	n.a.	2.4951		0.40745	1.42
5	12.01	Bromide	n.a.	2.4017		0.44199	1.54
6	14.10	Nitrate-N	n.a.	4.5778		5.57264	19.43
7	19.91	O-Phosphate-P	n.a.	2.2616		0.82634	2.88
8	22.29	Sulfate	n.a.	18.6398		6.62859	23.11
Total:				52.3263	0.000	28.683	100.00

29 1201872405/881671/1/1/MSD

Sample Name:	1201872405/881671/1/1/**MSD**	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 20:33	Analyst:	**MAR1**
Run Time (min):	28.00	Column:	**AS9HC-014108;GLGCE088;300;9058**

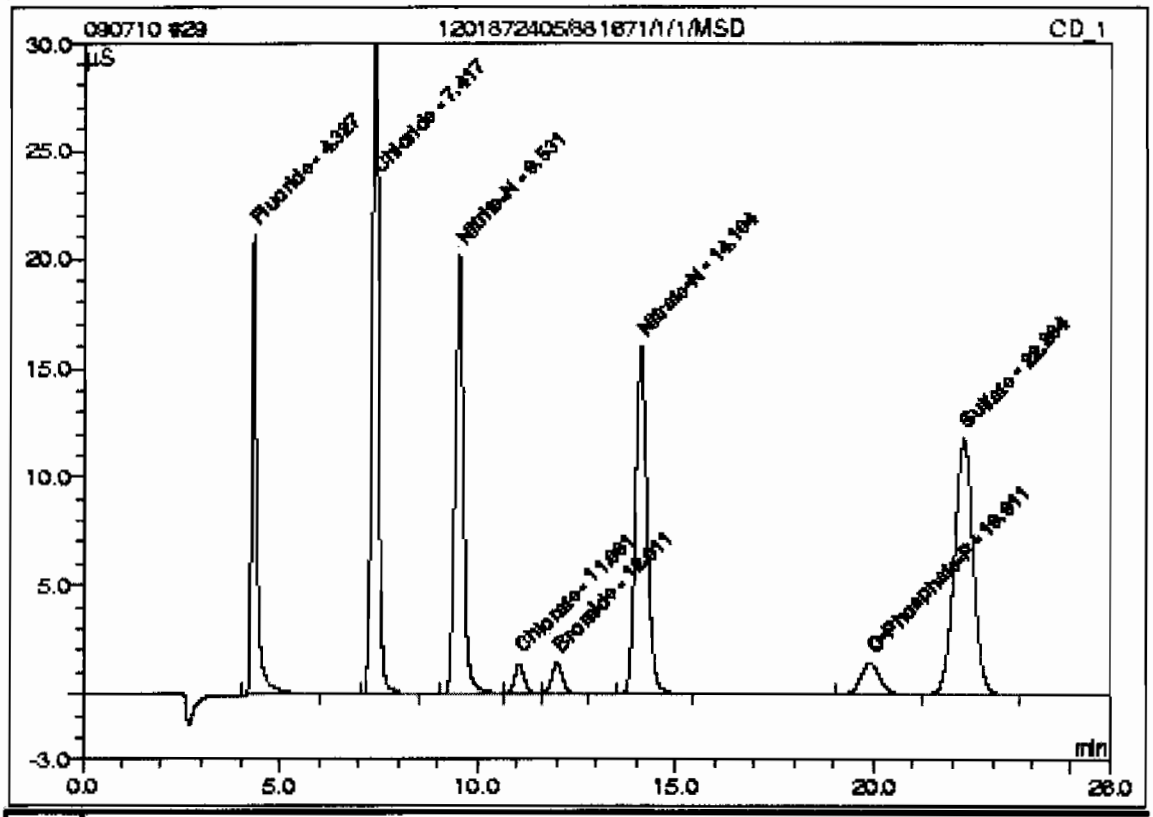

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.7534		3.26656	11.38
2	7.42	Chloride	n.a.	12.4318		6.59249	22.96
3	9.53	Nitrite-N	n.a.	4.7852		4.96307	17.28
4	11.06	Chlorate	n.a.	2.5169		0.41101	1.43
5	12.01	Bromide	n.a.	2.4189		0.44517	1.55
6	14.10	Nitrate-N	n.a.	4.5806		5.57615	19.42
7	19.91	O-Phosphate-P	n.a.	2.2642		0.82729	2.88
8	22.28	Sulfate	n.a.	18.6560		6.63444	23.10
Total:				52.4067	0.000	28.716	100.00

30 WIC090710-02CCV

Sample Name:	WIC090710-02CCV	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 21:01	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

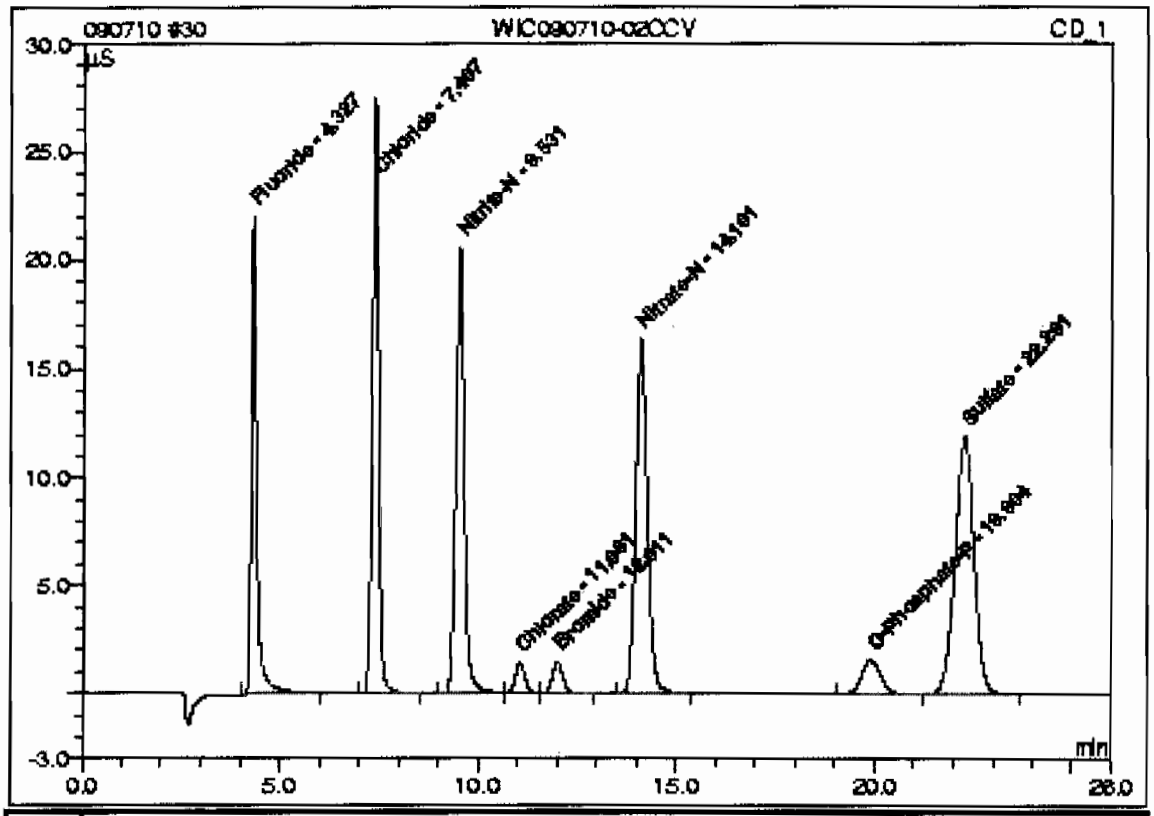

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9347		3.39290	12.34
2	7.41	Chloride	n.a.	9.3011		4.90363	17.84
3	9.53	Nitrite-N	n.a.	4.8658		5.04763	18.36
4	11.08	Chlorate	n.a.	2.5538		0.41710	1.52
5	12.01	Bromide	n.a.	2.4641		0.45360	1.65
6	14.10	Nitrate-N	n.a.	4.6637		5.67962	20.66
7	19.90	O-Phosphate-P	n.a.	2.4489		0.89612	3.26
8	22.29	Sulfate	n.a.	18.8318		6.69809	24.37
Total:				50.0638	0.000	27.489	100.00

31 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	24	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 21:30	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

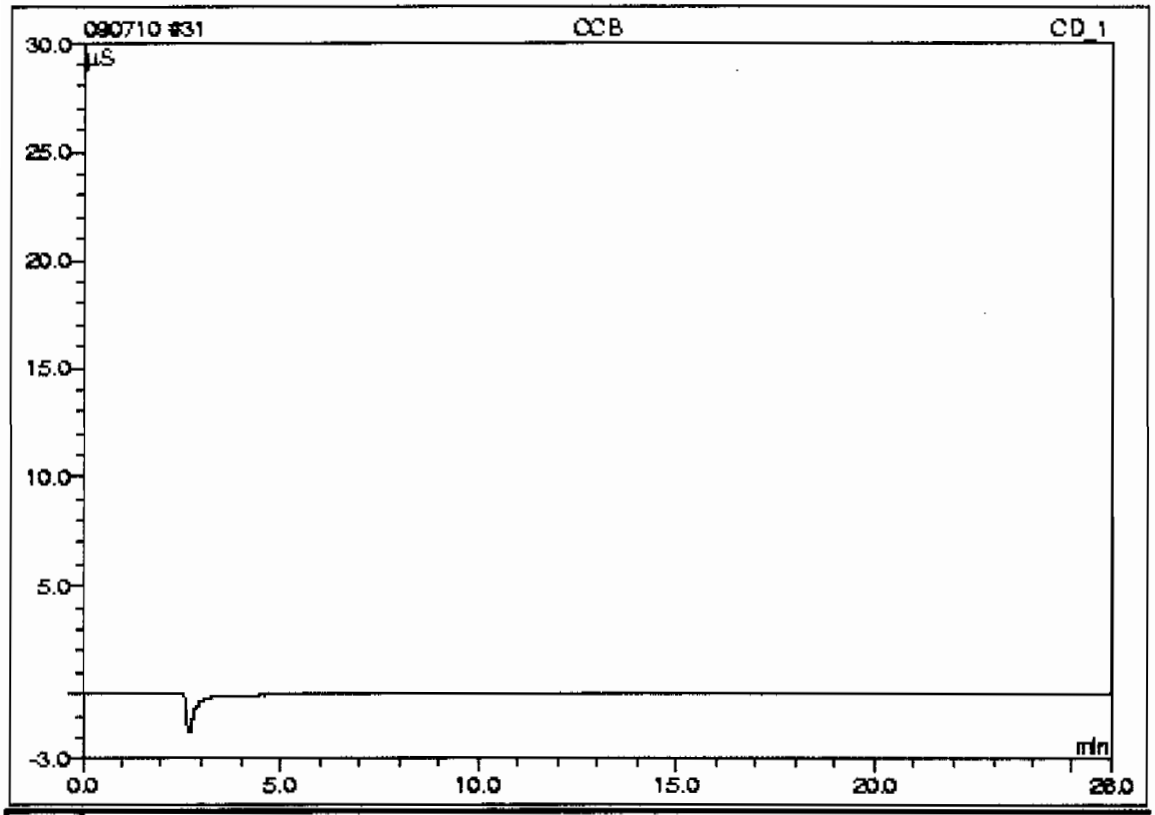

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

pH

pH / Corrosivity LogBook

Analyst: TXT1
Batch: 881740
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201872624	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201872624 LCS		Soil	10:00	10:05	01-JUL-09 12:33	pH	20	20	7.02	21.7'C	7	100.286	
1201872624 LCS		Soil	10:00	10:05	01-JUL-09 12:33	pH 2	20	20	7.02	21.7'C	7	100.286	
232582001		Soil	10:00	10:05	01-JUL-09 12:36	pH	20	20	7.57	22.1'C			
232582001		Soil	10:00	10:05	01-JUL-09 12:36	pH 2	20	20	7.59	22.2'C			
1201872623 DUP	232582001	Soil	10:00	10:05	01-JUL-09 12:39	pH	20	20	7.6	22.2'C			.396
1201872623 DUP	232582001	Soil	10:00	10:05	01-JUL-09 12:39	pH 2	20	20	7.58	22.4'C			.132
232582002		Soil	10:00	10:05	01-JUL-09 12:44	pH	20	20	8.34	22.2'C			
232582002		Soil	10:00	10:05	01-JUL-09 12:44	pH 2	20	20	8.29	22.4'C			
232585001		Soil	10:00	10:05	01-JUL-09 12:47	pH	20	20	7.74	22.2'C			
232585001		Soil	10:00	10:05	01-JUL-09 12:47	pH 2	20	20	7.7	22.3'C			
CCV			10:00	10:05	01-JUL-09 12:49	pH	20	20	7.02	21.6'C	7	100.286	
CCV			10:00	10:05	01-JUL-09 12:49	pH 2	20	20	7.01	21.7'C	7	100.143	
232585002		Soil	10:00	10:05	01-JUL-09 12:51	pH	20	20	6.6	22.3'C			
232585002		Soil	10:00	10:05	01-JUL-09 12:51	pH 2	20	20	6.57	22.7'C			
232585003		Soil	10:00	10:05	01-JUL-09 12:57	pH	20	20	6.61	22.4'C			
232585003		Soil	10:00	10:05	01-JUL-09 12:57	pH 2	20	20	6.58	22.8'C			
232591001		Soil	10:00	10:05	01-JUL-09 13:04	pH	20	20	6.68	22.6'C			
232591001		Soil	10:00	10:05	01-JUL-09 13:04	pH 2	20	20	6.64	22.7'C			
CCV			10:00	10:05	01-JUL-09 13:09	pH	20	20	7	22.0'C	7	100	
CCV			10:00	10:05	01-JUL-09 13:09	pH 2	20	20	6.99	22.1'C	7	99.857	

Calibration Information:
Run Date: 01-JUL-09 12:13
Instrument: PHX370
Analyst: TXT1

	Standard	Observed	Theoretical		C	%Recovery
12:13	IMM090701-PH1	4.01	4	SU	21.9	100.25
12:13	IMM090701-PH-	7.02	7	SU	21.9	100.29
12:13	UPH090701b3-1	10.03	10	SU	21.9	100.3
12:13	UPH090701-03e-	2.04	2	SU	21.9	102
12:13	090701F30-1	11.97	12	SU	21.9	99.75
12:13	IMM090701g3-1	7.03	7	SU	21.9	100.43

Comments:

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2508

Method/Analysis Information

Procedure:	**Dry Weight-Percent Moisture**
Analytical Method:	
Analytical Batch Number:	881796

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201872768	232585001(CAMO-09-6605) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-020 REV# 9.

Calibration Information:

Quality Control (QC) Information:

Designated QC
The following sample was used for QC: 232585001 (CAMO-09-6605). The QC was from LANL work order 232585.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU. Not Applicable.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
Not Applicable. The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882671
Prep Batch Number:	881800

Sample ID	Client ID
232582002	CAMO-09-10465
1201874683	Method Blank (MB)
1201874684	232278002(CAMO-09-10459) Sample Duplicate (DUP)
1201874685	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly

using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874683 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232278002 (CAMO-09-10459). The QC was from LANL work order 232278.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
Manual integration of alpha spectroscopy spectra 1201874685 (LCS) was performed to fully separate counts in Regions of Interest which would have been biased.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	884520
Prep Batch Number:	881800

Sample ID	Client ID
232582001	CAMO-09-10464
1201879100	Method Blank (MB)
1201879101	232582001(CAMO-09-10464) Sample Duplicate (DUP)
1201879102	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201879100 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232582001 (CAMO-09-10464). The QC was from LANL work order 232582.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples 232582001 (CAMO-09-10464) were reprepped due to low tracer yields. Tracer yield was lost during additional clean-up steps to remove interference.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
Manual integration of alpha spectroscopy spectra 1201879102 (LCS) was performed to fully separate counts in Regions of Interest which would have been biased.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOTH**
Analytical Method:	DOE EML HASL-300, Th-01-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882541
Prep Batch Number:	881800

Sample ID	Client ID
232582002	CAMO-09-10465
1201874438	Method Blank (MB)
1201874439	232582002(CAMO-09-10465) Sample Duplicate (DUP)
1201874440	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-038 REV# 12.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874438 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232582002 (CAMO-09-10465). The QC was from LANL work order 232582.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOTH**
Analytical Method:	DOE EML HASL-300, Th-01-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	885114
Prep Batch Number:	881800

Sample ID	Client ID
232582001	CAMO-09-10464
1201880666	Method Blank (MB)
1201880667	232582001(CAMO-09-10464) Sample Duplicate (DUP)
1201880668	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-038 REV# 12.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201880666 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232582001 (CAMO-09-10464). The QC was from LANL work order 232582.

QC Information
Refer to Non-Conformance Report.

CSU
The Th-230 and Th-232 blank results are greater than 1.65 times the CSU but less than the MDC.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Sample 232582001 (CAMO-09-10464) was recounted due to high carrier/tracer yield. Sample 232582001 (CAMO-09-10464) was reprepped due to high carrier/tracer yield.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 713152 was generated due to RDL less than MDA and Failed Recovery for Surrogate or Tracer. 1. Sample 232582001 does not meet the client tracer yield requirements of 50 to 105 percent or the requested detection limits due to the low tracer yield and the high standard deviation of the blank population, however the GEL standard tracer yield requirements of 15 to 125 percent were met. 1. Client was notified. Reporting results.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments

The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882673
Prep Batch Number:	881800

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201874686	Method Blank (MB)
1201874687	232278002(CAMO-09-10459) Sample Duplicate (DUP)
1201874688	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874686 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232278002 (CAMO-09-10459). The QC was from LANL work order 232278.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples 1201874687 (CAMO-09-10459) were cleaned-up and recounted due to poor resolution.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 710606 was generated due to RDL less than MDA. 1. Sample 232585001 does not meet the detection limits for U-235/236 due to the high standard deviation. 1. When a blank population is performed, the MDA is greater than the RDL due to the high standard deviation. Reporting results.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881931
Prep Batch Number:	881800

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201873069	Method Blank (MB)
1201873070	232591001(CAMO-09-9946) Sample Duplicate (DUP)
1201873071	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, November 2008, January 2009 and March 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232591001 (CAMO-09-9946). The QC was from LANL work order 232591.

QC Information
Refer to Non-Conformance Report.

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 711888 was generated due to Failed RPD for DUP. 1. Failed RPD for DUP: QC 1201873070DUP 1. Precision was not demonstrated for Pb-212, however precison was demonstrated for all other requested isotopes.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232582001	CAMO-09-10464
			232582002	CAMO-09-10465
			1201873070	CAMO-09-9946(232591001DUP)
		Cadmium-109	232582001	CAMO-09-10464
			232582002	CAMO-09-10465
			1201873070	CAMO-09-9946(232591001DUP)
		Radium-224	232582001	CAMO-09-10464
			232582002	CAMO-09-10465
			1201873070	CAMO-09-9946(232591001DUP)
UI	Data rejected due to low abundance.	Strontium-85	232582002	CAMO-09-10465
UI	Data rejected due to no valid peak.	Mercury-203	232582002	CAMO-09-10465

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883020

Sample ID	Client ID
232582001	CAMO-09-10464
232582002	CAMO-09-10465
1201875586	Method Blank (MB)
1201875587	232347003(CAMO-09-10461) Sample Duplicate (DUP)
1201875588	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232347003 (CAMO-09-10461). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 7/21/09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 710606
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
12-JUL-09	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ALPHA SPECTROMETER	DOE EML HASL-300, U-02-RC Modified	Solid	LANL
Batch ID:	**Sample Numbers:**		
882673	See Below		

Potentially affected work order(s)(SDG): 232211(09-2425),232212(09-2427),232278(09-2437),232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

RDL less than MDA

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Sample 232585001 does not meet the detection limits for U-235/236 due to the high standard deviation.	1. When a blank population is performed, the MDA is greater than the RDL due to the high standard deviation. Reporting results.

Originator's Name:

Jessica Downey 12-JUL-09

Data Validator/Group Leader:

Eric Brimstin 12-JUL-09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 711888
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
15-JUL-09	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
GAMMA SPECTROMETER	EML HASL 300, 4.5.2.3	Solid	LANL
Batch ID:	**Sample Numbers:**		
881931	See Below		

Potentially affected work order(s)(SDG): 232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

Failed RPD for DUP

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed RPD for DUP: QC 1201873070DUP	1. Precision was not demonstrated for Pb-212, however precison was demonstrated for all other requested isotopes.

Originator's Name:

Maggie Stamps 15-JUL-09

Data Validator/Group Leader:

Michael Hilton 17-JUL-09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 713152
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
20-JUL-09	Radiochemistry	Specifications	Process
Instrument Type: ALPHA SPECTROMETER	**Test / Method:** DOE EML HASL-300, Th-01-RC Modified	**Matrix Type:** Solid	**Client Code:** LANL
Batch ID: 885114	**Sample Numbers:** See Below		

Potentially affected work order(s)(SDG): 232582(09-2508)

Application Issues:

RDL less than MDA

Failed Recovery for Surrogate or Tracer

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Sample 232582001 does not meet the client tracer yield requirements of 50 to 105 percent or the requested detection limits due to the low tracer yield and the high standard deviation of the blank population, however the GEL standard tracer yield requirements of 15 to 125 percent were met.	1. Client was notified. Reporting results.

Originator's Name:

Jessica Downey 20-JUL-09

Data Validator/Group Leader:

Joseph Moulden 21-JUL-09

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2508 GEL Work Order: 232582

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 21, 2009

Client Sample ID:	CAMO-09-10464	Project:	LANL01004
Sample ID:	232582001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	6.71%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00	0.0223	+/-0.00132	0.050	pCi/g		MXE1	07/13/09	2154	884520	2
Plutonium-239/240	U	0.00263	0.0272	+/-0.00187	0.050	pCi/g						
ISOTH "Dry Weight Corrected"												
Thorium-228		1.29	0.905	+/-0.202	0.100	pCi/g		HAKB	07/17/09	1946	885114	5
Thorium-230	U	0.628	0.693	+/-0.120	0.100	pCi/g						
Thorium-232		1.34	0.256	+/-0.198	0.100	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.508	0.305	+/-0.0715	0.100	pCi/g		KXM4	07/09/09	2053	882673	8
Uranium-235/236	U	0.0254	0.140	+/-0.0187	0.100	pCi/g						
Uranium-238		0.387	0.119	+/-0.0608	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0698	0.326	+/-0.101	0.200	pCi/g		MXR1	07/09/09	0814	881931	9
Bismuth-211	UI	3.39	0.364	+/-0.275		pCi/g						
Bismuth-214		0.953	0.127	+/-0.081	0.200	pCi/g						
Cadmium-109	UI	2.04	1.33	+/-0.502		pCi/g						
Cerium-139	U	-0.0126	0.0522	+/-0.0161	0.050	pCi/g						
Cesium-134	U	0.0297	0.0936	+/-0.0272	0.100	pCi/g						
Cesium-137	U	0.00337	0.0679	+/-0.0202	0.100	pCi/g						
Cobalt-60	U	0.0352	0.0823	+/-0.0231	0.100	pCi/g						
Europium-152	U	0.125	0.182	+/-0.0565	0.200	pCi/g						
Lanthanum-140	U	-0.0453	0.127	+/-0.0419		pCi/g						
Lead-212		1.43	0.0967	+/-0.0903	0.100	pCi/g						
Lead-214		1.18	0.133	+/-0.100	0.100	pCi/g						
Mercury-203	U	0.0135	0.081	+/-0.024	0.100	pCi/g						
Potassium-40		33.5	0.694	+/-1.63	1.00	pCi/g						
Radium-223	U	0.201	1.22	+/-0.403		pCi/g						
Radium-224	UI	3.62	1.10	+/-0.657		pCi/g						
Radium-226		0.953	0.127	+/-0.081		pCi/g						
Radium-228		1.62	0.211	+/-0.178	0.500	pCi/g						
Ruthenium-106	U	-0.133	0.568	+/-0.174	0.800	pCi/g						
Sodium-22	U	-0.0396	0.0834	+/-0.0275	0.080	pCi/g						
Strontium-85	U	0.028	0.0717	+/-0.024		pCi/g						

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 21, 2009

Client Sample ID: CAMO-09-10464
Sample ID: 232582001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Thallium-208		0.464	0.0645	+/-0.047	0.080	pCi/g						
Thorium-227	U	0.221	0.751	+/-0.215		pCi/g						
Thorium-231	U	0.201	1.22	+/-0.403		pCi/g						
Thorium-234	U	0.0588	2.53	+/-1.34	2.00	pCi/g						
Tin-113	U	-0.0131	0.083	+/-0.0255	0.100	pCi/g						
Uranium-235	U	0.153	0.402	+/-0.122	0.500	pCi/g						
Yttrium-88	U	0.0257	0.071	+/-0.0192	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		542	213	+/-79.9	250	pCi/L	KXK2		07/15/09	0038	883020	10

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, Pu-11-RC Modified
5	DOE EML HASL-300, Th-01-RC Modified
6	DOE EML HASL-300, Th-01-RC Modified
7	DOE EML HASL-300, Th-01-RC Modified
8	DOE EML HASL-300, U-02-RC Modified
9	EML HASL 300, 4.5.2.3
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	93.1	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	43.5 *	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	52.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 21, 2009

Client Sample ID: CAMO-09-10464
Sample ID: 232582001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 21, 2009

Client Sample ID: CAMO-09-10465
Sample ID: 232582002
Matrix: R
Collect Date: 25-JUN-09
Receive Date: 30-JUN-09
Collector: Client
Moisture: 4.86%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Alpha Spec Analysis											
ISOPU "Dry Weight Corrected"											
Plutonium-238	U	0.00118	0.0195	+/-0.00243	0.050	pCi/g		KXM4 07/09/09	2051	882671	2
Plutonium-239/240	U	0.00	0.0239	+/-0.0011	0.050	pCi/g					
ISOTH "Dry Weight Corrected"											
Thorium-228		1.01	0.347	+/-0.111	0.100	pCi/g		HAKB 07/08/09	1919	882541	3
Thorium-230		0.423	0.266	+/-0.0631	0.100	pCi/g					
Thorium-232		0.823	0.0979	+/-0.0956	0.100	pCi/g					
ISOU "Dry Weight Corrected"											
Uranium-233/234		0.334	0.244	+/-0.0532	0.100	pCi/g		KXM4 07/09/09	2053	882673	4
Uranium-235/236	U	0.0142	0.112	+/-0.0187	0.100	pCi/g					
Uranium-238		0.428	0.095	+/-0.0586	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0353	0.134	+/-0.0434	0.200	pCi/g		MXR1 07/09/09	0815	881931	5
Bismuth-211	UI	2.89	0.449	+/-0.271		pCi/g					
Bismuth-214		1.02	0.152	+/-0.106	0.200	pCi/g					
Cadmium-109	UI	3.94	1.12	+/-0.491		pCi/g					
Cerium-139	U	-0.000599	0.0572	+/-0.0173	0.050	pCi/g					
Cesium-134	U	0.109	0.115	+/-0.0544	0.100	pCi/g					
Cesium-137	U	-0.0414	0.0783	+/-0.0262	0.100	pCi/g					
Cobalt-60	U	-0.0149	0.0855	+/-0.0275	0.100	pCi/g					
Europium-152	U	-0.0263	0.203	+/-0.0702	0.200	pCi/g					
Lanthanum-140	U	-0.0659	0.158	+/-0.0548		pCi/g					
Lead-212		1.26	0.107	+/-0.0801	0.100	pCi/g					
Lead-214		1.01	0.138	+/-0.0977	0.100	pCi/g					
Mercury-203	UI	0.137	0.0801	+/-0.0381	0.100	pCi/g					
Potassium-40		34.8	0.531	+/-1.59	1.00	pCi/g					
Radium-223	U	-0.447	1.36	+/-0.480		pCi/g					
Radium-224	UI	4.12	1.22	+/-0.727		pCi/g					
Radium-226		1.02	0.152	+/-0.106		pCi/g					
Radium-228		1.52	0.284	+/-0.207	0.500	pCi/g					
Ruthenium-106	U	0.0919	0.681	+/-0.204	0.800	pCi/g					
Sodium-22	U	-0.0113	0.119	+/-0.037	0.080	pCi/g					
Strontium-85	UI	0.105	0.0909	+/-0.0264		pCi/g					
Thallium-208		0.384	0.091	+/-0.0549	0.080	pCi/g					

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 21, 2009

Client Sample ID: CAMO-09-10465
Sample ID: 232582002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time Batch	Mtd.
Rad Gamma Spec Analysis										
GAMMA SPEC "Dry Weight Corrected"										
Thorium-227	U	-0.177	0.723	+/-0.229		pCi/g				
Thorium-231	U	-0.447	1.36	+/-0.480		pCi/g				
Thorium-234		1.60	1.29	+/-0.505	2.00	pCi/g				
Tin-113	U	0.0218	0.0932	+/-0.027	0.100	pCi/g				
Uranium-235	U	0.0583	0.426	+/-0.128	0.500	pCi/g				
Yttrium-88	U	-0.00393	0.087	+/-0.0269	0.100	pCi/g				
Rad Liquid Scintillation Analysis										
H3 "As Received"										
Tritium		357	217	+/-73.7	250	pCi/L	KXK2	07/15/09	0216 883020	6

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Th-01-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	87.3	(50%-105%)
Thorium-229 Tracer	ISOTH "Dry Weight Corrected"	97.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	70.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample

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Report Date: July 21, 2009

Client Sample ID: CAMO-09-10465
Sample ID: 232582002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 21, 2009

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232582

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882541										
QC1201874439 232582002 DUP										
Thorium-228		1.01		0.898	pCi/g	0.265		(0-1)	HAKB	07/08/0919:19
	TPU:	+/-0.111		+/-0.107						
	Yield:	97.1		102						
Thorium-230		0.423		0.363	pCi/g	0.246		(0-1)		
	TPU:	+/-0.0631		+/-0.0586						
	Yield:	97.1		102						
Thorium-232		0.823		0.863	pCi/g	0.103		(0-1)		
	TPU:	+/-0.0956		+/-0.0986						
	Yield:	97.1		102						
QC1201874440 LCS										
Thorium-228			U	0.939	pCi/g			(75%-125%)		07/08/0919:19
	TPU:			+/-0.182						
	Yield:			87.3						
Thorium-230	25.6			26.9	pCi/g		105	(75%-125%)		
	TPU:			+/-2.17						
	Yield:			87.3						
Thorium-232				1.31	pCi/g			(75%-125%)		
	TPU:			+/-0.191						
	Yield:			87.3						
QC1201874438 MB										
Thorium-228			U	-0.00128	pCi/g					07/08/0919:19
	TPU:			+/-0.00693						
	Yield:			86.5						
Thorium-230			U	0.0143	pCi/g					
	TPU:			+/-0.0062						
	Yield:			86.5						
Thorium-232			U	-0.00188	pCi/g					
	TPU:			+/-0.0029						
	Yield:			86.5						
Batch 882671										
QC1201874684 232278002 DUP										
Plutonium-238	U	-0.0021	U	0.00	pCi/g	0.347		(0-1)	KXM4	07/09/0920:52
	TPU:	+/-0.00184		+/-0.00118						
	Yield:	90.8		83.8						
Plutonium-239/240	U	0.00	U	0.00236	pCi/g	0.427		(0-1)		
	TPU:	+/-0.00109		+/-0.00167						
	Yield:	90.8		83.8						
QC1201874685 LCS										
Plutonium-238				5.53	pCi/g			(75%-125%)		07/09/0920:52
	TPU:			+/-0.402						
	Yield:			99.4						
Plutonium-239/240	41.8			32.8	pCi/g		78.5	(75%-125%)		
	TPU:			+/-1.94						

QC Summary

Workorder: 232582

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882671										
	Yield:			99.4						
QC1201874683 MB										
Plutonium-238			U	-0.00134	pCi/g					07/09/0920:52
	TPU:			+/-0.00193						
	Yield:			88.6						
Plutonium-239/240			U	0.00	pCi/g					
	TPU:			+/-0.00139						
	Yield:			88.6						
Batch 882673										
QC1201874687 232278002 DUP										
Uranium-233/234		0.547		0.506	pCi/g	0.152		(0-1)	KXM4	07/10/0921:23
	TPU:	+/-0.0729		+/-0.0631						
	Yield:	57.9		72.9						
Uranium-235/236	U	0.0159	U	0.0242	pCi/g	0.158		(0-1)		
	TPU:	+/-0.0113		+/-0.0149						
	Yield:	57.9		72.9						
Uranium-238		0.561		0.456	pCi/g	0.398		(0-1)		
	TPU:	+/-0.073		+/-0.0583						
	Yield:	57.9		72.9						
QC1201874688 LCS										
Uranium-233/234				6.01	pCi/g			(75%-125%)		07/09/0920:53
	TPU:			+/-0.584						
	Yield:			92.0						
Uranium-235/236			U	0.277	pCi/g			(75%-125%)		
	TPU:			+/-0.0863						
	Yield:			92.0						
Uranium-238	5.75			6.18	pCi/g		107	(75%-125%)		
	TPU:			+/-0.596						
	Yield:			92.0						
QC1201874686 MB										
Uranium-233/234			U	-0.00338	pCi/g					07/09/0920:53
	TPU:			+/-0.0026						
	Yield:			98.8						
Uranium-235/236			U	0.00241	pCi/g					
	TPU:			+/-0.00396						
	Yield:			98.8						
Uranium-238			U	7.52E-05	pCi/g					
	TPU:			+/-0.0026						
	Yield:			98.8						
Batch 884520										
QC1201879101 232582001 DUP										
Plutonium-238	U	0.00	U	0.00	pCi/g	0.00		(0-1)	MXE1	07/13/0921:54
	TPU:	+/-0.00132		+/-0.00134						
	Yield:	93.1		89.9						
Plutonium-239/240	U	0.00263	U	0.00536	pCi/g	0.299		(0-1)		
	TPU:	+/-0.00187		+/-0.00269						
	Yield:	93.1		89.9						
QC1201879102 LCS										
Plutonium-238				5.65	pCi/g			(75%-125%)		07/13/0921:54

QC Summary

Workorder: 232582

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 884520										
	TPU:			+/-0.370						
	Yield:			103						
Plutonium-239/240	41.8			39.9	pCi/g		95.5	(75%-125%)		
	TPU:			+/-2.16						
	Yield:			103						
QC1201879100 MB										
Plutonium-238			U	0.0018	pCi/g					07/13/0921:54
	TPU:			+/-0.0018						
	Yield:			87.0						
Plutonium-239/240			U	0.00	pCi/g					
	TPU:			+/-0.0018						
	Yield:			87.0						
Batch 885114										
QC1201880667 232582001 DUP										
Thorium-228		1.29		1.11	pCi/g	0.272		(0-1)	HAKB	07/16/0920:21
	TPU:	+/-0.202		+/-0.138						
	Yield:	43.5		68.8						
Thorium-230	U	0.628		0.553	pCi/g	0.179		(0-1)		
	TPU:	+/-0.120		+/-0.0886						
	Yield:	43.5		68.8						
Thorium-232		1.34		0.969	pCi/g	0.573		(0-1)		
	TPU:	+/-0.198		+/-0.126						
	Yield:	43.5		68.8						
QC1201880668 LCS										
Thorium-228				1.25	pCi/g			(75%-125%)		07/16/0920:21
	TPU:			+/-0.196						
	Yield:			85.8						
Thorium-230	25.6			26.8	pCi/g		105	(75%-125%)		
	TPU:			+/-2.15						
	Yield:			85.8						
Thorium-232				1.15	pCi/g			(75%-125%)		
	TPU:			+/-0.179						
	Yield:			85.8						
QC1201880666 MB										
Thorium-228			U	-0.00903	pCi/g					07/16/0920:21
	TPU:			+/-0.00382						
	Yield:			92.6						
Thorium-230			U	0.009	pCi/g					
	TPU:			+/-0.00497						
	Yield:			92.6						
Thorium-232			U	0.00572	pCi/g					
	TPU:			+/-0.00332						
	Yield:			92.6						
Rad Gamma Spec										
Batch 881931										
QC1201873070 232591001 DUP										
Americium-241	U	0.273	U	0.130	pCi/g	0.387		(0-1)	MXR1	07/09/0908:36
	TPU:	+/-0.116		+/-0.0691						
Bismuth-211	UI	4.16	UI	3.34	pCi/g	0.804		(0-1)		

QC Summary

Workorder: 232582

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881931										
	TPU:	+/-0.282		+/-0.227						
Bismuth-214		1.28		1.07	pCi/g	0.596		(0-1)		
	TPU:	+/-0.0925		+/-0.0844						
Cadmium-109	UI	3.01	UI	2.50	pCi/g	0.259		(0-1)		
	TPU:	+/-0.582		+/-0.397						
Cerium-139	U	0.0331	U	0.00333	pCi/g	0.510		(0-1)		
	TPU:	+/-0.0147		+/-0.0146						
Cesium-134	UI	0.127	U	0.0632	pCi/g	0.605		(0-1)		
	TPU:	+/-0.0293		+/-0.0231						
Cesium-137	U	0.0456	U	0.0355	pCi/g	0.128		(0-1)		
	TPU:	+/-0.0201		+/-0.0196						
Cobalt-60	U	-0.0188	U	0.0051	pCi/g	0.289		(0-1)		
	TPU:	+/-0.0205		+/-0.0208						
Europium-152	U	-0.029	U	0.0493	pCi/g	0.392		(0-1)		
	TPU:	+/-0.0478		+/-0.0521						
Lanthanum-140	U	0.0338	U	-0.0841	pCi/g	0.795		(0-1)		
	TPU:	+/-0.0399		+/-0.0343						
Lead-212		1.73		1.35	pCi/g	1.16		(0-1)		
	TPU:	+/-0.0873		+/-0.0733						
Lead-214		1.45		1.16	pCi/g	0.751		(0-1)		
	TPU:	+/-0.105		+/-0.0844						
Mercury-203	U	0.0254	U	0.0271	pCi/g	0.0189		(0-1)		
	TPU:	+/-0.0218		+/-0.0222						
Potassium-40		32.8		32.7	pCi/g	0.0256		(0-1)		
	TPU:	+/-1.71		+/-1.42						
Radium-223	U	-0.07	U	0.299	pCi/g	0.260		(0-1)		
	TPU:	+/-0.369		+/-0.340						
Radium-224	UI	4.42	UI	3.48	pCi/g	0.382		(0-1)		
	TPU:	+/-0.591		+/-0.638						
Radium-226		1.28		1.07	pCi/g	0.596		(0-1)		
	TPU:	+/-0.0925		+/-0.0844						
Radium-228		1.54		1.22	pCi/g	0.453		(0-1)		
	TPU:	+/-0.200		+/-0.144						
Ruthenium-106	U	-0.223	U	-0.182	pCi/g	0.0664		(0-1)		
	TPU:	+/-0.152		+/-0.154						
Sodium-22	U	-0.0151	U	-0.0142	pCi/g	0.00966		(0-1)		
	TPU:	+/-0.0242		+/-0.0239						
Strontium-85	UI	0.0887	U	0.0422	pCi/g	0.587		(0-1)		
	TPU:	+/-0.0188		+/-0.0208						
Thallium-208		0.471		0.485	pCi/g	0.0825		(0-1)		
	TPU:	+/-0.0437		+/-0.040						
Thorium-227	U	0.127	U	0.111	pCi/g	0.0213		(0-1)		
	TPU:	+/-0.186		+/-0.190						
Thorium-231	U	-0.07	U	0.299	pCi/g	0.260		(0-1)		
	TPU:	+/-0.369		+/-0.340						
Thorium-234	U	2.54		2.21	pCi/g	0.0941		(0-1)		
	TPU:	+/-0.968		+/-0.759						
Tin-113	U	0.018	U	-0.0207	pCi/g	0.454		(0-1)		
	TPU:	+/-0.0212		+/-0.0214						
Uranium-235	U	0.179	U	0.187	pCi/g	0.0126		(0-1)		
	TPU:	+/-0.112		+/-0.185						

QC Summary

Workorder: 232582

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881931										
Yttrium-88	U	0.0323	U	-0.00432	pCi/g	0.663		(0-1)		
	TPU:	+/-0.0138		+/-0.0138						
QC1201873071 LCS										
Americium-241	16.3			13.5	pCi/g		83	(75%-125%)		07/09/0908:51
	TPU:			+/-0.596						
Bismuth-211				2.66	pCi/g					
	TPU:			+/-0.329						
Bismuth-214				0.831	pCi/g					
	TPU:			+/-0.107						
Cadmium-109				47.7	pCi/g					
	TPU:			+/-2.15						
Cerium-139			U	0.0776	pCi/g					
	TPU:			+/-0.030						
Cesium-134			U	0.127	pCi/g					
	TPU:			+/-0.0499						
Cesium-137	5.78			5.95	pCi/g		103	(75%-125%)		
	TPU:			+/-0.234						
Cobalt-60	7.10			7.37	pCi/g		104	(75%-125%)		
	TPU:			+/-0.278						
Europium-152			U	-0.136	pCi/g					
	TPU:			+/-0.0998						
Lanthanum-140			U	-0.101	pCi/g					
	TPU:			+/-0.0411						
Lead-212				1.33	pCi/g					
	TPU:			+/-0.101						
Lead-214				0.926	pCi/g					
	TPU:			+/-0.117						
Mercury-203			U	0.0673	pCi/g					
	TPU:			+/-0.0369						
Potassium-40			U	0.520	pCi/g					
	TPU:			+/-0.310						
Radium-223			U	-0.219	pCi/g					
	TPU:			+/-0.601						
Radium-224				5.59	pCi/g					
	TPU:			+/-0.742						
Radium-226				0.831	pCi/g					
	TPU:			+/-0.107						
Radium-228				1.89	pCi/g					
	TPU:			+/-0.300						
Ruthenium-106			U	-0.253	pCi/g					
	TPU:			+/-0.307						
Sodium-22			U	-0.0081	pCi/g					
	TPU:			+/-0.0262						
Strontium-85			U	0.0816	pCi/g					
	TPU:			+/-0.0327						
Thallium-208				0.471	pCi/g					
	TPU:			+/-0.0678						
Thorium-227			U	0.550	pCi/g					
	TPU:			+/-0.329						
Thorium-231			U	-0.219	pCi/g					
	TPU:			+/-0.601						

QC Summary

Workorder: 232582

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881931										
Thorium-234			U	0.0802	pCi/g					
	TPU:			+/-0.849						
Tin-113			U	0.0472	pCi/g					
	TPU:			+/-0.0434						
Uranium-235			U	0.0049	pCi/g					
	TPU:			+/-0.160						
Yttrium-88			U	0.114	pCi/g					
	TPU:			+/-0.0319						
QC1201873069 MB										
Americium-241			U	0.00385	pCi/g					07/09/0908:22
	TPU:			+/-0.0104						
Bismuth-211			U	-0.0219	pCi/g					
	TPU:			+/-0.0685						
Bismuth-214			U	0.00628	pCi/g					
	TPU:			+/-0.0301						
Cadmium-109			U	-0.175	pCi/g					
	TPU:			+/-0.107						
Cerium-139			U	-0.00397	pCi/g					
	TPU:			+/-0.00608						
Cesium-134			U	-0.0285	pCi/g					
	TPU:			+/-0.0165						
Cesium-137			U	0.0203	pCi/g					
	TPU:			+/-0.0126						
Cobalt-60			U	0.00695	pCi/g					
	TPU:			+/-0.0166						
Europium-152			U	-0.0219	pCi/g					
	TPU:			+/-0.028						
Lanthanum-140			U	-0.022	pCi/g					
	TPU:			+/-0.024						
Lead-212			U	0.00214	pCi/g					
	TPU:			+/-0.0161						
Lead-214			U	-0.00926	pCi/g					
	TPU:			+/-0.0238						
Mercury-203			U	-0.00418	pCi/g					
	TPU:			+/-0.00888						
Potassium-40			U	0.116	pCi/g					
	TPU:			+/-0.168						
Radium-223			U	0.0636	pCi/g					
	TPU:			+/-0.186						
Radium-224			U	0.032	pCi/g					
	TPU:			+/-0.158						
Radium-226			U	0.00628	pCi/g					
	TPU:			+/-0.0301						
Radium-228			U	0.0764	pCi/g					
	TPU:			+/-0.0545						
Ruthenium-106			U	0.108	pCi/g					
	TPU:			+/-0.132						
Sodium-22			U	0.00551	pCi/g					
	TPU:			+/-0.0149						
Strontium-85			U	-0.0332	pCi/g					
	TPU:			+/-0.0162						

QC Summary

Workorder: 232582

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881931										
Thallium-208			U	-0.0174	pCi/g					
	TPU:			+/-0.0165						
Thorium-227			U	0.164	pCi/g					
	TPU:			+/-0.111						
Thorium-231			U	0.0636	pCi/g					
	TPU:			+/-0.186						
Thorium-234			U	0.0343	pCi/g					
	TPU:			+/-0.101						
Tin-113			U	0.0191	pCi/g					
	TPU:			+/-0.0135						
Uranium-235			U	-0.061	pCi/g					
	TPU:			+/-0.047						
Yttrium-88			U	-0.00129	pCi/g					
	TPU:			+/-0.0186						
Rad Liquid Scintillation										
Batch 883020										
QC1201875587 232347003 DUP										
Tritium		1170		1050	pCi/L	0.266		(0-1)	KXK2	07/15/0917:03
	TPU:	+/-113		+/-116						
QC1201875588 LCS										
Tritium	5730			6320	pCi/L		110	(75%-125%)		07/15/0918:05
	TPU:			+/-529						
QC1201875586 MB										
Tritium			U	-126	pCi/L					07/15/0916:01
	TPU:			+/-66.4						

Notes:
The Qualifiers in this report are defined as follows:

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor

QC Summary

Workorder: 232582

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time

N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 882541 Product: Th Date: 7/14/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/14/09

Secondary Review Performed By: [signature] 7/18/09

LANL

7/9 - 7/20

Thorium Que Sheet

06-JUL-09

Batch #: 882541 **Analyst:** HAKB **First Client Due Date:** 20-JUL-09 **Internal Due Date** 09-JUL-09

Tracer Isotope: Th-229 **Tracer Code:** 0934-6 **Expiration Date:** 4/28/10 **Vol:** 25.1

LCS Isotope: Th-232 **LCS Code:** SRM 0244-A **Expiration Date:** 10/31/20 **Vol:** 0.101 g

Spike Isotope: Th-232 **Spike Code:** NA **Expiration Date:** NA **Vol:** NA

Prep Date: 7/6/09 **Initials:** HAKB **Pipet ID:** 2971058 **Balance ID:** 50410272 **Witness:** KM 7-6-09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Th Det #
232424001-1	CAMO-09-10463	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	1	1	0.254	183
~~232582001-1~~	~~CAMO-09-10464~~	~~SAMPLE~~		~~.1 pCi/g~~	~~SOIL~~	~~LANL010~~	~~25-JUN-09~~	~~2~~	~~2~~	~~0.257~~	~~184~~
232582002-1	CAMO-09-10465	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	3	3	0.258	185
1201874438-1	MB for batch 882541	MB		.1 pCi/g	SOIL	QC ACCOUNT		4	4	1.00	186
1201874439-1	CAMO-09-10465(232582002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	25-JUN-09	5	5	0.256	187
1201874440-1	LCS for batch 882541	* LCS		.1 pCi/g	SOIL	QC ACCOUNT		6	6	0.101	188

SRM 0244-A

1120

Data Reviewed By: 7/14/09
GEL Laboratories LLC, Radiochemistry Division

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Choose SOP Used: GL-RAD-A-038, GL-RAD-A-045, GL-RAD-A-043, GL-RAD-A-032

Blank Correction Report

Batch ID 882541

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874439	DUP	Thorium-228	0.256 g	0.898	0.107	0.343	-.005	pCi/g	NO
		Thorium-230	0.256 g	0.363	0.0586	0.263	.055859375	pCi/g	NO
		Thorium-232	0.256 g	0.863	0.0986	0.0969	-.00734375	pCi/g	NO
1201874440	LCS	Thorium-228	0.101 g	0.939	0.182	0.982	-.01267327	pCi/g	NO
		Thorium-230	0.101 g	26.9	2.17	0.752	.141584158	pCi/g	NO
		Thorium-232	0.101 g	1.31	0.191	0.277	-.01861386	pCi/g	NO
1201874438	MB	Thorium-228	1.00 g	-0.00128	0.00693	0.102	-.00128	pCi/g	NO
		Thorium-230	1.00 g	0.0143	0.0062	0.0778	.0143	pCi/g	YES
		Thorium-232	1.00 g	-0.00188	0.0029	0.0287	-.00188	pCi/g	NO
232424001	CAMO-09-10463	Thorium-228	0.254 g	0.822	0.106	0.389	-.00503937	pCi/g	NO
		Thorium-230	0.254 g	0.437	0.067	0.298	.056299213	pCi/g	NO
		Thorium-232	0.254 g	0.759	0.0951	0.110	-.00740157	pCi/g	NO
232582002	CAMO-09-10465	Thorium-228	0.258 g	1.01	0.111	0.347	-.00496124	pCi/g	NO
		Thorium-230	0.258 g	0.423	0.0631	0.266	.055426357	pCi/g	NO
		Thorium-232	0.258 g	0.823	0.0956	0.0979	-.00728682	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882541
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232582002_TH
SAMPLE QTY: 0.258 G

DETECTOR NUMBER :68615
AVERAGE %EFFICIENCY :25.7763
% YIELD : 97.081

COUNT DATE: 8-JUL-2009 19:19:12
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B185.CNF;87
PCI/G : 4.558E+01	PCI/G : 4.558E+01	NOMINAL : 2.21252 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.14794 dpm	EFF FILE : W185.CNF;33
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	1.000	-1.000	2.000	1.8961	68.10000	-1.73E-02	3.00E-02	4.52E-02	1.18E-01	3.00E-02
TH-228	5363.000	149.000	143.156	4.000	10.0923	99.94000	1.01E+00	1.11E-01	1.64E-01	3.47E-01	8.70E-02
TH229	4900.000	551.000	551.000	0.000	0.0000	99.52000	3.86E+00	3.12E-01	0.00E+00	1.90E-02	1.65E-01
TH-230	4625.000	66.000	60.557	2.000	7.5977	100.0000	4.23E-01	6.31E-02	1.23E-01	2.66E-01	5.61E-02
TH-232	3972.000	121.000	117.954	2.000	2.4339	100.0000	8.23E-01	9.56E-02	3.95E-02	9.79E-02	7.70E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

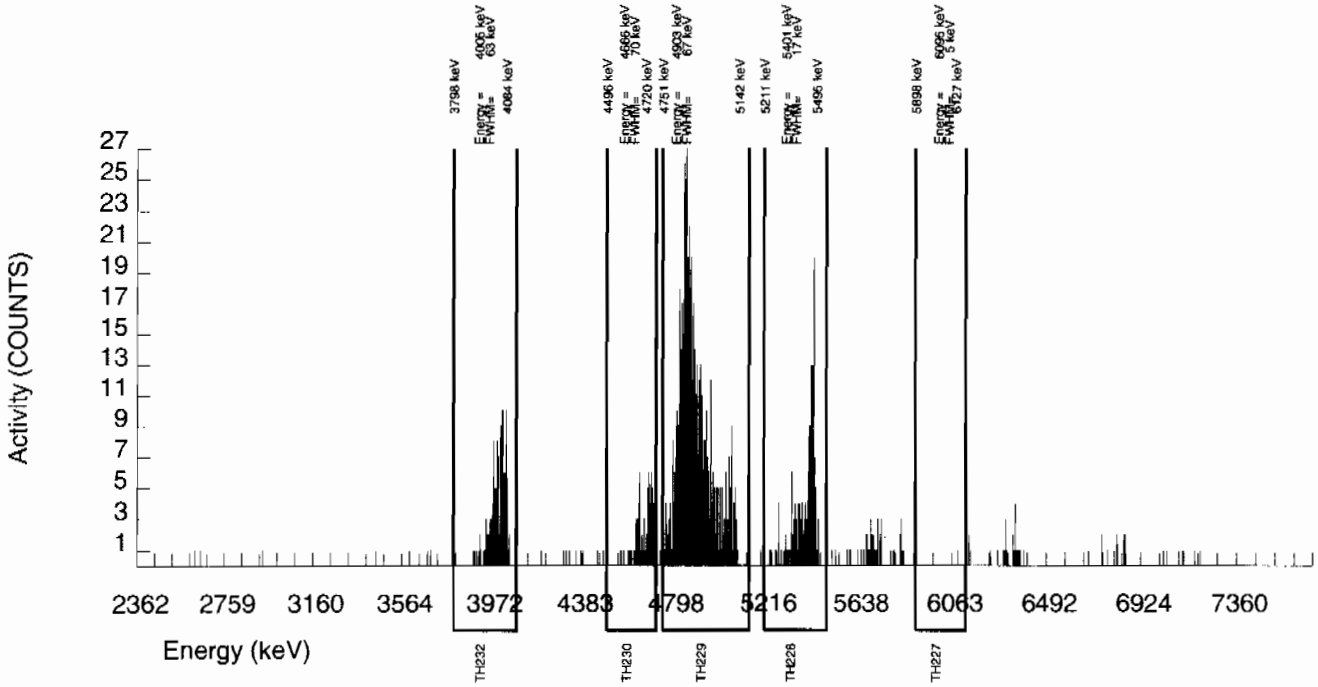

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882541
SAMPLE DATE : 6-JUL-2009 00:00:00.

SAMPLE ID : S1201874438_TH
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :68616
AVERAGE %EFFICIENCY :25.4593
% YIELD : 86.517

COUNT DATE: 8-JUL-2009 19:19:15
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B186.CNF;87
PCI/G : 1.176E+01	PCI/G : 1.176E+01	NOMINAL : 2.21252 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 1.91419 dpm	EFF FILE : W186.CNF;34
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	3.000	0.000	3.000	1.8961	68.10000	0.00E+00	8.27E-03	1.32E-02	3.46E-02	8.27E-03
TH-228	5363.000	7.000	-0.623	6.000	10.0923	99.94000	-1.28E-03	6.92E-03	4.80E-02	1.02E-01	6.92E-03
TH229	4900.000	487.000	485.000	2.000	1.4142	99.52000	9.97E-01	8.29E-02	6.76E-03	1.91E-02	4.54E-02
TH-230	4625.000	11.000	6.969	1.000	7.5977	100.0000	1.43E-02	6.20E-03	3.61E-02	7.78E-02	6.12E-03
TH-232	3972.000	1.000	-0.921	1.000	2.4339	100.0000	-1.88E-03	2.90E-03	1.16E-02	2.87E-02	2.89E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

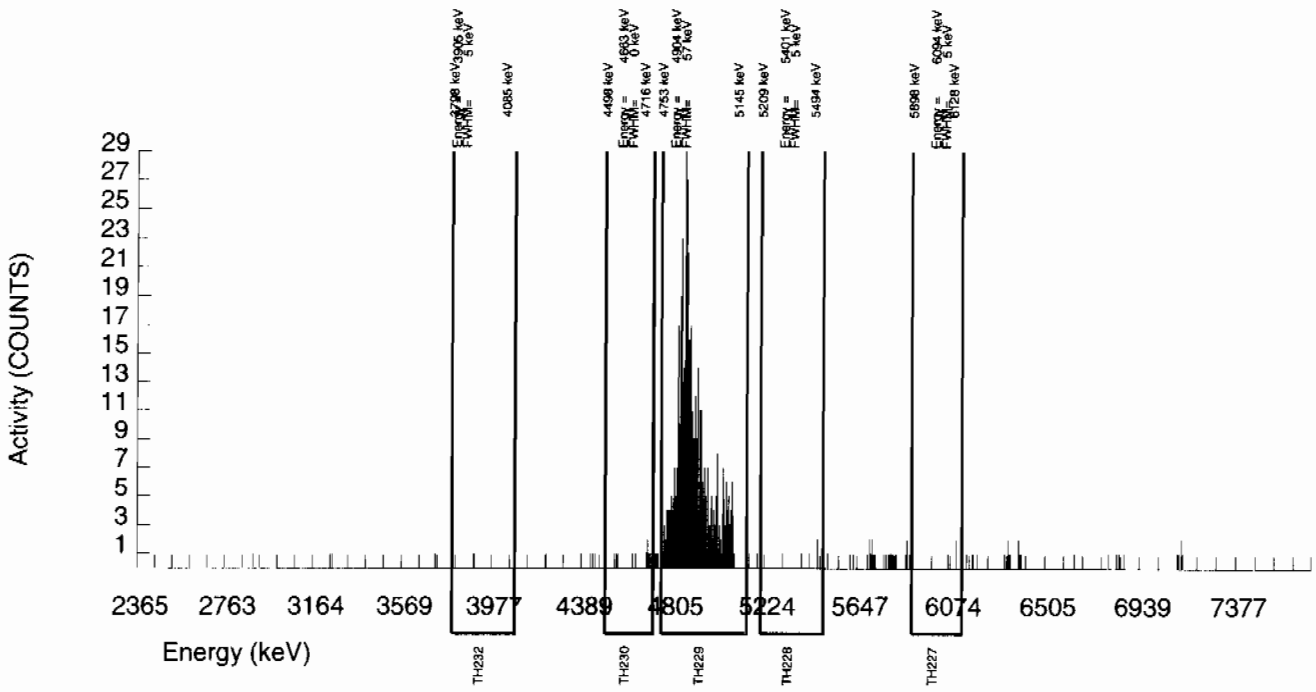

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882541
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S1201874439_TH
SAMPLE QTY: 0.256 G

DETECTOR NUMBER :68620
AVERAGE %EFFICIENCY :24.8701
% YIELD : 102.445

COUNT DATE: 8-JUL-2009 19:19:18
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B187.CNF;87
PCI/G : 4.594E+01	PCI/G : 4.594E+01	NOMINAL : 2.21252 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.26661 dpm	EFF FILE : W187.CNF;33
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	4.000	1.000	3.000	1.8961	68.10000	1.71E-02	4.53E-02	4.47E-02	1.17E-01	4.53E-02
TH-228	5363.000	142.000	128.122	12.000	10.0923	99.94000	8.98E-01	1.07E-01	1.62E-01	3.43E-01	8.64E-02
TH229	4900.000	567.000	561.000	6.000	2.4495	99.52000	3.89E+00	3.20E-01	3.95E-02	9.79E-02	1.66E-01
TH-230	4625.000	59.000	52.495	3.000	7.5977	100.0000	3.63E-01	5.86E-02	1.22E-01	2.63E-01	5.28E-02
TH-232	3972.000	127.000	124.935	1.000	2.4339	100.0000	8.63E-01	9.86E-02	3.91E-02	9.69E-02	7.78E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

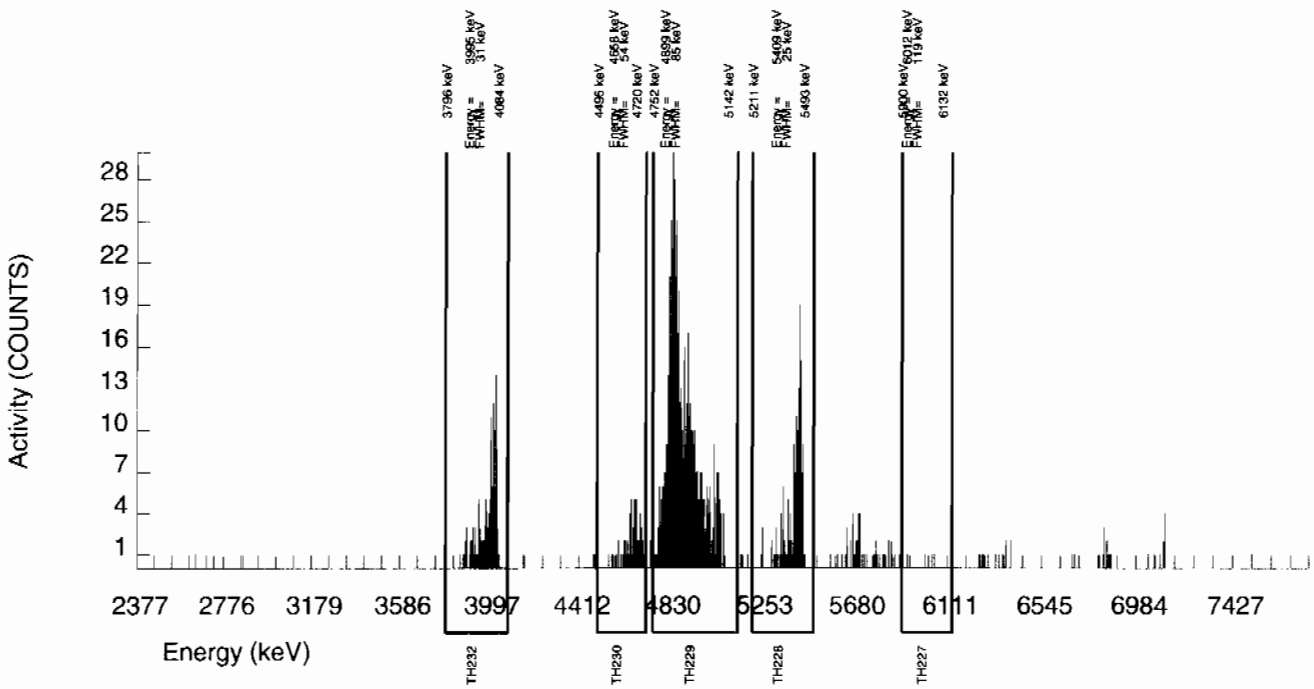

Alpha Spectroscopy Software Version 2 0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882541
SAMPLE DATE : 6-JUL-2009 00:00:00.

SAMPLE ID : S1201874440_TH
SAMPLE QTY: 0.101 G

DETECTOR NUMBER :68621
AVERAGE %EFFICIENCY :25.8624
% YIELD : 87.275

COUNT DATE: 8-JUL-2009 19:19:20
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B188.CNF;87
PCI/G : 1.164E+02	PCI/G : 1.164E+02	NOMINAL : 2.21252 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 1.93098 dpm	EFF FILE : W188.CNF;34
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	32.000	26.000	6.000	1.8961	68.10000	8.48E-01	2.11E-01	1.28E-01	3.35E-01	2.01E-01
TH-228	5363.000	61.000	47.336	12.000	10.0923	99.94000	9.39E-01	1.82E-01	4.64E-01	9.82E-01	1.68E-01
TH229	4900.000	498.000	497.000	1.000	1.0000	99.52000	9.87E+00	8.72E-01	4.62E-02	1.46E-01	4.44E-01
TH-230	4625.000	1363.000	1358.895	1.000	7.5977	100.0000	2.69E+01	2.17E+00	3.49E-01	7.52E-01	7.29E-01
TH-232	3972.000	68.000	66.056	1.000	2.4339	100.0000	1.31E+00	1.91E-01	1.12E-01	2.77E-01	1.63E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

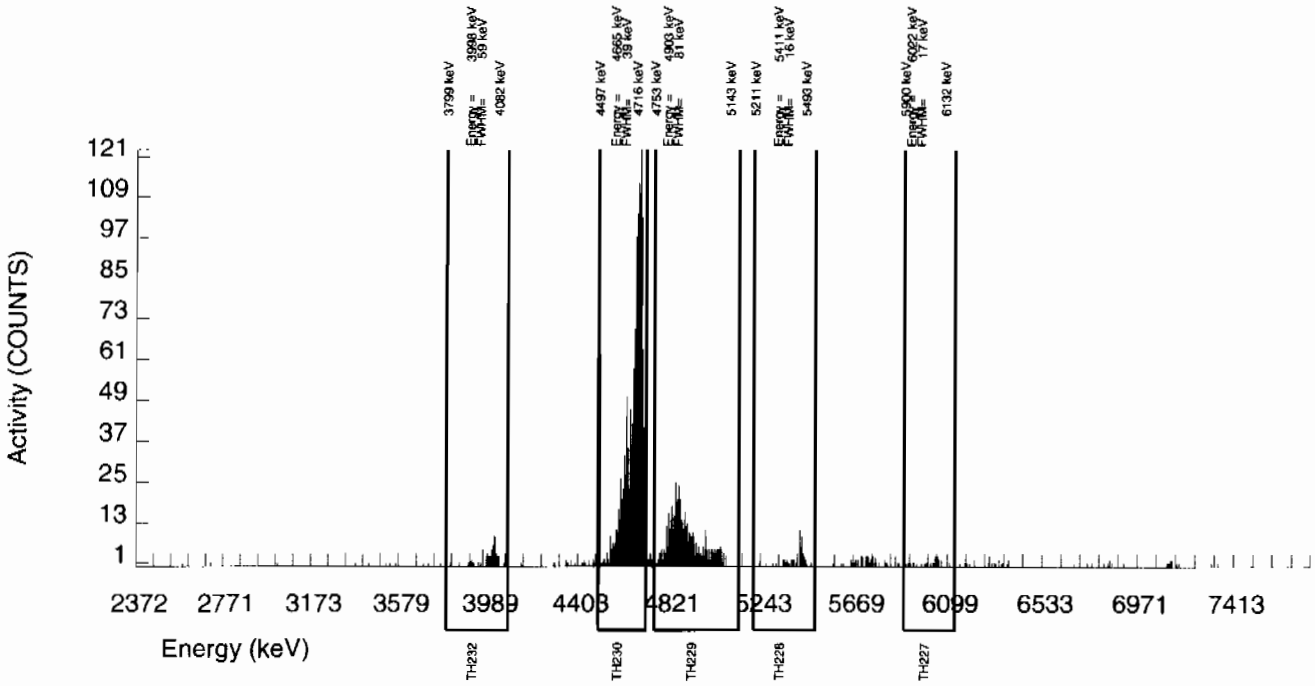

Radiochemistry Batch Checklist, Rev 9

Batch# 882671 Product: PU Date: 7/12/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/12/09

Secondary Review Performed By: [signature] 7/12/09

7/10-7/14

LAN

Plutonium Que Sheet

06-JUL-09

Batch #: 882671 Analyst: KXM4 First Client Due Date: ~~21-JUL-09~~ 14-JUL-09 9/10/09 Internal Due Date: 10-JUL-09

Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 1762-A Expiration Date: 5-11-10 Vol: 0.1 mL

LCS Isotope(s): Pu-239/Pu-238 LCS Code: SPM 0244-B Expiration Date: 4-30-10 Vol: 0.1 g

Spike Isotope(s): Pu-239/Pu-238 Spike Code: NA Expiration Date: NA Vol: NA

Prep Date: 7-7-09 Initials: KM Pipet ID: 2971058 Balance ID: 50410272 Witness: MDA 7/7/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Pu Det #
~~232211001-1~~	~~CAMO-09-10155~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~1~~	~~1~~	~~1.250~~	~~209 213~~
232211002-1	CAMO-09-10156	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	2	2	1.247	210
232211003-1	CAMO-09-10146	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	3	3	1.251	211
232211004-1	CAMO-09-10158	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	4	4	1.252	212
~~232211005-1~~	~~CAMO-09-10145~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~5~~	~~5~~	~~1.255~~	~~213 214~~
232211006-1	CAMO-09-10157	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	6	6	1.250	214
~~232211007-1~~	~~CAMO-09-10162~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~7~~	~~7~~	~~1.249~~	~~215 218~~
232211008-1	CAMO-09-10163	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	8	8	1.250	216
232212001-1	CAMO-09-9944	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	9	9	1.251	217 80
232212002-1	CAMO-09-9945	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	10	10	1.257	~~218~~ 114
~~232212003-1~~	~~CAMO-09-10029~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~11~~	~~11~~	~~1.248~~	~~219 214~~
232278001-1	CAMO-09-10458	SAMPLE		.05 pCi/g	SOIL	LANL010	19-JUN-09	12	12	1.250	220
232278002-1	CAMO-09-10459	SAMPLE		.05 pCi/g	SOIL	LANL010	19-JUN-09	13	13	1.249	221
~~232582001-1~~	~~CAMO-09-10464~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~25-JUN-09~~	~~14~~	~~14~~	~~1.252~~	~~222 219~~
232582002-1	CAMO-09-10465	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	15	15	1.249	223
232585001-1	CAMO-09-6605	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	16	16	1.249	224
232585002-1	CAMO-09-6603	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	17	17	1.247	225
232585003-1	CAMO-09-6604	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	18	18	1.250	226
232591001-1	CAMO-09-9946	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	19	19	1.254	227
1201874683-1	MB for batch 882671	MB		.05 pCi/g	SOIL	QC ACCOUNT		20	20	~~1.257~~ 1.0	228
1201874684-1	CAMO-09-10459(232278002DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	19-JUN-09	21	21	1.253	229
1201874685-1	LCS for batch 882671	LCS		.05 pCi/g	SOIL	QC ACCOUNT		22	22	0.107	230

#SPM 0244-B exp 4-30-10

1127

Choose SOP Used: GL-RAD-A-011 / GL-RAD-A-045 / GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: 7/12/09

Blank Correction Report

Batch ID 882671

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874684	DUP	Plutonium-238	1.25 g	0.00	0.00118	0.0209	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00236	0.00167	0.0255	0	pCi/g	NO
1201874685	LCS	Plutonium-238	0.107 g	5.41	0.393	0.205	-.01252336	pCi/g	NO
		Plutonium-239/240	0.107 g	31.5	1.86	0.251	0	pCi/g	NO
1201874683	MB	Plutonium-238	1.00 g	-0.00134	0.00193	0.0246	-.00134	pCi/g	NO
		Plutonium-239/240	1.00 g	0.00	0.00139	0.030	0	pCi/g	NO
232211002	CAMO-09-10156	Plutonium-238	1.25 g	0.00243	0.00172	0.0215	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00126	0.00207	0.0262	0	pCi/g	NO
232211003	CAMO-09-10146	Plutonium-238	1.25 g	0.00121	0.002	0.0207	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	4.33E-05	0.00162	0.0253	0	pCi/g	NO
232211004	CAMO-09-10158	Plutonium-238	1.25 g	0.00	0.00142	0.0251	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00283	0.00201	0.0306	0	pCi/g	NO
232211006	CAMO-09-10157	Plutonium-238	1.25 g	0.0828	0.0108	0.0216	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.134	0.0143	0.0264	0	pCi/g	NO
232211008	CAMO-09-10163	Plutonium-238	1.25 g	0.00966	0.00345	0.0214	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0906	0.0116	0.0261	0	pCi/g	NO
232212001	CAMO-09-9944	Plutonium-238	1.25 g	0.0405	0.00693	0.0194	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.708	0.0438	0.0237	0	pCi/g	NO
232212002	CAMO-09-9945	Plutonium-238	1.26 g	0.0699	0.0157	0.0453	-.00106349	pCi/g	NO
		Plutonium-239/240	1.26 g	7.04	0.438	0.0551	0	pCi/g	NO
232278001	CAMO-09-10458	Plutonium-238	1.25 g	0.00	0.00109	0.0193	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00113	0.00186	0.0236	0	pCi/g	NO
232278002	CAMO-09-10459	Plutonium-238	1.25 g	-0.0021	0.00184	0.0193	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00	0.00109	0.0236	0	pCi/g	NO
232582002	CAMO-09-10465	Plutonium-238	1.25 g	0.00118	0.00243	0.0195	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00	0.0011	0.0239	0	pCi/g	NO
232585001	CAMO-09-6605	Plutonium-238	1.25 g	0.00111	0.00111	0.0197	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00999	0.00337	0.024	0	pCi/g	NO
232585002	CAMO-09-6603	Plutonium-238	1.25 g	0.0525	0.00798	0.0194	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	1.25	0.0701	0.0237	0	pCi/g	NO
232585003	CAMO-09-6604	Plutonium-238	1.25 g	0.00367	0.00213	0.0217	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.211	0.019	0.0265	0	pCi/g	NO
232591001	CAMO-09-9946	Plutonium-238	1.25 g	0.0119	0.0038	0.0211	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.627	0.0409	0.0257	0	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S0232278002_PU
SAMPLE QTY: 1.249 G

DETECTOR NUMBER :79414
AVERAGE %EFFICIENCY :37.9316
% YIELD : 90.810

COUNT DATE: 9-JUL-2009 20:51:52
ELAPSED LIVE TIME(SEC): 57797.41
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B221.CNF;13
PCI/G : 1.478E+00	PCI/G : 1.478E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.82067 dpm	EFF FILE : W221.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	0.000	0.000	0.000	4.1106	99.90000	0.00E+00	1.09E-03	1.03E-02	2.36E-02	1.09E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.10E-03	6.80E-03	1.66E-02	1.10E-03
PU-238	5499.000	0.000	-1.927	1.927	3.2589	99.90000	-2.10E-03	1.84E-03	8.17E-03	1.93E-02	1.84E-03
PU242	4890.000	1397.000	1396.037	0.963	0.9815	100.0000	1.52E+00	8.31E-02	2.46E-03	7.86E-03	4.06E-02
PU-244	4589.000	6.000	6.000	0.000	4.8319	99.90000	6.53E-03	2.68E-03	1.21E-02	2.72E-02	2.67E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

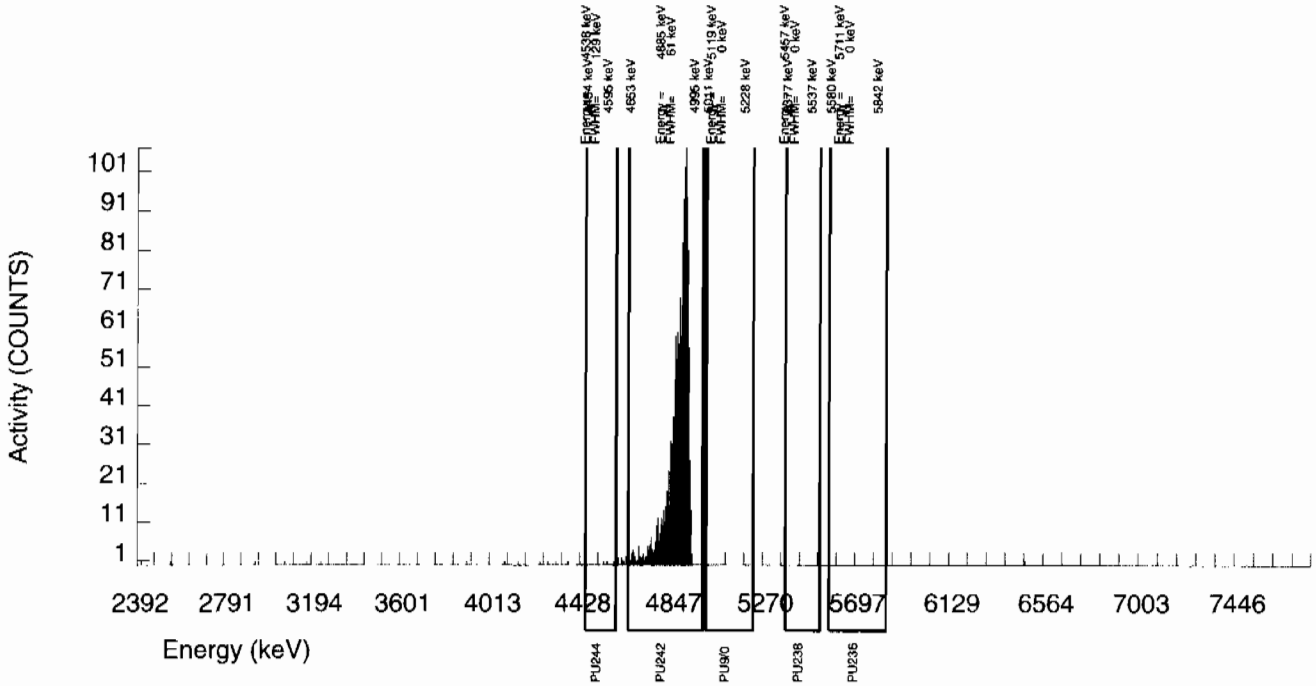

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232582002_PU
SAMPLE QTY: 1.249 G

DETECTOR NUMBER :79416
AVERAGE %EFFICIENCY :38.9390
% YIELD : 87.312

COUNT DATE: 9-JUL-2009 20:51:57
ELAPSED LIVE TIME(SEC): 57801.24
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B223.CNF;13
PCI/G : 1.478E+00	PCI/G : 1.478E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.67349 dpm	EFF FILE : W223.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	0.000	0.000	0.000	4.1106	99.90000	0.00E+00	1.10E-03	1.04E-02	2.39E-02	1.10E-03
PU-236	5749.000	0.000	-0.963	0.963	2.7154	100.0000	-1.07E-03	1.55E-03	6.89E-03	1.68E-02	1.54E-03
PU-238	5499.000	3.000	1.073	1.927	3.2589	99.90000	1.18E-03	2.43E-03	8.28E-03	1.95E-02	2.43E-03
PU242	4890.000	1378.000	1378.000	0.000	0.0000	100.0000	1.52E+00	8.33E-02	0.00E+00	2.98E-03	4.09E-02
PU-244	4589.000	8.000	8.000	0.000	4.8319	99.90000	8.82E-03	3.15E-03	1.23E-02	2.75E-02	3.12E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

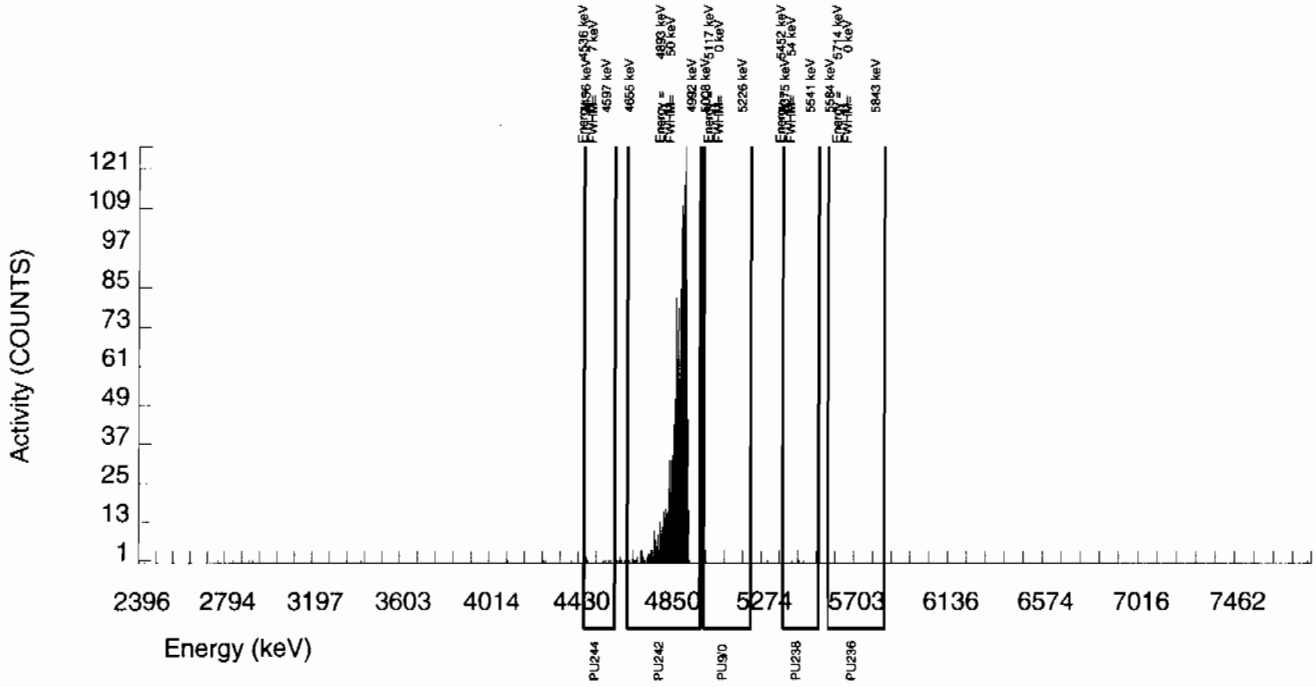

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 7-JUL-2009 00:00:00.

SAMPLE ID : S1201874683_PU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :79421
AVERAGE %EFFICIENCY :38.1208
% YIELD : 88.584

COUNT DATE: 9-JUL-2009 20:52:09
ELAPSED LIVE TIME(SEC): 57818.27
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B228.CNF;13
PCI/G : 1.846E+00	PCI/G : 1.846E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.72702 dpm	EFF FILE : W228.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	0.000	0.000	0.000	4.1106	99.90000	0.00E+00	1.39E-03	1.31E-02	3.00E-02	1.39E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.39E-03	8.66E-03	2.11E-02	1.39E-03
PU-238	5499.000	0.000	-0.964	0.964	3.2589	99.90000	-1.34E-03	1.93E-03	1.04E-02	2.46E-02	1.92E-03
PU242	4890.000	1372.000	1369.109	2.891	1.7003	100.0000	1.90E+00	1.04E-01	5.43E-03	1.46E-02	5.13E-02
PU-244	4589.000	7.000	7.000	0.000	4.8319	99.90000	9.70E-03	3.70E-03	1.54E-02	3.46E-02	3.67E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

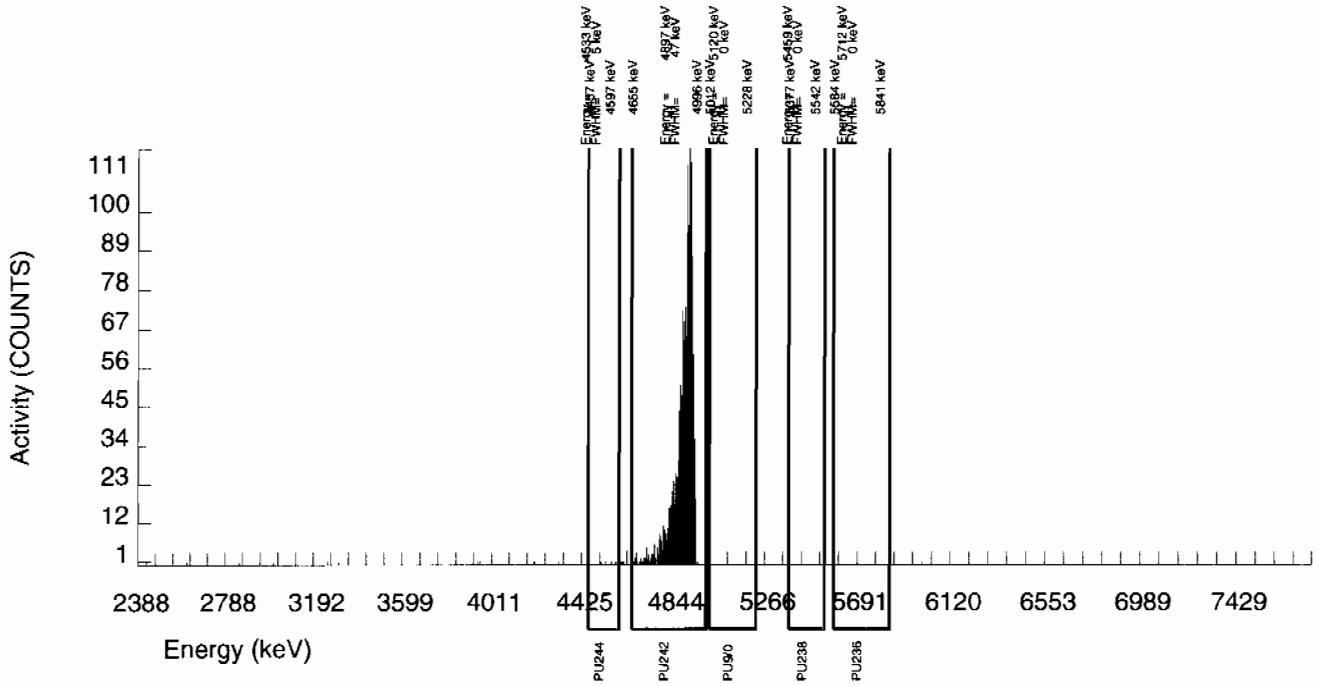

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S1201874684_PU
SAMPLE QTY: 1.253 G

DETECTOR NUMBER :79422
AVERAGE %EFFICIENCY :37.7719
% YIELD : 83.844

COUNT DATE: 9-JUL-2009 20:52:12
ELAPSED LIVE TIME(SEC): 57820.21
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B229.CNF;13
PCI/G : 1.473E+00	PCI/G : 1.473E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.52761 dpm	EFF FILE : W229.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2.000	2.000	0.000	4.1106	99.90000	2.36E-03	1.67E-03	1.12E-02	2.55E-02	1.67E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.20E-03	7.37E-03	1.79E-02	1.19E-03
PU-238	5499.000	0.000	0.000	0.000	3.2589	99.90000	0.00E+00	1.18E-03	8.86E-03	2.09E-02	1.18E-03
PU242	4890.000	1285.000	1284.036	0.964	0.9817	100.0000	1.51E+00	8.45E-02	2.67E-03	8.52E-03	4.22E-02
PU-244	4589.000	7.000	6.036	0.964	4.8319	99.90000	7.12E-03	3.34E-03	1.31E-02	2.95E-02	3.32E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

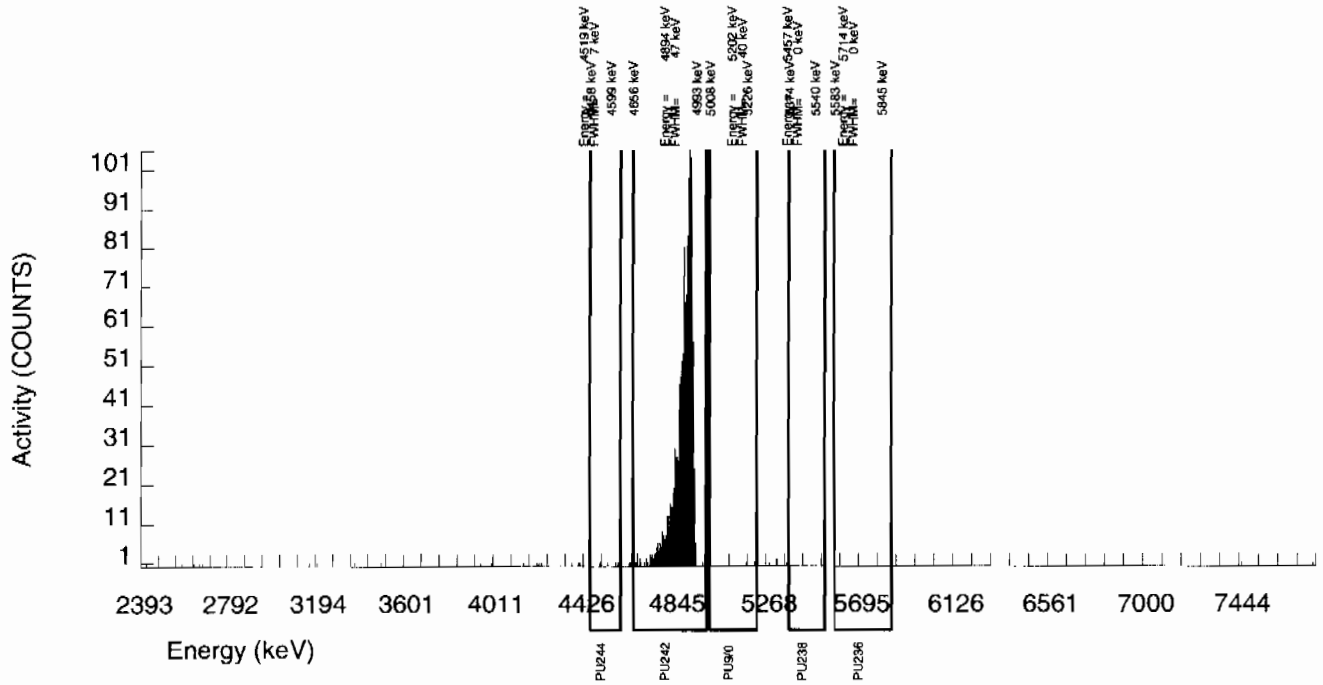

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 7-JUL-2009 00:00:00.

SAMPLE ID : S1201874685_PU
SAMPLE QTY: 0.107 G

DETECTOR NUMBER :79423
AVERAGE %EFFICIENCY :37.2375
% YIELD : 99.406

COUNT DATE: 9-JUL-2009 20:52:14
ELAPSED LIVE TIME(SEC): 57827.62
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B230.CNF;13
PCI/G : 1.725E+01	PCI/G : 1.725E+01	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.18231 dpm	EFF FILE : W230.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2775.000	2774.036	0.964	4.1106	99.90000	3.28E+01	1.94E+00	1.12E-01	2.56E-01	6.22E-01
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.18E-02	7.39E-02	1.80E-01	1.18E-02
PU-238	5499.000	469.000	468.036	0.964	3.2589	99.90000	5.53E+00	4.02E-01	8.87E-02	2.09E-01	2.56E-01
PU242	4890.000	1501.000	1501.000	0.000	0.0000	100.0000	1.77E+01	1.09E+00	0.00E+00	3.20E-02	4.57E-01
PU-244	4589.000	10.000	9.036	0.964	4.8319	99.90000	1.07E-01	3.95E-02	1.32E-01	2.95E-01	3.90E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

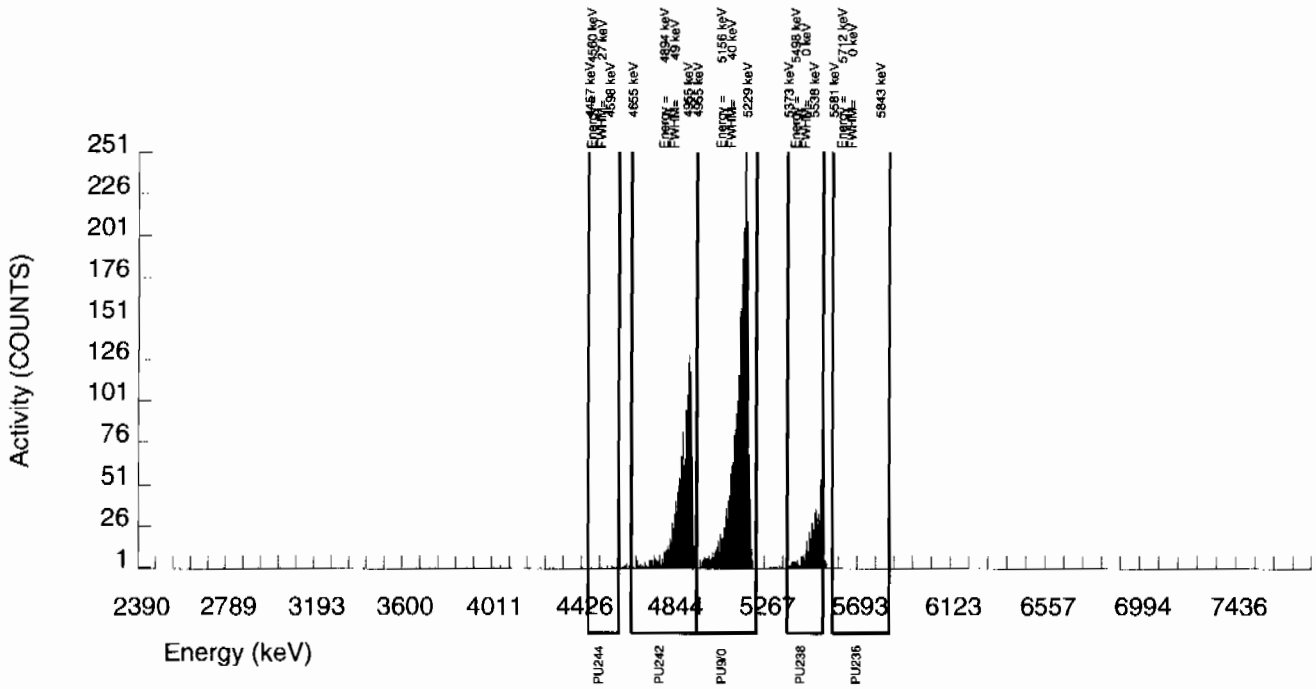

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671 SAMPLE DATE : 7-JUL-2009 00:00:00.	SAMPLE ID : S1201874685_PU SAMPLE QTY: 0.107 G
DETECTOR NUMBER :79423 AVERAGE %EFFICIENCY :37.2375 % YIELD : 102.324	COUNT DATE: 9-JUL-2009 20:52:14 ELAPSED LIVE TIME(SEC): 52061.47 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.725E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.725E+01	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.30509 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B230.CNF;13 BKG DATE : 5-JUL-2009 EFF FILE : W230.CNF;8 CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2472.000	2471.132	0.868	4.1684	99.90000	3.15E+01	1.89E+00	1.19E-01	2.73E-01	6.34E-01
PU-236	5749.000	0.000	0.000	0.000	3.3854	100.0000	0.00E+00	1.28E-02	9.69E-02	2.28E-01	1.28E-02
PU-238	5499.000	412.000	411.132	0.868	3.3734	99.90000	5.24E+00	3.93E-01	9.67E-02	2.28E-01	2.59E-01
PU242	4890.000	1391.000	1391.000	0.000	0.0000	100.0000	1.77E+01	1.11E+00	0.00E+00	3.45E-02	4.75E-01
PU-244	4589.000	10.000	9.132	0.868	4.1569	99.90000	1.16E-01	4.23E-02	1.19E-01	2.73E-01	4.18E-02

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

Integrate

DO NOT REPORT

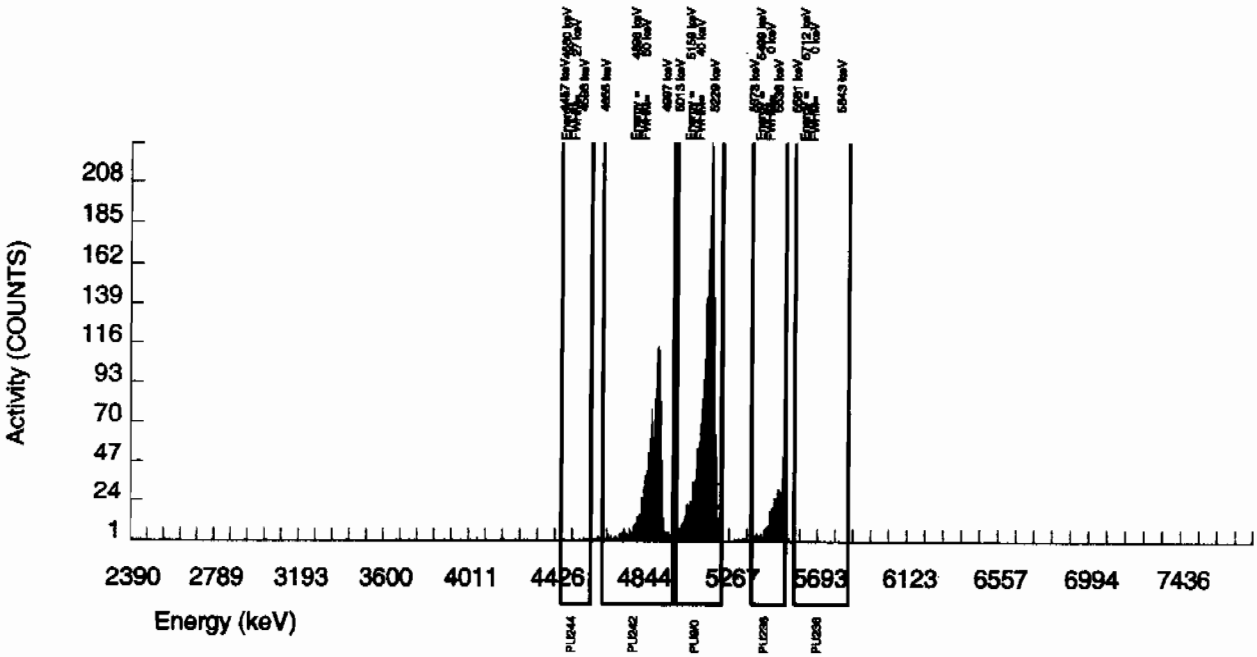

Radiochemistry Batch Checklist, Rev 9

Batch# 882673 Product: U Date: 7/12/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.		✓	NCM# 710606
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		case narrative
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		NCM# 710606
Batch non-conformances second reviewed and disposition verified to be completed.	✓		NCM# 710606
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/12/09

Secondary Review Performed By: [signature] 7/12/09

7/10-7/14
CANL

P ✓

Uranium Que Sheet

06-JUL-09

Batch #: 882673 Analyst: KXM4 First Client Due Date: ~~21-JUL-09~~ 14-JUL-09 OD 7/10/09 Internal Due Date: 10-JUL-09

Tracer Isotope: U-232/U-236 Tracer Code: VLBJ-B Expiration Date: 12-16-09 Vol: 0.1 ml

LCS Isotope: U-238 LCS Code: SRM 0244-A Expiration Date: 10-31-20 Vol: 0.1 g

Spike Isotope: U-238 Spike Code: NA Expiration Date: NA Vol: NA

Prep Date: 7-7-09 Initials: KM Pipet ID: 2071078 Balance ID: 50410272 Witness: MDA 7/9/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	U Det #
232211001-1	CAMO-09-10155	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	1	21	0.500	113 OD 7/12/09
232211002-1	CAMO-09-10156	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	2	22	0.502	~~119~~ 113
232211003-1	CAMO-09-10146	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	3	23	0.507	~~115~~ 170 – DT 7/19/09
232211004-1	CAMO-09-10158	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	4	24	0.503	116
232211005-1	CAMO-09-10145	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	5	25	0.500	117
232211006-1	CAMO-09-10157	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	6	26	0.508	118
232211007-1	CAMO-09-10162	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	7	27	0.504	121
232211008-1	CAMO-09-10163	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	8	28	0.506	122
232212001-1	CAMO-09-9944	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	9	29	0.500	123
232212002-1	CAMO-09-9945	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	10	30	0.505	124
232212003-1	CAMO-09-10029	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	11	31	0.500	125
232278001-1	CAMO-09-10458	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	12	32	0.504	126
232278002-1	CAMO-09-10459	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	13	33	0.509	127
232582001-1	CAMO-09-10464	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	14	34	0.501	129
232582002-1	CAMO-09-10465	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	15	35	0.499	130
232585001-1	CAMO-09-6605	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	16	36	0.499	131 OD 7/12/09
232585002-1	CAMO-09-6603	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	17	37	0.503	~~132~~ 155
232585003-1	CAMO-09-6604	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	18	38	0.503	133
232591001-1	CAMO-09-9946	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	19	39	0.503	134
1201874686-1	MB for batch 882673	MB		.1 pCi/g	SOIL	QC ACCOUNT		20	40	~~0.509~~ 1.0	135 OD 7/12/09
1201874687-1	CAMO-09-10459(232278002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	19-JUN-09	21	41	0.506	~~136~~ 156
1201874688-1	LCS for batch 882673	*LCS		.1 pCi/g	SOIL	QC ACCOUNT		22	42	0.101	144

*SRM 0241-A exp. 10-31-20

Choose SOP used: GL-RAD-A-011
GL-RAD-A-038
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: 7/12/09

1136

Blank Correction Report

Batch ID 882673

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874687	DUP	Uranium-233/234	0.506 g	0.506	0.0631	0.223	-.00667984	pCi/g	NO
		Uranium-235/236	0.506 g	0.0242	0.0149	0.102	.004762846	pCi/g	NO
		Uranium-238	0.506 g	0.456	0.0583	0.0868	.000148617	pCi/g	NO
1201874688	LCS	Uranium-233/234	0.101 g	6.01	0.584	0.919	-.03346535	pCi/g	NO
		Uranium-235/236	0.101 g	0.277	0.0863	0.421	.023861386	pCi/g	NO
		Uranium-238	0.101 g	6.18	0.596	0.358	.000744554	pCi/g	NO
1201874686	MB	Uranium-233/234	1.00 g	-0.00338	0.0026	0.0843	-.00338	pCi/g	NO
		Uranium-235/236	1.00 g	0.00241	0.00396	0.0387	.00241	pCi/g	YES
		Uranium-238	1.00 g	7.52E-05	0.0026	0.0328	.0000752	pCi/g	YES
232211001	CAMO-09-10155	Uranium-233/234	0.500 g	0.765	0.0813	0.213	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.0294	0.0155	0.0975	.00482	pCi/g	NO
		Uranium-238	0.500 g	0.925	0.0933	0.0828	.0001504	pCi/g	NO
232211002	CAMO-09-10156	Uranium-233/234	0.502 g	0.698	0.0788	0.257	-.00673307	pCi/g	NO
		Uranium-235/236	0.502 g	0.0481	0.0214	0.117	.004800797	pCi/g	NO
		Uranium-238	0.502 g	0.756	0.0826	0.0991	.000149801	pCi/g	NO
232211003	CAMO-09-10146	Uranium-233/234	0.507 g	0.958	0.095	0.193	-.00666667	pCi/g	NO
		Uranium-235/236	0.507 g	0.016	0.00929	0.0885	.004753452	pCi/g	YES
		Uranium-238	0.507 g	0.944	0.0928	0.0752	.000148323	pCi/g	NO
232211004	CAMO-09-10158	Uranium-233/234	0.503 g	0.758	0.0934	0.304	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0425	0.025	0.140	.004791252	pCi/g	NO
		Uranium-238	0.503 g	0.798	0.0944	0.119	.000149503	pCi/g	NO
232211005	CAMO-09-10145	Uranium-233/234	0.500 g	1.05	0.113	0.279	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.0612	0.0221	0.128	.00482	pCi/g	NO
		Uranium-238	0.500 g	1.15	0.120	0.109	.0001504	pCi/g	NO
232211006	CAMO-09-10157	Uranium-233/234	0.508 g	1.00	0.103	0.227	-.00665354	pCi/g	NO
		Uranium-235/236	0.508 g	0.0497	0.0179	0.104	.004744094	pCi/g	NO
		Uranium-238	0.508 g	1.14	0.112	0.0883	.000148031	pCi/g	NO
232211007	CAMO-09-10162	Uranium-233/234	0.504 g	1.08	0.114	0.271	-.00670635	pCi/g	NO
		Uranium-235/236	0.504 g	0.0521	0.020	0.124	.004781746	pCi/g	NO
		Uranium-238	0.504 g	0.934	0.102	0.106	.000149206	pCi/g	NO
232211008	CAMO-09-10163	Uranium-233/234	0.506 g	0.864	0.0909	0.223	-.00667984	pCi/g	NO
		Uranium-235/236	0.506 g	0.049	0.0177	0.102	.004762846	pCi/g	NO
		Uranium-238	0.506 g	0.977	0.0994	0.087	.000148617	pCi/g	NO
232212001	CAMO-09-9944	Uranium-233/234	0.500 g	0.887	0.0902	0.209	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.109	0.0262	0.096	.00482	pCi/g	NO
		Uranium-238	0.500 g	1.06	0.103	0.0815	.0001504	pCi/g	NO
232212002	CAMO-09-9945	Uranium-233/234	0.505 g	0.903	0.0964	0.239	-.00669307	pCi/g	NO
		Uranium-235/236	0.505 g	0.0786	0.0234	0.109	.004772277	pCi/g	NO
		Uranium-238	0.505 g	0.848	0.091	0.093	.000148911	pCi/g	NO
232212003	CAMO-09-10029	Uranium-233/234	0.500 g	0.814	0.0854	0.208	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.0178	0.017	0.0955	.00482	pCi/g	YES

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232212003	CAMO-09-10029	Uranium-238	0.500 g	0.850	0.0873	0.0811	.0001504	pCi/g	NO
232278001	CAMO-09-10458	Uranium-233/234	0.504 g	0.354	0.0519	0.229	-.00670635	pCi/g	NO
		Uranium-235/236	0.504 g	0.0129	0.0125	0.105	.004781746	pCi/g	YES
		Uranium-238	0.504 g	0.352	0.0508	0.0894	.000149206	pCi/g	NO
232278002	CAMO-09-10459	Uranium-233/234	0.509 g	0.547	0.0729	0.290	-.00664047	pCi/g	NO
		Uranium-235/236	0.509 g	0.0159	0.0113	0.133	.004734774	pCi/g	YES
		Uranium-238	0.509 g	0.561	0.073	0.113	.000147741	pCi/g	NO
232582001	CAMO-09-10464	Uranium-233/234	0.501 g	0.508	0.0715	0.305	-.00674651	pCi/g	NO
		Uranium-235/236	0.501 g	0.0254	0.0187	0.140	.004810379	pCi/g	NO
		Uranium-238	0.501 g	0.387	0.0608	0.119	.000150100	pCi/g	NO
232582002	CAMO-09-10465	Uranium-233/234	0.499 g	0.334	0.0532	0.244	-.00677355	pCi/g	NO
		Uranium-235/236	0.499 g	0.0142	0.0187	0.112	.004829659	pCi/g	YES
		Uranium-238	0.499 g	0.428	0.0586	0.095	.000150701	pCi/g	NO
232585001	CAMO-09-6605	Uranium-233/234	0.499 g	0.716	0.0916	0.329	-.00677355	pCi/g	NO
		Uranium-235/236	0.499 g	0.109	0.0346	0.151	.004829659	pCi/g	NO
		Uranium-238	0.499 g	0.753	0.0952	0.128	.000150701	pCi/g	NO
232585002	CAMO-09-6603	Uranium-233/234	0.503 g	1.36	0.140	0.309	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0336	0.0239	0.142	.004791252	pCi/g	NO
		Uranium-238	0.503 g	1.44	0.147	0.120	.000149503	pCi/g	NO
232585003	CAMO-09-6604	Uranium-233/234	0.503 g	1.04	0.114	0.298	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0654	0.0236	0.137	.004791252	pCi/g	NO
		Uranium-238	0.503 g	0.965	0.108	0.116	.000149503	pCi/g	NO
232591001	CAMO-09-9946	Uranium-233/234	0.503 g	0.840	0.0697	0.219	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0494	0.0255	0.101	.004791252	pCi/g	NO
		Uranium-238	0.503 g	1.03	0.103	0.0855	.000149503	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S0232278002_UU
SAMPLE QTY: 0.509 G

DETECTOR NUMBER :78770
AVERAGE %EFFICIENCY :24.7595
% YIELD : 57.937

COUNT DATE: 9-JUL-2009 20:53:30
ELAPSED LIVE TIME(SEC): 57449.93
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B127.CNF;382
PCI/G : 2.310E+01	PCI/G : 2.310E+01	NOMINAL : 5.29685 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.06884 dpm	EFF FILE : W127.CNF;108
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	89.000	84.891	1.915	9.1924	100.0000	5.47E-01	7.29E-02	1.36E-01	2.90E-01	6.07E-02
U232	5302.100	730.000	727.128	2.872	1.6948	100.0000	4.69E+00	3.87E-01	2.51E-02	6.77E-02	1.75E-01
U-235	4391.000	2.000	2.000	0.000	3.0409	80.90000	1.59E-02	1.13E-02	5.57E-02	1.33E-01	1.13E-02
U-238	4184.730	87.000	87.000	0.000	3.2215	100.0000	5.61E-01	7.30E-02	4.78E-02	1.13E-01	6.01E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

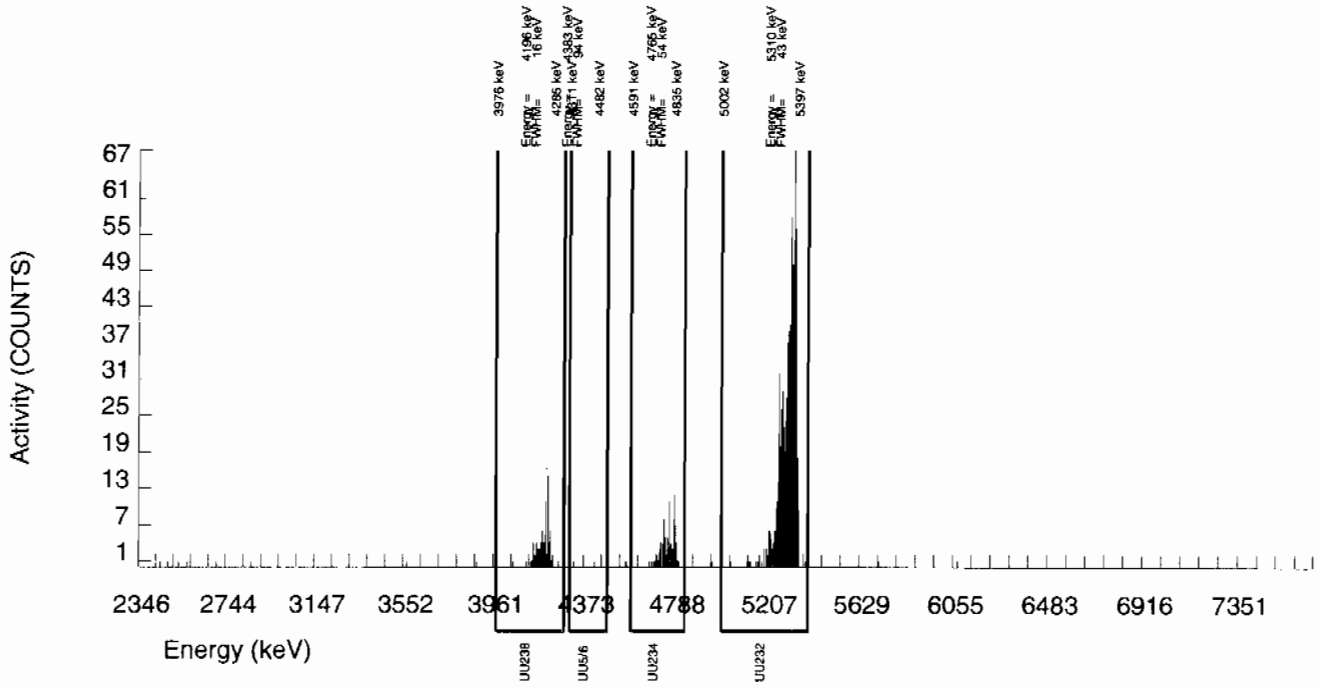

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232582001_UU
SAMPLE QTY: 0.501 G

DETECTOR NUMBER :76227
AVERAGE %EFFICIENCY :26.3822
% YIELD : 52.466

COUNT DATE: 9-JUL-2009 20:53:32
ELAPSED LIVE TIME(SEC): 57572.87
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B129.CNF;377
PCI/G : 2.347E+01	PCI/G : 2.347E+01	NOMINAL : 5.29601 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.77860 dpm	EFF FILE : W129.CNF;113
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	80.000	75.000	2.879	9.1924	100.0000	5.08E-01	7.15E-02	1.43E-01	3.05E-01	6.08E-02
U232	5302.100	706.000	703.121	2.879	1.6967	100.0000	4.76E+00	3.96E-01	2.64E-02	7.12E-02	1.80E-01
U-235	4391.000	4.000	3.040	0.960	3.0409	80.90000	2.54E-02	1.87E-02	5.86E-02	1.40E-01	1.86E-02
U-238	4184.730	60.000	57.121	2.879	3.2215	100.0000	3.87E-01	6.08E-02	5.02E-02	1.19E-01	5.36E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

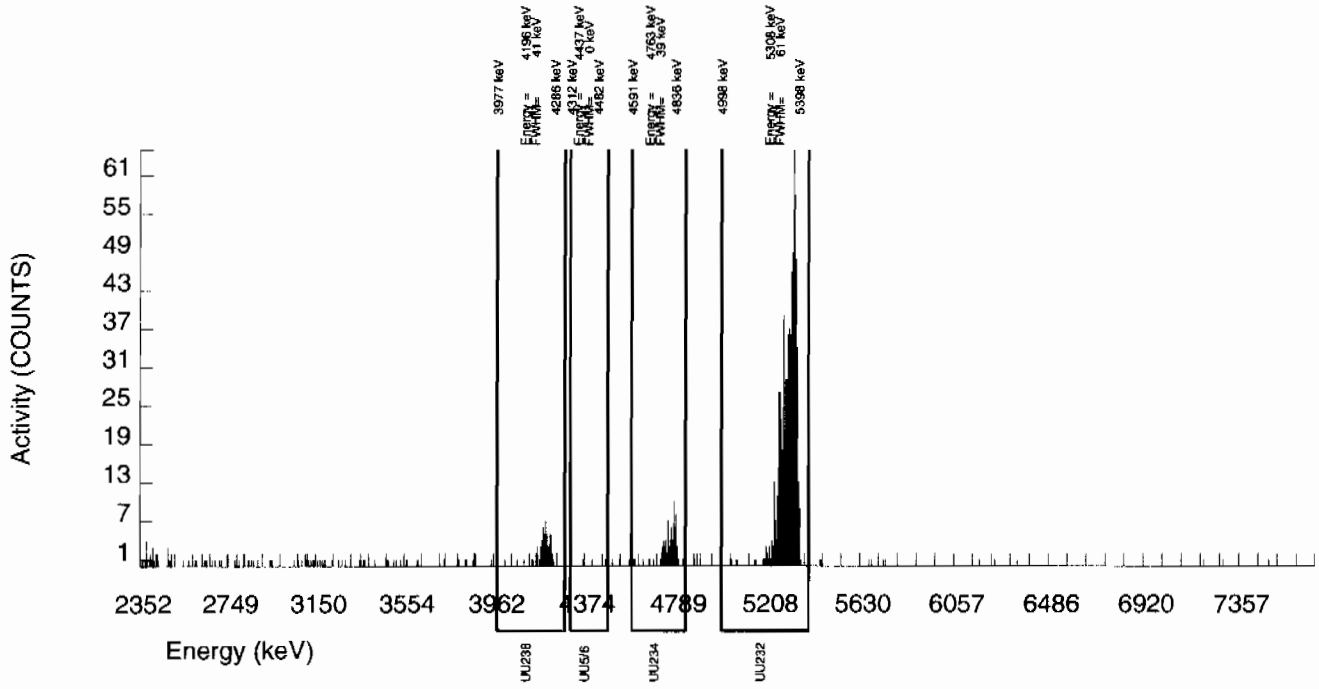

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232582002_UU
SAMPLE QTY: 0.499 G

DETECTOR NUMBER :76228
AVERAGE %EFFICIENCY :24.6764
% YIELD : 70.440

COUNT DATE: 9-JUL-2009 20:53:34
ELAPSED LIVE TIME(SEC): 57575.43
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B130.CNF;377
PCI/G : 2.357E+01	PCI/G : 2.357E+01	NOMINAL : 5.29601 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.73050 dpm	EFF FILE : W130.CNF;115
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	72.000	61.659	7.677	9.1924	100.0000	3.34E-01	5.32E-02	1.15E-01	2.44E-01	4.74E-02
U232	5302.100	883.000	883.000	0.000	0.0000	100.0000	4.78E+00	3.80E-01	0.00E+00	1.47E-02	1.61E-01
U-235	4391.000	5.000	2.121	2.879	3.0409	80.90000	1.42E-02	1.87E-02	4.68E-02	1.12E-01	1.86E-02
U-238	4184.730	82.000	79.121	2.879	3.2215	100.0000	4.28E-01	5.86E-02	4.01E-02	9.50E-02	4.98E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

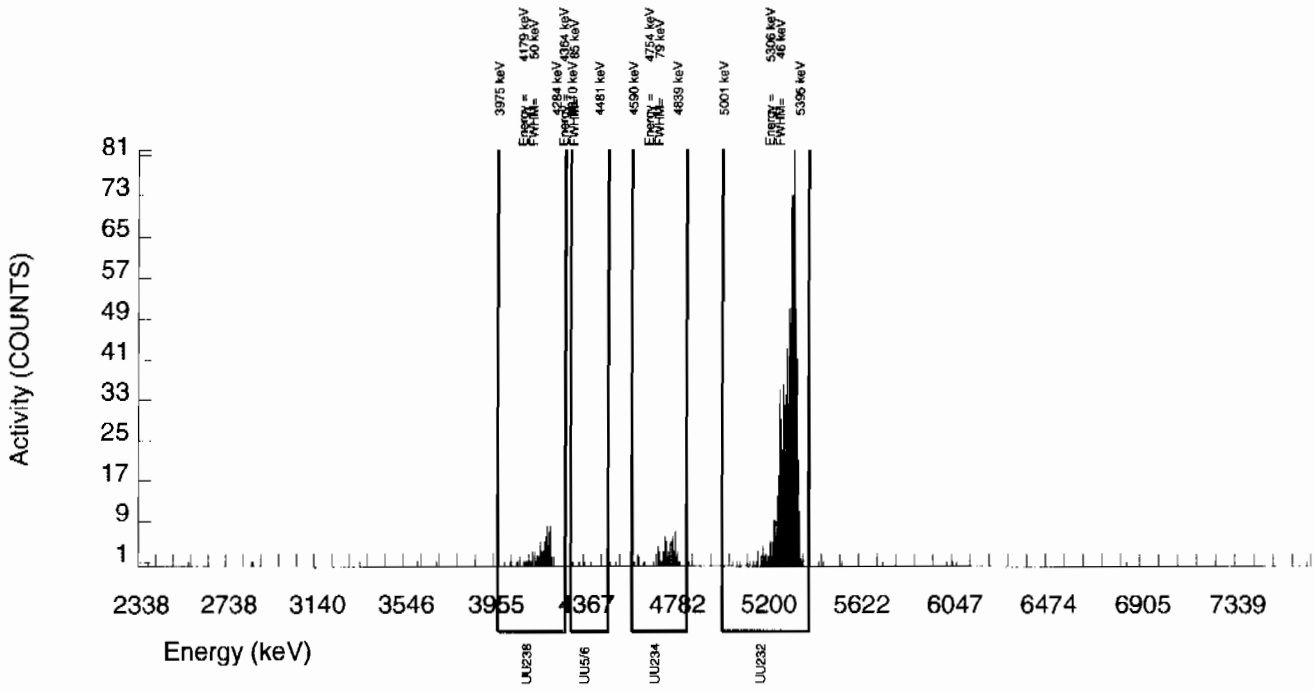

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 7-JUL-2009 00:00:00.

SAMPLE ID : S1201874686_UU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :64270
AVERAGE %EFFICIENCY :25.3758
% YIELD : 98.818

COUNT DATE: 9-JUL-2009 20:53:48
ELAPSED LIVE TIME(SEC): 57588.11
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B135.CNF;372
PCI/G : 1.176E+01	PCI/G : 1.176E+01	NOMINAL : 5.29434 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 5.23175 dpm	EFF FILE : W135.CNF;122
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	3.000	-1.804	0.960	9.1924	100.0000	-3.38E-03	2.60E-03	3.96E-02	8.43E-02	2.59E-03
U232	5302.100	1277.000	1274.121	2.879	1.6969	100.0000	2.38E+00	1.79E-01	7.31E-03	1.97E-02	6.70E-02
U-235	4391.000	2.000	1.040	0.960	3.0409	80.90000	2.41E-03	3.96E-03	1.62E-02	3.87E-02	3.95E-03
U-238	4184.730	1.000	0.040	0.960	3.2215	100.0000	7.52E-05	2.60E-03	1.39E-02	3.28E-02	2.59E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

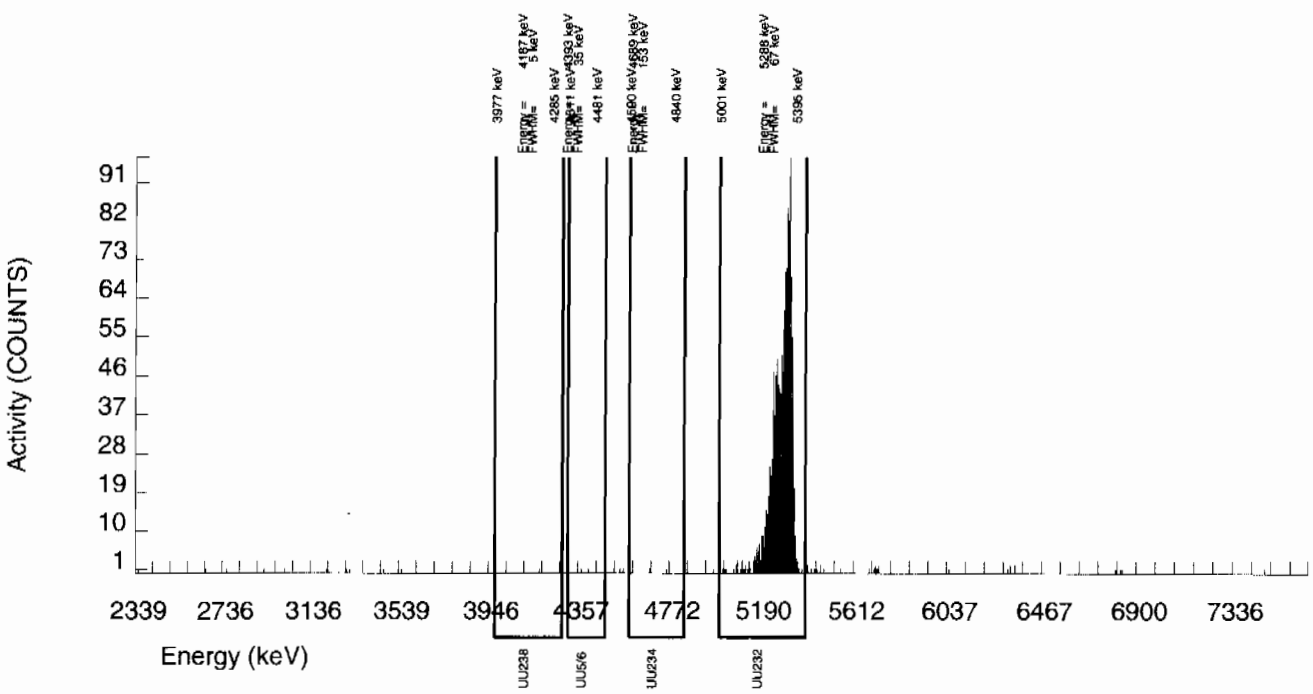

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S1201874687_UU
SAMPLE QTY: 0.506 G

DETECTOR NUMBER :75554
AVERAGE %EFFICIENCY :24.9092
% YIELD : 72.878

COUNT DATE:10-JUL-2009 21:23:10
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B156.CNF;331
PCI/G : 2.324E+01	PCI/G : 2.324E+01	NOMINAL : 5.29685 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.86027 dpm	EFF FILE : W156.CNF;105
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	110.000	103.101	4.000	9.1924	100.0000	5.06E-01	6.31E-02	1.05E-01	2.23E-01	5.17E-02
U232	5302.100	972.000	961.000	11.000	3.3166	100.0000	4.72E+00	3.71E-01	3.78E-02	8.90E-02	1.54E-01
U-235	4391.000	5.000	4.000	1.000	3.0409	80.90000	2.42E-02	1.49E-02	4.29E-02	1.02E-01	1.48E-02
U-238	4184.730	95.000	93.000	2.000	3.2215	100.0000	4.56E-01	5.83E-02	3.68E-02	8.68E-02	4.83E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

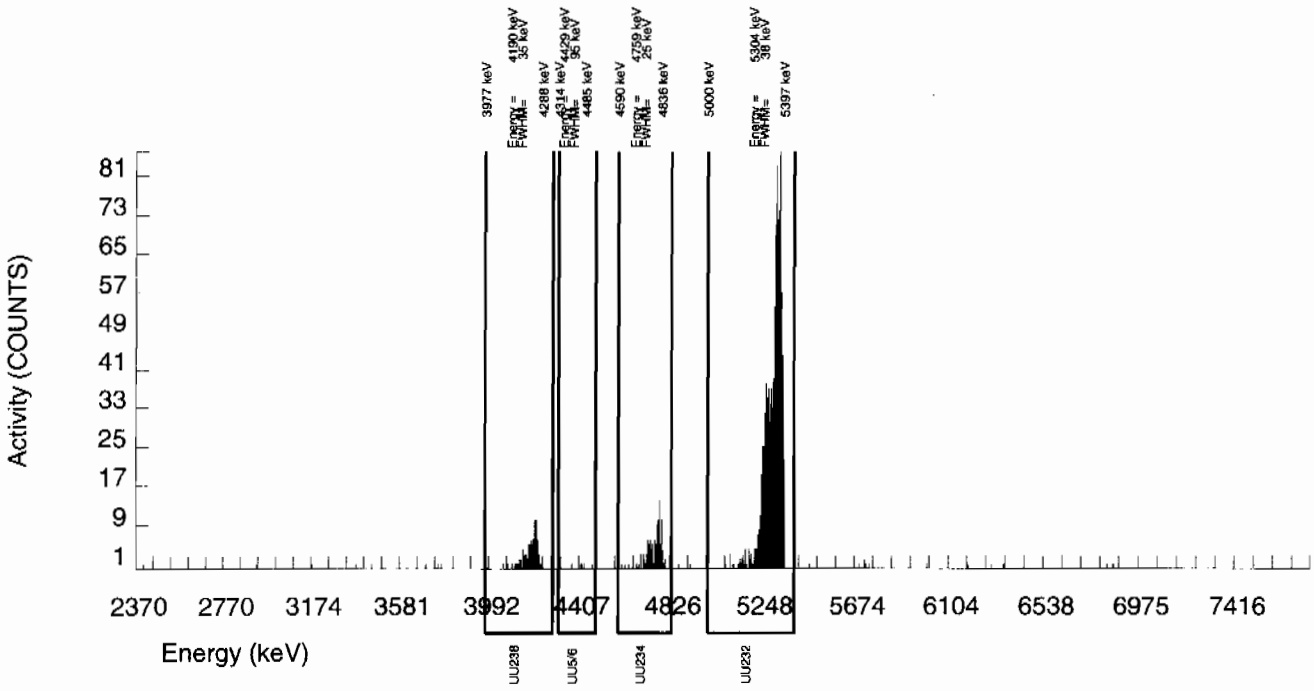

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 7-JUL-2009 00:00:00.

SAMPLE ID : S1201874688_UU
SAMPLE QTY: 0.101 G

DETECTOR NUMBER :75551
AVERAGE %EFFICIENCY :24.7777
% YIELD : 92.048

COUNT DATE: 9-JUL-2009 20:53:53
ELAPSED LIVE TIME(SEC): 57526.06
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B144.CNF;327
PCI/G : 1.164E+02	PCI/G : 1.164E+02	NOMINAL : 5.29434 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.87335 dpm	EFF FILE : W144.CNF;92
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	303.000	294.714	4.794	9.1924	100.0000	6.01E+00	5.84E-01	4.32E-01	9.19E-01	3.56E-01
U232	5302.100	1172.000	1157.619	14.382	3.7923	100.0000	2.36E+01	1.95E+00	1.78E-01	4.11E-01	7.02E-01
U-235	4391.000	11.000	11.000	0.000	3.0409	80.90000	2.77E-01	8.63E-02	1.77E-01	4.21E-01	8.36E-02
U-238	4184.730	306.000	303.124	2.876	3.2215	100.0000	6.18E+00	5.96E-01	1.51E-01	3.58E-01	3.58E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

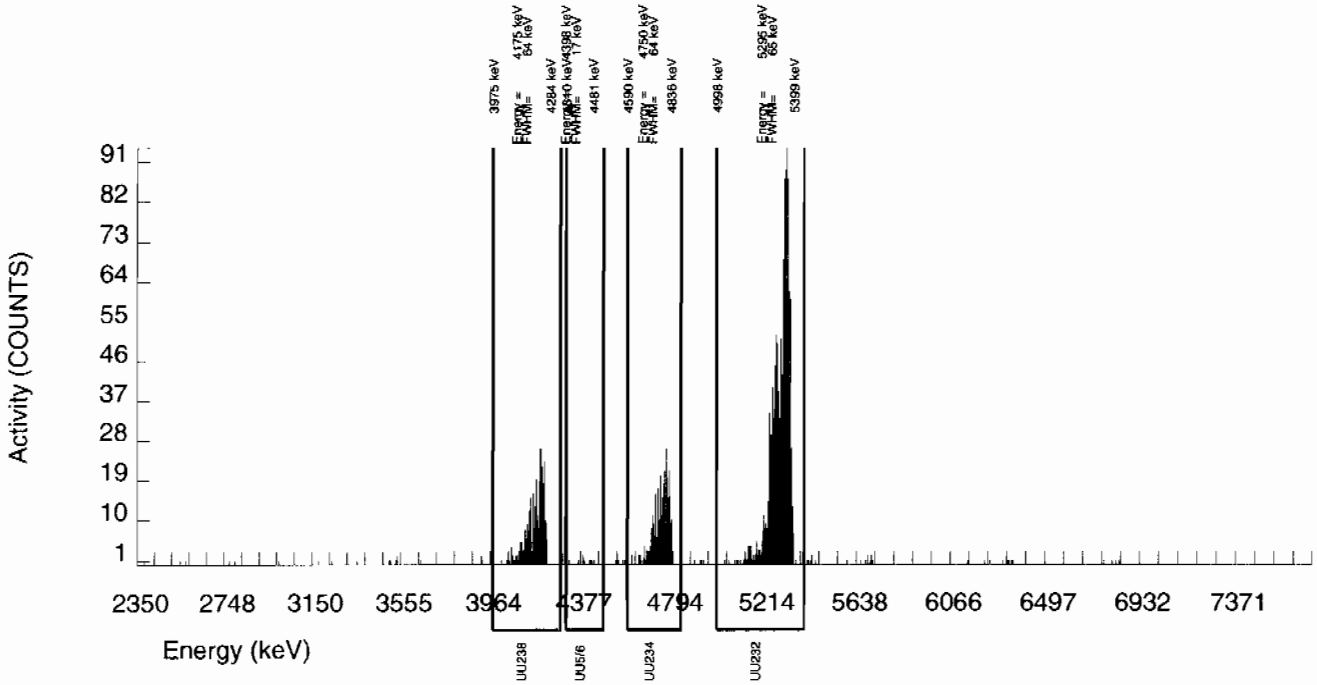

Radiochemistry Batch Checklist, Rev 9

Batch# 884520 Product: PU Date: 7/14/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		~~AA~~ 7/14/09
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/14/09

Secondary Review Performed By: [signature] 7/14/09

7/8 7/14

LAN

Pv

Plutonium Que Sheet

13-JUL-09

Batch #: 884520 **Analyst:** MXE1 **First Client Due Date:** 14-JUL-09 **Internal Due Date:** 08-JUL-09

Tracer Isotope(s): Pu-242/Pu-238 **Tracer Code:** 1262-4 **Expiration Date:** 5/11/10 **Vol:** 6.1 ml

LCS Isotope(s): Pu-239/Pu-238 **LCS Code:** — **Expiration Date:** — **Vol:** —

Spike Isotope(s): Pu-239/Pu-238 **Spike Code:** — **Expiration Date:** — **Vol:** —

Prep Date: 7/13/09 **Initials:** LLA **Pipet ID:** 20210058 **Balance ID:** 504102772 **Witness:** TSP 7/13/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Pu Det #
232211001-3	CAMO-09-10155	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	1	1	1.22	235
232211005-3	CAMO-09-10145	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	2	2	1.21	236
232211007-3	CAMO-09-10162	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	3	3	1.31	237
232212003-3	CAMO-09-10029	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	4	4	1.23	238
232582001-3	CAMO-09-10464	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	5	5	1.24	239
1201879100-1	MB for batch 884520	MB		UCF pCi/g to pCi/g	SOIL	QC ACCOUNT		6	6	1.0	240
1201879101-3	CAMO-09-10464(232582001DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	25-JUN-09	7	7	1.25	241
1201879102-1	LCS for batch 884520	LCS		UCF pCi/g to pCi/g	SOIL	QC ACCOUNT		8	8	0.170	242

SRM 02441-B exp 4/30/20

1146

Choose SOP Used: GL-RAD-A-011 / GL-RAD-A-045 / GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: 7/14/09

7/14/09

GEL Laboratories LLC, , Radiochemistry Division

Blank Correction Report

Batch ID 884520

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201879101	DUP	Plutonium-238	1.25 g	0.00	0.00134	0.0227	.00144	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00536	0.00269	0.0277	0	pCi/g	NO
1201879102	LCS	Plutonium-238	0.170 g	5.65	0.370	0.150	.010588235	pCi/g	NO
		Plutonium-239/240	0.170 g	39.9	2.16	0.183	0	pCi/g	NO
1201879100	MB	Plutonium-238	1.00 g	0.0018	0.0018	0.0305	.0018	pCi/g	YES
		Plutonium-239/240	1.00 g	0.00	0.0018	0.0372	0	pCi/g	NO
232211001	CAMO-09-10155	Plutonium-238	1.22 g	0.00135	0.00135	0.0229	.001475410	pCi/g	YES
		Plutonium-239/240	1.22 g	0.00135	0.00135	0.0279	0	pCi/g	NO
232211005	CAMO-09-10145	Plutonium-238	1.21 g	0.00137	0.00138	0.0233	.001487603	pCi/g	YES
		Plutonium-239/240	1.21 g	-0.00209	0.00202	0.0284	0	pCi/g	YES
232211007	CAMO-09-10162	Plutonium-238	1.31 g	-0.000658	0.00185	0.0213	.001374046	pCi/g	YES
		Plutonium-239/240	1.31 g	-0.000958	0.00158	0.026	0	pCi/g	YES
232212003	CAMO-09-10029	Plutonium-238	1.23 g	0.00514	0.00258	0.0217	.001463415	pCi/g	YES
		Plutonium-239/240	1.23 g	0.157	0.0163	0.0265	0	pCi/g	NO
232582001	CAMO-09-10484	Plutonium-238	1.24 g	0.00	0.00132	0.0223	.001451613	pCi/g	YES
		Plutonium-239/240	1.24 g	0.00263	0.00187	0.0272	0	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 884520
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232582001_PU
SAMPLE QTY: 1.240 G

DETECTOR NUMBER :79432
AVERAGE %EFFICIENCY :38.9618
% YIELD : 93.130

COUNT DATE:13-JUL-2009 21:54:02
ELAPSED LIVE TIME(SEC): 45665.70
ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B239.CNF;15
PCI/G : 1.489E+00	PCI/G : 1.489E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 3.91828 dpm	EFF FILE : W239.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2.000	2.000	0.000	4.1106	99.90000	2.63E-03	1.87E-03	1.18E-02	2.72E-02	1.86E-03
PU-236	5749.000	0.000	-0.761	0.761	2.7154	100.0000	-1.01E-03	1.68E-03	7.80E-03	1.92E-02	1.67E-03
PU-238	5499.000	0.000	0.000	0.000	3.2589	99.90000	0.00E+00	1.32E-03	9.37E-03	2.23E-02	1.32E-03
PU242	4890.000	1168.000	1161.911	6.089	2.4675	100.0000	1.53E+00	8.78E-02	7.09E-03	1.77E-02	4.50E-02
PU-244	4589.000	17.000	15.478	1.522	4.8319	99.90000	2.04E-02	5.70E-03	1.39E-02	3.13E-02	5.61E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

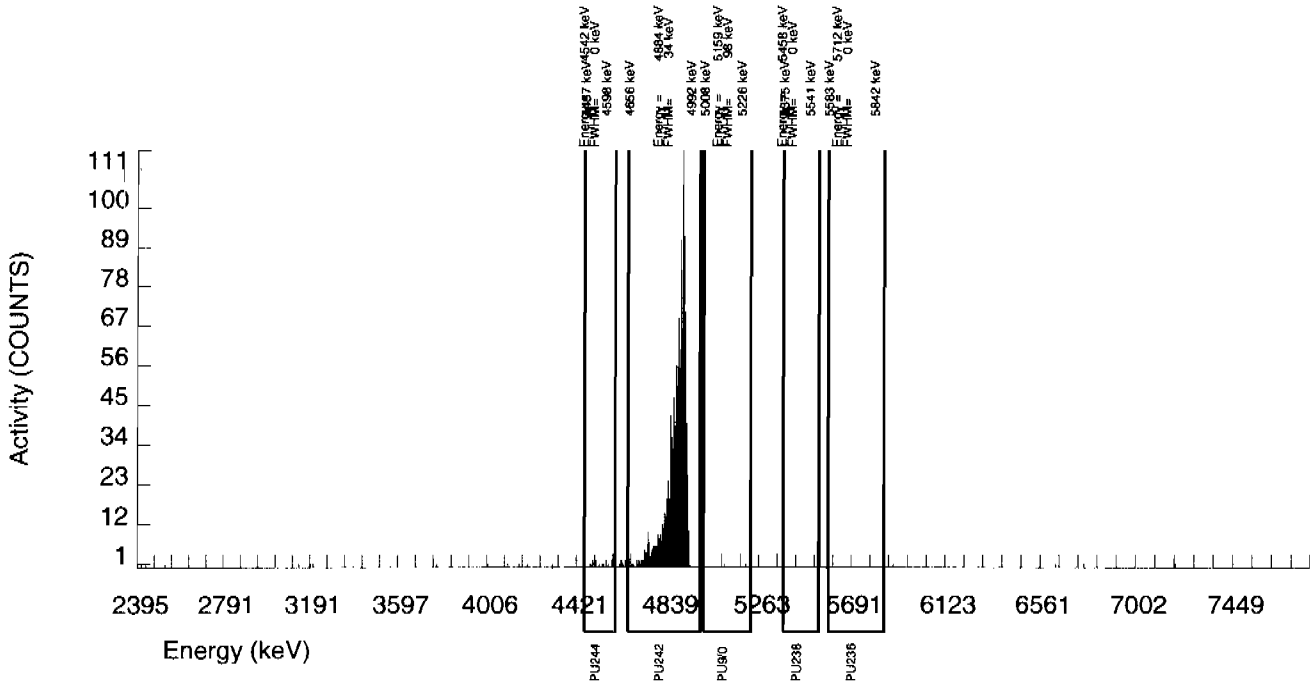

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 884520
SAMPLE DATE : 13-JUL-2009 00:00:00

SAMPLE ID : S1201879100 PU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :79433
AVERAGE %EFFICIENCY :37.7775
% YIELD : 87.035

COUNT DATE:13-JUL-2009 21:54:04
ELAPSED LIVE TIME(SEC): 45669.78
ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B240.CNF;15
PCI/G : 1.846E+00	PCI/G : 1.846E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 3.66183 dpm	EFF FILE : W240.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	0.000	0.000	0.000	4.1106	99.90000	0.00E+00	1.80E-03	1.62E-02	3.72E-02	1.80E-03
PU-236	5749.000	0.000	-2.283	2.283	2.7154	100.0000	-4.11E-03	2.98E-03	1.07E-02	2.62E-02	2.98E-03
PU-238	5499.000	1.000	1.000	0.000	3.2589	99.90000	1.80E-03	1.80E-03	1.28E-02	3.05E-02	1.80E-03
PU242	4890.000	1056.000	1052.955	3.045	1.7449	100.0000	1.90E+00	1.12E-01	6.86E-03	1.86E-02	5.86E-02
PU-244	4589.000	12.000	12.000	0.000	4.8319	99.90000	2.16E-02	6.34E-03	1.90E-02	4.29E-02	6.24E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

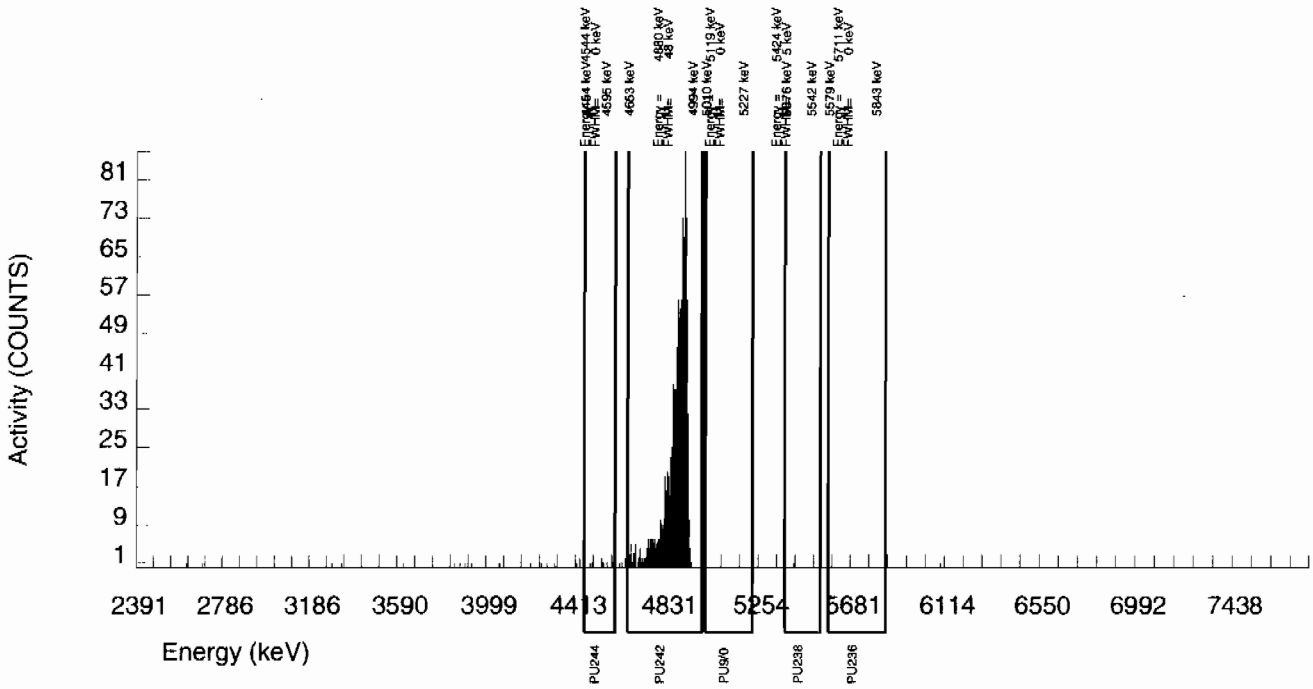

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 884520
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S1201879101_PU
SAMPLE QTY: 1.250 G

DETECTOR NUMBER :79434
AVERAGE %EFFICIENCY :39.3170
% YIELD : 89.896

COUNT DATE:13-JUL-2009 21:54:07
ELAPSED LIVE TIME(SEC): 45674.25
ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B241.CNF;15
PCI/G : 1.477E+00	PCI/G : 1.477E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 3.78221 dpm	EFF FILE : W241.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	4.000	4.000	0.000	4.1106	99.90000	5.36E-03	2.69E-03	1.20E-02	2.77E-02	2.68E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.36E-03	7.94E-03	1.95E-02	1.36E-03
PU-238	5499.000	0.000	0.000	0.000	3.2589	99.90000	0.00E+00	1.34E-03	9.54E-03	2.27E-02	1.34E-03
PU242	4890.000	1132.000	1132.000	0.000	0.0000	100.0000	1.52E+00	8.75E-02	0.00E+00	3.63E-03	4.51E-02
PU-244	4589.000	10.000	10.000	0.000	4.8319	99.90000	1.34E-02	4.29E-03	1.41E-02	3.19E-02	4.24E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

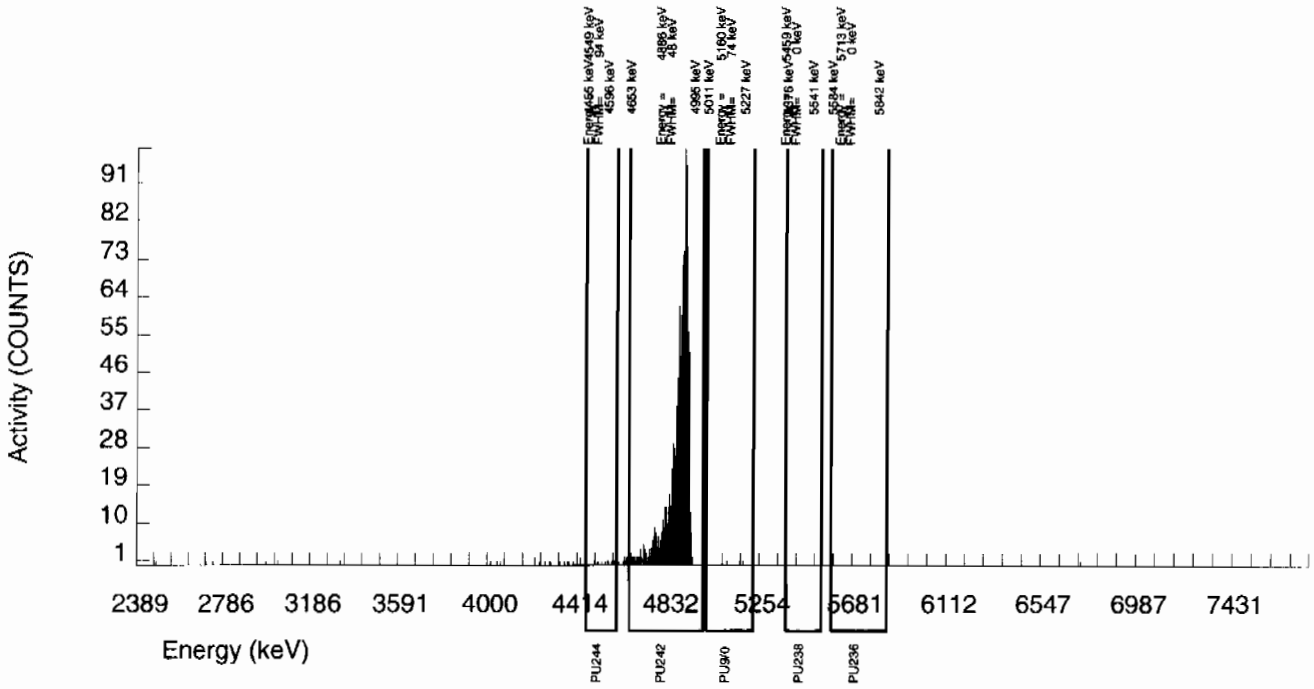

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 884520
SAMPLE DATE : 13-JUL-2009 00:00:00

SAMPLE ID : S1201879102_PU
SAMPLE QTY: 0.170 G

DETECTOR NUMBER :79435
AVERAGE %EFFICIENCY :38.4652
% YIELD : 102.516

COUNT DATE:13-JUL-2009 21:54:09
ELAPSED LIVE TIME(SEC): 45675.94
ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B242.CNF;15
PCI/G : 1.086E+01	PCI/G : 1.086E+01	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.31320 dpm	EFF FILE : W242.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	4517.000	4516.239	0.761	4.1106	99.90000	3.99E+01	2.16E+00	7.93E-02	1.83E-01	5.94E-01
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	8.85E-03	5.23E-02	1.29E-01	8.83E-03
PU-238	5499.000	640.000	639.239	0.761	3.2589	99.90000	5.65E+00	3.70E-01	6.29E-02	1.50E-01	2.24E-01
PU242	4890.000	1263.000	1263.000	0.000	0.0000	100.0000	1.11E+01	6.60E-01	0.00E+00	2.39E-02	3.14E-01
PU-244	4589.000	27.000	27.000	0.000	4.8319	99.90000	2.39E-01	4.76E-02	9.32E-02	2.10E-01	4.59E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

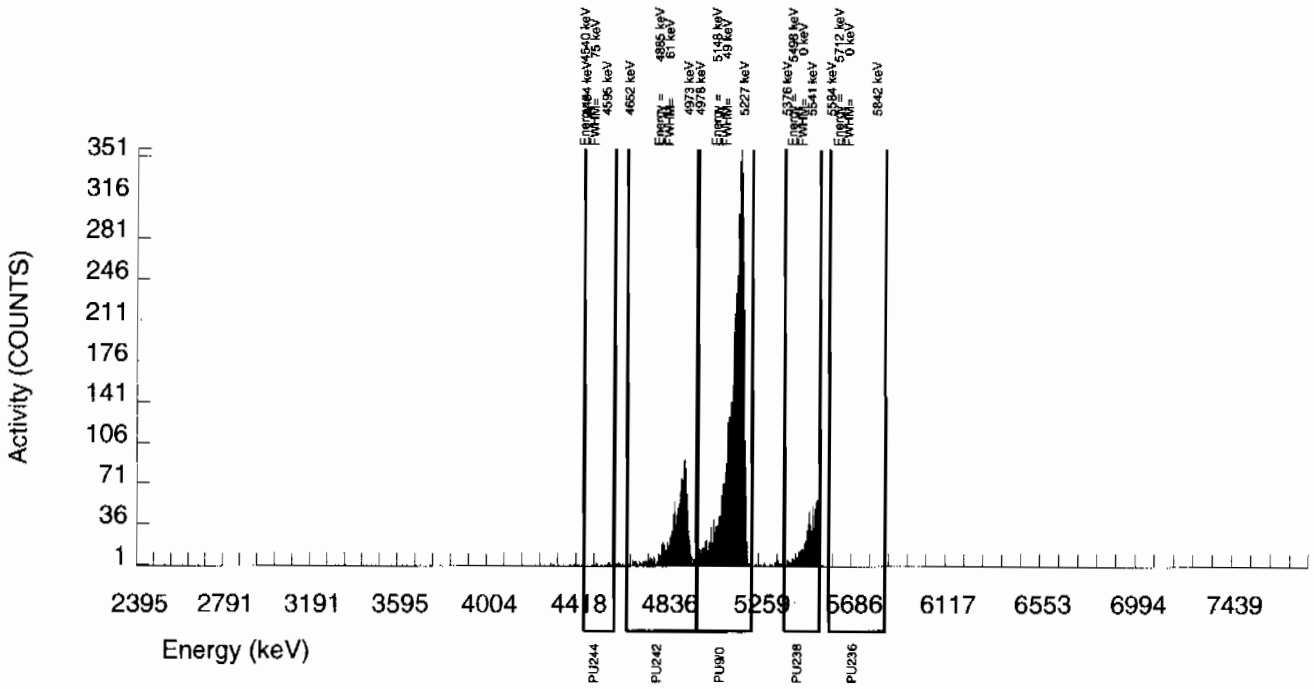

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 884520 SAMPLE DATE : 13-JUL-2009 00:00:00	SAMPLE ID : S1201879102_PU SAMPLE QTY: 0.170 G
DETECTOR NUMBER :79435 AVERAGE %EFFICIENCY :38.4652 % YIELD : 105.601	COUNT DATE:13-JUL-2009 21:54:09 ELAPSED LIVE TIME(SEC): 45675.94 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.086E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.086E+01	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.44296 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B242.CNF;15 BKG DATE : 12-JUL-2009 EFF FILE : W242.CNF;8 CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	4454.000	4453.239	0.761	4.1106	99.90000	3.82E+01	2.06E+00	7.70E-02	1.77E-01	5.72E-01
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	8.59E-03	5.08E-02	1.25E-01	8.58E-03
PU-238	5499.000	640.000	639.239	0.761	3.2589	99.90000	5.48E+00	3.58E-01	6.10E-02	1.45E-01	2.17E-01
PU242	4890.000	1301.000	1301.000	0.000	0.0000	100.0000	1.11E+01	6.56E-01	0.00E+00	2.32E-02	3.09E-01
PU-244	4589.000	27.000	27.000	0.000	4.8319	99.90000	2.32E-01	4.62E-02	9.05E-02	2.04E-01	4.46E-02

NOTE: Sg calculated via blank population (upd[illegible]2-JUL-2009)
NOTE: Sg of PU242 calculated as [illegible] AREA)

Integrated

DO NOT REPORT

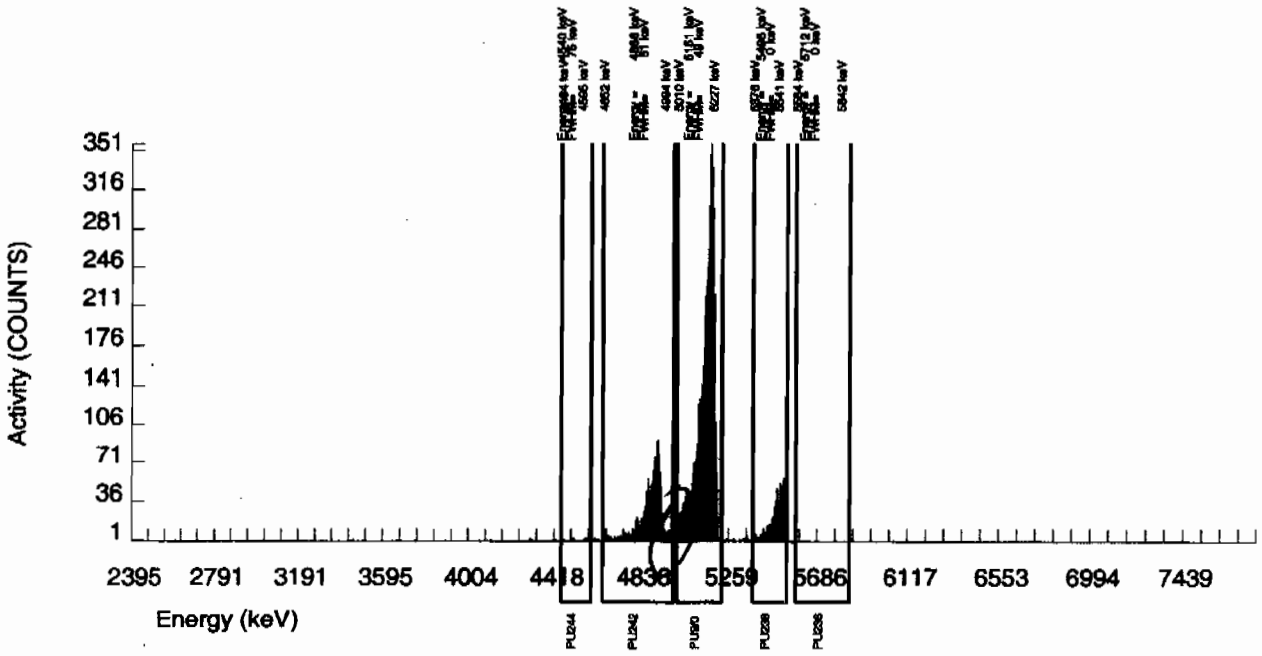

Radiochemistry Batch Checklist, Rev 9

Batch# 885114 Product: TN Date: 7/1/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.		✓	NCM# 713152
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.		✓	NCM# 713152
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		case narrative
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		NCM# 713152
Batch non-conformances second reviewed and disposition verified to be completed.	✓		NCM# 713152
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/20/09

Secondary Review Performed By: [signature] 7/21/09

6/16 - 7/22

[signature]

Thorium Que Sheet

14-JUL-09

Batch #: 885114 **Analyst:** HAKB **First Client Due Date:** 22-JUL-09 **Internal Due Date** 16-JUL-09

Tracer Isotope: Th-229 **Tracer Code:** 0934G **Expiration Date:** 4/28/10 **Vol:** 0.1

LCS Isotope: Th-232 **LCS Code:** — **Expiration Date:** — **Vol:** —

Spike Isotope: Th-232 **Spike Code:** — **Expiration Date:** — **Vol:** —

Prep Date: 7/14/09 **Initials:** MAE **Pipet ID:** ~~2971058~~ 3/9/09 2971058 **Balance ID:** 50410272 **Witness:** 7/14/09 CMM

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Th Det #
232582001-2	CAMO-09-10464	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	1	1	0.226	~~204~~ 207S
1201880666-1	MB for batch 885114	MB		UCF pCi/g to pCi/g	SOIL	QC ACCOUNT		2	2 1.0	~~0.237~~	205
1201880667-2	CAMO-09-10464(232582001DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	25-JUN-09	3	3	0.237	206
1201880668-1	LCS for batch 885114	LCS		UCF pCi/g to pCi/g	SOIL	QC ACCOUNT		4	4	0.11	207

SRM 0244-A exp 10/31/20

1154

Data Reviewed By: 7/20/09

GEL Laboratories LLC, Radiochemistry Division

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Choose SOP Used: ~~GL-RAD-A-038~~, GL-RAD-A-045, GL-RAD-A-043, GL-RAD-A-032

Blank Correction Report

Batch ID 885114

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201880667	DUP	Thorium-228	0.237 g	1.11	0.138	0.533	-.03810127	pCi/g	NO
		Thorium-230	0.237 g	0.553	0.0886	0.408	.037974684	pCi/g	NO
		Thorium-232	0.237 g	0.969	0.126	0.151	.024135021	pCi/g	NO
1201880668	LCS	Thorium-228	0.111 g	1.25	0.196	0.918	-.08135135	pCi/g	NO
		Thorium-230	0.111 g	26.8	2.15	0.703	.081081081	pCi/g	NO
		Thorium-232	0.111 g	1.15	0.179	0.259	.051531532	pCi/g	NO
1201880666	MB	Thorium-228	1.00 g	-0.00903	0.00382	0.0944	-.00903	pCi/g	NO
		Thorium-230	1.00 g	0.009	0.00497	0.0723	.009	pCi/g	YES
		Thorium-232	1.00 g	0.00572	0.00332	0.0267	.00572	pCi/g	YES
232582001	CAMO-09-10464	Thorium-228	0.226 g	1.29	0.202	0.905	-.03995575	pCi/g	NO
		Thorium-230	0.226 g	0.628	0.120	0.693	.039823009	pCi/g	NO
		Thorium-232	0.226 g	1.34	0.198	0.256	.025309735	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885114
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232582001_TH
SAMPLE QTY: 0.226 G

DETECTOR NUMBER :74433
AVERAGE %EFFICIENCY :25.1599
% YIELD : 43.502

COUNT DATE:17-JUL-2009 19:46:42
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B175.CNF;107
PCI/G : 5.203E+01	PCI/G : 5.203E+01	NOMINAL : 2.21252 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 0.96250 dpm	EFF FILE : W175.CNF;33
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	7.000	5.000	2.000	1.8961	68.10000	3.15E-01	1.91E-01	1.18E-01	3.08E-01	1.89E-01
TH-228	5363.000	76.000	69.200	6.000	10.0923	99.94000	1.29E+00	2.02E-01	4.28E-01	9.05E-01	1.68E-01
TH229	4900.000	252.000	241.000	11.000	3.3166	99.52000	4.41E+00	4.83E-01	1.41E-01	3.32E-01	2.97E-01
TH-230	4625.000	36.000	34.494	0.000	7.5977	100.0000	6.28E-01	1.20E-01	3.22E-01	6.93E-01	1.07E-01
TH-232	3972.000	76.000	73.542	2.000	2.4339	100.0000	1.34E+00	1.98E-01	1.03E-01	2.56E-01	1.60E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

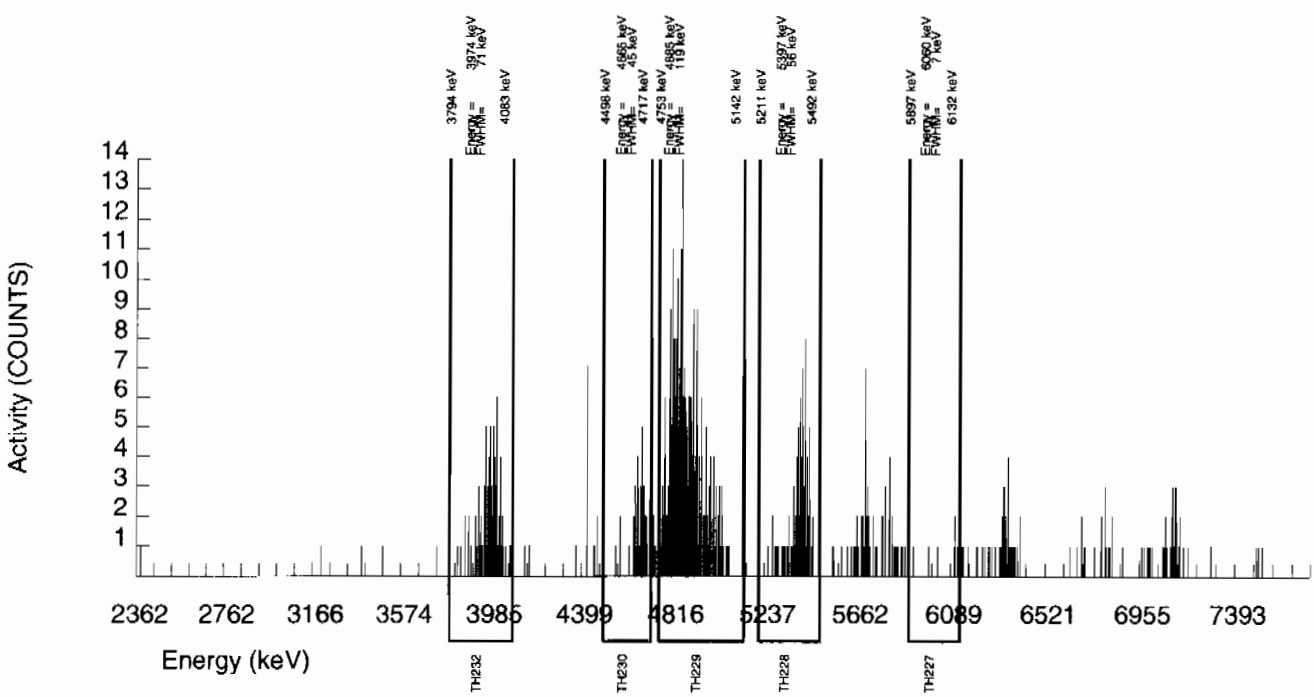

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885114
SAMPLE DATE : 14-JUL-2009 00:00:00

SAMPLE ID : S1201880666_TH
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :78908
AVERAGE %EFFICIENCY :25.6150
% YIELD : 92.551

COUNT DATE:16-JUL-2009 20:21:13
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B205.CNF;35
PCI/G : 1.176E+01	PCI/G : 1.176E+01	NOMINAL : 2.21251 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 2.04770 dpm	EFF FILE : W205.CNF;29
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	6.000	5.000	1.000	1.8961	68.10000	1.57E-02	8.38E-03	1.23E-02	3.22E-02	8.31E-03
TH-228	5363.000	0.000	-4.733	3.000	10.0923	99.94000	-9.03E-03	3.82E-03	4.46E-02	9.44E-02	3.81E-03
TH229	4900.000	525.000	522.000	3.000	1.7321	99.52000	9.97E-01	8.12E-02	7.69E-03	2.06E-02	4.39E-02
TH-230	4625.000	9.000	4.738	1.000	7.5977	100.0000	9.00E-03	4.97E-03	3.36E-02	7.23E-02	4.93E-03
TH-232	3972.000	4.000	3.009	0.000	2.4339	100.0000	5.72E-03	3.32E-03	1.08E-02	2.67E-02	3.30E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

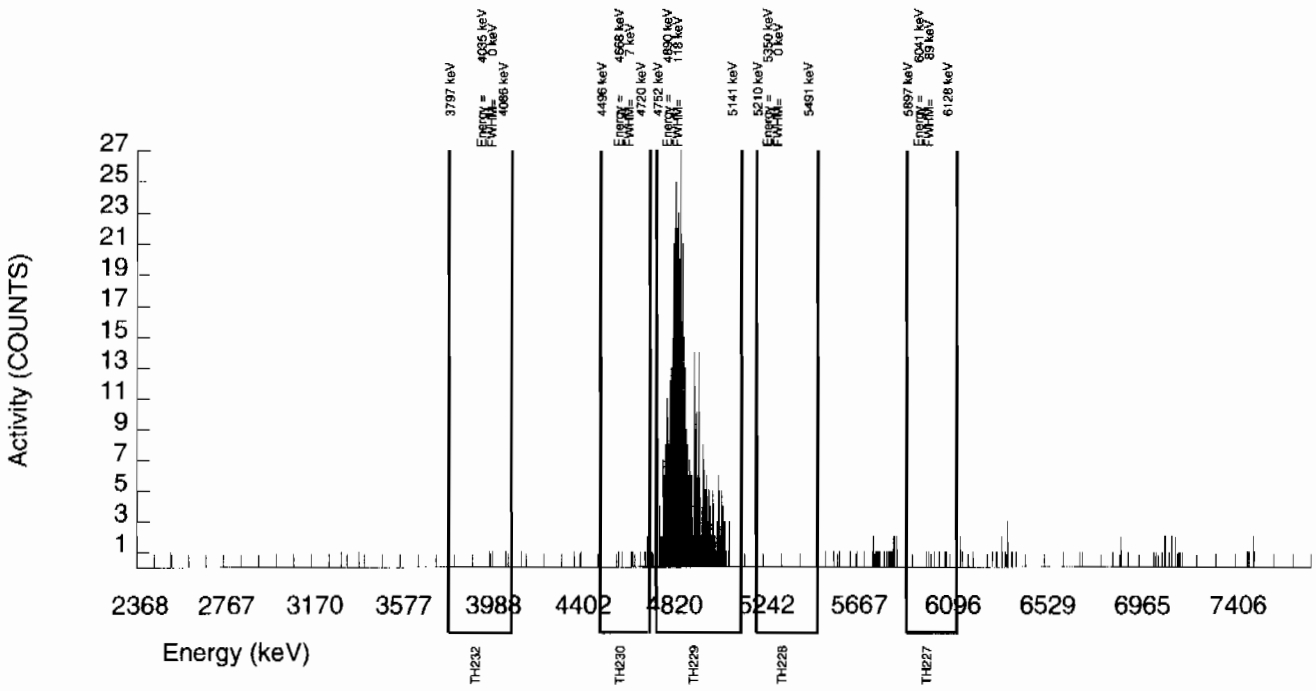

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885114
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S1201880667_TH
SAMPLE QTY: 0.237 G

DETECTOR NUMBER :78909
AVERAGE %EFFICIENCY :25.7401
% YIELD : 68.811

COUNT DATE:16-JUL-2009 20:21:16
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B206.CNF;35
PCI/G : 4.962E+01	PCI/G : 4.962E+01	NOMINAL : 2.21252 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 1.52246 dpm	EFF FILE : W206.CNF;29
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	13.000	13.000	0.000	1.8961	68.10000	4.66E-01	1.34E-01	6.95E-02	1.82E-01	1.29E-01
TH-228	5363.000	103.000	100.705	1.000	10.0923	99.94000	1.11E+00	1.38E-01	2.52E-01	5.33E-01	1.11E-01
TH229	4900.000	391.000	390.000	1.000	1.0000	99.52000	4.21E+00	3.78E-01	2.51E-02	7.94E-02	2.13E-01
TH-230	4625.000	55.000	51.563	1.000	7.5977	100.0000	5.53E-01	8.86E-02	1.90E-01	4.08E-01	7.85E-02
TH-232	3972.000	92.000	90.259	1.000	2.4339	100.0000	9.69E-01	1.26E-01	6.08E-02	1.51E-01	1.03E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

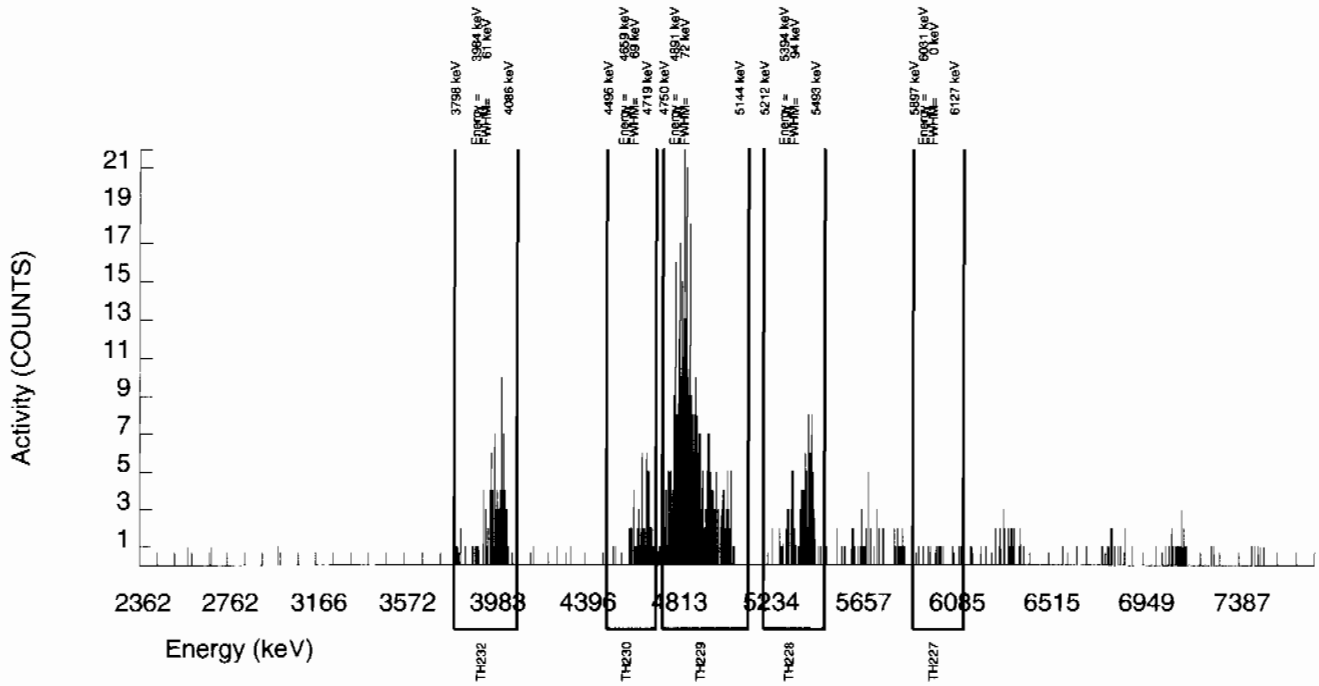

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885114
SAMPLE DATE : 14-JUL-2009 00:00:00

SAMPLE ID : S1201880668_TH
SAMPLE QTY: 0.111 G

DETECTOR NUMBER :78910
AVERAGE %EFFICIENCY :25.6132
% YIELD : 85.819

COUNT DATE:16-JUL-2009 20:21:19
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :HAKB

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 0934-G	LIB FILE : ENV_ALPHA_TH.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : TH229	BKG FILE : B207.CNF;35
PCI/G : 1.059E+02	PCI/G : 1.059E+02	NOMINAL : 2.21251 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 1.89876 dpm	EFF FILE : W207.CNF;29
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AC-227	6038.010	37.000	35.000	2.000	1.8961	68.10000	1.07E+00	2.07E-01	1.20E-01	3.13E-01	1.91E-01
TH-228	5363.000	78.000	67.393	9.000	10.0923	99.94000	1.25E+00	1.96E-01	4.34E-01	9.17E-01	1.71E-01
TH229	4900.000	491.000	484.000	7.000	2.6458	99.52000	8.98E+00	7.96E-01	1.14E-01	2.79E-01	4.14E-01
TH-230	4625.000	1456.000	1450.976	2.000	7.5977	100.0000	2.68E+01	2.15E+00	3.26E-01	7.03E-01	7.04E-01
TH-232	3972.000	68.000	62.081	5.000	2.4339	100.0000	1.15E+00	1.79E-01	1.05E-01	2.59E-01	1.57E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of TH229 calculated as sqrt(BKG AREA)
NOTE: Corrections made to TH-228, TH-230, TH-232 net area due to tracer impurity

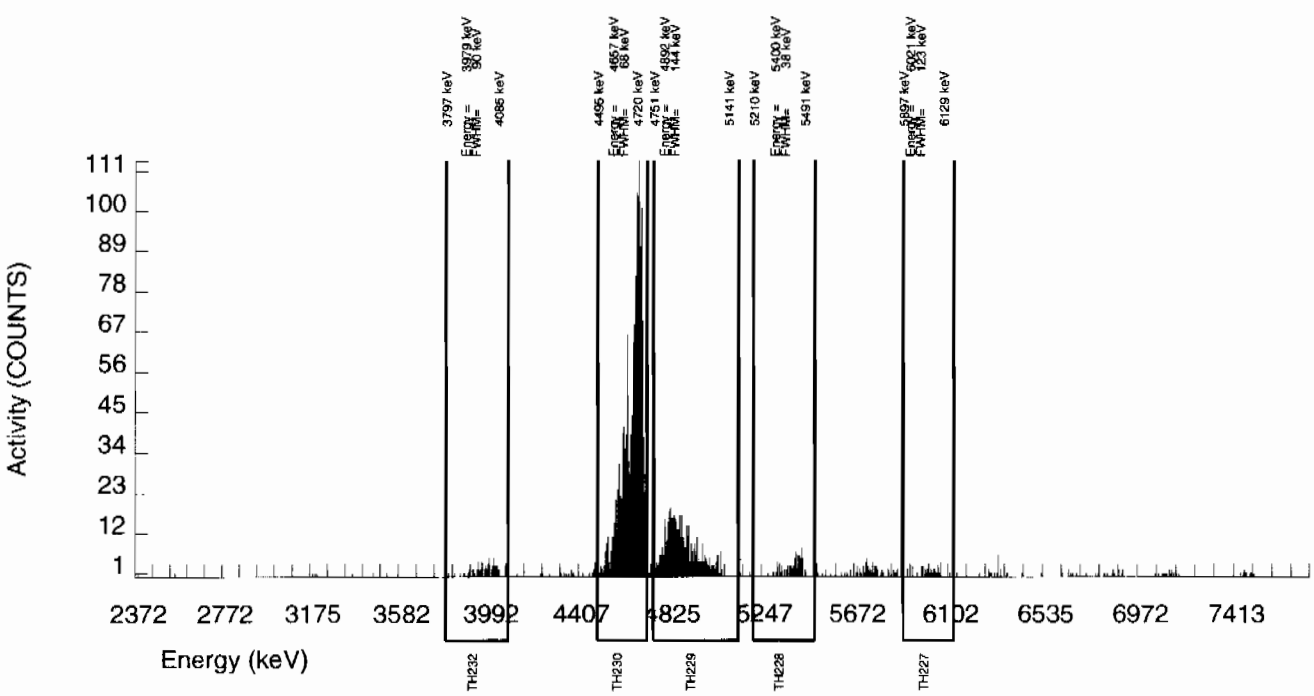

Radiochemistry Batch Checklist, Rev 9

Batch# 881931 Product: Y/LANL Date: 7/15/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			n/a
Samples have been blank corrected (if required)			n/a
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.		✓	See NCR#711888
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			n/a
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			n/a
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent	✓		
Aux data is correct.			n/a
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			n/a
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		#711888
Batch non-conformances second reviewed and disposition verified to be completed.	✓		
Aliquot Correction completed if required.			n/a
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Maggie Stamps 7/15/09

Secondary Review Performed By: [illegible] 7/16/09

7/22

Gamma Spec Que Sheet

I.G. - 7/9/09

07/01/2009

Batch #: 881931 **Analyst:** MXR1 **First Client DueDate** 07/22/2009 **Internal Due Date:** 07/11/2009

Gamma Spike Isotope: Mixed Gamma **Spike Code:** n/a **Expiration Date:** n/a **Vol:** n/a **Nominal Concentration:** n/a

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1.0mL **Nominal Concentration:** Cs137-5.775 Co60-7.096 Am241-16.31

Initials: MS **Prep Date:** 7/2/09 **Witness:** n/a

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
232582001-1	CAMO-09-10464	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	117.26	2	7/2/09
232582002-1	CAMO-09-10465	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	116.70	17	
232585001-1	CAMO-09-6605	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	132.82	22 ~~22~~	mga 7/7/09
232585002-1	CAMO-09-6603	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	112.05	1	
232585003-1	CAMO-09-6604	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	128.17	5	
232591001-1	CAMO-09-9946	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	125.48	10	
1201873069-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	7/2/09	122.82	21	
1201873070-1	DUP CAMO-09-9946(232591001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	25-JUN-09 12:00:00	125.46	11	
1201873071-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	7/2/09	151.73	7	

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GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: Maggie Stamps 7/15/09 7/17/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881931	232582001	SAMPLE	09-JUL-09	Americium-241	0.06977	0.3255	0.200
				Cerium-139	-0.01258	0.05217	0.050
				Sodium-22	-0.03963	0.08342	0.080
				Thorium-234	0.05884	2.529	2.00
881931	232582002	SAMPLE	09-JUL-09	Cerium-139	-0.0006	0.05723	0.050
				Cesium-134	0.109	0.1147	0.100
				Europium-152	-0.02628	0.2032	0.200
				Sodium-22	-0.01125	0.1185	0.080
881931	232585001	SAMPLE	09-JUL-09	Americium-241	0.09767	0.2167	0.200
881931	232585002	SAMPLE	09-JUL-09	Americium-241	0.2703	0.3619	0.200
				Cerium-139	-0.01626	0.05466	0.050
				Cesium-134	0.08236	0.1046	0.100
				Thorium-234	2.336	2.637	2.00
881931	232585003	SAMPLE	09-JUL-09	Cerium-139	-0.01625	0.05081	0.050
				Sodium-22	0.01058	0.09204	0.080
881931	232591001	SAMPLE	09-JUL-09	Americium-241	0.2727	0.4166	0.200
				Cerium-139	0.0331	0.05069	0.050
				Thorium-234	2.539	3.366	2.00
881931	1201873069	MB	09-JUL-09				
881931	1201873070	DUP	09-JUL-09	Americium-241	0.1295	0.2217	0.200
881931	1201873071	LCS	09-JUL-09	Cerium-139	0.07764	0.07837	0.050
				Cesium-134	0.1268	0.1799	0.100
				Europium-152	-0.1355	0.3004	0.200
				Mercury-203	0.06733	0.1188	0.100
				Potassium-40	0.5196	1.16	1.00
				Ruthenium-106	-0.2528	1.004	0.800
				Sodium-22	-0.0081	0.08536	0.080
				Thorium-234	0.08022	2.751	2.00
				Tin-113	0.04723	0.1505	0.100
				Uranium-235	0.0049	0.5453	0.500
				Yttrium-88	0.1137	0.1219	0.100

Gamma Review Report based on Result > MDA for Batch:881931

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232582001	25-JUN-09 12:00	09-JUL-09 08:14	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.616	0.1779	pCi/g	0.2114	N	911.1	3	1.71	IDENTIFIED	9.328	☐	
Americium-243 INT		0.2659	0.04062	pCi/g	0.09595	N	74.81	2	0.9552	IDENTIFIED	14.38	☐	
Annihilation Rad.	HE	0.1046	0.0398	pCi/g	0.0515	N	510.6	2	1.94	IDENTIFIED	37.91	☐	
Pb214 Bismuth-211 INT		3.386	0.2745	pCi/g	0.364	Y	352	4	1.421	IDENTIFIED	7.032	☑ U1	
Bismuth-212	HE	1.048	0.2828	pCi/g	0.7344	N	728	1	0.8624	FAIL_ABUND	26.63	☐	
Bismuth-214 ✓		0.953	0.081	pCi/g	0.1268	0.200	609.2	4	1.462	IDENTIFIED	7.411	☐	
Pb214 Cadmium-109 INT		2.044	0.5019	pCi/g	1.329	Y	87.17	3	1.068	IDENTIFIED	23.85	☑ U1	
Cerium-143		225.4	53.18	pCi/g	0	N	328.1	1	1.028	FAIL_DECAY	67.79	☐	
Gross Gamma	HE	8.441	3.649	pCi/g	2.78	N		0				☐	
Iodine-135	HE	1.74E+12	1.34E+14	pCi/g	0	N	510.6	2	1.94	NOT_IDENTI	37.91	☐	
Lead-212 ✓		1.434	0.09031	pCi/g	0.0967	0.100	238.6	5	1.096	IDENTIFIED	4.15	☐	
Lead-214 ✓		1.178	0.1003	pCi/g	0.1326	0.100	352	4	1.421	IDENTIFIED	7.032	☐	
Lutetium-177	HE	2.991	0.9182	pCi/g	1.918	N	209.2	1	1.362	FAIL_ABUND	30.46	☐	
Neptunium-237	HE	0.591	0.1574	pCi/g	0.3705	N	87.17	3	1.068	IDENTIFIED	23.85	☐	
Polonium-212 NV		1.434	0.09031	pCi/g	0.0967	N	238.6	5	1.096	IDENTIFIED	4.15	☐	
Polonium-214 NV		1.178	0.1003	pCi/g	0.1326	N	352	4	1.421	IDENTIFIED	7.032	☐	
Polonium-216 NV		1.434	0.09031	pCi/g	0.0967	N	238.6	5	1.096	IDENTIFIED	4.15	☐	
Polonium-218 NV		1.178	0.1003	pCi/g	0.1326	N	352	4	1.421	IDENTIFIED	7.032	☐	
Potassium-40 ✓		33.47	1.628	pCi/g	0.6941	1.00	1461	1	2.199	IDENTIFIED	3.15	☐	
Pb214 Radium-224 INT		3.621	0.6572	pCi/g	1.101	Y	241.7	1	2.085	IDENTIFIED	17.66	☑ U1	
Radium-226 ✓		0.953	0.081	pCi/g	0.1268	Y	609.2	4	1.462	IDENTIFIED	7.411	☐	
Radium-228 ✓		1.616	0.1779	pCi/g	0.2114	0.500	911.1	3	1.71	IDENTIFIED	9.328	☐	
Thallium-200	HE	14.94	110.7	pCi/g	0	N	74.81	2	0.9552	NOT_IDENTI	14.38	☐	
Thallium-208 ✓		0.4636	0.04702	pCi/g	0.06445	0.080	583.2	1	1.419	IDENTIFIED	9.454	☐	
Thorium-228 ✓		1.434	0.09031	pCi/g	0.09669	N	238.6	5	1.096	IDENTIFIED	4.15	☐	
Thorium-230 ✓		0.9529	0.081	pCi/g	0.1268	N	609.2	4	1.462	IDENTIFIED	7.411	☐	
Thorium-232 ✓		1.616	0.1779	pCi/g	0.2114	N	911.1	3	1.71	IDENTIFIED	9.328	☐	
Tin-126	HE	0.2012	0.04943	pCi/g	0.1317	N	87.17	3	1.068	IDENTIFIED	23.85	☐	
Titanium-44 LA		0.31	0.03112	pCi/g	0.0738	N	76.99	1	0.9832	FAIL_ABUND	8.552	☐	
Uranium-234 ✓		0.9529	0.081	pCi/g	0.1268	N	609.2	4	1.462	IDENTIFIED	7.411	☐	
Zirconium-97		1.16E+06	3.05E+05	pCi/g	0	N	238.6	5	1.096	NOT_IDENTI	4.15	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232582002	25-JUN-09 12:00	09-JUL-09 08:15	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.524	0.2065	pCi/g	0.2841	N	911.1	3	1.605	IDENTIFIED	12.54	☐	
Americium-243 INT		0.4978	0.0399	pCi/g	0.06964	N	74.91	1	1.439	IDENTIFIED	6.802	☐	
Annihilation Rad.	HE	0.09121	0.04112	pCi/g	0.06191	N	510.8	2	1.287	IDENTIFIED	44.95	☐	
Pb-214 Bismuth-211 INT		2.891	0.2707	pCi/g	0.4491	Y	352.1	4	1.017	IDENTIFIED	8.647	☑ U1	
Bismuth-214 ✓		1.019	0.1061	pCi/g	0.1518	0.200	609.4	4	1.32	IDENTIFIED	9.386	☐	
Pb214 Cadmium-109 INT		3.94	0.4907	pCi/g	1.122	Y	87.43	3	1.287	IDENTIFIED	11.78	☑ U1	
Cerium-143		339.3	65.4	pCi/g	0	N	330.1	1	4.945	NOT_IDENTI	33.72	☐	
Gross Gamma		9.003	1.583	pCi/g	4.435	N		0				☐	
Iodine-133	HE	843.8	1497	pCi/g	0	N	510.8	2	1.287	FAIL_DECAY	44.95	☐	
Krypton-85	HE	20.76	5.224	pCi/g	17.96	N	238.8	8	0.9946	NOT_IDENTI	4.6	☐	
Lead-212 ✓		1.259	0.08005	pCi/g	0.1071	0.100	238.8	8	0.9946	IDENTIFIED	4.6	☐	
Lead-214 ✓		1.006	0.09774	pCi/g	0.1377	0.100	352.1	4	1.017	IDENTIFIED	8.647	☐	

Mercury-203 nvp	0.137	0.03805	pCi/g	0.08005	0.100	278.2	1	1.143	IDENTIFIED	27.5	☑ UI	
Neptunium-237 INT	1.139	0.1843	pCi/g	0.3235	N	87.43	3	1.287	IDENTIFIED	11.78	☐	
Niobium-97 HE	1448	18980	pCi/g	0	N	238.8	8	0.9946	NOT_IDENTI	4.6	☐	
Polonium-212 nv	1.259	0.08005	pCi/g	0.1071	N	238.8	8	0.9946	IDENTIFIED	4.6	☐	
Polonium-214 nv	1.006	0.09774	pCi/g	0.1377	N	352.1	4	1.017	IDENTIFIED	8.647	☐	
Polonium-216 nv	1.259	0.08005	pCi/g	0.1071	N	238.8	8	0.9946	IDENTIFIED	4.6	☐	
Polonium-218 nv	1.006	0.09774	pCi/g	0.1377	N	352.1	4	1.017	IDENTIFIED	8.647	☐	
Potassium-40 ✓	34.75	1.588	pCi/g	0.5307	1.00	1460	1	1.875	IDENTIFIED	3.383	☐	
Pb214 Radium-224 INT	4.118	0.727	pCi/g	1.219	Y	241.9	1	1.734	IDENTIFIED	17.25	☑ UI	
Radium-226 ✓	1.019	0.1061	pCi/g	0.1518	Y	609.4	4	1.32	IDENTIFIED	9.386	☐	
Radium-228 ✓	1.524	0.2065	pCi/g	0.2841	0.500	911.1	3	1.605	IDENTIFIED	12.54	☐	
Sodium-24 HE	1.54E+05	1.22E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA	0.105	0.02643	pCi/g	0.09085	Y	238.8	8	0.9946	NOT_IDENTI	4.6	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.3836	0.05485	pCi/g	0.09095	0.080	583.1	1	1.429	IDENTIFIED	13.74	☐	
Thorium-228 ✓	1.259	0.08005	pCi/g	0.1071	N	238.8	8	0.9946	IDENTIFIED	4.6	☐	
Thorium-230 ✓	1.019	0.106	pCi/g	0.1518	N	609.4	4	1.32	IDENTIFIED	9.386	☐	
Thorium-232 ✓	1.524	0.2065	pCi/g	0.2841	N	911.1	3	1.605	IDENTIFIED	12.54	☐	
Thorium-234 ✓	1.599	0.5054	pCi/g	1.286	2.00	63.49	2	0.8711	IDENTIFIED	30.29	☐	
Tin-126 INT	0.388	0.04832	pCi/g	0.1104	N	87.43	3	1.287	IDENTIFIED	11.78	☐	
Titanium-44 LA	0.3778	0.02461	pCi/g	0.07695	N	77.37	1	1.024	FAIL_ABUND	4.986	☐	
Total Uranium	4.7829	1.50E-06	ug/g	1.916	N		0				☐	
Uranium-234 ✓	1.019	0.106	pCi/g	0.1518	N	609.4	4	1.32	IDENTIFIED	9.386	☐	
Uranium-238 HE	1.599	0.5054	pCi/g	1.286	N	63.49	2	0.8711	IDENTIFIED	30.29	☐	
Zirconium-97	9.18E+05	4.00E+05	pCi/g	0	N	238.8	8	0.9946	NOT_IDENTI	4.6	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232585001	25-JUN-09 12:00	09-JUL-09 08:16	13.8	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.912	0.1679	pCi/g	0.1737	N	911.6	3	2.164	IDENTIFIED	6.165	☐	
Americium-243 INT	0.3876	0.03637	pCi/g	0.08295	N	74.83	1	1.127	IDENTIFIED	8.538	☐	
Annihilation Rad.	0.1624	0.02641	pCi/g	0.03815	N	511	1	2.072	IDENTIFIED	15.94	☐	
Pb214 Bismuth-211 INT	4.04	0.2123	pCi/g	0.29	Y	352.1	4	1.421	IDENTIFIED	4.19	☑ UI	
Bismuth-212 HE	0.9779	0.2233	pCi/g	0.5588	N	727.8	1	1.815	FAIL_ABUND	22.32	☐	
Bismuth-214 ✓	1.232	0.0881	pCi/g	0.09523	0.200	609.6	4	1.937	IDENTIFIED	5.64	☐	
Pb214 Cadmium-109 INT	2.695	0.4517	pCi/g	1.438	Y	87.08	4	1.25	IDENTIFIED	16.16	☑ UI	
Cerium-143	474.7	64.7	pCi/g	0	N	328.2	1	1.043	FAIL_DECAY	27.03	☐	
Cesium-134 LA	0.09407	0.03466	pCi/g	0.07548	0.100	795.7	2	1.595	FAIL_ABUND	36.57	☑ UI	Data rejected due to low abundance.
Cesium-135 HE	0.2999	0.07734	pCi/g	0.2527	N	795.7	2	1.595	NOT_IDENTI	36.57	☐	
Gross Gamma	10.15	1.448	pCi/g	2.273	N		0				☐	
Iodine-123 HE	3.97E+05	5.54E+05	pCi/g	0	N	87.08	4	1.25	NOT_IDENTI	16.16	☐	
Krypton-85 LA	30.47	3.688	pCi/g	13.04	N	238.8	8	1.344	NOT_IDENTI	2.843	☐	
Lead-212 ✓	1.726	0.07831	pCi/g	0.08155	0.100	238.8	8	1.344	IDENTIFIED	2.843	☐	
Lead-214 ✓	1.405	0.08246	pCi/g	0.1004	0.100	352.1	4	1.421	IDENTIFIED	4.19	☐	
Lutetium-177 HE	1.815	0.5455	pCi/g	1.582	N	209.3	1	1.438	FAIL_ABUND	29.93	☐	
Neptunium-237 INT	0.7794	0.1534	pCi/g	0.3236	N	87.08	4	1.25	IDENTIFIED	16.16	☐	
Niobium-95m HE	0.3014	0.06609	pCi/g	0.208	N	238.8	8	1.344	NOT_IDENTI	2.843	☐	
Polonium-212 nv	1.726	0.07831	pCi/g	0.08155	N	238.8	8	1.344	IDENTIFIED	2.843	☐	
Polonium-214 nv	1.405	0.08246	pCi/g	0.1004	N	352.1	4	1.421	IDENTIFIED	4.19	☐	
Polonium-216 nv	1.726	0.07831	pCi/g	0.08155	N	238.8	8	1.344	IDENTIFIED	2.843	☐	
Polonium-218 nv	1.405	0.08246	pCi/g	0.1004	N	352.1	4	1.421	IDENTIFIED	4.19	☐	
Potassium-40 ✓	36.37	1.479	pCi/g	0.3988	1.00	1461	1	3.092	IDENTIFIED	2.106	☑ UI	~~Data rejected due to high peak width~~ LK 7/17/09
Pb214 Radium-224 INT	4.762	0.5846	pCi/g	0.9266	Y	241.7	1	1.823	IDENTIFIED	11.97	☑ UI	
Radium-226 ✓	1.232	0.0881	pCi/g	0.09523	Y	609.6	4	1.937	IDENTIFIED	5.64	☐	
Radium-228 ✓	1.912	0.1679	pCi/g	0.1737	0.500	911.6	3	2.164	IDENTIFIED	6.165	☐	
Strontium-85 LA	0.1541	0.01866	pCi/g	0.06599	Y	238.8	8	1.344	NOT_IDENTI	2.843	☑ UI	Data rejected due to low abundance.

Thallium-208 ✓	0.5336	0.03997	pCi/g	0.04646	0.080	583.3	1	1.533	IDENTIFIED	6.425	☐
Thorium-228 ✓	1.726	0.07831	pCi/g	0.08154	N	238.8	8	1.344	IDENTIFIED	2.843	☐
Thorium-230 ✓	1.232	0.0881	pCi/g	0.09523	N	609.6	4	1.937	IDENTIFIED	5.64	☐
Thorium-232 ✓	1.912	0.1679	pCi/g	0.1737	N	911.6	3	2.164	IDENTIFIED	6.165	☐
Tin-126 INT	0.2654	0.04448	pCi/g	0.1328	N	87.08	4	1.25	IDENTIFIED	16.16	☐
Titanium-44 LA	0.4118	0.02944	pCi/g	0.07566	N	77.16	1	1.266	FAIL_ABUND	5.941	☐
Uranium-234 ✓	1.232	0.0881	pCi/g	0.09523	N	609.6	4	1.937	IDENTIFIED	5.64	☐
Zirconium-97	1.17E+06	2.48E+05	pCi/g	0	N	238.8	8	1.344	NOT_IDENTI	2.843	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232585002	25-JUN-09 12:00	09-JUL-09 08:34	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.866	0.2138	pCi/g	0.229	N	911.6	3	1.461	IDENTIFIED	10.28	☐	
Americium-243 INT	0.4852	0.05931	pCi/g	0.1126	N	74.9	1	1.435	IDENTIFIED	11.47	☐	
Annihilation Rad.	0.179	0.03983	pCi/g	0.06033	N	511.1	1	1.844	IDENTIFIED	22.07	☐	
Barium-137m LA	0.1855	0.02811	pCi/g	0.1056	N	87.22	6	1.183	NOT_IDENTI	19.83	☐	
Pb214 Bismuth-211 INT	4.338	0.2972	pCi/g	0.393	Y	352.3	4	1.349	IDENTIFIED	6.077	☑ UI	
Bismuth-212 HE	1.181	0.2435	pCi/g	0.7532	N	727.6	1	1.173	FAIL_ABUND	20.28	☐	
Bismuth-214 ✓	1.373	0.1156	pCi/g	0.1239	0.200	609.7	4	1.52	IDENTIFIED	7.558	☐	
Pb214 Cadmium-109 INT	2.978	0.6059	pCi/g	1.515	Y	87.22	6	1.183	IDENTIFIED	19.83	☑ UI	
Cerium-143	126.2	53.39	pCi/g	0	N	87.22	6	1.183	FAIL_DECAY	19.83	☐	
Cesium-137 LA	0.1961	0.02972	pCi/g	0.1116	0.100	87.22	6	1.183	NOT_IDENTI	19.83	☑ UI	Data rejected due to low abundance.
Gross Gamma	9.541	1.605	pCi/g	3.538	N		0				☐	
Iodine-135 HE	1.39E+14	1.39E+14	pCi/g	0	N	796	1	1.671	NOT_IDENTI	38.38	☐	
Krypton-85 HE	22.27	5.607	pCi/g	18.48	N	239	6	1.219	NOT_IDENTI	4.902	☐	
Lead-212 ✓	1.569	0.09584	pCi/g	0.1228	0.100	239	6	1.219	IDENTIFIED	4.902	☐	
Lead-214 ✓	1.509	0.1106	pCi/g	0.137	0.100	352.3	4	1.349	IDENTIFIED	6.077	☐	
Lutetium-177 HE	3.06	1.016	pCi/g	2.039	N	209.8	1	1.212	FAIL_ABUND	33.07	☐	
Neptunium-237 HE	0.861	0.1964	pCi/g	0.5156	N	87.22	6	1.183	IDENTIFIED	19.83	☐	
Niobium-97 HE	10970	16160	pCi/g	0	N	392.8	2	5.769	NOT_IDENTI	86.76	☐	
Polonium-212 nr	1.569	0.09584	pCi/g	0.1228	N	239	6	1.219	IDENTIFIED	4.902	☐	
Polonium-214 nr	1.509	0.1106	pCi/g	0.137	N	352.3	4	1.349	IDENTIFIED	6.077	☐	
Polonium-216 nr	1.569	0.09584	pCi/g	0.1228	N	239	6	1.219	IDENTIFIED	4.902	☐	
Polonium-218 nr	1.509	0.1106	pCi/g	0.137	N	352.3	4	1.349	IDENTIFIED	6.077	☐	
Potassium-40 ✓	29.25	1.454	pCi/g	0.5769	1.00	1461	1	1.904	IDENTIFIED	3.478	☐	
Pb214 Radium-224 INT	2.993	0.5555	pCi/g	1.715	Y	242.2	1	1.526	IDENTIFIED	18.33	☑ UI	
Radium-226 ✓	1.373	0.1156	pCi/g	0.1239	Y	609.7	4	1.52	IDENTIFIED	7.558	☐	
Radium-228 ✓	1.866	0.2138	pCi/g	0.229	0.500	911.6	3	1.461	IDENTIFIED	10.28	☐	
Strontium-85 LA	0.1127	0.02837	pCi/g	0.09353	Y	239	6	1.219	NOT_IDENTI	4.902	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.4639	0.05657	pCi/g	0.06977	0.080	583.5	1	1.394	IDENTIFIED	11.78	☐	
Thorium-228 ✓	1.569	0.09584	pCi/g	0.1228	N	239	6	1.219	IDENTIFIED	4.902	☐	
Thorium-230 ✓	1.373	0.1156	pCi/g	0.1239	N	609.7	4	1.52	IDENTIFIED	7.558	☐	
Thorium-232 ✓	1.866	0.2138	pCi/g	0.229	N	911.6	3	1.461	IDENTIFIED	10.28	☐	
Tin-126 INT	0.2932	0.05966	pCi/g	0.15	N	87.22	6	1.183	IDENTIFIED	19.83	☐	
Titanium-44 LA	0.3707	0.03476	pCi/g	0.09604	N	77.11	1	1.13	FAIL_ABUND	8.354	☐	
Total Uranium	7.0023	3.32E-06	ug/g	3.9262	N		0				☐	
Uranium-234 ✓	1.373	0.1156	pCi/g	0.1239	N	609.7	4	1.52	IDENTIFIED	7.558	☐	
Zirconium-97 HE	86680	3.48E+05	pCi/g	0	N	392.8	2	5.769	NOT_IDENTI	86.76	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232585003	25-JUN-09 12:00	09-JUL-09 08:34	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.403	0.1734	pCi/g	0.2684	N	911.2	3	1.728	IDENTIFIED	10.7	☐	
Americium-243 INT	0.3538	0.03283	pCi/g	0.06154	N	74.68	2	1.493	IDENTIFIED	8.411	☐	

	Annihilation Rad.	HE	0.1226	0.04088	pCi/g	0.05069	N	510.8	1	2.036	IDENTIFIED	33.19	☐	
Pb214	Bismuth-211	INT	3.551	0.2804	pCi/g	0.3672	Y	351.9	4	1.521	IDENTIFIED	6.839	☑ UI	
	Bismuth-212	HE	1.12	0.2753	pCi/g	0.7816	N	726.9	1	2.207	FAIL_ABUND	24.15	☐	
	Bismuth-214 ✓		0.9202	0.0976	pCi/g	0.1234	0.200	609.4	4	1.686	IDENTIFIED	9.743	☐	
Pb214	Cadmium-109	INT	3.57	0.4352	pCi/g	1.008	Y	87.21	4	1.306	IDENTIFIED	11.58	☑ UI	
	Cerium-143		408.7	67.12	pCi/g	0	N	925.8	1	1.274	FAIL_DECAY	54.38	☐	
	Cesium-134	LA	0.1126	0.04248	pCi/g	0.1051	0.100	794.6	2	1.371	FAIL_ABUND	37.47	☑ UI	Data rejected due to low abundance.
	Gross Gamma		8.995	1.481	pCi/g	4.879	N		0				☐	
	Iodine-123	HE	9.38E+05	6.20E+05	pCi/g	0	N	87.21	4	1.306	NOT_IDENTI	11.58	☐	
	Iodine-135	HE	4.00E+13	1.28E+14	pCi/g	0	N	794.6	2	1.371	NOT_IDENTI	37.47	☐	
	Krypton-85	HE	23.38	4.541	pCi/g	15.93	N	238.7	8	1.327	NOT_IDENTI	3.812	☐	
	Lead-212 ✓		1.431	0.0945	pCi/g	0.08821	0.100	238.7	8	1.327	IDENTIFIED	3.812	☐	
	Lead-214 ✓		1.235	0.1027	pCi/g	0.1241	0.100	351.9	4	1.521	IDENTIFIED	6.839	☐	
	Neptunium-237	INT	1.032	0.1649	pCi/g	0.2902	N	87.21	4	1.306	IDENTIFIED	11.58	☐	
	Niobium-95m	HE	0.3593	0.07505	pCi/g	0.2418	N	238.7	8	1.327	NOT_IDENTI	3.812	☐	
	Polonium-212	NV	1.431	0.0945	pCi/g	0.08821	N	238.7	8	1.327	IDENTIFIED	3.812	☐	
	Polonium-214	NV	1.235	0.1027	pCi/g	0.1241	N	351.9	4	1.521	IDENTIFIED	6.839	☐	
	Polonium-216	NV	1.431	0.0945	pCi/g	0.08821	N	238.7	8	1.327	IDENTIFIED	3.812	☐	
	Polonium-218	NV	1.235	0.1027	pCi/g	0.1241	N	351.9	4	1.521	IDENTIFIED	6.839	☐	
	Potassium-40 ✓		29.05	1.357	pCi/g	0.6328	1.00	1460	1	2.103	IDENTIFIED	3.487	☐	
Pb214	Radium-224	INT	4.222	0.7317	pCi/g	1.004	Y	241.6	1	1.95	IDENTIFIED	16.63	☑ UI	
	Radium-226 ✓		0.9202	0.0976	pCi/g	0.1234	Y	609.4	4	1.686	IDENTIFIED	9.743	☐	
	Radium-228 ✓		1.403	0.1734	pCi/g	0.2684	0.500	911.2	3	1.728	IDENTIFIED	10.7	☐	
	Sodium-24	HE	1.33E+05	1.07E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Strontium-85	LA	0.1183	0.02298	pCi/g	0.08062	Y	238.7	8	1.327	NOT_IDENTI	3.812	☑ UI	Data rejected due to low abundance.
	Thallium-200	HE	112.4	112.7	pCi/g	0	N	74.68	2	1.493	NOT_IDENTI	8.411	☐	
	Thallium-208 ✓		0.5281	0.04764	pCi/g	0.06405	0.080	583	1	1.411	IDENTIFIED	8.237	☐	
	Thorium-228 ✓		1.431	0.0945	pCi/g	0.0882	N	238.7	8	1.327	IDENTIFIED	3.812	☐	
	Thorium-230 ✓		0.9201	0.09759	pCi/g	0.1234	N	609.4	4	1.686	IDENTIFIED	9.743	☐	
	Thorium-232 ✓		1.403	0.1734	pCi/g	0.2684	N	911.2	3	1.728	IDENTIFIED	10.7	☐	
	Thorium-234 ✓		1.347	0.5008	pCi/g	1.018	2.00	63.16	2	1.128	IDENTIFIED	36.1	☐	
	Tin-126	INT	0.3516	0.04286	pCi/g	0.09912	N	87.21	4	1.306	IDENTIFIED	11.58	☐	
	Titanium-44	LA	0.3284	0.02213	pCi/g	0.06315	N	77	1	1.191	FAIL_ABUND	5.501	☐	
	Total Uranium		4.0437	1.49E-06	ug/g	1.5174	N		0				☐	
	Uranium-234 ✓		0.9201	0.09759	pCi/g	0.1234	N	609.4	4	1.686	IDENTIFIED	9.743	☐	
	Uranium-238	HE	1.347	0.5008	pCi/g	1.018	N	63.16	2	1.128	IDENTIFIED	36.1	☐	
	Zirconium-97		1.37E+06	3.55E+05	pCi/g	0	N	238.7	8	1.327	NOT_IDENTI	3.812	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232591001	25-JUN-09 12:00	09-JUL-09 08:35	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓		1.536	0.2004	pCi/g	0.2186	N	911.4	3	1.533	IDENTIFIED	11.5	☐	
	Americium-243	INT	0.4028	0.05381	pCi/g	0.1088	N	74.89	2	1.301	IDENTIFIED	12.19	☐	
	Annihilation Rad.		0.1231	0.03741	pCi/g	0.04303	N	511.3	2	1.949	IDENTIFIED	30.21	☐	
Pb214	Bismuth-211	INT	4.159	0.2823	pCi/g	0.3136	Y	352	4	1.156	IDENTIFIED	5.725	☑ UI	
	Bismuth-212	LA	1.221	0.2658	pCi/g	0.6807	N	727.9	1	1.325	FAIL_ABUND	21.4	☐	
	Bismuth-214 ✓		1.282	0.09253	pCi/g	0.1167	0.200	609.6	4	1.56	IDENTIFIED	6.133	☐	
Pb214	Cadmium-109	INT	3.011	0.5822	pCi/g	1.422	Y	87.46	3	1.106	IDENTIFIED	18.49	☑ UI	
	Cerium-143		194.2	45.55	pCi/g	0	N	328.3	1	1.408	FAIL_DECAY	53.93	☐	
	Cesium-134	LA	0.1266	0.02932	pCi/g	0.09517	0.100	795.2	2	1.483	FAIL_ABUND	22.84	☑ UI	Data rejected due to low abundance.
	Gross Gamma		9.669	1.637	pCi/g	2.944	N		0				☐	
	Iodine-133	HE	490.2	1135	pCi/g	0	N	511.3	2	1.949	FAIL_DECAY	30.21	☐	
	Iodine-135	HE	3.72E+13	1.33E+14	pCi/g	0	N	795.2	2	1.483	NOT_IDENTI	22.84	☐	
	Krypton-85	HE	17.53	3.723	pCi/g	13.87	N	238.8	7	1.116	NOT_IDENTI	3.354	☐	
	Lead-212 ✓		1.725	0.08734	pCi/g	0.09533	0.100	238.8	7	1.116	IDENTIFIED	3.354	☐	

	Lead-214 ✓	1.447	0.1052	pCi/g	0.1093	0.100	352	4	1.156	IDENTIFIED	5.725	☐	
	Neptunium-237 INT	0.8708	0.1908	pCi/g	0.4697	N	87.46	3	1.106	IDENTIFIED	18.49	☐	
	Polonium-212 nr	1.725	0.08734	pCi/g	0.09533	N	238.8	7	1.116	IDENTIFIED	3.354	☐	
	Polonium-214 nr	1.447	0.1052	pCi/g	0.1093	N	352	4	1.156	IDENTIFIED	5.725	☐	
	Polonium-216 nr	1.725	0.08734	pCi/g	0.09533	N	238.8	7	1.116	IDENTIFIED	3.354	☐	
	Polonium-218 nr	1.447	0.1052	pCi/g	0.1093	N	352	4	1.156	IDENTIFIED	5.725	☐	
	Potassium-40 ✓	32.82	1.707	pCi/g	0.6215	1.00	1461	1	1.97	IDENTIFIED	2.918	☐	
Pb214	Radium-224 INT	4.42	0.5914	pCi/g	1.085	Y	241.8	1	1.617	IDENTIFIED	13.02	☑ UI	
	Radium-226 ✓	1.282	0.09253	pCi/g	0.1167	Y	609.6	4	1.56	IDENTIFIED	6.133	☐	
	Radium-228 ✓	1.536	0.2004	pCi/g	0.2186	0.500	911.4	3	1.533	IDENTIFIED	11.5	☐	
	Strontium-85 LA	0.08869	0.01884	pCi/g	0.07016	Y	238.8	7	1.116	NOT_IDENTI	3.354	☑ UI	Data rejected due to low abundance.
	Thallium-200 HE	150.2	116.4	pCi/g	0	N	74.89	2	1.301	NOT_IDENTI	12.19	☐	
	Thallium-208 ✓	0.4707	0.04366	pCi/g	0.05247	0.080	583.5	1	1.293	IDENTIFIED	8.646	☐	
	Thorium-228 ✓	1.725	0.08734	pCi/g	0.09532	N	238.8	7	1.116	IDENTIFIED	3.354	☐	
	Thorium-230 ✓	1.282	0.09253	pCi/g	0.1167	N	609.6	4	1.56	IDENTIFIED	6.133	☐	
	Thorium-232 ✓	1.536	0.2004	pCi/g	0.2186	N	911.4	3	1.533	IDENTIFIED	11.5	☐	
	Tin-126 INT	0.2966	0.05733	pCi/g	0.141	N	87.46	3	1.106	IDENTIFIED	18.49	☐	
	Titanium-44 LA	0.4128	0.03948	pCi/g	0.09352	N	77.27	1	1.303	FAIL_ABUND	7.848	☐	
	Total Uranium	7.637	2.88E-06	ug/g	5.01	N		0				☐	
	Uranium-234 ✓	1.282	0.09253	pCi/g	0.1167	N	609.6	4	1.56	IDENTIFIED	6.133	☐	
	Zirconium-97 HE	3.36E+05	2.63E+05	pCi/g	0	N	238.8	7	1.116	NOT_IDENTI	3.354	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201873069		09-JUL-09 08:22	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Iodine-133	HE	6.452	4.264	pCi/g	0	N	0	2	0	NOT_IDENTI	0	☐	
Technetium-99m	HE	1.83E+06	3.91E+06	pCi/g	0	N	0	2	0	NOT_IDENTI	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201873070	25-JUN-09 12:00	09-JUL-09 08:36	13.9	DUP	LOAD	1		LANL01004 GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.224	0.144	pCi/g	0.238	N	911.2	3	1.181	IDENTIFIED	10.46	☐	
	Americium-243 INT	0.4284	0.04129	pCi/g	0.08027	N	74.09	1	1.458	IDENTIFIED	8.847	☐	
	Annihilation Rad.	0.138	0.03484	pCi/g	0.04602	N	510.6	3	1.671	IDENTIFIED	25.06	☐	
Pb214	Bismuth-211 INT	3.341	0.2265	pCi/g	0.2909	Y	351.4	4	1.067	IDENTIFIED	5.806	☑ UI	
	Bismuth-212 HE	0.9922	0.2052	pCi/g	0.6127	N	727.5	1	1.272	FAIL_ABUND	20.19	☐	
	Bismuth-214 ✓	1.071	0.08443	pCi/g	0.1112	0.200	609.1	4	1.339	IDENTIFIED	6.632	☐	
Pb214	Cadmium-109 INT	2.504	0.3966	pCi/g	1.105	Y	89.36	2	1.155	IDENTIFIED	15.19	☑ UI	
	Cerium-143	537.5	75.47	pCi/g	0	N	86.52	3	1.548	FAIL_DECAY	12.73	☐	
	Gross Gamma	9.303	1.519	pCi/g	3.886	N		0				☐	
	Iodine-123 HE	3.52E+05	5.90E+05	pCi/g	0	N	89.36	2	1.155	NOT_IDENTI	15.19	☐	
	Iodine-133 HE	312	1082	pCi/g	0	N	510.6	3	1.671	FAIL_DECAY	25.06	☐	
	Iodine-135 HE	2.49E+13	1.31E+14	pCi/g	0	N	510.6	3	1.671	NOT_IDENTI	25.06	☐	
	Lead-212 ✓	1.351	0.07326	pCi/g	0.09253	0.100	238.1	6	0.9598	IDENTIFIED	3.587	☐	
	Lead-214 ✓	1.162	0.08443	pCi/g	0.09541	0.100	351.4	4	1.067	IDENTIFIED	5.806	☐	
	Lutetium-177 HE	2.953	0.7007	pCi/g	1.725	N	209.3	1	1.082	FAIL_ABUND	23.53	☐	
	Neptunium-237 INT	1.09	0.1852	pCi/g	0.3235	N	86.52	3	1.548	IDENTIFIED	12.73	☐	
	Niobium-95m LA	0.7866	0.08748	pCi/g	0.2884	N	238.1	6	0.9598	NOT_IDENTI	3.587	☐	
	Polonium-212 nr	1.351	0.07326	pCi/g	0.09253	N	238.1	6	0.9598	IDENTIFIED	3.587	☐	
	Polonium-214 nr	1.162	0.08443	pCi/g	0.09541	N	351.4	4	1.067	IDENTIFIED	5.806	☐	
	Polonium-216 nr	1.351	0.07326	pCi/g	0.09253	N	238.1	6	0.9598	IDENTIFIED	3.587	☐	
	Polonium-218 nr	1.162	0.08443	pCi/g	0.09541	N	351.4	4	1.067	IDENTIFIED	5.806	☐	
	Potassium-40 ✓	32.66	1.415	pCi/g	0.4295	1.00	1461	2	1.913	IDENTIFIED	2.745	☐	
Pb214	Radium-224 INT	3.482	0.6379	pCi/g	1.053	Y	241.3	1	1.97	IDENTIFIED	18	☑ UI	

Radium-226 ✓		1.071	0.08443	pCi/g	0.1112	Y	609.1	4	1.339	IDENTIFIED	6.632	☐
Radium-228 ✓		1.224	0.144	pCi/g	0.238	0.500	911.2	3	1.181	IDENTIFIED	10.46	☐
Thallium-208 ✓		0.4845	0.03997	pCi/g	0.05676	0.080	582.7	1	1.303	IDENTIFIED	7.372	☐
Thorium-228 ✓		1.351	0.07326	pCi/g	0.09252	N	238.1	6	0.9598	IDENTIFIED	3.587	☐
Thorium-230 ✓		1.071	0.08443	pCi/g	0.1112	N	609.1	4	1.339	IDENTIFIED	6.632	☐
Thorium-232 ✓		1.224	0.144	pCi/g	0.238	N	911.2	3	1.181	IDENTIFIED	10.46	☐
Thorium-234 ✓		2.214	0.7594	pCi/g	1.845	2.00	63.05	2	1.053	IDENTIFIED	33.2	☐
Tin-126 INT		0.3711	0.05009	pCi/g	0.1092	N	86.52	3	1.548	IDENTIFIED	12.73	☐
Titanium-44 LA		0.1963	0.02153	pCi/g	0.06532	N	1461	2	1.913	NOT_IDENTI	2.745	☐
Total Uranium		6.6737	2.26E-06	ug/g	2.7471	N		0				☐
Uranium-234 ✓		1.071	0.08443	pCi/g	0.1112	N	609.1	4	1.339	IDENTIFIED	6.632	☐
Uranium-238	HE	2.214	0.7594	pCi/g	1.845	N	63.05	2	1.053	IDENTIFIED	33.2	☐
Zirconium-97		1.29E+06	3.27E+05	pCi/g	0	N	238.1	6	0.9598	NOT_IDENTI	3.587	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201873071		09-JUL-09 08:51	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228		1.885	0.3002	pCi/g	0.574	N	911	3	1.548	IDENTIFIED	14.99	☐	
Americium-241		13.53	0.5961	pCi/g	0.4161	0.200	59.5	1	1.011	IDENTIFIED	2.239	☐ 83%	
Americium-243		0.3194	0.05083	pCi/g	0.1365	N	74.93	1	1.164	IDENTIFIED	15.54	☐	
Annihilation Rad.	HE	0.1259	0.04647	pCi/g	0.09813	N	510.5	3	1.548	IDENTIFIED	36.8	☐	
Barium-137m		5.633	0.2209	pCi/g	0.1274	N	661.6	2	1.499	IDENTIFIED	2.293	☐	
Bismuth-211		2.663	0.329	pCi/g	0.6399	Y	352	4	1.108	IDENTIFIED	11.92	☐	
Bismuth-212	HE	1.2	0.4061	pCi/g	1.156	N	727	1	3.148	FAIL_ABUND	33.56	☐	
Bismuth-214		0.8307	0.1074	pCi/g	0.359	0.200	609.2	4	1.25	FAIL_ABUND	12.28	☐	
Cadmium-109		47.72	2.146	pCi/g	2.27	Y	88.04	2	1.052	IDENTIFIED	2.372	☐	
Cerium-143	HE	9.634	2.852	pCi/g	8.999	N	165.7	1	1.091	FAIL_ABUND	38.54	☐	
Cesium-137		5.954	0.234	pCi/g	0.1346	0.100	661.6	2	1.499	IDENTIFIED	2.293	☐ 103%	
Cobalt-57		0.3682	0.03668	pCi/g	0.06741	N	122.1	2	0.9431	IDENTIFIED	8.776	☐	
Cobalt-60		7.374	0.2776	pCi/g	0.09091	0.100	1332	1	1.707	IDENTIFIED	2.369	☐ 104%	
Gross Gamma		31	3.157	pCi/g	6.206	N		0				☐	
Iodine-133	HE	10.98	11.47	pCi/g	0	N	510.5	3	1.548	FAIL_DECAY	36.8	☐	
Iodine-135	HE	5.32E+06	1.16E+07	pCi/g	0	N	510.5	3	1.548	NOT_IDENTI	36.8	☐	
Lead-212		1.331	0.1009	pCi/g	0.1947	0.100	238.6	4	1.043	IDENTIFIED	6.415	☐	
Lead-214		0.9262	0.117	pCi/g	0.2269	0.100	352	4	1.108	IDENTIFIED	11.92	☐	
Neptunium-237		6.807	0.8032	pCi/g	1.196	N	92.96	1	1.55	NOT_IDENTI	37.62	☐	
Niobium-97		168.9	60.48	pCi/g	0	N	1836	2	1.412	NOT_IDENTI	27.92	☐	
Polonium-212		1.331	0.1009	pCi/g	0.1947	N	238.6	4	1.043	IDENTIFIED	6.415	☐	
Polonium-214		0.9262	0.117	pCi/g	0.2269	N	352	4	1.108	IDENTIFIED	11.92	☐	
Polonium-216		1.331	0.1009	pCi/g	0.1947	N	238.6	4	1.043	IDENTIFIED	6.415	☐	
Polonium-218		0.9262	0.117	pCi/g	0.2269	N	352	4	1.108	IDENTIFIED	11.92	☐	
Radium-224		5.593	0.742	pCi/g	2.62	Y	122.1	2	0.9431	NOT_IDENTI	8.776	☐	
Radium-226		0.8307	0.1074	pCi/g	0.359	Y	609.2	4	1.25	FAIL_ABUND	12.28	☐	
Radium-228		1.885	0.3002	pCi/g	0.574	0.500	911	3	1.548	IDENTIFIED	14.99	☐	
Thallium-208		0.4711	0.06782	pCi/g	0.1159	0.080	583	1	1.289	IDENTIFIED	13.96	☐	
Thorium-228		1.331	0.1009	pCi/g	0.1946	N	238.6	4	1.043	IDENTIFIED	6.415	☐	
Thorium-230		0.8307	0.1074	pCi/g	0.359	N	609.2	4	1.25	FAIL_ABUND	12.28	☐	
Thorium-232		1.885	0.3002	pCi/g	0.574	N	911	3	1.548	IDENTIFIED	14.99	☐	
Tin-126		4.745	0.2134	pCi/g	0.2262	N	88.04	2	1.052	IDENTIFIED	2.372	☐	
Titanium-44		0.3128	0.03911	pCi/g	0.1058	N	77.2	1	1.262	FAIL_ABUND	12	☐	
Uranium-234		0.8307	0.1074	pCi/g	0.359	N	609.2	4	1.25	FAIL_ABUND	12.28	☐	
Zirconium-97	HE	1458	837.9	pCi/g	0	N	1836	2	1.412	NOT_IDENTI	27.92	☐	

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 881931

Report run on: July 15, 2009 4:23 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232585003-1 09-JUL-2009 08:34	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.57			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1126		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.222			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1183			
232591001-1 09-JUL-2009 08:35	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.159			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.011			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1266		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.42			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08869			
1201873070-1 DUP 09-JUL-2009 08:36	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.341			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.504			
	Radium-224	UI	UI	UI	NA DATA REJECTED DUE TO INTERFERENCE.		3.482			

mmgia
7/17/09

1169

GEL QUALS

Batch ID: 881931

Report run on: July 15, 2009 4:23 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232582001-1 09-JUL-2009 08:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.386			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.044			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.621			
232582002-1 09-JUL-2009 08:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.891			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.94			
	Mercury-203	UI	UI	UI	Data rejected due to no valid peak.		.137		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.118			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.105			
232585001-1 09-JUL-2009 08:16	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.04			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.695			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09407		.1	.1
	~~Potassium-40~~	~~UI~~	~~UI~~	~~UI~~	~~Data rejected due to high peak width.~~	7/17/09	36.37		1	1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.762			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1541			
232585002-1 09-JUL-2009 08:34	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.338			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.978			
	Cesium-137	UI	UI	UI	Data rejected due to low abundance.		.1961		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.993			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1127			
232585003-1 09-JUL-2009 08:34	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.551			

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertanty	Units	DL	RDL
881931	232591001	SAMPLE	09-JUL-09	Iodine-135	3.72E+13	1.33E+14	pCi/g	0	N
				Krypton-85	17.53	3.723	pCi/g	6.938	N
				Lead-212	1.725	0.08734	pCi/g	0.04769	0.100
				Lead-214	1.447	0.1052	pCi/g	0.05469	0.100
				Potassium-40	32.82	1.707	pCi/g	0.311	1.00
				Radium-224	4.42	0.5914	pCi/g	0.5426	Y
				Radium-226	1.282	0.09253	pCi/g	0.0584	Y
				Radium-228	1.536	0.2004	pCi/g	0.1094	0.500
				Strontium-85	0.08869	0.01884	pCi/g	0.0351	Y
				Thallium-200	150.2	116.4	pCi/g	0	N
				Thallium-208	0.4707	0.04366	pCi/g	0.02625	0.080
				Thorium-234	2.539	0.9677	pCi/g	1.684	2.00
				Yttrium-88	0.03231	0.01382	pCi/g	0.02828	0.100
				Zirconium-97	3.36E+05	2.63E+05	pCi/g	0	N
881931	1201873069	MB	09-JUL-09	Iodine-133	6.452	4.264	pCi/g	0	N
				Technetium-99m	1.63E+06	3.91E+06	pCi/g	0	N
881931	1201873070	DUP	09-JUL-09	Americium-241	0.1295	0.06908	pCi/g	0.1109	0.200
				Bismuth-211	3.341	0.2265	pCi/g	0.1455	Y
				Bismuth-214	1.071	0.08443	pCi/g	0.05563	0.200
				Cadmium-109	2.504	0.3966	pCi/g	0.553	Y
				Cerium-143	537.5	75.47	pCi/g	0	N
				Cesium-134	0.06318	0.02308	pCi/g	0.04261	0.100
				Cesium-137	0.03546	0.01962	pCi/g	0.03421	0.100
				Gross Gamma	9.303	1.519	pCi/g	1.89	N
				Iodine-123	3.52E+05	5.90E+05	pCi/g	0	N
				Iodine-133	312	1082	pCi/g	0	N
				Iodine-135	2.49E+13	1.31E+14	pCi/g	0	N
				Krypton-85	8.332	4.104	pCi/g	6.436	N
				Lead-212	1.351	0.07326	pCi/g	0.04629	0.100
				Lead-214	1.162	0.08443	pCi/g	0.04774	0.100
				Polonium-209	7.048	3.38	pCi/g	6.177	N
				Potassium-40	32.66	1.415	pCi/g	0.2149	1.00
				Radium-224	3.482	0.6379	pCi/g	0.5266	Y
				Radium-226	1.071	0.08443	pCi/g	0.05563	Y
				Radium-228	1.224	0.144	pCi/g	0.1191	0.500
				Strontium-85	0.04216	0.02077	pCi/g	0.03257	Y
				Thallium-208	0.4845	0.03997	pCi/g	0.0284	0.080

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:15:23.13

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232582001.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:14:59.
Sample ID         : G232582001           Sample quantity  : 1.17260E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.29  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.67*	2	492	1.17	126.54	122	9	2.53E-04	*****	
2	1	74.81	222	324	0.96	148.82	145	13	3.09E-02	14.4	1.16E+00
3	1	76.99	407	297	0.98	153.18	145	13	5.65E-02	8.6	
4	0	84.03*	68	319	1.04	167.27	164	7	9.44E-03	46.8	
5	0	87.17	122	292	1.07	173.57	171	6	1.70E-02	23.9	
6	4	89.91	133	243	1.18	179.05	177	16	1.84E-02	19.2	2.80E+00
7	4	92.81*	127	345	1.37	184.84	177	16	1.77E-02	30.8	
8	0	129.14	77	278	0.92	257.55	254	8	1.06E-02	39.3	
9	0	185.83*	129	329	1.10	370.98	366	11	1.80E-02	30.8	
10	0	209.24*	124	312	1.36	417.82	412	12	1.72E-02	30.5	
11	6	238.59*	920	170	1.10	476.56	470	19	1.28E-01	4.2	5.45E-01
12	6	241.73	204	221	2.08	482.83	470	19	2.83E-02	17.7	
13	0	270.18	102	168	1.58	539.77	536	10	1.42E-02	25.5	
14	0	295.18	202	225	1.24	589.79	585	10	2.81E-02	15.5	
15	0	300.29	73	124	1.09	600.03	595	8	1.01E-02	29.2	
16	0	328.12	36	168	1.03	655.70	651	9	4.97E-03	67.8	
17	0	338.12	194	190	1.49	675.73	669	14	2.70E-02	16.6	
18	0	352.05*	474	145	1.42	703.59	699	12	6.58E-02	7.0	
19	0	462.79	59	83	1.35	925.21	921	9	8.19E-03	30.8	
20	0	510.55*	85	140	1.94	1020.78	1012	17	1.18E-02	37.9	
21	0	583.24*	286	105	1.42	1166.25	1160	12	3.98E-02	9.5	
22	0	609.19*	312	55	1.46	1218.18	1213	10	4.34E-02	7.4	
23	0	728.04	75	74	0.86	1456.03	1452	13	1.05E-02	26.6	
24	0	860.73	48	51	1.98	1721.58	1714	15	6.68E-03	35.8	
25	0	911.10*	223	41	1.71	1822.38	1814	15	3.10E-02	9.3	
26	0	969.16*	95	73	1.94	1938.59	1934	12	1.32E-02	20.9	
27	0	1120.74*	68	87	2.80	2241.95	2234	18	9.50E-03	35.0	
28	0	1460.81*	1167	31	2.20	2922.63	2915	16	1.62E-01	3.2	
29	0	1503.42	11	12	0.68	3007.91	2999	12	1.53E-03	69.8	
30	0	1764.40*	38	14	2.33	3530.32	3523	14	5.22E-03	29.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:15:25

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232582001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:14:59
Sample ID : G232582001 Sample quantity : 117.26 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA2 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.29 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.347E+01	3.256E+00	6.964E-01	5.162E-02	48.059
CD-109	+	88.03	*	2.044E+00	1.004E+00	1.295E+00	1.529E-01	1.578
SN-126	+	64.28		2.329E-02	1.063E+00	9.236E-01	1.440E-01	0.025
	+	86.94		8.366E-01	5.324E-01	5.429E-01	2.286E-01	1.541
	+	87.57	*	2.012E-01	9.885E-02	1.283E-01	1.509E-02	1.569
TL-208		277.35		3.600E-01	4.212E-01	7.328E-01	9.341E-02	0.491
	+	510.84		4.843E-01	3.707E-01	2.365E-01	2.505E-02	2.048
	+	583.14	*	4.636E-01	9.404E-02	6.403E-02	4.702E-03	7.241
	+	860.37		7.343E-01	5.301E-01	4.699E-01	4.440E-02	1.563
BI-211		72.87		1.906E+00	3.534E+00	5.508E+00	5.578E-01	0.346
	+	351.07	*	3.386E+00	5.490E-01	3.597E-01	2.915E-02	9.411
PB-212	+	74.81		1.640E+00	5.240E-01	5.734E-01	7.977E-02	2.861
	+	77.11		1.680E+00	3.373E-01	3.213E-01	3.383E-02	5.229
	+	87.30		9.308E-01	4.666E-01	5.560E-01	8.569E-02	1.674
	+	238.63	*	1.434E+00	1.806E-01	9.517E-02	9.017E-03	15.067
	+	300.09		1.759E+00	1.043E+00	1.250E+00	1.330E-01	1.407
PO-212	+	74.81		1.640E+00	5.240E-01	5.734E-01	7.977E-02	2.861
	+	77.11		1.680E+00	3.373E-01	3.213E-01	3.383E-02	5.229
	+	87.30		9.308E-01	4.666E-01	5.560E-01	8.569E-02	1.674
		115.19		2.064E-01	3.508E+00	5.809E+00	3.910E-01	0.036
	+	238.63	*	1.434E+00	1.806E-01	9.517E-02	9.017E-03	15.067
	+	300.09		1.759E+00	1.043E+00	1.250E+00	1.330E-01	1.407
BI-214	+	609.31	*	9.530E-01	1.620E-01	1.261E-01	1.050E-02	7.559
		768.36		5.344E-01	8.765E-01	1.505E+00	1.459E-01	0.355
		934.06		5.228E-01	1.410E+00	2.324E+00	2.543E-01	0.225
	+	1120.29		1.099E+00	7.772E-01	5.925E-01	5.492E-02	1.855
		1238.11		1.006E+00	1.222E+00	2.129E+00	1.805E-01	0.472
		1377.67		4.589E-01	1.143E+00	1.958E+00	1.891E-01	0.234
	+	1764.49		8.287E-01	4.910E-01	3.995E-01	2.350E-02	2.074
PB-214	+	74.81		2.826E+00	8.884E-01	9.879E-01	1.254E-01	2.861
	+	77.11		2.880E+00	6.185E-01	5.507E-01	7.158E-02	5.229
	+	87.30		1.594E+00	7.928E-01	9.526E-01	1.337E-01	1.674
	+	241.98		1.910E+00	7.015E-01	5.735E-01	5.802E-02	3.330
	+	295.21		8.555E-01	2.819E-01	2.390E-01	2.613E-02	3.580

Sample ID : G232582001 Acquisition date : 9-JUL-2009 08:14:59

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.178E+00	2.006E-01	1.310E-01	1.260E-02	8.988
PO-214	+	74.81		2.826E+00	8.884E-01	9.879E-01	1.254E-01	2.861
	+	77.11		2.880E+00	6.185E-01	5.507E-01	7.158E-02	5.229
	+	87.30		1.594E+00	7.928E-01	9.526E-01	1.337E-01	1.674
	+	241.98		1.910E+00	7.015E-01	5.735E-01	5.802E-02	3.330
	+	295.21		8.555E-01	2.819E-01	2.390E-01	2.613E-02	3.580
	+	351.92	*	1.178E+00	2.006E-01	1.310E-01	1.260E-02	8.988
PO-216	+	74.81		1.640E+00	5.240E-01	5.734E-01	7.977E-02	2.861
	+	77.11		1.680E+00	3.373E-01	3.213E-01	3.383E-02	5.229
	+	87.30		9.308E-01	4.666E-01	5.560E-01	8.569E-02	1.674
	+	238.63	*	1.434E+00	1.806E-01	9.517E-02	9.017E-03	15.067
	+	300.09		1.759E+00	1.043E+00	1.250E+00	1.330E-01	1.407
PO-218	+	74.81		2.826E+00	8.884E-01	9.879E-01	1.254E-01	2.861
	+	77.11		2.880E+00	6.185E-01	5.507E-01	7.158E-02	5.229
	+	87.30		1.594E+00	7.928E-01	9.526E-01	1.337E-01	1.674
	+	241.98		1.910E+00	7.015E-01	5.735E-01	5.802E-02	3.330
	+	295.21		8.555E-01	2.819E-01	2.390E-01	2.613E-02	3.580
	+	351.92	*	1.178E+00	2.006E-01	1.310E-01	1.260E-02	8.988
RA-224	+	240.98	*	3.621E+00	1.314E+00	1.084E+00	9.101E-02	3.342
RA-226	+	609.31	*	9.530E-01	1.620E-01	1.261E-01	1.050E-02	7.559
		768.36		5.344E-01	8.765E-01	1.505E+00	1.459E-01	0.355
		934.06		5.228E-01	1.410E+00	2.324E+00	2.543E-01	0.225
	+	1120.29		1.099E+00	7.772E-01	5.925E-01	5.492E-02	1.855
		1238.11		1.006E+00	1.222E+00	2.129E+00	1.805E-01	0.472
		1377.67		4.589E-01	1.143E+00	1.958E+00	1.891E-01	0.234
	+	1764.49		8.287E-01	4.910E-01	3.995E-01	2.350E-02	2.074
AC-228	+	338.32		1.531E+00	8.098E-01	3.968E-01	1.632E-01	3.859
	+	911.07	*	1.616E+00	3.559E-01	2.111E-01	2.471E-02	7.655
	+	969.11		1.218E+00	5.820E-01	6.038E-01	1.409E-01	2.017
RA-228	+	338.32		1.531E+00	8.098E-01	3.968E-01	1.632E-01	3.859
	+	911.07	*	1.616E+00	3.559E-01	2.111E-01	2.471E-02	7.655
	+	969.11		1.218E+00	5.820E-01	6.038E-01	1.409E-01	2.017
TH-228	+	84.40		3.599E+00	3.415E+00	3.875E+00	5.841E-01	0.929
	+	238.60	*	1.434E+00	1.806E-01	9.516E-02	9.015E-03	15.068
	+	300.10		1.759E+00	1.463E+00	1.250E+00	7.414E-01	1.407
TH-230	+	609.31	*	9.529E-01	1.620E-01	1.261E-01	1.050E-02	7.559
		768.36		5.344E-01	8.765E-01	1.504E+00	1.459E-01	0.355
		934.06		5.228E-01	1.410E+00	2.324E+00	2.543E-01	0.225
	+	1120.29		1.099E+00	7.772E-01	5.925E-01	5.491E-02	1.855
		1238.11		1.006E+00	1.222E+00	2.129E+00	1.805E-01	0.472
		1377.67		4.589E-01	1.143E+00	1.958E+00	1.891E-01	0.234
	+	1764.49		8.287E-01	4.910E-01	3.995E-01	2.350E-02	2.074
TH-232	+	338.32		1.531E+00	5.237E-01	3.968E-01	3.166E-02	3.859
	+	911.07	*	1.616E+00	3.559E-01	2.111E-01	2.471E-02	7.655
	+	969.11		1.218E+00	5.820E-01	6.038E-01	1.409E-01	2.017
TH-234	+	63.29	*	5.884E-02	2.685E+00	2.455E+00	4.489E-01	0.024
	+	92.38		1.341E+00	8.657E-01	7.681E-01	1.469E-01	1.746
U-234	+	609.31	*	9.529E-01	1.620E-01	1.261E-01	1.050E-02	7.559
		768.36		5.344E-01	8.765E-01	1.504E+00	1.459E-01	0.355

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---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		5.228E-01	1.410E+00	2.324E+00	2.543E-01	0.225
	+	1120.29		1.099E+00	7.772E-01	5.925E-01	5.491E-02	1.855
		1238.11		1.006E+00	1.222E+00	2.129E+00	1.805E-01	0.472
		1377.67		4.589E-01	1.143E+00	1.958E+00	1.891E-01	0.234
	+	1764.49		8.287E-01	4.910E-01	3.995E-01	2.350E-02	2.074
NP-237	+	86.50	*	5.910E-01	3.148E-01	3.608E-01	8.545E-02	1.638
		95.87		-2.687E-01	1.099E+00	1.618E+00	4.059E-01	-0.166
U-238	+	63.29	*	5.884E-02	2.685E+00	2.455E+00	4.489E-01	0.024
	+	92.38		1.341E+00	8.391E-01	7.681E-01	8.163E-02	1.746
AM-243	+	74.67	*	2.659E-01	8.123E-02	9.331E-02	9.604E-03	2.849
	+	86.72		2.216E+01	1.089E+01	1.349E+01	1.571E+00	1.643
		117.66		6.220E-01	3.943E+00	6.551E+00	4.205E-01	0.095
		142.18		-5.496E+00	1.995E+01	3.119E+01	1.925E+00	-0.176
ANH-511	+	511.00	*	1.046E-01	7.960E-02	5.109E-02	3.341E-03	2.047

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.126E-01	3.393E-01	5.170E-01	3.801E-02	-0.411
NA-22		1274.54	*	-3.963E-02	5.500E-02	8.357E-02	5.587E-03	-0.474
NA-24		1368.53	*	-8.613E-02	5.500E-02	Half-Life too short		
AL-26		1129.67		9.887E-01	2.365E+00	3.695E+00	2.336E-01	0.268
		1808.65	*	2.251E-02	2.995E-02	5.746E-02	3.236E-03	0.392
TI-44		67.85		4.441E-03	5.602E-02	8.586E-02	8.309E-03	0.052
	+	78.38	*	3.100E-01	6.224E-02	7.181E-02	7.656E-03	4.317
SC-46		889.25	*	2.897E-02	4.355E-02	7.536E-02	6.944E-03	0.384
	+	1120.51		1.862E-01	1.311E-01	1.466E-01	9.502E-03	1.270
V-48		944.10		1.861E-02	9.580E-01	1.549E+00	1.378E-01	0.012
		983.50	*	-3.045E-03	7.667E-02	1.227E-01	1.037E-02	-0.025
		1312.09		-7.752E-03	8.607E-02	1.396E-01	9.936E-03	-0.056
CR-51		320.08	*	8.585E-02	3.694E-01	6.233E-01	5.557E-02	0.138
MN-52		744.21		1.490E-03	2.246E-01	3.703E-01	2.725E-02	0.004
		848.13		7.702E-01	6.644E+00	1.094E+01	9.486E-01	0.070
		935.52		1.756E-01	2.657E-01	4.492E-01	4.034E-02	0.391
		1246.25		4.224E+00	8.287E+00	1.423E+01	9.031E-01	0.297
		1333.61		-9.504E-02	5.129E+00	8.382E+00	6.169E-01	-0.011
		1434.06	*	1.355E-01	2.134E-01	3.814E-01	2.740E-02	0.355
MN-54		834.83	*	1.565E-02	4.354E-02	7.326E-02	6.223E-03	0.214
CO-56		846.75	*	-3.621E-02	4.577E-02	6.847E-02	5.923E-03	-0.529
		977.42		-4.656E-01	3.432E+00	5.278E+00	4.500E-01	-0.088
		1037.82		-2.418E-01	3.468E-01	5.388E-01	4.453E-02	-0.449
		1175.09		7.027E-01	2.619E+00	4.446E+00	2.469E-01	0.158
		1238.25		1.058E-01	1.227E-01	2.145E-01	1.414E-02	0.493
		1360.21		5.772E-01	1.086E+00	1.905E+00	1.395E-01	0.303
		1771.40		-7.795E-01	3.595E-01	3.726E-01	2.178E-02	-2.092
CO-57		122.06	*	-1.290E-02	2.702E-02	4.350E-02	2.567E-03	-0.297
		136.48		-8.379E-02	2.174E-01	3.490E-01	2.425E-02	-0.240
CO-58		810.76	*	-3.788E-02	4.159E-02	6.114E-02	5.018E-03	-0.620

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---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		-2.528E-01	3.031E+00	4.785E+00	2.958E-01	-0.053
		192.34		-4.037E-01	1.027E+00	1.608E+00	2.029E-01	-0.251
		1099.22	*	-5.815E-02	1.025E-01	1.611E-01	1.240E-02	-0.361
		1291.56		-3.254E-02	1.402E-01	2.242E-01	1.858E-02	-0.145
CO-60		1173.22		1.964E-02	5.668E-02	9.668E-02	5.350E-03	0.203
		1332.49	*	3.523E-02	4.619E-02	8.246E-02	6.070E-03	0.427
ZN-65		1115.52	*	1.769E-02	1.262E-01	1.841E-01	1.211E-02	0.096
GE-68		1077.35	*	1.727E+00	1.604E+00	2.909E+00	2.088E-01	0.594
AS-73		53.44	*	1.222E+00	1.151E+00	2.048E+00	1.833E-01	0.597
AS-74		595.88	*	4.496E-02	9.085E-02	1.582E-01	1.034E-02	0.284
		634.78		2.054E-02	3.574E-01	5.992E-01	3.876E-02	0.034
SE-75		66.05		-3.067E+00	5.923E+00	8.794E+00	9.832E-01	-0.349
		96.73		3.044E-01	8.539E-01	1.301E+00	1.861E-01	0.234
		121.11		9.896E-02	1.439E-01	2.437E-01	2.281E-02	0.406
		136.00		-1.611E-02	4.063E-02	6.521E-02	4.003E-03	-0.247
		198.60		1.619E+00	1.998E+00	3.259E+00	2.777E-01	0.497
		264.65	*	-5.602E-02	4.692E-02	7.034E-02	6.305E-03	-0.796
		279.53		-2.526E-02	1.308E-01	2.124E-01	2.026E-02	-0.119
		303.91		9.127E-01	2.375E+00	3.599E+00	4.181E-01	0.254
		400.65		6.192E-02	2.753E-01	4.576E-01	4.300E-02	0.135
BR-77	+	87.88		3.052E+02	1.499E+02	2.349E+02	2.773E+01	1.299
		200.40		-2.299E+00	1.241E+02	1.980E+02	1.482E+01	-0.012
	+	239.00		1.588E+02	1.870E+01	2.726E+01	2.277E+00	5.827
		249.79		9.511E+00	4.831E+01	8.249E+01	7.091E+00	0.115
		281.68		-5.074E+01	6.935E+01	1.115E+02	1.027E+01	-0.455
		297.23		6.866E+01	6.552E+01	7.857E+01	7.021E+00	0.874
		303.76		6.504E+01	1.395E+02	2.129E+02	1.875E+01	0.306
		439.47		1.602E+01	1.046E+02	1.720E+02	1.099E+01	0.093
		484.57		-2.535E+00	1.740E+02	2.802E+02	1.822E+01	-0.009
		520.65	*	-3.179E+00	8.182E+00	1.266E+01	8.292E-01	-0.251
		574.64		-5.315E+00	1.577E+02	2.644E+02	1.733E+01	-0.020
		578.91		-3.101E+01	7.352E+01	1.025E+02	6.714E+00	-0.303
		585.48		8.156E+02	1.839E+02	3.457E+02	2.262E+01	2.360
		755.35		-2.170E+01	1.424E+02	2.314E+02	1.734E+01	-0.094
		817.79		-2.012E+01	1.022E+02	1.636E+02	1.354E+01	-0.123
SR-82		698.33		-1.684E+01	3.577E+01	5.680E+01	3.872E+00	-0.297
		776.49	*	-1.731E-01	4.003E-01	6.290E-01	4.878E-02	-0.275
		1395.20		-4.219E+00	1.117E+01	1.711E+01	1.243E+00	-0.247
RB-83		520.41	*	-3.814E-02	7.917E-02	1.216E-01	7.961E-03	-0.314
		529.64		-6.827E-02	1.148E-01	1.735E-01	1.137E-02	-0.393
		552.65		-1.256E-01	1.947E-01	3.101E-01	2.034E-02	-0.405
RB-84		881.50	*	3.008E-02	7.969E-02	1.342E-01	1.222E-02	0.224
KR-85		513.99	*	5.525E+00	9.484E+00	1.406E+01	9.197E-01	0.393
SR-85		513.99	*	2.795E-02	4.798E-02	7.111E-02	4.653E-03	0.393
RB-86		1076.63	*	9.098E-01	9.672E-01	1.738E+00	1.250E-01	0.523
Y-88		898.02		-4.680E-02	4.697E-02	6.737E-02	6.314E-03	-0.695
		1836.01	*	2.573E-02	3.840E-02	7.139E-02	3.915E-03	0.360
ZR-88		392.90	*	4.071E-03	3.417E-02	5.645E-02	3.509E-03	0.072
Y-91		1204.90	*	-1.538E+01	2.508E+01	3.936E+01	2.315E+00	-0.391

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---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	-1.093E-02	3.677E-02	5.930E-02	4.072E-03	-0.184
		871.10		-1.282E-02	3.734E-02	5.836E-02	5.235E-03	-0.220
NB-95		765.79	*	2.916E-02	5.026E-02	8.439E-02	6.433E-03	0.346
NB-95M		235.69	*	1.114E-02	1.417E-01	2.135E-01	2.044E-02	0.052
ZR-95		724.18		-1.881E-02	1.114E-01	1.559E-01	1.249E-02	-0.121
		756.15	*	-1.666E-02	8.697E-02	1.408E-01	1.196E-02	-0.118
NB-97		657.90	*	-2.820E-03	8.697E-02	Half-Life too short		
		1024.50		9.593E-01	8.697E-02	Half-Life too short		
ZR-97		254.15		-5.793E-01	8.697E-02	Half-Life too short		
		355.39		1.595E+00	8.697E-02	Half-Life too short		
		507.63	*	1.162E+00	8.697E-02	Half-Life too short		
		602.52		-8.803E-01	8.697E-02	Half-Life too short		
		1021.30		-1.189E+00	8.697E-02	Half-Life too short		
		1147.95		-2.352E+00	8.697E-02	Half-Life too short		
		1362.66		-5.770E-01	8.697E-02	Half-Life too short		
		1750.46		9.965E-02	8.697E-02	Half-Life too short		
MO-99		140.51		-1.234E+01	2.021E+01	3.160E+01	8.540E+00	-0.391
		181.06		9.207E-01	1.428E+01	2.053E+01	3.616E+00	0.045
		366.43		-5.032E+00	6.691E+01	1.096E+02	7.807E+00	-0.046
		739.58	*	-9.709E+00	9.572E+00	1.409E+01	2.040E+00	-0.689
		778.00		-1.138E+01	2.638E+01	4.140E+01	3.218E+00	-0.275
TC-99M		140.51	*	-7.331E+08	2.638E+01	Half-Life too short		
RH-101		127.23		-1.301E-03	3.479E-02	5.098E-02	3.022E-03	-0.026
		198.01	*	-9.916E-04	3.779E-02	5.926E-02	4.406E-03	-0.017
		325.23		1.541E-01	2.684E-01	4.104E-01	3.416E-02	0.375
RH-102		418.52		-1.497E-01	3.222E-01	5.073E-01	3.207E-02	-0.295
		475.06	*	1.750E-02	3.129E-02	5.283E-02	3.426E-03	0.331
		631.29		-3.464E-03	5.805E-02	9.641E-02	6.243E-03	-0.036
		697.49		4.430E-02	8.183E-02	1.416E-01	9.640E-03	0.313
		766.84		9.228E-02	1.337E-01	2.262E-01	1.727E-02	0.408
		1046.59		-6.960E-02	1.360E-01	2.164E-01	1.652E-02	-0.322
		1112.84		1.007E-01	3.130E-01	4.675E-01	3.090E-02	0.215
RU-103		497.08	*	2.186E-03	4.577E-02	7.393E-02	9.605E-03	0.030
	+	610.33		1.006E+01	2.173E+00	2.901E+00	4.554E-01	3.469
RH-106	+	511.85		5.212E-01	3.966E-01	4.664E-01	3.051E-02	1.118
		621.84	*	-1.325E-01	3.489E-01	5.643E-01	6.826E-02	-0.235
		1050.47		9.196E-01	2.669E+00	4.607E+00	3.491E-01	0.200
RU-106	+	511.85		5.212E-01	3.966E-01	4.664E-01	3.051E-02	1.118
		621.84	*	-1.325E-01	3.486E-01	5.643E-01	3.665E-02	-0.235
		1050.47		9.196E-01	2.669E+00	4.607E+00	3.491E-01	0.200
AG-108M		433.93	*	2.640E-03	3.637E-02	5.947E-02	4.062E-03	0.044
		614.37		2.766E-03	4.756E-02	6.966E-02	4.841E-03	0.040
		722.95		-4.048E-02	5.122E-02	6.540E-02	4.913E-03	-0.619
AG-110M		657.75	*	-2.532E-03	3.892E-02	6.442E-02	4.349E-03	-0.039
		677.61		5.756E-02	3.477E-01	5.851E-01	4.034E-02	0.098
		706.67		1.225E-01	2.355E-01	4.057E-01	2.925E-02	0.302
		763.93		-1.649E-01	2.021E-01	3.093E-01	2.436E-02	-0.533
		884.67		-1.046E-02	5.765E-02	9.179E-02	8.641E-03	-0.114
		937.48		3.891E-02	1.318E-01	2.189E-01	2.028E-02	0.178

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1384.27		-4.113E-03	1.980E-01	3.223E-01	2.440E-02	-0.013
IN-111		171.28		2.105E-01	7.754E-01	1.268E+00	8.712E-02	0.166
		245.39	*	1.922E-01	8.650E-01	1.314E+00	1.117E-01	0.146
IN-113M		391.69	*	-1.306E-02	5.097E-02	8.209E-02	5.397E-03	-0.159
SN-113		391.69	*	-1.306E-02	5.097E-02	8.209E-02	5.397E-03	-0.159
IN-114M		190.27	*	1.450E-01	2.092E-01	3.125E-01	2.271E-02	0.464
CD-115		260.90		2.379E+01	9.544E+01	1.629E+02	1.441E+01	0.146
		492.35		4.186E+00	2.709E+01	4.418E+01	2.878E+00	0.095
		527.90	*	-3.177E+00	8.145E+00	1.257E+01	8.242E-01	-0.253
SN-117M		156.02		8.931E-01	2.243E+00	3.708E+00	2.409E-01	0.241
		158.56	*	-6.486E-02	5.491E-02	8.344E-02	5.476E-03	-0.777
SB-122		563.90	*	1.276E+00	1.659E+00	2.942E+00	1.929E-01	0.434
		692.80		-4.121E+00	3.814E+01	6.267E+01	4.233E+00	-0.066
I-123		159.00	*	-9.287E-01	3.814E+01	Half-Life too short		
		528.96		-4.327E+01	3.814E+01	Half-Life too short		
TE-123M		159.00	*	-2.286E-02	2.974E-02	4.626E-02	3.073E-03	-0.494
I-124		602.71	*	-3.591E-01	6.453E-01	9.262E-01	6.044E-02	-0.388
		722.78		-3.246E+00	4.288E+00	5.499E+00	3.906E-01	-0.590
		1325.50		-1.864E+01	3.617E+01	5.568E+01	4.052E+00	-0.335
		1376.25		1.949E+01	2.993E+01	5.261E+01	3.840E+00	0.370
		1509.49		6.446E+00	1.425E+01	2.328E+01	1.626E+00	0.277
		1691.02		-3.099E-01	2.821E+00	4.579E+00	2.867E-01	-0.068
SB-124		602.71		-2.540E-02	4.564E-02	6.552E-02	4.277E-03	-0.388
		645.85		-2.935E-01	5.223E-01	8.259E-01	5.880E-02	-0.355
		709.31		9.779E-01	3.166E+00	5.365E+00	3.727E-01	0.182
		713.82		1.338E-01	1.783E+00	2.966E+00	3.244E-01	0.045
		722.78		-3.328E-01	4.397E-01	5.638E-01	4.133E-02	-0.590
	+	968.20		1.235E+01	5.262E+00	7.904E+00	6.823E-01	1.563
		1045.16		-7.956E-01	2.901E+00	4.731E+00	3.621E-01	-0.168
		1325.50		-2.042E+00	3.962E+00	6.098E+00	4.438E-01	-0.335
		1368.21		-2.489E-01	1.836E+00	2.938E+00	3.725E-01	-0.085
		1436.60		-1.067E+00	3.995E+00	6.209E+00	4.457E-01	-0.172
		1691.02	*	-7.497E-03	6.824E-02	1.108E-01	7.447E-03	-0.068
SB-125		427.89	*	1.032E-02	1.031E-01	1.691E-01	1.113E-02	0.061
	+	463.38		6.541E-01	4.053E-01	6.022E-01	4.417E-02	1.086
		600.56		-1.015E-01	1.935E-01	3.109E-01	2.284E-02	-0.327
		635.90		2.413E-01	2.854E-01	5.088E-01	3.749E-02	0.474
TE-125M		109.28	*	2.272E+00	9.486E+00	1.587E+01	1.497E+00	0.143
I-126		388.63		1.717E-02	2.174E-01	3.585E-01	2.268E-02	0.048
		666.33	*	-1.858E-02	1.781E-01	2.934E-01	1.893E-02	-0.063
		753.82		2.182E+00	1.687E+00	3.047E+00	2.278E-01	0.716
SB-126		223.80		4.479E-01	3.952E+00	6.304E+00	5.051E-01	0.071
		278.60		2.047E+00	2.745E+00	4.652E+00	4.293E-01	0.440
	+	296.50		7.933E+00	2.567E+00	3.372E+00	3.018E-01	2.352
		414.70		-1.383E-02	7.753E-02	1.249E-01	7.875E-03	-0.111
		415.30		-5.177E+00	6.560E+00	1.007E+01	6.352E-01	-0.514
		555.20		1.560E+00	3.858E+00	6.707E+00	4.400E-01	0.233
		573.80		-1.436E-01	1.056E+00	1.758E+00	1.152E-01	-0.082
		593.00		-7.838E-01	9.081E-01	1.388E+00	9.072E-02	-0.565

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		656.30		-1.398E+00	3.519E+00	5.664E+00	3.633E-01	-0.247
		666.33		-7.742E-03	7.422E-02	1.222E-01	7.887E-03	-0.063
		675.00		-1.374E+00	2.163E+00	3.399E+00	2.227E-01	-0.404
		695.00		-9.854E-03	8.374E-02	1.374E-01	9.314E-03	-0.072
		697.00		2.393E-01	2.658E-01	4.725E-01	3.214E-02	0.506
		720.50	*	1.438E-01	1.378E-01	2.483E-01	1.757E-02	0.579
		856.80		-1.123E-01	5.585E-01	7.617E-01	6.689E-02	-0.147
		989.30		-5.569E-01	1.412E+00	2.169E+00	1.819E-01	-0.257
		1034.80		-4.237E+00	9.276E+00	1.482E+01	1.156E+00	-0.286
		1213.00		-3.205E+00	6.097E+00	9.462E+00	5.650E-01	-0.339
SB-127		61.10		-1.291E+01	5.996E+01	9.133E+01	1.007E+01	-0.141
		252.40		-3.604E+00	4.075E+00	6.084E+00	2.552E+00	-0.592
		290.80		2.726E+00	2.049E+01	3.052E+01	3.400E+00	0.089
		411.60		-2.569E+00	1.142E+01	1.836E+01	2.625E+00	-0.140
		444.90		1.870E+00	7.310E+00	1.214E+01	1.306E+00	0.154
		473.00		-1.310E+00	1.577E+00	2.369E+00	2.649E-01	-0.553
		543.00		-5.080E+00	1.481E+01	2.289E+01	2.965E+00	-0.222
		603.60		3.356E-01	1.088E+01	1.596E+01	1.724E+00	0.021
		685.20	*	-7.428E-01	1.292E+00	2.040E+00	1.952E-01	-0.364
		698.50		-5.777E+00	1.308E+01	2.079E+01	3.044E+00	-0.278
		722.20		-1.010E+01	2.681E+01	3.834E+01	3.688E+00	-0.264
		783.80		1.912E+00	3.249E+00	5.591E+00	6.456E-01	0.342
XE-127		57.60		-1.657E+00	7.167E+00	1.211E+01	1.060E+00	-0.137
		145.22		2.293E-01	7.271E-01	1.202E+00	7.494E-02	0.191
		172.10		1.807E-02	1.255E-01	2.039E-01	1.404E-02	0.089
		202.84	*	-4.079E-02	4.878E-02	7.401E-02	5.581E-03	-0.551
		374.96		2.692E-01	2.106E-01	3.744E-01	2.556E-02	0.719
I-131		80.18		-2.256E+00	5.523E+00	6.405E+00	6.976E-01	-0.352
		284.30		5.053E-02	1.431E+00	2.405E+00	2.303E-01	0.021
		364.48	*	-6.078E-02	1.126E-01	1.784E-01	1.379E-02	-0.341
		636.97		8.613E-01	1.448E+00	2.536E+00	1.796E-01	0.340
		722.89		-6.216E+00	7.721E+00	9.834E+00	7.042E-01	-0.632
TE-132		49.72		6.638E+00	2.363E+01	3.723E+01	3.929E+00	0.178
		111.76		-5.814E+00	2.353E+01	3.764E+01	3.533E+00	-0.154
		116.30		-5.961E+00	2.119E+01	3.452E+01	3.086E+00	-0.173
		228.16	*	8.866E-02	5.640E-01	9.005E-01	1.370E-01	0.098
BA-133		53.15		5.298E+00	5.061E+00	9.002E+00	8.058E-01	0.589
		79.62		-9.848E-01	1.514E+00	1.994E+00	3.300E-01	-0.494
		81.00		1.304E-02	1.253E-01	1.522E-01	2.626E-02	0.086
		276.40		5.992E-02	4.257E-01	6.970E-01	1.031E-01	0.086
		302.84		9.151E-02	1.562E-01	2.406E-01	3.230E-02	0.380
		356.01	*	4.371E-02	5.008E-02	7.813E-02	9.746E-03	0.559
		383.85		-1.413E-01	3.248E-01	5.160E-01	5.812E-02	-0.274
I-133	+	510.53		3.844E-01	3.248E-01	Half-Life too short		
		529.87	*	-1.002E-03	3.248E-01	Half-Life too short		
		706.58		8.645E-02	3.248E-01	Half-Life too short		
		856.28		-1.502E-01	3.248E-01	Half-Life too short		
		875.33		-1.755E-02	3.248E-01	Half-Life too short		
		1236.41		3.624E-01	3.248E-01	Half-Life too short		

Sample ID : G232582001 Acquisition date : 9-JUL-2009 08:14:59

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1298.22		5.584E-02	3.248E-01	Half-Life too short		
CS-134		475.35		6.780E-01	2.036E+00	3.378E+00	2.190E-01	0.201
		563.23		4.888E-02	3.944E-01	6.702E-01	4.468E-02	0.073
		569.32		4.504E-02	2.193E-01	3.745E-01	2.513E-02	0.120
		604.70		-6.151E-04	3.870E-02	5.631E-02	3.689E-03	-0.011
		795.84	*	2.968E-02	5.447E-02	9.327E-02	7.521E-03	0.318
		801.93		-9.253E-02	4.709E-01	7.569E-01	6.150E-02	-0.122
		1038.57		-2.727E+00	4.353E+00	6.819E+00	5.283E-01	-0.400
		1167.94		-1.950E+00	3.247E+00	5.098E+00	2.872E-01	-0.382
		1365.15		2.489E-01	1.309E+00	2.200E+00	1.710E-01	0.113
CS-135		268.24	*	2.788E-01	1.714E-01	2.825E-01	2.909E-02	0.987
I-135		288.45		3.979E+08	1.714E-01	Half-Life too short		
		417.63		-5.530E+08	1.714E-01	Half-Life too short		
		546.56		2.546E+07	1.714E-01	Half-Life too short		
		836.80		-3.966E+08	1.714E-01	Half-Life too short		
		1038.76		-4.621E+08	1.714E-01	Half-Life too short		
		1124.00		1.985E+08	1.714E-01	Half-Life too short		
		1131.51		3.347E+07	1.714E-01	Half-Life too short		
		1260.41	*	1.742E+06	1.714E-01	Half-Life too short		
		1457.56		2.898E+10	1.714E-01	Half-Life too short		
		1678.03		3.398E+08	1.714E-01	Half-Life too short		
		1706.46		-4.130E+08	1.714E-01	Half-Life too short		
		1791.20		1.456E+08	1.714E-01	Half-Life too short		
CS-136		66.91		-6.250E-01	9.152E-01	1.341E+00	2.145E-01	-0.466
	+	86.29		2.456E+00	1.229E+00	1.837E+00	2.757E-01	1.337
		153.22		-5.755E-03	6.608E-01	1.073E+00	8.297E-02	-0.005
		163.89		-4.764E-01	1.156E+00	1.798E+00	1.437E-01	-0.265
		176.55		2.095E-01	3.508E-01	5.823E-01	4.414E-02	0.360
		273.65		-4.193E-01	5.068E-01	7.019E-01	6.779E-02	-0.597
		340.57		1.520E-01	1.434E-01	2.256E-01	1.847E-02	0.674
		818.51		6.566E-03	7.711E-02	1.271E-01	1.054E-02	0.052
		1048.07	*	-1.707E-02	1.199E-01	1.980E-01	1.588E-02	-0.086
		1235.34		6.491E-01	7.577E-01	1.321E+00	1.352E-01	0.491
BA-137M		661.65	*	3.192E-03	3.818E-02	6.394E-02	4.092E-03	0.050
CS-137		661.65	*	3.374E-03	4.036E-02	6.759E-02	4.340E-03	0.050
CE-139		165.85	*	-1.258E-02	3.228E-02	5.116E-02	3.462E-03	-0.246
BA-140		162.64		7.391E-01	8.001E-01	1.322E+00	9.667E-02	0.559
		304.84		1.282E-01	1.314E+00	2.048E+00	5.751E-01	0.063
		423.70		3.774E-01	2.108E+00	3.471E+00	1.107E+00	0.109
		537.32	*	-5.243E-02	2.710E-01	4.247E-01	1.387E-01	-0.123
LA-140	+	328.77		3.253E-01	4.419E-01	5.693E-01	4.975E-02	0.571
		432.53		-5.029E-01	2.098E+00	3.348E+00	2.319E-01	-0.150
		487.03		1.051E-01	1.321E-01	2.273E-01	1.636E-02	0.462
		751.79		1.715E-01	1.921E+00	3.185E+00	2.708E-01	0.054
		815.85		-2.657E-02	3.308E-01	5.363E-01	4.978E-02	-0.050
		867.82		4.000E-01	1.490E+00	2.276E+00	2.133E-01	0.176
		919.63		-2.756E-01	3.071E+00	4.919E+00	5.445E-01	-0.056
		925.24		-1.960E-01	1.261E+00	2.006E+00	1.925E-01	-0.098
		1596.49	*	-4.533E-02	8.384E-02	1.274E-01	8.510E-03	-0.356

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	6.740E-03	6.517E-02	1.067E-01	6.889E-03	0.063
CE-143		57.37		-2.373E-04	6.517E-02	Half-Life too short		
		231.56		7.226E-04	6.517E-02	Half-Life too short		
		293.26	*	2.254E-04	6.517E-02	Half-Life too short		
	+	350.59		1.413E-02	6.517E-02	Half-Life too short		
		490.36		-1.028E-03	6.517E-02	Half-Life too short		
		664.57		-8.329E-05	6.517E-02	Half-Life too short		
		721.93		-2.173E-04	6.517E-02	Half-Life too short		
CE-144		80.11		-1.237E+00	2.827E+00	3.270E+00	3.547E-01	-0.378
		133.54	*	1.049E-01	2.391E-01	3.587E-01	5.126E-02	0.292
PM-144		476.78		-2.088E-02	7.142E-02	1.123E-01	8.454E-03	-0.186
		618.01		-5.321E-03	3.440E-02	5.680E-02	3.870E-03	-0.094
		696.49	*	2.360E-02	3.765E-02	6.550E-02	4.454E-03	0.360
		778.57		-8.072E-01	2.443E+00	3.875E+00	3.016E-01	-0.208
PR-144		696.49	*	1.598E+00	2.550E+00	4.436E+00	3.015E-01	0.360
		1489.15		-1.562E+01	1.560E+01	2.123E+01	1.495E+00	-0.736
PM-146		453.90	*	-8.858E-03	4.820E-02	7.696E-02	6.973E-03	-0.115
		633.02		-1.188E+00	1.601E+00	2.402E+00	8.874E-01	-0.494
		735.90		1.398E-01	1.882E-01	2.988E-01	8.432E-02	0.468
		747.13		-8.241E-02	1.050E-01	1.595E-01	2.124E-02	-0.517
ND-147	+	91.11		6.690E-01	2.689E-01	5.011E-01	5.772E-02	1.335
		319.41		5.327E-01	3.164E+00	5.319E+00	4.503E-01	0.100
		439.89		2.973E+00	5.535E+00	9.379E+00	5.999E-01	0.317
		531.02	*	-7.697E-02	5.713E-01	9.027E-01	1.251E-01	-0.085
PM-149		285.90	*	-4.364E+01	6.577E+01	1.054E+02	1.669E+01	-0.414
EU-152		121.78		-2.649E-02	7.914E-02	1.283E-01	9.882E-03	-0.206
		244.69		3.967E-01	3.594E-01	5.778E-01	4.901E-02	0.686
		344.27	*	1.251E-01	1.131E-01	1.801E-01	1.508E-02	0.695
		443.98		1.147E-01	9.465E-01	1.553E+00	9.947E-02	0.074
		778.89		-7.967E-03	2.773E-01	4.538E-01	3.532E-02	-0.018
		867.32		2.545E-01	9.713E-01	1.421E+00	1.268E-01	0.179
		964.01		6.407E-01	3.819E-01	6.371E-01	5.530E-02	1.006
		1085.78		3.043E-02	4.683E-01	7.860E-01	5.540E-02	0.039
		1112.02		1.702E-01	4.142E-01	6.678E-01	4.424E-02	0.255
		1407.95		-9.231E-02	1.911E-01	2.869E-01	2.077E-02	-0.322
GD-153		69.67		-4.030E-02	1.789E+00	3.027E+00	2.979E-01	-0.013
	+	83.37		2.060E+01	1.944E+01	2.606E+01	2.925E+00	0.790
		97.43	*	7.215E-03	9.165E-02	1.356E-01	1.289E-02	0.053
		103.18		-1.065E-01	1.037E-01	1.633E-01	1.382E-02	-0.652
EU-154		123.07		-4.082E-03	5.298E-02	8.686E-02	8.219E-03	-0.047
		247.94		-6.924E-03	3.764E-01	6.157E-01	7.035E-02	-0.011
		591.81		-3.658E-01	6.418E-01	1.023E+00	1.047E-01	-0.358
		723.30		-1.109E-01	2.101E-01	2.790E-01	2.285E-02	-0.397
		756.87		2.349E-01	9.294E-01	1.560E+00	1.749E-01	0.151
		873.19		-1.575E-01	3.261E-01	5.003E-01	6.261E-02	-0.315
		996.32		-2.687E-01	4.638E-01	6.959E-01	1.226E-01	-0.386
		1004.76		-8.219E-02	2.653E-01	4.334E-01	4.910E-02	-0.190
		1274.45	*	-1.135E-01	1.537E-01	2.326E-01	2.304E-02	-0.488
EU-155		48.70		-5.404E+00	4.295E+00	6.146E+00	5.135E-01	-0.879

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		1.620E+00	6.573E+00	1.027E+01	8.967E-01	0.158
	+	86.54		2.423E-01	1.190E-01	1.834E-01	2.143E-02	1.321
		105.31	*	6.226E-02	1.094E-01	1.859E-01	1.530E-02	0.335
TB-160	+	86.79		6.396E-01	3.142E-01	4.890E-01	5.701E-02	1.308
		197.04		-4.244E-01	6.406E-01	9.703E-01	7.192E-02	-0.437
		215.65		3.582E-03	8.038E-01	1.277E+00	9.999E-02	0.003
		298.57		7.717E-02	1.957E-01	2.194E-01	1.955E-02	0.352
		879.36	*	8.785E-02	1.604E-01	2.743E-01	2.491E-02	0.320
		962.29		4.271E-01	6.768E-01	1.091E+00	9.491E-02	0.391
		966.15		6.934E-01	3.134E-01	5.277E-01	4.567E-02	1.314
		1177.93		-4.430E-01	4.269E-01	6.351E-01	3.546E-02	-0.698
		1271.85		-5.560E-02	8.446E-01	1.380E+00	9.165E-02	-0.040
HO-166M		80.57		2.044E-01	3.362E-01	4.261E-01	4.644E-02	0.480
	+	184.41		1.057E-01	6.546E-02	7.572E-02	5.406E-03	1.396
		280.46		-1.125E-01	1.055E-01	1.628E-01	1.502E-02	-0.691
		410.95		2.543E-01	2.876E-01	4.958E-01	3.120E-02	0.513
		711.68	*	2.491E-03	6.843E-02	1.135E-01	7.913E-03	0.022
		752.31		1.253E-01	3.282E-01	5.571E-01	4.155E-02	0.225
		810.29		-6.368E-02	6.281E-02	9.096E-02	7.440E-03	-0.700
TM-171		51.35		-2.668E+01	4.405E+01	7.350E+01	6.534E+00	-0.363
		52.39		1.628E+01	2.248E+01	3.961E+01	3.542E+00	0.411
		59.40		3.789E+00	3.480E+01	5.381E+01	4.648E+00	0.070
		66.72	*	-1.303E+01	3.474E+01	5.201E+01	4.979E+00	-0.250
LU-176	+	88.36		4.773E-01	2.345E-01	3.610E-01	4.229E-02	1.322
		201.83		-2.652E-02	3.146E-02	4.780E-02	3.594E-03	-0.555
		306.84	*	-2.099E-03	2.544E-02	4.222E-02	3.692E-03	-0.050
		401.10		3.286E+00	7.219E+00	1.219E+01	7.619E-01	0.270
LU-177		112.95		-6.439E-01	1.472E+00	2.330E+00	1.636E-01	-0.276
	+	208.36	*	2.991E+00	1.836E+00	1.885E+00	1.445E-01	1.586
LU-177M		52.97		2.357E+00	2.287E+00	4.066E+00	3.639E-01	0.580
		54.07		1.100E+00	1.154E+00	2.047E+00	1.829E-01	0.537
		61.30		-2.282E-01	1.938E+00	2.967E+00	2.654E-01	-0.077
		121.62		2.970E-02	3.988E-01	6.589E-01	3.912E-02	0.045
		147.16		-7.703E-01	6.851E-01	1.052E+00	6.609E-02	-0.732
		171.86		2.552E-01	5.086E-01	8.408E-01	5.786E-02	0.304
		218.09		2.628E-01	9.038E-01	1.458E+00	1.150E-01	0.180
	+	268.79		2.433E+00	1.260E+00	1.497E+00	1.350E-01	1.625
		319.02		1.144E-01	2.618E-01	4.473E-01	3.791E-02	0.256
		367.43		5.543E-02	9.787E-01	1.618E+00	1.147E-01	0.034
		413.65	*	3.553E-02	1.949E-01	3.221E-01	2.030E-02	0.110
HF-181		56.28		-5.160E-01	1.172E+00	1.964E+00	1.735E-01	-0.263
		57.53		-1.547E-01	6.053E-01	1.022E+00	8.949E-02	-0.151
		65.20		5.651E-02	1.148E+00	1.761E+00	1.660E-01	0.032
		133.02		6.656E-02	7.417E-02	1.144E-01	6.871E-03	0.582
		136.25		-2.001E-01	4.670E-01	7.482E-01	4.533E-02	-0.267
		345.85		-4.263E-02	2.139E-01	3.371E-01	2.618E-02	-0.126
		482.03	*	-1.365E-02	4.503E-02	7.071E-02	4.595E-03	-0.193
W-181		56.28		-2.043E-01	4.650E-01	7.792E-01	6.883E-02	-0.262
		57.53		-6.159E-02	2.403E-01	4.058E-01	3.553E-02	-0.152

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20	*	2.226E-02	4.524E-01	6.937E-01	6.538E-02	0.032
TA-182		67.75		-3.683E-02	1.348E-01	2.028E-01	1.961E-02	-0.182
		100.10		6.562E-02	1.775E-01	3.000E-01	2.700E-02	0.219
		152.43		-1.805E-01	3.564E-01	5.647E-01	3.617E-02	-0.320
		222.10		-1.978E-01	3.581E-01	5.478E-01	4.368E-02	-0.361
		1001.68		1.732E+00	2.716E+00	4.633E+00	3.815E-01	0.374
	+	1121.28		5.157E-01	3.630E-01	4.047E-01	2.617E-02	1.274
		1189.05		-7.016E-02	3.904E-01	6.361E-01	3.629E-02	-0.110
		1221.42	*	4.628E-02	2.602E-01	4.356E-01	2.642E-02	0.106
		1230.97		-1.782E-01	6.387E-01	1.031E+00	6.363E-02	-0.173
RE-183		57.98		-8.862E-02	2.401E-01	4.033E-01	3.520E-02	-0.220
		59.32		-1.766E-02	1.427E-01	2.178E-01	1.882E-02	-0.081
		67.20		-1.740E-01	2.456E-01	3.605E-01	3.467E-02	-0.483
		162.32	*	1.269E-01	1.222E-01	2.030E-01	1.353E-02	0.625
	+	208.81		3.028E+00	1.859E+00	1.929E+00	1.480E-01	1.570
		291.72		-8.100E-01	1.175E+00	1.637E+00	1.480E-01	-0.495
RE-184		57.98		-3.290E-01	8.914E-01	1.497E+00	1.307E-01	-0.220
		59.32		-6.550E-02	5.291E-01	8.078E-01	6.980E-02	-0.081
		67.20		-6.456E-01	9.113E-01	1.338E+00	1.287E-01	-0.483
		161.27		-5.788E-02	3.854E-01	6.196E-01	4.112E-02	-0.093
		216.55		4.973E-03	2.908E-01	4.623E-01	3.629E-02	0.011
		252.85	*	-1.688E-01	2.500E-01	4.071E-01	3.527E-02	-0.415
		318.01		-2.126E-01	4.632E-01	7.473E-01	6.350E-02	-0.284
		792.07		-1.301E-01	1.149E+00	1.864E+00	1.482E-01	-0.070
		903.28		1.035E+00	1.266E+00	1.975E+00	1.834E-01	0.524
		920.93		1.814E-01	5.327E-01	8.908E-01	8.127E-02	0.204
OS-185		59.72		1.869E-01	3.804E-01	5.998E-01	5.202E-02	0.312
		61.14		-4.160E-02	2.125E-01	3.240E-01	2.890E-02	-0.128
		69.30		1.895E-01	3.166E-01	5.475E-01	5.370E-02	0.346
		592.07		-2.719E+00	2.732E+00	4.138E+00	2.706E-01	-0.657
		646.12	*	-1.780E-02	4.393E-02	7.050E-02	4.542E-03	-0.252
		717.42		2.356E-02	9.833E-01	1.628E+00	1.146E-01	0.014
		874.81		-9.711E-02	6.621E-01	1.059E+00	9.553E-02	-0.092
		880.27		8.338E-01	8.777E-01	1.555E+00	1.414E-01	0.536
RE-188		155.03	*	2.505E-01	1.799E-01	3.098E-01	2.005E-02	0.808
		477.96		-1.161E+00	3.240E+00	5.065E+00	3.287E-01	-0.229
		633.10		-2.436E+00	3.072E+00	4.777E+00	3.092E-01	-0.510
W-188	+	63.58		2.335E+00	1.065E+02	1.172E+02	1.084E+01	0.020
		227.08		-8.197E+00	1.406E+01	2.146E+01	1.735E+00	-0.382
		290.67	*	2.590E+00	8.706E+00	1.313E+01	1.189E+00	0.197
IR-192	+	295.96		6.446E-01	2.087E-01	2.882E-01	2.599E-02	2.237
		308.46		2.009E-02	9.805E-02	1.655E-01	1.449E-02	0.121
		316.51	*	-1.028E-02	3.613E-02	5.904E-02	5.050E-03	-0.174
		468.07		3.693E-02	8.507E-02	1.257E-01	9.141E-03	0.294
		604.41		9.290E-02	5.081E-01	7.562E-01	8.875E-02	0.123
		612.46		8.662E-01	8.475E-01	1.362E+00	1.108E-01	0.636
AU-195	+	65.12		8.126E-03	3.708E-01	3.255E-01	3.065E-02	0.025
		66.83		-3.833E-02	1.144E-01	1.717E-01	1.645E-02	-0.223
	+	75.70		8.563E-01	2.616E-01	4.616E-01	4.796E-02	1.855

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	1.944E-01	2.589E-01	3.964E-01	3.657E-02	0.491
	+	129.76		5.055E+00	3.984E+00	5.233E+00	3.118E-01	0.966
TL-200		367.94	*	1.494E-05	3.984E+00	Half-Life too short		
		579.30		-9.818E-04	3.984E+00	Half-Life too short		
		828.27		5.732E-04	3.984E+00	Half-Life too short		
		1205.75		-3.053E-04	3.984E+00	Half-Life too short		
TL-201		68.90		2.922E+00	3.909E+00	6.789E+00	6.635E-01	0.430
		70.82		-3.043E-01	2.400E+00	3.631E+00	3.610E-01	-0.084
		80.30		1.329E-01	4.854E+00	5.859E+00	6.368E-01	0.023
		135.34		-7.614E+00	1.992E+01	3.200E+01	1.934E+00	-0.238
		167.43	*	1.051E+00	5.508E+00	8.983E+00	6.105E-01	0.117
TL-202		68.90		3.267E-01	4.371E-01	7.592E-01	7.419E-02	0.430
		70.82		-3.393E-02	2.676E-01	4.049E-01	4.026E-02	-0.084
		80.30		1.482E-02	5.415E-01	6.536E-01	7.103E-02	0.023
		439.56	*	2.462E-02	6.721E-02	1.124E-01	7.185E-03	0.219
HG-203		70.83		-1.546E-01	1.223E+00	1.850E+00	2.679E-01	-0.084
		72.87		3.720E-01	6.908E-01	1.075E+00	1.530E-01	0.346
	+	82.60		1.508E+00	1.432E+00	1.843E+00	2.846E-01	0.818
		279.20	*	1.351E-02	4.807E-02	7.983E-02	7.560E-03	0.169
BI-207		72.80		7.487E-02	2.050E-01	3.171E-01	3.209E-02	0.236
	+	74.97		4.773E-01	1.458E-01	2.318E-01	2.393E-02	2.059
	+	84.90		2.674E-01	2.523E-01	3.242E-01	3.700E-02	0.825
		569.67		-3.163E-03	3.456E-02	5.777E-02	3.787E-03	-0.055
		1063.62	*	3.342E-02	6.000E-02	1.054E-01	7.788E-03	0.317
		1770.23		-1.373E-01	6.315E-01	8.400E-01	4.914E-02	-0.164
TL-207		81.07		-1.077E-01	2.888E-01	3.358E-01	3.679E-02	-0.321
	+	83.78		1.763E-01	1.664E-01	2.234E-01	2.518E-02	0.789
		94.90		3.497E-01	2.589E-01	4.117E-01	4.133E-02	0.849
		122.32		2.368E-01	1.810E+00	2.997E+00	2.030E-01	0.079
		144.24		5.854E-01	7.670E-01	1.253E+00	9.485E-02	0.467
		154.21		2.324E-01	4.239E-01	7.054E-01	5.332E-02	0.329
	+	269.46		5.728E-01	2.969E-01	3.726E-01	3.428E-02	1.537
		323.87	*	2.006E-01	8.064E-01	1.202E+00	2.113E-01	0.167
	+	338.28		6.393E+00	2.258E+00	2.561E+00	3.041E-01	2.496
		445.03		6.706E-01	2.153E+00	3.590E+00	3.815E-01	0.187
PO-209		260.50		3.337E+00	1.042E+01	1.786E+01	1.577E+00	0.187
		262.80		1.415E+01	2.850E+01	4.923E+01	4.373E+00	0.287
		896.60	*	-5.131E+00	8.369E+00	1.263E+01	1.176E+00	-0.406
BI-210		46.50	*	4.063E+00	6.852E+00	1.068E+01	8.610E-01	0.380
PB-210		46.50	*	4.063E+00	6.852E+00	1.068E+01	8.610E-01	0.380
PO-210		46.50	*	4.063E+00	6.850E+00	1.068E+01	7.504E-01	0.380
PB-211		404.84	*	-2.276E-01	1.058E+00	1.687E+00	1.053E+00	-0.135
		427.08		-6.613E-01	2.408E+00	3.785E+00	2.342E+00	-0.175
		831.96		-5.832E-01	1.514E+00	2.310E+00	1.447E+00	-0.252
BI-212	+	727.18	*	1.048E+00	5.655E-01	7.313E-01	6.420E-02	1.433
		785.46		2.462E-01	2.020E+00	3.348E+00	2.634E-01	0.074
		1620.62		1.233E+00	1.574E+00	2.907E+00	1.913E-01	0.424
PO-215		81.07		-1.077E-01	2.888E-01	3.358E-01	3.679E-02	-0.321
	+	83.78		1.763E-01	1.664E-01	2.234E-01	2.518E-02	0.789

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		94.90		3.497E-01	2.589E-01	4.117E-01	4.133E-02	0.849
		122.32		2.368E-01	1.810E+00	2.997E+00	2.030E-01	0.079
		144.24		5.854E-01	7.670E-01	1.253E+00	9.485E-02	0.467
		154.21		2.324E-01	4.239E-01	7.054E-01	5.332E-02	0.329
	+	269.46		5.728E-01	2.969E-01	3.726E-01	3.428E-02	1.537
		323.87	*	2.006E-01	8.064E-01	1.202E+00	2.113E-01	0.167
	+	338.28		6.393E+00	2.258E+00	2.561E+00	3.041E-01	2.496
		445.03		6.706E-01	2.153E+00	3.590E+00	3.815E-01	0.187
RN-219	+	271.23		7.349E-01	3.830E-01	4.899E-01	5.237E-02	1.500
		401.81	*	-2.942E-02	4.535E-01	7.384E-01	1.019E-01	-0.040
RN-220		549.76	*	-1.048E+01	2.764E+01	4.245E+01	2.785E+00	-0.247
RA-223		81.07		-1.077E-01	2.888E-01	3.358E-01	3.679E-02	-0.321
	+	83.78		1.763E-01	1.664E-01	2.234E-01	2.518E-02	0.789
		94.90		3.497E-01	2.589E-01	4.117E-01	4.133E-02	0.849
		122.32		2.368E-01	1.810E+00	2.997E+00	2.030E-01	0.079
		144.24		5.854E-01	7.670E-01	1.253E+00	9.485E-02	0.467
		154.21		2.324E-01	4.239E-01	7.054E-01	5.332E-02	0.329
	+	269.46		5.728E-01	2.969E-01	3.726E-01	3.428E-02	1.537
		323.87	*	2.006E-01	8.064E-01	1.202E+00	2.113E-01	0.167
	+	338.28		6.393E+00	2.258E+00	2.561E+00	3.041E-01	2.496
		445.03		6.706E-01	2.153E+00	3.590E+00	3.815E-01	0.187
AC-227		79.80		-1.128E+00	2.207E+00	2.520E+00	5.664E-01	-0.448
		236.00		2.543E-01	2.782E-01	4.373E-01	5.253E-02	0.582
		256.20	*	2.214E-01	4.289E-01	7.397E-01	1.140E-01	0.299
		286.10		-1.050E+00	1.643E+00	2.642E+00	3.578E-01	-0.397
	+	299.80		3.259E+00	1.986E+00	2.792E+00	4.921E-01	1.167
		304.40		4.024E-01	2.148E+00	3.203E+00	5.932E-01	0.126
		334.20		-1.031E+00	2.798E+00	3.935E+00	7.549E-01	-0.262
TH-227		79.80		-1.128E+00	2.207E+00	2.520E+00	5.730E-01	-0.448
	+	94.00		5.181E+00	3.404E+00	4.110E+00	9.236E-01	1.261
		236.00		2.543E-01	2.779E-01	4.373E-01	4.732E-02	0.582
		256.20	*	2.214E-01	4.294E-01	7.397E-01	1.340E-01	0.299
		286.10		-1.050E+00	1.947E+00	2.642E+00	2.653E+00	-0.397
	+	299.80		3.259E+00	1.986E+00	2.792E+00	4.921E-01	1.167
		304.40		4.024E-01	2.148E+00	3.203E+00	5.932E-01	0.126
		334.20		-1.031E+00	2.798E+00	3.935E+00	7.549E-01	-0.262
TH-229	+	85.43		2.639E-01	2.490E-01	3.133E-01	3.597E-02	0.842
	+	88.47		2.748E-01	1.350E-01	2.071E-01	2.419E-02	1.327
		100.00		8.753E-02	1.907E-01	3.154E-01	2.844E-02	0.278
		193.63	*	1.501E-01	5.546E-01	8.998E-01	6.603E-02	0.167
		210.97		8.469E-01	9.481E-01	1.404E+00	1.085E-01	0.603
PA-231		283.67	*	-1.947E-01	1.632E+00	2.719E+00	4.215E-01	-0.072
	+	301.29		1.304E+00	7.777E-01	1.107E+00	1.374E-01	1.178
TH-231		81.07		-1.077E-01	2.888E-01	3.358E-01	3.679E-02	-0.321
	+	83.78		1.763E-01	1.664E-01	2.234E-01	2.518E-02	0.789
		94.90		3.497E-01	2.589E-01	4.117E-01	4.133E-02	0.849
		122.32		2.368E-01	1.810E+00	2.997E+00	2.030E-01	0.079
		144.24		5.854E-01	7.670E-01	1.253E+00	9.485E-02	0.467
		154.21		2.324E-01	4.239E-01	7.054E-01	5.332E-02	0.329

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.728E-01	2.969E-01	3.726E-01	3.428E-02	1.537
		323.87	*	2.006E-01	8.064E-01	1.202E+00	2.113E-01	0.167
	+	338.28		6.393E+00	2.258E+00	2.561E+00	3.041E-01	2.496
		445.03		6.706E-01	2.153E+00	3.590E+00	3.815E-01	0.187
U-231	+	84.21		6.153E+00	5.806E+00	7.739E+00	8.765E-01	0.795
	+	92.29		4.147E+00	2.595E+00	3.707E+00	3.948E-01	1.119
		95.87	*	-2.467E-01	1.007E+00	1.486E+00	1.461E-01	-0.166
		108.00		1.935E-02	1.739E+00	2.884E+00	2.225E-01	0.007
PA-233	+	75.28		1.393E+01	4.608E+00	6.953E+00	1.139E+00	2.003
	+	86.59		3.940E+00	2.179E+00	2.990E+00	8.351E-01	1.318
	+	300.12		9.087E-01	5.475E-01	7.743E-01	1.163E-01	1.174
		311.98	*	2.235E-03	6.929E-02	1.157E-01	1.027E-02	0.019
		340.50		9.259E-01	7.793E-01	1.195E+00	2.820E-01	0.775
		398.62		-1.130E+00	2.378E+00	3.732E+00	9.689E-01	-0.303
		415.76		-1.319E+00	1.875E+00	2.868E+00	5.946E-01	-0.460
PA-234	+	63.00		6.858E-02	3.129E+00	3.530E+00	5.584E-01	0.019
		94.67		3.652E-01	1.940E-01	3.089E-01	4.160E-02	1.182
		98.44		4.927E-02	1.107E-01	1.619E-01	9.048E-02	0.304
		99.86		2.675E-01	4.852E-01	8.055E-01	7.284E-02	0.332
		111.00		-2.420E-03	1.945E-01	3.148E-01	3.518E-02	-0.008
		131.20		4.839E-04	1.238E-01	1.815E-01	1.085E-02	0.003
		152.70		5.068E-03	3.417E-01	5.556E-01	8.914E-02	0.009
	+	186.00		3.804E+00	2.618E+00	2.948E+00	9.093E-01	1.290
		226.40		-1.686E-01	4.395E-01	6.790E-01	8.726E-02	-0.248
		227.20		-2.777E-01	4.811E-01	7.347E-01	5.943E-02	-0.378
		248.90		-1.383E-02	8.395E-01	1.419E+00	3.177E-01	-0.010
	+	293.70		4.107E+00	1.465E+00	1.730E+00	3.026E-01	2.374
		369.80		1.299E-01	9.374E-01	1.557E+00	3.299E-01	0.083
		568.70		2.954E-01	1.112E+00	1.906E+00	1.250E-01	0.155
		569.50		5.366E-02	3.031E-01	5.166E-01	3.387E-02	0.104
		574.00		-3.562E-01	1.618E+00	2.675E+00	1.753E-01	-0.133
		699.00		-5.294E-01	7.803E-01	1.205E+00	2.211E-01	-0.439
		706.10		5.957E-01	1.215E+00	2.041E+00	9.042E-01	0.292
		733.00		2.505E-01	4.860E-01	7.347E-01	1.594E-01	0.341
		742.81		1.248E+00	1.641E+00	2.518E+00	1.689E+00	0.496
		796.30		7.714E-01	1.064E+00	1.818E+00	4.884E-01	0.424
		805.60		8.176E-01	1.135E+00	1.937E+00	5.912E-01	0.422
		819.60		7.930E-01	1.362E+00	2.301E+00	8.732E-01	0.345
		826.30		-3.896E-01	9.197E-01	1.408E+00	6.293E-01	-0.277
		831.60		-9.962E-02	7.485E-01	1.205E+00	3.592E-01	-0.083
		876.40		1.832E-01	9.752E-01	1.585E+00	1.629E+00	0.116
		880.51		2.633E-01	3.228E-01	5.652E-01	5.141E-02	0.466
		883.24		-3.281E-01	4.022E-01	4.885E-01	3.287E-01	-0.672
		899.00		-6.487E-01	1.002E+00	1.444E+00	6.334E-01	-0.449
		925.00		-1.856E-01	1.407E+00	2.243E+00	2.038E-01	-0.083
		926.50		-5.377E-02	2.029E-01	3.178E-01	8.084E-02	-0.169
		946.00	*	9.707E-02	3.571E-01	5.914E-01	1.117E-01	0.164
		949.00		4.799E-01	5.219E-01	9.171E-01	8.108E-02	0.523
		980.50		-3.672E-01	8.326E-01	1.270E+00	1.078E-01	-0.289

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-4.146E-01	1.257E+00	1.891E+00	1.228E+00	-0.219
PA-234M		766.41		1.921E+01	2.542E+01	3.575E+01	2.737E+01	0.537
		1001.03	*	6.834E+00	8.958E+00	1.540E+01	1.677E+00	0.444
U-235	+	89.95		2.887E+00	1.438E+00	2.013E+00	6.381E-01	1.434
	+	93.35		1.612E+00	1.097E+00	1.419E+00	4.062E-01	1.136
		105.00		7.325E-01	1.082E+00	1.814E+00	5.390E-01	0.404
		143.76	*	1.528E-01	2.430E-01	3.935E-01	6.475E-02	0.388
		163.35		1.135E-01	5.414E-01	8.673E-01	1.586E-01	0.131
	+	185.71		1.409E-01	8.728E-02	1.098E-01	7.869E-03	1.283
		205.31		-3.841E-02	6.240E-01	8.632E-01	1.609E-01	-0.045
NP-236		94.67		2.784E-01	1.452E-01	2.345E-01	2.367E-02	1.187
		98.44		3.727E-02	8.109E-02	1.224E-01	1.139E-02	0.305
		111.00		-1.830E-03	1.471E-01	2.381E-01	1.735E-02	-0.008
		160.31	*	-4.499E-02	8.551E-02	1.348E-01	8.913E-03	-0.334
NP-239		99.55		1.177E-01	1.708E-01	2.745E-01	2.498E-02	0.429
		117.00	*	-1.354E-01	1.962E-01	3.131E-01	2.035E-02	-0.433
	+	209.75		2.419E+00	1.485E+00	1.566E+00	1.205E-01	1.544
		228.18		4.004E-02	2.419E-01	3.865E-01	3.135E-02	0.104
		277.60		8.655E-02	2.137E-01	3.570E-01	3.287E-02	0.242
		334.30		-5.931E-01	1.582E+00	2.228E+00	1.802E-01	-0.266
AM-241		59.54	*	6.977E-02	2.017E-01	3.159E-01	2.926E-02	0.221
CM-243		99.55		1.211E-01	1.758E-01	2.825E-01	2.570E-02	0.429
		103.76	*	-2.103E-02	9.676E-02	1.591E-01	1.331E-02	-0.132
		117.00		-1.393E-01	2.019E-01	3.221E-01	2.094E-02	-0.433
	+	209.75		2.385E+00	1.464E+00	1.544E+00	1.188E-01	1.544
		228.18		4.045E-02	2.444E-01	3.905E-01	3.168E-02	0.104
		277.60		8.725E-02	2.154E-01	3.599E-01	3.313E-02	0.242
CM-247		278.00		5.204E-01	8.983E-01	1.512E+00	1.394E-01	0.344
		287.40		5.363E-01	1.305E+00	2.235E+00	2.036E-01	0.240
		402.60	*	-7.325E-03	4.096E-02	6.614E-02	4.139E-03	-0.111
CF-249		252.85		-6.367E-01	9.431E-01	1.536E+00	1.330E-01	-0.415
		333.44		9.777E-02	2.357E-01	3.043E-01	2.469E-02	0.321
		387.95	*	-1.373E-02	4.634E-02	7.451E-02	4.733E-03	-0.184
CF-251		176.60	*	7.887E-02	1.295E-01	2.150E-01	1.500E-02	0.367
		227.00		-2.508E-01	4.271E-01	6.519E-01	5.270E-02	-0.385
		285.00		-4.360E-01	1.885E+00	3.119E+00	2.854E-01	-0.140

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232582001      *
* Acquisition date :  9-JUL-2009 08:14:59 Detector SN#     :               *
* Detector ID        : GAM02               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:02.29     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232582001           Analyst initials: MXR1          *
* Batch Number       : 881931               Sample Quantity : 1.1726E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME :   1-NOV-2008 14:03:38 MS Isotope      :                *
* MSD DPM          :     0.000             MSD Isotope     :                *
* LCS DPM          :     0.000             LCS Isotope     :                *
* LCSD DPM         :     0.000             LCSD Isotope    :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.347E+01	3.191E+00	6.941E-01	0.000E+00
CD-109	2.044E+00	9.837E-01	1.329E+00	0.000E+00
SN-126	2.012E-01	9.687E-02	1.317E-01	0.000E+00
TL-208	4.636E-01	9.216E-02	6.445E-02	0.000E+00
BI-211	3.386E+00	5.381E-01	3.640E-01	0.000E+00
PB-212	1.434E+00	1.770E-01	9.670E-02	0.000E+00
PO-212	1.434E+00	1.770E-01	9.670E-02	0.000E+00
BI-214	9.530E-01	1.588E-01	1.268E-01	0.000E+00
PB-214	1.178E+00	1.966E-01	1.326E-01	0.000E+00
PO-214	1.178E+00	1.966E-01	1.326E-01	0.000E+00
PO-216	1.434E+00	1.770E-01	9.670E-02	0.000E+00
PO-218	1.178E+00	1.966E-01	1.326E-01	0.000E+00
RA-224	3.621E+00	1.288E+00	1.101E+00	0.000E+00
RA-226	9.530E-01	1.588E-01	1.268E-01	0.000E+00
AC-228	1.616E+00	3.487E-01	2.114E-01	0.000E+00
RA-228	1.616E+00	3.487E-01	2.114E-01	0.000E+00
TH-228	1.434E+00	1.770E-01	9.669E-02	0.000E+00
TH-230	9.529E-01	1.588E-01	1.268E-01	0.000E+00
TH-232	1.616E+00	3.487E-01	2.114E-01	0.000E+00
TH-234	5.884E-02	2.631E+00	2.529E+00	0.000E+00
U-234	9.529E-01	1.588E-01	1.268E-01	0.000E+00
NP-237	5.910E-01	3.086E-01	3.705E-01	0.000E+00
U-238	5.884E-02	2.631E+00	2.529E+00	0.000E+00
AM-243	2.659E-01	7.961E-02	9.595E-02	0.000E+00
ANH-511	1.046E-01	7.801E-02	5.150E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-2.126E-01	3.325E-01	5.215E-01	0.000E+00	NOT IDENT.
NA-22	-3.963E-02	5.390E-02	8.342E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	1.958E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.251E-02	2.935E-02	5.714E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.100E-02	7.380E-02	0.000E+00	FAIL ABUN
SC-46	2.897E-02	4.268E-02	7.552E-02	0.000E+00	FAIL ABUN
V-48	-3.045E-03	7.514E-02	1.228E-01	0.000E+00	NOT IDENT.
CR-51	8.585E-02	3.620E-01	6.313E-01	0.000E+00	NOT IDENT.
MN-52	1.355E-01	2.091E-01	3.802E-01	0.000E+00	NOT IDENT.
MN-54	1.565E-02	4.267E-02	7.346E-02	0.000E+00	NOT IDENT.
CO-56	-3.621E-02	4.485E-02	6.865E-02	0.000E+00	NOT IDENT.
CO-57	-1.290E-02	2.648E-02	4.451E-02	0.000E+00	NOT IDENT.
CO-58	-3.788E-02	4.076E-02	6.133E-02	0.000E+00	NOT IDENT.
FE-59	-5.815E-02	1.005E-01	1.610E-01	0.000E+00	NOT IDENT.
CO-60	3.523E-02	4.526E-02	8.227E-02	0.000E+00	NOT IDENT.
ZN-65	1.769E-02	1.237E-01	1.841E-01	0.000E+00	NOT IDENT.
GE-68	1.727E+00	1.572E+00	2.909E+00	0.000E+00	NOT IDENT.
AS-73	1.222E+00	1.128E+00	2.113E+00	0.000E+00	NOT IDENT.
AS-74	4.496E-02	8.903E-02	1.592E-01	0.000E+00	NOT IDENT.
SE-75	-5.602E-02	4.598E-02	7.139E-02	0.000E+00	NOT IDENT.
BR-77	-3.179E+00	8.018E+00	1.276E+01	0.000E+00	FAIL ABUN
SR-82	-1.731E-01	3.923E-01	6.312E-01	0.000E+00	NOT IDENT.
RB-83	-3.814E-02	7.759E-02	1.225E-01	0.000E+00	NOT IDENT.
RB-84	3.008E-02	7.809E-02	1.344E-01	0.000E+00	NOT IDENT.
KR-85	5.525E+00	9.294E+00	1.417E+01	0.000E+00	NOT IDENT.
SR-85	2.795E-02	4.702E-02	7.167E-02	0.000E+00	NOT IDENT.
RB-86	9.098E-01	9.479E-01	1.738E+00	0.000E+00	NOT IDENT.
Y-88	2.573E-02	3.763E-02	7.098E-02	0.000E+00	NOT IDENT.
ZR-88	4.071E-03	3.349E-02	5.706E-02	0.000E+00	NOT IDENT.
Y-91	-1.538E+01	2.458E+01	3.931E+01	0.000E+00	NOT IDENT.
NB-94	-1.093E-02	3.604E-02	5.957E-02	0.000E+00	NOT IDENT.
NB-95	2.916E-02	4.926E-02	8.470E-02	0.000E+00	NOT IDENT.
NB-95M	1.114E-02	1.388E-01	2.170E-01	0.000E+00	NOT IDENT.
ZR-95	-1.666E-02	8.523E-02	1.413E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.041E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.983E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-9.709E+00	9.381E+00	1.415E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.175E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-9.916E-04	3.704E-02	6.033E-02	0.000E+00	NOT IDENT.
RH-102	1.750E-02	3.067E-02	5.329E-02	0.000E+00	NOT IDENT.
RU-103	2.186E-03	4.486E-02	7.454E-02	0.000E+00	FAIL ABUN
RH-106	-1.325E-01	3.419E-01	5.677E-01	0.000E+00	FAIL ABUN
RU-106	-1.325E-01	3.417E-01	5.677E-01	0.000E+00	FAIL ABUN
AG-108M	2.640E-03	3.564E-02	6.005E-02	0.000E+00	NOT IDENT.
AG-110M	-2.532E-03	3.814E-02	6.476E-02	0.000E+00	NOT IDENT.
IN-111	1.922E-01	8.477E-01	1.335E+00	0.000E+00	NOT IDENT.
IN-113M	-1.306E-02	4.995E-02	8.297E-02	0.000E+00	NOT IDENT.
SN-113	-1.306E-02	4.995E-02	8.297E-02	0.000E+00	NOT IDENT.
IN-114M	1.450E-01	2.050E-01	3.183E-01	0.000E+00	NOT IDENT.
CD-115	-3.177E+00	7.982E+00	1.267E+01	0.000E+00	NOT IDENT.
SN-117M	-6.486E-02	5.381E-02	8.513E-02	0.000E+00	NOT IDENT.
SB-122	1.276E+00	1.626E+00	2.962E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.184E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.286E-02	2.914E-02	4.720E-02	0.000E+00	NOT IDENT.
I-124	-3.591E-01	6.324E-01	9.319E-01	0.000E+00	NOT IDENT.
SB-124	-7.497E-03	6.688E-02	1.102E-01	0.000E+00	FAIL ABUN
SB-125	1.032E-02	1.011E-01	1.708E-01	0.000E+00	FAIL ABUN
TE-125M	2.272E+00	9.296E+00	1.626E+01	0.000E+00	NOT IDENT.
I-126	-1.858E-02	1.746E-01	2.949E-01	0.000E+00	NOT IDENT.
SB-126	1.438E-01	1.351E-01	2.493E-01	0.000E+00	FAIL ABUN
SB-127	-7.428E-01	1.266E+00	2.049E+00	0.000E+00	NOT IDENT.
XE-127	-4.079E-02	4.781E-02	7.532E-02	0.000E+00	NOT IDENT.
I-131	-6.078E-02	1.103E-01	1.804E-01	0.000E+00	NOT IDENT.
TE-132	8.866E-02	5.527E-01	9.154E-01	0.000E+00	NOT IDENT.
BA-133	4.371E-02	4.908E-02	7.905E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.314E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	2.968E-02	5.338E-02	9.357E-02	0.000E+00	NOT IDENT.
CS-135	2.788E-01	1.679E-01	2.866E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.622E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.707E-02	1.175E-01	1.980E-01	0.000E+00	FAIL ABUN
BA-137M	3.192E-03	3.741E-02	6.427E-02	0.000E+00	NOT IDENT.
CS-137	3.374E-03	3.955E-02	6.794E-02	0.000E+00	NOT IDENT.
CE-139	-1.258E-02	3.163E-02	5.217E-02	0.000E+00	NOT IDENT.
BA-140	-5.243E-02	2.655E-01	4.278E-01	0.000E+00	NOT IDENT.
LA-140	-4.533E-02	8.216E-02	1.269E-01	0.000E+00	FAIL ABUN
CE-141	6.740E-03	6.387E-02	1.090E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.042E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.049E-01	2.343E-01	3.666E-01	0.000E+00	NOT IDENT.
PM-144	2.360E-02	3.690E-02	6.581E-02	0.000E+00	NOT IDENT.
PR-144	1.598E+00	2.499E+00	4.456E+00	0.000E+00	NOT IDENT.

PM-146	-8.858E-03	4.723E-02	7.766E-02	0.000E+00	NOT IDENT.
ND-147	-7.697E-02	5.598E-01	9.095E-01	0.000E+00	FAIL ABUN
PM-149	-4.364E+01	6.446E+01	1.069E+02	0.000E+00	NOT IDENT.
EU-152	1.251E-01	1.108E-01	1.823E-01	0.000E+00	NOT IDENT.
GD-153	7.215E-03	8.981E-02	1.390E-01	0.000E+00	FAIL ABUN
EU-154	-1.135E-01	1.506E-01	2.322E-01	0.000E+00	NOT IDENT.
EU-155	6.226E-02	1.072E-01	1.904E-01	0.000E+00	FAIL ABUN
TB-160	8.785E-02	1.572E-01	2.749E-01	0.000E+00	FAIL ABUN
HO-166M	2.491E-03	6.706E-02	1.140E-01	0.000E+00	FAIL ABUN
TM-171	-1.303E+01	3.405E+01	5.354E+01	0.000E+00	NOT IDENT.
LU-176	-2.099E-03	2.494E-02	4.279E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.800E+00	1.918E+00	0.000E+00	FAIL ABUN
LU-177M	3.553E-02	1.910E-01	3.254E-01	0.000E+00	FAIL ABUN
HF-181	-1.365E-02	4.413E-02	7.132E-02	0.000E+00	NOT IDENT.
W-181	2.226E-02	4.433E-01	7.143E-01	0.000E+00	NOT IDENT.
TA-182	4.628E-02	2.550E-01	4.350E-01	0.000E+00	FAIL ABUN
RE-183	1.269E-01	1.198E-01	2.071E-01	0.000E+00	FAIL ABUN
RE-184	-1.688E-01	2.450E-01	4.134E-01	0.000E+00	NOT IDENT.
OS-185	-1.780E-02	4.305E-02	7.089E-02	0.000E+00	NOT IDENT.
RE-188	2.505E-01	1.763E-01	3.162E-01	0.000E+00	NOT IDENT.
W-188	2.590E+00	8.532E+00	1.331E+01	0.000E+00	FAIL ABUN
IR-192	-1.028E-02	3.540E-02	5.981E-02	0.000E+00	FAIL ABUN
AU-195	1.944E-01	2.537E-01	4.064E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.169E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.051E+00	5.398E+00	9.161E+00	0.000E+00	NOT IDENT.
TL-202	2.462E-02	6.586E-02	1.135E-01	0.000E+00	NOT IDENT.
HG-203	1.351E-02	4.711E-02	8.098E-02	0.000E+00	FAIL ABUN
BI-207	3.342E-02	5.880E-02	1.054E-01	0.000E+00	FAIL ABUN
TL-207	2.006E-01	7.903E-01	1.217E+00	0.000E+00	FAIL ABUN
PO-209	-5.131E+00	8.201E+00	1.265E+01	0.000E+00	NOT IDENT.
BI-210	4.063E+00	6.715E+00	1.104E+01	0.000E+00	NOT IDENT.
PB-210	4.063E+00	6.715E+00	1.104E+01	0.000E+00	NOT IDENT.
PO-210	4.063E+00	6.713E+00	1.104E+01	0.000E+00	NOT IDENT.
PB-211	-2.276E-01	1.036E+00	1.705E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.542E-01	7.344E-01	0.000E+00	FAIL ABUN
PO-215	2.006E-01	7.903E-01	1.217E+00	0.000E+00	FAIL ABUN
RN-219	-2.942E-02	4.444E-01	7.462E-01	0.000E+00	FAIL ABUN
RN-220	-1.048E+01	2.709E+01	4.276E+01	0.000E+00	NOT IDENT.
RA-223	2.006E-01	7.903E-01	1.217E+00	0.000E+00	FAIL ABUN
AC-227	2.214E-01	4.203E-01	7.510E-01	0.000E+00	FAIL ABUN
TH-227	2.214E-01	4.208E-01	7.510E-01	0.000E+00	FAIL ABUN
TH-229	1.501E-01	5.435E-01	9.162E-01	0.000E+00	FAIL ABUN
PA-231	-1.947E-01	1.600E+00	2.757E+00	0.000E+00	FAIL ABUN
TH-231	2.006E-01	7.903E-01	1.217E+00	0.000E+00	FAIL ABUN
U-231	-2.467E-01	9.871E-01	1.524E+00	0.000E+00	FAIL ABUN
PA-233	2.235E-03	6.790E-02	1.172E-01	0.000E+00	FAIL ABUN
PA-234	9.707E-02	3.499E-01	5.922E-01	0.000E+00	FAIL ABUN
PA-234M	6.834E+00	8.779E+00	1.541E+01	0.000E+00	NOT IDENT.
U-235	1.528E-01	2.381E-01	4.020E-01	0.000E+00	FAIL ABUN
NP-236	-4.499E-02	8.380E-02	1.376E-01	0.000E+00	NOT IDENT.
NP-239	-1.354E-01	1.923E-01	3.204E-01	0.000E+00	FAIL ABUN
AM-241	6.977E-02	1.977E-01	3.255E-01	0.000E+00	NOT IDENT.
CM-243	-2.103E-02	9.483E-02	1.630E-01	0.000E+00	FAIL ABUN
CM-247	-7.325E-03	4.014E-02	6.684E-02	0.000E+00	NOT IDENT.
CF-249	-1.373E-02	4.542E-02	7.532E-02	0.000E+00	NOT IDENT.
CF-251	7.887E-02	1.269E-01	2.191E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:15:24.03

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232582001.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:14:59.
Sample ID         : G232582001           Sample quantity  : 1.17260E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.29  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1167	10.67*	1.046E+00	3.347E+01	3.347E+01	9.73
CD-109	88.03	122	3.72*	5.250E+00	2.002E+00	2.044E+00	49.12
SN-126	64.28	2	9.60	2.607E+00	2.329E-02	2.329E-02	4562.67
	86.94	122	8.90	5.250E+00	8.366E-01	8.366E-01	63.63
	87.57	122	37.00*	5.250E+00	2.012E-01	2.012E-01	49.12
TL-208	277.35	------	6.80	4.129E+00	------ Line Not Found		------
	510.84	85	21.60	2.610E+00	4.843E-01	4.843E-01	76.55
	583.14	286	84.20*	2.348E+00	4.636E-01	4.636E-01	20.28
	860.37	48	12.46	1.682E+00	7.343E-01	7.343E-01	72.19
BI-211	72.87	------	1.27	3.827E+00	------ Line Not Found		------
	351.07	474	12.94*	3.461E+00	3.386E+00	3.386E+00	16.22
PB-212	74.81	222	10.70	4.058E+00	1.640E+00	1.640E+00	31.95
	77.11	407	18.00	4.305E+00	1.680E+00	1.680E+00	20.08
	87.30	122	8.00	5.250E+00	9.308E-01	9.308E-01	50.13
	238.63	920	44.60*	4.606E+00	1.434E+00	1.434E+00	12.60
	300.09	73	3.41	3.894E+00	1.759E+00	1.759E+00	59.31
PO-212	74.81	222	10.70	4.058E+00	1.640E+00	1.640E+00	31.95
	77.11	407	18.00	4.305E+00	1.680E+00	1.680E+00	20.08
	87.30	122	8.00	5.250E+00	9.308E-01	9.308E-01	50.13
	115.19	------	0.60	6.304E+00	------ Line Not Found		------
	238.63	920	44.60*	4.606E+00	1.434E+00	1.434E+00	12.60
	300.09	73	3.41	3.894E+00	1.759E+00	1.759E+00	59.31
BI-214	609.31	312	46.30*	2.267E+00	9.529E-01	9.530E-01	17.00
	768.36	------	5.04	1.861E+00	------ Line Not Found		------
	934.06	------	3.21	1.561E+00	------ Line Not Found		------
	1120.29	68	15.10	1.319E+00	1.099E+00	1.099E+00	70.70
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.098E+00	------ Line Not Found		------
	1764.49	38	15.80	9.196E-01	8.287E-01	8.287E-01	59.25
PB-214	74.81	222	6.21	4.058E+00	2.826E+00	2.826E+00	31.44
	77.11	407	10.50	4.305E+00	2.880E+00	2.880E+00	21.48
	87.30	122	4.67	5.250E+00	1.594E+00	1.594E+00	49.72

Sample ID : G232582001 Acquisition date : 9-JUL-2009 08:14:59

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	204	7.49	4.563E+00	1.910E+00	1.910E+00	36.73
	295.21	202	19.20	3.944E+00	8.555E-01	8.555E-01	32.95
	351.92	474	37.20*	3.461E+00	1.178E+00	1.178E+00	17.04
PO-214	74.81	222	6.21	4.058E+00	2.826E+00	2.826E+00	31.44
	77.11	407	10.50	4.305E+00	2.880E+00	2.880E+00	21.48
	87.30	122	4.67	5.250E+00	1.594E+00	1.594E+00	49.72
	241.98	204	7.49	4.563E+00	1.910E+00	1.910E+00	36.73
	295.21	202	19.20	3.944E+00	8.555E-01	8.555E-01	32.95
	351.92	474	37.20*	3.461E+00	1.178E+00	1.178E+00	17.04
PO-216	74.81	222	10.70	4.058E+00	1.640E+00	1.640E+00	31.95
	77.11	407	18.00	4.305E+00	1.680E+00	1.680E+00	20.08
	87.30	122	8.00	5.250E+00	9.308E-01	9.308E-01	50.13
	238.63	920	44.60*	4.606E+00	1.434E+00	1.434E+00	12.60
	300.09	73	3.41	3.894E+00	1.759E+00	1.759E+00	59.31
PO-218	74.81	222	6.21	4.058E+00	2.826E+00	2.826E+00	31.44
	77.11	407	10.50	4.305E+00	2.880E+00	2.880E+00	21.48
	87.30	122	4.67	5.250E+00	1.594E+00	1.594E+00	49.72
	241.98	204	7.49	4.563E+00	1.910E+00	1.910E+00	36.73
	295.21	202	19.20	3.944E+00	8.555E-01	8.555E-01	32.95
	351.92	474	37.20*	3.461E+00	1.178E+00	1.178E+00	17.04
RA-224	240.98	204	3.95*	4.563E+00	3.621E+00	3.621E+00	36.30
RA-226	609.31	312	46.30*	2.267E+00	9.529E-01	9.530E-01	17.00
	768.36	------	5.04	1.861E+00	------ Line Not Found		------
	934.06	------	3.21	1.561E+00	------ Line Not Found		------
	1120.29	68	15.10	1.319E+00	1.099E+00	1.099E+00	70.70
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.098E+00	------ Line Not Found		------
	1764.49	38	15.80	9.196E-01	8.287E-01	8.287E-01	59.25
AC-228	338.32	194	11.40	3.566E+00	1.531E+00	1.531E+00	52.90
	911.07	223	27.70*	1.597E+00	1.616E+00	1.616E+00	22.02
	969.11	95	16.60	1.509E+00	1.218E+00	1.218E+00	47.79
RA-228	338.32	194	11.40	3.566E+00	1.531E+00	1.531E+00	52.90
	911.07	223	27.70*	1.597E+00	1.616E+00	1.616E+00	22.02
	969.11	95	16.60	1.509E+00	1.218E+00	1.218E+00	47.79
TH-228	84.40	68	1.21	4.996E+00	3.599E+00	3.599E+00	94.89
	238.60	920	44.60*	4.606E+00	1.434E+00	1.434E+00	12.60
	300.10	73	3.41	3.894E+00	1.759E+00	1.759E+00	83.20
TH-230	609.31	312	46.30*	2.267E+00	9.529E-01	9.529E-01	17.00
	768.36	------	5.04	1.861E+00	------ Line Not Found		------
	934.06	------	3.21	1.561E+00	------ Line Not Found		------
	1120.29	68	15.10	1.319E+00	1.099E+00	1.099E+00	70.70
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.098E+00	------ Line Not Found		------
	1764.49	38	15.80	9.196E-01	8.287E-01	8.287E-01	59.25
TH-232	338.32	194	11.40	3.566E+00	1.531E+00	1.531E+00	34.21
	911.07	223	27.70*	1.597E+00	1.616E+00	1.616E+00	22.02
	969.11	95	16.60	1.509E+00	1.218E+00	1.218E+00	47.79
TH-234	63.29	2	3.80*	2.607E+00	5.884E-02	5.884E-02	4562.68
	92.38	127	5.41	5.624E+00	1.341E+00	1.341E+00	64.56

Sample ID : G232582001 Acquisition date : 9-JUL-2009 08:14:59

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	312	46.30*	2.267E+00	9.529E-01	9.529E-01	17.00
	768.36	------	5.04	1.861E+00	------	Line Not Found	------
	934.06	------	3.21	1.561E+00	------	Line Not Found	------
	1120.29	68	15.10	1.319E+00	1.099E+00	1.099E+00	70.70
	1238.11	------	5.94	1.205E+00	------	Line Not Found	------
	1377.67	------	4.11	1.098E+00	------	Line Not Found	------
	1764.49	38	15.80	9.196E-01	8.287E-01	8.287E-01	59.25
NP-237	86.50	122	12.60*	5.250E+00	5.910E-01	5.910E-01	53.28
	95.87	------	2.60	5.787E+00	------	Line Not Found	------
U-238	63.29	2	3.80*	2.607E+00	5.884E-02	5.884E-02	4562.68
	92.38	127	5.41	5.624E+00	1.341E+00	1.341E+00	62.58
AM-243	74.67	222	66.00*	4.058E+00	2.659E-01	2.659E-01	30.55
	86.72	122	0.34	5.250E+00	2.216E+01	2.216E+01	49.12
	117.66	------	0.55	6.322E+00	------	Line Not Found	------
	142.18	------	0.13	6.186E+00	------	Line Not Found	------
ANH-511	511.00	85	100.00*	2.610E+00	1.046E-01	1.046E-01	76.09

Flag: "*" = Keyline

Sample ID : G232582001 Acquisition date : 9-JUL-2009 08:14:59

Total number of lines in spectrum 30
Number of unidentified lines 1
Number of lines tentatively identified by NID 29 96.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.347E+01	3.347E+01	0.326E+01	9.73	
CD-109	464.00D	1.02	2.002E+00	2.044E+00	1.004E+00	49.12	
SN-126	1.00E+05Y	1.00	2.012E-01	2.012E-01	0.988E-01	49.12	
TL-208	1.41E+10Y	1.00	4.636E-01	4.636E-01	0.940E-01	20.28	
BI-211	7.04E+08Y	1.00	3.386E+00	3.386E+00	0.549E+00	16.22	
PB-212	1.41E+10Y	1.00	1.434E+00	1.434E+00	0.181E+00	12.60	
PO-212	1.41E+10Y	1.00	1.434E+00	1.434E+00	0.181E+00	12.60	
BI-214	1600.00Y	1.00	9.529E-01	9.530E-01	1.620E-01	17.00	
PB-214	1600.00Y	1.00	1.178E+00	1.178E+00	0.201E+00	17.04	
PO-214	1600.00Y	1.00	1.178E+00	1.178E+00	0.201E+00	17.04	
PO-216	1.41E+10Y	1.00	1.434E+00	1.434E+00	0.181E+00	12.60	
PO-218	1600.00Y	1.00	1.178E+00	1.178E+00	0.201E+00	17.04	
RA-224	1.41E+10Y	1.00	3.621E+00	3.621E+00	1.314E+00	36.30	
RA-226	1600.00Y	1.00	9.529E-01	9.530E-01	1.620E-01	17.00	
AC-228	1.41E+10Y	1.00	1.616E+00	1.616E+00	0.356E+00	22.02	
RA-228	1.41E+10Y	1.00	1.616E+00	1.616E+00	0.356E+00	22.02	
TH-228	1.41E+10Y	1.00	1.434E+00	1.434E+00	0.181E+00	12.60	
TH-230	4.47E+09Y	1.00	9.529E-01	9.529E-01	1.620E-01	17.00	
TH-232	1.41E+10Y	1.00	1.616E+00	1.616E+00	0.356E+00	22.02	
TH-234	4.47E+09Y	1.00	5.884E-02	5.884E-02	268.5E-02	4562.68	
U-234	4.47E+09Y	1.00	9.529E-01	9.529E-01	1.620E-01	17.00	
NP-237	2.14E+06Y	1.00	5.910E-01	5.910E-01	3.148E-01	53.28	
U-238	4.47E+09Y	1.00	5.884E-02	5.884E-02	268.5E-02	4562.68	
AM-243	7380.00Y	1.00	2.659E-01	2.659E-01	0.812E-01	30.55	
ANH-511	1.00E+09Y	1.00	1.046E-01	1.046E-01	0.796E-01	76.09	
			---	---			
	Total Activity :		6.215E+01	6.219E+01			

Grand Total Activity : 6.215E+01 6.219E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232582001 Acquisition date : 9-JUL-2009 08:14:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	89.91	133	243	1.18	179.05	177	16	1.84E-02	38.4	5.44E+00	T
0	129.14	77	278	0.92	257.55	254	8	1.06E-02	78.6	6.32E+00	T
0	185.83	129	329	1.10	370.98	366	11	1.80E-02	61.5	5.45E+00	T
0	209.24	124	312	1.36	417.82	412	12	1.72E-02	60.9	5.05E+00	T
0	270.18	102	168	1.58	539.77	536	10	1.42E-02	51.0	4.21E+00	T
0	328.12	36	168	1.03	655.70	651	9	4.97E-03	****	3.65E+00	T
0	462.79	59	83	1.35	925.21	921	9	8.19E-03	61.5	2.82E+00	T
0	728.04	75	74	0.86	1456.03	1452	13	1.05E-02	53.3	1.95E+00	T
0	1503.42	11	12	0.68	3007.91	2999	12	1.53E-03	****	1.02E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:15:28.79

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*****************************************************************************
*                          GEI Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232582001.CNF;1  *
* Acquisition date : 9-JUL-2009 08:14:59.  Detector SN#     :               *
* Detector ID      : GAM02                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:02.29         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 25-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232582001            Analyst initials: MXR1           *
* Batch Number     : 881931                Sample Quantity : 1.17260E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 1-NOV-2008 14:03:38.86MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.347E+01	3.256E+00	6.964E-01	5.162E-02	48.059
CD-109	2.044E+00	1.004E+00	1.295E+00	1.529E-01	1.578
SN-126	2.012E-01	9.885E-02	1.283E-01	1.509E-02	1.569
TL-208	4.636E-01	9.404E-02	6.403E-02	4.702E-03	7.241
BI-211	3.386E+00	5.490E-01	3.597E-01	2.915E-02	9.411
PB-212	1.434E+00	1.806E-01	9.517E-02	9.017E-03	15.067
PO-212	1.434E+00	1.806E-01	9.517E-02	9.017E-03	15.067
BI-214	9.530E-01	1.620E-01	1.261E-01	1.050E-02	7.559
PB-214	1.178E+00	2.006E-01	1.310E-01	1.260E-02	8.988
PO-214	1.178E+00	2.006E-01	1.310E-01	1.260E-02	8.988
PO-216	1.434E+00	1.806E-01	9.517E-02	9.017E-03	15.067
PO-218	1.178E+00	2.006E-01	1.310E-01	1.260E-02	8.988
RA-224	3.621E+00	1.314E+00	1.084E+00	9.101E-02	3.342
RA-226	9.530E-01	1.620E-01	1.261E-01	1.050E-02	7.559
AC-228	1.616E+00	3.559E-01	2.111E-01	2.471E-02	7.655
RA-228	1.616E+00	3.559E-01	2.111E-01	2.471E-02	7.655
TH-228	1.434E+00	1.806E-01	9.516E-02	9.015E-03	15.068
TH-230	9.529E-01	1.620E-01	1.261E-01	1.050E-02	7.559

Sample ID : G232582001 Acquisition date : 9-JUL-2009 08:14:59

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.616E+00	3.559E-01	2.111E-01	2.471E-02	7.655
TH-234	5.884E-02	2.685E+00	2.455E+00	4.489E-01	0.024
U-234	9.529E-01	1.620E-01	1.261E-01	1.050E-02	7.559
NP-237	5.910E-01	3.148E-01	3.608E-01	8.545E-02	1.638
U-238	5.884E-02	2.685E+00	2.455E+00	4.489E-01	0.024
AM-243	2.659E-01	8.123E-02	9.331E-02	9.604E-03	2.849
ANH-511	1.046E-01	7.960E-02	5.109E-02	3.341E-03	2.047

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.126E-01		3.393E-01	5.170E-01	3.801E-02	-0.411
NA-22	-3.963E-02		5.500E-02	8.357E-02	5.587E-03	-0.474
NA-24	-8.613E-02		9.992E-02	Half-Life too short		
AL-26	2.251E-02		2.995E-02	5.746E-02	3.236E-03	0.392
TI-44	3.100E-01	+	6.224E-02	7.181E-02	7.656E-03	4.317
SC-46	2.897E-02		4.355E-02	7.536E-02	6.944E-03	0.384
V-48	-3.045E-03		7.667E-02	1.227E-01	1.037E-02	-0.025
CR-51	8.585E-02		3.694E-01	6.233E-01	5.557E-02	0.138
MN-52	1.355E-01		2.134E-01	3.814E-01	2.740E-02	0.355
MN-54	1.565E-02		4.354E-02	7.326E-02	6.223E-03	0.214
CO-56	-3.621E-02		4.577E-02	6.847E-02	5.923E-03	-0.529
CO-57	-1.290E-02		2.702E-02	4.350E-02	2.567E-03	-0.297
CO-58	-3.788E-02		4.159E-02	6.114E-02	5.018E-03	-0.620
FE-59	-5.815E-02		1.025E-01	1.611E-01	1.240E-02	-0.361
CO-60	3.523E-02		4.619E-02	8.246E-02	6.070E-03	0.427
ZN-65	1.769E-02		1.262E-01	1.841E-01	1.211E-02	0.096
GE-68	1.727E+00		1.604E+00	2.909E+00	2.088E-01	0.594
AS-73	1.222E+00		1.151E+00	2.048E+00	1.833E-01	0.597
AS-74	4.496E-02		9.085E-02	1.582E-01	1.034E-02	0.284
SE-75	-5.602E-02		4.692E-02	7.034E-02	6.305E-03	-0.796
BR-77	-3.179E+00		8.182E+00	1.266E+01	8.292E-01	-0.251
SR-82	-1.731E-01		4.003E-01	6.290E-01	4.878E-02	-0.275
RB-83	-3.814E-02		7.917E-02	1.216E-01	7.961E-03	-0.314
RB-84	3.008E-02		7.969E-02	1.342E-01	1.222E-02	0.224
KR-85	5.525E+00		9.484E+00	1.406E+01	9.197E-01	0.393
SR-85	2.795E-02		4.798E-02	7.111E-02	4.653E-03	0.393
RB-86	9.098E-01		9.672E-01	1.738E+00	1.250E-01	0.523
Y-88	2.573E-02		3.840E-02	7.139E-02	3.915E-03	0.360
ZR-88	4.071E-03		3.417E-02	5.645E-02	3.509E-03	0.072
Y-91	-1.538E+01		2.508E+01	3.936E+01	2.315E+00	-0.391
NB-94	-1.093E-02		3.677E-02	5.930E-02	4.072E-03	-0.184
NB-95	2.916E-02		5.026E-02	8.439E-02	6.433E-03	0.346
NB-95M	1.114E-02		1.417E-01	2.135E-01	2.044E-02	0.052
ZR-95	-1.666E-02		8.697E-02	1.408E-01	1.196E-02	-0.118
NB-97	-2.820E-03		1.552E-02	Half-Life too short		
ZR-97	1.162E+00		3.052E-01	Half-Life too short		

Sample ID : G232582001 Acquisition date : 9-JUL-2009 08:14:59

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	-9.709E+00		9.572E+00	1.409E+01	2.040E+00	-0.689
TC-99M	-7.331E+08		5.997E+08	Half-Life too short		
RH-101	-9.916E-04		3.779E-02	5.926E-02	4.406E-03	-0.017
RH-102	1.750E-02		3.129E-02	5.283E-02	3.426E-03	0.331
RU-103	2.186E-03		4.577E-02	7.393E-02	9.605E-03	0.030
RH-106	-1.325E-01		3.489E-01	5.643E-01	6.826E-02	-0.235
RU-106	-1.325E-01		3.486E-01	5.643E-01	3.665E-02	-0.235
AG-108M	2.640E-03		3.637E-02	5.947E-02	4.062E-03	0.044
AG-110M	-2.532E-03		3.892E-02	6.442E-02	4.349E-03	-0.039
IN-111	1.922E-01		8.650E-01	1.314E+00	1.117E-01	0.146
IN-113M	-1.306E-02		5.097E-02	8.209E-02	5.397E-03	-0.159
SN-113	-1.306E-02		5.097E-02	8.209E-02	5.397E-03	-0.159
IN-114M	1.450E-01		2.092E-01	3.125E-01	2.271E-02	0.464
CD-115	-3.177E+00		8.145E+00	1.257E+01	8.242E-01	-0.253
SN-117M	-6.486E-02		5.491E-02	8.344E-02	5.476E-03	-0.777
SB-122	1.276E+00		1.659E+00	2.942E+00	1.929E-01	0.434
I-123	-9.287E-01		6.041E-01	Half-Life too short		
TE-123M	-2.286E-02		2.974E-02	4.626E-02	3.073E-03	-0.494
I-124	-3.591E-01		6.453E-01	9.262E-01	6.044E-02	-0.388
SB-124	-7.497E-03		6.824E-02	1.108E-01	7.447E-03	-0.068
SB-125	1.032E-02		1.031E-01	1.691E-01	1.113E-02	0.061
TE-125M	2.272E+00		9.486E+00	1.587E+01	1.497E+00	0.143
I-126	-1.858E-02		1.781E-01	2.934E-01	1.893E-02	-0.063
SB-126	1.438E-01		1.378E-01	2.483E-01	1.757E-02	0.579
SB-127	-7.428E-01		1.292E+00	2.040E+00	1.952E-01	-0.364
XE-127	-4.079E-02		4.878E-02	7.401E-02	5.581E-03	-0.551
I-131	-6.078E-02		1.126E-01	1.784E-01	1.379E-02	-0.341
TE-132	8.866E-02		5.640E-01	9.005E-01	1.370E-01	0.098
BA-133	4.371E-02		5.008E-02	7.813E-02	9.746E-03	0.559
I-133	-1.002E-03		1.181E-03	Half-Life too short		
CS-134	2.968E-02		5.447E-02	9.327E-02	7.521E-03	0.318
CS-135	2.788E-01		1.714E-01	2.825E-01	2.909E-02	0.987
I-135	1.742E+06		1.338E+08	Half-Life too short		
CS-136	-1.707E-02		1.199E-01	1.980E-01	1.588E-02	-0.086
BA-137M	3.192E-03		3.818E-02	6.394E-02	4.092E-03	0.050
CS-137	3.374E-03		4.036E-02	6.759E-02	4.340E-03	0.050
CE-139	-1.258E-02		3.228E-02	5.116E-02	3.462E-03	-0.246
BA-140	-5.243E-02		2.710E-01	4.247E-01	1.387E-01	-0.123
LA-140	-4.533E-02		8.384E-02	1.274E-01	8.510E-03	-0.356
CE-141	6.740E-03		6.517E-02	1.067E-01	6.889E-03	0.063
CE-143	2.254E-04		5.318E-05	Half-Life too short		
CE-144	1.049E-01		2.391E-01	3.587E-01	5.126E-02	0.292
PM-144	2.360E-02		3.765E-02	6.550E-02	4.454E-03	0.360
PR-144	1.598E+00		2.550E+00	4.436E+00	3.015E-01	0.360
PM-146	-8.858E-03		4.820E-02	7.696E-02	6.973E-03	-0.115
ND-147	-7.697E-02		5.713E-01	9.027E-01	1.251E-01	-0.085
PM-149	-4.364E+01		6.577E+01	1.054E+02	1.669E+01	-0.414
EU-152	1.251E-01		1.131E-01	1.801E-01	1.508E-02	0.695

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	7.215E-03		9.165E-02	1.356E-01	1.289E-02	0.053
EU-154	-1.135E-01		1.537E-01	2.326E-01	2.304E-02	-0.488
EU-155	6.226E-02		1.094E-01	1.859E-01	1.530E-02	0.335
TB-160	8.785E-02		1.604E-01	2.743E-01	2.491E-02	0.320
HO-166M	2.491E-03		6.843E-02	1.135E-01	7.913E-03	0.022
TM-171	-1.303E+01		3.474E+01	5.201E+01	4.979E+00	-0.250
LU-176	-2.099E-03		2.544E-02	4.222E-02	3.692E-03	-0.050
LU-177	2.991E+00	+	1.836E+00	1.885E+00	1.445E-01	1.586
LU-177M	3.553E-02		1.949E-01	3.221E-01	2.030E-02	0.110
HF-181	-1.365E-02		4.503E-02	7.071E-02	4.595E-03	-0.193
W-181	2.226E-02		4.524E-01	6.937E-01	6.538E-02	0.032
TA-182	4.628E-02		2.602E-01	4.356E-01	2.642E-02	0.106
RE-183	1.269E-01		1.222E-01	2.030E-01	1.353E-02	0.625
RE-184	-1.688E-01		2.500E-01	4.071E-01	3.527E-02	-0.415
OS-185	-1.780E-02		4.393E-02	7.050E-02	4.542E-03	-0.252
RE-188	2.505E-01		1.799E-01	3.098E-01	2.005E-02	0.808
W-188	2.590E+00		8.706E+00	1.313E+01	1.189E+00	0.197
IR-192	-1.028E-02		3.613E-02	5.904E-02	5.050E-03	-0.174
AU-195	1.944E-01		2.589E-01	3.964E-01	3.657E-02	0.491
TL-200	1.494E-05		1.107E-04	Half-Life too short		
TL-201	1.051E+00		5.508E+00	8.983E+00	6.105E-01	0.117
TL-202	2.462E-02		6.721E-02	1.124E-01	7.185E-03	0.219
HG-203	1.351E-02		4.807E-02	7.983E-02	7.560E-03	0.169
BI-207	3.342E-02		6.000E-02	1.054E-01	7.788E-03	0.317
TL-207	2.006E-01		8.064E-01	1.202E+00	2.113E-01	0.167
PO-209	-5.131E+00		8.369E+00	1.263E+01	1.176E+00	-0.406
BI-210	4.063E+00		6.852E+00	1.068E+01	8.610E-01	0.380
PB-210	4.063E+00		6.852E+00	1.068E+01	8.610E-01	0.380
PO-210	4.063E+00		6.850E+00	1.068E+01	7.504E-01	0.380
PB-211	-2.276E-01		1.058E+00	1.687E+00	1.053E+00	-0.135
BI-212	1.048E+00	+	5.655E-01	7.313E-01	6.420E-02	1.433
PO-215	2.006E-01		8.064E-01	1.202E+00	2.113E-01	0.167
RN-219	-2.942E-02		4.535E-01	7.384E-01	1.019E-01	-0.040
RN-220	-1.048E+01		2.764E+01	4.245E+01	2.785E+00	-0.247
RA-223	2.006E-01		8.064E-01	1.202E+00	2.113E-01	0.167
AC-227	2.214E-01		4.289E-01	7.397E-01	1.140E-01	0.299
TH-227	2.214E-01		4.294E-01	7.397E-01	1.340E-01	0.299
TH-229	1.501E-01		5.546E-01	8.998E-01	6.603E-02	0.167
PA-231	-1.947E-01		1.632E+00	2.719E+00	4.215E-01	-0.072
TH-231	2.006E-01		8.064E-01	1.202E+00	2.113E-01	0.167
U-231	-2.467E-01		1.007E+00	1.486E+00	1.461E-01	-0.166
PA-233	2.235E-03		6.929E-02	1.157E-01	1.027E-02	0.019
PA-234	9.707E-02		3.571E-01	5.914E-01	1.117E-01	0.164
PA-234M	6.834E+00		8.958E+00	1.540E+01	1.677E+00	0.444
U-235	1.528E-01		2.430E-01	3.935E-01	6.475E-02	0.388
NP-236	-4.499E-02		8.551E-02	1.348E-01	8.913E-03	-0.334
NP-239	-1.354E-01		1.962E-01	3.131E-01	2.035E-02	-0.433
AM-241	6.977E-02		2.017E-01	3.159E-01	2.926E-02	0.221

Sample ID : G232582001 Acquisition date : 9-JUL-2009 08:14:59

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-2.103E-02		9.676E-02	1.591E-01	1.331E-02	-0.132
CM-247	-7.325E-03		4.096E-02	6.614E-02	4.139E-03	-0.111
CF-249	-1.373E-02		4.634E-02	7.451E-02	4.733E-03	-0.184
CF-251	7.887E-02		1.295E-01	2.150E-01	1.500E-02	0.367

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232582001           *
* Acquisition date  :  9-JUL-2009 08:14:59 Detector SN#     :               *
* Detector ID       : GAM02                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:02.29      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232582001           Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.1726E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.347E+01	3.191E+00	3.473E-01	1.628E+00
CD-109	2.044E+00	9.837E-01	6.650E-01	5.019E-01
SN-126	2.012E-01	9.687E-02	6.587E-02	4.943E-02
TL-208	4.636E-01	9.216E-02	3.224E-02	4.702E-02
BI-211	3.386E+00	5.381E-01	1.821E-01	2.745E-01
PB-212	1.434E+00	1.770E-01	4.838E-02	9.031E-02
PO-212	1.434E+00	1.770E-01	4.838E-02	9.031E-02
BI-214	9.530E-01	1.588E-01	6.346E-02	8.100E-02
PB-214	1.178E+00	1.966E-01	6.634E-02	1.003E-01
PO-214	1.178E+00	1.966E-01	6.634E-02	1.003E-01
PO-216	1.434E+00	1.770E-01	4.838E-02	9.031E-02
PO-218	1.178E+00	1.966E-01	6.634E-02	1.003E-01
RA-224	3.621E+00	1.288E+00	5.507E-01	6.572E-01
RA-226	9.530E-01	1.588E-01	6.346E-02	8.100E-02
AC-228	1.616E+00	3.487E-01	1.058E-01	1.779E-01
RA-228	1.616E+00	3.487E-01	1.058E-01	1.779E-01
TH-228	1.434E+00	1.770E-01	4.837E-02	9.031E-02
TH-230	9.529E-01	1.588E-01	6.345E-02	8.100E-02
TH-232	1.616E+00	3.487E-01	1.058E-01	1.779E-01
TH-234	5.884E-02	2.631E+00	1.265E+00	1.342E+00
U-234	9.529E-01	1.588E-01	6.345E-02	8.100E-02
NP-237	5.910E-01	3.086E-01	1.853E-01	1.574E-01
U-238	5.884E-02	2.631E+00	1.265E+00	1.342E+00
AM-243	2.659E-01	7.961E-02	4.800E-02	4.062E-02
ANH-511	1.046E-01	7.801E-02	2.576E-02	3.980E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-2.126E-01	3.325E-01	2.609E-01	1.696E-01 NOT IDENT.
NA-22	-3.963E-02	5.390E-02	4.173E-02	2.750E-02 NOT IDENT.

NA-24	-8.613E+04	1.958E+05	0.000E+00	9.992E+04	SHORT HLIF
AL-26	2.251E-02	2.935E-02	2.858E-02	1.498E-02	NOT IDENT.
TI-44	3.100E-01	6.100E-02	3.692E-02	3.112E-02	FAIL ABUN
SC-46	2.897E-02	4.268E-02	3.778E-02	2.178E-02	FAIL ABUN
V-48	-3.045E-03	7.514E-02	6.144E-02	3.833E-02	NOT IDENT.
CR-51	8.585E-02	3.620E-01	3.158E-01	1.847E-01	NOT IDENT.
MN-52	1.355E-01	2.091E-01	1.902E-01	1.067E-01	NOT IDENT.
MN-54	1.565E-02	4.267E-02	3.675E-02	2.177E-02	NOT IDENT.
CO-56	-3.621E-02	4.485E-02	3.434E-02	2.288E-02	NOT IDENT.
CO-57	-1.290E-02	2.648E-02	2.227E-02	1.351E-02	NOT IDENT.
CO-58	-3.788E-02	4.076E-02	3.068E-02	2.079E-02	NOT IDENT.
FE-59	-5.815E-02	1.005E-01	8.057E-02	5.127E-02	NOT IDENT.
CO-60	3.523E-02	4.526E-02	4.116E-02	2.309E-02	NOT IDENT.
ZN-65	1.769E-02	1.237E-01	9.209E-02	6.311E-02	NOT IDENT.
GE-68	1.727E+00	1.572E+00	1.455E+00	8.022E-01	NOT IDENT.
AS-73	1.222E+00	1.128E+00	1.057E+00	5.757E-01	NOT IDENT.
AS-74	4.496E-02	8.903E-02	7.966E-02	4.542E-02	NOT IDENT.
SE-75	-5.602E-02	4.598E-02	3.572E-02	2.346E-02	NOT IDENT.
BR-77	-3.179E+00	8.018E+00	6.384E+00	4.091E+00	FAIL ABUN
SR-82	-1.731E-01	3.923E-01	3.158E-01	2.001E-01	NOT IDENT.
RB-83	-3.814E-02	7.759E-02	6.129E-02	3.959E-02	NOT IDENT.
RB-84	3.008E-02	7.809E-02	6.726E-02	3.984E-02	NOT IDENT.
KR-85	5.525E+00	9.294E+00	7.088E+00	4.742E+00	NOT IDENT.
SR-85	2.795E-02	4.702E-02	3.586E-02	2.399E-02	NOT IDENT.
RB-86	9.098E-01	9.479E-01	8.695E-01	4.836E-01	NOT IDENT.
Y-88	2.573E-02	3.763E-02	3.551E-02	1.920E-02	NOT IDENT.
ZR-88	4.071E-03	3.349E-02	2.855E-02	1.709E-02	NOT IDENT.
Y-91	-1.538E+01	2.458E+01	1.967E+01	1.254E+01	NOT IDENT.
NB-94	-1.093E-02	3.604E-02	2.980E-02	1.839E-02	NOT IDENT.
NB-95	2.916E-02	4.926E-02	4.237E-02	2.513E-02	NOT IDENT.
NB-95M	1.114E-02	1.388E-01	1.086E-01	7.083E-02	NOT IDENT.
ZR-95	-1.666E-02	8.523E-02	7.070E-02	4.348E-02	NOT IDENT.
NB-97	-2.820E+03	3.041E+04	0.000E+00	1.552E+04	SHORT HLIF
ZR-97	1.162E+06	5.983E+05	0.000E+00	3.052E+05	SHORT HLIF
MO-99	-9.709E+00	9.381E+00	7.078E+00	4.786E+00	NOT IDENT.
TC-99M	-7.331E+14	1.175E+15	0.000E+00	5.997E+14	SHORT HLIF
RH-101	-9.916E-04	3.704E-02	3.018E-02	1.890E-02	NOT IDENT.
RH-102	1.750E-02	3.067E-02	2.666E-02	1.565E-02	NOT IDENT.
RU-103	2.186E-03	4.486E-02	3.729E-02	2.289E-02	FAIL ABUN
RH-106	-1.325E-01	3.419E-01	2.840E-01	1.745E-01	FAIL ABUN
RU-106	-1.325E-01	3.417E-01	2.840E-01	1.743E-01	FAIL ABUN
AG-108M	2.640E-03	3.564E-02	3.004E-02	1.818E-02	NOT IDENT.
AG-110M	-2.532E-03	3.814E-02	3.240E-02	1.946E-02	NOT IDENT.
IN-111	1.922E-01	8.477E-01	6.678E-01	4.325E-01	NOT IDENT.
IN-113M	-1.306E-02	4.995E-02	4.151E-02	2.549E-02	NOT IDENT.
SN-113	-1.306E-02	4.995E-02	4.151E-02	2.549E-02	NOT IDENT.
IN-114M	1.450E-01	2.050E-01	1.592E-01	1.046E-01	NOT IDENT.
CD-115	-3.177E+00	7.982E+00	6.339E+00	4.072E+00	NOT IDENT.
SN-117M	-6.486E-02	5.381E-02	4.259E-02	2.745E-02	NOT IDENT.
SB-122	1.276E+00	1.626E+00	1.482E+00	8.294E-01	NOT IDENT.
I-123	-9.287E+05	1.184E+06	0.000E+00	6.041E+05	SHORT HLIF
TE-123M	-2.286E-02	2.914E-02	2.361E-02	1.487E-02	NOT IDENT.
I-124	-3.591E-01	6.324E-01	4.662E-01	3.226E-01	NOT IDENT.
SB-124	-7.497E-03	6.688E-02	5.514E-02	3.412E-02	FAIL ABUN
SB-125	1.032E-02	1.011E-01	8.546E-02	5.157E-02	FAIL ABUN
TE-125M	2.272E+00	9.296E+00	8.134E+00	4.743E+00	NOT IDENT.
I-126	-1.858E-02	1.746E-01	1.475E-01	8.906E-02	NOT IDENT.
SB-126	1.438E-01	1.351E-01	1.247E-01	6.891E-02	FAIL ABUN
SB-127	-7.428E-01	1.266E+00	1.025E+00	6.462E-01	NOT IDENT.
XE-127	-4.079E-02	4.781E-02	3.768E-02	2.439E-02	NOT IDENT.
I-131	-6.078E-02	1.103E-01	9.027E-02	5.629E-02	NOT IDENT.
TE-132	8.866E-02	5.527E-01	4.580E-01	2.820E-01	NOT IDENT.
BA-133	4.371E-02	4.908E-02	3.955E-02	2.504E-02	NOT IDENT.
I-133	-1.002E+03	2.314E+03	0.000E+00	1.181E+03	SHORT HLIF
CS-134	2.968E-02	5.338E-02	4.681E-02	2.724E-02	NOT IDENT.
CS-135	2.788E-01	1.679E-01	1.434E-01	8.568E-02	NOT IDENT.
I-135	1.742E+12	2.622E+14	0.000E+00	1.338E+14	SHORT HLIF
CS-136	-1.707E-02	1.175E-01	9.907E-02	5.995E-02	FAIL ABUN
BA-137M	3.192E-03	3.741E-02	3.215E-02	1.909E-02	NOT IDENT.
CS-137	3.374E-03	3.955E-02	3.399E-02	2.018E-02	NOT IDENT.
CE-139	-1.258E-02	3.163E-02	2.610E-02	1.614E-02	NOT IDENT.
BA-140	-5.243E-02	2.655E-01	2.141E-01	1.355E-01	NOT IDENT.
LA-140	-4.533E-02	8.216E-02	6.347E-02	4.192E-02	FAIL ABUN
CE-141	6.740E-03	6.387E-02	5.452E-02	3.258E-02	NOT IDENT.
CE-143	2.254E+02	1.042E+02	0.000E+00	5.318E+01	SHORT HLIF
CE-144	1.049E-01	2.343E-01	1.834E-01	1.195E-01	NOT IDENT.
PM-144	2.360E-02	3.690E-02	3.292E-02	1.883E-02	NOT IDENT.
PR-144	1.598E+00	2.499E+00	2.230E+00	1.275E+00	NOT IDENT.

PM-146	-8.858E-03	4.723E-02	3.886E-02	2.410E-02	NOT IDENT.
ND-147	-7.697E-02	5.598E-01	4.550E-01	2.856E-01	FAIL ABUN
PM-149	-4.364E+01	6.446E+01	5.350E+01	3.289E+01	NOT IDENT.
EU-152	1.251E-01	1.108E-01	9.121E-02	5.654E-02	NOT IDENT.
GD-153	7.215E-03	8.981E-02	6.954E-02	4.582E-02	FAIL ABUN
EU-154	-1.135E-01	1.506E-01	1.161E-01	7.683E-02	NOT IDENT.
EU-155	6.226E-02	1.072E-01	9.527E-02	5.468E-02	FAIL ABUN
TB-160	8.785E-02	1.572E-01	1.375E-01	8.021E-02	FAIL ABUN
HO-166M	2.491E-03	6.706E-02	5.702E-02	3.421E-02	FAIL ABUN
TM-171	-1.303E+01	3.405E+01	2.679E+01	1.737E+01	NOT IDENT.
LU-176	-2.099E-03	2.494E-02	2.141E-02	1.272E-02	FAIL ABUN
LU-177	2.991E+00	1.800E+00	9.597E-01	9.182E-01	FAIL ABUN
LU-177M	3.553E-02	1.910E-01	1.628E-01	9.743E-02	FAIL ABUN
HF-181	-1.365E-02	4.413E-02	3.568E-02	2.252E-02	NOT IDENT.
W-181	2.226E-02	4.433E-01	3.574E-01	2.262E-01	NOT IDENT.
TA-182	4.628E-02	2.550E-01	2.177E-01	1.301E-01	FAIL ABUN
RE-183	1.269E-01	1.198E-01	1.036E-01	6.110E-02	FAIL ABUN
RE-184	-1.688E-01	2.450E-01	2.068E-01	1.250E-01	NOT IDENT.
OS-185	-1.780E-02	4.305E-02	3.547E-02	2.197E-02	NOT IDENT.
RE-188	2.505E-01	1.763E-01	1.582E-01	8.997E-02	NOT IDENT.
W-188	2.590E+00	8.532E+00	6.661E+00	4.353E+00	FAIL ABUN
IR-192	-1.028E-02	3.540E-02	2.992E-02	1.806E-02	FAIL ABUN
AU-195	1.944E-01	2.537E-01	2.033E-01	1.295E-01	FAIL ABUN
TL-200	1.494E+01	2.169E+02	0.000E+00	1.107E+02	SHORT HLIF
TL-201	1.051E+00	5.398E+00	4.583E+00	2.754E+00	NOT IDENT.
TL-202	2.462E-02	6.586E-02	5.676E-02	3.360E-02	NOT IDENT.
HG-203	1.351E-02	4.711E-02	4.051E-02	2.403E-02	FAIL ABUN
BI-207	3.342E-02	5.880E-02	5.275E-02	3.000E-02	FAIL ABUN
TL-207	2.006E-01	7.903E-01	6.090E-01	4.032E-01	FAIL ABUN
PO-209	-5.131E+00	8.201E+00	6.330E+00	4.184E+00	NOT IDENT.
BI-210	4.063E+00	6.715E+00	5.523E+00	3.426E+00	NOT IDENT.
PB-210	4.063E+00	6.715E+00	5.523E+00	3.426E+00	NOT IDENT.
PO-210	4.063E+00	6.713E+00	5.523E+00	3.425E+00	NOT IDENT.
PB-211	-2.276E-01	1.036E+00	8.530E-01	5.288E-01	NOT IDENT.
BI-212	1.048E+00	5.542E-01	3.674E-01	2.828E-01	FAIL ABUN
PO-215	2.006E-01	7.903E-01	6.090E-01	4.032E-01	FAIL ABUN
RN-219	-2.942E-02	4.444E-01	3.733E-01	2.268E-01	FAIL ABUN
RN-220	-1.048E+01	2.709E+01	2.139E+01	1.382E+01	NOT IDENT.
RA-223	2.006E-01	7.903E-01	6.090E-01	4.032E-01	FAIL ABUN
AC-227	2.214E-01	4.203E-01	3.757E-01	2.145E-01	FAIL ABUN
TH-227	2.214E-01	4.208E-01	3.757E-01	2.147E-01	FAIL ABUN
TH-229	1.501E-01	5.435E-01	4.584E-01	2.773E-01	FAIL ABUN
PA-231	-1.947E-01	1.600E+00	1.379E+00	8.162E-01	FAIL ABUN
TH-231	2.006E-01	7.903E-01	6.090E-01	4.032E-01	FAIL ABUN
U-231	-2.467E-01	9.871E-01	7.626E-01	5.036E-01	FAIL ABUN
PA-233	2.235E-03	6.790E-02	5.863E-02	3.464E-02	FAIL ABUN
PA-234	9.707E-02	3.499E-01	2.963E-01	1.785E-01	FAIL ABUN
PA-234M	6.834E+00	8.779E+00	7.708E+00	4.479E+00	NOT IDENT.
U-235	1.528E-01	2.381E-01	2.011E-01	1.215E-01	FAIL ABUN
NP-236	-4.499E-02	8.380E-02	6.882E-02	4.275E-02	NOT IDENT.
NP-239	-1.354E-01	1.923E-01	1.603E-01	9.811E-02	FAIL ABUN
AM-241	6.977E-02	1.977E-01	1.629E-01	1.009E-01	NOT IDENT.
CM-243	-2.103E-02	9.483E-02	8.157E-02	4.838E-02	FAIL ABUN
CM-247	-7.325E-03	4.014E-02	3.344E-02	2.048E-02	NOT IDENT.
CF-249	-1.373E-02	4.542E-02	3.768E-02	2.317E-02	NOT IDENT.
CF-251	7.887E-02	1.269E-01	1.096E-01	6.473E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	210.9640
46.50	210.9640
46.50	210.9640
48.70	247.4420
49.72	189.6747
51.35	224.1996
52.39	203.9986
52.97	200.1879
53.15	200.3071
53.44	200.4996
54.07	197.5381
56.28	226.1584
56.28	226.1605
57.37	0.0000
57.53	219.3738
57.53	219.3751
57.60	219.4221
57.98	231.6501
57.98	231.6501
59.32	236.9060
59.32	236.9060
59.40	229.2372
59.54	224.1821
59.72	224.3055
60.01	236.1162
61.10	261.4941
61.14	261.5257
61.30	261.6513
63.00	256.0356
63.29	256.2543
63.29	256.2543
63.58	256.4726
64.28	256.9978
65.12	277.7098
65.20	277.7741
65.20	277.7741
66.05	292.9002
66.72	290.8246
66.83	290.9174
66.91	309.4164
67.20	309.6710
67.20	309.6710
67.75	295.6321
67.85	279.8739
68.90	273.6325
68.90	273.6325
69.30	273.0515
69.67	296.3317
70.82	300.8132
70.82	300.8132
70.83	300.8218
72.80	294.3947
72.87	294.4484
72.87	294.4484
74.67	279.7174
74.81	279.8190
74.81	279.8190
74.81	279.8190
74.81	279.8190
74.81	279.8190
74.81	279.8190
74.97	279.9364
75.28	280.1633
75.70	280.4696
77.11	281.4932
77.11	281.4932
77.11	281.4932

77.11	281.4932
77.11	281.4932
77.11	281.4932
78.38	264.7553
79.62	279.6592
79.80	275.2426
79.80	275.2426
80.11	275.4568
80.18	275.5046
80.30	251.0305
80.30	251.0305
80.57	221.1643
81.00	246.0004
81.07	276.1149
81.07	276.1149
81.07	276.1149
81.07	276.1149
82.60	246.9713
83.37	266.6775
83.78	261.4413
83.78	261.4413
83.78	261.4413
83.78	261.4413
84.21	261.7124
84.40	250.8082
84.90	251.1095
85.43	251.4289
86.29	251.9426
86.50	252.0690
86.54	252.0926
86.59	252.1218
86.72	252.1995
86.79	288.2740
86.94	288.3772
87.30	246.9948
87.30	246.9948
87.30	246.9948
87.30	246.9948
87.30	246.9948
87.30	246.9948
87.57	283.2517
87.88	283.4572
88.03	283.5568
88.36	283.7747
88.47	283.8478
89.95	321.1230
91.11	243.5830
92.29	244.2375
92.38	244.2866
92.38	244.2866
93.35	244.8203
94.00	245.1774
94.67	245.5398
94.67	245.5424
94.90	245.6685
94.90	245.6685
94.90	245.6685
94.90	245.6685
95.87	280.1536
95.87	280.1536
96.73	239.5735
97.43	241.3575
98.44	230.5032
98.44	230.5032
98.88	216.4799
99.55	215.6508
99.55	215.6508
99.86	213.1297
100.00	213.1935
100.10	227.5209
103.18	245.2904
103.76	233.1172
105.00	216.4032
105.31	224.2409
108.00	252.5703
109.28	242.5499
111.00	235.5933
111.00	235.5933

111.76	235.9478
112.95	235.5232
115.19	216.9196
116.30	231.1536
117.00	247.2224
117.00	247.2224
117.66	230.7675
121.11	225.3212
121.62	239.4445
121.78	254.4232
122.06	254.5547
122.32	224.8321
122.32	224.8321
122.32	224.8321
122.32	224.8321
123.07	226.1398
127.23	215.3084
129.76	261.6541
131.20	245.6400
133.02	214.4777
133.54	228.3737
135.34	245.3736
136.00	241.5759
136.25	241.6783
136.48	241.7736
140.51	256.7749
140.51	0.0000
142.18	243.0701
142.65	243.2574
143.76	229.2469
144.24	212.8901
144.24	212.8901
144.24	212.8901
144.24	212.8901
145.22	246.3551
145.44	246.4447
147.16	264.7845
152.43	250.2615
152.70	233.6074
153.22	243.2337
154.21	227.8584
154.21	227.8584
154.21	227.8584
154.21	227.8584
155.03	203.9680
156.02	222.1828
158.56	251.5918
159.00	0.0000
159.00	236.9518
160.31	240.6033
161.27	239.8905
162.32	198.8073
162.64	207.4117
163.35	226.7979
163.89	244.0323
165.85	240.4678
167.43	209.9607
171.28	202.5211
171.86	199.4569
172.10	212.4668
176.55	181.2564
176.60	181.2683
181.06	201.5135
184.41	213.9656
185.71	219.8385
186.00	219.9259
190.27	185.8008
192.34	225.1267
193.63	205.5129
197.04	239.9066
198.01	223.4497
198.60	193.4301
200.40	212.9305
201.83	226.7918
202.84	213.5934
205.31	187.7613
208.36	196.9678
208.81	197.0793

209.75	197.3076
209.75	197.3076
210.97	183.9771
215.65	189.6021
216.55	192.0950
218.09	172.9778
222.10	176.1094
223.80	166.0825
226.40	186.2562
227.00	196.8063
227.08	196.8254
227.20	196.8513
228.16	168.0899
228.18	168.0943
228.18	168.0943
231.56	0.0000
235.69	202.0535
236.00	203.5292
236.00	203.5292
238.60	172.4510
238.63	172.4570
238.63	172.4570
238.63	172.4570
239.00	172.5273
240.98	172.9101
241.98	173.1015
241.98	173.1015
241.98	173.1015
244.69	130.3925
245.39	147.5145
247.94	149.3481
248.90	153.0641
249.79	157.6649
252.40	189.3737
252.85	178.7415
252.85	178.7415
254.15	0.0000
256.20	168.6194
256.20	168.6194
260.50	156.7715
260.90	158.6406
262.80	146.3107
264.65	165.4660
268.24	106.0835
268.79	98.8723
269.46	126.5854
269.46	126.5854
269.46	126.5854
269.46	126.5854
271.23	141.3889
273.65	176.8059
276.40	172.6883
277.35	159.4956
277.60	149.4498
277.60	149.4498
278.00	150.4268
278.60	143.1746
279.20	151.5253
279.53	163.5179
280.46	185.7348
281.68	174.9127
283.67	144.8158
284.30	142.1379
285.00	148.6995
285.90	152.5273
286.10	152.5575
286.10	152.5575
287.40	132.3845
288.45	0.0000
290.67	138.1899
290.80	144.1525
291.72	174.0261
293.26	0.0000
293.70	137.1016
295.21	147.7459
295.21	147.7459
295.21	147.7459
295.96	164.2803

296.50	164.3635
297.23	164.4763
298.57	164.6858
299.80	137.8967
299.80	137.8967
300.09	124.4412
300.09	124.4412
300.09	124.4412
300.10	124.4412
300.12	124.4433
301.29	118.5771
302.84	103.7173
303.76	112.8333
303.91	115.8572
304.40	118.9205
304.40	118.9205
304.84	122.9845
306.84	120.6992
308.46	116.1571
311.98	127.8994
316.51	125.5728
318.01	122.8842
319.02	104.8790
319.41	112.5462
320.08	109.7498
323.87	124.1024
323.87	124.1024
323.87	124.1024
323.87	124.1024
325.23	119.6489
328.77	140.0258
333.44	113.2996
334.20	132.9557
334.20	132.9557
334.30	132.9683
338.28	117.3277
338.28	117.3277
338.28	117.3277
338.28	117.3277
338.32	117.3314
338.32	117.3314
338.32	117.3314
340.50	118.1321
340.57	118.1395
344.27	90.4423
345.85	124.9141
350.59	0.0000
351.07	117.6178
351.92	128.4894
351.92	128.4894
351.92	128.4894
355.39	0.0000
356.01	88.1795
364.48	113.9594
366.43	107.1909
367.43	104.2966
367.94	0.0000
369.80	105.4889
374.96	85.9357
383.85	107.6645
387.95	122.1373
388.63	112.1018
391.69	118.4371
391.69	118.4371
392.90	106.3875
398.62	114.9881
400.65	96.8192
401.10	92.7732
401.81	104.0435
402.60	107.1661
404.84	111.4333
410.95	104.7478
411.60	121.2374
413.65	99.8092
414.70	101.9457
415.30	113.3217
415.76	111.2992
417.63	0.0000

418.52	106.3586
423.70	106.7547
427.08	105.9735
427.89	94.5991
432.53	91.7799
433.93	90.8259
439.47	80.6975
439.56	75.4623
439.89	71.2861
443.98	69.3858
444.90	61.0135
445.03	61.0188
445.03	61.0188
445.03	61.0188
445.03	61.0188
453.90	89.9662
463.38	71.5794
468.07	85.4785
473.00	105.0514
475.06	70.8441
475.35	73.0043
476.78	79.5204
477.59	84.9380
477.96	80.6568
482.03	80.8685
484.57	79.9213
487.03	59.4941
490.36	0.0000
492.35	77.0615
497.08	83.8240
507.63	0.0000
510.53	0.0000
510.84	80.1517
511.00	80.1590
511.85	80.2013
511.85	80.2013
513.99	93.2863
513.99	93.2863
520.41	87.2452
520.65	82.8415
527.90	78.7656
528.96	0.0000
529.64	78.8480
529.87	0.0000
531.02	73.3557
537.32	75.8608
543.00	77.2333
546.56	0.0000
549.76	68.5468
552.65	70.2381
555.20	64.0283
563.23	77.9102
563.90	71.5976
568.70	78.1517
569.32	79.0880
569.50	79.0965
569.67	84.5605
573.80	78.3763
574.00	78.3847
574.64	77.5002
578.91	82.2546
579.30	0.0000
583.14	72.3710
585.48	58.0932
591.81	71.7939
592.07	79.1700
593.00	71.8415
595.88	61.8065
600.56	84.1572
602.52	0.0000
602.71	76.7157
602.71	76.7157
603.60	63.2984
604.41	64.8713
604.70	69.5160
609.31	78.9778
609.31	78.9778
609.31	78.9778

609.31	78.9778
610.33	71.2742
612.46	65.1499
614.37	72.9785
618.01	70.9411
621.84	73.8889
621.84	73.8889
631.29	63.9144
633.02	78.0820
633.10	78.0861
634.78	61.2041
635.90	51.8176
636.97	53.7325
645.85	67.2333
646.12	63.4537
656.30	76.1543
657.75	71.4459
657.90	0.0000
661.65	64.9038
661.65	64.9038
664.57	0.0000
666.33	65.0549
666.33	65.0549
675.00	80.7044
677.61	66.3771
685.20	82.0719
692.80	83.3398
695.00	76.6373
696.49	60.1881
696.49	60.1881
697.00	53.4061
697.49	58.2744
698.33	72.8723
698.50	71.9061
699.00	74.8400
702.63	71.0734
706.10	65.3381
706.58	0.0000
706.67	64.3806
709.31	68.3679
711.68	66.4876
713.82	62.6391
717.42	62.7438
720.50	44.1804
721.93	0.0000
722.20	61.7599
722.78	68.7969
722.78	68.7969
722.89	70.4384
722.95	70.4401
723.30	65.5371
724.18	63.9241
727.18	62.3716
733.00	57.5999
735.90	53.6747
739.58	72.2978
742.81	42.6494
744.21	58.5549
747.13	71.5518
751.79	68.7136
752.31	64.7445
753.82	56.8149
755.35	76.8007
756.15	76.8289
756.87	66.8724
763.93	90.1099
765.79	66.1337
766.41	63.1461
766.84	71.1768
768.36	74.2349
768.36	74.2349
768.36	74.2349
768.36	74.2349
776.49	60.4043
778.00	57.4217
778.57	56.4279
778.89	51.3972
783.80	55.5465

785.46	62.6600
792.07	67.9062
795.84	60.9097
796.30	56.8600
801.93	66.1553
805.60	46.8906
810.29	58.2176
810.76	58.2288
815.85	51.1877
817.79	53.2784
818.51	50.2190
819.60	42.0390
826.30	54.4945
828.27	0.0000
831.60	64.9180
831.96	70.0802
834.83	59.8451
836.80	0.0000
846.75	65.3194
848.13	52.9075
856.28	0.0000
856.80	53.7858
860.37	43.7852
867.32	38.3308
867.82	40.3296
871.10	49.2066
873.19	50.2945
874.81	51.3758
875.33	0.0000
876.40	48.2596
879.36	46.2150
880.27	39.9278
880.51	42.0332
881.50	48.3562
883.24	62.0652
884.67	53.6795
889.25	41.1214
896.60	53.9273
898.02	59.2471
899.00	57.1522
903.28	40.6375
911.07	39.3414
911.07	39.3414
911.07	39.3414
919.63	52.2695
920.93	48.0256
925.00	53.4436
925.24	53.4485
926.50	51.3352
934.06	47.1904
934.06	47.1904
934.06	47.1904
934.06	47.1904
935.52	42.9238
937.48	50.4722
944.10	46.2890
946.00	48.4761
949.00	40.9808
962.29	60.9576
964.01	43.3740
966.15	59.6863
968.20	104.9810
969.11	103.2035
969.11	103.2035
969.11	103.2035
977.42	47.2160
980.50	49.0858
983.50	45.8626
989.30	53.6165
996.32	62.5260
1001.03	50.5427
1001.68	50.5540
1004.76	64.1781
1021.30	0.0000
1024.50	0.0000
1034.80	50.9515
1037.82	53.7850
1038.57	52.8716

1038.76	0.0000
1045.16	55.7788
1046.59	57.6659
1048.07	53.9738
1050.47	46.5658
1050.47	46.5658
1063.62	43.0295
1076.63	49.7910
1077.35	48.8643
1085.78	49.9420
1099.22	54.8918
1112.02	53.2201
1112.84	53.7769
1115.52	60.3470
1120.29	62.8875
1120.29	62.8875
1120.29	62.8875
1120.29	62.8875
1120.51	62.8928
1121.28	62.9089
1124.00	0.0000
1129.67	55.9078
1131.51	0.0000
1147.95	0.0000
1167.94	73.5044
1173.22	59.0938
1175.09	52.3411
1177.93	67.9093
1189.05	68.1401
1204.90	84.1138
1205.75	0.0000
1213.00	84.3168
1221.42	74.7012
1230.97	85.7539
1235.34	79.9420
1236.41	0.0000
1238.11	76.0538
1238.11	76.0538
1238.11	76.0538
1238.11	76.0538
1238.25	76.0569
1246.25	62.3745
1260.41	0.0000
1271.85	45.8802
1274.45	56.8933
1274.54	56.8956
1291.56	41.1235
1298.22	0.0000
1312.09	34.2988
1325.50	44.5514
1325.50	44.5514
1332.49	26.3766
1333.61	33.4888
1360.21	21.4657
1362.66	0.0000
1365.15	21.4939
1368.21	23.5606
1368.53	0.0000
1376.25	28.7440
1377.67	28.7542
1377.67	28.7542
1377.67	28.7542
1377.67	28.7542
1384.27	30.8630
1394.10	22.6920
1395.20	23.7300
1407.95	24.8447
1434.06	15.6335
1436.60	21.9015
1457.56	0.0000
1460.81	27.2843
1489.15	32.7634
1509.49	15.5792
1596.49	20.4531
1620.62	16.8292
1678.03	0.0000
1691.02	9.5002
1691.02	9.5002

1706.46	0.0000
1750.46	0.0000
1764.49	15.2051
1764.49	15.2051
1764.49	15.2051
1764.49	15.2051
1770.23	15.2238
1771.40	40.6069
1791.20	0.0000
1808.65	5.8470
1836.01	8.8208

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232582001

Total Uranium Activity	2.4573E-01	ug/g
Total Uranium Counting Unc.	7.8277E+00	ug/g
Total Uranium Tpu	3.9937E-06	ug/g
Total Uranium Mda	3.7651E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID  : G232582001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM02            *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:14:59.57    SAMPLE ALQT:  117.260 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 8.441E+00
GROSS GAMMA ERROR (pCi/GRAM) : 3.649E+00
GROSS GAMMA MDA (pCi/GRAM) : 2.780E+00
GROSS GAMMA DLC (pCi/GRAM) : 1.339E+00

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:16:19.58

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232582002.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:15:28.
Sample ID         : G232582002           Sample quantity  : 1.16700E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.27  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	47.01*	54	333	0.91	95.22	91	8	7.54E-03	63.7	
2	0	63.49*	126	402	0.87	128.15	125	8	1.74E-02	30.3	
3	2	74.91*	679	395	1.44	150.98	146	16	9.43E-02	6.8	2.13E+01
4	2	77.37*	761	255	1.02	155.90	146	16	1.06E-01	5.0	
5	1	84.30*	113	309	1.40	169.75	165	29	1.57E-02	29.1	3.57E+00
6	1	87.43*	293	298	1.29	176.01	165	29	4.07E-02	11.8	
7	1	90.06*	204	288	1.41	181.26	165	29	2.83E-02	16.7	
8	1	93.02*	291	309	1.42	187.17	165	29	4.05E-02	13.3	
9	0	186.14*	76	258	1.46	373.27	369	9	1.06E-02	42.0	
10	0	209.33	77	203	1.11	419.62	416	10	1.07E-02	36.9	
11	4	238.81*	721	120	0.99	478.56	474	16	1.00E-01	4.6	1.87E+00
12	4	241.89*	207	161	1.73	484.70	474	16	2.87E-02	17.2	
13	0	278.20	98	155	1.14	557.28	552	12	1.36E-02	27.5	
14	0	295.06*	193	206	1.07	590.98	585	12	2.68E-02	16.7	
15	0	300.88	48	197	1.17	602.59	596	12	6.67E-03	60.7	
16	0	330.14	90	157	4.94	661.08	652	16	1.25E-02	33.7	
17	0	338.69*	160	150	0.88	678.18	672	14	2.22E-02	18.5	
18	0	352.10*	344	129	1.02	704.98	700	11	4.77E-02	8.6	
19	0	510.85*	59	101	1.29	1022.28	1015	14	8.16E-03	45.0	
20	0	583.14*	183	94	1.43	1166.80	1159	13	2.54E-02	13.7	
21	0	609.36*	257	68	1.32	1219.20	1212	13	3.56E-02	9.4	
22	0	728.11*	47	60	1.13	1456.58	1450	13	6.49E-03	39.3	
23	0	795.91	35	51	0.70	1592.11	1584	17	4.86E-03	49.7	
24	0	911.12*	158	44	1.60	1822.45	1815	16	2.19E-02	12.5	
25	0	968.93*	78	48	1.51	1938.03	1933	10	1.09E-02	20.4	
26	0	1120.95	28	34	1.60	2241.97	2238	7	3.88E-03	40.8	
27	0	1237.84*	35	48	3.92	2475.68	2469	12	4.80E-03	44.2	
28	0	1460.38*	920	9	1.87	2920.68	2912	15	1.28E-01	3.4	
29	0	1587.30	24	6	1.44	3174.48	3168	12	3.39E-03	28.4	
30	0	1763.69	56	3	2.25	3527.25	3518	16	7.73E-03	15.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:16:22

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232582002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:15:28
Sample ID : G232582002 Sample quantity : 116.70 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.27 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.475E+01	3.177E+00	5.325E-01	3.274E-02	65.255
CD-109	+	88.03	*	3.940E+00	9.814E-01	1.094E+00	8.810E-02	3.602
SN-126	+	64.28		6.328E-01	3.955E-01	4.702E-01	7.214E-02	1.346
	+	86.94		1.613E+00	7.662E-01	4.468E-01	1.843E-01	3.610
	+	87.57	*	3.880E-01	9.665E-02	1.076E-01	8.679E-03	3.605
HG-203		70.83		-6.920E-02	7.988E-01	1.169E+00	1.591E-01	-0.059
		72.87		7.966E-01	5.208E-01	7.989E-01	1.051E-01	0.997
		82.60		1.474E+00	1.375E+00	1.582E+00	2.135E-01	0.931
	+	279.20	*	1.370E-01	7.611E-02	7.896E-02	6.091E-03	1.735
TL-208	+	277.35		1.267E+00	7.120E-01	7.173E-01	8.279E-02	1.766
	+	510.84		4.223E-01	3.823E-01	2.844E-01	3.051E-02	1.485
	+	583.14	*	3.836E-01	1.097E-01	9.039E-02	7.166E-03	4.244
		860.37		6.448E-01	4.707E-01	8.646E-01	7.054E-02	0.746
BI-210	+	46.50	*	6.576E-01	8.399E-01	1.015E+00	8.123E-02	0.648
PB-210	+	46.50	*	6.576E-01	8.399E-01	1.015E+00	8.123E-02	0.648
PO-210	+	46.50	*	6.576E-01	8.395E-01	1.015E+00	7.064E-02	0.648
BI-211		72.87		4.081E+00	2.637E+00	4.093E+00	3.500E-01	0.997
	+	351.07	*	2.891E+00	5.413E-01	4.441E-01	3.190E-02	6.511
PB-212	+	74.81		3.071E+00	5.697E-01	4.182E-01	5.278E-02	7.342
	+	77.11		2.047E+00	2.668E-01	2.493E-01	2.094E-02	8.211
	+	87.30		1.794E+00	4.817E-01	4.974E-01	6.393E-02	3.607
	+	238.63	*	1.259E+00	1.601E-01	1.055E-01	9.255E-03	11.941
	+	300.09		1.329E+00	1.618E+00	1.502E+00	1.404E-01	0.885
PO-212	+	74.81		3.071E+00	5.697E-01	4.182E-01	5.278E-02	7.342
	+	77.11		2.047E+00	2.668E-01	2.493E-01	2.094E-02	8.211
	+	87.30		1.794E+00	4.817E-01	4.974E-01	6.393E-02	3.607
		115.19		8.318E-01	4.041E+00	6.715E+00	6.986E-01	0.124
	+	238.63	*	1.259E+00	1.601E-01	1.055E-01	9.255E-03	11.941
	+	300.09		1.329E+00	1.618E+00	1.502E+00	1.404E-01	0.885
BI-214	+	609.31	*	1.019E+00	2.121E-01	1.509E-01	1.355E-02	6.754
		768.36		9.357E-01	1.173E+00	2.001E+00	1.933E-01	0.468
		934.06		5.875E-01	1.861E+00	3.176E+00	3.014E-01	0.185
	+	1120.29		5.929E-01	4.863E-01	7.591E-01	6.777E-02	0.781
	+	1238.11		2.033E+00	1.805E+00	2.268E+00	1.818E-01	0.896

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		8.281E-01	1.458E+00	2.536E+00	2.168E-01	0.326
	+	1764.49		1.674E+00	5.301E-01	3.644E-01	2.095E-02	4.594
PB-214	+	74.81		5.291E+00	9.342E-01	7.206E-01	8.113E-02	7.342
	+	77.11		3.509E+00	5.298E-01	4.274E-01	4.846E-02	8.211
	+	87.30		3.074E+00	8.016E-01	8.522E-01	9.512E-02	3.607
	+	241.98		2.172E+00	7.764E-01	6.356E-01	5.973E-02	3.417
	+	295.21		9.340E-01	3.248E-01	2.669E-01	2.570E-02	3.499
	+	351.92	*	1.006E+00	1.955E-01	1.362E-01	1.208E-02	7.385
PO-214	+	74.81		5.291E+00	9.342E-01	7.206E-01	8.113E-02	7.342
	+	77.11		3.509E+00	5.298E-01	4.274E-01	4.846E-02	8.211
	+	87.30		3.074E+00	8.016E-01	8.522E-01	9.512E-02	3.607
	+	241.98		2.172E+00	7.764E-01	6.356E-01	5.973E-02	3.417
	+	295.21		9.340E-01	3.248E-01	2.669E-01	2.570E-02	3.499
	+	351.92	*	1.006E+00	1.955E-01	1.362E-01	1.208E-02	7.385
PO-216	+	74.81		3.071E+00	5.697E-01	4.182E-01	5.278E-02	7.342
	+	77.11		2.047E+00	2.668E-01	2.493E-01	2.094E-02	8.211
	+	87.30		1.794E+00	4.817E-01	4.974E-01	6.393E-02	3.607
	+	238.63	*	1.259E+00	1.601E-01	1.055E-01	9.255E-03	11.941
	+	300.09		1.329E+00	1.618E+00	1.502E+00	1.404E-01	0.885
PO-218	+	74.81		5.291E+00	9.342E-01	7.206E-01	8.113E-02	7.342
	+	77.11		3.509E+00	5.298E-01	4.274E-01	4.846E-02	8.211
	+	87.30		3.074E+00	8.016E-01	8.522E-01	9.512E-02	3.607
	+	241.98		2.172E+00	7.764E-01	6.356E-01	5.973E-02	3.417
	+	295.21		9.340E-01	3.248E-01	2.669E-01	2.570E-02	3.499
	+	351.92	*	1.006E+00	1.955E-01	1.362E-01	1.208E-02	7.385
RA-224	+	240.98	*	4.118E+00	1.454E+00	1.201E+00	9.058E-02	3.429
RA-226	+	609.31	*	1.019E+00	2.121E-01	1.509E-01	1.355E-02	6.754
		768.36		9.357E-01	1.173E+00	2.001E+00	1.933E-01	0.468
		934.06		5.875E-01	1.861E+00	3.176E+00	3.014E-01	0.185
	+	1120.29		5.929E-01	4.863E-01	7.591E-01	6.777E-02	0.781
	+	1238.11		2.033E+00	1.805E+00	2.268E+00	1.818E-01	0.896
		1377.67		8.281E-01	1.458E+00	2.536E+00	2.168E-01	0.326
	+	1764.49		1.674E+00	5.301E-01	3.644E-01	2.095E-02	4.594
AC-228	+	338.32		1.472E+00	8.113E-01	4.481E-01	1.834E-01	3.286
	+	911.07	*	1.524E+00	4.130E-01	2.837E-01	2.903E-02	5.372
	+	969.11		1.332E+00	6.227E-01	6.689E-01	1.524E-01	1.991
RA-228	+	338.32		1.472E+00	8.113E-01	4.481E-01	1.834E-01	3.286
	+	911.07	*	1.524E+00	4.130E-01	2.837E-01	2.903E-02	5.372
	+	969.11		1.332E+00	6.227E-01	6.689E-01	1.524E-01	1.991
TH-228	+	84.40		4.559E+00	2.717E+00	3.271E+00	4.201E-01	1.394
	+	238.60	*	1.259E+00	1.601E-01	1.054E-01	9.254E-03	11.942
	+	300.10		1.329E+00	1.794E+00	1.502E+00	8.877E-01	0.885
TH-230	+	609.31	*	1.019E+00	2.121E-01	1.509E-01	1.355E-02	6.754
		768.36		9.357E-01	1.173E+00	2.001E+00	1.933E-01	0.468
		934.06		5.875E-01	1.861E+00	3.176E+00	3.014E-01	0.185
	+	1120.29		5.929E-01	4.863E-01	7.591E-01	6.777E-02	0.781
	+	1238.11		2.033E+00	1.805E+00	2.268E+00	1.818E-01	0.896
		1377.67		8.281E-01	1.458E+00	2.536E+00	2.168E-01	0.326
	+	1764.49		1.674E+00	5.301E-01	3.644E-01	2.095E-02	4.594

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	+	338.32		1.472E+00	5.526E-01	4.481E-01	3.060E-02	3.286
	+	911.07	*	1.524E+00	4.130E-01	2.837E-01	2.903E-02	5.372
	+	969.11		1.332E+00	6.227E-01	6.689E-01	1.524E-01	1.991
TH-234	+	63.29	*	1.599E+00	1.011E+00	1.249E+00	2.267E-01	1.279
	+	92.38		2.659E+00	8.527E-01	7.436E-01	1.337E-01	3.575
U-234	+	609.31	*	1.019E+00	2.121E-01	1.509E-01	1.355E-02	6.754
		768.36		9.357E-01	1.173E+00	2.001E+00	1.933E-01	0.468
		934.06		5.875E-01	1.861E+00	3.176E+00	3.014E-01	0.185
	+	1120.29		5.929E-01	4.863E-01	7.591E-01	6.777E-02	0.781
	+	1238.11		2.033E+00	1.805E+00	2.268E+00	1.818E-01	0.896
		1377.67		8.281E-01	1.458E+00	2.536E+00	2.168E-01	0.326
	+	1764.49		1.674E+00	5.301E-01	3.644E-01	2.095E-02	4.594
NP-237	+	86.50	*	1.139E+00	3.685E-01	3.153E-01	6.990E-02	3.613
		95.87		-2.064E-01	1.120E+00	1.613E+00	3.976E-01	-0.128
U-238	+	63.29	*	1.599E+00	1.011E+00	1.249E+00	2.267E-01	1.279
	+	92.38		2.659E+00	7.406E-01	7.436E-01	6.242E-02	3.575
AM-243	+	74.67	*	4.978E-01	7.979E-02	6.779E-02	5.751E-03	7.343
	+	86.72		4.272E+01	1.064E+01	1.183E+01	9.571E-01	3.611
		117.66		1.493E+00	4.187E+00	6.999E+00	7.450E-01	0.213
		142.18		-1.424E+01	2.075E+01	3.285E+01	3.114E+00	-0.433
ANH-511	+	511.00	*	9.121E-02	8.223E-02	6.145E-02	4.153E-03	1.484

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-4.501E-01	4.254E-01	6.379E-01	4.704E-02	-0.706
NA-22		1274.54	*	-1.125E-02	7.400E-02	1.187E-01	6.729E-03	-0.095
NA-24		1368.53	*	1.535E-01	7.400E-02	Half-Life too short		
AL-26		1129.67		-2.201E+00	2.827E+00	4.260E+00	2.518E-01	-0.517
		1808.65	*	-8.010E-03	3.617E-02	5.625E-02	3.216E-03	-0.142
TI-44		67.85		-2.427E-03	3.343E-02	4.903E-02	4.288E-03	-0.050
	+	78.38	*	3.778E-01	4.923E-02	7.494E-02	6.261E-03	5.041
SC-46		889.25	*	1.964E-02	5.780E-02	9.938E-02	7.284E-03	0.198
	+	1120.51		1.004E-01	8.210E-02	1.595E-01	9.551E-03	0.630
V-48		944.10		-1.380E+00	1.322E+00	1.961E+00	1.395E-01	-0.704
		983.50	*	2.427E-03	1.103E-01	1.830E-01	1.267E-02	0.013
		1312.09		3.652E-02	1.279E-01	2.146E-01	1.222E-02	0.170
CR-51		320.08	*	-1.635E-01	4.567E-01	7.497E-01	5.718E-02	-0.218
MN-52		744.21		3.621E-02	3.039E-01	4.944E-01	3.766E-02	0.073
		848.13		-2.701E+00	7.408E+00	1.188E+01	8.873E-01	-0.227
		935.52		4.036E-02	3.503E-01	5.879E-01	4.205E-02	0.069
		1246.25		-1.915E+00	1.032E+01	1.616E+01	9.084E-01	-0.118
		1333.61		-1.276E+00	6.085E+00	9.590E+00	5.477E-01	-0.133
		1434.06	*	8.161E-02	2.770E-01	4.700E-01	2.716E-02	0.174
MN-54		834.83	*	4.959E-03	5.848E-02	9.847E-02	7.387E-03	0.050
CO-56		846.75	*	-8.031E-03	4.959E-02	8.142E-02	6.083E-03	-0.099
		977.42		1.849E+00	4.650E+00	7.987E+00	5.556E-01	0.232
		1037.82		-6.715E-02	5.028E-01	8.197E-01	5.894E-02	-0.082

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1175.09		1.822E+00	3.828E+00	6.527E+00	3.604E-01	0.279
	+	1238.25		2.037E-01	1.805E-01	2.644E-01	1.583E-02	0.770
		1360.21		-3.095E-01	1.298E+00	2.024E+00	1.160E-01	-0.153
		1771.40		-6.660E-01	4.201E-01	4.839E-01	2.780E-02	-1.376
CO-57		122.06	*	6.739E-03	2.798E-02	4.650E-02	5.160E-03	0.145
		136.48		-9.045E-03	2.409E-01	3.933E-01	4.137E-02	-0.023
CO-58		810.76	*	-2.753E-02	5.759E-02	9.221E-02	6.988E-03	-0.299
FE-59		142.65		-1.188E+00	3.225E+00	5.122E+00	4.836E-01	-0.232
		192.34		-2.596E-01	1.143E+00	1.763E+00	2.238E-01	-0.147
		1099.22	*	-6.218E-02	1.545E-01	2.449E-01	1.740E-02	-0.254
		1291.56		-1.662E-01	1.833E-01	2.640E-01	1.933E-02	-0.630
CO-60		1173.22		9.104E-02	7.817E-02	1.402E-01	7.740E-03	0.649
		1332.49	*	-1.489E-02	5.494E-02	8.576E-02	4.897E-03	-0.174
ZN-65		1115.52	*	7.486E-02	1.513E-01	2.333E-01	1.409E-02	0.321
GE-68		1077.35	*	1.705E-01	1.895E+00	3.150E+00	1.993E-01	0.054
AS-73		53.44	*	1.136E-02	2.822E-01	4.750E-01	3.854E-02	0.024
AS-74		595.88	*	-7.062E-02	1.101E-01	1.675E-01	1.217E-02	-0.422
		634.78		1.896E-01	4.908E-01	8.238E-01	6.124E-02	0.230
SE-75		66.05		-7.335E-01	3.233E+00	4.697E+00	4.980E-01	-0.156
		96.73		-3.857E-01	9.015E-01	1.279E+00	1.753E-01	-0.302
		121.11		-4.279E-03	1.508E-01	2.478E-01	3.254E-02	-0.017
		136.00		-1.375E-02	4.569E-02	7.370E-02	7.404E-03	-0.187
		198.60		-7.488E-01	2.027E+00	3.212E+00	2.741E-01	-0.233
		264.65	*	-1.791E-02	5.310E-02	8.300E-02	6.261E-03	-0.216
	+	279.53		3.705E-01	2.058E-01	2.461E-01	1.920E-02	1.505
		303.91		2.411E+00	2.719E+00	4.262E+00	4.469E-01	0.566
		400.65		1.290E-01	3.204E-01	5.466E-01	4.997E-02	0.236
BR-77	+	87.88		5.884E+02	1.466E+02	2.284E+02	1.840E+01	2.575
		200.40		6.525E+01	1.284E+02	2.132E+02	1.592E+01	0.306
	+	239.00		1.395E+02	1.660E+01	2.808E+01	2.118E+00	4.968
		249.79		-5.612E+00	5.716E+01	9.106E+01	6.861E+00	-0.062
		281.68		6.943E+01	8.339E+01	1.303E+02	9.665E+00	0.533
		297.23		1.094E+02	9.391E+01	1.051E+02	7.676E+00	1.042
		303.76		1.372E+02	1.603E+02	2.513E+02	1.821E+01	0.546
		439.47		1.238E+02	1.318E+02	2.322E+02	1.441E+01	0.533
		484.57		-9.788E+01	2.164E+02	3.432E+02	2.254E+01	-0.285
		520.65	*	8.150E+00	9.170E+00	1.616E+01	1.103E+00	0.504
		574.64		-1.110E+02	2.108E+02	3.057E+02	2.186E+01	-0.363
		578.91		6.941E+01	8.993E+01	1.387E+02	9.952E+00	0.500
		585.48		8.477E+02	2.503E+02	4.381E+02	3.158E+01	1.935
		755.35		9.462E+00	1.665E+02	2.691E+02	2.049E+01	0.035
		817.79		-6.025E+01	1.431E+02	2.306E+02	1.739E+01	-0.261
SR-82		698.33		-2.008E+01	5.038E+01	7.840E+01	5.953E+00	-0.256
		776.49	*	-3.446E-01	5.311E-01	8.388E-01	6.376E-02	-0.411
		1395.20		-6.216E+00	1.378E+01	2.052E+01	1.181E+00	-0.303
RB-83		520.41	*	2.884E-02	9.007E-02	1.517E-01	1.035E-02	0.190
		529.64		4.854E-02	1.438E-01	2.422E-01	1.667E-02	0.200
		552.65		-2.760E-01	2.681E-01	3.958E-01	2.781E-02	-0.697
RB-84		881.50	*	-3.782E-02	1.014E-01	1.628E-01	1.198E-02	-0.232

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---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
KR-85		513.99	*	2.076E+01	1.045E+01	1.783E+01	1.208E+00	1.165
SR-85		513.99	*	1.050E-01	5.286E-02	9.018E-02	6.113E-03	1.165
RB-86		1076.63	*	7.229E-01	1.117E+00	1.961E+00	1.241E-01	0.369
Y-88		898.02		4.915E-02	6.223E-02	1.109E-01	8.147E-03	0.443
		1836.01	*	-3.929E-03	5.372E-02	8.749E-02	4.995E-03	-0.045
ZR-88		392.90	*	2.176E-02	3.807E-02	6.453E-02	3.735E-03	0.337
Y-91		1204.90	*	2.313E+01	2.996E+01	5.231E+01	2.912E+00	0.442
NB-94		702.63	*	8.615E-02	5.392E-02	9.742E-02	7.402E-03	0.884
		871.10		4.359E-02	4.835E-02	8.748E-02	6.470E-03	0.498
NB-95		765.79	*	1.469E-02	6.637E-02	1.087E-01	8.275E-03	0.135
NB-95M		235.69	*	1.127E-01	1.581E-01	2.333E-01	2.086E-02	0.483
ZR-95		724.18		7.087E-02	1.432E-01	2.124E-01	1.794E-02	0.334
		756.15	*	8.417E-02	9.835E-02	1.713E-01	1.472E-02	0.491
NB-97		657.90	*	1.448E-03	9.835E-02	Half-Life too short		
		1024.50		-1.714E+00	9.835E-02	Half-Life too short		
ZR-97		254.15		2.507E+00	9.835E-02	Half-Life too short		
		355.39		2.999E-01	9.835E-02	Half-Life too short		
		507.63	*	9.178E-01	9.835E-02	Half-Life too short		
		602.52		8.936E-01	9.835E-02	Half-Life too short		
		1021.30		-1.083E-02	9.835E-02	Half-Life too short		
		1147.95		1.088E+00	9.835E-02	Half-Life too short		
		1362.66		-2.346E+00	9.835E-02	Half-Life too short		
		1750.46		-5.485E-01	9.835E-02	Half-Life too short		
MO-99		140.51		-1.680E+01	2.307E+01	3.534E+01	9.901E+00	-0.475
		181.06		-4.274E+00	1.659E+01	2.310E+01	4.097E+00	-0.185
		366.43		-1.526E+01	7.389E+01	1.214E+02	7.696E+00	-0.126
		739.58	*	5.179E+00	1.313E+01	2.186E+01	3.201E+00	0.237
		778.00		-1.706E+01	3.566E+01	5.726E+01	4.352E+00	-0.298
TC-99M		140.51	*	-9.985E+08	3.566E+01	Half-Life too short		
RH-101		127.23		7.395E-03	3.625E-02	6.008E-02	6.424E-03	0.123
		198.01	*	8.926E-03	3.694E-02	6.053E-02	4.516E-03	0.147
		325.23		1.228E-02	3.160E-01	4.625E-01	3.243E-02	0.027
RH-102		418.52		-6.334E-02	3.612E-01	5.909E-01	3.559E-02	-0.107
		475.06	*	-2.233E-02	3.858E-02	6.054E-02	3.932E-03	-0.369
		631.29		-3.419E-02	7.828E-02	1.218E-01	9.036E-03	-0.281
		697.49		-9.823E-02	1.146E-01	1.697E-01	1.289E-02	-0.579
		766.84		1.686E-01	1.748E-01	3.021E-01	2.299E-02	0.558
		1046.59		-4.479E-02	1.781E-01	2.865E-01	1.875E-02	-0.156
		1112.84		-1.447E-01	3.479E-01	5.340E-01	3.230E-02	-0.271
RU-103		497.08	*	-1.762E-03	5.084E-02	8.332E-02	1.088E-02	-0.021
	+	610.33		1.076E+01	2.659E+00	3.537E+00	5.679E-01	3.044
RH-106	+	511.85		4.545E-01	4.098E-01	5.670E-01	3.836E-02	0.801
		621.84	*	9.188E-02	4.079E-01	6.773E-01	8.529E-02	0.136
		1050.47		1.035E+00	3.412E+00	5.803E+00	3.782E-01	0.178
RU-106	+	511.85		4.545E-01	4.098E-01	5.670E-01	3.836E-02	0.801
		621.84	*	9.188E-02	4.078E-01	6.773E-01	4.998E-02	0.136
		1050.47		1.035E+00	3.412E+00	5.803E+00	3.782E-01	0.178
AG-108M		433.93	*	1.783E-02	4.203E-02	7.172E-02	4.754E-03	0.249
		614.37		2.388E-03	5.950E-02	8.398E-02	6.501E-03	0.028

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.95		4.496E-03	6.200E-02	8.702E-02	6.956E-03	0.052
AG-110M		657.75	*	-2.401E-03	4.797E-02	7.732E-02	6.039E-03	-0.031
		677.61		-5.546E-01	4.397E-01	6.148E-01	4.818E-02	-0.902
		706.67		-1.813E-01	3.302E-01	5.062E-01	3.984E-02	-0.358
		763.93		-2.883E-01	2.753E-01	3.999E-01	3.154E-02	-0.721
		884.67		4.467E-03	7.403E-02	1.241E-01	9.519E-03	0.036
		937.48		-9.794E-02	1.691E-01	2.648E-01	1.991E-02	-0.370
		1384.27		1.197E-02	2.298E-01	3.754E-01	2.293E-02	0.032
IN-111		171.28		-1.475E-01	8.583E-01	1.384E+00	1.015E-01	-0.107
		245.39	*	-1.642E-01	1.061E+00	1.465E+00	1.104E-01	-0.112
IN-113M		391.69	*	2.183E-02	5.394E-02	9.221E-02	5.686E-03	0.237
SN-113		391.69	*	2.183E-02	5.394E-02	9.221E-02	5.686E-03	0.237
IN-114M		190.27	*	-4.438E-02	2.453E-01	3.429E-01	2.547E-02	-0.129
CD-115		260.90		1.466E+01	1.000E+02	1.616E+02	1.213E+01	0.091
		492.35		-2.925E+01	2.979E+01	4.440E+01	2.942E+00	-0.659
		527.90	*	5.515E+00	9.873E+00	1.692E+01	1.163E+00	0.326
SN-117M		156.02		1.570E+00	2.458E+00	4.126E+00	3.406E-01	0.380
		158.56	*	-2.079E-02	6.147E-02	9.862E-02	7.906E-03	-0.211
SB-122		563.90	*	7.956E-01	2.142E+00	3.602E+00	2.555E-01	0.221
		692.80		5.552E+00	4.278E+01	6.996E+01	5.307E+00	0.079
I-123		159.00	*	-9.945E-02	4.278E+01	Half-Life too short		
		528.96		3.449E+01	4.278E+01	Half-Life too short		
TE-123M		159.00	*	-2.446E-03	3.382E-02	5.496E-02	4.414E-03	-0.045
I-124		602.71	*	2.260E-01	7.430E-01	1.089E+00	7.944E-02	0.208
		722.78		6.002E-01	5.263E+00	7.432E+00	5.658E-01	0.081
		1325.50		-2.197E+00	4.069E+01	6.566E+01	3.746E+00	-0.033
		1376.25		2.942E+01	3.864E+01	6.849E+01	3.935E+00	0.430
		1509.49		6.791E+00	1.607E+01	2.791E+01	1.621E+00	0.243
		1691.02		-4.603E+00	3.425E+00	3.186E+00	1.844E-01	-1.445
SB-124		602.71		1.599E-02	5.256E-02	7.704E-02	5.621E-03	0.208
		645.85		-6.042E-01	7.378E-01	1.102E+00	8.886E-02	-0.549
		709.31		-2.591E+00	4.090E+00	6.188E+00	4.706E-01	-0.419
		713.82		-7.997E-05	2.426E+00	3.910E+00	4.432E-01	0.000
		722.78		6.154E-02	5.397E-01	7.621E-01	5.962E-02	0.081
	+	968.20		1.351E+01	5.597E+00	9.597E+00	6.720E-01	1.408
		1045.16		6.305E-01	3.790E+00	6.357E+00	4.165E-01	0.099
		1325.50		-2.406E-01	4.456E+00	7.191E+00	4.102E-01	-0.033
		1368.21		1.276E+00	2.308E+00	4.059E+00	4.807E-01	0.314
		1436.60		1.580E+00	4.823E+00	8.247E+00	4.767E-01	0.192
		1691.02	*	-1.113E-01	8.288E-02	7.706E-02	4.843E-03	-1.445
SB-125		427.89	*	4.945E-02	1.168E-01	1.994E-01	1.264E-02	0.248
		463.38		1.133E-01	3.786E-01	6.376E-01	4.646E-02	0.178
		600.56		-1.230E-01	2.326E-01	3.475E-01	2.789E-02	-0.354
		635.90		5.801E-02	3.974E-01	6.533E-01	5.380E-02	0.089
TE-125M		109.28	*	-1.110E+01	1.045E+01	1.636E+01	1.860E+00	-0.678
I-126		388.63		-1.183E-02	2.326E-01	3.855E-01	2.256E-02	-0.031
		666.33	*	1.140E-01	2.428E-01	4.093E-01	3.086E-02	0.279
		753.82		-1.199E+00	2.072E+00	3.132E+00	2.385E-01	-0.383
SB-126		223.80		1.712E+00	4.581E+00	7.522E+00	5.667E-01	0.228

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	278.60		7.801E+00	4.330E+00	5.398E+00	4.014E-01	1.445
	+	296.50		8.660E+00	2.963E+00	3.952E+00	2.890E-01	2.191
		414.70		-6.640E-02	8.835E-02	1.382E-01	8.273E-03	-0.481
		415.30		-4.880E+00	7.301E+00	1.149E+01	6.886E-01	-0.425
		555.20		1.649E+00	5.046E+00	8.479E+00	5.971E-01	0.194
		573.80		-3.130E-01	1.337E+00	2.137E+00	1.527E-01	-0.146
		593.00		-2.590E-01	1.126E+00	1.794E+00	1.300E-01	-0.144
		656.30		-3.781E-01	4.452E+00	7.154E+00	5.375E-01	-0.053
		666.33		4.750E-02	1.012E-01	1.705E-01	1.286E-02	0.279
		675.00		1.450E-01	2.706E+00	4.398E+00	3.324E-01	0.033
		695.00		-6.508E-02	1.040E-01	1.575E-01	1.195E-02	-0.413
		697.00		-4.323E-01	3.743E-01	5.352E-01	4.063E-02	-0.808
		720.50	*	-2.400E-01	2.220E-01	2.765E-01	2.105E-02	-0.868
		856.80		-1.699E-01	7.147E-01	1.170E+00	8.706E-02	-0.145
		989.30		-8.193E-01	1.876E+00	2.973E+00	2.049E-01	-0.276
		1034.80		-5.636E+00	1.353E+01	2.143E+01	1.419E+00	-0.263
		1213.00		-5.191E+00	6.841E+00	1.035E+01	5.774E-01	-0.501
SB-127		61.10		2.484E+01	2.670E+01	4.087E+01	4.548E+00	0.608
		252.40		-6.415E-01	4.408E+00	6.986E+00	2.915E+00	-0.092
		290.80		-3.841E+00	2.284E+01	3.305E+01	3.243E+00	-0.116
		411.60		7.344E+00	1.223E+01	2.106E+01	2.981E+00	0.349
		444.90		4.714E+00	1.035E+01	1.765E+01	1.882E+00	0.267
		473.00		6.269E-01	1.815E+00	3.066E+00	3.430E-01	0.204
		543.00		-2.369E+00	1.803E+01	2.917E+01	3.841E+00	-0.081
		603.60		-7.379E-01	1.302E+01	1.816E+01	2.049E+00	-0.041
		685.20	*	1.569E-01	1.577E+00	2.572E+00	2.630E-01	0.061
		698.50		-5.240E+00	1.853E+01	2.913E+01	4.375E+00	-0.180
		722.20		-1.843E+01	3.867E+01	4.989E+01	4.992E+00	-0.369
		783.80		2.358E+00	4.206E+00	7.372E+00	8.387E-01	0.320
XE-127		57.60		-1.087E+00	2.657E+00	4.395E+00	3.866E-01	-0.247
		145.22		2.719E-01	8.369E-01	1.370E+00	1.263E-01	0.199
		172.10		-7.114E-02	1.394E-01	2.207E-01	1.620E-02	-0.322
		202.84	*	-4.647E-03	5.392E-02	8.675E-02	6.488E-03	-0.054
		374.96		-1.505E-02	2.464E-01	4.088E-01	2.518E-02	-0.037
I-131		80.18		1.610E+00	4.848E+00	5.303E+00	4.424E-01	0.304
		284.30		1.274E-01	1.829E+00	2.702E+00	2.137E-01	0.047
		364.48	*	-2.631E-02	1.252E-01	2.058E-01	1.438E-02	-0.128
		636.97		-7.266E-04	1.960E+00	3.180E+00	2.539E-01	0.000
		722.89		7.737E-01	9.365E+00	1.316E+01	1.009E+00	0.059
TE-132		49.72		-1.403E+00	4.160E+00	6.068E+00	5.844E-01	-0.231
		111.76		5.963E+00	2.580E+01	4.294E+01	5.046E+00	0.139
		116.30		-1.435E+01	2.416E+01	3.868E+01	4.690E+00	-0.371
		228.16	*	2.800E-01	6.468E-01	1.063E+00	1.586E-01	0.263
BA-133		53.15		3.302E-01	1.198E+00	2.032E+00	1.639E-01	0.163
		79.62		3.828E+00	1.567E+00	1.908E+00	2.872E-01	2.006
		81.00		5.300E-02	1.174E-01	1.294E-01	2.030E-02	0.409
		276.40		6.680E-01	5.424E-01	8.189E-01	1.128E-01	0.816
		302.84		2.246E-01	1.984E-01	3.137E-01	3.905E-02	0.716
		356.01	*	-3.362E-02	5.832E-02	7.950E-02	9.497E-03	-0.423

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		383.85		-2.972E-01	3.633E-01	5.656E-01	6.199E-02	-0.526
I-133	+	510.53		3.353E-01	3.633E-01	Half-Life too short		
		529.87	*	8.438E-04	3.633E-01	Half-Life too short		
		706.58		-1.282E-01	3.633E-01	Half-Life too short		
		856.28		-2.291E-01	3.633E-01	Half-Life too short		
		875.33		4.094E-02	3.633E-01	Half-Life too short		
	+	1236.41		5.393E-01	3.633E-01	Half-Life too short		
		1298.22		9.962E-02	3.633E-01	Half-Life too short		
CS-134		475.35		-1.576E+00	2.513E+00	3.925E+00	2.550E-01	-0.401
		563.23		3.695E-01	5.108E-01	8.818E-01	6.339E-02	0.419
		569.32		1.061E-01	2.726E-01	4.593E-01	3.336E-02	0.231
		604.70		3.172E-02	4.418E-02	6.833E-02	5.008E-03	0.464
	+	795.84	*	1.090E-01	1.087E-01	1.144E-01	8.749E-03	0.953
		801.93		-3.092E-01	6.644E-01	9.237E-01	7.043E-02	-0.335
		1038.57		-2.264E+00	6.364E+00	1.015E+01	6.694E-01	-0.223
		1167.94		-3.396E+00	4.278E+00	6.493E+00	3.616E-01	-0.523
		1365.15		-1.733E+00	1.657E+00	2.181E+00	1.377E-01	-0.795
CS-135		268.24	*	1.419E-01	1.994E-01	3.312E-01	2.981E-02	0.428
I-135		288.45		6.224E+08	1.994E-01	Half-Life too short		
		417.63		-9.100E+08	1.994E-01	Half-Life too short		
		546.56		4.149E+08	1.994E-01	Half-Life too short		
		836.80		5.794E+08	1.994E-01	Half-Life too short		
		1038.76		-3.352E+08	1.994E-01	Half-Life too short		
		1124.00		1.521E+09	1.994E-01	Half-Life too short		
		1131.51		-2.246E+08	1.994E-01	Half-Life too short		
		1260.41	*	-2.856E+08	1.994E-01	Half-Life too short		
		1457.56		4.334E+10	1.994E-01	Half-Life too short		
		1678.03		9.803E+07	1.994E-01	Half-Life too short		
		1706.46		1.151E+09	1.994E-01	Half-Life too short		
		1791.20		1.132E+08	1.994E-01	Half-Life too short		
CS-136		66.91		-2.828E-01	5.168E-01	7.367E-01	1.144E-01	-0.384
	+	86.29		4.735E+00	1.263E+00	1.871E+00	2.340E-01	2.531
		153.22		3.263E-01	7.043E-01	1.174E+00	1.120E-01	0.278
		163.89		-1.004E-02	1.178E+00	1.919E+00	1.664E-01	-0.005
		176.55		3.835E-03	4.201E-01	6.828E-01	5.421E-02	0.006
		273.65		-9.199E-01	6.507E-01	7.911E-01	6.415E-02	-1.163
		340.57		4.615E-01	1.828E-01	3.098E-01	2.202E-02	1.490
		818.51		4.314E-03	1.061E-01	1.782E-01	1.345E-02	0.024
		1048.07	*	-9.865E-02	1.604E-01	2.481E-01	1.738E-02	-0.398
		1235.34		5.580E-01	1.095E+00	1.635E+00	1.615E-01	0.341
BA-137M		661.65	*	-3.914E-02	4.950E-02	7.373E-02	5.552E-03	-0.531
CS-137		661.65	*	-4.137E-02	5.233E-02	7.794E-02	5.884E-03	-0.531
CE-139		165.85	*	-5.986E-04	3.452E-02	5.616E-02	4.107E-03	-0.011
BA-140		162.64		1.067E+00	8.318E-01	1.428E+00	1.170E-01	0.747
		304.84		1.111E+00	1.554E+00	2.372E+00	6.555E-01	0.469
		423.70		2.307E-01	2.359E+00	3.933E+00	1.252E+00	0.059
		537.32	*	-1.401E-01	3.463E-01	5.428E-01	1.777E-01	-0.258
LA-140	+	328.77		9.552E-01	6.481E-01	6.169E-01	4.660E-02	1.548
		432.53		9.198E-01	2.441E+00	4.152E+00	2.791E-01	0.222

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		487.03		-9.411E-04	1.631E-01	2.683E-01	1.950E-02	-0.004
		751.79		1.840E-01	2.376E+00	3.848E+00	3.327E-01	0.048
		815.85		-1.637E-01	4.631E-01	7.508E-01	6.503E-02	-0.218
		867.82		-8.877E-01	1.862E+00	2.957E+00	2.346E-01	-0.300
		919.63		3.002E-01	4.082E+00	6.352E+00	6.065E-01	0.047
		925.24		-1.067E+00	1.616E+00	2.507E+00	1.964E-01	-0.426
		1596.49	*	-6.592E-02	1.095E-01	1.588E-01	9.229E-03	-0.415
CE-141		145.44	*	4.995E-02	7.528E-02	1.248E-01	1.167E-02	0.400
CE-143		57.37		-1.783E-04	7.528E-02	Half-Life too short		
		231.56		-5.609E-04	7.528E-02	Half-Life too short		
		293.26	*	3.393E-04	7.528E-02	Half-Life too short		
		350.59		1.157E-02	7.528E-02	Half-Life too short		
		490.36		1.186E-04	7.528E-02	Half-Life too short		
		664.57		-2.685E-04	7.528E-02	Half-Life too short		
		721.93		-6.942E-04	7.528E-02	Half-Life too short		
CE-144		80.11		8.588E-01	2.481E+00	2.717E+00	2.254E-01	0.316
		133.54	*	-1.103E-01	2.405E-01	3.853E-01	6.354E-02	-0.286
PM-144		476.78		-9.084E-02	9.070E-02	1.368E-01	1.032E-02	-0.664
		618.01		-5.785E-03	4.388E-02	7.043E-02	5.382E-03	-0.082
		696.49	*	-5.302E-02	5.161E-02	7.496E-02	5.692E-03	-0.707
		778.57		-6.063E-01	3.260E+00	5.381E+00	4.091E-01	-0.113
PR-144		696.49	*	-3.590E+00	3.495E+00	5.076E+00	3.853E-01	-0.707
		1489.15		1.157E+01	1.621E+01	2.942E+01	1.707E+00	0.393
PM-146		453.90	*	1.756E-02	5.406E-02	9.153E-02	8.224E-03	0.192
		633.02		4.224E-01	1.993E+00	3.288E+00	1.220E+00	0.128
		735.90		8.378E-02	2.357E-01	3.803E-01	1.077E-01	0.220
		747.13		-1.421E-02	1.378E-01	2.192E-01	2.948E-02	-0.065
ND-147	+	91.11		8.597E-01	2.979E-01	4.978E-01	4.496E-02	1.727
		319.41		1.923E+00	3.803E+00	6.563E+00	4.650E-01	0.293
		439.89		6.189E+00	7.218E+00	1.264E+01	7.852E-01	0.490
		531.02	*	-2.417E-01	7.225E-01	1.149E+00	1.611E-01	-0.210
PM-149		285.90	*	-4.371E+01	7.522E+01	1.186E+02	1.767E+01	-0.368
EU-152		121.78		2.168E-02	8.147E-02	1.356E-01	1.641E-02	0.160
		244.69		9.259E-03	4.759E-01	6.668E-01	5.028E-02	0.014
		344.27	*	-2.628E-02	1.405E-01	2.009E-01	1.483E-02	-0.131
		443.98		2.080E-01	1.327E+00	2.217E+00	1.384E-01	0.094
		778.89		-6.129E-02	3.780E-01	6.254E-01	4.753E-02	-0.098
		867.32		-5.669E-01	1.201E+00	1.909E+00	1.414E-01	-0.297
		964.01		5.526E-01	4.464E-01	7.405E-01	5.200E-02	0.746
		1085.78		4.351E-01	5.712E-01	1.015E+00	6.354E-02	0.429
		1112.02		-2.695E-01	4.674E-01	7.212E-01	4.368E-02	-0.374
		1407.95		1.871E-01	2.715E-01	4.820E-01	2.779E-02	0.388
GD-153		69.67		5.990E-01	1.244E+00	1.868E+00	1.620E-01	0.321
	+	83.37		2.610E+01	1.534E+01	2.254E+01	1.846E+00	1.158
		97.43	*	2.396E-02	9.008E-02	1.330E-01	1.171E-02	0.180
		103.18		-1.392E-01	1.142E-01	1.779E-01	1.654E-02	-0.783
EU-154		123.07		7.765E-03	5.852E-02	9.679E-02	1.285E-02	0.080
		247.94		1.540E-01	4.867E-01	7.361E-01	7.866E-02	0.209
		591.81		-3.819E-01	8.382E-01	1.305E+00	1.396E-01	-0.293

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		723.30		-1.530E-02	2.610E-01	3.591E-01	3.099E-02	-0.043
		756.87		5.520E-01	1.105E+00	1.862E+00	2.100E-01	0.296
		873.19		-2.063E-02	4.482E-01	7.444E-01	8.494E-02	-0.028
		996.32		1.880E-01	5.611E-01	9.573E-01	1.625E-01	0.196
		1004.76		-4.757E-02	3.157E-01	5.143E-01	5.332E-02	-0.093
		1274.45	*	-3.143E-02	2.068E-01	3.319E-01	3.070E-02	-0.095
EU-155		48.70		6.064E-01	6.238E-01	9.681E-01	7.096E-02	0.626
		60.01		2.757E+00	2.763E+00	4.240E+00	3.853E-01	0.650
	+	86.54		4.670E-01	1.165E-01	1.826E-01	1.495E-02	2.558
		105.31	*	4.549E-02	1.166E-01	1.956E-01	1.874E-02	0.233
TB-160	+	86.79		1.233E+00	3.072E-01	4.766E-01	3.855E-02	2.587
		197.04		-2.931E-01	6.394E-01	1.009E+00	7.521E-02	-0.291
		215.65		1.591E-01	9.632E-01	1.449E+00	1.090E-01	0.110
		298.57		-1.005E-01	2.726E-01	2.555E-01	1.864E-02	-0.393
		879.36	*	5.854E-02	2.087E-01	3.570E-01	2.630E-02	0.164
		962.29		9.430E-01	7.788E-01	1.296E+00	9.111E-02	0.728
		966.15		1.133E+00	3.879E-01	7.047E-01	4.942E-02	1.608
		1177.93		-5.673E-01	6.109E-01	9.138E-01	5.050E-02	-0.621
		1271.85		-1.418E+00	1.206E+00	1.714E+00	9.683E-02	-0.827
HO-166M		80.57		1.273E-01	3.214E-01	3.534E-01	2.927E-02	0.360
		184.41		6.225E-02	4.942E-02	7.729E-02	5.720E-03	0.805
		280.46		1.064E-01	1.136E-01	1.787E-01	1.327E-02	0.595
		410.95		3.023E-01	3.148E-01	5.550E-01	3.304E-02	0.545
		711.68	*	1.102E-02	8.929E-02	1.456E-01	1.108E-02	0.076
		752.31		6.846E-02	4.069E-01	6.648E-01	5.063E-02	0.103
		810.29		-6.272E-02	8.802E-02	1.376E-01	1.039E-02	-0.456
TM-171		51.35		7.628E-01	9.951E+00	1.482E+01	1.151E+00	0.051
		52.39		1.583E-01	5.117E+00	8.334E+00	6.618E-01	0.019
		59.40		1.117E+01	1.465E+01	2.229E+01	2.027E+00	0.501
		66.72	*	-1.342E+01	1.997E+01	2.836E+01	2.493E+00	-0.473
LU-176	+	88.36		9.202E-01	2.292E-01	3.754E-01	3.033E-02	2.451
		201.83		-6.471E-03	3.281E-02	5.246E-02	3.921E-03	-0.123
		306.84	*	-2.574E-02	3.207E-02	4.582E-02	3.308E-03	-0.562
		401.10		4.290E+00	8.416E+00	1.446E+01	8.481E-01	0.297
LU-177		112.95		5.758E-01	1.611E+00	2.694E+00	2.745E-01	0.214
	+	208.36	*	2.068E+00	1.536E+00	2.054E+00	1.540E-01	1.006
LU-177M		52.97		1.791E-01	5.303E-01	9.015E-01	7.244E-02	0.199
		54.07		1.748E-01	3.021E-01	5.171E-01	4.249E-02	0.338
		61.30		8.960E-01	8.718E-01	1.341E+00	1.211E-01	0.668
		121.62		1.806E-01	4.128E-01	6.919E-01	7.640E-02	0.261
		147.16		4.031E-01	7.644E-01	1.278E+00	1.157E-01	0.315
		171.86		-2.985E-01	5.720E-01	9.052E-01	6.642E-02	-0.330
		218.09		2.032E-01	9.934E-01	1.619E+00	1.218E-01	0.126
		268.79		1.025E+00	1.009E+00	1.702E+00	1.274E-01	0.602
		319.02		1.588E-01	3.216E-01	5.546E-01	3.931E-02	0.286
		367.43		-7.194E-01	1.083E+00	1.719E+00	1.086E-01	-0.419
		413.65	*	-2.091E-01	2.270E-01	3.508E-01	2.097E-02	-0.596
HF-181		56.28		-2.102E-01	3.840E-01	6.318E-01	5.421E-02	-0.333
		57.53		-8.654E-02	2.237E-01	3.703E-01	3.254E-02	-0.234

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20		6.352E-01	6.483E-01	9.903E-01	8.770E-02	0.641
		133.02		-5.563E-02	7.652E-02	1.211E-01	1.240E-02	-0.459
		136.25		7.248E-03	5.195E-01	8.504E-01	8.482E-02	0.009
		345.85		1.034E-01	3.075E-01	4.067E-01	2.729E-02	0.254
		482.03	*	4.698E-02	5.704E-02	9.959E-02	6.521E-03	0.472
W-181		56.28		-8.349E-02	1.524E-01	2.507E-01	2.151E-02	-0.333
		57.53		-3.430E-02	8.884E-02	1.470E-01	1.292E-02	-0.233
		65.20	*	2.502E-01	2.554E-01	3.901E-01	3.455E-02	0.641
TA-182		67.75		-3.541E-02	8.046E-02	1.156E-01	1.012E-02	-0.306
		100.10		6.445E-02	1.932E-01	3.134E-01	2.830E-02	0.206
		152.43		-8.678E-02	3.892E-01	6.289E-01	5.399E-02	-0.138
		222.10		-3.298E-02	4.067E-01	6.520E-01	4.910E-02	-0.051
		1001.68		-3.630E-01	3.019E+00	4.936E+00	3.368E-01	-0.074
	+	1121.28		2.782E-01	2.274E-01	4.433E-01	2.651E-02	0.628
		1189.05		-1.070E-01	5.066E-01	8.135E-01	4.509E-02	-0.132
		1221.42	*	8.996E-02	3.146E-01	5.273E-01	2.947E-02	0.171
		1230.97		3.747E-01	8.857E-01	1.306E+00	7.317E-02	0.287
RE-183		57.98		-2.440E-02	9.196E-02	1.477E-01	1.309E-02	-0.165
		59.32		4.617E-02	5.940E-02	9.041E-02	8.210E-03	0.511
		67.20		-6.147E-02	1.411E-01	2.029E-01	1.780E-02	-0.303
		162.32	*	1.668E-01	1.286E-01	2.211E-01	1.693E-02	0.755
	+	208.81		2.094E+00	1.555E+00	2.070E+00	1.553E-01	1.011
		291.72		-1.151E-01	1.251E+00	1.821E+00	1.339E-01	-0.063
RE-184		57.98		-9.057E-02	3.414E-01	5.484E-01	4.859E-02	-0.165
		59.32		1.713E-01	2.203E-01	3.354E-01	3.045E-02	0.511
		67.20		-2.281E-01	5.237E-01	7.528E-01	6.604E-02	-0.303
		161.27		1.966E-02	4.206E-01	6.871E-01	5.331E-02	0.029
		216.55		4.816E-02	3.160E-01	5.136E-01	3.861E-02	0.094
		252.85	*	2.968E-02	2.897E-01	4.669E-01	3.516E-02	0.064
		318.01		1.165E-01	5.594E-01	9.499E-01	6.744E-02	0.123
		792.07		-5.967E-01	1.528E+00	2.090E+00	1.585E-01	-0.286
		903.28		-1.007E+00	1.709E+00	2.357E+00	1.715E-01	-0.427
		920.93		2.527E-01	6.768E-01	1.144E+00	8.249E-02	0.221
OS-185		59.72		6.226E-02	1.644E-01	2.462E-01	2.240E-02	0.253
		61.14		9.006E-02	9.468E-02	1.453E-01	1.313E-02	0.620
		69.30		1.806E-01	2.326E-01	3.319E-01	2.883E-02	0.544
		592.07		-2.022E+00	3.376E+00	5.180E+00	3.752E-01	-0.390
		646.12	*	-3.895E-02	6.313E-02	9.638E-02	7.206E-03	-0.404
		717.42		6.254E-01	1.260E+00	2.127E+00	1.619E-01	0.294
		874.81		5.023E-01	8.390E-01	1.478E+00	1.091E-01	0.340
		880.27		2.071E-01	1.122E+00	1.905E+00	1.402E-01	0.109
RE-188		155.03	*	3.264E-03	1.994E-01	3.257E-01	2.719E-02	0.010
		477.96		-3.458E+00	4.080E+00	6.247E+00	4.071E-01	-0.554
		633.10		7.599E-01	3.960E+00	6.540E+00	4.857E-01	0.116
W-188	+	63.58		6.344E+01	3.885E+01	5.563E+01	4.966E+00	1.140
		227.08		7.682E-02	1.574E+01	2.533E+01	1.909E+00	0.003
		290.67	*	-1.514E+00	9.827E+00	1.424E+01	1.048E+00	-0.106
IR-192	+	295.96		7.037E-01	2.409E-01	3.229E-01	2.386E-02	2.180
		308.46		-1.828E-02	1.111E-01	1.847E-01	1.340E-02	-0.099

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		316.51	*	7.499E-04	4.319E-02	7.256E-02	5.181E-03	0.010
		468.07		-1.409E-02	9.561E-02	1.560E-01	1.131E-02	-0.090
		604.41		3.149E-01	6.025E-01	9.076E-01	1.106E-01	0.347
		612.46		2.004E+00	1.189E+00	1.953E+00	1.720E-01	1.026
AU-195		65.12		1.428E-01	1.193E-01	1.835E-01	1.626E-02	0.778
		66.83		-3.771E-02	6.573E-02	9.379E-02	8.242E-03	-0.402
	+	75.70		1.603E+00	2.570E-01	4.129E-01	3.488E-02	3.883
		98.88	*	3.337E-01	2.581E-01	4.002E-01	3.573E-02	0.834
		129.76		2.502E+00	3.284E+00	5.549E+00	5.823E-01	0.451
TL-200		367.94	*	-1.708E-05	3.284E+00	Half-Life too short		
		579.30		1.749E-03	3.284E+00	Half-Life too short		
		828.27		-1.330E-03	3.284E+00	Half-Life too short		
		1205.75		1.404E-03	3.284E+00	Half-Life too short		
TL-201		68.90		2.118E+00	2.813E+00	4.009E+00	3.489E-01	0.528
		70.82		-1.441E-01	1.567E+00	2.293E+00	1.978E-01	-0.063
		80.30		1.422E+00	4.419E+00	4.829E+00	4.003E-01	0.294
		135.34		-4.104E+00	2.208E+01	3.590E+01	3.607E+00	-0.114
		167.43	*	-3.855E+00	6.076E+00	9.564E+00	6.995E-01	-0.403
TL-202		68.90		2.368E-01	3.145E-01	4.483E-01	3.901E-02	0.528
		70.82		-1.607E-02	1.747E-01	2.557E-01	2.206E-02	-0.063
		80.30		1.586E-01	4.928E-01	5.386E-01	4.465E-02	0.294
		439.56	*	9.906E-02	8.470E-02	1.514E-01	9.397E-03	0.654
BI-207		72.80		1.567E-01	1.506E-01	2.303E-01	1.970E-02	0.680
	+	74.97		8.936E-01	1.432E-01	1.947E-01	1.649E-02	4.590
	+	84.90		3.387E-01	1.991E-01	2.964E-01	2.414E-02	1.143
		569.67		2.428E-02	4.198E-02	7.182E-02	5.117E-03	0.338
		1063.62	*	1.705E-02	7.967E-02	1.342E-01	8.621E-03	0.127
		1770.23		-2.788E+00	1.016E+00	8.316E-01	4.778E-02	-3.353
TL-207		81.07		1.203E-01	2.589E-01	2.863E-01	2.367E-02	0.420
	+	83.78		2.234E-01	1.313E-01	1.949E-01	1.594E-02	1.146
		94.90		9.436E-01	2.858E-01	4.626E-01	3.977E-02	2.040
		122.32		2.453E-01	1.951E+00	3.228E+00	3.735E-01	0.076
		144.24		2.006E-01	8.360E-01	1.364E+00	1.399E-01	0.147
		154.21		2.313E-01	4.610E-01	7.691E-01	7.152E-02	0.301
		269.46		3.191E-01	2.373E-01	4.063E-01	3.123E-02	0.785
		323.87	*	-4.470E-01	9.591E-01	1.339E+00	2.275E-01	-0.334
	+	338.28		6.148E+00	2.370E+00	2.937E+00	3.270E-01	2.093
		445.03		1.562E+00	3.012E+00	5.160E+00	5.434E-01	0.303
PO-209		260.50		-1.855E+00	1.116E+01	1.765E+01	1.326E+00	-0.105
		262.80		5.679E+00	3.151E+01	5.098E+01	3.825E+00	0.111
		896.60	*	7.289E+00	1.132E+01	1.994E+01	1.456E+00	0.365
PB-211		404.84	*	-3.584E-01	1.294E+00	2.077E+00	1.295E+00	-0.173
		427.08		1.257E+00	2.729E+00	4.485E+00	2.774E+00	0.280
		831.96		8.232E-01	1.885E+00	3.152E+00	1.970E+00	0.261
BI-212	+	727.18	*	8.621E-01	6.825E-01	8.740E-01	8.003E-02	0.986
		785.46		2.857E+00	2.542E+00	4.645E+00	3.526E-01	0.615
		1620.62		1.106E+00	1.728E+00	3.185E+00	1.850E-01	0.347
PO-215		81.07		1.203E-01	2.589E-01	2.863E-01	2.367E-02	0.420
	+	83.78		2.234E-01	1.313E-01	1.949E-01	1.594E-02	1.146

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		9.436E-01	2.858E-01	4.626E-01	3.977E-02	2.040
		122.32		2.453E-01	1.951E+00	3.228E+00	3.735E-01	0.076
		144.24		2.006E-01	8.360E-01	1.364E+00	1.399E-01	0.147
		154.21		2.313E-01	4.610E-01	7.691E-01	7.152E-02	0.301
		269.46		3.191E-01	2.373E-01	4.063E-01	3.123E-02	0.785
		323.87	*	-4.470E-01	9.591E-01	1.339E+00	2.275E-01	-0.334
	+	338.28		6.148E+00	2.370E+00	2.937E+00	3.270E-01	2.093
		445.03		1.562E+00	3.012E+00	5.160E+00	5.434E-01	0.303
RN-219		271.23		3.627E-01	3.170E-01	5.210E-01	4.884E-02	0.696
		401.81	*	-1.105E-01	5.355E-01	8.764E-01	1.195E-01	-0.126
RN-220		549.76	*	-1.191E+01	3.515E+01	5.573E+01	3.906E+00	-0.214
RA-223		81.07		1.203E-01	2.589E-01	2.863E-01	2.367E-02	0.420
	+	83.78		2.234E-01	1.313E-01	1.949E-01	1.594E-02	1.146
		94.90		9.436E-01	2.858E-01	4.626E-01	3.977E-02	2.040
		122.32		2.453E-01	1.951E+00	3.228E+00	3.735E-01	0.076
		144.24		2.006E-01	8.360E-01	1.364E+00	1.399E-01	0.147
		154.21		2.313E-01	4.610E-01	7.691E-01	7.152E-02	0.301
		269.46		3.191E-01	2.373E-01	4.063E-01	3.123E-02	0.785
		323.87	*	-4.470E-01	9.591E-01	1.339E+00	2.275E-01	-0.334
	+	338.28		6.148E+00	2.370E+00	2.937E+00	3.270E-01	2.093
		445.03		1.562E+00	3.012E+00	5.160E+00	5.434E-01	0.303
AC-227		79.80		2.438E+00	2.029E+00	2.312E+00	4.942E-01	1.055
		236.00		5.229E-01	3.136E-01	4.842E-01	5.574E-02	1.080
		256.20	*	-1.767E-01	4.572E-01	7.126E-01	1.052E-01	-0.248
		286.10		-7.317E-01	1.808E+00	2.972E+00	3.696E-01	-0.246
	+	299.80		2.464E+00	3.018E+00	3.285E+00	5.542E-01	0.750
		304.40		2.375E+00	2.448E+00	3.827E+00	6.825E-01	0.621
		334.20		1.038E+00	4.280E+00	4.380E+00	8.194E-01	0.237
TH-227		79.80		2.438E+00	2.031E+00	2.312E+00	5.006E-01	1.055
	+	94.00		1.027E+01	3.523E+00	4.237E+00	9.212E-01	2.425
		236.00		5.229E-01	3.125E-01	4.842E-01	4.968E-02	1.080
		256.20	*	-1.767E-01	4.575E-01	7.126E-01	1.252E-01	-0.248
		286.10		-7.317E-01	1.949E+00	2.972E+00	2.980E+00	-0.246
	+	299.80		2.464E+00	3.018E+00	3.285E+00	5.542E-01	0.750
		304.40		2.375E+00	2.448E+00	3.827E+00	6.825E-01	0.621
		334.20		1.038E+00	4.280E+00	4.380E+00	8.194E-01	0.237
TH-229	+	85.43		3.344E-01	1.965E-01	3.157E-01	2.566E-02	1.059
	+	88.47		5.297E-01	1.320E-01	2.187E-01	1.769E-02	2.422
		100.00		6.824E-02	2.020E-01	3.277E-01	2.957E-02	0.208
		193.63	*	2.923E-01	5.856E-01	9.722E-01	7.236E-02	0.301
		210.97		1.246E+00	1.057E+00	1.604E+00	1.204E-01	0.777
PA-231		283.67	*	5.891E-02	2.068E+00	3.046E+00	4.425E-01	0.019
	+	301.29		9.855E-01	1.201E+00	1.322E+00	1.498E-01	0.746
TH-231		81.07		1.203E-01	2.589E-01	2.863E-01	2.367E-02	0.420
	+	83.78		2.234E-01	1.313E-01	1.949E-01	1.594E-02	1.146
		94.90		9.436E-01	2.858E-01	4.626E-01	3.977E-02	2.040
		122.32		2.453E-01	1.951E+00	3.228E+00	3.735E-01	0.076
		144.24		2.006E-01	8.360E-01	1.364E+00	1.399E-01	0.147
		154.21		2.313E-01	4.610E-01	7.691E-01	7.152E-02	0.301

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		3.191E-01	2.373E-01	4.063E-01	3.123E-02	0.785
		323.87	*	-4.470E-01	9.591E-01	1.339E+00	2.275E-01	-0.334
	+	338.28		6.148E+00	2.370E+00	2.937E+00	3.270E-01	2.093
		445.03		1.562E+00	3.012E+00	5.160E+00	5.434E-01	0.303
U-231	+	84.21		7.796E+00	4.581E+00	6.798E+00	5.551E-01	1.147
	+	92.29		8.223E+00	2.291E+00	3.505E+00	2.940E-01	2.346
		95.87	*	-1.896E-01	1.028E+00	1.481E+00	1.285E-01	-0.128
		108.00		2.332E-01	1.810E+00	3.003E+00	2.922E-01	0.078
PA-233	+	75.28		2.608E+01	5.332E+00	5.949E+00	9.078E-01	4.383
	+	86.59		7.595E+00	2.702E+00	2.962E+00	7.896E-01	2.564
	+	300.12		6.869E-01	8.390E-01	9.072E-01	1.283E-01	0.757
		311.98	*	3.349E-02	7.689E-02	1.324E-01	9.877E-03	0.253
		340.50		2.365E+00	1.097E+00	1.625E+00	3.776E-01	1.455
		398.62		-1.815E+00	2.628E+00	4.074E+00	1.054E+00	-0.445
		415.76		-1.042E+00	2.009E+00	3.178E+00	6.561E-01	-0.328
PA-234	+	63.00		1.863E+00	1.166E+00	1.639E+00	2.571E-01	1.137
		94.67		8.804E-01	2.281E-01	3.487E-01	4.315E-02	2.525
		98.44		1.400E-01	1.302E-01	1.629E-01	9.097E-02	0.859
		99.86		1.756E-01	5.110E-01	8.293E-01	7.473E-02	0.212
		111.00		3.411E-02	2.044E-01	3.394E-01	4.451E-02	0.100
		131.20		5.624E-02	1.241E-01	2.074E-01	2.153E-02	0.271
		152.70		6.860E-03	3.754E-01	6.135E-01	1.044E-01	0.011
	+	186.00		2.486E+00	2.226E+00	2.954E+00	9.127E-01	0.842
		226.40		7.311E-02	5.046E-01	8.181E-01	1.024E-01	0.089
		227.20		-3.547E-02	5.396E-01	8.650E-01	6.520E-02	-0.041
		248.90		-5.119E-02	1.026E+00	1.640E+00	3.611E-01	-0.031
	+	293.70		4.483E+00	1.675E+00	1.967E+00	3.284E-01	2.279
		369.80		3.655E-02	1.033E+00	1.726E+00	3.618E-01	0.021
		568.70		-8.781E-02	1.409E+00	2.288E+00	1.629E-01	-0.038
		569.50		1.687E-01	3.767E-01	6.378E-01	4.543E-02	0.265
		574.00		-9.050E-01	2.140E+00	3.259E+00	2.330E-01	-0.278
		699.00		-1.251E-01	1.112E+00	1.777E+00	3.312E-01	-0.070
		706.10		-8.967E-01	1.724E+00	2.580E+00	1.146E+00	-0.348
		733.00		-6.522E-01	7.167E-01	8.473E-01	1.849E-01	-0.770
		742.81		-1.332E+00	2.315E+00	3.227E+00	2.166E+00	-0.413
	+	796.30		2.121E+00	2.184E+00	2.227E+00	5.953E-01	0.953
		805.60		6.136E-01	1.446E+00	2.450E+00	7.440E-01	0.250
		819.60		6.408E-01	1.911E+00	3.266E+00	1.234E+00	0.196
		826.30		-1.454E+00	1.374E+00	1.792E+00	7.981E-01	-0.811
		831.60		1.714E-01	9.459E-01	1.605E+00	4.741E-01	0.107
		876.40		-1.685E-01	1.259E+00	2.053E+00	2.109E+00	-0.082
		880.51		1.499E-01	4.013E-01	6.933E-01	5.104E-02	0.216
		883.24		-5.389E-02	4.435E-01	7.285E-01	4.886E-01	-0.074
		899.00		6.611E-01	1.308E+00	2.226E+00	9.677E-01	0.297
		925.00		-1.329E+00	1.852E+00	2.861E+00	2.059E-01	-0.465
		926.50		4.297E-02	2.592E-01	4.376E-01	1.086E-01	0.098
		946.00	*	-7.183E-02	4.705E-01	7.697E-01	1.395E-01	-0.093
		949.00		5.454E-01	7.147E-01	1.265E+00	8.972E-02	0.431
		980.50		1.629E-01	1.174E+00	1.971E+00	1.368E-01	0.083

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-7.733E-01	1.608E+00	2.249E+00	1.456E+00	-0.344
PA-234M		766.41		1.842E+01	3.113E+01	4.708E+01	3.605E+01	0.391
		1001.03	*	1.254E+00	9.881E+00	1.655E+01	1.632E+00	0.076
U-235	+	89.95		3.711E+00	1.687E+00	1.908E+00	5.866E-01	1.945
	+	93.35		3.196E+00	1.233E+00	1.326E+00	3.711E-01	2.410
		105.00		8.435E-01	1.166E+00	1.938E+00	5.832E-01	0.435
		143.76	*	5.831E-02	2.561E-01	4.174E-01	7.461E-02	0.140
		163.35		1.709E-01	5.615E-01	9.265E-01	1.725E-01	0.184
	+	185.71		9.206E-02	7.767E-02	1.096E-01	8.120E-03	0.840
		205.31		-3.596E-02	7.030E-01	9.732E-01	1.810E-01	-0.037
NP-236		94.67		6.709E-01	1.626E-01	2.648E-01	2.272E-02	2.534
		98.44		1.058E-01	7.928E-02	1.232E-01	1.095E-02	0.859
		111.00		2.580E-02	1.546E-01	2.567E-01	2.569E-02	0.100
		160.31	*	-8.482E-03	9.674E-02	1.571E-01	1.233E-02	-0.054
NP-239		99.55		9.333E-02	1.768E-01	2.779E-01	2.497E-02	0.336
		117.00	*	-8.149E-03	2.141E-01	3.521E-01	3.726E-02	-0.023
	+	209.75		1.673E+00	1.242E+00	1.620E+00	1.215E-01	1.032
		228.18		1.209E-01	2.770E-01	4.559E-01	3.437E-02	0.265
	+	277.60		6.110E-01	3.391E-01	4.142E-01	3.082E-02	1.475
		334.30		5.680E-01	2.423E+00	2.478E+00	1.707E-01	0.229
AM-241		59.54	*	3.531E-02	8.686E-02	1.302E-01	1.263E-02	0.271
CM-243		99.55		9.602E-02	1.819E-01	2.860E-01	2.569E-02	0.336
		103.76	*	2.322E-02	1.046E-01	1.744E-01	1.631E-02	0.133
		117.00		-8.383E-03	2.203E-01	3.622E-01	3.833E-02	-0.023
	+	209.75		1.649E+00	1.224E+00	1.597E+00	1.198E-01	1.032
		228.18		1.222E-01	2.799E-01	4.607E-01	3.473E-02	0.265
	+	277.60		6.160E-01	3.419E-01	4.175E-01	3.107E-02	1.475
CM-247	+	278.00		2.534E+00	1.406E+00	1.740E+00	1.294E-01	1.456
		287.40		-6.816E-02	1.514E+00	2.480E+00	1.830E-01	-0.027
		402.60	*	7.815E-03	4.701E-02	7.895E-02	4.641E-03	0.099
CF-249		252.85		1.120E-01	1.093E+00	1.761E+00	1.326E-01	0.064
		333.44		7.170E-02	3.163E-01	3.231E-01	2.230E-02	0.222
		387.95	*	-1.114E-02	4.799E-02	7.848E-02	4.604E-03	-0.142
CF-251		176.60	*	-3.929E-03	1.547E-01	2.510E-01	1.848E-02	-0.016
		227.00		6.245E-03	4.785E-01	7.704E-01	5.807E-02	0.008
		285.00		-1.067E-01	2.272E+00	3.478E+00	2.572E-01	-0.031

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232582002      *
* Acquisition date :  9-JUL-2009 08:15:28 Detector SN#     :               *
* Detector ID        : GAM17               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:08.27      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232582002           Analyst initials: MXR1         *
* Batch Number       : 881931               Sample Quantity : 1.1670E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.475E+01	3.113E+00	5.307E-01	0.000E+00
CD-109	3.940E+00	9.618E-01	1.122E+00	0.000E+00
SN-126	3.880E-01	9.472E-02	1.104E-01	0.000E+00
HG-203	1.370E-01	7.458E-02	8.005E-02	0.000E+00
TL-208	3.836E-01	1.075E-01	9.095E-02	0.000E+00
BI-210	6.576E-01	8.231E-01	1.048E+00	0.000E+00
PB-210	6.576E-01	8.231E-01	1.048E+00	0.000E+00
PO-210	6.576E-01	8.227E-01	1.048E+00	0.000E+00
BI-211	2.891E+00	5.305E-01	4.491E-01	0.000E+00
PB-212	1.259E+00	1.569E-01	1.071E-01	0.000E+00
PO-212	1.259E+00	1.569E-01	1.071E-01	0.000E+00
BI-214	1.019E+00	2.079E-01	1.518E-01	0.000E+00
PB-214	1.006E+00	1.916E-01	1.377E-01	0.000E+00
PO-214	1.006E+00	1.916E-01	1.377E-01	0.000E+00
PO-216	1.259E+00	1.569E-01	1.071E-01	0.000E+00
PO-218	1.006E+00	1.916E-01	1.377E-01	0.000E+00
RA-224	4.118E+00	1.425E+00	1.219E+00	0.000E+00
RA-226	1.019E+00	2.079E-01	1.518E-01	0.000E+00
AC-228	1.524E+00	4.047E-01	2.841E-01	0.000E+00
RA-228	1.524E+00	4.047E-01	2.841E-01	0.000E+00
TH-228	1.259E+00	1.569E-01	1.071E-01	0.000E+00
TH-230	1.019E+00	2.079E-01	1.518E-01	0.000E+00
TH-232	1.524E+00	4.047E-01	2.841E-01	0.000E+00
TH-234	1.599E+00	9.907E-01	1.286E+00	0.000E+00
U-234	1.019E+00	2.079E-01	1.518E-01	0.000E+00
NP-237	1.139E+00	3.612E-01	3.235E-01	0.000E+00
U-238	1.599E+00	9.907E-01	1.286E+00	0.000E+00
AM-243	4.978E-01	7.820E-02	6.964E-02	0.000E+00
ANH-511	9.121E-02	8.059E-02	6.191E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line Activity	K.L. Act error	MDA

Nuclide	(pCi/GRAM	) Ided	(pCi/GRAM	)	
BE-7	-4.501E-01	4.169E-01	6.431E-01	0.000E+00	NOT IDENT.
NA-22	-1.125E-02	7.252E-02	1.185E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.389E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-8.010E-03	3.545E-02	5.593E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.824E-02	7.695E-02	0.000E+00	FAIL ABUN
SC-46	1.964E-02	5.664E-02	9.956E-02	0.000E+00	FAIL ABUN
V-48	2.427E-03	1.081E-01	1.832E-01	0.000E+00	NOT IDENT.
CR-51	-1.635E-01	4.476E-01	7.589E-01	0.000E+00	NOT IDENT.
MN-52	8.161E-02	2.715E-01	4.684E-01	0.000E+00	NOT IDENT.
MN-54	4.959E-03	5.731E-02	9.870E-02	0.000E+00	NOT IDENT.
CO-56	-8.031E-03	4.860E-02	8.160E-02	0.000E+00	FAIL ABUN
CO-57	6.739E-03	2.742E-02	4.754E-02	0.000E+00	NOT IDENT.
CO-58	-2.753E-02	5.644E-02	9.246E-02	0.000E+00	NOT IDENT.
FE-59	-6.218E-02	1.514E-01	2.448E-01	0.000E+00	NOT IDENT.
CO-60	-1.489E-02	5.384E-02	8.554E-02	0.000E+00	NOT IDENT.
ZN-65	7.486E-02	1.483E-01	2.331E-01	0.000E+00	NOT IDENT.
GE-68	1.705E-01	1.857E+00	3.149E+00	0.000E+00	NOT IDENT.
AS-73	1.136E-02	2.766E-01	4.896E-01	0.000E+00	NOT IDENT.
AS-74	-7.062E-02	1.079E-01	1.685E-01	0.000E+00	NOT IDENT.
SE-75	-1.791E-02	5.204E-02	8.419E-02	0.000E+00	FAIL ABUN
BR-77	8.150E+00	8.987E+00	1.628E+01	0.000E+00	FAIL ABUN
SR-82	-3.446E-01	5.204E-01	8.414E-01	0.000E+00	NOT IDENT.
RB-83	2.884E-02	8.827E-02	1.528E-01	0.000E+00	NOT IDENT.
RB-84	-3.782E-02	9.933E-02	1.631E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.024E+01	1.796E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.180E-02	9.085E-02	0.000E+00	NOT IDENT.
RB-86	7.229E-01	1.095E+00	1.960E+00	0.000E+00	NOT IDENT.
Y-88	-3.929E-03	5.264E-02	8.698E-02	0.000E+00	NOT IDENT.
ZR-88	2.176E-02	3.730E-02	6.519E-02	0.000E+00	NOT IDENT.
Y-91	2.313E+01	2.936E+01	5.224E+01	0.000E+00	NOT IDENT.
NB-94	8.615E-02	5.284E-02	9.783E-02	0.000E+00	NOT IDENT.
NB-95	1.469E-02	6.505E-02	1.091E-01	0.000E+00	NOT IDENT.
NB-95M	1.127E-01	1.549E-01	2.369E-01	0.000E+00	NOT IDENT.
ZR-95	8.417E-02	9.638E-02	1.719E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.720E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.833E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.179E+00	1.287E+01	2.194E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.342E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	8.926E-03	3.621E-02	6.158E-02	0.000E+00	NOT IDENT.
RH-102	-2.233E-02	3.781E-02	6.104E-02	0.000E+00	NOT IDENT.
RU-103	-1.762E-03	4.982E-02	8.397E-02	0.000E+00	FAIL ABUN
RH-106	9.188E-02	3.997E-01	6.810E-01	0.000E+00	FAIL ABUN
RU-106	9.188E-02	3.996E-01	6.810E-01	0.000E+00	FAIL ABUN
AG-108M	1.783E-02	4.119E-02	7.238E-02	0.000E+00	NOT IDENT.
AG-110M	-2.401E-03	4.701E-02	7.770E-02	0.000E+00	NOT IDENT.
IN-111	-1.642E-01	1.040E+00	1.487E+00	0.000E+00	NOT IDENT.
IN-113M	2.183E-02	5.286E-02	9.315E-02	0.000E+00	NOT IDENT.
SN-113	2.183E-02	5.286E-02	9.315E-02	0.000E+00	NOT IDENT.
IN-114M	-4.438E-02	2.404E-01	3.490E-01	0.000E+00	NOT IDENT.
CD-115	5.515E+00	9.676E+00	1.704E+01	0.000E+00	NOT IDENT.
SN-117M	-2.079E-02	6.024E-02	1.005E-01	0.000E+00	NOT IDENT.
SB-122	7.956E-01	2.099E+00	3.626E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.347E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.446E-03	3.314E-02	5.603E-02	0.000E+00	NOT IDENT.
I-124	2.260E-01	7.282E-01	1.095E+00	0.000E+00	NOT IDENT.
SB-124	-1.113E-01	8.123E-02	7.667E-02	0.000E+00	FAIL ABUN
SB-125	4.945E-02	1.145E-01	2.013E-01	0.000E+00	NOT IDENT.
TE-125M	-1.110E+01	1.024E+01	1.674E+01	0.000E+00	NOT IDENT.
I-126	1.140E-01	2.379E-01	4.112E-01	0.000E+00	NOT IDENT.
SB-126	-2.400E-01	2.175E-01	2.776E-01	0.000E+00	FAIL ABUN
SB-127	1.569E-01	1.546E+00	2.584E+00	0.000E+00	NOT IDENT.
XE-127	-4.647E-03	5.284E-02	8.823E-02	0.000E+00	NOT IDENT.
I-131	-2.631E-02	1.227E-01	2.081E-01	0.000E+00	NOT IDENT.
TE-132	2.800E-01	6.339E-01	1.080E+00	0.000E+00	NOT IDENT.
BA-133	-3.362E-02	5.716E-02	8.039E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.934E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.090E-01	1.066E-01	1.147E-01	0.000E+00	FAIL ABUN
CS-135	1.419E-01	1.954E-01	3.359E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.472E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-9.865E-02	1.572E-01	2.481E-01	0.000E+00	FAIL ABUN
BA-137M	-3.914E-02	4.851E-02	7.408E-02	0.000E+00	NOT IDENT.
CS-137	-4.137E-02	5.128E-02	7.831E-02	0.000E+00	NOT IDENT.
CE-139	-5.986E-04	3.383E-02	5.723E-02	0.000E+00	NOT IDENT.
BA-140	-1.401E-01	3.394E-01	5.466E-01	0.000E+00	NOT IDENT.
LA-140	-6.592E-02	1.073E-01	1.581E-01	0.000E+00	FAIL ABUN
CE-141	4.995E-02	7.378E-02	1.274E-01	0.000E+00	NOT IDENT.

CE-143	0.000E+00	1.282E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.103E-01	2.357E-01	3.935E-01	0.000E+00	NOT IDENT.
PM-144	-5.302E-02	5.058E-02	7.528E-02	0.000E+00	NOT IDENT.
PR-144	-3.590E+00	3.425E+00	5.098E+00	0.000E+00	NOT IDENT.
PM-146	1.756E-02	5.298E-02	9.233E-02	0.000E+00	NOT IDENT.
ND-147	-2.417E-01	7.080E-01	1.157E+00	0.000E+00	FAIL ABUN
PM-149	-4.371E+01	7.372E+01	1.202E+02	0.000E+00	NOT IDENT.
EU-152	-2.628E-02	1.377E-01	2.032E-01	0.000E+00	NOT IDENT.
GD-153	2.396E-02	8.828E-02	1.363E-01	0.000E+00	FAIL ABUN
EU-154	-3.143E-02	2.027E-01	3.312E-01	0.000E+00	NOT IDENT.
EU-155	4.549E-02	1.142E-01	2.002E-01	0.000E+00	FAIL ABUN
TB-160	5.854E-02	2.045E-01	3.576E-01	0.000E+00	FAIL ABUN
HO-166M	1.102E-02	8.750E-02	1.462E-01	0.000E+00	NOT IDENT.
TM-171	-1.342E+01	1.958E+01	2.916E+01	0.000E+00	NOT IDENT.
LU-176	-2.574E-02	3.143E-02	4.641E-02	0.000E+00	FAIL ABUN
LU-177	2.068E+00	1.505E+00	2.089E+00	0.000E+00	FAIL ABUN
LU-177M	-2.091E-01	2.224E-01	3.542E-01	0.000E+00	NOT IDENT.
HF-181	4.698E-02	5.590E-02	1.004E-01	0.000E+00	NOT IDENT.
W-181	2.502E-01	2.503E-01	4.013E-01	0.000E+00	NOT IDENT.
TA-182	8.996E-02	3.083E-01	5.265E-01	0.000E+00	FAIL ABUN
RE-183	1.668E-01	1.260E-01	2.254E-01	0.000E+00	FAIL ABUN
RE-184	2.968E-02	2.839E-01	4.738E-01	0.000E+00	NOT IDENT.
OS-185	-3.895E-02	6.187E-02	9.687E-02	0.000E+00	NOT IDENT.
RE-188	3.264E-03	1.954E-01	3.322E-01	0.000E+00	NOT IDENT.
W-188	-1.514E+00	9.630E+00	1.443E+01	0.000E+00	FAIL ABUN
IR-192	7.499E-04	4.233E-02	7.346E-02	0.000E+00	FAIL ABUN
AU-195	3.337E-01	2.530E-01	4.100E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.419E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.855E+00	5.955E+00	9.746E+00	0.000E+00	NOT IDENT.
TL-202	9.906E-02	8.301E-02	1.528E-01	0.000E+00	NOT IDENT.
BI-207	1.705E-02	7.807E-02	1.342E-01	0.000E+00	FAIL ABUN
TL-207	-4.470E-01	9.399E-01	1.356E+00	0.000E+00	FAIL ABUN
PO-209	7.289E+00	1.109E+01	1.998E+01	0.000E+00	NOT IDENT.
PB-211	-3.584E-01	1.268E+00	2.098E+00	0.000E+00	NOT IDENT.
BI-212	8.621E-01	6.689E-01	8.773E-01	0.000E+00	FAIL ABUN
PO-215	-4.470E-01	9.399E-01	1.356E+00	0.000E+00	FAIL ABUN
RN-219	-1.105E-01	5.248E-01	8.852E-01	0.000E+00	NOT IDENT.
RN-220	-1.191E+01	3.445E+01	5.610E+01	0.000E+00	NOT IDENT.
RA-223	-4.470E-01	9.399E-01	1.356E+00	0.000E+00	FAIL ABUN
AC-227	-1.767E-01	4.481E-01	7.230E-01	0.000E+00	FAIL ABUN
TH-227	-1.767E-01	4.484E-01	7.230E-01	0.000E+00	FAIL ABUN
TH-229	2.923E-01	5.739E-01	9.893E-01	0.000E+00	FAIL ABUN
PA-231	5.891E-02	2.027E+00	3.087E+00	0.000E+00	FAIL ABUN
TH-231	-4.470E-01	9.399E-01	1.356E+00	0.000E+00	FAIL ABUN
U-231	-1.896E-01	1.007E+00	1.518E+00	0.000E+00	FAIL ABUN
PA-233	3.349E-02	7.535E-02	1.341E-01	0.000E+00	FAIL ABUN
PA-234	-7.183E-02	4.611E-01	7.705E-01	0.000E+00	FAIL ABUN
PA-234M	1.254E+00	9.683E+00	1.656E+01	0.000E+00	NOT IDENT.
U-235	5.831E-02	2.510E-01	4.260E-01	0.000E+00	FAIL ABUN
NP-236	-8.482E-03	9.481E-02	1.601E-01	0.000E+00	NOT IDENT.
NP-239	-8.149E-03	2.099E-01	3.601E-01	0.000E+00	FAIL ABUN
AM-241	3.531E-02	8.512E-02	1.341E-01	0.000E+00	NOT IDENT.
CM-243	2.322E-02	1.025E-01	1.786E-01	0.000E+00	FAIL ABUN
CM-247	7.815E-03	4.607E-02	7.974E-02	0.000E+00	FAIL ABUN
CF-249	-1.114E-02	4.703E-02	7.929E-02	0.000E+00	NOT IDENT.
CF-251	-3.929E-03	1.516E-01	2.556E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:16:20.39

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232582002.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:15:28.
Sample ID         : G232582002           Sample quantity  : 1.16700E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.27  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881931                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	920	10.67*	7.983E-01	3.475E+01	3.475E+01	9.14
CD-109	88.03	293	3.72*	6.573E+00	3.859E+00	3.940E+00	24.91
SN-126	64.28	126	9.60	6.650E+00	6.328E-01	6.328E-01	62.49
	86.94	293	8.90	6.573E+00	1.613E+00	1.613E+00	47.51
	87.57	293	37.00*	6.573E+00	3.880E-01	3.880E-01	24.91
HG-203	70.83	------	4.75	6.658E+00	------	Line Not Found	------
	72.87	------	8.00	6.655E+00	------	Line Not Found	------
	82.60	------	3.55	6.611E+00	------	Line Not Found	------
	279.20	98	77.30*	3.645E+00	1.115E-01	1.370E-01	55.54
TL-208	277.35	98	6.80	3.645E+00	1.267E+00	1.267E+00	56.20
	510.84	59	21.60	2.072E+00	4.223E-01	4.223E-01	90.55
	583.14	183	84.20*	1.824E+00	3.836E-01	3.836E-01	28.59
	860.37	------	12.46	1.267E+00	------	Line Not Found	------
BI-210	46.50	54	4.05*	6.561E+00	6.568E-01	6.576E-01	127.72
PB-210	46.50	54	4.05*	6.561E+00	6.568E-01	6.576E-01	127.72
PO-210	46.50	54	4.05*	6.561E+00	6.568E-01	6.576E-01	127.66
BI-211	72.87	------	1.27	6.655E+00	------	Line Not Found	------
	351.07	344	12.94*	2.955E+00	2.891E+00	2.891E+00	18.72
PB-212	74.81	679	10.70	6.650E+00	3.071E+00	3.071E+00	18.55
	77.11	761	18.00	6.641E+00	2.047E+00	2.047E+00	13.03
	87.30	293	8.00	6.573E+00	1.794E+00	1.794E+00	26.84
	238.63	721	44.60*	4.130E+00	1.259E+00	1.259E+00	12.71
	300.09	48	3.41	3.406E+00	1.329E+00	1.329E+00	121.68
PO-212	74.81	679	10.70	6.650E+00	3.071E+00	3.071E+00	18.55
	77.11	761	18.00	6.641E+00	2.047E+00	2.047E+00	13.03
	87.30	293	8.00	6.573E+00	1.794E+00	1.794E+00	26.84
	115.19	------	0.60	6.204E+00	------	Line Not Found	------
	238.63	721	44.60*	4.130E+00	1.259E+00	1.259E+00	12.71
	300.09	48	3.41	3.406E+00	1.329E+00	1.329E+00	121.68
BI-214	609.31	257	46.30*	1.749E+00	1.019E+00	1.019E+00	20.81
	768.36	------	5.04	1.406E+00	------	Line Not Found	------
	934.06	------	3.21	1.177E+00	------	Line Not Found	------

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1120.29	28	15.10	1.002E+00	5.929E-01	5.929E-01	82.01
	1238.11	35	5.94	9.202E-01	2.033E+00	2.033E+00	88.78
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	56	15.80	6.764E-01	1.674E+00	1.674E+00	31.66
PB-214	74.81	679	6.21	6.650E+00	5.291E+00	5.291E+00	17.66
	77.11	761	10.50	6.641E+00	3.509E+00	3.509E+00	15.10
	87.30	293	4.67	6.573E+00	3.074E+00	3.074E+00	26.08
	241.98	207	7.49	4.089E+00	2.172E+00	2.172E+00	35.75
	295.21	193	19.20	3.465E+00	9.340E-01	9.340E-01	34.78
	351.92	344	37.20*	2.955E+00	1.006E+00	1.006E+00	19.43
PO-214	74.81	679	6.21	6.650E+00	5.291E+00	5.291E+00	17.66
	77.11	761	10.50	6.641E+00	3.509E+00	3.509E+00	15.10
	87.30	293	4.67	6.573E+00	3.074E+00	3.074E+00	26.08
	241.98	207	7.49	4.089E+00	2.172E+00	2.172E+00	35.75
	295.21	193	19.20	3.465E+00	9.340E-01	9.340E-01	34.78
	351.92	344	37.20*	2.955E+00	1.006E+00	1.006E+00	19.43
PO-216	74.81	679	10.70	6.650E+00	3.071E+00	3.071E+00	18.55
	77.11	761	18.00	6.641E+00	2.047E+00	2.047E+00	13.03
	87.30	293	8.00	6.573E+00	1.794E+00	1.794E+00	26.84
	238.63	721	44.60*	4.130E+00	1.259E+00	1.259E+00	12.71
	300.09	48	3.41	3.406E+00	1.329E+00	1.329E+00	121.68
PO-218	74.81	679	6.21	6.650E+00	5.291E+00	5.291E+00	17.66
	77.11	761	10.50	6.641E+00	3.509E+00	3.509E+00	15.10
	87.30	293	4.67	6.573E+00	3.074E+00	3.074E+00	26.08
	241.98	207	7.49	4.089E+00	2.172E+00	2.172E+00	35.75
	295.21	193	19.20	3.465E+00	9.340E-01	9.340E-01	34.78
	351.92	344	37.20*	2.955E+00	1.006E+00	1.006E+00	19.43
RA-224	240.98	207	3.95*	4.089E+00	4.118E+00	4.118E+00	35.31
RA-226	609.31	257	46.30*	1.749E+00	1.019E+00	1.019E+00	20.81
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	28	15.10	1.002E+00	5.929E-01	5.929E-01	82.01
	1238.11	35	5.94	9.202E-01	2.033E+00	2.033E+00	88.78
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	56	15.80	6.764E-01	1.674E+00	1.674E+00	31.66
AC-228	338.32	160	11.40	3.062E+00	1.472E+00	1.472E+00	55.11
	911.07	158	27.70*	1.203E+00	1.524E+00	1.524E+00	27.10
	969.11	78	16.60	1.139E+00	1.332E+00	1.332E+00	46.77
RA-228	338.32	160	11.40	3.062E+00	1.472E+00	1.472E+00	55.11
	911.07	158	27.70*	1.203E+00	1.524E+00	1.524E+00	27.10
	969.11	78	16.60	1.139E+00	1.332E+00	1.332E+00	46.77
TH-228	84.40	113	1.21	6.599E+00	4.559E+00	4.559E+00	59.60
	238.60	721	44.60*	4.130E+00	1.259E+00	1.259E+00	12.71
	300.10	48	3.41	3.406E+00	1.329E+00	1.329E+00	134.95
TH-230	609.31	257	46.30*	1.749E+00	1.019E+00	1.019E+00	20.81
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	28	15.10	1.002E+00	5.929E-01	5.929E-01	82.01
	1238.11	35	5.94	9.202E-01	2.033E+00	2.033E+00	88.78

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	56	15.80	6.764E-01	1.674E+00	1.674E+00	31.66
TH-232	338.32	160	11.40	3.062E+00	1.472E+00	1.472E+00	37.53
	911.07	158	27.70*	1.203E+00	1.524E+00	1.524E+00	27.10
	969.11	78	16.60	1.139E+00	1.332E+00	1.332E+00	46.77
TH-234	63.29	126	3.80*	6.650E+00	1.599E+00	1.599E+00	63.23
	92.38	291	5.41	6.517E+00	2.659E+00	2.659E+00	32.07
U-234	609.31	257	46.30*	1.749E+00	1.019E+00	1.019E+00	20.81
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	28	15.10	1.002E+00	5.929E-01	5.929E-01	82.01
	1238.11	35	5.94	9.202E-01	2.033E+00	2.033E+00	88.78
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	56	15.80	6.764E-01	1.674E+00	1.674E+00	31.66
NP-237	86.50	293	12.60*	6.573E+00	1.139E+00	1.139E+00	32.35
	95.87	------	2.60	6.484E+00	------ Line Not Found		------
U-238	63.29	126	3.80*	6.650E+00	1.599E+00	1.599E+00	63.23
	92.38	291	5.41	6.517E+00	2.659E+00	2.659E+00	27.86
AM-243	74.67	679	66.00*	6.650E+00	4.978E-01	4.978E-01	16.03
	86.72	293	0.34	6.573E+00	4.272E+01	4.272E+01	24.91
	117.66	------	0.55	6.163E+00	------ Line Not Found		------
	142.18	------	0.13	5.726E+00	------ Line Not Found		------
ANH-511	511.00	59	100.00*	2.072E+00	9.121E-02	9.121E-02	90.16

Flag: "*" = Keyline

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

Total number of lines in spectrum 30
Number of unidentified lines 1
Number of lines tentatively identified by NID 29 96.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.475E+01	3.475E+01	0.318E+01	9.14	
CD-109	464.00D	1.02	3.859E+00	3.940E+00	0.981E+00	24.91	
SN-126	1.00E+05Y	1.00	3.880E-01	3.880E-01	0.966E-01	24.91	
HG-203	46.60D	1.23	1.115E-01	1.370E-01	0.761E-01	55.54	
TL-208	1.41E+10Y	1.00	3.836E-01	3.836E-01	1.097E-01	28.59	
BI-210	22.26Y	1.00	6.568E-01	6.576E-01	8.399E-01	127.72	
PB-210	22.26Y	1.00	6.568E-01	6.576E-01	8.399E-01	127.72	
PO-210	22.26Y	1.00	6.568E-01	6.576E-01	8.395E-01	127.66	
BI-211	7.04E+08Y	1.00	2.891E+00	2.891E+00	0.541E+00	18.72	
PB-212	1.41E+10Y	1.00	1.259E+00	1.259E+00	0.160E+00	12.71	
PO-212	1.41E+10Y	1.00	1.259E+00	1.259E+00	0.160E+00	12.71	
BI-214	1600.00Y	1.00	1.019E+00	1.019E+00	0.212E+00	20.81	
PB-214	1600.00Y	1.00	1.006E+00	1.006E+00	0.195E+00	19.43	
PO-214	1600.00Y	1.00	1.006E+00	1.006E+00	0.195E+00	19.43	
PO-216	1.41E+10Y	1.00	1.259E+00	1.259E+00	0.160E+00	12.71	
PO-218	1600.00Y	1.00	1.006E+00	1.006E+00	0.195E+00	19.43	
RA-224	1.41E+10Y	1.00	4.118E+00	4.118E+00	1.454E+00	35.31	
RA-226	1600.00Y	1.00	1.019E+00	1.019E+00	0.212E+00	20.81	
AC-228	1.41E+10Y	1.00	1.524E+00	1.524E+00	0.413E+00	27.10	
RA-228	1.41E+10Y	1.00	1.524E+00	1.524E+00	0.413E+00	27.10	
TH-228	1.41E+10Y	1.00	1.259E+00	1.259E+00	0.160E+00	12.71	
TH-230	4.47E+09Y	1.00	1.019E+00	1.019E+00	0.212E+00	20.81	
TH-232	1.41E+10Y	1.00	1.524E+00	1.524E+00	0.413E+00	27.10	
TH-234	4.47E+09Y	1.00	1.599E+00	1.599E+00	1.011E+00	63.23	
U-234	4.47E+09Y	1.00	1.019E+00	1.019E+00	0.212E+00	20.81	
NP-237	2.14E+06Y	1.00	1.139E+00	1.139E+00	0.369E+00	32.35	
U-238	4.47E+09Y	1.00	1.599E+00	1.599E+00	1.011E+00	63.23	
AM-243	7380.00Y	1.00	4.978E-01	4.978E-01	0.798E-01	16.03	
ANH-511	1.00E+09Y	1.00	9.121E-02	9.121E-02	8.223E-02	90.16	
			---	---			
	Total Activity :		7.010E+01	7.021E+01			

Grand Total Activity : 7.010E+01 7.021E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	90.06	204	288	1.41	181.26	165	29	2.83E-02	33.5	6.55E+00	T
0	186.14	76	258	1.46	373.27	369	9	1.06E-02	84.0	4.94E+00	T
0	209.33	77	203	1.11	419.62	416	10	1.07E-02	73.9	4.56E+00	T
0	330.14	90	157	4.94	661.08	652	16	1.25E-02	67.4	3.13E+00	T
0	728.11	47	60	1.13	1456.58	1450	13	6.49E-03	78.6	1.48E+00	T
0	795.91	35	51	0.70	1592.11	1584	17	4.86E-03	99.4	1.36E+00	T
0	1587.30	24	6	1.44	3174.48	3168	12	3.39E-03	56.7	7.43E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:16:25.22

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232582002.CNF;1 *
* Acquisition date  : 9-JUL-2009 08:15:28.  Detector SN#     :             *
* Detector ID       : GAM17                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:08.27          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232582002            Analyst initials: MXR1         *
* Batch Number      : 881931                Sample Quantity : 1.16700E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14.8MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.475E+01	3.177E+00	5.325E-01	3.274E-02	65.255
CD-109	3.940E+00	9.814E-01	1.094E+00	8.810E-02	3.602
SN-126	3.880E-01	9.665E-02	1.076E-01	8.679E-03	3.605
HG-203	1.370E-01	7.611E-02	7.896E-02	6.091E-03	1.735
TL-208	3.836E-01	1.097E-01	9.039E-02	7.166E-03	4.244
BI-210	6.576E-01	8.399E-01	1.015E+00	8.123E-02	0.648
PB-210	6.576E-01	8.399E-01	1.015E+00	8.123E-02	0.648
PO-210	6.576E-01	8.395E-01	1.015E+00	7.064E-02	0.648
BI-211	2.891E+00	5.413E-01	4.441E-01	3.190E-02	6.511
PB-212	1.259E+00	1.601E-01	1.055E-01	9.255E-03	11.941
PO-212	1.259E+00	1.601E-01	1.055E-01	9.255E-03	11.941
BI-214	1.019E+00	2.121E-01	1.509E-01	1.355E-02	6.754
PB-214	1.006E+00	1.955E-01	1.362E-01	1.208E-02	7.385
PO-214	1.006E+00	1.955E-01	1.362E-01	1.208E-02	7.385
PO-216	1.259E+00	1.601E-01	1.055E-01	9.255E-03	11.941
PO-218	1.006E+00	1.955E-01	1.362E-01	1.208E-02	7.385
RA-224	4.118E+00	1.454E+00	1.201E+00	9.058E-02	3.429
RA-226	1.019E+00	2.121E-01	1.509E-01	1.355E-02	6.754

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	1.524E+00	4.130E-01	2.837E-01	2.903E-02	5.372
RA-228	1.524E+00	4.130E-01	2.837E-01	2.903E-02	5.372
TH-228	1.259E+00	1.601E-01	1.054E-01	9.254E-03	11.942
TH-230	1.019E+00	2.121E-01	1.509E-01	1.355E-02	6.754
TH-232	1.524E+00	4.130E-01	2.837E-01	2.903E-02	5.372
TH-234	1.599E+00	1.011E+00	1.249E+00	2.267E-01	1.279
U-234	1.019E+00	2.121E-01	1.509E-01	1.355E-02	6.754
NP-237	1.139E+00	3.685E-01	3.153E-01	6.990E-02	3.613
U-238	1.599E+00	1.011E+00	1.249E+00	2.267E-01	1.279
AM-243	4.978E-01	7.979E-02	6.779E-02	5.751E-03	7.343
ANH-511	9.121E-02	8.223E-02	6.145E-02	4.153E-03	1.484

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-4.501E-01		4.254E-01	6.379E-01	4.704E-02	-0.706
NA-22	-1.125E-02		7.400E-02	1.187E-01	6.729E-03	-0.095
NA-24	1.535E-01		1.219E-01	Half-Life too short		
AL-26	-8.010E-03		3.617E-02	5.625E-02	3.216E-03	-0.142
TI-44	3.778E-01	+	4.923E-02	7.494E-02	6.261E-03	5.041
SC-46	1.964E-02		5.780E-02	9.938E-02	7.284E-03	0.198
V-48	2.427E-03		1.103E-01	1.830E-01	1.267E-02	0.013
CR-51	-1.635E-01		4.567E-01	7.497E-01	5.718E-02	-0.218
MN-52	8.161E-02		2.770E-01	4.700E-01	2.716E-02	0.174
MN-54	4.959E-03		5.848E-02	9.847E-02	7.387E-03	0.050
CO-56	-8.031E-03		4.959E-02	8.142E-02	6.083E-03	-0.099
CO-57	6.739E-03		2.798E-02	4.650E-02	5.160E-03	0.145
CO-58	-2.753E-02		5.759E-02	9.221E-02	6.988E-03	-0.299
FE-59	-6.218E-02		1.545E-01	2.449E-01	1.740E-02	-0.254
CO-60	-1.489E-02		5.494E-02	8.576E-02	4.897E-03	-0.174
ZN-65	7.486E-02		1.513E-01	2.333E-01	1.409E-02	0.321
GE-68	1.705E-01		1.895E+00	3.150E+00	1.993E-01	0.054
AS-73	1.136E-02		2.822E-01	4.750E-01	3.854E-02	0.024
AS-74	-7.062E-02		1.101E-01	1.675E-01	1.217E-02	-0.422
SE-75	-1.791E-02		5.310E-02	8.300E-02	6.261E-03	-0.216
BR-77	8.150E+00		9.170E+00	1.616E+01	1.103E+00	0.504
SR-82	-3.446E-01		5.311E-01	8.388E-01	6.376E-02	-0.411
RB-83	2.884E-02		9.007E-02	1.517E-01	1.035E-02	0.190
RB-84	-3.782E-02		1.014E-01	1.628E-01	1.198E-02	-0.232
KR-85	2.076E+01		1.045E+01	1.783E+01	1.208E+00	1.165
SR-85	1.050E-01		5.286E-02	9.018E-02	6.113E-03	1.165
RB-86	7.229E-01		1.117E+00	1.961E+00	1.241E-01	0.369
Y-88	-3.929E-03		5.372E-02	8.749E-02	4.995E-03	-0.045
ZR-88	2.176E-02		3.807E-02	6.453E-02	3.735E-03	0.337
Y-91	2.313E+01		2.996E+01	5.231E+01	2.912E+00	0.442
NB-94	8.615E-02		5.392E-02	9.742E-02	7.402E-03	0.884
NB-95	1.469E-02		6.637E-02	1.087E-01	8.275E-03	0.135

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	1.127E-01		1.581E-01	2.333E-01	2.086E-02	0.483
ZR-95	8.417E-02		9.835E-02	1.713E-01	1.472E-02	0.491
NB-97	1.448E-03		1.898E-02	Half-Life too short		
ZR-97	9.178E-01		3.996E-01	Half-Life too short		
MO-99	5.179E+00		1.313E+01	2.186E+01	3.201E+00	0.237
TC-99M	-9.985E+08		6.849E+08	Half-Life too short		
RH-101	8.926E-03		3.694E-02	6.053E-02	4.516E-03	0.147
RH-102	-2.233E-02		3.858E-02	6.054E-02	3.932E-03	-0.369
RU-103	-1.762E-03		5.084E-02	8.332E-02	1.088E-02	-0.021
RH-106	9.188E-02		4.079E-01	6.773E-01	8.529E-02	0.136
RU-106	9.188E-02		4.078E-01	6.773E-01	4.998E-02	0.136
AG-108M	1.783E-02		4.203E-02	7.172E-02	4.754E-03	0.249
AG-110M	-2.401E-03		4.797E-02	7.732E-02	6.039E-03	-0.031
IN-111	-1.642E-01		1.061E+00	1.465E+00	1.104E-01	-0.112
IN-113M	2.183E-02		5.394E-02	9.221E-02	5.686E-03	0.237
SN-113	2.183E-02		5.394E-02	9.221E-02	5.686E-03	0.237
IN-114M	-4.438E-02		2.453E-01	3.429E-01	2.547E-02	-0.129
CD-115	5.515E+00		9.873E+00	1.692E+01	1.163E+00	0.326
SN-117M	-2.079E-02		6.147E-02	9.862E-02	7.906E-03	-0.211
SB-122	7.956E-01		2.142E+00	3.602E+00	2.555E-01	0.221
I-123	-9.945E-02		6.874E-01	Half-Life too short		
TE-123M	-2.446E-03		3.382E-02	5.496E-02	4.414E-03	-0.045
I-124	2.260E-01		7.430E-01	1.089E+00	7.944E-02	0.208
SB-124	-1.113E-01		8.288E-02	7.706E-02	4.843E-03	-1.445
SB-125	4.945E-02		1.168E-01	1.994E-01	1.264E-02	0.248
TE-125M	-1.110E+01		1.045E+01	1.636E+01	1.860E+00	-0.678
I-126	1.140E-01		2.428E-01	4.093E-01	3.086E-02	0.279
SB-126	-2.400E-01		2.220E-01	2.765E-01	2.105E-02	-0.868
SB-127	1.569E-01		1.577E+00	2.572E+00	2.630E-01	0.061
XE-127	-4.647E-03		5.392E-02	8.675E-02	6.488E-03	-0.054
I-131	-2.631E-02		1.252E-01	2.058E-01	1.438E-02	-0.128
TE-132	2.800E-01		6.468E-01	1.063E+00	1.586E-01	0.263
BA-133	-3.362E-02		5.832E-02	7.950E-02	9.497E-03	-0.423
I-133	8.438E-04		1.497E-03	Half-Life too short		
CS-134	1.090E-01	+	1.087E-01	1.144E-01	8.749E-03	0.953
CS-135	1.419E-01		1.994E-01	3.312E-01	2.981E-02	0.428
I-135	-2.856E+08		1.771E+08	Half-Life too short		
CS-136	-9.865E-02		1.604E-01	2.481E-01	1.738E-02	-0.398
BA-137M	-3.914E-02		4.950E-02	7.373E-02	5.552E-03	-0.531
CS-137	-4.137E-02		5.233E-02	7.794E-02	5.884E-03	-0.531
CE-139	-5.986E-04		3.452E-02	5.616E-02	4.107E-03	-0.011
BA-140	-1.401E-01		3.463E-01	5.428E-01	1.777E-01	-0.258
LA-140	-6.592E-02		1.095E-01	1.588E-01	9.229E-03	-0.415
CE-141	4.995E-02		7.528E-02	1.248E-01	1.167E-02	0.400
CE-143	3.393E-04		6.540E-05	Half-Life too short		
CE-144	-1.103E-01		2.405E-01	3.853E-01	6.354E-02	-0.286
PM-144	-5.302E-02		5.161E-02	7.496E-02	5.692E-03	-0.707
PR-144	-3.590E+00		3.495E+00	5.076E+00	3.853E-01	-0.707

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-146	1.756E-02		5.406E-02	9.153E-02	8.224E-03	0.192
ND-147	-2.417E-01		7.225E-01	1.149E+00	1.611E-01	-0.210
PM-149	-4.371E+01		7.522E+01	1.186E+02	1.767E+01	-0.368
EU-152	-2.628E-02		1.405E-01	2.009E-01	1.483E-02	-0.131
GD-153	2.396E-02		9.008E-02	1.330E-01	1.171E-02	0.180
EU-154	-3.143E-02		2.068E-01	3.319E-01	3.070E-02	-0.095
EU-155	4.549E-02		1.166E-01	1.956E-01	1.874E-02	0.233
TB-160	5.854E-02		2.087E-01	3.570E-01	2.630E-02	0.164
HO-166M	1.102E-02		8.929E-02	1.456E-01	1.108E-02	0.076
TM-171	-1.342E+01		1.997E+01	2.836E+01	2.493E+00	-0.473
LU-176	-2.574E-02		3.207E-02	4.582E-02	3.308E-03	-0.562
LU-177	2.068E+00	+	1.536E+00	2.054E+00	1.540E-01	1.006
LU-177M	-2.091E-01		2.270E-01	3.508E-01	2.097E-02	-0.596
HF-181	4.698E-02		5.704E-02	9.959E-02	6.521E-03	0.472
W-181	2.502E-01		2.554E-01	3.901E-01	3.455E-02	0.641
TA-182	8.996E-02		3.146E-01	5.273E-01	2.947E-02	0.171
RE-183	1.668E-01		1.286E-01	2.211E-01	1.693E-02	0.755
RE-184	2.968E-02		2.897E-01	4.669E-01	3.516E-02	0.064
OS-185	-3.895E-02		6.313E-02	9.638E-02	7.206E-03	-0.404
RE-188	3.264E-03		1.994E-01	3.257E-01	2.719E-02	0.010
W-188	-1.514E+00		9.827E+00	1.424E+01	1.048E+00	-0.106
IR-192	7.499E-04		4.319E-02	7.256E-02	5.181E-03	0.010
AU-195	3.337E-01		2.581E-01	4.002E-01	3.573E-02	0.834
TL-200	-1.708E-05		1.234E-04	Half-Life too short		
TL-201	-3.855E+00		6.076E+00	9.564E+00	6.995E-01	-0.403
TL-202	9.906E-02		8.470E-02	1.514E-01	9.397E-03	0.654
BI-207	1.705E-02		7.967E-02	1.342E-01	8.621E-03	0.127
TL-207	-4.470E-01		9.591E-01	1.339E+00	2.275E-01	-0.334
PO-209	7.289E+00		1.132E+01	1.994E+01	1.456E+00	0.365
PB-211	-3.584E-01		1.294E+00	2.077E+00	1.295E+00	-0.173
BI-212	8.621E-01	+	6.825E-01	8.740E-01	8.003E-02	0.986
PO-215	-4.470E-01		9.591E-01	1.339E+00	2.275E-01	-0.334
RN-219	-1.105E-01		5.355E-01	8.764E-01	1.195E-01	-0.126
RN-220	-1.191E+01		3.515E+01	5.573E+01	3.906E+00	-0.214
RA-223	-4.470E-01		9.591E-01	1.339E+00	2.275E-01	-0.334
AC-227	-1.767E-01		4.572E-01	7.126E-01	1.052E-01	-0.248
TH-227	-1.767E-01		4.575E-01	7.126E-01	1.252E-01	-0.248
TH-229	2.923E-01		5.856E-01	9.722E-01	7.236E-02	0.301
PA-231	5.891E-02		2.068E+00	3.046E+00	4.425E-01	0.019
TH-231	-4.470E-01		9.591E-01	1.339E+00	2.275E-01	-0.334
U-231	-1.896E-01		1.028E+00	1.481E+00	1.285E-01	-0.128
PA-233	3.349E-02		7.689E-02	1.324E-01	9.877E-03	0.253
PA-234	-7.183E-02		4.705E-01	7.697E-01	1.395E-01	-0.093
PA-234M	1.254E+00		9.881E+00	1.655E+01	1.632E+00	0.076
U-235	5.831E-02		2.561E-01	4.174E-01	7.461E-02	0.140
NP-236	-8.482E-03		9.674E-02	1.571E-01	1.233E-02	-0.054
NP-239	-8.149E-03		2.141E-01	3.521E-01	3.726E-02	-0.023
AM-241	3.531E-02		8.686E-02	1.302E-01	1.263E-02	0.271

Sample ID : G232582002 Acquisition date : 9-JUL-2009 08:15:28

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.322E-02		1.046E-01	1.744E-01	1.631E-02	0.133
CM-247	7.815E-03		4.701E-02	7.895E-02	4.641E-03	0.099
CF-249	-1.114E-02		4.799E-02	7.848E-02	4.604E-03	-0.142
CF-251	-3.929E-03		1.547E-01	2.510E-01	1.848E-02	-0.016

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232582002           *
* Acquisition date  :  9-JUL-2009 08:15:28 Detector SN#     :               *
* Detector ID       : GAM17                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:08.27      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232582002           Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.1670E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.475E+01	3.113E+00	2.655E-01	1.588E+00
CD-109	3.940E+00	9.618E-01	5.612E-01	4.907E-01
SN-126	3.880E-01	9.472E-02	5.522E-02	4.832E-02
HG-203	1.370E-01	7.458E-02	4.005E-02	3.805E-02
TL-208	3.836E-01	1.075E-01	4.550E-02	5.485E-02
BI-210	6.576E-01	8.231E-01	5.241E-01	4.199E-01
PB-210	6.576E-01	8.231E-01	5.241E-01	4.199E-01
PO-210	6.576E-01	8.227E-01	5.241E-01	4.197E-01
BI-211	2.891E+00	5.305E-01	2.247E-01	2.707E-01
PB-212	1.259E+00	1.569E-01	5.357E-02	8.005E-02
PO-212	1.259E+00	1.569E-01	5.357E-02	8.005E-02
BI-214	1.019E+00	2.079E-01	7.595E-02	1.061E-01
PB-214	1.006E+00	1.916E-01	6.891E-02	9.774E-02
PO-214	1.006E+00	1.916E-01	6.891E-02	9.774E-02
PO-216	1.259E+00	1.569E-01	5.357E-02	8.005E-02
PO-218	1.006E+00	1.916E-01	6.891E-02	9.774E-02
RA-224	4.118E+00	1.425E+00	6.099E-01	7.270E-01
RA-226	1.019E+00	2.079E-01	7.595E-02	1.061E-01
AC-228	1.524E+00	4.047E-01	1.421E-01	2.065E-01
RA-228	1.524E+00	4.047E-01	1.421E-01	2.065E-01
TH-228	1.259E+00	1.569E-01	5.356E-02	8.005E-02
TH-230	1.019E+00	2.079E-01	7.595E-02	1.060E-01
TH-232	1.524E+00	4.047E-01	1.421E-01	2.065E-01
TH-234	1.599E+00	9.907E-01	6.432E-01	5.054E-01
U-234	1.019E+00	2.079E-01	7.595E-02	1.060E-01
NP-237	1.139E+00	3.612E-01	1.618E-01	1.843E-01
U-238	1.599E+00	9.907E-01	6.432E-01	5.054E-01
AM-243	4.978E-01	7.820E-02	3.484E-02	3.990E-02
ANH-511	9.121E-02	8.059E-02	3.097E-02	4.112E-02

---- Non-Identified Nuclides ----

Key-Line Activity	K.L Act error	DLC	TPU

Nuclide	(pCi/GRAM)		(pCi/GRAM)		
BE-7	-4.501E-01	4.169E-01	3.218E-01	2.127E-01	NOT IDENT.
NA-22	-1.125E-02	7.252E-02	5.928E-02	3.700E-02	NOT IDENT.
NA-24	1.535E+05	2.389E+05	0.000E+00	1.219E+05	SHORT HLIF
AL-26	-8.010E-03	3.545E-02	2.798E-02	1.809E-02	NOT IDENT.
TI-44	3.778E-01	4.824E-02	3.850E-02	2.461E-02	FAIL ABUN
SC-46	1.964E-02	5.664E-02	4.981E-02	2.890E-02	FAIL ABUN
V-48	2.427E-03	1.081E-01	9.164E-02	5.513E-02	NOT IDENT.
CR-51	-1.635E-01	4.476E-01	3.797E-01	2.283E-01	NOT IDENT.
MN-52	8.161E-02	2.715E-01	2.343E-01	1.385E-01	NOT IDENT.
MN-54	4.959E-03	5.731E-02	4.938E-02	2.924E-02	NOT IDENT.
CO-56	-8.031E-03	4.860E-02	4.082E-02	2.479E-02	FAIL ABUN
CO-57	6.739E-03	2.742E-02	2.378E-02	1.399E-02	NOT IDENT.
CO-58	-2.753E-02	5.644E-02	4.626E-02	2.880E-02	NOT IDENT.
FE-59	-6.218E-02	1.514E-01	1.224E-01	7.727E-02	NOT IDENT.
CO-60	-1.489E-02	5.384E-02	4.280E-02	2.747E-02	NOT IDENT.
ZN-65	7.486E-02	1.483E-01	1.166E-01	7.567E-02	NOT IDENT.
GE-68	1.705E-01	1.857E+00	1.576E+00	9.474E-01	NOT IDENT.
AS-73	1.136E-02	2.766E-01	2.449E-01	1.411E-01	NOT IDENT.
AS-74	-7.062E-02	1.079E-01	8.431E-02	5.506E-02	NOT IDENT.
SE-75	-1.791E-02	5.204E-02	4.212E-02	2.655E-02	FAIL ABUN
BR-77	8.150E+00	8.987E+00	8.145E+00	4.585E+00	FAIL ABUN
SR-82	-3.446E-01	5.204E-01	4.210E-01	2.655E-01	NOT IDENT.
RB-83	2.884E-02	8.827E-02	7.645E-02	4.504E-02	NOT IDENT.
RB-84	-3.782E-02	9.933E-02	8.158E-02	5.068E-02	NOT IDENT.
KR-85	2.076E+01	1.024E+01	8.984E+00	5.224E+00	NOT IDENT.
SR-85	1.050E-01	5.180E-02	4.545E-02	2.643E-02	NOT IDENT.
RB-86	7.229E-01	1.095E+00	9.806E-01	5.587E-01	NOT IDENT.
Y-88	-3.929E-03	5.264E-02	4.352E-02	2.686E-02	NOT IDENT.
ZR-88	2.176E-02	3.730E-02	3.261E-02	1.903E-02	NOT IDENT.
Y-91	2.313E+01	2.936E+01	2.613E+01	1.498E+01	NOT IDENT.
NB-94	8.615E-02	5.284E-02	4.894E-02	2.696E-02	NOT IDENT.
NB-95	1.469E-02	6.505E-02	5.458E-02	3.319E-02	NOT IDENT.
NB-95M	1.127E-01	1.549E-01	1.185E-01	7.903E-02	NOT IDENT.
ZR-95	8.417E-02	9.638E-02	8.599E-02	4.918E-02	NOT IDENT.
NB-97	1.448E+03	3.720E+04	0.000E+00	1.898E+04	SHORT HLIF
ZR-97	9.178E+05	7.833E+05	0.000E+00	3.996E+05	SHORT HLIF
MO-99	5.179E+00	1.287E+01	1.098E+01	6.565E+00	NOT IDENT.
TC-99M	-9.985E+14	1.342E+15	0.000E+00	6.849E+14	SHORT HLIF
RH-101	8.926E-03	3.621E-02	3.081E-02	1.847E-02	NOT IDENT.
RH-102	-2.233E-02	3.781E-02	3.054E-02	1.929E-02	NOT IDENT.
RU-103	-1.762E-03	4.982E-02	4.201E-02	2.542E-02	FAIL ABUN
RH-106	9.188E-02	3.997E-01	3.407E-01	2.039E-01	FAIL ABUN
RU-106	9.188E-02	3.996E-01	3.407E-01	2.039E-01	FAIL ABUN
AG-108M	1.783E-02	4.119E-02	3.621E-02	2.102E-02	NOT IDENT.
AG-110M	-2.401E-03	4.701E-02	3.887E-02	2.399E-02	NOT IDENT.
IN-111	-1.642E-01	1.040E+00	7.438E-01	5.305E-01	NOT IDENT.
IN-113M	2.183E-02	5.286E-02	4.660E-02	2.697E-02	NOT IDENT.
SN-113	2.183E-02	5.286E-02	4.660E-02	2.697E-02	NOT IDENT.
IN-114M	-4.438E-02	2.404E-01	1.746E-01	1.226E-01	NOT IDENT.
CD-115	5.515E+00	9.676E+00	8.526E+00	4.937E+00	NOT IDENT.
SN-117M	-2.079E-02	6.024E-02	5.030E-02	3.074E-02	NOT IDENT.
SB-122	7.956E-01	2.099E+00	1.814E+00	1.071E+00	NOT IDENT.
I-123	-9.945E+04	1.347E+06	0.000E+00	6.874E+05	SHORT HLIF
TE-123M	-2.446E-03	3.314E-02	2.803E-02	1.691E-02	NOT IDENT.
I-124	2.260E-01	7.282E-01	5.480E-01	3.715E-01	NOT IDENT.
SB-124	-1.113E-01	8.123E-02	3.836E-02	4.144E-02	FAIL ABUN
SB-125	4.945E-02	1.145E-01	1.007E-01	5.841E-02	NOT IDENT.
TE-125M	-1.110E+01	1.024E+01	8.377E+00	5.224E+00	NOT IDENT.
I-126	1.140E-01	2.379E-01	2.057E-01	1.214E-01	NOT IDENT.
SB-126	-2.400E-01	2.175E-01	1.389E-01	1.110E-01	FAIL ABUN
SB-127	1.569E-01	1.546E+00	1.293E+00	7.886E-01	NOT IDENT.
XE-127	-4.647E-03	5.284E-02	4.414E-02	2.696E-02	NOT IDENT.
I-131	-2.631E-02	1.227E-01	1.041E-01	6.262E-02	NOT IDENT.
TE-132	2.800E-01	6.339E-01	5.402E-01	3.234E-01	NOT IDENT.
BA-133	-3.362E-02	5.716E-02	4.022E-02	2.916E-02	NOT IDENT.
I-133	8.438E+02	2.934E+03	0.000E+00	1.497E+03	SHORT HLIF
CS-134	1.090E-01	1.066E-01	5.738E-02	5.436E-02	FAIL ABUN
CS-135	1.419E-01	1.954E-01	1.681E-01	9.969E-02	NOT IDENT.
I-135	-2.856E+14	3.472E+14	0.000E+00	1.771E+14	SHORT HLIF
CS-136	-9.865E-02	1.572E-01	1.241E-01	8.018E-02	FAIL ABUN
BA-137M	-3.914E-02	4.851E-02	3.706E-02	2.475E-02	NOT IDENT.
CS-137	-4.137E-02	5.128E-02	3.918E-02	2.616E-02	NOT IDENT.
CE-139	-5.986E-04	3.383E-02	2.863E-02	1.726E-02	NOT IDENT.
BA-140	-1.401E-01	3.394E-01	2.735E-01	1.731E-01	NOT IDENT.
LA-140	-6.592E-02	1.073E-01	7.908E-02	5.476E-02	FAIL ABUN
CE-141	4.995E-02	7.378E-02	6.372E-02	3.764E-02	NOT IDENT.

CE-143	3.393E+02	1.282E+02	0.000E+00	6.540E+01	SHORT HLIF
CE-144	-1.103E-01	2.357E-01	1.969E-01	1.203E-01	NOT IDENT.
PM-144	-5.302E-02	5.058E-02	3.766E-02	2.580E-02	NOT IDENT.
PR-144	-3.590E+00	3.425E+00	2.551E+00	1.747E+00	NOT IDENT.
PM-146	1.756E-02	5.298E-02	4.619E-02	2.703E-02	NOT IDENT.
ND-147	-2.417E-01	7.080E-01	5.789E-01	3.612E-01	FAIL ABUN
PM-149	-4.371E+01	7.372E+01	6.016E+01	3.761E+01	NOT IDENT.
EU-152	-2.628E-02	1.377E-01	1.017E-01	7.024E-02	NOT IDENT.
GD-153	2.396E-02	8.828E-02	6.817E-02	4.504E-02	FAIL ABUN
EU-154	-3.143E-02	2.027E-01	1.657E-01	1.034E-01	NOT IDENT.
EU-155	4.549E-02	1.142E-01	1.002E-01	5.829E-02	FAIL ABUN
TB-160	5.854E-02	2.045E-01	1.789E-01	1.044E-01	FAIL ABUN
HO-166M	1.102E-02	8.750E-02	7.316E-02	4.464E-02	NOT IDENT.
TM-171	-1.342E+01	1.958E+01	1.459E+01	9.987E+00	NOT IDENT.
LU-176	-2.574E-02	3.143E-02	2.322E-02	1.604E-02	FAIL ABUN
LU-177	2.068E+00	1.505E+00	1.045E+00	7.678E-01	FAIL ABUN
LU-177M	-2.091E-01	2.224E-01	1.772E-01	1.135E-01	NOT IDENT.
HF-181	4.698E-02	5.590E-02	5.023E-02	2.852E-02	NOT IDENT.
W-181	2.502E-01	2.503E-01	2.008E-01	1.277E-01	NOT IDENT.
TA-182	8.996E-02	3.083E-01	2.634E-01	1.573E-01	FAIL ABUN
RE-183	1.668E-01	1.260E-01	1.128E-01	6.430E-02	FAIL ABUN
RE-184	2.968E-02	2.839E-01	2.371E-01	1.449E-01	NOT IDENT.
OS-185	-3.895E-02	6.187E-02	4.847E-02	3.157E-02	NOT IDENT.
RE-188	3.264E-03	1.954E-01	1.662E-01	9.972E-02	NOT IDENT.
W-188	-1.514E+00	9.630E+00	7.218E+00	4.913E+00	FAIL ABUN
IR-192	7.499E-04	4.233E-02	3.675E-02	2.160E-02	FAIL ABUN
AU-195	3.337E-01	2.530E-01	2.051E-01	1.291E-01	FAIL ABUN
TL-200	-1.708E+01	2.419E+02	0.000E+00	1.234E+02	SHORT HLIF
TL-201	-3.855E+00	5.955E+00	4.876E+00	3.038E+00	NOT IDENT.
TL-202	9.906E-02	8.301E-02	7.644E-02	4.235E-02	NOT IDENT.
BI-207	1.705E-02	7.807E-02	6.712E-02	3.983E-02	FAIL ABUN
TL-207	-4.470E-01	9.399E-01	6.783E-01	4.796E-01	FAIL ABUN
PO-209	7.289E+00	1.109E+01	9.995E+00	5.660E+00	NOT IDENT.
PB-211	-3.584E-01	1.268E+00	1.049E+00	6.470E-01	NOT IDENT.
BI-212	8.621E-01	6.689E-01	4.389E-01	3.413E-01	FAIL ABUN
PO-215	-4.470E-01	9.399E-01	6.783E-01	4.796E-01	FAIL ABUN
RN-219	-1.105E-01	5.248E-01	4.429E-01	2.678E-01	NOT IDENT.
RN-220	-1.191E+01	3.445E+01	2.807E+01	1.758E+01	NOT IDENT.
RA-223	-4.470E-01	9.399E-01	6.783E-01	4.796E-01	FAIL ABUN
AC-227	-1.767E-01	4.481E-01	3.617E-01	2.286E-01	FAIL ABUN
TH-227	-1.767E-01	4.484E-01	3.617E-01	2.288E-01	FAIL ABUN
TH-229	2.923E-01	5.739E-01	4.949E-01	2.928E-01	FAIL ABUN
PA-231	5.891E-02	2.027E+00	1.544E+00	1.034E+00	FAIL ABUN
TH-231	-4.470E-01	9.399E-01	6.783E-01	4.796E-01	FAIL ABUN
U-231	-1.896E-01	1.007E+00	7.595E-01	5.139E-01	FAIL ABUN
PA-233	3.349E-02	7.535E-02	6.707E-02	3.844E-02	FAIL ABUN
PA-234	-7.183E-02	4.611E-01	3.855E-01	2.353E-01	FAIL ABUN
PA-234M	1.254E+00	9.683E+00	8.284E+00	4.940E+00	NOT IDENT.
U-235	5.831E-02	2.510E-01	2.131E-01	1.280E-01	FAIL ABUN
NP-236	-8.482E-03	9.481E-02	8.011E-02	4.837E-02	NOT IDENT.
NP-239	-8.149E-03	2.099E-01	1.802E-01	1.071E-01	FAIL ABUN
AM-241	3.531E-02	8.512E-02	6.708E-02	4.343E-02	NOT IDENT.
CM-243	2.322E-02	1.025E-01	8.936E-02	5.230E-02	FAIL ABUN
CM-247	7.815E-03	4.607E-02	3.989E-02	2.350E-02	FAIL ABUN
CF-249	-1.114E-02	4.703E-02	3.967E-02	2.400E-02	NOT IDENT.
CF-251	-3.929E-03	1.516E-01	1.279E-01	7.734E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	324.0760
46.50	324.0760
46.50	324.0760
48.70	321.9190
49.72	351.5536
51.35	343.8104
52.39	353.3883
52.97	346.9538
53.15	351.6262
53.44	364.5907
54.07	343.9378
56.28	396.6053
56.28	396.6070
57.37	0.0000
57.53	405.6914
57.53	405.6923
57.60	405.7368
57.98	395.5954
57.98	395.5954
59.32	376.4075
59.32	376.4075
59.40	376.4550
59.54	397.2109
59.72	397.3242
60.01	362.0397
61.10	387.8213
61.14	387.8452
61.30	387.9420
63.00	427.5562
63.29	445.5684
63.29	445.5684
63.58	424.4052
64.28	403.1009
65.12	412.5464
65.20	412.5954
65.20	412.5954
66.05	390.7469
66.72	419.4985
66.83	413.5946
66.91	413.6436
67.20	413.8195
67.20	413.8195
67.75	418.6379
67.85	406.7375
68.90	378.1551
68.90	378.1551
69.30	374.6262
69.67	391.3200
70.82	409.9849
70.82	409.9849
70.83	409.9899
72.80	427.6970
72.87	427.7386
72.87	427.7386
74.67	395.8079
74.81	395.8847
74.81	395.8847
74.81	395.8847
74.81	395.8847
74.81	395.8847
74.81	395.8847
74.97	395.9711
75.28	396.1407
75.70	396.3679
77.11	397.1279
77.11	397.1279
77.11	397.1279

77.11	397.1279
77.11	397.1279
77.11	397.1279
78.38	354.0887
79.62	262.2055
79.80	319.2823
79.80	319.2823
80.11	319.4130
80.18	319.4431
80.30	319.4938
80.30	319.4938
80.57	319.6078
81.00	319.7886
81.07	319.8181
81.07	319.8181
81.07	319.8181
81.07	319.8181
82.60	320.4564
83.37	356.4158
83.78	304.5700
83.78	304.5700
83.78	304.5700
83.78	304.5700
84.21	304.7378
84.40	304.8120
84.90	305.0079
85.43	305.2134
86.29	305.5455
86.50	305.6270
86.54	305.6428
86.59	305.6610
86.72	305.7121
86.79	305.7377
86.94	305.7961
87.30	305.9347
87.30	305.9347
87.30	305.9347
87.30	305.9347
87.30	305.9347
87.30	305.9347
87.57	306.0381
87.88	306.1561
88.03	306.2145
88.36	306.3398
88.47	306.3823
89.95	306.9431
91.11	307.3810
92.29	307.8225
92.38	307.8553
92.38	307.8553
93.35	308.2166
94.00	308.4574
94.67	286.5739
94.67	286.5750
94.90	292.8519
94.90	292.8519
94.90	292.8519
94.90	292.8519
95.87	341.2780
95.87	341.2780
96.73	327.6514
97.43	284.4039
98.44	247.3962
98.44	247.3972
98.88	249.0801
99.55	281.7315
99.55	281.7315
99.86	288.3263
100.00	288.3726
100.10	288.4076
103.18	321.6894
103.76	281.7850
105.00	264.5422
105.31	274.4351
108.00	276.2374
109.28	324.8626
111.00	274.1844
111.00	274.1844

111.76	289.2155
112.95	276.7369
115.19	271.4528
116.30	289.6241
117.00	262.0443
117.00	262.0443
117.66	239.3801
121.11	244.2224
121.62	226.3982
121.78	233.4171
122.06	233.4841
122.32	238.5359
122.32	238.5359
122.32	238.5359
122.32	238.5359
123.07	245.7100
127.23	254.7621
129.76	252.3826
131.20	259.7873
133.02	285.4636
133.54	271.4792
135.34	256.7828
136.00	250.8760
136.25	237.7817
136.48	237.8346
140.51	265.1518
140.51	0.0000
142.18	278.7913
142.65	262.6257
143.76	248.6297
144.24	251.7978
144.24	251.7978
144.24	251.7978
144.24	251.7978
145.22	251.0036
145.44	238.8078
147.16	242.2473
152.43	245.4495
152.70	237.2900
153.22	221.9837
154.21	227.3195
154.21	227.3195
154.21	227.3195
154.21	227.3195
155.03	242.9249
156.02	218.4091
158.56	246.7696
159.00	0.0000
159.00	241.6981
160.31	248.1757
161.27	234.9268
162.32	204.0611
162.64	204.1167
163.35	228.0852
163.89	230.2637
165.85	222.3333
167.43	229.9110
171.28	216.0351
171.86	231.7999
172.10	231.8456
176.55	230.5894
176.60	230.5995
181.06	223.8498
184.41	210.9421
185.71	207.9899
186.00	219.6543
190.27	222.0764
192.34	213.4549
193.63	185.8948
197.04	207.6740
198.01	183.3130
198.60	199.3866
200.40	179.3690
201.83	194.5233
202.84	203.2260
205.31	198.8794
208.36	209.6324
208.81	199.3878

209.75	195.6522
209.75	195.6522
210.97	194.5332
215.65	190.0024
216.55	185.8036
218.09	175.1914
222.10	180.0212
223.80	180.2340
226.40	193.6092
227.00	193.6893
227.08	193.7002
227.20	195.8917
228.16	177.5077
228.18	177.5102
228.18	177.5102
231.56	0.0000
235.69	164.6216
236.00	162.9044
236.00	162.9044
238.60	168.8898
238.63	168.8934
238.63	168.8934
238.63	168.8934
239.00	168.9345
240.98	169.1554
241.98	169.2670
241.98	169.2670
241.98	169.2670
244.69	181.4595
245.39	160.3920
247.94	155.9495
248.90	163.4073
249.79	162.3962
252.40	167.0951
252.85	157.1802
252.85	157.1802
254.15	0.0000
256.20	150.8605
256.20	150.8605
260.50	134.5852
260.90	124.6055
262.80	131.4374
264.65	147.2009
268.24	150.8801
268.79	148.6935
269.46	140.9271
269.46	140.9271
269.46	140.9271
269.46	140.9271
271.23	144.5980
273.65	206.3234
276.40	138.3763
277.35	142.0515
277.60	146.1191
277.60	146.1191
278.00	146.1548
278.60	146.2064
279.20	145.5099
279.53	145.5375
280.46	126.1025
281.68	126.1948
283.67	135.3680
284.30	136.9240
285.00	136.7645
285.90	146.5901
286.10	140.9846
286.10	140.9846
287.40	139.6862
288.45	0.0000
290.67	140.4555
290.80	140.4669
291.72	142.0538
293.26	0.0000
293.70	131.6257
295.21	140.8264
295.21	140.8264
295.21	140.8264
295.96	218.1475

296.50	218.2148
297.23	218.3057
298.57	218.4756
299.80	136.6425
299.80	136.6425
300.09	136.6644
300.09	136.6644
300.09	136.6644
300.10	136.6663
300.12	129.0737
301.29	127.6406
302.84	117.1073
303.76	106.5167
303.91	106.5253
304.40	101.9885
304.40	101.9885
304.84	103.5356
306.84	131.9619
308.46	119.9197
311.98	113.7343
316.51	131.4895
318.01	125.1559
319.02	119.7009
319.41	117.8844
320.08	137.2739
323.87	140.0195
323.87	140.0195
323.87	140.0195
323.87	140.0195
325.23	130.8843
328.77	115.1916
333.44	97.4352
334.20	97.4749
334.20	97.4749
334.30	97.4800
338.28	109.5727
338.28	109.5727
338.28	109.5727
338.28	109.5727
338.32	109.5742
338.32	109.5742
338.32	109.5742
340.50	121.0831
340.57	114.8783
344.27	121.3228
345.85	112.0811
350.59	0.0000
351.07	129.5524
351.92	100.2524
351.92	100.2524
351.92	100.2524
355.39	0.0000
356.01	104.8429
364.48	99.0053
366.43	97.2138
367.43	102.9273
367.94	0.0000
369.80	94.5398
374.96	105.2061
383.85	101.8538
387.95	93.4708
388.63	93.5020
391.69	85.9944
391.69	85.9944
392.90	79.3515
398.62	101.6135
400.65	90.1962
401.10	88.2962
401.81	104.6464
402.60	95.0808
404.84	117.2925
410.95	85.8081
411.60	85.8342
413.65	110.0479
414.70	100.4428
415.30	97.5725
415.76	88.8959
417.63	0.0000

418.52	89.9757
423.70	94.0658
427.08	79.6397
427.89	79.6687
432.53	77.8867
433.93	78.9097
439.47	77.1494
439.56	71.2926
439.89	79.1174
443.98	92.9578
444.90	81.2482
445.03	79.2954
445.03	79.2954
445.03	79.2954
445.03	79.2954
453.90	70.7555
463.38	90.7759
468.07	102.8193
473.00	79.2559
475.06	86.2640
475.35	86.2746
476.78	94.2636
477.59	94.2961
477.96	91.3318
482.03	71.5975
484.57	87.5993
487.03	69.7513
490.36	0.0000
492.35	73.8979
497.08	69.0362
507.63	0.0000
510.53	0.0000
510.84	72.4346
511.00	72.4395
511.85	67.0964
511.85	67.0964
513.99	55.4012
513.99	55.4012
520.41	64.6297
520.65	53.5253
527.90	63.8044
528.96	0.0000
529.64	68.9147
529.87	0.0000
531.02	78.0772
537.32	81.3145
543.00	71.3057
546.56	0.0000
549.76	70.4656
552.65	79.7424
555.20	63.4456
563.23	66.7139
563.90	72.8911
568.70	75.0763
569.32	66.8646
569.50	65.8391
569.67	62.7573
573.80	72.1260
574.00	75.5659
574.64	74.7249
578.91	56.7751
579.30	0.0000
583.14	86.1552
585.48	81.0528
591.81	67.4089
592.07	68.4524
593.00	60.1750
595.88	62.3145
600.56	64.7287
602.52	0.0000
602.71	50.3193
602.71	50.3193
603.60	57.2773
604.41	46.8765
604.70	43.4092
609.31	66.7844
609.31	66.7844
609.31	66.7844

609.31	66.7844
610.33	60.8925
612.46	62.6777
614.37	62.7202
618.01	63.8460
621.84	50.3063
621.84	50.3063
631.29	68.3436
633.02	61.0189
633.10	61.0204
634.78	60.0031
635.90	64.2376
636.97	61.1011
645.85	76.0764
646.12	73.9700
656.30	63.6182
657.75	59.4057
657.90	0.0000
661.65	69.0403
661.65	69.0403
664.57	0.0000
666.33	59.5725
666.33	59.5725
675.00	61.8756
677.61	72.6053
685.20	59.9389
692.80	54.7192
695.00	69.7893
696.49	80.5646
696.49	80.5646
697.00	81.6518
697.49	78.4411
698.33	77.3877
698.50	76.3163
699.00	76.3285
702.63	58.1186
706.10	84.0423
706.58	0.0000
706.67	81.9022
709.31	72.2622
711.68	60.4434
713.82	63.7232
717.42	50.8199
720.50	74.2148
721.93	0.0000
722.20	63.1683
722.78	48.7386
722.78	48.7386
722.89	48.7397
722.95	48.7408
723.30	50.5518
724.18	50.5654
727.18	45.1894
733.00	76.0532
735.90	57.9961
739.58	58.7870
742.81	70.8319
744.21	56.6896
747.13	60.0126
751.79	56.8191
752.31	55.7352
753.82	65.6001
755.35	54.6924
756.15	42.6705
756.87	48.1508
763.93	88.8291
765.79	68.0290
766.41	65.8477
766.84	66.9526
768.36	69.1785
768.36	69.1785
768.36	69.1785
768.36	69.1785
776.49	65.1252
778.00	62.4011
778.57	57.8231
778.89	57.8282
783.80	55.1538

785.46	46.9025
792.07	55.2856
795.84	51.6558
796.30	51.6626
801.93	55.4431
805.60	47.4277
810.29	63.9112
810.76	61.1405
815.85	62.1568
817.79	64.0474
818.51	56.6328
819.60	53.8641
826.30	66.0613
828.27	0.0000
831.60	57.7731
831.96	54.0517
834.83	67.1514
836.80	0.0000
846.75	41.1730
848.13	43.0604
856.28	0.0000
856.80	70.3751
860.37	51.6587
867.32	53.6381
867.82	52.7039
871.10	36.7371
873.19	51.8378
874.81	41.4881
875.33	0.0000
876.40	51.8825
879.36	49.0917
880.27	46.2705
880.51	42.4960
881.50	53.8422
883.24	54.8128
884.67	50.1070
889.25	46.3811
896.60	45.5234
898.02	43.6425
899.00	47.4497
903.28	61.2797
911.07	39.9843
911.07	39.9843
911.07	39.9843
919.63	45.7979
920.93	43.7310
925.00	61.1497
925.24	57.3303
926.50	45.8799
934.06	57.4609
934.06	57.4609
934.06	57.4609
934.06	57.4609
935.52	58.4410
937.48	58.4695
944.10	63.3695
946.00	54.7537
949.00	48.0662
962.29	34.7241
964.01	38.0472
966.15	44.6877
968.20	57.9590
969.11	71.4993
969.11	71.4993
969.11	71.4993
977.42	49.3782
980.50	52.3224
983.50	56.2394
989.30	57.2907
996.32	46.6895
1001.03	49.6646
1001.68	51.6209
1004.76	48.7356
1021.30	0.0000
1024.50	0.0000
1034.80	58.9063
1037.82	56.0004
1038.57	58.9575

1038.76	0.0000
1045.16	48.2244
1046.59	52.1783
1048.07	58.1045
1050.47	42.3719
1050.47	42.3719
1063.62	45.4666
1076.63	38.6652
1077.35	46.6041
1085.78	34.7721
1099.22	66.7683
1112.02	52.9698
1112.84	54.5233
1115.52	41.1512
1120.29	59.0744
1120.29	59.0744
1120.29	59.0744
1120.29	59.0744
1120.51	59.0768
1121.28	66.0994
1124.00	0.0000
1129.67	65.2195
1131.51	0.0000
1147.95	0.0000
1167.94	73.8644
1173.22	53.6879
1175.09	60.8032
1177.93	76.0498
1189.05	65.0521
1204.90	53.0326
1205.75	0.0000
1213.00	67.4260
1221.42	60.3828
1230.97	61.5283
1235.34	72.1418
1236.41	0.0000
1238.11	68.6608
1238.11	68.6608
1238.11	68.6608
1238.11	68.6608
1238.25	65.1423
1246.25	59.4791
1260.41	0.0000
1271.85	64.1166
1274.45	52.7681
1274.54	52.7701
1291.56	45.6829
1298.22	0.0000
1312.09	39.6158
1325.50	29.2681
1325.50	29.2681
1332.49	28.2612
1333.61	28.2678
1360.21	22.0997
1362.66	0.0000
1365.15	27.3880
1368.21	16.8639
1368.53	0.0000
1376.25	26.3906
1377.67	25.3418
1377.67	25.3418
1377.67	25.3418
1377.67	25.3418
1384.27	23.2595
1394.10	21.1849
1395.20	21.1890
1407.95	20.1782
1434.06	17.0749
1436.60	14.9479
1457.56	0.0000
1460.81	9.1926
1489.15	11.8580
1509.49	12.9834
1596.49	19.2655
1620.62	11.3450
1678.03	0.0000
1691.02	12.4351
1691.02	12.4351

1706.46	0.0000
1750.46	0.0000
1764.49	6.7751
1764.49	6.7751
1764.49	6.7751
1764.49	6.7751
1770.23	46.5000
1771.40	28.0988
1791.20	0.0000
1808.65	7.7969
1836.01	12.7234

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232582002

Total Uranium Activity	4.7829E+00	ug/g
Total Uranium Counting Unc.	2.9495E+00	ug/g
Total Uranium Tpu	1.5048E-06	ug/g
Total Uranium Mda	1.9160E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID  : G232582002       *
*   ANALYST       : MXR1                      DETECTOR   : GAM17            *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:15:28.32    SAMPLE ALQT:  116.700 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.003E+00
GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.583E+00
GROSS GAMMA MDA    (pCi/GRAM  )   : 4.435E+00
GROSS GAMMA DLC    (pCi/GRAM  )   : 2.154E+00
```

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:36:26.36

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:35:24.
Sample ID         : G232591001           Sample quantity  : 1.25480E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.07  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	74.89*	347	420	1.30	149.93	144	18	4.82E-02	12.2	3.11E+00
2	3	77.27	566	435	1.30	154.67	144	18	7.86E-02	7.8	
3	3	87.46	194	426	1.11	175.03	171	20	2.70E-02	18.5	1.13E+00
4	3	90.06	133	399	1.10	180.24	171	20	1.85E-02	26.0	
5	3	93.08*	212	414	1.26	186.27	171	20	2.95E-02	19.2	
6	0	185.91*	185	367	1.33	371.77	367	10	2.57E-02	21.5	
7	0	209.26	82	327	1.09	418.42	414	9	1.14E-02	41.3	
8	3	238.84*	1314	207	1.12	477.55	470	21	1.83E-01	3.4	2.27E+00
9	3	241.77	296	280	1.62	483.39	470	21	4.11E-02	13.0	
10	2	295.45*	399	125	1.23	590.68	585	20	5.54E-02	7.0	7.65E-01
11	2	300.22	69	173	1.54	600.21	585	20	9.63E-03	35.3	
12	0	328.31	46	177	1.41	656.35	653	9	6.43E-03	53.9	
13	0	338.40	273	142	1.11	676.52	671	10	3.80E-02	10.2	
14	0	352.01*	699	193	1.16	703.72	697	14	9.71E-02	5.7	
15	0	375.01	12	201	2.89	749.70	738	13	1.70E-03	241.7	
16	0	409.92	30	132	1.12	819.47	815	9	4.16E-03	71.6	
17	0	463.40	95	92	1.09	926.36	922	10	1.33E-02	21.4	
18	0	511.33*	120	177	1.95	1022.18	1014	19	1.67E-02	30.2	
19	0	583.54*	348	114	1.29	1166.52	1160	14	4.83E-02	8.6	
20	0	609.55	502	108	1.56	1218.52	1213	13	6.97E-02	6.1	
21	0	727.88	104	82	1.32	1455.10	1447	15	1.44E-02	21.4	
22	0	795.21	64	42	1.48	1589.70	1584	10	8.86E-03	22.8	
23	0	861.55	77	84	2.92	1722.35	1712	21	1.07E-02	31.9	
24	0	911.38*	247	116	1.53	1821.99	1816	15	3.43E-02	11.5	
25	2	964.75	66	44	2.12	1928.71	1924	20	9.22E-03	20.5	6.13E-01
26	2	969.13	186	30	1.63	1937.47	1924	20	2.58E-02	9.5	
27	0	1120.64*	103	89	2.05	2240.49	2232	17	1.43E-02	23.5	
28	0	1460.77*	1296	19	1.97	2920.85	2910	19	1.80E-01	2.9	
29	0	1764.79*	96	4	2.15	3529.15	3522	17	1.34E-02	12.1	
30	0	1848.24	9	9	0.69	3696.16	3689	12	1.24E-03	75.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:36:29

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:35:24
Sample ID : G232591001 Sample quantity : 125.48 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA10 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.07 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.282E+01	3.415E+00	6.220E-01	5.357E-02	52.766
CD-109	+	88.03	*	3.011E+00	1.164E+00	1.367E+00	1.550E-01	2.202
SN-126		64.28		6.826E-01	7.126E-01	1.196E+00	2.045E-01	0.571
	+	86.94		1.233E+00	6.899E-01	5.697E-01	2.392E-01	2.164
	+	87.57	*	2.966E-01	1.147E-01	1.356E-01	1.535E-02	2.186
TL-208		277.35		4.290E-01	4.025E-01	6.906E-01	7.532E-02	0.621
	+	510.84		5.701E-01	3.497E-01	1.963E-01	2.063E-02	2.904
	+	583.14	*	4.707E-01	8.732E-02	5.182E-02	3.482E-03	9.084
	+	860.37		1.006E+00	6.484E-01	4.400E-01	4.297E-02	2.285
BI-211		72.87		3.542E+00	4.022E+00	6.174E+00	6.790E-01	0.574
	+	351.07	*	4.159E+00	5.646E-01	3.075E-01	2.242E-02	13.525
PB-212	+	74.81		2.485E+00	7.033E-01	6.410E-01	9.228E-02	3.876
	+	77.11		2.237E+00	4.279E-01	3.552E-01	3.884E-02	6.298
	+	87.30		1.372E+00	5.478E-01	6.300E-01	9.507E-02	2.177
	+	238.63	*	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
	+	300.09		1.395E+00	9.926E-01	1.186E+00	1.042E-01	1.176
PO-212	+	74.81		2.485E+00	7.033E-01	6.410E-01	9.228E-02	3.876
	+	77.11		2.237E+00	4.279E-01	3.552E-01	3.884E-02	6.298
	+	87.30		1.372E+00	5.478E-01	6.300E-01	9.507E-02	2.177
		115.19		-8.830E-01	3.544E+00	5.693E+00	4.073E-01	-0.155
	+	238.63	*	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
	+	300.09		1.395E+00	9.926E-01	1.186E+00	1.042E-01	1.176
BI-214	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.111E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
PB-214	+	74.81		4.281E+00	1.187E+00	1.105E+00	1.460E-01	3.876
	+	77.11		3.835E+00	7.896E-01	6.089E-01	8.115E-02	6.298
	+	87.30		2.350E+00	9.264E-01	1.079E+00	1.476E-01	2.177
	+	241.98		2.331E+00	6.374E-01	5.597E-01	4.657E-02	4.165
	+	295.21		1.409E+00	2.342E-01	2.078E-01	1.876E-02	6.782

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-214	+	74.81		4.281E+00	1.187E+00	1.105E+00	1.460E-01	3.876
	+	77.11		3.835E+00	7.896E-01	6.089E-01	8.115E-02	6.298
	+	87.30		2.350E+00	9.264E-01	1.079E+00	1.476E-01	2.177
	+	241.98		2.331E+00	6.374E-01	5.597E-01	4.657E-02	4.165
	+	295.21		1.409E+00	2.342E-01	2.078E-01	1.876E-02	6.782
	+	351.92	*	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-216	+	74.81		2.485E+00	7.033E-01	6.410E-01	9.228E-02	3.876
	+	77.11		2.237E+00	4.279E-01	3.552E-01	3.884E-02	6.298
	+	87.30		1.372E+00	5.478E-01	6.300E-01	9.507E-02	2.177
	+	238.63	*	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
	+	300.09		1.395E+00	9.926E-01	1.186E+00	1.042E-01	1.176
PO-218	+	74.81		4.281E+00	1.187E+00	1.105E+00	1.460E-01	3.876
	+	77.11		3.835E+00	7.896E-01	6.089E-01	8.115E-02	6.298
	+	87.30		2.350E+00	9.264E-01	1.079E+00	1.476E-01	2.177
	+	241.98		2.331E+00	6.374E-01	5.597E-01	4.657E-02	4.165
	+	295.21		1.409E+00	2.342E-01	2.078E-01	1.876E-02	6.782
	+	351.92	*	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
RA-224	+	240.98	*	4.420E+00	1.183E+00	1.058E+00	6.493E-02	4.178
RA-226	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.111E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
AC-228	+	338.32		1.794E+00	8.194E-01	3.668E-01	1.500E-01	4.891
	+	911.07	*	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
	+	969.11		2.047E+00	6.206E-01	3.559E-01	8.414E-02	5.753
RA-228	+	338.32		1.794E+00	8.194E-01	3.668E-01	1.500E-01	4.891
	+	911.07	*	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
	+	969.11		2.047E+00	6.206E-01	3.559E-01	8.414E-02	5.753
TH-228		84.40		3.561E-01	3.163E+00	4.691E+00	6.993E-01	0.076
	+	238.60	*	1.725E+00	1.747E-01	9.296E-02	7.051E-03	18.556
	+	300.10		1.395E+00	1.284E+00	1.186E+00	6.998E-01	1.176
TH-230	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.110E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
TH-232	+	338.32		1.794E+00	3.838E-01	3.668E-01	2.459E-02	4.891
	+	911.07	*	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
	+	969.11		2.047E+00	6.206E-01	3.559E-01	8.414E-02	5.753
U-234	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.110E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
NP-237	+	86.50	*	8.708E-01	3.817E-01	4.517E-01	1.062E-01	1.928
		95.87		-5.570E-02	1.057E+00	1.543E+00	3.855E-01	-0.036
AM-243	+	74.67	*	4.028E-01	1.076E-01	1.044E-01	1.143E-02	3.858
	+	86.72		3.266E+01	1.263E+01	1.515E+01	1.706E+00	2.156
		117.66		-3.122E-01	3.860E+00	6.243E+00	4.332E-01	-0.050
		142.18		-2.781E+00	1.847E+01	2.951E+01	1.762E+00	-0.094
ANH-511	+	511.00	*	1.231E-01	7.483E-02	4.241E-02	2.717E-03	2.904

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-9.064E-02	3.155E-01	4.982E-01	3.705E-02	-0.182
NA-22		1274.54	*	-1.508E-02	4.842E-02	7.809E-02	6.049E-03	-0.193
NA-24		1368.53	*	-8.263E-02	4.842E-02	Half-Life too short		
AL-26		1129.67		6.643E-01	1.964E+00	3.251E+00	2.280E-01	0.204
		1808.65	*	9.558E-03	3.255E-02	5.565E-02	3.529E-03	0.172
TI-44		67.85		-1.904E-02	5.878E-02	9.588E-02	1.082E-02	-0.199
	+	78.38	*	4.128E-01	7.896E-02	8.983E-02	9.829E-03	4.595
SC-46		889.25	*	-5.161E-02	4.183E-02	5.954E-02	5.892E-03	-0.867
	+	1120.51		2.441E-01	1.163E-01	1.427E-01	1.025E-02	1.711
V-48		944.10		-4.294E-02	8.072E-01	1.306E+00	1.265E-01	-0.033
		983.50	*	-4.840E-02	6.817E-02	1.018E-01	9.410E-03	-0.476
		1312.09		-8.588E-03	8.022E-02	1.316E-01	1.098E-02	-0.065
CR-51		320.08	*	1.789E-01	3.426E-01	5.842E-01	4.220E-02	0.306
MN-52		744.21		-3.669E-02	1.960E-01	3.193E-01	2.083E-02	-0.115
		848.13		5.144E-01	6.007E+00	9.932E+00	8.803E-01	0.052
		935.52		2.966E-01	2.264E-01	4.098E-01	4.006E-02	0.724
		1246.25		1.854E-01	6.899E+00	1.152E+01	8.394E-01	0.016
		1333.61		5.701E-01	4.446E+00	7.482E+00	6.501E-01	0.076
		1434.06	*	-1.546E-02	1.985E-01	3.233E-01	2.732E-02	-0.048
MN-54		834.83	*	-2.184E-03	4.137E-02	6.767E-02	5.781E-03	-0.032
CO-56		846.75	*	-7.039E-04	3.946E-02	6.464E-02	5.708E-03	-0.011
		977.42		1.075E+00	3.033E+00	5.095E+00	4.749E-01	0.211
		1037.82		-2.759E-01	3.436E-01	5.077E-01	4.565E-02	-0.543
		1175.09		2.413E-01	2.374E+00	4.010E+00	2.484E-01	0.060
		1238.25		1.806E-01	1.146E-01	2.084E-01	1.554E-02	0.866
		1360.21		-1.920E-01	9.739E-01	1.569E+00	1.355E-01	-0.122
		1771.40		4.531E-02	1.869E-01	2.847E-01	1.886E-02	0.159
CO-57		122.06	*	-2.309E-02	2.592E-02	4.025E-02	2.655E-03	-0.574
		136.48		-5.861E-02	2.143E-01	3.412E-01	2.386E-02	-0.172
CO-58		810.76	*	-3.084E-02	4.298E-02	6.635E-02	5.308E-03	-0.465
FE-59		142.65		-2.519E-01	2.829E+00	4.533E+00	2.701E-01	-0.056
		192.34		-6.185E-01	9.448E-01	1.442E+00	1.695E-01	-0.429
		1099.22	*	6.530E-03	9.298E-02	1.506E-01	1.257E-02	0.043
		1291.56		1.513E-02	1.224E-01	2.061E-01	1.907E-02	0.073

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60		1173.22		-1.094E-02	4.987E-02	8.196E-02	5.054E-03	-0.134
		1332.49	*	-1.882E-02	4.100E-02	6.411E-02	5.571E-03	-0.294
ZN-65		1115.52	*	-2.451E-02	1.090E-01	1.458E-01	1.062E-02	-0.168
GE-68		1077.35	*	-7.842E-01	1.459E+00	2.225E+00	1.762E-01	-0.352
AS-73		53.44	*	1.012E-02	1.471E+00	2.463E+00	3.259E-01	0.004
AS-74		595.88	*	6.989E-02	8.065E-02	1.441E-01	8.229E-03	0.485
		634.78		1.939E-01	3.209E-01	5.622E-01	2.967E-02	0.345
SE-75		66.05		-1.182E+01	6.624E+00	9.940E+00	1.280E+00	-1.189
		96.73		-7.547E-02	8.681E-01	1.264E+00	1.789E-01	-0.060
		121.11		-1.712E-02	1.381E-01	2.226E-01	2.180E-02	-0.077
		136.00		-1.641E-02	4.032E-02	6.382E-02	3.963E-03	-0.257
		198.60		-1.331E+00	1.898E+00	2.864E+00	2.029E-01	-0.465
		264.65	*	3.492E-03	4.207E-02	7.073E-02	4.512E-03	0.049
		279.53		6.998E-02	1.153E-01	1.951E-01	1.337E-02	0.359
		303.91		-1.130E+00	2.247E+00	3.148E+00	3.156E-01	-0.359
		400.65		2.400E-01	2.382E-01	4.136E-01	4.039E-02	0.580
BR-77	+	87.88		4.515E+02	1.746E+02	2.487E+02	2.820E+01	1.816
		200.40		-3.199E+01	1.160E+02	1.806E+02	1.042E+01	-0.177
	+	239.00		1.919E+02	1.742E+01	2.714E+01	1.661E+00	7.070
		249.79		-2.092E+01	4.428E+01	7.262E+01	4.510E+00	-0.288
		281.68		-3.046E+01	6.348E+01	1.033E+02	6.653E+00	-0.295
		297.23		2.098E+02	4.577E+01	8.584E+01	5.604E+00	2.444
		303.76		-7.007E+01	1.334E+02	1.866E+02	1.224E+01	-0.376
		439.47		6.282E+01	1.022E+02	1.727E+02	1.161E+01	0.364
		484.57		-6.321E+00	1.605E+02	2.582E+02	1.692E+01	-0.024
		520.65	*	3.239E+00	7.361E+00	1.184E+01	7.513E-01	0.274
		574.64		-2.901E+01	1.375E+02	2.282E+02	1.351E+01	-0.127
		578.91		-2.654E+01	6.221E+01	8.709E+01	5.120E+00	-0.305
		585.48		9.355E+02	1.751E+02	3.326E+02	1.935E+01	2.812
		755.35		9.730E+01	1.084E+02	1.929E+02	1.303E+01	0.504
		817.79		-7.808E+00	1.027E+02	1.678E+02	1.366E+01	-0.047
SR-82		698.33		-1.991E+01	3.226E+01	5.103E+01	2.863E+00	-0.390
		776.49	*	1.128E-01	3.624E-01	6.143E-01	4.429E-02	0.184
		1395.20		6.731E+00	1.100E+01	1.958E+01	1.676E+00	0.344
RB-83		520.41	*	2.455E-02	6.909E-02	1.104E-01	7.006E-03	0.222
		529.64		-2.663E-03	1.088E-01	1.740E-01	1.094E-02	-0.015
		552.65		-1.149E-01	2.059E-01	3.138E-01	1.917E-02	-0.366
RB-84		881.50	*	5.841E-03	7.004E-02	1.155E-01	1.120E-02	0.051
KR-85		513.99	*	1.753E+01	7.447E+00	1.367E+01	8.732E-01	1.282
SR-85		513.99	*	8.869E-02	3.768E-02	6.917E-02	4.418E-03	1.282
RB-86		1076.63	*	-8.853E-01	9.051E-01	1.314E+00	1.042E-01	-0.674
Y-88		898.02		-5.945E-02	4.424E-02	6.192E-02	6.290E-03	-0.960
		1836.01	*	3.231E-02	2.763E-02	5.675E-02	3.482E-03	0.569
ZR-88		392.90	*	-1.567E-03	2.967E-02	4.836E-02	3.286E-03	-0.032
Y-91		1204.90	*	-7.518E+00	2.100E+01	3.407E+01	2.263E+00	-0.221
NB-94		702.63	*	2.083E-02	3.521E-02	6.100E-02	3.473E-03	0.342
		871.10		1.016E-02	3.585E-02	5.709E-02	5.386E-03	0.178
NB-95		765.79	*	1.715E-02	4.398E-02	7.478E-02	5.218E-03	0.229
NB-95M		235.69	*	5.289E-02	1.337E-01	2.041E-01	1.583E-02	0.259

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95		724.18		-1.587E-02	1.016E-01	1.438E-01	1.025E-02	-0.110
		756.15	*	8.356E-02	6.697E-02	1.219E-01	9.573E-03	0.686
NB-97		657.90	*	-2.431E-02	6.697E-02	Half-Life too short		
		1024.50		-2.921E+00	6.697E-02	Half-Life too short		
ZR-97		254.15		1.833E-01	6.697E-02	Half-Life too short		
		355.39		7.792E-02	6.697E-02	Half-Life too short		
		507.63	*	3.355E-01	6.697E-02	Half-Life too short		
		602.52		-1.383E+00	6.697E-02	Half-Life too short		
		1021.30		-6.472E-01	6.697E-02	Half-Life too short		
		1147.95		-3.776E-01	6.697E-02	Half-Life too short		
		1362.66		-1.486E+00	6.697E-02	Half-Life too short		
		1750.46		2.399E-01	6.697E-02	Half-Life too short		
MO-99		140.51		-3.754E+00	1.987E+01	3.168E+01	8.551E+00	-0.118
		181.06		1.521E+00	1.409E+01	2.003E+01	3.419E+00	0.076
		366.43		2.036E+01	6.826E+01	1.009E+02	6.835E+00	0.202
		739.58	*	5.319E+00	7.876E+00	1.376E+01	1.935E+00	0.386
		778.00		-2.984E+01	2.584E+01	3.821E+01	2.768E+00	-0.781
TC-99M		140.51	*	-2.310E+08	2.584E+01	Half-Life too short		
RH-101		127.23		-2.271E-02	3.307E-02	5.185E-02	3.314E-03	-0.438
		198.01	*	-6.641E-03	3.420E-02	5.297E-02	3.043E-03	-0.125
		325.23		5.673E-02	2.434E-01	3.603E-01	2.399E-02	0.157
RH-102		418.52		-1.175E-01	2.878E-01	4.556E-01	3.084E-02	-0.258
		475.06	*	1.030E-02	2.952E-02	4.890E-02	3.225E-03	0.211
		631.29		1.872E-02	5.369E-02	9.229E-02	4.910E-03	0.203
		697.49		-5.078E-02	7.459E-02	1.173E-01	6.560E-03	-0.433
		766.84		2.216E-01	1.154E-01	2.143E-01	1.500E-02	1.034
		1046.59		4.933E-03	1.349E-01	2.185E-01	1.835E-02	0.023
		1112.84		2.645E-02	2.703E-01	3.793E-01	2.777E-02	0.070
RU-103		497.08	*	-5.403E-03	3.855E-02	6.054E-02	7.854E-03	-0.089
	+	610.33		1.354E+01	2.659E+00	3.013E+00	4.618E-01	4.494
RH-106	+	511.85		6.136E-01	3.729E-01	4.164E-01	2.665E-02	1.474
		621.84	*	-2.228E-01	3.048E-01	4.800E-01	5.549E-02	-0.464
		1050.47		8.834E-01	2.654E+00	4.397E+00	3.667E-01	0.201
RU-106	+	511.85		6.136E-01	3.729E-01	4.164E-01	2.665E-02	1.474
		621.84	*	-2.228E-01	3.040E-01	4.800E-01	2.607E-02	-0.464
		1050.47		8.834E-01	2.654E+00	4.397E+00	3.667E-01	0.201
AG-108M		433.93	*	-1.683E-02	3.401E-02	5.336E-02	3.826E-03	-0.315
		614.37		-7.708E-03	4.378E-02	6.283E-02	3.789E-03	-0.123
		722.95		-3.553E-02	4.651E-02	6.072E-02	3.984E-03	-0.585
AG-110M		657.75	*	-2.666E-02	3.625E-02	5.722E-02	3.100E-03	-0.466
		677.61		-6.304E-02	2.910E-01	4.765E-01	2.675E-02	-0.132
		706.67		-2.419E-02	2.232E-01	3.682E-01	2.254E-02	-0.066
		763.93		-2.848E-01	1.768E-01	2.523E-01	1.827E-02	-1.129
		884.67		1.969E-02	5.004E-02	8.486E-02	8.506E-03	0.232
		937.48		8.203E-03	1.147E-01	1.880E-01	1.887E-02	0.044
		1384.27		8.943E-02	1.748E-01	3.065E-01	2.706E-02	0.292
IN-111		171.28		5.066E-02	7.431E-01	1.188E+00	6.534E-02	0.043
		245.39	*	4.085E-01	8.444E-01	1.290E+00	7.967E-02	0.317
IN-113M		391.69	*	1.800E-02	4.244E-02	7.135E-02	5.088E-03	0.252

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113		391.69	*	1.800E-02	4.244E-02	7.135E-02	5.088E-03	0.252
IN-114M		190.27	*	-1.782E-02	1.992E-01	2.781E-01	1.577E-02	-0.064
CD-115		260.90		-3.726E+00	8.422E+01	1.408E+02	8.864E+00	-0.026
		492.35		-1.164E+01	2.295E+01	3.537E+01	2.303E+00	-0.329
		527.90	*	-3.477E+00	7.157E+00	1.099E+01	6.922E-01	-0.316
SN-117M		156.02		-1.596E+00	2.240E+00	3.470E+00	1.965E-01	-0.460
		158.56	*	-3.871E-02	5.220E-02	8.051E-02	4.515E-03	-0.481
SB-122		563.90	*	2.901E-01	1.583E+00	2.563E+00	1.542E-01	0.113
		692.80		1.431E+01	3.280E+01	5.631E+01	3.100E+00	0.254
I-123		159.00	*	-4.774E-01	3.280E+01	Half-Life too short		
		528.96		1.694E+01	3.280E+01	Half-Life too short		
TE-123M		159.00	*	-1.154E-02	2.876E-02	4.513E-02	2.563E-03	-0.256
I-124		602.71	*	-3.886E-01	5.675E-01	8.499E-01	4.795E-02	-0.457
		722.78		-3.157E+00	3.932E+00	5.104E+00	3.107E-01	-0.619
		1325.50		4.357E+01	2.960E+01	5.652E+01	4.845E+00	0.771
		1376.25		4.684E+01	2.900E+01	5.524E+01	4.753E+00	0.848
		1509.49		9.572E+00	1.386E+01	2.480E+01	2.027E+00	0.386
		1691.02		1.597E-01	2.785E+00	4.584E+00	3.297E-01	0.035
SB-124		602.71		-2.743E-02	4.005E-02	5.999E-02	3.386E-03	-0.457
		645.85		-1.617E-01	4.810E-01	7.832E-01	4.673E-02	-0.206
		709.31		1.576E+00	2.781E+00	4.817E+00	2.805E-01	0.327
		713.82		-1.264E+00	1.669E+00	2.598E+00	2.669E-01	-0.487
		722.78		-3.230E-01	4.024E-01	5.222E-01	3.316E-02	-0.619
	+	968.20		2.077E+01	4.399E+00	7.880E+00	7.429E-01	2.636
		1045.16		-1.802E+00	2.870E+00	4.347E+00	3.660E-01	-0.414
		1325.50		4.762E+00	3.234E+00	6.176E+00	5.295E-01	0.771
		1368.21		-7.803E-01	1.746E+00	2.705E+00	3.646E-01	-0.288
		1436.60		-3.598E+00	3.737E+00	5.200E+00	4.391E-01	-0.692
		1691.02	*	3.855E-03	6.722E-02	1.106E-01	8.406E-03	0.035
SB-125		427.89	*	4.778E-02	9.394E-02	1.579E-01	1.100E-02	0.303
	+	463.38		8.807E-01	3.831E-01	5.628E-01	4.221E-02	1.565
		600.56		-4.321E-02	1.735E-01	2.865E-01	1.888E-02	-0.151
		635.90		-1.567E-02	2.570E-01	4.284E-01	2.716E-02	-0.037
TE-125M		109.28	*	1.314E+00	9.268E+00	1.518E+01	1.457E+00	0.087
I-126		388.63		3.800E-03	1.884E-01	3.087E-01	2.098E-02	0.012
		666.33	*	-1.524E-01	1.742E-01	2.715E-01	1.362E-02	-0.561
		753.82		1.864E-01	1.266E+00	2.123E+00	1.427E-01	0.088
SB-126		223.80		-8.506E-01	3.686E+00	6.163E+00	3.690E-01	-0.138
		278.60		2.881E+00	2.486E+00	4.297E+00	2.758E-01	0.670
	+	296.50		1.307E+01	2.013E+00	3.498E+00	2.282E-01	3.738
		414.70		1.951E-02	7.487E-02	1.096E-01	7.425E-03	0.178
		415.30		9.457E-01	5.919E+00	9.045E+00	6.128E-01	0.105
		555.20		3.742E+00	3.881E+00	6.658E+00	4.054E-01	0.562
		573.80		-5.550E-01	9.415E-01	1.520E+00	9.006E-02	-0.365
		593.00		-7.672E-01	7.997E-01	1.241E+00	7.126E-02	-0.618
		656.30		-1.208E+00	3.066E+00	4.966E+00	2.486E-01	-0.243
		666.33		-6.349E-02	7.258E-02	1.131E-01	5.674E-03	-0.561
		675.00		-4.838E-01	1.729E+00	2.815E+00	1.457E-01	-0.172
		695.00		-9.198E-03	7.210E-02	1.188E-01	6.591E-03	-0.077

---- Non-Identified Nuclides ----

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		697.00		-1.949E-01	2.460E-01	3.830E-01	2.139E-02	-0.509
		720.50	*	1.378E-02	1.513E-01	2.204E-01	1.331E-02	0.063
		856.80		-9.038E-03	4.806E-01	6.800E-01	6.173E-02	-0.013
		989.30		-5.313E-01	1.269E+00	1.968E+00	1.806E-01	-0.270
		1034.80		1.527E+00	8.821E+00	1.450E+01	1.243E+00	0.105
		1213.00		6.605E-01	5.040E+00	8.502E+00	5.752E-01	0.078
SB-127		61.10		-8.116E+01	6.972E+01	1.097E+02	1.509E+01	-0.740
		252.40		-8.558E-01	3.370E+00	5.555E+00	2.306E+00	-0.154
		290.80		-1.507E+01	1.952E+01	2.693E+01	2.474E+00	-0.559
		411.60		1.246E+01	1.094E+01	1.700E+01	2.469E+00	0.733
		444.90		3.447E+00	7.003E+00	1.179E+01	1.290E+00	0.292
		473.00		6.678E-02	1.374E+00	2.228E+00	2.509E-01	0.030
		543.00		-3.624E+00	1.316E+01	2.055E+01	2.625E+00	-0.176
		603.60		6.603E+00	9.561E+00	1.496E+01	1.539E+00	0.441
		685.20	*	-5.456E-01	1.086E+00	1.736E+00	1.514E-01	-0.314
		698.50		-7.414E+00	1.197E+01	1.886E+01	2.664E+00	-0.393
		722.20		-9.172E+00	2.564E+01	3.530E+01	3.141E+00	-0.260
		783.80		6.548E+00	3.099E+00	5.775E+00	6.487E-01	1.134
XE-127		57.60		-1.306E+01	9.447E+00	1.462E+01	1.859E+00	-0.893
		145.22		2.997E-01	7.284E-01	1.173E+00	6.919E-02	0.255
		172.10		1.126E-01	1.138E-01	1.898E-01	1.045E-02	0.594
		202.84	*	-6.192E-03	4.408E-02	7.432E-02	4.304E-03	-0.083
	+	374.96		7.404E-02	3.579E-01	2.976E-01	2.019E-02	0.249
I-131		80.18		-1.431E+00	4.974E+00	7.234E+00	7.966E-01	-0.198
		284.30		-7.286E-01	1.294E+00	2.091E+00	1.471E-01	-0.348
		364.48	*	-2.209E-02	1.011E-01	1.637E-01	1.202E-02	-0.135
		636.97		-1.663E+00	1.357E+00	2.042E+00	1.224E-01	-0.815
		722.89		-5.460E+00	7.020E+00	9.147E+00	5.631E-01	-0.597
TE-132		49.72		-2.375E+01	3.211E+01	5.193E+01	7.286E+00	-0.457
		111.76		-5.662E+00	2.328E+01	3.747E+01	3.604E+00	-0.151
		116.30		-1.520E+01	2.147E+01	3.370E+01	3.133E+00	-0.451
		228.16	*	-2.278E-01	5.190E-01	8.573E-01	1.219E-01	-0.266
BA-133		53.15		5.710E-02	6.557E+00	1.098E+01	1.454E+00	0.005
		79.62		4.025E-03	1.591E+00	2.349E+00	3.914E-01	0.002
		81.00		-1.577E-01	1.251E-01	1.687E-01	2.915E-02	-0.935
		276.40		6.567E-01	3.955E-01	6.927E-01	9.176E-02	0.948
		302.84		-3.245E-02	1.543E-01	2.217E-01	2.672E-02	-0.146
		356.01	*	-1.897E-02	4.734E-02	6.584E-02	7.944E-03	-0.288
		383.85		-3.724E-02	3.010E-01	4.892E-01	5.592E-02	-0.076
I-133	+	510.53		4.577E-01	3.010E-01	Half-Life too short		
		529.87	*	4.902E-04	3.010E-01	Half-Life too short		
		706.58		-2.190E-02	3.010E-01	Half-Life too short		
		856.28		-1.409E-01	3.010E-01	Half-Life too short		
		875.33		-1.905E-02	3.010E-01	Half-Life too short		
		1236.41		2.717E-01	3.010E-01	Half-Life too short		
		1298.22		5.477E-02	3.010E-01	Half-Life too short		
CS-134		475.35		1.136E+00	1.889E+00	3.186E+00	2.101E-01	0.357
		563.23		-6.400E-02	3.867E-01	6.094E-01	3.740E-02	-0.105
		569.32		2.235E-02	2.293E-01	3.635E-01	2.230E-02	0.061

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		604.70		-4.815E-03	3.545E-02	5.113E-02	2.891E-03	-0.094
	+	795.84	*	1.266E-01	5.863E-02	9.440E-02	7.278E-03	1.341
		801.93		-2.435E-01	4.122E-01	6.225E-01	4.874E-02	-0.391
		1038.57		-3.634E+00	4.310E+00	6.335E+00	5.395E-01	-0.574
		1167.94		1.056E-01	2.859E+00	4.803E+00	3.013E-01	0.022
		1365.15		3.901E-01	1.141E+00	1.978E+00	1.785E-01	0.197
CS-135		268.24	*	-8.035E-02	1.559E-01	2.541E-01	2.054E-02	-0.316
I-135		288.45		1.752E+09	1.559E-01	Half-Life too short		
		417.63		1.449E+08	1.559E-01	Half-Life too short		
		546.56		2.257E+08	1.559E-01	Half-Life too short		
		836.80		4.372E+08	1.559E-01	Half-Life too short		
		1038.76		-6.913E+08	1.559E-01	Half-Life too short		
		1124.00		1.467E+09	1.559E-01	Half-Life too short		
		1131.51		2.441E+08	1.559E-01	Half-Life too short		
		1260.41	*	3.716E+07	1.559E-01	Half-Life too short		
		1457.56		2.491E+10	1.559E-01	Half-Life too short		
		1678.03		-5.040E+08	1.559E-01	Half-Life too short		
		1706.46		3.345E+08	1.559E-01	Half-Life too short		
		1791.20		2.216E+08	1.559E-01	Half-Life too short		
CS-136		66.91		-6.468E-01	9.382E-01	1.500E+00	2.568E-01	-0.431
	+	86.29		3.622E+00	1.442E+00	2.005E+00	2.954E-01	1.806
		153.22		8.122E-01	6.448E-01	1.085E+00	7.765E-02	0.749
		163.89		-6.992E-01	1.030E+00	1.590E+00	1.115E-01	-0.440
		176.55		-9.662E-02	3.525E-01	5.532E-01	3.480E-02	-0.175
		273.65		-8.606E-01	4.373E-01	6.546E-01	4.669E-02	-1.315
		340.57		3.692E-01	1.394E-01	2.347E-01	1.650E-02	1.573
		818.51		-2.647E-02	7.785E-02	1.244E-01	1.015E-02	-0.213
		1048.07	*	6.555E-02	1.174E-01	1.990E-01	1.742E-02	0.329
		1235.34		5.231E-01	6.694E-01	1.171E+00	1.265E-01	0.447
BA-137M		661.65	*	4.316E-02	3.793E-02	6.811E-02	3.361E-03	0.634
CS-137		661.65	*	4.562E-02	4.010E-02	7.200E-02	3.573E-03	0.634
CE-139		165.85	*	3.310E-02	2.931E-02	4.918E-02	2.686E-03	0.673
BA-140		162.64		2.272E-01	7.086E-01	1.149E+00	7.214E-02	0.198
		304.84		4.797E-01	1.218E+00	1.825E+00	5.012E-01	0.263
		423.70		-1.242E+00	1.874E+00	2.843E+00	9.090E-01	-0.437
		537.32	*	-4.333E-02	2.518E-01	3.971E-01	1.295E-01	-0.109
LA-140	+	328.77		3.509E-01	3.794E-01	5.023E-01	3.659E-02	0.699
		432.53		-1.383E+00	1.991E+00	3.075E+00	2.235E-01	-0.450
		487.03		4.103E-02	1.304E-01	2.152E-01	1.555E-02	0.191
		751.79		-2.234E+00	1.479E+00	2.065E+00	1.618E-01	-1.082
		815.85		1.483E-01	3.349E-01	5.706E-01	5.219E-02	0.260
		867.82		-8.989E-01	1.562E+00	2.068E+00	2.021E-01	-0.435
		919.63		1.602E+00	3.078E+00	4.821E+00	5.657E-01	0.332
		925.24		-1.267E-01	1.072E+00	1.726E+00	1.787E-01	-0.073
		1596.49	*	3.378E-02	7.981E-02	1.391E-01	1.079E-02	0.243
CE-141		145.44	*	2.914E-02	6.534E-02	1.054E-01	6.448E-03	0.277
CE-143		57.37		-1.158E-03	6.534E-02	Half-Life too short		
		231.56		4.494E-04	6.534E-02	Half-Life too short		
		293.26	*	1.942E-04	6.534E-02	Half-Life too short		

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	+	350.59		1.748E-02	6.534E-02	Half-Life too short		
		490.36		-1.500E-03	6.534E-02	Half-Life too short		
		664.57		7.155E-05	6.534E-02	Half-Life too short		
		721.93		-6.207E-04	6.534E-02	Half-Life too short		
CE-144		80.11		-6.585E-01	2.549E+00	3.713E+00	4.074E-01	-0.177
		133.54	*	-3.818E-02	2.138E-01	3.422E-01	4.916E-02	-0.112
PM-144		476.78		1.722E-02	6.586E-02	1.085E-01	8.258E-03	0.159
		618.01		-3.956E-03	3.146E-02	5.231E-02	3.056E-03	-0.076
		696.49	*	-1.945E-02	3.420E-02	5.435E-02	3.032E-03	-0.358
		778.57		-3.144E+00	2.387E+00	3.466E+00	2.516E-01	-0.907
PR-144		696.49	*	-1.317E+00	2.316E+00	3.680E+00	2.052E-01	-0.358
		1489.15		-4.508E+00	1.127E+01	1.720E+01	1.421E+00	-0.262
PM-146		453.90	*	-2.150E-02	4.191E-02	6.516E-02	6.019E-03	-0.330
		633.02		5.759E-01	1.373E+00	2.345E+00	8.616E-01	0.246
		735.90		-1.592E-01	1.565E-01	2.174E-01	6.089E-02	-0.732
		747.13		9.017E-02	8.472E-02	1.520E-01	1.959E-02	0.593
ND-147	+	91.11		6.215E-01	3.312E-01	4.746E-01	5.291E-02	1.309
		319.41		6.443E-01	2.940E+00	4.930E+00	3.272E-01	0.131
		439.89		1.575E+00	5.580E+00	9.233E+00	6.208E-01	0.171
		531.02	*	7.212E-02	5.292E-01	8.575E-01	1.177E-01	0.084
PM-149		285.90	*	-6.997E+01	6.103E+01	9.403E+01	1.359E+01	-0.744
EU-152		121.78		-7.386E-02	7.630E-02	1.179E-01	9.717E-03	-0.626
		244.69		1.154E-01	3.558E-01	5.384E-01	3.322E-02	0.214
		344.27	*	-2.895E-02	9.556E-02	1.491E-01	1.098E-02	-0.194
		443.98		-9.275E-02	8.774E-01	1.412E+00	9.476E-02	-0.066
		778.89		-2.991E-01	2.774E-01	4.139E-01	3.006E-02	-0.723
		867.32		-5.944E-01	9.946E-01	1.313E+00	1.226E-01	-0.453
	+	964.01		8.406E-01	3.545E-01	6.496E-01	6.154E-02	1.294
		1085.78		1.445E-02	4.641E-01	7.492E-01	5.832E-02	0.019
		1112.02		-1.572E-01	3.829E-01	5.254E-01	3.853E-02	-0.299
		1407.95		2.012E-01	2.017E-01	3.706E-01	3.160E-02	0.543
GD-153		69.67		1.725E+00	2.196E+00	3.376E+00	3.765E-01	0.511
		83.37		4.881E+00	1.988E+01	2.730E+01	3.025E+00	0.179
		97.43	*	-5.452E-02	9.228E-02	1.303E-01	1.213E-02	-0.418
		103.18		-3.323E-02	1.107E-01	1.770E-01	1.496E-02	-0.188
EU-154		123.07		-2.155E-02	5.160E-02	8.192E-02	8.095E-03	-0.263
		247.94		1.349E-01	3.941E-01	5.968E-01	5.840E-02	0.226
		591.81		-1.885E-01	5.555E-01	9.091E-01	8.861E-02	-0.207
		723.30		-1.536E-01	1.983E-01	2.590E-01	1.897E-02	-0.593
		756.87		8.339E-01	7.269E-01	1.312E+00	1.408E-01	0.636
		873.19		2.397E-02	2.907E-01	4.798E-01	6.175E-02	0.050
		996.32		-3.120E-01	4.160E-01	6.187E-01	1.113E-01	-0.504
		1004.76		-2.748E-02	2.369E-01	3.793E-01	4.518E-02	-0.072
		1274.45	*	-3.573E-02	1.347E-01	2.183E-01	2.325E-02	-0.164
EU-155		48.70		1.281E+00	5.517E+00	9.342E+00	1.122E+00	0.137
		60.01		4.527E+00	7.326E+00	1.246E+01	1.535E+00	0.363
	+	86.54		3.570E-01	1.381E-01	1.988E-01	2.250E-02	1.795
		105.31	*	9.777E-03	1.114E-01	1.824E-01	1.513E-02	0.054
TB-160	+	86.79		9.426E-01	3.645E-01	5.270E-01	5.937E-02	1.789

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		197.04		7.566E-02	5.704E-01	9.079E-01	5.207E-02	0.083
		215.65		-1.886E-01	7.122E-01	1.192E+00	7.045E-02	-0.158
		298.57		1.107E-01	1.084E-01	1.890E-01	1.235E-02	0.586
		879.36	*	5.561E-02	1.352E-01	2.300E-01	2.218E-02	0.242
		962.29		1.155E+00	6.024E-01	1.028E+00	9.760E-02	1.124
	+	966.15		5.704E-01	2.405E-01	5.194E-01	4.908E-02	1.098
		1177.93		-7.527E-02	3.765E-01	6.191E-01	3.861E-02	-0.122
		1271.85		-2.279E-01	7.813E-01	1.263E+00	9.716E-02	-0.180
HO-166M		80.57		-2.541E-01	3.325E-01	4.704E-01	5.167E-02	-0.540
	+	184.41		1.285E-01	5.584E-02	6.464E-02	3.630E-03	1.988
		280.46		-1.132E-01	8.965E-02	1.400E-01	9.001E-03	-0.809
	+	410.95		2.305E-01	3.305E-01	4.401E-01	2.984E-02	0.524
		711.68	*	-2.530E-02	6.245E-02	1.005E-01	5.895E-03	-0.252
		752.31		-1.684E-01	2.464E-01	3.805E-01	2.546E-02	-0.443
		810.29		-5.964E-02	6.583E-02	9.976E-02	7.948E-03	-0.598
TM-171		51.35		-8.971E+00	6.057E+01	1.009E+02	1.326E+01	-0.089
		52.39		5.675E+00	2.982E+01	5.031E+01	6.664E+00	0.113
		59.40		4.870E+01	4.001E+01	6.906E+01	8.580E+00	0.705
		66.72	*	-2.673E+01	3.660E+01	5.863E+01	6.680E+00	-0.456
LU-176	+	88.36		7.034E-01	2.720E-01	3.869E-01	4.352E-02	1.818
		201.83		-9.915E-03	2.739E-02	4.581E-02	2.648E-03	-0.216
		306.84	*	-7.786E-03	2.282E-02	3.711E-02	2.441E-03	-0.210
		401.10		5.478E+00	6.283E+00	1.085E+01	7.367E-01	0.505
LU-177		112.95		1.389E-01	1.429E+00	2.334E+00	1.718E-01	0.060
	+	208.36	*	1.679E+00	1.391E+00	1.751E+00	1.023E-01	0.959
LU-177M		52.97		8.921E-01	2.951E+00	4.998E+00	6.622E-01	0.178
		54.07		-3.171E-01	1.496E+00	2.479E+00	3.270E-01	-0.128
		61.30		-2.399E+00	2.212E+00	3.505E+00	4.241E-01	-0.684
		121.62		-2.138E-01	3.835E-01	6.056E-01	4.007E-02	-0.353
		147.16		-3.809E-01	6.763E-01	1.059E+00	6.196E-02	-0.360
		171.86		3.380E-01	4.734E-01	7.799E-01	4.293E-02	0.433
		218.09		4.986E-02	8.371E-01	1.419E+00	8.423E-02	0.035
		268.79		2.634E-01	7.884E-01	1.339E+00	8.507E-02	0.197
		319.02		2.108E-02	2.473E-01	4.117E-01	2.731E-02	0.051
		367.43		5.376E-01	1.027E+00	1.545E+00	1.046E-01	0.348
		413.65	*	-6.891E-02	1.930E-01	2.657E-01	1.801E-02	-0.259
HF-181		56.28		-1.539E+00	1.492E+00	2.361E+00	3.050E-01	-0.652
		57.53		-1.032E+00	7.944E-01	1.236E+00	1.573E-01	-0.835
		65.20		-9.696E-01	1.249E+00	2.009E+00	2.322E-01	-0.483
		133.02		1.483E-02	6.651E-02	1.084E-01	6.729E-03	0.137
		136.25		-1.633E-01	4.634E-01	7.352E-01	4.499E-02	-0.222
		345.85		-3.549E-02	2.023E-01	2.882E-01	1.938E-02	-0.123
		482.03	*	1.992E-02	3.954E-02	6.632E-02	4.353E-03	0.300
W-181		56.28		-6.096E-01	5.919E-01	9.367E-01	1.210E-01	-0.651
		57.53		-4.096E-01	3.154E-01	4.909E-01	6.246E-02	-0.834
		65.20	*	-3.819E-01	4.920E-01	7.914E-01	9.144E-02	-0.483
TA-182		67.75		-4.519E-02	1.395E-01	2.276E-01	2.571E-02	-0.199
		100.10		2.753E-02	1.809E-01	2.975E-01	2.644E-02	0.093
		152.43		-8.415E-02	3.489E-01	5.532E-01	3.174E-02	-0.152

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		-1.140E-01	3.397E-01	5.657E-01	3.378E-02	-0.202
		1001.68		1.639E+00	2.265E+00	3.879E+00	3.499E-01	0.422
	+	1121.28		6.761E-01	3.220E-01	3.946E-01	2.829E-02	1.713
		1189.05		-1.092E-01	3.499E-01	5.704E-01	3.652E-02	-0.191
		1221.42	*	6.860E-02	2.162E-01	3.698E-01	2.550E-02	0.186
		1230.97		5.432E-04	5.273E-01	8.797E-01	6.197E-02	0.001
RE-183		57.98		-2.236E-01	3.048E-01	4.912E-01	6.215E-02	-0.455
		59.32		2.023E-01	1.634E-01	2.821E-01	3.508E-02	0.717
		67.20		-1.263E-01	2.488E-01	4.026E-01	4.568E-02	-0.314
		162.32	*	3.392E-02	1.092E-01	1.770E-01	9.790E-03	0.192
	+	208.81		1.697E+00	1.406E+00	1.785E+00	1.044E-01	0.951
		291.72		-1.142E+00	1.054E+00	1.417E+00	9.209E-02	-0.806
RE-184		57.98		-8.301E-01	1.131E+00	1.823E+00	2.307E-01	-0.455
		59.32		7.503E-01	6.059E-01	1.046E+00	1.301E-01	0.717
		67.20		-4.688E-01	9.234E-01	1.494E+00	1.695E-01	-0.314
		161.27		9.536E-02	3.626E-01	5.865E-01	3.257E-02	0.163
		216.55		-4.397E-03	2.541E-01	4.295E-01	2.543E-02	-0.010
		252.85	*	6.263E-02	2.221E-01	3.778E-01	2.355E-02	0.166
		318.01		-1.529E-01	4.297E-01	6.969E-01	4.620E-02	-0.219
		792.07		6.512E-01	1.020E+00	1.577E+00	1.192E-01	0.413
		903.28		5.580E-01	1.075E+00	1.793E+00	1.807E-01	0.311
		920.93		2.927E-01	4.872E-01	8.368E-01	8.299E-02	0.350
OS-185		59.72		3.771E-01	4.339E-01	7.432E-01	9.192E-02	0.507
		61.14		-2.880E-01	2.454E-01	3.870E-01	4.693E-02	-0.744
		69.30		3.114E-01	3.907E-01	6.013E-01	6.721E-02	0.518
		592.07		-6.119E-01	2.259E+00	3.720E+00	2.140E-01	-0.164
		646.12	*	-1.091E-02	4.164E-02	6.823E-02	3.505E-03	-0.160
		717.42		2.194E-01	8.890E-01	1.505E+00	9.003E-02	0.146
		874.81		-3.210E-01	6.033E-01	9.352E-01	8.910E-02	-0.343
		880.27		1.763E-01	7.724E-01	1.292E+00	1.248E-01	0.136
RE-188		155.03	*	2.252E-01	1.770E-01	2.983E-01	1.695E-02	0.755
		477.96		-2.981E-01	2.939E+00	4.708E+00	3.099E-01	-0.063
		633.10		1.097E+00	2.705E+00	4.668E+00	2.473E-01	0.235
W-188		63.58		9.587E+01	7.366E+01	1.253E+02	1.473E+01	0.765
		227.08		7.377E+00	1.215E+01	2.103E+01	1.265E+00	0.351
		290.67	*	-2.290E+00	8.133E+00	1.167E+01	7.576E-01	-0.196
IR-192	+	295.96		1.062E+00	1.639E-01	2.895E-01	1.912E-02	3.668
		308.46		-6.226E-02	8.826E-02	1.401E-01	9.312E-03	-0.444
		316.51	*	-1.050E-02	3.274E-02	5.323E-02	3.538E-03	-0.197
		468.07		-3.004E-02	7.402E-02	1.000E-01	7.417E-03	-0.300
		604.41		1.126E-02	4.794E-01	7.033E-01	7.920E-02	0.016
		612.46		1.863E+00	9.127E-01	1.535E+00	1.132E-01	1.214
AU-195		65.12		-1.647E-01	2.293E-01	3.698E-01	4.276E-02	-0.445
		66.83		-8.025E-02	1.197E-01	1.923E-01	2.188E-02	-0.417
	+	75.70		1.297E+00	3.466E-01	5.069E-01	5.545E-02	2.559
		98.88	*	6.436E-02	2.323E-01	3.821E-01	3.467E-02	0.168
		129.76		2.595E+00	2.983E+00	4.983E+00	3.144E-01	0.521
TL-200		367.94	*	1.502E-04	2.983E+00	Half-Life too short		
		579.30		-8.372E-04	2.983E+00	Half-Life too short		

---- Non-Identified Nuclides ----

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		828.27		-4.670E-04	2.983E+00	Half-Life too short		
		1205.75		-1.485E-04	2.983E+00	Half-Life too short		
TL-201		68.90		2.712E+00	4.518E+00	7.319E+00	8.201E-01	0.371
		70.82		2.612E-01	2.640E+00	3.939E+00	4.366E-01	0.066
		80.30		-3.292E+00	4.633E+00	6.578E+00	7.221E-01	-0.500
		135.34		-6.923E+00	1.985E+01	3.151E+01	1.936E+00	-0.220
		167.43	*	-7.308E-01	5.405E+00	8.568E+00	4.686E-01	-0.085
TL-202		68.90		3.025E-01	5.040E-01	8.163E-01	9.148E-02	0.371
		70.82		2.906E-02	2.937E-01	4.381E-01	4.857E-02	0.066
		80.30		-3.663E-01	5.155E-01	7.319E-01	8.035E-02	-0.500
		439.56	*	1.979E-02	6.722E-02	1.113E-01	7.484E-03	0.178
HG-203		70.83		1.383E-01	1.341E+00	2.002E+00	3.060E-01	0.069
		72.87		6.915E-01	7.882E-01	1.205E+00	1.792E-01	0.574
		82.60		3.832E-01	1.458E+00	1.992E+00	3.064E-01	0.192
		279.20	*	2.544E-02	4.360E-02	7.368E-02	4.972E-03	0.345
BI-207		72.80		1.624E-01	2.332E-01	3.558E-01	3.914E-02	0.457
	+	74.97		7.230E-01	1.932E-01	2.600E-01	2.846E-02	2.781
		84.90		1.845E-02	2.313E-01	3.425E-01	3.821E-02	0.054
		569.67		2.680E-03	3.574E-02	5.657E-02	3.373E-03	0.047
		1063.62	*	-8.850E-03	5.659E-02	8.975E-02	7.306E-03	-0.099
		1770.23		4.045E-01	3.388E-01	6.871E-01	4.559E-02	0.589
TL-207		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281
PO-209		260.50		-3.695E-01	9.478E+00	1.561E+01	9.822E-01	-0.024
		262.80		-1.607E+01	2.562E+01	4.150E+01	2.619E+00	-0.387
		896.60	*	-7.020E+00	7.909E+00	1.175E+01	1.185E+00	-0.598
BI-210		46.50	*	4.094E+00	8.988E+00	1.536E+01	1.506E+00	0.267
PB-210		46.50	*	4.094E+00	8.988E+00	1.536E+01	1.506E+00	0.267
PO-210		46.50	*	4.094E+00	8.987E+00	1.536E+01	1.379E+00	0.267
PB-211		404.84	*	-1.141E+00	1.256E+00	1.318E+00	8.232E-01	-0.865
		427.08		8.632E-01	2.167E+00	3.511E+00	2.173E+00	0.246
		831.96		-7.025E-02	1.361E+00	2.226E+00	1.394E+00	-0.032
BI-212	+	727.18	*	1.221E+00	5.317E-01	6.744E-01	5.395E-02	1.811
		785.46		1.252E+00	1.886E+00	3.267E+00	2.420E-01	0.383
		1620.62		8.307E-01	1.433E+00	2.535E+00	1.933E-01	0.328
PO-215		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281
RN-219		271.23		2.783E-01	2.412E-01	4.226E-01	3.601E-02	0.659
		401.81	*	3.097E-01	3.872E-01	6.627E-01	9.315E-02	0.467
RN-220		549.76	*	-1.556E+01	2.573E+01	3.894E+01	2.388E+00	-0.400
RA-223		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281
AC-227		79.80		-1.856E-01	1.996E+00	2.933E+00	6.614E-01	-0.063
		236.00		1.366E-01	2.521E-01	3.875E-01	4.115E-02	0.353
		256.20	*	1.274E-01	3.714E-01	6.324E-01	8.954E-02	0.201
		286.10		-1.425E+00	1.507E+00	2.368E+00	2.820E-01	-0.602
	+	299.80		2.585E+00	1.875E+00	2.501E+00	4.143E-01	1.034
		304.40		1.225E+00	1.903E+00	2.906E+00	5.106E-01	0.421
		334.20		2.485E-01	2.897E+00	3.578E+00	6.666E-01	0.069
TH-227		79.80		-1.856E-01	1.996E+00	2.933E+00	6.691E-01	-0.063
	+	94.00		7.884E+00	3.510E+00	4.027E+00	8.994E-01	1.958
		236.00		1.366E-01	2.520E-01	3.875E-01	3.584E-02	0.353
		256.20	*	1.274E-01	3.716E-01	6.324E-01	1.079E-01	0.201
		286.10		-1.425E+00	2.069E+00	2.368E+00	2.373E+00	-0.602
	+	299.80		2.585E+00	1.875E+00	2.501E+00	4.143E-01	1.034
		304.40		1.225E+00	1.903E+00	2.906E+00	5.106E-01	0.421
		334.20		2.485E-01	2.897E+00	3.578E+00	6.666E-01	0.069
TH-229		85.43		-5.554E-02	2.310E-01	3.367E-01	3.766E-02	-0.165
	+	88.47		4.049E-01	1.566E-01	2.229E-01	2.501E-02	1.816
		100.00		-1.297E-02	1.927E-01	3.124E-01	2.781E-02	-0.042
		193.63	*	1.027E-01	5.095E-01	8.146E-01	4.646E-02	0.126
		210.97		1.244E+00	8.520E-01	1.369E+00	8.033E-02	0.909
PA-231		283.67	*	-9.014E-01	1.495E+00	2.404E+00	3.382E-01	-0.375
	+	301.29		1.034E+00	7.388E-01	9.982E-01	1.087E-01	1.036
TH-231		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		7.101E-01	5.443E+00	8.079E+00	8.986E-01	0.088
	+	92.29		6.325E+00	2.516E+00	3.410E+00	3.510E-01	1.855
		95.87	*	-5.128E-02	9.732E-01	1.420E+00	1.361E-01	-0.036
		108.00		6.975E-01	1.696E+00	2.809E+00	2.211E-01	0.248
PA-233	+	75.28		2.110E+01	6.242E+00	7.715E+00	1.293E+00	2.735
	+	86.59		5.805E+00	2.686E+00	3.237E+00	8.992E-01	1.793
	+	300.12		7.208E-01	5.185E-01	6.962E-01	9.590E-02	1.035
		311.98	*	8.658E-02	6.151E-02	1.095E-01	7.578E-03	0.791
		340.50		2.168E+00	8.797E-01	1.254E+00	2.910E-01	1.729
		398.62		-4.594E-01	2.060E+00	3.312E+00	8.642E-01	-0.139
		415.76		-5.727E-01	1.669E+00	2.549E+00	5.324E-01	-0.225
PA-234		63.00		2.506E+00	2.279E+00	3.825E+00	6.693E-01	0.655
		94.67		4.555E-01	2.022E-01	3.150E-01	4.175E-02	1.446
		98.44		1.979E-02	9.605E-02	1.566E-01	8.748E-02	0.126
		99.86		-5.072E-03	4.892E-01	7.951E-01	7.095E-02	-0.006
		111.00		-9.004E-02	1.892E-01	3.011E-01	3.419E-02	-0.299
		131.20		1.473E-02	1.109E-01	1.800E-01	1.128E-02	0.082
		152.70		1.577E-01	3.390E-01	5.529E-01	8.726E-02	0.285
	+	186.00		4.627E+00	2.443E+00	2.610E+00	7.967E-01	1.773
		226.40		1.976E-01	3.909E-01	6.729E-01	7.851E-02	0.294
		227.20		1.473E-01	4.195E-01	7.186E-01	4.325E-02	0.205
		248.90		-4.331E-01	8.191E-01	1.284E+00	2.774E-01	-0.337
		293.70		3.719E+00	1.055E+00	1.552E+00	2.537E-01	2.397
		369.80		-4.680E-01	1.014E+00	1.395E+00	2.945E-01	-0.336
		568.70		9.477E-01	1.120E+00	1.871E+00	1.117E-01	0.507
		569.50		2.727E-02	3.174E-01	5.027E-01	2.999E-02	0.054
		574.00		-7.653E-01	1.457E+00	2.365E+00	1.401E-01	-0.324
		699.00		-6.104E-01	7.244E-01	1.112E+00	1.994E-01	-0.549
		706.10		-2.417E-01	1.132E+00	1.845E+00	8.143E-01	-0.131
		733.00		3.138E-01	3.719E-01	5.861E-01	1.254E-01	0.535
		742.81		-9.768E-01	1.535E+00	2.101E+00	1.407E+00	-0.465
	+	796.30		2.463E+00	1.304E+00	1.834E+00	4.906E-01	1.343
		805.60		4.202E-01	1.080E+00	1.788E+00	5.444E-01	0.235
		819.60		-1.857E-01	1.391E+00	2.259E+00	8.568E-01	-0.082
		826.30		-1.077E+00	1.022E+00	1.323E+00	5.913E-01	-0.814
		831.60		-1.383E-01	7.105E-01	1.147E+00	3.419E-01	-0.121
		876.40		-4.174E-01	9.522E-01	1.323E+00	1.362E+00	-0.315
		880.51		9.694E-02	2.851E-01	4.814E-01	4.656E-02	0.201
		883.24		-6.914E-02	2.931E-01	4.621E-01	3.113E-01	-0.150
		899.00		-9.601E-01	9.954E-01	1.327E+00	5.844E-01	-0.723
		925.00		-1.693E-01	1.201E+00	1.930E+00	1.907E-01	-0.088
		926.50		-6.522E-02	1.756E-01	2.738E-01	7.045E-02	-0.238
		946.00	*	-8.805E-02	3.049E-01	4.805E-01	9.258E-02	-0.183
		949.00		-2.228E-01	4.976E-01	7.746E-01	7.466E-02	-0.288
		980.50		-2.996E-01	7.643E-01	1.189E+00	1.103E-01	-0.252
		1394.10		5.157E-01	1.242E+00	2.089E+00	1.359E+00	0.247
PA-234M		766.41		2.728E+01	2.763E+01	3.313E+01	2.535E+01	0.823
		1001.03	*	8.629E-01	7.515E+00	1.223E+01	1.406E+00	0.071
TH-234		63.29	*	2.539E+00	1.935E+00	3.223E+00	6.353E-01	0.788

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.040E+00	8.739E-01	1.102E+00	2.085E-01	1.852
U-235	+	89.95		2.680E+00	1.631E+00	1.991E+00	6.282E-01	1.346
	+	93.35		2.453E+00	1.175E+00	1.311E+00	3.738E-01	1.871
		105.00		7.549E-01	1.098E+00	1.806E+00	5.369E-01	0.418
		143.76	*	1.791E-01	2.248E-01	3.651E-01	5.969E-02	0.491
		163.35		7.108E-02	4.842E-01	7.785E-01	1.393E-01	0.091
	+	185.71		1.714E-01	7.445E-02	9.675E-02	5.445E-03	1.771
		205.31		-1.983E-01	5.701E-01	8.321E-01	1.497E-01	-0.238
NP-236		94.67		3.481E-01	1.504E-01	2.392E-01	2.346E-02	1.455
		98.44		1.497E-02	7.214E-02	1.184E-01	1.082E-02	0.126
		111.00		-6.811E-02	1.430E-01	2.278E-01	1.721E-02	-0.299
		160.31	*	7.273E-02	7.887E-02	1.314E-01	7.320E-03	0.554
U-238		63.29	*	2.539E+00	1.935E+00	3.223E+00	6.353E-01	0.788
	+	92.38		2.040E+00	8.115E-01	1.102E+00	1.132E-01	1.852
NP-239		99.55		4.582E-02	1.624E-01	2.670E-01	2.396E-02	0.172
		117.00	*	-1.044E-01	1.939E-01	3.071E-01	2.148E-02	-0.340
	+	209.75		1.356E+00	1.123E+00	1.426E+00	8.353E-02	0.951
		228.18		-9.974E-02	2.214E-01	3.662E-01	2.207E-02	-0.272
		277.60		2.178E-01	1.924E-01	3.323E-01	2.131E-02	0.655
		334.30		1.482E-01	1.642E+00	2.029E+00	1.357E-01	0.073
AM-241		59.54	*	2.727E-01	2.313E-01	3.987E-01	5.120E-02	0.684
CM-243		99.55		4.714E-02	1.670E-01	2.748E-01	2.465E-02	0.172
		103.76	*	1.633E-02	1.000E-01	1.644E-01	1.377E-02	0.099
		117.00		-1.074E-01	1.995E-01	3.159E-01	2.210E-02	-0.340
	+	209.75		1.337E+00	1.107E+00	1.406E+00	8.233E-02	0.951
		228.18		-1.008E-01	2.237E-01	3.700E-01	2.230E-02	-0.272
		277.60		2.196E-01	1.939E-01	3.350E-01	2.148E-02	0.655
CM-247		278.00		1.015E+00	8.013E-01	1.391E+00	8.923E-02	0.730
		287.40		7.788E-01	1.208E+00	2.079E+00	1.346E-01	0.375
		402.60	*	-9.905E-03	3.493E-02	5.591E-02	3.796E-03	-0.177
CF-249		252.85		2.362E-01	8.376E-01	1.425E+00	8.883E-02	0.166
		333.44		4.259E-02	2.533E-01	2.720E-01	1.819E-02	0.157
		387.95	*	6.521E-03	3.907E-02	6.466E-02	4.393E-03	0.101
CF-251		176.60	*	-2.943E-02	1.299E-01	2.043E-01	1.133E-02	-0.144
		227.00		2.120E-01	3.701E-01	6.396E-01	3.848E-02	0.331
		285.00		-2.449E+00	1.715E+00	2.625E+00	1.696E-01	-0.933

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001      *
* Acquisition date :  9-JUL-2009 08:35:24 Detector SN#     :                *
* Detector ID        : GAM10               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:02.07      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232591001           Analyst initials: MXR1          *
* Batch Number       : 881931               Sample Quantity : 1.2548E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.282E+01	3.346E+00	6.215E-01	0.000E+00
CD-109	3.011E+00	1.141E+00	1.422E+00	0.000E+00
SN-126	2.966E-01	1.124E-01	1.410E-01	0.000E+00
TL-208	4.707E-01	8.557E-02	5.247E-02	0.000E+00
BI-211	4.159E+00	5.533E-01	3.136E-01	0.000E+00
PB-212	1.725E+00	1.712E-01	9.533E-02	0.000E+00
PO-212	1.725E+00	1.712E-01	9.533E-02	0.000E+00
BI-214	1.282E+00	1.814E-01	1.167E-01	0.000E+00
PB-214	1.447E+00	2.062E-01	1.093E-01	0.000E+00
PO-214	1.447E+00	2.062E-01	1.093E-01	0.000E+00
PO-216	1.725E+00	1.712E-01	9.533E-02	0.000E+00
PO-218	1.447E+00	2.062E-01	1.093E-01	0.000E+00
RA-224	4.420E+00	1.159E+00	1.085E+00	0.000E+00
RA-226	1.282E+00	1.814E-01	1.167E-01	0.000E+00
AC-228	1.536E+00	3.928E-01	2.186E-01	0.000E+00
RA-228	1.536E+00	3.928E-01	2.186E-01	0.000E+00
TH-228	1.725E+00	1.712E-01	9.532E-02	0.000E+00
TH-230	1.282E+00	1.813E-01	1.167E-01	0.000E+00
TH-232	1.536E+00	3.928E-01	2.186E-01	0.000E+00
U-234	1.282E+00	1.813E-01	1.167E-01	0.000E+00
NP-237	8.708E-01	3.740E-01	4.697E-01	0.000E+00
AM-243	4.028E-01	1.055E-01	1.088E-01	0.000E+00
ANH-511	1.231E-01	7.333E-02	4.303E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-9.064E-02	3.092E-01	5.059E-01	0.000E+00	NOT IDENT.
NA-22	-1.508E-02	4.745E-02	7.819E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.811E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	9.558E-03	3.190E-02	5.544E-02	0.000E+00	NOT IDENT.

TI-44	0.000E+00	7.738E-02	9.352E-02	0.000E+00	FAIL ABUN
SC-46	-5.161E-02	4.099E-02	5.992E-02	0.000E+00	FAIL ABUN
V-48	-4.840E-02	6.681E-02	1.023E-01	0.000E+00	NOT IDENT.
CR-51	1.789E-01	3.358E-01	5.966E-01	0.000E+00	NOT IDENT.
MN-52	-1.546E-02	1.945E-01	3.231E-01	0.000E+00	NOT IDENT.
MN-54	-2.184E-03	4.054E-02	6.817E-02	0.000E+00	NOT IDENT.
CO-56	-7.039E-04	3.867E-02	6.510E-02	0.000E+00	NOT IDENT.
CO-57	-2.309E-02	2.541E-02	4.166E-02	0.000E+00	NOT IDENT.
CO-58	-3.084E-02	4.212E-02	6.687E-02	0.000E+00	NOT IDENT.
FE-59	6.530E-03	9.113E-02	1.511E-01	0.000E+00	NOT IDENT.
CO-60	-1.882E-02	4.018E-02	6.415E-02	0.000E+00	NOT IDENT.
ZN-65	-2.451E-02	1.069E-01	1.462E-01	0.000E+00	NOT IDENT.
GE-68	-7.842E-01	1.430E+00	2.233E+00	0.000E+00	NOT IDENT.
AS-73	1.012E-02	1.442E+00	2.577E+00	0.000E+00	NOT IDENT.
AS-74	6.989E-02	7.903E-02	1.458E-01	0.000E+00	NOT IDENT.
SE-75	3.492E-03	4.123E-02	7.242E-02	0.000E+00	NOT IDENT.
BR-77	3.239E+00	7.214E+00	1.201E+01	0.000E+00	FAIL ABUN
SR-82	1.128E-01	3.552E-01	6.195E-01	0.000E+00	NOT IDENT.
RB-83	2.455E-02	6.771E-02	1.120E-01	0.000E+00	NOT IDENT.
RB-84	5.841E-03	6.864E-02	1.163E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.298E+00	1.387E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.692E-02	7.016E-02	0.000E+00	NOT IDENT.
RB-86	-8.853E-01	8.870E-01	1.319E+00	0.000E+00	NOT IDENT.
Y-88	3.231E-02	2.708E-02	5.652E-02	0.000E+00	NOT IDENT.
ZR-88	-1.567E-03	2.907E-02	4.924E-02	0.000E+00	NOT IDENT.
Y-91	-7.518E+00	2.058E+01	3.414E+01	0.000E+00	NOT IDENT.
NB-94	2.083E-02	3.451E-02	6.161E-02	0.000E+00	NOT IDENT.
NB-95	1.715E-02	4.310E-02	7.543E-02	0.000E+00	NOT IDENT.
NB-95M	5.289E-02	1.310E-01	2.094E-01	0.000E+00	NOT IDENT.
ZR-95	8.356E-02	6.564E-02	1.230E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.858E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.150E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.319E+00	7.719E+00	1.389E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.198E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.641E-03	3.352E-02	5.446E-02	0.000E+00	NOT IDENT.
RH-102	1.030E-02	2.893E-02	4.966E-02	0.000E+00	NOT IDENT.
RU-103	-5.403E-03	3.778E-02	6.144E-02	0.000E+00	FAIL ABUN
RH-106	-2.228E-01	2.988E-01	4.856E-01	0.000E+00	FAIL ABUN
RU-106	-2.228E-01	2.979E-01	4.856E-01	0.000E+00	FAIL ABUN
AG-108M	-1.683E-02	3.333E-02	5.426E-02	0.000E+00	NOT IDENT.
AG-110M	-2.666E-02	3.552E-02	5.784E-02	0.000E+00	NOT IDENT.
IN-111	4.085E-01	8.275E-01	1.323E+00	0.000E+00	NOT IDENT.
IN-113M	1.800E-02	4.159E-02	7.266E-02	0.000E+00	NOT IDENT.
SN-113	1.800E-02	4.159E-02	7.266E-02	0.000E+00	NOT IDENT.
IN-114M	-1.782E-02	1.952E-01	2.861E-01	0.000E+00	NOT IDENT.
CD-115	-3.477E+00	7.014E+00	1.115E+01	0.000E+00	NOT IDENT.
SN-117M	-3.871E-02	5.115E-02	8.302E-02	0.000E+00	NOT IDENT.
SB-122	2.901E-01	1.552E+00	2.597E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.166E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.154E-02	2.818E-02	4.653E-02	0.000E+00	NOT IDENT.
I-124	-3.886E-01	5.561E-01	8.602E-01	0.000E+00	NOT IDENT.
SB-124	3.855E-03	6.587E-02	1.103E-01	0.000E+00	FAIL ABUN
SB-125	4.778E-02	9.206E-02	1.606E-01	0.000E+00	FAIL ABUN
TE-125M	1.314E+00	9.082E+00	1.574E+01	0.000E+00	NOT IDENT.
I-126	-1.524E-01	1.707E-01	2.744E-01	0.000E+00	NOT IDENT.
SB-126	1.378E-02	1.482E-01	2.225E-01	0.000E+00	FAIL ABUN
SB-127	-5.456E-01	1.065E+00	1.754E+00	0.000E+00	NOT IDENT.
XE-127	-6.192E-03	4.319E-02	7.638E-02	0.000E+00	FAIL ABUN
I-131	-2.209E-02	9.904E-02	1.669E-01	0.000E+00	NOT IDENT.
TE-132	-2.278E-01	5.086E-01	8.797E-01	0.000E+00	NOT IDENT.
BA-133	-1.897E-02	4.640E-02	6.714E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.225E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.746E-02	9.517E-02	0.000E+00	FAIL ABUN
CS-135	-8.035E-02	1.528E-01	2.602E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.607E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.555E-02	1.150E-01	1.998E-01	0.000E+00	FAIL ABUN
BA-137M	4.316E-02	3.718E-02	6.885E-02	0.000E+00	NOT IDENT.
CS-137	4.562E-02	3.930E-02	7.278E-02	0.000E+00	NOT IDENT.
CE-139	3.310E-02	2.872E-02	5.069E-02	0.000E+00	NOT IDENT.
BA-140	-4.333E-02	2.468E-01	4.026E-01	0.000E+00	NOT IDENT.
LA-140	3.378E-02	7.821E-02	1.388E-01	0.000E+00	FAIL ABUN
CE-141	2.914E-02	6.403E-02	1.088E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.928E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.818E-02	2.095E-01	3.537E-01	0.000E+00	NOT IDENT.
PM-144	-1.945E-02	3.351E-02	5.489E-02	0.000E+00	NOT IDENT.
PR-144	-1.317E+00	2.269E+00	3.717E+00	0.000E+00	NOT IDENT.
PM-146	-2.150E-02	4.107E-02	6.622E-02	0.000E+00	NOT IDENT.
ND-147	7.212E-02	5.186E-01	8.695E-01	0.000E+00	FAIL ABUN

PM-149	-6.997E+01	5.981E+01	9.617E+01	0.000E+00	NOT IDENT.
EU-152	-2.895E-02	9.365E-02	1.521E-01	0.000E+00	FAIL ABUN
GD-153	-5.452E-02	9.043E-02	1.353E-01	0.000E+00	NOT IDENT.
EU-154	-3.573E-02	1.320E-01	2.185E-01	0.000E+00	NOT IDENT.
EU-155	9.777E-03	1.092E-01	1.892E-01	0.000E+00	FAIL ABUN
TB-160	5.561E-02	1.325E-01	2.315E-01	0.000E+00	FAIL ABUN
HO-166M	-2.530E-02	6.120E-02	1.014E-01	0.000E+00	FAIL ABUN
TM-171	-2.673E+01	3.587E+01	6.118E+01	0.000E+00	NOT IDENT.
LU-176	-7.786E-03	2.236E-02	3.792E-02	0.000E+00	FAIL ABUN
LU-177	1.679E+00	1.363E+00	1.799E+00	0.000E+00	FAIL ABUN
LU-177M	-6.891E-02	1.891E-01	2.704E-01	0.000E+00	NOT IDENT.
HF-181	1.992E-02	3.875E-02	6.733E-02	0.000E+00	NOT IDENT.
W-181	-3.819E-01	4.822E-01	8.260E-01	0.000E+00	NOT IDENT.
TA-182	6.860E-02	2.118E-01	3.705E-01	0.000E+00	FAIL ABUN
RE-183	3.392E-02	1.070E-01	1.825E-01	0.000E+00	FAIL ABUN
RE-184	6.263E-02	2.176E-01	3.871E-01	0.000E+00	NOT IDENT.
OS-185	-1.091E-02	4.081E-02	6.899E-02	0.000E+00	NOT IDENT.
RE-188	2.252E-01	1.735E-01	3.077E-01	0.000E+00	NOT IDENT.
W-188	-2.290E+00	7.971E+00	1.193E+01	0.000E+00	NOT IDENT.
IR-192	-1.050E-02	3.208E-02	5.436E-02	0.000E+00	FAIL ABUN
AU-195	6.436E-02	2.276E-01	3.966E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.281E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-7.308E-01	5.297E+00	8.829E+00	0.000E+00	NOT IDENT.
TL-202	1.979E-02	6.587E-02	1.132E-01	0.000E+00	NOT IDENT.
HG-203	2.544E-02	4.272E-02	7.538E-02	0.000E+00	NOT IDENT.
BI-207	-8.850E-03	5.546E-02	9.010E-02	0.000E+00	FAIL ABUN
TL-207	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
PO-209	-7.020E+00	7.750E+00	1.182E+01	0.000E+00	NOT IDENT.
BI-210	4.094E+00	8.809E+00	1.610E+01	0.000E+00	NOT IDENT.
PB-210	4.094E+00	8.809E+00	1.610E+01	0.000E+00	NOT IDENT.
PO-210	4.094E+00	8.807E+00	1.610E+01	0.000E+00	NOT IDENT.
PB-211	-1.141E+00	1.231E+00	1.342E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.211E-01	6.807E-01	0.000E+00	FAIL ABUN
PO-215	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
RN-219	3.097E-01	3.794E-01	6.746E-01	0.000E+00	NOT IDENT.
RN-220	-1.556E+01	2.522E+01	3.946E+01	0.000E+00	NOT IDENT.
RA-223	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
AC-227	1.274E-01	3.640E-01	6.479E-01	0.000E+00	FAIL ABUN
TH-227	1.274E-01	3.642E-01	6.479E-01	0.000E+00	FAIL ABUN
TH-229	1.027E-01	4.993E-01	8.378E-01	0.000E+00	FAIL ABUN
PA-231	-9.014E-01	1.465E+00	2.459E+00	0.000E+00	FAIL ABUN
TH-231	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
U-231	-5.128E-02	9.537E-01	1.475E+00	0.000E+00	FAIL ABUN
PA-233	8.658E-02	6.028E-02	1.119E-01	0.000E+00	FAIL ABUN
PA-234	-8.805E-02	2.988E-01	4.832E-01	0.000E+00	FAIL ABUN
PA-234M	8.629E-01	7.364E+00	1.229E+01	0.000E+00	NOT IDENT.
TH-234	2.539E+00	1.897E+00	3.366E+00	0.000E+00	FAIL ABUN
U-235	1.791E-01	2.203E-01	3.770E-01	0.000E+00	FAIL ABUN
NP-236	7.273E-02	7.729E-02	1.355E-01	0.000E+00	NOT IDENT.
U-238	2.539E+00	1.897E+00	3.366E+00	0.000E+00	FAIL ABUN
NP-239	-1.044E-01	1.900E-01	3.180E-01	0.000E+00	FAIL ABUN
AM-241	2.727E-01	2.267E-01	4.166E-01	0.000E+00	NOT IDENT.
CM-243	1.633E-02	9.805E-02	1.705E-01	0.000E+00	FAIL ABUN
CM-247	-9.905E-03	3.423E-02	5.691E-02	0.000E+00	NOT IDENT.
CF-249	6.521E-03	3.829E-02	6.585E-02	0.000E+00	NOT IDENT.
CF-251	-2.943E-02	1.273E-01	2.104E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:36:27.60

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:35:24.
Sample ID         : G232591001           Sample quantity  : 1.25480E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.07  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1296	10.67*	1.107E+00	3.282E+01	3.282E+01	10.40
CD-109	88.03	194	3.72*	5.295E+00	2.950E+00	3.011E+00	38.67
SN-126	64.28	------	9.60	2.419E+00	------ Line Not Found		------
	86.94	194	8.90	5.295E+00	1.233E+00	1.233E+00	55.96
	87.57	194	37.00*	5.295E+00	2.966E-01	2.966E-01	38.67
TL-208	277.35	------	6.80	4.610E+00	------ Line Not Found		------
	510.84	120	21.60	2.927E+00	5.701E-01	5.701E-01	61.34
	583.14	348	84.20*	2.626E+00	4.707E-01	4.707E-01	18.55
	860.37	77	12.46	1.838E+00	1.006E+00	1.006E+00	64.48
BI-211	72.87	------	1.27	3.633E+00	------ Line Not Found		------
	351.07	699	12.94*	3.886E+00	4.159E+00	4.159E+00	13.58
PB-212	74.81	347	10.70	3.902E+00	2.485E+00	2.485E+00	28.30
	77.11	566	18.00	4.203E+00	2.237E+00	2.237E+00	19.13
	87.30	194	8.00	5.295E+00	1.372E+00	1.372E+00	39.94
	238.63	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.09	69	3.41	4.358E+00	1.395E+00	1.395E+00	71.15
PO-212	74.81	347	10.70	3.902E+00	2.485E+00	2.485E+00	28.30
	77.11	566	18.00	4.203E+00	2.237E+00	2.237E+00	19.13
	87.30	194	8.00	5.295E+00	1.372E+00	1.372E+00	39.94
	115.19	------	0.60	6.657E+00	------ Line Not Found		------
	238.63	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.09	69	3.41	4.358E+00	1.395E+00	1.395E+00	71.15
BI-214	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------ Line Not Found		------
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	------	4.11	1.163E+00	------ Line Not Found		------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
PB-214	74.81	347	6.21	3.902E+00	4.281E+00	4.281E+00	27.72
	77.11	566	10.50	4.203E+00	3.835E+00	3.835E+00	20.59
	87.30	194	4.67	5.295E+00	2.350E+00	2.350E+00	39.43

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	296	7.49	5.069E+00	2.331E+00	2.331E+00	27.34
	295.21	399	19.20	4.408E+00	1.409E+00	1.409E+00	16.62
	351.92	699	37.20*	3.886E+00	1.447E+00	1.447E+00	14.54
PO-214	74.81	347	6.21	3.902E+00	4.281E+00	4.281E+00	27.72
	77.11	566	10.50	4.203E+00	3.835E+00	3.835E+00	20.59
	87.30	194	4.67	5.295E+00	2.350E+00	2.350E+00	39.43
	241.98	296	7.49	5.069E+00	2.331E+00	2.331E+00	27.34
	295.21	399	19.20	4.408E+00	1.409E+00	1.409E+00	16.62
	351.92	699	37.20*	3.886E+00	1.447E+00	1.447E+00	14.54
PO-216	74.81	347	10.70	3.902E+00	2.485E+00	2.485E+00	28.30
	77.11	566	18.00	4.203E+00	2.237E+00	2.237E+00	19.13
	87.30	194	8.00	5.295E+00	1.372E+00	1.372E+00	39.94
	238.63	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.09	69	3.41	4.358E+00	1.395E+00	1.395E+00	71.15
PO-218	74.81	347	6.21	3.902E+00	4.281E+00	4.281E+00	27.72
	77.11	566	10.50	4.203E+00	3.835E+00	3.835E+00	20.59
	87.30	194	4.67	5.295E+00	2.350E+00	2.350E+00	39.43
	241.98	296	7.49	5.069E+00	2.331E+00	2.331E+00	27.34
	295.21	399	19.20	4.408E+00	1.409E+00	1.409E+00	16.62
	351.92	699	37.20*	3.886E+00	1.447E+00	1.447E+00	14.54
RA-224	240.98	296	3.95*	5.069E+00	4.420E+00	4.420E+00	26.76
RA-226	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------	Line Not Found	------
	934.06	------	3.21	1.697E+00	------	Line Not Found	------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------	Line Not Found	------
	1377.67	------	4.11	1.163E+00	------	Line Not Found	------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
AC-228	338.32	273	11.40	3.999E+00	1.794E+00	1.794E+00	45.67
	911.07	247	27.70*	1.739E+00	1.536E+00	1.536E+00	26.10
	969.11	186	16.60	1.636E+00	2.047E+00	2.047E+00	30.31
RA-228	338.32	273	11.40	3.999E+00	1.794E+00	1.794E+00	45.67
	911.07	247	27.70*	1.739E+00	1.536E+00	1.536E+00	26.10
	969.11	186	16.60	1.636E+00	2.047E+00	2.047E+00	30.31
TH-228	84.40	------	1.21	5.004E+00	------	Line Not Found	------
	238.60	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.10	69	3.41	4.358E+00	1.395E+00	1.395E+00	92.02
TH-230	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------	Line Not Found	------
	934.06	------	3.21	1.697E+00	------	Line Not Found	------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------	Line Not Found	------
	1377.67	------	4.11	1.163E+00	------	Line Not Found	------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
TH-232	338.32	273	11.40	3.999E+00	1.794E+00	1.794E+00	21.39
	911.07	247	27.70*	1.739E+00	1.536E+00	1.536E+00	26.10
	969.11	186	16.60	1.636E+00	2.047E+00	2.047E+00	30.31
U-234	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------	Line Not Found	------

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	------	4.11	1.163E+00	------ Line Not Found		------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
NP-237	86.50	194	12.60*	5.295E+00	8.708E-01	8.708E-01	43.83
	95.87	------	2.60	5.933E+00	------ Line Not Found		------
AM-243	74.67	347	66.00*	3.902E+00	4.028E-01	4.028E-01	26.72
	86.72	194	0.34	5.295E+00	3.266E+01	3.266E+01	38.67
	117.66	------	0.55	6.694E+00	------ Line Not Found		------
	142.18	------	0.13	6.676E+00	------ Line Not Found		------
ANH-511	511.00	120	100.00*	2.927E+00	1.231E-01	1.231E-01	60.77

Flag: "*" = Keyline

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

Total number of lines in spectrum 30
Number of unidentified lines 1
Number of lines tentatively identified by NID 29 96.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.282E+01	3.282E+01	0.341E+01	10.40	
CD-109	464.00D	1.02	2.950E+00	3.011E+00	1.164E+00	38.67	
SN-126	1.00E+05Y	1.00	2.966E-01	2.966E-01	1.147E-01	38.67	
TL-208	1.41E+10Y	1.00	4.707E-01	4.707E-01	0.873E-01	18.55	
BI-211	7.04E+08Y	1.00	4.159E+00	4.159E+00	0.565E+00	13.58	
PB-212	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
PO-212	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
BI-214	1600.00Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
PB-214	1600.00Y	1.00	1.447E+00	1.447E+00	0.210E+00	14.54	
PO-214	1600.00Y	1.00	1.447E+00	1.447E+00	0.210E+00	14.54	
PO-216	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
PO-218	1600.00Y	1.00	1.447E+00	1.447E+00	0.210E+00	14.54	
RA-224	1.41E+10Y	1.00	4.420E+00	4.420E+00	1.183E+00	26.76	
RA-226	1600.00Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
AC-228	1.41E+10Y	1.00	1.536E+00	1.536E+00	0.401E+00	26.10	
RA-228	1.41E+10Y	1.00	1.536E+00	1.536E+00	0.401E+00	26.10	
TH-228	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
TH-230	4.47E+09Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
TH-232	1.41E+10Y	1.00	1.536E+00	1.536E+00	0.401E+00	26.10	
U-234	4.47E+09Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
NP-237	2.14E+06Y	1.00	8.708E-01	8.708E-01	3.817E-01	43.83	
AM-243	7380.00Y	1.00	4.028E-01	4.028E-01	1.076E-01	26.72	
ANH-511	1.00E+09Y	1.00	1.231E-01	1.231E-01	0.748E-01	60.77	
		Total Activity :	6.749E+01	6.755E+01			

Grand Total Activity : 6.749E+01 6.755E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	90.06	133	399	1.10	180.24	171	20	1.85E-02	52.1	5.52E+00	T
3	93.08	212	414	1.26	186.27	171	20	2.95E-02	38.5	5.75E+00	T
0	185.91	185	367	1.33	371.77	367	10	2.57E-02	43.1	5.98E+00	T
0	209.26	82	327	1.09	418.42	414	9	1.14E-02	82.6	5.57E+00	T
0	328.31	46	177	1.41	656.35	653	9	6.43E-03	****	4.09E+00	T
0	375.01	12	201	2.89	749.70	738	13	1.70E-03	****	3.71E+00	T
0	409.92	30	132	1.12	819.47	815	9	4.16E-03	****	3.47E+00	T
0	463.40	95	92	1.09	926.36	922	10	1.33E-02	42.8	3.16E+00	T
0	727.88	104	82	1.32	1455.10	1447	15	1.44E-02	42.8	2.16E+00	T
0	795.21	64	42	1.48	1589.70	1584	10	8.86E-03	45.7	1.99E+00	T
2	964.75	66	44	2.12	1928.71	1924	20	9.22E-03	41.1	1.64E+00	T
0	1848.24	9	9	0.69	3696.16	3689	12	1.24E-03	****	9.57E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:36:32.15

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1 *
* Acquisition date  : 9-JUL-2009 08:35:24.  Detector SN#     :             *
* Detector ID       : GAM10                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:02.07          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232591001            Analyst initials: MXR1         *
* Batch Number      : 881931                Sample Quantity : 1.25480E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08.8MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.282E+01	3.415E+00	6.220E-01	5.357E-02	52.766
CD-109	3.011E+00	1.164E+00	1.367E+00	1.550E-01	2.202
SN-126	2.966E-01	1.147E-01	1.356E-01	1.535E-02	2.186
TL-208	4.707E-01	8.732E-02	5.182E-02	3.482E-03	9.084
BI-211	4.159E+00	5.646E-01	3.075E-01	2.242E-02	13.525
PB-212	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
PO-212	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
BI-214	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
PB-214	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-214	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-216	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
PO-218	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
RA-224	4.420E+00	1.183E+00	1.058E+00	6.493E-02	4.178
RA-226	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
AC-228	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
RA-228	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
TH-228	1.725E+00	1.747E-01	9.296E-02	7.051E-03	18.556
TH-230	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
U-234	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
NP-237	8.708E-01	3.817E-01	4.517E-01	1.062E-01	1.928
AM-243	4.028E-01	1.076E-01	1.044E-01	1.143E-02	3.858
ANH-511	1.231E-01	7.483E-02	4.241E-02	2.717E-03	2.904

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-9.064E-02		3.155E-01	4.982E-01	3.705E-02	-0.182
NA-22	-1.508E-02		4.842E-02	7.809E-02	6.049E-03	-0.193
NA-24	-8.263E-02		9.241E-02	Half-Life too short		
AL-26	9.558E-03		3.255E-02	5.565E-02	3.529E-03	0.172
TI-44	4.128E-01	+	7.896E-02	8.983E-02	9.829E-03	4.595
SC-46	-5.161E-02		4.183E-02	5.954E-02	5.892E-03	-0.867
V-48	-4.840E-02		6.817E-02	1.018E-01	9.410E-03	-0.476
CR-51	1.789E-01		3.426E-01	5.842E-01	4.220E-02	0.306
MN-52	-1.546E-02		1.985E-01	3.233E-01	2.732E-02	-0.048
MN-54	-2.184E-03		4.137E-02	6.767E-02	5.781E-03	-0.032
CO-56	-7.039E-04		3.946E-02	6.464E-02	5.708E-03	-0.011
CO-57	-2.309E-02		2.592E-02	4.025E-02	2.655E-03	-0.574
CO-58	-3.084E-02		4.298E-02	6.635E-02	5.308E-03	-0.465
FE-59	6.530E-03		9.298E-02	1.506E-01	1.257E-02	0.043
CO-60	-1.882E-02		4.100E-02	6.411E-02	5.571E-03	-0.294
ZN-65	-2.451E-02		1.090E-01	1.458E-01	1.062E-02	-0.168
GE-68	-7.842E-01		1.459E+00	2.225E+00	1.762E-01	-0.352
AS-73	1.012E-02		1.471E+00	2.463E+00	3.259E-01	0.004
AS-74	6.989E-02		8.065E-02	1.441E-01	8.229E-03	0.485
SE-75	3.492E-03		4.207E-02	7.073E-02	4.512E-03	0.049
BR-77	3.239E+00		7.361E+00	1.184E+01	7.513E-01	0.274
SR-82	1.128E-01		3.624E-01	6.143E-01	4.429E-02	0.184
RB-83	2.455E-02		6.909E-02	1.104E-01	7.006E-03	0.222
RB-84	5.841E-03		7.004E-02	1.155E-01	1.120E-02	0.051
KR-85	1.753E+01		7.447E+00	1.367E+01	8.732E-01	1.282
SR-85	8.869E-02		3.768E-02	6.917E-02	4.418E-03	1.282
RB-86	-8.853E-01		9.051E-01	1.314E+00	1.042E-01	-0.674
Y-88	3.231E-02		2.763E-02	5.675E-02	3.482E-03	0.569
ZR-88	-1.567E-03		2.967E-02	4.836E-02	3.286E-03	-0.032
Y-91	-7.518E+00		2.100E+01	3.407E+01	2.263E+00	-0.221
NB-94	2.083E-02		3.521E-02	6.100E-02	3.473E-03	0.342
NB-95	1.715E-02		4.398E-02	7.478E-02	5.218E-03	0.229
NB-95M	5.289E-02		1.337E-01	2.041E-01	1.583E-02	0.259
ZR-95	8.356E-02		6.697E-02	1.219E-01	9.573E-03	0.686
NB-97	-2.431E-02		1.458E-02	Half-Life too short		
ZR-97	3.355E-01		2.627E-01	Half-Life too short		
MO-99	5.319E+00		7.876E+00	1.376E+01	1.935E+00	0.386
TC-99M	-2.310E+08		6.114E+08	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101	-6.641E-03		3.420E-02	5.297E-02	3.043E-03	-0.125
RH-102	1.030E-02		2.952E-02	4.890E-02	3.225E-03	0.211
RU-103	-5.403E-03		3.855E-02	6.054E-02	7.854E-03	-0.089
RH-106	-2.228E-01		3.048E-01	4.800E-01	5.549E-02	-0.464
RU-106	-2.228E-01		3.040E-01	4.800E-01	2.607E-02	-0.464
AG-108M	-1.683E-02		3.401E-02	5.336E-02	3.826E-03	-0.315
AG-110M	-2.666E-02		3.625E-02	5.722E-02	3.100E-03	-0.466
IN-111	4.085E-01		8.444E-01	1.290E+00	7.967E-02	0.317
IN-113M	1.800E-02		4.244E-02	7.135E-02	5.088E-03	0.252
SN-113	1.800E-02		4.244E-02	7.135E-02	5.088E-03	0.252
IN-114M	-1.782E-02		1.992E-01	2.781E-01	1.577E-02	-0.064
CD-115	-3.477E+00		7.157E+00	1.099E+01	6.922E-01	-0.316
SN-117M	-3.871E-02		5.220E-02	8.051E-02	4.515E-03	-0.481
SB-122	2.901E-01		1.583E+00	2.563E+00	1.542E-01	0.113
I-123	-4.774E-01		5.948E-01	Half-Life too short		
TE-123M	-1.154E-02		2.876E-02	4.513E-02	2.563E-03	-0.256
I-124	-3.886E-01		5.675E-01	8.499E-01	4.795E-02	-0.457
SB-124	3.855E-03		6.722E-02	1.106E-01	8.406E-03	0.035
SB-125	4.778E-02		9.394E-02	1.579E-01	1.100E-02	0.303
TE-125M	1.314E+00		9.268E+00	1.518E+01	1.457E+00	0.087
I-126	-1.524E-01		1.742E-01	2.715E-01	1.362E-02	-0.561
SB-126	1.378E-02		1.513E-01	2.204E-01	1.331E-02	0.063
SB-127	-5.456E-01		1.086E+00	1.736E+00	1.514E-01	-0.314
XE-127	-6.192E-03		4.408E-02	7.432E-02	4.304E-03	-0.083
I-131	-2.209E-02		1.011E-01	1.637E-01	1.202E-02	-0.135
TE-132	-2.278E-01		5.190E-01	8.573E-01	1.219E-01	-0.266
BA-133	-1.897E-02		4.734E-02	6.584E-02	7.944E-03	-0.288
I-133	4.902E-04		1.135E-03	Half-Life too short		
CS-134	1.266E-01	+	5.863E-02	9.440E-02	7.278E-03	1.341
CS-135	-8.035E-02		1.559E-01	2.541E-01	2.054E-02	-0.316
I-135	3.716E+07		1.330E+08	Half-Life too short		
CS-136	6.555E-02		1.174E-01	1.990E-01	1.742E-02	0.329
BA-137M	4.316E-02		3.793E-02	6.811E-02	3.361E-03	0.634
CS-137	4.562E-02		4.010E-02	7.200E-02	3.573E-03	0.634
CE-139	3.310E-02		2.931E-02	4.918E-02	2.686E-03	0.673
BA-140	-4.333E-02		2.518E-01	3.971E-01	1.295E-01	-0.109
LA-140	3.378E-02		7.981E-02	1.391E-01	1.079E-02	0.243
CE-141	2.914E-02		6.534E-02	1.054E-01	6.448E-03	0.277
CE-143	1.942E-04		4.555E-05	Half-Life too short		
CE-144	-3.818E-02		2.138E-01	3.422E-01	4.916E-02	-0.112
PM-144	-1.945E-02		3.420E-02	5.435E-02	3.032E-03	-0.358
PR-144	-1.317E+00		2.316E+00	3.680E+00	2.052E-01	-0.358
PM-146	-2.150E-02		4.191E-02	6.516E-02	6.019E-03	-0.330
ND-147	7.212E-02		5.292E-01	8.575E-01	1.177E-01	0.084
PM-149	-6.997E+01		6.103E+01	9.403E+01	1.359E+01	-0.744
EU-152	-2.895E-02		9.556E-02	1.491E-01	1.098E-02	-0.194
GD-153	-5.452E-02		9.228E-02	1.303E-01	1.213E-02	-0.418
EU-154	-3.573E-02		1.347E-01	2.183E-01	2.325E-02	-0.164

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	9.777E-03		1.114E-01	1.824E-01	1.513E-02	0.054
TB-160	5.561E-02		1.352E-01	2.300E-01	2.218E-02	0.242
HO-166M	-2.530E-02		6.245E-02	1.005E-01	5.895E-03	-0.252
TM-171	-2.673E+01		3.660E+01	5.863E+01	6.680E+00	-0.456
LU-176	-7.786E-03		2.282E-02	3.711E-02	2.441E-03	-0.210
LU-177	1.679E+00	+	1.391E+00	1.751E+00	1.023E-01	0.959
LU-177M	-6.891E-02		1.930E-01	2.657E-01	1.801E-02	-0.259
HF-181	1.992E-02		3.954E-02	6.632E-02	4.353E-03	0.300
W-181	-3.819E-01		4.920E-01	7.914E-01	9.144E-02	-0.483
TA-182	6.860E-02		2.162E-01	3.698E-01	2.550E-02	0.186
RE-183	3.392E-02		1.092E-01	1.770E-01	9.790E-03	0.192
RE-184	6.263E-02		2.221E-01	3.778E-01	2.355E-02	0.166
OS-185	-1.091E-02		4.164E-02	6.823E-02	3.505E-03	-0.160
RE-188	2.252E-01		1.770E-01	2.983E-01	1.695E-02	0.755
W-188	-2.290E+00		8.133E+00	1.167E+01	7.576E-01	-0.196
IR-192	-1.050E-02		3.274E-02	5.323E-02	3.538E-03	-0.197
AU-195	6.436E-02		2.323E-01	3.821E-01	3.467E-02	0.168
TL-200	1.502E-04		1.164E-04	Half-Life too short		
TL-201	-7.308E-01		5.405E+00	8.568E+00	4.686E-01	-0.085
TL-202	1.979E-02		6.722E-02	1.113E-01	7.484E-03	0.178
HG-203	2.544E-02		4.360E-02	7.368E-02	4.972E-03	0.345
BI-207	-8.850E-03		5.659E-02	8.975E-02	7.306E-03	-0.099
TL-207	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
PO-209	-7.020E+00		7.909E+00	1.175E+01	1.185E+00	-0.598
BI-210	4.094E+00		8.988E+00	1.536E+01	1.506E+00	0.267
PB-210	4.094E+00		8.988E+00	1.536E+01	1.506E+00	0.267
PO-210	4.094E+00		8.987E+00	1.536E+01	1.379E+00	0.267
PB-211	-1.141E+00		1.256E+00	1.318E+00	8.232E-01	-0.865
BI-212	1.221E+00	+	5.317E-01	6.744E-01	5.395E-02	1.811
PO-215	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
RN-219	3.097E-01		3.872E-01	6.627E-01	9.315E-02	0.467
RN-220	-1.556E+01		2.573E+01	3.894E+01	2.388E+00	-0.400
RA-223	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
AC-227	1.274E-01		3.714E-01	6.324E-01	8.954E-02	0.201
TH-227	1.274E-01		3.716E-01	6.324E-01	1.079E-01	0.201
TH-229	1.027E-01		5.095E-01	8.146E-01	4.646E-02	0.126
PA-231	-9.014E-01		1.495E+00	2.404E+00	3.382E-01	-0.375
TH-231	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
U-231	-5.128E-02		9.732E-01	1.420E+00	1.361E-01	-0.036
PA-233	8.658E-02		6.151E-02	1.095E-01	7.578E-03	0.791
PA-234	-8.805E-02		3.049E-01	4.805E-01	9.258E-02	-0.183
PA-234M	8.629E-01		7.515E+00	1.223E+01	1.406E+00	0.071
TH-234	2.539E+00		1.935E+00	3.223E+00	6.353E-01	0.788
U-235	1.791E-01		2.248E-01	3.651E-01	5.969E-02	0.491
NP-236	7.273E-02		7.887E-02	1.314E-01	7.320E-03	0.554
U-238	2.539E+00		1.935E+00	3.223E+00	6.353E-01	0.788
NP-239	-1.044E-01		1.939E-01	3.071E-01	2.148E-02	-0.340
AM-241	2.727E-01		2.313E-01	3.987E-01	5.120E-02	0.684

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.633E-02		1.000E-01	1.644E-01	1.377E-02	0.099
CM-247	-9.905E-03		3.493E-02	5.591E-02	3.796E-03	-0.177
CF-249	6.521E-03		3.907E-02	6.466E-02	4.393E-03	0.101
CF-251	-2.943E-02		1.299E-01	2.043E-01	1.133E-02	-0.144

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232591001           *
* Acquisition date :  9-JUL-2009 08:35:24 Detector SN#     :                *
* Detector ID       : GAM10               Sensitivity      : 5.000         *
* Geometry          : CAN                 Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:02.07     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232591001           Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.2548E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.282E+01	3.346E+00	3.110E-01	1.707E+00
CD-109	3.011E+00	1.141E+00	7.112E-01	5.822E-01
SN-126	2.966E-01	1.124E-01	7.055E-02	5.733E-02
TL-208	4.707E-01	8.557E-02	2.625E-02	4.366E-02
BI-211	4.159E+00	5.533E-01	1.569E-01	2.823E-01
PB-212	1.725E+00	1.712E-01	4.769E-02	8.734E-02
PO-212	1.725E+00	1.712E-01	4.769E-02	8.734E-02
BI-214	1.282E+00	1.814E-01	5.840E-02	9.253E-02
PB-214	1.447E+00	2.062E-01	5.469E-02	1.052E-01
PO-214	1.447E+00	2.062E-01	5.469E-02	1.052E-01
PO-216	1.725E+00	1.712E-01	4.769E-02	8.734E-02
PO-218	1.447E+00	2.062E-01	5.469E-02	1.052E-01
RA-224	4.420E+00	1.159E+00	5.426E-01	5.914E-01
RA-226	1.282E+00	1.814E-01	5.840E-02	9.253E-02
AC-228	1.536E+00	3.928E-01	1.094E-01	2.004E-01
RA-228	1.536E+00	3.928E-01	1.094E-01	2.004E-01
TH-228	1.725E+00	1.712E-01	4.769E-02	8.734E-02
TH-230	1.282E+00	1.813E-01	5.840E-02	9.253E-02
TH-232	1.536E+00	3.928E-01	1.094E-01	2.004E-01
U-234	1.282E+00	1.813E-01	5.840E-02	9.253E-02
NP-237	8.708E-01	3.740E-01	2.350E-01	1.908E-01
AM-243	4.028E-01	1.055E-01	5.442E-02	5.381E-02
ANH-511	1.231E-01	7.333E-02	2.153E-02	3.741E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-9.064E-02	3.092E-01	2.531E-01	1.577E-01	NOT IDENT.
NA-22	-1.508E-02	4.745E-02	3.912E-02	2.421E-02	NOT IDENT.
NA-24	-8.263E+04	1.811E+05	0.000E+00	9.241E+04	SHORT HLIF
AL-26	9.558E-03	3.190E-02	2.774E-02	1.628E-02	NOT IDENT.

TI-44	4.128E-01	7.738E-02	4.679E-02	3.948E-02	FAIL ABUN
SC-46	-5.161E-02	4.099E-02	2.998E-02	2.092E-02	FAIL ABUN
V-48	-4.840E-02	6.681E-02	5.117E-02	3.409E-02	NOT IDENT.
CR-51	1.789E-01	3.358E-01	2.985E-01	1.713E-01	NOT IDENT.
MN-52	-1.546E-02	1.945E-01	1.617E-01	9.924E-02	NOT IDENT.
MN-54	-2.184E-03	4.054E-02	3.411E-02	2.068E-02	NOT IDENT.
CO-56	-7.039E-04	3.867E-02	3.257E-02	1.973E-02	NOT IDENT.
CO-57	-2.309E-02	2.541E-02	2.084E-02	1.296E-02	NOT IDENT.
CO-58	-3.084E-02	4.212E-02	3.345E-02	2.149E-02	NOT IDENT.
FE-59	6.530E-03	9.113E-02	7.561E-02	4.649E-02	NOT IDENT.
CO-60	-1.882E-02	4.018E-02	3.209E-02	2.050E-02	NOT IDENT.
ZN-65	-2.451E-02	1.069E-01	7.316E-02	5.452E-02	NOT IDENT.
GE-68	-7.842E-01	1.430E+00	1.117E+00	7.296E-01	NOT IDENT.
AS-73	1.012E-02	1.442E+00	1.289E+00	7.356E-01	NOT IDENT.
AS-74	6.989E-02	7.903E-02	7.296E-02	4.032E-02	NOT IDENT.
SE-75	3.492E-03	4.123E-02	3.623E-02	2.104E-02	NOT IDENT.
BR-77	3.239E+00	7.214E+00	6.009E+00	3.681E+00	FAIL ABUN
SR-82	1.128E-01	3.552E-01	3.099E-01	1.812E-01	NOT IDENT.
RB-83	2.455E-02	6.771E-02	5.602E-02	3.455E-02	NOT IDENT.
RB-84	5.841E-03	6.864E-02	5.817E-02	3.502E-02	NOT IDENT.
KR-85	1.753E+01	7.298E+00	6.938E+00	3.723E+00	NOT IDENT.
SR-85	8.869E-02	3.692E-02	3.510E-02	1.884E-02	NOT IDENT.
RB-86	-8.853E-01	8.870E-01	6.597E-01	4.525E-01	NOT IDENT.
Y-88	3.231E-02	2.708E-02	2.828E-02	1.382E-02	NOT IDENT.
ZR-88	-1.567E-03	2.907E-02	2.464E-02	1.483E-02	NOT IDENT.
Y-91	-7.518E+00	2.058E+01	1.708E+01	1.050E+01	NOT IDENT.
NB-94	2.083E-02	3.451E-02	3.082E-02	1.761E-02	NOT IDENT.
NB-95	1.715E-02	4.310E-02	3.774E-02	2.199E-02	NOT IDENT.
NB-95M	5.289E-02	1.310E-01	1.047E-01	6.684E-02	NOT IDENT.
ZR-95	8.356E-02	6.564E-02	6.151E-02	3.349E-02	NOT IDENT.
NB-97	-2.431E+04	2.858E+04	0.000E+00	1.458E+04	SHORT HLIF
ZR-97	3.355E+05	5.150E+05	0.000E+00	2.627E+05	SHORT HLIF
MO-99	5.319E+00	7.719E+00	6.950E+00	3.938E+00	NOT IDENT.
TC-99M	-2.310E+14	1.198E+15	0.000E+00	6.114E+14	SHORT HLIF
RH-101	-6.641E-03	3.352E-02	2.725E-02	1.710E-02	NOT IDENT.
RH-102	1.030E-02	2.893E-02	2.484E-02	1.476E-02	NOT IDENT.
RU-103	-5.403E-03	3.778E-02	3.074E-02	1.928E-02	FAIL ABUN
RH-106	-2.228E-01	2.988E-01	2.430E-01	1.524E-01	FAIL ABUN
RU-106	-2.228E-01	2.979E-01	2.430E-01	1.520E-01	FAIL ABUN
AG-108M	-1.683E-02	3.333E-02	2.714E-02	1.701E-02	NOT IDENT.
AG-110M	-2.666E-02	3.552E-02	2.894E-02	1.812E-02	NOT IDENT.
IN-111	4.085E-01	8.275E-01	6.617E-01	4.222E-01	NOT IDENT.
IN-113M	1.800E-02	4.159E-02	3.635E-02	2.122E-02	NOT IDENT.
SN-113	1.800E-02	4.159E-02	3.635E-02	2.122E-02	NOT IDENT.
IN-114M	-1.782E-02	1.952E-01	1.431E-01	9.960E-02	NOT IDENT.
CD-115	-3.477E+00	7.014E+00	5.578E+00	3.578E+00	NOT IDENT.
SN-117M	-3.871E-02	5.115E-02	4.153E-02	2.610E-02	NOT IDENT.
SB-122	2.901E-01	1.552E+00	1.299E+00	7.916E-01	NOT IDENT.
I-123	-4.774E+05	1.166E+06	0.000E+00	5.948E+05	SHORT HLIF
TE-123M	-1.154E-02	2.818E-02	2.328E-02	1.438E-02	NOT IDENT.
I-124	-3.886E-01	5.561E-01	4.303E-01	2.837E-01	NOT IDENT.
SB-124	3.855E-03	6.587E-02	5.519E-02	3.361E-02	FAIL ABUN
SB-125	4.778E-02	9.206E-02	8.036E-02	4.697E-02	FAIL ABUN
TE-125M	1.314E+00	9.082E+00	7.873E+00	4.634E+00	NOT IDENT.
I-126	-1.524E-01	1.707E-01	1.373E-01	8.709E-02	NOT IDENT.
SB-126	1.378E-02	1.482E-01	1.113E-01	7.563E-02	FAIL ABUN
SB-127	-5.456E-01	1.065E+00	8.774E-01	5.432E-01	NOT IDENT.
XE-127	-6.192E-03	4.319E-02	3.821E-02	2.204E-02	FAIL ABUN
I-131	-2.209E-02	9.904E-02	8.350E-02	5.053E-02	NOT IDENT.
TE-132	-2.278E-01	5.086E-01	4.401E-01	2.595E-01	NOT IDENT.
BA-133	-1.897E-02	4.640E-02	3.359E-02	2.367E-02	NOT IDENT.
I-133	4.902E+02	2.225E+03	0.000E+00	1.135E+03	SHORT HLIF
CS-134	1.266E-01	5.746E-02	4.761E-02	2.932E-02	FAIL ABUN
CS-135	-8.035E-02	1.528E-01	1.302E-01	7.795E-02	NOT IDENT.
I-135	3.716E+13	2.607E+14	0.000E+00	1.330E+14	SHORT HLIF
CS-136	6.555E-02	1.150E-01	9.996E-02	5.869E-02	FAIL ABUN
BA-137M	4.316E-02	3.718E-02	3.444E-02	1.897E-02	NOT IDENT.
CS-137	4.562E-02	3.930E-02	3.641E-02	2.005E-02	NOT IDENT.
CE-139	3.310E-02	2.872E-02	2.536E-02	1.465E-02	NOT IDENT.
BA-140	-4.333E-02	2.468E-01	2.014E-01	1.259E-01	NOT IDENT.
LA-140	3.378E-02	7.821E-02	6.945E-02	3.990E-02	FAIL ABUN
CE-141	2.914E-02	6.403E-02	5.443E-02	3.267E-02	NOT IDENT.
CE-143	1.942E+02	8.928E+01	0.000E+00	4.555E+01	SHORT HLIF
CE-144	-3.818E-02	2.095E-01	1.770E-01	1.069E-01	NOT IDENT.
PM-144	-1.945E-02	3.351E-02	2.746E-02	1.710E-02	NOT IDENT.
PR-144	-1.317E+00	2.269E+00	1.860E+00	1.158E+00	NOT IDENT.
PM-146	-2.150E-02	4.107E-02	3.313E-02	2.096E-02	NOT IDENT.
ND-147	7.212E-02	5.186E-01	4.350E-01	2.646E-01	FAIL ABUN

PM-149	-6.997E+01	5.981E+01	4.812E+01	3.052E+01	NOT IDENT.
EU-152	-2.895E-02	9.365E-02	7.609E-02	4.778E-02	FAIL ABUN
GD-153	-5.452E-02	9.043E-02	6.767E-02	4.614E-02	NOT IDENT.
EU-154	-3.573E-02	1.320E-01	1.093E-01	6.736E-02	NOT IDENT.
EU-155	9.777E-03	1.092E-01	9.465E-02	5.572E-02	FAIL ABUN
TB-160	5.561E-02	1.325E-01	1.158E-01	6.760E-02	FAIL ABUN
HO-166M	-2.530E-02	6.120E-02	5.075E-02	3.122E-02	FAIL ABUN
TM-171	-2.673E+01	3.587E+01	3.061E+01	1.830E+01	NOT IDENT.
LU-176	-7.786E-03	2.236E-02	1.897E-02	1.141E-02	FAIL ABUN
LU-177	1.679E+00	1.363E+00	8.999E-01	6.953E-01	FAIL ABUN
LU-177M	-6.891E-02	1.891E-01	1.353E-01	9.648E-02	NOT IDENT.
HF-181	1.992E-02	3.875E-02	3.369E-02	1.977E-02	NOT IDENT.
W-181	-3.819E-01	4.822E-01	4.133E-01	2.460E-01	NOT IDENT.
TA-182	6.860E-02	2.118E-01	1.854E-01	1.081E-01	FAIL ABUN
RE-183	3.392E-02	1.070E-01	9.129E-02	5.460E-02	FAIL ABUN
RE-184	6.263E-02	2.176E-01	1.936E-01	1.110E-01	NOT IDENT.
OS-185	-1.091E-02	4.081E-02	3.452E-02	2.082E-02	NOT IDENT.
RE-188	2.252E-01	1.735E-01	1.539E-01	8.850E-02	NOT IDENT.
W-188	-2.290E+00	7.971E+00	5.970E+00	4.067E+00	NOT IDENT.
IR-192	-1.050E-02	3.208E-02	2.720E-02	1.637E-02	FAIL ABUN
AU-195	6.436E-02	2.276E-01	1.984E-01	1.161E-01	FAIL ABUN
TL-200	1.502E+02	2.281E+02	0.000E+00	1.164E+02	SHORT HLIF
TL-201	-7.308E-01	5.297E+00	4.417E+00	2.703E+00	NOT IDENT.
TL-202	1.979E-02	6.587E-02	5.662E-02	3.361E-02	NOT IDENT.
HG-203	2.544E-02	4.272E-02	3.771E-02	2.180E-02	NOT IDENT.
BI-207	-8.850E-03	5.546E-02	4.508E-02	2.829E-02	FAIL ABUN
TL-207	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
PO-209	-7.020E+00	7.750E+00	5.914E+00	3.954E+00	NOT IDENT.
BI-210	4.094E+00	8.809E+00	8.056E+00	4.494E+00	NOT IDENT.
PB-210	4.094E+00	8.809E+00	8.056E+00	4.494E+00	NOT IDENT.
PO-210	4.094E+00	8.807E+00	8.056E+00	4.493E+00	NOT IDENT.
PB-211	-1.141E+00	1.231E+00	6.713E-01	6.282E-01	NOT IDENT.
BI-212	1.221E+00	5.211E-01	3.406E-01	2.658E-01	FAIL ABUN
PO-215	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
RN-219	3.097E-01	3.794E-01	3.375E-01	1.936E-01	NOT IDENT.
RN-220	-1.556E+01	2.522E+01	1.974E+01	1.286E+01	NOT IDENT.
RA-223	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
AC-227	1.274E-01	3.640E-01	3.241E-01	1.857E-01	FAIL ABUN
TH-227	1.274E-01	3.642E-01	3.241E-01	1.858E-01	FAIL ABUN
TH-229	1.027E-01	4.993E-01	4.191E-01	2.547E-01	FAIL ABUN
PA-231	-9.014E-01	1.465E+00	1.230E+00	7.474E-01	FAIL ABUN
TH-231	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
U-231	-5.128E-02	9.537E-01	7.378E-01	4.866E-01	FAIL ABUN
PA-233	8.658E-02	6.028E-02	5.597E-02	3.076E-02	FAIL ABUN
PA-234	-8.805E-02	2.988E-01	2.417E-01	1.524E-01	FAIL ABUN
PA-234M	8.629E-01	7.364E+00	6.148E+00	3.757E+00	NOT IDENT.
TH-234	2.539E+00	1.897E+00	1.684E+00	9.677E-01	FAIL ABUN
U-235	1.791E-01	2.203E-01	1.886E-01	1.124E-01	FAIL ABUN
NP-236	7.273E-02	7.729E-02	6.777E-02	3.943E-02	NOT IDENT.
U-238	2.539E+00	1.897E+00	1.684E+00	9.677E-01	FAIL ABUN
NP-239	-1.044E-01	1.900E-01	1.591E-01	9.695E-02	FAIL ABUN
AM-241	2.727E-01	2.267E-01	2.084E-01	1.157E-01	NOT IDENT.
CM-243	1.633E-02	9.805E-02	8.531E-02	5.002E-02	FAIL ABUN
CM-247	-9.905E-03	3.423E-02	2.847E-02	1.746E-02	NOT IDENT.
CF-249	6.521E-03	3.829E-02	3.294E-02	1.954E-02	NOT IDENT.
CF-251	-2.943E-02	1.273E-01	1.053E-01	6.493E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	274.0410
46.50	274.0410
46.50	274.0410
48.70	269.2525
49.72	290.2568
51.35	268.3630
52.39	260.7319
52.97	252.7546
53.15	264.0262
53.44	259.5680
54.07	269.2985
56.28	285.7653
56.28	285.7676
57.37	0.0000
57.53	311.0710
57.53	311.0722
57.60	315.8229
57.98	299.1772
57.98	299.1772
59.32	268.0433
59.32	268.0433
59.40	268.0939
59.54	268.1827
59.72	281.5228
60.01	293.0587
61.10	387.6334
61.14	387.6688
61.30	381.1750
63.00	323.6470
63.29	311.4773
63.29	311.4773
63.58	311.6819
64.28	328.4034
65.12	383.5391
65.20	383.6069
65.20	383.6069
66.05	410.2080
66.72	357.0601
66.83	352.3467
66.91	352.4083
67.20	342.0630
67.20	342.0630
67.75	349.2062
67.85	349.2819
68.90	319.4063
68.90	319.4063
69.30	314.1792
69.67	320.2251
70.82	341.3391
70.82	341.3391
70.83	341.3463
72.80	352.9653
72.87	353.0170
72.87	353.0170
74.67	367.9896
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.97	368.2139
75.28	368.4459
75.70	368.7585
77.11	369.8035
77.11	369.8035
77.11	369.8035

77.11	369.8035
77.11	369.8035
77.11	369.8035
78.38	370.7374
79.62	371.1476
79.80	366.8403
79.80	366.8403
80.11	367.0635
80.18	367.1127
80.30	392.3687
80.30	392.3687
80.57	392.5749
81.00	424.0381
81.07	424.0948
81.07	424.0948
81.07	424.0948
81.07	424.0948
82.60	378.7417
83.37	371.3521
83.78	393.5045
83.78	393.5045
83.78	393.5045
83.78	393.5045
84.21	384.8722
84.40	385.0100
84.90	380.8911
85.43	406.6864
86.29	453.7603
86.50	453.9383
86.54	453.9706
86.59	454.0122
86.72	365.6966
86.79	365.7412
86.94	365.8436
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.57	366.2681
87.88	366.4766
88.03	366.5771
88.36	366.7986
88.47	366.8712
89.95	367.8578
91.11	368.6248
92.29	369.3992
92.38	369.4588
92.38	369.4588
93.35	370.0917
94.00	285.4782
94.67	293.4109
94.67	293.4138
94.90	307.2196
94.90	307.2196
94.90	307.2196
94.90	307.2196
95.87	295.5484
95.87	295.5484
96.73	297.5137
97.43	308.5620
98.44	279.5104
98.44	279.5104
98.88	274.6151
99.55	273.9037
99.55	273.9037
99.86	285.2950
100.00	285.3631
100.10	285.4128
103.18	299.2131
103.76	288.1775
105.00	269.1669
105.31	294.0672
108.00	279.7984
109.28	284.5220
111.00	305.0757
111.00	305.0757

111.76	303.3544
112.95	280.9389
115.19	280.8610
116.30	300.2310
117.00	294.2444
117.00	294.2444
117.66	280.8628
121.11	281.2545
121.62	292.0483
121.78	309.0515
122.06	301.7659
122.32	282.8143
122.32	282.8143
122.32	282.8143
122.32	282.8143
123.07	276.7643
127.23	323.2375
129.76	300.8464
131.20	311.1104
133.02	293.6144
133.54	308.8934
135.34	308.5794
136.00	304.5390
136.25	302.4817
136.48	298.2560
140.51	314.0035
140.51	0.0000
142.18	321.2368
142.65	330.1518
143.76	285.8962
144.24	289.3504
144.24	289.3504
144.24	289.3504
144.24	289.3504
145.22	301.7487
145.44	295.2740
147.16	320.0463
152.43	306.7604
152.70	289.2037
153.22	270.6155
154.21	252.1489
154.21	252.1489
154.21	252.1489
154.21	252.1489
155.03	267.9075
156.02	319.2246
158.56	287.9815
159.00	0.0000
159.00	282.5745
160.31	237.3412
161.27	271.0860
162.32	260.2620
162.64	261.4790
163.35	274.0050
163.89	293.2068
165.85	228.8339
167.43	275.3409
171.28	251.7506
171.86	227.0676
172.10	214.7009
176.55	266.9114
176.60	265.7899
181.06	260.2828
184.41	247.5044
185.71	270.8080
186.00	270.8944
190.27	235.2545
192.34	262.3625
193.63	237.2627
197.04	255.5455
198.01	238.3638
198.60	261.7813
200.40	256.4451
201.83	260.0381
202.84	249.7925
205.31	255.8753
208.36	253.8501
208.81	246.9119

209.75	235.8488
209.75	235.8488
210.97	241.7943
215.65	242.3908
216.55	233.7207
218.09	242.0840
222.10	246.6064
223.80	238.0610
226.40	215.3284
227.00	210.9625
227.08	209.1831
227.20	219.0847
228.16	239.0554
228.18	239.0595
228.18	239.0595
231.56	0.0000
235.69	237.4917
236.00	237.5618
236.00	237.5618
238.60	232.3242
238.63	232.3301
238.63	232.3301
238.63	232.3301
239.00	232.4082
240.98	232.8301
241.98	233.0430
241.98	233.0430
241.98	233.0430
244.69	197.1145
245.39	189.9330
247.94	183.0460
248.90	197.8594
249.79	197.1008
252.40	192.0436
252.85	178.3316
252.85	178.3316
254.15	0.0000
256.20	181.6214
256.20	181.6214
260.50	174.8977
260.90	177.7354
262.80	188.2248
264.65	175.5235
268.24	210.5232
268.79	197.5757
269.46	173.4413
269.46	173.4413
269.46	173.4413
269.46	173.4413
271.23	181.1705
273.65	259.2057
276.40	181.0141
277.35	193.3576
277.60	189.6432
277.60	189.6432
278.00	187.8265
278.60	192.6192
279.20	204.9338
279.53	194.6468
280.46	233.3779
281.68	199.6978
283.67	179.2644
284.30	174.6372
285.00	194.5709
285.90	189.0411
286.10	185.2902
286.10	185.2902
287.40	157.0916
288.45	0.0000
290.67	180.6557
290.80	198.8923
291.72	203.5975
293.26	0.0000
293.70	161.3084
295.21	159.9763
295.21	159.9763
295.21	159.9763
295.96	160.0712

296.50	160.1378
297.23	160.2301
298.57	160.3993
299.80	160.5531
299.80	160.5531
300.09	160.5890
300.09	160.5890
300.09	160.5890
300.10	160.5890
300.12	160.5916
301.29	150.0218
302.84	151.7363
303.76	154.9102
303.91	154.9300
304.40	124.2962
304.40	124.2962
304.84	128.9449
306.84	142.2097
308.46	149.1203
311.98	118.6514
316.51	147.1271
318.01	148.2608
319.02	140.6148
319.41	137.7445
320.08	130.0497
323.87	154.1606
323.87	154.1606
323.87	154.1606
323.87	154.1606
325.23	146.5216
328.77	160.1863
333.44	141.1260
334.20	138.5902
334.20	138.5902
334.30	138.5988
338.28	144.5663
338.28	144.5663
338.28	144.5663
338.28	144.5663
338.32	144.5708
338.32	144.5708
338.32	144.5708
340.50	130.8081
340.57	130.8142
344.27	135.4457
345.85	131.3025
350.59	0.0000
351.07	124.0406
351.92	124.1150
351.92	124.1150
351.92	124.1150
355.39	0.0000
356.01	133.8237
364.48	126.1846
366.43	117.1262
367.43	120.4156
367.94	0.0000
369.80	144.7273
374.96	129.0879
383.85	127.8111
387.95	117.9807
388.63	122.1021
391.69	108.0687
391.69	108.0687
392.90	118.3541
398.62	121.8562
400.65	92.2783
401.10	95.3812
401.81	95.4238
402.60	113.9488
404.84	131.5840
410.95	97.4119
411.60	100.7542
413.65	115.7649
414.70	99.2915
415.30	100.7077
415.76	114.7325
417.63	0.0000

418.52	121.2936
423.70	129.9934
427.08	109.4156
427.89	107.3849
432.53	125.4547
433.93	123.4646
439.47	103.9231
439.56	111.2777
439.89	110.2487
443.98	89.4630
444.90	77.9261
445.03	77.9328
445.03	77.9328
445.03	77.9328
445.03	77.9328
453.90	102.6777
463.38	108.5524
468.07	104.1438
473.00	102.7178
475.06	95.3366
475.35	87.8520
476.78	90.0652
477.59	100.8317
477.96	92.2700
482.03	79.5724
484.57	97.9872
487.03	92.7279
490.36	0.0000
492.35	87.5877
497.08	81.3046
507.63	0.0000
510.53	0.0000
510.84	79.7140
511.00	79.7207
511.85	79.7552
511.85	79.7552
513.99	79.8443
513.99	79.8443
520.41	79.0137
520.65	79.0225
527.90	88.1299
528.96	0.0000
529.64	93.7210
529.87	0.0000
531.02	87.1657
537.32	94.0842
543.00	86.5812
546.56	0.0000
549.76	87.9866
552.65	98.1487
555.20	77.0544
563.23	100.9012
563.90	93.0837
568.70	87.6786
569.32	106.8199
569.50	106.8286
569.67	106.8373
573.80	95.5553
574.00	95.5630
574.64	86.5758
578.91	84.3418
579.30	0.0000
583.14	67.9102
585.48	67.9852
591.81	74.5507
592.07	74.5607
593.00	86.4185
595.88	65.5840
600.56	93.1099
602.52	0.0000
602.71	103.9385
602.71	103.9385
603.60	71.6073
604.41	85.3512
604.70	85.3626
609.31	94.4024
609.31	94.4024
609.31	94.4024

609.31	94.4024
610.33	94.4452
612.46	96.3713
614.37	91.8628
618.01	84.6530
621.84	84.7990
621.84	84.7990
631.29	73.1232
633.02	71.3265
633.10	71.3303
634.78	63.9665
635.90	72.3461
636.97	90.9395
645.85	78.2517
646.12	79.1915
656.30	82.3496
657.75	97.3832
657.90	0.0000
661.65	76.9110
661.65	76.9110
664.57	0.0000
666.33	98.6785
666.33	98.6785
675.00	69.8014
677.61	70.8215
685.20	81.4669
692.80	79.8226
695.00	80.8475
696.49	86.6055
696.49	86.6055
697.00	87.5774
697.49	84.7369
698.33	85.7197
698.50	86.6788
699.00	92.4129
702.63	80.1466
706.10	94.5914
706.58	0.0000
706.67	91.7461
709.31	71.7535
711.68	84.2703
713.82	88.1771
717.42	70.0682
720.50	70.4750
721.93	0.0000
722.20	72.1252
722.78	81.7606
722.78	81.7606
722.89	81.7648
722.95	81.7668
723.30	84.9863
724.18	75.3901
727.18	65.5230
733.00	43.4608
735.90	78.4279
739.58	51.3205
742.81	69.8063
744.21	64.9946
747.13	45.6448
751.79	73.9423
752.31	62.2797
753.82	56.4735
755.35	50.6606
756.15	47.7535
756.87	46.7918
763.93	106.5438
765.79	80.2083
766.41	66.5308
766.84	62.6266
768.36	66.5789
768.36	66.5789
768.36	66.5789
768.36	66.5789
776.49	60.8920
778.00	84.5114
778.57	86.4961
778.89	84.5387
783.80	48.2571

785.46	69.9669
792.07	49.3933
795.84	61.0042
796.30	57.7153
801.93	71.6068
805.60	57.5823
810.29	85.5276
810.76	82.5583
815.85	66.7661
817.79	72.7968
818.51	76.8064
819.60	74.8407
826.30	84.0226
828.27	0.0000
831.60	82.1782
831.96	79.1813
834.83	81.2690
836.80	0.0000
846.75	59.4465
848.13	60.4834
856.28	0.0000
856.80	53.9258
860.37	52.6437
867.32	60.8892
867.82	60.8994
871.10	49.5367
873.19	49.8266
874.81	63.0808
875.33	0.0000
876.40	60.0616
879.36	46.8749
880.27	50.9668
880.51	50.9705
881.50	55.0666
883.24	56.1199
884.67	50.0216
889.25	73.6154
896.60	68.6734
898.02	74.8589
899.00	69.7548
903.28	54.7878
911.07	56.6462
911.07	56.6462
911.07	56.6462
919.63	53.1186
920.93	52.6983
925.00	53.8040
925.24	52.7730
926.50	53.8294
934.06	46.6985
934.06	46.6985
934.06	46.6985
934.06	46.6985
935.52	42.5675
937.48	55.0613
944.10	45.8101
946.00	54.1722
949.00	67.7803
962.29	41.8877
964.01	47.1500
966.15	48.2304
968.20	48.2618
969.11	48.2753
969.11	48.2753
969.11	48.2753
977.42	48.4022
980.50	55.8208
983.50	55.8739
989.30	59.1432
996.32	69.8559
1001.03	60.4178
1001.68	50.8875
1004.76	61.5471
1021.30	0.0000
1024.50	0.0000
1034.80	50.3299
1037.82	65.3814
1038.57	65.3963

1038.76	0.0000
1045.16	70.8952
1046.59	63.4048
1048.07	55.9051
1050.47	54.8698
1050.47	54.8698
1063.62	55.0815
1076.63	75.8892
1077.35	68.3156
1085.78	60.8727
1099.22	49.1045
1112.02	61.0164
1112.84	51.1191
1115.52	58.4661
1120.29	57.0807
1120.29	57.0807
1120.29	57.0807
1120.29	57.0807
1120.51	57.0857
1121.28	57.0984
1124.00	0.0000
1129.67	59.4330
1131.51	0.0000
1147.95	0.0000
1167.94	68.5891
1173.22	67.7603
1175.09	59.4349
1177.93	61.3406
1189.05	74.5736
1204.90	75.8254
1205.75	0.0000
1213.00	74.1107
1221.42	66.7532
1230.97	74.4579
1235.34	83.9807
1236.41	0.0000
1238.11	84.0387
1238.11	84.0387
1238.11	84.0387
1238.11	84.0387
1238.25	84.0423
1246.25	62.4524
1260.41	0.0000
1271.85	54.2887
1274.45	53.3727
1274.54	54.3258
1291.56	38.2878
1298.22	0.0000
1312.09	39.4452
1325.50	22.2008
1325.50	22.2008
1332.49	37.7083
1333.61	31.9164
1360.21	28.2283
1362.66	0.0000
1365.15	20.4651
1368.21	30.2331
1368.53	0.0000
1376.25	26.3815
1377.67	30.2999
1377.67	30.2999
1377.67	30.2999
1377.67	30.2999
1384.27	27.4110
1394.10	22.5686
1395.20	22.5742
1407.95	23.6260
1434.06	22.7782
1436.60	29.7278
1457.56	0.0000
1460.81	27.8997
1489.15	20.0545
1509.49	21.1521
1596.49	16.4199
1620.62	18.5654
1678.03	0.0000
1691.02	10.4626
1691.02	10.4626

1706.46	0.0000
1750.46	0.0000
1764.49	7.4301
1764.49	7.4301
1764.49	7.4301
1764.49	7.4301
1770.23	1.8216
1771.40	5.4662
1791.20	0.0000
1808.65	11.7748
1836.01	3.2278

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232591001

Total Uranium Activity	7.6370E+00	ug/g
Total Uranium Counting Unc.	5.6433E+00	ug/g
Total Uranium Tpu	2.8793E-06	ug/g
Total Uranium Mda	5.0100E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID   : G232591001      *
*   ANALYST       : MXR1                      DETECTOR    : GAM10           *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:35:24.45    SAMPLE ALQT:  125.480 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.669E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.637E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.944E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.424E+00
```

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:24:24.14

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:22:22.
Sample ID         : G1201873069          Sample quantity  : 1.32820E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.24  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
No peaks were found
```

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:24:26

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 2-JUL-2009 00:00:00
Sample ID : G1201873069
Sample type : SOLID
Detector name : GAMMA21
Elapsed live time: 0 02:00:00.00
Peak Width (FWHM): 3.00
Energy tolerance : 1.50 keV
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 75.00

Acquisition date : 9-JUL-2009 08:22:22
Sample quantity : 132.82 GRAM
Sample geometry :
Detector geometry: CAN
Elapsed real time: 0 02:00:08.24 0.1%
Confidence level : 5.00 %
Half life ratio : 8.00
Systematic Error : 0.00 %
Efficiencies at : Peak Energy
WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.057E-01	1.934E-01	2.700E-01	1.900E-02	-0.391
NA-22		1274.54	*	5.508E-03	2.973E-02	5.040E-02	2.981E-03	0.109
NA-24		1368.53	*	-7.892E-05	2.973E-02	Half-Life too short		
AL-26		1129.67		4.667E-01	1.039E+00	1.871E+00	1.126E-01	0.249
		1808.65	*	1.059E-03	3.994E-02	6.649E-02	3.702E-03	0.016
K-40		1460.81	*	1.161E-01	3.351E-01	5.820E-01	3.704E-02	0.199
TI-44		67.85		-7.748E-04	7.801E-03	1.258E-02	9.152E-04	-0.062
		78.38	*	-1.007E-02	9.084E-03	1.264E-02	9.775E-04	-0.797
SC-46		889.25	*	-2.137E-02	2.307E-02	2.953E-02	2.120E-03	-0.724
		1120.51		1.462E-02	2.791E-02	5.092E-02	3.099E-03	0.287
V-48		944.10		-8.409E-02	3.584E-01	5.559E-01	3.907E-02	-0.151
		983.50	*	-4.730E-02	3.639E-02	4.128E-02	2.840E-03	-1.146
		1312.09		3.372E-02	4.415E-02	8.348E-02	4.989E-03	0.404
CR-51		320.08	*	1.004E-01	1.776E-01	3.112E-01	2.024E-02	0.323
MN-52		744.21		4.783E-02	5.771E-02	1.097E-01	8.023E-03	0.436
		848.13		-6.448E-01	1.954E+00	3.055E+00	2.222E-01	-0.211
		935.52		-3.590E-02	6.326E-02	8.721E-02	6.153E-03	-0.412
		1246.25		-7.159E-01	1.946E+00	2.906E+00	1.697E-01	-0.246
		1333.61		9.273E-01	1.592E+00	2.908E+00	1.749E-01	0.319
		1434.06	*	-1.474E-03	1.064E-01	1.712E-01	1.032E-02	-0.009
MN-54		834.83	*	-1.609E-02	2.456E-02	3.563E-02	2.599E-03	-0.452
CO-56		846.75	*	-1.989E-02	2.822E-02	4.090E-02	2.976E-03	-0.486
		977.42		1.769E+00	1.721E+00	3.431E+00	2.369E-01	0.516
		1037.82		-5.063E-02	1.982E-01	3.071E-01	2.213E-02	-0.165
		1175.09		1.363E-01	1.506E+00	2.501E+00	1.418E-01	0.055
		1238.25		-1.818E-02	4.966E-02	7.391E-02	4.572E-03	-0.246
		1360.21		1.702E-01	5.896E-01	1.040E+00	6.264E-02	0.164
		1771.40		-8.956E-02	2.088E-01	2.983E-01	1.685E-02	-0.300
CO-57		122.06	*	3.399E-03	1.035E-02	1.714E-02	1.973E-03	0.198
		136.48		-1.248E-02	9.135E-02	1.444E-01	1.520E-02	-0.086
CO-58		810.76	*	1.470E-02	2.914E-02	5.206E-02	3.824E-03	0.282
FE-59		142.65		-3.457E-01	1.101E+00	1.624E+00	1.499E-01	-0.213
		192.34		-1.990E-01	4.011E-01	6.427E-01	7.712E-02	-0.310
		1099.22	*	-8.377E-03	5.121E-02	8.059E-02	5.780E-03	-0.104

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1291.56		6.178E-02	6.019E-02	1.250E-01	9.409E-03	0.494
CO-60		1173.22		-1.927E-02	3.303E-02	4.726E-02	2.678E-03	-0.408
		1332.49	*	6.945E-03	3.313E-02	5.617E-02	3.379E-03	0.124
ZN-65		1115.52	*	3.344E-02	5.662E-02	1.038E-01	6.367E-03	0.322
GE-68		1077.35	*	-4.615E-01	9.392E-01	1.385E+00	8.839E-02	-0.333
AS-73		53.44	*	-4.483E-02	6.811E-02	1.029E-01	6.917E-03	-0.435
AS-74		595.88	*	2.940E-04	4.642E-02	7.485E-02	5.151E-03	0.004
		634.78		-4.344E-02	1.929E-01	2.979E-01	2.100E-02	-0.146
SE-75		66.05		-1.929E-01	8.358E-01	1.223E+00	1.139E-01	-0.158
		96.73		-4.775E-02	2.200E-01	3.473E-01	4.817E-02	-0.137
		121.11		-7.184E-03	5.325E-02	8.444E-02	1.138E-02	-0.085
		136.00		-1.189E-04	1.632E-02	2.613E-02	2.630E-03	-0.005
		198.60		7.542E-01	8.064E-01	1.456E+00	1.084E-01	0.518
		264.65	*	5.518E-03	2.170E-02	3.703E-02	2.240E-03	0.149
		279.53		-1.524E-02	5.127E-02	8.215E-02	5.181E-03	-0.186
		303.91		-3.904E-01	1.050E+00	1.660E+00	1.591E-01	-0.235
		400.65		-1.097E-02	1.410E-01	2.285E-01	2.033E-02	-0.048
BR-77		87.88		-4.030E+00	4.829E+00	7.173E+00	5.937E-01	-0.562
		200.40		-3.975E+00	7.850E+00	1.254E+01	7.766E-01	-0.317
		239.00		1.968E-01	5.248E-01	8.868E-01	5.461E-02	0.222
		249.79		-9.218E-01	3.792E+00	6.168E+00	3.765E-01	-0.149
		281.68		-1.400E+00	4.516E+00	7.212E+00	4.216E-01	-0.194
		297.23		2.705E-01	3.036E+00	5.073E+00	2.976E-01	0.053
		303.76		-2.400E+00	9.849E+00	1.584E+01	9.290E-01	-0.152
		439.47		-7.344E+00	8.570E+00	1.199E+01	6.977E-01	-0.613
		484.57		1.763E+00	1.506E+01	2.492E+01	1.542E+00	0.071
		520.65	*	4.969E-02	6.918E-01	1.134E+00	7.311E-02	0.044
		574.64		-4.187E+00	1.299E+01	1.968E+01	1.333E+00	-0.213
		578.91		-6.964E+00	6.344E+00	8.306E+00	5.645E-01	-0.838
		585.48		7.615E+00	1.311E+01	2.279E+01	1.557E+00	0.334
		755.35		-4.746E+00	1.007E+01	1.515E+01	1.109E+00	-0.313
		817.79		-5.644E+00	1.024E+01	1.531E+01	1.120E+00	-0.369
SR-82		698.33		6.945E+00	2.232E+01	3.882E+01	2.811E+00	0.179
		776.49	*	8.230E-02	2.442E-01	4.264E-01	3.126E-02	0.193
		1395.20		-4.113E+00	8.390E+00	1.194E+01	7.198E-01	-0.345
RB-83		520.41	*	-1.084E-02	4.349E-02	6.769E-02	4.362E-03	-0.160
		529.64		4.077E-02	7.105E-02	1.243E-01	8.087E-03	0.328
		552.65		-1.064E-01	1.166E-01	1.553E-01	1.032E-02	-0.685
RB-84		881.50	*	1.453E-02	3.378E-02	6.132E-02	4.416E-03	0.237
KR-85		513.99	*	-7.030E+00	6.860E+00	9.933E+00	6.357E-01	-0.708
SR-85		513.99	*	-3.322E-02	3.241E-02	4.693E-02	3.004E-03	-0.708
RB-86		1076.63	*	-3.497E-01	4.476E-01	6.100E-01	3.896E-02	-0.573
Y-88		898.02		-2.582E-02	2.935E-02	3.999E-02	2.881E-03	-0.646
		1836.01	*	-1.293E-03	3.715E-02	6.083E-02	3.357E-03	-0.021
ZR-88		392.90	*	1.199E-03	1.880E-02	3.106E-02	1.675E-03	0.039
Y-91		1204.90	*	3.325E+00	1.149E+01	1.984E+01	1.140E+00	0.168
NB-94		702.63	*	3.184E-03	2.812E-02	4.772E-02	3.460E-03	0.067
		871.10		2.300E-02	2.529E-02	4.819E-02	3.483E-03	0.477
NB-95		765.79	*	-7.575E-04	2.960E-02	4.917E-02	3.603E-03	-0.015

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M		235.69	*	-1.457E-02	5.331E-02	8.659E-02	6.770E-03	-0.168
ZR-95		724.18		1.333E-03	5.531E-02	9.280E-02	7.570E-03	0.014
		756.15	*	-9.515E-03	4.136E-02	6.604E-02	5.504E-03	-0.144
NB-97		657.90	*	-1.058E-05	4.136E-02	Half-Life too short		
		1024.50		-1.480E-03	4.136E-02	Half-Life too short		
ZR-97		254.15		-6.006E-04	4.136E-02	Half-Life too short		
		355.39		4.877E-04	4.136E-02	Half-Life too short		
		507.63	*	-1.086E-03	4.136E-02	Half-Life too short		
		602.52		4.356E-04	4.136E-02	Half-Life too short		
		1021.30		-2.393E-04	4.136E-02	Half-Life too short		
		1147.95		-4.800E-05	4.136E-02	Half-Life too short		
		1362.66		1.347E-03	4.136E-02	Half-Life too short		
		1750.46		-2.149E-03	4.136E-02	Half-Life too short		
MO-99		140.51		3.734E-01	1.598E+00	2.610E+00	7.301E-01	0.143
		181.06		1.360E-01	1.131E+00	1.919E+00	3.312E-01	0.071
		366.43		7.154E+00	7.521E+00	1.368E+01	7.686E-01	0.523
		739.58	*	-1.366E+00	1.047E+00	1.230E+00	1.781E-01	-1.111
		778.00		3.937E-01	3.523E+00	5.973E+00	4.379E-01	0.066
TC-99M		140.51	*	1.829E+00	3.523E+00	Half-Life too short		
RH-101		127.23		-7.711E-04	1.395E-02	2.228E-02	2.445E-03	-0.035
		198.01	*	1.608E-02	1.565E-02	2.842E-02	1.759E-03	0.566
		325.23		-6.497E-02	1.196E-01	1.841E-01	1.074E-02	-0.353
RH-102		418.52		-7.247E-02	1.617E-01	2.461E-01	1.386E-02	-0.295
		475.06	*	5.059E-03	1.847E-02	3.125E-02	1.910E-03	0.162
		631.29		-7.177E-03	3.779E-02	5.865E-02	4.127E-03	-0.122
		697.49		1.685E-02	6.079E-02	1.054E-01	7.629E-03	0.160
		766.84		5.067E-02	8.031E-02	1.454E-01	1.065E-02	0.349
		1046.59		-3.891E-02	8.084E-02	1.187E-01	7.795E-03	-0.328
		1112.84		-4.620E-02	1.544E-01	2.362E-01	1.451E-02	-0.196
RU-103		497.08	*	-3.365E-03	2.156E-02	3.409E-02	4.388E-03	-0.099
		610.33		1.421E-01	5.508E-01	9.104E-01	1.446E-01	0.156
RH-106		511.85		-2.514E-01	1.764E-01	3.054E-01	1.950E-02	-0.823
		621.84	*	1.076E-01	2.637E-01	4.126E-01	5.106E-02	0.261
		1050.47		4.422E-02	1.770E+00	2.919E+00	1.911E-01	0.015
RU-106		511.85		-2.514E-01	1.764E-01	3.054E-01	1.950E-02	-0.823
		621.84	*	1.076E-01	2.634E-01	4.126E-01	2.888E-02	0.261
		1050.47		4.422E-02	1.770E+00	2.919E+00	1.911E-01	0.015
AG-108M		433.93	*	-4.853E-03	1.679E-02	2.602E-02	1.632E-03	-0.186
		614.37		-1.633E-02	2.798E-02	4.066E-02	3.001E-03	-0.401
		722.95		-6.763E-04	2.836E-02	4.724E-02	3.629E-03	-0.014
CD-109		88.03	*	-1.750E-01	2.132E-01	3.172E-01	2.629E-02	-0.552
AG-110M		657.75	*	-8.917E-03	2.339E-02	3.693E-02	2.747E-03	-0.241
		677.61		-5.004E-02	2.091E-01	3.373E-01	2.523E-02	-0.148
		706.67		-2.677E-02	1.548E-01	2.527E-01	1.905E-02	-0.106
		763.93		-3.088E-02	1.230E-01	1.975E-01	1.504E-02	-0.156
		884.67		7.463E-03	2.810E-02	4.930E-02	3.709E-03	0.151
		937.48		2.162E-02	5.359E-02	9.783E-02	7.266E-03	0.221
		1384.27		-1.023E-01	1.238E-01	1.530E-01	9.749E-03	-0.669
IN-111		171.28		-2.810E-02	6.480E-02	1.047E-01	6.367E-03	-0.268

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		245.39	*	-1.061E-02	7.656E-02	1.257E-01	7.705E-03	-0.084
IN-113M		391.69	*	1.913E-02	2.691E-02	4.781E-02	2.772E-03	0.400
SN-113		391.69	*	1.913E-02	2.691E-02	4.781E-02	2.772E-03	0.400
IN-114M		190.27	*	-4.911E-02	7.510E-02	1.185E-01	7.309E-03	-0.414
CD-115		260.90		2.075E-01	6.444E+00	1.075E+01	6.476E-01	0.019
		492.35		-8.954E-01	1.913E+00	2.852E+00	1.781E-01	-0.314
		527.90	*	1.549E-01	7.020E-01	1.173E+00	7.615E-02	0.132
SN-117M		156.02		-7.826E-01	7.705E-01	1.109E+00	8.306E-02	-0.706
		158.56	*	1.304E-02	1.722E-02	2.941E-02	2.097E-03	0.443
SB-122		563.90	*	-9.189E-02	1.942E-01	2.893E-01	1.942E-02	-0.318
		692.80		-1.868E+00	4.289E+00	6.710E+00	4.850E-01	-0.278
I-123		159.00	*	-9.611E-06	4.289E+00	Half-Life too short		
		528.96		3.152E-03	4.289E+00	Half-Life too short		
TE-123M		159.00	*	-8.537E-04	1.292E-02	2.048E-02	1.461E-03	-0.042
I-124		602.71	*	2.069E-02	1.369E-01	2.252E-01	1.557E-02	0.092
		722.78		-7.515E-02	8.079E-01	1.330E+00	9.694E-02	-0.056
		1325.50		3.041E+00	7.882E+00	1.386E+01	8.321E-01	0.219
		1376.25		5.574E+00	6.597E+00	1.271E+01	7.660E-01	0.439
		1509.49		-1.564E-01	3.947E+00	6.539E+00	3.922E-01	-0.024
		1691.02		1.386E-01	1.129E+00	1.933E+00	1.120E-01	0.072
SB-124		602.71		3.987E-03	2.638E-02	4.340E-02	3.002E-03	0.092
		645.85		1.246E-02	3.541E-01	5.715E-01	4.407E-02	0.022
		709.31		2.564E-01	1.919E+00	3.271E+00	2.376E-01	0.078
		713.82		-5.655E-01	1.136E+00	1.749E+00	1.944E-01	-0.323
		722.78		-2.099E-02	2.257E-01	3.717E-01	2.790E-02	-0.056
		968.20		1.664E-01	1.472E+00	2.480E+00	1.722E-01	0.067
		1045.16		-3.284E-01	1.479E+00	2.305E+00	1.516E-01	-0.142
		1325.50		9.072E-01	2.352E+00	4.136E+00	2.483E-01	0.219
		1368.21		-1.045E+00	1.333E+00	1.664E+00	1.994E-01	-0.628
		1436.60		3.080E-01	4.139E+00	6.770E+00	4.081E-01	0.045
		1691.02	*	9.132E-03	7.437E-02	1.273E-01	8.012E-03	0.072
SB-125		427.89	*	3.257E-02	5.328E-02	9.455E-02	5.641E-03	0.345
		463.38		6.311E-02	1.708E-01	2.925E-01	2.034E-02	0.216
		600.56		5.480E-03	1.255E-01	2.035E-01	1.564E-02	0.027
		635.90		-4.296E-02	1.930E-01	2.978E-01	2.350E-02	-0.144
TE-125M		109.28	*	8.374E-01	3.256E+00	5.369E+00	6.241E-01	0.156
I-126		388.63		7.935E-03	8.057E-02	1.338E-01	7.245E-03	0.059
		666.33	*	-3.197E-02	7.910E-02	1.241E-01	8.884E-03	-0.258
		753.82		-5.222E-01	6.239E-01	8.694E-01	6.365E-02	-0.601
SB-126		223.80		4.478E-01	1.370E+00	2.354E+00	1.460E-01	0.190
		278.60		-3.562E-01	7.925E-01	1.247E+00	7.294E-02	-0.286
		296.50		-2.686E-01	5.567E-01	8.018E-01	4.703E-02	-0.335
		414.70		8.592E-03	2.779E-02	4.745E-02	2.656E-03	0.181
		415.30		3.339E-01	2.312E+00	3.861E+00	2.164E-01	0.086
		555.20		1.346E+00	1.555E+00	2.878E+00	1.918E-01	0.468
		573.80		-1.894E-01	4.440E-01	6.631E-01	4.488E-02	-0.286
		593.00		-1.835E-01	4.636E-01	7.014E-01	4.817E-02	-0.262
		656.30		-1.326E+00	1.507E+00	2.170E+00	1.546E-01	-0.611
		666.33		-1.312E-02	3.247E-02	5.095E-02	3.647E-03	-0.258

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		-3.618E-01	9.704E-01	1.538E+00	1.105E-01	-0.235
		695.00		-6.849E-03	3.836E-02	6.264E-02	4.531E-03	-0.109
		697.00		3.380E-02	1.355E-01	2.343E-01	1.696E-02	0.144
		720.50	*	2.150E-02	6.239E-02	1.100E-01	8.009E-03	0.196
		856.80		-1.079E-01	2.392E-01	3.667E-01	2.661E-02	-0.294
		989.30		9.436E-01	7.306E-01	1.428E+00	9.787E-02	0.661
		1034.80		1.690E+00	3.776E+00	6.792E+00	4.506E-01	0.249
		1213.00		-2.480E+00	1.923E+00	2.036E+00	1.173E-01	-1.218
SN-126		64.28		4.832E-02	7.627E-02	1.311E-01	1.889E-02	0.369
		86.94		-8.608E-02	1.003E-01	1.320E-01	5.450E-02	-0.652
		87.57	*	-1.780E-02	2.256E-02	3.212E-02	2.653E-03	-0.554
SB-127		61.10		9.014E-01	2.028E+00	3.440E+00	2.711E-01	0.262
		252.40		-8.092E-02	6.148E-01	1.010E+00	4.152E-01	-0.080
		290.80		-5.656E-01	2.678E+00	4.330E+00	2.946E-01	-0.131
		411.60		1.071E+00	1.789E+00	3.148E+00	4.053E-01	0.340
		444.90		6.568E-01	1.522E+00	2.629E+00	2.334E-01	0.250
		473.00		2.296E-01	2.575E-01	4.713E-01	4.473E-02	0.487
		543.00		-1.378E+00	3.112E+00	4.674E+00	5.491E-01	-0.295
		603.60		3.287E-02	2.205E+00	3.558E+00	3.407E-01	0.009
		685.20	*	4.538E-02	2.101E-01	3.648E-01	3.029E-02	0.124
		698.50		7.343E-01	3.068E+00	5.287E+00	7.289E-01	0.139
		722.20		-1.244E+00	4.836E+00	7.738E+00	6.240E-01	-0.161
		783.80		-2.007E-01	5.914E-01	9.242E-01	9.023E-02	-0.217
XE-127		57.60		1.397E-01	6.193E-01	1.034E+00	7.176E-02	0.135
		145.22		3.266E-02	2.365E-01	3.838E-01	3.421E-02	0.085
		172.10		-2.785E-03	4.371E-02	7.316E-02	4.451E-03	-0.038
		202.84	*	-1.710E-02	1.808E-02	2.743E-02	1.700E-03	-0.623
		374.96		3.703E-02	1.020E-01	1.750E-01	9.710E-03	0.212
I-131		80.18		-2.794E-01	5.555E-01	8.581E-01	6.729E-02	-0.326
		284.30		4.377E-02	3.600E-01	6.060E-01	3.902E-02	0.072
		364.48	*	1.915E-02	3.773E-02	6.558E-02	4.111E-03	0.292
		636.97		-3.224E-02	5.818E-01	9.256E-01	7.027E-02	-0.035
		722.89		-1.073E-01	2.437E+00	4.046E+00	2.954E-01	-0.027
TE-132		49.72		1.980E-02	2.641E-01	4.359E-01	3.186E-02	0.045
		111.76		1.958E-01	2.243E+00	3.641E+00	3.965E-01	0.054
		116.30		3.788E-01	2.090E+00	3.421E+00	3.879E-01	0.111
		228.16	*	4.258E-02	7.178E-02	1.255E-01	1.674E-02	0.339
BA-133		53.15		-2.876E-01	3.143E-01	4.597E-01	3.083E-02	-0.625
		79.62		9.013E-03	2.983E-01	4.855E-01	7.173E-02	0.019
		81.00		-2.582E-02	2.810E-02	3.671E-02	5.684E-03	-0.703
		276.40		3.814E-02	1.879E-01	3.185E-01	4.139E-02	0.120
		302.84		1.504E-02	8.120E-02	1.370E-01	1.601E-02	0.110
		356.01	*	-5.253E-03	2.557E-02	4.100E-02	4.718E-03	-0.128
		383.85		7.443E-02	1.744E-01	3.017E-01	3.227E-02	0.247
I-133		510.53		-6.178E-04	1.744E-01	Half-Life too short		
		529.87	*	6.452E-06	1.744E-01	Half-Life too short		
		706.58		-9.986E-05	1.744E-01	Half-Life too short		
		856.28		-5.634E-04	1.744E-01	Half-Life too short		
		875.33		-6.788E-05	1.744E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1236.41		-1.178E-03	1.744E-01	Half-Life too short		
		1298.22		-4.196E-04	1.744E-01	Half-Life too short		
CS-134		475.35		1.004E-01	1.198E+00	1.973E+00	1.207E-01	0.051
		563.23		-1.263E-01	2.453E-01	3.624E-01	2.470E-02	-0.349
		569.32		6.186E-02	1.348E-01	2.327E-01	1.604E-02	0.266
		604.70		-9.211E-03	2.726E-02	4.187E-02	2.910E-03	-0.220
		795.84	*	-2.848E-02	3.303E-02	4.653E-02	3.444E-03	-0.612
		801.93		2.503E-01	2.922E-01	5.488E-01	4.052E-02	0.456
		1038.57		5.810E-01	2.399E+00	4.158E+00	2.750E-01	0.140
		1167.94		-4.173E-01	1.745E+00	2.703E+00	1.544E-01	-0.154
		1365.15		1.913E-01	9.269E-01	1.583E+00	1.041E-01	0.121
CS-135		268.24	*	3.782E-02	8.169E-02	1.420E-01	1.104E-02	0.266
I-135		288.45		-3.497E+00	8.169E-02	Half-Life too short		
		417.63		-3.041E+01	8.169E-02	Half-Life too short		
		546.56		1.504E+01	8.169E-02	Half-Life too short		
		836.80		2.305E+01	8.169E-02	Half-Life too short		
		1038.76		8.728E+00	8.169E-02	Half-Life too short		
		1124.00		-7.283E+01	8.169E-02	Half-Life too short		
		1131.51		-3.659E+00	8.169E-02	Half-Life too short		
		1260.41	*	-7.742E+00	8.169E-02	Half-Life too short		
		1457.56		2.876E+01	8.169E-02	Half-Life too short		
		1678.03		6.065E+01	8.169E-02	Half-Life too short		
		1706.46		-7.754E+01	8.169E-02	Half-Life too short		
		1791.20		5.515E+01	8.169E-02	Half-Life too short		
CS-136		66.91		-6.624E-02	9.735E-02	1.350E-01	1.986E-02	-0.491
		86.29		-1.327E-01	1.941E-01	2.788E-01	3.501E-02	-0.476
		153.22		1.955E-01	2.030E-01	3.516E-01	3.153E-02	0.556
		163.89		-1.445E-01	3.085E-01	4.984E-01	3.835E-02	-0.290
		176.55		2.958E-02	1.088E-01	1.874E-01	1.271E-02	0.158
		273.65		5.427E-02	1.570E-01	2.697E-01	1.806E-02	0.201
		340.57		-2.616E-03	4.315E-02	7.057E-02	4.331E-03	-0.037
		818.51		-2.141E-02	3.741E-02	5.586E-02	4.087E-03	-0.383
		1048.07	*	-1.052E-02	5.357E-02	8.448E-02	5.936E-03	-0.125
		1235.34		-2.750E-01	2.697E-01	3.398E-01	3.394E-02	-0.809
BA-137M		661.65	*	1.923E-02	2.377E-02	4.449E-02	3.178E-03	0.432
CS-137		661.65	*	2.032E-02	2.513E-02	4.703E-02	3.369E-03	0.432
CE-139		165.85	*	-3.965E-03	1.215E-02	1.987E-02	1.204E-03	-0.199
BA-140		162.64		-1.475E-01	2.172E-01	3.442E-01	2.474E-02	-0.429
		304.84		-1.057E-01	4.437E-01	7.120E-01	1.944E-01	-0.148
		423.70		1.648E-01	7.254E-01	1.221E+00	3.879E-01	0.135
		537.32	*	-5.633E-02	1.171E-01	1.723E-01	5.627E-02	-0.327
LA-140		328.77		-1.608E-02	1.096E-01	1.779E-01	1.159E-02	-0.090
		432.53		-2.777E-01	7.190E-01	1.097E+00	6.985E-02	-0.253
		487.03		1.050E-02	5.815E-02	9.705E-02	6.722E-03	0.108
		751.79		-2.539E-01	5.864E-01	8.795E-01	7.375E-02	-0.289
		815.85		5.232E-02	1.666E-01	2.904E-01	2.458E-02	0.180
		867.82		-1.717E-01	6.966E-01	1.104E+00	8.581E-02	-0.156
		919.63		1.656E-01	1.370E+00	2.314E+00	2.189E-01	0.072
		925.24		-5.961E-01	5.122E-01	6.125E-01	4.738E-02	-0.973

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1596.49	*	-2.203E-02	4.805E-02	6.985E-02	4.139E-03	-0.315
CE-141		145.44	*	2.015E-03	2.101E-02	3.394E-02	3.067E-03	0.059
CE-143		57.37		3.923E-01	2.464E+00	4.089E+00	3.381E-01	0.096
		231.56		6.425E+00	2.719E+01	4.461E+01	1.381E+01	0.144
		293.26	*	7.068E-02	1.291E+00	2.152E+00	4.397E-01	0.033
		350.59		-1.084E+01	2.155E+01	3.237E+01	9.809E+00	-0.335
		490.36		1.540E+01	3.436E+01	5.928E+01	1.836E+01	0.260
		664.57		-1.061E+01	1.796E+01	2.682E+01	8.558E+00	-0.396
		721.93		-5.383E+00	1.862E+01	2.956E+01	8.501E+00	-0.182
CE-144		80.11		-1.727E-01	4.838E-01	7.583E-01	5.933E-02	-0.228
		133.54	*	-4.773E-02	8.784E-02	1.327E-01	2.197E-02	-0.360
PM-144		476.78		-2.779E-02	4.453E-02	6.133E-02	4.425E-03	-0.453
		618.01		-1.881E-02	2.306E-02	3.178E-02	2.311E-03	-0.592
		696.49	*	1.055E-02	2.656E-02	4.675E-02	3.384E-03	0.226
		778.57		5.137E-02	1.676E+00	2.806E+00	2.058E-01	0.018
PR-144		696.49	*	7.120E-01	1.792E+00	3.155E+00	2.283E-01	0.226
		1489.15		1.857E+00	1.181E+01	2.040E+01	1.226E+00	0.091
PM-146		453.90	*	-1.187E-02	3.139E-02	4.864E-02	4.240E-03	-0.244
		633.02		9.231E-02	9.507E-01	1.552E+00	5.750E-01	0.059
		735.90		2.482E-02	8.280E-02	1.460E-01	4.123E-02	0.170
		747.13		3.150E-03	5.901E-02	9.941E-02	1.320E-02	0.032
ND-147		91.11		3.721E-02	4.374E-02	7.609E-02	7.034E-03	0.489
		319.41		-5.592E-01	1.202E+00	1.880E+00	1.100E-01	-0.297
		439.89		-8.555E-01	2.002E+00	3.038E+00	1.769E-01	-0.282
		531.02	*	2.533E-01	2.446E-01	4.494E-01	6.221E-02	0.564
PM-149		285.90	*	6.789E-01	3.934E+00	6.654E+00	9.433E-01	0.102
EU-152		121.78		8.845E-03	3.074E-02	5.072E-02	6.331E-03	0.174
		244.69		-8.233E-02	1.590E-01	2.504E-01	1.536E-02	-0.329
		344.27	*	-2.187E-02	5.606E-02	8.790E-02	5.717E-03	-0.249
		443.98		1.970E-01	5.803E-01	9.930E-01	5.817E-02	0.198
		778.89		-1.299E-02	1.981E-01	3.266E-01	2.395E-02	-0.040
		867.32		-2.220E-01	6.200E-01	9.604E-01	6.949E-02	-0.231
		964.01		1.247E-01	1.931E-01	3.540E-01	2.463E-02	0.352
		1085.78		-6.668E-02	3.221E-01	5.072E-01	3.209E-02	-0.131
		1112.02		-1.324E-01	2.339E-01	3.374E-01	2.074E-02	-0.392
		1407.95		1.183E-01	1.425E-01	2.771E-01	1.671E-02	0.427
GD-153		69.67		-1.679E-01	2.853E-01	4.365E-01	3.205E-02	-0.385
		83.37		3.213E+00	3.385E+00	5.962E+00	4.773E-01	0.539
		97.43	*	-2.600E-03	2.276E-02	3.632E-02	3.288E-03	-0.072
		103.18		1.651E-02	3.378E-02	5.716E-02	5.469E-03	0.289
EU-154		123.07		3.869E-03	2.168E-02	3.541E-02	4.815E-03	0.109
		247.94		1.939E-02	1.854E-01	3.121E-01	3.038E-02	0.062
		591.81		-3.149E-01	4.897E-01	7.099E-01	7.411E-02	-0.444
		723.30		1.835E-02	1.129E-01	1.936E-01	1.615E-02	0.095
		756.87		3.703E-01	5.003E-01	9.353E-01	1.036E-01	0.396
		873.19		1.175E-01	2.124E-01	3.860E-01	4.363E-02	0.304
		996.32		-4.089E-01	3.289E-01	4.062E-01	6.891E-02	-1.007
		1004.76		2.102E-02	1.848E-01	3.096E-01	3.206E-02	0.068
		1274.45	*	1.545E-02	8.339E-02	1.414E-01	1.329E-02	0.109

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		48.70		-2.072E-03	1.630E-01	2.668E-01	1.741E-02	-0.008
		60.01		-1.377E-01	6.898E-01	1.105E+00	7.803E-02	-0.125
		86.54		-2.212E-02	2.696E-02	3.822E-02	3.167E-03	-0.579
		105.31	*	-2.227E-02	3.802E-02	5.756E-02	5.676E-03	-0.387
TB-160		86.79		-5.424E-02	6.665E-02	9.445E-02	7.754E-03	-0.574
		197.04		2.169E-01	2.520E-01	4.520E-01	2.796E-02	0.480
		215.65		-2.815E-02	3.605E-01	5.990E-01	3.719E-02	-0.047
		298.57		8.949E-03	5.925E-02	9.959E-02	5.842E-03	0.090
		879.36	*	-6.171E-02	8.345E-02	1.148E-01	8.274E-03	-0.538
		962.29		-4.598E-02	3.273E-01	5.252E-01	3.658E-02	-0.088
		966.15		1.007E-01	1.189E-01	2.254E-01	1.567E-02	0.447
		1177.93		2.942E-02	2.419E-01	4.042E-01	2.295E-02	0.073
		1271.85		-1.459E-01	4.509E-01	6.723E-01	3.963E-02	-0.217
HO-166M		80.57		-7.362E-02	7.610E-02	9.931E-02	7.795E-03	-0.741
		184.41		-3.568E-03	1.686E-02	2.581E-02	1.585E-03	-0.138
		280.46		-4.335E-03	4.105E-02	6.726E-02	3.930E-03	-0.064
		410.95		9.358E-02	1.478E-01	2.612E-01	1.453E-02	0.358
		711.68	*	-4.423E-03	4.480E-02	7.383E-02	5.366E-03	-0.060
		752.31		-7.121E-02	1.479E-01	2.198E-01	1.609E-02	-0.324
		810.29		2.780E-02	4.439E-02	8.101E-02	5.930E-03	0.343
TM-171		51.35		-3.846E-01	2.354E+00	3.784E+00	2.507E-01	-0.102
		52.39		-7.148E-01	1.296E+00	1.989E+00	1.327E-01	-0.359
		59.40		5.184E-01	3.515E+00	5.818E+00	4.100E-01	0.089
		66.72	*	-3.822E+00	5.292E+00	7.354E+00	5.322E-01	-0.520
LU-176		88.36		-2.737E-02	4.981E-02	7.634E-02	6.346E-03	-0.358
		201.83		-1.141E-02	1.319E-02	2.027E-02	1.256E-03	-0.563
		306.84	*	-1.577E-02	1.363E-02	1.927E-02	1.130E-03	-0.818
		401.10		-1.628E+00	3.967E+00	6.128E+00	3.353E-01	-0.266
LU-177		112.95		3.924E-02	2.892E-01	4.714E-01	4.960E-02	0.083
		208.36	*	1.063E-01	2.342E-01	4.071E-01	2.526E-02	0.261
LU-177M		52.97		-1.224E-01	1.363E-01	2.000E-01	1.339E-02	-0.612
		54.07		-2.412E-02	7.612E-02	1.201E-01	8.108E-03	-0.201
		61.30		8.534E-02	2.061E-01	3.487E-01	2.472E-02	0.245
		121.62		4.602E-02	1.527E-01	2.522E-01	2.888E-02	0.182
		147.16		-9.780E-02	2.562E-01	3.925E-01	3.402E-02	-0.249
		171.86		-5.369E-02	2.003E-01	3.289E-01	2.000E-02	-0.163
		218.09		2.455E-01	4.231E-01	7.423E-01	4.607E-02	0.331
		268.79		5.153E-02	3.962E-01	6.670E-01	3.970E-02	0.077
		319.02		-1.079E-01	1.526E-01	2.320E-01	1.357E-02	-0.465
		367.43		2.002E-01	5.445E-01	9.337E-01	5.239E-02	0.214
		413.65	*	-1.332E-02	1.018E-01	1.636E-01	9.141E-03	-0.081
HF-181		56.28		-4.056E-02	9.065E-02	1.411E-01	9.684E-03	-0.287
		57.53		1.091E-02	5.293E-02	8.823E-02	6.119E-03	0.124
		65.20		-2.797E-02	1.480E-01	2.180E-01	1.567E-02	-0.128
		133.02		-3.936E-03	2.436E-02	3.843E-02	3.977E-03	-0.102
		136.25		-2.804E-02	1.794E-01	2.831E-01	2.827E-02	-0.099
		345.85		2.370E-02	9.686E-02	1.642E-01	9.444E-03	0.144
		482.03	*	9.115E-03	2.119E-02	3.689E-02	2.275E-03	0.247
W-181		56.28		-1.722E-02	3.854E-02	5.999E-02	4.118E-03	-0.287

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		57.53		4.627E-03	2.252E-02	3.753E-02	2.602E-03	0.123
		65.20	*	-1.181E-02	6.244E-02	9.200E-02	6.613E-03	-0.128
TA-182		67.75		-2.832E-03	1.779E-02	2.851E-02	2.073E-03	-0.099
		100.10		-5.173E-02	5.537E-02	8.013E-02	7.443E-03	-0.646
		152.43		6.417E-02	1.495E-01	2.483E-01	1.981E-02	0.258
		222.10		-6.757E-02	1.742E-01	2.811E-01	1.744E-02	-0.240
		1001.68		1.080E+00	1.573E+00	2.873E+00	1.954E-01	0.376
		1121.28		-5.403E-03	7.625E-02	1.226E-01	7.453E-03	-0.044
		1189.05		3.407E-03	1.577E-01	2.587E-01	1.476E-02	0.013
		1221.42	*	7.968E-02	1.219E-01	2.245E-01	1.298E-02	0.355
		1230.97		2.849E-01	3.211E-01	6.054E-01	3.514E-02	0.471
RE-183		57.98		1.459E-02	2.178E-02	3.789E-02	2.637E-03	0.385
		59.32		1.686E-03	1.342E-02	2.216E-02	1.561E-03	0.076
		67.20		-2.589E-02	3.476E-02	4.796E-02	3.479E-03	-0.540
		162.32	*	-2.091E-02	4.495E-02	7.273E-02	4.790E-03	-0.288
		208.81		3.032E-01	4.326E-01	7.663E-01	4.755E-02	0.396
		291.72		-5.991E-02	4.310E-01	7.026E-01	4.118E-02	-0.085
RE-184		57.98		5.624E-02	8.394E-02	1.460E-01	1.017E-02	0.385
		59.32		6.495E-03	5.168E-02	8.536E-02	6.011E-03	0.076
		67.20		-9.976E-02	1.340E-01	1.848E-01	1.340E-02	-0.540
		161.27		6.382E-02	1.497E-01	2.614E-01	1.762E-02	0.244
		216.55		5.767E-02	1.314E-01	2.280E-01	1.416E-02	0.253
		252.85	*	1.452E-02	1.309E-01	2.201E-01	1.339E-02	0.066
		318.01		-1.513E-01	2.658E-01	4.113E-01	2.407E-02	-0.368
		792.07		-3.580E-02	6.290E-01	1.036E+00	7.597E-02	-0.035
		903.28		4.103E-02	7.372E-01	1.231E+00	8.793E-02	0.033
		920.93		1.192E-01	2.975E-01	5.298E-01	3.761E-02	0.225
OS-185		59.72		-4.840E-03	3.869E-02	6.242E-02	4.405E-03	-0.078
		61.14		1.108E-02	2.201E-02	3.753E-02	2.659E-03	0.295
		69.30		-1.773E-02	4.670E-02	7.300E-02	5.349E-03	-0.243
		592.07		-8.153E-01	1.825E+00	2.736E+00	1.878E-01	-0.298
		646.12	*	8.206E-03	3.061E-02	5.123E-02	3.633E-03	0.160
		717.42		-2.496E-01	6.034E-01	9.418E-01	6.854E-02	-0.265
		874.81		-1.564E-01	4.192E-01	6.470E-01	4.670E-02	-0.242
		880.27		-2.517E-01	4.521E-01	6.512E-01	4.691E-02	-0.386
RE-188		155.03	*	1.859E-02	7.528E-02	1.229E-01	9.375E-03	0.151
		477.96		-1.309E+00	1.899E+00	2.575E+00	1.580E-01	-0.508
		633.10		1.500E-01	1.778E+00	2.899E+00	2.042E-01	0.052
W-188		63.58		5.059E-01	7.408E+00	1.215E+01	8.681E-01	0.042
		227.08		1.079E+00	6.460E+00	1.094E+01	6.779E-01	0.099
		290.67	*	-7.870E-01	3.468E+00	5.596E+00	3.280E-01	-0.141
IR-192		295.96		-2.240E-02	5.917E-02	8.561E-02	5.099E-03	-0.262
		308.46		6.926E-03	4.703E-02	7.915E-02	4.693E-03	0.088
		316.51	*	1.399E-02	1.894E-02	3.371E-02	1.983E-03	0.415
		468.07		-3.303E-02	4.114E-02	5.892E-02	4.072E-03	-0.561
		604.41		-7.965E-02	3.380E-01	5.263E-01	6.296E-02	-0.151
		612.46		-3.016E-02	4.910E-01	7.829E-01	6.649E-02	-0.039
AU-195		65.12		4.404E-05	2.913E-02	4.372E-02	3.142E-03	0.001
		66.83		-1.128E-02	1.702E-02	2.377E-02	1.721E-03	-0.474

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		75.70		1.373E-02	4.418E-02	6.817E-02	5.181E-03	0.201
		98.88	*	-6.205E-03	6.704E-02	1.072E-01	9.841E-03	-0.058
		129.76		4.202E-01	1.178E+00	1.951E+00	2.088E-01	0.215
TL-200		367.94	*	-1.230E-01	2.000E+00	3.262E+00	1.829E-01	-0.038
		579.30		-1.598E+01	1.760E+01	2.408E+01	1.637E+00	-0.664
		828.27		1.996E+01	2.242E+01	4.319E+01	3.154E+00	0.462
		1205.75		6.058E+00	1.176E+01	2.114E+01	1.215E+00	0.287
TL-201		68.90		-5.777E-02	1.380E-01	2.150E-01	1.572E-02	-0.269
		70.82		-7.079E-02	8.569E-02	1.278E-01	9.443E-03	-0.554
		80.30		-1.058E-01	2.017E-01	3.108E-01	2.435E-02	-0.340
		135.34		-9.988E-01	1.857E+00	2.810E+00	2.835E-01	-0.355
		167.43	*	-1.634E-01	5.147E-01	8.424E-01	5.102E-02	-0.194
TL-202		68.90		-1.961E-02	4.685E-02	7.300E-02	5.338E-03	-0.269
		70.82		-2.397E-02	2.902E-02	4.329E-02	3.198E-03	-0.554
		80.30		-3.585E-02	6.832E-02	1.053E-01	8.248E-03	-0.340
		439.56	*	-1.993E-02	2.546E-02	3.610E-02	2.101E-03	-0.552
HG-203		70.83		-1.435E-01	1.747E-01	2.597E-01	3.340E-02	-0.552
		72.87		1.497E-02	1.043E-01	1.718E-01	2.144E-02	0.087
		82.60		4.755E-02	2.750E-01	4.021E-01	5.364E-02	0.118
		279.20	*	-4.180E-03	1.775E-02	2.865E-02	1.775E-03	-0.146
BI-207		72.80		1.920E-03	3.402E-02	5.561E-02	4.153E-03	0.035
		74.97		-8.555E-03	2.515E-02	3.661E-02	2.770E-03	-0.234
		84.90		-5.406E-02	5.239E-02	7.291E-02	5.902E-03	-0.741
		569.67		-6.770E-04	2.262E-02	3.636E-02	2.453E-03	-0.019
		1063.62	*	2.911E-02	3.736E-02	7.038E-02	4.552E-03	0.414
		1770.23		-5.799E-02	4.021E-01	6.336E-01	3.580E-02	-0.092
TL-207		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
TL-208		277.35		-4.420E-02	1.930E-01	3.124E-01	3.309E-02	-0.142
		510.84		-1.338E-01	1.629E-01	2.950E-01	3.096E-02	-0.453
		583.14	*	-1.740E-02	3.308E-02	4.150E-02	3.148E-03	-0.419
		860.37		1.495E-01	2.133E-01	3.928E-01	3.141E-02	0.381
PO-209		260.50		3.092E-01	5.434E+00	9.086E+00	5.476E-01	0.034
		262.80		-1.532E+01	1.492E+01	2.213E+01	1.330E+00	-0.692
		896.60	*	-1.517E+00	5.039E+00	7.820E+00	5.598E-01	-0.194
BI-210		46.50	*	4.000E-02	1.928E-01	3.223E-01	2.441E-02	0.124
PB-210		46.50	*	4.000E-02	1.928E-01	3.223E-01	2.441E-02	0.124
PO-210		46.50	*	4.000E-02	1.927E-01	3.223E-01	2.083E-02	0.124
BI-211		72.87		8.446E-02	5.883E-01	9.694E-01	7.243E-02	0.087
		351.07	*	-2.192E-02	1.370E-01	2.171E-01	1.382E-02	-0.101
PB-211		404.84	*	7.020E-02	5.240E-01	8.712E-01	5.429E-01	0.081

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		427.08		4.011E-01	1.171E+00	1.968E+00	1.216E+00	0.204
		831.96		-7.895E-02	7.797E-01	1.267E+00	7.918E-01	-0.062
BI-212		727.18	*	1.162E-02	1.805E-01	3.050E-01	2.711E-02	0.038
		785.46		-7.482E-02	1.226E+00	2.021E+00	1.482E-01	-0.037
		1620.62		2.336E-01	9.297E-01	1.667E+00	9.828E-02	0.140
PB-212		74.81		-3.141E-02	8.637E-02	1.253E-01	1.506E-02	-0.251
		77.11		-1.145E-03	4.815E-02	7.461E-02	5.723E-03	-0.015
		87.30		-8.987E-02	1.056E-01	1.489E-01	1.929E-02	-0.604
		238.63	*	2.140E-03	3.217E-02	5.303E-02	4.040E-03	0.040
		300.09		4.644E-01	4.293E-01	7.837E-01	6.502E-02	0.593
PO-212		74.81		-3.141E-02	8.637E-02	1.253E-01	1.506E-02	-0.251
		77.11		-1.145E-03	4.815E-02	7.461E-02	5.723E-03	-0.015
		87.30		-8.987E-02	1.056E-01	1.489E-01	1.929E-02	-0.604
		115.19		-5.504E-02	1.413E+00	2.266E+00	2.437E-01	-0.024
		238.63	*	2.140E-03	3.217E-02	5.303E-02	4.040E-03	0.040
		300.09		4.644E-01	4.293E-01	7.837E-01	6.502E-02	0.593
BI-214		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.713E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
PB-214		74.81		-5.412E-02	1.488E-01	2.159E-01	2.285E-02	-0.251
		77.11		-1.962E-03	8.254E-02	1.279E-01	1.383E-02	-0.015
		87.30		-1.540E-01	1.806E-01	2.551E-01	2.878E-02	-0.604
		241.98		-2.196E-01	1.725E-01	2.495E-01	2.076E-02	-0.880
		295.21		-6.632E-02	8.225E-02	1.118E-01	9.582E-03	-0.593
		351.92	*	-9.257E-03	4.764E-02	7.516E-02	6.183E-03	-0.123
PO-214		74.81		-5.412E-02	1.488E-01	2.159E-01	2.285E-02	-0.251
		77.11		-1.962E-03	8.254E-02	1.279E-01	1.383E-02	-0.015
		87.30		-1.540E-01	1.806E-01	2.551E-01	2.878E-02	-0.604
		241.98		-2.196E-01	1.725E-01	2.495E-01	2.076E-02	-0.880
		295.21		-6.632E-02	8.225E-02	1.118E-01	9.582E-03	-0.593
		351.92	*	-9.257E-03	4.764E-02	7.516E-02	6.183E-03	-0.123
PO-215		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
PO-216		74.81		-3.141E-02	8.637E-02	1.253E-01	1.506E-02	-0.251
		77.11		-1.145E-03	4.815E-02	7.461E-02	5.723E-03	-0.015
		87.30		-8.987E-02	1.056E-01	1.489E-01	1.929E-02	-0.604
		238.63	*	2.140E-03	3.217E-02	5.303E-02	4.040E-03	0.040

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		300.09		4.644E-01	4.293E-01	7.837E-01	6.502E-02	0.593
PO-218		74.81		-5.412E-02	1.488E-01	2.159E-01	2.285E-02	-0.251
		77.11		-1.962E-03	8.254E-02	1.279E-01	1.383E-02	-0.015
		87.30		-1.540E-01	1.806E-01	2.551E-01	2.878E-02	-0.604
		241.98		-2.196E-01	1.725E-01	2.495E-01	2.076E-02	-0.880
		295.21		-6.632E-02	8.225E-02	1.118E-01	9.582E-03	-0.593
		351.92	*	-9.257E-03	4.764E-02	7.516E-02	6.183E-03	-0.123
RN-219		271.23		-3.627E-02	1.280E-01	2.065E-01	1.692E-02	-0.176
		401.81	*	-8.733E-02	2.377E-01	3.686E-01	4.965E-02	-0.237
RN-220		549.76	*	-8.942E+00	1.528E+01	2.183E+01	1.448E+00	-0.410
RA-223		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
RA-224		240.98	*	3.196E-02	3.157E-01	5.314E-01	3.268E-02	0.060
RA-226		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.713E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
AC-227		79.80		-3.067E-02	3.762E-01	6.058E-01	1.284E-01	-0.051
		236.00		-4.848E-03	1.095E-01	1.820E-01	1.940E-02	-0.027
		256.20	*	1.643E-01	2.222E-01	3.920E-01	5.515E-02	0.419
		286.10		-5.719E-02	7.618E-01	1.252E+00	1.451E-01	-0.046
		299.80		6.476E-01	8.273E-01	1.462E+00	2.384E-01	0.443
		304.40		-6.040E-01	1.028E+00	1.577E+00	2.732E-01	-0.383
		334.20		9.312E-01	1.371E+00	2.406E+00	4.410E-01	0.387
TH-227		79.80		-3.067E-02	3.762E-01	6.058E-01	1.301E-01	-0.051
		94.00		-3.833E-01	6.106E-01	8.571E-01	1.872E-01	-0.447
		236.00		-4.848E-03	1.095E-01	1.820E-01	1.692E-02	-0.027
		256.20	*	1.643E-01	2.227E-01	3.920E-01	6.660E-02	0.419
		286.10		-5.719E-02	7.640E-01	1.252E+00	1.254E+00	-0.046
		299.80		6.476E-01	8.273E-01	1.462E+00	2.384E-01	0.443
		304.40		-6.040E-01	1.028E+00	1.577E+00	2.732E-01	-0.383
		334.20		9.312E-01	1.371E+00	2.406E+00	4.410E-01	0.387
AC-228		338.32		3.153E-02	1.270E-01	2.145E-01	8.745E-02	0.147
		911.07	*	7.644E-02	1.090E-01	1.989E-01	2.018E-02	0.384
		969.11		-4.660E-03	1.520E-01	2.489E-01	5.668E-02	-0.019
RA-228		338.32		3.153E-02	1.270E-01	2.145E-01	8.745E-02	0.147
		911.07	*	7.644E-02	1.090E-01	1.989E-01	2.018E-02	0.384
		969.11		-4.660E-03	1.520E-01	2.489E-01	5.668E-02	-0.019

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228		84.40		-2.520E-02	6.199E-01	1.001E+00	1.279E-01	-0.025
		238.60	*	1.972E-03	3.215E-02	5.297E-02	4.036E-03	0.037
		300.10		4.644E-01	5.077E-01	7.838E-01	4.620E-01	0.593
TH-229		85.43		-6.099E-02	5.197E-02	7.110E-02	5.778E-03	-0.858
		88.47		-1.493E-02	2.875E-02	4.422E-02	3.679E-03	-0.338
		100.00		-5.564E-02	6.024E-02	8.731E-02	8.101E-03	-0.637
		193.63	*	-2.919E-03	2.394E-01	4.012E-01	2.478E-02	-0.007
		210.97		1.769E-01	3.759E-01	6.536E-01	4.057E-02	0.271
TH-230		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.712E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
PA-231		283.67	*	6.319E-02	7.262E-01	1.217E+00	1.680E-01	0.052
		301.29		2.754E-01	3.191E-01	5.716E-01	5.996E-02	0.482
TH-231		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
U-231		84.21		4.040E-02	3.612E-01	5.918E-01	4.766E-02	0.068
		92.29		-1.310E-02	1.674E-01	2.524E-01	2.176E-02	-0.052
		95.87	*	-2.747E-02	9.025E-02	1.413E-01	1.261E-02	-0.194
		108.00		5.401E-02	2.074E-01	3.425E-01	3.435E-02	0.158
TH-232		338.32		3.153E-02	1.264E-01	2.145E-01	1.242E-02	0.147
		911.07	*	7.644E-02	1.090E-01	1.989E-01	2.018E-02	0.384
		969.11		-4.660E-03	1.520E-01	2.489E-01	5.668E-02	-0.019
PA-233		75.28		4.864E-02	7.229E-01	1.089E+00	1.611E-01	0.045
		86.59		-3.660E-01	4.489E-01	6.215E-01	1.659E-01	-0.589
		300.12		2.400E-01	2.233E-01	4.050E-01	5.454E-02	0.593
		311.98	*	2.836E-02	3.833E-02	6.814E-02	4.236E-03	0.416
		340.50		-8.019E-02	3.224E-01	5.141E-01	1.181E-01	-0.156
		398.62		2.153E-01	1.270E+00	2.125E+00	5.478E-01	0.101
		415.76		-8.639E-02	9.336E-01	1.506E+00	3.092E-01	-0.057
PA-234		63.00		6.963E-02	2.354E-01	3.938E-01	5.798E-02	0.177
		94.67		-1.652E-02	4.806E-02	7.497E-02	9.402E-03	-0.220
		98.44		1.311E-03	2.802E-02	4.547E-02	2.540E-02	0.029
		99.86		-9.036E-02	1.477E-01	2.223E-01	2.060E-02	-0.406
		111.00		-3.456E-03	7.429E-02	1.192E-01	1.592E-02	-0.029
		131.20		1.259E-02	4.508E-02	7.417E-02	7.824E-03	0.170
		152.70		1.101E-01	1.507E-01	2.552E-01	4.266E-02	0.432
		186.00		-2.533E-02	6.089E-01	9.459E-01	2.897E-01	-0.027

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		226.40		1.015E-01	2.174E-01	3.769E-01	4.433E-02	0.269
		227.20		1.095E-01	2.317E-01	4.024E-01	2.493E-02	0.272
		248.90		-1.525E-01	4.383E-01	7.028E-01	1.516E-01	-0.217
		293.70		4.186E-03	3.298E-01	5.471E-01	8.812E-02	0.008
		369.80		-3.676E-01	5.463E-01	8.137E-01	1.690E-01	-0.452
		568.70		4.508E-01	6.913E-01	1.224E+00	8.250E-02	0.368
		569.50		-1.306E-03	2.015E-01	3.249E-01	2.192E-02	-0.004
		574.00		-3.910E-01	9.620E-01	1.440E+00	9.747E-02	-0.272
		699.00		2.437E-01	5.912E-01	1.037E+00	1.918E-01	0.235
		706.10		-5.155E-02	8.185E-01	1.357E+00	6.019E-01	-0.038
		733.00		8.463E-02	2.191E-01	3.909E-01	8.489E-02	0.217
		742.81		7.076E-01	9.828E-01	1.638E+00	1.098E+00	0.432
		796.30		-5.903E-01	6.759E-01	9.243E-01	2.465E-01	-0.639
		805.60		-7.220E-01	8.270E-01	1.128E+00	3.420E-01	-0.640
		819.60		-2.437E-02	8.912E-01	1.474E+00	5.564E-01	-0.017
		826.30		-8.353E-04	5.763E-01	9.572E-01	4.260E-01	-0.001
		831.60		-1.844E-01	4.078E-01	6.102E-01	1.799E-01	-0.302
		876.40		-1.949E-01	6.130E-01	8.954E-01	9.195E-01	-0.218
		880.51		-9.536E-02	1.734E-01	2.503E-01	1.803E-02	-0.381
		883.24		9.185E-02	1.708E-01	2.984E-01	2.001E-01	0.308
		899.00		-4.341E-01	6.500E-01	8.899E-01	3.866E-01	-0.488
		925.00		-1.080E+00	8.161E-01	9.168E-01	6.497E-02	-1.178
		926.50		-3.909E-02	1.166E-01	1.780E-01	4.414E-02	-0.220
		946.00	*	6.598E-02	1.745E-01	3.124E-01	5.650E-02	0.211
		949.00		2.999E-02	2.701E-01	4.569E-01	3.203E-02	0.066
		980.50		-1.015E-01	4.704E-01	7.366E-01	5.077E-02	-0.138
		1394.10		2.053E-02	1.074E+00	1.743E+00	1.130E+00	0.012
PA-234M		766.41		5.768E+00	1.357E+01	2.273E+01	1.740E+01	0.254
		1001.03	*	2.399E+00	5.263E+00	9.310E+00	9.167E-01	0.258
TH-234		63.29	*	3.425E-02	2.012E-01	3.330E-01	5.769E-02	0.103
		92.38		6.530E-03	1.574E-01	2.399E-01	4.340E-02	0.027
U-234		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.712E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
U-235		89.95		1.779E-01	2.822E-01	4.753E-01	1.464E-01	0.374
		93.35		-8.292E-02	1.921E-01	2.771E-01	7.774E-02	-0.299
		105.00		-1.819E-01	3.730E-01	5.651E-01	1.706E-01	-0.322
		143.76	*	-6.096E-02	9.401E-02	1.317E-01	2.338E-02	-0.463
		163.35		-1.382E-01	2.082E-01	3.281E-01	5.969E-02	-0.421
		185.71		-3.935E-04	2.257E-02	3.514E-02	2.161E-03	-0.011
		205.31		-4.013E-02	2.393E-01	3.946E-01	7.149E-02	-0.102
NP-236		94.67		-1.246E-02	3.644E-02	5.688E-02	5.015E-03	-0.219
		98.44		9.953E-04	2.117E-02	3.437E-02	3.142E-03	0.029
		111.00		-2.614E-03	5.620E-02	9.014E-02	9.306E-03	-0.029
		160.31	*	6.951E-03	3.743E-02	6.078E-02	4.182E-03	0.114

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237		86.50	*	-5.344E-02	6.688E-02	9.366E-02	2.079E-02	-0.571
		95.87		-8.737E-02	2.877E-01	4.495E-01	1.112E-01	-0.194
U-238		63.29	*	3.425E-02	2.012E-01	3.330E-01	5.769E-02	0.103
		92.38		6.530E-03	1.574E-01	2.399E-01	2.070E-02	0.027
NP-239		99.55		-1.756E-02	4.929E-02	7.655E-02	7.072E-03	-0.229
		117.00	*	2.319E-03	7.434E-02	1.200E-01	1.313E-02	0.019
		209.75		2.255E-01	3.782E-01	6.640E-01	4.121E-02	0.340
		228.18		7.225E-02	1.222E-01	2.141E-01	1.326E-02	0.337
		277.60		-4.439E-02	9.488E-02	1.496E-01	8.762E-03	-0.297
		334.30		5.363E-01	7.723E-01	1.366E+00	7.930E-02	0.393
AM-241		59.54	*	3.850E-03	2.077E-02	3.449E-02	2.692E-03	0.112
AM-243		74.67	*	-7.902E-03	1.411E-02	2.013E-02	1.520E-03	-0.393
		86.72		-1.986E+00	2.459E+00	3.487E+00	2.861E-01	-0.570
		117.66		-6.764E-01	1.542E+00	2.370E+00	2.611E-01	-0.285
		142.18		1.644E+00	7.580E+00	1.238E+01	1.150E+00	0.133
CM-243		99.55		-1.806E-02	5.069E-02	7.873E-02	7.273E-03	-0.229
		103.76	*	9.780E-03	3.209E-02	5.337E-02	5.136E-03	0.183
		117.00		2.384E-03	7.645E-02	1.234E-01	1.350E-02	0.019
		209.75		2.222E-01	3.727E-01	6.543E-01	4.061E-02	0.340
		228.18		7.297E-02	1.234E-01	2.163E-01	1.339E-02	0.337
		277.60		-4.473E-02	9.560E-02	1.507E-01	8.829E-03	-0.297
CM-247		278.00		-2.061E-01	3.917E-01	6.131E-01	3.589E-02	-0.336
		287.40		-2.389E-01	5.976E-01	9.413E-01	5.512E-02	-0.254
		402.60	*	-7.342E-03	2.013E-02	3.116E-02	1.709E-03	-0.236
CF-249		252.85		5.626E-02	5.070E-01	8.526E-01	5.187E-02	0.066
		333.44		8.682E-02	1.003E-01	1.804E-01	1.048E-02	0.481
		387.95	*	-1.636E-02	2.427E-02	3.618E-02	1.962E-03	-0.452
CF-251		176.60	*	1.384E-02	5.681E-02	9.760E-02	5.960E-03	0.142
		227.00		3.500E-02	2.095E-01	3.548E-01	2.198E-02	0.099
		285.00		1.172E-02	8.264E-01	1.373E+00	8.034E-02	0.009
ANH-511		511.00	*	-2.890E-02	3.513E-02	6.374E-02	4.067E-03	-0.453

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069    *
* Acquisition date :  9-JUL-2009 08:22:22 Detector SN#     :               *
* Detector ID        : GAM21               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:08.24     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        :  2-JUL-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201873069          Analyst initials: MXR1          *
* Batch Number       : 881931               Sample Quantity : 1.3282E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-1.057E-01	1.896E-01	2.758E-01	0.000E+00	NOT IDENT.
NA-22	5.508E-03	2.914E-02	5.061E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.109E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.059E-03	3.915E-02	6.633E-02	0.000E+00	NOT IDENT.
K-40	1.161E-01	3.284E-01	5.829E-01	0.000E+00	NOT IDENT.
TI-44	-1.007E-02	8.902E-03	1.331E-02	0.000E+00	NOT IDENT.
SC-46	-2.137E-02	2.261E-02	2.984E-02	0.000E+00	NOT IDENT.
V-48	-4.730E-02	3.567E-02	4.163E-02	0.000E+00	NOT IDENT.
CR-51	1.004E-01	1.740E-01	3.201E-01	0.000E+00	NOT IDENT.
MN-52	-1.474E-03	1.043E-01	1.716E-01	0.000E+00	NOT IDENT.
MN-54	-1.609E-02	2.407E-02	3.605E-02	0.000E+00	NOT IDENT.
CO-56	-1.989E-02	2.766E-02	4.136E-02	0.000E+00	NOT IDENT.
CO-57	3.399E-03	1.015E-02	1.792E-02	0.000E+00	NOT IDENT.
CO-58	1.470E-02	2.855E-02	5.269E-02	0.000E+00	NOT IDENT.
FE-59	-8.377E-03	5.018E-02	8.112E-02	0.000E+00	NOT IDENT.
CO-60	6.945E-03	3.247E-02	5.635E-02	0.000E+00	NOT IDENT.
ZN-65	3.344E-02	5.549E-02	1.044E-01	0.000E+00	NOT IDENT.
GE-68	-4.615E-01	9.204E-01	1.395E+00	0.000E+00	NOT IDENT.
AS-73	-4.483E-02	6.675E-02	1.091E-01	0.000E+00	NOT IDENT.
AS-74	2.940E-04	4.549E-02	7.617E-02	0.000E+00	NOT IDENT.
SE-75	5.518E-03	2.127E-02	3.821E-02	0.000E+00	NOT IDENT.
BR-77	4.969E-02	6.780E-01	1.157E+00	0.000E+00	NOT IDENT.
SR-82	8.230E-02	2.393E-01	4.319E-01	0.000E+00	NOT IDENT.
RB-83	-1.084E-02	4.262E-02	6.905E-02	0.000E+00	NOT IDENT.
RB-84	1.453E-02	3.310E-02	6.197E-02	0.000E+00	NOT IDENT.
KR-85	-7.030E+00	6.722E+00	1.013E+01	0.000E+00	NOT IDENT.

SR-85	-3.322E-02	3.176E-02	4.788E-02	0.000E+00	NOT IDENT.
RB-86	-3.497E-01	4.387E-01	6.143E-01	0.000E+00	NOT IDENT.
Y-88	-1.293E-03	3.641E-02	6.067E-02	0.000E+00	NOT IDENT.
ZR-88	1.199E-03	1.843E-02	3.184E-02	0.000E+00	NOT IDENT.
Y-91	3.325E+00	1.126E+01	1.994E+01	0.000E+00	NOT IDENT.
NB-94	3.184E-03	2.756E-02	4.842E-02	0.000E+00	NOT IDENT.
NB-95	-7.575E-04	2.901E-02	4.981E-02	0.000E+00	NOT IDENT.
NB-95M	-1.457E-02	5.225E-02	8.953E-02	0.000E+00	NOT IDENT.
ZR-95	-9.515E-03	4.053E-02	6.692E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.144E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.731E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.366E+00	1.026E+00	1.247E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.657E+06	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.608E-02	1.534E-02	2.947E-02	0.000E+00	NOT IDENT.
RH-102	5.059E-03	1.810E-02	3.192E-02	0.000E+00	NOT IDENT.
RU-103	-3.365E-03	2.113E-02	3.480E-02	0.000E+00	NOT IDENT.
RH-106	1.076E-01	2.584E-01	4.196E-01	0.000E+00	NOT IDENT.
RU-106	1.076E-01	2.582E-01	4.196E-01	0.000E+00	NOT IDENT.
AG-108M	-4.853E-03	1.645E-02	2.663E-02	0.000E+00	NOT IDENT.
CD-109	-1.750E-01	2.089E-01	3.334E-01	0.000E+00	NOT IDENT.
AG-110M	-8.917E-03	2.292E-02	3.751E-02	0.000E+00	NOT IDENT.
IN-111	-1.061E-02	7.503E-02	1.299E-01	0.000E+00	NOT IDENT.
IN-113M	1.913E-02	2.637E-02	4.901E-02	0.000E+00	NOT IDENT.
SN-113	1.913E-02	2.637E-02	4.901E-02	0.000E+00	NOT IDENT.
IN-114M	-4.911E-02	7.360E-02	1.230E-01	0.000E+00	NOT IDENT.
CD-115	1.549E-01	6.879E-01	1.196E+00	0.000E+00	NOT IDENT.
SN-117M	1.304E-02	1.687E-02	3.061E-02	0.000E+00	NOT IDENT.
SB-122	-9.189E-02	1.903E-01	2.946E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.426E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-8.537E-04	1.266E-02	2.132E-02	0.000E+00	NOT IDENT.
I-124	2.069E-02	1.341E-01	2.291E-01	0.000E+00	NOT IDENT.
SB-124	9.132E-03	7.289E-02	1.272E-01	0.000E+00	NOT IDENT.
SB-125	3.257E-02	5.222E-02	9.677E-02	0.000E+00	NOT IDENT.
TE-125M	8.374E-01	3.191E+00	5.623E+00	0.000E+00	NOT IDENT.
I-126	-3.197E-02	7.751E-02	1.261E-01	0.000E+00	NOT IDENT.
SB-126	2.150E-02	6.114E-02	1.115E-01	0.000E+00	NOT IDENT.
SN-126	-1.780E-02	2.211E-02	3.377E-02	0.000E+00	NOT IDENT.
SB-127	4.538E-02	2.059E-01	3.703E-01	0.000E+00	NOT IDENT.
XE-127	-1.710E-02	1.772E-02	2.843E-02	0.000E+00	NOT IDENT.
I-131	1.915E-02	3.697E-02	6.730E-02	0.000E+00	NOT IDENT.
TE-132	4.258E-02	7.035E-02	1.298E-01	0.000E+00	NOT IDENT.
BA-133	-5.253E-03	2.505E-02	4.209E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	8.357E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	-2.848E-02	3.237E-02	4.711E-02	0.000E+00	NOT IDENT.
CS-135	3.782E-02	8.006E-02	1.464E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.425E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.052E-02	5.250E-02	8.511E-02	0.000E+00	NOT IDENT.
BA-137M	1.923E-02	2.330E-02	4.519E-02	0.000E+00	NOT IDENT.
CS-137	2.032E-02	2.463E-02	4.777E-02	0.000E+00	NOT IDENT.
CE-139	-3.965E-03	1.191E-02	2.067E-02	0.000E+00	NOT IDENT.
BA-140	-5.633E-02	1.147E-01	1.756E-01	0.000E+00	NOT IDENT.
LA-140	-2.203E-02	4.709E-02	6.985E-02	0.000E+00	NOT IDENT.
CE-141	2.015E-03	2.059E-02	3.538E-02	0.000E+00	NOT IDENT.
CE-143	7.068E-02	1.265E+00	2.216E+00	0.000E+00	NOT IDENT.
CE-144	-4.773E-02	8.608E-02	1.386E-01	0.000E+00	NOT IDENT.
PM-144	1.055E-02	2.603E-02	4.744E-02	0.000E+00	NOT IDENT.
PR-144	7.120E-01	1.757E+00	3.202E+00	0.000E+00	NOT IDENT.
PM-146	-1.187E-02	3.076E-02	4.973E-02	0.000E+00	NOT IDENT.
ND-147	2.533E-01	2.397E-01	4.582E-01	0.000E+00	NOT IDENT.
PM-149	6.789E-01	3.855E+00	6.858E+00	0.000E+00	NOT IDENT.
EU-152	-2.187E-02	5.493E-02	9.030E-02	0.000E+00	NOT IDENT.
GD-153	-2.600E-03	2.231E-02	3.812E-02	0.000E+00	NOT IDENT.
EU-154	1.545E-02	8.172E-02	1.419E-01	0.000E+00	NOT IDENT.
EU-155	-2.227E-02	3.726E-02	6.032E-02	0.000E+00	NOT IDENT.
TB-160	-6.171E-02	8.178E-02	1.160E-01	0.000E+00	NOT IDENT.
HO-166M	-4.423E-03	4.390E-02	7.490E-02	0.000E+00	NOT IDENT.
TM-171	-3.822E+00	5.186E+00	7.765E+00	0.000E+00	NOT IDENT.
LU-176	-1.577E-02	1.335E-02	1.984E-02	0.000E+00	NOT IDENT.
LU-177	1.063E-01	2.296E-01	4.218E-01	0.000E+00	NOT IDENT.
LU-177M	-1.332E-02	9.977E-02	1.675E-01	0.000E+00	NOT IDENT.
HF-181	9.115E-03	2.076E-02	3.768E-02	0.000E+00	NOT IDENT.
W-181	-1.181E-02	6.120E-02	9.717E-02	0.000E+00	NOT IDENT.
TA-182	7.968E-02	1.194E-01	2.255E-01	0.000E+00	NOT IDENT.
RE-183	-2.091E-02	4.405E-02	7.567E-02	0.000E+00	NOT IDENT.
RE-184	1.452E-02	1.283E-01	2.273E-01	0.000E+00	NOT IDENT.
OS-185	8.206E-03	3.000E-02	5.206E-02	0.000E+00	NOT IDENT.
RE-188	1.859E-02	7.377E-02	1.280E-01	0.000E+00	NOT IDENT.
W-188	-7.870E-01	3.399E+00	5.766E+00	0.000E+00	NOT IDENT.

IR-192	1.399E-02	1.856E-02	3.468E-02	0.000E+00	NOT IDENT.
AU-195	-6.205E-03	6.570E-02	1.125E-01	0.000E+00	NOT IDENT.
TL-200	-1.230E-01	1.960E+00	3.348E+00	0.000E+00	NOT IDENT.
TL-201	-1.634E-01	5.044E-01	8.760E-01	0.000E+00	NOT IDENT.
TL-202	-1.993E-02	2.495E-02	3.693E-02	0.000E+00	NOT IDENT.
HG-203	-4.180E-03	1.739E-02	2.954E-02	0.000E+00	NOT IDENT.
BI-207	2.911E-02	3.661E-02	7.090E-02	0.000E+00	NOT IDENT.
TL-207	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
TL-208	-1.740E-02	3.242E-02	4.225E-02	0.000E+00	NOT IDENT.
PO-209	-1.517E+00	4.938E+00	7.901E+00	0.000E+00	NOT IDENT.
BI-210	4.000E-02	1.889E-01	3.423E-01	0.000E+00	NOT IDENT.
PB-210	4.000E-02	1.889E-01	3.423E-01	0.000E+00	NOT IDENT.
PO-210	4.000E-02	1.889E-01	3.423E-01	0.000E+00	NOT IDENT.
BI-211	-2.192E-02	1.343E-01	2.230E-01	0.000E+00	NOT IDENT.
PB-211	7.020E-02	5.135E-01	8.925E-01	0.000E+00	NOT IDENT.
BI-212	1.162E-02	1.769E-01	3.093E-01	0.000E+00	NOT IDENT.
PB-212	2.140E-03	3.153E-02	5.482E-02	0.000E+00	NOT IDENT.
PO-212	2.140E-03	3.153E-02	5.482E-02	0.000E+00	NOT IDENT.
BI-214	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
PB-214	-9.257E-03	4.668E-02	7.718E-02	0.000E+00	NOT IDENT.
PO-214	-9.257E-03	4.668E-02	7.718E-02	0.000E+00	NOT IDENT.
PO-215	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
PO-216	2.140E-03	3.153E-02	5.482E-02	0.000E+00	NOT IDENT.
PO-218	-9.257E-03	4.668E-02	7.718E-02	0.000E+00	NOT IDENT.
RN-219	-8.733E-02	2.330E-01	3.776E-01	0.000E+00	NOT IDENT.
RN-220	-8.942E+00	1.497E+01	2.225E+01	0.000E+00	NOT IDENT.
RA-223	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
RA-224	3.196E-02	3.094E-01	5.493E-01	0.000E+00	NOT IDENT.
RA-226	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
AC-227	1.643E-01	2.178E-01	4.047E-01	0.000E+00	NOT IDENT.
TH-227	1.643E-01	2.183E-01	4.047E-01	0.000E+00	NOT IDENT.
AC-228	7.644E-02	1.068E-01	2.009E-01	0.000E+00	NOT IDENT.
RA-228	7.644E-02	1.068E-01	2.009E-01	0.000E+00	NOT IDENT.
TH-228	1.972E-03	3.151E-02	5.476E-02	0.000E+00	NOT IDENT.
TH-229	-2.919E-03	2.346E-01	4.162E-01	0.000E+00	NOT IDENT.
TH-230	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
PA-231	6.319E-02	7.117E-01	1.255E+00	0.000E+00	NOT IDENT.
TH-231	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
U-231	-2.747E-02	8.845E-02	1.483E-01	0.000E+00	NOT IDENT.
TH-232	7.644E-02	1.068E-01	2.009E-01	0.000E+00	NOT IDENT.
PA-233	2.836E-02	3.756E-02	7.012E-02	0.000E+00	NOT IDENT.
PA-234	6.598E-02	1.710E-01	3.153E-01	0.000E+00	NOT IDENT.
PA-234M	2.399E+00	5.158E+00	9.388E+00	0.000E+00	NOT IDENT.
TH-234	3.425E-02	1.972E-01	3.519E-01	0.000E+00	NOT IDENT.
U-234	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
U-235	-6.096E-02	9.213E-02	1.373E-01	0.000E+00	NOT IDENT.
NP-236	6.951E-03	3.668E-02	6.325E-02	0.000E+00	NOT IDENT.
NP-237	-5.344E-02	6.554E-02	9.847E-02	0.000E+00	NOT IDENT.
U-238	3.425E-02	1.972E-01	3.519E-01	0.000E+00	NOT IDENT.
NP-239	2.319E-03	7.286E-02	1.255E-01	0.000E+00	NOT IDENT.
AM-241	3.850E-03	2.036E-02	3.648E-02	0.000E+00	NOT IDENT.
AM-243	-7.902E-03	1.383E-02	2.121E-02	0.000E+00	NOT IDENT.
CM-243	9.780E-03	3.145E-02	5.595E-02	0.000E+00	NOT IDENT.
CM-247	-7.342E-03	1.973E-02	3.192E-02	0.000E+00	NOT IDENT.
CF-249	-1.636E-02	2.378E-02	3.709E-02	0.000E+00	NOT IDENT.
CF-251	1.384E-02	5.568E-02	1.014E-01	0.000E+00	NOT IDENT.
ANH-511	-2.890E-02	3.442E-02	6.504E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:24:25.15

```
*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:22:22.
Sample ID         : G1201873069          Sample quantity  : 1.32820E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.24  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881931                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Flag: "*" = Keyline

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

None

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:24:29.68

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1  *
* Acquisition date : 9-JUL-2009 08:22:22.  Detector SN#     :               *
* Detector ID      : GAM21                 Sensitivity      : 5.00000       *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:08.24         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 2-JUL-2009 00:00:00.  Nuclide Library : SOLID          *
* Sample ID        : G1201873069           Analyst initials: MXR1           *
* Batch Number     : 881931                Sample Quantity : 1.32820E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.057E-01		1.934E-01	2.700E-01	1.900E-02	-0.391
NA-22	5.508E-03		2.973E-02	5.040E-02	2.981E-03	0.109
NA-24	-7.892E-05		5.659E-05	Half-Life too short		
AL-26	1.059E-03		3.994E-02	6.649E-02	3.702E-03	0.016
K-40	1.161E-01		3.351E-01	5.820E-01	3.704E-02	0.199
TI-44	-1.007E-02		9.084E-03	1.264E-02	9.775E-04	-0.797
SC-46	-2.137E-02		2.307E-02	2.953E-02	2.120E-03	-0.724
V-48	-4.730E-02		3.639E-02	4.128E-02	2.840E-03	-1.146
CR-51	1.004E-01		1.776E-01	3.112E-01	2.024E-02	0.323
MN-52	-1.474E-03		1.064E-01	1.712E-01	1.032E-02	-0.009
MN-54	-1.609E-02		2.456E-02	3.563E-02	2.599E-03	-0.452
CO-56	-1.989E-02		2.822E-02	4.090E-02	2.976E-03	-0.486
CO-57	3.399E-03		1.035E-02	1.714E-02	1.973E-03	0.198
CO-58	1.470E-02		2.914E-02	5.206E-02	3.824E-03	0.282
FE-59	-8.377E-03		5.121E-02	8.059E-02	5.780E-03	-0.104
CO-60	6.945E-03		3.313E-02	5.617E-02	3.379E-03	0.124
ZN-65	3.344E-02		5.662E-02	1.038E-01	6.367E-03	0.322

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	-4.615E-01		9.392E-01	1.385E+00	8.839E-02	-0.333
AS-73	-4.483E-02		6.811E-02	1.029E-01	6.917E-03	-0.435
AS-74	2.940E-04		4.642E-02	7.485E-02	5.151E-03	0.004
SE-75	5.518E-03		2.170E-02	3.703E-02	2.240E-03	0.149
BR-77	4.969E-02		6.918E-01	1.134E+00	7.311E-02	0.044
SR-82	8.230E-02		2.442E-01	4.264E-01	3.126E-02	0.193
RB-83	-1.084E-02		4.349E-02	6.769E-02	4.362E-03	-0.160
RB-84	1.453E-02		3.378E-02	6.132E-02	4.416E-03	0.237
KR-85	-7.030E+00		6.860E+00	9.933E+00	6.357E-01	-0.708
SR-85	-3.322E-02		3.241E-02	4.693E-02	3.004E-03	-0.708
RB-86	-3.497E-01		4.476E-01	6.100E-01	3.896E-02	-0.573
Y-88	-1.293E-03		3.715E-02	6.083E-02	3.357E-03	-0.021
ZR-88	1.199E-03		1.880E-02	3.106E-02	1.675E-03	0.039
Y-91	3.325E+00		1.149E+01	1.984E+01	1.140E+00	0.168
NB-94	3.184E-03		2.812E-02	4.772E-02	3.460E-03	0.067
NB-95	-7.575E-04		2.960E-02	4.917E-02	3.603E-03	-0.015
NB-95M	-1.457E-02		5.331E-02	8.659E-02	6.770E-03	-0.168
ZR-95	-9.515E-03		4.136E-02	6.604E-02	5.504E-03	-0.144
NB-97	-1.058E-05		1.604E-05	Half-Life too short		
ZR-97	-1.086E-03		3.944E-04	Half-Life too short		
MO-99	-1.366E+00		1.047E+00	1.230E+00	1.781E-01	-1.111
TC-99M	1.829E+00		3.906E+00	Half-Life too short		
RH-101	1.608E-02		1.565E-02	2.842E-02	1.759E-03	0.566
RH-102	5.059E-03		1.847E-02	3.125E-02	1.910E-03	0.162
RU-103	-3.365E-03		2.156E-02	3.409E-02	4.388E-03	-0.099
RH-106	1.076E-01		2.637E-01	4.126E-01	5.106E-02	0.261
RU-106	1.076E-01		2.634E-01	4.126E-01	2.888E-02	0.261
AG-108M	-4.853E-03		1.679E-02	2.602E-02	1.632E-03	-0.186
CD-109	-1.750E-01		2.132E-01	3.172E-01	2.629E-02	-0.552
AG-110M	-8.917E-03		2.339E-02	3.693E-02	2.747E-03	-0.241
IN-111	-1.061E-02		7.656E-02	1.257E-01	7.705E-03	-0.084
IN-113M	1.913E-02		2.691E-02	4.781E-02	2.772E-03	0.400
SN-113	1.913E-02		2.691E-02	4.781E-02	2.772E-03	0.400
IN-114M	-4.911E-02		7.510E-02	1.185E-01	7.309E-03	-0.414
CD-115	1.549E-01		7.020E-01	1.173E+00	7.615E-02	0.132
SN-117M	1.304E-02		1.722E-02	2.941E-02	2.097E-03	0.443
SB-122	-9.189E-02		1.942E-01	2.893E-01	1.942E-02	-0.318
I-123	-9.611E-06		7.273E-05	Half-Life too short		
TE-123M	-8.537E-04		1.292E-02	2.048E-02	1.461E-03	-0.042
I-124	2.069E-02		1.369E-01	2.252E-01	1.557E-02	0.092
SB-124	9.132E-03		7.437E-02	1.273E-01	8.012E-03	0.072
SB-125	3.257E-02		5.328E-02	9.455E-02	5.641E-03	0.345
TE-125M	8.374E-01		3.256E+00	5.369E+00	6.241E-01	0.156
I-126	-3.197E-02		7.910E-02	1.241E-01	8.884E-03	-0.258
SB-126	2.150E-02		6.239E-02	1.100E-01	8.009E-03	0.196
SN-126	-1.780E-02		2.256E-02	3.212E-02	2.653E-03	-0.554
SB-127	4.538E-02		2.101E-01	3.648E-01	3.029E-02	0.124
XE-127	-1.710E-02		1.808E-02	2.743E-02	1.700E-03	-0.623

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	1.915E-02		3.773E-02	6.558E-02	4.111E-03	0.292
TE-132	4.258E-02		7.178E-02	1.255E-01	1.674E-02	0.339
BA-133	-5.253E-03		2.557E-02	4.100E-02	4.718E-03	-0.128
I-133	6.452E-06		4.264E-06	Half-Life too short		
CS-134	-2.848E-02		3.303E-02	4.653E-02	3.444E-03	-0.612
CS-135	3.782E-02		8.169E-02	1.420E-01	1.104E-02	0.266
I-135	-7.742E+00		7.272E+00	Half-Life too short		
CS-136	-1.052E-02		5.357E-02	8.448E-02	5.936E-03	-0.125
BA-137M	1.923E-02		2.377E-02	4.449E-02	3.178E-03	0.432
CS-137	2.032E-02		2.513E-02	4.703E-02	3.369E-03	0.432
CE-139	-3.965E-03		1.215E-02	1.987E-02	1.204E-03	-0.199
BA-140	-5.633E-02		1.171E-01	1.723E-01	5.627E-02	-0.327
LA-140	-2.203E-02		4.805E-02	6.985E-02	4.139E-03	-0.315
CE-141	2.015E-03		2.101E-02	3.394E-02	3.067E-03	0.059
CE-143	7.068E-02		1.291E+00	2.152E+00	4.397E-01	0.033
CE-144	-4.773E-02		8.784E-02	1.327E-01	2.197E-02	-0.360
PM-144	1.055E-02		2.656E-02	4.675E-02	3.384E-03	0.226
PR-144	7.120E-01		1.792E+00	3.155E+00	2.283E-01	0.226
PM-146	-1.187E-02		3.139E-02	4.864E-02	4.240E-03	-0.244
ND-147	2.533E-01		2.446E-01	4.494E-01	6.221E-02	0.564
PM-149	6.789E-01		3.934E+00	6.654E+00	9.433E-01	0.102
EU-152	-2.187E-02		5.606E-02	8.790E-02	5.717E-03	-0.249
GD-153	-2.600E-03		2.276E-02	3.632E-02	3.288E-03	-0.072
EU-154	1.545E-02		8.339E-02	1.414E-01	1.329E-02	0.109
EU-155	-2.227E-02		3.802E-02	5.756E-02	5.676E-03	-0.387
TB-160	-6.171E-02		8.345E-02	1.148E-01	8.274E-03	-0.538
HO-166M	-4.423E-03		4.480E-02	7.383E-02	5.366E-03	-0.060
TM-171	-3.822E+00		5.292E+00	7.354E+00	5.322E-01	-0.520
LU-176	-1.577E-02		1.363E-02	1.927E-02	1.130E-03	-0.818
LU-177	1.063E-01		2.342E-01	4.071E-01	2.526E-02	0.261
LU-177M	-1.332E-02		1.018E-01	1.636E-01	9.141E-03	-0.081
HF-181	9.115E-03		2.119E-02	3.689E-02	2.275E-03	0.247
W-181	-1.181E-02		6.244E-02	9.200E-02	6.613E-03	-0.128
TA-182	7.968E-02		1.219E-01	2.245E-01	1.298E-02	0.355
RE-183	-2.091E-02		4.495E-02	7.273E-02	4.790E-03	-0.288
RE-184	1.452E-02		1.309E-01	2.201E-01	1.339E-02	0.066
OS-185	8.206E-03		3.061E-02	5.123E-02	3.633E-03	0.160
RE-188	1.859E-02		7.528E-02	1.229E-01	9.375E-03	0.151
W-188	-7.870E-01		3.468E+00	5.596E+00	3.280E-01	-0.141
IR-192	1.399E-02		1.894E-02	3.371E-02	1.983E-03	0.415
AU-195	-6.205E-03		6.704E-02	1.072E-01	9.841E-03	-0.058
TL-200	-1.230E-01		2.000E+00	3.262E+00	1.829E-01	-0.038
TL-201	-1.634E-01		5.147E-01	8.424E-01	5.102E-02	-0.194
TL-202	-1.993E-02		2.546E-02	3.610E-02	2.101E-03	-0.552
HG-203	-4.180E-03		1.775E-02	2.865E-02	1.775E-03	-0.146
BI-207	2.911E-02		3.736E-02	7.038E-02	4.552E-03	0.414
TL-207	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
TL-208	-1.740E-02		3.308E-02	4.150E-02	3.148E-03	-0.419

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	-1.517E+00		5.039E+00	7.820E+00	5.598E-01	-0.194
BI-210	4.000E-02		1.928E-01	3.223E-01	2.441E-02	0.124
PB-210	4.000E-02		1.928E-01	3.223E-01	2.441E-02	0.124
PO-210	4.000E-02		1.927E-01	3.223E-01	2.083E-02	0.124
BI-211	-2.192E-02		1.370E-01	2.171E-01	1.382E-02	-0.101
PB-211	7.020E-02		5.240E-01	8.712E-01	5.429E-01	0.081
BI-212	1.162E-02		1.805E-01	3.050E-01	2.711E-02	0.038
PB-212	2.140E-03		3.217E-02	5.303E-02	4.040E-03	0.040
PO-212	2.140E-03		3.217E-02	5.303E-02	4.040E-03	0.040
BI-214	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
PB-214	-9.257E-03		4.764E-02	7.516E-02	6.183E-03	-0.123
PO-214	-9.257E-03		4.764E-02	7.516E-02	6.183E-03	-0.123
PO-215	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
PO-216	2.140E-03		3.217E-02	5.303E-02	4.040E-03	0.040
PO-218	-9.257E-03		4.764E-02	7.516E-02	6.183E-03	-0.123
RN-219	-8.733E-02		2.377E-01	3.686E-01	4.965E-02	-0.237
RN-220	-8.942E+00		1.528E+01	2.183E+01	1.448E+00	-0.410
RA-223	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
RA-224	3.196E-02		3.157E-01	5.314E-01	3.268E-02	0.060
RA-226	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
AC-227	1.643E-01		2.222E-01	3.920E-01	5.515E-02	0.419
TH-227	1.643E-01		2.227E-01	3.920E-01	6.660E-02	0.419
AC-228	7.644E-02		1.090E-01	1.989E-01	2.018E-02	0.384
RA-228	7.644E-02		1.090E-01	1.989E-01	2.018E-02	0.384
TH-228	1.972E-03		3.215E-02	5.297E-02	4.036E-03	0.037
TH-229	-2.919E-03		2.394E-01	4.012E-01	2.478E-02	-0.007
TH-230	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
PA-231	6.319E-02		7.262E-01	1.217E+00	1.680E-01	0.052
TH-231	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
U-231	-2.747E-02		9.025E-02	1.413E-01	1.261E-02	-0.194
TH-232	7.644E-02		1.090E-01	1.989E-01	2.018E-02	0.384
PA-233	2.836E-02		3.833E-02	6.814E-02	4.236E-03	0.416
PA-234	6.598E-02		1.745E-01	3.124E-01	5.650E-02	0.211
PA-234M	2.399E+00		5.263E+00	9.310E+00	9.167E-01	0.258
TH-234	3.425E-02		2.012E-01	3.330E-01	5.769E-02	0.103
U-234	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
U-235	-6.096E-02		9.401E-02	1.317E-01	2.338E-02	-0.463
NP-236	6.951E-03		3.743E-02	6.078E-02	4.182E-03	0.114
NP-237	-5.344E-02		6.688E-02	9.366E-02	2.079E-02	-0.571
U-238	3.425E-02		2.012E-01	3.330E-01	5.769E-02	0.103
NP-239	2.319E-03		7.434E-02	1.200E-01	1.313E-02	0.019
AM-241	3.850E-03		2.077E-02	3.449E-02	2.692E-03	0.112
AM-243	-7.902E-03		1.411E-02	2.013E-02	1.520E-03	-0.393
CM-243	9.780E-03		3.209E-02	5.337E-02	5.136E-03	0.183
CM-247	-7.342E-03		2.013E-02	3.116E-02	1.709E-03	-0.236
CF-249	-1.636E-02		2.427E-02	3.618E-02	1.962E-03	-0.452
CF-251	1.384E-02		5.681E-02	9.760E-02	5.960E-03	0.142
ANH-511	-2.890E-02		3.513E-02	6.374E-02	4.067E-03	-0.453

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201873069          *
* Acquisition date  :  9-JUL-2009 08:22:22 Detector SN#     :               *
* Detector ID       : GAM21                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:08.24      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       :  2-JUL-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201873069          Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.3282E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.057E-01	1.896E-01	1.380E-01	9.671E-02 NOT IDENT.
NA-22	5.508E-03	2.914E-02	2.532E-02	1.487E-02 NOT IDENT.
NA-24	-7.892E+01	1.109E+02	0.000E+00	5.659E+01 SHORT HLIF
AL-26	1.059E-03	3.915E-02	3.319E-02	1.997E-02 NOT IDENT.
K-40	1.161E-01	3.284E-01	2.916E-01	1.675E-01 NOT IDENT.
TI-44	-1.007E-02	8.902E-03	6.659E-03	4.542E-03 NOT IDENT.
SC-46	-2.137E-02	2.261E-02	1.493E-02	1.154E-02 NOT IDENT.
V-48	-4.730E-02	3.567E-02	2.083E-02	1.820E-02 NOT IDENT.
CR-51	1.004E-01	1.740E-01	1.601E-01	8.878E-02 NOT IDENT.
MN-52	-1.474E-03	1.043E-01	8.583E-02	5.322E-02 NOT IDENT.
MN-54	-1.609E-02	2.407E-02	1.803E-02	1.228E-02 NOT IDENT.
CO-56	-1.989E-02	2.766E-02	2.069E-02	1.411E-02 NOT IDENT.
CO-57	3.399E-03	1.015E-02	8.966E-03	5.176E-03 NOT IDENT.
CO-58	1.470E-02	2.855E-02	2.636E-02	1.457E-02 NOT IDENT.
FE-59	-8.377E-03	5.018E-02	4.059E-02	2.560E-02 NOT IDENT.
CO-60	6.945E-03	3.247E-02	2.819E-02	1.656E-02 NOT IDENT.
ZN-65	3.344E-02	5.549E-02	5.225E-02	2.831E-02 NOT IDENT.
GE-68	-4.615E-01	9.204E-01	6.977E-01	4.696E-01 NOT IDENT.
AS-73	-4.483E-02	6.675E-02	5.457E-02	3.405E-02 NOT IDENT.
AS-74	2.940E-04	4.549E-02	3.811E-02	2.321E-02 NOT IDENT.
SE-75	5.518E-03	2.127E-02	1.912E-02	1.085E-02 NOT IDENT.
BR-77	4.969E-02	6.780E-01	5.788E-01	3.459E-01 NOT IDENT.
SR-82	8.230E-02	2.393E-01	2.161E-01	1.221E-01 NOT IDENT.
RB-83	-1.084E-02	4.262E-02	3.454E-02	2.174E-02 NOT IDENT.
RB-84	1.453E-02	3.310E-02	3.101E-02	1.689E-02 NOT IDENT.
KR-85	-7.030E+00	6.722E+00	5.070E+00	3.430E+00 NOT IDENT.

SR-85	-3.322E-02	3.176E-02	2.396E-02	1.621E-02	NOT IDENT.
RB-86	-3.497E-01	4.387E-01	3.073E-01	2.238E-01	NOT IDENT.
Y-88	-1.293E-03	3.641E-02	3.035E-02	1.858E-02	NOT IDENT.
ZR-88	1.199E-03	1.843E-02	1.593E-02	9.402E-03	NOT IDENT.
Y-91	3.325E+00	1.126E+01	9.976E+00	5.747E+00	NOT IDENT.
NB-94	3.184E-03	2.756E-02	2.423E-02	1.406E-02	NOT IDENT.
NB-95	-7.575E-04	2.901E-02	2.492E-02	1.480E-02	NOT IDENT.
NB-95M	-1.457E-02	5.225E-02	4.479E-02	2.666E-02	NOT IDENT.
ZR-95	-9.515E-03	4.053E-02	3.348E-02	2.068E-02	NOT IDENT.
NB-97	-1.058E+01	3.144E+01	0.000E+00	1.604E+01	SHORT HLIF
ZR-97	-1.086E+03	7.731E+02	0.000E+00	3.944E+02	SHORT HLIF
MO-99	-1.366E+00	1.026E+00	6.239E-01	5.233E-01	NOT IDENT.
TC-99M	1.829E+06	7.657E+06	0.000E+00	3.906E+06	SHORT HLIF
RH-101	1.608E-02	1.534E-02	1.475E-02	7.824E-03	NOT IDENT.
RH-102	5.059E-03	1.810E-02	1.597E-02	9.233E-03	NOT IDENT.
RU-103	-3.365E-03	2.113E-02	1.741E-02	1.078E-02	NOT IDENT.
RH-106	1.076E-01	2.584E-01	2.099E-01	1.318E-01	NOT IDENT.
RU-106	1.076E-01	2.582E-01	2.099E-01	1.317E-01	NOT IDENT.
AG-108M	-4.853E-03	1.645E-02	1.332E-02	8.395E-03	NOT IDENT.
CD-109	-1.750E-01	2.089E-01	1.668E-01	1.066E-01	NOT IDENT.
AG-110M	-8.917E-03	2.292E-02	1.877E-02	1.169E-02	NOT IDENT.
IN-111	-1.061E-02	7.503E-02	6.500E-02	3.828E-02	NOT IDENT.
IN-113M	1.913E-02	2.637E-02	2.452E-02	1.345E-02	NOT IDENT.
SN-113	1.913E-02	2.637E-02	2.452E-02	1.345E-02	NOT IDENT.
IN-114M	-4.911E-02	7.360E-02	6.154E-02	3.755E-02	NOT IDENT.
CD-115	1.549E-01	6.879E-01	5.983E-01	3.510E-01	NOT IDENT.
SN-117M	1.304E-02	1.687E-02	1.532E-02	8.608E-03	NOT IDENT.
SB-122	-9.189E-02	1.903E-01	1.474E-01	9.709E-02	NOT IDENT.
I-123	-9.611E+00	1.426E+02	0.000E+00	7.273E+01	SHORT HLIF
TE-123M	-8.537E-04	1.266E-02	1.066E-02	6.460E-03	NOT IDENT.
I-124	2.069E-02	1.341E-01	1.146E-01	6.844E-02	NOT IDENT.
SB-124	9.132E-03	7.289E-02	6.364E-02	3.719E-02	NOT IDENT.
SB-125	3.257E-02	5.222E-02	4.841E-02	2.664E-02	NOT IDENT.
TE-125M	8.374E-01	3.191E+00	2.813E+00	1.628E+00	NOT IDENT.
I-126	-3.197E-02	7.751E-02	6.306E-02	3.955E-02	NOT IDENT.
SB-126	2.150E-02	6.114E-02	5.580E-02	3.120E-02	NOT IDENT.
SN-126	-1.780E-02	2.211E-02	1.689E-02	1.128E-02	NOT IDENT.
SB-127	4.538E-02	2.059E-01	1.853E-01	1.051E-01	NOT IDENT.
XE-127	-1.710E-02	1.772E-02	1.422E-02	9.040E-03	NOT IDENT.
I-131	1.915E-02	3.697E-02	3.367E-02	1.886E-02	NOT IDENT.
TE-132	4.258E-02	7.035E-02	6.495E-02	3.589E-02	NOT IDENT.
BA-133	-5.253E-03	2.505E-02	2.106E-02	1.278E-02	NOT IDENT.
I-133	6.452E+00	8.357E+00	0.000E+00	4.264E+00	SHORT HLIF
CS-134	-2.848E-02	3.237E-02	2.357E-02	1.651E-02	NOT IDENT.
CS-135	3.782E-02	8.006E-02	7.327E-02	4.085E-02	NOT IDENT.
I-135	-7.742E+06	1.425E+07	0.000E+00	7.272E+06	SHORT HLIF
CS-136	-1.052E-02	5.250E-02	4.258E-02	2.679E-02	NOT IDENT.
BA-137M	1.923E-02	2.330E-02	2.261E-02	1.189E-02	NOT IDENT.
CS-137	2.032E-02	2.463E-02	2.390E-02	1.257E-02	NOT IDENT.
CE-139	-3.965E-03	1.191E-02	1.034E-02	6.076E-03	NOT IDENT.
BA-140	-5.633E-02	1.147E-01	8.785E-02	5.854E-02	NOT IDENT.
LA-140	-2.203E-02	4.709E-02	3.494E-02	2.403E-02	NOT IDENT.
CE-141	2.015E-03	2.059E-02	1.770E-02	1.050E-02	NOT IDENT.
CE-143	7.068E-02	1.265E+00	1.109E+00	6.454E-01	NOT IDENT.
CE-144	-4.773E-02	8.608E-02	6.932E-02	4.392E-02	NOT IDENT.
PM-144	1.055E-02	2.603E-02	2.373E-02	1.328E-02	NOT IDENT.
PR-144	7.120E-01	1.757E+00	1.602E+00	8.962E-01	NOT IDENT.
PM-146	-1.187E-02	3.076E-02	2.488E-02	1.569E-02	NOT IDENT.
ND-147	2.533E-01	2.397E-01	2.292E-01	1.223E-01	NOT IDENT.
PM-149	6.789E-01	3.855E+00	3.431E+00	1.967E+00	NOT IDENT.
EU-152	-2.187E-02	5.493E-02	4.518E-02	2.803E-02	NOT IDENT.
GD-153	-2.600E-03	2.231E-02	1.907E-02	1.138E-02	NOT IDENT.
EU-154	1.545E-02	8.172E-02	7.100E-02	4.169E-02	NOT IDENT.
EU-155	-2.227E-02	3.726E-02	3.018E-02	1.901E-02	NOT IDENT.
TB-160	-6.171E-02	8.178E-02	5.805E-02	4.172E-02	NOT IDENT.
HO-166M	-4.423E-03	4.390E-02	3.747E-02	2.240E-02	NOT IDENT.
TM-171	-3.822E+00	5.186E+00	3.885E+00	2.646E+00	NOT IDENT.
LU-176	-1.577E-02	1.335E-02	9.926E-03	6.813E-03	NOT IDENT.
LU-177	1.063E-01	2.296E-01	2.110E-01	1.171E-01	NOT IDENT.
LU-177M	-1.332E-02	9.977E-02	8.380E-02	5.091E-02	NOT IDENT.
HF-181	9.115E-03	2.076E-02	1.885E-02	1.059E-02	NOT IDENT.
W-181	-1.181E-02	6.120E-02	4.861E-02	3.122E-02	NOT IDENT.
TA-182	7.968E-02	1.194E-01	1.128E-01	6.093E-02	NOT IDENT.
RE-183	-2.091E-02	4.405E-02	3.786E-02	2.247E-02	NOT IDENT.
RE-184	1.452E-02	1.283E-01	1.137E-01	6.545E-02	NOT IDENT.
OS-185	8.206E-03	3.000E-02	2.604E-02	1.531E-02	NOT IDENT.
RE-188	1.859E-02	7.377E-02	6.404E-02	3.764E-02	NOT IDENT.
W-188	-7.870E-01	3.399E+00	2.885E+00	1.734E+00	NOT IDENT.

IR-192	1.399E-02	1.856E-02	1.735E-02	9.469E-03	NOT IDENT.
AU-195	-6.205E-03	6.570E-02	5.627E-02	3.352E-02	NOT IDENT.
TL-200	-1.230E-01	1.960E+00	1.675E+00	1.000E+00	NOT IDENT.
TL-201	-1.634E-01	5.044E-01	4.383E-01	2.573E-01	NOT IDENT.
TL-202	-1.993E-02	2.495E-02	1.848E-02	1.273E-02	NOT IDENT.
HG-203	-4.180E-03	1.739E-02	1.478E-02	8.875E-03	NOT IDENT.
BI-207	2.911E-02	3.661E-02	3.547E-02	1.868E-02	NOT IDENT.
TL-207	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
TL-208	-1.740E-02	3.242E-02	2.114E-02	1.654E-02	NOT IDENT.
PO-209	-1.517E+00	4.938E+00	3.953E+00	2.519E+00	NOT IDENT.
BI-210	4.000E-02	1.889E-01	1.712E-01	9.638E-02	NOT IDENT.
PB-210	4.000E-02	1.889E-01	1.712E-01	9.638E-02	NOT IDENT.
PO-210	4.000E-02	1.889E-01	1.712E-01	9.637E-02	NOT IDENT.
BI-211	-2.192E-02	1.343E-01	1.116E-01	6.852E-02	NOT IDENT.
PB-211	7.020E-02	5.135E-01	4.465E-01	2.620E-01	NOT IDENT.
BI-212	1.162E-02	1.769E-01	1.547E-01	9.026E-02	NOT IDENT.
PB-212	2.140E-03	3.153E-02	2.742E-02	1.609E-02	NOT IDENT.
PO-212	2.140E-03	3.153E-02	2.742E-02	1.609E-02	NOT IDENT.
BI-214	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
PB-214	-9.257E-03	4.668E-02	3.861E-02	2.382E-02	NOT IDENT.
PO-214	-9.257E-03	4.668E-02	3.861E-02	2.382E-02	NOT IDENT.
PO-215	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
PO-216	2.140E-03	3.153E-02	2.742E-02	1.609E-02	NOT IDENT.
PO-218	-9.257E-03	4.668E-02	3.861E-02	2.382E-02	NOT IDENT.
RN-219	-8.733E-02	2.330E-01	1.889E-01	1.189E-01	NOT IDENT.
RN-220	-8.942E+00	1.497E+01	1.113E+01	7.640E+00	NOT IDENT.
RA-223	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
RA-224	3.196E-02	3.094E-01	2.748E-01	1.578E-01	NOT IDENT.
RA-226	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
AC-227	1.643E-01	2.178E-01	2.025E-01	1.111E-01	NOT IDENT.
TH-227	1.643E-01	2.183E-01	2.025E-01	1.114E-01	NOT IDENT.
AC-228	7.644E-02	1.068E-01	1.005E-01	5.451E-02	NOT IDENT.
RA-228	7.644E-02	1.068E-01	1.005E-01	5.451E-02	NOT IDENT.
TH-228	1.972E-03	3.151E-02	2.740E-02	1.608E-02	NOT IDENT.
TH-229	-2.919E-03	2.346E-01	2.082E-01	1.197E-01	NOT IDENT.
TH-230	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
PA-231	6.319E-02	7.117E-01	6.277E-01	3.631E-01	NOT IDENT.
TH-231	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
U-231	-2.747E-02	8.845E-02	7.422E-02	4.513E-02	NOT IDENT.
TH-232	7.644E-02	1.068E-01	1.005E-01	5.451E-02	NOT IDENT.
PA-233	2.836E-02	3.756E-02	3.508E-02	1.916E-02	NOT IDENT.
PA-234	6.598E-02	1.710E-01	1.578E-01	8.726E-02	NOT IDENT.
PA-234M	2.399E+00	5.158E+00	4.697E+00	2.631E+00	NOT IDENT.
TH-234	3.425E-02	1.972E-01	1.760E-01	1.006E-01	NOT IDENT.
U-234	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
U-235	-6.096E-02	9.213E-02	6.871E-02	4.701E-02	NOT IDENT.
NP-236	6.951E-03	3.668E-02	3.164E-02	1.872E-02	NOT IDENT.
NP-237	-5.344E-02	6.554E-02	4.926E-02	3.344E-02	NOT IDENT.
U-238	3.425E-02	1.972E-01	1.760E-01	1.006E-01	NOT IDENT.
NP-239	2.319E-03	7.286E-02	6.279E-02	3.717E-02	NOT IDENT.
AM-241	3.850E-03	2.036E-02	1.825E-02	1.039E-02	NOT IDENT.
AM-243	-7.902E-03	1.383E-02	1.061E-02	7.055E-03	NOT IDENT.
CM-243	9.780E-03	3.145E-02	2.799E-02	1.605E-02	NOT IDENT.
CM-247	-7.342E-03	1.973E-02	1.597E-02	1.007E-02	NOT IDENT.
CF-249	-1.636E-02	2.378E-02	1.856E-02	1.213E-02	NOT IDENT.
CF-251	1.384E-02	5.568E-02	5.073E-02	2.841E-02	NOT IDENT.
ANH-511	-2.890E-02	3.442E-02	3.254E-02	1.756E-02	NOT IDENT.

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*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                           CHARLESTON ,SC 29417                        *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                *
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ENERGY	MDA COUNTS
46.50	51.5619
46.50	51.5619
46.50	51.5619
48.70	51.7203
49.72	47.7304
51.35	45.7999
52.39	48.9207
52.97	53.0379
53.15	53.0504
53.44	48.9882
54.07	46.9856
56.28	53.2646
56.28	53.2648
57.37	49.2351
57.53	49.2450
57.53	49.2451
57.60	49.2493
57.98	43.1136
57.98	43.1136
59.32	56.5521
59.32	56.5521
59.40	56.5576
59.54	56.5674
59.72	63.7809
60.01	63.8035
61.10	56.6750
61.14	55.6472
61.30	56.6886
63.00	59.9027
63.29	60.9564
63.29	60.9564
63.58	60.9774
64.28	50.6840
65.12	52.8046
65.20	55.9159
65.20	55.9159
66.05	54.9347
66.72	63.2753
66.83	61.2086
66.91	61.2142
67.20	61.2347
67.20	61.2347
67.75	58.1576
67.85	57.1256
68.90	58.2334
68.90	58.2334
69.30	55.1386
69.67	62.4472
70.82	68.7800
70.82	68.7800
70.83	68.7808
72.80	59.5308
72.87	59.5352
72.87	59.5352
74.67	65.9308
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.97	61.7645
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75.70	53.4315
77.11	59.8071
77.11	59.8071
77.11	59.8071

77.11	59.8071
77.11	59.8071
77.11	59.8071
78.38	76.6976
79.62	62.0686
79.80	62.0803
79.80	62.0803
80.11	66.3102
80.18	69.4729
80.30	69.4815
80.30	69.4815
80.57	71.6069
81.00	72.6921
81.07	72.6974
81.07	72.6974
81.07	72.6974
81.07	72.6974
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83.78	49.6553
83.78	49.6553
83.78	49.6553
84.21	58.1322
84.40	60.2577
84.90	67.6917
85.43	69.8440
86.29	58.2531
86.50	60.3838
86.54	60.3862
86.59	60.3892
86.72	59.3374
86.79	59.3413
86.94	62.5297
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.57	60.4475
87.88	73.1956
88.03	73.2064
88.36	68.9846
88.47	68.9921
89.95	51.0212
91.11	51.0784
92.29	56.4626
92.38	54.3365
92.38	54.3365
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94.00	60.8223
94.67	60.8604
94.67	60.8606
94.90	63.0097
94.90	63.0097
94.90	63.0097
94.90	63.0097
95.87	58.7910
95.87	58.7910
96.73	53.4893
97.43	49.2417
98.44	49.2875
98.44	49.2875
98.88	50.3793
99.55	54.7003
99.55	54.7003
99.86	56.8614
100.00	63.3067
100.10	63.3126
103.18	46.2708
103.76	48.4480
105.00	61.4349
105.31	63.6079
108.00	56.1932
109.28	61.6645
111.00	69.3396
111.00	69.3396

111.76	65.0480
112.95	64.0282
115.19	63.0616
116.30	58.7669
117.00	57.7120
117.00	57.7120
117.66	66.4595
121.11	61.1842
121.62	59.0234
121.78	59.0310
122.06	57.9510
122.32	65.6186
122.32	65.6186
122.32	65.6186
122.32	65.6186
123.07	60.1867
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131.20	60.5729
133.02	61.7610
133.54	69.5085
135.34	66.2892
136.00	61.9011
136.25	66.3350
136.48	66.3464
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140.51	0.0000
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142.65	61.0975
143.76	60.0354
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144.24	52.2715
144.24	52.2715
144.24	52.2715
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145.44	48.9777
147.16	55.7255
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152.70	55.9460
153.22	53.7279
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154.21	57.1256
154.21	57.1256
154.21	57.1256
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156.02	86.3571
158.56	52.8044
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159.00	64.0589
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161.27	54.0282
162.32	65.7811
162.64	67.5980
163.35	66.7287
163.89	63.1448
165.85	57.8086
167.43	58.7737
171.28	58.0172
171.86	55.3189
172.10	51.6994
176.55	52.7586
176.60	53.6701
181.06	62.0338
184.41	59.4224
185.71	56.7260
186.00	56.7366
190.27	64.2271
192.34	65.2273
193.63	57.9235
197.04	51.5939
198.01	47.9365
198.60	47.0315
200.40	60.0068
201.83	62.8294
202.84	60.0937
205.31	56.4779
208.36	55.6512
208.81	51.9545

209.75	55.6959
209.75	55.6959
210.97	56.6644
215.65	62.4052
216.55	54.0500
218.09	52.2320
222.10	64.5026
223.80	55.2066
226.40	56.2233
227.00	60.9288
227.08	60.9315
227.20	55.3107
228.16	54.4019
228.18	54.4026
228.18	54.4026
231.56	46.0461
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236.00	53.6929
236.00	53.6929
238.60	42.4482
238.63	42.4490
238.63	42.4490
238.63	42.4490
239.00	35.8528
240.98	49.1134
241.98	66.1497
241.98	66.1497
241.98	66.1497
244.69	49.2099
245.39	44.4945
247.94	44.5542
248.90	52.1641
249.79	54.0860
252.40	56.0594
252.85	55.1219
252.85	55.1219
254.15	0.0000
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256.20	47.6007
260.50	50.5674
260.90	48.6691
262.80	59.2232
264.65	39.1997
268.24	40.2281
268.79	43.1131
269.46	51.7529
269.46	51.7529
269.46	51.7529
269.46	51.7529
271.23	49.8799
273.65	42.2565
276.40	39.4285
277.35	44.2570
277.60	48.1116
277.60	48.1116
278.00	48.1207
278.60	42.3586
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279.53	39.4880
280.46	35.6518
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284.30	29.9257
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285.90	31.8805
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286.10	34.7823
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290.80	38.7329
291.72	36.8125
293.26	36.8389
293.70	37.8165
295.21	46.5762
295.21	46.5762
295.21	46.5762
295.96	43.6805

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297.23	44.6776
298.57	45.6776
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299.80	39.8689
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300.09	34.0391
300.09	34.0391
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300.12	34.0396
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303.91	38.9702
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304.40	43.8514
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306.84	46.8270
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311.98	35.2022
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318.01	48.0436
319.02	49.0466
319.41	44.1491
320.08	33.3671
323.87	35.3892
323.87	35.3892
323.87	35.3892
323.87	35.3892
325.23	39.3447
328.77	40.3909
333.44	32.5758
334.20	34.5616
334.20	34.5616
334.30	34.5629
338.28	31.6547
338.28	31.6547
338.28	31.6547
338.28	31.6547
338.32	31.6551
338.32	31.6551
338.32	31.6551
340.50	35.6454
340.57	32.6757
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345.85	31.7566
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351.92	35.8176
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351.92	35.8176
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367.94	34.0515
369.80	41.0931
374.96	28.1217
383.85	25.1978
387.95	36.3432
388.63	29.2843
391.69	27.2973
391.69	27.2973
392.90	34.3906
398.62	28.3845
400.65	27.3919
401.10	31.4556
401.81	29.4340
402.60	26.3974
404.84	24.3876
410.95	24.4441
411.60	23.4312
413.65	28.5472
414.70	22.4388
415.30	23.4638
415.76	24.4884
417.63	0.0000

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427.08	19.4683
427.89	19.4741
432.53	21.5606
433.93	19.5172
439.47	27.7907
439.56	26.7624
439.89	23.6772
443.98	21.6501
444.90	22.6886
445.03	22.6896
445.03	22.6896
445.03	22.6896
445.03	22.6896
453.90	36.2112
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468.07	33.2719
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475.35	22.9319
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477.59	23.9928
477.96	25.0392
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484.57	21.9585
487.03	21.9767
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511.00	16.8779
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511.85	27.4343
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513.99	68.6340
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529.87	0.0000
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546.56	0.0000
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552.65	23.5168
555.20	11.7678
563.23	25.7385
563.90	25.7438
568.70	18.2621
569.32	19.3399
569.50	25.7877
569.67	25.7895
573.80	22.5940
574.00	21.5190
574.64	18.2949
578.91	31.2493
579.30	30.1752
583.14	28.0522
585.48	23.7531
591.81	31.3697
592.07	28.1265
593.00	28.1347
595.88	20.5771
600.56	22.7744
602.52	0.0000
602.71	24.9592
602.71	24.9592
603.60	28.2223
604.41	32.5715
604.70	34.7461
609.31	26.0947
609.31	26.0947
609.31	26.0947

609.31	26.0947
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614.37	27.2217
618.01	27.2504
621.84	14.1857
621.84	14.1857
631.29	19.6950
633.02	17.5152
633.10	17.5156
634.78	21.9048
635.90	20.8160
636.97	20.8225
645.85	21.9731
646.12	19.7771
656.30	25.7094
657.75	22.0454
657.90	0.0000
661.65	13.7933
661.65	13.7933
664.57	23.9275
666.33	21.1769
666.33	21.1769
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677.61	20.3184
685.20	13.8818
692.80	24.1105
695.00	25.0527
696.49	22.2778
696.49	22.2778
697.00	23.2091
697.49	24.1407
698.33	25.0746
698.50	26.0045
699.00	25.0790
702.63	27.8925
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706.58	0.0000
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711.68	21.4348
713.82	22.3794
717.42	21.4670
720.50	14.9456
721.93	19.6234
722.20	18.6902
722.78	18.6930
722.78	18.6930
722.89	18.6934
722.95	18.6938
723.30	15.8912
724.18	16.8296
727.18	14.9714
733.00	10.3082
735.90	9.3781
739.58	20.6510
742.81	9.3945
744.21	9.3978
747.13	14.1071
751.79	11.2991
752.31	12.2422
753.82	18.8411
755.35	14.1364
756.15	15.0820
756.87	10.3707
763.93	23.6115
765.79	22.6772
766.41	18.9006
766.84	17.9575
768.36	21.7464
768.36	21.7464
768.36	21.7464
768.36	21.7464
776.49	18.9478
778.00	17.0592
778.57	18.0096
778.89	18.9591
783.80	17.0837

785.46	17.0907
792.07	15.2161
795.84	22.8447
796.30	23.7996
801.93	12.3925
805.60	25.7607
810.29	13.3725
810.76	16.2398
815.85	16.2595
817.79	19.1378
818.51	20.0981
819.60	15.3167
826.30	14.3823
828.27	7.6742
831.60	15.3604
831.96	13.4414
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836.80	0.0000
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848.13	18.3108
856.28	0.0000
856.80	21.2440
860.37	12.5636
867.32	17.4236
867.82	17.4254
871.10	9.6881
873.19	10.6618
874.81	17.4532
875.33	0.0000
876.40	14.5496
879.36	14.5593
880.27	12.6207
880.51	12.6213
881.50	6.7976
883.24	5.8289
884.67	7.7743
889.25	14.5917
896.60	13.6414
898.02	19.4938
899.00	18.5230
903.28	15.6133
911.07	14.6625
911.07	14.6625
911.07	14.6625
919.63	13.7109
920.93	9.7961
925.00	18.6293
925.24	17.6497
926.50	12.7506
934.06	10.8066
934.06	10.8066
934.06	10.8066
934.06	10.8066
935.52	7.8618
937.48	4.9158
944.10	8.8608
946.00	6.8946
949.00	8.8702
962.29	14.8257
964.01	10.8760
966.15	8.9026
968.20	11.8752
969.11	11.8777
969.11	11.8777
969.11	11.8777
977.42	4.9577
980.50	10.9138
983.50	18.8632
989.30	10.9340
996.32	26.8770
1001.03	13.9496
1001.68	12.9550
1004.76	17.9491
1021.30	0.0000
1024.50	0.0000
1034.80	8.0264
1037.82	12.0469
1038.57	8.0322

1038.76	0.0000
1045.16	11.0591
1046.59	14.0792
1048.07	14.0832
1050.47	14.0900
1050.47	14.0900
1063.62	8.0726
1076.63	17.1978
1077.35	16.1888
1085.78	16.2148
1099.22	10.1607
1112.02	16.2975
1112.84	13.2439
1115.52	8.1543
1120.29	7.1413
1120.29	7.1413
1120.29	7.1413
1120.29	7.1413
1120.51	7.1416
1121.28	9.1835
1124.00	0.0000
1129.67	7.1541
1131.51	0.0000
1147.95	0.0000
1167.94	13.3814
1173.22	16.4857
1175.09	12.3687
1177.93	12.3750
1189.05	7.2333
1204.90	10.3630
1205.75	9.3281
1213.00	16.6055
1221.42	8.3151
1230.97	9.3706
1235.34	19.7979
1236.41	0.0000
1238.11	15.6372
1238.11	15.6372
1238.11	15.6372
1238.11	15.6372
1238.25	12.5103
1246.25	13.5718
1260.41	0.0000
1271.85	10.4867
1274.45	8.3932
1274.54	8.3932
1291.56	2.1045
1298.22	0.0000
1312.09	6.3357
1325.50	8.4668
1325.50	8.4668
1332.49	9.5361
1333.61	7.4184
1360.21	4.2580
1362.66	0.0000
1365.15	6.3921
1368.21	11.7251
1368.53	0.0000
1376.25	5.3365
1377.67	8.5404
1377.67	8.5404
1377.67	8.5404
1377.67	8.5404
1384.27	5.3436
1394.10	9.6339
1395.20	12.8472
1407.95	4.2913
1434.06	15.0824
1436.60	15.0886
1457.56	0.0000
1460.81	8.6553
1489.15	9.3143
1509.49	9.3436
1596.49	8.5201
1620.62	3.8001
1678.03	0.0000
1691.02	6.7175
1691.02	6.7175

1706.46	0.0000
1750.46	0.0000
1764.49	5.8169
1764.49	5.8169
1764.49	5.8169
1764.49	5.8169
1770.23	4.8512
1771.40	6.7927
1791.20	0.0000
1808.65	8.7778
1836.01	6.8521

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201873069

Total Uranium Activity	7.3681E-02	ug/g
Total Uranium Counting Unc.	5.8811E-01	ug/g
Total Uranium Tpu	3.0006E-07	ug/g
Total Uranium Mda	5.2465E-01	ug/g

THERE ARE NO PEAKS !

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:37:18.35

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:36:12.
Sample ID         : G1201873070          Sample quantity  : 1.25460E+02 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.66  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.05*	125	468	1.05	126.10	122	9	1.74E-02	33.2	
2	3	74.09	555	564	1.46	148.18	141	16	7.71E-02	8.8	6.21E+00
3	3	76.55*	621	334	0.94	153.10	141	16	8.63E-02	6.4	
4	2	83.69*	124	302	1.46	167.39	164	29	1.73E-02	25.3	1.49E+00
5	2	86.52	317	384	1.55	173.04	164	29	4.40E-02	12.7	
6	2	89.36	215	294	1.15	178.72	164	29	2.99E-02	15.2	
7	2	92.23*	270	330	1.37	184.46	164	29	3.75E-02	14.3	
8	0	128.41	69	307	0.74	256.83	254	8	9.52E-03	45.9	
9	0	143.92*	48	495	0.63	287.84	280	13	6.62E-03	98.6	
10	0	185.56*	212	401	1.49	371.12	366	13	2.95E-02	21.3	
11	0	209.33	155	313	1.08	418.65	414	11	2.15E-02	23.5	
12	4	238.13*	1105	178	0.96	476.26	472	19	1.53E-01	3.6	2.03E+00
13	4	241.30*	250	300	1.97	482.60	472	19	3.47E-02	18.0	
14	0	269.83	131	192	1.23	539.65	535	10	1.82E-02	21.6	
15	0	277.18	80	254	0.80	554.36	547	13	1.11E-02	42.9	
16	0	294.77	339	180	1.07	589.53	584	10	4.71E-02	9.2	
17	0	326.80	85	217	2.44	653.59	648	15	1.19E-02	38.9	
18	0	337.67*	187	155	1.07	675.34	671	10	2.59E-02	14.7	
19	0	351.41*	596	141	1.07	702.83	697	12	8.28E-02	5.8	
20	0	462.92*	67	100	1.47	925.85	920	11	9.29E-03	32.7	
21	0	510.58*	142	174	1.67	1021.16	1013	17	1.97E-02	25.1	
22	0	582.72*	377	79	1.30	1165.44	1157	14	5.24E-02	7.4	
23	0	609.08*	442	85	1.34	1218.17	1213	13	6.14E-02	6.6	
24	0	727.54	90	59	1.27	1455.08	1450	12	1.25E-02	20.2	
25	0	860.75	55	42	1.82	1721.51	1715	13	7.59E-03	28.0	
26	0	911.18*	214	65	1.18	1822.36	1816	12	2.97E-02	10.5	
27	0	934.47	60	57	1.73	1868.95	1859	19	8.33E-03	32.8	
28	8	964.64	41	49	2.62	1929.28	1924	21	5.68E-03	35.6	1.19E+00
29	8	968.84*	162	42	1.58	1937.67	1924	21	2.25E-02	10.8	
30	0	1120.59	93	63	1.36	2241.18	2236	12	1.30E-02	19.9	
31	0	1238.62	95	64	2.16	2477.25	2470	18	1.32E-02	22.2	
32	0	1378.20	20	19	0.98	2756.40	2751	10	2.73E-03	48.0	
33	0	1460.86*	1464	24	1.91	2921.73	2912	19	2.03E-01	2.7	
34	0	1496.29	22	3	1.98	2992.58	2985	13	3.09E-03	26.8	
35	0	1730.11	29	6	1.90	3460.21	3453	13	3.98E-03	26.2	
36	0	1764.61*	73	3	2.34	3529.22	3522	13	1.01E-02	13.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:37:21

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:36:12
Sample ID : G1201873070 Sample quantity : 125.46 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA11 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.66 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.266E+01	2.830E+00	4.298E-01	2.881E-02	75.996
CD-109	+	88.03	*	2.504E+00	7.932E-01	1.063E+00	9.739E-02	2.355
SN-126	+	64.28		8.765E-01	5.952E-01	6.766E-01	9.629E-02	1.295
	+	86.94		1.543E+00	7.503E-01	4.389E-01	1.819E-01	3.516
	+	87.57	*	3.711E-01	1.002E-01	1.051E-01	9.572E-03	3.532
TL-208	+	277.35		7.111E-01	6.164E-01	5.847E-01	6.855E-02	1.216
	+	510.84		6.388E-01	3.270E-01	2.099E-01	2.176E-02	3.043
	+	583.14	*	4.845E-01	7.994E-02	5.606E-02	4.154E-03	8.642
	+	860.37		6.610E-01	3.747E-01	4.496E-01	3.877E-02	1.470
BI-211	+	72.87		2.226E+01	4.291E+00	4.134E+00	3.114E-01	5.385
	+	351.07	*	3.341E+00	4.530E-01	2.852E-01	1.999E-02	11.713
PB-212	+	74.81		2.642E+00	5.660E-01	4.741E-01	5.745E-02	5.573
	+	77.11		1.684E+00	2.545E-01	2.644E-01	2.099E-02	6.370
	+	87.30		1.717E+00	4.941E-01	4.869E-01	6.576E-02	3.525
	+	238.63	*	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
		300.09		1.059E+00	7.986E-01	1.311E+00	1.245E-01	0.808
PO-212	+	74.81		2.642E+00	5.660E-01	4.741E-01	5.745E-02	5.573
	+	77.11		1.684E+00	2.545E-01	2.644E-01	2.099E-02	6.370
	+	87.30		1.717E+00	4.941E-01	4.869E-01	6.576E-02	3.525
		115.19		-1.084E+00	3.376E+00	5.492E+00	3.792E-01	-0.197
	+	238.63	*	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
		300.09		1.059E+00	7.986E-01	1.311E+00	1.245E-01	0.808
BI-214	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.302E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
PB-214	+	74.81		4.553E+00	9.402E-01	8.169E-01	8.737E-02	5.573
	+	77.11		2.888E+00	4.886E-01	4.533E-01	4.988E-02	6.370
	+	87.30		2.941E+00	8.255E-01	8.341E-01	9.933E-02	3.525
	+	241.98		1.836E+00	6.806E-01	5.432E-01	4.822E-02	3.380
	+	295.21		1.122E+00	2.336E-01	2.437E-01	2.388E-02	4.606

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-214	+	74.81		4.553E+00	9.402E-01	8.169E-01	8.737E-02	5.573
	+	77.11		2.888E+00	4.886E-01	4.533E-01	4.988E-02	6.370
	+	87.30		2.941E+00	8.255E-01	8.341E-01	9.933E-02	3.525
	+	241.98		1.836E+00	6.806E-01	5.432E-01	4.822E-02	3.380
	+	295.21		1.122E+00	2.336E-01	2.437E-01	2.388E-02	4.606
	+	351.92	*	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-216	+	74.81		2.642E+00	5.660E-01	4.741E-01	5.745E-02	5.573
	+	77.11		1.684E+00	2.545E-01	2.644E-01	2.099E-02	6.370
	+	87.30		1.717E+00	4.941E-01	4.869E-01	6.576E-02	3.525
	+	238.63	*	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
		300.09		1.059E+00	7.986E-01	1.311E+00	1.245E-01	0.808
PO-218	+	74.81		4.553E+00	9.402E-01	8.169E-01	8.737E-02	5.573
	+	77.11		2.888E+00	4.886E-01	4.533E-01	4.988E-02	6.370
	+	87.30		2.941E+00	8.255E-01	8.341E-01	9.933E-02	3.525
	+	241.98		1.836E+00	6.806E-01	5.432E-01	4.822E-02	3.380
	+	295.21		1.122E+00	2.336E-01	2.437E-01	2.388E-02	4.606
	+	351.92	*	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
RA-224	+	240.98	*	3.482E+00	1.276E+00	1.027E+00	7.041E-02	3.391
RA-226	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.302E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
AC-228	+	338.32		1.151E+00	5.806E-01	3.434E-01	1.405E-01	3.353
	+	911.07	*	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
	+	969.11		1.629E+00	5.128E-01	3.658E-01	8.405E-02	4.454
RA-228	+	338.32		1.151E+00	5.806E-01	3.434E-01	1.405E-01	3.353
	+	911.07	*	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
	+	969.11		1.629E+00	5.128E-01	3.658E-01	8.405E-02	4.454
TH-228	+	84.40		4.575E+00	2.392E+00	3.299E+00	4.358E-01	1.387
	+	238.60	*	1.351E+00	1.465E-01	9.023E-02	7.352E-03	14.967
		300.10		1.060E+00	1.010E+00	1.311E+00	7.751E-01	0.808
TH-230	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.301E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
TH-232	+	338.32		1.151E+00	3.482E-01	3.434E-01	2.313E-02	3.353
	+	911.07	*	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
	+	969.11		1.629E+00	5.128E-01	3.658E-01	8.405E-02	4.454
TH-234	+	63.29	*	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
	+	92.38		2.075E+00	7.032E-01	6.971E-01	1.261E-01	2.977
U-234	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.301E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
U-235	+	89.95		3.379E+00	1.466E+00	1.416E+00	4.383E-01	2.386
	+	93.35		2.495E+00	1.000E+00	8.340E-01	2.335E-01	2.991
		105.00		9.097E-01	1.077E+00	1.775E+00	5.245E-01	0.512
	+	143.76	*	1.866E-01	3.692E-01	3.234E-01	5.281E-02	0.577
		163.35		-5.409E-01	4.844E-01	7.368E-01	1.314E-01	-0.734
	+	185.71		1.825E-01	7.826E-02	6.717E-02	3.783E-03	2.717
		205.31		3.979E-01	5.417E-01	7.943E-01	1.435E-01	0.501
NP-237	+	86.50	*	1.090E+00	3.703E-01	3.111E-01	7.001E-02	3.503
		95.87		-6.682E-01	1.004E+00	1.393E+00	3.416E-01	-0.480
U-238	+	63.29	*	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
	+	92.38		2.075E+00	6.210E-01	6.971E-01	6.020E-02	2.977
AM-243	+	74.67	*	4.284E-01	8.257E-02	7.705E-02	5.933E-03	5.560
	+	86.72		4.087E+01	1.103E+01	1.165E+01	1.049E+00	3.509
		117.66		8.843E-01	3.665E+00	6.089E+00	4.123E-01	0.145
		142.18		1.041E+01	1.757E+01	2.909E+01	1.723E+00	0.358
ANH-511	+	511.00	*	1.380E-01	6.968E-02	4.536E-02	2.796E-03	3.042

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.576E-01	3.119E-01	4.955E-01	3.402E-02	-0.318
NA-22		1274.54	*	-1.415E-02	4.788E-02	7.585E-02	4.649E-03	-0.187
NA-24		1368.53	*	-9.176E-02	4.788E-02	Half-Life too short		
AL-26		1129.67		-7.109E-01	1.842E+00	2.852E+00	1.721E-01	-0.249
		1808.65	*	3.332E-03	2.269E-02	3.883E-02	2.142E-03	0.086
TI-44		67.85		-1.635E-03	6.094E-02	6.493E-02	4.605E-03	-0.025
		78.38	*	1.963E-01	4.306E-02	6.274E-02	5.062E-03	3.129
SC-46		889.25	*	-1.814E-04	3.810E-02	6.345E-02	5.097E-03	-0.003
	+	1120.51		1.992E-01	8.019E-02	1.240E-01	7.614E-03	1.607
V-48		944.10		-6.102E-02	8.783E-01	1.382E+00	1.074E-01	-0.044
		983.50	*	-4.293E-03	6.598E-02	1.086E-01	8.128E-03	-0.040
		1312.09		1.439E-02	7.607E-02	1.263E-01	8.023E-03	0.114
CR-51		320.08	*	1.827E-01	3.621E-01	5.720E-01	4.386E-02	0.319
MN-52		744.21		-1.376E-02	2.124E-01	3.397E-01	2.538E-02	-0.041
		848.13		-8.041E-01	5.670E+00	9.360E+00	7.390E-01	-0.086
	+	935.52		5.764E-01	3.810E-01	4.167E-01	3.264E-02	1.383
		1246.25		3.804E+00	7.133E+00	1.067E+01	6.342E-01	0.356
		1333.61		3.426E+00	4.614E+00	8.082E+00	5.237E-01	0.424
		1434.06	*	-1.269E-01	1.818E-01	2.600E-01	1.666E-02	-0.488
MN-54		834.83	*	-1.561E-02	3.781E-02	6.120E-02	4.802E-03	-0.255
CO-56		846.75	*	3.360E-03	3.707E-02	6.240E-02	4.924E-03	0.054
		977.42		8.720E-01	2.874E+00	4.689E+00	3.531E-01	0.186
		1037.82		-7.461E-02	3.132E-01	5.058E-01	3.828E-02	-0.148

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1175.09		3.776E+00	2.356E+00	4.338E+00	2.388E-01	0.870
	+	1238.25		3.313E-01	1.487E-01	1.786E-01	1.116E-02	1.855
		1360.21		9.527E-01	8.968E-01	1.653E+00	1.069E-01	0.576
		1771.40		-9.566E-01	3.441E-01	3.370E-01	1.903E-02	-2.839
CO-57		122.06	*	-1.308E-02	2.436E-02	3.918E-02	2.570E-03	-0.334
		136.48		-9.111E-03	2.221E-01	3.362E-01	2.343E-02	-0.027
CO-58		810.76	*	-1.763E-02	3.418E-02	5.450E-02	4.239E-03	-0.323
FE-59	+	142.65		2.361E+00	4.656E+00	4.377E+00	2.587E-01	0.539
		192.34		-2.170E-02	1.021E+00	1.443E+00	1.702E-01	-0.015
		1099.22	*	-3.286E-02	9.838E-02	1.572E-01	1.148E-02	-0.209
		1291.56		-3.502E-02	1.197E-01	1.887E-01	1.464E-02	-0.186
CO-60		1173.22		6.154E-02	5.037E-02	9.007E-02	4.948E-03	0.683
		1332.49	*	5.103E-03	4.164E-02	6.858E-02	4.444E-03	0.074
ZN-65		1115.52	*	-4.993E-02	1.091E-01	1.480E-01	9.195E-03	-0.337
GE-68		1077.35	*	-8.634E-01	1.364E+00	2.122E+00	1.404E-01	-0.407
AS-73		53.44	*	-4.229E-01	6.012E-01	9.710E-01	6.196E-02	-0.436
AS-74		595.88	*	-2.167E-02	8.228E-02	1.311E-01	8.782E-03	-0.165
		634.78		-1.123E-01	3.434E-01	5.423E-01	3.754E-02	-0.207
SE-75		66.05		-2.393E+00	4.526E+00	6.481E+00	5.897E-01	-0.369
		96.73		-6.573E-01	8.101E-01	1.115E+00	1.491E-01	-0.589
		121.11		-1.208E-01	1.339E-01	2.116E-01	2.064E-02	-0.571
		136.00		-7.753E-03	4.021E-02	6.312E-02	3.904E-03	-0.123
		198.60		2.046E+00	1.693E+00	2.874E+00	2.072E-01	0.712
		264.65	*	2.699E-02	5.076E-02	7.342E-02	5.480E-03	0.368
		279.53		1.725E-02	1.190E-01	1.740E-01	1.413E-02	0.099
		303.91		-1.846E+00	1.997E+00	3.184E+00	3.374E-01	-0.580
		400.65		1.284E-01	2.531E-01	4.320E-01	3.814E-02	0.297
BR-77	+	87.88		5.652E+02	1.526E+02	2.268E+02	2.075E+01	2.492
		200.40		-1.994E+01	1.106E+02	1.774E+02	1.054E+01	-0.112
	+	239.00		1.502E+02	1.484E+01	2.435E+01	1.659E+00	6.169
		249.79		-2.718E+01	4.604E+01	7.139E+01	5.043E+00	-0.381
		281.68		1.522E+00	6.635E+01	9.766E+01	7.554E+00	0.016
		297.23		1.052E+02	4.258E+01	7.052E+01	5.301E+00	1.491
		303.76		-9.738E+01	1.190E+02	1.915E+02	1.420E+01	-0.508
		439.47		6.531E+01	9.611E+01	1.656E+02	9.370E+00	0.394
		484.57		6.658E+01	1.546E+02	2.619E+02	1.567E+01	0.254
		520.65	*	-1.642E-01	7.335E+00	1.201E+01	7.479E-01	-0.014
		574.64		1.722E+01	1.465E+02	2.192E+02	1.441E+01	0.079
		578.91		7.170E+01	6.055E+01	9.639E+01	6.359E+00	0.744
		585.48		6.777E+02	1.658E+02	2.957E+02	1.963E+01	2.292
		755.35		2.557E+01	1.155E+02	1.891E+02	1.422E+01	0.135
		817.79		3.003E+01	7.947E+01	1.376E+02	1.071E+01	0.218
SR-82		698.33		3.380E+00	3.281E+01	5.339E+01	3.873E+00	0.063
		776.49	*	-3.198E-01	3.591E-01	5.586E-01	4.254E-02	-0.572
		1395.20		-6.903E+00	9.221E+00	1.311E+01	8.448E-01	-0.527
RB-83		520.41	*	7.665E-03	6.992E-02	1.155E-01	7.193E-03	0.066
		529.64		-7.905E-03	1.034E-01	1.685E-01	1.059E-02	-0.047
		552.65		-1.225E-01	1.926E-01	2.991E-01	1.925E-02	-0.410
RB-84		881.50	*	4.069E-02	6.633E-02	1.162E-01	9.305E-03	0.350

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
KR-85		513.99	*	8.332E+00	8.208E+00	1.268E+01	7.842E-01	0.657
SR-85		513.99	*	4.216E-02	4.153E-02	6.417E-02	3.968E-03	0.657
RB-86		1076.63	*	-2.606E-01	8.021E-01	1.283E+00	8.504E-02	-0.203
Y-88		898.02		1.179E-02	3.717E-02	6.369E-02	5.163E-03	0.185
		1836.01	*	-4.315E-03	2.756E-02	4.395E-02	2.387E-03	-0.098
ZR-88		392.90	*	-4.245E-03	2.956E-02	4.872E-02	2.580E-03	-0.087
Y-91		1204.90	*	-6.113E+00	1.958E+01	3.117E+01	1.773E+00	-0.196
NB-94		702.63	*	9.777E-03	3.395E-02	5.601E-02	4.075E-03	0.175
		871.10		-3.420E-02	3.145E-02	4.674E-02	3.727E-03	-0.732
NB-95		765.79	*	5.387E-02	4.425E-02	7.725E-02	5.847E-03	0.697
NB-95M		235.69	*	7.866E-01	1.750E-01	2.812E-01	2.325E-02	2.798
ZR-95		724.18		3.758E-02	1.091E-01	1.572E-01	1.295E-02	0.239
		756.15	*	1.922E-02	6.968E-02	1.146E-01	9.757E-03	0.168
NB-97		657.90	*	-2.090E-02	6.968E-02	Half-Life too short		
		1024.50		-5.956E-01	6.968E-02	Half-Life too short		
ZR-97		254.15		-1.512E-01	6.968E-02	Half-Life too short		
		355.39		-9.791E-01	6.968E-02	Half-Life too short		
		507.63	*	1.287E+00	6.968E-02	Half-Life too short		
		602.52		1.759E+00	6.968E-02	Half-Life too short		
		1021.30		-3.345E-01	6.968E-02	Half-Life too short		
		1147.95		5.146E-01	6.968E-02	Half-Life too short		
		1362.66		8.360E-01	6.968E-02	Half-Life too short		
		1750.46		2.917E-01	6.968E-02	Half-Life too short		
MO-99		140.51		-9.984E+00	2.137E+01	2.962E+01	7.992E+00	-0.337
		181.06		2.943E+00	1.378E+01	1.980E+01	3.376E+00	0.149
		366.43		-1.070E+00	5.792E+01	9.646E+01	5.821E+00	-0.011
		739.58	*	1.180E+00	8.180E+00	1.333E+01	1.939E+00	0.089
		778.00		-1.787E+01	2.423E+01	3.822E+01	2.913E+00	-0.467
TC-99M		140.51	*	-6.153E+08	2.423E+01	Half-Life too short		
RH-101	+	127.23		4.043E-02	3.718E-02	5.306E-02	3.380E-03	0.762
		198.01	*	4.171E-02	3.271E-02	5.395E-02	3.178E-03	0.773
		325.23		4.143E-02	2.401E-01	3.547E-01	2.488E-02	0.117
RH-102		418.52		6.576E-02	2.716E-01	4.569E-01	2.512E-02	0.144
		475.06	*	-2.080E-02	2.812E-02	4.386E-02	2.595E-03	-0.474
		631.29		-1.657E-02	5.454E-02	8.630E-02	5.956E-03	-0.192
		697.49		-5.457E-03	7.518E-02	1.206E-01	8.744E-03	-0.045
		766.84		1.276E-01	1.155E-01	1.999E-01	1.514E-02	0.638
		1046.59		6.595E-02	1.212E-01	2.090E-01	1.448E-02	0.316
		1112.84		1.243E-01	2.579E-01	4.116E-01	2.565E-02	0.302
RU-103		497.08	*	6.784E-03	3.757E-02	6.253E-02	7.986E-03	0.108
	+	610.33		1.131E+01	2.334E+00	2.685E+00	4.247E-01	4.211
RH-106	+	511.85		6.876E-01	3.472E-01	4.282E-01	2.642E-02	1.606
		621.84	*	-1.822E-01	3.082E-01	4.746E-01	5.833E-02	-0.384
		1050.47		3.959E-01	2.348E+00	3.931E+00	2.709E-01	0.101
RU-106	+	511.85		6.876E-01	3.472E-01	4.282E-01	2.642E-02	1.606
		621.84	*	-1.822E-01	3.077E-01	4.746E-01	3.250E-02	-0.384
		1050.47		3.959E-01	2.348E+00	3.931E+00	2.709E-01	0.101
AG-108M		433.93	*	-2.249E-03	3.102E-02	5.107E-02	3.129E-03	-0.044
		614.37		-2.689E-03	4.160E-02	5.796E-02	4.190E-03	-0.046

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.95		3.988E-02	4.508E-02	6.908E-02	5.365E-03	0.577
AG-110M		657.75	*	-2.736E-02	3.610E-02	5.481E-02	4.033E-03	-0.499
		677.61		-3.349E-02	2.921E-01	4.675E-01	3.479E-02	-0.072
		706.67		-1.732E-01	2.062E-01	3.077E-01	2.331E-02	-0.563
		763.93		-1.177E-01	1.775E-01	2.694E-01	2.111E-02	-0.437
		884.67		8.849E-03	4.954E-02	8.379E-02	6.968E-03	0.106
		937.48		4.808E-03	1.257E-01	1.805E-01	1.473E-02	0.027
		1384.27		-1.376E-01	1.986E-01	2.385E-01	1.616E-02	-0.577
IN-111		171.28		-1.747E-01	7.227E-01	1.163E+00	6.214E-02	-0.150
		245.39	*	3.128E-01	8.684E-01	1.245E+00	8.668E-02	0.251
IN-113M		391.69	*	-2.074E-02	4.285E-02	6.914E-02	3.949E-03	-0.300
SN-113		391.69	*	-2.074E-02	4.285E-02	6.914E-02	3.949E-03	-0.300
IN-114M		190.27	*	1.299E-01	1.874E-01	2.769E-01	1.585E-02	0.469
CD-115		260.90		-1.143E+02	8.972E+01	1.328E+02	9.729E+00	-0.861
		492.35		1.074E+01	2.244E+01	3.818E+01	2.305E+00	0.281
		527.90	*	-2.229E+00	7.137E+00	1.142E+01	7.166E-01	-0.195
SN-117M		156.02		-2.252E+00	2.137E+00	3.332E+00	1.842E-01	-0.676
		158.56	*	1.662E-02	5.144E-02	8.495E-02	4.635E-03	0.196
SB-122		563.90	*	1.145E+00	1.485E+00	2.555E+00	1.662E-01	0.448
		692.80		-1.096E+01	3.095E+01	4.846E+01	3.502E+00	-0.226
I-123		159.00	*	3.523E-01	3.095E+01	Half-Life too short		
		528.96		-6.184E+01	3.095E+01	Half-Life too short		
TE-123M		159.00	*	8.512E-03	2.850E-02	4.700E-02	2.598E-03	0.181
I-124		602.71	*	5.147E-01	6.160E-01	9.385E-01	6.324E-02	0.548
		722.78		3.199E+00	3.808E+00	5.812E+00	4.285E-01	0.550
		1325.50		-1.232E+01	2.992E+01	4.562E+01	2.936E+00	-0.270
		1376.25		2.694E+01	2.749E+01	4.443E+01	2.869E+00	0.607
		1509.49		1.472E+01	1.286E+01	2.379E+01	1.501E+00	0.619
		1691.02		3.064E+00	2.819E+00	5.514E+00	3.253E-01	0.556
SB-124		602.71		3.633E-02	4.348E-02	6.624E-02	4.465E-03	0.548
		645.85		-3.194E-01	4.881E-01	7.462E-01	5.679E-02	-0.428
		709.31		-2.132E+00	2.775E+00	4.176E+00	3.052E-01	-0.511
		713.82		7.200E-01	1.567E+00	2.621E+00	2.923E-01	0.275
		722.78		3.273E-01	3.896E-01	5.946E-01	4.513E-02	0.550
	+	968.20		1.653E+01	3.771E+00	6.975E+00	5.301E-01	2.370
		1045.16		8.243E-02	2.571E+00	4.254E+00	2.953E-01	0.019
		1325.50		-1.347E+00	3.270E+00	4.985E+00	3.209E-01	-0.270
		1368.21		-1.181E+00	1.616E+00	2.330E+00	2.845E-01	-0.507
		1436.60		1.432E+00	3.270E+00	5.638E+00	3.612E-01	0.254
		1691.02	*	7.395E-02	6.806E-02	1.331E-01	8.499E-03	0.556
SB-125		427.89	*	4.226E-02	8.733E-02	1.490E-01	8.678E-03	0.284
	+	463.38		5.859E-01	3.850E-01	5.160E-01	3.504E-02	1.135
		600.56		1.423E-01	1.797E-01	3.083E-01	2.320E-02	0.461
		635.90		-1.176E-01	2.877E-01	4.517E-01	3.513E-02	-0.260
TE-125M		109.28	*	-6.013E+00	8.708E+00	1.396E+01	1.287E+00	-0.431
I-126		388.63		5.932E-02	1.792E-01	3.038E-01	1.636E-02	0.195
		666.33	*	-1.306E-01	1.752E-01	2.662E-01	1.888E-02	-0.491
		753.82		6.338E-01	1.376E+00	2.297E+00	1.727E-01	0.276
SB-126		223.80		4.490E-01	3.746E+00	6.063E+00	3.918E-01	0.074

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	278.60		4.382E+00	3.778E+00	3.991E+00	3.094E-01	1.098
		296.50		8.132E+00	1.847E+00	3.129E+00	2.356E-01	2.599
		414.70		1.534E-02	6.492E-02	1.092E-01	5.974E-03	0.140
		415.30		2.171E+00	5.452E+00	9.263E+00	5.070E-01	0.234
		555.20		2.425E+00	3.444E+00	5.930E+00	3.825E-01	0.409
		573.80		-2.978E-01	9.686E-01	1.445E+00	9.490E-02	-0.206
		593.00		-2.509E-01	7.928E-01	1.256E+00	8.394E-02	-0.200
		656.30		-1.076E+00	2.954E+00	4.631E+00	3.259E-01	-0.232
		666.33		-5.443E-02	7.299E-02	1.109E-01	7.867E-03	-0.491
		675.00		-6.907E-01	1.718E+00	2.675E+00	1.909E-01	-0.258
		695.00		-1.371E-02	6.972E-02	1.106E-01	8.008E-03	-0.124
		697.00		-2.093E-02	2.470E-01	3.959E-01	2.870E-02	-0.053
		720.50	*	6.378E-02	1.369E-01	2.172E-01	1.599E-02	0.294
		856.80		-3.979E-01	4.933E-01	6.352E-01	5.035E-02	-0.626
		989.30		1.259E-02	1.110E+00	1.840E+00	1.368E-01	0.007
		1034.80		-6.015E-01	8.420E+00	1.381E+01	9.725E-01	-0.044
		1213.00		3.142E+00	4.719E+00	8.112E+00	4.653E-01	0.387
SB-127		61.10		1.934E+01	4.211E+01	6.333E+01	5.841E+00	0.305
		252.40		-1.752E+00	3.530E+00	5.380E+00	2.241E+00	-0.326
		290.80		-2.459E+00	1.806E+01	2.624E+01	2.626E+00	-0.094
		411.60		-5.988E+00	9.413E+00	1.494E+01	2.085E+00	-0.401
		444.90		-2.763E+00	7.295E+00	1.173E+01	1.215E+00	-0.236
		473.00		8.086E-01	1.271E+00	2.181E+00	2.369E-01	0.371
		543.00		-3.426E+00	1.209E+01	1.932E+01	2.486E+00	-0.177
		603.60		5.499E+00	1.052E+01	1.555E+01	1.701E+00	0.354
		685.20	*	3.891E-01	1.043E+00	1.737E+00	1.728E-01	0.224
		698.50		2.680E+00	1.203E+01	1.974E+01	2.932E+00	0.136
		722.20		2.111E+01	2.570E+01	3.911E+01	3.843E+00	0.540
		783.80		4.126E+00	2.920E+00	5.322E+00	6.076E-01	0.775
XE-127		57.60		9.575E+00	4.998E+00	8.319E+00	5.317E-01	1.151
	+	145.22		6.022E-01	1.188E+00	1.090E+00	6.358E-02	0.553
		172.10		-4.537E-02	1.128E-01	1.802E-01	9.656E-03	-0.252
		202.84	*	-4.291E-02	4.678E-02	6.948E-02	4.165E-03	-0.618
		374.96		-5.921E-02	1.779E-01	2.902E-01	1.681E-02	-0.204
I-131		80.18		4.870E+00	4.844E+00	5.576E+00	4.632E-01	0.873
		284.30		-2.427E-01	1.327E+00	2.159E+00	1.769E-01	-0.112
		364.48	*	1.449E-02	9.637E-02	1.621E-01	1.090E-02	0.089
		636.97		4.746E-01	1.453E+00	2.415E+00	1.814E-01	0.197
		722.89		5.911E+00	6.802E+00	1.041E+01	7.733E-01	0.568
TE-132		49.72		-1.049E+01	9.983E+00	1.608E+01	1.413E+00	-0.652
		111.76		-7.958E+00	2.115E+01	3.435E+01	3.204E+00	-0.232
		116.30		1.512E+01	2.022E+01	3.417E+01	3.121E+00	0.443
		228.16	*	-1.990E-01	5.253E-01	8.281E-01	1.197E-01	-0.240
BA-133		53.15		-1.977E+00	2.586E+00	4.163E+00	2.657E-01	-0.475
		79.62		6.987E-01	1.597E+00	1.754E+00	2.630E-01	0.398
		81.00		5.518E-02	1.198E-01	1.317E-01	2.072E-02	0.419
	+	276.40		7.026E-01	6.112E-01	6.453E-01	8.981E-02	1.089
		302.84		-1.233E-01	1.380E-01	2.201E-01	2.762E-02	-0.560
		356.01	*	-1.406E-03	4.353E-02	6.300E-02	7.450E-03	-0.022

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		383.85		-8.561E-02	2.927E-01	4.784E-01	5.134E-02	-0.179
I-133	+	510.53		5.131E-01	2.927E-01	Half-Life too short		
		529.87	*	3.120E-04	2.927E-01	Half-Life too short		
		706.58		-1.193E-01	2.927E-01	Half-Life too short		
		856.28		-2.217E-01	2.927E-01	Half-Life too short		
		875.33		3.371E-03	2.927E-01	Half-Life too short		
		1236.41		4.498E-01	2.927E-01	Half-Life too short		
		1298.22		-1.935E-02	2.927E-01	Half-Life too short		
CS-134		475.35		-1.860E+00	1.866E+00	2.852E+00	1.688E-01	-0.652
		563.23		3.616E-01	3.559E-01	6.219E-01	4.110E-02	0.582
		569.32		-1.703E-01	2.084E-01	3.118E-01	2.087E-02	-0.546
		604.70		-3.943E-03	3.920E-02	5.452E-02	3.695E-03	-0.072
		795.84	*	6.318E-02	4.616E-02	8.449E-02	6.561E-03	0.748
		801.93		8.575E-02	4.224E-01	7.103E-01	5.522E-02	0.121
		1038.57		9.597E-01	3.922E+00	6.615E+00	4.634E-01	0.145
		1167.94		-5.475E-01	2.896E+00	4.676E+00	2.601E-01	-0.117
		1365.15		4.446E-01	1.142E+00	1.950E+00	1.361E-01	0.228
CS-135		268.24	*	2.581E-01	1.960E-01	2.943E-01	2.654E-02	0.877
I-135		288.45		-6.455E+08	1.960E-01	Half-Life too short		
		417.63		2.448E+08	1.960E-01	Half-Life too short		
		546.56		1.469E+08	1.960E-01	Half-Life too short		
		836.80		1.713E+09	1.960E-01	Half-Life too short		
		1038.76		4.206E+08	1.960E-01	Half-Life too short		
		1124.00		1.947E+09	1.960E-01	Half-Life too short		
		1131.51		-7.347E+04	1.960E-01	Half-Life too short		
		1260.41	*	2.488E+07	1.960E-01	Half-Life too short		
		1457.56		2.878E+10	1.960E-01	Half-Life too short		
		1678.03		-1.043E+08	1.960E-01	Half-Life too short		
		1706.46		-7.569E+08	1.960E-01	Half-Life too short		
		1791.20		-4.349E+08	1.960E-01	Half-Life too short		
CS-136		66.91		-4.095E-01	8.257E-01	9.951E-01	1.453E-01	-0.412
	+	86.29		4.533E+00	1.298E+00	1.720E+00	2.249E-01	2.635
		153.22		3.754E-01	6.055E-01	1.012E+00	7.151E-02	0.371
		163.89		-5.789E-01	9.958E-01	1.582E+00	1.085E-01	-0.366
		176.55		1.020E-01	3.322E-01	5.467E-01	3.391E-02	0.187
		273.65		1.054E-01	6.317E-01	6.414E-01	5.303E-02	0.164
		340.57		3.270E-02	1.256E-01	1.862E-01	1.304E-02	0.176
		818.51		2.471E-02	5.956E-02	1.035E-01	8.061E-03	0.239
		1048.07	*	8.441E-02	1.052E-01	1.851E-01	1.363E-02	0.456
		1235.34		8.103E-01	7.037E-01	1.096E+00	1.099E-01	0.739
BA-137M		661.65	*	3.354E-02	3.711E-02	6.399E-02	4.522E-03	0.524
CS-137		661.65	*	3.546E-02	3.923E-02	6.764E-02	4.793E-03	0.524
CE-139		165.85	*	3.330E-03	2.910E-02	4.760E-02	2.497E-03	0.070
BA-140		162.64		-1.847E-01	7.037E-01	1.134E+00	6.936E-02	-0.163
		304.84		-5.769E-01	1.104E+00	1.785E+00	4.941E-01	-0.323
		423.70		-1.128E+00	1.712E+00	2.649E+00	8.407E-01	-0.426
		537.32	*	5.998E-02	2.205E-01	3.672E-01	1.198E-01	0.163
LA-140		328.77		2.717E-01	2.669E-01	4.678E-01	3.525E-02	0.581
		432.53		-8.887E-01	1.897E+00	3.044E+00	1.896E-01	-0.292

---- Non-Identified Nuclides ----

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		487.03		-4.823E-02	1.242E-01	1.986E-01	1.339E-02	-0.243
		751.79		-1.406E-01	1.696E+00	2.707E+00	2.314E-01	-0.052
		815.85		-5.707E-02	2.617E-01	4.292E-01	3.804E-02	-0.133
		867.82		3.476E-01	1.300E+00	2.010E+00	1.699E-01	0.173
		919.63		-8.941E-03	2.712E+00	4.509E+00	4.554E-01	-0.002
		925.24		9.245E-01	1.175E+00	1.902E+00	1.614E-01	0.486
		1596.49	*	-8.414E-02	6.859E-02	8.954E-02	5.499E-03	-0.940
CE-141		145.44	*	3.443E-02	6.644E-02	9.787E-02	5.930E-03	0.352
CE-143		57.37		8.664E-04	6.644E-02	Half-Life too short		
		231.56		6.752E-04	6.644E-02	Half-Life too short		
		293.26	*	5.375E-04	6.644E-02	Half-Life too short		
	+	350.59		1.404E-02	6.644E-02	Half-Life too short		
		490.36		-7.215E-04	6.644E-02	Half-Life too short		
		664.57		-3.287E-04	6.644E-02	Half-Life too short		
		721.93		7.507E-04	6.644E-02	Half-Life too short		
CE-144		80.11		1.369E+00	2.575E+00	2.854E+00	2.355E-01	0.480
		133.54	*	-1.116E-02	2.288E-01	3.280E-01	4.710E-02	-0.034
PM-144		476.78		-3.139E-02	6.608E-02	1.052E-01	7.417E-03	-0.298
		618.01		-7.659E-04	3.014E-02	4.887E-02	3.482E-03	-0.016
		696.49	*	-1.524E-02	3.393E-02	5.268E-02	3.818E-03	-0.289
		778.57		-1.207E+00	2.143E+00	3.427E+00	2.614E-01	-0.352
PR-144		696.49	*	-1.032E+00	2.298E+00	3.567E+00	2.585E-01	-0.289
		1489.15		1.702E-01	1.085E+01	1.501E+01	9.512E-01	0.011
PM-146		453.90	*	2.502E-02	3.986E-02	6.854E-02	5.893E-03	0.365
		633.02		3.677E-01	1.374E+00	2.267E+00	8.390E-01	0.162
		735.90		2.295E-02	1.424E-01	2.262E-01	6.393E-02	0.101
		747.13		5.502E-02	9.579E-02	1.609E-01	2.151E-02	0.342
ND-147	+	91.11		9.642E-01	2.906E-01	4.735E-01	4.488E-02	2.037
		319.41		-9.452E-01	2.944E+00	4.721E+00	3.367E-01	-0.200
		439.89		3.340E+00	5.115E+00	8.809E+00	4.988E-01	0.379
		531.02	*	-1.824E-01	5.141E-01	8.191E-01	1.126E-01	-0.223
PM-149		285.90	*	2.539E+01	5.906E+01	1.013E+02	1.524E+01	0.251
EU-152		121.78		-4.508E-02	7.066E-02	1.131E-01	9.280E-03	-0.399
		244.69		1.739E-01	3.652E-01	5.278E-01	3.665E-02	0.329
		344.27	*	4.934E-02	1.043E-01	1.572E-01	1.141E-02	0.314
		443.98		-4.865E-01	9.093E-01	1.447E+00	8.236E-02	-0.336
		778.89		-1.257E-01	2.491E-01	4.006E-01	3.055E-02	-0.314
		867.32		3.278E-01	8.647E-01	1.306E+00	1.040E-01	0.251
	+	964.01		4.739E-01	3.394E-01	5.437E-01	4.149E-02	0.872
		1085.78		-3.373E-01	4.367E-01	6.694E-01	4.371E-02	-0.504
		1112.02		2.226E-01	3.465E-01	5.878E-01	3.668E-02	0.379
		1407.95		5.617E-02	1.698E-01	2.873E-01	1.849E-02	0.195
GD-153		69.67		2.571E-01	1.601E+00	2.370E+00	1.718E-01	0.108
	+	83.37		2.618E+01	1.344E+01	2.124E+01	1.829E+00	1.233
		97.43	*	-5.330E-03	8.317E-02	1.198E-01	9.746E-03	-0.044
		103.18		-4.003E-02	1.040E-01	1.695E-01	1.299E-02	-0.236
EU-154		123.07		2.218E-02	5.104E-02	8.254E-02	8.139E-03	0.269
		247.94		2.128E-01	3.942E-01	5.725E-01	5.913E-02	0.372
		591.81		-5.130E-02	5.652E-01	9.135E-01	9.425E-02	-0.056

---- Non-Identified Nuclides ----

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		723.30		1.718E-01	1.842E-01	2.841E-01	2.392E-02	0.605
		756.87		1.069E-01	7.540E-01	1.226E+00	1.376E-01	0.087
		873.19		-5.712E-02	2.690E-01	4.396E-01	5.189E-02	-0.130
		996.32		-1.937E-01	3.509E-01	5.475E-01	9.415E-02	-0.354
		1004.76		-2.468E-01	2.195E-01	3.232E-01	3.459E-02	-0.763
		1274.45	*	-3.848E-02	1.340E-01	2.123E-01	2.026E-02	-0.181
EU-155		48.70		-1.626E+00	1.610E+00	2.606E+00	1.656E-01	-0.624
		60.01		2.453E+00	4.411E+00	6.674E+00	4.307E-01	0.368
	+	86.54		4.468E-01	1.207E-01	1.692E-01	1.534E-02	2.641
		105.31	*	1.117E-01	1.067E-01	1.821E-01	1.390E-02	0.614
TB-160	+	86.79		1.180E+00	3.185E-01	4.476E-01	4.035E-02	2.636
		197.04		1.102E-01	5.590E-01	8.828E-01	5.182E-02	0.125
		215.65		4.248E-02	7.805E-01	1.165E+00	7.316E-02	0.036
		298.57		1.166E-01	1.220E-01	1.894E-01	1.420E-02	0.616
		879.36	*	-1.992E-02	1.317E-01	2.166E-01	1.733E-02	-0.092
		962.29		7.098E-01	6.259E-01	9.968E-01	7.620E-02	0.712
		966.15		1.069E+00	2.646E-01	5.136E-01	3.911E-02	2.081
		1177.93		-4.384E-01	3.947E-01	5.841E-01	3.225E-02	-0.751
		1271.85		3.806E-01	7.474E-01	1.276E+00	7.782E-02	0.298
HO-166M		80.57		2.974E-01	3.177E-01	3.639E-01	3.021E-02	0.817
	+	184.41		1.369E-01	5.869E-02	6.766E-02	3.792E-03	2.023
		280.46		3.807E-02	8.901E-02	1.346E-01	1.044E-02	0.283
		410.95		4.920E-02	2.342E-01	3.934E-01	2.140E-02	0.125
		711.68	*	7.009E-02	5.789E-02	1.025E-01	7.501E-03	0.684
		752.31		-4.284E-02	2.892E-01	4.588E-01	3.446E-02	-0.093
		810.29		-3.565E-02	5.257E-02	8.246E-02	6.393E-03	-0.432
TM-171		51.35		1.666E+01	2.079E+01	3.593E+01	2.293E+00	0.464
		52.39		-1.066E+00	1.095E+01	1.808E+01	1.154E+00	-0.059
		59.40		2.216E+01	2.373E+01	3.646E+01	2.336E+00	0.608
		66.72	*	-1.863E+01	2.897E+01	3.838E+01	2.686E+00	-0.485
LU-176	+	88.36		5.849E-01	1.853E-01	3.430E-01	3.127E-02	1.705
		201.83		-2.646E-02	2.756E-02	4.247E-02	2.537E-03	-0.623
		306.84	*	-1.219E-02	2.272E-02	3.703E-02	2.726E-03	-0.329
		401.10		1.675E+00	6.689E+00	1.127E+01	6.041E-01	0.149
LU-177		112.95		6.788E-01	1.323E+00	2.222E+00	1.563E-01	0.305
	+	208.36	*	2.953E+00	1.401E+00	1.679E+00	1.027E-01	1.759
LU-177M		52.97		-9.010E-01	1.152E+00	1.853E+00	1.183E-01	-0.486
		54.07		-6.738E-01	6.258E-01	9.947E-01	6.347E-02	-0.677
		61.30		3.005E-01	1.403E+00	2.090E+00	1.371E-01	0.144
		121.62		-3.340E-01	3.660E-01	5.792E-01	3.803E-02	-0.577
		147.16		7.775E-02	6.914E-01	9.964E-01	5.760E-02	0.078
		171.86		-1.260E-01	4.657E-01	7.481E-01	4.006E-02	-0.168
		218.09		-8.761E-02	8.437E-01	1.353E+00	8.566E-02	-0.065
	+	268.79		2.442E+00	1.071E+00	1.473E+00	1.107E-01	1.657
		319.02		-6.541E-02	2.430E-01	3.908E-01	2.790E-02	-0.167
		367.43		-1.547E-01	8.457E-01	1.394E+00	8.374E-02	-0.111
		413.65	*	-2.036E-01	1.715E-01	2.626E-01	1.434E-02	-0.775
HF-181		56.28		-9.536E-02	7.157E-01	1.196E+00	7.634E-02	-0.080
		57.53		9.467E-01	4.161E-01	7.003E-01	4.475E-02	1.352

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		65.20		-7.613E-02	8.566E-01	1.252E+00	8.609E-02	-0.061
		133.02		3.661E-04	7.090E-02	1.020E-01	6.311E-03	0.004
		136.25		-1.425E-01	4.873E-01	7.286E-01	4.440E-02	-0.196
		345.85		8.382E-02	1.981E-01	2.978E-01	1.954E-02	0.281
		482.03	*	2.746E-03	4.269E-02	7.056E-02	4.209E-03	0.039
W-181		56.28		-3.693E-02	2.840E-01	4.745E-01	3.029E-02	-0.078
		57.53		3.757E-01	1.652E-01	2.780E-01	1.777E-02	1.351
		65.20	*	-2.998E-02	3.374E-01	4.932E-01	3.391E-02	-0.061
TA-182		67.75		-4.179E-03	1.443E-01	1.537E-01	1.089E-02	-0.027
		100.10		1.491E-01	1.733E-01	2.859E-01	2.260E-02	0.521
		152.43		2.368E-01	3.298E-01	5.532E-01	3.115E-02	0.428
		222.10		1.631E-01	3.445E-01	5.666E-01	3.640E-02	0.288
		1001.68		1.484E+00	2.039E+00	3.588E+00	2.631E-01	0.414
	+	1121.28		5.518E-01	2.221E-01	3.427E-01	2.102E-02	1.610
		1189.05		-2.512E-02	3.205E-01	5.211E-01	2.913E-02	-0.048
		1221.42	*	1.258E-01	2.112E-01	3.609E-01	2.089E-02	0.348
		1230.97		2.878E-01	5.774E-01	8.544E-01	4.995E-02	0.337
RE-183		57.98		3.364E-01	1.742E-01	2.780E-01	1.777E-02	1.210
		59.32		9.084E-02	9.648E-02	1.483E-01	9.502E-03	0.613
		67.20		-1.730E-03	2.188E-01	2.721E-01	1.915E-02	-0.006
		162.32	*	1.862E-02	1.081E-01	1.774E-01	9.485E-03	0.105
	+	208.81		2.986E+00	1.417E+00	1.721E+00	1.054E-01	1.735
		291.72		3.571E-01	1.004E+00	1.508E+00	1.146E-01	0.237
RE-184		57.98		1.249E+00	6.467E-01	1.032E+00	6.597E-02	1.210
		59.32		3.369E-01	3.578E-01	5.500E-01	3.524E-02	0.613
		67.20		-6.421E-03	8.119E-01	1.010E+00	7.106E-02	-0.006
		161.27		3.660E-01	3.500E-01	5.933E-01	3.191E-02	0.617
		216.55		6.582E-02	2.627E-01	4.282E-01	2.697E-02	0.154
		252.85	*	-1.269E-01	2.292E-01	3.558E-01	2.539E-02	-0.357
		318.01		-9.083E-02	4.096E-01	6.786E-01	4.858E-02	-0.134
		792.07		-1.154E-01	9.398E-01	1.561E+00	1.199E-01	-0.074
		903.28		-7.028E-01	1.071E+00	1.535E+00	1.233E-01	-0.458
		920.93		-1.791E-01	4.611E-01	7.407E-01	5.870E-02	-0.242
OS-185		59.72		1.787E-01	2.612E-01	3.972E-01	2.554E-02	0.450
		61.14		-6.470E-03	1.527E-01	2.249E-01	1.472E-02	-0.029
		69.30		1.711E-02	2.835E-01	4.179E-01	3.015E-02	0.041
		592.07		-8.321E-02	2.281E+00	3.703E+00	2.472E-01	-0.022
		646.12	*	-6.817E-03	4.052E-02	6.472E-02	4.520E-03	-0.105
		717.42		-1.087E+00	8.773E-01	1.247E+00	9.161E-02	-0.872
		874.81		2.438E-01	5.120E-01	8.912E-01	7.118E-02	0.274
		880.27		-2.520E-01	7.587E-01	1.228E+00	9.829E-02	-0.205
RE-188		155.03	*	1.161E-02	1.676E-01	2.743E-01	1.524E-02	0.042
		477.96		-9.953E-01	2.993E+00	4.816E+00	2.859E-01	-0.207
		633.10		8.017E-01	2.736E+00	4.543E+00	3.140E-01	0.176
W-188	+	63.58		8.788E+01	5.866E+01	7.567E+01	5.103E+00	1.161
		227.08		-1.014E+01	1.254E+01	1.934E+01	1.264E+00	-0.524
		290.67	*	-6.750E-01	7.764E+00	1.132E+01	8.619E-01	-0.060
IR-192	+	295.96		8.458E-01	1.681E-01	2.612E-01	1.987E-02	3.238
		308.46		-3.049E-03	8.672E-02	1.454E-01	1.074E-02	-0.021

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		316.51	*	1.097E-03	3.209E-02	5.394E-02	3.889E-03	0.020
		468.07		-1.962E-02	7.117E-02	9.882E-02	6.664E-03	-0.198
		604.41		-2.762E-02	5.260E-01	7.351E-01	8.720E-02	-0.038
		612.46		7.629E-01	7.507E-01	1.164E+00	9.730E-02	0.655
AU-195		65.12		-1.394E-02	1.566E-01	2.290E-01	1.573E-02	-0.061
		66.83		-5.828E-02	9.553E-02	1.268E-01	8.887E-03	-0.460
	+	75.70		1.480E+00	2.235E-01	4.266E-01	3.328E-02	3.468
		98.88	*	2.054E-01	2.375E-01	3.572E-01	2.861E-02	0.575
	+	129.76		3.549E+00	3.263E+00	4.639E+00	2.918E-01	0.765
TL-200		367.94	*	-7.708E-05	3.263E+00	Half-Life too short		
		579.30		2.319E-03	3.263E+00	Half-Life too short		
		828.27		2.461E-04	3.263E+00	Half-Life too short		
		1205.75		-2.960E-04	3.263E+00	Half-Life too short		
TL-201		68.90		1.593E-01	3.686E+00	5.066E+00	3.638E-01	0.031
		70.82		1.563E+00	1.992E+00	3.017E+00	2.217E-01	0.518
		80.30		4.300E+00	4.413E+00	5.070E+00	4.193E-01	0.848
		135.34		7.459E+00	1.860E+01	3.095E+01	1.894E+00	0.241
		167.43	*	2.954E+00	5.149E+00	8.576E+00	4.520E-01	0.344
TL-202		68.90		1.777E-02	4.111E-01	5.651E-01	4.058E-02	0.031
		70.82		1.739E-01	2.216E-01	3.356E-01	2.465E-02	0.518
		80.30		4.785E-01	4.910E-01	5.641E-01	4.666E-02	0.848
		439.56	*	4.174E-02	6.248E-02	1.076E-01	6.089E-03	0.388
HG-203		70.83		7.998E-01	1.016E+00	1.533E+00	1.968E-01	0.522
	+	72.87		4.346E+00	9.437E-01	1.138E+00	1.425E-01	3.818
	+	82.60		1.917E+00	1.005E+00	1.552E+00	2.124E-01	1.235
		279.20	*	2.710E-02	4.444E-02	6.692E-02	5.379E-03	0.405
BI-207	+	72.80		1.298E+00	2.502E-01	3.370E-01	2.536E-02	3.851
	+	74.97		7.689E-01	1.482E-01	2.370E-01	1.832E-02	3.244
	+	84.90		3.399E-01	1.745E-01	3.206E-01	2.818E-02	1.060
		569.67		-2.172E-02	3.207E-02	4.850E-02	3.172E-03	-0.448
		1063.62	*	6.754E-03	5.248E-02	8.753E-02	5.917E-03	0.077
		1770.23		2.271E-02	4.242E-01	6.109E-01	3.452E-02	0.037
TL-207		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
PO-209		260.50		-8.023E+00	9.721E+00	1.482E+01	1.084E+00	-0.541
		262.80		-8.635E+00	2.709E+01	4.256E+01	3.137E+00	-0.203
		896.60	*	7.048E+00	6.760E+00	1.227E+01	9.884E-01	0.574
BI-210		46.50	*	1.210E+00	2.260E+00	3.826E+00	2.836E-01	0.316
PB-210		46.50	*	1.210E+00	2.260E+00	3.826E+00	2.836E-01	0.316
PO-210		46.50	*	1.210E+00	2.259E+00	3.826E+00	2.400E-01	0.316
PB-211		404.84	*	-6.519E-01	1.061E+00	1.567E+00	9.761E-01	-0.416

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		427.08		4.322E-01	1.981E+00	3.296E+00	2.036E+00	0.131
		831.96		-3.714E-01	1.156E+00	1.842E+00	1.153E+00	-0.202
BI-212	+	727.18	*	9.922E-01	4.104E-01	6.070E-01	5.447E-02	1.635
		785.46		5.603E-01	1.768E+00	3.033E+00	2.321E-01	0.185
		1620.62		8.202E-01	1.102E+00	2.043E+00	1.243E-01	0.401
PO-215		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
RN-219	+	271.23		7.374E-01	3.262E-01	4.494E-01	4.249E-02	1.641
		401.81	*	1.474E-01	4.182E-01	7.073E-01	9.497E-02	0.208
RN-220		549.76	*	1.033E+01	2.402E+01	4.059E+01	2.604E+00	0.254
RA-223		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
AC-227		79.80		8.188E-01	2.028E+00	2.218E+00	4.735E-01	0.369
		236.00		3.026E+00	4.831E-01	6.610E-01	7.273E-02	4.577
		256.20	*	1.114E-01	3.799E-01	6.169E-01	9.009E-02	0.181
		286.10		7.799E-01	1.466E+00	2.526E+00	3.185E-01	0.309
		299.80		1.774E+00	1.579E+00	2.442E+00	4.140E-01	0.726
		304.40		-1.394E+00	1.800E+00	2.878E+00	5.152E-01	-0.484
		334.20		2.023E+00	3.320E+00	3.595E+00	6.716E-01	0.563
TH-227		79.80		8.188E-01	2.028E+00	2.218E+00	4.797E-01	0.369
		94.00		6.394E+00	2.298E+00	3.348E+00	7.272E-01	1.910
		236.00		3.026E+00	4.566E-01	6.610E-01	6.404E-02	4.577
		256.20	*	1.114E-01	3.800E-01	6.169E-01	1.076E-01	0.181
		286.10		7.799E-01	1.659E+00	2.526E+00	2.534E+00	0.309
		299.80		1.774E+00	1.579E+00	2.442E+00	4.140E-01	0.726
		304.40		-1.394E+00	1.800E+00	2.878E+00	5.152E-01	-0.484
		334.20		2.023E+00	3.320E+00	3.595E+00	6.716E-01	0.563
TH-229	+	85.43		8.323E-01	2.247E-01	3.262E-01	2.887E-02	2.552
	+	88.47		3.367E-01	1.066E-01	1.943E-01	1.768E-02	1.733
		100.00		1.613E-01	1.815E-01	2.996E-01	2.372E-02	0.538
		193.63	*	-2.191E-01	4.853E-01	7.690E-01	4.458E-02	-0.285
		210.97		1.435E+00	8.583E-01	1.323E+00	8.165E-02	1.085
PA-231		283.67	*	-1.733E-01	1.562E+00	2.473E+00	3.632E-01	-0.070

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		301.29		7.054E-01	5.570E-01	9.607E-01	1.100E-01	0.734
TH-231		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
U-231	+	84.21		7.840E+00	4.025E+00	6.782E+00	5.906E-01	1.156
	+	92.29		6.434E+00	1.925E+00	2.972E+00	2.570E-01	2.165
		95.87	*	-6.152E-01	9.137E-01	1.283E+00	1.062E-01	-0.480
		108.00		-3.399E-01	1.623E+00	2.658E+00	1.949E-01	-0.128
PA-233	+	75.28		2.244E+01	5.180E+00	7.063E+00	1.051E+00	3.177
	+	86.59		7.266E+00	2.693E+00	2.750E+00	7.410E-01	2.642
		300.12		5.488E-01	4.168E-01	6.776E-01	9.647E-02	0.810
		311.98	*	-1.306E-02	5.849E-02	9.699E-02	7.332E-03	-0.135
		340.50		3.544E-01	6.645E-01	9.969E-01	2.313E-01	0.355
		398.62		-4.695E-01	2.095E+00	3.429E+00	8.833E-01	-0.137
		415.76		4.759E-01	1.536E+00	2.592E+00	5.312E-01	0.184
PA-234	+	63.00		2.581E+00	1.755E+00	2.268E+00	3.293E-01	1.138
		94.67		2.671E-01	1.670E-01	2.569E-01	3.147E-02	1.040
		98.44		4.685E-02	1.013E-01	1.448E-01	8.065E-02	0.324
		99.86		4.268E-01	4.602E-01	7.606E-01	6.029E-02	0.561
		111.00		-1.063E-01	1.750E-01	2.814E-01	3.119E-02	-0.378
		131.20		-5.722E-02	1.155E-01	1.615E-01	1.009E-02	-0.354
		152.70		2.262E-01	3.211E-01	5.356E-01	8.432E-02	0.422
	+	186.00		4.927E+00	2.579E+00	2.469E+00	7.538E-01	1.995
		226.40		-1.076E-01	3.978E-01	6.312E-01	7.536E-02	-0.170
		227.20		-3.424E-01	4.291E-01	6.624E-01	4.331E-02	-0.517
		248.90		-2.218E-01	8.799E-01	1.277E+00	2.792E-01	-0.174
	+	293.70		5.387E+00	1.341E+00	1.663E+00	2.795E-01	3.239
		369.80		-3.500E-01	8.060E-01	1.303E+00	2.718E-01	-0.269
		568.70		-1.089E+00	1.062E+00	1.562E+00	1.021E-01	-0.697
		569.50		-1.895E-01	2.848E-01	4.312E-01	2.820E-02	-0.439
		574.00		-2.266E-01	1.486E+00	2.251E+00	1.478E-01	-0.101
		699.00		2.493E-01	7.186E-01	1.189E+00	2.200E-01	0.210
		706.10		-5.572E-01	1.070E+00	1.604E+00	7.113E-01	-0.347
		733.00		1.257E-01	3.675E-01	5.331E-01	1.160E-01	0.236
		742.81		-9.160E-01	1.551E+00	2.161E+00	1.449E+00	-0.424
		796.30		1.237E+00	9.487E-01	1.639E+00	4.387E-01	0.755
		805.60		1.098E+00	1.040E+00	1.789E+00	5.442E-01	0.614
		819.60		1.536E-01	1.070E+00	1.812E+00	6.857E-01	0.085
		826.30		-3.878E-01	7.135E-01	1.094E+00	4.880E-01	-0.354
		831.60		-1.093E-01	5.736E-01	9.421E-01	2.791E-01	-0.116
		876.40		9.890E-02	7.737E-01	1.294E+00	1.330E+00	0.076
		880.51		1.644E-02	2.719E-01	4.557E-01	3.648E-02	0.036

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		883.24		6.912E-02	2.952E-01	4.954E-01	3.326E-01	0.140
		899.00		-2.104E-01	7.911E-01	1.276E+00	5.566E-01	-0.165
		925.00		1.169E+00	1.288E+00	2.112E+00	1.669E-01	0.553
		926.50		9.396E-02	2.048E-01	3.079E-01	7.710E-02	0.305
		946.00	*	-9.030E-02	2.896E-01	4.662E-01	8.571E-02	-0.194
		949.00		4.422E-02	4.254E-01	7.128E-01	5.517E-02	0.062
		980.50		-1.696E-01	7.141E-01	1.157E+00	8.682E-02	-0.147
		1394.10		-1.402E+00	1.375E+00	1.282E+00	8.310E-01	-1.094
PA-234M		766.41		2.572E+01	2.695E+01	3.257E+01	2.494E+01	0.790
		1001.03	*	5.944E+00	6.703E+00	1.190E+01	1.217E+00	0.500
NP-236		94.67		2.048E-01	1.254E-01	1.951E-01	1.638E-02	1.050
		98.44		3.541E-02	7.403E-02	1.095E-01	8.808E-03	0.324
		111.00		-8.039E-02	1.322E-01	2.128E-01	1.521E-02	-0.378
		160.31	*	5.222E-02	8.047E-02	1.344E-01	7.268E-03	0.388
NP-239		99.55		2.088E-01	1.568E-01	2.533E-01	2.015E-02	0.824
		117.00	*	5.517E-02	1.821E-01	3.033E-01	2.065E-02	0.182
	+	209.75		2.385E+00	1.132E+00	1.448E+00	8.900E-02	1.647
		228.18		-8.408E-02	2.244E-01	3.542E-01	2.324E-02	-0.237
	+	277.60		3.429E-01	2.957E-01	3.191E-01	2.466E-02	1.075
		334.30		1.160E+00	1.871E+00	2.039E+00	1.392E-01	0.569
AM-241		59.54	*	1.295E-01	1.382E-01	2.122E-01	1.535E-02	0.610
CM-243		99.55		2.148E-01	1.614E-01	2.606E-01	2.073E-02	0.824
		103.76	*	2.890E-02	9.506E-02	1.588E-01	1.211E-02	0.182
		117.00		5.676E-02	1.873E-01	3.120E-01	2.124E-02	0.182
	+	209.75		2.351E+00	1.116E+00	1.427E+00	8.772E-02	1.647
		228.18		-8.495E-02	2.267E-01	3.578E-01	2.348E-02	-0.237
	+	277.60		3.457E-01	2.981E-01	3.217E-01	2.486E-02	1.075
CM-247	+	278.00		1.422E+00	1.226E+00	1.306E+00	1.010E-01	1.089
		287.40		8.563E-02	1.209E+00	1.993E+00	1.526E-01	0.043
		402.60	*	1.383E-02	3.751E-02	6.355E-02	3.415E-03	0.218
CF-249		252.85		-4.787E-01	8.645E-01	1.342E+00	9.575E-02	-0.357
		333.44		1.444E-01	2.442E-01	2.652E-01	1.815E-02	0.544
		387.95	*	3.826E-03	3.815E-02	6.382E-02	3.449E-03	0.060
CF-251		176.60	*	3.375E-02	1.222E-01	2.009E-01	1.094E-02	0.168
		227.00		-2.829E-01	3.803E-01	5.888E-01	3.848E-02	-0.480
		285.00		-9.285E-02	1.679E+00	2.821E+00	2.170E-01	-0.033

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070    *
* Acquisition date :  9-JUL-2009 08:36:12 Detector SN#     :               *
* Detector ID        : GAM11               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.66      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201873070          Analyst initials: MXR1         *
* Batch Number       : 881931               Sample Quantity : 1.2546E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.266E+01	2.773E+00	4.295E-01	0.000E+00
CD-109	2.504E+00	7.773E-01	1.105E+00	0.000E+00
SN-126	3.711E-01	9.818E-02	1.092E-01	0.000E+00
TL-208	4.845E-01	7.834E-02	5.676E-02	0.000E+00
BI-211	3.341E+00	4.440E-01	2.909E-01	0.000E+00
PB-212	1.351E+00	1.436E-01	9.253E-02	0.000E+00
PO-212	1.351E+00	1.436E-01	9.253E-02	0.000E+00
BI-214	1.071E+00	1.655E-01	1.112E-01	0.000E+00
PB-214	1.162E+00	1.655E-01	9.541E-02	0.000E+00
PO-214	1.162E+00	1.655E-01	9.541E-02	0.000E+00
PO-216	1.351E+00	1.436E-01	9.253E-02	0.000E+00
PO-218	1.162E+00	1.655E-01	9.541E-02	0.000E+00
RA-224	3.482E+00	1.250E+00	1.053E+00	0.000E+00
RA-226	1.071E+00	1.655E-01	1.112E-01	0.000E+00
AC-228	1.224E+00	2.823E-01	2.380E-01	0.000E+00
RA-228	1.224E+00	2.823E-01	2.380E-01	0.000E+00
TH-228	1.351E+00	1.436E-01	9.252E-02	0.000E+00
TH-230	1.071E+00	1.655E-01	1.112E-01	0.000E+00
TH-232	1.224E+00	2.823E-01	2.380E-01	0.000E+00
TH-234	2.214E+00	1.488E+00	1.845E+00	0.000E+00
U-234	1.071E+00	1.655E-01	1.112E-01	0.000E+00
U-235	1.866E-01	3.618E-01	3.339E-01	0.000E+00
NP-237	1.090E+00	3.629E-01	3.235E-01	0.000E+00
U-238	2.214E+00	1.488E+00	1.845E+00	0.000E+00
AM-243	4.284E-01	8.092E-02	8.027E-02	0.000E+00
ANH-511	1.380E-01	6.829E-02	4.602E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-1.576E-01	3.056E-01	5.031E-01	0.000E+00	NOT IDENT.

NA-22	-1.415E-02	4.693E-02	7.594E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.654E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.332E-03	2.224E-02	3.868E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.220E-02	6.532E-02	0.000E+00	NOT IDENT.
SC-46	-1.814E-04	3.733E-02	6.386E-02	0.000E+00	FAIL ABUN
V-48	-4.293E-03	6.466E-02	1.092E-01	0.000E+00	NOT IDENT.
CR-51	1.827E-01	3.548E-01	5.841E-01	0.000E+00	NOT IDENT.
MN-52	-1.269E-01	1.782E-01	2.599E-01	0.000E+00	FAIL ABUN
MN-54	-1.561E-02	3.705E-02	6.165E-02	0.000E+00	NOT IDENT.
CO-56	3.360E-03	3.632E-02	6.285E-02	0.000E+00	FAIL ABUN
CO-57	-1.308E-02	2.387E-02	4.055E-02	0.000E+00	NOT IDENT.
CO-58	-1.763E-02	3.350E-02	5.492E-02	0.000E+00	NOT IDENT.
FE-59	-3.286E-02	9.641E-02	1.578E-01	0.000E+00	FAIL ABUN
CO-60	5.103E-03	4.081E-02	6.862E-02	0.000E+00	NOT IDENT.
ZN-65	-4.993E-02	1.069E-01	1.485E-01	0.000E+00	NOT IDENT.
GE-68	-8.634E-01	1.337E+00	2.129E+00	0.000E+00	NOT IDENT.
AS-73	-4.229E-01	5.892E-01	1.016E+00	0.000E+00	NOT IDENT.
AS-74	-2.167E-02	8.064E-02	1.327E-01	0.000E+00	NOT IDENT.
SE-75	2.699E-02	4.975E-02	7.518E-02	0.000E+00	NOT IDENT.
BR-77	-1.642E-01	7.188E+00	1.218E+01	0.000E+00	FAIL ABUN
SR-82	-3.198E-01	3.519E-01	5.634E-01	0.000E+00	NOT IDENT.
RB-83	7.665E-03	6.852E-02	1.172E-01	0.000E+00	NOT IDENT.
RB-84	4.069E-02	6.500E-02	1.170E-01	0.000E+00	NOT IDENT.
KR-85	8.332E+00	8.044E+00	1.286E+01	0.000E+00	NOT IDENT.
SR-85	4.216E-02	4.070E-02	6.509E-02	0.000E+00	NOT IDENT.
RB-86	-2.606E-01	7.861E-01	1.288E+00	0.000E+00	NOT IDENT.
Y-88	-4.315E-03	2.701E-02	4.377E-02	0.000E+00	NOT IDENT.
ZR-88	-4.245E-03	2.897E-02	4.961E-02	0.000E+00	NOT IDENT.
Y-91	-6.113E+00	1.919E+01	3.124E+01	0.000E+00	NOT IDENT.
NB-94	9.777E-03	3.327E-02	5.657E-02	0.000E+00	NOT IDENT.
NB-95	5.387E-02	4.336E-02	7.792E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.715E-01	2.884E-01	0.000E+00	NOT IDENT.
ZR-95	1.922E-02	6.828E-02	1.156E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.876E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.404E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.180E+00	8.016E+00	1.345E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.290E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.171E-02	3.206E-02	5.546E-02	0.000E+00	FAIL ABUN
RH-102	-2.080E-02	2.756E-02	4.454E-02	0.000E+00	NOT IDENT.
RU-103	6.784E-03	3.682E-02	6.346E-02	0.000E+00	FAIL ABUN
RH-106	-1.822E-01	3.021E-01	4.802E-01	0.000E+00	FAIL ABUN
RU-106	-1.822E-01	3.015E-01	4.802E-01	0.000E+00	FAIL ABUN
AG-108M	-2.249E-03	3.040E-02	5.193E-02	0.000E+00	NOT IDENT.
AG-110M	-2.736E-02	3.537E-02	5.541E-02	0.000E+00	NOT IDENT.
IN-111	3.128E-01	8.510E-01	1.276E+00	0.000E+00	NOT IDENT.
IN-113M	-2.074E-02	4.199E-02	7.041E-02	0.000E+00	NOT IDENT.
SN-113	-2.074E-02	4.199E-02	7.041E-02	0.000E+00	NOT IDENT.
IN-114M	1.299E-01	1.837E-01	2.848E-01	0.000E+00	NOT IDENT.
CD-115	-2.229E+00	6.994E+00	1.158E+01	0.000E+00	NOT IDENT.
SN-117M	1.662E-02	5.041E-02	8.760E-02	0.000E+00	NOT IDENT.
SB-122	1.145E+00	1.455E+00	2.589E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.156E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	8.512E-03	2.793E-02	4.847E-02	0.000E+00	NOT IDENT.
I-124	5.147E-01	6.037E-01	9.498E-01	0.000E+00	NOT IDENT.
SB-124	7.395E-02	6.670E-02	1.327E-01	0.000E+00	FAIL ABUN
SB-125	4.226E-02	8.558E-02	1.515E-01	0.000E+00	FAIL ABUN
TE-125M	-6.013E+00	8.534E+00	1.447E+01	0.000E+00	NOT IDENT.
I-126	-1.306E-01	1.717E-01	2.691E-01	0.000E+00	NOT IDENT.
SB-126	6.378E-02	1.342E-01	2.192E-01	0.000E+00	FAIL ABUN
SB-127	3.891E-01	1.022E+00	1.755E+00	0.000E+00	NOT IDENT.
XE-127	-4.291E-02	4.585E-02	7.140E-02	0.000E+00	FAIL ABUN
I-131	1.449E-02	9.445E-02	1.653E-01	0.000E+00	NOT IDENT.
TE-132	-1.990E-01	5.148E-01	8.497E-01	0.000E+00	NOT IDENT.
BA-133	-1.406E-03	4.266E-02	6.424E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.120E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.318E-02	4.524E-02	8.517E-02	0.000E+00	NOT IDENT.
CS-135	2.581E-01	1.920E-01	3.013E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.563E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.441E-02	1.031E-01	1.859E-01	0.000E+00	FAIL ABUN
BA-137M	3.354E-02	3.637E-02	6.468E-02	0.000E+00	NOT IDENT.
CS-137	3.546E-02	3.845E-02	6.837E-02	0.000E+00	NOT IDENT.
CE-139	3.330E-03	2.852E-02	4.905E-02	0.000E+00	NOT IDENT.
BA-140	5.998E-02	2.160E-01	3.723E-01	0.000E+00	NOT IDENT.
LA-140	-8.414E-02	6.722E-02	8.936E-02	0.000E+00	NOT IDENT.
CE-141	3.443E-02	6.511E-02	1.010E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.479E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.116E-02	2.242E-01	3.391E-01	0.000E+00	NOT IDENT.
PM-144	-1.524E-02	3.325E-02	5.320E-02	0.000E+00	NOT IDENT.

PR-144	-1.032E+00	2.252E+00	3.603E+00	0.000E+00	NOT IDENT.
PM-146	2.502E-02	3.906E-02	6.965E-02	0.000E+00	NOT IDENT.
ND-147	-1.824E-01	5.039E-01	8.305E-01	0.000E+00	FAIL ABUN
PM-149	2.539E+01	5.788E+01	1.036E+02	0.000E+00	NOT IDENT.
EU-152	4.934E-02	1.022E-01	1.604E-01	0.000E+00	FAIL ABUN
GD-153	-5.330E-03	8.151E-02	1.243E-01	0.000E+00	FAIL ABUN
EU-154	-3.848E-02	1.313E-01	2.126E-01	0.000E+00	NOT IDENT.
EU-155	1.117E-01	1.045E-01	1.888E-01	0.000E+00	FAIL ABUN
TB-160	-1.992E-02	1.291E-01	2.181E-01	0.000E+00	FAIL ABUN
HO-166M	7.009E-02	5.673E-02	1.035E-01	0.000E+00	FAIL ABUN
TM-171	-1.863E+01	2.839E+01	4.005E+01	0.000E+00	NOT IDENT.
LU-176	-1.219E-02	2.226E-02	3.784E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.373E+00	1.725E+00	0.000E+00	FAIL ABUN
LU-177M	-2.036E-01	1.680E-01	2.672E-01	0.000E+00	FAIL ABUN
HF-181	2.746E-03	4.183E-02	7.164E-02	0.000E+00	NOT IDENT.
W-181	-2.998E-02	3.306E-01	5.148E-01	0.000E+00	NOT IDENT.
TA-182	1.258E-01	2.070E-01	3.616E-01	0.000E+00	FAIL ABUN
RE-183	1.862E-02	1.060E-01	1.828E-01	0.000E+00	FAIL ABUN
RE-184	-1.269E-01	2.246E-01	3.645E-01	0.000E+00	NOT IDENT.
OS-185	-6.817E-03	3.971E-02	6.544E-02	0.000E+00	NOT IDENT.
RE-188	1.161E-02	1.643E-01	2.829E-01	0.000E+00	NOT IDENT.
W-188	-6.750E-01	7.609E+00	1.158E+01	0.000E+00	FAIL ABUN
IR-192	1.097E-03	3.145E-02	5.509E-02	0.000E+00	FAIL ABUN
AU-195	2.054E-01	2.328E-01	3.708E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.900E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.954E+00	5.046E+00	8.837E+00	0.000E+00	NOT IDENT.
TL-202	4.174E-02	6.123E-02	1.094E-01	0.000E+00	NOT IDENT.
HG-203	2.710E-02	4.355E-02	6.847E-02	0.000E+00	FAIL ABUN
BI-207	6.754E-03	5.143E-02	8.787E-02	0.000E+00	FAIL ABUN
TL-207	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
PO-209	7.048E+00	6.625E+00	1.235E+01	0.000E+00	NOT IDENT.
BI-210	1.210E+00	2.215E+00	4.011E+00	0.000E+00	NOT IDENT.
PB-210	1.210E+00	2.215E+00	4.011E+00	0.000E+00	NOT IDENT.
PO-210	1.210E+00	2.214E+00	4.011E+00	0.000E+00	NOT IDENT.
PB-211	-6.519E-01	1.040E+00	1.595E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.022E-01	6.127E-01	0.000E+00	FAIL ABUN
PO-215	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
RN-219	1.474E-01	4.098E-01	7.200E-01	0.000E+00	FAIL ABUN
RN-220	1.033E+01	2.354E+01	4.113E+01	0.000E+00	NOT IDENT.
RA-223	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
AC-227	1.114E-01	3.723E-01	6.319E-01	0.000E+00	NOT IDENT.
TH-227	1.114E-01	3.724E-01	6.319E-01	0.000E+00	NOT IDENT.
TH-229	-2.191E-01	4.756E-01	7.909E-01	0.000E+00	FAIL ABUN
PA-231	-1.733E-01	1.531E+00	2.530E+00	0.000E+00	NOT IDENT.
TH-231	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
U-231	-6.152E-01	8.954E-01	1.332E+00	0.000E+00	FAIL ABUN
PA-233	-1.306E-02	5.732E-02	9.909E-02	0.000E+00	FAIL ABUN
PA-234	-9.030E-02	2.838E-01	4.688E-01	0.000E+00	FAIL ABUN
PA-234M	5.944E+00	6.569E+00	1.196E+01	0.000E+00	NOT IDENT.
NP-236	5.222E-02	7.886E-02	1.386E-01	0.000E+00	NOT IDENT.
NP-239	5.517E-02	1.785E-01	3.141E-01	0.000E+00	FAIL ABUN
AM-241	1.295E-01	1.354E-01	2.217E-01	0.000E+00	NOT IDENT.
CM-243	2.890E-02	9.316E-02	1.647E-01	0.000E+00	FAIL ABUN
CM-247	1.383E-02	3.676E-02	6.469E-02	0.000E+00	FAIL ABUN
CF-249	3.826E-03	3.739E-02	6.500E-02	0.000E+00	NOT IDENT.
CF-251	3.375E-02	1.198E-01	2.069E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:37:19.41

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:36:12.
Sample ID         : G1201873070          Sample quantity  : 1.25460E+02 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.66  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1464	10.67*	1.257E+00	3.266E+01	3.266E+01	8.66
CD-109	88.03	215	3.72*	7.058E+00	2.453E+00	2.504E+00	31.68
SN-126	64.28	125	9.60	4.447E+00	8.765E-01	8.765E-01	67.91
	86.94	317	8.90	6.901E+00	1.543E+00	1.543E+00	48.63
	87.57	317	37.00*	6.901E+00	3.711E-01	3.711E-01	26.99
TL-208	277.35	80	6.80	4.926E+00	7.111E-01	7.111E-01	86.68
	510.84	142	21.60	3.080E+00	6.388E-01	6.388E-01	51.18
	583.14	377	84.20*	2.766E+00	4.845E-01	4.845E-01	16.50
	860.37	55	12.46	1.985E+00	6.610E-01	6.610E-01	56.70
BI-211	72.87	555	1.27	5.878E+00	2.226E+01	2.226E+01	19.28
	351.07	596	12.94*	4.126E+00	3.341E+00	3.341E+00	13.56
PB-212	74.81	555	10.70	5.878E+00	2.642E+00	2.642E+00	21.42
	77.11	621	18.00	6.128E+00	1.684E+00	1.684E+00	15.11
	87.30	317	8.00	6.901E+00	1.717E+00	1.717E+00	28.79
	238.63	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.09	------	3.41	4.646E+00	------ Line Not Found		------
PO-212	74.81	555	10.70	5.878E+00	2.642E+00	2.642E+00	21.42
	77.11	621	18.00	6.128E+00	1.684E+00	1.684E+00	15.11
	87.30	317	8.00	6.901E+00	1.717E+00	1.717E+00	28.79
	115.19	------	0.60	7.604E+00	------ Line Not Found		------
	238.63	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.09	------	3.41	4.646E+00	------ Line Not Found		------
BI-214	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
PB-214	74.81	555	6.21	5.878E+00	4.553E+00	4.553E+00	20.65
	77.11	621	10.50	6.128E+00	2.887E+00	2.888E+00	16.92
	87.30	317	4.67	6.901E+00	2.941E+00	2.941E+00	28.07

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	250	7.49	5.438E+00	1.836E+00	1.836E+00	37.07
	295.21	339	19.20	4.708E+00	1.122E+00	1.122E+00	20.81
	351.92	596	37.20*	4.126E+00	1.162E+00	1.162E+00	14.53
PO-214	74.81	555	6.21	5.878E+00	4.553E+00	4.553E+00	20.65
	77.11	621	10.50	6.128E+00	2.887E+00	2.888E+00	16.92
	87.30	317	4.67	6.901E+00	2.941E+00	2.941E+00	28.07
	241.98	250	7.49	5.438E+00	1.836E+00	1.836E+00	37.07
	295.21	339	19.20	4.708E+00	1.122E+00	1.122E+00	20.81
	351.92	596	37.20*	4.126E+00	1.162E+00	1.162E+00	14.53
PO-216	74.81	555	10.70	5.878E+00	2.642E+00	2.642E+00	21.42
	77.11	621	18.00	6.128E+00	1.684E+00	1.684E+00	15.11
	87.30	317	8.00	6.901E+00	1.717E+00	1.717E+00	28.79
	238.63	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.09	------	3.41	4.646E+00	------ Line Not Found		------
PO-218	74.81	555	6.21	5.878E+00	4.553E+00	4.553E+00	20.65
	77.11	621	10.50	6.128E+00	2.887E+00	2.888E+00	16.92
	87.30	317	4.67	6.901E+00	2.941E+00	2.941E+00	28.07
	241.98	250	7.49	5.438E+00	1.836E+00	1.836E+00	37.07
	295.21	339	19.20	4.708E+00	1.122E+00	1.122E+00	20.81
	351.92	596	37.20*	4.126E+00	1.162E+00	1.162E+00	14.53
RA-224	240.98	250	3.95*	5.438E+00	3.482E+00	3.482E+00	36.64
RA-226	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
AC-228	338.32	187	11.40	4.253E+00	1.151E+00	1.151E+00	50.42
	911.07	214	27.70*	1.888E+00	1.224E+00	1.224E+00	23.53
	969.11	162	16.60	1.789E+00	1.629E+00	1.629E+00	31.48
RA-228	338.32	187	11.40	4.253E+00	1.151E+00	1.151E+00	50.42
	911.07	214	27.70*	1.888E+00	1.224E+00	1.224E+00	23.53
	969.11	162	16.60	1.789E+00	1.629E+00	1.629E+00	31.48
TH-228	84.40	124	1.21	6.719E+00	4.575E+00	4.575E+00	52.28
	238.60	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.10	------	3.41	4.646E+00	------ Line Not Found		------
TH-230	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
TH-232	338.32	187	11.40	4.253E+00	1.151E+00	1.151E+00	30.24
	911.07	214	27.70*	1.888E+00	1.224E+00	1.224E+00	23.53
	969.11	162	16.60	1.789E+00	1.629E+00	1.629E+00	31.48
TH-234	63.29	125	3.80*	4.447E+00	2.214E+00	2.214E+00	68.59
	92.38	270	5.41	7.192E+00	2.075E+00	2.075E+00	33.89

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
U-235	89.95	215	2.70	7.058E+00	3.379E+00	3.379E+00	43.37
	93.35	270	4.50	7.192E+00	2.495E+00	2.495E+00	40.08
	105.00	------	2.10	7.539E+00	------ Line Not Found		------
	143.76	48	10.50*	7.283E+00	1.866E-01	1.866E-01	197.81
	163.35	------	4.70	6.902E+00	------ Line Not Found		------
	185.71	212	54.00	6.446E+00	1.825E-01	1.825E-01	42.88
	205.31	------	4.70	6.059E+00	------ Line Not Found		------
NP-237	86.50	317	12.60*	6.901E+00	1.090E+00	1.090E+00	33.98
	95.87	------	2.60	7.329E+00	------ Line Not Found		------
U-238	63.29	125	3.80*	4.447E+00	2.214E+00	2.214E+00	68.59
	92.38	270	5.41	7.192E+00	2.075E+00	2.075E+00	29.93
AM-243	74.67	555	66.00*	5.878E+00	4.284E-01	4.284E-01	19.28
	86.72	317	0.34	6.901E+00	4.087E+01	4.087E+01	26.99
	117.66	------	0.55	7.600E+00	------ Line Not Found		------
	142.18	------	0.13	7.314E+00	------ Line Not Found		------
ANH-511	511.00	142	100.00*	3.080E+00	1.380E-01	1.380E-01	50.50

Flag: "*" = Keyline

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

Total number of lines in spectrum 36
Number of unidentified lines 3
Number of lines tentatively identified by NID 33 91.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.266E+01	3.266E+01	0.283E+01	8.66	
CD-109	464.00D	1.02	2.453E+00	2.504E+00	0.793E+00	31.68	
SN-126	1.00E+05Y	1.00	3.711E-01	3.711E-01	1.002E-01	26.99	
TL-208	1.41E+10Y	1.00	4.845E-01	4.845E-01	0.799E-01	16.50	
BI-211	7.04E+08Y	1.00	3.341E+00	3.341E+00	0.453E+00	13.56	
PB-212	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
PO-212	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
BI-214	1600.00Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
PB-214	1600.00Y	1.00	1.162E+00	1.162E+00	0.169E+00	14.53	
PO-214	1600.00Y	1.00	1.162E+00	1.162E+00	0.169E+00	14.53	
PO-216	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
PO-218	1600.00Y	1.00	1.162E+00	1.162E+00	0.169E+00	14.53	
RA-224	1.41E+10Y	1.00	3.482E+00	3.482E+00	1.276E+00	36.64	
RA-226	1600.00Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
AC-228	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.288E+00	23.53	
RA-228	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.288E+00	23.53	
TH-228	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
TH-230	4.47E+09Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
TH-232	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.288E+00	23.53	
TH-234	4.47E+09Y	1.00	2.214E+00	2.214E+00	1.519E+00	68.59	
U-234	4.47E+09Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
U-235	7.04E+08Y	1.00	1.866E-01	1.866E-01	3.692E-01	197.81	
NP-237	2.14E+06Y	1.00	1.090E+00	1.090E+00	0.370E+00	33.98	
U-238	4.47E+09Y	1.00	2.214E+00	2.214E+00	1.519E+00	68.59	
AM-243	7380.00Y	1.00	4.284E-01	4.284E-01	0.826E-01	19.28	
ANH-511	1.00E+09Y	1.00	1.380E-01	1.380E-01	0.697E-01	50.50	
	Total Activity :		6.591E+01	6.596E+01			

Grand Total Activity : 6.591E+01 6.596E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	128.41	69	307	0.74	256.83	254	8	9.52E-03	91.7	7.52E+00	T
0	209.33	155	313	1.08	418.65	414	11	2.15E-02	47.1	5.98E+00	T
0	269.83	131	192	1.23	539.65	535	10	1.82E-02	43.2	5.02E+00	T
0	326.80	85	217	2.44	653.59	648	15	1.19E-02	77.8	4.36E+00	
0	462.92	67	100	1.47	925.85	920	11	9.29E-03	65.4	3.33E+00	T
0	727.54	90	59	1.27	1455.08	1450	12	1.25E-02	40.4	2.30E+00	T
8	964.64	41	49	2.62	1929.28	1924	21	5.68E-03	71.2	1.80E+00	T
0	1496.29	22	3	1.98	2992.58	2985	13	3.09E-03	53.6	1.23E+00	
0	1730.11	29	6	1.90	3460.21	3453	13	3.98E-03	52.3	1.11E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:37:24.03

```
*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1 *
* Acquisition date : 9-JUL-2009 08:36:12.  Detector SN#     :              *
* Detector ID      : GAM11                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:01.66         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 25-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G1201873070           Analyst initials: MXR1          *
* Batch Number     : 881931                Sample Quantity : 1.25460E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 1-NOV-2008 15:37:21.59MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.266E+01	2.830E+00	4.298E-01	2.881E-02	75.996
CD-109	2.504E+00	7.932E-01	1.063E+00	9.739E-02	2.355
SN-126	3.711E-01	1.002E-01	1.051E-01	9.572E-03	3.532
TL-208	4.845E-01	7.994E-02	5.606E-02	4.154E-03	8.642
BI-211	3.341E+00	4.530E-01	2.852E-01	1.999E-02	11.713
PB-212	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
PO-212	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
BI-214	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
PB-214	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-214	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-216	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
PO-218	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
RA-224	3.482E+00	1.276E+00	1.027E+00	7.041E-02	3.391
RA-226	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
AC-228	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
RA-228	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
TH-228	1.351E+00	1.465E-01	9.023E-02	7.352E-03	14.967
TH-230	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
TH-234	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
U-234	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
U-235	1.866E-01	3.692E-01	3.234E-01	5.281E-02	0.577
NP-237	1.090E+00	3.703E-01	3.111E-01	7.001E-02	3.503
U-238	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
AM-243	4.284E-01	8.257E-02	7.705E-02	5.933E-03	5.560
ANH-511	1.380E-01	6.968E-02	4.536E-02	2.796E-03	3.042

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.576E-01		3.119E-01	4.955E-01	3.402E-02	-0.318
NA-22	-1.415E-02		4.788E-02	7.585E-02	4.649E-03	-0.187
NA-24	-9.176E-02		8.439E-02	Half-Life too short		
AL-26	3.332E-03		2.269E-02	3.883E-02	2.142E-03	0.086
TI-44	1.963E-01		4.306E-02	6.274E-02	5.062E-03	3.129
SC-46	-1.814E-04		3.810E-02	6.345E-02	5.097E-03	-0.003
V-48	-4.293E-03		6.598E-02	1.086E-01	8.128E-03	-0.040
CR-51	1.827E-01		3.621E-01	5.720E-01	4.386E-02	0.319
MN-52	-1.269E-01		1.818E-01	2.600E-01	1.666E-02	-0.488
MN-54	-1.561E-02		3.781E-02	6.120E-02	4.802E-03	-0.255
CO-56	3.360E-03		3.707E-02	6.240E-02	4.924E-03	0.054
CO-57	-1.308E-02		2.436E-02	3.918E-02	2.570E-03	-0.334
CO-58	-1.763E-02		3.418E-02	5.450E-02	4.239E-03	-0.323
FE-59	-3.286E-02		9.838E-02	1.572E-01	1.148E-02	-0.209
CO-60	5.103E-03		4.164E-02	6.858E-02	4.444E-03	0.074
ZN-65	-4.993E-02		1.091E-01	1.480E-01	9.195E-03	-0.337
GE-68	-8.634E-01		1.364E+00	2.122E+00	1.404E-01	-0.407
AS-73	-4.229E-01		6.012E-01	9.710E-01	6.196E-02	-0.436
AS-74	-2.167E-02		8.228E-02	1.311E-01	8.782E-03	-0.165
SE-75	2.699E-02		5.076E-02	7.342E-02	5.480E-03	0.368
BR-77	-1.642E-01		7.335E+00	1.201E+01	7.479E-01	-0.014
SR-82	-3.198E-01		3.591E-01	5.586E-01	4.254E-02	-0.572
RB-83	7.665E-03		6.992E-02	1.155E-01	7.193E-03	0.066
RB-84	4.069E-02		6.633E-02	1.162E-01	9.305E-03	0.350
KR-85	8.332E+00		8.208E+00	1.268E+01	7.842E-01	0.657
SR-85	4.216E-02		4.153E-02	6.417E-02	3.968E-03	0.657
RB-86	-2.606E-01		8.021E-01	1.283E+00	8.504E-02	-0.203
Y-88	-4.315E-03		2.756E-02	4.395E-02	2.387E-03	-0.098
ZR-88	-4.245E-03		2.956E-02	4.872E-02	2.580E-03	-0.087
Y-91	-6.113E+00		1.958E+01	3.117E+01	1.773E+00	-0.196
NB-94	9.777E-03		3.395E-02	5.601E-02	4.075E-03	0.175
NB-95	5.387E-02		4.425E-02	7.725E-02	5.847E-03	0.697
NB-95M	7.866E-01		1.750E-01	2.812E-01	2.325E-02	2.798
ZR-95	1.922E-02		6.968E-02	1.146E-01	9.757E-03	0.168
NB-97	-2.090E-02		1.467E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1.287E+00		3.267E-01	Half-Life too short		
MO-99	1.180E+00		8.180E+00	1.333E+01	1.939E+00	0.089
TC-99M	-6.153E+08		6.582E+08	Half-Life too short		
RH-101	4.171E-02		3.271E-02	5.395E-02	3.178E-03	0.773
RH-102	-2.080E-02		2.812E-02	4.386E-02	2.595E-03	-0.474
RU-103	6.784E-03		3.757E-02	6.253E-02	7.986E-03	0.108
RH-106	-1.822E-01		3.082E-01	4.746E-01	5.833E-02	-0.384
RU-106	-1.822E-01		3.077E-01	4.746E-01	3.250E-02	-0.384
AG-108M	-2.249E-03		3.102E-02	5.107E-02	3.129E-03	-0.044
AG-110M	-2.736E-02		3.610E-02	5.481E-02	4.033E-03	-0.499
IN-111	3.128E-01		8.684E-01	1.245E+00	8.668E-02	0.251
IN-113M	-2.074E-02		4.285E-02	6.914E-02	3.949E-03	-0.300
SN-113	-2.074E-02		4.285E-02	6.914E-02	3.949E-03	-0.300
IN-114M	1.299E-01		1.874E-01	2.769E-01	1.585E-02	0.469
CD-115	-2.229E+00		7.137E+00	1.142E+01	7.166E-01	-0.195
SN-117M	1.662E-02		5.144E-02	8.495E-02	4.635E-03	0.196
SB-122	1.145E+00		1.485E+00	2.555E+00	1.662E-01	0.448
I-123	3.523E-01		5.898E-01	Half-Life too short		
TE-123M	8.512E-03		2.850E-02	4.700E-02	2.598E-03	0.181
I-124	5.147E-01		6.160E-01	9.385E-01	6.324E-02	0.548
SB-124	7.395E-02		6.806E-02	1.331E-01	8.499E-03	0.556
SB-125	4.226E-02		8.733E-02	1.490E-01	8.678E-03	0.284
TE-125M	-6.013E+00		8.708E+00	1.396E+01	1.287E+00	-0.431
I-126	-1.306E-01		1.752E-01	2.662E-01	1.888E-02	-0.491
SB-126	6.378E-02		1.369E-01	2.172E-01	1.599E-02	0.294
SB-127	3.891E-01		1.043E+00	1.737E+00	1.728E-01	0.224
XE-127	-4.291E-02		4.678E-02	6.948E-02	4.165E-03	-0.618
I-131	1.449E-02		9.637E-02	1.621E-01	1.090E-02	0.089
TE-132	-1.990E-01		5.253E-01	8.281E-01	1.197E-01	-0.240
BA-133	-1.406E-03		4.353E-02	6.300E-02	7.450E-03	-0.022
I-133	3.120E-04		1.082E-03	Half-Life too short		
CS-134	6.318E-02		4.616E-02	8.449E-02	6.561E-03	0.748
CS-135	2.581E-01		1.960E-01	2.943E-01	2.654E-02	0.877
I-135	2.488E+07		1.307E+08	Half-Life too short		
CS-136	8.441E-02		1.052E-01	1.851E-01	1.363E-02	0.456
BA-137M	3.354E-02		3.711E-02	6.399E-02	4.522E-03	0.524
CS-137	3.546E-02		3.923E-02	6.764E-02	4.793E-03	0.524
CE-139	3.330E-03		2.910E-02	4.760E-02	2.497E-03	0.070
BA-140	5.998E-02		2.205E-01	3.672E-01	1.198E-01	0.163
LA-140	-8.414E-02		6.859E-02	8.954E-02	5.499E-03	-0.940
CE-141	3.443E-02		6.644E-02	9.787E-02	5.930E-03	0.352
CE-143	5.375E-04		7.547E-05	Half-Life too short		
CE-144	-1.116E-02		2.288E-01	3.280E-01	4.710E-02	-0.034
PM-144	-1.524E-02		3.393E-02	5.268E-02	3.818E-03	-0.289
PR-144	-1.032E+00		2.298E+00	3.567E+00	2.585E-01	-0.289
PM-146	2.502E-02		3.986E-02	6.854E-02	5.893E-03	0.365
ND-147	-1.824E-01		5.141E-01	8.191E-01	1.126E-01	-0.223
PM-149	2.539E+01		5.906E+01	1.013E+02	1.524E+01	0.251

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	4.934E-02		1.043E-01	1.572E-01	1.141E-02	0.314
GD-153	-5.330E-03		8.317E-02	1.198E-01	9.746E-03	-0.044
EU-154	-3.848E-02		1.340E-01	2.123E-01	2.026E-02	-0.181
EU-155	1.117E-01		1.067E-01	1.821E-01	1.390E-02	0.614
TB-160	-1.992E-02		1.317E-01	2.166E-01	1.733E-02	-0.092
HO-166M	7.009E-02		5.789E-02	1.025E-01	7.501E-03	0.684
TM-171	-1.863E+01		2.897E+01	3.838E+01	2.686E+00	-0.485
LU-176	-1.219E-02		2.272E-02	3.703E-02	2.726E-03	-0.329
LU-177	2.953E+00	+	1.401E+00	1.679E+00	1.027E-01	1.759
LU-177M	-2.036E-01		1.715E-01	2.626E-01	1.434E-02	-0.775
HF-181	2.746E-03		4.269E-02	7.056E-02	4.209E-03	0.039
W-181	-2.998E-02		3.374E-01	4.932E-01	3.391E-02	-0.061
TA-182	1.258E-01		2.112E-01	3.609E-01	2.089E-02	0.348
RE-183	1.862E-02		1.081E-01	1.774E-01	9.485E-03	0.105
RE-184	-1.269E-01		2.292E-01	3.558E-01	2.539E-02	-0.357
OS-185	-6.817E-03		4.052E-02	6.472E-02	4.520E-03	-0.105
RE-188	1.161E-02		1.676E-01	2.743E-01	1.524E-02	0.042
W-188	-6.750E-01		7.764E+00	1.132E+01	8.619E-01	-0.060
IR-192	1.097E-03		3.209E-02	5.394E-02	3.889E-03	0.020
AU-195	2.054E-01		2.375E-01	3.572E-01	2.861E-02	0.575
TL-200	-7.708E-05		9.691E-05	Half-Life too short		
TL-201	2.954E+00		5.149E+00	8.576E+00	4.520E-01	0.344
TL-202	4.174E-02		6.248E-02	1.076E-01	6.089E-03	0.388
HG-203	2.710E-02		4.444E-02	6.692E-02	5.379E-03	0.405
BI-207	6.754E-03		5.248E-02	8.753E-02	5.917E-03	0.077
TL-207	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
PO-209	7.048E+00		6.760E+00	1.227E+01	9.884E-01	0.574
BI-210	1.210E+00		2.260E+00	3.826E+00	2.836E-01	0.316
PB-210	1.210E+00		2.260E+00	3.826E+00	2.836E-01	0.316
PO-210	1.210E+00		2.259E+00	3.826E+00	2.400E-01	0.316
PB-211	-6.519E-01		1.061E+00	1.567E+00	9.761E-01	-0.416
BI-212	9.922E-01	+	4.104E-01	6.070E-01	5.447E-02	1.635
PO-215	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
RN-219	1.474E-01		4.182E-01	7.073E-01	9.497E-02	0.208
RN-220	1.033E+01		2.402E+01	4.059E+01	2.604E+00	0.254
RA-223	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
AC-227	1.114E-01		3.799E-01	6.169E-01	9.009E-02	0.181
TH-227	1.114E-01		3.800E-01	6.169E-01	1.076E-01	0.181
TH-229	-2.191E-01		4.853E-01	7.690E-01	4.458E-02	-0.285
PA-231	-1.733E-01		1.562E+00	2.473E+00	3.632E-01	-0.070
TH-231	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
U-231	-6.152E-01		9.137E-01	1.283E+00	1.062E-01	-0.480
PA-233	-1.306E-02		5.849E-02	9.699E-02	7.332E-03	-0.135
PA-234	-9.030E-02		2.896E-01	4.662E-01	8.571E-02	-0.194
PA-234M	5.944E+00		6.703E+00	1.190E+01	1.217E+00	0.500
NP-236	5.222E-02		8.047E-02	1.344E-01	7.268E-03	0.388
NP-239	5.517E-02		1.821E-01	3.033E-01	2.065E-02	0.182
AM-241	1.295E-01		1.382E-01	2.122E-01	1.535E-02	0.610

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.890E-02		9.506E-02	1.588E-01	1.211E-02	0.182
CM-247	1.383E-02		3.751E-02	6.355E-02	3.415E-03	0.218
CF-249	3.826E-03		3.815E-02	6.382E-02	3.449E-03	0.060
CF-251	3.375E-02		1.222E-01	2.009E-01	1.094E-02	0.168

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201873070          *
* Acquisition date  :  9-JUL-2009 08:36:12 Detector SN#     :               *
* Detector ID       : GAM11                 Sensitivity     : 5.000         *
* Geometry          : CAN                   Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.66       Half life ratio : 8.000         *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201873070          Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.2546E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.266E+01	2.773E+00	2.149E-01	1.415E+00
CD-109	2.504E+00	7.773E-01	5.530E-01	3.966E-01
SN-126	3.711E-01	9.818E-02	5.465E-02	5.009E-02
TL-208	4.845E-01	7.834E-02	2.840E-02	3.997E-02
BI-211	3.341E+00	4.440E-01	1.455E-01	2.265E-01
PB-212	1.351E+00	1.436E-01	4.629E-02	7.326E-02
PO-212	1.351E+00	1.436E-01	4.629E-02	7.326E-02
BI-214	1.071E+00	1.655E-01	5.563E-02	8.443E-02
PB-214	1.162E+00	1.655E-01	4.774E-02	8.443E-02
PO-214	1.162E+00	1.655E-01	4.774E-02	8.443E-02
PO-216	1.351E+00	1.436E-01	4.629E-02	7.326E-02
PO-218	1.162E+00	1.655E-01	4.774E-02	8.443E-02
RA-224	3.482E+00	1.250E+00	5.266E-01	6.379E-01
RA-226	1.071E+00	1.655E-01	5.563E-02	8.443E-02
AC-228	1.224E+00	2.823E-01	1.191E-01	1.440E-01
RA-228	1.224E+00	2.823E-01	1.191E-01	1.440E-01
TH-228	1.351E+00	1.436E-01	4.629E-02	7.326E-02
TH-230	1.071E+00	1.655E-01	5.563E-02	8.443E-02
TH-232	1.224E+00	2.823E-01	1.191E-01	1.440E-01
TH-234	2.214E+00	1.488E+00	9.230E-01	7.594E-01
U-234	1.071E+00	1.655E-01	5.563E-02	8.443E-02
U-235	1.866E-01	3.618E-01	1.670E-01	1.846E-01
NP-237	1.090E+00	3.629E-01	1.618E-01	1.852E-01
U-238	2.214E+00	1.488E+00	9.230E-01	7.594E-01
AM-243	4.284E-01	8.092E-02	4.016E-02	4.129E-02
ANH-511	1.380E-01	6.829E-02	2.302E-02	3.484E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.576E-01	3.056E-01	2.517E-01	1.559E-01 NOT IDENT.

NA-22	-1.415E-02	4.693E-02	3.799E-02	2.394E-02	NOT IDENT.
NA-24	-9.176E+04	1.654E+05	0.000E+00	8.439E+04	SHORT HLIF
AL-26	3.332E-03	2.224E-02	1.935E-02	1.134E-02	NOT IDENT.
TI-44	1.963E-01	4.220E-02	3.268E-02	2.153E-02	NOT IDENT.
SC-46	-1.814E-04	3.733E-02	3.195E-02	1.905E-02	FAIL ABUN
V-48	-4.293E-03	6.466E-02	5.462E-02	3.299E-02	NOT IDENT.
CR-51	1.827E-01	3.548E-01	2.922E-01	1.810E-01	NOT IDENT.
MN-52	-1.269E-01	1.782E-01	1.300E-01	9.089E-02	FAIL ABUN
MN-54	-1.561E-02	3.705E-02	3.084E-02	1.890E-02	NOT IDENT.
CO-56	3.360E-03	3.632E-02	3.144E-02	1.853E-02	FAIL ABUN
CO-57	-1.308E-02	2.387E-02	2.029E-02	1.218E-02	NOT IDENT.
CO-58	-1.763E-02	3.350E-02	2.748E-02	1.709E-02	NOT IDENT.
FE-59	-3.286E-02	9.641E-02	7.893E-02	4.919E-02	FAIL ABUN
CO-60	5.103E-03	4.081E-02	3.433E-02	2.082E-02	NOT IDENT.
ZN-65	-4.993E-02	1.069E-01	7.428E-02	5.456E-02	NOT IDENT.
GE-68	-8.634E-01	1.337E+00	1.065E+00	6.819E-01	NOT IDENT.
AS-73	-4.229E-01	5.892E-01	5.084E-01	3.006E-01	NOT IDENT.
AS-74	-2.167E-02	8.064E-02	6.639E-02	4.114E-02	NOT IDENT.
SE-75	2.699E-02	4.975E-02	3.761E-02	2.538E-02	NOT IDENT.
BR-77	-1.642E-01	7.188E+00	6.093E+00	3.667E+00	FAIL ABUN
SR-82	-3.198E-01	3.519E-01	2.818E-01	1.795E-01	NOT IDENT.
RB-83	7.665E-03	6.852E-02	5.861E-02	3.496E-02	NOT IDENT.
RB-84	4.069E-02	6.500E-02	5.851E-02	3.317E-02	NOT IDENT.
KR-85	8.332E+00	8.044E+00	6.436E+00	4.104E+00	NOT IDENT.
SR-85	4.216E-02	4.070E-02	3.257E-02	2.077E-02	NOT IDENT.
RB-86	-2.606E-01	7.861E-01	6.444E-01	4.011E-01	NOT IDENT.
Y-88	-4.315E-03	2.701E-02	2.190E-02	1.378E-02	NOT IDENT.
ZR-88	-4.245E-03	2.897E-02	2.482E-02	1.478E-02	NOT IDENT.
Y-91	-6.113E+00	1.919E+01	1.563E+01	9.788E+00	NOT IDENT.
NB-94	9.777E-03	3.327E-02	2.830E-02	1.698E-02	NOT IDENT.
NB-95	5.387E-02	4.336E-02	3.898E-02	2.212E-02	NOT IDENT.
NB-95M	7.866E-01	1.715E-01	1.443E-01	8.748E-02	NOT IDENT.
ZR-95	1.922E-02	6.828E-02	5.785E-02	3.484E-02	NOT IDENT.
NB-97	-2.090E+04	2.876E+04	0.000E+00	1.467E+04	SHORT HLIF
ZR-97	1.287E+06	6.404E+05	0.000E+00	3.267E+05	SHORT HLIF
MO-99	1.180E+00	8.016E+00	6.728E+00	4.090E+00	NOT IDENT.
TC-99M	-6.153E+14	1.290E+15	0.000E+00	6.582E+14	SHORT HLIF
RH-101	4.171E-02	3.206E-02	2.775E-02	1.636E-02	FAIL ABUN
RH-102	-2.080E-02	2.756E-02	2.229E-02	1.406E-02	NOT IDENT.
RU-103	6.784E-03	3.682E-02	3.175E-02	1.878E-02	FAIL ABUN
RH-106	-1.822E-01	3.021E-01	2.402E-01	1.541E-01	FAIL ABUN
RU-106	-1.822E-01	3.015E-01	2.402E-01	1.538E-01	FAIL ABUN
AG-108M	-2.249E-03	3.040E-02	2.598E-02	1.551E-02	NOT IDENT.
AG-110M	-2.736E-02	3.537E-02	2.772E-02	1.805E-02	NOT IDENT.
IN-111	3.128E-01	8.510E-01	6.386E-01	4.342E-01	NOT IDENT.
IN-113M	-2.074E-02	4.199E-02	3.523E-02	2.143E-02	NOT IDENT.
SN-113	-2.074E-02	4.199E-02	3.523E-02	2.143E-02	NOT IDENT.
IN-114M	1.299E-01	1.837E-01	1.425E-01	9.370E-02	NOT IDENT.
CD-115	-2.229E+00	6.994E+00	5.793E+00	3.568E+00	NOT IDENT.
SN-117M	1.662E-02	5.041E-02	4.383E-02	2.572E-02	NOT IDENT.
SB-122	1.145E+00	1.455E+00	1.295E+00	7.426E-01	NOT IDENT.
I-123	3.523E+05	1.156E+06	0.000E+00	5.898E+05	SHORT HLIF
TE-123M	8.512E-03	2.793E-02	2.425E-02	1.425E-02	NOT IDENT.
I-124	5.147E-01	6.037E-01	4.752E-01	3.080E-01	NOT IDENT.
SB-124	7.395E-02	6.670E-02	6.638E-02	3.403E-02	FAIL ABUN
SB-125	4.226E-02	8.558E-02	7.580E-02	4.366E-02	FAIL ABUN
TE-125M	-6.013E+00	8.534E+00	7.241E+00	4.354E+00	NOT IDENT.
I-126	-1.306E-01	1.717E-01	1.346E-01	8.759E-02	NOT IDENT.
SB-126	6.378E-02	1.342E-01	1.097E-01	6.847E-02	FAIL ABUN
SB-127	3.891E-01	1.022E+00	8.779E-01	5.213E-01	NOT IDENT.
XE-127	-4.291E-02	4.585E-02	3.572E-02	2.339E-02	FAIL ABUN
I-131	1.449E-02	9.445E-02	8.269E-02	4.819E-02	NOT IDENT.
TE-132	-1.990E-01	5.148E-01	4.251E-01	2.627E-01	NOT IDENT.
BA-133	-1.406E-03	4.266E-02	3.214E-02	2.177E-02	FAIL ABUN
I-133	3.120E+02	2.120E+03	0.000E+00	1.082E+03	SHORT HLIF
CS-134	6.318E-02	4.524E-02	4.261E-02	2.308E-02	NOT IDENT.
CS-135	2.581E-01	1.920E-01	1.508E-01	9.798E-02	NOT IDENT.
I-135	2.488E+13	2.563E+14	0.000E+00	1.307E+14	SHORT HLIF
CS-136	8.441E-02	1.031E-01	9.299E-02	5.260E-02	FAIL ABUN
BA-137M	3.354E-02	3.637E-02	3.236E-02	1.856E-02	NOT IDENT.
CS-137	3.546E-02	3.845E-02	3.421E-02	1.962E-02	NOT IDENT.
CE-139	3.330E-03	2.852E-02	2.454E-02	1.455E-02	NOT IDENT.
BA-140	5.998E-02	2.160E-01	1.862E-01	1.102E-01	NOT IDENT.
LA-140	-8.414E-02	6.722E-02	4.470E-02	3.430E-02	NOT IDENT.
CE-141	3.443E-02	6.511E-02	5.055E-02	3.322E-02	NOT IDENT.
CE-143	5.375E+02	1.479E+02	0.000E+00	7.547E+01	SHORT HLIF
CE-144	-1.116E-02	2.242E-01	1.696E-01	1.144E-01	NOT IDENT.
PM-144	-1.524E-02	3.325E-02	2.662E-02	1.696E-02	NOT IDENT.

PR-144	-1.032E+00	2.252E+00	1.803E+00	1.149E+00	NOT IDENT.
PM-146	2.502E-02	3.906E-02	3.485E-02	1.993E-02	NOT IDENT.
ND-147	-1.824E-01	5.039E-01	4.155E-01	2.571E-01	FAIL ABUN
PM-149	2.539E+01	5.788E+01	5.185E+01	2.953E+01	NOT IDENT.
EU-152	4.934E-02	1.022E-01	8.023E-02	5.213E-02	FAIL ABUN
GD-153	-5.330E-03	8.151E-02	6.221E-02	4.159E-02	FAIL ABUN
EU-154	-3.848E-02	1.313E-01	1.064E-01	6.698E-02	NOT IDENT.
EU-155	1.117E-01	1.045E-01	9.445E-02	5.333E-02	FAIL ABUN
TB-160	-1.992E-02	1.291E-01	1.091E-01	6.585E-02	FAIL ABUN
HO-166M	7.009E-02	5.673E-02	5.176E-02	2.895E-02	FAIL ABUN
TM-171	-1.863E+01	2.839E+01	2.004E+01	1.448E+01	NOT IDENT.
LU-176	-1.219E-02	2.226E-02	1.893E-02	1.136E-02	FAIL ABUN
LU-177	2.953E+00	1.373E+00	8.628E-01	7.007E-01	FAIL ABUN
LU-177M	-2.036E-01	1.680E-01	1.337E-01	8.573E-02	FAIL ABUN
HF-181	2.746E-03	4.183E-02	3.584E-02	2.134E-02	NOT IDENT.
W-181	-2.998E-02	3.306E-01	2.576E-01	1.687E-01	NOT IDENT.
TA-182	1.258E-01	2.070E-01	1.809E-01	1.056E-01	FAIL ABUN
RE-183	1.862E-02	1.060E-01	9.148E-02	5.406E-02	FAIL ABUN
RE-184	-1.269E-01	2.246E-01	1.824E-01	1.146E-01	NOT IDENT.
OS-185	-6.817E-03	3.971E-02	3.274E-02	2.026E-02	NOT IDENT.
RE-188	1.161E-02	1.643E-01	1.415E-01	8.381E-02	NOT IDENT.
W-188	-6.750E-01	7.609E+00	5.791E+00	3.882E+00	FAIL ABUN
IR-192	1.097E-03	3.145E-02	2.756E-02	1.605E-02	FAIL ABUN
AU-195	2.054E-01	2.328E-01	1.855E-01	1.188E-01	FAIL ABUN
TL-200	-7.708E+01	1.900E+02	0.000E+00	9.691E+01	SHORT HLIF
TL-201	2.954E+00	5.046E+00	4.421E+00	2.575E+00	NOT IDENT.
TL-202	4.174E-02	6.123E-02	5.474E-02	3.124E-02	NOT IDENT.
HG-203	2.710E-02	4.355E-02	3.426E-02	2.222E-02	FAIL ABUN
BI-207	6.754E-03	5.143E-02	4.396E-02	2.624E-02	FAIL ABUN
TL-207	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
PO-209	7.048E+00	6.625E+00	6.177E+00	3.380E+00	NOT IDENT.
BI-210	1.210E+00	2.215E+00	2.007E+00	1.130E+00	NOT IDENT.
PB-210	1.210E+00	2.215E+00	2.007E+00	1.130E+00	NOT IDENT.
PO-210	1.210E+00	2.214E+00	2.007E+00	1.130E+00	NOT IDENT.
PB-211	-6.519E-01	1.040E+00	7.978E-01	5.305E-01	NOT IDENT.
BI-212	9.922E-01	4.022E-01	3.066E-01	2.052E-01	FAIL ABUN
PO-215	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
RN-219	1.474E-01	4.098E-01	3.602E-01	2.091E-01	FAIL ABUN
RN-220	1.033E+01	2.354E+01	2.058E+01	1.201E+01	NOT IDENT.
RA-223	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
AC-227	1.114E-01	3.723E-01	3.161E-01	1.899E-01	NOT IDENT.
TH-227	1.114E-01	3.724E-01	3.161E-01	1.900E-01	NOT IDENT.
TH-229	-2.191E-01	4.756E-01	3.957E-01	2.427E-01	FAIL ABUN
PA-231	-1.733E-01	1.531E+00	1.266E+00	7.809E-01	NOT IDENT.
TH-231	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
U-231	-6.152E-01	8.954E-01	6.664E-01	4.569E-01	FAIL ABUN
PA-233	-1.306E-02	5.732E-02	4.957E-02	2.925E-02	FAIL ABUN
PA-234	-9.030E-02	2.838E-01	2.345E-01	1.448E-01	FAIL ABUN
PA-234M	5.944E+00	6.569E+00	5.982E+00	3.351E+00	NOT IDENT.
NP-236	5.222E-02	7.886E-02	6.935E-02	4.024E-02	NOT IDENT.
NP-239	5.517E-02	1.785E-01	1.571E-01	9.106E-02	FAIL ABUN
AM-241	1.295E-01	1.354E-01	1.109E-01	6.908E-02	NOT IDENT.
CM-243	2.890E-02	9.316E-02	8.238E-02	4.753E-02	FAIL ABUN
CM-247	1.383E-02	3.676E-02	3.236E-02	1.875E-02	FAIL ABUN
CF-249	3.826E-03	3.739E-02	3.252E-02	1.907E-02	NOT IDENT.
CF-251	3.375E-02	1.198E-01	1.035E-01	6.112E-02	NOT IDENT.

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*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                           CHARLESTON ,SC 29417                        *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT              *
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ENERGY	MDA COUNTS
46.50	300.8419
46.50	300.8419
46.50	300.8419
48.70	366.4348
49.72	364.3700
51.35	305.2627
52.39	319.5000
52.97	351.7958
53.15	357.3872
53.44	364.8776
54.07	375.3334
56.28	397.8364
56.28	397.8381
57.37	0.0000
57.53	325.2999
57.53	325.3006
57.60	347.4346
57.98	347.8926
57.98	347.8926
59.32	394.4312
59.32	394.4312
59.40	394.4809
59.54	394.5681
59.72	406.5062
60.01	406.6917
61.10	450.3455
61.14	488.8921
61.30	489.0139
63.00	468.0088
63.29	468.2150
63.29	468.2150
63.58	463.9610
64.28	467.4295
65.12	456.0958
65.20	456.1499
65.20	456.1499
66.05	482.1027
66.72	493.0362
66.83	493.1188
66.91	490.6864
67.20	473.4518
67.20	473.4518
67.75	486.3019
67.85	486.3733
68.90	488.9907
68.90	488.9907
69.30	494.8973
69.67	498.1642
70.82	492.9689
70.82	492.9689
70.83	492.9769
72.80	470.0472
72.87	470.0929
72.87	470.0929
74.67	471.2693
74.81	471.3607
74.81	471.3607
74.81	471.3607
74.81	471.3607
74.81	471.3607
74.81	471.3607
74.97	471.4635
75.28	471.6653
75.70	471.9355
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77.11	447.2570
77.11	447.2570

77.11	447.2570
77.11	447.2570
77.11	447.2570
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79.80	384.2010
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80.30	334.9709
80.30	334.9709
80.57	335.0905
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81.07	373.4142
81.07	373.4142
81.07	373.4142
81.07	373.4142
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83.78	376.6420
83.78	376.6420
83.78	376.6420
84.21	376.8509
84.40	376.9426
84.90	377.1830
85.43	377.4370
86.29	377.8489
86.50	377.9496
86.54	377.9676
86.59	377.9916
86.72	378.0548
86.79	378.0863
86.94	378.1585
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87.30	378.3298
87.30	378.3298
87.30	378.3298
87.30	378.3298
87.30	378.3298
87.57	378.4576
87.88	378.6049
88.03	378.6755
88.36	378.8303
88.47	378.8829
89.95	379.5773
91.11	380.1184
92.29	380.6640
92.38	380.7061
92.38	380.7061
93.35	381.1524
94.00	381.4500
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94.67	344.1610
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94.90	390.7769
94.90	390.7769
94.90	390.7769
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95.87	406.7524
96.73	386.9637
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98.44	345.6948
98.88	327.1752
99.55	319.6343
99.55	319.6343
99.86	345.3726
100.00	345.4280
100.10	345.4699
103.18	402.1840
103.76	372.0925
105.00	359.8642
105.31	355.0844
108.00	376.8052
109.28	369.4525
111.00	360.2743
111.00	360.2743

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112.95	315.5306
115.19	343.0540
116.30	315.6612
117.00	322.8465
117.00	322.8465
117.66	327.0459
121.11	363.1308
121.62	354.3378
121.78	337.4236
122.06	337.5204
122.32	306.6451
122.32	306.6451
122.32	306.6451
122.32	306.6451
123.07	306.1654
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136.48	337.6185
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140.51	0.0000
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142.65	315.8064
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144.24	300.3544
144.24	300.3544
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145.44	307.2212
147.16	301.1563
152.43	311.4215
152.70	310.4675
153.22	311.6389
154.21	306.7623
154.21	306.7623
154.21	306.7623
154.21	306.7623
155.03	327.5881
156.02	362.9275
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159.00	0.0000
159.00	320.4514
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161.27	287.9346
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162.64	329.7474
163.35	353.8104
163.89	331.1360
165.85	302.5714
167.43	286.3129
171.28	296.6278
171.86	291.5460
172.10	291.6035
176.55	273.7800
176.60	273.7899
181.06	289.7188
184.41	293.8629
185.71	282.1169
186.00	282.1821
190.27	237.5215
192.34	270.1835
193.63	275.3397
197.04	262.1952
198.01	226.1218
198.60	235.8242
200.40	279.9521
201.83	287.7355
202.84	299.7260
205.31	226.4899
208.36	266.5463
208.81	275.2344

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209.75	264.6613
210.97	248.0959
215.65	252.0966
216.55	255.1397
218.09	260.8284
222.10	246.3675
223.80	248.8317
226.40	251.4543
227.00	262.4482
227.08	264.6411
227.20	264.6633
228.16	253.9371
228.18	253.9407
228.18	253.9407
231.56	0.0000
235.69	264.6537
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236.00	268.2151
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238.63	251.3441
238.63	251.3441
238.63	251.3441
239.00	251.4052
240.98	251.7354
241.98	251.9014
241.98	251.9014
241.98	251.9014
244.69	209.8130
245.39	208.1450
247.94	183.7532
248.90	212.1548
249.79	223.3324
252.40	217.0622
252.85	214.9094
252.85	214.9094
254.15	0.0000
256.20	199.8248
256.20	199.8248
260.50	222.6288
260.90	232.7077
262.80	211.8018
264.65	194.6353
268.24	221.9103
268.79	227.3567
269.46	225.6588
269.46	225.6588
269.46	225.6588
269.46	225.6588
271.23	183.7718
273.65	184.0421
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277.35	197.9490
277.60	194.3789
277.60	194.3789
278.00	175.5238
278.60	172.5842
279.20	177.1512
279.53	181.6895
280.46	174.2785
281.68	183.4269
283.67	194.1797
284.30	194.7552
285.00	189.8126
285.90	178.1585
286.10	175.4644
286.10	175.4644
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290.80	184.4123
291.72	186.0240
293.26	0.0000
293.70	177.1544
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295.21	250.0479
295.21	250.0479
295.96	242.5781

296.50	212.3214
297.23	174.4794
298.57	183.7230
299.80	174.7367
299.80	174.7367
300.09	166.7321
300.09	166.7321
300.09	166.7321
300.10	166.7321
300.12	166.7344
301.29	166.2666
302.84	201.8271
303.76	199.1911
303.91	199.2071
304.40	193.7787
304.40	193.7787
304.84	174.6256
306.84	166.5860
308.46	154.8273
311.98	155.1305
316.51	157.3588
318.01	153.8064
319.02	155.6305
319.41	161.8081
320.08	140.9394
323.87	140.1306
323.87	140.1306
323.87	140.1306
323.87	140.1306
325.23	163.3477
328.77	160.2636
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334.20	120.7784
334.30	120.7848
338.28	142.7636
338.28	142.7636
338.28	142.7636
338.28	142.7636
338.32	142.7655
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338.32	142.7655
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340.57	163.1311
344.27	138.5410
345.85	133.9796
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351.07	119.9703
351.92	106.2694
351.92	106.2694
351.92	106.2694
355.39	0.0000
356.01	123.7172
364.48	126.4478
366.43	131.2949
367.43	133.2495
367.94	0.0000
369.80	138.1368
374.96	129.9510
383.85	141.9465
387.95	130.7721
388.63	122.2203
391.69	142.4794
391.69	142.4794
392.90	136.8206
398.62	144.8656
400.65	131.5598
401.10	137.3512
401.81	139.3182
402.60	139.3696
404.84	169.3420
410.95	127.3658
411.60	141.8823
413.65	150.7099
414.70	112.1201
415.30	111.1844
415.76	110.2413
417.63	0.0000

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423.70	125.1955
427.08	112.7502
427.89	106.9573
432.53	127.6403
433.93	112.1194
439.47	104.5758
439.56	104.5797
439.89	100.6853
443.98	116.5334
444.90	110.7019
445.03	110.7088
445.03	110.7088
445.03	110.7088
445.03	110.7088
453.90	90.4805
463.38	88.8728
468.07	107.1881
473.00	92.2076
475.06	115.1093
475.35	122.0706
476.78	115.1915
477.59	116.2245
477.96	113.2611
482.03	114.4469
484.57	97.6303
487.03	106.7048
490.36	0.0000
492.35	82.9504
497.08	92.1213
507.63	0.0000
510.53	0.0000
510.84	100.6830
511.00	100.6891
511.85	100.7239
511.85	100.7239
513.99	109.2088
513.99	109.2088
520.41	104.0939
520.65	104.1039
527.90	98.3167
528.96	0.0000
529.64	98.3830
529.87	0.0000
531.02	101.4795
537.32	77.3100
543.00	84.6130
546.56	0.0000
549.76	75.6314
552.65	100.2682
555.20	72.7126
563.23	82.1738
563.90	86.3051
568.70	108.0710
569.32	103.9787
569.50	98.8383
569.67	98.8430
573.80	88.9390
574.00	86.3672
574.64	79.5724
578.91	63.7067
579.30	0.0000
583.14	87.9468
585.48	84.5697
591.81	76.8039
592.07	75.7731
593.00	79.9514
595.88	86.2685
600.56	88.4946
602.52	0.0000
602.71	86.8245
602.71	86.8245
603.60	92.0642
604.41	105.9905
604.70	106.0004
609.31	95.0324
609.31	95.0324
609.31	95.0324

609.31	95.0324
610.33	87.0565
612.46	76.6670
614.37	83.6934
618.01	79.6089
621.84	88.1036
621.84	88.1036
631.29	87.3385
633.02	77.9132
633.10	77.9150
634.78	89.5488
635.90	99.0672
636.97	86.4523
645.85	87.7680
646.12	77.2007
656.30	79.5850
657.75	100.8563
657.90	0.0000
661.65	80.7890
661.65	80.7890
664.57	0.0000
666.33	102.2063
666.33	102.2063
675.00	73.6679
677.61	73.7303
685.20	68.5547
692.80	84.8286
695.00	80.5902
696.49	88.1540
696.49	88.1540
697.00	83.8671
697.49	82.8051
698.33	83.9014
698.50	81.7557
699.00	81.7687
702.63	82.9385
706.10	89.4986
706.58	0.0000
706.67	91.6718
709.31	92.8279
711.68	57.2506
713.82	68.0972
717.42	89.8167
720.50	67.6971
721.93	0.0000
722.20	63.2175
722.78	63.2281
722.78	63.2281
722.89	63.2310
722.95	63.2324
723.30	59.6259
724.18	84.9446
727.18	79.5960
733.00	50.7420
735.90	61.6707
739.58	66.4596
742.81	87.2461
744.21	79.6459
747:13	72.0731
751.79	83.1083
752.31	83.1213
753.82	67.8413
755.35	71.1556
756.15	68.9832
756.87	67.9033
763.93	102.0684
765.79	75.7703
766.41	76.8821
766.84	81.2862
768.36	80.2234
768.36	80.2234
768.36	80.2234
768.36	80.2234
776.49	85.3730
778.00	82.6556
778.57	74.4016
778.89	74.4082
783.80	62.5561

785.46	77.3127
792.07	75.6171
795.84	61.8515
796.30	60.9364
801.93	70.2836
805.60	58.3217
810.29	63.9617
810.76	61.1888
815.85	54.7783
817.79	47.3767
818.51	46.4569
819.60	50.1888
826.30	54.9392
828.27	0.0000
831.60	64.3464
831.96	69.0167
834.83	85.8738
836.80	0.0000
846.75	61.8079
848.13	67.4531
856.28	0.0000
856.80	75.6619
860.37	63.9188
867.32	50.0474
867.82	50.8612
871.10	65.9896
873.19	54.7078
874.81	45.2959
875.33	0.0000
876.40	52.8669
879.36	60.4674
880.27	66.1534
880.51	59.5419
881.50	53.8851
883.24	63.3673
884.67	62.4457
889.25	61.5749
896.60	41.7629
898.02	49.3742
899.00	59.8341
903.28	73.5305
911.07	79.0790
911.07	79.0790
911.07	79.0790
919.63	67.7961
920.93	69.7296
925.00	50.2003
925.24	53.0723
926.50	57.3950
934.06	56.5477
934.06	56.5477
934.06	56.5477
934.06	56.5477
935.52	56.5693
937.48	60.8451
944.10	61.1130
946.00	60.5660
949.00	55.8016
962.29	69.5024
964.01	86.0869
966.15	60.8736
968.20	60.9044
969.11	60.9185
969.11	60.9185
969.11	60.9185
977.42	49.9980
980.50	59.1508
983.50	58.2251
989.30	52.4773
996.32	61.3286
1001.03	48.7295
1001.68	49.7113
1004.76	77.0616
1021.30	0.0000
1024.50	0.0000
1034.80	60.9177
1037.82	62.9271
1038.57	57.0371

1038.76	0.0000
1045.16	65.0063
1046.59	59.1162
1048.07	54.2078
1050.47	59.1699
1050.47	59.1699
1063.62	57.3746
1076.63	69.4531
1077.35	77.4033
1085.78	78.5468
1099.22	75.7959
1112.02	63.2856
1112.84	65.3599
1115.52	73.7863
1120.29	66.1370
1120.29	66.1370
1120.29	66.1370
1120.29	66.1370
1120.51	66.1396
1121.28	60.1367
1124.00	0.0000
1129.67	73.3943
1131.51	0.0000
1147.95	0.0000
1167.94	87.0848
1173.22	63.8690
1175.09	51.7242
1177.93	91.3330
1189.05	72.2249
1204.90	78.5916
1205.75	0.0000
1213.00	71.5694
1221.42	73.7461
1230.97	73.8926
1235.34	79.2428
1236.41	0.0000
1238.11	80.1677
1238.11	80.1677
1238.11	80.1677
1238.11	80.1677
1238.25	80.1709
1246.25	54.7127
1260.41	0.0000
1271.85	51.7476
1274.45	64.1999
1274.54	64.2024
1291.56	48.8359
1298.22	0.0000
1312.09	40.6901
1325.50	42.8902
1325.50	42.8902
1332.49	41.9027
1333.61	36.6720
1360.21	20.0112
1362.66	0.0000
1365.15	25.3008
1368.21	33.7552
1368.53	0.0000
1376.25	27.1666
1377.67	31.7029
1377.67	31.7029
1377.67	31.7029
1377.67	31.7029
1384.27	41.7196
1394.10	32.8618
1395.20	28.6282
1407.95	25.5078
1434.06	27.7689
1436.60	19.2334
1457.56	0.0000
1460.81	17.1732
1489.15	14.7958
1509.49	19.4897
1596.49	26.3838
1620.62	13.2461
1678.03	0.0000
1691.02	8.6155
1691.02	8.6155

1706.46	0.0000
1750.46	0.0000
1764.49	13.5610
1764.49	13.5610
1764.49	13.5610
1764.49	13.5610
1770.23	10.1799
1771.40	61.0906
1791.20	0.0000
1808.65	7.8030
1836.01	10.7744

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201873070

Total Uranium Activity	6.6737E+00	ug/g
Total Uranium Counting Unc.	4.4310E+00	ug/g
Total Uranium Tpu	2.2607E-06	ug/g
Total Uranium Mda	2.7471E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                              2040 SAVAGE ROAD                             *
*                            CHARLESTON ,SC 29417                           *
*                             GROSS GAMMA REPORT                            *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID  : G1201873070      *
*   ANALYST       : MXR1                      DETECTOR   : GAM11            *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:36:12.08    SAMPLE ALQT:  125.460 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.303E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.519E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.886E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.890E+00
```

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 09:51:53.32

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:51:19.
Sample ID         : G1201873071          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM07                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.46  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.50	4585	1430	1.01	118.60	113	12	1.27E+00	2.2	
2	3	74.93*	271	564	1.16	149.47	146	14	7.54E-02	15.5	1.84E+00
3	3	77.20*	403	594	1.26	154.01	146	14	1.12E-01	12.0	
4	2	88.04*	2521	413	1.05	175.68	171	11	7.00E-01	2.4	5.39E+00
5	2	89.71*	72	359	1.05	179.02	171	11	1.99E-02	70.4	
6	0	92.96*	90	358	1.55	185.53	182	7	2.49E-02	37.6	
7	0	122.05	459	358	0.94	243.71	240	9	1.27E-01	8.8	
8	0	165.66	80	291	1.09	330.94	328	8	2.22E-02	38.5	
9	0	186.00*	164	365	1.41	371.61	366	12	4.56E-02	24.9	
10	0	209.69	76	324	1.23	419.00	414	10	2.11E-02	45.9	
11	0	238.62*	629	323	1.04	476.87	473	8	1.75E-01	6.4	
12	0	277.42	50	190	1.10	554.48	551	7	1.39E-02	48.1	
13	0	295.44*	176	254	1.26	590.52	585	10	4.90E-02	18.6	
14	0	338.36	143	210	1.04	676.37	672	10	3.97E-02	20.7	
15	0	352.02*	272	220	1.11	703.70	699	10	7.57E-02	11.9	
16	0	510.45*	73	141	1.55	1020.63	1014	12	2.04E-02	36.8	
17	0	582.98*	207	148	1.29	1165.72	1161	13	5.74E-02	14.0	
18	0	609.24*	193	100	1.25	1218.27	1213	10	5.35E-02	12.3	
19	0	661.62	2363	140	1.50	1323.05	1317	13	6.56E-01	2.3	
20	0	726.96*	61	95	3.15	1453.77	1449	11	1.69E-02	33.6	
21	0	911.03*	184	133	1.55	1822.07	1815	13	5.10E-02	15.0	
22	0	968.67*	94	108	1.29	1937.38	1932	11	2.60E-02	24.1	
23	0	1172.95	2061	77	1.88	2346.16	2337	19	5.73E-01	2.4	
24	0	1332.16	1867	17	1.71	2664.77	2656	17	5.19E-01	2.4	
25	0	1764.24*	30	12	1.44	3529.54	3522	16	8.34E-03	32.7	
26	0	1836.27	22	3	1.41	3673.71	3666	14	6.07E-03	27.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 09:51:56

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 2-JUL-2009 00:00:00 Acquisition date : 9-JUL-2009 08:51:19
Sample ID : G1201873071 Sample quantity : 151.73 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA7 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.46 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	3.682E-01	7.337E-02	6.289E-02	5.931E-03	5.855
		136.48		2.672E-01	3.385E-01	5.559E-01	5.084E-02	0.481
CO-60	+	1173.22		7.330E+00	5.564E-01	1.307E-01	7.630E-03	56.073
	+	1332.49	*	7.374E+00	5.551E-01	9.002E-02	5.266E-03	81.914
CD-109	+	88.03	*	4.772E+01	4.292E+00	2.102E+00	1.606E-01	22.705
SN-126		64.28		-2.176E-01	6.695E-01	9.784E-01	1.388E-01	-0.222
	+	86.94		1.973E+01	8.174E+00	9.134E-01	3.759E-01	21.597
	+	87.57	*	4.745E+00	4.268E-01	2.094E-01	1.593E-02	22.659
BA-137M	+	661.65	*	5.633E+00	4.417E-01	1.238E-01	7.877E-03	45.485
CS-137	+	661.65	*	5.954E+00	4.680E-01	1.309E-01	8.356E-03	45.485
CE-139	+	165.85	*	7.764E-02	6.006E-02	7.365E-02	4.823E-03	1.054
TL-208	+	277.35		7.734E-01	7.485E-01	1.075E+00	1.185E-01	0.720
	+	510.84		5.827E-01	4.330E-01	4.387E-01	4.486E-02	1.328
	+	583.14	*	4.711E-01	1.356E-01	1.124E-01	7.890E-03	4.193
		860.37		5.862E-01	6.850E-01	1.175E+00	9.983E-02	0.499
BI-211		72.87		3.643E+00	4.667E+00	7.016E+00	4.793E-01	0.519
	+	351.07	*	2.663E+00	6.580E-01	6.124E-01	4.018E-02	4.348
PB-212	+	74.81		1.970E+00	6.535E-01	7.756E-01	9.009E-02	2.540
	+	77.11		1.696E+00	4.240E-01	4.499E-01	3.148E-02	3.769
	+	87.30		2.195E+01	2.952E+00	9.697E-01	1.217E-01	22.632
	+	238.63	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.09		1.163E+00	1.487E+00	2.252E+00	1.968E-01	0.517
PO-212	+	74.81		1.970E+00	6.535E-01	7.756E-01	9.009E-02	2.540
	+	77.11		1.696E+00	4.240E-01	4.499E-01	3.148E-02	3.769
	+	87.30		2.195E+01	2.952E+00	9.697E-01	1.217E-01	22.632
		115.19		-6.885E-01	5.271E+00	8.399E+00	7.506E-01	-0.082
	+	238.63	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.09		1.163E+00	1.487E+00	2.252E+00	1.968E-01	0.517
PB-214	+	74.81		3.394E+00	1.109E+00	1.336E+00	1.353E-01	2.540
	+	77.11		2.907E+00	7.599E-01	7.713E-01	7.979E-02	3.769
	+	87.30		3.759E+01	4.453E+00	1.661E+00	1.797E-01	22.632
		241.98		1.666E+00	7.002E-01	1.132E+00	9.906E-02	1.472
	+	295.21		1.013E+00	3.887E-01	3.751E-01	3.387E-02	2.701
	+	351.92	*	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.394E+00	1.109E+00	1.336E+00	1.353E-01	2.540
	+	77.11		2.907E+00	7.599E-01	7.713E-01	7.979E-02	3.769
	+	87.30		3.759E+01	4.453E+00	1.661E+00	1.797E-01	22.632
		241.98		1.666E+00	7.002E-01	1.132E+00	9.906E-02	1.472
	+	295.21		1.013E+00	3.887E-01	3.751E-01	3.387E-02	2.701
	+	351.92	*	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
PO-216	+	74.81		1.970E+00	6.535E-01	7.756E-01	9.009E-02	2.540
	+	77.11		1.696E+00	4.240E-01	4.499E-01	3.148E-02	3.769
	+	87.30		2.195E+01	2.952E+00	9.697E-01	1.217E-01	22.632
	+	238.63	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.09		1.163E+00	1.487E+00	2.252E+00	1.968E-01	0.517
PO-218	+	74.81		3.394E+00	1.109E+00	1.336E+00	1.353E-01	2.540
	+	77.11		2.907E+00	7.599E-01	7.713E-01	7.979E-02	3.769
	+	87.30		3.759E+01	4.453E+00	1.661E+00	1.797E-01	22.632
		241.98		1.666E+00	7.002E-01	1.132E+00	9.906E-02	1.472
	+	295.21		1.013E+00	3.887E-01	3.751E-01	3.387E-02	2.701
	+	351.92	*	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
AC-228	+	338.32		1.536E+00	8.923E-01	6.779E-01	2.767E-01	2.266
	+	911.07	*	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
	+	969.11		1.693E+00	9.046E-01	8.852E-01	2.036E-01	1.912
RA-228	+	338.32		1.536E+00	8.923E-01	6.779E-01	2.767E-01	2.266
	+	911.07	*	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
	+	969.11		1.693E+00	9.046E-01	8.852E-01	2.036E-01	1.912
TH-228		84.40		2.855E+00	4.485E+00	6.664E+00	8.244E-01	0.428
	+	238.60	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.10		1.165E+00	1.635E+00	2.252E+00	1.329E+00	0.517
TH-232	+	338.32		1.536E+00	6.418E-01	6.779E-01	4.139E-02	2.266
	+	911.07	*	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
	+	969.11		1.693E+00	9.046E-01	8.852E-01	2.036E-01	1.912
AM-241	+	59.54	*	1.353E+01	1.192E+00	3.818E-01	2.899E-02	35.426
AM-243	+	74.67	*	3.194E-01	1.017E-01	1.259E-01	8.682E-03	2.536
	+	86.72		5.225E+02	4.699E+01	2.422E+01	1.829E+00	21.575
		117.66		3.305E-01	6.537E+00	9.346E+00	8.510E-01	0.035
		142.18		1.288E+01	2.671E+01	4.335E+01	3.524E+00	0.297
ANH-511	+	511.00	*	1.259E-01	9.293E-02	9.479E-02	5.616E-03	1.328

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.247E-01	6.608E-01	1.085E+00	7.297E-02	0.299
NA-22		1274.54	*	-8.096E-03	5.236E-02	8.442E-02	4.963E-03	-0.096
NA-24		1368.53	*	-1.036E-04	5.236E-02	Half-Life too short		
AL-26		1129.67		7.417E-01	3.193E+00	5.416E+00	3.421E-01	0.137
		1808.65	*	1.288E-02	3.861E-02	6.928E-02	3.801E-03	0.186
K-40		1460.81	*	5.196E-01	6.208E-01	1.152E+00	7.168E-02	0.451
TI-44		67.85		6.559E-02	5.960E-02	1.007E-01	6.768E-03	0.651
	+	78.38	*	3.128E-01	7.823E-02	9.767E-02	6.891E-03	3.203
SC-46		889.25	*	-7.621E-02	9.696E-02	1.485E-01	1.187E-02	-0.513

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1120.51		1.856E-01	9.812E-02	1.828E-01	1.172E-02	1.016
V-48		944.10		8.665E-01	1.751E+00	2.910E+00	2.275E-01	0.298
		983.50	*	1.783E-02	1.348E-01	2.186E-01	1.656E-02	0.082
		1312.09		-3.195E-02	7.611E-02	1.174E-01	6.878E-03	-0.272
CR-51		320.08	*	2.993E-01	5.470E-01	9.213E-01	6.376E-02	0.325
MN-52		744.21		-9.880E-02	1.876E-01	2.959E-01	2.063E-02	-0.334
		848.13		-2.725E-01	6.235E+00	1.010E+01	7.793E-01	-0.027
		935.52		1.639E-01	2.574E-01	4.315E-01	3.395E-02	0.380
		1246.25		3.597E+00	2.860E+00	5.545E+00	3.252E-01	0.649
	+	1333.61		3.626E+02	2.730E+01	3.831E+01	2.241E+00	9.466
		1434.06	*	8.301E-02	1.197E-01	2.183E-01	1.282E-02	0.380
MN-54		834.83	*	4.738E-03	7.601E-02	1.243E-01	9.468E-03	0.038
CO-56		846.75	*	-5.056E-03	8.659E-02	1.402E-01	1.080E-02	-0.036
		977.42		-7.633E-01	7.193E+00	1.148E+01	8.741E-01	-0.066
		1037.82		5.973E-03	7.104E-01	1.191E+00	9.189E-02	0.005
		1175.09		2.810E+02	2.178E+01	3.236E+01	1.889E+00	8.682
		1238.25		8.100E-02	9.751E-02	1.762E-01	1.097E-02	0.460
		1360.21		-5.600E-01	1.176E+00	1.766E+00	1.035E-01	-0.317
		1771.40		-1.717E-01	3.619E-01	4.366E-01	2.426E-02	-0.393
CO-58		810.76	*	-7.497E-02	7.901E-02	1.193E-01	8.917E-03	-0.628
FE-59		142.65		2.202E+00	3.621E+00	5.923E+00	4.797E-01	0.372
		192.34		1.137E+00	1.361E+00	2.287E+00	2.802E-01	0.497
		1099.22	*	9.180E-02	1.861E-01	3.204E-01	2.406E-02	0.287
		1291.56		6.692E-02	1.413E-01	2.477E-01	1.850E-02	0.270
ZN-65		1115.52	*	-2.741E-01	2.000E-01	3.008E-01	1.947E-02	-0.911
GE-68		1077.35	*	-4.716E-01	2.887E+00	4.771E+00	3.258E-01	-0.099
AS-73		53.44	*	-7.070E-01	1.185E+00	1.927E+00	1.272E-01	-0.367
AS-74		595.88	*	-9.255E-02	1.296E-01	2.057E-01	1.280E-02	-0.450
		634.78		-6.066E-02	5.033E-01	8.280E-01	5.228E-02	-0.073
SE-75		66.05		-8.618E+00	5.872E+00	9.079E+00	8.099E-01	-0.949
		96.73		-4.633E-01	1.184E+00	1.665E+00	2.197E-01	-0.278
	+	121.11		1.931E+00	4.089E-01	5.177E-01	6.106E-02	3.730
		136.00		6.178E-02	6.150E-02	1.018E-01	8.740E-03	0.607
		198.60		3.840E-01	2.762E+00	4.641E+00	3.641E-01	0.083
		264.65	*	-8.727E-03	7.360E-02	1.212E-01	8.150E-03	-0.072
		279.53		1.416E-01	2.076E-01	3.138E-01	2.205E-02	0.451
		303.91		-4.460E+00	3.654E+00	5.586E+00	5.559E-01	-0.798
		400.65		7.135E-03	4.973E-01	8.043E-01	7.093E-02	0.009
BR-77	+	87.88		1.082E+03	9.733E+01	1.089E+02	8.314E+00	9.934
		200.40		-4.400E+00	2.713E+01	4.525E+01	3.019E+00	-0.097
	+	239.00		2.217E+01	3.211E+00	5.122E+00	3.443E-01	4.329
		249.79		6.986E+00	1.178E+01	2.008E+01	1.348E+00	0.348
		281.68		1.430E+00	1.871E+01	2.724E+01	1.798E+00	0.052
		297.23		1.386E+01	1.197E+01	1.841E+01	1.197E+00	0.753
		303.76		-4.049E+01	3.367E+01	5.177E+01	3.341E+00	-0.782
		439.47		-2.573E+01	3.362E+01	5.166E+01	2.878E+00	-0.498
		484.57		4.308E+00	4.932E+01	7.915E+01	4.595E+00	0.054
		520.65	*	1.078E+00	2.068E+00	3.579E+00	2.135E-01	0.301
		574.64		7.379E+00	4.082E+01	6.893E+01	4.246E+00	0.107

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		578.91		5.285E+00	1.887E+01	2.807E+01	1.733E+00	0.188
		585.48		1.249E+02	4.313E+01	7.439E+01	4.606E+00	1.679
		755.35		5.140E+01	3.731E+01	6.634E+01	4.679E+00	0.775
		817.79		1.659E+01	3.121E+01	5.271E+01	3.953E+00	0.315
SR-82		698.33		-1.531E+00	5.203E+01	8.558E+01	5.678E+00	-0.018
		776.49	*	7.426E-02	6.398E-01	1.055E+00	7.604E-02	0.070
		1395.20		3.687E+00	1.284E+01	2.195E+01	1.289E+00	0.168
RB-83		520.41	*	6.617E-02	1.225E-01	2.123E-01	1.266E-02	0.312
		529.64		8.491E-02	1.882E-01	3.243E-01	1.946E-02	0.262
		552.65		-7.131E-03	3.647E-01	6.098E-01	3.712E-02	-0.012
RB-84		881.50	*	-3.667E-02	1.532E-01	2.443E-01	1.940E-02	-0.150
KR-85		513.99	*	1.727E+01	1.382E+01	2.230E+01	1.324E+00	0.775
SR-85		513.99	*	8.162E-02	6.529E-02	1.054E-01	6.255E-03	0.775
RB-86		1076.63	*	-9.497E-01	1.392E+00	2.215E+00	1.514E-01	-0.429
Y-88		898.02		5.016E-02	1.080E-01	1.796E-01	1.455E-02	0.279
	+	1836.01	*	1.137E-01	6.377E-02	1.217E-01	6.629E-03	0.934
ZR-88		392.90	*	-3.081E-02	5.899E-02	9.266E-02	4.902E-03	-0.333
Y-91		1204.90	*	6.839E+00	2.269E+01	3.885E+01	2.274E+00	0.176
NB-94		702.63	*	-3.199E-02	6.382E-02	1.013E-01	6.753E-03	-0.316
		871.10		2.528E-04	8.364E-02	1.357E-01	1.068E-02	0.002
NB-95		765.79	*	4.730E-02	7.796E-02	1.328E-01	9.465E-03	0.356
NB-95M		235.69	*	1.443E-01	2.101E-01	3.196E-01	2.640E-02	0.451
ZR-95		724.18		9.030E-02	1.965E-01	2.919E-01	2.261E-02	0.309
		756.15	*	1.133E-01	1.403E-01	2.418E-01	1.959E-02	0.469
NB-97		657.90	*	1.689E-04	1.403E-01	Half-Life too short		
		1024.50		-2.623E-03	1.403E-01	Half-Life too short		
ZR-97		254.15		-4.919E-03	1.403E-01	Half-Life too short		
		355.39		9.816E-04	1.403E-01	Half-Life too short		
		507.63	*	1.458E-03	1.403E-01	Half-Life too short		
		602.52		5.141E-04	1.403E-01	Half-Life too short		
		1021.30		4.397E-03	1.403E-01	Half-Life too short		
		1147.95		2.985E-03	1.403E-01	Half-Life too short		
		1362.66		2.715E-03	1.403E-01	Half-Life too short		
		1750.46		3.236E-04	1.403E-01	Half-Life too short		
MO-99		140.51		-3.040E+00	5.826E+00	8.928E+00	2.462E+00	-0.341
		181.06		6.190E-01	4.065E+00	6.105E+00	1.064E+00	0.101
		366.43		-8.329E+00	2.361E+01	3.761E+01	2.150E+00	-0.221
		739.58	*	2.758E+00	3.359E+00	5.791E+00	8.279E-01	0.476
		778.00		8.184E-01	9.960E+00	1.639E+01	1.183E+00	0.050
TC-99M		140.51	*	-1.488E+01	9.960E+00	Half-Life too short		
RH-101		127.23		-4.636E-03	5.332E-02	8.058E-02	7.320E-03	-0.058
		198.01	*	3.477E-03	5.284E-02	8.856E-02	5.902E-03	0.039
		325.23		-3.972E-01	4.257E-01	6.633E-01	4.149E-02	-0.599
RH-102		418.52		4.878E-01	5.773E-01	9.741E-01	5.309E-02	0.501
		475.06	*	3.956E-02	6.577E-02	1.087E-01	6.258E-03	0.364
		631.29		-1.799E-03	1.073E-01	1.779E-01	1.122E-02	-0.010
		697.49		8.633E-02	1.451E-01	2.488E-01	1.649E-02	0.347
		766.84		2.000E-01	2.186E-01	3.786E-01	2.701E-02	0.528
		1046.59		-2.754E-01	2.622E-01	4.054E-01	2.878E-02	-0.679

---- Non-Identified Nuclides ----

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		1112.84		9.768E-02	5.006E-01	8.452E-01	5.484E-02	0.116
RU-103		497.08	*	-3.235E-02	6.980E-02	1.144E-01	1.449E-02	-0.283
	+	610.33		7.822E+00	2.275E+00	3.234E+00	5.044E-01	2.419
RH-106	+	511.85		6.196E-01	4.574E-01	6.004E-01	3.559E-02	1.032
		621.84	*	-2.528E-01	6.136E-01	9.752E-01	1.169E-01	-0.259
		1050.47		1.164E-02	5.137E+00	8.601E+00	6.077E-01	0.001
RU-106	+	511.85		6.196E-01	4.574E-01	6.004E-01	3.559E-02	1.032
		621.84	*	-2.528E-01	6.130E-01	9.752E-01	6.130E-02	-0.259
		1050.47		1.164E-02	5.137E+00	8.601E+00	6.077E-01	0.001
AG-108M		433.93	*	7.341E-02	7.131E-02	1.209E-01	7.325E-03	0.607
		614.37		-1.680E-02	8.475E-02	1.201E-01	8.079E-03	-0.140
		722.95		4.224E-02	9.252E-02	1.377E-01	9.964E-03	0.307
AG-110M		657.75	*	1.081E-01	8.647E-02	1.365E-01	9.146E-03	0.792
		677.61		5.684E-01	5.789E-01	1.019E+00	6.926E-02	0.558
		706.67		-1.973E-01	4.007E-01	6.367E-01	4.456E-02	-0.310
		763.93		-2.363E-01	3.419E-01	5.329E-01	3.948E-02	-0.443
		884.67		-1.967E-02	1.254E-01	2.010E-01	1.661E-02	-0.098
		937.48		-1.770E-01	3.041E-01	4.720E-01	3.870E-02	-0.375
		1384.27		1.470E-02	1.977E-01	3.282E-01	2.042E-02	0.045
IN-111		171.28		-1.557E-01	2.333E-01	3.700E-01	2.429E-02	-0.421
		245.39	*	-6.233E-01	2.868E-01	4.256E-01	2.859E-02	-1.464
IN-113M		391.69	*	4.723E-02	8.672E-02	1.444E-01	8.239E-03	0.327
SN-113		391.69	*	4.723E-02	8.672E-02	1.444E-01	8.239E-03	0.327
IN-114M		190.27	*	7.153E-02	2.836E-01	4.272E-01	2.836E-02	0.167
CD-115		260.90		-7.816E+00	2.047E+01	3.331E+01	2.227E+00	-0.235
		492.35		4.924E+00	6.340E+00	1.113E+01	6.502E-01	0.442
		527.90	*	2.130E-01	1.808E+00	3.056E+00	1.832E-01	0.070
SN-117M		156.02		1.113E+00	2.421E+00	3.908E+00	2.823E-01	0.285
		158.56	*	1.677E-03	5.561E-02	9.451E-02	6.666E-03	0.018
SB-122		563.90	*	8.205E-02	5.115E-01	8.640E-01	5.292E-02	0.095
		692.80		-8.855E+00	1.171E+01	1.831E+01	1.207E+00	-0.484
I-123		159.00	*	-1.432E-05	1.171E+01	Half-Life too short		
		528.96		2.500E-02	1.171E+01	Half-Life too short		
TE-123M		159.00	*	-1.273E-03	4.067E-02	6.895E-02	4.886E-03	-0.018
I-124		602.71	*	3.729E-02	3.896E-01	5.944E-01	3.709E-02	0.063
		722.78		1.362E+00	2.652E+00	3.968E+00	2.704E-01	0.343
		1325.50		8.605E+00	1.643E+01	2.549E+01	1.492E+00	0.338
		1376.25		6.416E+00	1.021E+01	1.841E+01	1.080E+00	0.348
		1509.49		2.307E+00	5.366E+00	9.440E+00	5.528E-01	0.244
		1691.02		-1.302E+00	1.598E+00	2.077E+00	1.181E-01	-0.627
SB-124		602.71		7.186E-03	7.509E-02	1.146E-01	7.151E-03	0.063
		645.85		4.610E-01	9.438E-01	1.612E+00	1.132E-01	0.286
		709.31		7.656E+00	4.901E+00	8.877E+00	5.962E-01	0.862
		713.82		-1.563E+00	2.909E+00	4.590E+00	4.948E-01	-0.340
		722.78		3.805E-01	7.410E-01	1.109E+00	7.814E-02	0.343
	+	968.20		1.593E+01	7.783E+00	1.134E+01	8.700E-01	1.406
		1045.16		-2.198E+00	5.309E+00	8.641E+00	6.144E-01	-0.254
		1325.50		2.568E+00	4.904E+00	7.607E+00	4.452E-01	0.338
		1368.21		-1.256E+00	2.140E+00	3.144E+00	3.742E-01	-0.400

---- Non-Identified Nuclides ----

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		1436.60		-2.227E+00	4.352E+00	6.388E+00	3.752E-01	-0.349
		1691.02	*	-8.578E-02	1.054E-01	1.368E-01	8.471E-03	-0.627
SB-125		427.89	*	-1.887E-02	1.971E-01	3.156E-01	1.819E-02	-0.060
		463.38		8.876E-01	6.167E-01	1.057E+00	7.056E-02	0.840
		600.56		9.117E-02	3.419E-01	5.785E-01	4.100E-02	0.158
		635.90		-5.191E-02	5.151E-01	8.484E-01	6.140E-02	-0.061
TE-125M		109.28	*	1.229E+01	1.243E+01	2.075E+01	2.130E+00	0.592
I-126		388.63		-1.216E-01	2.815E-01	4.451E-01	2.377E-02	-0.273
		666.33	*	3.226E-02	2.468E-01	3.588E-01	2.295E-02	0.090
		753.82		3.256E-01	2.155E+00	3.568E+00	2.513E-01	0.091
SB-126		223.80		-1.816E+00	4.277E+00	7.008E+00	4.709E-01	-0.259
	+	278.60		3.312E+00	3.192E+00	5.156E+00	3.411E-01	0.642
	+	296.50		6.533E+00	2.473E+00	3.376E+00	2.197E-01	1.935
		414.70		-7.210E-02	9.856E-02	1.520E-01	8.249E-03	-0.474
		415.30		-2.939E+00	8.302E+00	1.311E+01	7.121E-01	-0.224
		555.20		-2.340E-01	4.919E+00	8.208E+00	5.004E-01	-0.029
		573.80		-7.540E-02	1.268E+00	2.110E+00	1.299E-01	-0.036
		593.00		1.665E-01	1.130E+00	1.901E+00	1.181E-01	0.088
		656.30		9.949E-01	5.233E+00	7.643E+00	4.855E-01	0.130
		666.33		1.324E-02	1.013E-01	1.473E-01	9.419E-03	0.090
		675.00		-1.907E+00	2.487E+00	3.875E+00	2.504E-01	-0.492
		695.00		-5.137E-02	9.860E-02	1.566E-01	1.035E-02	-0.328
		697.00		1.077E-01	3.293E-01	5.551E-01	3.677E-02	0.194
		720.50	*	9.278E-02	1.950E-01	3.038E-01	2.065E-02	0.305
		856.80		-2.882E-01	7.473E-01	1.182E+00	9.190E-02	-0.244
		989.30		-5.105E-01	2.108E+00	3.328E+00	2.507E-01	-0.153
		1034.80		-5.467E-01	1.397E+01	2.335E+01	1.680E+00	-0.023
		1213.00		-1.054E+00	3.916E+00	6.281E+00	3.679E-01	-0.168
SB-127		61.10		5.629E+02	5.291E+01	6.379E+01	4.845E+00	8.824
		252.40		2.658E-01	1.809E+00	3.018E+00	1.244E+00	0.088
		290.80		5.454E-01	1.026E+01	1.488E+01	1.101E+00	0.037
		411.60		-2.042E+00	6.105E+00	9.654E+00	1.236E+00	-0.212
		444.90		7.976E-02	5.245E+00	8.427E+00	7.337E-01	0.009
		473.00		-4.252E-02	9.523E-01	1.518E+00	1.408E-01	-0.028
		543.00		-9.072E-01	7.507E+00	1.248E+01	1.430E+00	-0.073
		603.60		1.196E+00	6.245E+00	9.183E+00	8.356E-01	0.130
		685.20	*	-4.450E-01	6.728E-01	1.057E+00	8.169E-02	-0.421
		698.50		-9.432E-01	7.151E+00	1.168E+01	1.574E+00	-0.081
		722.20		1.084E+00	1.627E+01	2.332E+01	1.781E+00	0.047
		783.80		8.806E-01	1.775E+00	3.004E+00	2.916E-01	0.293
XE-127		57.60		7.414E+01	1.246E+01	1.944E+01	1.310E+00	3.813
		145.22		-6.360E-01	9.094E-01	1.394E+00	1.106E-01	-0.456
		172.10		-1.041E-01	1.556E-01	2.557E-01	1.679E-02	-0.407
		202.84	*	2.011E-02	6.279E-02	1.068E-01	7.130E-03	0.188
		374.96		-9.102E-02	3.305E-01	5.279E-01	2.945E-02	-0.172
I-131		80.18		-1.559E+00	3.765E+00	5.376E+00	3.851E-01	-0.290
		284.30		9.853E-02	1.362E+00	2.254E+00	1.603E-01	0.044
		364.48	*	9.314E-02	1.140E-01	1.934E-01	1.232E-02	0.482
		636.97		4.288E-01	1.459E+00	2.470E+00	1.707E-01	0.174

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.89		3.758E+00	7.983E+00	1.189E+01	8.126E-01	0.316
TE-132		49.72		3.924E+00	4.613E+00	7.776E+00	5.648E-01	0.505
		111.76		-7.171E+00	8.482E+00	1.305E+01	1.212E+00	-0.550
		116.30		-3.259E+00	7.954E+00	1.249E+01	1.195E+00	-0.261
		228.16	*	2.445E-02	2.174E-01	3.644E-01	4.952E-02	0.067
BA-133		53.15		-3.948E+00	5.383E+00	8.725E+00	5.752E-01	-0.453
		79.62		-3.686E-01	2.035E+00	2.937E+00	4.237E-01	-0.126
		81.00		-1.549E-01	1.656E-01	2.287E-01	3.464E-02	-0.678
	+	276.40		7.632E-01	7.408E-01	1.175E+00	1.569E-01	0.649
		302.84		-1.904E-01	2.531E-01	3.983E-01	4.779E-02	-0.478
		356.01	*	-4.231E-02	9.453E-02	1.308E-01	1.516E-02	-0.324
		383.85		-2.053E-01	5.568E-01	8.816E-01	9.413E-02	-0.233
I-133	+	510.53		2.565E-03	5.568E-01	Half-Life too short		
		529.87	*	1.098E-05	5.568E-01	Half-Life too short		
		706.58		-8.081E-04	5.568E-01	Half-Life too short		
		856.28		-6.935E-04	5.568E-01	Half-Life too short		
		875.33		3.390E-05	5.568E-01	Half-Life too short		
		1236.41		1.561E-03	5.568E-01	Half-Life too short		
		1298.22		-3.429E-04	5.568E-01	Half-Life too short		
CS-134		475.35		1.645E+00	4.377E+00	7.141E+00	4.113E-01	0.230
		563.23		1.936E-01	6.507E-01	1.108E+00	6.915E-02	0.175
		569.32		4.674E-02	3.582E-01	6.044E-01	3.811E-02	0.077
		604.70		-2.344E-02	7.279E-02	1.022E-01	6.410E-03	-0.229
		795.84	*	1.268E-01	9.976E-02	1.758E-01	1.304E-02	0.721
		801.93		-4.513E-01	8.591E-01	1.352E+00	1.006E-01	-0.334
		1038.57		-5.601E+00	9.501E+00	1.530E+01	1.096E+00	-0.366
		1167.94		1.493E+00	5.264E+00	7.784E+00	4.590E-01	0.192
		1365.15		8.718E-01	1.527E+00	2.743E+00	1.763E-01	0.318
CS-135		268.24	*	-1.096E-01	2.755E-01	4.473E-01	3.725E-02	-0.245
I-135		288.45		-3.029E+01	2.755E-01	Half-Life too short		
		417.63		1.686E+02	2.755E-01	Half-Life too short		
		546.56		4.834E+01	2.755E-01	Half-Life too short		
		836.80		-3.815E+01	2.755E-01	Half-Life too short		
		1038.76		-8.591E+01	2.755E-01	Half-Life too short		
		1124.00		-4.717E+02	2.755E-01	Half-Life too short		
		1131.51		-1.636E+01	2.755E-01	Half-Life too short		
		1260.41	*	5.315E+00	2.755E-01	Half-Life too short		
		1457.56		2.467E+01	2.755E-01	Half-Life too short		
		1678.03		-3.250E+00	2.755E-01	Half-Life too short		
		1706.46		1.243E+01	2.755E-01	Half-Life too short		
		1791.20		4.264E+01	2.755E-01	Half-Life too short		
CS-136		66.91		6.458E-02	6.537E-01	1.074E+00	1.553E-01	0.060
		86.29		1.351E+01	2.293E+00	2.890E+00	3.508E-01	4.675
		153.22		-1.405E-01	6.921E-01	1.084E+00	9.284E-02	-0.130
		163.89		9.516E-01	1.223E+00	1.905E+00	1.518E-01	0.500
		176.55		2.515E-01	3.790E-01	6.564E-01	4.738E-02	0.383
		273.65		-6.554E-01	6.380E-01	8.646E-01	6.358E-02	-0.758
		340.57		2.507E-01	1.753E-01	2.736E-01	1.757E-02	0.916
		818.51		6.898E-02	1.154E-01	1.955E-01	1.467E-02	0.353

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1048.07	*	-7.661E-02	1.644E-01	2.663E-01	2.002E-02	-0.288
		1235.34		2.034E-01	4.746E-01	8.216E-01	8.231E-02	0.248
BA-140		162.64		1.382E-01	8.243E-01	1.247E+00	9.225E-02	0.111
		304.84		-9.552E-01	1.523E+00	2.385E+00	6.543E-01	-0.401
		423.70		1.401E+00	2.587E+00	4.233E+00	1.343E+00	0.331
		537.32	*	-1.421E-02	3.030E-01	5.066E-01	1.650E-01	-0.028
LA-140		328.77		3.395E-01	3.681E-01	6.272E-01	4.309E-02	0.541
		432.53		-2.461E+00	3.090E+00	4.746E+00	2.926E-01	-0.519
		487.03		3.572E-02	1.873E-01	3.026E-01	1.991E-02	0.118
		751.79		1.061E+00	2.461E+00	4.148E+00	3.373E-01	0.256
		815.85		-3.581E-03	4.655E-01	7.583E-01	6.530E-02	-0.005
		867.82		1.060E-01	2.204E+00	3.589E+00	2.996E-01	0.030
		919.63		-5.117E+00	5.143E+00	7.735E+00	7.823E-01	-0.662
		925.24		-5.853E-01	2.087E+00	3.309E+00	2.816E-01	-0.177
		1596.49	*	-1.005E-01	8.226E-02	9.888E-02	5.733E-03	-1.016
CE-141		145.44	*	-5.040E-02	8.083E-02	1.241E-01	1.004E-02	-0.406
CE-143		57.37		1.277E+02	4.417E+01	6.829E+01	5.533E+00	1.871
		231.56		-4.291E+01	8.715E+01	1.406E+02	4.368E+01	-0.305
		293.26	*	9.634E+00	5.704E+00	8.573E+00	1.769E+00	1.124
	+	350.59		4.203E+02	1.622E+02	1.493E+02	4.529E+01	2.816
		490.36		-1.562E+01	1.126E+02	1.882E+02	5.815E+01	-0.083
		664.57		8.777E+02	2.937E+02	1.946E+02	6.178E+01	4.510
		721.93		6.117E+00	6.133E+01	8.819E+01	2.526E+01	0.069
CE-144		80.11		-1.402E+00	3.321E+00	4.740E+00	3.386E-01	-0.296
		133.54	*	-3.740E-01	3.346E-01	4.974E-01	7.759E-02	-0.752
PM-144		476.78		2.733E-02	1.545E-01	2.493E-01	1.723E-02	0.110
		618.01		3.228E-02	6.138E-02	1.054E-01	6.952E-03	0.306
		696.49	*	-9.839E-03	6.472E-02	1.055E-01	6.989E-03	-0.093
		778.57		-7.354E-01	4.625E+00	7.475E+00	5.398E-01	-0.098
PR-144		696.49	*	-6.640E-01	4.367E+00	7.122E+00	4.716E-01	-0.093
		1489.15		1.068E+01	1.821E+01	3.241E+01	1.901E+00	0.330
PM-146		453.90	*	1.391E-02	9.380E-02	1.517E-01	1.292E-02	0.092
		633.02		-1.468E+00	2.738E+00	4.286E+00	1.582E+00	-0.343
		735.90		-1.332E-01	3.080E-01	4.864E-01	1.368E-01	-0.274
		747.13		8.176E-02	1.852E-01	3.129E-01	4.099E-02	0.261
ND-147	+	91.11		2.825E-01	3.982E-01	3.891E-01	3.311E-02	0.726
		319.41		-2.105E-02	3.613E+00	5.917E+00	3.736E-01	-0.004
		439.89		-1.352E+00	7.878E+00	1.253E+01	6.987E-01	-0.108
		531.02	*	2.985E-01	6.419E-01	1.106E+00	1.505E-01	0.270
PM-149		285.90	*	-1.865E+00	1.428E+01	2.339E+01	3.390E+00	-0.080
EU-152	+	121.78		1.089E+00	2.235E-01	2.980E-01	3.163E-02	3.655
		244.69		-1.429E+00	6.100E-01	8.995E-01	6.043E-02	-1.588
		344.27	*	-1.355E-01	1.997E-01	2.873E-01	1.938E-02	-0.471
		443.98		5.799E-01	2.110E+00	3.440E+00	1.925E-01	0.169
		778.89		-1.280E-01	5.412E-01	8.695E-01	6.280E-02	-0.147
		867.32		1.409E-01	1.993E+00	3.250E+00	2.550E-01	0.043
		964.01		3.191E-01	8.342E-01	1.196E+00	9.207E-02	0.267
		1085.78		-5.221E-01	9.030E-01	1.445E+00	9.757E-02	-0.361
		1112.02		1.962E-01	7.194E-01	1.221E+00	7.929E-02	0.161

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1407.95		1.028E-01	2.389E-01	4.184E-01	2.457E-02	0.246
GD-153		69.67		-3.803E-01	2.177E+00	3.541E+00	2.390E-01	-0.107
		83.37		3.046E+01	2.474E+01	3.764E+01	2.760E+00	0.809
		97.43	*	1.535E-02	1.148E-01	1.775E-01	1.412E-02	0.086
		103.18		-7.519E-02	1.523E-01	2.398E-01	1.972E-02	-0.313
EU-154	+	123.07		7.641E-01	1.624E-01	2.051E-01	2.449E-02	3.725
		247.94		4.016E-01	6.109E-01	1.043E+00	1.056E-01	0.385
		591.81		6.948E-02	1.194E+00	1.998E+00	2.002E-01	0.035
		723.30		1.433E-01	3.842E-01	5.673E-01	4.502E-02	0.253
		756.87		-1.784E-01	1.667E+00	2.712E+00	2.959E-01	-0.066
		873.19		-1.976E-01	7.313E-01	1.163E+00	1.365E-01	-0.170
		996.32		-3.163E-01	9.815E-01	1.539E+00	2.654E-01	-0.206
		1004.76		-5.805E-01	5.322E-01	8.268E-01	8.917E-02	-0.702
		1274.45	*	-4.580E-02	1.496E-01	2.358E-01	2.212E-02	-0.194
EU-155		48.70		-1.604E+00	2.840E+00	4.631E+00	3.006E-01	-0.346
	+	60.01		4.387E+02	3.578E+01	3.103E+01	2.110E+00	14.136
		86.54		2.921E+00	3.316E-01	4.632E-01	3.538E-02	6.306
		105.31	*	1.421E-01	1.592E-01	2.654E-01	2.241E-02	0.536
TB-160	+	86.79		1.417E+01	1.274E+00	1.303E+00	9.847E-02	10.871
		197.04		9.956E-03	8.364E-01	1.399E+00	9.318E-02	0.007
		215.65		5.598E-01	1.204E+00	1.988E+00	1.333E-01	0.282
		298.57		1.110E-01	2.017E-01	3.018E-01	1.959E-02	0.368
		879.36	*	5.609E-02	3.205E-01	5.256E-01	4.167E-02	0.107
		962.29		5.631E-02	1.448E+00	2.016E+00	1.554E-01	0.028
		966.15		8.240E-01	5.573E-01	8.614E-01	6.622E-02	0.957
		1177.93		3.286E-01	7.005E-01	1.057E+00	6.173E-02	0.311
		1271.85		-5.117E-01	8.066E-01	1.204E+00	7.060E-02	-0.425
HO-166M		80.57		-1.730E-01	4.362E-01	6.232E-01	4.468E-02	-0.278
		184.41		8.336E-02	6.033E-02	9.730E-02	6.438E-03	0.857
		280.46		-2.214E-02	1.713E-01	2.461E-01	1.626E-02	-0.090
		410.95		3.969E-01	4.855E-01	8.181E-01	4.421E-02	0.485
		711.68	*	-1.142E-02	1.229E-01	2.011E-01	1.354E-02	-0.057
		752.31		2.083E-01	5.912E-01	9.919E-01	6.974E-02	0.210
		810.29		-4.595E-02	1.247E-01	1.976E-01	1.471E-02	-0.233
TM-171		51.35		1.503E+01	4.165E+01	6.941E+01	4.545E+00	0.217
		52.39		-9.529E+00	2.259E+01	3.693E+01	2.427E+00	-0.258
	+	59.40		2.296E+03	1.873E+02	1.689E+02	1.151E+01	13.592
		66.72	*	-2.136E+00	3.524E+01	5.762E+01	3.867E+00	-0.037
LU-176	+	88.36		1.125E+01	1.012E+00	1.130E+00	8.643E-02	9.959
		201.83		-1.747E-02	4.533E-02	7.485E-02	4.997E-03	-0.233
		306.84	*	3.208E-02	4.449E-02	7.564E-02	4.862E-03	0.424
		401.10		-1.904E+00	1.365E+01	2.188E+01	1.169E+00	-0.087
LU-177		112.95		-2.157E-01	1.052E+00	1.671E+00	1.469E-01	-0.129
	+	208.36	*	1.280E+00	1.177E+00	1.361E+00	9.112E-02	0.940
LU-177M		52.97		-2.214E+00	2.345E+00	3.779E+00	2.490E-01	-0.586
		54.07		6.093E-01	1.421E+00	2.126E+00	1.407E-01	0.287
		61.30		3.405E+01	3.576E+00	5.317E+00	3.593E-01	6.405
	+	121.62		5.407E+00	1.077E+00	1.477E+00	1.387E-01	3.661
		147.16		-1.953E-01	9.484E-01	1.488E+00	1.162E-01	-0.131

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		171.86		-4.470E-01	7.041E-01	1.159E+00	7.608E-02	-0.386
		218.09		1.083E+00	1.383E+00	2.383E+00	1.600E-01	0.454
		268.79		2.928E-01	1.365E+00	2.279E+00	1.518E-01	0.128
		319.02		-3.016E-02	4.570E-01	7.461E-01	4.714E-02	-0.040
		367.43		-1.131E+00	1.697E+00	2.651E+00	1.511E-01	-0.426
		413.65	*	-1.054E-01	3.388E-01	5.365E-01	2.908E-02	-0.196
HF-181		56.28		1.759E+00	1.559E+00	2.368E+00	1.584E-01	0.743
		57.53		4.744E+00	1.004E+00	1.577E+00	1.062E-01	3.009
		65.20		-1.123E+00	1.071E+00	1.603E+00	1.075E-01	-0.700
		133.02		1.053E-02	9.067E-02	1.452E-01	1.265E-02	0.073
		136.25		5.744E-01	6.682E-01	1.100E+00	9.359E-02	0.522
		345.85		5.910E-02	3.245E-01	5.164E-01	3.104E-02	0.114
		482.03	*	-4.113E-02	8.134E-02	1.257E-01	7.283E-03	-0.327
W-181		56.28		7.488E-01	6.629E-01	1.007E+00	6.735E-02	0.744
		57.53		1.998E+00	4.262E-01	6.697E-01	4.510E-02	2.984
		65.20	*	-4.739E-01	4.520E-01	6.766E-01	4.538E-02	-0.700
TA-182		67.75		1.458E-01	1.355E-01	2.288E-01	1.538E-02	0.637
		100.10		-3.942E-02	2.455E-01	3.932E-01	3.173E-02	-0.100
		152.43		-9.436E-04	5.007E-01	7.921E-01	5.913E-02	-0.001
		222.10		-3.501E-01	5.421E-01	8.786E-01	5.901E-02	-0.398
		1001.68		4.464E+00	4.996E+00	8.488E+00	6.321E-01	0.526
		1121.28		4.281E-01	2.780E-01	5.083E-01	3.254E-02	0.842
		1189.05		-3.773E-02	4.163E-01	6.838E-01	3.997E-02	-0.055
		1221.42	*	2.526E-02	2.147E-01	3.607E-01	2.113E-02	0.070
		1230.97		-1.319E-02	5.656E-01	9.331E-01	5.470E-02	-0.014
RE-183		57.98		7.351E+00	6.518E-01	8.722E-01	5.890E-02	8.428
	+	59.32		8.780E+00	7.161E-01	6.486E-01	4.417E-02	13.536
		67.20		2.261E-01	2.319E-01	3.910E-01	2.625E-02	0.578
		162.32	*	4.824E-02	1.707E-01	2.598E-01	1.765E-02	0.186
	+	208.81		2.377E+00	2.187E+00	2.542E+00	1.702E-01	0.935
		291.72		-5.797E-01	1.671E+00	2.354E+00	1.540E-01	-0.246
RE-184		57.98		2.834E+01	2.512E+00	3.362E+00	2.270E-01	8.428
	+	59.32		3.382E+01	2.758E+00	2.498E+00	1.701E-01	13.536
		67.20		8.712E-01	8.937E-01	1.507E+00	1.012E-01	0.578
		161.27		2.600E-02	5.829E-01	8.759E-01	6.015E-02	0.030
		216.55		4.763E-01	4.394E-01	7.647E-01	5.130E-02	0.623
		252.85	*	-1.115E-01	3.798E-01	6.214E-01	4.166E-02	-0.180
		318.01		-4.111E-01	8.037E-01	1.281E+00	8.107E-02	-0.321
		792.07		7.514E-01	2.052E+00	3.434E+00	2.513E-01	0.219
		903.28		-8.622E-01	2.834E+00	4.043E+00	3.247E-01	-0.213
		920.93		-7.726E-01	1.215E+00	1.879E+00	1.493E-01	-0.411
OS-185	+	59.72		2.442E+01	1.992E+00	1.763E+00	1.200E-01	13.856
		61.14		5.630E+00	5.043E-01	6.712E-01	4.539E-02	8.389
		69.30		1.615E-01	3.723E-01	6.172E-01	4.161E-02	0.262
		592.07		-7.559E-01	4.657E+00	7.681E+00	4.771E-01	-0.098
		646.12	*	2.726E-02	8.271E-02	1.399E-01	8.864E-03	0.195
		717.42		-5.668E-01	1.625E+00	2.603E+00	1.763E-01	-0.218
		874.81		6.640E-02	1.368E+00	2.225E+00	1.757E-01	0.030
		880.27		4.141E-01	1.849E+00	3.041E+00	2.413E-01	0.136

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188		155.03	*	1.502E-02	2.501E-01	3.965E-01	2.891E-02	0.038
		477.96		1.216E+00	6.479E+00	1.046E+01	6.040E-01	0.116
		633.10		-2.837E+00	5.030E+00	8.017E+00	5.059E-01	-0.354
W-188		63.58		-1.866E+01	6.368E+01	9.331E+01	6.267E+00	-0.200
		227.08		1.366E+01	1.953E+01	3.353E+01	2.254E+00	0.407
		290.67	*	7.071E-01	1.331E+01	1.931E+01	1.264E+00	0.037
IR-192	+	295.96		7.183E-01	2.720E-01	3.744E-01	2.468E-02	1.919
		308.46		7.001E-03	1.641E-01	2.700E-01	1.748E-02	0.026
		316.51	*	3.291E-02	5.713E-02	9.642E-02	6.140E-03	0.341
		468.07		-4.268E-02	1.329E-01	2.085E-01	1.380E-02	-0.205
		604.41		-2.336E-01	9.254E-01	1.307E+00	1.514E-01	-0.179
		612.46		1.614E-01	1.433E+00	2.091E+00	1.659E-01	0.077
AU-195		65.12		-2.170E-01	2.125E-01	3.185E-01	2.136E-02	-0.681
		66.83		3.730E-03	1.145E-01	1.877E-01	1.260E-02	0.020
	+	75.70		1.004E+00	3.195E-01	5.183E-01	3.595E-02	1.936
		98.88	*	4.923E-02	3.171E-01	5.151E-01	4.128E-02	0.096
		129.76		4.411E+00	4.411E+00	7.311E+00	6.522E-01	0.603
TL-200		367.94	*	-1.060E+00	6.273E+00	1.009E+01	5.746E-01	-0.105
		579.30		5.987E+00	5.310E+01	7.782E+01	4.805E+00	0.077
		828.27		-6.752E+01	7.769E+01	1.180E+02	8.940E+00	-0.572
		1205.75		1.566E+01	2.358E+01	4.181E+01	2.447E+00	0.375
TL-201		68.90		5.697E-01	1.071E+00	1.781E+00	1.200E-01	0.320
		70.82		-4.879E-01	7.072E-01	1.002E+00	6.788E-02	-0.487
		80.30		-5.478E-01	1.368E+00	1.955E+00	1.399E-01	-0.280
		135.34		6.234E+00	6.971E+00	1.151E+01	9.855E-01	0.542
		167.43	*	1.921E+00	2.138E+00	3.344E+00	2.190E-01	0.574
TL-202		68.90		1.935E-01	3.638E-01	6.049E-01	4.074E-02	0.320
		70.82		-1.652E-01	2.395E-01	3.393E-01	2.299E-02	-0.487
		80.30		-1.856E-01	4.635E-01	6.622E-01	4.738E-02	-0.280
		439.56	*	-7.685E-02	1.010E-01	1.553E-01	8.651E-03	-0.495
HG-203		70.83		-9.870E-01	1.440E+00	2.035E+00	2.548E-01	-0.485
		72.87		6.454E-01	8.295E-01	1.243E+00	1.506E-01	0.519
		82.60		7.050E-01	1.681E+00	2.478E+00	3.209E-01	0.284
		279.20	*	6.733E-02	7.388E-02	1.130E-01	7.832E-03	0.596
BI-207		72.80		1.878E-01	2.715E-01	4.069E-01	2.779E-02	0.462
	+	74.97		5.730E-01	1.824E-01	2.740E-01	1.892E-02	2.091
		84.90		2.873E-01	3.287E-01	4.935E-01	3.666E-02	0.582
		569.67		1.970E-02	5.613E-02	9.600E-02	5.898E-03	0.205
		1063.62	*	8.285E-02	1.231E-01	2.146E-01	1.492E-02	0.386
		1770.23		-1.718E-01	8.032E-01	1.075E+00	5.973E-02	-0.160
TL-207		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
PO-209		260.50		-1.269E+01	1.702E+01	2.719E+01	1.818E+00	-0.467
		262.80		1.163E+01	4.573E+01	7.665E+01	5.120E+00	0.152
		896.60	*	1.794E+01	2.057E+01	3.496E+01	2.813E+00	0.513
BI-210		46.50	*	-1.828E+00	3.396E+00	5.587E+00	4.220E-01	-0.327
PB-210		46.50	*	-1.828E+00	3.396E+00	5.587E+00	4.220E-01	-0.327
PO-210		46.50	*	-1.828E+00	3.395E+00	5.587E+00	3.597E-01	-0.327
PB-211		404.84	*	-1.065E+00	2.037E+00	3.015E+00	1.878E+00	-0.353
		427.08		5.883E-01	4.378E+00	7.075E+00	4.371E+00	0.083
		831.96		2.532E-01	2.525E+00	4.132E+00	2.584E+00	0.061
BI-212	+	727.18	*	1.200E+00	8.121E-01	1.127E+00	9.614E-02	1.065
		785.46		9.555E-01	3.469E+00	5.785E+00	4.205E-01	0.165
		1620.62		2.570E+00	1.850E+00	3.694E+00	2.132E-01	0.696
BI-214	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.613E-01	5.353E-02	0.952
PO-215		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
RN-219		271.23		5.087E-01	4.349E-01	7.516E-01	6.563E-02	0.677
		401.81	*	4.775E-01	8.398E-01	1.395E+00	1.872E-01	0.342
RN-220		549.76	*	2.311E+01	4.922E+01	8.479E+01	5.152E+00	0.273
RA-223		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
RA-224		240.98	*	5.593E+00	1.484E+00	2.484E+00	1.670E-01	2.252
RA-226	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.613E-01	5.353E-02	0.952
AC-227		79.80		-4.543E-01	2.588E+00	3.735E+00	7.826E-01	-0.122
		236.00		2.850E-01	4.389E-01	6.647E-01	7.306E-02	0.429
		256.20	*	5.496E-01	6.550E-01	1.120E+00	1.608E-01	0.491
		286.10		-2.669E-02	2.696E+00	4.442E+00	5.316E-01	-0.006
		299.80		2.645E+00	2.749E+00	4.170E+00	6.898E-01	0.634
		304.40		-3.110E+00	3.425E+00	5.296E+00	9.281E-01	-0.587
		334.20		-1.829E+00	4.617E+00	6.391E+00	1.179E+00	-0.286
TH-227		79.80		-4.543E-01	2.588E+00	3.735E+00	7.931E-01	-0.122
	+	94.00		4.374E+00	3.422E+00	4.641E+00	9.965E-01	0.943
		236.00		2.850E-01	4.386E-01	6.647E-01	6.431E-02	0.429
		256.20	*	5.496E-01	6.571E-01	1.120E+00	1.930E-01	0.491
		286.10		-2.669E-02	2.696E+00	4.442E+00	4.452E+00	-0.006
		299.80		2.645E+00	2.749E+00	4.170E+00	6.898E-01	0.634
		304.40		-3.110E+00	3.425E+00	5.296E+00	9.281E-01	-0.587
		334.20		-1.829E+00	4.617E+00	6.391E+00	1.179E+00	-0.286
TH-229		85.43		4.121E-01	3.329E-01	5.049E-01	3.768E-02	0.816
	+	88.47		6.478E+00	5.827E-01	6.488E-01	4.964E-02	9.985
		100.00		-9.504E-03	2.659E-01	4.282E-01	3.453E-02	-0.022
		193.63	*	-8.969E-02	8.033E-01	1.345E+00	8.945E-02	-0.067
	+	210.97		2.010E+00	1.850E+00	2.109E+00	1.413E-01	0.953
TH-230	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.612E-01	5.353E-02	0.952
PA-231		283.67	*	-7.883E-01	2.730E+00	4.436E+00	6.268E-01	-0.178
		301.29		3.034E-01	1.024E+00	1.647E+00	1.785E-01	0.184
TH-231		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
U-231		84.21		1.645E+00	2.621E+00	3.902E+00	2.881E-01	0.422
	+	92.29		1.198E+00	9.064E-01	1.359E+00	1.054E-01	0.882
		95.87	*	-5.597E-02	4.613E-01	6.599E-01	5.204E-02	-0.085
		108.00		-3.793E-01	8.492E-01	1.337E+00	1.135E-01	-0.284
PA-233	+	75.28		1.673E+01	5.733E+00	8.222E+00	1.189E+00	2.035
	+	86.59		9.289E+01	2.503E+01	7.762E+00	2.056E+00	11.967
		300.12		6.031E-01	7.713E-01	1.164E+00	1.600E-01	0.518
		311.98	*	-7.700E-02	1.131E-01	1.785E-01	1.198E-02	-0.431

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		340.50		2.026E+00	1.365E+00	2.026E+00	4.669E-01	1.000
		398.62		4.225E-01	4.313E+00	7.007E+00	1.805E+00	0.060
		415.76		-7.584E-01	3.357E+00	5.336E+00	1.093E+00	-0.142
PA-234		63.00		1.467E-01	1.995E+00	2.972E+00	4.320E-01	0.049
		94.67		1.909E-01	2.521E-01	3.768E-01	4.474E-02	0.507
		98.44		1.002E-01	1.424E-01	2.184E-01	1.216E-01	0.459
		99.86		-1.109E-03	6.738E-01	1.087E+00	8.758E-02	-0.001
		111.00		-1.451E-01	2.721E-01	4.254E-01	5.156E-02	-0.341
		131.20		-1.716E-01	1.728E-01	2.620E-01	2.313E-02	-0.655
		152.70		-1.092E-01	5.123E-01	8.017E-01	1.322E-01	-0.136
	+	186.00		6.582E+00	3.849E+00	3.766E+00	1.157E+00	1.748
		226.40		3.482E-01	6.601E-01	1.124E+00	1.355E-01	0.310
		227.20		4.794E-01	7.120E-01	1.221E+00	8.208E-02	0.393
		248.90		2.195E-01	1.405E+00	2.350E+00	5.111E-01	0.093
		293.70		4.121E+00	1.565E+00	2.377E+00	3.888E-01	1.734
		369.80		2.459E-01	1.640E+00	2.685E+00	5.581E-01	0.092
		568.70		4.117E-02	1.837E+00	3.079E+00	1.891E-01	0.013
		569.50		8.362E-02	5.004E-01	8.463E-01	5.199E-02	0.099
		574.00		-9.128E-02	2.817E+00	4.695E+00	2.891E-01	-0.019
		699.00		-2.872E-01	1.371E+00	2.225E+00	4.065E-01	-0.129
		706.10		-5.236E-01	2.051E+00	3.296E+00	1.459E+00	-0.159
		733.00		2.529E-02	8.525E-01	1.216E+00	2.625E-01	0.021
		742.81		1.948E-01	2.801E+00	4.614E+00	3.093E+00	0.042
		796.30		2.298E+00	2.036E+00	3.418E+00	9.117E-01	0.672
		805.60		8.993E-01	2.227E+00	3.708E+00	1.125E+00	0.243
		819.60		1.254E+00	3.015E+00	4.985E+00	1.884E+00	0.251
		826.30		-2.784E-01	1.855E+00	2.981E+00	1.328E+00	-0.093
		831.60		7.011E-01	1.305E+00	2.181E+00	6.449E-01	0.321
		876.40		-4.021E-01	2.125E+00	3.334E+00	3.426E+00	-0.121
		880.51		8.483E-02	7.157E-01	1.169E+00	9.279E-02	0.073
		883.24		3.180E-01	7.464E-01	1.194E+00	8.014E-01	0.266
		899.00		-4.153E-01	2.314E+00	3.691E+00	1.610E+00	-0.113
		925.00		-9.946E-02	3.288E+00	5.300E+00	4.199E-01	-0.019
		926.50		2.785E-02	4.918E-01	7.967E-01	1.995E-01	0.035
		946.00	*	-3.701E-01	8.448E-01	1.319E+00	2.428E-01	-0.281
		949.00		-2.333E-01	1.208E+00	1.923E+00	1.498E-01	-0.121
		980.50		-1.740E-02	1.924E+00	3.090E+00	2.347E-01	-0.006
		1394.10		-1.702E-01	1.785E+00	2.877E+00	1.864E+00	-0.059
PA-234M		766.41		3.380E+01	4.320E+01	6.031E+01	4.615E+01	0.560
		1001.03	*	1.554E+01	1.727E+01	2.927E+01	3.016E+00	0.531
TH-234		63.29	*	8.022E-02	1.698E+00	2.528E+00	4.338E-01	0.032
	+	92.38		1.132E+00	8.748E-01	1.284E+00	2.271E-01	0.882
U-234	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.612E-01	5.353E-02	0.952

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-235	+	89.95		1.837E+00	2.646E+00	3.780E+00	1.157E+00	0.486
	+	93.35		1.361E+00	1.091E+00	1.513E+00	4.204E-01	0.899
		105.00		1.097E+00	1.613E+00	2.619E+00	7.793E-01	0.419
		143.76	*	4.902E-03	3.208E-01	5.107E-01	8.796E-02	0.010
		163.35		1.487E-01	7.970E-01	1.206E+00	2.206E-01	0.123
	+	185.71		2.438E-01	1.224E-01	1.388E-01	9.189E-03	1.757
		205.31		1.446E-01	8.938E-01	1.333E+00	2.438E-01	0.108
NP-236		94.67		1.460E-01	1.908E-01	2.859E-01	2.242E-02	0.511
		98.44		7.576E-02	9.924E-02	1.651E-01	1.320E-02	0.459
		111.00		-1.098E-01	2.056E-01	3.217E-01	2.789E-02	-0.341
		160.31	*	-5.327E-02	1.244E-01	2.004E-01	1.389E-02	-0.266
NP-237		86.50	*	6.807E+00	1.606E+00	1.107E+00	2.432E-01	6.148
		95.87		-1.780E-01	1.468E+00	2.099E+00	5.119E-01	-0.085
U-238		63.29	*	8.022E-02	1.698E+00	2.528E+00	4.338E-01	0.032
	+	92.38		1.132E+00	8.561E-01	1.284E+00	9.963E-02	0.882
NP-239		99.55		-4.534E-02	2.286E-01	3.656E-01	2.941E-02	-0.124
		117.00	*	-1.367E-01	3.069E-01	4.564E-01	4.135E-02	-0.299
	+	209.75		2.025E+00	1.863E+00	2.183E+00	1.462E-01	0.928
		228.18		4.038E-02	3.711E-01	6.221E-01	4.182E-02	0.065
	+	277.60		3.730E-01	3.595E-01	5.661E-01	3.748E-02	0.659
		334.30		-1.156E+00	2.605E+00	3.600E+00	2.215E-01	-0.321
CM-243		99.55		-4.663E-02	2.351E-01	3.760E-01	3.025E-02	-0.124
		103.76	*	-1.683E-02	1.429E-01	2.290E-01	1.890E-02	-0.073
		117.00		-1.406E-01	3.156E-01	4.693E-01	4.252E-02	-0.299
	+	209.75		1.996E+00	1.836E+00	2.151E+00	1.440E-01	0.928
		228.18		4.079E-02	3.748E-01	6.283E-01	4.224E-02	0.065
	+	277.60		3.758E-01	3.622E-01	5.704E-01	3.776E-02	0.659
CM-247	+	278.00		1.547E+00	1.491E+00	2.373E+00	1.570E-01	0.652
		287.40		4.304E-01	2.181E+00	3.621E+00	2.378E-01	0.119
		402.60	*	1.226E-02	7.487E-02	1.221E-01	6.533E-03	0.100
CF-249		252.85		-4.321E-01	1.471E+00	2.407E+00	1.614E-01	-0.180
		333.44		-9.629E-02	3.443E-01	4.824E-01	2.973E-02	-0.200
		387.95	*	-1.435E-03	8.213E-02	1.329E-01	7.112E-03	-0.011
CF-251		176.60	*	1.337E-01	1.969E-01	3.412E-01	2.247E-02	0.392
		227.00		5.780E-01	6.279E-01	1.087E+00	7.307E-02	0.532
		285.00		1.488E+00	3.095E+00	5.219E+00	3.435E-01	0.285

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071    *
* Acquisition date :  9-JUL-2009 08:51:19 Detector SN#     :               *
* Detector ID        : GAM07               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 01:00:01.46      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        :  2-JUL-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201873071         Analyst initials: MXR1           *
* Batch Number       : 881931              Sample Quantity : 1.5173E+02 GRAM *
* Recovery           :    1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-NOV-2008 14:41:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	3.682E-01	7.190E-02	6.741E-02	0.000E+00
CO-60	7.374E+00	5.440E-01	9.091E-02	0.000E+00
CD-109	4.772E+01	4.206E+00	2.270E+00	0.000E+00
SN-126	4.745E+00	4.182E-01	2.262E-01	0.000E+00
BA-137M	5.633E+00	4.329E-01	1.274E-01	0.000E+00
CS-137	5.954E+00	4.586E-01	1.346E-01	0.000E+00
CE-139	7.764E-02	5.886E-02	7.837E-02	0.000E+00
TL-208	4.711E-01	1.329E-01	1.159E-01	0.000E+00
BI-211	2.663E+00	6.449E-01	6.399E-01	0.000E+00
PB-212	1.331E+00	1.977E-01	1.947E-01	0.000E+00
PO-212	1.331E+00	1.977E-01	1.947E-01	0.000E+00
PB-214	9.262E-01	2.293E-01	2.269E-01	0.000E+00
PO-214	9.262E-01	2.293E-01	2.269E-01	0.000E+00
PO-216	1.331E+00	1.977E-01	1.947E-01	0.000E+00
PO-218	9.262E-01	2.293E-01	2.269E-01	0.000E+00
AC-228	1.885E+00	5.884E-01	5.740E-01	0.000E+00
RA-228	1.885E+00	5.884E-01	5.740E-01	0.000E+00
TH-228	1.331E+00	1.977E-01	1.946E-01	0.000E+00
TH-232	1.885E+00	5.884E-01	5.740E-01	0.000E+00
AM-241	1.353E+01	1.168E+00	4.161E-01	0.000E+00
AM-243	3.194E-01	9.963E-02	1.365E-01	0.000E+00
ANH-511	1.259E-01	9.107E-02	9.813E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	3.247E-01	6.476E-01	1.125E+00	0.000E+00	NOT IDENT.
NA-22	-8.096E-03	5.131E-02	8.536E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.752E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.288E-02	3.784E-02	6.939E-02	0.000E+00	NOT IDENT.
K-40	5.196E-01	6.084E-01	1.160E+00	0.000E+00	NOT IDENT.

TI-44	0.000E+00	7.666E-02	1.058E-01	0.000E+00	FAIL ABUN
SC-46	-7.621E-02	9.502E-02	1.516E-01	0.000E+00	NOT IDENT.
V-48	1.783E-02	1.321E-01	2.225E-01	0.000E+00	NOT IDENT.
CR-51	2.993E-01	5.361E-01	9.649E-01	0.000E+00	NOT IDENT.
MN-52	8.301E-02	1.173E-01	2.200E-01	0.000E+00	FAIL ABUN
MN-54	4.738E-03	7.449E-02	1.270E-01	0.000E+00	NOT IDENT.
CO-56	-5.056E-03	8.486E-02	1.433E-01	0.000E+00	NOT IDENT.
CO-58	-7.497E-02	7.743E-02	1.220E-01	0.000E+00	NOT IDENT.
FE-59	9.180E-02	1.823E-01	3.252E-01	0.000E+00	NOT IDENT.
ZN-65	-2.741E-01	1.960E-01	3.052E-01	0.000E+00	NOT IDENT.
GE-68	-4.716E-01	2.829E+00	4.845E+00	0.000E+00	NOT IDENT.
AS-73	-7.070E-01	1.161E+00	2.105E+00	0.000E+00	NOT IDENT.
AS-74	-9.255E-02	1.270E-01	2.121E-01	0.000E+00	NOT IDENT.
SE-75	-8.727E-03	7.213E-02	1.275E-01	0.000E+00	FAIL ABUN
BR-77	1.078E+00	2.027E+00	3.703E+00	0.000E+00	FAIL ABUN
SR-82	7.426E-02	6.270E-01	1.081E+00	0.000E+00	NOT IDENT.
RB-83	6.617E-02	1.201E-01	2.197E-01	0.000E+00	NOT IDENT.
RB-84	-3.667E-02	1.501E-01	2.494E-01	0.000E+00	NOT IDENT.
KR-85	1.727E+01	1.354E+01	2.308E+01	0.000E+00	NOT IDENT.
SR-85	8.162E-02	6.399E-02	1.090E-01	0.000E+00	NOT IDENT.
RB-86	-9.497E-01	1.364E+00	2.250E+00	0.000E+00	NOT IDENT.
Y-88	1.137E-01	6.250E-02	1.219E-01	0.000E+00	FAIL ABUN
ZR-88	-3.081E-02	5.781E-02	9.655E-02	0.000E+00	NOT IDENT.
Y-91	6.839E+00	2.224E+01	3.934E+01	0.000E+00	NOT IDENT.
NB-94	-3.199E-02	6.254E-02	1.040E-01	0.000E+00	NOT IDENT.
NB-95	4.730E-02	7.640E-02	1.360E-01	0.000E+00	NOT IDENT.
NB-95M	1.443E-01	2.059E-01	3.372E-01	0.000E+00	NOT IDENT.
ZR-95	1.133E-01	1.375E-01	2.478E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.185E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.642E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.758E+00	3.292E+00	5.939E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.776E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.477E-03	5.179E-02	9.384E-02	0.000E+00	NOT IDENT.
RH-102	3.956E-02	6.446E-02	1.127E-01	0.000E+00	NOT IDENT.
RU-103	-3.235E-02	6.841E-02	1.185E-01	0.000E+00	FAIL ABUN
RH-106	-2.528E-01	6.013E-01	1.004E+00	0.000E+00	FAIL ABUN
RU-106	-2.528E-01	6.008E-01	1.004E+00	0.000E+00	FAIL ABUN
AG-108M	7.341E-02	6.989E-02	1.257E-01	0.000E+00	NOT IDENT.
AG-110M	1.081E-01	8.474E-02	1.404E-01	0.000E+00	NOT IDENT.
IN-111	-6.233E-01	2.810E-01	4.487E-01	0.000E+00	NOT IDENT.
IN-113M	4.723E-02	8.498E-02	1.505E-01	0.000E+00	NOT IDENT.
SN-113	4.723E-02	8.498E-02	1.505E-01	0.000E+00	NOT IDENT.
IN-114M	7.153E-02	2.780E-01	4.532E-01	0.000E+00	NOT IDENT.
CD-115	2.130E-01	1.771E+00	3.161E+00	0.000E+00	NOT IDENT.
SN-117M	1.677E-03	5.450E-02	1.007E-01	0.000E+00	NOT IDENT.
SB-122	8.205E-02	5.013E-01	8.921E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.485E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.273E-03	3.986E-02	7.344E-02	0.000E+00	NOT IDENT.
I-124	3.729E-02	3.818E-01	6.127E-01	0.000E+00	NOT IDENT.
SB-124	-8.578E-02	1.033E-01	1.373E-01	0.000E+00	FAIL ABUN
SB-125	-1.887E-02	1.932E-01	3.281E-01	0.000E+00	NOT IDENT.
TE-125M	1.229E+01	1.218E+01	2.230E+01	0.000E+00	NOT IDENT.
I-126	3.226E-02	2.419E-01	3.689E-01	0.000E+00	NOT IDENT.
SB-126	9.278E-02	1.911E-01	3.118E-01	0.000E+00	FAIL ABUN
SB-127	-4.450E-01	6.594E-01	1.086E+00	0.000E+00	NOT IDENT.
XE-127	2.011E-02	6.153E-02	1.131E-01	0.000E+00	NOT IDENT.
I-131	9.314E-02	1.118E-01	2.019E-01	0.000E+00	NOT IDENT.
TE-132	2.445E-02	2.130E-01	3.848E-01	0.000E+00	NOT IDENT.
BA-133	-4.231E-02	9.264E-02	1.366E-01	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.248E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.268E-01	9.777E-02	1.799E-01	0.000E+00	NOT IDENT.
CS-135	-1.096E-01	2.700E-01	4.705E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.266E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.661E-02	1.611E-01	2.706E-01	0.000E+00	NOT IDENT.
BA-140	-1.421E-02	2.970E-01	5.237E-01	0.000E+00	NOT IDENT.
LA-140	-1.005E-01	8.062E-02	9.938E-02	0.000E+00	NOT IDENT.
CE-141	-5.040E-02	7.922E-02	1.324E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.590E+00	8.999E+00	0.000E+00	FAIL ABUN
CE-144	-3.740E-01	3.279E-01	5.320E-01	0.000E+00	NOT IDENT.
PM-144	-9.839E-03	6.342E-02	1.084E-01	0.000E+00	NOT IDENT.
PR-144	-6.640E-01	4.280E+00	7.315E+00	0.000E+00	NOT IDENT.
PM-146	1.391E-02	9.193E-02	1.575E-01	0.000E+00	NOT IDENT.
ND-147	2.985E-01	6.290E-01	1.143E+00	0.000E+00	FAIL ABUN
PM-149	-1.865E+00	1.400E+01	2.457E+01	0.000E+00	NOT IDENT.
EU-152	-1.355E-01	1.957E-01	3.004E-01	0.000E+00	FAIL ABUN
GD-153	1.535E-02	1.125E-01	1.913E-01	0.000E+00	NOT IDENT.
EU-154	-4.580E-02	1.466E-01	2.384E-01	0.000E+00	FAIL ABUN
EU-155	1.421E-01	1.560E-01	2.854E-01	0.000E+00	FAIL ABUN

TB-160	5.609E-02	3.141E-01	5.366E-01	0.000E+00	FAIL ABUN
HO-166M	-1.142E-02	1.205E-01	2.064E-01	0.000E+00	NOT IDENT.
TM-171	-2.136E+00	3.454E+01	6.264E+01	0.000E+00	FAIL ABUN
LU-176	3.208E-02	4.360E-02	7.930E-02	0.000E+00	FAIL ABUN
LU-177	1.280E+00	1.154E+00	1.441E+00	0.000E+00	FAIL ABUN
LU-177M	-1.054E-01	3.321E-01	5.583E-01	0.000E+00	FAIL ABUN
HF-181	-4.113E-02	7.971E-02	1.303E-01	0.000E+00	NOT IDENT.
W-181	-4.739E-01	4.429E-01	7.359E-01	0.000E+00	NOT IDENT.
TA-182	2.526E-02	2.104E-01	3.650E-01	0.000E+00	NOT IDENT.
RE-183	4.824E-02	1.673E-01	2.766E-01	0.000E+00	FAIL ABUN
RE-184	-1.115E-01	3.722E-01	6.546E-01	0.000E+00	FAIL ABUN
OS-185	2.726E-02	8.105E-02	1.440E-01	0.000E+00	FAIL ABUN
RE-188	1.502E-02	2.451E-01	4.226E-01	0.000E+00	NOT IDENT.
W-188	7.071E-01	1.304E+01	2.027E+01	0.000E+00	NOT IDENT.
IR-192	3.291E-02	5.598E-02	1.010E-01	0.000E+00	FAIL ABUN
AU-195	4.923E-02	3.107E-01	5.548E-01	0.000E+00	FAIL ABUN
TL-200	-1.060E+00	6.147E+00	1.054E+01	0.000E+00	NOT IDENT.
TL-201	1.921E+00	2.095E+00	3.558E+00	0.000E+00	NOT IDENT.
TL-202	-7.685E-02	9.900E-02	1.613E-01	0.000E+00	NOT IDENT.
HG-203	6.733E-02	7.240E-02	1.188E-01	0.000E+00	NOT IDENT.
BI-207	8.285E-02	1.206E-01	2.180E-01	0.000E+00	FAIL ABUN
TL-207	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
PO-209	1.794E+01	2.016E+01	3.568E+01	0.000E+00	NOT IDENT.
BI-210	-1.828E+00	3.328E+00	6.123E+00	0.000E+00	NOT IDENT.
PB-210	-1.828E+00	3.328E+00	6.123E+00	0.000E+00	NOT IDENT.
PO-210	-1.828E+00	3.327E+00	6.123E+00	0.000E+00	NOT IDENT.
PB-211	-1.065E+00	1.996E+00	3.139E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	7.959E-01	1.156E+00	0.000E+00	FAIL ABUN
BI-214	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
PO-215	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
RN-219	4.775E-01	8.230E-01	1.453E+00	0.000E+00	NOT IDENT.
RN-220	2.311E+01	4.824E+01	8.761E+01	0.000E+00	NOT IDENT.
RA-223	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.454E+00	2.620E+00	0.000E+00	NOT IDENT.
RA-226	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
AC-227	5.496E-01	6.419E-01	1.180E+00	0.000E+00	NOT IDENT.
TH-227	5.496E-01	6.439E-01	1.180E+00	0.000E+00	FAIL ABUN
TH-229	-8.969E-02	7.872E-01	1.426E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
PA-231	-7.883E-01	2.676E+00	4.660E+00	0.000E+00	NOT IDENT.
TH-231	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
U-231	-5.597E-02	4.521E-01	7.113E-01	0.000E+00	FAIL ABUN
PA-233	-7.700E-02	1.108E-01	1.870E-01	0.000E+00	FAIL ABUN
PA-234	-3.701E-01	8.279E-01	1.344E+00	0.000E+00	FAIL ABUN
PA-234M	1.554E+01	1.693E+01	2.978E+01	0.000E+00	NOT IDENT.
TH-234	8.022E-02	1.664E+00	2.751E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
U-235	4.902E-03	3.144E-01	5.453E-01	0.000E+00	FAIL ABUN
NP-236	-5.327E-02	1.219E-01	2.134E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	1.574E+00	1.196E+00	0.000E+00	NOT IDENT.
U-238	8.022E-02	1.664E+00	2.751E+00	0.000E+00	FAIL ABUN
NP-239	-1.367E-01	3.008E-01	4.897E-01	0.000E+00	FAIL ABUN
CM-243	-1.683E-02	1.401E-01	2.464E-01	0.000E+00	FAIL ABUN
CM-247	1.226E-02	7.338E-02	1.271E-01	0.000E+00	FAIL ABUN
CF-249	-1.435E-03	8.049E-02	1.385E-01	0.000E+00	NOT IDENT.
CF-251	1.337E-01	1.930E-01	3.626E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 09:51:54.27

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:51:19.
Sample ID         : G1201873071          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM07                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.46  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881931                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	459	85.51*	7.349E+00	3.613E-01	3.682E-01	19.92
	136.48	------	10.60	7.139E+00	------ Line Not Found		------
CO-60	1173.22	2061	100.00	1.395E+00	7.310E+00	7.330E+00	7.59
	1332.49	1867	100.00*	1.256E+00	7.355E+00	7.374E+00	7.53
CD-109	88.03	2521	3.72*	7.106E+00	4.720E+01	4.772E+01	8.99
SN-126	64.28	------	9.60	5.307E+00	------ Line Not Found		------
	86.94	2521	8.90	7.106E+00	1.973E+01	1.973E+01	41.44
	87.57	2521	37.00*	7.106E+00	4.745E+00	4.745E+00	8.99
BA-137M	661.65	2363	89.98*	2.308E+00	5.630E+00	5.633E+00	7.84
CS-137	661.65	2363	85.12*	2.308E+00	5.952E+00	5.954E+00	7.86
CE-139	165.85	80	80.35*	6.573E+00	7.480E-02	7.764E-02	77.36
TL-208	277.35	50	6.80	4.700E+00	7.734E-01	7.734E-01	96.78
	510.84	73	21.60	2.885E+00	5.827E-01	5.827E-01	74.30
	583.14	207	84.20*	2.576E+00	4.711E-01	4.711E-01	28.79
	860.37	------	12.46	1.830E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	6.202E+00	------ Line Not Found		------
	351.07	272	12.94*	3.913E+00	2.663E+00	2.663E+00	24.71
PB-212	74.81	271	10.70	6.372E+00	1.970E+00	1.970E+00	33.18
	77.11	403	18.00	6.540E+00	1.696E+00	1.696E+00	25.01
	87.30	2521	8.00	7.106E+00	2.195E+01	2.195E+01	13.45
	238.63	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.09	------	3.41	4.430E+00	------ Line Not Found		------
PO-212	74.81	271	10.70	6.372E+00	1.970E+00	1.970E+00	33.18
	77.11	403	18.00	6.540E+00	1.696E+00	1.696E+00	25.01
	87.30	2521	8.00	7.106E+00	2.195E+01	2.195E+01	13.45
	115.19	------	0.60	7.410E+00	------ Line Not Found		------
	238.63	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.09	------	3.41	4.430E+00	------ Line Not Found		------
PB-214	74.81	271	6.21	6.372E+00	3.394E+00	3.394E+00	32.68
	77.11	403	10.50	6.540E+00	2.907E+00	2.907E+00	26.14
	87.30	2521	4.67	7.106E+00	3.759E+01	3.759E+01	11.85
	241.98	------	7.49	5.191E+00	------ Line Not Found		------

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	176	19.20	4.483E+00	1.013E+00	1.013E+00	38.37
	351.92	272	37.20*	3.913E+00	9.262E-01	9.262E-01	25.26
PO-214	74.81	271	6.21	6.372E+00	3.394E+00	3.394E+00	32.68
	77.11	403	10.50	6.540E+00	2.907E+00	2.907E+00	26.14
	87.30	2521	4.67	7.106E+00	3.759E+01	3.759E+01	11.85
	241.98	------	7.49	5.191E+00	------ Line Not Found		------
	295.21	176	19.20	4.483E+00	1.013E+00	1.013E+00	38.37
	351.92	272	37.20*	3.913E+00	9.262E-01	9.262E-01	25.26
PO-216	74.81	271	10.70	6.372E+00	1.970E+00	1.970E+00	33.18
	77.11	403	18.00	6.540E+00	1.696E+00	1.696E+00	25.01
	87.30	2521	8.00	7.106E+00	2.195E+01	2.195E+01	13.45
	238.63	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.09	------	3.41	4.430E+00	------ Line Not Found		------
PO-218	74.81	271	6.21	6.372E+00	3.394E+00	3.394E+00	32.68
	77.11	403	10.50	6.540E+00	2.907E+00	2.907E+00	26.14
	87.30	2521	4.67	7.106E+00	3.759E+01	3.759E+01	11.85
	241.98	------	7.49	5.191E+00	------ Line Not Found		------
	295.21	176	19.20	4.483E+00	1.013E+00	1.013E+00	38.37
	351.92	272	37.20*	3.913E+00	9.262E-01	9.262E-01	25.26
AC-228	338.32	143	11.40	4.037E+00	1.536E+00	1.536E+00	58.08
	911.07	184	27.70*	1.739E+00	1.885E+00	1.885E+00	31.86
	969.11	94	16.60	1.648E+00	1.693E+00	1.693E+00	53.44
RA-228	338.32	143	11.40	4.037E+00	1.536E+00	1.536E+00	58.08
	911.07	184	27.70*	1.739E+00	1.885E+00	1.885E+00	31.86
	969.11	94	16.60	1.648E+00	1.693E+00	1.693E+00	53.44
TH-228	84.40	------	1.21	6.955E+00	------ Line Not Found		------
	238.60	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.10	------	3.41	4.430E+00	------ Line Not Found		------
TH-232	338.32	143	11.40	4.037E+00	1.536E+00	1.536E+00	41.77
	911.07	184	27.70*	1.739E+00	1.885E+00	1.885E+00	31.86
	969.11	94	16.60	1.648E+00	1.693E+00	1.693E+00	53.44
AM-241	59.54	4585	35.90*	4.672E+00	1.353E+01	1.353E+01	8.81
AM-243	74.67	271	66.00*	6.372E+00	3.194E-01	3.194E-01	31.83
	86.72	2521	0.34	7.106E+00	5.225E+02	5.225E+02	8.99
	117.66	------	0.55	7.392E+00	------ Line Not Found		------
	142.18	------	0.13	7.037E+00	------ Line Not Found		------
ANH-511	511.00	73	100.00*	2.885E+00	1.259E-01	1.259E-01	73.83

Flag: "*" = Keyline

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

Total number of lines in spectrum 26
Number of unidentified lines 0
Number of lines tentatively identified by NID 26 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	3.613E-01	3.682E-01	0.734E-01	19.92	
CO-60	5.27Y	1.00	7.355E+00	7.374E+00	0.555E+00	7.53	
CD-109	464.00D	1.01	4.720E+01	4.772E+01	0.429E+01	8.99	
SN-126	1.00E+05Y	1.00	4.745E+00	4.745E+00	0.427E+00	8.99	
BA-137M	30.17Y	1.00	5.630E+00	5.633E+00	0.442E+00	7.84	
CS-137	30.17Y	1.00	5.952E+00	5.954E+00	0.468E+00	7.86	
CE-139	137.66D	1.04	7.480E-02	7.764E-02	6.006E-02	77.36	
TL-208	1.41E+10Y	1.00	4.711E-01	4.711E-01	1.356E-01	28.79	
BI-211	7.04E+08Y	1.00	2.663E+00	2.663E+00	0.658E+00	24.71	
PB-212	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
PO-212	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
PB-214	1600.00Y	1.00	9.262E-01	9.262E-01	2.339E-01	25.26	
PO-214	1600.00Y	1.00	9.262E-01	9.262E-01	2.339E-01	25.26	
PO-216	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
PO-218	1600.00Y	1.00	9.262E-01	9.262E-01	2.339E-01	25.26	
AC-228	1.41E+10Y	1.00	1.885E+00	1.885E+00	0.600E+00	31.86	
RA-228	1.41E+10Y	1.00	1.885E+00	1.885E+00	0.600E+00	31.86	
TH-228	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
TH-232	1.41E+10Y	1.00	1.885E+00	1.885E+00	0.600E+00	31.86	
AM-241	432.20Y	1.00	1.353E+01	1.353E+01	0.119E+01	8.81	
AM-243	7380.00Y	1.00	3.194E-01	3.194E-01	1.017E-01	31.83	
ANH-511	1.00E+09Y	1.00	1.259E-01	1.259E-01	0.929E-01	73.83	
	Total Activity :		1.022E+02	1.027E+02			

Grand Total Activity : 1.022E+02 1.027E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.71	72	359	1.05	179.02	171	11	1.99E-02	****	7.16E+00	T
0	92.96	90	358	1.55	185.53	182	7	2.49E-02	75.2	7.26E+00	T
0	186.00	164	365	1.41	371.61	366	12	4.56E-02	49.8	6.17E+00	T
0	209.69	76	324	1.23	419.00	414	10	2.11E-02	91.8	5.72E+00	T
0	609.24	193	100	1.25	1218.27	1213	10	5.35E-02	24.6	2.48E+00	T
0	726.96	61	95	3.15	1453.77	1449	11	1.69E-02	67.1	2.12E+00	T
0	1764.24	30	12	1.44	3529.54	3522	16	8.34E-03	65.5	1.03E+00	T
0	1836.27	22	3	1.41	3673.71	3666	14	6.07E-03	55.8	1.00E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 09:51:59.08

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1  *
* Acquisition date  : 9-JUL-2009 08:51:19.  Detector SN#     :             *
* Detector ID       : GAM07                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 01:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 01:00:01.46          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 2-JUL-2009 00:00:00.  Nuclide Library : SOLID        *
* Sample ID         : G1201873071           Analyst initials: MXR1         *
* Batch Number      : 881931                Sample Quantity : 1.51730E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 2-NOV-2008 14:41:14.60MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	3.682E-01	7.337E-02	6.289E-02	5.931E-03	5.855
CO-60	7.374E+00	5.551E-01	9.002E-02	5.266E-03	81.914
CD-109	4.772E+01	4.292E+00	2.102E+00	1.606E-01	22.705
SN-126	4.745E+00	4.268E-01	2.094E-01	1.593E-02	22.659
BA-137M	5.633E+00	4.417E-01	1.238E-01	7.877E-03	45.485
CS-137	5.954E+00	4.680E-01	1.309E-01	8.356E-03	45.485
CE-139	7.764E-02	6.006E-02	7.365E-02	4.823E-03	1.054
TL-208	4.711E-01	1.356E-01	1.124E-01	7.890E-03	4.193
BI-211	2.663E+00	6.580E-01	6.124E-01	4.018E-02	4.348
PB-212	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
PO-212	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
PB-214	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
PO-214	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
PO-216	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
PO-218	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
AC-228	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
RA-228	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
TH-228	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
AM-241	1.353E+01	1.192E+00	3.818E-01	2.899E-02	35.426
AM-243	3.194E-01	1.017E-01	1.259E-01	8.682E-03	2.536
ANH-511	1.259E-01	9.293E-02	9.479E-02	5.616E-03	1.328

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.247E-01		6.608E-01	1.085E+00	7.297E-02	0.299
NA-22	-8.096E-03		5.236E-02	8.442E-02	4.963E-03	-0.096
NA-24	-1.036E-04		8.941E-05	Half-Life too short		
AL-26	1.288E-02		3.861E-02	6.928E-02	3.801E-03	0.186
K-40	5.196E-01		6.208E-01	1.152E+00	7.168E-02	0.451
TI-44	3.128E-01	+	7.823E-02	9.767E-02	6.891E-03	3.203
SC-46	-7.621E-02		9.696E-02	1.485E-01	1.187E-02	-0.513
V-48	1.783E-02		1.348E-01	2.186E-01	1.656E-02	0.082
CR-51	2.993E-01		5.470E-01	9.213E-01	6.376E-02	0.325
MN-52	8.301E-02		1.197E-01	2.183E-01	1.282E-02	0.380
MN-54	4.738E-03		7.601E-02	1.243E-01	9.468E-03	0.038
CO-56	-5.056E-03		8.659E-02	1.402E-01	1.080E-02	-0.036
CO-58	-7.497E-02		7.901E-02	1.193E-01	8.917E-03	-0.628
FE-59	9.180E-02		1.861E-01	3.204E-01	2.406E-02	0.287
ZN-65	-2.741E-01		2.000E-01	3.008E-01	1.947E-02	-0.911
GE-68	-4.716E-01		2.887E+00	4.771E+00	3.258E-01	-0.099
AS-73	-7.070E-01		1.185E+00	1.927E+00	1.272E-01	-0.367
AS-74	-9.255E-02		1.296E-01	2.057E-01	1.280E-02	-0.450
SE-75	-8.727E-03		7.360E-02	1.212E-01	8.150E-03	-0.072
BR-77	1.078E+00		2.068E+00	3.579E+00	2.135E-01	0.301
SR-82	7.426E-02		6.398E-01	1.055E+00	7.604E-02	0.070
RB-83	6.617E-02		1.225E-01	2.123E-01	1.266E-02	0.312
RB-84	-3.667E-02		1.532E-01	2.443E-01	1.940E-02	-0.150
KR-85	1.727E+01		1.382E+01	2.230E+01	1.324E+00	0.775
SR-85	8.162E-02		6.529E-02	1.054E-01	6.255E-03	0.775
RB-86	-9.497E-01		1.392E+00	2.215E+00	1.514E-01	-0.429
Y-88	1.137E-01	+	6.377E-02	1.217E-01	6.629E-03	0.934
ZR-88	-3.081E-02		5.899E-02	9.266E-02	4.902E-03	-0.333
Y-91	6.839E+00		2.269E+01	3.885E+01	2.274E+00	0.176
NB-94	-3.199E-02		6.382E-02	1.013E-01	6.753E-03	-0.316
NB-95	4.730E-02		7.796E-02	1.328E-01	9.465E-03	0.356
NB-95M	1.443E-01		2.101E-01	3.196E-01	2.640E-02	0.451
ZR-95	1.133E-01		1.403E-01	2.418E-01	1.959E-02	0.469
NB-97	1.689E-04		6.048E-05	Half-Life too short		
ZR-97	1.458E-03		8.379E-04	Half-Life too short		
MO-99	2.758E+00		3.359E+00	5.791E+00	8.279E-01	0.476
TC-99M	-1.488E+01		1.416E+01	Half-Life too short		
RH-101	3.477E-03		5.284E-02	8.856E-02	5.902E-03	0.039
RH-102	3.956E-02		6.577E-02	1.087E-01	6.258E-03	0.364

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RU-103	-3.235E-02		6.980E-02	1.144E-01	1.449E-02	-0.283
RH-106	-2.528E-01		6.136E-01	9.752E-01	1.169E-01	-0.259
RU-106	-2.528E-01		6.130E-01	9.752E-01	6.130E-02	-0.259
AG-108M	7.341E-02		7.131E-02	1.209E-01	7.325E-03	0.607
AG-110M	1.081E-01		8.647E-02	1.365E-01	9.146E-03	0.792
IN-111	-6.233E-01		2.868E-01	4.256E-01	2.859E-02	-1.464
IN-113M	4.723E-02		8.672E-02	1.444E-01	8.239E-03	0.327
SN-113	4.723E-02		8.672E-02	1.444E-01	8.239E-03	0.327
IN-114M	7.153E-02		2.836E-01	4.272E-01	2.836E-02	0.167
CD-115	2.130E-01		1.808E+00	3.056E+00	1.832E-01	0.070
SN-117M	1.677E-03		5.561E-02	9.451E-02	6.666E-03	0.018
SB-122	8.205E-02		5.115E-01	8.640E-01	5.292E-02	0.095
I-123	-1.432E-05		2.288E-04	Half-Life too short		
TE-123M	-1.273E-03		4.067E-02	6.895E-02	4.886E-03	-0.018
I-124	3.729E-02		3.896E-01	5.944E-01	3.709E-02	0.063
SB-124	-8.578E-02		1.054E-01	1.368E-01	8.471E-03	-0.627
SB-125	-1.887E-02		1.971E-01	3.156E-01	1.819E-02	-0.060
TE-125M	1.229E+01		1.243E+01	2.075E+01	2.130E+00	0.592
I-126	3.226E-02		2.468E-01	3.588E-01	2.295E-02	0.090
SB-126	9.278E-02		1.950E-01	3.038E-01	2.065E-02	0.305
SB-127	-4.450E-01		6.728E-01	1.057E+00	8.169E-02	-0.421
XE-127	2.011E-02		6.279E-02	1.068E-01	7.130E-03	0.188
I-131	9.314E-02		1.140E-01	1.934E-01	1.232E-02	0.482
TE-132	2.445E-02		2.174E-01	3.644E-01	4.952E-02	0.067
BA-133	-4.231E-02		9.453E-02	1.308E-01	1.516E-02	-0.324
I-133	1.098E-05		1.147E-05	Half-Life too short		
CS-134	1.268E-01		9.976E-02	1.758E-01	1.304E-02	0.721
CS-135	-1.096E-01		2.755E-01	4.473E-01	3.725E-02	-0.245
I-135	5.315E+00		1.156E+01	Half-Life too short		
CS-136	-7.661E-02		1.644E-01	2.663E-01	2.002E-02	-0.288
BA-140	-1.421E-02		3.030E-01	5.066E-01	1.650E-01	-0.028
LA-140	-1.005E-01		8.226E-02	9.888E-02	5.733E-03	-1.016
CE-141	-5.040E-02		8.083E-02	1.241E-01	1.004E-02	-0.406
CE-143	9.634E+00		5.704E+00	8.573E+00	1.769E+00	1.124
CE-144	-3.740E-01		3.346E-01	4.974E-01	7.759E-02	-0.752
PM-144	-9.839E-03		6.472E-02	1.055E-01	6.989E-03	-0.093
PR-144	-6.640E-01		4.367E+00	7.122E+00	4.716E-01	-0.093
PM-146	1.391E-02		9.380E-02	1.517E-01	1.292E-02	0.092
ND-147	2.985E-01		6.419E-01	1.106E+00	1.505E-01	0.270
PM-149	-1.865E+00		1.428E+01	2.339E+01	3.390E+00	-0.080
EU-152	-1.355E-01		1.997E-01	2.873E-01	1.938E-02	-0.471
GD-153	1.535E-02		1.148E-01	1.775E-01	1.412E-02	0.086
EU-154	-4.580E-02		1.496E-01	2.358E-01	2.212E-02	-0.194
EU-155	1.421E-01		1.592E-01	2.654E-01	2.241E-02	0.536
TB-160	5.609E-02		3.205E-01	5.256E-01	4.167E-02	0.107
HO-166M	-1.142E-02		1.229E-01	2.011E-01	1.354E-02	-0.057
TM-171	-2.136E+00		3.524E+01	5.762E+01	3.867E+00	-0.037
LU-176	3.208E-02		4.449E-02	7.564E-02	4.862E-03	0.424

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	1.280E+00	+	1.177E+00	1.361E+00	9.112E-02	0.940
LU-177M	-1.054E-01		3.388E-01	5.365E-01	2.908E-02	-0.196
HF-181	-4.113E-02		8.134E-02	1.257E-01	7.283E-03	-0.327
W-181	-4.739E-01		4.520E-01	6.766E-01	4.538E-02	-0.700
TA-182	2.526E-02		2.147E-01	3.607E-01	2.113E-02	0.070
RE-183	4.824E-02		1.707E-01	2.598E-01	1.765E-02	0.186
RE-184	-1.115E-01		3.798E-01	6.214E-01	4.166E-02	-0.180
OS-185	2.726E-02		8.271E-02	1.399E-01	8.864E-03	0.195
RE-188	1.502E-02		2.501E-01	3.965E-01	2.891E-02	0.038
W-188	7.071E-01		1.331E+01	1.931E+01	1.264E+00	0.037
IR-192	3.291E-02		5.713E-02	9.642E-02	6.140E-03	0.341
AU-195	4.923E-02		3.171E-01	5.151E-01	4.128E-02	0.096
TL-200	-1.060E+00		6.273E+00	1.009E+01	5.746E-01	-0.105
TL-201	1.921E+00		2.138E+00	3.344E+00	2.190E-01	0.574
TL-202	-7.685E-02		1.010E-01	1.553E-01	8.651E-03	-0.495
HG-203	6.733E-02		7.388E-02	1.130E-01	7.832E-03	0.596
BI-207	8.285E-02		1.231E-01	2.146E-01	1.492E-02	0.386
TL-207	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
PO-209	1.794E+01		2.057E+01	3.496E+01	2.813E+00	0.513
BI-210	-1.828E+00		3.396E+00	5.587E+00	4.220E-01	-0.327
PB-210	-1.828E+00		3.396E+00	5.587E+00	4.220E-01	-0.327
PO-210	-1.828E+00		3.395E+00	5.587E+00	3.597E-01	-0.327
PB-211	-1.065E+00		2.037E+00	3.015E+00	1.878E+00	-0.353
BI-212	1.200E+00	+	8.121E-01	1.127E+00	9.614E-02	1.065
BI-214	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
PO-215	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
RN-219	4.775E-01		8.398E-01	1.395E+00	1.872E-01	0.342
RN-220	2.311E+01		4.922E+01	8.479E+01	5.152E+00	0.273
RA-223	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
RA-224	5.593E+00		1.484E+00	2.484E+00	1.670E-01	2.252
RA-226	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
AC-227	5.496E-01		6.550E-01	1.120E+00	1.608E-01	0.491
TH-227	5.496E-01		6.571E-01	1.120E+00	1.930E-01	0.491
TH-229	-8.969E-02		8.033E-01	1.345E+00	8.945E-02	-0.067
TH-230	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
PA-231	-7.883E-01		2.730E+00	4.436E+00	6.268E-01	-0.178
TH-231	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
U-231	-5.597E-02		4.613E-01	6.599E-01	5.204E-02	-0.085
PA-233	-7.700E-02		1.131E-01	1.785E-01	1.198E-02	-0.431
PA-234	-3.701E-01		8.448E-01	1.319E+00	2.428E-01	-0.281
PA-234M	1.554E+01		1.727E+01	2.927E+01	3.016E+00	0.531
TH-234	8.022E-02		1.698E+00	2.528E+00	4.338E-01	0.032
U-234	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
U-235	4.902E-03		3.208E-01	5.107E-01	8.796E-02	0.010
NP-236	-5.327E-02		1.244E-01	2.004E-01	1.389E-02	-0.266
NP-237	6.807E+00		1.606E+00	1.107E+00	2.432E-01	6.148
U-238	8.022E-02		1.698E+00	2.528E+00	4.338E-01	0.032
NP-239	-1.367E-01		3.069E-01	4.564E-01	4.135E-02	-0.299

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.683E-02		1.429E-01	2.290E-01	1.890E-02	-0.073
CM-247	1.226E-02		7.487E-02	1.221E-01	6.533E-03	0.100
CF-249	-1.435E-03		8.213E-02	1.329E-01	7.112E-03	-0.011
CF-251	1.337E-01		1.969E-01	3.412E-01	2.247E-02	0.392

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201873071          *
* Acquisition date  :  9-JUL-2009 08:51:19 Detector SN#     :               *
* Detector ID       : GAM07                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 01:00:01.46      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       :  2-JUL-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201873071          Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.5173E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  2-NOV-2008 14:41:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	3.682E-01	7.190E-02	3.372E-02	3.668E-02
CO-60	7.374E+00	5.440E-01	4.548E-02	2.776E-01
CD-109	4.772E+01	4.206E+00	1.136E+00	2.146E+00
SN-126	4.745E+00	4.182E-01	1.132E-01	2.134E-01
BA-137M	5.633E+00	4.329E-01	6.372E-02	2.209E-01
CS-137	5.954E+00	4.586E-01	6.735E-02	2.340E-01
CE-139	7.764E-02	5.886E-02	3.921E-02	3.003E-02
TL-208	4.711E-01	1.329E-01	5.799E-02	6.782E-02
BI-211	2.663E+00	6.449E-01	3.202E-01	3.290E-01
PB-212	1.331E+00	1.977E-01	9.739E-02	1.009E-01
PO-212	1.331E+00	1.977E-01	9.739E-02	1.009E-01
PB-214	9.262E-01	2.293E-01	1.135E-01	1.170E-01
PO-214	9.262E-01	2.293E-01	1.135E-01	1.170E-01
PO-216	1.331E+00	1.977E-01	9.739E-02	1.009E-01
PO-218	9.262E-01	2.293E-01	1.135E-01	1.170E-01
AC-228	1.885E+00	5.884E-01	2.872E-01	3.002E-01
RA-228	1.885E+00	5.884E-01	2.872E-01	3.002E-01
TH-228	1.331E+00	1.977E-01	9.738E-02	1.009E-01
TH-232	1.885E+00	5.884E-01	2.872E-01	3.002E-01
AM-241	1.353E+01	1.168E+00	2.082E-01	5.961E-01
AM-243	3.194E-01	9.963E-02	6.831E-02	5.083E-02
ANH-511	1.259E-01	9.107E-02	4.909E-02	4.647E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	3.247E-01	6.476E-01	5.628E-01	3.304E-01	NOT IDENT.
NA-22	-8.096E-03	5.131E-02	4.270E-02	2.618E-02	NOT IDENT.
NA-24	-1.036E+02	1.752E+02	0.000E+00	8.941E+01	SHORT HLIF
AL-26	1.288E-02	3.784E-02	3.472E-02	1.930E-02	NOT IDENT.
K-40	5.196E-01	6.084E-01	5.806E-01	3.104E-01	NOT IDENT.

TI-44	3.128E-01	7.666E-02	5.292E-02	3.911E-02	FAIL ABUN
SC-46	-7.621E-02	9.502E-02	7.583E-02	4.848E-02	NOT IDENT.
V-48	1.783E-02	1.321E-01	1.113E-01	6.740E-02	NOT IDENT.
CR-51	2.993E-01	5.361E-01	4.827E-01	2.735E-01	NOT IDENT.
MN-52	8.301E-02	1.173E-01	1.101E-01	5.983E-02	FAIL ABUN
MN-54	4.738E-03	7.449E-02	6.355E-02	3.801E-02	NOT IDENT.
CO-56	-5.056E-03	8.486E-02	7.167E-02	4.329E-02	NOT IDENT.
CO-58	-7.497E-02	7.743E-02	6.106E-02	3.950E-02	NOT IDENT.
FE-59	9.180E-02	1.823E-01	1.627E-01	9.303E-02	NOT IDENT.
ZN-65	-2.741E-01	1.960E-01	1.527E-01	9.999E-02	NOT IDENT.
GE-68	-4.716E-01	2.829E+00	2.424E+00	1.443E+00	NOT IDENT.
AS-73	-7.070E-01	1.161E+00	1.053E+00	5.923E-01	NOT IDENT.
AS-74	-9.255E-02	1.270E-01	1.061E-01	6.481E-02	NOT IDENT.
SE-75	-8.727E-03	7.213E-02	6.379E-02	3.680E-02	FAIL ABUN
BR-77	1.078E+00	2.027E+00	1.853E+00	1.034E+00	FAIL ABUN
SR-82	7.426E-02	6.270E-01	5.407E-01	3.199E-01	NOT IDENT.
RB-83	6.617E-02	1.201E-01	1.099E-01	6.125E-02	NOT IDENT.
RB-84	-3.667E-02	1.501E-01	1.248E-01	7.660E-02	NOT IDENT.
KR-85	1.727E+01	1.354E+01	1.155E+01	6.909E+00	NOT IDENT.
SR-85	8.162E-02	6.399E-02	5.456E-02	3.265E-02	NOT IDENT.
RB-86	-9.497E-01	1.364E+00	1.126E+00	6.960E-01	NOT IDENT.
Y-88	1.137E-01	6.250E-02	6.098E-02	3.189E-02	FAIL ABUN
ZR-88	-3.081E-02	5.781E-02	4.830E-02	2.950E-02	NOT IDENT.
Y-91	6.839E+00	2.224E+01	1.968E+01	1.135E+01	NOT IDENT.
NB-94	-3.199E-02	6.254E-02	5.204E-02	3.191E-02	NOT IDENT.
NB-95	4.730E-02	7.640E-02	6.806E-02	3.898E-02	NOT IDENT.
NB-95M	1.443E-01	2.059E-01	1.687E-01	1.051E-01	NOT IDENT.
ZR-95	1.133E-01	1.375E-01	1.240E-01	7.014E-02	NOT IDENT.
NB-97	1.689E+02	1.185E+02	0.000E+00	6.048E+01	SHORT HLIF
ZR-97	1.458E+03	1.642E+03	0.000E+00	8.379E+02	SHORT HLIF
MO-99	2.758E+00	3.292E+00	2.971E+00	1.679E+00	NOT IDENT.
TC-99M	-1.488E+07	2.776E+07	0.000E+00	1.416E+07	SHORT HLIF
RH-101	3.477E-03	5.179E-02	4.695E-02	2.642E-02	NOT IDENT.
RH-102	3.956E-02	6.446E-02	5.638E-02	3.289E-02	NOT IDENT.
RU-103	-3.235E-02	6.841E-02	5.926E-02	3.490E-02	FAIL ABUN
RH-106	-2.528E-01	6.013E-01	5.025E-01	3.068E-01	FAIL ABUN
RU-106	-2.528E-01	6.008E-01	5.025E-01	3.065E-01	FAIL ABUN
AG-108M	7.341E-02	6.989E-02	6.287E-02	3.566E-02	NOT IDENT.
AG-110M	1.081E-01	8.474E-02	7.026E-02	4.324E-02	NOT IDENT.
IN-111	-6.233E-01	2.810E-01	2.245E-01	1.434E-01	NOT IDENT.
IN-113M	4.723E-02	8.498E-02	7.527E-02	4.336E-02	NOT IDENT.
SN-113	4.723E-02	8.498E-02	7.527E-02	4.336E-02	NOT IDENT.
IN-114M	7.153E-02	2.780E-01	2.267E-01	1.418E-01	NOT IDENT.
CD-115	2.130E-01	1.771E+00	1.582E+00	9.038E-01	NOT IDENT.
SN-117M	1.677E-03	5.450E-02	5.037E-02	2.781E-02	NOT IDENT.
SB-122	8.205E-02	5.013E-01	4.463E-01	2.558E-01	NOT IDENT.
I-123	-1.432E+01	4.485E+02	0.000E+00	2.288E+02	SHORT HLIF
TE-123M	-1.273E-03	3.986E-02	3.674E-02	2.034E-02	NOT IDENT.
I-124	3.729E-02	3.818E-01	3.065E-01	1.948E-01	NOT IDENT.
SB-124	-8.578E-02	1.033E-01	6.870E-02	5.268E-02	FAIL ABUN
SB-125	-1.887E-02	1.932E-01	1.642E-01	9.857E-02	NOT IDENT.
TE-125M	1.229E+01	1.218E+01	1.116E+01	6.215E+00	NOT IDENT.
I-126	3.226E-02	2.419E-01	1.846E-01	1.234E-01	NOT IDENT.
SB-126	9.278E-02	1.911E-01	1.560E-01	9.751E-02	FAIL ABUN
SB-127	-4.450E-01	6.594E-01	5.435E-01	3.364E-01	NOT IDENT.
XE-127	2.011E-02	6.153E-02	5.656E-02	3.139E-02	NOT IDENT.
I-131	9.314E-02	1.118E-01	1.010E-01	5.702E-02	NOT IDENT.
TE-132	2.445E-02	2.130E-01	1.925E-01	1.087E-01	NOT IDENT.
BA-133	-4.231E-02	9.264E-02	6.833E-02	4.726E-02	FAIL ABUN
I-133	1.098E+01	2.248E+01	0.000E+00	1.147E+01	SHORT HLIF
CS-134	1.268E-01	9.777E-02	9.001E-02	4.988E-02	NOT IDENT.
CS-135	-1.096E-01	2.700E-01	2.354E-01	1.378E-01	NOT IDENT.
I-135	5.315E+06	2.266E+07	0.000E+00	1.156E+07	SHORT HLIF
CS-136	-7.661E-02	1.611E-01	1.354E-01	8.219E-02	NOT IDENT.
BA-140	-1.421E-02	2.970E-01	2.620E-01	1.515E-01	NOT IDENT.
LA-140	-1.005E-01	8.062E-02	4.972E-02	4.113E-02	NOT IDENT.
CE-141	-5.040E-02	7.922E-02	6.626E-02	4.042E-02	NOT IDENT.
CE-143	9.634E+00	5.590E+00	4.502E+00	2.852E+00	FAIL ABUN
CE-144	-3.740E-01	3.279E-01	2.662E-01	1.673E-01	NOT IDENT.
PM-144	-9.839E-03	6.342E-02	5.423E-02	3.236E-02	NOT IDENT.
PR-144	-6.640E-01	4.280E+00	3.660E+00	2.184E+00	NOT IDENT.
PM-146	1.391E-02	9.193E-02	7.878E-02	4.690E-02	NOT IDENT.
ND-147	2.985E-01	6.290E-01	5.721E-01	3.209E-01	FAIL ABUN
PM-149	-1.865E+00	1.400E+01	1.229E+01	7.142E+00	NOT IDENT.
EU-152	-1.355E-01	1.957E-01	1.503E-01	9.983E-02	FAIL ABUN
GD-153	1.535E-02	1.125E-01	9.572E-02	5.738E-02	NOT IDENT.
EU-154	-4.580E-02	1.466E-01	1.193E-01	7.481E-02	FAIL ABUN
EU-155	1.421E-01	1.560E-01	1.428E-01	7.958E-02	FAIL ABUN

TB-160	5.609E-02	3.141E-01	2.685E-01	1.602E-01	FAIL ABUN
HO-166M	-1.142E-02	1.205E-01	1.033E-01	6.147E-02	NOT IDENT.
TM-171	-2.136E+00	3.454E+01	3.134E+01	1.762E+01	FAIL ABUN
LU-176	3.208E-02	4.360E-02	3.968E-02	2.225E-02	FAIL ABUN
LU-177	1.280E+00	1.154E+00	7.209E-01	5.887E-01	FAIL ABUN
LU-177M	-1.054E-01	3.321E-01	2.793E-01	1.694E-01	FAIL ABUN
HF-181	-4.113E-02	7.971E-02	6.521E-02	4.067E-02	NOT IDENT.
W-181	-4.739E-01	4.429E-01	3.682E-01	2.260E-01	NOT IDENT.
TA-182	2.526E-02	2.104E-01	1.826E-01	1.073E-01	NOT IDENT.
RE-183	4.824E-02	1.673E-01	1.384E-01	8.536E-02	FAIL ABUN
RE-184	-1.115E-01	3.722E-01	3.275E-01	1.899E-01	FAIL ABUN
OS-185	2.726E-02	8.105E-02	7.203E-02	4.135E-02	FAIL ABUN
RE-188	1.502E-02	2.451E-01	2.114E-01	1.250E-01	NOT IDENT.
W-188	7.071E-01	1.304E+01	1.014E+01	6.655E+00	NOT IDENT.
IR-192	3.291E-02	5.598E-02	5.053E-02	2.856E-02	FAIL ABUN
AU-195	4.923E-02	3.107E-01	2.776E-01	1.585E-01	FAIL ABUN
TL-200	-1.060E+00	6.147E+00	5.271E+00	3.136E+00	NOT IDENT.
TL-201	1.921E+00	2.095E+00	1.780E+00	1.069E+00	NOT IDENT.
TL-202	-7.685E-02	9.900E-02	8.072E-02	5.051E-02	NOT IDENT.
HG-203	6.733E-02	7.240E-02	5.943E-02	3.694E-02	NOT IDENT.
BI-207	8.285E-02	1.206E-01	1.090E-01	6.153E-02	FAIL ABUN
TL-207	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
PO-209	1.794E+01	2.016E+01	1.785E+01	1.029E+01	NOT IDENT.
BI-210	-1.828E+00	3.328E+00	3.063E+00	1.698E+00	NOT IDENT.
PB-210	-1.828E+00	3.328E+00	3.063E+00	1.698E+00	NOT IDENT.
PO-210	-1.828E+00	3.327E+00	3.063E+00	1.697E+00	NOT IDENT.
PB-211	-1.065E+00	1.996E+00	1.570E+00	1.018E+00	NOT IDENT.
BI-212	1.200E+00	7.959E-01	5.786E-01	4.061E-01	FAIL ABUN
BI-214	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
PO-215	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
RN-219	4.775E-01	8.230E-01	7.268E-01	4.199E-01	NOT IDENT.
RN-220	2.311E+01	4.824E+01	4.383E+01	2.461E+01	NOT IDENT.
RA-223	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
RA-224	5.593E+00	1.454E+00	1.311E+00	7.420E-01	NOT IDENT.
RA-226	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
AC-227	5.496E-01	6.419E-01	5.902E-01	3.275E-01	NOT IDENT.
TH-227	5.496E-01	6.439E-01	5.902E-01	3.285E-01	FAIL ABUN
TH-229	-8.969E-02	7.872E-01	7.134E-01	4.016E-01	FAIL ABUN
TH-230	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
PA-231	-7.883E-01	2.676E+00	2.331E+00	1.365E+00	NOT IDENT.
TH-231	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
U-231	-5.597E-02	4.521E-01	3.559E-01	2.307E-01	FAIL ABUN
PA-233	-7.700E-02	1.108E-01	9.357E-02	5.654E-02	FAIL ABUN
PA-234	-3.701E-01	8.279E-01	6.725E-01	4.224E-01	FAIL ABUN
PA-234M	1.554E+01	1.693E+01	1.490E+01	8.637E+00	NOT IDENT.
TH-234	8.022E-02	1.664E+00	1.376E+00	8.492E-01	FAIL ABUN
U-234	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
U-235	4.902E-03	3.144E-01	2.728E-01	1.604E-01	FAIL ABUN
NP-236	-5.327E-02	1.219E-01	1.068E-01	6.218E-02	NOT IDENT.
NP-237	6.807E+00	1.574E+00	5.986E-01	8.032E-01	NOT IDENT.
U-238	8.022E-02	1.664E+00	1.376E+00	8.492E-01	FAIL ABUN
NP-239	-1.367E-01	3.008E-01	2.450E-01	1.535E-01	FAIL ABUN
CM-243	-1.683E-02	1.401E-01	1.233E-01	7.147E-02	FAIL ABUN
CM-247	1.226E-02	7.338E-02	6.359E-02	3.744E-02	FAIL ABUN
CF-249	-1.435E-03	8.049E-02	6.929E-02	4.107E-02	NOT IDENT.
CF-251	1.337E-01	1.930E-01	1.814E-01	9.845E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	639.0174
46.50	639.0174
46.50	639.0174
48.70	776.8658
49.72	749.6448
51.35	835.9173
52.39	906.7592
52.97	962.0948
53.15	956.6166
53.44	966.1468
54.07	914.8989
56.28	967.2495
56.28	967.2569
57.37	1033.7673
57.53	1035.6414
57.53	1035.6466
57.60	1035.8083
57.98	773.6828
57.98	773.6828
59.32	776.0551
59.32	776.0551
59.40	776.1956
59.54	776.4409
59.72	776.7575
60.01	777.2660
61.10	500.2469
61.14	500.2914
61.30	500.4692
63.00	440.4951
63.29	440.7736
63.29	440.7736
63.58	463.7083
64.28	467.4364
65.12	512.8333
65.20	512.9211
65.20	512.9211
66.05	546.6467
66.72	486.5942
66.83	486.7090
66.91	486.7920
67.20	448.5263
67.20	448.5263
67.75	459.2005
67.85	459.2970
68.90	493.9028
68.90	493.9028
69.30	505.5185
69.67	534.4636
70.82	564.3395
70.82	564.3395
70.83	564.3507
72.80	518.8595
72.87	518.9315
72.87	518.9315
74.67	526.4411
74.81	526.5867
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74.81	526.5867
74.97	526.7504
75.28	527.0701
75.70	527.4990
77.11	528.9362
77.11	528.9362
77.11	528.9362

77.11	528.9362
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77.11	528.9362
78.38	530.2176
79.62	480.4980
79.80	480.6602
79.80	480.6602
80.11	498.1138
80.18	498.1795
80.30	498.2915
80.30	498.2915
80.57	501.6678
81.00	556.8123
81.07	556.8856
81.07	556.8856
81.07	556.8856
81.07	556.8856
82.60	522.3780
83.37	491.6917
83.78	525.0756
83.78	525.0756
83.78	525.0756
83.78	525.0756
84.21	536.4964
84.40	536.6811
84.90	519.8371
85.43	537.6776
86.29	596.9350
86.50	597.1570
86.54	622.4786
86.59	622.5328
86.72	622.6771
86.79	622.7522
86.94	622.9205
87.30	569.5285
87.30	569.5285
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87.30	569.5285
87.57	569.8004
87.88	570.1108
88.03	570.2618
88.36	570.5942
88.47	570.7040
89.95	368.7358
91.11	369.4756
92.29	370.2226
92.38	304.8419
92.38	304.8419
93.35	297.3500
94.00	312.0808
94.67	307.6230
94.67	307.6260
94.90	315.7588
94.90	315.7588
94.90	315.7588
94.90	315.7588
95.87	308.2427
95.87	308.2427
96.73	323.1531
97.43	294.8738
98.44	277.3046
98.44	277.3059
98.88	297.9404
99.55	306.8800
99.55	306.8800
99.86	291.9514
100.00	292.0175
100.10	297.4558
103.18	306.5027
103.76	293.7763
105.00	280.2283
105.31	268.4113
108.00	301.1773
109.28	253.6591
111.00	288.3050
111.00	288.3050

111.76	302.9012
112.95	268.2600
115.19	271.3572
116.30	281.7428
117.00	288.0031
117.00	288.0031
117.66	273.9988
121.11	283.7039
121.62	283.9101
121.78	283.9743
122.06	284.0865
122.32	284.1915
122.32	284.1915
122.32	284.1915
122.32	284.1915
123.07	269.4311
127.23	302.9762
129.76	278.1269
131.20	332.8233
133.02	275.9570
133.54	329.3406
135.34	266.5982
136.00	271.3719
136.25	281.6842
136.48	281.7700
140.51	287.8169
140.51	0.0000
142.18	251.8081
142.65	239.3601
143.76	258.0482
144.24	254.7612
144.24	254.7612
144.24	254.7612
144.24	254.7612
145.22	267.7163
145.44	271.2377
147.16	254.5466
152.43	260.8406
152.70	272.5220
153.22	273.8545
154.21	276.5070
154.21	276.5070
154.21	276.5070
154.21	276.5070
155.03	262.8253
156.02	254.9876
158.56	266.2714
159.00	0.0000
159.00	263.7792
160.31	277.8550
161.27	261.4989
162.32	251.9657
162.64	252.0596
163.35	256.4951
163.89	252.4245
165.85	265.0108
167.43	264.7813
171.28	265.1259
171.86	265.0448
172.10	265.1152
176.55	247.6520
176.60	247.6668
181.06	248.6938
184.41	253.9174
185.71	249.2132
186.00	249.2890
190.27	249.6856
192.34	239.0004
193.63	265.8525
197.04	263.1292
198.01	263.3884
198.60	259.8863
200.40	271.3597
201.83	269.9142
202.84	243.5367
205.31	241.7398
208.36	235.0743
208.81	233.8829

209.75	234.0972
209.75	234.0972
210.97	226.7788
215.65	259.4968
216.55	250.5395
218.09	246.2432
222.10	258.4110
223.80	254.1328
226.40	231.2444
227.00	221.0279
227.08	230.4501
227.20	230.4744
228.16	240.0936
228.18	240.0975
228.18	240.0975
231.56	271.0638
235.69	251.7903
236.00	273.1003
236.00	273.1003
238.60	351.6739
238.63	351.6852
238.63	351.6852
238.63	351.6852
239.00	419.8792
240.98	260.5997
241.98	234.8989
241.98	234.8989
241.98	234.8989
244.69	338.2786
245.39	313.6260
247.94	205.0757
248.90	220.5910
249.79	209.2432
252.40	208.7503
252.85	218.4532
252.85	218.4532
254.15	0.0000
256.20	198.8089
256.20	198.8089
260.50	243.1141
260.90	232.5403
262.80	204.7636
264.65	220.6302
268.24	241.7523
268.79	236.9858
269.46	218.5757
269.46	218.5757
269.46	218.5757
269.46	218.5757
271.23	221.8217
273.65	288.2457
276.40	216.6627
277.35	222.9162
277.60	226.8901
277.60	226.8901
278.00	198.0778
278.60	199.7428
279.20	209.2802
279.53	204.6135
280.46	220.5171
281.68	209.6926
283.67	215.1526
284.30	206.3722
285.00	194.6313
285.90	209.5965
286.10	201.7183
286.10	201.7183
287.40	196.9747
288.45	0.0000
290.67	196.8803
290.80	196.8984
291.72	201.8078
293.26	200.4557
293.70	192.5661
295.21	197.1692
295.21	197.1692
295.21	197.1692
295.96	224.7807

296.50	237.6324
297.23	236.1677
298.57	191.6836
299.80	172.6761
299.80	172.6761
300.09	180.7090
300.09	180.7090
300.09	180.7090
300.10	180.7117
300.12	180.7145
301.29	196.6494
302.84	213.3348
303.76	231.5217
303.91	231.5463
304.40	222.6064
304.40	222.6064
304.84	212.6502
306.84	176.8030
308.46	197.1305
311.98	191.5916
316.51	167.9453
318.01	202.5635
319.02	189.5338
319.41	178.4358
320.08	169.3928
323.87	195.2813
323.87	195.2813
323.87	195.2813
323.87	195.2813
325.23	238.2311
328.77	200.0435
333.44	188.4136
334.20	186.8754
334.20	186.8754
334.30	186.8865
338.28	183.9109
338.28	183.9109
338.28	183.9109
338.28	183.9109
338.32	183.9164
338.32	183.9164
338.32	183.9164
340.50	179.4588
340.57	179.4668
344.27	202.2087
345.85	177.0473
350.59	195.6161
351.07	182.4131
351.92	188.7400
351.92	188.7400
351.92	188.7400
355.39	0.0000
356.01	188.0087
364.48	157.9007
366.43	187.4179
367.43	185.4454
367.94	176.0750
369.80	167.8931
374.96	176.8748
383.85	160.9341
387.95	191.0715
388.63	204.9594
391.69	174.4927
391.69	174.4927
392.90	194.8536
398.62	183.7893
400.65	180.8055
401.10	185.1377
401.81	170.2282
402.60	176.7375
404.84	198.4284
410.95	158.2511
411.60	185.2380
413.65	173.6027
414.70	183.4213
415.30	180.2507
415.76	173.8213
417.63	0.0000

418.52	150.3154
423.70	156.1970
427.08	173.8940
427.89	182.6733
432.53	213.6931
433.93	160.3977
439.47	206.8831
439.56	206.8918
439.89	186.1295
443.98	174.4885
444.90	173.4827
445.03	173.4948
445.03	173.4948
445.03	173.4948
445.03	173.4948
453.90	166.6332
463.38	159.7412
468.07	171.2714
473.00	181.7658
475.06	164.1054
475.35	175.2954
476.78	181.0165
477.59	166.5632
477.96	172.1855
482.03	165.8383
484.57	141.3751
487.03	138.1892
490.36	143.1582
492.35	125.2816
497.08	146.3715
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510.53	0.0000
510.84	141.0402
511.00	141.0515
511.85	138.0774
511.85	138.0774
513.99	101.7711
513.99	101.7711
520.41	112.4627
520.65	115.2211
527.90	114.7186
528.96	0.0000
529.64	112.9822
529.87	0.0000
531.02	107.5423
537.32	105.1104
543.00	110.9502
546.56	0.0000
549.76	106.6726
552.65	122.6124
555.20	116.2506
563.23	104.5598
563.90	106.4603
568.70	107.6356
569.32	104.8578
569.50	104.8688
569.67	101.1313
573.80	114.4614
574.00	114.4703
574.64	110.7518
578.91	108.1494
579.30	114.4397
583.14	112.1290
585.48	110.0472
591.81	111.6275
592.07	117.3186
593.00	104.1160
595.88	124.1526
600.56	116.8170
602.52	0.0000
602.71	122.2276
602.71	122.2276
603.60	118.8782
604.41	126.8522
604.70	126.8685
609.31	109.6487
609.31	109.6487
609.31	109.6487

609.31	109.6487
610.33	111.2862
612.46	120.9395
614.37	117.8562
618.01	103.3699
621.84	108.3376
621.84	108.3376
631.29	107.8191
633.02	111.7548
633.10	111.7576
634.78	102.1984
635.90	101.2830
636.97	88.7836
645.85	106.5571
646.12	108.5082
656.30	118.3785
657.75	115.2074
657.90	0.0000
661.65	124.8219
661.65	124.8219
664.57	82.9891
666.33	89.5630
666.33	89.5630
675.00	108.8429
677.61	82.4558
685.20	113.2340
692.80	115.5575
695.00	111.7061
696.49	102.8701
696.49	102.8701
697.00	94.9758
697.49	92.0260
698.33	100.9666
698.50	103.9438
699.00	105.9446
702.63	107.0877
706.10	107.2354
706.58	0.0000
706.67	111.2344
709.31	75.5584
711.68	107.4727
713.82	103.5785
717.42	97.7416
720.50	87.0173
721.93	98.2469
722.20	98.2565
722.78	93.2809
722.78	93.2809
722.89	94.9513
722.95	94.9536
723.30	94.9675
724.18	103.3333
727.18	97.1113
733.00	95.3247
735.90	107.4833
739.58	86.5102
742.81	98.7034
744.21	107.8255
747.13	90.7954
751.79	107.1257
752.31	105.1248
753.82	115.2998
755.35	90.0647
756.15	97.1789
756.87	112.3929
763.93	126.9043
765.79	98.5440
766.41	95.5192
766.84	99.6006
768.36	105.7570
768.36	105.7570
768.36	105.7570
768.36	105.7570
776.49	98.9348
778.00	96.9506
778.57	97.9898
778.89	99.0224
783.80	87.9505

785.46	89.0284
792.07	104.6284
795.84	92.4456
796.30	93.4883
801.93	111.1772
805.60	101.0146
810.29	99.1195
810.76	112.5606
815.85	99.3164
817.79	96.2786
818.51	102.5143
819.60	111.8786
826.30	105.9122
828.27	114.2969
831.60	85.3012
831.96	93.6365
834.83	97.8945
836.80	0.0000
846.75	113.9843
848.13	118.2252
856.28	0.0000
856.80	133.2663
860.37	105.0610
867.32	111.6261
867.82	112.6974
871.10	113.8773
873.19	118.1769
874.81	115.0754
875.33	0.0000
876.40	120.4181
879.36	113.1363
880.27	116.3433
880.51	120.5823
881.50	129.0859
883.24	110.1039
884.67	128.1637
889.25	142.1493
896.60	128.6689
898.02	134.0473
899.00	146.8608
903.28	141.5856
911.07	138.8931
911.07	138.8931
911.07	138.8931
919.63	159.6330
920.93	150.0557
925.00	141.6647
925.24	147.0409
926.50	141.7324
934.06	146.3793
934.06	146.3793
934.06	146.3793
934.06	146.3793
935.52	123.8356
937.48	156.2361
944.10	127.4089
946.00	149.0946
949.00	137.3405
962.29	146.5983
964.01	137.6201
966.15	132.2769
968.20	141.4258
969.11	110.6345
969.11	110.6345
969.11	110.6345
977.42	121.1000
980.50	120.1218
983.50	121.3250
989.30	118.2542
996.32	132.7691
1001.03	110.9816
1001.68	106.6076
1004.76	138.4228
1021.30	0.0000
1024.50	0.0000
1034.80	110.0663
1037.82	111.0889
1038.57	122.2246

1038.76	0.0000
1045.16	109.4678
1046.59	113.2283
1048.07	104.9213
1050.47	95.6991
1050.47	95.6991
1063.62	93.2658
1076.63	112.3340
1077.35	105.8042
1085.78	103.2414
1099.22	93.2677
1112.02	95.4889
1112.84	94.5638
1115.52	129.6528
1120.29	81.4928
1120.29	81.4928
1120.29	81.4928
1120.29	81.4928
1120.51	66.3342
1121.28	72.9833
1124.00	0.0000
1129.67	66.5023
1131.51	0.0000
1147.95	0.0000
1167.94	64.1748
1173.22	62.4795
1175.09	62.6459
1177.93	61.0438
1189.05	42.4692
1204.90	34.8911
1205.75	32.9610
1213.00	38.8493
1221.42	28.2271
1230.97	36.1012
1235.34	33.2114
1236.41	0.0000
1238.11	24.4375
1238.11	24.4375
1238.11	24.4375
1238.11	24.4375
1238.25	27.3711
1246.25	12.7334
1260.41	0.0000
1271.85	28.5882
1274.45	26.6331
1274.54	24.6613
1291.56	21.7923
1298.22	0.0000
1312.09	26.8792
1325.50	23.9697
1325.50	23.9697
1332.49	24.0098
1333.61	13.7238
1360.21	20.1400
1362.66	0.0000
1365.15	13.1063
1368.21	22.1952
1368.53	0.0000
1376.25	14.1510
1377.67	18.2000
1377.67	18.2000
1377.67	18.2000
1377.67	18.2000
1384.27	16.2025
1394.10	23.3435
1395.20	19.2891
1407.95	15.2728
1434.06	12.2905
1436.60	17.4213
1457.56	0.0000
1460.81	19.5760
1489.15	15.5511
1509.49	11.4548
1596.49	23.3320
1620.62	7.4606
1678.03	0.0000
1691.02	16.2128
1691.02	16.2128

1706.46	0.0000
1750.46	0.0000
1764.49	5.6380
1764.49	5.6380
1764.49	5.6380
1764.49	5.6380
1770.23	13.1694
1771.40	13.1724
1791.20	0.0000
1808.65	6.6321
1836.01	11.6647

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201873071

Total Uranium Activity	2.4094E-01	ug/g
Total Uranium Counting Unc.	4.9539E+00	ug/g
Total Uranium Tpu	2.5275E-06	ug/g
Total Uranium Mda	4.0966E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID  : G1201873071      *
*   ANALYST       : MXR1                      DETECTOR   : GAM07            *
*   SAMPLE DATE   :  2-JUL-2009 00:00:00.00   COUNT TIME :    0 01:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:51:19.80    SAMPLE ALQT:  151.730 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 3.100E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.157E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 6.206E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 3.042E+00
```

Radiochemistry Batch Checklist, Rev 9

Batch# 883020 Product: H3 Date: 7/16/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature]

Secondary Review Performed By: [signature]

LANL 7-22-09

LANL 7/22/09

Tritium Que Sheet

13-JUL-09

Batch #: 883020 **Analyst:** KXK2 **First Client Due Date** 22-JUL-09 **Internal Due Date:** 11-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** ~~0~~ KKG 7/13/09 **Expiration Date:** ——— **Vol:** ——

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.2

Prep Date: 7/10/09 **Initials:** KXK2 **Pipet ID:** 2970968 **Witness:** TSP 7/13/09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Total MOISTURE Dist ~~Vol~~ (mL) KKG 7/13/09
232347001-1	CAMO-09-10462	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-2	1	KKG 7/14/09	382.65	357.78	24.87
232347002-1	CAMO-09-10460	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-3	2		451.25	413.80	37.45
232347003-1	CAMO-09-10461	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-4	3		524.03	463.77	60.26
232347004-1	CAMO-09-10467	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-5	4		293.05	279.86	13.19
232582001-1	CAMO-09-10464	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	6-6	5		480.42	448.23	32.19
232582002-1	CAMO-09-10465	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	6-7	6		492.56	408.94	20.62
232585001-1	CAMO-09-6605	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-1	7		445.56	416.15	29.41
232585002-1	CAMO-09-6603	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-2	8		401.80	372.87	28.93
232585003-1	CAMO-09-6604	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-3	9		475.14	425.73	49.41
232591001-1	CAMO-09-9946	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-4	10		665.38	541.44	124.54
232664001-1	CAMO-09-9942	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-5	11		416.90	367.71	49.19
232664002-1	CAMO-09-9941	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-6	12		602.20	447.96	54.24
232664003-1	CAMO-09-9943	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-7	13		521.28	449.34	71.94
232664004-1	CAMO-09-10030	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-8	14		480.98	432.88	48.10
232664005-1	CAMO-09-9989	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-9	15		573.89	478.62	95.27
1201875586-1	MB for batch 883020	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	41-10	16		40.00	0	40.00
1201875587-1	~~CAMO-09-10463(232347001DUP)~~ CAMO-09-10462(232347003DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	22-JUN-09	10	41-11	3		524.03	463.77	60.26
1201875588-1	LCS for batch 883020	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	27-1	17		40.00	0	40.00

Bkg Rack #: 6-1

daities

1433

Comments:

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, ~~LS6000 (Brown)~~ 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069125, Silver 7060656*

Bkg prepared with dead water? Yes/No

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Econscint Ultra)*

Data Reviewed By: Nana Marie Hart

GEL Laboratories LLC, Radiochemistry Division

DATE	7/10/2009	INITIALS	KXK2		BATCH NUMBER	883020

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232347001	382.65	0.065	24.87	357.78	10	602
232347002	451.25	0.083	37.45	413.80	10	18
232347003	524.03	0.115	60.26	463.77	10	11
232347004	293.05	0.045	13.19	279.86	10	722
232582001	480.42	0.067	32.19	448.23	10	521
232582002	429.56	0.048	20.62	408.94	10	908
232585001	445.56	0.066	29.41	416.15	10	200
232585002	401.80	0.072	28.93	372.87	10	55
232585003	475.14	0.104	49.41	425.73	10	40
232591001	665.98	0.187	124.54	541.44	10	50
232664001	416.90	0.118	49.19	367.71	10	85
232664002	502.20	0.108	54.24	447.96	10	812
232664003	521.28	0.138	71.94	449.34	10	62
232664004	480.98	0.100	48.10	432.88	10	49
232664005	573.89	0.166	95.27	478.62	10	614
MB			0.00	0.00	10	74
LCS			0.00	0.00	10	10

Tritium Solid

Filename :	H3VAC.XLS	Spike S/N :	N/A	LCS S/N :	0134-K
File type :	Excel	Spike Exp Date :	N/A	LCS Exp Date :	3/27/2010
Version # :	1.2.5	Spike Activity (dpm/ml):	N/A	LCS Activity (dpm/ml):	2545.47
		Spike Volume Added:	N/A	LCS Volume Added:	0.20
Batch :	883020				
Analyst :	KXK2				
Prep Date :	7/10/2009				

					Procedure Code :	LSC_VH3S	
H-3 Abundance :	1	Pipet, 0.1 ml Stdev : +/-	0.000701	ml	Parmname :	Tritium	
Method Uncertainty :	0.0691	Pipet, 0.5 ml Stdev : +/-	0.002564	ml	Required MDC :	250	pCi/L
Geometry:	10mL DW/13mL Ecoscint Ultra	Pipet, 1.0 ml Stdev : +/-	0.005480	ml	Halflife of Tritium :	12.28	years
		Pipet, 5.0 ml Stdev : +/-	0.025729	ml			

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot In Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232347001.1	382.65	0.0249	0.0100	2.5729E-05	357.78	6.50%	1	6/22/2009 12:00
2	232347002.1	451.25	0.0375	0.0100	2.5729E-05	413.80	8.30%	2	6/22/2009 12:00
3	232347003.1	524.03	0.0603	0.0100	2.5729E-05	463.77	11.50%	3	6/22/2009 12:00
4	232347004.1	293.05	0.0132	0.0100	2.5729E-05	279.86	4.50%	4	6/22/2009 12:00
5	232582001.1	480.42	0.0322	0.0100	2.5729E-05	448.23	6.70%	5	6/25/2009 12:00
6	232582002.1	429.56	0.0206	0.0100	2.5729E-05	408.94	4.80%	6	6/25/2009 12:00
7	232585001.1	445.56	0.0294	0.0100	2.5729E-05	416.15	6.60%	7	6/25/2009 12:00
8	232585002.1	401.80	0.0289	0.0100	2.5729E-05	372.87	7.20%	8	6/25/2009 12:00
9	232585003.1	475.14	0.0494	0.0100	2.5729E-05	425.73	10.40%	9	6/25/2009 12:00
10	232591001.1	665.38	0.1245	0.0100	2.5729E-05	541.44	18.63%	10	6/25/2009 12:00
11	232664001.1	416.90	0.0492	0.0100	2.5729E-05	367.71	11.80%	11	6/26/2009 12:00
12	232664002.1	502.20	0.0542	0.0100	2.5729E-05	447.96	10.80%	12	6/26/2009 12:00
13	232664003.1	521.28	0.0719	0.0100	2.5729E-05	449.34	13.80%	13	6/26/2009 12:00
14	232664004.1	480.98	0.0481	0.0100	2.5729E-05	432.88	10.00%	14	6/26/2009 12:00
15	232664005.1	573.89	0.0953	0.0100	2.5729E-05	478.62	16.60%	15	6/26/2009 12:00
16	1201875586.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	16	7/10/2009 0:00
17	1201875587.1	524.03	0.0603	0.0100	2.5729E-05	463.77	11.50%	3	6/22/2009 12:00
18	1201875588.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	17	7/10/2009 0:00

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	6-2	95	129.2	7.93	6.06	95	7/14/2009 18:04	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2644	0.00792	6-1	7/14/2009 16:25
2	6-3	95	132.5	11.58	6.06	95	7/14/2009 19:43	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2585	0.00792	6-1	7/14/2009 16:25
3	6-4	95	132	12.78	6.06	95	7/14/2009 21:21	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2594	0.00792	6-1	7/14/2009 16:25
4	6-5	95	129.8	6.93	6.06	95	7/14/2009 22:59	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2633	0.00792	6-1	7/14/2009 16:25
5	6-6	95	133.6	9.14	6.06	95	7/15/2009 0:38	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2565	0.00792	6-1	7/14/2009 16:25
6	6-7	95	136.8	8.04	6.06	95	7/15/2009 2:16	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2508	0.00792	6-1	7/14/2009 16:25
7	41-1	95	138.1	6.61	6.06	95	7/15/2009 5:08	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2484	0.00792	6-1	7/14/2009 16:25
8	41-2	60	133.7	5.72	6.06	95	7/15/2009 7:41	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2564	0.00792	6-1	7/14/2009 16:25
9	41-3	60	128.9	7.18	6.06	95	7/15/2009 8:43	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2649	0.00792	6-1	7/14/2009 16:25
10	41-4	60	128.5	6.6	6.06	95	7/15/2009 9:46	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2656	0.00792	6-1	7/14/2009 16:25
11	41-5	60	129.1	6.02	6.06	95	7/15/2009 10:48	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2645	0.00792	6-1	7/14/2009 16:25
12	41-6	60	130.5	7.48	6.06	95	7/15/2009 11:51	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2621	0.00792	6-1	7/14/2009 16:25
13	41-7	60	128.4	6.85	6.06	95	7/15/2009 12:53	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2658	0.00792	6-1	7/14/2009 16:25
14	41-8	60	128.7	7.33	6.06	95	7/15/2009 13:56	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2652	0.00792	6-1	7/14/2009 16:25
15	41-9	60	129.3	6.7	6.06	95	7/15/2009 14:58	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2642	0.00792	6-1	7/14/2009 16:25
16	41-10	60	128.8	5.32	6.06	95	7/15/2009 16:01	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2651	0.00792	6-1	7/14/2009 16:25
17	41-11	60	132.3	12.07	6.06	95	7/15/2009 17:03	0.996	LSCSILVER	8/6/2008	8/31/2009	0.2589	0.00792	6-1	7/14/2009 16:25
18	29-1	15	130.3	42.87	6.06	95	7/15/2009 18:05	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2624	0.00792	6-1	7/14/2009 16:25

1436

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	142.2958	100.4620	250	206.3234	**319.7335**	0.205	1.870	0.384	65.6136	69.2895		SAMPLE				
2	145.5156	102.7353	250	210.9921	**985.1686**	0.079	5.520	0.431	75.3445	100.9729		SAMPLE				
3	145.0171	102.3833	250	210.2692	**1170.9623**	0.067	6.720	0.445	77.5983	112.5729		SAMPLE				
4	142.8712	100.8683	250	207.1578	**149.3545**	0.425	0.870	0.370	63.4807	64.3274		SAMPLE				
5	146.5684	103.4785	250	212.5185	**542.4323**	0.130	3.080	0.400	70.4457	79.8366		SAMPLE				
6	149.9428	105.8609	250	217.4113	**356.7346**	0.195	1.980	0.385	69.4109	73.7237		SAMPLE				
7	151.3714	106.8695	250	219.4827	**100.0371**	0.664	0.550	0.365	66.4240	66.7884		SAMPLE				
8	166.7009	117.6923	250	244.1968	**-59.9234**	1.173	-0.340	0.399	70.3046	70.3049		SAMPLE				
9	161.3397	113.9072	250	236.3432	**191.0462**	0.383	1.120	0.428	73.0612	74.2629		SAMPLE				
10	160.9146	113.6071	250	235.7206	**91.8689**	0.772	0.540	0.417	70.9229	71.2110		SAMPLE				
11	161.5311	114.0423	250	236.6236	**-6.8312**	10.128	-0.040	0.405	69.1863	69.1866		SAMPLE				
12	163.0536	115.1173	250	238.8540	**244.7925**	0.306	1.420	0.434	74.8368	76.7543		SAMPLE				
13	160.7870	113.5170	250	235.5336	**134.2942**	0.534	0.790	0.422	71.7112	72.3186		SAMPLE				
14	161.1067	113.7427	250	236.0020	**216.3200**	0.340	1.270	0.431	73.4511	74.9803		SAMPLE				
15	161.7504	114.1972	250	236.9449	**109.4472**	0.655	0.640	0.419	71.6323	72.0368		SAMPLE				
16	160.8795	113.5823	250	235.6691	**-125.8670**	0.528	-0.740	0.390	66.4129	66.4132		MB				
17	165.1751	116.6150	250	241.9617	**1049.5386**	0.086	6.010	0.515	89.8899	115.8597	232347003.1	DUP	10.9%	0.2658		
18	273.7888	193.2972	250	420.9553	**6324.1227**	0.047	36.810	1.709	293.6696	529.3829		LCS			5733.0311	110.3%

1437

ID:TRITIUM 14 JUL 2009 16:15

USER: 2 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	6-1	95.00	129.3	6.06	9.08	43.93	3.14	2.66	98.03
2	6-2	95.00	129.2	7.93	7.72	45.81	3.06	2.19	196.53
3	6-3	95.00	132.5	11.58	6.35	52.07	2.88	2.49	295.12
4	6-4	95.00	132.0	12.78	5.99	51.79	2.88	2.21	393.67
5	6-5	95.00	129.8	6.93	8.06	44.73	3.08	1.15	491.96
6	6-6	95.00	133.6	9.14	7.09	47.08	3.02	1.87	590.42
7	6-7	95.00	136.8	8.04	7.53	46.39	3.03	1.48	688.79

QP

INSTRUMENT CALIBRATION: Maxi 15 JUL 2009 03:46
Calibration successful

QP

Calibrating Auto DPM
Counting Standard for 14C
Calibration Complete: 14C
Counting Standard for 3H
Calibration Complete: 3H
Calibration Successful

QPQP

ID:TRITIUM 15 JUL 2000 04:58

USER: 2 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	41-1	95.00	138.1	6.61	8.35	46.37	3.03	1.43	97.83
2	41-2	38.80	133.6	6.34	13.51	44.48	4.86	1.82	138.62
3	41-3	0.05	128.1	0.00	0.00	0.00	0.00	0.00	139.45
4	41-4	0.05	128.4	20.00	200.00	80.00	100.00	3.13	140.35
5	41-5	0.05	129.2	40.00	141.42	60.00	115.47	4.18	141.23
6	41-6	0.05	130.8	0.00	0.00	20.00	200.00	17.61	142.13
7	41-7	0.05	128.6	20.00	200.00	80.00	100.00	2.99	143.03
8	41-8	0.05	129.7	0.00	0.00	20.00	200.00	10.08	143.95
9	41-9	0.05	129.4	0.00	0.00	20.00	200.00	9.09	144.83
10	41-10	0.05	128.7	40.00	141.42	100.00	89.44	1.77	145.72
11	41-11	0.05	132.5	40.00	141.42	80.00	100.00	2.87	146.62
12	41-12	0.05	130.0	60.00	115.47	160.00	70.71	0.90	147.52

7-6-09

ID=TRITIUM 15 JUL 2000 07:20

USER: 2 COMMENT:SILVER

PRESET TIME : 60.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
2	41-2	60.00	133.7	5.72	11.55	42.37	4.00	2.01	62.01
3	41-3	60.00	128.9	7.18	10.14	46.35	3.82	1.77	124.55
4	41-4	60.00	128.5	6.60	10.50	45.68	3.85	1.43	187.03
5	41-5	60.00	129.1	6.02	11.11	45.95	3.84	1.59	249.54
6	41-6	60.00	130.5	7.48	9.90	46.02	3.84	1.72	312.05
7	41-7	60.00	128.4	6.85	10.25	45.47	3.85	1.29	374.51
8	41-8	60.00	128.7	7.33	9.88	45.47	3.85	1.25	436.97
9	41-9	60.00	129.3	6.70	10.23	45.85	3.83	0.85	499.36
10	41-10	60.00	128.8	5.32	11.48	43.70	3.92	0.72	561.73
11	41-11	60.00	132.3	12.07	7.58	50.98	3.63	1.03	624.18

QPQP

ID:TRITIUM 15 JUL 2009 17:57

USER: 3 COMMENT:SILVER

PRESET TIME : 15.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	29-1	15.00	130.3	42.87	7.90	81.20	5.74	0.33	15.80
MISSING SAMPLE									
13	30-1	15.00	127.5	6.60	21.29	44.13	7.84	2.02	32.40
14	30-2	15.00	127.6	9.60	17.46	44.27	7.84	2.26	48.76
15	30-3	15.00	127.7	13.13	14.68	51.80	7.23	1.67	65.11
16	30-4	15.00	128.5	7.53	19.79	46.33	7.65	1.96	81.47
17	30-5	15.00	128.4	5.53	23.36	42.47	7.99	2.00	97.83
18	30-6	15.00	124.2	6.20	21.93	43.67	7.88	1.86	114.20
19	30-7	15.00	128.0	7.67	19.52	43.73	7.87	1.96	130.56
20	30-8	15.00	128.5	22.07	11.17	60.87	6.66	1.51	146.93
21	30-9	15.00	121.9	19.60	11.88	58.07	6.82	1.43	163.30

QPQ`

SCB
7.15.09

Sample Count Start Time:	14 Jul 2009 16:25:55		
Data Capture Date	14 Jul 2009 18:01:14		
User Filename	S02071406-1A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	6-1	95.00
H#, Total Counts:	129.3	3859	
Start, End, X-Axis:	0	990	Channel Number

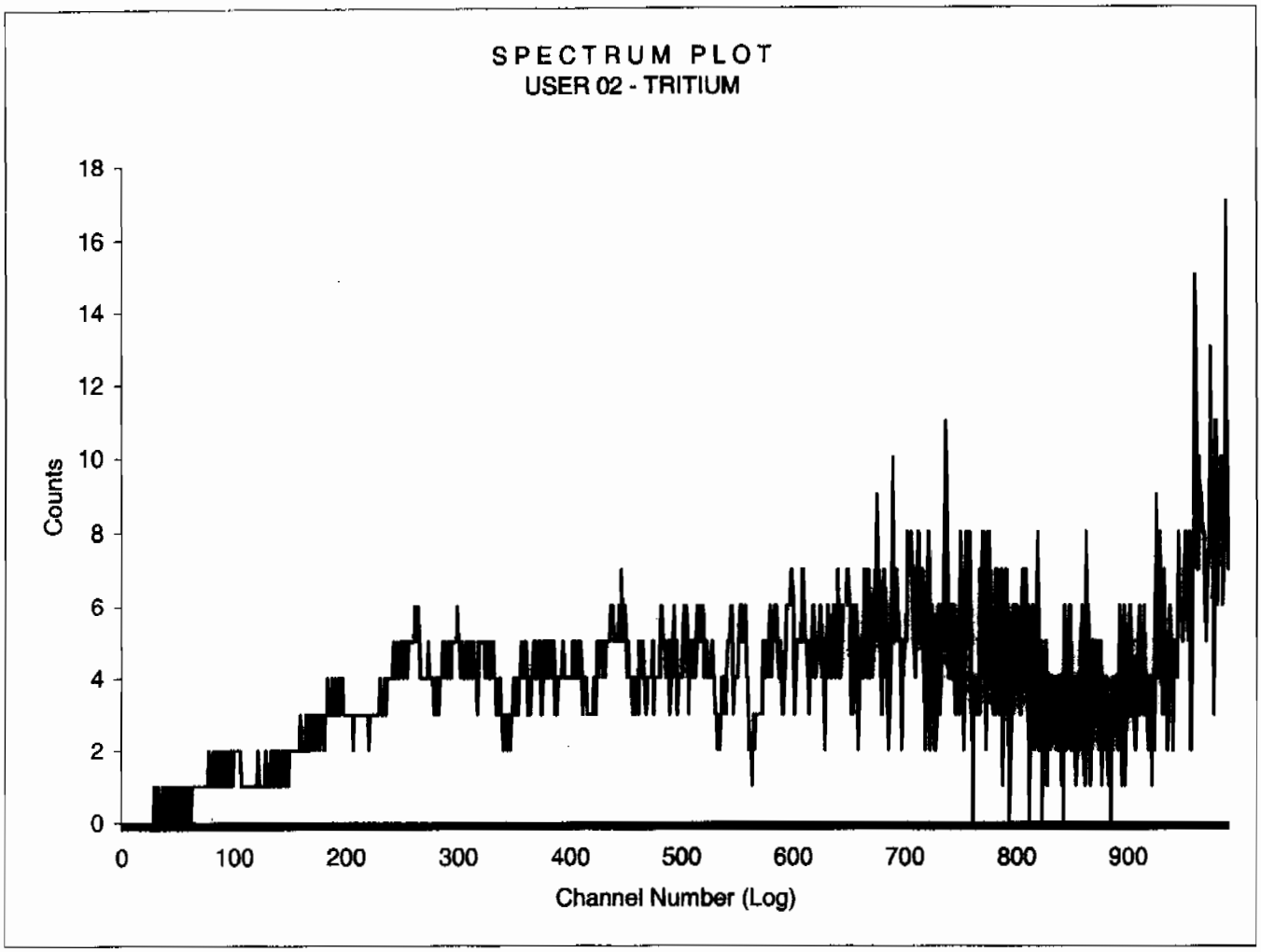

Sample Count Start Time:	14 Jul 2009 18:04:25		
Data Capture Date	14 Jul 2009 19:39:44		
User Filename	S02071406-2A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	6-2	95.00
H#, Total Counts:	129.2	4087	
Start, End, X-Axis:	0	990	Channel Number

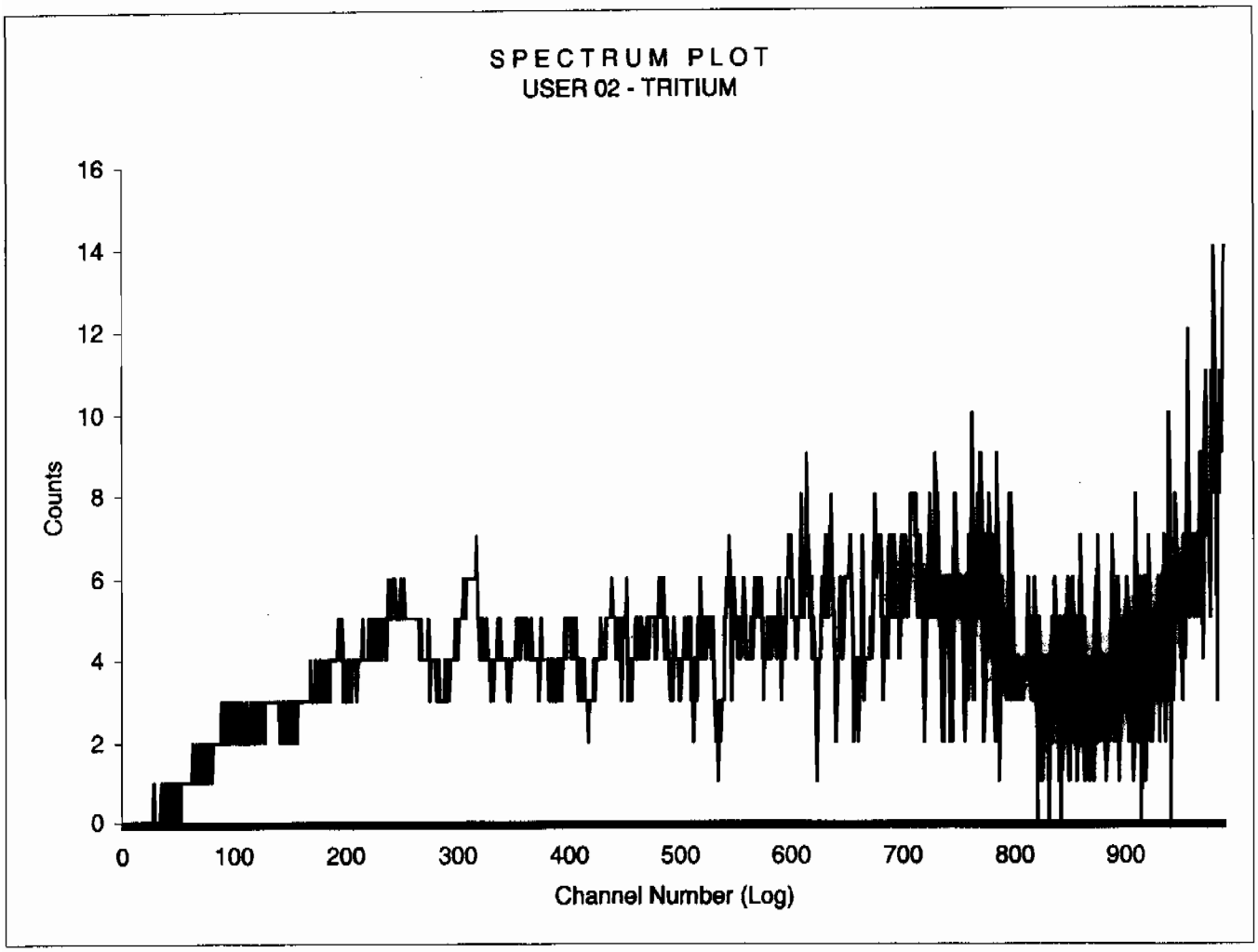

Sample Count Start Time:	14 Jul 2009 19:43:00		
Data Capture Date	14 Jul 2009 21:18:20		
User Filename	S02071406-3A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	6-3	95.00
H#, Total Counts:	132.5	4672	
Start, End, X-Axis:	0	990	Channel Number

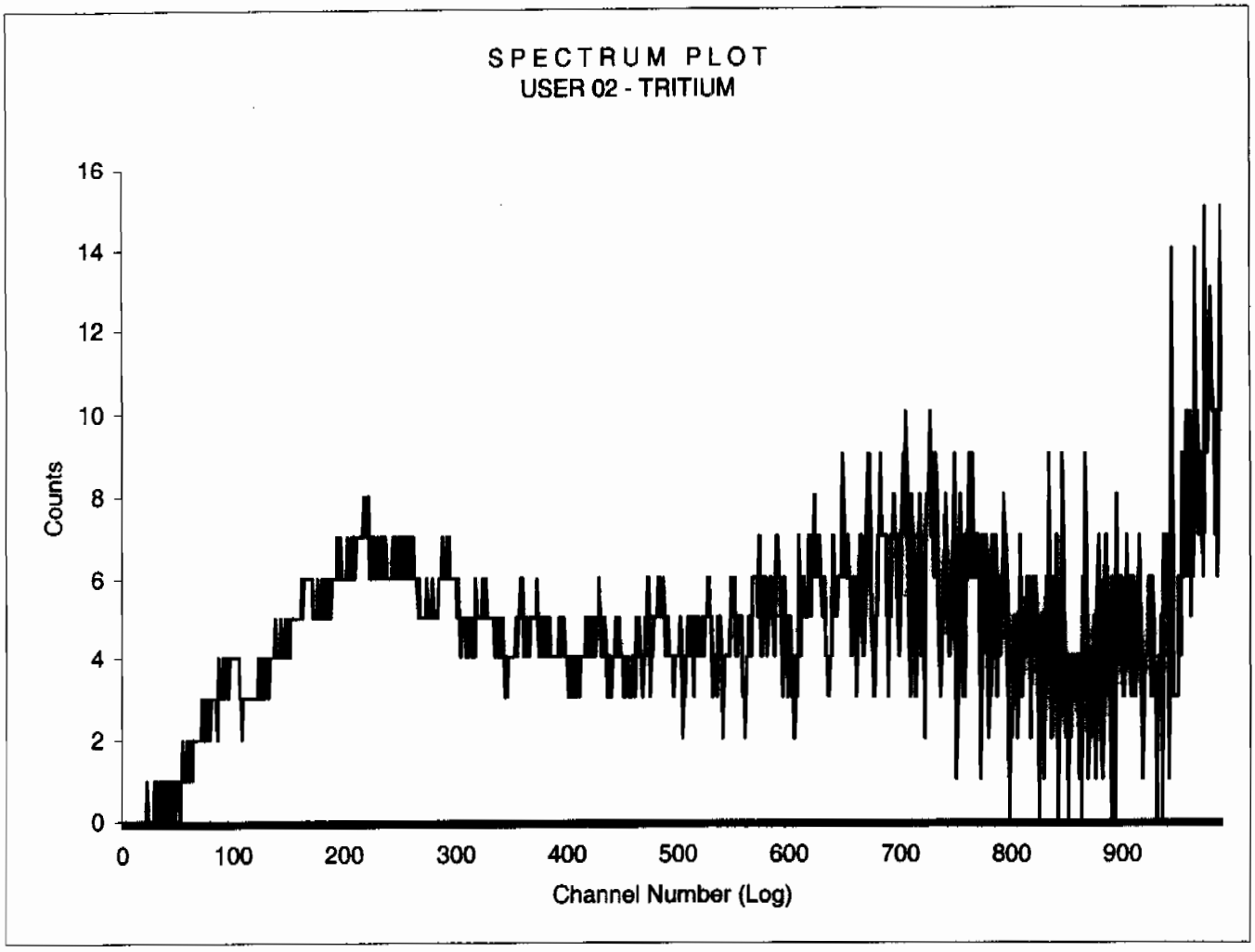

Sample Count Start Time:	14 Jul 2009 21:21:33		
Data Capture Date	14 Jul 2009 22:56:53		
User Filename	S02071406-4A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	6-4	95.00
H#, Total Counts:	132.0	4609	
Start, End, X-Axis:	0	990	Channel Number

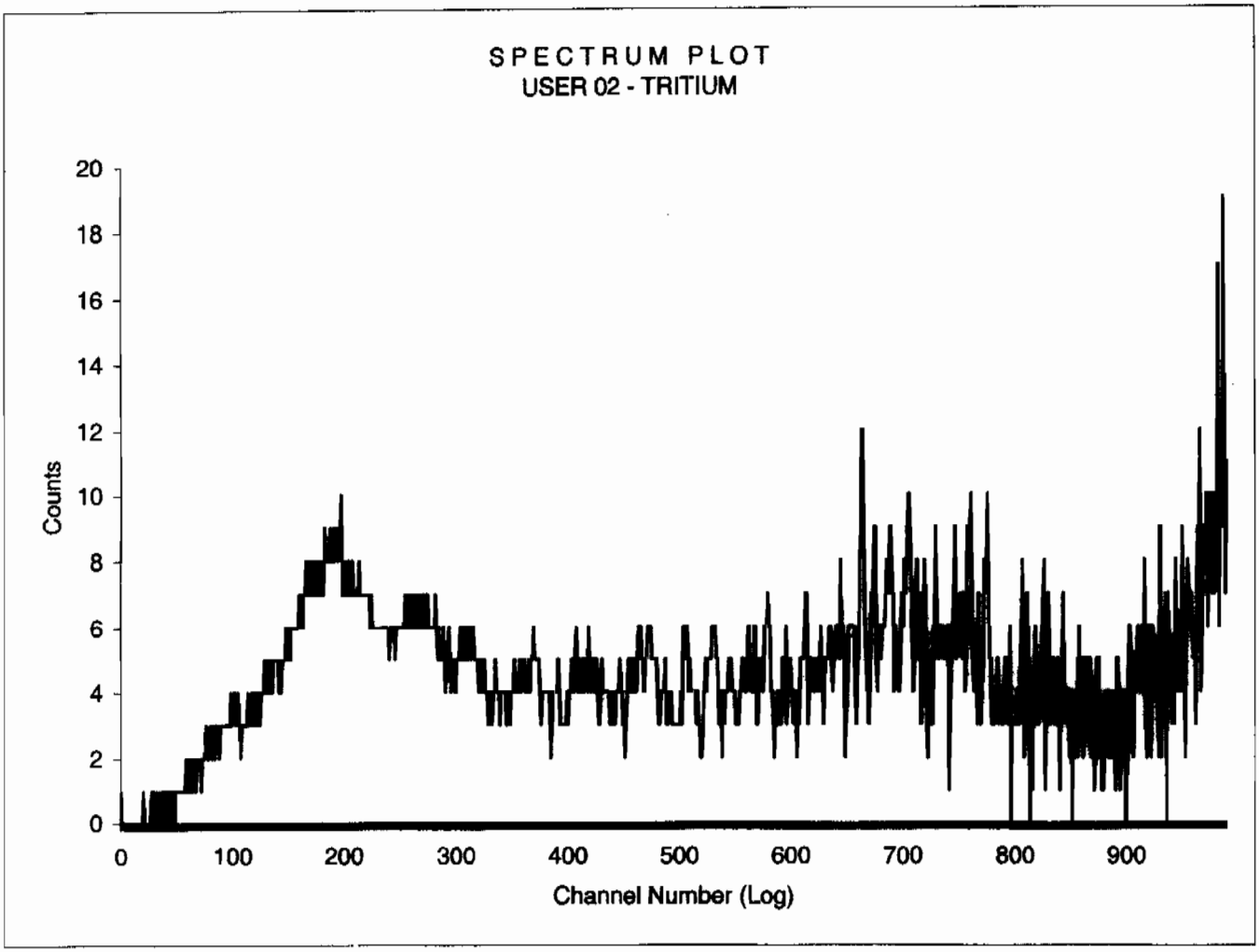

Sample Count Start Time:	14 Jul 2009 22:59:51		
Data Capture Date	15 Jul 2009 00:35:10		
User Filename	S02071506-5A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	6-5	95.00
H#, Total Counts:	129.8	3966	
Start, End, X-Axis:	0	990	Channel Number

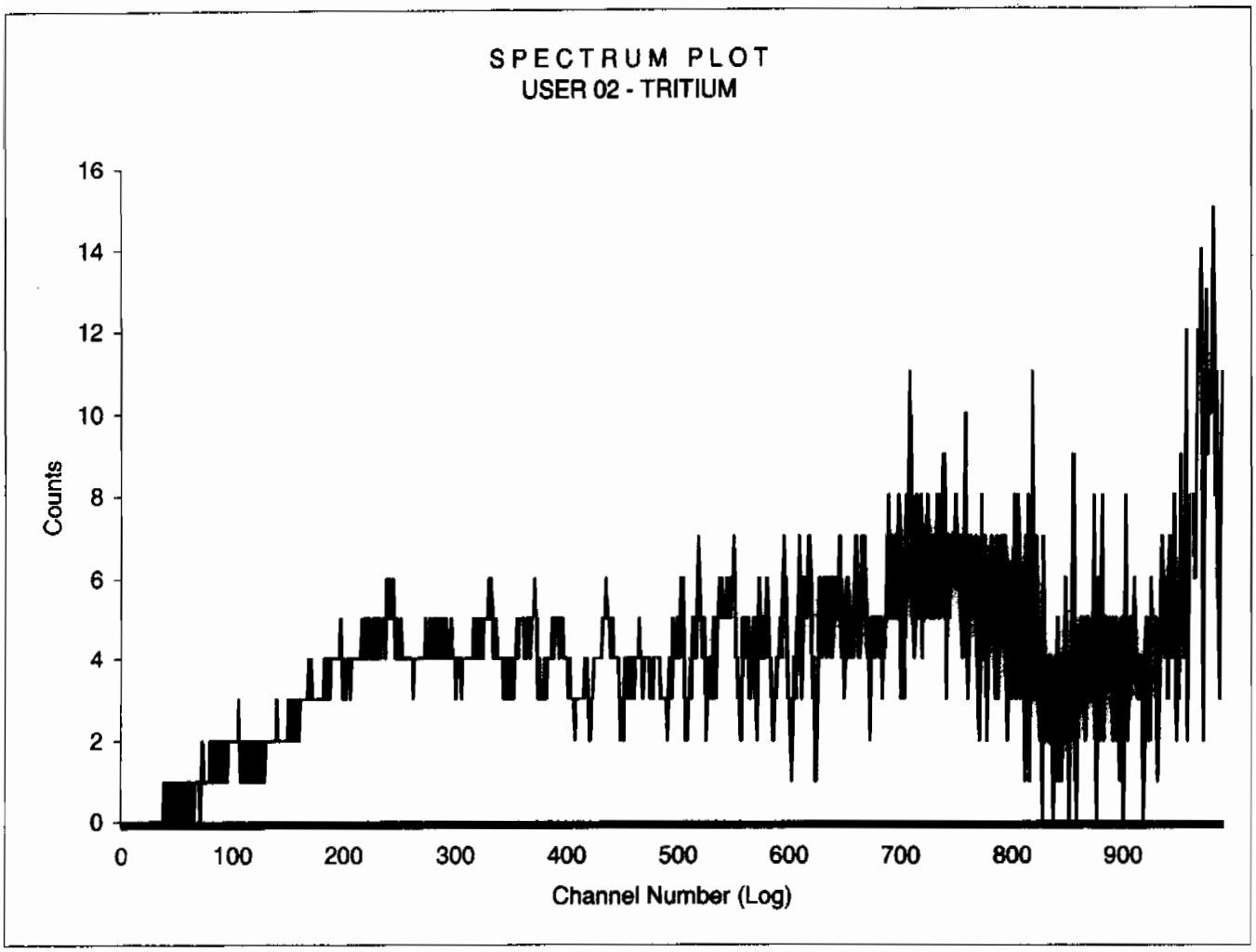

Sample Count Start Time:	15 Jul 2009 00:38:18		
Data Capture Date	15 Jul 2009 02:13:38		
User Filename	S02071506-6A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	6-6	95.00
H#, Total Counts:	133.6	4213	
Start, End, X-Axis:	0	990	Channel Number

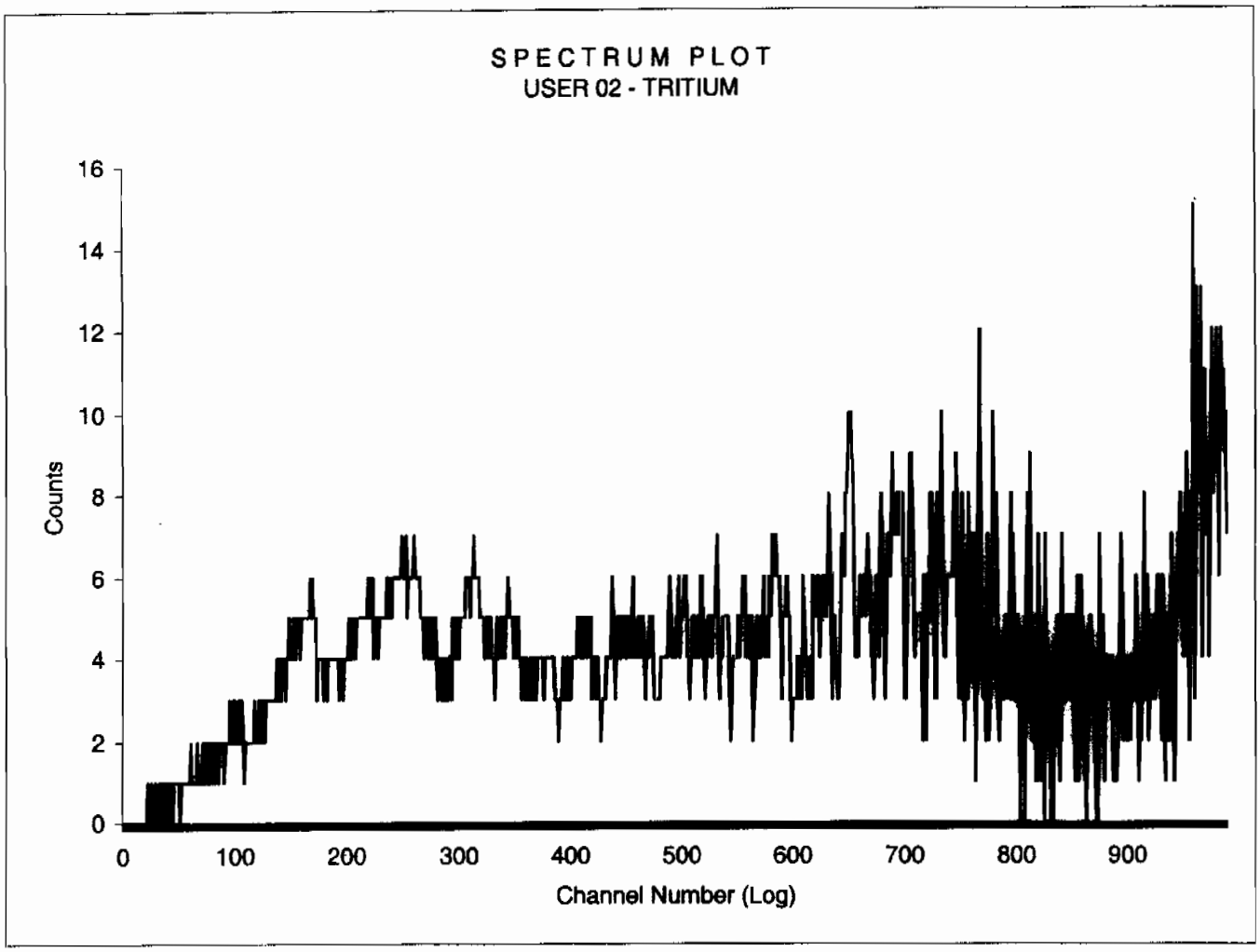

Sample Count Start Time:	15 Jul 2009 02:16:40		
Data Capture Date	15 Jul 2009 03:52:00		
User Filename	S02071506-7A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	6-7	95.00
H#, Total Counts:	136.8	4152	
Start, End, X-Axis:	0	990	Channel Number

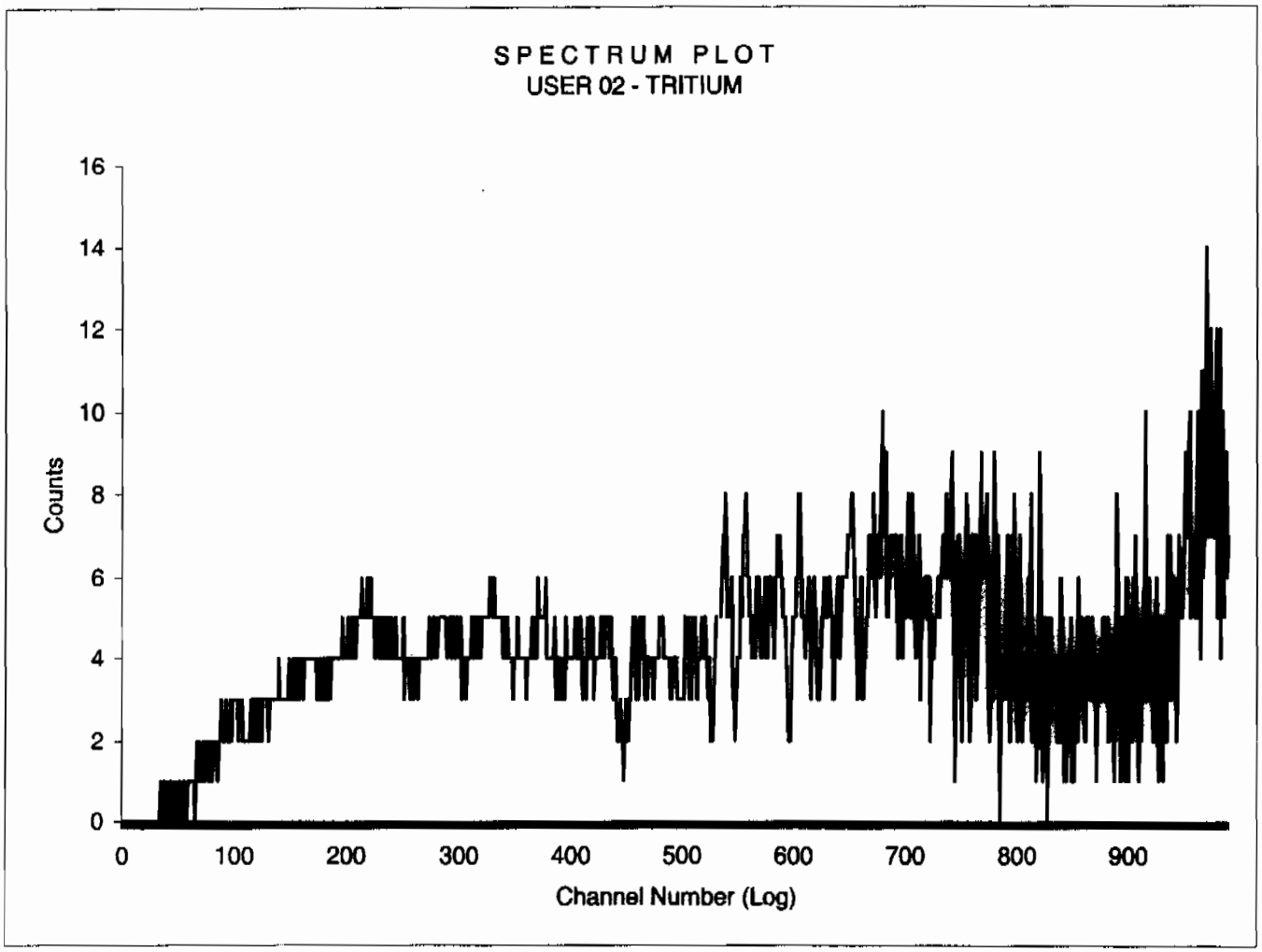

Sample Count Start Time:	15 Jul 2009 05:08:32		
Data Capture Date	15 Jul 2009 06:43:58		
User Filename	S02071541-1A.XLS		
	U02071541-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	41-1	95.00
H#, Total Counts:	138.1	4171	
Start, End, X-Axis:	0	990	Channel Number

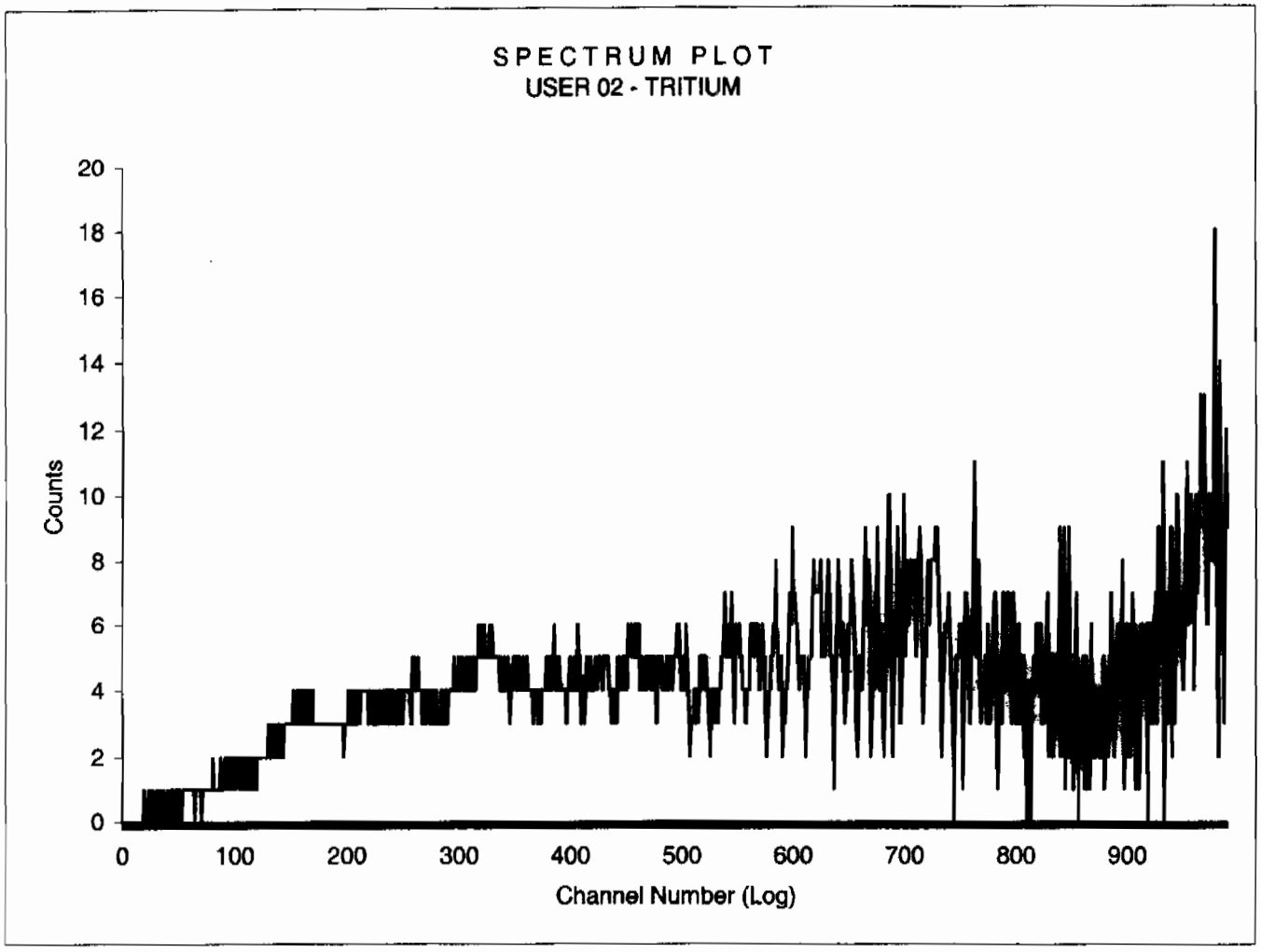

Sample Count Start Time:	15 Jul 2009 07:41:21		
Data Capture Date	15 Jul 2009 08:41:47		
User Filename	S02071541-2B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	41-2	60.00
H#, Total Counts:	133.7	2407	
Start, End, X-Axis:	0	990	Channel Number

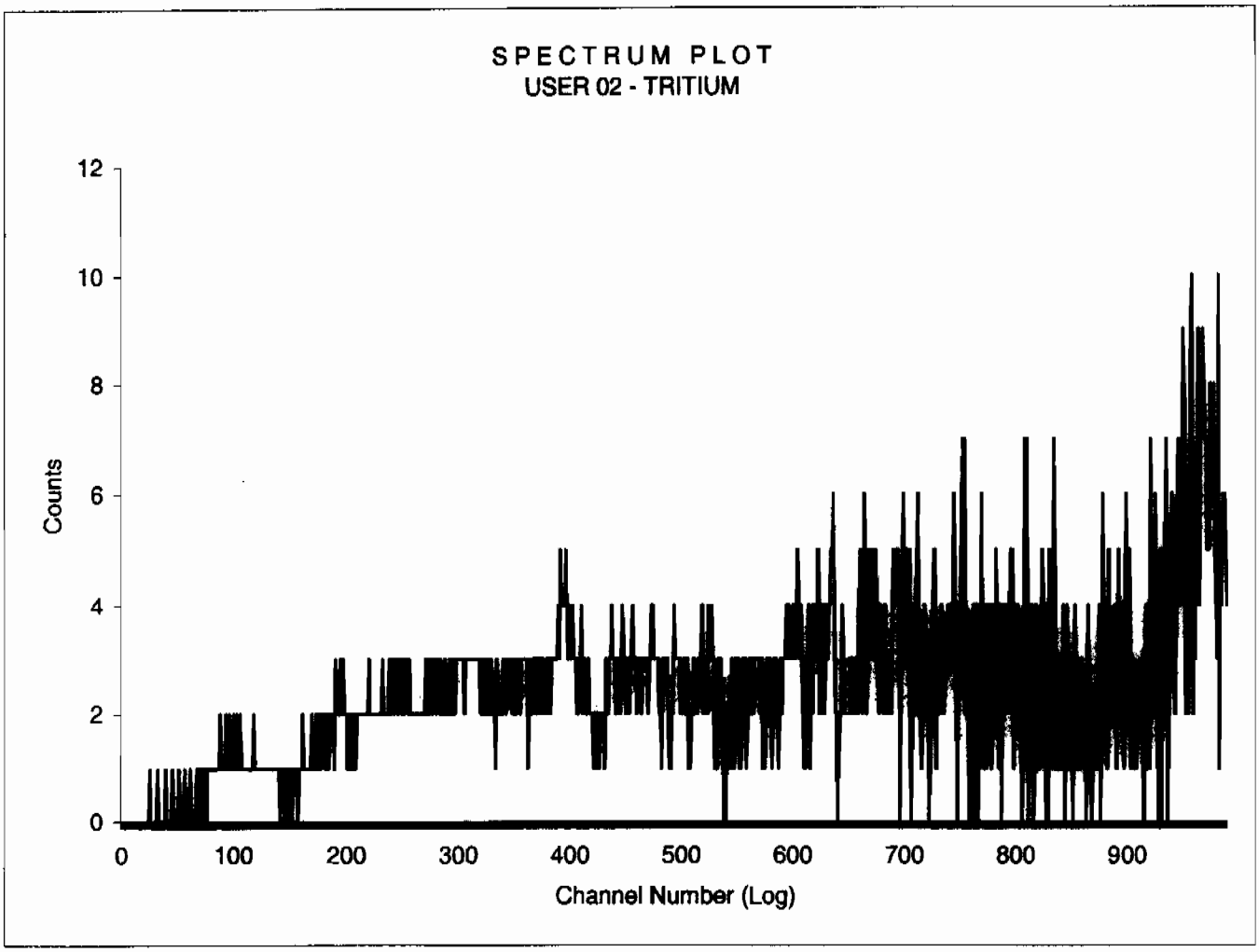

Sample Count Start Time:	15 Jul 2009 08:43:53		
Data Capture Date	15 Jul 2009 09:44:21		
User Filename	S02071541-3B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	41-3	60.00
H#, Total Counts:	128.9	2594	
Start, End, X-Axis:	0	990	Channel Number

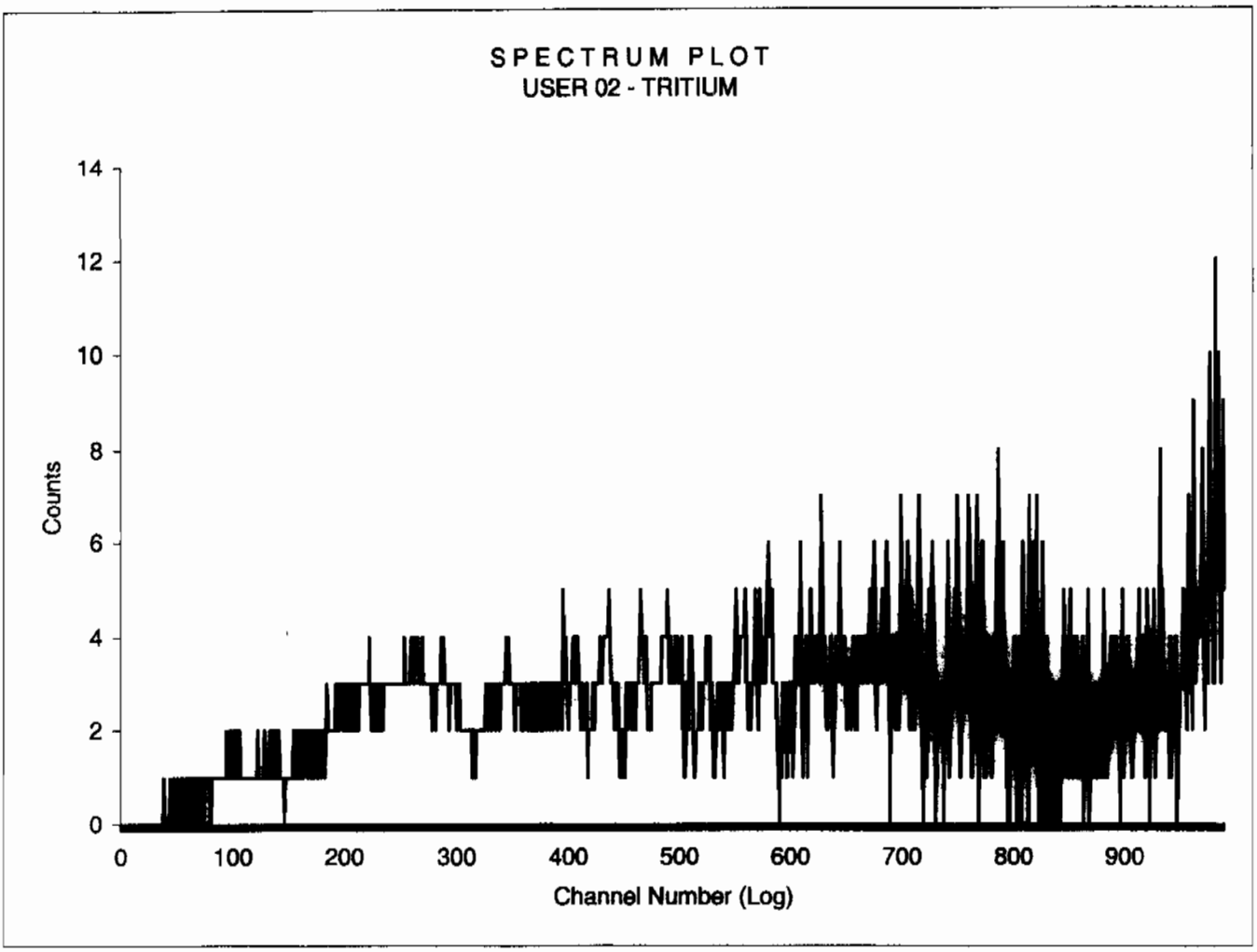

Sample Count Start Time:	15 Jul 2009 09:46:22		
Data Capture Date	15 Jul 2009 10:46:48		
User Filename	S02071541-4B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	41-4	60.00
H#, Total Counts:	128.5	2530	
Start, End, X-Axis:	0	990	Channel Number

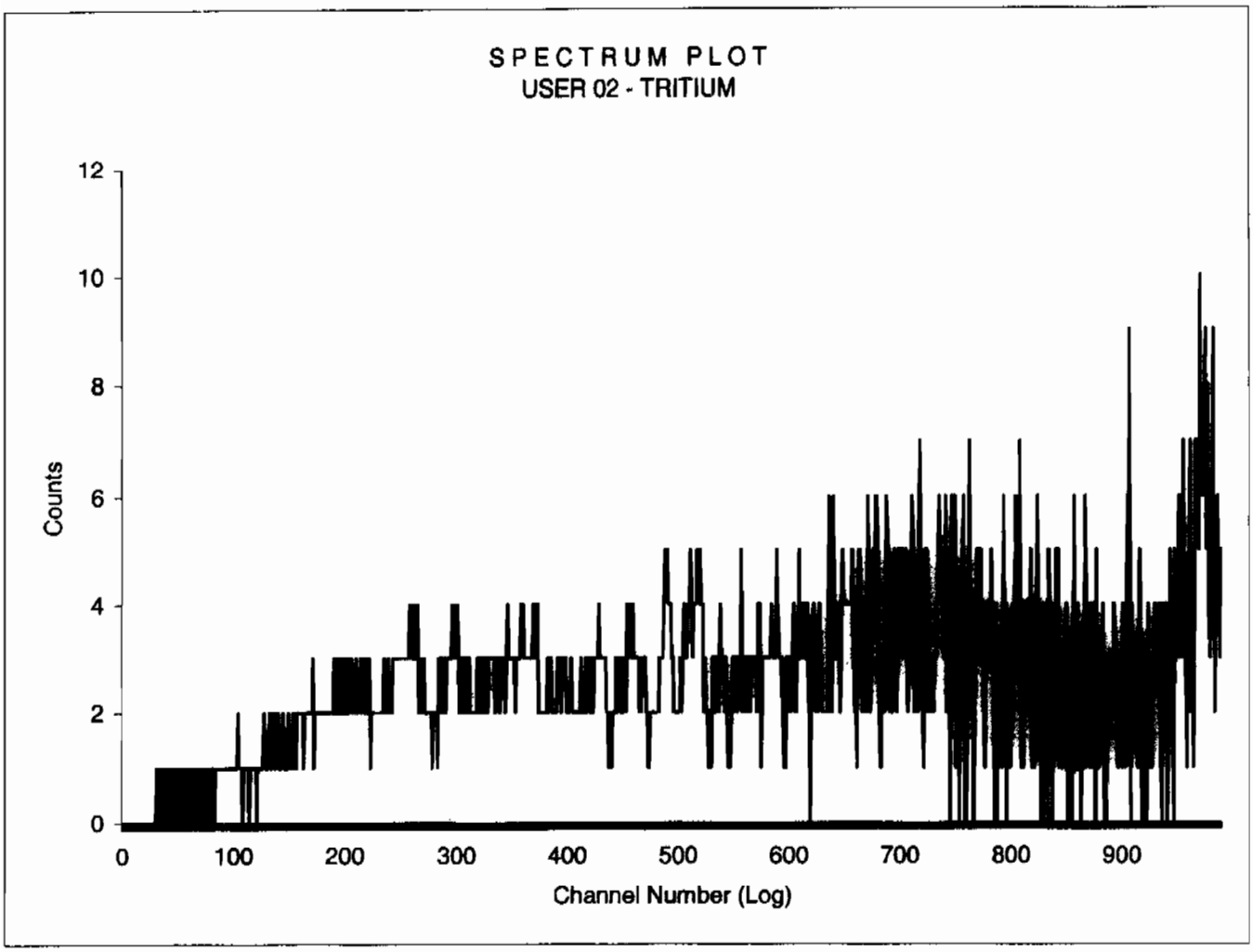

Sample Count Start Time:	15 Jul 2009 10:48:52		
Data Capture Date	15 Jul 2009 11:49:19		
User Filename	S02071541-5B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	41-5	60.00
H#, Total Counts:	129.1	2559	
Start, End, X-Axis:	0	990	Channel Number

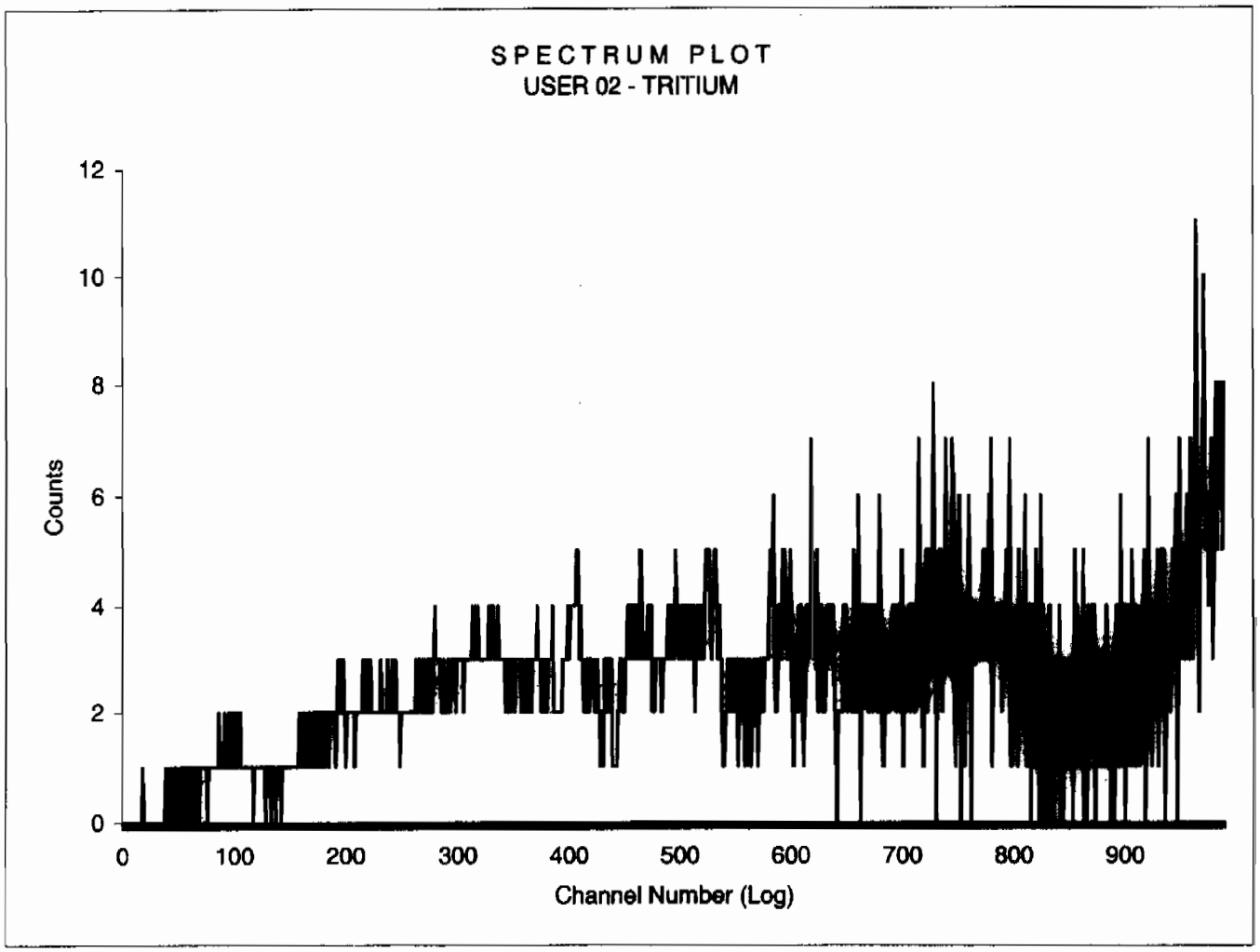

Sample Count Start Time:	15 Jul 2009 11:51:23		
Data Capture Date	15 Jul 2009 12:51:49		
User Filename	S02071541-6B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	41-6	60.00
H#, Total Counts:	130.5	2579	
Start, End, X-Axis:	0	990	Channel Number

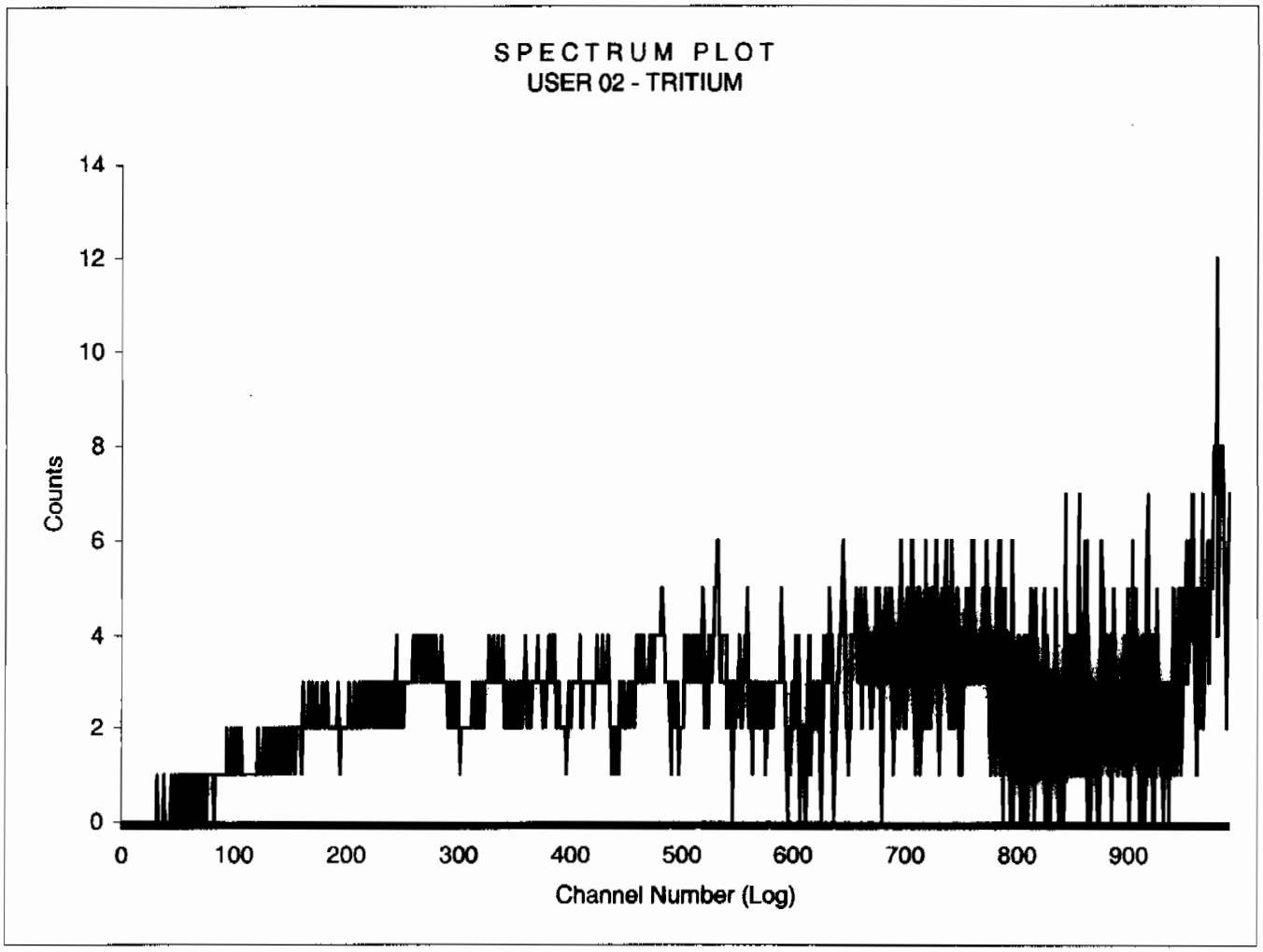

Sample Count Start Time:	15 Jul 2009 12:53:51		
Data Capture Date	15 Jul 2009 13:54:17		
User Filename	S02071541-7B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	41-7	60.00
H#, Total Counts:	128.4	2542	
Start, End, X-Axis:	0	990	Channel Number

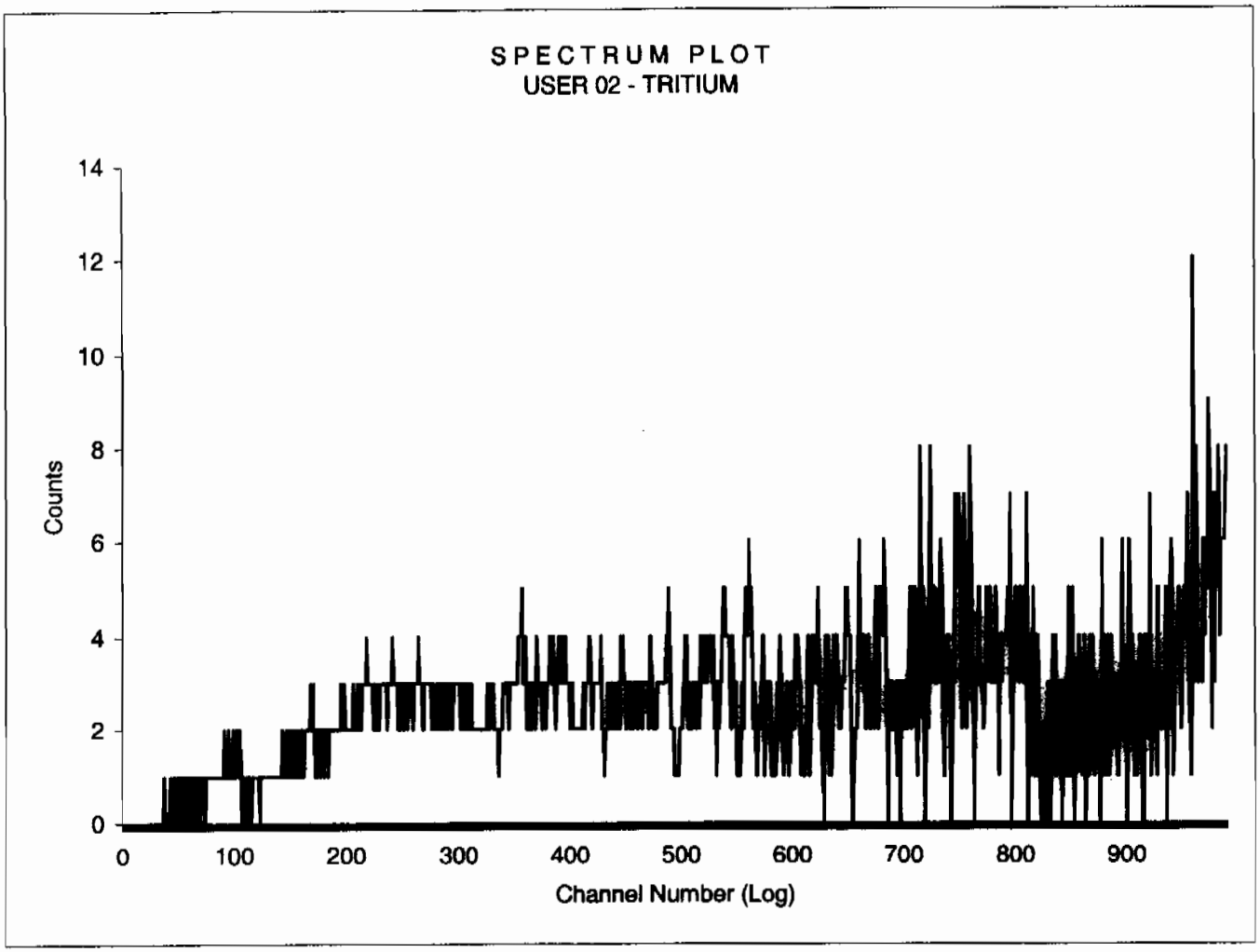

Sample Count Start Time:	15 Jul 2009 13:56:18		
Data Capture Date	15 Jul 2009 14:56:44		
User Filename	S02071541-8B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	41-8	60.00
H#, Total Counts:	128.7	2548	
Start, End, X-Axis:	0	990	Channel Number

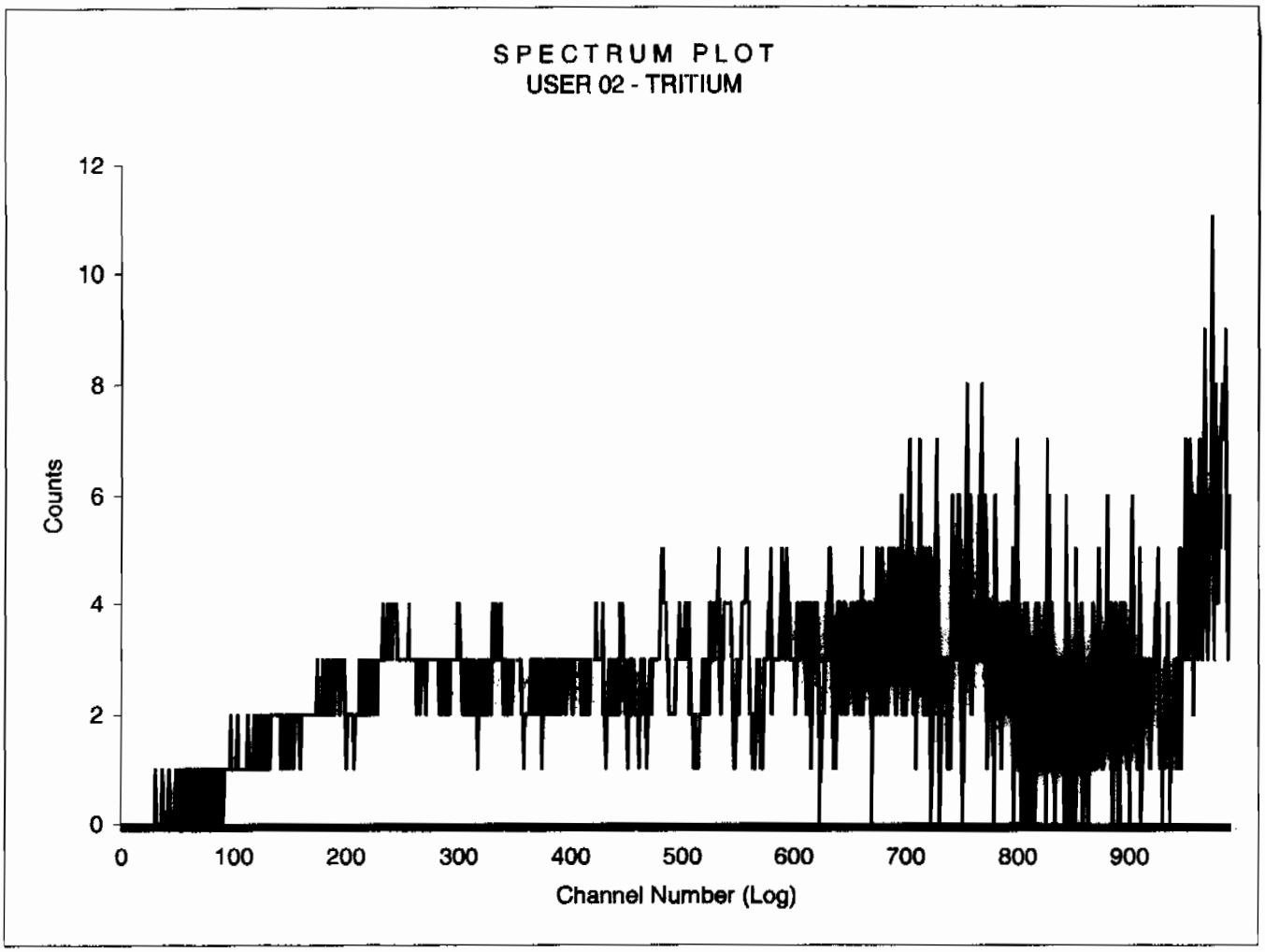

Sample Count Start Time:	15 Jul 2009 14:58:42		
Data Capture Date	15 Jul 2009 15:59:08		
User Filename	S02071541-9B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	41-9	60.00
H#, Total Counts:	129.3	2573	
Start, End, X-Axis:	0	990	Channel Number

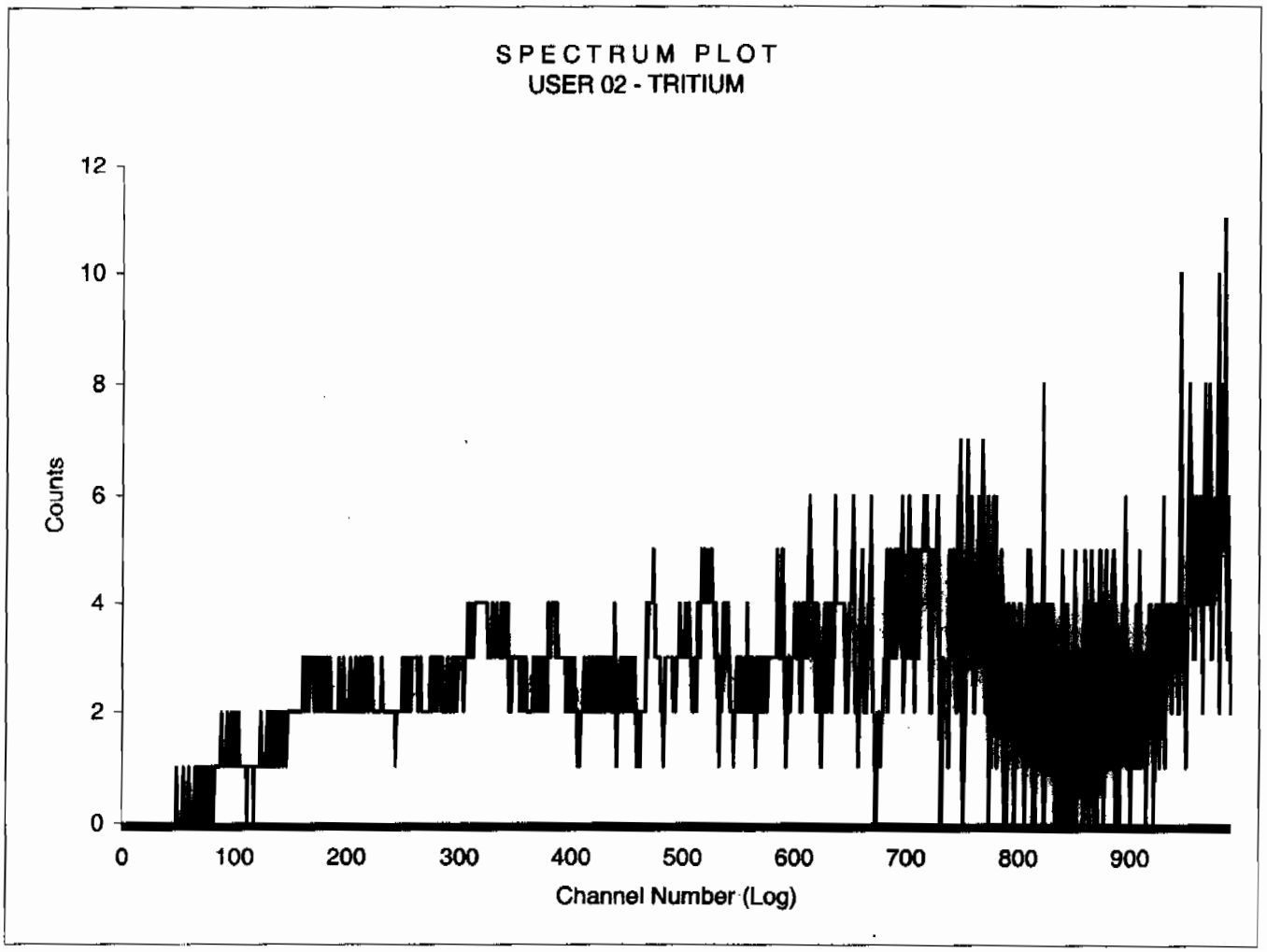

Sample Count Start Time:	15 Jul 2009 16:01:04		
Data Capture Date	15 Jul 2009 17:01:30		
User Filename	S02071541-10B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	41-10	60.00
H#, Total Counts:	128.8	2395	
Start, End, X-Axis:	0	990	Channel Number

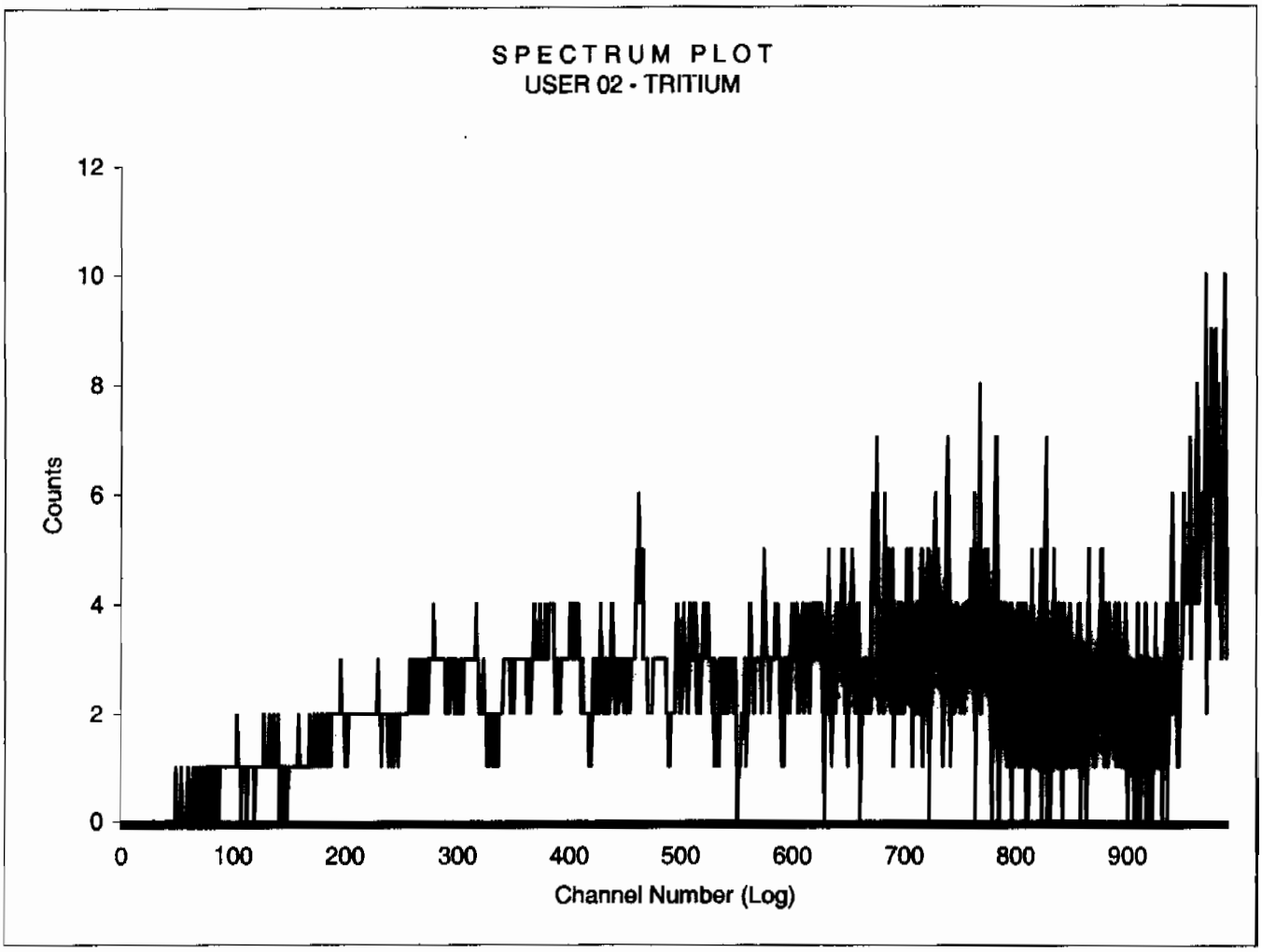

Sample Count Start Time:	15 Jul 2009 17:03:31		
Data Capture Date	15 Jul 2009 18:03:57		
User Filename	S02071541-11B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	41-11	60.00
H#, Total Counts:	132.3	2870	
Start, End, X-Axis:	0	990	Channel Number

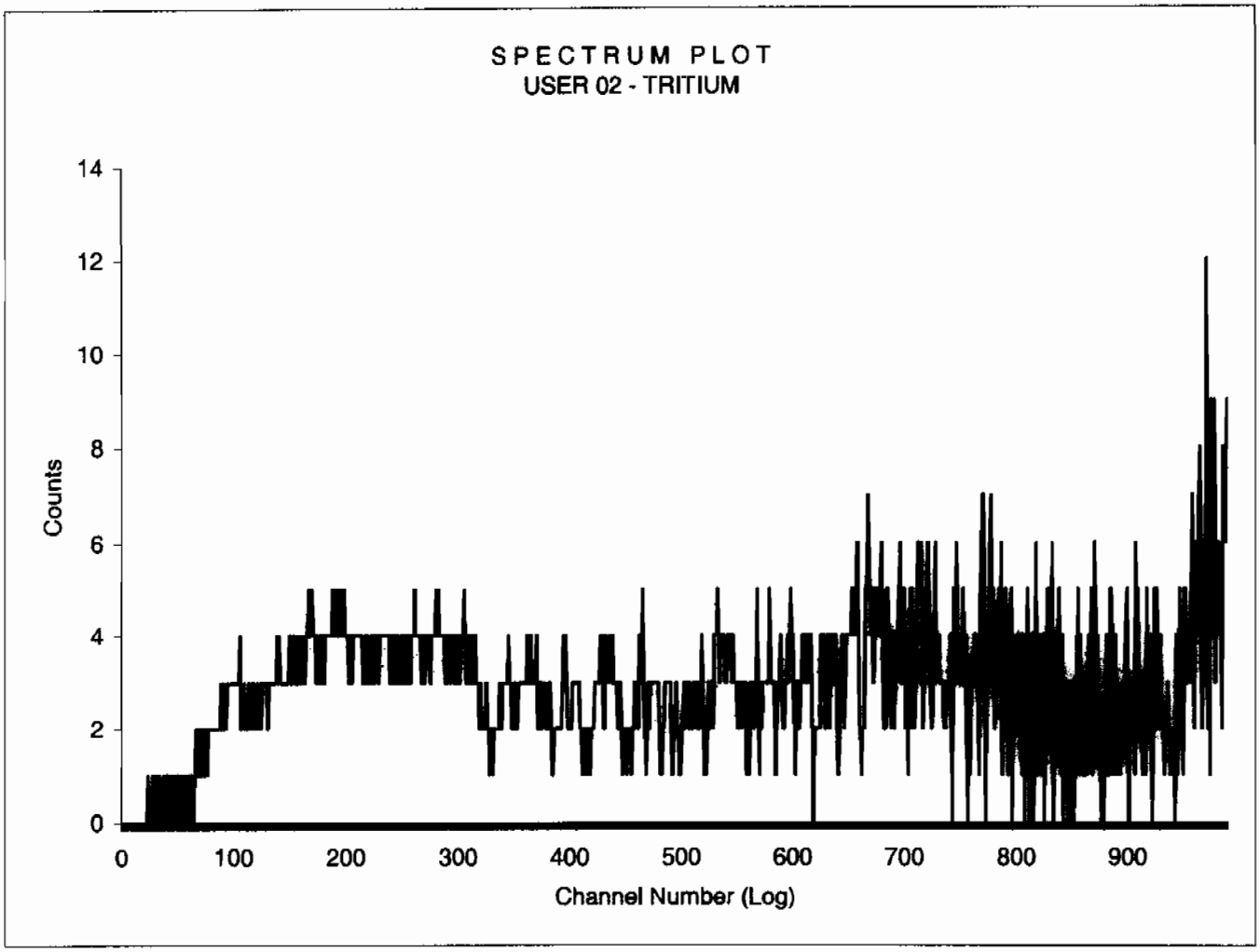

Sample Count Start Time:	15 Jul 2009 18:05:02		
Data Capture Date	15 Jul 2009 18:20:26		
User Filename	S03071529-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	29-1	15.00
H#, Total Counts:	130.3	1167	
Start, End, X-Axis:	0	990	Channel Number

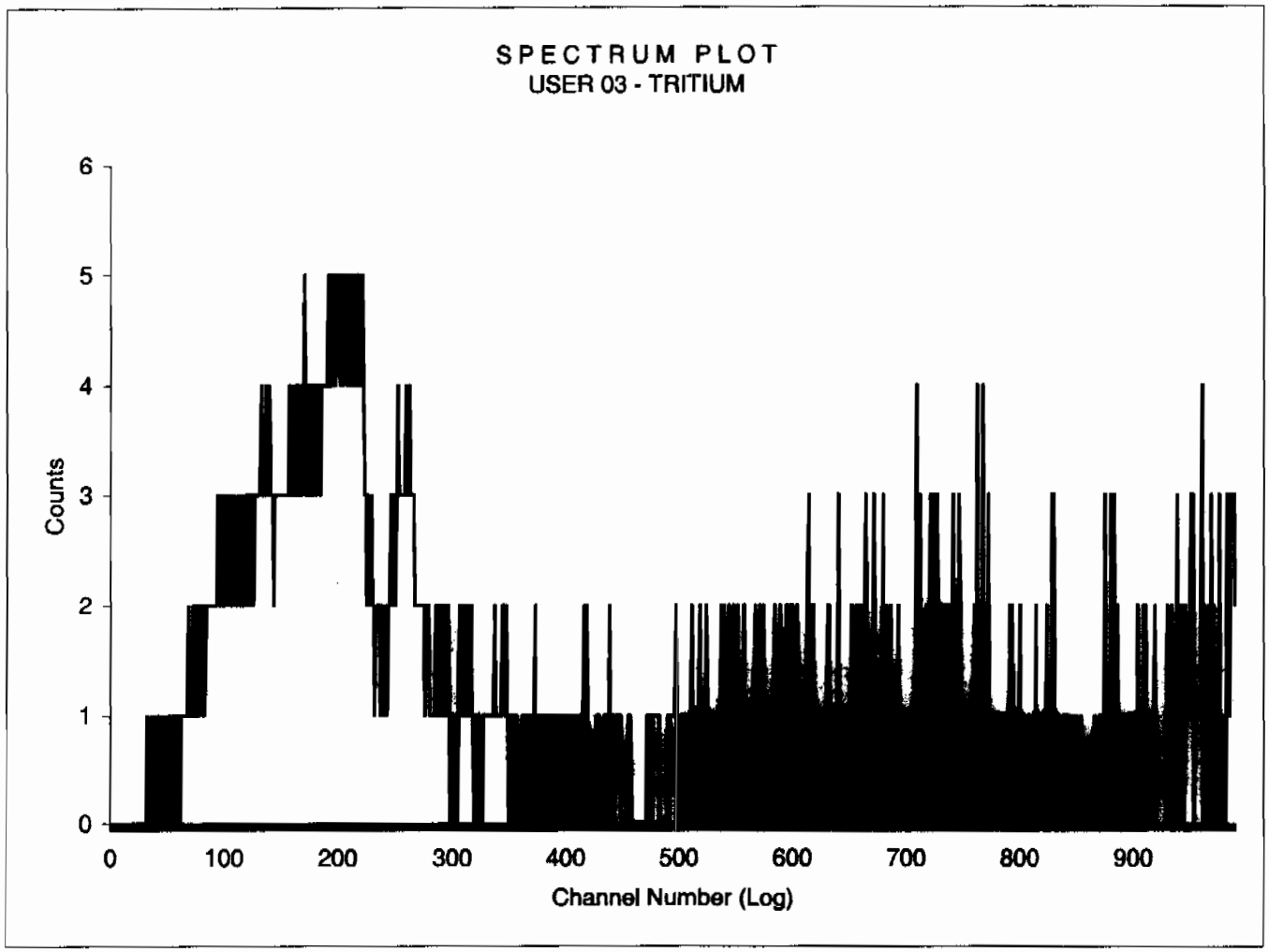

BACKGROUND AND EFFICIENCY DATA

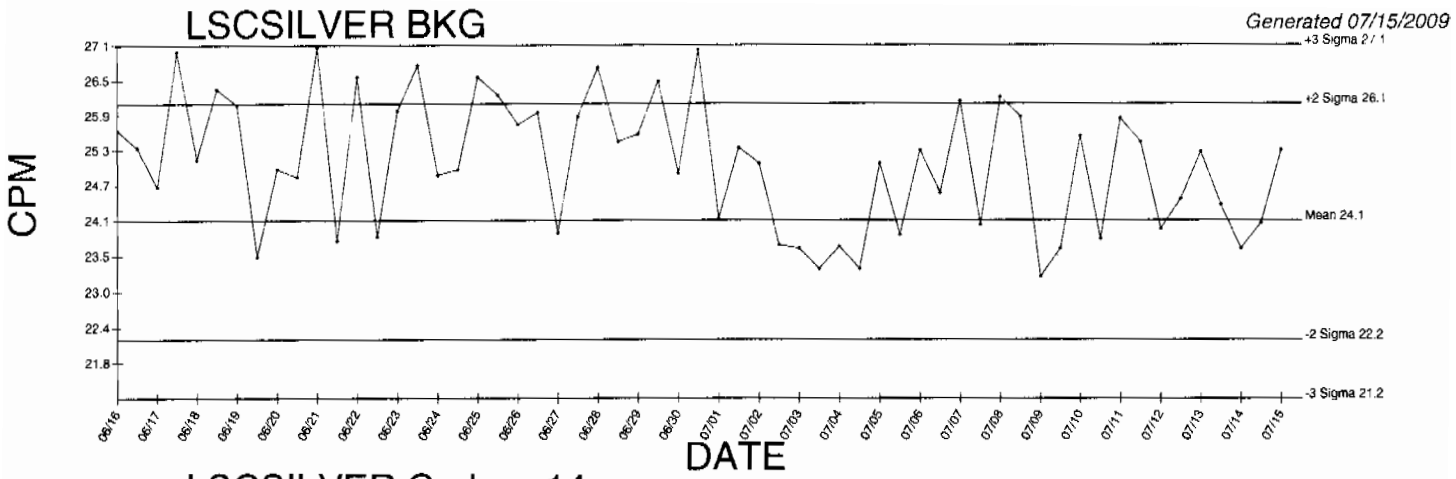

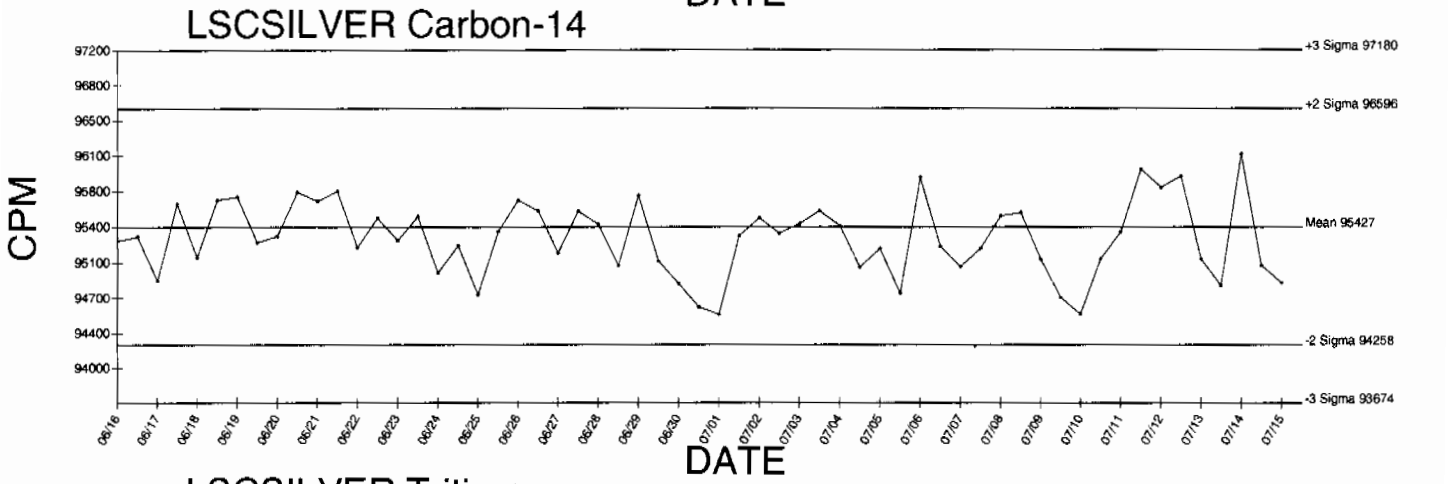

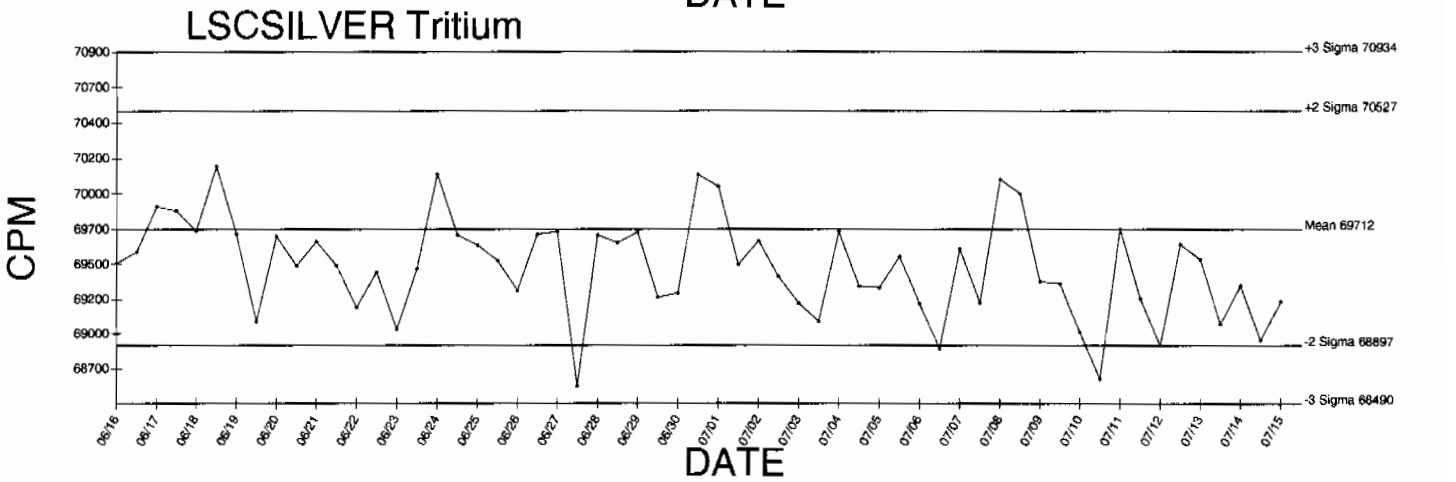

● Denotes Outlier

QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:23:48 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.237773 through 0.257773

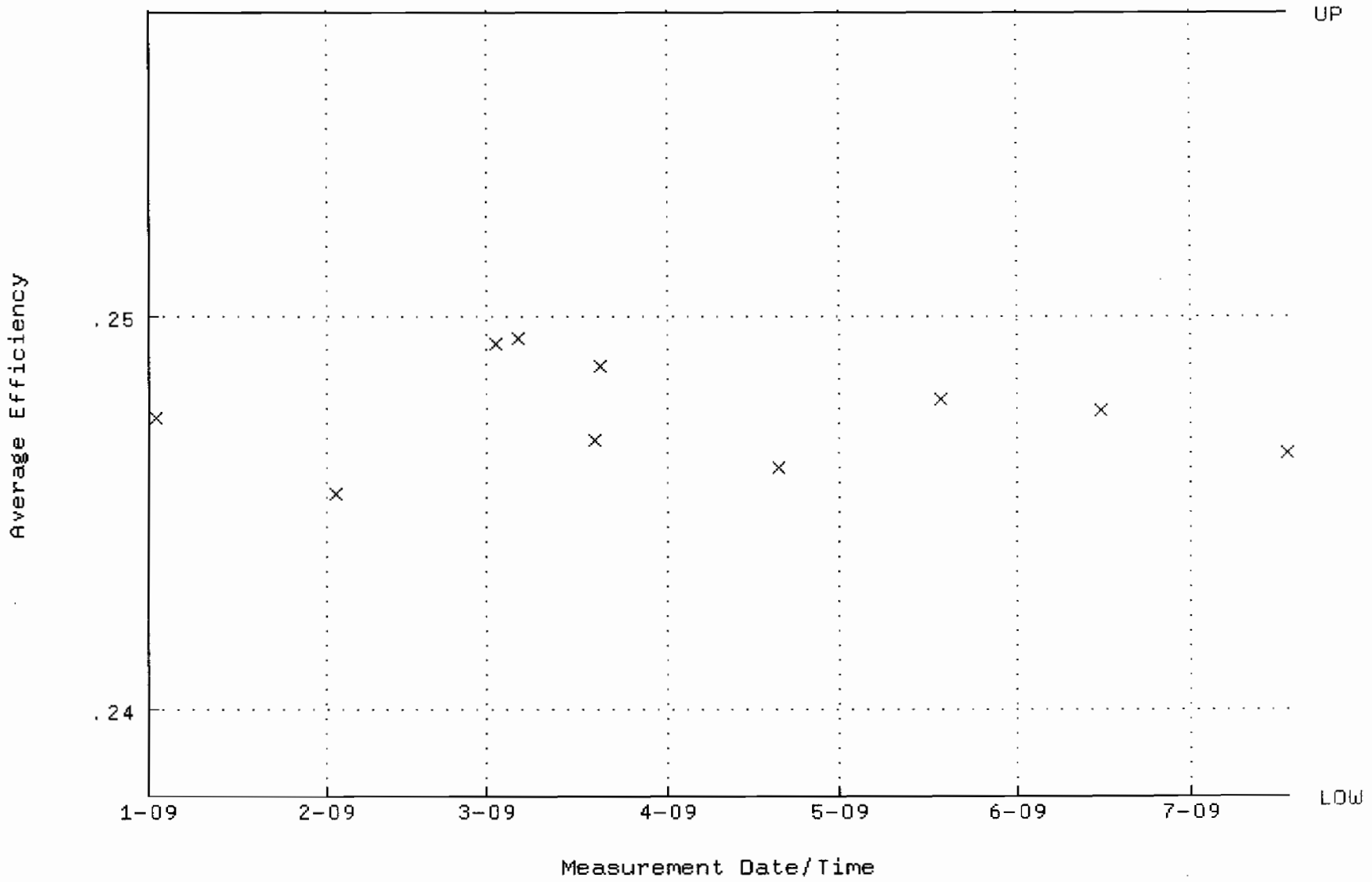

QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:23:48 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 90.4503 through 99.9713

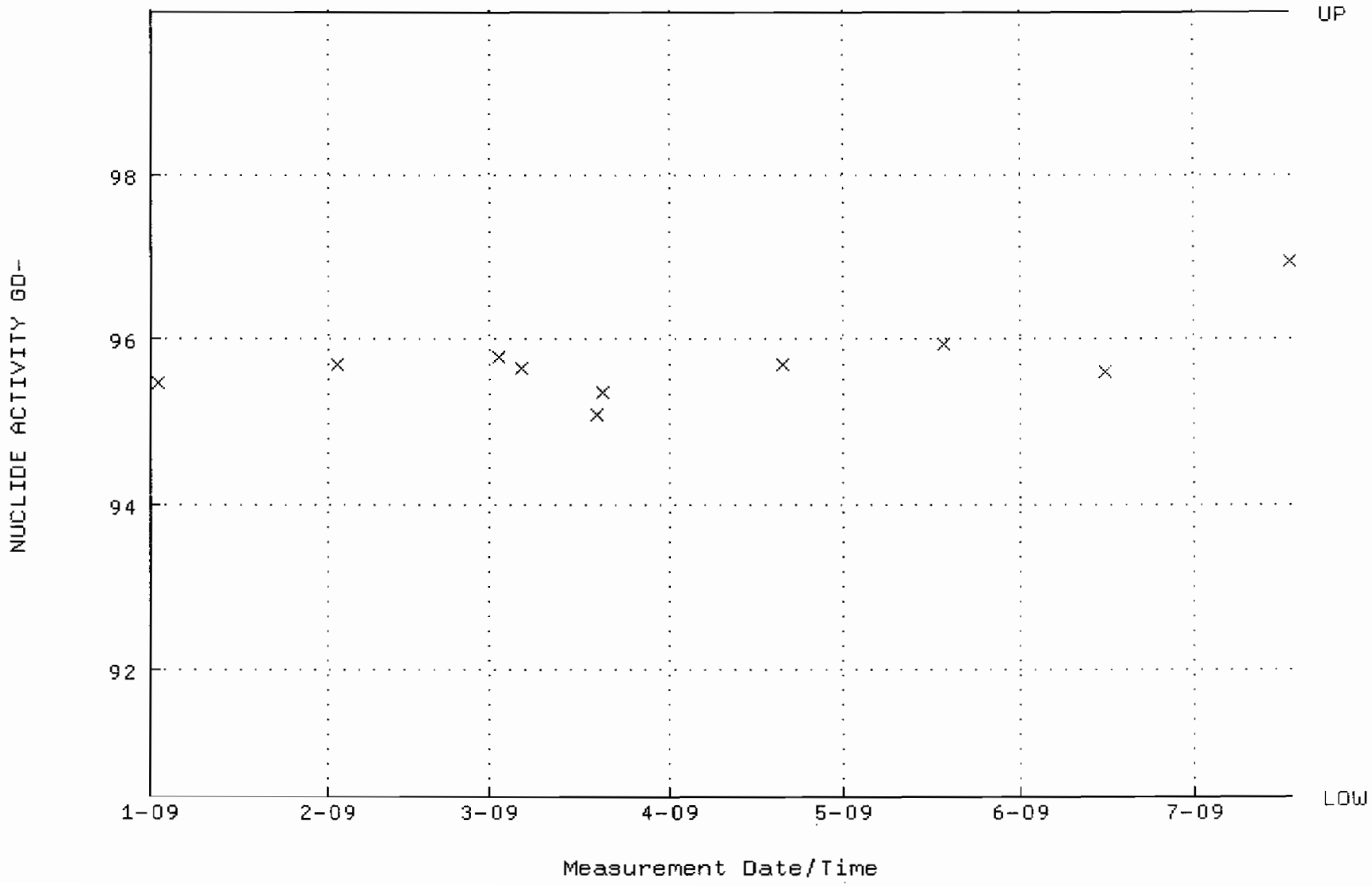

QA filename : DKA100:[ENV_ALPHA.QA.B]B127.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:22:48 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

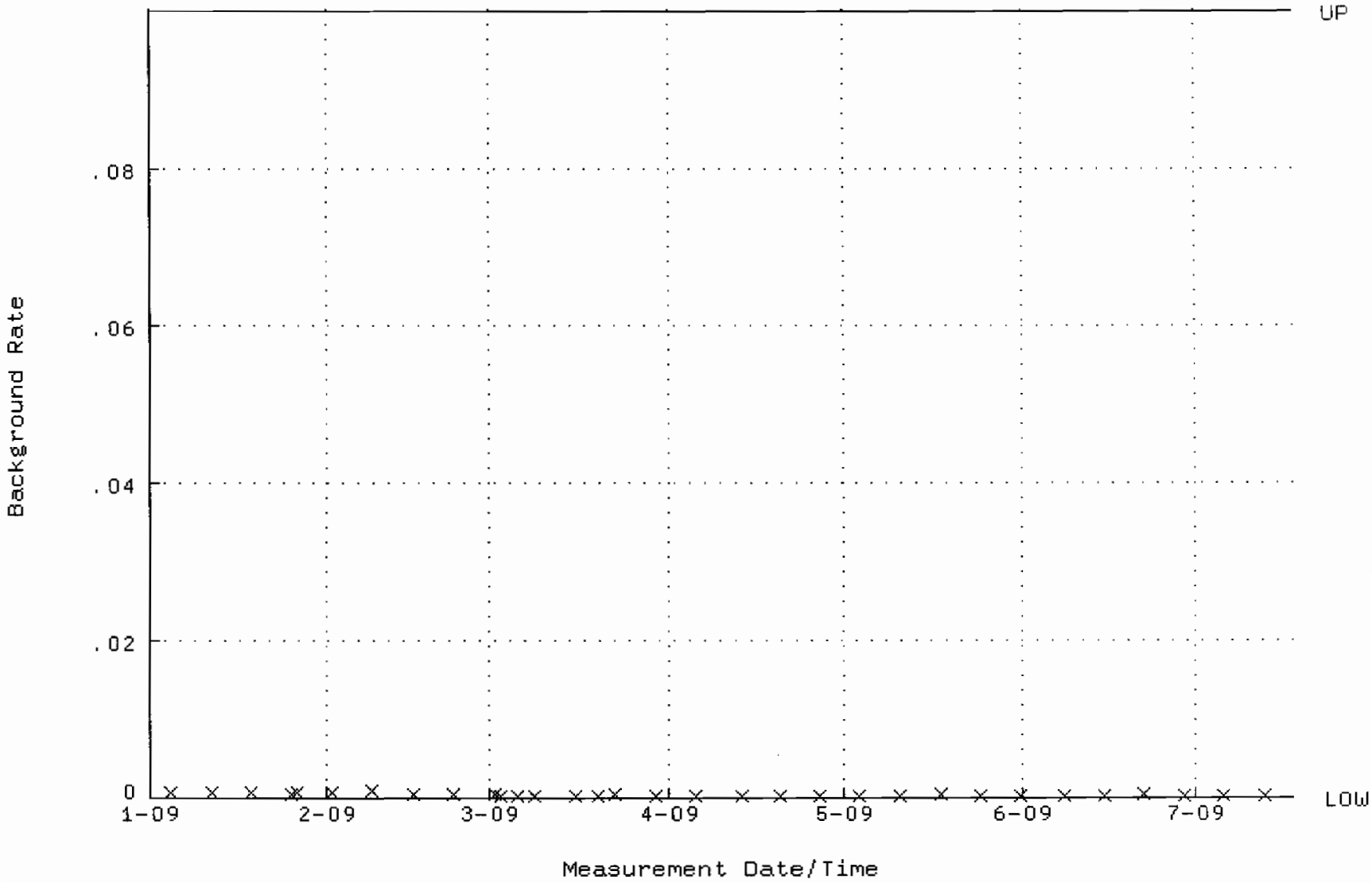

QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:23:59 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.256741 through 0.276741

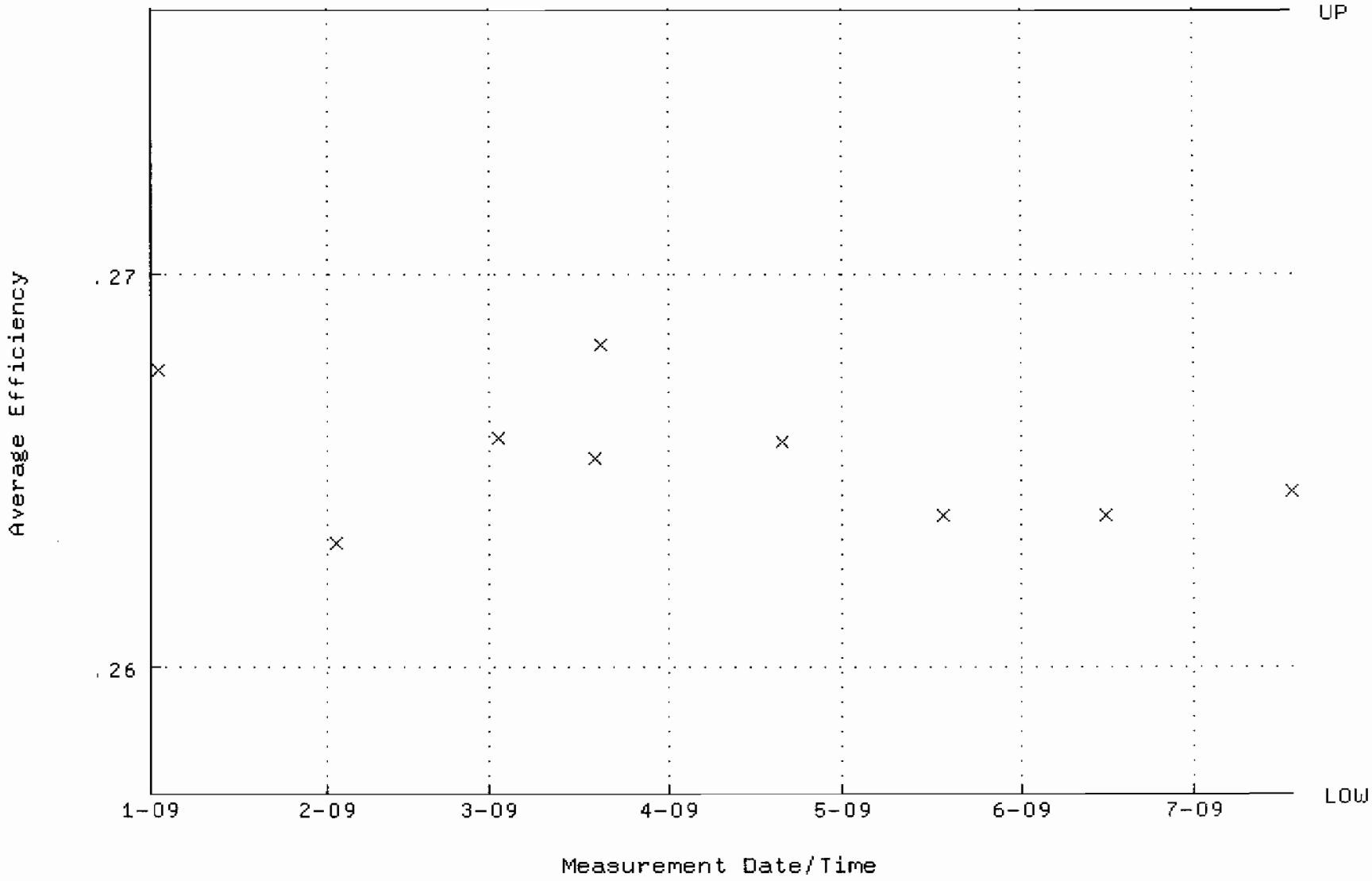

QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:23:59 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 86.3646 through 95.4556

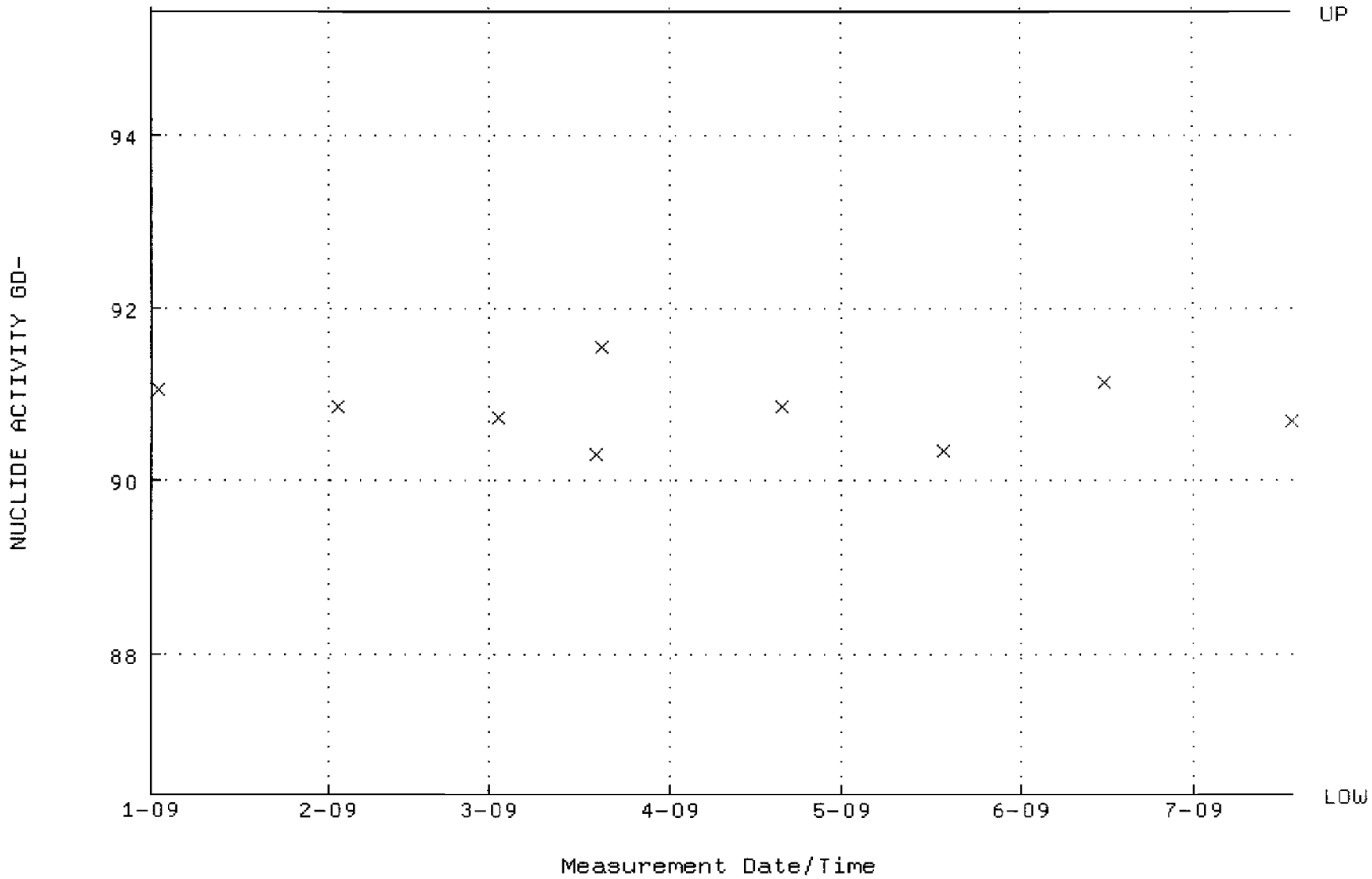

QA filename : DKA100:[ENV_ALPHA.QA.B]B129.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:22:57 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

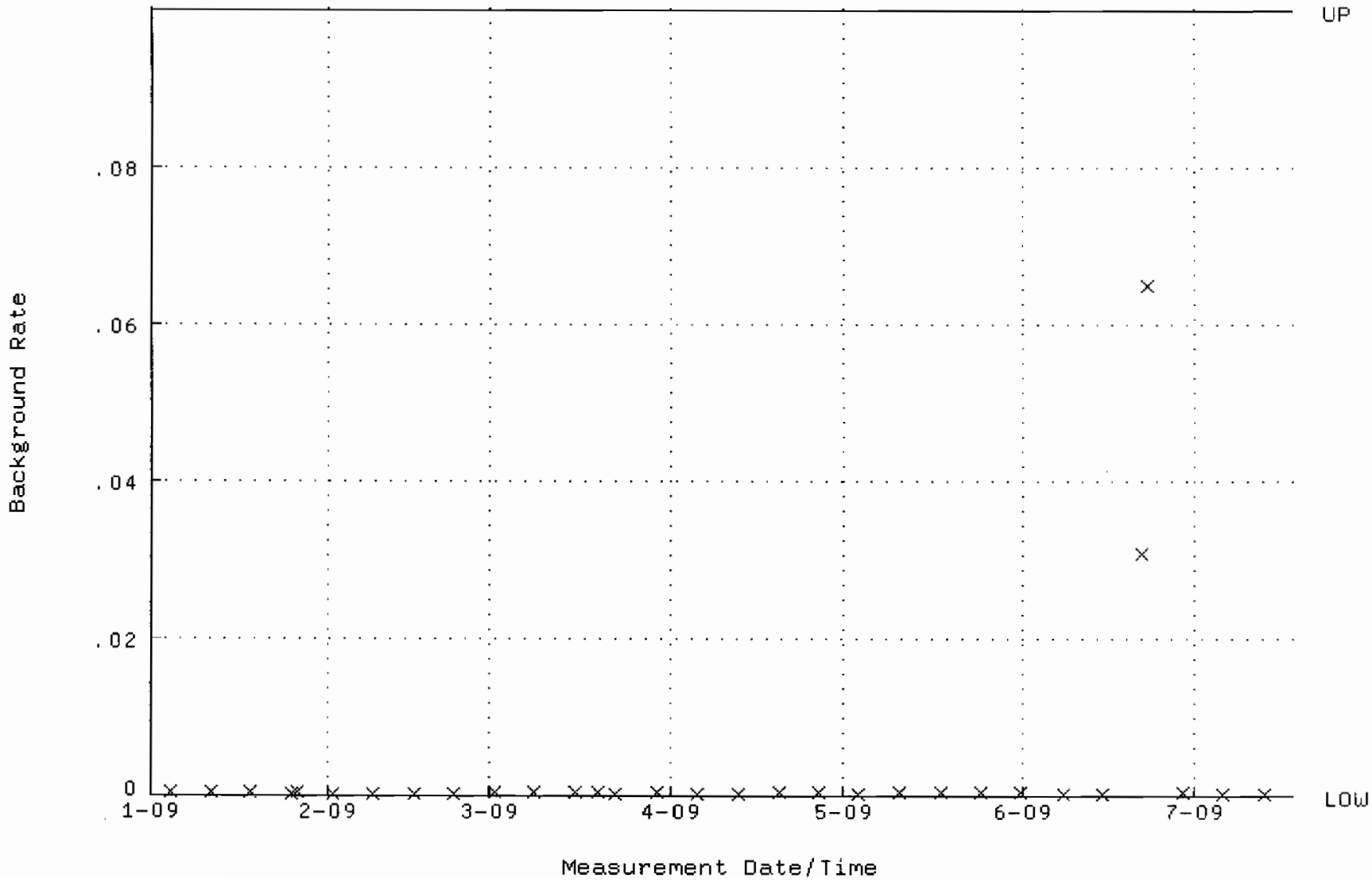

QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:04 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.239131 through 0.259131

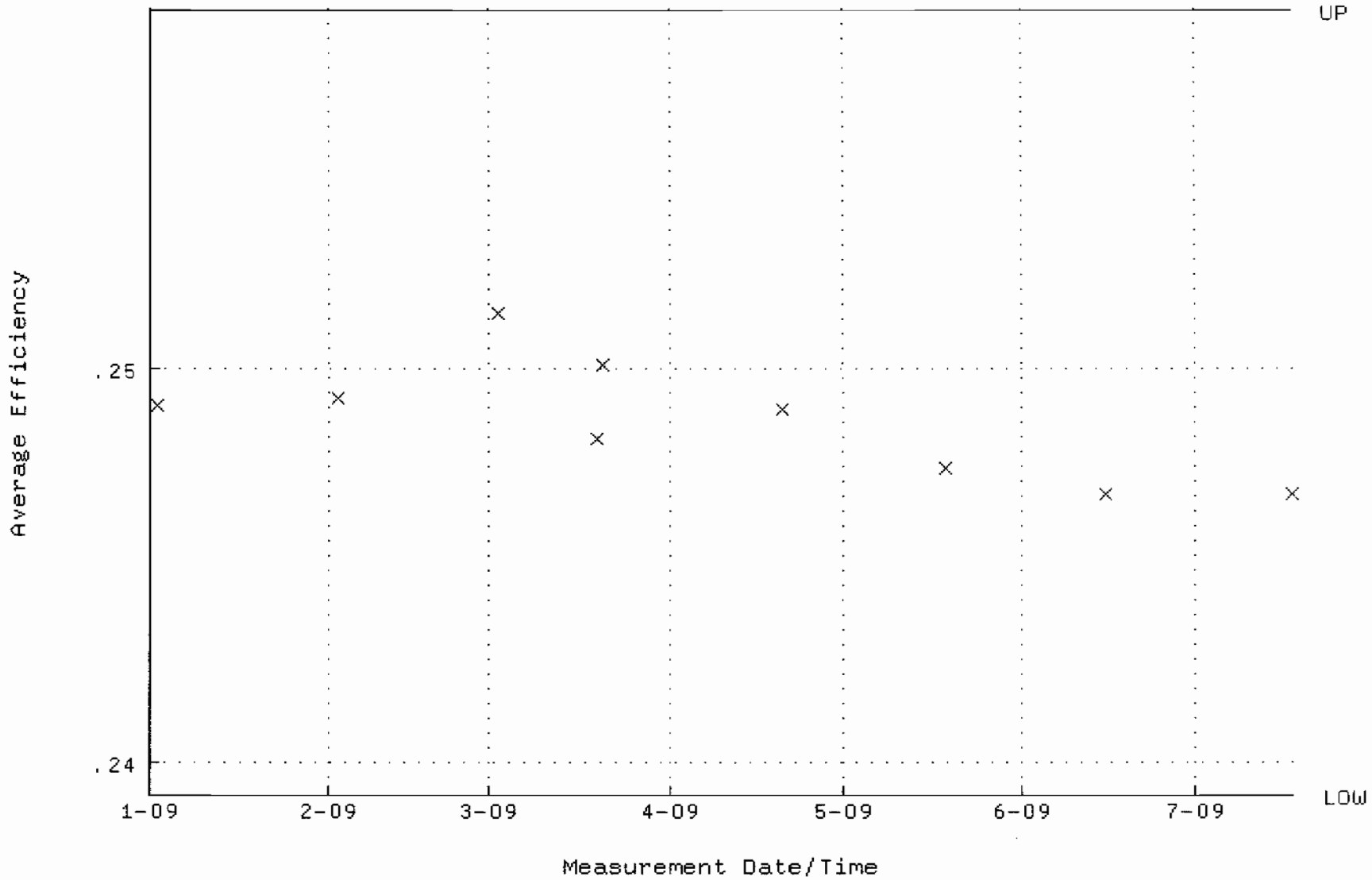

QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:04 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 88.1614 through 97.4416

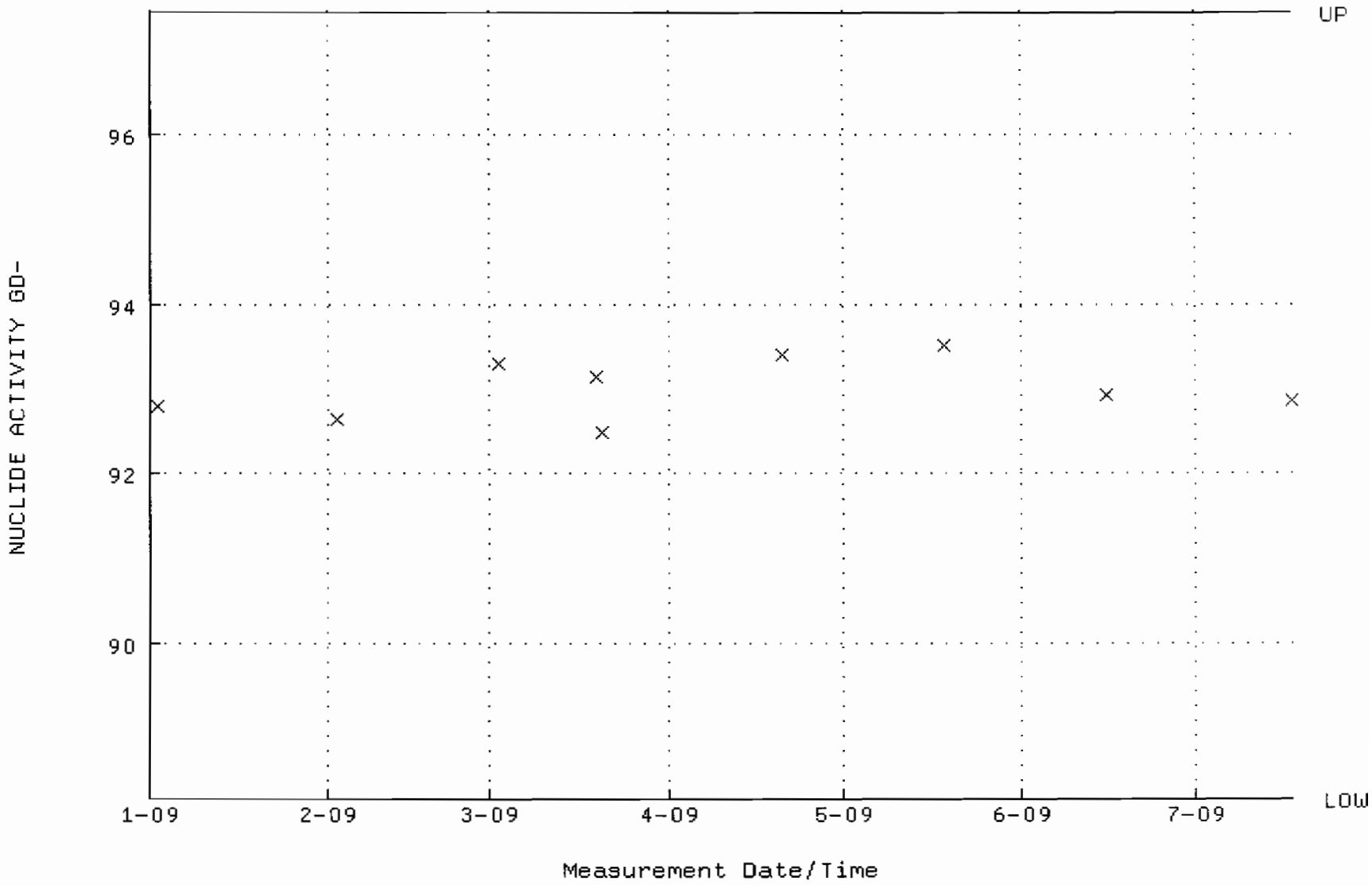

QA filename : DKA100:[ENV_ALPHA.QA.B]B130.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:01 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

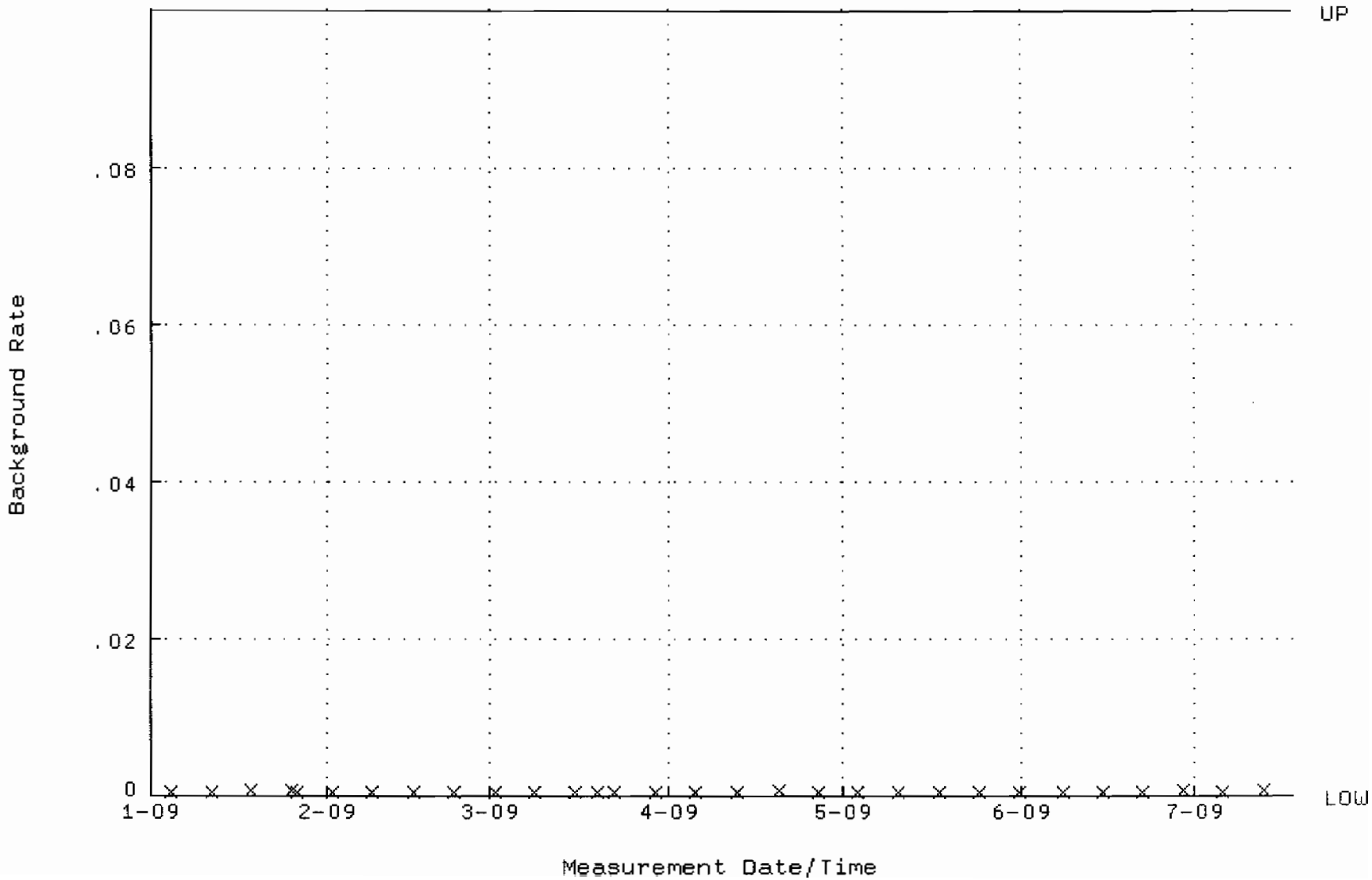

QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:28 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.244305 through 0.264305

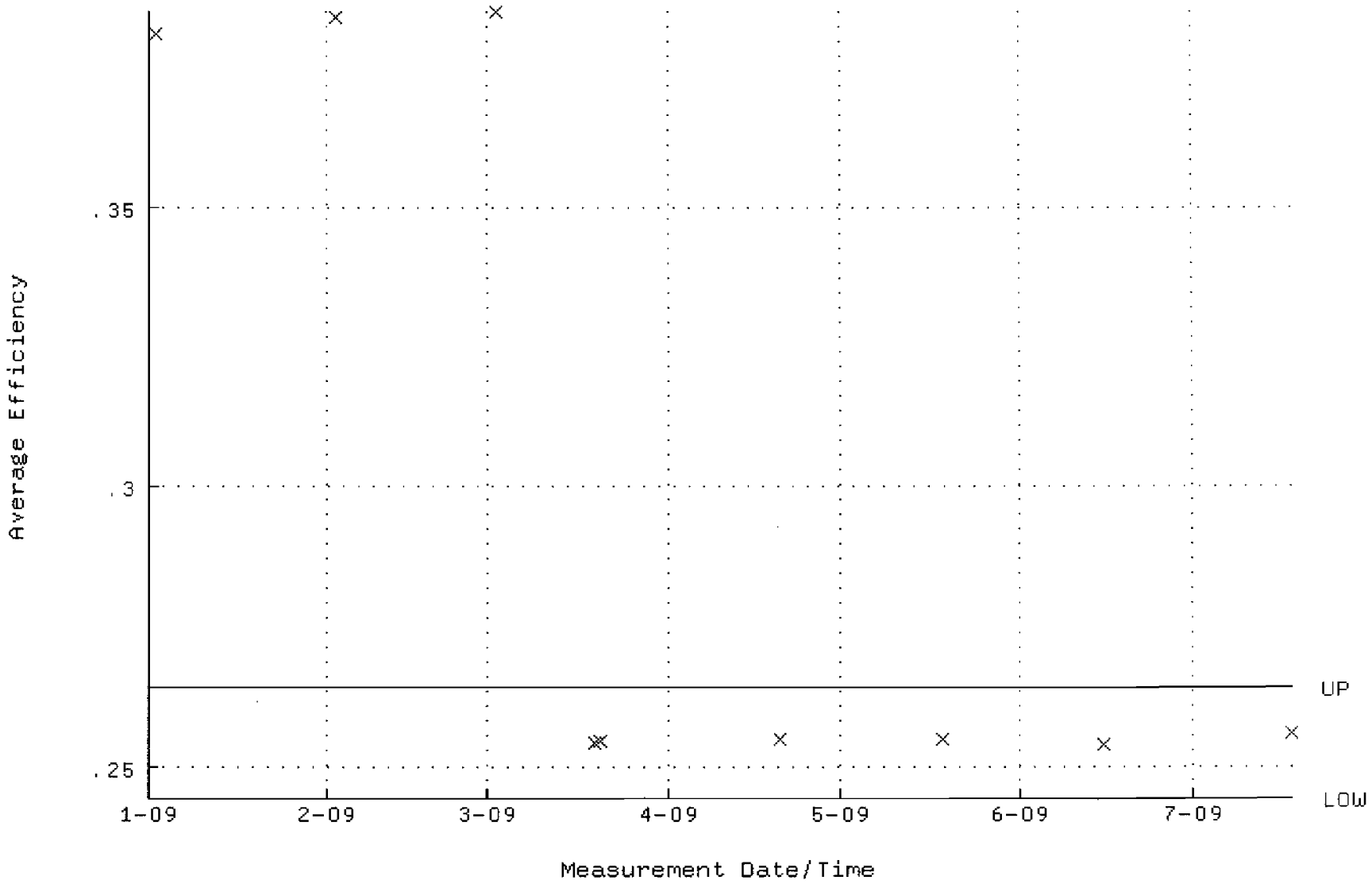

QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:28 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 87.1482 through 96.3217

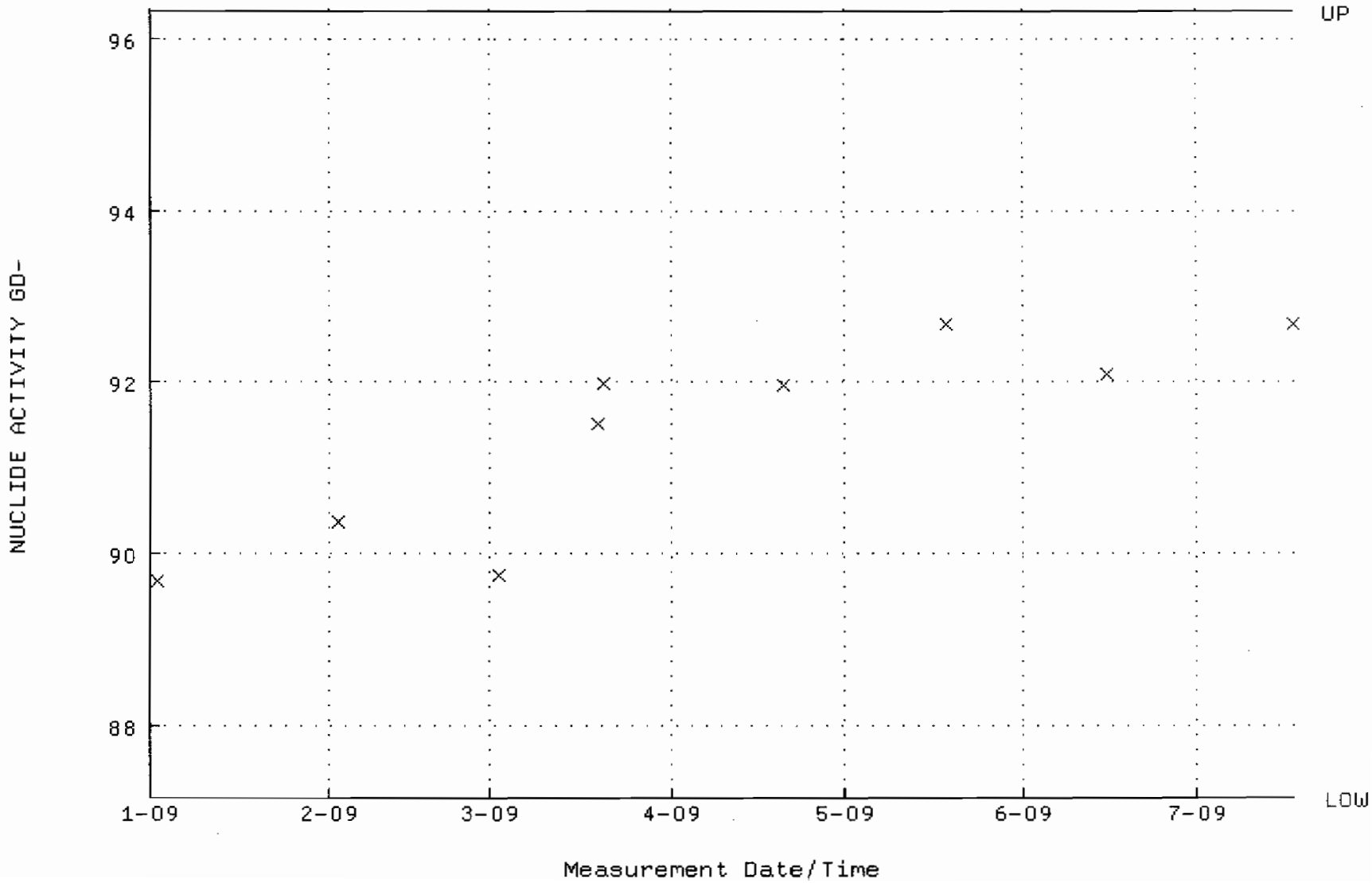

QA filename : DKA100:[ENV_ALPHA.QA.B]B135.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:22 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

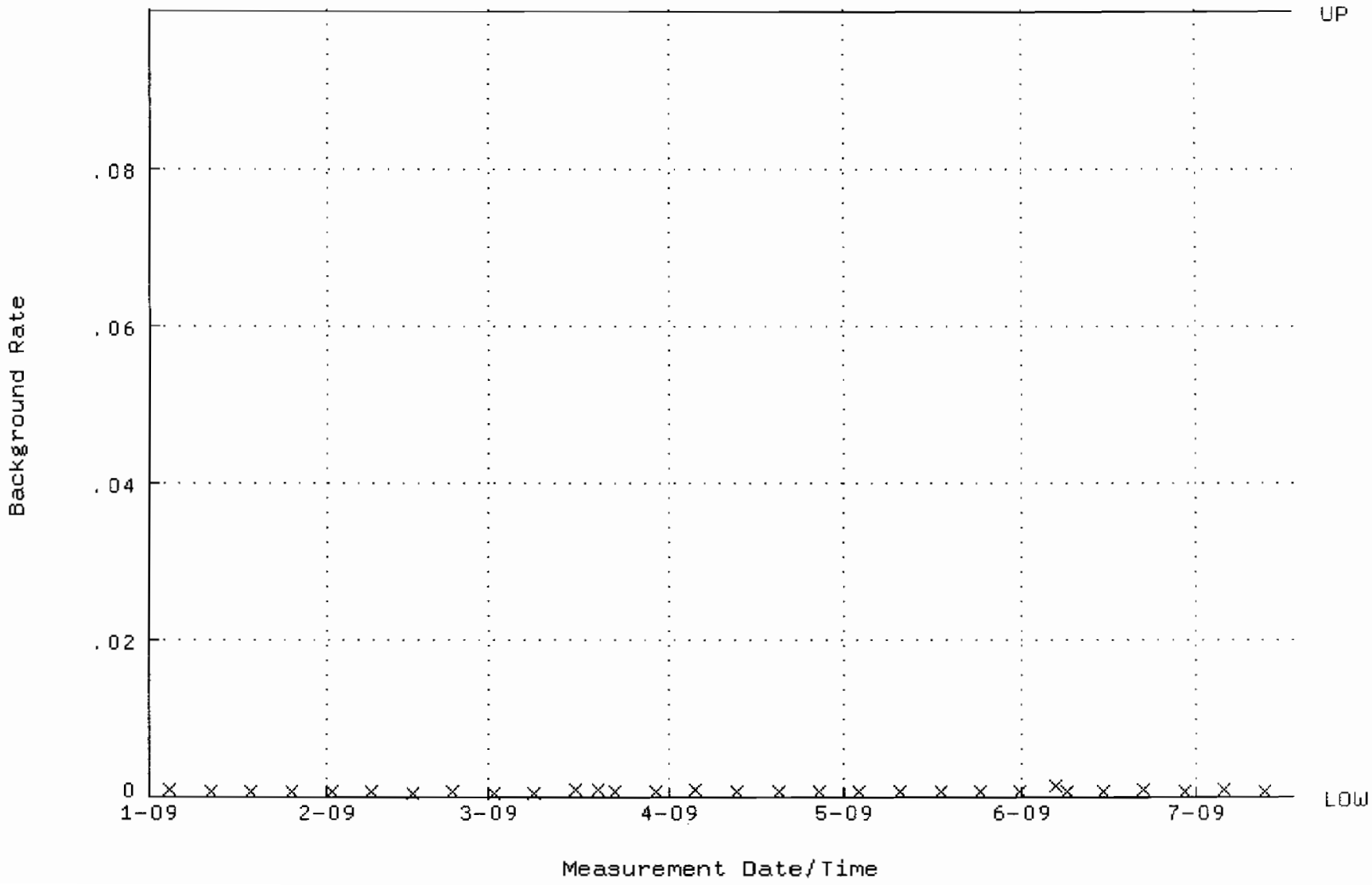

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:11 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.237963 through 0.257963

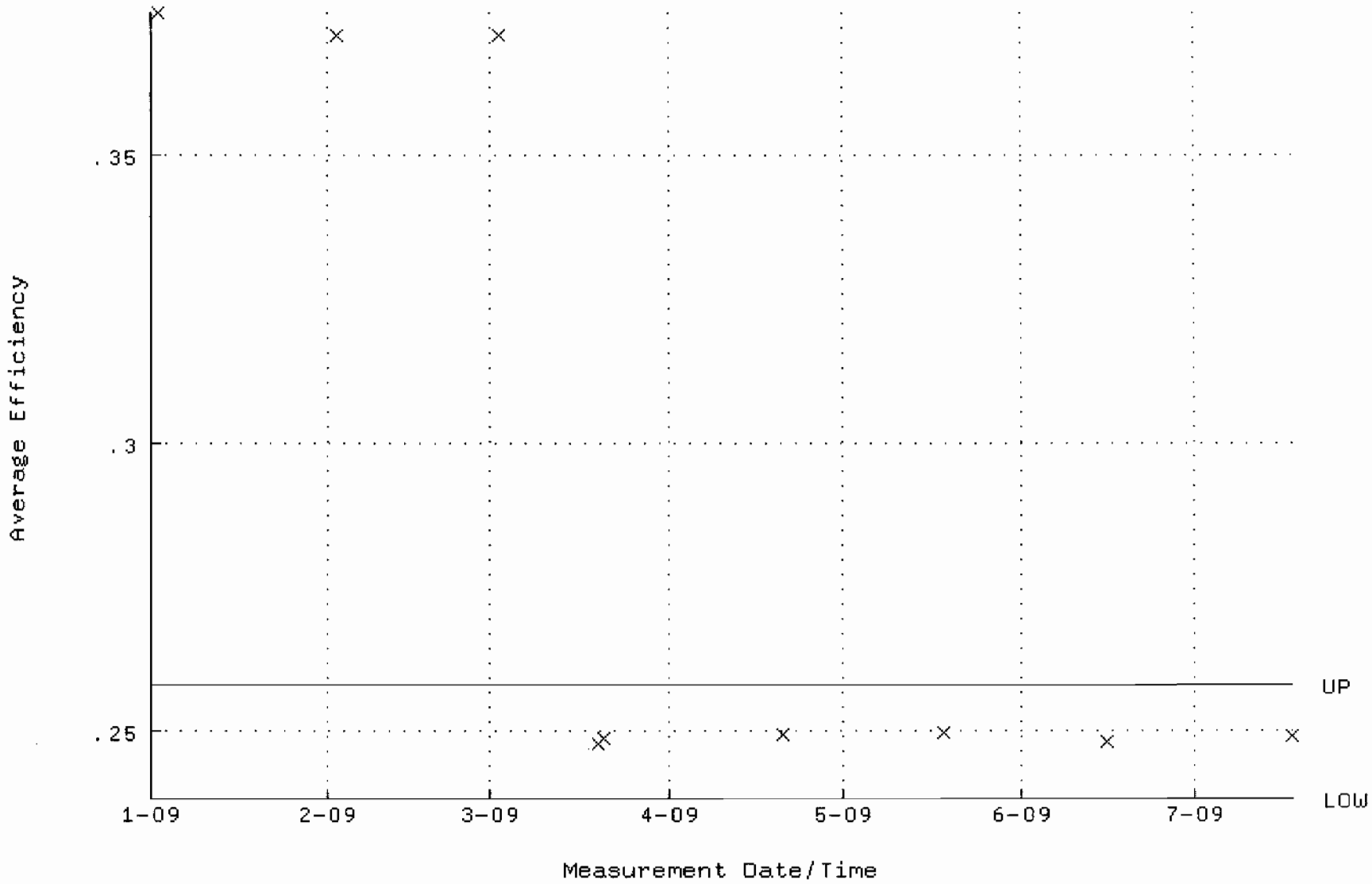

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:11 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 84.6507 through 93.5613

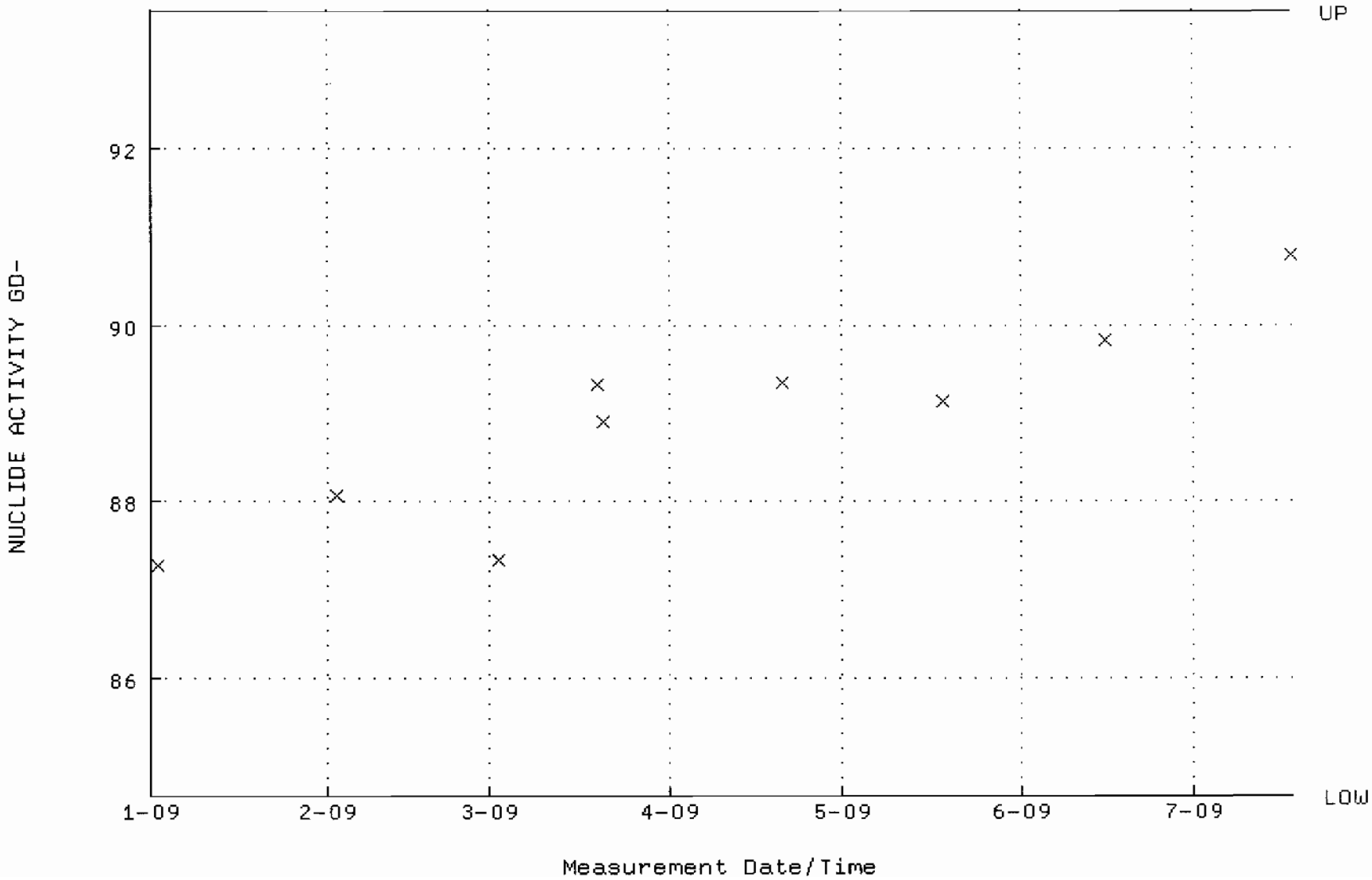

QA filename : DKA100:[ENV_ALPHA.QA.B]B144.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:00 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

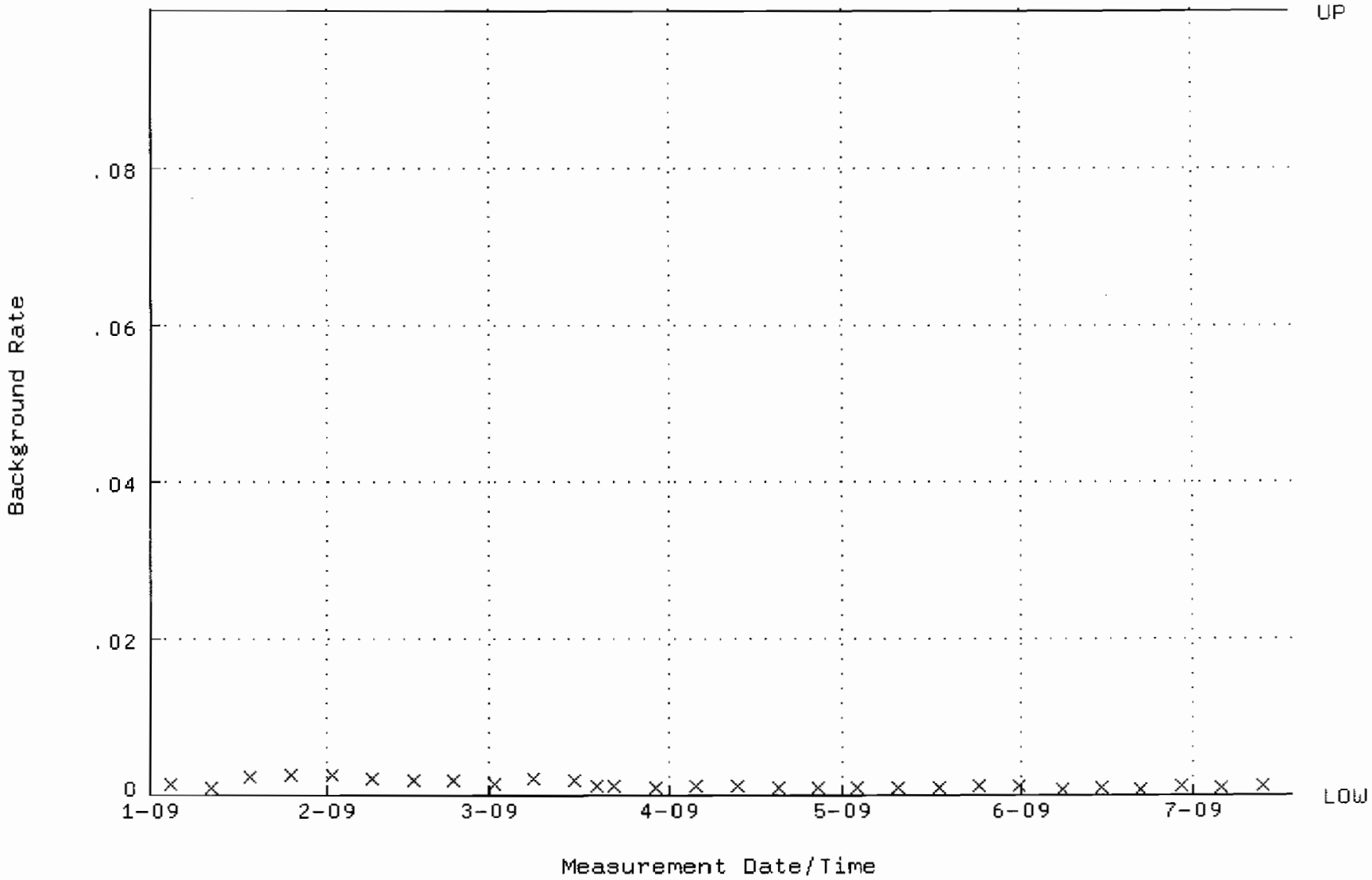

QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:06 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.241250 through 0.261250

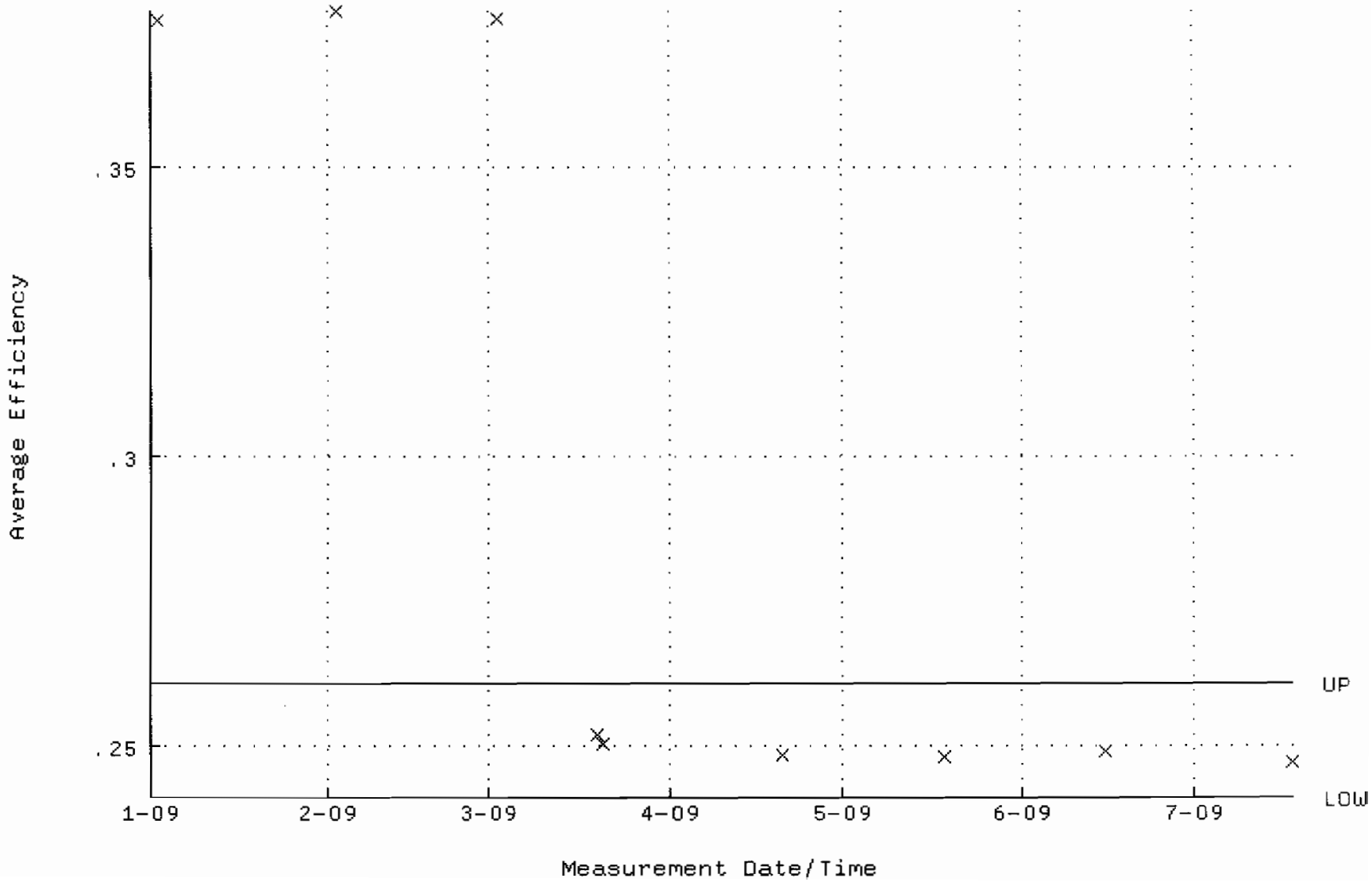

QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:06 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 82.7847 through 91.4989

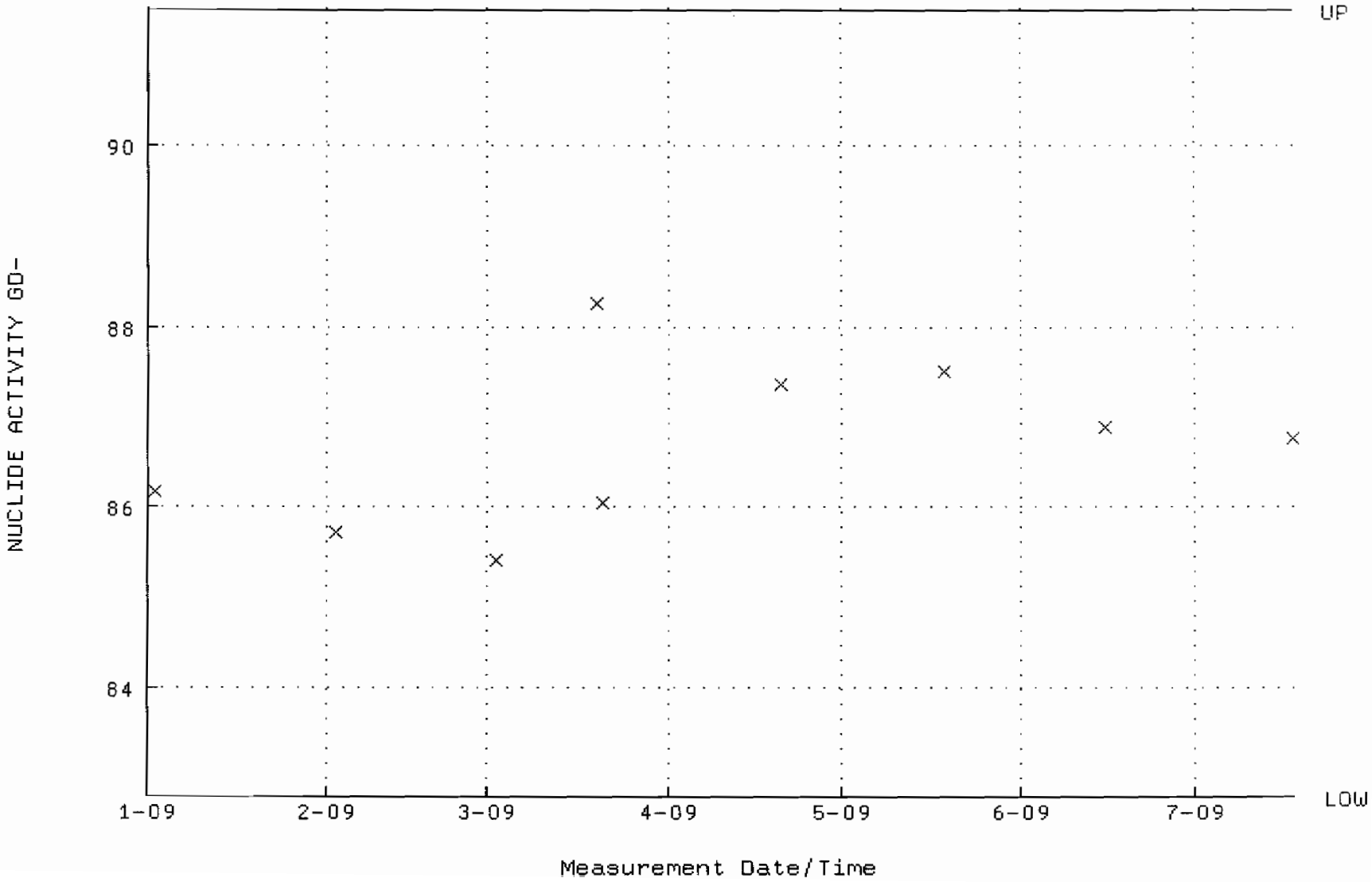

QA filename : DKA100:[ENV_ALPHA.QA.B]B156.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:47 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

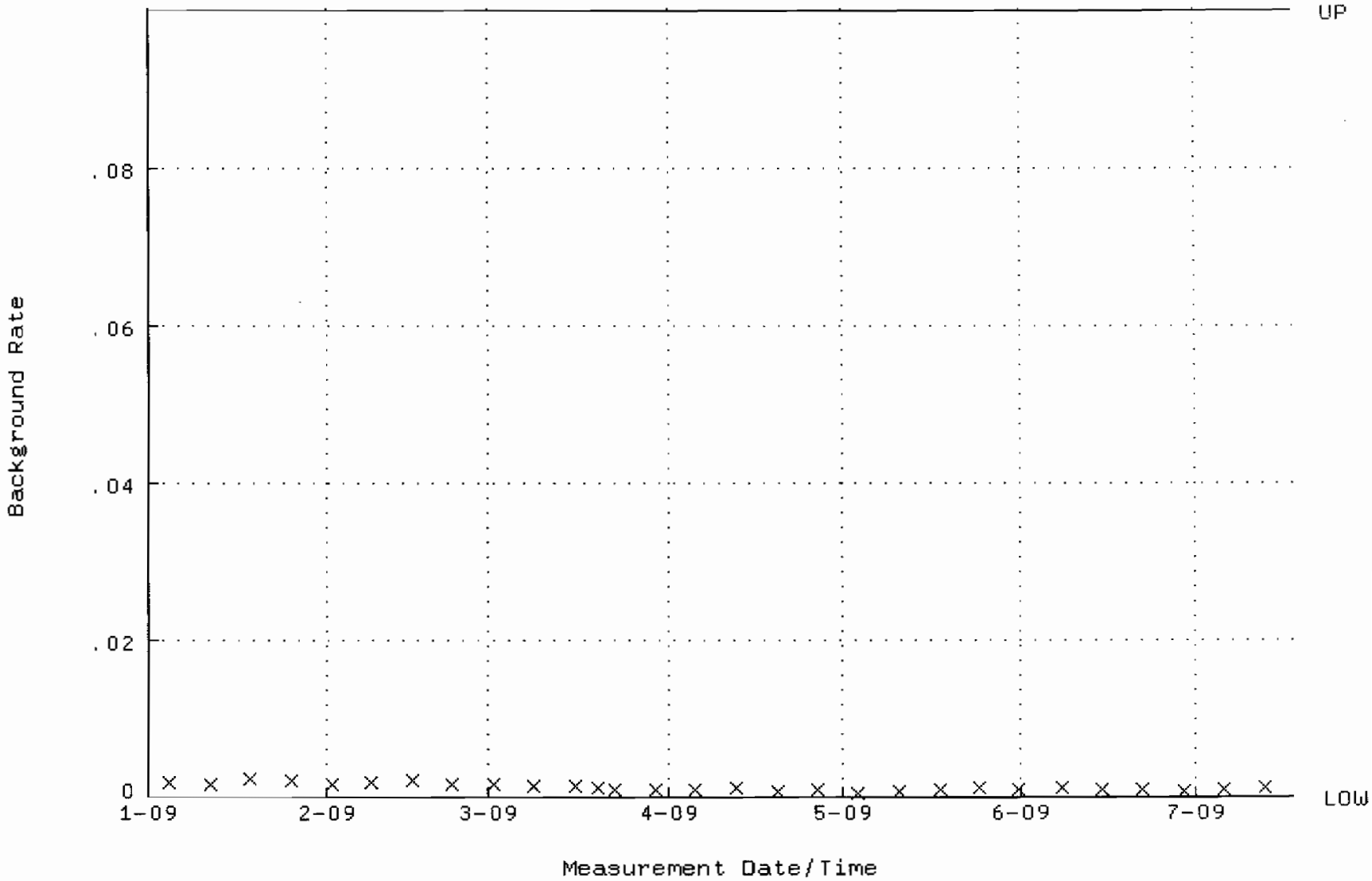

QA filename : DKA100:[ENV_ALPHA.QA.W]W175.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-JAN-2009 12:57:05 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.248296 through 0.268296

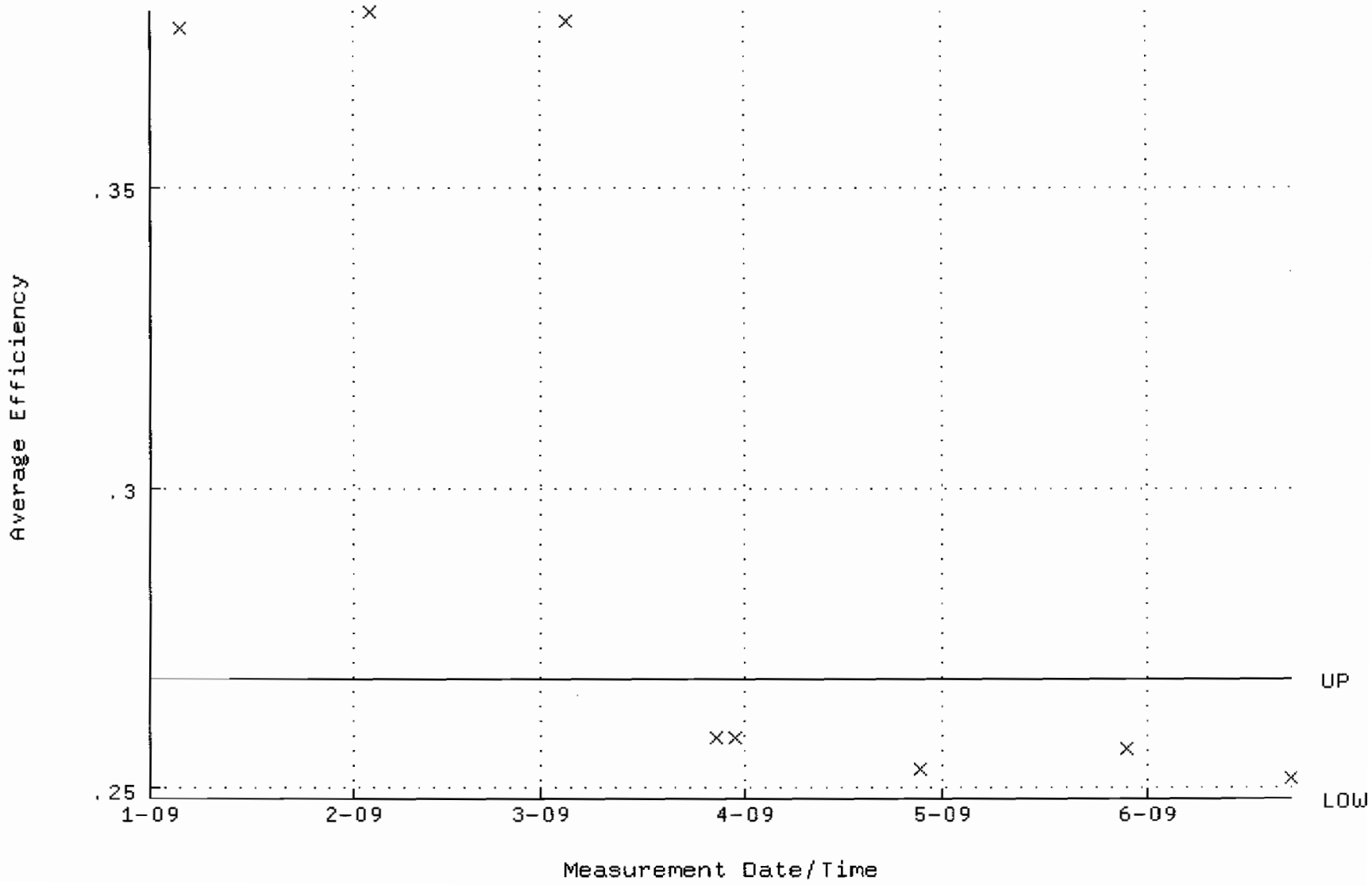

QA filename : DKA100:[ENV_ALPHA.QA.W]W175.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-JAN-2009 12:57:05 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 90.6224 through 100.162

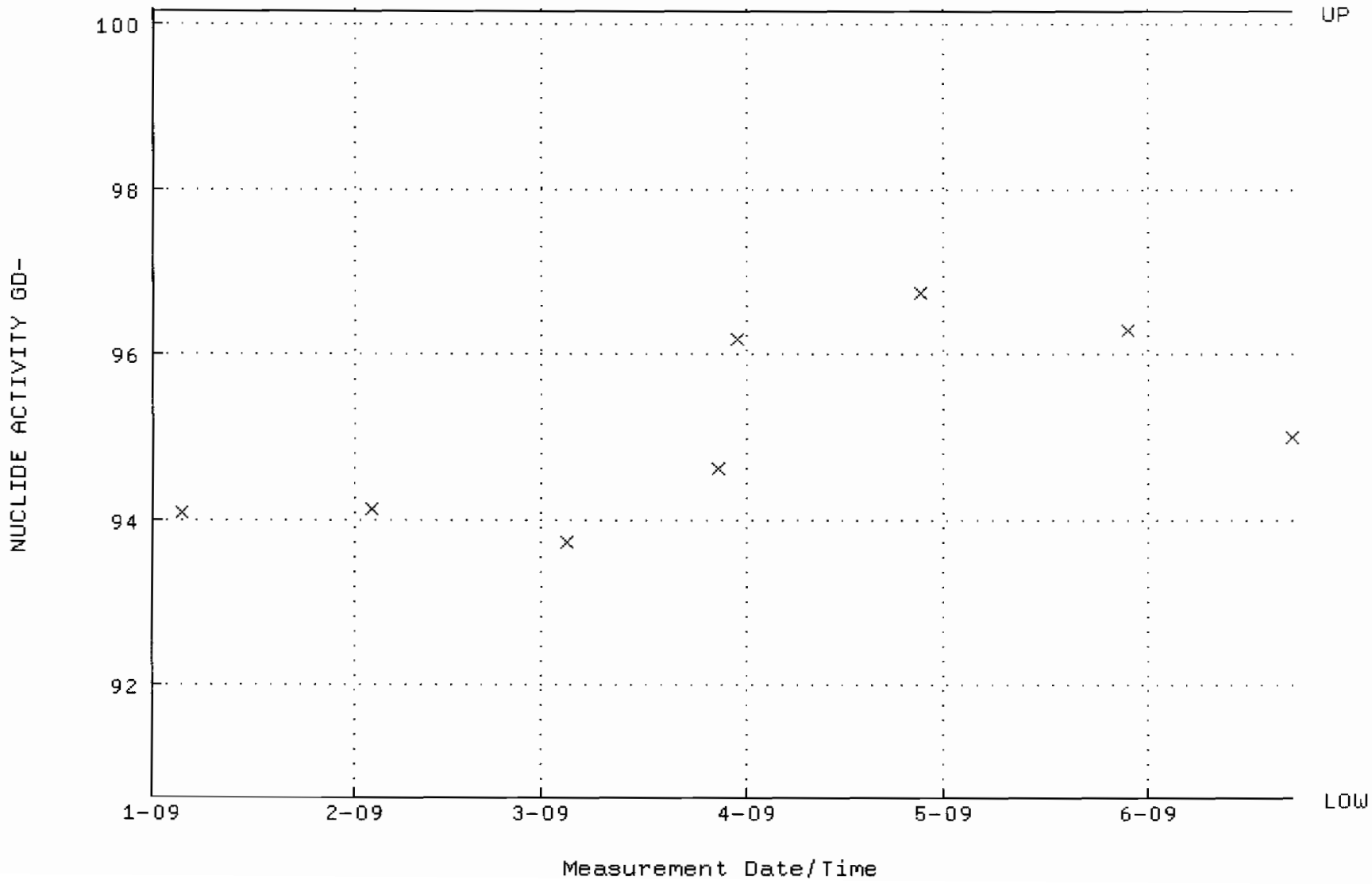

QA filename : DKA100:[ENV_ALPHA.QA.B]B175.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:25:58 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

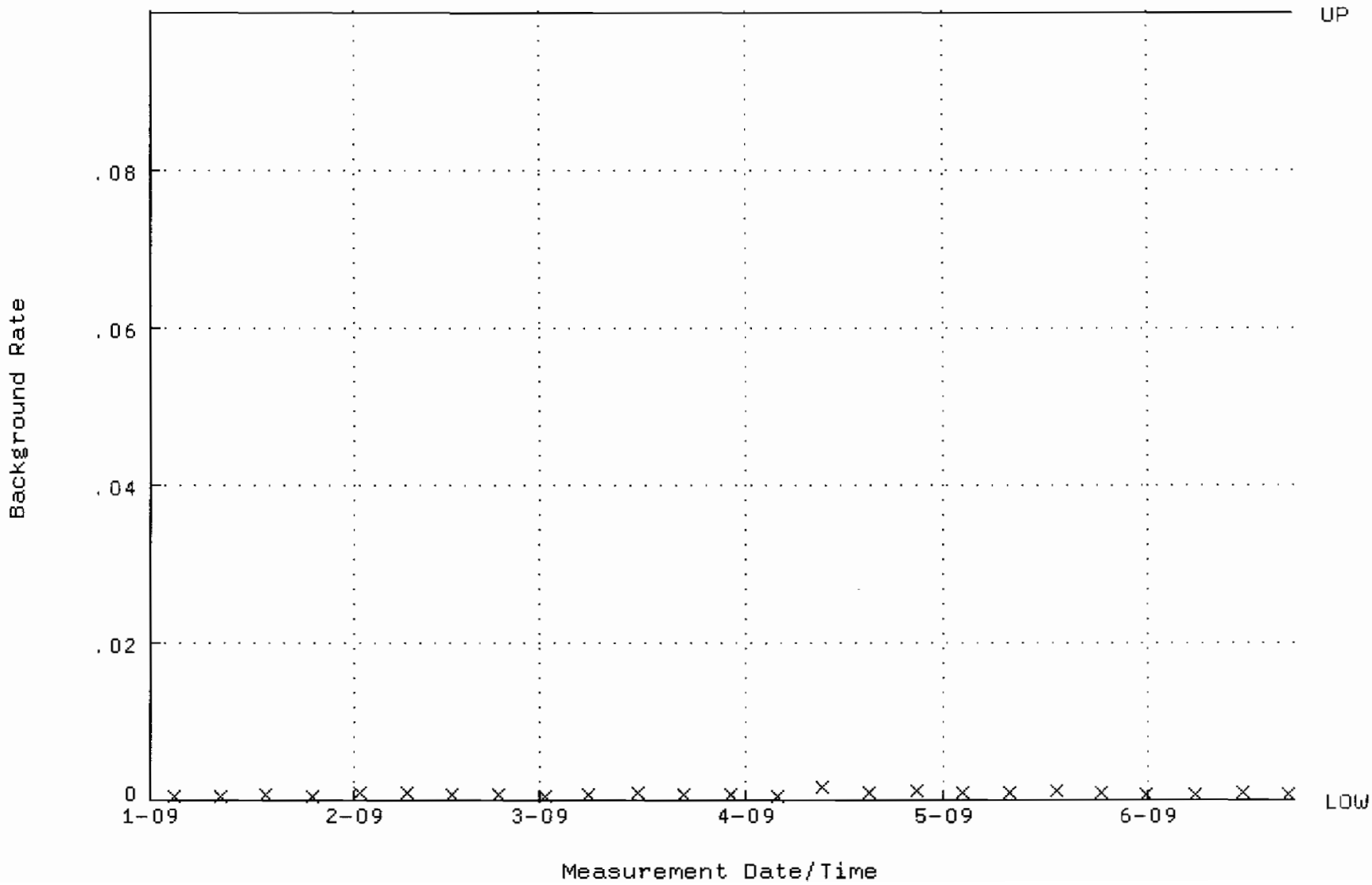

QA filename : DKA100:[ENV_ALPHA.QA.W]W185.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:29 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.249628 through 0.269628

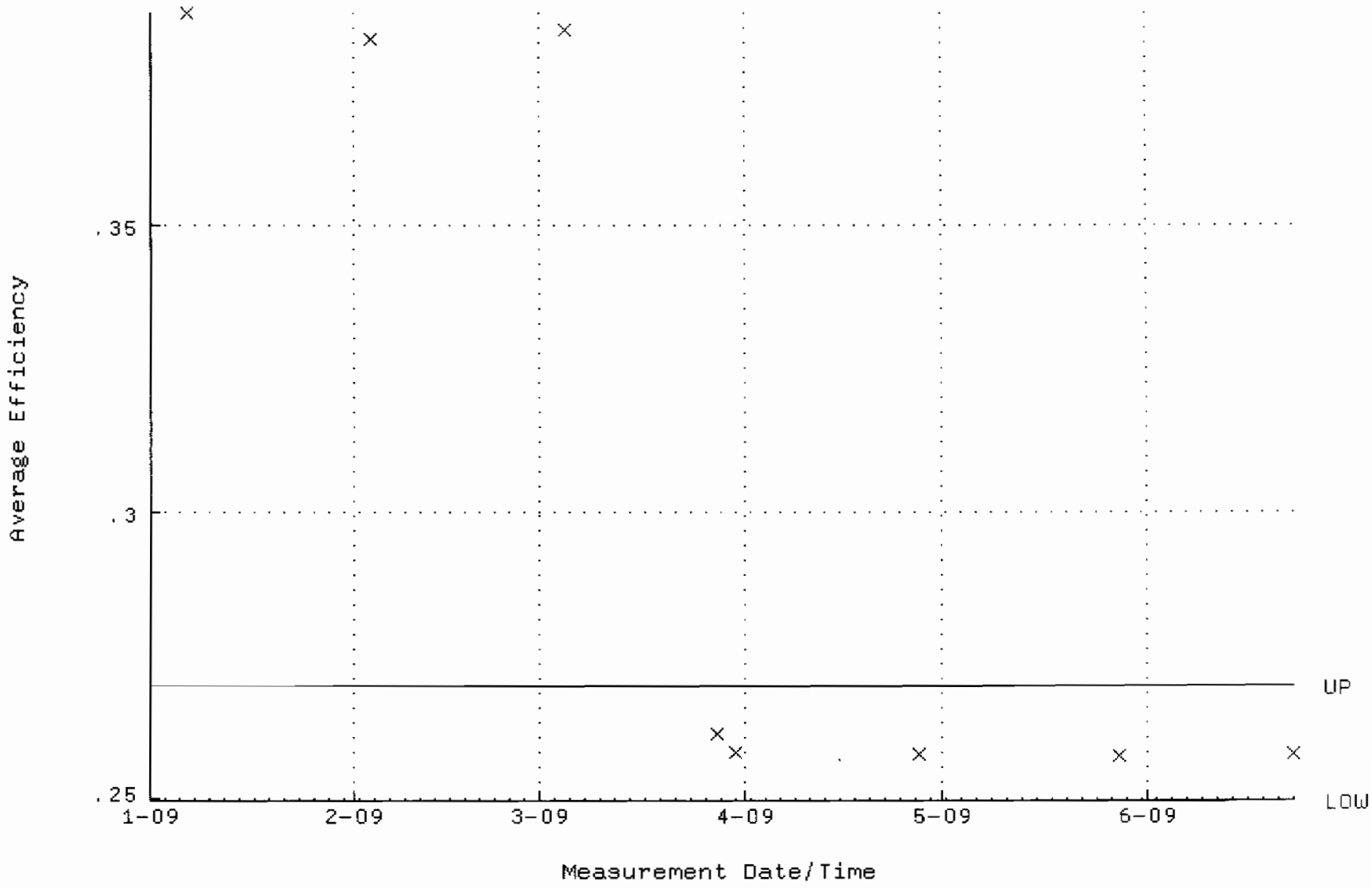

QA filename : DKA100:[ENV_ALPHA.QA.W]W185.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:29 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 84.3502 through 93.2292

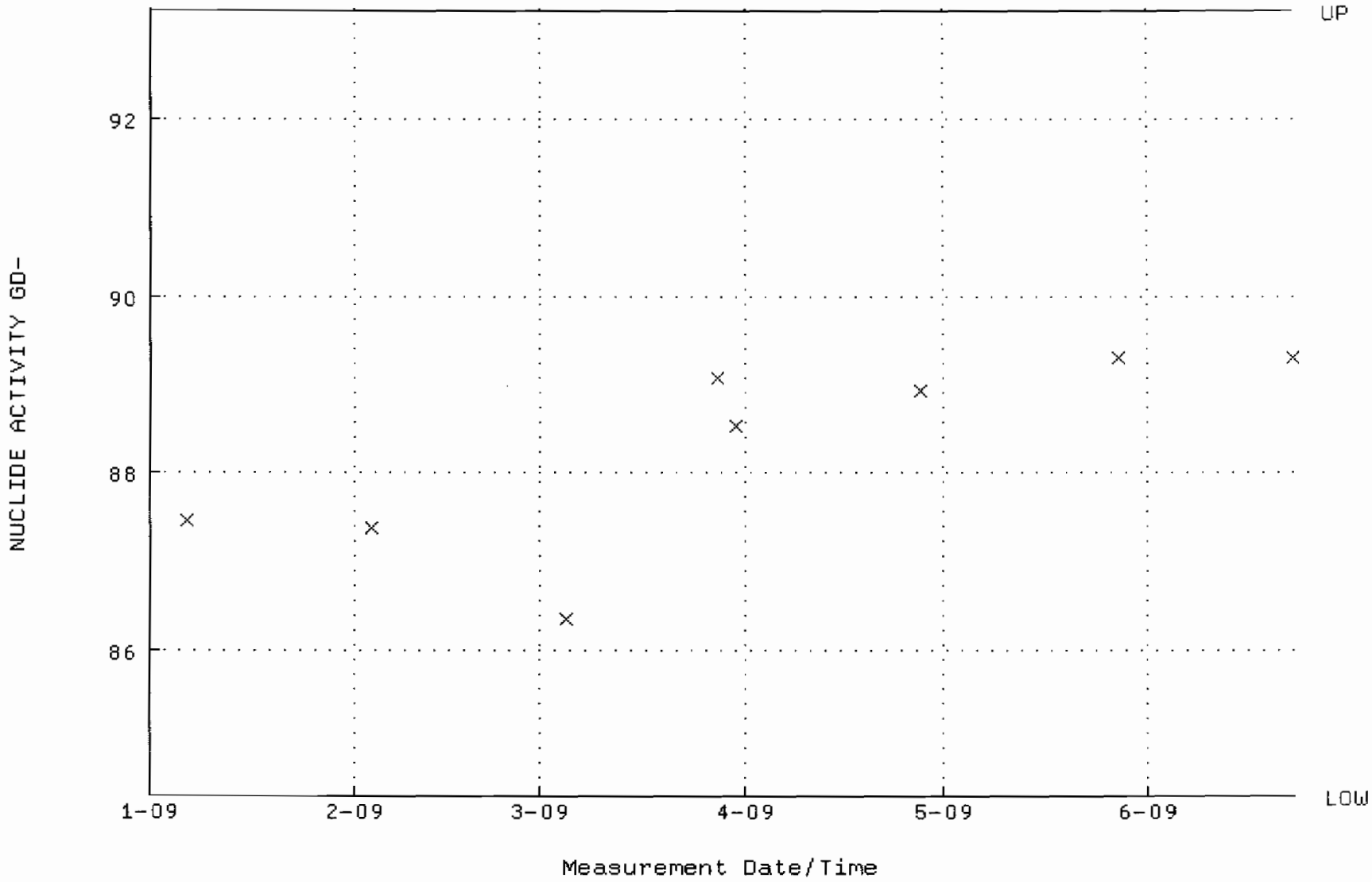

QA filename : DKA100:[ENV_ALPHA.QA.B]B185.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:36 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

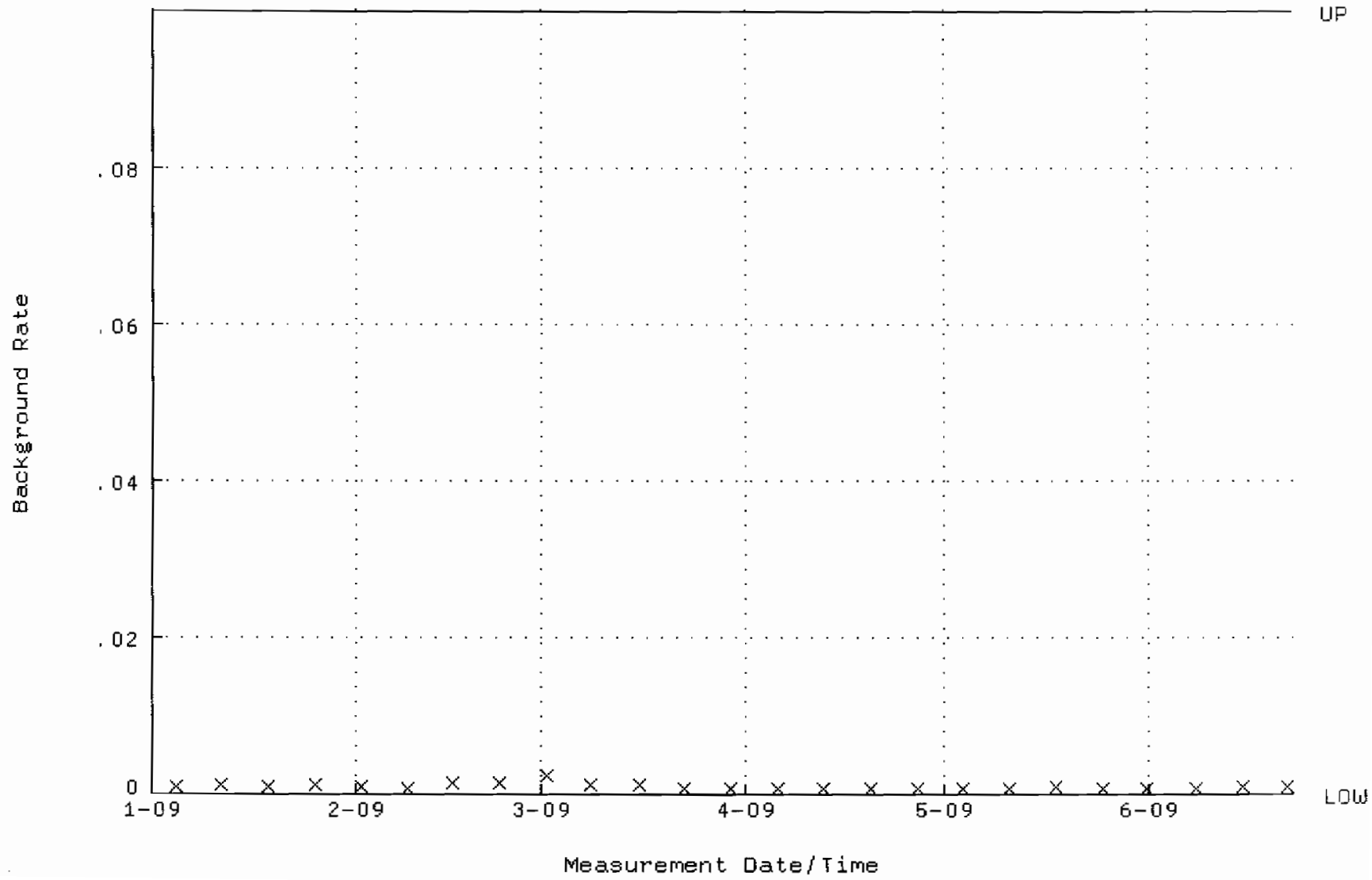

QA filename : DKA100:[ENV_ALPHA.QA.W]W186.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:33 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.242649 through 0.262649

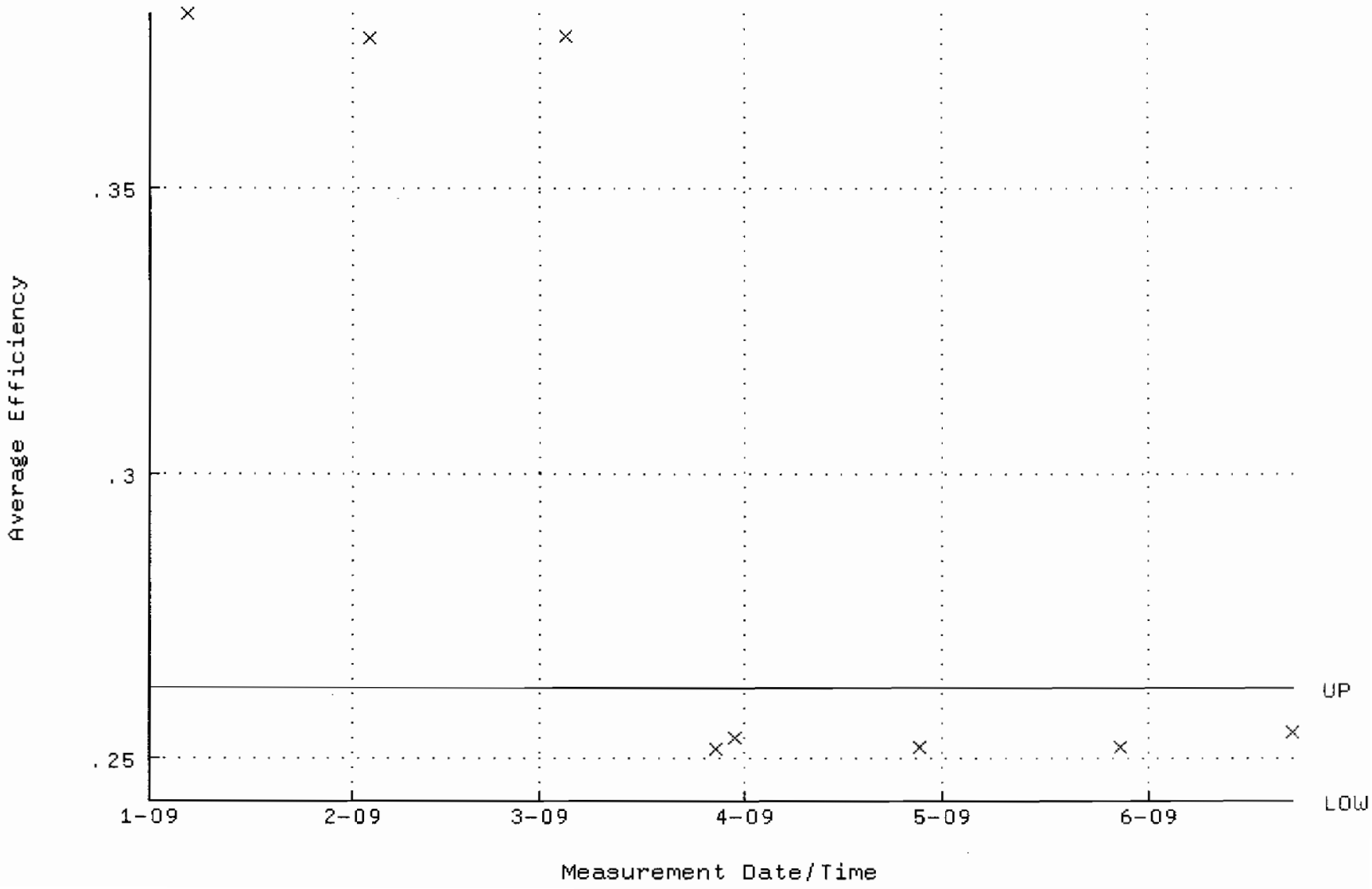

QA filename : DKA100:[ENV_ALPHA.QA.W]W186.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:33 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 82.6495 through 91.3495

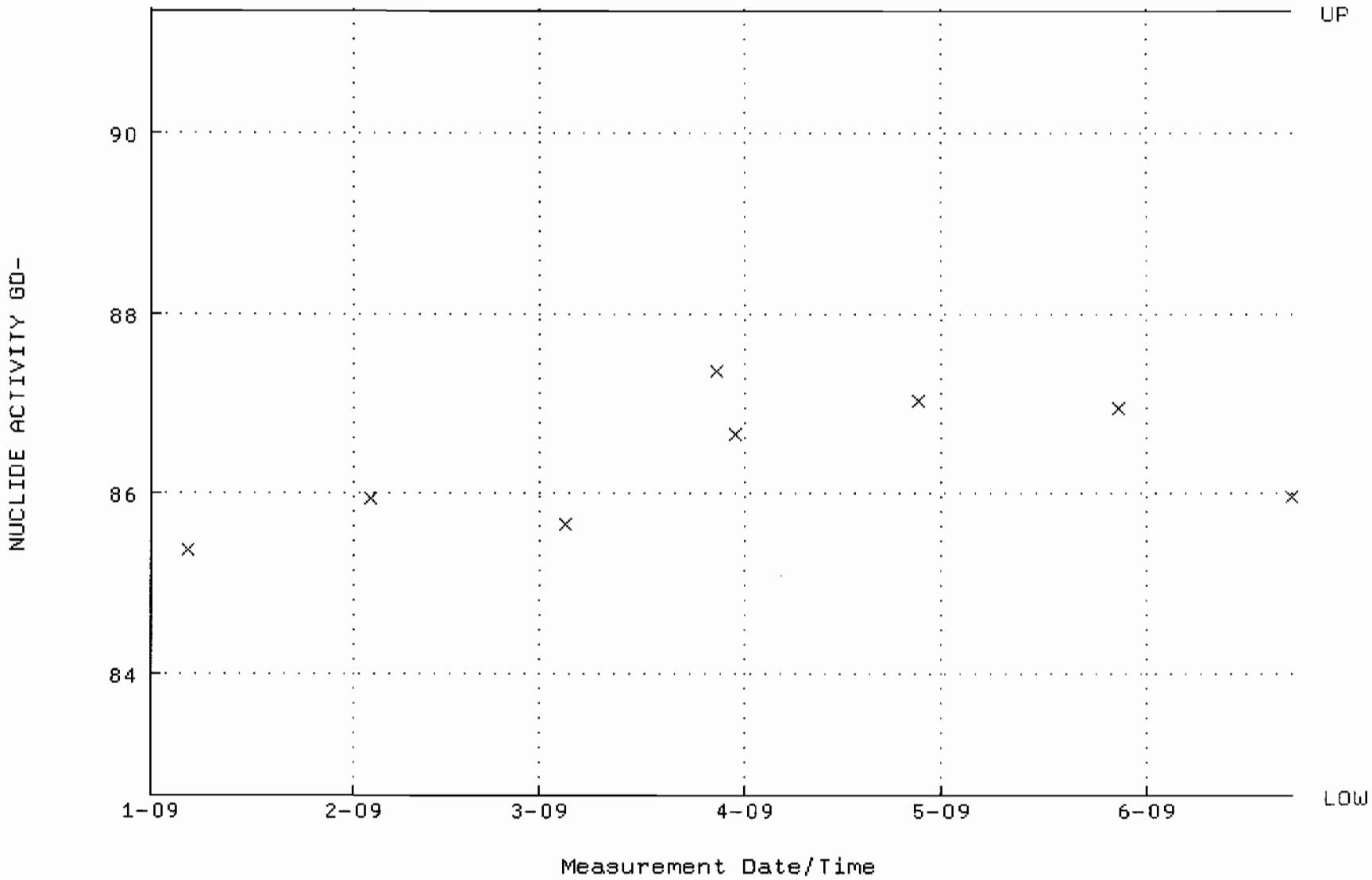

QA filename : DKA100:[ENV_ALPHA.QA.B]B186.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:40 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

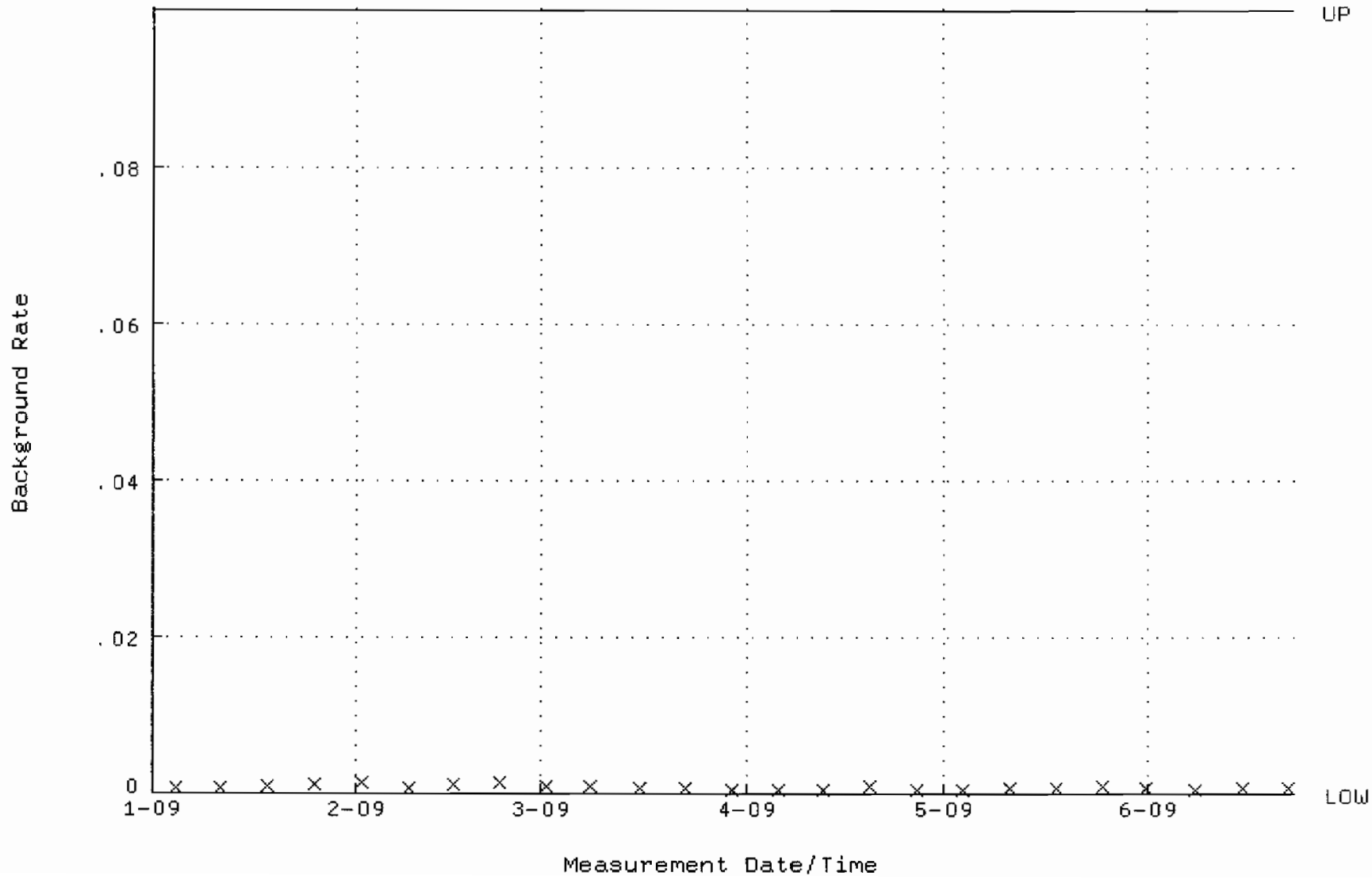

QA filename : DKA100:[ENV_ALPHA.QA.W]W187.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:37 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.241464 through 0.261464

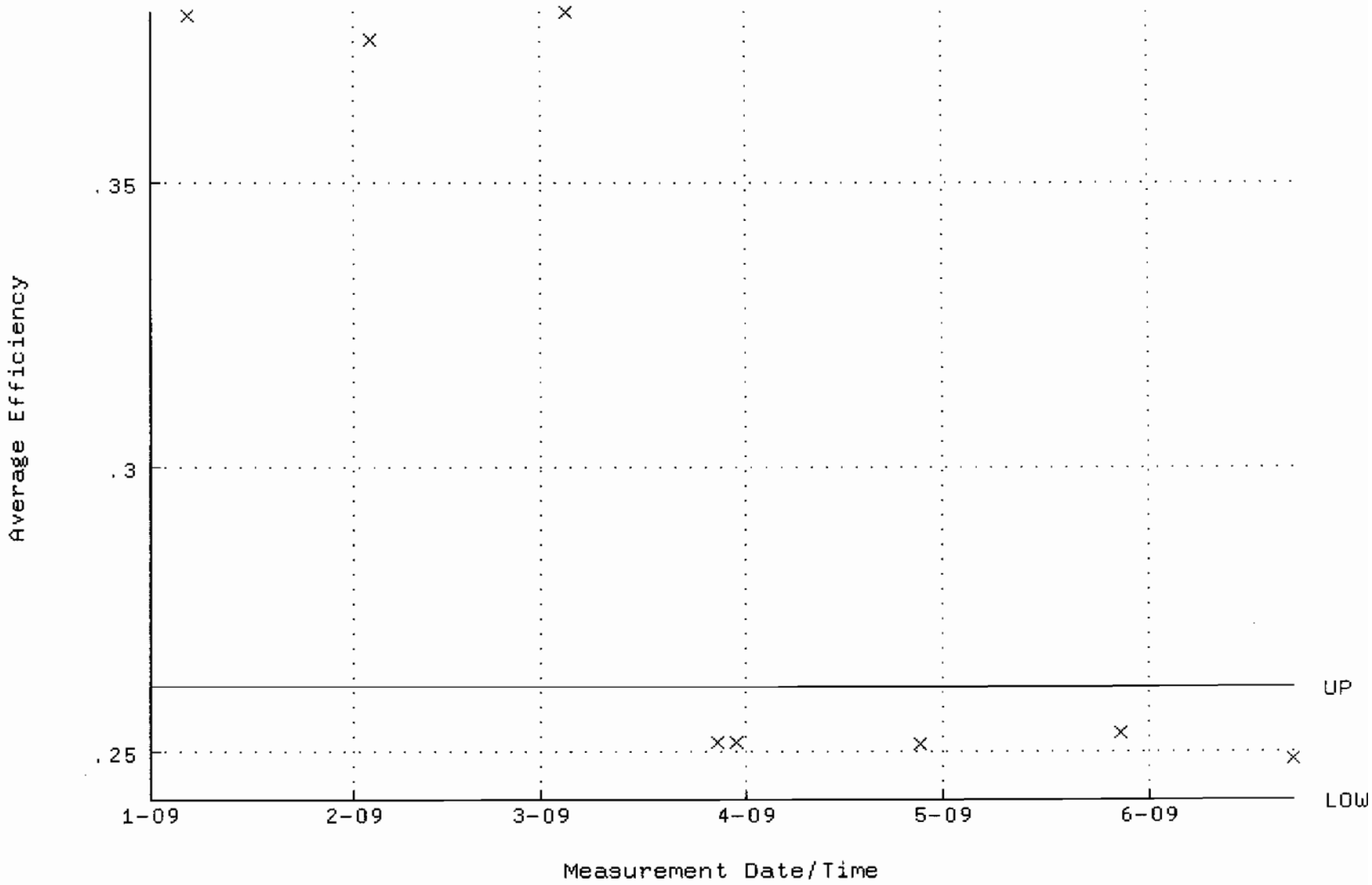

QA filename : DKA100:[ENV_ALPHA.QA.W]W187.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:37 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 85.5888 through 94.5982

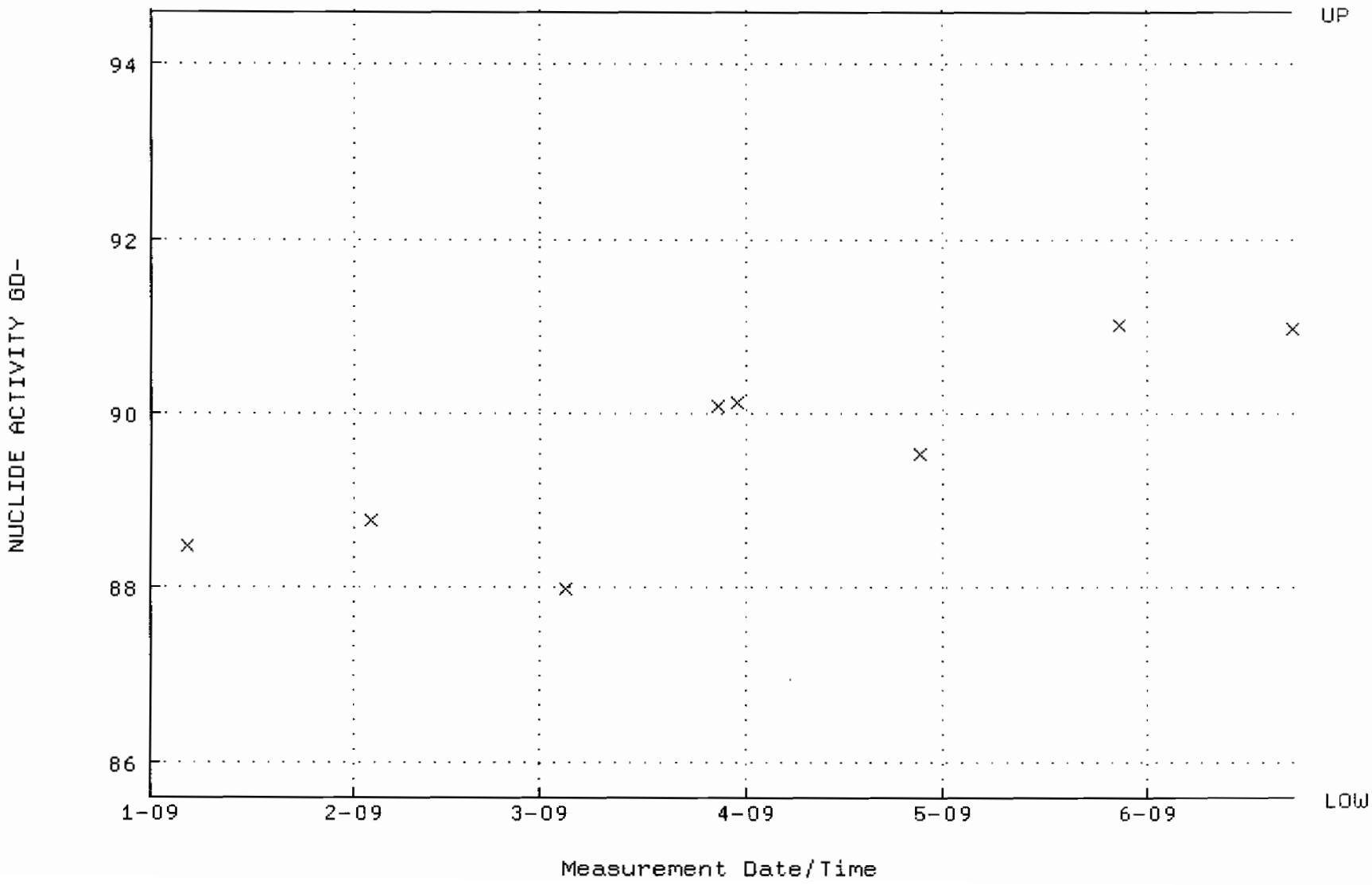

QA filename : DKA100:[ENV_ALPHA.QA.B]B187.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:44 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

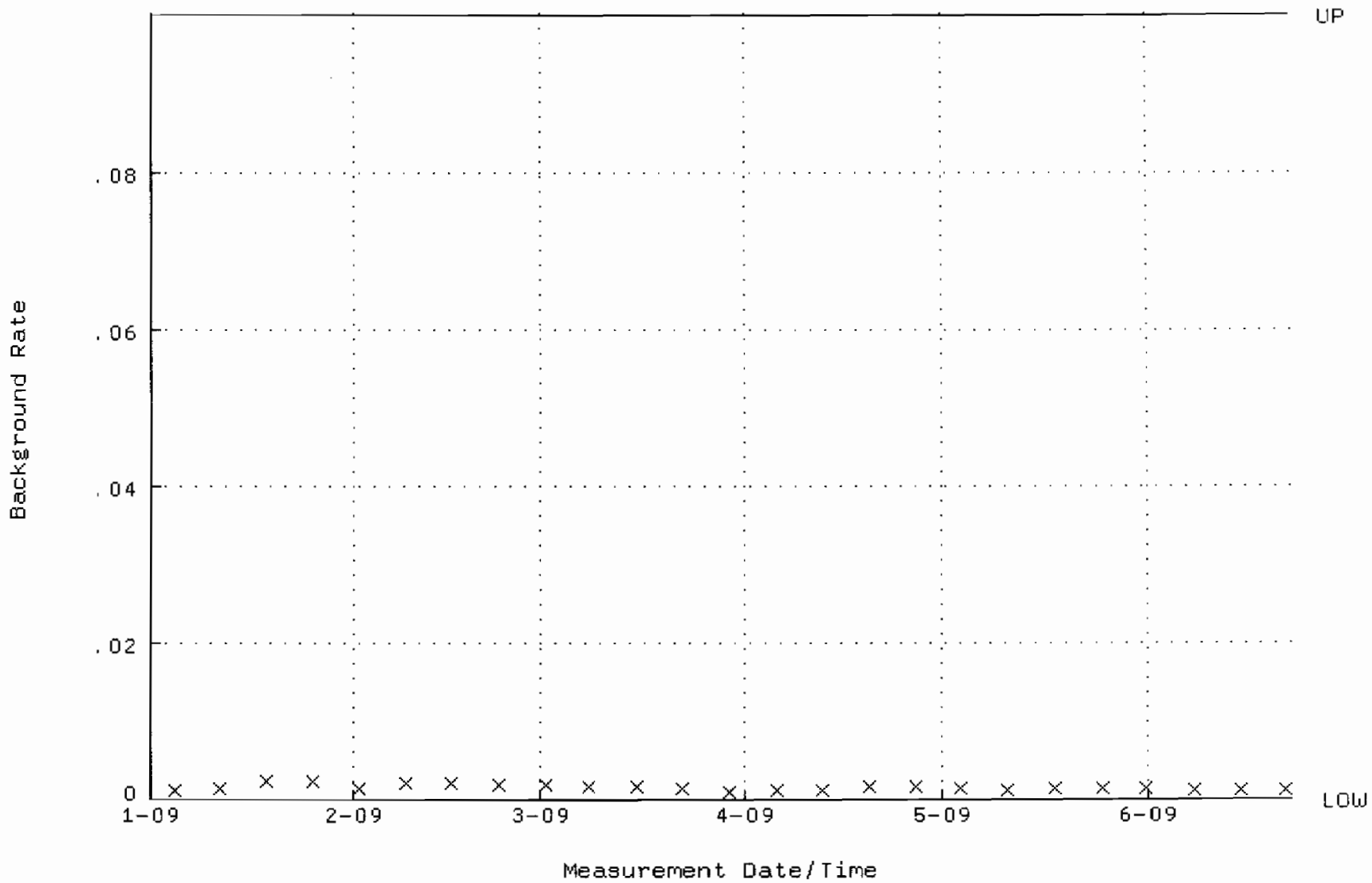

QA filename : DKA100:[ENV_ALPHA.QA.W]W188.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 19:31:41 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.249341 through 0.269341

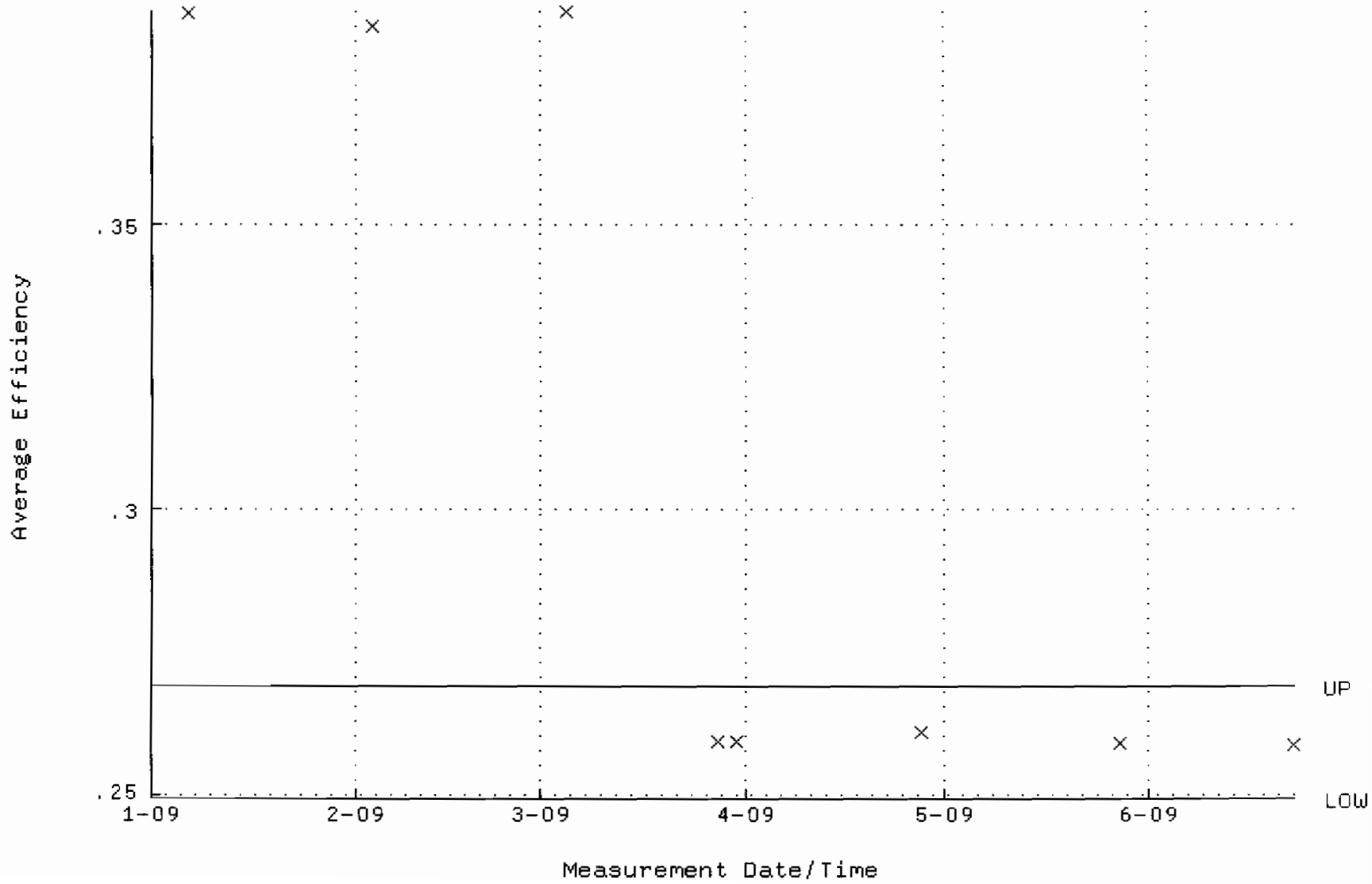

QA filename : DKA100:[ENV_ALPHA.QA.W]W188.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 19:31:41 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 83.6747 through 92.4825

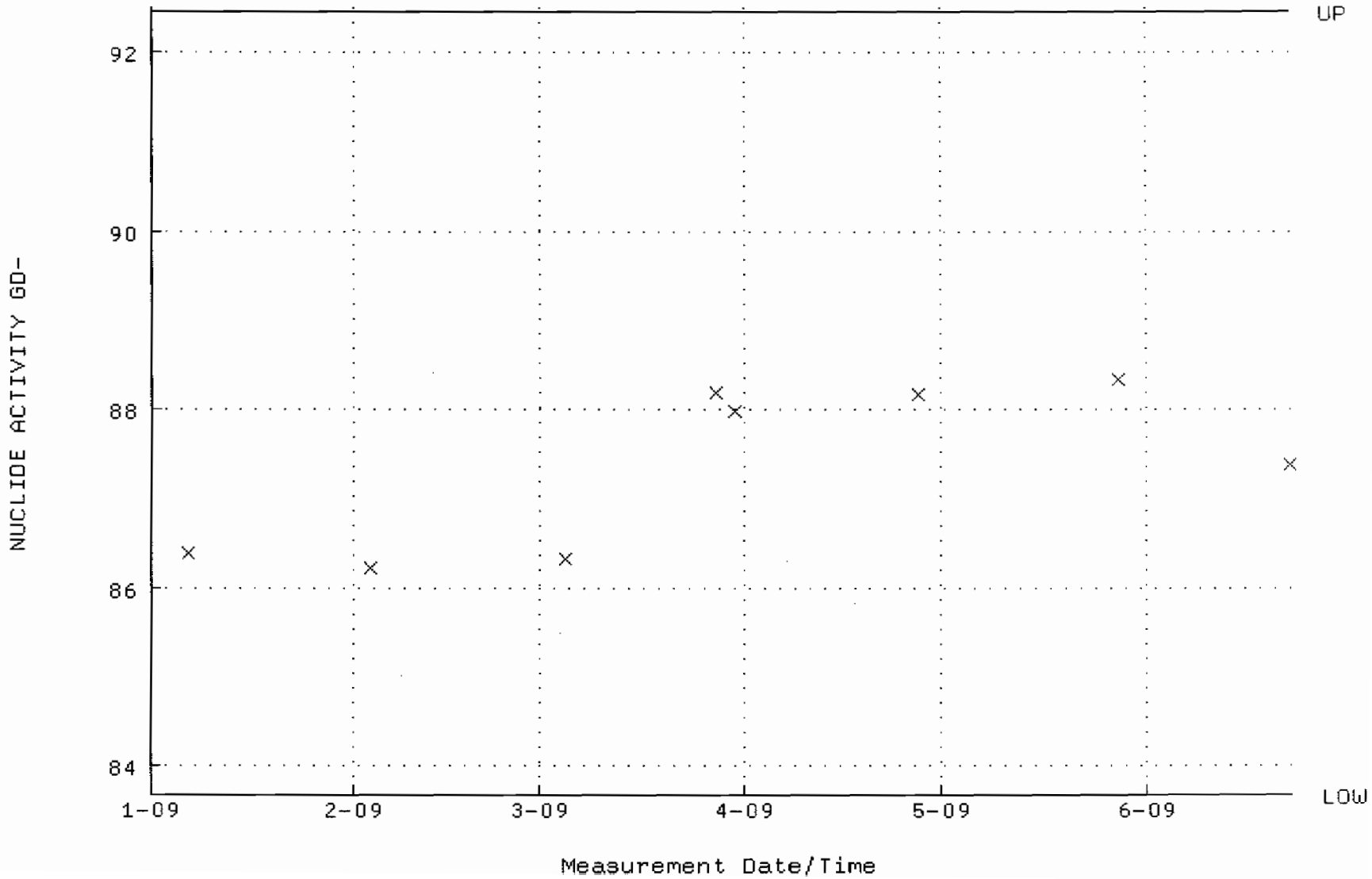

QA filename : DKA100:[ENV_ALPHA.QA.B]B188.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:26:47 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

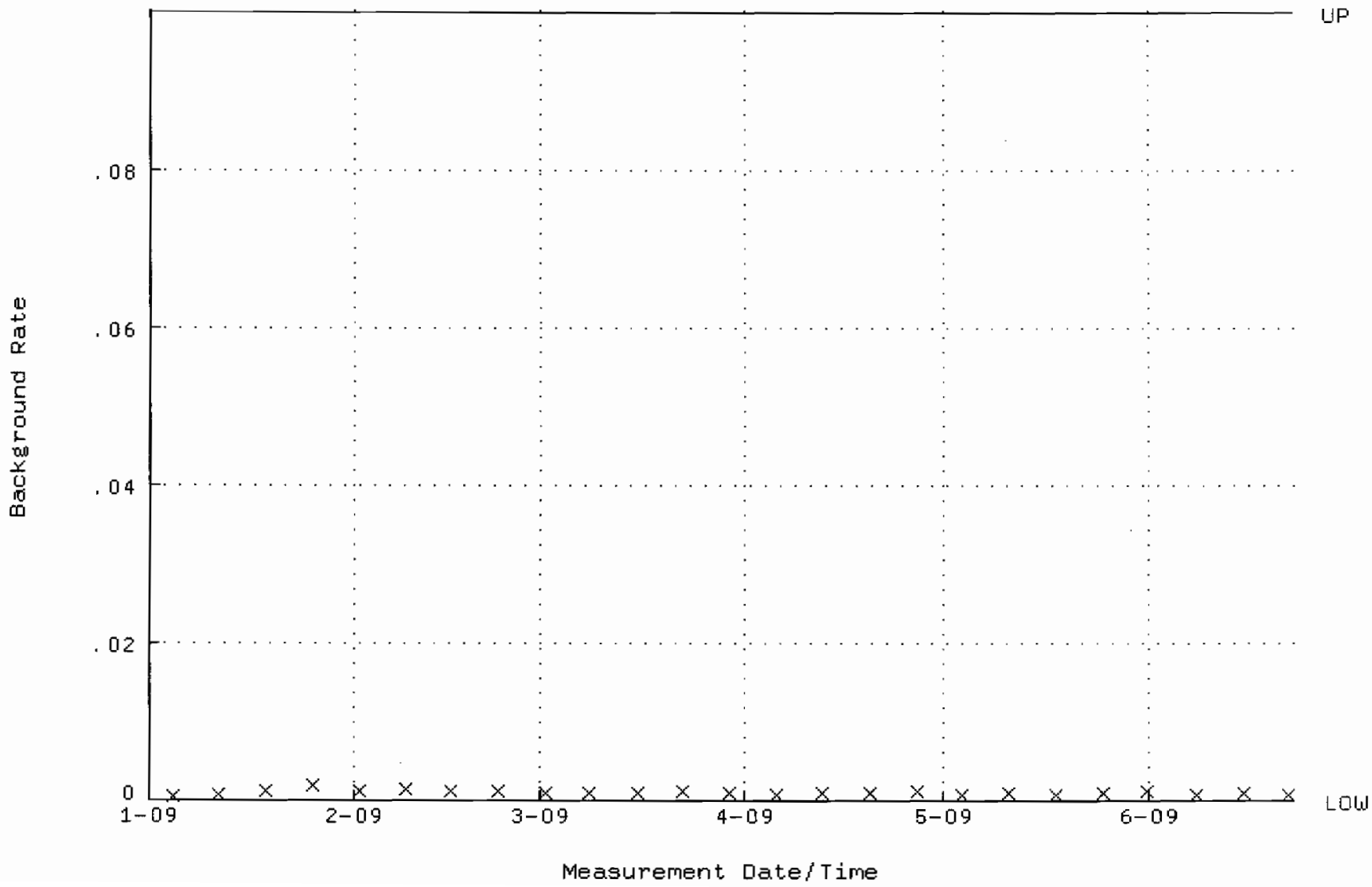

QA filename : DKA100:[ENV_ALPHA.QA.W]W205.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 31-MAR-2009 15:10:33 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.245702 through 0.265702

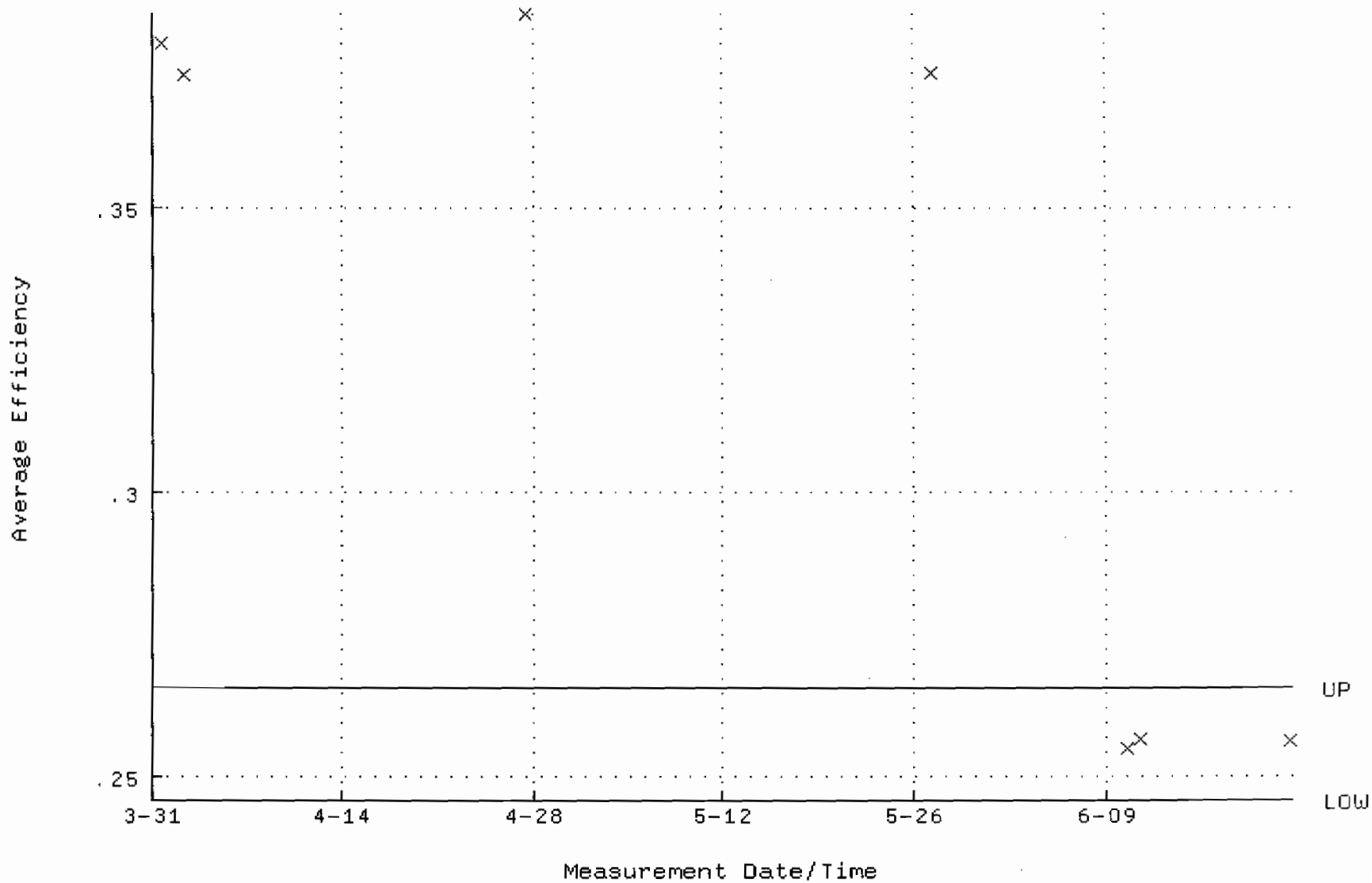

QA filename : DKA100:[ENV_ALPHA.QA.W]W205.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 31-MAR-2009 15:10:33 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 86.7285 through 95.8579

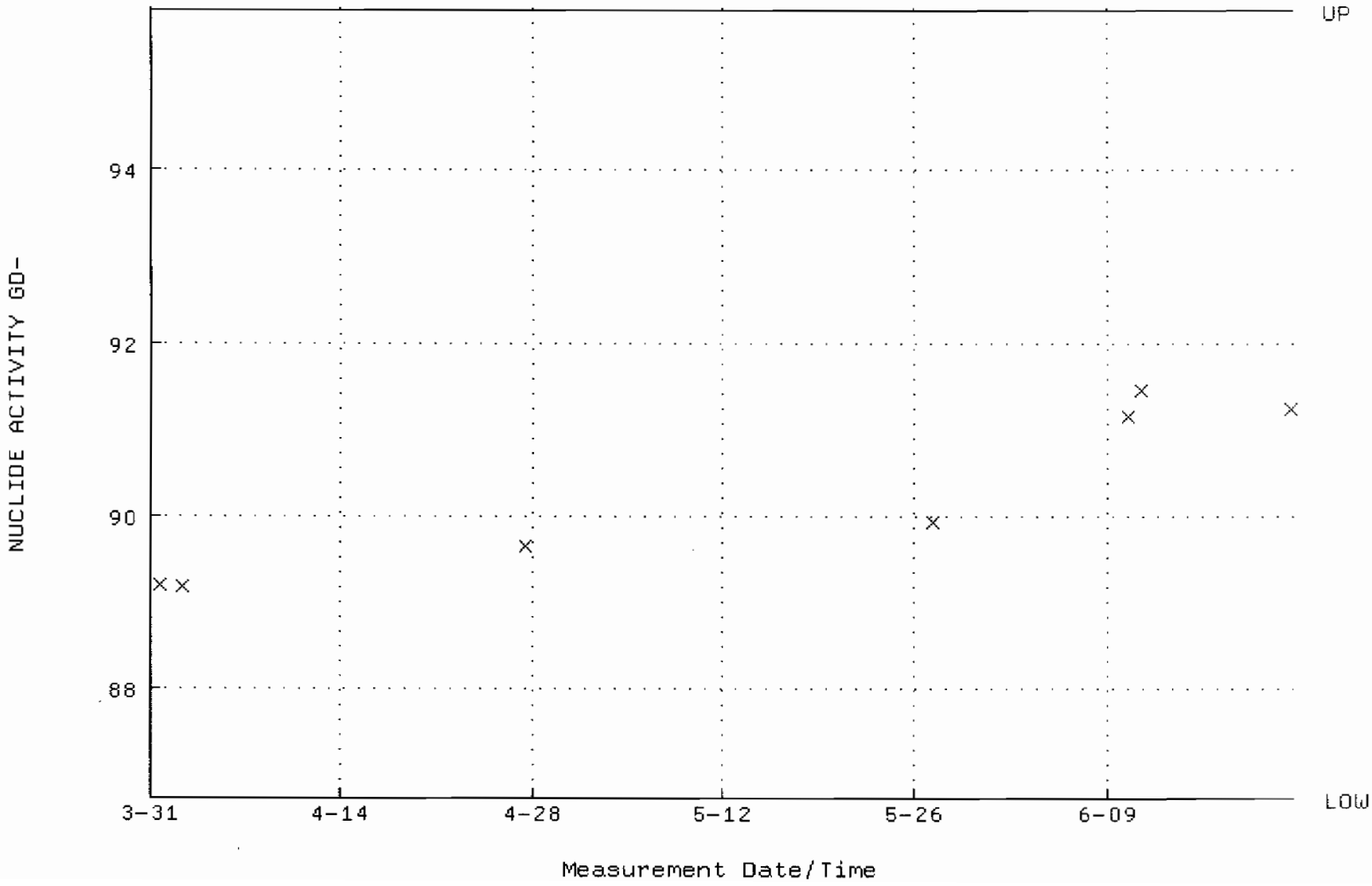

QA filename : DKA100:[ENV_ALPHA.QA.B]B205.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-APR-2009 08:03:01 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

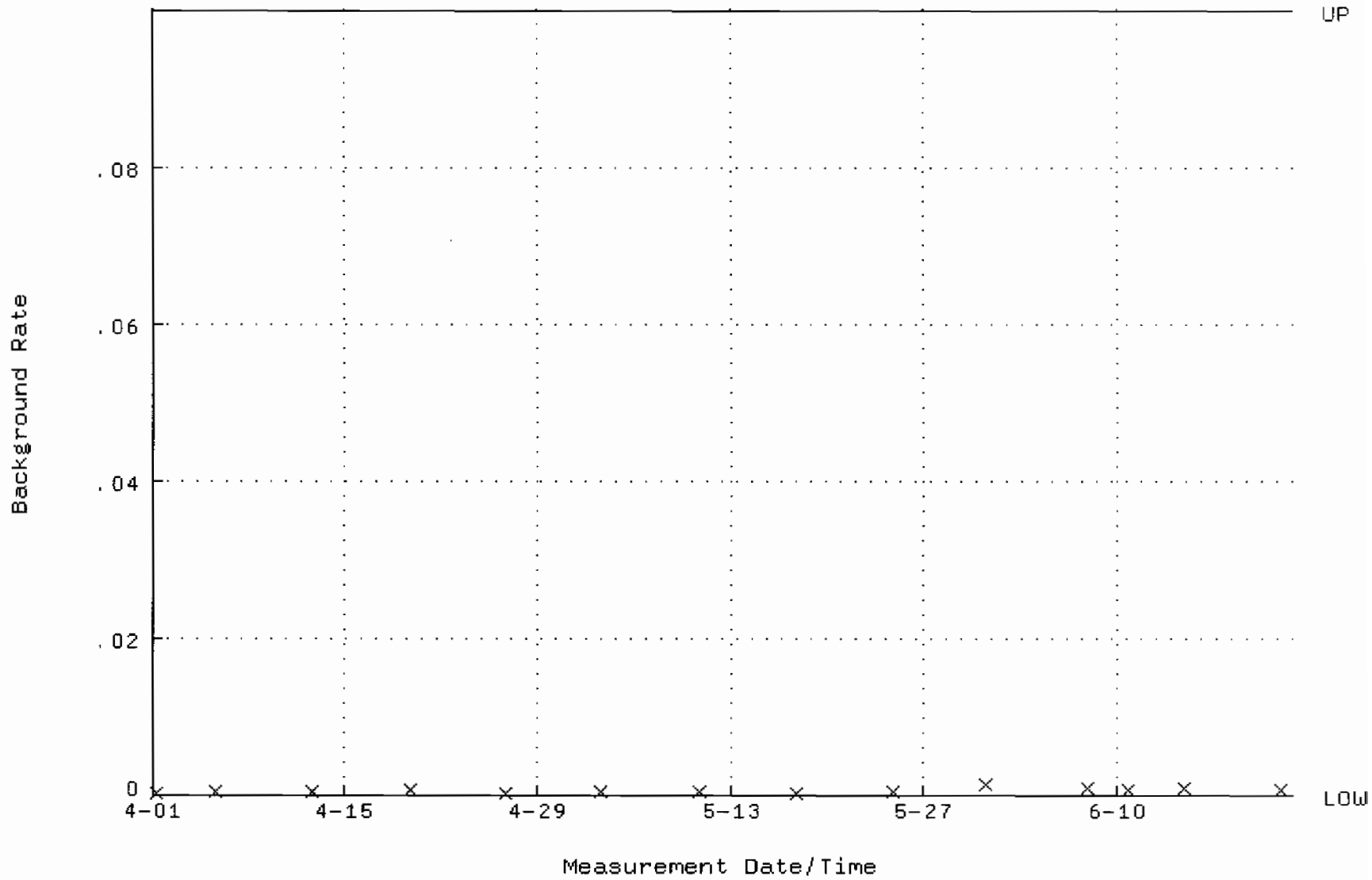

QA filename : DKA100:[ENV_ALPHA.QA.W]W206.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 31-MAR-2009 15:10:35 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.246228 through 0.266228

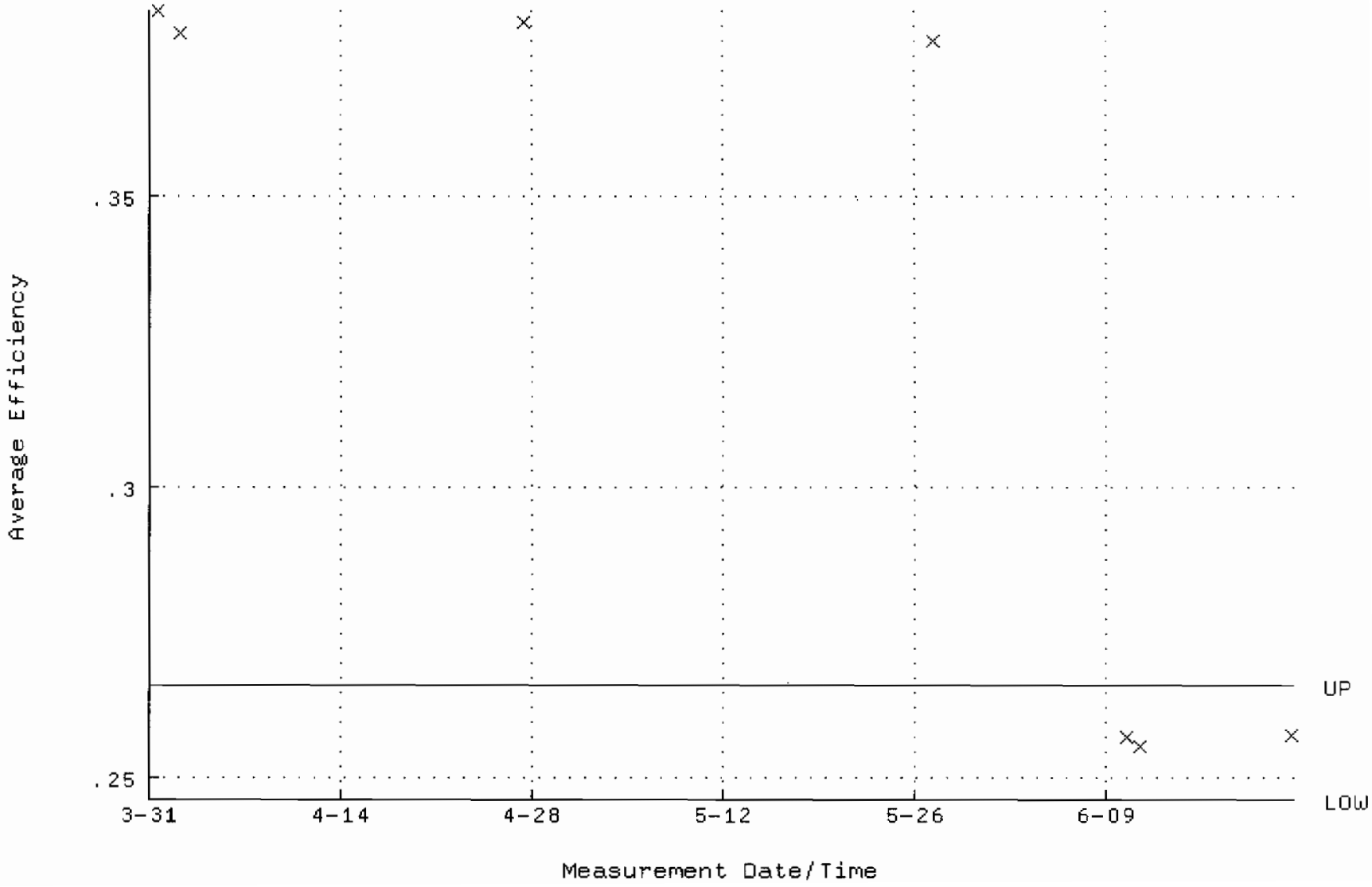

QA filename : DKA100:[ENV_ALPHA.QA.W]W206.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 31-MAR-2009 15:10:35 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 85.1104 through 94.0694

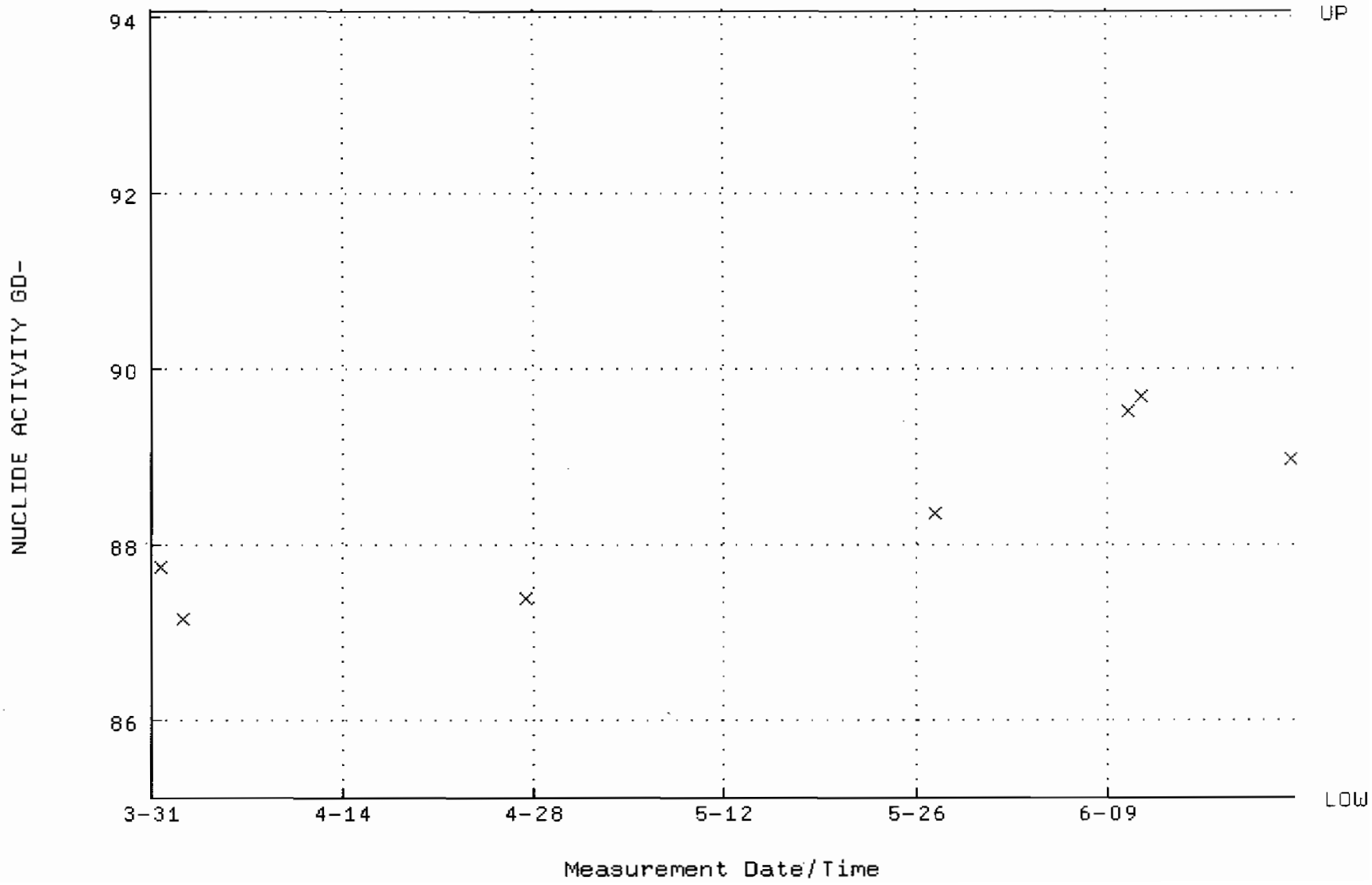

QA filename : DKA100:[ENV_ALPHA.QA.B]B206.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-APR-2009 08:03:06 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

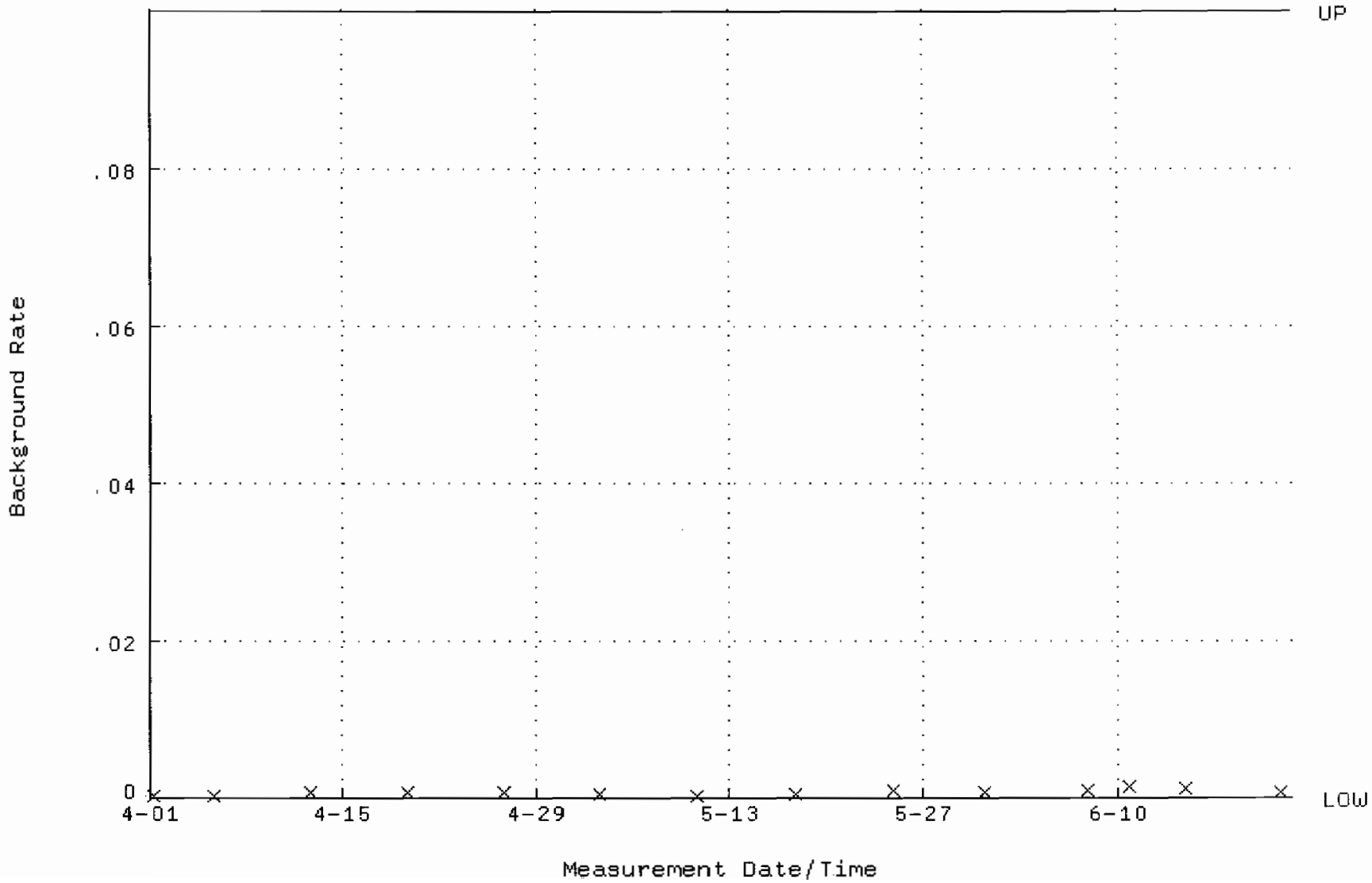

QA filename : DKA100:[ENV_ALPHA.QA.W]W207.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 31-MAR-2009 15:10:38 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.246432 through 0.266432

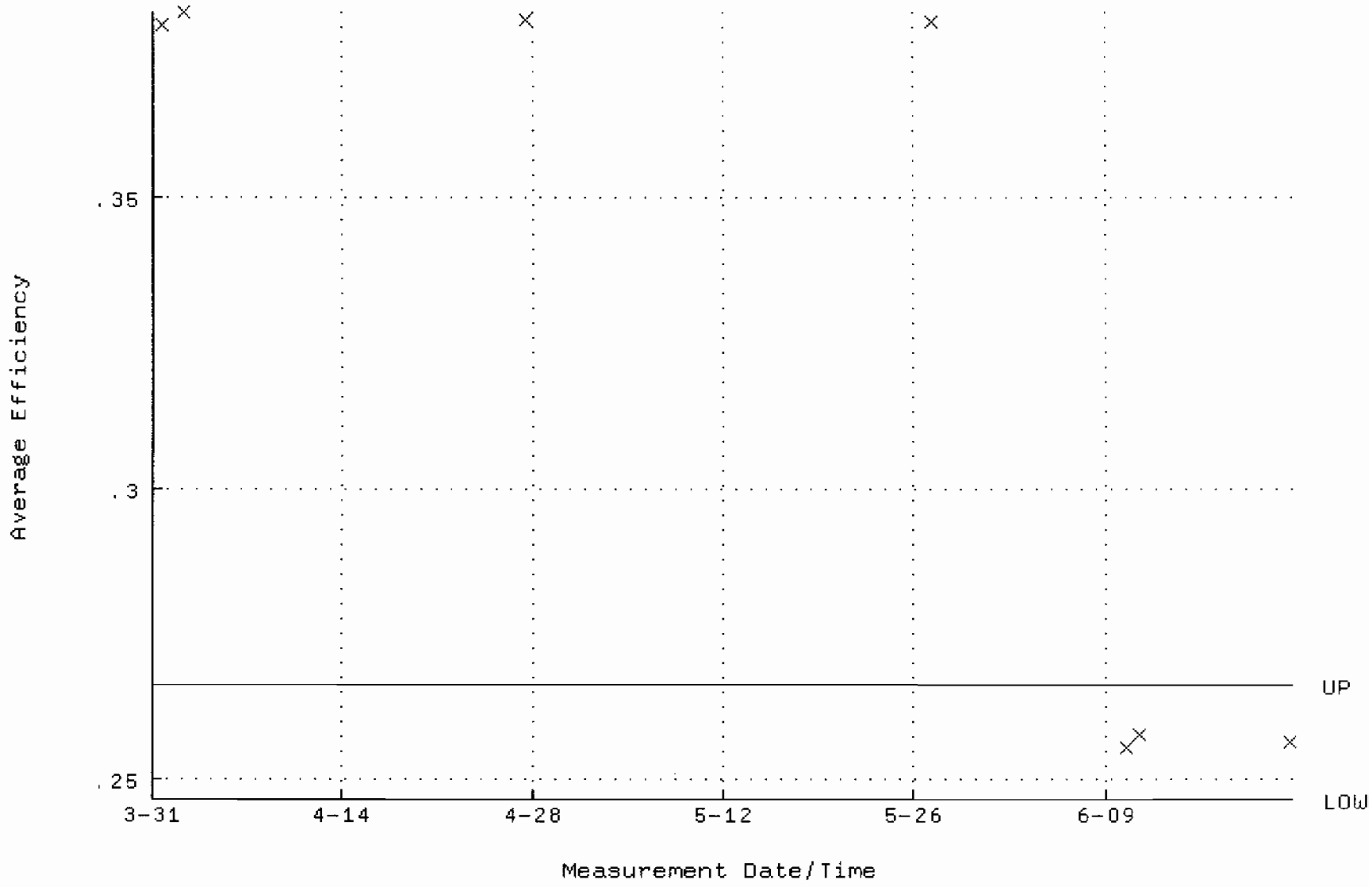

QA filename : DKA100:[ENV_ALPHA.QA.W]W207.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 31-MAR-2009 15:10:38 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 80.7759 through 89.2787

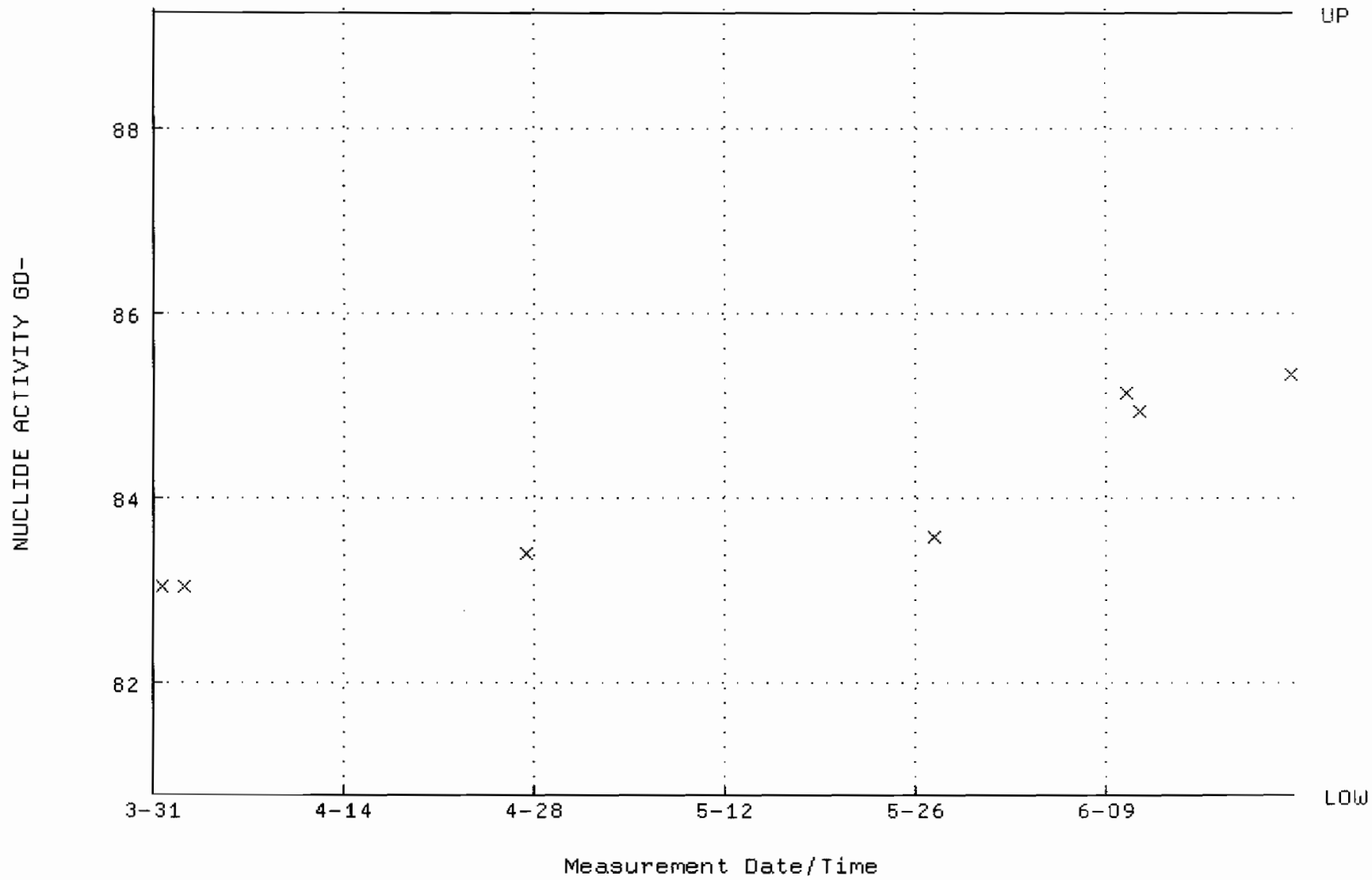

QA filename : DKA100:[ENV_ALPHA.QA.B]B207.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-APR-2009 08:03:11 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

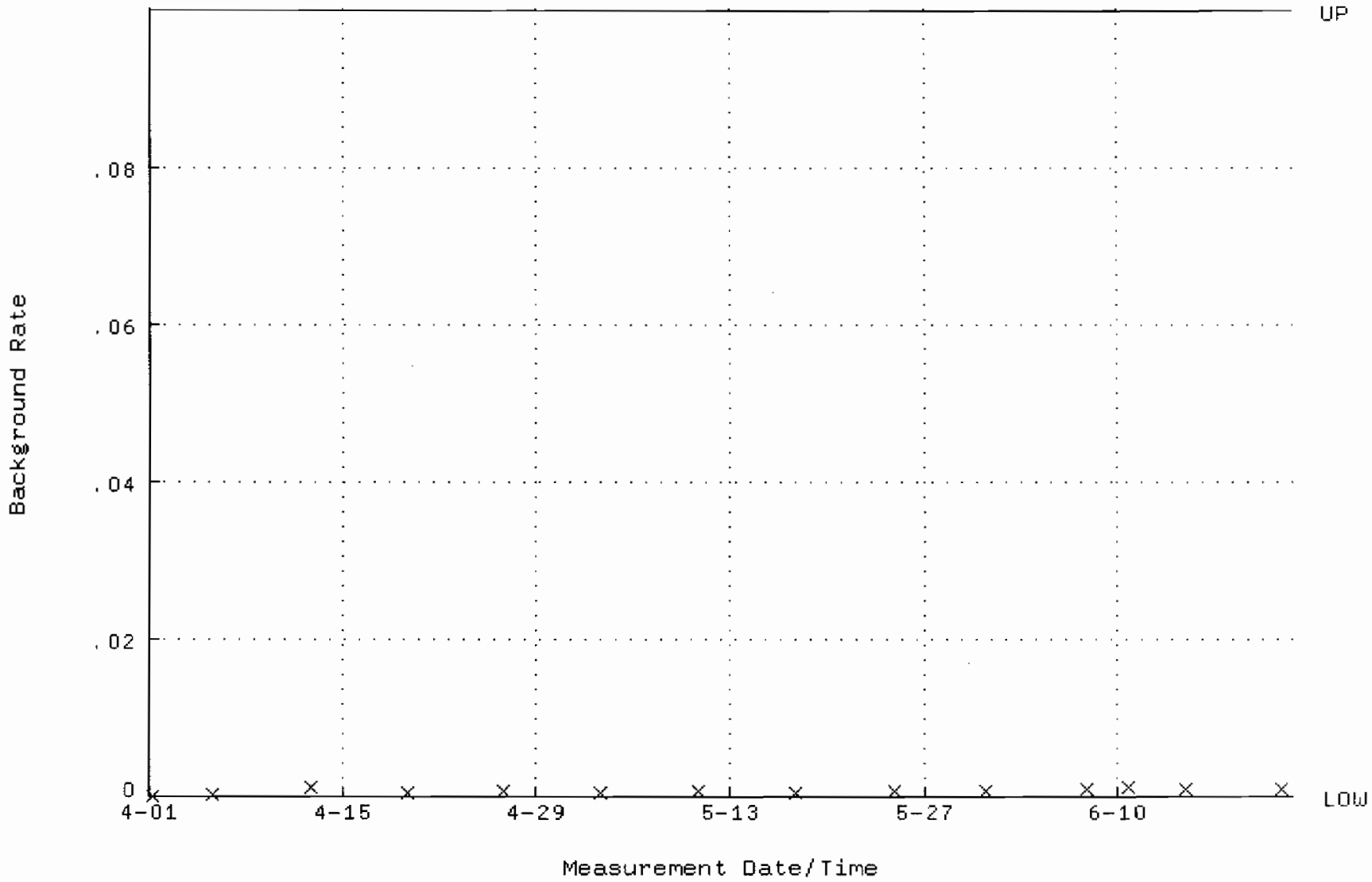

QA filename : DKA100:[ENV_ALPHA.QA.W]W221.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:31:39 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.366972 through 0.386972

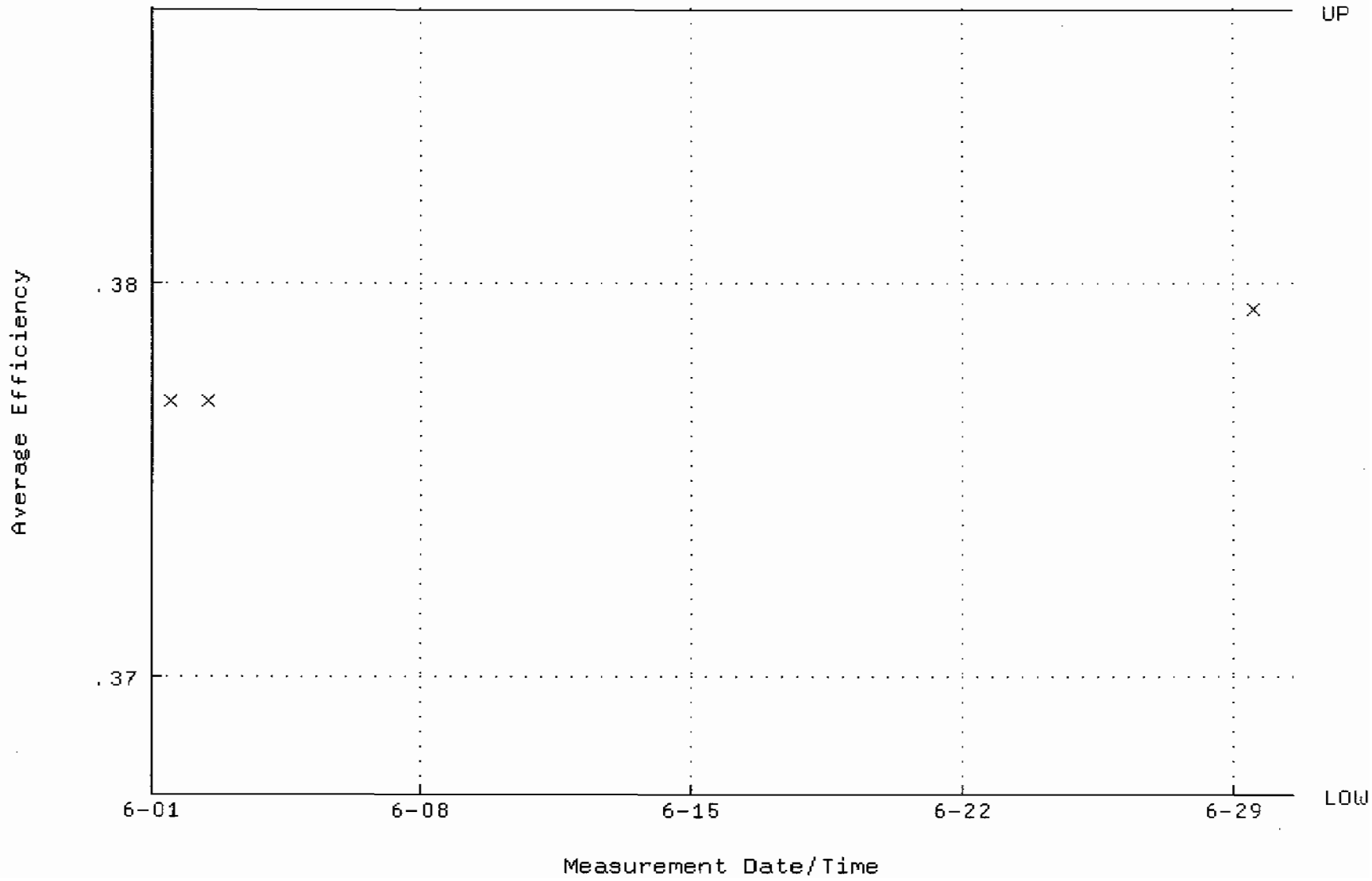

QA filename : DKA100:[ENV_ALPHA.QA.W]W221.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:31:39 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 86.3706 through 95.4622

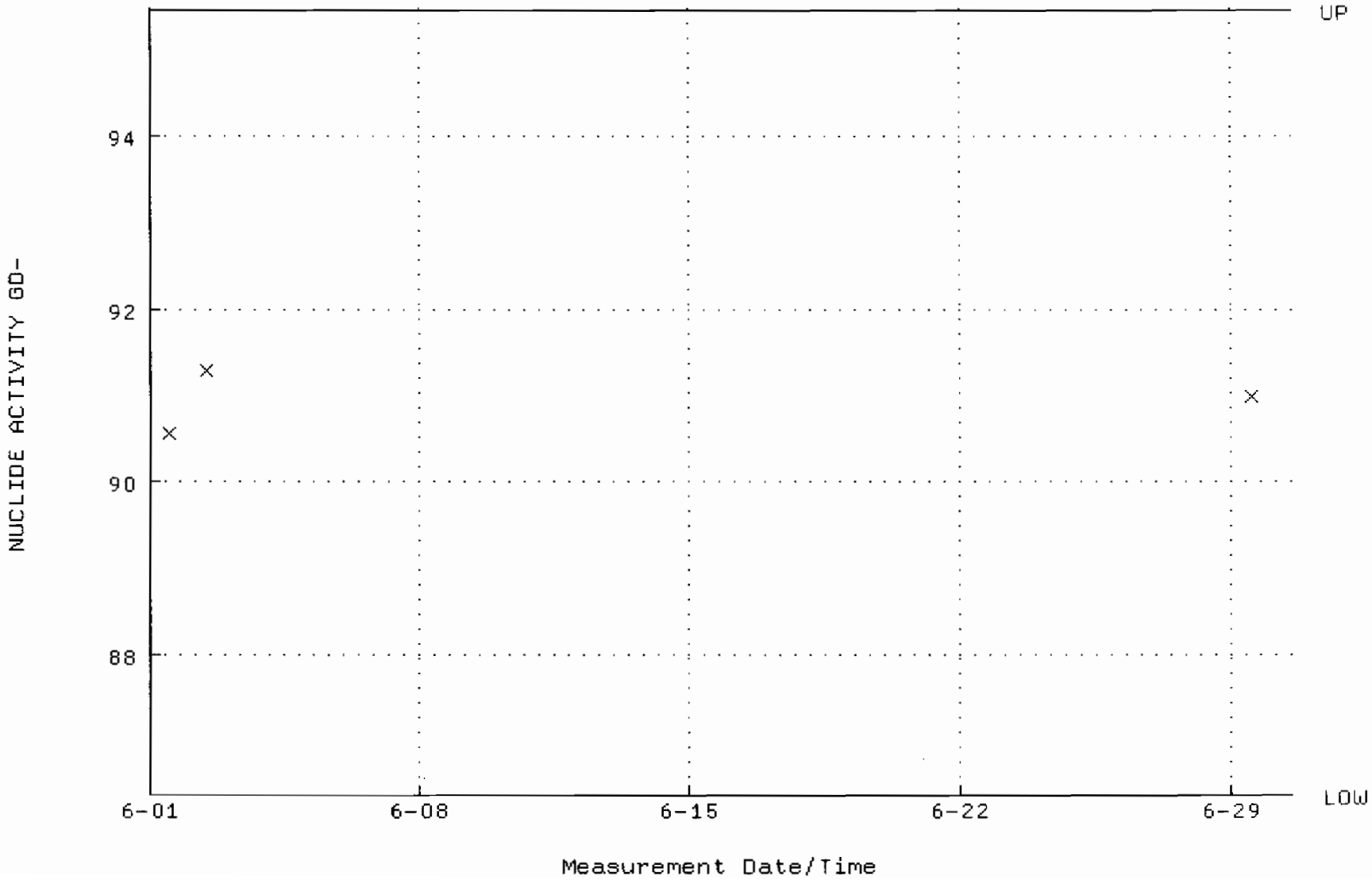

QA filename : DKA100:[ENV_ALPHA.QA.B]B221.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:25 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

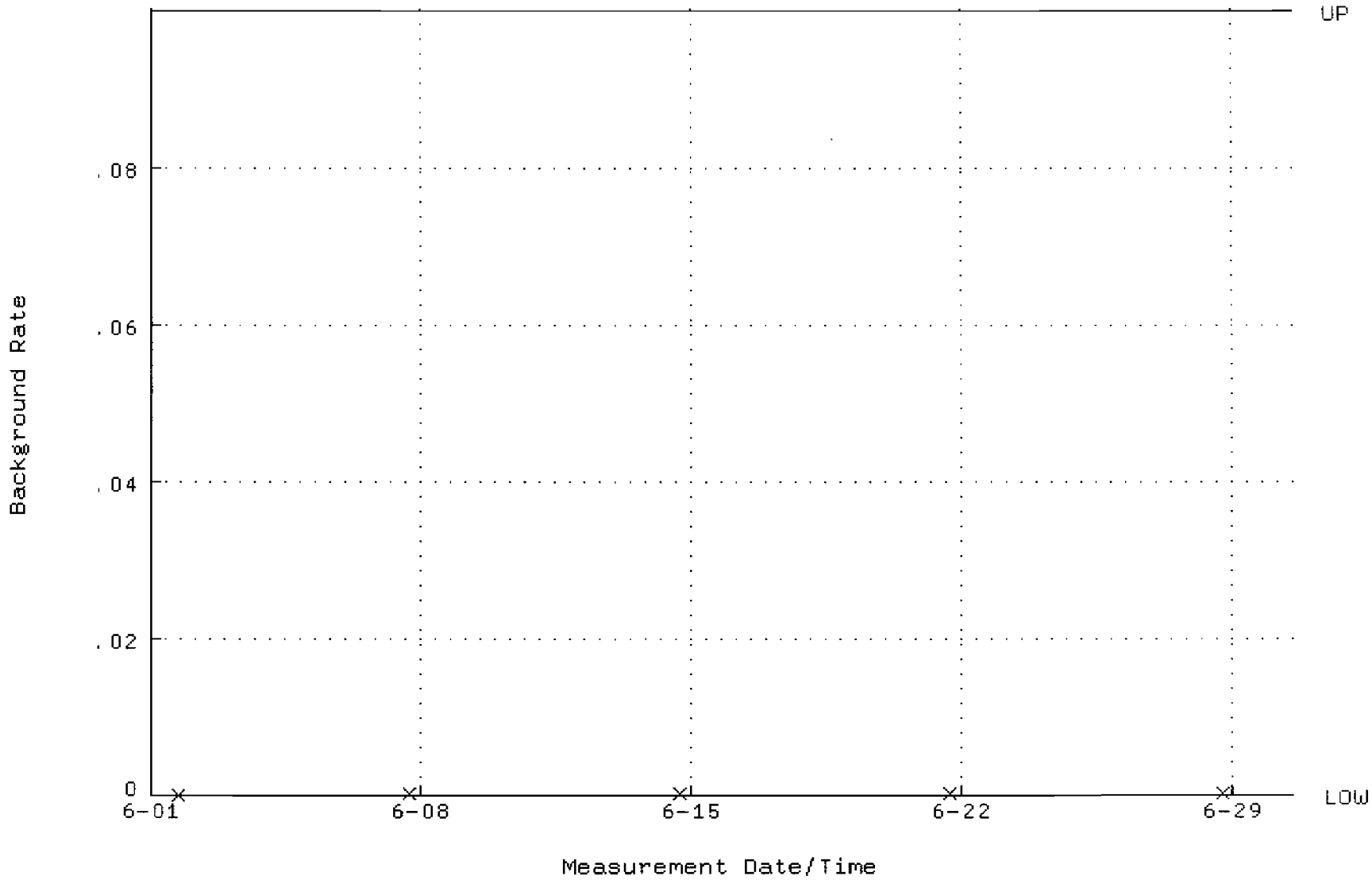

QA filename : DKA100:[ENV_ALPHA.QA.W]W223.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:31:49 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.380076 through 0.400076

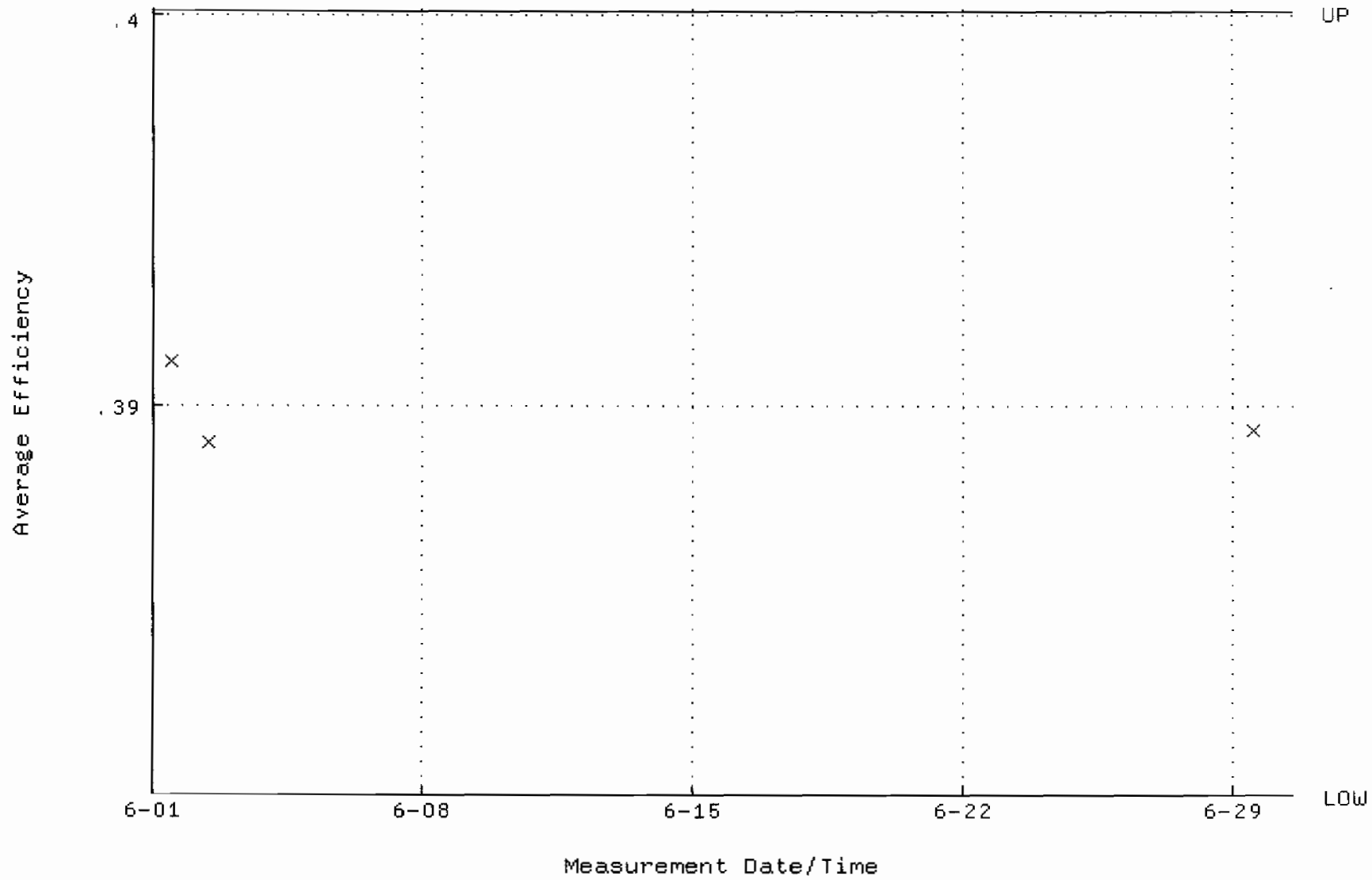

QA filename : DKA100:[ENV_ALPHA.QA.W]W223.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:31:49 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 84.8420 through 93.7728

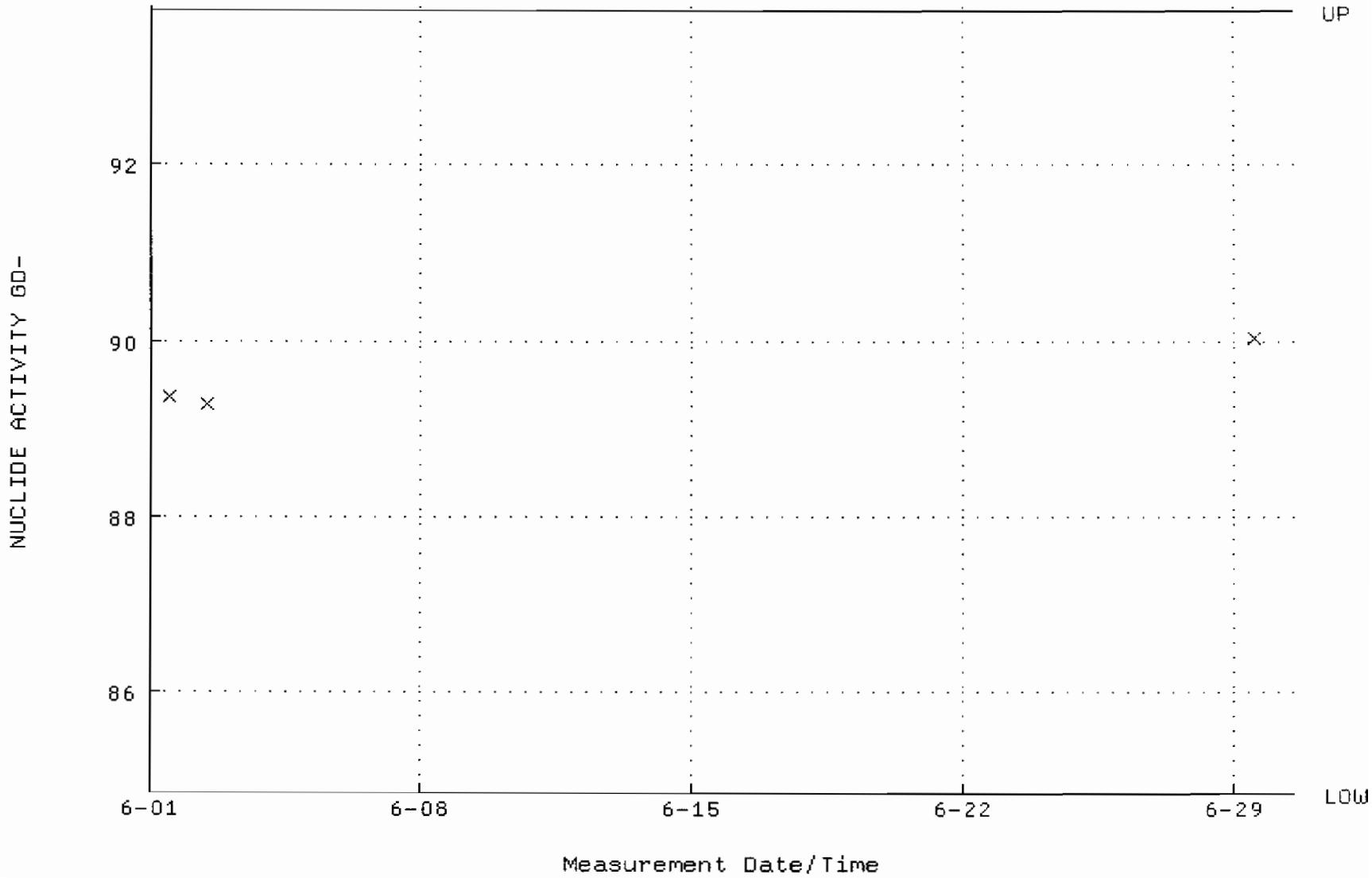

QA filename : DKA100:[ENV_ALPHA.QA.B]B223.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:34 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

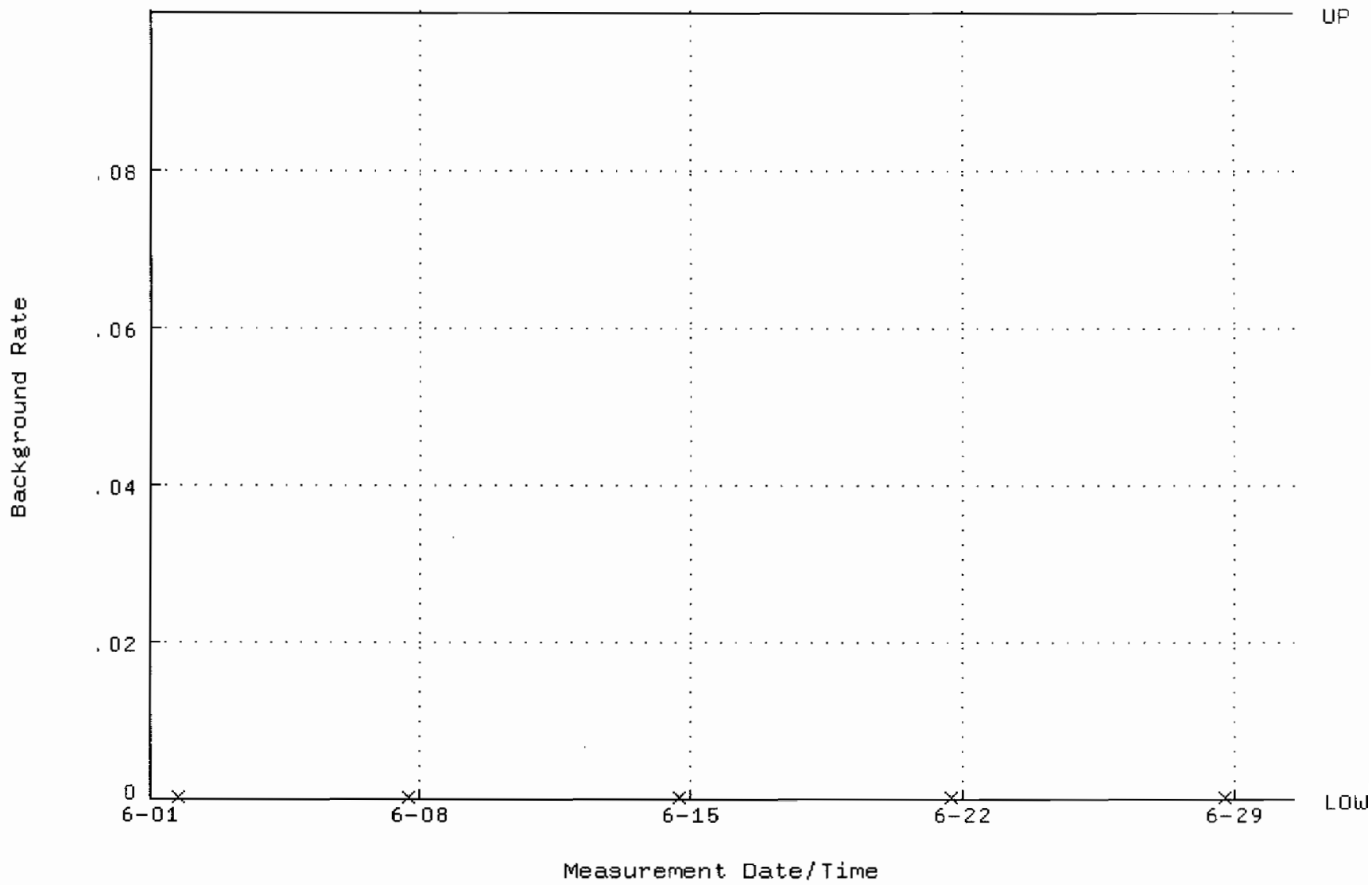

QA filename : DKA100:[ENV_ALPHA.QA.W]W228.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:12 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.372265 through 0.392265

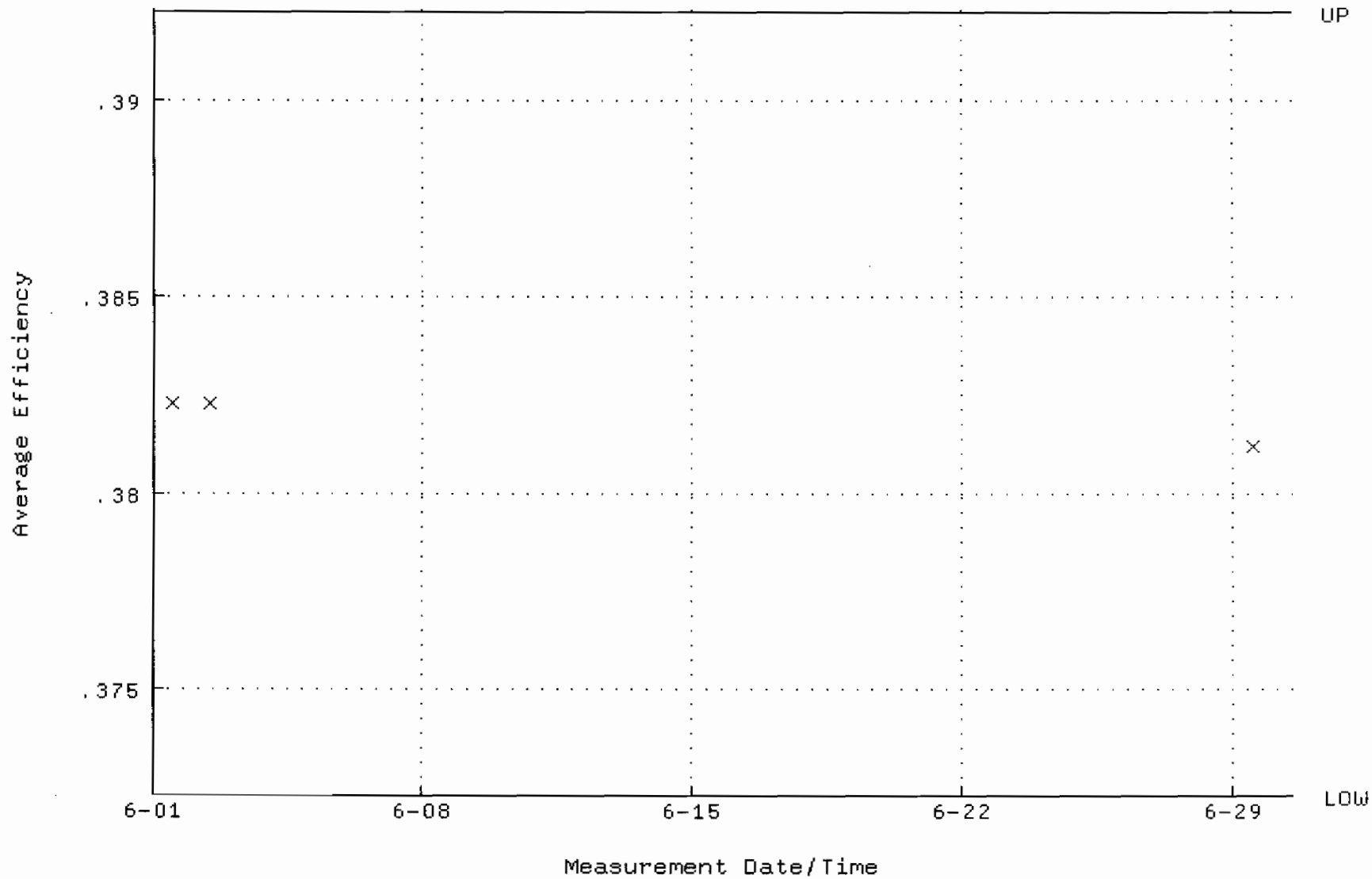

QA filename : DKA100:[ENV_ALPHA.QA.W]W228.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:12 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 85.4480 through 94.4426

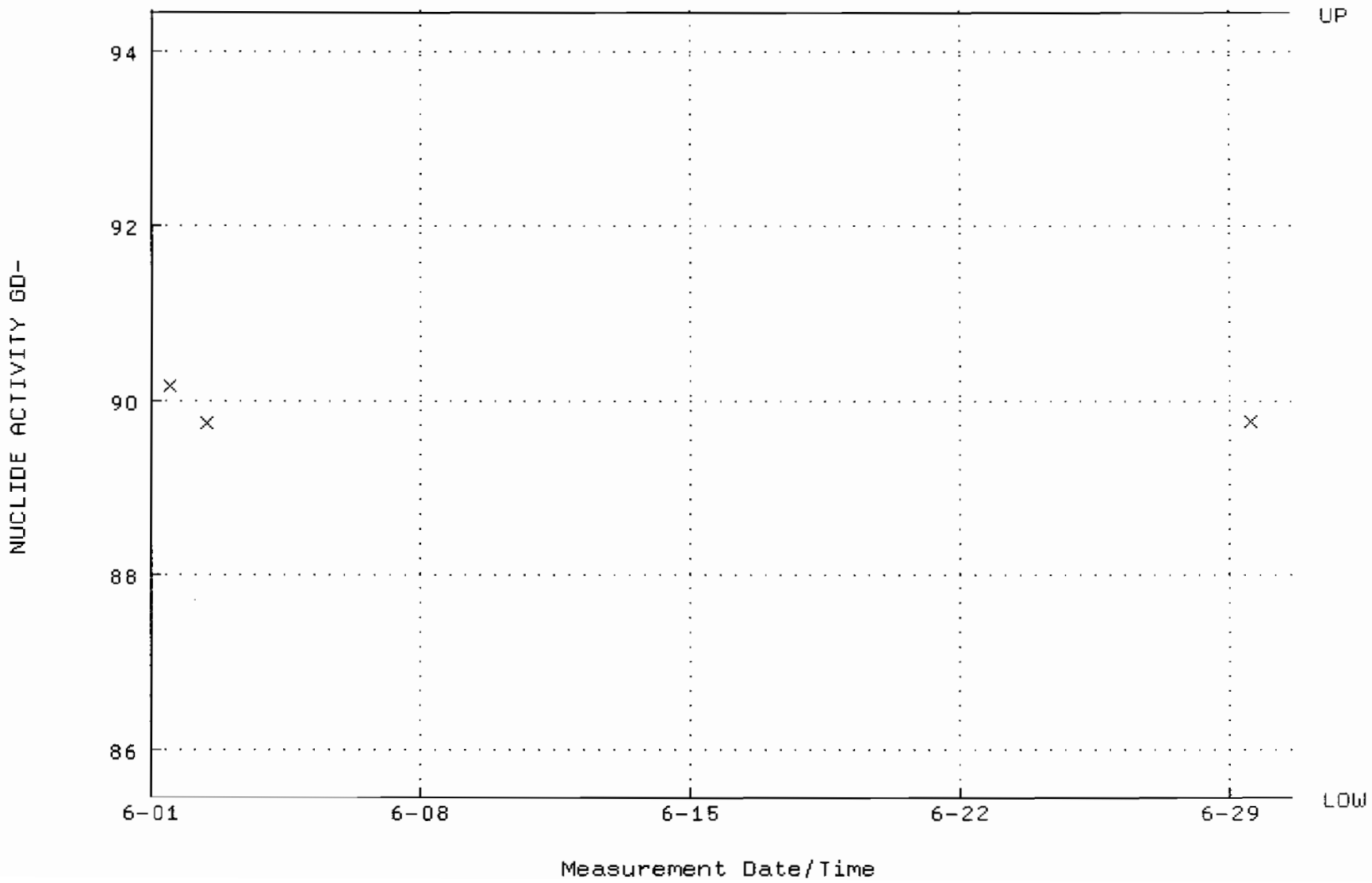

QA filename : DKA100:[ENV_ALPHA.QA.B]B228.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:57 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

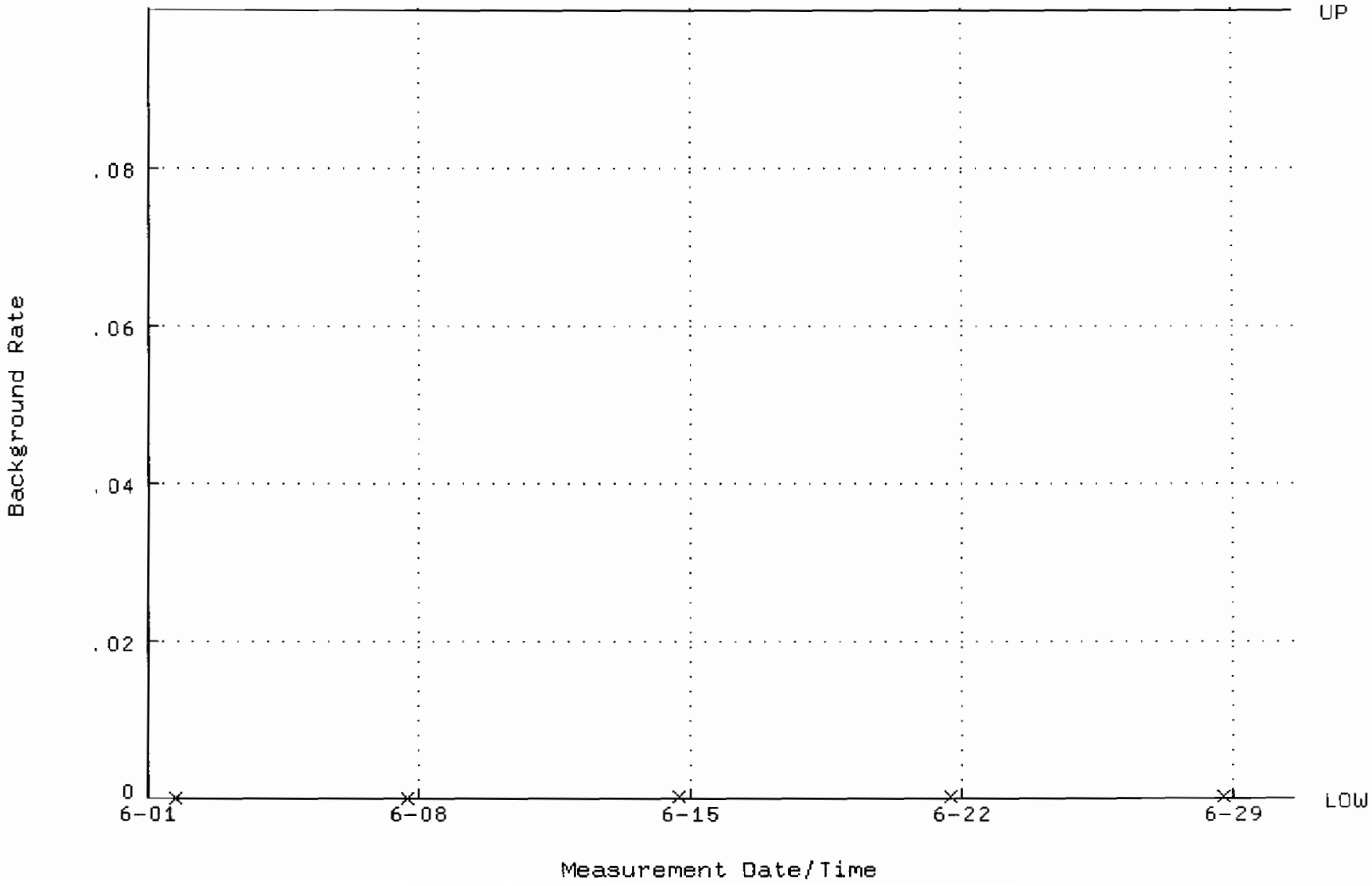

QA filename : DKA100:[ENV_ALPHA.QA.W]W229.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:17 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.371063 through 0.391063

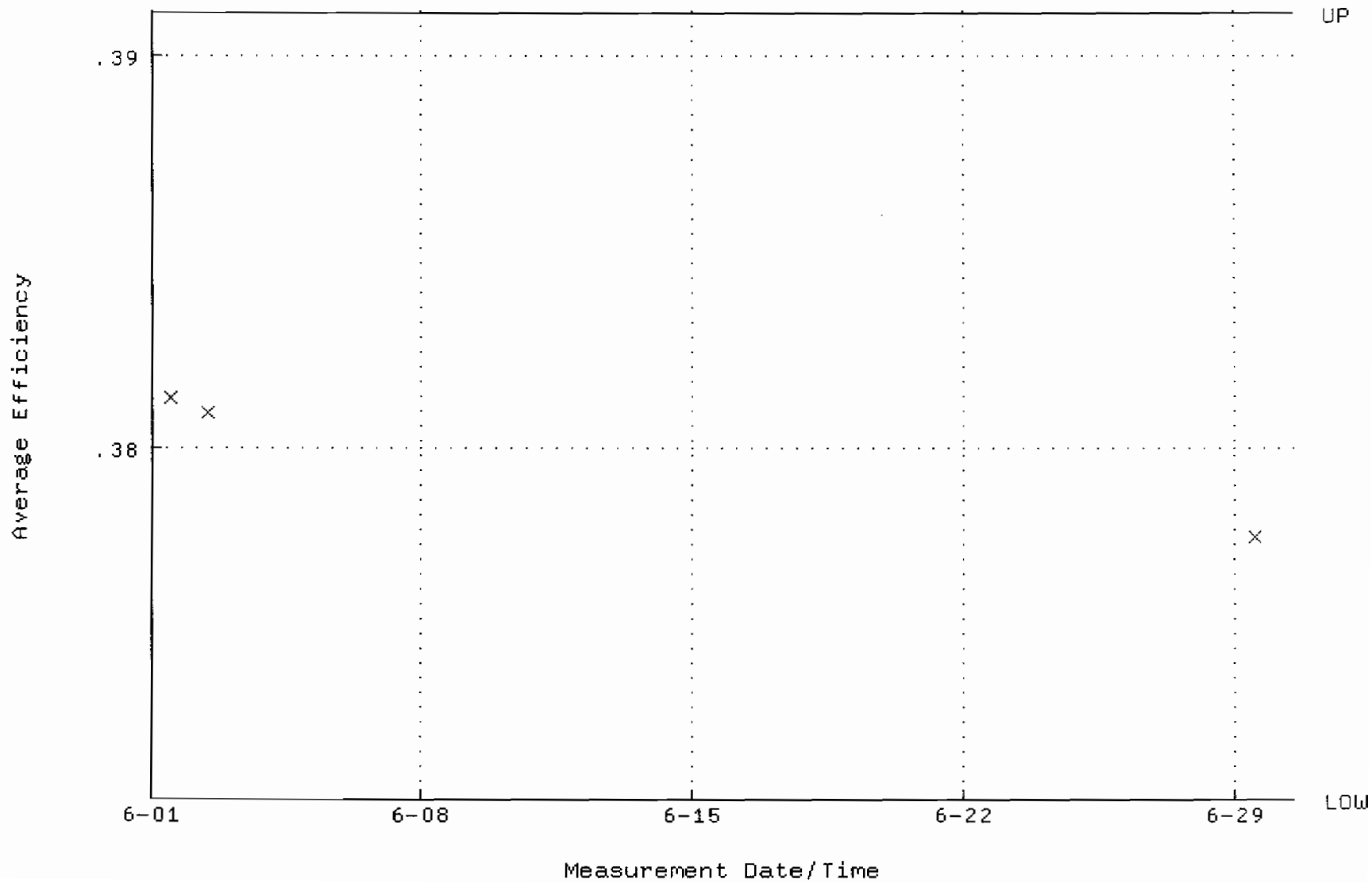

QA filename : DKA100:[ENV_ALPHA.QA.W]W229.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:17 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 87.6635 through 96.8913

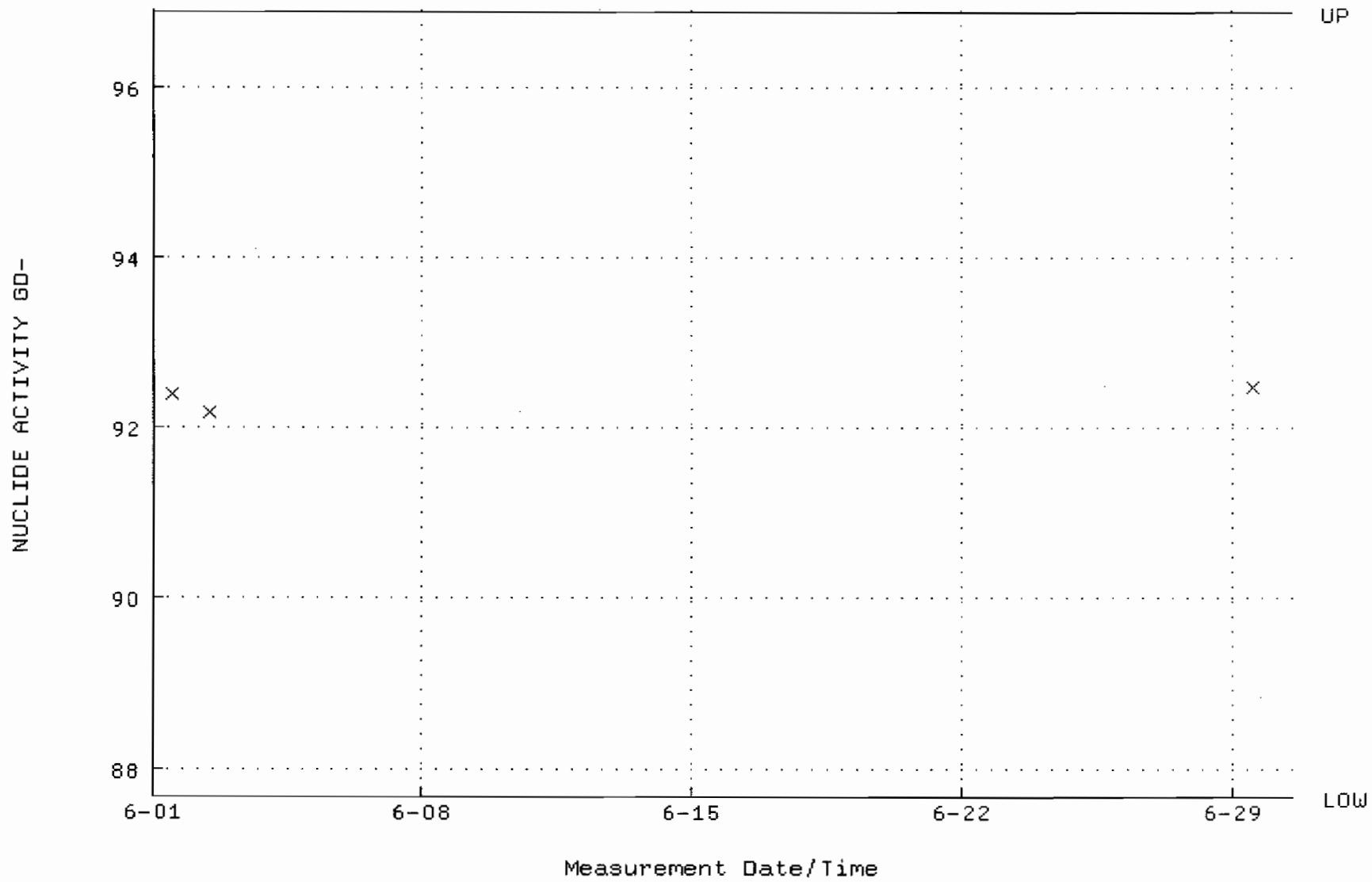

QA filename : DKA100:[ENV_ALPHA.QA.B]B229.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:45:01 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

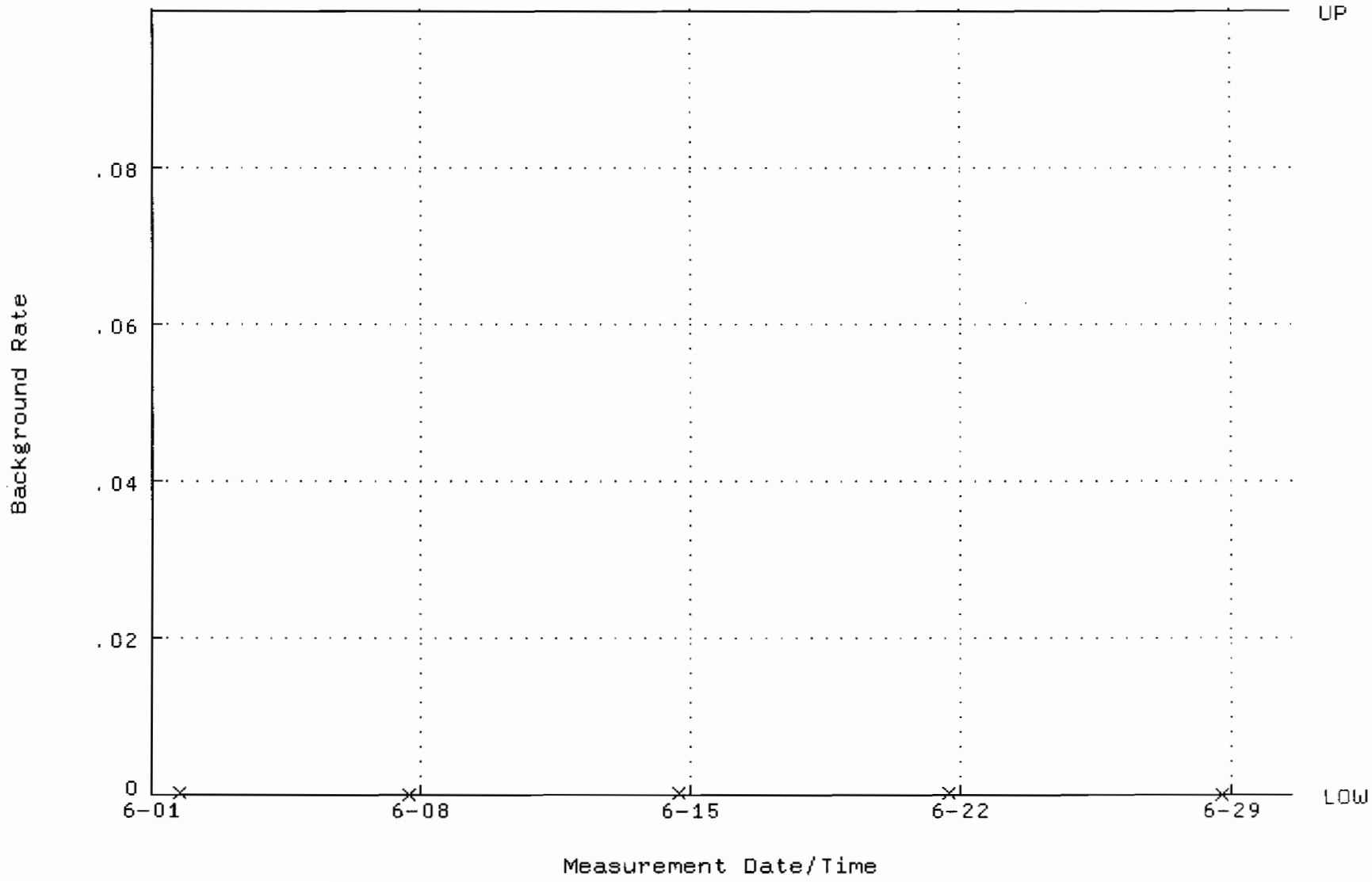

QA filename : DKA100:[ENV_ALPHA.QA.W]W230.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:22 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.363845 through 0.383845

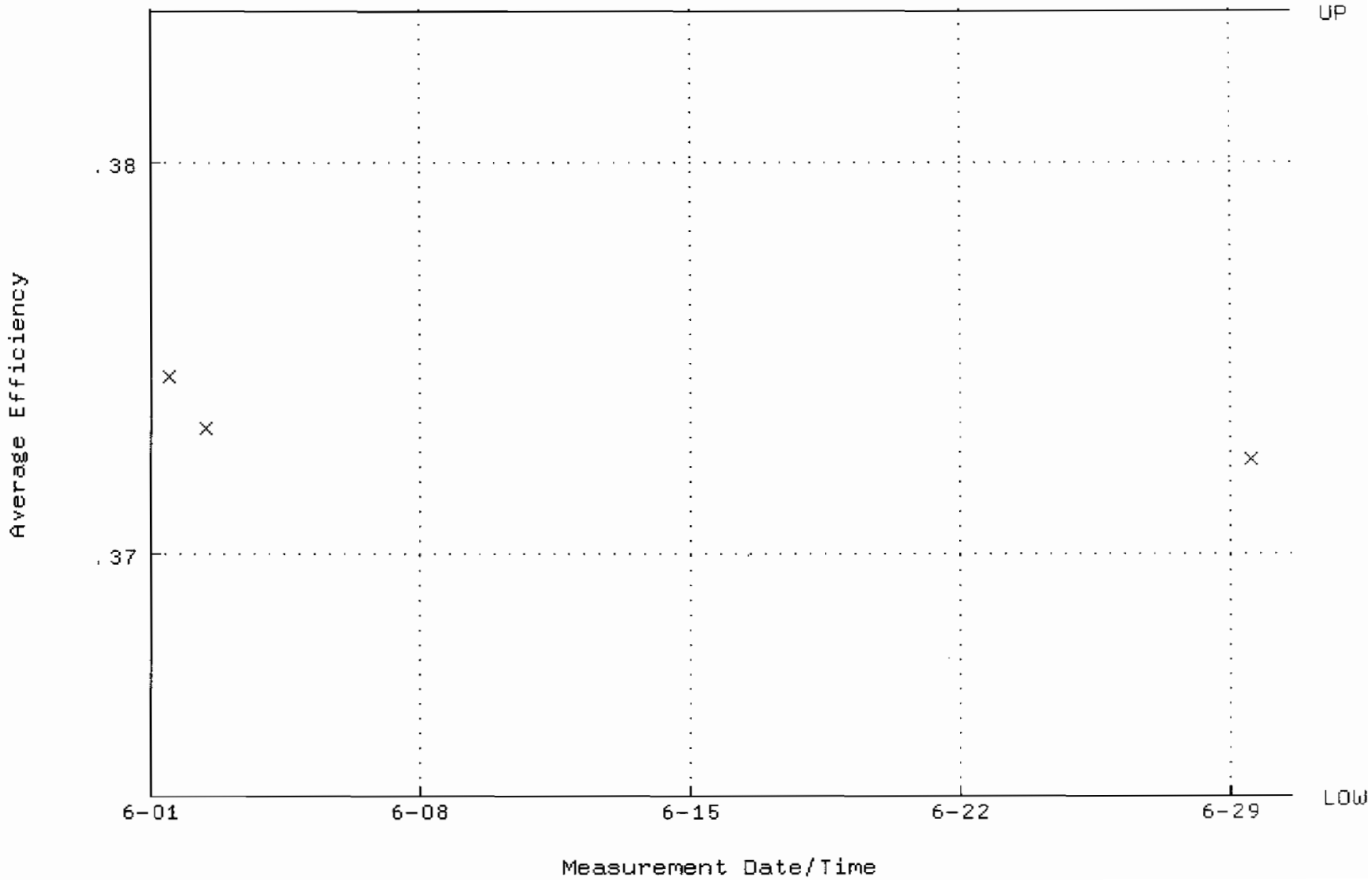

QA filename : DKA100:[ENV_ALPHA.QA.W]W230.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:22 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 86.9924 through 96.1494

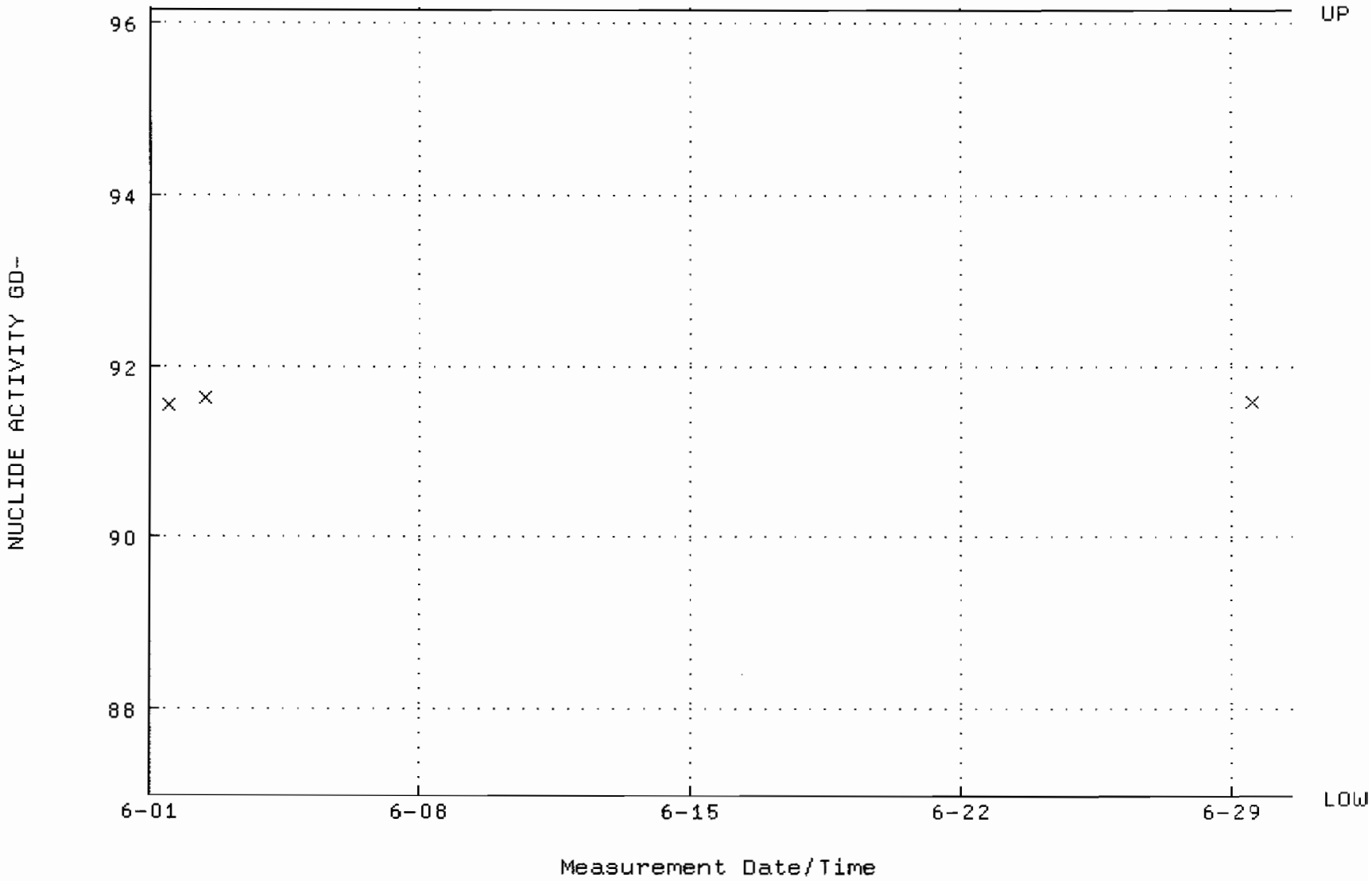

QA filename : DKA100:[ENV_ALPHA.QA.B]B230.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:45:05 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

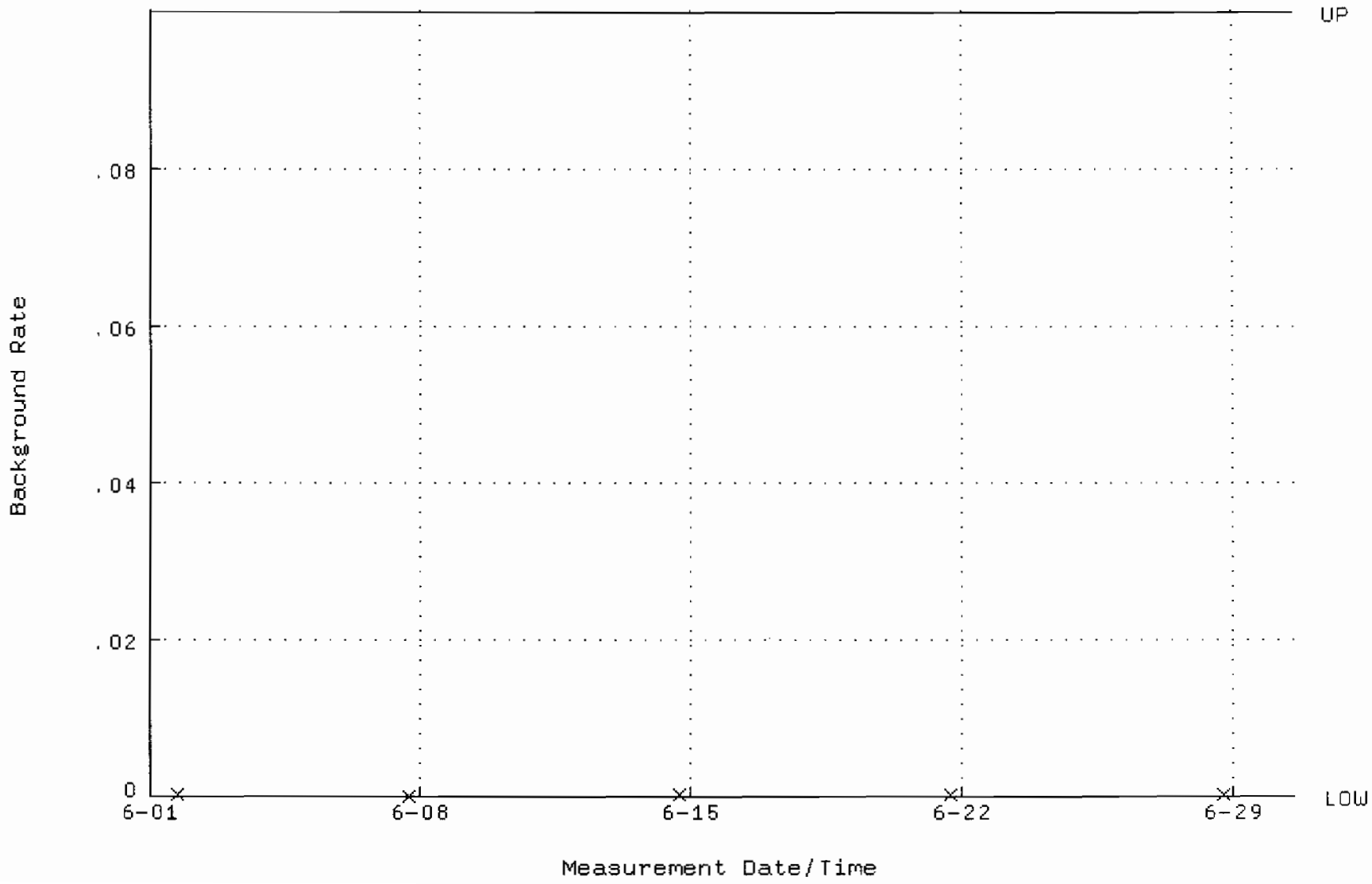

QA filename : DKA100:[ENV_ALPHA.QA.W]W239.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:33:07 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.382736 through 0.402736

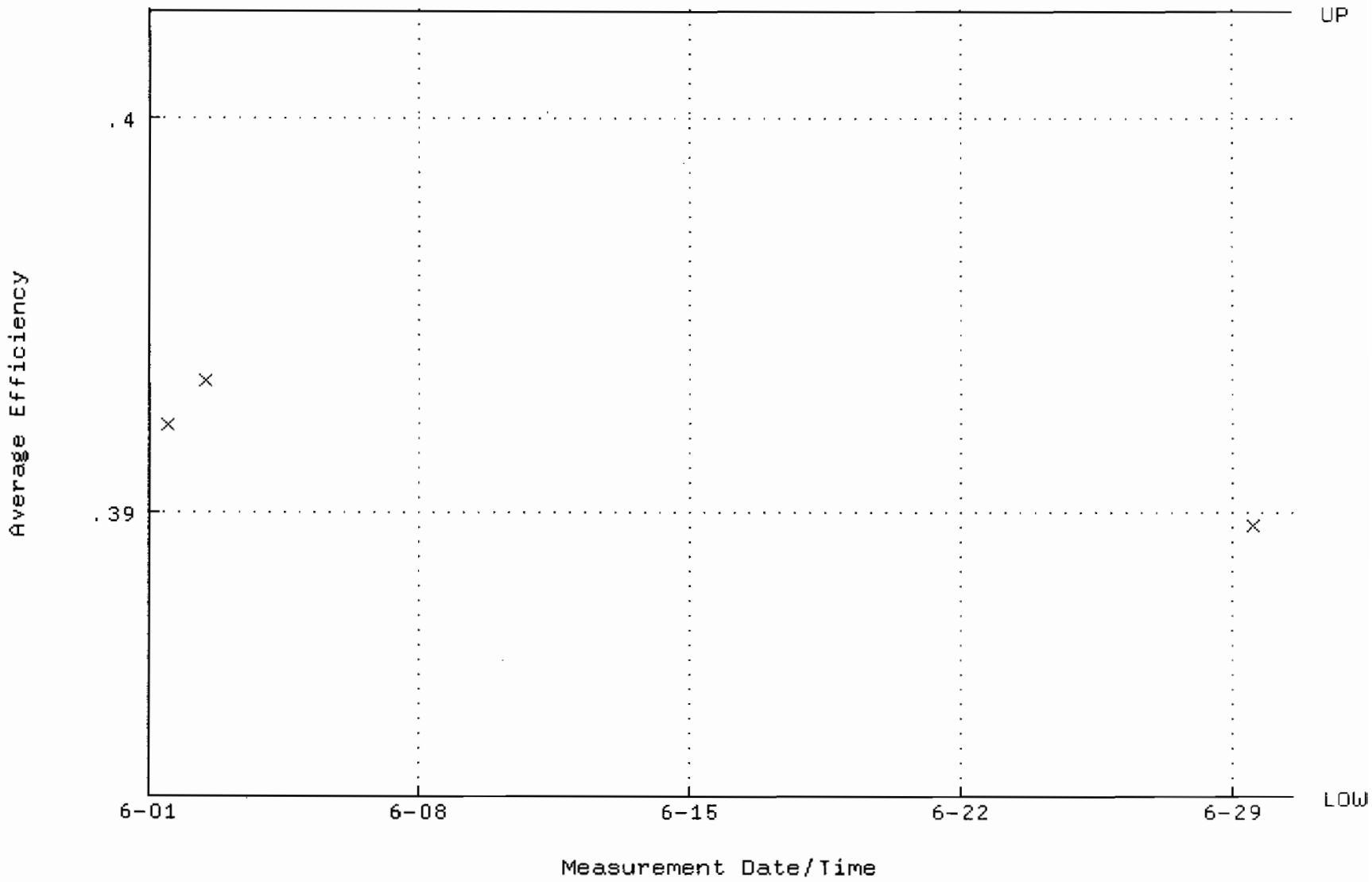

QA filename : DKA100:[ENV_ALPHA.QA.W]W239.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:33:07 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 81.2563 through 89.8096

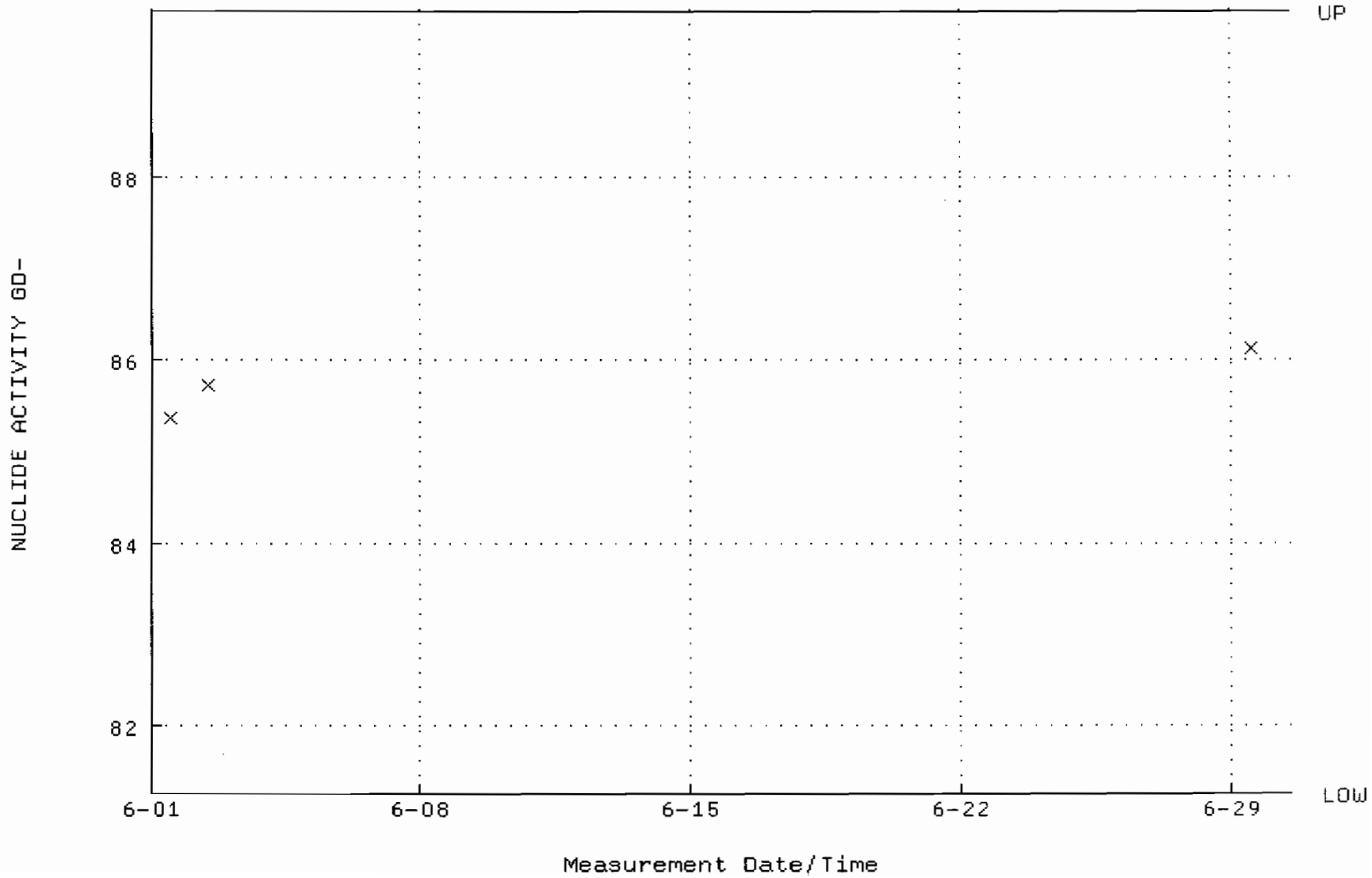

QA filename : DKA100:[ENV_ALPHA.QA.B]B239.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:46:15 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

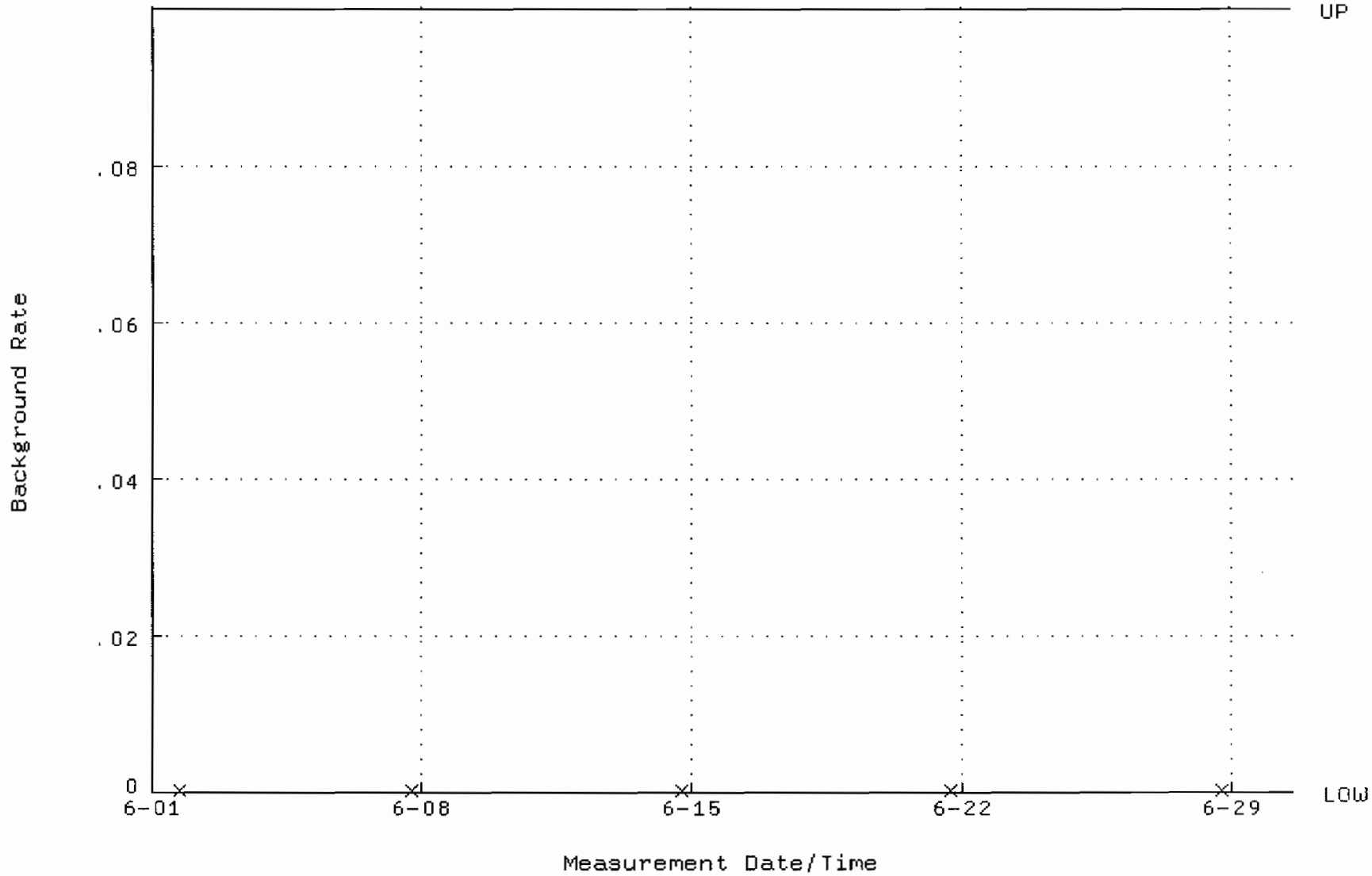

QA filename : DKA100:[ENV_ALPHA.QA.W]W240.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:33:12 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.369390 through 0.389390

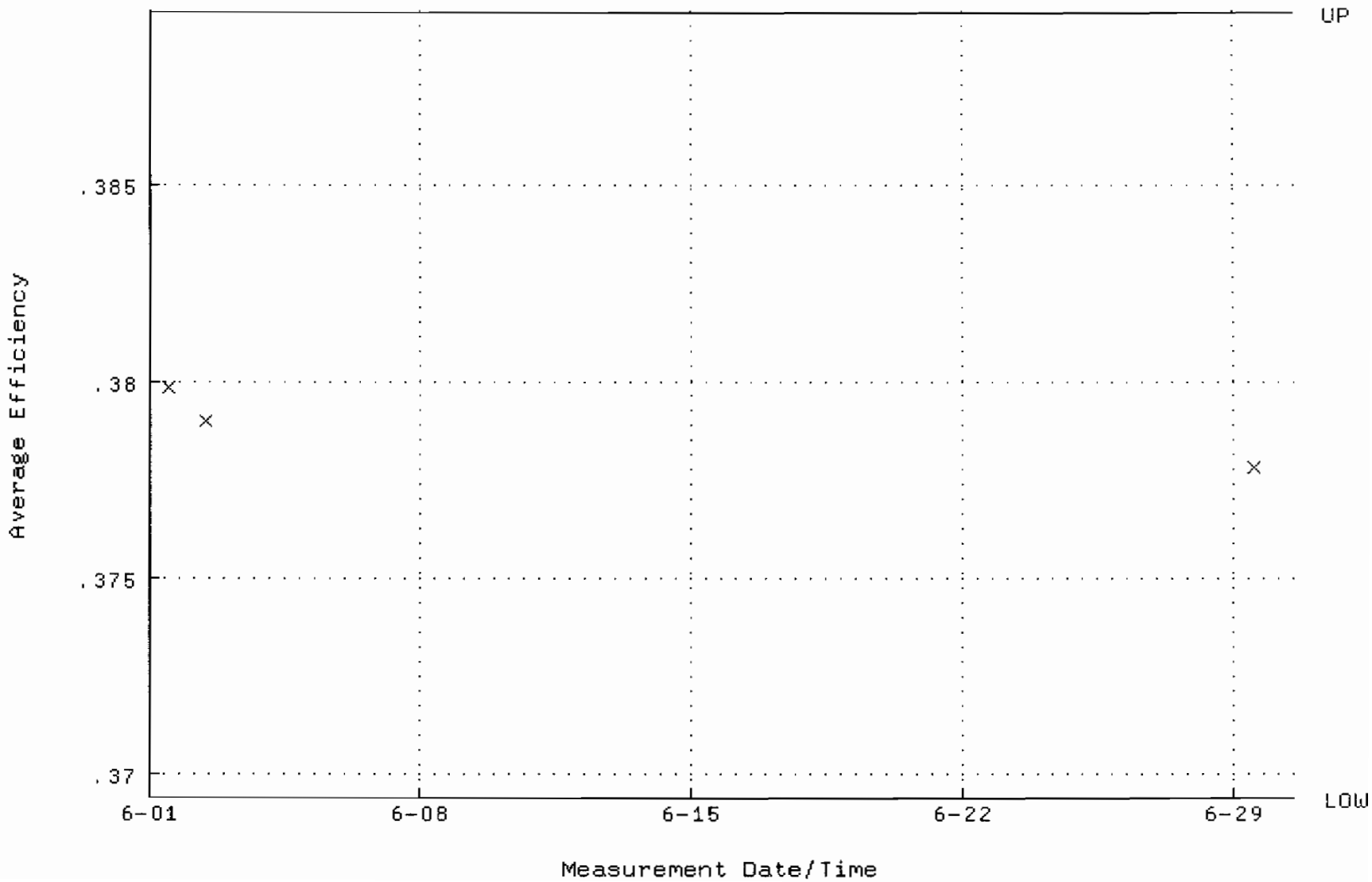

QA filename : DKA100:[ENV_ALPHA.QA.W]W240.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:33:12 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 82.2336 through 90.8898

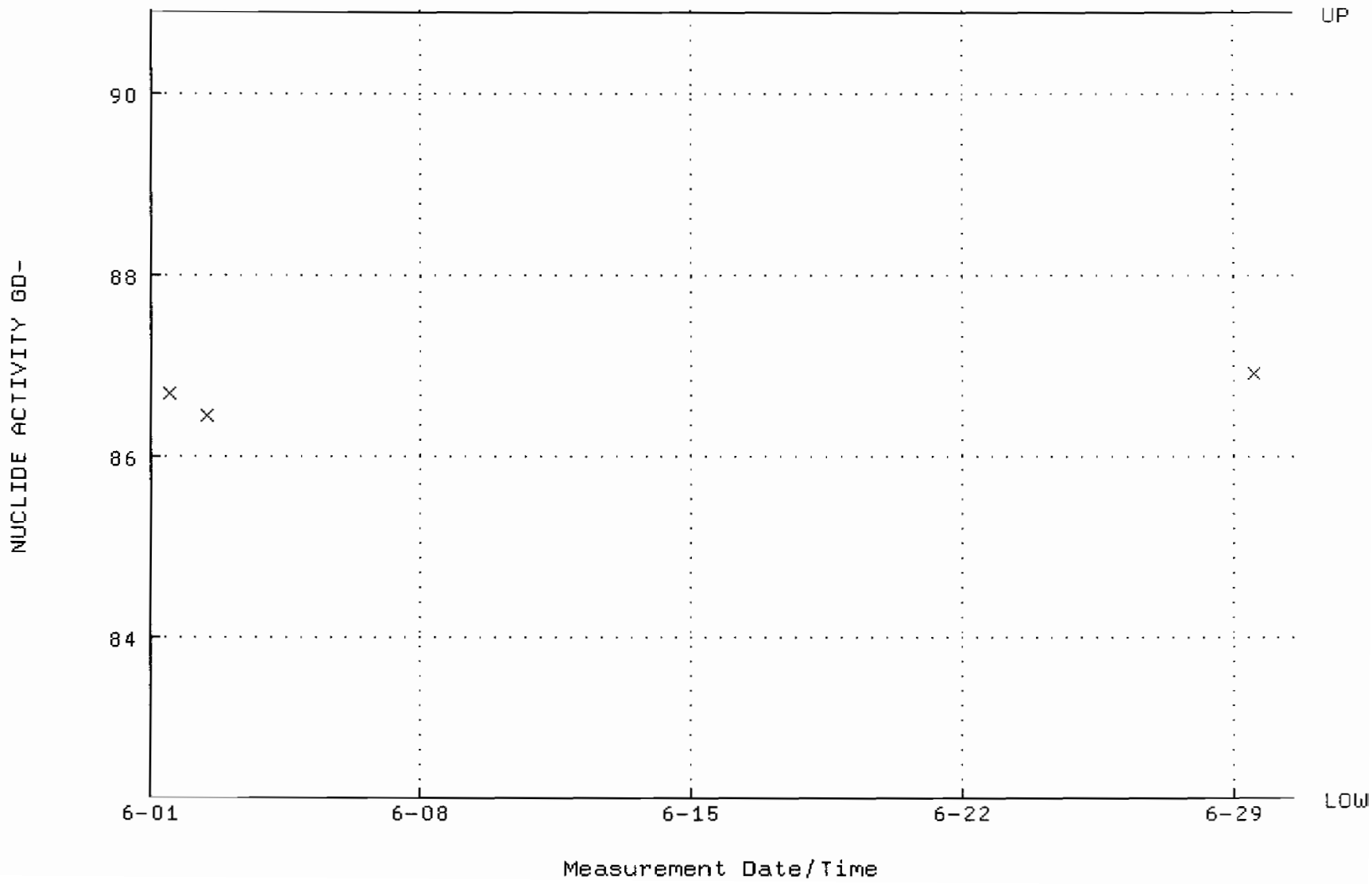

QA filename : OKA100:[ENV_ALPHA.QA.B]B240.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:46:21 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

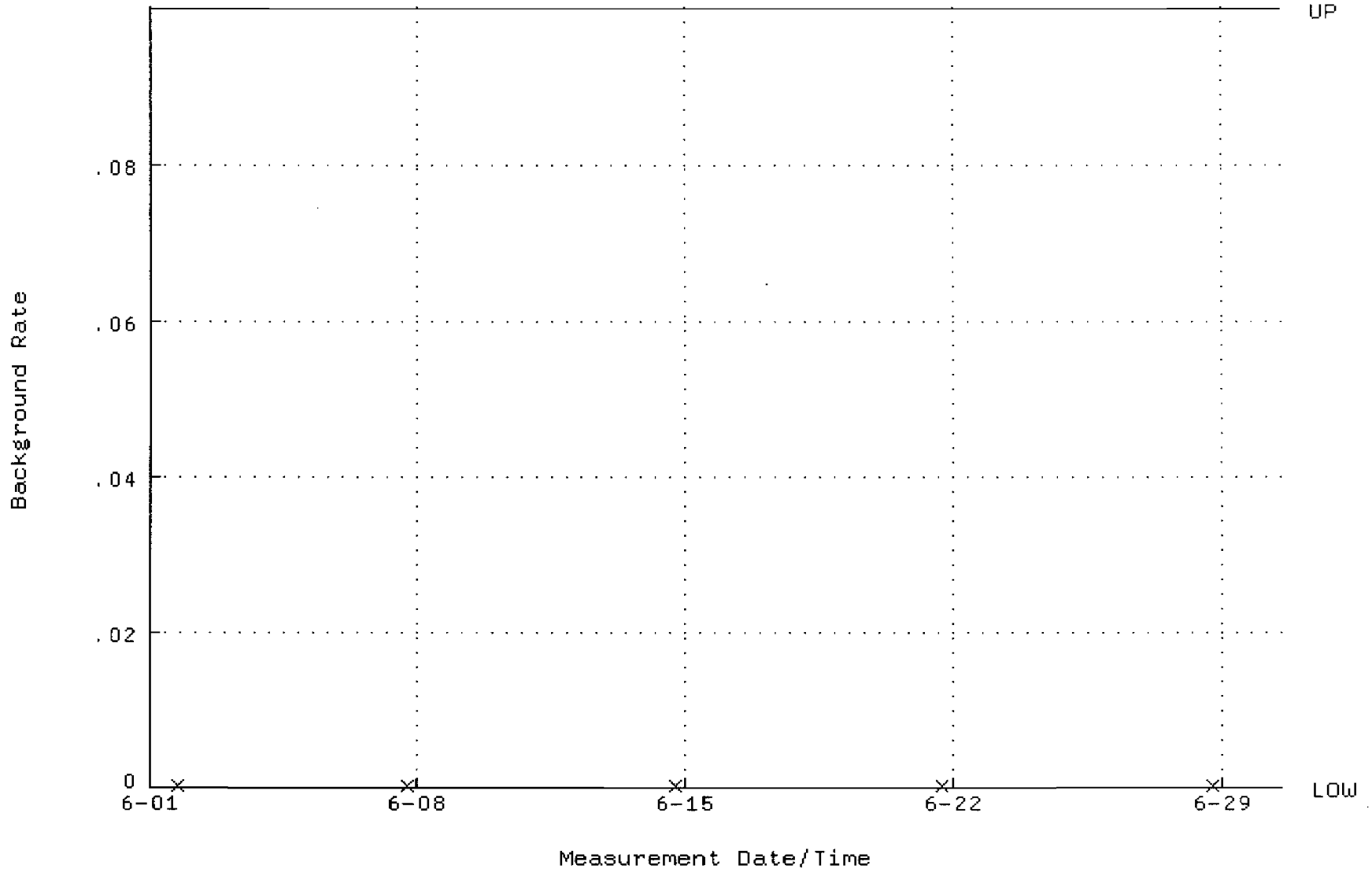

QA filename : DKA100:[ENV_ALPHA.QA.W]W241.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:33:16 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.384592 through 0.404592

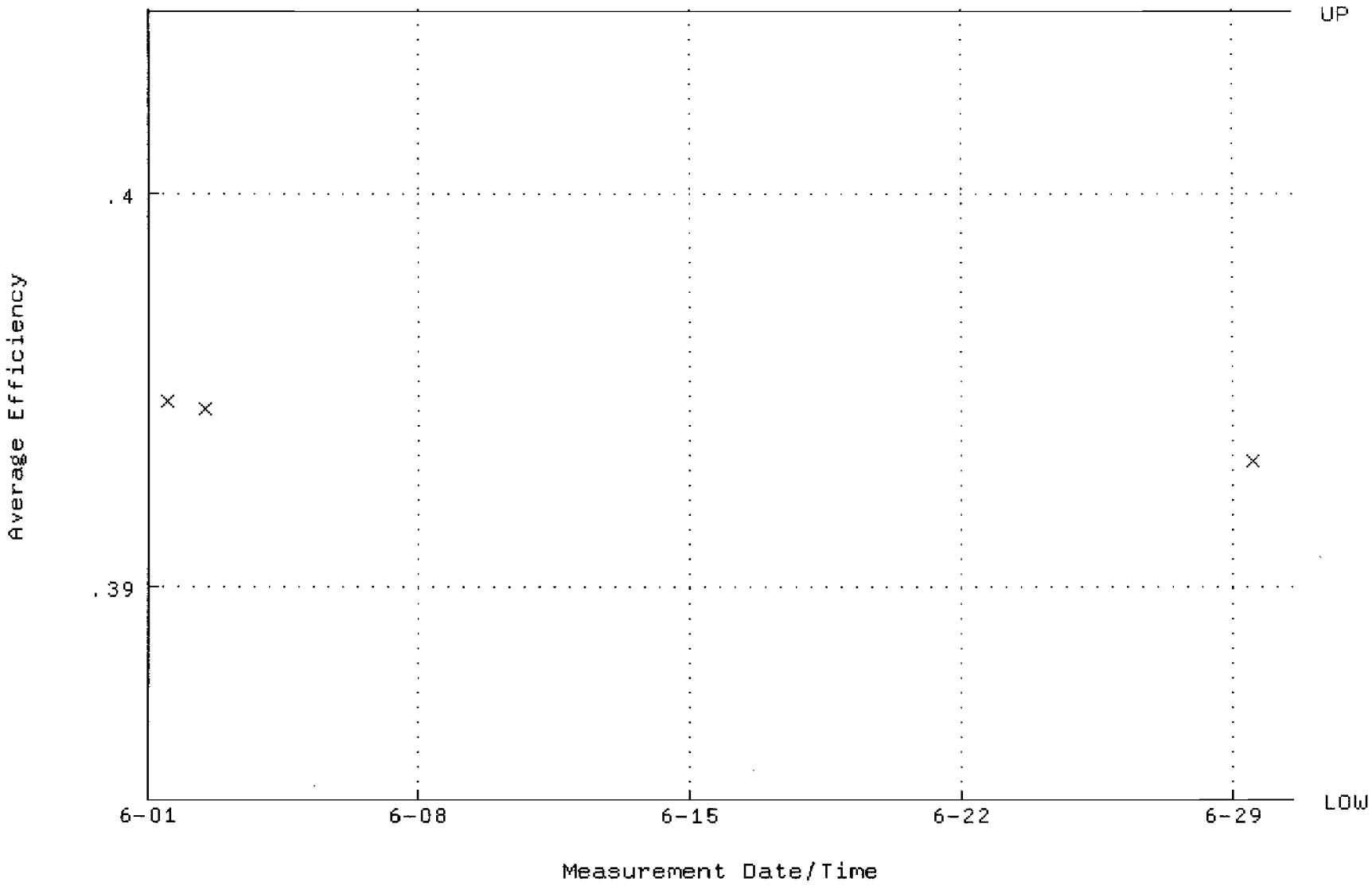

QA filename : DKA100:[ENV_ALPHA.QA.W]W241.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:33:16 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 79.9196 through 88.3322

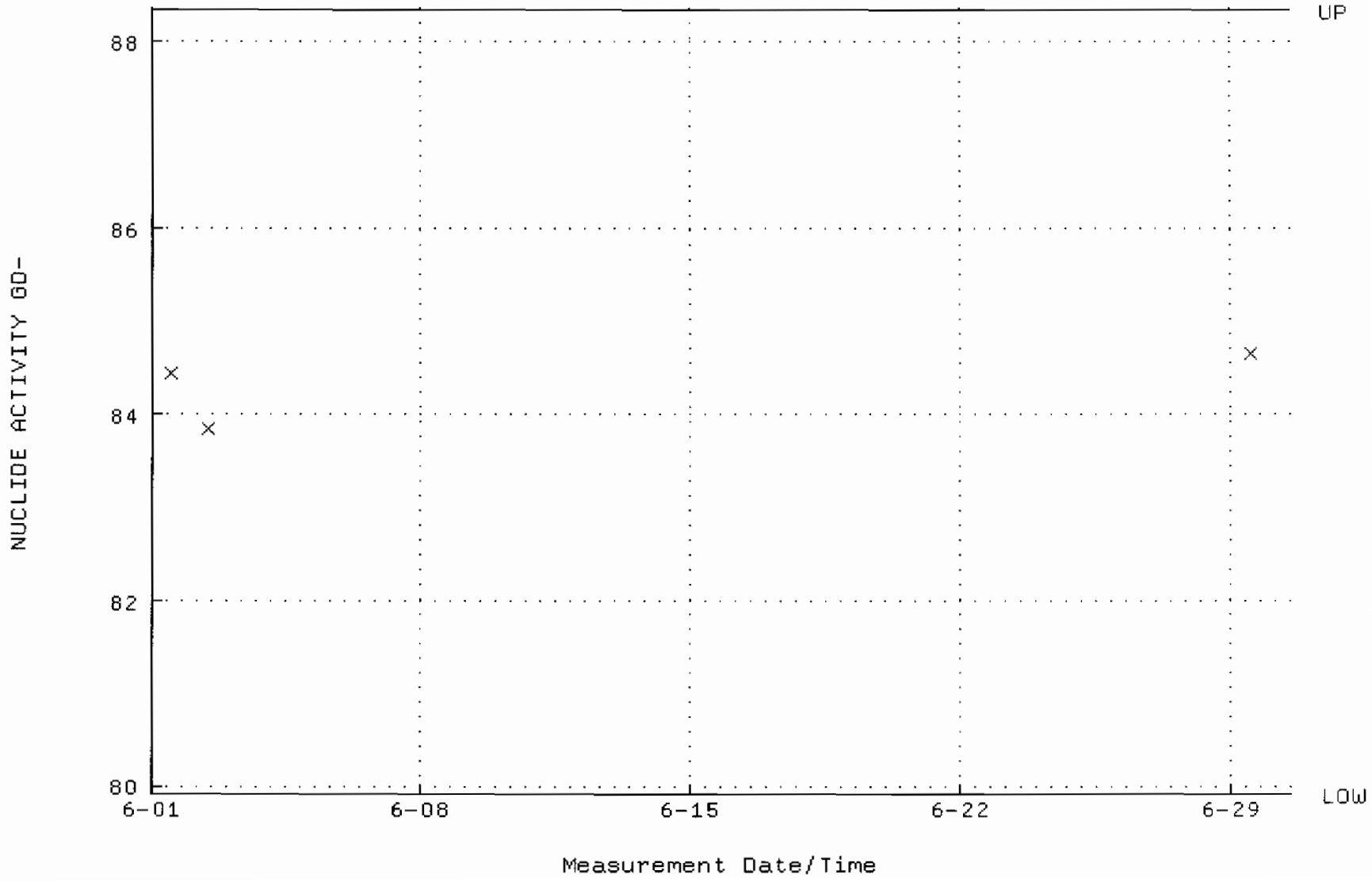

QA filename : DKA100:[ENV_ALPHA.QA.B]B241.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:46:27 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

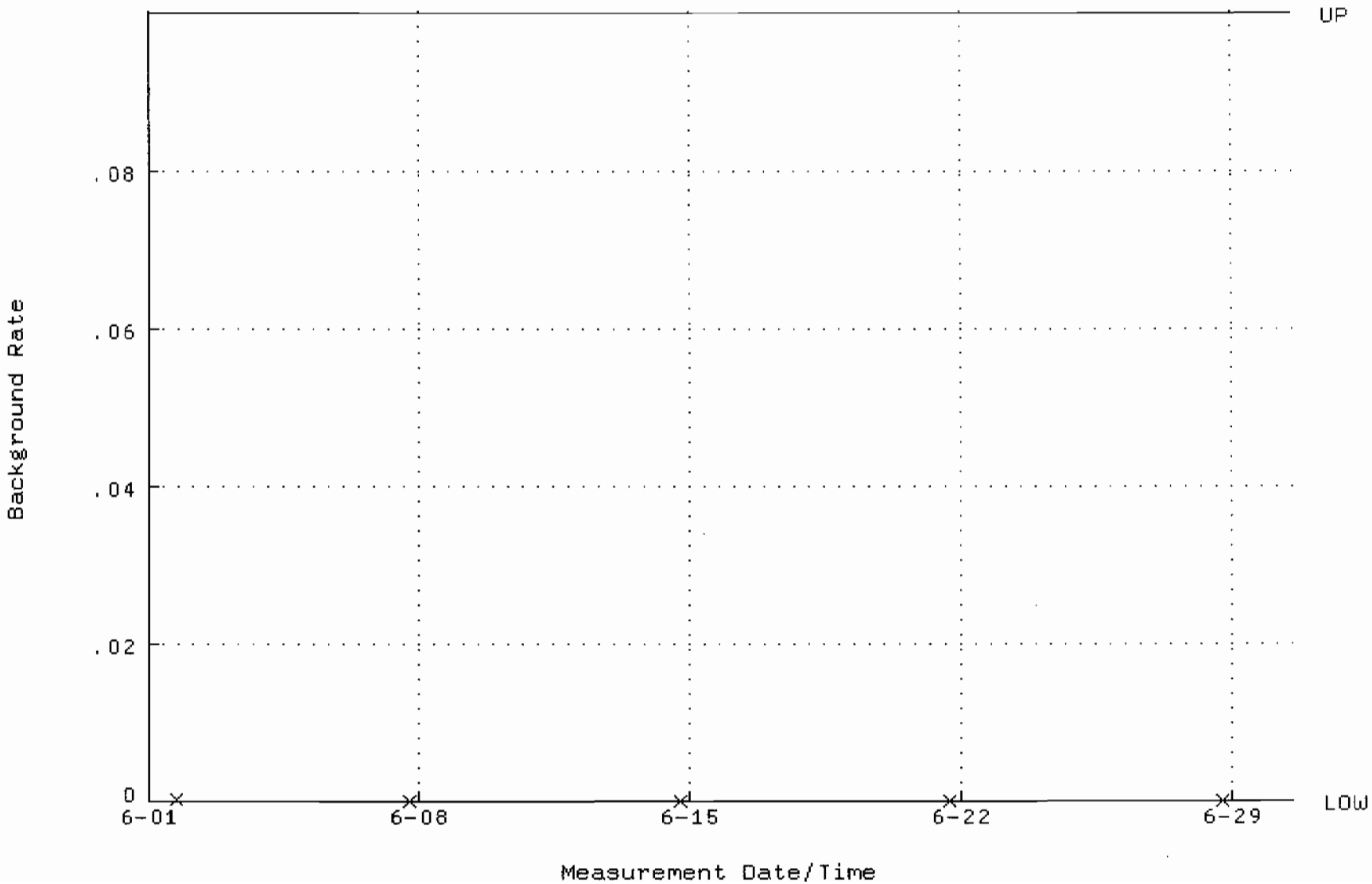

QA filename : DKA100:[ENV_ALPHA.QA.W]W242.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:33:20 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.382221 through 0.402221

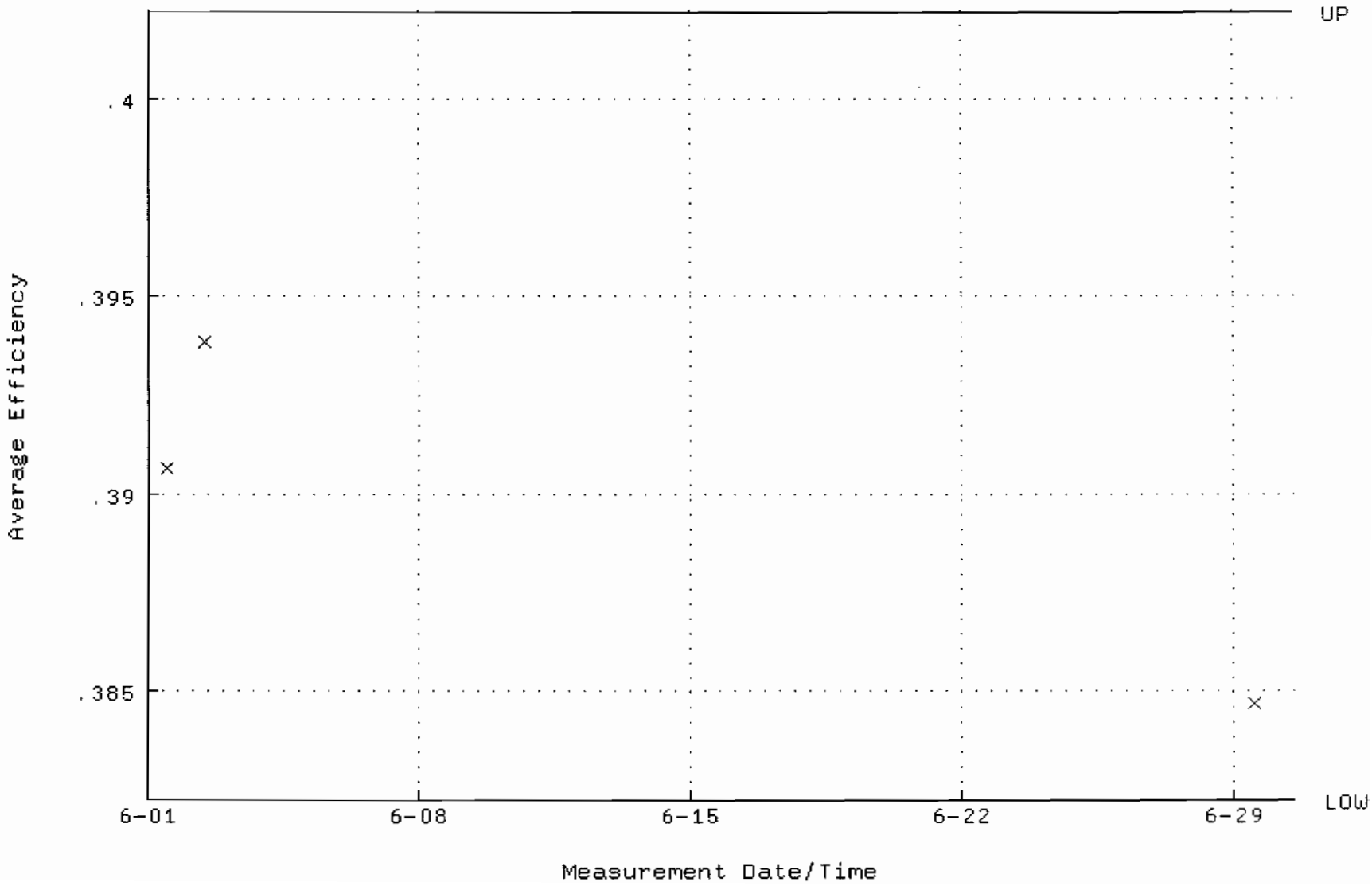

QA filename : DKA100:[ENV_ALPHA.QA.W]W242.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:33:20 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 83.9394 through 92.7752

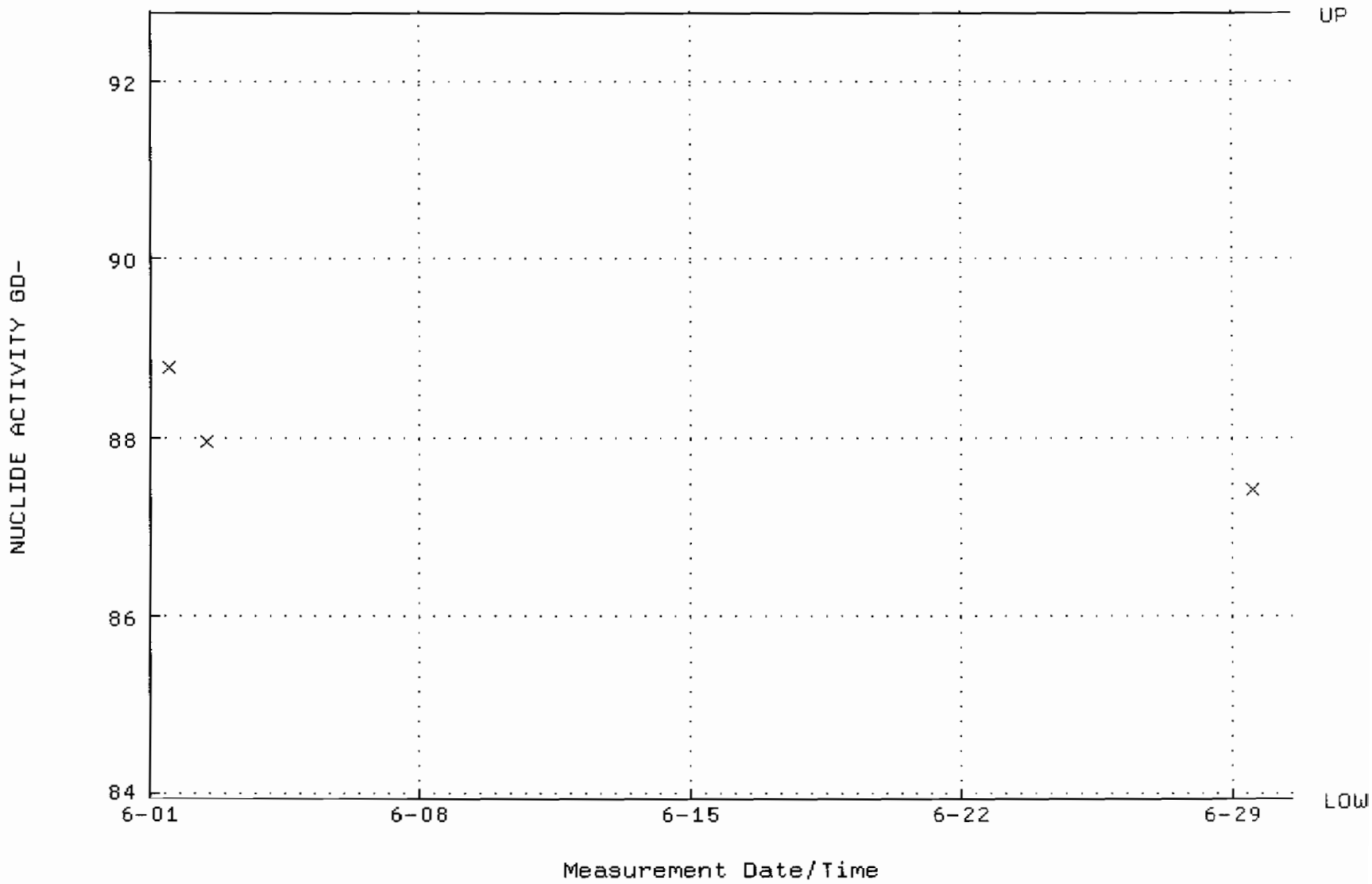

QA filename : DKA100:[ENV_ALPHA.QA.B]B242.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:46:32 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

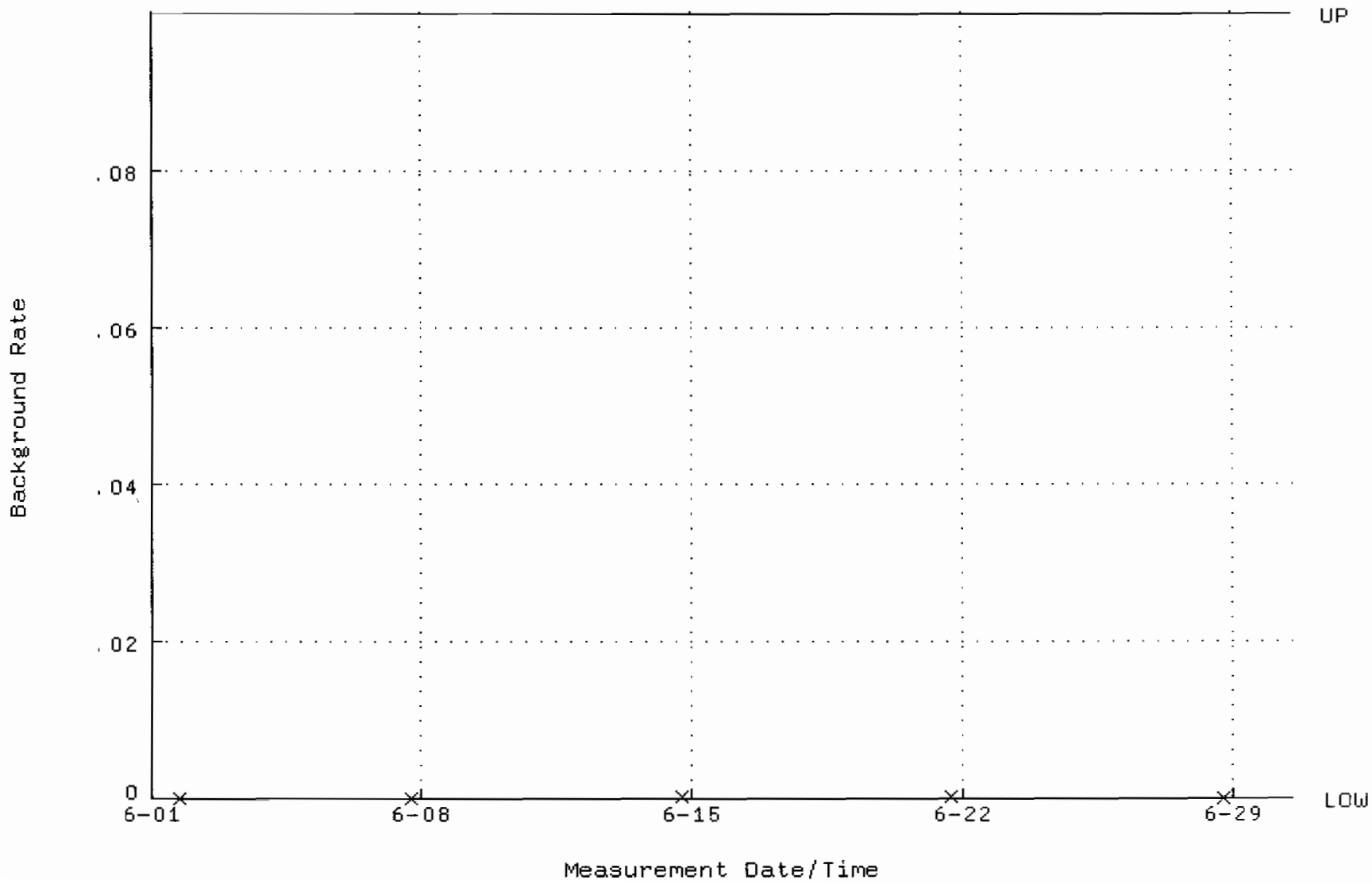

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM02_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:44 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

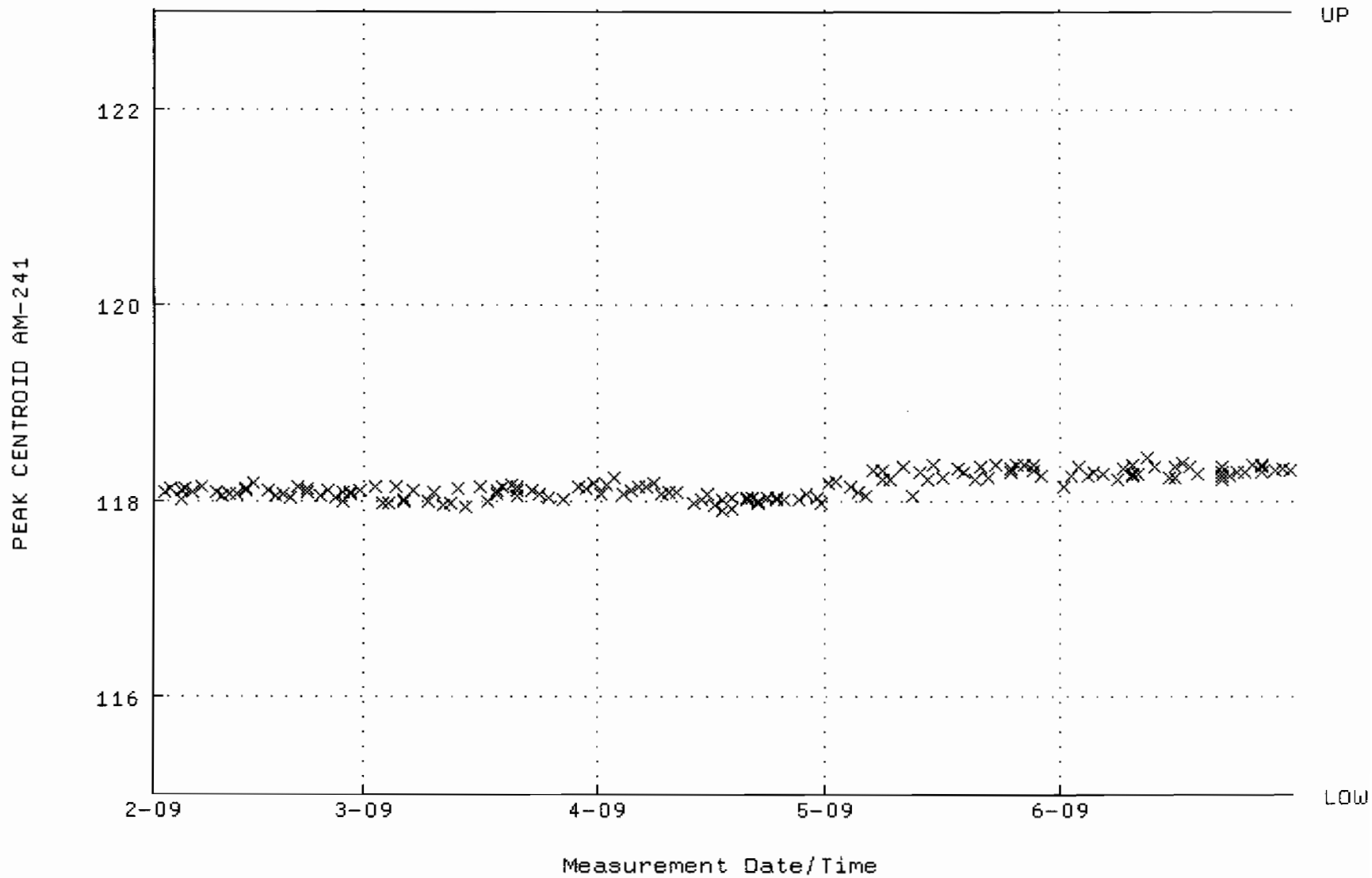

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM02.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.93670 through 2.08210

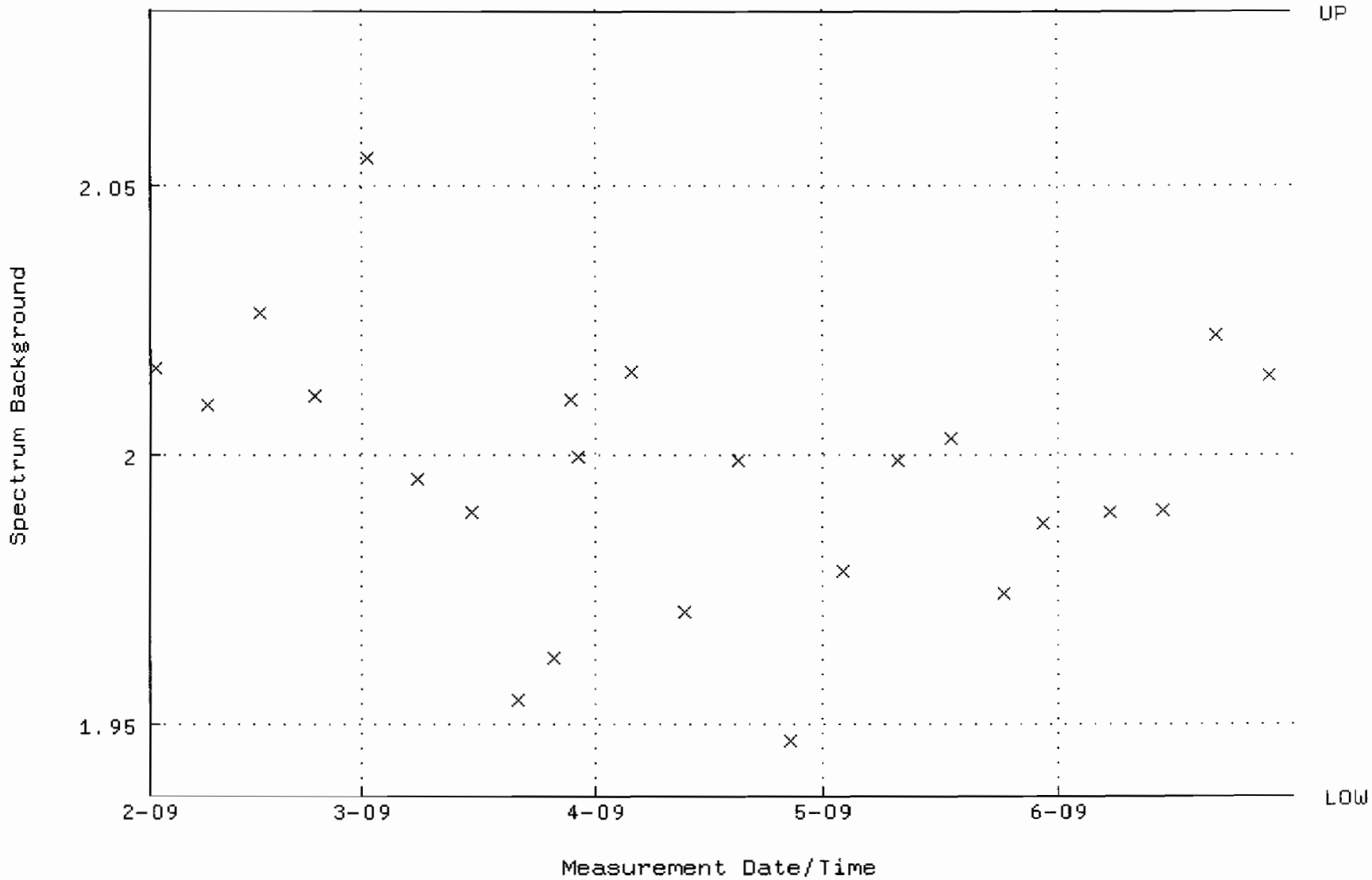

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM07_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:09 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

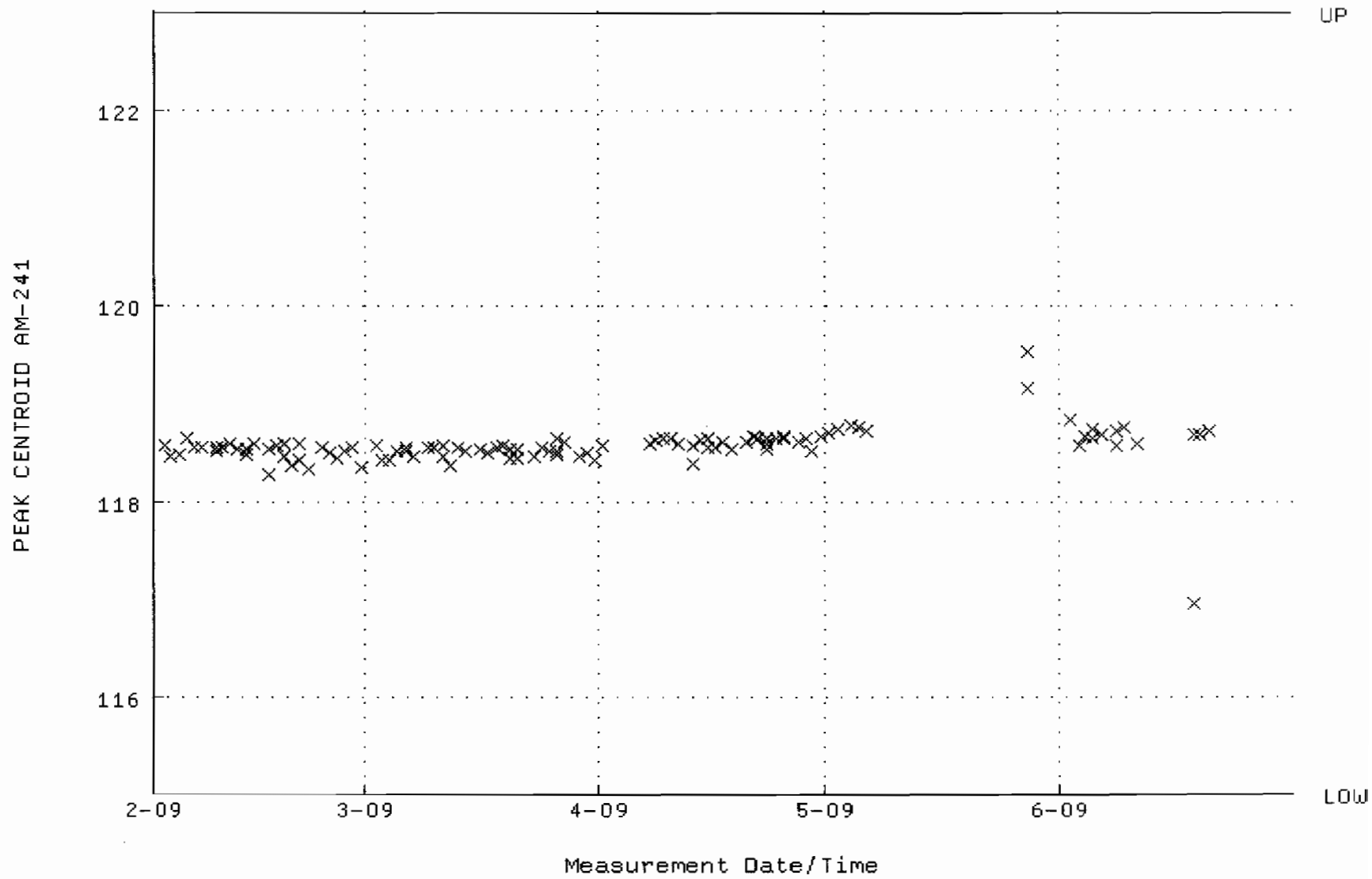

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM07.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:02 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.44400 through 1.56330

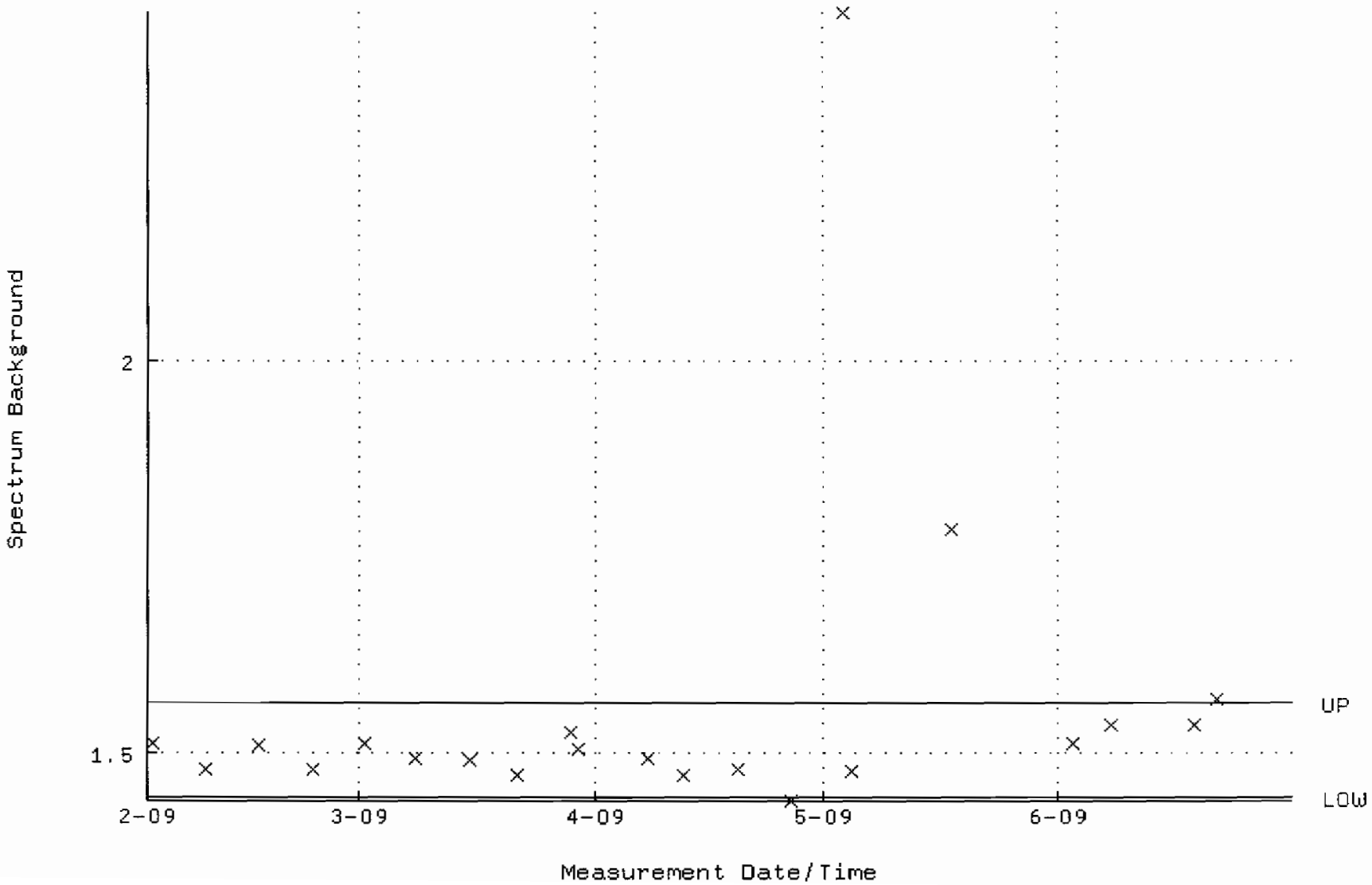

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM10_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:33 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

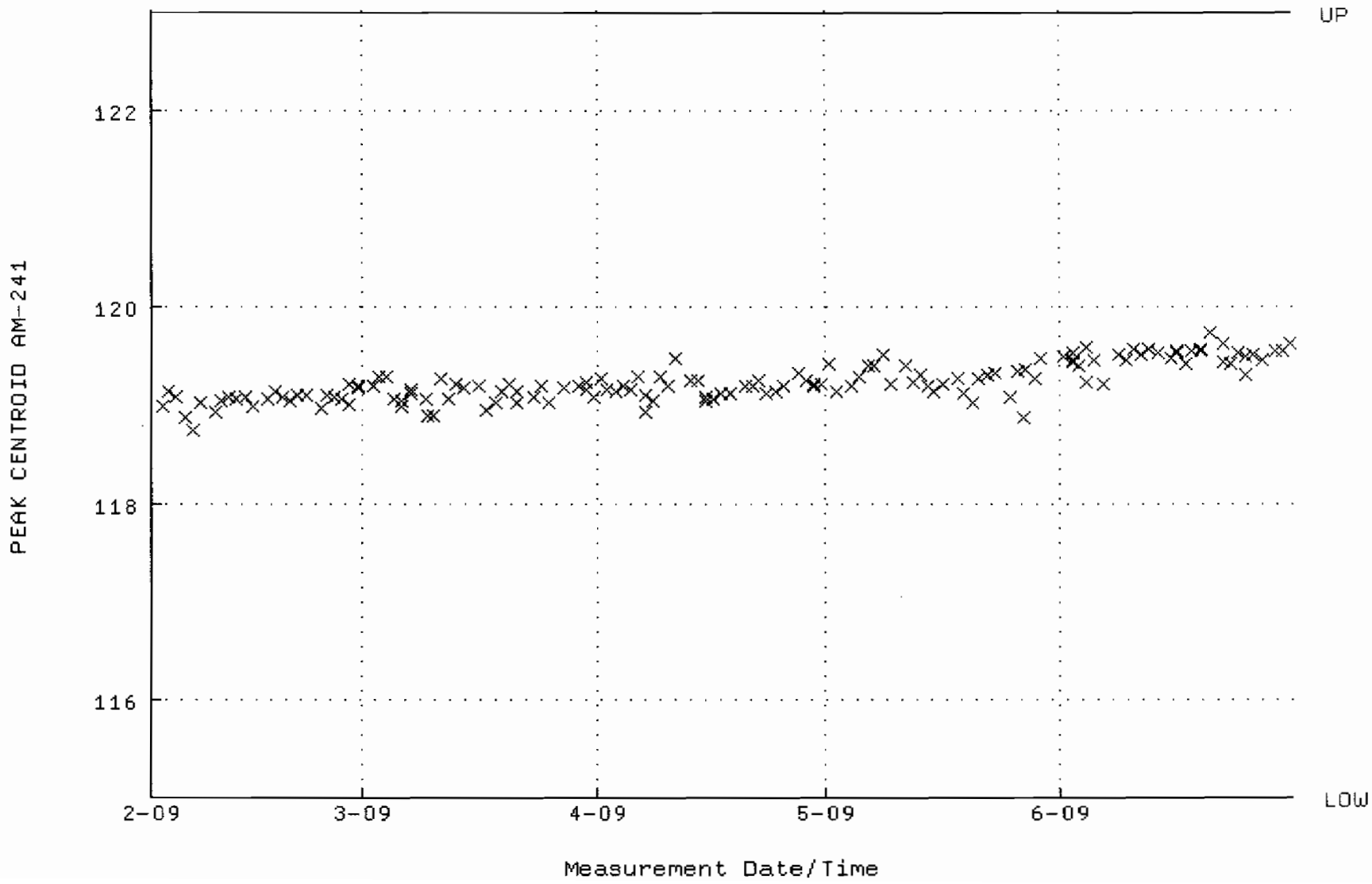

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM10.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.36818 through 1.67222

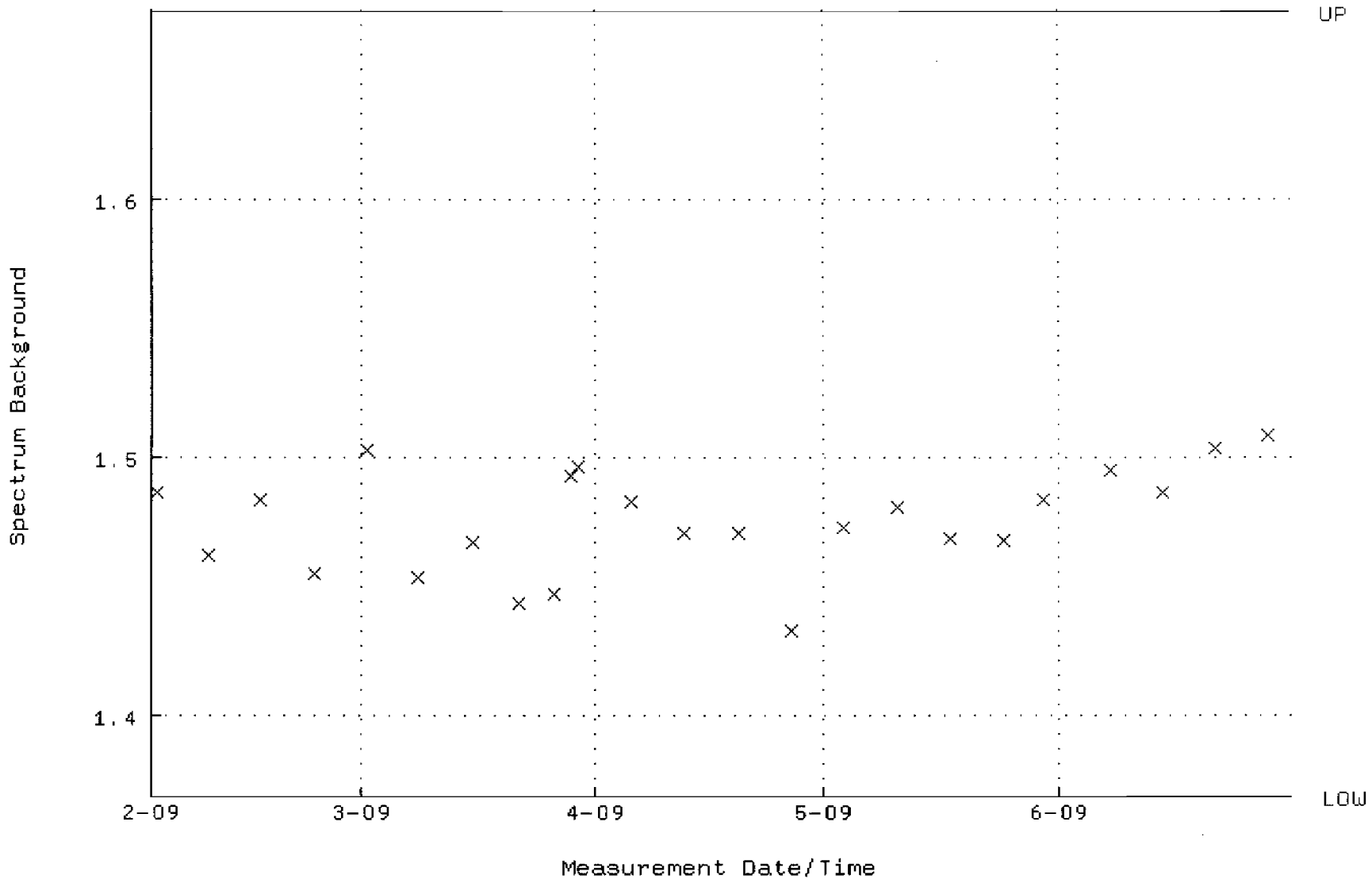

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:41 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

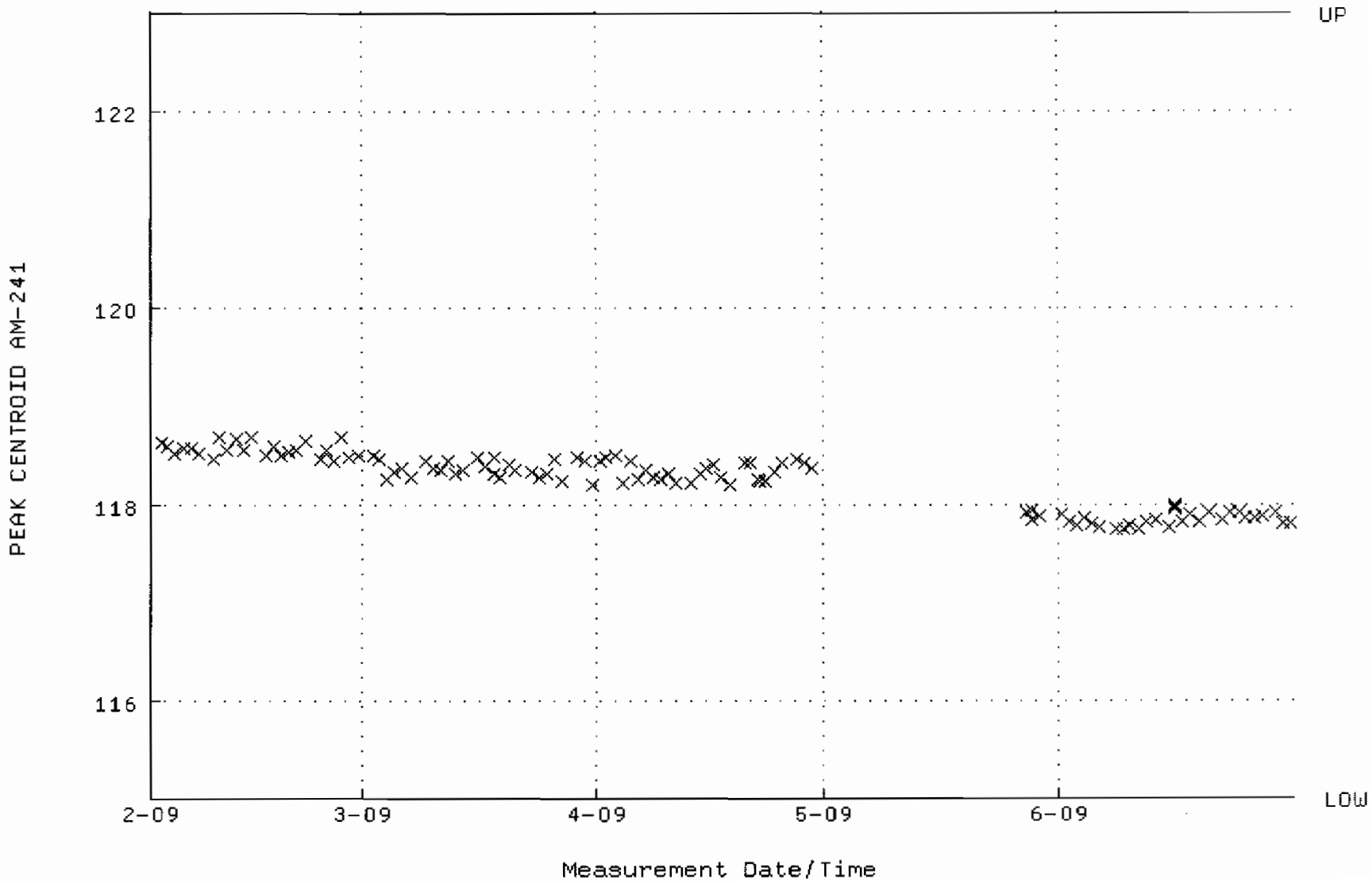

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM11.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:39 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.47699 through 1.80520

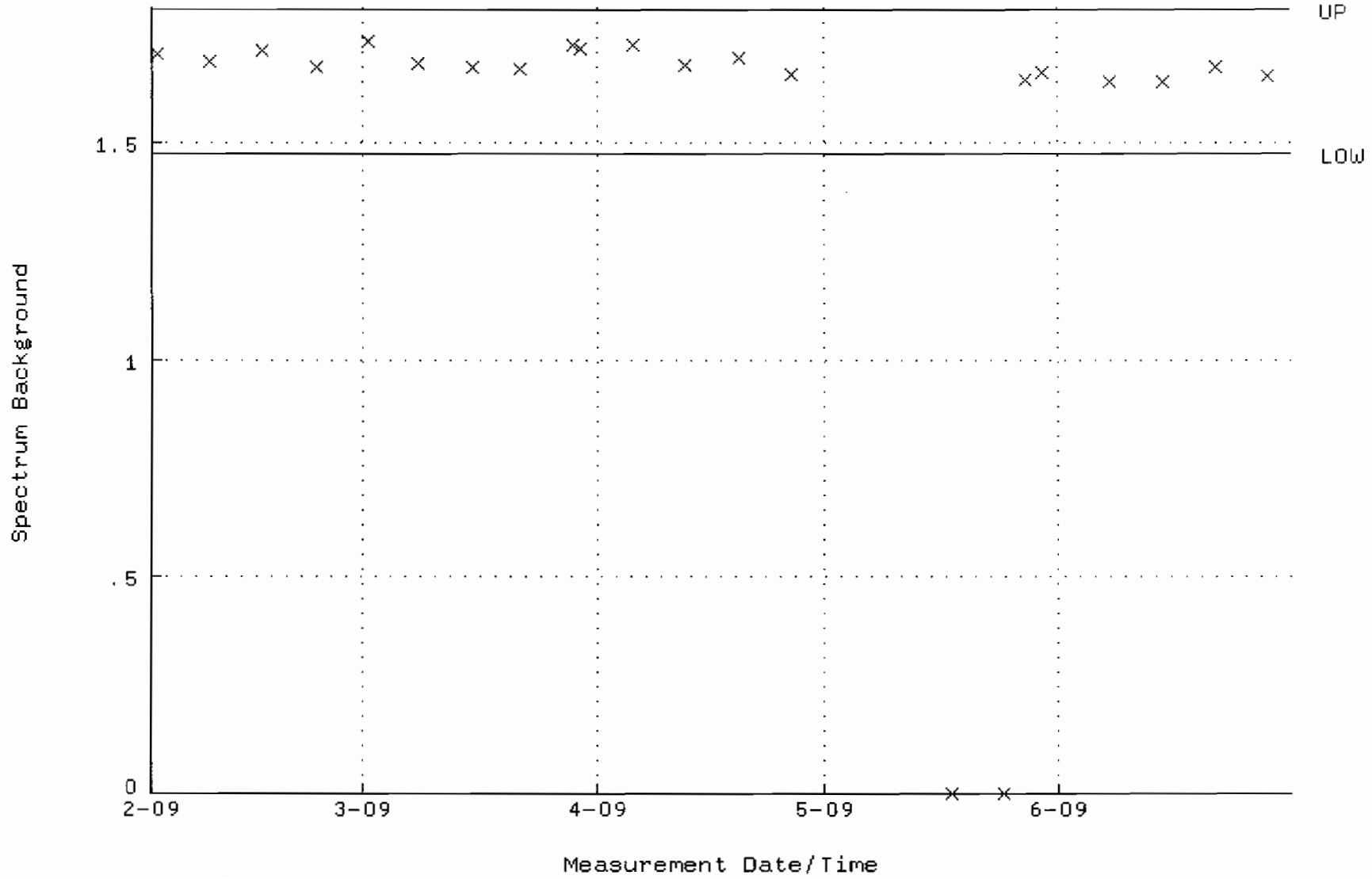

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:14:08 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

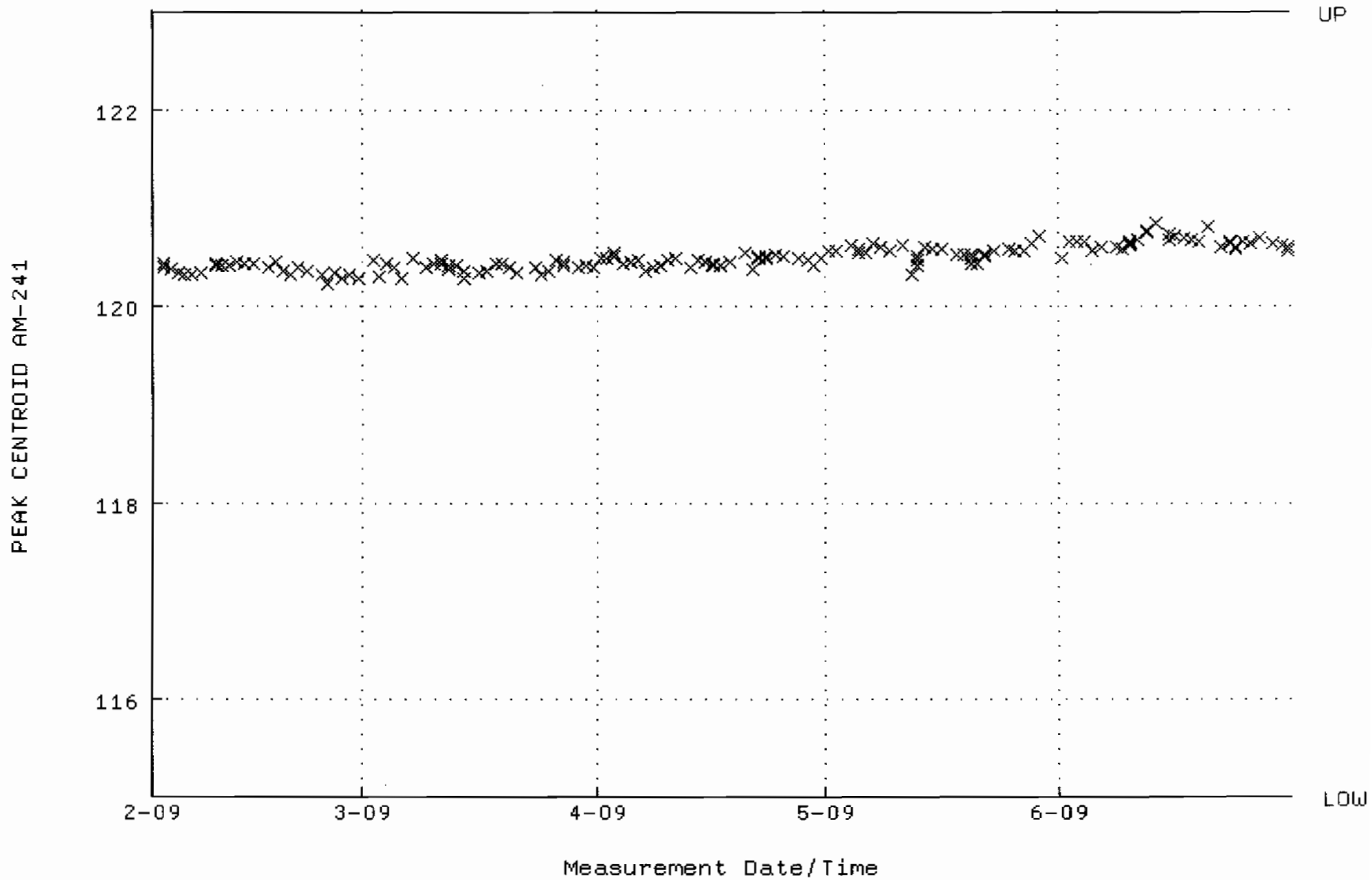

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM17.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.31148 through 1.60292

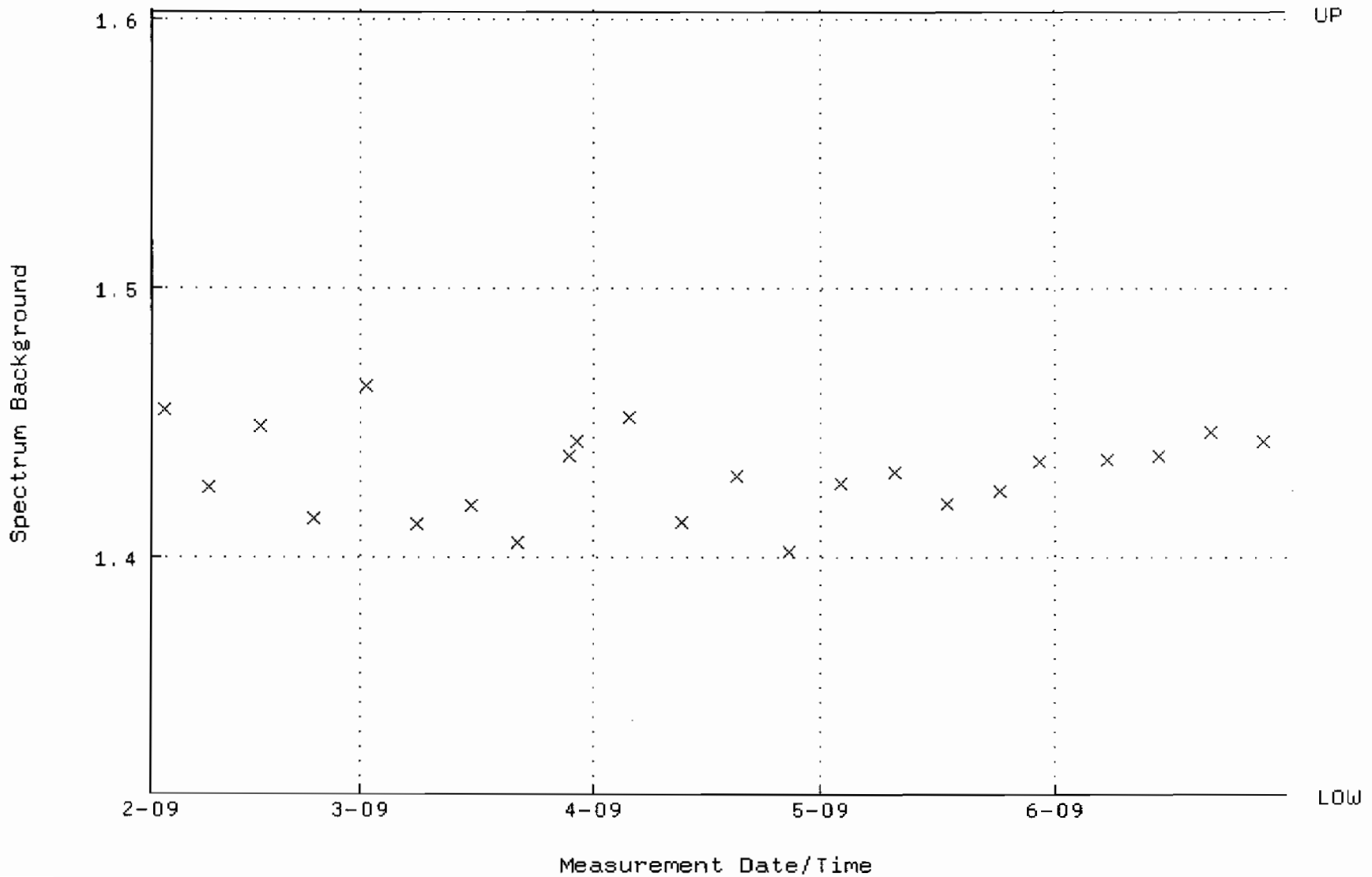

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:33:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

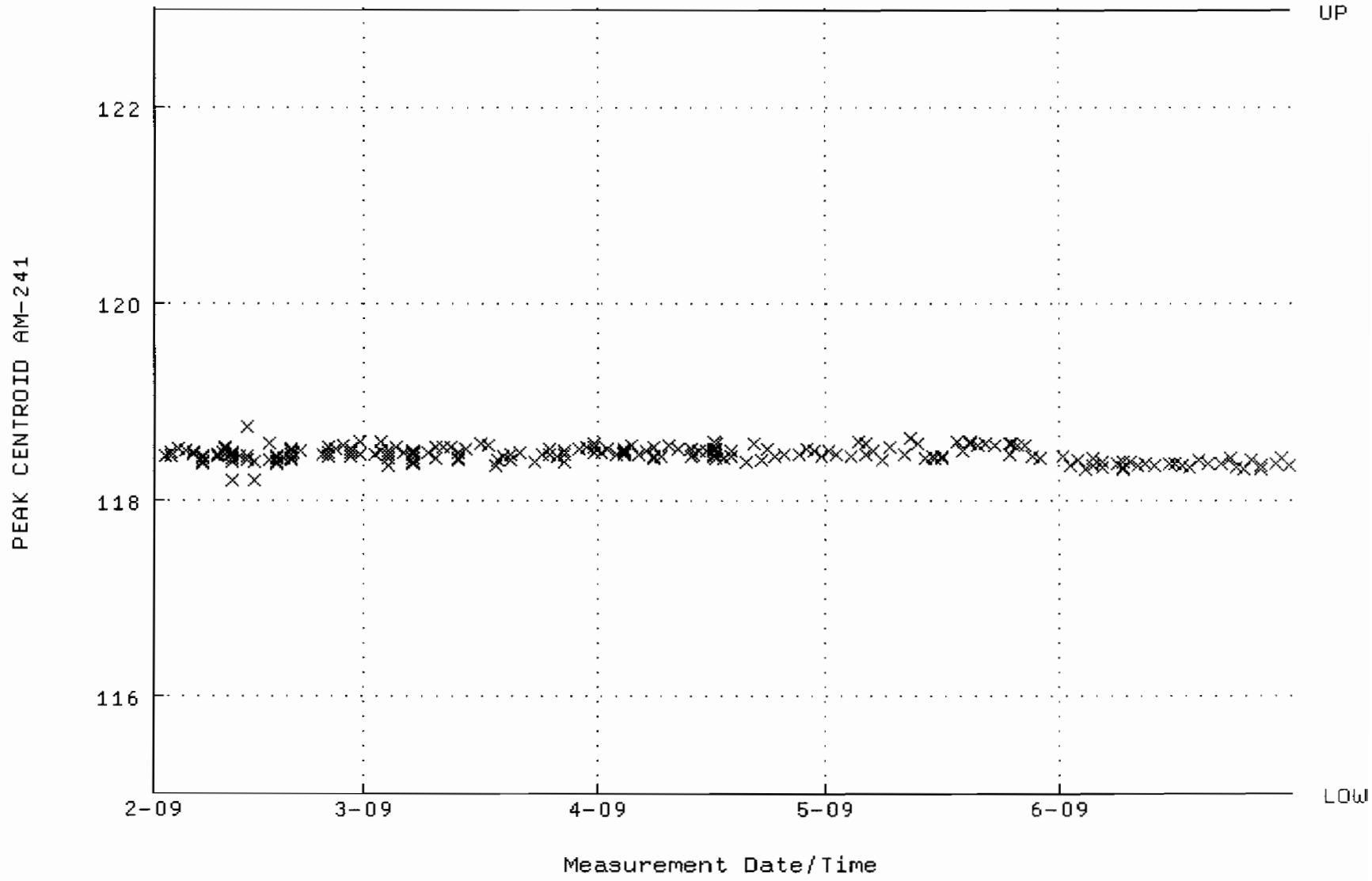

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM21.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:00 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.71450 through 2.09550

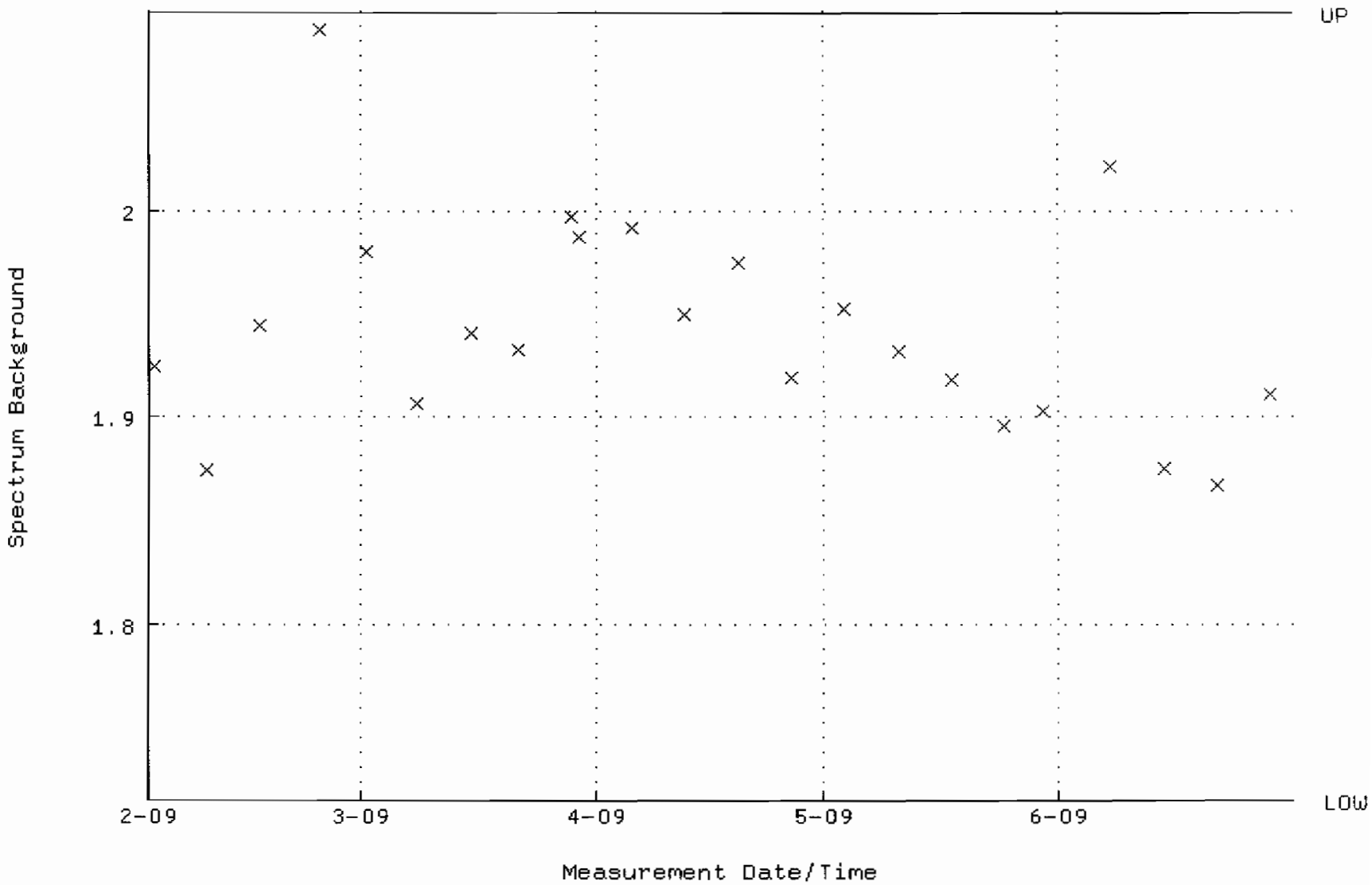

STANDARDS DATA

Amersham International plc
Amersham Laboratories

0134

NAMAS
CALIBRATION No. 0146

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

RC-5-024-061

W. F. Case

W.F. Case

1545

Amersham
The Health Science Group

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

Mary L. Aders 4/9/09
Amanda L. Tech 4/9/09

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATE 4/14/2000 Scott C Neill 12/1/04

Angela L. Johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM-1	TRM-2	TRM-3	TRM-4
U-238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U-234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th-230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra-225	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb-210	425 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: [illegible]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 13
SMO Authorization: [signature]
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location — Tech Area VI
Building N/A — Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

1550

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

Sample Tracking SMO USE
Date Entered (mm/dd/yy)
Entered by

QC Initials

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized and materials being sent to GEL on behalf of Hank Mistaer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DEP	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original — To Accompany Samples, Laboratory Copy (White)
1st Copy — To Accompany Samples, Return to SMO (Blue)
2nd Copy — SMO Suspense Copy (Yellow)
3rd Copy — Field Copy (Pink)

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATE 4/14/2000

Amanda L. Fehr 4/30/04
[illegible] 5/1/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-15-99 SMO USE
Carrier/Waybill No.: [illegible]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1/3
SMO Authorization: [signature]
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Reference LOV (available at SMO)

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

1553

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab

Sample Tracking SMO USE
Date Entered (mm/dd/yy)
Entered by

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized rad materials being sent to GEL per behalf of Hank Hinton
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Turnaround Time ☒Normal ☐Rush Required Report Date
QC limits

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DP	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. WESTON	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

0934

ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 · U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

72858-278

Th-229 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:	Th-229
ACTIVITY (dps):	3.842 E3
HALF-LIFE:	7340 years
CALIBRATION DATE:	May 2, 2006 12:00 EST
RELATIVE EXPANDED UNCERTAINTY (k=2):	3.5%

Impurities: Th-228 5.7 dps
Th-230 24 dps
Th-232 1.5 dps

5.05657 grams 0.5M HNO_3 solution.

P O NUMBER 2724RD, Item 1

SOURCE PREPARED BY: M Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 05-02-2006

RECEIVED 5/5/06 MLK

RCS-041-110

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0934
Prepared By:	Daniel Roy
Carrier Conc:	0.05M HNO3
Reference Date:	05/02/2006
Ampoule Mass (g):	5.05657 g
Uncertainty:	+/- 3.5 %
LogBook No:	RC-S-041-110

A Solution Material Info	
Isotope:	Thorium-229
Prepared By:	Daniel Roy
Prep Date:	04/23/2008
Verification Date:	04/23/2008
Expiration Date:	04/29/2010
Primary Code:	0934-A
Dilution(mL):	100 mL
Mass of Parent(g):	4.8973 g
Density(g/mL):	1.0143
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(4.8973 g) * (3842 dps) * (60 dpm/dps) / (5.05657 g * 100 mL) = 2232.5917 dpm/mL
(4.8973 g) * (3842 dps) * (60 dpm/dps) / (1.0143 g/mL)/ (5.05657 g * 100 mL) = 2201.0332 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
04/23/2008	Daniel Roy	2.5898	250	0934-B	22.8009 dpm/ml	04/23/2008	04/23/2009
09/25/2008	Daniel Roy	2.6237	250	0934-C	23.0994 dpm/ml	09/25/2008	09/25/2009
12/16/2008	Daniel Roy	2.6547	250	0934-D	23.3723 dpm/ml	12/16/2008	12/16/2009
01/09/2009	Daniel Roy	2.5399	250	0934-E	22.3616 dpm/ml	01/09/2009	01/09/2010
04/03/2009	Mary Aders	2.5434	250	0934-F	22.3924 dpm/ml	04/03/2009	04/03/2010
04/22/2009	Mary Aders	2.5138	250	0934-G	22.1318 dpm/ml	04/28/2009	04/28/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Th-229 Standard 0934-G

M. Aders	Isotope	Value	Uncertainty
4/28/2009	0934-G	0.976	0.1700
	0934-G	0.995	0.1750
	0934-G	0.951	0.1680

Mean Value (Counting) =	0.974	97.73	**Pass**
Stdev =	0.022068076		**Rule 3 (Pass/Fail)**

Target =	0.997
Lower Limit =	0.929863847
Upper Limit =	1.018136153
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.044136153
10 % of Mean =	0.0974
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard 0934-G using 0.1 mL for each source. Each standard was combined with 0.1 mL of Th-232 standard 0163-A-1 and 100 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 2 mL of DI water. Two mL of 49% HF was added to precipitate neodymium(and Thorium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Th-229 were calculated by comparison to Th-232 certified values.

4/29/09

Amanda 4/27/09

ANALYTICS
Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

Rec'd 11/30/06
RC-S-045-073-0

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318

Tel 404•352•8677
Fax 404•352•2837

www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info

Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info

Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David Dry 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

	Isotope	Result	
	Mixed Gamma N1	440.7	pCi/L
	Mixed Gamma N2	461.1	pCi/L
	Mixed Gamma N3	467.4	pCi/L
Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**
Certificate Value =	444.3738739	pCi/L	
Lower Limit =	428.4865624	pCi/L	
Upper Limit =	484.3134376	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	27.91343762		
10 % of Mean =	45.64000000		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David [illegible] 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr 12/4/2008	**Isotope**	**Result** **pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L		**Rule 3 (Pass/Fail)**
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David [illegible] 12/4/08
Amanda L. Fehr 12/4/08

1380 Seaboard Industrial Blvd.

1262

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

aithersburg, Maryland 20899
anuary 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

RECEIVED 10/5/05

a, 30318

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*Notes and references ...

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994** [b]*
Massic activity of the solution [c]	**26.31 Bq·g^{-1}**
Relative expanded uncertainty (k=2)	**0.72%** [d] [e]
Solution density	**(1.105 ± 0.002) g·mL^{-1} at 20 °C** [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L^{-1})	Mass Fraction (g·g^{-1})
	H_2O HNO_3 $^{242}Pu^{+6}$	50 3.2 8×10^{-7}	0.81 0.19 2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) Bq·g^{-1} [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three 4πα liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	^{239}Pu + ^{240}Pu <0.000 001 [u]	^{239}Pu + ^{240}Pu 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	^{238}Pu + ^{241}Am <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One µSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (µSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 $s^{-1} \cdot g^{-1}$ for energies less than 3.1 MeV,
0.03 $s^{-1} \cdot g^{-1}$ for energies between 3.1 and 4.4 MeV, and
0.003 $s^{-1} \cdot g^{-1}$ for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 19 and 39 keV,
7×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 49 and 92 keV,
2×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 106 and 507 keV,
1×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 515 and 1456 keV, and
5×10^{-6} $s^{-1} \cdot g^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i| \cdot (x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i| \cdot (x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i| \cdot u(x_i)/y = |\partial y/\partial x_i| \cdot (x_i/y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i| \cdot (x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}·{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1262
Prepared By:	Daniel Roy
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-048-143

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Mary Aders
Prep Date:	05/08/2009
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	1262-A
Dilution(mL):	200 mL
Mass of Parent(g):	5.3306 g
Density(g/mL):	1.0000
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (200 mL) = 42.0744 dpm/mL
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0000 g/mL) / (200 mL) = 42.0744 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1262-*A*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	1262-A	1.830	0.2560
	1262-A	1.890	0.2630
	1262-A	1.810	0.2520
Mean Value (Counting) =	1.843	97.26	**Pass**
Stdev =	0.04163332		**Rule 3 (Pass/Fail)**

Target =	1.90
Lower Limit =	1.760066693
Upper Limit =	1.926599973
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.08326664
10 % of Mean =	0.184333333
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1262-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-Y and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Five drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 48% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

5/15/09

05 15 09

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: W. Mao, Radiochemist

QA Approved: D. M. Montgomery, QA Manager Date: 12-11-08

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End of Certificate

RECEIVED 12/15/08
RC-5-05

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

	Serial #	Value		Uncertainty	
Analyst: D. Roy					
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L
Mean Value (Counting) =	2.407	pCi/L		**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L			**Rule 3 (Pass/Fail)**
Target =	2.397	pCi/L			
Lower Limit =	2.259244371	pCi/L			
Upper Limit =	2.554088963	pCi/L			
Rule 1 Pass/Fail	**Pass**				
Two sigma =	0.147422296				
10 % of Mean =	0.240666667				
Rule 2 (Pass/Fail)	**Pass**				

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09
1/5/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 881931**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232582001	SAMPLE	MXR1	GAM02	09-JUL-09 08:14	DONE	CAN	01-NOV-08 00:00
232582002	SAMPLE	MXR1	GAM17	09-JUL-09 08:15	DONE	CAN	27-JAN-09 00:00
232585001	SAMPLE	MXR1	GAM22	09-JUL-09 08:16	DONE	CAN	18-FEB-09 00:00
1201873069	MB	MXR1	GAM21	09-JUL-09 08:22	DONE	CAN	25-JUL-08 00:00
232585002	SAMPLE	MXR1	GAM01	09-JUL-09 08:34	DONE	CAN	30-JAN-09 00:00
232585003	SAMPLE	MXR1	GAM05	09-JUL-09 08:34	DONE	CAN	11-JUN-09 00:00
232591001	SAMPLE	MXR1	GAM10	09-JUL-09 08:35	DONE	CAN	16-MAR-09 00:00
1201873070	DUP	MXR1	GAM11	09-JUL-09 08:36	DONE	CAN	01-NOV-08 00:00
1201873071	LCS	MXR1	GAM07	09-JUL-09 08:51	DONE	CAN	01-NOV-08 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882541**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232424001	SAMPLE	HAKB	1183	08-JUL-09 19:19	DONE		
232582001	SAMPLE	HAKB	1184	08-JUL-09 19:19	DUSE		
232582002	SAMPLE	HAKB	1185	08-JUL-09 19:19	DONE		
1201874438	MB	HAKB	1186	08-JUL-09 19:19	DONE		
1201874439	DUP	HAKB	1187	08-JUL-09 19:19	DONE		
1201874440	LCS	HAKB	1188	08-JUL-09 19:19	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882671**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232211001	SAMPLE	KXM4	1209	09-JUL-09 20:51	DUSE		
232211002	SAMPLE	KXM4	1210	09-JUL-09 20:51	DONE		
232211003	SAMPLE	KXM4	1211	09-JUL-09 20:51	DONE		
232211004	SAMPLE	KXM4	1212	09-JUL-09 20:51	DONE		
232211005	SAMPLE	KXM4	1213	09-JUL-09 20:51	DUSE		
232211006	SAMPLE	KXM4	1214	09-JUL-09 20:51	DONE		
232211007	SAMPLE	KXM4	1215	09-JUL-09 20:51	DUSE		
232211008	SAMPLE	KXM4	1216	09-JUL-09 20:51	DONE		
232212001	SAMPLE	KXM4	1217	09-JUL-09 20:51	DONE		
232212003	SAMPLE	KXM4	1219	09-JUL-09 20:51	DUSE		
232278001	SAMPLE	KXM4	1220	09-JUL-09 20:51	DONE		
232278002	SAMPLE	KXM4	1221	09-JUL-09 20:51	DONE		
232582001	SAMPLE	KXM4	1222	09-JUL-09 20:51	DUSE		
232582002	SAMPLE	KXM4	1223	09-JUL-09 20:51	DONE		
232585001	SAMPLE	KXM4	1224	09-JUL-09 20:51	DONE		
232585002	SAMPLE	KXM4	1225	09-JUL-09 20:52	DONE		
232585003	SAMPLE	KXM4	1226	09-JUL-09 20:52	DONE		
232591001	SAMPLE	KXM4	1227	09-JUL-09 20:52	DONE		
1201874683	MB	KXM4	1228	09-JUL-09 20:52	DONE		
1201874684	DUP	KXM4	1229	09-JUL-09 20:52	DONE		
1201874685	LCS	KXM4	1230	09-JUL-09 20:52	DONE		
232212002	SAMPLE	KXM4	1114	10-JUL-09 13:36	DONE		
232211001	SAMPLE	KXM4	1213	10-JUL-09 21:22	DUSE		
232211005	SAMPLE	KXM4	1214	10-JUL-09 21:22	DUSE		
232211007	SAMPLE	KXM4	1215	10-JUL-09 21:23	DUSE		
232212003	SAMPLE	KXM4	1216	10-JUL-09 21:23	DUSE		
232582001	SAMPLE	KXM4	1217	10-JUL-09 21:23	DUSE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882673**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232211001	SAMPLE	KXM4	1113	09-JUL-09 20:53	DONE		
232211004	SAMPLE	KXM4	1116	09-JUL-09 20:53	DONE		
232211005	SAMPLE	KXM4	1117	09-JUL-09 20:53	DONE		
232211006	SAMPLE	KXM4	1118	09-JUL-09 20:53	DONE		
232211007	SAMPLE	KXM4	1121	09-JUL-09 20:53	DONE		
232211008	SAMPLE	KXM4	1122	09-JUL-09 20:53	DONE		
232212001	SAMPLE	KXM4	1123	09-JUL-09 20:53	DONE		
232212002	SAMPLE	KXM4	1124	09-JUL-09 20:53	DONE		
232212003	SAMPLE	KXM4	1125	09-JUL-09 20:53	DONE		
232278001	SAMPLE	KXM4	1126	09-JUL-09 20:53	DONE		
232278002	SAMPLE	KXM4	1127	09-JUL-09 20:53	DONE		
232582001	SAMPLE	KXM4	1129	09-JUL-09 20:53	DONE		
232582002	SAMPLE	KXM4	1130	09-JUL-09 20:53	DONE		
232585001	SAMPLE	KXM4	1131	09-JUL-09 20:53	DONE		
232585003	SAMPLE	KXM4	1133	09-JUL-09 20:53	DONE		
232591001	SAMPLE	KXM4	1134	09-JUL-09 20:53	DONE		
1201874686	MB	KXM4	1135	09-JUL-09 20:53	DONE		
1201874688	LCS	KXM4	1144	09-JUL-09 20:53	DONE		
232211003	SAMPLE	KXM4	1170	09-JUL-09 21:21	DONE		
232211002	SAMPLE	KXM4	1113	10-JUL-09 13:36	DONE		
232585002	SAMPLE	KXM4	1155	10-JUL-09 21:23	DONE		
1201874687	DUP	KXM4	1156	10-JUL-09 21:23	DONE		

Instrument Run Log

Instrument Type: LSC **Batch ID: 883020**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	KXK2	LSCSILVER	14-JUL-09 18:04	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347002	SAMPLE	KXK2	LSCSILVER	14-JUL-09 19:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347003	SAMPLE	KXK2	LSCSILVER	14-JUL-09 21:21	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347004	SAMPLE	KXK2	LSCSILVER	14-JUL-09 22:59	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232582001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 00:38	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232582002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 02:16	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 05:08	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 07:41	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585003	SAMPLE	KXK2	LSCSILVER	15-JUL-09 08:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232591001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 09:46	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 10:48	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 11:51	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664003	SAMPLE	KXK2	LSCSILVER	15-JUL-09 12:53	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664004	SAMPLE	KXK2	LSCSILVER	15-JUL-09 13:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664005	SAMPLE	KXK2	LSCSILVER	15-JUL-09 14:58	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875586	MB	KXK2	LSCSILVER	15-JUL-09 16:01	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875587	DUP	KXK2	LSCSILVER	15-JUL-09 17:03	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875588	LCS	KXK2	LSCSILVER	15-JUL-09 18:05	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 884520**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232211001	SAMPLE	MXE1	1235	13-JUL-09 21:53	DONE		
232211005	SAMPLE	MXE1	1236	13-JUL-09 21:53	DONE		
232211007	SAMPLE	MXE1	1237	13-JUL-09 21:53	DONE		
232212003	SAMPLE	MXE1	1238	13-JUL-09 21:54	DONE		
232582001	SAMPLE	MXE1	1239	13-JUL-09 21:54	DONE		
1201879100	MB	MXE1	1240	13-JUL-09 21:54	DONE		
1201879101	DUP	MXE1	1241	13-JUL-09 21:54	DONE		
1201879102	LCS	MXE1	1242	13-JUL-09 21:54	DONE		

4

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 885114**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232582001	SAMPLE	HAKB	1204	16-JUL-09 20:21	DUSE		
1201880666	MB	HAKB	1205	16-JUL-09 20:21	DONE		
1201880667	DUP	HAKB	1206	16-JUL-09 20:21	DONE		
1201880668	LCS	HAKB	1207	16-JUL-09 20:21	DONE		
232582001	SAMPLE	HAKB	1175	17-JUL-09 19:46	DONE		

Monday, June 29, 2009

REQUEST NUMBER: 09-2507

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2507
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10464	R	6/25/2009	
		2	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
		2	CAMO-09-10465	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2507

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2507

REQUEST NUMBER: 09-2507

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10464	1	GLASS	8290	Ice	R
CAMO-09-10464	2	GLASS	8290	Ice	R
CAMO-09-10465	1	GLASS	8290	Ice	R
CAMO-09-10465	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/29/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10464

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	OBT4	ok
TIME COLLECTED (HH:MM)		09:15	SUB-MEDIA:	UA	↓
PRS ID:	03-007	ok	SAMPLE TECH CODE:	CBS	J.B. 6/25/09 H.A.
LOCATION ID:	MO-605525	MO-604998	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	6.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	7.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 Day Full data package	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	15 Day Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2		8290	125 ML GLASS	Ice		
		GS+TAL Metals	1 LITER POLY	Ice		
		H3	500 ML POLY	Ice		
1		ISOU+ISOPU+ISOTH	1 LITER POLY	None		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		
1		NMED Explosives list	250 ML AMBER GLASS	Ice		

SAMPLE DESC: Tan / Grey / white, indurated, dry tuff.

SAMPLE COMMENTS: Tuff Interface @ 1.0' bgs. Sample collected 5.0' below interface ~~03-007-05 (E) of bldg. 03-159~~ J.B 6/25/09

LOCATION DESC: 03-007-05 (E) of bldg. 03-159

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

Bγ ≤ 855 dpm

PID ambient reading 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) TL McFarland

RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time
J. Branch	6/25/09 1550	Sherri Sherwood	6/25/09 1550

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 885 **EVENT NAME:** 3rd Qtr. FY09; AOC 03-007; Mortandad Cyn.

SAMPLE ID: CAMO-09-10465

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	OBT4	ok
TIME COLLECTED (HH:MM)		1015	SUB-MEDIA:	UA	↓
PRS ID:	03-007	ok	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605526	MO-605170	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	6.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	7.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	15 Day Full Data Package
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+TAL Metals	1 LITER POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	ISOU+ISOPU+ISOTH	1 LITER POLY	None	↓	↓
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	↓

SAMPLE DESC: Grayish white dry indurated tuff

SAMPLE COMMENTS: Tuff interface at 1.0 bgs, sample collected 5 ft below interface

LOCATION DESC: 03-007.06 South of security fence

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 8 dpm

βγ ≤ 1264 dpm

PID ambient reading 0.0 / 0.0 dpm

COLLECTED BY (PRINT) TLMcFarland

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/25/09 1550	(Printed Name) Sherri Sherwood	6/25/09 4:00

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00076	Request or PO Number:	
Client Sample ID:	CAMO-09-10464	ARS Sample ID:	ARS2-09-00076-005
Sample Collection Date:	06/25/09 09:15	Date Received:	06/26/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/26/09 16:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	18.49	62.33	133.66	62.37	U	pCi/g	EPA 900.0M	6/26/2009	LR	N/A
GROSS BETA	36.92	15.68	19.98	16.32		pCi/g	EPA 900.0M	6/26/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
K-40	2.02	5.33	3.13	5.33	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CO-60	0.00	12.09	0.13	12.09	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-134	0.25	0.19	0.09	0.19	SI	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-137	-0.01	16.87	0.08	16.87	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
EU-152	0.30	0.32	0.15	0.32	SI	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
PB-212	1.64	0.60	0.18	0.60		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
RA-228	1.11	0.71	0.34	0.73		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-235	-0.08	114.97	0.26	114.97	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-238	2.37	3.65	1.74	3.69		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
AM-241	0.52	0.32	0.09	0.32		pCi/g	EPA 901.1M	6/26/2009	ME	

NOTES: % Moisture: 0.74

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E67558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00076	Request or PO Number:	
Client Sample ID:	CANO-09-10465	ARS Sample ID:	ARS2-09-00076-006
Sample Collection Date:	06/25/09 10:15	Date Received:	06/26/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/26/09 16:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	22.50	61.56	127.53	61.61	U	pCi/g	EPA 900.0M	6/26/2009	LR	N/A
GROSS BETA	36.01	15.91	20.61	16.51		pCi/g	EPA 900.0M	6/26/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
K-40	1.46	7.26	4.26	7.26	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CO-60	0.00	12.89	0.12	12.89	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-137	-0.01	16.87	0.08	16.87	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
EU-152	0.10	0.16	0.15	0.16	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
PB-212	1.38	0.60	0.18	0.60		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
RA-226	1.06	1.10	0.34	1.10		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-235	3.48	1.55	0.55	1.56		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-238	1.34	2.58	1.40	2.60	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
AM-241	0.36	0.29	0.09	0.29		pCi/g	EPA 901.1M	6/26/2009	ME	

NOTES: % Moisture: 0.61

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5123-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2507 VALIDATION DATE: 07/23/2009 LAB CODE: ALTC

CONTRACT LABORATORY NAME: Vista Analytical Laboratory

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☒ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the sample was not analyzed within 30 days of the primary ICAL. No sample data were qualified, based on professional judgment.
2. The ICV %D was >20% with positive bias for 1,2,3,4,7,8-HxCDD. The associated sample results were NDs and, thus, were not qualified.
3. It should be noted that ICV standards are not available for 13C-OCDF and 13C-1,2,3,4-TCDF which are used in the quantitation of OCDF; 13C-2,3,7,8-TCDF; 13C-1,2,3,7,8-PeCDF and 13C-2,3,4,7,8-PeCDF. Thus, ICV %Ds could not be evaluated for these compounds. No sample data were qualified as a result.
4. It should be noted that laboratory ion abundance limits were used for evaluation of the PeCDD compounds since the laboratory uses an alternate ion for these masses due to interferences.
5. It should be noted that MS/MSD analyses were not performed with the sample. No sample data were qualified as a

DATA VALIDATION COVER SHEET

5123-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

result.

Reviewed by: CLL Level: 1 Date: 7/23/09

VALIDATOR'S SIGNATURE: Mary A. Dennison DATE: 07/23/2009

Form 5123-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time and qualitative criteria for target compound identification were not met.	R, DF0	R, DF0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF0b	R, DF0b
☐	☒	☐	3. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF1d	R, DF1d
☐	☒	☐	4. The sample result is ≤5 times the concentration of the related analyte in the method blank.	N/A	U, DF4
☐	☒	☐	5. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, DF4a
☐	☐	☒	6. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	N/A	U, DF4d
☐	☒	☐	7. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF4e	R, DF4e
☐	☒	☐	8. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, DF7	J, DF7
☐	☒	☐	9. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria.	UJ, R, DF7a	J, DF7a
☐	☒	☐	10. The affected analytes were analyzed with an out of range ion abundance in the initial calibration and/or CCV.	R, DF7b	R, DF7b
☒	☐	☐	11. The ICV and/or CCV were recovered outside the method specific limits.	UJ, R, DF7c	J, R, DF7c
☐	☒	☐	12. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DF7d	J, DF7d

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 **Dioxin/Furan Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DF7f	R, DF7f
☐	☒	☐	14. The affected analyte is considered rejected because the ion abundances did not meet specifications.	N/A	R, DF8
☐	☒	☐	15. The ion abundance documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF8a	R, DF8a
☐	☒	☐	16. If GC column performance was not evaluated at the required frequency or if method criteria were not met, qualify all associated detects as J and all associated non-detects as UJ.	UJ, DF8b	J, DF8b
☐	☐	☒	17. If 2, 3, 7, 8-TCDF was detected in a sample and the result was not confirmed on a second column with successful analysis of the GC column performance mix, qualify all associated detects as U.	N/A	U, DF8c
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, DF9	J-, DF9
☐	☒	☐	19. The holding time was >2 times the applicable holding time requirement.	R, DF9a	J-, DF9a
☐	☒	☐	20. The LCS percent recovery was <10%.	R, DF12	J-, DF12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, DF12a	J-, DF12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DF12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12c	R, DF12c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	24. The MS/MSD percent recovery was <10%.	R, DF12d	R, DF12d
☐	☐	☒	25. The MS/MSD percent recovery was >10% but <70%.	UJ, DF12e	J, DF12e
☐	☐	☒	26. The MS/MSD percent recovery was >70%	N/A	J+, DF12f
☐	☐	☒	27. The MS/MSD relative percent difference was >30%.	UJ, DF12g	J, DF12g
☐	☒	☐	28. The fortification sample percent recovery was <10%.	R, DF12h	J-, DF12h
☐	☒	☐	29. The fortification sample percent recovery was <40% but >10%	UJ, DF12i	J-, DF12i
☐	☒	☐	30. The fortification sample percent recovery was >135%.	N/A	J+, DF12j
☐	☒	☐	31. The fortification sample documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12k	R, DF12k
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference.	R, DF15	UJ, DF15
☐	☒	☐	33. Sample clean-up was not performed. If run log notations, spectral data and/or internal standard or labeled compound recoveries indicate interferences and extract cleanup was not performed, qualify all associated detects as J and all non-detects as UJ.	RJ, DF15a	J, DF15a
☐	☒	☐	34. The instrument performance sample did not pass method acceptance criteria.	R, DF16	R, DF16
☐	☒	☐	35. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, DF16c	R, DF16c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, DF19	J, R, DR19
☐	☒	☐	37. Duplicate, dilution, or reanalysis.	UJ, DF88	J, DF88

Sample ID: CAMO-09-10464 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31845-001	Date Received:	30-Jun-09
Project:	09-2507	Sample Size:	10.6 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	25-Jun-09	%Solids:	95.1	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	0915						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0502		
1,2,3,7,8-PeCDD	ND	0.0850		
1,2,3,4,7,8-HxCDD	ND	0.216		
1,2,3,6,7,8-HxCDD	ND	0.219		
1,2,3,7,8,9-HxCDD	ND	0.209		
1,2,3,4,6,7,8-HpCDD	ND	0.270		
OCDD	1.50			J
2,3,7,8-TCDF	ND	0.0397		
1,2,3,7,8-PeCDF	ND	0.0400		
2,3,4,7,8-PeCDF	ND	0.0406		
1,2,3,4,7,8-HxCDF	ND	0.0793		
1,2,3,6,7,8-HxCDF	ND	0.0820		
2,3,4,6,7,8-HxCDF	ND	0.102		
1,2,3,7,8,9-HxCDF	ND	0.134		
1,2,3,4,6,7,8-HpCDF	ND	0.154		
1,2,3,4,7,8,9-HpCDF	ND	0.163		
OCDF	ND	0.125		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	101	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	95.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	98.7	40 - 135	
	13C-2,3,7,8-TCDF	99.1	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	95.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	84.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	84.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.3	40 - 135	
	13C-OCDF	90.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.8	40 - 135	

Totals		
Total TCDD	ND	0.0502
Total PeCDD	ND	0.0850
Total HxCDD	ND	0.215
Total HpCDD	ND	0.270
Total TCDF	ND	0.0397
Total PeCDF	ND	0.0403
Total HxCDF	ND	0.0993
Total HpCDF	ND	0.158

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.00150

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:06

MAD
07/23/09

Sample ID: CAMO-09-10465 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31845-002	Date Received:	30-Jun-09
Project:	09-2507	Sample Size:	10.5 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	25-Jun-09	%Solids:	95.2	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1015						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0422		
1,2,3,7,8-PeCDD	ND	0.0728		
1,2,3,4,7,8-HxCDD	ND	0.228		
1,2,3,6,7,8-HxCDD	ND	0.241		
1,2,3,7,8,9-HxCDD	ND	0.226		
1,2,3,4,6,7,8-HpCDD	ND	0.304		
OCDD	ND	0.217		
2,3,7,8-TCDF	ND	0.0397		
1,2,3,7,8-PeCDF	ND	0.0412		
2,3,4,7,8-PeCDF	ND	0.0462		
1,2,3,4,7,8-HxCDF	ND	0.0860		
1,2,3,6,7,8-HxCDF	ND	0.0901		
2,3,4,6,7,8-HxCDF	ND	0.109		
1,2,3,7,8,9-HxCDF	ND	0.143		
1,2,3,4,6,7,8-HpCDF	ND	0.165		
1,2,3,4,7,8,9-HpCDF	ND	0.172		
OCDF	ND	0.130		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	98.0	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	81.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	99.2	40 - 135	
	13C-OCDD	96.0	40 - 135	
	13C-2,3,7,8-TCDF	96.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.7	40 - 135	
	13C-2,3,4,7,8-PeCDF	94.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	86.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	81.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	92.1	40 - 135	
	13C-OCDF	87.1	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	92.9	40 - 135	

Totals		
Total TCDD	ND	0.0422
Total PeCDD	ND	0.0728
Total HxCDD	ND	0.232
Total HpCDD	ND	0.304
Total TCDF	ND	0.0397
Total PeCDF	ND	0.0437
Total HxCDF	ND	0.107
Total HpCDF	ND	0.168

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:06

MAD
07/23/09

Monday, June 29, 2009

REQUEST NUMBER: 09-2507

31845
2.1°C

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2507
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10464	R	6/25/2009	
		2	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
		2	CAMO-09-10465	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2507

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2507

LOS ALAMOS

NATIONAL LABORATORY

REQUEST NUMBER: 09-2507

31845

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10464	1	GLASS	8290	Ice	R
CAMO-09-10464	2	GLASS	8290	Ice	R
CAMO-09-10465	1	GLASS	8290	Ice	R
CAMO-09-10465	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/29/09	1400	B. Benedict	[illegible]	6/30/09	1212
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Vista
Analytical Laboratory

July 07, 2009

Vista Project I.D.: 31845

Mr. Keith Greene
Los Alamos National Laboratory
ER Sample Management Office
TA-3, Building 271, DP O1-U
Los Alamos, NM 87545

Dear Mr. Greene,

Enclosed are the results for the two soil samples received at Vista Analytical Laboratory on June 30, 2009 under your Project Name "09-2507". These samples were extracted and analyzed using EPA Method 8290 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha M. Maier
Laboratory Director

ACCREDITED IN ACCORDANCE WITH nelac

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Vista

Section I: Sample Inventory Report

Date Received: **6/30/2009**

Vista Lab. ID	Client Sample ID
31845-001	CAMO-09-10464
31845-002	CAMO-09-10465

SECTION II

Vista

Method Blank | **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2214	Lab Sample:	0-MB001
Sample Size:	10.0 g	Date Extracted:	1-Jul-09	Date Analyzed DB-5:	2-Jul-09
				Date Analyzed DB-225:	NA

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0500		
1,2,3,7,8-PeCDD	ND	0.0717		
1,2,3,4,7,8-HxCDD	ND	0.133		
1,2,3,6,7,8-HxCDD	ND	0.133		
1,2,3,7,8,9-HxCDD	ND	0.128		
1,2,3,4,6,7,8-HpCDD	ND	0.247		
OCDD	ND	0.188		
2,3,7,8-TCDF	ND	0.0365		
1,2,3,7,8-PeCDF	ND	0.0403		
2,3,4,7,8-PeCDF	ND	0.0429		
1,2,3,4,7,8-HxCDF	ND	0.0470		
1,2,3,6,7,8-HxCDF	ND	0.0479		
2,3,4,6,7,8-HxCDF	ND	0.0614		
1,2,3,7,8,9-HxCDF	ND	0.0813		
1,2,3,4,6,7,8-HpCDF	ND	0.131		
1,2,3,4,7,8,9-HpCDF	ND	0.122		
OCDF	ND	0.109		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	97.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	96.3	40 - 135	
	13C-OCDD	91.5	40 - 135	
	13C-2,3,7,8-TCDF	99.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	96.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	91.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	96.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	87.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	83.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	90.6	40 - 135	
	13C-OCDF	86.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.0	40 - 135	

Totals		
Total TCDD	ND	0.0500
Total PeCDD	ND	0.0717
Total HxCDD	ND	0.131
Total HpCDD	ND	0.247
Total TCDF	ND	0.0365
Total PeCDF	ND	0.0416
Total HxCDF	ND	0.0594
Total HpCDF	ND	0.126

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst JMH

Approved By William J. Luksemburg 07-Jul-2009 10:06

Vista

OPR Results **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2214	Lab Sample:	0-OPR001		
Sample Size:	10.0 g	Date Extracted:	1-Jul-09	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	9.32	7 - 13	IS	13C-2,3,7,8-TCDD	99.6	40 - 135	
1,2,3,7,8-PeCDD	50.0	45.6	35 - 65		13C-1,2,3,7,8-PeCDD	94.0	40 - 135	
1,2,3,4,7,8-HxCDD	50.0	45.9	35 - 65		13C-1,2,3,4,7,8-HxCDD	96.1	40 - 135	
1,2,3,6,7,8-HxCDD	50.0	44.8	35 - 65		13C-1,2,3,6,7,8-HxCDD	87.4	40 - 135	
1,2,3,7,8,9-HxCDD	50.0	46.6	35 - 65		13C-1,2,3,4,6,7,8-HpCDD	99.9	40 - 135	
1,2,3,4,6,7,8-HpCDD	50.0	44.2	35 - 65		13C-OCDD	94.2	40 - 135	
OCDD	100	88.9	70 - 130		13C-2,3,7,8-TCDF	102	40 - 135	
2,3,7,8-TCDF	10.0	8.40	7 - 13		13C-1,2,3,7,8-PeCDF	95.4	40 - 135	
1,2,3,7,8-PeCDF	50.0	41.6	35 - 65		13C-2,3,4,7,8-PeCDF	91.4	40 - 135	
2,3,4,7,8-PeCDF	50.0	41.3	35 - 65		13C-1,2,3,4,7,8-HxCDF	95.4	40 - 135	
1,2,3,4,7,8-HxCDF	50.0	44.3	35 - 65		13C-1,2,3,6,7,8-HxCDF	85.3	40 - 135	
1,2,3,6,7,8-HxCDF	50.0	43.7	35 - 65		13C-2,3,4,6,7,8-HxCDF	86.5	40 - 135	
2,3,4,6,7,8-HxCDF	50.0	44.7	35 - 65		13C-1,2,3,7,8,9-HxCDF	90.9	40 - 135	
1,2,3,7,8,9-HxCDF	50.0	44.9	35 - 65		13C-1,2,3,4,6,7,8-HpCDF	84.9	40 - 135	
1,2,3,4,6,7,8-HpCDF	50.0	44.9	35 - 65		13C-1,2,3,4,7,8,9-HpCDF	93.4	40 - 135	
1,2,3,4,7,8,9-HpCDF	50.0	45.9	35 - 65		13C-OCDF	89.3	40 - 135	
OCDF	100	88.0	70 - 130	CRS	37Cl-2,3,7,8-TCDD	92.8	40 - 135	

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:06

Vista

Sample ID: CAMO-09-10464 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31845-001	Date Received:	30-Jun-09
Project:	09-2507	Sample Size:	10.6 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	25-Jun-09	%Solids:	95.1	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	0915						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0502		
1,2,3,7,8-PeCDD	ND	0.0850		
1,2,3,4,7,8-HxCDD	ND	0.216		
1,2,3,6,7,8-HxCDD	ND	0.219		
1,2,3,7,8,9-HxCDD	ND	0.209		
1,2,3,4,6,7,8-HpCDD	ND	0.270		
OCDD	1.50			J
2,3,7,8-TCDF	ND	0.0397		
1,2,3,7,8-PeCDF	ND	0.0400		
2,3,4,7,8-PeCDF	ND	0.0406		
1,2,3,4,7,8-HxCDF	ND	0.0793		
1,2,3,6,7,8-HxCDF	ND	0.0820		
2,3,4,6,7,8-HxCDF	ND	0.102		
1,2,3,7,8,9-HxCDF	ND	0.134		
1,2,3,4,6,7,8-HpCDF	ND	0.154		
1,2,3,4,7,8,9-HpCDF	ND	0.163		
OCDF	ND	0.125		

Labeled Standard		%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	101	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	95.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	98.7	40 - 135	
	13C-2,3,7,8-TCDF	99.1	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	95.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	84.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	84.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.3	40 - 135	
	13C-OCDF	90.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.8	40 - 135	

Totals		
Total TCDD	ND	0.0502
Total PeCDD	ND	0.0850
Total HxCDD	ND	0.215
Total HpCDD	ND	0.270
Total TCDF	ND	0.0397
Total PeCDF	ND	0.0403
Total HxCDF	ND	0.0993
Total HpCDF	ND	0.158

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.00150

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:06

Vista

Sample ID: CAMO-09-10465 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31845-002	Date Received:	30-Jun-09
Project:	09-2507	Sample Size:	10.5 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	25-Jun-09	%Solids:	95.2	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1015						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0422		
1,2,3,7,8-PeCDD	ND	0.0728		
1,2,3,4,7,8-HxCDD	ND	0.228		
1,2,3,6,7,8-HxCDD	ND	0.241		
1,2,3,7,8,9-HxCDD	ND	0.226		
1,2,3,4,6,7,8-HpCDD	ND	0.304		
OCDD	ND	0.217		
2,3,7,8-TCDF	ND	0.0397		
1,2,3,7,8-PeCDF	ND	0.0412		
2,3,4,7,8-PeCDF	ND	0.0462		
1,2,3,4,7,8-HxCDF	ND	0.0860		
1,2,3,6,7,8-HxCDF	ND	0.0901		
2,3,4,6,7,8-HxCDF	ND	0.109		
1,2,3,7,8,9-HxCDF	ND	0.143		
1,2,3,4,6,7,8-HpCDF	ND	0.165		
1,2,3,4,7,8,9-HpCDF	ND	0.172		
OCDF	ND	0.130		

Totals		
Total TCDD	ND	0.0422
Total PeCDD	ND	0.0728
Total HxCDD	ND	0.232
Total HpCDD	ND	0.304
Total TCDF	ND	0.0397
Total PeCDF	ND	0.0437
Total HxCDF	ND	0.107
Total HpCDF	ND	0.168

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	98.0	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	81.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	99.2	40 - 135	
	13C-OCDD	96.0	40 - 135	
	13C-2,3,7,8-TCDF	96.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.7	40 - 135	
	13C-2,3,4,7,8-PeCDF	94.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	86.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	81.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	92.1	40 - 135	
	13C-OCDF	87.1	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	92.9	40 - 135	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:06

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

Monday, June 29, 2009

REQUEST NUMBER: 09-2507

31845
2.1°C

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2507
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-10464	R	6/25/2009	
		2	CAMO-09-10464	R	6/25/2009	
		1	CAMO-09-10465	R	6/25/2009	
		2	CAMO-09-10465	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2507

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2507

LOS ALAMOS

NATIONAL LABORATORY

REQUEST NUMBER: 09-2507

31845

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10464	1	GLASS	8290	Ice	R
CAMO-09-10464	2	GLASS	8290	Ice	R
CAMO-09-10465	1	GLASS	8290	Ice	R
CAMO-09-10465	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/29/09	1400	B. Benedict	[illegible]	6/30/09	1212
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31845 TAT 15

Samples Arrival:	Date/Time 6/30/09 0859	Initials: LBLB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 6/30/09 1204	Initials: LBLB	Location: WR-2 Shelf/Rack: F5

Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C 2.1	Time: 0925	Thermometer ID: IR-1				

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7209 7847 5767	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?	✓		
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	None		
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

	date	time	
CAMO-09-10464	6/25/09	0915	A & B jar
↓ -10465	↓	1015	↓

Sample Login 3/2007 rmh

EXTRACTION INFORMATION

PROCESS SHEET

Project No.-AR: 31845-1 of 1

RUSH!

Prep Due: 7/8/2009

Hold Due: 7/25/2009

Client: Los Alamos National Laboratory(LOANM01F

Client Manager: Rose Harrelson

Method: EPA Method 8290 | PCDD/F (Tetra - Octa)

Project Due: 7/14/2009

TAT: 14

2214

Split Type:

Matrix: Soil

LabID	Recon	Client-ID	Description	Date Received	SLoc	Shelf
001	☑	CAMO-09-10464 "A"		6/30/2009	WR-2	F-5
002	☑	CAMO-09-10465 ↓		6/30/2009	WR-2	F-5

% Solids 6/30/09 BLB

Instructions:

Report Options

Report Level:

EDD Type:

Report Group: Dioxins NoMDL with %Solid

TEQ Type: EPA(Default) : Min

Samples Reconciled By: BLB 6/30/09

Vial Box ID: ice Cone

Date Requested 7/7/2009

Percent Solids

Vista Analytical Laboratory

Project: 31845 - 1of1

Sample ID	Chemist/Date (BJB 6/30/09) Boat Wt.	Sample + Boat Wt.	Chemist/Date (BJB 7/1/09) Residue + Boat Wt.	Comments
001	1.33	4.18	4.04	
002	1.33	4.85	4.68	

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

%Solids 3/2007 rmh

Project: 31845

Extraction Set: 2214

Chemist: M. Colisso 7/1/09

Method(s): EPA Method 8290 | PCDD/F (Tetra - Octa)

C	ALTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/ WIT DATE	CRS CHEM/WIT DATE	AP CHEM/Date	ABSG CHEM/Date	AA CHEM/Date	Florisil CHEM/Date	RS CHEM/WIT DATE
☐	0_2214_MB001	10.00	10.00	MC TEH 7/1/09	MC FEB 7/2/09	N/A	MC 7/2/09	MC 7/2/09	MC 7/2/09	MC FEB 7/2/09
☐	0_2214_OPR001	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	31845_2214_001	10.52	10.61	↓	↓	↓	↓	↓	↓	↓
☐	31845_2214_002	10.51	10.50	↓	↓	↓	↓	↓	↓	↓

IS Name (V4)	NS Name (V4)	CRS Name (V6)	RS Name (V4)	Cycle Time	APP.: SEFUN SOX SDS	Check Out:
PCDD/F 0809 10A 10µl	PCDD/F 0809 16B 10µl	PCDD/F 0809 10C 10µl	PCDD/F 0809 10D 10µl	7/1 Start: 1505	SOLV: Toluene	Chemist: MC 7/1/09
PCB	PCB	PCB	PCB	7/2 Stop: 0705	Other: N/A	Check-In:
PAH	PAH	PAH	PAH		Final Volume(s): 20µl C14	Chemist: / /

Comments:

SAMPLE DATA

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Tuesday, July 07, 2009 09:13:21 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:13:43 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1	2,3,7,8-TCDD			NO	1.08	10.000					0.0500
2	1,2,3,7,8-PeCDD			NO	1.03	10.000					0.0717
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.133
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.133
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.128
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.247
7	OCDD			NO	1.18	10.000					0.188
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0365
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.0403
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0429
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.0470
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.0479
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.0614
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.0813
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.131
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.122
17	OCDF			NO	1.10	10.000					0.109
18	13C-2,3,7,8-TCDD	8.70e5	0.79	NO	1.01	10.000	26.05	1.023	194.77	97.4	0.279
19	13C-1,2,3,7,8-PeCDD	6.60e5	0.62	NO	0.827	10.000	30.69	1.205	181.17	90.6	0.232
20	13C-1,2,3,4,7,8-HxCDD	5.57e5	1.27	NO	0.916	10.000	34.14	0.988	188.94	94.5	0.468
21	13C-1,2,3,6,7,8-HxCDD	5.03e5	1.22	NO	0.921	10.000	34.25	0.991	169.85	84.9	0.466
22	13C-1,2,3,4,6,7,8-HpCDD	4.39e5	1.05	NO	0.708	10.000	38.18	1.105	192.67	96.3	0.850
23	13C-OCDD	5.92e5	0.89	NO	0.503	10.000	41.63	1.205	365.82	91.5	0.545
24	13C-2,3,7,8-TCDF	1.18e6	0.78	NO	0.977	10.000	25.28	0.993	198.95	99.5	0.209
25	13C-1,2,3,7,8-PeCDF	1.05e6	1.55	NO	0.896	10.000	29.47	1.157	193.06	96.5	0.352
26	13C-2,3,4,7,8-PeCDF	9.93e5	1.59	NO	0.900	10.000	30.42	1.194	182.51	91.3	0.350
27	13C-1,2,3,4,7,8-HxCDF	7.24e5	0.52	NO	1.17	10.000	33.21	0.961	192.47	96.2	0.586
28	13C-1,2,3,6,7,8-HxCDF	8.07e5	0.52	NO	1.52	10.000	33.34	0.965	165.10	82.6	0.451
29	13C-2,3,4,6,7,8-HxCDF	6.84e5	0.52	NO	1.25	10.000	33.96	0.983	170.14	85.1	0.548
30	13C-1,2,3,7,8,9-HxCDF	5.95e5	0.52	NO	1.05	10.000	34.95	1.012	175.67	87.8	0.651

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Tuesday, July 07, 2009 09:13:21 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:13:43 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

31	13C-1,2,3,4,6,7,8-HpCDF	4.67e5	0.44	NO	0.868	10.000	36.83	1.066	166.99	83.5	0.836
32	13C-1,2,3,4,7,8,9-HpCDF	4.24e5	0.43	NO	0.727	10.000	38.76	1.122	181.28	90.6	0.999
33	13C-OCDF	8.44e5	0.88	NO	0.760	10.000	41.86	1.212	345.35	86.3	0.289
34	37Cl-2,3,7,8-TCDD	2.21e5			0.668	10.000	26.06	1.023	75.231	94.0	0.0751
35	13C-1,2,3,4-TCDD	8.81e5	0.78	NO	1.00	10.000	25.47	0.000	200.00	100	0.283
36	13C-1,2,3,4-TCDF	1.21e6	0.77	NO	1.00	10.000	24.04	0.000	200.00	100	0.204
37	13C-1,2,3,7,8,9-HxCDD	6.44e5	1.25	NO	1.00	10.000	34.55	0.000	200.00	100	0.429
38	Total Tetra-Dioxins				1.08	10.000					0.0223
39	Total Penta-Dioxins				1.03	10.000					0.0296
40	Total Hexa-Dioxins				1.13	10.000					0.0693
41	Total Hepta-Dioxins				1.06	10.000					0.151
42	Total Tetra-Furans				1.09	10.000					0.0155
43	1st Func. Penta-Furans				1.16	10.000					0.0141
44	Total Penta-Furans				1.16	10.000					0.0139
45	Total Hexa-Furans				1.28	10.000					0.0344
46	Total Hepta-Furans				1.69	10.000					0.0735

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

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Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

2,3,7,8-TCDD

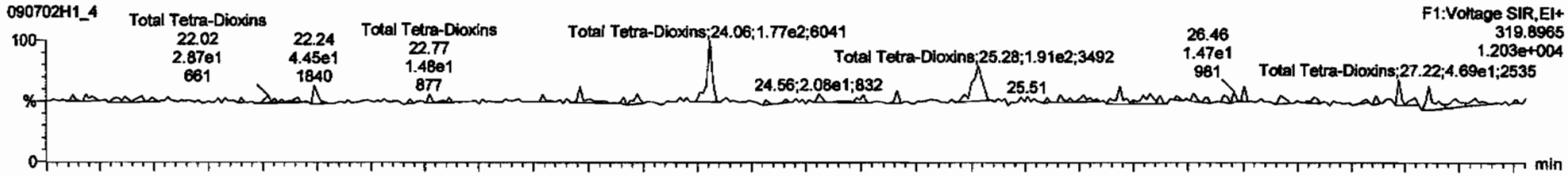

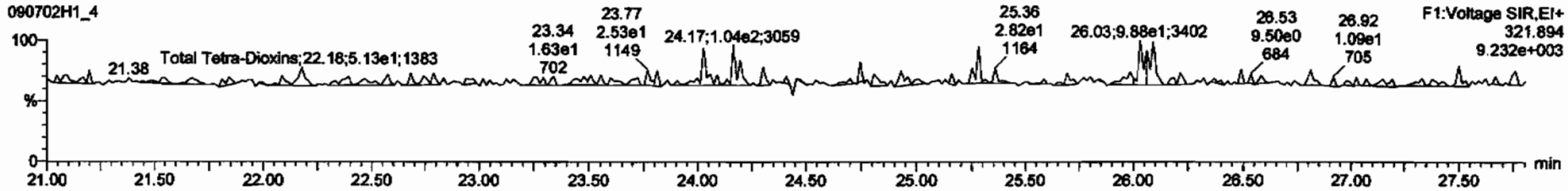

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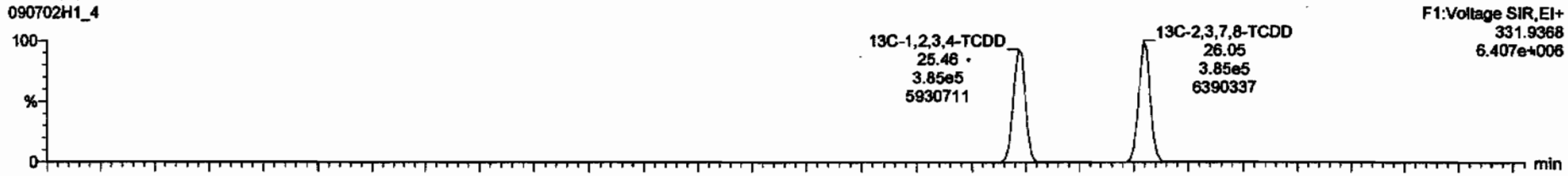

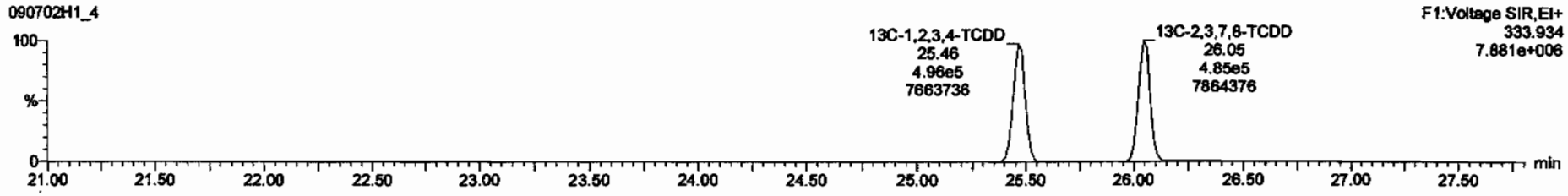

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

37Cl-2,3,7,8-TCDD

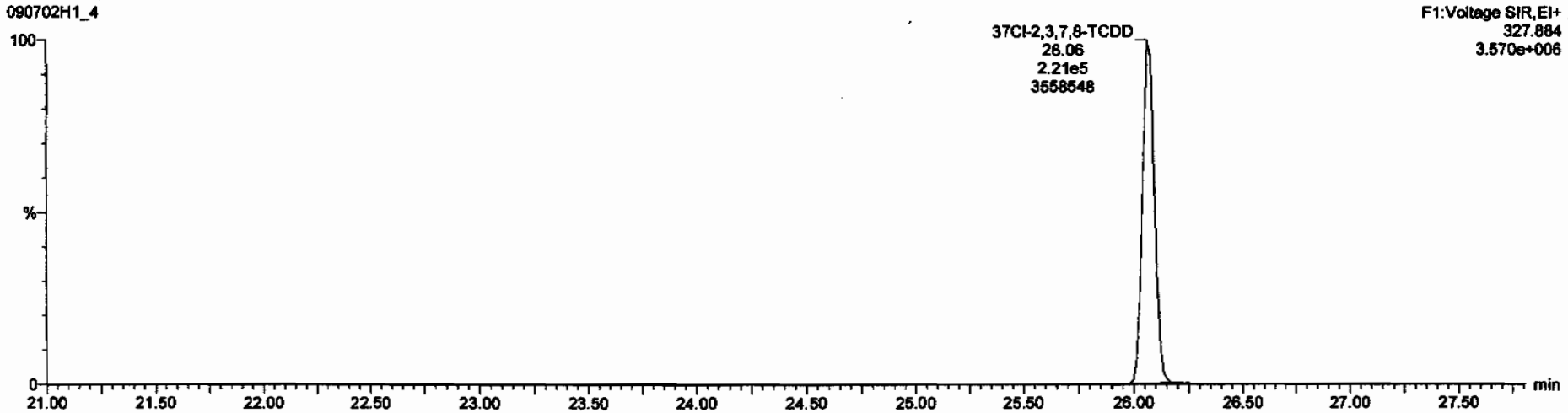

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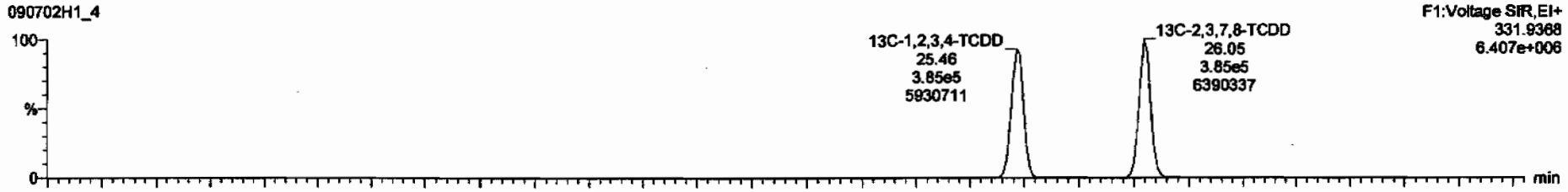

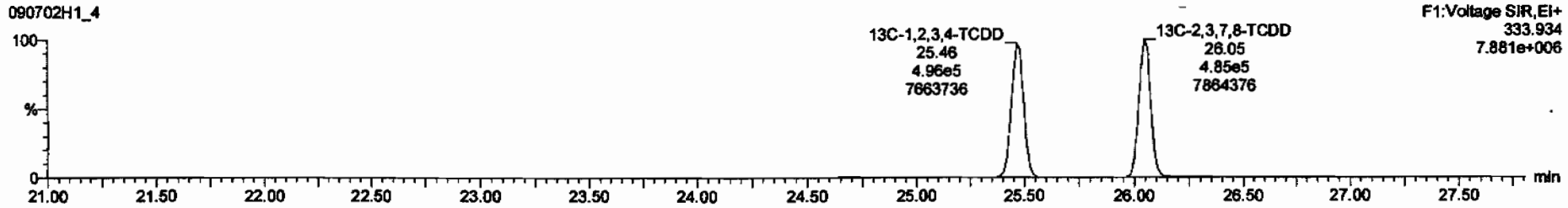

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Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,7,8-PeCDD

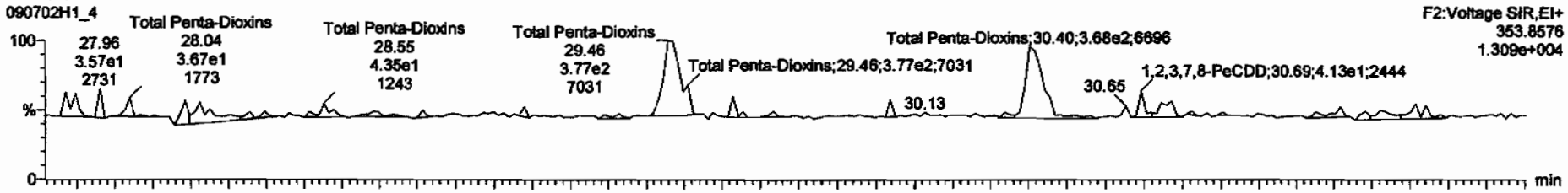

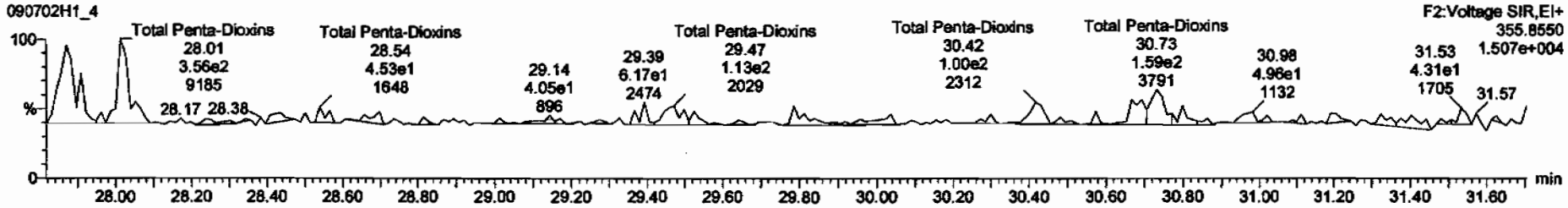

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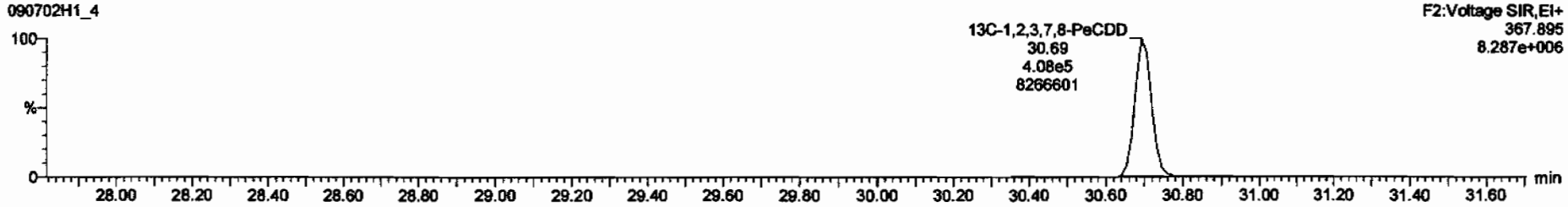

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,4,7,8-HxCDD

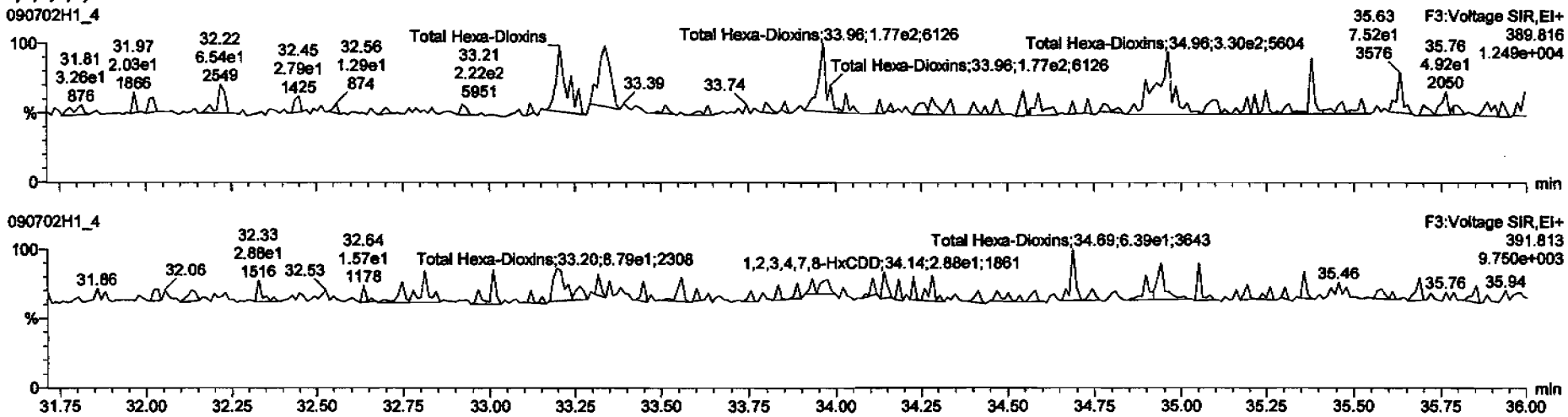

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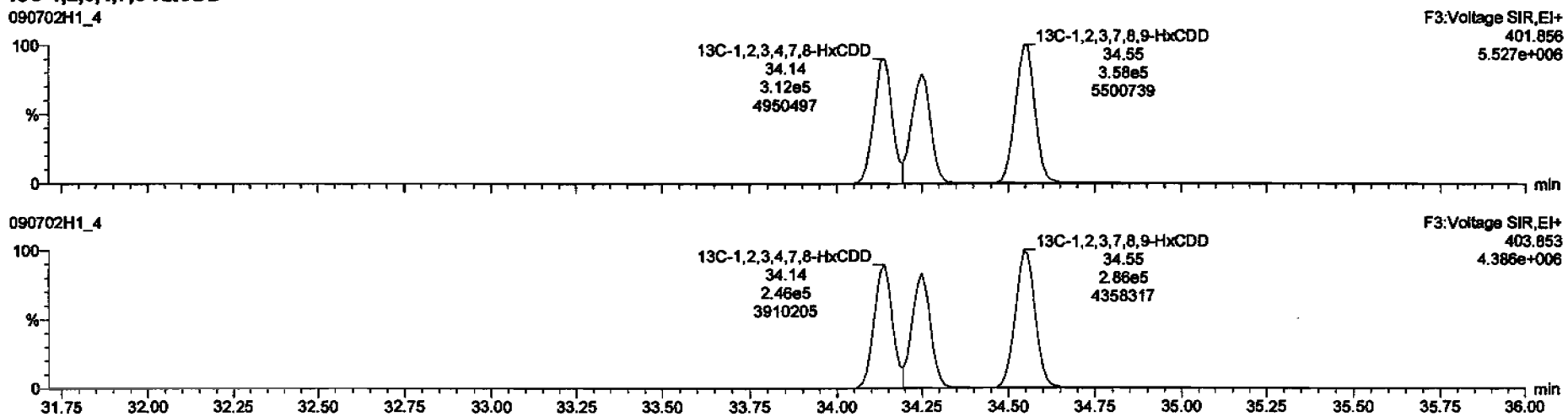

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,4,6,7,8-HpCDD

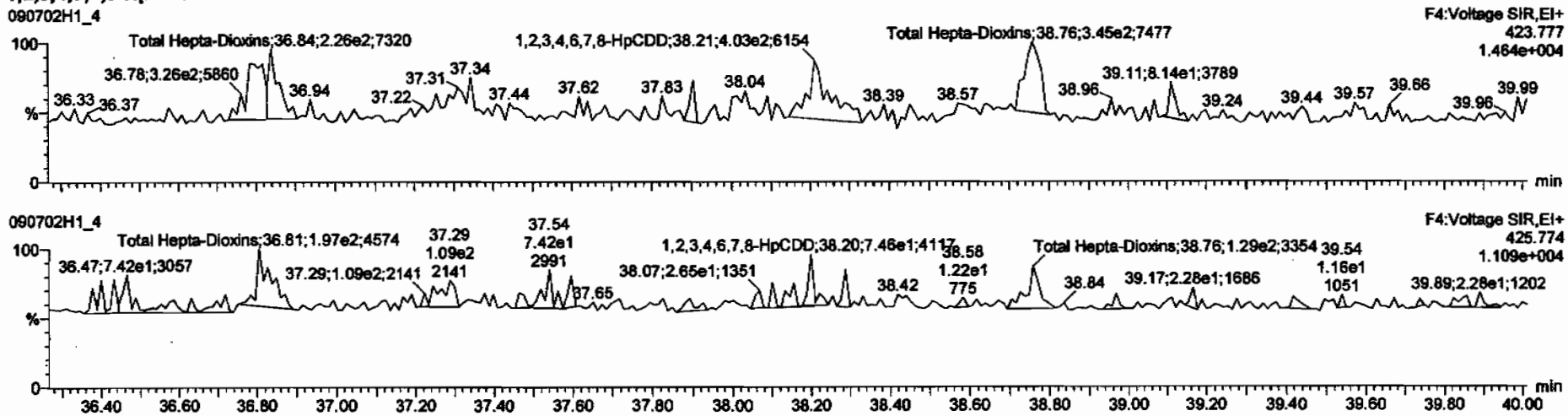

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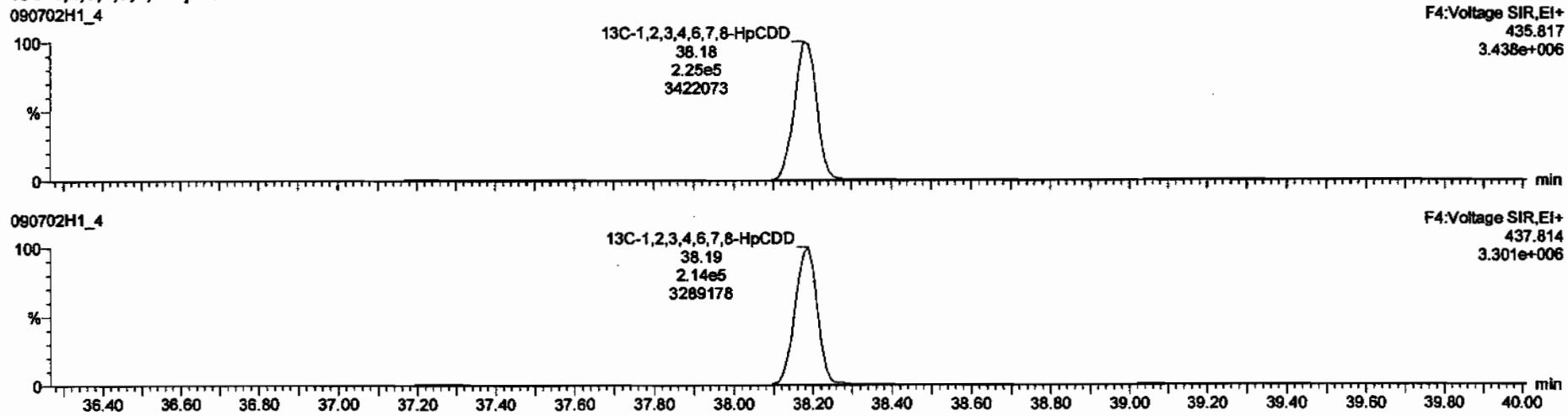

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OCDD

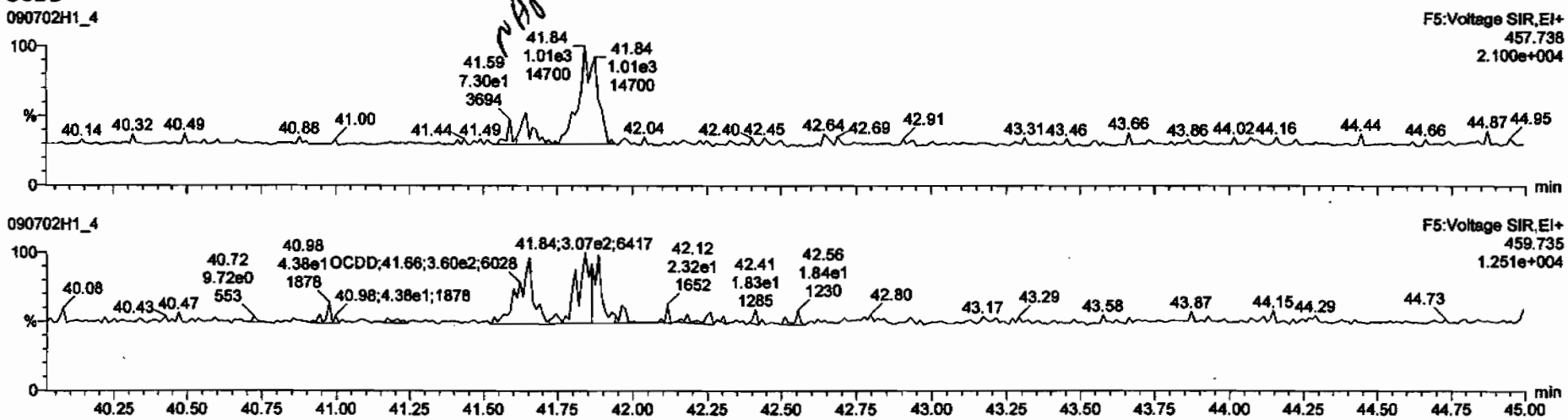

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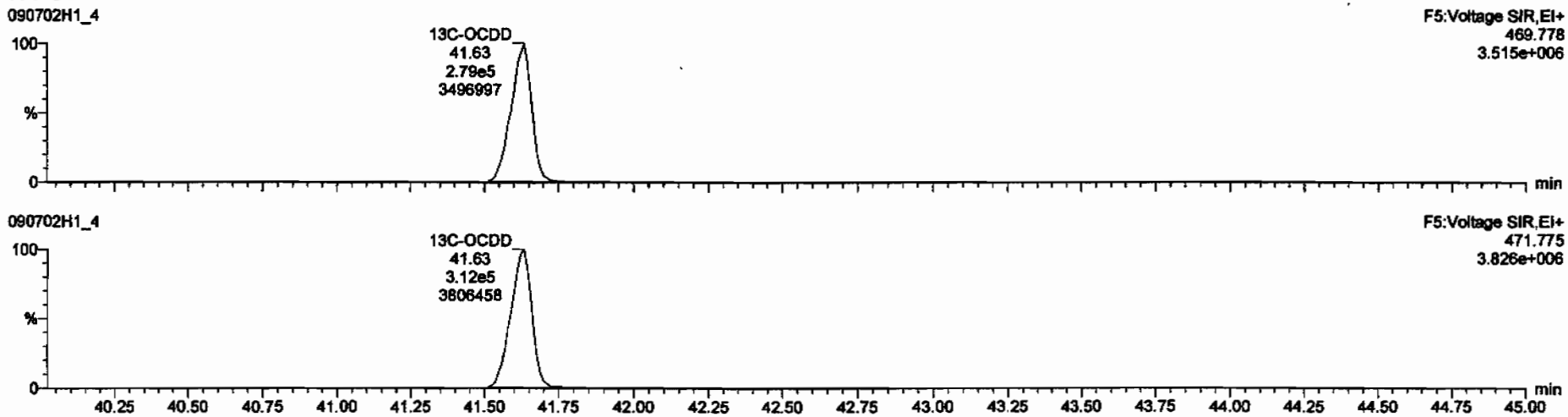

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

2,3,7,8-TCDF

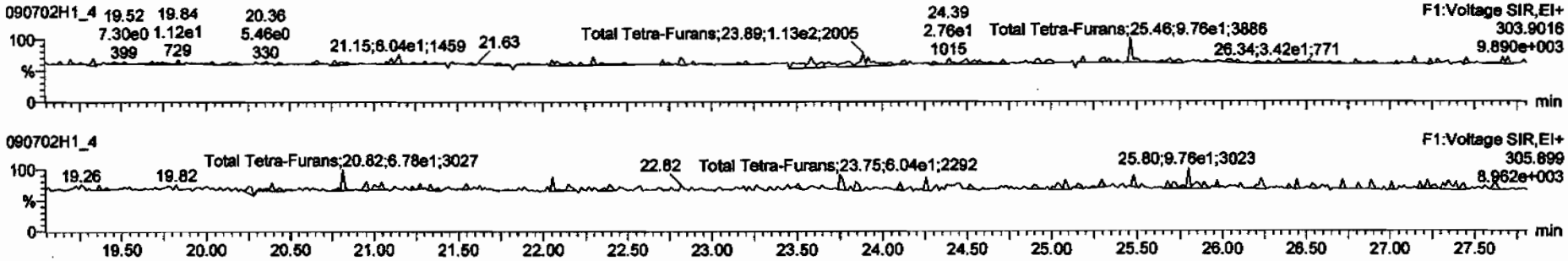

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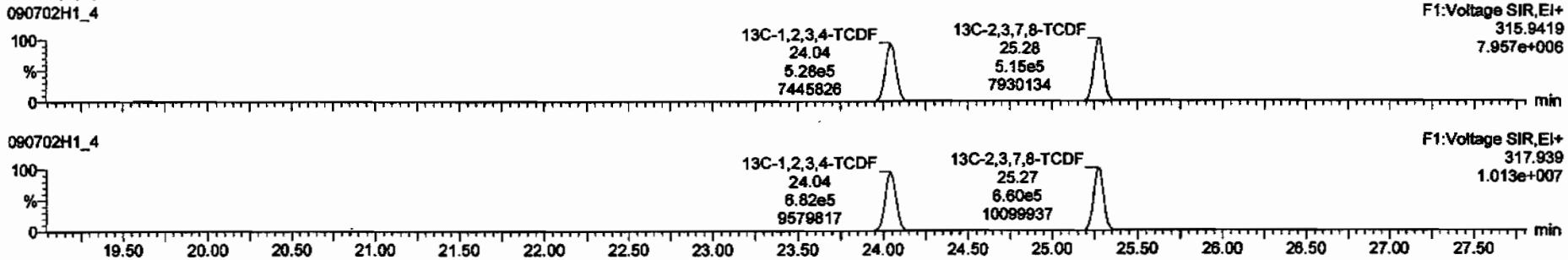

DPE1

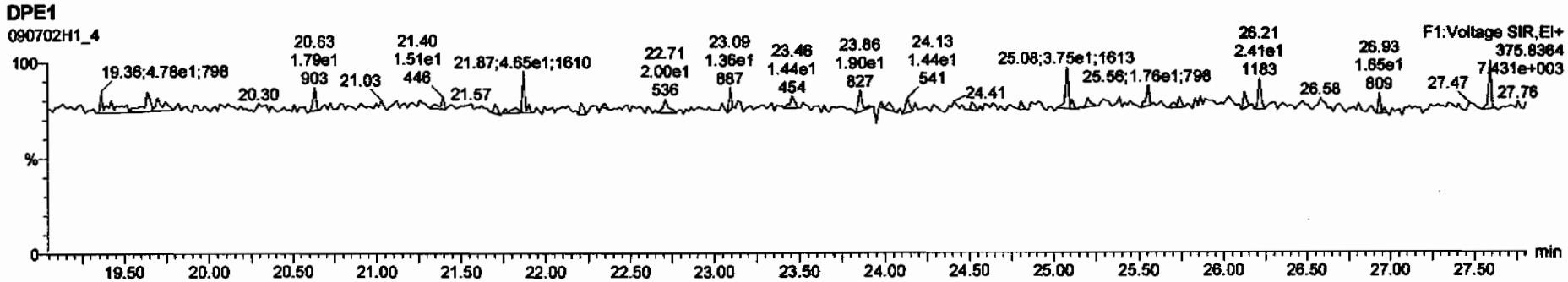

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Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

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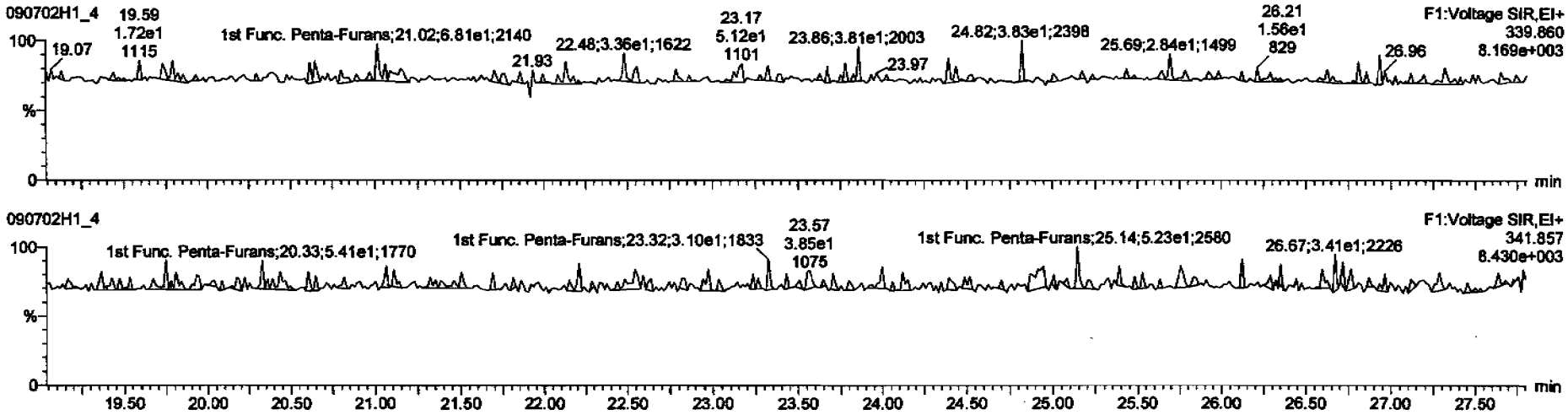

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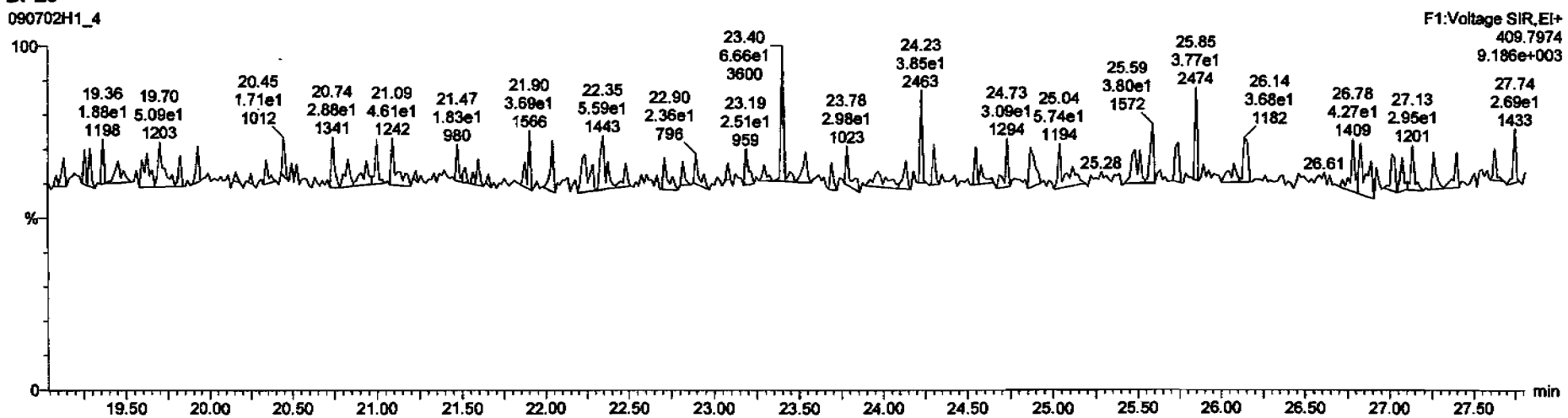

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Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,7,8-PeCDF

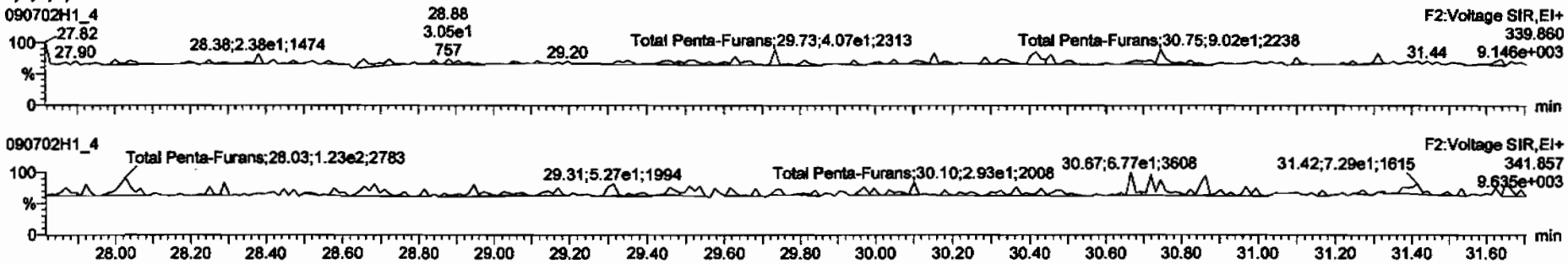

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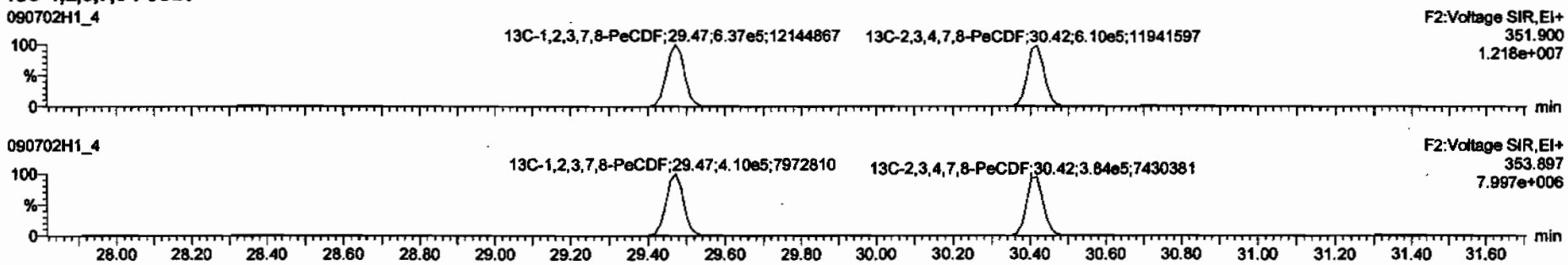

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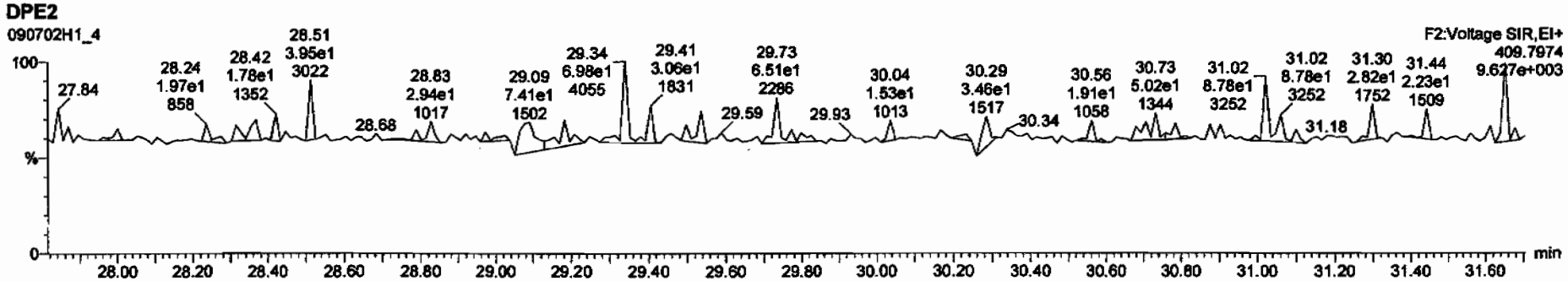

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

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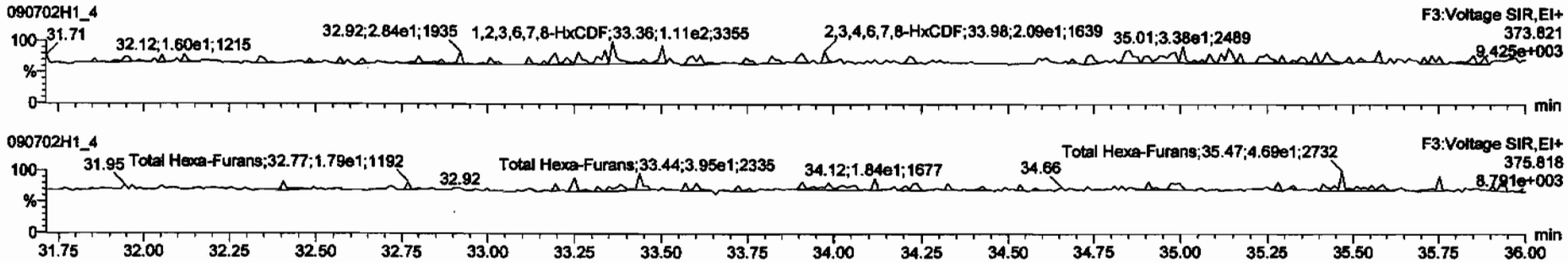

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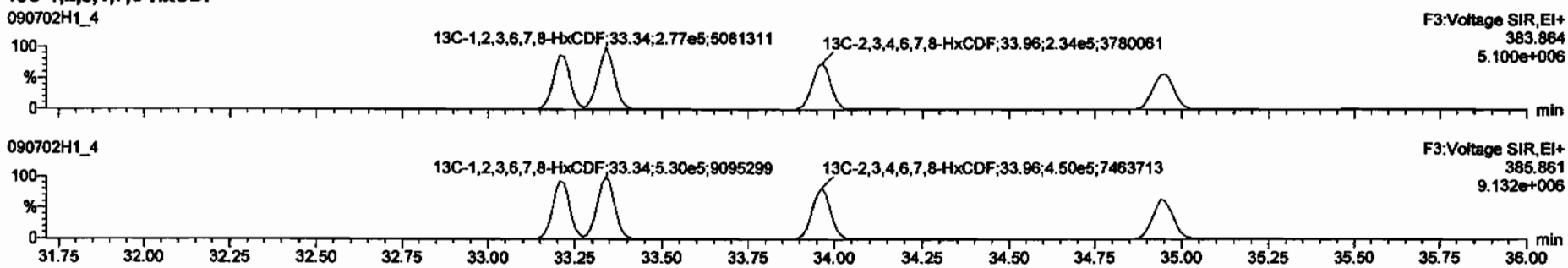

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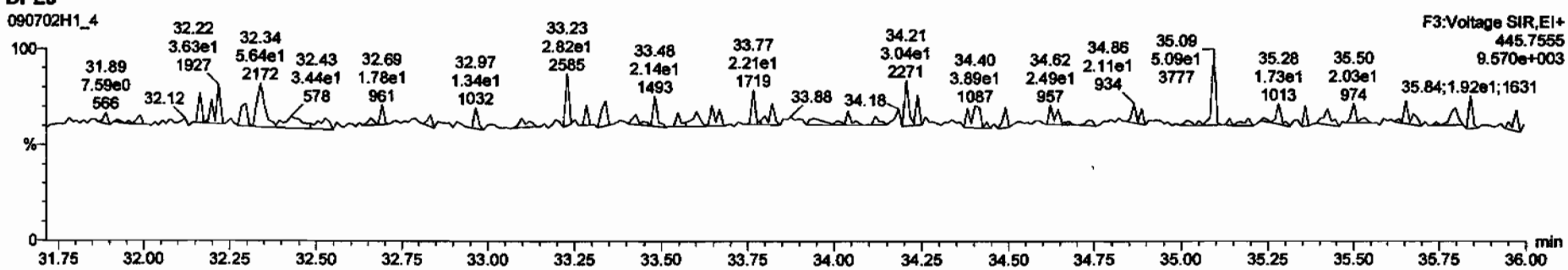

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1,2,3,4,6,7,8-HpCDF

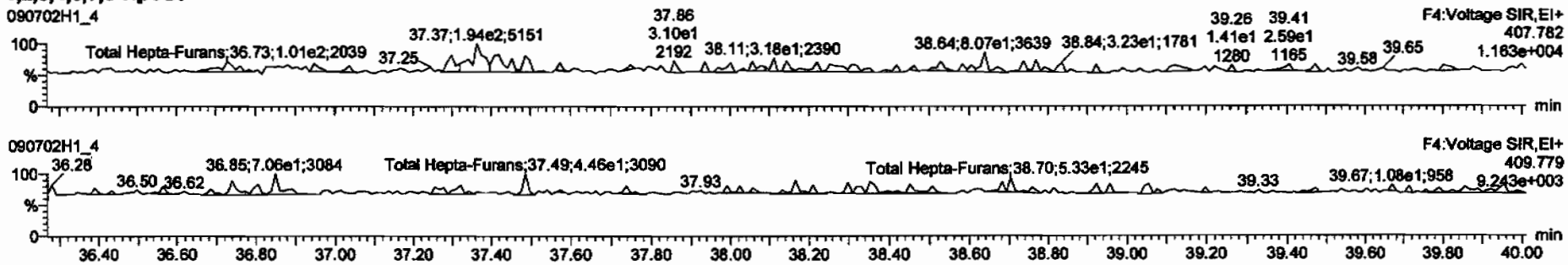

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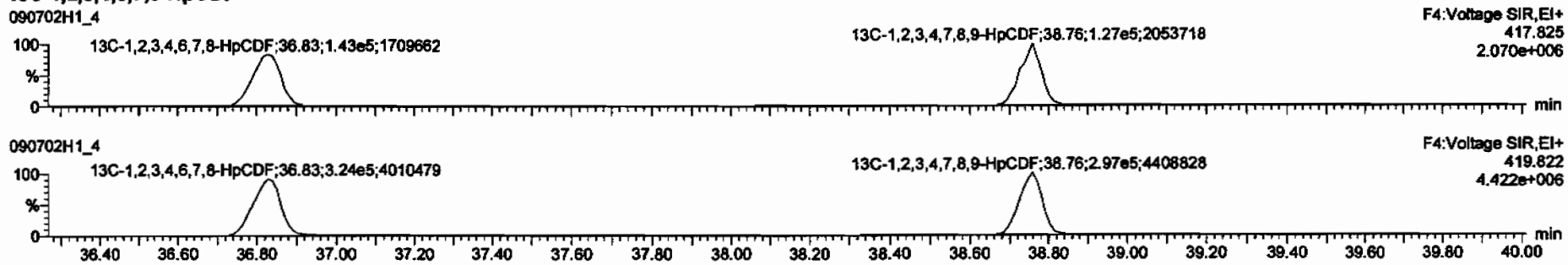

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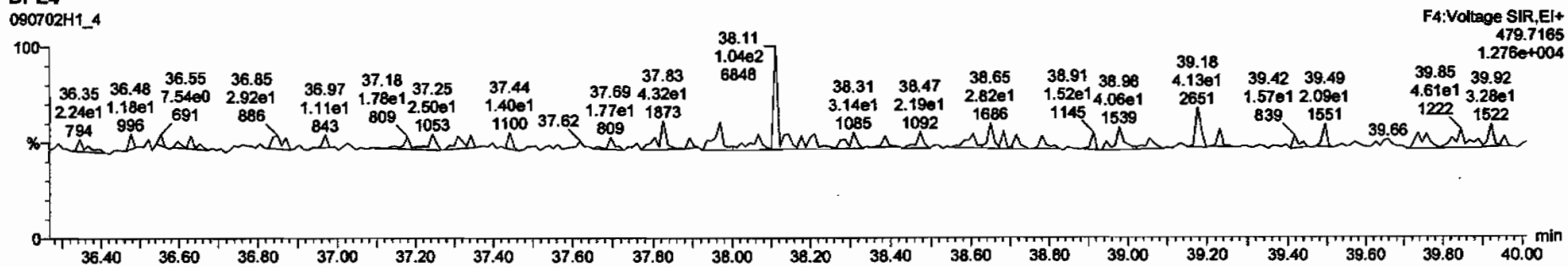

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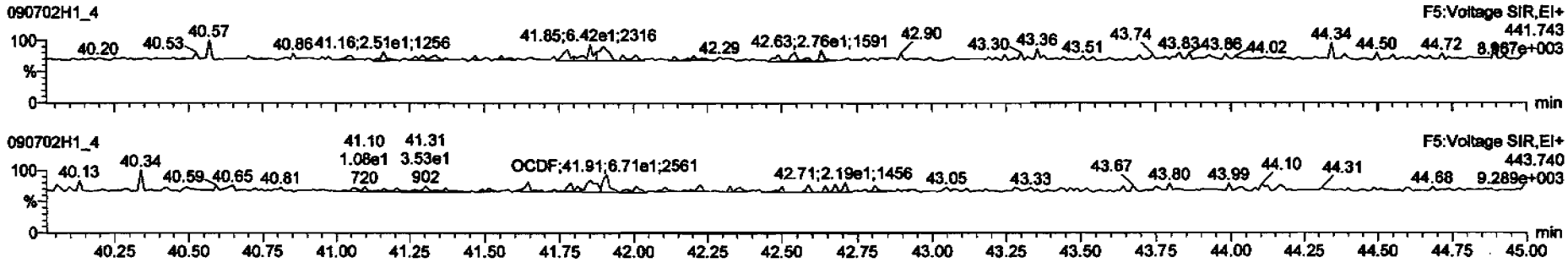

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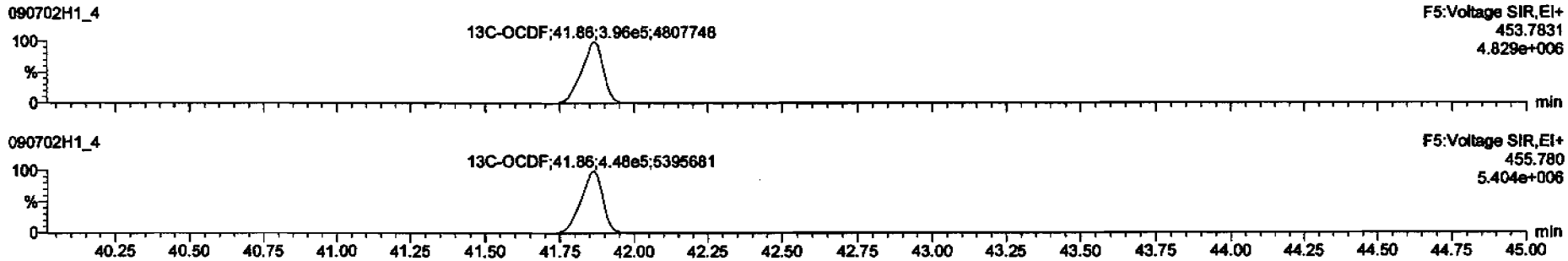

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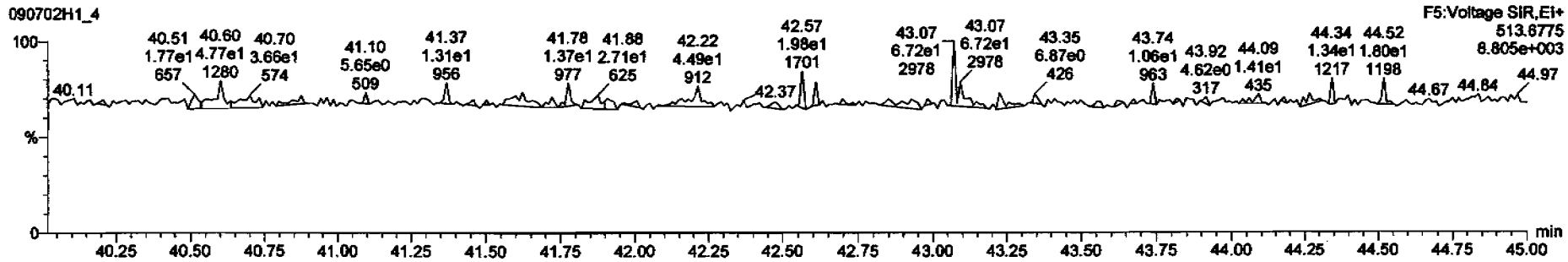

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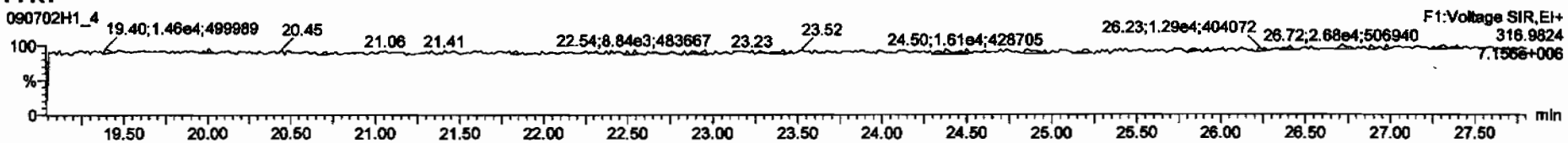

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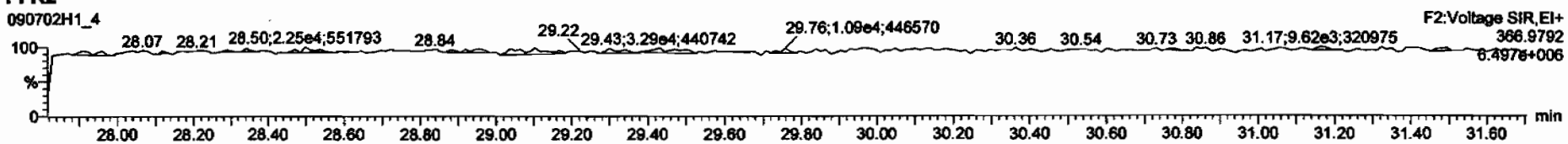

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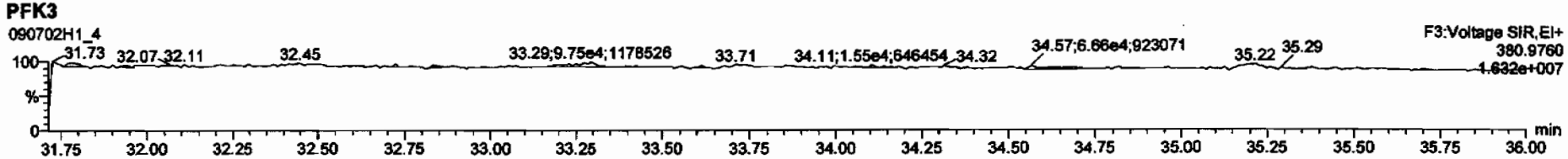

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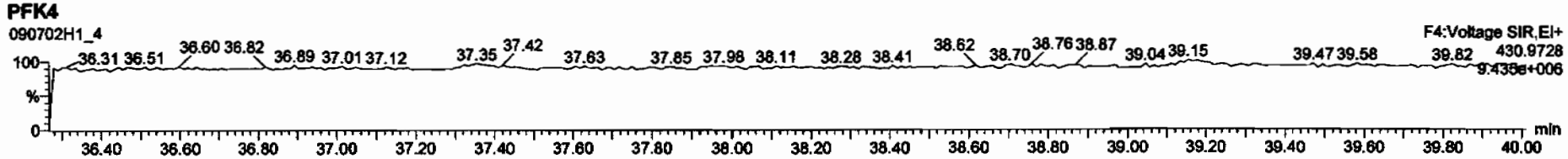

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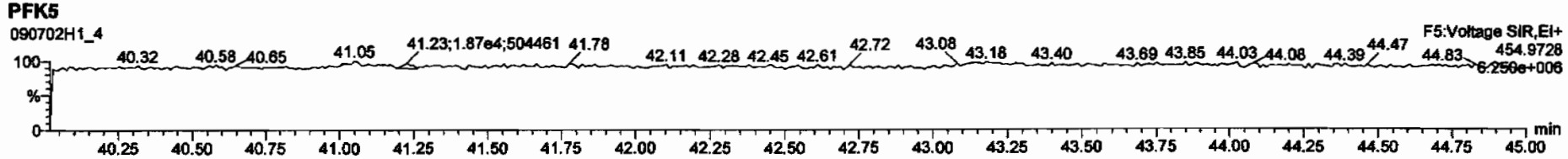

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:07:14 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

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2	1,2,3,7,8-PeCDD	3.04e5	0.62	NO	1.03	1.000	30.72	1.000	45.641	91.3	0.0578	45.641
3	1,2,3,4,7,8-HxCDD	2.50e5	1.26	NO	1.00	1.000	34.15	1.001	45.851	91.7	0.121	45.851
4	1,2,3,6,7,8-HxCDD	2.50e5	1.26	NO	1.13	1.000	34.26	1.000	44.751	89.5	0.123	44.751
5	1,2,3,7,8,9-HxCDD	2.67e5	1.23	NO	1.10	1.000	34.56	1.009	46.597	93.2	0.117	46.597
6	1,2,3,4,6,7,8-HpCDD	2.06e5	1.04	NO	1.06	1.000	38.19	1.000	44.249	88.5	0.226	44.249
7	OCDD	3.06e5	0.87	NO	1.18	1.000	41.65	1.000	88.869	88.9	0.142	88.869
8	2,3,7,8-TCDF	1.08e5	0.74	NO	1.09	1.000	25.31	1.001	8.4016	84.0	0.0196	8.4020
9	1,2,3,7,8-PeCDF	4.85e5	1.61	NO	1.16	1.000	29.49	1.000	41.587	83.2	0.0590	41.587
10	2,3,4,7,8-PeCDF	4.47e5	1.59	NO	1.12	1.000	30.43	1.000	41.315	82.6	0.0623	41.315
11	1,2,3,4,7,8-HxCDF	4.30e5	1.25	NO	1.41	1.000	33.23	1.000	44.258	88.5	0.0866	44.258
12	1,2,3,6,7,8-HxCDF	4.27e5	1.28	NO	1.22	1.000	33.36	1.001	43.689	87.4	0.0913	43.689
13	2,3,4,6,7,8-HxCDF	3.81e5	1.26	NO	1.28	1.000	33.97	1.000	44.683	89.4	0.108	44.683
14	1,2,3,7,8,9-HxCDF	3.33e5	1.28	NO	1.26	1.000	34.96	1.000	44.873	89.7	0.139	44.873
15	1,2,3,4,6,7,8-HpCDF	3.45e5	1.05	NO	1.69	1.000	36.85	1.001	44.914	89.8	0.198	44.914
16	1,2,3,4,7,8,9-HpCDF	2.85e5	1.05	NO	1.48	1.000	38.77	1.000	45.881	91.8	0.215	45.881
17	OCDF	4.04e5	0.91	NO	1.10	1.000	41.89	1.000	88.020	88.0	0.122	88.020
18	13C-2,3,7,8-TCDD	8.37e5	0.78	NO	1.01	1.000	26.06	1.023	99.620	99.6	0.121	
19	13C-1,2,3,7,8-PeCDD	6.44e5	0.62	NO	0.827	1.000	30.71	1.205	94.026	94.0	0.122	
20	13C-1,2,3,4,7,8-HxCDD	5.43e5	1.20	NO	0.916	1.000	34.13	0.988	96.107	96.1	0.239	
21	13C-1,2,3,6,7,8-HxCDD	4.97e5	1.33	NO	0.921	1.000	34.25	0.991	87.429	87.4	0.238	
22	13C-1,2,3,4,6,7,8-HpCDD	4.37e5	1.05	NO	0.708	1.000	38.18	1.105	99.866	99.9	0.463	
23	13C-OCDD	5.84e5	0.89	NO	0.503	1.000	41.62	1.205	188.32	94.2	0.275	
24	13C-2,3,7,8-TCDF	1.18e6	0.79	NO	0.977	1.000	25.28	0.992	102.41	102	0.0965	
25	13C-1,2,3,7,8-PeCDF	1.01e6	1.55	NO	0.896	1.000	29.47	1.157	95.404	95.4	0.205	
26	13C-2,3,4,7,8-PeCDF	9.68e5	1.55	NO	0.900	1.000	30.42	1.194	91.426	91.4	0.204	
27	13C-1,2,3,4,7,8-HxCDF	6.88e5	0.52	NO	1.17	1.000	33.22	0.962	95.390	95.4	0.321	
28	13C-1,2,3,6,7,8-HxCDF	8.00e5	0.52	NO	1.52	1.000	33.34	0.965	85.317	85.3	0.247	
29	13C-2,3,4,6,7,8-HxCDF	6.67e5	0.52	NO	1.25	1.000	33.97	0.983	86.459	86.5	0.301	
30	13C-1,2,3,7,8,9-HxCDF	5.91e5	0.51	NO	1.05	1.000	34.95	1.012	90.906	90.9	0.357	

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7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:07:14 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

31	13C-1,2,3,4,6,7,8-HpCDF	4.55e5	0.44	NO	0.868	1.000	36.83	1.066	84.855	84.9	0.521
32	13C-1,2,3,4,7,8,9-HpCDF	4.19e5	0.44	NO	0.727	1.000	38.76	1.122	93.449	93.4	0.623
33	13C-OCDF	8.37e5	0.88	NO	0.760	1.000	41.88	1.212	178.53	89.3	0.154
34	37Cl-2,3,7,8-TCDD	2.05e5			0.668	1.000	26.08	1.023	37.129	92.8	0.0420
35	13C-1,2,3,4-TCDD	8.28e5	0.79	NO	1.00	1.000	25.48	0.000	100.00	100	0.123
36	13C-1,2,3,4-TCDF	1.18e6	0.76	NO	1.00	1.000	24.06	0.000	100.00	100	0.0943
37	13C-1,2,3,7,8,9-HxCDD	6.17e5	1.25	NO	1.00	1.000	34.55	0.000	100.00	100	0.219

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

2,3,7,8-TCDD

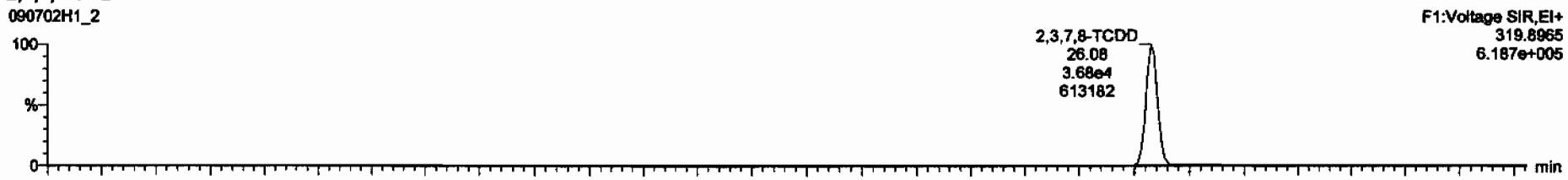

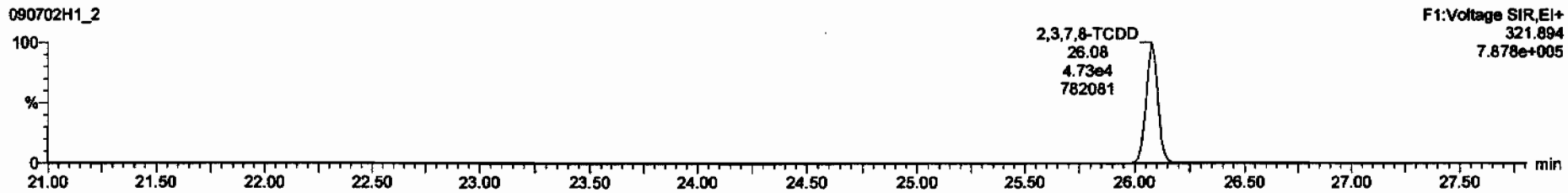

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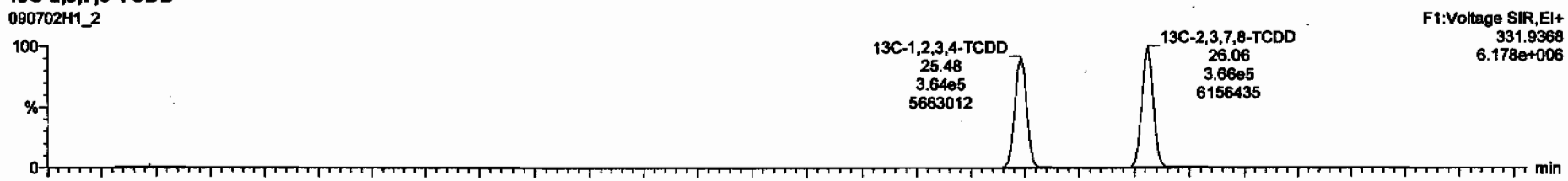

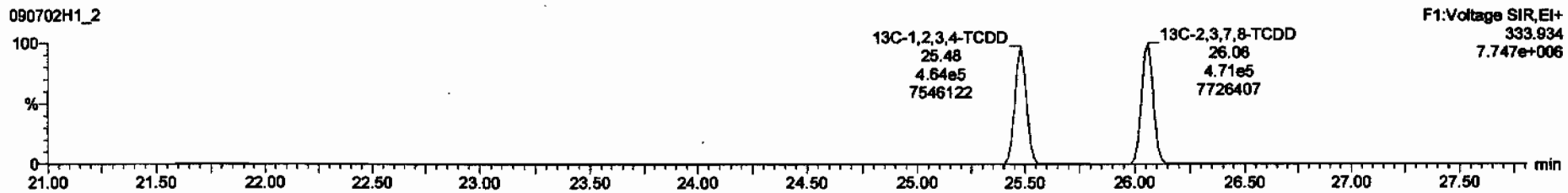

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

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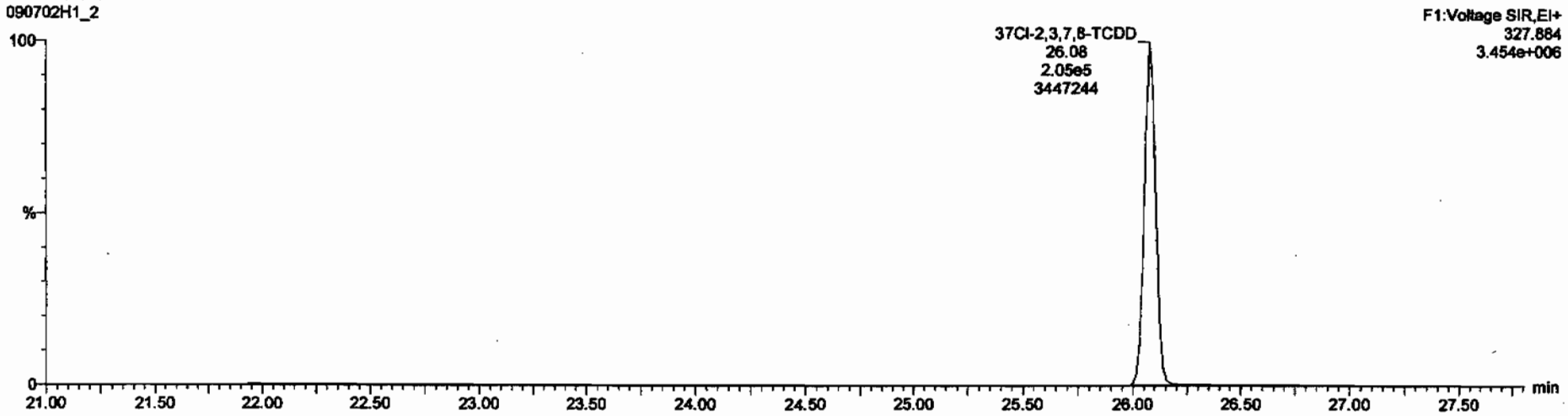

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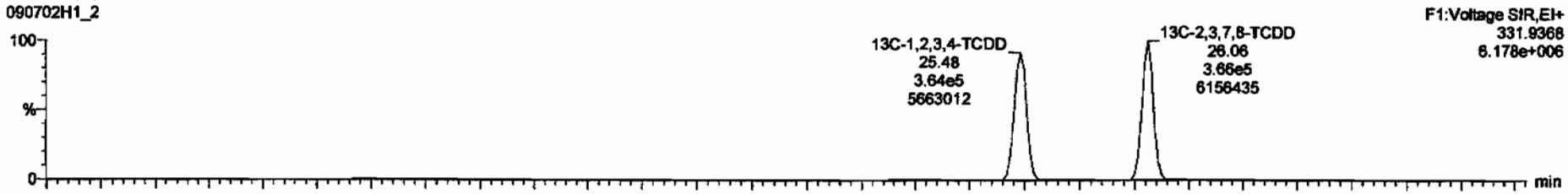

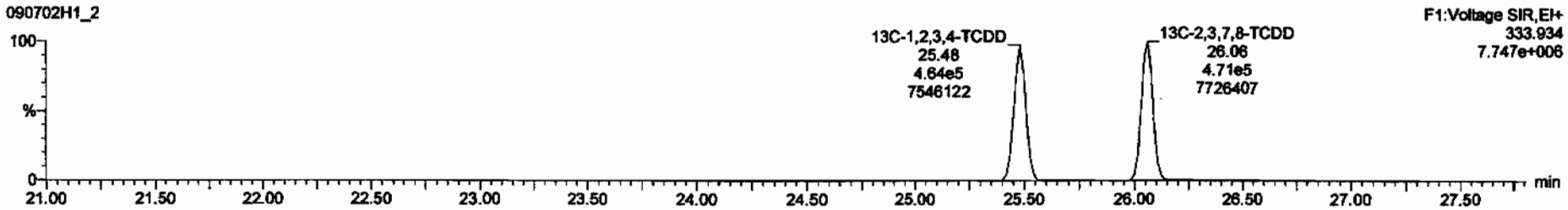

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,7,8-PeCDD

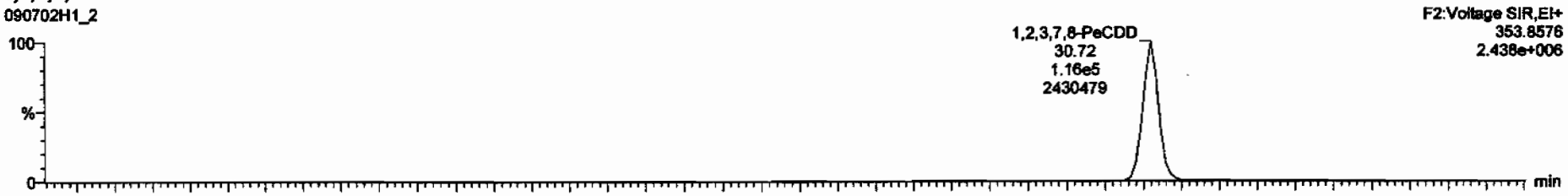

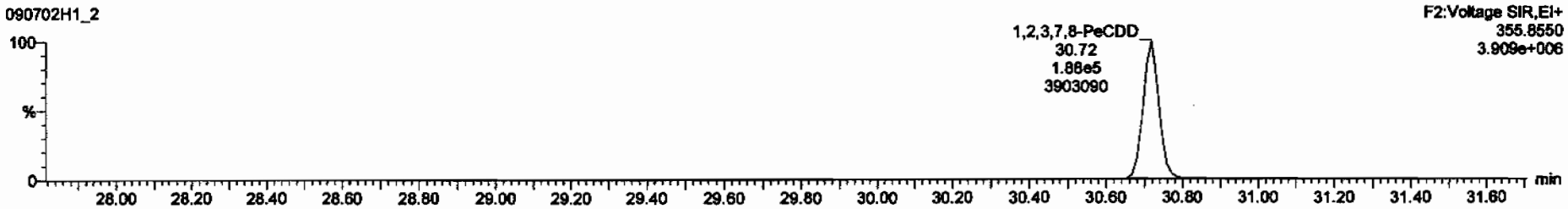

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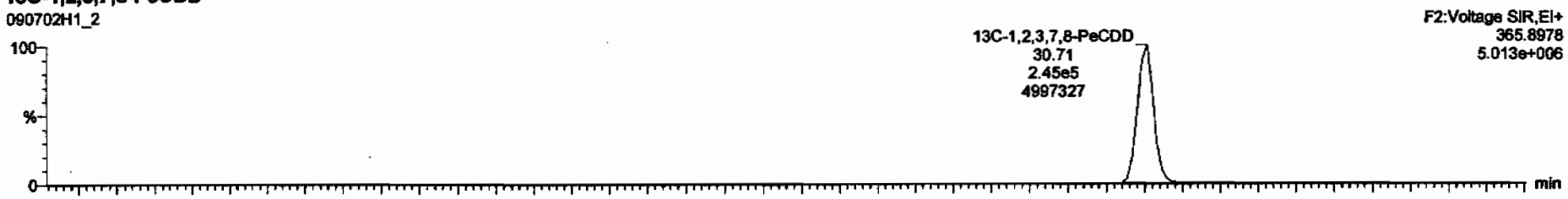

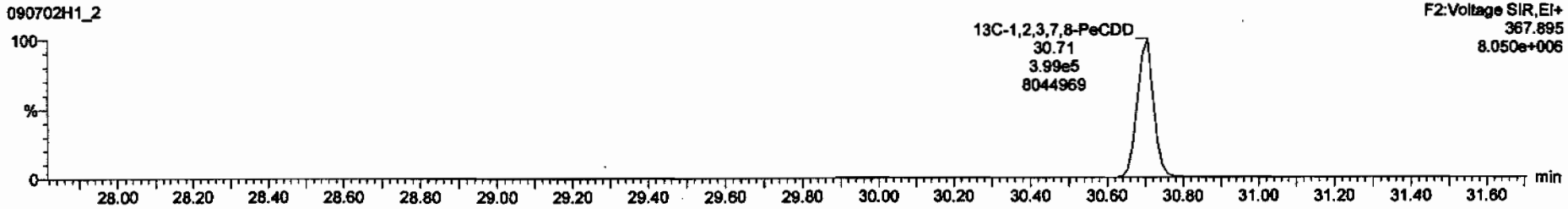

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,7,8-HxCDD

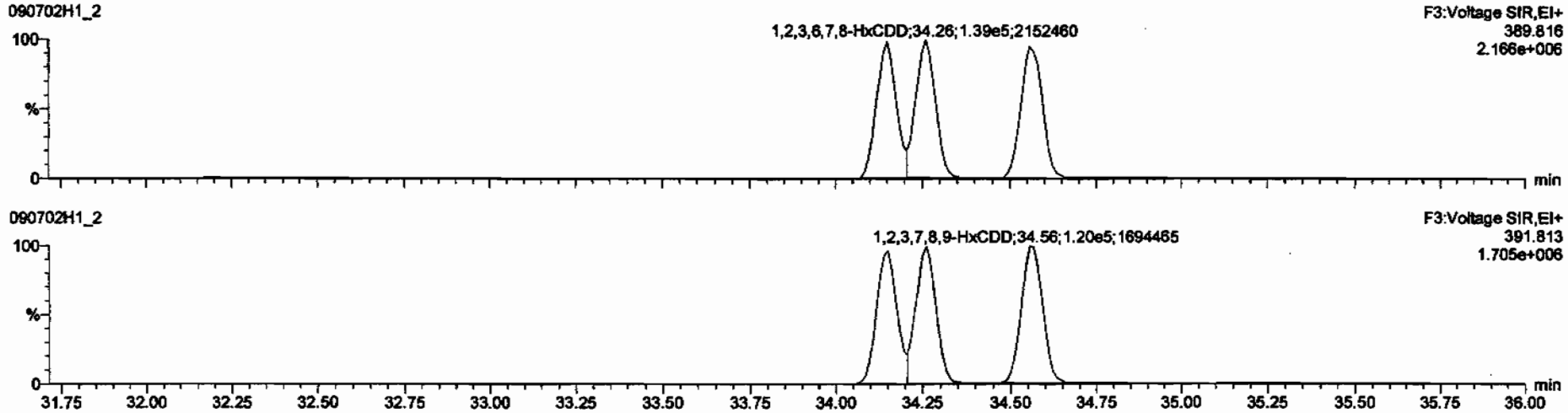

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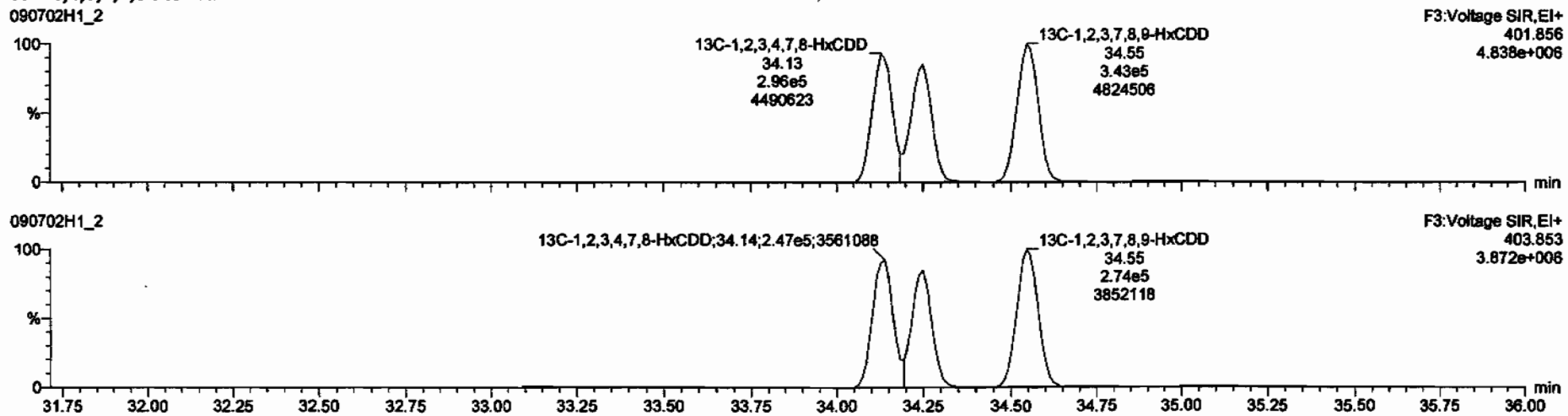

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,6,7,8-HpCDD

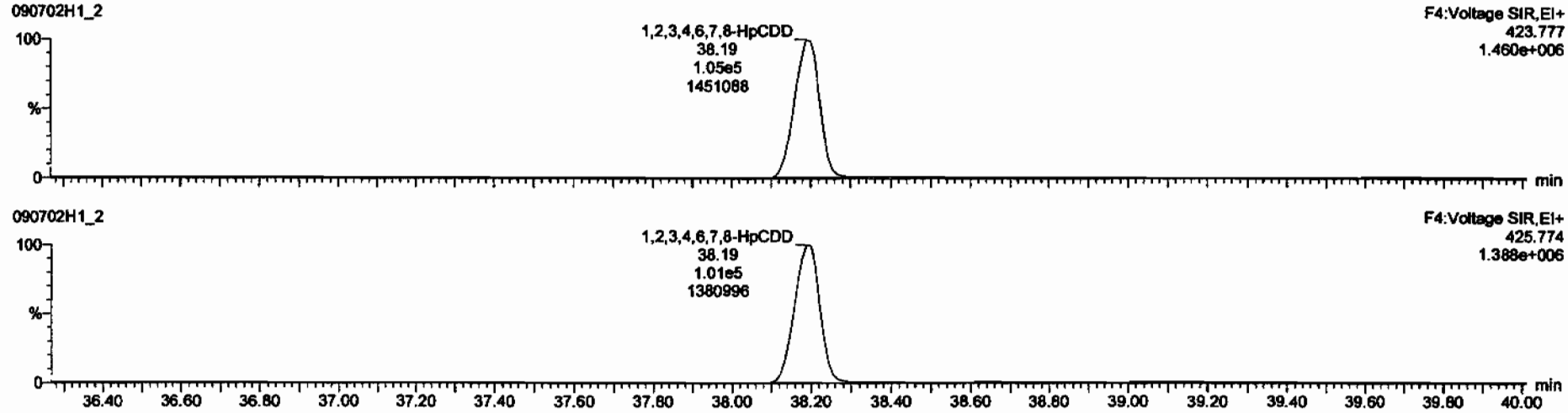

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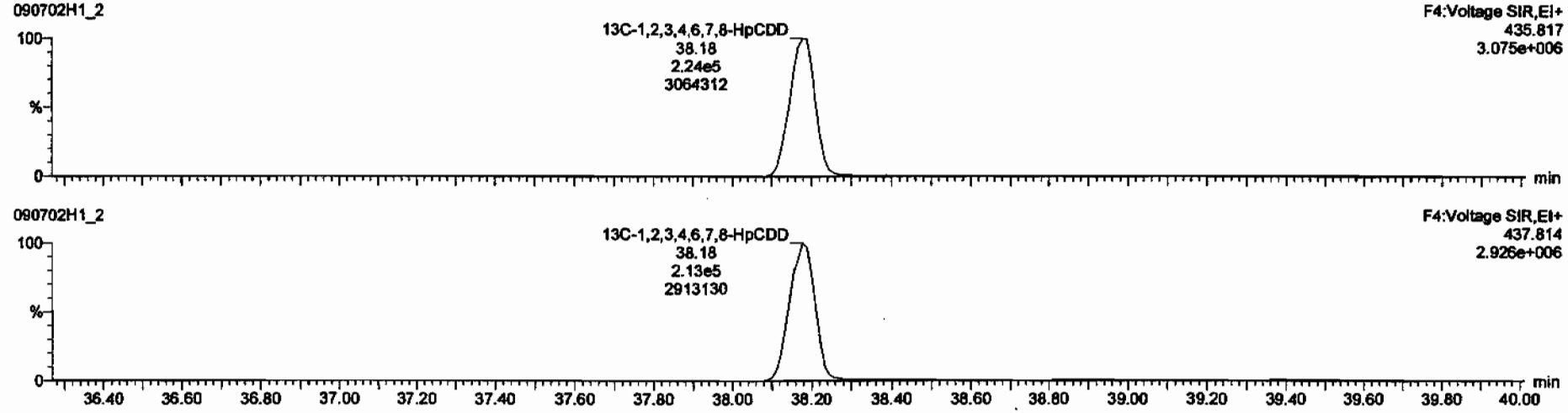

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OCDD

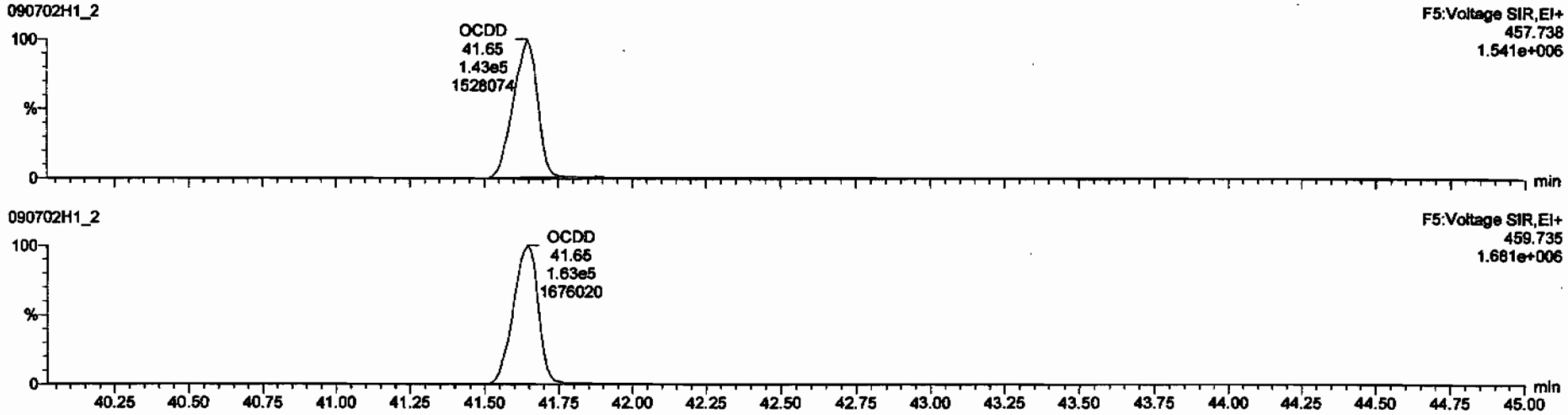

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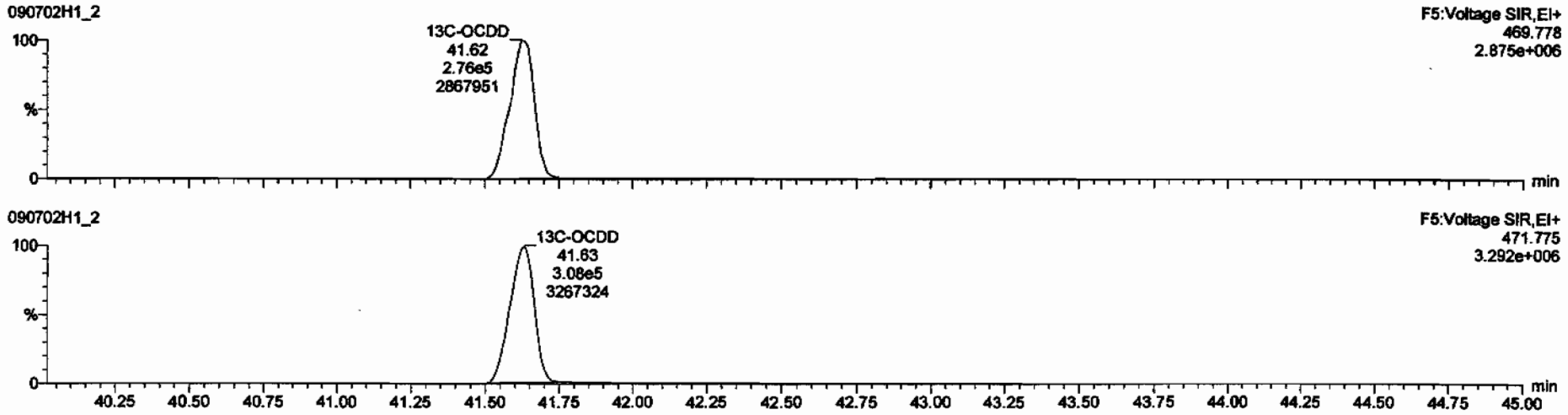

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

2,3,7,8-TCDF

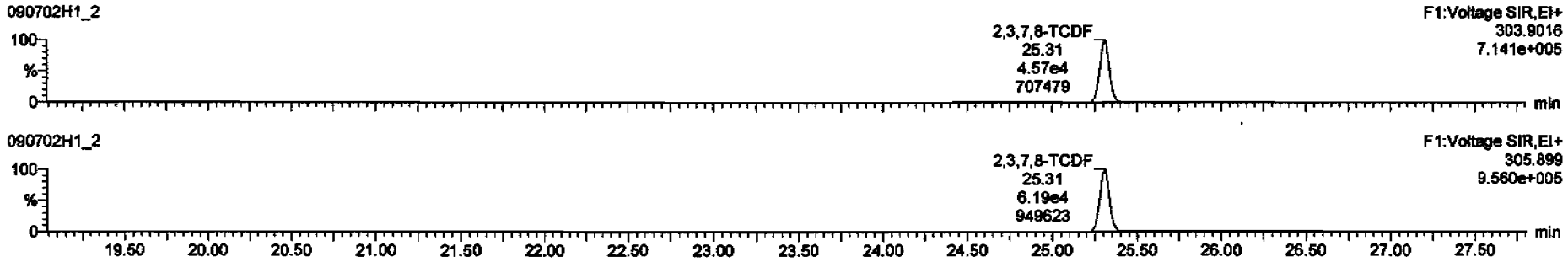

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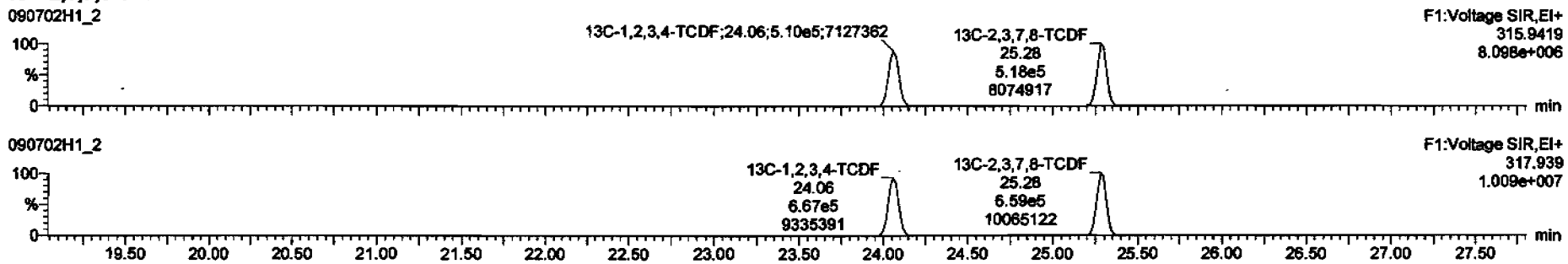

DPE1

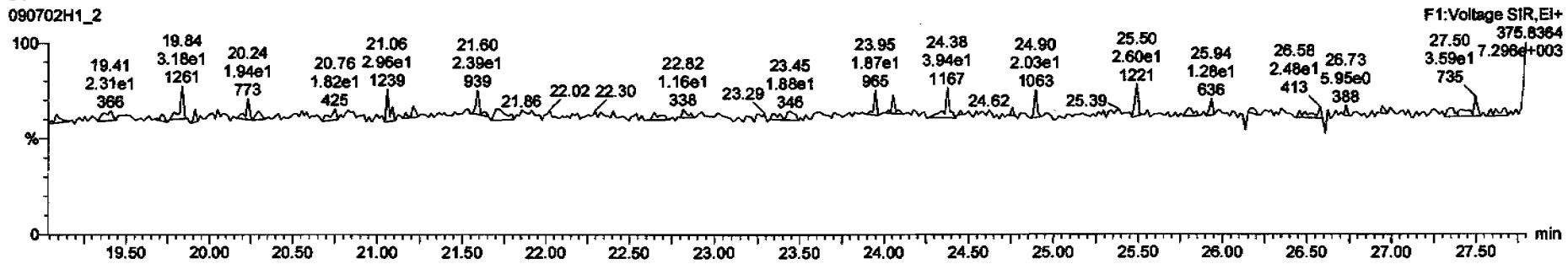

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

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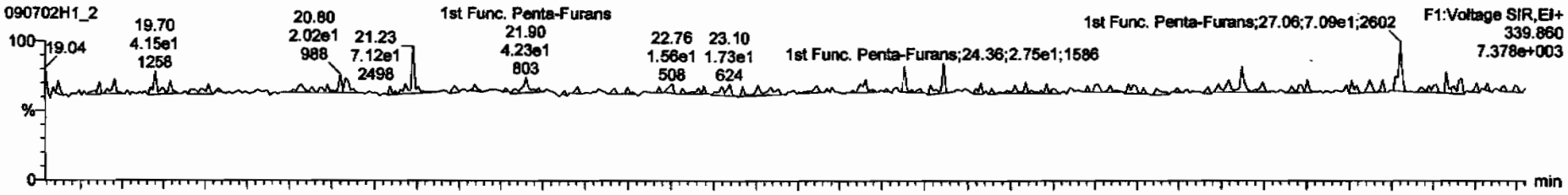

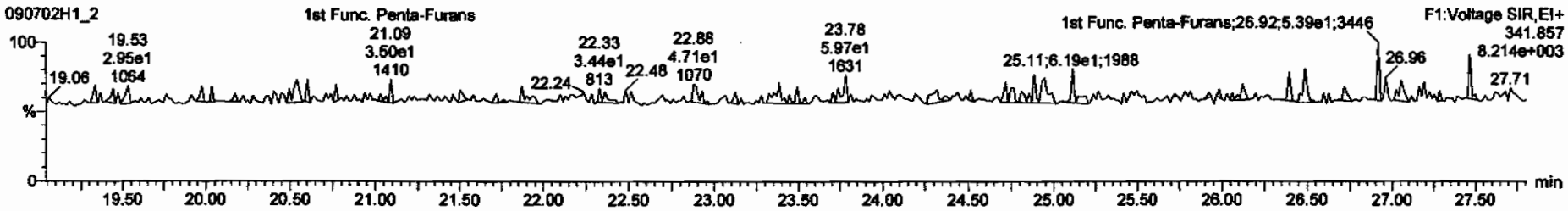

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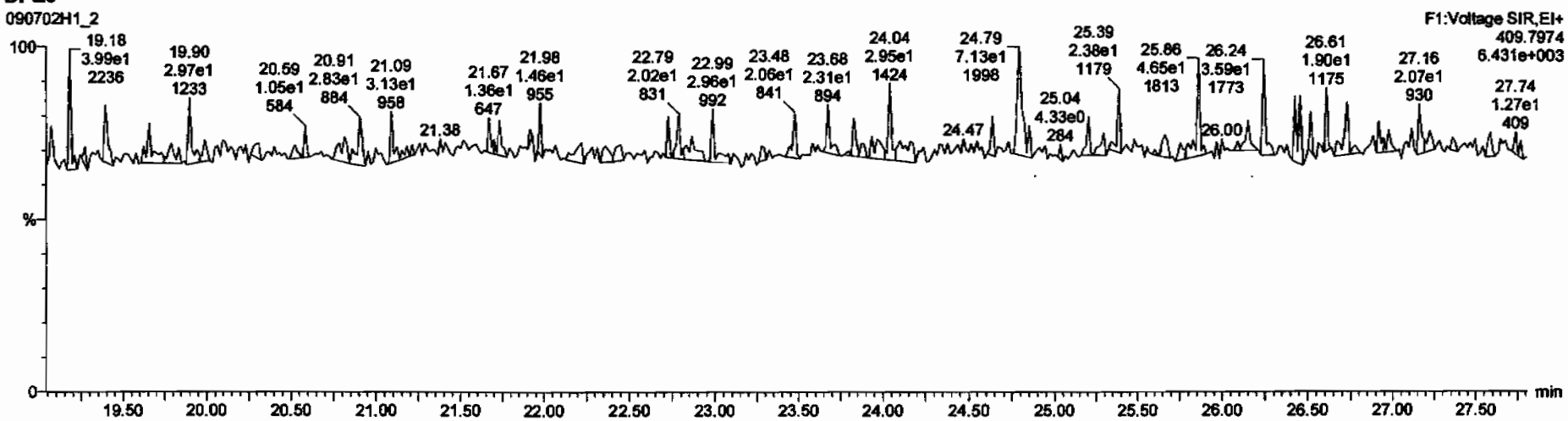

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,7,8-PeCDF

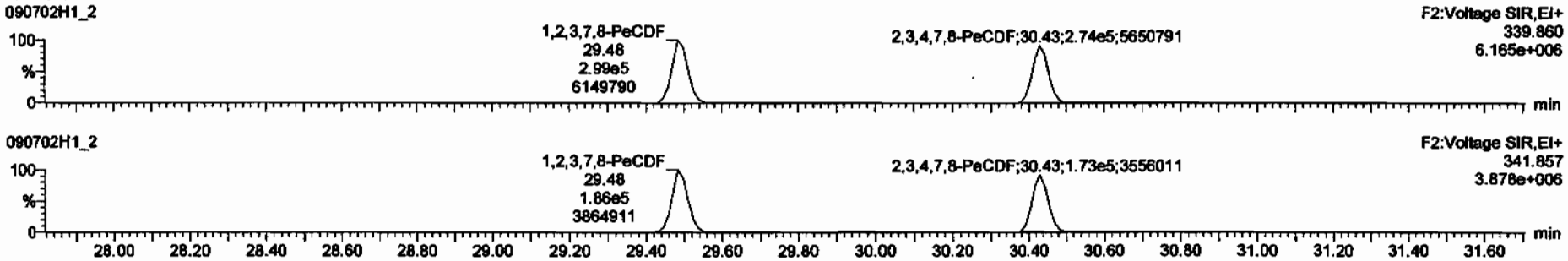

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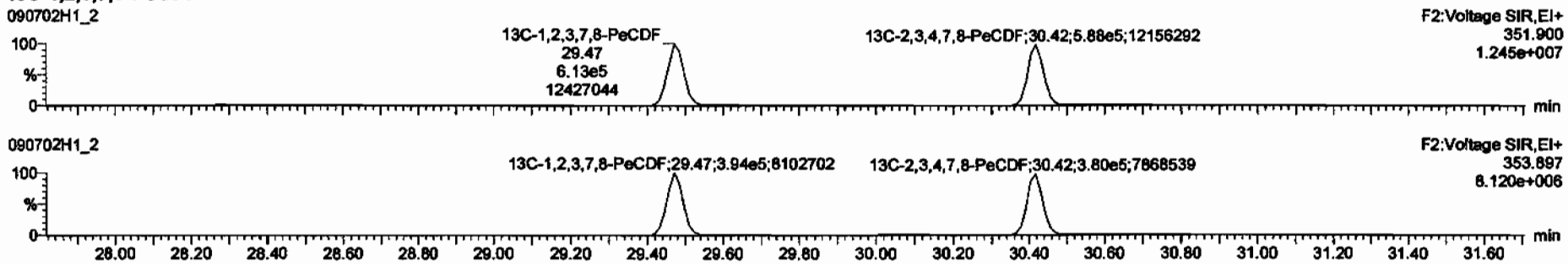

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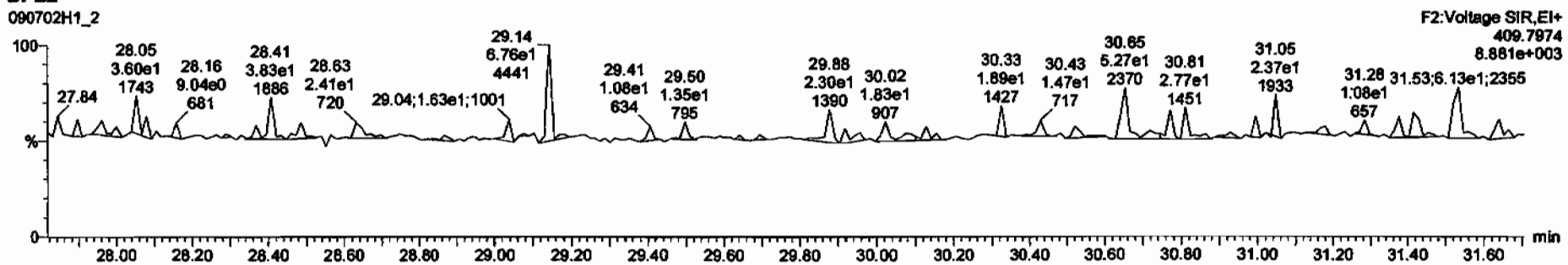

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,7,8-HxCDF

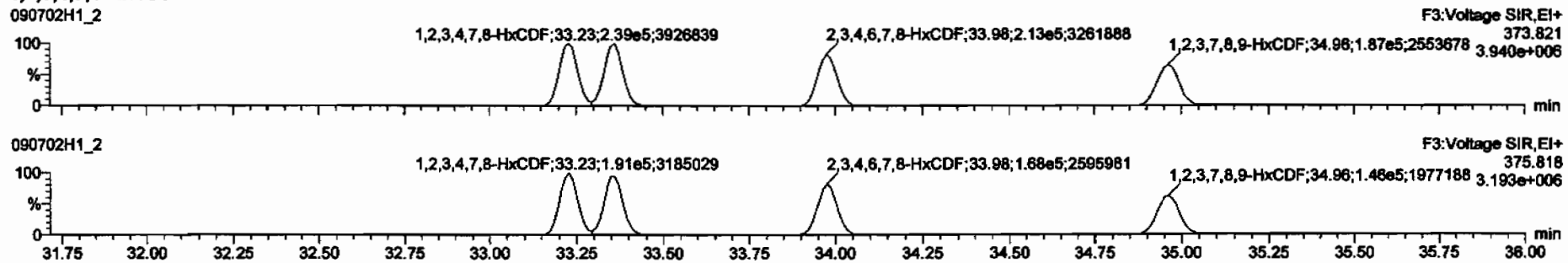

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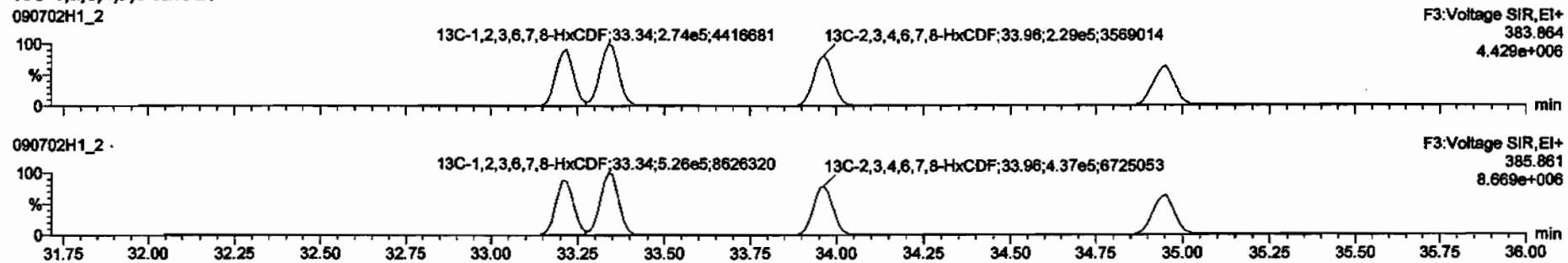

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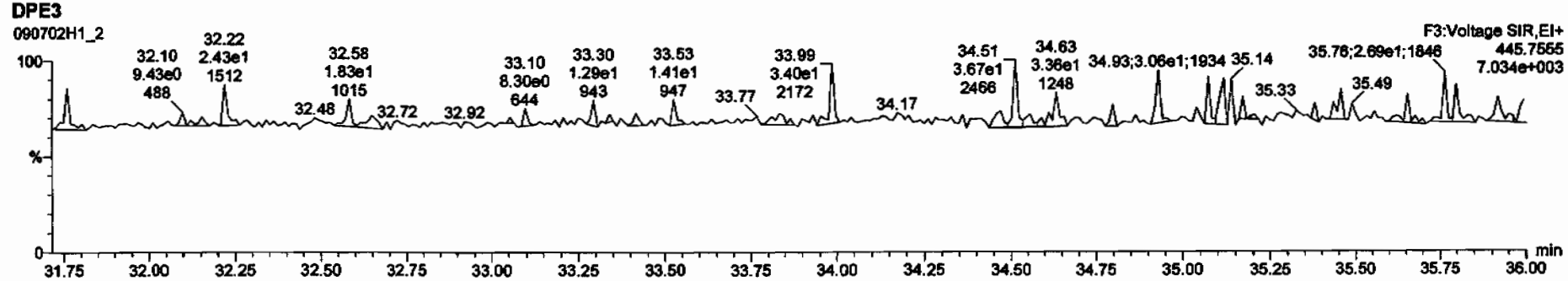

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1,2,3,4,6,7,8-HpCDF

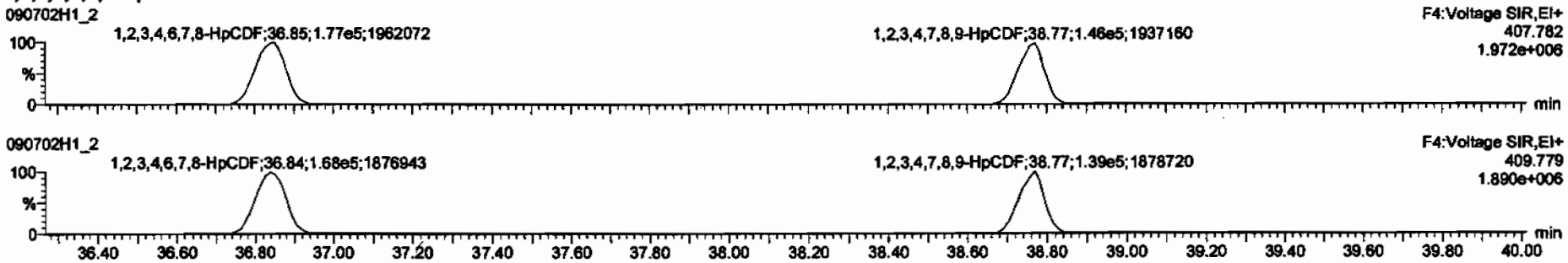

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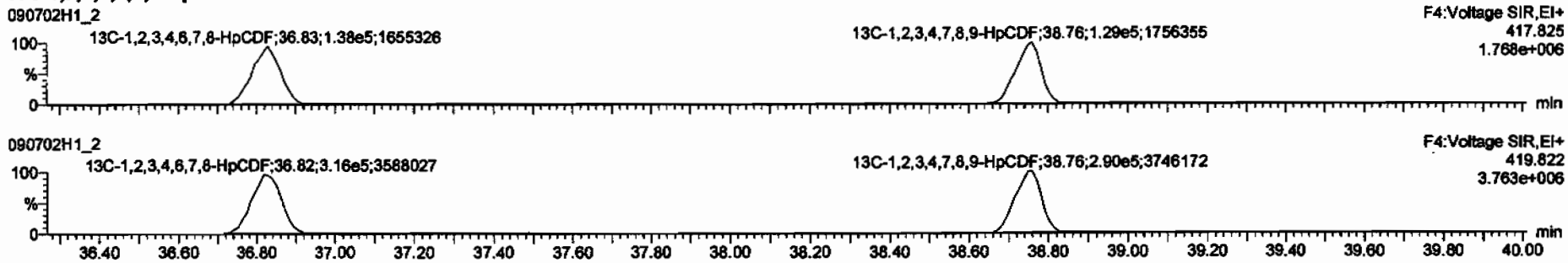

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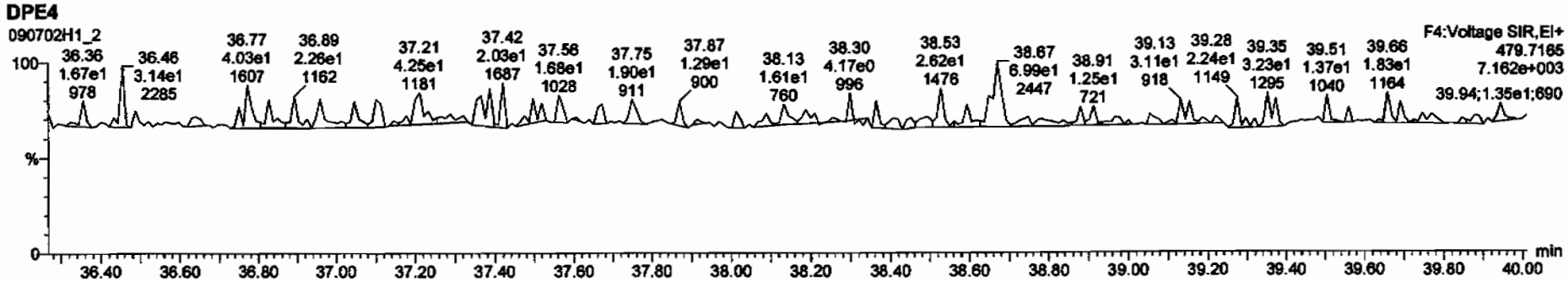

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

OCDF

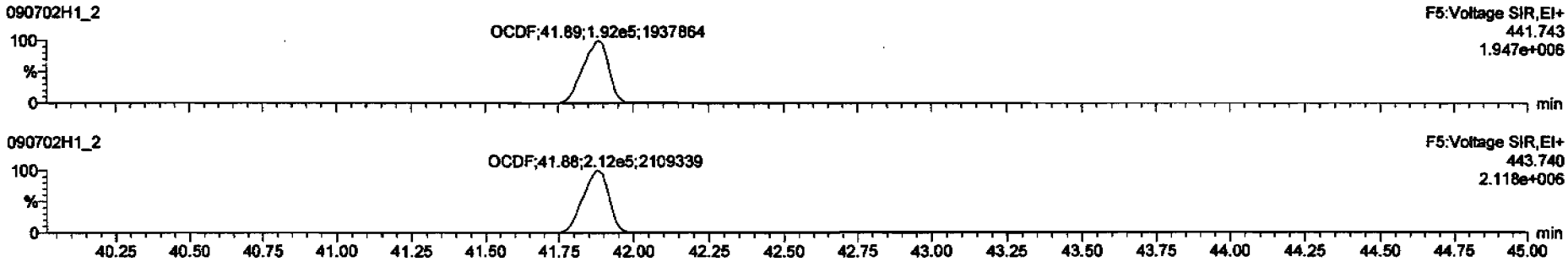

13C-OCDF

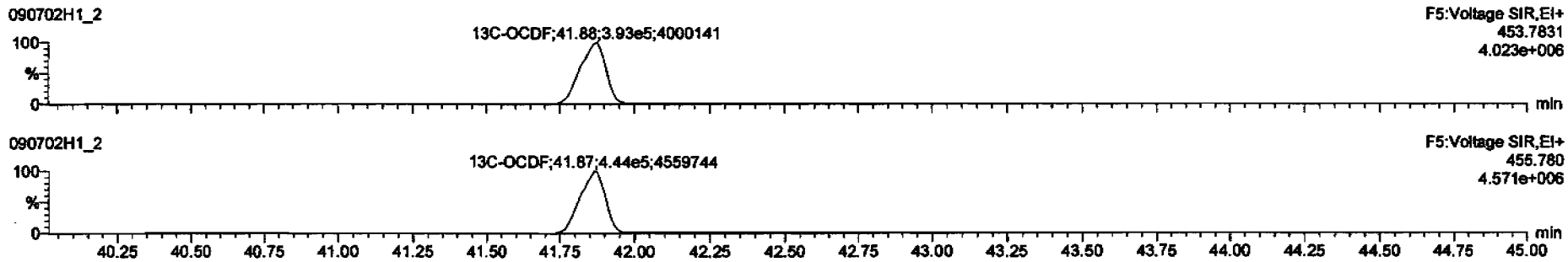

DPE5

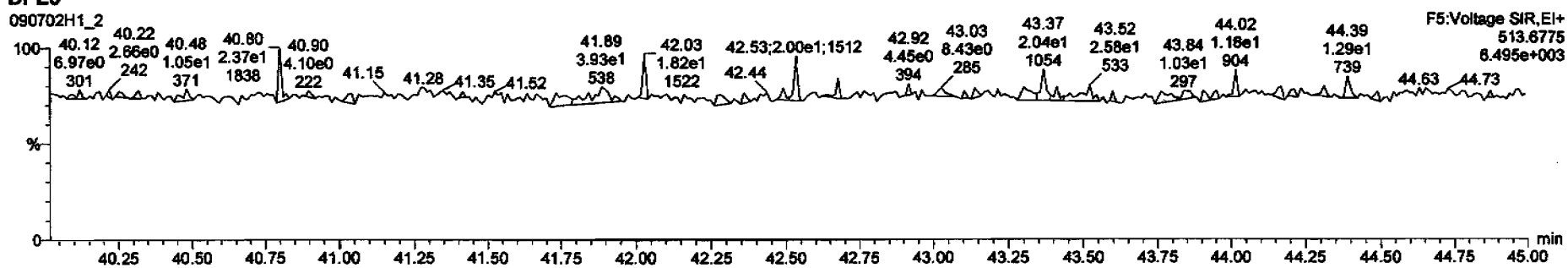

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

PFK1

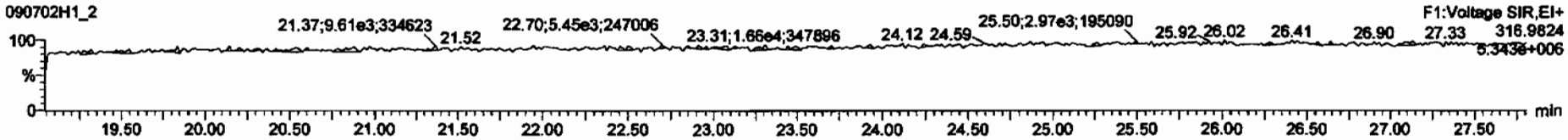

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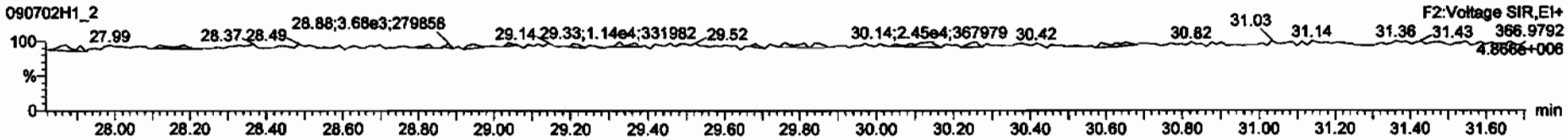

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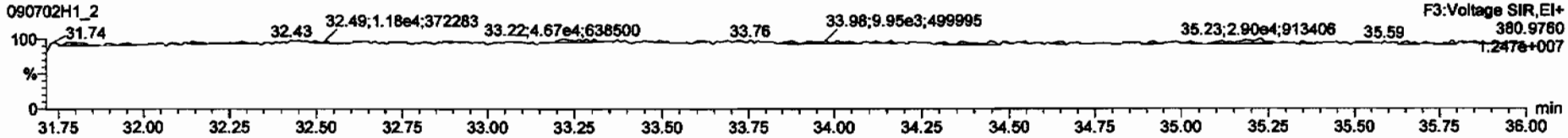

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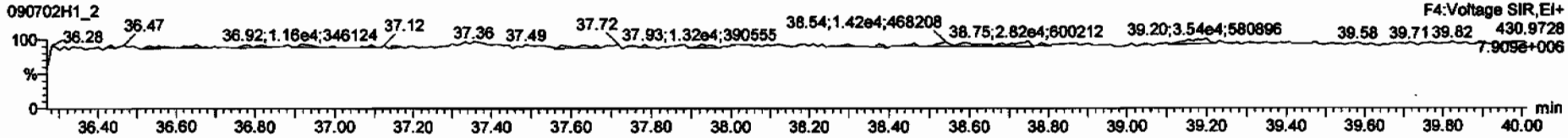

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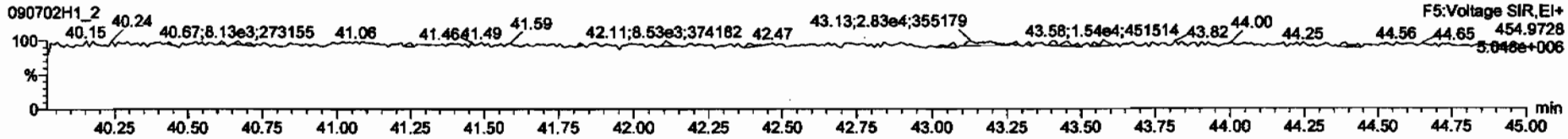

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-5.qld

Last Altered: Tuesday, July 07, 2009 09:23:10 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:23:35 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

1 2,3,7,8-TCDD			NO	1.08	10.090					0.0502	
2 1,2,3,7,8-PeCDD			NO	1.03	10.090					0.0850	
3 1,2,3,4,7,8-HxCDD			NO	1.00	10.090					0.216	
4 1,2,3,6,7,8-HxCDD			NO	1.13	10.090					0.219	
5 1,2,3,7,8,9-HxCDD			NO	1.10	10.090					0.209	
6 1,2,3,4,6,7,8-HpCDD			NO	1.06	10.090					0.270	
7 OCDD	3.06e3	0.87	NO	1.18	10.090	41.64	1.001	1.4959		0.221	~~1.4959~~
8 2,3,7,8-TCDF			NO	1.09	10.090					0.0397	
9 1,2,3,7,8-PeCDF			NO	1.16	10.090					0.0400	
10 2,3,4,7,8-PeCDF			NO	1.12	10.090					0.0406	
11 1,2,3,4,7,8-HxCDF			NO	1.41	10.090					0.0793	
12 1,2,3,6,7,8-HxCDF			NO	1.22	10.090					0.0820	
13 2,3,4,6,7,8-HxCDF			NO	1.28	10.090					0.102	
14 1,2,3,7,8,9-HxCDF			NO	1.26	10.090					0.134	
15 1,2,3,4,6,7,8-HpCDF			NO	1.69	10.090					0.154	
16 1,2,3,4,7,8,9-HpCDF			NO	1.48	10.090					0.163	
17 OCDF			NO	1.10	10.090					0.125	
18 13C-2,3,7,8-TCDD	9.39e5	0.78	NO	1.01	10.090	26.05	1.023	200.13	101	0.298	
19 13C-1,2,3,7,8-PeCDD	7.17e5	0.63	NO	0.827	10.090	30.69	1.205	187.50	94.6	0.229	
20 13C-1,2,3,4,7,8-HxCDD	6.03e5	1.30	NO	0.916	10.090	34.13	0.988	188.25	95.0	0.533	
21 13C-1,2,3,6,7,8-HxCDD	5.43e5	1.21	NO	0.921	10.090	34.25	0.991	168.59	85.1	0.530	
22 13C-1,2,3,4,6,7,8-HpCDD	5.01e5	1.04	NO	0.708	10.090	38.18	1.105	202.53	102	0.912	
23 13C-OCDD	6.88e5	0.90	NO	0.503	10.090	41.62	1.205	391.46	98.7	0.601	
24 13C-2,3,7,8-TCDF	1.25e6	0.78	NO	0.977	10.090	25.28	0.993	196.50	99.1	0.192	
25 13C-1,2,3,7,8-PeCDF	1.13e6	1.54	NO	0.896	10.090	29.47	1.157	193.49	97.6	0.339	
26 13C-2,3,4,7,8-PeCDF	1.12e6	1.58	NO	0.900	10.090	30.42	1.194	191.81	96.8	0.338	
27 13C-1,2,3,4,7,8-HxCDF	7.75e5	0.52	NO	1.17	10.090	33.22	0.962	189.71	95.7	0.472	
28 13C-1,2,3,6,7,8-HxCDF	8.75e5	0.53	NO	1.52	10.090	33.34	0.965	164.77	83.1	0.363	
29 13C-2,3,4,6,7,8-HxCDF	7.32e5	0.52	NO	1.25	10.090	33.96	0.983	167.74	84.6	0.442	
30 13C-1,2,3,7,8,9-HxCDF	6.50e5	0.52	NO	1.05	10.090	34.95	1.012	176.70	89.1	0.524	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-5.qld

Last Altered: Tuesday, July 07, 2009 09:23:10 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:23:35 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

31	13C-1,2,3,4,6,7,8-HpCDF	5.05e5	0.44	NO	0.868	10.090	36.83	1.066	166.52	84.0	0.856
32	13C-1,2,3,4,7,8,9-HpCDF	4.74e5	0.45	NO	0.727	10.090	38.75	1.122	186.82	94.3	1.02
33	13C-OCDF	9.51e5	0.88	NO	0.760	10.090	41.86	1.212	358.36	90.4	0.297
34	37Cl-2,3,7,8-TCDD	2.32e5			0.668	10.090	26.08	1.024	75.191	94.8	0.0752
35	13C-1,2,3,4-TCDD	9.16e5	0.80	NO	1.00	10.090	25.47	0.000	198.22	100	0.302
36	13C-1,2,3,4-TCDF	1.29e6	0.78	NO	1.00	10.090	24.04	0.000	198.22	100	0.188
37	13C-1,2,3,7,8,9-HxCDD	6.93e5	1.24	NO	1.00	10.090	34.56	0.000	198.22	100	0.488
38	Total Tetra-Dioxins				1.08	10.090					0.0241
39	Total Penta-Dioxins				1.03	10.090					0.0272
40	Total Hexa-Dioxins				1.13	10.090					0.142
41	Total Hepta-Dioxins				1.06	10.090					0.168
42	Total Tetra-Furans				1.09	10.090					0.0173
43	1st Func. Penta-Furans				1.16	10.090					0.0103
44	Total Penta-Furans				1.16	10.090					0.0166
45	Total Hexa-Furans				1.28	10.090					0.0669
46	Total Hepta-Furans				1.69	10.090					0.0661

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-5.qld

Last Altered: Tuesday, July 07, 2009 09:15:32 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

2,3,7,8-TCDD

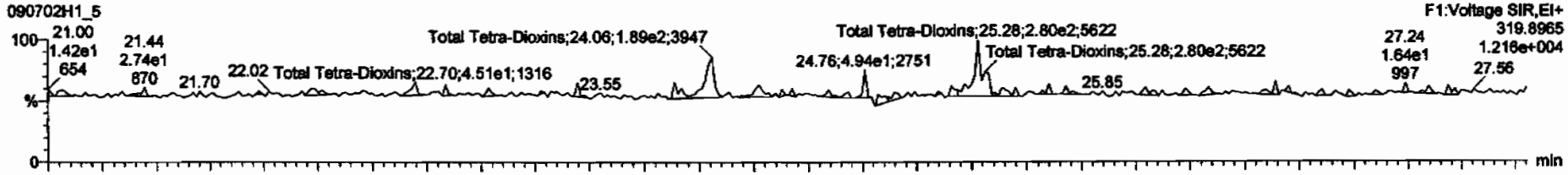

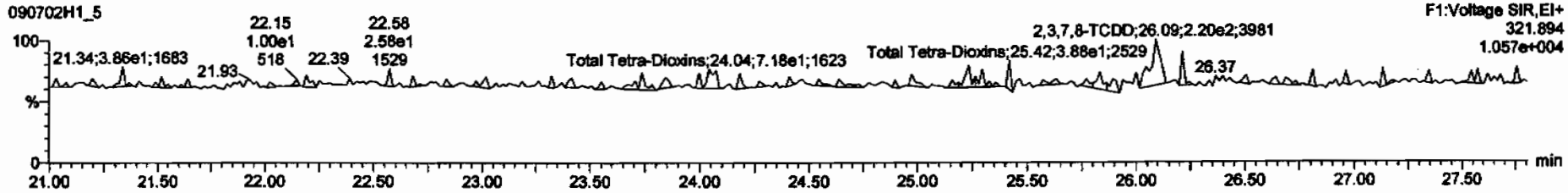

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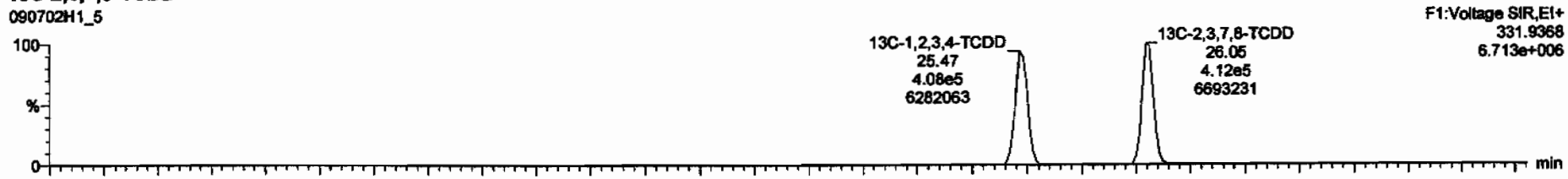

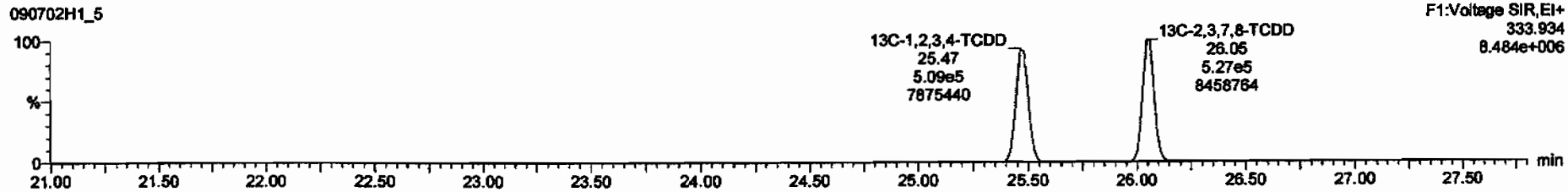

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Last Altered: Tuesday, July 07, 2009 09:15:32 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

37Cl-2,3,7,8-TCDD

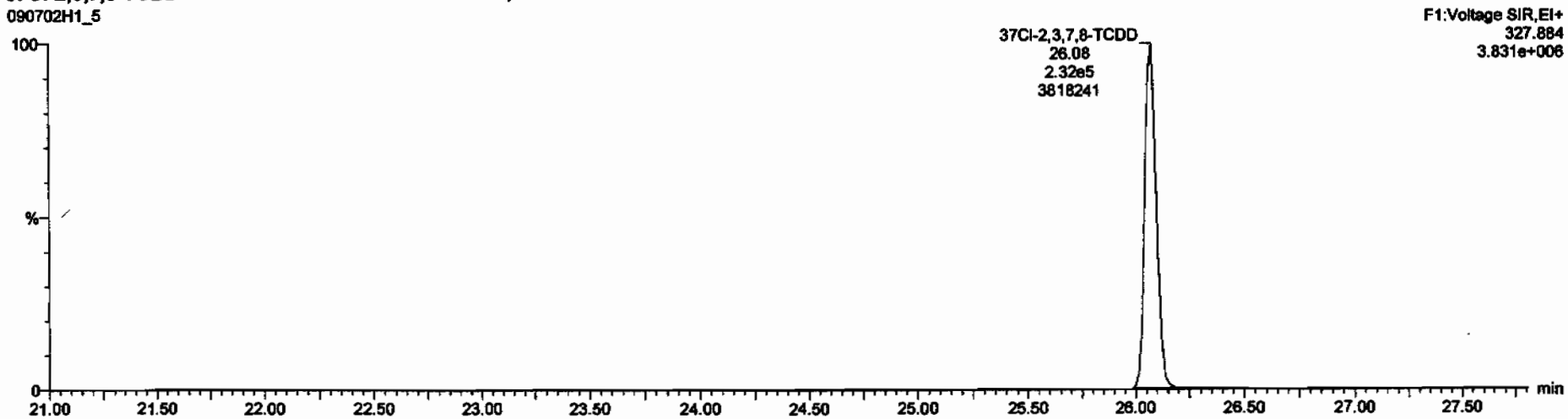

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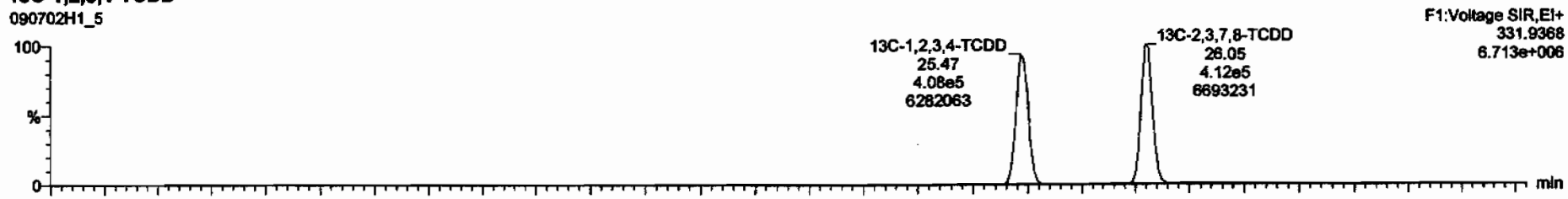

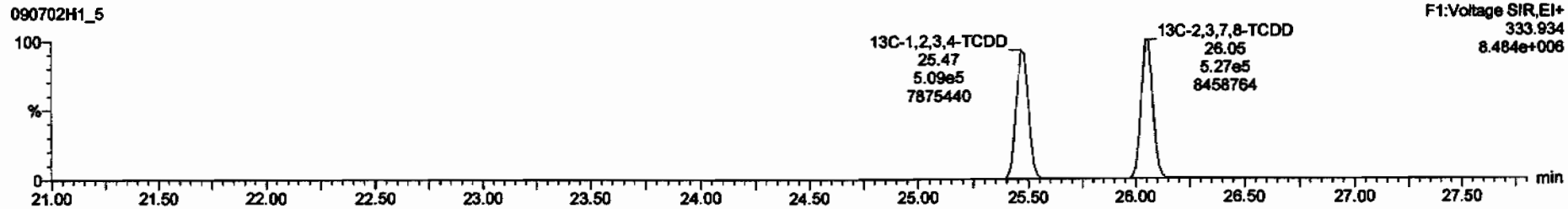

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Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

1,2,3,7,8-PeCDD

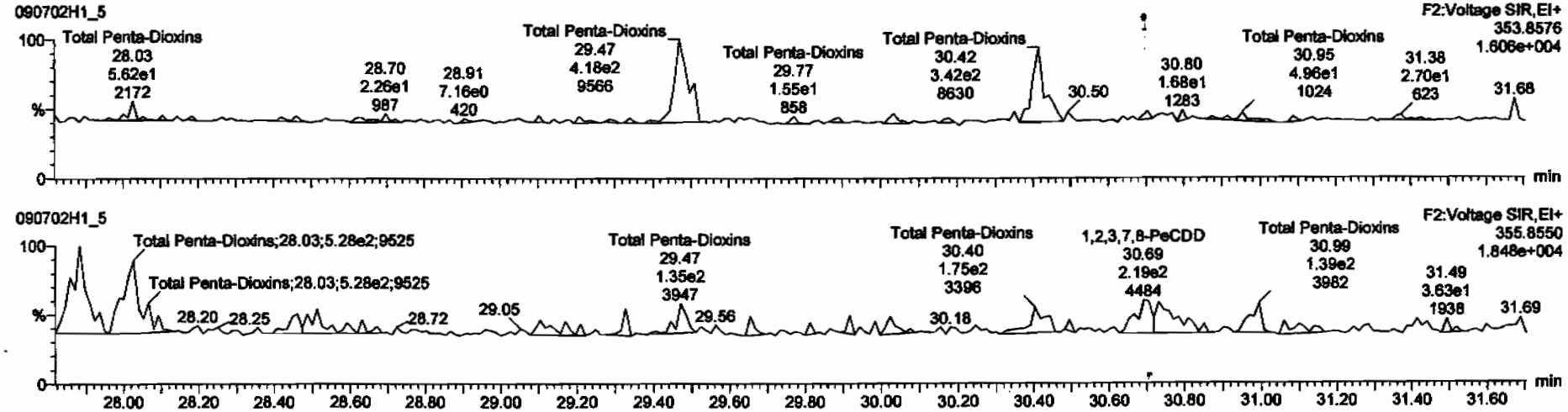

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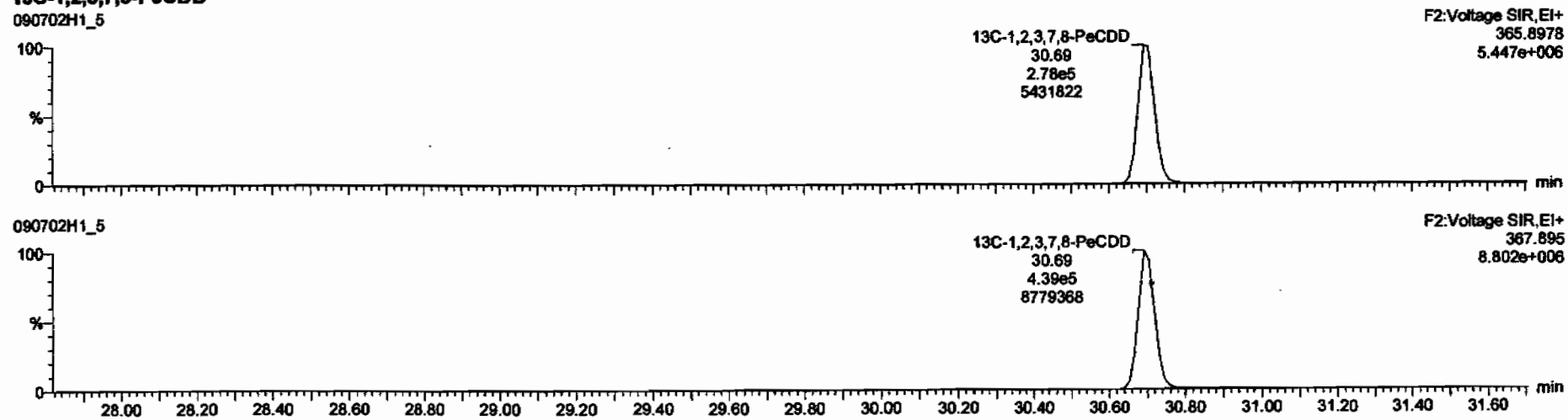

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Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

1,2,3,4,7,8-HxCDD

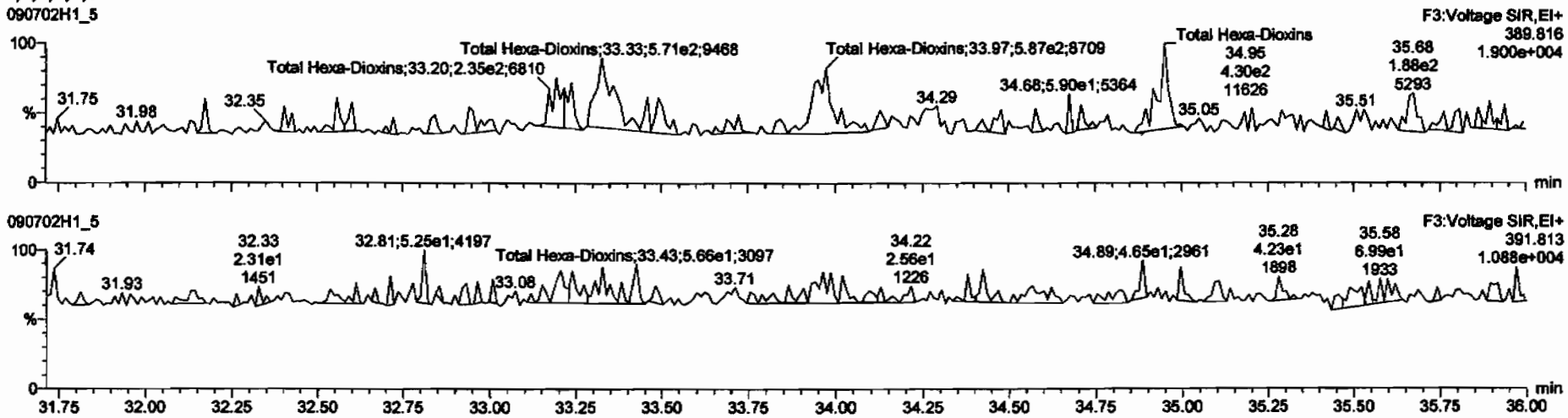

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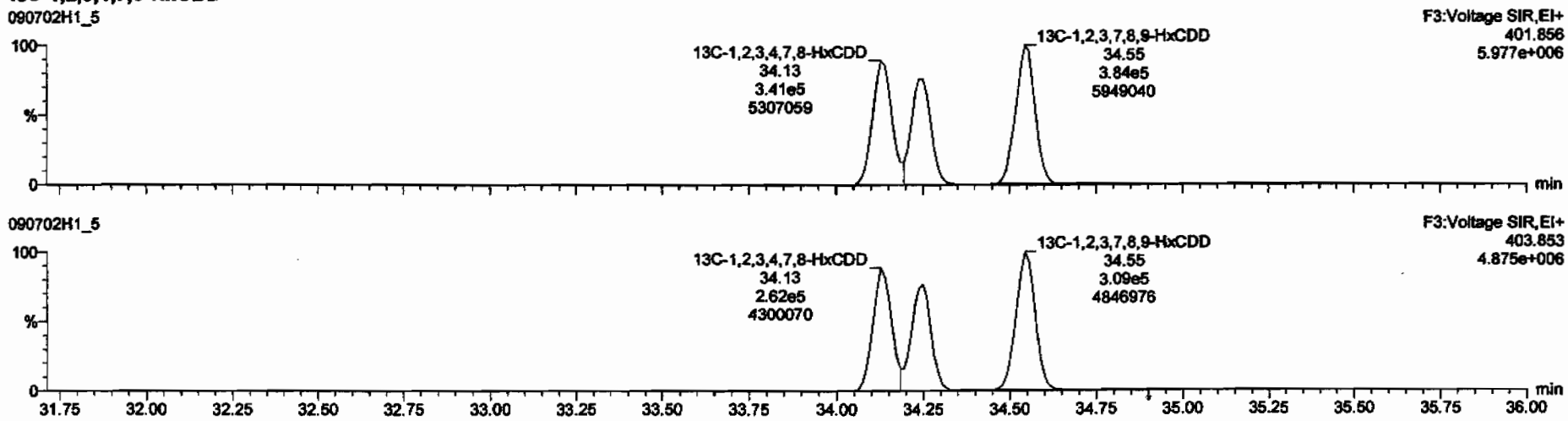

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Last Altered: Tuesday, July 07, 2009 09:15:32 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

1,2,3,4,6,7,8-HpCDD

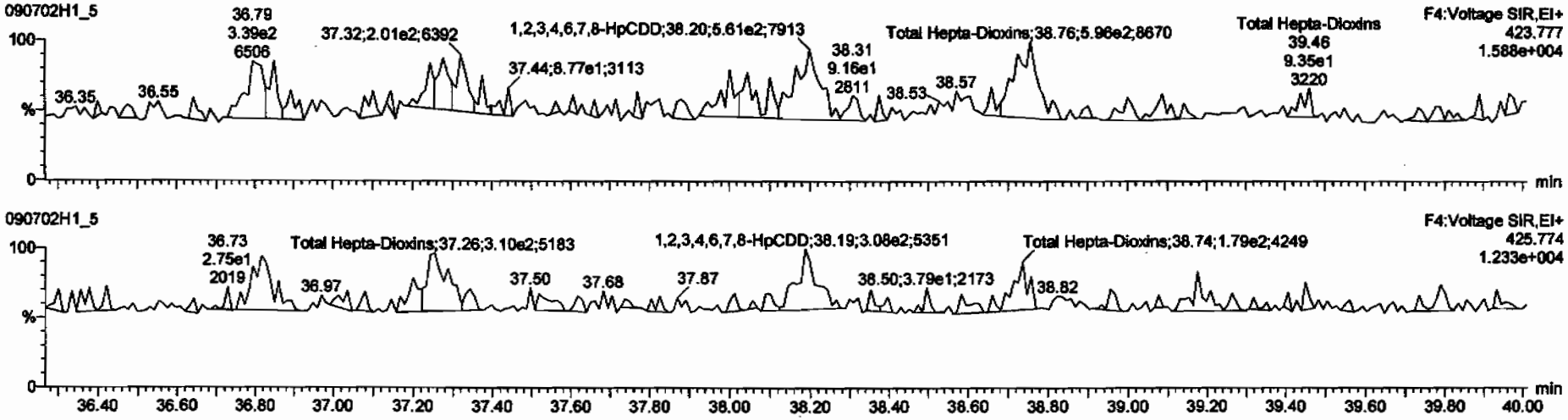

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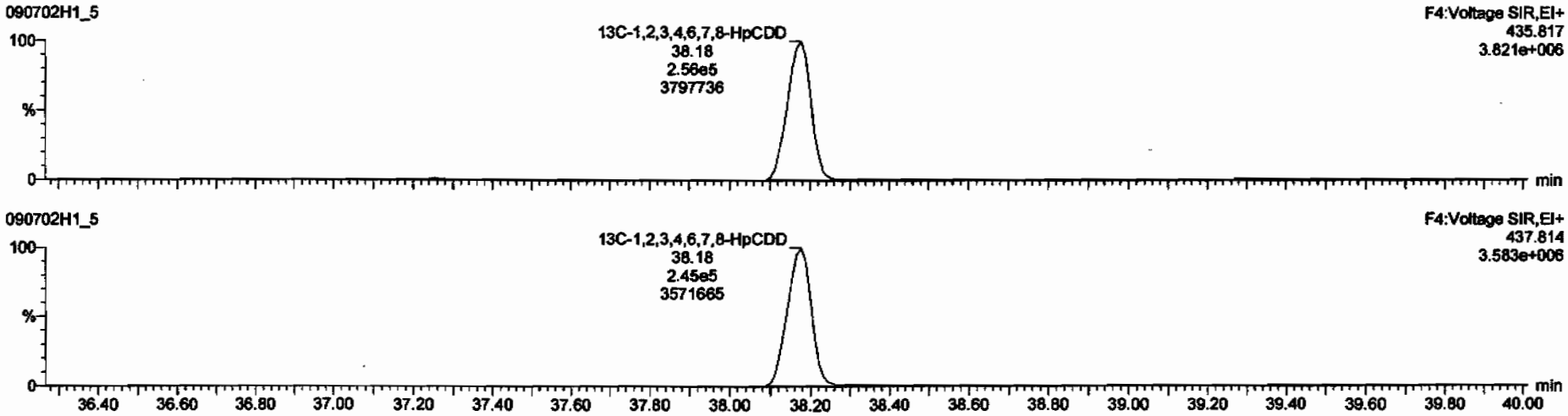

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Last Altered: Tuesday, July 07, 2009 09:15:32 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

OCDD

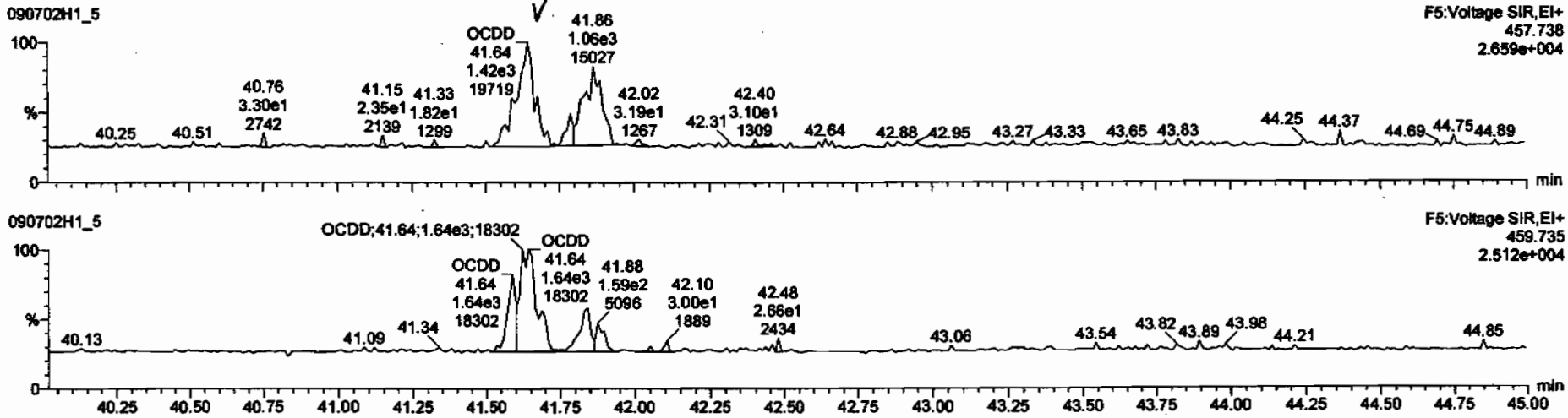

13C-OCDD

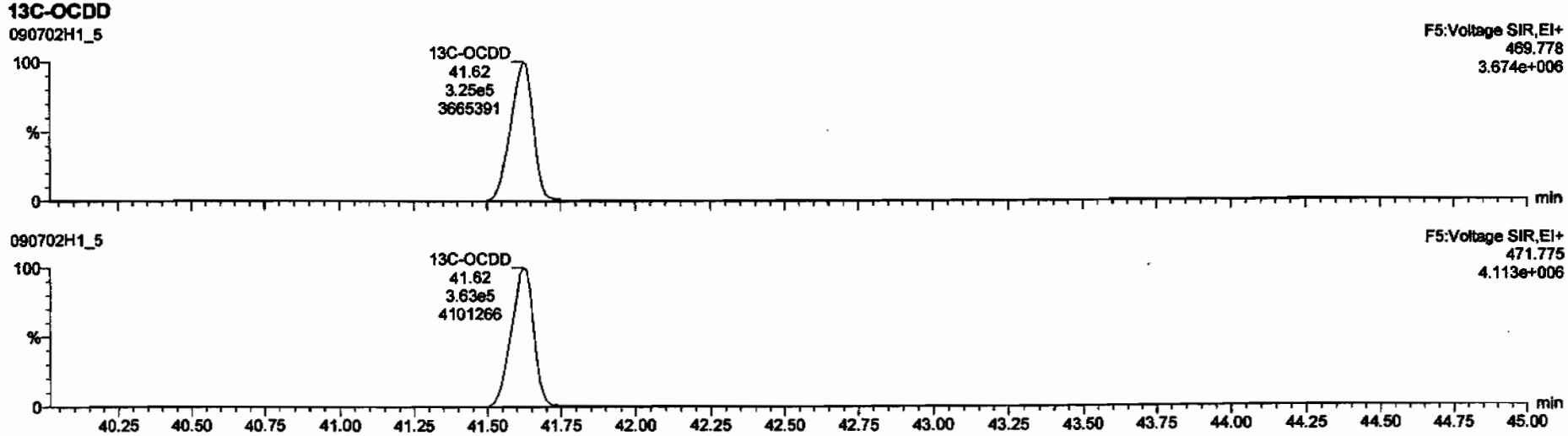

TargetLynx - 090702h1-5.qld * - [Chromatogram]

090702H1_5 - 31845_2214_001 CAMO-09-10464 10.61 - CAMO-09-10464

2,3,7,8-TCDF	1.40e2	5.67	YES	1.09	10.090	25.25	0.999	0.0205		0.0397	0.00543
1,2,3,7,8-PeCDF			NO	1.16	10.090					0.0400	
2,3,4,7,8-PeCDF	5.38e1	0.88	YES	1.12	10.090	30.44	1.001	0.00851		0.0406	0.00654
1,2,3,4,7,8-HxCDF	9.25e1	4.10	YES	1.41	10.090	33.13	0.997	0.0168		0.0793	0.00736

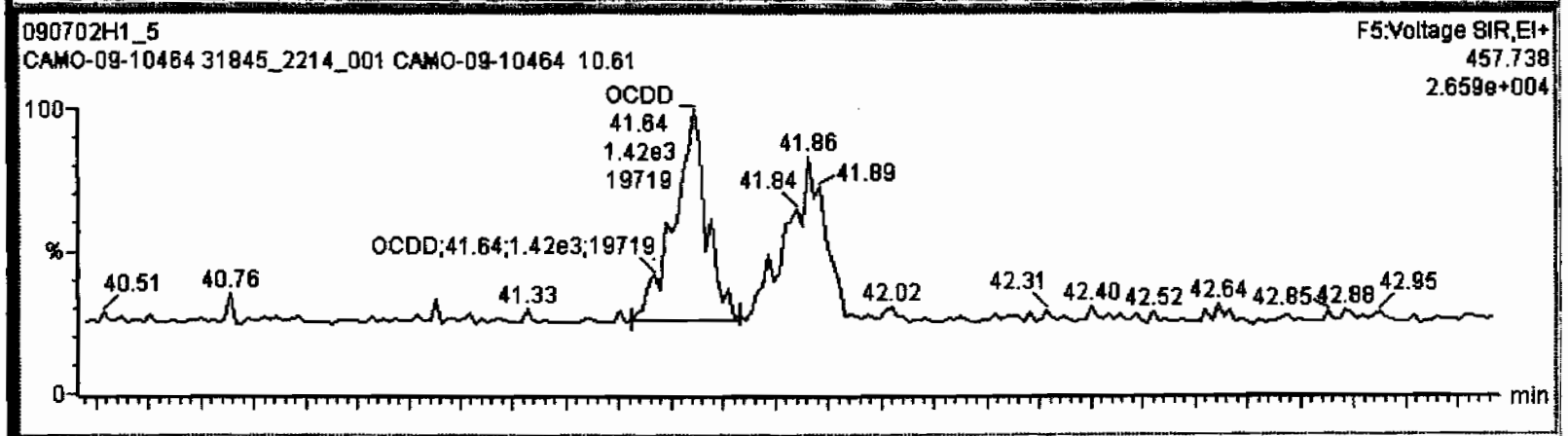

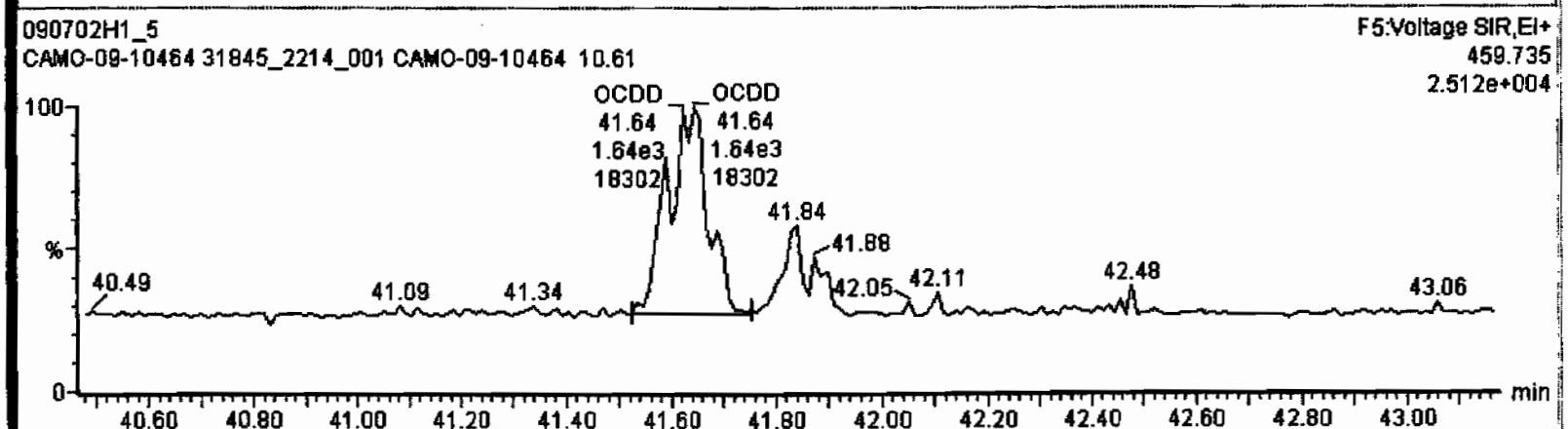

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-5.qld

Last Altered: Tuesday, July 07, 2009 09:15:32 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

2,3,7,8-TCDF

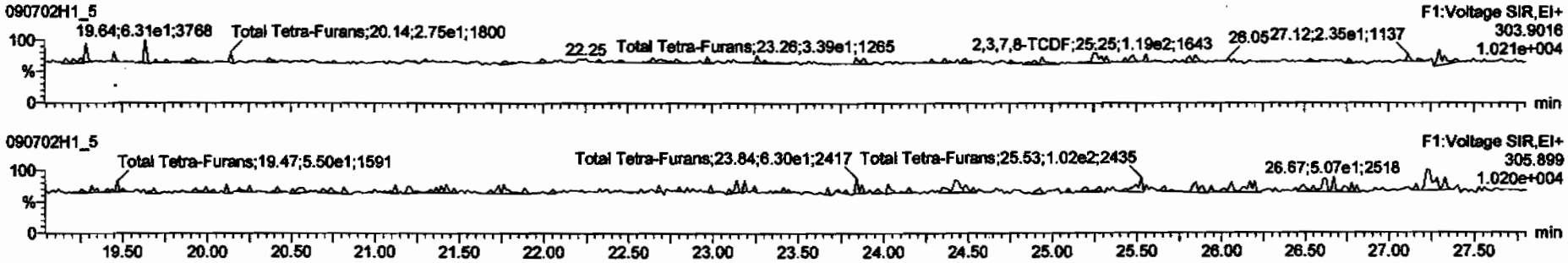

13C-2,3,7,8-TCDF

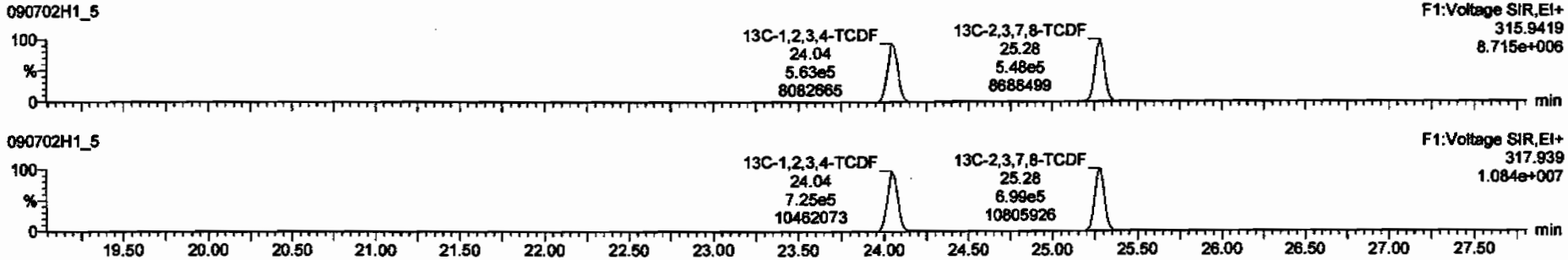

DPE1

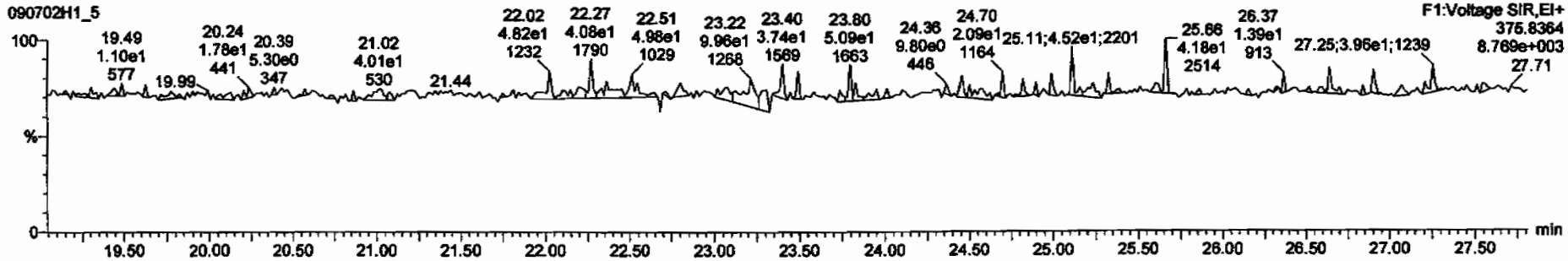

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-5.qld

Last Altered: Tuesday, July 07, 2009 09:15:32 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

1st Func. Penta-Furans

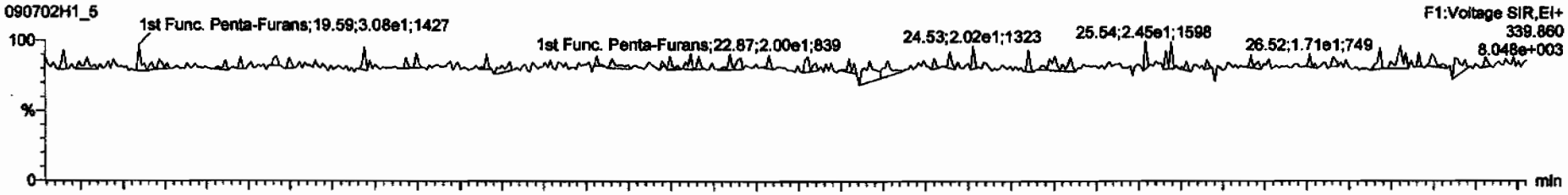

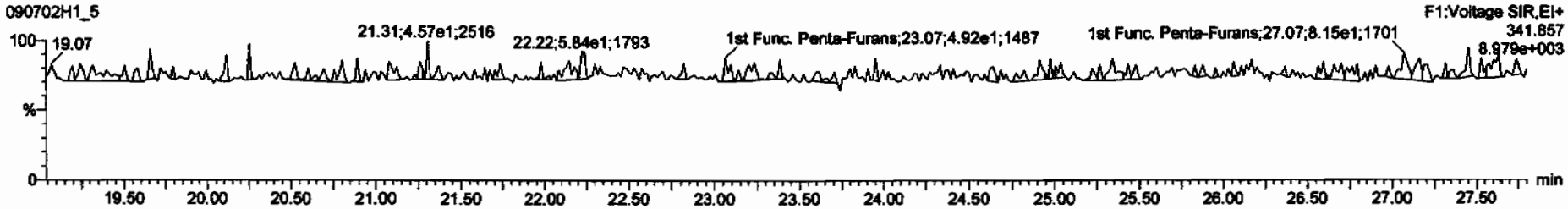

DPE6

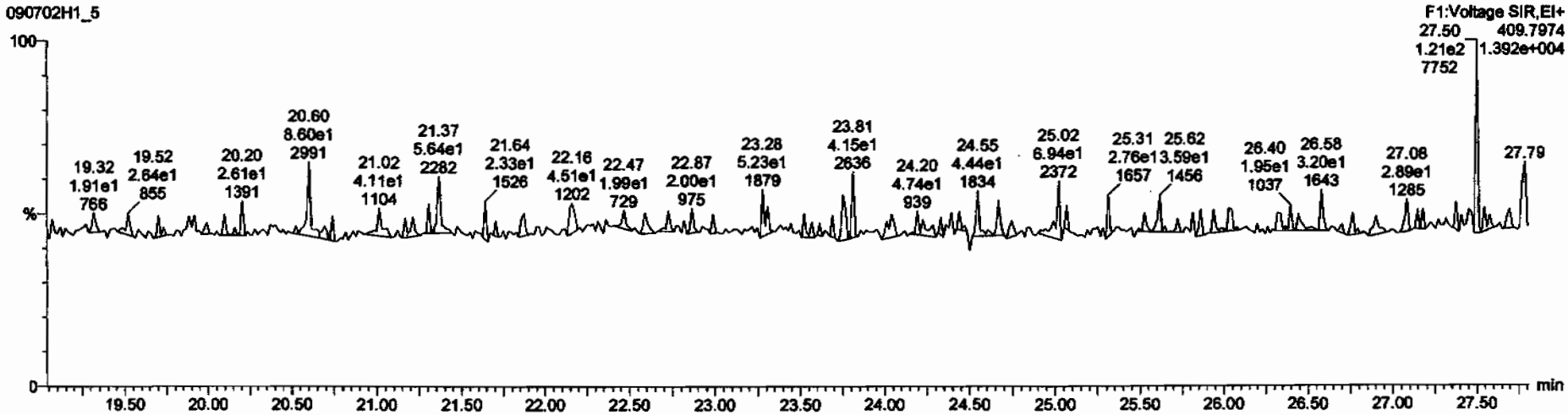

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Last Altered: Tuesday, July 07, 2009 09:15:32 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

1,2,3,7,8-PeCDF

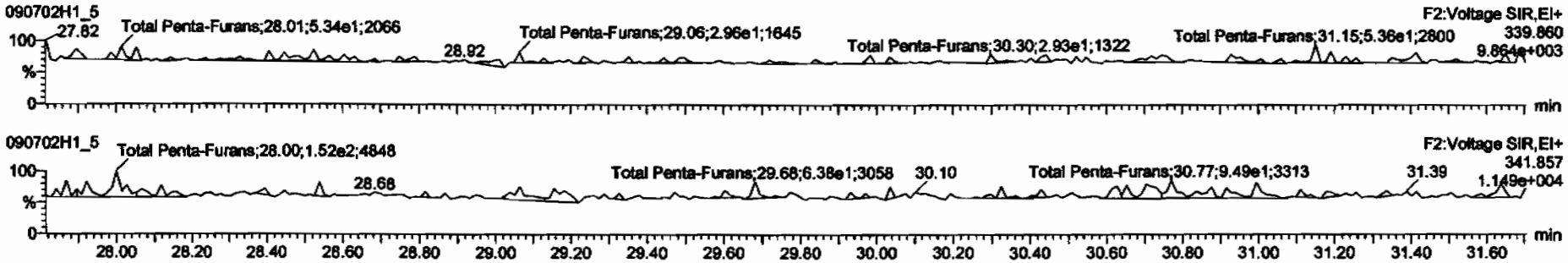

13C-1,2,3,7,8-PeCDF

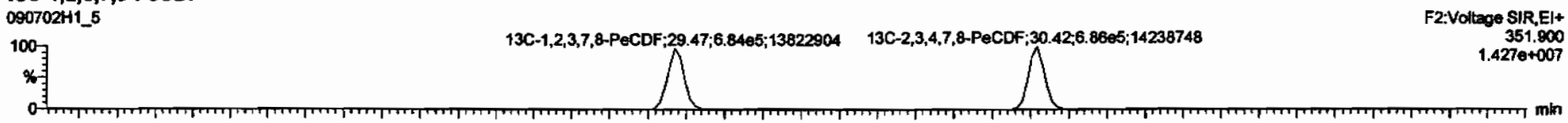

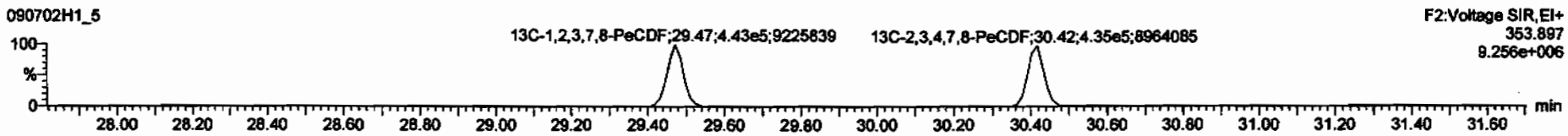

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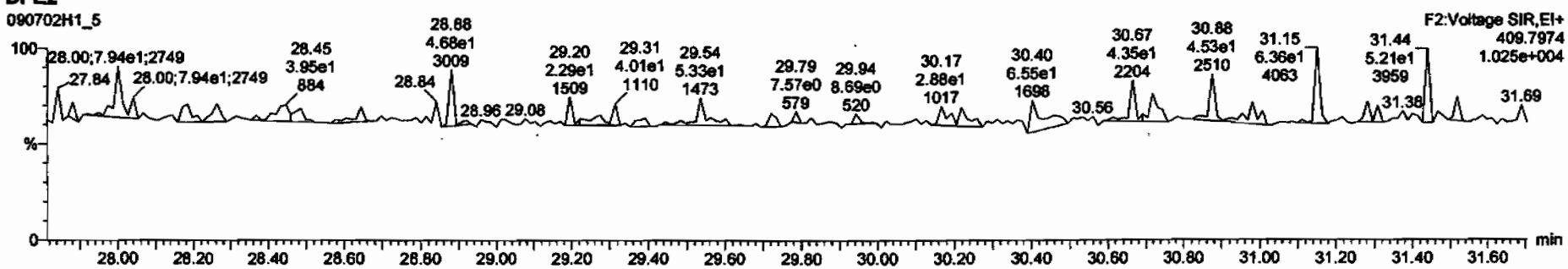

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Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

1,2,3,4,7,8-HxCDF

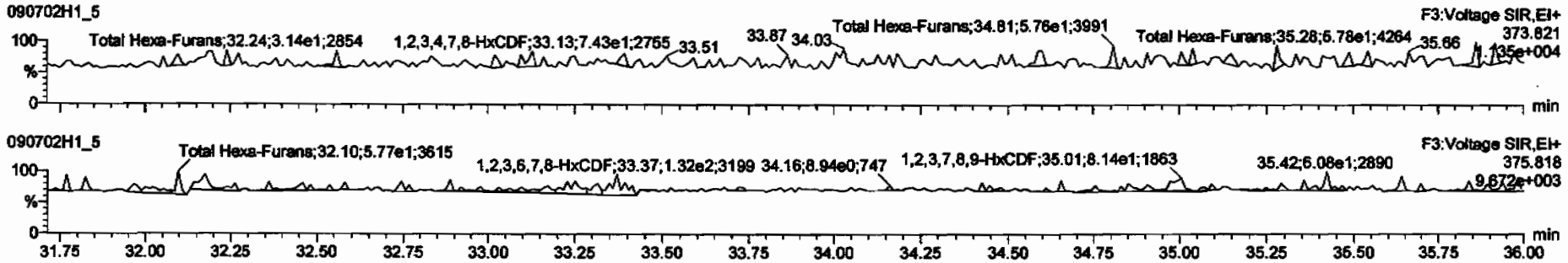

13C-1,2,3,4,7,8-HxCDF

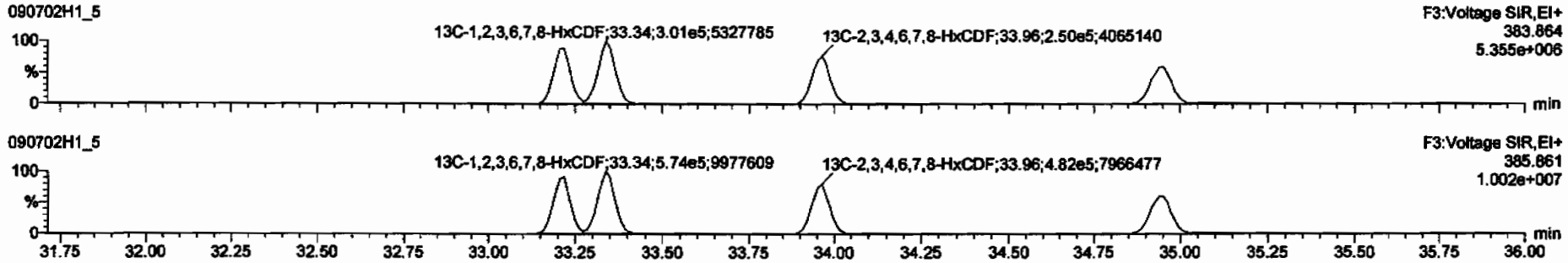

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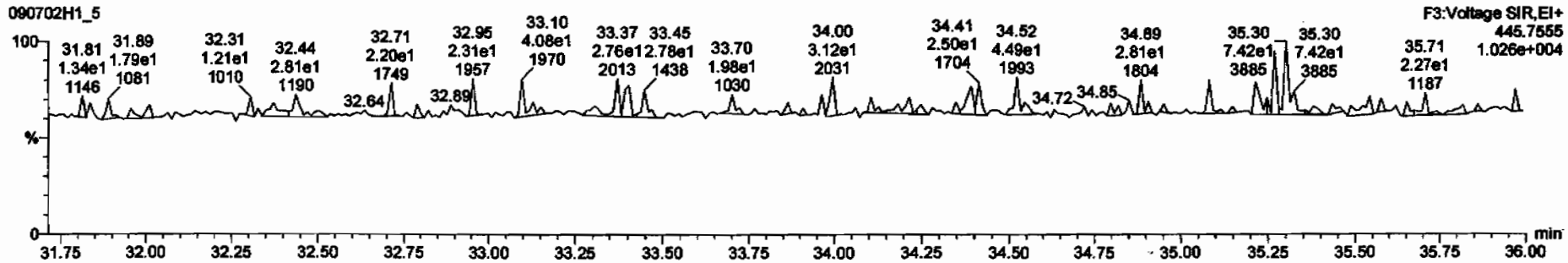

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Last Altered: Tuesday, July 07, 2009 09:15:32 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

1,2,3,4,6,7,8-HpCDF

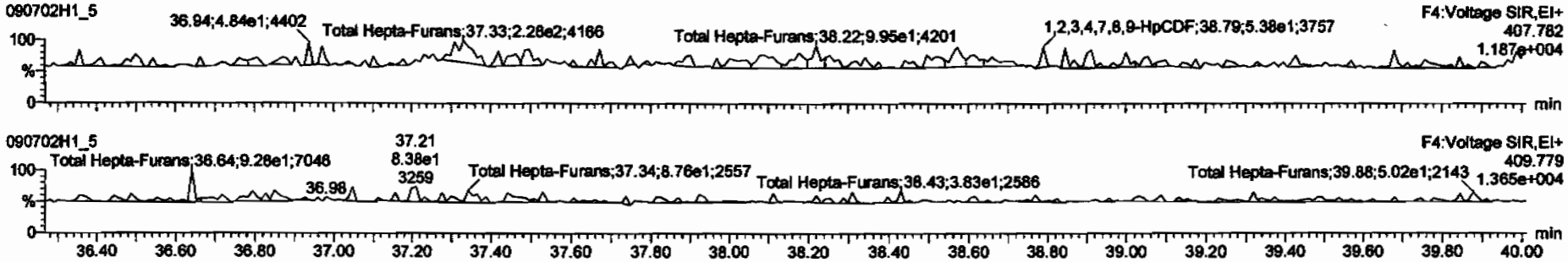

13C-1,2,3,4,6,7,8-HpCDF

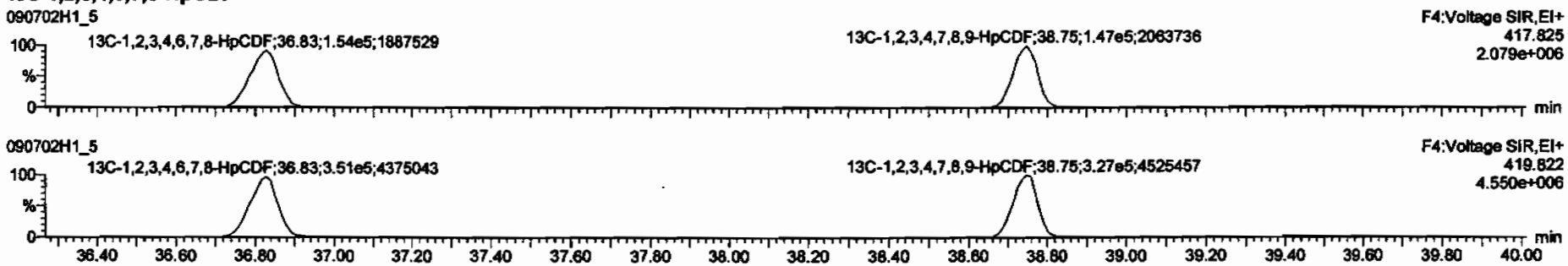

DPE4

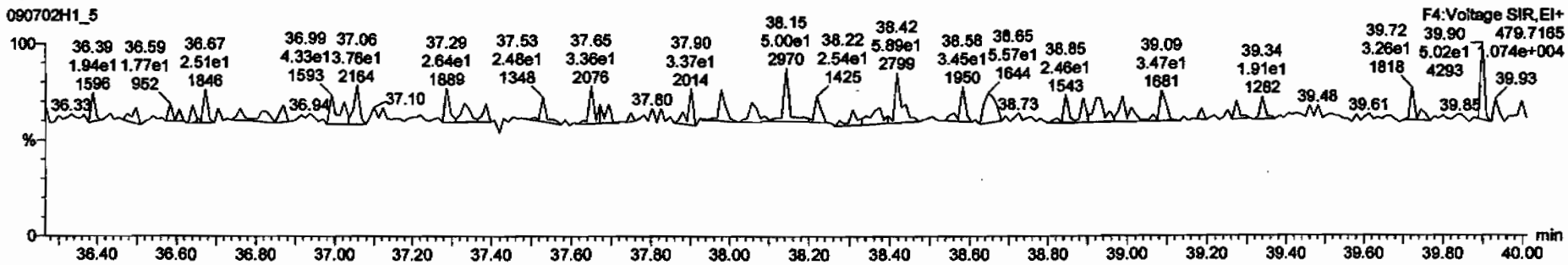

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Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

OCDF

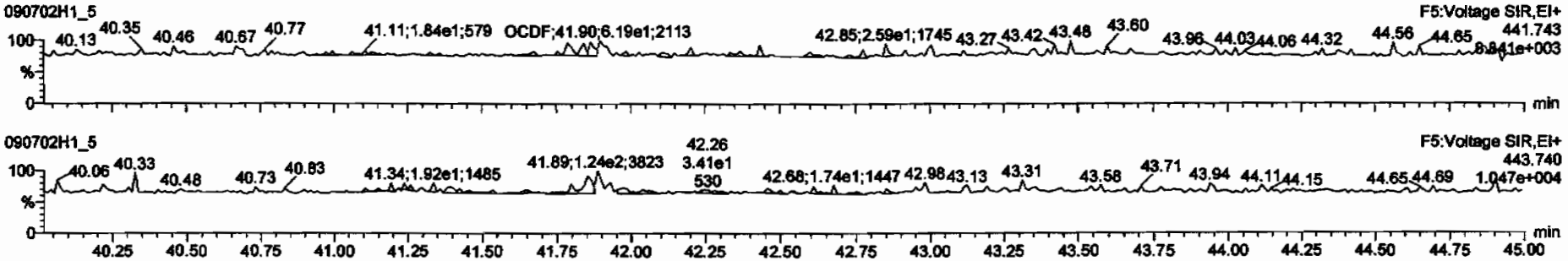

13C-OCDF

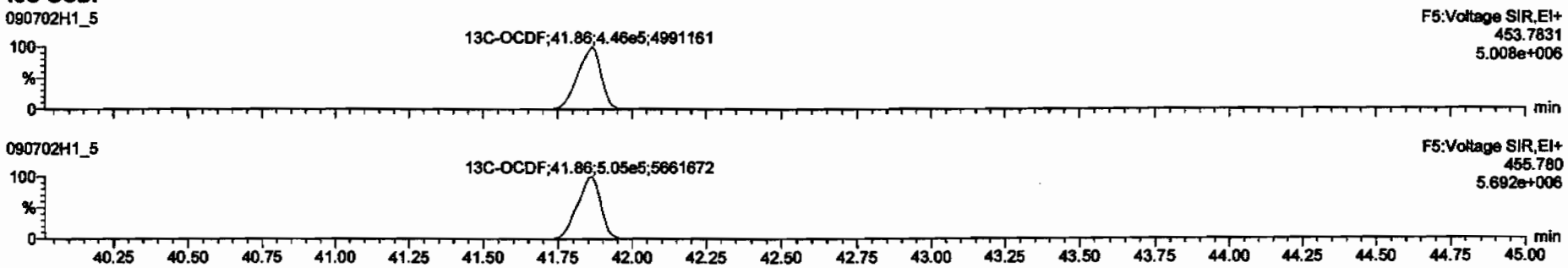

DPE5

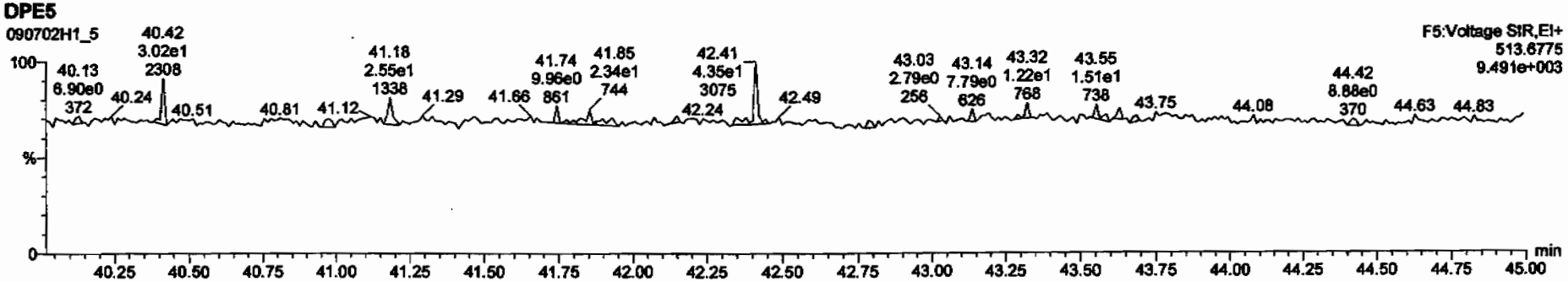

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Printed: Tuesday, July 07, 2009 09:16:36 Pacific Daylight Time

Name: 090702H1_5, Date: 02-Jul-2009, Time: 17:41:36, ID: 31845_2214_001 CAMO-09-10464 10.61, Description: CAMO-09-10464

PFK1

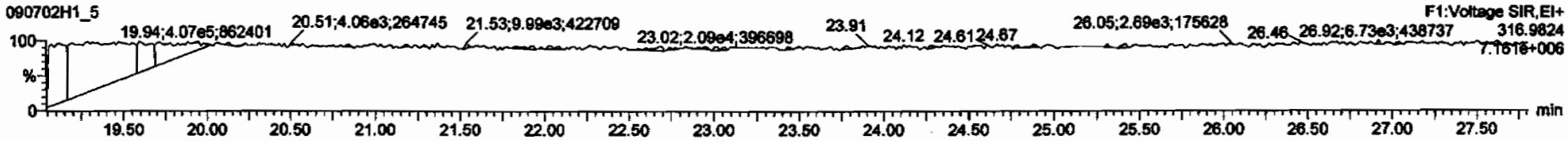

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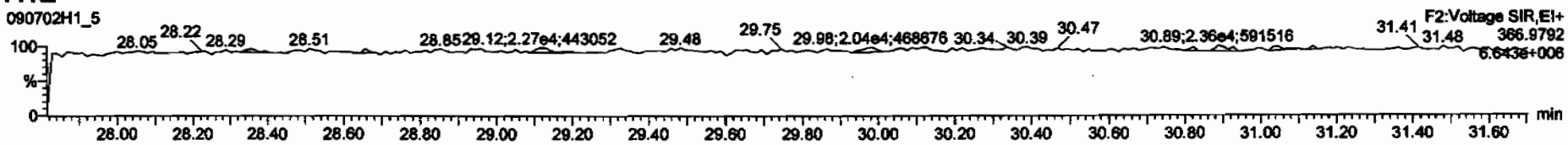

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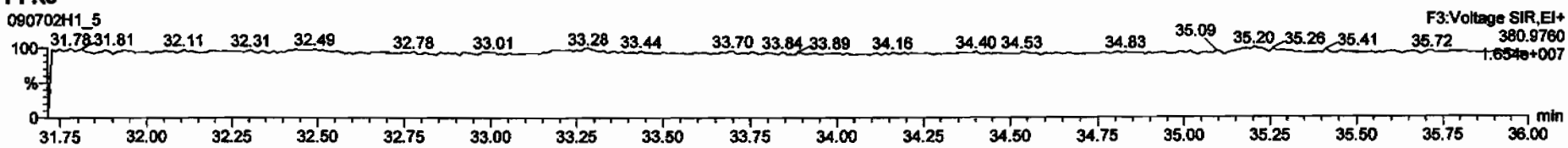

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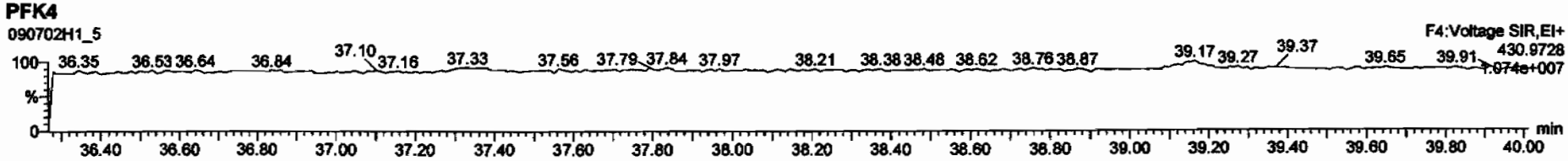

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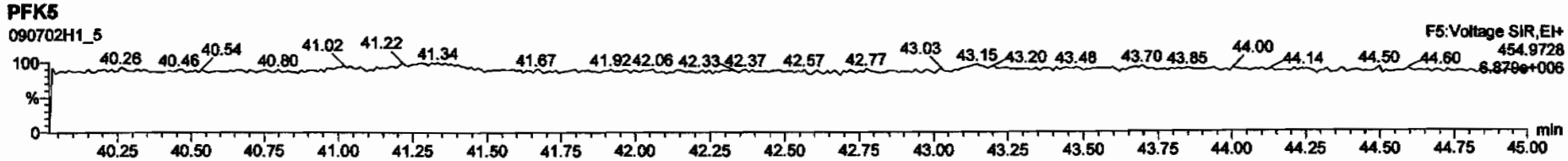

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-6.qld

Last Altered: Tuesday, July 07, 2009 09:30:45 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:31:09 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

1	2,3,7,8-TCDD			NO	1.08	9.993					0.0422
2	1,2,3,7,8-PeCDD			NO	1.03	9.993					0.0728
3	1,2,3,4,7,8-HxCDD			NO	1.00	9.993					0.228
4	1,2,3,6,7,8-HxCDD			NO	1.13	9.993					0.241
5	1,2,3,7,8,9-HxCDD			NO	1.10	9.993					0.226
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	9.993					0.304
7	OCDD			NO	1.18	9.993					0.217
8	2,3,7,8-TCDF			NO	1.09	9.993					0.0397
9	1,2,3,7,8-PeCDF			NO	1.16	9.993					0.0412
10	2,3,4,7,8-PeCDF			NO	1.12	9.993					0.0462
11	1,2,3,4,7,8-HxCDF			NO	1.41	9.993					0.0860
12	1,2,3,6,7,8-HxCDF			NO	1.22	9.993					0.0901
13	2,3,4,6,7,8-HxCDF			NO	1.28	9.993					0.109
14	1,2,3,7,8,9-HxCDF			NO	1.26	9.993					0.143
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	9.993					0.165
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	9.993					0.172
17	OCDF			NO	1.10	9.993					0.130
18	13C-2,3,7,8-TCDD	9.15e5	0.79	NO	1.01	9.993	26.05	1.023	196.16	98.0	0.278
19	13C-1,2,3,7,8-PeCDD	7.35e5	0.61	NO	0.827	9.993	30.69	1.205	193.22	96.5	0.231
20	13C-1,2,3,4,7,8-HxCDD	5.99e5	1.26	NO	0.916	9.993	34.13	0.988	183.79	91.8	0.475
21	13C-1,2,3,6,7,8-HxCDD	5.36e5	1.24	NO	0.921	9.993	34.24	0.991	163.89	81.9	0.472
22	13C-1,2,3,4,6,7,8-HpCDD	5.00e5	1.06	NO	0.708	9.993	38.18	1.105	198.53	99.2	0.996
23	13C-OCDD	6.86e5	0.89	NO	0.503	9.993	41.62	1.205	384.20	96.0	0.839
24	13C-2,3,7,8-TCDF	1.24e6	0.78	NO	0.977	9.993	25.28	0.993	192.92	96.4	0.197
25	13C-1,2,3,7,8-PeCDF	1.16e6	1.55	NO	0.896	9.993	29.47	1.157	195.58	97.7	0.346
26	13C-2,3,4,7,8-PeCDF	1.12e6	1.55	NO	0.900	9.993	30.40	1.194	189.05	94.5	0.345
27	13C-1,2,3,4,7,8-HxCDF	7.80e5	0.52	NO	1.17	9.993	33.21	0.961	187.60	93.7	0.568
28	13C-1,2,3,6,7,8-HxCDF	8.75e5	0.52	NO	1.52	9.993	33.34	0.965	162.14	81.0	0.437
29	13C-2,3,4,6,7,8-HxCDF	7.31e5	0.52	NO	1.25	9.993	33.96	0.983	164.61	82.2	0.532
30	13C-1,2,3,7,8,9-HxCDF	6.45e5	0.53	NO	1.05	9.993	34.94	1.011	172.32	86.1	0.631

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-6.qld

Last Altered: Tuesday, July 07, 2009 09:30:45 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:31:09 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

31	13C-1,2,3,4,6,7,8-HpCDF	5.01e5	0.44	NO	0.868	9.993	36.83	1.066	162.45	81.2	1.07
32	13C-1,2,3,4,7,8,9-HpCDF	4.76e5	0.44	NO	0.727	9.993	38.75	1.122	184.27	92.1	1.28
33	13C-OCDF	9.41e5	0.89	NO	0.760	9.993	41.87	1.212	348.66	87.1	0.374
34	37Cl-2,3,7,8-TCDD	2.28e5			0.668	9.993	26.08	1.024	74.389	92.9	0.0980
35	13C-1,2,3,4-TCDD	9.20e5	0.79	NO	1.00	9.993	25.47	0.000	200.14	100	0.282
36	13C-1,2,3,4-TCDF	1.32e6	0.76	NO	1.00	9.993	24.04	0.000	200.14	100	0.193
37	13C-1,2,3,7,8,9-HxCDD	7.11e5	1.26	NO	1.00	9.993	34.55	0.000	200.14	100	0.435
38	Total Tetra-Dioxins				1.08	9.993					0.0193
39	Total Penta-Dioxins				1.03	9.993					0.0222
40	Total Hexa-Dioxins				1.13	9.993					0.149
41	Total Hepta-Dioxins				1.06	9.993					0.184
42	Total Tetra-Furans				1.09	9.993					0.0164
43	1st Func. Penta-Furans				1.16	9.993					0.0103
44	Total Penta-Furans				1.16	9.993					0.0164
45	Total Hexa-Furans				1.28	9.993					0.0747
46	Total Hepta-Furans				1.69	9.993					0.102

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-6.qld

Last Altered: Monday, July 06, 2009 13:15:21 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

2,3,7,8-TCDD

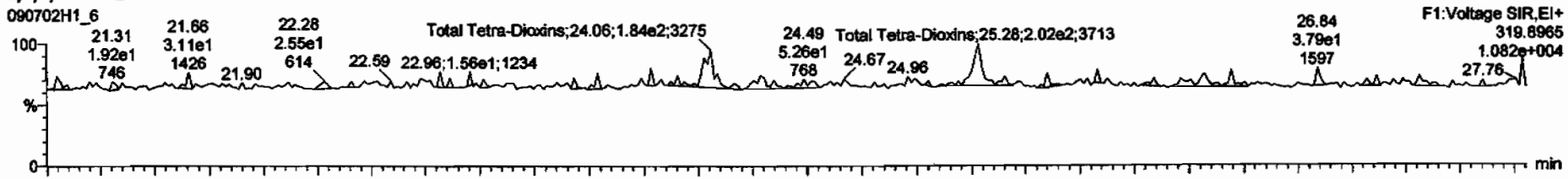

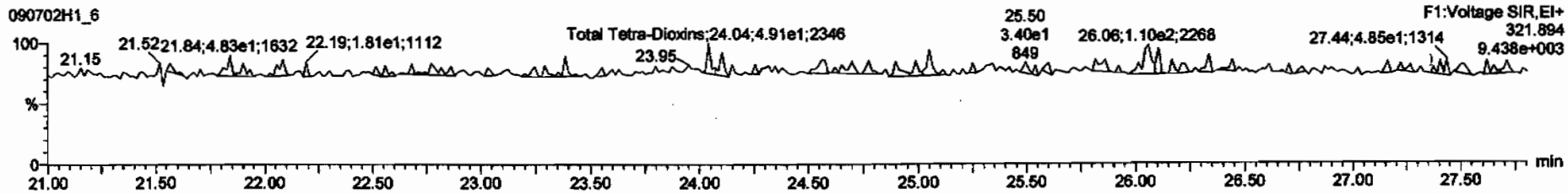

13C-2,3,7,8-TCDD

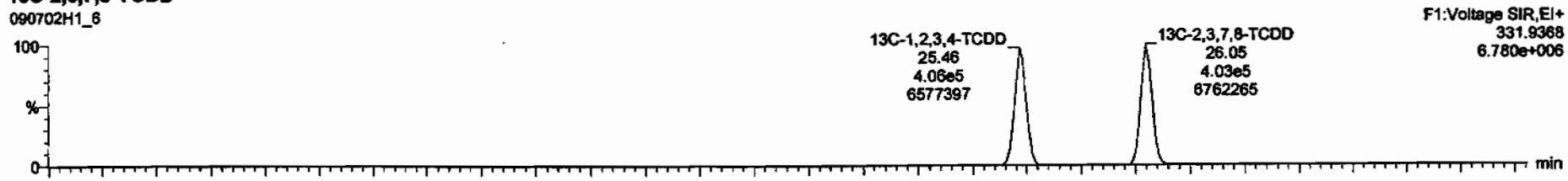

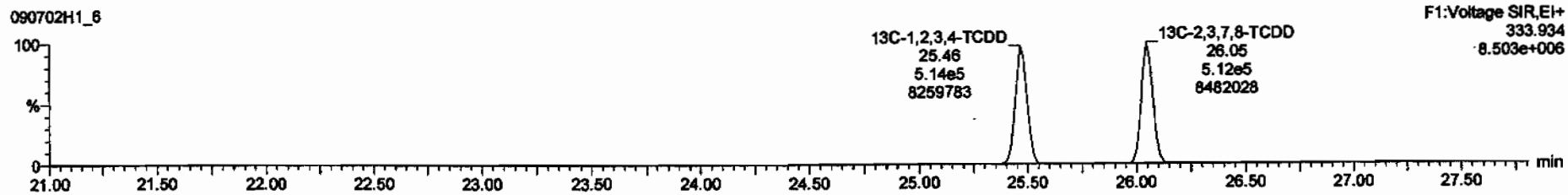

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-6.qld

Last Altered: Monday, July 06, 2009 13:15:21 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

37Cl-2,3,7,8-TCDD

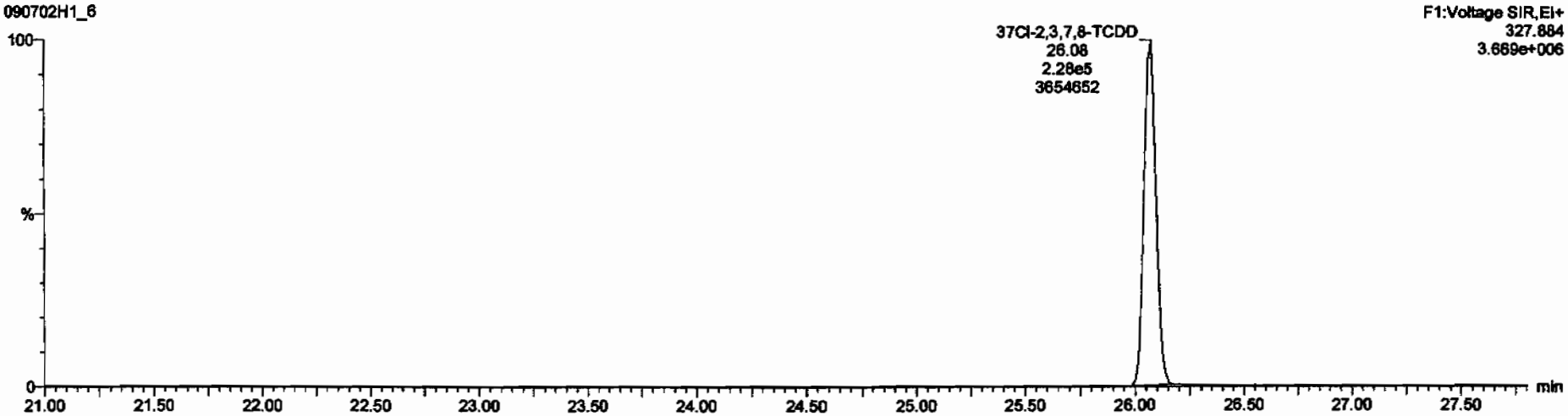

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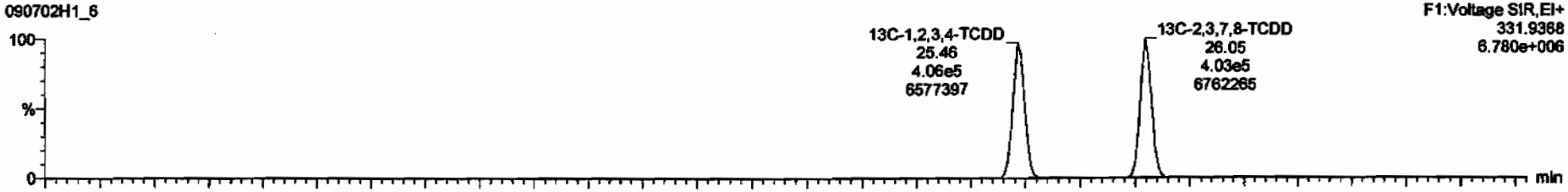

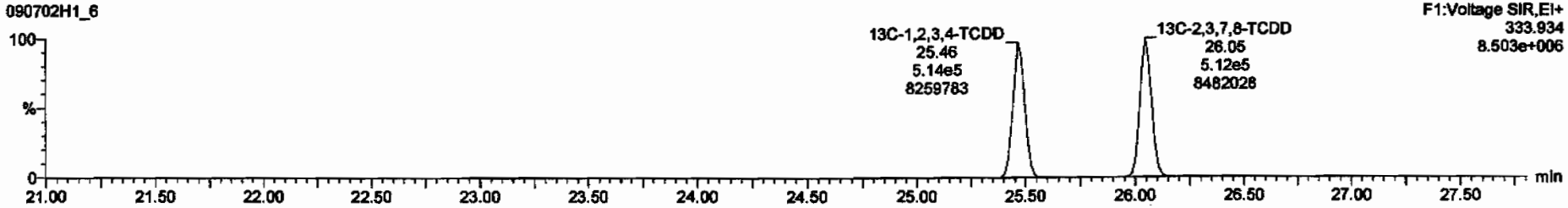

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Last Altered: Monday, July 06, 2009 13:15:21 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

1,2,3,7,8-PeCDD

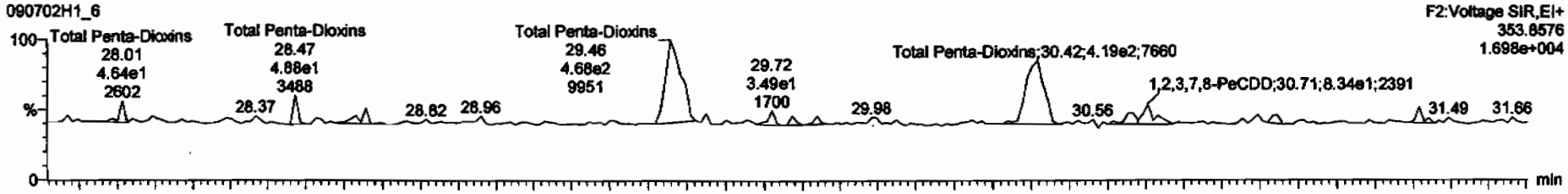

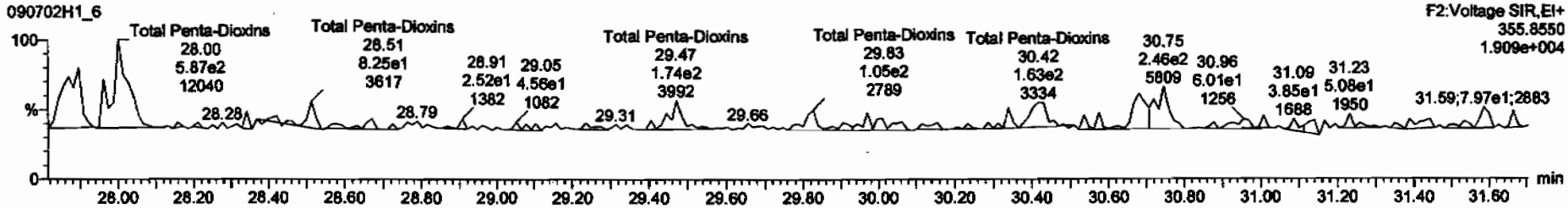

13C-1,2,3,7,8-PeCDD

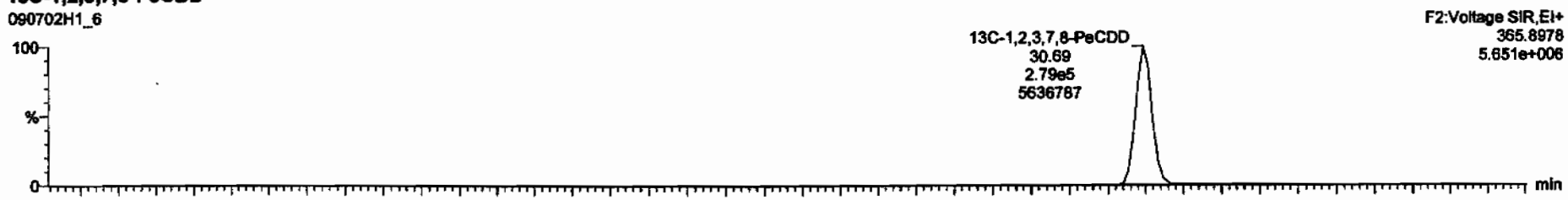

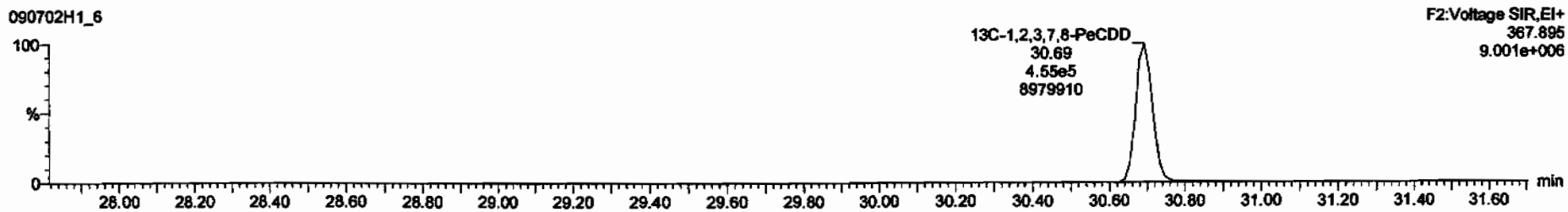

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Last Altered: Monday, July 06, 2009 13:15:21 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

1,2,3,4,7,8-HxCDD

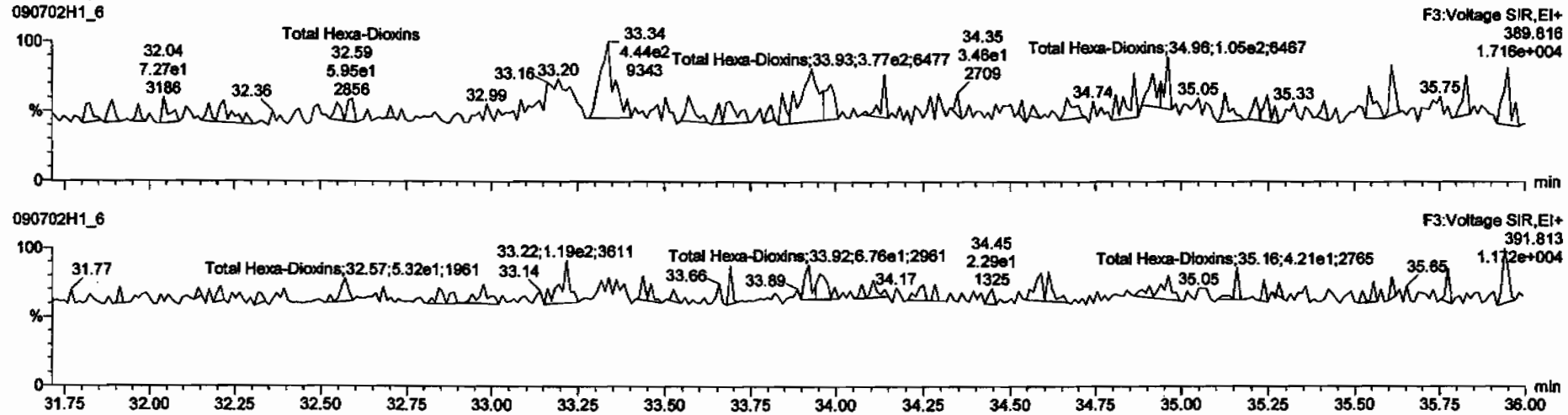

13C-1,2,3,4,7,8-HxCDD

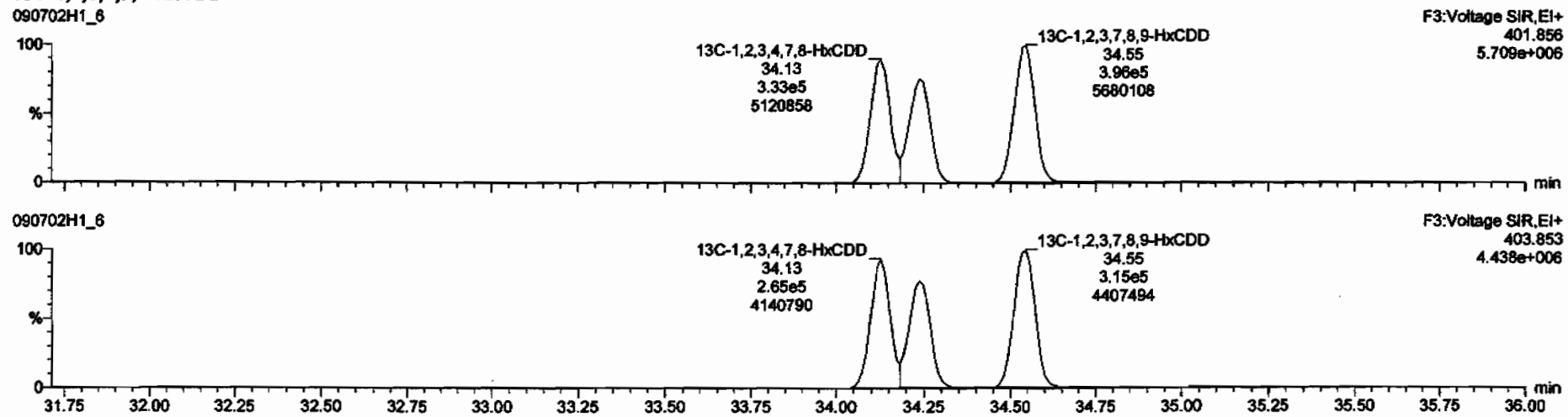

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Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

1,2,3,4,6,7,8-HpCDD

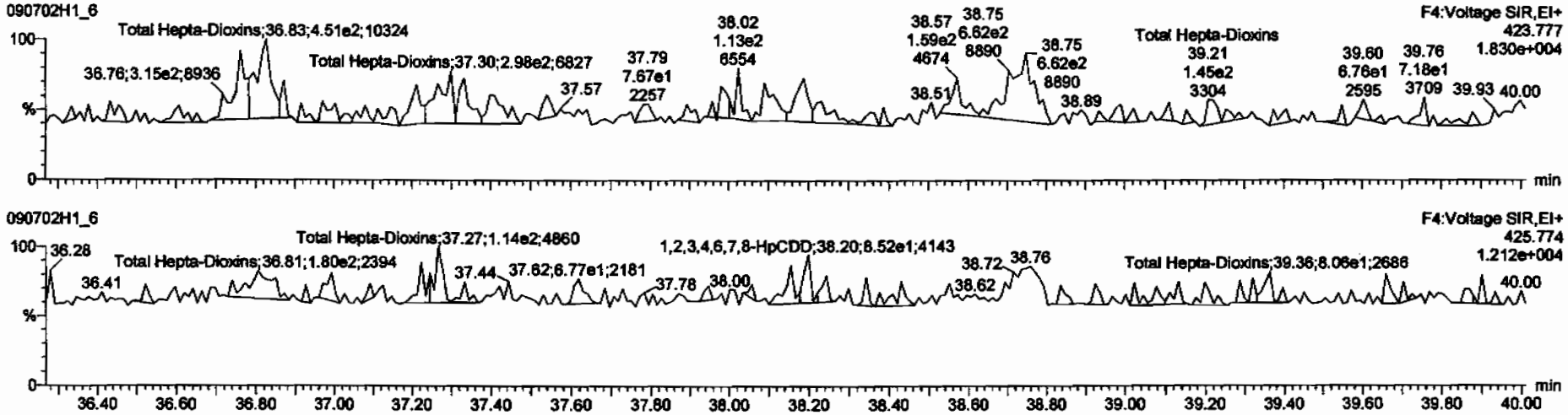

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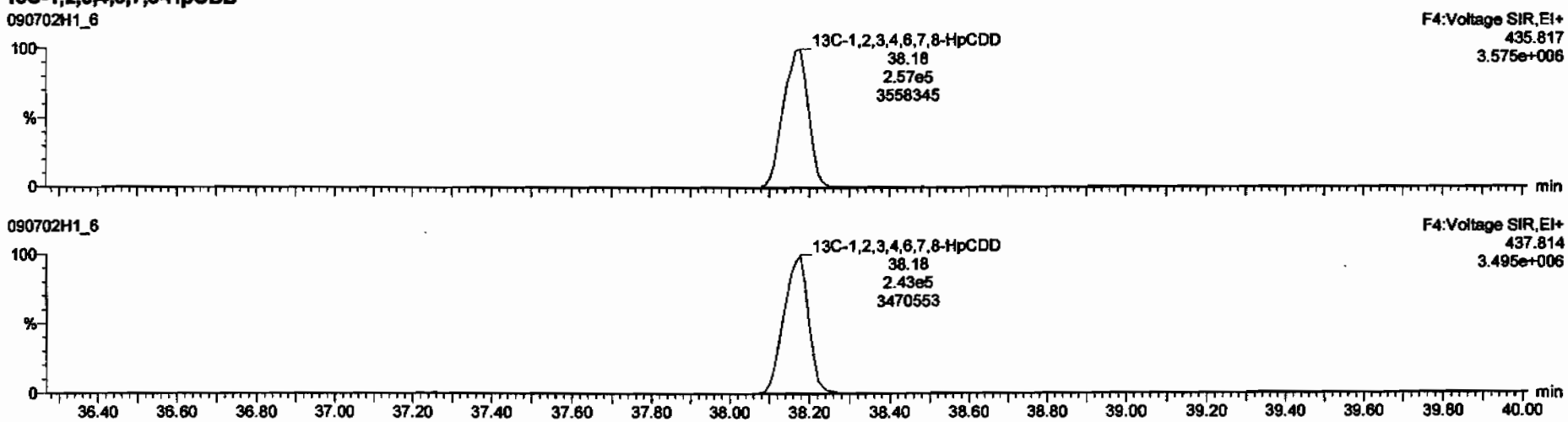

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Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

OCDD

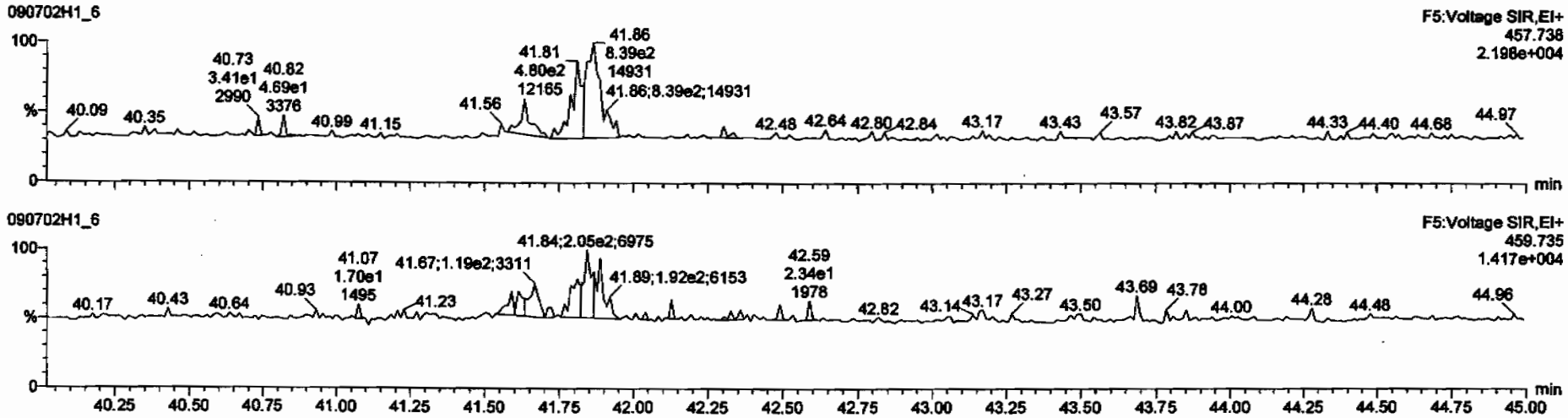

13C-OCDD

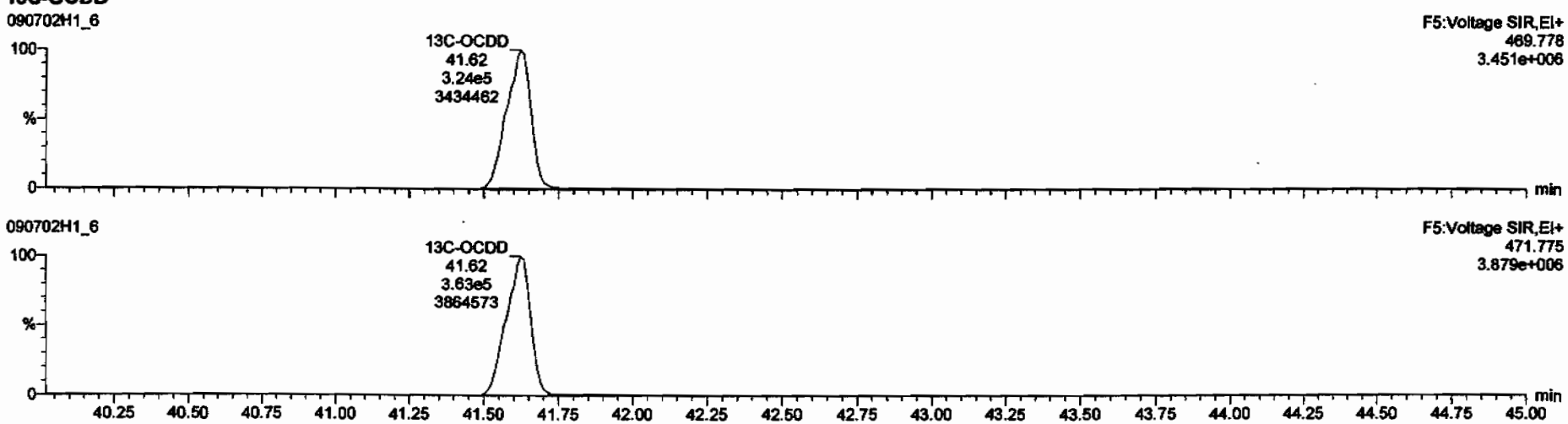

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Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

2,3,7,8-TCDF

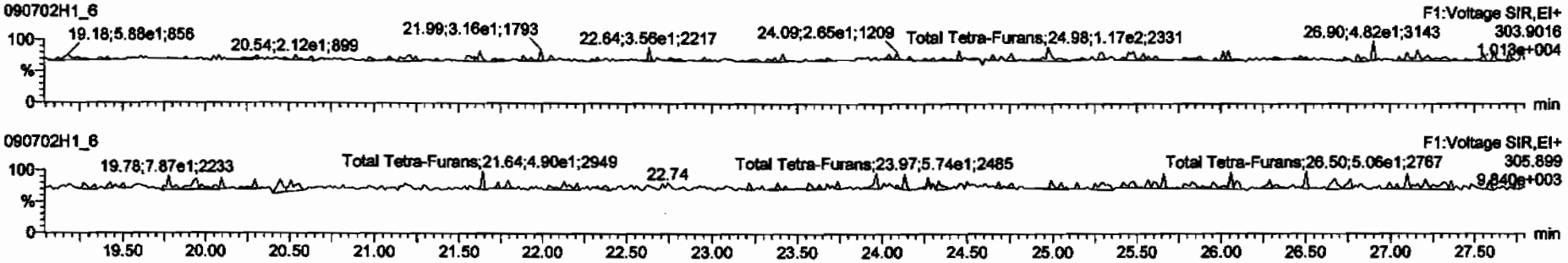

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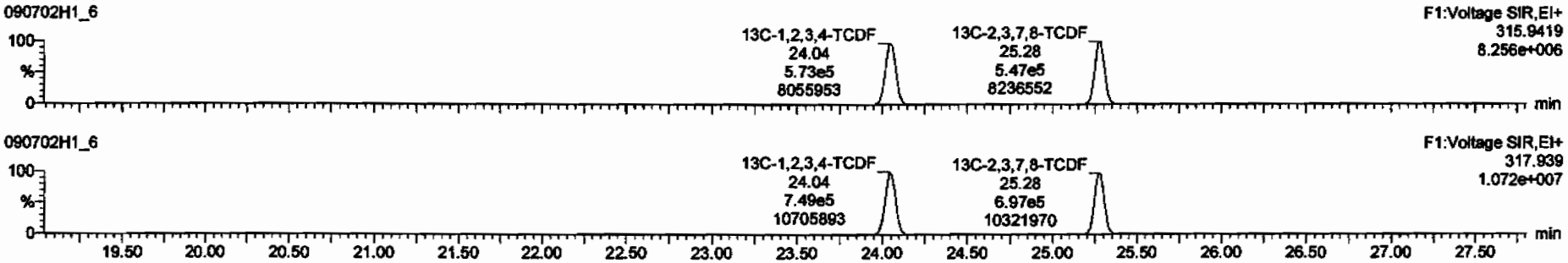

DPE1

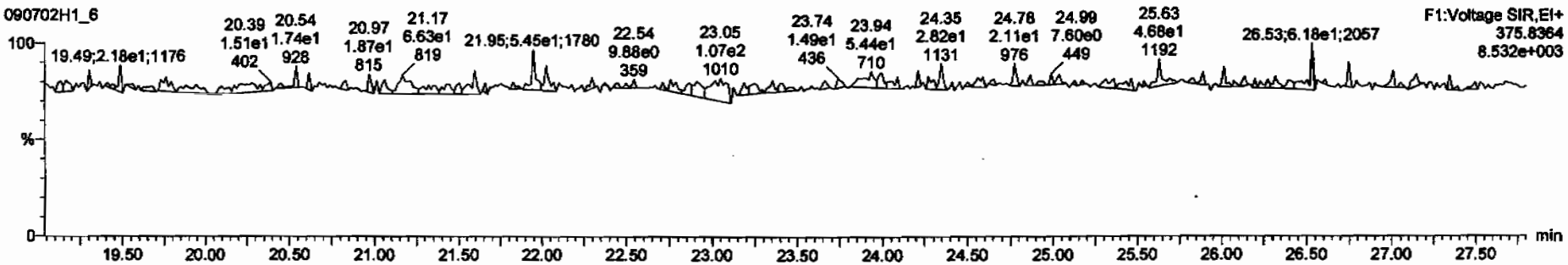

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Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

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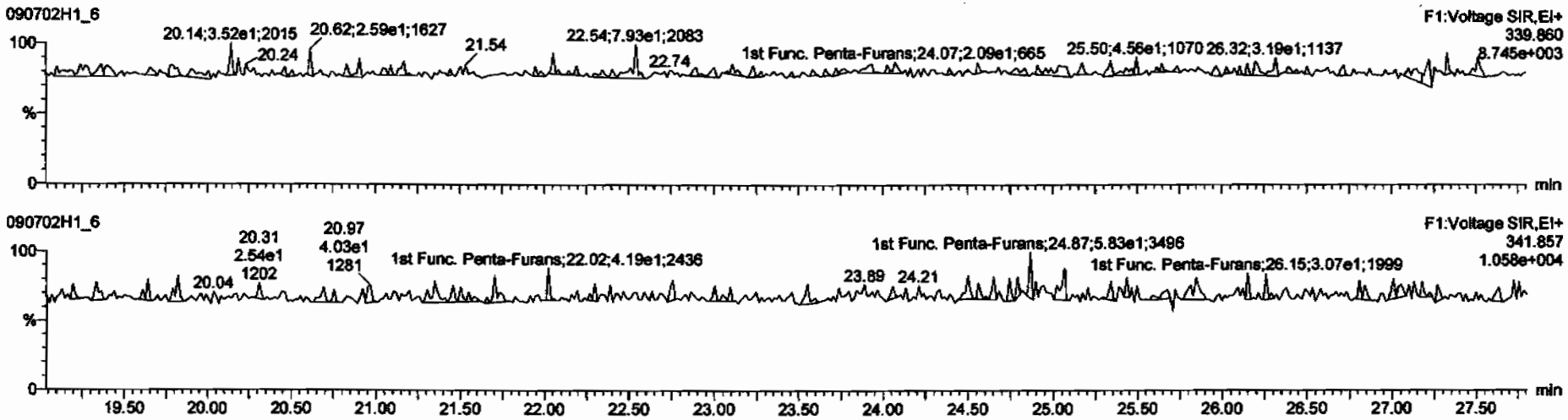

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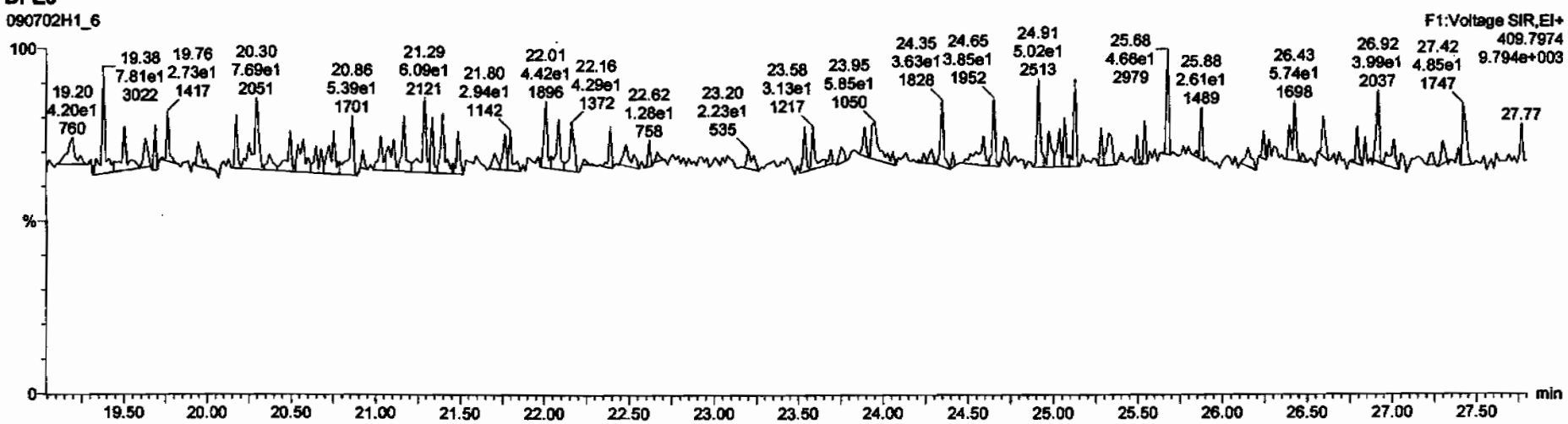

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Last Altered: Monday, July 06, 2009 13:15:21 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

1,2,3,7,8-PeCDF

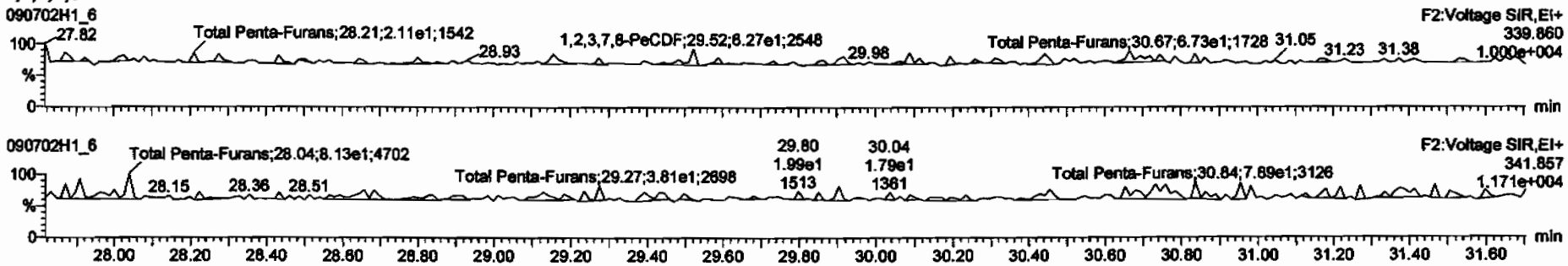

13C-1,2,3,7,8-PeCDF

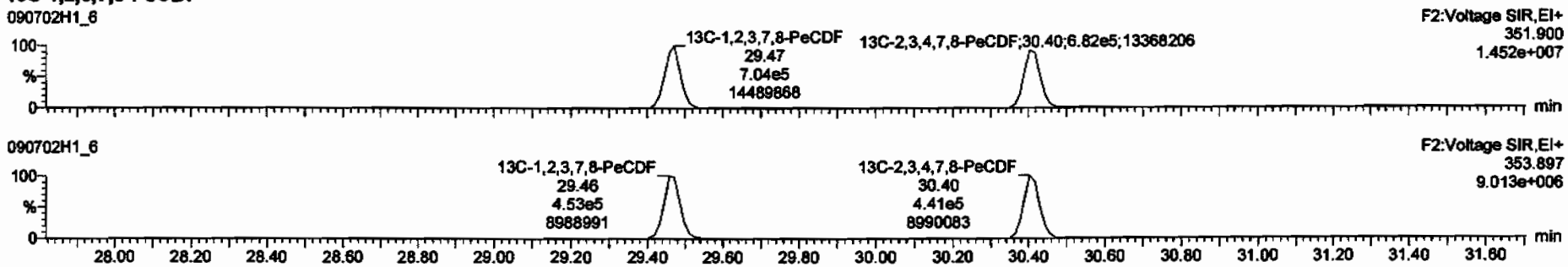

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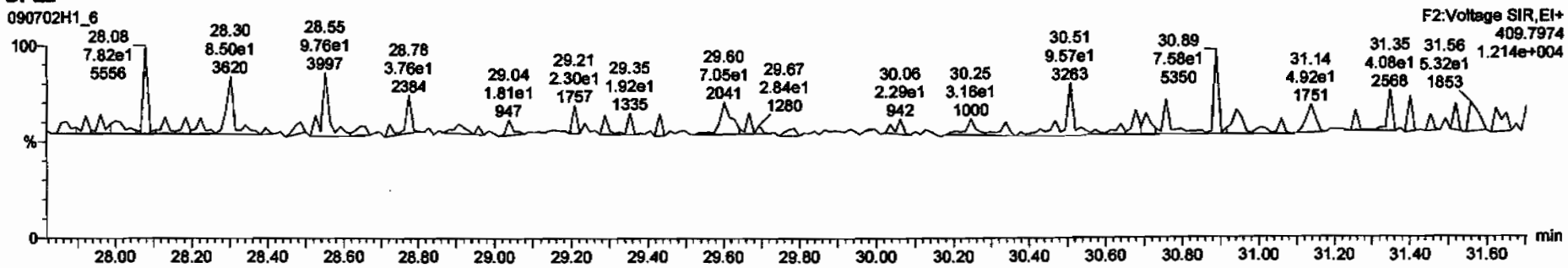

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Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

1,2,3,4,7,8-HxCDF

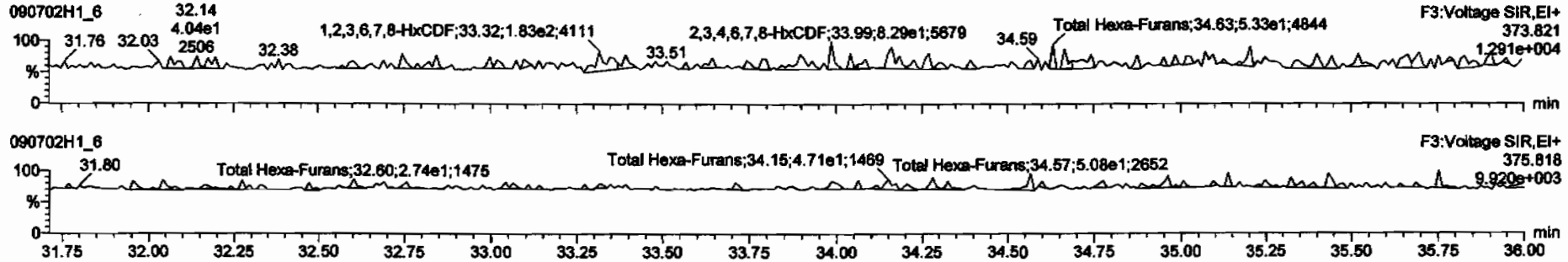

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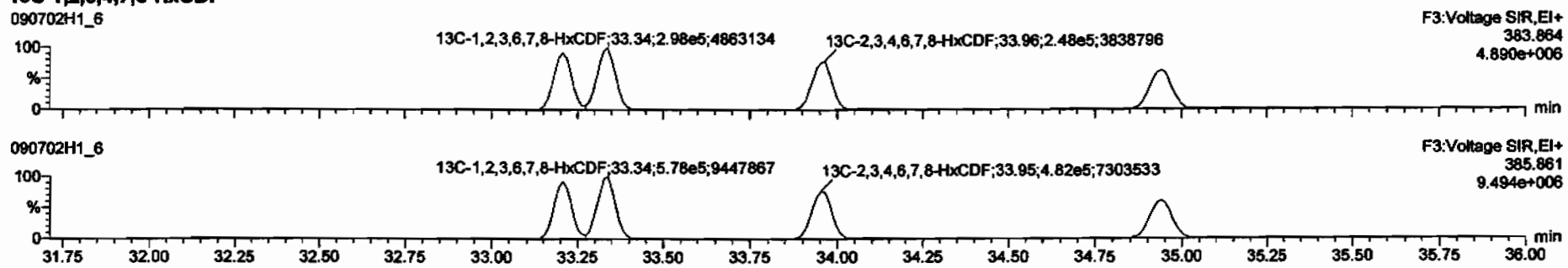

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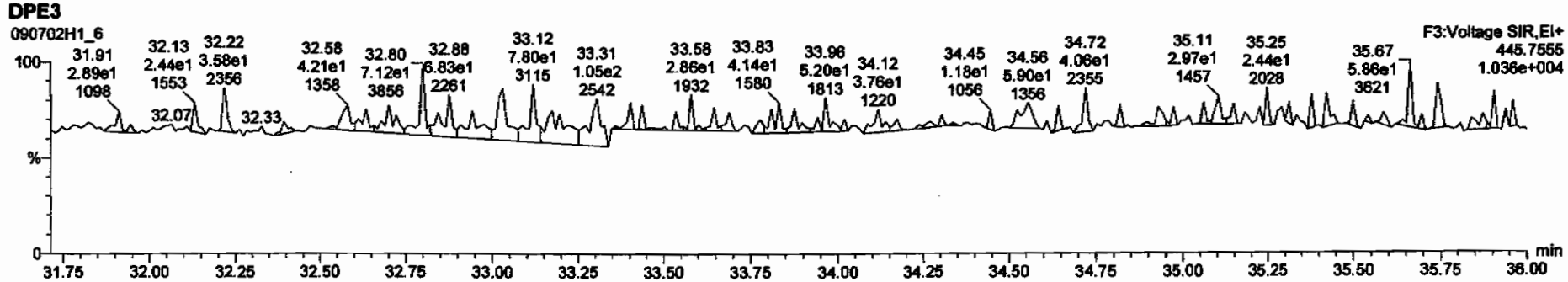

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Last Altered: Monday, July 06, 2009 13:15:21 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

1,2,3,4,6,7,8-HpCDF

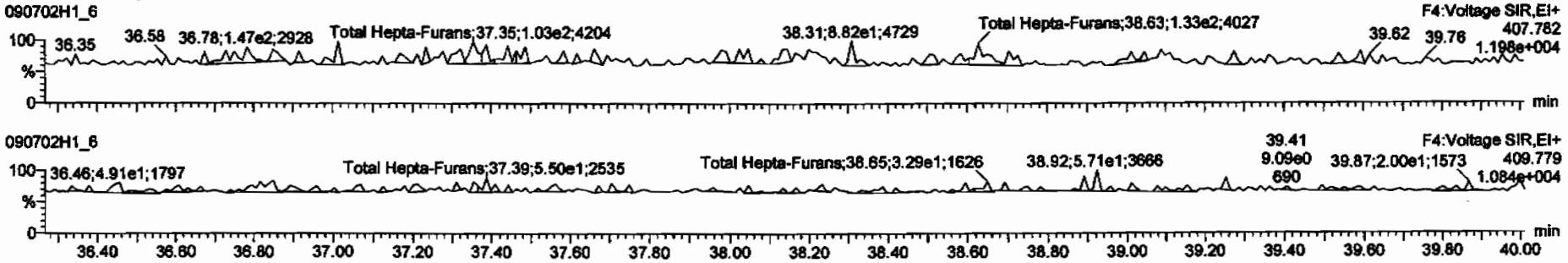

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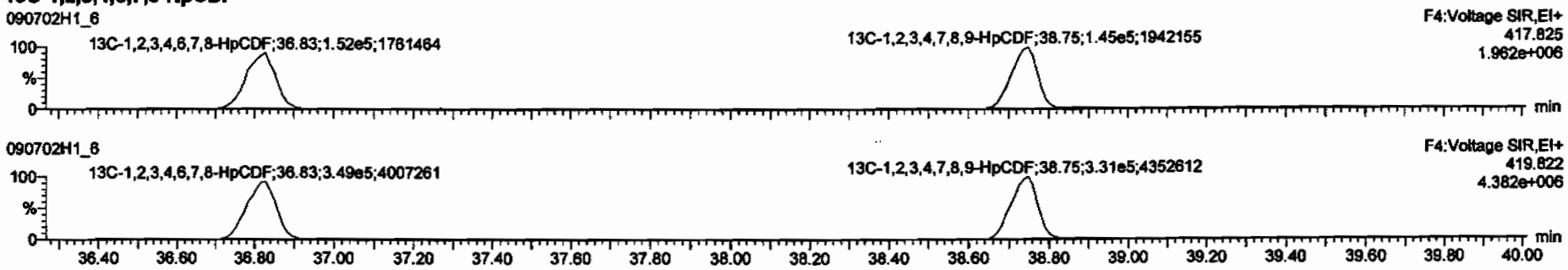

DPE4

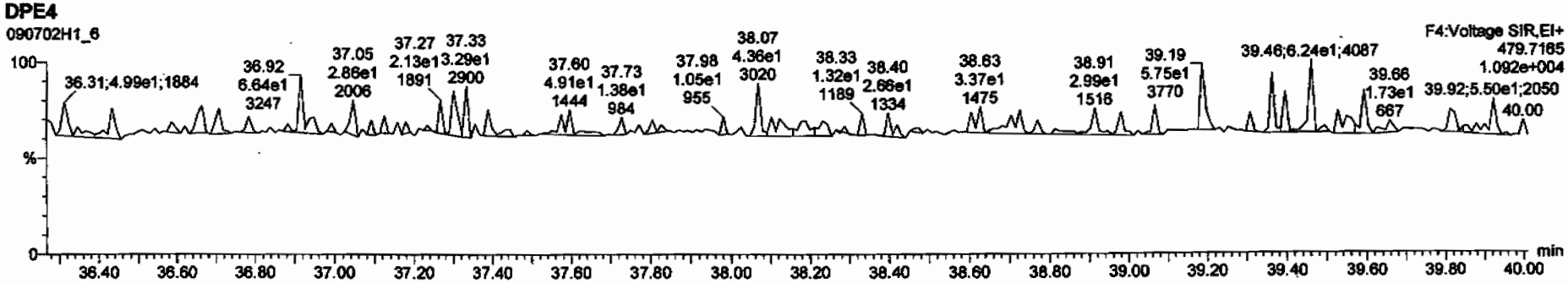

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-6.qld

Last Altered: Monday, July 06, 2009 13:15:21 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

OCDF

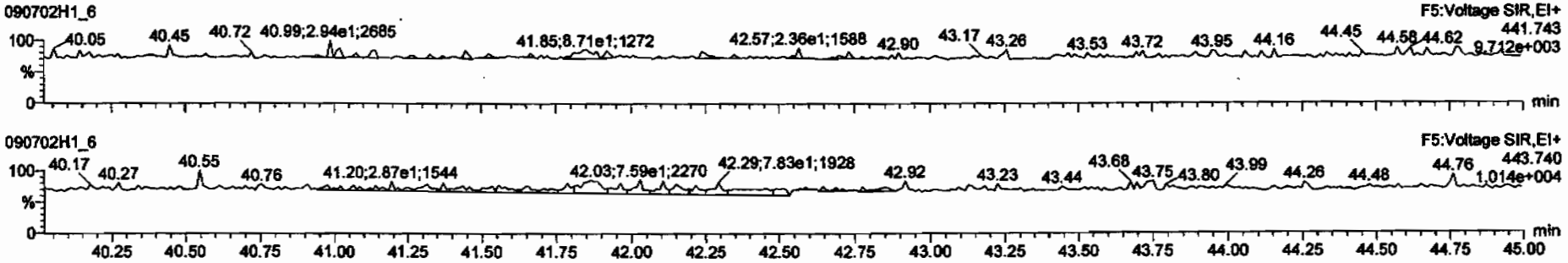

13C-OCDF

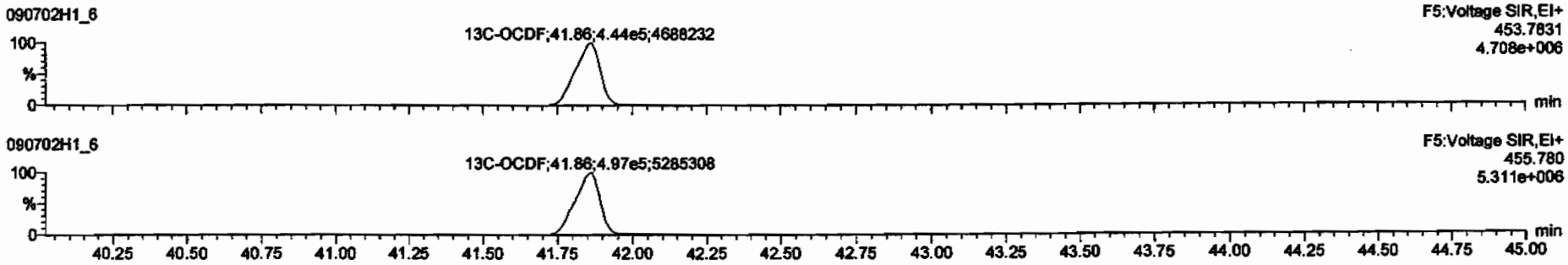

DPE5

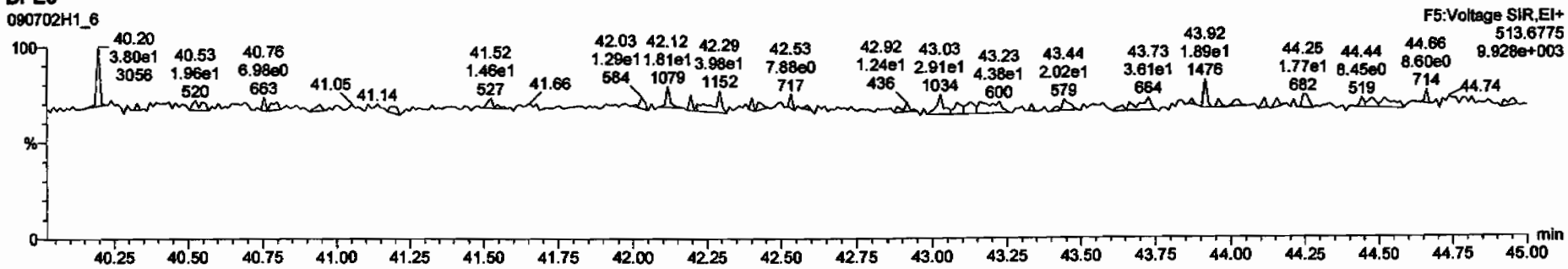

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Last Altered: Monday, July 06, 2009 13:15:21 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:15:39 Pacific Daylight Time

Name: 090702H1_6, Date: 02-Jul-2009, Time: 18:31:05, ID: 31845_2214_002 CAMO-09-10465 10.5, Description: CAMO-09-10465

PFK1

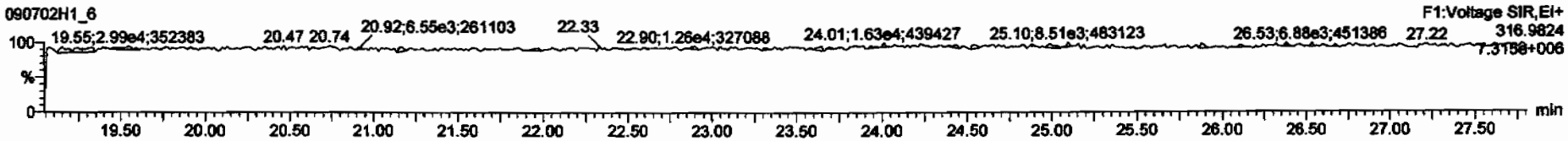

PFK2

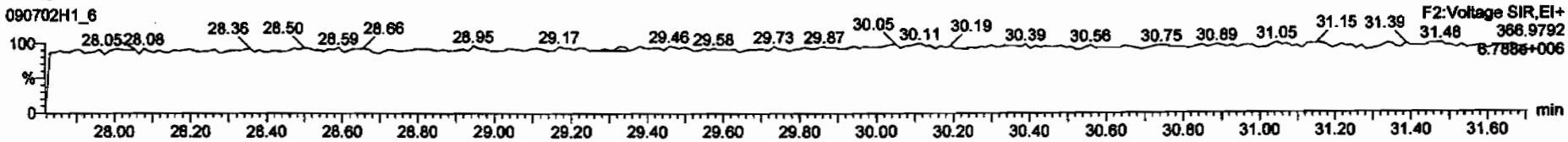

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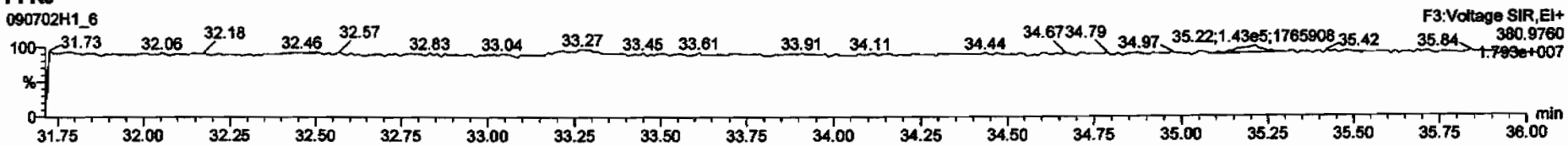

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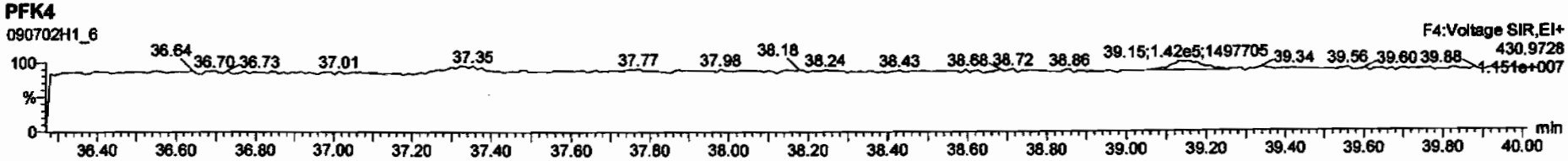

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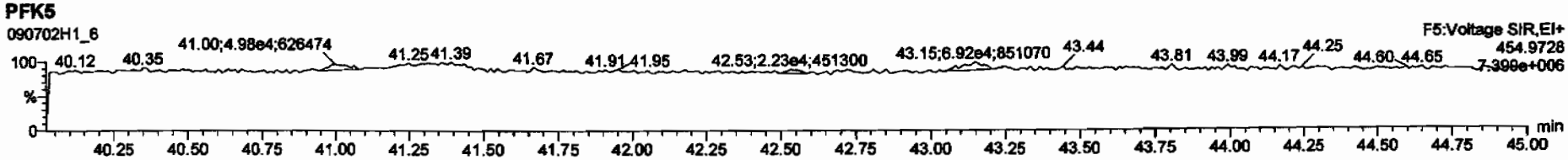

CALIBRATION DATA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090702H1-1

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

GC Column ID: DB-5
Analysis Date: 02-Jul-09 Analysis Time: 14:22:39

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	9.09	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	45.5	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	45.5	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	45.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	NO	43.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	90.1	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	NO	8.34	8.4	12.0	No	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	41.5	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	41.7	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	44.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.7	44.0	57.0	No	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.8	44.0	57.0	No	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.8	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.4	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	45.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.90	0.76-1.02	NO	87.8	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/2/09

8290 only

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

CCAL ID: ST090702H1-1

GC Column ID: DB-5
Analysis Date: 02-Jul-09 Analysis Time: 14:22:39

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	107	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	99.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	93.1	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	105	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.90	0.76-1.02	NO	226	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	NO	103	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	NO	97.5	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	104	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	93.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	94.8	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	96.5	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	NO	93.4	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	98.9	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.89	0.76-1.02	NO	206	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.96	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/2/09

8290 only

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:05:37 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:05:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.70
2	1,2,8,9-TCDD (Last)	26.95
3	1,2,4,7,9-PeCDD (First)	28.58
4	1,2,3,8,9-PeCDD (Last)	31.09
5	12,4,6,7,9-HxCDD (First)	32.56
6	1,2,3,7,8,9-HxCDD (Last)	34.57
7	1,2,3,4,6,7,9-HpCDD (First)	37.27
8	1,2,3,4,6,7,8-HpCDD (Last)	38.20
9	1,3,6,8-TCDF (First)	20.60
10	1,2,8,9-TCDF (Last)	27.12
11	1,3,4,6,8-PeCDF (First)	27.02
12	1,2,3,8,9-PeCDF (Last)	31.35
13	1,2,3,4,6,8-HxCDF (First)	32.01
14	1,2,3,4,8,9-HxCDF (Last)	34.96
15	1,2,3,4,6,7,8-HpCDF (First)	36.84
16	1,2,3,4,7,8,9-HpCDF (Last)	38.77

7/2/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090702H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090702H1_1

Analysis Date: 02-Jul-09

Analysis Time: 14:22:39

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/2/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

CCAL ID: ST090702H1-1

GC Column ID: DB-5
Analysis Date: 02-Jul-09

Analysis Time: 14:22:39

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.962	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.012	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/2/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:16:13 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	6.17e4	0.79	NO	1.08	1.000	26.08	1.001	9.0888	90.9	0.0376	9.0888
2	1,2,3,7,8-PeCDD	2.25e5	0.61	NO	1.03	1.000	30.72	1.000	45.521	91.0	0.0790	45.521
3	1,2,3,4,7,8-HxCDD	1.91e5	1.23	NO	1.00	1.000	34.15	1.001	45.479	91.0	0.198	45.479
4	1,2,3,6,7,8-HxCDD	1.96e5	1.26	NO	1.13	1.000	34.26	1.000	45.639	91.3	0.208	45.639
5	1,2,3,7,8,9-HxCDD	2.08e5	1.23	NO	1.10	1.000	34.57	1.009	47.045	94.1	0.198	47.045
6	1,2,3,4,6,7,8-HpCDD	1.54e5	1.02	NO	1.06	1.000	38.20	1.000	43.741	87.5	0.248	43.741
7	OCDD	2.69e5	0.90	NO	1.18	1.000	41.66	1.001	90.062	90.1	0.200	90.062
8	2,3,7,8-TCDF	8.19e4	0.75	NO	1.09	1.000	25.30	1.001	8.3365	83.4	0.0318	8.3365
9	1,2,3,7,8-PeCDF	3.82e5	1.58	NO	1.16	1.000	29.48	1.000	41.481	83.0	0.0940	41.481
10	2,3,4,7,8-PeCDF	3.53e5	1.57	NO	1.12	1.000	30.43	1.000	41.664	83.3	0.0968	41.664
11	1,2,3,4,7,8-HxCDF	3.37e5	1.25	NO	1.41	1.000	33.23	1.000	44.011	88.0	0.103	44.011
12	1,2,3,6,7,8-HxCDF	3.36e5	1.26	NO	1.22	1.000	33.36	1.001	43.657	87.3	0.108	43.657
13	2,3,4,6,7,8-HxCDF	2.96e5	1.27	NO	1.28	1.000	33.98	1.000	43.754	87.5	0.132	43.754
14	1,2,3,7,8,9-HxCDF	2.56e5	1.26	NO	1.26	1.000	34.96	1.000	44.823	89.6	0.172	44.823
15	1,2,3,4,6,7,8-HpCDF	2.71e5	1.05	NO	1.69	1.000	36.84	1.000	44.449	88.9	0.201	44.449
16	1,2,3,4,7,8,9-HpCDF	2.16e5	1.05	NO	1.48	1.000	38.77	1.000	45.539	91.1	0.218	45.539
17	OCDF	3.35e5	0.90	NO	1.10	1.000	41.89	1.001	87.818	87.8	0.124	87.818
18	13C-2,3,7,8-TCDD	6.30e5	0.79	NO	1.01	1.000	26.05	1.022	106.82	107	0.144	
19	13C-1,2,3,7,8-PeCDD	4.79e5	0.63	NO	0.827	1.000	30.71	1.205	99.713	99.7	0.123	
20	13C-1,2,3,4,7,8-HxCDD	4.20e5	1.27	NO	0.916	1.000	34.13	0.988	102.85	103	0.305	
21	13C-1,2,3,6,7,8-HxCDD	3.82e5	1.25	NO	0.921	1.000	34.25	0.991	93.129	93.1	0.303	
22	13C-1,2,3,4,6,7,8-HpCDD	3.31e5	1.05	NO	0.708	1.000	38.19	1.105	104.78	105	0.497	
23	13C-OCDD	5.07e5	0.90	NO	0.503	1.000	41.63	1.205	226.08	113	0.384	
24	13C-2,3,7,8-TCDF	9.03e5	0.78	NO	0.977	1.000	25.28	0.992	106.98	107	0.123	
25	13C-1,2,3,7,8-PeCDF	7.95e5	1.55	NO	0.896	1.000	29.47	1.157	102.56	103	0.208	
26	13C-2,3,4,7,8-PeCDF	7.58e5	1.54	NO	0.900	1.000	30.42	1.194	97.527	97.5	0.208	
27	13C-1,2,3,4,7,8-HxCDF	5.42e5	0.52	NO	1.17	1.000	33.22	0.962	104.03	104	0.386	
28	13C-1,2,3,6,7,8-HxCDF	6.30e5	0.51	NO	1.52	1.000	33.34	0.965	93.007	93.0	0.297	
29	13C-2,3,4,6,7,8-HxCDF	5.28e5	0.52	NO	1.25	1.000	33.96	0.983	94.807	94.8	0.361	
30	13C-1,2,3,7,8,9-HxCDF	4.53e5	0.51	NO	1.05	1.000	34.95	1.012	96.548	96.5	0.428	

7/2/07

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:16:13 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	3.62e5	0.45	NO	0.868	1.000	36.83	1.066	93.417	93.4	0.449
32	13C-1,2,3,4,7,8,9-HpCDF	3.20e5	0.45	NO	0.727	1.000	38.76	1.122	98.909	98.9	0.536
33	13C-OCDF	6.97e5	0.89	NO	0.760	1.000	41.86	1.212	205.67	103	0.232
34	37Cl-2,3,7,8-TCDD	3.86e4			0.668	1.000	26.08	1.023	9.9558	99.6	0.0608
35	13C-1,2,3,4-TCDD	5.81e5	0.78	NO	1.00	1.000	25.48	0.000	100.00	100	0.146
36	13C-1,2,3,4-TCDF	8.64e5	0.79	NO	1.00	1.000	24.06	0.000	100.00	100	0.120
37	13C-1,2,3,7,8,9-HxCDD	4.46e5	1.25	NO	1.00	1.000	34.55	0.000	100.00	100	0.279

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 06:54:46 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:05:01 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 2,3,7,8-TCDD

090702H1_1	ST090702H1-1 1613 CS3 080917I	02-Jul-09	14:22:39
090702H1_2	0_2214_OPR001	02-Jul-09	15:13:01
090702H1_3	solvent blank	02-Jul-09	16:02:37
090702H1_4	0_2214_MB001	02-Jul-09	16:52:06
090702H1_5	31845_2214_001 CAMO-09-10464 10.61	02-Jul-09	17:41:36
090702H1_6	31845_2214_002 CAMO-09-10465 10.5	02-Jul-09	18:31:05
090702H1_7	31846_2214_001 CAMO-09-9946 12.7	02-Jul-09	19:20:36
090702H1_8	31847_2214_001 CAMO-09-6518 11.68	02-Jul-09	20:10:06
090702H1_9	31847_2214_002 CAMO-09-6519 13.07	02-Jul-09	20:59:34
090702H1_10	31847_2214_003 CAMO-09-6531 11.58	02-Jul-09	21:49:03
090702H1_11	31850_2214_001 CAMO-09-9941 11.19	02-Jul-09	22:38:41
090702H1_12	31850_2214_002 CAMO-09-9942 11.32	02-Jul-09	23:28:16
090702H1_13	31850_2214_003 CAMO-09-9943 11.85	03-Jul-09	00:17:49
090702H1_14	31850_2214_004 CAMO-09-9989 12.48	03-Jul-09	01:07:22
090702H1_15	31850_2214_005 CAMO-09-10030 11.22	03-Jul-09	01:56:54
090702H1_16	solvent blank	03-Jul-09	02:46:25
090702H1_17	ST090702H1-2 1613 CS3 080917I	03-Jul-09	03:35:57

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090702HI-1

End Calibration ID: ST090702HI-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range?	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits	NA	
-S/N > 2.5:1		
-CS1 within 12-hour clock	✓	

Comments: 8290 only

Reviewed by: DMS 7/3/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 rmh

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:20:01 Pacific Daylight Time

M 292.9824 R 14449

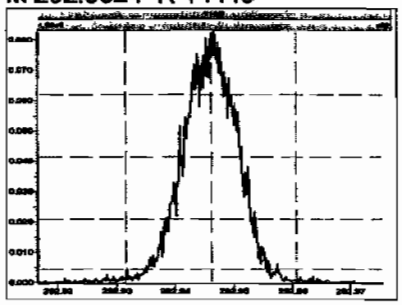

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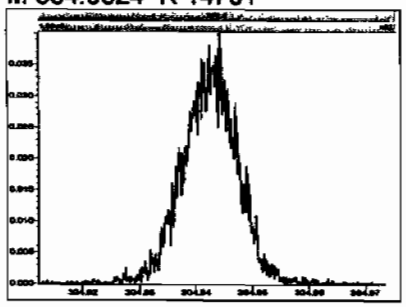

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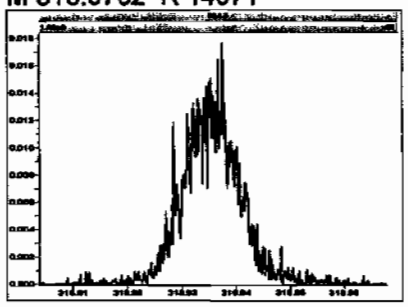

M 330.9792 R 13659

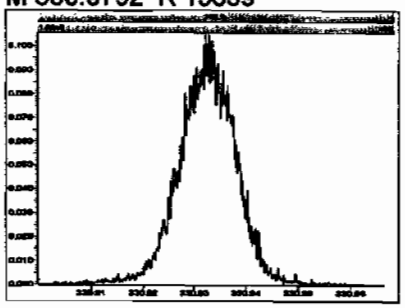

M 342.9792 R 12955

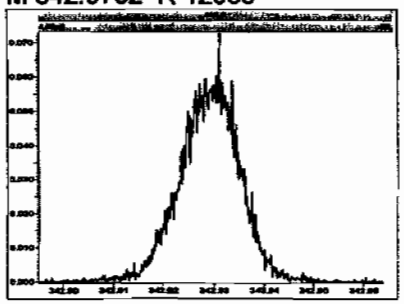

M 354.9792 R 13227

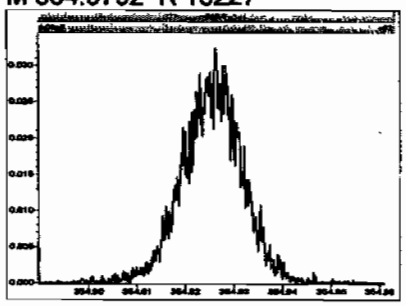

M 366.9792 R 13295

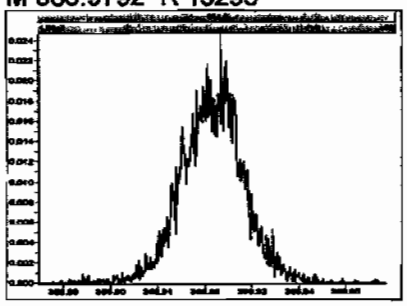

M 380.9760 R 13022

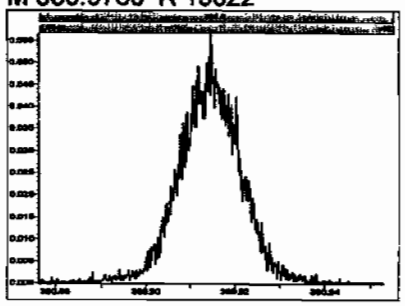

M 392.9760 R 12376

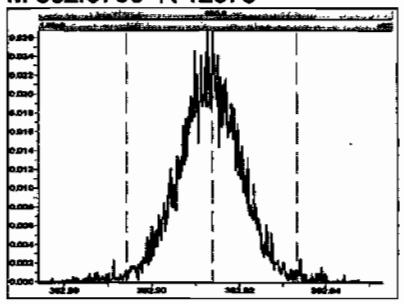

M 404.9760 R 13511

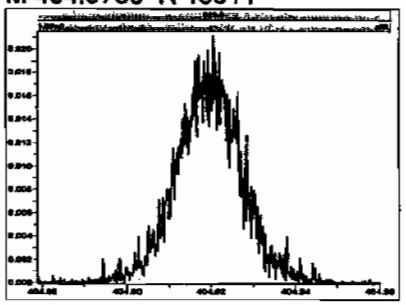

M 416.9760 R 12687

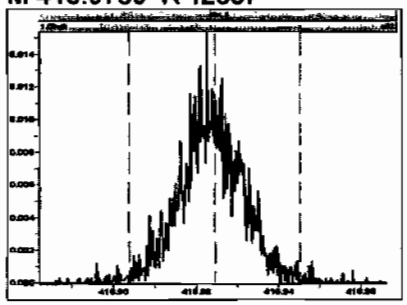

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:20:44 Pacific Daylight Time

M 330.9792 R 14285

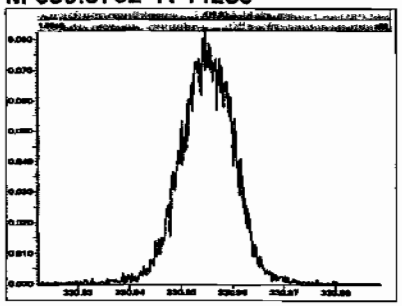

M 342.9792 R 14790

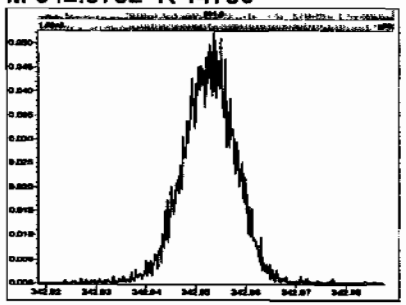

M 354.9792 R 14286

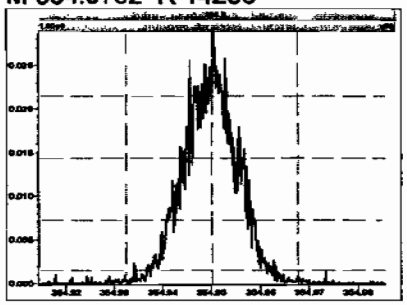

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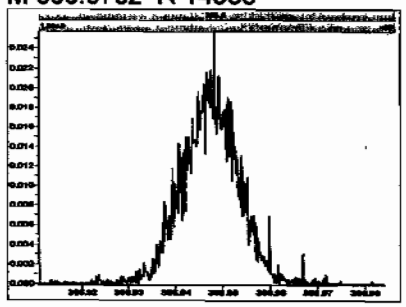

M 380.9760 R 14796

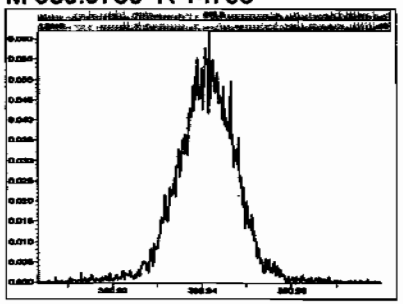

M 392.9760 R 13514

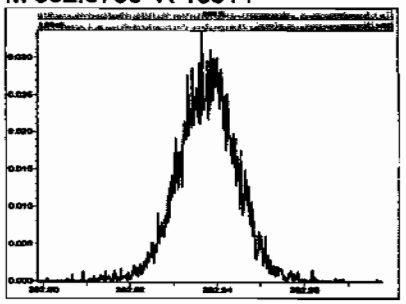

M 404.9760 R 13965

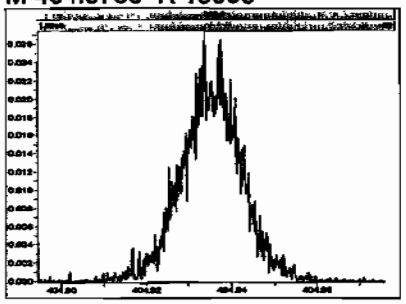

M 416.9760 R 14702

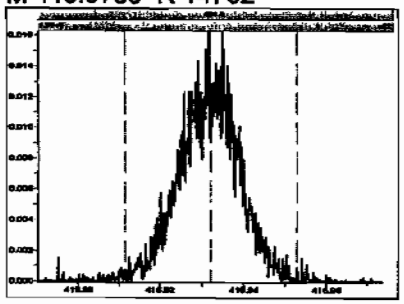

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:21:14 Pacific Daylight Time

M 366.9792 R 15527

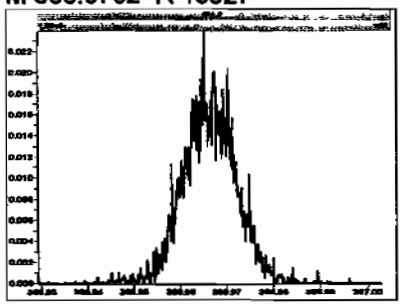

M 380.9760 R 14208

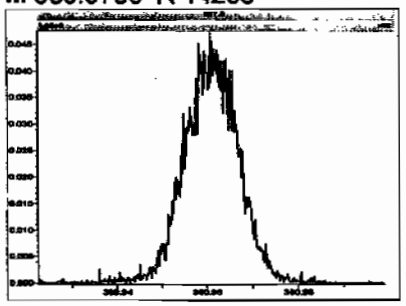

M 392.9760 R 14281

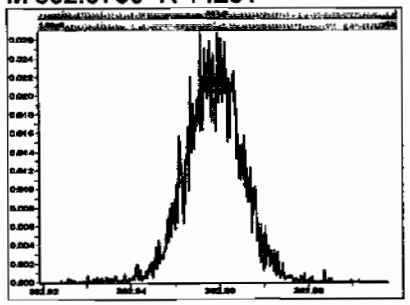

M 404.9760 R 16666

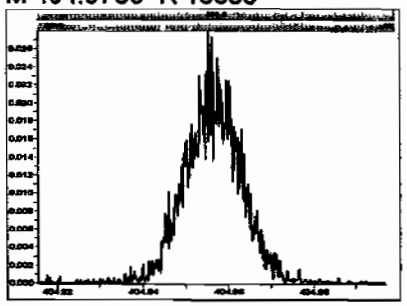

M 416.9760 R 13891

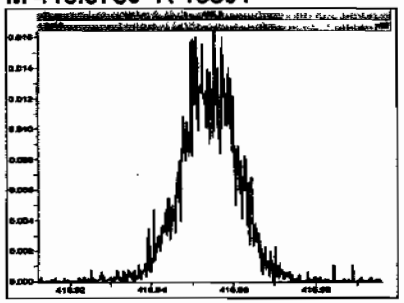

M 430.9728 R 13967

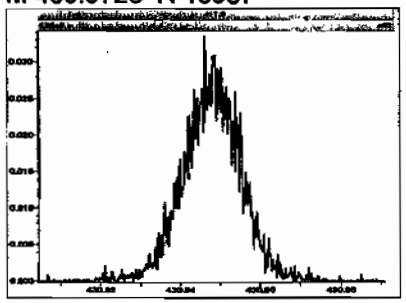

M 442.9728 R 14044

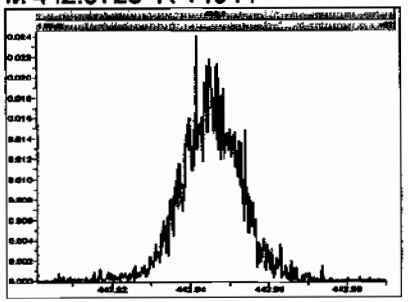

M 454.9728 R 15246

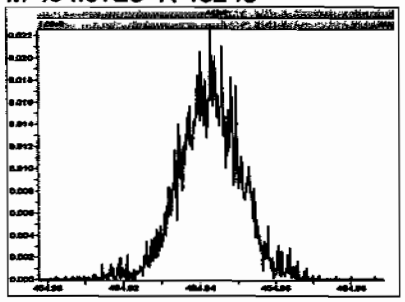

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:21:36 Pacific Daylight Time

M 404.9760 R 16887

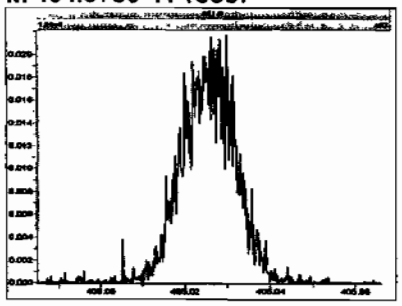

M 416.9760 R 16025

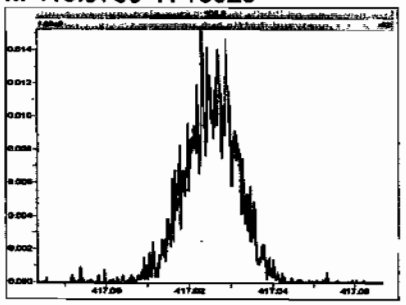

M 430.9728 R 15242

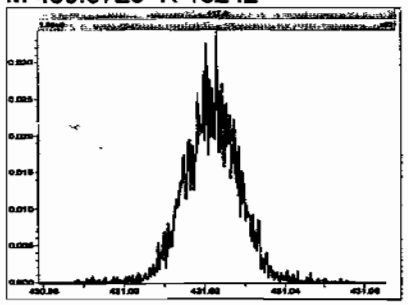

M 442.9728 R 15434

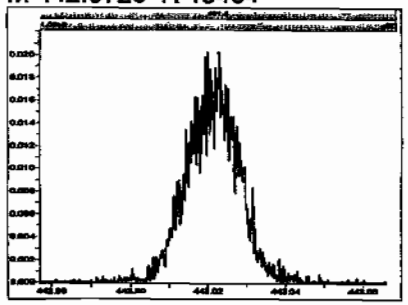

M 454.9728 R 15723

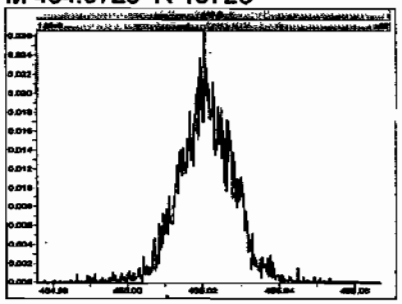

M 466.9728 R 16132

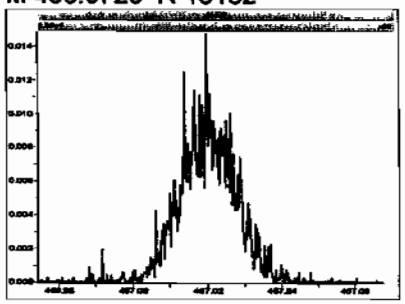

M 480.9696 R 16027

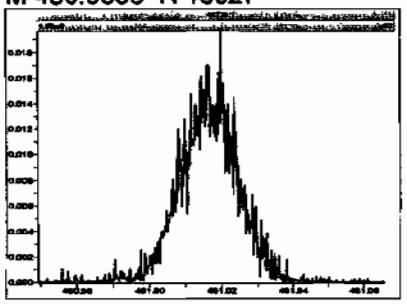

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:22:01 Pacific Daylight Time

M 430.9728 R 16025

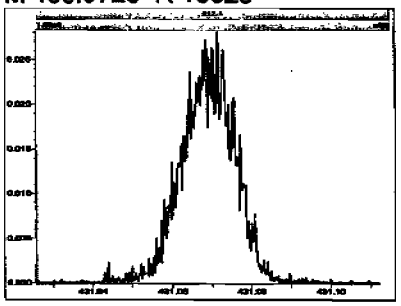

M 442.9728 R 14704

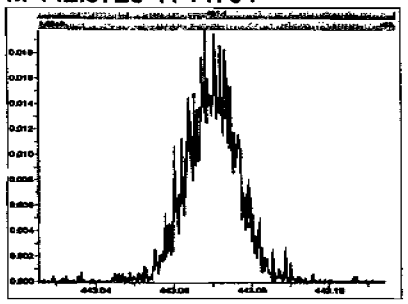

M 454.9728 R 16780

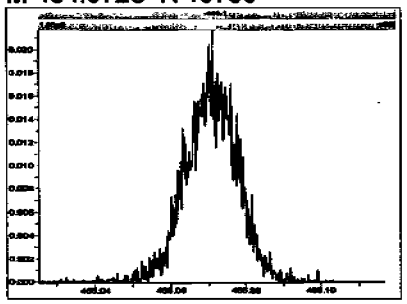

M 466.9728 R 17006

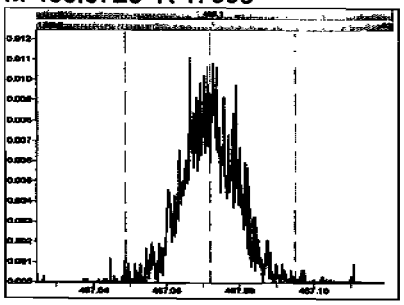

M 480.9696 R 14449

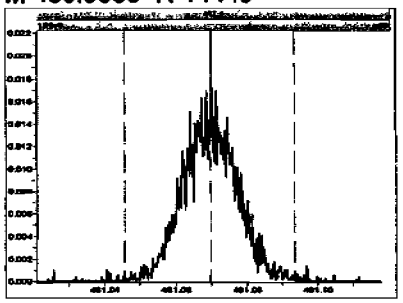

M 492.9696 R 14365

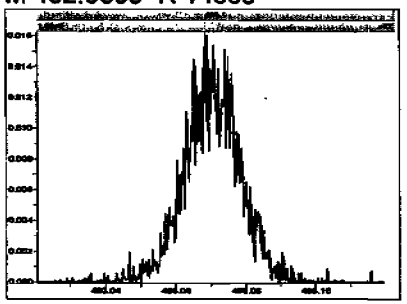

M 504.9696 R 16025

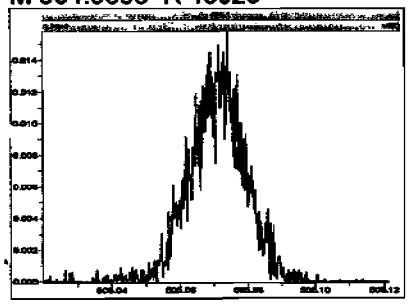

M 516.9697 R 15618

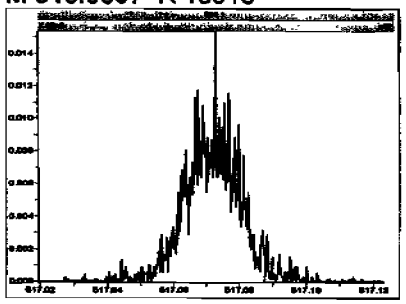

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:05:37 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:05:58 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

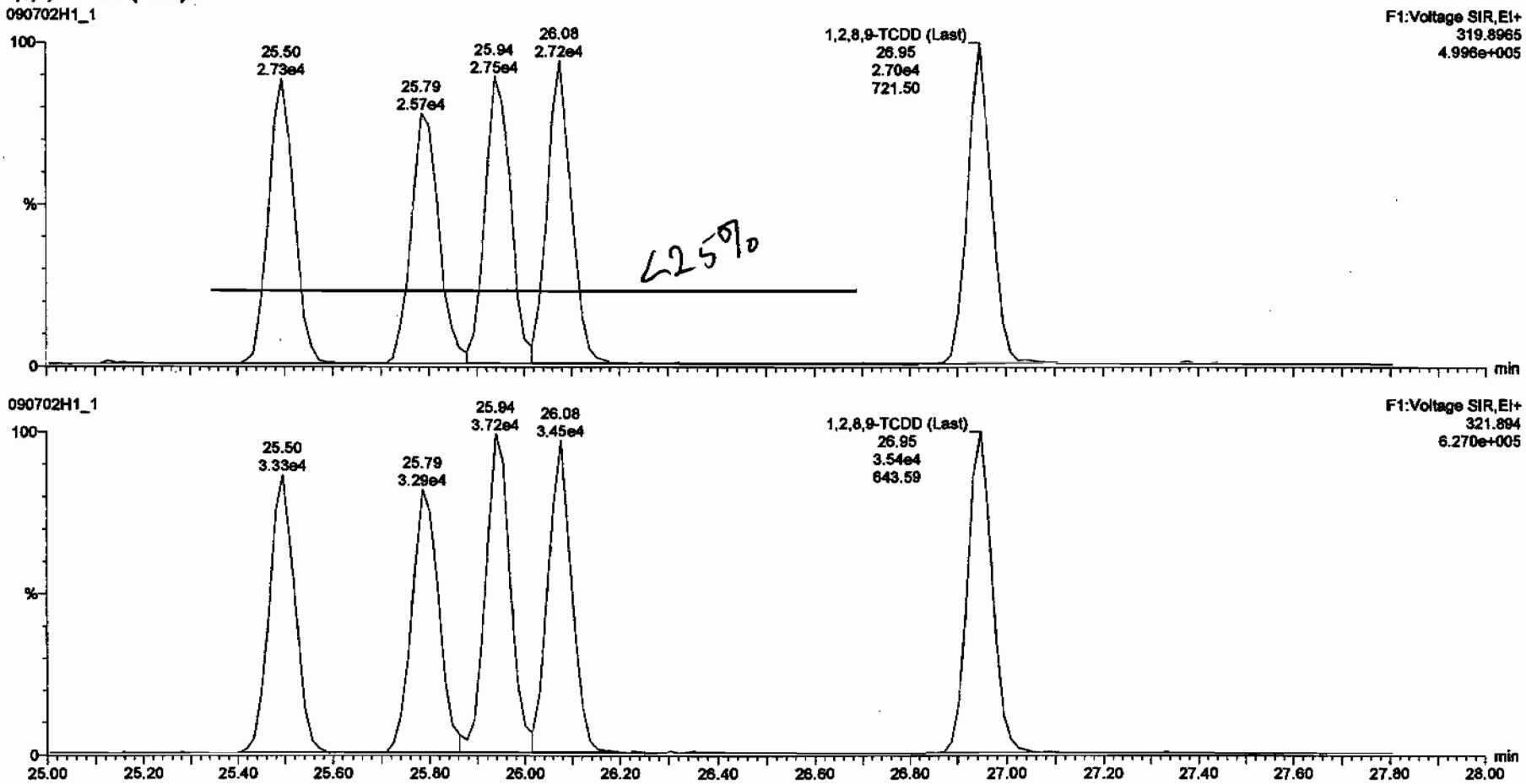

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

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2,3,7,8-TCDD

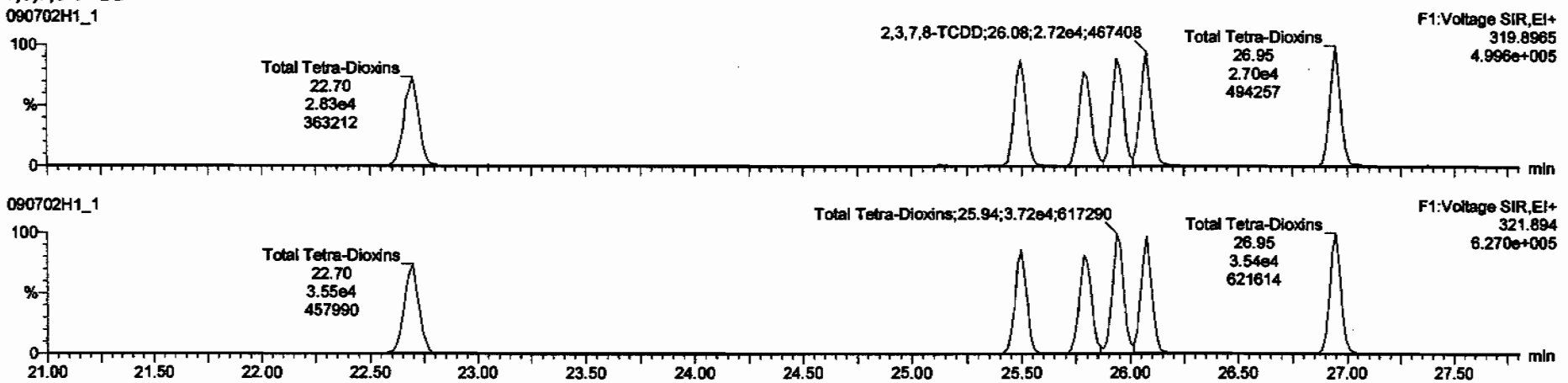

13C-2,3,7,8-TCDD

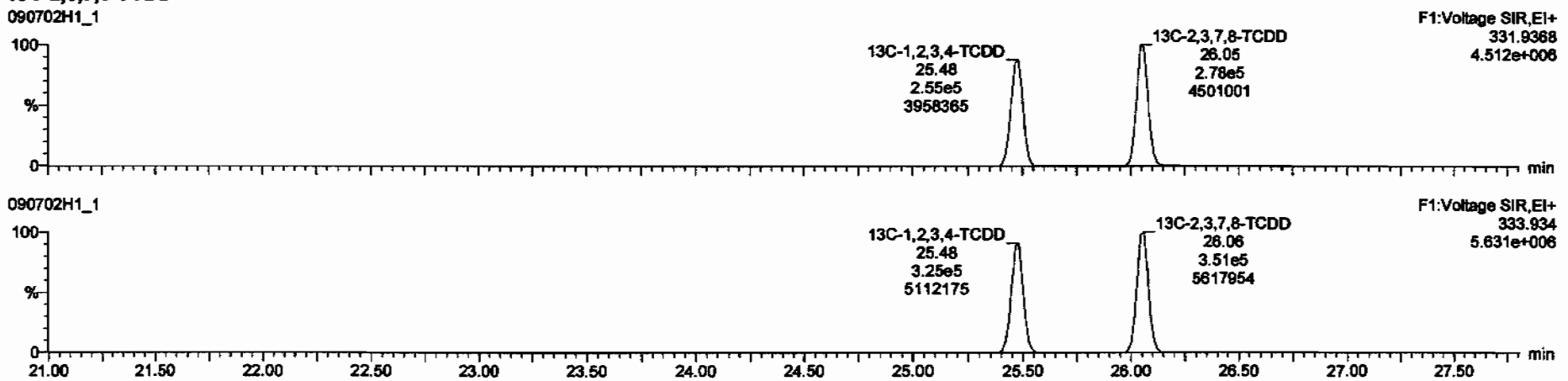

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Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
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Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

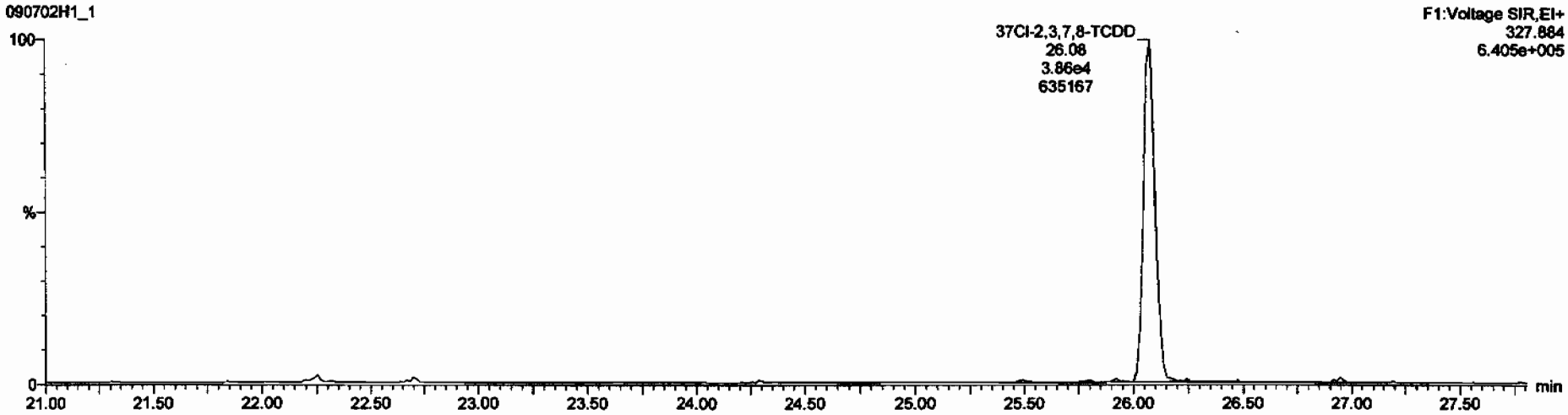

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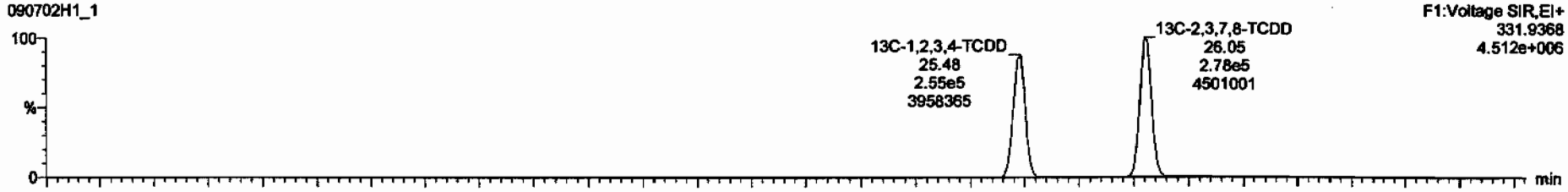

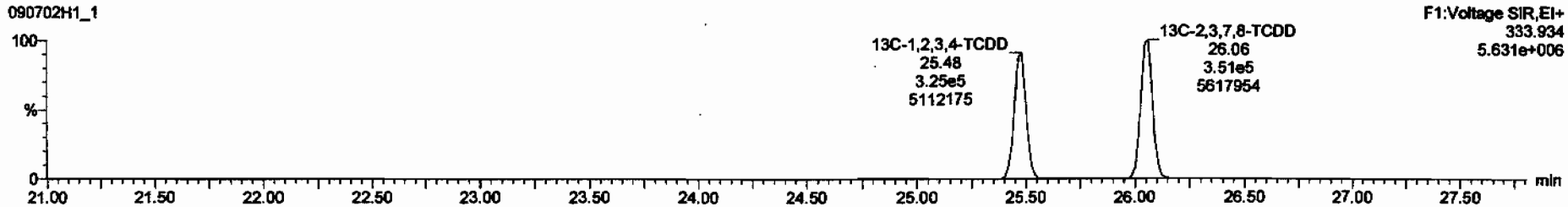

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Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

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1,2,3,7,8-PeCDD

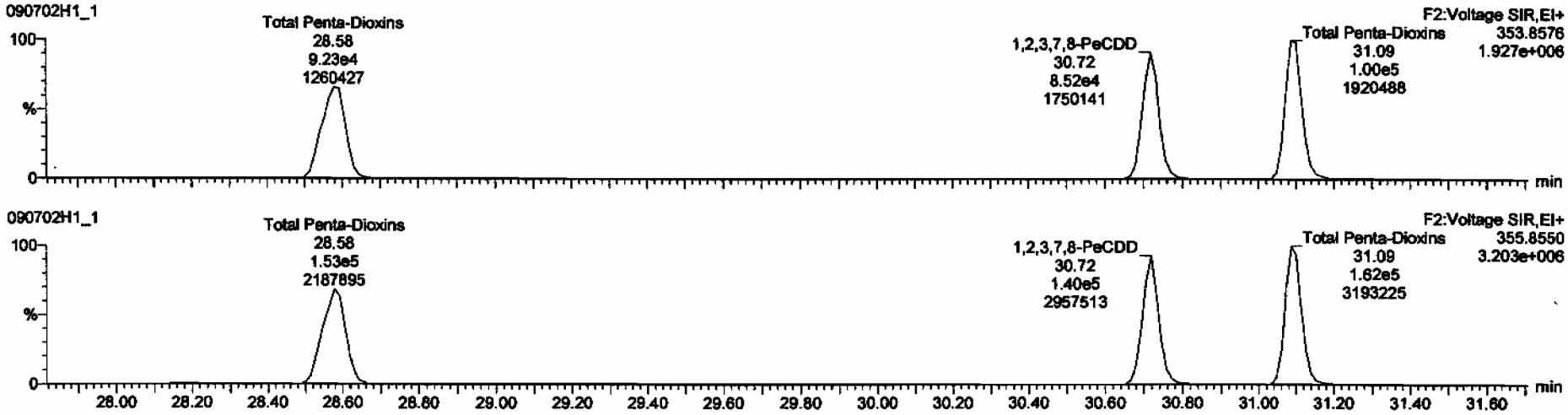

13C-1,2,3,7,8-PeCDD

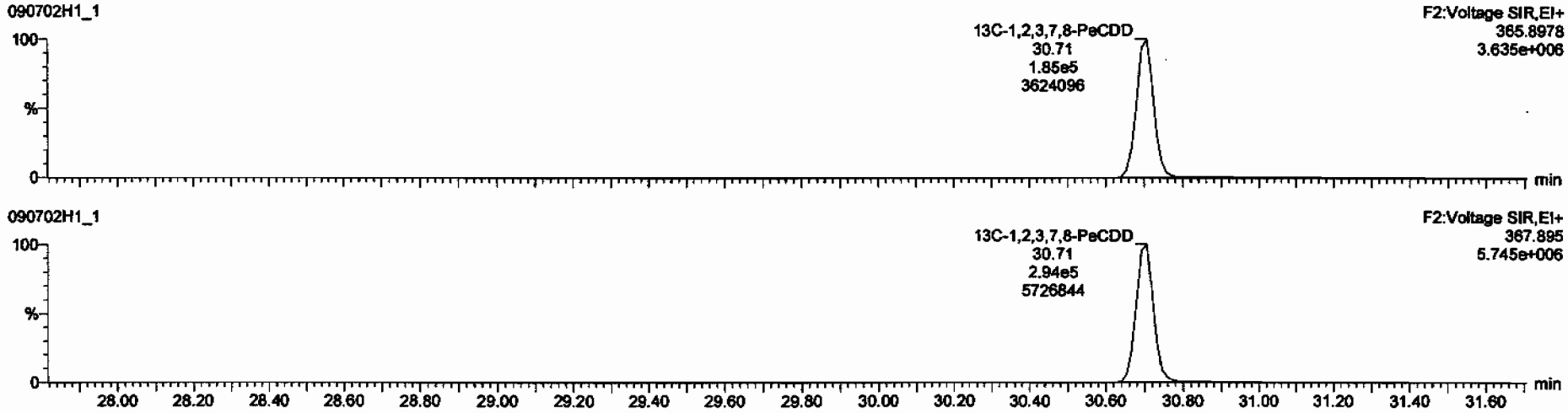

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Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

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1,2,3,4,7,8-HxCDD

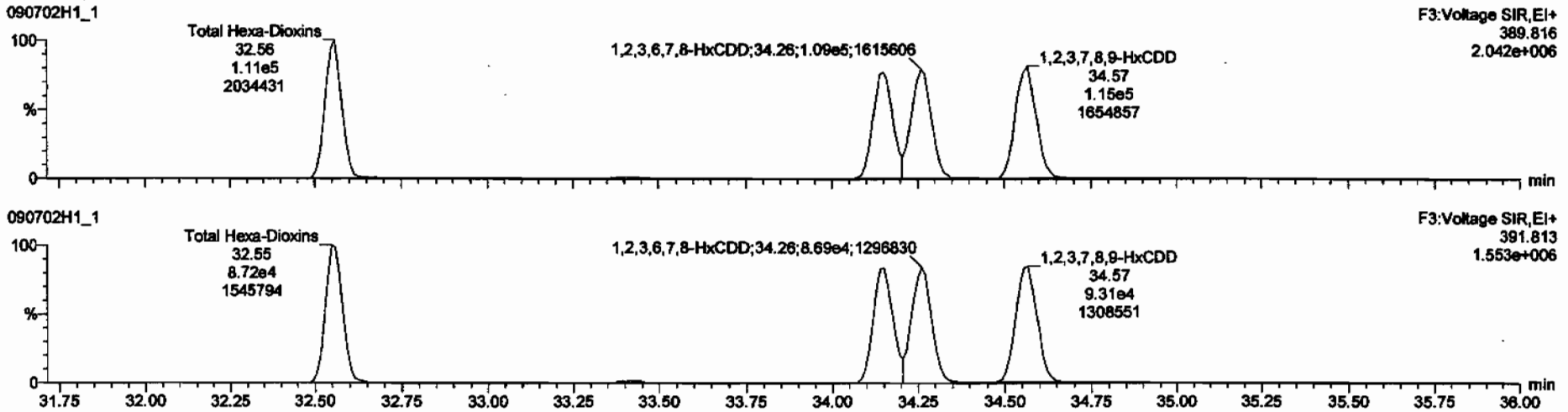

13C-1,2,3,4,7,8-HxCDD

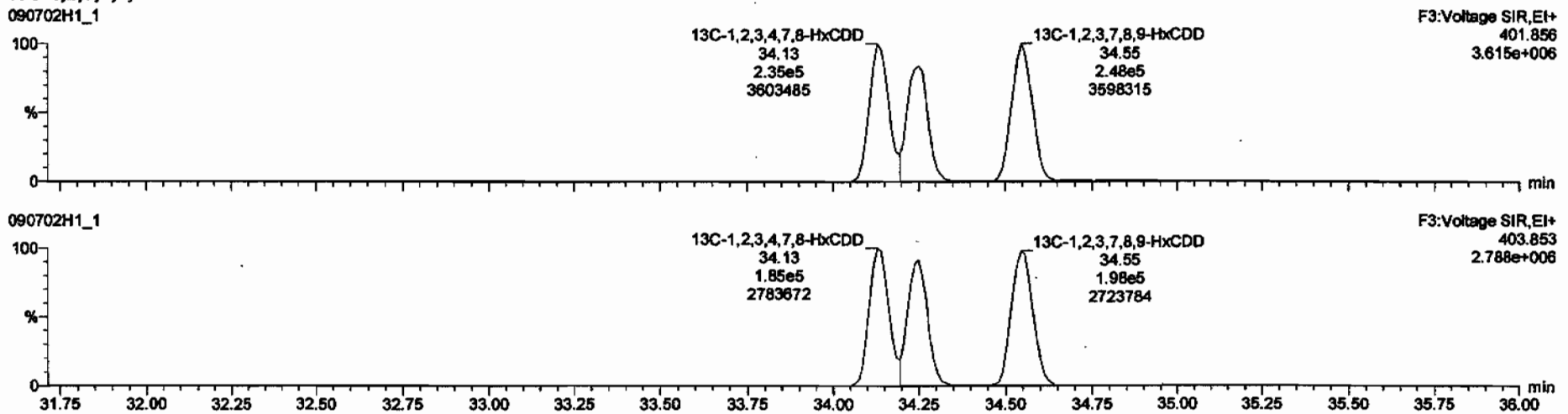

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Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

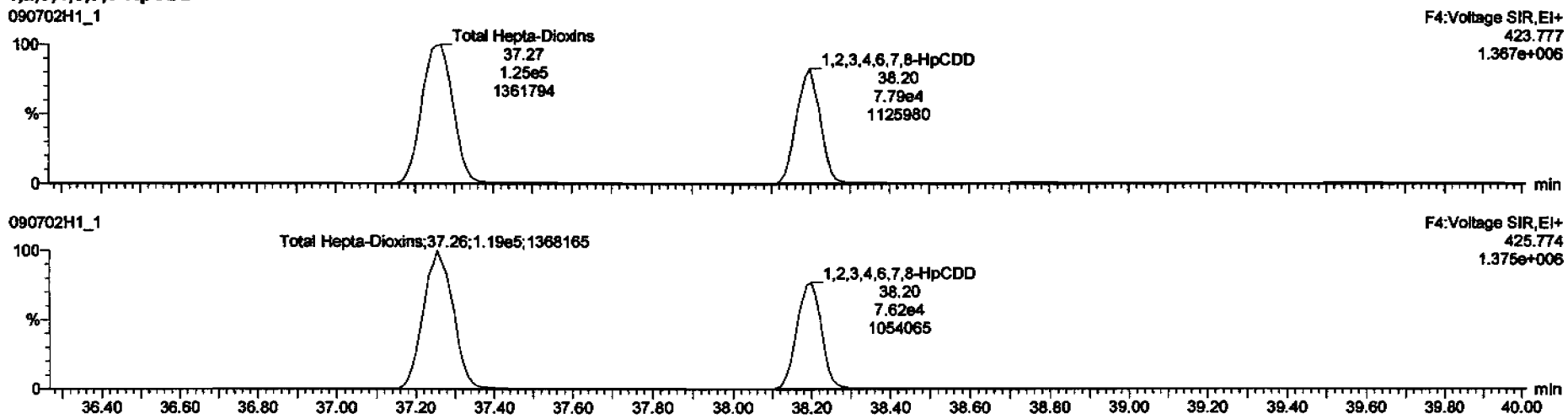

13C-1,2,3,4,6,7,8-HpCDD

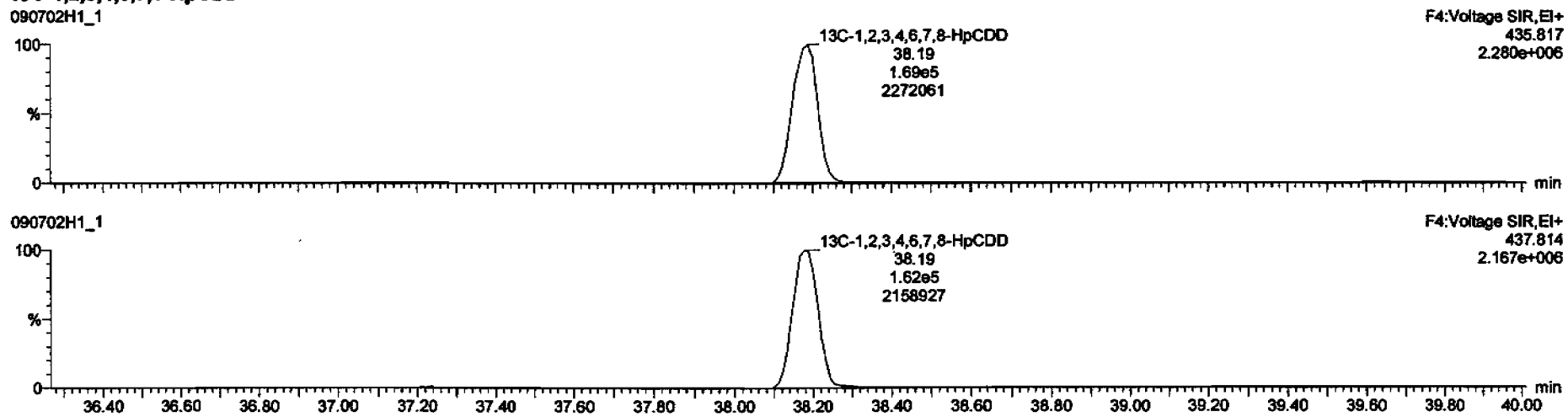

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Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

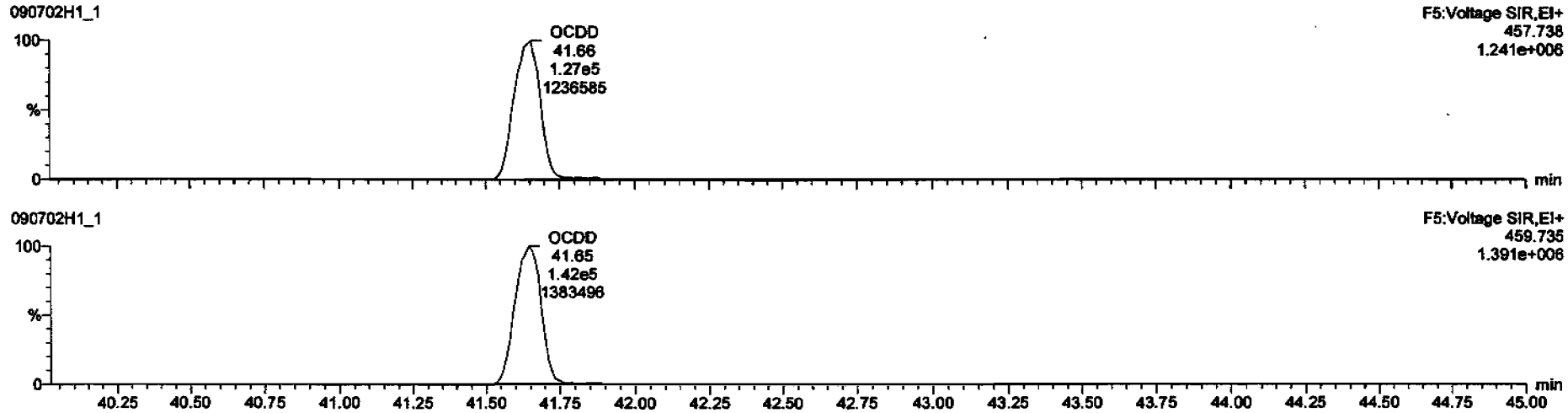

13C-OCDD

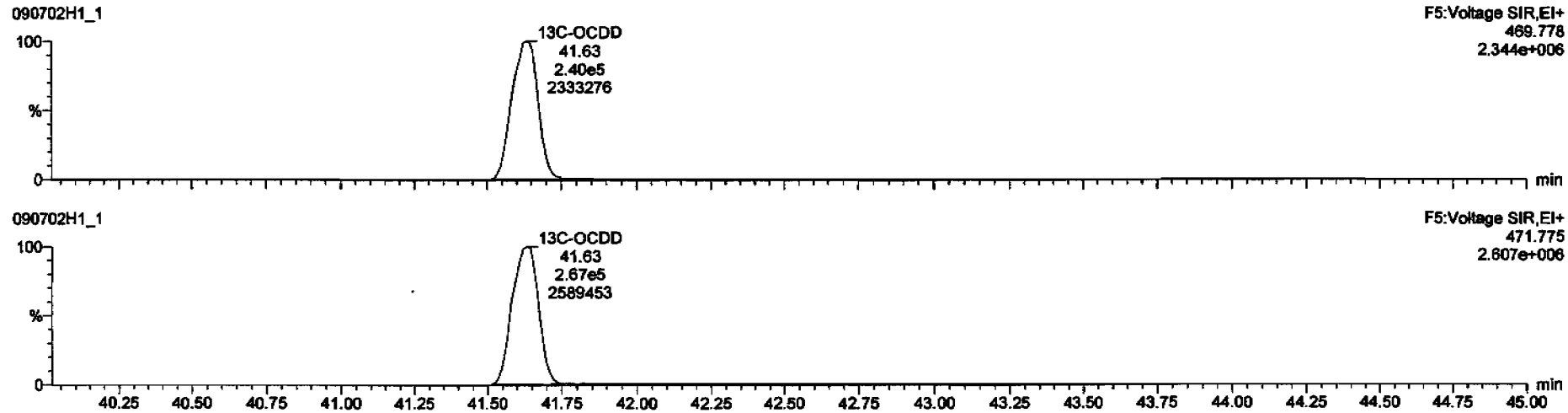

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Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

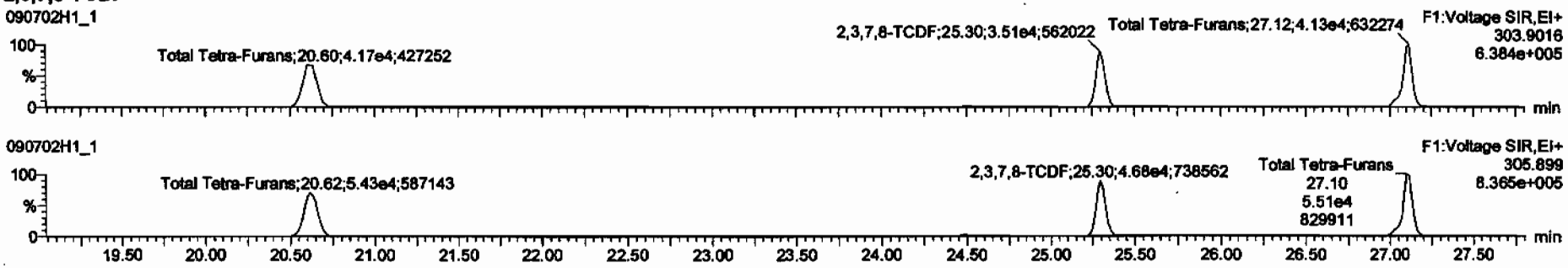

13C-2,3,7,8-TCDF

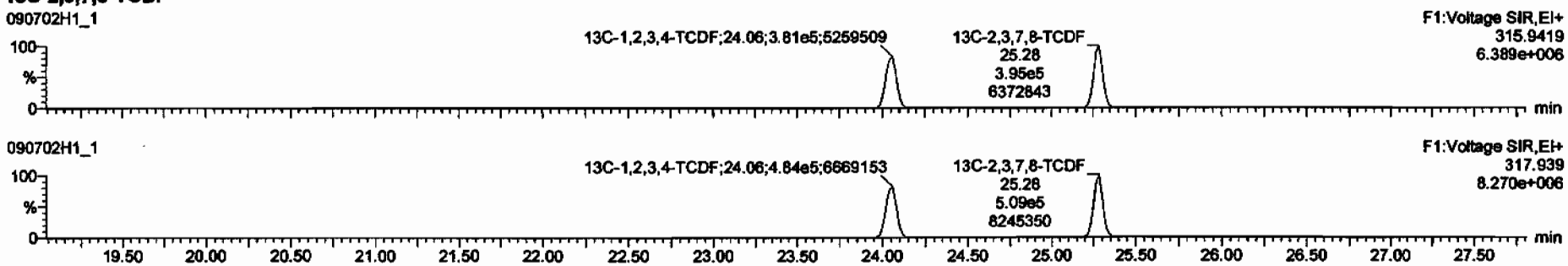

DPE1

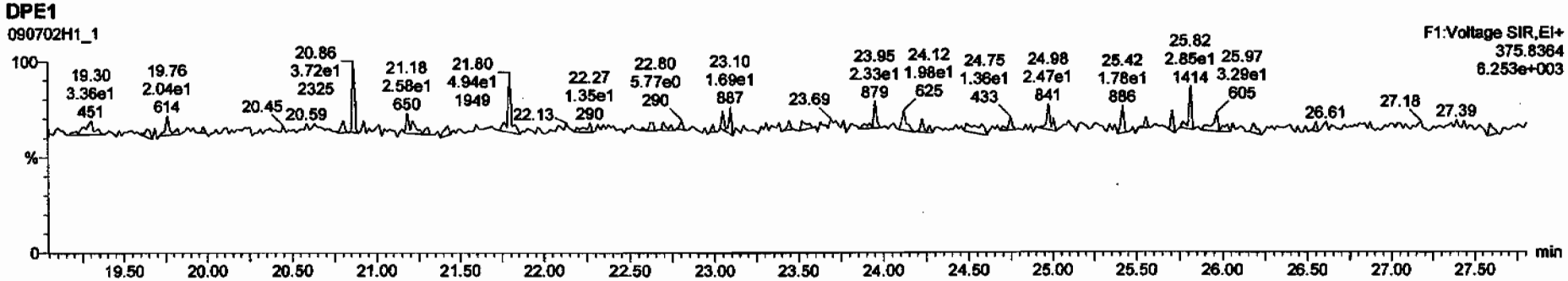

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Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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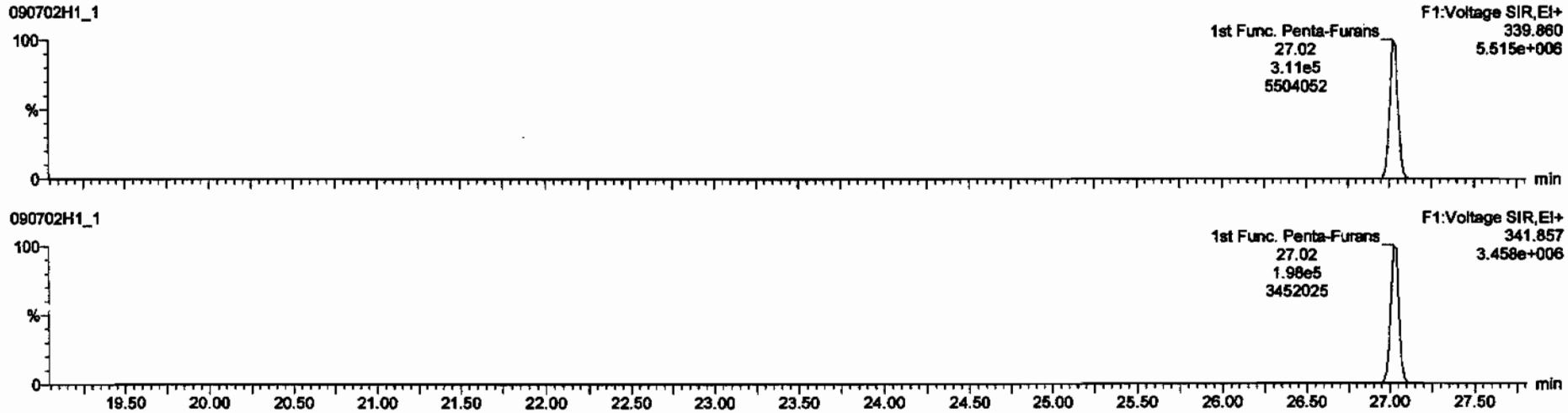

DPE6

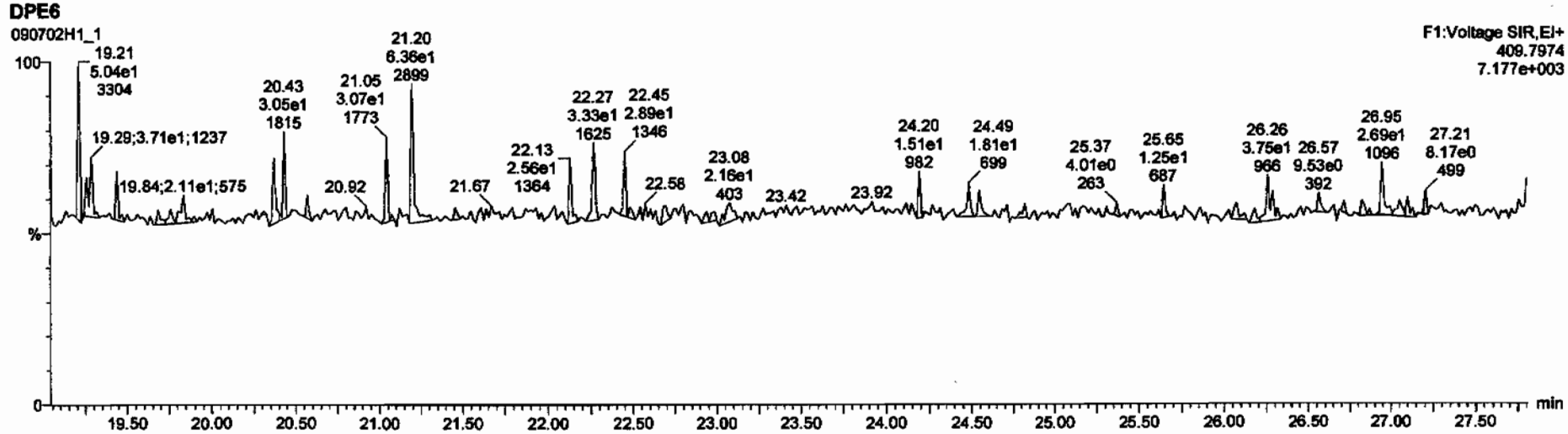

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Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

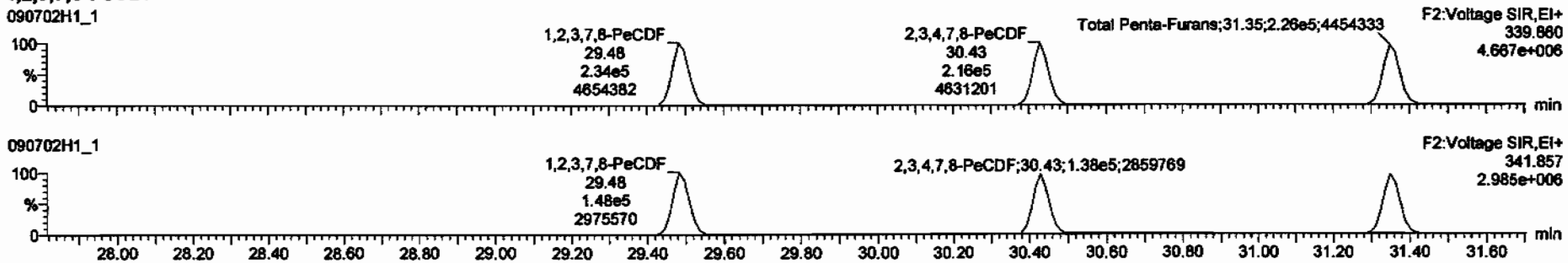

13C-1,2,3,7,8-PeCDF

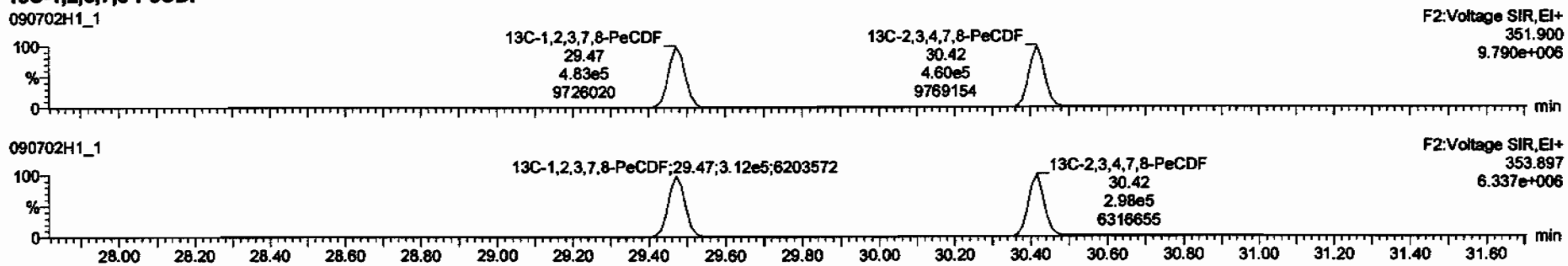

DPE2

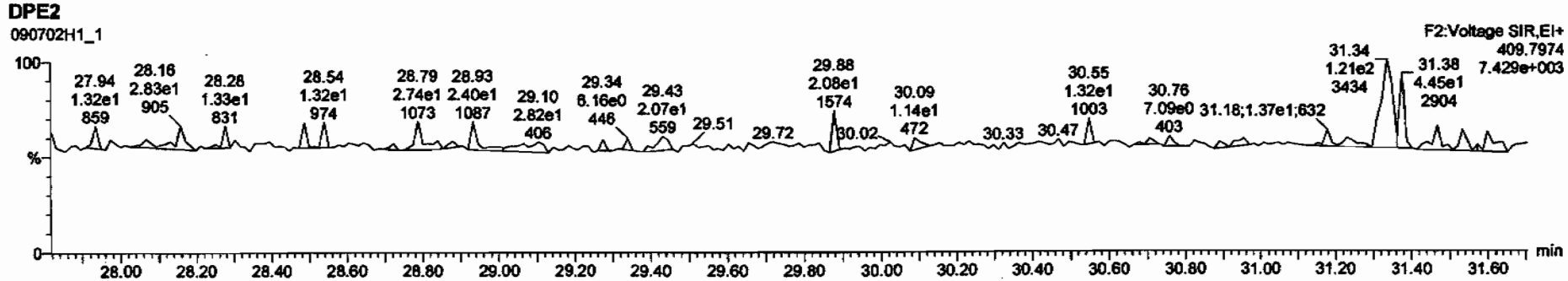

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Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDF

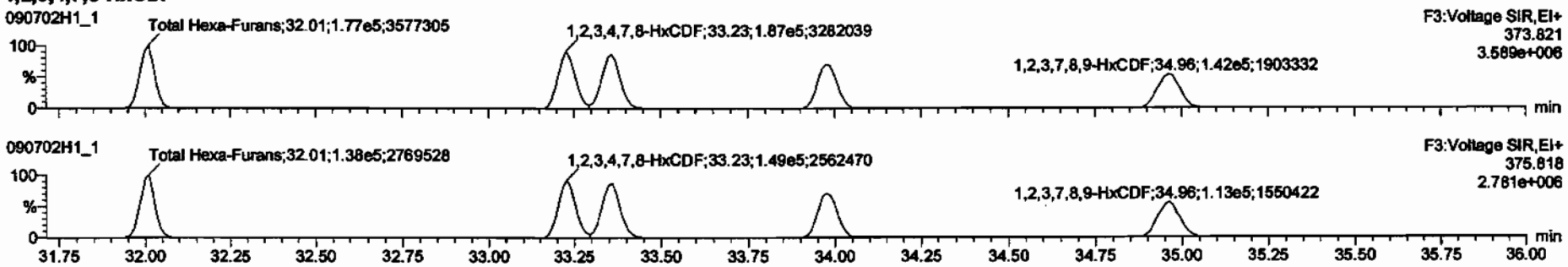

13C-1,2,3,4,7,8-HxCDF

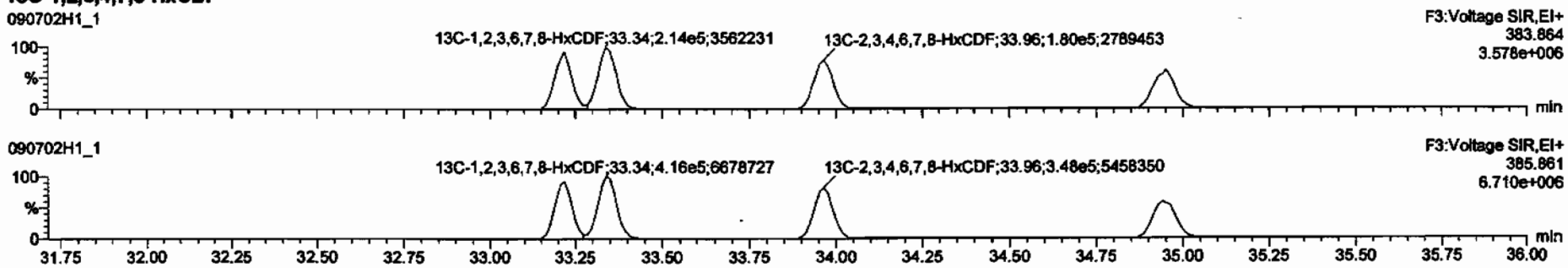

DPE3

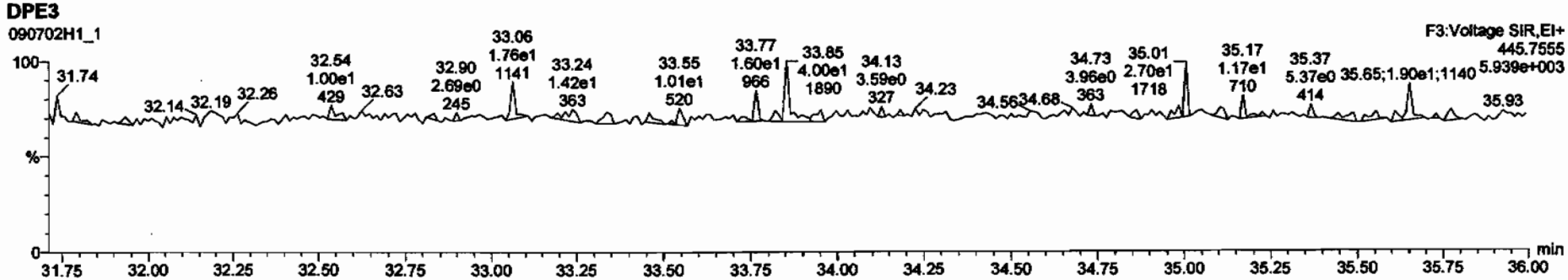

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDF

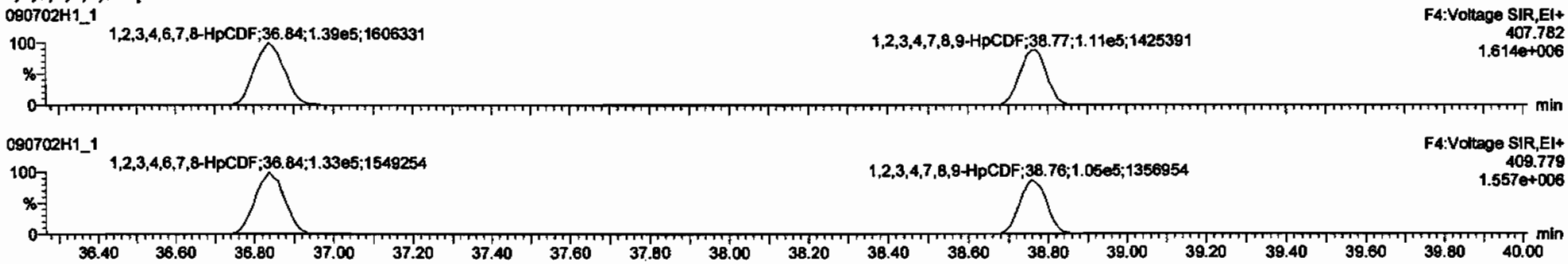

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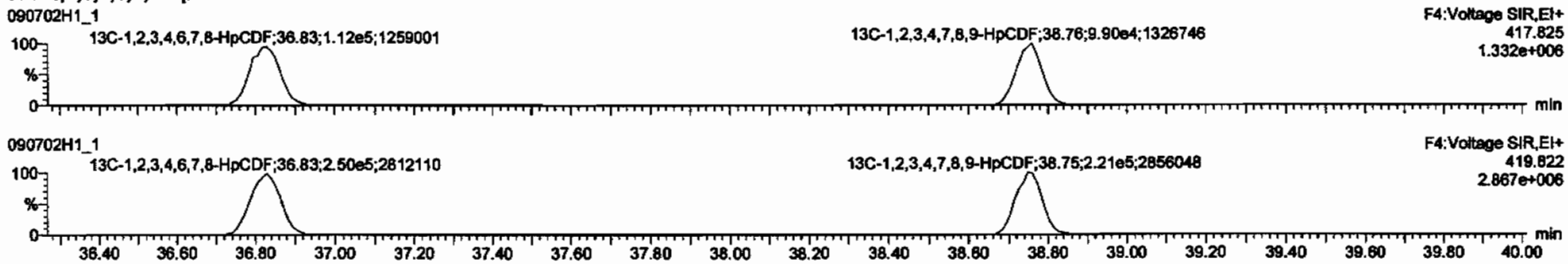

DPE4

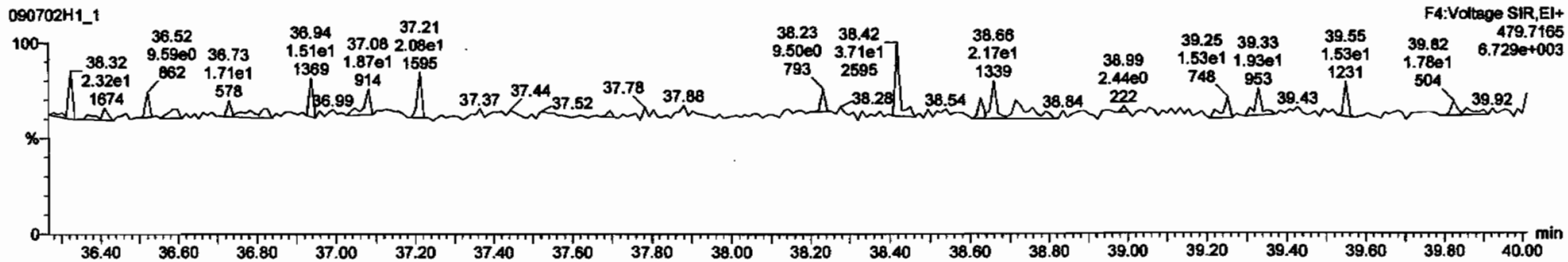

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDF

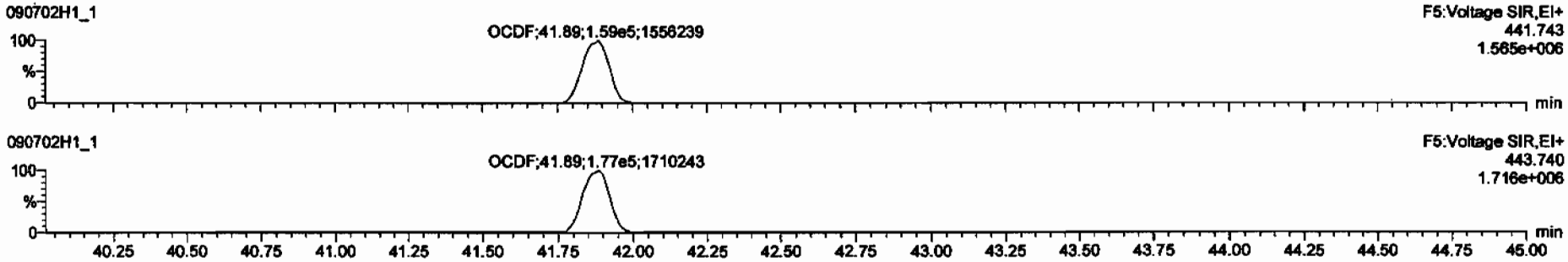

13C-OCDF

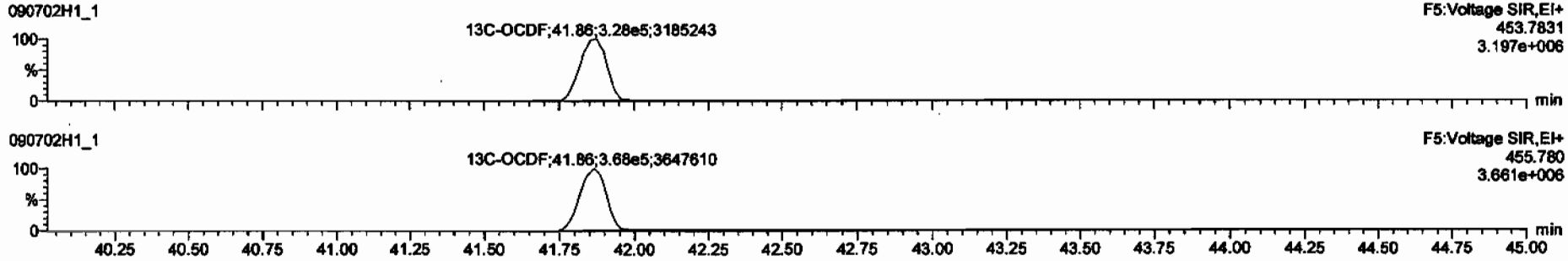

DPE5

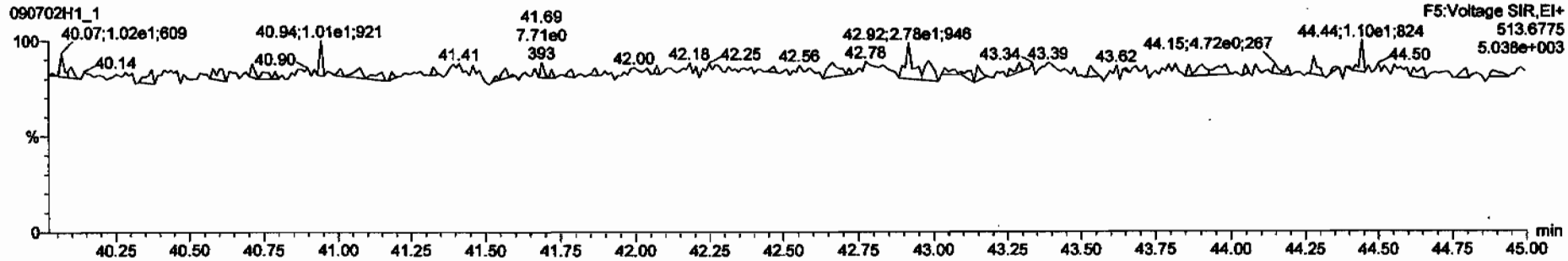

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

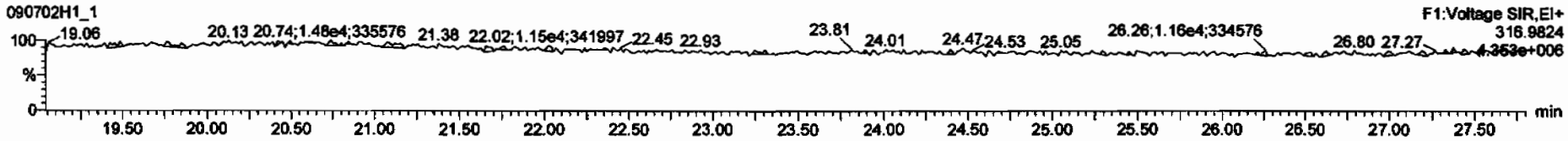

PFK2

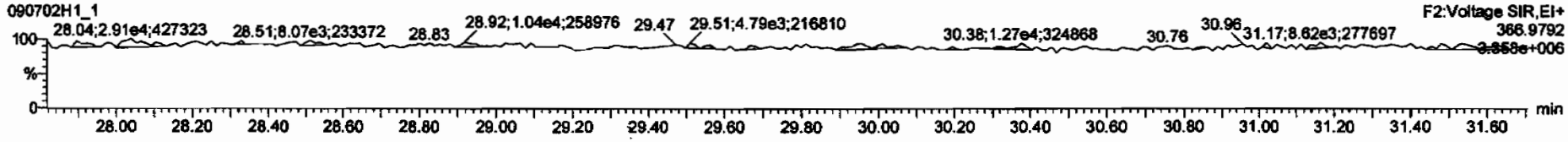

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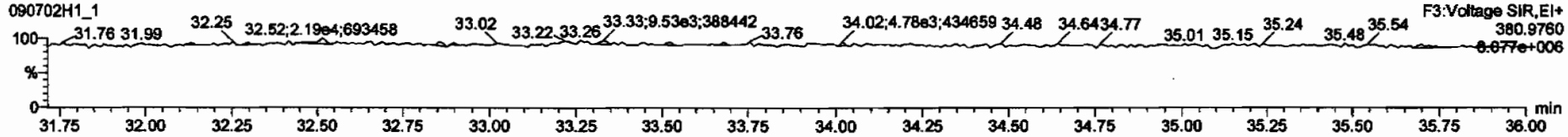

PFK4

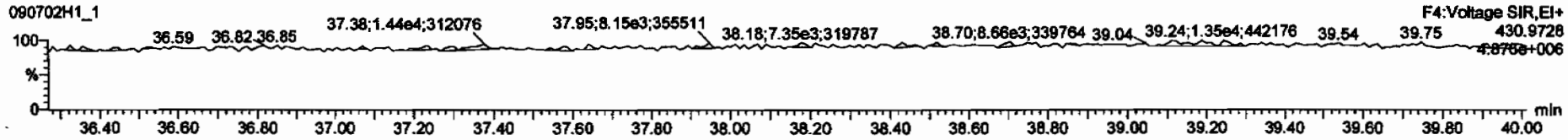

PFK5

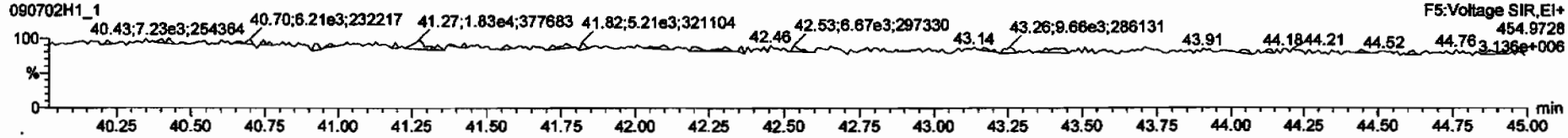

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_17

CCAL ID: ST090702H1-2

GC Column ID: DB-5
Analysis Date: 03-Jul-09
Analysis Time: 03:35:57

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	9.05	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	45.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	45.7	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	47.9	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	43.9	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	88.2	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	NO	8.40	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	41.5	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	40.7	41.0	60.0	No	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.2	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.4	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.9	44.0	57.0	No	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.7	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	43.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	45.3	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	86.1	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/3/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_17

CCAL ID: ST090702H1-2

GC Column ID: DB-5
Analysis Date: 03-Jul-09
Analysis Time: 03:35:57

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	97.1	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	101	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	93.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	109	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.88	0.76-1.02	NO	238	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	99.2	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	102	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	87.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	93.1	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	NO	97.5	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	97.0	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.42	0.37-0.51	NO	98.5	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.33	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [illegible]

Date: 7/3/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 07:06:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:06:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.67
2	1,2,8,9-TCDD (Last)	26.93
3	1,2,4,7,9-PeCDD (First)	28.57
4	1,2,3,8,9-PeCDD (Last)	31.09
5	12,4,6,7,9-HxCDD (First)	32.55
6	1,2,3,7,8,9-HxCDD (Last)	34.56
7	1,2,3,4,6,7,9-HpCDD (First)	37.26
8	1,2,3,4,6,7,8-HpCDD (Last)	38.20
9	1,3,6,8-TCDF (First)	20.57
10	1,2,8,9-TCDF (Last)	27.10
11	1,3,4,6,8-PeCDF (First)	27.01
12	1,2,3,8,9-PeCDF (Last)	31.35
13	1,2,3,4,6,8-HxCDF (First)	32.00
14	1,2,3,4,8,9-HxCDF (Last)	34.95
15	1,2,3,4,6,7,8-HpCDF (First)	36.84
16	1,2,3,4,7,8,9-HpCDF (Last)	38.76

7/3/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_17

CCAL ID: ST090702H1-2
GC Column ID: DB-5
Analysis Date: 03-Jul-09
Analysis Time: 03:35:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.206	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.993	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [illegible]

Date: 7/3/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_17

CCAL ID: ST090702H1-2

GC Column ID: DB-5
Analysis Date: 03-Jul-09

Analysis Time: 03:35:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/3/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:48:20 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	6.08e4	0.78	NO	1.08	1.000	26.06	1.001	9.0452	90.5	0.0442	9.0452
2	1,2,3,7,8-PeCDD	2.25e5	0.62	NO	1.03	1.000	30.71	1.000	45.583	91.2	0.0902	45.583
3	1,2,3,4,7,8-HxCDD	1.92e5	1.27	NO	1.00	1.000	34.14	1.000	45.738	91.5	0.174	45.738
4	1,2,3,6,7,8-HxCDD	1.99e5	1.23	NO	1.13	1.000	34.26	1.001	45.298	90.6	0.168	45.298
5	1,2,3,7,8,9-HxCDD	2.14e5	1.25	NO	1.10	1.000	34.56	1.009	47.933	95.9	0.165	47.933
6	1,2,3,4,6,7,8-HpCDD	1.63e5	1.06	NO	1.06	1.000	38.20	1.001	43.917	87.8	0.199	43.917
7	OCDD	2.80e5	0.90	NO	1.18	1.000	41.66	1.000	88.239	88.2	0.0848	88.239
8	2,3,7,8-TCDF	8.10e4	0.76	NO	1.09	1.000	25.28	1.001	8.3960	84.0	0.0417	8.3960
9	1,2,3,7,8-PeCDF	3.61e5	1.57	NO	1.16	1.000	29.47	1.000	41.481	83.0	0.0753	41.481
10	2,3,4,7,8-PeCDF	3.33e5	1.58	NO	1.12	1.000	30.42	1.000	40.676	81.4	0.0736	40.676
11	1,2,3,4,7,8-HxCDF	3.29e5	1.27	NO	1.41	1.000	33.23	1.001	43.246	86.5	0.113	43.246
12	1,2,3,6,7,8-HxCDF	3.24e5	1.26	NO	1.22	1.000	33.35	1.000	44.446	88.9	0.116	44.446
13	2,3,4,6,7,8-HxCDF	2.95e5	1.27	NO	1.28	1.000	33.98	1.001	43.942	87.9	0.137	43.942
14	1,2,3,7,8,9-HxCDF	2.60e5	1.27	NO	1.26	1.000	34.95	1.000	44.729	89.5	0.172	44.729
15	1,2,3,4,6,7,8-HpCDF	2.81e5	1.06	NO	1.69	1.000	36.84	1.001	43.814	87.6	0.148	43.814
16	1,2,3,4,7,8,9-HpCDF	2.16e5	1.05	NO	1.48	1.000	38.76	1.000	45.270	90.5	0.166	45.270
17	OCDF	3.27e5	0.91	NO	1.10	1.000	41.89	1.000	86.142	86.1	0.107	86.142
18	13C-2,3,7,8-TCDD	6.24e5	0.78	NO	1.01	1.000	26.03	1.023	103.21	103	0.218	
19	13C-1,2,3,7,8-PeCDD	4.78e5	0.63	NO	0.827	1.000	30.69	1.206	97.071	97.1	0.178	
20	13C-1,2,3,4,7,8-HxCDD	4.19e5	1.25	NO	0.916	1.000	34.13	0.988	101.40	101	0.303	
21	13C-1,2,3,6,7,8-HxCDD	3.90e5	1.24	NO	0.921	1.000	34.24	0.991	93.814	93.8	0.302	
22	13C-1,2,3,4,6,7,8-HpCDD	3.48e5	1.06	NO	0.708	1.000	38.18	1.105	108.99	109	0.409	
23	13C-OCDD	5.39e5	0.88	NO	0.503	1.000	41.65	1.206	237.82	119	0.343	
24	13C-2,3,7,8-TCDF	8.87e5	0.78	NO	0.977	1.000	25.27	0.993	107.45	107	0.134	
25	13C-1,2,3,7,8-PeCDF	7.51e5	1.59	NO	0.896	1.000	29.47	1.158	99.231	99.2	0.217	
26	13C-2,3,4,7,8-PeCDF	7.31e5	1.57	NO	0.900	1.000	30.40	1.195	96.255	96.3	0.216	
27	13C-1,2,3,4,7,8-HxCDF	5.39e5	0.52	NO	1.17	1.000	33.21	0.961	102.08	102	0.347	
28	13C-1,2,3,6,7,8-HxCDF	5.97e5	0.52	NO	1.52	1.000	33.34	0.965	87.045	87.0	0.267	
29	13C-2,3,4,6,7,8-HxCDF	5.25e5	0.52	NO	1.25	1.000	33.95	0.983	93.072	93.1	0.325	
30	13C-1,2,3,7,8,9-HxCDF	4.63e5	0.52	NO	1.05	1.000	34.94	1.011	97.471	97.5	0.385	

7/3/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:48:20 Pacific Daylight Time

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

	31 13C-1,2,3,4,6,7,8-HpCDF	3.80e5	0.44	NO	0.868	1.000	36.82	1.066	96.972	97.0	0.382
	32 13C-1,2,3,4,7,8,9-HpCDF	3.23e5	0.42	NO	0.727	1.000	38.75	1.122	98.492	98.5	0.457
	33 13C-OCDF	6.92e5	0.88	NO	0.760	1.000	41.88	1.212	202.05	101	0.195

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 06:54:46 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:05:08 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 2,3,7,8-TCDD

090702H1_1	ST090702H1-1 1613 CS3 080917I	02-Jul-09	14:22:39
090702H1_2	0_2214_OPR001	02-Jul-09	15:13:01
090702H1_3	solvent blank	02-Jul-09	16:02:37
090702H1_4	0_2214_MB001	02-Jul-09	16:52:06
090702H1_5	31845_2214_001 CAMO-09-10464 10.61	02-Jul-09	17:41:36
090702H1_6	31845_2214_002 CAMO-09-10465 10.5	02-Jul-09	18:31:05
090702H1_7	31846_2214_001 CAMO-09-9946 12.7	02-Jul-09	19:20:36
090702H1_8	31847_2214_001 CAMO-09-6518 11.68	02-Jul-09	20:10:06
090702H1_9	31847_2214_002 CAMO-09-6519 13.07	02-Jul-09	20:59:34
090702H1_10	31847_2214_003 CAMO-09-6531 11.56	02-Jul-09	21:49:03
090702H1_11	31850_2214_001 CAMO-09-9941 11.19	02-Jul-09	22:38:41
090702H1_12	31850_2214_002 CAMO-09-9942 11.32	02-Jul-09	23:28:16
090702H1_13	31850_2214_003 CAMO-09-9943 11.85	03-Jul-09	00:17:49
090702H1_14	31850_2214_004 CAMO-09-9989 12.48	03-Jul-09	01:07:22
090702H1_15	31850_2214_005 CAMO-09-10030 11.22	03-Jul-09	01:56:54
090702H1_16	solvent blank	03-Jul-09	02:46:25
090702H1_17	ST090702H1-2 1613 CS3 080917I	03-Jul-09	03:35:57

Dataset: Untitled

Last Altered: Friday, July 03, 2009 07:06:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:06:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

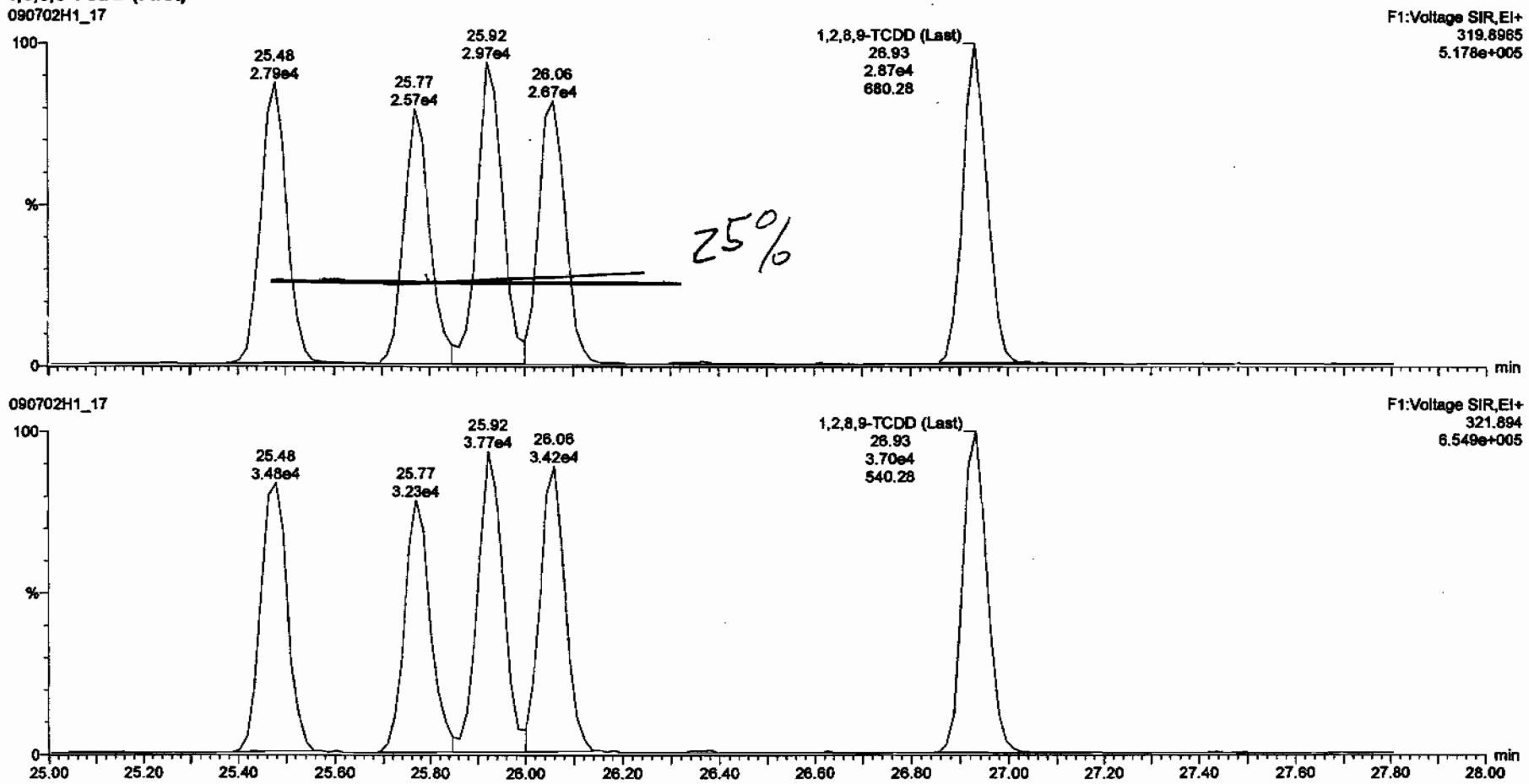

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:49:25 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

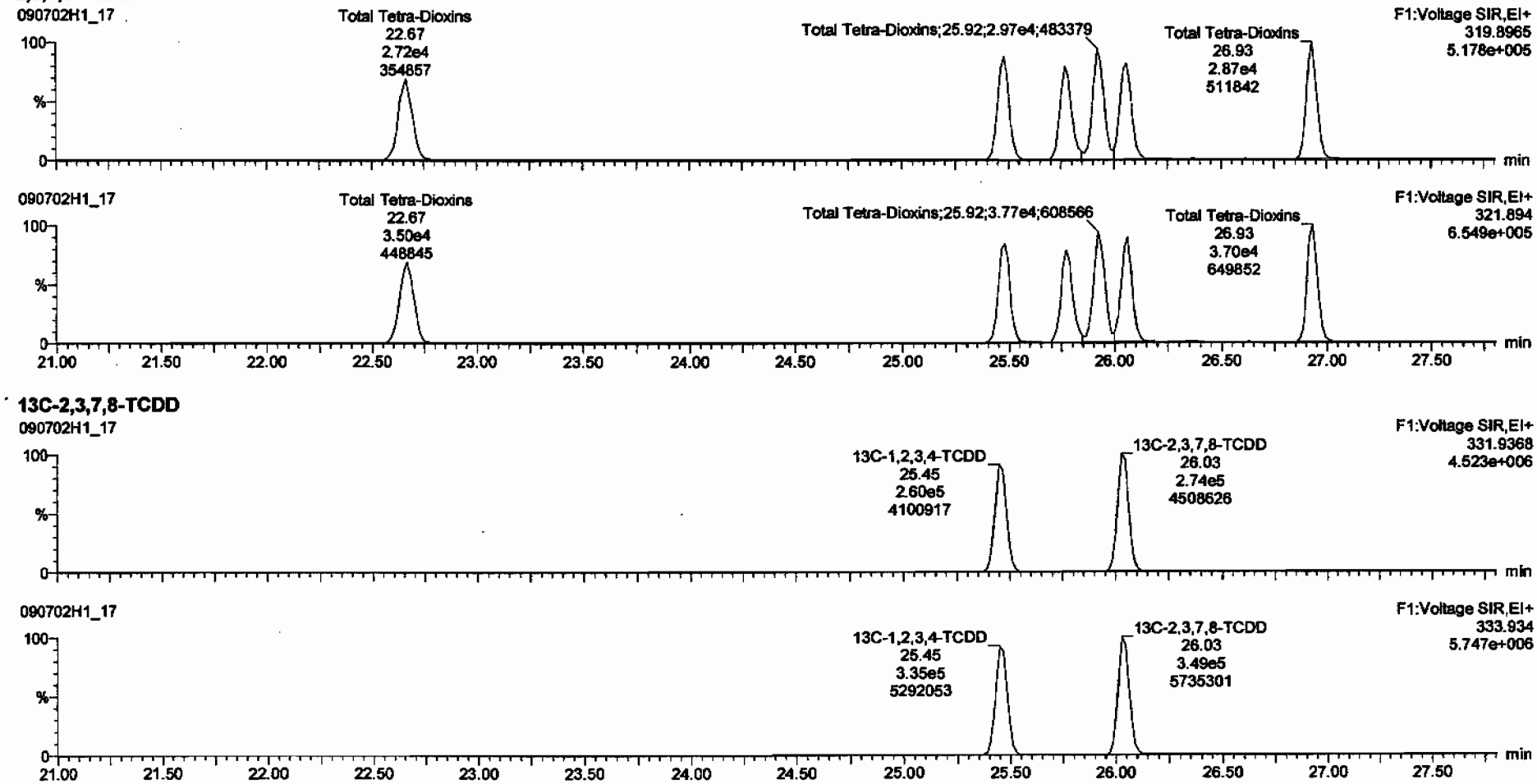

13C-2,3,7,8-TCDD

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:49:25 Pacific Daylight Time

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

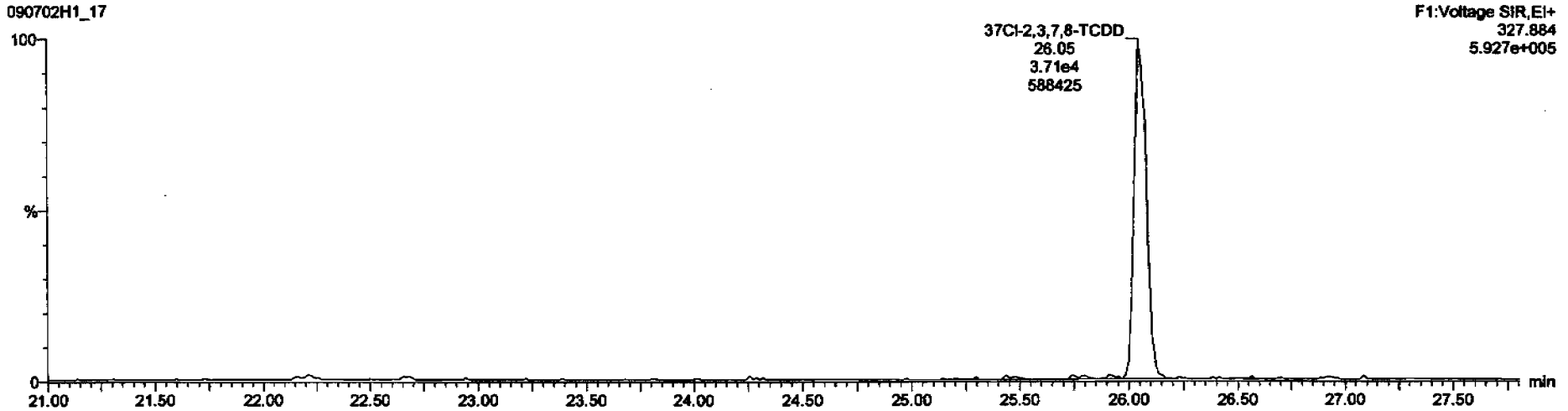

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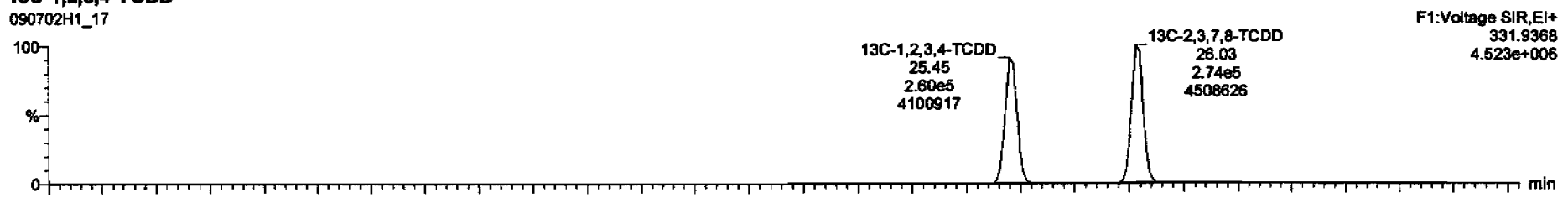

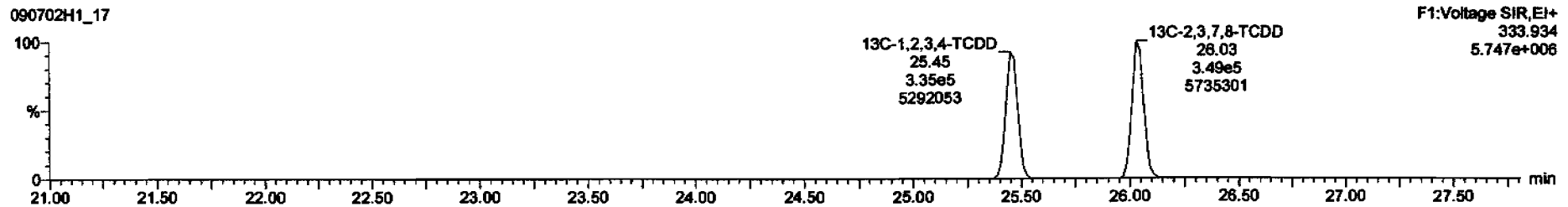

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Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:49:25 Pacific Daylight Time

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

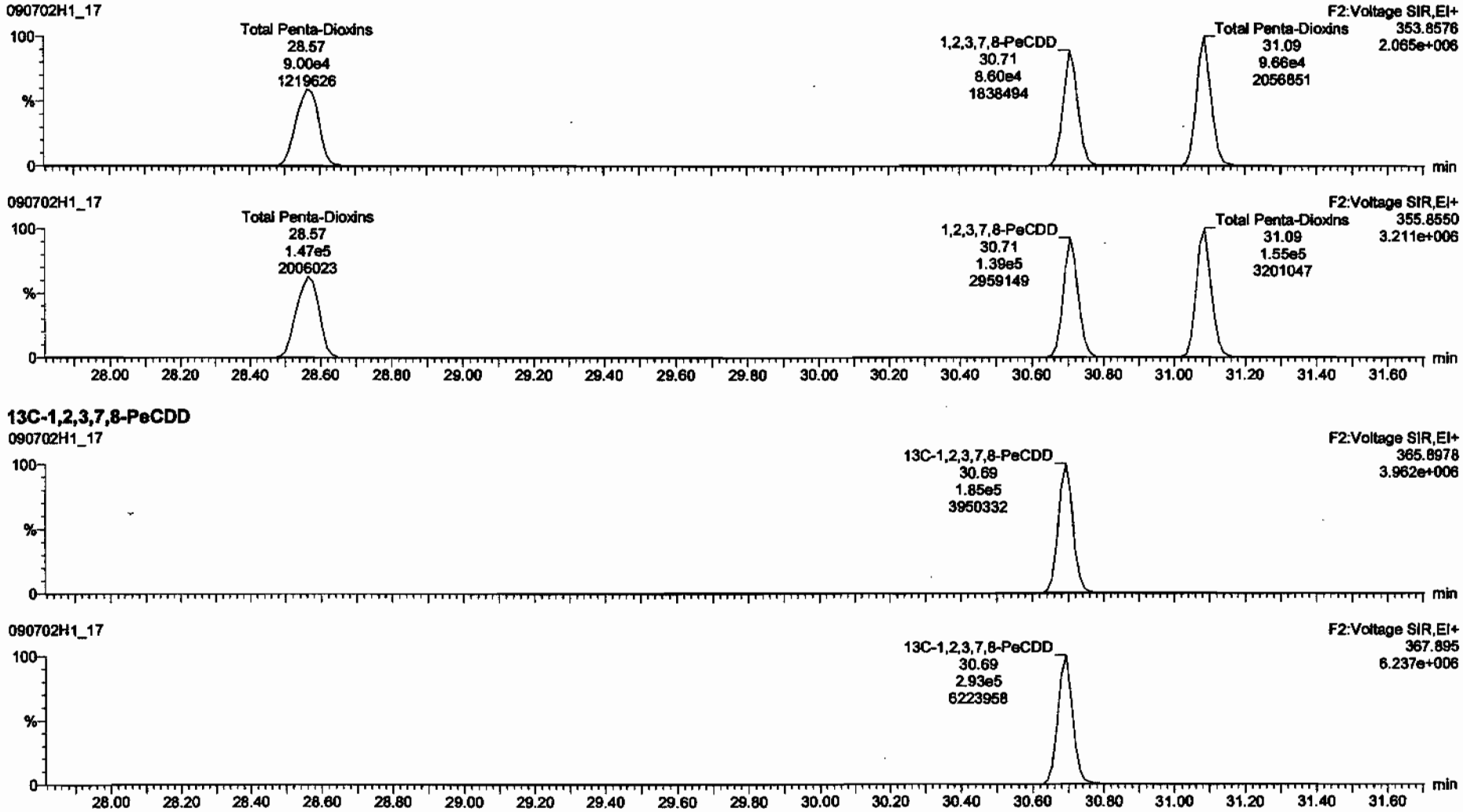

13C-1,2,3,7,8-PeCDD

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:49:25 Pacific Daylight Time

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

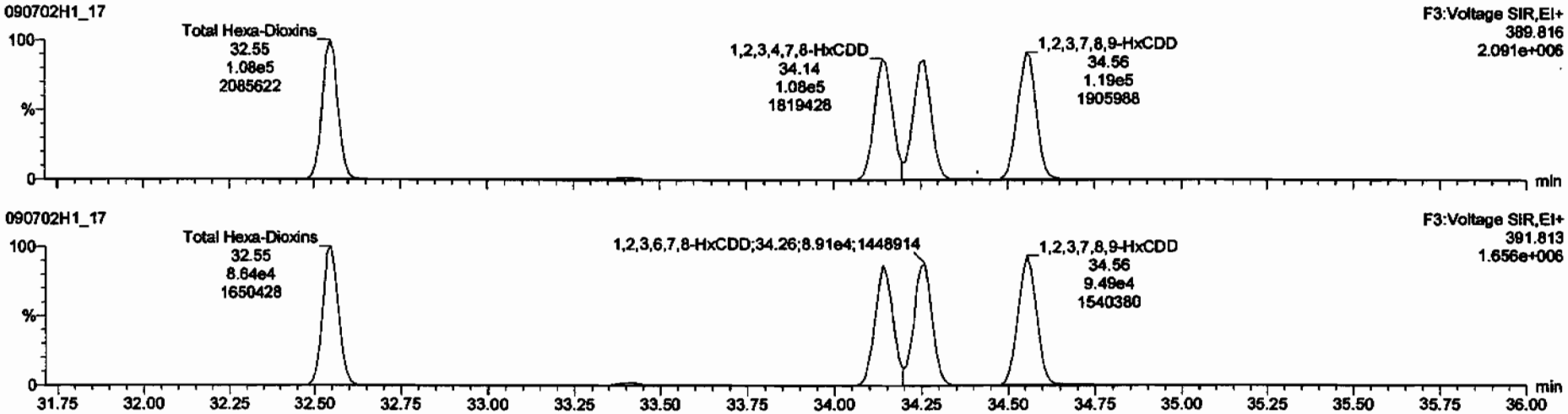

13C-1,2,3,4,7,8-HxCDD

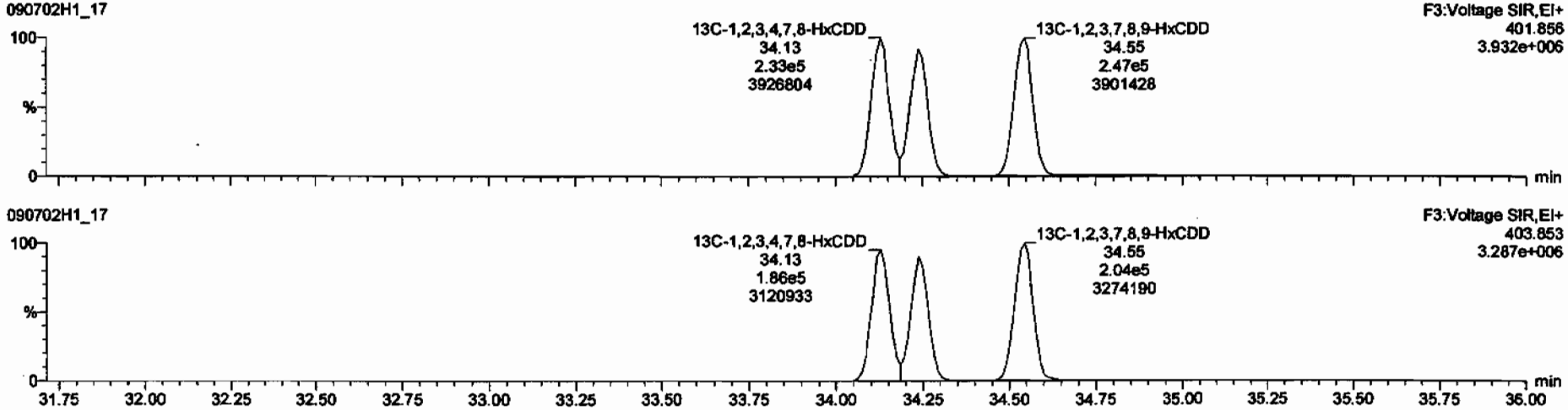

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:49:25 Pacific Daylight Time

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

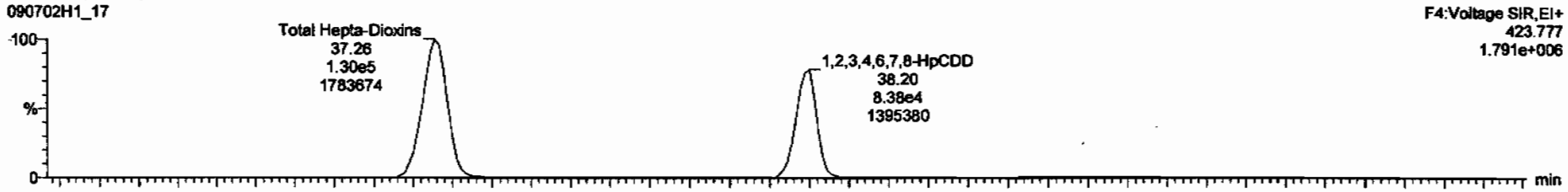

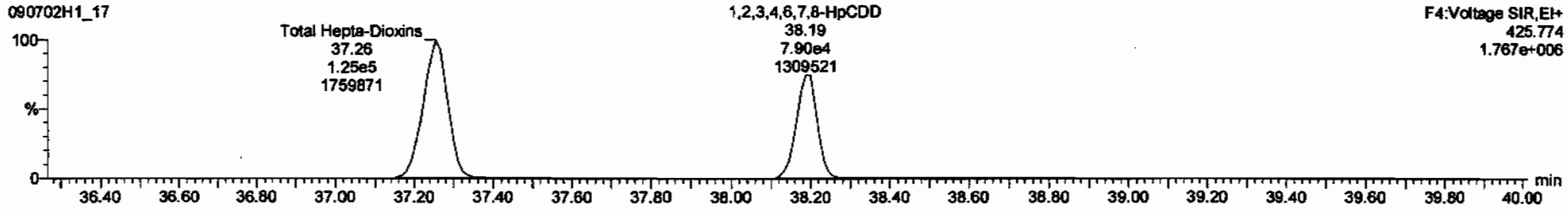

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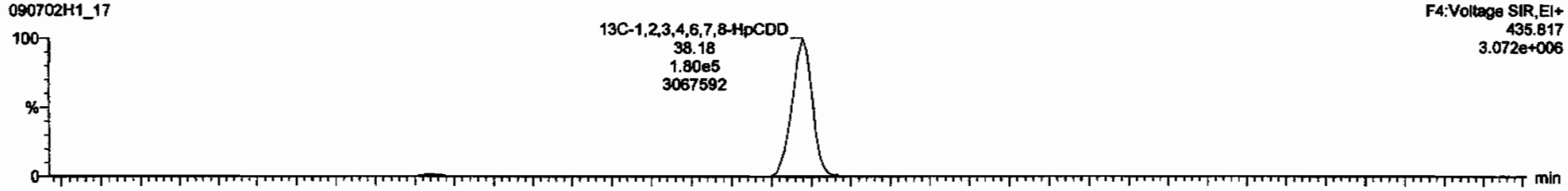

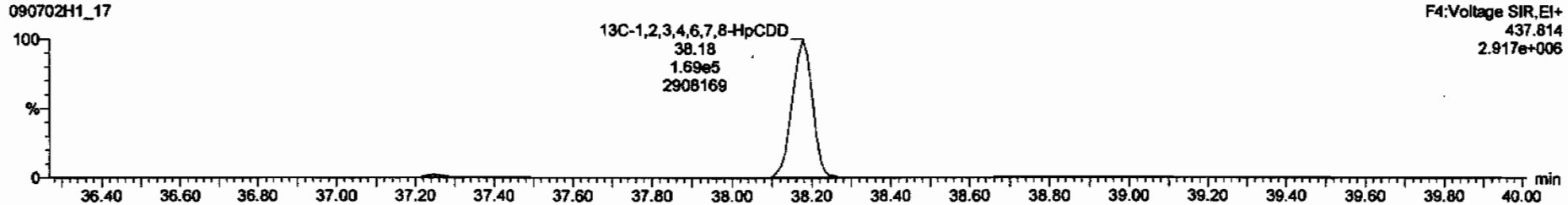

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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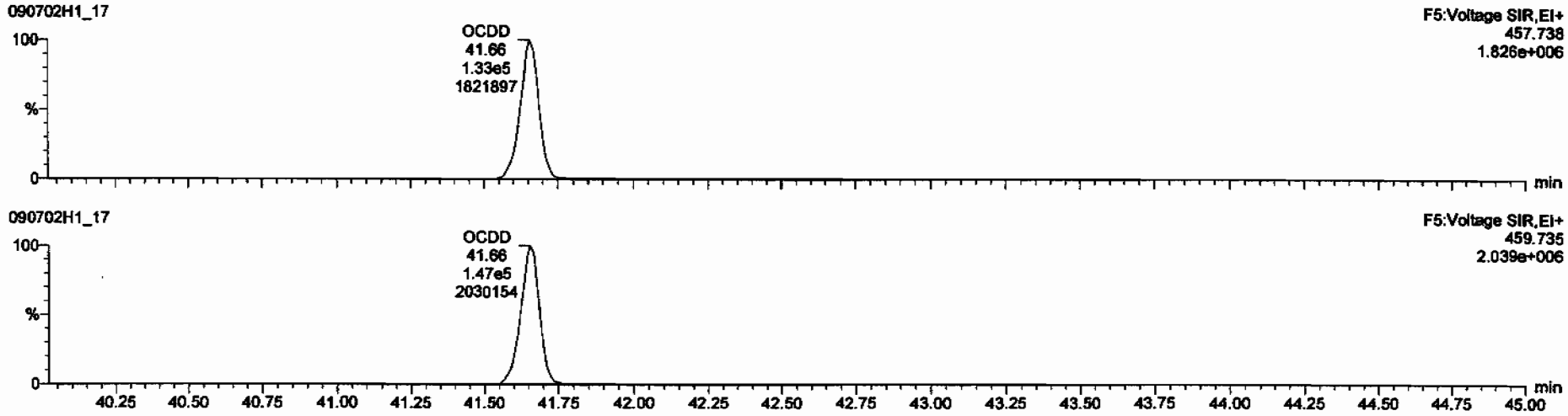

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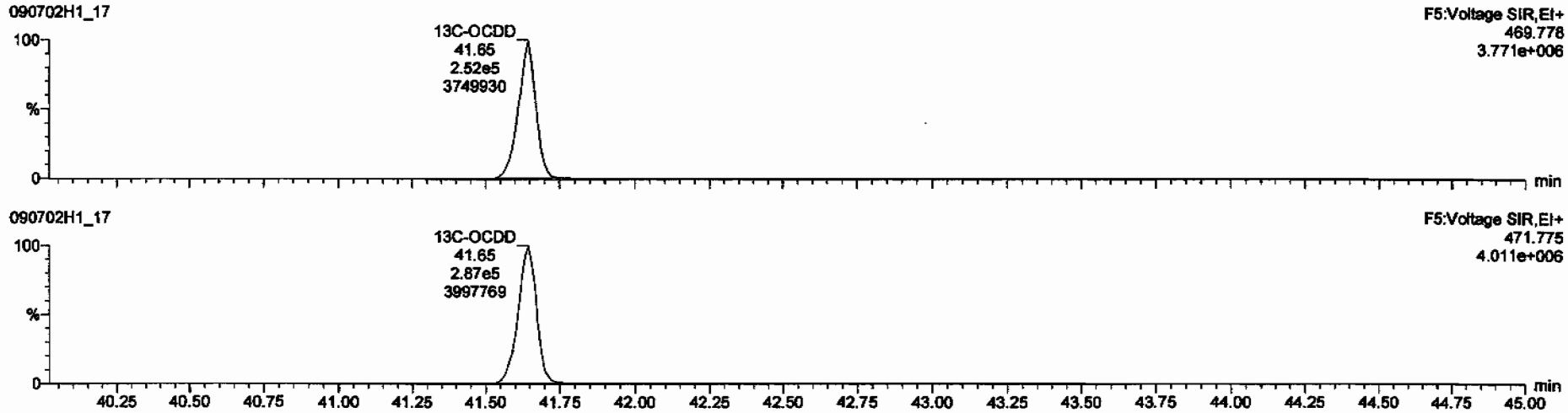

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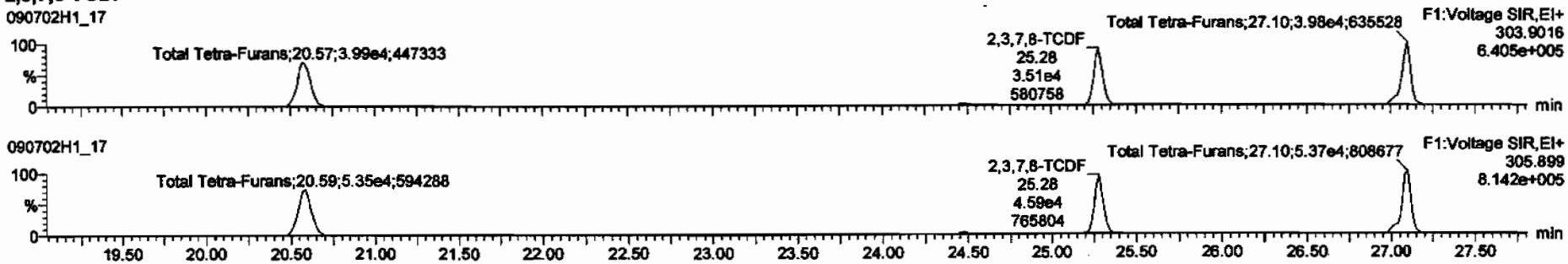

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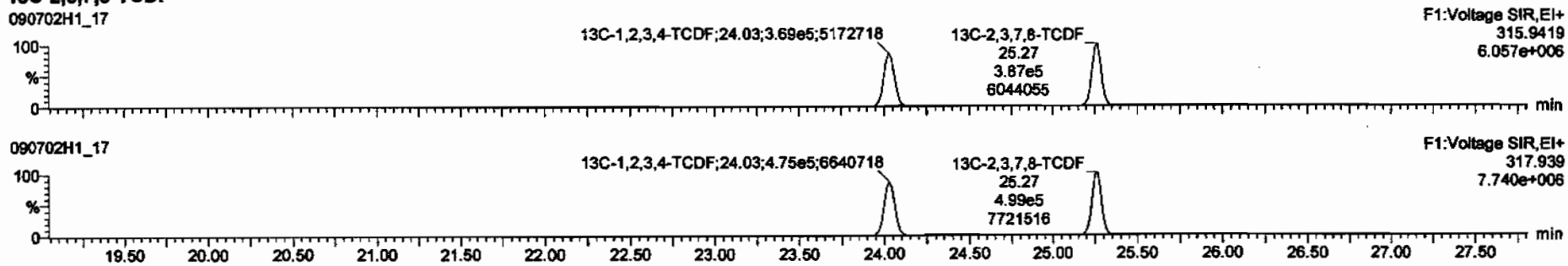

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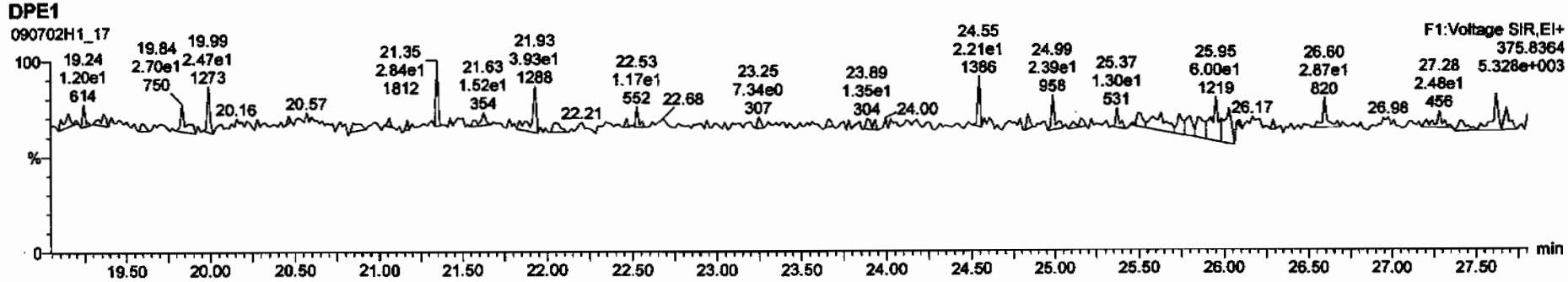

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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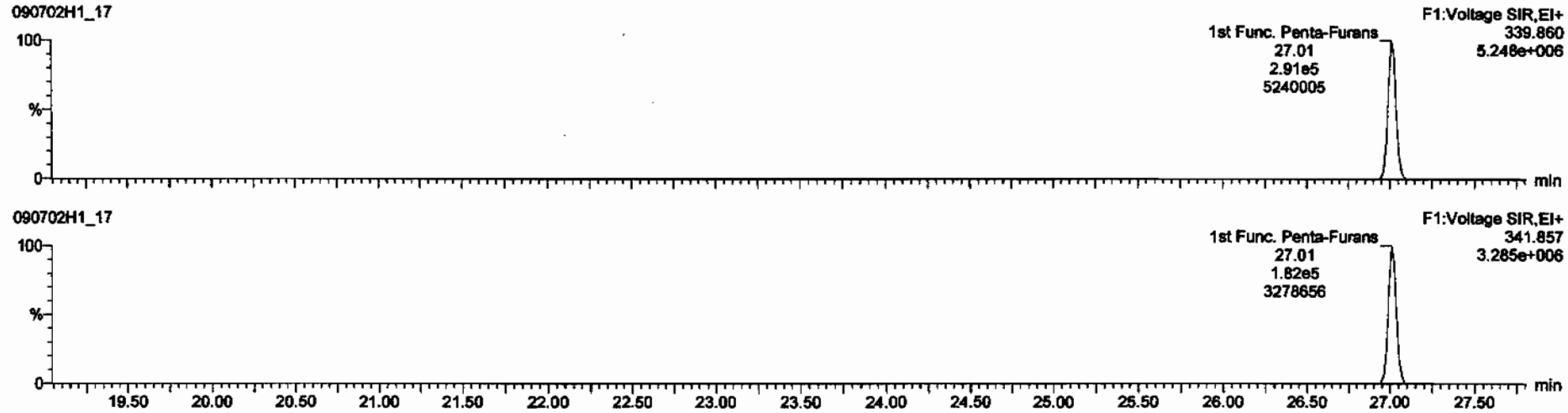

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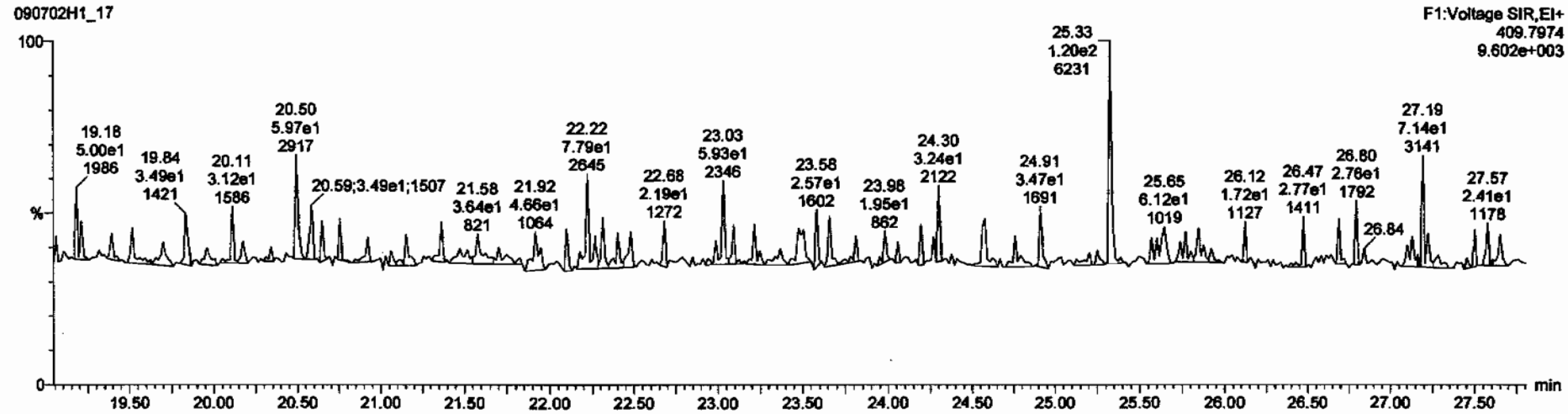

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

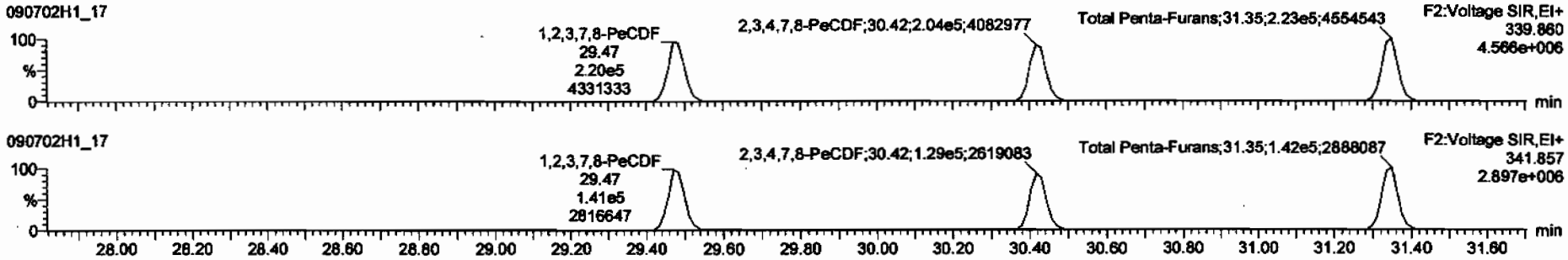

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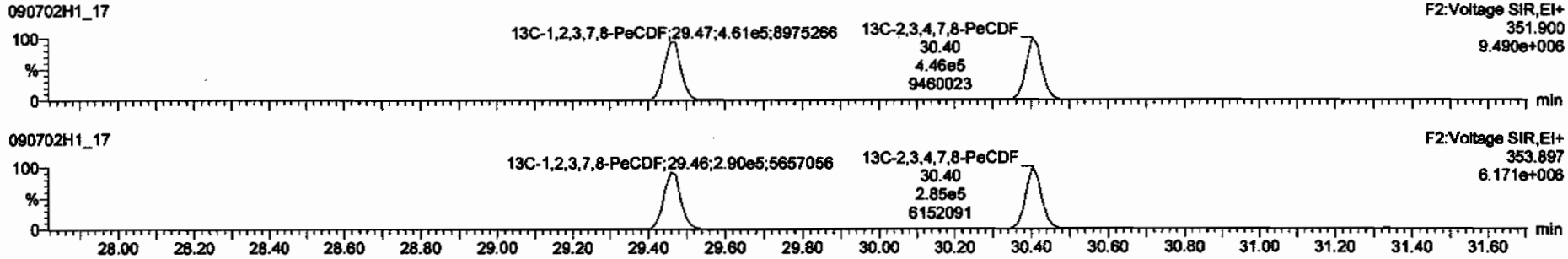

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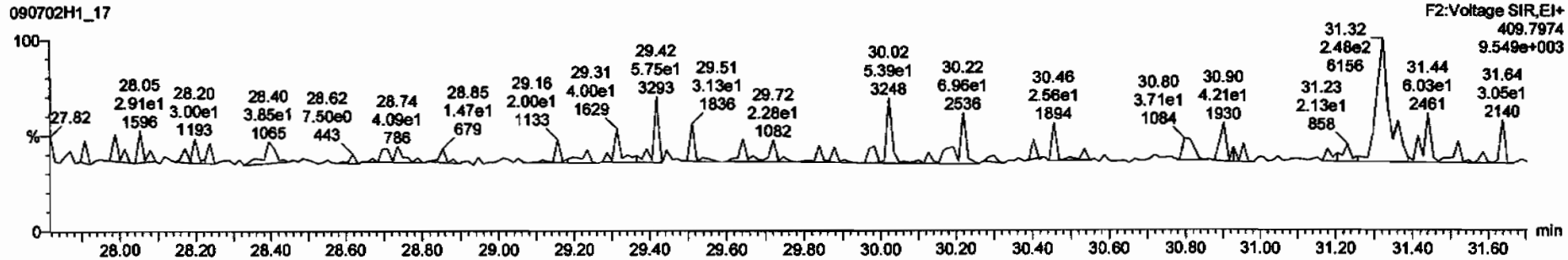

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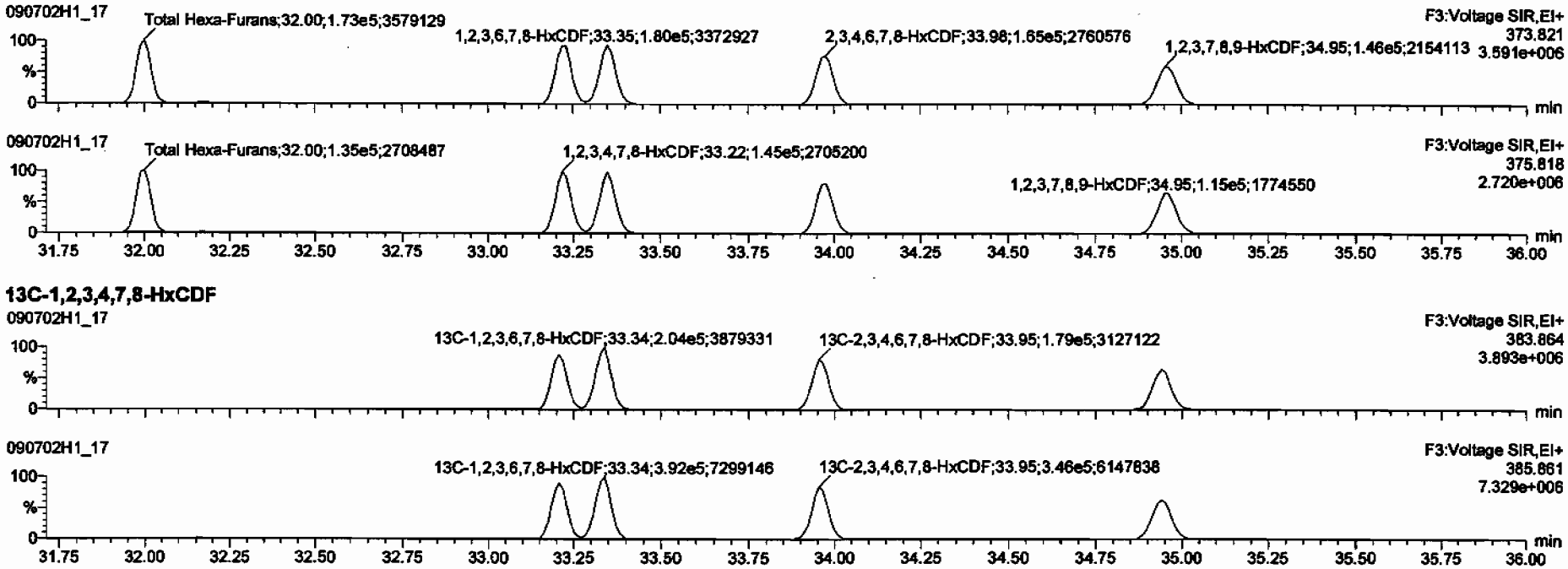

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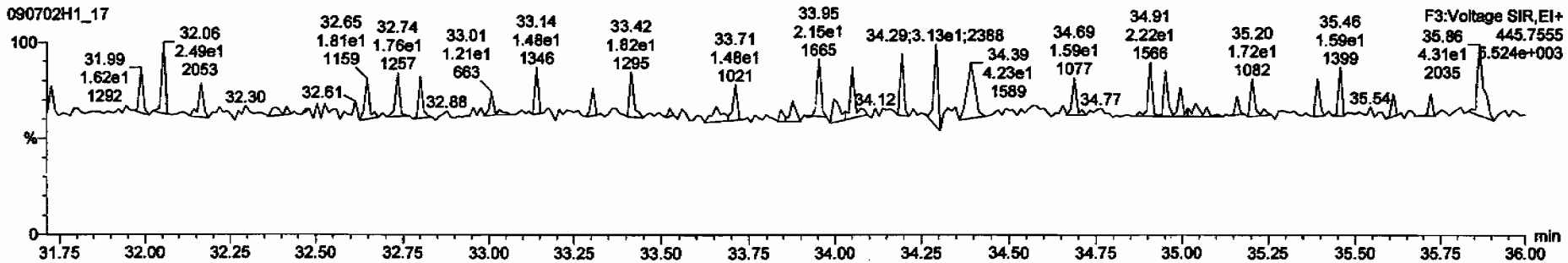

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1,2,3,4,6,7,8-HpCDF

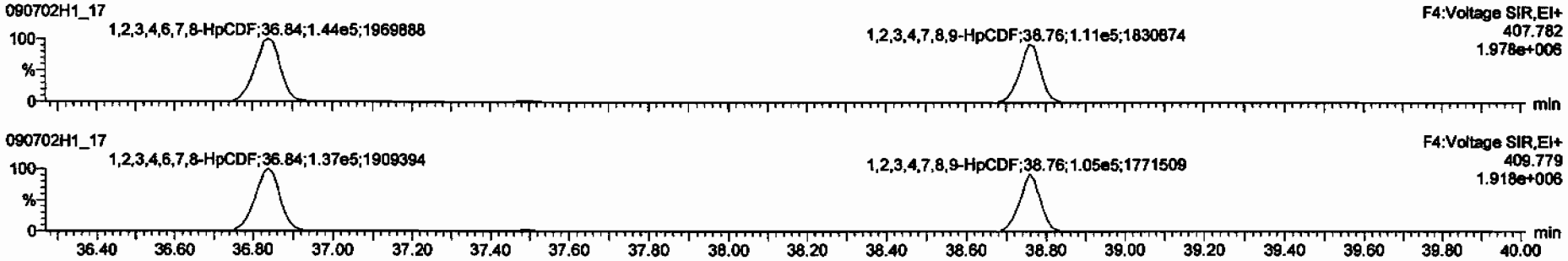

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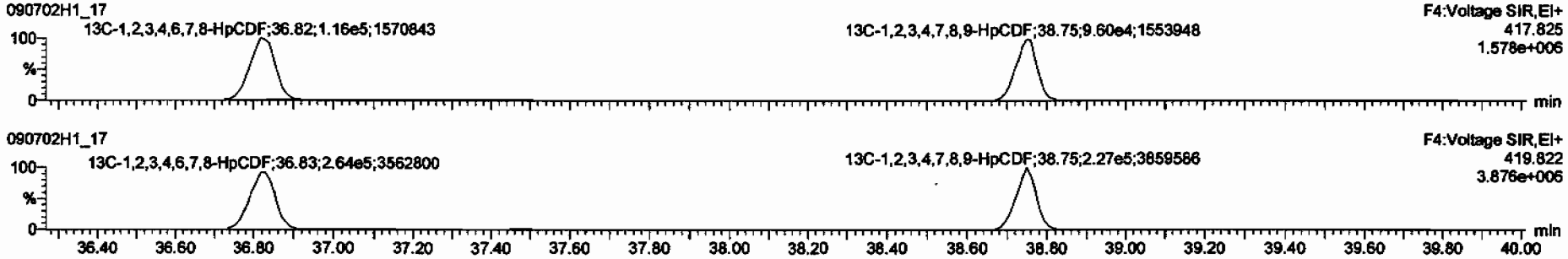

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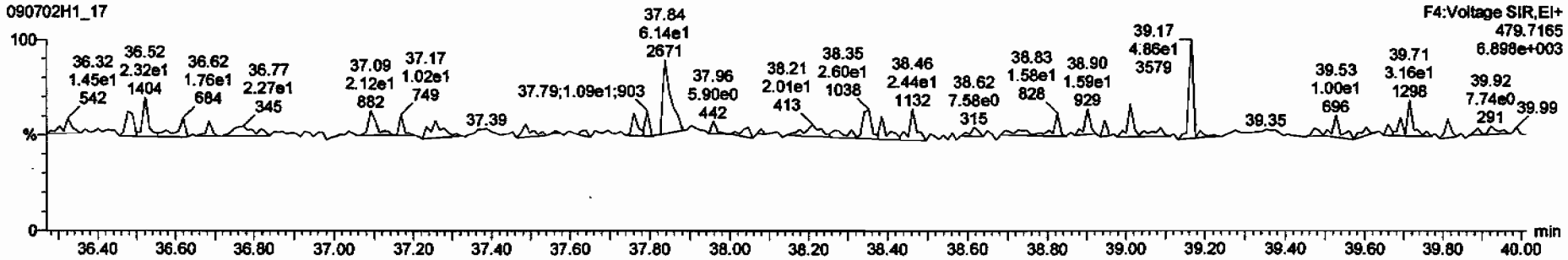

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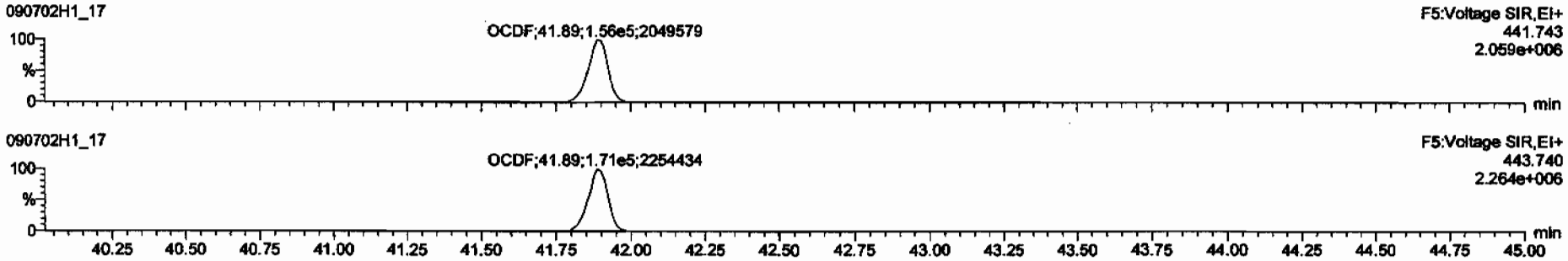

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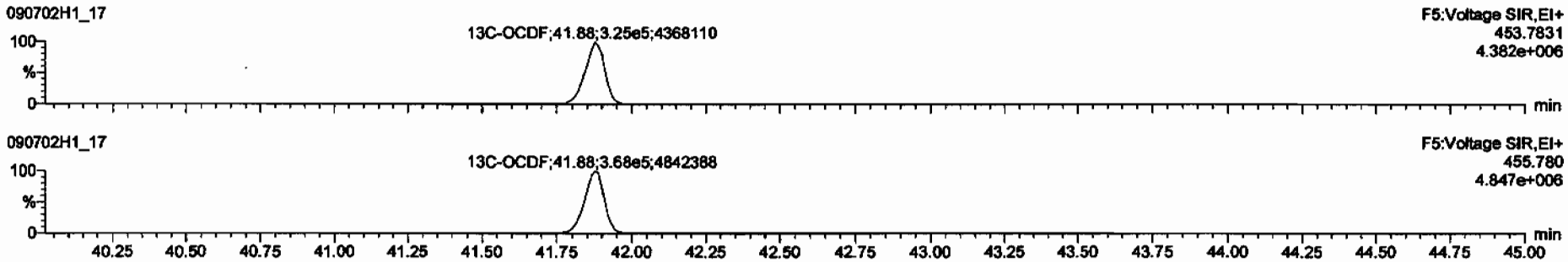

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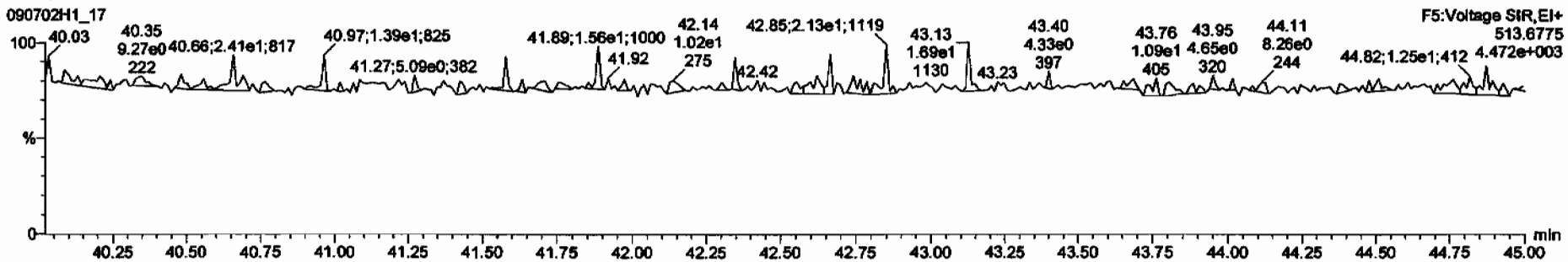

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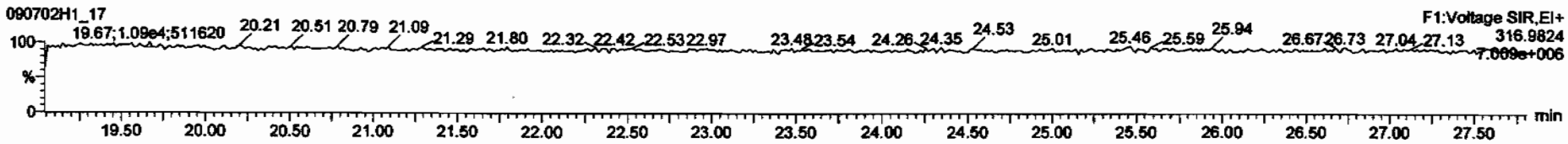

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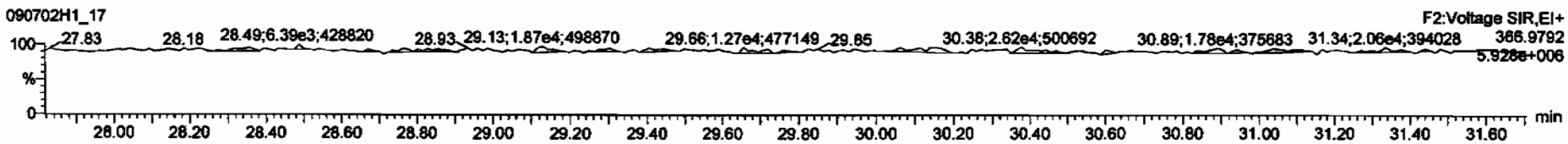

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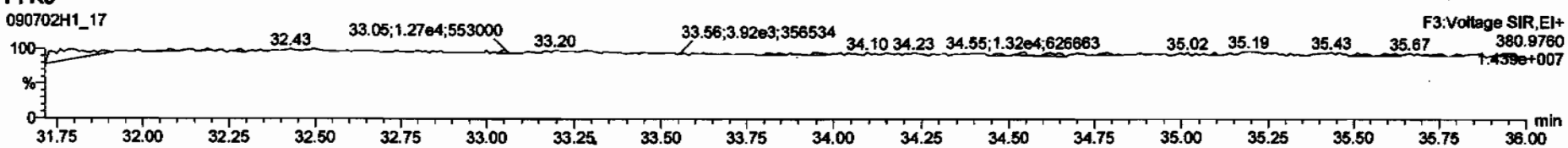

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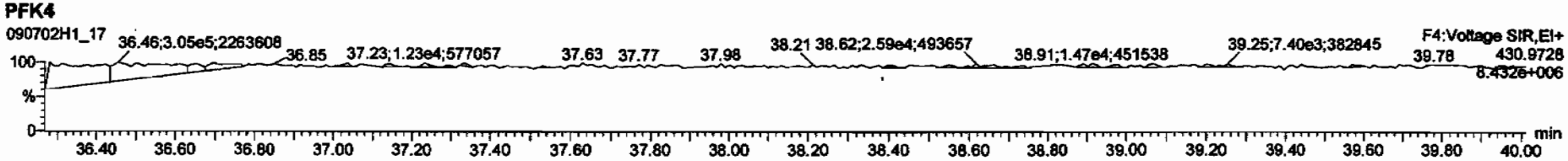

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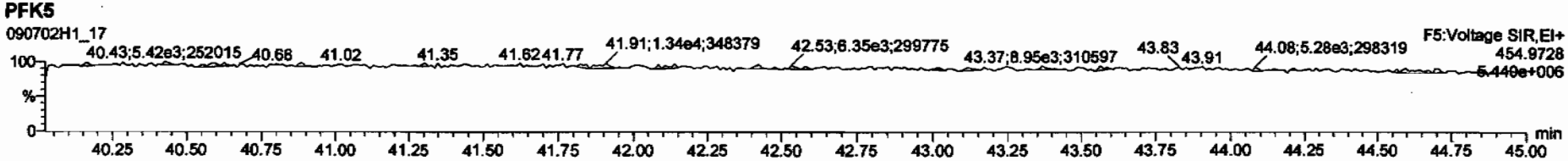

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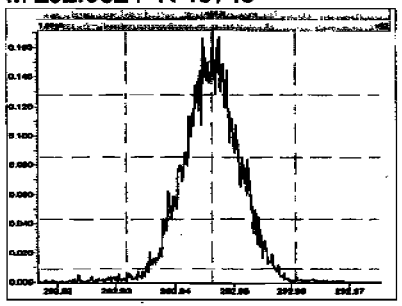

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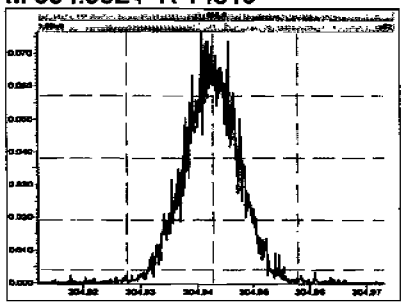

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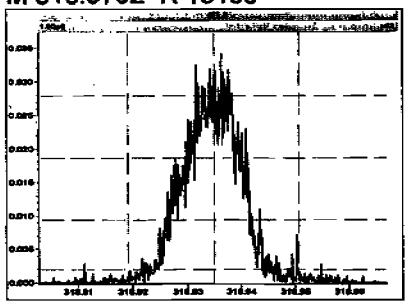

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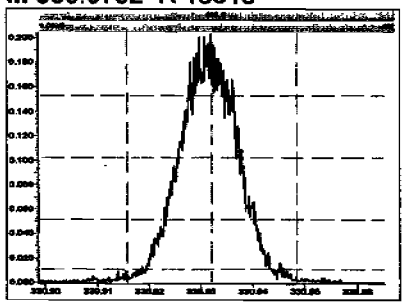

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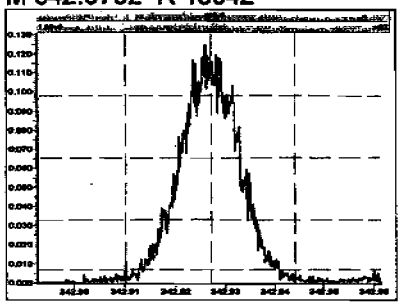

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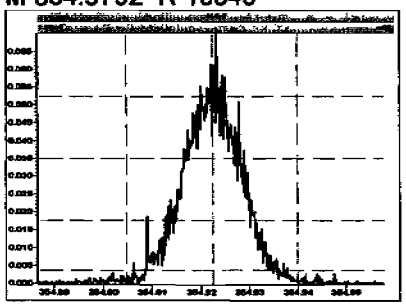

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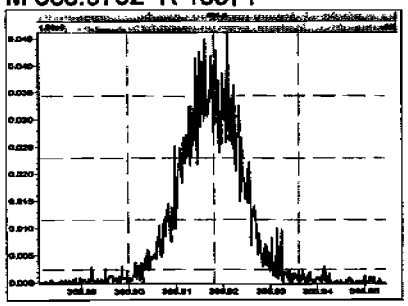

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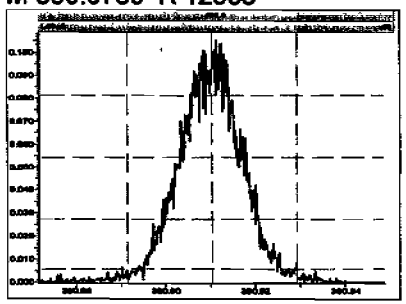

M 392.9760 R 13065

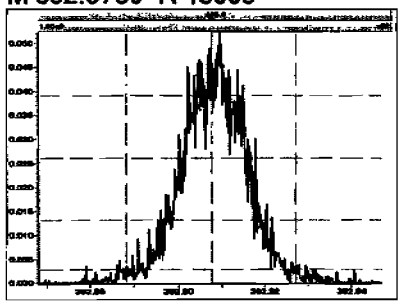

M 404.9760 R 13262

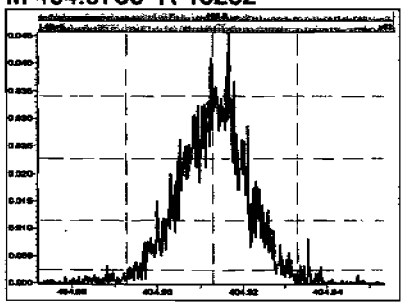

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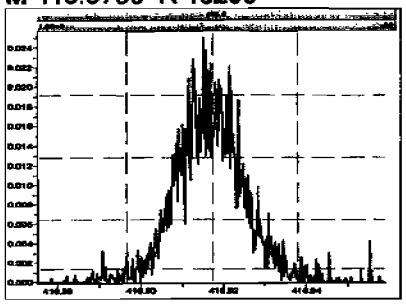

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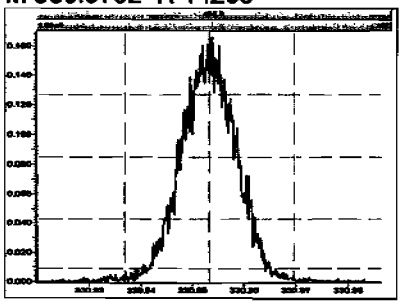

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M 342.9792 R 13624

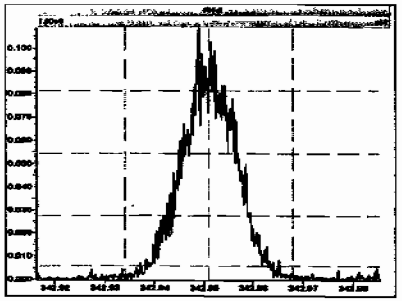

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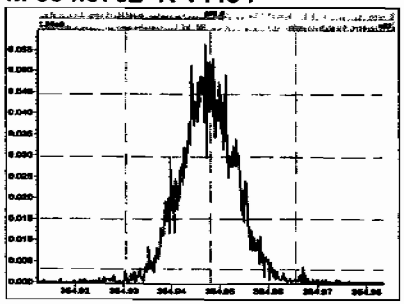

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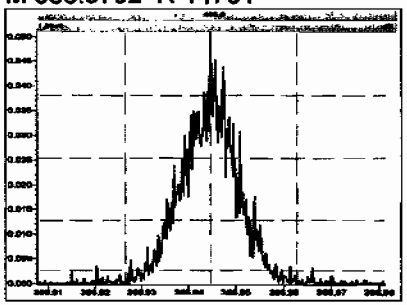

M 380.9760 R 13552

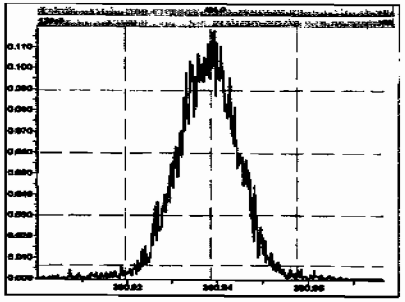

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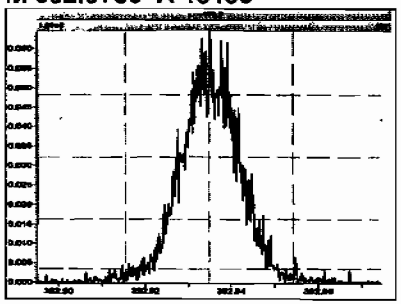

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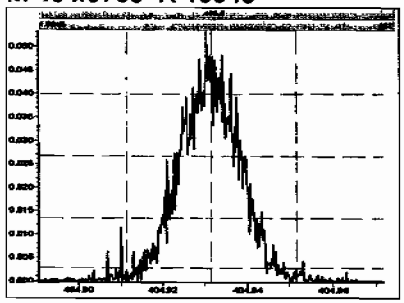

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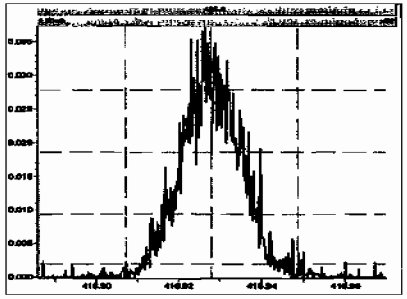

M 366.9792 R 15339

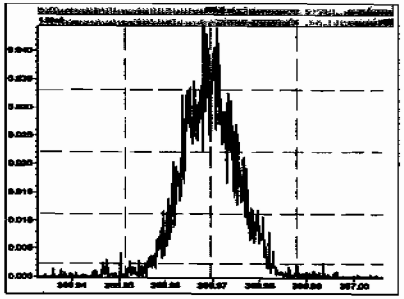

M 380.9760 R 14296

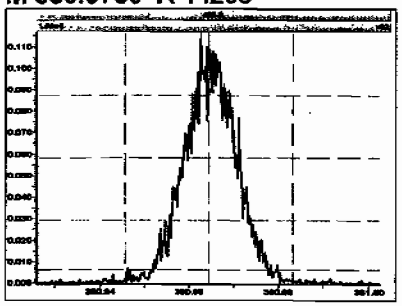

M 392.9760 R 15577

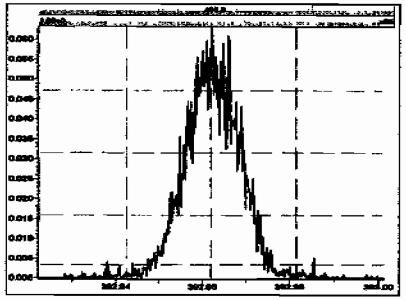

M 404.9760 R 14124

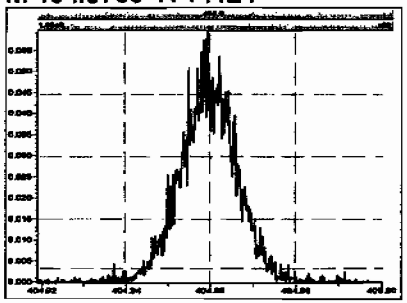

M 416.9760 R 14846

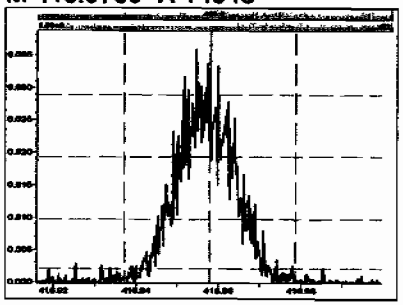

M 430.9728 R 13320

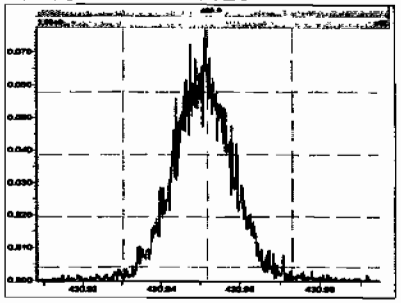

M 442.9728 R 14253

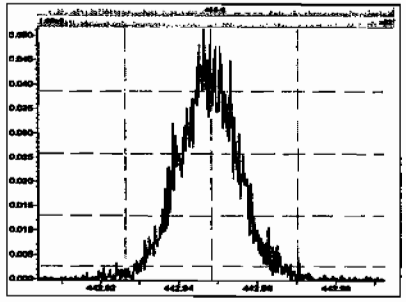

M 454.9728 R 13858

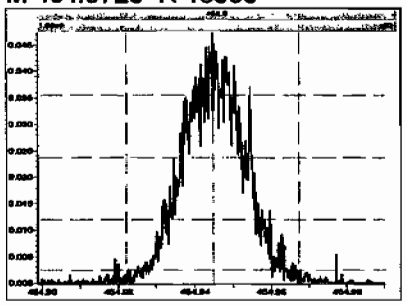

M 404.9760 R 15774

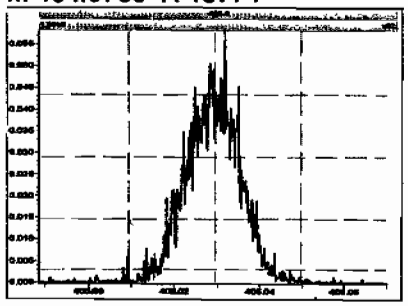

M 416.9760 R 16340

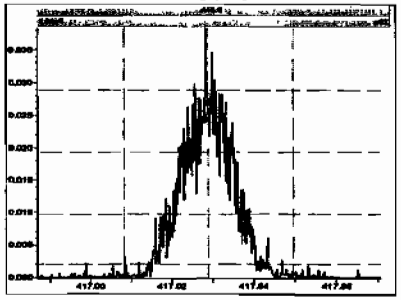

M 430.9728 R 15159

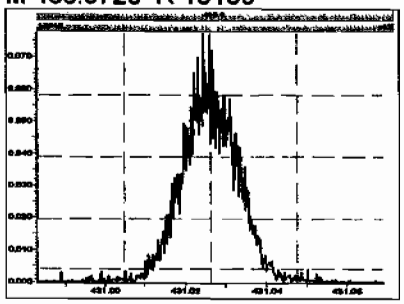

M 442.9728 R 15073

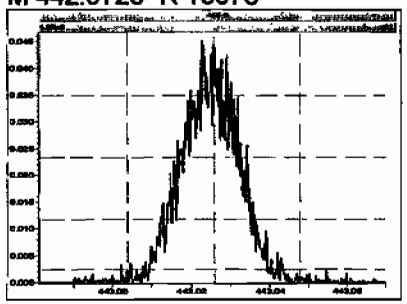

M 454.9728 R 14287

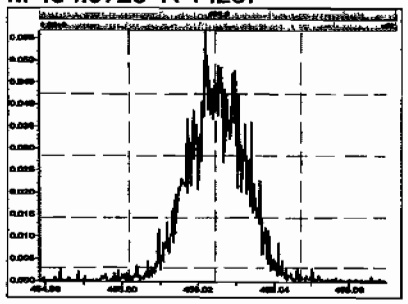

M 466.9728 R 15433

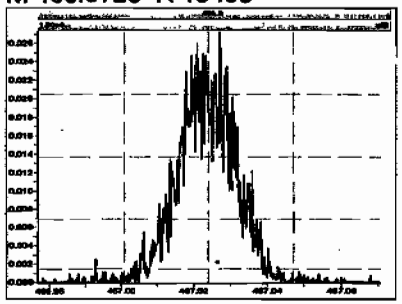

M 480.9696 R 14098

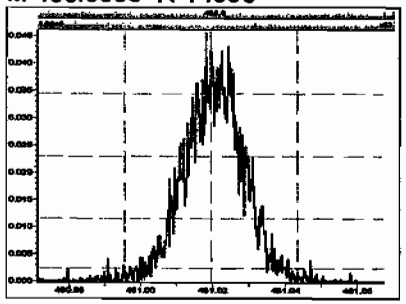

M 430.9728 R 14292

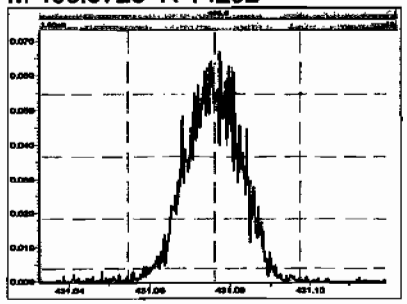

M 442.9728 R 15248

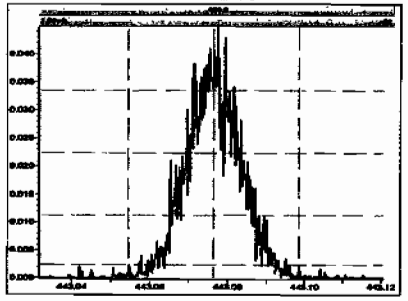

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M 454.9728 R 15214

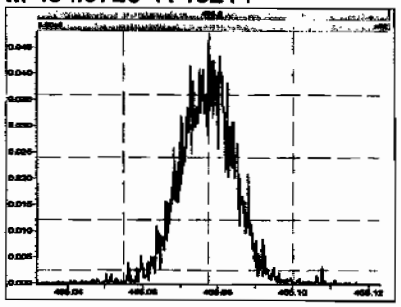

M 466.9728 R 16342

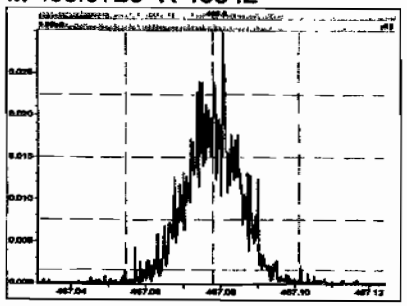

M 480.9696 R 14621

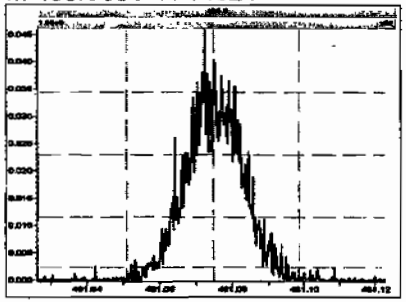

M 492.9696 R 16201

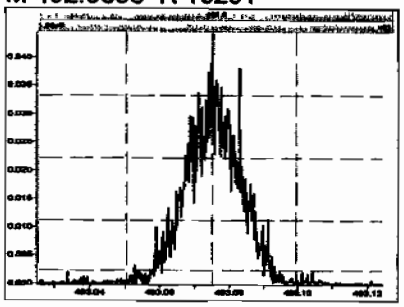

M 504.9696 R 15271

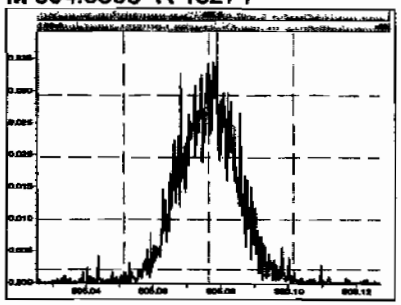

M 516.9697 R 16350

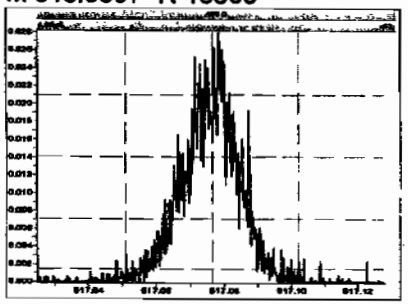

ICAL

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qid

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Compound name: 2,3,7,8-TCDD
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	R²	Out	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	10.0	0.82	NO	25.98	1.001	7.90e4	7.49e5	9.78	-2.2	1.05
090212H1_3	0.250	0.85	NO	26.00	1.001	1.54e3	5.94e5	0.240	-4.1	1.03
090212H1_4	0.500	0.71	NO	25.98	1.001	3.65e3	6.33e5	0.536	7.1	1.16
090212H1_5	2.00	0.72	NO	26.00	1.001	1.40e4	6.64e5	1.95	-2.5	1.05
090212H1_6	40.0	0.77	NO	25.98	1.001	3.33e5	7.81e5	39.5	-1.3	1.06
090212H1_7	200	0.78	NO	26.00	1.001	1.92e6	8.66e5	206	3.0	1.11

2/13/09

MS 2/13/09

Compound name: 1,2,3,7,8-PeCDD
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	R²	Out	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	50.0	0.63	NO	30.65	1.000	3.03e5	6.02e5	48.6	-2.7	1.01
090212H1_3	1.25	0.69	NO	30.67	1.000	6.36e3	4.83e5	1.27	1.9	1.05
090212H1_4	2.50	0.60	NO	30.67	1.000	1.30e4	4.97e5	2.53	1.1	1.04
090212H1_5	10.0	0.61	NO	30.67	1.000	5.28e4	5.23e5	9.77	-2.3	1.01
090212H1_6	200	0.63	NO	30.67	1.000	1.31e6	6.35e5	200	-0.1	1.03
090212H1_7	1000	0.63	NO	30.67	1.000	8.09e6	7.66e5	1020	2.2	1.06

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.00153
RRF SD: 0.0317187, Relative SD: 3.16702
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.26	NO	34.10	1.000	2.54e5	5.27e5	48.0	-3.9	0.962
090212H1_3	1.25	1.42	NO	34.11	1.000	5.16e3	4.08e5	1.26	1.0	1.01
090212H1_4	2.50	1.28	NO	34.11	1.001	1.10e4	4.22e5	2.61	4.2	1.04
090212H1_5	10.0	1.32	NO	34.12	1.000	4.31e4	4.47e5	9.64	-3.6	0.965
090212H1_6	200	1.27	NO	34.11	1.000	1.12e6	5.53e5	203	1.4	1.02
090212H1_7	1000	1.25	NO	34.12	1.000	7.63e6	7.54e5	1010	1.0	1.01

Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.27	NO	34.21	1.000	2.90e5	5.42e5	47.6	-4.8	1.07
090212H1_3	1.25	1.20	NO	34.23	1.001	6.02e3	4.14e5	1.29	3.4	1.16
090212H1_4	2.50	1.24	NO	34.23	1.001	1.23e4	4.20e5	2.60	3.9	1.17
090212H1_5	10.0	1.26	NO	34.24	1.001	4.91e4	4.60e5	9.46	-5.2	1.07
090212H1_6	200	1.30	NO	34.22	1.000	1.29e6	5.59e5	205	2.7	1.16
090212H1_7	1000	1.26	NO	34.23	1.000	8.08e6	7.18e5	1000	0.0	1.13

Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.10201
RRF SD: 0.0447729, Relative SD: 4.06282
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.28	NO	34.51	1.009	2.83e5	0.00e0	48.1	-3.9	1.06
090212H1_3	1.25	1.27	NO	34.53	1.010	5.79e3	0.00e0	1.28	2.4	1.13

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1,2,3,7,8,9-HxCDD

	Name	Std Conc	RA		RT	RRT	Resp	IS Resp	Conc	Dev	RRF
	090212H1_4	2.50	1.28	NO	34.52	1.009	1.21e4	0.00e0	2.60	4.0	1.15
	090212H1_5	10.0	1.22	NO	34.53	1.009	4.70e4	0.00e0	9.41	-5.9	1.04
	090212H1_6	200	1.32	NO	34.52	1.009	1.26e6	0.00e0	207	3.3	1.14
	090212H1_7	1000	1.25	NO	34.53	1.009	8.13e6	0.00e0	1000	0.2	1.10

Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA		RT	RRT	Resp	IS Resp	Conc	Dev	RRF
	090212H1_1	50.0	1.03	NO	38.17	1.000	2.11e5	4.13e5	48.0	-4.0	1.02
	090212H1_3	1.25	1.15	NO	38.18	1.000	4.52e3	3.21e5	1.32	5.7	1.12
	090212H1_4	2.50	1.07	NO	38.18	1.000	8.68e3	3.21e5	2.54	1.7	1.08
	090212H1_5	10.0	1.07	NO	38.19	1.001	3.41e4	3.36e5	9.55	-4.5	1.02
	090212H1_6	200	1.07	NO	38.19	1.000	9.19e5	4.29e5	201	0.7	1.07
	090212H1_7	1000	1.05	NO	38.19	1.001	6.29e6	5.88e5	1000	0.5	1.07

Compound name: OCDD
Response Factor: 1.17831
RRF SD: 0.0736447, Relative SD: 6.25001
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA		RT	RRT	Resp	IS Resp	Conc	Dev	RRF
	090212H1_1	100	0.91	NO	41.63	1.000	3.30e5	5.87e5	95.3	-4.7	1.12
	090212H1_3	2.50	0.89	NO	41.67	1.001	7.09e3	4.40e5	2.74	9.5	1.29
	090212H1_4	5.00	0.87	NO	41.65	1.000	1.25e4	4.37e5	4.85	-3.0	1.14
	090212H1_5	20.0	0.85	NO	41.66	1.000	5.10e4	4.67e5	18.5	-7.3	1.09
	090212H1_6	400	0.92	NO	41.68	1.000	1.48e6	6.21e5	404	1.1	1.19
	090212H1_7	2000	0.89	NO	41.67	1.001	1.10e7	8.92e5	2090	4.4	1.23

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 2,3,7,8-TCDF
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0	0.78	NO	25.19	1.001	1.14e5	1.07e6	9.75	-2.5	1.06
090212H1_3	0.250	0.83	NO	25.19	1.001	2.44e3	8.63e5	0.260	4.1	1.13
090212H1_4	0.500	0.84	NO	25.20	1.001	4.98e3	9.06e5	0.506	1.2	1.10
090212H1_5	2.00	0.81	NO	25.20	1.001	1.97e4	9.70e5	1.87	-6.4	1.02
090212H1_6	40.0	0.79	NO	25.20	1.001	4.71e5	1.08e6	40.1	0.3	1.09
090212H1_7	200	0.79	NO	25.20	1.001	2.66e6	1.18e6	207	3.4	1.12

Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.61	NO	29.42	1.000	5.65e5	9.82e5	49.6	-0.7	1.15
090212H1_3	1.25	1.63	NO	29.43	1.000	1.11e4	7.63e5	1.25	0.1	1.16
090212H1_4	2.50	1.74	NO	29.43	1.000	2.29e4	7.80e5	2.53	1.3	1.17
090212H1_5	10.0	1.61	NO	29.43	1.000	9.64e4	8.78e5	9.48	-5.2	1.10
090212H1_6	200	1.62	NO	29.43	1.000	2.36e6	9.96e5	204	2.0	1.18
090212H1_7	1000	1.60	NO	29.45	1.000	1.42e7	1.20e6	1030	2.5	1.19

Compound name: 2,3,4,7,8-PeCDF
Response Factor: 1.11789
RRF SD: 0.0264655, Relative SD: 2.36745
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.56	NO	30.35	1.000	5.35e5	9.65e5	49.6	-0.8	1.11
090212H1_3	1.25	1.51	NO	30.36	1.000	1.08e4	7.68e5	1.25	0.4	1.12

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 2,3,4,7,8-PeCDF

Name	Std Conc	RA	IM	RT	RRT	Resp	S/N Resp	Conc	Dev	RRF
090212H1_4	2.50	1.61	NO	30.36	1.000	2.28e4	7.94e5	2.57	2.6	1.15
090212H1_5	10.0	1.64	NO	30.38	1.000	9.28e4	8.67e5	9.58	-4.2	1.07
090212H1_6	200	1.60	NO	30.36	1.000	2.28e6	1.01e6	203	1.5	1.13
090212H1_7	1000	1.59	NO	30.38	1.000	1.37e7	1.22e6	1010	0.5	1.12

Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.41088
RRF SD: 0.0512913, Relative SD: 3.6354
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	S/N Resp	Conc	Dev	RRF
090212H1_1	50.0	1.27	NO	33.19	1.001	4.59e5	6.74e5	48.3	-3.3	1.36
090212H1_3	1.25	1.35	NO	33.19	1.000	9.88e3	5.28e5	1.33	6.0	1.50
090212H1_4	2.50	1.32	NO	33.19	1.000	1.96e4	5.45e5	2.54	1.8	1.44
090212H1_5	10.0	1.31	NO	33.20	1.000	7.94e4	5.86e5	9.61	-3.9	1.36
090212H1_6	200	1.27	NO	33.20	1.001	1.99e6	7.08e5	199	-0.5	1.40
090212H1_7	1000	1.27	NO	33.20	1.000	1.28e7	9.05e5	1000	-0.0	1.41

Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.22218
RRF SD: 0.0229408, Relative SD: 1.87703
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	S/N Resp	Conc	Dev	RRF
090212H1_1	50.0	1.25	NO	33.31	1.000	5.49e5	9.02e5	49.8	-0.4	1.22
090212H1_3	1.25	1.21	NO	33.32	1.000	1.07e4	6.79e5	1.29	3.1	1.26
090212H1_4	2.50	1.37	NO	33.31	1.000	2.16e4	6.99e5	2.52	1.0	1.23
090212H1_5	10.0	1.34	NO	33.33	1.000	8.96e4	7.51e5	9.76	-2.4	1.19
090212H1_6	200	1.27	NO	33.32	1.000	2.27e6	9.34e5	199	-0.5	1.22
090212H1_7	1000	1.27	NO	33.33	1.001	1.41e7	1.17e6	992	-0.8	1.21

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Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	Qv	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	50.0	1.29	NO	33.92	1.000	4.53e5	7.19e5	49.2	-1.6	1.26
090212H1_3	1.25	1.38	NO	33.93	1.000	9.11e3	5.78e5	1.23	-1.5	1.26
090212H1_4	2.50	1.28	NO	33.93	1.001	1.91e4	5.74e5	2.60	3.9	1.33
090212H1_5	10.0	1.25	NO	33.94	1.000	7.70e4	6.20e5	9.71	-2.9	1.24
090212H1_6	200	1.26	NO	33.93	1.000	1.95e6	7.64e5	200	-0.2	1.28
090212H1_7	1000	1.30	NO	33.94	1.000	1.26e7	9.59e5	1020	2.3	1.31

Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.25756
RRF SD: 0.0204635, Relative SD: 1.62723
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	Qv	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	50.0	1.25	NO	34.91	1.000	3.76e5	6.05e5	49.5	-1.0	1.24
090212H1_3	1.25	1.37	NO	34.91	1.000	7.41e3	4.73e5	1.24	-0.4	1.25
090212H1_4	2.50	1.24	NO	34.92	1.001	1.51e4	4.79e5	2.50	0.2	1.26
090212H1_5	10.0	1.28	NO	34.93	1.000	6.29e4	5.10e5	9.81	-1.9	1.23
090212H1_6	200	1.25	NO	34.92	1.001	1.68e6	6.50e5	206	2.9	1.29
090212H1_7	1000	1.28	NO	34.92	1.000	1.08e7	8.57e5	1000	0.3	1.26

Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	Qv	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	50.0	1.05	NO	36.81	1.000	4.18e5	5.07e5	48.8	-2.3	1.65
090212H1_3	1.25	1.05	NO	36.84	1.001	8.84e3	3.97e5	1.32	5.5	1.78

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Compound name: 1,2,3,4,6,7,8-HpCDF

Name	Std Conc.	RT	Int	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_4	2.50	1.04	NO	36.82	1.000	1.73e4	3.94e5	2.60	4.0	1.76
090212H1_5	10.0	1.05	NO	36.84	1.001	6.64e4	4.25e5	9.25	-7.5	1.56
090212H1_6	200	1.06	NO	36.83	1.000	1.78e6	5.26e5	200	-0.1	1.69
090212H1_7	1000	1.06	NO	36.83	1.000	1.17e7	6.89e5	1010	0.5	1.70

Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.48054
RRF SD: 0.0286004, Relative SD: 1.93175
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RT	Int	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	50.0	1.05	NO	38.73	1.000	3.09e5	4.20e5	49.7	-0.5	1.47
090212H1_3	1.25	0.89	NO	38.75	1.001	6.11e3	3.26e5	1.27	1.3	1.50
090212H1_4	2.50	0.99	NO	38.73	1.000	1.20e4	3.25e5	2.49	-0.4	1.47
090212H1_5	10.0	1.07	NO	38.74	1.000	4.97e4	3.47e5	9.66	-3.4	1.43
090212H1_6	200	1.04	NO	38.75	1.000	1.34e6	4.47e5	202	0.9	1.49
090212H1_7	1000	1.03	NO	38.75	1.000	9.18e6	6.08e5	1020	2.1	1.51

Compound name: OCDF
Response Factor: 1.09622
RRF SD: 0.0644136, Relative SD: 5.87597
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RT	Int	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	100	0.93	NO	41.88	1.001	4.66e5	8.78e5	96.7	-3.3	1.06
090212H1_3	2.50	0.90	NO	41.89	1.001	1.01e4	6.65e5	2.76	10.6	1.21
090212H1_4	5.00	0.84	NO	41.88	1.001	1.79e4	6.44e5	5.08	1.6	1.11
090212H1_5	20.0	0.95	NO	41.88	1.000	7.14e4	6.95e5	18.8	-6.2	1.03
090212H1_6	400	0.94	NO	41.90	1.000	2.10e6	9.52e5	402	0.4	1.10
090212H1_7	2000	0.92	NO	41.89	1.000	1.48e7	1.39e6	1940	-3.1	1.06

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Compound name: 13C-2,3,7,8-TCDD
Response Factor: 1.01489
RRF SD: 0.0275825, Relative SD: 2.71777
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.95	1.022	7.49e5	7.37e5	100	0.1	1.02
090212H1_3	100	0.80	NO	25.97	1.022	5.94e5	6.03e5	97.2	-2.8	0.986
090212H1_4	100	0.78	NO	25.97	1.022	6.33e5	6.33e5	98.5	-1.5	1.00
090212H1_5	100	0.78	NO	25.97	1.022	6.64e5	6.68e5	97.9	-2.1	0.994
090212H1_6	100	0.79	NO	25.97	1.022	7.81e5	7.54e5	102	2.0	1.04
090212H1_7	100	0.79	NO	25.97	1.022	8.66e5	8.18e5	104	4.3	1.06

Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.827461
RRF SD: 0.0577323, Relative SD: 6.97704
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.64	NO	30.64	1.207	6.02e5	7.37e5	98.7	-1.3	0.817
090212H1_3	100	0.63	NO	30.65	1.207	4.83e5	6.03e5	96.8	-3.2	0.801
090212H1_4	100	0.61	NO	30.65	1.207	4.97e5	6.33e5	94.9	-5.1	0.786
090212H1_5	100	0.64	NO	30.65	1.207	5.23e5	6.68e5	94.6	-5.4	0.783
090212H1_6	100	0.65	NO	30.65	1.207	6.35e5	7.54e5	102	1.7	0.842
090212H1_7	100	0.64	NO	30.65	1.207	7.66e5	8.18e5	113	13.2	0.937

Compound name: 13C-1,2,3,4,7,8-HxCDD
Response Factor: 0.916247
RRF SD: 0.0122736, Relative SD: 1.33955
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.08	0.988	5.27e5	5.79e5	99.4	-0.6	0.911
090212H1_3	100	1.26	NO	34.10	0.988	4.08e5	4.37e5	102	2.0	0.934

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Compound name: 13C-1,2,3,4,7,8-HxCDD

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_4	100	1.26	NO	34.08	0.988	4.22e5	4.66e5	98.7	-1.3	0.904
090212H1_5	100	1.24	NO	34.11	0.988	4.47e5	4.90e5	99.6	-0.4	0.913
090212H1_6	100	1.25	NO	34.10	0.988	5.53e5	6.10e5	98.9	-1.1	0.907
090212H1_7	100	1.25	NO	34.11	0.988	7.54e5	8.12e5	101	1.4	0.929

Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.920893
RRF SD: 0.0250009, Relative SD: 2.71486
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	100	1.26	NO	34.19	0.991	5.42e5	5.79e5	102	1.7	0.936
090212H1_3	100	1.23	NO	34.21	0.991	4.14e5	4.37e5	103	2.9	0.948
090212H1_4	100	1.29	NO	34.21	0.991	4.20e5	4.66e5	97.7	-2.3	0.900
090212H1_5	100	1.25	NO	34.22	0.991	4.60e5	4.90e5	102	2.1	0.940
090212H1_6	100	1.27	NO	34.21	0.991	5.59e5	6.10e5	99.5	-0.5	0.916
090212H1_7	100	1.23	NO	34.22	0.991	7.18e5	8.12e5	96.0	-4.0	0.884

Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.708388
RRF SD: 0.019948, Relative SD: 2.81596
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	100	1.07	NO	38.16	1.106	4.13e5	5.79e5	101	0.7	0.713
090212H1_3	100	1.09	NO	38.17	1.106	3.21e5	4.37e5	104	3.9	0.736
090212H1_4	100	1.05	NO	38.17	1.106	3.21e5	4.66e5	97.1	-2.9	0.688
090212H1_5	100	1.06	NO	38.17	1.106	3.36e5	4.90e5	96.8	-3.2	0.686
090212H1_6	100	1.06	NO	38.18	1.106	4.29e5	6.10e5	99.3	-0.7	0.703
090212H1_7	100	1.04	NO	38.17	1.106	5.88e5	8.12e5	102	2.2	0.724

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Compound name: 13C-OCDD
Response Factor: 0.502588
RRF SD: 0.0283515, Relative SD: 5.6411
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IW	RT	RRT	Resp	IS Resp	Conc.	%D	RRF
090212H1_1	200	0.89	NO	41.62	1.206	5.87e5	5.79e5	202	0.9	0.507
090212H1_3	200	0.92	NO	41.65	1.207	4.40e5	4.37e5	200	0.2	0.504
090212H1_4	200	0.90	NO	41.63	1.206	4.37e5	4.66e5	187	-6.7	0.469
090212H1_5	200	0.89	NO	41.65	1.206	4.67e5	4.90e5	190	-5.0	0.477
090212H1_6	200	0.91	NO	41.67	1.207	6.21e5	6.10e5	203	1.4	0.510
090212H1_7	200	0.93	NO	41.65	1.206	8.92e5	8.12e5	219	9.3	0.549

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.976814
RRF SD: 0.0185774, Relative SD: 1.90184
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IW	RT	RRT	Resp	IS Resp	Conc.	%D	RRF
090212H1_1	100	0.77	NO	25.16	0.991	1.07e6	1.11e6	98.8	-1.2	0.965
090212H1_3	100	0.79	NO	25.17	0.991	8.63e5	9.05e5	97.5	-2.5	0.953
090212H1_4	100	0.78	NO	25.17	0.991	9.06e5	9.34e5	99.3	-0.7	0.970
090212H1_5	100	0.79	NO	25.17	0.991	9.70e5	9.83e5	101	1.1	0.987
090212H1_6	100	0.77	NO	25.17	0.991	1.08e6	1.10e6	100	0.4	0.980
090212H1_7	100	0.76	NO	25.17	0.991	1.18e6	1.18e6	103	2.9	1.01

Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 0.896189
RRF SD: 0.0663113, Relative SD: 7.39926
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IW	RT	RRT	Resp	IS Resp	Conc.	%D	RRF
090212H1_1	100	1.58	NO	29.41	1.158	9.82e5	1.11e6	98.4	-1.6	0.882
090212H1_3	100	1.57	NO	29.42	1.158	7.63e5	9.05e5	94.0	-6.0	0.842

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Compound name: 13C-1,2,3,7,8-PeCDF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	100	1.57	NO	29.42	1.158	7.80e5	9.34e5	93.1	-6.9	0.835
090212H1_5	100	1.58	NO	29.42	1.158	8.78e5	9.83e5	99.7	-0.3	0.894
090212H1_6	100	1.56	NO	29.42	1.158	9.96e5	1.10e6	101	1.0	0.905
090212H1_7	100	1.52	NO	29.43	1.159	1.20e6	1.18e6	114	13.7	1.02

Compound name: 13C-2,3,4,7,8-PeCDF
Response Factor: 0.899625
RRF SD: 0.0716088, Relative SD: 7.95986
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	1.57	NO	30.34	1.195	9.65e5	1.11e6	96.3	-3.7	0.866
090212H1_3	100	1.54	NO	30.35	1.195	7.68e5	9.05e5	94.2	-5.8	0.848
090212H1_4	100	1.52	NO	30.35	1.195	7.94e5	9.34e5	94.5	-5.5	0.850
090212H1_5	100	1.59	NO	30.36	1.195	8.67e5	9.83e5	98.1	-1.9	0.882
090212H1_6	100	1.55	NO	30.35	1.195	1.01e6	1.10e6	102	1.6	0.914
090212H1_7	100	1.54	NO	30.36	1.195	1.22e6	1.18e6	115	15.3	1.04

Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.16919
RRF SD: 0.0331609, Relative SD: 2.83622
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.54	NO	33.16	0.961	6.74e5	5.79e5	99.5	-0.5	1.16
090212H1_3	100	0.54	NO	33.17	0.961	5.28e5	4.37e5	104	3.5	1.21
090212H1_4	100	0.52	NO	33.17	0.961	5.45e5	4.66e5	99.9	-0.1	1.17
090212H1_5	100	0.54	NO	33.19	0.961	5.86e5	4.90e5	102	2.3	1.20
090212H1_6	100	0.53	NO	33.17	0.961	7.08e5	6.10e5	99.4	-0.6	1.16
090212H1_7	100	0.53	NO	33.19	0.961	9.05e5	8.12e5	95.3	-4.7	1.11

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Compound name: 13C-1,2,3,6,7,8-HxCDF
Response Factor: 1.51914
RRF SD: 0.0457416, Relative SD: 3.01103
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.55	NO	33.29	0.965	9.02e5	5.79e5	103	2.5	1.56
090212H1_3	100	0.52	NO	33.31	0.965	6.79e5	4.37e5	102	2.4	1.56
090212H1_4	100	0.53	NO	33.29	0.965	6.99e5	4.66e5	98.7	-1.3	1.50
090212H1_5	100	0.53	NO	33.32	0.965	7.51e5	4.90e5	101	1.0	1.53
090212H1_6	100	0.52	NO	33.31	0.965	9.34e5	6.10e5	101	0.8	1.53
090212H1_7	100	0.54	NO	33.31	0.965	1.17e6	8.12e5	94.6	-5.4	1.44

Compound name: 13C-2,3,4,6,7,8-HxCDF
Response Factor: 1.24921
RRF SD: 0.0473005, Relative SD: 3.78643
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.54	NO	33.91	0.983	7.19e5	5.79e5	99.3	-0.7	1.24
090212H1_3	100	0.53	NO	33.92	0.983	5.78e5	4.37e5	106	6.0	1.32
090212H1_4	100	0.55	NO	33.91	0.983	5.74e5	4.66e5	98.4	-1.6	1.23
090212H1_5	100	0.55	NO	33.93	0.983	6.20e5	4.90e5	101	1.3	1.27
090212H1_6	100	0.53	NO	33.92	0.983	7.64e5	6.10e5	100	0.4	1.25
090212H1_7	100	0.53	NO	33.93	0.983	9.59e5	8.12e5	94.5	-5.5	1.18

Compound name: 13C-1,2,3,7,8,9-HxCDF
Response Factor: 1.05297
RRF SD: 0.0198461, Relative SD: 1.88477
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.53	NO	34.90	1.011	6.05e5	5.79e5	99.2	-0.8	1.04
090212H1_3	100	0.52	NO	34.90	1.011	4.73e5	4.37e5	103	2.9	1.08

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Compound name: 13C-1,2,3,7,8,9-HxCDF

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	100	0.53	NO	34.90	1.011	4.79e5	4.66e5	97.6	-2.4	1.03
090212H1_5	100	0.54	NO	34.92	1.011	5.10e5	4.90e5	98.9	-1.1	1.04
090212H1_6	100	0.52	NO	34.90	1.011	6.50e5	6.10e5	101	1.2	1.07
090212H1_7	100	0.53	NO	34.91	1.011	8.57e5	8.12e5	100	0.2	1.05

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 0.868264
RRF SD: 0.0231201, Relative SD: 2.6628
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.46	NO	36.80	1.066	5.07e5	5.79e5	101	0.8	0.875
090212H1_3	100	0.44	NO	36.81	1.066	3.97e5	4.37e5	105	4.7	0.909
090212H1_4	100	0.44	NO	36.81	1.066	3.94e5	4.66e5	97.3	-2.7	0.845
090212H1_5	100	0.44	NO	36.82	1.066	4.25e5	4.90e5	99.9	-0.1	0.868
090212H1_6	100	0.46	NO	36.82	1.066	5.26e5	6.10e5	99.5	-0.5	0.864
090212H1_7	100	0.45	NO	36.82	1.066	6.89e5	8.12e5	97.7	-2.3	0.849

Compound name: 13C-1,2,3,4,7,8,9-HpCDF
Response Factor: 0.726514
RRF SD: 0.0207066, Relative SD: 2.85014
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IM	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.46	NO	38.72	1.122	4.20e5	5.79e5	99.8	-0.2	0.725
090212H1_3	100	0.45	NO	38.73	1.122	3.26e5	4.37e5	103	2.8	0.747
090212H1_4	100	0.45	NO	38.72	1.122	3.25e5	4.66e5	95.9	-4.1	0.696
090212H1_5	100	0.44	NO	38.73	1.122	3.47e5	4.90e5	97.6	-2.4	0.709
090212H1_6	100	0.45	NO	38.74	1.122	4.47e5	6.10e5	101	1.0	0.734
090212H1_7	100	0.44	NO	38.74	1.122	6.08e5	8.12e5	103	3.0	0.748

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Compound name: 13C-OCDF
Response Factor: 0.759527
RRF SD: 0.058777, Relative SD: 7.73863
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IS	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	200	0.91	NO	41.85	1.213	8.78e5	5.79e5	200	-0.2	0.758
090212H1_3	200	0.88	NO	41.86	1.213	6.65e5	4.37e5	200	0.2	0.761
090212H1_4	200	0.90	NO	41.85	1.213	6.44e5	4.66e5	182	-9.1	0.690
090212H1_5	200	0.90	NO	41.86	1.213	6.95e5	4.90e5	187	-6.6	0.710
090212H1_6	200	0.90	NO	41.89	1.213	9.52e5	6.10e5	206	2.8	0.781
090212H1_7	200	0.90	NO	41.88	1.213	1.39e6	8.12e5	226	12.8	0.857

Compound name: 37Cl-2,3,7,8-TCDD
Response Factor: 0.668396
RRF SD: 0.0327668, Relative SD: 4.90231
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IS	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	10.0			25.98	1.023	4.66e4	7.37e5	9.46	-5.4	0.632
090212H1_3	0.250			25.97	1.022	1.08e3	6.03e5	0.269	7.5	0.718
090212H1_4	0.500			25.98	1.023	2.17e3	6.33e5	0.512	2.4	0.685
090212H1_5	2.00			25.98	1.023	8.69e3	6.68e5	1.95	-2.7	0.650
090212H1_6	40.0			25.98	1.023	1.93e5	7.54e5	38.4	-4.1	0.641
090212H1_7	200			25.98	1.023	1.12e6	8.18e5	205	2.3	0.684

Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IS	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	100	0.81	NO	25.39	0.000	7.37e5	7.37e5	100	0.0	1.00
090212H1_3	100	0.79	NO	25.40	0.000	6.03e5	6.03e5	100	0.0	1.00

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Compound name: 13C-1,2,3,4-TCDD

Name	Std Conc	RT	IS	RT	RRT	Response	IS Response	Conc	Dev	RRF
090212H1_4	100	0.79	NO	25.40	0.000	6.33e5	6.33e5	100	0.0	1.00
090212H1_5	100	0.78	NO	25.40	0.000	6.68e5	6.68e5	100	0.0	1.00
090212H1_6	100	0.78	NO	25.40	0.000	7.54e5	7.54e5	100	0.0	1.00
090212H1_7	100	0.79	NO	25.40	0.000	8.18e5	8.18e5	100	0.0	1.00

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 4.96507e-017, Relative SD: 4.96507e-015
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	IS	RT	RRT	Response	IS Response	Conc	Dev	RRF
090212H1_1	100	0.78	NO	23.95	0.000	1.11e6	1.11e6	100	0.0	1.00
090212H1_3	100	0.77	NO	23.95	0.000	9.05e5	9.05e5	100	0.0	1.00
090212H1_4	100	0.77	NO	23.95	0.000	9.34e5	9.34e5	100	0.0	1.00
090212H1_5	100	0.76	NO	23.97	0.000	9.83e5	9.83e5	100	0.0	1.00
090212H1_6	100	0.77	NO	23.97	0.000	1.10e6	1.10e6	100	-0.0	1.00
090212H1_7	100	0.78	NO	23.97	0.000	1.18e6	1.18e6	100	0.0	1.00

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	IS	RT	RRT	Response	IS Response	Conc	Dev	RRF
090212H1_1	100	1.22	NO	34.50	0.000	5.79e5	5.79e5	100	0.0	1.00
090212H1_3	100	1.23	NO	34.51	0.000	4.37e5	4.37e5	100	0.0	1.00
090212H1_4	100	1.25	NO	34.51	0.000	4.66e5	4.66e5	100	0.0	1.00
090212H1_5	100	1.18	NO	34.52	0.000	4.90e5	4.90e5	100	0.0	1.00
090212H1_6	100	1.26	NO	34.52	0.000	6.10e5	6.10e5	100	0.0	1.00
090212H1_7	100	1.22	NO	34.52	0.000	8.12e5	8.12e5	100	0.0	1.00

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Compound name: Total Tetra-Dioxins
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	10.0					7.49e5	60.1		
090212H1_3	0.250					5.94e5	0.240		
090212H1_4	0.500					6.33e5	0.536		
090212H1_5	2.00					6.64e5	1.95		
090212H1_6	40.0					7.81e5	39.5		
090212H1_7	200					8.66e5	206		

Compound name: Total Penta-Dioxins
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	50.0					6.02e5	159		
090212H1_3	1.25					4.83e5	1.30		
090212H1_4	2.50					4.97e5	2.53		
090212H1_5	10.0					5.23e5	9.77		
090212H1_6	200					6.35e5	200		
090212H1_7	1000					7.66e5	1020		

Compound name: Total Hexa-Dioxins
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	50.0					0.00e0	191		
090212H1_3	1.25					0.00e0	3.85		

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Compound name: Total Hexa-Dioxins

Name	Std Conc	RF	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	2.50					0.00e0	7.81		
090212H1_5	10.0					0.00e0	28.5		
090212H1_6	200					0.00e0	615		
090212H1_7	1000					0.00e0	3010		

Compound name: Total Hepta-Dioxins
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0					4.13e5	127		
090212H1_3	1.25					3.21e5	1.38		
090212H1_4	2.50					3.21e5	2.60		
090212H1_5	10.0					3.36e5	9.55		
090212H1_6	200					4.29e5	203		
090212H1_7	1000					5.88e5	1010		

Compound name: Total Tetra-Furans
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0					1.07e6	35.3		
090212H1_3	0.250					8.63e5	0.269		
090212H1_4	0.500					9.06e5	0.506		
090212H1_5	2.00					9.70e5	1.88		
090212H1_6	40.0					1.08e6	40.6		
090212H1_7	200					1.18e6	209		

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Compound name: 1st Func. Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
	090212H1_1	50.0					0.00e0	46.2		
	090212H1_3	1.25					0.00e0	0.00241		
	090212H1_4	2.50					0.00e0	0.0270		
	090212H1_5	10.0					0.00e0	0.0198		
	090212H1_6	200					0.00e0	0.00694		
	090212H1_7	1000					0.00e0	0.00731		

Compound name: Total Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
	090212H1_1	50.0					0.00e0	147		
	090212H1_3	1.25					0.00e0	2.51		
	090212H1_4	2.50					0.00e0	5.10		
	090212H1_5	10.0					0.00e0	19.1		
	090212H1_6	200					0.00e0	412		
	090212H1_7	1000					0.00e0	2040		

Compound name: Total Hexa-Furans
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
	090212H1_1	50.0					0.00e0	250		
	090212H1_3	1.25					0.00e0	5.09		

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Compound name: Total Hexa-Furans

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	ATV	RRF
090212H1_4	2.50						0.00e0	10.2		
090212H1_5	10.0						0.00e0	38.9		
090212H1_6	200						0.00e0	804		
090212H1_7	1000						0.00e0	4020		

Compound name: Total Hepta-Furans
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	ATV	RRF
090212H1_1	50.0						0.00e0	98.6		
090212H1_3	1.25						0.00e0	2.59		
090212H1_4	2.50						0.00e0	5.09		
090212H1_5	10.0						0.00e0	18.9		
090212H1_6	200						0.00e0	403		
090212H1_7	1000						0.00e0	2030		

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	ATV	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

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Compound name: PFK2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sample	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sample	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sample	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								

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Compound name: PFK4

Name	Std Conc
090212H1_6	1.00
090212H1_7	1.00

Compound name: PFK5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

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Compound name: DPE2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									

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Compound name: DPE4

Name	Std Conc	RA	Area	RT	RRT	Resp	Resp Ratio	Conc	Calc Conc	RRF
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	Area	RT	RRT	Resp	Resp Ratio	Conc	Calc Conc	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE6
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	Area	RT	RRT	Resp	Resp Ratio	Conc	Calc Conc	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	NO	9.78	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	48.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	48.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	48.1	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	48.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.91	0.76-1.02	NO	95.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	9.75	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	48.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	49.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	48.8	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	49.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.93	0.76-1.02	NO	96.7	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	100	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	98.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	99.4	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	102	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	98.8	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.5	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	NO	103	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	99.2	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	101	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	99.8	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	200	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.46	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/12/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.58
2	1,2,8,9-TCDD (Last)	26.86
3	1,2,4,7,9-PeCDD (First)	28.51
4	1,2,3,8,9-PeCDD (Last)	31.03
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.01
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.28
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.91
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

JA 2/13/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1
GC Column ID: DB-5
Analysis Date: 12-Feb-09
Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]
Date: 2/13/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090212H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090212H1_1

Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	Name											
1	2,3,7,8-TCDD	7.90e4	0.82	NO	1.08	1.000	25.98	1.001	9.7764	97.8	0.0390	9.7764
2	1,2,3,7,8-PeCDD	3.03e5	0.63	NO	1.03	1.000	30.65	1.000	48.635	97.3	0.124	48.635
3	1,2,3,4,7,8-HxCDD	2.54e5	1.26	NO	1.00	1.000	34.10	1.000	48.035	96.1	0.187	48.035
4	1,2,3,6,7,8-HxCDD	2.90e5	1.27	NO	1.13	1.000	34.21	1.000	47.595	95.2	0.184	47.595
5	1,2,3,7,8,9-HxCDD	2.83e5	1.28	NO	1.10	1.000	34.51	1.009	48.051	96.1	0.180	48.051
6	1,2,3,4,6,7,8-HpCDD	2.11e5	1.03	NO	1.06	1.000	38.17	1.000	47.989	96.0	0.341	47.989
7	OCDD	3.30e5	0.91	NO	1.18	1.000	41.63	1.000	95.331	95.3	0.179	95.331
8	2,3,7,8-TCDF	1.14e5	0.78	NO	1.09	1.000	25.19	1.001	9.7515	97.5	0.0409	9.7515
9	1,2,3,7,8-PeCDF	5.65e5	1.61	NO	1.16	1.000	29.42	1.000	49.643	99.3	0.123	49.643
10	2,3,4,7,8-PeCDF	5.35e5	1.56	NO	1.12	1.000	30.35	1.000	49.591	99.2	0.120	49.591
11	1,2,3,4,7,8-HxCDF	4.59e5	1.27	NO	1.41	1.000	33.19	1.001	48.331	96.7	0.150	48.331
12	1,2,3,6,7,8-HxCDF	5.49e5	1.25	NO	1.22	1.000	33.31	1.000	49.809	99.6	0.137	49.809
13	2,3,4,6,7,8-HxCDF	4.53e5	1.29	NO	1.28	1.000	33.92	1.000	49.224	98.4	0.172	49.224
14	1,2,3,7,8,9-HxCDF	3.76e5	1.25	NO	1.26	1.000	34.91	1.000	49.483	99.0	0.252	49.483
15	1,2,3,4,6,7,8-HpCDF	4.18e5	1.05	NO	1.69	1.000	36.81	1.000	48.842	97.7	0.180	48.842
16	1,2,3,4,7,8,9-HpCDF	3.09e5	1.05	NO	1.48	1.000	38.73	1.000	49.738	99.5	0.251	49.738
17	OCDF	4.66e5	0.93	NO	1.10	1.000	41.88	1.001	96.743	96.7	0.177	96.743
18	13C-2,3,7,8-TCDD	7.49e5	0.77	NO	1.01	1.000	25.95	1.022	100.15	100	0.141	
19	13C-1,2,3,7,8-PeCDD	6.02e5	0.64	NO	0.827	1.000	30.64	1.207	98.735	98.7	0.269	
20	13C-1,2,3,4,7,8-HxCDD	5.27e5	1.26	NO	0.916	1.000	34.08	0.988	99.432	99.4	0.335	
21	13C-1,2,3,6,7,8-HxCDD	5.42e5	1.26	NO	0.921	1.000	34.19	0.991	101.67	102	0.334	
22	13C-1,2,3,4,6,7,8-HpCDD	4.13e5	1.07	NO	0.708	1.000	38.16	1.106	100.67	101	0.425	
23	13C-OCDD	5.87e5	0.89	NO	0.503	1.000	41.62	1.206	201.71	101	0.424	
24	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	0.977	1.000	25.16	0.991	98.780	98.8	0.129	
25	13C-1,2,3,7,8-PeCDF	9.82e5	1.58	NO	0.896	1.000	29.41	1.158	98.441	98.4	0.304	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.57	NO	0.900	1.000	30.34	1.195	96.306	96.3	0.303	
27	13C-1,2,3,4,7,8-HxCDF	6.74e5	0.54	NO	1.17	1.000	33.16	0.961	99.512	99.5	0.469	
28	13C-1,2,3,6,7,8-HxCDF	9.02e5	0.55	NO	1.52	1.000	33.29	0.965	102.54	103	0.361	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.54	NO	1.25	1.000	33.91	0.983	99.345	99.3	0.439	
30	13C-1,2,3,7,8,9-HxCDF	6.05e5	0.53	NO	1.05	1.000	34.90	1.011	99.208	99.2	0.521	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	Name	Resp	RT	IntY	RRF	Conc	RT	RRT	Conc	%Rec	Area
	31 13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.46	NO	0.868	1.000	36.80	1.066	100.83	101	0.602
	32 13C-1,2,3,4,7,8,9-HpCDF	4.20e5	0.46	NO	0.727	1.000	38.72	1.122	99.796	99.8	0.719
	33 13C-OCDF	8.78e5	0.91	NO	0.760	1.000	41.85	1.213	199.65	99.8	0.296
	34 37Cl-2,3,7,8-TCDD	4.66e4			0.668	1.000	25.98	1.023	9.4592	94.6	0.0533
	35 13C-1,2,3,4-TCDD	7.37e5	0.81	NO	1.00	1.000	25.39	0.000	100.00	100	0.144
	36 13C-1,2,3,4-TCDF	1.11e6	0.78	NO	1.00	1.000	23.95	0.000	100.00	100	0.126
	37 13C-1,2,3,7,8,9-HxCDD	5.79e5	1.22	NO	1.00	1.000	34.50	0.000	100.00	100	0.307

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 7:21:09 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:21:55 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Compound name: 1,3,6,8-TCDD (First)

	ID		
090212H1_1	ST090212H1-1 1613 CS3 080917I	12-Feb-09	11:10:11
090212H1_2	solvent blank	12-Feb-09	11:59:18
090212H1_3	ST090212H1-2 1613 CS0 080917F	12-Feb-09	12:49:08
090212H1_4	ST090212H1-3 1613 CS1 080917CG	12-Feb-09	13:38:34
090212H1_5	ST090212H1-4 1613 CS2 080917H	12-Feb-09	14:28:11
090212H1_6	ST090212H1-5 1613 CS4 080917J	12-Feb-09	15:17:39
090212H1_7	ST090212H1-6 1613 CS5 080917K	12-Feb-09	16:07:03
090212H1_8	solvent blank	12-Feb-09	16:56:26
090212H1_9	SSS090212H1-1 Sec Src Std L070913A	12-Feb-09	17:45:49

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:13 Pacific Standard Time

M 292.9824 R 13157

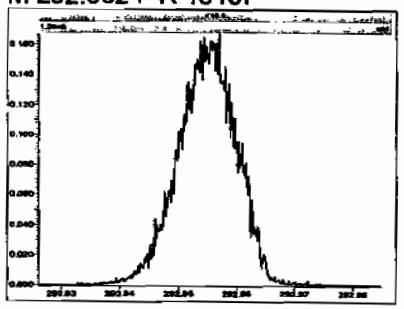

M 304.9824 R 14289

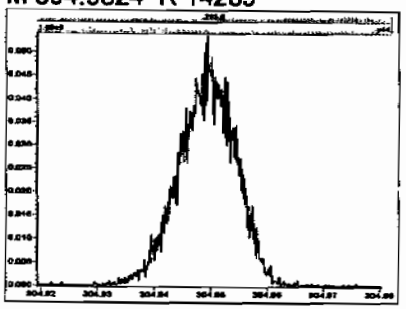

M 318.9792 R 13655

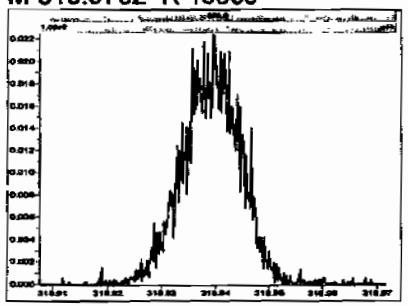

M 330.9792 R 12819

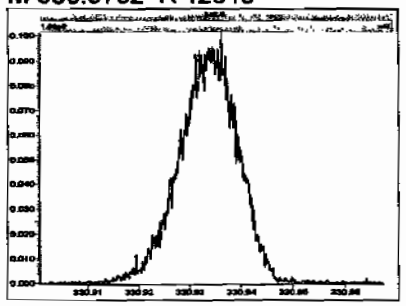

M 342.9792 R 13085

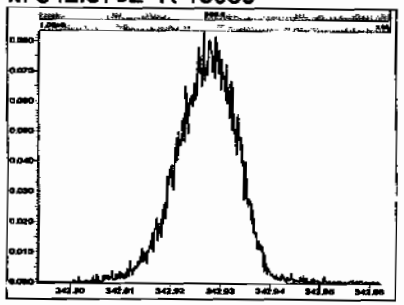

M 354.9792 R 13440

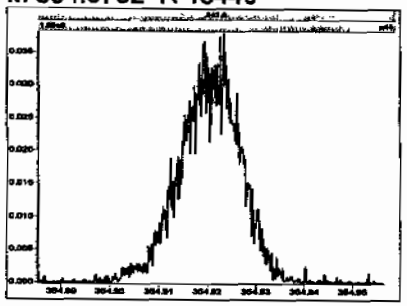

M 366.9792 R 11572

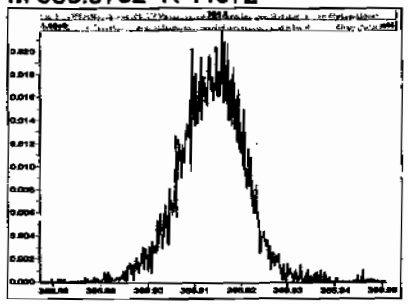

M 380.9760 R 13365

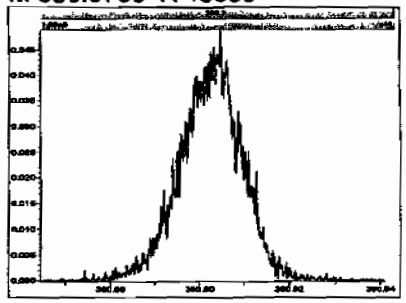

M 392.9760 R 13660

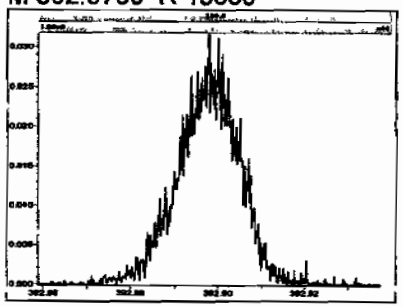

M 404.9760 R 13160

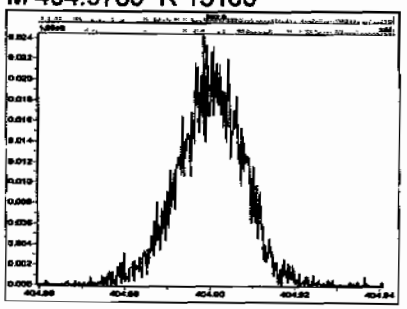

M 416.9760 R 15061

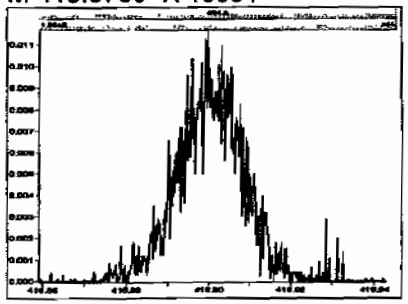

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:36 Pacific Standard Time

M 330.9792 R 13661

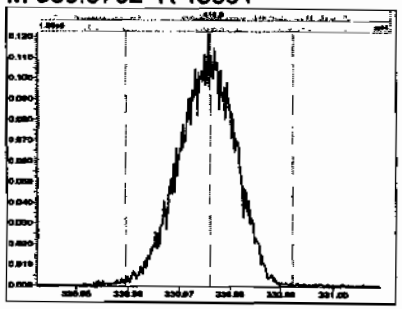

M 342.9792 R 12688

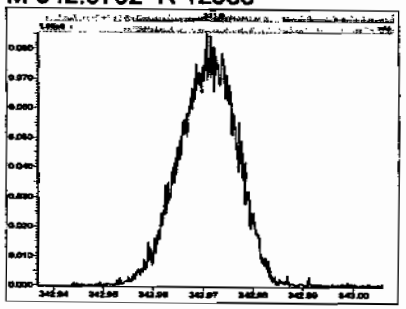

M 354.9792 R 13813

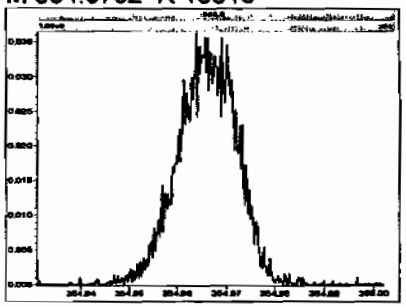

M 366.9792 R 13735

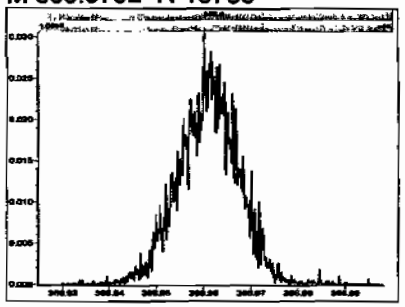

M 380.9760 R 13225

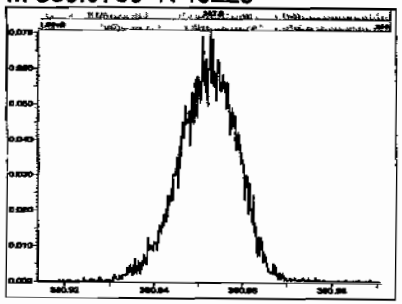

M 392.9760 R 13090

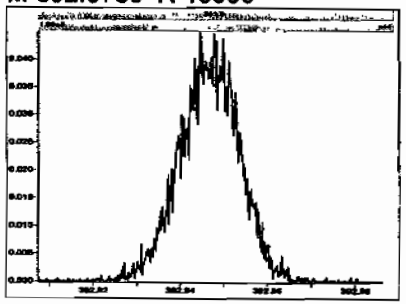

M 404.9760 R 13368

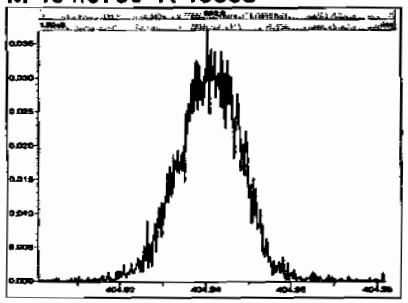

M 416.9760 R 13510

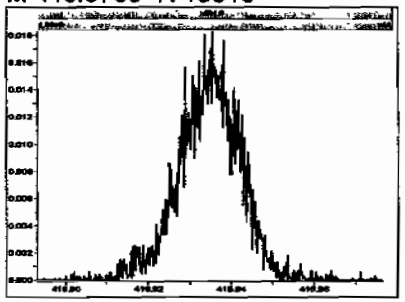

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:57 Pacific Standard Time

M 366.9792 R 13441

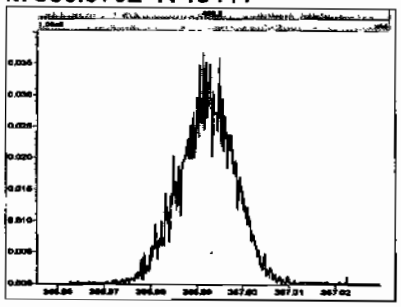

M 380.9760 R 13367

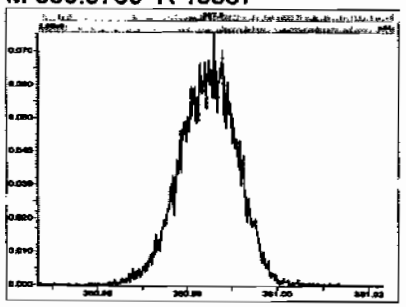

M 392.9760 R 13733

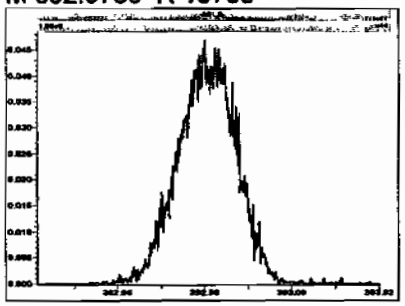

M 404.9760 R 12136

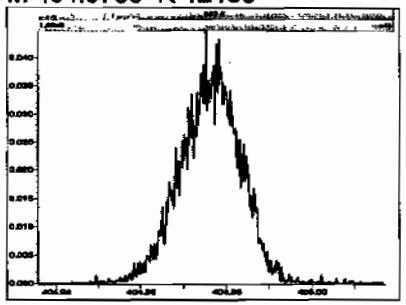

M 416.9760 R 13887

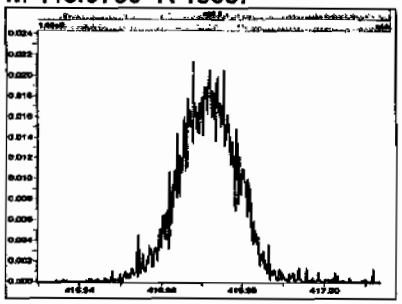

M 430.9728 R 13515

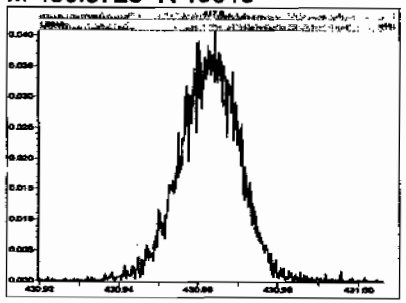

M 442.9728 R 14124

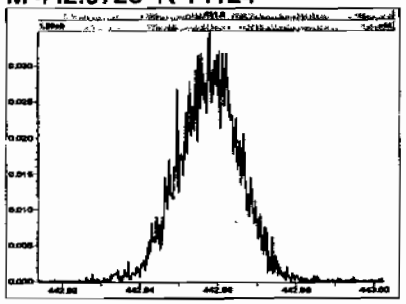

M 454.9728 R 13225

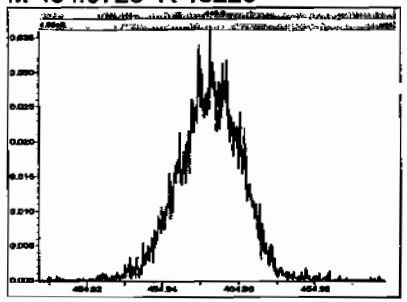

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:16 Pacific Standard Time

M 404.9760 R 13299

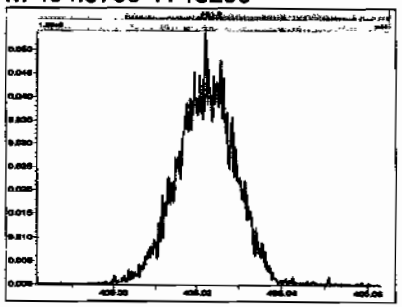

M 416.9760 R 14124

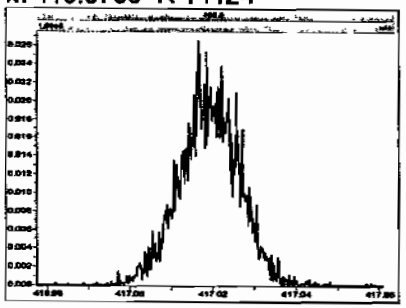

M 430.9728 R 13019

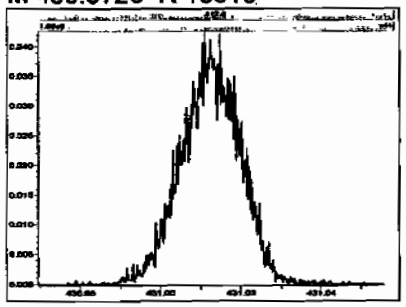

M 442.9728 R 13022

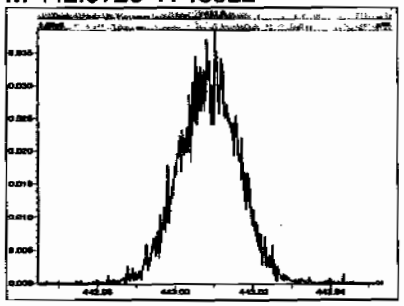

M 454.9728 R 12953

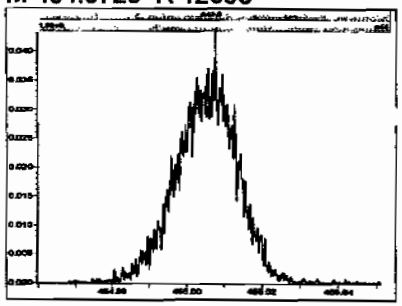

M 466.9728 R 12692

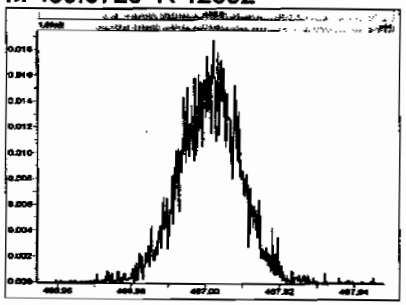

M 480.9696 R 14882

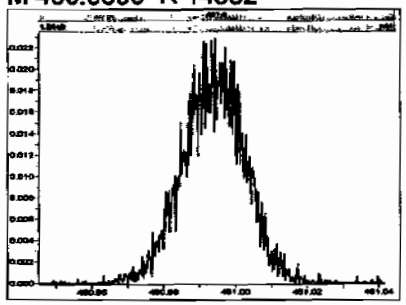

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:41 Pacific Standard Time

M 430.9728 R 12434

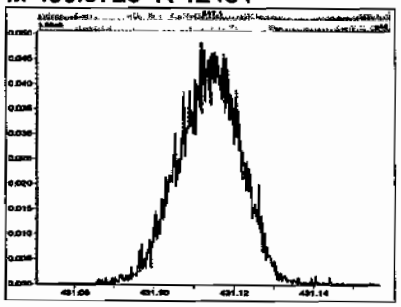

M 442.9728 R 12886

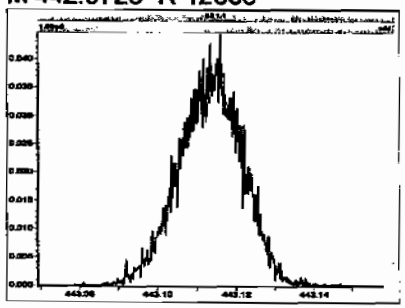

M 454.9728 R 12021

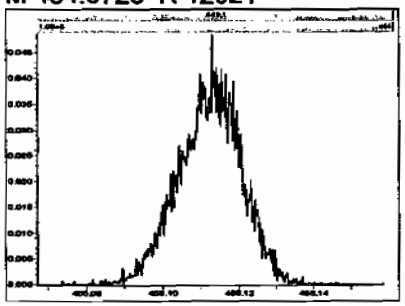

M 466.9728 R 12954

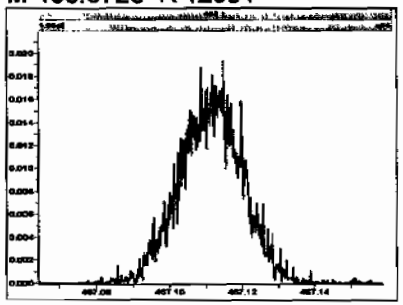

M 480.9696 R 11520

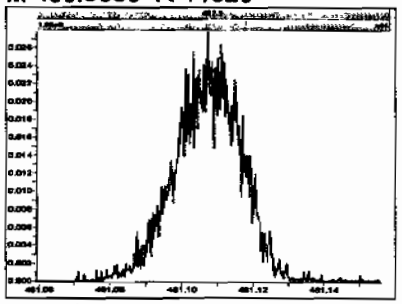

M 492.9696 R 12757

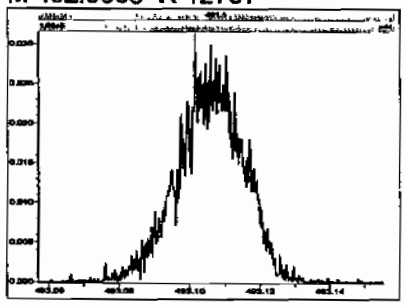

M 504.9696 R 11211

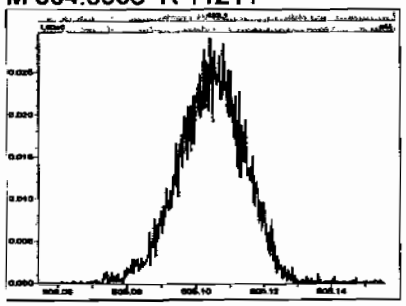

M 516.9697 R 11516

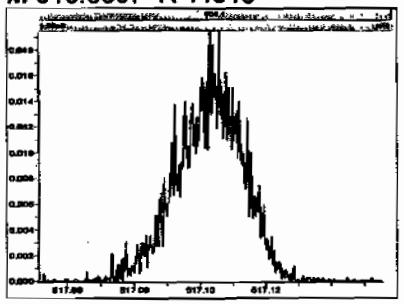

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

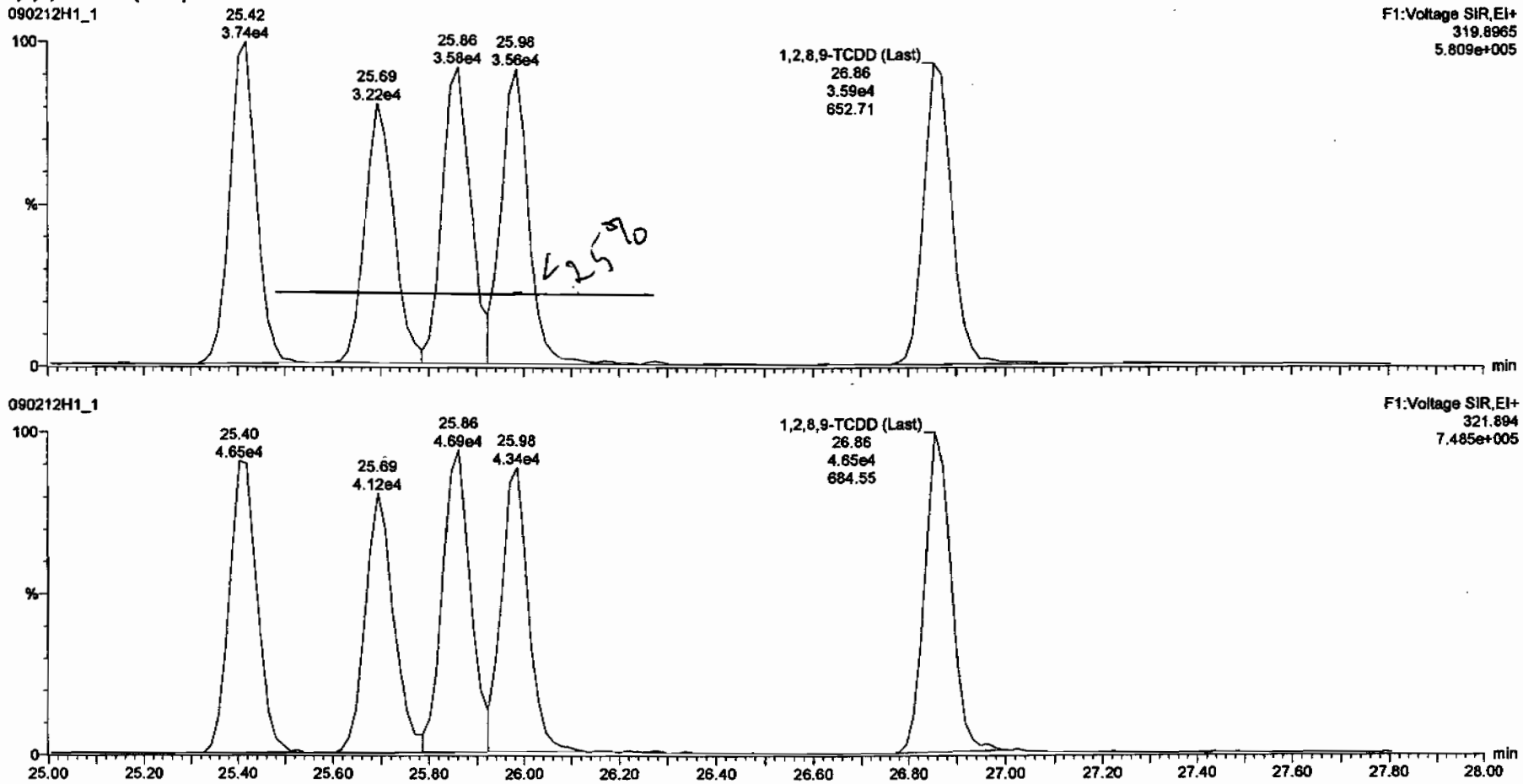

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

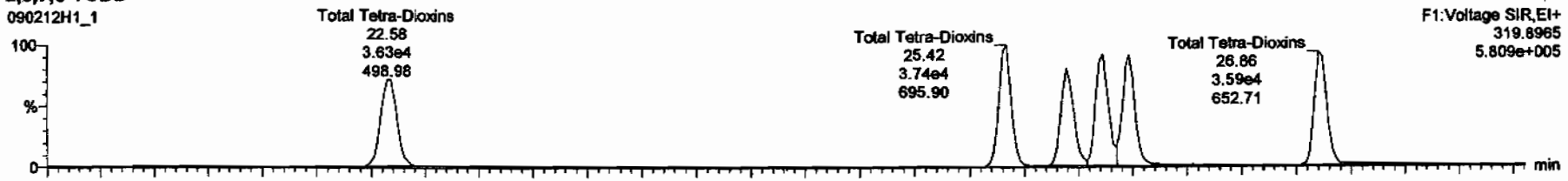

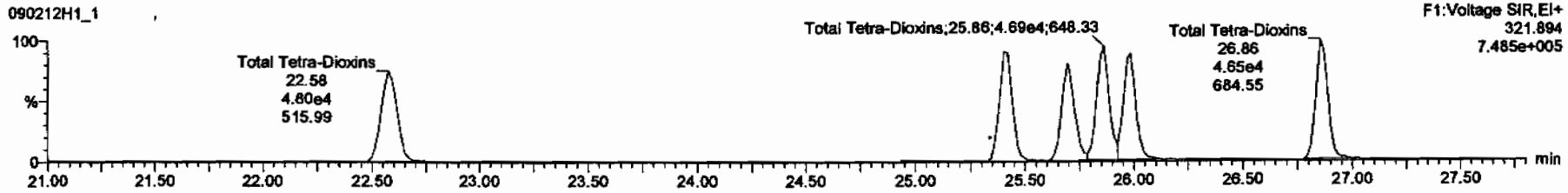

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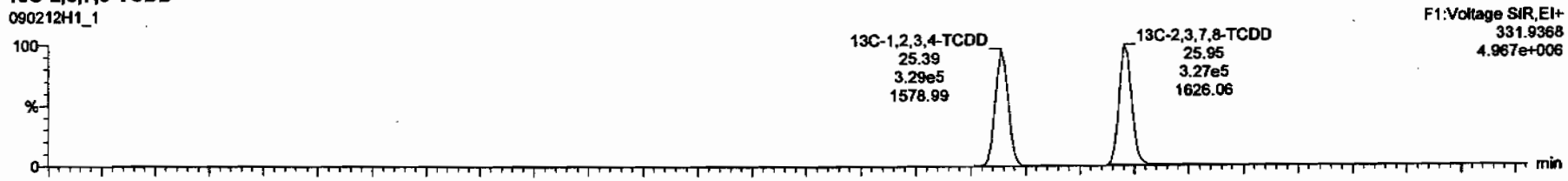

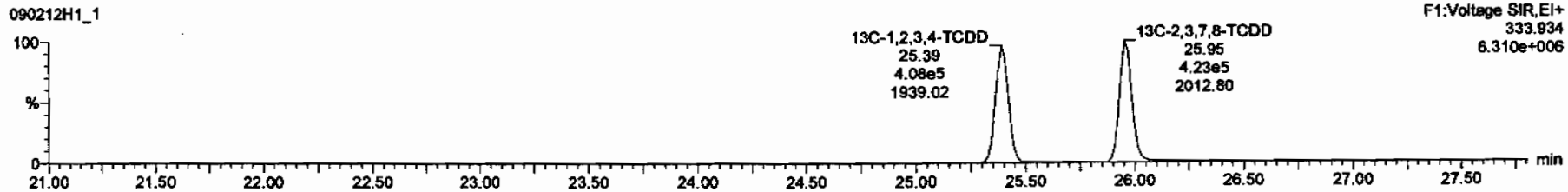

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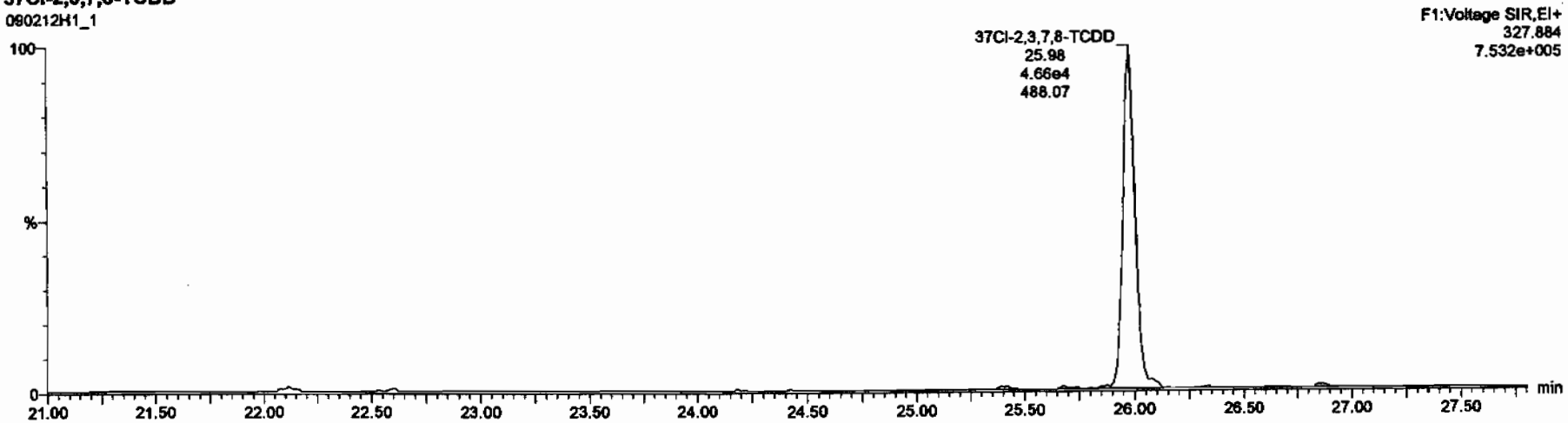

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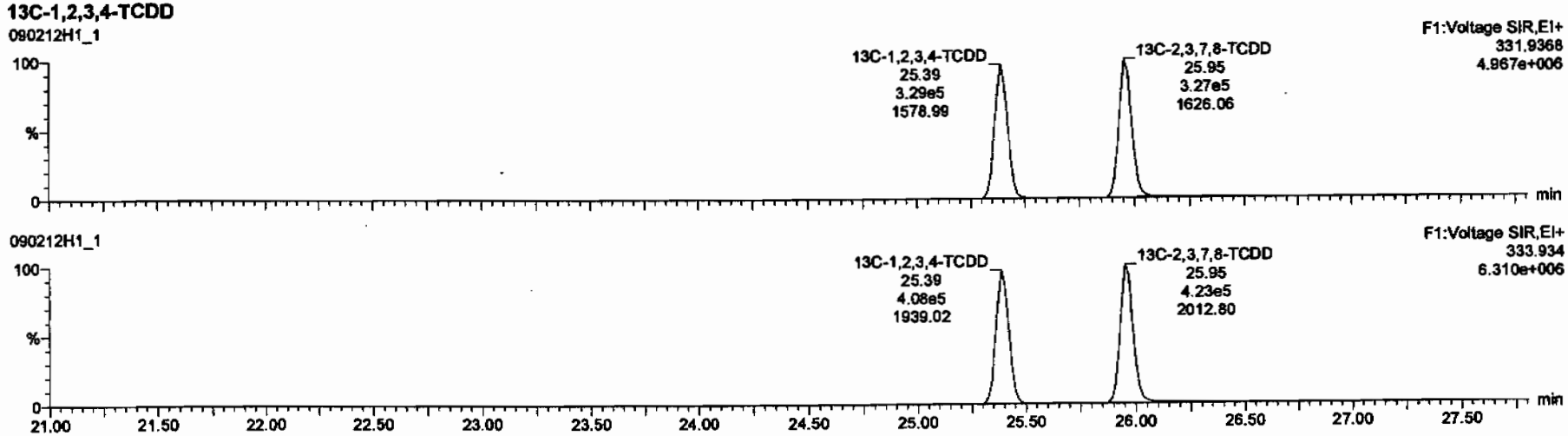

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1,2,3,7,8-PeCDD

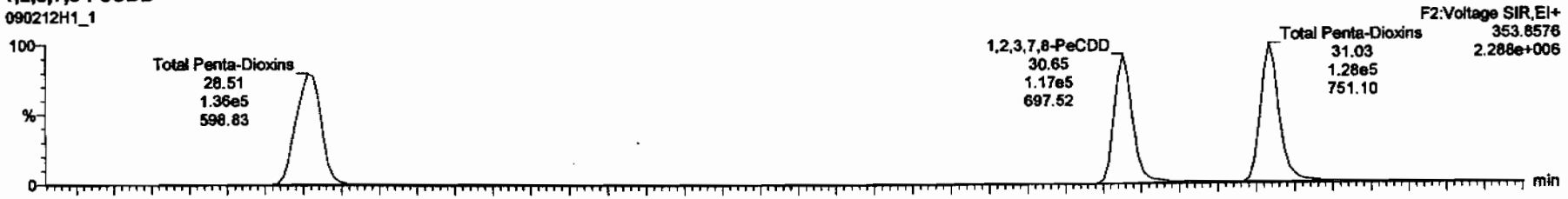

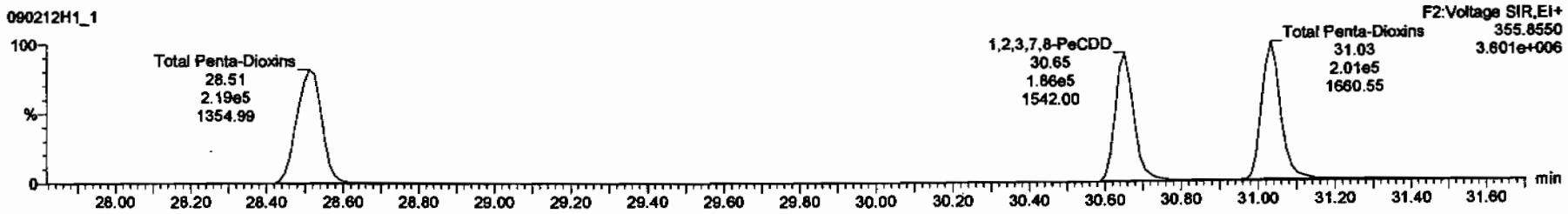

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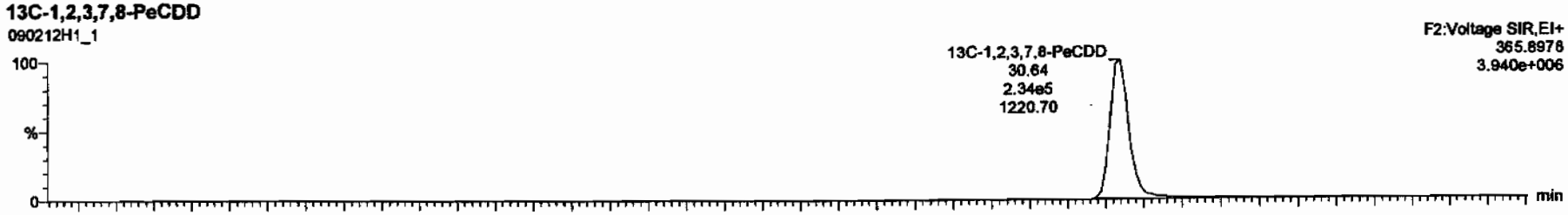

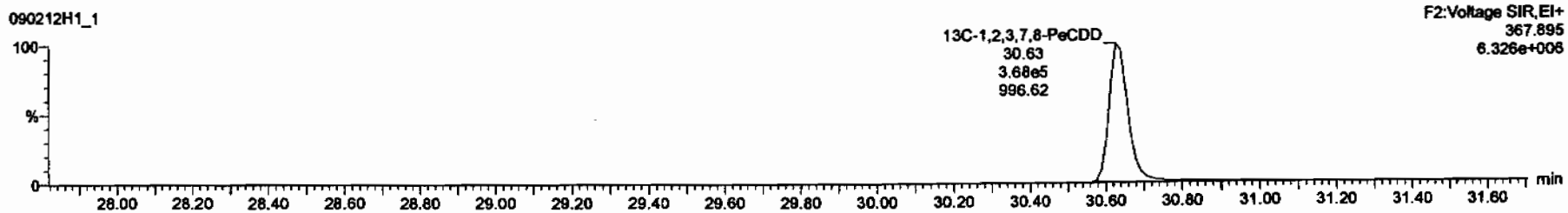

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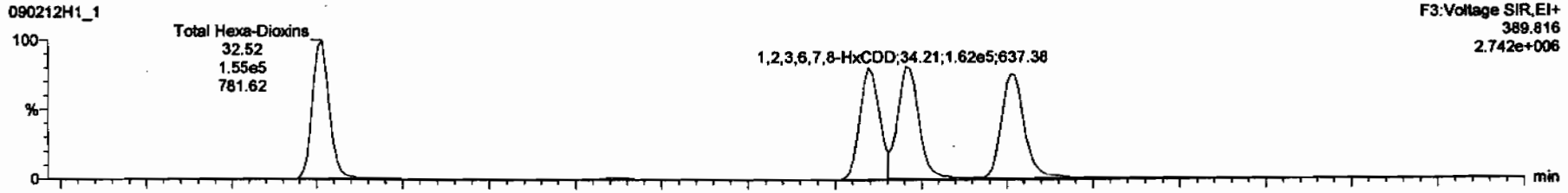

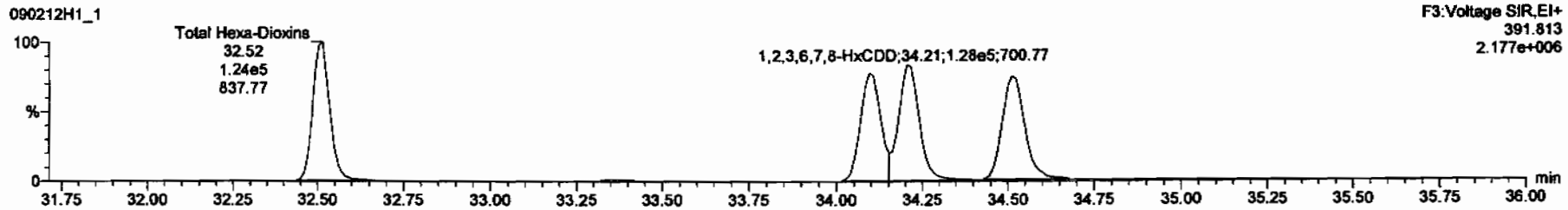

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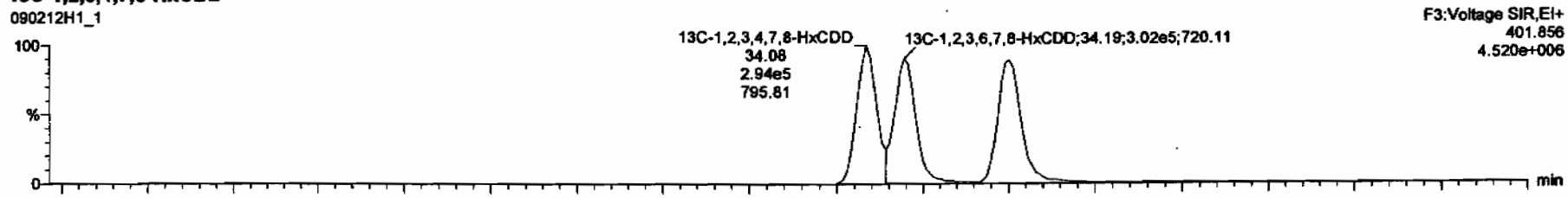

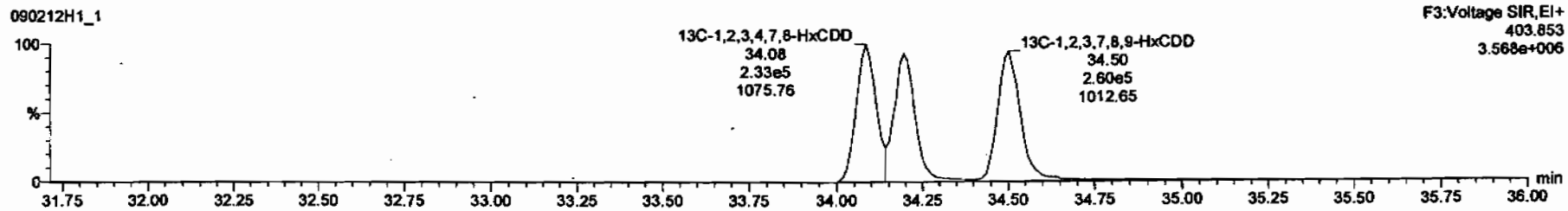

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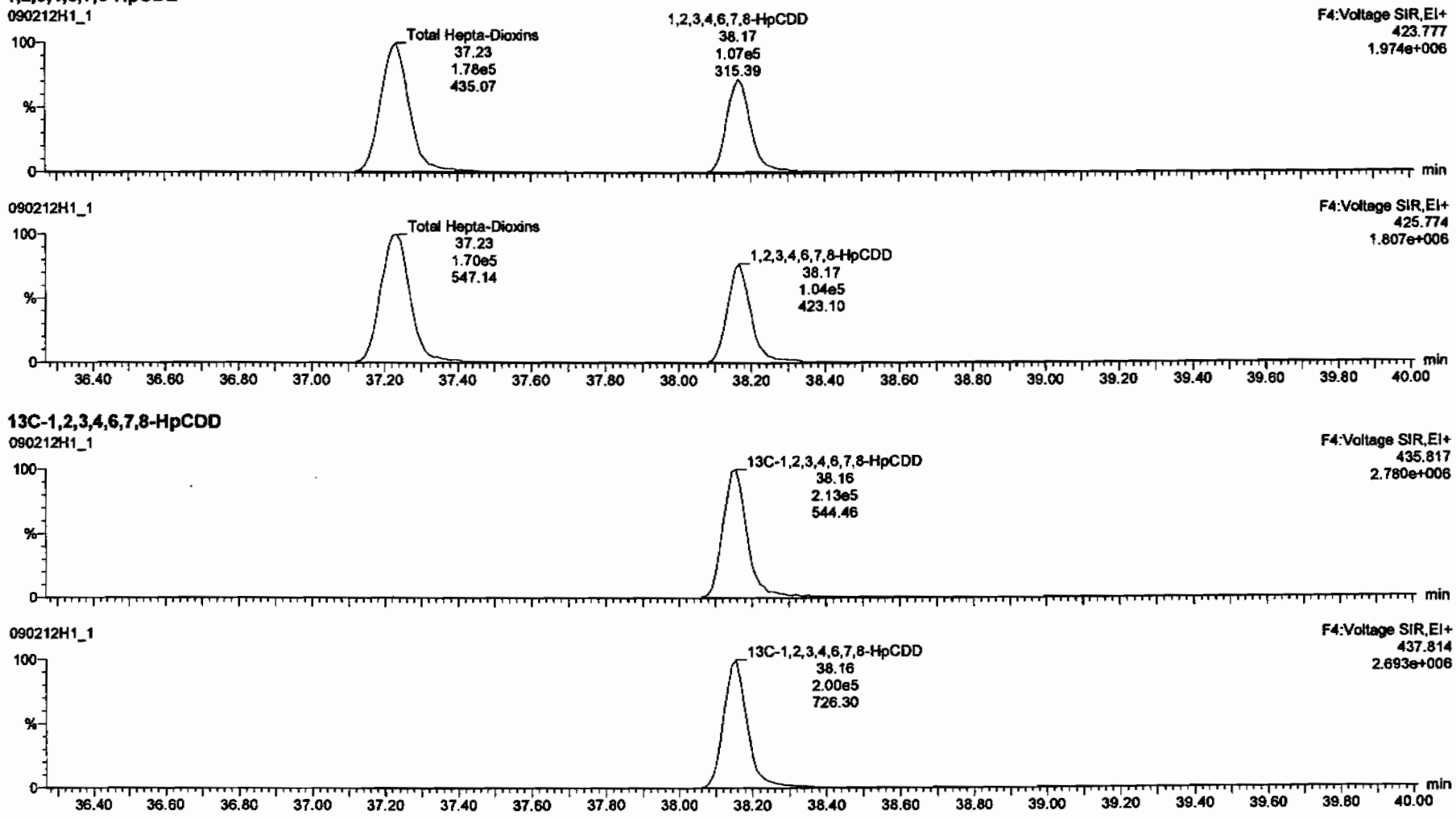

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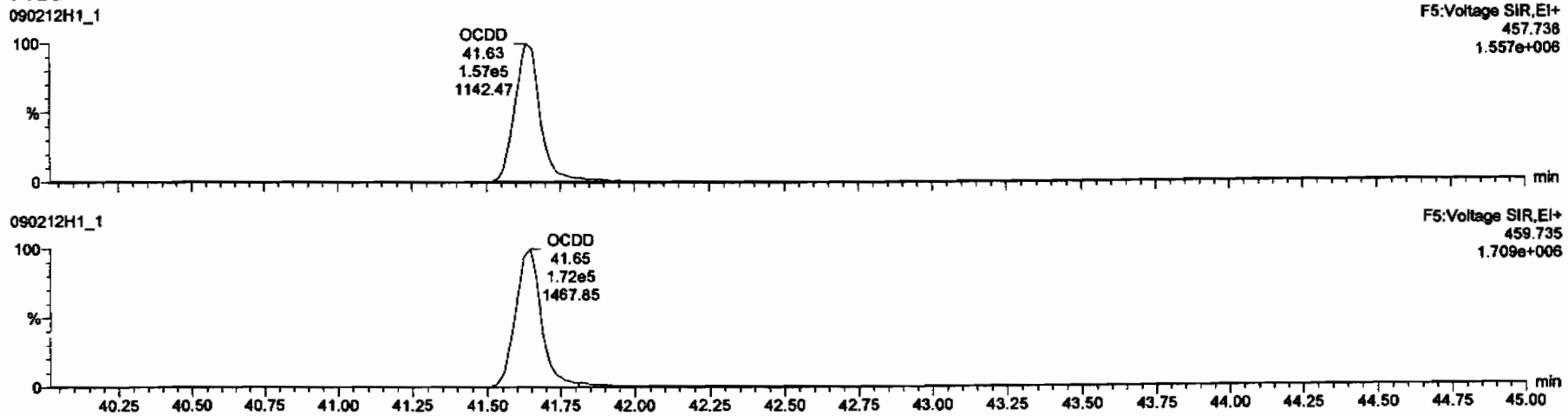

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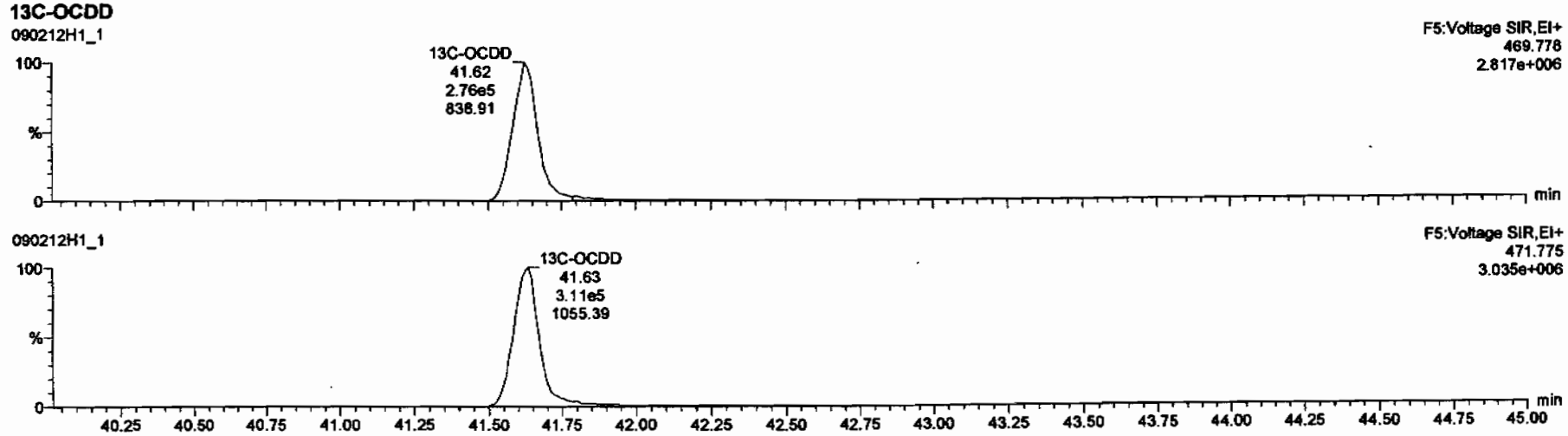

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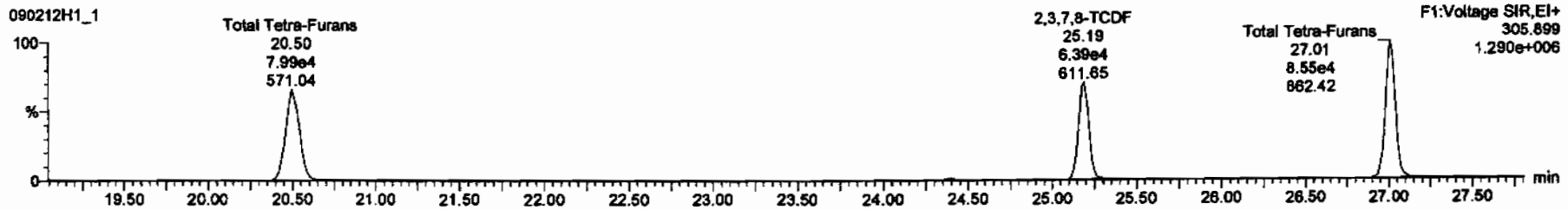

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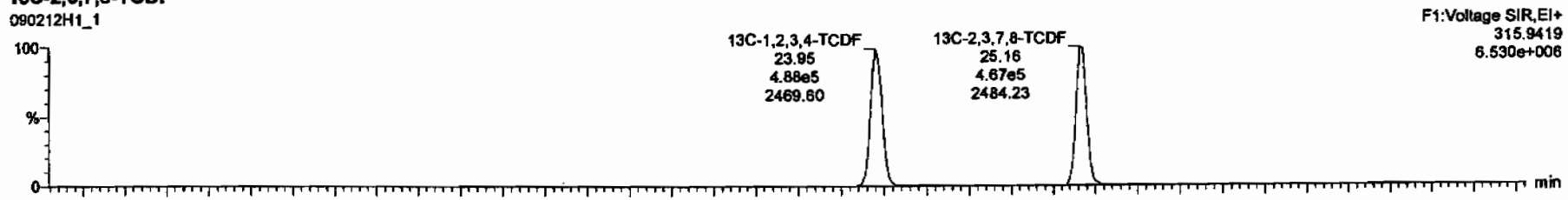

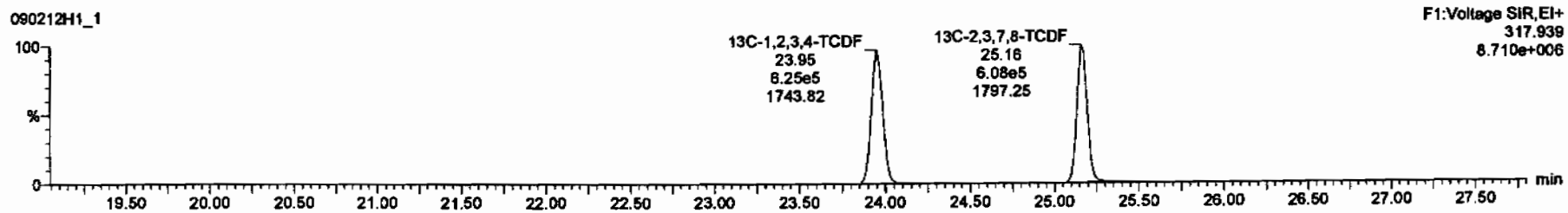

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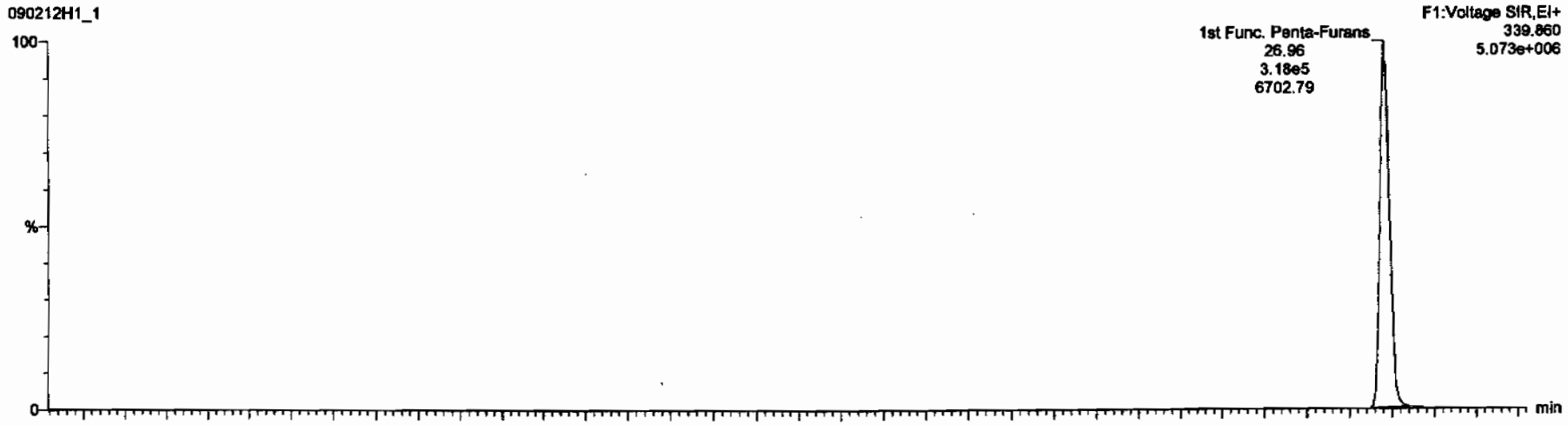

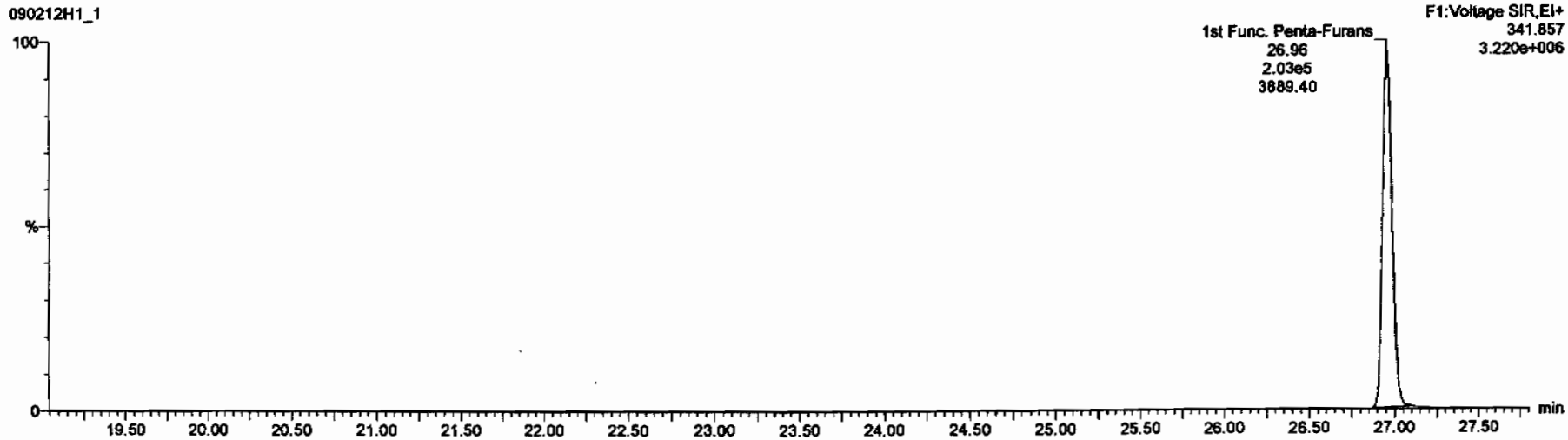

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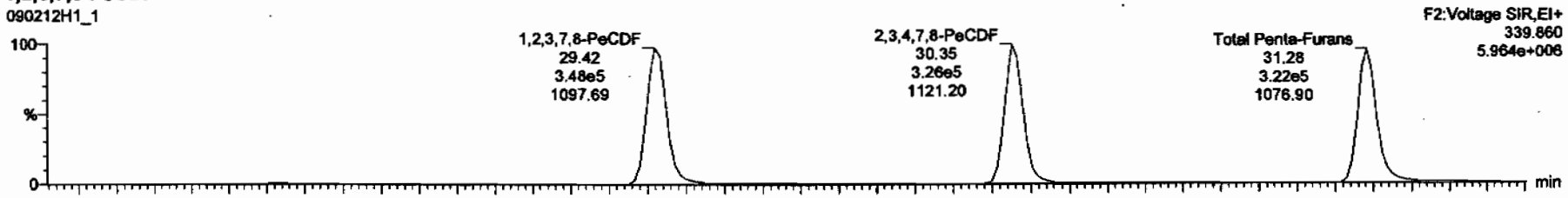

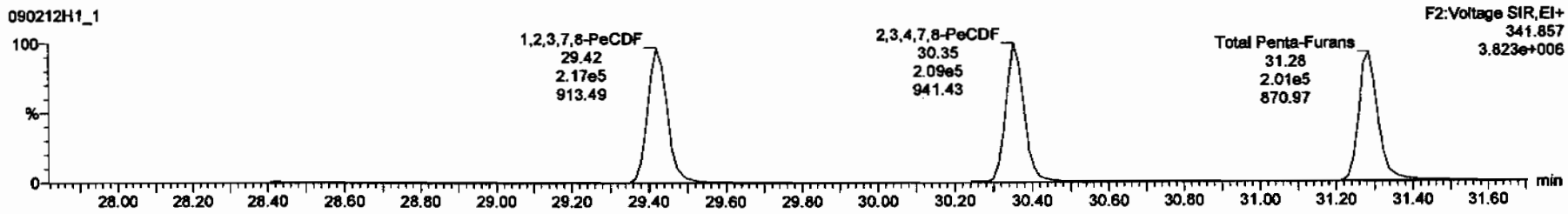

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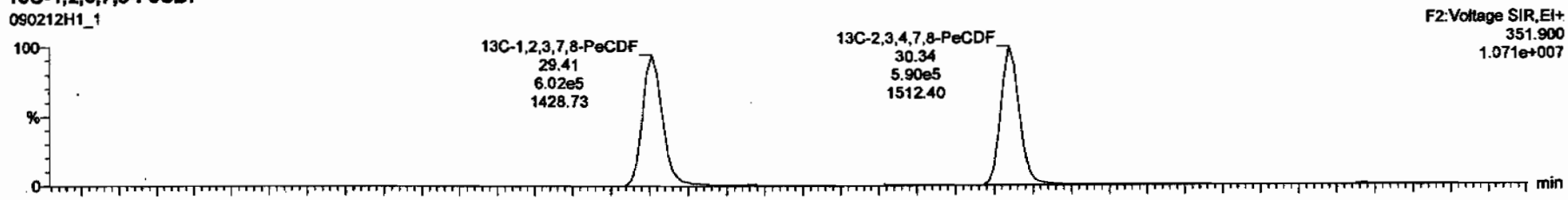

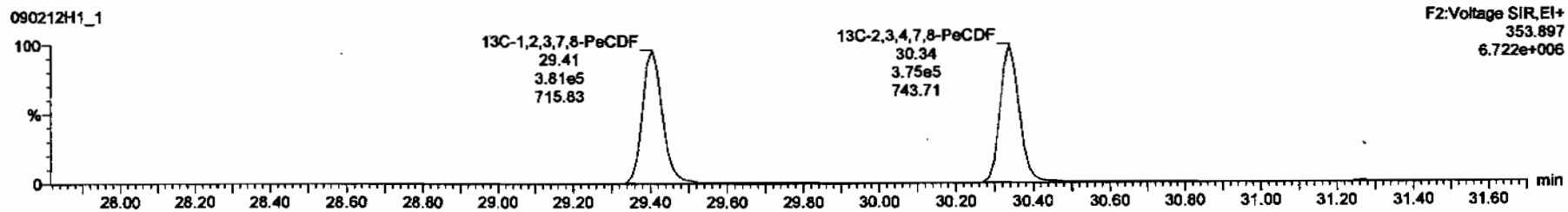

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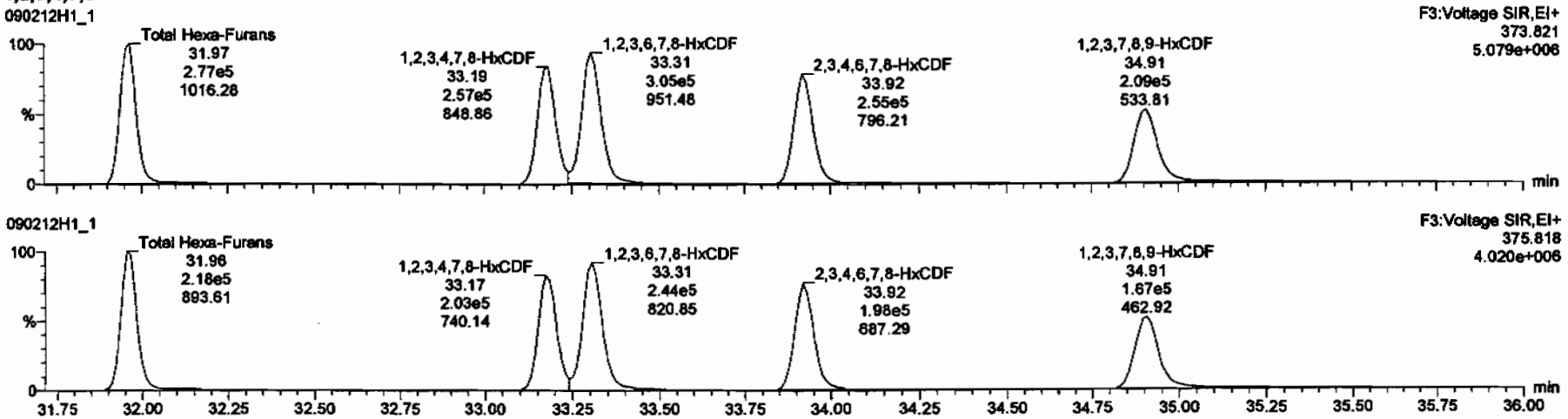

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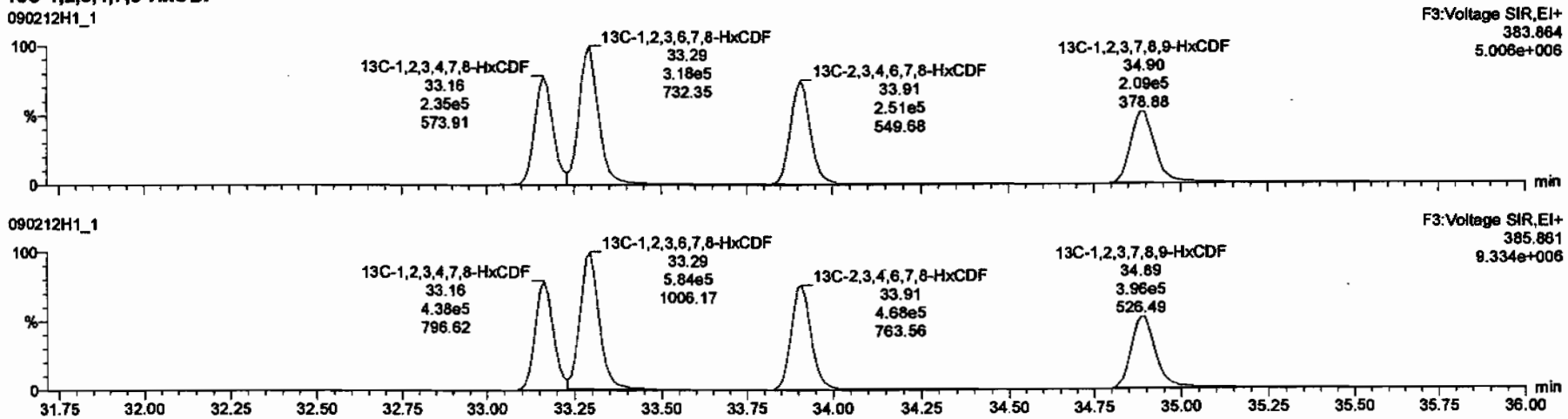

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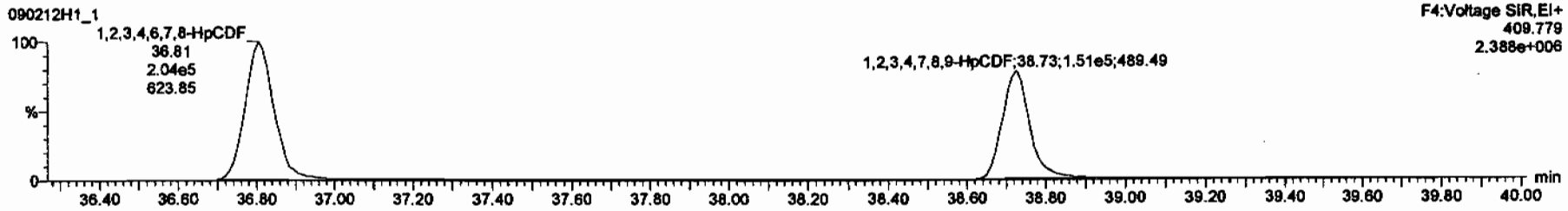

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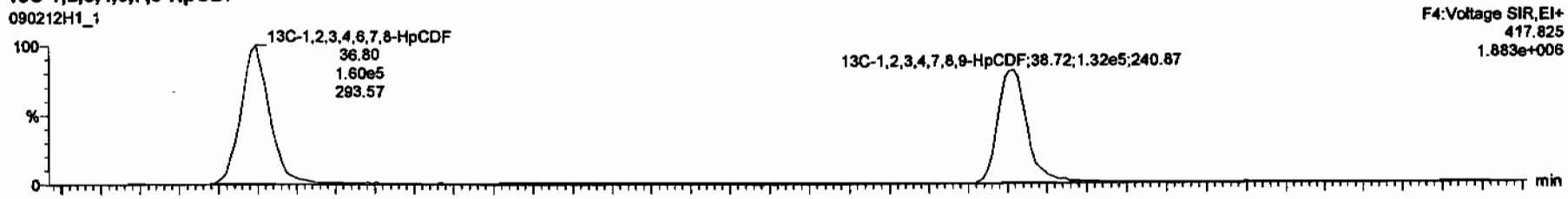

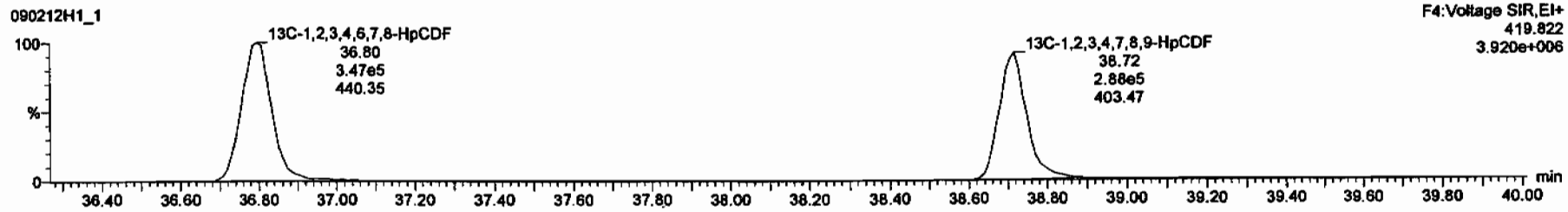

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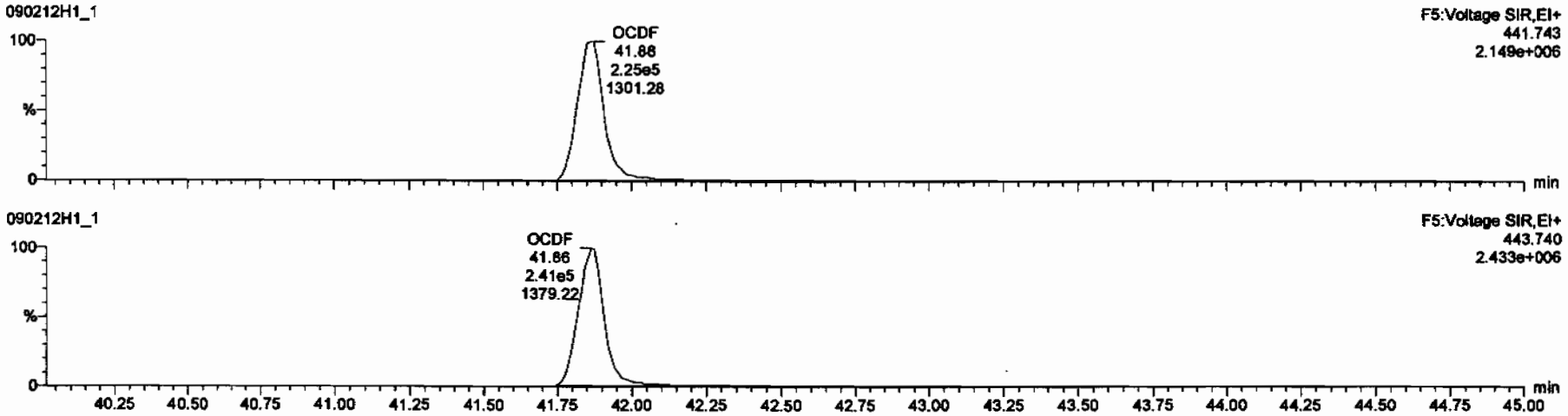

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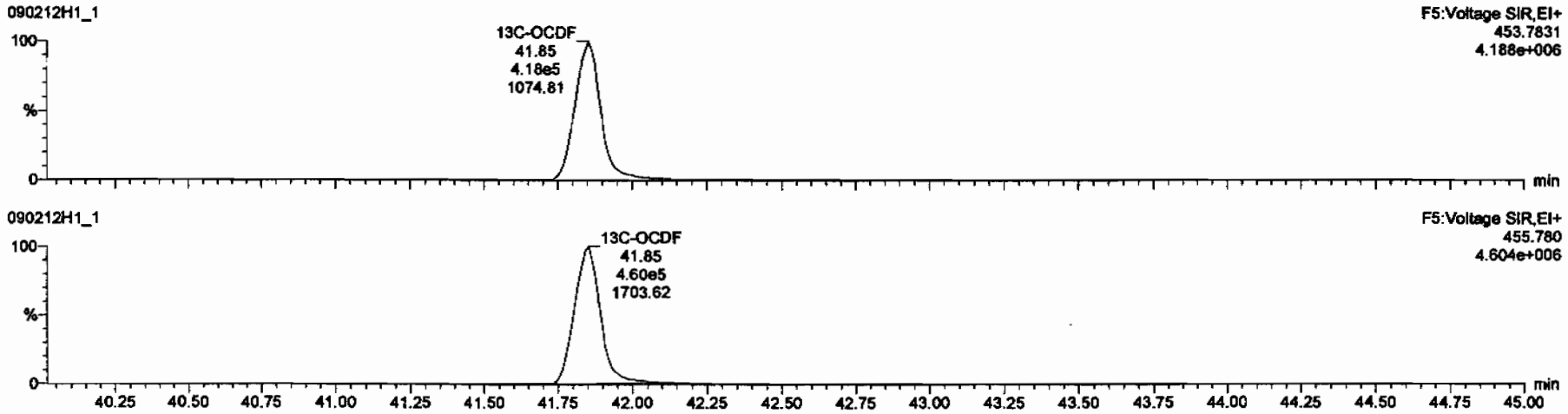

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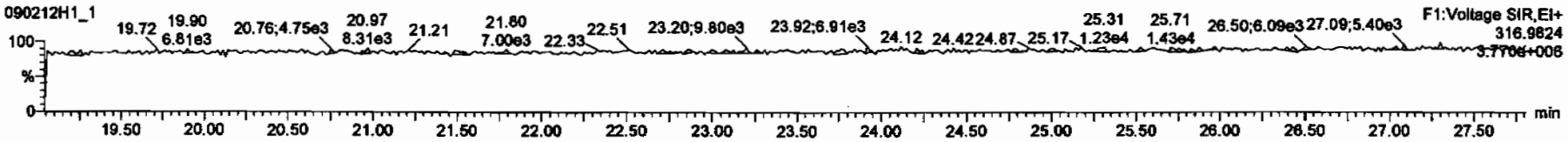

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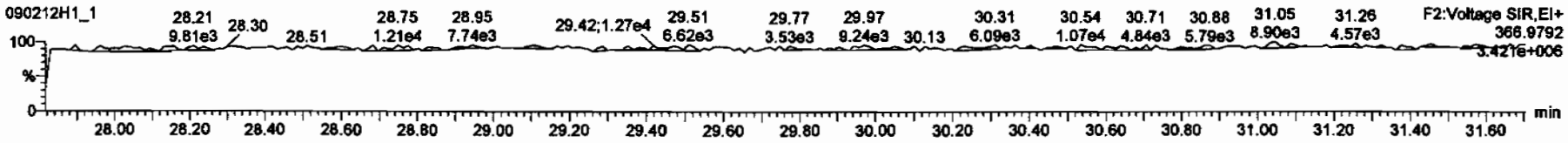

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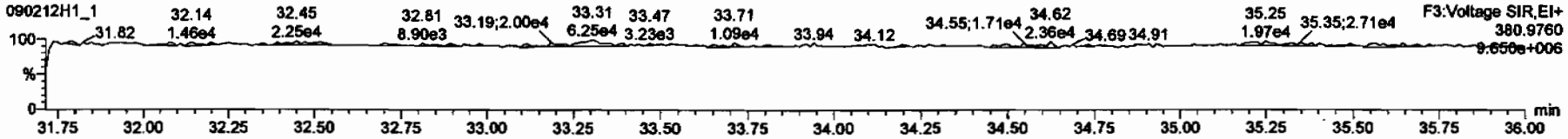

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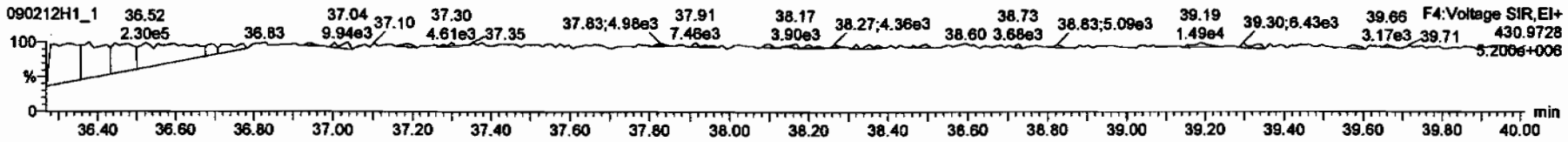

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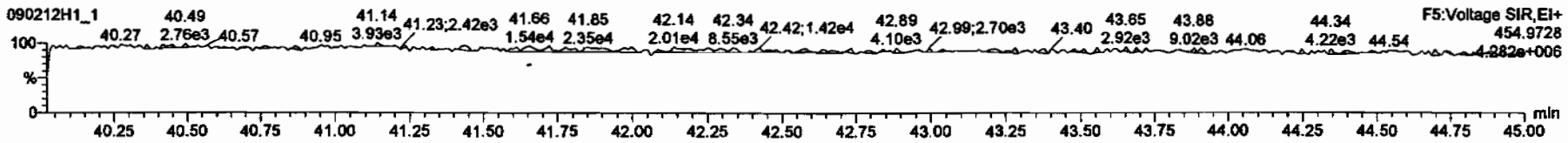

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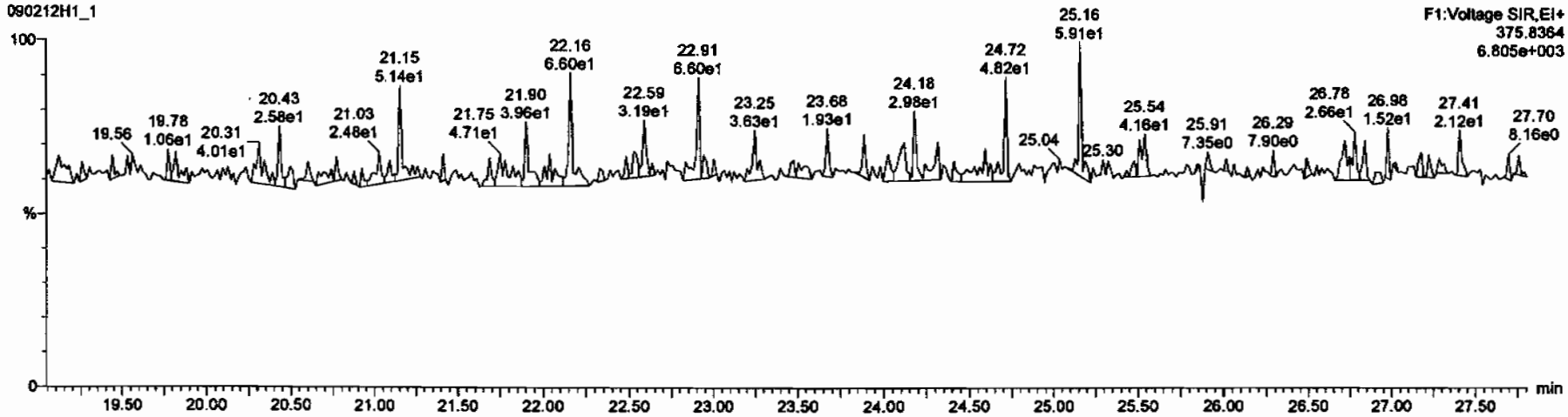

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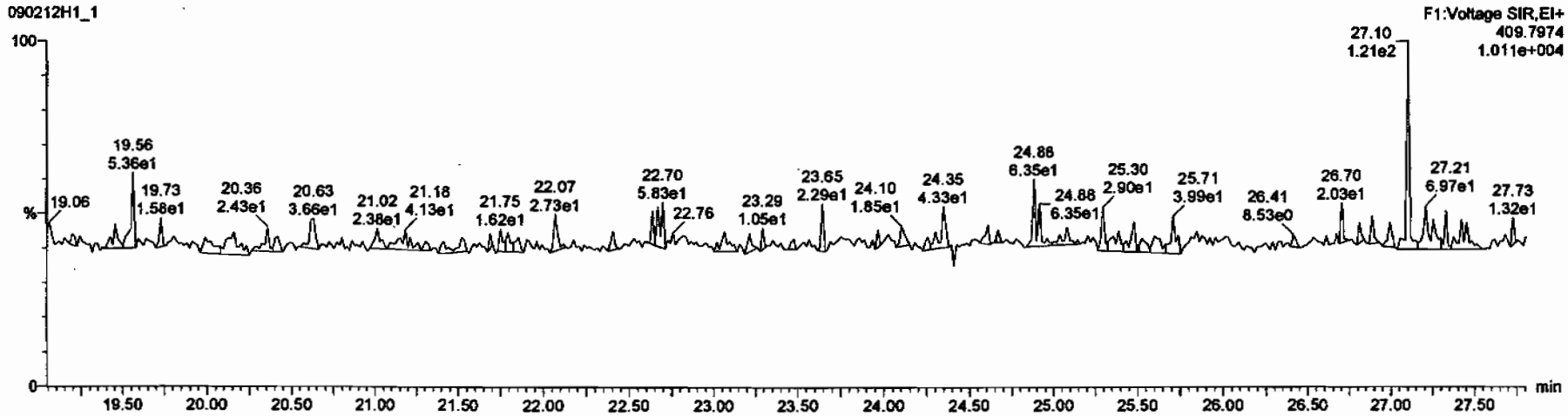

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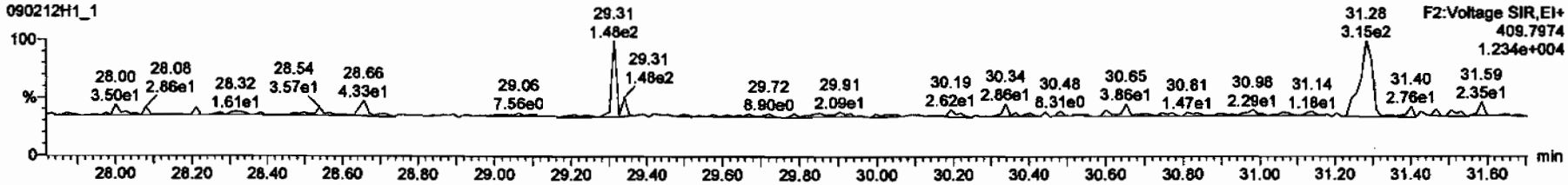

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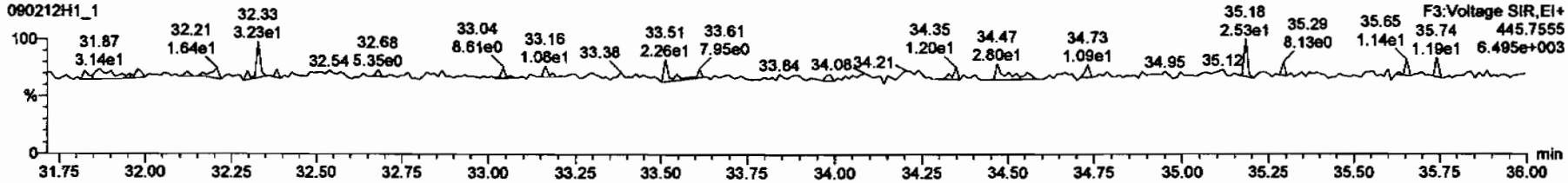

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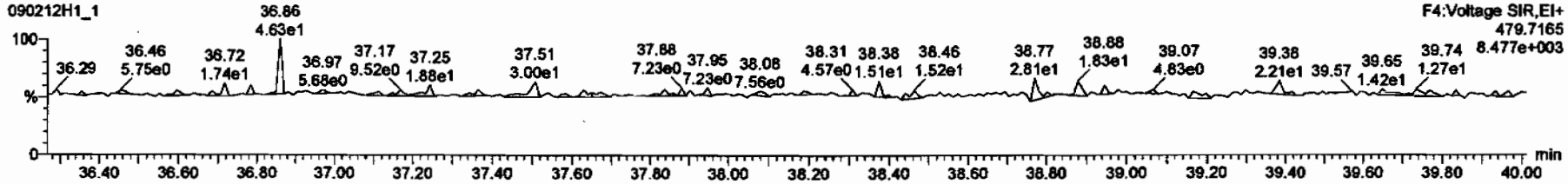

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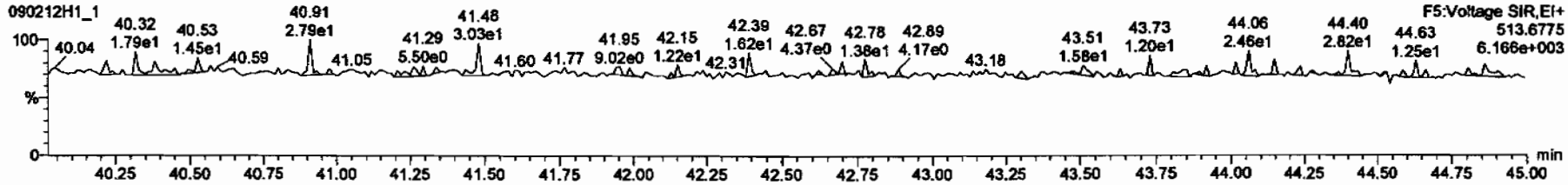

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2,3,7,8-TCDD

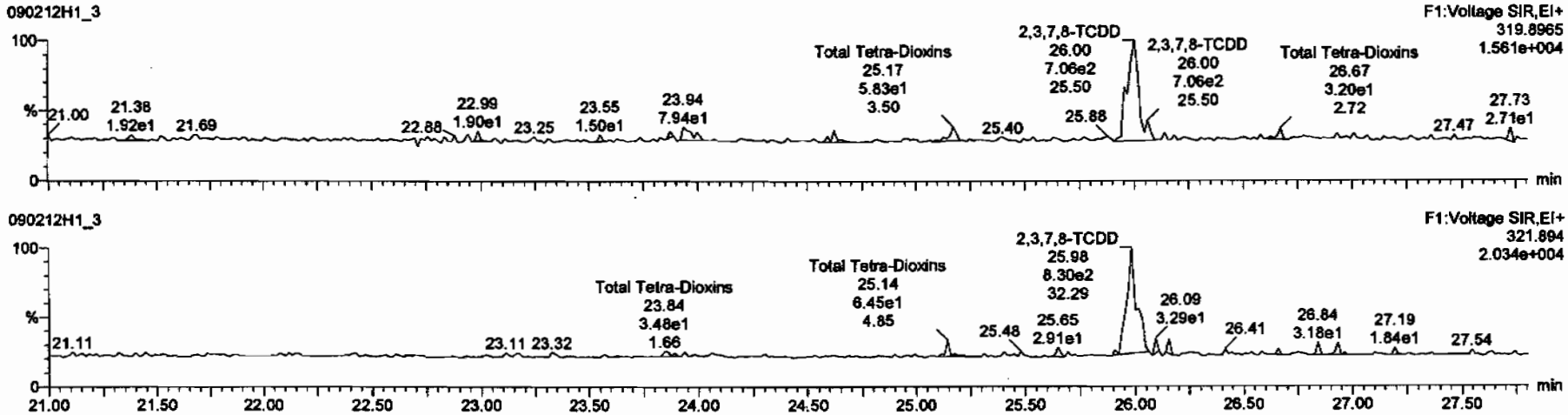

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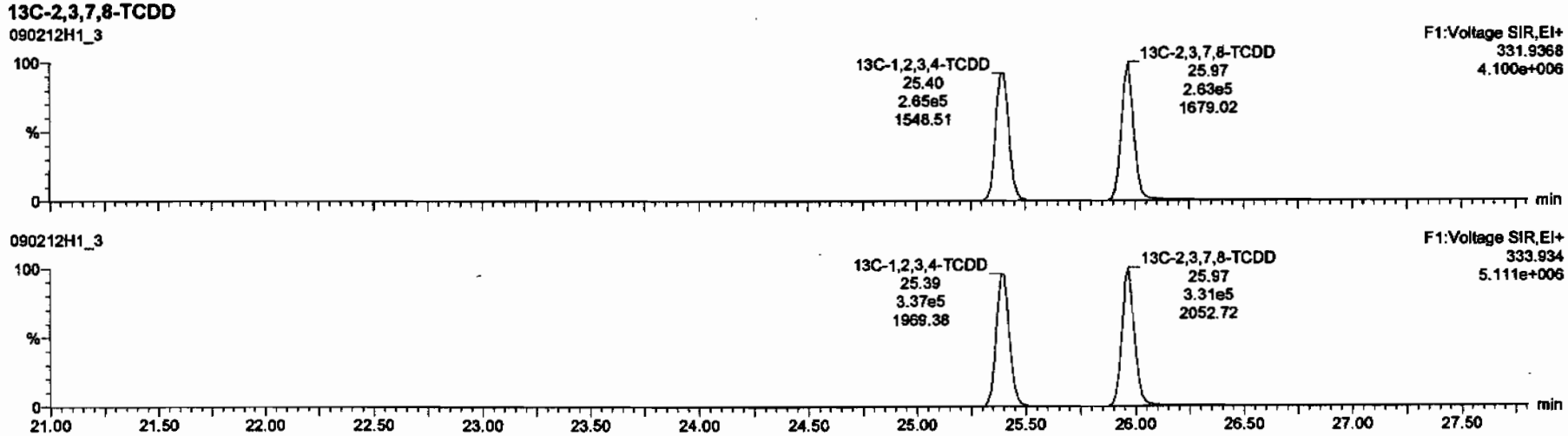

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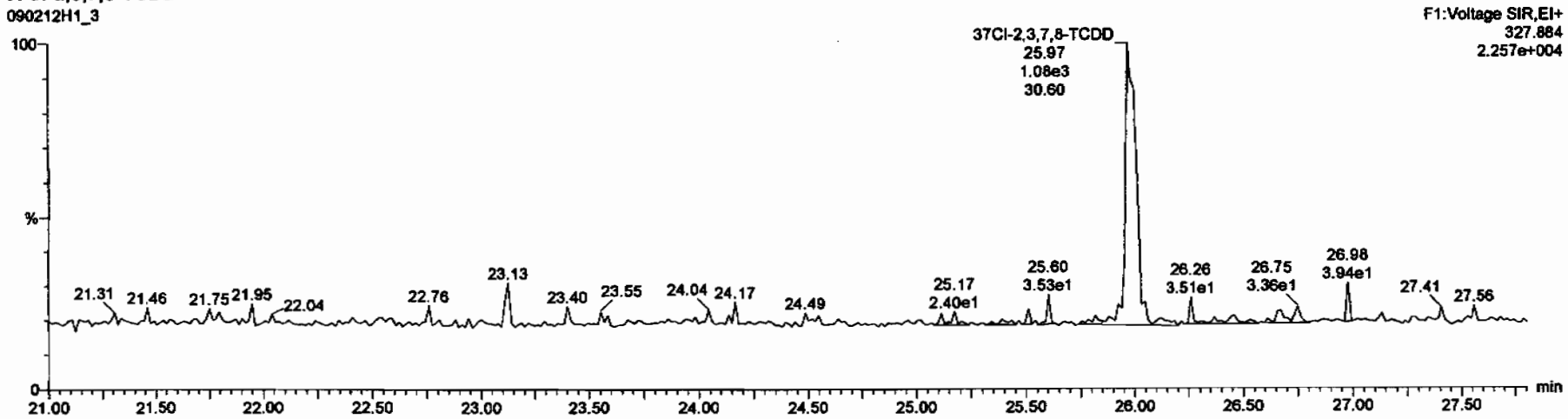

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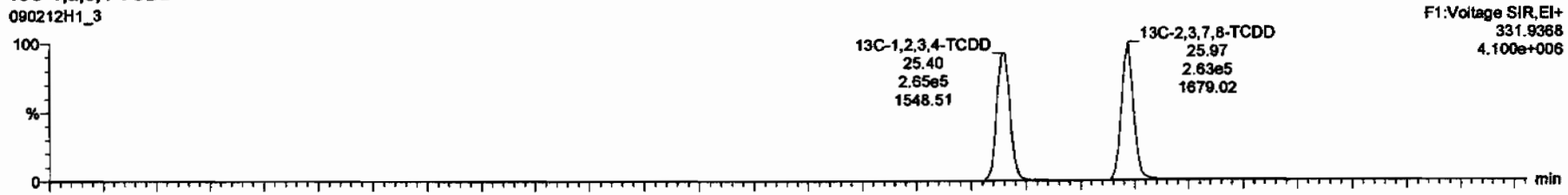

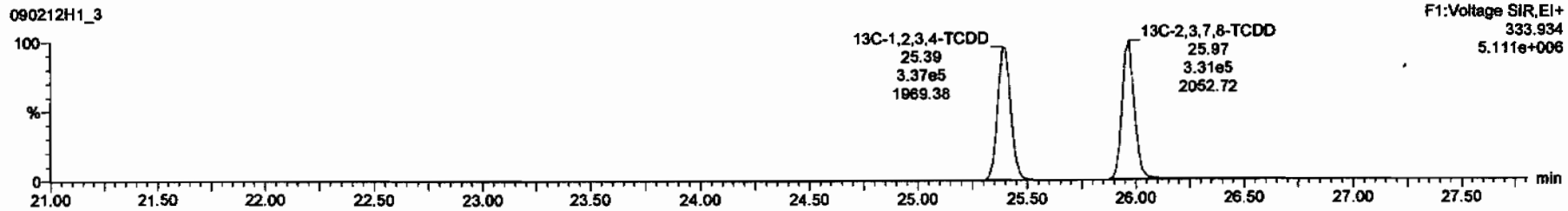

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1,2,3,7,8-PeCDD

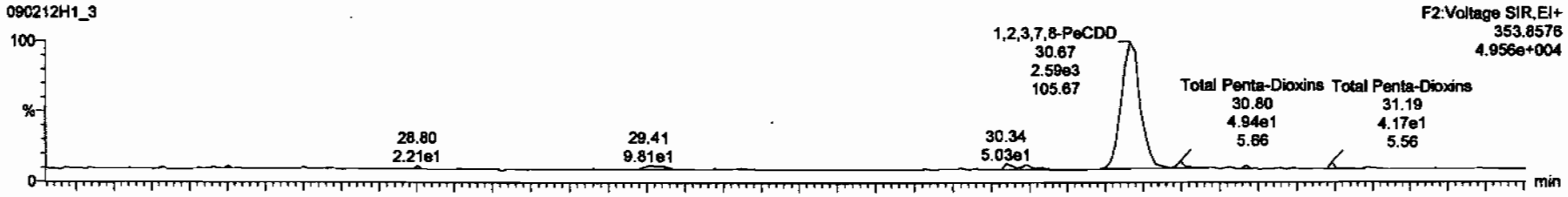

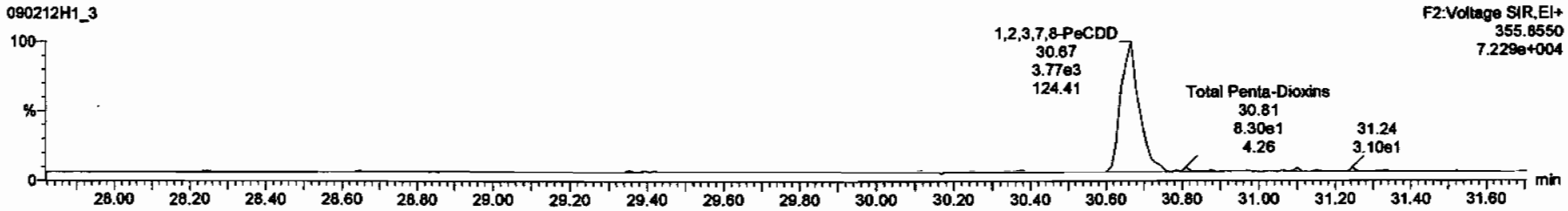

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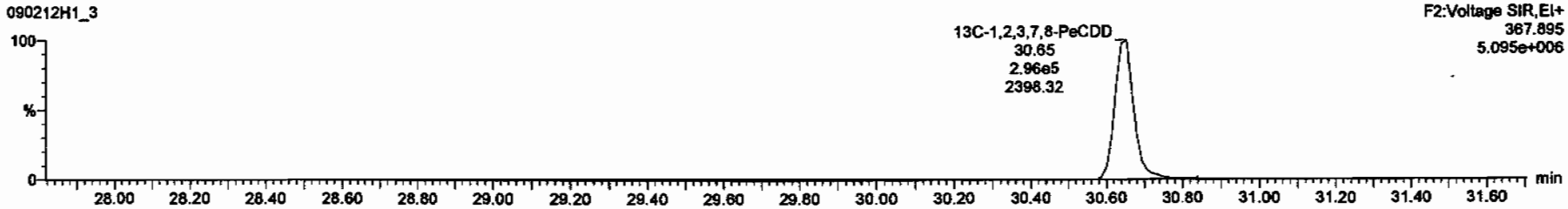

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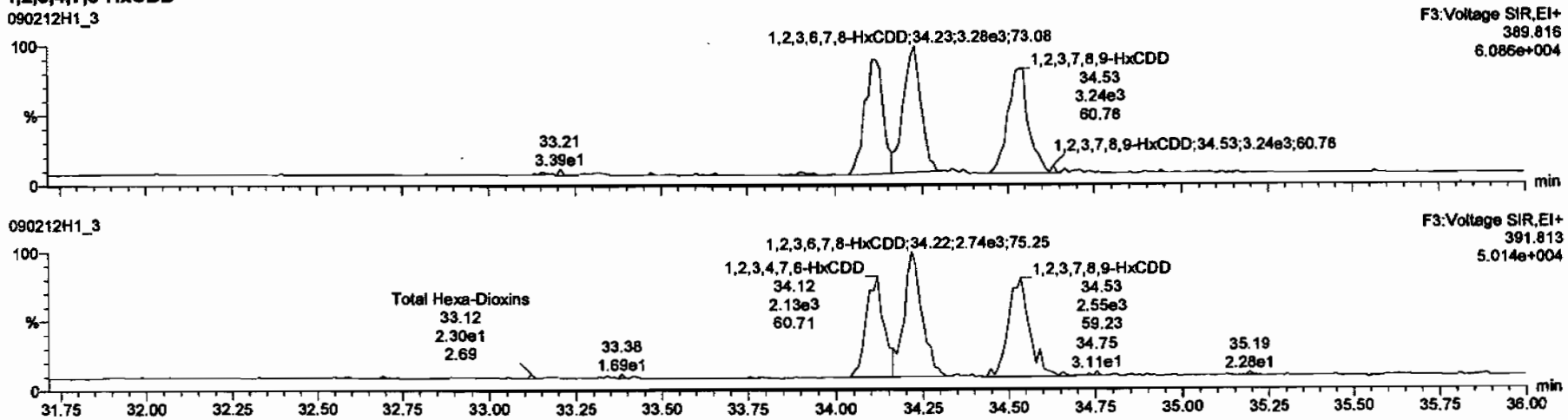

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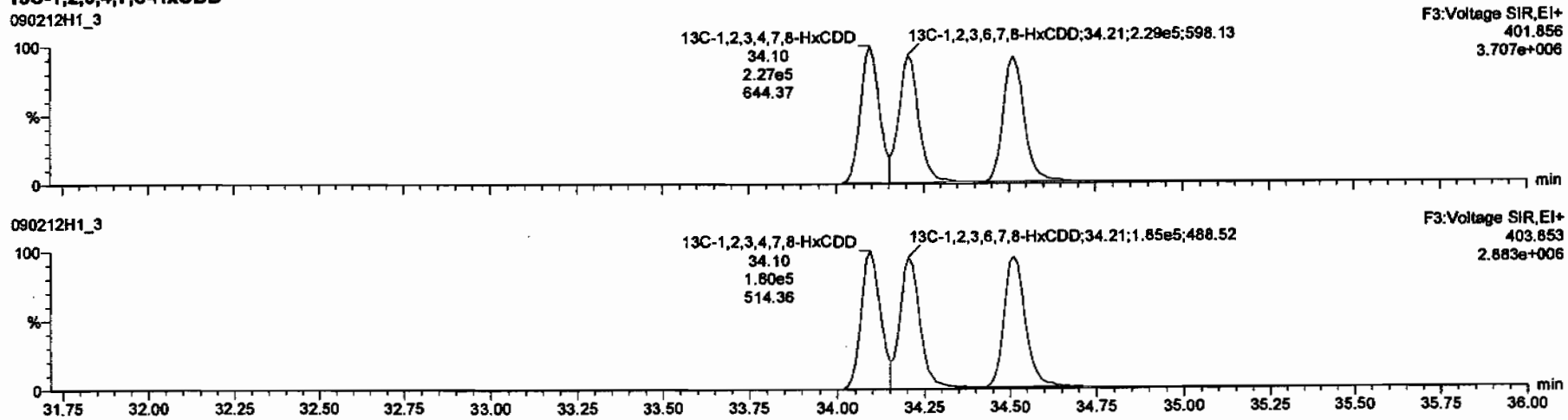

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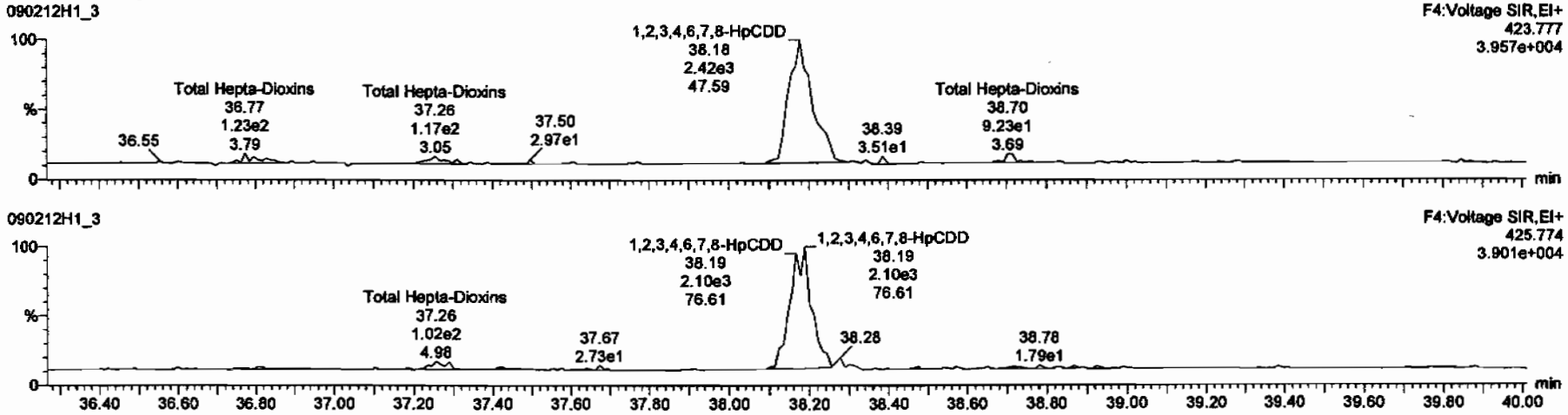

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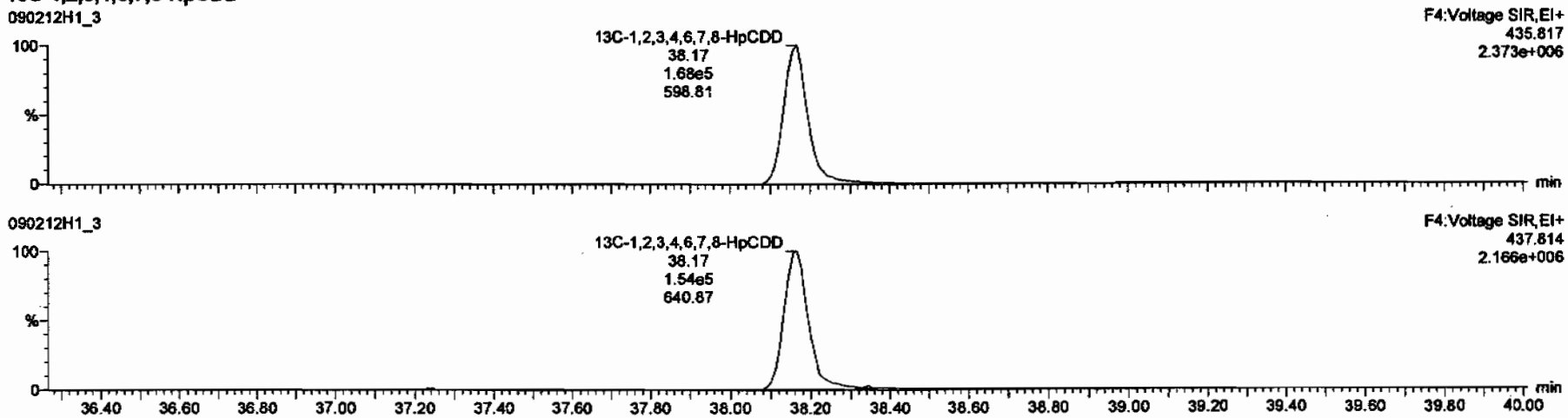

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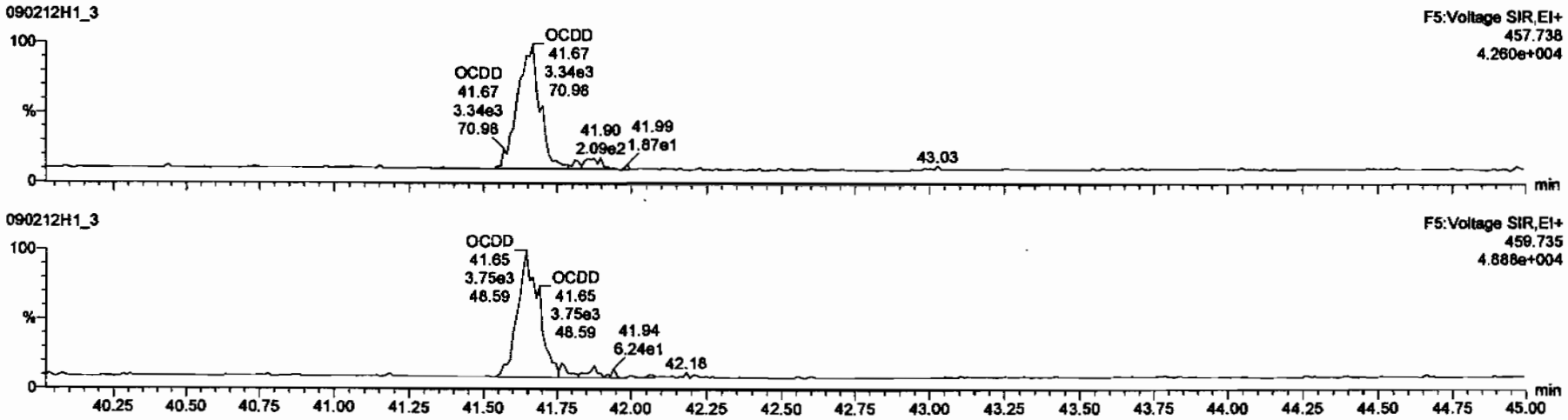

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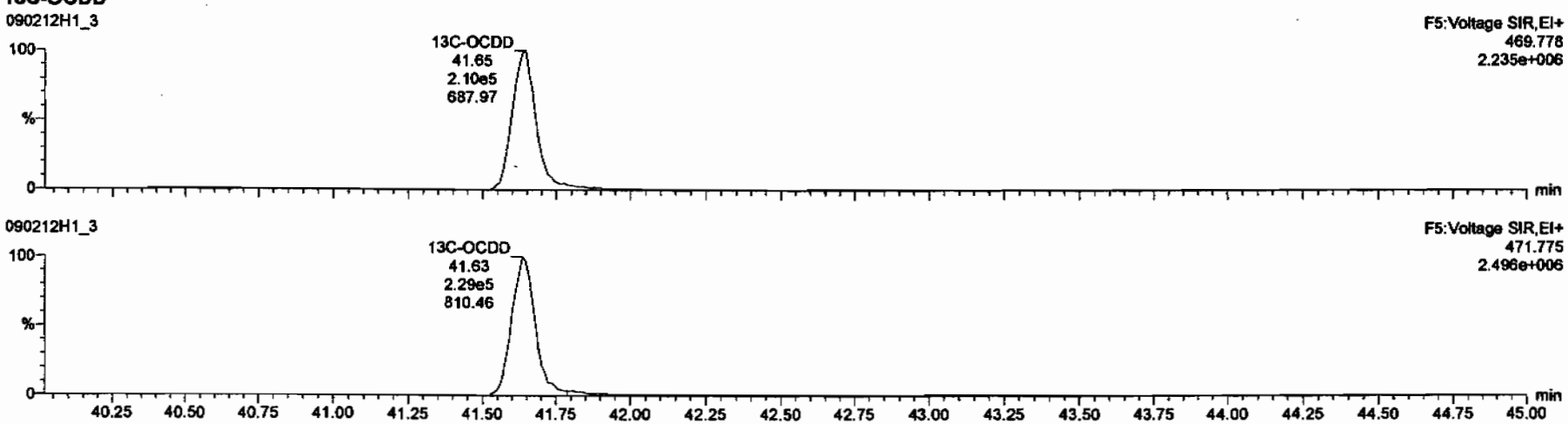

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2,3,7,8-TCDF

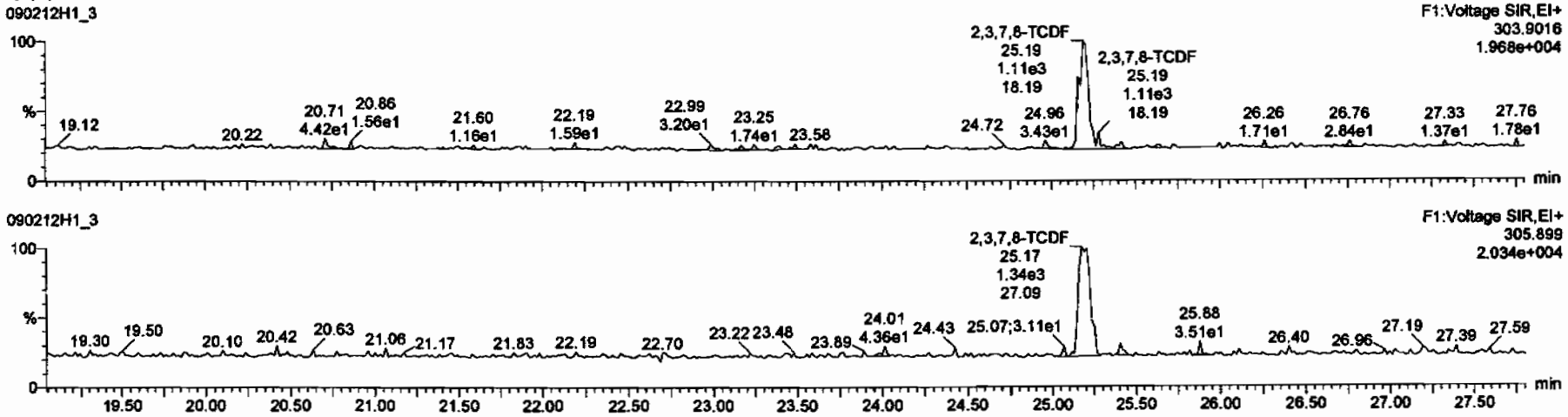

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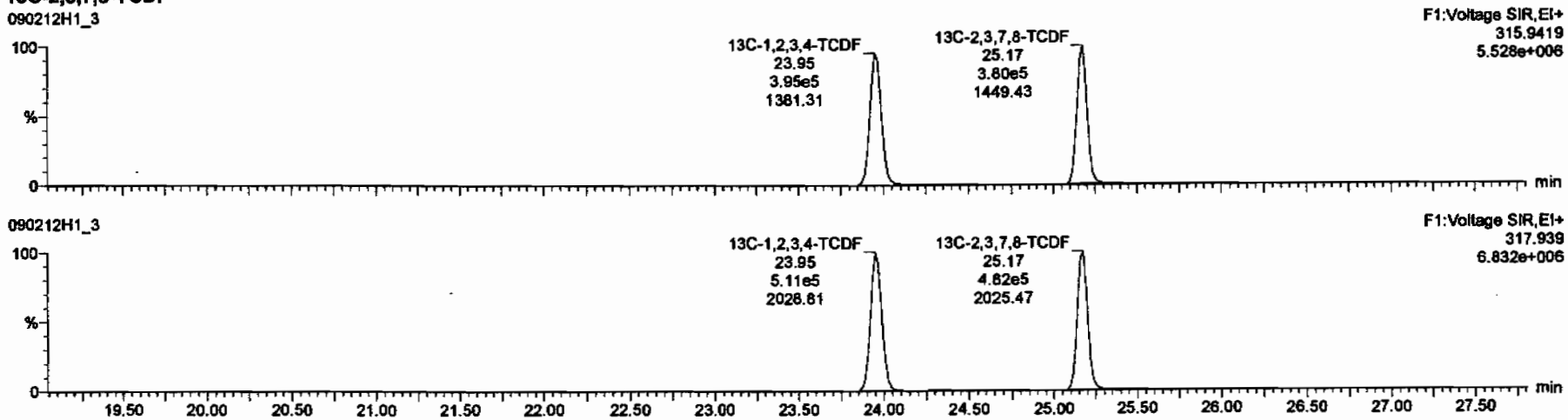

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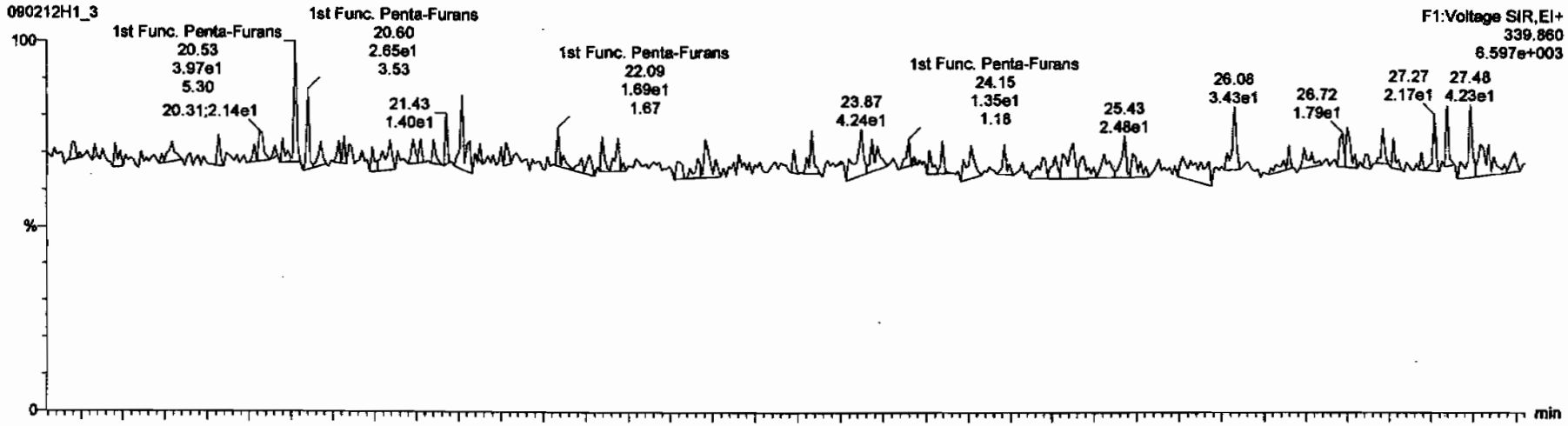

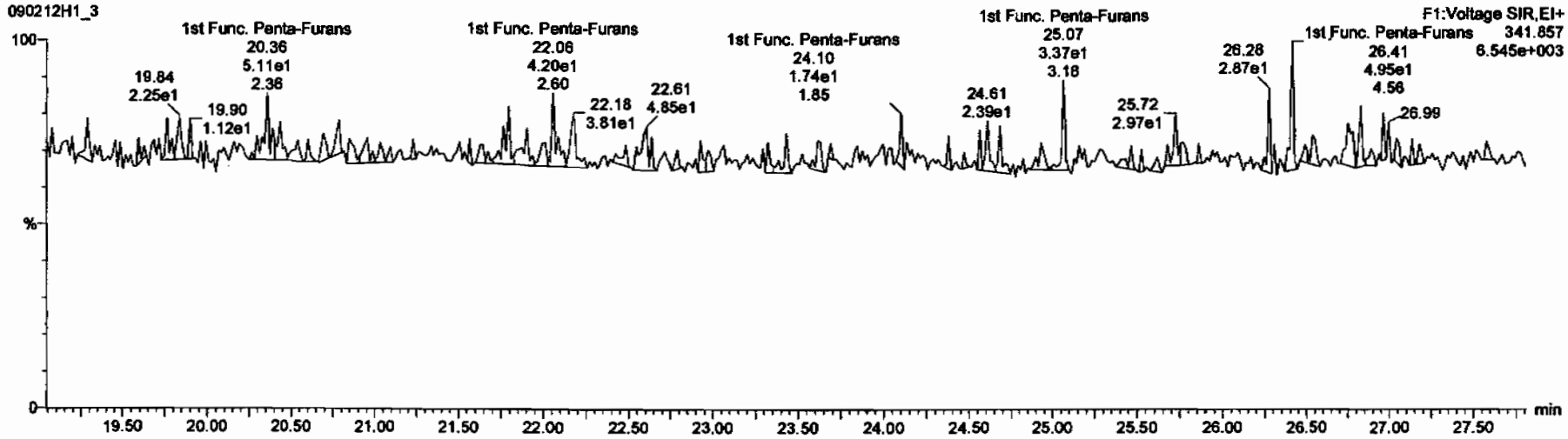

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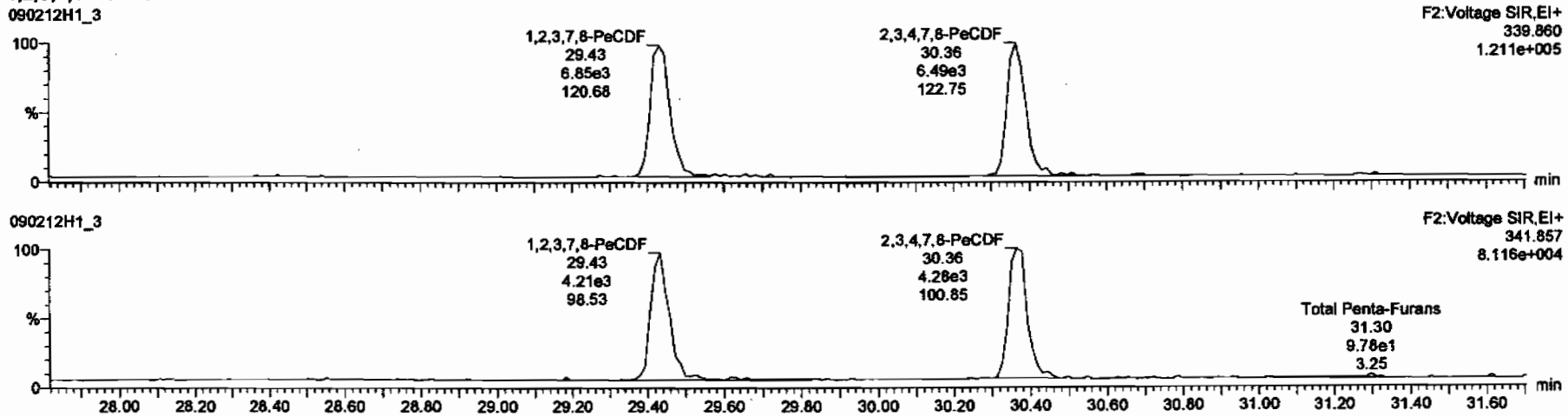

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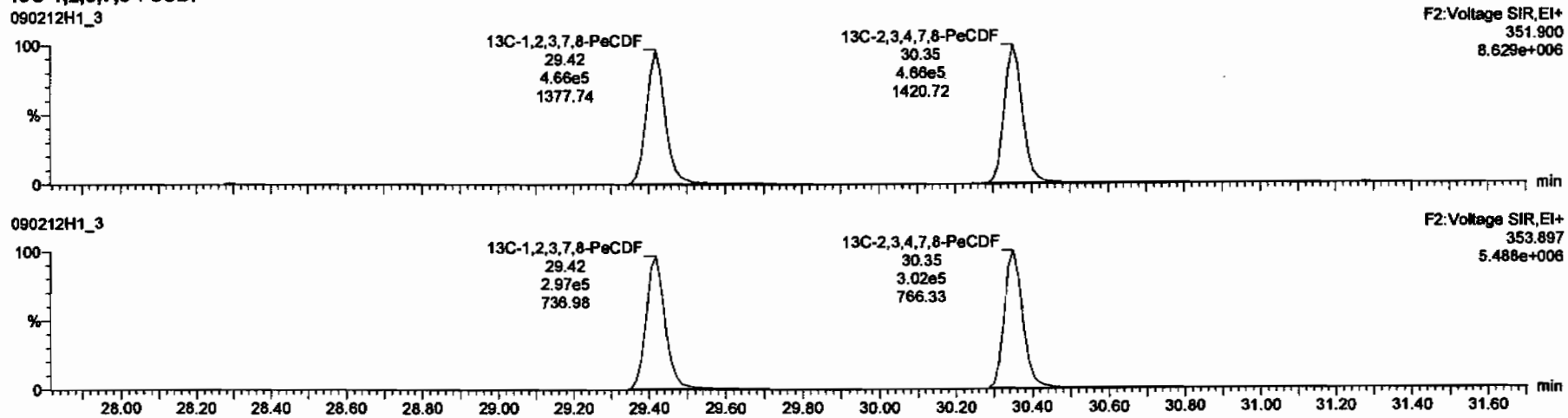

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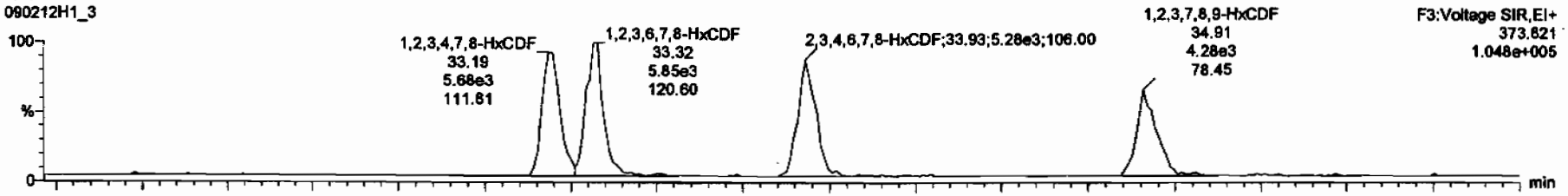

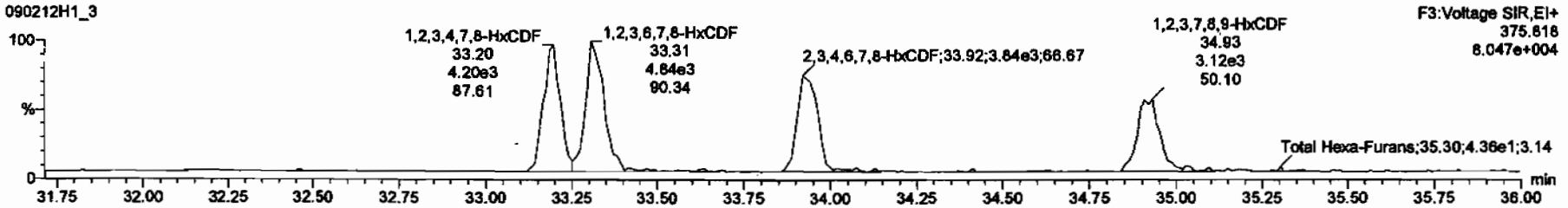

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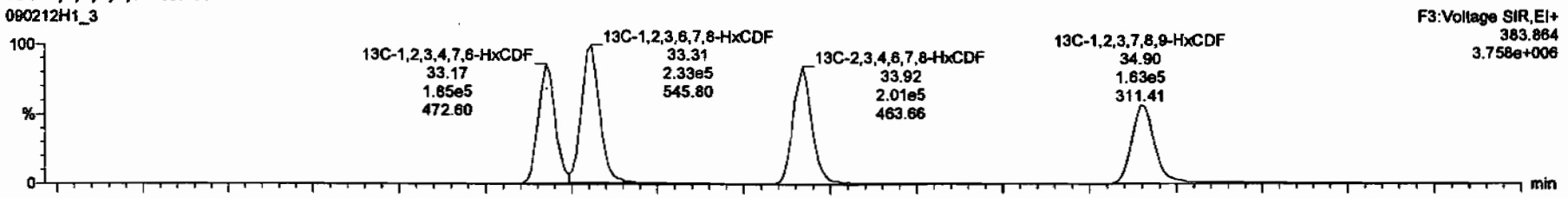

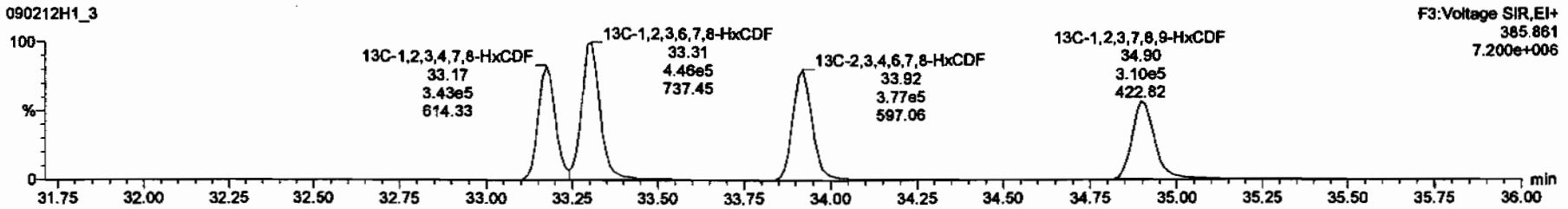

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1,2,3,4,6,7,8-HpCDF

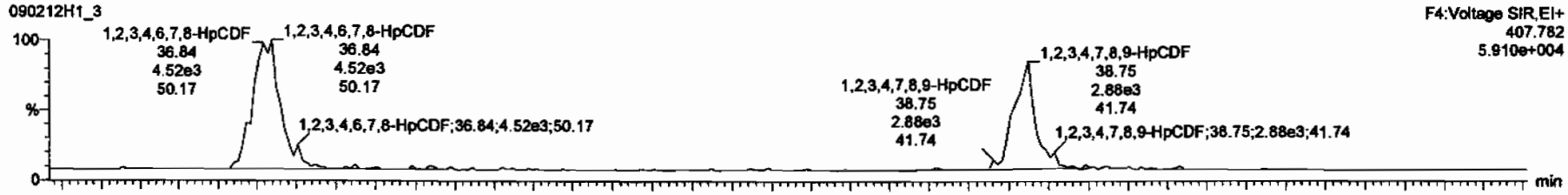

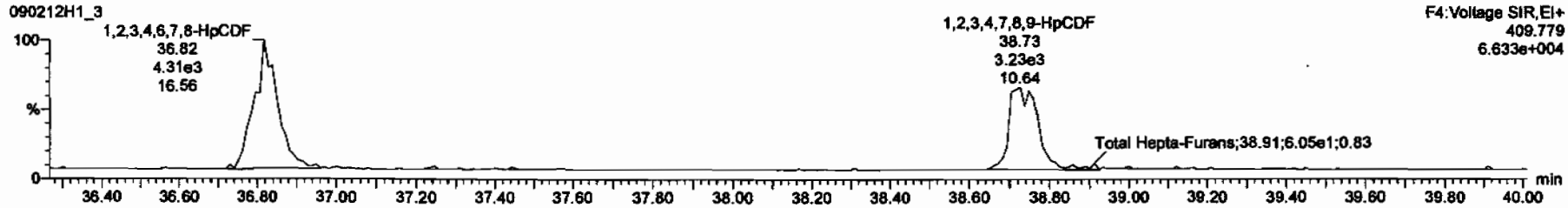

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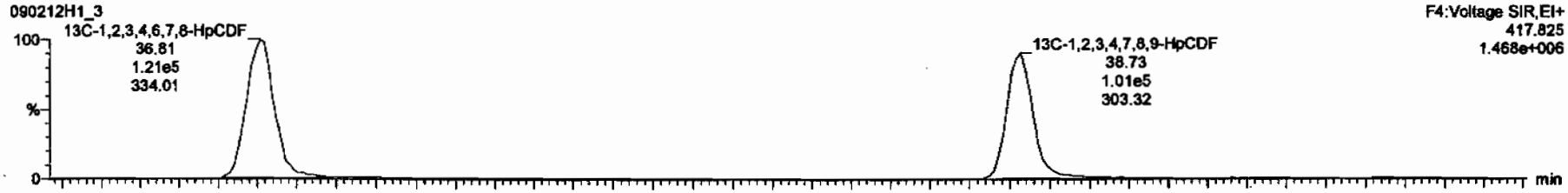

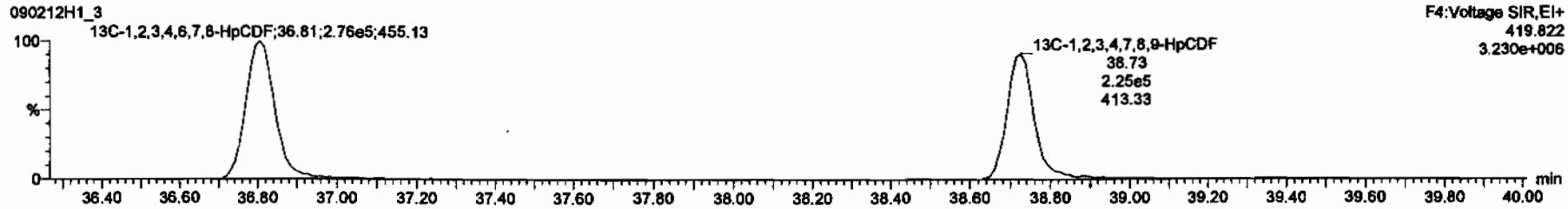

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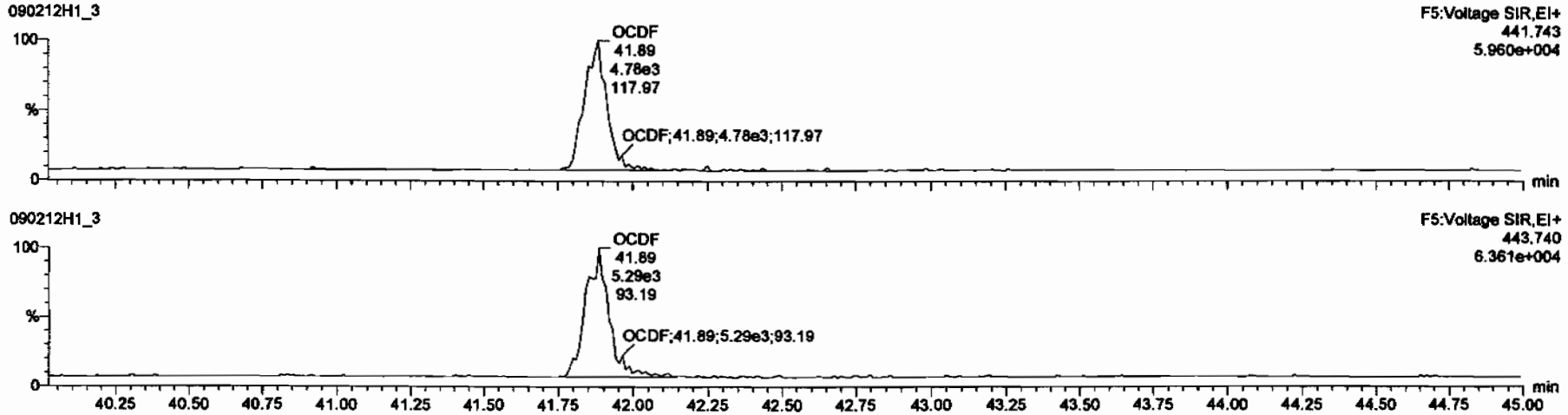

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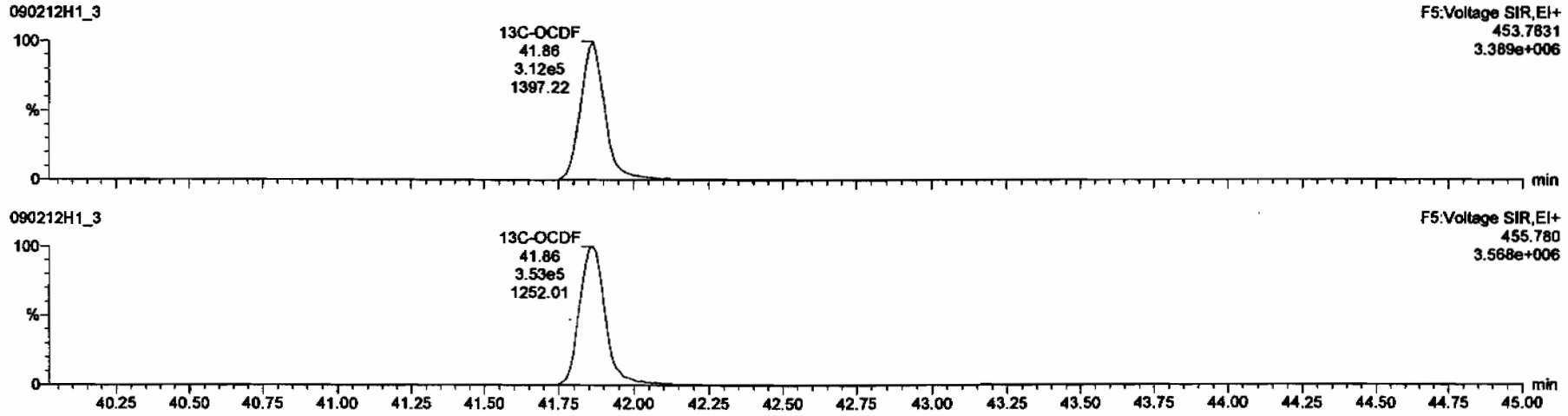

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PFK1

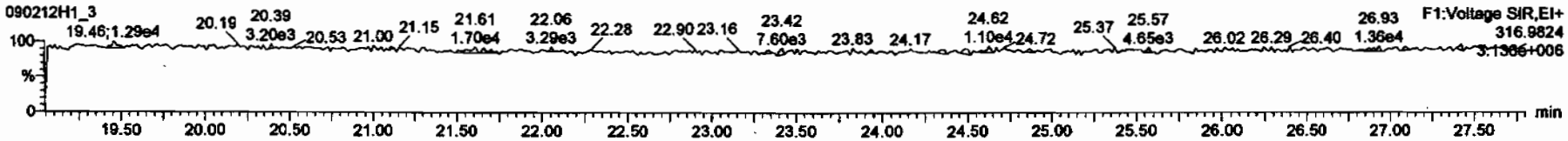

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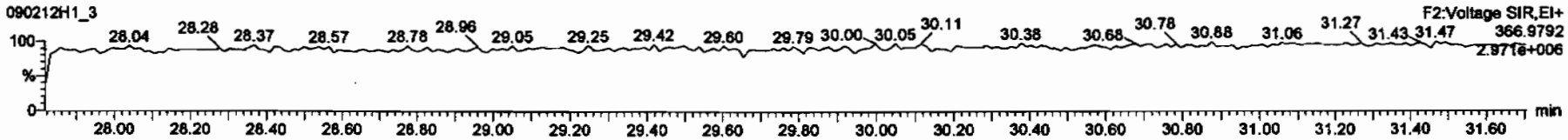

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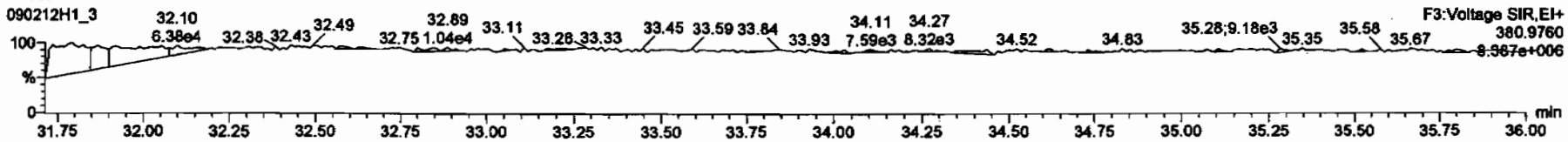

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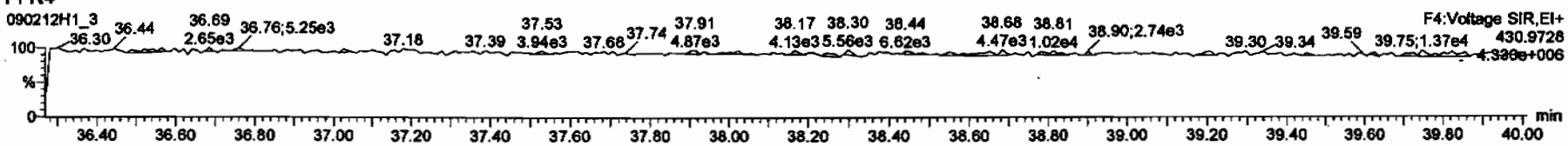

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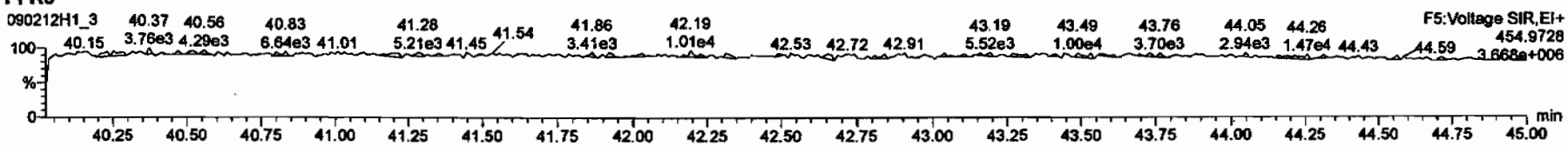

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DPE1

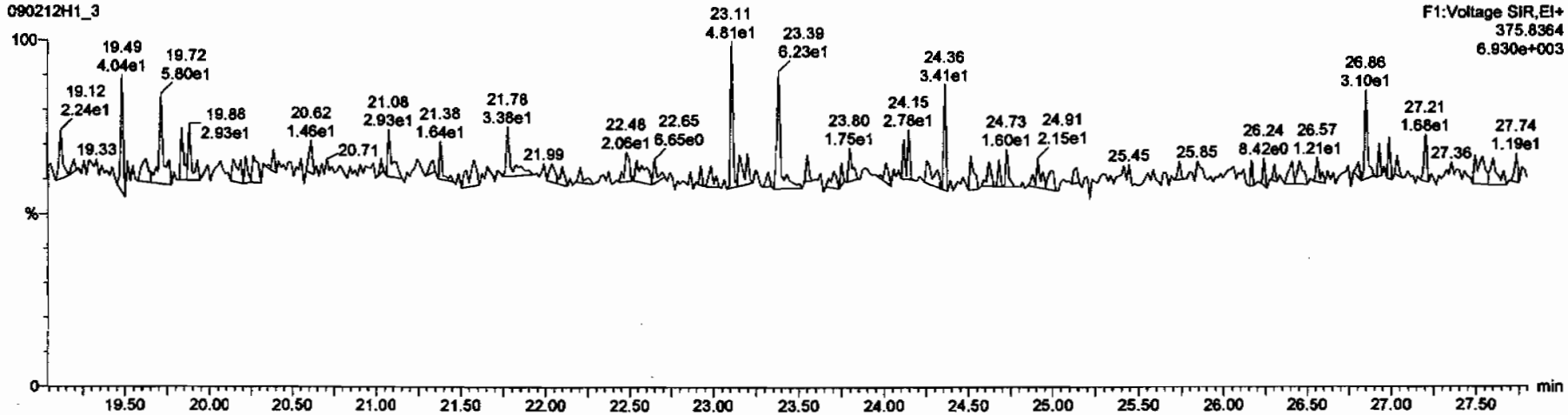

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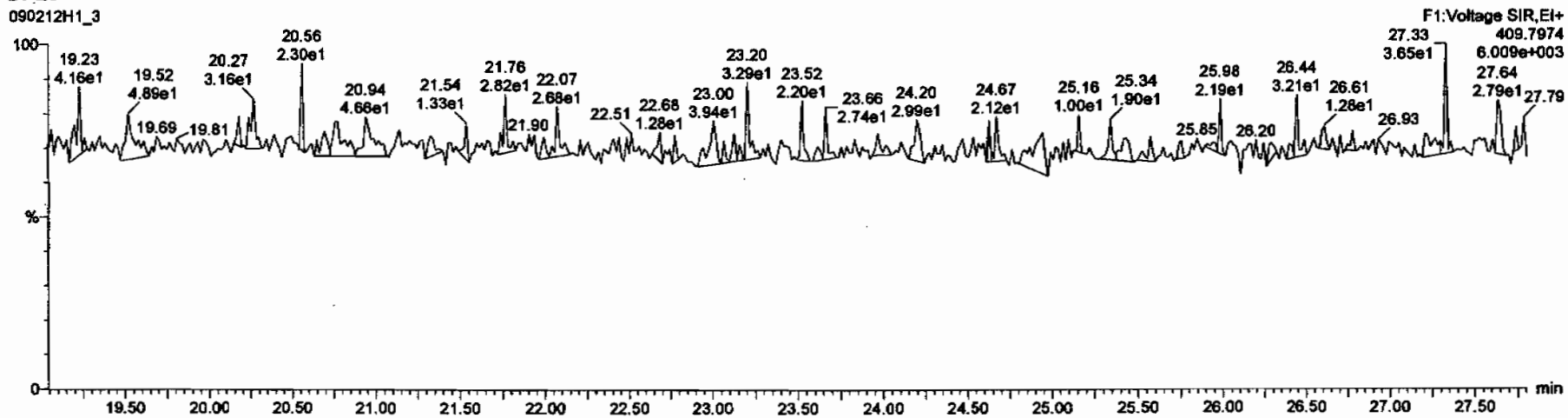

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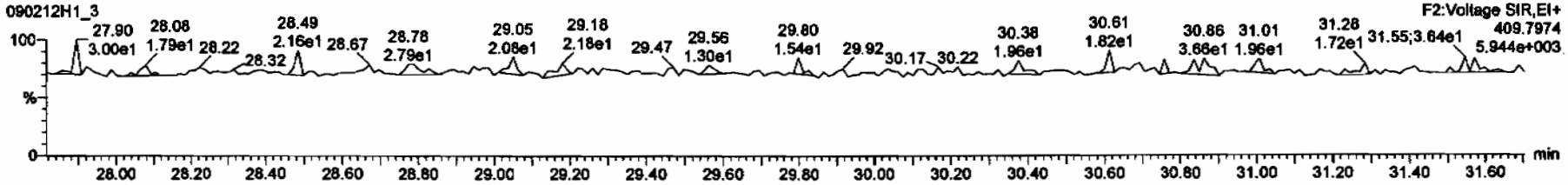

DPE3

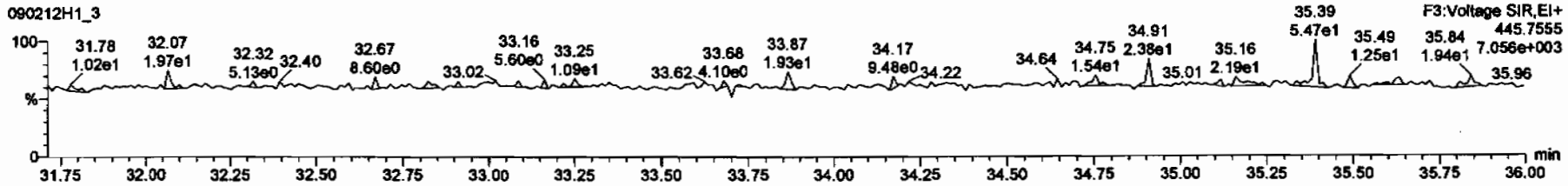

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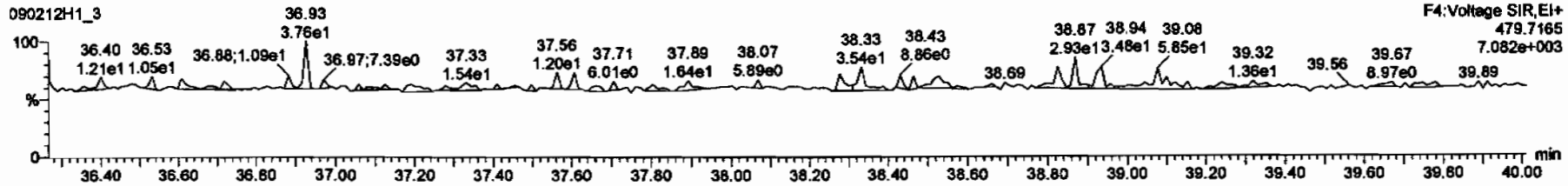

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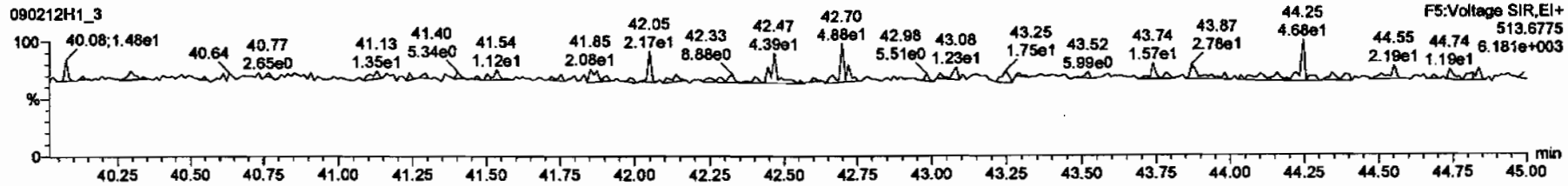

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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2,3,7,8-TCDD

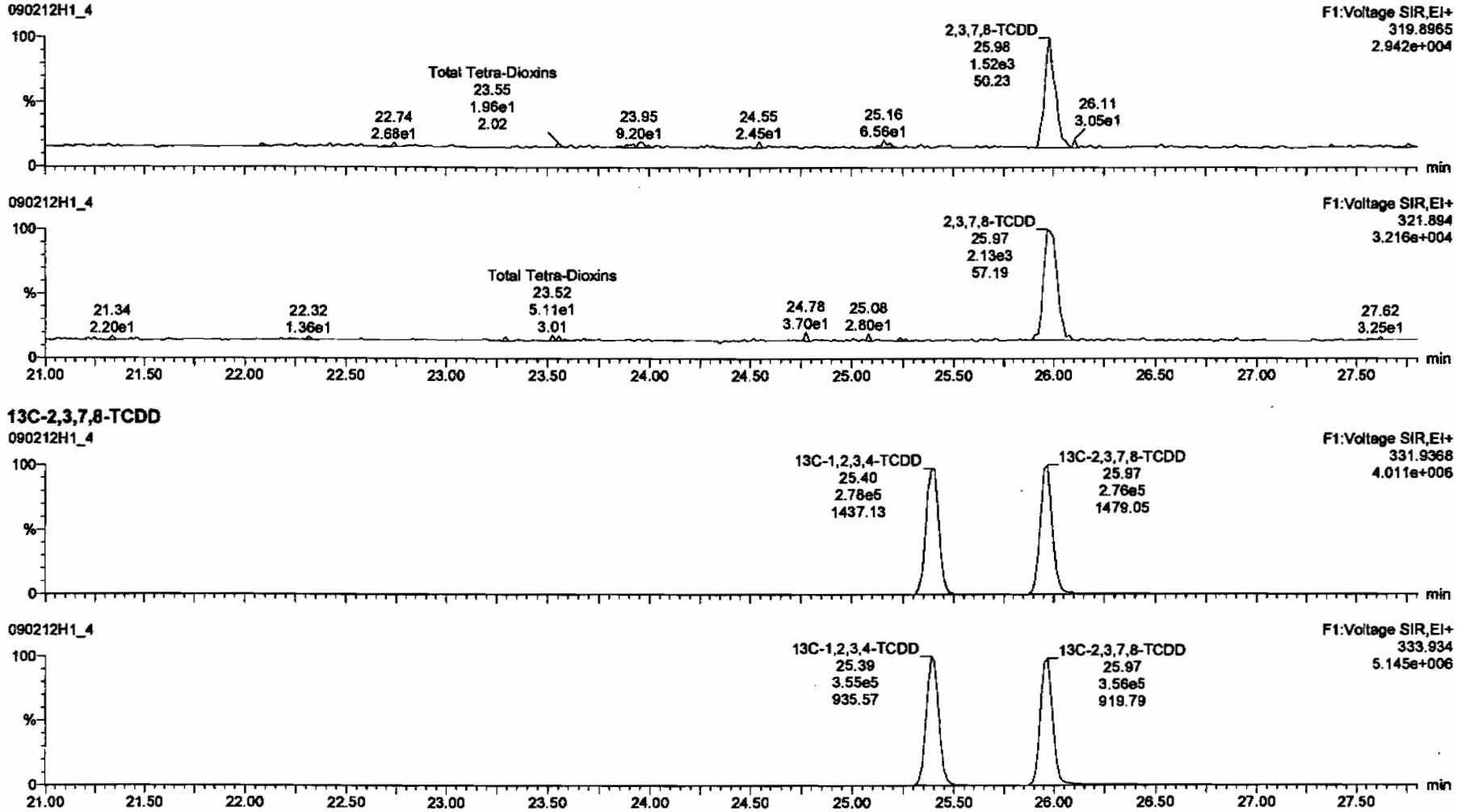

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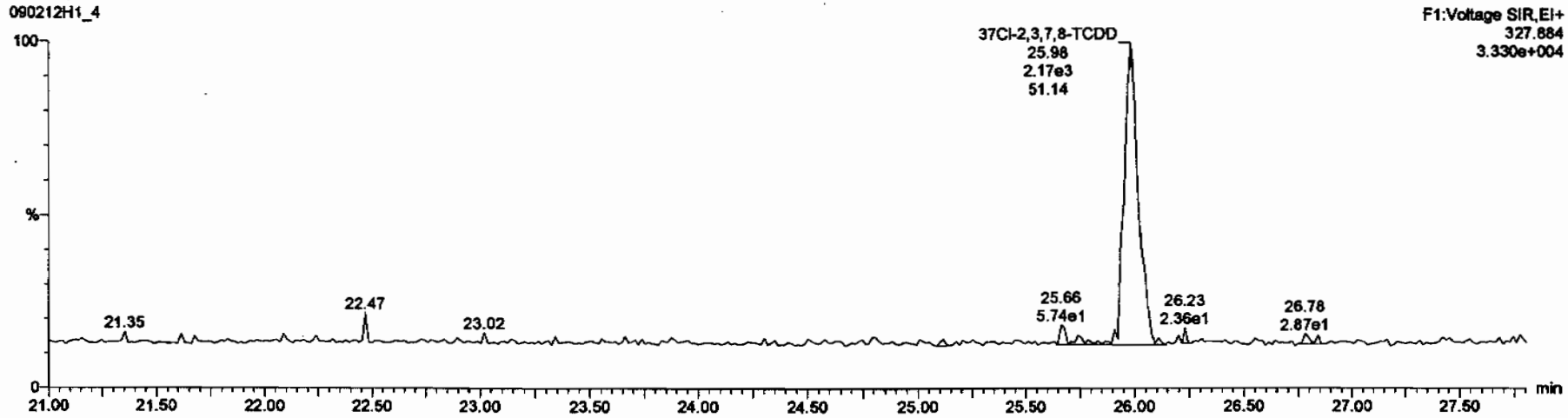

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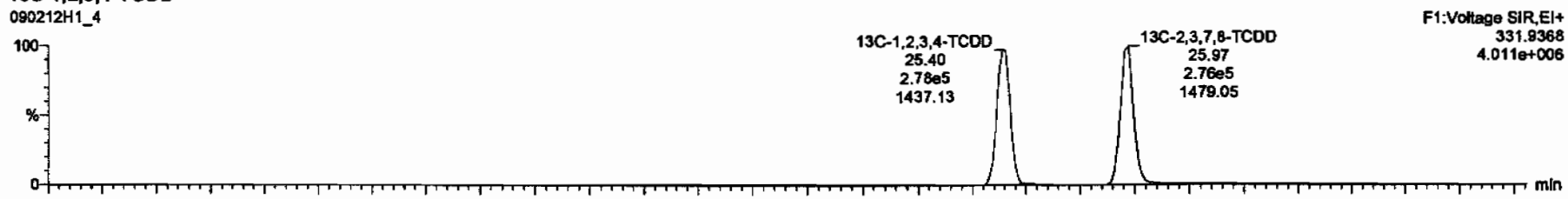

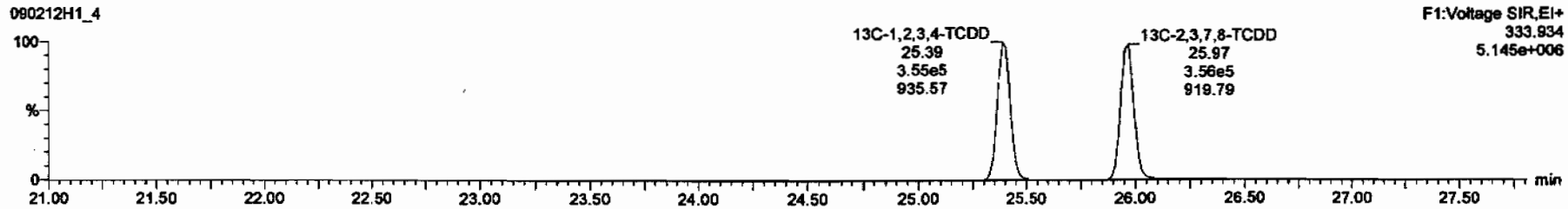

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1,2,3,7,8-PeCDD

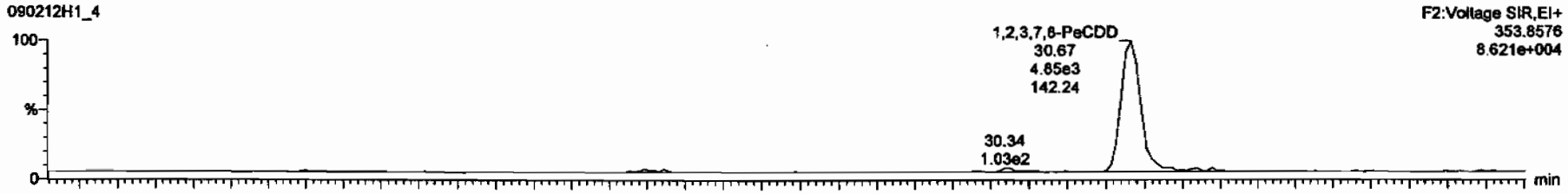

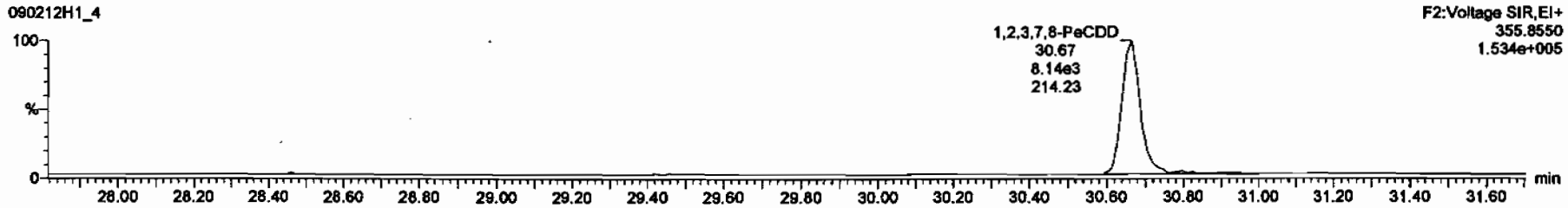

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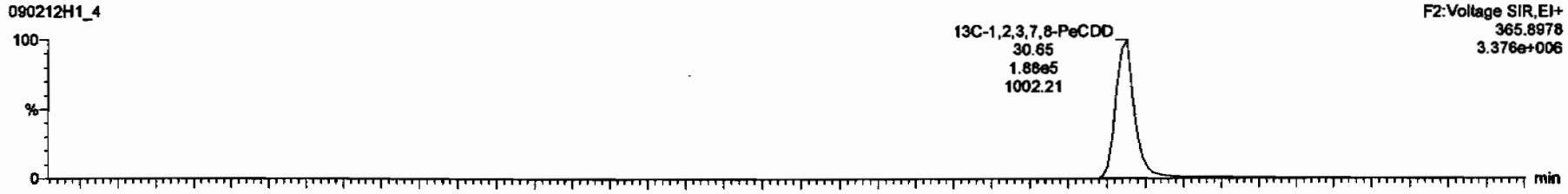

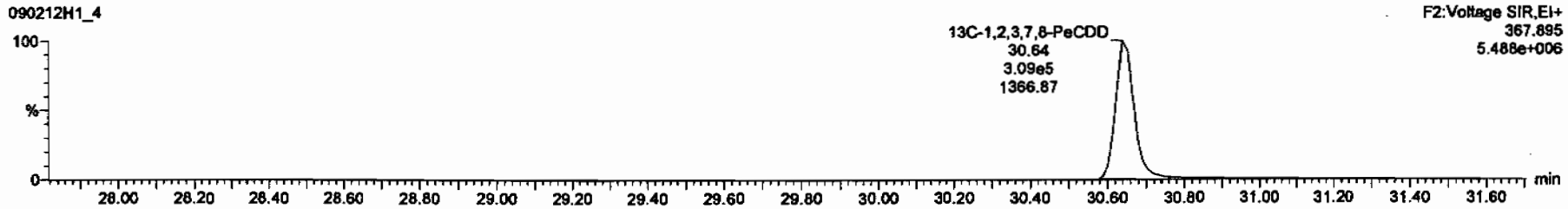

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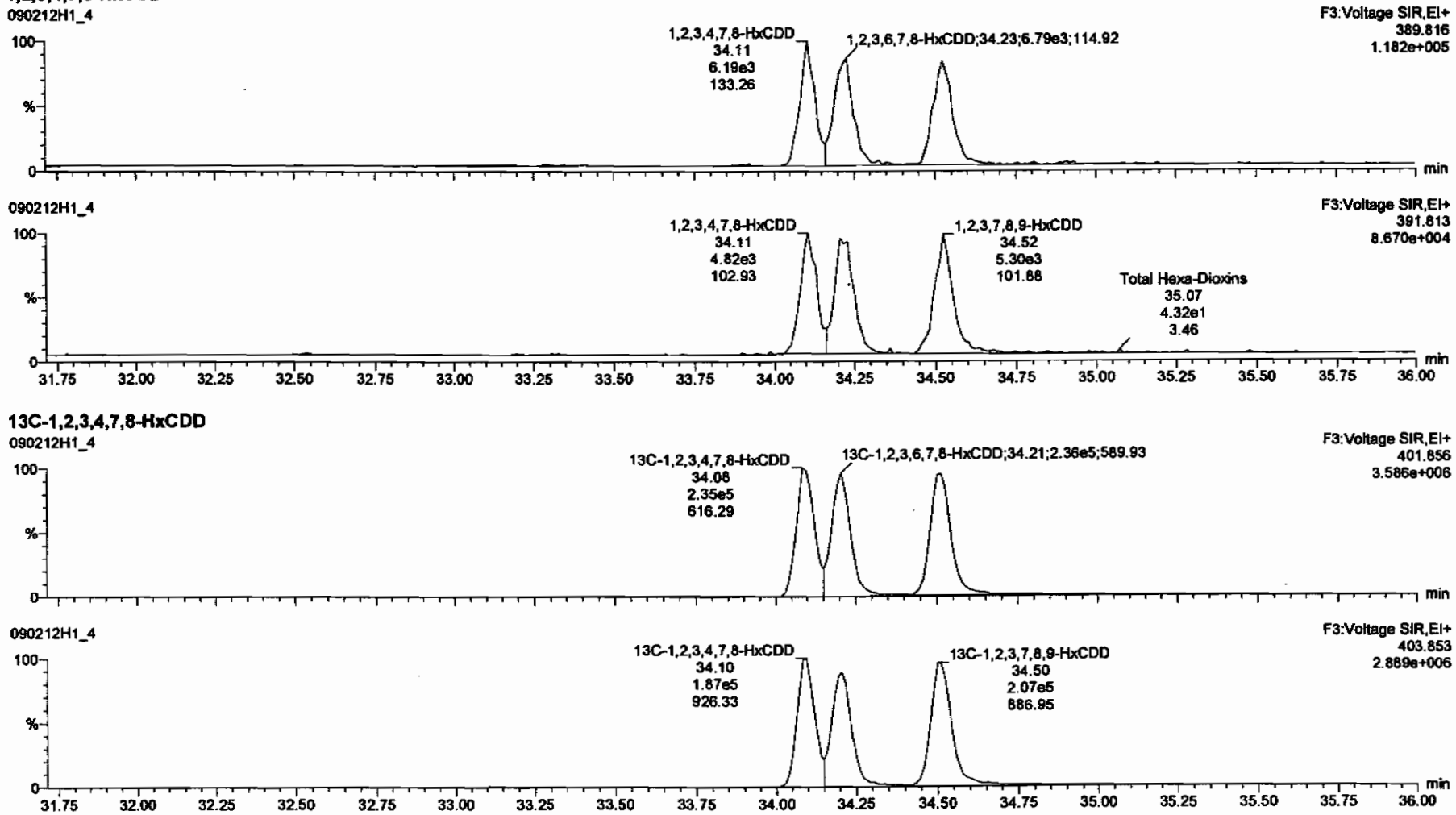

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1,2,3,4,6,7,8-HpCDD

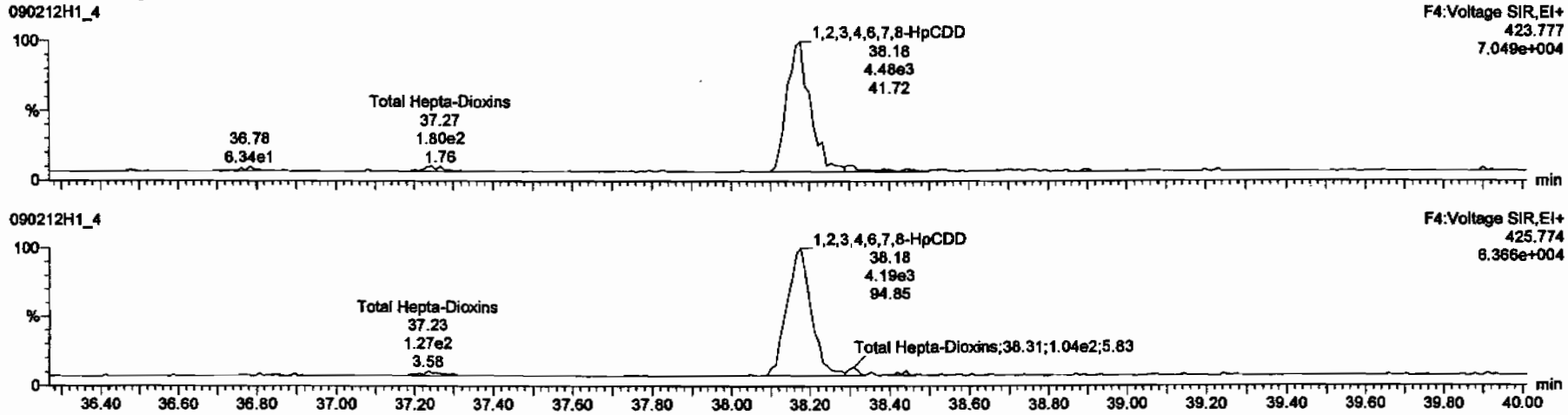

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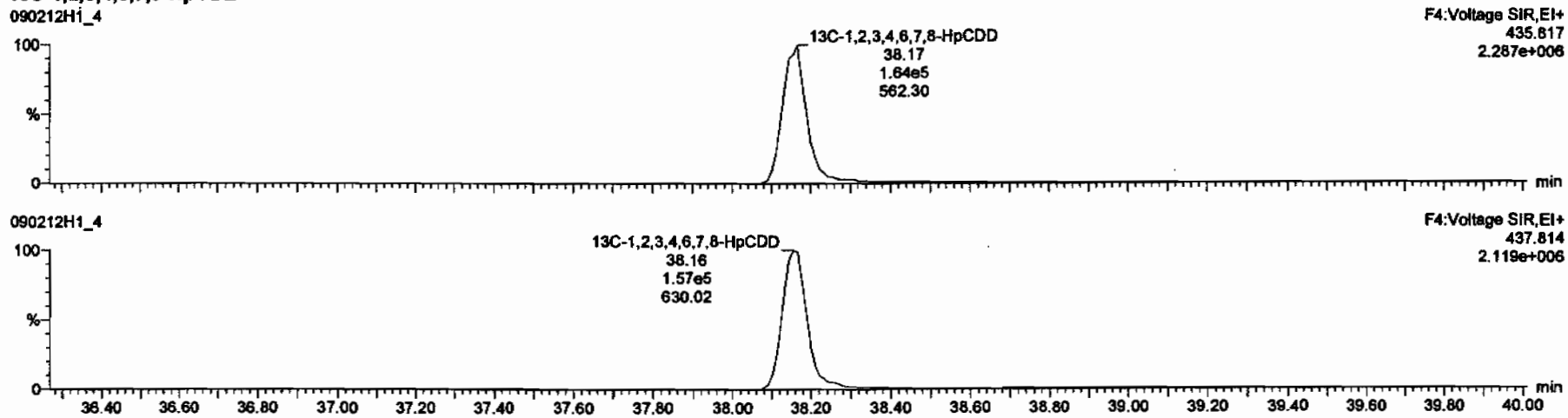

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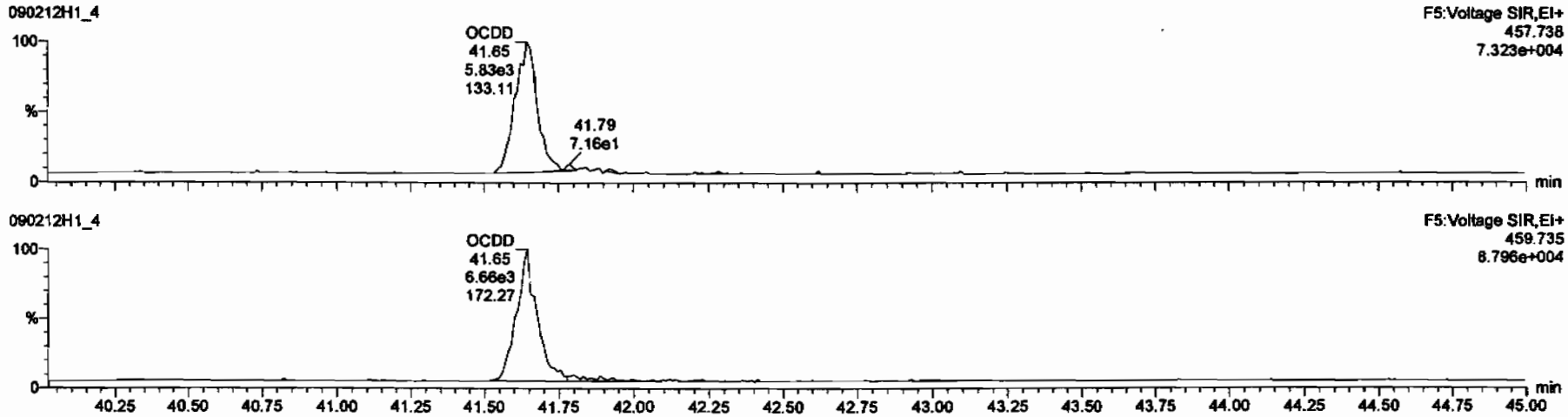

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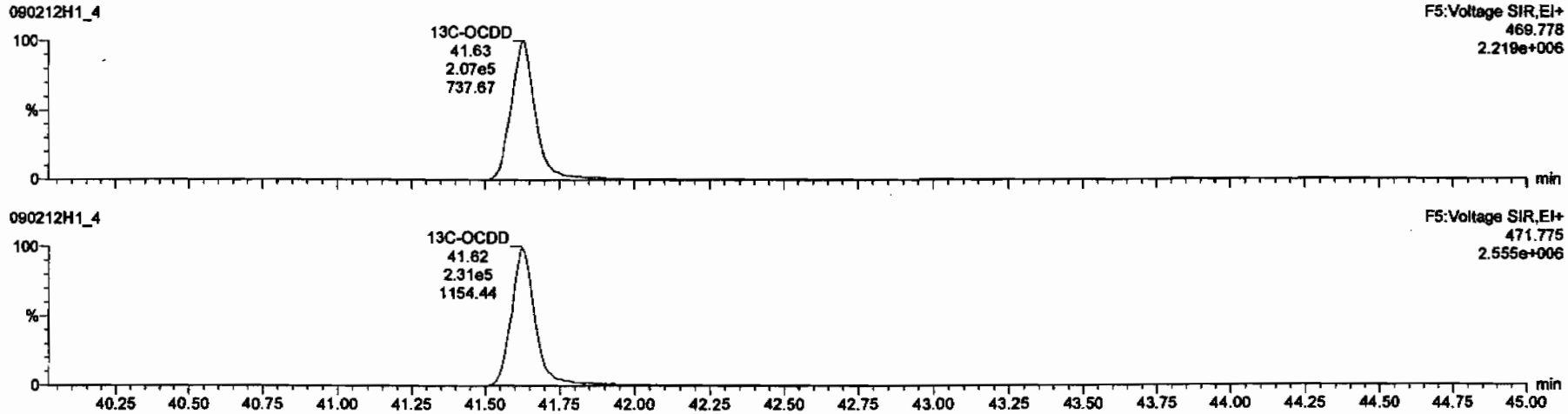

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2,3,7,8-TCDF

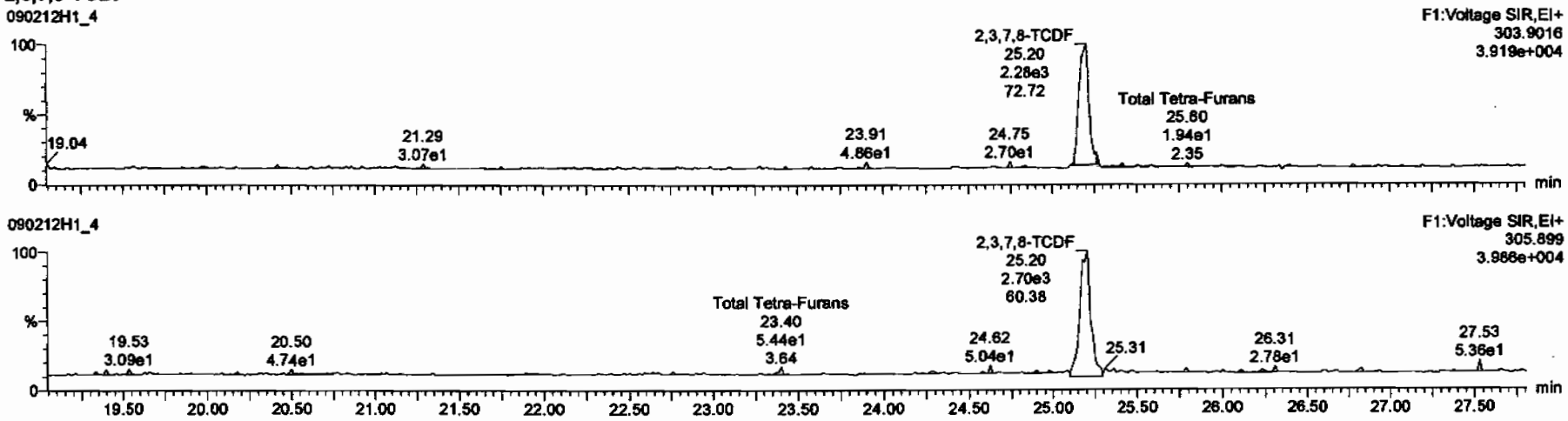

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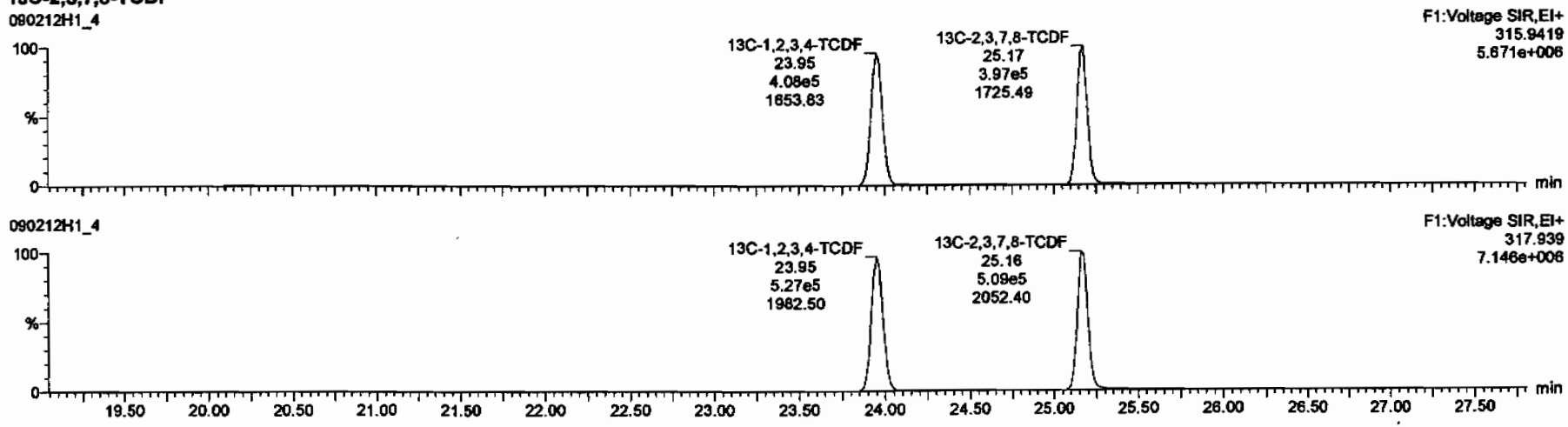

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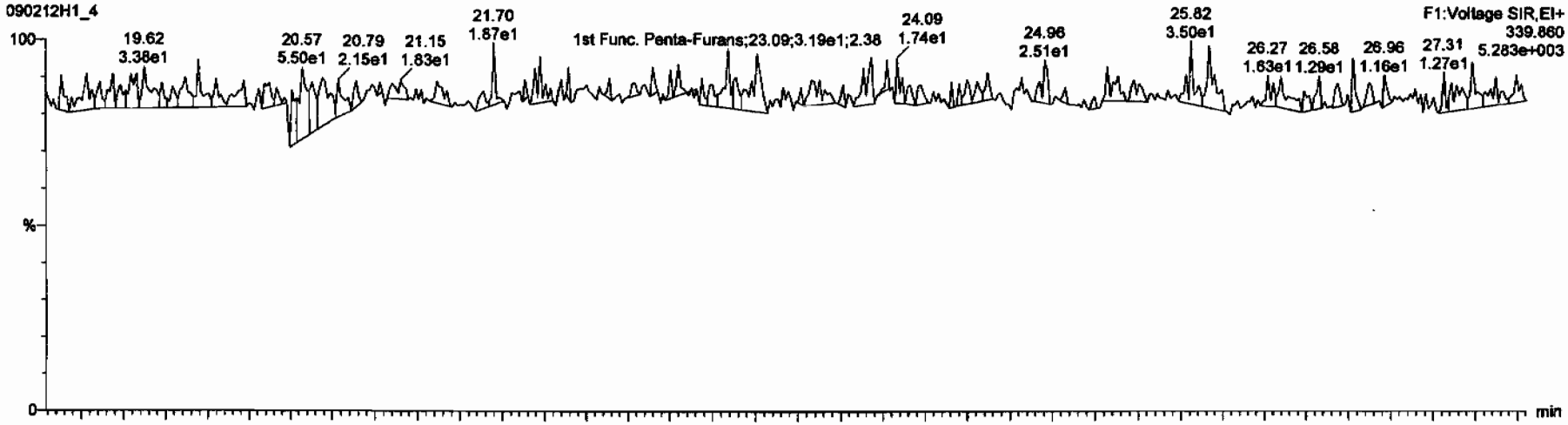

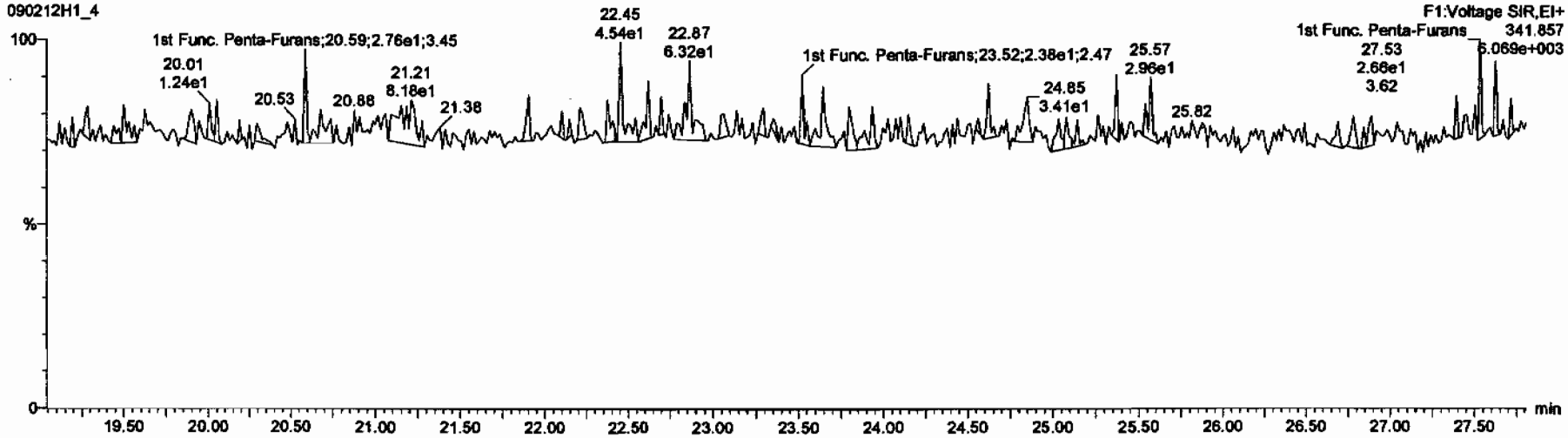

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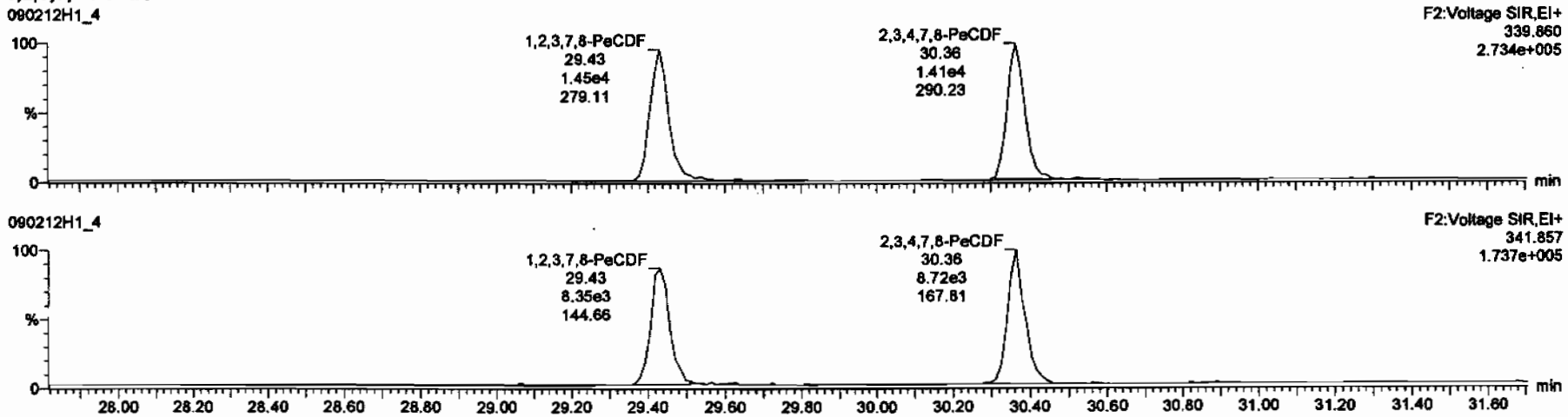

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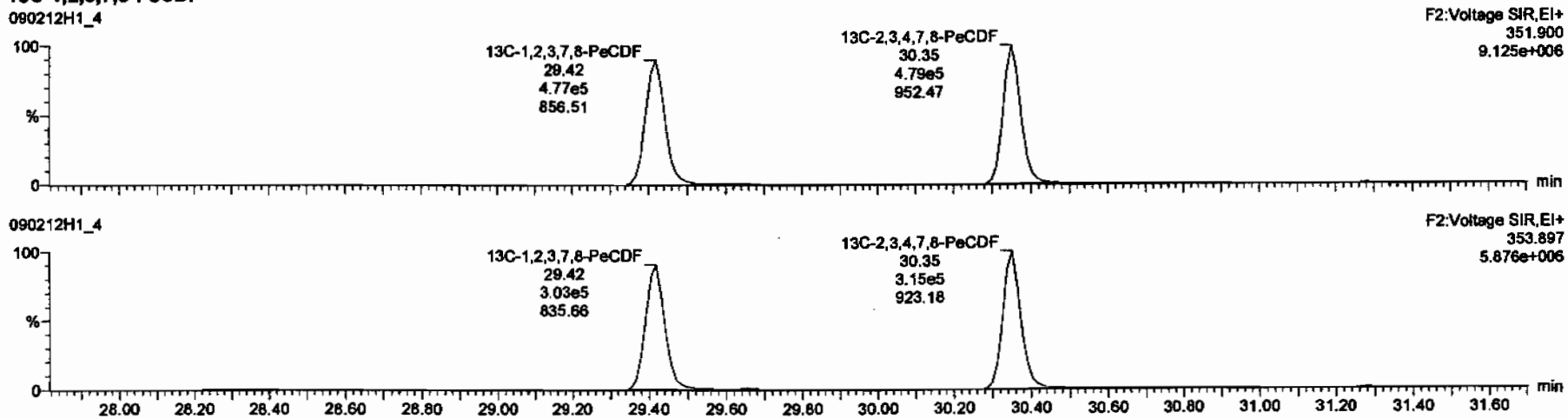

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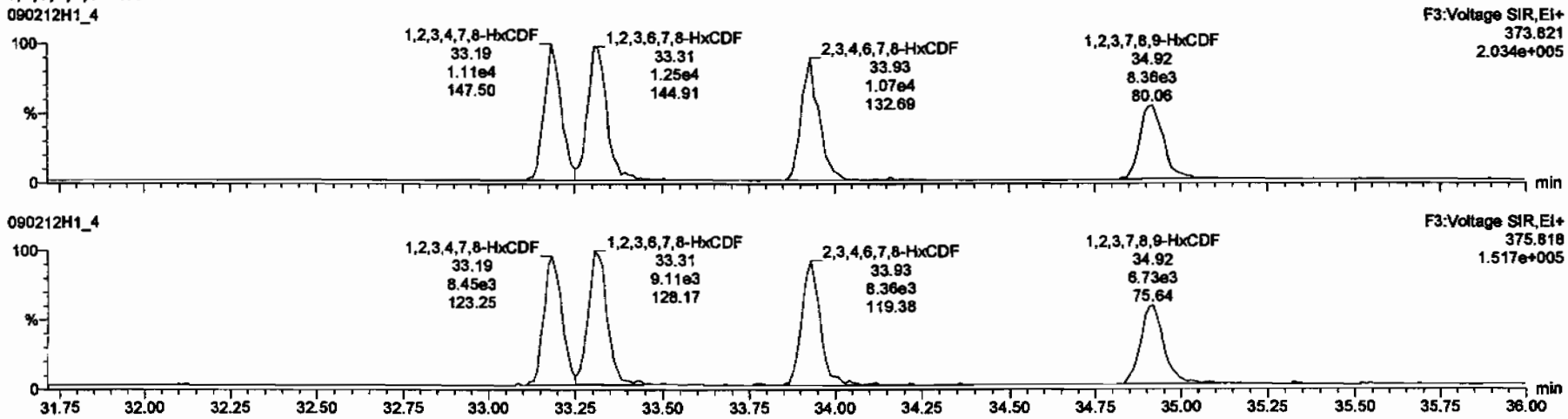

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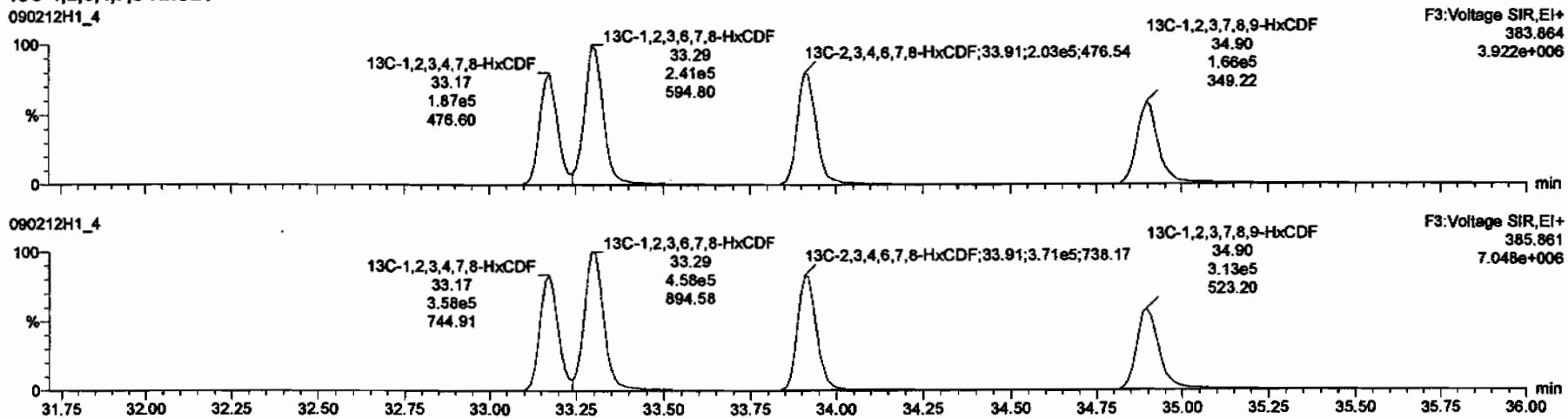

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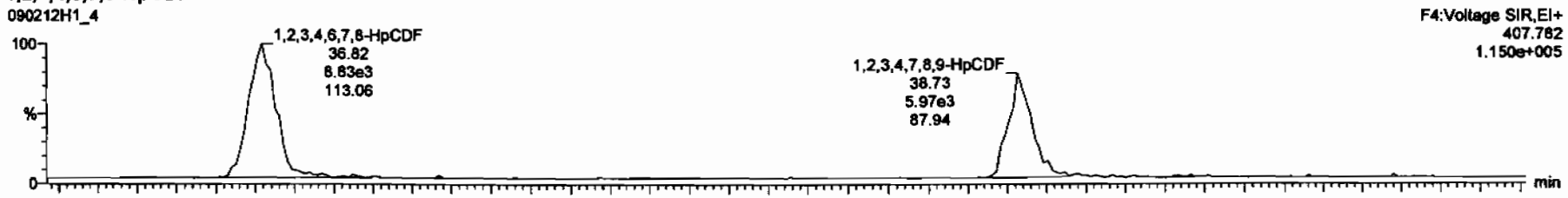

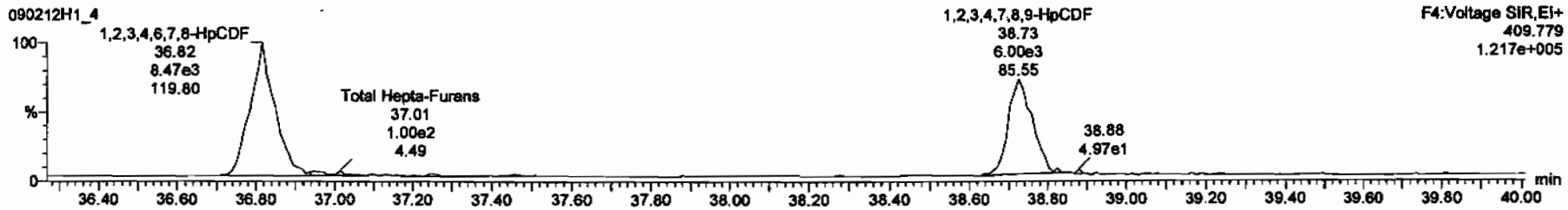

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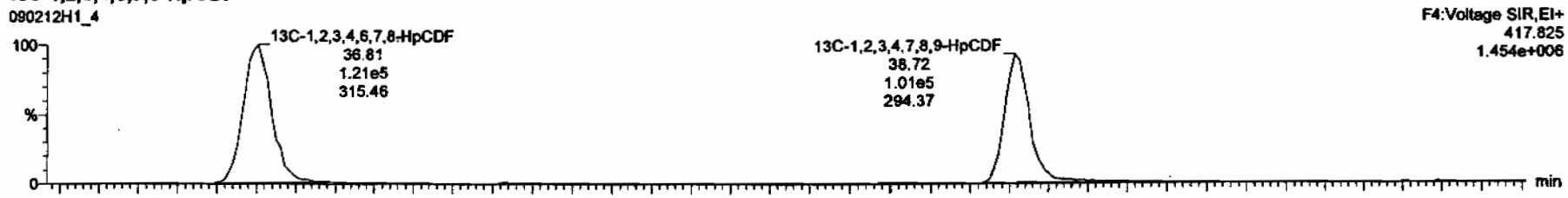

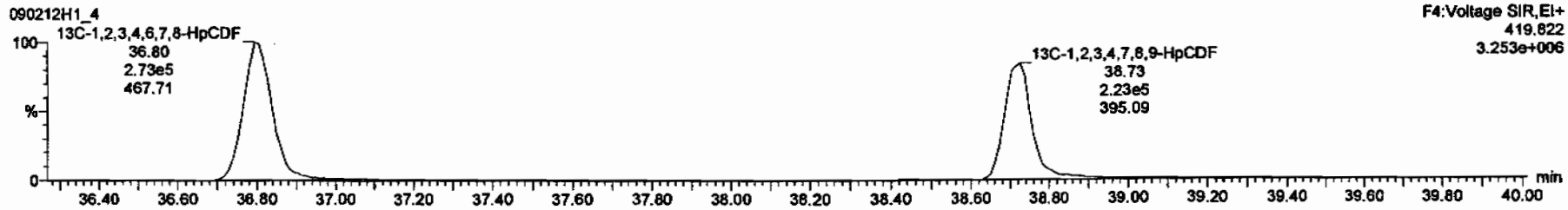

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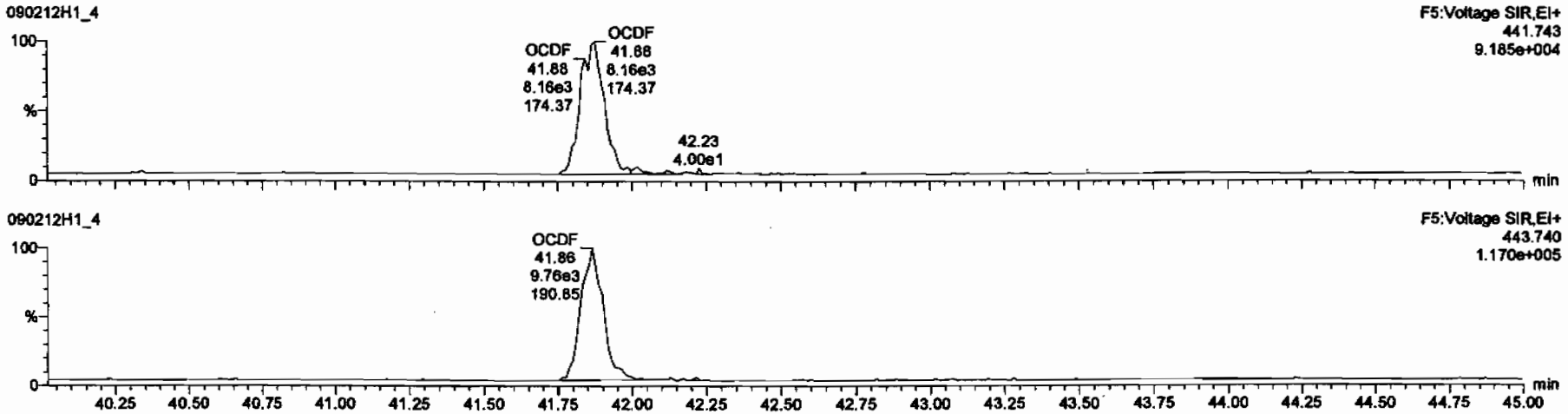

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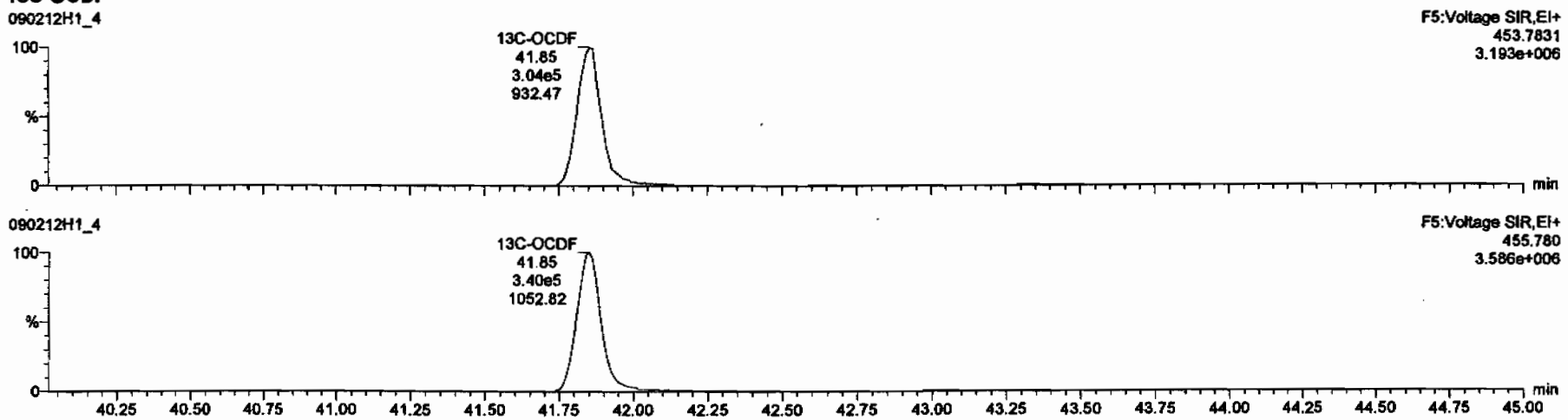

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PFK1

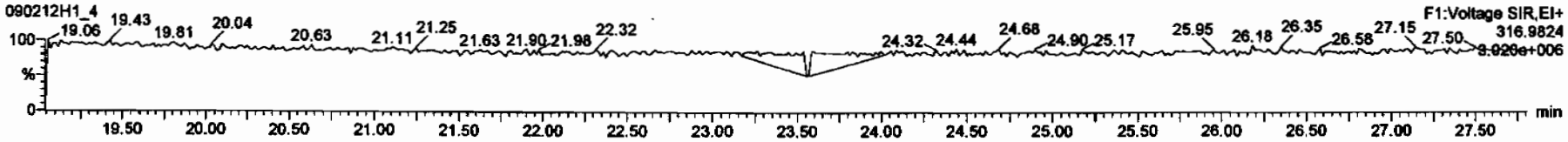

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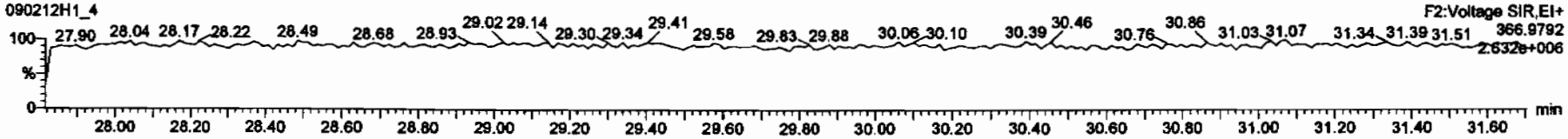

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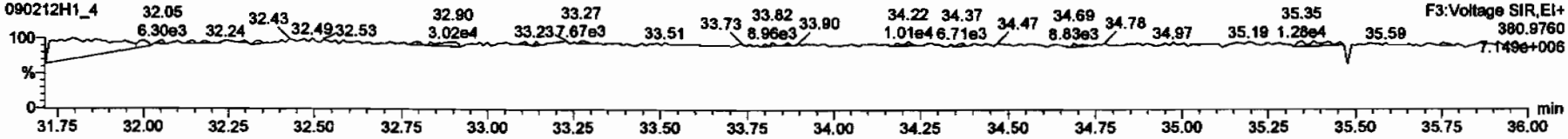

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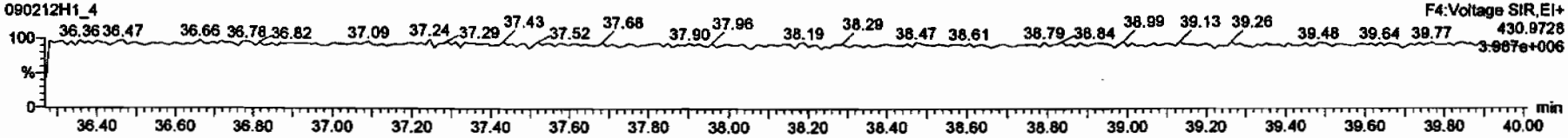

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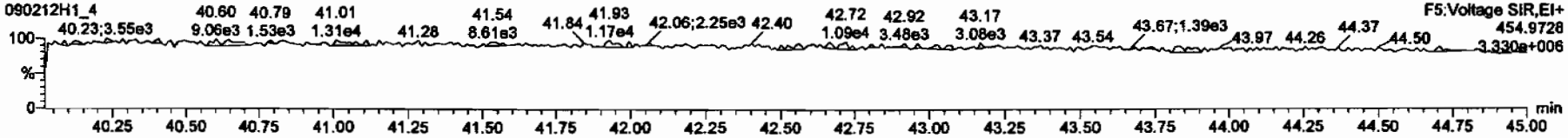

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DPE1

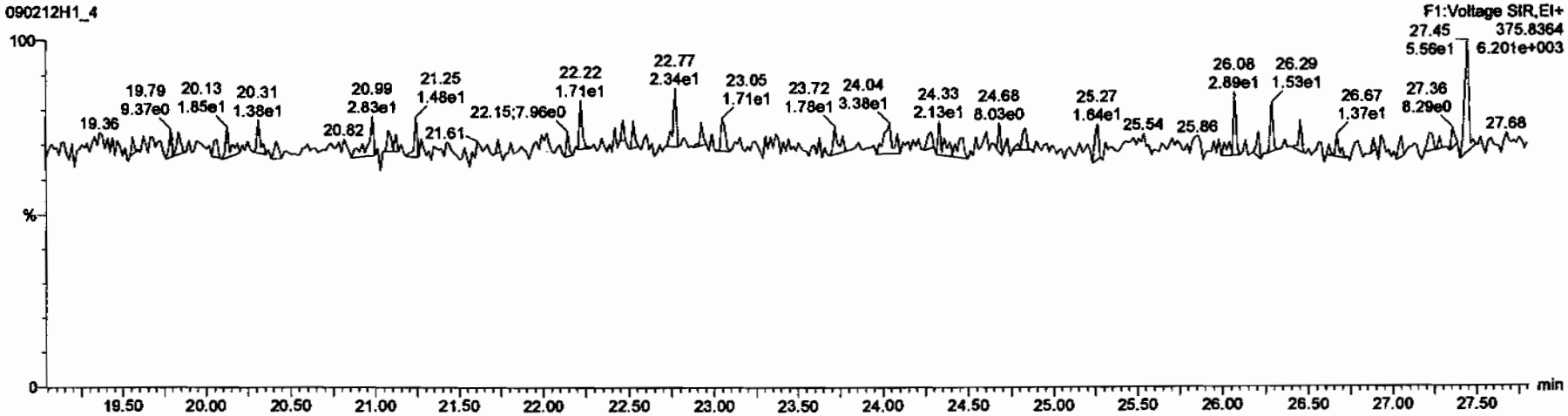

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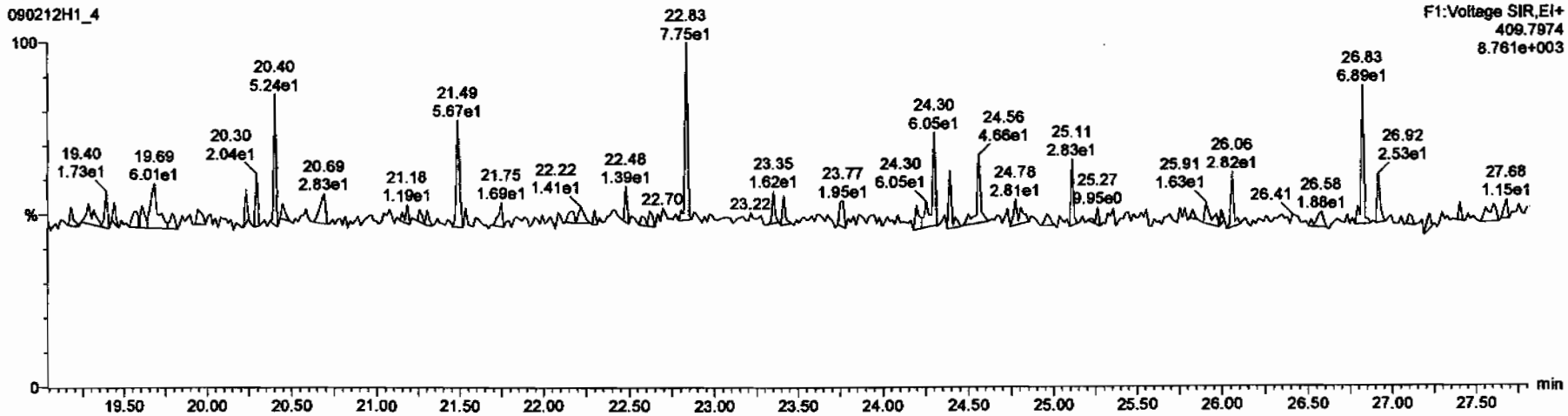

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DPE2

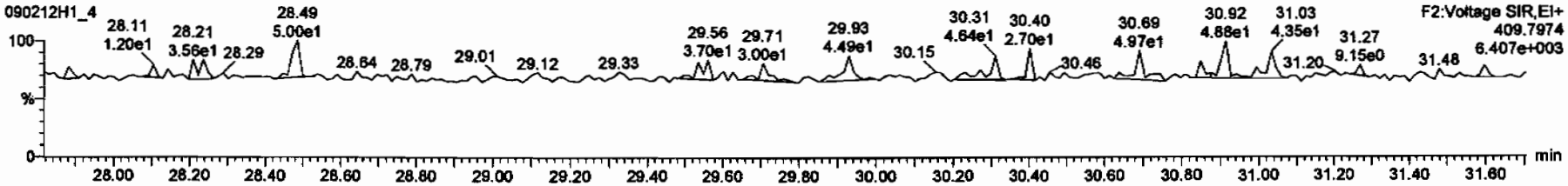

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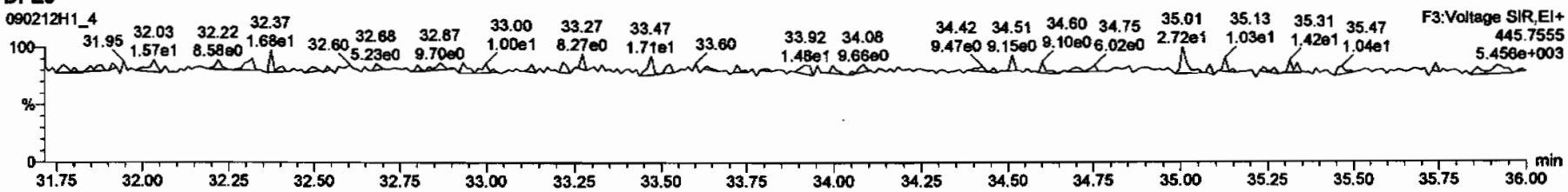

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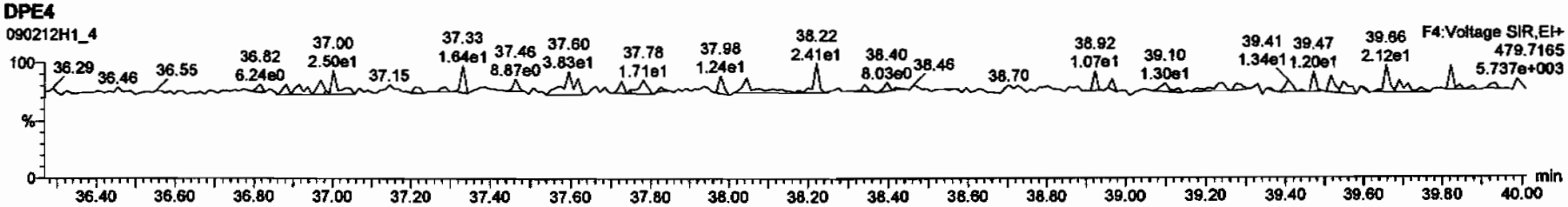

DPE5

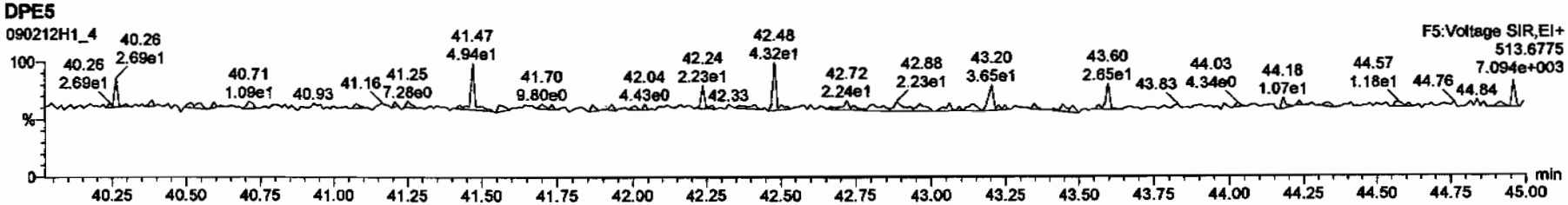

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2,3,7,8-TCDD

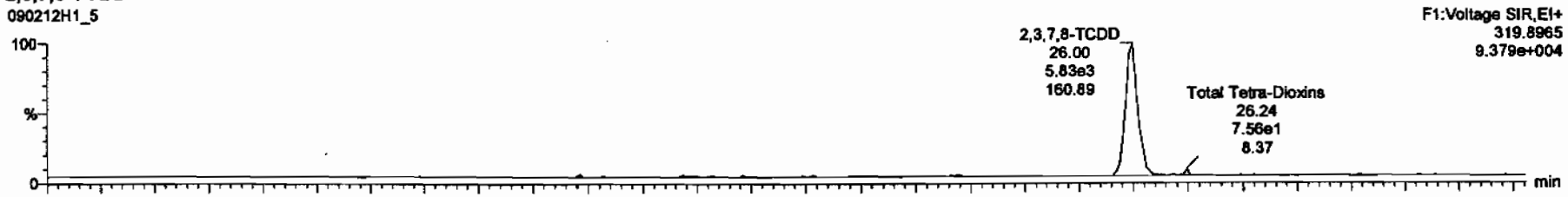

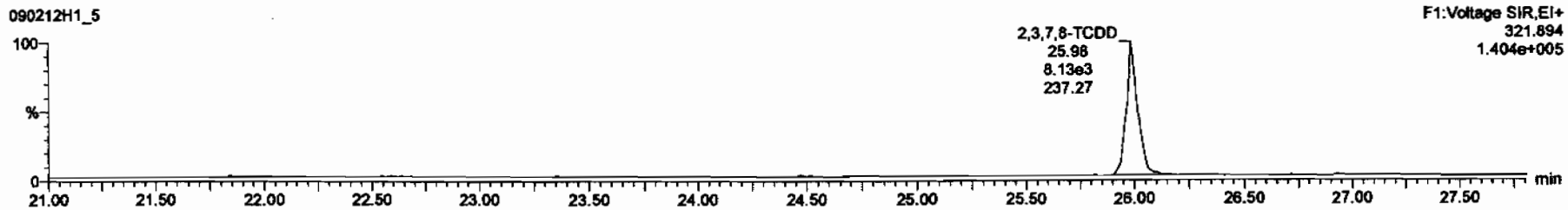

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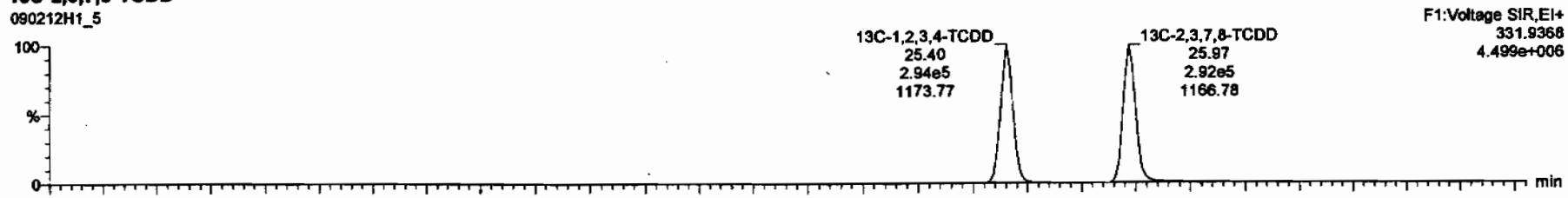

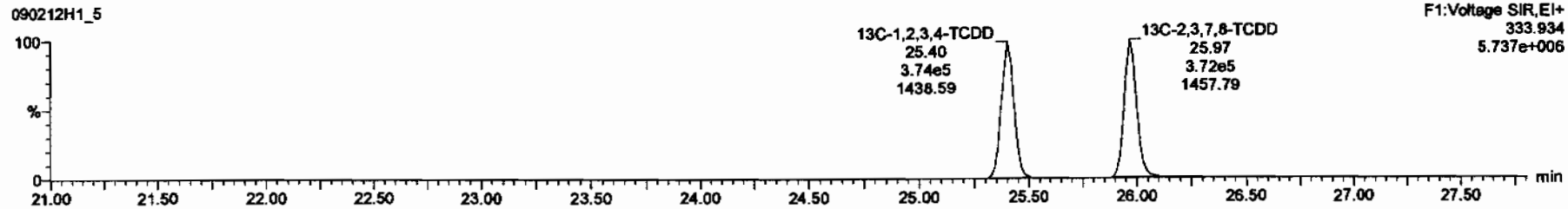

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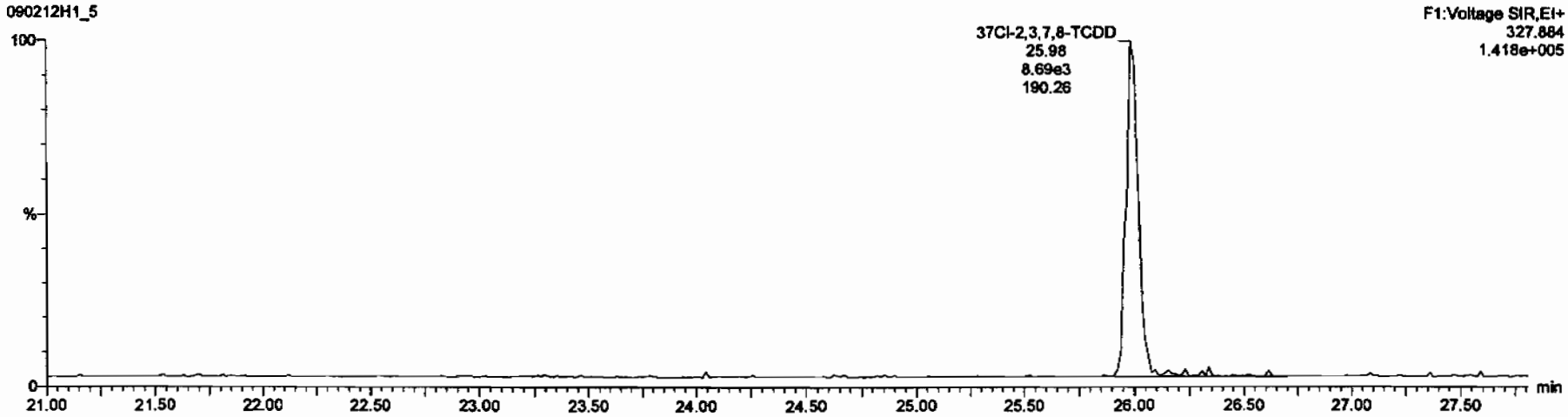

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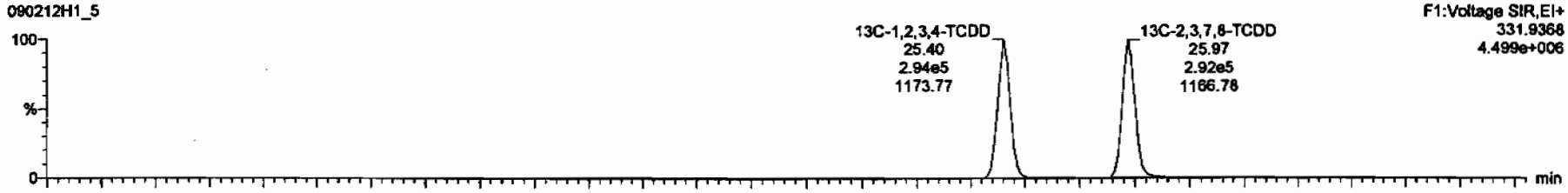

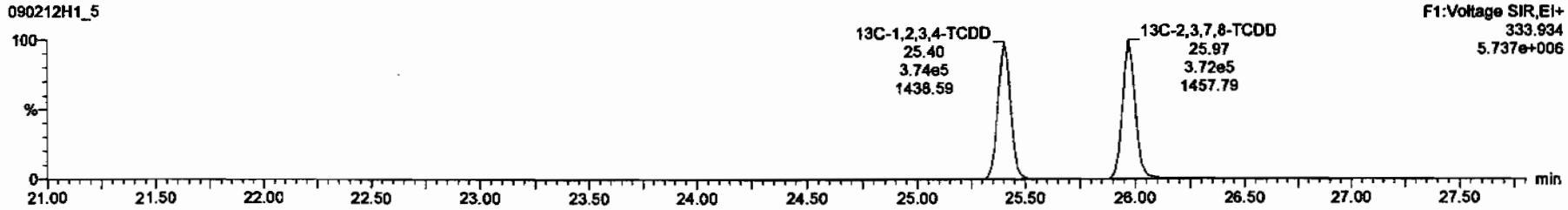

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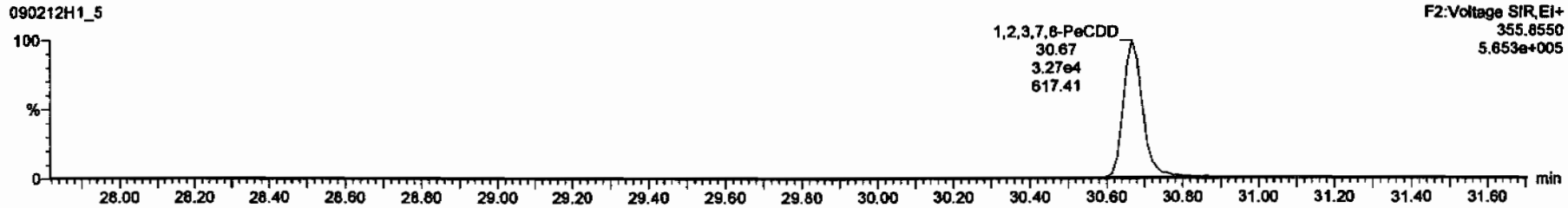

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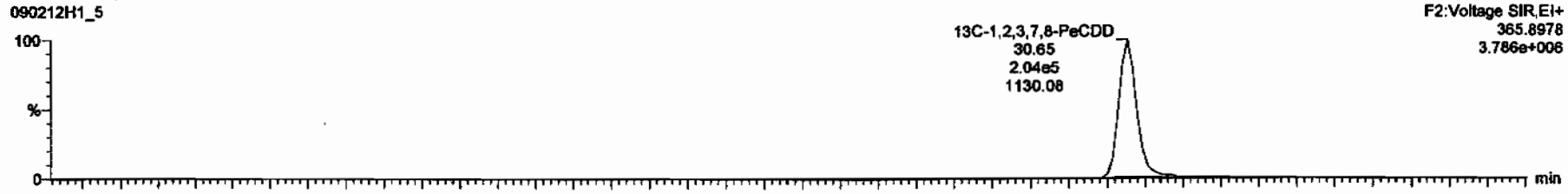

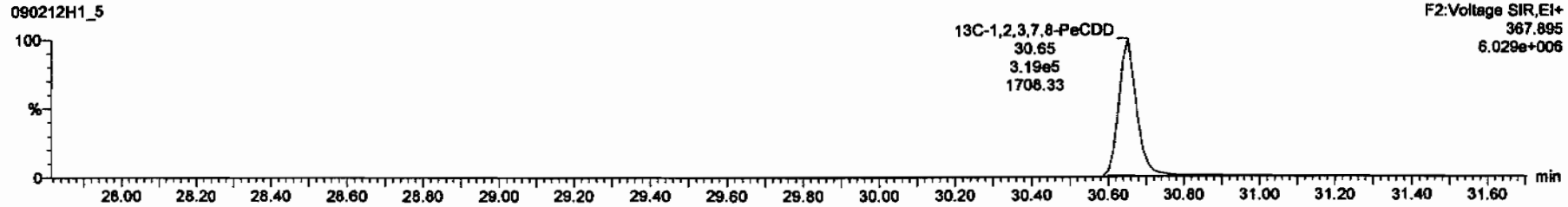

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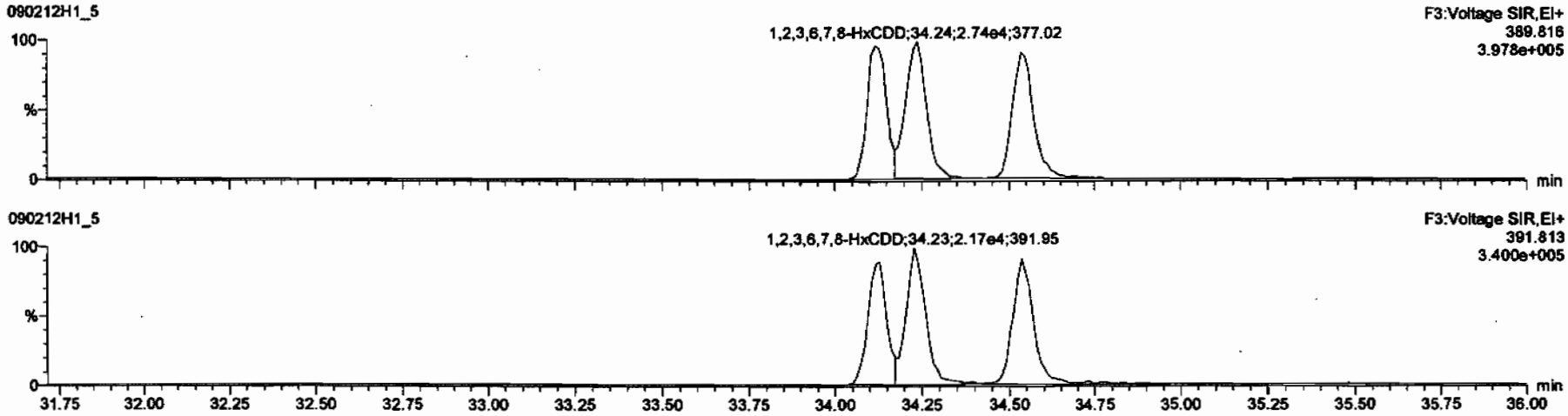

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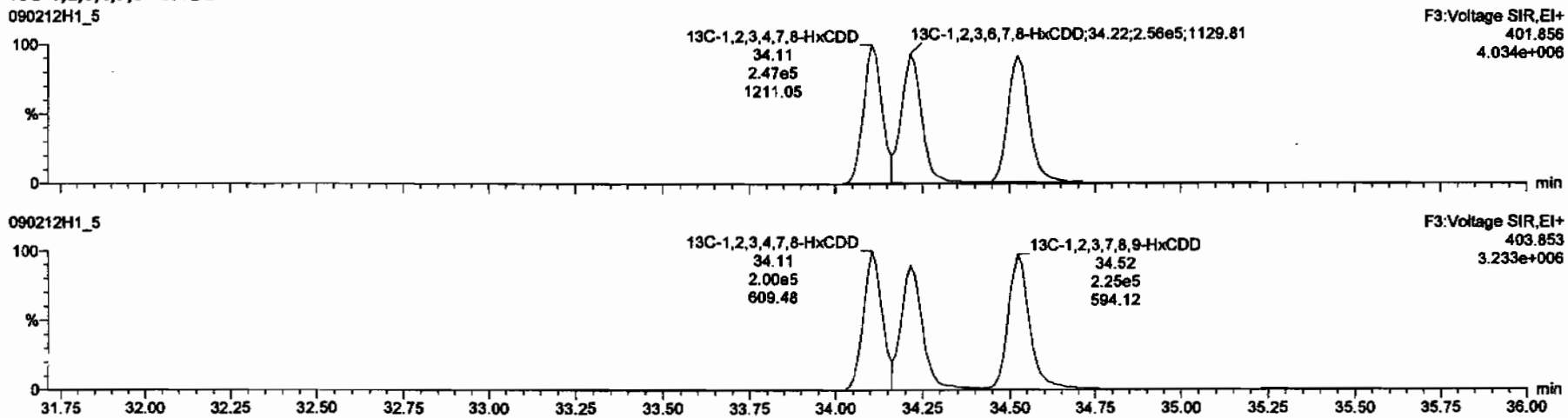

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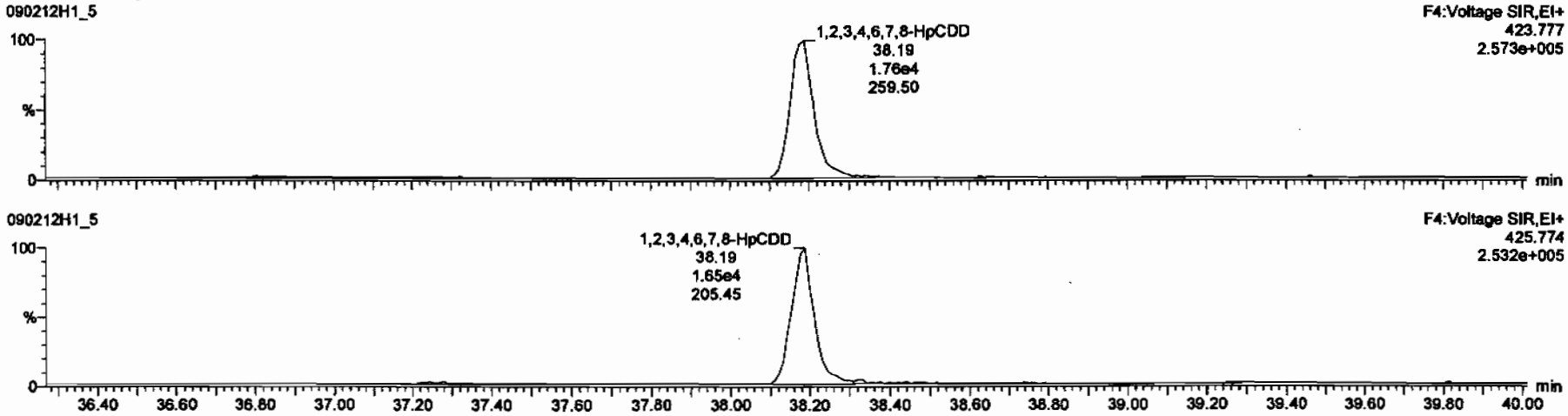

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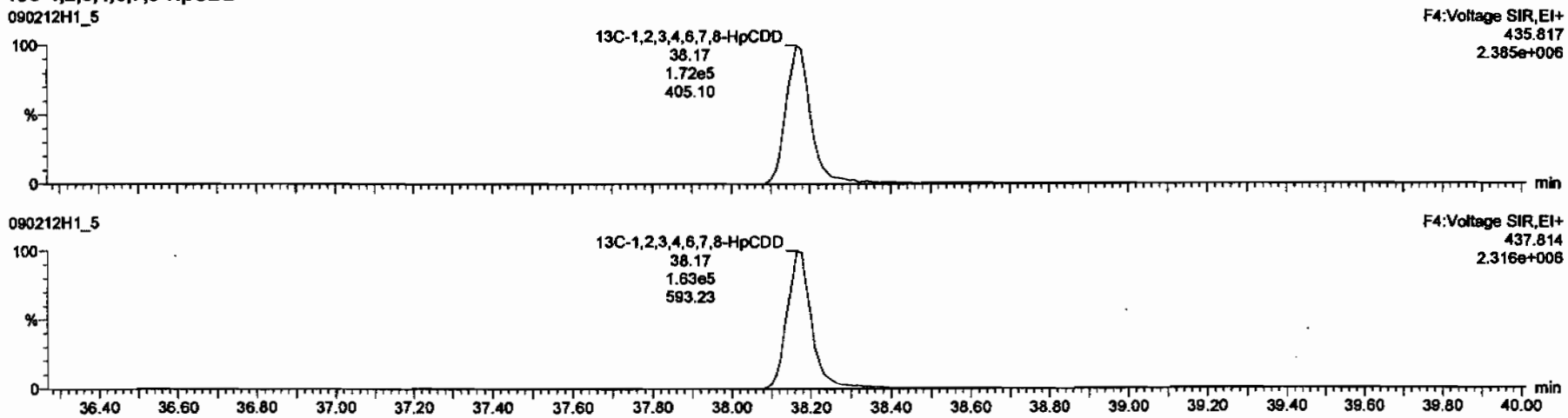

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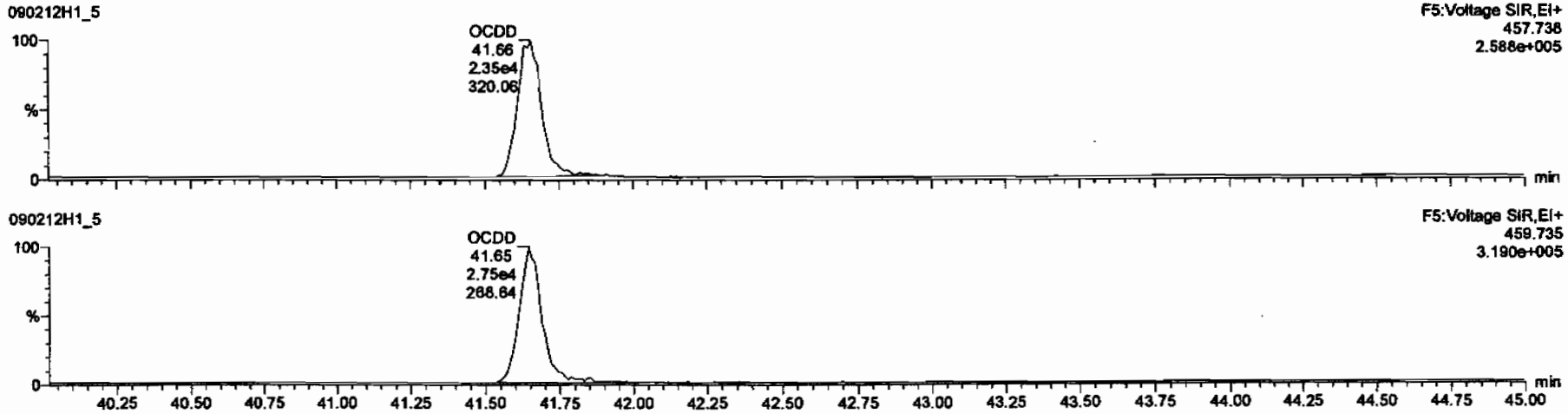

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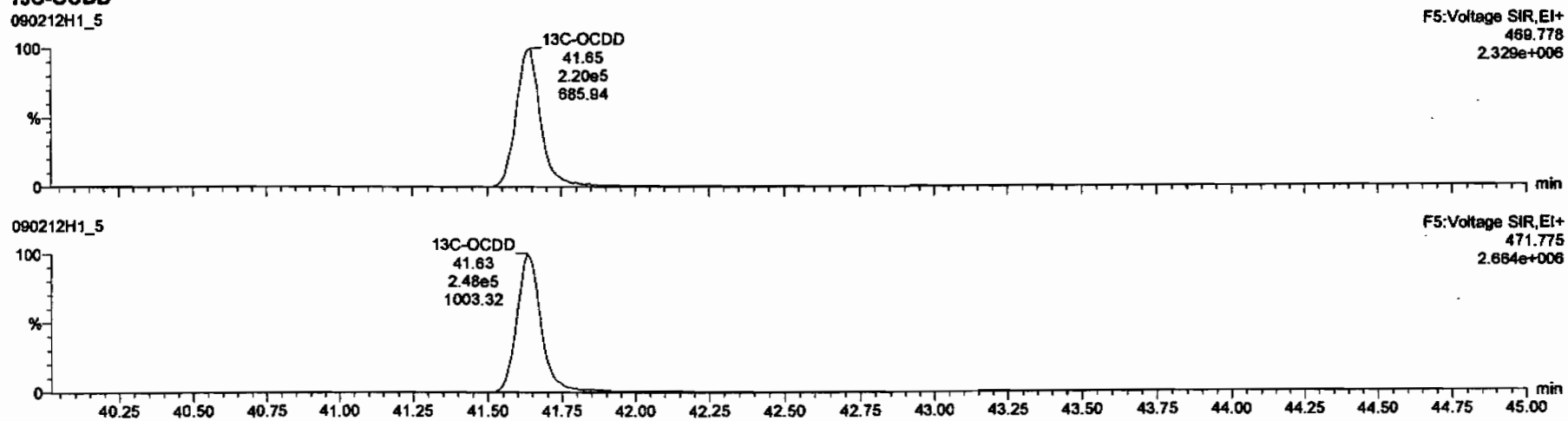

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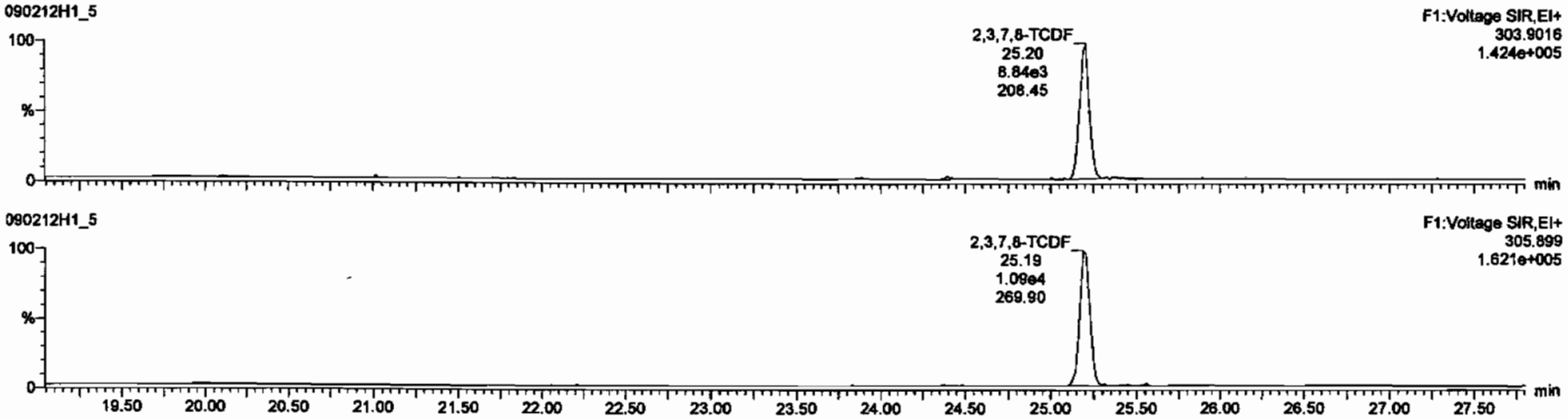

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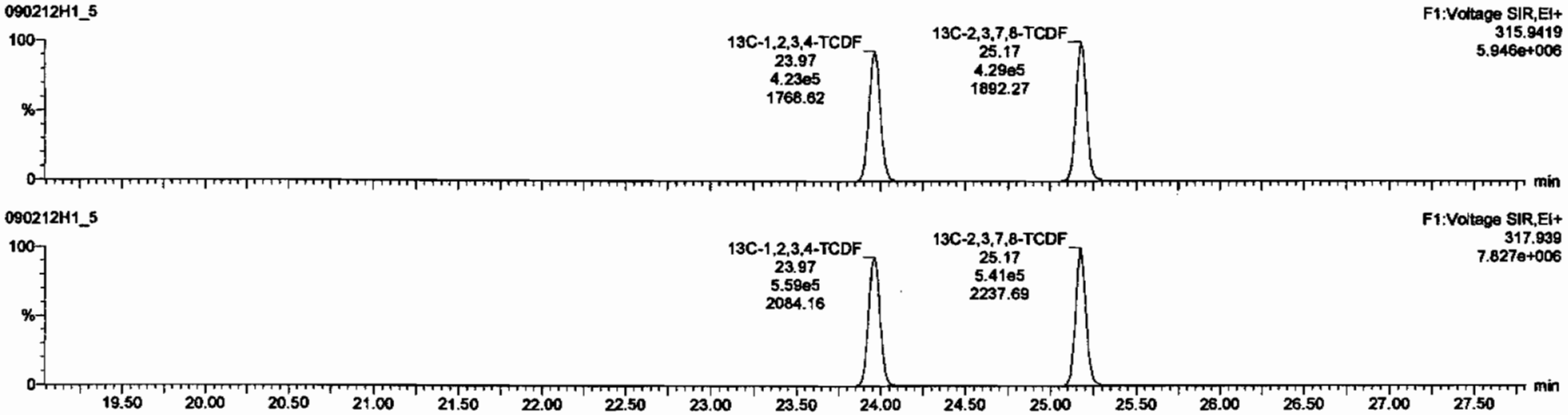

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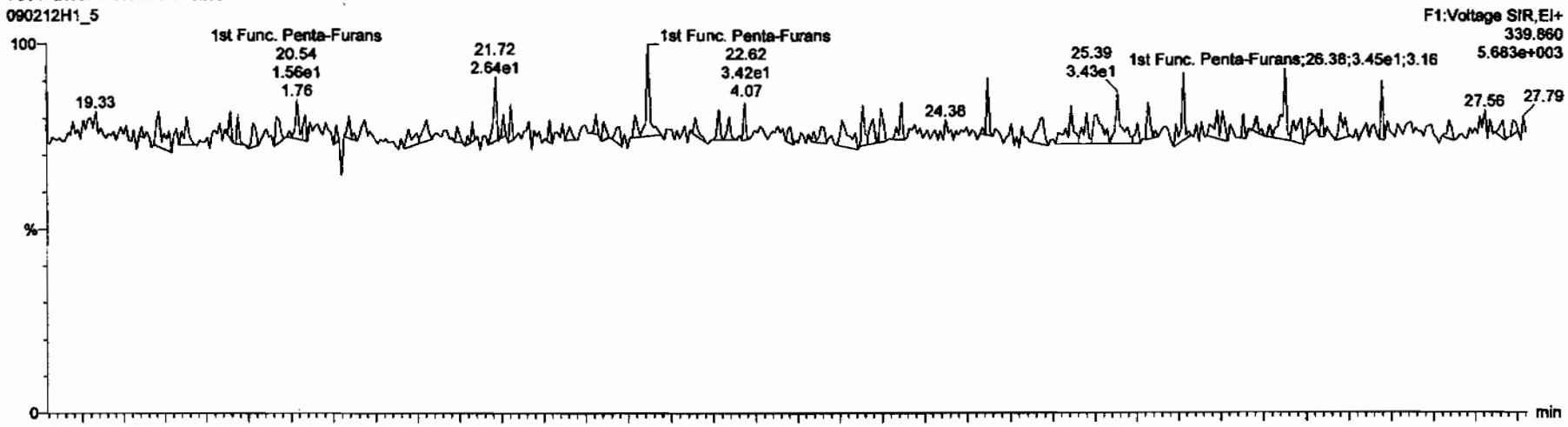

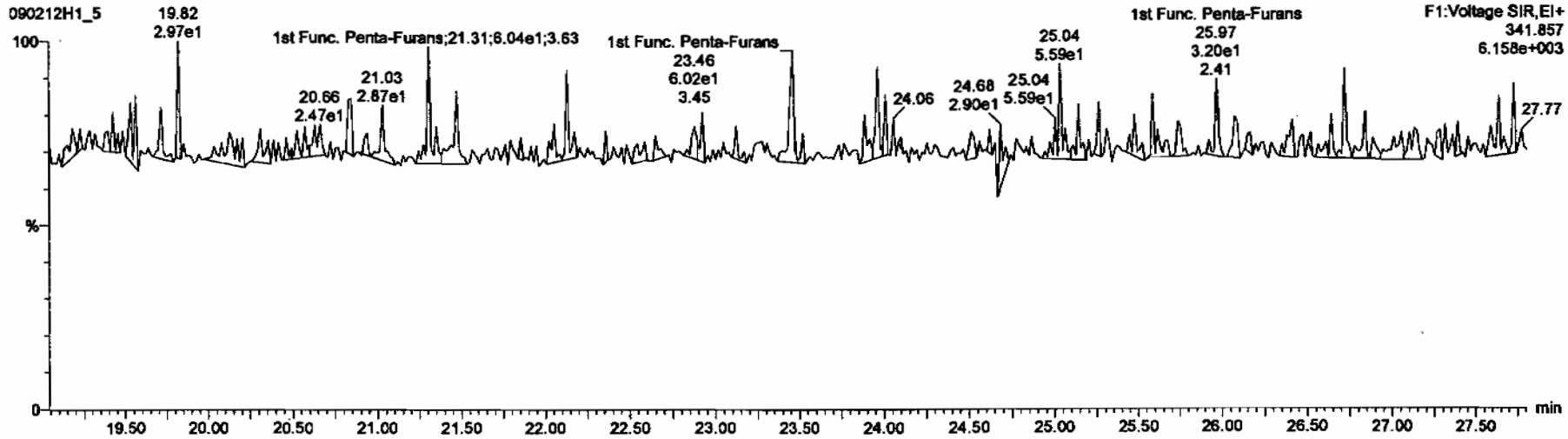

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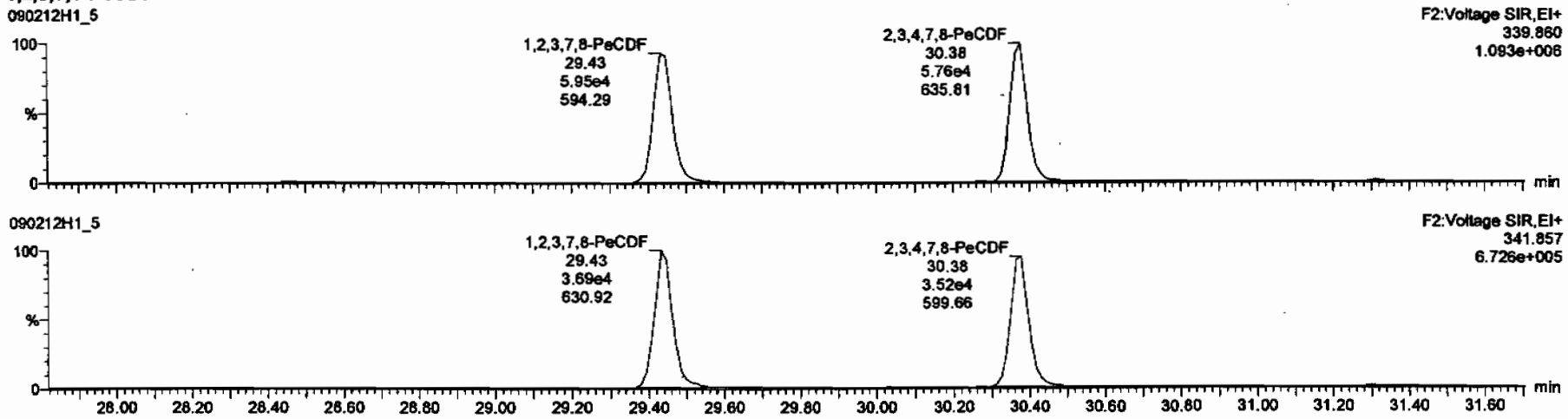

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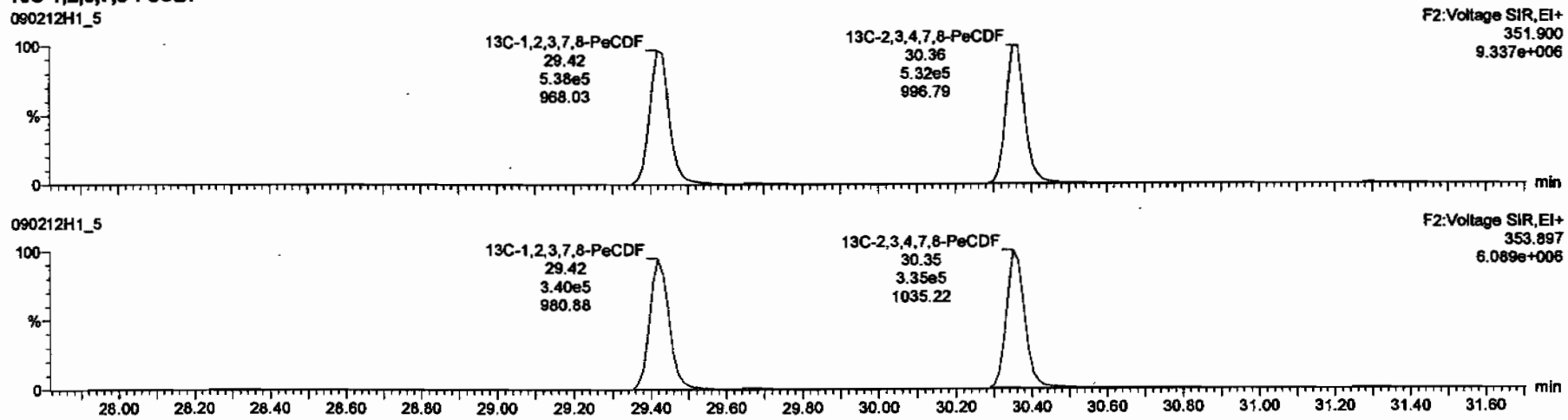

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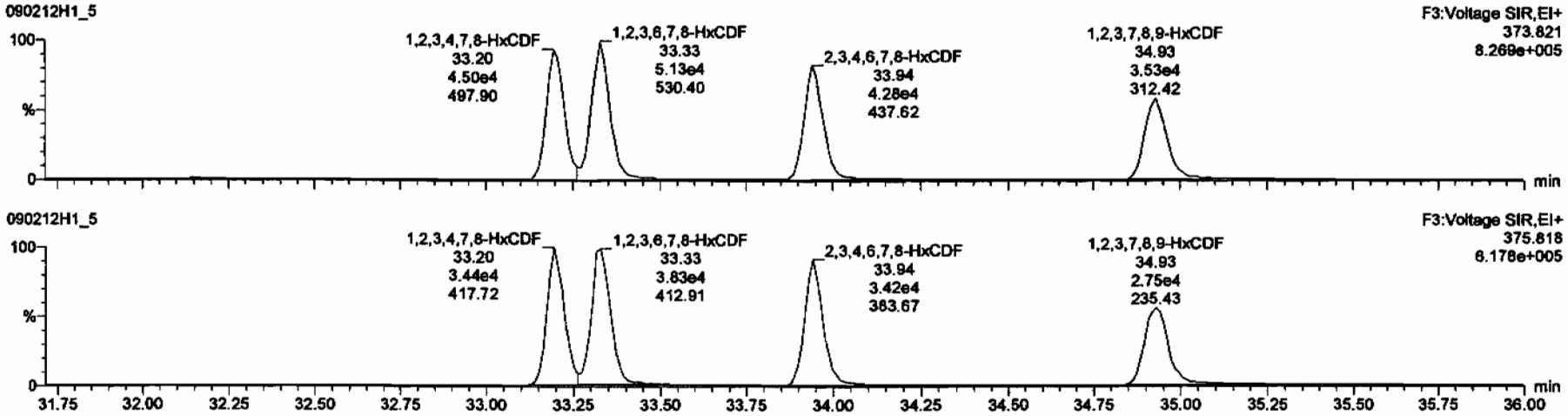

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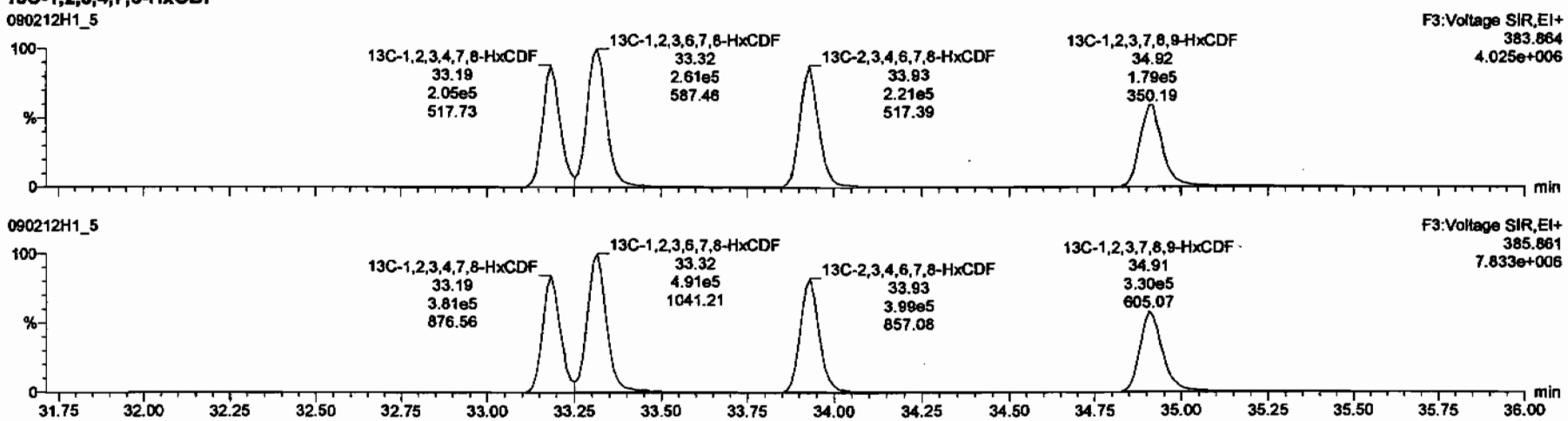

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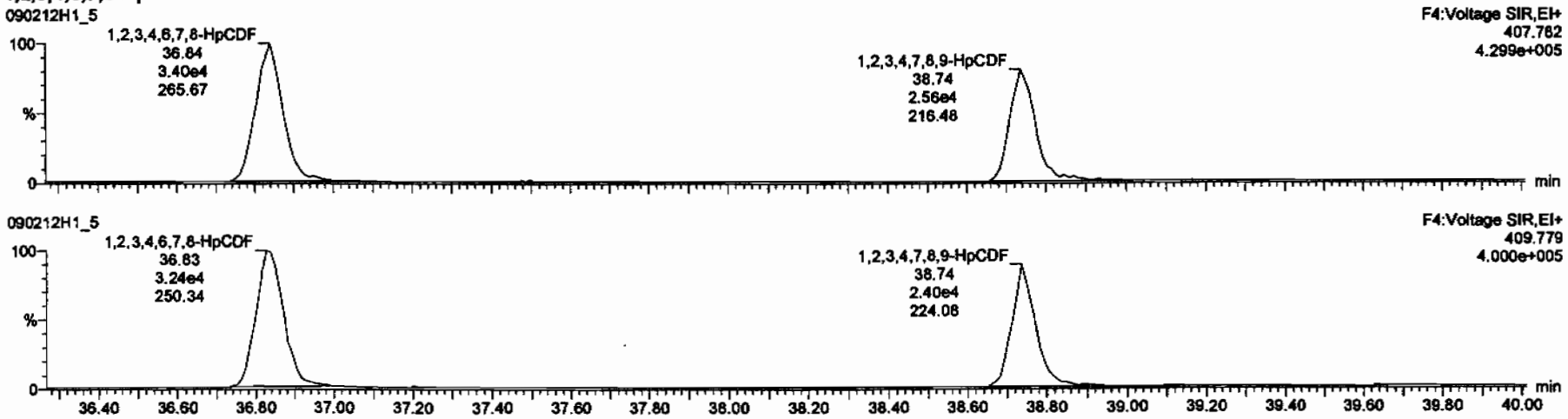

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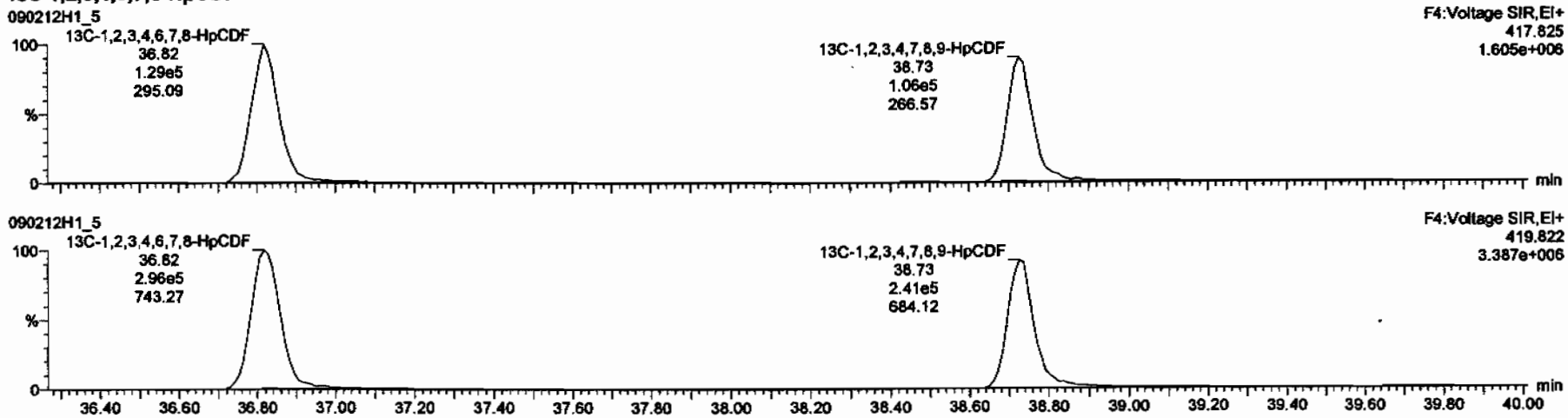

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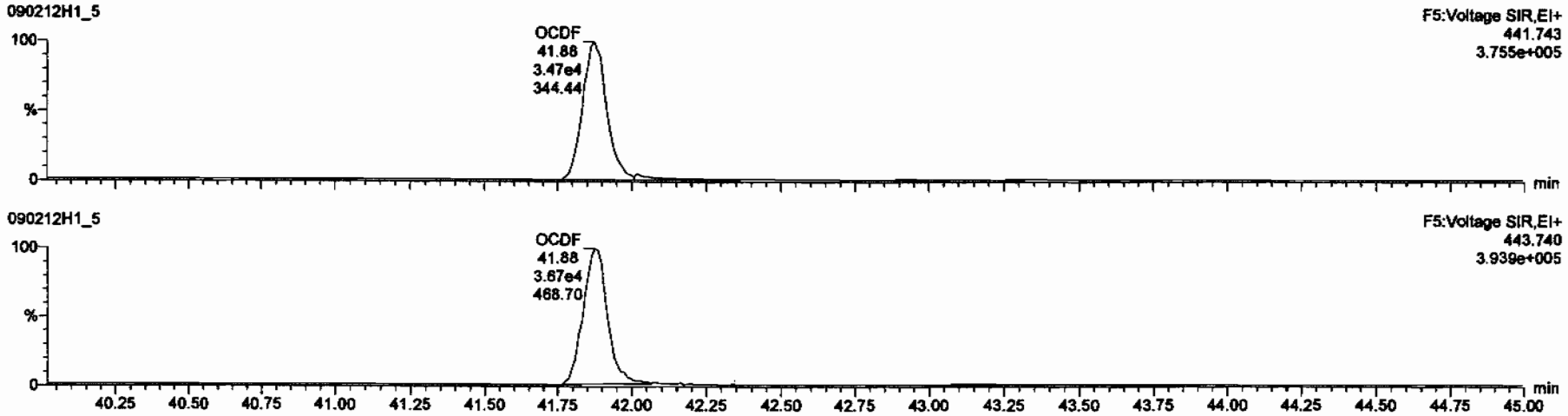

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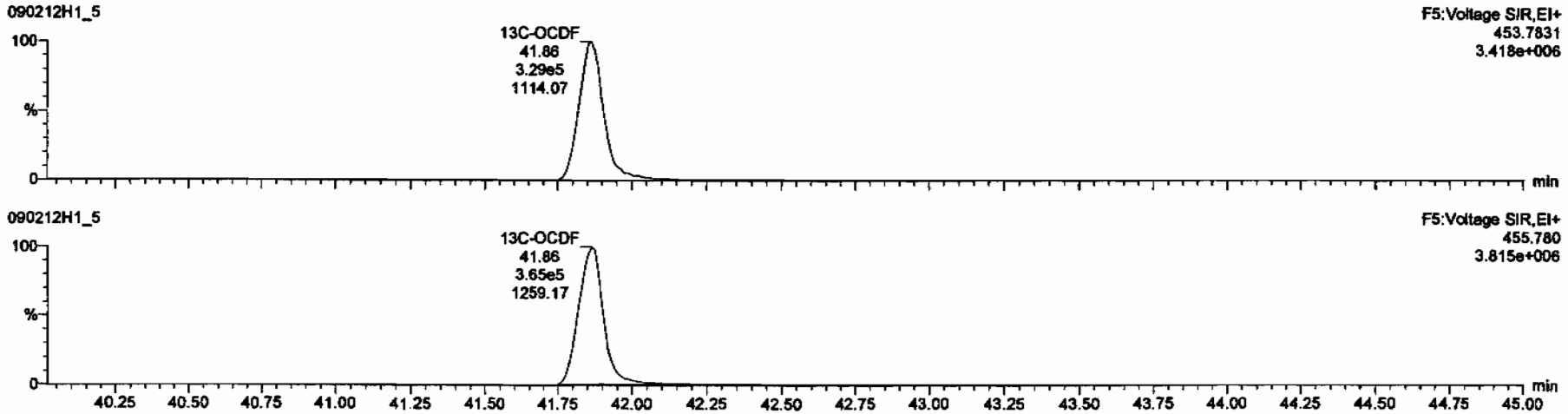

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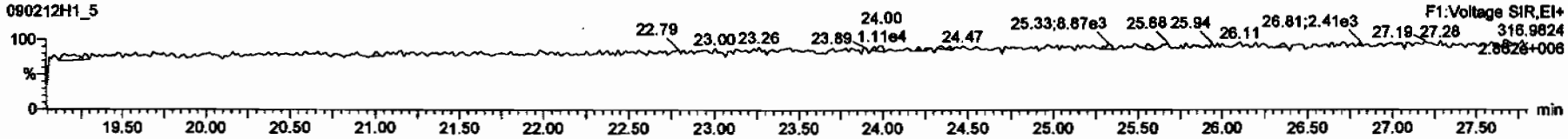

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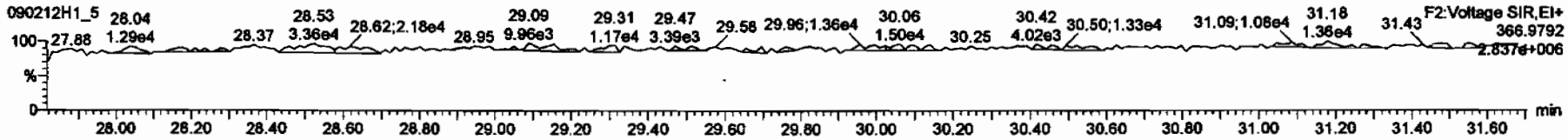

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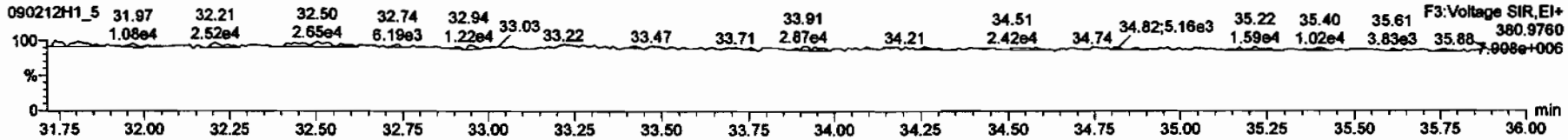

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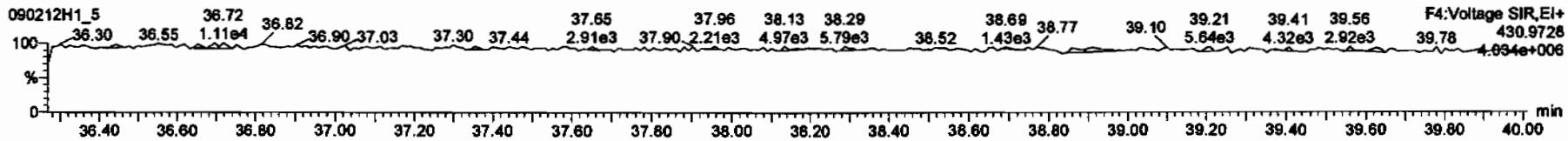

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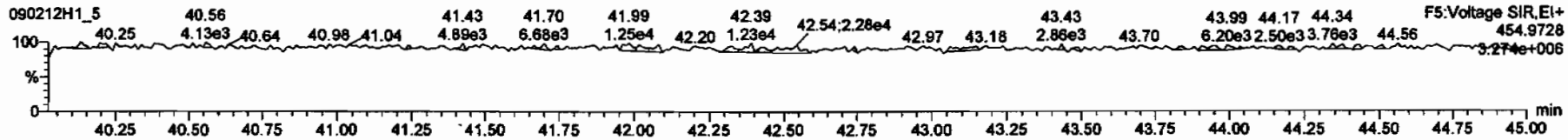

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DPE1

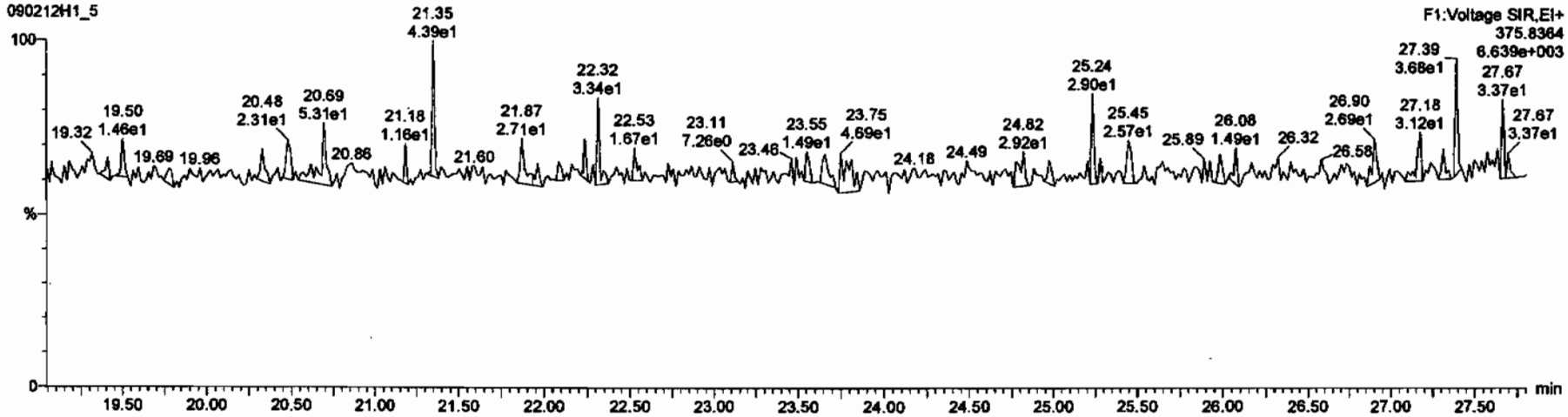

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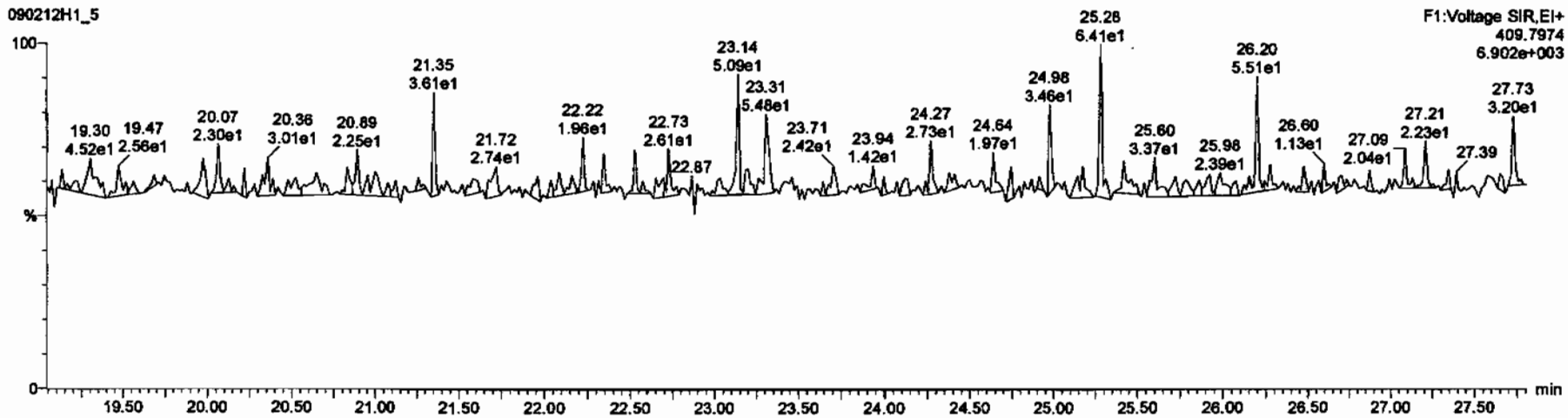

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DPE2

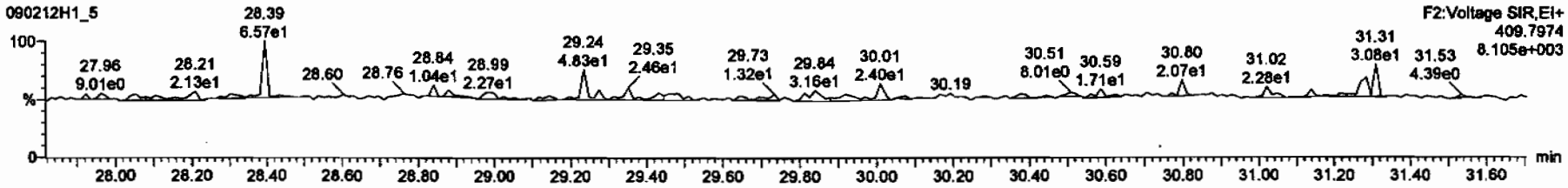

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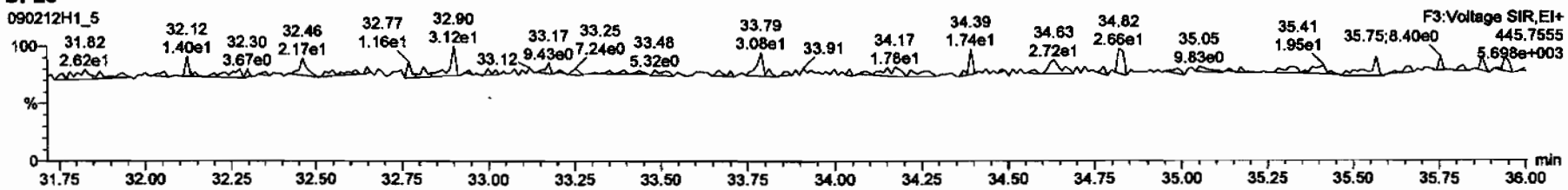

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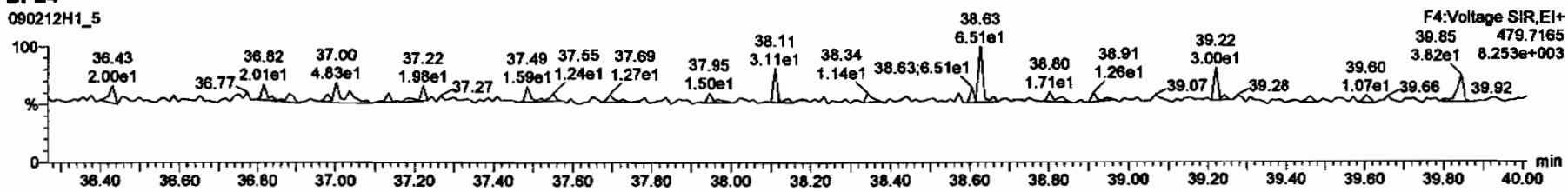

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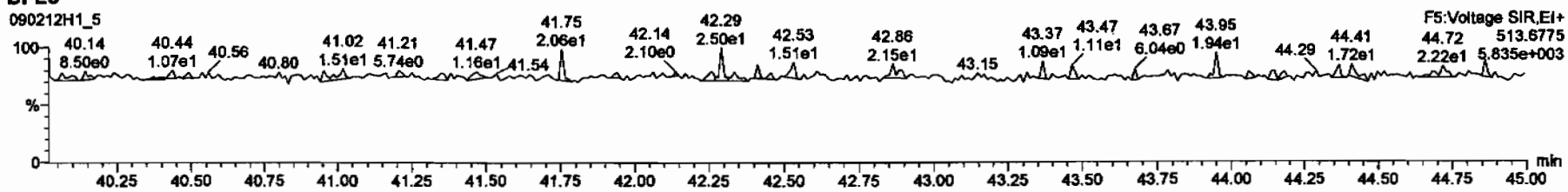

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Name: 090212H1_6, Date: 12-Feb-2009, Time: 15:17:39, ID: ST090212H1-5 1613 CS4 080917J, Description: 1613 CS4 080917J

2,3,7,8-TCDD

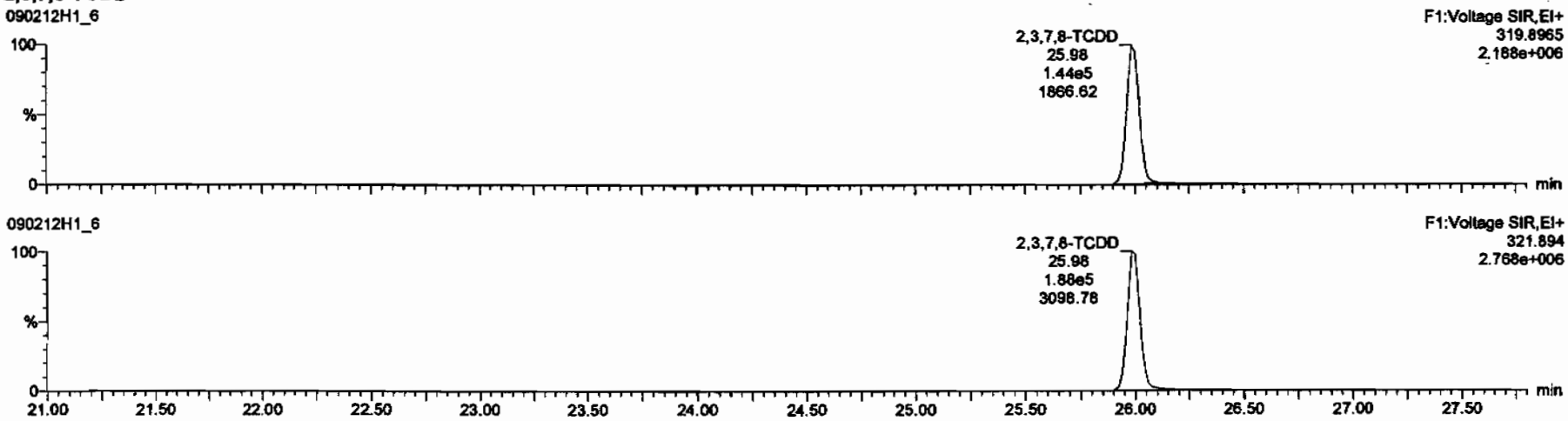

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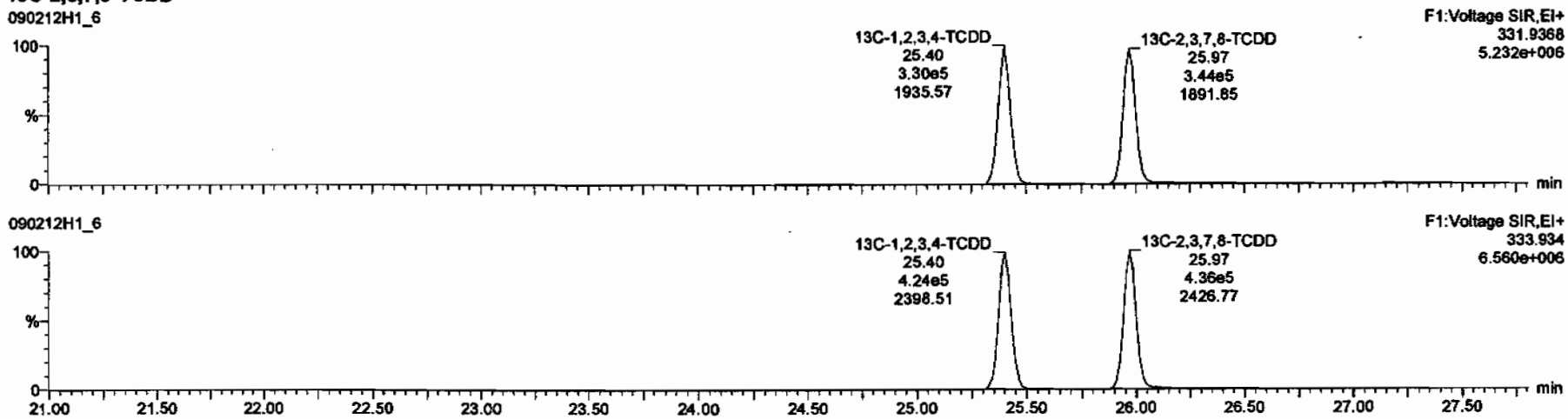

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37Cl-2,3,7,8-TCDD

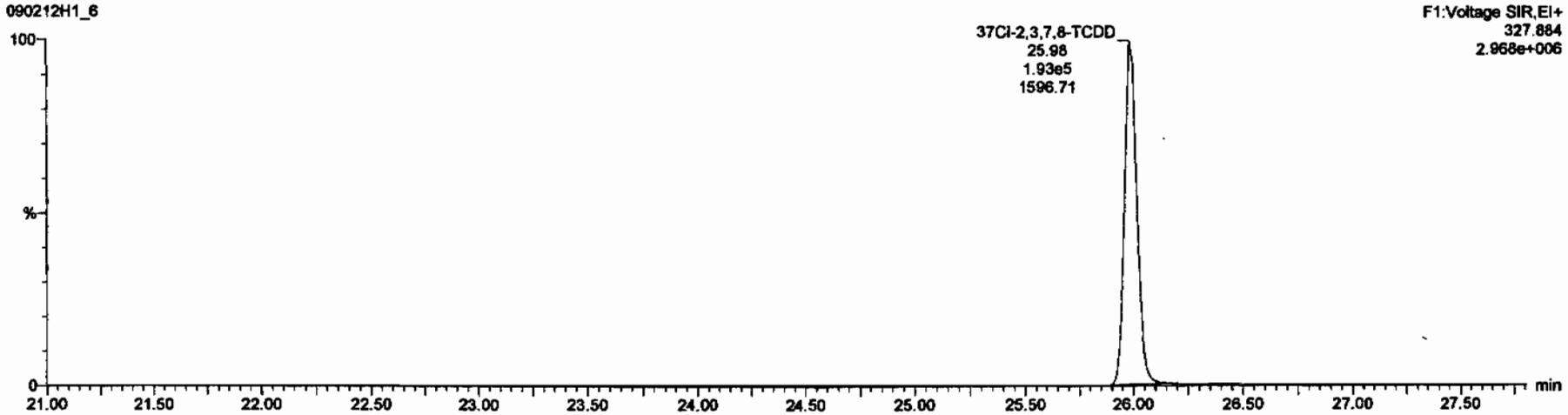

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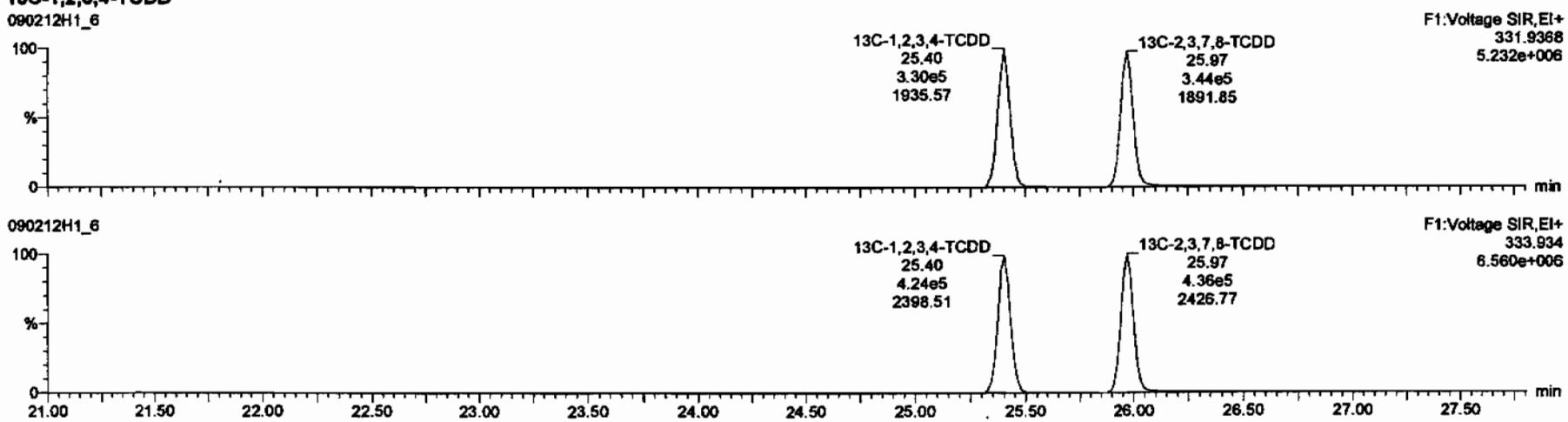

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1,2,3,7,8-PeCDD

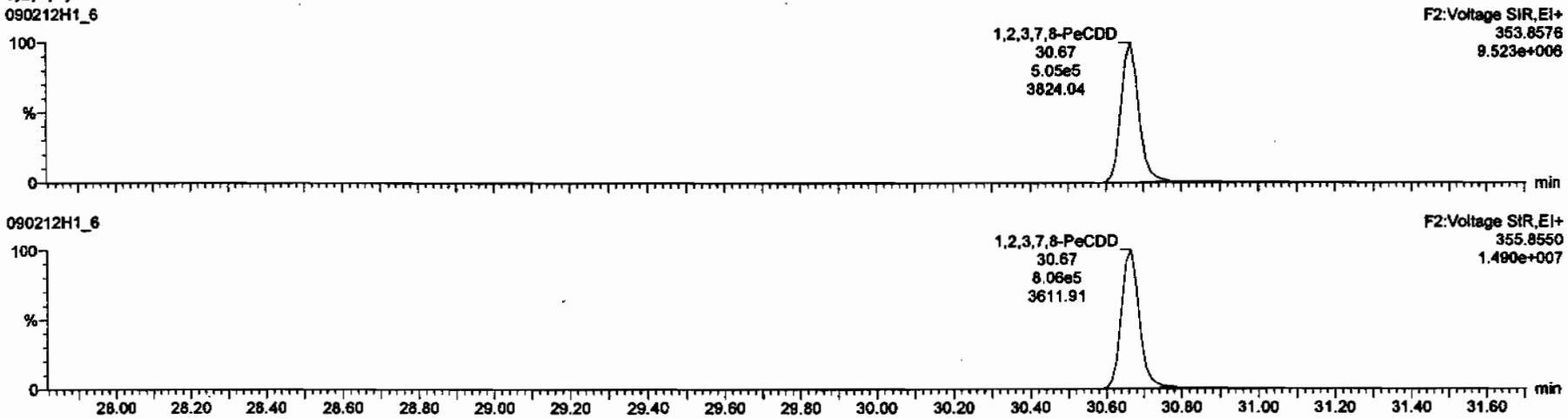

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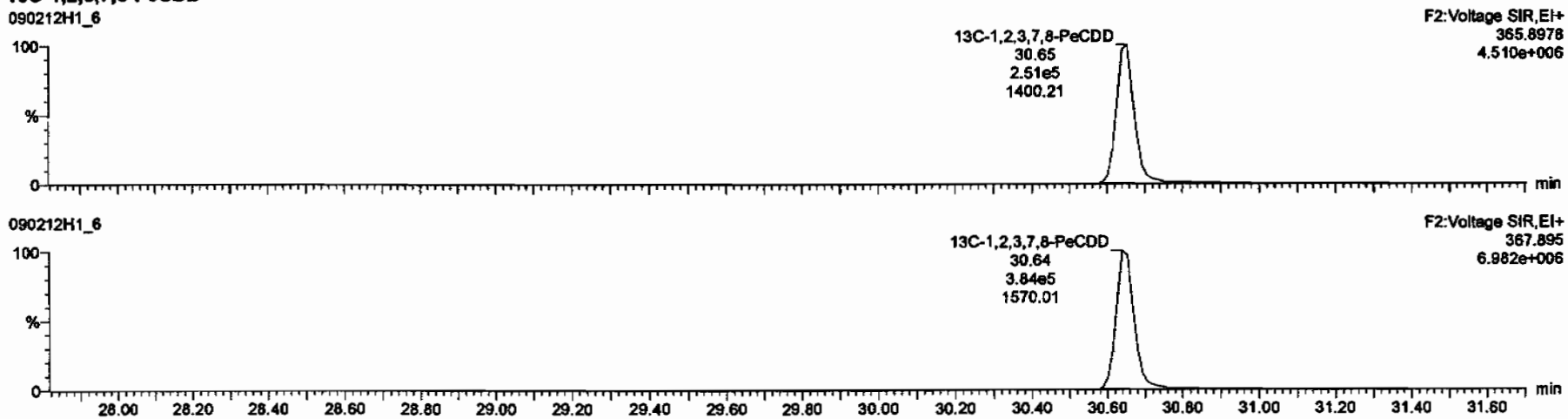

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1,2,3,4,7,8-HxCDD

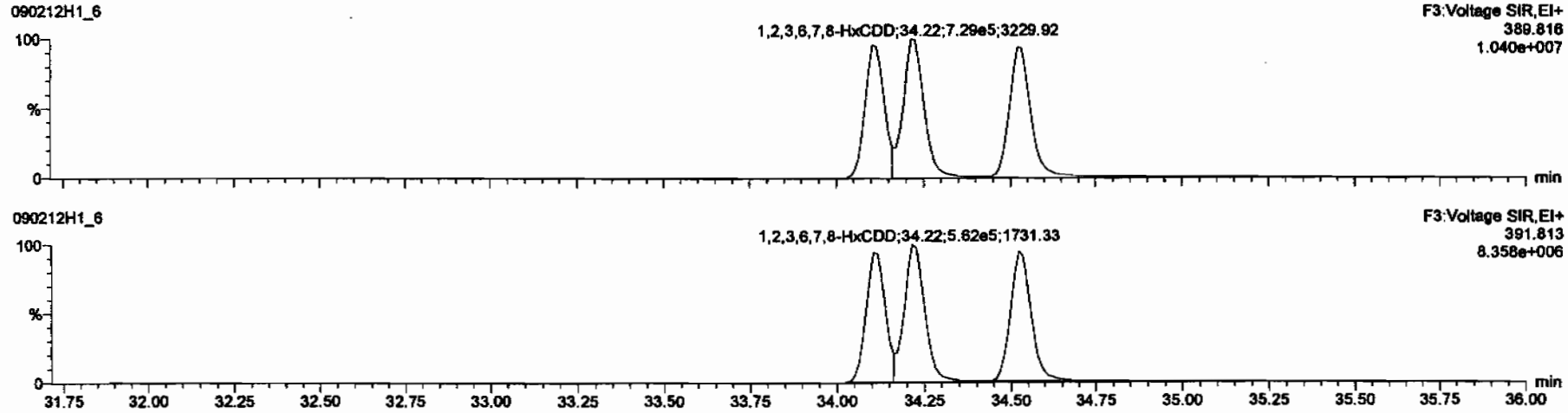

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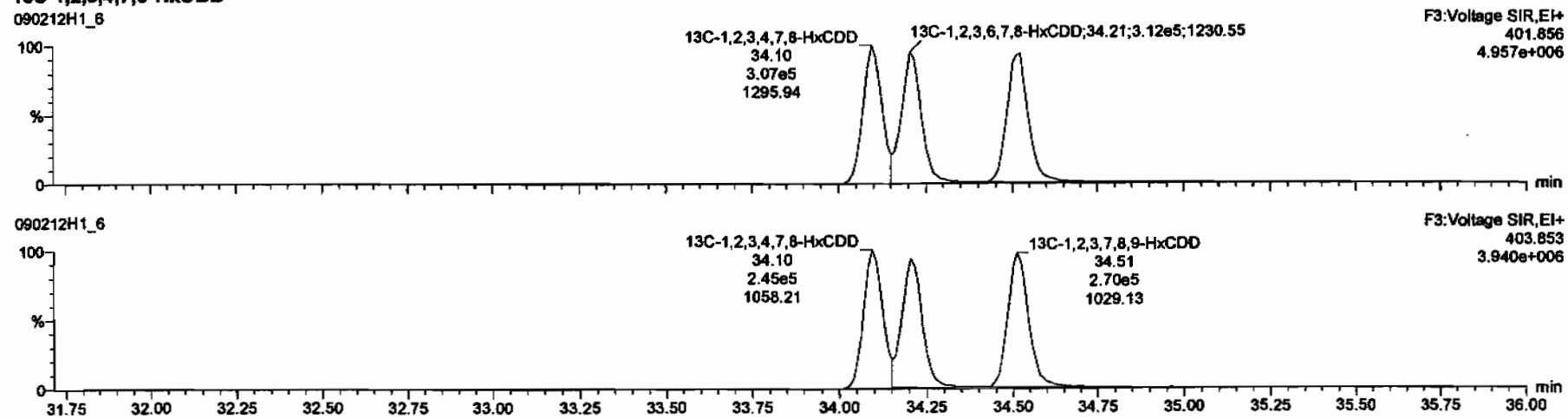

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1,2,3,4,6,7,8-HpCDD

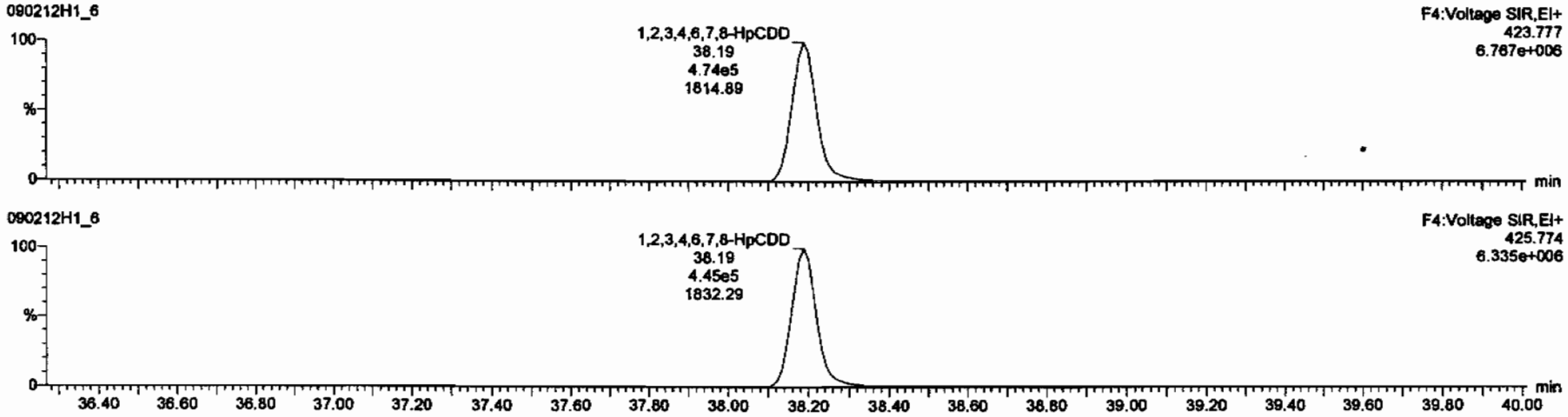

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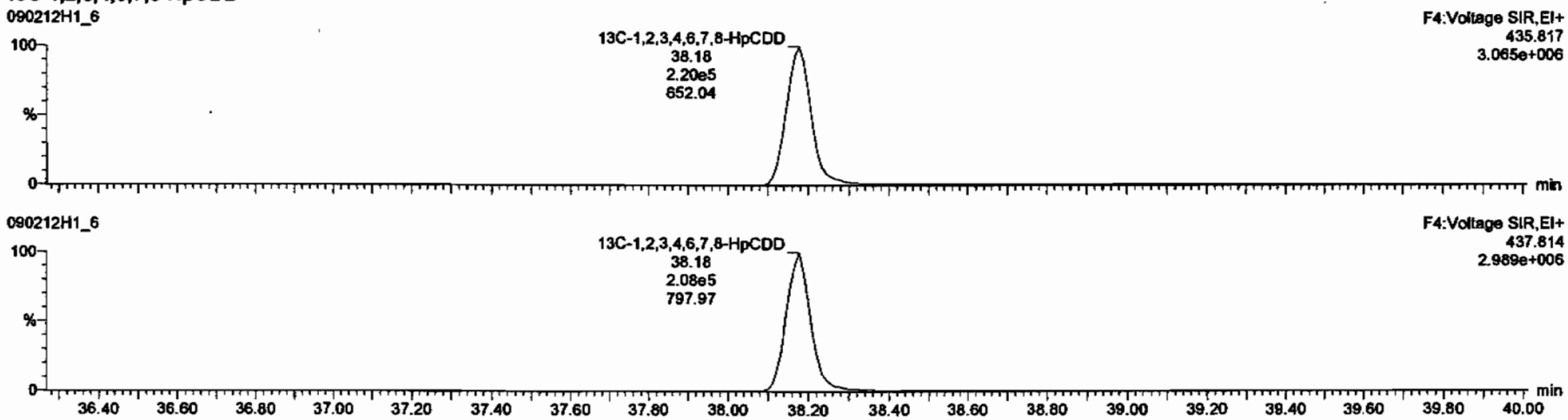

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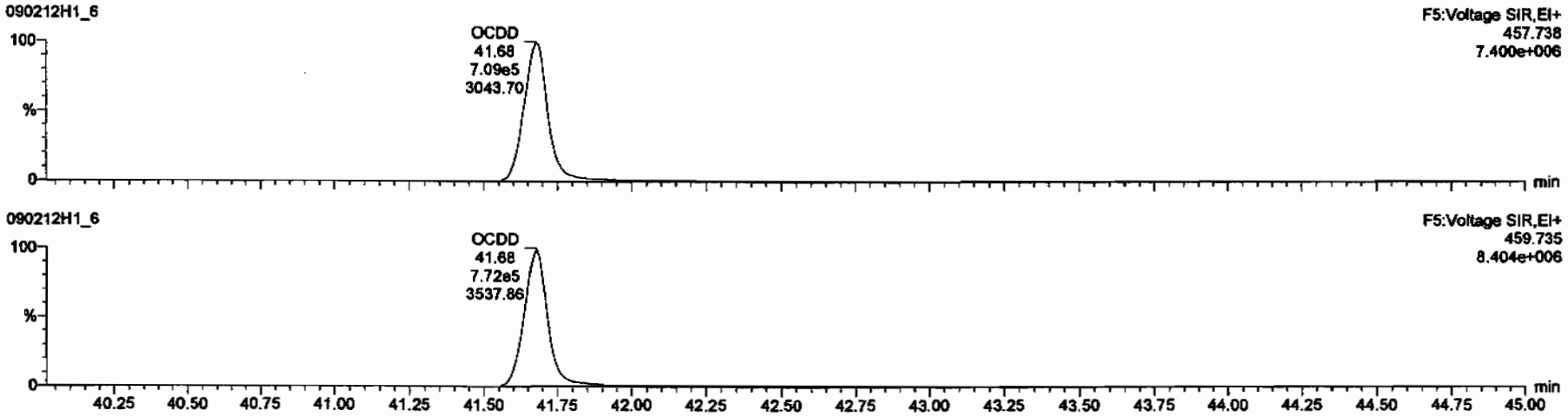

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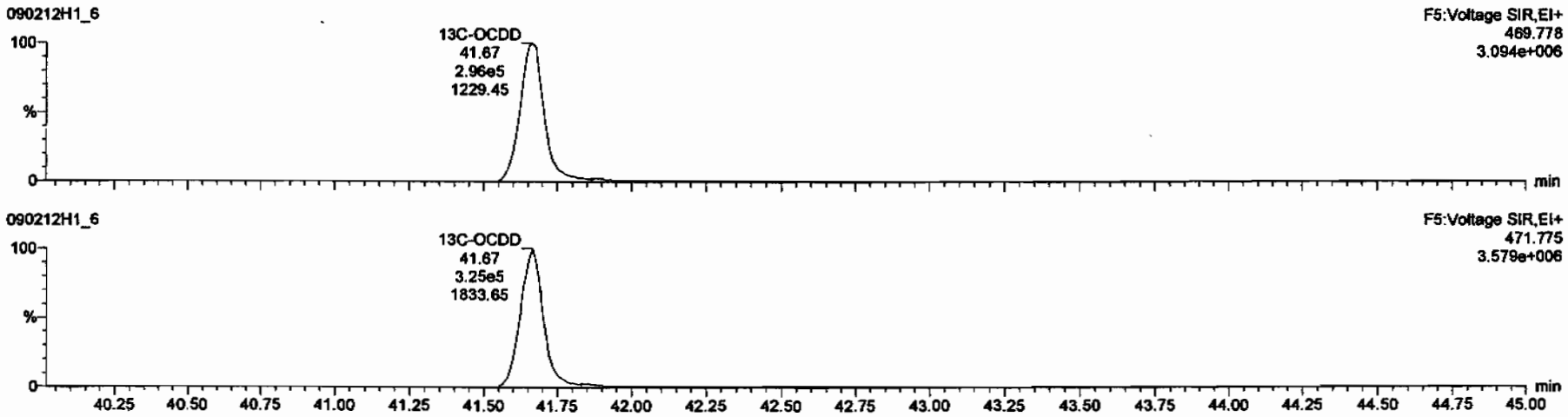

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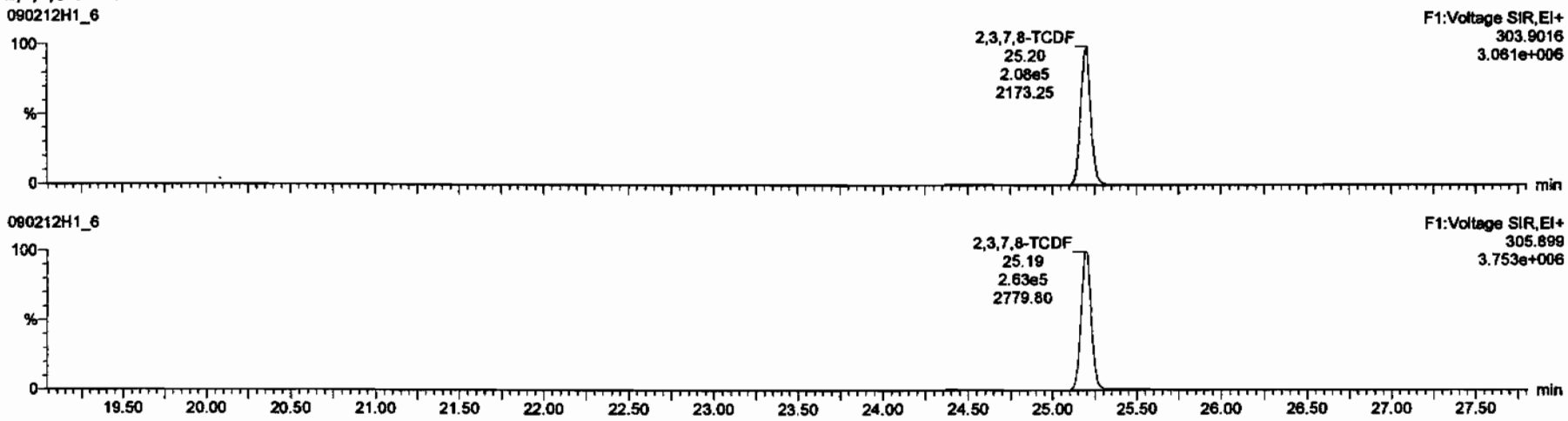

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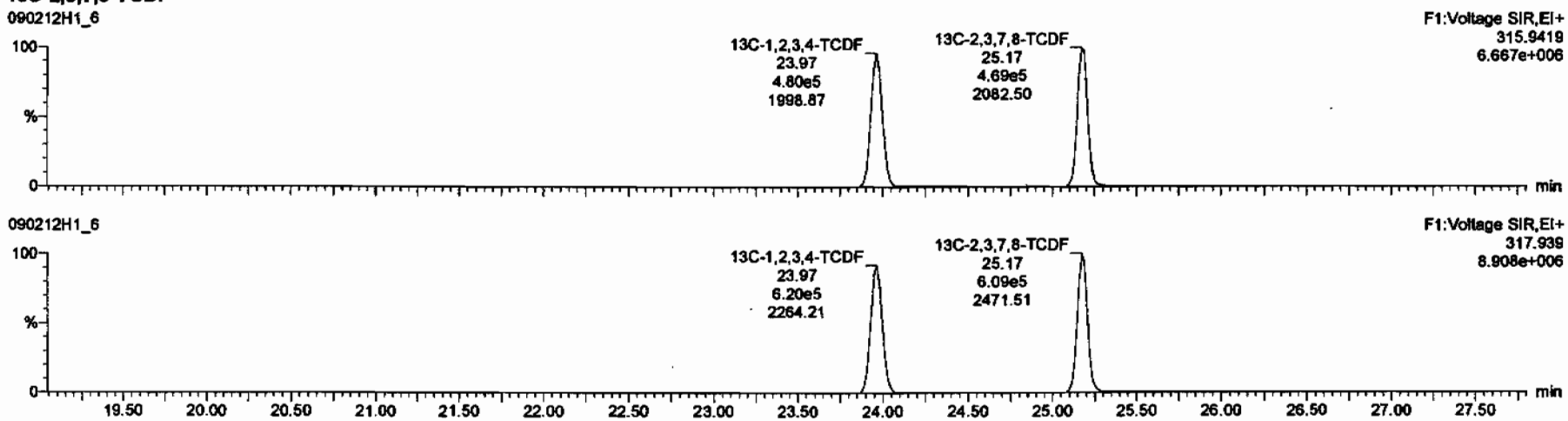

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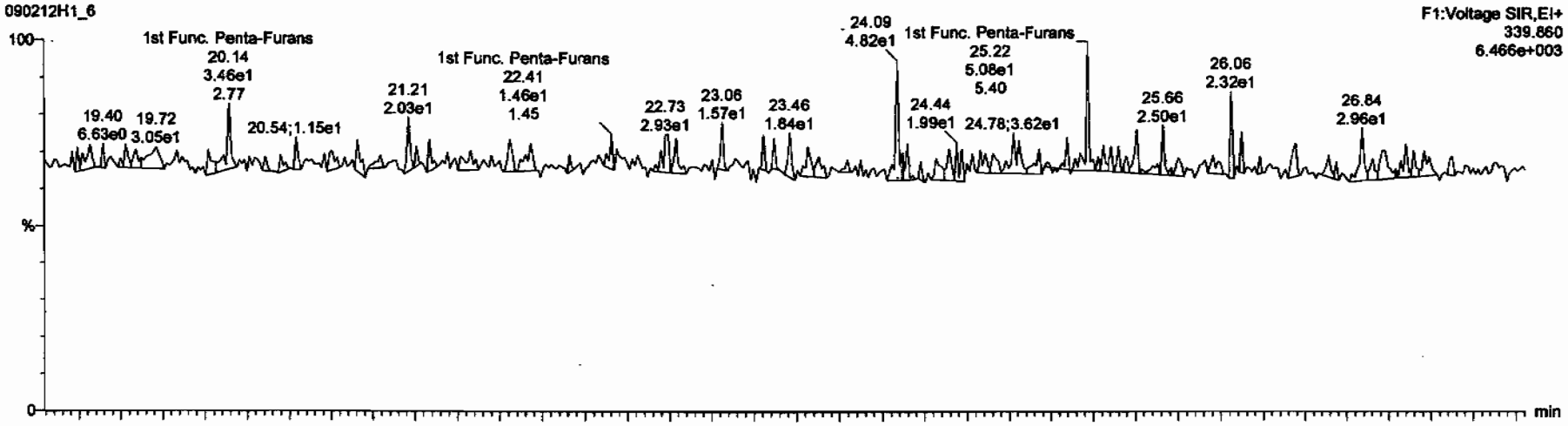

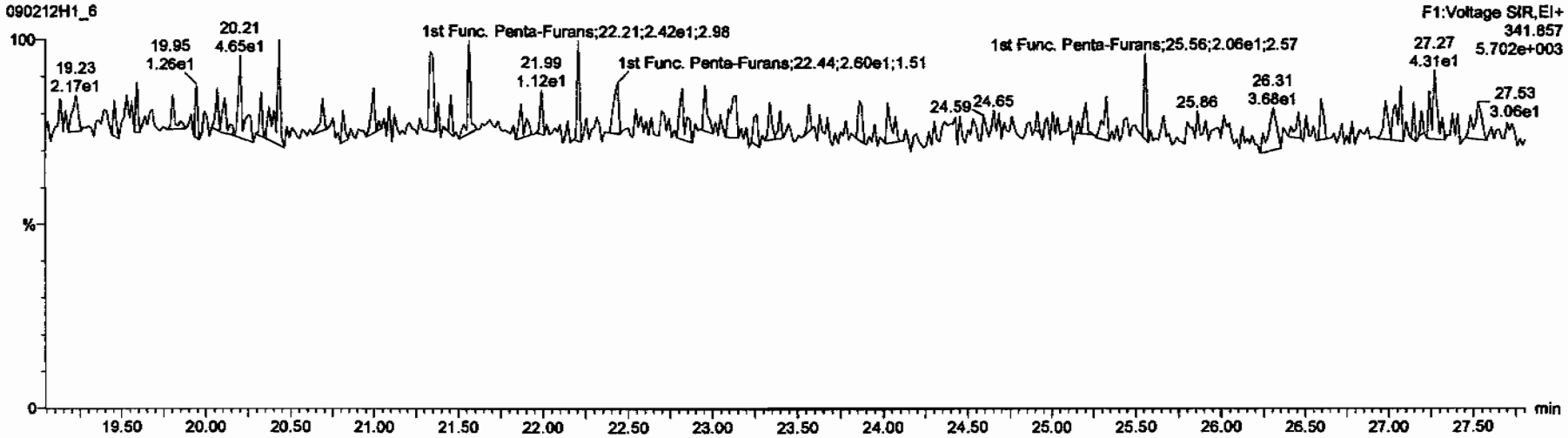

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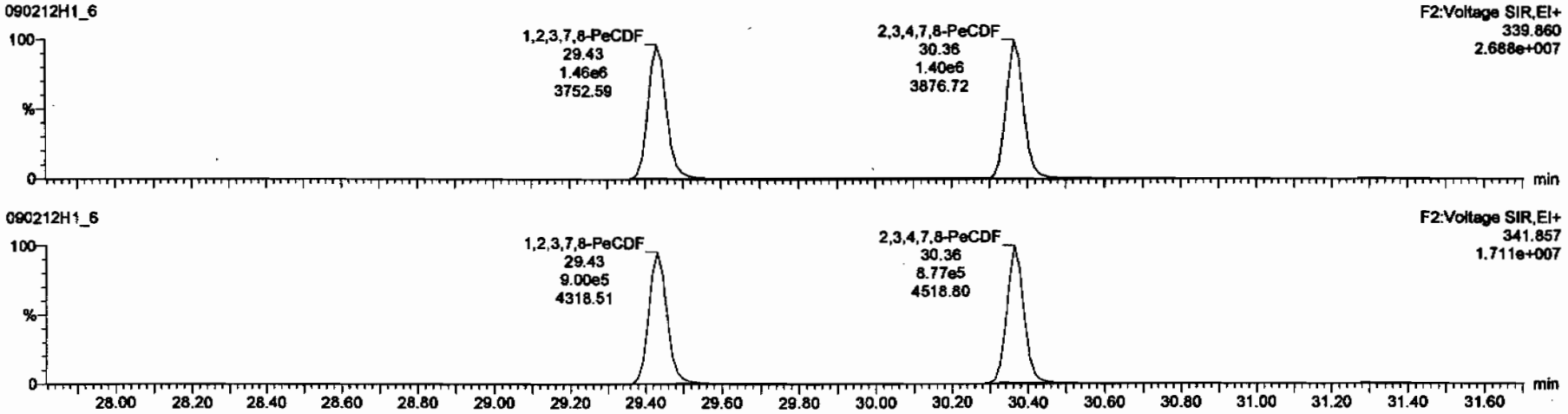

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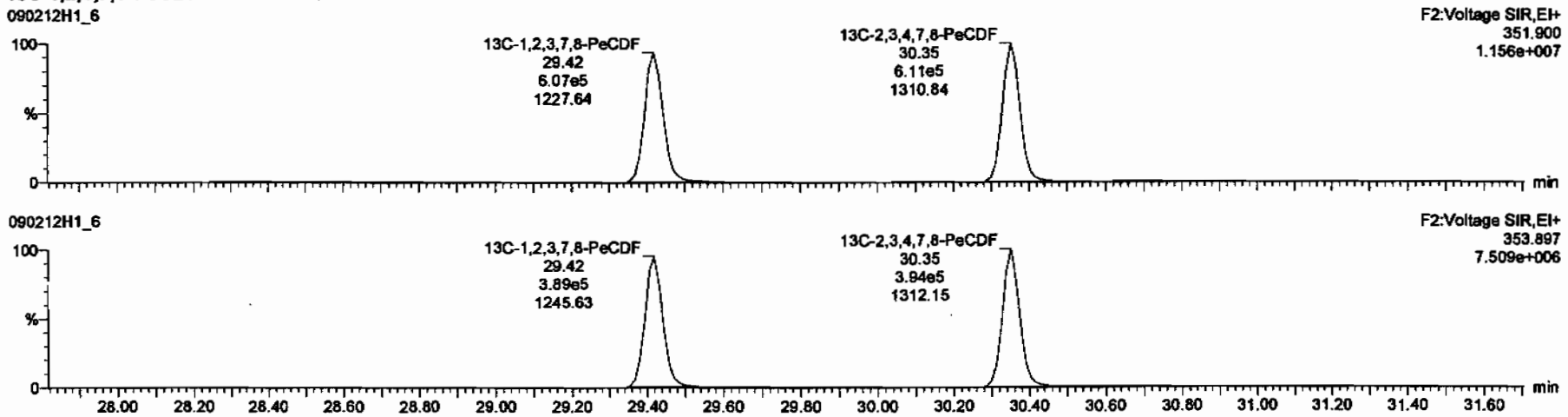

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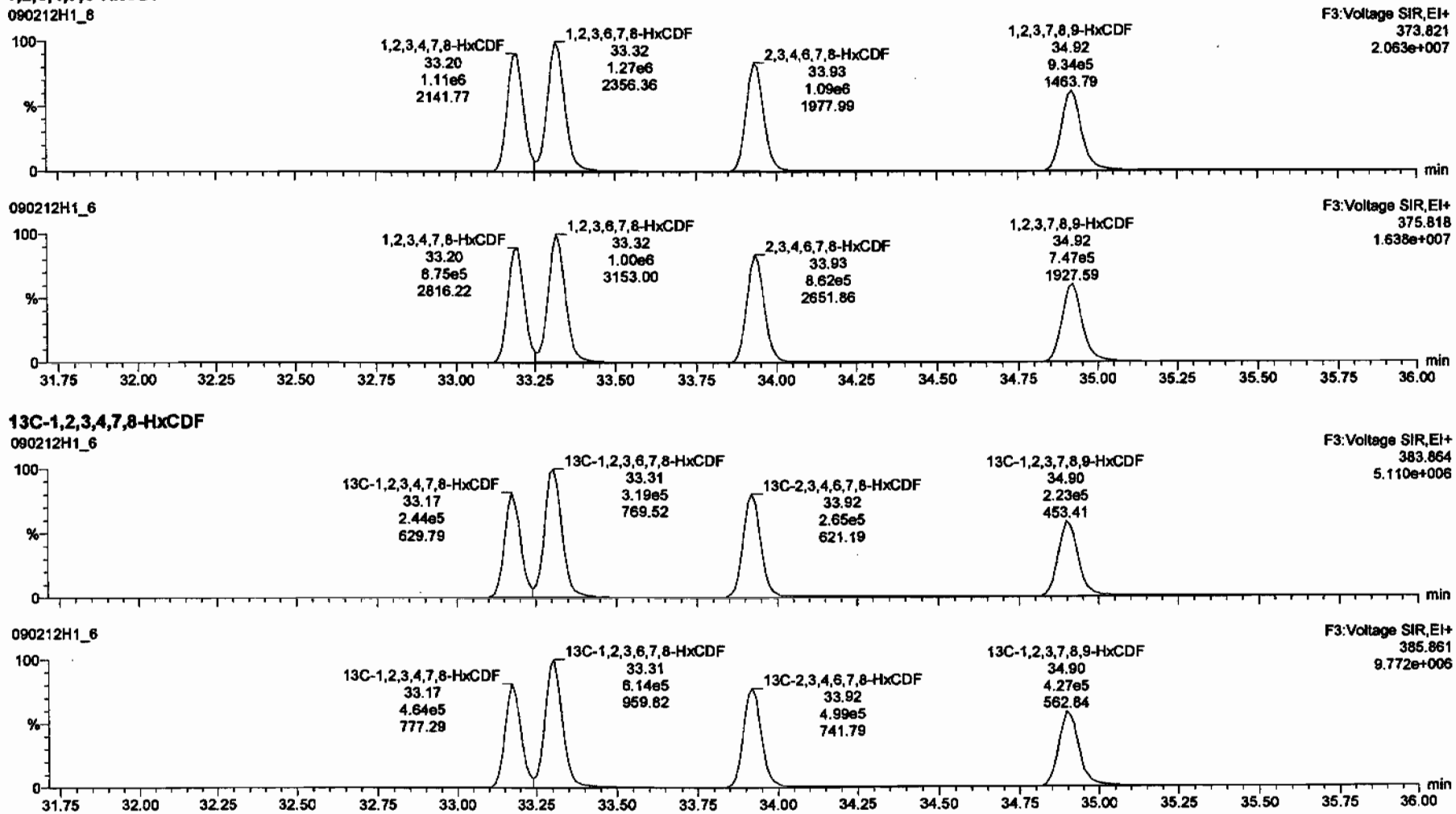

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1,2,3,4,6,7,8-HpCDF

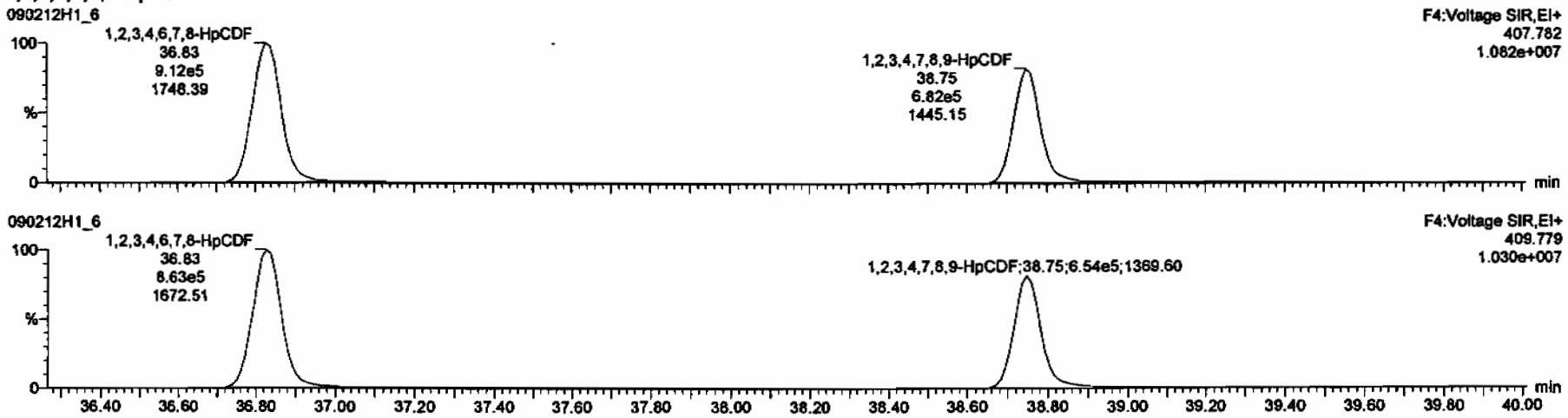

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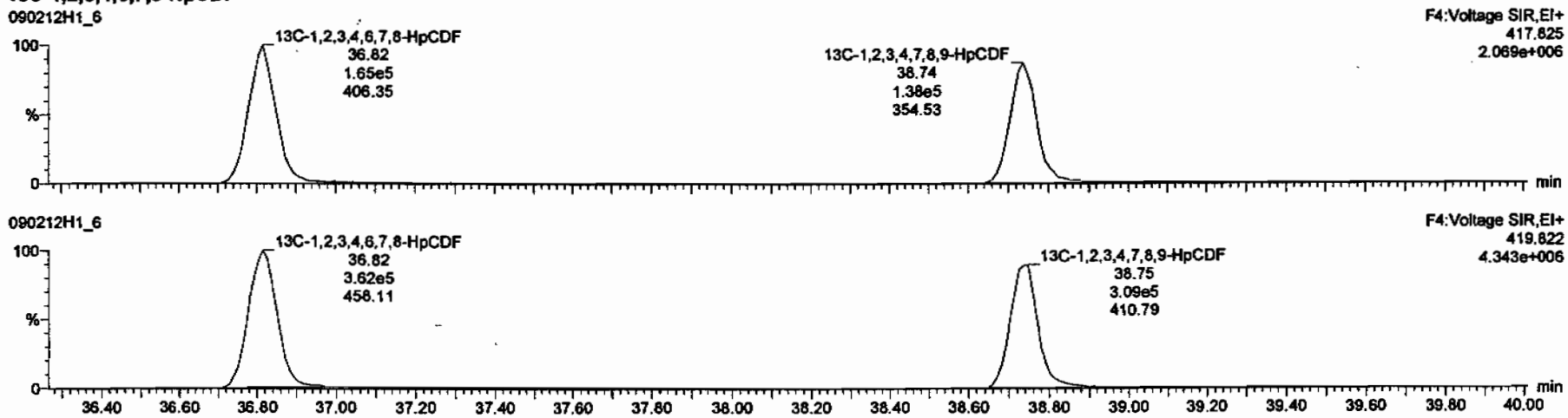

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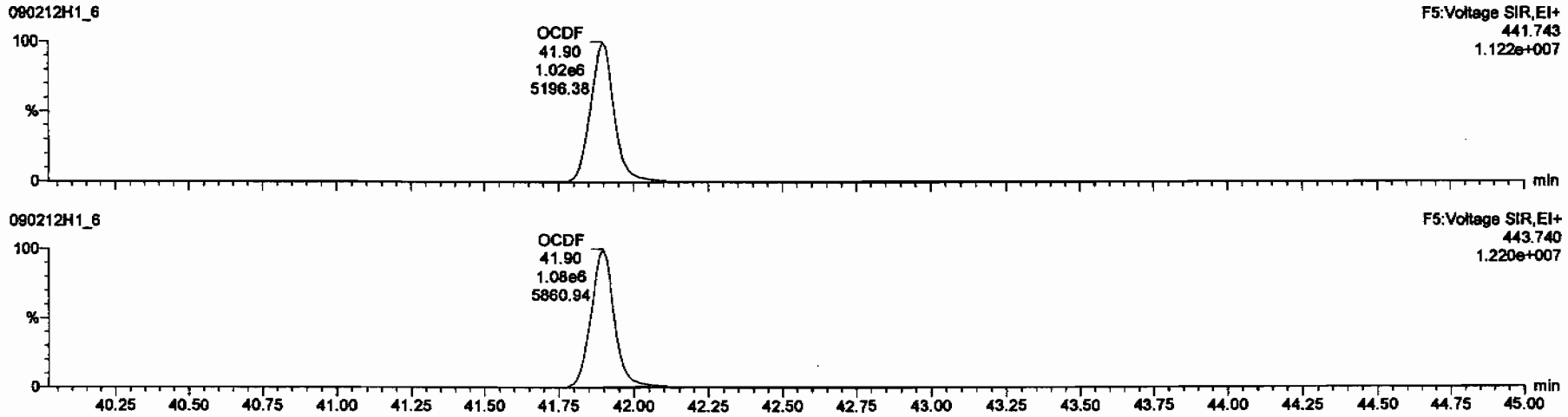

13C-OCDF

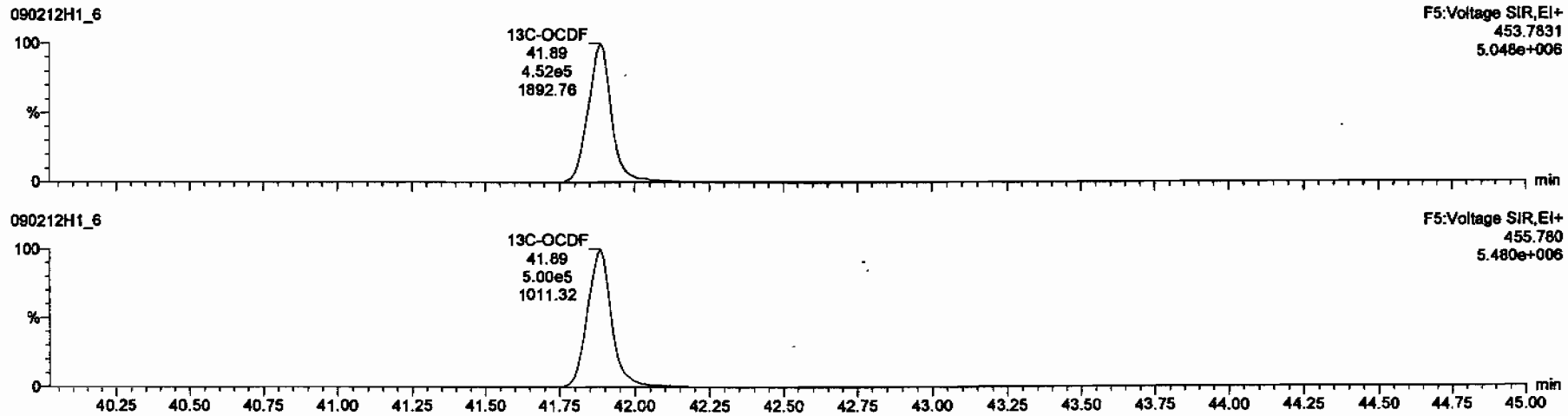

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PFK1

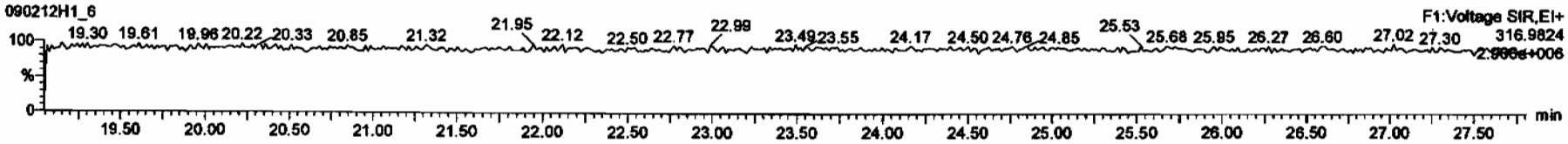

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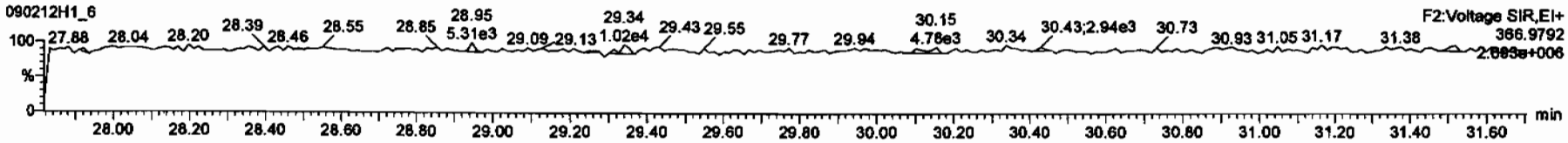

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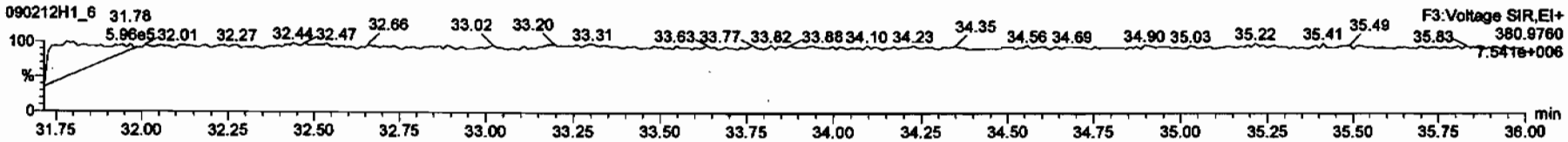

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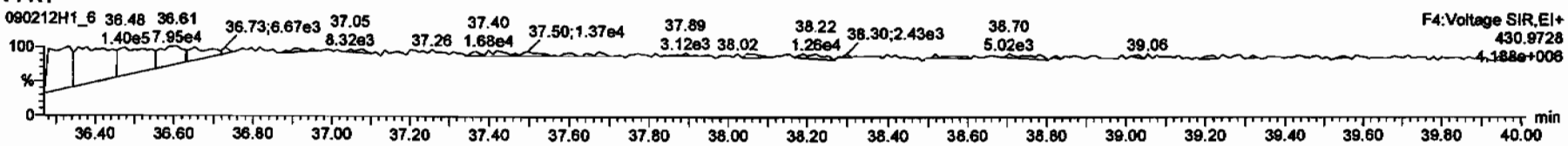

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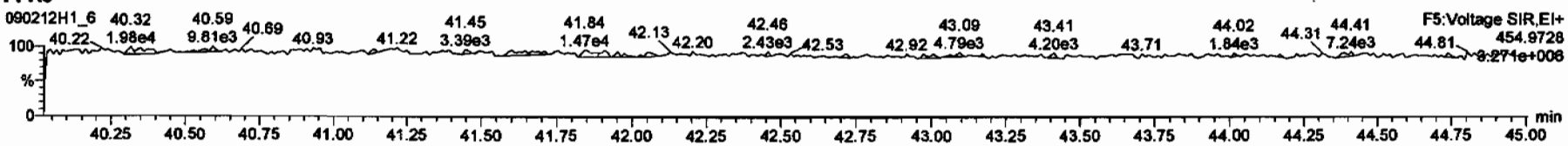

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DPE1

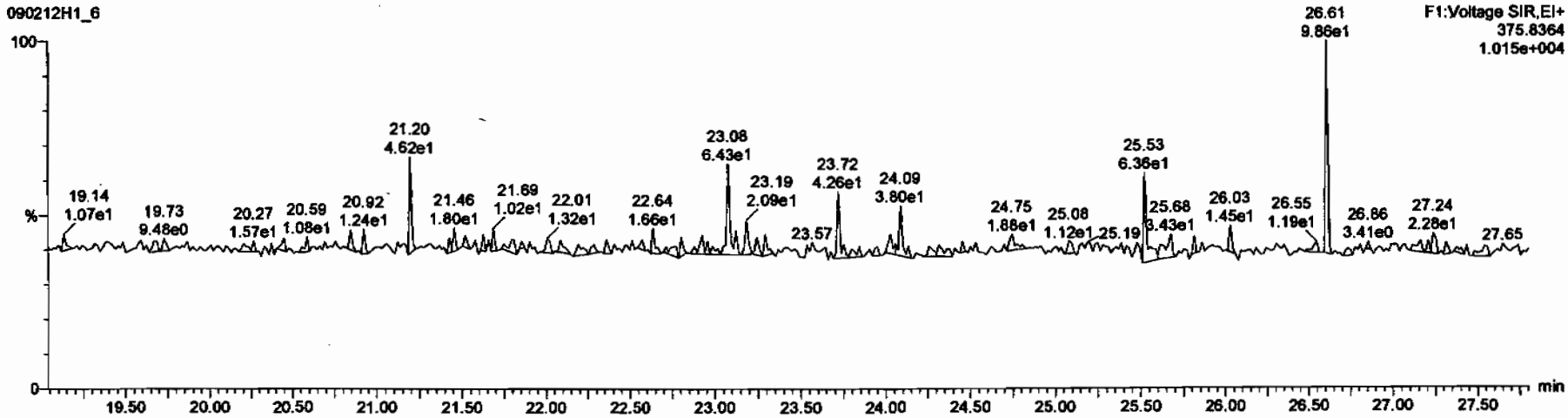

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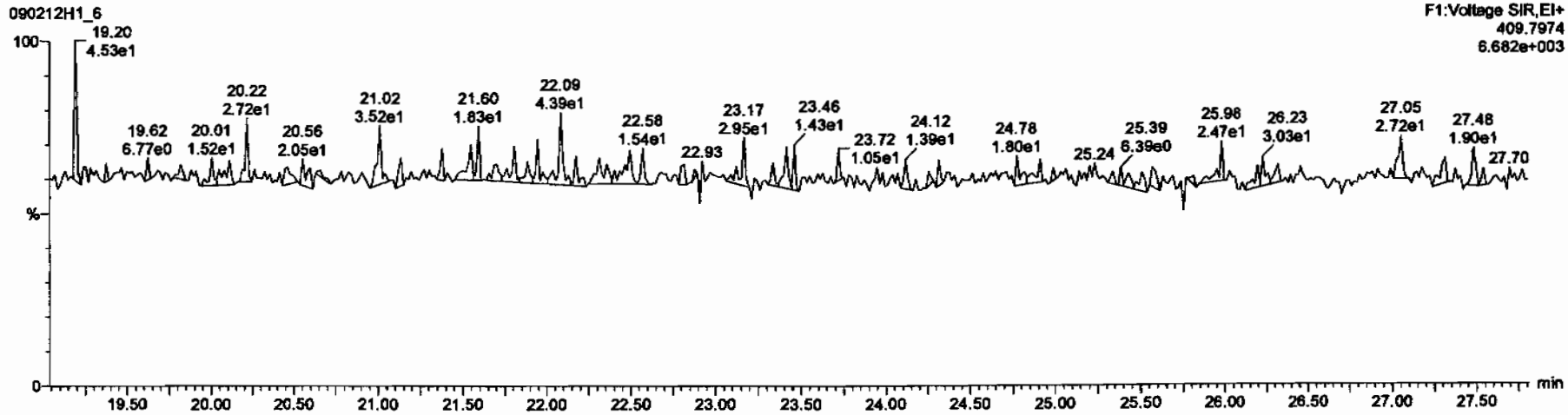

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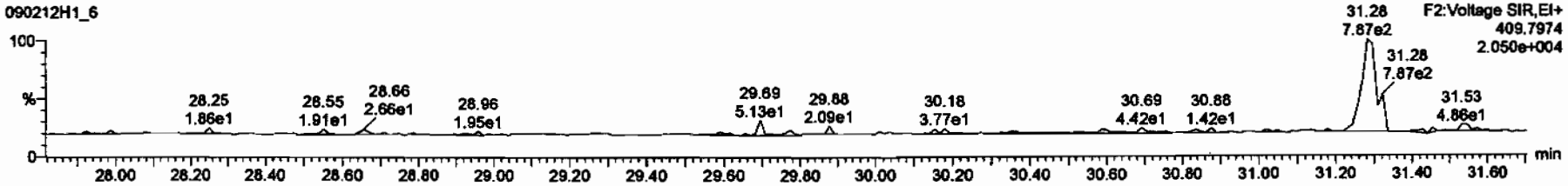

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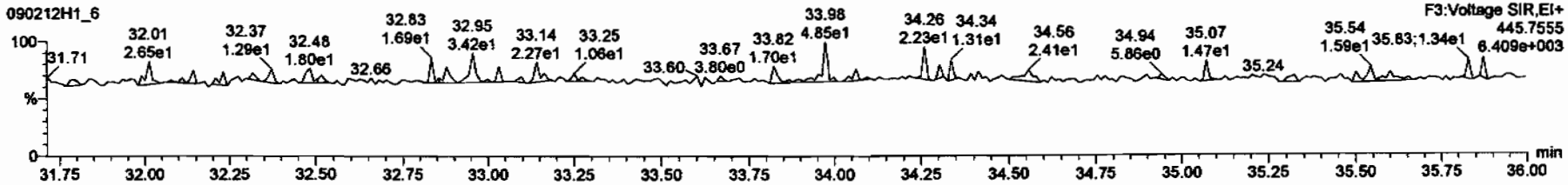

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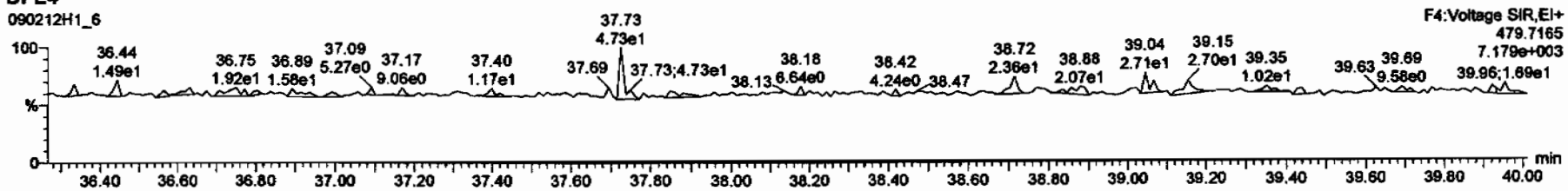

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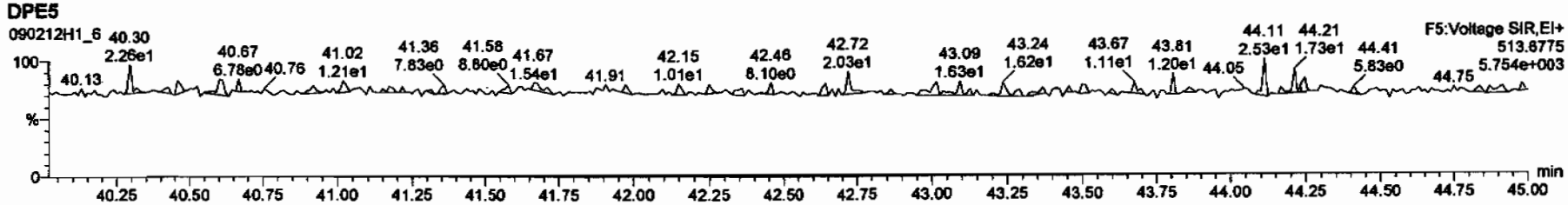

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2,3,7,8-TCDD

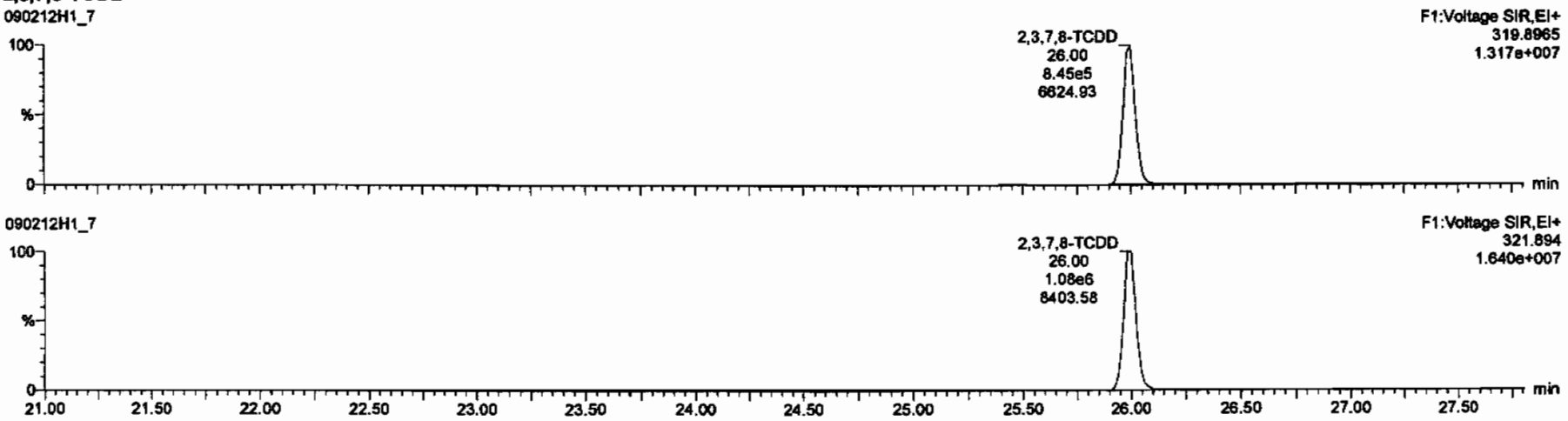

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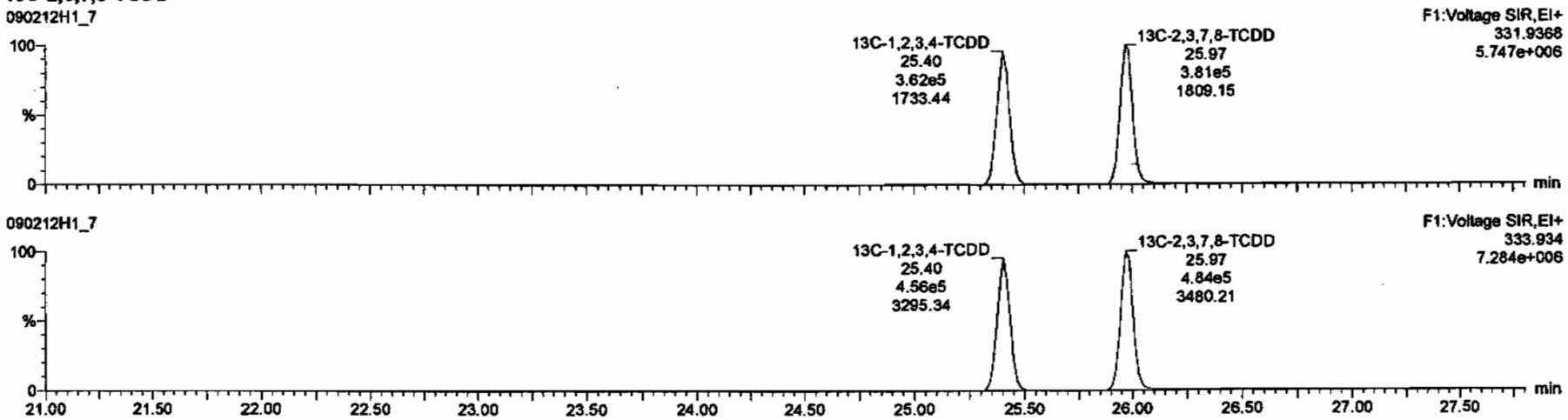

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37Cl-2,3,7,8-TCDD

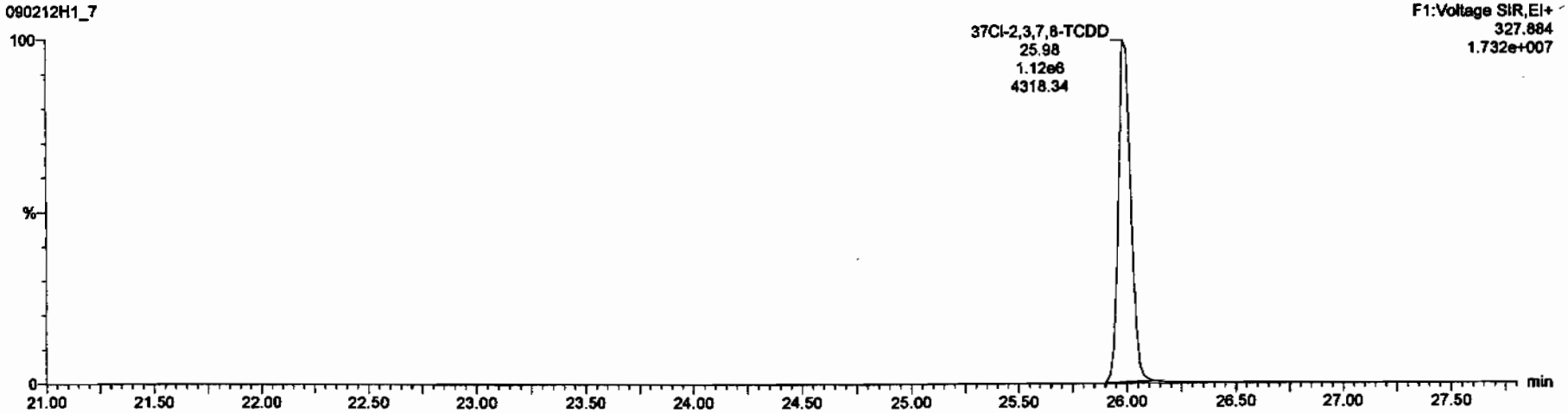

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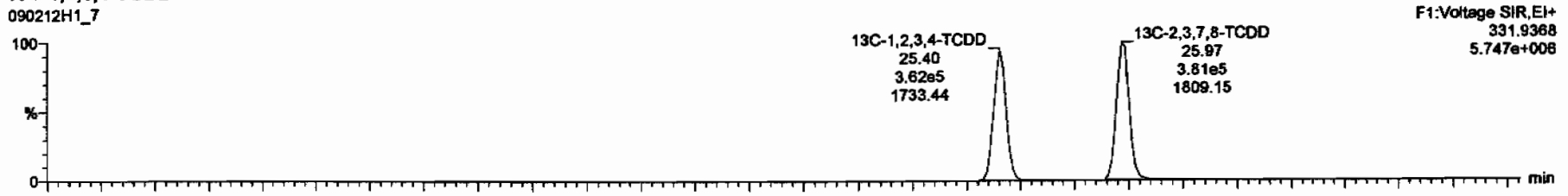

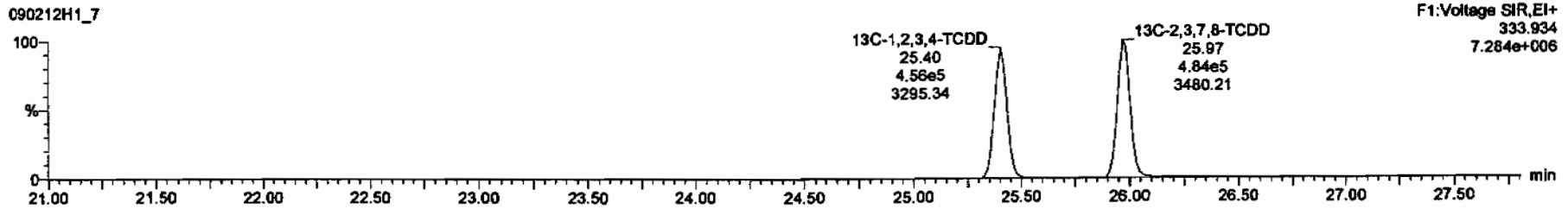

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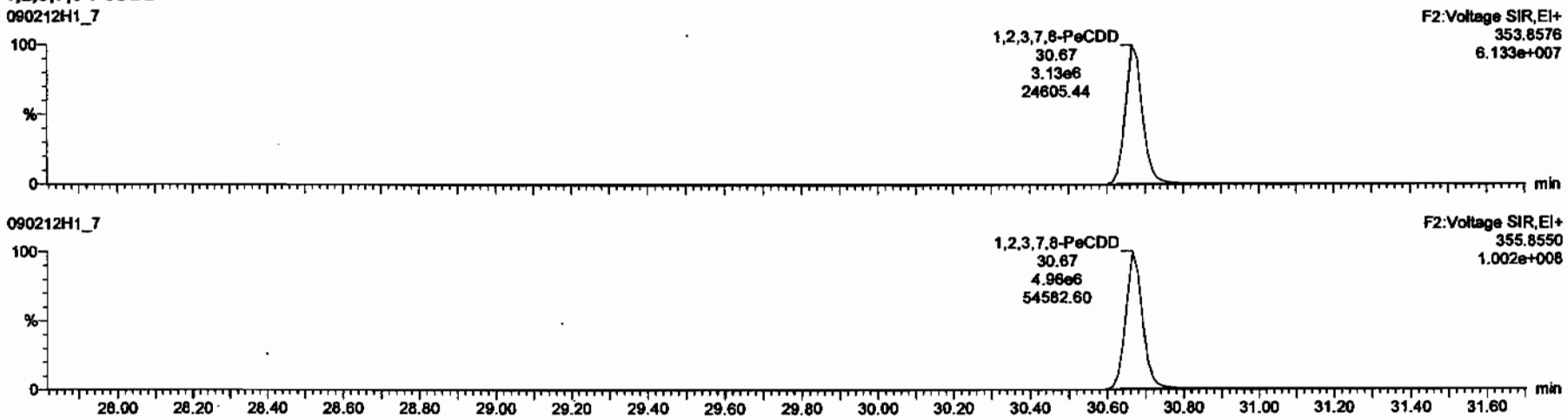

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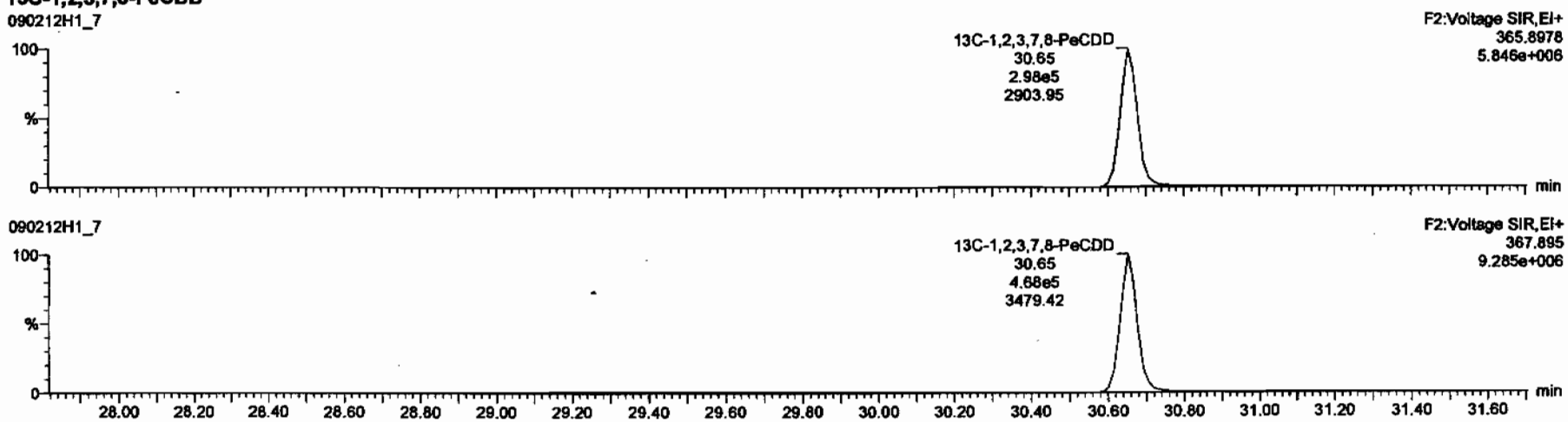

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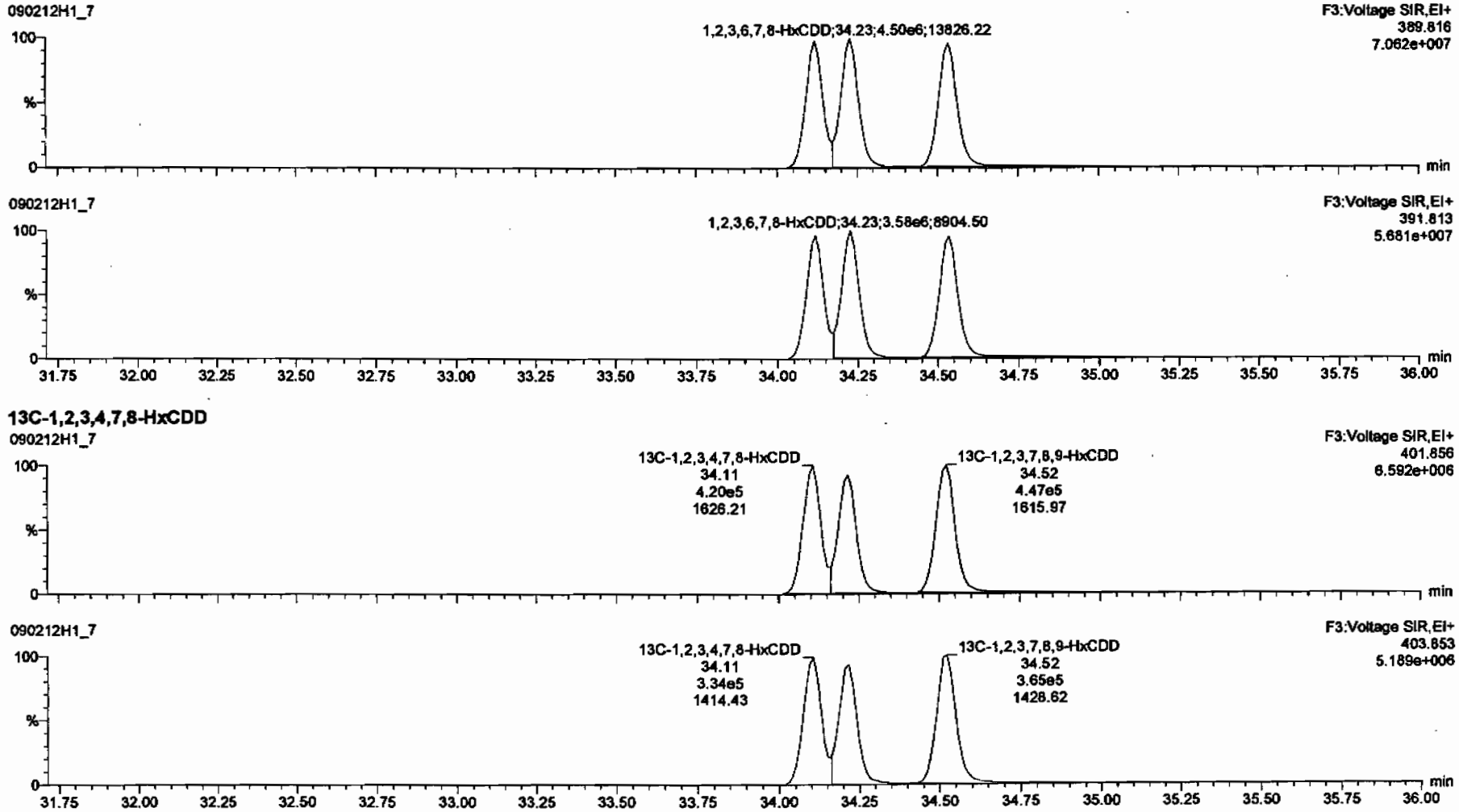

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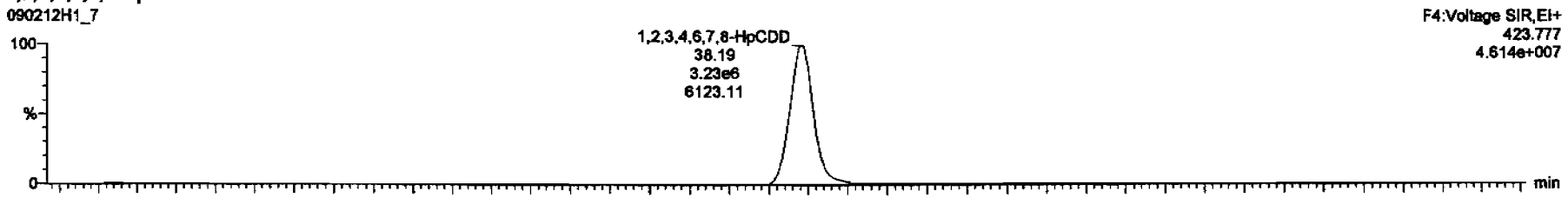

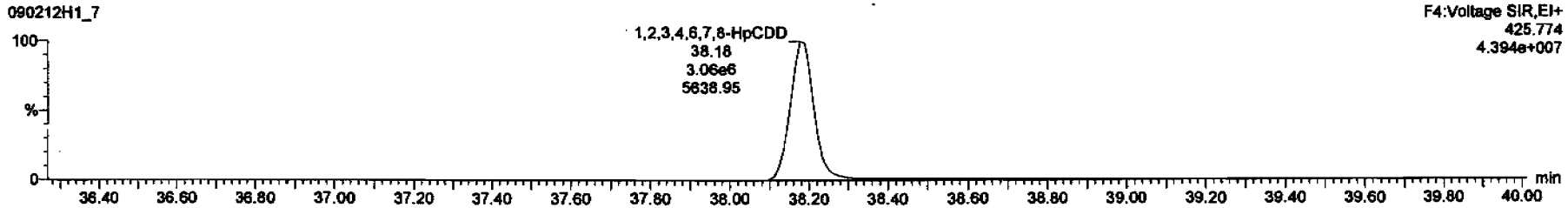

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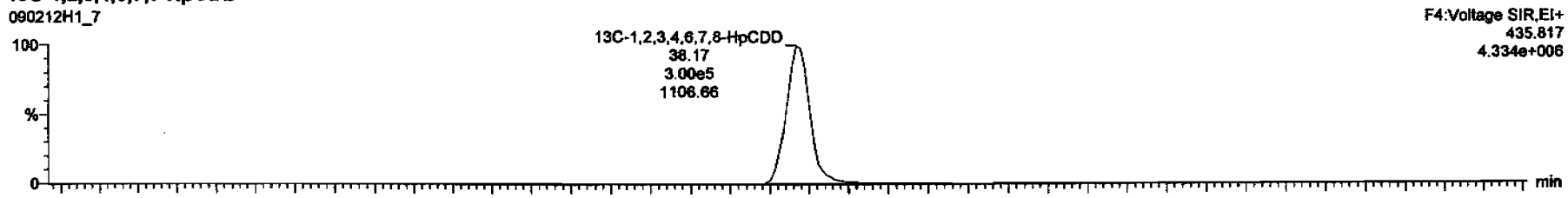

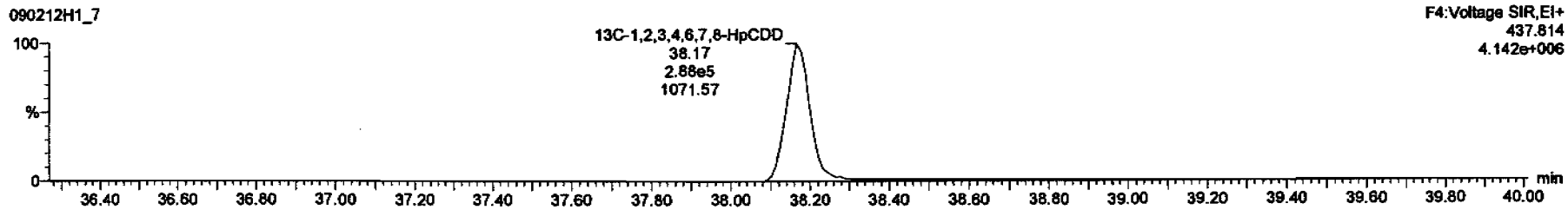

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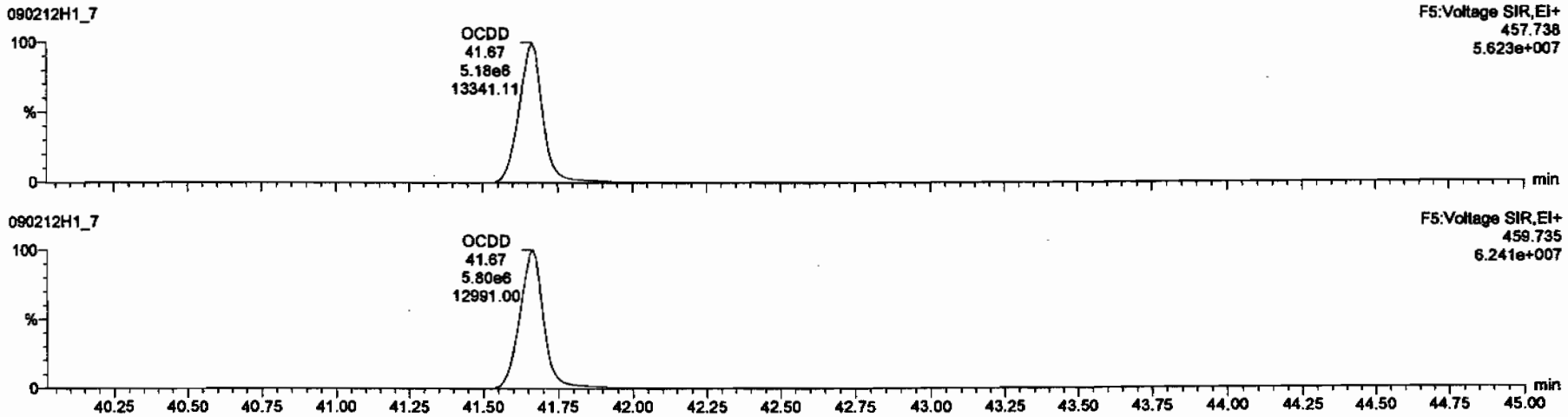

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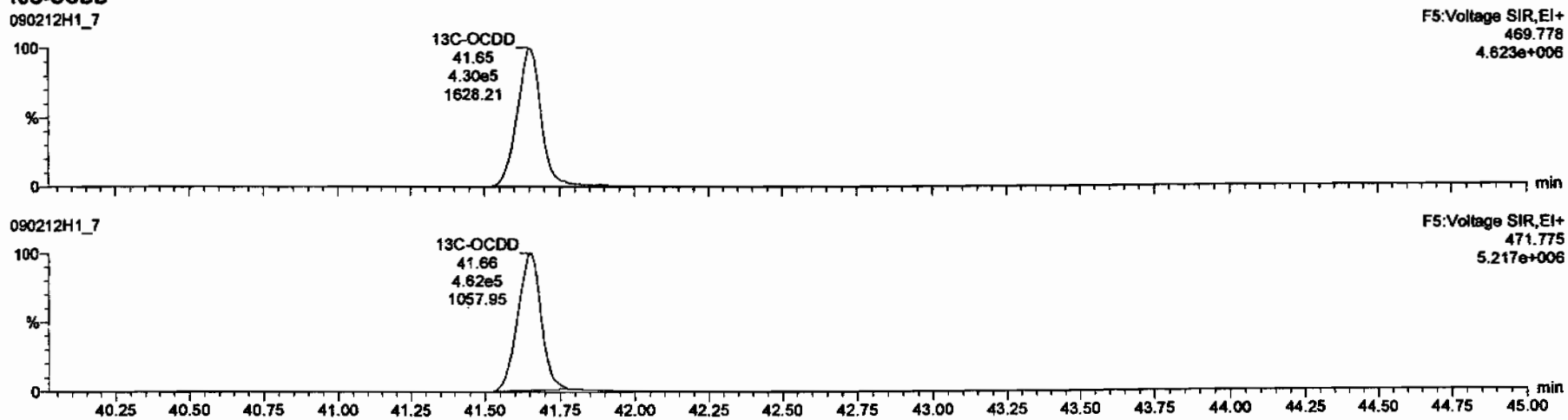

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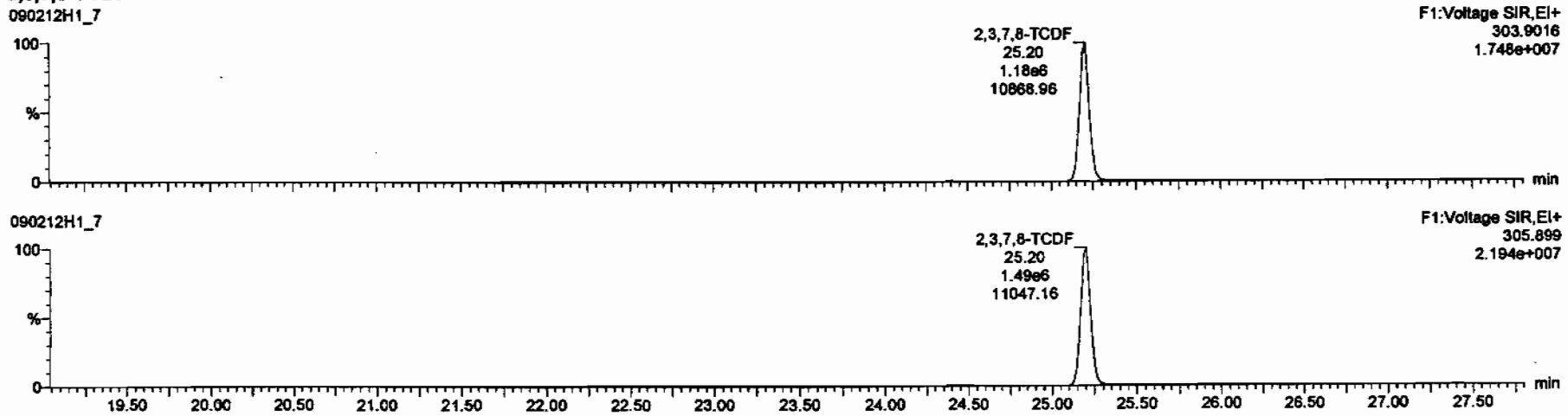

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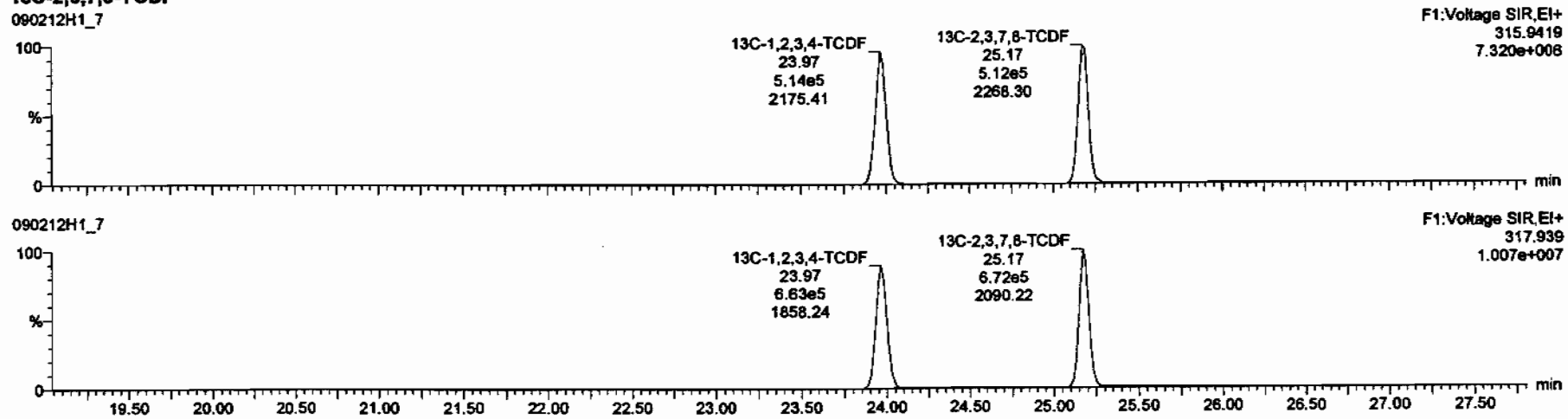

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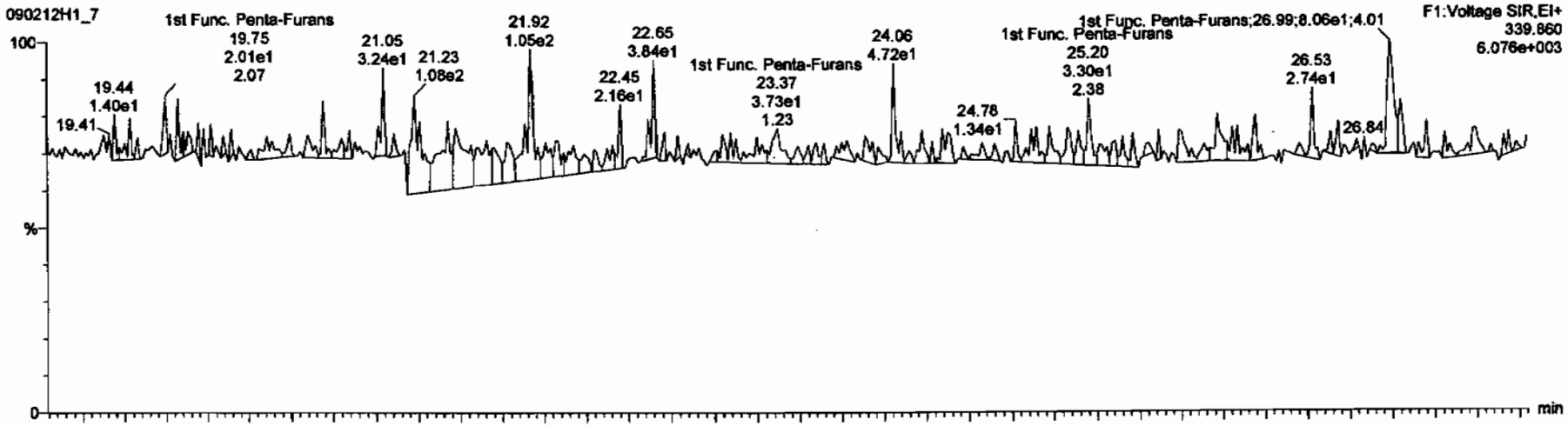

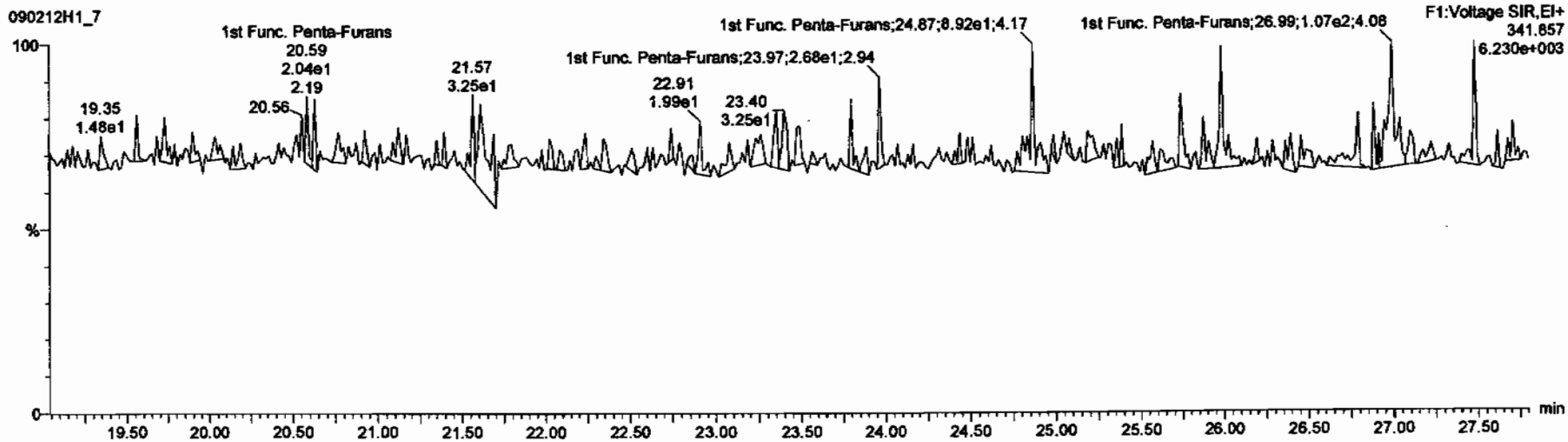

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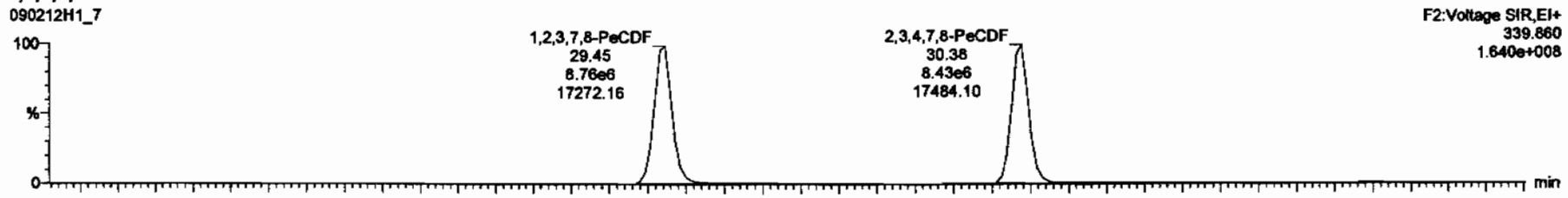

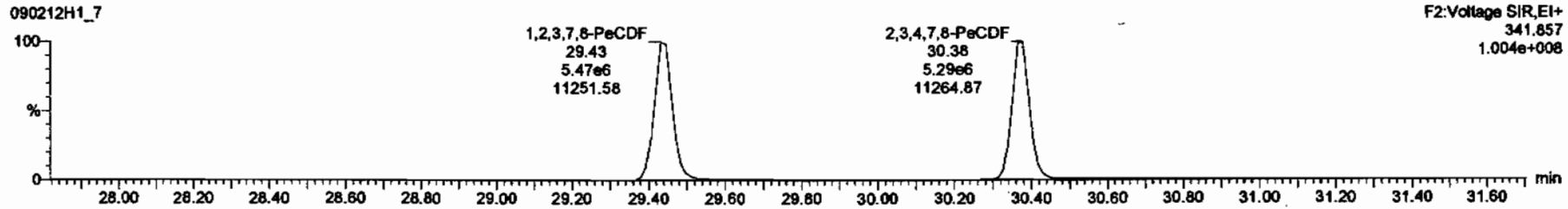

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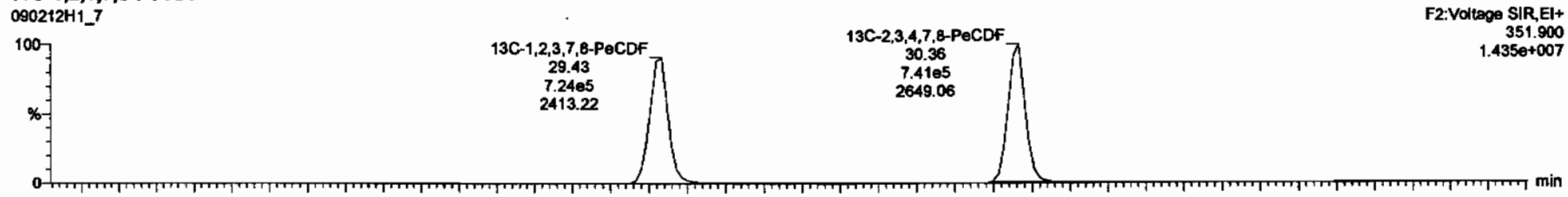

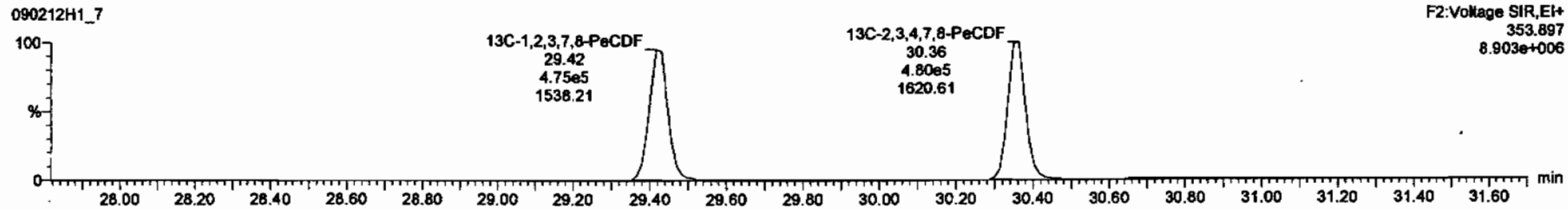

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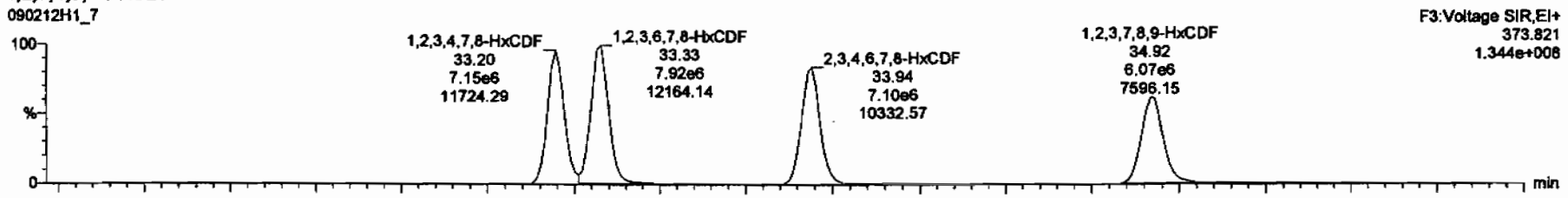

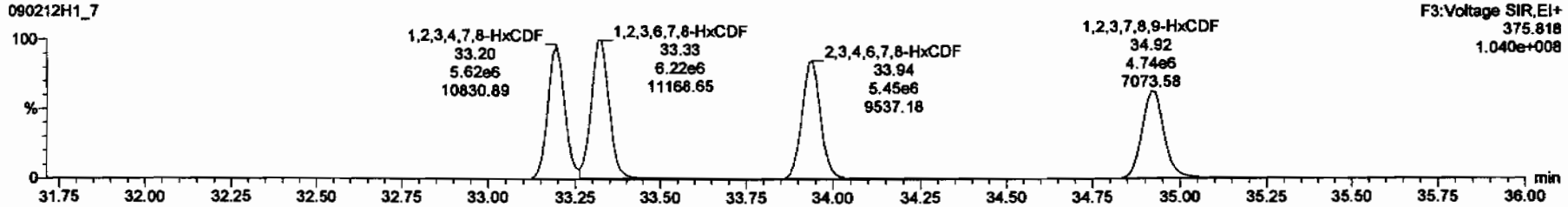

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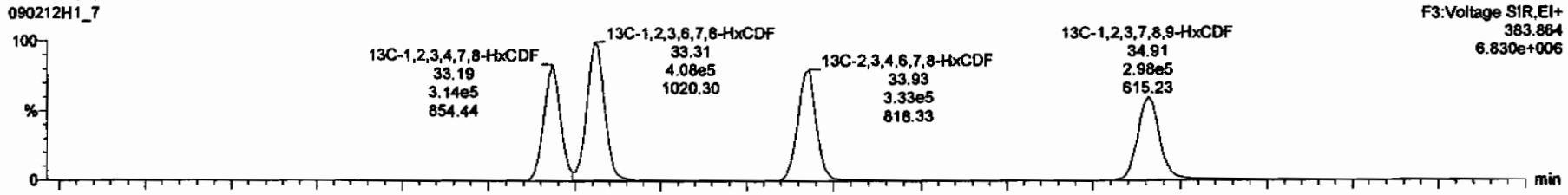

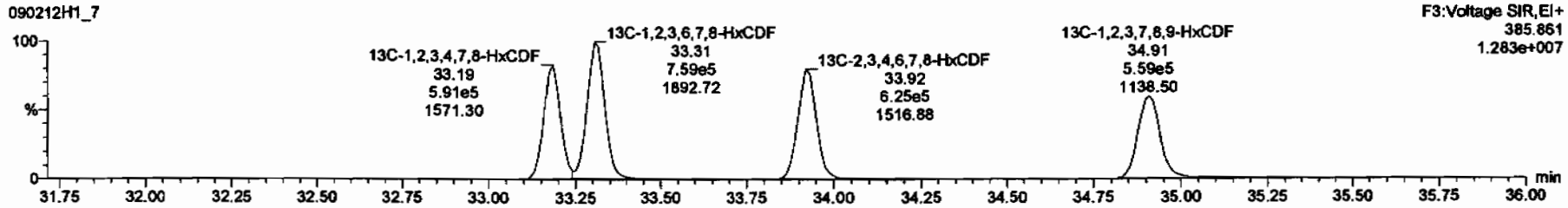

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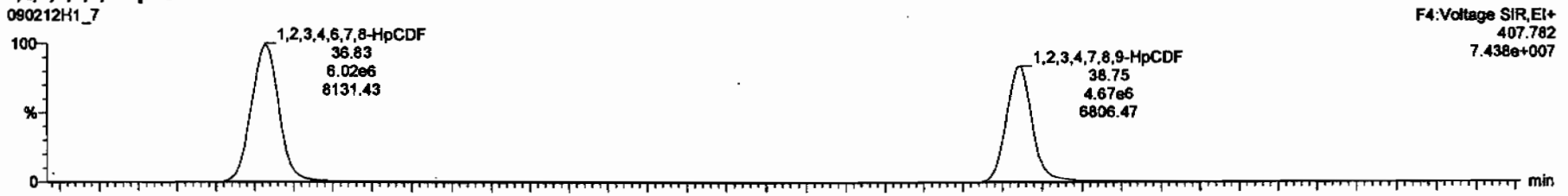

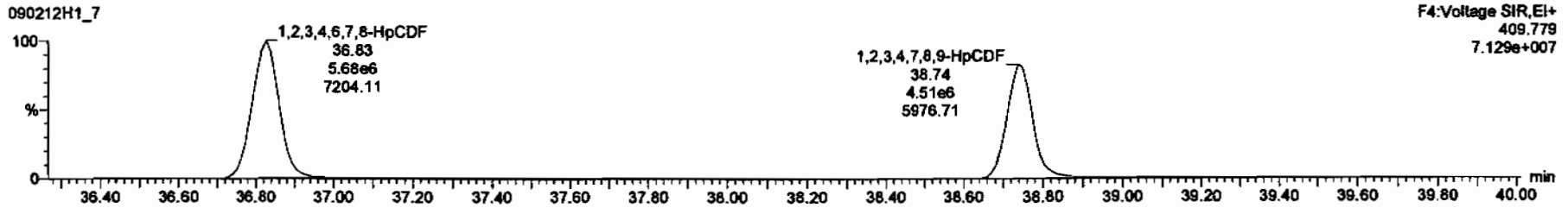

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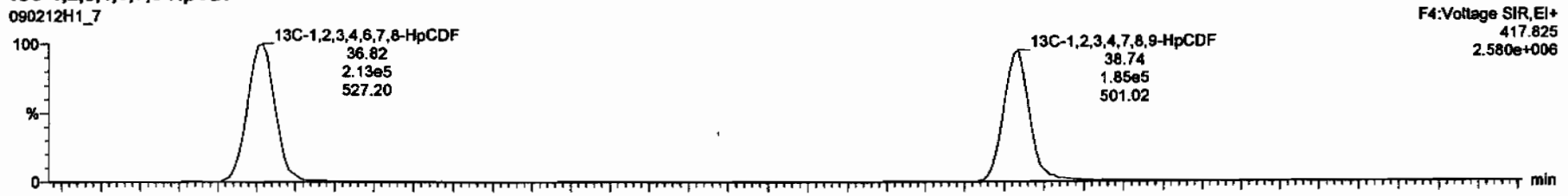

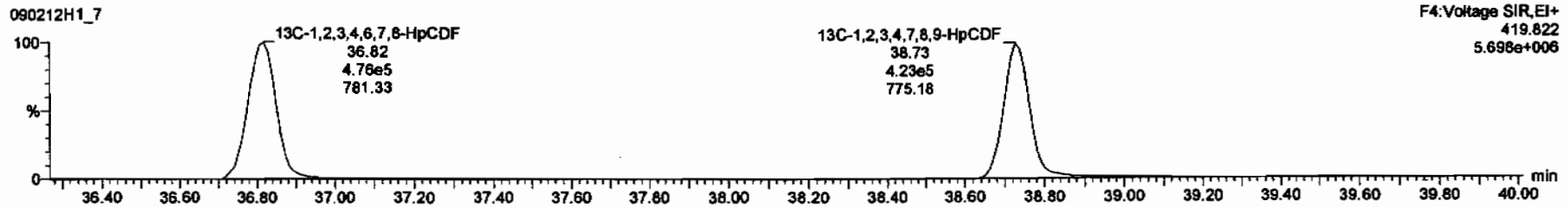

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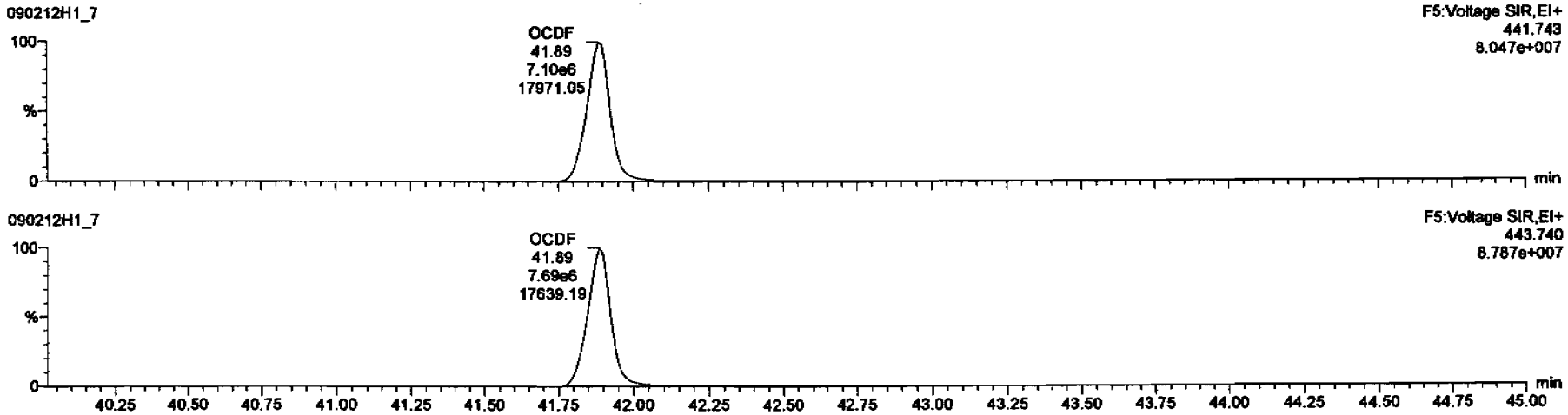

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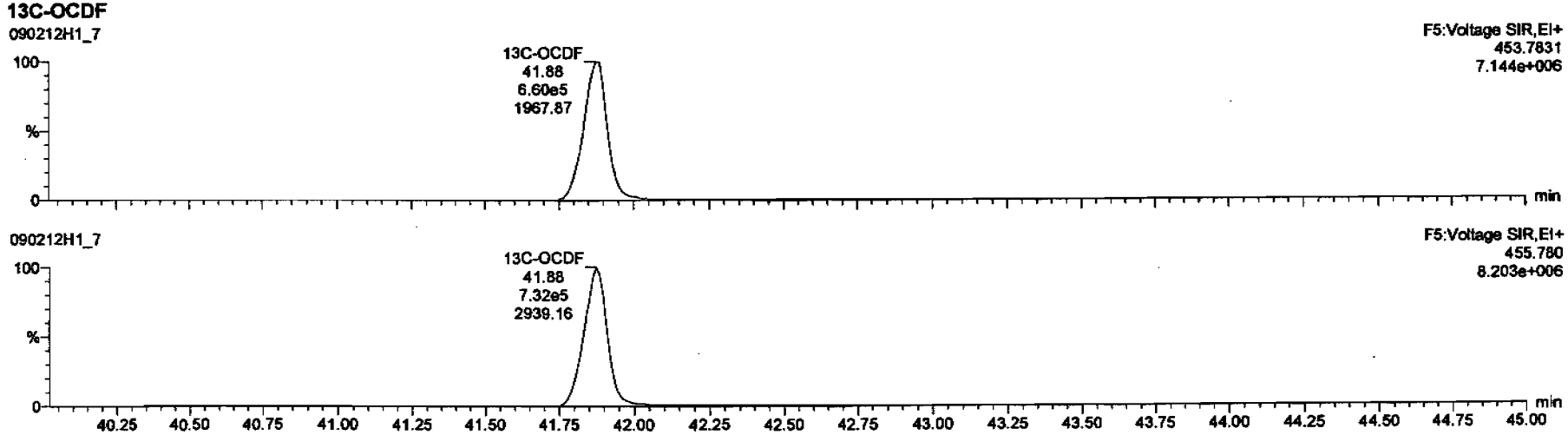

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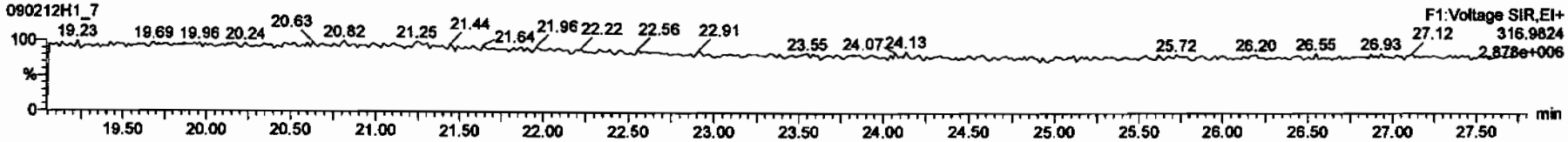

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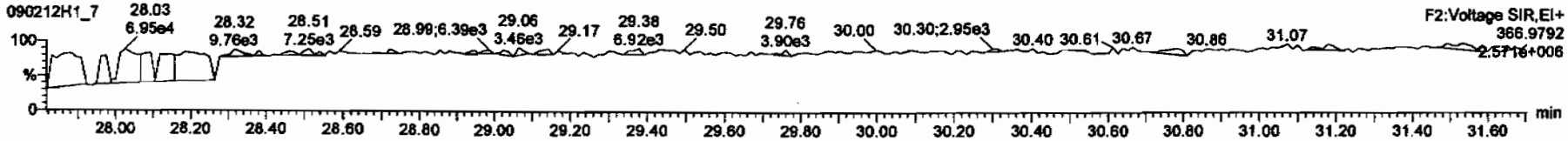

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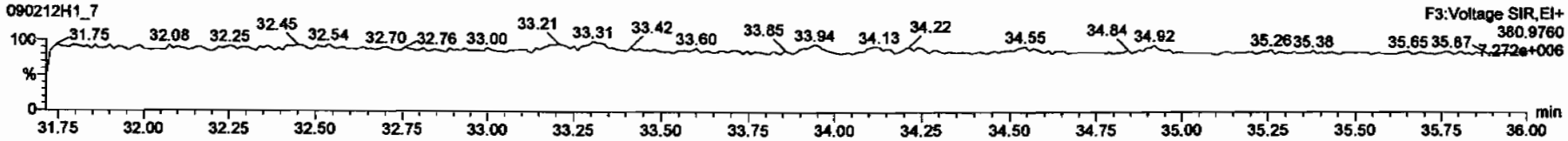

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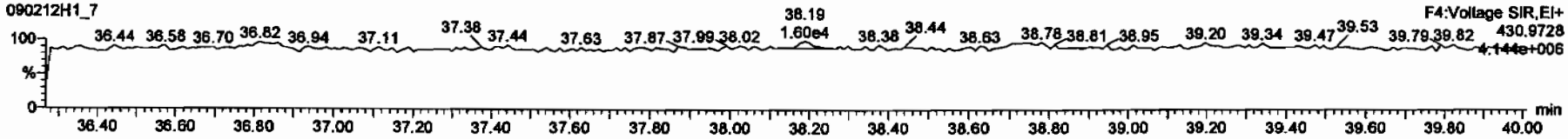

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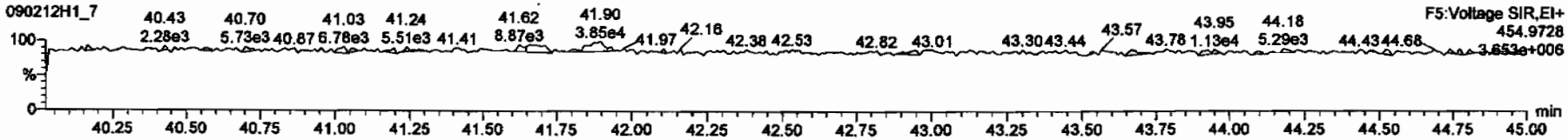

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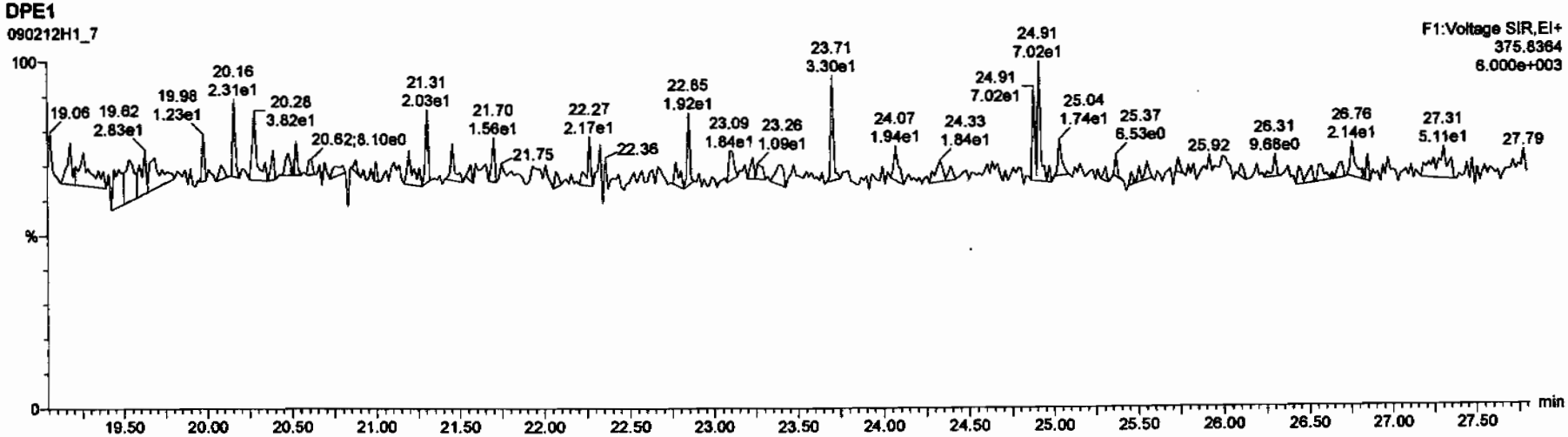

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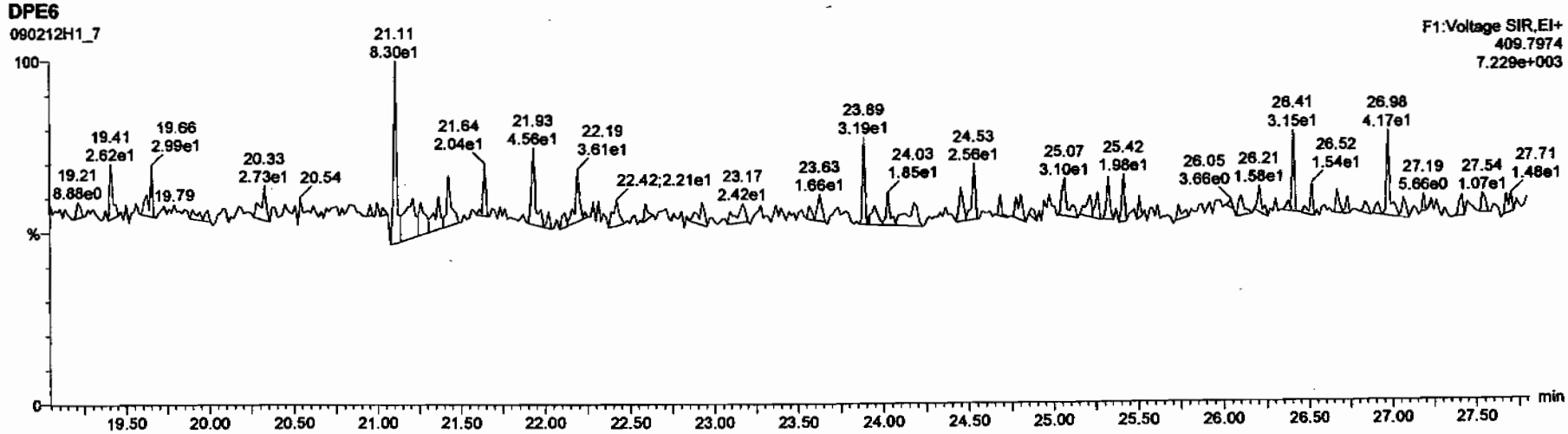

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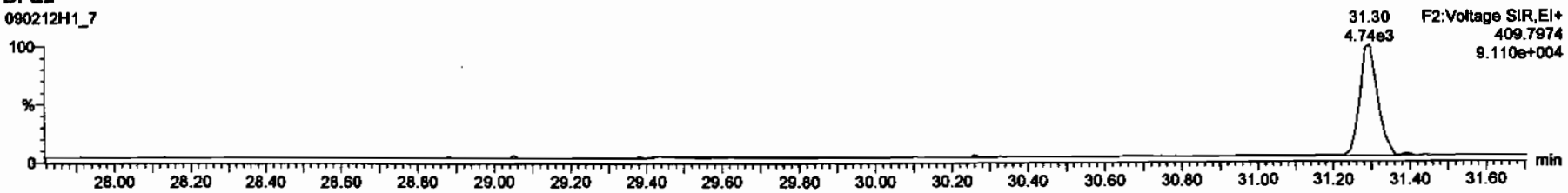

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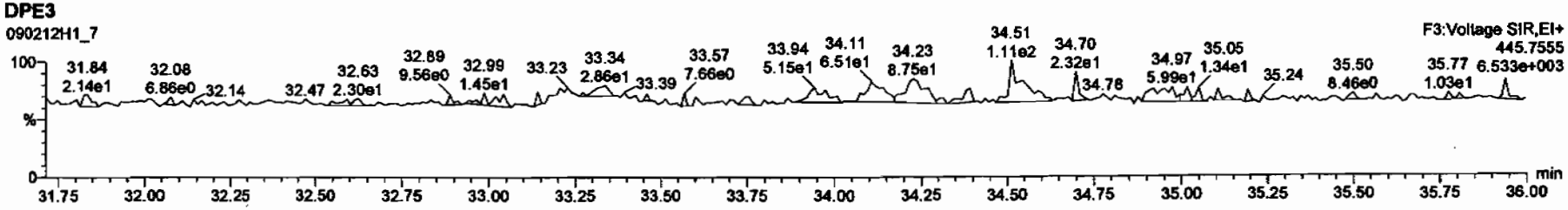

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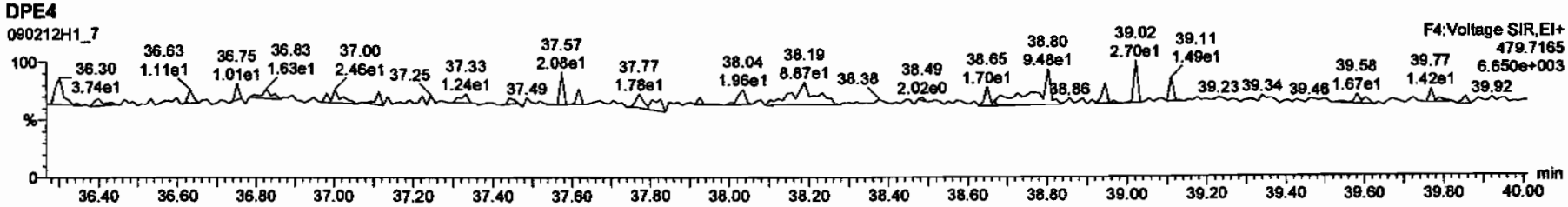

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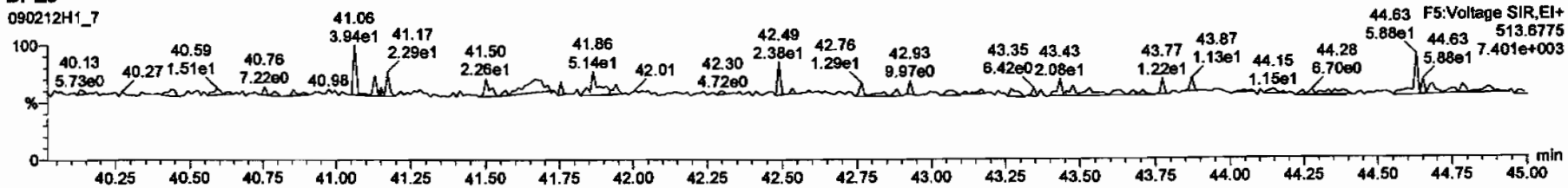

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M 292.9824 R 13769

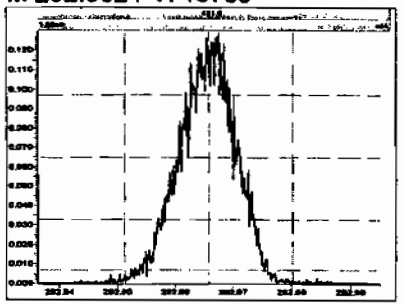

M 304.9824 R 14205

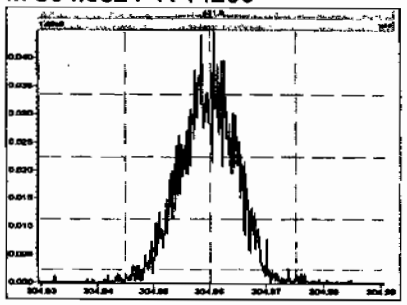

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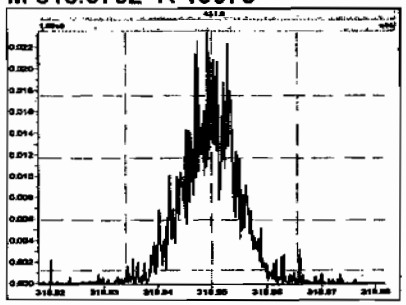

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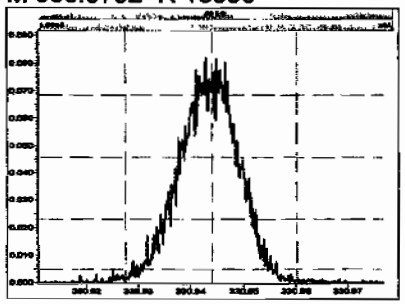

M 342.9792 R 13710

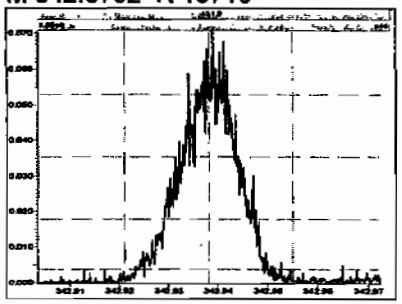

M 354.9792 R 14492

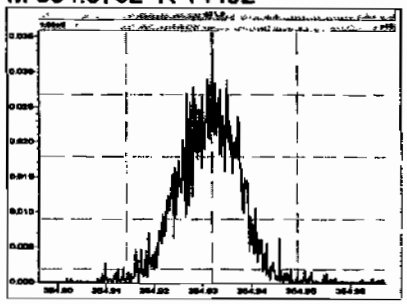

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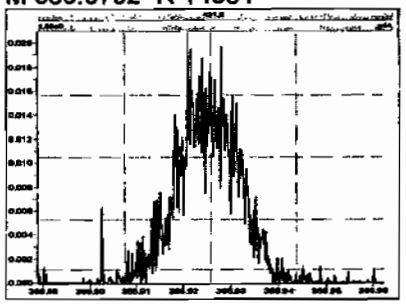

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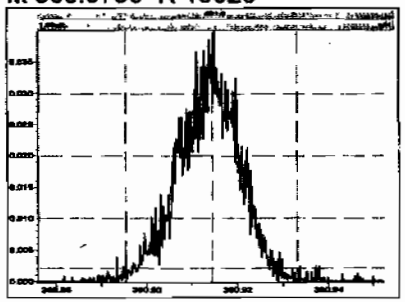

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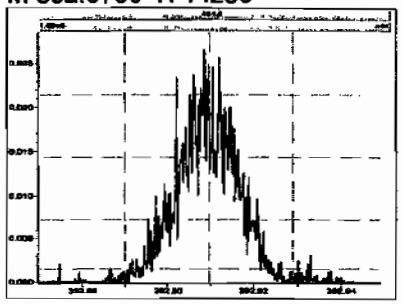

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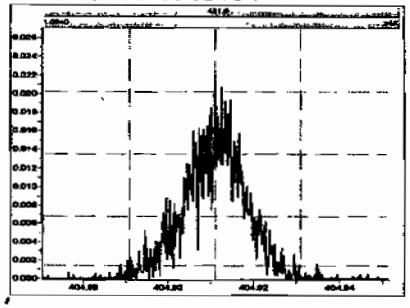

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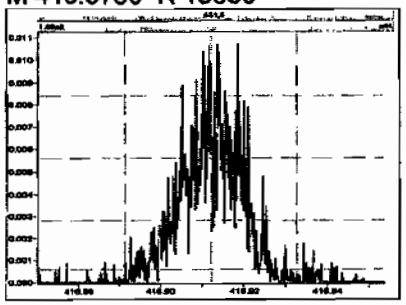

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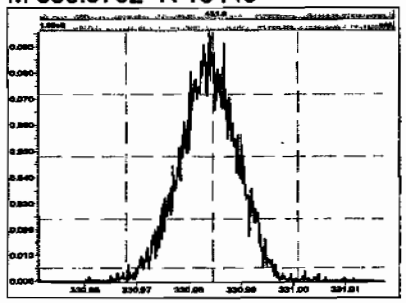

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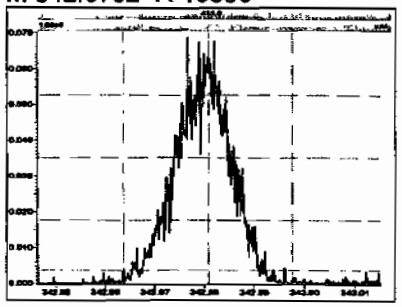

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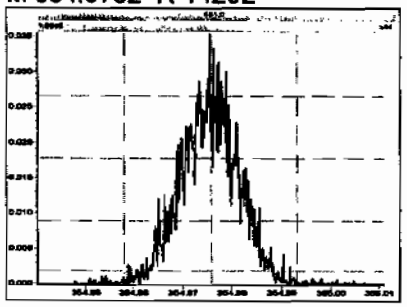

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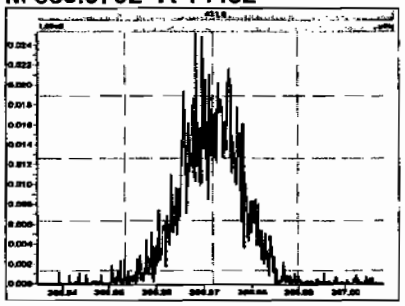

M 380.9760 R 13928

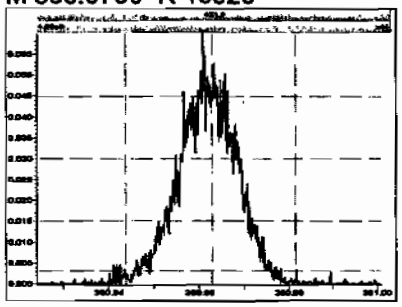

M 392.9760 R 14536

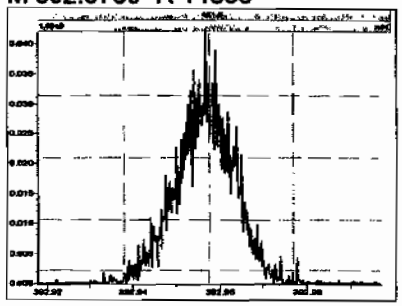

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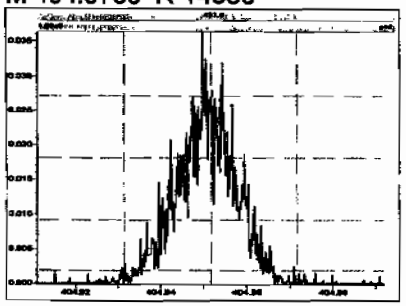

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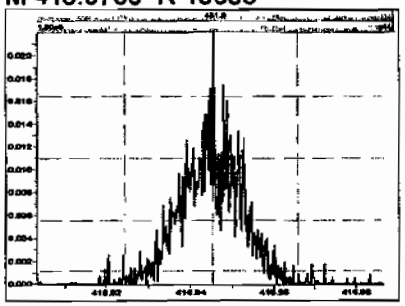

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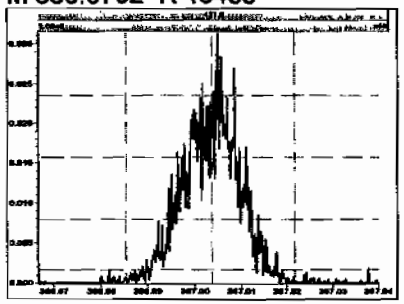

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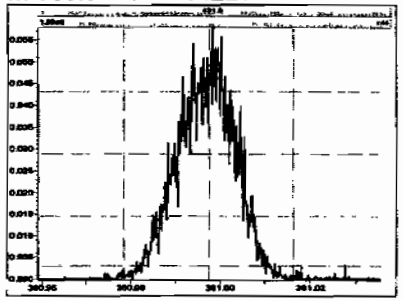

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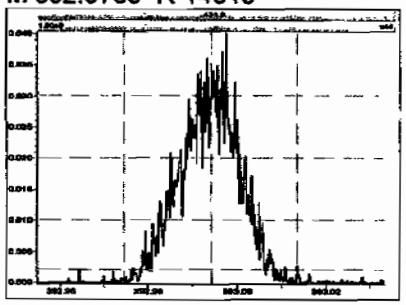

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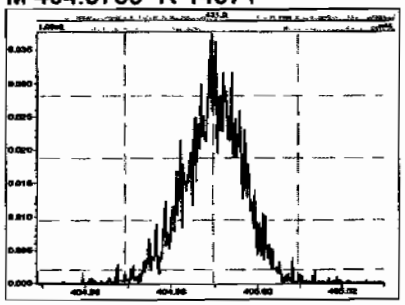

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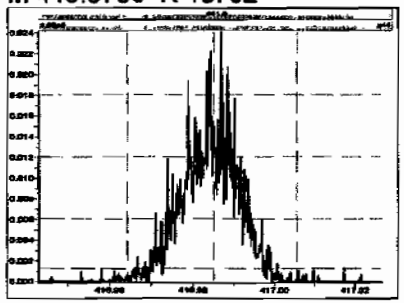

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M 430.9728 R 14874

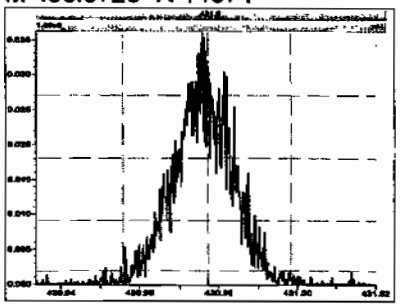

M 442.9728 R 15394

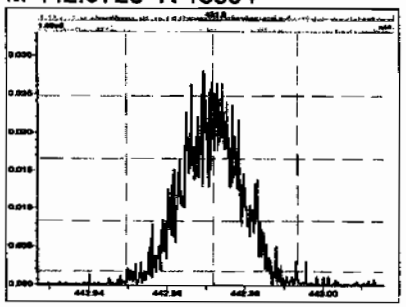

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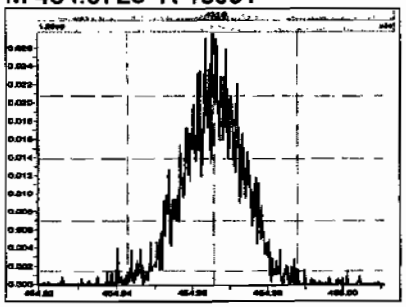

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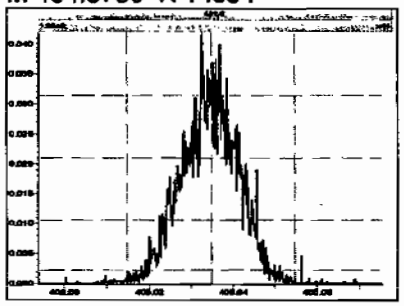

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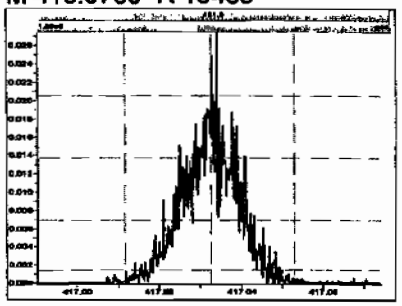

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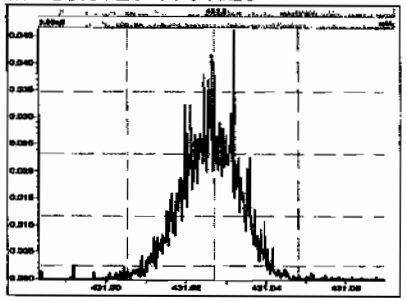

M 442.9728 R 14332

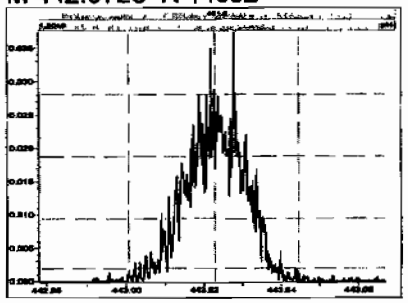

M 454.9728 R 13746

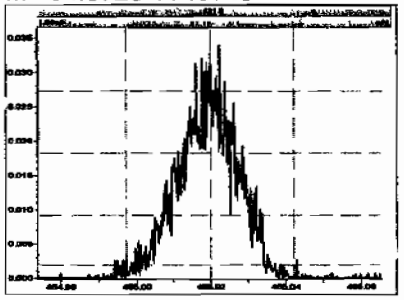

M 466.9728 R 16090

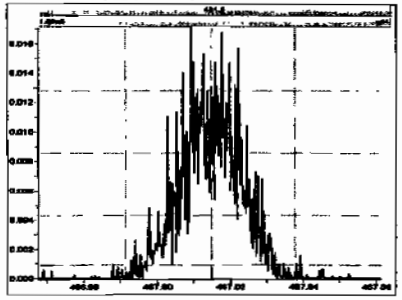

M 480.9696 R 13927

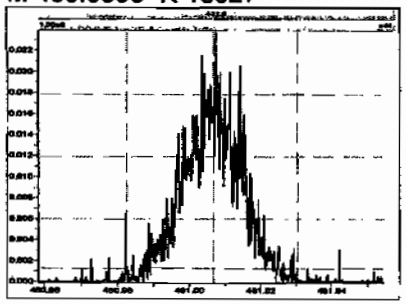

M 430.9728 R 12991

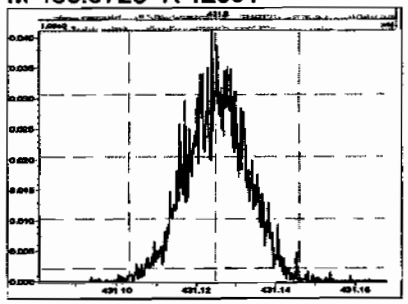

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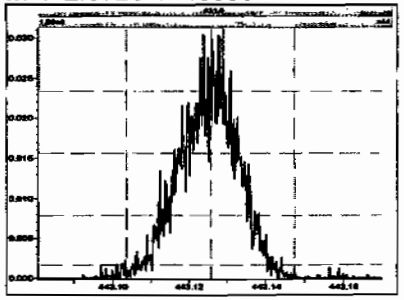

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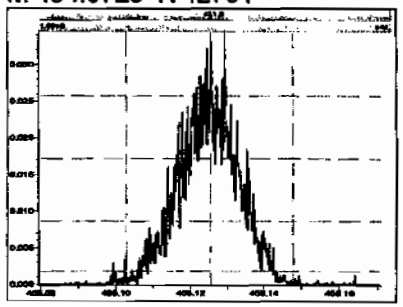

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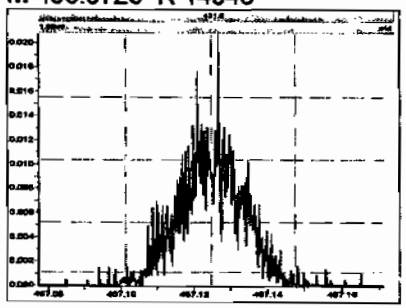

M 480.9696 R 12740

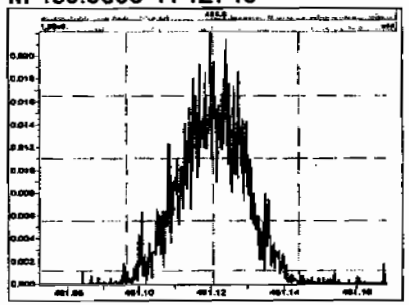

M 492.9696 R 15128

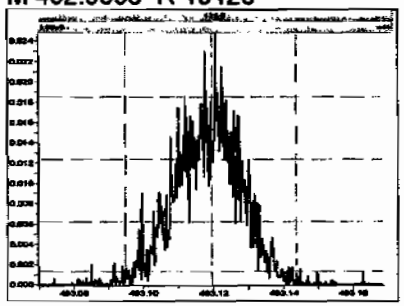

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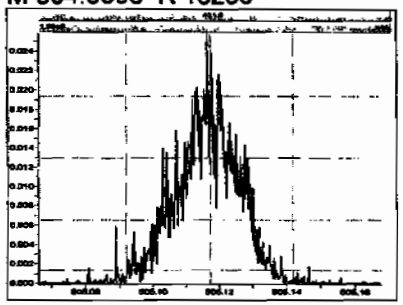

M 516.9697 R 17182

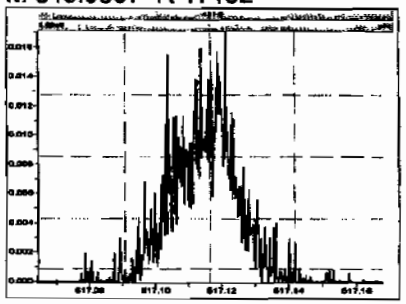

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qid

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	Name	Resp	RA		RRF		RT	RRT	Conc			
1	2,3,7,8-TCDD	2.66e4	0.81	NO	1.08	1.000	25.98	1.001	9.5090		0.0723	9.5090
2	1,2,3,7,8-PeCDD	1.01e5	0.61	NO	1.03	1.000	30.65	1.000	47.444		0.172	47.444
3	1,2,3,4,7,8-HxCDD	9.43e4	1.26	NO	1.00	1.000	34.11	1.001	60.533		0.392	60.533
4	1,2,3,6,7,8-HxCDD	8.97e4	1.28	NO	1.13	1.000	34.22	1.000	41.292		0.312	41.292
5	1,2,3,7,8,9-HxCDD	9.40e4	1.29	NO	1.10	1.000	34.52	1.009	48.966		0.335	48.966
6	1,2,3,4,6,7,8-HpCDD	7.06e4	1.02	NO	1.06	1.000	38.18	1.001	47.757		0.360	47.757
7	OCDD	1.05e5	0.91	NO	1.18	1.000	41.66	1.000	87.851		0.375	87.851
8	2,3,7,8-TCDF	3.59e4	0.80	NO	1.09	1.000	25.20	1.001	9.2692		0.0713	9.2692
9	1,2,3,7,8-PeCDF	1.90e5	1.60	NO	1.16	1.000	29.43	1.001	47.569		0.197	47.569
10	2,3,4,7,8-PeCDF	1.76e5	1.60	NO	1.12	1.000	30.36	1.001	49.959		0.207	49.959
11	1,2,3,4,7,8-HxCDF	1.51e5	1.22	NO	1.41	1.000	33.19	1.000	47.242		0.234	47.242
12	1,2,3,6,7,8-HxCDF	1.99e5	1.24	NO	1.22	1.000	33.31	1.000	52.247		0.205	52.247
13	2,3,4,6,7,8-HxCDF	1.49e5	1.26	NO	1.28	1.000	33.93	1.001	48.194		0.285	48.194
14	1,2,3,7,8,9-HxCDF	1.18e5	1.28	NO	1.26	1.000	34.91	1.000	50.089		0.402	50.089
15	1,2,3,4,6,7,8-HpCDF	1.26e5	1.05	NO	1.69	1.000	36.81	1.000	45.609		0.324	45.609
16	1,2,3,4,7,8,9-HpCDF	9.92e4	1.09	NO	1.48	1.000	38.74	1.000	53.044		0.451	53.044
17	OCDF	1.36e5	0.92	NO	1.10	1.000	41.88	1.001	~~77825~~		102	77825
18	13C-2,3,7,8-TCDD	2.60e5	0.79	NO	1.01	1.000	25.97	1.022	100.68	101	0.251	
19	13C-1,2,3,7,8-PeCDD	2.07e5	0.62	NO	0.827	1.000	30.64	1.206	98.194	98.2	0.366	
20	13C-1,2,3,4,7,8-HxCDD	1.56e5	1.23	NO	0.916	1.000	34.08	0.988	96.272	96.3	1.12	
21	13C-1,2,3,6,7,8-HxCDD	1.93e5	1.30	NO	0.921	1.000	34.21	0.991	118.79	119	1.12	
22	13C-1,2,3,4,6,7,8-HpCDD	1.39e5	1.04	NO	0.708	1.000	38.16	1.106	111.12	111	0.936	
23	13C-OCDD	2.03e5	0.90	NO	0.503	1.000	41.65	1.207	229.27	115	1.10	
24	13C-2,3,7,8-TCDF	3.56e5	0.77	NO	0.977	1.000	25.17	0.991	47241	~~47200~~	47.8	
25	13C-1,2,3,7,8-PeCDF	3.45e5	1.53	NO	0.898	1.000	29.41	1.158	49875	~~49800~~	135	
26	13C-2,3,4,7,8-PeCDF	3.15e5	1.57	NO	0.900	1.000	30.34	1.194	45355	~~45400~~	135	
27	13C-1,2,3,4,7,8-HxCDF	2.27e5	0.52	NO	1.17	1.000	33.17	0.962	110.01	110	1.09	
28	13C-1,2,3,6,7,8-HxCDF	3.11e5	0.53	NO	1.52	1.000	33.29	0.965	116.12	116	0.841	
29	13C-2,3,4,6,7,8-HxCDF	2.41e5	0.53	NO	1.25	1.000	33.91	0.983	109.27	109	1.02	
30	13C-1,2,3,7,8,9-HxCDF	1.87e5	0.53	NO	1.05	1.000	34.90	1.011	100.48	100	1.21	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	31 13C-1,2,3,4,6,7,8-HpCDF	1.64e5	0.42	NO	0.868	1.000	36.80	1.066	107.17	107	0.875
	32 13C-1,2,3,4,7,8,9-HpCDF	1.26e5	0.43	NO	0.727	1.000	38.73	1.122	98.571	98.6	1.05
	33 13C-OCDF	3.18e2	0.17	YES	0.760	1.000	41.82	1.212	0.23753	~~0.119~~	0.197
	34 37Cl-2,3,7,8-TCDD	2.82e4			0.668	1.000	25.98	1.023	16.616	166	0.0976
	35 13C-1,2,3,4-TCDD	2.54e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.254
	36 13C-1,2,3,4-TCDF	7.72e2	0.44	YES	1.00	1.000	23.92	0.000	100.00	100	46.7
	37 13C-1,2,3,7,8,9-HxCDD	1.76e5	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	1.03

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDD

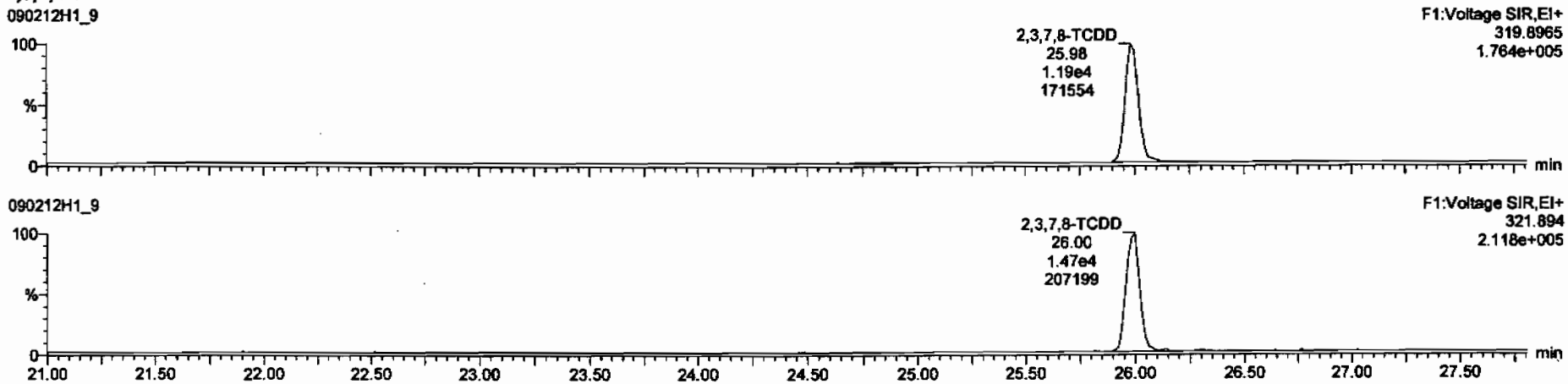

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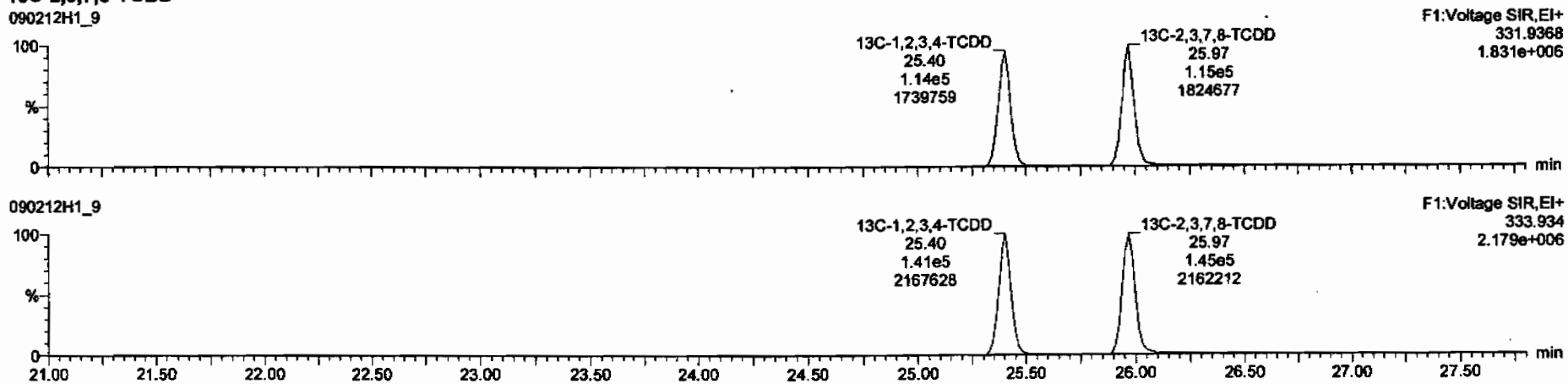

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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37Cl-2,3,7,8-TCDD

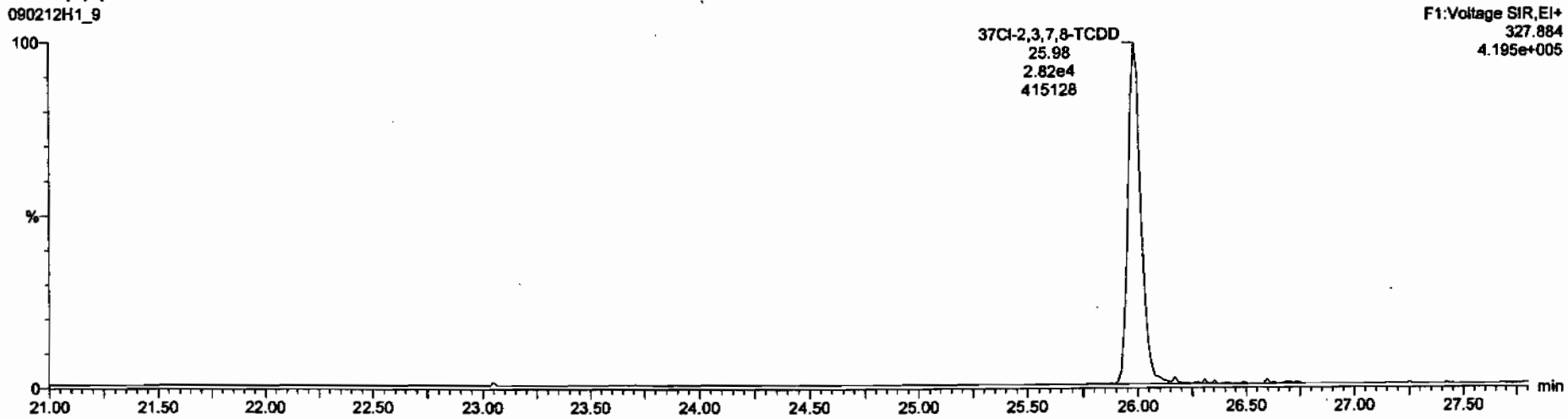

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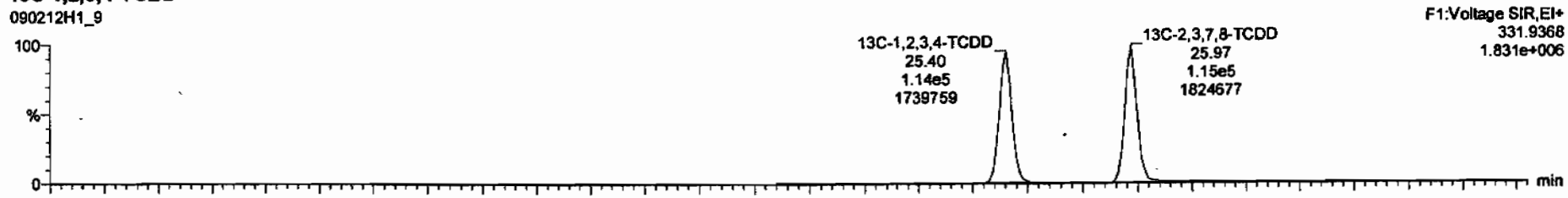

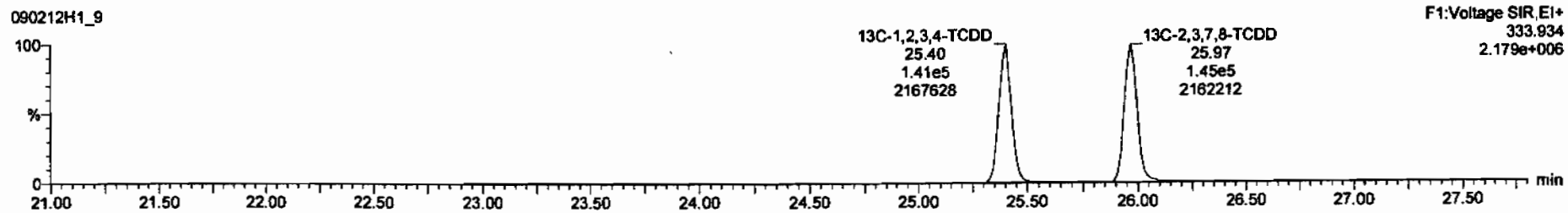

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1,2,3,7,8-PeCDD

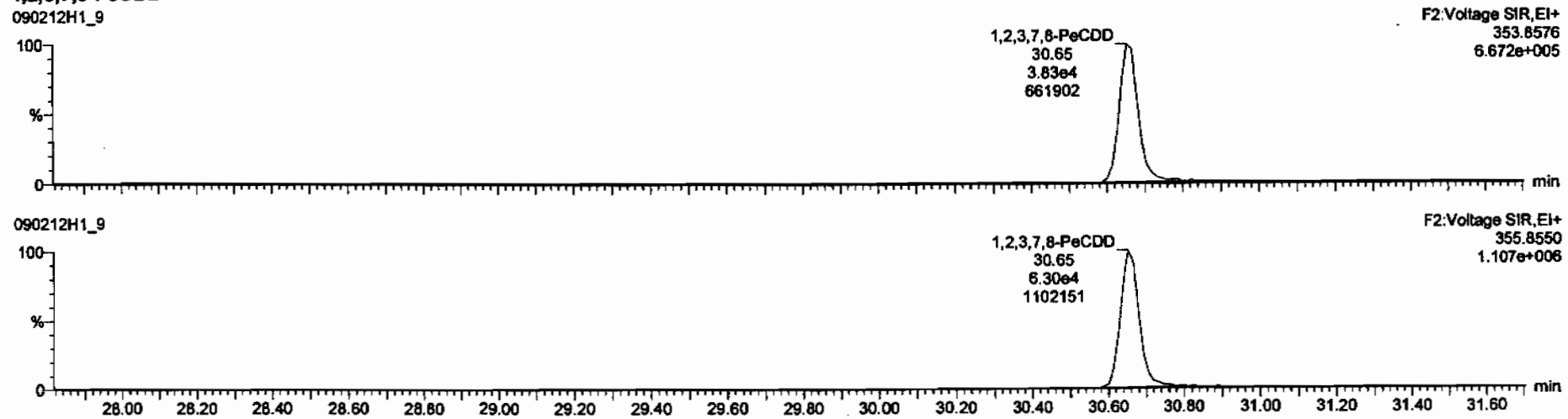

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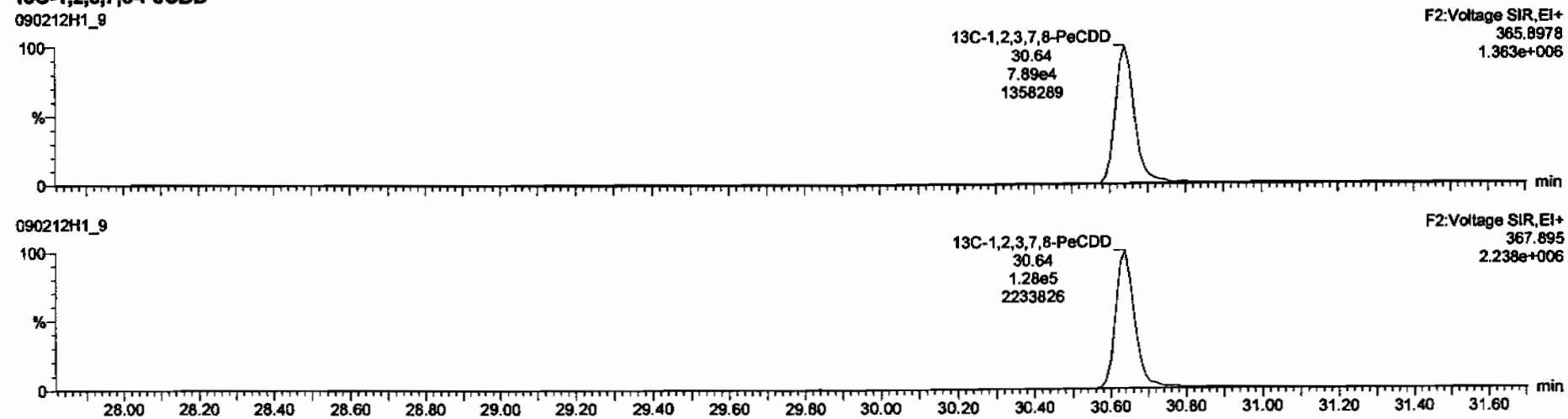

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1,2,3,4,7,8-HxCDD

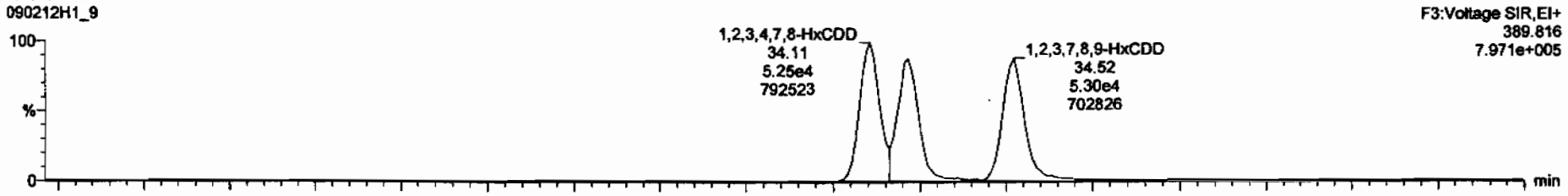

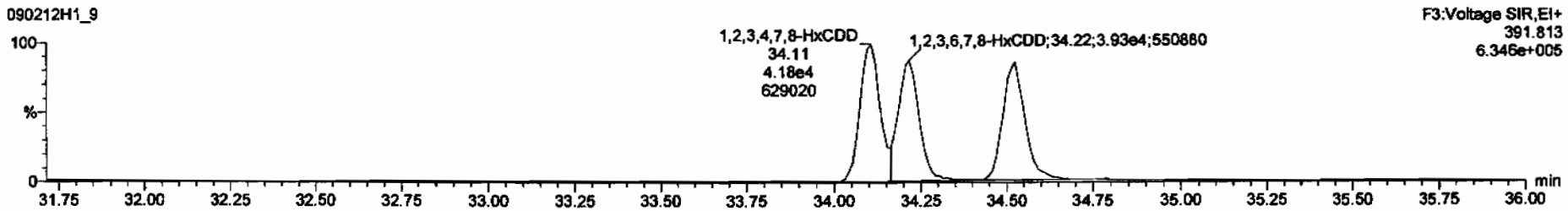

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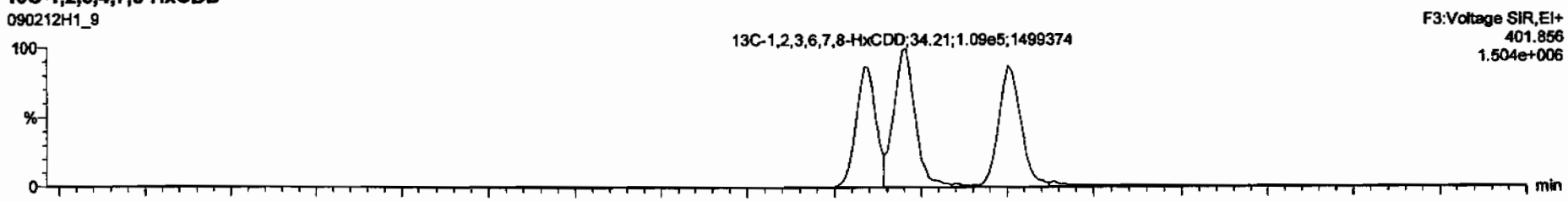

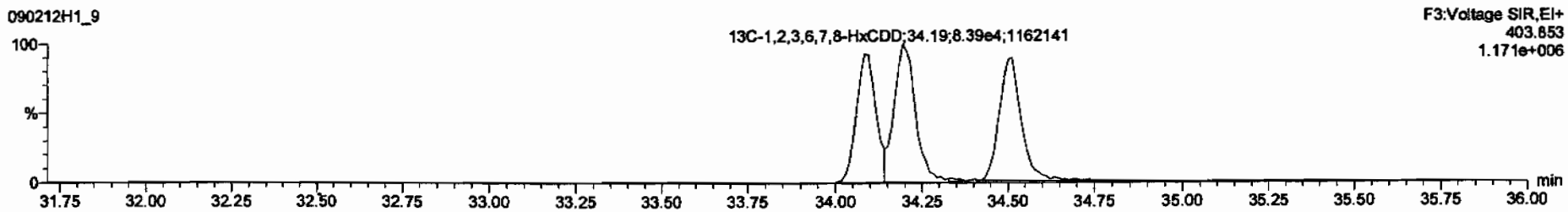

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1,2,3,4,6,7,8-HpCDD

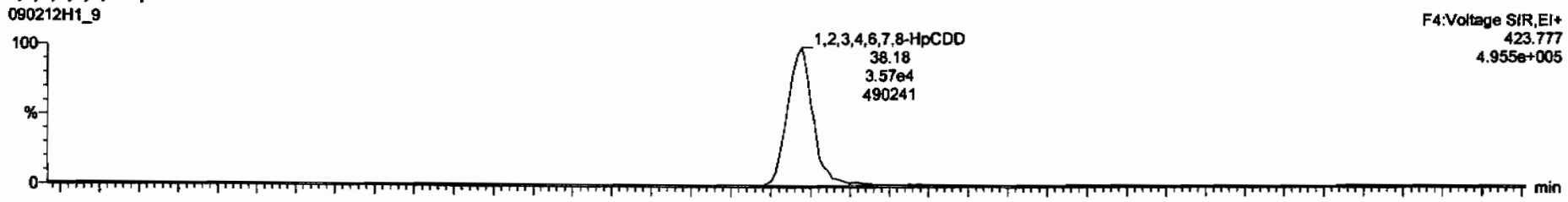

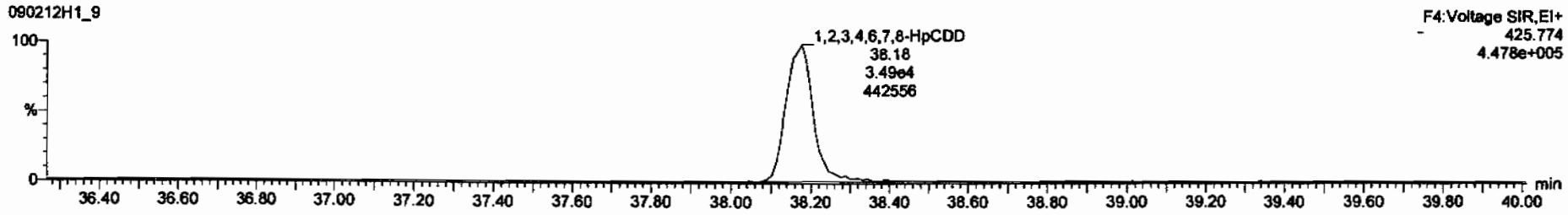

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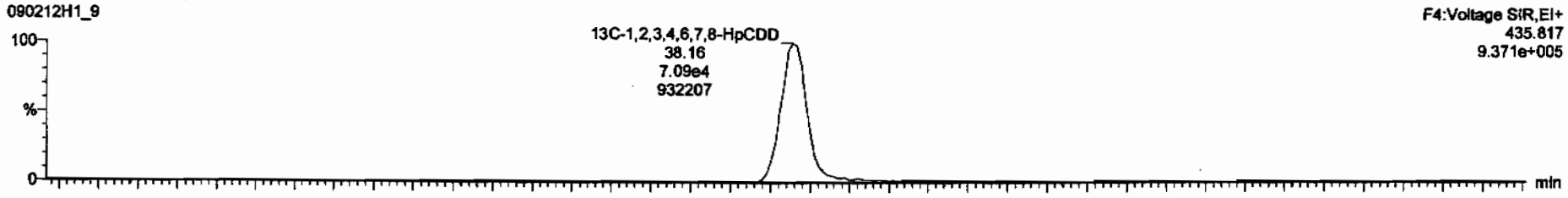

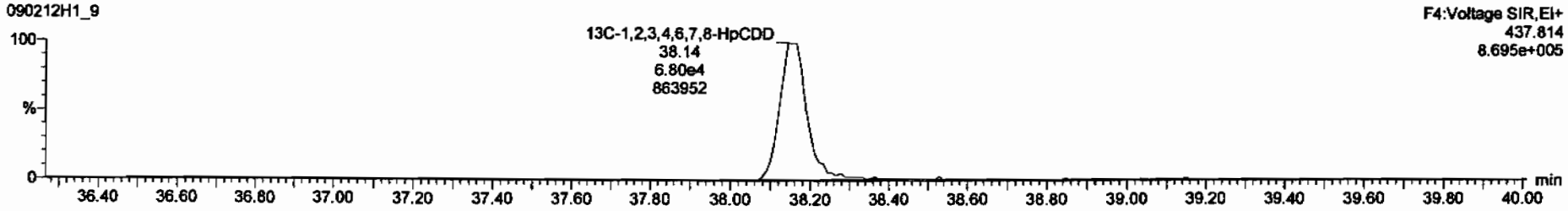

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OCDD

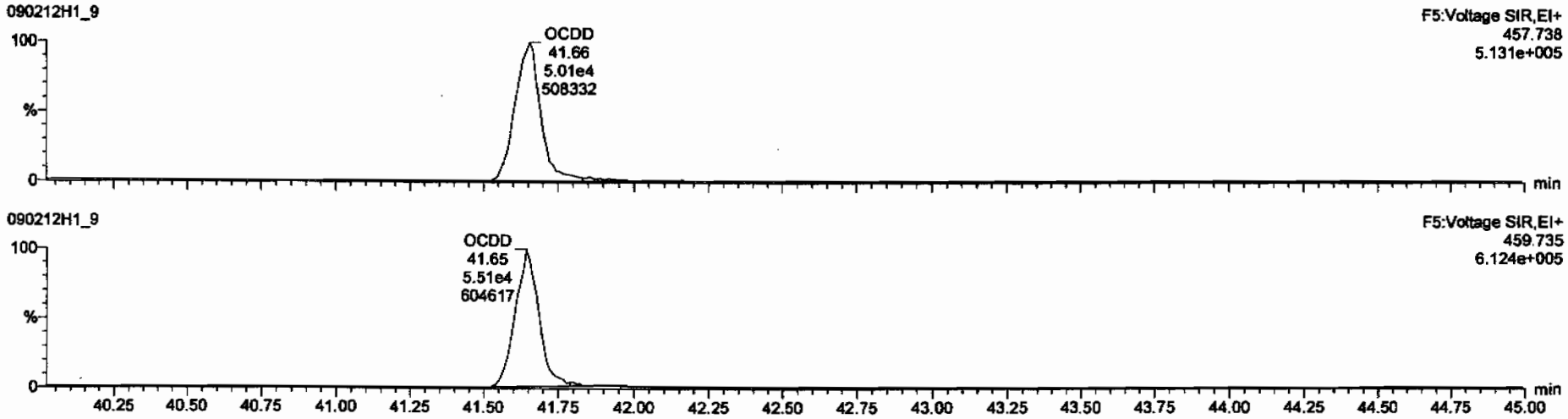

13C-OCDD

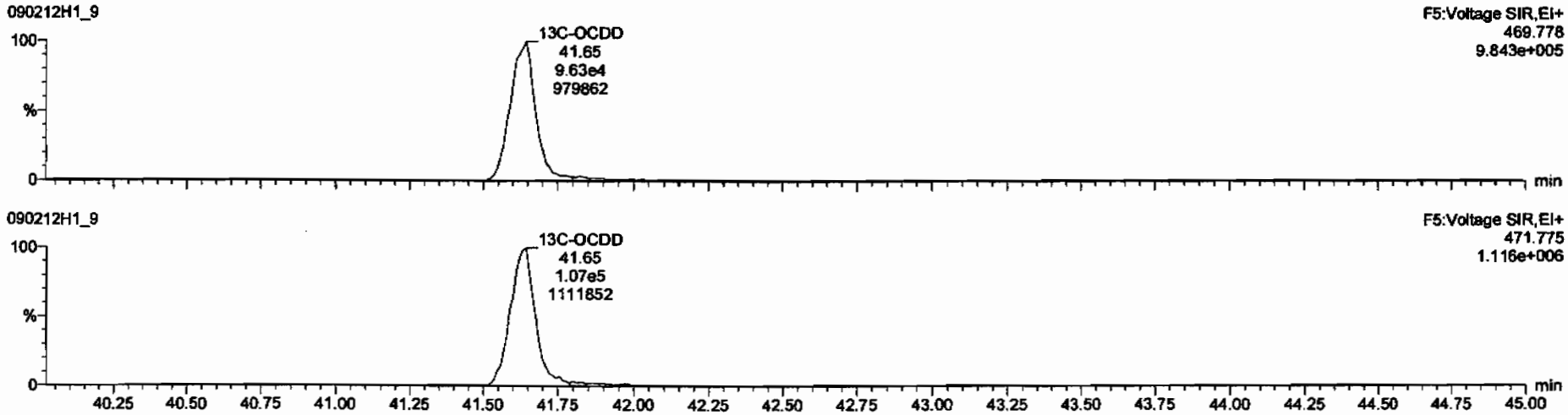

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2,3,7,8-TCDF

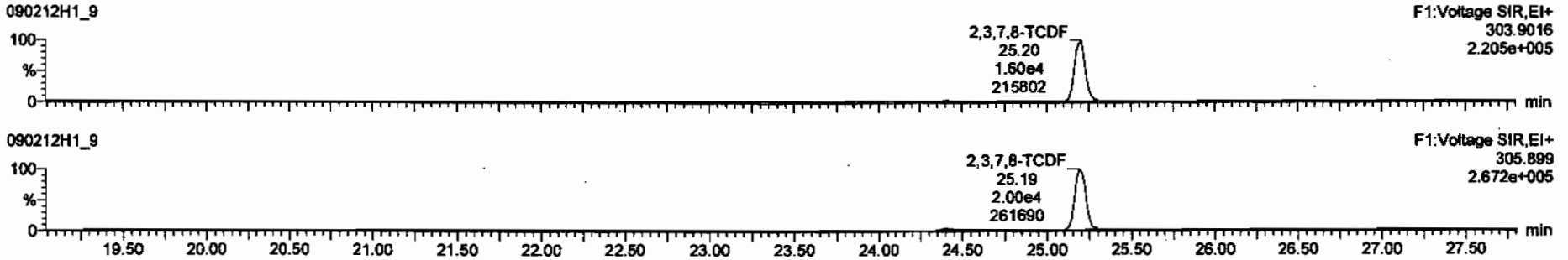

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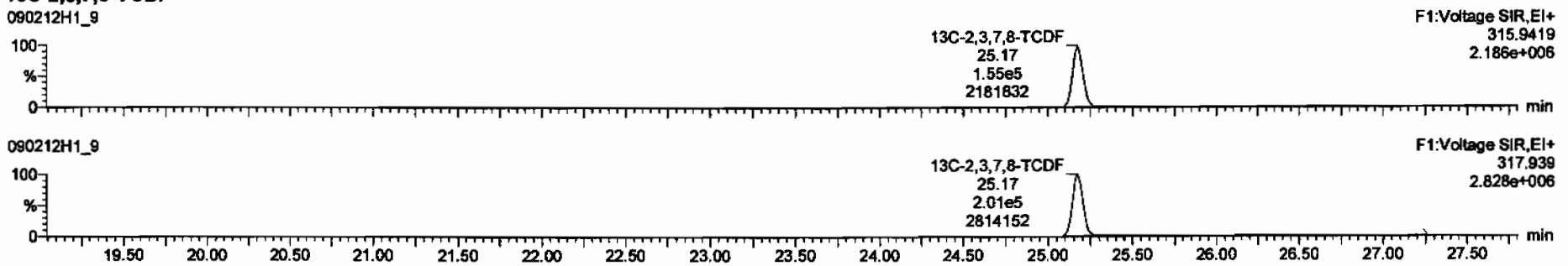

DPE1

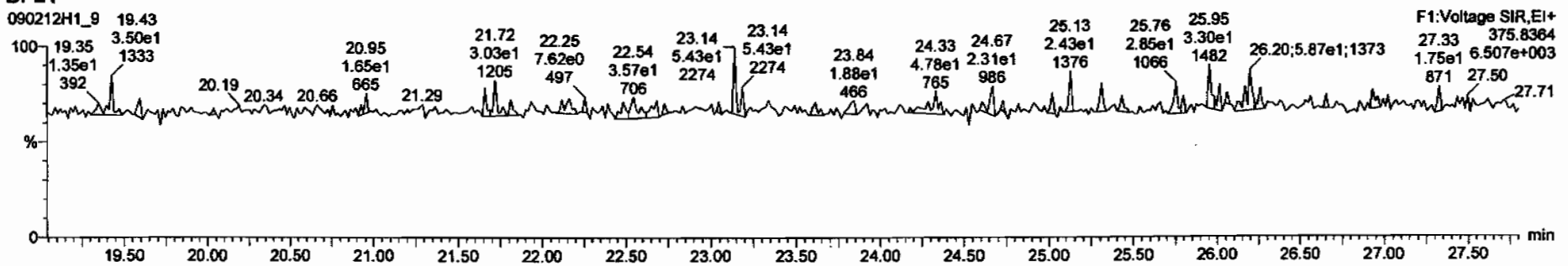

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1st Func. Penta-Furans

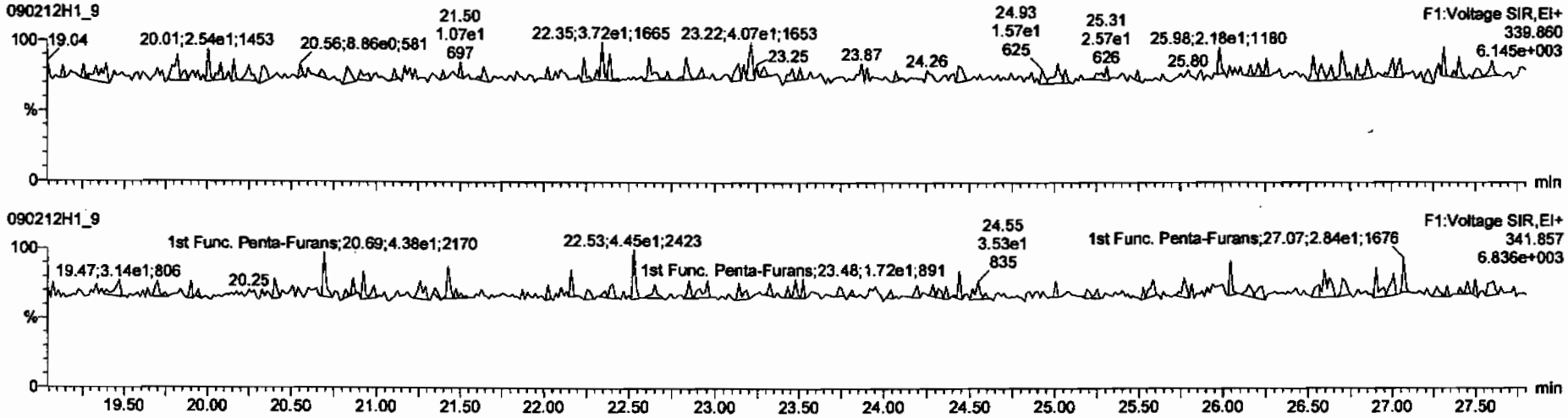

DPE6

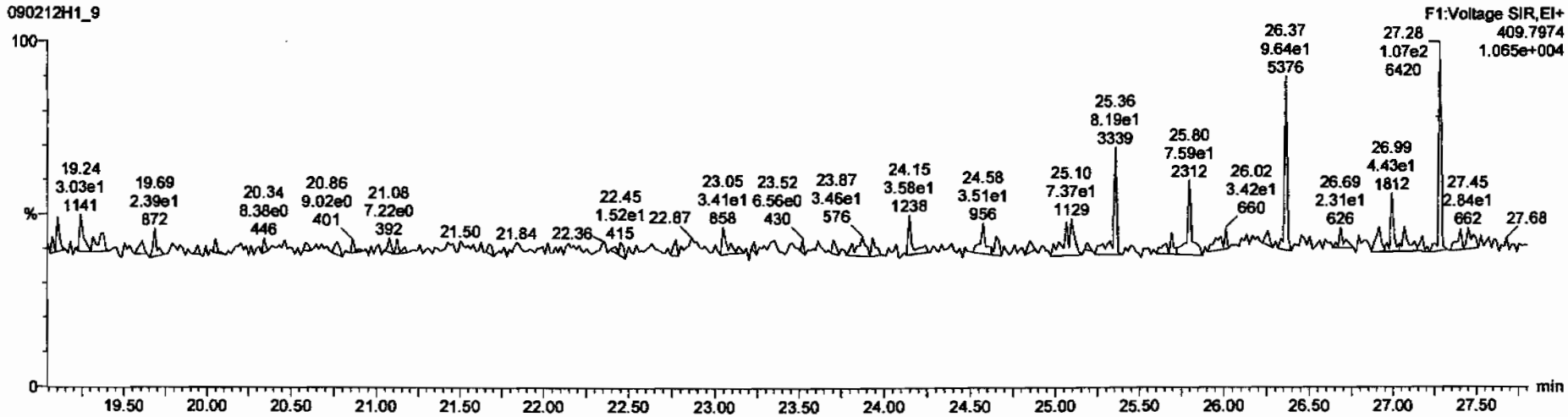

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1,2,3,7,8-PeCDF

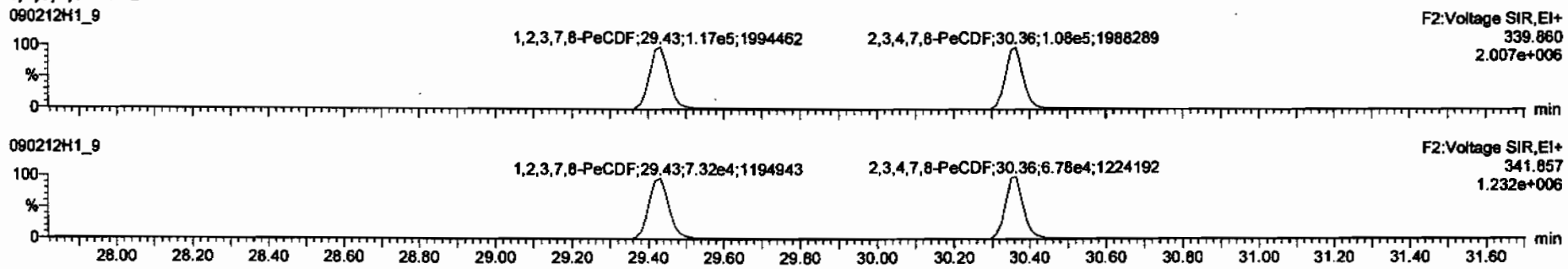

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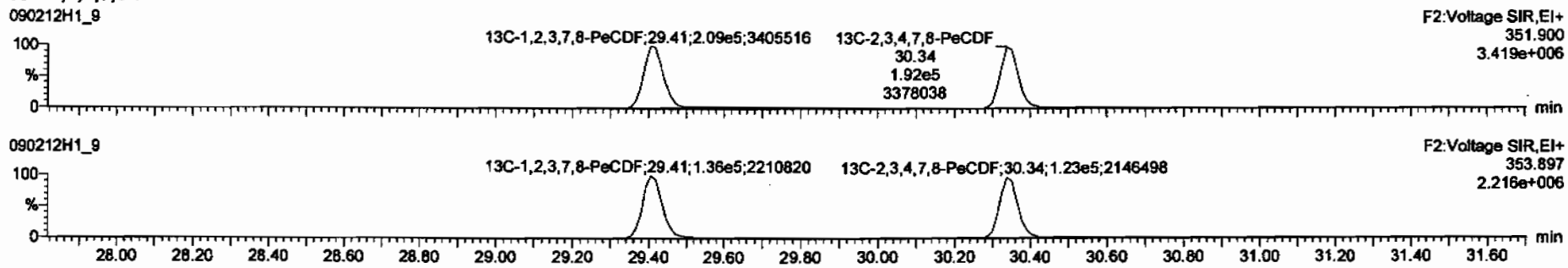

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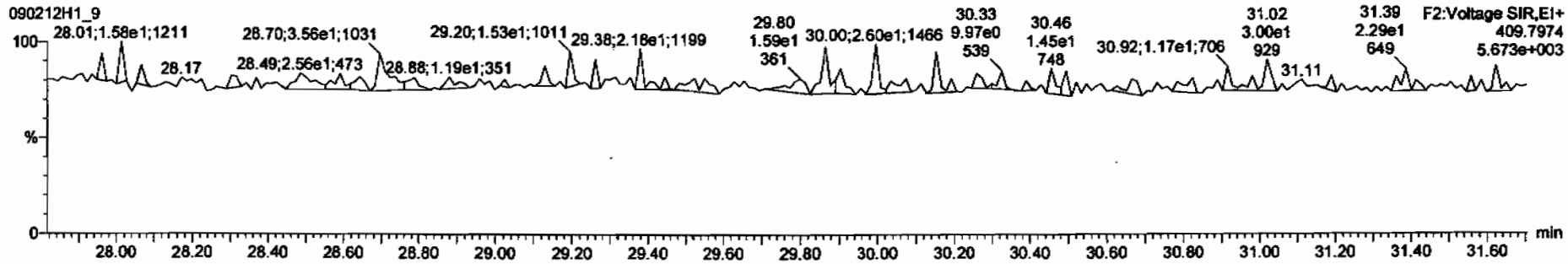

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1,2,3,4,7,8-HxCDF

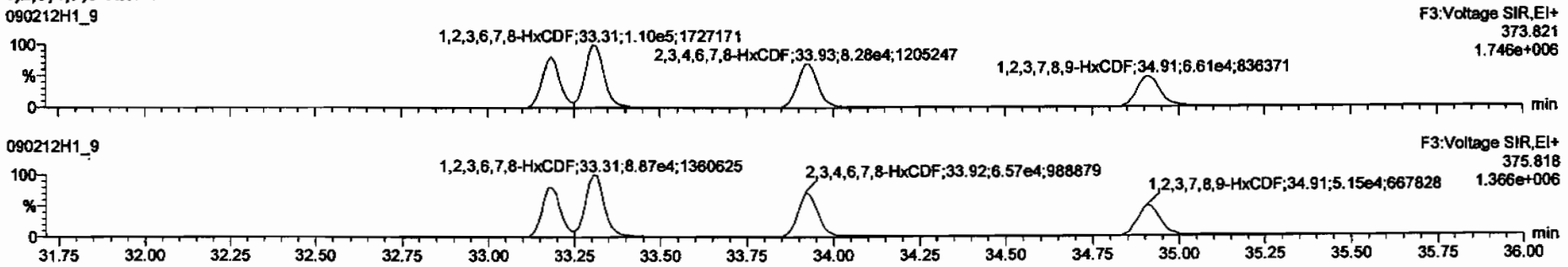

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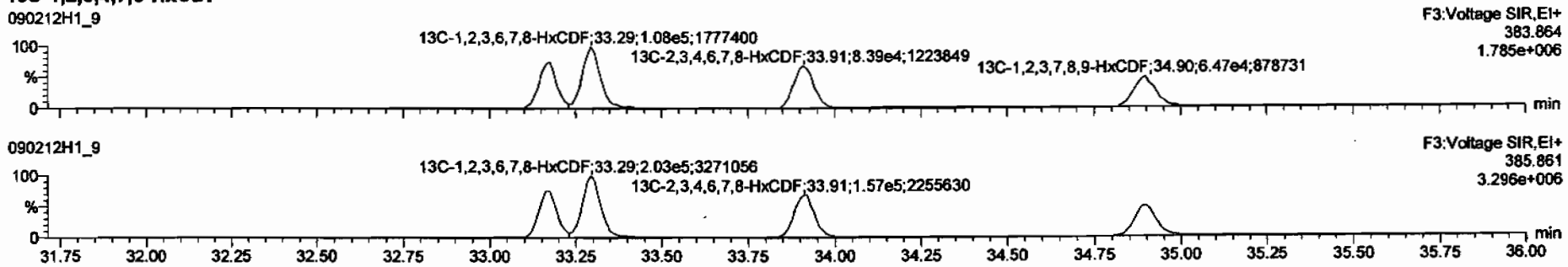

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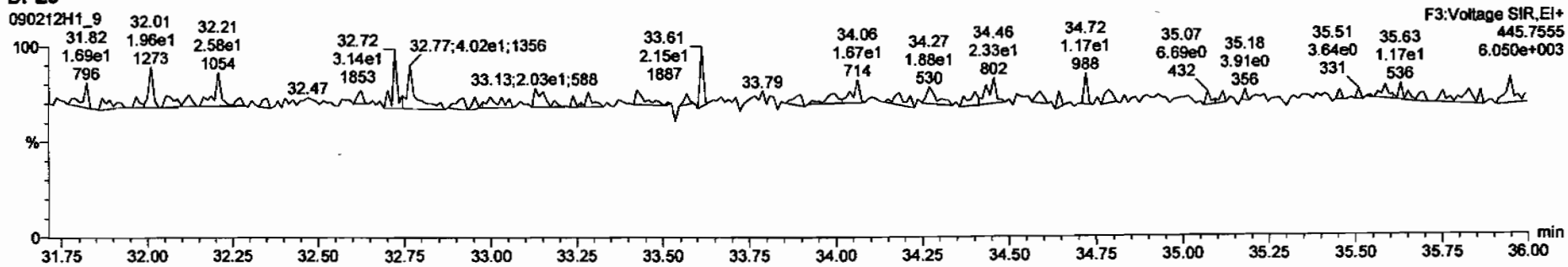

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1,2,3,4,6,7,8-HpCDF

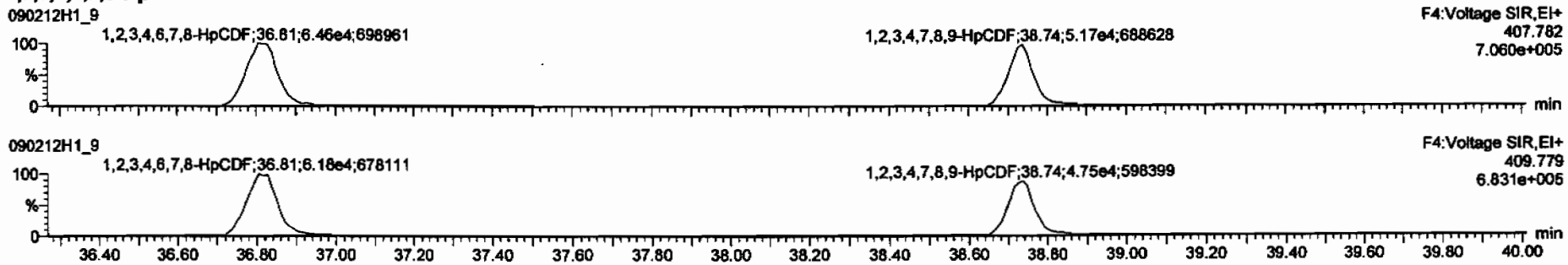

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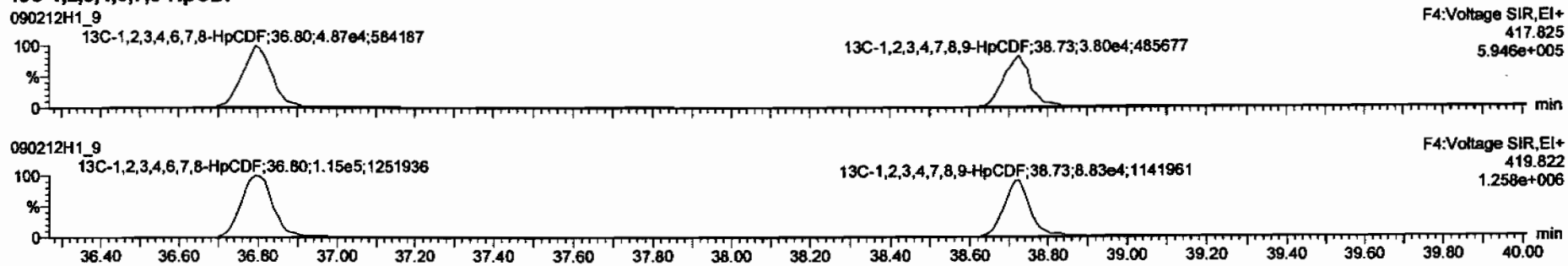

DPE4

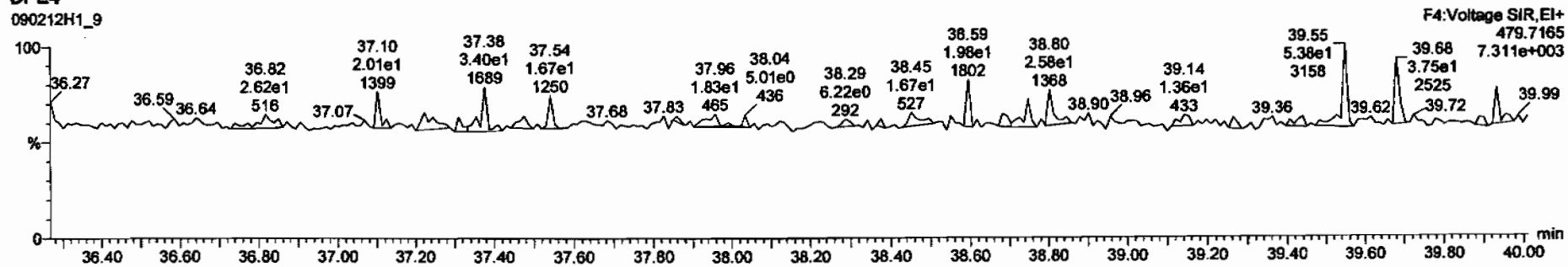

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OCDF

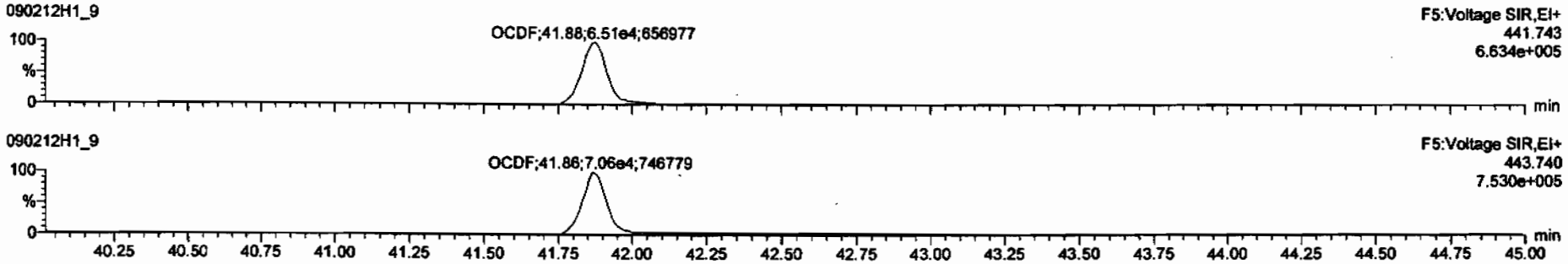

13C-OCDF

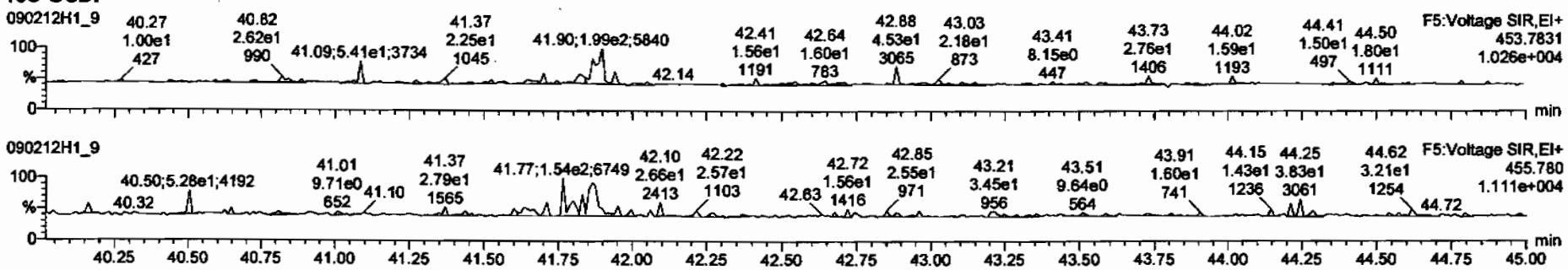

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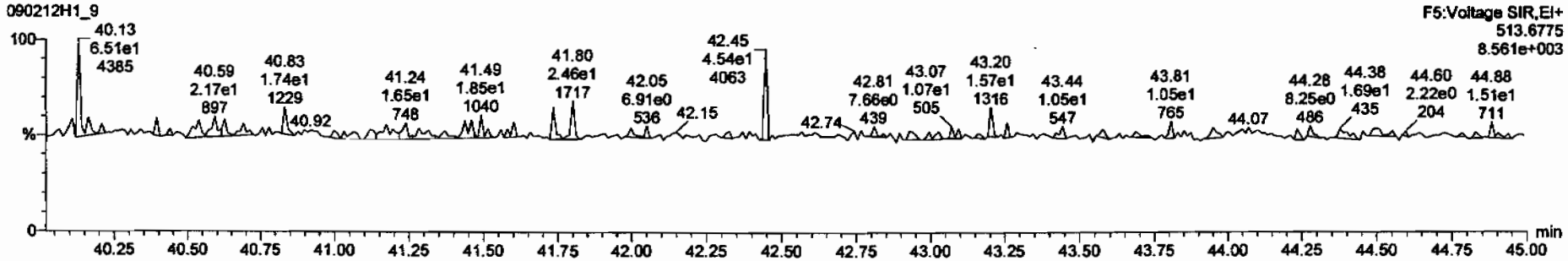

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

PFK1

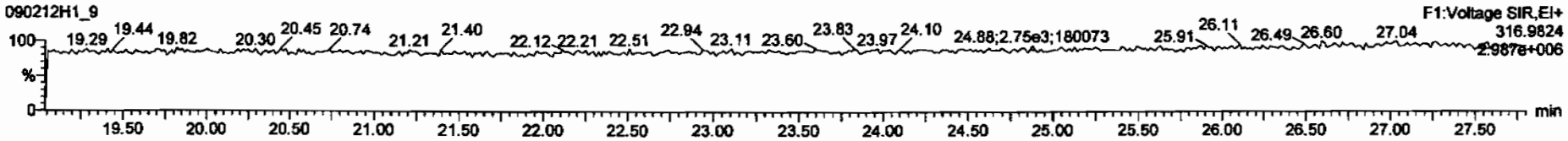

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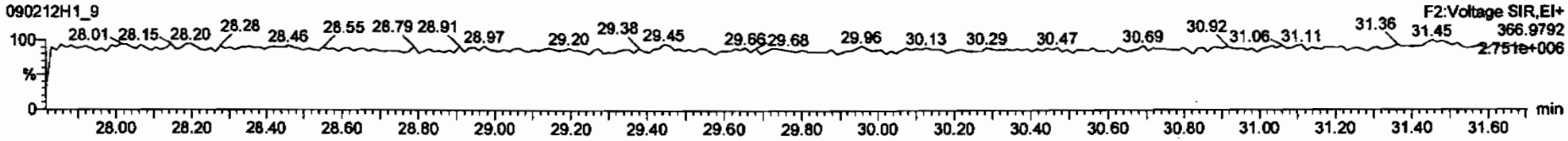

PFK3

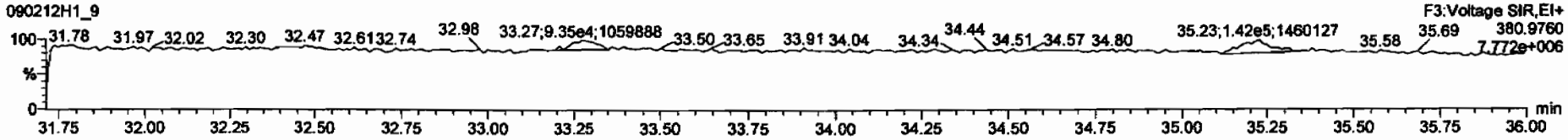

PFK4

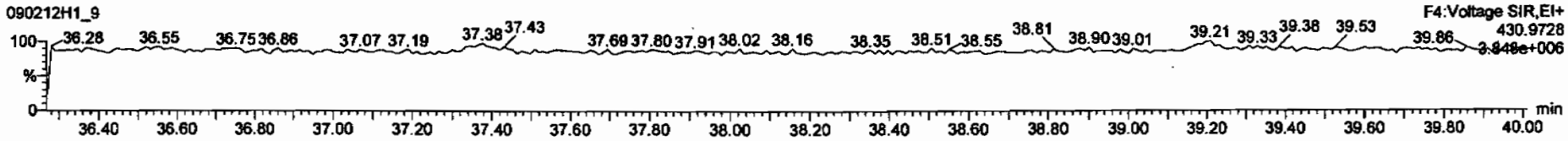

PFK5

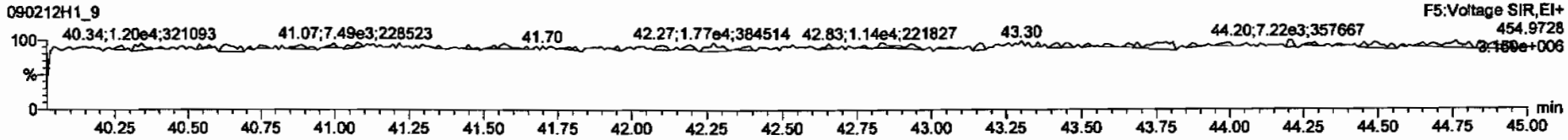

Monday, June 29, 2009

REQUEST NUMBER: 09-2506

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2506

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	EPA:901.1	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	EPA:906.0	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	

Monday, June 29, 2009

REQUEST NUMBER: 09-2506

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	HASL-300:ISOU	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:6010B	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:6850	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:8082	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:8260B	1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
		1	CAMO-09-6641	S	6/25/2009	
	SW-846:8270C	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:9012A	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:9045C	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2506

REQUEST NUMBER: 09-2506

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6605	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6605	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6605	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6605	1	POLY	H3	Ice	R
CAMO-09-6605	1	POLY	METALS-GEL	Ice	R
CAMO-09-6605	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6603	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6603	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6603	1	POLY	H3	Ice	R
CAMO-09-6603	1	POLY	METALS-GEL	Ice	R
CAMO-09-6603	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6604	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6604	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6604	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6604	1	POLY	H3	Ice	R
CAMO-09-6604	1	POLY	METALS-GEL	Ice	R
CAMO-09-6604	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6641	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:	Date	Time	Received By:	Date	Time
[illegible]	6/29/09	1400			
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By:	Date	Time	Remarks:
Printed Name / Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6603

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		1200	SUB-MEDIA:	UA	OK
PRS ID:	50-004(a)-00	OK	SAMPLE TECH CODE:	CBS	SS
LOCATION ID:	MO-605106	↓	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER GLASS~~	~~Ice~~	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	Full Outer Package
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Crushed tuff Fill w/ root material & some cobbles

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) - 05,

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 13 dpm

β/γ ≤ 787 dpm

PID Ambient / Reading = 0.0 / 12.5 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.25.09	(Printed Name) Sherri Sherwood	6/25/09
(Signature) [signature]	1550	(Signature) Sherri Sherwood	4:00

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6604

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	QBT4	qbt3
TIME COLLECTED (HH:MM)		12.20	SUB-MEDIA:	UA	OK
PRS ID:	50-004(a)-00	OK	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605106	↓	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	↓
TOP DEPTH:	0	1.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	2.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	16-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown / Purple, indurated, moist tuff.

FTB: CAMO-09-6641

SAMPLE COMMENTS: Interface @ 1.0' bgs

LOCATION DESC: 50-004(a)-05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 8 dpm

β/γ ≤ 576 dpm

PID Ambient Reading = 0.0 / 82.8 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.25.09	(Printed Name) Sherri Sherwood	6/25/09
(Signature) [signature]	1550	(Signature) Sherri Sherwood	4:00

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6605

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		1305	SUB-MEDIA:	UA	OK
PRS ID:	50-004(a)-00	OK	SAMPLE TECH CODE:	CBS	H.A.
LOCATION ID:	MO-605106	↓	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	↓
TOP DEPTH:	0	6.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	7.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Purple/Grey, indurated, moist tuff

SAMPLE COMMENTS: Power auger to 6.0', clean hole, de-con H.A. and collect sample @ 5.0' below S/T interface.

LOCATION DESC: 50-004(a)-00-05

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 31$ dpm

$\beta/\gamma \leq 555$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/25/09 1550	(Printed Name) Sherri Sherwood	6/25/09 4:00
(Signature) [signature]		(Signature) [signature]	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6641

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1220	SUB-MEDIA:	OTHER	
PRS ID:	50-004(a)-00	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605106	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:		
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA	NA	

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
No 6.25.09 1	~~32~~ Reg 15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package

SAMPLE DESC: QC Sample of CAMO-09-6604

SAMPLE COMMENTS: none

LOCATION DESC: 50-004(a)-05

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.25.09 1550	(Printed Name) Sherri Sherwood (Signature) [signature]	6/25/09 4:00
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2506 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ HIGH EXPLOSIVES
- ☐ DIOXIN FURANS
- ☐ LCMSMS PERCHLORATES
- ☐ TPH-DRO
- ☐ METALS
- ☐ PCB CONGENERS
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ GENERAL CHEMISTRY
- ☐ RADIOCHEMISTRY
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ OTHER (DESCRIBE): VOC

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. Sample CAMO-09-6604 was re-analyzed at a lower sample weight due to an over-range detect (i.e. "E" flagged by the laboratory) for 4-isopropyltoluene in the original analysis. Both sets of results were reported. Thus, the original result for 4-isoproyltoluene for sample -6604 was qualified R,V7. The acetone and toluene results for sample -6604RE were detects and, thus, were qualified J,V88. All other associated results for sample -6604RE <u>except</u> for 4-isoproyltoluene were NDs and, thus, were qualified UJ,V88.
2. In the FTB, sample -6641, associated with all the field samples, acetone detected. The associated result for sample -6605 was a detect ≤10X the FTB concentration and, thus, was qualified U,V4d. The associated result for sample -6604 was a detect >10X the FTB concentration and, thus, was not qualified.
3. The ICV %D for 1,2-dibromo-3-chloropropane was >20%. For the CCV associated with samples -6605 and -6604, the %Ds for bromomethane and 1,2-dibromo-3-chloropropane were >20%. For the CCV associated with samples

DATA VALIDATION COVER SHEET

5114-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

-6604RE and -6641, the %D for 1,2-dibromo-3-chloropropane was >20%. All associated sample results were NDs and, thus, were qualified UJ,V7c.

4. It should be noted that the bromofluorobenzene surrogate %Rs for the MS and MSD were < the laboratory's LAL but ≥10%. However, the associated samples are QC samples and, thus, no sample results were qualified.
5. It should be noted that trichlorotrifluoroethane was not spiked into the MS/MSD. No sample data were qualified as a result.
6. It should be noted that the parent sample for the MS/MSD was a LANL sample from a different RN. No sample data were qualified as a result.
7. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: [signature] DATE: 7/28/09

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☒	☐	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☒	☐	☐	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☐	☒	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☒	☐	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☐	☒	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☒	☐	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☒	☐	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☒	☐	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☒	☐	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 13:45	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T116.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.07	ug/kg	0.364	1.07	
74-87-3	Chloromethane	U	1.07	ug/kg	0.321	1.07	
75-01-4	Vinyl chloride	U	1.07	ug/kg	0.321	1.07	
74-83-9	Bromomethane	U	1.07	ug/kg	0.321	1.07	UJ,V7c
75-00-3	Chloroethane	U	1.07	ug/kg	0.321	1.07	
75-69-4	Trichlorofluoromethane	U	1.07	ug/kg	0.321	1.07	
67-64-1	Acetone	J	4.38	ug/kg	1.78	5.35	U,V4d
75-35-4	1,1-Dichloroethylene	U	1.07	ug/kg	0.321	1.07	
74-88-4	Iodomethane	U	5.35	ug/kg	1.71	5.35	
75-09-2	Methylene chloride	U	5.35	ug/kg	2.14	5.35	
75-15-0	Carbon disulfide	U	5.35	ug/kg	1.34	5.35	
156-60-5	trans-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07	
75-34-3	1,1-Dichloroethane	U	1.07	ug/kg	0.321	1.07	
78-93-3	2-Butanone	U	5.35	ug/kg	1.61	5.35	
156-59-2	cis-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07	
594-20-7	2,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07	
67-66-3	Chloroform	U	1.07	ug/kg	0.321	1.07	
74-97-5	Bromochloromethane	U	1.07	ug/kg	0.353	1.07	
71-55-6	1,1,1-Trichloroethane	U	1.07	ug/kg	0.321	1.07	
563-58-6	1,1-Dichloropropene	U	1.07	ug/kg	0.321	1.07	
56-23-5	Carbon tetrachloride	U	1.07	ug/kg	0.321	1.07	
107-06-2	1,2-Dichloroethane	U	1.07	ug/kg	0.321	1.07	
71-43-2	Benzene	U	1.07	ug/kg	0.321	1.07	
79-01-6	Trichloroethylene	U	1.07	ug/kg	0.353	1.07	
78-87-5	1,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07	
75-27-4	Bromodichloromethane	U	1.07	ug/kg	0.321	1.07	
74-95-3	Dibromomethane	U	1.07	ug/kg	0.321	1.07	
108-10-1	4-Methyl-2-pentanone	U	5.35	ug/kg	1.34	5.35	
10061-01-5	cis-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07	
108-88-3	Toluene	U	1.07	ug/kg	0.321	1.07	
10061-02-6	trans-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07	
79-00-5	1,1,2-Trichloroethane	U	1.07	ug/kg	0.321	1.07	
591-78-6	2-Hexanone	U	5.35	ug/kg	1.61	5.35	
142-28-9	1,3-Dichloropropane	U	1.07	ug/kg	0.321	1.07	
127-18-4	Tetrachloroethylene	U	1.07	ug/kg	0.321	1.07	
124-48-1	Dibromochloromethane	U	1.07	ug/kg	0.321	1.07	
106-93-4	1,2-Dibromoethane	U	1.07	ug/kg	0.321	1.07	
108-90-7	Chlorobenzene	U	1.07	ug/kg	0.321	1.07	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 13:45	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T116.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.07	ug/kg	0.321	1.07	
179601-23-1	m,p-Xylenes	U	2.14	ug/kg	0.321	2.14	
95-47-6	o-Xylene	U	1.07	ug/kg	0.321	1.07	
100-42-5	Styrene	U	1.07	ug/kg	0.321	1.07	
75-25-2	Bromoform	U	1.07	ug/kg	0.321	1.07	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07	
96-18-4	1,2,3-Trichloropropane	U	1.07	ug/kg	0.321	1.07	
108-86-1	Bromobenzene	U	1.07	ug/kg	0.321	1.07	
103-65-1	n-Propylbenzene	U	1.07	ug/kg	0.321	1.07	
95-49-8	2-Chlorotoluene	U	1.07	ug/kg	0.321	1.07	
98-82-8	Isopropylbenzene	U	1.07	ug/kg	0.321	1.07	
108-67-8	1,3,5-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07	
106-43-4	4-Chlorotoluene	U	1.07	ug/kg	0.321	1.07	
98-06-6	tert-Butylbenzene	U	1.07	ug/kg	0.321	1.07	
95-63-6	1,2,4-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07	
135-98-8	sec-Butylbenzene	U	1.07	ug/kg	0.321	1.07	
99-87-6	4-Isopropyltoluene	U	1.07	ug/kg	0.321	1.07	
541-73-1	1,3-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07	
106-46-7	1,4-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07	
104-51-8	n-Butylbenzene	U	1.07	ug/kg	0.321	1.07	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.07	ug/kg	0.321	1.07	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.35	ug/kg	1.71	5.35	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07	
95-50-1	1,2-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.35	16.7	ug/kg	0	J
	unknown siloxane	17.2	412	ug/kg	0	J
	unknown siloxane	19.15	49.1	ug/kg	0	J
	unknown siloxane	21.25	5.56	ug/kg	0	J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 14:14	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 14:03	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T117.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.380	1.12	
74-87-3	Chloromethane	U	1.12	ug/kg	0.335	1.12	
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.335	1.12	
74-83-9	Bromomethane	U	1.12	ug/kg	0.335	1.12	UJ,V7c
75-00-3	Chloroethane	U	1.12	ug/kg	0.335	1.12	
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.335	1.12	
67-64-1	Acetone		205	ug/kg	1.85	5.58	
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.335	1.12	
74-88-4	Iodomethane	U	5.58	ug/kg	1.79	5.58	
75-09-2	Methylene chloride	U	5.58	ug/kg	2.23	5.58	
75-15-0	Carbon disulfide	U	5.58	ug/kg	1.40	5.58	
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12	
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.335	1.12	
78-93-3	2-Butanone	U	5.58	ug/kg	1.67	5.58	
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12	
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12	
67-66-3	Chloroform	U	1.12	ug/kg	0.335	1.12	
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.368	1.12	
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.335	1.12	
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.335	1.12	
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.335	1.12	
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.335	1.12	
71-43-2	Benzene	U	1.12	ug/kg	0.335	1.12	
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.368	1.12	
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12	
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.335	1.12	
74-95-3	Dibromomethane	U	1.12	ug/kg	0.335	1.12	
108-10-1	4-Methyl-2-pentanone	U	5.58	ug/kg	1.40	5.58	
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12	
108-88-3	Toluene		2.47	ug/kg	0.335	1.12	
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12	
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.335	1.12	
591-78-6	2-Hexanone	U	5.58	ug/kg	1.67	5.58	
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.335	1.12	
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.335	1.12	
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.335	1.12	
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.335	1.12	
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.335	1.12	

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7/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2506**	**Date Collected:**	**06/25/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232585003**	**Date Received:**	**06/30/2009 09:15**	**%Moisture:**	**10.4**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6604**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 14:14**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 14:03**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T117.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.335	1.12	
179601-23-1	m,p-Xylenes	J	0.547	ug/kg	0.335	2.23	
95-47-6	o-Xylene	U	1.12	ug/kg	0.335	1.12	
100-42-5	Styrene	U	1.12	ug/kg	0.335	1.12	
75-25-2	Bromoform	U	1.12	ug/kg	0.335	1.12	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12	
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.335	1.12	
108-86-1	Bromobenzene	U	1.12	ug/kg	0.335	1.12	
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.335	1.12	
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.335	1.12	
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.335	1.12	
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12	
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.335	1.12	
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.335	1.12	
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12	
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.335	1.12	
99-87-6	4-Isopropyltoluene	E	151	ug/kg	0.335	1.12	R,V7
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12	
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12	
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.335	1.12	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.335	1.12	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.58	ug/kg	1.79	5.58	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12	
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.36	27.4	ug/kg	0	J
	unknown hydrocarbon	17.04	330	ug/kg	0	J
	unknown siloxane	17.2	140	ug/kg	0	J
	unknown hydrocarbon	18.09	172	ug/kg	0	J
	unknown hydrocarbon	18.19	6.71	ug/kg	0	J
	unknown hydrocarbon	18.33	275	ug/kg	0	J
	unknown hydrocarbon	18.46	55.8	ug/kg	0	J
	unknown hydrocarbon	19.05	33.9	ug/kg	0	J
	unknown siloxane	19.15	16.6	ug/kg	0	J
	unknown aromatic	19.23	13.5	ug/kg	0	J

JEJ
7/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604RE	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 11:29	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:31	**Aliquot:**	2 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T211.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	2.79	ug/kg	0.949	2.79	UJ,V88
74-87-3	Chloromethane	U	2.79	ug/kg	0.837	2.79	
75-01-4	Vinyl chloride	U	2.79	ug/kg	0.837	2.79	
74-83-9	Bromomethane	U	2.79	ug/kg	0.837	2.79	
75-00-3	Chloroethane	U	2.79	ug/kg	0.837	2.79	
75-69-4	Trichlorofluoromethane	U	2.79	ug/kg	0.837	2.79	
67-64-1	Acetone		117	ug/kg	4.63	14.0	J,V88
75-35-4	1,1-Dichloroethylene	U	2.79	ug/kg	0.837	2.79	UJ,V88
74-88-4	Iodomethane	U	14.0	ug/kg	4.46	14.0	
75-09-2	Methylene chloride	U	14.0	ug/kg	5.58	14.0	
75-15-0	Carbon disulfide	U	14.0	ug/kg	3.49	14.0	
156-60-5	trans-1,2-Dichloroethylene	U	2.79	ug/kg	0.837	2.79	
75-34-3	1,1-Dichloroethane	U	2.79	ug/kg	0.837	2.79	
78-93-3	2-Butanone	U	14.0	ug/kg	4.19	14.0	
156-59-2	cis-1,2-Dichloroethylene	U	2.79	ug/kg	0.837	2.79	
594-20-7	2,2-Dichloropropane	U	2.79	ug/kg	0.837	2.79	
67-66-3	Chloroform	U	2.79	ug/kg	0.837	2.79	
74-97-5	Bromochloromethane	U	2.79	ug/kg	0.921	2.79	
71-55-6	1,1,1-Trichloroethane	U	2.79	ug/kg	0.837	2.79	
563-58-6	1,1-Dichloropropene	U	2.79	ug/kg	0.837	2.79	
56-23-5	Carbon tetrachloride	U	2.79	ug/kg	0.837	2.79	
107-06-2	1,2-Dichloroethane	U	2.79	ug/kg	0.837	2.79	
71-43-2	Benzene	U	2.79	ug/kg	0.837	2.79	
79-01-6	Trichloroethylene	U	2.79	ug/kg	0.921	2.79	
78-87-5	1,2-Dichloropropane	U	2.79	ug/kg	0.837	2.79	
75-27-4	Bromodichloromethane	U	2.79	ug/kg	0.837	2.79	
74-95-3	Dibromomethane	U	2.79	ug/kg	0.837	2.79	
108-10-1	4-Methyl-2-pentanone	U	14.0	ug/kg	3.49	14.0	
10061-01-5	cis-1,3-Dichloropropylene	U	2.79	ug/kg	0.837	2.79	
108-88-3	Toluene	J	1.06	ug/kg	0.837	2.79	J,V88
10061-02-6	trans-1,3-Dichloropropylene	U	2.79	ug/kg	0.837	2.79	UJ,V88
79-00-5	1,1,2-Trichloroethane	U	2.79	ug/kg	0.837	2.79	
591-78-6	2-Hexanone	U	14.0	ug/kg	4.19	14.0	
142-28-9	1,3-Dichloropropane	U	2.79	ug/kg	0.837	2.79	
127-18-4	Tetrachloroethylene	U	2.79	ug/kg	0.837	2.79	
124-48-1	Dibromochloromethane	U	2.79	ug/kg	0.837	2.79	
106-93-4	1,2-Dibromoethane	U	2.79	ug/kg	0.837	2.79	
108-90-7	Chlorobenzene	U	2.79	ug/kg	0.837	2.79	

JEJ
7/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604RE	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 11:29	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:31	**Aliquot:**	2 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T211.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	2.79	ug/kg	0.837	2.79	UJ,V88
179601-23-1	m,p-Xylenes	U	5.58	ug/kg	0.837	5.58	
95-47-6	o-Xylene	U	2.79	ug/kg	0.837	2.79	
100-42-5	Styrene	U	2.79	ug/kg	0.837	2.79	
75-25-2	Bromoform	U	2.79	ug/kg	0.837	2.79	
79-34-5	1,1,2,2-Tetrachloroethane	U	2.79	ug/kg	0.837	2.79	
96-18-4	1,2,3-Trichloropropane	U	2.79	ug/kg	0.837	2.79	
108-86-1	Bromobenzene	U	2.79	ug/kg	0.837	2.79	
103-65-1	n-Propylbenzene	U	2.79	ug/kg	0.837	2.79	
95-49-8	2-Chlorotoluene	U	2.79	ug/kg	0.837	2.79	
98-82-8	Isopropylbenzene	U	2.79	ug/kg	0.837	2.79	
108-67-8	1,3,5-Trimethylbenzene	U	2.79	ug/kg	0.837	2.79	
106-43-4	4-Chlorotoluene	U	2.79	ug/kg	0.837	2.79	
98-06-6	tert-Butylbenzene	U	2.79	ug/kg	0.837	2.79	
95-63-6	1,2,4-Trimethylbenzene	U	2.79	ug/kg	0.837	2.79	
135-98-8	sec-Butylbenzene	U	2.79	ug/kg	0.837	2.79	
99-87-6	4-Isopropyltoluene		75.2	ug/kg	0.837	2.79	
541-73-1	1,3-Dichlorobenzene	U	2.79	ug/kg	0.837	2.79	UJ,V88
106-46-7	1,4-Dichlorobenzene	U	2.79	ug/kg	0.837	2.79	
104-51-8	n-Butylbenzene	U	2.79	ug/kg	0.837	2.79	
96-12-8	1,2-Dibromo-3-chloropropane	U	2.79	ug/kg	0.837	2.79	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	14.0	ug/kg	4.46	14.0	
630-20-6	1,1,1,2-Tetrachloroethane	U	2.79	ug/kg	0.837	2.79	
95-50-1	1,2-Dichlorobenzene	U	2.79	ug/kg	0.837	2.79	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.35	57.8	ug/kg	0	J
	unknown hydrocarbon	17.04	154	ug/kg	0	J
	unknown siloxane	17.2	438	ug/kg	0	J
	unknown hydrocarbon	18.09	174	ug/kg	0	J
	unknown hydrocarbon	18.33	359	ug/kg	0	J
	unknown hydrocarbon	19.05	30.9	ug/kg	0	J
	unknown siloxane	19.15	72.7	ug/kg	0	J

JEJ
7/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	S
Lab Sample ID:	232585004	**Date Received:**	06/30/2009 09:15		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6641	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 11:00	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T210.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone		6.03	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

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7/28/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	S
Lab Sample ID:	232585004	**Date Received:**	06/30/2009 09:15		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6641	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 11:00	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T210.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00	
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00	
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00	
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00	
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00	
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00	
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00	
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00	
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00	
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	17.5	ug/kg	0	J

JEJ
7/28/09

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2506 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☒ OTHER (DESCRIBE): SVOC

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The ICV and/or CCV %Ds for benzoic acid; 2-methyl-4,6-dinitrophenol and p-nitroaniline were >20%. All associated sample results were NDs and, thus, were qualified UJ,SV7c.
2. The MS/MSD %Rs for several analytes and the RPDs for benzyl alcohol and 2,4-dinitrophenol were outside the laboratory acceptance limits. Since the analysis of an MS or MSD was not required for this analysis, no sample data were qualified.
3. It should be noted that the parent sample for the MS/MSD was a LANL sample from a different RN. Also, the raw data for the parent sample were not provided in the data package. No sample data were qualified as a result.
4. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

DATA VALIDATION COVER SHEET

5115-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: _____ DATE: 7/28/09

Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☐	☒	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☒	☐	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☒	☐	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	7.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6603	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:23	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.22 g	**Final Volume:**	1 mL
Data File:	s6g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	357	ug/kg	71.4	357	
108-95-2	Phenol	U	357	ug/kg	71.4	357	
95-57-8	2-Chlorophenol	U	357	ug/kg	71.4	357	
106-46-7	1,4-Dichlorobenzene	U	357	ug/kg	71.4	357	
621-64-7	N-Nitrosodipropylamine	U	357	ug/kg	71.4	357	
59-50-7	4-Chloro-3-methylphenol	U	357	ug/kg	71.4	357	
83-32-9	Acenaphthene	U	35.7	ug/kg	11.8	35.7	
121-14-2	2,4-Dinitrotoluene	U	357	ug/kg	35.7	357	
100-02-7	4-Nitrophenol	U	357	ug/kg	118	357	
87-86-5	Pentachlorophenol	U	357	ug/kg	89.2	357	
129-00-0	Pyrene		66.1	ug/kg	10.7	35.7	
110-86-1	Pyridine	U	357	ug/kg	71.4	357	
62-53-3	Aniline	U	357	ug/kg	107	357	
111-44-4	bis(2-Chloroethyl) ether	U	357	ug/kg	71.4	357	
541-73-1	1,3-Dichlorobenzene	U	357	ug/kg	71.4	357	
100-51-6	Benzyl alcohol	U	357	ug/kg	107	357	
95-50-1	1,2-Dichlorobenzene	U	357	ug/kg	71.4	357	
108-60-1	bis(2-Chloroisopropyl)ether	U	357	ug/kg	71.4	357	
95-48-7	o-Cresol	U	357	ug/kg	71.4	357	
65794-96-9	m,p-Cresols	U	357	ug/kg	107	357	
67-72-1	Hexachloroethane	U	357	ug/kg	71.4	357	
98-95-3	Nitrobenzene	U	357	ug/kg	71.4	357	
78-59-1	Isophorone	U	357	ug/kg	71.4	357	
88-75-5	2-Nitrophenol	U	357	ug/kg	71.4	357	
105-67-9	2,4-Dimethylphenol	U	357	ug/kg	125	357	
111-91-1	bis(2-Chloroethoxy)methane	U	357	ug/kg	71.4	357	
120-83-2	2,4-Dichlorophenol	U	357	ug/kg	71.4	357	
65-85-0	Benzoic acid	U	714	ug/kg	178	714	UJ,SV7c
91-20-3	Naphthalene	U	35.7	ug/kg	10.7	35.7	
106-47-8	4-Chloroaniline	U	357	ug/kg	71.4	357	
87-68-3	Hexachlorobutadiene	U	357	ug/kg	71.4	357	
91-57-6	2-Methylnaphthalene	U	35.7	ug/kg	7.14	35.7	
77-47-4	Hexachlorocyclopentadiene	U	357	ug/kg	71.4	357	
88-06-2	2,4,6-Trichlorophenol	U	357	ug/kg	71.4	357	
95-95-4	2,4,5-Trichlorophenol	U	357	ug/kg	71.4	357	
91-58-7	2-Chloronaphthalene	U	35.7	ug/kg	11.8	35.7	
88-74-4	2-Nitroaniline	U	357	ug/kg	71.4	357	
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	357	ug/kg	71.4	357	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	7.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6603	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:23	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.22 g	**Final Volume:**	1 mL
Data File:	s6g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	357	ug/kg	71.4	357	
606-20-2	2,6-Dinitrotoluene	U	357	ug/kg	35.7	357	
208-96-8	Acenaphthylene	U	35.7	ug/kg	10.7	35.7	
51-28-5	2,4-Dinitrophenol	U	714	ug/kg	136	714	
132-64-9	Dibenzofuran	U	357	ug/kg	71.4	357	
84-66-2	Diethylphthalate	U	357	ug/kg	71.4	357	
86-73-7	Fluorene	U	35.7	ug/kg	10.7	35.7	
7005-72-3	4-Chlorophenylphenylether	U	357	ug/kg	71.4	357	
534-52-1	2-Methyl-4,6-dinitrophenol	U	357	ug/kg	71.4	357	UJ,SV7c
100-01-6	4-Nitroaniline	U	357	ug/kg	107	357	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	357	ug/kg	71.4	357	
122-66-7	Azobenzene	U	357	ug/kg	71.4	357	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	357	ug/kg	71.4	357	
118-74-1	Hexachlorobenzene	U	357	ug/kg	71.4	357	
85-01-8	Phenanthrene	U	35.7	ug/kg	10.7	35.7	
120-12-7	Anthracene	U	35.7	ug/kg	7.14	35.7	
84-74-2	Di-n-butylphthalate	U	357	ug/kg	71.4	357	
206-44-0	Fluoranthene		69.3	ug/kg	10.7	35.7	
85-68-7	Butylbenzylphthalate	U	357	ug/kg	71.4	357	
56-55-3	Benzo(a)anthracene	U	35.7	ug/kg	10.7	35.7	
91-94-1	3,3'-Dichlorobenzidine	U	357	ug/kg	107	357	
218-01-9	Chrysene		49.2	ug/kg	10.7	35.7	
117-81-7	bis(2-Ethylhexyl)phthalate	U	357	ug/kg	71.4	357	
117-84-0	Di-n-octylphthalate	U	357	ug/kg	71.4	357	
205-99-2	Benzo(b)fluoranthene		83.0	ug/kg	10.7	35.7	
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7	
50-32-8	Benzo(a)pyrene		38.0	ug/kg	10.7	35.7	
193-39-5	Indeno(1,2,3-cd)pyrene	J	22.3	ug/kg	10.7	35.7	
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7	
191-24-2	Benzo(ghi)perylene	J	24.7	ug/kg	10.7	35.7	
120-82-1	1,2,4-Trichlorobenzene	U	357	ug/kg	71.4	357	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1000197-14-1	4b,8-Dimethyl-2-isopropylphenanthrene, 4	8.11	522	ug/kg	95	NJ
	Unknown	8.32	680	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	7.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6603	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:23	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.22 g	**Final Volume:**	1 mL
Data File:	s6g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.74	381	ug/kg		J
	Unknown	8.91	311	ug/kg		J
	Unknown	8.94	315	ug/kg		J
	Unknown	8.98	519	ug/kg		J
	Unknown	9.09	931	ug/kg		J
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.17	400	ug/kg	95	NJ
489-39-4	1H-Cycloprop[e]azulene, decahydro-1,1,7-	9.23	829	ug/kg	87	NJ
	Unknown	9.29	494	ug/kg		J
	Unknown	9.45	1650	ug/kg		J
	Unknown	9.55	2500	ug/kg		J
	Unknown	9.66	608	ug/kg		J
	Unknown	9.71	596	ug/kg		J
	Unknown	9.85	1350	ug/kg		J
	Unknown	10.17	482	ug/kg		J
	Unknown	10.3	420	ug/kg		J
	Unknown	10.34	507	ug/kg		J
	Unknown	10.54	548	ug/kg		J
55030-21-2	Cyclohexane, 1,1'-(2-propyl-1,3-propaned	12.35	1220	ug/kg	89	NJ

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Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585003	Date Received:	06/30/2009 09:15	%Moisture:	10.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6604	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 18:46	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.17 g	Final Volume:	1 mL
Data File:	s6g0215.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	370	ug/kg	74.0	370	
108-95-2	Phenol	U	370	ug/kg	74.0	370	
95-57-8	2-Chlorophenol	U	370	ug/kg	74.0	370	
106-46-7	1,4-Dichlorobenzene	U	370	ug/kg	74.0	370	
621-64-7	N-Nitrosodipropylamine	U	370	ug/kg	74.0	370	
59-50-7	4-Chloro-3-methylphenol	U	370	ug/kg	74.0	370	
83-32-9	Acenaphthene	U	37.0	ug/kg	12.2	37.0	
121-14-2	2,4-Dinitrotoluene	U	370	ug/kg	37.0	370	
100-02-7	4-Nitrophenol	U	370	ug/kg	122	370	
87-86-5	Pentachlorophenol	U	370	ug/kg	92.5	370	
129-00-0	Pyrene	U	37.0	ug/kg	11.1	37.0	
110-86-1	Pyridine	U	370	ug/kg	74.0	370	
62-53-3	Aniline	U	370	ug/kg	111	370	
111-44-4	bis(2-Chloroethyl) ether	U	370	ug/kg	74.0	370	
541-73-1	1,3-Dichlorobenzene	U	370	ug/kg	74.0	370	
100-51-6	Benzyl alcohol	U	370	ug/kg	111	370	
95-50-1	1,2-Dichlorobenzene	U	370	ug/kg	74.0	370	
108-60-1	bis(2-Chloroisopropyl)ether	U	370	ug/kg	74.0	370	
95-48-7	o-Cresol	U	370	ug/kg	74.0	370	
65794-96-9	m,p-Cresols	U	370	ug/kg	111	370	
67-72-1	Hexachloroethane	U	370	ug/kg	74.0	370	
98-95-3	Nitrobenzene	U	370	ug/kg	74.0	370	
78-59-1	Isophorone	U	370	ug/kg	74.0	370	
88-75-5	2-Nitrophenol	U	370	ug/kg	74.0	370	
105-67-9	2,4-Dimethylphenol	U	370	ug/kg	129	370	
111-91-1	bis(2-Chloroethoxy)methane	U	370	ug/kg	74.0	370	
120-83-2	2,4-Dichlorophenol	U	370	ug/kg	74.0	370	
65-85-0	Benzoic acid	U	740	ug/kg	185	740	UJ,SV7c
91-20-3	Naphthalene	U	37.0	ug/kg	11.1	37.0	
106-47-8	4-Chloroaniline	U	370	ug/kg	74.0	370	
87-68-3	Hexachlorobutadiene	U	370	ug/kg	74.0	370	
91-57-6	2-Methylnaphthalene	U	37.0	ug/kg	7.40	37.0	
77-47-4	Hexachlorocyclopentadiene	U	370	ug/kg	74.0	370	
88-06-2	2,4,6-Trichlorophenol	U	370	ug/kg	74.0	370	
95-95-4	2,4,5-Trichlorophenol	U	370	ug/kg	74.0	370	
91-58-7	2-Chloronaphthalene	U	37.0	ug/kg	12.2	37.0	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	370	ug/kg	74.0	370	
99-09-2	3-Nitroaniline	U	370	ug/kg	74.0	370	

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Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:46	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s6g0215.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	370	ug/kg	74.0	370	
606-20-2	2,6-Dinitrotoluene	U	370	ug/kg	37.0	370	
208-96-8	Acenaphthylene	U	37.0	ug/kg	11.1	37.0	
51-28-5	2,4-Dinitrophenol	U	740	ug/kg	141	740	
132-64-9	Dibenzofuran	U	370	ug/kg	74.0	370	
84-66-2	Diethylphthalate	U	370	ug/kg	74.0	370	
86-73-7	Fluorene	U	37.0	ug/kg	11.1	37.0	
7005-72-3	4-Chlorophenylphenylether	U	370	ug/kg	74.0	370	
534-52-1	2-Methyl-4,6-dinitrophenol	U	370	ug/kg	74.0	370	UJ,SV7c
100-01-6	4-Nitroaniline	U	370	ug/kg	111	370	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	370	ug/kg	74.0	370	
122-66-7	Azobenzene	U	370	ug/kg	74.0	370	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	370	ug/kg	74.0	370	
118-74-1	Hexachlorobenzene	U	370	ug/kg	74.0	370	
85-01-8	Phenanthrene	U	37.0	ug/kg	11.1	37.0	
120-12-7	Anthracene	U	37.0	ug/kg	7.40	37.0	
84-74-2	Di-n-butylphthalate	U	370	ug/kg	74.0	370	
206-44-0	Fluoranthene	U	37.0	ug/kg	11.1	37.0	
85-68-7	Butylbenzylphthalate	U	370	ug/kg	74.0	370	
56-55-3	Benzo(a)anthracene	U	37.0	ug/kg	11.1	37.0	
91-94-1	3,3'-Dichlorobenzidine	U	370	ug/kg	111	370	
218-01-9	Chrysene	U	37.0	ug/kg	11.1	37.0	
117-81-7	bis(2-Ethylhexyl)phthalate	U	370	ug/kg	74.0	370	
117-84-0	Di-n-octylphthalate	U	370	ug/kg	74.0	370	
205-99-2	Benzo(b)fluoranthene	U	37.0	ug/kg	11.1	37.0	
207-08-9	Benzo(k)fluoranthene	U	37.0	ug/kg	11.1	37.0	
50-32-8	Benzo(a)pyrene	U	37.0	ug/kg	11.1	37.0	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.0	ug/kg	11.1	37.0	
53-70-3	Dibenzo(a,h)anthracene	U	37.0	ug/kg	11.1	37.0	
191-24-2	Benzo(ghi)perylene	U	37.0	ug/kg	11.1	37.0	
120-82-1	1,2,4-Trichlorobenzene	U	370	ug/kg	74.0	370	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	314	ug/kg		JA
57-10-3	n-Hexadecanoic acid	7.68	194	ug/kg	98	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:46	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s6g0215.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	7.92	204	ug/kg		J
1000130-90-5	2-Methyl-Z,Z-3,13-octadecadienol	8.33	380	ug/kg	90	NJ
	Unknown	8.47	870	ug/kg		J
	Unknown	8.9	221	ug/kg		J
	Unknown	9.09	149	ug/kg		J
	Unknown	9.24	594	ug/kg		J
	Unknown	9.29	239	ug/kg		J
	Unknown	9.35	232	ug/kg		J
	Unknown	9.45	1840	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.55	827	ug/kg	93	NJ
	Unknown	9.84	672	ug/kg		J
	Unknown	9.92	279	ug/kg		J
	Unknown	10.21	586	ug/kg		J
	Unknown	12.83	470	ug/kg		J
70038-20-9	7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet	13.57	444	ug/kg	90	NJ
	Unknown	13.63	493	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585001	Date Received:	06/30/2009 09:15	%Moisture:	6.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6605	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 18:00	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.11 g	Final Volume:	1 mL
Data File:	s6g0213.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	356	ug/kg	71.1	356	
108-95-2	Phenol	U	356	ug/kg	71.1	356	
95-57-8	2-Chlorophenol	U	356	ug/kg	71.1	356	
106-46-7	1,4-Dichlorobenzene	U	356	ug/kg	71.1	356	
621-64-7	N-Nitrosodipropylamine	U	356	ug/kg	71.1	356	
59-50-7	4-Chloro-3-methylphenol	U	356	ug/kg	71.1	356	
83-32-9	Acenaphthene	U	35.6	ug/kg	11.7	35.6	
121-14-2	2,4-Dinitrotoluene	U	356	ug/kg	35.6	356	
100-02-7	4-Nitrophenol	U	356	ug/kg	117	356	
87-86-5	Pentachlorophenol	U	356	ug/kg	88.9	356	
129-00-0	Pyrene	U	35.6	ug/kg	10.7	35.6	
110-86-1	Pyridine	U	356	ug/kg	71.1	356	
62-53-3	Aniline	U	356	ug/kg	107	356	
111-44-4	bis(2-Chloroethyl) ether	U	356	ug/kg	71.1	356	
541-73-1	1,3-Dichlorobenzene	U	356	ug/kg	71.1	356	
100-51-6	Benzyl alcohol	U	356	ug/kg	107	356	
95-50-1	1,2-Dichlorobenzene	U	356	ug/kg	71.1	356	
108-60-1	bis(2-Chloroisopropyl)ether	U	356	ug/kg	71.1	356	
95-48-7	o-Cresol	U	356	ug/kg	71.1	356	
65794-96-9	m,p-Cresols	U	356	ug/kg	107	356	
67-72-1	Hexachloroethane	U	356	ug/kg	71.1	356	
98-95-3	Nitrobenzene	U	356	ug/kg	71.1	356	
78-59-1	Isophorone	U	356	ug/kg	71.1	356	
88-75-5	2-Nitrophenol	U	356	ug/kg	71.1	356	
105-67-9	2,4-Dimethylphenol	U	356	ug/kg	124	356	
111-91-1	bis(2-Chloroethoxy)methane	U	356	ug/kg	71.1	356	
120-83-2	2,4-Dichlorophenol	U	356	ug/kg	71.1	356	
65-85-0	Benzoic acid	U	711	ug/kg	178	711	UJ,SV7c
91-20-3	Naphthalene	U	35.6	ug/kg	10.7	35.6	
106-47-8	4-Chloroaniline	U	356	ug/kg	71.1	356	
87-68-3	Hexachlorobutadiene	U	356	ug/kg	71.1	356	
91-57-6	2-Methylnaphthalene	U	35.6	ug/kg	7.11	35.6	
77-47-4	Hexachlorocyclopentadiene	U	356	ug/kg	71.1	356	
88-06-2	2,4,6-Trichlorophenol	U	356	ug/kg	71.1	356	
95-95-4	2,4,5-Trichlorophenol	U	356	ug/kg	71.1	356	
91-58-7	2-Chloronaphthalene	U	35.6	ug/kg	11.7	35.6	
88-74-4	2-Nitroaniline	U	356	ug/kg	71.1	356	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	356	ug/kg	71.1	356	

JEJ
7/28/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:00	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.11 g	**Final Volume:**	1 mL
Data File:	s6g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	356	ug/kg	71.1	356	
606-20-2	2,6-Dinitrotoluene	U	356	ug/kg	35.6	356	
208-96-8	Acenaphthylene	U	35.6	ug/kg	10.7	35.6	
51-28-5	2,4-Dinitrophenol	U	711	ug/kg	135	711	
132-64-9	Dibenzofuran	U	356	ug/kg	71.1	356	
84-66-2	Diethylphthalate	U	356	ug/kg	71.1	356	
86-73-7	Fluorene	U	35.6	ug/kg	10.7	35.6	
7005-72-3	4-Chlorophenylphenylether	U	356	ug/kg	71.1	356	
534-52-1	2-Methyl-4,6-dinitrophenol	U	356	ug/kg	71.1	356	UJ,SV7c
100-01-6	4-Nitroaniline	U	356	ug/kg	107	356	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	356	ug/kg	71.1	356	
122-66-7	Azobenzene	U	356	ug/kg	71.1	356	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	356	ug/kg	71.1	356	
118-74-1	Hexachlorobenzene	U	356	ug/kg	71.1	356	
85-01-8	Phenanthrene	U	35.6	ug/kg	10.7	35.6	
120-12-7	Anthracene	U	35.6	ug/kg	7.11	35.6	
84-74-2	Di-n-butylphthalate	U	356	ug/kg	71.1	356	
206-44-0	Fluoranthene	U	35.6	ug/kg	10.7	35.6	
85-68-7	Butylbenzylphthalate	U	356	ug/kg	71.1	356	
56-55-3	Benzo(a)anthracene	U	35.6	ug/kg	10.7	35.6	
91-94-1	3,3'-Dichlorobenzidine	U	356	ug/kg	107	356	
218-01-9	Chrysene	U	35.6	ug/kg	10.7	35.6	
117-81-7	bis(2-Ethylhexyl)phthalate	U	356	ug/kg	71.1	356	
117-84-0	Di-n-octylphthalate	U	356	ug/kg	71.1	356	
205-99-2	Benzo(b)fluoranthene	U	35.6	ug/kg	10.7	35.6	
207-08-9	Benzo(k)fluoranthene	U	35.6	ug/kg	10.7	35.6	
50-32-8	Benzo(a)pyrene	U	35.6	ug/kg	10.7	35.6	
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.6	ug/kg	10.7	35.6	
53-70-3	Dibenzo(a,h)anthracene	U	35.6	ug/kg	10.7	35.6	
191-24-2	Benzo(ghi)perylene	U	35.6	ug/kg	10.7	35.6	
120-82-1	1,2,4-Trichlorobenzene	U	356	ug/kg	71.1	356	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	312	ug/kg		JA
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.52	196	ug/kg	94	NJ

JEJ
7/28/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:00	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.11 g	**Final Volume:**	1 mL
Data File:	s6g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	9.82	162	ug/kg		J
	Unknown	10.33	166	ug/kg		J

JEJ
7/28/09

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2506 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☒ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the MS/MSD %R calculations were performed incorrectly. The parent sample result was < the MDL and, thus, a result of 0 µg/kg should have been used to calculate the %Rs. The laboratory subtracted the parent sample concentration. The %Rs were within the acceptance limits when calculated correctly. No sample results were qualified.
2. It should be noted that the parent sample for the MS/MSD was a LANL sample from different RN. Also, the raw data for the parent sample was not provided in the data package. No sample data were qualified as a result.
3. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: [signature]	DATE: 7/28/09
Form 5121-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☒	☐	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☒	☐	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☒	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6605

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 232585001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 93.4

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	0.535	ug/kg	U	1	08-JUL-09 20:05	per0708059a
	Perchlorate-O(18)			5.16	ug/kg		1	08-JUL-09 20:05	per0708059a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

JEJ
7/28/09

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6603

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 232585002

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 92.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.539	2.16	0.655	ug/kg	J	1	08-JUL-09 20:13	per0708060a
	Perchlorate-O(18)			5.27	ug/kg		1	08-JUL-09 20:13	per0708060a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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7/28/09

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6604

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 232585003

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.558	2.23	1.12	ug/kg	J	1	08-JUL-09 20:21	per0708061a
	Perchlorate-O(18)			5.55	ug/kg		1	08-JUL-09 20:21	per0708061a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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7/28/09

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DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2506 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☒ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE): PCB

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that due to the scale of the chromatograms provided for the detected aroclor, it was not possible to pattern match the result with the associated standard. Since the retention time criteria were met, no sample data were qualified, based on professional judgment.
2. It should be noted that the parent sample for the MS/MSD was a LANL sample from a different RN. Also, the raw data for the parent sample were not provided in the data package. No sample data were qualified as a result.
3. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: [signature]	DATE: 7/28/09
Form 5116-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, P9	J-, P9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, P9b	R, P9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, P7	J, P7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, P7a	J, P7a
☐	☒	☐	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, P7d	J, P7d
☐	☒	☐	8. The multicomponent standard was not analyzed within 72 hours of the initial analysis.	R, P7e	J, P7e
☐	☒	☐	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
☐	☐	☒	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	11. The breakdown criteria have been exceeded. This can cause high bias in the reported results and potential false positive results for the breakdown products Endrin ketone, Endrin aldehyde, DDD, and DDE.	UJ, P13a	J+, P13a
☐	☐	☒	12. The breakdown documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P13b	R, P13b
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, P4	N/A
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X.	N/A	J, P4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	UJ, P4b	N/A
☐	☐	☒	16. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, P4d	N/A
☐	☒	☐	17. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P4e	R, P4e
☐	☒	☐	18. The analyte RT shifted by more than 0.05 minutes from the mid-level standard of the initial calibration.	R, P0	J, P0
☐	☒	☐	19. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P0b	R, P0b
☐	☒	☐	20. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, P3	J-, P3

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, P3a	J-, P3a
☐	☒	☐	22. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P3b
☐	☒	☐	23. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, P3c	J, P3c
☐	☒	☐	24. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P3d	R, P3d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, P12	J-, P12
☐	☒	☐	26. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, P12a	J-, P12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P12c	R, P12c
☐	☒	☐	29. The analyte was not confirmed on a second dissimilar column.	N/A	R, P8
☐	☒	☐	30. The second dissimilar column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P8a	R, P8a
☐	☒	☐	31. Duplicate, Dilution, or reanalysis.	UJ, P88	J, P88

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, P15	R, P15
☒	☐	☐	33. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, P19	J, R, P19

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	7.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6603	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	5
Run Date:	07/14/2009 11:02	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	025f2501.d	**Column:**	1 CLP1	**Level:**	LOW
	025b2501.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	18.0	ug/kg	5.98	18.0	1
11104–28–2	Aroclor–1221	U	18.0	ug/kg	5.98	18.0	1
11141–16–5	Aroclor–1232	U	18.0	ug/kg	5.98	18.0	1
53469–21–9	Aroclor–1242	U	18.0	ug/kg	5.98	18.0	1
12672–29–6	Aroclor–1248	U	18.0	ug/kg	5.98	18.0	1
11097–69–1	Aroclor–1254	U	18.0	ug/kg	5.98	18.0	1
11096–82–5	Aroclor–1260	J	10.4	ug/kg	5.98	18.0	2

JEJ
7/28/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 11:12	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	026f2601.d	**Column:**	1 CLP1	**Level:**	LOW
	026b2601.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.71	ug/kg	1.24	3.71	1
11104-28-2	Aroclor-1221	U	3.71	ug/kg	1.24	3.71	1
11141-16-5	Aroclor-1232	U	3.71	ug/kg	1.24	3.71	1
53469-21-9	Aroclor-1242	U	3.71	ug/kg	1.24	3.71	1
12672-29-6	Aroclor-1248	U	3.71	ug/kg	1.24	3.71	1
11097-69-1	Aroclor-1254	U	3.71	ug/kg	1.24	3.71	1
11096-82-5	Aroclor-1260	U	3.71	ug/kg	1.24	3.71	1

JEJ
7/28/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 10:51	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	024f2401.d	**Column:**	1 CLP1	**Level:**	LOW
	024b2401.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.57	ug/kg	1.19	3.57	1
11104-28-2	Aroclor-1221	U	3.57	ug/kg	1.19	3.57	1
11141-16-5	Aroclor-1232	U	3.57	ug/kg	1.19	3.57	1
53469-21-9	Aroclor-1242	U	3.57	ug/kg	1.19	3.57	1
12672-29-6	Aroclor-1248	U	3.57	ug/kg	1.19	3.57	1
11097-69-1	Aroclor-1254	U	3.57	ug/kg	1.19	3.57	1
11096-82-5	Aroclor-1260	U	3.57	ug/kg	1.19	3.57	1

JEJ
7/28/09

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2506 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☒ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB, Tl and Mg were detected. The Tl results for samples CAMO-09-6603 and -6604 were detects ≤5X the MB concentration and, thus, were qualified U,I4. The Mg result for sample -6605 was a detect >5X but ≤50X the MB concentration and, thus, was qualified J,I4a. The Tl result for sample -6605 was an ND and, thus, was not qualified. The Mg results for samples -6603 and -6604 were detects >50X the MB concentration and, thus, were not qualified, based on professional judgment.
2. In one of the CCBs, Tl was detected. The Tl results for samples -6603 and -6604 were detects ≤5X the CCB concentration and, thus, were qualified U,I4b. The Tl result for sample -6605 was an ND and, thus, was not qualified.
3. The MS %R for Ba was < the LAL but ≥10%. The associated sample results were detects and, thus, were qualified J-,I6a. The MS %Rs for Mg and K were > the laboratory's UAL. The associated sample results were detects and,

DATA VALIDATION COVER SHEET

5118-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

thus, were qualified J+,I6b. It should be noted that the MS %R for Al was > the laboratory's UAL and the %Rs for Fe and Mn were <10%. However, the associated parent sample concentrations were >4X the spike concentrations. Thus, no sample data were qualified, based on professional judgment.

4. The duplicate RPD values for Ba, Co, Fe and Mn were >35%, and both the parent sample and duplicate results were ≥5X the PQLs. All associated sample results were detects and, thus, were qualified J,I10a.
5. All results that were > the MDLs but < the PQLs were "J" flagged by the laboratory and, thus, were not further qualified J,I1.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: [signature] DATE: 7/28/09

Form 5118-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☒	☐	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☐	☒	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☒	☐	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☒	☐	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2506 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232585001 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-6605 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 93.4

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	935000	ug/Kg		7250	21300	21300	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-36-0	Antimony	1070	ug/Kg	U	352	1070	1070	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-38-2	Arsenic	559	ug/kg	J	204	1020	1020	2	MS	RMJ	07/14/09 16:05	090713-2	881838
7440-39-3	Barium J-,I6a	15700	ug/Kg		107	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-41-7	Beryllium	610	ug/kg		20.4	102	102	2	MS	RMJ	07/14/09 16:05	090713-2	881838
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-70-2	Calcium	138000	ug/Kg		8530	26700	26700	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-47-3	Chromium	22000	ug/Kg		160	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-48-4	Cobalt J,I10a	533	ug/Kg		160	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-50-8	Copper	1500	ug/Kg		320	1070	1070	1	P	HSC	07/08/09 14:32	070809A-1	881859
7439-89-6	Iron J,I10a	7540000	ug/Kg		8530	26700	26700	1	P	HSC	07/08/09 14:32	070809A-1	881859
7439-92-1	Lead	3660	ug/Kg		267	1070	1070	1	P	HSC	07/08/09 14:32	070809A-1	881859
7439-95-4	Magnesium J,I4a	81300	ug/Kg		9070	32000	32000	1	P	HSC	07/08/09 14:32	070809A-1	881859
7439-96-5	Manganese J,I10a	345000	ug/Kg		213	1070	1070	1	P	HSC	07/08/09 14:32	070809A-1	881859
7439-97-6	Mercury	12.1	ug/kg	U	4.12	12.1	12.1	1	AV	JXL1	07/13/09 12:05	071309S2-4	881916
7440-02-0	Nickel	1230	ug/kg		102	409	409	2	MS	RMJ	07/14/09 16:05	090713-2	881838
7440-09-7	Potassium J+,I6b	165000	ug/Kg		6830	26700	26700	1	P	HSC	07/08/09 14:32	070809A-1	881859
7782-49-2	Selenium	1020	ug/kg	U	511	1020	1020	2	MS	RMJ	07/14/09 23:20	090714-3	881838
7440-22-4	Silver	345	ug/Kg	J	107	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-23-5	Sodium	126000	ug/Kg		7470	26700	26700	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-28-0	Thallium	204	ug/kg	U	61.3	204	204	2	MS	RMJ	07/14/09 16:05	090713-2	881838
7440-62-2	Vanadium	3010	ug/Kg		107	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-66-6	Zinc	36600	ug/Kg		352	1070	1070	1	P	HSC	07/08/09 14:32	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.524	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.502	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.53	g	30	mL	07/10/09	AXG2

JEJ
7/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2506 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232585002 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-6603 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 92.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3490000	ug/Kg		7250	21300	21300	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-36-0	Antimony	1070	ug/Kg	U	352	1070	1070	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-38-2	Arsenic	1790	ug/kg		209	1050	1050	2	MS	RMJ	07/14/09 16:11	090713-2	881838
7440-39-3	Barium J-,I6a	67700	ug/Kg		107	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-41-7	Beryllium	717	ug/kg		20.9	105	105	2	MS	RMJ	07/14/09 16:11	090713-2	881838
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-70-2	Calcium	1470000	ug/Kg		8530	26600	26600	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-47-3	Chromium	4030	ug/Kg		160	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-48-4	Cobalt J,I10a	2080	ug/Kg		160	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-50-8	Copper	4460	ug/Kg		320	1070	1070	1	P	HSC	07/08/09 14:39	070809A-1	881859
7439-89-6	Iron J,I10a	8130000	ug/Kg		8530	26600	26600	1	P	HSC	07/08/09 14:39	070809A-1	881859
7439-92-1	Lead	9290	ug/Kg		266	1070	1070	1	P	HSC	07/08/09 14:39	070809A-1	881859
7439-95-4	Magnesium J+,I6b	732000	ug/Kg		9060	32000	32000	1	P	HSC	07/08/09 14:39	070809A-1	881859
7439-96-5	Manganese J,I10a	288000	ug/Kg		213	1070	1070	1	P	HSC	07/08/09 14:39	070809A-1	881859
7439-97-6	Mercury	16.1	ug/kg		3.81	11.2	11.2	1	AV	JXL1	07/13/09 12:07	071309S2-4	881916
7440-02-0	Nickel	3590	ug/kg		105	418	418	2	MS	RMJ	07/14/09 16:11	090713-2	881838
7440-09-7	Potassium J+,I6b	730000	ug/Kg		6820	26600	26600	1	P	HSC	07/08/09 14:39	070809A-1	881859
7782-49-2	Selenium	530	ug/kg	J	523	1050	1050	2	MS	RMJ	07/14/09 23:24	090714-3	881838
7440-22-4	Silver	413	ug/Kg	J	107	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-23-5	Sodium	46800	ug/Kg		7460	26600	26600	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-28-0	Thallium U,I4	125	ug/kg	J	62.7	209	209	2	MS	RMJ	07/14/09 16:11	090713-2	881838
7440-62-2	Vanadium	10300	ug/Kg		107	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-66-6	Zinc	35800	ug/Kg		352	1070	1070	1	P	HSC	07/08/09 14:39	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.516	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.506	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.578	g	30	mL	07/10/09	AXG2

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7/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2506 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232585003 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-6604 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3570000	ug/Kg		7400	21800	21800	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-36-0	Antimony	1090	ug/Kg	U	359	1090	1090	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-38-2	Arsenic	1630	ug/kg		213	1060	1060	2	MS	RMJ	07/14/09 16:17	090713-2	881838
7440-39-3	Barium J-,I6a	42400	ug/Kg		109	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-41-7	Beryllium	819	ug/kg		21.3	106	106	2	MS	RMJ	07/14/09 16:17	090713-2	881838
7440-43-9	Cadmium	544	ug/Kg	U	109	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-70-2	Calcium	863000	ug/Kg		8700	27200	27200	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-47-3	Chromium	14000	ug/Kg		163	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-48-4	Cobalt J,I10a	1380	ug/Kg		163	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-50-8	Copper	3760	ug/Kg		326	1090	1090	1	P	HSC	07/08/09 15:00	070809A-1	881859
7439-89-6	Iron J,I10a	8980000	ug/Kg		8700	27200	27200	1	P	HSC	07/08/09 15:00	070809A-1	881859
7439-92-1	Lead	6530	ug/Kg		272	1090	1090	1	P	HSC	07/08/09 15:00	070809A-1	881859
7439-95-4	Magnesium J+,I6b	601000	ug/Kg		9250	32600	32600	1	P	HSC	07/08/09 15:00	070809A-1	881859
7439-96-5	Manganese J,I10a	314000	ug/Kg		218	1090	1090	1	P	HSC	07/08/09 15:00	070809A-1	881859
7439-97-6	Mercury	16.1	ug/kg		3.98	11.7	11.7	1	AV	JXL1	07/13/09 12:09	071309S2-4	881916
7440-02-0	Nickel	2880	ug/kg		106	425	425	2	MS	RMJ	07/14/09 16:17	090713-2	881838
7440-09-7	Potassium J+,I6b	467000	ug/Kg		6960	27200	27200	1	P	HSC	07/08/09 15:00	070809A-1	881859
7782-49-2	Selenium	1060	ug/kg	U	532	1060	1060	2	MS	RMJ	07/14/09 23:28	090714-3	881838
7440-22-4	Silver	404	ug/Kg	J	109	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-23-5	Sodium	123000	ug/Kg		7620	27200	27200	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-28-0	Thallium U,I4	95.5	ug/kg	J	63.8	213	213	2	MS	RMJ	07/14/09 16:17	090713-2	881838
7440-62-2	Vanadium	8560	ug/Kg		109	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-66-6	Zinc	36400	ug/Kg		359	1090	1090	1	P	HSC	07/08/09 15:00	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.525	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.513	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.572	g	30	mL	07/10/09	AXG2

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7/28/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2506 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☒ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB, total cyanide was detected. The associated result for sample CAMO-09-6603 was a detect ≤5X the MB concentration and, thus, was qualified U,I4. All other associated sample results were NDs and, thus, were not qualified.
2. It should be noted that the parent samples for the total cyanide and pH matrix QC were LANL samples from different RNs. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: [illegible]	DATE: 7/28/09
Form 5120-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 **General Chemistry Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☐	☒	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☐	☒	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2506

Client Sample ID:	CAMO-09-6605	Project:	LANL01004
Sample ID:	232585001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	6.61%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.2C	H	7.74	0.010	0.100	SU	1	TXT1 07/01/09	1247	881740	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	72.8	268	ug/kg	1	AXC2 07/02/09	1002	881270	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.321	1.07	mg/kg	1	MAR1 07/10/09	1906	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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7/28/09

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2506

Client Sample ID:	CAMO-09-6603	Project:	LANL01004
Sample ID:	232585002	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	7.28%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 22.3C	H	6.60		0.010	0.100	SU	1	TXT1 07/01/09	1251	881740	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	243	U,I4	73.3	270	ug/kg	1	AXC2 07/02/09	1003	881270	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	1.28		0.323	1.08	mg/kg	1	MAR1 07/10/09	2159	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

JEJ
7/28/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2506

Client Sample ID:	CAMO-09-6604	Project:	LANL01004
Sample ID:	232585003	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	10.4%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.4C	H	6.61	0.010	0.100	SU	1	TXT1 07/01/09	1257	881740	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.6	263	ug/kg	1	AXC2 07/02/09	1004	881270	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.335	1.12	mg/kg	1	MAR1 07/10/09	2228	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

JEJ
7/28/09

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2506 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Jessica Jorvig ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☒ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The gamma spec sample results that were rejected by the laboratory due to interference or low abundance were qualified R,R5a. In the QC samples, several results were also rejected by the laboratory. No sample data were qualified as a result.
2. It should be noted that an MS was not analyzed for tritium. However, an LCS was analyzed and passed acceptance criteria. Thus, no sample data were qualified.
3. The duplicate RER for gamma spec Pb-212 was >1.0. The associated sample results were detects and, thus, were qualified J,R10.
4. The reported results that were ≤ the MDCs were qualified U,R5.
5. The gamma spec Th-234 result for sample CAMO-09-6604 was > the MDC but ≤3X the 1-sigma TPU and, thus,

DATA VALIDATION COVER SHEET

5119-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

was qualified U,R11.

6. It should be noted that the parent samples for the matrix QC for all analyses were LANL samples from different RNs. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: _____ DATE: 7/28/09

Form 5119-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☒	☐	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☒	☐	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6605	Project:	LANL01004
Sample ID:	232585001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	6.61%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00111	U,R5	0.0197	+/-0.00111	0.050	pCi/g		KXM4	07/09/09	2051	882671	2
Plutonium-239/240	U	0.00999	U,R5	0.024	+/-0.00337	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.716		0.329	+/-0.0916	0.100	pCi/g		KXM4	07/09/09	2053	882673	3
Uranium-235/236	U	0.109	U,R5	0.151	+/-0.0346	0.100	pCi/g						
Uranium-238		0.753		0.128	+/-0.0952	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0977	U,R5	0.217	+/-0.070	0.200	pCi/g		MXR1	07/09/09	0816	881931	4
Bismuth-211	UI	4.04	R,R5a	0.290	+/-0.212		pCi/g						
Bismuth-214		1.23		0.0952	+/-0.0881	0.200	pCi/g						
Cadmium-109	UI	2.70	R,R5a	1.44	+/-0.452		pCi/g						
Cerium-139	U	0.0204	U,R5	0.0462	+/-0.0133	0.050	pCi/g						
Cesium-134	UI	0.0941	R,R5a	0.0755	+/-0.0347	0.100	pCi/g						
Cesium-137	U	0.0183	U,R5	0.0539	+/-0.0157	0.100	pCi/g						
Cobalt-60	U	0.0158		0.058	+/-0.0169	0.100	pCi/g						
Europium-152	U	-0.00139		0.138	+/-0.0541	0.200	pCi/g						
Lanthanum-140	U	-0.113		0.096	+/-0.0356		pCi/g						
Lead-212		1.73	J,R10	0.0816	+/-0.0783	0.100	pCi/g						
Lead-214		1.41		0.100	+/-0.0825	0.100	pCi/g						
Mercury-203	U	0.0553	U,R5	0.063	+/-0.0174	0.100	pCi/g						
Potassium-40		36.4		0.399	+/-1.48	1.00	pCi/g						
Radium-223	U	0.214	U,R5	0.930	+/-0.309		pCi/g						
Radium-224	UI	4.76	R,R5a	0.927	+/-0.585		pCi/g						
Radium-226		1.23		0.0952	+/-0.0881		pCi/g						
Radium-228		1.91		0.174	+/-0.168	0.500	pCi/g						
Ruthenium-106	U	-0.19	U,R5	0.407	+/-0.127	0.800	pCi/g						
Sodium-22	U	-9.61E-05	U,R5	0.0676	+/-0.0202	0.080	pCi/g						
Strontium-85	UI	0.154	R,R5a	0.066	+/-0.0187		pCi/g						
Thallium-208		0.534		0.0465	+/-0.040	0.080	pCi/g						
Thorium-227	U	0.349	U,R5	0.576	+/-0.162		pCi/g						
Thorium-231	U	0.214		0.930	+/-0.309		pCi/g						
Thorium-234	U	0.582		1.90	+/-0.667	2.00	pCi/g						

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Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6605
Sample ID: 232585001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Tin-113	U	0.0208	U,R5	0.0609	+/-0.0177	0.100	pCi/g						
Uranium-235	U	0.0706		0.336	+/-0.0982	0.500	pCi/g						
Yttrium-88	U	-0.0219		0.0399	+/-0.0143	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	100		219	+/-66.8	250	pCi/L		KXK2	07/15/09	0508	883020	5

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	87.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	50.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6603
Sample ID: 232585002
Matrix: R
Collect Date: 25-JUN-09
Receive Date: 30-JUN-09
Collector: Client
Moisture: 7.28%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		0.0525		0.0194	+/-0.00798	0.050	pCi/g		KXM4	07/09/09	2052	882671	2
Plutonium-239/240		1.25		0.0237	+/-0.0701	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.36		0.309	+/-0.140	0.100	pCi/g		KXM4	07/10/09	2123	882673	3
Uranium-235/236	U	0.0336	U,R5	0.142	+/-0.0239	0.100	pCi/g						
Uranium-238		1.44		0.120	+/-0.147	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.270	U,R5	0.362	+/-0.115	0.200	pCi/g		MXR1	07/09/09	0834	881931	4
Bismuth-211	UI	4.34	R,R5a	0.393	+/-0.297		pCi/g						
Bismuth-214		1.37		0.124	+/-0.116	0.200	pCi/g						
Cadmium-109	UI	2.98	R,R5a	1.52	+/-0.606		pCi/g						
Cerium-139	U	-0.0163	U,R5	0.0547	+/-0.0164	0.050	pCi/g						
Cesium-134	U	0.0824	U,R5	0.105	+/-0.0317	0.100	pCi/g						
Cesium-137	UI	0.196	R,R5a	0.112	+/-0.0297	0.100	pCi/g						
Cobalt-60	U	-0.0679	U,R5	0.0729	+/-0.0264	0.100	pCi/g						
Europium-152	U	0.0169		0.200	+/-0.0624	0.200	pCi/g						
Lanthanum-140	U	0.017		0.180	+/-0.0539		pCi/g						
Lead-212		1.57	J,R10	0.123	+/-0.0958	0.100	pCi/g						
Lead-214		1.51		0.137	+/-0.111	0.100	pCi/g						
Mercury-203	U	-0.0202	U,R5	0.081	+/-0.0249	0.100	pCi/g						
Potassium-40		29.3		0.577	+/-1.45	1.00	pCi/g						
Radium-223	U	-0.102	U,R5	1.37	+/-0.419		pCi/g						
Radium-224	UI	2.99	R,R5a	1.72	+/-0.556		pCi/g						
Radium-226		1.37		0.124	+/-0.116		pCi/g						
Radium-228		1.87		0.229	+/-0.214	0.500	pCi/g						
Ruthenium-106	U	0.026	U,R5	0.639	+/-0.190	0.800	pCi/g						
Sodium-22	U	-0.0104	U,R5	0.0774	+/-0.0239	0.080	pCi/g						
Strontium-85	UI	0.113	R,R5a	0.0935	+/-0.0284		pCi/g						
Thallium-208		0.464		0.0698	+/-0.0566	0.080	pCi/g						
Thorium-227	U	0.136	U,R5	0.759	+/-0.224		pCi/g						
Thorium-231	U	-0.102		1.37	+/-0.419		pCi/g						
Thorium-234	U	2.34		2.64	+/-1.12	2.00	pCi/g						
Tin-113	U	0.0653		0.0865	+/-0.0567	0.100	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6603
Sample ID: 232585002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Uranium-235	U	0.114	UR5	0.417	+/-0.124	0.500	pCi/g						
Yttrium-88	U	-0.00369		0.0574	+/-0.0183	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	-59.9		244	+/-70.3	250	pCi/L		KXK2	07/15/09	0741	883020	5

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	90.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	51.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6604	Project:	LANL01004
Sample ID:	232585003	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	10.4%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00367	U,R5	0.0217	+/-0.00213	0.050	pCi/g		KXM4	07/09/09	2052	882671	2
Plutonium-239/240		0.211		0.0265	+/-0.019	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.04		0.298	+/-0.114	0.100	pCi/g		KXM4	07/09/09	2053	882673	3
Uranium-235/236	U	0.0654	U,R5	0.137	+/-0.0236	0.100	pCi/g						
Uranium-238		0.965		0.116	+/-0.108	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.0211	U,R5	0.105	+/-0.034	0.200	pCi/g		MXR1	07/09/09	0834	881931	4
Bismuth-211	UI	3.55	R,R5a	0.367	+/-0.280		pCi/g						
Bismuth-214		0.920		0.123	+/-0.0976	0.200	pCi/g						
Cadmium-109	UI	3.57	R,R5a	1.01	+/-0.435		pCi/g						
Cerium-139	U	-0.0163	U,R5	0.0508	+/-0.0154	0.050	pCi/g						
Cesium-134	UI	0.113	R,R5a	0.105	+/-0.0425	0.100	pCi/g						
Cesium-137	U	-0.00722	U,R5	0.073	+/-0.0227	0.100	pCi/g						
Cobalt-60	U	0.00361		0.0824	+/-0.0253	0.100	pCi/g						
Europium-152	U	-0.10		0.157	+/-0.0611	0.200	pCi/g						
Lanthanum-140	U	-0.0864		0.137	+/-0.0482		pCi/g						
Lead-212		1.43	J,R10	0.0882	+/-0.0945	0.100	pCi/g						
Lead-214		1.24		0.124	+/-0.103	0.100	pCi/g						
Mercury-203	U	-0.0108	U,R5	0.0724	+/-0.0212	0.100	pCi/g						
Potassium-40		29.1		0.633	+/-1.36	1.00	pCi/g						
Radium-223	U	0.131	U,R5	1.25	+/-0.415		pCi/g						
Radium-224	UI	4.22	R,R5a	1.00	+/-0.732		pCi/g						
Radium-226		0.920		0.123	+/-0.0976		pCi/g						
Radium-228		1.40		0.268	+/-0.173	0.500	pCi/g						
Ruthenium-106	U	0.250	U,R5	0.612	+/-0.176	0.800	pCi/g						
Sodium-22	U	0.0106	U,R5	0.092	+/-0.0279	0.080	pCi/g						
Strontium-85	UI	0.118	R,R5a	0.0806	+/-0.023		pCi/g						
Thallium-208		0.528		0.0641	+/-0.0476	0.080	pCi/g						
Thorium-227	U	-0.123	U,R5	0.678	+/-0.210		pCi/g						
Thorium-231	U	0.131	U,R5	1.25	+/-0.415		pCi/g						
Thorium-234		1.35	U,R11	1.02	+/-0.501	2.00	pCi/g						
Tin-113	U	0.0041	U,R5	0.0821	+/-0.0241	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6604
Sample ID: 232585003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Uranium-235	U	0.0777	U.R5	0.373	+/-0.111	0.500	pCi/g						
Yttrium-88	U	-0.0504		0.045	+/-0.0198	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	191		236	+/-74.3	250	pCi/L		KXK2	07/15/09	0843	883020	5

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	79.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	57.6	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD

JEJ
7/28/09

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2506

REQUEST NUMBER: 09-2506

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232585%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6605	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6605	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6605	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6605	1	POLY	H3	Ice	R
CAMO-09-6605	1	POLY	METALS-GEL	Ice	R
CAMO-09-6605	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6603	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6603	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6603	1	POLY	H3	Ice	R
CAMO-09-6603	1	POLY	METALS-GEL	Ice	R
CAMO-09-6603	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6604	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6604	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6604	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6604	1	POLY	H3	Ice	R
CAMO-09-6604	1	POLY	METALS-GEL	Ice	R
CAMO-09-6604	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6641	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/29/09	1400	Patricia Dent	[illegible]	6/30/09	09:15
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: Date Time

Remarks:

Printed Name Signature

Monday, June 29, 2009

REQUEST NUMBER: 09-2506

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2506
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	EPA:901.1	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	EPA:906.0	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	

Monday, June 29, 2009

REQUEST NUMBER: 09-2506

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	HASL-300:ISOU	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:6010B	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:6850	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:8082	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:8260B	1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
		1	CAMO-09-6641	S	6/25/2009	
	SW-846:8270C	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:9012A	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:9045C	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 01, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232585
SDG: 09-2506

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 30, 2009, and analyzed for GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2506
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232585
SDG: 09-2506

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 01, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232585
SDG: 09-2506

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 30, 2009, and analyzed for GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2506
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232585
SDG: 09-2506

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Quality Control Data 1161
Raw Data..... 1168
Background and Efficiency Data 1537
Standards Data 1595
Runlogs 1623

Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232585
SDG # : 09-2506

July 01, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 30, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
232585004	CAMO-09-6641

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC Semivolatile PCB, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

Valerie Davis

Project Manager

List of current GEL Certifications as of 01 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2506

REQUEST NUMBER: 09-2506

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232585%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6605	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6605	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6605	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6605	1	POLY	H3	Ice	R
CAMO-09-6605	1	POLY	METALS-GEL	Ice	R
CAMO-09-6605	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6603	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6603	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6603	1	POLY	H3	Ice	R
CAMO-09-6603	1	POLY	METALS-GEL	Ice	R
CAMO-09-6603	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6604	1	SEPTUM AMBER GLASS	8260B	Ice	R
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CAMO-09-6604	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6604	1	POLY	H3	Ice	R
CAMO-09-6604	1	POLY	METALS-GEL	Ice	R
CAMO-09-6604	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6641	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/29/09	1400	Patricia Dent	Patricia Dent	6/30/09	09:15
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Monday, June 29, 2009

REQUEST NUMBER: 09-2506

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2506

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	EPA:901.1	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	EPA:906.0	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	

Monday, June 29, 2009

REQUEST NUMBER: 09-2506

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	HASL-300:ISOU	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:6010B	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:6850	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:8082	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:8260B	1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
		1	CAMO-09-6641	S	6/25/2009	
	SW-846:8270C	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:9012A	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
	SW-846:9045C	1	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2506**
Received By: Patricia Dent	**Date Received: JUNE 30, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) 2,23C
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5789 3C
7209 7847 5778 23C

PM (or PMA) review: Initials PCL Date 1 Jul 09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 29JUN09
ActWgt: 52.0 LB MAN
System#: 0014170/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B010AMR2A0512BGD0

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5789 Form 0201

TUE
Deliver By:
30JUN09

CHS A1

29407 -SC-US XX CHSA

Part # 156149-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 29JUN09
ActWgt: 27.0 LB MAN
System#: 0014170/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B010AMR2A0512BGD0

Delivery Address Barcode

23°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5789 Form 0201

TUE
Deliver By:
30JUN09

CHS A1

29407 -SC-US XX CHSA

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

Case Narrative

ChemStation Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2506

Method/Analysis Information

Procedure:	**Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method:	SW846 8260B
Prep Method:	SW846 5030
Analytical Batch Number:	882632
Prep Batch Number:	882630

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232585001	CAMO-09-6605
232585003	CAMO-09-6604
232585004	CAMO-09-6641
1201874617	Method Blank (MB)
1201874620	Laboratory Control Sample (LCS)
1201874621	Laboratory Control Sample (LCS)
1201876171	Method Blank (MB)
1201876172	Laboratory Control Sample (LCS)
1201876173	Laboratory Control Sample (LCS)
1201874618	232582001(CAMO-09-10464) Post Spike (PS)
1201874619	232582001(CAMO-09-10464) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

Samples 232585 001 and 003 in this SDG were analyzed on an "dry weight" basis. Sample 232585004 in this SDG was analyzed on a "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Chemstation software package. False positives have been removed from the quantitation reports per standard operating procedures (SOP) section 19.1.2. False positive analytes are designated on the quantitation report with a 'd' qualifier.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232582001 (CAMO-09-10464) was designated for spike analysis.

Matrix Spike (PS) Recovery Statement
The spike recoveries were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate recoveries were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
Sample 232585003 (CAMO-09-6604RE) was analyzed at a dilution because target analyte concentrations exceeded the calibration range.

Sample Re-extraction/Re-analysis
Re-analyses were required for samples in this SDG due to unacceptable surrogate recoveries and/or due to possible carry-over.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
NCR # 709074 was generated for samples in this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may have required manual integrations due to software limitations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG. Please note that non-requested target analytes that are reported on the quantitation reports will not be present as TICS on the Form I. These detected analytes are included in the calibrated method and as a result cannot be reported on the TIC quantitation report.

Additional Comments
Additional comments were not required for this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA2.1	Gas Chromatograph/Mass Spectrometer	HP7890N/HP5975C	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2506 GEL Work Order: 232585

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

E Organics--Concentration of the target analyte exceeds the instrument calibration range

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this case narrative:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 21 JUL 2009 **Title: Data Validator**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585001	Date Received:	06/30/2009 09:15	%Moisture:	6.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6605	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882632	Inst:	VOA2.I	Dilution:	1
Run Date:	07/06/2009 13:45	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/06/2009 11:02	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070609V2.b\2T116.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.07	ug/kg	0.364	1.07
74-87-3	Chloromethane	U	1.07	ug/kg	0.321	1.07
75-01-4	Vinyl chloride	U	1.07	ug/kg	0.321	1.07
74-83-9	Bromomethane	U	1.07	ug/kg	0.321	1.07
75-00-3	Chloroethane	U	1.07	ug/kg	0.321	1.07
75-69-4	Trichlorofluoromethane	U	1.07	ug/kg	0.321	1.07
67-64-1	Acetone	J	4.38	ug/kg	1.78	5.35
75-35-4	1,1-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
74-88-4	Iodomethane	U	5.35	ug/kg	1.71	5.35
75-09-2	Methylene chloride	U	5.35	ug/kg	2.14	5.35
75-15-0	Carbon disulfide	U	5.35	ug/kg	1.34	5.35
156-60-5	trans-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
75-34-3	1,1-Dichloroethane	U	1.07	ug/kg	0.321	1.07
78-93-3	2-Butanone	U	5.35	ug/kg	1.61	5.35
156-59-2	cis-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
594-20-7	2,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07
67-66-3	Chloroform	U	1.07	ug/kg	0.321	1.07
74-97-5	Bromochloromethane	U	1.07	ug/kg	0.353	1.07
71-55-6	1,1,1-Trichloroethane	U	1.07	ug/kg	0.321	1.07
563-58-6	1,1-Dichloropropene	U	1.07	ug/kg	0.321	1.07
56-23-5	Carbon tetrachloride	U	1.07	ug/kg	0.321	1.07
107-06-2	1,2-Dichloroethane	U	1.07	ug/kg	0.321	1.07
71-43-2	Benzene	U	1.07	ug/kg	0.321	1.07
79-01-6	Trichloroethylene	U	1.07	ug/kg	0.353	1.07
78-87-5	1,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07
75-27-4	Bromodichloromethane	U	1.07	ug/kg	0.321	1.07
74-95-3	Dibromomethane	U	1.07	ug/kg	0.321	1.07
108-10-1	4-Methyl-2-pentanone	U	5.35	ug/kg	1.34	5.35
10061-01-5	cis-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07
108-88-3	Toluene	U	1.07	ug/kg	0.321	1.07
10061-02-6	trans-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07
79-00-5	1,1,2-Trichloroethane	U	1.07	ug/kg	0.321	1.07
591-78-6	2-Hexanone	U	5.35	ug/kg	1.61	5.35
142-28-9	1,3-Dichloropropane	U	1.07	ug/kg	0.321	1.07
127-18-4	Tetrachloroethylene	U	1.07	ug/kg	0.321	1.07
124-48-1	Dibromochloromethane	U	1.07	ug/kg	0.321	1.07
106-93-4	1,2-Dibromoethane	U	1.07	ug/kg	0.321	1.07
108-90-7	Chlorobenzene	U	1.07	ug/kg	0.321	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 13:45	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T116.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.07	ug/kg	0.321	1.07
179601-23-1	m,p-Xylenes	U	2.14	ug/kg	0.321	2.14
95-47-6	o-Xylene	U	1.07	ug/kg	0.321	1.07
100-42-5	Styrene	U	1.07	ug/kg	0.321	1.07
75-25-2	Bromoform	U	1.07	ug/kg	0.321	1.07
79-34-5	1,1,2,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07
96-18-4	1,2,3-Trichloropropane	U	1.07	ug/kg	0.321	1.07
108-86-1	Bromobenzene	U	1.07	ug/kg	0.321	1.07
103-65-1	n-Propylbenzene	U	1.07	ug/kg	0.321	1.07
95-49-8	2-Chlorotoluene	U	1.07	ug/kg	0.321	1.07
98-82-8	Isopropylbenzene	U	1.07	ug/kg	0.321	1.07
108-67-8	1,3,5-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07
106-43-4	4-Chlorotoluene	U	1.07	ug/kg	0.321	1.07
98-06-6	tert-Butylbenzene	U	1.07	ug/kg	0.321	1.07
95-63-6	1,2,4-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07
135-98-8	sec-Butylbenzene	U	1.07	ug/kg	0.321	1.07
99-87-6	4-Isopropyltoluene	U	1.07	ug/kg	0.321	1.07
541-73-1	1,3-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07
106-46-7	1,4-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07
104-51-8	n-Butylbenzene	U	1.07	ug/kg	0.321	1.07
96-12-8	1,2-Dibromo-3-chloropropane	U	1.07	ug/kg	0.321	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.35	ug/kg	1.71	5.35
630-20-6	1,1,1,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07
95-50-1	1,2-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.35	16.7	ug/kg	0	J
	unknown siloxane	17.2	412	ug/kg	0	J
	unknown siloxane	19.15	49.1	ug/kg	0	J
	unknown siloxane	21.25	5.56	ug/kg	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 14:14	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 14:03	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T117.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.380	1.12
74-87-3	Chloromethane	U	1.12	ug/kg	0.335	1.12
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.335	1.12
74-83-9	Bromomethane	U	1.12	ug/kg	0.335	1.12
75-00-3	Chloroethane	U	1.12	ug/kg	0.335	1.12
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.335	1.12
67-64-1	Acetone		205	ug/kg	1.85	5.58
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
74-88-4	Iodomethane	U	5.58	ug/kg	1.79	5.58
75-09-2	Methylene chloride	U	5.58	ug/kg	2.23	5.58
75-15-0	Carbon disulfide	U	5.58	ug/kg	1.40	5.58
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.335	1.12
78-93-3	2-Butanone	U	5.58	ug/kg	1.67	5.58
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
67-66-3	Chloroform	U	1.12	ug/kg	0.335	1.12
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.368	1.12
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.335	1.12
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.335	1.12
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.335	1.12
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.335	1.12
71-43-2	Benzene	U	1.12	ug/kg	0.335	1.12
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.368	1.12
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.335	1.12
74-95-3	Dibromomethane	U	1.12	ug/kg	0.335	1.12
108-10-1	4-Methyl-2-pentanone	U	5.58	ug/kg	1.40	5.58
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
108-88-3	Toluene		2.47	ug/kg	0.335	1.12
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.335	1.12
591-78-6	2-Hexanone	U	5.58	ug/kg	1.67	5.58
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.335	1.12
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.335	1.12
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.335	1.12
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.335	1.12
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.335	1.12

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585003	Date Received:	06/30/2009 09:15	%Moisture:	10.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6604	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882632	Inst:	VOA2.I	Dilution:	1
Run Date:	07/06/2009 14:14	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/06/2009 14:03	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070609V2.b\2T117.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.335	1.12
179601-23-1	m,p-Xylenes	J	0.547	ug/kg	0.335	2.23
95-47-6	o-Xylene	U	1.12	ug/kg	0.335	1.12
100-42-5	Styrene	U	1.12	ug/kg	0.335	1.12
75-25-2	Bromoform	U	1.12	ug/kg	0.335	1.12
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.335	1.12
108-86-1	Bromobenzene	U	1.12	ug/kg	0.335	1.12
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.335	1.12
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.335	1.12
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.335	1.12
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.335	1.12
99-87-6	4-Isopropyltoluene	E	151	ug/kg	0.335	1.12
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.335	1.12
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.335	1.12
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.58	ug/kg	1.79	5.58
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.36	27.4	ug/kg	0	J
	unknown hydrocarbon	17.04	330	ug/kg	0	J
	unknown siloxane	17.2	140	ug/kg	0	J
	unknown hydrocarbon	18.09	172	ug/kg	0	J
	unknown hydrocarbon	18.19	6.71	ug/kg	0	J
	unknown hydrocarbon	18.33	275	ug/kg	0	J
	unknown hydrocarbon	18.46	55.8	ug/kg	0	J
	unknown hydrocarbon	19.05	33.9	ug/kg	0	J
	unknown siloxane	19.15	16.6	ug/kg	0	J
	unknown aromatic	19.23	13.5	ug/kg	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585003	Date Received:	06/30/2009 09:15	%Moisture:	10.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6604RE	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882632	Inst:	VOA2.I	Dilution:	1
Run Date:	07/07/2009 11:29	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/07/2009 08:31	Aliquot:	2 g	Final Volume:	5 mL
Data File:	070709V2.b\2T211.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	2.79	ug/kg	0.949	2.79
74-87-3	Chloromethane	U	2.79	ug/kg	0.837	2.79
75-01-4	Vinyl chloride	U	2.79	ug/kg	0.837	2.79
74-83-9	Bromomethane	U	2.79	ug/kg	0.837	2.79
75-00-3	Chloroethane	U	2.79	ug/kg	0.837	2.79
75-69-4	Trichlorofluoromethane	U	2.79	ug/kg	0.837	2.79
67-64-1	Acetone		117	ug/kg	4.63	14.0
75-35-4	1,1-Dichloroethylene	U	2.79	ug/kg	0.837	2.79
74-88-4	Iodomethane	U	14.0	ug/kg	4.46	14.0
75-09-2	Methylene chloride	U	14.0	ug/kg	5.58	14.0
75-15-0	Carbon disulfide	U	14.0	ug/kg	3.49	14.0
156-60-5	trans-1,2-Dichloroethylene	U	2.79	ug/kg	0.837	2.79
75-34-3	1,1-Dichloroethane	U	2.79	ug/kg	0.837	2.79
78-93-3	2-Butanone	U	14.0	ug/kg	4.19	14.0
156-59-2	cis-1,2-Dichloroethylene	U	2.79	ug/kg	0.837	2.79
594-20-7	2,2-Dichloropropane	U	2.79	ug/kg	0.837	2.79
67-66-3	Chloroform	U	2.79	ug/kg	0.837	2.79
74-97-5	Bromochloromethane	U	2.79	ug/kg	0.921	2.79
71-55-6	1,1,1-Trichloroethane	U	2.79	ug/kg	0.837	2.79
563-58-6	1,1-Dichloropropene	U	2.79	ug/kg	0.837	2.79
56-23-5	Carbon tetrachloride	U	2.79	ug/kg	0.837	2.79
107-06-2	1,2-Dichloroethane	U	2.79	ug/kg	0.837	2.79
71-43-2	Benzene	U	2.79	ug/kg	0.837	2.79
79-01-6	Trichloroethylene	U	2.79	ug/kg	0.921	2.79
78-87-5	1,2-Dichloropropane	U	2.79	ug/kg	0.837	2.79
75-27-4	Bromodichloromethane	U	2.79	ug/kg	0.837	2.79
74-95-3	Dibromomethane	U	2.79	ug/kg	0.837	2.79
108-10-1	4-Methyl-2-pentanone	U	14.0	ug/kg	3.49	14.0
10061-01-5	cis-1,3-Dichloropropylene	U	2.79	ug/kg	0.837	2.79
108-88-3	Toluene	J	1.06	ug/kg	0.837	2.79
10061-02-6	trans-1,3-Dichloropropylene	U	2.79	ug/kg	0.837	2.79
79-00-5	1,1,2-Trichloroethane	U	2.79	ug/kg	0.837	2.79
591-78-6	2-Hexanone	U	14.0	ug/kg	4.19	14.0
142-28-9	1,3-Dichloropropane	U	2.79	ug/kg	0.837	2.79
127-18-4	Tetrachloroethylene	U	2.79	ug/kg	0.837	2.79
124-48-1	Dibromochloromethane	U	2.79	ug/kg	0.837	2.79
106-93-4	1,2-Dibromoethane	U	2.79	ug/kg	0.837	2.79
108-90-7	Chlorobenzene	U	2.79	ug/kg	0.837	2.79

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585003	Date Received:	06/30/2009 09:15	%Moisture:	10.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6604RE	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882632	Inst:	VOA2.I	Dilution:	1
Run Date:	07/07/2009 11:29	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/07/2009 08:31	Aliquot:	2 g	Final Volume:	5 mL
Data File:	070709V2.b\2T211.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	2.79	ug/kg	0.837	2.79
179601-23-1	m,p-Xylenes	U	5.58	ug/kg	0.837	5.58
95-47-6	o-Xylene	U	2.79	ug/kg	0.837	2.79
100-42-5	Styrene	U	2.79	ug/kg	0.837	2.79
75-25-2	Bromoform	U	2.79	ug/kg	0.837	2.79
79-34-5	1,1,2,2-Tetrachloroethane	U	2.79	ug/kg	0.837	2.79
96-18-4	1,2,3-Trichloropropane	U	2.79	ug/kg	0.837	2.79
108-86-1	Bromobenzene	U	2.79	ug/kg	0.837	2.79
103-65-1	n-Propylbenzene	U	2.79	ug/kg	0.837	2.79
95-49-8	2-Chlorotoluene	U	2.79	ug/kg	0.837	2.79
98-82-8	Isopropylbenzene	U	2.79	ug/kg	0.837	2.79
108-67-8	1,3,5-Trimethylbenzene	U	2.79	ug/kg	0.837	2.79
106-43-4	4-Chlorotoluene	U	2.79	ug/kg	0.837	2.79
98-06-6	tert-Butylbenzene	U	2.79	ug/kg	0.837	2.79
95-63-6	1,2,4-Trimethylbenzene	U	2.79	ug/kg	0.837	2.79
135-98-8	sec-Butylbenzene	U	2.79	ug/kg	0.837	2.79
99-87-6	4-Isopropyltoluene		75.2	ug/kg	0.837	2.79
541-73-1	1,3-Dichlorobenzene	U	2.79	ug/kg	0.837	2.79
106-46-7	1,4-Dichlorobenzene	U	2.79	ug/kg	0.837	2.79
104-51-8	n-Butylbenzene	U	2.79	ug/kg	0.837	2.79
96-12-8	1,2-Dibromo-3-chloropropane	U	2.79	ug/kg	0.837	2.79
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	14.0	ug/kg	4.46	14.0
630-20-6	1,1,1,2-Tetrachloroethane	U	2.79	ug/kg	0.837	2.79
95-50-1	1,2-Dichlorobenzene	U	2.79	ug/kg	0.837	2.79

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.35	57.8	ug/kg	0	J
	unknown hydrocarbon	17.04	154	ug/kg	0	J
	unknown siloxane	17.2	438	ug/kg	0	J
	unknown hydrocarbon	18.09	174	ug/kg	0	J
	unknown hydrocarbon	18.33	359	ug/kg	0	J
	unknown hydrocarbon	19.05	30.9	ug/kg	0	J
	unknown siloxane	19.15	72.7	ug/kg	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	S
Lab Sample ID:	232585004	**Date Received:**	06/30/2009 09:15		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6641	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 11:00	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T210.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone		6.03	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	S
Lab Sample ID:	232585004	**Date Received:**	06/30/2009 09:15		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6641	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 11:00	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T210.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	17.5	ug/kg	0	J

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2506

Matrix Type: SOLID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201874620	LCS for batch 882630	99	99	98
1201874621	LCS for batch 882630	98	97	97
1201874617	MB for batch 882630	102	102	102
232585001	CAMO-09-6605	102	99	69
232585003	CAMO-09-6604	102	101	82
1201876172	LCS for batch 882630	99	96	98
1201876173	LCS for batch 882630	99	96	99
1201876171	MB for batch 882630	102	99	100
232585004	CAMO-09-6641	103	100	103
232585003	CAMO-09-6604RE	106	101	93

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-10464PS
Lab Sample ID: 1201874618
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:09
Prep Batch ID: 882630
Batch ID: 882632
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	38.7	77	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	42.3	85	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	43.1	86	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	40.3	81	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	44.2	88	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	44.1	88	51-151
67-64-1	PS	Acetone	250	1.96	J	186	74	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	45.1	90	61-125
74-88-4	PS	Iodomethane	250	0.00	U	234	93	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	43.2	86	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	230	92	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	43.2	86	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	44.7	89	62-125
78-93-3	PS	2-Butanone	250	0.00	U	183	73	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	44.3	89	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	46.9	94	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	44.3	89	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	43.2	86	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	46.3	93	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	44.1	88	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	46.7	93	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	44.0	88	58-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-10464PS
Lab Sample ID: 1201874618
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:09
Prep Batch ID: 882630
Batch ID: 882632
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	42.2	84	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	43.0	86	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	43.7	87	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	46.1	92	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	44.4	89	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	219	88	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	45.9	92	54-133
108-88-3	PS	Toluene	50.0	0.00	U	41.5	83	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	46.0	92	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	43.7	87	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	220	88	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	43.4	87	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	41.6	83	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	48.1	96	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	45.6	91	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	42.5	85	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	42.6	85	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	83.3	83	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	42.4	85	52-127
100-42-5	PS	Styrene	50.0	0.00	U	46.7	93	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	40.3	81	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	47.1	94	63-127

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-10464PS
Lab Sample ID: 1201874618
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:09
Prep Batch ID: 882630
Batch ID: 882632
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	45.3	91	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	43.5	87	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	42.9	86	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	43.3	87	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	42.8	86	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	42.8	86	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	42.5	85	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	43.2	86	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	42.8	86	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	42.6	85	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	41.4	83	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	41.5	83	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	40.7	81	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	41.1	82	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	54.9	110	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	45.2	90	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	41.6	83	43-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-10464PSD
Lab Sample ID: 1201874619
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:37
Prep Batch ID: 882630
Batch ID: 882632

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	41.0	82	25-149	6	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	42.6	85	39-140	1	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	43.9	88	47-129	2	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	37.3	75	31-135	8	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	44.4	89	53-128	0	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	46.3	93	51-151	5	0-25
67-64-1	PSD	Acetone	250	1.96	J	190	75	21-153	2	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	45.9	92	61-125	2	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	235	94	53-142	0	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	42.0	84	59-136	3	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	237	95	46-129	3	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	43.3	87	56-126	0	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	44.1	88	62-125	2	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	188	75	26-152	2	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	43.2	86	60-130	3	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	44.2	88	55-135	6	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	43.3	87	60-127	2	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	42.9	86	61-131	1	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	45.8	92	59-131	1	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	45.5	91	57-128	3	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	47.1	94	58-136	1	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	42.9	86	58-126	2	0-25

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-10464PSD
Lab Sample ID: 1201874619
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:37
Prep Batch ID: 882630
Batch ID: 882632
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	41.7	83	56-123	1	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	42.9	86	51-137	0	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	42.7	85	60-126	2	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	45.1	90	55-138	2	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	44.2	88	60-132	0	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	221	88	58-136	1	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	45.2	90	54-133	1	0-25
108-88-3	PSD	Toluene	50.0	0.00	U	41.1	82	52-128	1	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	44.6	89	53-137	3	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	42.9	86	59-130	2	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	222	89	31-148	1	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	42.4	85	57-127	3	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	42.2	84	51-128	1	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	47.1	94	59-139	2	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	45.0	90	57-133	1	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	41.5	83	53-122	2	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	41.7	83	51-125	2	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	81.8	82	50-126	2	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	41.2	82	52-127	3	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	45.4	91	49-135	3	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	40.2	80	57-149	0	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	47.1	94	63-127	0	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-10464PSD
Lab Sample ID: 1201874619
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 6.7
Analysis Date: 07/06/2009 17:37
Prep Batch ID: 882630
Batch ID: 882632
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	45.8	92	57-149	1	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	42.1	84	49-131	3	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	41.8	84	40-136	3	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	41.7	83	44-135	4	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	41.8	84	44-140	2	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	41.8	84	42-140	2	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	40.8	82	44-132	4	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	42.0	84	42-142	3	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	40.6	81	43-137	5	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	41.7	83	39-139	2	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	40.4	81	38-145	2	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	39.7	79	43-129	5	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	38.7	77	44-125	5	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	39.2	78	36-141	5	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	55.7	111	47-151	1	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	44.0	88	59-131	3	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	40.2	80	43-129	3	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882630 **Matrix:** SOIL

Lab Sample ID: 1201874620

Instrument: VOA2.I **Analysis Date:** 07/06/2009 07:55 **Dilution:** 1

Analyst: CDS1 **Prep Batch ID:** 882630

Purge Vol: 5 mL **Batch ID:** 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	46.3	93	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	44.5	89	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	47.7	95	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	41.9	84	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	48.4	97	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	50.1	100	67-151
67-64-1	LCS	Acetone	250	0.0	235	94	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	48.9	98	70-125
74-88-4	LCS	Iodomethane	250	0.0	271	108	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	53.1	106	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	261	104	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	46.7	93	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	47.9	96	75-120
78-93-3	LCS	2-Butanone	250	0.0	226	90	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	47.2	94	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	51.0	102	74-135
67-66-3	LCS	Chloroform	50.0	0.0	47.9	96	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	49.5	99	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	51.1	102	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	49.7	99	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	53.0	106	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	45.9	92	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: LCS for batch 882630
Lab Sample ID: 1201874620
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/06/2009 07:55
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	46.7	93	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	49.0	98	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	47.1	94	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	50.6	101	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	49.2	98	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	239	96	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	51.9	104	80-125
108-88-3	LCS	Toluene	50.0	0.0	46.3	93	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	50.1	100	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	47.2	94	76-120
591-78-6	LCS	2-Hexanone	250	0.0	237	95	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	45.9	92	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	50.5	101	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	54.1	108	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	50.8	102	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	48.9	98	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	47.8	96	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	95.7	96	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	48.2	96	74-120
100-42-5	LCS	Styrene	50.0	0.0	53.5	107	76-125
75-25-2	LCS	Bromoform	50.0	0.0	46.6	93	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	49.0	98	72-122

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: LCS for batch 882630
Lab Sample ID: 1201874620
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/06/2009 07:55
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	48.7	97	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	49.4	99	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	47.6	95	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	47.3	95	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	48.7	97	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	48.7	97	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	47.1	94	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	49.3	99	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	48.5	97	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	49.2	98	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	50.6	101	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	49.5	99	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	48.2	96	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	49.2	98	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	64.8	130	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	51.6	103	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	49.1	98	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 882630
Matrix: SOIL
Lab Sample ID: 1201874621
Instrument: VOA2.I
Analysis Date: 07/06/2009 08:53
Dilution: 1
Analyst: CDS1
Prep Batch ID: 882630
Purge Vol: 5 mL
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	237	95	52-139

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 882630
Matrix: SOIL
Lab Sample ID: 1201876172
Instrument: VOA2.I
Analysis Date: 07/07/2009 08:06
Dilution: 1
Analyst: CDS1
Prep Batch ID: 882630
Purge Vol: 5 mL
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	63.8	128	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	56.2	112	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	55.7	111	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	46.7	93	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	52.7	105	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	56.7	113	67-151
67-64-1	LCS	Acetone	250	0.0	129	51	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	52.1	104	70-125
74-88-4	LCS	Iodomethane	250	0.0	261	105	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	51.4	103	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	263	105	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	48.0	96	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	51.0	102	75-120
78-93-3	LCS	2-Butanone	250	0.0	150	60	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	51.8	104	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	52.9	106	74-135
67-66-3	LCS	Chloroform	50.0	0.0	51.1	102	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	52.2	104	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	53.5	107	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	53.0	106	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	54.7	109	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	49.6	99	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: LCS for batch 882630
Lab Sample ID: 1201876172
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/07/2009 08:06
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	48.9	98	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	52.2	104	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	50.5	101	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	56.7	113	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	52.6	105	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	237	95	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	55.0	110	80-125
108-88-3	LCS	Toluene	50.0	0.0	48.6	97	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	54.6	109	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	51.4	103	76-120
591-78-6	LCS	2-Hexanone	250	0.0	237	95	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	49.6	99	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	51.4	103	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	56.4	113	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	54.1	108	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	50.5	101	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	49.2	98	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	99.3	99	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	50.7	101	74-120
100-42-5	LCS	Styrene	50.0	0.0	56.0	112	76-125
75-25-2	LCS	Bromoform	50.0	0.0	49.8	100	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	52.3	105	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882630 **Matrix:** SOIL

Lab Sample ID: 1201876172

Instrument: VOA2.I **Analysis Date:** 07/07/2009 08:06 **Dilution:** 1

Analyst: CDS1 **Prep Batch ID:** 882630

Purge Vol: 5 mL **Batch ID:** 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	57.3	115	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	50.7	101	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	48.9	98	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	50.0	100	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	43.9	88	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	43.9	88	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	49.8	100	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	51.5	103	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	50.2	100	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	51.4	103	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	53.7	107	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	52.1	104	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	50.0	100	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	51.3	103	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	68.3	137	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	54.2	108	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	51.1	102	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: LCS for batch 882630
Lab Sample ID: 1201876173
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/07/2009 09:05
Dilution: 1
Prep Batch ID: 882630
Batch ID: 882632

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	275	110	52-139

Method Blank Summary

SDG Number:	09-2506	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882630	Instrument ID:	VOA2.I	Data File:	070609V2.b\2T113.D
Lab Sample ID:	1201874617	Prep Date:	07/06/2009 06:00	Analyzed:	07/06/09 12:19
Column:	DB-624				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 882630	1201874620	070609V2.b\2T104.D	07/06/09	0755
02	LCS for batch 882630	1201874621	070609V2.b\2T106.D	07/06/09	0853
03	CAMO-09-6605	232585001	070609V2.b\2T116.D	07/06/09	1345
04	CAMO-09-6604	232585003	070609V2.b\2T117.D	07/06/09	1414

Method Blank Summary

SDG Number:	09-2506	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882630	Instrument ID:	VOA2.I	Data File:	070709V2.b\2T208BS1.D
Lab Sample ID:	1201876171	Prep Date:	07/07/2009 06:00	Analyzed:	07/07/09 10:03
Column:	DB-624				

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 882630	1201876172	070709V2.b\2T204LS1.D	07/07/09	0806
02 LCS for batch 882630	1201876173	070709V2.b\2T206SLS1.D	07/07/09	0905
03 CAMO-09-6641	232585004	070709V2.b\2T210.D	07/07/09	1100
04 CAMO-09-6604RE	232585003	070709V2.b\2T211.D	07/07/09	1129

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2506

Instrument ID: VOA2.I **Injection Date/Time:** 01-JUL-09 09:58

Column Description: DB-624 **Lab File ID** 070109V2.b\2S301.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	25.2
75	30.0 - 60.0% of mass 95	47.2
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	71.5
175	5.0 -9.0% of mass 174	7.6
176	95.0 - 101.0% of mass 174	100.6
177	5.0 - 9.0% of mass 176	6.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALVSTD001 5ML MIX [A]	W2VM090701-01	070109V2.b\2S303.D	01-JUL-09 10:53
ICALVSTD002 5ML MIX [A]	W2VM090701-02	070109V2.b\2S304.D	01-JUL-09 11:22
ICALVSTD005 5ML MIX [A]	W2VM090701-03	070109V2.b\2S305.D	01-JUL-09 11:51
ICALVSTD010 5ML MIX [A]	W2VM090701-04	070109V2.b\2S306.D	01-JUL-09 12:21
ICALVSTD020 5ML MIX [A]	W2VM090701-05	070109V2.b\2S307.D	01-JUL-09 12:50
ICALVSTD050 5ML MIX [A]	W2VM090701-06	070109V2.b\2S308.D	01-JUL-09 13:19
ICALVSTD100 5ML MIX [A]	W2VM090701-07	070109V2.b\2S309.D	01-JUL-09 13:48
ICALVSTD0005 5ML MIX [A]	W2VM090701-08	070109V2.b\2S311.D	01-JUL-09 14:45
ICVLCS 5ML MIX [A] ULTRA(	W2VM090701-10	070109V2.b\2S313.D	01-JUL-09 15:44
ICALVSTD005S 5ML MIX [B]	W2VM090701-11	070109V2.b\2S315.D	01-JUL-09 16:41
ICALVSTD010S 5ML MIX [B]	W2VM090701-12	070109V2.b\2S316.D	01-JUL-09 17:10
ICALVSTD025S 5ML MIX [B]	W2VM090701-13	070109V2.b\2S317.D	01-JUL-09 17:39
ICALVSTD050S 5ML MIX [B]	W2VM090701-14	070109V2.b\2S318.D	01-JUL-09 18:08
ICALVSTD100S 5ML MIX [B]	W2VM090701-15	070109V2.b\2S319.D	01-JUL-09 18:37
ICALVSTD250S 5ML MIX [B]	W2VM090701-16	070109V2.b\2S320.D	01-JUL-09 19:07
ICALVSTD500S 5ML MIX [B]	W2VM090701-17	070109V2.b\2S321.D	01-JUL-09 19:36
ICVLCS 5ML MIX [B] 03	W2VM090701-18	070109V2.b\2S323.D	01-JUL-09 20:34

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2506

Instrument ID: VOA2.I **Injection Date/Time:** 06-JUL-09 06:57

Column Description: DB-624 **Lab File ID** 070609V2.b\2T102BFB.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	19.8
75	30.0 - 60.0% of mass 95	45.3
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	89.8
175	5.0 -9.0% of mass 174	7.6
176	95.0 - 101.0% of mass 174	100.8
177	5.0 - 9.0% of mass 176	6.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVVSTD050 5ML MIX [A] UV	W2VM090706-01	070609V2.b\2T102.D	06-JUL-09 06:57
BLK01LCS	1201874620	070609V2.b\2T104.D	06-JUL-09 07:55
CCVVSTD250S LCS 5ML MIX	UVM090701-08A	070609V2.b\2T105.D	06-JUL-09 08:24
BLK01SLCS	1201874621	070609V2.b\2T106.D	06-JUL-09 08:53
BLK01	1201874617	070609V2.b\2T113.D	06-JUL-09 12:19
CAMO-09-6605	232585001	070609V2.b\2T116.D	06-JUL-09 13:45
CAMO-09-6604	232585003	070609V2.b\2T117.D	06-JUL-09 14:14

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2506

Instrument ID: VOA2.I **Injection Date/Time:** 07-JUL-09 06:41

Column Description: DB-624 **Lab File ID** 070709V2.b\2T201.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	25.7
75	30.0 - 60.0% of mass 95	50.2
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	71
175	5.0 -9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	100.5
177	5.0 - 9.0% of mass 176	6.3

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVMIX [A] UVM090617-07C+	W2VM090707-01	070709V2.b\2T202.D	07-JUL-09 07:08
BLK02LCS	1201876172	070709V2.b\2T204LS1.D	07-JUL-09 08:06
CCVVSTD250S LCS 5ML MIX	UVM090701-08A	070709V2.b\2T205.D	07-JUL-09 08:36
BLK02SLCS	1201876173	070709V2.b\2T206SLS1.D	07-JUL-09 09:05
BLK02	1201876171	070709V2.b\2T208BS1.D	07-JUL-09 10:03
CAMO-09-6641	232585004	070709V2.b\2T210.D	07-JUL-09 11:00
CAMO-09-6604RE	232585003	070709V2.b\2T211.D	07-JUL-09 11:29

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA2.I

GC Column: DB-624

Client SDG: 09-2506

STD Analysis Time: 06-JUL-09 06:57

Data File: C:\msdchem\1\DATA\070609V2.b\2T102.D

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	1767232		12.4	1520020		16.0	957984		18.5
Upper Limit	3534464		12.9	3040040		16.5	1915968		19.0
Lower Limit	883616		11.9	760010		15.5	478992		18.0
Sample ID									
BLK01LCS	1717098		12.4	1483018		16.0	935834		18.5
BLK01SLCS	1749528		12.4	1519196		16.0	951777		18.5
BLK01	1648861		12.4	1385774		16.0	844664		18.5
CAMO-09-6605	1674093		12.4	1401310		16.0	853698		18.5
CAMO-09-6604	1662114		12.4	1341471		16.0	777642		18.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA2.I

GC Column: DB-624

Client SDG: 09-2506

STD Analysis Time: 07-JUL-09 07:08

Data File: C:\msdchem\1\DATA\070709V2.b\2T202.D

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	1642832		12.4	1402598		16.0	878468		18.5
Upper Limit	3285664		12.9	2805196		16.5	1756936		19.0
Lower Limit	821416		11.9	701299		15.5	439234		18.0
Sample ID									
BLK02LCS	1683356		12.4	1455054		16.0	902441		18.5
BLK02SLCS	1713132		12.4	1479268		16.0	907740		18.5
BLK02	1640166		12.4	1393088		16.0	851929		18.5
CAMO-09-6641	1622532		12.4	1359040		16.0	814347		18.5
CAMO-09-6604RE	1567946		12.4	1311454		16.0	813492		18.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 13:45	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T116.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.07	ug/kg	0.364	1.07
74-87-3	Chloromethane	U	1.07	ug/kg	0.321	1.07
75-01-4	Vinyl chloride	U	1.07	ug/kg	0.321	1.07
74-83-9	Bromomethane	U	1.07	ug/kg	0.321	1.07
75-00-3	Chloroethane	U	1.07	ug/kg	0.321	1.07
75-69-4	Trichlorofluoromethane	U	1.07	ug/kg	0.321	1.07
67-64-1	Acetone	J	4.38	ug/kg	1.78	5.35
75-35-4	1,1-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
74-88-4	Iodomethane	U	5.35	ug/kg	1.71	5.35
75-09-2	Methylene chloride	U	5.35	ug/kg	2.14	5.35
75-15-0	Carbon disulfide	U	5.35	ug/kg	1.34	5.35
156-60-5	trans-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
75-34-3	1,1-Dichloroethane	U	1.07	ug/kg	0.321	1.07
78-93-3	2-Butanone	U	5.35	ug/kg	1.61	5.35
156-59-2	cis-1,2-Dichloroethylene	U	1.07	ug/kg	0.321	1.07
594-20-7	2,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07
67-66-3	Chloroform	U	1.07	ug/kg	0.321	1.07
74-97-5	Bromochloromethane	U	1.07	ug/kg	0.353	1.07
71-55-6	1,1,1-Trichloroethane	U	1.07	ug/kg	0.321	1.07
563-58-6	1,1-Dichloropropene	U	1.07	ug/kg	0.321	1.07
56-23-5	Carbon tetrachloride	U	1.07	ug/kg	0.321	1.07
107-06-2	1,2-Dichloroethane	U	1.07	ug/kg	0.321	1.07
71-43-2	Benzene	U	1.07	ug/kg	0.321	1.07
79-01-6	Trichloroethylene	U	1.07	ug/kg	0.353	1.07
78-87-5	1,2-Dichloropropane	U	1.07	ug/kg	0.321	1.07
75-27-4	Bromodichloromethane	U	1.07	ug/kg	0.321	1.07
74-95-3	Dibromomethane	U	1.07	ug/kg	0.321	1.07
108-10-1	4-Methyl-2-pentanone	U	5.35	ug/kg	1.34	5.35
10061-01-5	cis-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07
108-88-3	Toluene	U	1.07	ug/kg	0.321	1.07
10061-02-6	trans-1,3-Dichloropropylene	U	1.07	ug/kg	0.321	1.07
79-00-5	1,1,2-Trichloroethane	U	1.07	ug/kg	0.321	1.07
591-78-6	2-Hexanone	U	5.35	ug/kg	1.61	5.35
142-28-9	1,3-Dichloropropane	U	1.07	ug/kg	0.321	1.07
127-18-4	Tetrachloroethylene	U	1.07	ug/kg	0.321	1.07
124-48-1	Dibromochloromethane	U	1.07	ug/kg	0.321	1.07
106-93-4	1,2-Dibromoethane	U	1.07	ug/kg	0.321	1.07
108-90-7	Chlorobenzene	U	1.07	ug/kg	0.321	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 13:45	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T116.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.07	ug/kg	0.321	1.07
179601-23-1	m,p-Xylenes	U	2.14	ug/kg	0.321	2.14
95-47-6	o-Xylene	U	1.07	ug/kg	0.321	1.07
100-42-5	Styrene	U	1.07	ug/kg	0.321	1.07
75-25-2	Bromoform	U	1.07	ug/kg	0.321	1.07
79-34-5	1,1,2,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07
96-18-4	1,2,3-Trichloropropane	U	1.07	ug/kg	0.321	1.07
108-86-1	Bromobenzene	U	1.07	ug/kg	0.321	1.07
103-65-1	n-Propylbenzene	U	1.07	ug/kg	0.321	1.07
95-49-8	2-Chlorotoluene	U	1.07	ug/kg	0.321	1.07
98-82-8	Isopropylbenzene	U	1.07	ug/kg	0.321	1.07
108-67-8	1,3,5-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07
106-43-4	4-Chlorotoluene	U	1.07	ug/kg	0.321	1.07
98-06-6	tert-Butylbenzene	U	1.07	ug/kg	0.321	1.07
95-63-6	1,2,4-Trimethylbenzene	U	1.07	ug/kg	0.321	1.07
135-98-8	sec-Butylbenzene	U	1.07	ug/kg	0.321	1.07
99-87-6	4-Isopropyltoluene	U	1.07	ug/kg	0.321	1.07
541-73-1	1,3-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07
106-46-7	1,4-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07
104-51-8	n-Butylbenzene	U	1.07	ug/kg	0.321	1.07
96-12-8	1,2-Dibromo-3-chloropropane	U	1.07	ug/kg	0.321	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.35	ug/kg	1.71	5.35
630-20-6	1,1,1,2-Tetrachloroethane	U	1.07	ug/kg	0.321	1.07
95-50-1	1,2-Dichlorobenzene	U	1.07	ug/kg	0.321	1.07

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.35	16.7	ug/kg	0	J
	unknown siloxane	17.2	412	ug/kg	0	J
	unknown siloxane	19.15	49.1	ug/kg	0	J
	unknown siloxane	21.25	5.56	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDS1
InstName : VOA2
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 16 15:53:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1674093	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1401310	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	853698	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1674093	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1401310	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	853698	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	477839	50.90 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 101.80%		
43) Toluene-d8	14.310	98	1633863	49.62 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 99.24%		
61) Bromofluorobenzene	17.216	95	461416	34.38 ug/L	0.01
Spiked Amount 50.000	Range 68 - 133		Recovery = 68.76%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.252	62	563	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.907	43	19053	4.09 ug/L	95
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.464	41	255	N.D.	
13) Methyl acetate	8.535	43	627	N.D.	
14) Carbon disulfide	8.251	76	1726	N.D.	
15) Methylene chloride	8.701	84	8903	Below Cal	97
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	881	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	729	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	424	N.D.	
31) Benzene	12.045	78	724	N.D.	
32) Cyclohexene	12.377	67	443	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDS1
InstName : VOA2
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 16 15:53:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D.	d
44) Toluene	14.393	91	3213	N.D.	
45) trans-1,3-Dichloroprop...	14.713	75	359	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.049	43	1505	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	335	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.077	91	739	N.D.	
55) m,p-Xylenes	16.184	106	698	N.D.	
56) o-Xylene	16.634	106	231	N.D.	
57) Styrene	16.646	104	781	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	0.000		0m	N.D.	d
62) 1,1,2,2-Tetrachloroethane	0.000		0m	N.D.	d
63) 1,2,3-Trichloropropane	0.000		0m	N.D.	d
64) Bromobenzene	17.417	156	120	N.D.	
65) n-Propylbenzene	17.465	91	446	N.D.	
66) 1,3,5-Trimethylbenzene	17.631	105	158	N.D.	
67) 2-Chlorotoluene	17.702	91	704	N.D.	
68) 4-Chlorotoluene	17.702	91	704	N.D.	
69) tert-Butylbenzene	18.093	119	383	N.D.	
70) 1,2,4-Trimethylbenzene	18.046	105	525	N.D.	
71) sec-Butylbenzene	18.046	105	525	N.D.	
72) 4-Isopropyltoluene	18.366	119	299	N.D.	
73) 1,3-Dichlorobenzene	18.401	146	638	N.D.	
74) 1,4-Dichlorobenzene	18.401	146	638	N.D.	
75) n-Butylbenzene	18.650	91	120	N.D.	
76) 1,2-Dichlorobenzene	18.899	146	294	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	448	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	1286	N.D.	
81) 1,2,3-Trichlorobenzene	21.342	180	136	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	8.203	45	432	N.D.	
88) Allyl chloride	8.464	41	255	N.D.	
89) tert-Butyl Alcohol	8.879	59	2402	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	10.563	59	231	N.D.	
94) Ethyl acetate	10.800	43	881	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDS1
InstName : VOA2
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 16 15:53:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95)	Propionitrile	0.000		0	N.D.	
96)	Methacrylonitrile	11.227	41	616	N.D.	
97)	Tetrahydrofuran	11.227	42	1205	N.D.	
98)	Isobutyl alcohol	11.927	41	250	N.D.	
99)	Methyl tert-amyl ether	0.000		0m	N.D.	d
100)	Methyl methacrylate	0.000		0	N.D.	
101)	1,4-Dioxane	0.000		0	N.D.	
102)	2-Nitropropane	0.000		0	N.D.	
104)	Ethyl methacrylate	0.000		0	N.D.	
106)	1-Chlorohexane	0.000		0m	N.D.	d
107)	cis-1,4-Dichloro-2-butene	17.038	53	287	N.D.	
108)	Cyclohexanone	17.192	42	941	N.D.	
109)	trans-1,4-Dichloro-2-b...	17.204	53	391	N.D.	
110)	Pentachloroethane	0.000		0	N.D.	
111)	Benzyl chloride	18.603	91	324	N.D.	
112)	bis(2-Chloroisopropyl)...	0.000		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDS1
InstName : VOA2
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 16 15:53:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

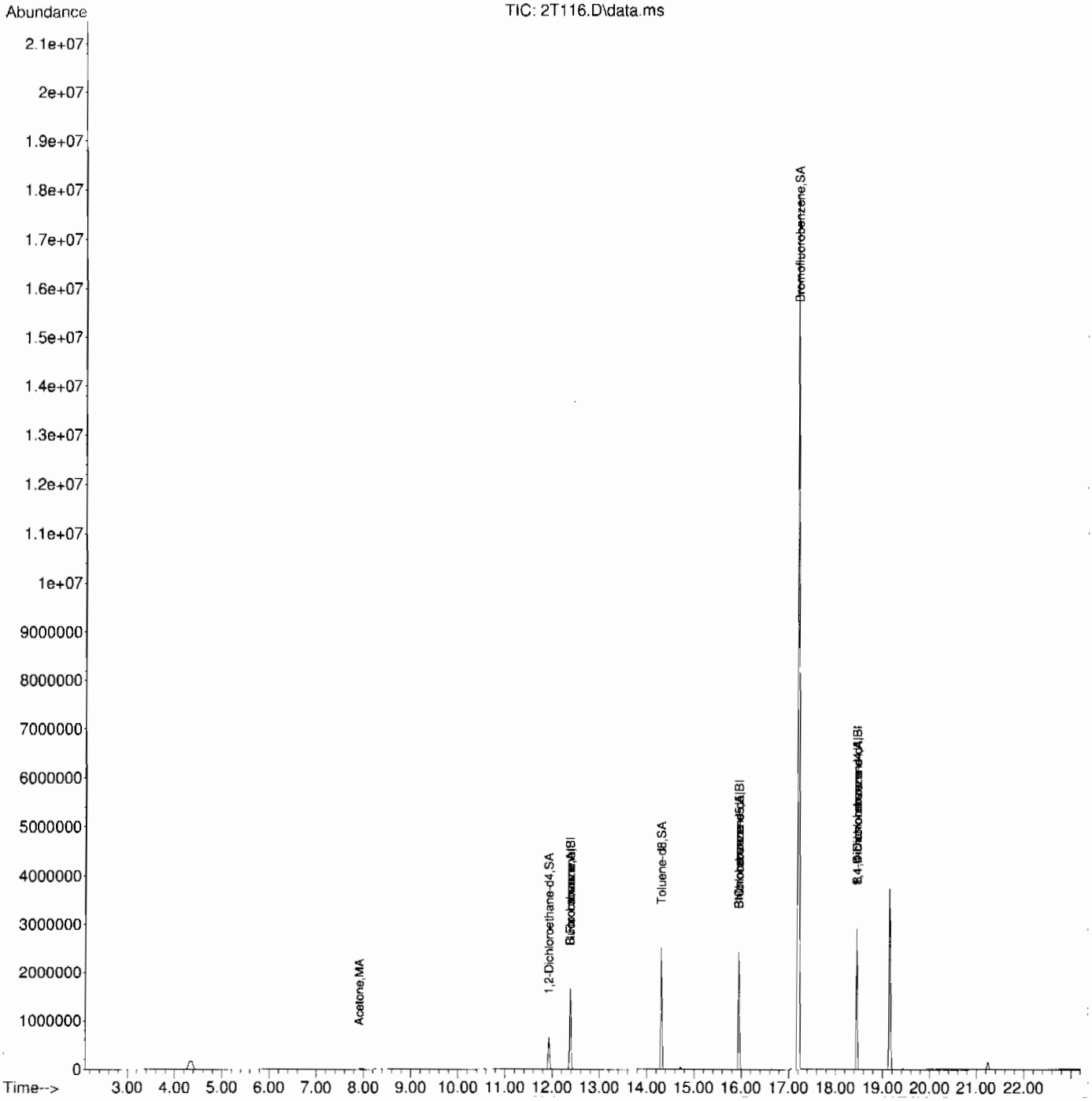

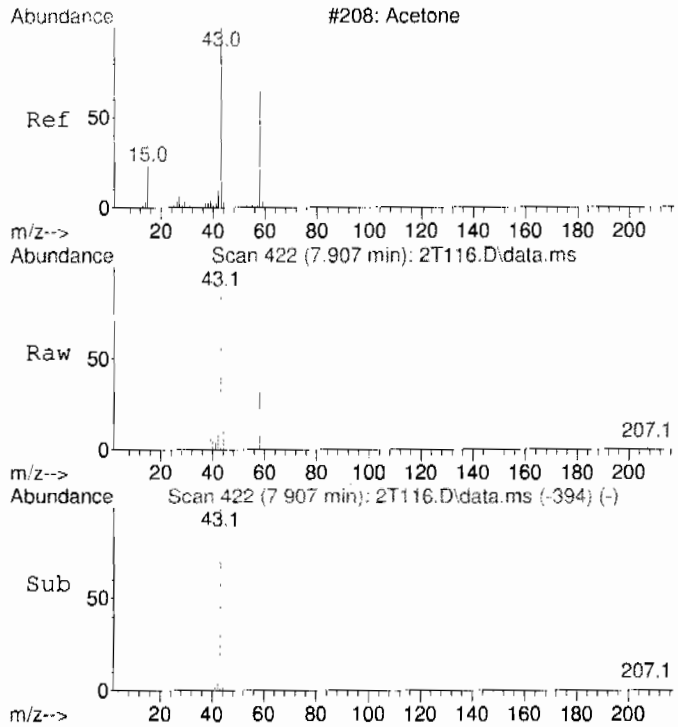

#9
Acetone
Concen: 4.09 ug/L
RT: 7.907 min Scan# 422
Delta R.T. 0.036 min
Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 43 Resp: 19053

Ion	Ratio	Lower	Upper
43	100		
58	26.5	0.0	59.3

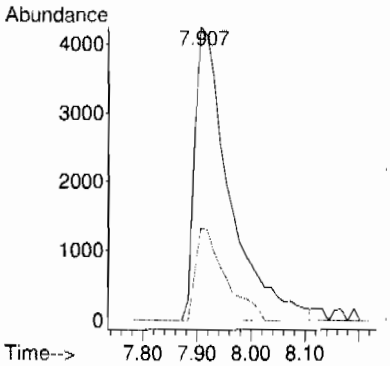

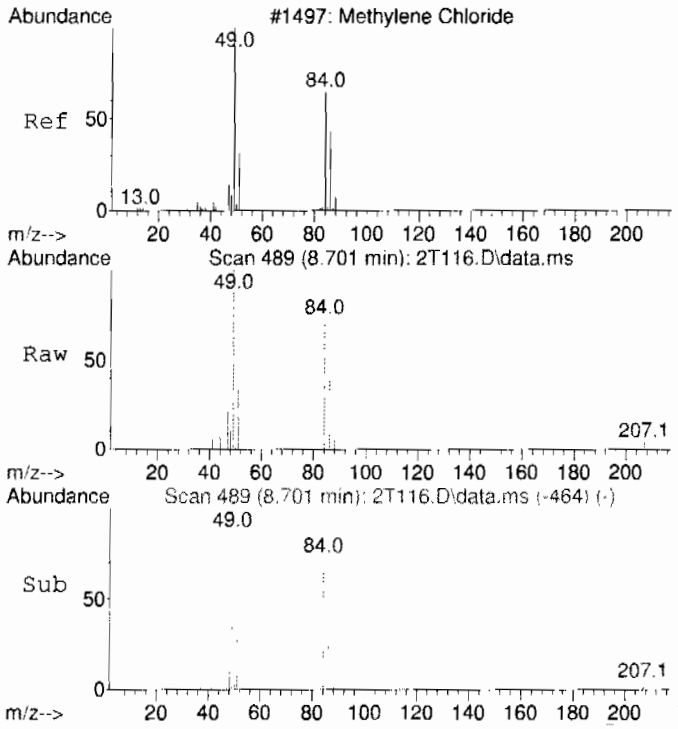

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 84 Resp: 8903

Ion	Ratio	Lower	Upper
84	100		
86	65.2	33.8	93.8
49	140.1	105.0	165.0

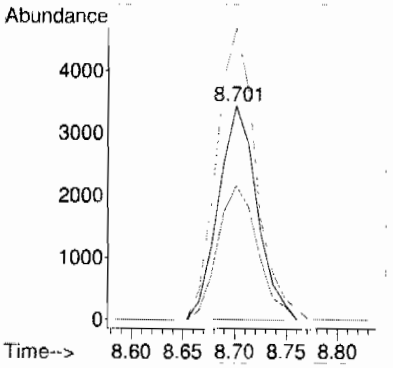

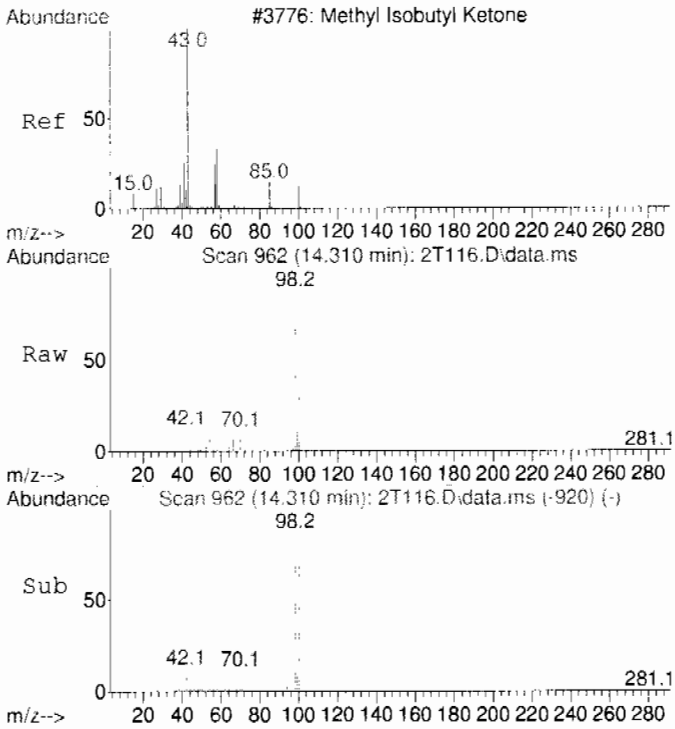

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.37 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 58 Resp: 13418

Ion	Ratio	Lower	Upper
58	100		
43	58.4	245.2	305.2#
100	8335.9	7.2	67.2#

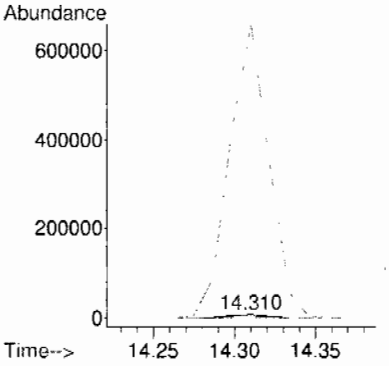

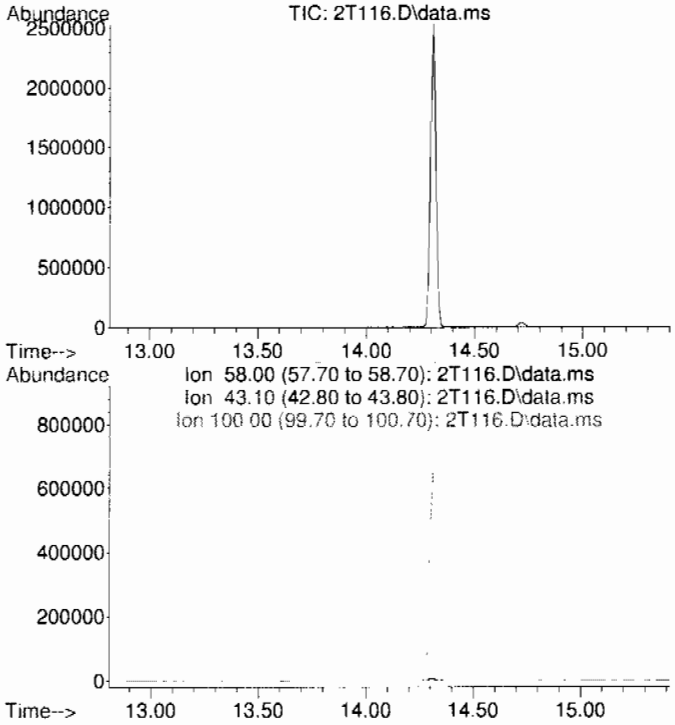

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

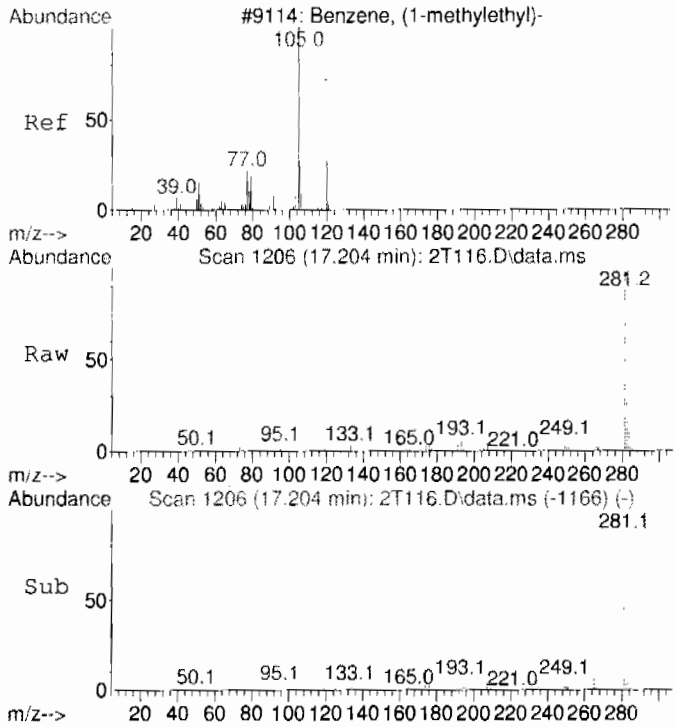

#60 BEFORE analyst integration
Isopropylbenzene
Concen: 0.65 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. 0.178 min
Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion:105 Resp: 23615

Ion	Ratio	Lower	Upper
105	100		
120	51.4	0.0	57.9

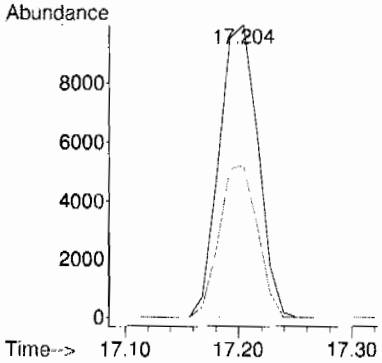

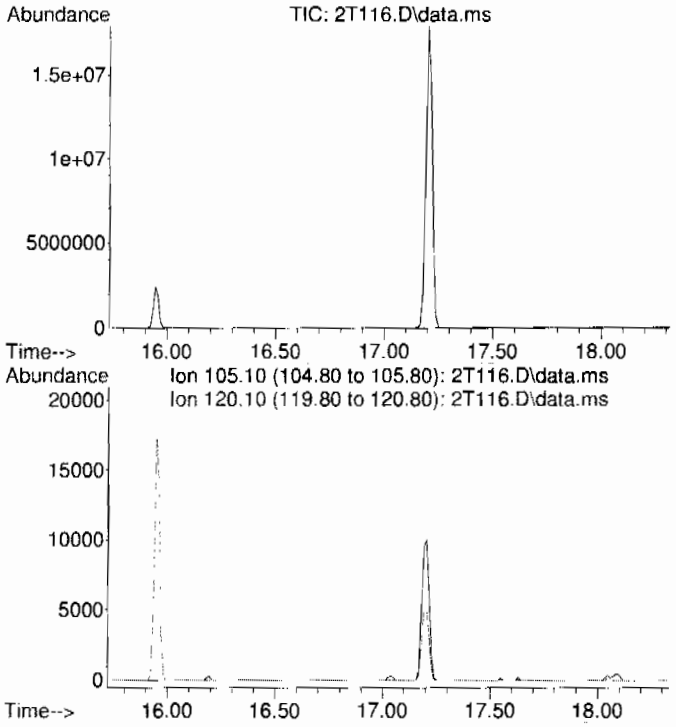

#60 AFTER analyst integration
Isopropylbenzene
Concen: N.D. DELETED
Expected RT: 17.03 min

Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	27.9

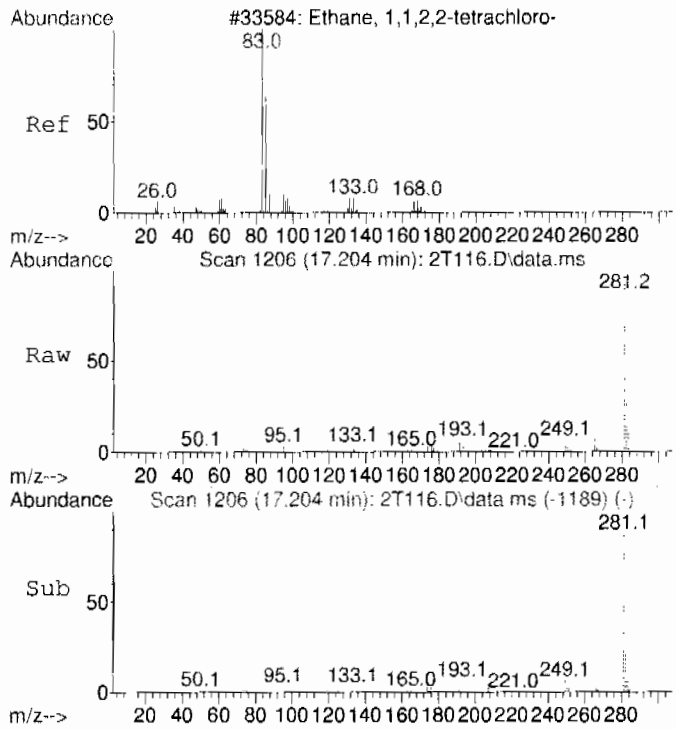

#62 BEFORE analyst integration
1,1,2,2-Tetrachloroethane
Concen: 0.30 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. -0.095 min
Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 83 Resp: 2564

Ion	Ratio	Lower	Upper
83	100		
85	331.7	33.9	93.9#

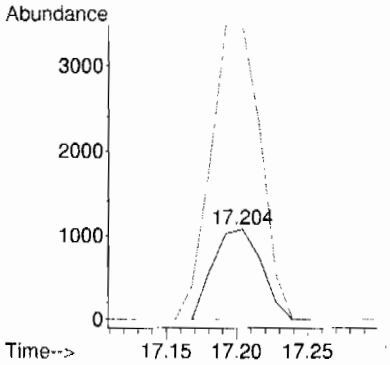

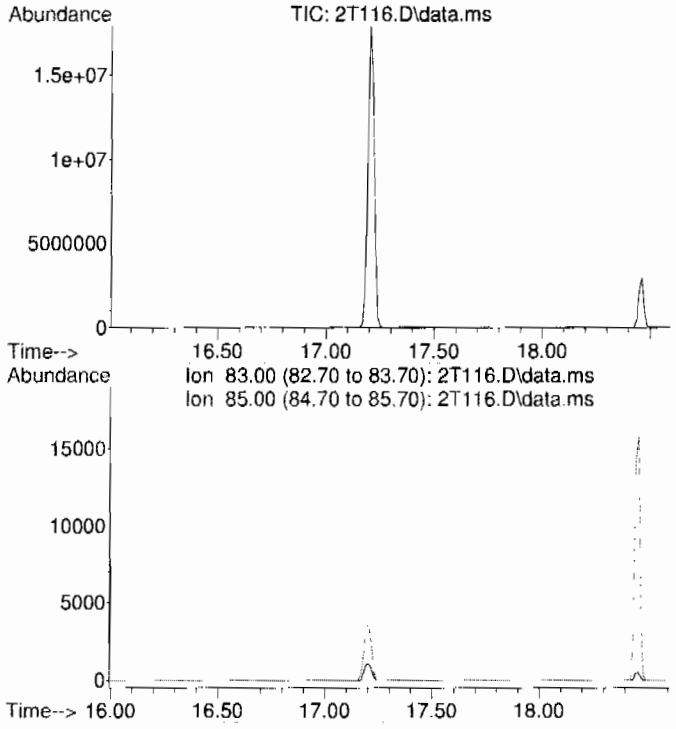

#62 AFTER analyst integration
1,1,2,2-Tetrachloroethane
Concen: N.D. DELETED
Expected RT: 17.30 min

Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.9

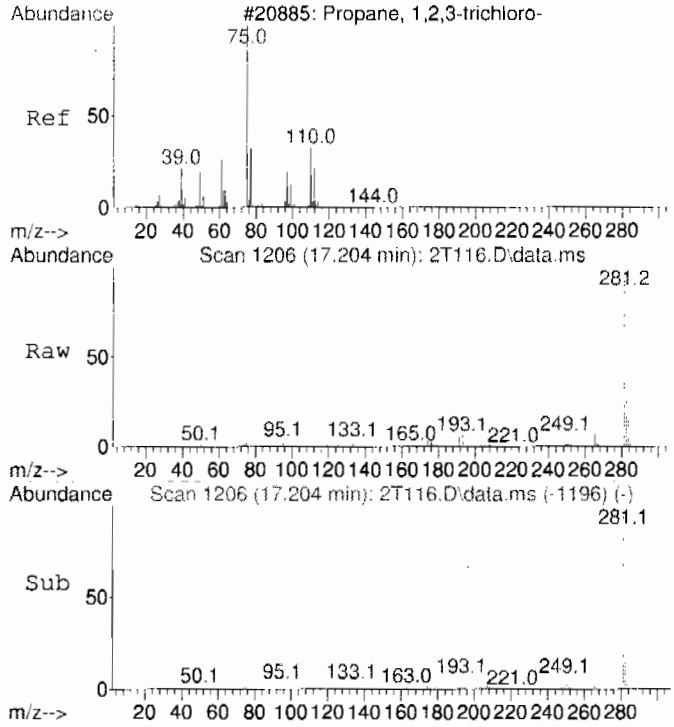

#63 BEFORE analyst integration
1,2,3-Trichloropropane
Concen: 10.20 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. -0.178 min
Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion:110 Resp: 24989

Ion	Ratio	Lower	Upper
110	100		
75	1042.2	252.2	312.2#
77	22.5	629.3	689.3#

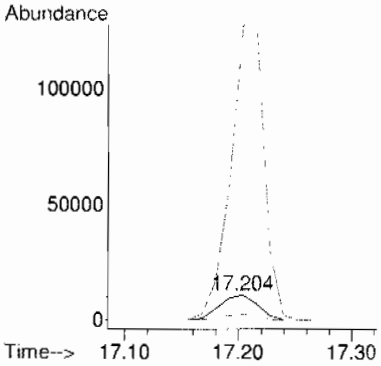

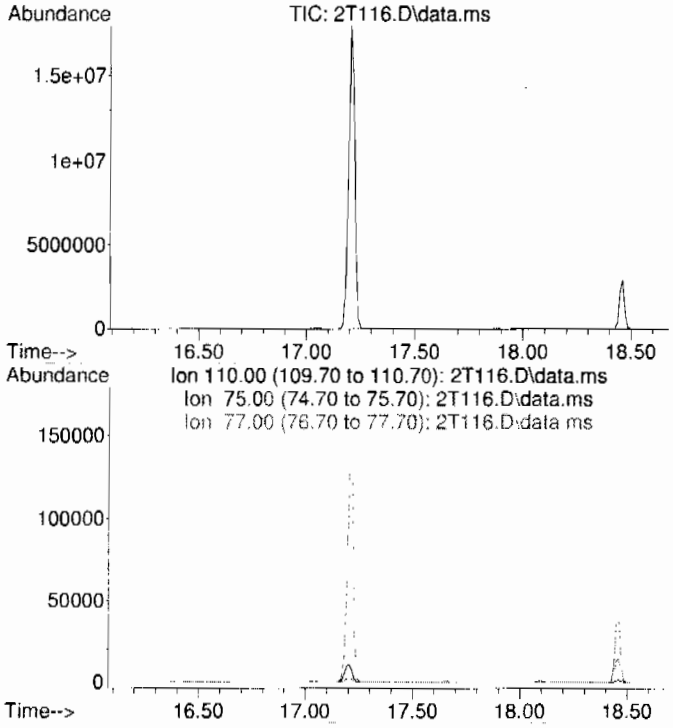

#63 AFTER analyst integration
1,2,3-Trichloropropane
Concen: N.D. DELETED
Expected RT: 17.38 min

Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 110

Sig	Exp Ratio
110	100
75	282.2
77	659.3

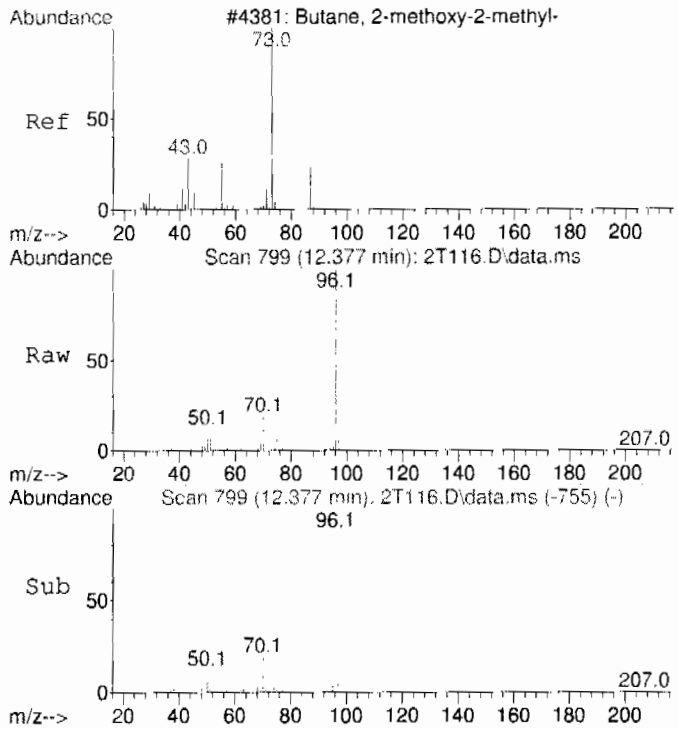

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.98 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 73 Resp: 18393

Ion	Ratio	Lower	Upper
73	100		
55	7.4	5.2	65.2
87	0.0	0.0	54.7

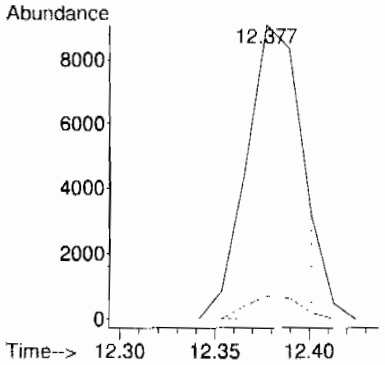

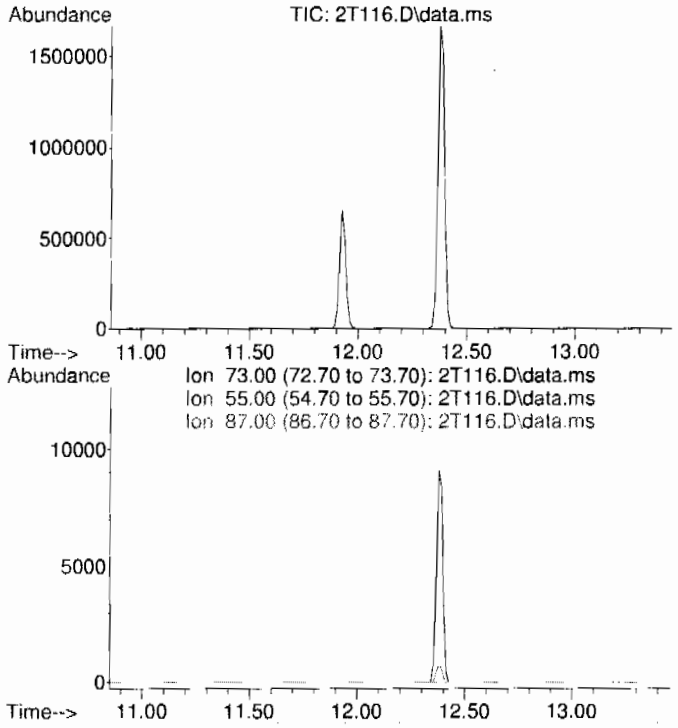

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

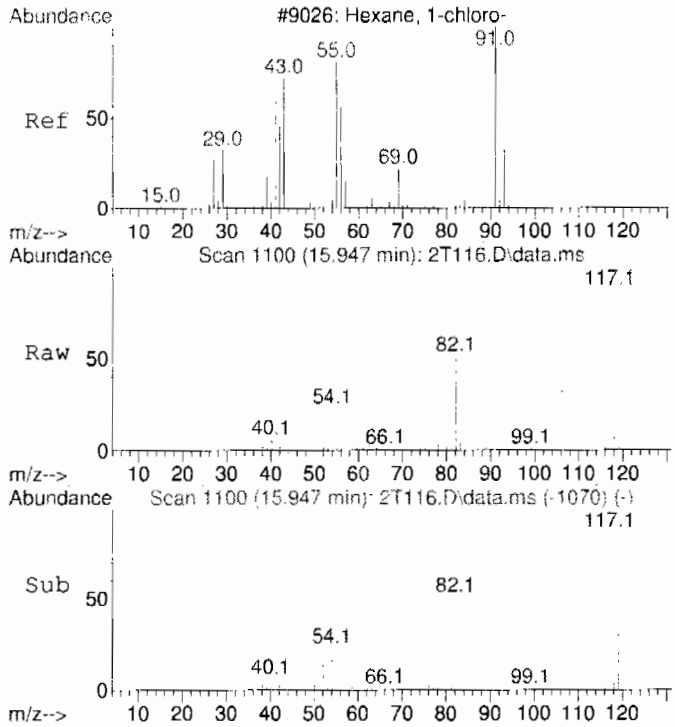

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 1.95 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 55 Resp: 13102

Ion	Ratio	Lower	Upper
55	100		
91	19.5	113.2	173.2#
56	60.1	30.3	90.3

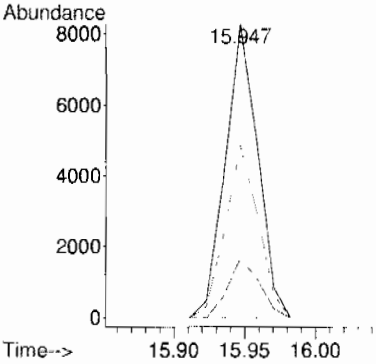

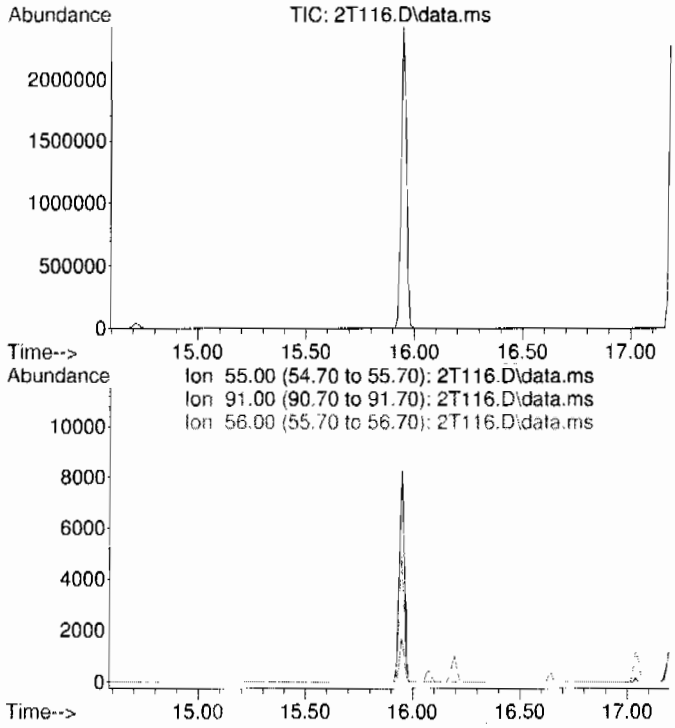

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

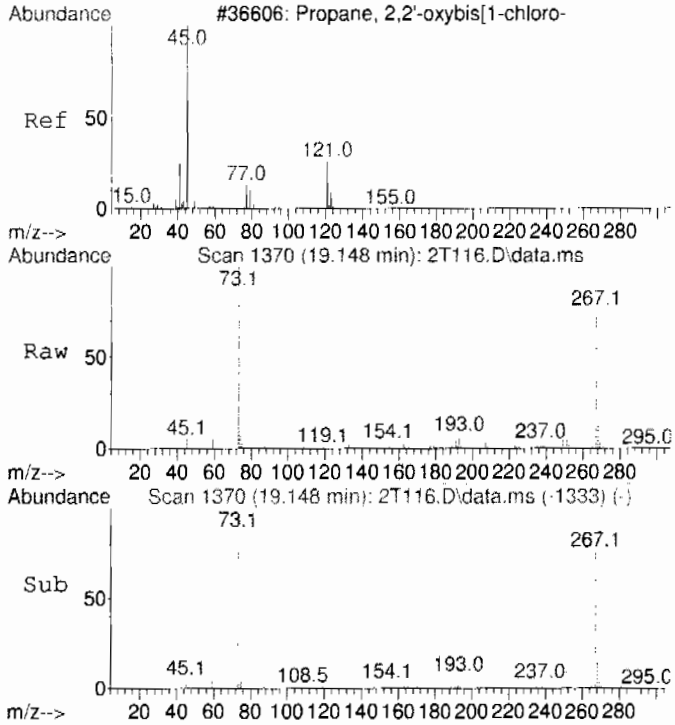

#112 BEFORE analyst integration
bis(2-Chloroisopropyl)ether
Concen: 27.69 ug/L
RT: 19.148 min Scan# 1370
Delta R.T. 0.142 min
Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 45 Resp: 126131

Ion	Ratio	Lower	Upper
45	100		
121	2.5	0.0	54.5

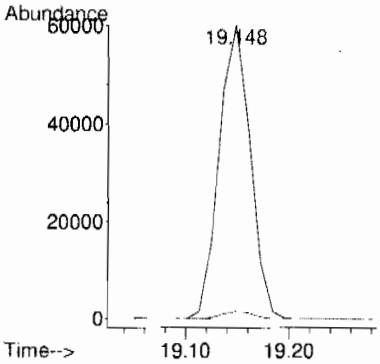

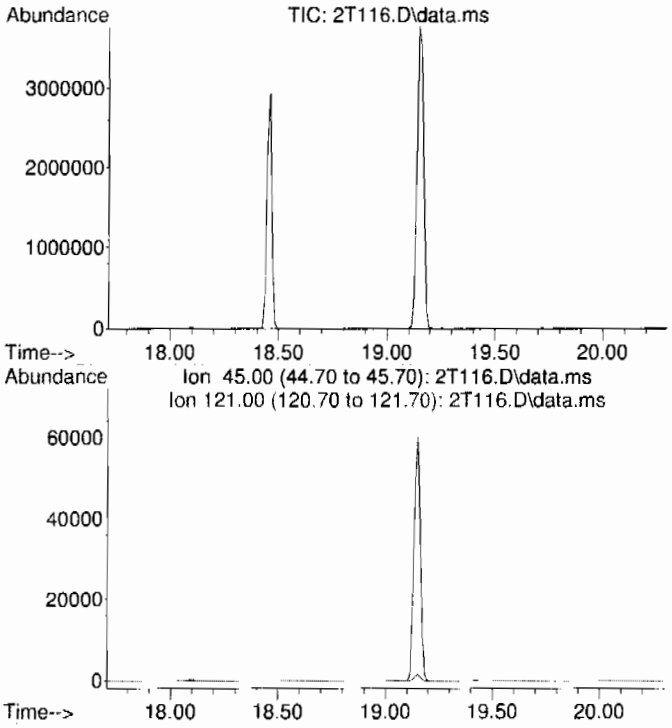

#112 AFTER analyst integration
bis(2-Chloroisopropyl)ether
Concen: N.D. DELETED
Expected RT: 19.01 min

Lab File: 2T116.D
Acq: 6 Jul 2009 1:45 pm

Tgt Ion: 45

Sig	Exp Ratio
45	100
121	24.5

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDS1
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T116.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.345	143	152	165	rBV	167589	1084725	3.03%	1.705%
2	4.687	173	175	178	rBB	222	373	0.00%	0.001%
3	4.954	190	193	196	rBV	348	1091	0.00%	0.002%
4	6.021	261	263	271	rBV	716	4327	0.01%	0.007%
5	7.907	418	422	442	rBV	6861	31865	0.09%	0.050%
6	8.701	484	489	497	rVV	14288	36664	0.10%	0.058%
7	8.879	501	504	511	rVB3	1744	5491	0.02%	0.009%
8	9.685	568	572	581	rVB2	3801	9630	0.03%	0.015%
9	10.942	675	678	698	rVB	2016	5534	0.02%	0.009%
10	11.227	700	702	707	rVB	1704	3673	0.01%	0.006%
11	11.927	756	761	777	rBV	654216	1332257	3.73%	2.095%
12	12.377	794	799	842	rVB	1666910	3477295	9.72%	5.467%
13	14.049	938	940	944	rBV	2128	4205	0.01%	0.007%
14	14.310	957	962	967	rBV	2523971	4368784	12.22%	6.869%
15	14.713	992	996	1005	rVB	41940	87564	0.24%	0.138%
16	15.947	1094	1100	1109	rBV	2430124	4010026	11.21%	6.304%
17	16.196	1118	1121	1129	rVB	1776	4025	0.01%	0.006%
18	16.646	1156	1159	1166	rVB2	2041	3920	0.01%	0.006%
19	17.038	1189	1192	1200	rBV	9237	15759	0.04%	0.025%
20	17.204	1200	1206	1240	rVV	17892540	35765086	100.00%	56.229%
21	17.654	1241	1244	1275	rVV5	5907	18404	0.05%	0.029%
22	18.093	1278	1281	1286	rVB	12548	20780	0.06%	0.033%
23	18.330	1299	1301	1307	rBV4	3322	9632	0.03%	0.015%
24	18.461	1307	1312	1344	rVB	2925800	4652519	13.01%	7.315%
25	19.148	1364	1370	1389	rBV2	3760126	8064467	22.55%	12.679%
26	19.421	1391	1393	1487	rVV6	9500	105109	0.29%	0.165%
27	21.247	1541	1547	1696	rBV	147610	482756	1.35%	0.759%

Sum of corrected areas: 63605961

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDS1
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

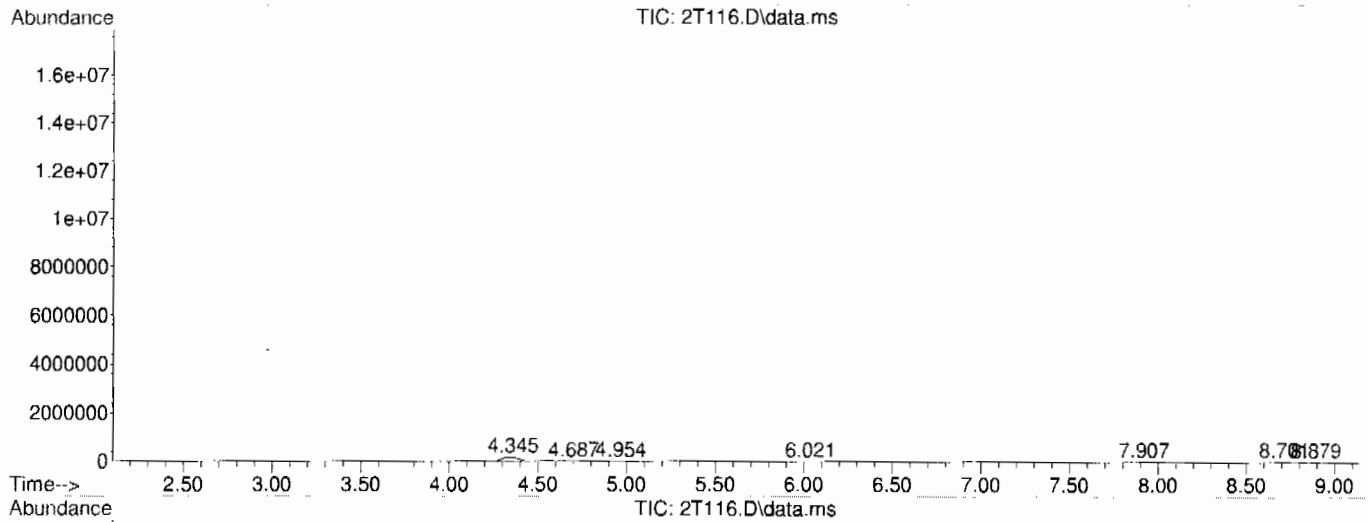

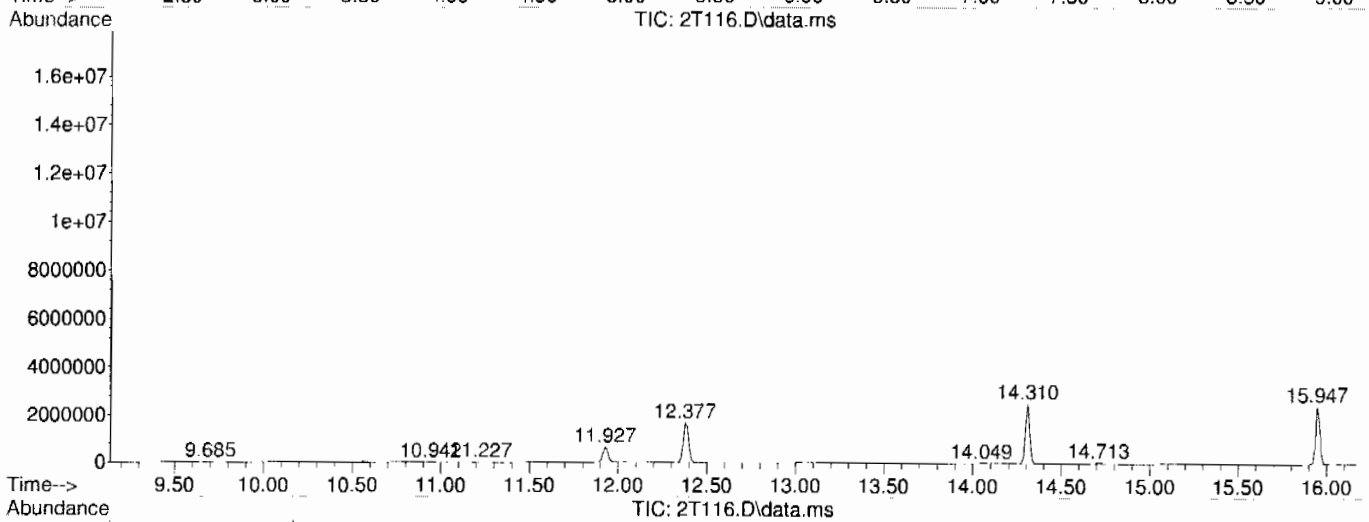

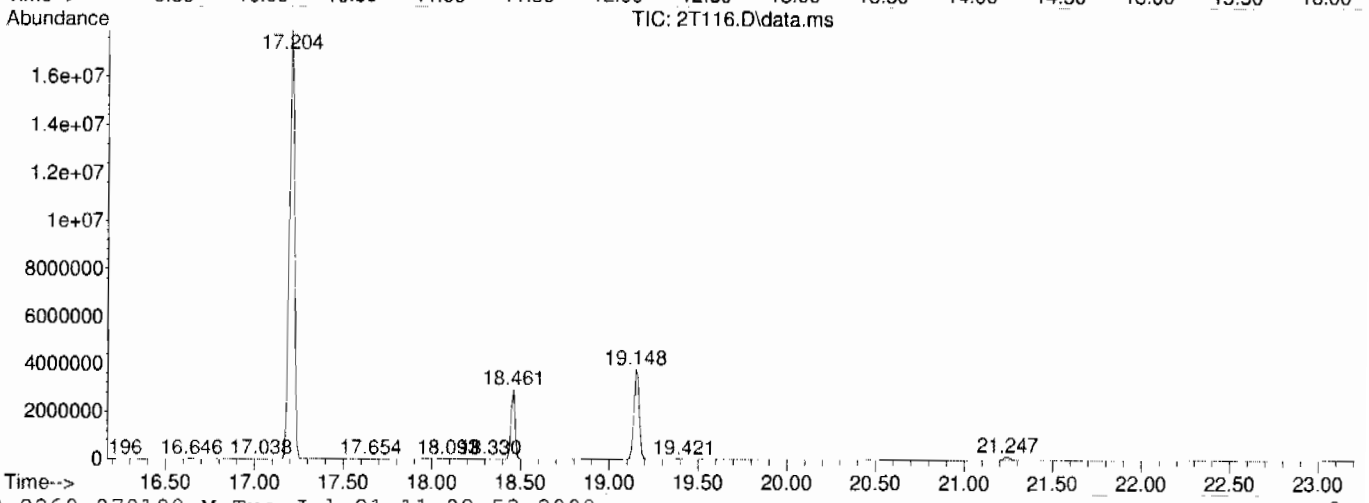

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDSI
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.345	15.60 ug/L	1084730	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

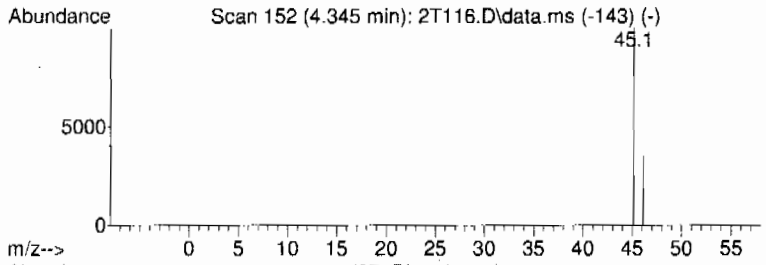

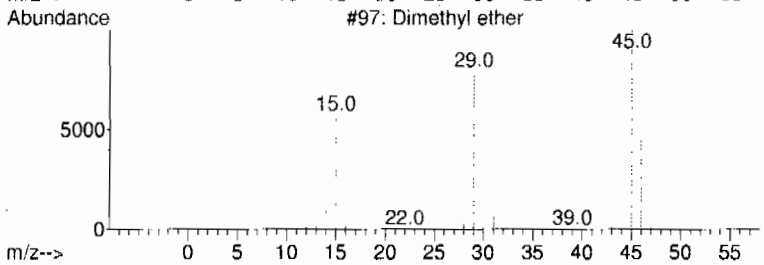

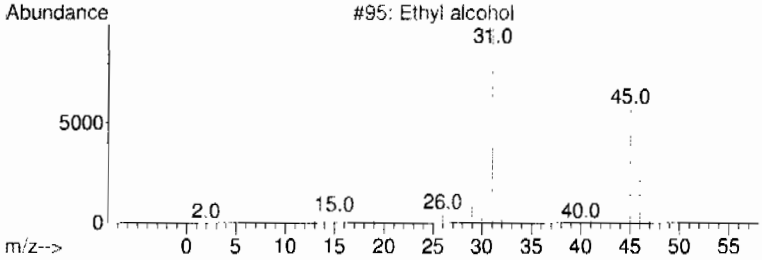

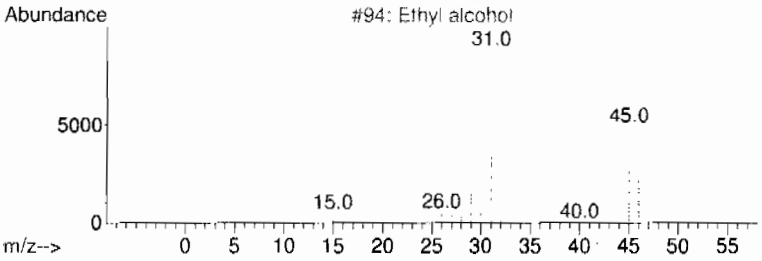

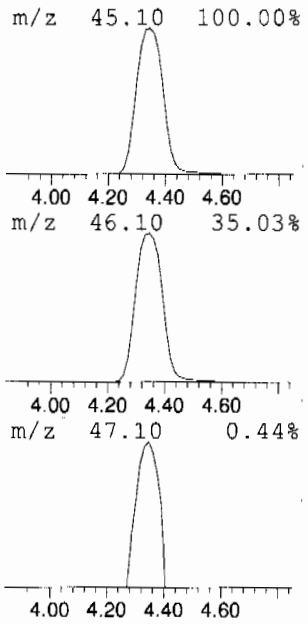

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDS1
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 2 unknown siloxane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.148	45.83 ug/L	4264460	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzaldehyde, 2,4-bis(trimethyls...	282	C13H22O3Si2	033617-38-8	72
2	4-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-53-3	56
3	Butanamide, 2,2,3,3,4,4,4-heptaf...	493	C18H26F7NO3Si2	055471-01-7	56
4	p-Trimethylsilyloxyphenyl-(trime...	398	C18H34O4Si3	1000079-05-1	50
5	Benzonitrile, 3-(2-hydroxy-5-nit...	267	C14H9N3O3	304454-14-6	43

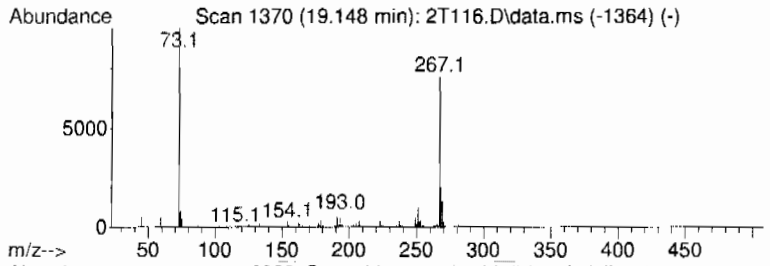

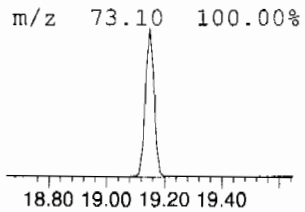

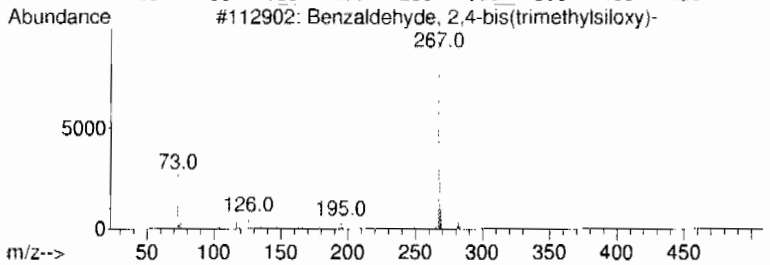

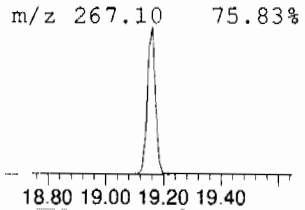

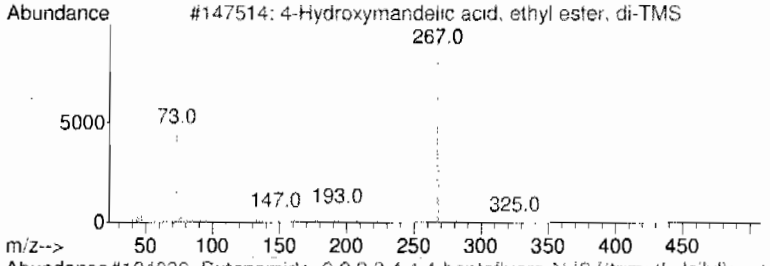

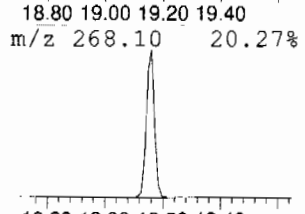

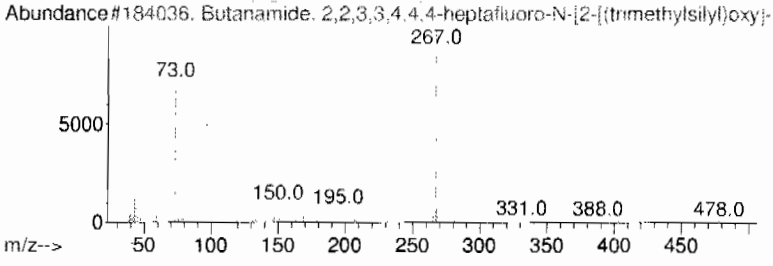

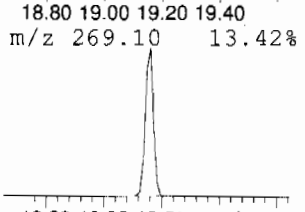

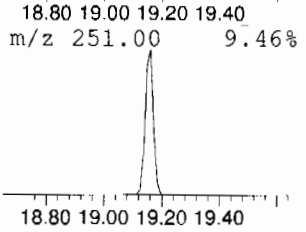

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDS1
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 4 unknown siloxane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.247	5.19 ug/L	482756	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Oxa-6-thia-2,7-disilaoctane, 2...	222	C8H22OSSi2	078921-31-0	45
2	Butanal, 2,3,4-tris[(trimethylsi...	365	C14H35NO4Si3	056196-36-2	40
3	Benzenepropanoic acid, .alpha.-[...	310	C15H26O3Si2	027750-45-4	40
4	Ribo-hexos-3-ulose, 2,4,5,6-tetr...	524	C20H48N2O6Si4	062108-14-9	36
5	3,8-Dioxa-2,9-disiladec-5-ene, 2...	232	C10H24O2Si2	053326-59-3	33

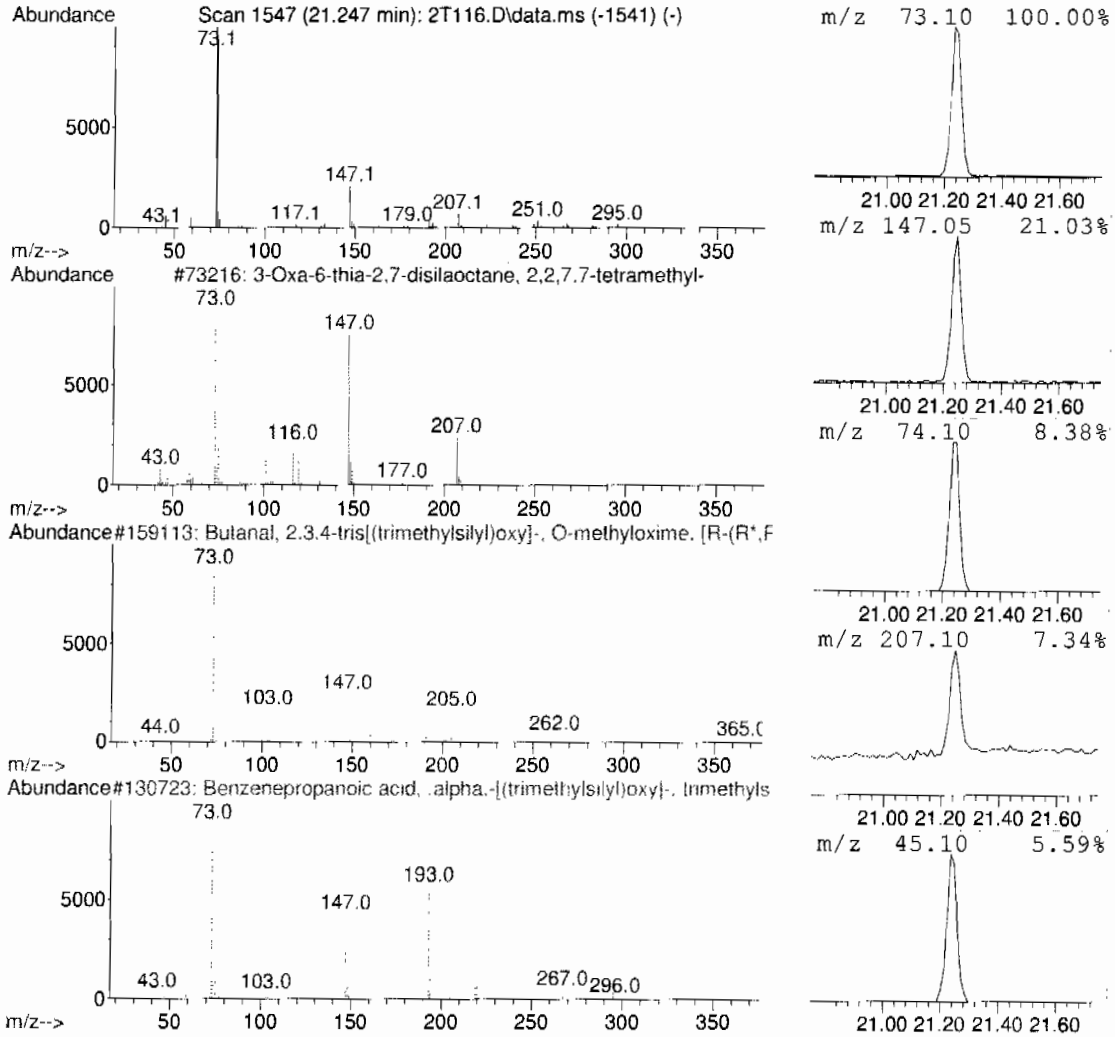

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDS1
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 5 unknown siloxane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.204	384.36 ug/L	35765100	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	91
2	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	90
3	4H-1,2,4-Triazole-3-thiol, 4-all...	281	C16H15N3S	031803-13-1	59
4	5-Hydroxy-7-methoxy-2-methyl-3-p...	282	C17H14O4	055927-39-4	53
5	5H-Naphtho[2,3-c]carbazole, 5-me...	281	C21H15N	100025-44-3	50

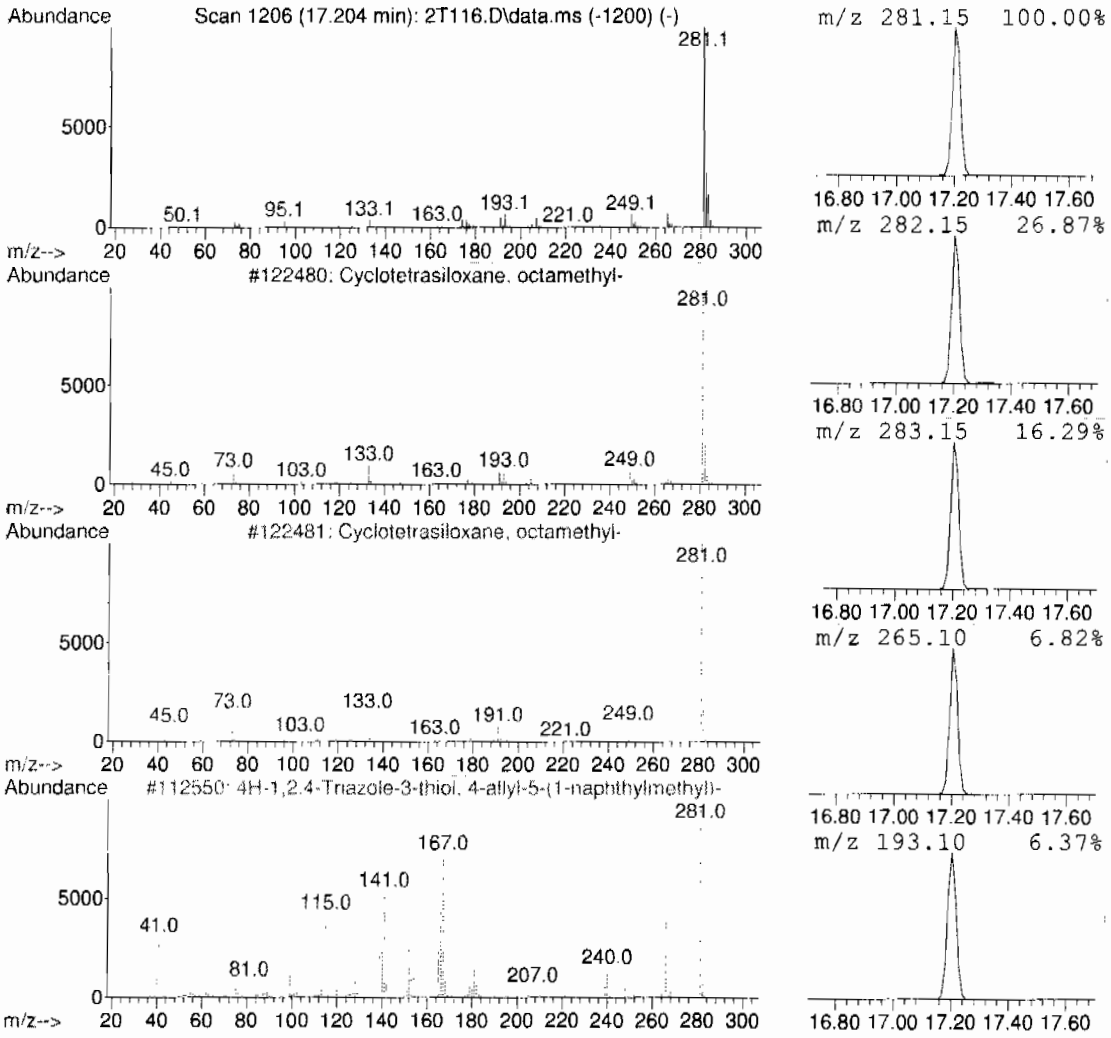

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T116.D
Acq On : 6 Jul 2009 1:45 pm
Operator : CDS1
Sample : |232585001|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - soil
ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.345	15.6	ug/L	1084730	1	12.377	3477300	50.0
unknown siloxane	19.148	45.8	ug/L	4264460	6	18.461	4652520	50.0
unknown siloxane	21.247	5.2	ug/L	482756	6	18.461	4652520	50.0
unknown siloxane	17.204	384.4	ug/L	35765100	5	18.461	4652520	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 14:14	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 14:03	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T117.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.380	1.12
74-87-3	Chloromethane	U	1.12	ug/kg	0.335	1.12
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.335	1.12
74-83-9	Bromomethane	U	1.12	ug/kg	0.335	1.12
75-00-3	Chloroethane	U	1.12	ug/kg	0.335	1.12
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.335	1.12
67-64-1	Acetone		205	ug/kg	1.85	5.58
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
74-88-4	Iodomethane	U	5.58	ug/kg	1.79	5.58
75-09-2	Methylene chloride	U	5.58	ug/kg	2.23	5.58
75-15-0	Carbon disulfide	U	5.58	ug/kg	1.40	5.58
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.335	1.12
78-93-3	2-Butanone	U	5.58	ug/kg	1.67	5.58
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
67-66-3	Chloroform	U	1.12	ug/kg	0.335	1.12
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.368	1.12
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.335	1.12
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.335	1.12
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.335	1.12
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.335	1.12
71-43-2	Benzene	U	1.12	ug/kg	0.335	1.12
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.368	1.12
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.335	1.12
74-95-3	Dibromomethane	U	1.12	ug/kg	0.335	1.12
108-10-1	4-Methyl-2-pentanone	U	5.58	ug/kg	1.40	5.58
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
108-88-3	Toluene		2.47	ug/kg	0.335	1.12
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.335	1.12
591-78-6	2-Hexanone	U	5.58	ug/kg	1.67	5.58
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.335	1.12
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.335	1.12
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.335	1.12
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.335	1.12
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.335	1.12

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 14:14	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 14:03	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T117.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.335	1.12
179601-23-1	m,p-Xylenes	J	0.547	ug/kg	0.335	2.23
95-47-6	o-Xylene	U	1.12	ug/kg	0.335	1.12
100-42-5	Styrene	U	1.12	ug/kg	0.335	1.12
75-25-2	Bromoform	U	1.12	ug/kg	0.335	1.12
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.335	1.12
108-86-1	Bromobenzene	U	1.12	ug/kg	0.335	1.12
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.335	1.12
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.335	1.12
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.335	1.12
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.335	1.12
99-87-6	4-Isopropyltoluene	E	151	ug/kg	0.335	1.12
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.335	1.12
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.335	1.12
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.58	ug/kg	1.79	5.58
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.36	27.4	ug/kg	0	J
	unknown hydrocarbon	17.04	330	ug/kg	0	J
	unknown siloxane	17.2	140	ug/kg	0	J
	unknown hydrocarbon	18.09	172	ug/kg	0	J
	unknown hydrocarbon	18.19	6.71	ug/kg	0	J
	unknown hydrocarbon	18.33	275	ug/kg	0	J
	unknown hydrocarbon	18.46	55.8	ug/kg	0	J
	unknown hydrocarbon	19.05	33.9	ug/kg	0	J
	unknown siloxane	19.15	16.6	ug/kg	0	J
	unknown aromatic	19.23	13.5	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
InstName : VOA2
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 16 15:58:34 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1662114	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1341471	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	777642	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1662114	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1341471	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	777642	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	477141	51.19 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 102.38%		
43) Toluene-d8	14.310	98	1593002	50.54 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 101.08%		
61) Bromofluorobenzene	17.204	95	498426	40.76 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 81.52%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.266	62	702	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	7.385	59	110	N.D.	
9) Acetone	7.871	43	1046250	183.48 ug/L	100
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.405	41	109	N.D.	
13) Methyl acetate	8.523	43	10673	1.81 ug/L	95
14) Carbon disulfide	8.250	76	1755	N.D.	
15) Methylene chloride	8.701	84	11105	Below Cal	96
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.788	43	3272	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	1324	N.D.	
25) 1,1,1-Trichloroethane	11.535	97	110	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.938	62	355	N.D.	
31) Benzene	12.033	78	1215	N.D.	
32) Cyclohexene	12.377	67	504	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
InstName : VOA2
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 16 15:58:34 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D. d	
44) Toluene	14.381	91	67614	2.21 ug/L	100
45) trans-1,3-Dichloroprop...	14.381	75	288	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.061	43	1220	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	364	N.D.	
53) 1,1,1,2-Tetrachloroethane	16.148	131	1760	N.D.	
54) Ethylbenzene	16.077	91	8475	N.D.	
55) m,p-Xylenes	16.196	106	6852	0.49 ug/L #	1
56) o-Xylene	16.646	106	1826	N.D.	
57) Styrene	16.646	104	3089	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	0.000		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.370	83	318	N.D.	
63) 1,2,3-Trichloropropane	0.000		0m	N.D. d	
64) Bromobenzene	17.405	156	147	N.D.	
65) n-Propylbenzene	17.429	91	7984	N.D.	
66) 1,3,5-Trimethylbenzene	17.536	105	2774	N.D.	
67) 2-Chlorotoluene	0.000		0m	N.D. d	
68) 4-Chlorotoluene	0.000		0m	N.D. d	
69) tert-Butylbenzene	0.000		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	0.000		0m	N.D. d	
71) sec-Butylbenzene	0.000		0m	N.D. d	
72) 4-Isopropyltoluene	18.366	119	4024112	135.13 ug/L #	67 E
73) 1,3-Dichlorobenzene	18.401	146	710	N.D.	
74) 1,4-Dichlorobenzene	18.484	146	1505	N.D.	
75) n-Butylbenzene	0.000		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.899	146	336	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	490	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	20.892	128	986	N.D.	
81) 1,2,3-Trichlorobenzene	0.000		0	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	8.156	45	19223	41.54 ug/L #	58
88) Allyl chloride	8.452	41	111	N.D.	
89) tert-Butyl Alcohol	8.879	59	2148	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.788	43	3272	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
InstName : VOA2
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 16 15:58:34 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	0.000		0	N.D.	
96) Methacrylonitrile	11.227	41	586	N.D.	
97) Tetrahydrofuran	11.227	42	1106	N.D.	
98) Isobutyl alcohol	11.927	41	108	N.D.	
99) Methyl tert-amyl ether	0.000		0m	N.D. d	
100) Methyl methacrylate	0.000		0	N.D.	
101) 1,4-Dioxane	0.000		0	N.D.	
102) 2-Nitropropane	0.000		0	N.D.	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	0.000		0m	N.D. d	
107) cis-1,4-Dichloro-2-butene	0.000		0m	N.D. d	
108) Cyclohexanone	17.204	42	1000	N.D.	
109) trans-1,4-Dichloro-2-b...	0.000		0m	N.D. d	
110) Pentachloroethane	0.000		0	N.D.	
111) Benzyl chloride	0.000		0m	N.D. d	
112) bis(2-Chloroisopropyl)...	19.054	45	1387	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
InstName : VOA2
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 16 15:58:34 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

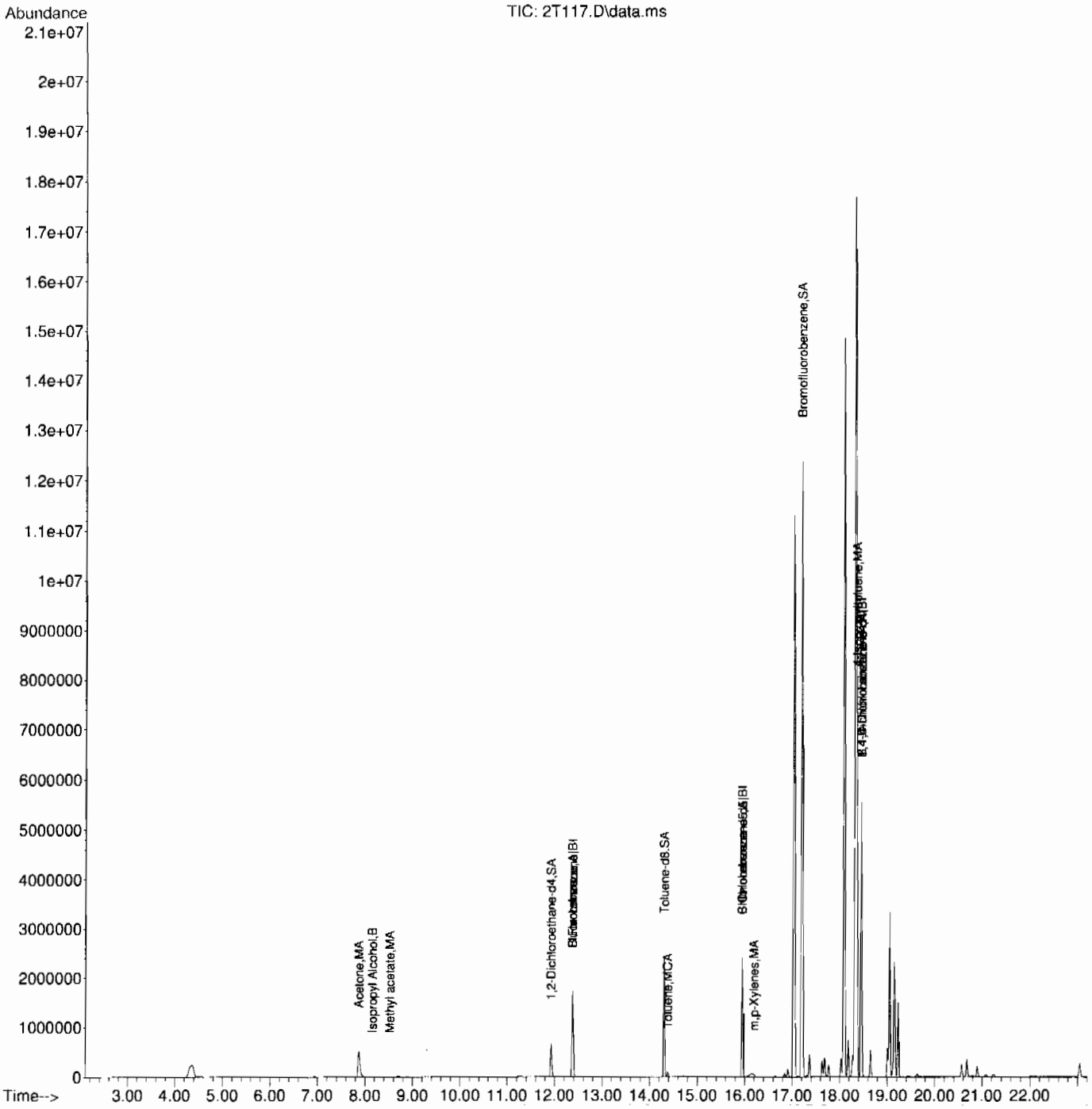

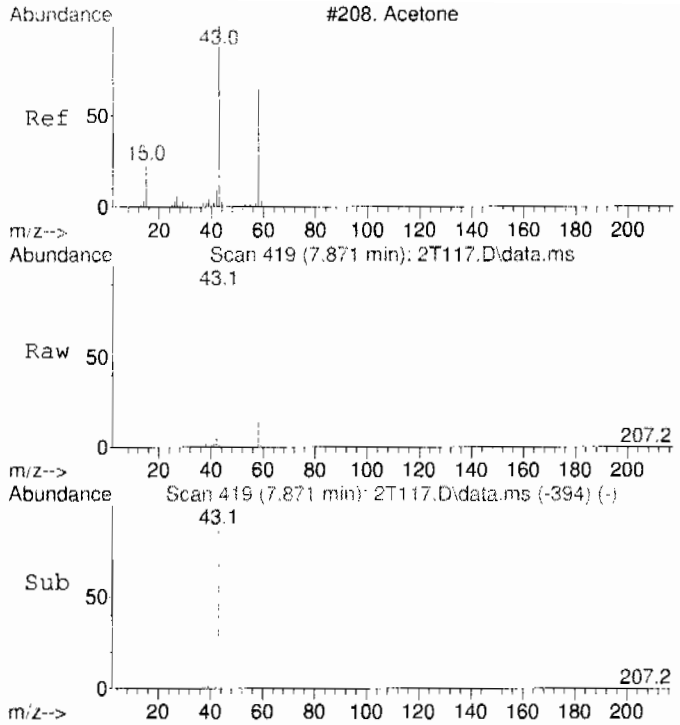

#9
Acetone
Concen: 183.48 ug/L
RT: 7.871 min Scan# 419
Delta R.T. -0.000 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 43 Resp: 1046250

Ion	Ratio	Lower	Upper
43	100		
58	29.3	0.0	59.3

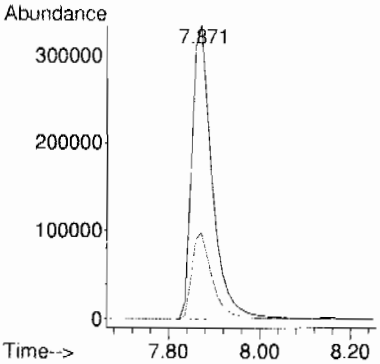

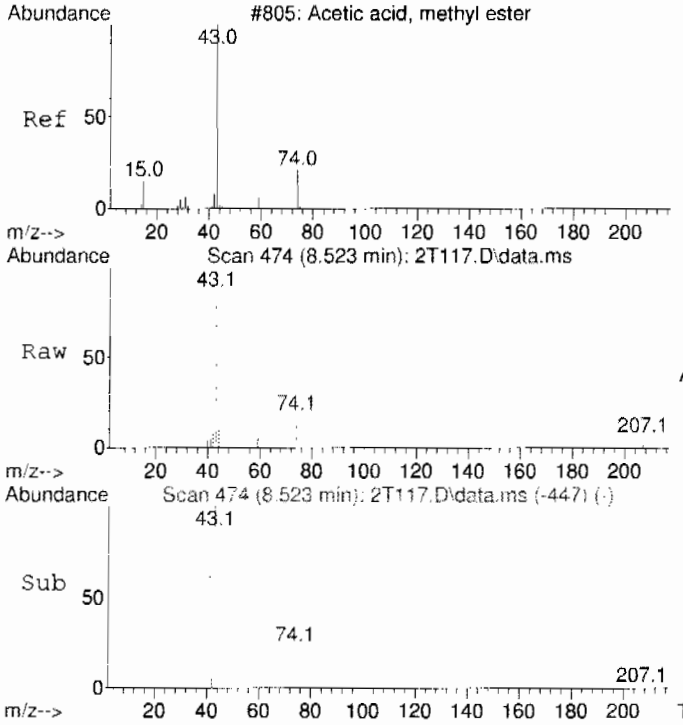

#13
Methyl acetate
Concen: 1.81 ug/L
RT: 8.523 min Scan# 474
Delta R.T. 0.023 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 43 Resp: 10673

Ion	Ratio	Lower	Upper
43	100		
74	16.8	0.0	49.3
59	6.4	0.0	37.5

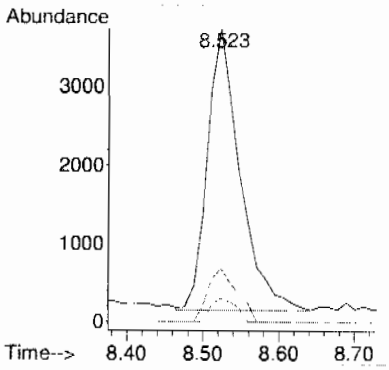

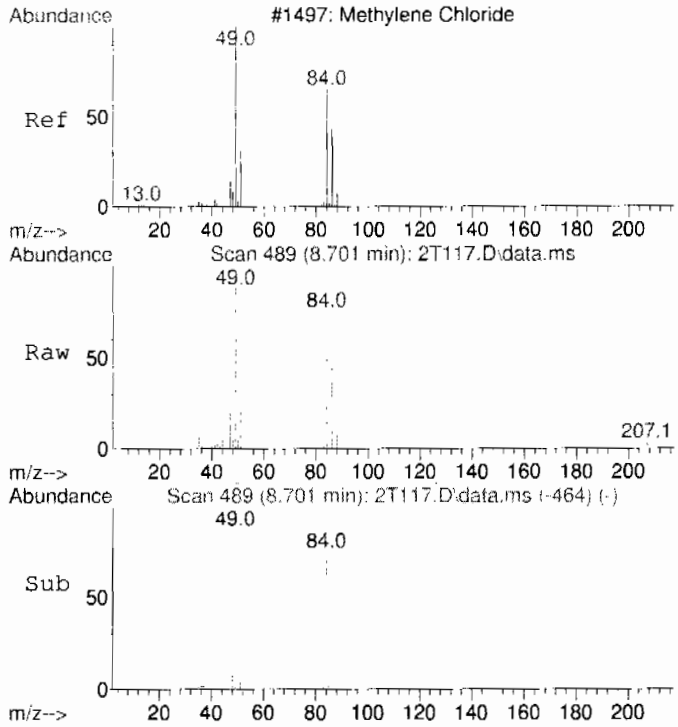

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 84 Resp: 11105

Ion	Ratio	Lower	Upper
84	100		
86	63.1	33.8	93.8
49	141.8	105.0	165.0

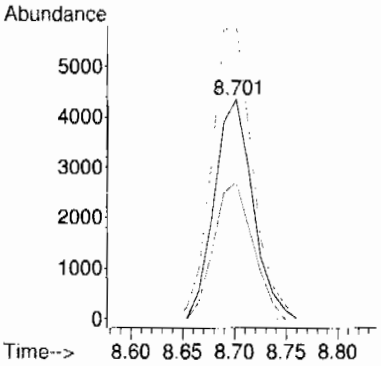

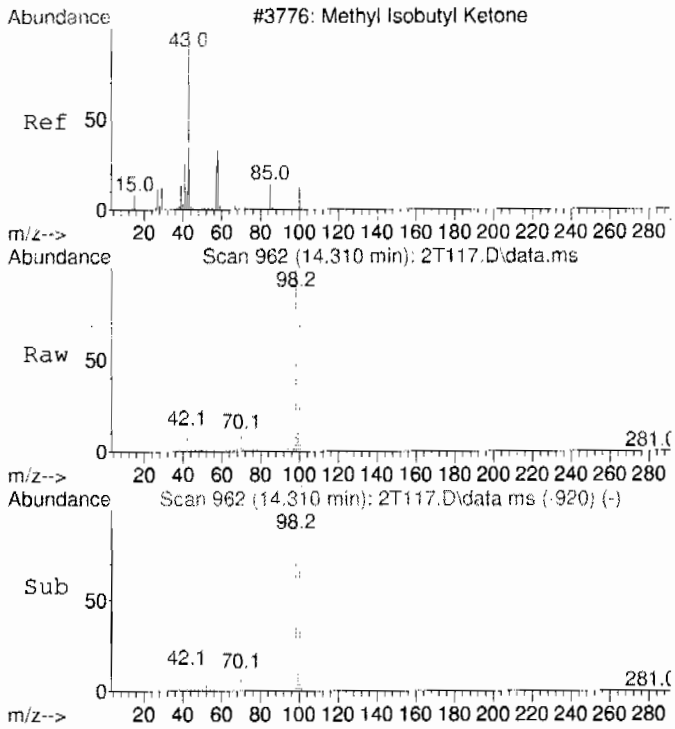

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.61 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 58 Resp: 13546

Ion	Ratio	Lower	Upper
58	100		
43	58.6	245.2	305.2#
100	8052.6	7.2	67.2#

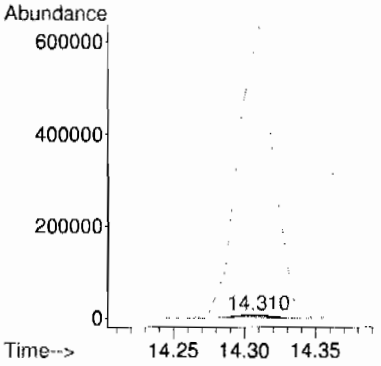

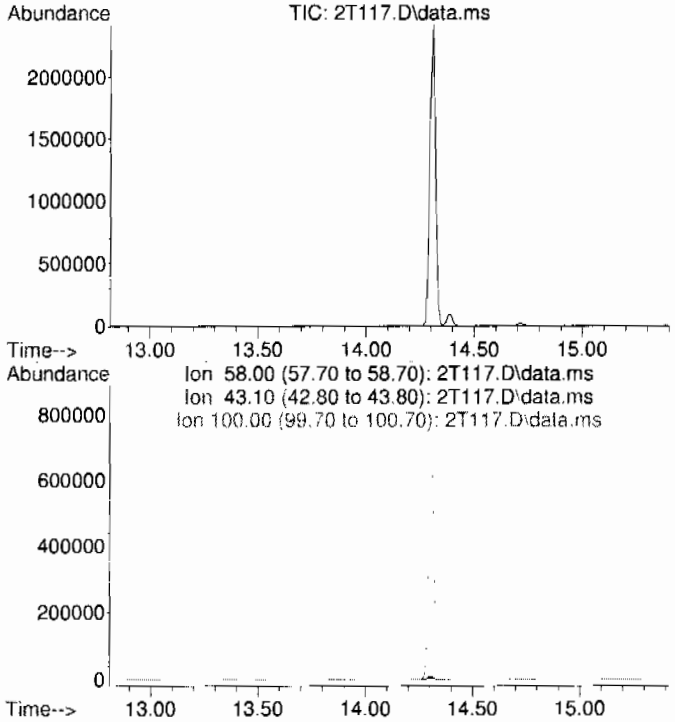

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

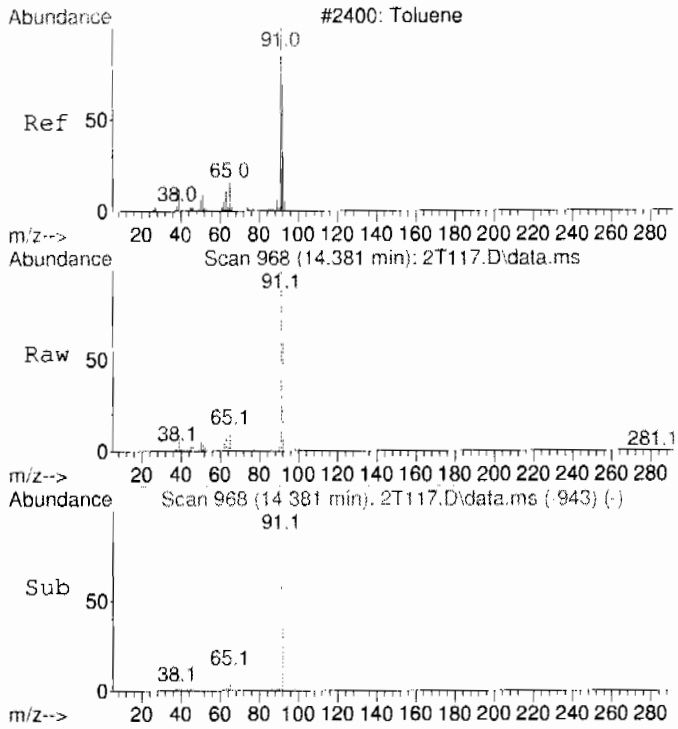

#44
Toluene
Concen: 2.21 ug/L
RT: 14.381 min Scan# 968
Delta R.T. 0.000 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 91 Resp: 67614

Ion	Ratio	Lower	Upper
91	100		
92	60.2	30.1	90.1

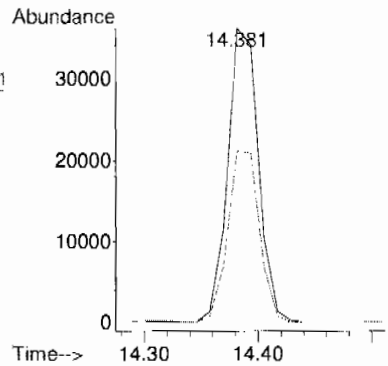

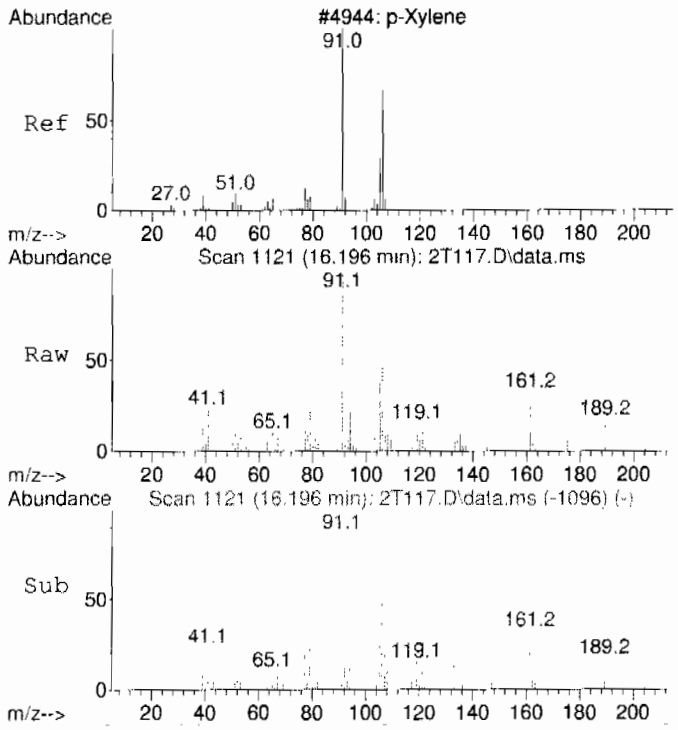

#55
m,p-Xylenes
Concen: 0.49 ug/L
RT: 16.196 min Scan# 1121
Delta R.T. -0.000 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion:106 Resp: 6852

Ion	Ratio	Lower	Upper
106	100		
91	0.0	161.2	221.2#

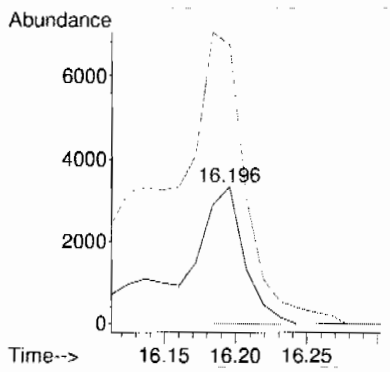

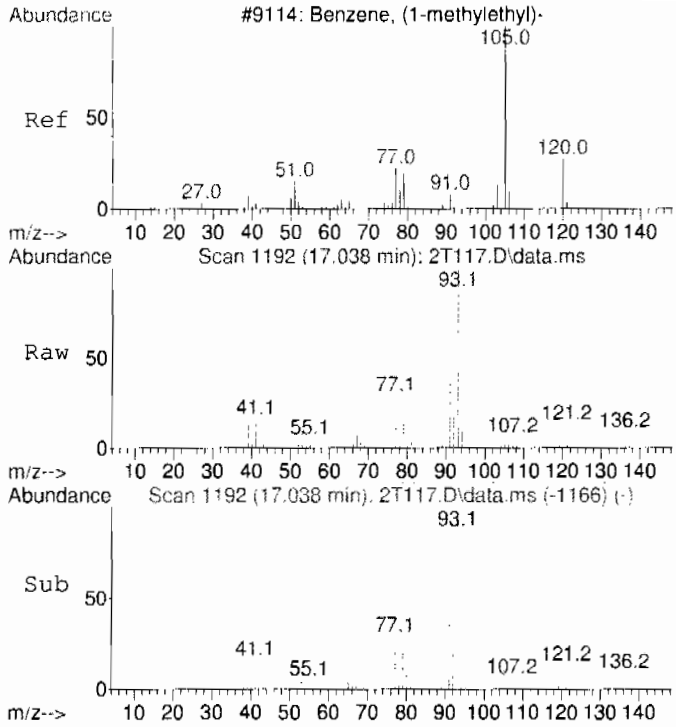

#60 BEFORE analyst integration
Isopropylbenzene
Concen: 18.87 ug/L
RT: 17.038 min Scan# 1192
Delta R.T. 0.012 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion:105 Resp: 624364

Ion	Ratio	Lower	Upper
105	100		
120	4.0	0.0	57.9

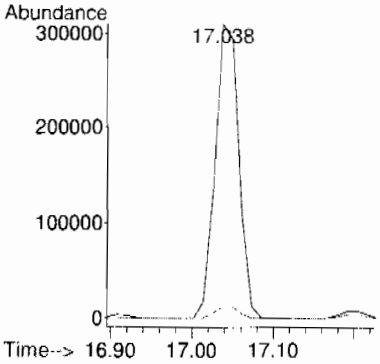

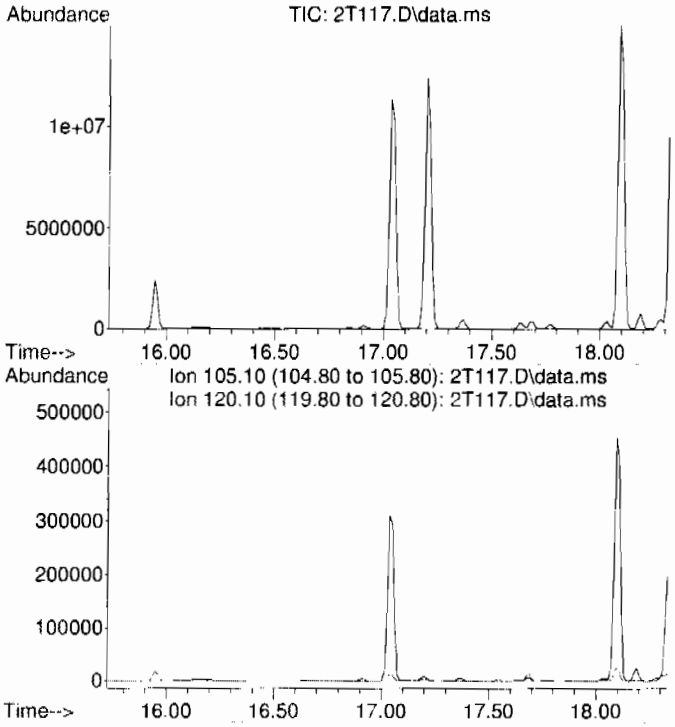

#60 AFTER analyst integration
Isopropylbenzene
Concen: N.D. DELETED
Expected RT: 17.03 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	27.9

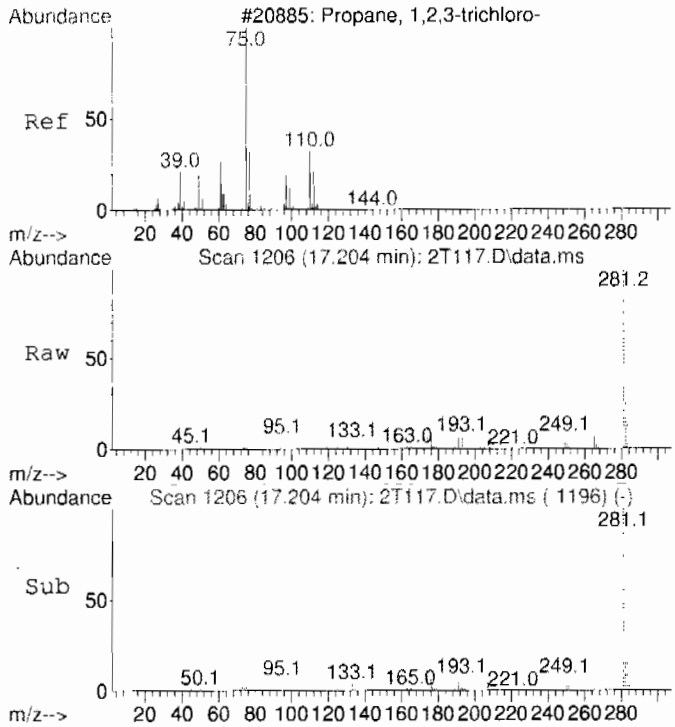

#63 BEFORE analyst integration
1,2,3-Trichloropropane
Concen: 8.36 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. -0.178 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion:110 Resp: 18661

Ion	Ratio	Lower	Upper
110	100		
75	1409.2	252.2	312.2#
77	29.1	629.3	689.3#

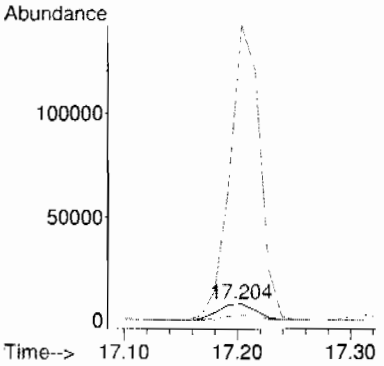

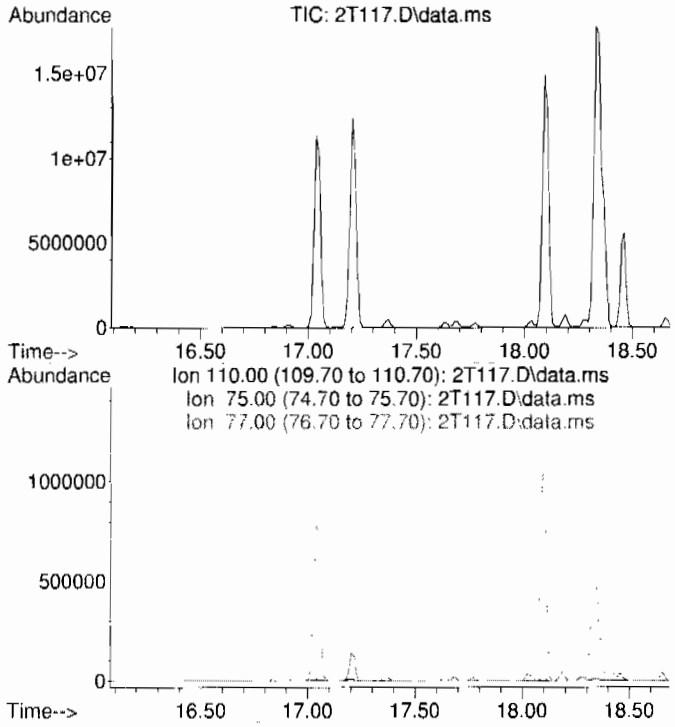

#63 AFTER analyst integration
1,2,3-Trichloropropane
Concen: N.D. DELETED
Expected RT: 17.38 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 110

Sig	Exp Ratio
110	100
75	282.2
77	659.3

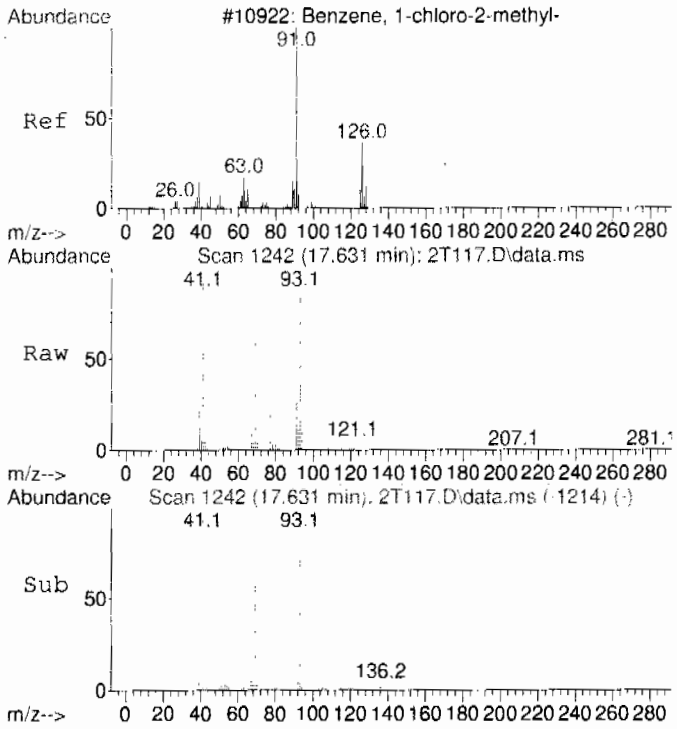

#67 BEFORE analyst integration
2-Chlorotoluene
Concen: 1.16 ug/L
RT: 17.631 min Scan# 1242
Delta R.T. 0.036 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 91 Resp: 30658

Ion	Ratio	Lower	Upper
91	100		
126	0.0	3.5	63.5#

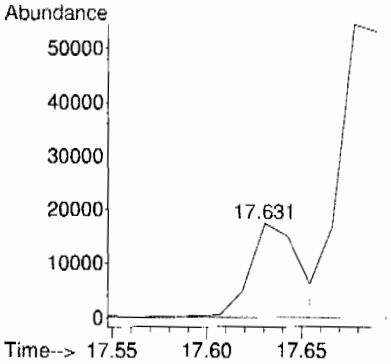

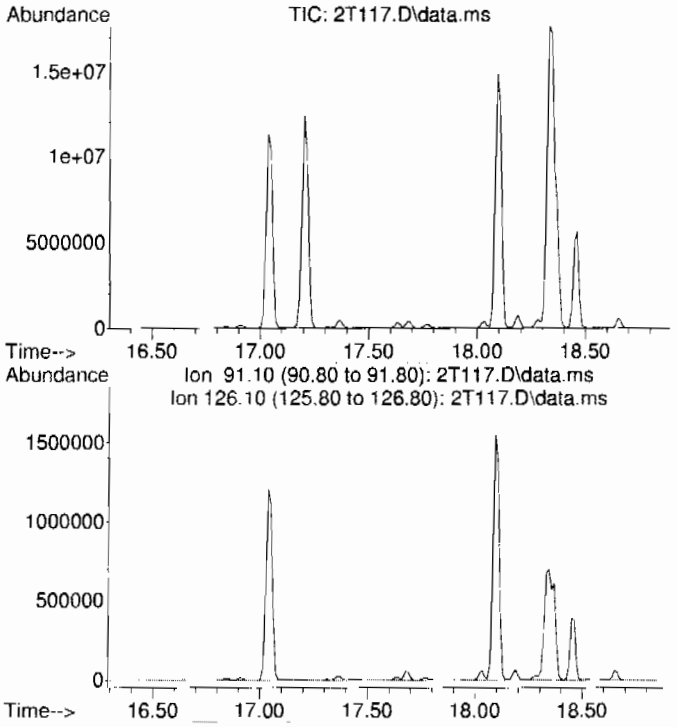

#67 AFTER analyst integration
2-Chlorotoluene
Concen: N.D. DELETED
Expected RT: 17.59 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	33.5

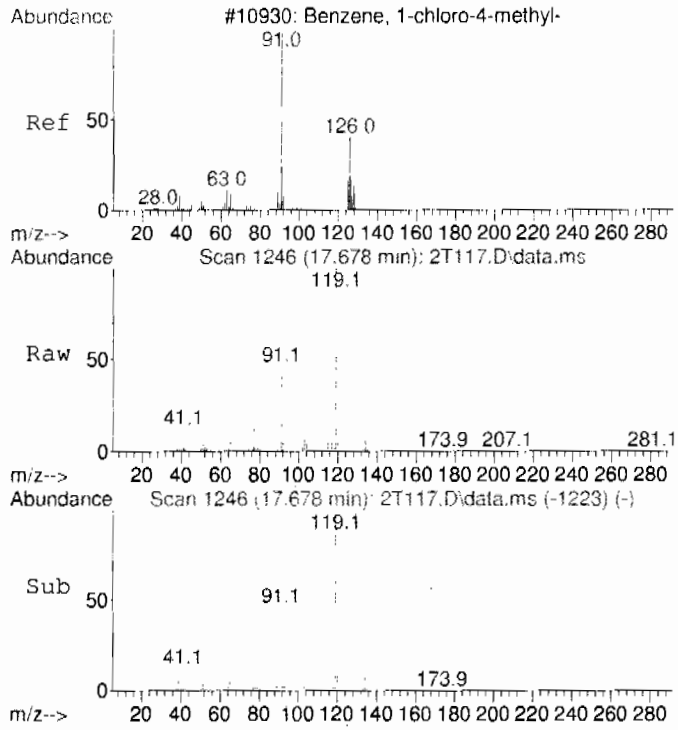

#68 BEFORE analyst integration
4-Chlorotoluene
Concen: 4.19 ug/L
RT: 17.678 min Scan# 1246
Delta R.T. -0.024 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 91 Resp: 101142

Ion	Ratio	Lower	Upper
91	100		
126	0.2	7.5	67.5#

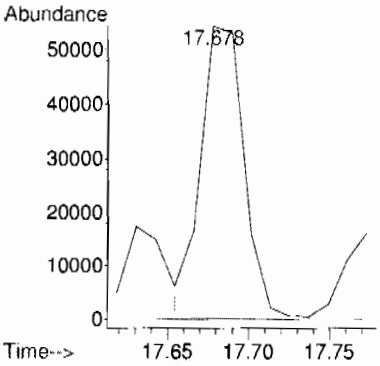

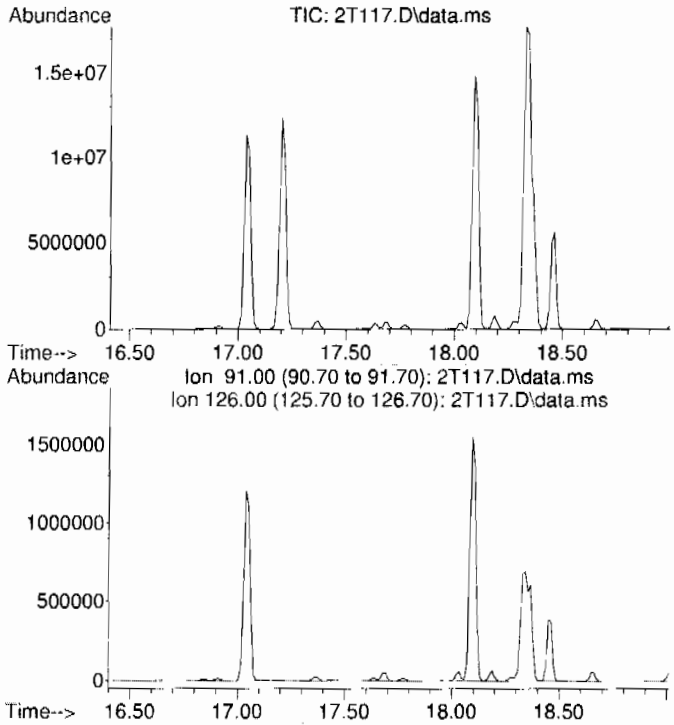

#68 AFTER analyst integration
4-Chlorotoluene
Concen: N.D. DELETED
Expected RT: 17.70 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	37.5

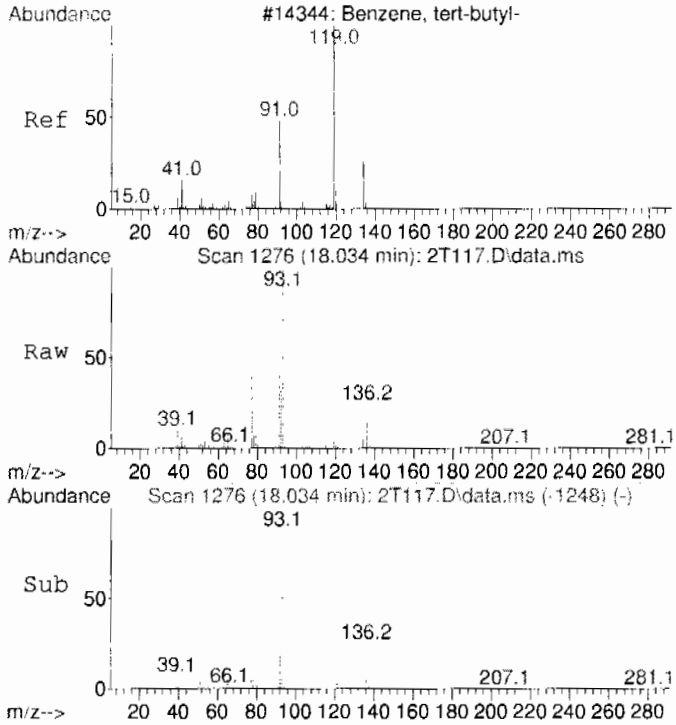

#69 BEFORE analyst integration
tert-Butylbenzene
Concen: 0.80 ug/L
RT: 18.034 min Scan# 1276
Delta R.T. 0.036 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion:119 Resp: 22467

Ion	Ratio	Lower	Upper
119	100		
91	462.1	36.1	96.1#
134	38.0	0.0	53.2

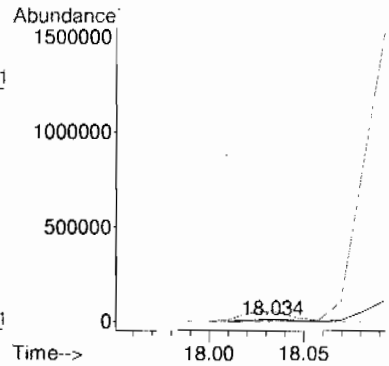

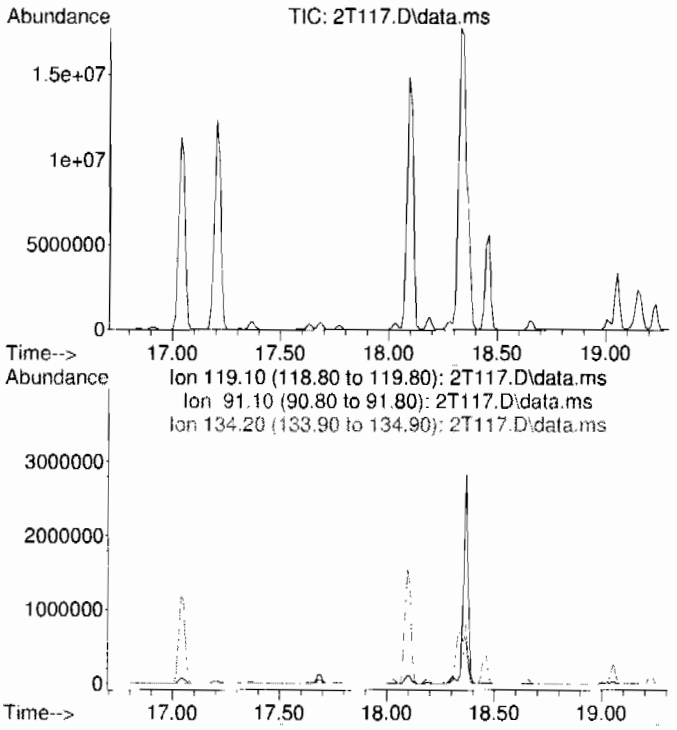

#69 AFTER analyst integration
tert-Butylbenzene
Concen: N.D. DELETED
Expected RT: 18.00 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 119

Sig	Exp Ratio
119	100
91	66.1
134	23.2

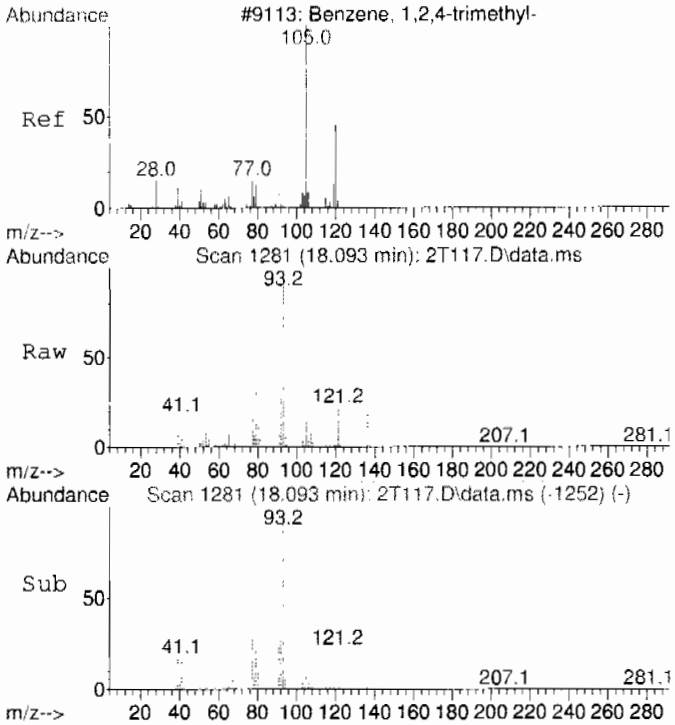

#70 BEFORE analyst integration
1,2,4-Trimethylbenzene
Concen: 31.72 ug/L
RT: 18.093 min Scan# 1281
Delta R.T. 0.047 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion:105 Resp: 900180

Ion	Ratio	Lower	Upper
105	100		
120	5.1	26.4	86.4#

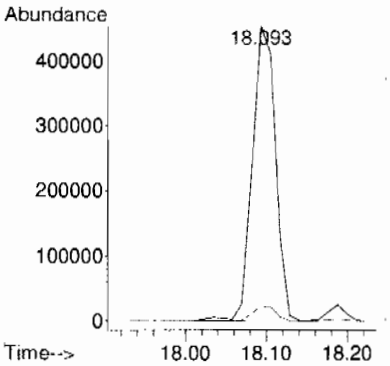

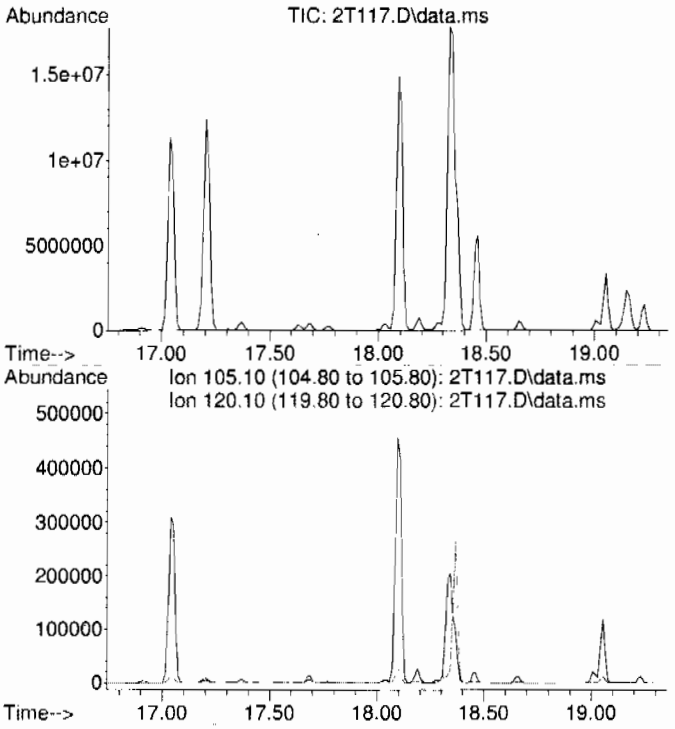

#70 AFTER analyst integration
1,2,4-Trimethylbenzene
Concen: N.D. DELETED
Expected RT: 18.05 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	56.4

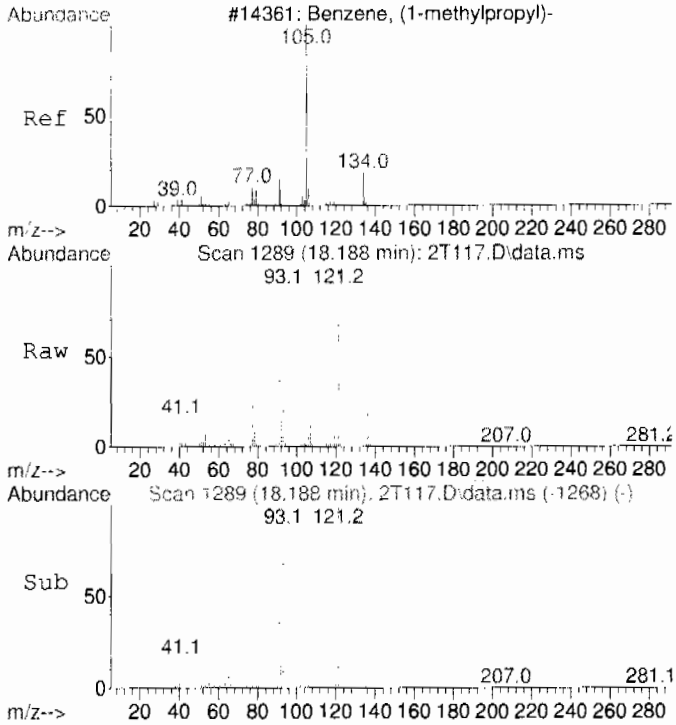

#71 BEFORE analyst integration
sec-Butylbenzene
Concen: 1.01 ug/L
RT: 18.188 min Scan# 1289
Delta R.T. -0.047 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion:105 Resp: 37513

Ion	Ratio	Lower	Upper
105	100		
134	15.4	0.0	51.8

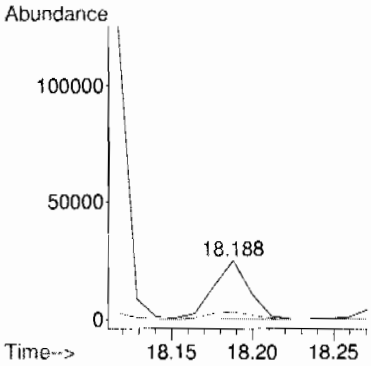

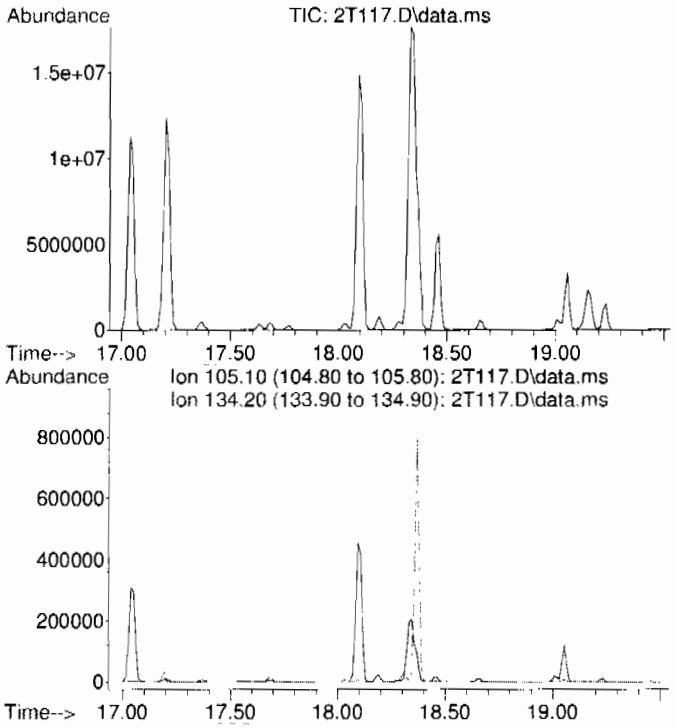

#71 AFTER analyst integration
sec-Butylbenzene
Concen: N.D. DELETED
Expected RT: 18.23 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
134	21.8

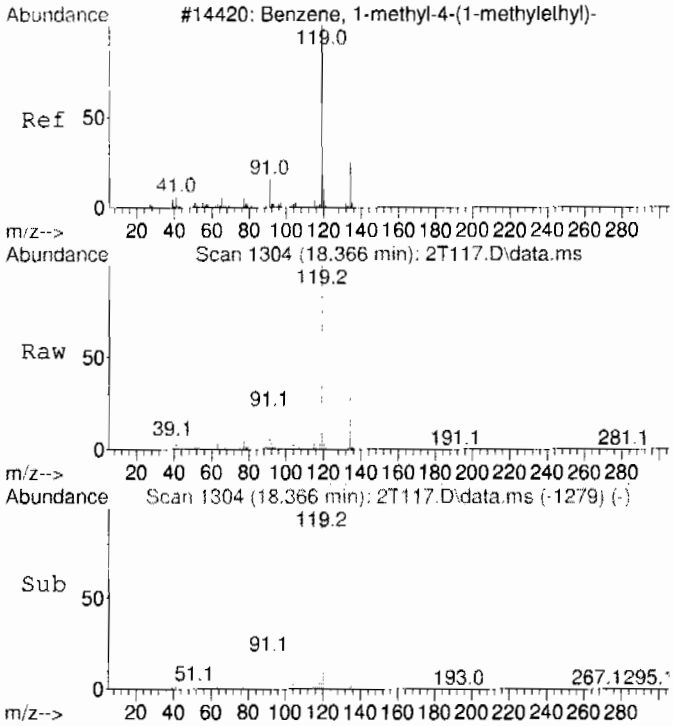

#72
4-Isopropyltoluene
Concen: 135.13 ug/L
RT: 18.366 min Scan# 1304
Delta R.T. -0.000 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion:119 Resp: 4024112

Ion	Ratio	Lower	Upper
119	100		
134	28.3	0.0	58.3
91	58.3	0.0	52.0#

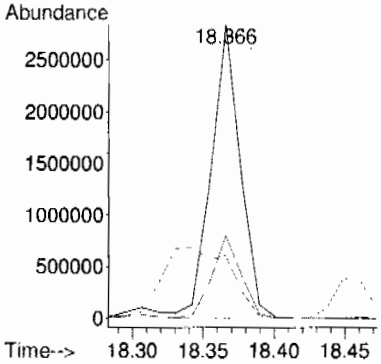

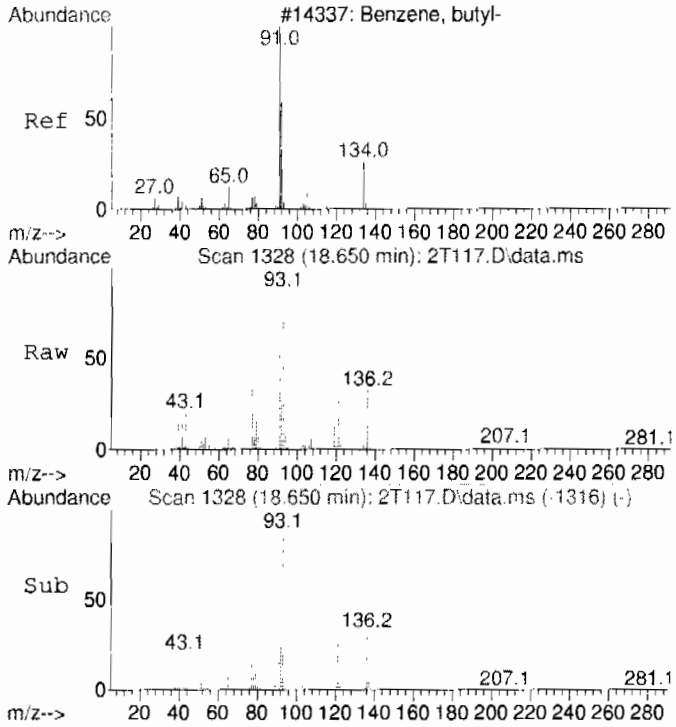

#75 BEFORE analyst integration
n-Butylbenzene
Concen: 3.66 ug/L
RT: 18.650 min Scan# 1328
Delta R.T. -0.155 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 91 Resp: 103610

Ion	Ratio	Lower	Upper
91	100		
92	45.1	25.2	85.2
134	7.0	0.0	59.1

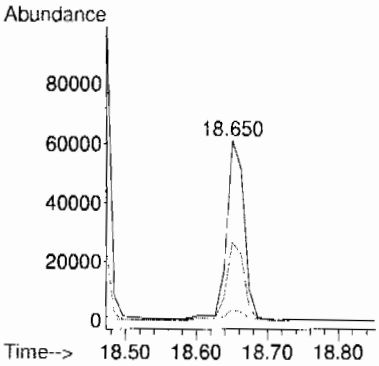

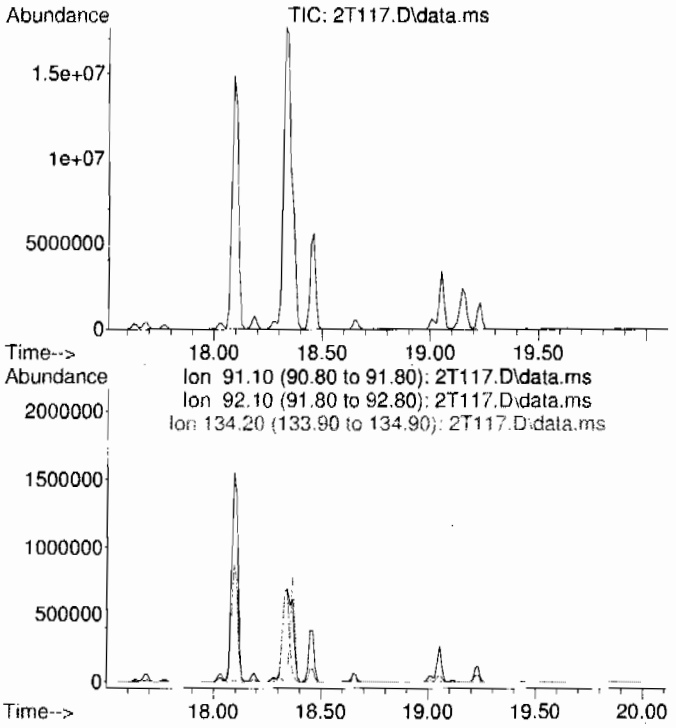

#75 AFTER analyst integration
n-Butylbenzene
Concen: N.D. DELETED
Expected RT: 18.81 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	55.2
134	29.1

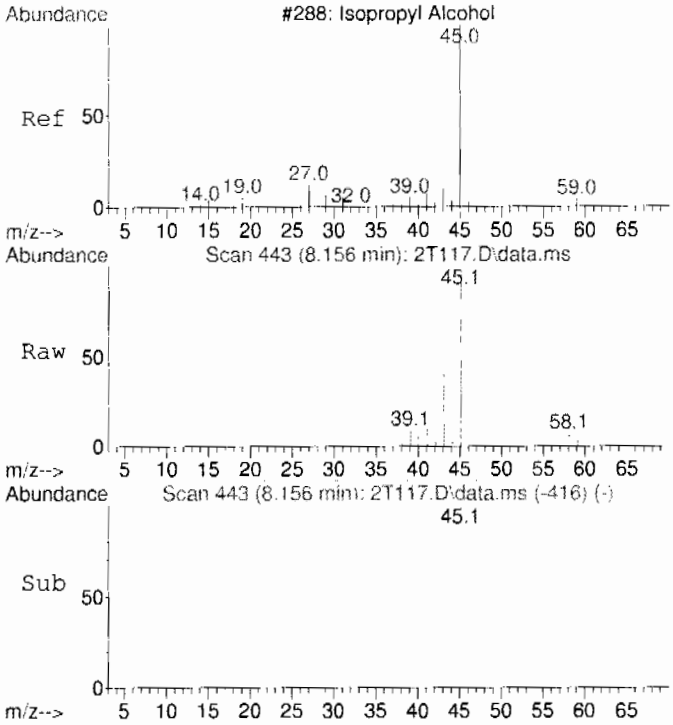

#87
Isopropyl Alcohol
Concen: 41.54 ug/L
RT: 8.156 min Scan# 443
Delta R.T. 0.024 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 45 Resp: 19223

Ion	Ratio	Lower	Upper
45	100		
43	0.0	0.0	49.0

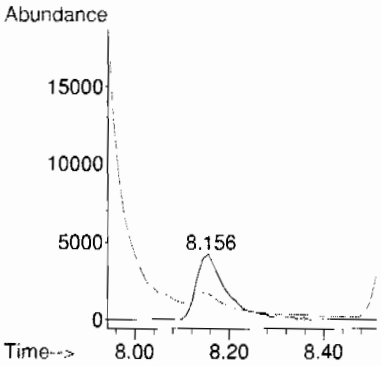

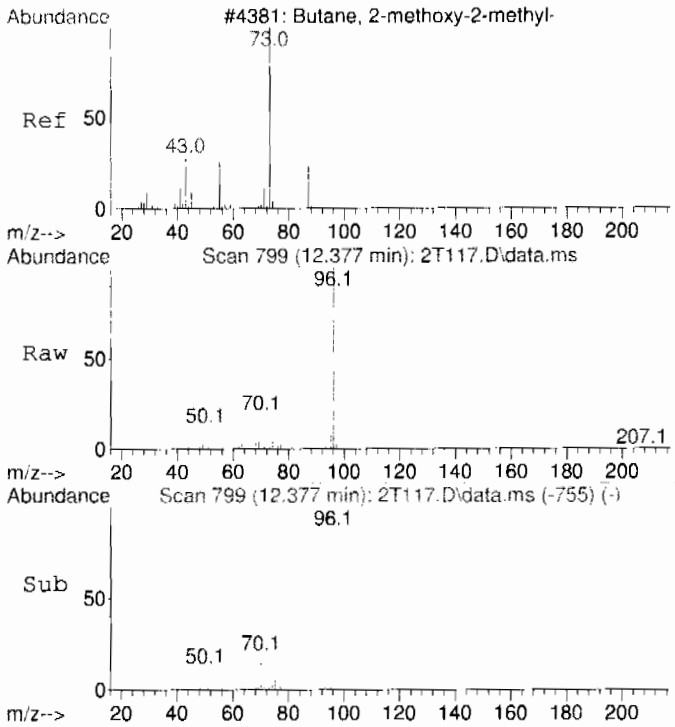

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.98 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 73 Resp: 18258

Ion	Ratio	Lower	Upper
73	100		
55	8.8	5.2	65.2
87	0.0	0.0	54.7

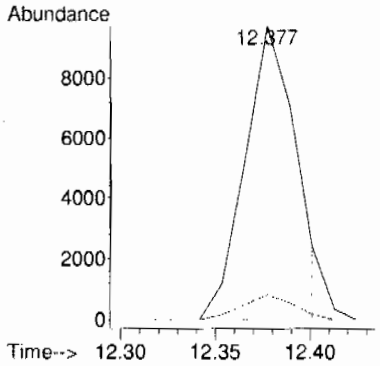

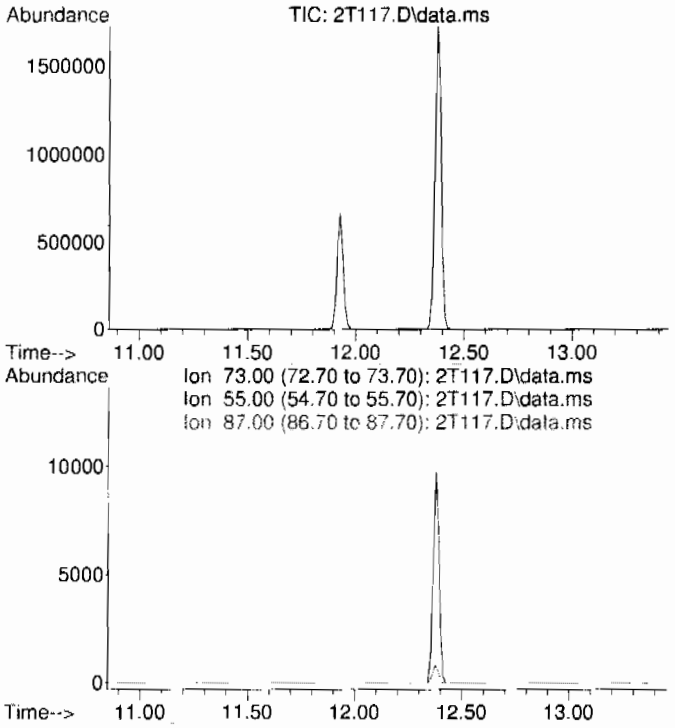

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

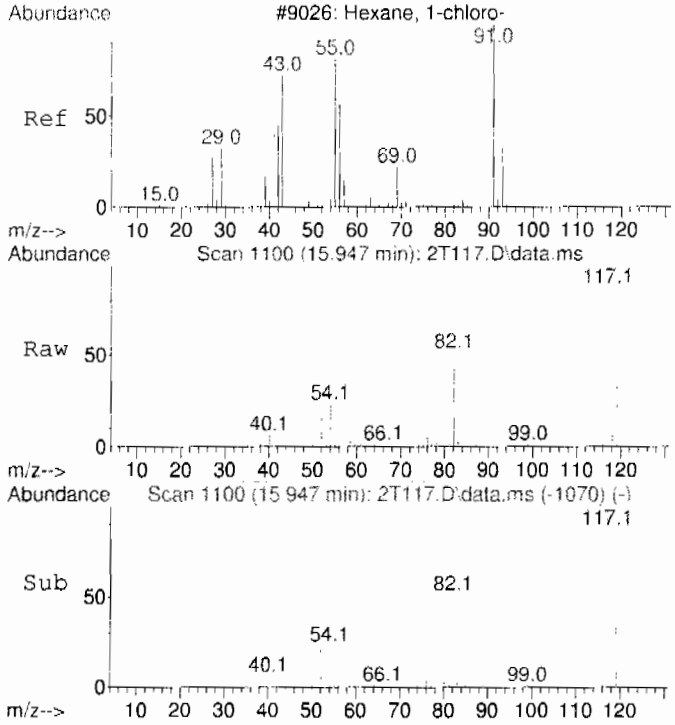

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 2.10 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 55 Resp: 12851

Ion	Ratio	Lower	Upper
55	100		
91	20.0	113.2	173.2#
56	61.9	30.3	90.3

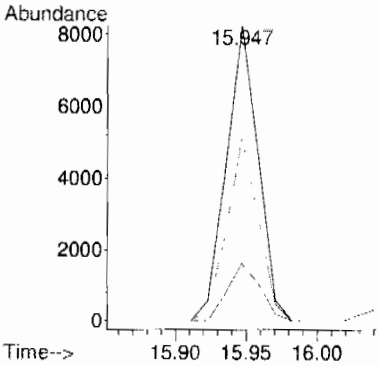

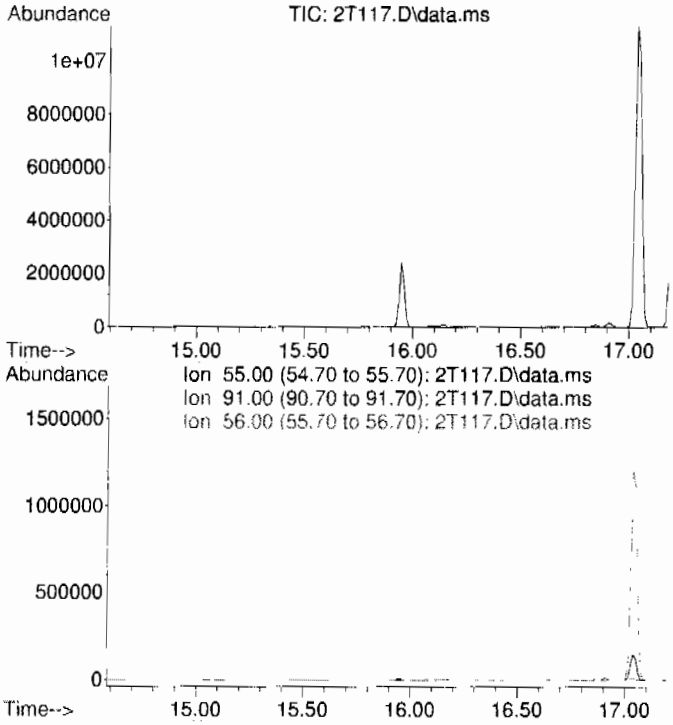

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

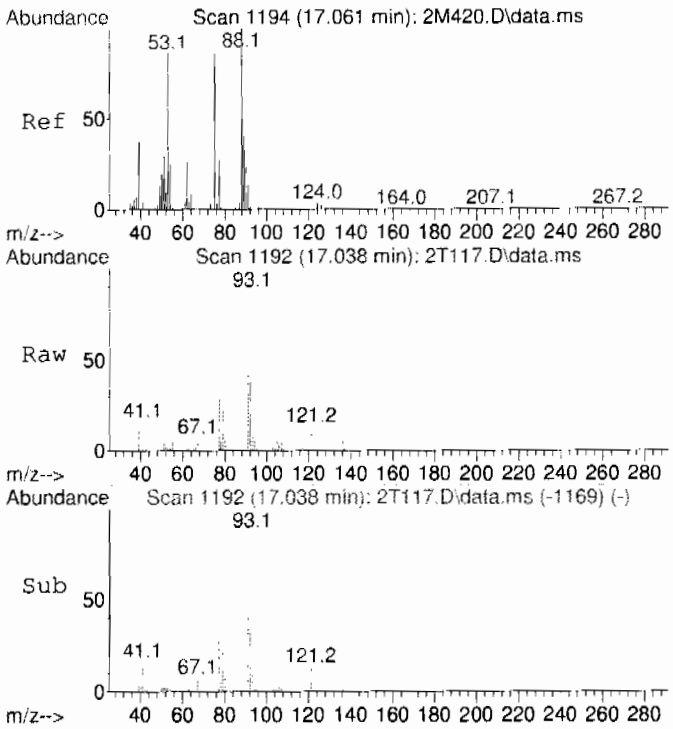

#107 BEFORE analyst integration
cis-1,4-Dichloro-2-butene
Concen: 200.36 ug/L
RT: 17.038 min Scan# 1192
Delta R.T. -0.024 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 53 Resp: 490556

Ion	Ratio	Lower	Upper
53	100		
88	0.4	80.3	140.3#
77	328.5	1.2	61.2#

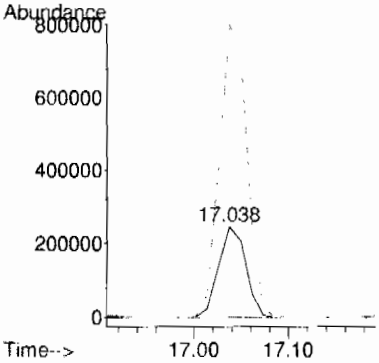

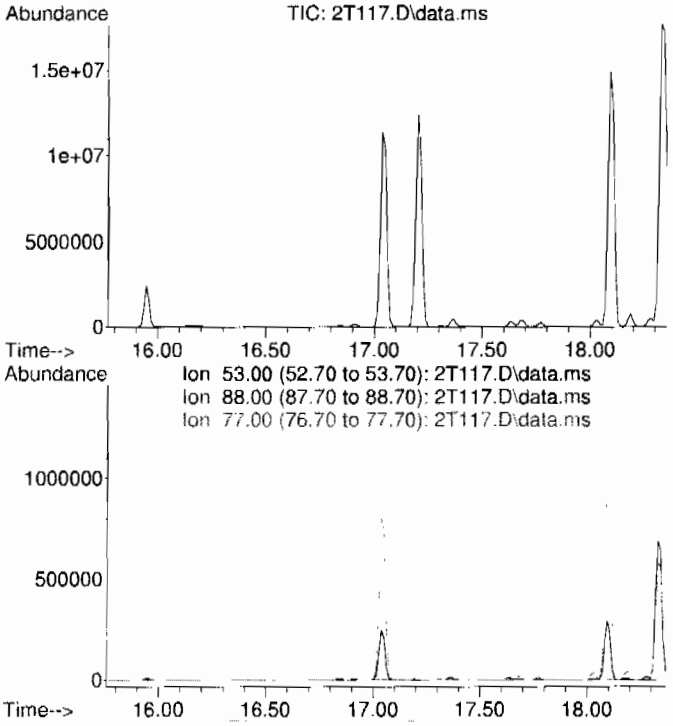

#107 AFTER analyst integration
cis-1,4-Dichloro-2-butene
Concen: N.D. DELETED
Expected RT: 17.06 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	110.3
77	31.2

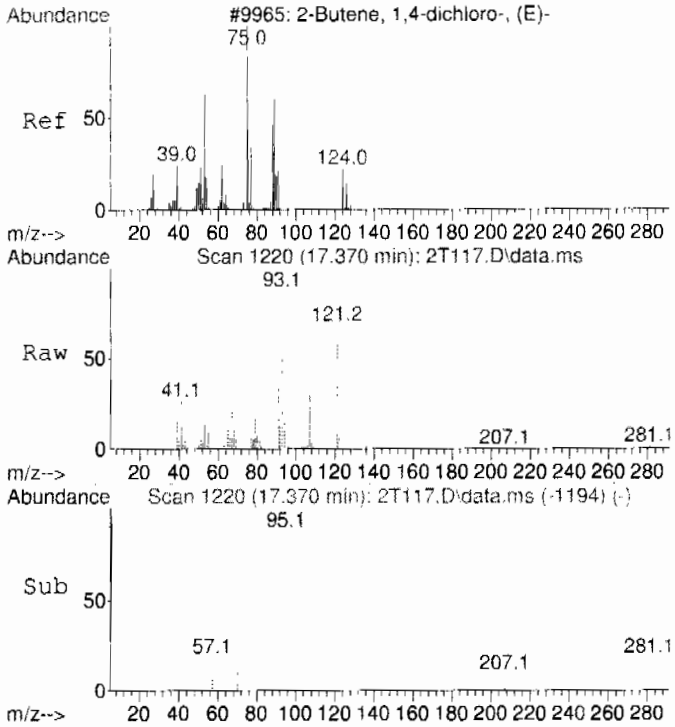

#109 BEFORE analyst integration
trans-1,4-Dichloro-2-butene
Concen: 9.04 ug/L
RT: 17.370 min Scan# 1220
Delta R.T. 0.012 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 53 Resp: 21584

Ion	Ratio	Lower	Upper
53	100		
88	0.0	21.1	81.1#
75	1.8	88.8	148.8#

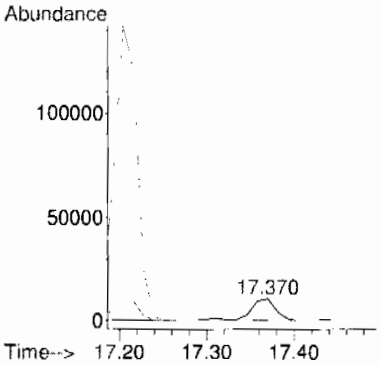

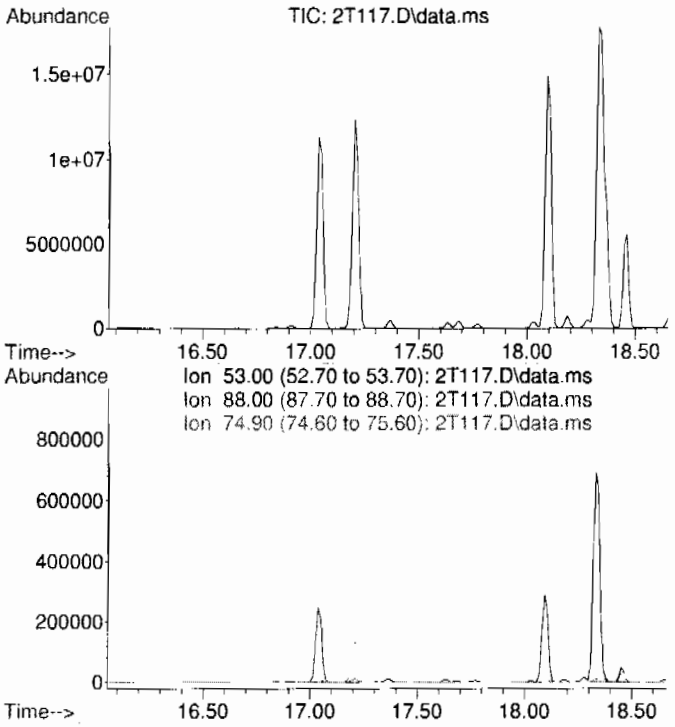

#109 AFTER analyst integration
trans-1,4-Dichloro-2-butene
Concen: N.D. DELETED
Expected RT: 17.36 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	51.1
75	118.8

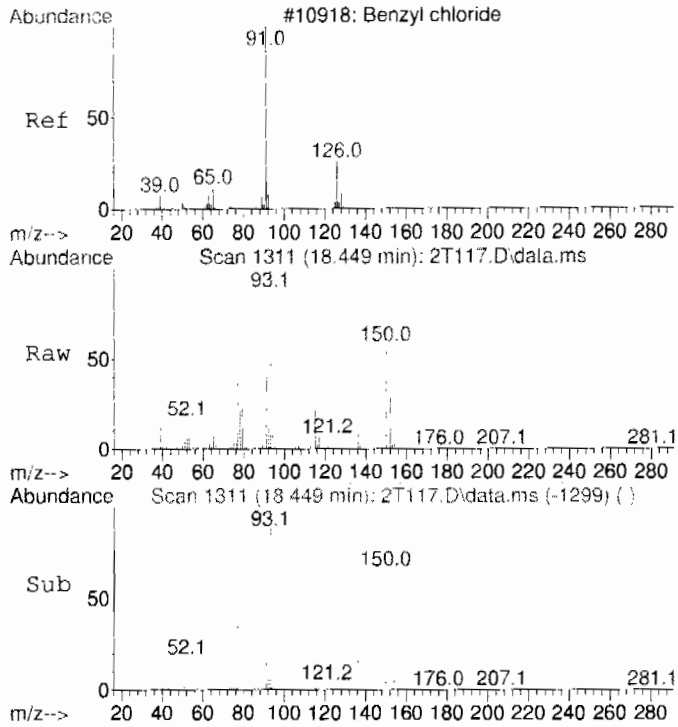

#111 BEFORE analyst integration
Benzyl chloride
Concen: 54.40 ug/L
RT: 18.449 min Scan# 1311
Delta R.T. -0.154 min
Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 91 Resp: 693084

Ion	Ratio	Lower	Upper
91	100		
126	0.0	0.0	53.5
65	17.6	0.0	41.0

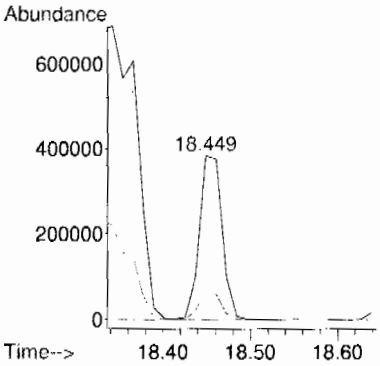

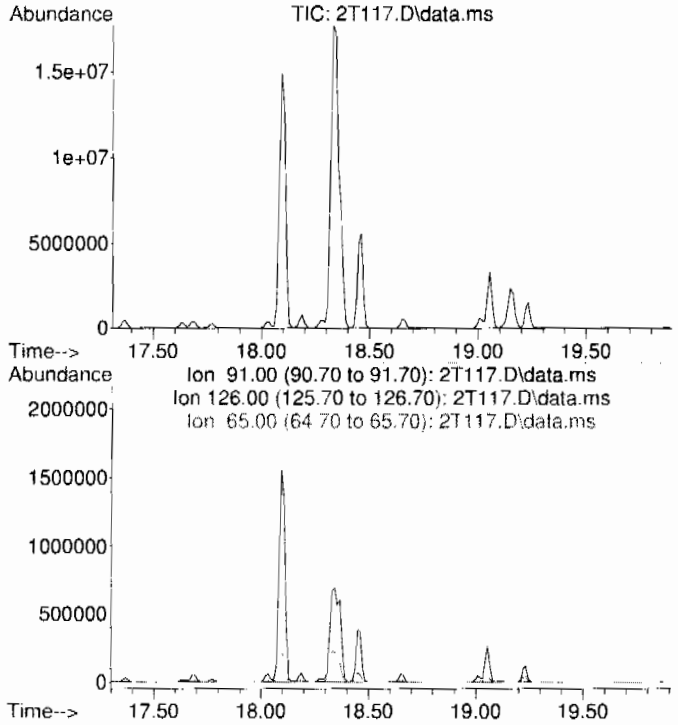

#111 AFTER analyst integration
Benzyl chloride
Concen: N.D. DELETED
Expected RT: 18.60 min

Lab File: 2T117.D
Acq: 6 Jul 2009 2:14 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	23.5
65	11.0

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T117.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.360	142	153	171	rBB	238307	1692825	3.53%	0.978%
2	4.687	172	175	178	rBB	241	545	0.00%	0.000%
3	4.969	190	194	206	rBV	347	3008	0.01%	0.002%
4	6.021	261	263	282	rBV	765	9055	0.02%	0.005%
5	6.922	336	339	353	rBV3	1314	5013	0.01%	0.003%
6	7.159	355	359	376	rBV2	5338	33068	0.07%	0.019%
7	7.871	414	419	438	rBV	510259	1600761	3.33%	0.925%
8	8.144	439	442	463	rVB2	7954	41002	0.09%	0.024%
9	8.523	470	474	483	rBV	5152	14305	0.03%	0.008%
10	8.701	484	489	499	rVB	19223	49760	0.10%	0.029%
11	8.867	500	503	521	rVB4	1658	6269	0.01%	0.004%
12	9.673	567	571	577	rVB	3774	9800	0.02%	0.006%
13	10.563	643	646	662	rVB	1251	3278	0.01%	0.002%
14	10.942	675	678	688	rVB	1755	4718	0.01%	0.003%
15	11.227	699	702	705	rBV2	2441	4617	0.01%	0.003%
16	11.927	755	761	768	rBV	663937	1331229	2.77%	0.769%
17	12.377	794	799	812	rVB	1725175	3451808	7.19%	1.994%
18	13.018	851	853	875	rVB3	1676	8879	0.02%	0.005%
19	14.049	937	940	948	rVB4	1597	4306	0.01%	0.002%
20	14.310	957	962	966	rBV	2424064	4274219	8.90%	2.469%
21	14.381	966	968	977	rVB	89554	165427	0.34%	0.096%
22	14.713	992	996	1004	rVB	20222	40931	0.09%	0.024%
23	15.947	1094	1100	1106	rBV	2407599	3868637	8.06%	2.235%
24	16.136	1106	1116	1149	rVB4	60336	425973	0.89%	0.246%
25	16.646	1156	1159	1171	rBV	10241	18212	0.04%	0.011%
26	16.848	1171	1176	1178	rBV	71791	125683	0.26%	0.073%
27	16.907	1178	1181	1187	rVB	155372	276911	0.58%	0.160%
28	17.038	1187	1192	1200	rBV	11310064	22869427	47.64%	13.210%
29	17.204	1200	1206	1212	rVB	12352125	24413387	50.86%	14.102%
30	17.370	1212	1220	1224	rBV	453452	866300	1.80%	0.500%
31	17.631	1238	1242	1244	rBV	325142	523098	1.09%	0.302%
32	17.690	1244	1247	1250	rVV	378452	711864	1.48%	0.411%
33	17.773	1250	1254	1260	rVB	237318	412943	0.86%	0.239%
34	17.951	1265	1269	1271	rVB	7363	14012	0.03%	0.008%
35	18.093	1271	1281	1286	rBV	14848323	30060867	62.62%	17.364%
36	18.188	1286	1289	1292	rVV	750766	1171871	2.44%	0.677%
37	18.330	1292	1301	1308	rVV2	17671243	48004615	100.00%	27.729%

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

38	18.461	1308	1312	1322	rVV	5562566	9744806	20.30%	5.629%
39	18.650	1322	1328	1339	rVB	541658	923965	1.92%	0.534%
40	19.054	1354	1362	1365	rBV	3333157	5916022	12.32%	3.417%
41	19.148	1365	1370	1374	rVV2	2326209	5077356	10.58%	2.933%
42	19.231	1374	1377	1390	rVB	1501822	2349259	4.89%	1.357%
43	19.445	1392	1395	1406	rVB2	18210	41951	0.09%	0.024%
44	19.635	1406	1411	1415	rBV	59726	129219	0.27%	0.075%
45	19.860	1428	1430	1437	rVB	15279	26433	0.06%	0.015%
46	20.571	1485	1490	1495	rBV	261529	552155	1.15%	0.319%
47	20.678	1495	1499	1507	rVV	354113	663146	1.38%	0.383%
48	20.892	1513	1517	1530	rBV	209191	425401	0.89%	0.246%
49	21.081	1530	1533	1541	rVB	35556	83871	0.17%	0.048%
50	23.050	1693	1699	1705	rBV	265356	666763	1.39%	0.385%

Sum of corrected areas: 173118970

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

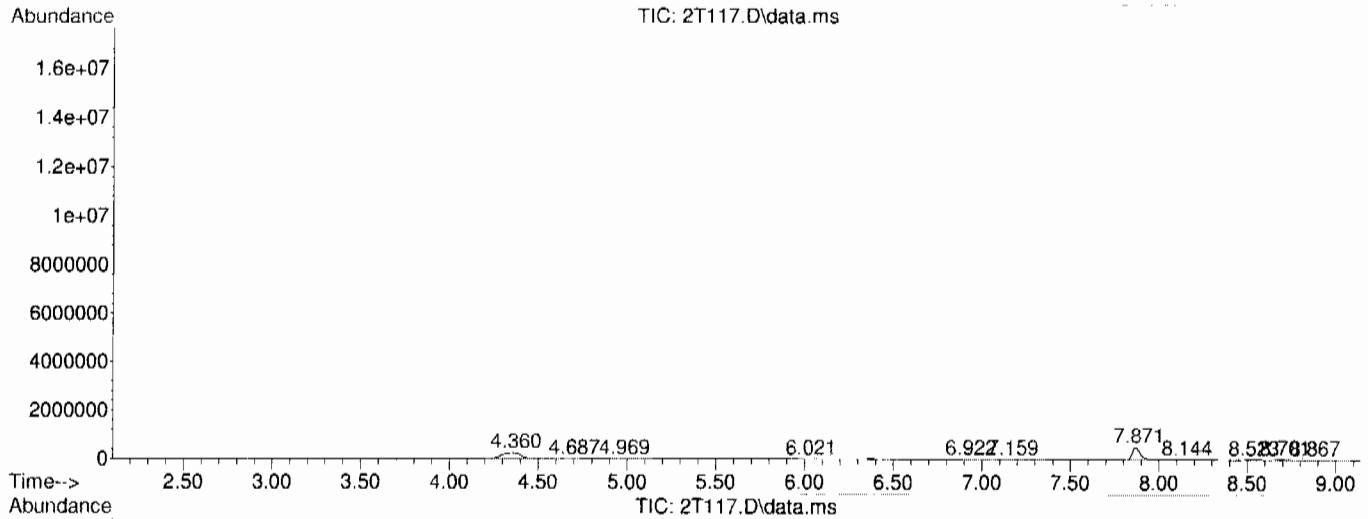

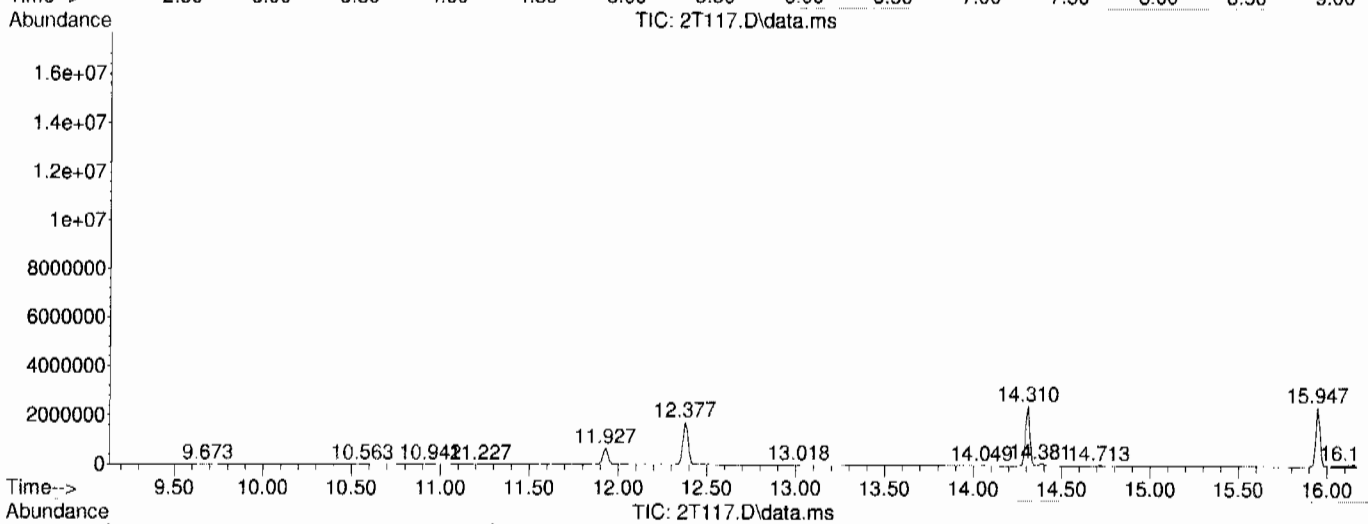

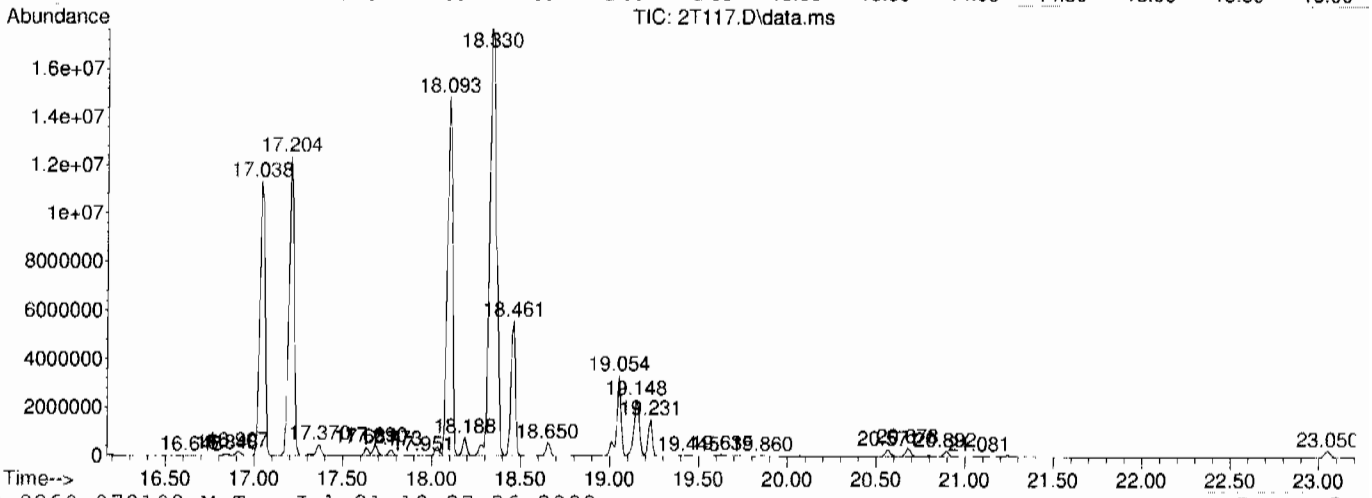

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.360	24.52 ug/L	1692830	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

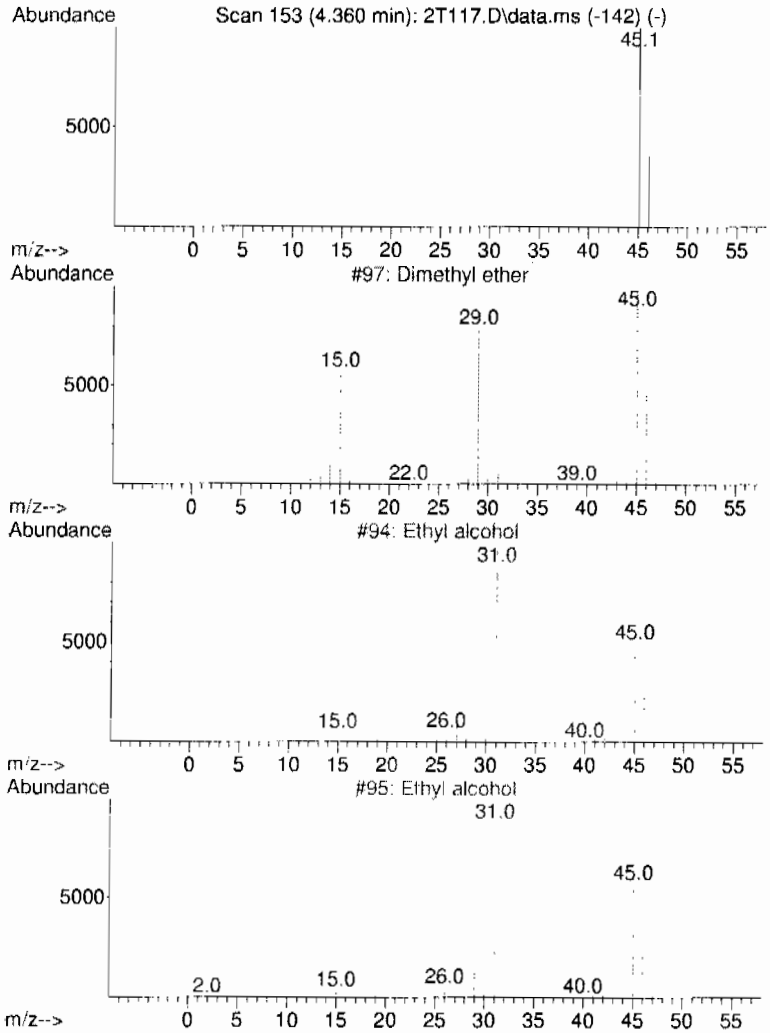

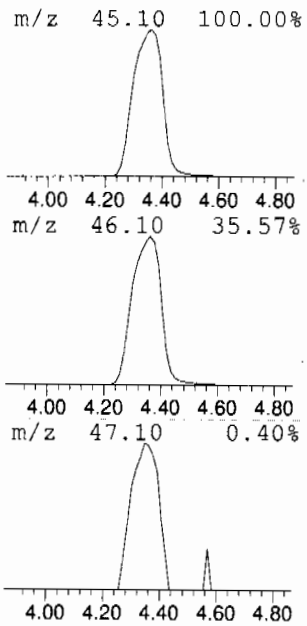

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 2 unknown hydrocarbon Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.038	295.57 ug/L	22869400	B Chlorobenzene-d5	15.947

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	.alpha.-Pinene	136	C10H16	000080-56-8	96
2	1S-.alpha.-Pinene	136	C10H16	007785-26-4	96
3	1R-.alpha.-Pinene	136	C10H16	007785-70-8	96
4	1R-.alpha.-Pinene	136	C10H16	007785-70-8	95
5	Bicyclo[3.1.1]hept-2-ene, 3,6,6-...	136	C10H16	004889-83-2	94

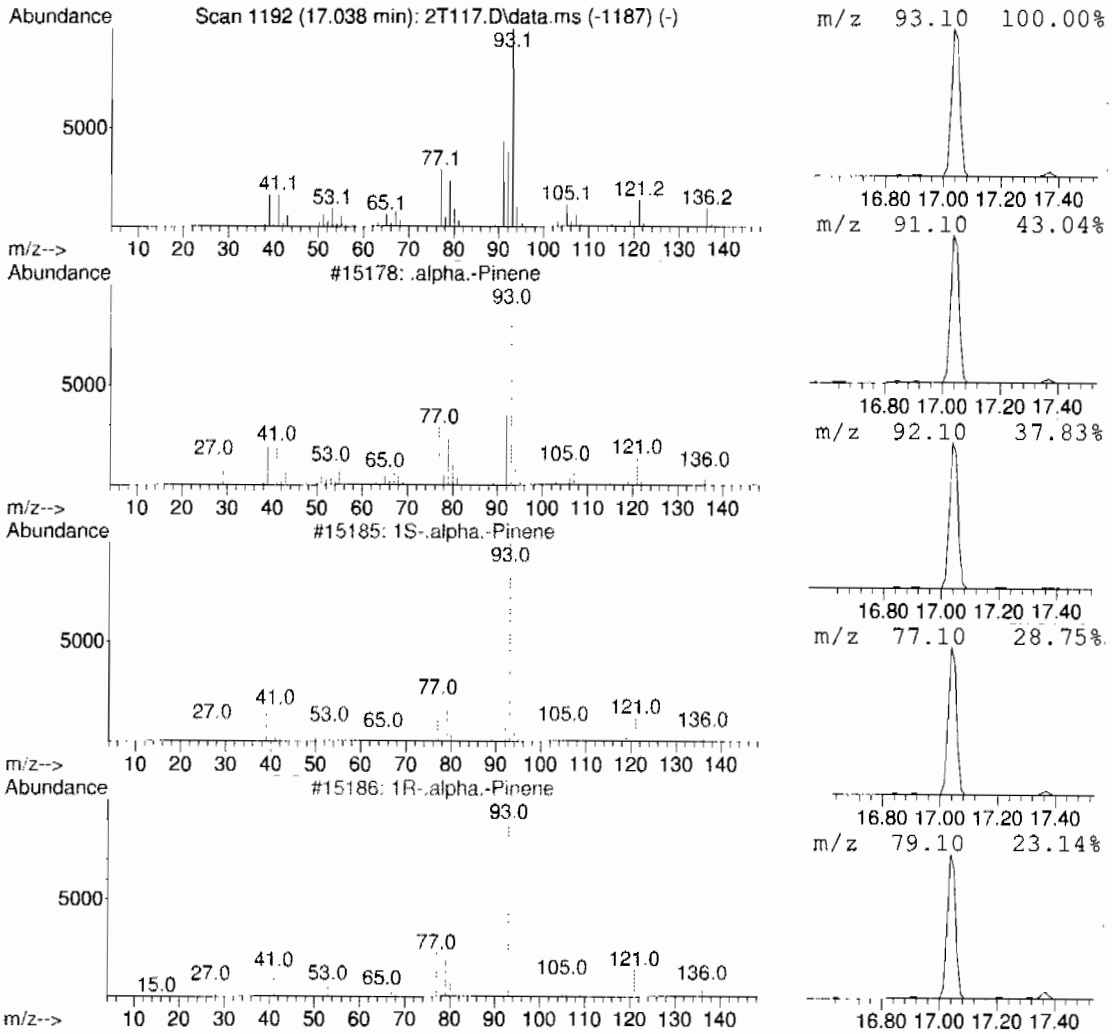

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 3 unknown hydrocarbon Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.093	154.24 ug/L	30060900	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Carene	136	C10H16	013466-78-9	96
2	Cyclopropane, 1,1-dimethyl-2-(3-...	136	C10H16	068998-21-0	95
3	Bicyclo[4.1.0]hept-3-ene, 3,7,7-...	136	C10H16	000498-15-7	94
4	3-Carene	136	C10H16	013466-78-9	94
5	1S-.alpha.-Pinene	136	C10H16	007785-26-4	94

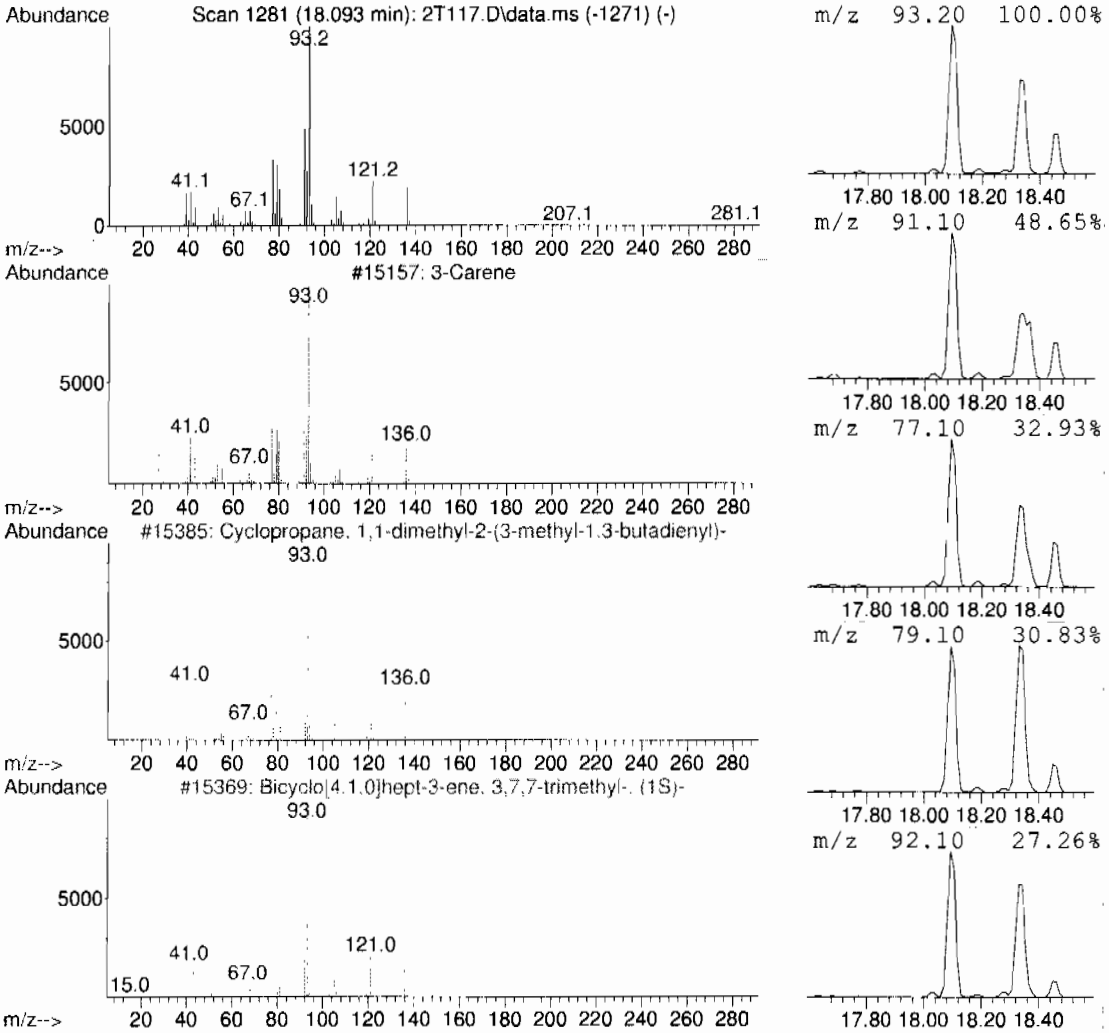

Library Search Compound Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On    :  6 Jul 2009   2:14 pm
Operator  : CDS1
Sample    : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5g - SOIL
ALS Vial  : 16   Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B

TIC Library    : C:\Database\NIST05.L
TIC Integration Parameters: default.P
```

****

Peak Number 4 unknown hydrocarbon Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.188	6.01 ug/L	1171870	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,3-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-86-5	97
2	Bicyclo[4.1.0]hept-2-ene, 3,7,7-...	136	C10H16	000554-61-0	95
3	(+)-4-Carene	136	C10H16	029050-33-7	94
4	1,3-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-86-5	94
5	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	94

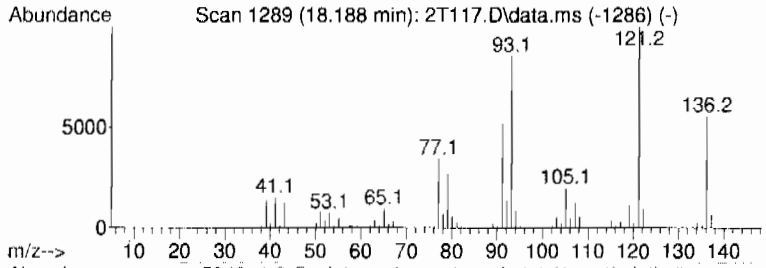

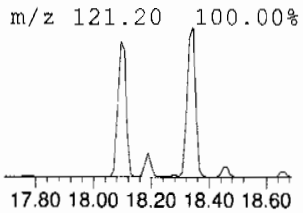

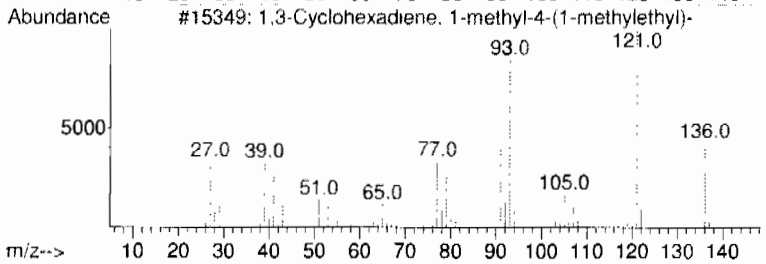

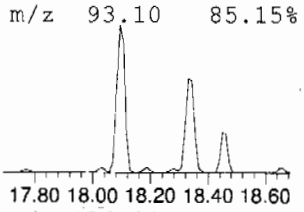

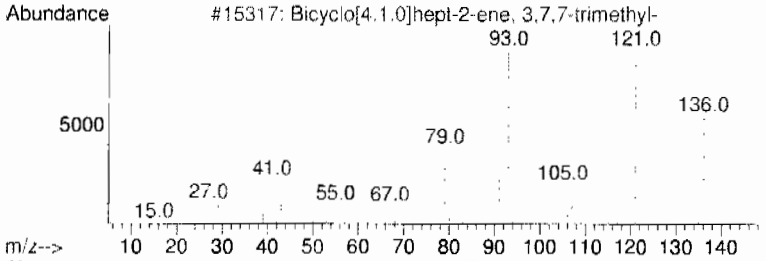

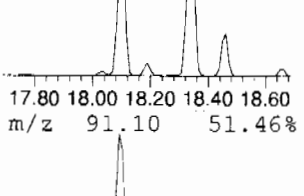

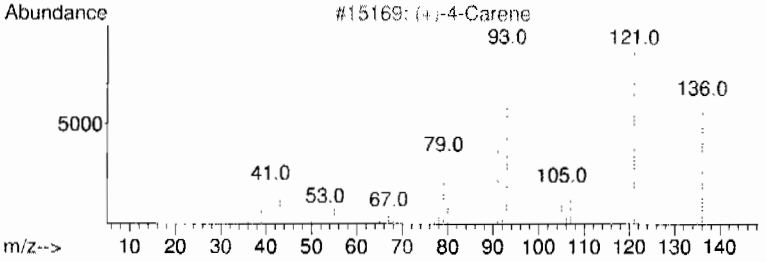

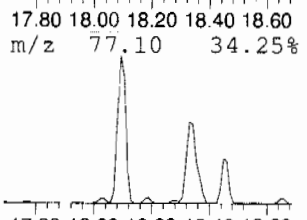

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 5 unknown hydrocarbon Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.054	30.35 ug/L	5916020	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	96
2	(+)-4-Carene	136	C10H16	029050-33-7	96
3	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	95
4	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	95
5	Bicyclo[4.1.0]hept-2-ene, 3,7,7-...	136	C10H16	000554-61-0	95

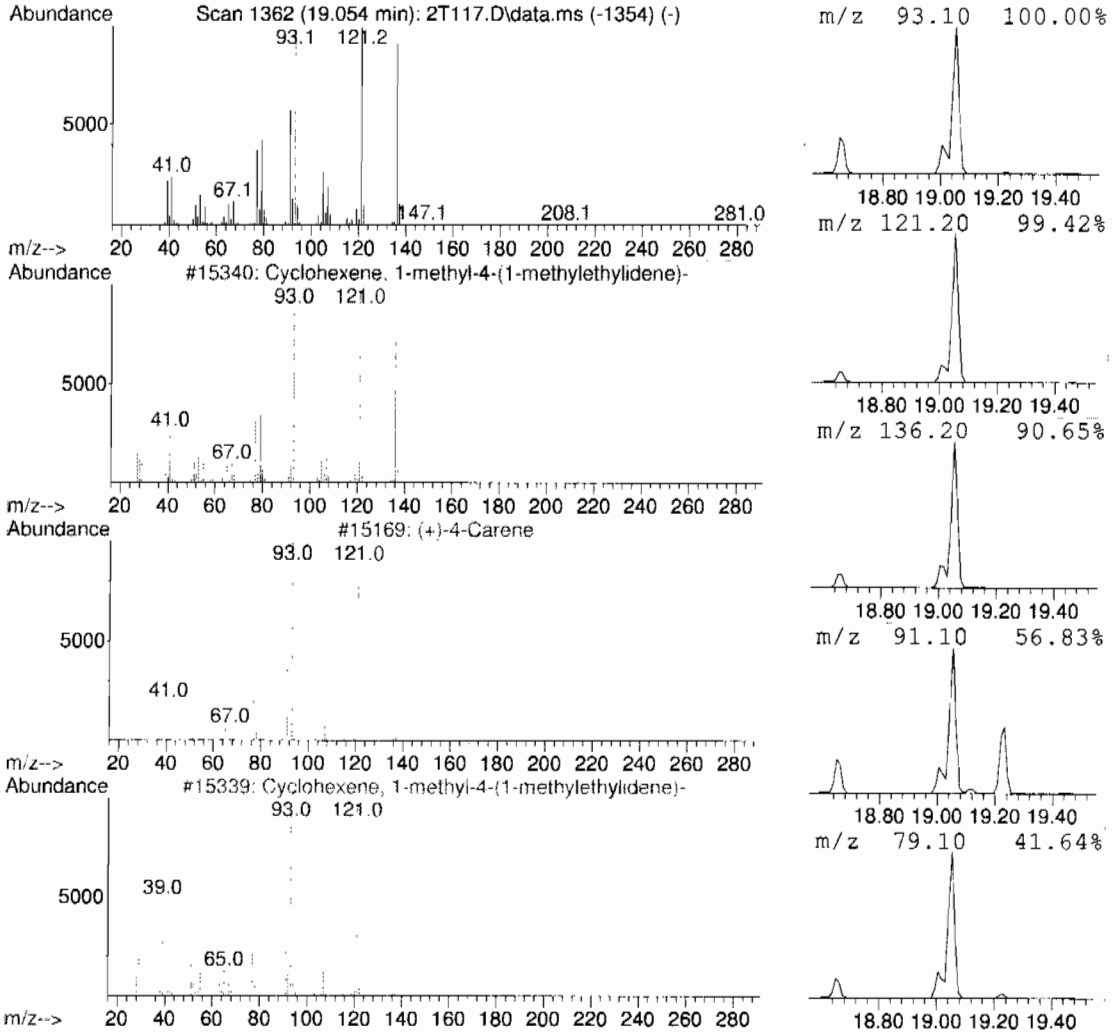

Library Search Compound Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On    :  6 Jul 2009   2:14 pm
Operator  : CDS1
Sample    : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5g - SOIL
ALS Vial  : 16   Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B

TIC Library    : C:\Database\NIST05.L
TIC Integration Parameters: default.P
```

****

Peak Number 6 unknown siloxane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.148	14.84 ug/L	2891330	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzaldehyde, 2,4-bis(trimethyls...	282	C13H22O3Si2	033617-38-8	64
2	Benzaldehyde, 2,5-bis[(trimethyl...	282	C13H22O3Si2	056114-69-3	56
3	3-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-88-9	56
4	Butanamide, 2,2,3,3,4,4,4-heptaf...	493	C18H26F7NO3Si2	055471-01-7	50
5	4-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-53-3	50

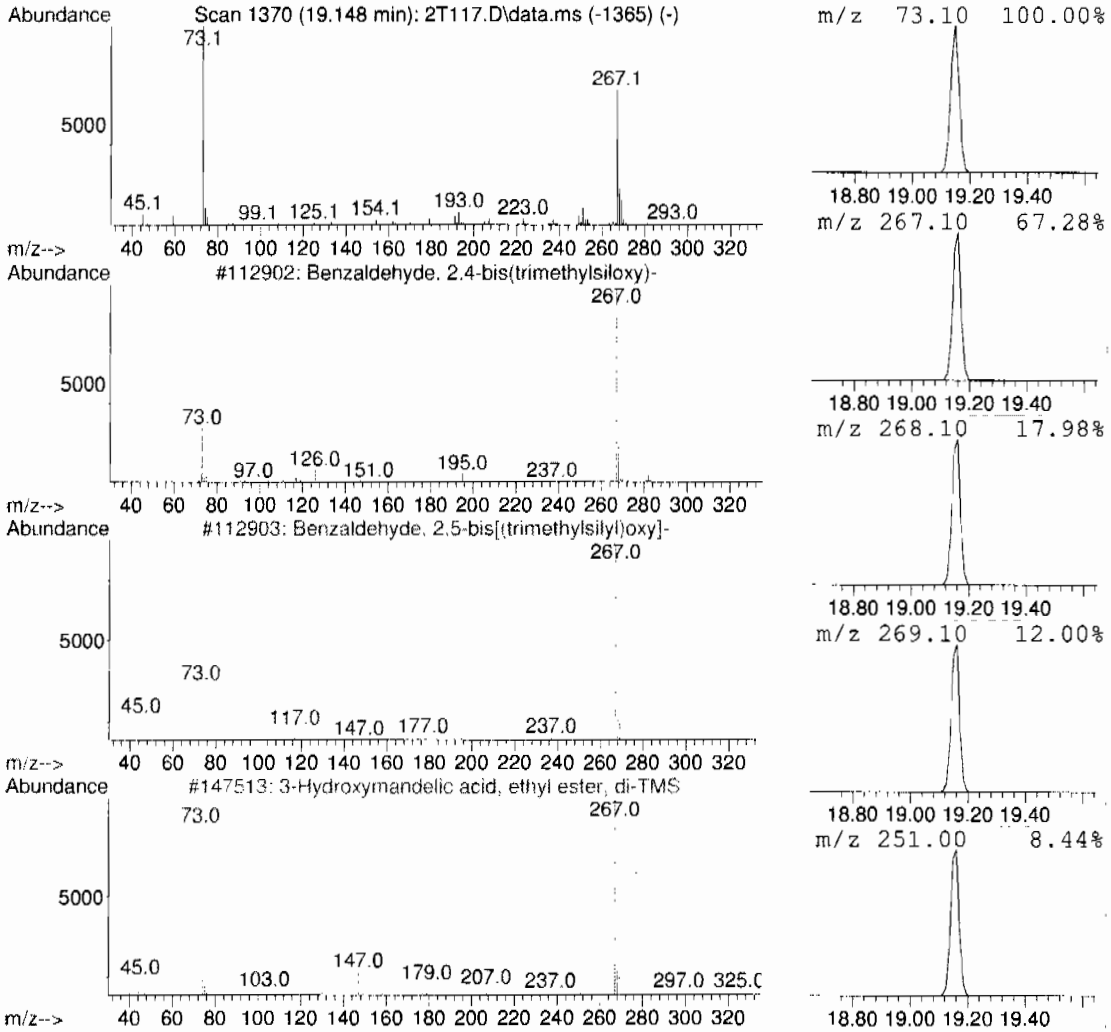

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g · SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 8 unknown aromatic Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.231	12.05 ug/L	2349260	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methyleth...	132	C10H12	001195-32-0	96
2	Benzene, 1-ethenyl-4-ethyl-	132	C10H12	003454-07-7	93
3	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	93
4	Benzene, 1-methyl-4-(1-methyleth...	132	C10H12	001195-32-0	90
5	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	90

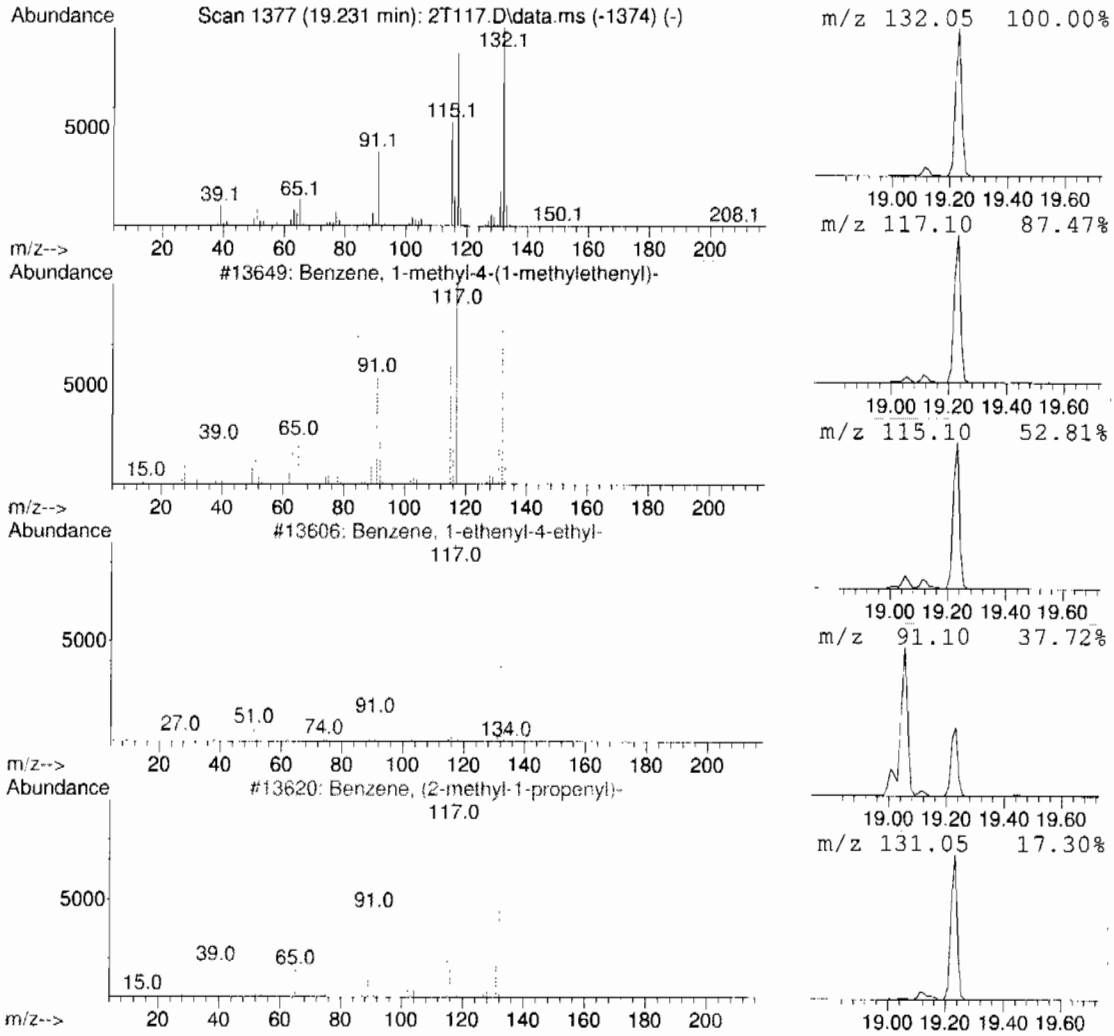

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 9 unknown siloxane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.204	125.26 ug/L	24413400	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	91
2	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	90
3	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	78
4	4H-1,2,4-Triazole-3-thiol, 4-all...	281	C16H15N3S	031803-13-1	59
5	5-Hydroxy-7-methoxy-2-methyl-3-p...	282	C17H14O4	055927-39-4	53

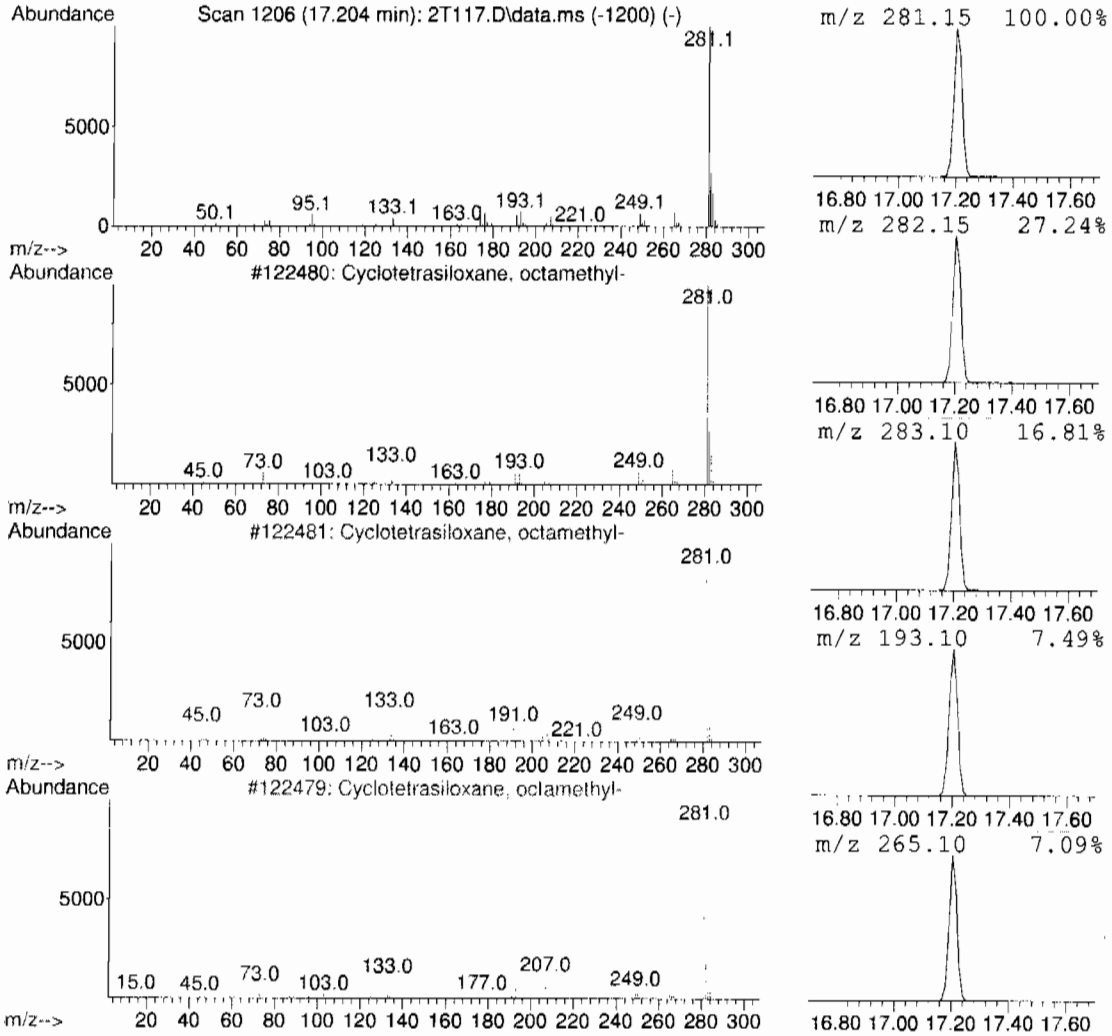

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 10 unknown hydrocarbon Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.330	246.31 ug/L	48004600	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Limonene	136	C10H16	000138-86-3	91
2	Limonene	136	C10H16	000138-86-3	91
3	D-Limonene	136	C10H16	005989-27-5	89
4	D-Limonene	136	C10H16	005989-27-5	89
5	D-Limonene	136	C10H16	005989-27-5	86

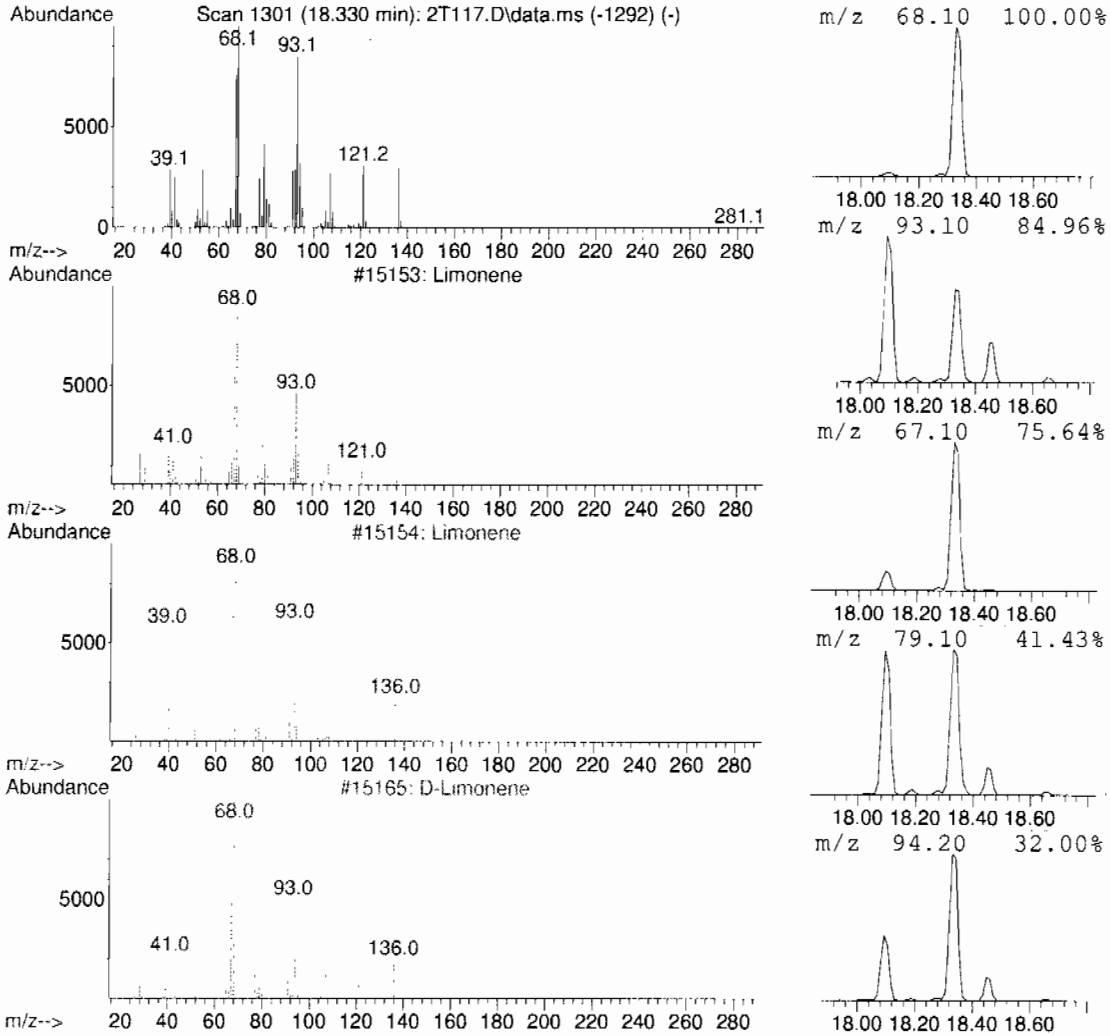

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 11 unknown hydrocarbon Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.461	50.00 ug/L	9744810	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.0]hex-2-ene, 4-methy...	136	C10H16	028634-89-1	60
2	.beta.-Phellandrene	136	C10H16	000555-10-2	60
3	1,4-Dichlorobenzene-D4	150	C6D4Cl2	003855-82-1	51
4	.beta.-Phellandrene	136	C10H16	000555-10-2	49
5	1,4-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-85-4	45

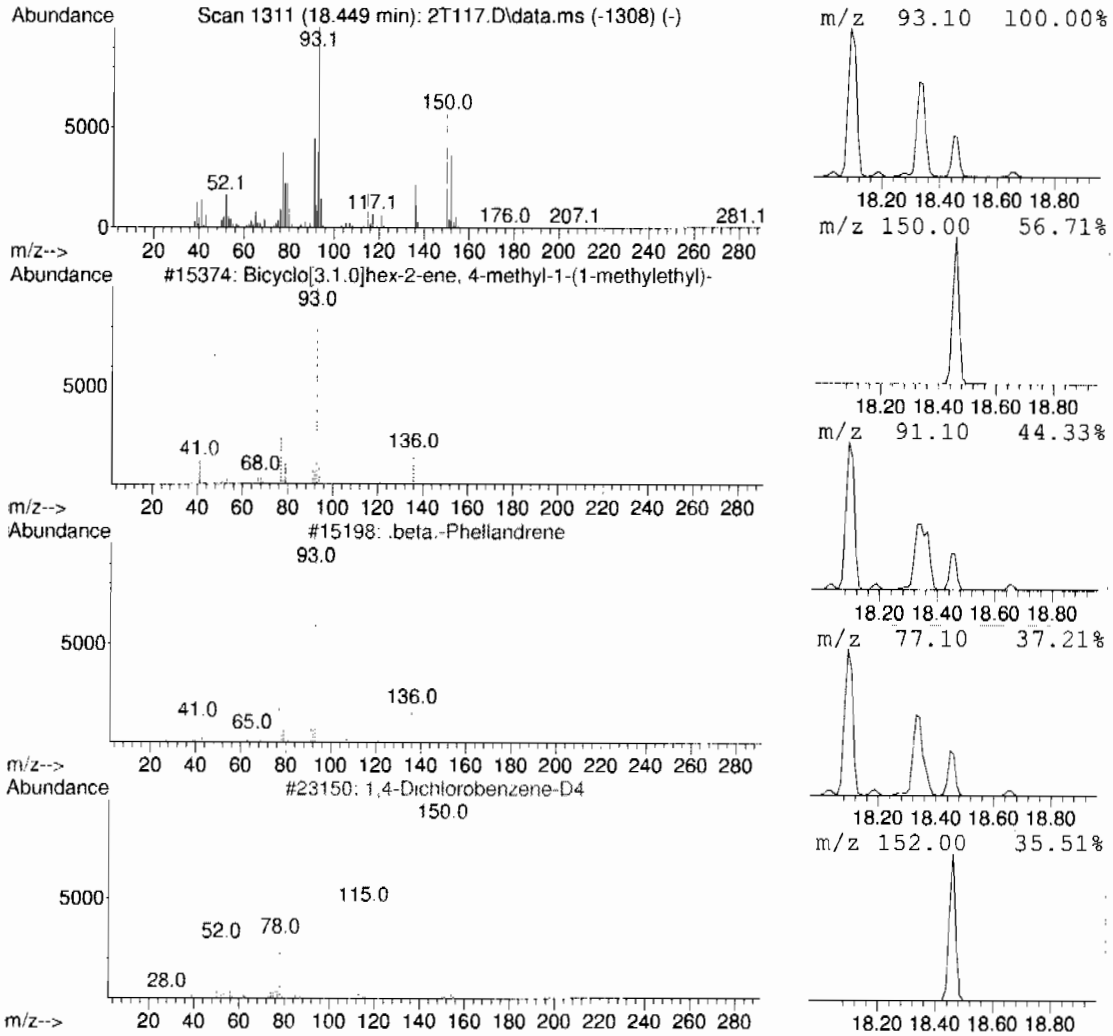

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T117.D
Acq On : 6 Jul 2009 2:14 pm
Operator : CDS1
Sample : |232585003|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.360	24.5	ug/L	1692830	1	12.377	3451810	50.0
unknown hydroca...	17.038	295.6	ug/L	22869400	4	15.947	3868640	50.0
unknown hydroca...	18.093	154.2	ug/L	30060900	5	18.461	9744810	50.0
unknown hydroca...	18.188	6.0	ug/L	1171870	5	18.461	9744810	50.0
unknown hydroca...	19.054	30.4	ug/L	5916020	6	18.461	9744810	50.0
unknown siloxane	19.148	14.8	ug/L	2891330	6	18.461	9744810	50.0
unknown aromatic	19.231	12.1	ug/L	2349260	6	18.461	9744810	50.0
unknown siloxane	17.204	125.3	ug/L	24413400	5	18.461	9744810	50.0
unknown hydroca...	18.330	246.3	ug/L	48004600	5	18.461	9744810	50.0
unknown hydroca...	18.461	50.0	ug/L	9744810	5	18.461	9744810	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	S
Lab Sample ID:	232585004	**Date Received:**	06/30/2009 09:15		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6641	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 11:00	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T210.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone		6.03	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	S
Lab Sample ID:	232585004	**Date Received:**	06/30/2009 09:15		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6641	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 11:00	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T210.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	17.5	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T210.D
Acq On : 7 Jul 2009 11:00 am
Operator : CDS1
InstName : VOA2
Sample : |232585004|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 11:36:49 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1622532	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1359040	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	814347	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1622532	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1359040	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	814347	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	470653	51.73 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 103.46%		
43) Toluene-d8	14.310	98	1590074	49.79 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 99.58%		
61) Bromofluorobenzene	17.204	95	656737	51.29 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 102.58%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.252	62	291	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.895	43	29276	6.03 ug/L	97
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.417	41	1459	N.D.	
13) Methyl acetate	8.547	43	383	N.D.	
14) Carbon disulfide	8.251	76	1986	N.D.	
15) Methylene chloride	8.701	84	7354	Below Cal	96
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.788	43	1665	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	704	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	434	N.D.	
31) Benzene	12.033	78	807	N.D.	
32) Cyclohexene	12.377	67	406	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T210.D
Acq On : 7 Jul 2009 11:00 am
Operator : CDS1
InstName : VOA2
Sample : |232585004|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 11:36:49 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	14.109	58	699	N.D.	
44) Toluene	14.381	91	3083	N.D.	
45) trans-1,3-Dichloroprop...	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.109	43	2184	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	671	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.077	91	1101	N.D.	
55) m,p-Xylenes	16.196	106	1120	N.D.	
56) o-Xylene	16.635	106	287	N.D.	
57) Styrene	16.635	104	502	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.026	105	135	N.D.	
62) 1,1,2,2-Tetrachloroethane	17.204	83	154	N.D.	
63) 1,2,3-Trichloropropane	17.204	110	157	N.D.	
64) Bromobenzene	17.405	156	339	N.D.	
65) n-Propylbenzene	17.595	91	324	N.D.	
66) 1,3,5-Trimethylbenzene	17.631	105	526	N.D.	
67) 2-Chlorotoluene	17.702	91	972	N.D.	
68) 4-Chlorotoluene	17.702	91	972	N.D.	
69) tert-Butylbenzene	18.046	119	130	N.D.	
70) 1,2,4-Trimethylbenzene	18.046	105	1736	N.D.	
71) sec-Butylbenzene	18.046	105	1736	N.D.	
72) 4-Isopropyltoluene	18.366	119	934	N.D.	
73) 1,3-Dichlorobenzene	18.390	146	924	N.D.	
74) 1,4-Dichlorobenzene	18.390	146	924	N.D.	
75) n-Butylbenzene	18.805	91	135	N.D.	
76) 1,2-Dichlorobenzene	18.900	146	512	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	605	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	1902	N.D.	
81) 1,2,3-Trichlorobenzene	21.331	180	389	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.417	41	1459	N.D.	
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.788	43	1665	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T210.D
Acq On : 7 Jul 2009 11:00 am
Operator : CDS1
InstName : VOA2
Sample : |232585004|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 11:36:49 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	0.000		0	N.D.	
96) Methacrylonitrile	11.215	41	414	N.D.	
97) Tetrahydrofuran	11.239	42	852	N.D.	
98) Isobutyl alcohol	11.915	41	107	N.D.	
99) Methyl tert-amyl ether	0.000		0m	N.D.	d
100) Methyl methacrylate	0.000		0	N.D.	
101) 1,4-Dioxane	0.000		0	N.D.	
102) 2-Nitropropane	0.000		0	N.D.	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	0.000		0m	N.D.	d
107) cis-1,4-Dichloro-2-butene	17.050	53	117	N.D.	
108) Cyclohexanone	0.000		0	N.D.	
109) trans-1,4-Dichloro-2-b...	17.358	53	289	N.D.	
110) Pentachloroethane	0.000		0	N.D.	
111) Benzyl chloride	18.603	91	868	N.D.	
112) bis(2-Chloroisopropyl)...	19.149	45	1053	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T210.D
Acq On    :  7 Jul 2009  11:00 am
Operator  : CDS1
InstName  : VOA2
Sample    : |232585004|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5G - SOIL
ALS Vial  : 10   Sample Multiplier: 1

Quant Time: Jul 16 11:36:49 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
```

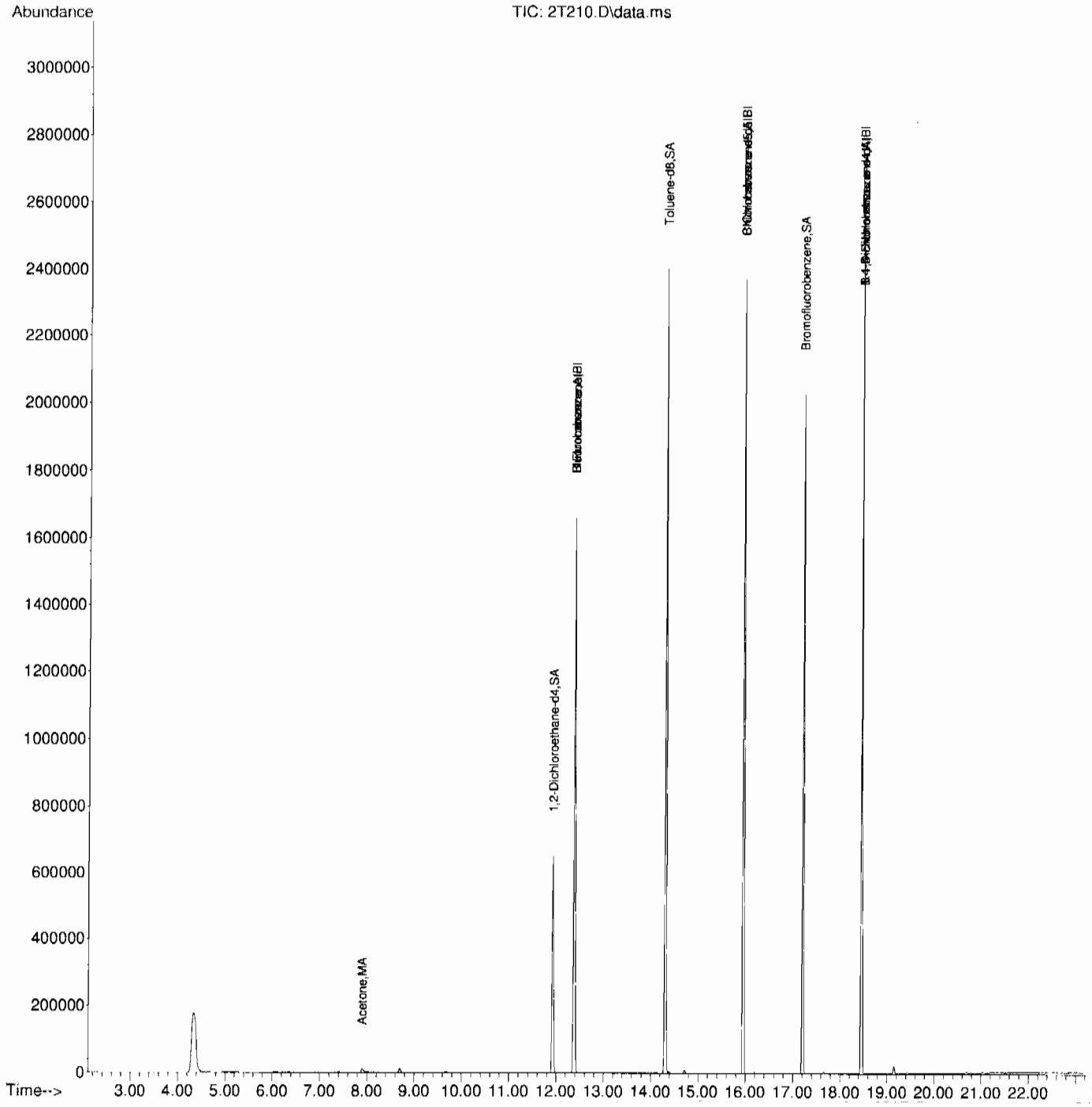

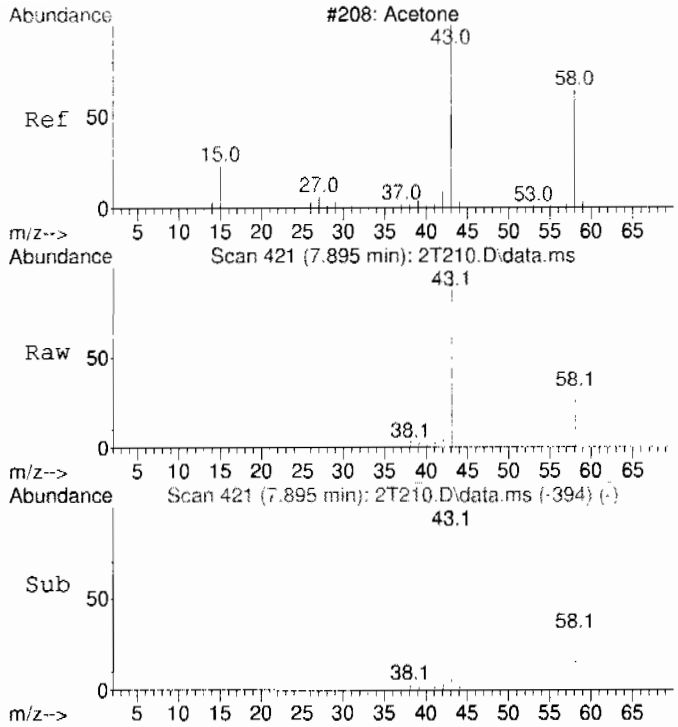

#9
Acetone
Concen: 6.03 ug/L
RT: 7.895 min Scan# 421
Delta R.T. 0.024 min
Lab File: 2T210.D
Acq: 7 Jul 2009 11:00 am

Tgt Ion: 43 Resp: 29276

Ion	Ratio	Lower	Upper
43	100		
58	27.7	0.0	59.3

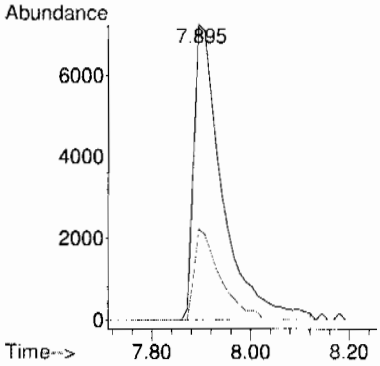

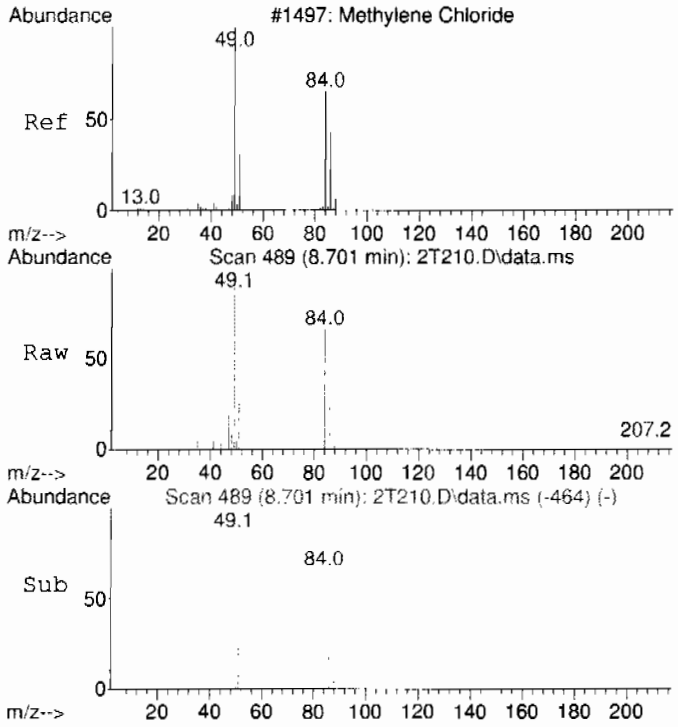

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T210.D
Acq: 7 Jul 2009 11:00 am

Tgt Ion: 84 Resp: 7354

Ion	Ratio	Lower	Upper
84	100		
86	61.2	33.8	93.8
49	139.5	105.0	165.0

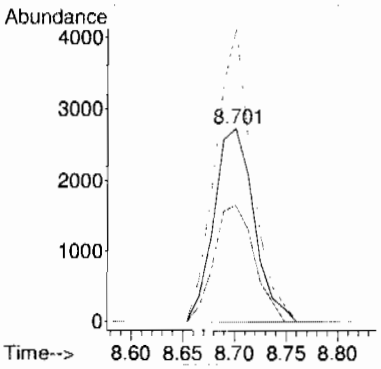

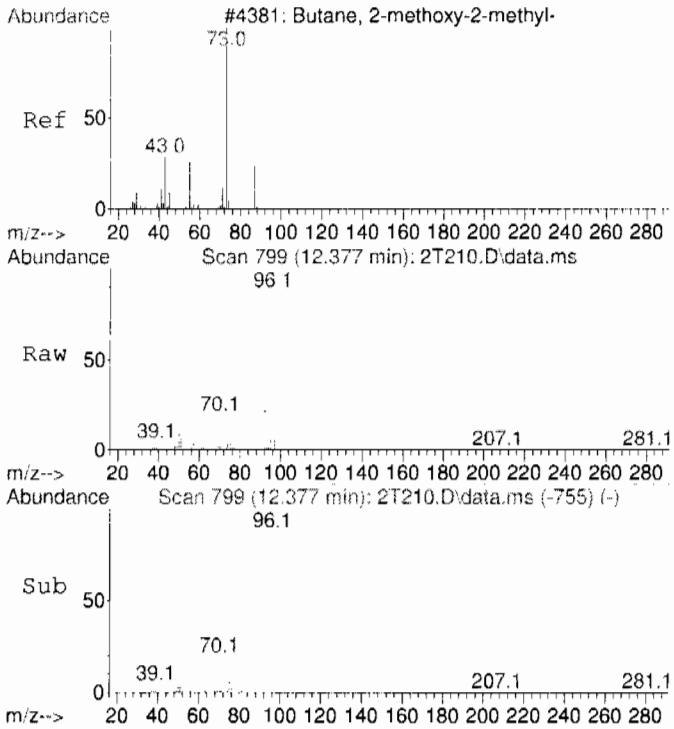

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.98 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T210.D
Acq: 7 Jul 2009 11:00 am

Tgt Ion: 73 Resp: 17824

Ion	Ratio	Lower	Upper
73	100		
55	7.2	5.2	65.2
87	0.0	0.0	54.7

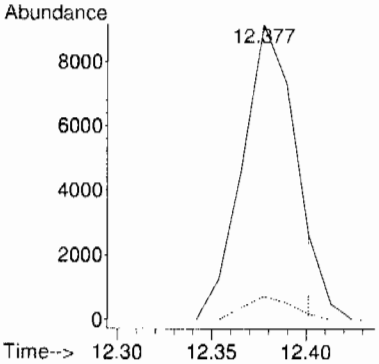

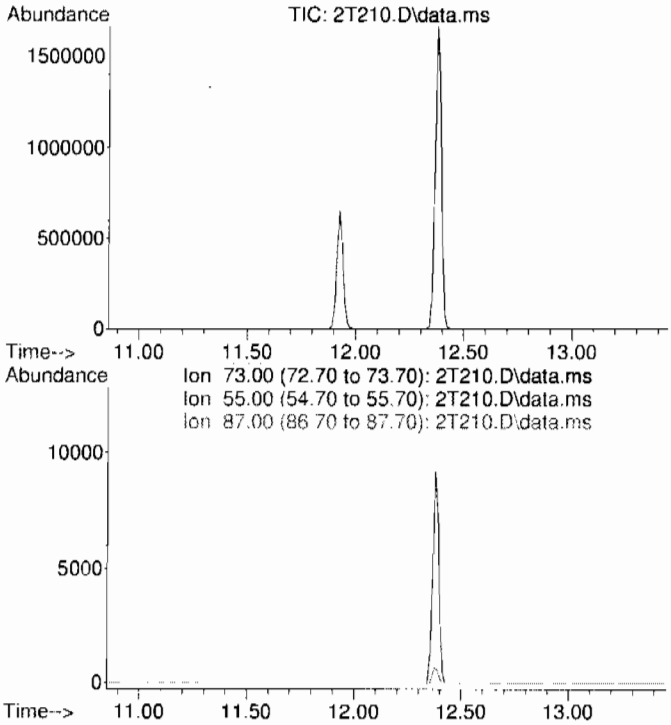

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T210.D
Acq: 7 Jul 2009 11:00 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

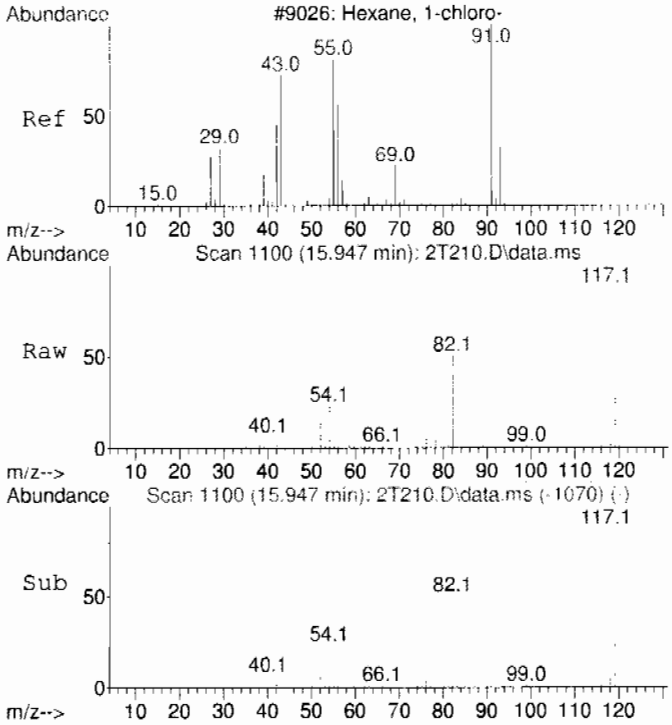

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 2.04 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T210.D
Acq: 7 Jul 2009 11:00 am

Tgt Ion: 55 Resp: 13077

Ion	Ratio	Lower	Upper
55	100		
91	18.5	113.2	173.2#
56	58.1	30.3	90.3

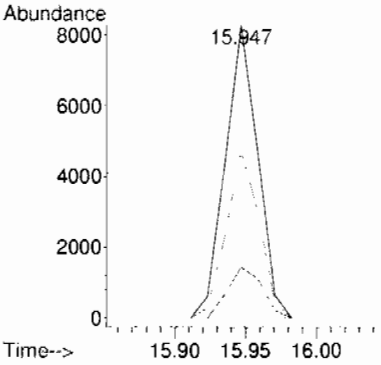

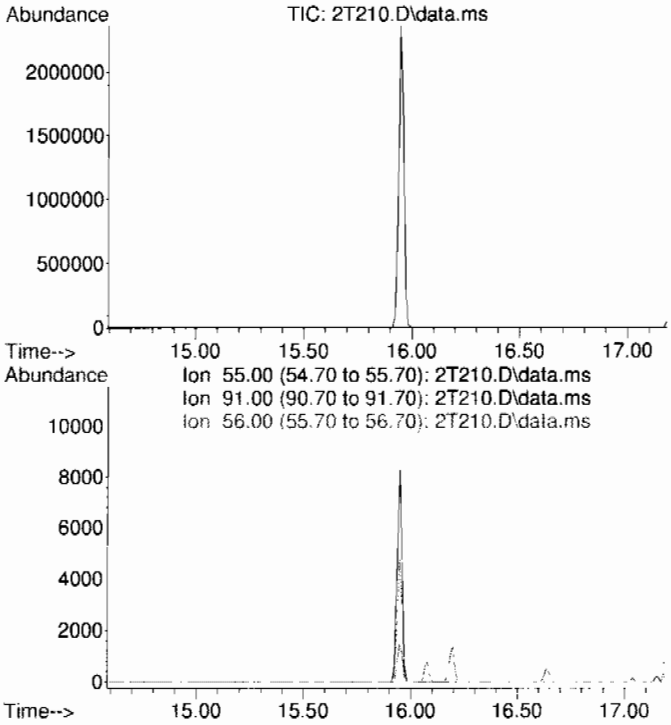

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T210.D
Acq: 7 Jul 2009 11:00 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T210.D
Acq On : 7 Jul 2009 11:00 am
Operator : CDS1
Sample : |232585004|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T210.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.330	143	151	169	rBB	177995	1166084	26.34%	5.309%
2	4.642	169	172	178	rBB2	519	2334	0.05%	0.011%
3	4.940	190	192	212	rBV	327	3549	0.08%	0.016%
4	6.057	261	266	271	rBV	625	3766	0.09%	0.017%
5	7.421	378	381	386	rVB3	1378	3248	0.07%	0.015%
6	7.895	418	421	436	rBV	11090	42140	0.95%	0.192%
7	8.701	484	489	496	rVB	11766	30958	0.70%	0.141%
8	9.686	568	572	580	rVB	3386	9015	0.20%	0.041%
9	11.927	755	761	787	rVB	652244	1313568	29.67%	5.980%
10	12.377	794	799	812	rVB	1662629	3339394	75.44%	15.202%
11	13.018	850	853	856	rVB2	1834	3528	0.08%	0.016%
12	14.109	942	945	952	rVB	2538	4435	0.10%	0.020%
13	14.310	956	962	967	rBV	2402136	4232844	95.62%	19.270%
14	14.714	992	996	1001	rVB	8190	17549	0.40%	0.080%
15	15.046	1022	1024	1026	rVB	684	1059	0.02%	0.005%
16	15.947	1094	1100	1109	rBV	2371725	3877596	87.59%	17.653%
17	16.196	1117	1121	1126	rVB	2899	4944	0.11%	0.023%
18	16.646	1156	1159	1170	rVB3	1579	3218	0.07%	0.015%
19	17.204	1201	1206	1216	rVB	2026465	3415221	77.15%	15.548%
20	17.654	1241	1244	1256	rVB3	5733	11286	0.25%	0.051%
21	18.046	1274	1277	1287	rVB2	1880	5913	0.13%	0.027%
22	18.461	1307	1312	1322	rVB	2614418	4426746	100.00%	20.153%
23	19.149	1366	1370	1390	rBV2	21641	47826	1.08%	0.218%

Sum of corrected areas: 21966221

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T210.D
Acq On    :  7 Jul 2009  11:00 am
Operator  : CDS1
Sample    : |232585004|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5G - SOIL
ALS Vial  : 10   Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B

TIC Library    : C:\Database\NIST05.L
TIC Integration Parameters: default.P
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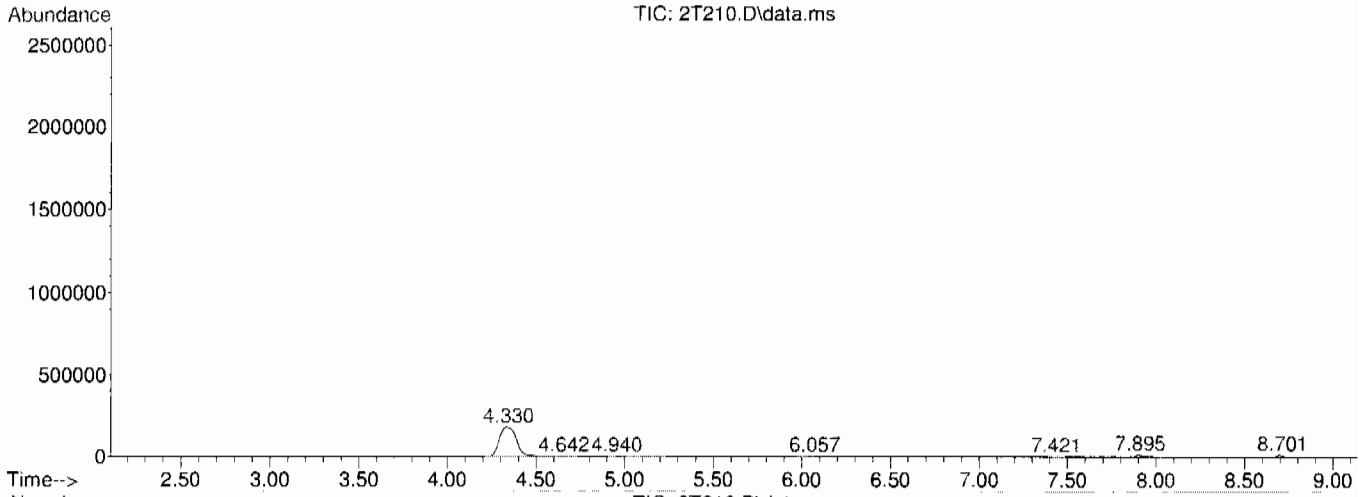

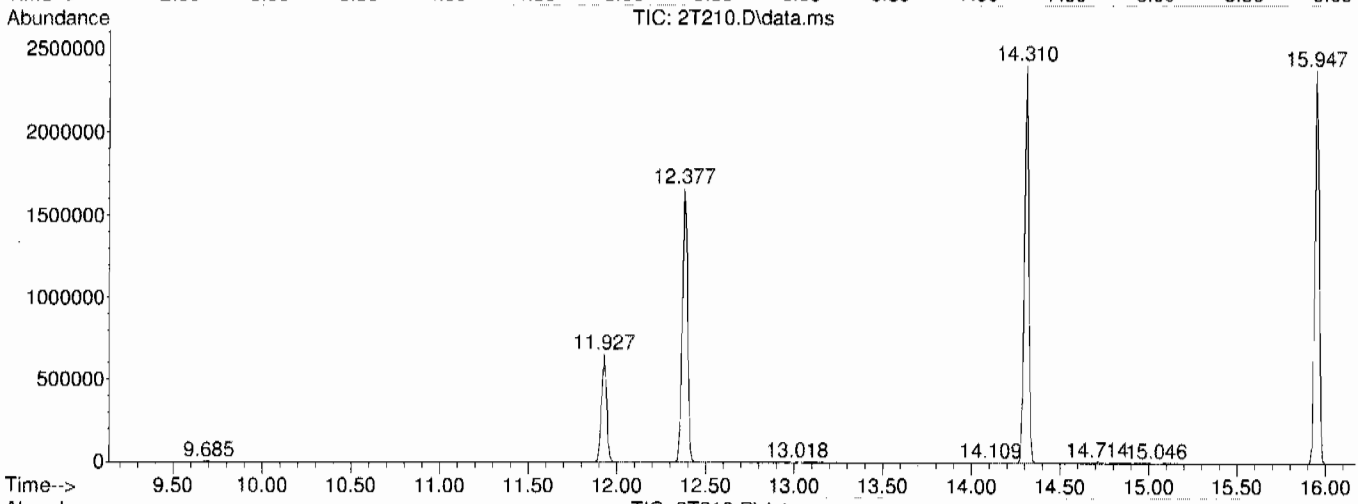

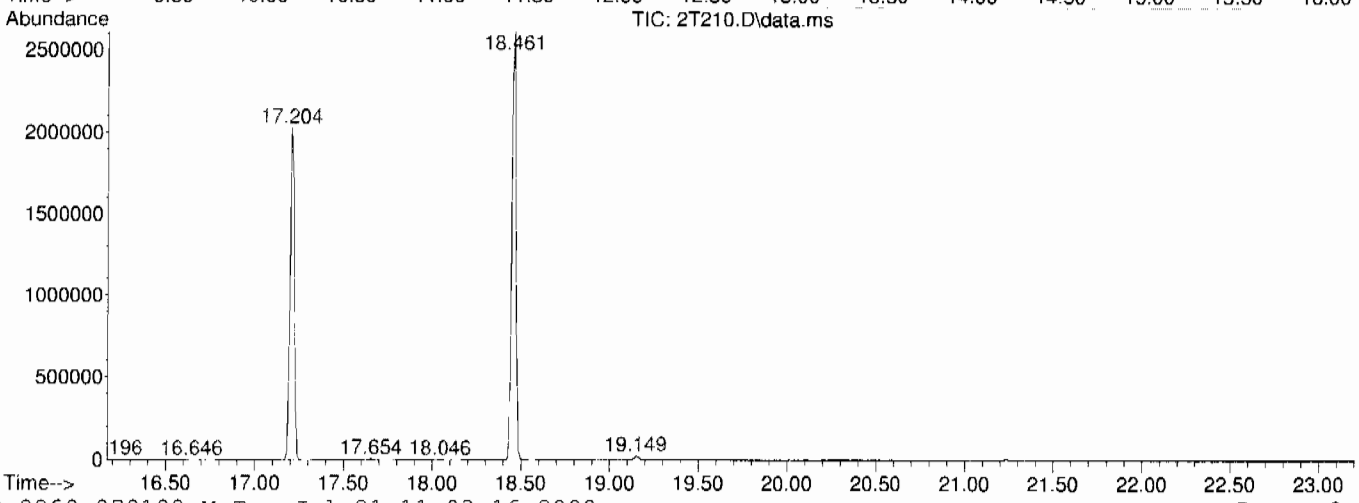

Library Search Compound Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T210.D
Acq On    :  7 Jul 2009  11:00 am
Operator  : CDS1
Sample    : |232585004|882632|1|VOAF|1|VOA8260BSF|
Misc      : LANL 5G - SOIL
ALS Vial  : 10   Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B

TIC Library    : C:\Database\NIST05.L
TIC Integration Parameters: default.P
```

****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.330	17.46 ug/L	1166080	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

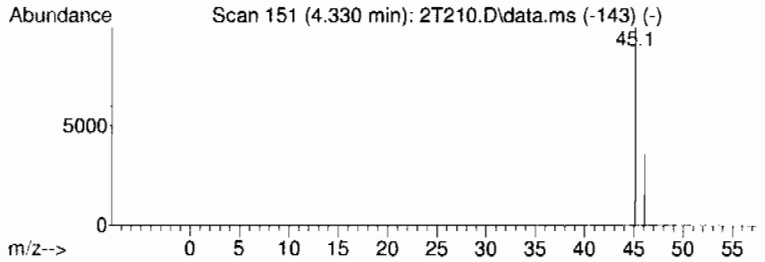

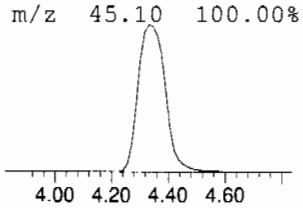

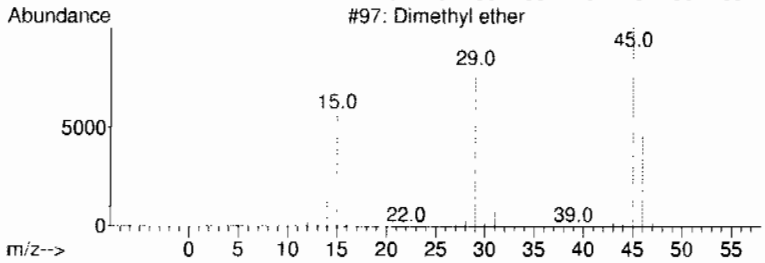

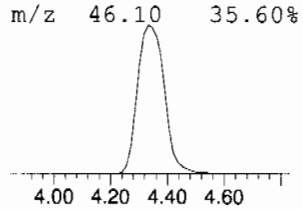

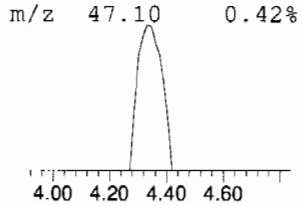

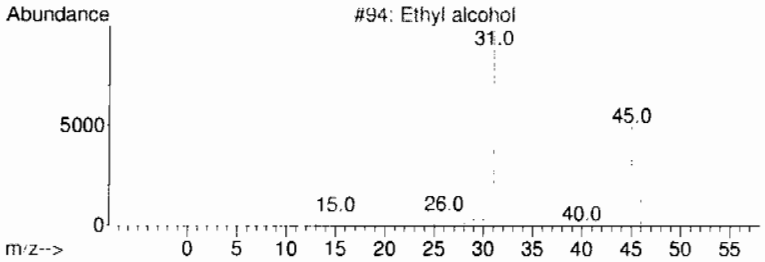

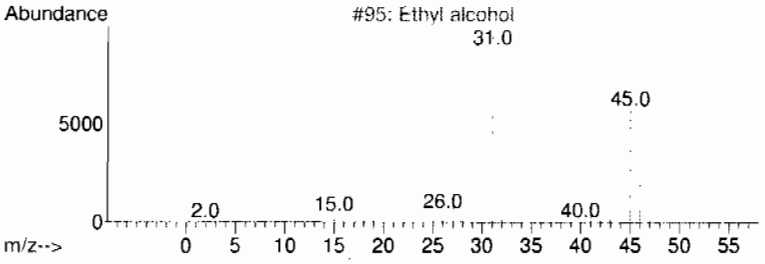

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T210.D
Acq On : 7 Jul 2009 11:00 am
Operator : CDS1
Sample : |232585004|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.330	17.5	ug/L	1166080	1	12.377	3339390	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604RE	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 11:29	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:31	**Aliquot:**	2 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T211.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	2.79	ug/kg	0.949	2.79
74-87-3	Chloromethane	U	2.79	ug/kg	0.837	2.79
75-01-4	Vinyl chloride	U	2.79	ug/kg	0.837	2.79
74-83-9	Bromomethane	U	2.79	ug/kg	0.837	2.79
75-00-3	Chloroethane	U	2.79	ug/kg	0.837	2.79
75-69-4	Trichlorofluoromethane	U	2.79	ug/kg	0.837	2.79
67-64-1	Acetone		117	ug/kg	4.63	14.0
75-35-4	1,1-Dichloroethylene	U	2.79	ug/kg	0.837	2.79
74-88-4	Iodomethane	U	14.0	ug/kg	4.46	14.0
75-09-2	Methylene chloride	U	14.0	ug/kg	5.58	14.0
75-15-0	Carbon disulfide	U	14.0	ug/kg	3.49	14.0
156-60-5	trans-1,2-Dichloroethylene	U	2.79	ug/kg	0.837	2.79
75-34-3	1,1-Dichloroethane	U	2.79	ug/kg	0.837	2.79
78-93-3	2-Butanone	U	14.0	ug/kg	4.19	14.0
156-59-2	cis-1,2-Dichloroethylene	U	2.79	ug/kg	0.837	2.79
594-20-7	2,2-Dichloropropane	U	2.79	ug/kg	0.837	2.79
67-66-3	Chloroform	U	2.79	ug/kg	0.837	2.79
74-97-5	Bromochloromethane	U	2.79	ug/kg	0.921	2.79
71-55-6	1,1,1-Trichloroethane	U	2.79	ug/kg	0.837	2.79
563-58-6	1,1-Dichloropropene	U	2.79	ug/kg	0.837	2.79
56-23-5	Carbon tetrachloride	U	2.79	ug/kg	0.837	2.79
107-06-2	1,2-Dichloroethane	U	2.79	ug/kg	0.837	2.79
71-43-2	Benzene	U	2.79	ug/kg	0.837	2.79
79-01-6	Trichloroethylene	U	2.79	ug/kg	0.921	2.79
78-87-5	1,2-Dichloropropane	U	2.79	ug/kg	0.837	2.79
75-27-4	Bromodichloromethane	U	2.79	ug/kg	0.837	2.79
74-95-3	Dibromomethane	U	2.79	ug/kg	0.837	2.79
108-10-1	4-Methyl-2-pentanone	U	14.0	ug/kg	3.49	14.0
10061-01-5	cis-1,3-Dichloropropylene	U	2.79	ug/kg	0.837	2.79
108-88-3	Toluene	J	1.06	ug/kg	0.837	2.79
10061-02-6	trans-1,3-Dichloropropylene	U	2.79	ug/kg	0.837	2.79
79-00-5	1,1,2-Trichloroethane	U	2.79	ug/kg	0.837	2.79
591-78-6	2-Hexanone	U	14.0	ug/kg	4.19	14.0
142-28-9	1,3-Dichloropropane	U	2.79	ug/kg	0.837	2.79
127-18-4	Tetrachloroethylene	U	2.79	ug/kg	0.837	2.79
124-48-1	Dibromochloromethane	U	2.79	ug/kg	0.837	2.79
106-93-4	1,2-Dibromoethane	U	2.79	ug/kg	0.837	2.79
108-90-7	Chlorobenzene	U	2.79	ug/kg	0.837	2.79

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604RE	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 11:29	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:31	**Aliquot:**	2 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T211.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	2.79	ug/kg	0.837	2.79
179601-23-1	m,p-Xylenes	U	5.58	ug/kg	0.837	5.58
95-47-6	o-Xylene	U	2.79	ug/kg	0.837	2.79
100-42-5	Styrene	U	2.79	ug/kg	0.837	2.79
75-25-2	Bromoform	U	2.79	ug/kg	0.837	2.79
79-34-5	1,1,2,2-Tetrachloroethane	U	2.79	ug/kg	0.837	2.79
96-18-4	1,2,3-Trichloropropane	U	2.79	ug/kg	0.837	2.79
108-86-1	Bromobenzene	U	2.79	ug/kg	0.837	2.79
103-65-1	n-Propylbenzene	U	2.79	ug/kg	0.837	2.79
95-49-8	2-Chlorotoluene	U	2.79	ug/kg	0.837	2.79
98-82-8	Isopropylbenzene	U	2.79	ug/kg	0.837	2.79
108-67-8	1,3,5-Trimethylbenzene	U	2.79	ug/kg	0.837	2.79
106-43-4	4-Chlorotoluene	U	2.79	ug/kg	0.837	2.79
98-06-6	tert-Butylbenzene	U	2.79	ug/kg	0.837	2.79
95-63-6	1,2,4-Trimethylbenzene	U	2.79	ug/kg	0.837	2.79
135-98-8	sec-Butylbenzene	U	2.79	ug/kg	0.837	2.79
99-87-6	4-Isopropyltoluene		75.2	ug/kg	0.837	2.79
541-73-1	1,3-Dichlorobenzene	U	2.79	ug/kg	0.837	2.79
106-46-7	1,4-Dichlorobenzene	U	2.79	ug/kg	0.837	2.79
104-51-8	n-Butylbenzene	U	2.79	ug/kg	0.837	2.79
96-12-8	1,2-Dibromo-3-chloropropane	U	2.79	ug/kg	0.837	2.79
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	14.0	ug/kg	4.46	14.0
630-20-6	1,1,1,2-Tetrachloroethane	U	2.79	ug/kg	0.837	2.79
95-50-1	1,2-Dichlorobenzene	U	2.79	ug/kg	0.837	2.79

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.35	57.8	ug/kg	0	J
	unknown hydrocarbon	17.04	154	ug/kg	0	J
	unknown siloxane	17.2	438	ug/kg	0	J
	unknown hydrocarbon	18.09	174	ug/kg	0	J
	unknown hydrocarbon	18.33	359	ug/kg	0	J
	unknown hydrocarbon	19.05	30.9	ug/kg	0	J
	unknown siloxane	19.15	72.7	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
InstName : VOA2
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 11:38:38 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1567946	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1311454	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	813492	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1567946	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1311454	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	813492	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	465204	52.91	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 105.82%			
43) Toluene-d8	14.310	98	1556268	50.50	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 101.00%			
61) Bromofluorobenzene	17.204	95	593469	46.40	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 92.80%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	0.000		0	N.D.		
4) Vinyl chloride	5.266	62	282	N.D.		
5) Bromomethane	0.000		0	N.D.		
6) Chloroethane	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000		0	N.D.		
8) Ethyl ether	0.000		0	N.D.		
9) Acetone	7.883	43	222488	41.97	ug/L	99
10) 1,1-Dichloroethylene	0.000		0	N.D.		
11) Iodomethane	0.000		0	N.D.		
12) Acetonitrile	8.440	41	845	N.D.		
13) Methyl acetate	8.535	43	2359	N.D.		
14) Carbon disulfide	8.250	76	1591	N.D.		
15) Methylene chloride	8.701	84	6954	Below Cal		95
16) tert-Butyl methyl ether	0.000		0	N.D.		
17) trans-1,2-Dichloroethy...	0.000		0	N.D.		
18) Vinyl acetate	0.000		0	N.D.		
19) 1,1-Dichloroethane	0.000		0	N.D.		
20) 2-Butanone	10.800	43	812	N.D.		
21) cis-1,2-Dichloroethylene	0.000		0	N.D.		
22) 2,2-Dichloropropane	0.000		0	N.D.		
23) Bromochloromethane	0.000		0	N.D.		
24) Chloroform	11.239	83	813	N.D.		
25) 1,1,1-Trichloroethane	0.000		0	N.D.		
26) Cyclohexane	0.000		0	N.D.		
27) 1,1-Dichloropropene	0.000		0	N.D.		
28) Carbon tetrachloride	0.000		0	N.D.		
30) 1,2-Dichloroethane	11.950	62	386	N.D.		
31) Benzene	12.033	78	604	N.D.		
32) Cyclohexene	12.389	67	467	N.D.		
33) n-Butyl alcohol	0.000		0	N.D.		
34) Trichloroethylene	0.000		0	N.D.		
35) 1,2-Dichloropropane	0.000		0	N.D.		
36) Methylcyclohexane	0.000		0	N.D.		
37) Dibromomethane	0.000		0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
InstName : VOA2
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 11:38:38 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D. d	
44) Toluene	14.393	91	11416	0.38 ug/L	98
45) trans-1,3-Dichloroprop...	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.109	43	107	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	587	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.077	91	1176	N.D.	
55) m,p-Xylenes	16.196	106	1419	N.D.	
56) o-Xylene	16.634	106	470	N.D.	
57) Styrene	16.646	104	1047	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	0.000		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.204	83	1123	N.D.	
63) 1,2,3-Trichloropropane	0.000		0m	N.D. d	
64) Bromobenzene	17.417	156	297	N.D.	
65) n-Propylbenzene	0.000		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631	105	695	N.D.	
67) 2-Chlorotoluene	0.000		0m	N.D. d	
68) 4-Chlorotoluene	0.000		0m	N.D. d	
69) tert-Butylbenzene	18.034	119	6315	N.D.	
70) 1,2,4-Trimethylbenzene	0.000		0m	N.D. d	
71) sec-Butylbenzene	18.188	105	7003	N.D.	
72) 4-Isopropyltoluene	18.366	119	839851	26.96 ug/L #	78
73) 1,3-Dichlorobenzene	18.401	146	931	N.D.	
74) 1,4-Dichlorobenzene	18.401	146	931	N.D.	
75) n-Butylbenzene	0.000		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.899	146	392	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	672	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	2215	N.D.	
81) 1,2,3-Trichlorobenzene	21.342	180	472	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	8.167	45	3324	N.D.	
88) Allyl chloride	8.440	41	845	N.D.	
89) tert-Butyl Alcohol	8.879	59	884	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.800	43	812	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
InstName : VOA2
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 11:38:38 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95)	Propionitrile	0.000		0	N.D.	
96)	Methacrylonitrile	11.298	41	223	N.D.	
97)	Tetrahydrofuran	11.227	42	691	N.D.	
98)	Isobutyl alcohol	0.000		0	N.D.	
99)	Methyl tert-amyl ether	0.000		0m	N.D.	d
100)	Methyl methacrylate	0.000		0	N.D.	
101)	1,4-Dioxane	0.000		0	N.D.	
102)	2-Nitropropane	0.000		0	N.D.	
104)	Ethyl methacrylate	0.000		0	N.D.	
106)	1-Chlorohexane	0.000		0m	N.D.	d
107)	cis-1,4-Dichloro-2-butene	0.000		0m	N.D.	d
108)	Cyclohexanone	17.192	42	233	N.D.	
109)	trans-1,4-Dichloro-2-b...	0.000		0m	N.D.	d
110)	Pentachloroethane	0.000		0	N.D.	
111)	Benzyl chloride	0.000		0m	N.D.	d
112)	bis(2-Chloroisopropyl)...	19.054	45	260	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
InstName : VOA2
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 11:38:38 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

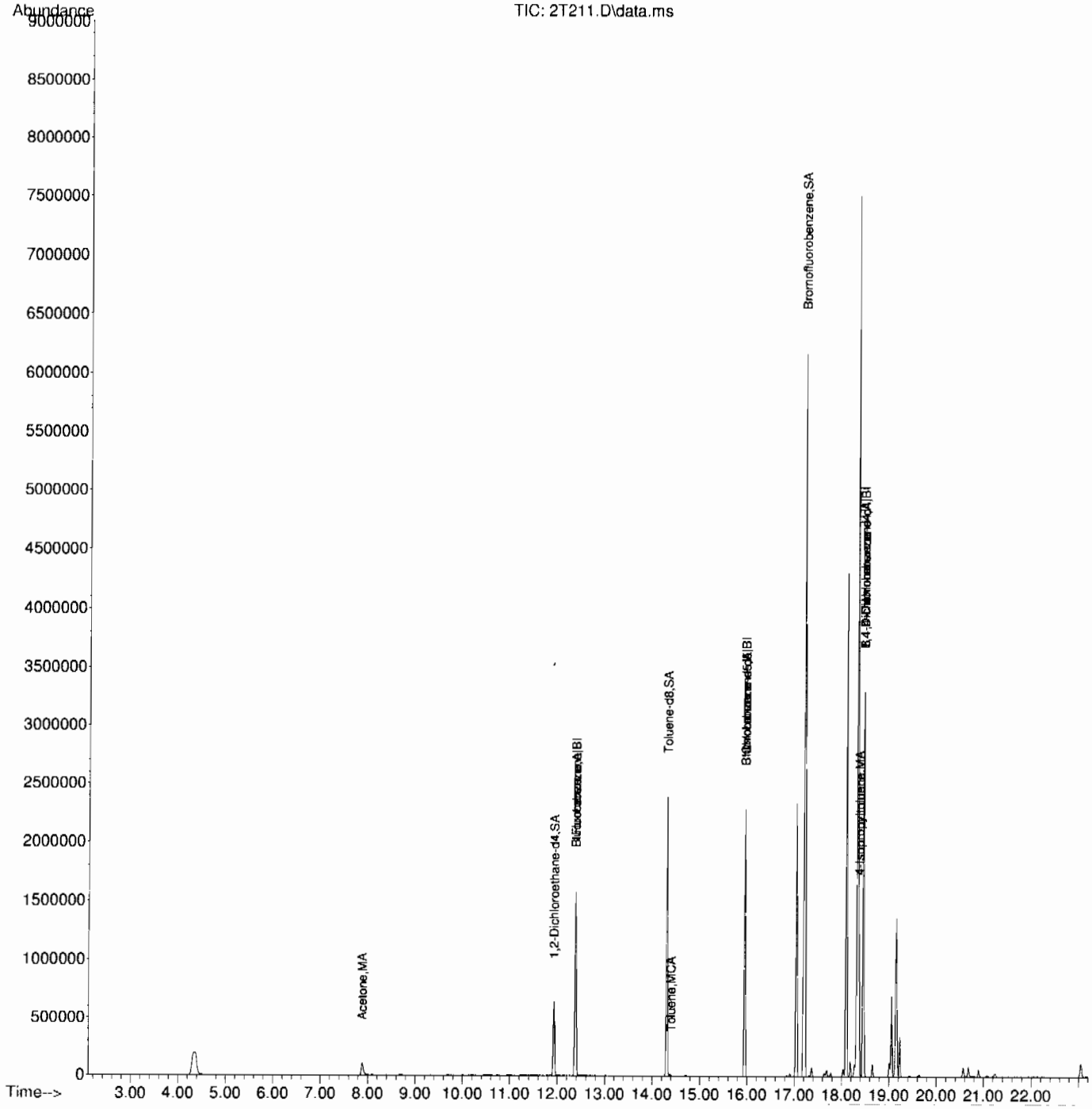

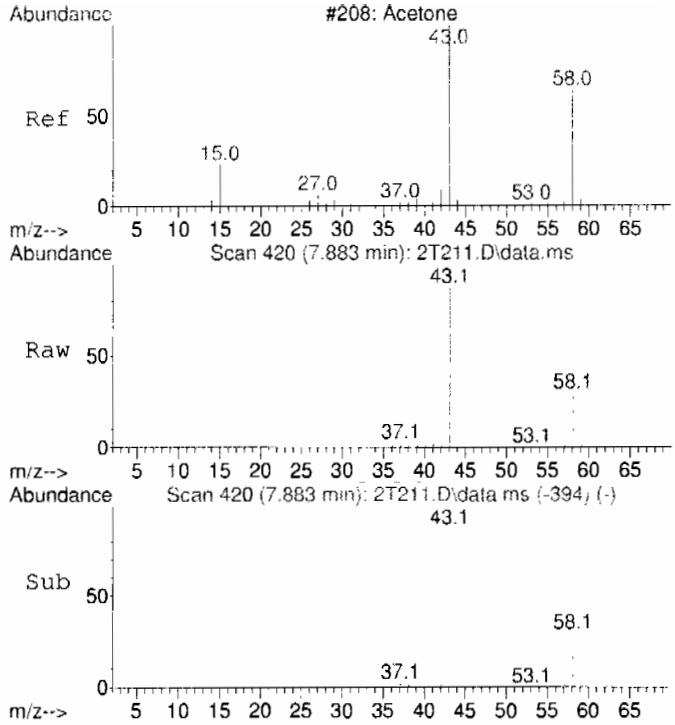

#9
Acetone
Concen: 41.97 ug/L
RT: 7.883 min Scan# 420
Delta R.T. 0.012 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 43 Resp: 222488

Ion	Ratio	Lower	Upper
43	100		
58	28.9	0.0	59.3

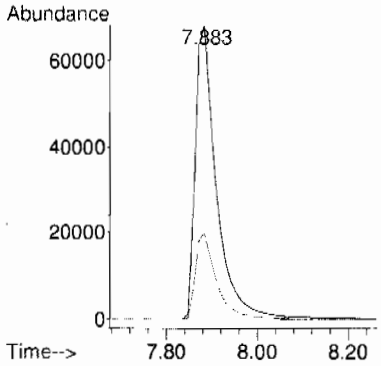

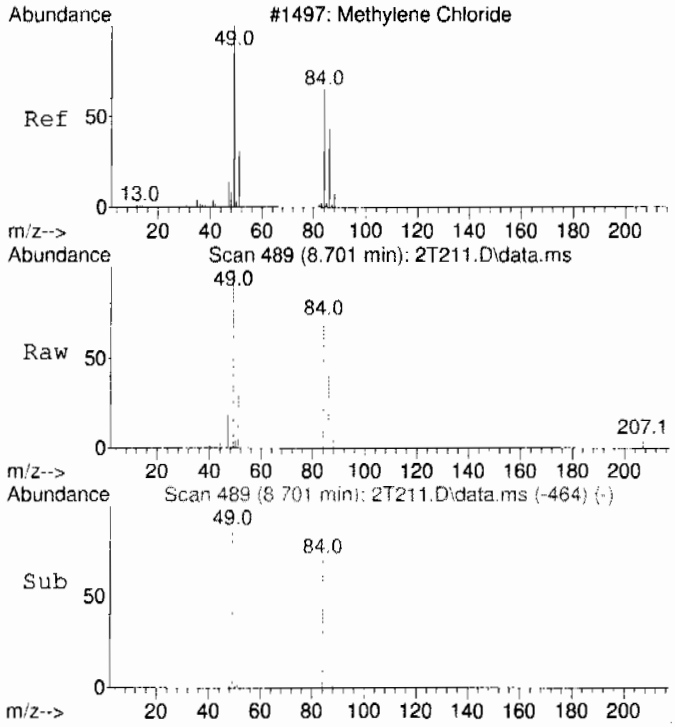

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 84 Resp: 6954

Ion	Ratio	Lower	Upper
84	100		
86	63.4	33.8	93.8
49	143.1	105.0	165.0

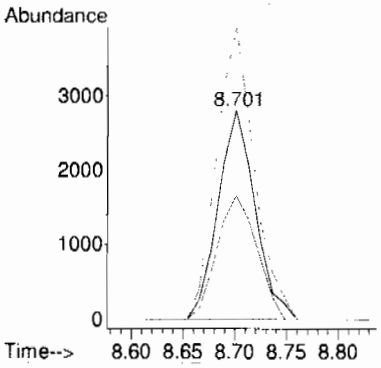

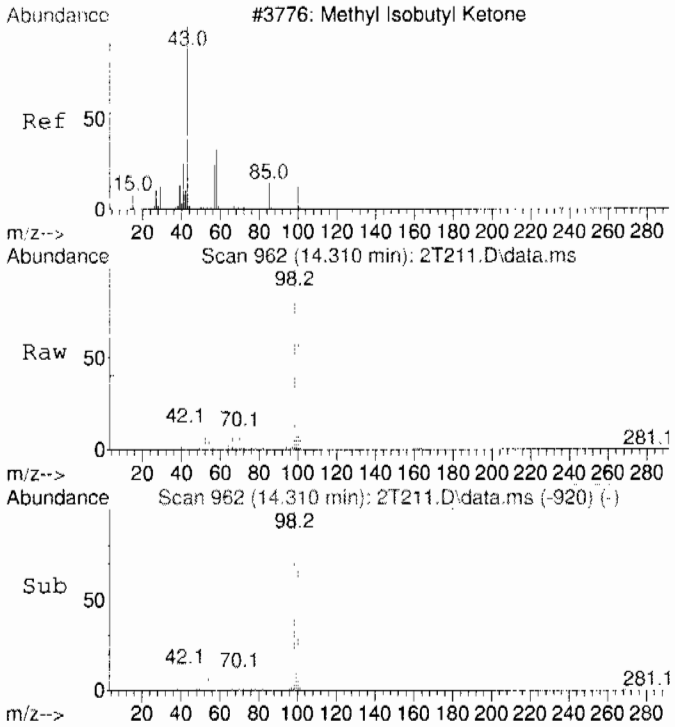

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.54 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 58 Resp: 13034

Ion	Ratio	Lower	Upper
58	100		
43	57.4	245.2	305.2#
100	8156.6	7.2	67.2#

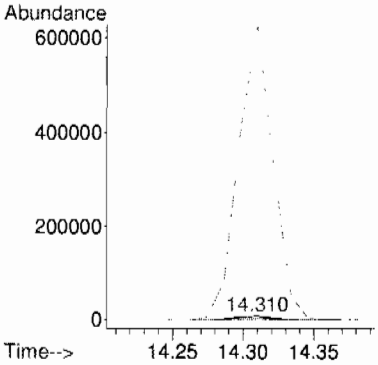

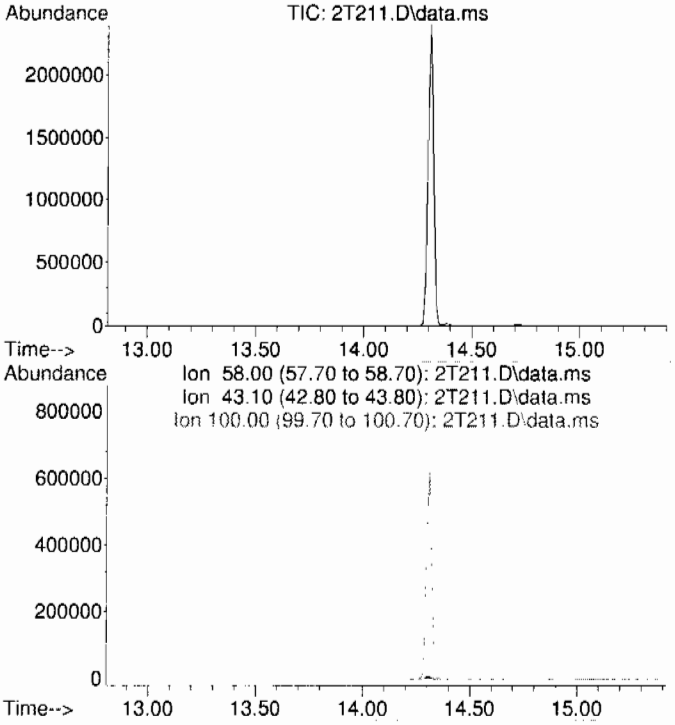

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

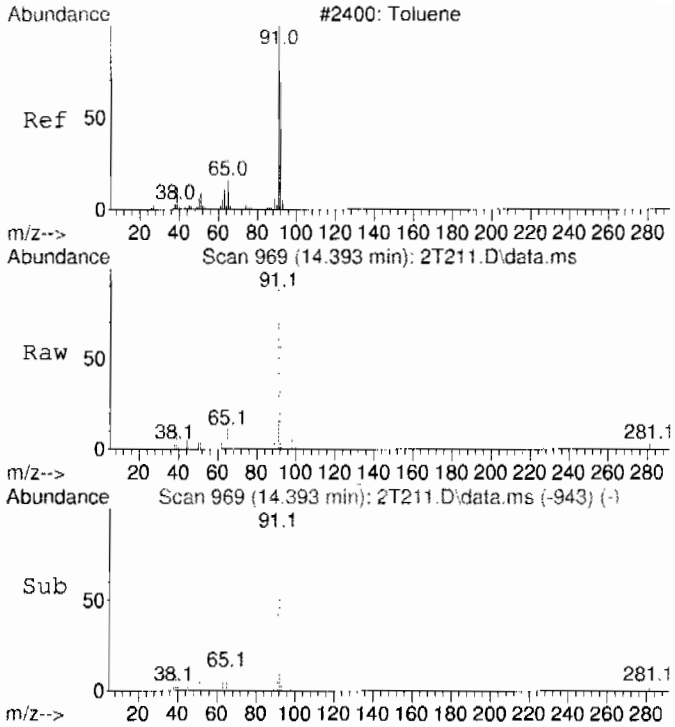

#44
Toluene
Concen: 0.38 ug/L
RT: 14.393 min Scan# 969
Delta R.T. 0.012 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91 Resp: 11416

Ion	Ratio	Lower	Upper
91	100		
92	58.7	30.1	90.1

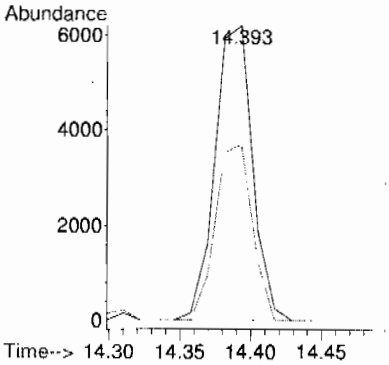

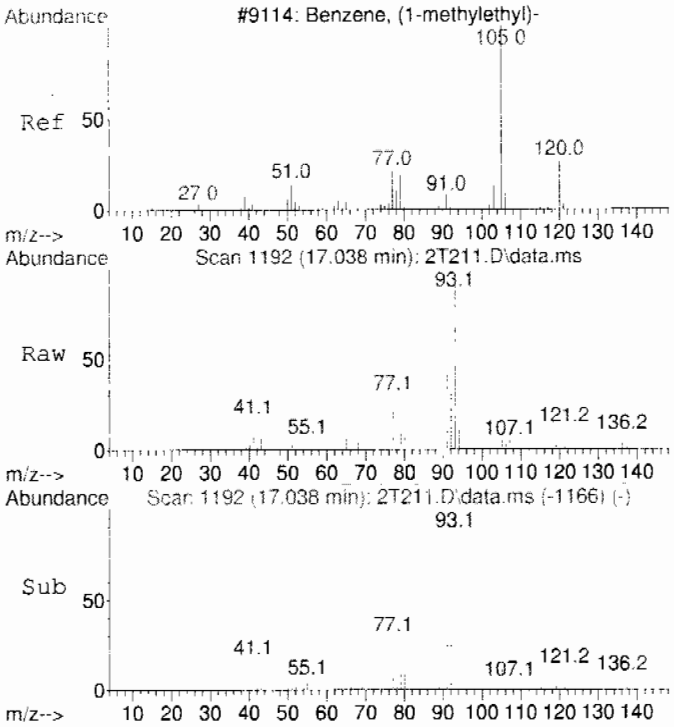

#60 BEFORE analyst integration
Isopropylbenzene
Concen: 3.11 ug/L
RT: 17.038 min Scan# 1192
Delta R.T. 0.012 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion:105 Resp: 107784

Ion	Ratio	Lower	Upper
105	100		
120	4.4	0.0	57.9

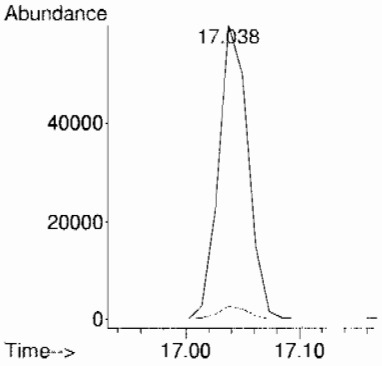

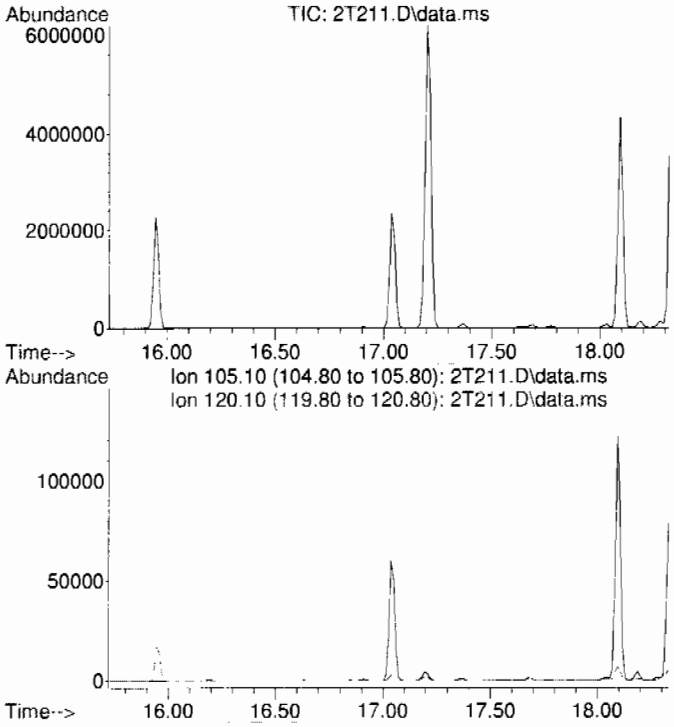

#60 AFTER analyst integration
Isopropylbenzene
Concen: N.D. DELETED
Expected RT: 17.03 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	27.9

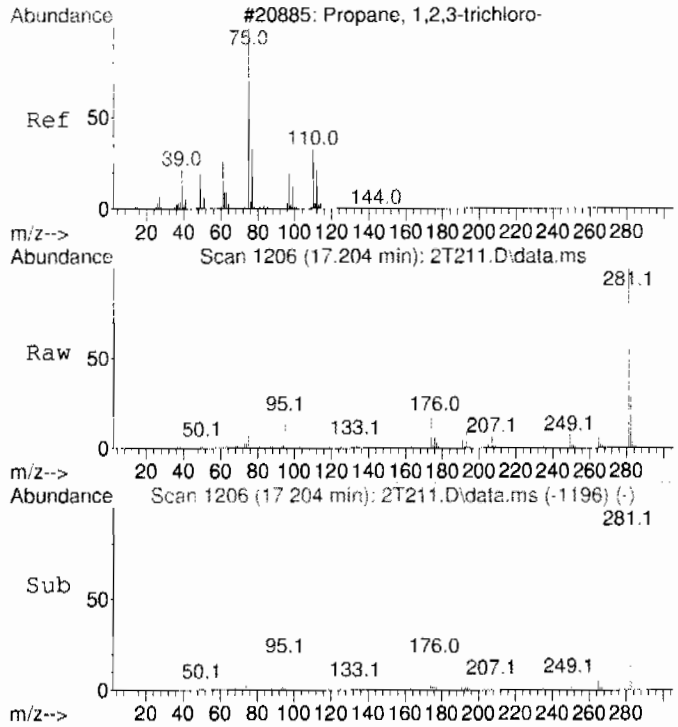

#63 BEFORE analyst integration
1,2,3-Trichloropropane
Concen: 3.64 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. -0.178 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion:110 Resp: 8506

Ion	Ratio	Lower	Upper
110	100		
75	3337.9	252.2	312.2#
77	49.4	629.3	689.3#

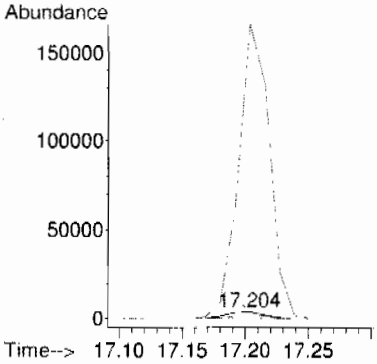

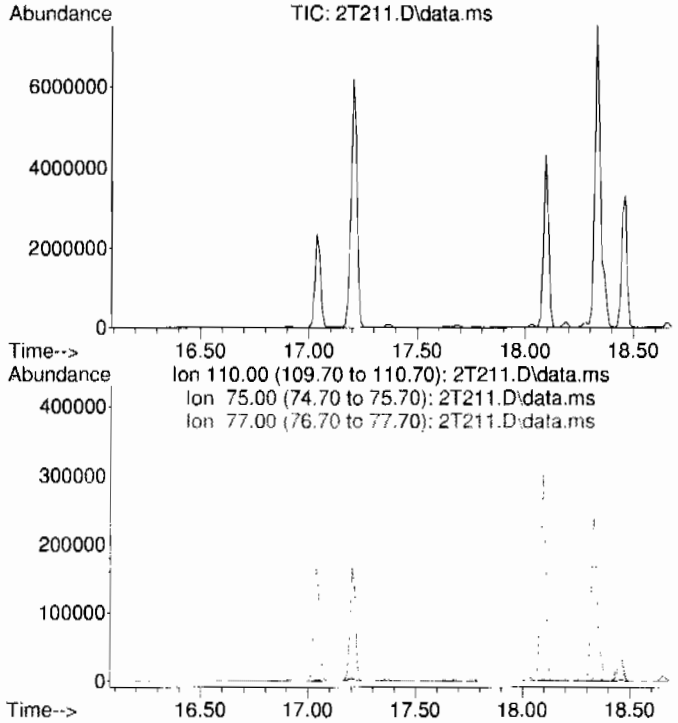

#63 AFTER analyst integration
1,2,3-Trichloropropane
Concen: N.D. DELETED
Expected RT: 17.38 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 110

Sig	Exp Ratio
110	100
75	282.2
77	659.3

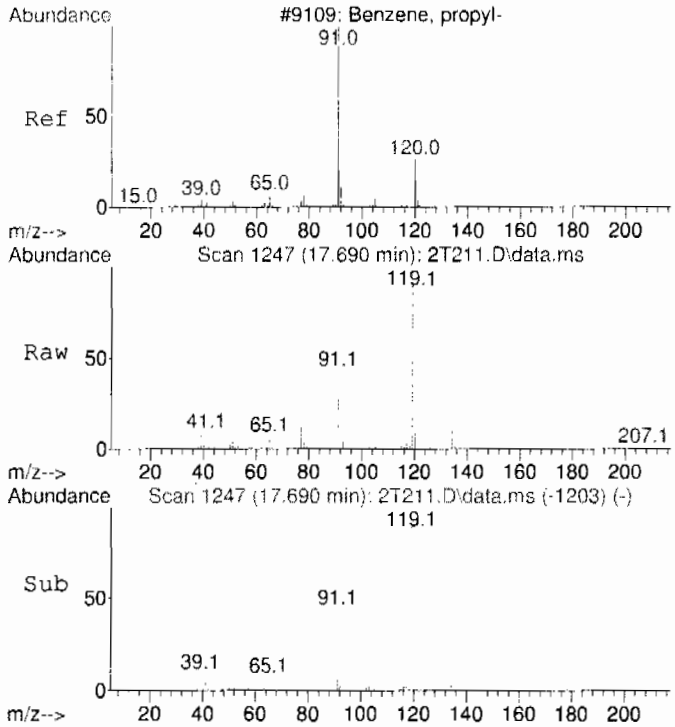

#65 BEFORE analyst integration
n-Propylbenzene
Concen: 0.48 ug/L
RT: 17.690 min Scan# 1247
Delta R.T. 0.225 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91 Resp: 19767

Ion	Ratio	Lower	Upper
91	100		
120	16.8	0.0	54.5

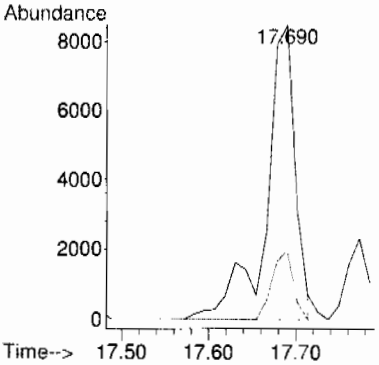

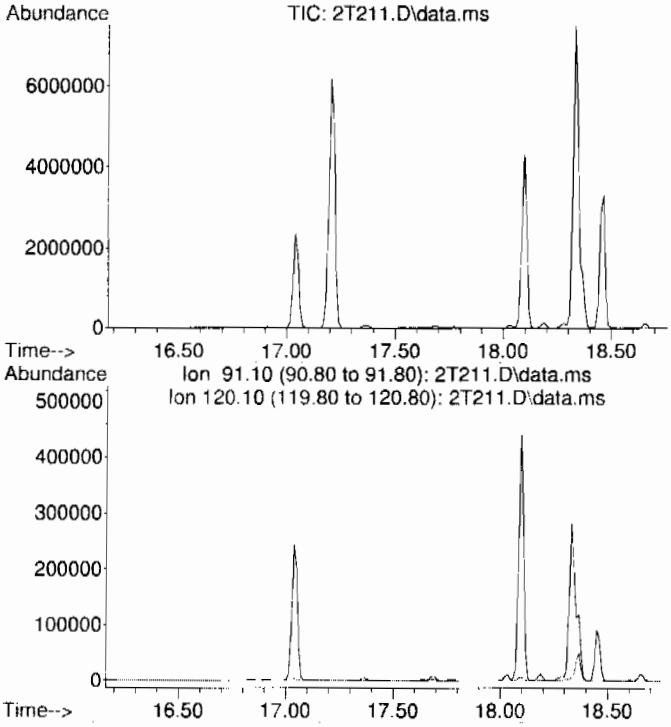

#65 AFTER analyst integration
n-Propylbenzene
Concen: N.D. DELETED
Expected RT: 17.47 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
120	24.5

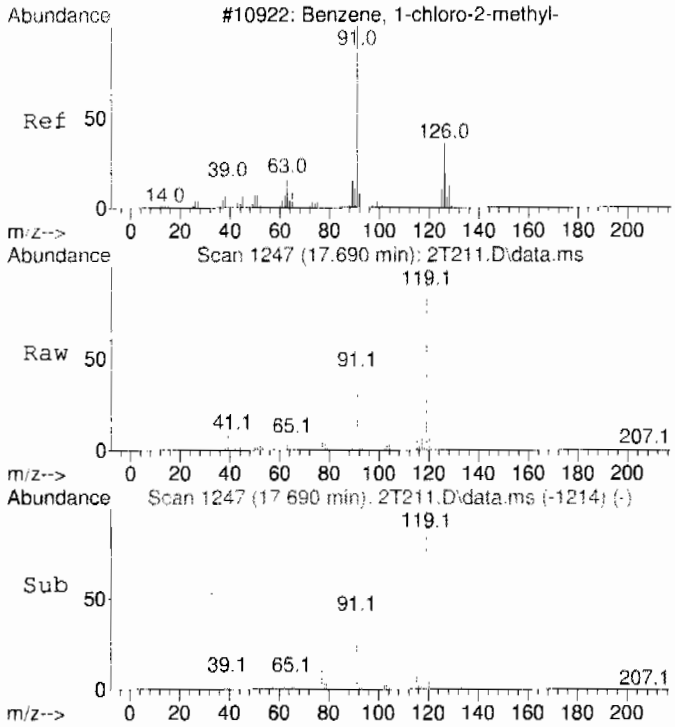

#67 BEFORE analyst integration
2-Chlorotoluene
Concen: 0.72 ug/L
RT: 17.690 min Scan# 1247
Delta R.T. 0.095 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91 Resp: 19918

Ion	Ratio	Lower	Upper
91	100		
126	2.0	3.5	63.5#

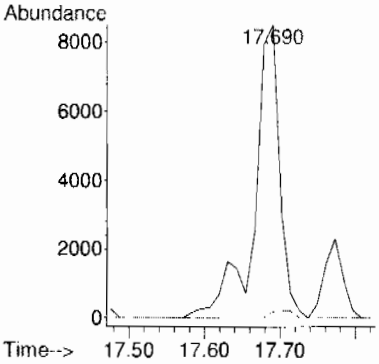

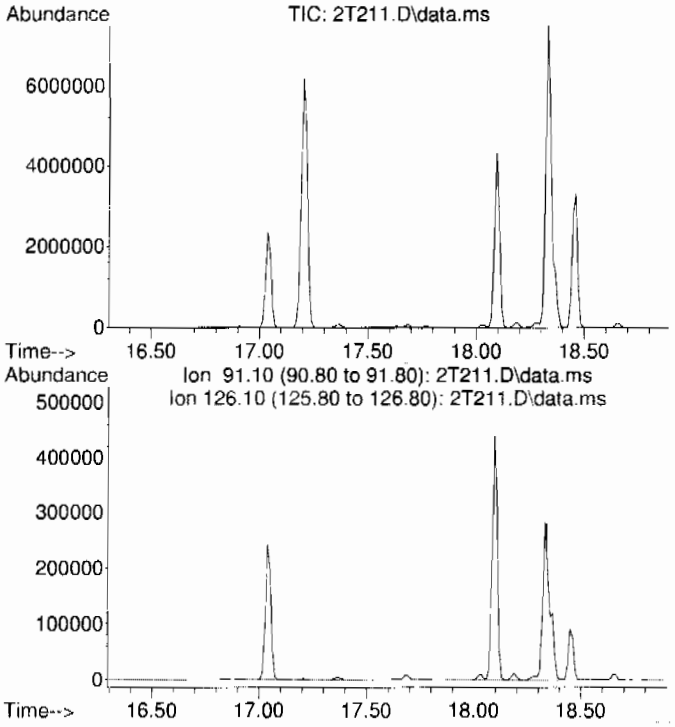

#67 AFTER analyst integration
2-Chlorotoluene
Concen: N.D. DELETED
Expected RT: 17.59 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	33.5

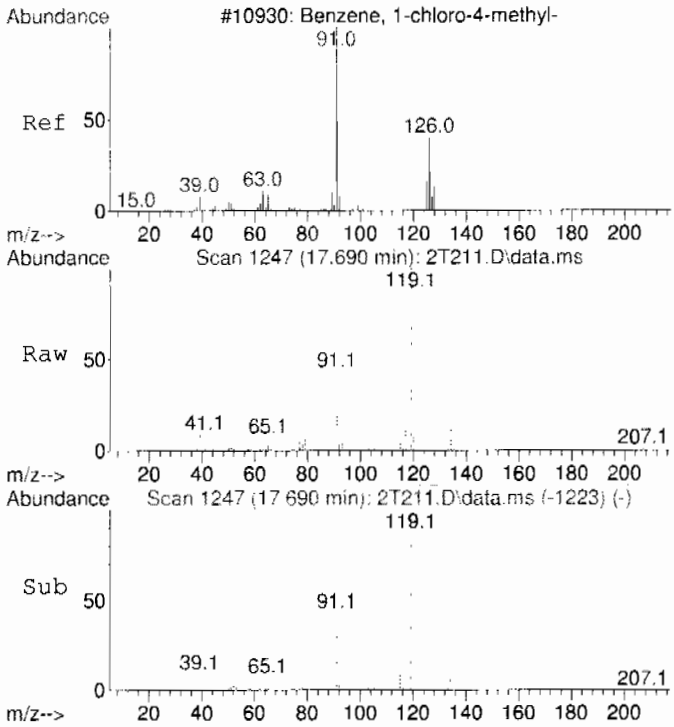

#68 BEFORE analyst integration
4-Chlorotoluene
Concen: 0.79 ug/L
RT: 17.690 min Scan# 1247
Delta R.T. -0.012 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91 Resp: 19918

Ion	Ratio	Lower	Upper
91	100		
126	2.0	7.5	67.5#

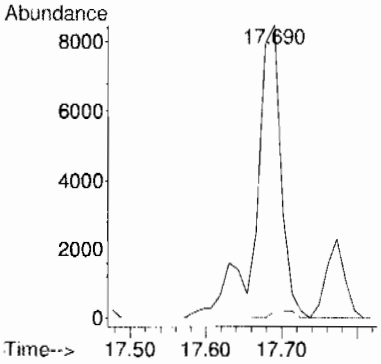

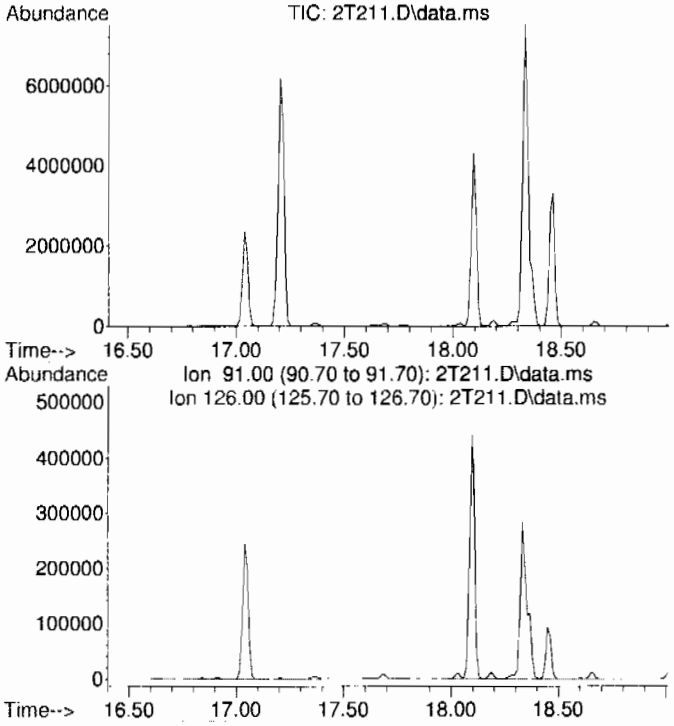

#68 AFTER analyst integration
4-Chlorotoluene
Concen: N.D. DELETED
Expected RT: 17.70 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	37.5

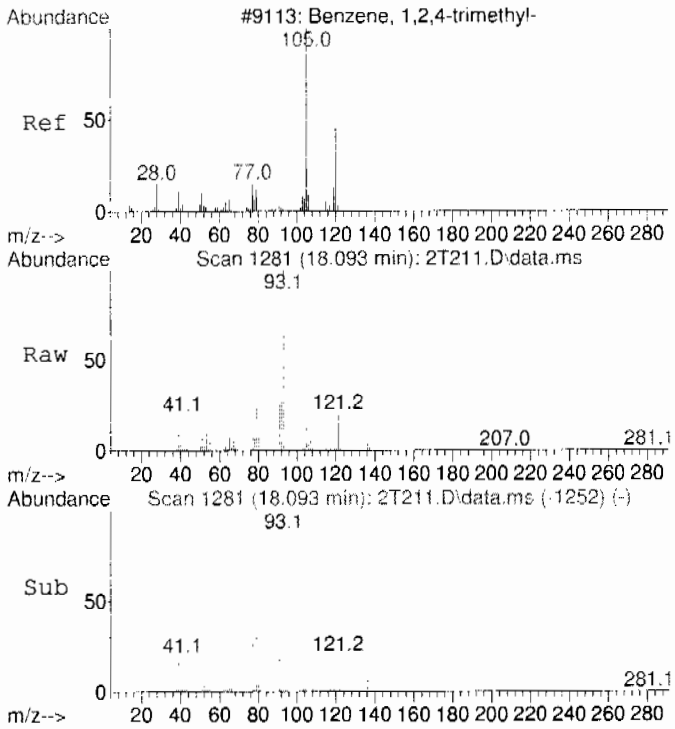

#70 BEFORE analyst integration
1,2,4-Trimethylbenzene
Concen: 6.78 ug/L
RT: 18.093 min Scan# 1281
Delta R.T. 0.047 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion:105 Resp: 201328

Ion	Ratio	Lower	Upper
105	100		
120	5.7	26.4	86.4#

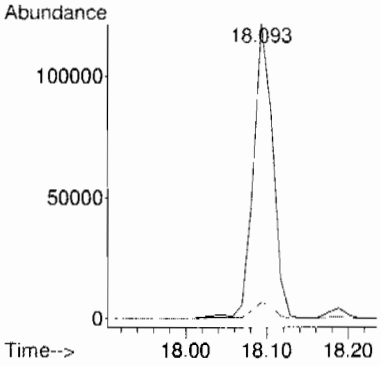

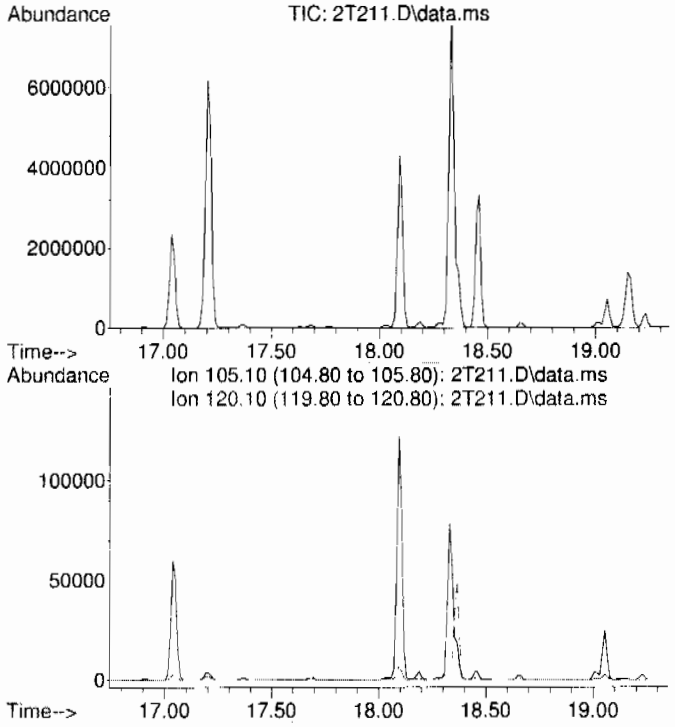

#70 AFTER analyst integration
1,2,4-Trimethylbenzene
Concen: N.D. DELETED
Expected RT: 18.05 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	56.4

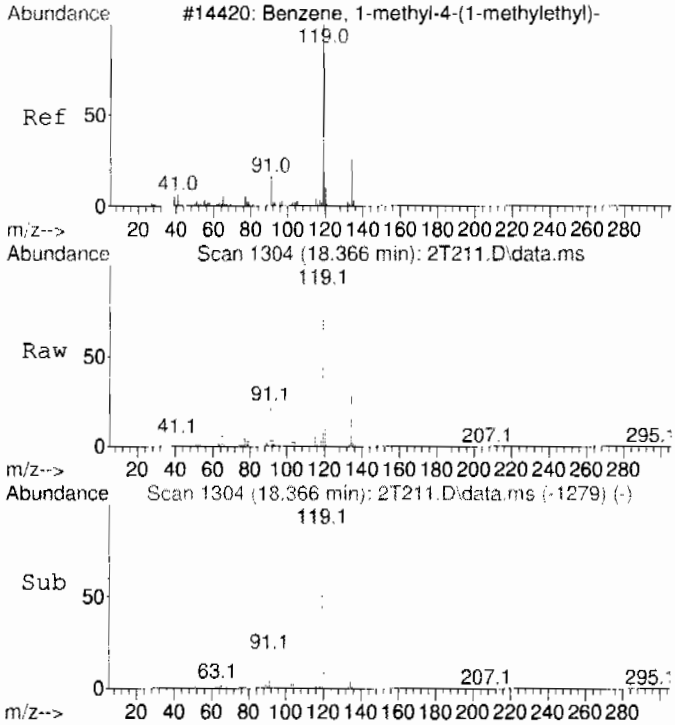

#72
4-Isopropyltoluene
Concen: 26.96 ug/L
RT: 18.366 min Scan# 1304
Delta R.T. -0.000 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion:119 Resp: 839851

Ion	Ratio	Lower	Upper
119	100		
134	26.2	0.0	58.3
91	0.0	0.0	52.0

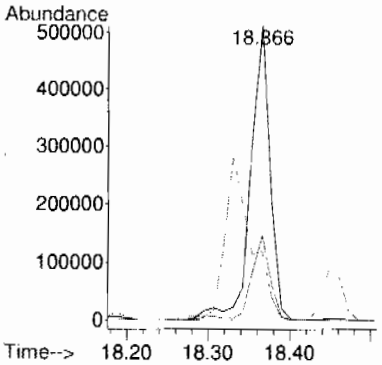

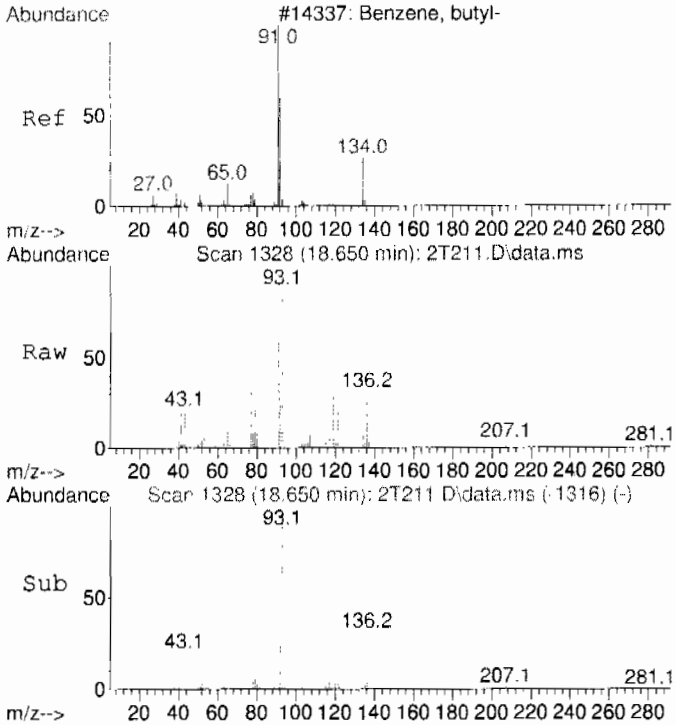

#75 BEFORE analyst integration
n-Butylbenzene
Concen: 0.75 ug/L
RT: 18.650 min Scan# 1328
Delta R.T. -0.155 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91 Resp: 22092

Ion	Ratio	Lower	Upper
91	100		
92	40.7	25.2	85.2
134	11.5	0.0	59.1

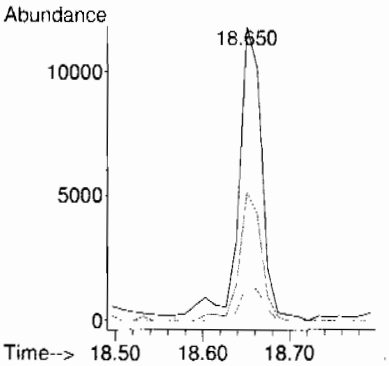

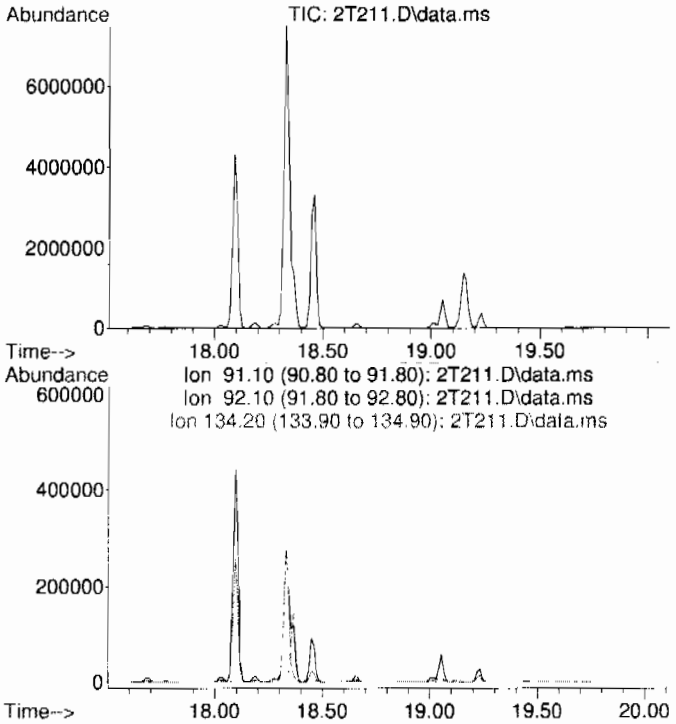

#75 AFTER analyst integration
n-Butylbenzene
Concen: N.D. DELETED
Expected RT: 18.81 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	55.2
134	29.1

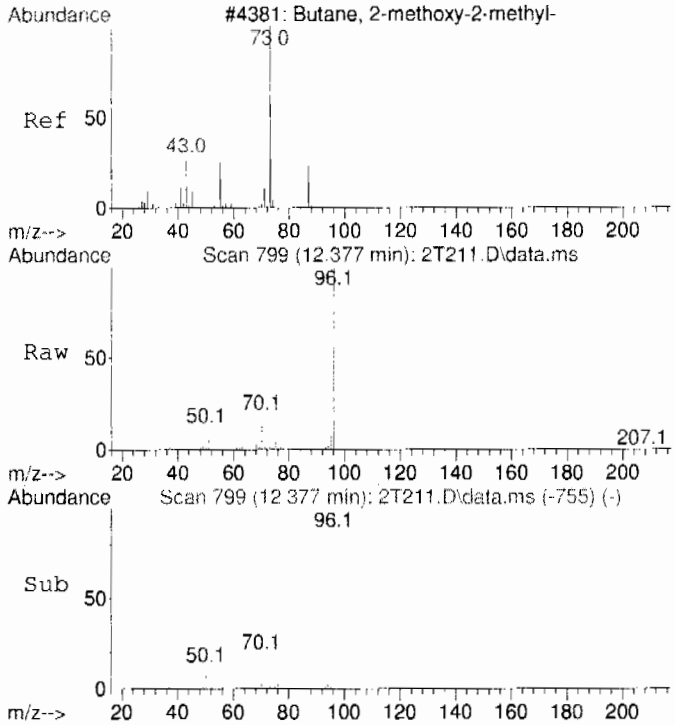

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 1.02 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 73 Resp: 17896

Ion	Ratio	Lower	Upper
73	100		
55	7.0	5.2	65.2
87	0.0	0.0	54.7

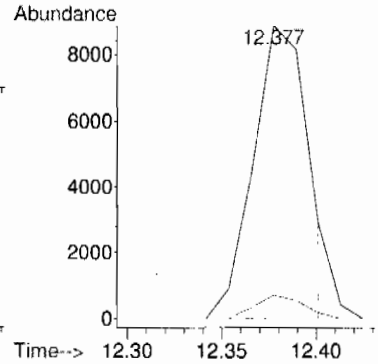

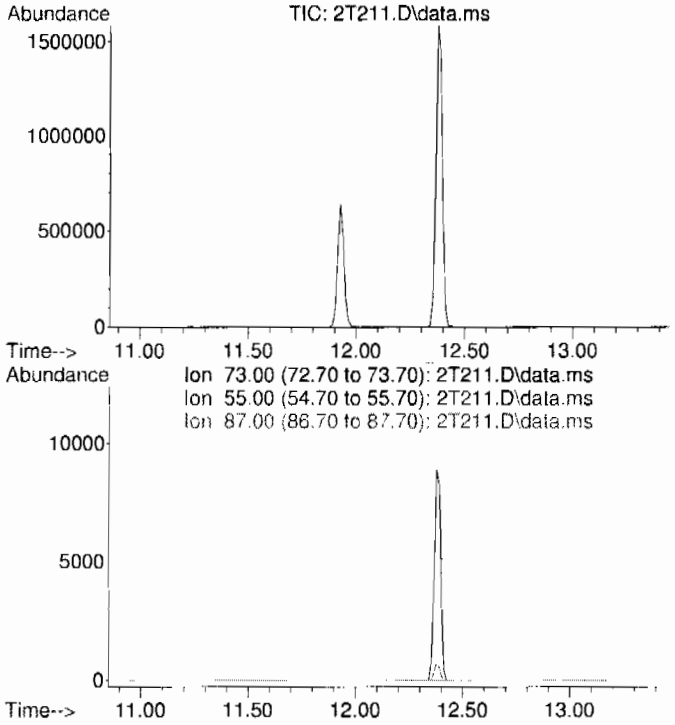

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

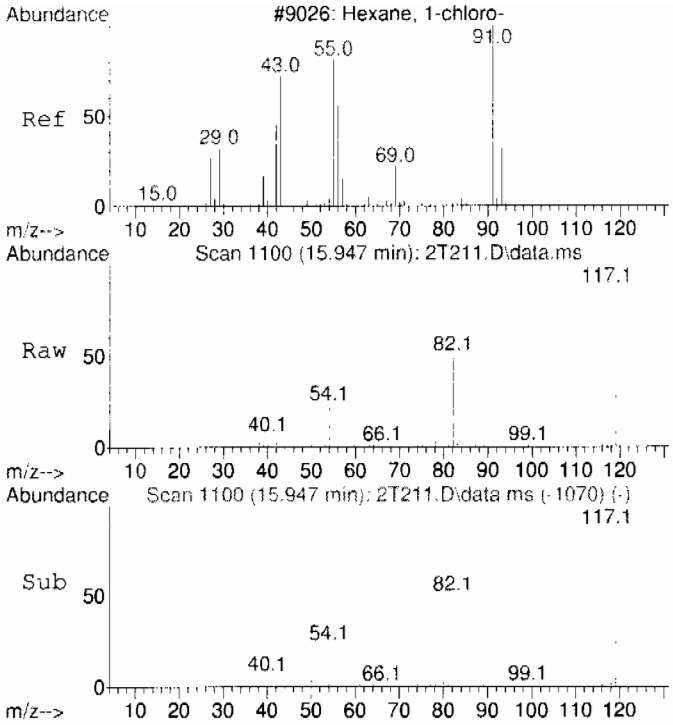

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 2.02 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 55 Resp: 12934

Ion	Ratio	Lower	Upper
55	100		
91	18.9	113.2	173.2#
56	57.4	30.3	90.3

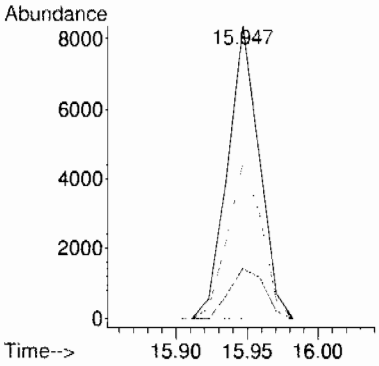

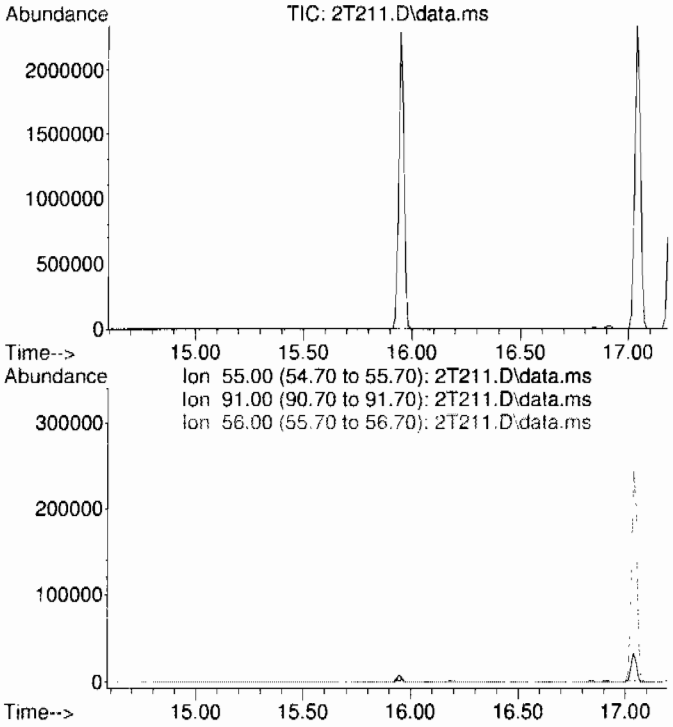

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

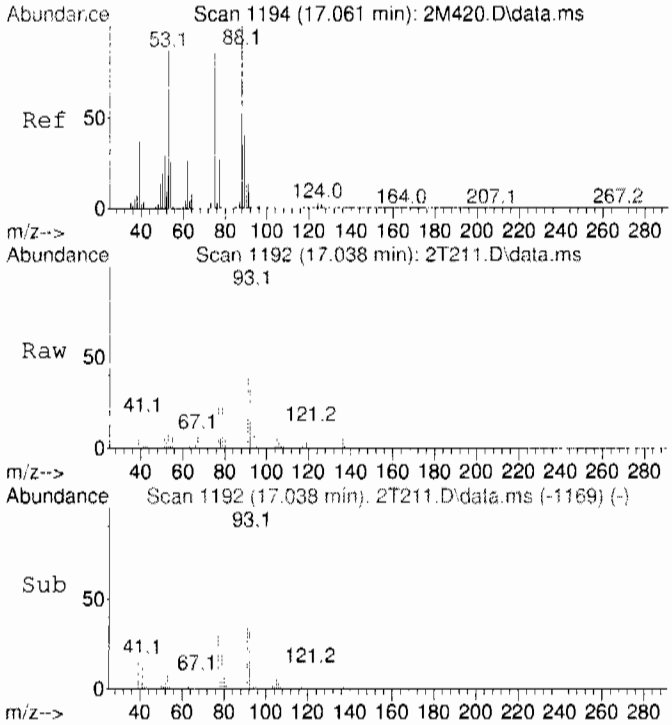

#107 BEFORE analyst integration
cis-1,4-Dichloro-2-butene
Concen: 35.56 ug/L
RT: 17.038 min Scan# 1192
Delta R.T. -0.024 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 53 Resp: 91079

Ion	Ratio	Lower	Upper
53	100		
88	0.3	80.3	140.3#
77	326.3	1.2	61.2#

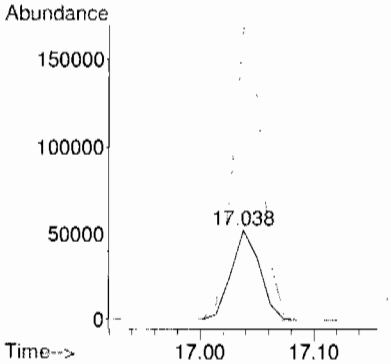

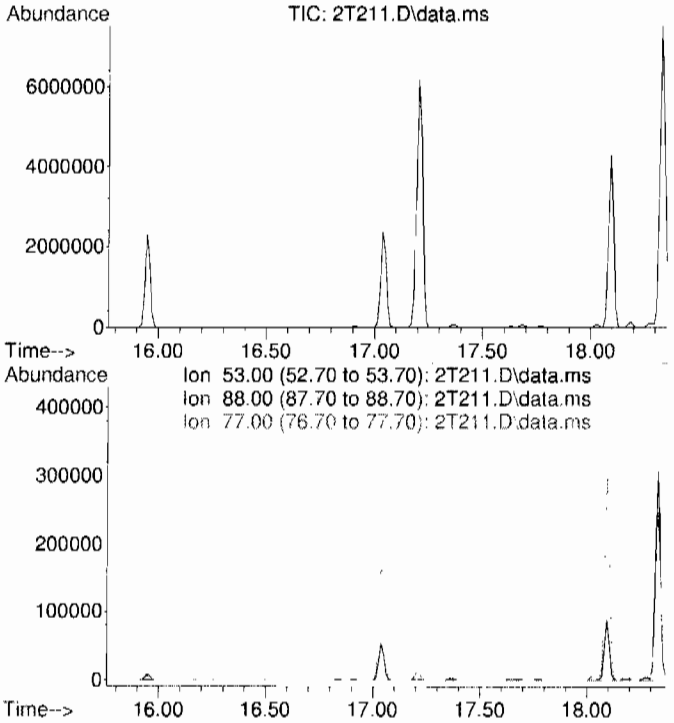

#107 AFTER analyst integration
cis-1,4-Dichloro-2-butene
Concen: N.D. DELETED
Expected RT: 17.06 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	110.3
77	31.2

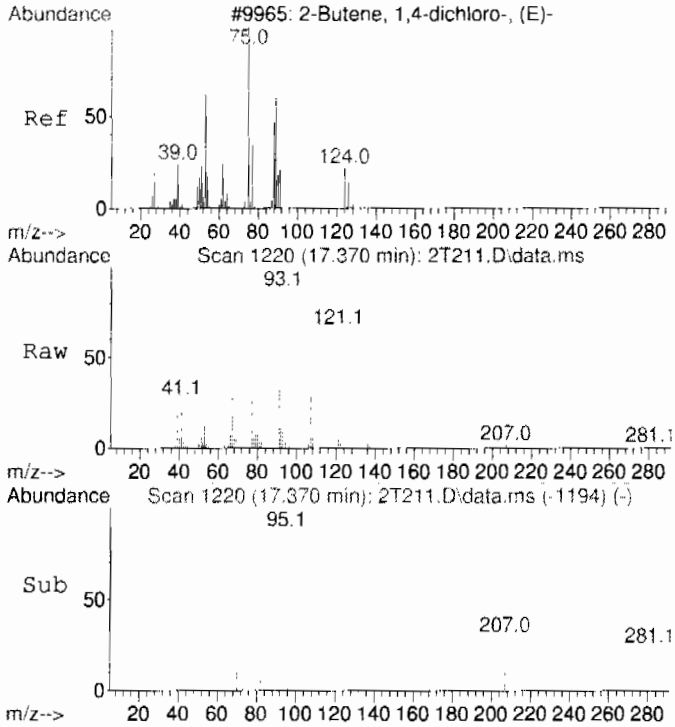

#109 BEFORE analyst integration
trans-1,4-Dichloro-2-butene
Concen: 1.46 ug/L
RT: 17.370 min Scan# 1220
Delta R.T. 0.012 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 53 Resp: 3637

Ion	Ratio	Lower	Upper
53	100		
88	0.0	21.1	81.1#
75	12.4	88.8	148.8#

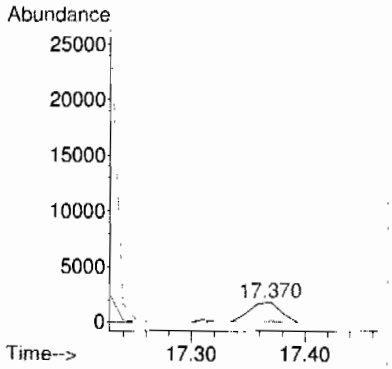

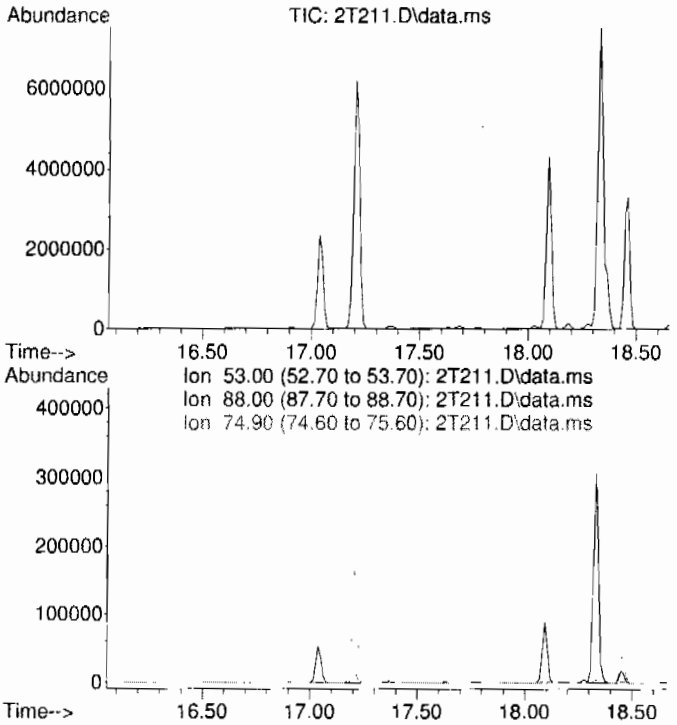

#109 AFTER analyst integration
trans-1,4-Dichloro-2-butene
Concen: N.D. DELETED
Expected RT: 17.36 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	51.1
75	118.8

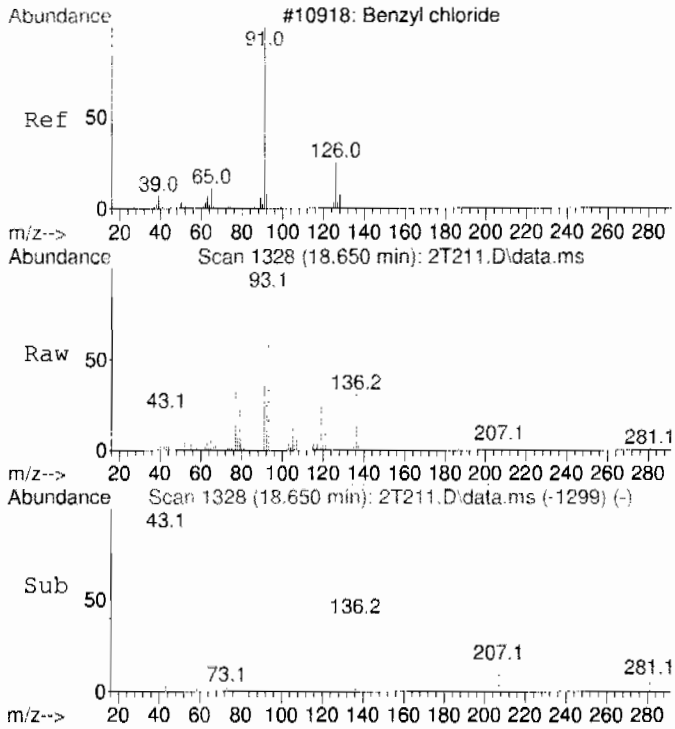

#111 BEFORE analyst integration
Benzyl chloride
Concen: 1.66 ug/L
RT: 18.650 min Scan# 1328
Delta R.T. 0.047 min
Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91 Resp: 22092

Ion	Ratio	Lower	Upper
91	100		
126	0.5	0.0	53.5
65	14.3	0.0	41.0

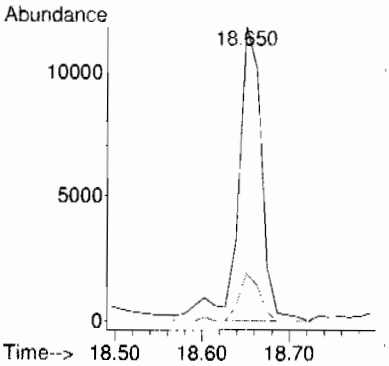

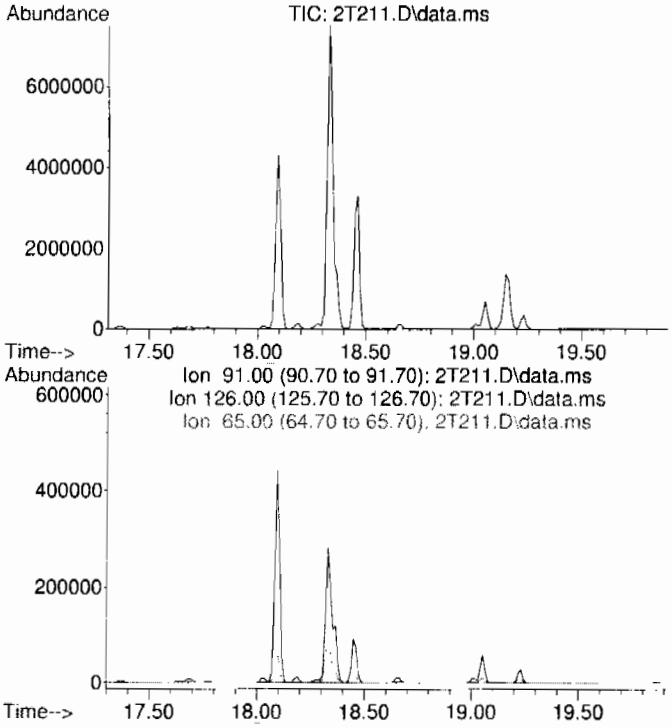

#111 AFTER analyst integration
Benzyl chloride
Concen: N.D. DELETED
Expected RT: 18.60 min

Lab File: 2T211.D
Acq: 7 Jul 2009 11:29 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	23.5
65	11.0

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T211.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.345	143	152	170	rBB	196078	1344666	9.31%	2.109%
2	4.687	173	175	178	rBB	197	332	0.00%	0.001%
3	4.954	191	193	196	rBB	316	453	0.00%	0.001%
4	6.021	261	263	290	rBV	717	10607	0.07%	0.017%
5	6.934	338	340	353	rBV2	823	2453	0.02%	0.004%
6	7.883	416	420	442	rBV	104377	343011	2.38%	0.538%
7	8.701	484	489	502	rVB	11358	30336	0.21%	0.048%
8	9.685	567	572	596	rVB2	3235	10646	0.07%	0.017%
9	10.942	675	678	687	rBV	910	2937	0.02%	0.005%
10	11.239	700	703	705	rBV2	1418	2906	0.02%	0.005%
11	11.927	755	761	769	rBV	638483	1288586	8.93%	2.021%
12	12.377	794	799	828	rVB	1583775	3242725	22.46%	5.087%
13	13.018	850	853	858	rVB2	1379	3123	0.02%	0.005%
14	14.310	956	962	967	rBV	2393922	4155393	28.78%	6.519%
15	14.713	992	996	1005	rVB	9250	18249	0.13%	0.029%
16	15.947	1094	1100	1109	rBV	2288846	3763355	26.07%	5.904%
17	16.196	1118	1121	1127	rVB	3539	6393	0.04%	0.010%
18	16.646	1156	1159	1163	rVB2	3307	5395	0.04%	0.008%
19	16.848	1171	1176	1178	rVB	9155	15258	0.11%	0.024%
20	16.907	1178	1181	1186	rVB	23499	40703	0.28%	0.064%
21	17.038	1186	1192	1199	rBV	2343268	4152771	28.77%	6.514%
22	17.204	1200	1206	1213	rVV	6171593	11802636	81.76%	18.515%
23	17.370	1213	1220	1233	rVB	76346	156747	1.09%	0.246%
24	17.631	1239	1242	1244	rBV	31676	55543	0.38%	0.087%
25	17.690	1244	1247	1251	rVV	57845	107674	0.75%	0.169%
26	17.773	1251	1254	1267	rVB	32769	57545	0.40%	0.090%
27	18.034	1271	1276	1278	rBV	64305	121721	0.84%	0.191%
28	18.093	1278	1281	1286	rVV	4306151	7005842	48.53%	10.990%
29	18.188	1286	1289	1292	rVV	134599	210391	1.46%	0.330%
30	18.330	1292	1301	1308	rVV2	7504397	14436460	100.00%	22.646%
31	18.461	1308	1312	1322	rVV	3299419	5606735	38.84%	8.795%
32	18.650	1325	1328	1339	rVB	106859	177672	1.23%	0.279%
33	19.054	1355	1362	1365	rBV	699546	1244091	8.62%	1.952%
34	19.148	1365	1370	1374	rVV2	1369317	2920883	20.23%	4.582%
35	19.231	1374	1377	1390	rVB	345745	527841	3.66%	0.828%
36	19.635	1407	1411	1428	rBV	18054	36774	0.25%	0.058%
37	20.571	1486	1490	1495	rBV	81813	170134	1.18%	0.267%

LSC Area Percent Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On    :  7 Jul 2009  11:29 am
Operator  : CDS1
Sample    : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc      : LANL 2G - SOIL
ALS Vial  : 11   Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON                          Filtering: 5
Sampling  : 1                            Min Area: 100 Area counts
Start Thrs: 1                           Max Peaks: 100
Stop Thrs : 0.3                      Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method    : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title     : Volatile Organics 8260B

38  20.678  1495 1499 1507 rVV    86326    167375   1.16%   0.263%
39  20.892  1513 1517 1530 rBV    58391    121287   0.84%   0.190%
40  21.247  1543 1547 1694 rVB    23637     80414   0.56%   0.126%

41  23.050  1694 1699 1706 rBV   118782    299292   2.07%   0.469%


                      Sum of corrected areas:    63747355
```

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

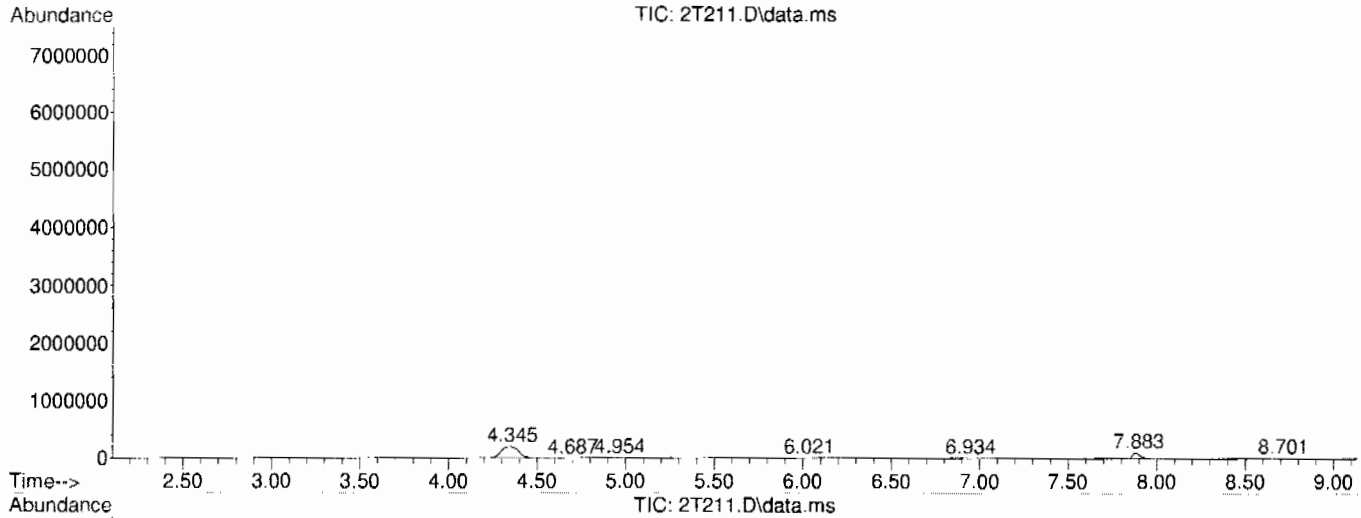

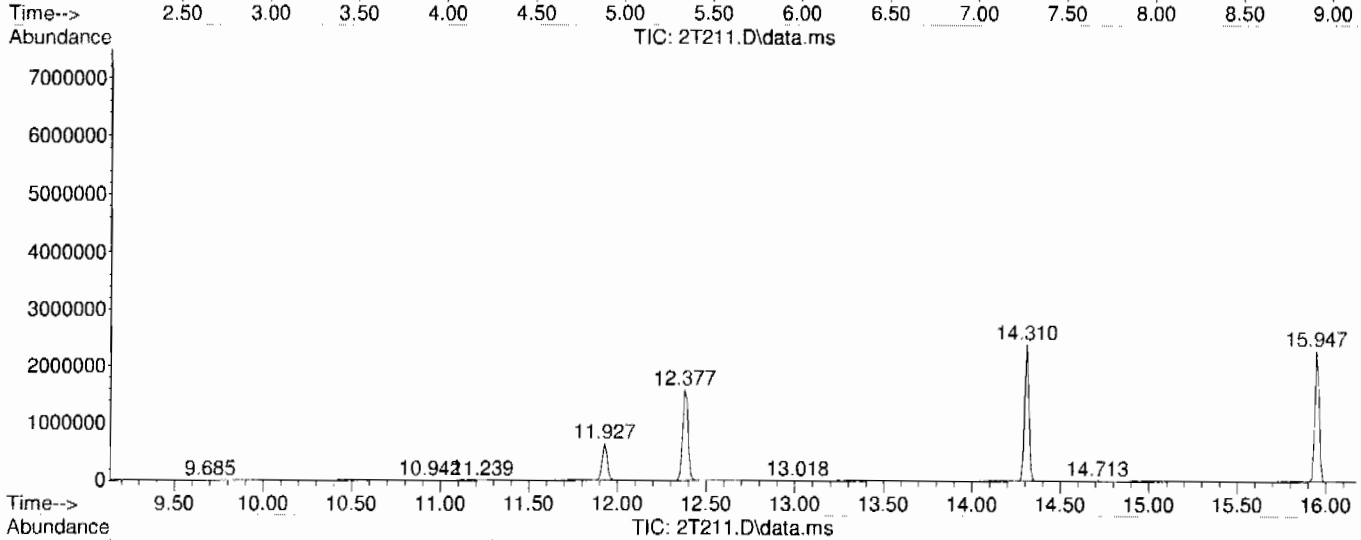

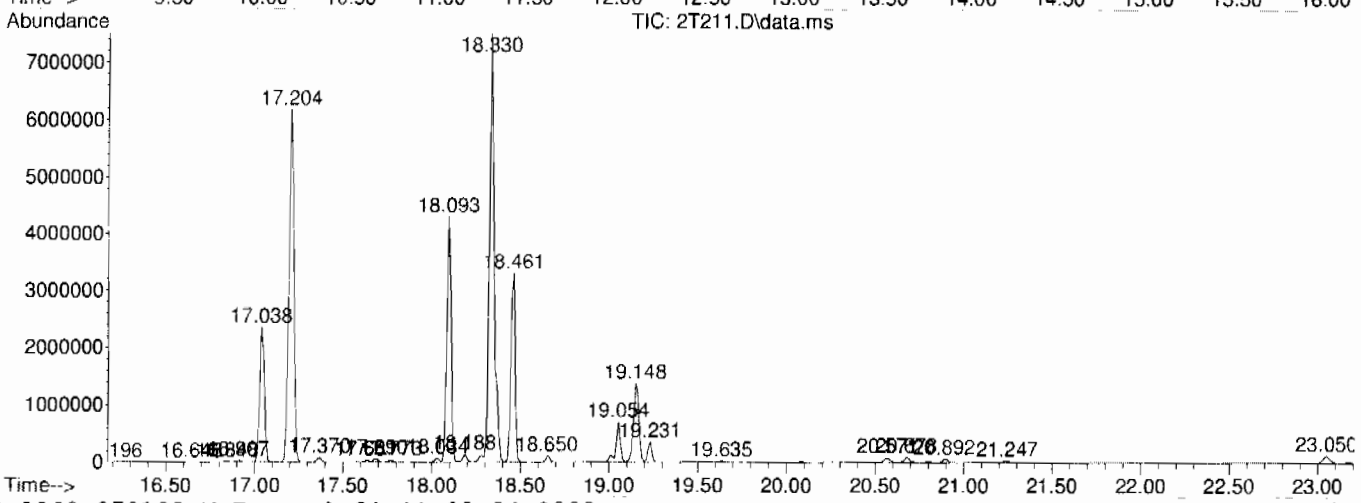

Library Search Compound Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On    :  7 Jul 2009  11:29 am
Operator  : CDS1
Sample    : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc      : LANL 2G - SOIL
ALS Vial  : 11   Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B

TIC Library    : C:\Database\NIST05.L
TIC Integration Parameters: default.P
```

****

Peak Number 1 unknown — Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.345	20.73 ug/L	1344670	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

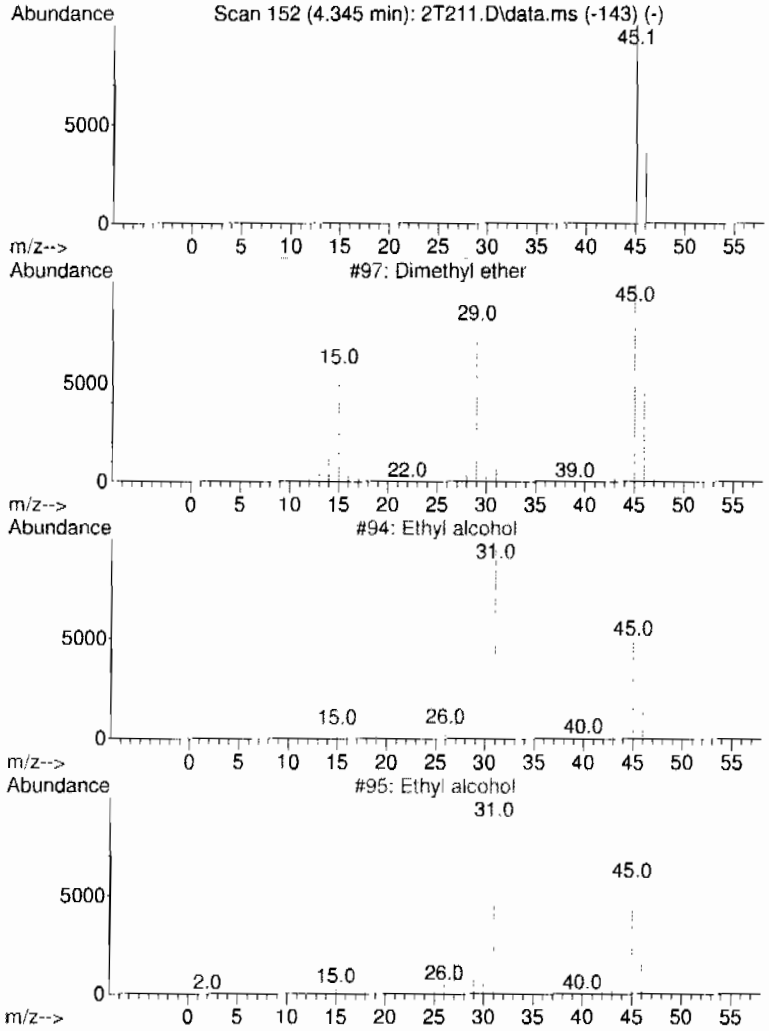

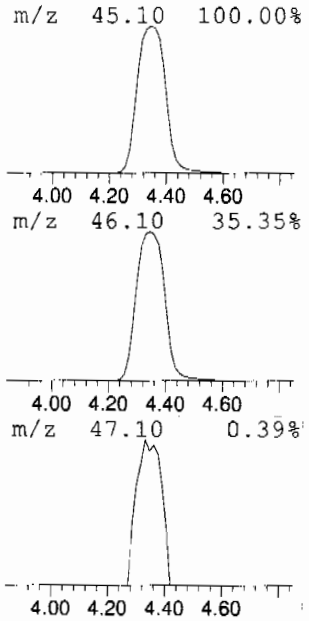

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 2 unknown hydrocarbon Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.038	55.17 ug/L	4152770	B Chlorobenzene-d5	15.947

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1S-.alpha.-Pinene	136	C10H16	007785-26-4	96
2	.alpha.-Pinene	136	C10H16	000080-56-8	96
3	1R-.alpha.-Pinene	136	C10H16	007785-70-8	95
4	1R-.alpha.-Pinene	136	C10H16	007785-70-8	95
5	Bicyclo[3.1.1]hept-2-ene, 2,6,6-...	136	C10H16	002437-95-8	95

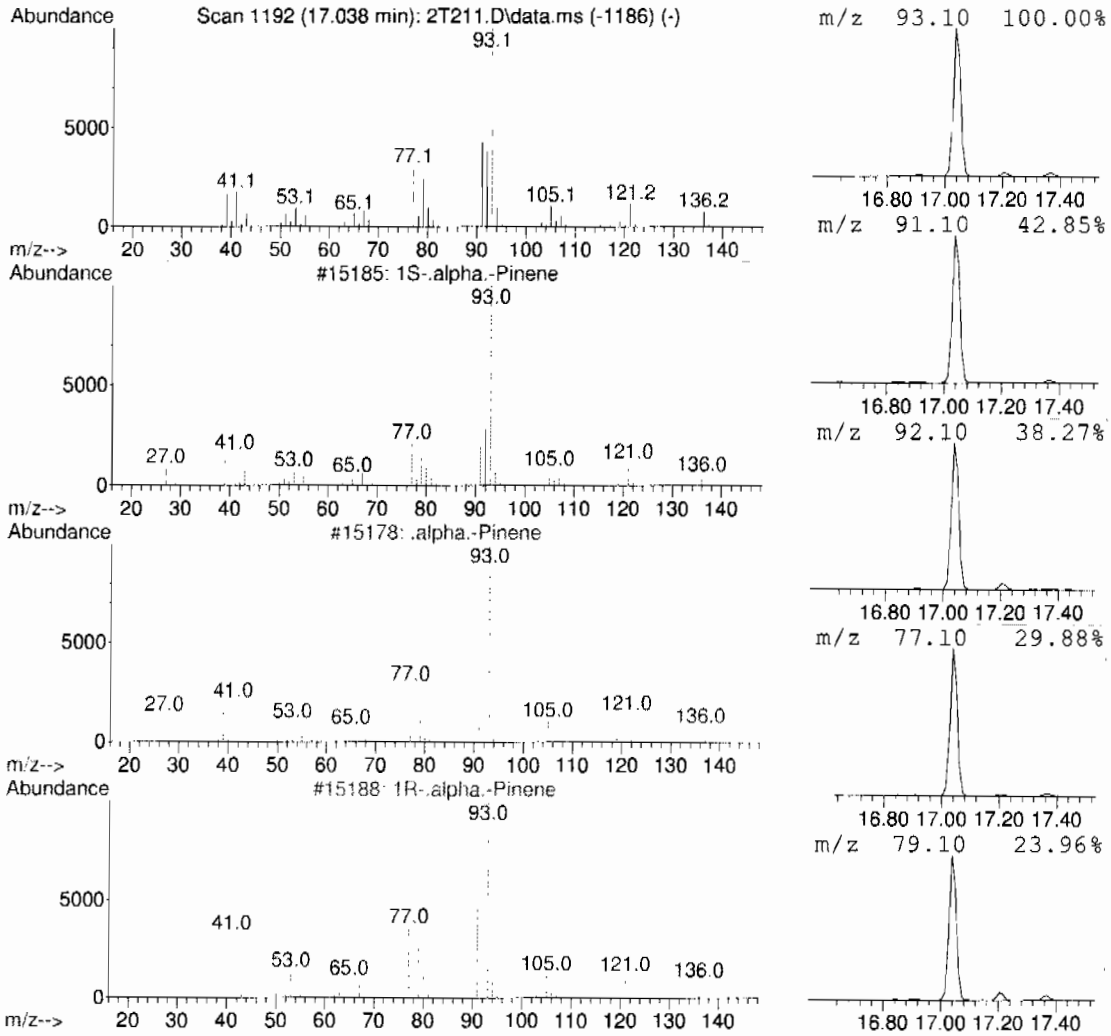

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 3 unknown hydrocarbon Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.093	62.48 ug/L	7005840	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[4.1.0]hept-3-ene, 3,7,7-...	136	C10H16	000498-15-7	97
2	3-Carene	136	C10H16	013466-78-9	96
3	1R-.alpha.-Pinene	136	C10H16	007785-70-8	95
4	3-Carene	136	C10H16	013466-78-9	95
5	3-Carene	136	C10H16	013466-78-9	94

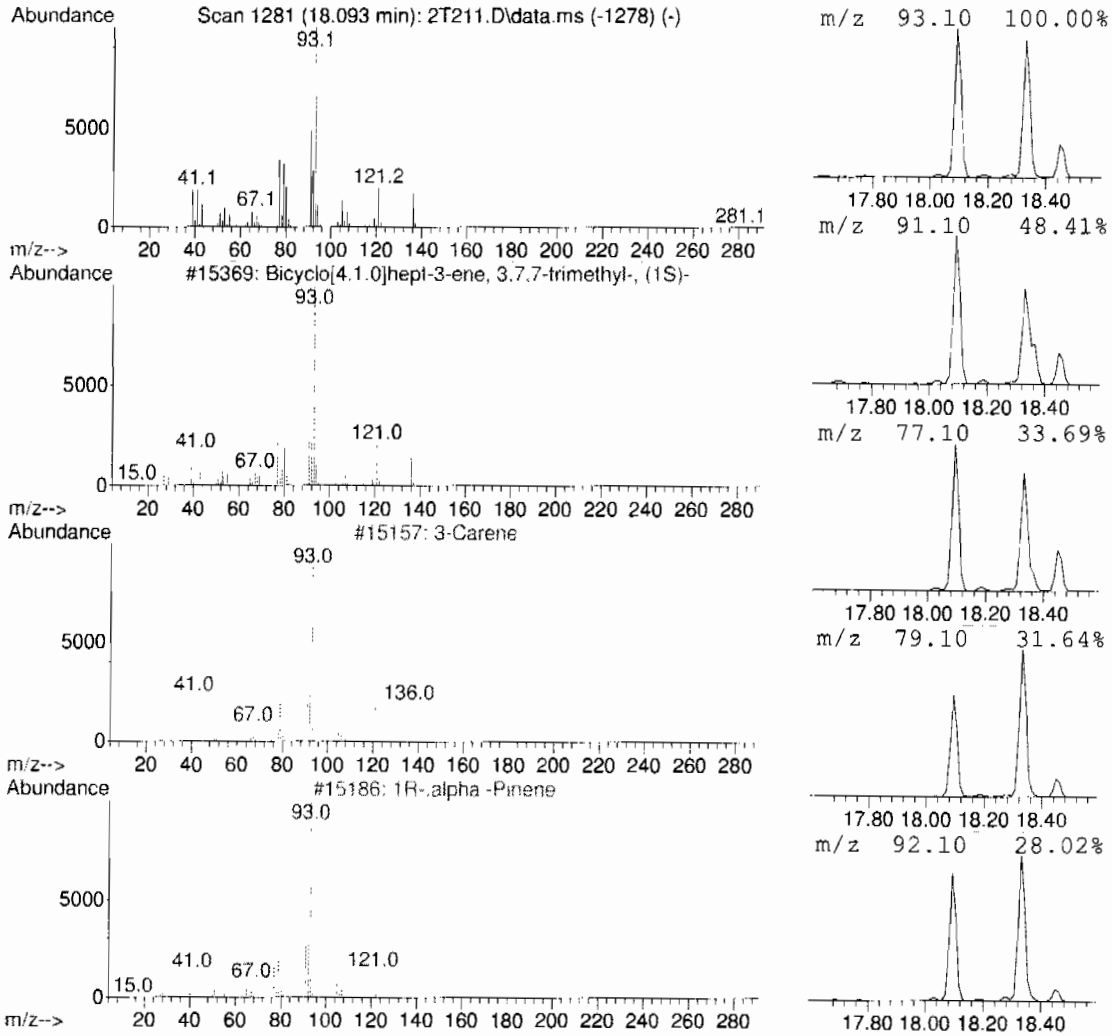

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 4 unknown hydrocarbon Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.054	11.09 ug/L	1244090	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	96
2	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	96
3	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	96
4	(+)-4-Carene	136	C10H16	029050-33-7	96
5	Bicyclo[4.1.0]hept-2-ene, 3,7,7-...	136	C10H16	000554-61-0	95

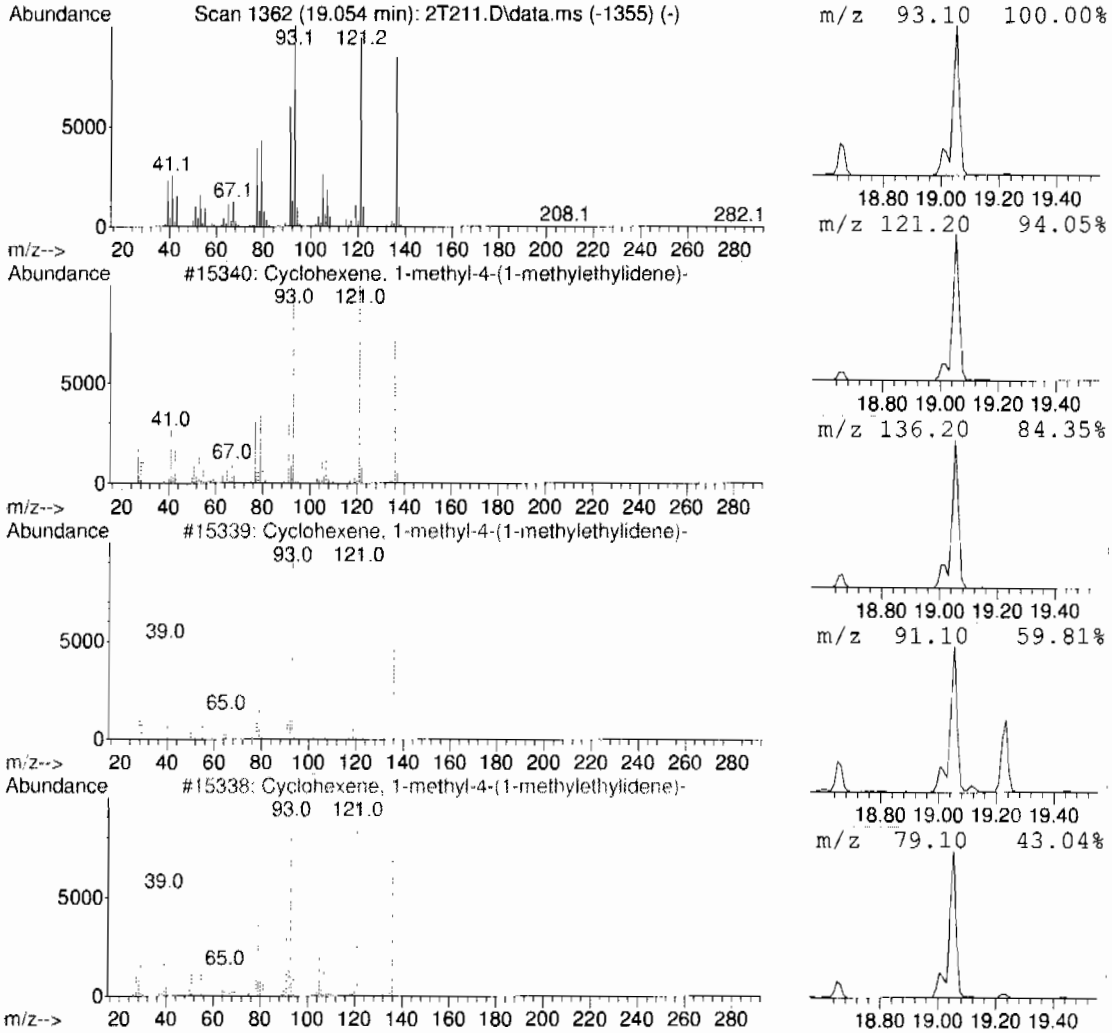

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 7 unknown siloxane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.148	26.05 ug/L	2920880	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-88-8	56
2	p-Trimethylsilyloxyphenyl-(trime...	398	C18H34O4Si3	1000079-05-1	56
3	4-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-53-3	56
4	2-Methyl-5-(3,4-methylenedioxyci...	267	C16H13NO3	094298-70-1	50
5	Butanamide, 2,2,3,3,4,4,4-heptaf...	493	C18H26F7NO3Si2	055471-01-7	50

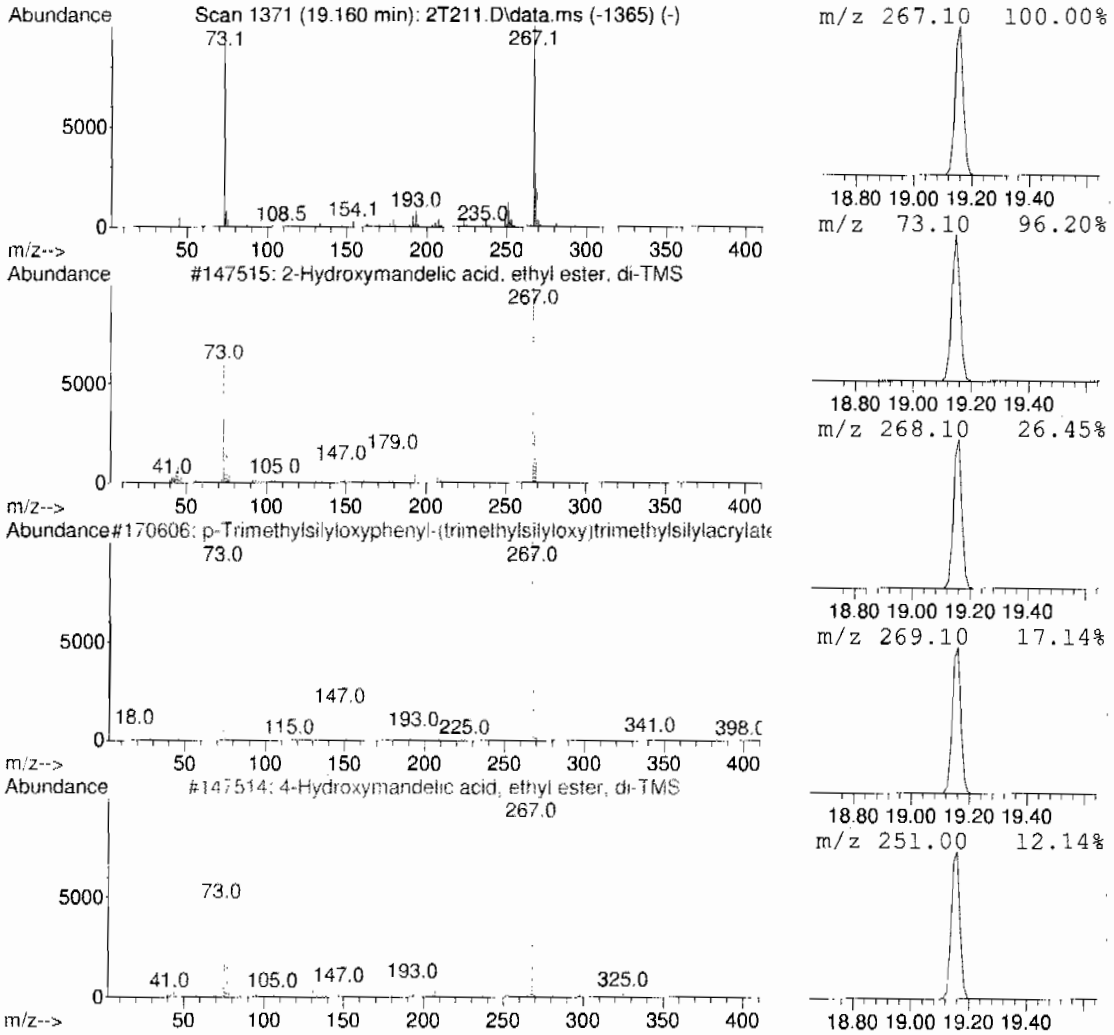

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 8 unknown siloxane Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.204	156.81 ug/L	11802600	B Chlorobenzene-d5	15.947

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	68
2	4-Nitro-4'-chlorodiphenylsulfoxide	281	C12H8ClNO3S	024535-53-3	47
3	7H-Dibenzo[b,g]carbazole, 7-methyl-	281	C21H15N	003557-49-1	47
4	4H-1,2,4-Triazole-3-thiol, 4-all...	281	C16H15N3S	031803-13-1	47
5	trans-4-Dimethylamino-4'-methoxy...	281	C18H19NO2	052119-37-6	42

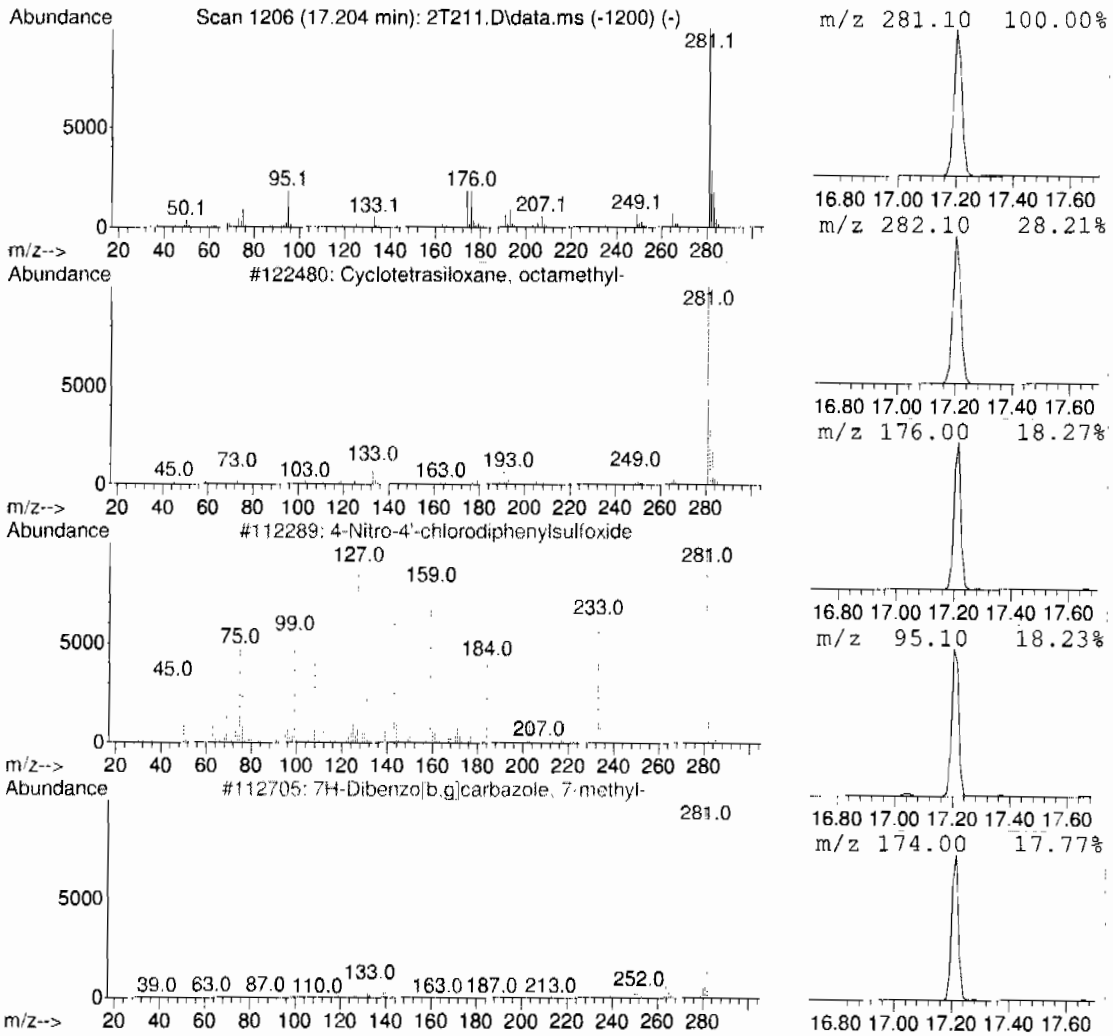

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 9 unknown hydrocarbon Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.330	128.74 ug/L	14436500	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	D-Limonene	136	C10H16	005989-27-5	94
2	Limonene	136	C10H16	000138-86-3	94
3	D-Limonene	136	C10H16	005989-27-5	86
4	D-Limonene	136	C10H16	005989-27-5	86
5	Limonene	136	C10H16	000138-86-3	81

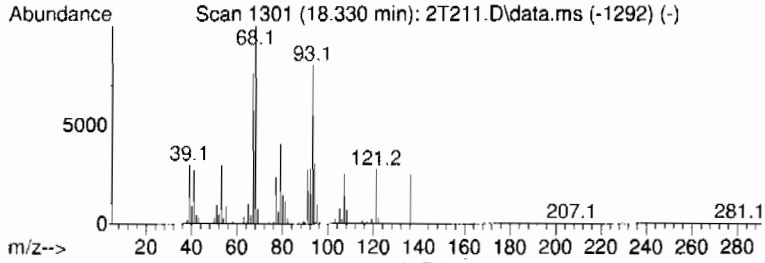

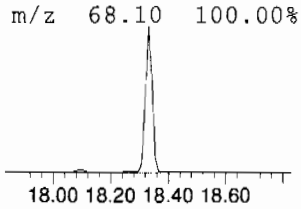

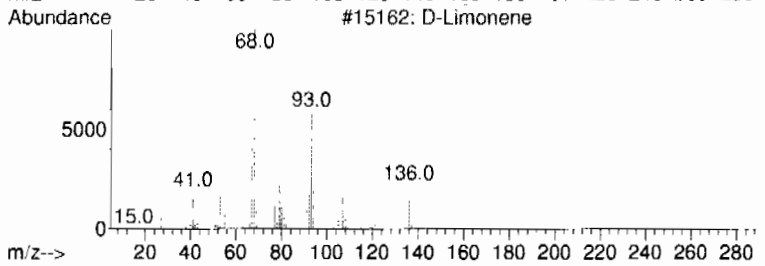

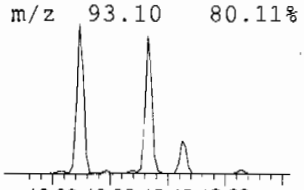

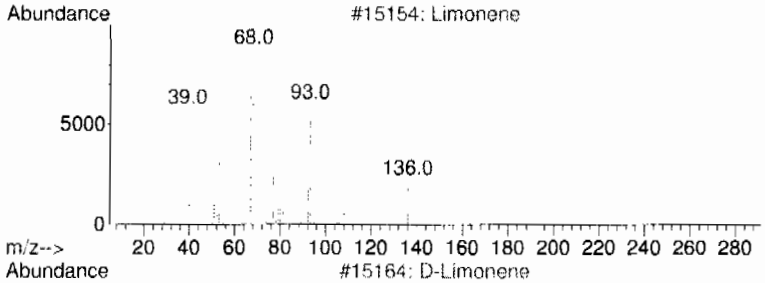

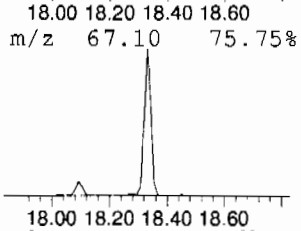

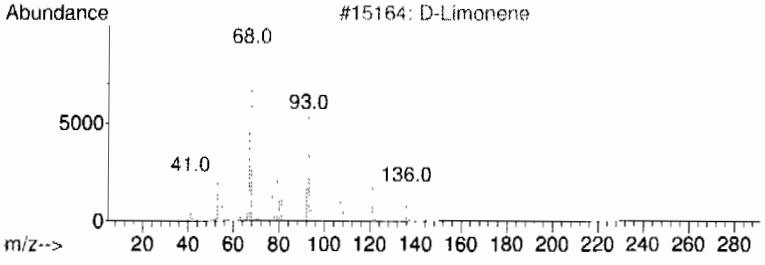

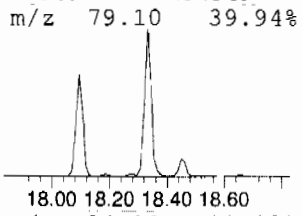

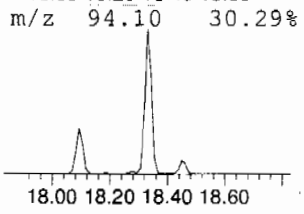

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T211.D
Acq On : 7 Jul 2009 11:29 am
Operator : CDS1
Sample : |232585003|882632|1|VOAF|2|VOA8260BSF|
Misc : LANL 2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	|--Internal Standard---| #	RT	Resp	Conc|
unknown	4.345	20.7	ug/L	1344670	1	12.377	3242730	50.0
unknown hydroca...	17.038	55.2	ug/L	4152770	4	15.947	3763360	50.0
unknown hydroca...	18.093	62.5	ug/L	7005840	5	18.461	5606740	50.0
unknown hydroca...	19.054	11.1	ug/L	1244090	6	18.461	5606740	50.0
unknown siloxane	19.148	26.1	ug/L	2920880	6	18.461	5606740	50.0
unknown siloxane	17.204	156.8	ug/L	11802600	4	15.947	3763360	50.0
unknown hydroca...	18.330	128.7	ug/L	14436500	5	18.461	5606740	50.0

Standards

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
Fluorobenzene (IS)									
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
[redacted]									
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
[redacted]									
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Method	PQL	Concentration range
EPA 524.2	Level 1a	Levels 1a -> 7a
SW 846 8260B low level	Level 1a	Levels 1-> 7a
EPA 624	Level 2	Levels 2-> 7a
SW846 8260B	Level 2	Levels 2-> 7a

#: Indicates calibration verification concentration level used for low level analysis

!: Indicates calibration verification concentration level used for regular level analysis

Calibration History Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009 Response via : Initial Calibration
Integrator : (RTE Integrator)

Cal Lvl:8 Amt:-1 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S311.D

Injection Date	Mix	Calibration File
1 Jul 2009 2:45 pm	A	C:\msdchem\1\DATA\070109V2.b\2S311.D

Cal Lvl:1 Amt:1 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S315.D

Injection Date	Mix	Calibration File
1 Jul 2009 10:53 am	A	C:\msdchem\1\DATA\070109V2.b\2S303.D
1 Jul 2009 4:41 pm	B	C:\msdchem\1\DATA\070109V2.b\2S315.D

Cal Lvl:2 Amt:2 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S316.D

Injection Date	Mix	Calibration File
1 Jul 2009 11:22 am	A	C:\msdchem\1\DATA\070109V2.b\2S304.D
1 Jul 2009 5:10 pm	B	C:\msdchem\1\DATA\070109V2.b\2S316.D

Cal Lvl:3 Amt:5 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S317.D

Injection Date	Mix	Calibration File
1 Jul 2009 11:51 am	A	C:\msdchem\1\DATA\070109V2.b\2S305.D
1 Jul 2009 5:39 pm	B	C:\msdchem\1\DATA\070109V2.b\2S317.D

Cal Lvl:4 Amt:10 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S318.D

Injection Date	Mix	Calibration File
1 Jul 2009 12:21 pm	A	C:\msdchem\1\DATA\070109V2.b\2S306.D
1 Jul 2009 6:08 pm	B	C:\msdchem\1\DATA\070109V2.b\2S318.D

Cal Lvl:5 Amt:20 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S319.D

Injection Date	Mix	Calibration File
1 Jul 2009 12:50 pm	A	C:\msdchem\1\DATA\070109V2.b\2S307.D
1 Jul 2009 6:37 pm	B	C:\msdchem\1\DATA\070109V2.b\2S319.D

Cal Lvl:6 Amt:50 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S320.D

Injection Date	Mix	Calibration File
1 Jul 2009 1:19 pm	A	C:\msdchem\1\DATA\070109V2.b\2S308.D
1 Jul 2009 7:07 pm	B	C:\msdchem\1\DATA\070109V2.b\2S320.D

Cal Lvl:7 Amt:100 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S321.D

Injection Date	Mix	Calibration File
1 Jul 2009 1:48 pm	A	C:\msdchem\1\DATA\070109V2.b\2S309.D
1 Jul 2009 7:36 pm	B	C:\msdchem\1\DATA\070109V2.b\2S321.D

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
2)MA Dichlorodifluoromethane		0.183	0.177	0.171	0.172	0.168				
	0.186	0.195					0.179	AVRG		5.4508
3)MPA Chloromethane		0.182	0.176	0.159	0.151	0.148				
	0.156	0.158					0.161	AVRG		7.8160
4)MCA Vinyl chloride		0.160	0.155	0.141	0.137	0.129				
	0.141	0.139					0.143	AVRG		7.4385
5)MA Bromomethane		0.151	0.168	0.153	0.157	0.135				
	0.124	0.120					0.144	AVRG		12.3745
6)MA Chloroethane		0.149	0.161	0.156	0.150	0.146				
	0.150	0.149					0.152	AVRG		3.3340
7)MA Trichlorofluoromethane		0.307	0.326	0.297	0.291	0.280				
	0.286	0.287					0.296	AVRG		5.2873
8)MA Ethyl ether		0.173	0.185	0.173	0.171	0.174				
	0.170	0.166					0.173	AVRG		3.4582
9)MA Acetone		0.252	0.195	0.174	0.168	0.169				
-0.0027 | 0.1723 | 0.00	0.165	0.174					0.185	LINR		0.9993
10)MCA 1,1-Dichloroethylene		0.314	0.293	0.315	0.306	0.296				
	0.284	0.296					0.301	AVRG		3.8444
11)MA Iodomethane		0.424	0.397	0.422	0.414	0.403				
	0.396	0.411					0.410	AVRG		2.7350
12)MA Acetonitrile		0.032	0.028	0.028	0.027	0.026				
	0.031	0.027					0.029	AVRG		7.6240
13)MA Methyl acetate		0.212	0.188	0.177	0.173	0.173				
	0.158	0.163					0.177	AVRG		10.1937
14)MA Carbon disulfide		0.735	0.683	0.712	0.693	0.659				
	0.623	0.624					0.676	AVRG		6.3069
15)MA Methylene chloride			0.638	0.456	0.261	0.270				
0.0167 | 0.2127 | 0.00	0.217	0.224					0.344	LINR		0.9974
16)MA tert-Butyl methyl ether		0.602	0.617	0.563	0.588	0.528				
	0.519	0.543					0.566	AVRG		6.6778
17)MA trans-1,2-Dichloroethyle		0.341	0.320	0.324	0.315	0.297				
	0.283	0.283					0.309	AVRG		7.0757
18)MA Vinyl acetate		0.298	0.391	0.379	0.388	0.362				
	0.396	0.377					0.370	AVRG		9.1248
19)MPA 1,1-Dichloroethane		0.414	0.389	0.403	0.390	0.371				
	0.361	0.371					0.386	AVRG		4.8799
20)MA 2-Butanone		0.222	0.207	0.198	0.198	0.210				
	0.205	0.209					0.207	AVRG		3.9501
21)MA cis-1,2-Dichloroethylene		0.380	0.357	0.364	0.347	0.330				
	0.309	0.305					0.342	AVRG		8.3485
22)MA 2,2-Dichloropropane		0.308	0.279	0.283	0.276	0.268				

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
	0.253	0.267					0.276	AVRG		6.2651
23)MA Bromochloromethane		0.134	0.125	0.129	0.127	0.121				
	0.122	0.130					0.127	AVRG		3.6616
24)MCA Chloroform		0.430	0.400	0.405	0.399	0.376				
	0.371	0.383					0.395	AVRG		5.0591
25)MA 1,1,1-Trichloroethane		0.361	0.334	0.345	0.337	0.332				
	0.325	0.342					0.339	AVRG		3.3499
26)MA Cyclohexane		0.392	0.359	0.373	0.360	0.349				
	0.327	0.330					0.356	AVRG		6.4366
27)MA 1,1-Dichloropropene		0.302	0.283	0.291	0.285	0.275				
	0.263	0.265					0.281	AVRG		4.9125
28)MA Carbon tetrachloride		0.312	0.289	0.311	0.305	0.302				
	0.301	0.317					0.306	AVRG		3.0123
29)SA 1,2-Dichloroethane-d4		0.281	0.286	0.283	0.281	0.283				
	0.276	0.273					0.280	AVRG		1.6885
30)MA 1,2-Dichloroethane		0.337	0.305	0.311	0.305	0.284				
	0.277	0.279					0.300	AVRG		7.2456
31)MA Benzene	0.917	0.965	0.898	0.905	0.888	0.833				
	0.795	0.794					0.874	AVRG		6.9909
32)MA Cyclohexene		0.445	0.453	0.467	0.440	0.443				
	0.412	0.416					0.439	AVRG		4.4961
33)MA n-Butyl alcohol	0.005	0.005	0.005	0.006	0.006	0.006				
	0.006	0.006					0.006	AVRG	#	8.5391
34)MA Trichloroethylene		0.258	0.235	0.249	0.241	0.228				
	0.222	0.231					0.238	AVRG		5.1899
35)MCA 1,2-Dichloropropane		0.237	0.226	0.230	0.228	0.215				
	0.203	0.198					0.219	AVRG		6.6362
36)MA Methylcyclohexane		0.418	0.388	0.400	0.397	0.378				
	0.359	0.354					0.385	AVRG		5.9080
37)MA Dibromomethane		0.143	0.130	0.136	0.134	0.132				
	0.132	0.139					0.135	AVRG		3.3912
38)MA Bromodichloromethane		0.272	0.264	0.278	0.281	0.280				
	0.286	0.301					0.280	AVRG		4.1368
39)MA 2-Chloroethylvinyl ether		0.092	0.106	0.130	0.111	0.112				
	0.109	0.100					0.109	AVRG		10.9581
40)MA cis-1,3-Dichloropropylen		0.328	0.307	0.334	0.333	0.324				
	0.327	0.339					0.327	AVRG		3.1689
42)MA 4-Methyl-2-pentanone		0.109	0.106	0.108	0.114	0.113				
	0.108	0.108					0.109	AVRG		2.6106
43)SA Toluene-d8		1.175	1.190	1.179	1.188	1.178				
	1.157	1.157					1.175	AVRG		1.1311

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
44)MCA Toluene		1.301	1.184	1.190	1.149	1.076				
	1.048	1.053					1.143	AVRG		8.0216
45)MA trans-1,3-Dichloropropyl		0.340	0.330	0.357	0.372	0.353				
	0.361	0.373					0.355	AVRG		4.4458
46)MA 1,1,2-Trichloroethane		0.215	0.192	0.198	0.198	0.187				
	0.185	0.190					0.195	AVRG		5.3262
47)MA 2-Hexanone		0.296	0.291	0.298	0.313	0.306				
	0.296	0.296					0.300	AVRG		2.4725
48)MA 1,3-Dichloropropane		0.424	0.402	0.407	0.407	0.373				
	0.365	0.365					0.392	AVRG		6.0583
49)MA Tetrachloroethylene		0.323	0.302	0.306	0.296	0.283				
	0.277	0.275					0.295	AVRG		5.8638
50)MA Dibromochloromethane		0.236	0.228	0.250	0.268	0.269				
	0.289	0.316					0.265	AVRG		11.5426
51)MA 1,2-Dibromoethane		0.224	0.233	0.243	0.247	0.238				
	0.242	0.257					0.241	AVRG		4.3479
52)MPA Chlorobenzene		0.874	0.822	0.817	0.799	0.751				
	0.736	0.768					0.795	AVRG		5.9751
53)MA 1,1,1,2-Tetrachloroethan		0.280	0.273	0.289	0.297	0.286				
	0.291	0.310					0.289	AVRG		4.1463
54)MCA Ethylbenzene		1.386	1.309	1.349	1.326	1.243				
	1.209	1.214					1.291	AVRG		5.3918
55)MA m,p-Xylenes		0.560	0.529	0.548	0.538	0.504				
	0.483	0.470					0.519	AVRG		6.5331
56)MA o-Xylene		0.538	0.518	0.537	0.531	0.501				
	0.483	0.462					0.510	AVRG		5.7656
57)MA Styrene		0.669	0.659	0.747	0.799	0.795				
	0.801	0.791					0.752	AVRG		8.3323
59)MPA Bromoform		0.258	0.255	0.287	0.319	0.331				
-0.0193 | 0.4250 | 0.00	0.372	0.425					0.321	LINR		0.9960
60)MA Isopropylbenzene		2.237	2.089	2.196	2.185	2.094				
	2.033	2.058					2.127	AVRG		3.6665
61)SA Bromofluorobenzene		0.794	0.789	0.797	0.794	0.790				
	0.772	0.766					0.786	AVRG		1.5297
62)MPA 1,1,2,2-Tetrachloroethan		0.517	0.481	0.511	0.511	0.490				
	0.485	0.508					0.500	AVRG		2.8921
63)MA 1,2,3-Trichloropropane		0.155	0.143	0.140	0.147	0.138				
	0.137	0.145					0.143	AVRG		4.3388
64)MA Bromobenzene		0.711	0.618	0.646	0.638	0.602				
	0.602	0.636					0.636	AVRG		5.8687
65)MA n-Propylbenzene		2.665	2.494	2.631	2.593	2.446				
	2.370	2.378					2.511	AVRG		4.7881

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b m1 m2	8 6	1 7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
66)MA 1,3,5-Trimethylbenzene		1.774	1.731	1.837	1.832	1.751				
	1.698	1.713					1.762	AVRG		3.1311
67)MA 2-Chlorotoluene		1.876	1.723	1.790	1.755	1.645				
	1.573	1.577					1.706	AVRG		6.6254
68)MA 4-Chlorotoluene		1.718	1.574	1.622	1.587	1.488				
	1.441	1.441					1.553	AVRG		6.5898
69)MA tert-Butylbenzene		1.885	1.755	1.853	1.839	1.759				
	1.729	1.762					1.797	AVRG		3.3595
70)MA 1,2,4-Trimethylbenzene		1.903	1.776	1.910	1.894	1.786				
	1.742	1.761					1.825	AVRG		4.0567
71)MA sec-Butylbenzene		2.433	2.320	2.481	2.467	2.344				
	2.306	2.300					2.379	AVRG		3.3159
72)MA 4-Isopropyltoluene		1.886	1.840	1.981	1.993	1.907				
	1.886	1.911					1.915	AVRG		2.8469
73)MA 1,3-Dichlorobenzene		1.303	1.209	1.227	1.203	1.134				
	1.122	1.168					1.195	AVRG		5.1366
74)MA 1,4-Dichlorobenzene		1.395	1.299	1.272	1.226	1.157				
	1.142	1.184					1.239	AVRG		7.2379
75)MA n-Butylbenzene		1.881	1.764	1.907	1.917	1.809				
	1.750	1.717					1.821	AVRG		4.4542
76)MA 1,2-Dichlorobenzene		1.240	1.140	1.180	1.154	1.088				
	1.077	1.135					1.145	AVRG		4.8342
77)MA 1,2-Dibromo-3-chloroprop		0.084	0.087	0.093	0.104	0.105				
	0.119						0.099	AVRG		13.4369
78)MA 1,2,4-Trichlorobenzene		0.949	0.864	0.877	0.882	0.822				
	0.832	0.876					0.872	AVRG		4.7419
79)MA Hexachlorobutadiene		0.566	0.510	0.529	0.536	0.514				
	0.531	0.552					0.534	AVRG		3.7074
80)MA Naphthalene		1.834	1.730	1.803	1.853	1.788				
	1.826	1.940					1.825	AVRG		3.5381
81)MA 1,2,3-Trichlorobenzene		0.850	0.772	0.812	0.811	0.759				
	0.773	0.817					0.799	AVRG		4.0158
83)B Chlorotrifluoroethylene		0.157	0.133	0.162	0.138	0.160				
	0.195	0.186					0.162	AVRG		13.9956
84)B 2-Chloro-1,1,1-trifluoro		0.275	0.246	0.258	0.243	0.248				
	0.265	0.246					0.254	AVRG		4.7615
85)B Acrolein		0.030	0.031	0.032	0.033	0.035				
	0.040	0.040					0.034	AVRG		11.6625
86)B Trichlorotrifluoroethane		0.065	0.063	0.062	0.062	0.063				
	0.067	0.058					0.063	AVRG		4.4089
87)B Isopropyl Alcohol		0.014	0.013	0.015	0.013	0.014				

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b m1 m2	6	7								
	0.014	0.015					0.014	AVRG		4.7550
88)B Allyl chloride		0.365	0.356	0.351	0.360	0.352				
	0.342	0.319					0.349	AVRG		4.3977
89)B tert-Butyl Alcohol		0.024	0.022	0.023	0.021	0.022				
	0.022	0.022					0.022	AVRG		4.1724
90)B Acrylonitrile		0.067	0.070	0.069	0.070	0.071				
	0.072	0.073					0.070	AVRG		3.0598
91)B Isopropyl ether		0.780	0.720	0.761	0.717	0.733				
	0.762	0.699					0.739	AVRG		3.9713
92)B 2-Chloro-1,3-butadiene		0.257	0.263	0.268	0.292	0.302				
	0.316	0.320					0.288	AVRG		9.0081
93)B Ethyl tert-butyl ether		0.663	0.613	0.659	0.631	0.650				
	0.668	0.621					0.644	AVRG		3.4033
94)B Ethyl acetate		0.206	0.215	0.209	0.206	0.205				
	0.206	0.205					0.208	AVRG		1.7815
95)B Propionitrile		0.028	0.029	0.028	0.029	0.028				
	0.028	0.028					0.028	AVRG		1.1052
96)B Methacrylonitrile		0.114	0.124	0.126	0.128	0.129				
	0.127	0.126					0.125	AVRG		4.1089
97)B Tetrahydrofuran		0.068	0.070	0.067	0.065	0.065				
	0.065	0.066					0.067	AVRG		2.8567
98)B Isobutyl alcohol		0.007	0.007	0.007	0.007	0.008				
	0.008	0.008					0.007	AVRG	#	2.9321
99)B Methyl tert-amyl ether		0.574	0.543	0.577	0.552	0.566				
	0.577	0.536					0.561	AVRG		3.0128
100)B Methyl methacrylate		0.105	0.113	0.122	0.128	0.132				
	0.129	0.123					0.122	AVRG		8.0488
101)B 1,4-Dioxane		0.001	0.002	0.002	0.002	0.002				
	0.002	0.002					0.002	AVRG	#	9.9647
102)B 2-Nitropropane		0.048	0.050	0.056	0.060	0.064				
	0.068						0.058	AVRG		13.8687
104)B Ethyl methacrylate		0.229	0.256	0.282	0.303	0.305				
	0.292	0.265					0.276	AVRG		10.0550
106)B 1-Chlorohexane		0.394	0.389	0.403	0.382	0.398				
	0.417	0.369					0.393	AVRG		3.9090
107)B cis-1,4-Dichloro-2-buten		0.135	0.150	0.158	0.164	0.169				
	0.167	0.159					0.157	AVRG		7.3579
108)B Cyclohexanone		0.048	0.056	0.062	0.060	0.062				
	0.069	0.059					0.059	AVRG		10.8542
109)B trans-1,4-Dichloro-2-but		0.138	0.152	0.158	0.159	0.161				
	0.157	0.149					0.154	AVRG		5.1007

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b / m1 / m2	6	7								
110)B Pentachloroethane		0.123	0.132	0.137	0.143	0.171				
-0.0071 / 0.1758 / 0.00	0.189	0.172					0.152	LINR		0.9970
111)B Benzyl chloride		0.698	0.785	0.823	0.865	0.878				
	0.862	0.823					0.819	AVRG		7.6038
112)B bis(2-Chloroisopropyl)et		0.248	0.261	0.268	0.264	0.275				
	0.273	0.278					0.267	AVRG		3.8659

(#) = Out of Range

Continuing Calibration Summary

Client SDG: 09-2506

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.2804	0.269		.01		-4.06562	60		Averaged	
S	Toluene-d8	1.1749	1.151		.01		-2.03422	60		Averaged	
S	Bromofluorobenzene	0.7862	0.765		.01		-2.69651	60		Averaged	
	Dichlorodifluoromethane	0.179	0.161		.01		-10.05587	60		Averaged	
	Chloromethane	0.1614	0.148		.1		-8.30235	60		Averaged	spcc
	Vinyl chloride	0.1433	0.135		.01		-5.79204	20		Averaged	ccc
	Bromomethane	0.1441	0.126		.01		-12.56072	60		Averaged	
	Chloroethane	0.1518	0.143		.01		-5.7971	60		Averaged	
	Trichlorofluoromethane	0.2964	0.287		.01		-3.17139	60		Averaged	
	Ethyl ether	0.1732	0.163		.01		-5.88915	60		Averaged	
	1,1-Dichloroethylene	0.3007	0.286		.01		-4.88859	20		Averaged	ccc
	Acetone	250	216.96	250			-13.216	60		Linear	
	Iodomethane	0.4096	0.432		.01		5.46875	60		Averaged	
	Carbon disulfide	0.6756	0.674		.01		-0.23683	60		Averaged	
	Acetonitrile	0.0286	0.032		.01		11.88811	60		Averaged	
	Methyl acetate	0.1775	0.214		.01		20.56338	60		Averaged	
	Methylene chloride	50	48.37	50			-3.26	60		Linear	
	trans-1,2-Dichloroethylene	0.3091	0.282		.01		-8.76739	60		Averaged	
	tert-Butyl methyl ether	0.5656	0.52		.01		-8.06223	60		Averaged	
	1,1-Dichloroethane	0.3855	0.367		.1		-4.79896	60		Averaged	spcc
	Vinyl acetate	0.3702	0.203		.01		-45.16478	60		Averaged	
	2-Butanone	0.207	0.172		.01		-16.90821	60		Averaged	
	cis-1,2-Dichloroethylene	0.3417	0.318		.01		-6.93591	60		Averaged	
	2,2-Dichloropropane	0.276	0.269		.01		-2.53623	60		Averaged	
	Bromochloromethane	0.1267	0.124		.01		-2.13102	60		Averaged	
	Chloroform	0.3949	0.375		.01		-5.03925	20		Averaged	ccc
	1,1,1-Trichloroethane	0.3395	0.335		.01		-1.32548	60		Averaged	
	Cyclohexane	0.3556	0.337		.01		-5.2306	60		Averaged	
	1,1-Dichloropropene	0.2806	0.269		.01		-4.134	60		Averaged	
	Carbon tetrachloride	0.3055	0.308		.01		0.81833	60		Averaged	
	1,2-Dichloroethane	0.2997	0.277		.01		-7.57424	60		Averaged	
	Benzene	0.8742	0.802		.01		-8.25898	60		Averaged	
	Cyclohexene	0.4394	0.403		.01		-8.28402	60		Averaged	
	n-Butyl alcohol	0.0058	0.006		.01		3.44828	60		Averaged	
	Trichloroethylene	0.2376	0.231		.01		-2.77778	60		Averaged	
	1,2-Dichloropropane	0.2194	0.206		.01		-6.10757	20		Averaged	ccc
	Methylcyclohexane	0.385	0.37		.01		-3.8961	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.1351	0.132		.01		-2.2946	60		Averaged	
Bromodichloromethane	0.2802	0.283		.01		0.99929	60		Averaged	
2-Chloroethylvinyl ether	0.1086	0.11		.01		1.28913	60		Averaged	
cis-1,3-Dichloropropylene	0.3273	0.333		.01		1.74152	60		Averaged	
4-Methyl-2-pentanone	0.1094	0.101		.01		-7.67824	60		Averaged	
2-Hexanone	0.2996	0.275		.01		-8.21095	60		Averaged	
Toluene	1.1428	1.047		.01		-8.38292	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.3552	0.358		.01		0.78829	60		Averaged	
1,1,2-Trichloroethane	0.1949	0.185		.01		-5.07953	60		Averaged	
1,3-Dichloropropane	0.3918	0.365		.01		-6.84022	60		Averaged	
Tetrachloroethylene	0.2946	0.289		.01		-1.90088	60		Averaged	
Dibromochloromethane	0.265	0.291		.01		9.81132	60		Averaged	
1,2-Dibromoethane	0.2408	0.244		.01		1.3289	60		Averaged	
Chlorobenzene	0.7955	0.772		.3		-2.95412	60		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.2894	0.299		.01		3.31721	60		Averaged	
Ethylbenzene	1.2909	1.221		.01		-5.41483	20		Averaged	ccc
m,p-Xylenes	0.5189	0.487		.01		-6.14762	60		Averaged	
o-Xylene	0.51	0.483		.01		-5.29412	60		Averaged	
Styrene	0.7515	0.8		.01		6.45376	60		Averaged	
Bromoform	50	46.79	50			-6.42	60		Linear	spcc
Isopropylbenzene	2.1274	2.052		.01		-3.54423	60		Averaged	
1,1,2,2-Tetrachloroethane	0.5005	0.481		.3		-3.8961	60		Averaged	spcc
1,2,3-Trichloropropane	0.1435	0.138		.01		-3.83275	60		Averaged	
Bromobenzene	0.6362	0.631		.01		-0.81735	60		Averaged	
n-Propylbenzene	2.5112	2.384		.01		-5.06531	60		Averaged	
2-Chlorotoluene	1.7056	1.621		.01		-4.96013	60		Averaged	
1,3,5-Trimethylbenzene	1.7622	1.713		.01		-2.79196	60		Averaged	
4-Chlorotoluene	1.5531	1.472		.01		-5.22181	60		Averaged	
tert-Butylbenzene	1.7973	1.762		.01		-1.96406	60		Averaged	
1,2,4-Trimethylbenzene	1.8246	1.756		.01		-3.75973	60		Averaged	
sec-Butylbenzene	2.3786	2.335		.01		-1.83301	60		Averaged	
4-Isopropyltoluene	1.9148	1.91		.01		-0.25068	60		Averaged	
1,3-Dichlorobenzene	1.1952	1.173		.01		-1.85743	60		Averaged	
1,4-Dichlorobenzene	1.2391	1.19		.01		-3.96255	60		Averaged	
n-Butylbenzene	1.8207	1.766		.01		-3.00434	60		Averaged	
1,2-Dichlorobenzene	1.1449	1.124		.01		-1.82549	60		Averaged	
1,2-Dibromo-3-chloropropane	0.0988	0.124		.01		25.50607	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	0.8718	0.857		.01		-1.69764	60		Averaged
Hexachlorobutadiene	0.5338	0.551		.01		3.22218	60		Averaged
Naphthalene	1.8249	1.829		.01		0.22467	60		Averaged
1,2,3-Trichlorobenzene	0.799	0.828		.01		3.62954	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1816013	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1540251	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	956988	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1816013	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1540251	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	956988	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	488579	47.98 ug/L	0.00
43) Toluene-d8	14.310	98	1773476	49.00 ug/L	0.00
61) Bromofluorobenzene	17.204	95	731905	48.64 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	4.672	85	292436	44.98 ug/L	100
3) Chloromethane	5.014	50	269572	46.00 ug/L	100
4) Vinyl chloride	5.252	62	245602	47.18 ug/L	100
5) Bromomethane	5.980	94	227963	43.56 ug/L	100
6) Chloroethane	6.199	64	259835	47.12 ug/L	99
7) Trichlorofluoromethane	6.756	101	521083	48.40 ug/L	100
8) Ethyl ether	7.349	59	296707	47.18 ug/L	100
9) Acetone	7.871	43	1352631	216.96 ug/L	100
10) 1,1-Dichloroethylene	7.812	61	518775	47.49 ug/L	98
11) Iodomethane	8.096	142	3920148	263.52 ug/L	100
12) Acetonitrile	8.381	41	1151204	1107.72 ug/L	99
13) Methyl acetate	8.500	43	1941955	301.24 ug/L	100
14) Carbon disulfide	8.251	76	6121756	249.48 ug/L	100
15) Methylene chloride	8.701	84	404082	48.37 ug/L	99
16) tert-Butyl methyl ether	9.199	73	944502	45.98 ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	511649	45.58 ug/L	99
18) Vinyl acetate	9.935	43	1842087	137.02 ug/L	96
19) 1,1-Dichloroethane	9.887	63	665904	47.55 ug/L	100
20) 2-Butanone	10.765	43	1561738	207.76 ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	578319	46.60 ug/L	98
22) 2,2-Dichloropropane	10.800	77	488266	48.70 ug/L	100
23) Bromochloromethane	11.132	128	226027	49.12 ug/L	99
24) Chloroform	11.227	83	680521	47.44 ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	607548	49.27 ug/L	100
26) Cyclohexane	11.642	56	612261	47.41 ug/L	99
27) 1,1-Dichloropropene	11.749	75	488823	47.97 ug/L	100
28) Carbon tetrachloride	11.784	117	560221	50.49 ug/L	100
30) 1,2-Dichloroethane	12.033	62	502499	46.17 ug/L	100
31) Benzene	12.033	78	1455629	45.84 ug/L	100
32) Cyclohexene	12.188	67	732745	45.91 ug/L	99
33) n-Butyl alcohol	12.650	56	1121237	5342.87 ug/L	100
34) Trichloroethylene	12.852	95	419699	48.63 ug/L	99
35) 1,2-Dichloropropane	13.124	63	374518	47.00 ug/L	99
36) Methylcyclohexane	13.136	83	671359	48.01 ug/L	99
37) Dibromomethane	13.267	93	240040	48.92 ug/L	98
38) Bromodichloromethane	13.445	83	513660	50.47 ug/L	100
39) 2-Chloroethylvinyl ether	13.753	63	996561	252.57 ug/L	100
40) cis-1,3-Dichloropropylene	13.966	75	604045	50.81 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
42) 4-Methyl-2-pentanone	14.109	58	776007	230.18 ug/L	99	
44) Toluene	14.381	91	1612719	45.81 ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	552027	50.45 ug/L	100	
46) 1,1,2-Trichloroethane	14.808	83	285261	47.50 ug/L	99	
47) 2-Hexanone	14.109	43	2119224	229.66 ug/L	99	
48) 1,3-Dichloropropane	15.010	76	562287	46.59 ug/L	94	
49) Tetrachloroethylene	15.034	164	444818	49.01 ug/L	99	
50) Dibromochloromethane	15.295	129	447970	54.87 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	375747	50.66 ug/L	100	
52) Chlorobenzene	15.982	112	1188626	48.51 ug/L	99	
53) 1,1,1,2-Tetrachloroethane	16.054	131	460563	51.66 ug/L	100	
54) Ethylbenzene	16.077	91	1881100	47.31 ug/L	99	
55) m,p-Xylenes	16.196	106	1500055	93.84 ug/L	99	
56) o-Xylene	16.635	106	744228	47.37 ug/L	100	
57) Styrene	16.646	104	1232341	53.23 ug/L	99	
59) Bromoform	16.884	173	362113	46.79 ug/L	100	
60) Isopropylbenzene	17.026	105	1963566	48.22 ug/L	99	
62) 1,1,2,2-Tetrachloroethane	17.299	83	459904	48.01 ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	132333	48.18 ug/L	98	
64) Bromobenzene	17.417	156	603554	49.57 ug/L	95	
65) n-Propylbenzene	17.465	91	2281803	47.47 ug/L	99	
66) 1,3,5-Trimethylbenzene	17.631	105	1639584	48.61 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1551197	47.52 ug/L	98	
68) 4-Chlorotoluene	17.702	91	1408248	47.38 ug/L	99	
69) tert-Butylbenzene	17.998	119	1686280	49.02 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1680321	48.12 ug/L	99	
71) sec-Butylbenzene	18.235	105	2234304	49.08 ug/L	99	
72) 4-Isopropyltoluene	18.366	119	1827510	49.87 ug/L	100	
73) 1,3-Dichlorobenzene	18.401	146	1122218	49.06 ug/L	99	
74) 1,4-Dichlorobenzene	18.485	146	1139216	48.03 ug/L	99	
75) n-Butylbenzene	18.805	91	1690481	48.51 ug/L	99	
76) 1,2-Dichlorobenzene	18.900	146	1075319	49.07 ug/L	99	
77) 1,2-Dibromo-3-chloropr...	19.706	157	118302	62.56 ug/L	98	E
78) 1,2,4-Trichlorobenzene	20.690	180	820135	49.15 ug/L	100	
79) Hexachlorobutadiene	20.868	225	527406	51.62 ug/L	100	
80) Naphthalene	21.022	128	1750176	50.11 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	791976	51.79 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.539		0m	N.D. d		
86) Trichlorotrifluoroethane	0.000		0	N.D.		
87) Isopropyl Alcohol	8.239		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.903		0m	N.D. d		
90) Acrylonitrile	9.199		0m	N.D. d		
91) Isopropyl ether	10.053		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.148		0m	N.D. d		
93) Ethyl tert-butyl ether	10.788		0m	N.D. d		
94) Ethyl acetate	10.765		0m	N.D. d		
95) Propionitrile	10.765		0m	N.D. d		
96) Methacrylonitrile	11.061		0m	N.D. d		
97) Tetrahydrofuran	11.227		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) Isobutyl alcohol	11.927		0m	N.D.	d	
99) Methyl tert-amyl ether	12.188		0m	N.D.	d	
100) Methyl methacrylate	13.136		0m	N.D.	d	
101) 1,4-Dioxane	13.279		0m	N.D.	d	
102) 2-Nitropropane	13.753		0m	N.D.	d	
104) Ethyl methacrylate	0.000		0	N.D.		
106) 1-Chlorohexane	15.947		0m	N.D.	d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108) Cyclohexanone	17.026		0m	N.D.	d	
109) trans-1,4-Dichloro-2-b...	17.465		0m	N.D.	d	
110) Pentachloroethane	18.058		0m	N.D.	d	
111) Benzyl chloride	18.805		0m	N.D.	d	
112) bis(2-Chloroisopropyl)...	19.149		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

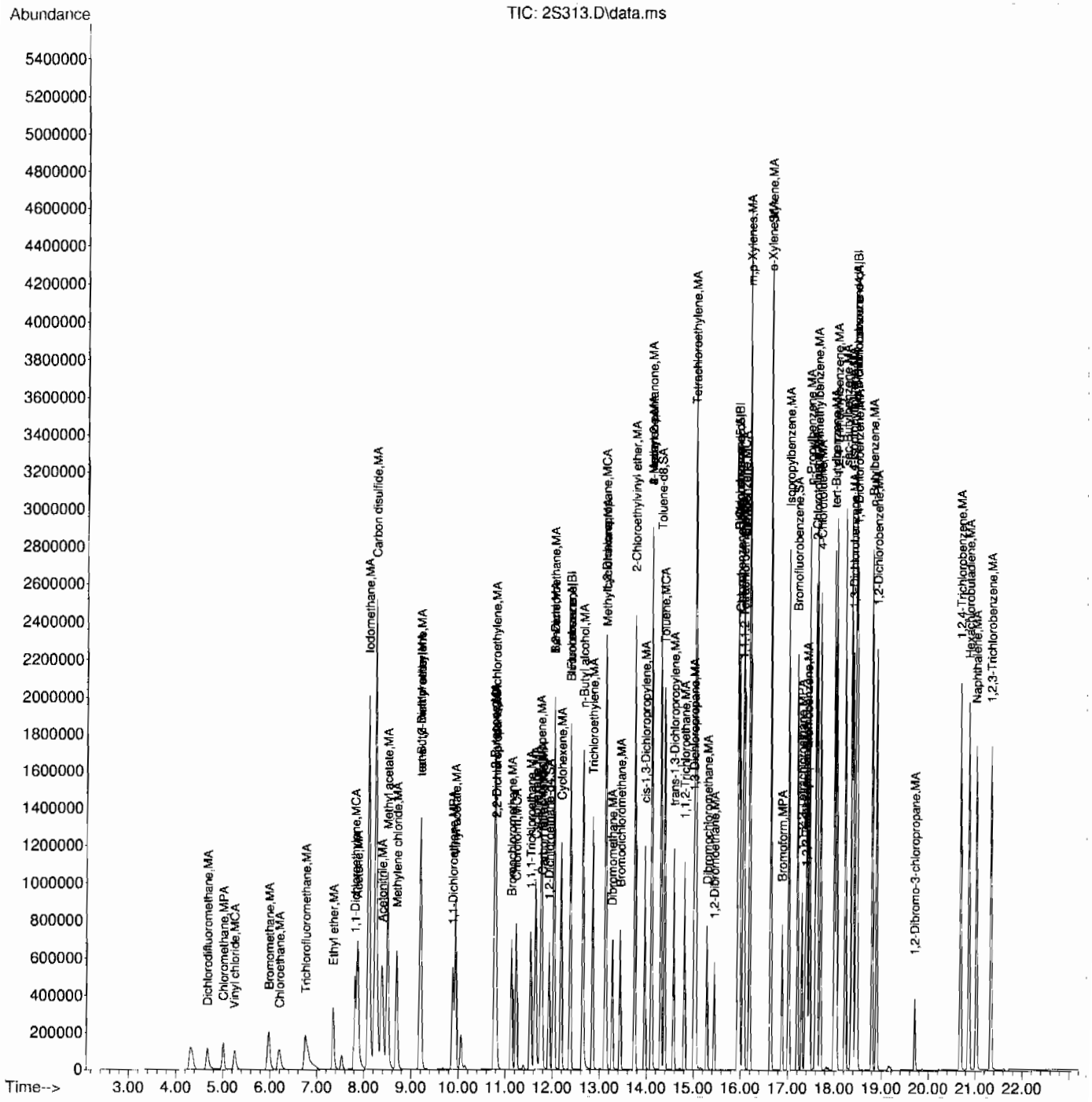

Continuing Calibration Summary

Client SDG: 09-2506

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 20:34

Data File: 070109V2.b\2S323.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090701-18 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.2804	0.272		.01		-2.99572	60		Averaged
S	Toluene-d8	1.1749	1.154		.01		-1.77887	60		Averaged
S	Bromofluorobenzene	0.7862	0.785		.01		-0.15263	60		Averaged
	Chlorotrifluoroethylene	0.1616	0.157		.01		-2.84653	60		Averaged
	2-Chloro-1,1,1-trifluoroethane	0.2543	0.26		.01		2.24145	60		Averaged
	Acrolein	0.0345	0.041		.01		18.84058	60		Averaged
	Trichlorotrifluoroethane	0.0628	0.066		.01		5.09554	60		Averaged
	Isopropyl Alcohol	0.0139	0.016		.01		15.10791	60		Averaged
	Allyl chloride	0.3493	0.311		.01		-10.96479	60		Averaged
	tert-Butyl Alcohol	0.022	0.024		.01		9.09091	60		Averaged
	Acrylonitrile	0.0703	0.077		.01		9.53058	60		Averaged
	Isopropyl ether	0.739	0.747		.01		1.08254	60		Averaged
	2-Chloro-1,3-butadiene	0.2881	0.33		.01		14.54356	60		Averaged
	Ethyl tert-butyl ether	0.6436	0.641		.01		-0.40398	60		Averaged
	Propionitrile	0.0284	0.031		.01		9.15493	60		Averaged
	Ethyl acetate	0.2075	0.22		.01		6.0241	60		Averaged
	Methacrylonitrile	0.1249	0.137		.01		9.68775	60		Averaged
	Tetrahydrofuran	0.0668	0.073		.01		9.28144	60		Averaged
	Isobutyl alcohol	0.0074	0.009		.01		21.62162	60		Averaged
	Methyl tert-amyl ether	0.5609	0.564		.01		0.55268	60		Averaged
	Methyl methacrylate	0.1218	0.139		.01		14.12151	60		Averaged
	1,4-Dioxane	0.0017	0.002		.01		17.64706	60		Averaged
	2-Nitropropane	0.0578	0.074		.01		28.02768	60		Averaged
	Ethyl methacrylate	0.2758	0.298		.01		8.04931	60		Averaged
	1-Chlorohexane	0.3931	0.426		.01		8.36937	60		Averaged
	cis-1,4-Dichloro-2-butene	0.1574	0.174		.01		10.54638	60		Averaged
	Cyclohexanone	0.0593	0.076		.01		28.16189	60		Averaged
	trans-1,4-Dichloro-2-butene	0.1536	0.166		.01		8.07292	60		Averaged
	Pentachloroethane	250	183.53	250			-26.588	60		Linear
	Benzyl chloride	0.8192	0.828		.01		1.07422	60		Averaged
	bis(2-Chloroisopropyl)ether	0.2668	0.3		.01		12.44378	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1776961	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1492904	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	910409	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1776961	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1492904	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	910409	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	483555	48.53 ug/L	0.00
43) Toluene-d8	14.310	98	1723019	49.12 ug/L	0.00
61) Bromofluorobenzene	17.204	95	714881	49.94 ug/L	0.00

Target Compounds				Qvalue
2) Dichlorodifluoromethane	4.613	0m	N.D. d	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.252	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	0.000	0	N.D.	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.859	0m	N.D. d	
10) 1,1-Dichloroethylene	7.871	0m	N.D. d	
11) Iodomethane	0.000	0	N.D.	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.251	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.211	0m	N.D. d	
17) trans-1,2-Dichloroethy...	0.000	0	N.D.	
18) Vinyl acetate	9.994	0m	N.D. d	
19) 1,1-Dichloroethane	10.053	0m	N.D. d	
20) 2-Butanone	10.777	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.860	0m	N.D. d	
22) 2,2-Dichloropropane	0.000	0	N.D.	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.239	0m	N.D. d	
25) 1,1,1-Trichloroethane	0.000	0	N.D.	
26) Cyclohexane	11.654	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	0.000	0	N.D.	
30) 1,2-Dichloroethane	11.939	0m	N.D. d	
31) Benzene	12.034	0m	N.D. d	
32) Cyclohexene	12.152	0m	N.D. d	
33) n-Butyl alcohol	12.662	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	0.000	0	N.D.	
36) Methylcyclohexane	13.196	0m	N.D. d	
37) Dibromomethane	0.000	0	N.D.	
38) Bromodichloromethane	13.196	0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000	0	N.D.	
40) cis-1,3-Dichloropropylene	13.966	0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42)	4-Methyl-2-pentanone	14.310		0m	N.D.	d	
44)	Toluene	14.382		0m	N.D.	d	
45)	trans-1,3-Dichloroprop...	14.583		0m	N.D.	d	
46)	1,1,2-Trichloroethane	14.642		0m	N.D.	d	
47)	2-Hexanone	14.073		0m	N.D.	d	
48)	1,3-Dichloropropane	15.057		0m	N.D.	d	
49)	Tetrachloroethylene	15.034		0m	N.D.	d	
50)	Dibromochloromethane	0.000		0	N.D.		
51)	1,2-Dibromoethane	15.449		0m	N.D.	d	
52)	Chlorobenzene	15.982		0m	N.D.	d	
53)	1,1,1,2-Tetrachloroethane	16.054		0m	N.D.	d	
54)	Ethylbenzene	16.196		0m	N.D.	d	
55)	m,p-Xylenes	16.196		0m	N.D.	d	
56)	o-Xylene	0.000		0	N.D.		
57)	Styrene	16.646		0m	N.D.	d	
59)	Bromoform	0.000		0	N.D.		
60)	Isopropylbenzene	17.026		0m	N.D.	d	
62)	1,1,2,2-Tetrachloroethane	17.358		0m	N.D.	d	
63)	1,2,3-Trichloropropane	17.204		0m	N.D.	d	
64)	Bromobenzene	17.405		0m	N.D.	d	
65)	n-Propylbenzene	17.595		0m	N.D.	d	
66)	1,3,5-Trimethylbenzene	17.631		0m	N.D.	d	
67)	2-Chlorotoluene	17.595		0m	N.D.	d	
68)	4-Chlorotoluene	17.702		0m	N.D.	d	
69)	tert-Butylbenzene	18.046		0m	N.D.	d	
70)	1,2,4-Trimethylbenzene	18.070		0m	N.D.	d	
71)	sec-Butylbenzene	18.236		0m	N.D.	d	
72)	4-Isopropyltoluene	18.366		0m	N.D.	d	
73)	1,3-Dichlorobenzene	18.402		0m	N.D.	d	
74)	1,4-Dichlorobenzene	18.402		0m	N.D.	d	
75)	n-Butylbenzene	18.603		0m	N.D.	d	
76)	1,2-Dichlorobenzene	18.900		0m	N.D.	d	
77)	1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
78)	1,2,4-Trichlorobenzene	20.690		0m	N.D.	d	
79)	Hexachlorobutadiene	20.868		0m	N.D.	d	
80)	Naphthalene	21.022		0m	N.D.	d	
81)	1,2,3-Trichlorobenzene	21.342		0m	N.D.	d	
83)	Chlorotrifluoroethylene	4.613	116	839045	146.12	ug/L	100
84)	2-Chloro-1,1,1-trifluo...	5.475	118	1386207	153.41	ug/L	100
85)	Acrolein	7.575	56	360031	293.76	ug/L	98
86)	Trichlorotrifluoroethane	7.859	85	586254	262.49	ug/L	100
87)	Isopropyl Alcohol	8.120	45	1408561	2847.02	ug/L	99
88)	Allyl chloride	8.488	41	2760549	222.37	ug/L	99
89)	tert-Butyl Alcohol	8.867	59	2117465	2710.98	ug/L	100
90)	Acrylonitrile	9.093	53	679988	272.29	ug/L	100
91)	Isopropyl ether	9.994	45	1327071	50.53	ug/L	100
92)	2-Chloro-1,3-butadiene	10.053	53	586086	57.25	ug/L	100
93)	Ethyl tert-butyl ether	10.563	59	1138335	49.77	ug/L	100
94)	Ethyl acetate	10.860	43	1951361	264.60	ug/L	100
95)	Propionitrile	10.848	54	273857	271.63	ug/L	100
96)	Methacrylonitrile	11.085	41	1215595	273.80	ug/L	100
97)	Tetrahydrofuran	11.203	42	651169	274.34	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|1CV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
98)	Isobutyl alcohol	11.796	41	765122	2899.44	ug/L	100	
99)	Methyl tert-amyl ether	12.152	73	1002023	50.27	ug/L	94	
100)	Methyl methacrylate	13.196	69	1233037	284.92	ug/L	99	
101)	1,4-Dioxane	13.267	88	177152	3018.22	ug/L	99	
102)	2-Nitropropane	13.682	43	659876	321.25	ug/L	100	E
104)	Ethyl methacrylate	14.642	69	2224510	270.12	ug/L	100	
106)	1-Chlorohexane	15.888	55	387744	54.17	ug/L	100	
107)	cis-1,4-Dichloro-2-butene	17.062	53	793463	276.81	ug/L	99	
108)	Cyclohexanone	17.145	42	1719806	1591.54	ug/L	98	
109)	trans-1,4-Dichloro-2-b...	17.358	53	757123	270.77	ug/L	99	
110)	Pentachloroethane	18.058	167	581071	183.53	ug/L	100	
111)	Benzyl chloride	18.603	91	3770433	252.77	ug/L	100	
112)	bis(2-Chloroisopropyl)...	19.006	45	1363411	280.70	ug/L	99	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

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Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On    :  1 Jul 2009   8:34 pm
Operator  : CDS1
InstName  : VOA2
Sample    : |W2VM090701-18|ICV|1|VOAF|1|
Misc      : LCS  5ML  MIX [B]
ALS Vial  : 22   Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
```

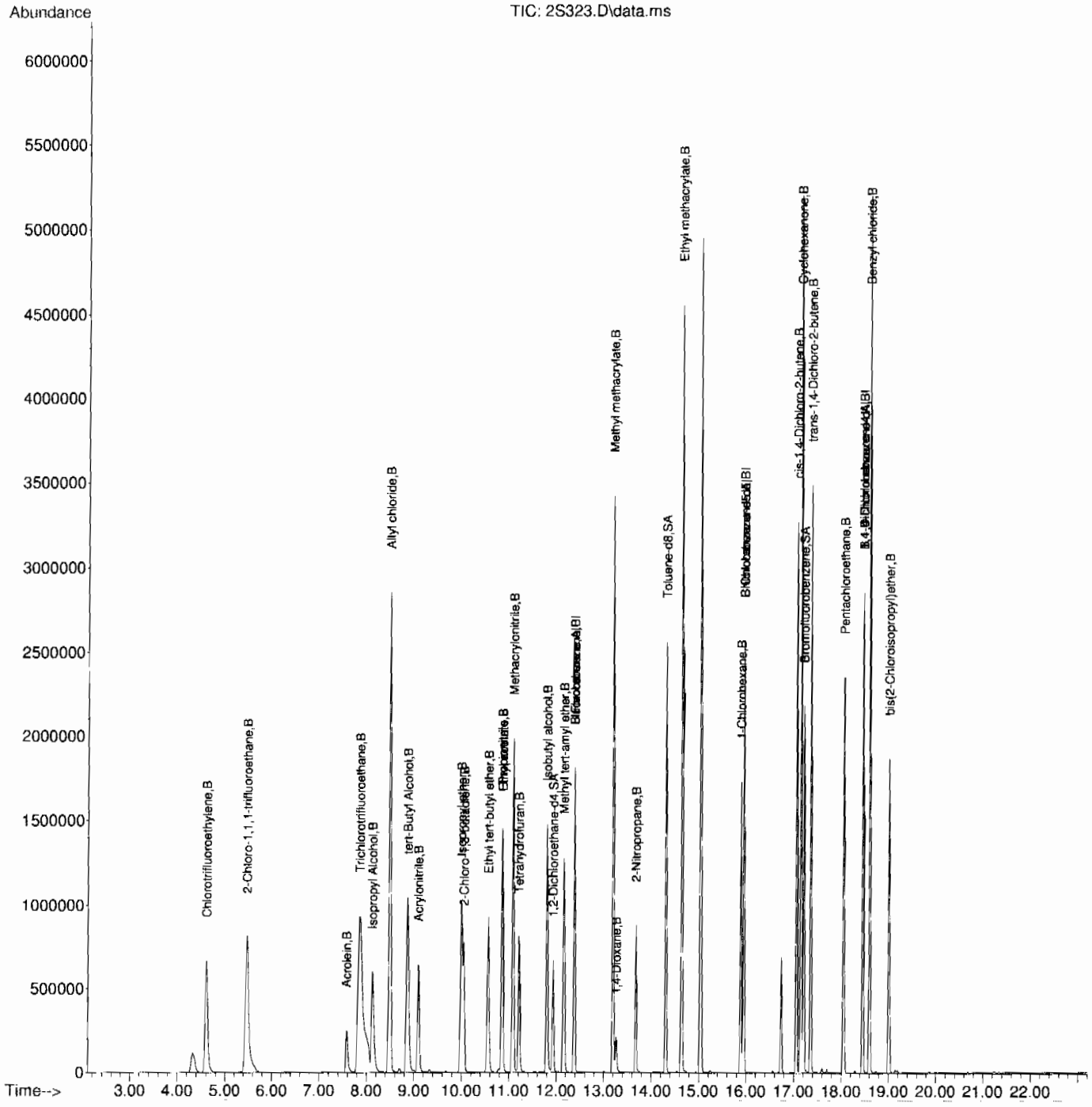

Continuing Calibration Summary

Client SDG: 09-2506

Instrument ID: VOA2.I **Injection Date** 06-JUL-09 06:57

Data File: 070609V2.b\2T102.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090706-01 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.2804	0.28		.01		-0.14265	60		Averaged	
S	Toluene-d8	1.1749	1.187		.01		1.02987	60		Averaged	
S	Bromofluorobenzene	0.7862	0.784		.01		-0.27983	60		Averaged	
	Dichlorodifluoromethane	0.179	0.151		.01		-15.64246	60		Averaged	
	Chloromethane	0.1614	0.15		.1		-7.0632	60		Averaged	spcc
	Vinyl chloride	0.1433	0.165		.01		15.14306	20		Averaged	ccc
	Bromomethane	0.1441	0.111		.01		-22.97016	60		Averaged	
	Chloroethane	0.1518	0.146		.01		-3.82082	60		Averaged	
	Trichlorofluoromethane	0.2964	0.272		.01		-8.23212	60		Averaged	
	Ethyl ether	0.1732	0.177		.01		2.194	60		Averaged	
	1,1-Dichloroethylene	0.3007	0.316		.01		5.08813	20		Averaged	ccc
	Acetone	250	271.93	250			8.772	60		Linear	
	Iodomethane	0.4096	0.443		.01		8.1543	60		Averaged	
	Carbon disulfide	0.6756	0.696		.01		3.01954	60		Averaged	
	Acetonitrile	0.0286	0.034		.01		18.88112	60		Averaged	
	Methyl acetate	0.1775	0.168		.01		-5.35211	60		Averaged	
	Methylene chloride	50	57.63	50			15.26	60		Linear	
	trans-1,2-Dichloroethylene	0.3091	0.313		.01		1.26173	60		Averaged	
	tert-Butyl methyl ether	0.5656	0.56		.01		-0.9901	60		Averaged	
	1,1-Dichloroethane	0.3855	0.398		.1		3.24254	60		Averaged	spcc
	Vinyl acetate	0.3702	0.464		.01		25.33766	60		Averaged	
	2-Butanone	0.207	0.23		.01		11.11111	60		Averaged	
	cis-1,2-Dichloroethylene	0.3417	0.339		.01		-0.79017	60		Averaged	
	2,2-Dichloropropane	0.276	0.292		.01		5.7971	60		Averaged	
	Bromochloromethane	0.1267	0.136		.01		7.34017	60		Averaged	
	Chloroform	0.3949	0.407		.01		3.06407	20		Averaged	ccc
	1,1,1-Trichloroethane	0.3395	0.364		.01		7.21649	60		Averaged	
	Cyclohexane	0.3556	0.363		.01		2.08099	60		Averaged	
	1,1-Dichloropropene	0.2806	0.296		.01		5.48824	60		Averaged	
	Carbon tetrachloride	0.3055	0.339		.01		10.96563	60		Averaged	
	1,2-Dichloroethane	0.2997	0.294		.01		-1.9019	60		Averaged	
	Benzene	0.8742	0.884		.01		1.12102	60		Averaged	
	Cyclohexene	0.4394	0.463		.01		5.37096	60		Averaged	
	n-Butyl alcohol	0.0058	0.007		.01		20.68966	60		Averaged	
	Trichloroethylene	0.2376	0.249		.01		4.79798	60		Averaged	
	1,2-Dichloropropane	0.2194	0.222		.01		1.18505	20		Averaged	ccc
	Methylcyclohexane	0.385	0.409		.01		6.23377	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 06-JUL-09 06:57

Data File: 070609V2.b\2T102.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090706-01 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.1351	0.143		.01		5.84752	60		Averaged	
Bromodichloromethane	0.2802	0.311		.01		10.99215	60		Averaged	
2-Chloroethylvinyl ether	0.1086	0.111		.01		2.20994	60		Averaged	
cis-1,3-Dichloropropylene	0.3273	0.361		.01		10.29636	60		Averaged	
4-Methyl-2-pentanone	0.1094	0.124		.01		13.34552	60		Averaged	
2-Hexanone	0.2996	0.338		.01		12.81709	60		Averaged	
Toluene	1.1428	1.154		.01		0.98005	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.3552	0.391		.01		10.07883	60		Averaged	
1,1,2-Trichloroethane	0.1949	0.197		.01		1.07748	60		Averaged	
1,3-Dichloropropane	0.3918	0.387		.01		-1.22511	60		Averaged	
Tetrachloroethylene	0.2946	0.316		.01		7.26409	60		Averaged	
Dibromochloromethane	0.265	0.315		.01		18.86792	60		Averaged	
1,2-Dibromoethane	0.2408	0.261		.01		8.3887	60		Averaged	
Chlorobenzene	0.7955	0.82		.3		3.07982	60		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.2894	0.321		.01		10.91914	60		Averaged	
Ethylbenzene	1.2909	1.346		.01		4.26834	20		Averaged	ccc
m,p-Xylenes	0.5189	0.541		.01		4.25901	60		Averaged	
o-Xylene	0.51	0.526		.01		3.13725	60		Averaged	
Styrene	0.7515	0.881		.01		17.2322	60		Averaged	
Bromoform	50	49.93	50			-0.14	60		Linear	spcc
Isopropylbenzene	2.1274	2.254		.01		5.95093	60		Averaged	
1,1,2,2-Tetrachloroethane	0.5005	0.524		.3		4.6953	60		Averaged	spcc
1,2,3-Trichloropropane	0.1435	0.145		.01		1.0453	60		Averaged	
Bromobenzene	0.6362	0.666		.01		4.68406	60		Averaged	
n-Propylbenzene	2.5112	2.615		.01		4.13348	60		Averaged	
2-Chlorotoluene	1.7056	1.725		.01		1.13743	60		Averaged	
1,3,5-Trimethylbenzene	1.7622	1.884		.01		6.91181	60		Averaged	
4-Chlorotoluene	1.5531	1.582		.01		1.86079	60		Averaged	
tert-Butylbenzene	1.7973	1.915		.01		6.54871	60		Averaged	
1,2,4-Trimethylbenzene	1.8246	1.92		.01		5.22854	60		Averaged	
sec-Butylbenzene	2.3786	2.551		.01		7.24796	60		Averaged	
4-Isopropyltoluene	1.9148	2.119		.01		10.6643	60		Averaged	
1,3-Dichlorobenzene	1.1952	1.271		.01		6.34203	60		Averaged	
1,4-Dichlorobenzene	1.2391	1.284		.01		3.6236	60		Averaged	
n-Butylbenzene	1.8207	1.971		.01		8.25507	60		Averaged	
1,2-Dichlorobenzene	1.1449	1.196		.01		4.46327	60		Averaged	
1,2-Dibromo-3-chloropropane	0.0988	0.131		.01		32.59109	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 06-JUL-09 06:57

Data File: 070609V2.b\2T102.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090706-01 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	0.8718	0.973		.01		11.60817	60		Averaged
Hexachlorobutadiene	0.5338	0.614		.01		15.02435	60		Averaged
Naphthalene	1.8249	1.948		.01		6.74558	60		Averaged
1,2,3-Trichlorobenzene	0.799	0.87		.01		8.88611	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1767232	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1520020	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	957984	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1767232	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1520020	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	957984	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	495409	49.99	ug/L	0.00
43) Toluene-d8	14.310	98	1804624	50.53	ug/L	0.00
61) Bromofluorobenzene	17.204	95	750704	49.84	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.687	85	267359	42.26	ug/L	100
3) Chloromethane	5.029	50	265597	46.57	ug/L	100
4) Vinyl chloride	5.266	62	291194	57.49	ug/L	100
5) Bromomethane	5.980	94	195690	38.43	ug/L	99
6) Chloroethane	6.211	64	258065	48.09	ug/L	100
7) Trichlorofluoromethane	6.756	101	481534	45.96	ug/L	100
8) Ethyl ether	7.349	59	312020	50.98	ug/L	100
9) Acetone	7.871	43	1650991	271.93	ug/L	99
10) 1,1-Dichloroethylene	7.824	61	558761	52.57	ug/L	99
11) Iodomethane	8.108	142	3913746	270.36	ug/L	99
12) Acetonitrile	8.381	41	1217400	1203.75	ug/L	100
13) Methyl acetate	8.511	43	1483053	236.40	ug/L	100
14) Carbon disulfide	8.251	76	6150005	257.55	ug/L	100
15) Methylene chloride	8.701	84	462831	57.63	ug/L	99
16) tert-Butyl methyl ether	9.199	73	989917	49.52	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	554025	50.72	ug/L	99
18) Vinyl acetate	9.946	43	4101187	313.47	ug/L	97
19) 1,1-Dichloroethane	9.887	63	703074	51.59	ug/L	100
20) 2-Butanone	10.765	43	2030359	277.55	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	599166	49.61	ug/L	98
22) 2,2-Dichloropropane	10.812	77	516166	52.91	ug/L	99
23) Bromochloromethane	11.132	128	240228	53.65	ug/L	98
24) Chloroform	11.239	83	718477	51.47	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	642756	53.57	ug/L	100
26) Cyclohexane	11.642	56	642270	51.11	ug/L	99
27) 1,1-Dichloropropene	11.761	75	523015	52.74	ug/L	99
28) Carbon tetrachloride	11.784	117	598978	55.47	ug/L	100
30) 1,2-Dichloroethane	12.033	62	520394	49.13	ug/L	100
31) Benzene	12.045	78	1562960	50.58	ug/L	100
32) Cyclohexene	12.188	67	817575	52.64	ug/L	99
33) n-Butyl alcohol	12.650	56	1171728	5737.59	ug/L	100
34) Trichloroethylene	12.852	95	440233	52.42	ug/L	99
35) 1,2-Dichloropropane	13.124	63	393020	50.69	ug/L	100
36) Methylcyclohexane	13.136	83	723587	53.18	ug/L	99
37) Dibromomethane	13.279	93	252732	52.93	ug/L	98
38) Bromodichloromethane	13.445	83	550300	55.56	ug/L	100
39) 2-Chloroethylvinyl ether	13.753	63	981662	255.66	ug/L	100
40) cis-1,3-Dichloropropylene	13.966	75	637139	55.07	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
42)	4-Methyl-2-pentanone	14.109	58	942739	283.36 ug/L	99	
44)	Toluene	14.393	91	1754074	50.49 ug/L	99	
45)	trans-1,3-Dichloroprop...	14.583	75	593684	54.98 ug/L	100	
46)	1,1,2-Trichloroethane	14.808	83	299541	50.55 ug/L	99	
47)	2-Hexanone	14.109	43	2568838	282.09 ug/L	99	
48)	1,3-Dichloropropane	15.010	76	588785	49.44 ug/L	94	
49)	Tetrachloroethylene	15.034	164	481023	53.70 ug/L	98	
50)	Dibromochloromethane	15.295	129	478986	59.45 ug/L	100	
51)	1,2-Dibromoethane	15.449	107	397003	54.24 ug/L	100	
52)	Chlorobenzene	15.982	112	1246441	51.54 ug/L	98	
53)	1,1,1,2-Tetrachloroethane	16.054	131	488055	55.47 ug/L	100	
54)	Ethylbenzene	16.077	91	2045873	52.13 ug/L	99	
55)	m,p-Xylenes	16.196	106	1644810	104.27 ug/L	98	
56)	o-Xylene	16.635	106	799408	51.56 ug/L	99	
57)	Styrene	16.646	104	1339655	58.64 ug/L	99	
59)	Bromoform	16.884	173	388089	49.93 ug/L	100	
60)	Isopropylbenzene	17.026	105	2159227	52.97 ug/L	99	
62)	1,1,2,2-Tetrachloroethane	17.299	83	502180	52.37 ug/L	100	
63)	1,2,3-Trichloropropane	17.382	110	138777	50.48 ug/L	98	
64)	Bromobenzene	17.417	156	637539	52.30 ug/L	95	
65)	n-Propylbenzene	17.465	91	2504912	52.06 ug/L	99	
66)	1,3,5-Trimethylbenzene	17.631	105	1804607	53.45 ug/L	53	
67)	2-Chlorotoluene	17.595	91	1652304	50.56 ug/L	98	
68)	4-Chlorotoluene	17.702	91	1515139	50.92 ug/L	98	
69)	tert-Butylbenzene	17.998	119	1834182	53.26 ug/L	99	
70)	1,2,4-Trimethylbenzene	18.046	105	1839735	52.63 ug/L	99	
71)	sec-Butylbenzene	18.235	105	2444244	53.63 ug/L	100	
72)	4-Isopropyltoluene	18.366	119	2029612	55.32 ug/L	100	
73)	1,3-Dichlorobenzene	18.401	146	1217404	53.16 ug/L	99	
74)	1,4-Dichlorobenzene	18.484	146	1230190	51.82 ug/L	99	
75)	n-Butylbenzene	18.805	91	1888626	54.14 ug/L	99	
76)	1,2-Dichlorobenzene	18.900	146	1145558	52.22 ug/L	100	
77)	1,2-Dibromo-3-chloropr...	19.706	157	125085	66.08 ug/L	97	E
78)	1,2,4-Trichlorobenzene	20.690	180	932323	55.82 ug/L	100	
79)	Hexachlorobutadiene	20.868	225	588678	57.56 ug/L	99	
80)	Naphthalene	21.022	128	1865794	53.36 ug/L	100	
81)	1,2,3-Trichlorobenzene	21.342	180	833741	54.46 ug/L	99	
83)	Chlorotrifluoroethylene	0.000		0	N.D.		
84)	2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85)	Acrolein	7.539		0m	N.D. d		
86)	Trichlorotrifluoroethane	0.000		0	N.D.		
87)	Isopropyl Alcohol	8.168		0m	N.D. d		
88)	Allyl chloride	8.381		0m	N.D. d		
89)	tert-Butyl Alcohol	8.915		0m	N.D. d		
90)	Acrylonitrile	9.104		0m	N.D. d		
91)	Isopropyl ether	9.946		0m	N.D. d		
92)	2-Chloro-1,3-butadiene	10.148		0m	N.D. d		
93)	Ethyl tert-butyl ether	10.788		0m	N.D. d		
94)	Ethyl acetate	10.765		0m	N.D. d		
95)	Propionitrile	10.859		0m	N.D. d		
96)	Methacrylonitrile	11.085		0m	N.D. d		
97)	Tetrahydrofuran	11.215		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98) Isobutyl alcohol	11.642		0m	N.D.	d	
99) Methyl tert-amyl ether	12.188		0m	N.D.	d	
100) Methyl methacrylate	13.136		0m	N.D.	d	
101) 1,4-Dioxane	13.279		0m	N.D.	d	
102) 2-Nitropropane	13.753		0m	N.D.	d	
104) Ethyl methacrylate	0.000		0	N.D.		
106) 1-Chlorohexane	15.947		0m	N.D.	d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108) Cyclohexanone	17.144		0m	N.D.	d	
109) trans-1,4-Dichloro-2-b...	17.465		0m	N.D.	d	
110) Pentachloroethane	18.058		0m	N.D.	d	
111) Benzyl chloride	18.805		0m	N.D.	d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102.D
Acq On    :  6 Jul 2009   6:57 am
Operator  : CDS1
InstName  : VOA2
Sample    : |W2VM090706-01|CCV|1|VOAF|1|VOA8260BLF|
Misc      : VSTD050 5ML MIX [A] UVM090617-017C+UVM090603-
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Jul 15 12:54:59 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
```

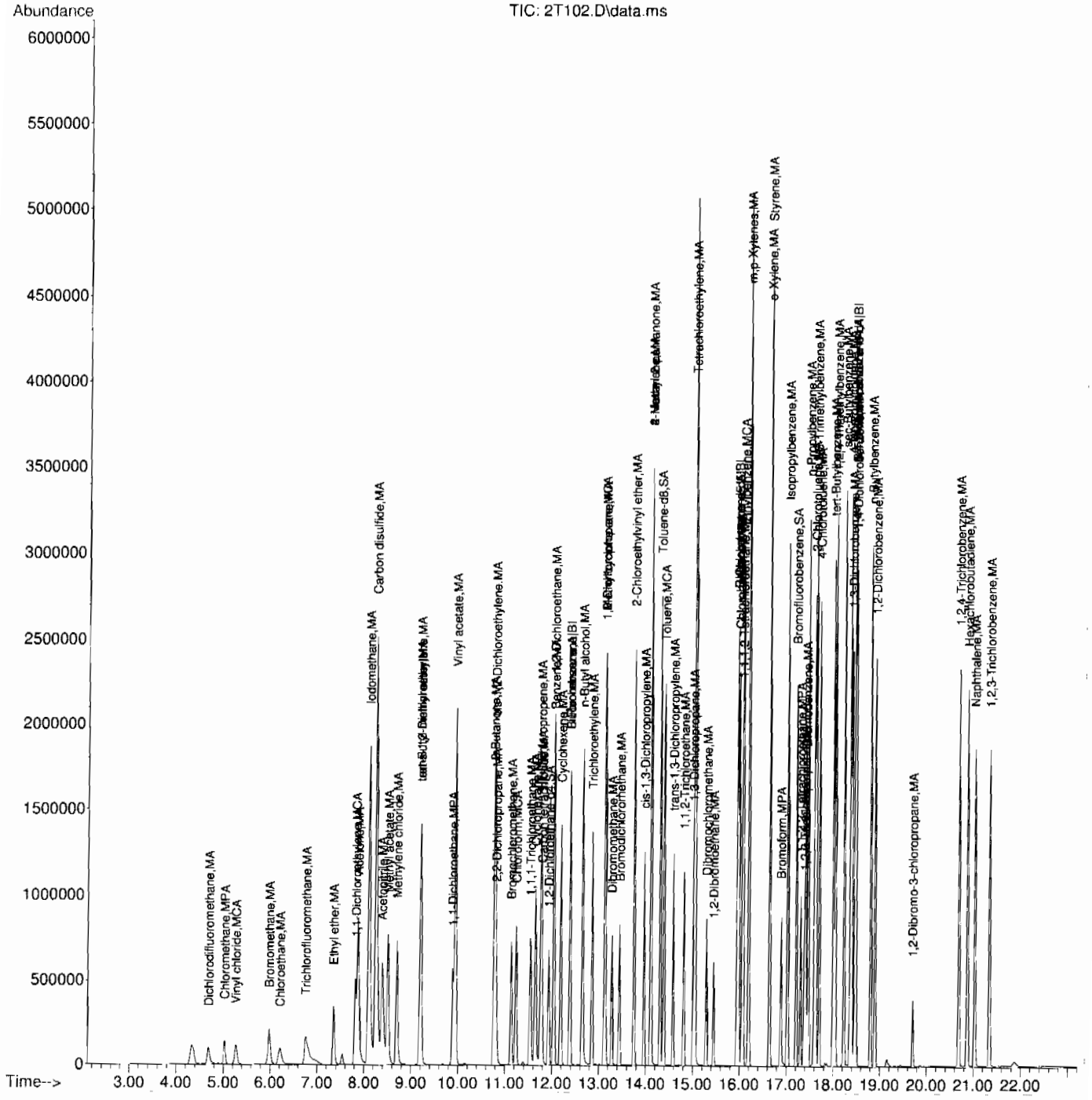

Continuing Calibration Summary

Client SDG: 09-2506

Instrument ID: VOA2.I

Injection Date 06-JUL-09 08:24

Data File: 070609V2.b\2T105.D

Init. Cal. Date(s) 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID UVM090701-08A **Quant Type** ISTD

Method: 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.2804	0.267		.01		-4.77889	60		Averaged
S	Toluene-d8	1.1749	1.148		.01		-2.28956	60		Averaged
S	Bromofluorobenzene	0.7862	0.76		.01		-3.33249	60		Averaged
	Acrolein	0.0345	0.042		.01		21.73913	60		Averaged
	Trichlorotrifluoroethane	0.0628	0.063		.01		0.31847	60		Averaged
	Allyl chloride	0.3493	0.307		.01		-12.10993	60		Averaged
	Acrylonitrile	0.0703	0.069		.01		-1.84922	60		Averaged
	2-Chloro-1,3-butadiene	0.2881	0.323		.01		12.11385	60		Averaged
	Propionitrile	0.0284	0.027		.01		-4.92958	60		Averaged
	Ethyl acetate	0.2075	0.199		.01		-4.09639	60		Averaged
	Methacrylonitrile	0.1249	0.124		.01		-0.72058	60		Averaged
	Tetrahydrofuran	0.0668	0.067		.01		0.2994	60		Averaged
	Isobutyl alcohol	0.0074	0.008		.01		8.10811	60		Averaged
	Methyl tert-amyl ether	0.5609	0.01		.01		-98.21715	60	*	Averaged
	Methyl methacrylate	0.1218	0.129		.01		5.91133	60		Averaged
	1,4-Dioxane	0.0017	0.002		.01		17.64706	60		Averaged
	2-Nitropropane	0.0578	0.068		.01		17.64706	60		Averaged
	Ethyl methacrylate	0.2758	0.275		.01		-0.29007	60		Averaged
	1-Chlorohexane	0.3931	0.014		.01		-96.43857	60	*	Averaged
	cis-1,4-Dichloro-2-butene	0.1574	0.161		.01		2.28717	60		Averaged
	Cyclohexanone	0.0593	0.07		.01		18.04384	60		Averaged
	trans-1,4-Dichloro-2-butene	0.1536	0.154		.01		0.26042	60		Averaged
	Pentachloroethane	250	401.64	250			60.656	60	*	Linear
	Benzyl chloride	0.8192	0.986		.01		20.36133	60		Averaged
	bis(2-Chloroisopropyl)ether	0.2668	0.256		.01		-4.04798	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On : 6 Jul 2009 8:24 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1766847	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1518709	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	954184	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1766847	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1518709	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	954184	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	471253	47.56 ug/L	0.00
43) Toluene-d8	14.310	98	1743778	48.87 ug/L	0.00
61) Bromofluorobenzene	17.204	95	725005	48.32 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	4.687		0m	N.D. d	
3) Chloromethane	4.999		0m	N.D. d	
4) Vinyl chloride	5.252		0m	N.D. d	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	6.745		0m	N.D. d	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.859		0m	N.D. d	
10) 1,1-Dichloroethylene	7.835		0m	N.D. d	
11) Iodomethane	8.108		0m	N.D. d	
12) Acetonitrile	8.488		0m	N.D. d	
13) Methyl acetate	8.523		0m	N.D. d	
14) Carbon disulfide	8.251		0m	N.D. d	
15) Methylene chloride	8.701		0m	N.D. d	
16) tert-Butyl methyl ether	9.211		0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.199		0m	N.D. d	
18) Vinyl acetate	10.053		0m	N.D. d	
19) 1,1-Dichloroethane	10.053		0m	N.D. d	
20) 2-Butanone	10.859		0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.859		0m	N.D. d	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.239		0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535		0m	N.D. d	
26) Cyclohexane	11.642		0m	N.D. d	
27) 1,1-Dichloropropene	11.796		0m	N.D. d	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	12.033		0m	N.D. d	
31) Benzene	12.045		0m	N.D. d	
32) Cyclohexene	12.389		0m	N.D. d	
33) n-Butyl alcohol	12.650		0m	N.D. d	
34) Trichloroethylene	12.864		0m	N.D. d	
35) 1,2-Dichloropropane	13.124		0m	N.D. d	
36) Methylcyclohexane	13.196		0m	N.D. d	
37) Dibromomethane	13.267		0m	N.D. d	
38) Bromodichloromethane	13.196		0m	N.D. d	
39) 2-Chloroethylvinyl ether	13.753		0m	N.D. d	
40) cis-1,3-Dichloropropylene	13.966		0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On : 6 Jul 2009 8:24 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) 4-Methyl-2-pentanone	14.121		0m	N.D.	d	
44) Toluene	14.381		0m	N.D.	d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D.	d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D.	d	
47) 2-Hexanone	14.109		0m	N.D.	d	
48) 1,3-Dichloropropane	15.010		0m	N.D.	d	
49) Tetrachloroethylene	15.034		0m	N.D.	d	
50) Dibromochloromethane	15.294		0m	N.D.	d	
51) 1,2-Dibromoethane	15.449		0m	N.D.	d	
52) Chlorobenzene	15.982		0m	N.D.	d	
53) 1,1,1,2-Tetrachloroethane	16.053		0m	N.D.	d	
54) Ethylbenzene	16.077		0m	N.D.	d	
55) m,p-Xylenes	16.196		0m	N.D.	d	
56) o-Xylene	16.646		0m	N.D.	d	
57) Styrene	16.646		0m	N.D.	d	
59) Bromoform	16.884		0m	N.D.	d	
60) Isopropylbenzene	17.026		0m	N.D.	d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D.	d	
63) 1,2,3-Trichloropropane	17.204		0m	N.D.	d	
64) Bromobenzene	17.417		0m	N.D.	d	
65) n-Propylbenzene	17.465		0m	N.D.	d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D.	d	
67) 2-Chlorotoluene	17.595		0m	N.D.	d	
68) 4-Chlorotoluene	17.702		0m	N.D.	d	
69) tert-Butylbenzene	18.058		0m	N.D.	d	
70) 1,2,4-Trimethylbenzene	18.069		0m	N.D.	d	
71) sec-Butylbenzene	18.235		0m	N.D.	d	
72) 4-Isopropyltoluene	18.366		0m	N.D.	d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D.	d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D.	d	
75) n-Butylbenzene	18.603		0m	N.D.	d	
76) 1,2-Dichlorobenzene	18.899		0m	N.D.	d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D.	d	
79) Hexachlorobutadiene	20.868		0m	N.D.	d	
80) Naphthalene	21.022		0m	N.D.	d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D.	d	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.575	56	375363	308.02	ug/L	99
86) Trichlorotrifluoroethane	7.859	85	553982	249.46	ug/L	97
87) Isopropyl Alcohol	8.156	45	18000	36.59	ug/L	86
88) Allyl chloride	8.488	41	2713975	219.87	ug/L	100
89) tert-Butyl Alcohol	8.879	59	275	N.D.		
90) Acrylonitrile	9.092	53	607922	244.83	ug/L	100
91) Isopropyl ether	10.006	45	113	N.D.		
92) 2-Chloro-1,3-butadiene	10.053	53	570741	56.07	ug/L	97
93) Ethyl tert-butyl ether	0.000		0	N.D.		
94) Ethyl acetate	10.859	43	1761745	240.26	ug/L	100
95) Propionitrile	10.848	54	242542	241.95	ug/L	100
96) Methacrylonitrile	11.085	41	1092483	247.48	ug/L	100
97) Tetrahydrofuran	11.203	42	591447	250.61	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On : 6 Jul 2009 8:24 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)	
98)	Isobutyl alcohol	11.796	41	678977	2587.72	ug/L		100	
99)	Methyl tert-amyl ether	12.377	73	18254	0.92	ug/L	#	52	
100)	Methyl methacrylate	13.196	69	1135317	263.84	ug/L		98	
101)	1,4-Dioxane	13.267	88	169107	2897.65	ug/L		98	
102)	2-Nitropropane	13.682	43	599496	293.52	ug/L		99	E
104)	Ethyl methacrylate	14.642	69	2085233	248.90	ug/L		100	
106)	1-Chlorohexane	15.947	55	13104	1.75	ug/L	#	30	
107)	cis-1,4-Dichloro-2-butene	17.061	53	766922	255.28	ug/L		99	
108)	Cyclohexanone	17.144	42	1670142	1474.68	ug/L		98	
109)	trans-1,4-Dichloro-2-b...	17.358	53	733008	250.12	ug/L		98	
110)	Pentachloroethane	18.058	167	1340855	401.64	ug/L		96	
111)	Benzyl chloride	18.603	91	4702849	300.82	ug/L		99	
112)	bis(2-Chloroisopropyl)...	19.006	45	1220622	239.78	ug/L		98	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T105.D
Acq On : 6 Jul 2009 8:24 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 15 12:55:12 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

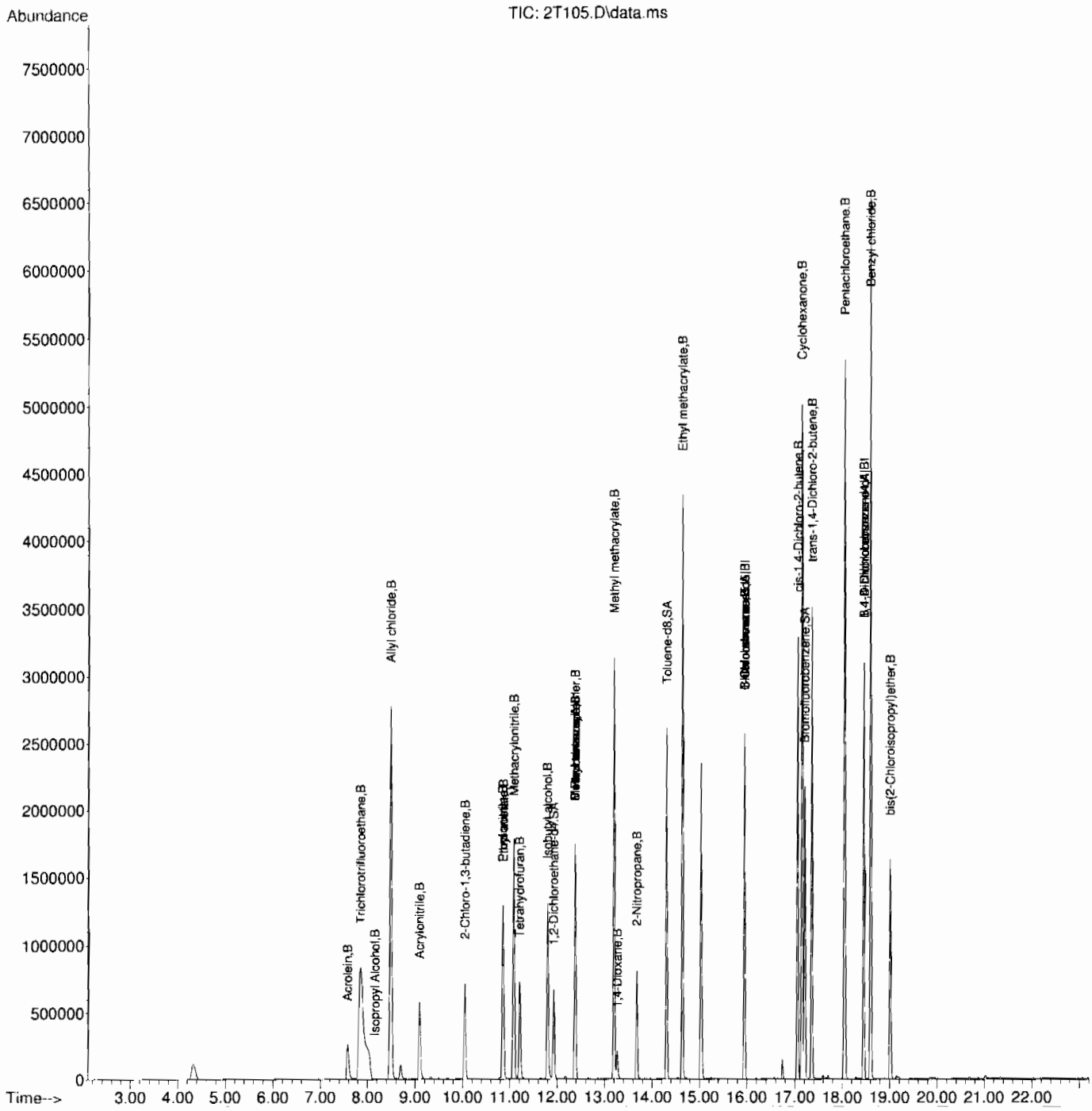

Continuing Calibration Summary

Client SDG: 09-2506

Instrument ID: VOA2.I **Injection Date** 07-JUL-09 07:08

Data File: 070709V2.b\2T202.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090707-01 **Quant Type** ISTD **Method:** 070709V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.2804	0.285		.01		1.64051	60		Averaged	
S	Toluene-d8	1.1749	1.181		.01		0.51919	60		Averaged	
S	Bromofluorobenzene	0.7862	0.789		.01		0.35614	60		Averaged	
	Dichlorodifluoromethane	0.179	0.157		.01		-12.2905	60		Averaged	
	Chloromethane	0.1614	0.145		.1		-10.16109	60		Averaged	spcc
	Vinyl chloride	0.1433	0.138		.01		-3.69853	20		Averaged	ccc
	Bromomethane	0.1441	0.132		.01		-8.39695	60		Averaged	
	Chloroethane	0.1518	0.152		.01		0.13175	60		Averaged	
	Trichlorofluoromethane	0.2964	0.294		.01		-0.80972	60		Averaged	
	Ethyl ether	0.1732	0.176		.01		1.61663	60		Averaged	
	1,1-Dichloroethylene	0.3007	0.332		.01		10.40905	20		Averaged	ccc
	Acetone	250	259.61	250			3.844	60		Linear	
	Iodomethane	0.4096	0.454		.01		10.83984	60		Averaged	
	Carbon disulfide	0.6756	0.725		.01		7.31202	60		Averaged	
	Acetonitrile	0.0286	0.036		.01		25.87413	60		Averaged	
	Methyl acetate	0.1775	0.171		.01		-3.66197	60		Averaged	
	Methylene chloride	50	55.4	50			10.8	60		Linear	
	trans-1,2-Dichloroethylene	0.3091	0.331		.01		7.08509	60		Averaged	
	tert-Butyl methyl ether	0.5656	0.58		.01		2.54597	60		Averaged	
	1,1-Dichloroethane	0.3855	0.419		.1		8.69001	60		Averaged	spcc
	Vinyl acetate	0.3702	0.454		.01		22.63641	60		Averaged	
	2-Butanone	0.207	0.219		.01		5.7971	60		Averaged	
	cis-1,2-Dichloroethylene	0.3417	0.359		.01		5.06292	60		Averaged	
	2,2-Dichloropropane	0.276	0.307		.01		11.23188	60		Averaged	
	Bromochloromethane	0.1267	0.137		.01		8.12944	60		Averaged	
	Chloroform	0.3949	0.428		.01		8.38187	20		Averaged	ccc
	1,1,1-Trichloroethane	0.3395	0.379		.01		11.63476	60		Averaged	
	Cyclohexane	0.3556	0.375		.01		5.45557	60		Averaged	
	1,1-Dichloropropene	0.2806	0.31		.01		10.47755	60		Averaged	
	Carbon tetrachloride	0.3055	0.355		.01		16.20295	60		Averaged	
	1,2-Dichloroethane	0.2997	0.315		.01		5.10511	60		Averaged	
	Benzene	0.8742	0.916		.01		4.78151	60		Averaged	
	Cyclohexene	0.4394	0.481		.01		9.46746	60		Averaged	
	n-Butyl alcohol	0.0058	0.007		.01		20.68966	60		Averaged	
	Trichloroethylene	0.2376	0.255		.01		7.32323	60		Averaged	
	1,2-Dichloropropane	0.2194	0.231		.01		5.28715	20		Averaged	ccc
	Methylcyclohexane	0.385	0.418		.01		8.57143	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 07-JUL-09 07:08

Data File: 070709V2.b\2T202.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090707-01 **Quant Type** ISTD **Method:** 070709V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.1351	0.147		.01		8.80829	60		Averaged	
Bromodichloromethane	0.2802	0.326		.01		16.34547	60		Averaged	
2-Chloroethylvinyl ether	0.1086	0.119		.01		9.57643	60		Averaged	
cis-1,3-Dichloropropylene	0.3273	0.371		.01		13.35167	60		Averaged	
4-Methyl-2-pentanone	0.1094	0.122		.01		11.51737	60		Averaged	
2-Hexanone	0.2996	0.335		.01		11.81575	60		Averaged	
Toluene	1.1428	1.198		.01		4.83024	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.3552	0.404		.01		13.73874	60		Averaged	
1,1,2-Trichloroethane	0.1949	0.202		.01		3.64289	60		Averaged	
1,3-Dichloropropane	0.3918	0.4		.01		2.0929	60		Averaged	
Tetrachloroethylene	0.2946	0.32		.01		8.62186	60		Averaged	
Dibromochloromethane	0.265	0.319		.01		20.37736	60		Averaged	
1,2-Dibromoethane	0.2408	0.263		.01		9.21927	60		Averaged	
Chlorobenzene	0.7955	0.842		.3		5.84538	60		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.2894	0.33		.01		14.02903	60		Averaged	
Ethylbenzene	1.2909	1.39		.01		7.67681	20		Averaged	ccc
m,p-Xylenes	0.5189	0.552		.01		6.37888	60		Averaged	
o-Xylene	0.51	0.543		.01		6.47059	60		Averaged	
Styrene	0.7515	0.901		.01		19.89355	60		Averaged	
Bromoform	50	49.51	50			-0.98	60		Linear	spcc
Isopropylbenzene	2.1274	2.334		.01		9.71138	60		Averaged	
1,1,2,2-Tetrachloroethane	0.5005	0.532		.3		6.29371	60		Averaged	spcc
1,2,3-Trichloropropane	0.1435	0.147		.01		2.43902	60		Averaged	
Bromobenzene	0.6362	0.669		.01		5.15561	60		Averaged	
n-Propylbenzene	2.5112	2.736		.01		8.9519	60		Averaged	
2-Chlorotoluene	1.7056	1.789		.01		4.88977	60		Averaged	
1,3,5-Trimethylbenzene	1.7622	1.938		.01		9.97617	60		Averaged	
4-Chlorotoluene	1.5531	1.643		.01		5.78842	60		Averaged	
tert-Butylbenzene	1.7973	1.968		.01		9.49758	60		Averaged	
1,2,4-Trimethylbenzene	1.8246	1.999		.01		9.55826	60		Averaged	
sec-Butylbenzene	2.3786	2.635		.01		10.77945	60		Averaged	
4-Isopropyltoluene	1.9148	2.195		.01		14.63338	60		Averaged	
1,3-Dichlorobenzene	1.1952	1.282		.01		7.26238	60		Averaged	
1,4-Dichlorobenzene	1.2391	1.298		.01		4.75345	60		Averaged	
n-Butylbenzene	1.8207	2.043		.01		12.20959	60		Averaged	
1,2-Dichlorobenzene	1.1449	1.214		.01		6.03546	60		Averaged	
1,2-Dibromo-3-chloropropane	0.0988	0.124		.01		25.50607	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 07-JUL-09 07:08

Data File: 070709V2.b\2T202.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090707-01 **Quant Type** ISTD **Method:** 070709V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	0.8718	0.963		.01		10.46111	60		Averaged
Hexachlorobutadiene	0.5338	0.608		.01		13.90034	60		Averaged
Naphthalene	1.8249	1.915		.01		4.93726	60		Averaged
1,2,3-Trichlorobenzene	0.799	0.855		.01		7.00876	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T202.D
Acq On : 7 Jul 2009 7:08 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090707-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : MIX [A] UVM090617-07C+UVM090603-07B
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:07:18 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1642832	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1402598	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	878468	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1642832	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1402598	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	878468	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	468240	50.83	ug/L	0.00
43) Toluene-d8	14.310	98	1656227	50.25	ug/L	0.00
61) Bromofluorobenzene	17.204	95	693112	50.18	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	257462	43.78	ug/L	100
3) Chloromethane	5.014	50	238618	45.01	ug/L	100
4) Vinyl chloride	5.251	62	227421	48.30	ug/L	100
5) Bromomethane	5.979	94	217082	45.86	ug/L	99
6) Chloroethane	6.199	64	249312	49.98	ug/L	99
7) Trichlorofluoromethane	6.756	101	483339	49.63	ug/L	99
8) Ethyl ether	7.349	59	289565	50.89	ug/L	100
9) Acetone	7.859	43	1465061	259.61	ug/L	99
10) 1,1-Dichloroethylene	7.812	61	545546	55.21	ug/L	100
11) Iodomethane	8.096	142	3725947	276.87	ug/L	99
12) Acetonitrile	8.369	41	1181272	1256.47	ug/L	99
13) Methyl acetate	8.499	43	1403379	240.64	ug/L	99
14) Carbon disulfide	8.239	76	5954125	268.23	ug/L	100
15) Methylene chloride	8.689	84	414628	55.40	ug/L	99
16) tert-Butyl methyl ether	9.199	73	953163	51.29	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	544025	53.57	ug/L	99
18) Vinyl acetate	9.934	43	3732439	306.89	ug/L	97
19) 1,1-Dichloroethane	9.887	63	687615	54.28	ug/L	100
20) 2-Butanone	10.764	43	1796773	264.22	ug/L	99
21) cis-1,2-Dichloroethylene	10.776	61	590363	52.59	ug/L	100
22) 2,2-Dichloropropane	10.800	77	505010	55.68	ug/L	98
23) Bromochloromethane	11.132	128	225571	54.19	ug/L	99
24) Chloroform	11.227	83	703866	54.24	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	622865	55.84	ug/L	99
26) Cyclohexane	11.642	56	616428	52.76	ug/L	100
27) 1,1-Dichloropropene	11.749	75	509064	55.22	ug/L	99
28) Carbon tetrachloride	11.772	117	583484	58.13	ug/L	100
30) 1,2-Dichloroethane	12.021	62	516873	52.50	ug/L	100
31) Benzene	12.033	78	1504944	52.39	ug/L	100
32) Cyclohexene	12.176	67	789933	54.71	ug/L	99
33) n-Butyl alcohol	12.638	56	1092326	5753.81	ug/L	99
34) Trichloroethylene	12.852	95	419684	53.76	ug/L	99
35) 1,2-Dichloropropane	13.124	63	378712	52.54	ug/L	99
36) Methylcyclohexane	13.124	83	686124	54.24	ug/L	99
37) Dibromomethane	13.267	93	242292	54.59	ug/L	99
38) Bromodichloromethane	13.433	83	535842	58.20	ug/L	100
39) 2-Chloroethylvinyl ether	13.753	63	974002	272.87	ug/L	100
40) cis-1,3-Dichloropropylene	13.966	75	609362	56.66	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T202.D
Acq On : 7 Jul 2009 7:08 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090707-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : MIX [A] UVM090617-07C+UVM090603-07B
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:07:18 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
42)	4-Methyl-2-pentanone	14.109	58	856644	279.04	ug/L	99	
44)	Toluene	14.381	91	1679855	52.40	ug/L	100	
45)	trans-1,3-Dichloroprop...	14.583	75	566898	56.89	ug/L	99	
46)	1,1,2-Trichloroethane	14.808	83	283837	51.91	ug/L	100	
47)	2-Hexanone	14.109	43	2347896	279.41	ug/L	100	
48)	1,3-Dichloropropane	15.010	76	561657	51.11	ug/L	95	
49)	Tetrachloroethylene	15.033	164	448893	54.31	ug/L	100	
50)	Dibromochloromethane	15.283	129	446896	60.11	ug/L	100	
51)	1,2-Dibromoethane	15.449	107	369202	54.66	ug/L	100	
52)	Chlorobenzene	15.982	112	1180622	52.91	ug/L	100	
53)	1,1,1,2-Tetrachloroethane	16.053	131	462796	57.00	ug/L	99	
54)	Ethylbenzene	16.077	91	1949996	53.85	ug/L	100	
55)	m,p-Xylenes	16.196	106	1547934	106.34	ug/L	100	
56)	o-Xylene	16.634	106	761753	53.24	ug/L	100	
57)	Styrene	16.646	104	1263377	59.93	ug/L	99	
59)	Bromoform	16.883	173	352739	49.51	ug/L	100	
60)	Isopropylbenzene	17.026	105	2050534	54.86	ug/L	100	
62)	1,1,2,2-Tetrachloroethane	17.298	83	466960	53.11	ug/L	99	
63)	1,2,3-Trichloropropane	17.381	110	128776	51.08	ug/L	98	
64)	Bromobenzene	17.405	156	587319	52.54	ug/L	97	
65)	n-Propylbenzene	17.464	91	2403926	54.49	ug/L	100	
66)	1,3,5-Trimethylbenzene	17.630	105	1702487	54.99	ug/L	55	
67)	2-Chlorotoluene	17.595	91	1571223	52.43	ug/L	100	
68)	4-Chlorotoluene	17.702	91	1442968	52.88	ug/L	100	
69)	tert-Butylbenzene	17.998	119	1728877	54.75	ug/L	100	
70)	1,2,4-Trimethylbenzene	18.046	105	1756389	54.79	ug/L	100	
71)	sec-Butylbenzene	18.235	105	2314760	55.39	ug/L	100	
72)	4-Isopropyltoluene	18.366	119	1928361	57.32	ug/L	100	
73)	1,3-Dichlorobenzene	18.401	146	1126189	53.63	ug/L	99	
74)	1,4-Dichlorobenzene	18.484	146	1139904	52.36	ug/L	100	
75)	n-Butylbenzene	18.804	91	1794285	56.09	ug/L	100	
76)	1,2-Dichlorobenzene	18.899	146	1066447	53.02	ug/L	100	
77)	1,2-Dibromo-3-chloropr...	19.706	157	109193	62.91	ug/L	99	E
78)	1,2,4-Trichlorobenzene	20.690	180	846085	55.24	ug/L	100	
79)	Hexachlorobutadiene	20.868	225	534007	56.94	ug/L	99	
80)	Naphthalene	21.022	128	1682214	52.47	ug/L	100	
81)	1,2,3-Trichlorobenzene	21.342	180	750914	53.49	ug/L	99	
83)	Chlorotrifluoroethylene	0.000		0	N.D.			
84)	2-Chloro-1,1,1-trifluo...	0.000		0	N.D.			
85)	Acrolein	7.515		0m	N.D.	d		
86)	Trichlorotrifluoroethane	0.000		0	N.D.			
87)	Isopropyl Alcohol	8.239		0m	N.D.	d		
88)	Allyl chloride	8.369		0m	N.D.	d		
89)	tert-Butyl Alcohol	8.926		0m	N.D.	d		
90)	Acrylonitrile	9.199		0m	N.D.	d		
91)	Isopropyl ether	9.934		0m	N.D.	d		
92)	2-Chloro-1,3-butadiene	10.136		0m	N.D.	d		
93)	Ethyl tert-butyl ether	10.776		0m	N.D.	d		
94)	Ethyl acetate	10.764		0m	N.D.	d		
95)	Propionitrile	10.764		0m	N.D.	d		
96)	Methacrylonitrile	11.227		0m	N.D.	d		
97)	Tetrahydrofuran	11.227		0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T202.D
Acq On : 7 Jul 2009 7:08 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090707-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : MIX [A] UVM090617-07C+UVM090603-07B
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:07:18 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98)	Isobutyl alcohol	11.915		0m	N.D.	d	
99)	Methyl tert-amyl ether	12.176		0m	N.D.	d	
100)	Methyl methacrylate	13.124		0m	N.D.	d	
101)	1,4-Dioxane	13.267		0m	N.D.	d	
102)	2-Nitropropane	13.753		0m	N.D.	d	
104)	Ethyl methacrylate	0.000		0	N.D.		
106)	1-Chlorohexane	15.947		0m	N.D.	d	
107)	cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108)	Cyclohexanone	17.014		0m	N.D.	d	
109)	trans-1,4-Dichloro-2-b...	17.464		0m	N.D.	d	
110)	Pentachloroethane	18.057		0m	N.D.	d	
111)	Benzyl chloride	18.804		0m	N.D.	d	
112)	bis(2-Chloroisopropyl)...	19.148		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T202.D
Acq On : 7 Jul 2009 7:08 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090707-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : MIX [A] UVM090617-07C+UVM090603-07B
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:07:18 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

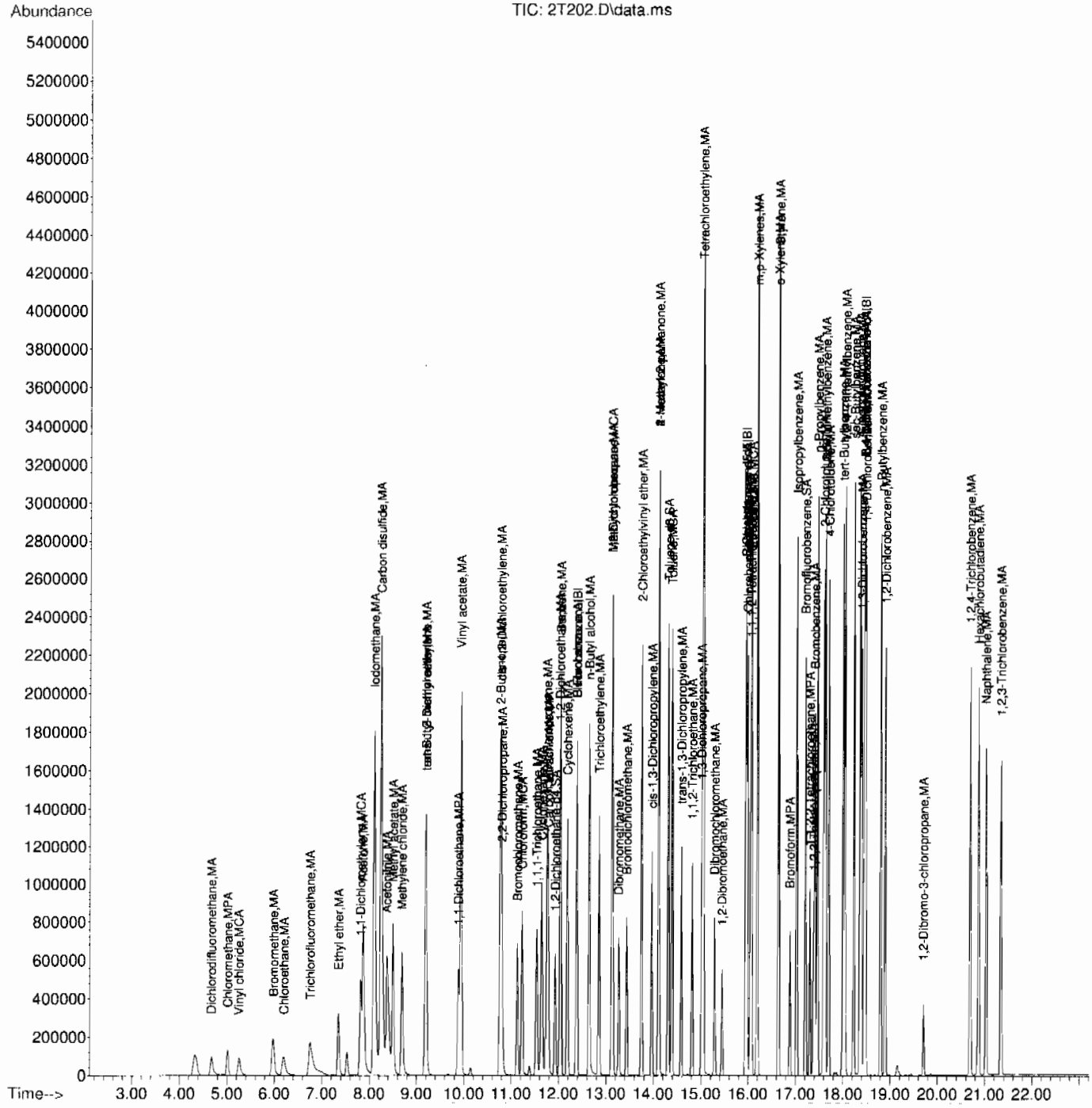

Continuing Calibration Summary

Client SDG: 09-2506

Instrument ID: VOA2.I

Injection Date 07-JUL-09 08:36

Data File: 070709V2.b\2T205.D

Init. Cal. Date(s) 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID UVM090701-08A **Quant Type** ISTD

Method: 070709V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.2804	0.278		.01		-0.85592	60		Averaged
S	Toluene-d8	1.1749	1.145		.01		-2.5449	60		Averaged
S	Bromofluorobenzene	0.7862	0.784		.01		-0.27983	60		Averaged
	Acrolein	0.0345	0.038		.01		10.14493	60		Averaged
	Trichlorotrifluoroethane	0.0628	0.066		.01		5.09554	60		Averaged
	Allyl chloride	0.3493	0.315		.01		-9.81964	60		Averaged
	Acrylonitrile	0.0703	0.07		.01		-0.42674	60		Averaged
	2-Chloro-1,3-butadiene	0.2881	0.332		.01		15.23776	60		Averaged
	Propionitrile	0.0284	0.028		.01		-1.40845	60		Averaged
	Ethyl acetate	0.2075	0.203		.01		-2.16867	60		Averaged
	Methacrylonitrile	0.1249	0.126		.01		0.8807	60		Averaged
	Tetrahydrofuran	0.0668	0.066		.01		-1.1976	60		Averaged
	Isobutyl alcohol	0.0074	0.008		.01		8.10811	60		Averaged
	Methyl methacrylate	0.1218	0.131		.01		7.55337	60		Averaged
	1,4-Dioxane	0.0017	0.002		.01		17.64706	60		Averaged
	2-Nitropropane	0.0578	0.07		.01		21.10727	60		Averaged
	Ethyl methacrylate	0.2758	0.28		.01		1.52284	60		Averaged
	cis-1,4-Dichloro-2-butene	0.1574	0.169		.01		7.36976	60		Averaged
	Cyclohexanone	0.0593	0.073		.01		23.10287	60		Averaged
	trans-1,4-Dichloro-2-butene	0.1536	0.161		.01		4.81771	60		Averaged
	Pentachloroethane	250	423.74	250			69.496	60	*	Linear
	Benzyl chloride	0.8192	1.007		.01		22.9248	60		Averaged
	bis(2-Chloroisopropyl)ether	0.2668	0.26		.01		-2.54873	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T205.D
Acq On : 7 Jul 2009 8:36 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 11:16:16 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1700350	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1463045	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	908470	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1700350	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1463045	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	908470	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	471870	49.49 ug/L	0.00
43) Toluene-d8	14.310	98	1675182	48.73 ug/L	0.00
61) Bromofluorobenzene	17.204	95	712286	49.87 ug/L	0.00

Target Compounds				Qvalue
2) Dichlorodifluoromethane	0.000	0	N.D.	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.266	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	0.000	0	N.D.	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.859	0m	N.D. d	
10) 1,1-Dichloroethylene	7.812	0m	N.D. d	
11) Iodomethane	8.108	0m	N.D. d	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.251	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.211	0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.199	0m	N.D. d	
18) Vinyl acetate	9.946	0m	N.D. d	
19) 1,1-Dichloroethane	9.887	0m	N.D. d	
20) 2-Butanone	10.860	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.860	0m	N.D. d	
22) 2,2-Dichloropropane	10.800	0m	N.D. d	
23) Bromochloromethane	11.144	0m	N.D. d	
24) Chloroform	11.239	0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535	0m	N.D. d	
26) Cyclohexane	11.654	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	11.784	0m	N.D. d	
30) 1,2-Dichloroethane	12.033	0m	N.D. d	
31) Benzene	12.045	0m	N.D. d	
32) Cyclohexene	12.176	0m	N.D. d	
33) n-Butyl alcohol	12.650	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	13.124	0m	N.D. d	
36) Methylcyclohexane	13.136	0m	N.D. d	
37) Dibromomethane	13.267	0m	N.D. d	
38) Bromodichloromethane	13.445	0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000	0	N.D.	
40) cis-1,3-Dichloropropylene	13.966	0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T205.D
Acq On : 7 Jul 2009 8:36 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 11:16:16 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 4-Methyl-2-pentanone	14.109		0m	N.D. d	
44) Toluene	14.393		0m	N.D. d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D. d	
46) 1,1,2-Trichloroethane	14.808		0m	N.D. d	
47) 2-Hexanone	14.109		0m	N.D. d	
48) 1,3-Dichloropropane	15.010		0m	N.D. d	
49) Tetrachloroethylene	15.034		0m	N.D. d	
50) Dibromochloromethane	15.283		0m	N.D. d	
51) 1,2-Dibromoethane	15.449		0m	N.D. d	
52) Chlorobenzene	15.982		0m	N.D. d	
53) 1,1,1,2-Tetrachloroethane	16.054		0m	N.D. d	
54) Ethylbenzene	16.077		0m	N.D. d	
55) m,p-Xylenes	16.196		0m	N.D. d	
56) o-Xylene	16.635		0m	N.D. d	
57) Styrene	16.646		0m	N.D. d	
59) Bromoform	16.884		0m	N.D. d	
60) Isopropylbenzene	17.026		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.382		0m	N.D. d	
64) Bromobenzene	17.417		0m	N.D. d	
65) n-Propylbenzene	17.465		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D. d	
67) 2-Chlorotoluene	17.595		0m	N.D. d	
68) 4-Chlorotoluene	17.702		0m	N.D. d	
69) tert-Butylbenzene	18.058		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	18.081		0m	N.D. d	
71) sec-Butylbenzene	18.235		0m	N.D. d	
72) 4-Isopropyltoluene	18.366		0m	N.D. d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D. d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D. d	
75) n-Butylbenzene	18.805		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.900		0m	N.D. d	
77) 1,2-Dibromo-3-chloropr...	19.718		0m	N.D. d	
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D. d	
79) Hexachlorobutadiene	20.868		0m	N.D. d	
80) Naphthalene	21.022		0m	N.D. d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D. d	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	7.587	56	320143	272.98 ug/L	100
86) Trichlorotrifluoroethane	7.859	85	561314	262.65 ug/L	99
87) Isopropyl Alcohol	0.000		0m	N.D. d	
88) Allyl chloride	8.488	41	2680043	225.62 ug/L	99
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	9.093	53	592414	247.91 ug/L	100
91) Isopropyl ether	10.053	45	406	N.D.	
92) 2-Chloro-1,3-butadiene	10.053	53	565225	57.70 ug/L	96
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.860	43	1728373	244.93 ug/L	100
95) Propionitrile	10.848	54	235802	244.42 ug/L	100
96) Methacrylonitrile	11.085	41	1072705	252.50 ug/L	100
97) Tetrahydrofuran	11.203	42	560426	246.75 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T205.D
Acq On : 7 Jul 2009 8:36 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 11:16:16 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
98)	Isobutyl alcohol	11.796	41	655883	2597.46	ug/L	100	
99)	Methyl tert-amyl ether	12.164	73	1368	N.D.			
100)	Methyl methacrylate	13.196	69	1112550	268.66	ug/L	99	
101)	1,4-Dioxane	13.267	88	180754	3218.34	ug/L	100	
102)	2-Nitropropane	13.682	43	593959	302.19	ug/L	99	E
104)	Ethyl methacrylate	14.642	69	2047507	253.70	ug/L	99	
106)	1-Chlorohexane	0.000		0m	N.D.	d		
107)	cis-1,4-Dichloro-2-butene	17.061	53	765955	267.79	ug/L	99	
108)	Cyclohexanone	17.145	42	1659672	1539.17	ug/L	98	
109)	trans-1,4-Dichloro-2-b...	17.358	53	731445	262.15	ug/L	99	
110)	Pentachloroethane	18.058	167	1347201	423.74	ug/L	97	
111)	Benzyl chloride	18.603	91	4572648	307.21	ug/L	99	
112)	bis(2-Chloroisopropyl)...	19.006	45	1181230	243.72	ug/L	98	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T205.D
Acq On : 7 Jul 2009 8:36 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 11:16:16 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

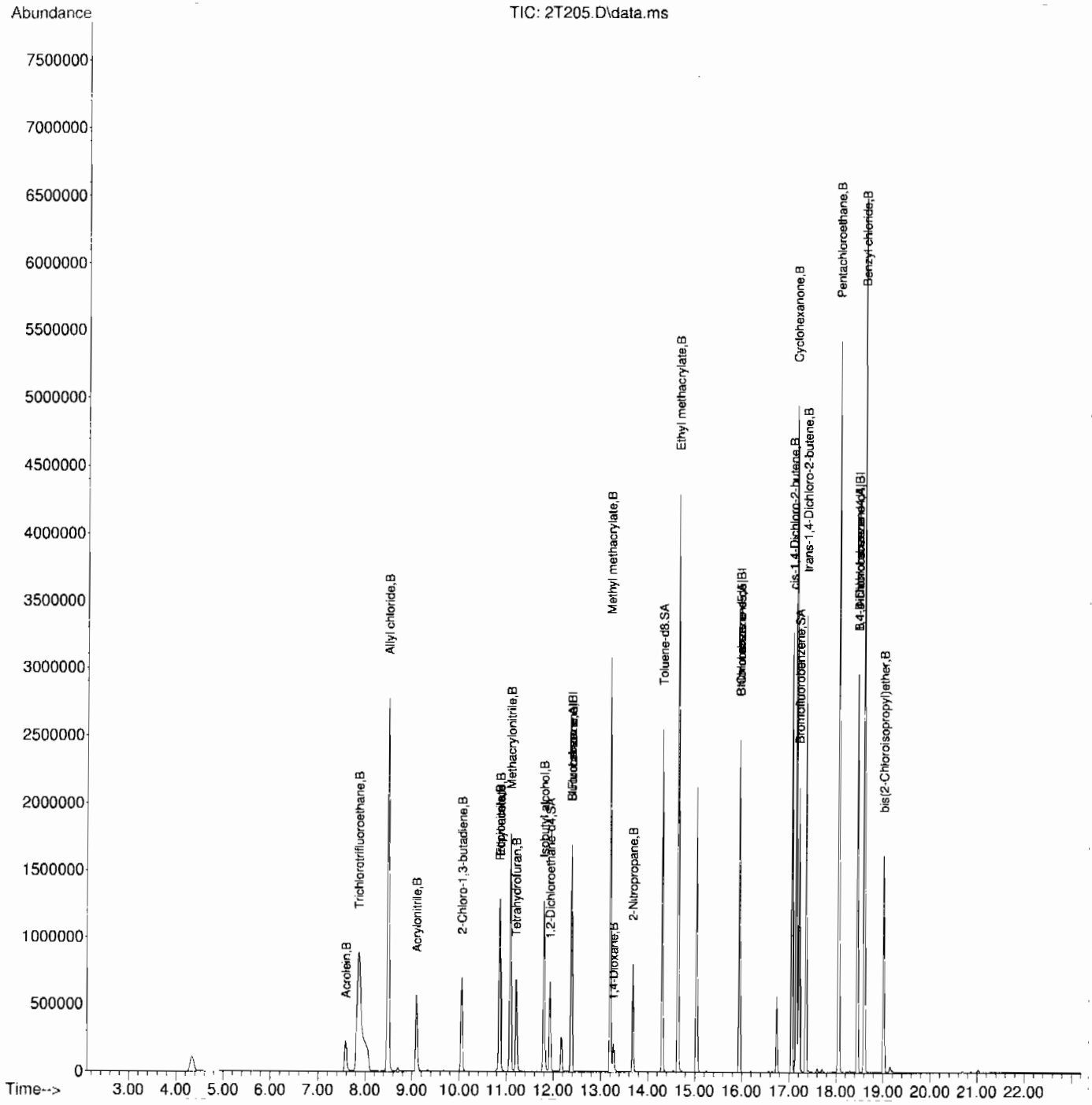

Quality Control Data

Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S301.D
Acq On : 1 Jul 2009 9:58 am
Operator : CDS1
Sample : |UVM090604-02|BFB|1|VOAF|1|
Misc : BFB01
ALS Vial : 1 Sample Multiplier: 1

Integration File: default.P

Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B
Last Update : Tue Jul 14 15:00:31 2009

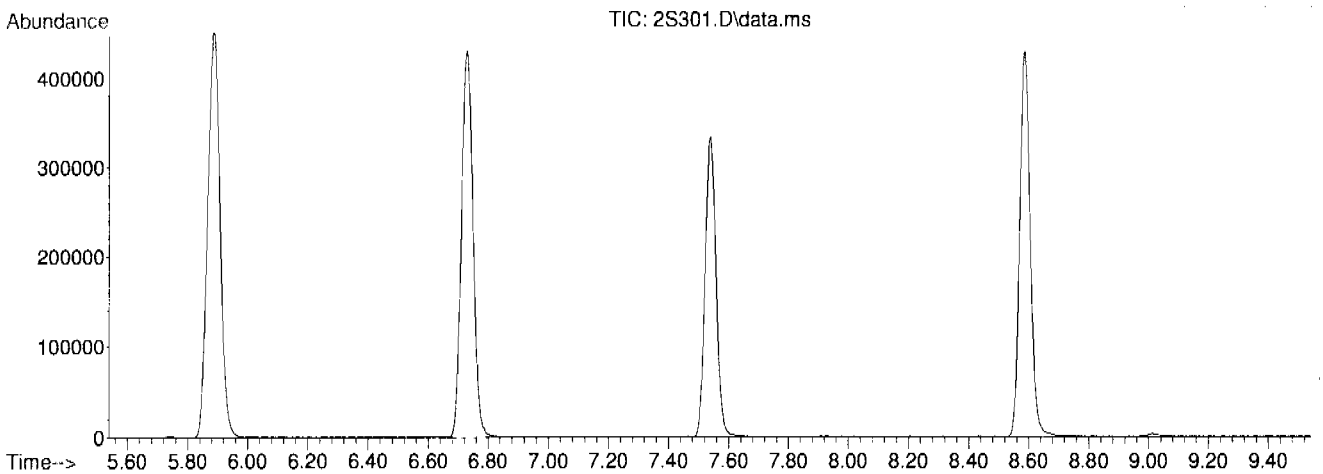

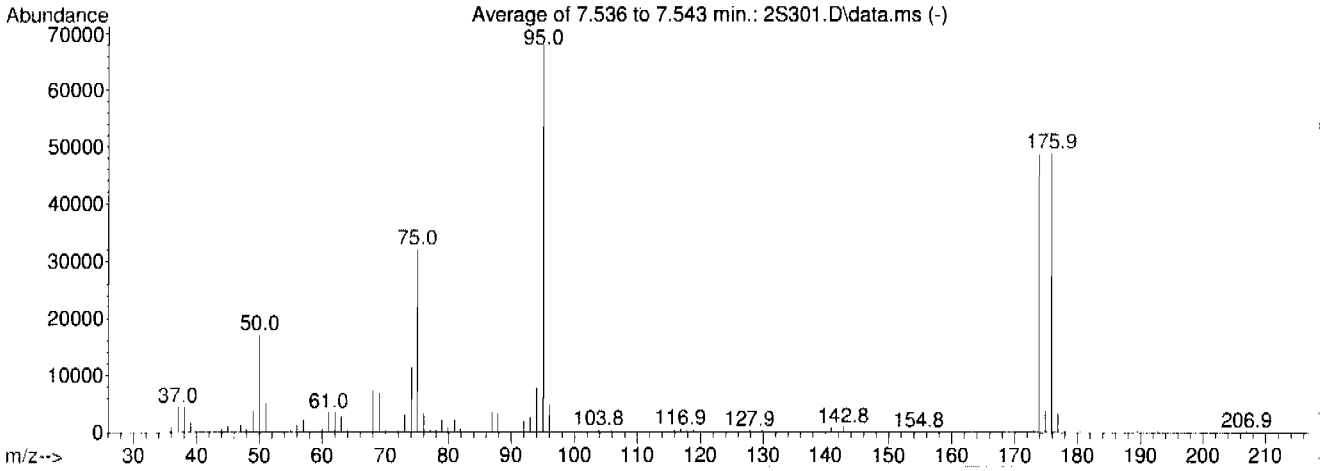

Spectrum Information: Average of 7.536 to 7.543 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.2	17106	PASS
75	95	30	60	47.2	32032	PASS
95	95	100	100	100.0	67893	PASS
96	95	5	9	7.0	4730	PASS
173	174	0.00	2	0.6	275	PASS
174	95	50	100	71.5	48512	PASS
175	174	5	9	7.6	3684	PASS
176	174	95	101	100.6	48792	PASS
177	176	5	9	6.8	3312	PASS

Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T102BFB.D
Acq On : 6 Jul 2009 6:57 am
Operator : CDS1
Sample : |W2VM090706-01|BFB|1|VOAF|1|VOA8260BLF|
Misc : VSTD050 5ML MIX [A]
ALS Vial : 1 Sample Multiplier: 1

Integration File: default.P

Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B
Last Update : Tue Jul 14 15:05:31 2009

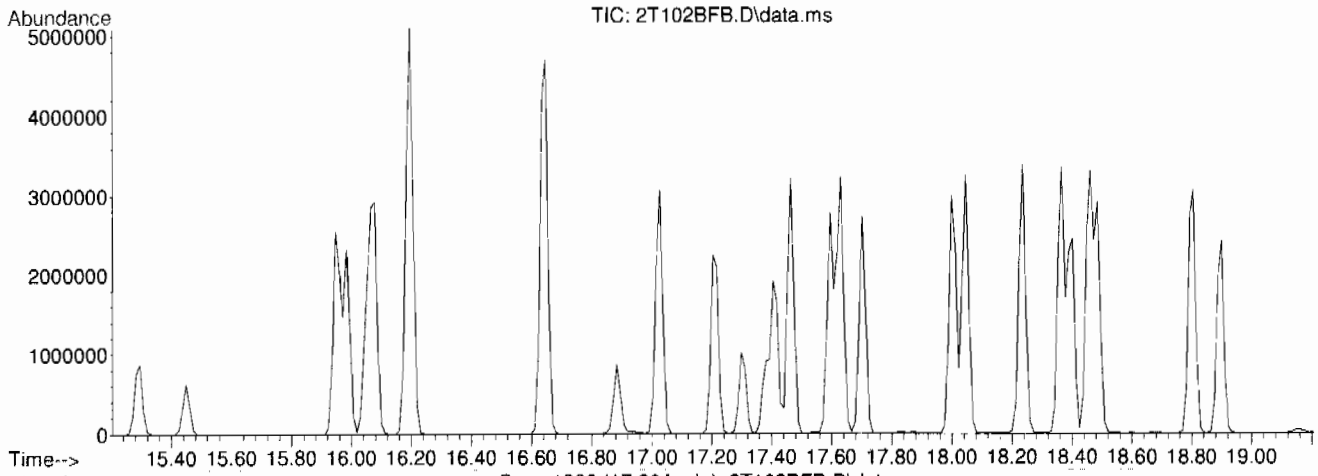

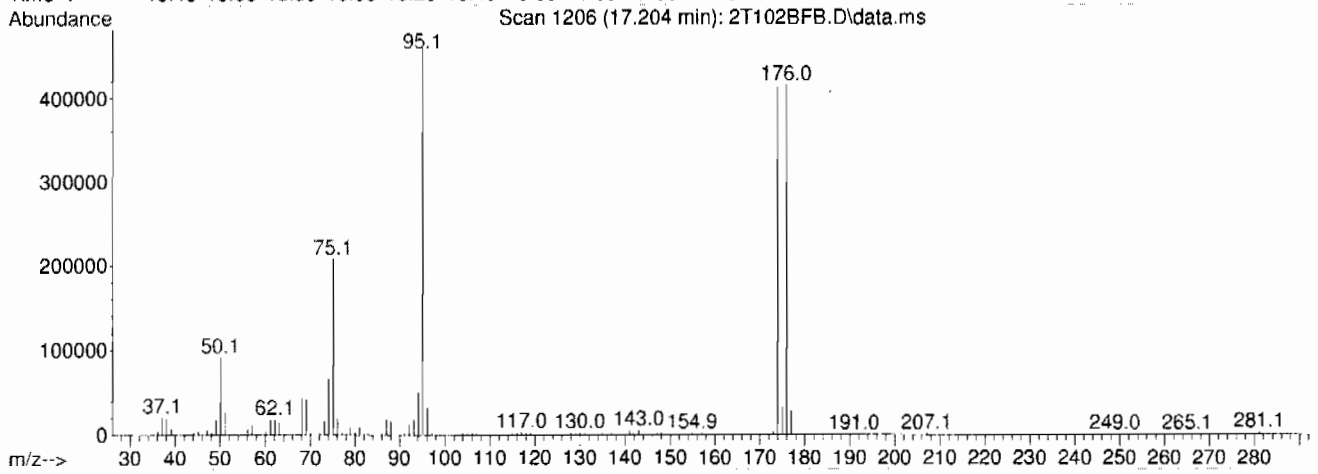

Spectrum Information: Scan 1206

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.8	90632	PASS
75	95	30	60	45.3	207168	PASS
95	95	100	100	100.0	457408	PASS
96	95	5	9	7.0	32048	PASS
173	174	0.00	2	0.7	2844	PASS
174	95	50	100	89.8	410944	PASS
175	174	5	9	7.6	31424	PASS
176	174	95	101	100.8	414208	PASS
177	176	5	9	6.7	27664	PASS

Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T201.D
Acq On : 7 Jul 2009 6:41 am
Operator : CDSJ
Sample : |UVM090604-02|BFB|1|VOAF|1|
Misc : BFB01
ALS Vial : 1 Sample Multiplier: 1

Integration File: default.P

Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B
Last Update : Thu Jul 02 10:08:36 2009

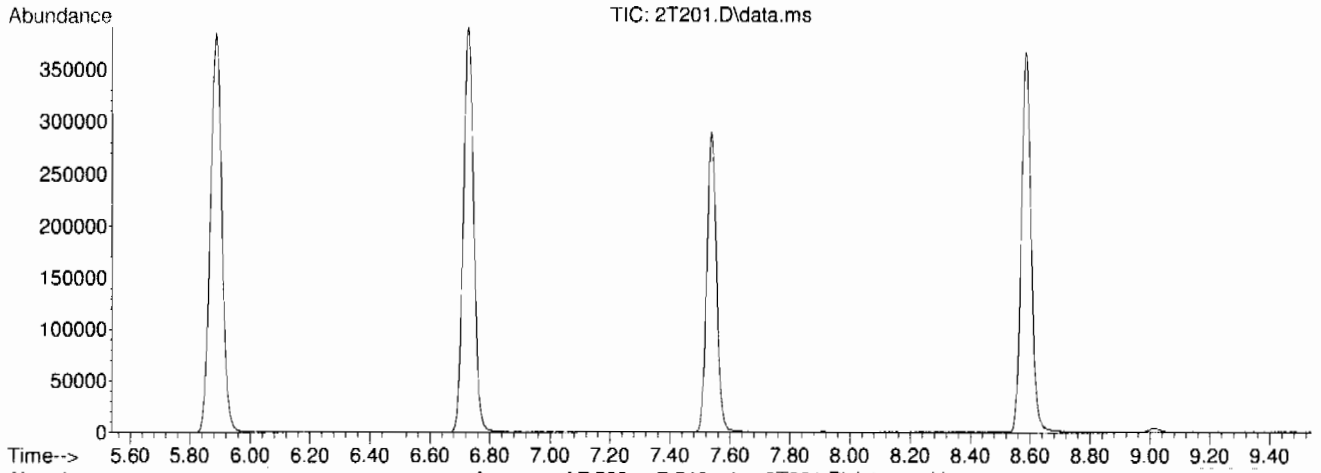

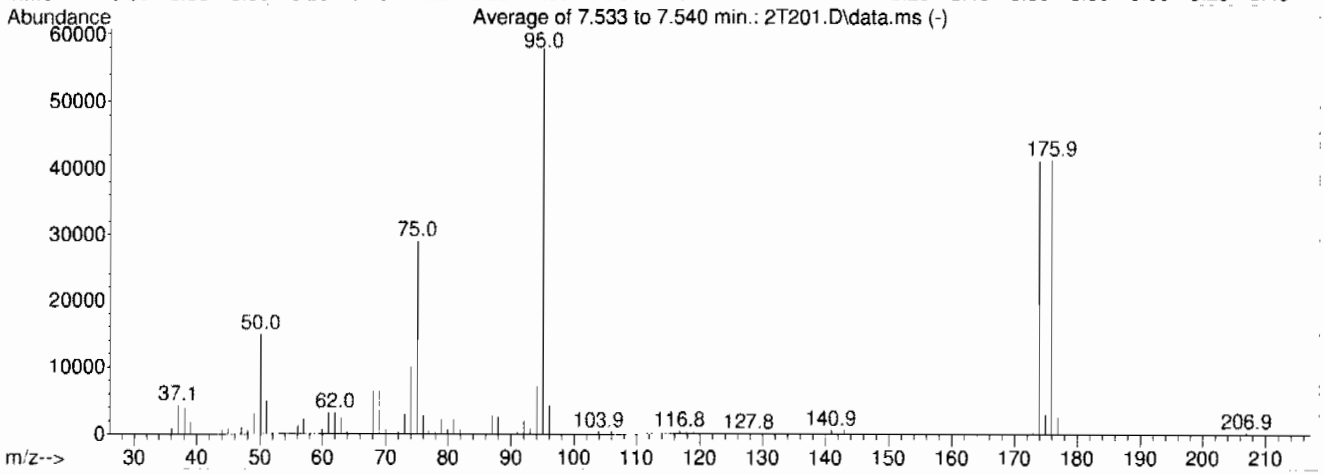

Spectrum Information: Average of 7.533 to 7.540 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.7	14882	PASS
75	95	30	60	50.2	29019	PASS
95	95	100	100	100.0	57832	PASS
96	95	5	9	7.3	4223	PASS
173	174	0.00	2	0.7	288	PASS
174	95	50	100	71.0	41037	PASS
175	174	5	9	7.2	2960	PASS
176	174	95	101	100.5	41253	PASS
177	176	5	9	6.3	2591	PASS

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			**Matrix:**	SOIL
Lab Sample ID:	1201874617				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.1	**Dilution:**	1
Run Date:	07/06/2009 12:19	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T113.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			**Matrix:**	SOIL
Lab Sample ID:	1201874617				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 12:19	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T113.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.32	9.82	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1648861	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1385774	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	844664	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1648861	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1385774	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	844664	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	473118	51.17 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 102.34%		
43) Toluene-d8	14.310	98	1655996	50.86 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 101.72%		
61) Bromofluorobenzene	17.204	95	679038	51.13 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 102.26%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.266	62	528	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.942	43	3820	N.D.	
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.440	41	368	N.D.	
13) Methyl acetate	8.547	43	774	N.D.	
14) Carbon disulfide	8.250	76	1423	N.D.	
15) Methylene chloride	8.701	84	11168	Below Cal	98
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	561	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	574	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	379	N.D.	
31) Benzene	12.033	78	531	N.D.	
32) Cyclohexene	12.389	67	295	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D.	d
44) Toluene	14.381	91	943	N.D.	
45) trans-1,3-Dichloroprop...	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.310	43	7554	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	365	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.196	91	598	N.D.	
55) m,p-Xylenes	16.184	106	282	N.D.	
56) o-Xylene	0.000		0	N.D.	
57) Styrene	16.646	104	418	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.204	105	766	N.D.	
62) 1,1,2,2-Tetrachloroethane	17.204	83	136	N.D.	
63) 1,2,3-Trichloropropane	17.204	110	157	N.D.	
64) Bromobenzene	17.405	156	227	N.D.	
65) n-Propylbenzene	17.595	91	127	N.D.	
66) 1,3,5-Trimethylbenzene	0.000		0	N.D.	
67) 2-Chlorotoluene	17.702	91	709	N.D.	
68) 4-Chlorotoluene	17.702	91	709	N.D.	
69) tert-Butylbenzene	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	18.069	105	450	N.D.	
71) sec-Butylbenzene	18.069	105	450	N.D.	
72) 4-Isopropyltoluene	18.449	119	262	N.D.	
73) 1,3-Dichlorobenzene	18.401	146	675	N.D.	
74) 1,4-Dichlorobenzene	18.484	146	1245	N.D.	
75) n-Butylbenzene	18.603	91	402	N.D.	
76) 1,2-Dichlorobenzene	18.899	146	353	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	342	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	1279	N.D.	
81) 1,2,3-Trichlorobenzene	0.000		0	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.440	41	368	N.D.	
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.800	43	561	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	0.000		0	N.D.	
96) Methacrylonitrile	11.227	41	671	N.D.	
97) Tetrahydrofuran	11.227	42	963	N.D.	
98) Isobutyl alcohol	11.927	41	112	N.D.	
99) Methyl tert-amyl ether	0.000		0m	N.D.	d
100) Methyl methacrylate	0.000		0	N.D.	
101) 1,4-Dioxane	0.000		0	N.D.	
102) 2-Nitropropane	0.000		0	N.D.	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	0.000		0m	N.D.	d
107) cis-1,4-Dichloro-2-butene	0.000		0	N.D.	
108) Cyclohexanone	0.000		0	N.D.	
109) trans-1,4-Dichloro-2-b...	0.000		0	N.D.	
110) Pentachloroethane	0.000		0	N.D.	
111) Benzyl chloride	18.603	91	402	N.D.	
112) bis(2-Chloroisopropyl)...	0.000		0	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 17 06:58:46 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

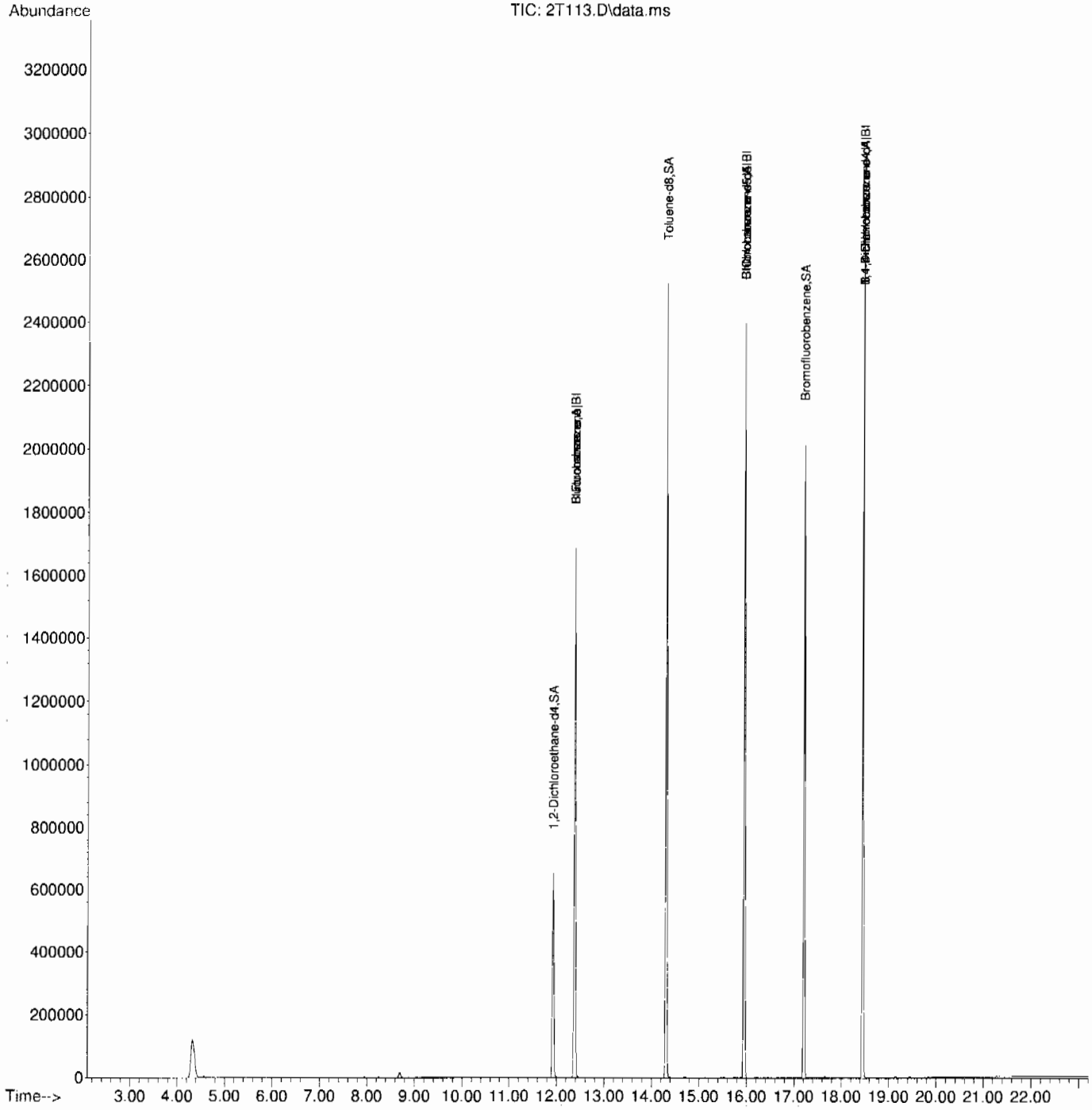

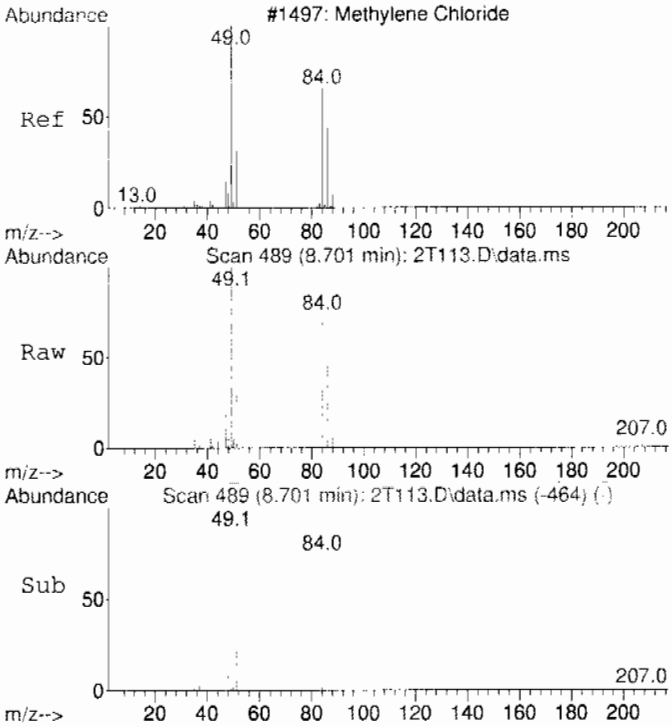

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 84 Resp: 11168

Ion	Ratio	Lower	Upper
84	100		
86	64.6	33.8	93.8
49	138.3	105.0	165.0

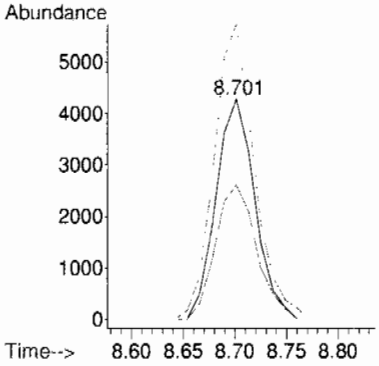

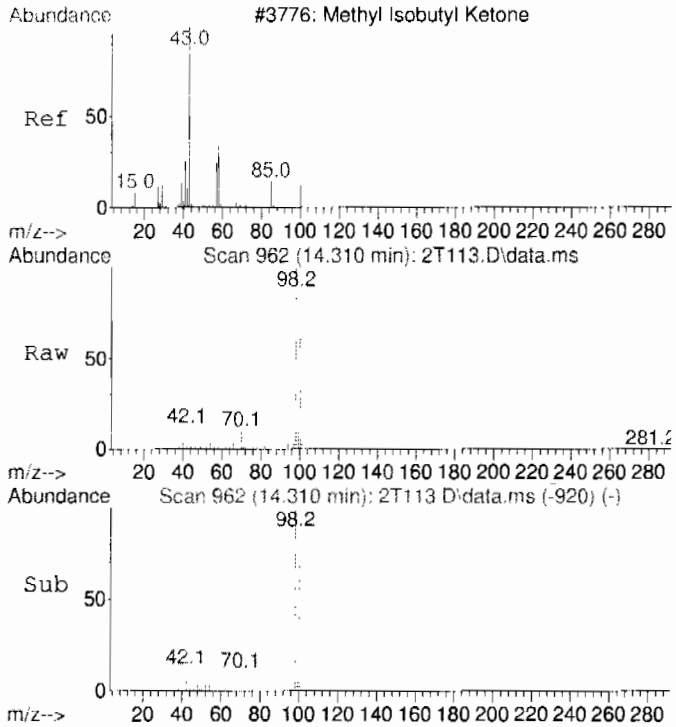

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.42 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 58 Resp: 13415

Ion	Ratio	Lower	Upper
58	100		
43	56.3	245.2	305.2#
100	8481.8	7.2	67.2#

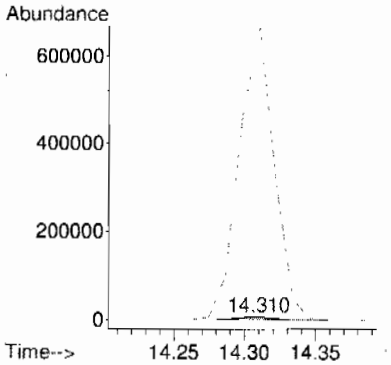

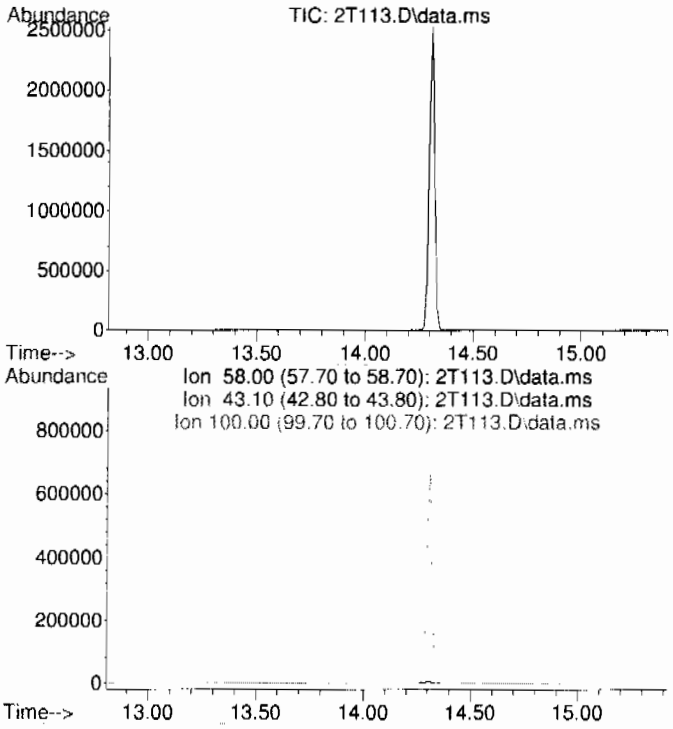

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

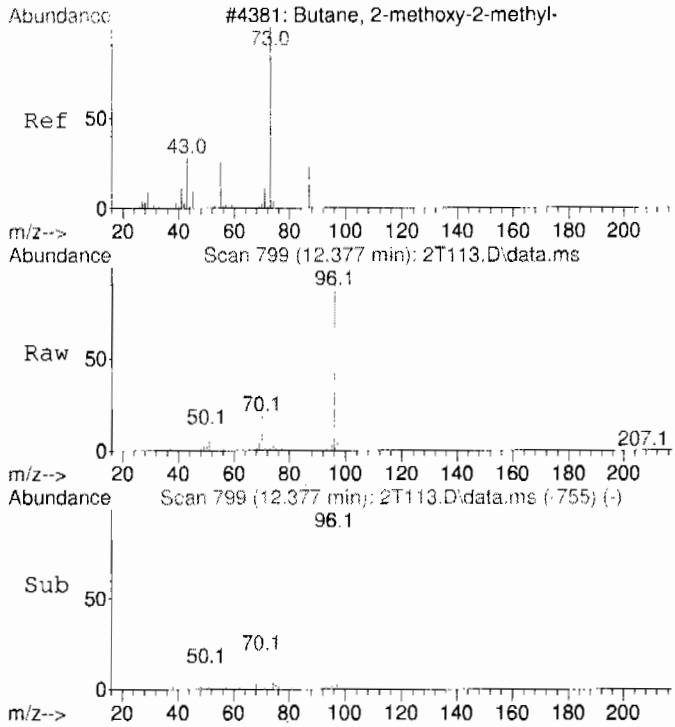


```
#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen:     0.96 ug/L
RT:  12.377 min  Scan# 799
Delta R.T.  0.225 min
Lab File:   2T113.D
Acq:  6 Jul 2009  12:19 pm

Tgt Ion: 73 Resp:    17694
Ion  Ratio  Lower  Upper
 73  100
 55    7.3    5.2   65.2
 87    0.0    0.0   54.7
```

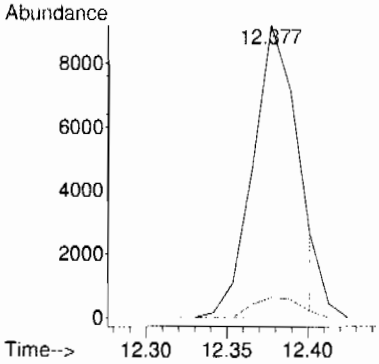

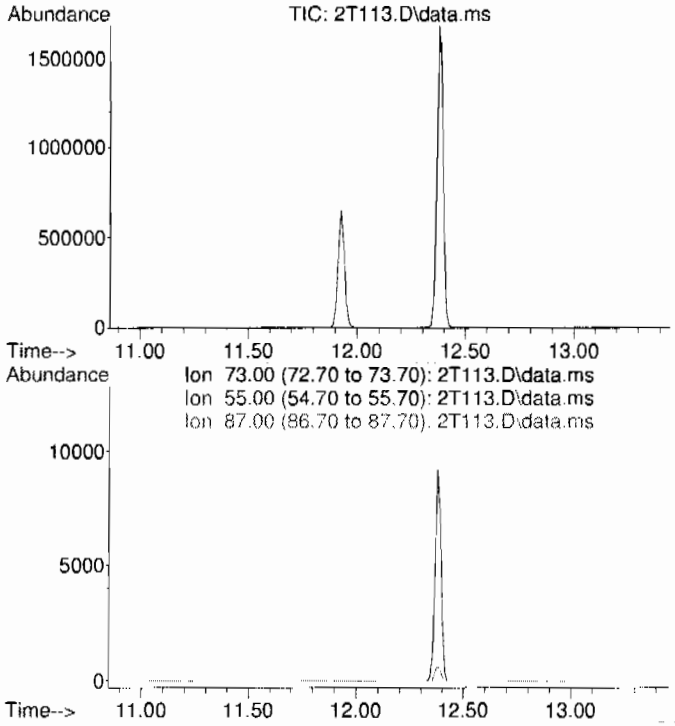


```
#99 AFTER analyst integration
Methyl tert-amyl ether
Concen:     N.D.    DELETED
Expected RT: 12.15 min

Lab File:   2T113.D
Acq:  6 Jul 2009  12:19 pm

Tgt Ion:  73
Sig      Exp Ratio
 73       100
 55        35.2
 87        24.7
```

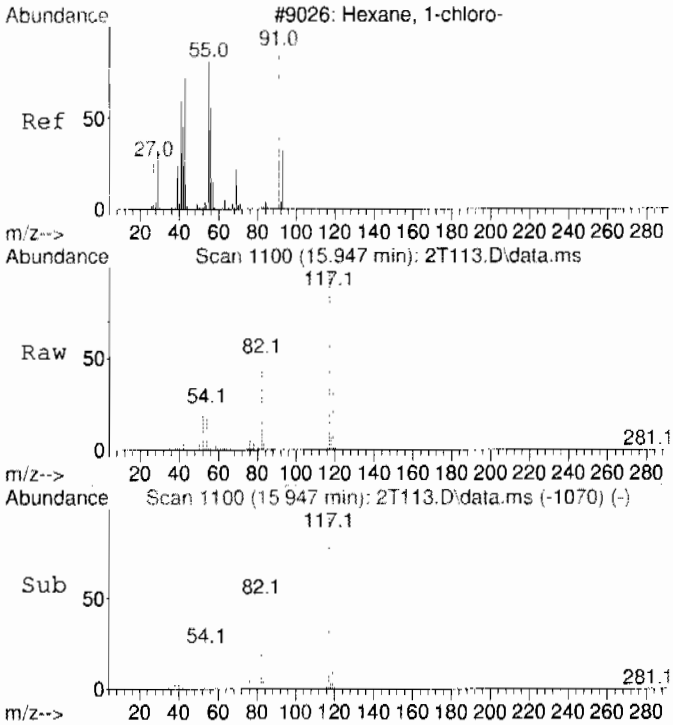

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 1.92 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 55 Resp: 12740

Ion	Ratio	Lower	Upper
55	100		
91	19.4	113.2	173.2#
56	60.3	30.3	90.3

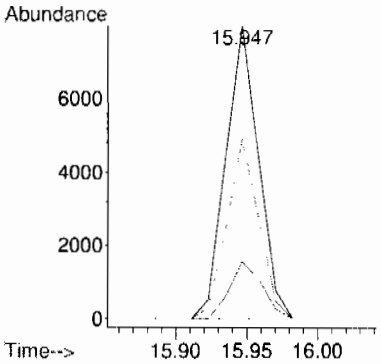

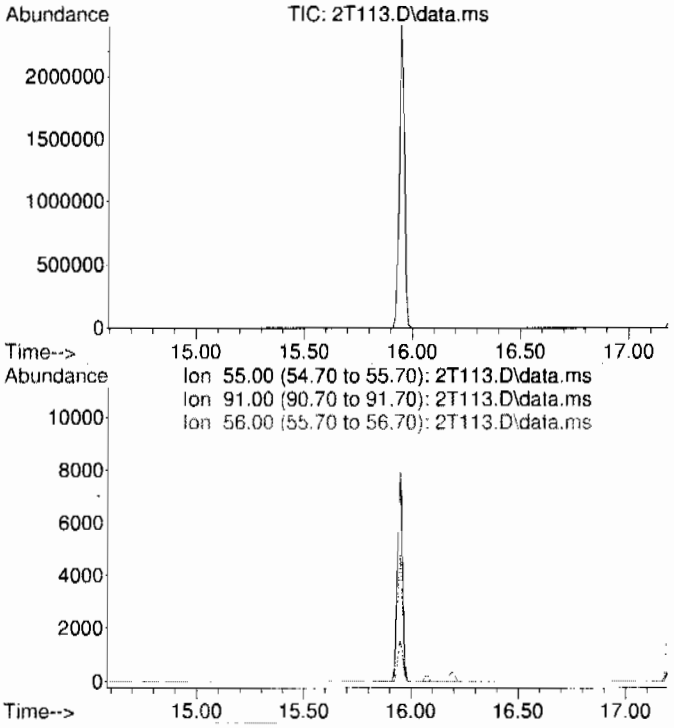

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T113.D
Acq: 6 Jul 2009 12:19 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T113.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.315	143	150	164	rBV	120085	664724	14.60%	3.035%
2	4.568	164	167	173	rVB	4196	11200	0.25%	0.051%
3	4.925	189	191	192	rBB	163	145	0.00%	0.001%
4	5.147	193	206	208	rBB	211	2276	0.05%	0.010%
5	5.727	243	245	247	rBB	153	136	0.00%	0.001%
6	6.045	261	265	268	rBV	564	2909	0.06%	0.013%
7	6.353	289	291	300	rBV3	1160	3647	0.08%	0.017%
8	7.409	378	380	390	rVB2	1006	3281	0.07%	0.015%
9	7.942	422	425	445	rVB3	1413	8746	0.19%	0.040%
10	8.701	483	489	499	rVB	17935	48797	1.07%	0.223%
11	9.685	567	572	587	rVB2	3257	8522	0.19%	0.039%
12	11.227	699	702	717	rVB2	2057	5084	0.11%	0.023%
13	11.927	756	761	777	rVB	653123	1318911	28.97%	6.022%
14	12.377	794	799	817	rBV	1685323	3384745	74.36%	15.453%
15	14.310	956	962	978	rVB	2521093	4403810	96.74%	20.106%
16	14.713	992	996	1002	rVB	3008	6562	0.14%	0.030%
17	15.947	1094	1100	1109	rBV	2394378	3939952	86.55%	17.988%
18	16.196	1119	1121	1125	rVB	772	1269	0.03%	0.006%
19	17.204	1201	1206	1220	rVB	2011376	3513250	77.18%	16.040%
20	17.654	1241	1244	1253	rVB3	5075	9327	0.20%	0.043%
21	18.461	1306	1312	1346	rVB	2796302	4552126	100.00%	20.783%
22	19.148	1367	1370	1392	rBV2	4379	13698	0.30%	0.063%

Sum of corrected areas: 21903117

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

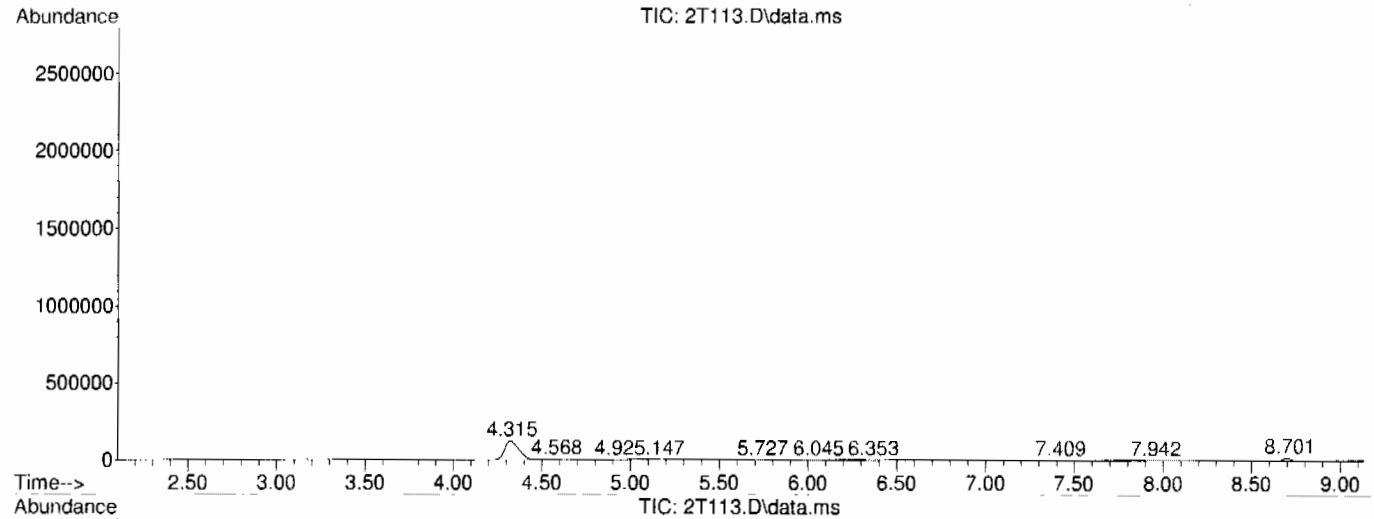

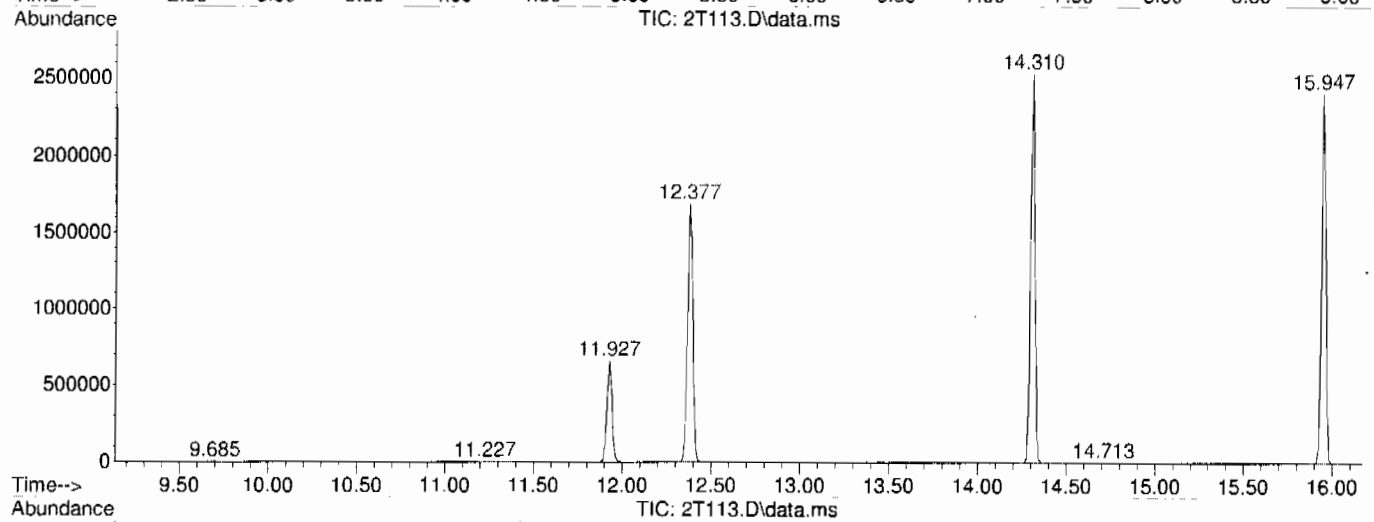

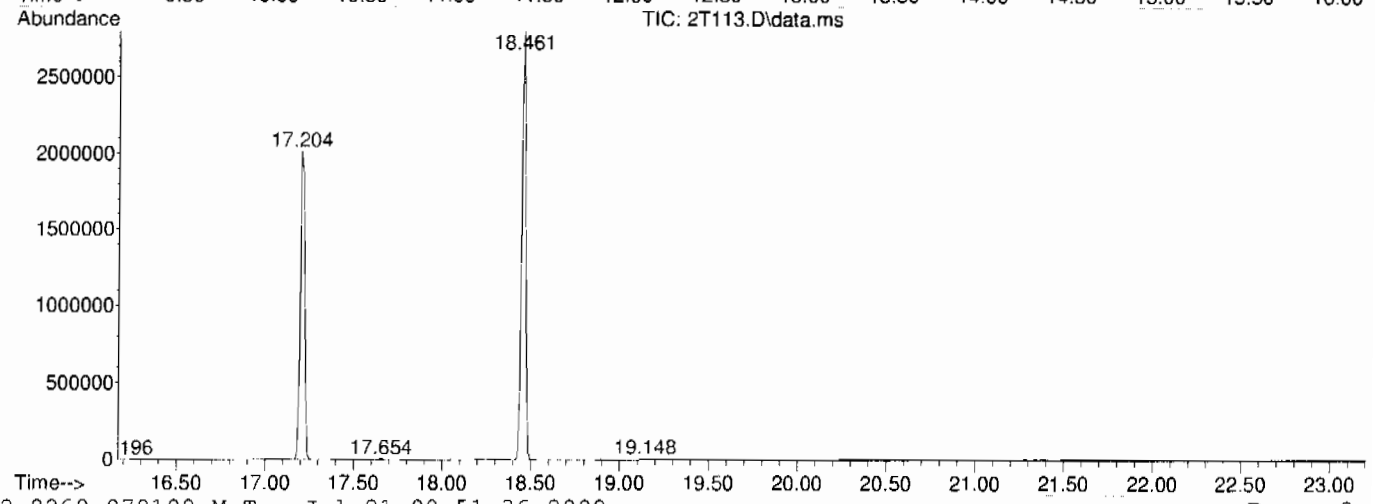

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.315	9.82 ug/L	664724	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

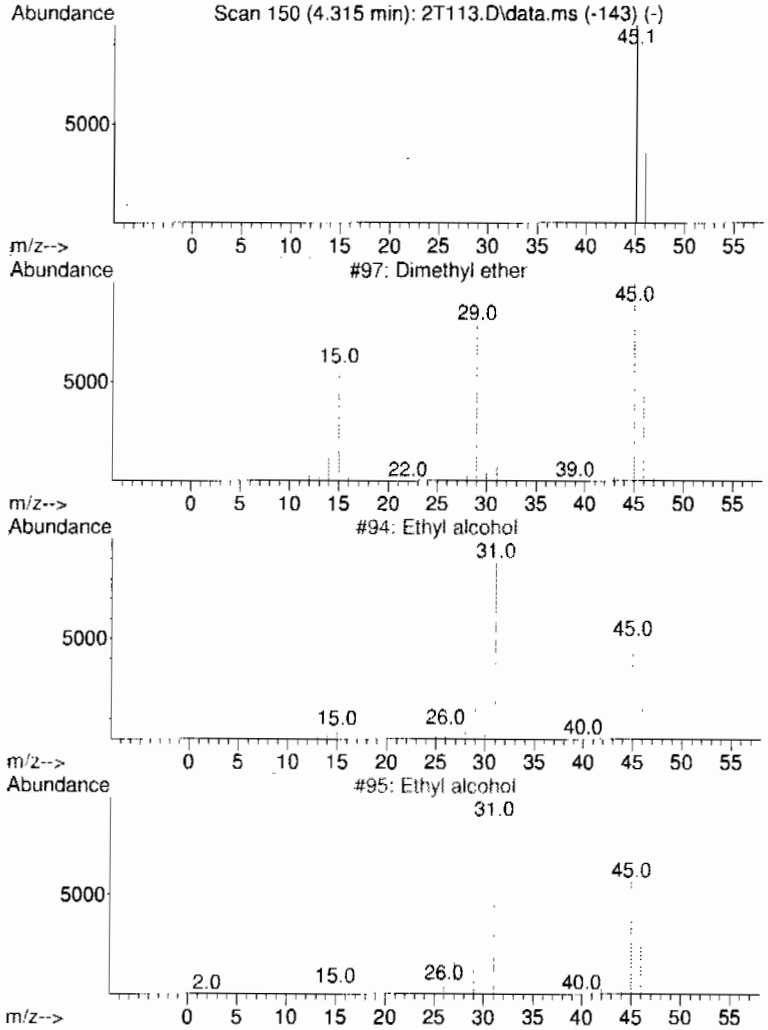

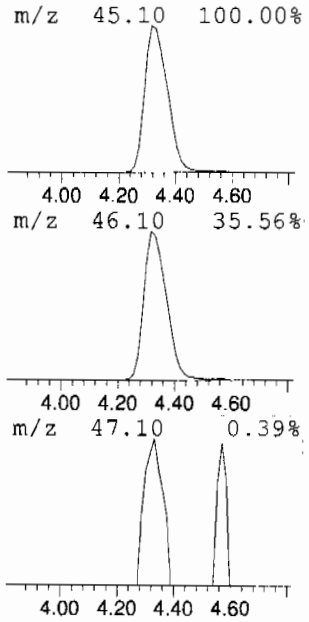

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T113.D
Acq On : 6 Jul 2009 12:19 pm
Operator : CDS1
Sample : |1201874617|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.315	9.8	ug/L	664724	1	12.377	3384750	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			**Matrix:**	SOIL
Lab Sample ID:	1201876171				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.1	**Dilution:**	1
Run Date:	07/07/2009 10:03	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T208BS1.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.300	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			Matrix:	SOIL
Lab Sample ID:	1201876171				
Client Sample:	QC for batch 882630	Client:	LANL010	Project:	QC
Client ID:	MB for batch 882630	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	882632	Inst:	VOA2.I	Dilution:	1
Run Date:	07/07/2009 10:03	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/07/2009 06:00	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070709V2.b\2T208BS1.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	10	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS1.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
InstName : VOA2
Sample : |1201876171|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 17 07:01:57 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	Qion	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.389	96	1640166	50.00 ug/L	0.01
41) Chlorobenzene-d5	15.947	117	1393088	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	851929	50.00 ug/L	0.00
82) B Fluorobenzene	12.389	96	1640166	50.00 ug/L	0.01
103) B Chlorobenzene-d5	15.947	117	1393088	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	851929	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	468957	50.99 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 101.98%		
43) Toluene-d8	14.310	98	1613891	49.30 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 98.60%		
61) Bromofluorobenzene	17.204	95	671161	50.11 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 100.22%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	0.000		0	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.954	43	3589	N.D.	
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	8.096	142	327	N.D.	
12) Acetonitrile	8.452	41	1866	N.D.	
13) Methyl acetate	8.535	43	403	N.D.	
14) Carbon disulfide	8.251	76	2143	N.D.	
15) Methylene chloride	8.701	84	13837	Below Cal	98
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	9.958	43	502	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	1016	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.239	83	561	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	295	N.D.	
31) Benzene	12.045	78	662	N.D.	
32) Cyclohexene	12.389	67	292	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS1.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
InstName : VOA2
Sample : |1201876171|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 17 07:01:57 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38)	Bromodichloromethane	0.000		0	N.D.	
39)	2-Chloroethylvinyl ether	0.000		0	N.D.	
40)	cis-1,3-Dichloropropylene	0.000		0	N.D.	
42)	4-Methyl-2-pentanone	0.000		0m	N.D.	d
44)	Toluene	14.393	91	1389	N.D.	
45)	trans-1,3-Dichloroprop...	0.000		0	N.D.	
46)	1,1,2-Trichloroethane	0.000		0	N.D.	
47)	2-Hexanone	14.310	43	7372	N.D.	
48)	1,3-Dichloropropane	0.000		0	N.D.	
49)	Tetrachloroethylene	0.000		0	N.D.	
50)	Dibromochloromethane	0.000		0	N.D.	
51)	1,2-Dibromoethane	0.000		0	N.D.	
52)	Chlorobenzene	15.982	112	818	N.D.	
53)	1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54)	Ethylbenzene	16.196	91	952	N.D.	
55)	m,p-Xylenes	16.196	106	394	N.D.	
56)	o-Xylene	0.000		0	N.D.	
57)	Styrene	16.646	104	441	N.D.	
59)	Bromoform	0.000		0	N.D.	
60)	Isopropylbenzene	17.026	105	110	N.D.	
62)	1,1,2,2-Tetrachloroethane	17.204	83	243	N.D.	
63)	1,2,3-Trichloropropane	17.204	110	238	N.D.	
64)	Bromobenzene	17.417	156	431	N.D.	
65)	n-Propylbenzene	17.465	91	361	N.D.	
66)	1,3,5-Trimethylbenzene	0.000		0	N.D.	
67)	2-Chlorotoluene	17.702	91	1209	N.D.	
68)	4-Chlorotoluene	17.702	91	1209	N.D.	
69)	tert-Butylbenzene	0.000		0	N.D.	
70)	1,2,4-Trimethylbenzene	18.081	105	550	N.D.	
71)	sec-Butylbenzene	18.081	105	550	N.D.	
72)	4-Isopropyltoluene	18.366	119	246	N.D.	
73)	1,3-Dichlorobenzene	18.401	146	1027	N.D.	
74)	1,4-Dichlorobenzene	18.401	146	1027	N.D.	
75)	n-Butylbenzene	18.793	91	389	N.D.	
76)	1,2-Dichlorobenzene	18.900	146	698	N.D.	
77)	1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78)	1,2,4-Trichlorobenzene	20.690	180	773	N.D.	
79)	Hexachlorobutadiene	0.000		0	N.D.	
80)	Naphthalene	21.022	128	2259	N.D.	
81)	1,2,3-Trichlorobenzene	21.342	180	568	N.D.	
83)	Chlorotrifluoroethylene	0.000		0	N.D.	
84)	2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85)	Acrolein	0.000		0	N.D.	
86)	Trichlorotrifluoroethane	0.000		0	N.D.	
87)	Isopropyl Alcohol	0.000		0	N.D.	
88)	Allyl chloride	8.452	41	1866	N.D.	
89)	tert-Butyl Alcohol	0.000		0	N.D.	
90)	Acrylonitrile	9.116	53	264	N.D.	
91)	Isopropyl ether	0.000		0	N.D.	
92)	2-Chloro-1,3-butadiene	0.000		0	N.D.	
93)	Ethyl tert-butyl ether	0.000		0	N.D.	
94)	Ethyl acetate	10.871	43	490	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS1.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
InstName : VOA2
Sample : |1201876171|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 17 07:01:57 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	0.000		0	N.D.	
96) Methacrylonitrile	11.085	41	609	N.D.	
97) Tetrahydrofuran	11.239	42	1451	N.D.	
98) Isobutyl alcohol	11.927	41	110	N.D.	
99) Methyl tert-amyl ether	0.000		0m	N.D.	d
100) Methyl methacrylate	0.000		0	N.D.	
101) 1,4-Dioxane	0.000		0	N.D.	
102) 2-Nitropropane	0.000		0	N.D.	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	0.000		0m	N.D.	d
107) cis-1,4-Dichloro-2-butene	17.050	53	357	N.D.	
108) Cyclohexanone	17.144	42	340	N.D.	
109) trans-1,4-Dichloro-2-b...	17.358	53	709	N.D.	
110) Pentachloroethane	0.000		0	N.D.	
111) Benzyl chloride	18.603	91	1969	N.D.	
112) bis(2-Chloroisopropyl)...	19.006	45	313	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS1.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
InstName : VOA2
Sample : |1201876171|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 17 07:01:57 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

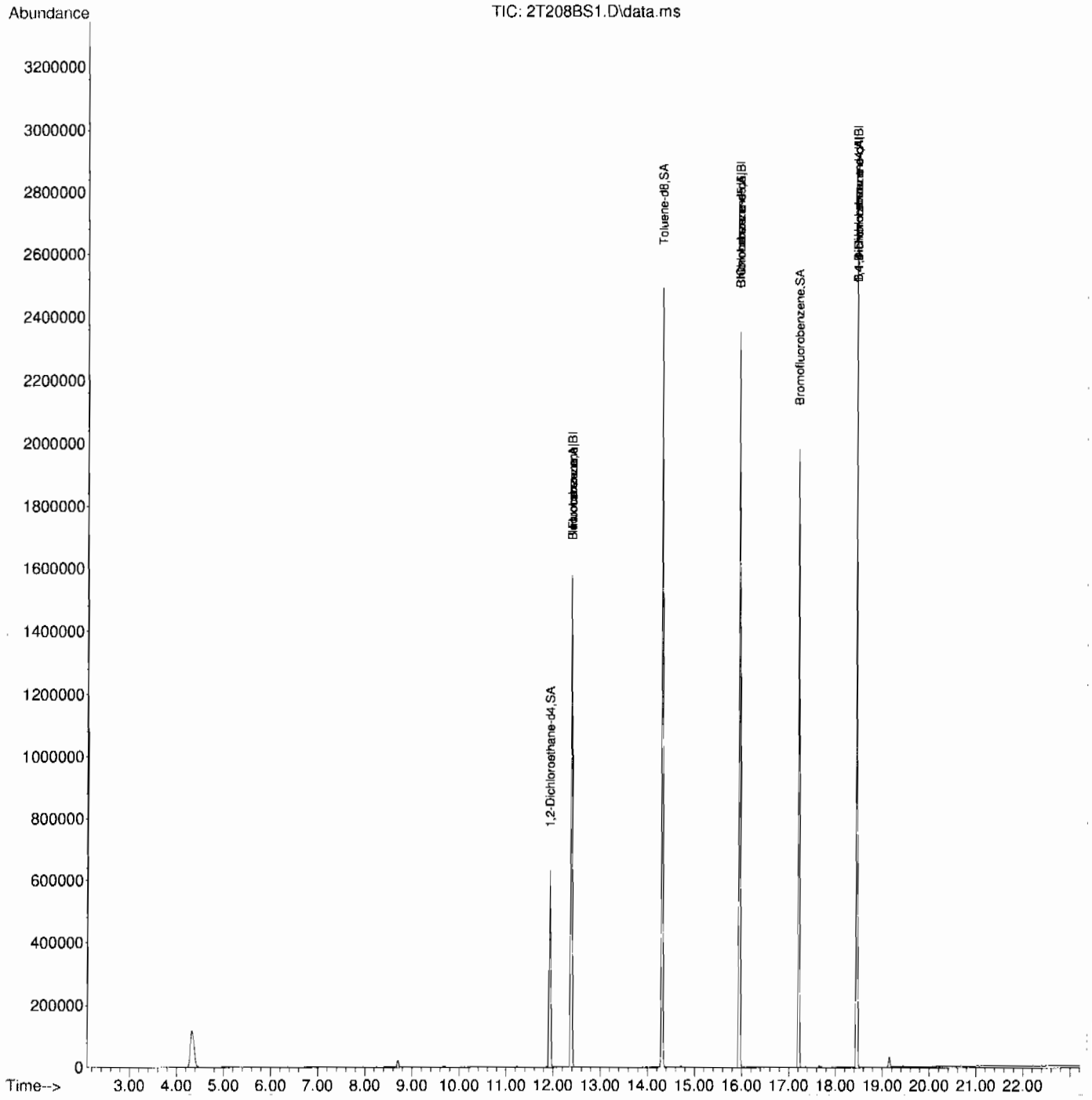

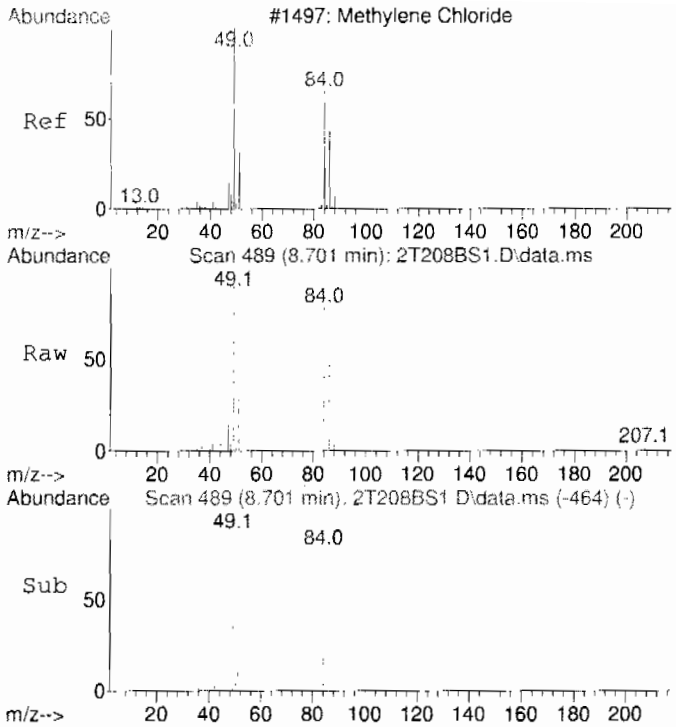

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T208BS1.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 84 Resp: 13837

Ion	Ratio	Lower	Upper
84	100		
86	64.3	33.8	93.8
49	138.1	105.0	165.0

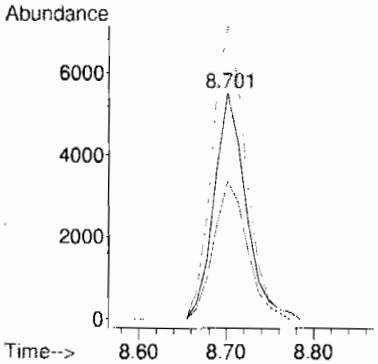

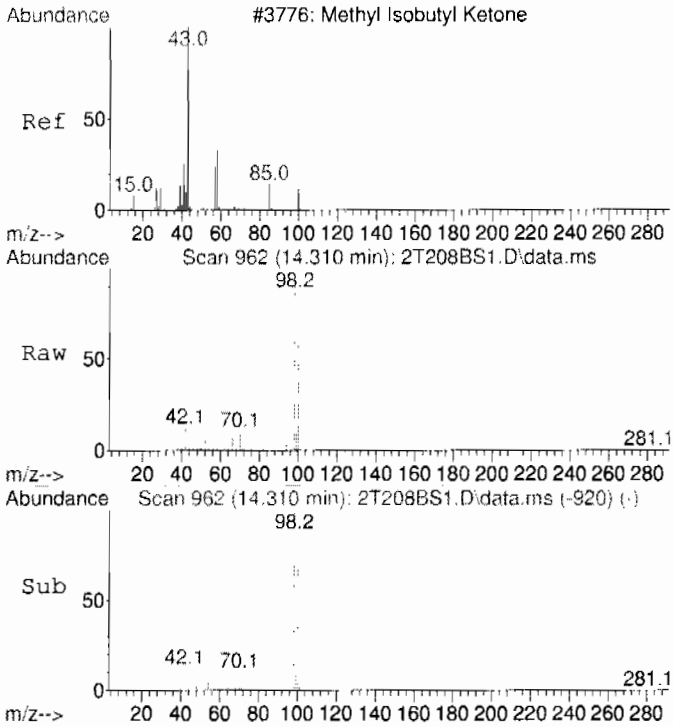


```
#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen:    4.24 ug/L
RT:  14.310 min  Scan# 962
Delta R.T.  0.201 min
Lab File:   2T208BS1.D
Acq:  7 Jul 2009  10:03 am

Tgt Ion: 58 Resp:   12919
Ion  Ratio  Lower  Upper
 58  100
 43   57.1  245.2  305.2#
100  8561.9    7.2   67.2#
```

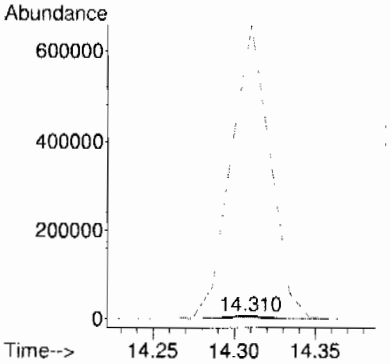

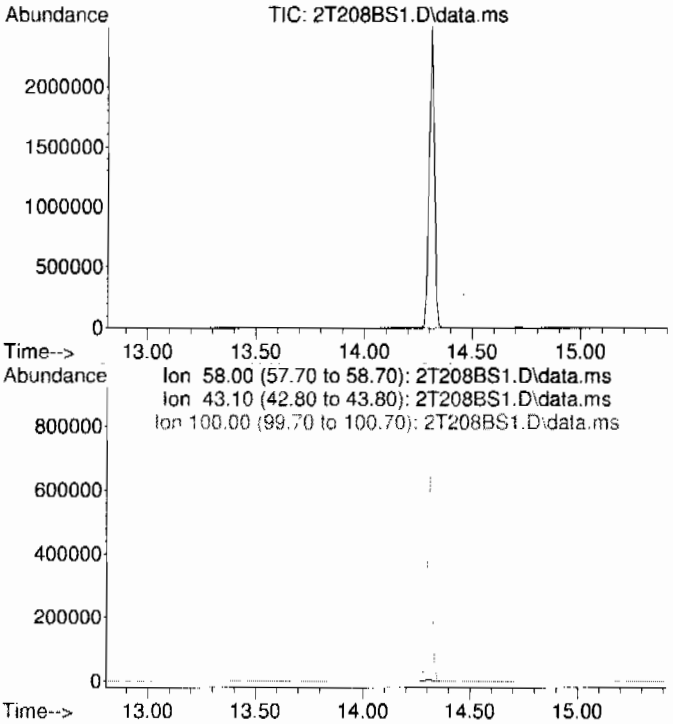


```
#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen:    N.D.   DELETED
Expected RT: 14.11 min

Lab File:   2T208BS1.D
Acq:  7 Jul 2009  10:03 am

Tgt Ion:  58
Sig      Exp Ratio
 58       100
 43       275.2
100        37.2
```

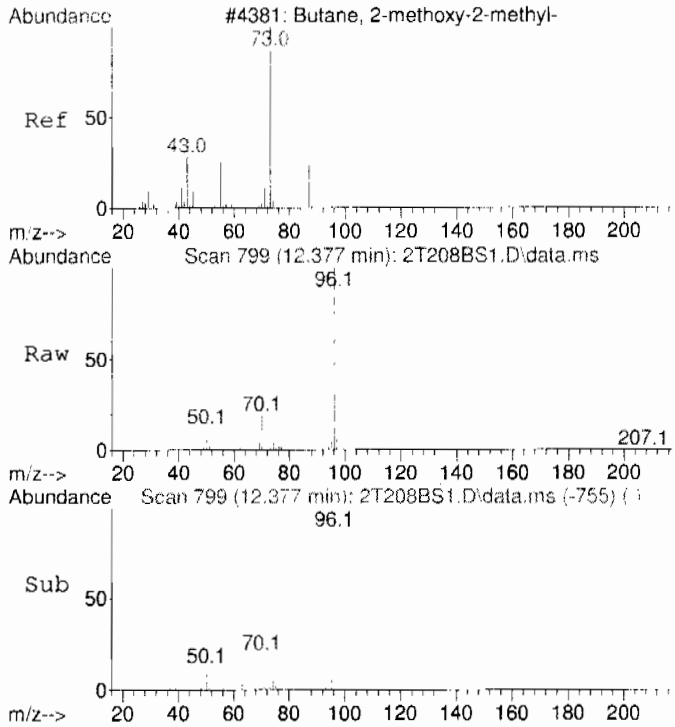

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.97 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T208BS1.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 73 Resp: 17847

Ion	Ratio	Lower	Upper
73	100		
55	7.0	5.2	65.2
87	0.0	0.0	54.7

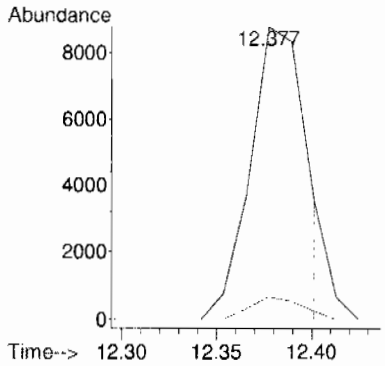

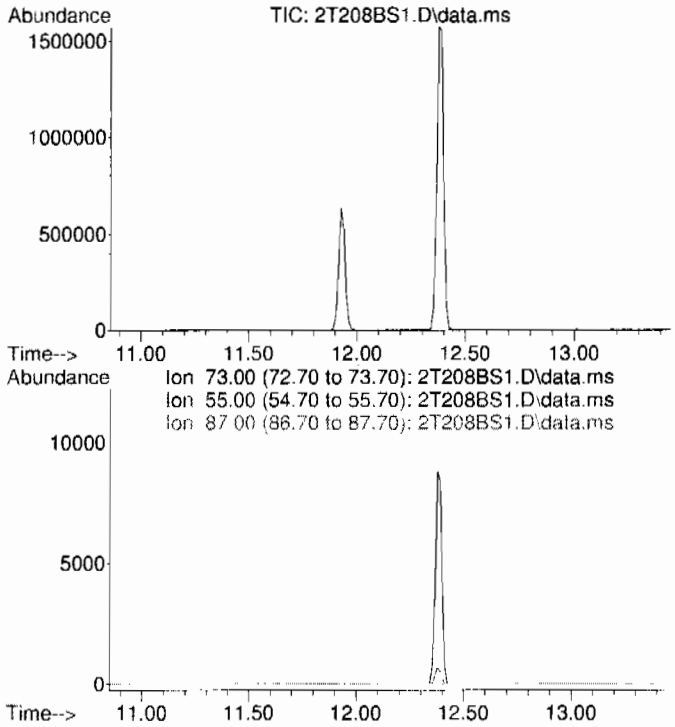

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T208BS1.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

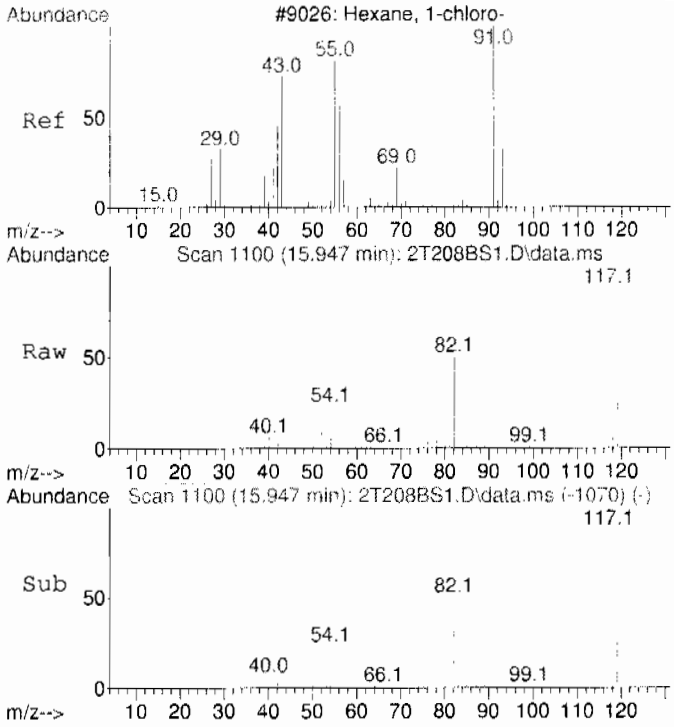

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 1.90 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T208BS1.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 55 Resp: 12735

Ion	Ratio	Lower	Upper
55	100		
91	19.8	113.2	173.2#
56	59.4	30.3	90.3

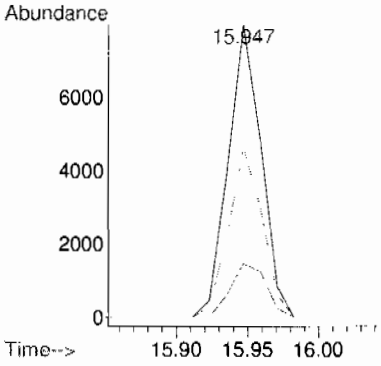

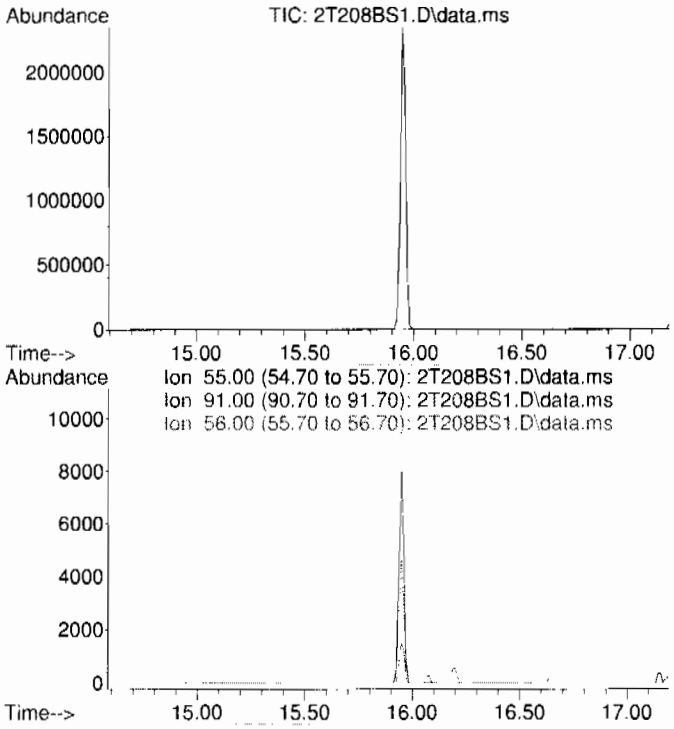

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T208BS1.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS1.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
Sample : |1201876171|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SO1L
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\072109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T208BS1.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.330	143	151	170	rBB	117885	674333	14.65%	3.084%
2	4.687	172	175	178	rBB	250	589	0.01%	0.003%
3	5.103	191	203	205	rBV	192	2004	0.04%	0.009%
4	6.021	261	263	271	rBV2	827	5113	0.11%	0.023%
5	6.365	289	292	299	rBV3	896	3088	0.07%	0.014%
6	7.954	421	426	438	rBV3	1097	6799	0.15%	0.031%
7	8.251	448	451	457	rVB2	1090	3019	0.07%	0.014%
8	8.701	484	489	504	rVB	23280	60768	1.32%	0.278%
9	9.674	568	571	576	rVB	4261	11274	0.24%	0.052%
10	11.239	699	703	718	rBV3	2380	6631	0.14%	0.030%
11	11.927	756	761	780	rVB	630831	1305694	28.37%	5.971%
12	12.377	793	799	815	rVB	1574733	3359422	73.00%	15.362%
13	13.018	851	853	857	rVB2	1449	2506	0.05%	0.011%
14	14.310	957	962	976	rVB	2487723	4289081	93.20%	19.613%
15	14.713	992	996	1005	rVB	5208	11751	0.26%	0.054%
16	15.947	1096	1100	1113	rVB	2349633	3950196	85.84%	18.063%
17	16.196	1119	1121	1128	rVB	934	2081	0.05%	0.010%
18	16.646	1156	1159	1168	rBV	1076	2110	0.05%	0.010%
19	17.061	1191	1194	1199	rVB	1172	2078	0.05%	0.010%
20	17.204	1199	1206	1217	rBV	1979477	3481355	75.65%	15.919%
21	17.358	1217	1219	1222	rVV	2526	3152	0.07%	0.014%
22	17.405	1222	1223	1226	rVB	1482	1851	0.04%	0.008%
23	17.654	1241	1244	1247	rBV	5579	7821	0.17%	0.036%
24	18.461	1306	1312	1321	rVB	2783615	4601993	100.00%	21.044%
25	19.149	1367	1370	1390	rBV2	32897	73823	1.60%	0.338%

Sum of corrected areas: 21868532

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS1.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
Sample : |1201876171|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SO1L
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

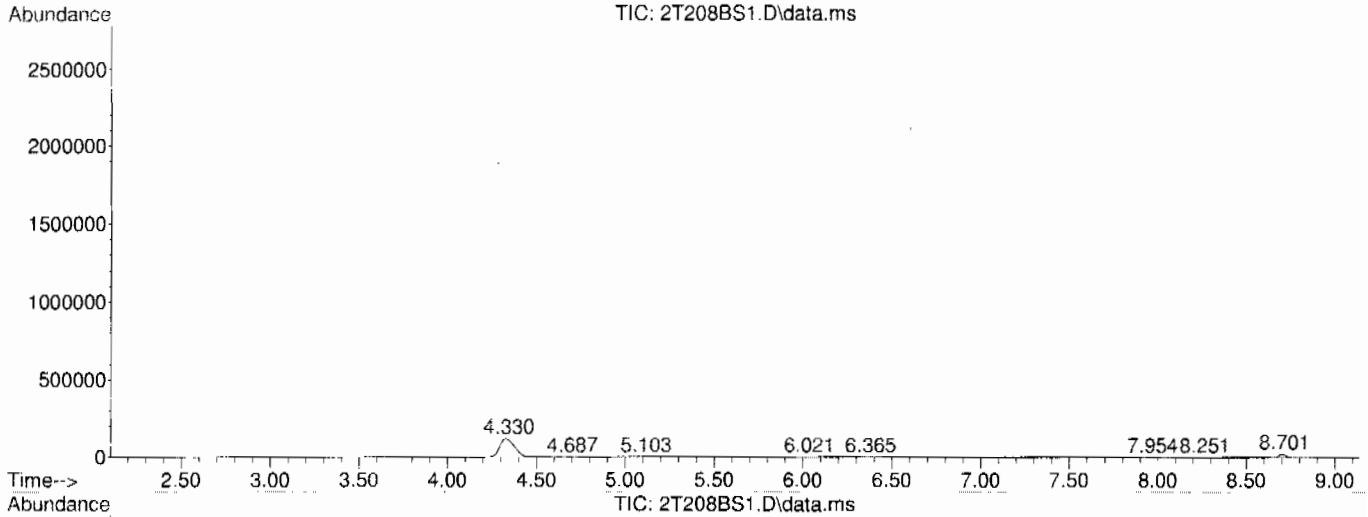

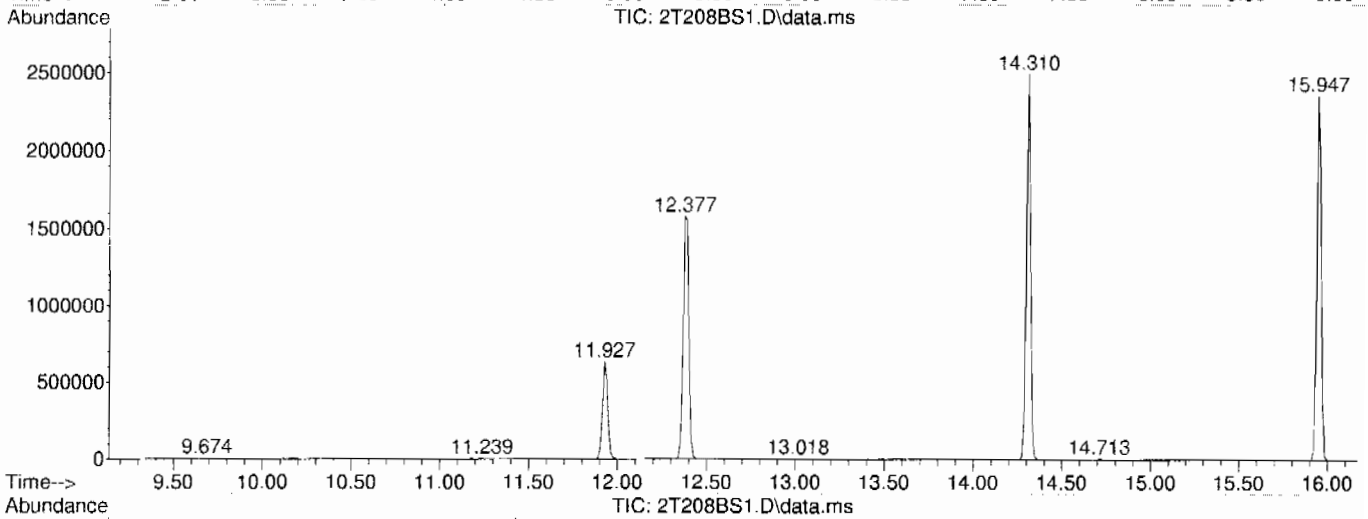

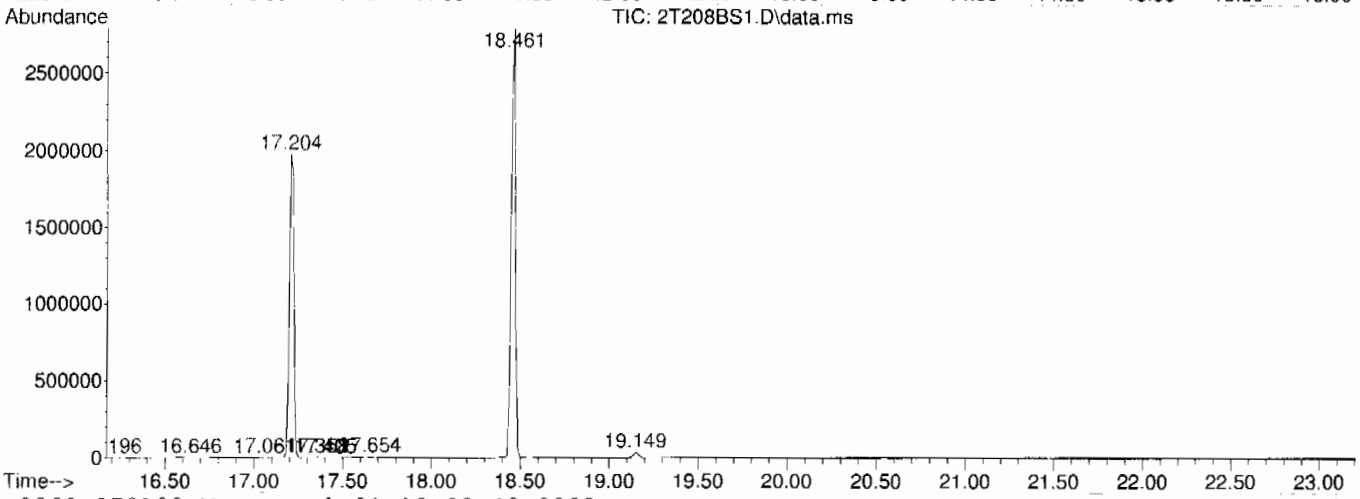

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS1.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
Sample : |1201876171|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.330	10.04 ug/L	674333	Fluorobenzene	12.389

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

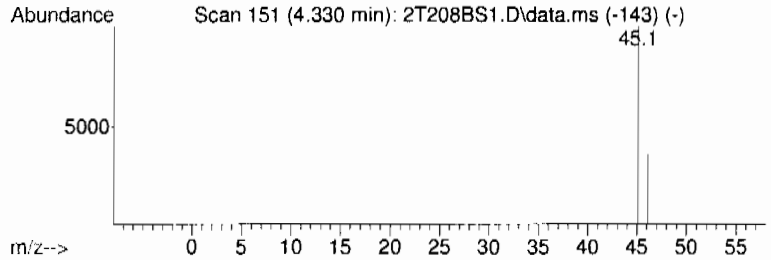

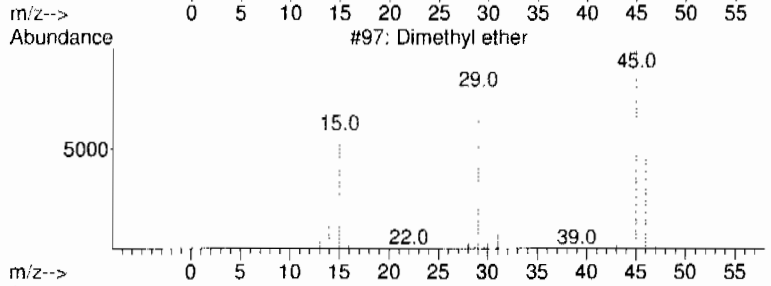

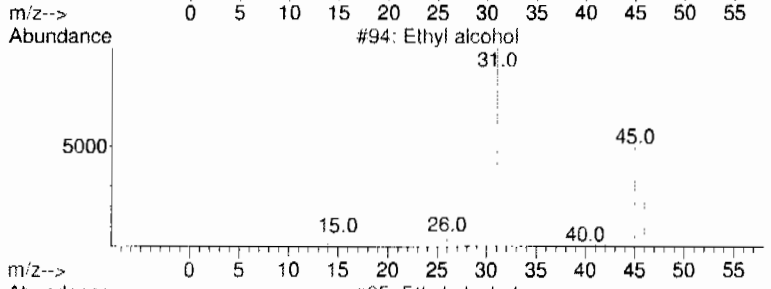

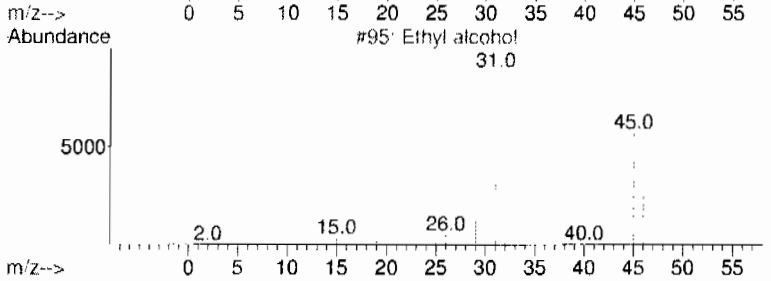

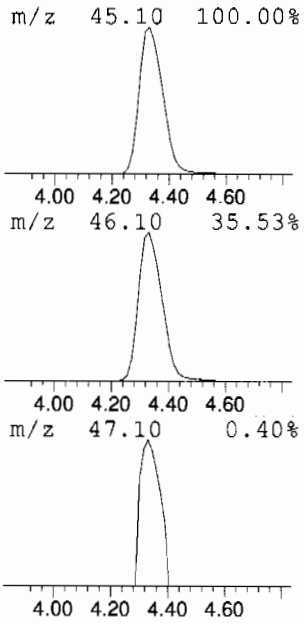

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS1.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
Sample : |1201876171|882632|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.330	10.0	ug/L	674333	1	12.389	3359420	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			**Matrix:**	SOIL
Lab Sample ID:	1201874620				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 07:55	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T104.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		46.3	ug/kg	0.340	1.00
74-87-3	Chloromethane		44.5	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		47.7	ug/kg	0.300	1.00
74-83-9	Bromomethane		41.9	ug/kg	0.300	1.00
75-00-3	Chloroethane		48.4	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		50.1	ug/kg	0.570	1.00
67-64-1	Acetone		235	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		48.9	ug/kg	0.300	1.00
74-88-4	Iodomethane		271	ug/kg	1.60	5.00
75-09-2	Methylene chloride		53.1	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		261	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		46.7	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		47.9	ug/kg	0.300	1.00
78-93-3	2-Butanone		226	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		47.2	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		51.0	ug/kg	0.300	1.00
67-66-3	Chloroform		47.9	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		49.5	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		51.1	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		49.7	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		53.0	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		45.9	ug/kg	0.300	1.00
71-43-2	Benzene		46.7	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		49.0	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		47.1	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		50.6	ug/kg	0.300	1.00
74-95-3	Dibromomethane		49.2	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		239	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		51.9	ug/kg	0.300	1.00
108-88-3	Toluene		46.3	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		50.1	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		47.2	ug/kg	0.300	1.00
591-78-6	2-Hexanone		237	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		45.9	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		50.5	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		54.1	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		50.8	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		48.9	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2506**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874620**				
Client Sample:	**QC for batch 882630**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882630**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/06/2009 07:55**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/06/2009 06:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070609V2.b\2T104.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		47.8	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		95.7	ug/kg	0.300	2.00
95-47-6	o-Xylene		48.2	ug/kg	0.300	1.00
100-42-5	Styrene		53.5	ug/kg	0.300	1.00
75-25-2	Bromoform		46.6	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		49.0	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		48.7	ug/kg	0.300	1.00
108-86-1	Bromobenzene		49.4	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		47.6	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		47.3	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		48.7	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		48.7	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		47.1	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		49.3	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		48.5	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		49.2	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		50.6	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		49.5	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		48.2	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		49.2	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	E	64.8	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		51.6	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		49.1	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDS1
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1717098	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1483018	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	935834	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1717098	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1483018	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	935834	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	475483	49.38	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 98.76%			
43) Toluene-d8	14.310	98	1718449	49.31	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 98.62%			
61) Bromofluorobenzene	17.204	95	721741	49.05	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 98.10%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.687	85	284282	46.25	ug/L	100
3) Chloromethane	5.014	50	246713	44.52	ug/L	100
4) Vinyl chloride	5.266	62	234852	47.72	ug/L	100
5) Bromomethane	5.979	94	207307	41.90	ug/L	100
6) Chloroethane	6.211	64	252549	48.44	ug/L	99
7) Trichlorofluoromethane	6.756	101	510079	50.11	ug/L	100
8) Ethyl ether	7.349	59	281232	47.29	ug/L	100
9) Acetone	7.871	43	1385912	235.04	ug/L	100
10) 1,1-Dichloroethylene	7.812	61	505461	48.94	ug/L	99
11) Iodomethane	8.096	142	3807971	270.73	ug/L	99
12) Acetonitrile	8.381	41	1141548	1161.71	ug/L	100
13) Methyl acetate	8.499	43	1897415	311.29	ug/L	100
14) Carbon disulfide	8.250	76	6045790	260.57	ug/L	100
15) Methylene chloride	8.701	84	416701	53.12	ug/L	99
16) tert-Butyl methyl ether	9.199	73	865459	44.56	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	495671	46.70	ug/L	98
18) Vinyl acetate	9.934	43	1979542	155.72	ug/L	97
19) 1,1-Dichloroethane	9.887	63	634220	47.90	ug/L	100
20) 2-Butanone	10.764	43	1607187	226.12	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	553952	47.21	ug/L	98
22) 2,2-Dichloropropane	10.800	77	483230	50.98	ug/L	100
23) Bromochloromethane	11.132	128	215565	49.54	ug/L	98
24) Chloroform	11.227	83	649464	47.89	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	595273	51.06	ug/L	100
26) Cyclohexane	11.642	56	600980	49.22	ug/L	98
27) 1,1-Dichloropropene	11.749	75	478710	49.68	ug/L	99
28) Carbon tetrachloride	11.784	117	556373	53.03	ug/L	99
30) 1,2-Dichloroethane	12.021	62	472247	45.89	ug/L	99
31) Benzene	12.033	78	1401308	46.68	ug/L	100
32) Cyclohexene	12.187	67	728491	48.27	ug/L	100
33) n-Butyl alcohol	12.650	56	1126752	5678.45	ug/L	99
34) Trichloroethylene	12.852	95	399865	49.00	ug/L	97
35) 1,2-Dichloropropane	13.124	63	355141	47.14	ug/L	99
36) Methylcyclohexane	13.136	83	653590	49.44	ug/L	99
37) Dibromomethane	13.267	93	228437	49.24	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDSI
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
38) Bromodichloromethane	13.444	83	487122	50.62 ug/L	100	
39) 2-Chloroethylvinyl ether	13.753	63	804686	215.69 ug/L	99	
40) cis-1,3-Dichloropropylene	13.966	75	583118	51.88 ug/L	99	
42) 4-Methyl-2-pentanone	14.109	58	776428	239.19 ug/L	98	
44) Toluene	14.381	91	1570279	46.33 ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	527741	50.09 ug/L	100	
46) 1,1,2-Trichloroethane	14.808	83	272945	47.21 ug/L	100	
47) 2-Hexanone	14.109	43	2109768	237.46 ug/L	99	
48) 1,3-Dichloropropane	15.010	76	533740	45.93 ug/L	97	
49) Tetrachloroethylene	15.034	164	441132	50.48 ug/L	99	
50) Dibromochloromethane	15.294	129	425404	54.12 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	363081	50.84 ug/L	100	
52) Chlorobenzene	15.982	112	1153783	48.90 ug/L	98	
53) 1,1,1,2-Tetrachloroethane	16.053	131	442779	51.58 ug/L	99	
54) Ethylbenzene	16.077	91	1830579	47.81 ug/L	99	
55) m,p-Xylenes	16.196	106	1473198	95.72 ug/L	98	
56) o-Xylene	16.634	106	728875	48.18 ug/L	99	
57) Styrene	16.646	104	1191314	53.45 ug/L	99	
59) Bromoform	16.883	173	352215	46.55 ug/L	100	
60) Isopropylbenzene	17.026	105	1937164	48.65 ug/L	99	
62) 1,1,2,2-Tetrachloroethane	17.298	83	458948	49.00 ug/L	100	
63) 1,2,3-Trichloropropane	17.381	110	130664	48.65 ug/L	93	
64) Bromobenzene	17.417	156	588153	49.39 ug/L	94	
65) n-Propylbenzene	17.464	91	2238818	47.63 ug/L	99	
66) 1,3,5-Trimethylbenzene	17.631	105	1604343	48.64 ug/L	54	
67) 2-Chlorotoluene	17.595	91	1510900	47.33 ug/L	98	
68) 4-Chlorotoluene	17.702	91	1368611	47.08 ug/L	98	
69) tert-Butylbenzene	17.998	119	1658474	49.30 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1657239	48.53 ug/L	99	
71) sec-Butylbenzene	18.235	105	2191471	49.23 ug/L	99	
72) 4-Isopropyltoluene	18.366	119	1814371	50.63 ug/L	99	
73) 1,3-Dichlorobenzene	18.401	146	1107473	49.51 ug/L	99	
74) 1,4-Dichlorobenzene	18.484	146	1118534	48.23 ug/L	99	
75) n-Butylbenzene	18.805	91	1676100	49.19 ug/L	99	
76) 1,2-Dichlorobenzene	18.899	146	1051700	49.08 ug/L	100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	119792	64.78 ug/L	97	E
78) 1,2,4-Trichlorobenzene	20.690	180	839899	51.47 ug/L	100	
79) Hexachlorobutadiene	20.868	225	517696	51.82 ug/L	100	
80) Naphthalene	21.022	128	1749446	51.22 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	782151	52.30 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.622		0m	N.D. d		
86) Trichlorotrifluoroethane	7.824		0m	N.D. d		
87) Isopropyl Alcohol	8.250		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.903		0m	N.D. d		
90) Acrylonitrile	9.104		0m	N.D. d		
91) Isopropyl ether	10.053		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.041		0m	N.D. d		
93) Ethyl tert-butyl ether	10.776		0m	N.D. d		
94) Ethyl acetate	10.764		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDS1
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	10.764		0m	N.D. d	
96) Methacrylonitrile	11.085		0m	N.D. d	
97) Tetrahydrofuran	11.215		0m	N.D. d	
98) Isobutyl alcohol	11.915		0m	N.D. d	
99) Methyl tert-amyl ether	12.187		0m	N.D. d	
100) Methyl methacrylate	13.136		0m	N.D. d	
101) 1,4-Dioxane	13.278		0m	N.D. d	
102) 2-Nitropropane	13.753		0m	N.D. d	
104) Ethyl methacrylate	14.642		0m	N.D. d	
106) 1-Chlorohexane	15.947		0m	N.D. d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D. d	
108) Cyclohexanone	17.144		0m	N.D. d	
109) trans-1,4-Dichloro-2-b...	17.358		0m	N.D. d	
110) Pentachloroethane	18.057		0m	N.D. d	
111) Benzyl chloride	18.603		0m	N.D. d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D. d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T104.D
Acq On : 6 Jul 2009 7:55 am
Operator : CDS1
InstName : VOA2
Sample : |1201874620|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL UVM090527-01E+IVM090630
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 17 06:59:32 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

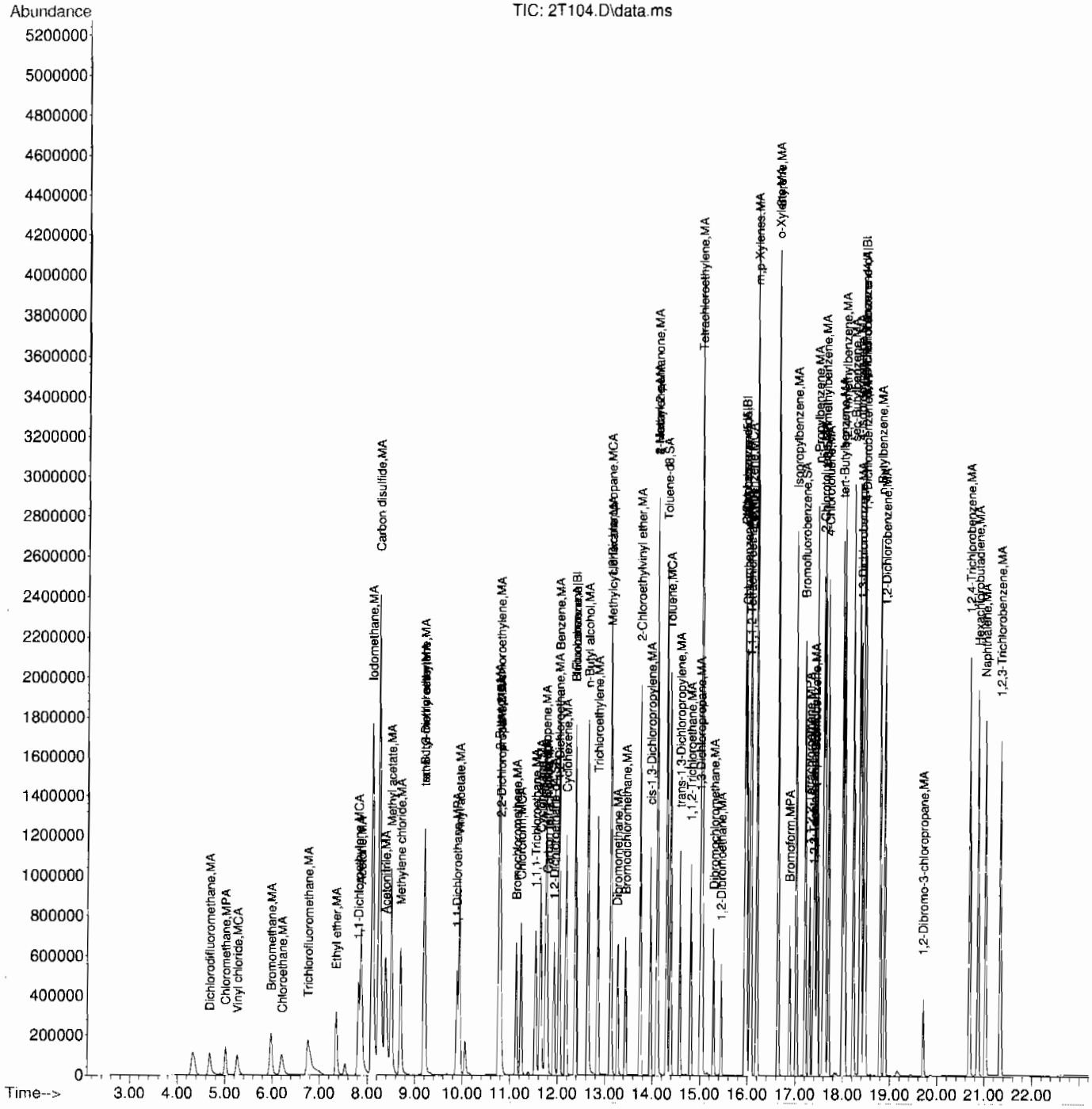

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			**Matrix:**	SOIL
Lab Sample ID:	1201874621				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 08:53	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T106.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			**Matrix:**	SOIL
Lab Sample ID:	1201874621				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 08:53	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T106.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		237	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1749528	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1519196	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	951777	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1749528	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1519196	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	951777	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	480979	49.03 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 98.06%		
43) Toluene-d8	14.310	98	1726974	48.38 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 96.76%		
61) Bromofluorobenzene	17.204	95	728289	48.67 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 97.34%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	4.687		0m	N.D. d	
3) Chloromethane	5.014		0m	N.D. d	
4) Vinyl chloride	5.266		0m	N.D. d	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	6.756		0m	N.D. d	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.859		0m	N.D. d	
10) 1,1-Dichloroethylene	7.824		0m	N.D. d	
11) Iodomethane	8.096		0m	N.D. d	
12) Acetonitrile	8.488		0m	N.D. d	
13) Methyl acetate	8.523		0m	N.D. d	
14) Carbon disulfide	8.250		0m	N.D. d	
15) Methylene chloride	8.701		0m	N.D. d	
16) tert-Butyl methyl ether	9.223		0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.187		0m	N.D. d	
18) Vinyl acetate	9.946		0m	N.D. d	
19) 1,1-Dichloroethane	10.041		0m	N.D. d	
20) 2-Butanone	10.859		0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.859		0m	N.D. d	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227		0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535		0m	N.D. d	
26) Cyclohexane	11.642		0m	N.D. d	
27) 1,1-Dichloropropene	11.796		0m	N.D. d	
28) Carbon tetrachloride	11.772		0m	N.D. d	
30) 1,2-Dichloroethane	12.033		0m	N.D. d	
31) Benzene	12.045		0m	N.D. d	
32) Cyclohexene	12.187		0m	N.D. d	
33) n-Butyl alcohol	12.662		0m	N.D. d	
34) Trichloroethylene	12.852		0m	N.D. d	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	13.136		0m	N.D. d	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	13.195		0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	13.966		0m	N.D. d	
42) 4-Methyl-2-pentanone	14.310		0m	N.D. d	
44) Toluene	14.393		0m	N.D. d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D. d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D. d	
47) 2-Hexanone	14.168		0m	N.D. d	
48) 1,3-Dichloropropane	15.010		0m	N.D. d	
49) Tetrachloroethylene	15.034		0m	N.D. d	
50) Dibromochloromethane	15.294		0m	N.D. d	
51) 1,2-Dibromoethane	15.449		0m	N.D. d	
52) Chlorobenzene	15.982		0m	N.D. d	
53) 1,1,1,2-Tetrachloroethane	16.053		0m	N.D. d	
54) Ethylbenzene	16.077		0m	N.D. d	
55) m,p-Xylenes	16.196		0m	N.D. d	
56) o-Xylene	16.634		0m	N.D. d	
57) Styrene	16.646		0m	N.D. d	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.026		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.204		0m	N.D. d	
64) Bromobenzene	17.405		0m	N.D. d	
65) n-Propylbenzene	17.465		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D. d	
67) 2-Chlorotoluene	17.595		0m	N.D. d	
68) 4-Chlorotoluene	17.702		0m	N.D. d	
69) tert-Butylbenzene	18.057		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	18.046		0m	N.D. d	
71) sec-Butylbenzene	18.235		0m	N.D. d	
72) 4-Isopropyltoluene	18.366		0m	N.D. d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D. d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D. d	
75) n-Butylbenzene	18.805		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.899		0m	N.D. d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D. d	
79) Hexachlorobutadiene	20.868		0m	N.D. d	
80) Naphthalene	21.022		0m	N.D. d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D. d	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	7.586	56	374377	310.26 ug/L	100
86) Trichlorotrifluoroethane	7.859	85	521229	237.04 ug/L	97
87) Isopropyl Alcohol	0.000		0m	N.D. d	
88) Allyl chloride	8.488	41	2617696	214.17 ug/L	100
89) tert-Butyl Alcohol	8.879	59	110	N.D.	
90) Acrylonitrile	9.092	53	610681	248.37 ug/L	100
91) Isopropyl ether	10.053	45	307	N.D.	
92) 2-Chloro-1,3-butadiene	10.053	53	552832	54.85 ug/L	97
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.859	43	1757936	242.11 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	Qion	Response	Conc Units	Dev(Min)	
95)	Propionitrile	10.847	54	245689	247.51 ug/L	100	
96)	Methacrylonitrile	11.085	41	1088359	248.99 ug/L	100	
97)	Tetrahydrofuran	11.203	42	583471	249.67 ug/L	100	
98)	Isobutyl alcohol	11.796	41	687491	2646.11 ug/L	100	
99)	Methyl tert-amyl ether	0.000		0m	N.D. d		
100)	Methyl methacrylate	13.195	69	1109403	260.37 ug/L	99	
101)	1,4-Dioxane	13.267	88	169837	2938.96 ug/L	99	
102)	2-Nitropropane	13.682	43	599585	296.47 ug/L	100	E
104)	Ethyl methacrylate	14.642	69	2028431	242.05 ug/L	100	
106)	1-Chlorohexane	0.000		0m	N.D. d		
107)	cis-1,4-Dichloro-2-butene	17.061	53	759569	253.47 ug/L	99	
108)	Cyclohexanone	17.144	42	1736982	1537.57 ug/L	98	
109)	trans-1,4-Dichloro-2-b...	17.358	53	722971	247.32 ug/L	99	
110)	Pentachloroethane	18.057	167	1070506	321.88 ug/L	97	
111)	Benzyl chloride	18.603	91	4512470	289.37 ug/L	99	
112)	bis(2-Chloroisopropyl)...	19.006	45	1241349	244.47 ug/L	98	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T106.D
Acq On : 6 Jul 2009 8:53 am
Operator : CDS1
InstName : VOA2
Sample : |1201874621|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G M1X [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 17 07:00:22 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

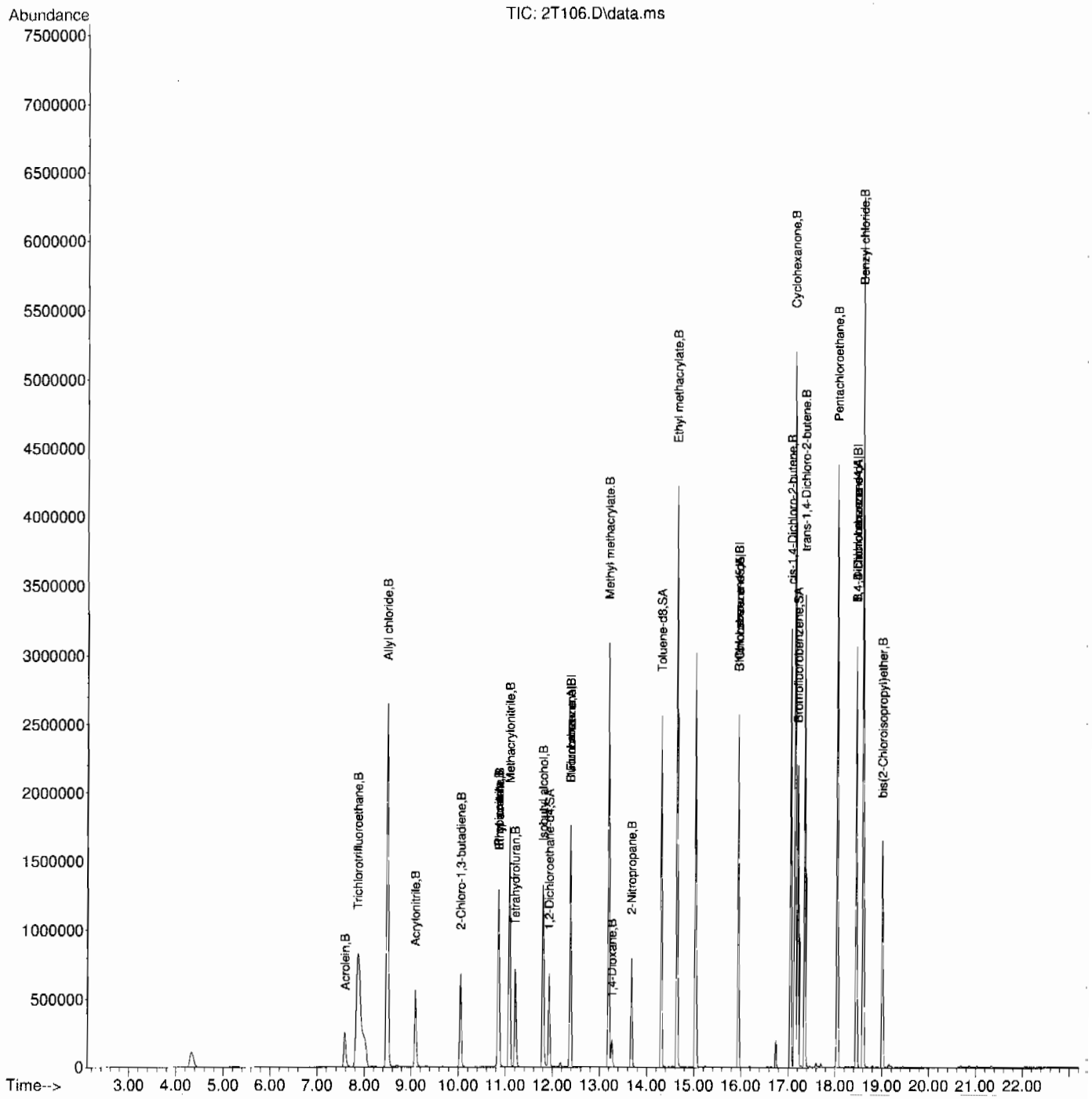

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			**Matrix:**	SOIL
Lab Sample ID:	1201876172				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 08:06	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T204LS1.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		63.8	ug/kg	0.340	1.00
74-87-3	Chloromethane		56.2	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		55.7	ug/kg	0.300	1.00
74-83-9	Bromomethane		46.7	ug/kg	0.300	1.00
75-00-3	Chloroethane		52.7	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		56.7	ug/kg	0.570	1.00
67-64-1	Acetone		129	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		52.1	ug/kg	0.300	1.00
74-88-4	Iodomethane		261	ug/kg	1.60	5.00
75-09-2	Methylene chloride		51.4	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		263	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		48.0	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		51.0	ug/kg	0.300	1.00
78-93-3	2-Butanone		150	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		51.8	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		52.9	ug/kg	0.300	1.00
67-66-3	Chloroform		51.1	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		52.2	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		53.5	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		53.0	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		54.7	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		49.6	ug/kg	0.300	1.00
71-43-2	Benzene		48.9	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		52.2	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		50.5	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		56.7	ug/kg	0.300	1.00
74-95-3	Dibromomethane		52.6	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		237	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		55.0	ug/kg	0.300	1.00
108-88-3	Toluene		48.6	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		54.6	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		51.4	ug/kg	0.300	1.00
591-78-6	2-Hexanone		237	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		49.6	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		51.4	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		56.4	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		54.1	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		50.5	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			**Matrix:**	SOIL
Lab Sample ID:	1201876172				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 08:06	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T204LS1.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		49.2	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		99.3	ug/kg	0.300	2.00
95-47-6	o-Xylene		50.7	ug/kg	0.300	1.00
100-42-5	Styrene		56.0	ug/kg	0.300	1.00
75-25-2	Bromoform		49.8	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		52.3	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		57.3	ug/kg	0.300	1.00
108-86-1	Bromobenzene		50.7	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		48.9	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		50.0	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		43.9	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		43.9	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		49.8	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		51.5	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		50.2	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		51.4	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		53.7	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		52.1	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		50.0	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		51.3	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	E	68.3	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		54.2	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		51.1	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T204LS1.D
Acq On : 7 Jul 2009 8:06 am
Operator : CDS1
InstName : VOA2
Sample : |1201876172|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] UVM090605-01E+IVM090630-01 SO
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 17 07:02:32 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1683356	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1455054	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	902441	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1683356	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1455054	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	902441	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	469130	49.70	ug/L	0.00
Spiked Amount 50.000	Range 59 - 130		Recovery = 99.40%			
43) Toluene-d8	14.310	98	1648568	48.22	ug/L	0.00
Spiked Amount 50.000	Range 76 - 129		Recovery = 96.44%			
61) Bromofluorobenzene	17.204	95	691899	48.76	ug/L	0.00
Spiked Amount 50.000	Range 71 - 126		Recovery = 97.52%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	384282	63.77	ug/L	100
3) Chloromethane	5.014	50	305213	56.18	ug/L	100
4) Vinyl chloride	5.252	62	268658	55.68	ug/L	100
5) Bromomethane	5.980	94	226590	46.71	ug/L	100
6) Chloroethane	6.211	64	269334	52.69	ug/L	100
7) Trichlorofluoromethane	6.756	101	565621	56.68	ug/L	100
8) Ethyl ether	7.349	59	314342	53.92	ug/L	100
9) Acetone	7.871	43	741335	128.60	ug/L	100
10) 1,1-Dichloroethylene	7.812	61	526997	52.05	ug/L	99
11) Iodomethane	8.096	142	3604618	261.41	ug/L	100
12) Acetonitrile	8.381	41	1255528	1303.31	ug/L	100
13) Methyl acetate	8.500	43	1489686	249.29	ug/L	100
14) Carbon disulfide	8.251	76	5979831	262.90	ug/L	100
15) Methylene chloride	8.701	84	395904	51.35	ug/L	100
16) tert-Butyl methyl ether	9.199	73	940137	49.37	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	499494	48.00	ug/L	99
18) Vinyl acetate	9.946	43	3511820	281.80	ug/L	97
19) 1,1-Dichloroethane	9.887	63	662216	51.02	ug/L	100
20) 2-Butanone	10.765	43	1046994	150.26	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	595508	51.77	ug/L	98
22) 2,2-Dichloropropane	10.800	77	491546	52.89	ug/L	98
23) Bromochloromethane	11.132	128	222735	52.22	ug/L	98
24) Chloroform	11.239	83	678736	51.05	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	611910	53.54	ug/L	100
26) Cyclohexane	11.642	56	602686	50.34	ug/L	100
27) 1,1-Dichloropropene	11.761	75	500505	52.98	ug/L	99
28) Carbon tetrachloride	11.784	117	562526	54.69	ug/L	99
30) 1,2-Dichloroethane	12.034	62	500758	49.64	ug/L	100
31) Benzene	12.034	78	1438054	48.86	ug/L	100
32) Cyclohexene	12.188	67	783744	52.98	ug/L	99
33) n-Butyl alcohol	12.650	56	1198776	6162.52	ug/L	99
34) Trichloroethylene	12.852	95	417366	52.17	ug/L	99
35) 1,2-Dichloropropane	13.124	63	372892	50.49	ug/L	100
36) Methylcyclohexane	13.136	83	672887	51.91	ug/L	99
37) Dibromomethane	13.279	93	239178	52.59	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T204LS1.D
Acq On : 7 Jul 2009 8:06 am
Operator : CDS1
InstName : VOA2
Sample : |1201876172|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] UVM090605-01E+IVM090630-01 SO
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 17 07:02:32 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)	
38)	Bromodichloromethane	13.445	83	535097	56.72 ug/L		100	
39)	2-Chloroethylvinyl ether	13.753	63	865392	236.61 ug/L		100	
40)	cis-1,3-Dichloropropylene	13.966	75	606158	55.01 ug/L		99	
42)	4-Methyl-2-pentanone	14.109	58	755104	237.09 ug/L		99	
44)	Toluene	14.393	91	1616321	48.60 ug/L		100	
45)	trans-1,3-Dichloroprop...	14.583	75	564002	54.56 ug/L		100	
46)	1,1,2-Trichloroethane	14.808	83	291347	51.36 ug/L		100	
47)	2-Hexanone	14.109	43	2062893	236.64 ug/L		99	
48)	1,3-Dichloropropane	15.010	76	564903	49.55 ug/L		86	
49)	Tetrachloroethylene	15.034	164	440983	51.43 ug/L		100	
50)	Dibromochloromethane	15.295	129	435178	56.42 ug/L		100	
51)	1,2-Dibromoethane	15.449	107	379218	54.12 ug/L		100	
52)	Chlorobenzene	15.982	112	1169357	50.51 ug/L		99	
53)	1,1,1,2-Tetrachloroethane	16.054	131	456353	54.18 ug/L		100	
54)	Ethylbenzene	16.077	91	1848066	49.20 ug/L		99	
55)	m,p-Xylenes	16.196	106	1498948	99.27 ug/L		100	
56)	o-Xylene	16.635	106	752301	50.69 ug/L		100	
57)	Styrene	16.646	104	1225548	56.04 ug/L		100	
59)	Bromoform	16.884	173	364267	49.76 ug/L		100	
60)	Isopropylbenzene	17.026	105	1684522	43.87 ug/L		100	
62)	1,1,2,2-Tetrachloroethane	17.299	83	471956	52.25 ug/L		100	
63)	1,2,3-Trichloropropane	17.382	110	148339	57.28 ug/L	#	81	
64)	Bromobenzene	17.417	156	582011	50.69 ug/L		97	
65)	n-Propylbenzene	17.465	91	2216980	48.91 ug/L		99	
66)	1,3,5-Trimethylbenzene	17.631	105	1612980	50.71 ug/L		54	
67)	2-Chlorotoluene	17.595	91	1538122	49.97 ug/L		99	
68)	4-Chlorotoluene	17.702	91	1397115	49.84 ug/L		99	
69)	tert-Butylbenzene	17.998	119	1670313	51.49 ug/L		99	
70)	1,2,4-Trimethylbenzene	18.046	105	1653129	50.20 ug/L		100	
71)	sec-Butylbenzene	18.235	105	2205966	51.38 ug/L		100	
72)	4-Isopropyltoluene	18.366	119	1854653	53.67 ug/L		100	
73)	1,3-Dichlorobenzene	18.402	146	1123325	52.07 ug/L		99	
74)	1,4-Dichlorobenzene	18.485	146	1118500	50.01 ug/L		99	
75)	n-Butylbenzene	18.805	91	1686997	51.34 ug/L		100	
76)	1,2-Dichlorobenzene	18.900	146	1055998	51.10 ug/L		99	
77)	1,2-Dibromo-3-chloropr...	19.706	157	121803	68.31 ug/L		98	E
78)	1,2,4-Trichlorobenzene	20.690	180	798901	50.77 ug/L		100	
79)	Hexachlorobutadiene	20.868	225	484437	50.28 ug/L		100	
80)	Naphthalene	21.022	128	1702251	51.68 ug/L		100	
81)	1,2,3-Trichlorobenzene	21.342	180	757209	52.51 ug/L		99	
83)	Chlorotrifluoroethylene	0.000		0	N.D.			
84)	2-Chloro-1,1,1-trifluo...	0.000		0	N.D.			
85)	Acrolein	7.610		0m	N.D.	d		
86)	Trichlorotrifluoroethane	7.847		0m	N.D.	d		
87)	Isopropyl Alcohol	8.239		0m	N.D.	d		
88)	Allyl chloride	8.381		0m	N.D.	d		
89)	tert-Butyl Alcohol	8.915		0m	N.D.	d		
90)	Acrylonitrile	9.104		0m	N.D.	d		
91)	Isopropyl ether	9.946		0m	N.D.	d		
92)	2-Chloro-1,3-butadiene	10.041		0m	N.D.	d		
93)	Ethyl tert-butyl ether	10.788		0m	N.D.	d		
94)	Ethyl acetate	10.765		0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T204LS1.D
Acq On : 7 Jul 2009 8:06 am
Operator : CDS1
InstName : VOA2
Sample : |1201876172|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] UVM090605-01F+IVM090630-01 SO
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 17 07:02:32 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Propionitrile	10.848		0m	N.D.	d	
96) Methacrylonitrile	11.085		0m	N.D.	d	
97) Tetrahydrofuran	11.227		0m	N.D.	d	
98) Isobutyl alcohol	11.927		0m	N.D.	d	
99) Methyl tert-amyl ether	12.188		0m	N.D.	d	
100) Methyl methacrylate	13.136		0m	N.D.	d	
101) 1,4-Dioxane	13.279		0m	N.D.	d	
102) 2-Nitropropane	13.611		0m	N.D.	d	
104) Ethyl methacrylate	14.642		0m	N.D.	d	
106) 1-Chlorohexane	15.947		0m	N.D.	d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108) Cyclohexanone	17.145		0m	N.D.	d	
109) trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110) Pentachloroethane	18.058		0m	N.D.	d	
111) Benzyl chloride	18.603		0m	N.D.	d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

```
Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T204LS1.D
Acq On    :  7 Jul 2009   8:06 am
Operator  : CDS1
InstName  : VOA2
Sample    : |1201876172|882632|1|VOAF|1|VOA8260BSF|
Misc      : LCS 5G  MIX [A] UVM090605-01E+IVM090630-01 SO
ALS Vial  : 4   Sample Multiplier: 1

Quant Time: Jul 17 07:02:32 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title  : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE
```

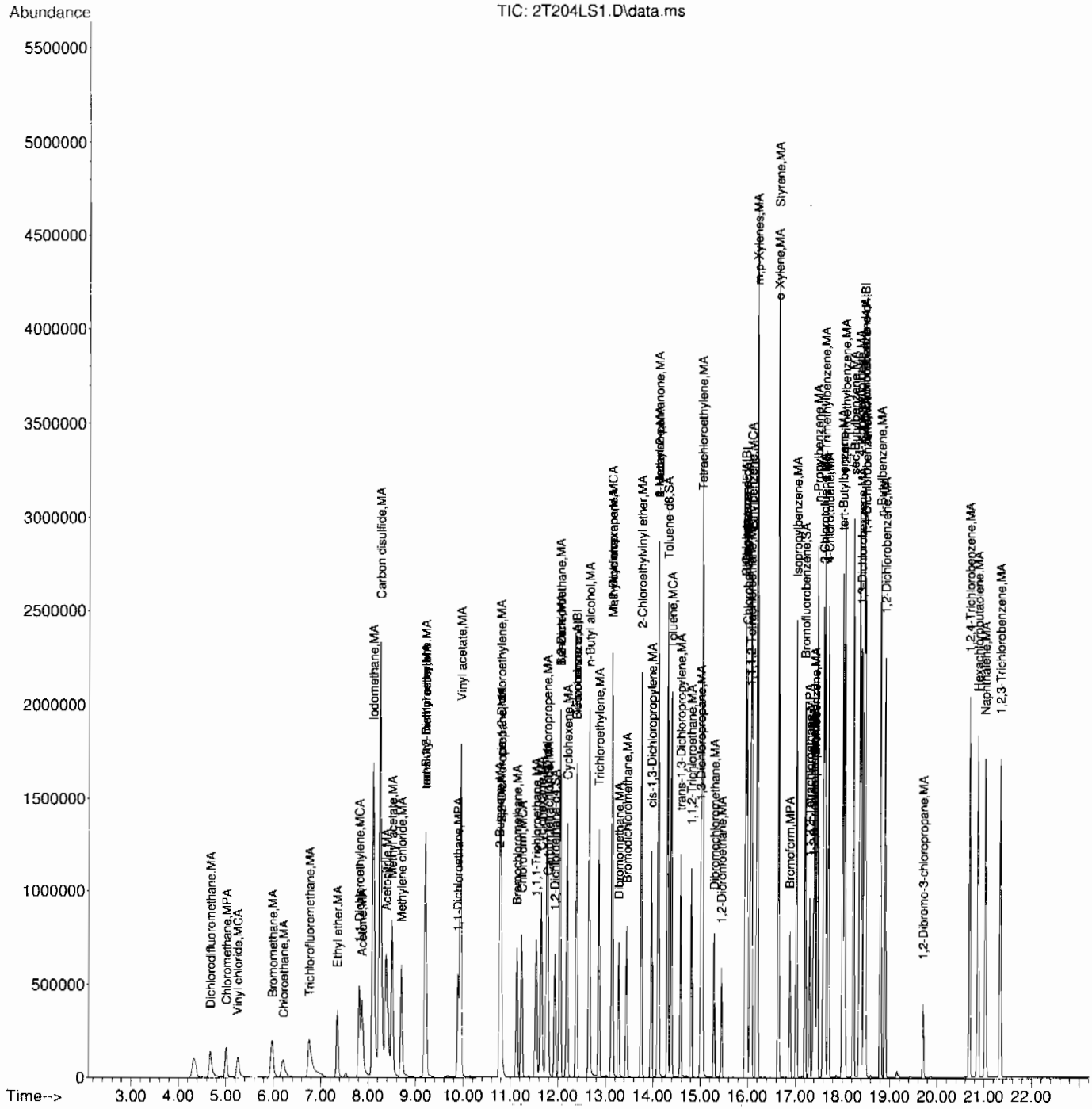

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			**Matrix:**	SOIL
Lab Sample ID:	1201876173				
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882630	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 09:05	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T206SLS1.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2506**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201876173**				
Client Sample:	**QC for batch 882630**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882630**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**882632**	**Inst:**	**VOA2.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 09:05**	**Analyst:**	**CDS1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/07/2009 06:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**070709V2.b\2T206SLS1.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		275	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T206SLS1.D
Acq On : 7 Jul 2009 9:05 am
Operator : CDS1
InstName : VOA2
Sample : |1201876173|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 17 07:03:32 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1713132	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1479268	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	907740	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1713132	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1479268	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	907740	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	477379	49.69 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 99.38%		
43) Toluene-d8	14.310	98	1661887	47.81 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 95.62%		
61) Bromofluorobenzene	17.204	95	705853	49.46 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 98.92%		

Target Compounds				Qvalue
2) Dichlorodifluoromethane	0.000	0	N.D.	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.266	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	0.000	0	N.D.	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.847	0m	N.D. d	
10) 1,1-Dichloroethylene	7.847	0m	N.D. d	
11) Iodomethane	8.096	0m	N.D. d	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.250	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.211	0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.199	0m	N.D. d	
18) Vinyl acetate	10.065	0m	N.D. d	
19) 1,1-Dichloroethane	10.053	0m	N.D. d	
20) 2-Butanone	10.859	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.859	0m	N.D. d	
22) 2,2-Dichloropropane	0.000	0	N.D.	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.239	0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535	0m	N.D. d	
26) Cyclohexane	11.796	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	0.000	0	N.D.	
30) 1,2-Dichloroethane	12.021	0m	N.D. d	
31) Benzene	12.033	0m	N.D. d	
32) Cyclohexene	12.389	0m	N.D. d	
33) n-Butyl alcohol	12.662	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	0.000	0	N.D.	
36) Methylcyclohexane	13.195	0m	N.D. d	
37) Dibromomethane	13.267	0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T206SLS1.D
Acq On : 7 Jul 2009 9:05 am
Operator : CDS1
InstName : VOA2
Sample : |1201876173|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 17 07:03:32 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	13.444		0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	13.966		0m	N.D. d	
42) 4-Methyl-2-pentanone	14.109		0m	N.D. d	
44) Toluene	14.381		0m	N.D. d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D. d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D. d	
47) 2-Hexanone	14.298		0m	N.D. d	
48) 1,3-Dichloropropane	15.010		0m	N.D. d	
49) Tetrachloroethylene	15.034		0m	N.D. d	
50) Dibromochloromethane	15.294		0m	N.D. d	
51) 1,2-Dibromoethane	15.449		0m	N.D. d	
52) Chlorobenzene	15.982		0m	N.D. d	
53) 1,1,1,2-Tetrachloroethane	16.053		0m	N.D. d	
54) Ethylbenzene	16.077		0m	N.D. d	
55) m,p-Xylenes	16.196		0m	N.D. d	
56) o-Xylene	16.634		0m	N.D. d	
57) Styrene	16.646		0m	N.D. d	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.026		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.215		0m	N.D. d	
64) Bromobenzene	17.417		0m	N.D. d	
65) n-Propylbenzene	17.464		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D. d	
67) 2-Chlorotoluene	17.595		0m	N.D. d	
68) 4-Chlorotoluene	17.702		0m	N.D. d	
69) tert-Butylbenzene	18.057		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	18.069		0m	N.D. d	
71) sec-Butylbenzene	18.235		0m	N.D. d	
72) 4-Isopropyltoluene	18.366		0m	N.D. d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D. d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D. d	
75) n-Butylbenzene	18.603		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.899		0m	N.D. d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D. d	
79) Hexachlorobutadiene	20.868		0m	N.D. d	
80) Naphthalene	21.022		0m	N.D. d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D. d	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	7.574	56	347112	293.77 ug/L	100
86) Trichlorotrifluoroethane	7.859	85	591981	274.93 ug/L	99
87) Isopropyl Alcohol	0.000		0m	N.D. d	
88) Allyl chloride	8.488	41	2665306	222.70 ug/L	99
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	9.092	53	639016	265.42 ug/L	100
91) Isopropyl ether	10.053	45	445	N.D.	
92) 2-Chloro-1,3-butadiene	10.041	53	573500	58.11 ug/L	95
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.859	43	1835912	258.22 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T206SLS1.D
Acq On : 7 Jul 2009 9:05 am
Operator : CDS1
InstName : VOA2
Sample : |1201876173|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 17 07:03:32 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
95)	Propionitrile	10.847	54	256689	264.09 ug/L	100	
96)	Methacrylonitrile	11.085	41	1137650	265.79 ug/L	100	
97)	Tetrahydrofuran	11.203	42	612332	267.59 ug/L	100	
98)	Isobutyl alcohol	11.796	41	706062	2775.32 ug/L	99	
99)	Methyl tert-amyl ether	12.164	73	1340	N.D.		
100)	Methyl methacrylate	13.195	69	1155214	276.88 ug/L	100	
101)	1,4-Dioxane	13.267	88	158255	2796.72 ug/L	99	
102)	2-Nitropropane	13.682	43	632202	319.24 ug/L	100	E
104)	Ethyl methacrylate	14.642	69	2085643	255.59 ug/L	100	
106)	1-Chlorohexane	0.000		0m	N.D. d		
107)	cis-1,4-Dichloro-2-butene	17.061	53	787987	275.71 ug/L	99	
108)	Cyclohexanone	17.144	42	1663417	1543.89 ug/L	97	
109)	trans-1,4-Dichloro-2-b...	17.358	53	751069	269.39 ug/L	99	
110)	Pentachloroethane	18.057	167	1166944	367.61 ug/L	97	
111)	Benzyl chloride	18.603	91	4533972	304.85 ug/L	99	
112)	bis(2-Chloroisopropyl)...	19.006	45	1273749	263.02 ug/L	99	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T206SLS1.D
Acq On : 7 Jul 2009 9:05 am
Operator : CDS1
InstName : VOA2
Sample : |1201876173|882632|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 17 07:03:32 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

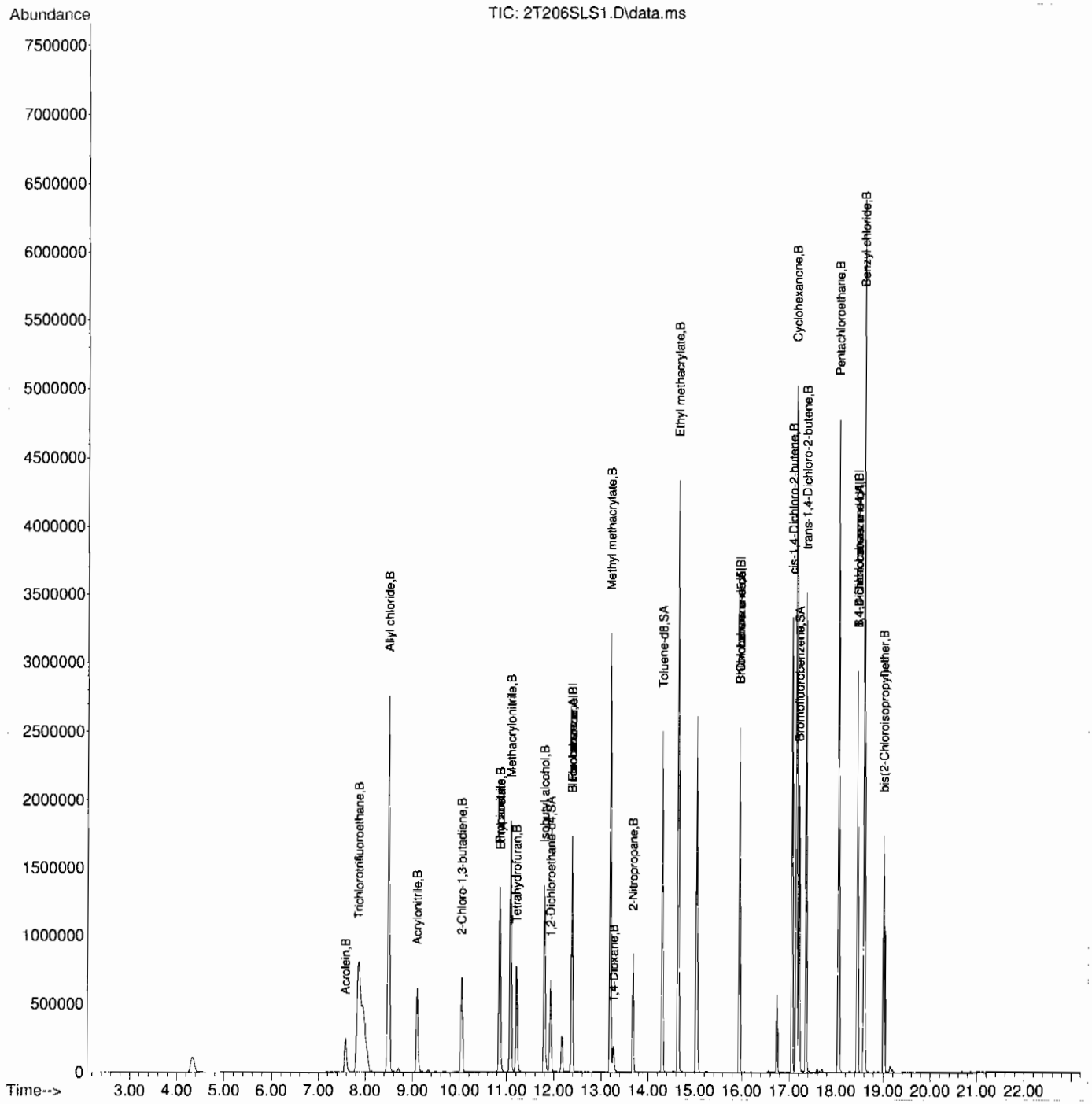

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874618	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10464PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 17:09	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:06	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T123.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		41.5	ug/kg	0.364	1.07
74-87-3	Chloromethane		45.3	ug/kg	0.322	1.07
75-01-4	Vinyl chloride		46.2	ug/kg	0.322	1.07
74-83-9	Bromomethane		43.2	ug/kg	0.322	1.07
75-00-3	Chloroethane		47.3	ug/kg	0.322	1.07
75-69-4	Trichlorofluoromethane		47.3	ug/kg	0.611	1.07
67-64-1	Acetone		200	ug/kg	1.78	5.36
75-35-4	1,1-Dichloroethylene		48.4	ug/kg	0.322	1.07
74-88-4	Iodomethane		250	ug/kg	1.72	5.36
75-09-2	Methylene chloride		46.4	ug/kg	2.14	5.36
75-15-0	Carbon disulfide		246	ug/kg	1.34	5.36
156-60-5	trans-1,2-Dichloroethylene		46.3	ug/kg	0.322	1.07
75-34-3	1,1-Dichloroethane		48.0	ug/kg	0.322	1.07
78-93-3	2-Butanone		196	ug/kg	1.61	5.36
156-59-2	cis-1,2-Dichloroethylene		47.5	ug/kg	0.322	1.07
594-20-7	2,2-Dichloropropane		50.2	ug/kg	0.322	1.07
67-66-3	Chloroform		47.5	ug/kg	0.322	1.07
74-97-5	Bromochloromethane		46.4	ug/kg	0.354	1.07
71-55-6	1,1,1-Trichloroethane		49.7	ug/kg	0.322	1.07
563-58-6	1,1-Dichloropropene		47.3	ug/kg	0.322	1.07
56-23-5	Carbon tetrachloride		50.0	ug/kg	0.322	1.07
107-06-2	1,2-Dichloroethane		47.1	ug/kg	0.322	1.07
71-43-2	Benzene		45.2	ug/kg	0.322	1.07
79-01-6	Trichloroethylene		46.1	ug/kg	0.354	1.07
78-87-5	1,2-Dichloropropane		46.8	ug/kg	0.322	1.07
75-27-4	Bromodichloromethane		49.4	ug/kg	0.322	1.07
74-95-3	Dibromomethane		47.6	ug/kg	0.322	1.07
108-10-1	4-Methyl-2-pentanone		235	ug/kg	1.34	5.36
10061-01-5	cis-1,3-Dichloropropylene		49.2	ug/kg	0.322	1.07
108-88-3	Toluene		44.5	ug/kg	0.322	1.07
10061-02-6	trans-1,3-Dichloropropylene		49.3	ug/kg	0.322	1.07
79-00-5	1,1,2-Trichloroethane		46.9	ug/kg	0.322	1.07
591-78-6	2-Hexanone		236	ug/kg	1.61	5.36
142-28-9	1,3-Dichloropropane		46.6	ug/kg	0.322	1.07
127-18-4	Tetrachloroethylene		44.6	ug/kg	0.322	1.07
124-48-1	Dibromochloromethane		51.6	ug/kg	0.322	1.07
106-93-4	1,2-Dibromoethane		48.9	ug/kg	0.322	1.07
108-90-7	Chlorobenzene		45.5	ug/kg	0.322	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874618	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
Client Sample:	QC for batch 882630	**Client:**	LAN1.010	**Project:**	QC
Client ID:	CAMO-09-10464PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 17:09	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:06	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T123.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		45.7	ug/kg	0.322	1.07
179601-23-1	m,p-Xylenes		89.3	ug/kg	0.322	2.14
95-47-6	o-Xylene		45.4	ug/kg	0.322	1.07
100-42-5	Styrene		50.0	ug/kg	0.322	1.07
75-25-2	Bromoform		43.2	ug/kg	0.322	1.07
79-34-5	1,1,2,2-Tetrachloroethane		50.5	ug/kg	0.322	1.07
96-18-4	1,2,3-Trichloropropane		48.6	ug/kg	0.322	1.07
108-86-1	Bromobenzene		46.6	ug/kg	0.322	1.07
103-65-1	n-Propylbenzene		46.0	ug/kg	0.322	1.07
95-49-8	2-Chlorotoluene		46.4	ug/kg	0.322	1.07
98-82-8	Isopropylbenzene		45.9	ug/kg	0.322	1.07
108-67-8	1,3,5-Trimethylbenzene		45.9	ug/kg	0.322	1.07
106-43-4	4-Chlorotoluene		45.6	ug/kg	0.322	1.07
98-06-6	tert-Butylbenzene		46.3	ug/kg	0.322	1.07
95-63-6	1,2,4-Trimethylbenzene		45.9	ug/kg	0.322	1.07
135-98-8	sec-Butylbenzene		45.7	ug/kg	0.322	1.07
99-87-6	4-Isopropyltoluene		44.4	ug/kg	0.322	1.07
541-73-1	1,3-Dichlorobenzene		44.5	ug/kg	0.322	1.07
106-46-7	1,4-Dichlorobenzene		43.6	ug/kg	0.322	1.07
104-51-8	n-Butylbenzene		44.0	ug/kg	0.322	1.07
96-12-8	1,2-Dibromo-3-chloropropane	E	58.9	ug/kg	0.322	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.36	ug/kg	1.72	5.36
630-20-6	1,1,1,2-Tetrachloroethane		48.5	ug/kg	0.322	1.07
95-50-1	1,2-Dichlorobenzene		44.6	ug/kg	0.322	1.07

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1638626	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1384078	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	861083	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1638626	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1384078	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	861083	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	475621	51.76	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 103.52%			
43) Toluene-d8	14.310	98	1637070	50.34	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 100.68%			
61) Bromofluorobenzene	17.216	95	328864	24.29	ug/L	0.01
Spiked Amount 50.000	Range 68 - 133		Recovery = 48.58%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	227096	38.72	ug/L	100
3) Chloromethane	5.014	50	223513	42.26	ug/L	100
4) Vinyl chloride	5.252	62	202318	43.08	ug/L	100
5) Bromomethane	5.980	94	190183	40.28	ug/L	99
6) Chloroethane	6.199	64	219752	44.16	ug/L	100
7) Trichlorofluoromethane	6.756	101	428804	44.14	ug/L	100
8) Ethyl ether	7.349	59	247415	43.60	ug/L	100
9) Acetone	7.871	43	1047033	186.24	ug/L	99
10) 1,1-Dichloroethylene	7.812	61	444600	45.11	ug/L	99
11) Iodomethane	8.096	142	3134325	233.51	ug/L	98
12) Acetonitrile	8.381	41	977135	1042.01	ug/L	100
13) Methyl acetate	8.500	43	1818963	312.71	ug/L	99
14) Carbon disulfide	8.251	76	5083133	229.58	ug/L	100
15) Methylene chloride	8.701	84	328851	43.24	ug/L	99
16) tert-Butyl methyl ether	9.199	73	771570	41.63	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	437927	43.23	ug/L	98
18) Vinyl acetate	9.946	43	713076	58.78	ug/L	94
19) 1,1-Dichloroethane	9.887	63	565261	44.74	ug/L	100
20) 2-Butanone	10.765	43	1242993	183.26	ug/L	99
21) cis-1,2-Dichloroethylene	10.788	61	496332	44.32	ug/L	99
22) 2,2-Dichloropropane	10.812	77	424012	46.87	ug/L	99
23) Bromochloromethane	11.132	128	179544	43.24	ug/L	97
24) Chloroform	11.239	83	573926	44.34	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	515379	46.32	ug/L	99
26) Cyclohexane	11.642	56	506013	43.42	ug/L	99
27) 1,1-Dichloropropene	11.761	75	405504	44.10	ug/L	99
28) Carbon tetrachloride	11.784	117	467181	46.66	ug/L	99
30) 1,2-Dichloroethane	12.033	62	431614	43.95	ug/L	100
31) Benzene	12.045	78	1208822	42.19	ug/L	99
32) Cyclohexene	12.188	67	615466	42.74	ug/L	99
33) n-Butyl alcohol	12.650	56	873355	4612.19	ug/L	98
34) Trichloroethylene	12.852	95	335094	43.03	ug/L	98
35) 1,2-Dichloropropane	13.124	63	313880	43.66	ug/L	100
36) Methylcyclohexane	13.136	83	527460	41.81	ug/L	99
37) Dibromomethane	13.279	93	196579	44.40	ug/L	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
38)	Bromodichloromethane	13.445	83	423059	46.06	ug/L	100	
39)	2-Chloroethylvinyl ether	13.753	63	786595	220.94	ug/L	99	
40)	cis-1,3-Dichloropropylene	13.966	75	491926	45.86	ug/L	99	
42)	4-Methyl-2-pentanone	14.109	58	664873	219.47	ug/L	100	
44)	Toluene	14.393	91	1313225	41.51	ug/L	100	
45)	trans-1,3-Dichloroprop...	14.583	75	451792	45.95	ug/L	99	
46)	1,1,2-Trichloroethane	14.808	83	236047	43.74	ug/L	99	
47)	2-Hexanone	14.109	43	1828262	220.48	ug/L	100	
48)	1,3-Dichloropropane	15.010	76	470942	43.43	ug/L	93	
49)	Tetrachloroethylene	15.034	164	339473	41.62	ug/L	99	
50)	Dibromochloromethane	15.295	129	352769	48.09	ug/L	100	
51)	1,2-Dibromoethane	15.449	107	304005	45.61	ug/L	99	
52)	Chlorobenzene	15.982	112	935169	42.47	ug/L	99	
53)	1,1,1,2-Tetrachloroethane	16.054	131	362311	45.22	ug/L	100	
54)	Ethylbenzene	16.077	91	1521868	42.59	ug/L	100	
55)	m,p-Xylenes	16.196	106	1196646	83.31	ug/L	99	
56)	o-Xylene	16.635	106	598471	42.39	ug/L	98	
57)	Styrene	16.646	104	970529	46.65	ug/L	98	
59)	Bromoform	16.884	173	278131	40.27	ug/L	100	
60)	Isopropylbenzene	17.026	105	1569668	42.84	ug/L	99	
62)	1,1,2,2-Tetrachloroethane	17.299	83	405803	47.08	ug/L	100	
63)	1,2,3-Trichloropropane	17.382	110	112024	45.33	ug/L	94	
64)	Bromobenzene	17.417	156	476691	43.51	ug/L	99	
65)	n-Propylbenzene	17.465	91	1855008	42.89	ug/L	100	
66)	1,3,5-Trimethylbenzene	17.631	105	1317487	43.41	ug/L	55	
67)	2-Chlorotoluene	17.595	91	1270616	43.26	ug/L	100	
68)	4-Chlorotoluene	17.702	91	1137050	42.51	ug/L	100	
69)	tert-Butylbenzene	17.998	119	1337684	43.22	ug/L	99	
70)	1,2,4-Trimethylbenzene	18.046	105	1345651	42.82	ug/L	99	
71)	sec-Butylbenzene	18.235	105	1746030	42.62	ug/L	100	
72)	4-Isopropyltoluene	18.366	119	1365024	41.40	ug/L	99	
73)	1,3-Dichlorobenzene	18.401	146	854376	41.51	ug/L	99	
74)	1,4-Dichlorobenzene	18.485	146	867803	40.67	ug/L	99	
75)	n-Butylbenzene	18.805	91	1286963	41.05	ug/L	100	
76)	1,2-Dichlorobenzene	18.900	146	820684	41.62	ug/L	99	
77)	1,2-Dibromo-3-chloropr...	19.706	157	93469	54.94	ug/L	100	E
78)	1,2,4-Trichlorobenzene	20.690	180	580397	38.66	ug/L	100	
79)	Hexachlorobutadiene	20.868	225	350030	38.08	ug/L	100	
80)	Naphthalene	21.022	128	1315650	41.86	ug/L	100	
81)	1,2,3-Trichlorobenzene	21.342	180	556571	40.45	ug/L	99	
83)	Chlorotrifluoroethylene	0.000		0	N.D.			
84)	2-Chloro-1,1,1-trifluo...	0.000		0	N.D.			
85)	Acrolein	7.610		0m	N.D.	d		
86)	Trichlorotrifluoroethane	7.836		0m	N.D.	d		
87)	Isopropyl Alcohol	8.251		0m	N.D.	d		
88)	Allyl chloride	8.381		0m	N.D.	d		
89)	tert-Butyl Alcohol	8.891		0m	N.D.	d		
90)	Acrylonitrile	9.104		0m	N.D.	d		
91)	Isopropyl ether	10.053		0m	N.D.	d		
92)	2-Chloro-1,3-butadiene	10.053		0m	N.D.	d		
93)	Ethyl tert-butyl ether	10.563		0m	N.D.	d		
94)	Ethyl acetate	10.765		0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Propionitrile	10.860		0m	N.D.	d	
96) Methacrylonitrile	11.085		0m	N.D.	d	
97) Tetrahydrofuran	11.239		0m	N.D.	d	
98) Isobutyl alcohol	11.927		0m	N.D.	d	
99) Methyl tert-amyl ether	12.188		0m	N.D.	d	
100) Methyl methacrylate	13.136		0m	N.D.	d	
101) 1,4-Dioxane	13.267		0m	N.D.	d	
102) 2-Nitropropane	13.753		0m	N.D.	d	
104) Ethyl methacrylate	14.642		0m	N.D.	d	
106) 1-Chlorohexane	15.947		0m	N.D.	d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108) Cyclohexanone	17.145		0m	N.D.	d	
109) trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110) Pentachloroethane	18.058		0m	N.D.	d	
111) Benzyl chloride	18.603		0m	N.D.	d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T123.D
Acq On : 6 Jul 2009 5:09 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874618|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - ms 232582001 SOIL MIX [A]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 17 07:15:58 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

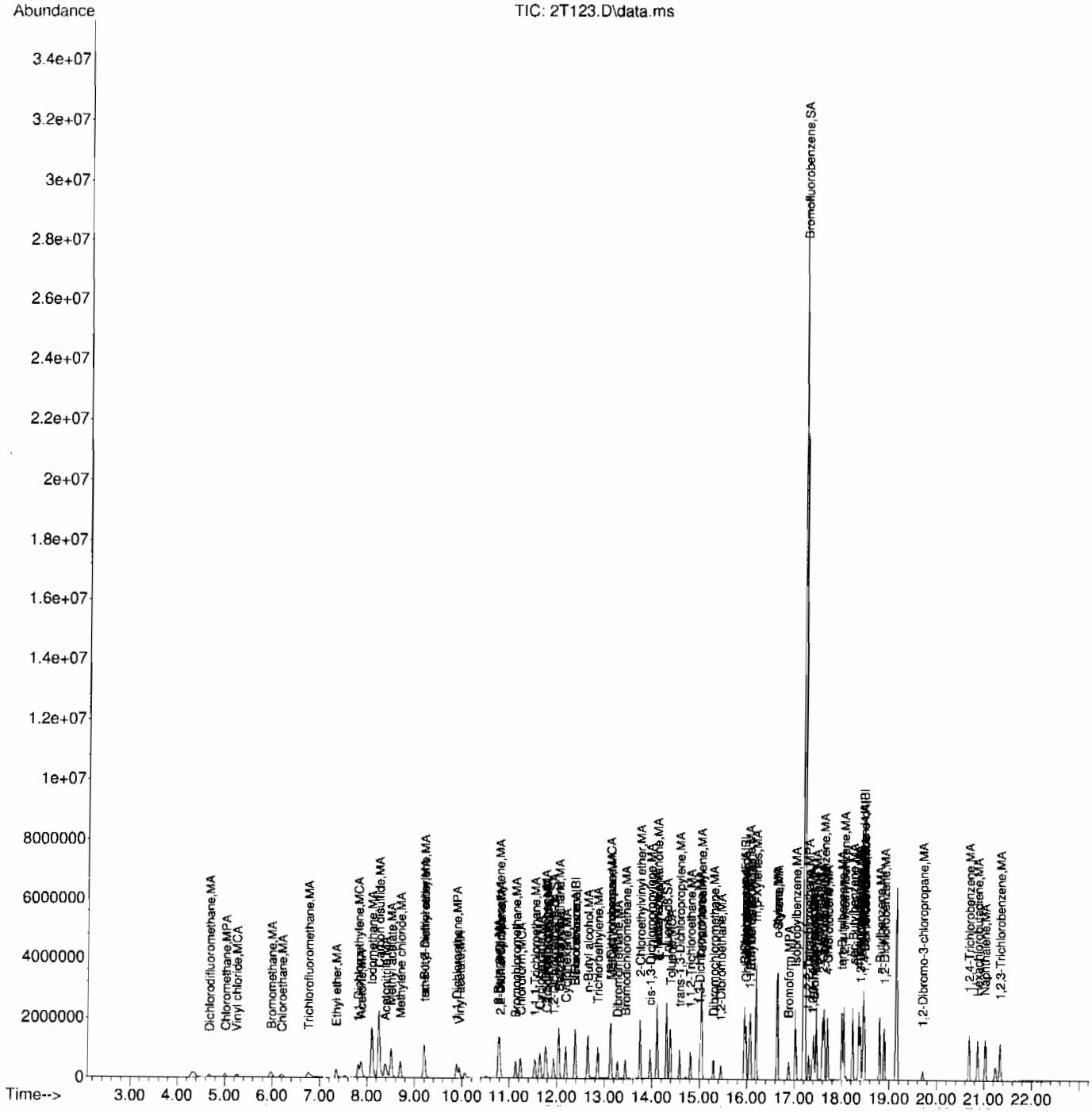

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874619	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10464PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 17:37	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:07	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T124.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		44.0	ug/kg	0.364	1.07
74-87-3	Chloromethane		45.7	ug/kg	0.322	1.07
75-01-4	Vinyl chloride		47.0	ug/kg	0.322	1.07
74-83-9	Bromomethane		40.0	ug/kg	0.322	1.07
75-00-3	Chloroethane		47.6	ug/kg	0.322	1.07
75-69-4	Trichlorofluoromethane		49.6	ug/kg	0.611	1.07
67-64-1	Acetone		203	ug/kg	1.78	5.36
75-35-4	1,1-Dichloroethylene		49.2	ug/kg	0.322	1.07
74-88-4	Iodomethane		251	ug/kg	1.72	5.36
75-09-2	Methylene chloride		45.0	ug/kg	2.14	5.36
75-15-0	Carbon disulfide		254	ug/kg	1.34	5.36
156-60-5	trans-1,2-Dichloroethylene		46.4	ug/kg	0.322	1.07
75-34-3	1,1-Dichloroethane		47.2	ug/kg	0.322	1.07
78-93-3	2-Butanone		201	ug/kg	1.61	5.36
156-59-2	cis-1,2-Dichloroethylene		46.3	ug/kg	0.322	1.07
594-20-7	2,2-Dichloropropane		47.3	ug/kg	0.322	1.07
67-66-3	Chloroform		46.4	ug/kg	0.322	1.07
74-97-5	Bromochloromethane		46.0	ug/kg	0.354	1.07
71-55-6	1,1,1-Trichloroethane		49.1	ug/kg	0.322	1.07
563-58-6	1,1-Dichloropropene		48.8	ug/kg	0.322	1.07
56-23-5	Carbon tetrachloride		50.4	ug/kg	0.322	1.07
107-06-2	1,2-Dichloroethane		46.0	ug/kg	0.322	1.07
71-43-2	Benzene		44.7	ug/kg	0.322	1.07
79-01-6	Trichloroethylene		46.0	ug/kg	0.354	1.07
78-87-5	1,2-Dichloropropane		45.8	ug/kg	0.322	1.07
75-27-4	Bromodichloromethane		48.3	ug/kg	0.322	1.07
74-95-3	Dibromomethane		47.4	ug/kg	0.322	1.07
108-10-1	4-Methyl-2-pentanone		237	ug/kg	1.34	5.36
10061-01-5	cis-1,3-Dichloropropylene		48.4	ug/kg	0.322	1.07
108-88-3	Toluene		44.0	ug/kg	0.322	1.07
10061-02-6	trans-1,3-Dichloropropylene		47.8	ug/kg	0.322	1.07
79-00-5	1,1,2-Trichloroethane		46.0	ug/kg	0.322	1.07
591-78-6	2-Hexanone		238	ug/kg	1.61	5.36
142-28-9	1,3-Dichloropropane		45.4	ug/kg	0.322	1.07
127-18-4	Tetrachloroethylene		45.2	ug/kg	0.322	1.07
124-48-1	Dibromochloromethane		50.4	ug/kg	0.322	1.07
106-93-4	1,2-Dibromoethane		48.2	ug/kg	0.322	1.07
108-90-7	Chlorobenzene		44.4	ug/kg	0.322	1.07

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874619	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.7
Client Sample:	QC for batch 882630	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10464PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	882632	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/06/2009 17:37	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/06/2009 11:07	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070609V2.b\2T124.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		44.7	ug/kg	0.322	1.07
179601-23-1	m,p-Xylenes		87.7	ug/kg	0.322	2.14
95-47-6	o-Xylene		44.1	ug/kg	0.322	1.07
100-42-5	Styrene		48.6	ug/kg	0.322	1.07
75-25-2	Bromoform		43.1	ug/kg	0.322	1.07
79-34-5	1,1,2,2-Tetrachloroethane		50.5	ug/kg	0.322	1.07
96-18-4	1,2,3-Trichloropropane		49.1	ug/kg	0.322	1.07
108-86-1	Bromobenzene		45.2	ug/kg	0.322	1.07
103-65-1	n-Propylbenzene		44.8	ug/kg	0.322	1.07
95-49-8	2-Chlorotoluene		44.7	ug/kg	0.322	1.07
98-82-8	Isopropylbenzene		44.8	ug/kg	0.322	1.07
108-67-8	1,3,5-Trimethylbenzene		44.8	ug/kg	0.322	1.07
106-43-4	4-Chlorotoluene		43.7	ug/kg	0.322	1.07
98-06-6	tert-Butylbenzene		45.1	ug/kg	0.322	1.07
95-63-6	1,2,4-Trimethylbenzene		43.5	ug/kg	0.322	1.07
135-98-8	sec-Butylbenzene		44.7	ug/kg	0.322	1.07
99-87-6	4-Isopropyltoluene		43.3	ug/kg	0.322	1.07
541-73-1	1,3-Dichlorobenzene		42.5	ug/kg	0.322	1.07
106-46-7	1,4-Dichlorobenzene		41.5	ug/kg	0.322	1.07
104-51-8	n-Butylbenzene		42.1	ug/kg	0.322	1.07
96-12-8	1,2-Dibromo-3-chloropropane	E	59.7	ug/kg	0.322	1.07
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.36	ug/kg	1.72	5.36
630-20-6	1,1,1,2-Tetrachloroethane		47.2	ug/kg	0.322	1.07
95-50-1	1,2-Dichlorobenzene		43.1	ug/kg	0.322	1.07

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1564606	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1330232	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	819919	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1564606	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1330232	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	819919	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	445440	50.77	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 101.54%			
43) Toluene-d8	14.310	98	1492265	47.74	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 95.48%			
61) Bromofluorobenzene	17.216	95	302924	23.50	ug/L	0.01
Spiked Amount 50.000	Range 68 - 133		Recovery = 47.00%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	229698	41.01	ug/L	100
3) Chloromethane	5.014	50	215134	42.60	ug/L	100
4) Vinyl chloride	5.267	62	196785	43.88	ug/L	100
5) Bromomethane	5.980	94	168248	37.32	ug/L	99
6) Chloroethane	6.211	64	210790	44.37	ug/L	100
7) Trichlorofluoromethane	6.757	101	429399	46.29	ug/L	100
8) Ethyl ether	7.349	59	232038	42.82	ug/L	99
9) Acetone	7.871	43	1018949	189.80	ug/L	100
10) 1,1-Dichloroethylene	7.824	61	432344	45.94	ug/L	99
11) Iodomethane	8.108	142	3006363	234.57	ug/L	99
12) Acetonitrile	8.381	41	1004918	1122.34	ug/L	100
13) Methyl acetate	8.512	43	1810573	325.99	ug/L	99
14) Carbon disulfide	8.251	76	5000825	236.54	ug/L	100
15) Methylene chloride	8.701	84	305751	42.01	ug/L	99
16) tert-Butyl methyl ether	9.211	73	688701	38.91	ug/L	99
17) trans-1,2-Dichloroethy...	9.199	61	418340	43.25	ug/L	99
18) Vinyl acetate	9.946	43	714926	61.72	ug/L	94
19) 1,1-Dichloroethane	9.887	63	531620	44.06	ug/L	100
20) 2-Butanone	10.777	43	1216245	187.79	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	461422	43.16	ug/L	100
22) 2,2-Dichloropropane	10.812	77	381483	44.17	ug/L	98
23) Bromochloromethane	11.132	128	170066	42.90	ug/L	99
24) Chloroform	11.239	83	535531	43.33	ug/L	99
25) 1,1,1-Trichloroethane	11.535	97	486262	45.77	ug/L	100
26) Cyclohexane	11.642	56	491048	44.13	ug/L	100
27) 1,1-Dichloropropene	11.761	75	399280	45.48	ug/L	99
28) Carbon tetrachloride	11.785	117	449852	47.05	ug/L	99
30) 1,2-Dichloroethane	12.034	62	402000	42.87	ug/L	100
31) Benzene	12.045	78	1141648	41.73	ug/L	99
32) Cyclohexene	12.188	67	605950	44.07	ug/L	99
33) n-Butyl alcohol	12.650	56	983273	5438.33	ug/L	98
34) Trichloroethylene	12.852	95	319093	42.92	ug/L	100
35) 1,2-Dichloropropane	13.125	63	292974	42.68	ug/L	100
36) Methylcyclohexane	13.136	83	520734	43.23	ug/L	99
37) Dibromomethane	13.279	93	186866	44.20	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
38) Bromodichloromethane	13.445	83	395098	45.06 ug/L	100	
39) 2-Chloroethylvinyl ether	13.753	63	734693	216.12 ug/L	99	
40) cis-1,3-Dichloropropylene	13.966	75	462762	45.18 ug/L	99	
42) 4-Methyl-2-pentanone	14.109	58	643124	220.88 ug/L	100	
44) Toluene	14.393	91	1248012	41.05 ug/L	100	
45) trans-1,3-Dichloroprop...	14.583	75	421034	44.55 ug/L	99	
46) 1,1,2-Trichloroethane	14.808	83	222374	42.88 ug/L	100	
47) 2-Hexanone	14.109	43	1766306	221.63 ug/L	100	
48) 1,3-Dichloropropane	15.010	76	441428	42.35 ug/L	93	
49) Tetrachloroethylene	15.034	164	330734	42.19 ug/L	100	
50) Dibromochloromethane	15.295	129	331812	47.06 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	288305	45.01 ug/L	100	
52) Chlorobenzene	15.982	112	877415	41.46 ug/L	100	
53) 1,1,1,2-Tetrachloroethane	16.054	131	338784	44.00 ug/L	98	
54) Ethylbenzene	16.077	91	1430952	41.67 ug/L	100	
55) m,p-Xylenes	16.196	106	1129455	81.81 ug/L	100	
56) o-Xylene	16.635	106	558727	41.18 ug/L	99	
57) Styrene	16.647	104	907120	45.37 ug/L	99	
59) Bromoform	16.884	173	264119	40.17 ug/L	99	
60) Isopropylbenzene	17.026	105	1459433	41.83 ug/L	100	
62) 1,1,2,2-Tetrachloroethane	17.299	83	386886	47.14 ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	107851	45.83 ug/L #	90	
64) Bromobenzene	17.417	156	439482	42.13 ug/L	100	
65) n-Propylbenzene	17.465	91	1720256	41.77 ug/L	100	
66) 1,3,5-Trimethylbenzene	17.631	105	1207874	41.80 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1165247	41.66 ug/L	100	
68) 4-Chlorotoluene	17.702	91	1038583	40.78 ug/L	100	
69) tert-Butylbenzene	17.998	119	1239176	42.04 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1214442	40.59 ug/L	99	
71) sec-Butylbenzene	18.236	105	1626745	41.71 ug/L	100	
72) 4-Isopropyltoluene	18.366	119	1268104	40.39 ug/L	99	
73) 1,3-Dichlorobenzene	18.402	146	777753	39.68 ug/L	99	
74) 1,4-Dichlorobenzene	18.485	146	786346	38.70 ug/L	100	
75) n-Butylbenzene	18.805	91	1171446	39.24 ug/L	100	
76) 1,2-Dichlorobenzene	18.900	146	754662	40.20 ug/L	100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	90187	55.67 ug/L	99	E
78) 1,2,4-Trichlorobenzene	20.690	180	509087	35.61 ug/L	100	
79) Hexachlorobutadiene	20.868	225	309728	35.38 ug/L	100	
80) Naphthalene	21.022	128	1224985	40.94 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	493210	37.64 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.622		0m	N.D. d		
86) Trichlorotrifluoroethane	7.847		0m	N.D. d		
87) Isopropyl Alcohol	8.251		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.891		0m	N.D. d		
90) Acrylonitrile	9.116		0m	N.D. d		
91) Isopropyl ether	9.946		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.053		0m	N.D. d		
93) Ethyl tert-butyl ether	10.788		0m	N.D. d		
94) Ethyl acetate	10.777		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Propionitrile	10.860		0m	N.D.	d	
96) Methacrylonitrile	11.085		0m	N.D.	d	
97) Tetrahydrofuran	11.239		0m	N.D.	d	
98) Isobutyl alcohol	11.642		0m	N.D.	d	
99) Methyl tert-amyl ether	12.188		0m	N.D.	d	
100) Methyl methacrylate	13.136		0m	N.D.	d	
101) 1,4-Dioxane	13.267		0m	N.D.	d	
102) 2-Nitropropane	13.753		0m	N.D.	d	
104) Ethyl methacrylate	14.642		0m	N.D.	d	
106) 1-Chlorohexane	15.947		0m	N.D.	d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108) Cyclohexanone	17.145		0m	N.D.	d	
109) trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110) Pentachloroethane	18.058		0m	N.D.	d	
111) Benzyl chloride	18.603		0m	N.D.	d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070609V2.b\
Data File : 2T124.D
Acq On : 6 Jul 2009 5:37 pm
Operator : CDS1
InstName : VOA2
Sample : |1201874619|882632|1|VOAF|1|VOA8260BSF|
Misc : LANL 5g - msd 232582001 SOIL MIX [A]
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 17 07:16:07 2009
Quant Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

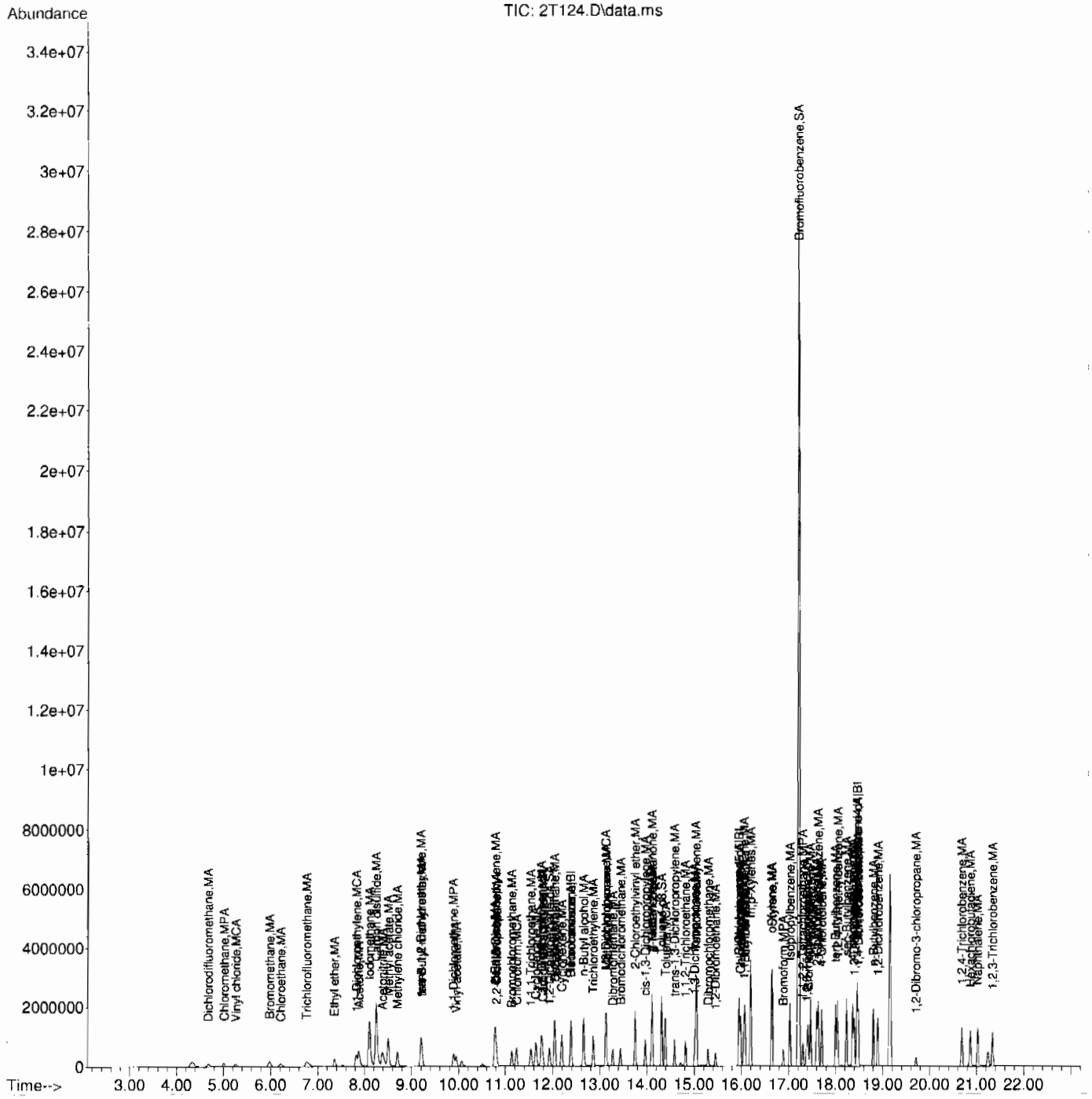

Miscellaneous

Prep LogBook

Analyst: CDS1 Verified by:_____

Batch: 882630

Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201874617		SW846 5030	06-JUL-2009 06:00	5 g	5 mL	1	SOIL
MB	1201876171		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201874620		SW846 5030	06-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201874621		SW846 5030	06-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201876172		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201876173		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
SAMPLE	232582001		SW846 5030	06-JUL-2009 11:00	5 g	5 mL	1	SOIL
PS	1201874618	232582001	SW846 5030	06-JUL-2009 11:06	5 g	5 mL	1	SOIL
PSD	1201874619	232582001	SW846 5030	06-JUL-2009 11:07	5 g	5 mL	1	SOIL
SAMPLE	232582002		SW846 5030	06-JUL-2009 11:01	5 g	5 mL	1	SOIL
SAMPLE	232585001		SW846 5030	06-JUL-2009 11:02	5 g	5 mL	1	SOIL
SAMPLE	232585003		SW846 5030	06-JUL-2009 14:03	5 g	5 mL	1	SOIL
SAMPLE	232585003		SW846 5030	07-JUL-2009 08:31	2 g	5 mL	2.5	SOIL
SAMPLE	232585004		SW846 5030	07-JUL-2009 08:32	5 g	5 mL	1	SOIL
SAMPLE	232591001		SW846 5030	06-JUL-2009 11:05	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/1/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: _____

(See pg. _____ for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 070109V2

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
Long ICV	W2VM090701-10			5+5	
BFB	UVM090604-02				1
Short ICV	W2VM090701-18			5+5	

Purge Amount	
5	Water Purge Vol:
	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
1 Jul 2009 09:58	2S301.D	UVM090604-02	--------	BFB	5ML	1	N/A	1	w	CDS1	N/A	O	
1 Jul 2009 10:25	2S302.D	120189------	--------	BLANK	5ML	1	N/A	2	w	CDS1	N/A	X	instrument blank
1 Jul 2009 10:53	2S303.D	W2VM090701-01	VSTD001	ICAL	5uL ea.	1	N/A	3	w	CDS1	N/A	O	UVM090603-02B+UVM090617-02C
1 Jul 2009 11:22	2S304.D	W2VM090701-02	VSTD002	ICAL	5uL ea.	1	N/A	4	w	CDS1	N/A	O	UVM090603-03B+UVM090617-03C
1 Jul 2009 11:51	2S305.D	W2VM090701-03	VSTD005	ICAL	5uL ea.	1	N/A	5	w	CDS1	N/A	O	UVM090603-04B+UVM090617-04C
1 Jul 2009 12:21	2S306.D	W2VM090701-04	VSTD010	ICAL	5uL ea.	1	N/A	6	w	CDS1	N/A	O	UVM090603-05B+UVM090617-05C
1 Jul 2009 12:50	2S307.D	W2VM090701-05	VSTD020	ICAL	5uL ea.	1	N/A	6	w	CDS1	N/A	O	UVM090603-06B+UVM090617-06C
1 Jul 2009 13:19	2S308.D	W2VM090701-06	VSTD050	ICAL	5uL ea.	1	N/A	7	w	CDS1	N/A	O	UVM090603-07B+UVM090617-07C
1 Jul 2009 13:48	2S309.D	W2VM090701-07	VSTD100	ICAL	5uL ea.	1	N/A	8	w	CDS1	N/A	O	UVM090603-07B+UVM090617-08C
1 Jul 2009 14:17	2S310.D	120146------	--------	BLANK	5ML	1	N/A	9	w	CDS1	N/A	X	instrument blank
1 Jul 2009 14:45	2S311.D	W2VM090701-08	VSTD0005	ICAL	5uL ea.	1	N/A	10	w	CDS1	N/A	O	UVM090603-01B+UVM090617-01C
1 Jul 2009 15:15	2S312.D	W2VM090701-09	LCS	ICV	5uL ea.	1	N/A	11	w	CDS1	N/A	X	UVM090605-01D+IVM090630-01 passes but see 2S313 for ICV
1 Jul 2009 15:44	2S313.D	W2VM090701-10	LCS	ICV	5uL ea.	1	N/A	12	w	CDS1	N/A	O	UVM090527-01E+IVM090630-01
1 Jul 2009 16:12	2S314.D	120146------	--------	BLANK	5ML	1	N/A	13	w	CDS1	N/A	X	instrument blank
1 Jul 2009 16:41	2S315.D	W2VM090701-11	VSTD005S	ICAL	5uL ea.	1	N/A	14	w	CDS1	N/A	O	UVM090701-01+UVM090625-01A
1 Jul 2009 17:10	2S316.D	W2VM090701-12	VSTD010S	ICAL	5uL ea.	1	N/A	15	w	CDS1	N/A	O	UVM090701-02+UVM090625-02A
1 Jul 2009 17:39	2S317.D	W2VM090701-13	VSTD025S	ICAL	5uL ea.	1	N/A	16	w	CDS1	N/A	O	UVM090701-03+UVM090625-03A
1 Jul 2009 18:08	2S318.D	W2VM090701-14	VSTD050S	ICAL	5uL ea.	1	N/A	17	w	CDS1	N/A	O	UVM090701-04+UVM090625-04A
1 Jul 2009 18:37	2S319.D	W2VM090701-15	VSTD100S	ICAL	5uL ea.	1	N/A	18	w	CDS1	N/A	O	UVM090701-05+UVM090625-05A
1 Jul 2009 19:07	2S320.D	W2VM090701-16	VSTD250S	ICAL	5uL ea.	1	N/A	19	w	CDS1	N/A	O	UVM090701-06+UVM090625-06A
1 Jul 2009 19:36	2S321.D	W2VM090701-17	VSTD500S	ICAL	5uL ea.	1	N/A	20	w	CDS1	N/A	O	UVM090701-07+UVM090625-07A
1 Jul 2009 20:05	2S322.D	120146-----	--------	BLANK	5ML	1	N/A	21	w	CDS1	N/A	X	instrument blank
1 Jul 2009 20:34	2S323.D	W2VM090701-18	LCS	ICV	5uL ea.	1	N/A	22	w	CDS1	N/A	O	UVM090701-08A+UVM090624-02A

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/6/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 25 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: _____

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	UVM090701-08A		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
LCS/MS	UVM090701-08A			5+5	
BFB	UVM090604-02				1
SHORT			5		
DHEC				5	

Purge Amount

5	Water Purge Vol:
	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
CV646	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
6 Jul 2009	06:43	2T101.D	UVM090604-02	--------	BFB	5mL	1	N/A	1	w	CDS1	N/A		
6 Jul 2009	06:57	2T102.D	W2VM090706-01	--------	CCV	5mL	1	N/A	1	w	CDS1	N/A		[A] UVM090617-017C+UVM0
6 Jul 2009	06:57	2T102BFB.D	W2VM090706-01	--------	CCV	5mL	1	N/A	1	w	CDS1	N/A		[A]
6 Jul 2009	07:27	2T103.D	W2VM090706-02	--------	LCS	5g	1	N/A	2	s	CDS1	N/A		MIX [A] UVM090527-01E+IVM0906
6 Jul 2009	07:55	2T104.D	W2VM090706-03	--------	LCS	5mL	1	N/A	3	w	CDS1	N/A		MIX [A] SOIL UVM090527-01E+IVM
6 Jul 2009	08:24	2T105.D	UVM090701-08A	--------	CCV	5mL	1	N/A	4	s	CDS1	N/A		5ML MIX [B]
6 Jul 2009	08:24	2T105SL.D	UVM090701-08A	--------	CCV	5mL	1	N/A	4	w	CDS1	N/A		5ML MIX [B]
6 Jul 2009	08:53	2T106.D	UVM090701-08A	--------	LCS	5g	1	N/A	5	s	CDS1	N/A		MIX [B] SOIL
6 Jul 2009	09:23	2T107.D	120182-----		----		1		6					
6 Jul 2009	09:52	2T108.D	120182-----	BLANK	----	5G	1	SOIL	7	s				
6 Jul 2009	10:21	2T109.D	120182-----	GEL	----	5ml	1	-	6	w				Tygon tubing
6 Jul 2009	10:51	2T110.D	120182-----	GEL	----	100uml	50	-	7	w				Fisher methanol lot 091463
6 Jul 2009	11:20	2T111.D	120182-----	GEL	----	100uml	50	-	10	w				B&J lot CY840
6 Jul 2009	11:50	2T112.D	120182-----	BLANK	----	5ml	1		11	w				
6 Jul 2009	12:19	2T113.D	120182-----	BLANK	----	5G	1	SOIL	12	s				
6 Jul 2009	12:47	2T114.D	232582001	LANL	882632	5g	1	-	13	s				SOIL
6 Jul 2009	13:16	2T115.D	232582002	LANL	882632	5g	1	-	14	s				soil
6 Jul 2009	13:45	2T116.D	232585001	LANL	882632	5g	1	-	15	s				soil
6 Jul 2009	14:14	2T117.D	232585003	LANL	882632	5g	1	-	16	s				SOIL
6 Jul 2009	14:43	2T118.D	232585004	LANL	882632	5g	1	-	17	s				SOIL
6 Jul 2009	15:13	2T119.D	232591001	LANL	882632	5g	1	-	18	s				SOIL
6 Jul 2009	15:41	2T120.D	232671001	LANL	882633	5mL	1	pH2	19	w				
6 Jul 2009	16:11	2T121.D	232671002	LANL	882633	5mL	1	pH2	20	w				
6 Jul 2009	16:40	2T122.D	232671005	LANL	882633	5mL	1	pH2	21	w				
6 Jul 2009	17:09	2T123.D	1201874618	LANL	882632	5g	1	-	22	s				ms 232582001 SOIL

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/6/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 25 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: _____

Daily Standard Volume Added for Purge (ul)

Solution ID#		Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	UVM090701-08A		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
LCS/MS	UVM090701-08A			5+5	
BFB	UVM090604-02				1
SHORT			5		
DHEC				5	

Purge Amount

5	Water Purge Vol:
	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
CV646	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
6 Jul 2009	17:37	2T124.D	1201874619	LANL	882632	5g	1	-	23	s				msd 232582001 SOIL
6 Jul 2009	18:06	2T125.D	1201874625	LANL	882633	5mL	1	pH2	24	w				ms 232671002
6 Jul 2009	18:35	2T126.D	1201874626	LANL	882633	5mL	1	pH2	25	w				msd 232671002
6 Jul 2009	19:04	2T127.D	120182-----	BLANK	----	5ml	1		26	w				
6 Jul 2009	19:33	2T128.D	120182-----	GEL	----	5ml	1	-	27	w				ZHE water

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/7/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 25 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 070709V2

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W2VM090707-01		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
LCS/MS	W2VM090707-02/03			5+5	
BFB	UVM090604-02				1
SHORT	UVM090701-08A		5	5	

Purge Amount

5	Water Purge Vol:
varied	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
7 Jul 2009	06:41	2T201.D	UVM090604-02	--------	BFB	5mL	1	N/A	1	w	CDS1	N/A	O	
7 Jul 2009	07:08	2T202.D	W2VM090707-01	--------	CCV	5mL	1	N/A	2	w	CDS1	N/A	O	UVM090617-07C+UVM090603-07B
7 Jul 2009	07:37	2T203.D	W2VM090707-02	--------	LCS	5mL	1	N/A	3	w	CDS1	N/A	O	UVM090605-01E+IVM090630-01
7 Jul 2009	08:06	2T204.D	W2VM090707-03	--------	LCS	5g	1	N/A	4	s	CDS1	N/A	O	UVM090605-01E+IVM090630-01
7 Jul 2009	08:36	2T205.D	UVM090701-08A	--------	CCV/LCS	5mL	1	N/A	5	w	CDS1	N/A	O	
7 Jul 2009	09:05	2T206.D	UVM090701-08A	--------	LCS	5g	1	N/A	6	s	CDS1	N/A	O	
7 Jul 2009	09:34	2T207.D	120182-----	--------	BLANK	5mL	1	N/A	7	w	CDS1	N/A	O	
7 Jul 2009	10:03	2T208.D	120182-----	--------	BLANK	5g	1	N/A	8	s	CDS1	N/A	O	
7 Jul 2009	10:31	2T209.D	232582002	LANL	882632	5G	1	N/A	9	s	CDS1	N/A	X	SS low--conf. of 2T115
7 Jul 2009	11:00	2T210.D	232585004	LANL	882632	5G	1	N/A	10	s	CDS1	N/A	O	
7 Jul 2009	11:29	2T211.D	232585003	LANL	882632	2G	1	N/A	11	s	CDS1	N/A	O	w/ 2T117
7 Jul 2009	12:46	2T212.D	232507001	LANL	883080	5G	1	N/A	12	s	CDS1	N/A	O	
7 Jul 2009	13:16	2T213.D	232507004	LANL	883080	5G	1	N/A	13	s	CDS1	N/A	O	
7 Jul 2009	13:45	2T214.D	232507005	LANL	883080	5G	1	N/A	14	s	CDS1	N/A	O	
7 Jul 2009	14:13	2T215.D	232507007	LANL	883080	5G	1	N/A	15	s	CDS1	N/A	O	

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GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 709074
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
07-JUL-09	Federal	SOP	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
VOA GC/MS	8260	Solid	LANL010
Batch ID:	**Sample Numbers:**		
882632	232582001, 232585002		

Potentially affected work order(s)(SDG): 232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

Failed Recovery for Surrogate or Tracer

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The recovery for the surrogate, bromofluorobenzene, was outside of acceptance limits in sample 232582001 and in the MS and MSD performed on this sample. 2. The recovery for the surrogate, bromofluorobenzene, was outside of acceptance limits in sample 232582002. The sample was re-analyzed with similar results for surrogate recovery.	1,2. Narrate and report data. It is believed that matrix interference was demonstrated.

Originator's Name:

Crystal Stacey 07-JUL-09

Data Validator/Group Leader:

Kelle Bellamy 08-JUL-09

GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2506

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	881964
Prep Batch Number:	881962

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201873125	Method Blank (MB)
1201873126	Laboratory Control Sample (LCS)
1201873127	232591001(CAMO-09-9946) Matrix Spike (MS)
1201873128	232591001(CAMO-09-9946) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
The non-SDG sample 232591001 (CAMO-09-9946) was selected for analysis as the matrix spike and matrix spike duplicate. Please see the associated raw data files located in the Miscellaneous Section of the data report.

Matrix Spike (MS) Recovery Statement
The MS recoveries were not within the acceptance limits. The failures confirmed in the MSD and were attributed to matrix interference.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were not within the acceptance limits. The failures confirmed in the MS and were attributed to matrix interference.

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent differences (RPD) were not within the acceptance limits. The failures were attributed to matrix interference.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for confirmations and/or dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
A non-conformance report was not required for the samples reported in this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration
The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD6.I	HP Mass Spectrometer	HP6890/HP5973	DB-5MS	25m x 0.20mm x 0.33 um (5% Phenylmethylpolysiloxane)

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: Dan Benkum **Date:** 7-20-09

Roadmap for LANL 09-2506 SVOA

This roadmap was analyzed by jos00786 on 07-06-2009, 08:51.
This roadmap was reviewed by dan01134 on 07-07-2009, 09:40.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD6.i/s070209.b/s6g0213.d	232585001	02-JUL-2009	18:00	09-2506.sub	CAMO-09-6605	1	881964	USE
☐	N	/chem/MSD6.i/s070209.b/s6g0214.d	232585002	02-JUL-2009	18:23	09-2506.sub	CAMO-09-6603	1	881964	USE
☐	N	/chem/MSD6.i/s070209.b/s6g0215.d	232585003	02-JUL-2009	18:46	09-2506.sub	CAMO-09-6604	1	881964	USE

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD6.i/s070209.b/s6g0209-1.d	1201873125	mb	02-JUL-2009	16:31	09-2506.sub	SB1.K01	1	881964	USE
☐	N	/chem/MSD6.i/s070209.b/s6g0210-1.d	1201873126	lcs	02-JUL-2009	16:54	09-2506.sub	SBLK01LCS	1	881964	USE

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585002	Date Received:	06/30/2009 09:15	%Moisture:	7.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6603	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 18:23	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.22 g	Final Volume:	1 mL
Data File:	s6g0214.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	357	ug/kg	71.4	357
108-95-2	Phenol	U	357	ug/kg	71.4	357
95-57-8	2-Chlorophenol	U	357	ug/kg	71.4	357
106-46-7	1,4-Dichlorobenzene	U	357	ug/kg	71.4	357
621-64-7	N-Nitrosodipropylamine	U	357	ug/kg	71.4	357
59-50-7	4-Chloro-3-methylphenol	U	357	ug/kg	71.4	357
83-32-9	Acenaphthene	U	35.7	ug/kg	11.8	35.7
121-14-2	2,4-Dinitrotoluene	U	357	ug/kg	35.7	357
100-02-7	4-Nitrophenol	U	357	ug/kg	118	357
87-86-5	Pentachlorophenol	U	357	ug/kg	89.2	357
129-00-0	Pyrene		66.1	ug/kg	10.7	35.7
110-86-1	Pyridine	U	357	ug/kg	71.4	357
62-53-3	Aniline	U	357	ug/kg	107	357
111-44-4	bis(2-Chloroethyl) ether	U	357	ug/kg	71.4	357
541-73-1	1,3-Dichlorobenzene	U	357	ug/kg	71.4	357
100-51-6	Benzyl alcohol	U	357	ug/kg	107	357
95-50-1	1,2-Dichlorobenzene	U	357	ug/kg	71.4	357
108-60-1	bis(2-Chloroisopropyl)ether	U	357	ug/kg	71.4	357
95-48-7	o-Cresol	U	357	ug/kg	71.4	357
65794-96-9	m,p-Cresols	U	357	ug/kg	107	357
67-72-1	Hexachloroethane	U	357	ug/kg	71.4	357
98-95-3	Nitrobenzene	U	357	ug/kg	71.4	357
78-59-1	Isophorone	U	357	ug/kg	71.4	357
88-75-5	2-Nitrophenol	U	357	ug/kg	71.4	357
105-67-9	2,4-Dimethylphenol	U	357	ug/kg	125	357
111-91-1	bis(2-Chloroethoxy)methane	U	357	ug/kg	71.4	357
120-83-2	2,4-Dichlorophenol	U	357	ug/kg	71.4	357
65-85-0	Benzoic acid	U	714	ug/kg	178	714
91-20-3	Naphthalene	U	35.7	ug/kg	10.7	35.7
106-47-8	4-Chloroaniline	U	357	ug/kg	71.4	357
87-68-3	Hexachlorobutadiene	U	357	ug/kg	71.4	357
91-57-6	2-Methylnaphthalene	U	35.7	ug/kg	7.14	35.7
77-47-4	Hexachlorocyclopentadiene	U	357	ug/kg	71.4	357
88-06-2	2,4,6-Trichlorophenol	U	357	ug/kg	71.4	357
95-95-4	2,4,5-Trichlorophenol	U	357	ug/kg	71.4	357
91-58-7	2-Chloronaphthalene	U	35.7	ug/kg	11.8	35.7
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	357	ug/kg	71.4	357
99-09-2	3-Nitroaniline	U	357	ug/kg	71.4	357

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585002	Date Received:	06/30/2009 09:15	%Moisture:	7.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6603	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 18:23	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.22 g	Final Volume:	1 mL
Data File:	s6g0214.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	357	ug/kg	71.4	357
606-20-2	2,6-Dinitrotoluene	U	357	ug/kg	35.7	357
208-96-8	Acenaphthylene	U	35.7	ug/kg	10.7	35.7
51-28-5	2,4-Dinitrophenol	U	714	ug/kg	136	714
132-64-9	Dibenzofuran	U	357	ug/kg	71.4	357
84-66-2	Diethylphthalate	U	357	ug/kg	71.4	357
86-73-7	Fluorene	U	35.7	ug/kg	10.7	35.7
7005-72-3	4-Chlorophenylphenylether	U	357	ug/kg	71.4	357
534-52-1	2-Methyl-4,6-dinitrophenol	U	357	ug/kg	71.4	357
100-01-6	4-Nitroaniline	U	357	ug/kg	107	357
	p-Nitroaniline					
122-39-4	Diphenylamine	U	357	ug/kg	71.4	357
122-66-7	Azobenzene	U	357	ug/kg	71.4	357
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	357	ug/kg	71.4	357
118-74-1	Hexachlorobenzene	U	357	ug/kg	71.4	357
85-01-8	Phenanthrene	U	35.7	ug/kg	10.7	35.7
120-12-7	Anthracene	U	35.7	ug/kg	7.14	35.7
84-74-2	Di-n-butylphthalate	U	357	ug/kg	71.4	357
206-44-0	Fluoranthene		69.3	ug/kg	10.7	35.7
85-68-7	Butylbenzylphthalate	U	357	ug/kg	71.4	357
56-55-3	Benzo(a)anthracene	U	35.7	ug/kg	10.7	35.7
91-94-1	3,3'-Dichlorobenzidine	U	357	ug/kg	107	357
218-01-9	Chrysene		49.2	ug/kg	10.7	35.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	357	ug/kg	71.4	357
117-84-0	Di-n-octylphthalate	U	357	ug/kg	71.4	357
205-99-2	Benzo(b)fluoranthene		83.0	ug/kg	10.7	35.7
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7
50-32-8	Benzo(a)pyrene		38.0	ug/kg	10.7	35.7
193-39-5	Indeno(1,2,3-cd)pyrene	J	22.3	ug/kg	10.7	35.7
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7
191-24-2	Benzo(ghi)perylene	J	24.7	ug/kg	10.7	35.7
120-82-1	1,2,4-Trichlorobenzene	U	357	ug/kg	71.4	357

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1000197-14-1	4b,8-Dimethyl-2-isopropylphenanthrene, 4	8.11	522	ug/kg	95	NJ
	Unknown	8.32	680	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585002	Date Received:	06/30/2009 09:15	%Moisture:	7.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6603	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 18:23	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.22 g	Final Volume:	1 mL
Data File:	s6g0214.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.74	381	ug/kg		J
	Unknown	8.91	311	ug/kg		J
	Unknown	8.94	315	ug/kg		J
	Unknown	8.98	519	ug/kg		J
	Unknown	9.09	931	ug/kg		J
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.17	400	ug/kg	95	NJ
489-39-4	1H-Cycloprop[e]azulene, decahydro-1,1.7-	9.23	829	ug/kg	87	NJ
	Unknown	9.29	494	ug/kg		J
	Unknown	9.45	1650	ug/kg		J
	Unknown	9.55	2500	ug/kg		J
	Unknown	9.66	608	ug/kg		J
	Unknown	9.71	596	ug/kg		J
	Unknown	9.85	1350	ug/kg		J
	Unknown	10.17	482	ug/kg		J
	Unknown	10.3	420	ug/kg		J
	Unknown	10.34	507	ug/kg		J
	Unknown	10.54	548	ug/kg		J
55030-21-2	Cyclohexane, 1,1'-(2-propyl-1,3-propaned	12.35	1220	ug/kg	89	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:46	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s6g0215.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	370	ug/kg	74.0	370
108-95-2	Phenol	U	370	ug/kg	74.0	370
95-57-8	2-Chlorophenol	U	370	ug/kg	74.0	370
106-46-7	1,4-Dichlorobenzene	U	370	ug/kg	74.0	370
621-64-7	N-Nitrosodipropylamine	U	370	ug/kg	74.0	370
59-50-7	4-Chloro-3-methylphenol	U	370	ug/kg	74.0	370
83-32-9	Acenaphthene	U	37.0	ug/kg	12.2	37.0
121-14-2	2,4-Dinitrotoluene	U	370	ug/kg	37.0	370
100-02-7	4-Nitrophenol	U	370	ug/kg	122	370
87-86-5	Pentachlorophenol	U	370	ug/kg	92.5	370
129-00-0	Pyrene	U	37.0	ug/kg	11.1	37.0
110-86-1	Pyridine	U	370	ug/kg	74.0	370
62-53-3	Aniline	U	370	ug/kg	111	370
111-44-4	bis(2-Chloroethyl) ether	U	370	ug/kg	74.0	370
541-73-1	1,3-Dichlorobenzene	U	370	ug/kg	74.0	370
100-51-6	Benzyl alcohol	U	370	ug/kg	111	370
95-50-1	1,2-Dichlorobenzene	U	370	ug/kg	74.0	370
108-60-1	bis(2-Chloroisopropyl)ether	U	370	ug/kg	74.0	370
95-48-7	o-Cresol	U	370	ug/kg	74.0	370
65794-96-9	m,p-Cresols	U	370	ug/kg	111	370
67-72-1	Hexachloroethane	U	370	ug/kg	74.0	370
98-95-3	Nitrobenzene	U	370	ug/kg	74.0	370
78-59-1	Isophorone	U	370	ug/kg	74.0	370
88-75-5	2-Nitrophenol	U	370	ug/kg	74.0	370
105-67-9	2,4-Dimethylphenol	U	370	ug/kg	129	370
111-91-1	bis(2-Chloroethoxy)methane	U	370	ug/kg	74.0	370
120-83-2	2,4-Dichlorophenol	U	370	ug/kg	74.0	370
65-85-0	Benzoic acid	U	740	ug/kg	185	740
91-20-3	Naphthalene	U	37.0	ug/kg	11.1	37.0
106-47-8	4-Chloroaniline	U	370	ug/kg	74.0	370
87-68-3	Hexachlorobutadiene	U	370	ug/kg	74.0	370
91-57-6	2-Methylnaphthalene	U	37.0	ug/kg	7.40	37.0
77-47-4	Hexachlorocyclopentadiene	U	370	ug/kg	74.0	370
88-06-2	2,4,6-Trichlorophenol	U	370	ug/kg	74.0	370
95-95-4	2,4,5-Trichlorophenol	U	370	ug/kg	74.0	370
91-58-7	2-Chloronaphthalene	U	37.0	ug/kg	12.2	37.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	370	ug/kg	74.0	370
99-09-2	3-Nitroaniline	U	370	ug/kg	74.0	370

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:46	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s6g0215.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	370	ug/kg	74.0	370
606-20-2	2,6-Dinitrotoluene	U	370	ug/kg	37.0	370
208-96-8	Acenaphthylene	U	37.0	ug/kg	11.1	37.0
51-28-5	2,4-Dinitrophenol	U	740	ug/kg	141	740
132-64-9	Dibenzofuran	U	370	ug/kg	74.0	370
84-66-2	Diethylphthalate	U	370	ug/kg	74.0	370
86-73-7	Fluorene	U	37.0	ug/kg	11.1	37.0
7005-72-3	4-Chlorophenylphenylether	U	370	ug/kg	74.0	370
534-52-1	2-Methyl-4,6-dinitrophenol	U	370	ug/kg	74.0	370
100-01-6	4-Nitroaniline	U	370	ug/kg	111	370
	p-Nitroaniline					
122-39-4	Diphenylamine	U	370	ug/kg	74.0	370
122-66-7	Azobenzene	U	370	ug/kg	74.0	370
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	370	ug/kg	74.0	370
118-74-1	Hexachlorobenzene	U	370	ug/kg	74.0	370
85-01-8	Phenanthrene	U	37.0	ug/kg	11.1	37.0
120-12-7	Anthracene	U	37.0	ug/kg	7.40	37.0
84-74-2	Di-n-butylphthalate	U	370	ug/kg	74.0	370
206-44-0	Fluoranthene	U	37.0	ug/kg	11.1	37.0
85-68-7	Butylbenzylphthalate	U	370	ug/kg	74.0	370
56-55-3	Benzo(a)anthracene	U	37.0	ug/kg	11.1	37.0
91-94-1	3,3'-Dichlorobenzidine	U	370	ug/kg	111	370
218-01-9	Chrysene	U	37.0	ug/kg	11.1	37.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	370	ug/kg	74.0	370
117-84-0	Di-n-octylphthalate	U	370	ug/kg	74.0	370
205-99-2	Benzo(b)fluoranthene	U	37.0	ug/kg	11.1	37.0
207-08-9	Benzo(k)fluoranthene	U	37.0	ug/kg	11.1	37.0
50-32-8	Benzo(a)pyrene	U	37.0	ug/kg	11.1	37.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.0	ug/kg	11.1	37.0
53-70-3	Dibenzo(a,h)anthracene	U	37.0	ug/kg	11.1	37.0
191-24-2	Benzo(ghi)perylene	U	37.0	ug/kg	11.1	37.0
120-82-1	1,2,4-Trichlorobenzene	U	370	ug/kg	74.0	370

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	314	ug/kg		JA
57-10-3	n-Hexadecanoic acid	7.68	194	ug/kg	98	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585003	Date Received:	06/30/2009 09:15	%Moisture:	10.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6604	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 18:46	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.17 g	Final Volume:	1 mL
Data File:	s6g0215.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	7.92	204	ug/kg		J
1000130-90-5	2-Methyl-Z,Z-3,13-octadecadienol	8.33	380	ug/kg	90	NJ
	Unknown	8.47	870	ug/kg		J
	Unknown	8.9	221	ug/kg		J
	Unknown	9.09	149	ug/kg		J
	Unknown	9.24	594	ug/kg		J
	Unknown	9.29	239	ug/kg		J
	Unknown	9.35	232	ug/kg		J
	Unknown	9.45	1840	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.55	827	ug/kg	93	NJ
	Unknown	9.84	672	ug/kg		J
	Unknown	9.92	279	ug/kg		J
	Unknown	10.21	586	ug/kg		J
	Unknown	12.83	470	ug/kg		J
70038-20-9	7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet	13.57	444	ug/kg	90	NJ
	Unknown	13.63	493	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:00	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.11 g	**Final Volume:**	1 mL
Data File:	s6g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	356	ug/kg	71.1	356
108-95-2	Phenol	U	356	ug/kg	71.1	356
95-57-8	2-Chlorophenol	U	356	ug/kg	71.1	356
106-46-7	1,4-Dichlorobenzene	U	356	ug/kg	71.1	356
621-64-7	N-Nitrosodipropylamine	U	356	ug/kg	71.1	356
59-50-7	4-Chloro-3-methylphenol	U	356	ug/kg	71.1	356
83-32-9	Acenaphthene	U	35.6	ug/kg	11.7	35.6
121-14-2	2,4-Dinitrotoluene	U	356	ug/kg	35.6	356
100-02-7	4-Nitrophenol	U	356	ug/kg	117	356
87-86-5	Pentachlorophenol	U	356	ug/kg	88.9	356
129-00-0	Pyrene	U	35.6	ug/kg	10.7	35.6
110-86-1	Pyridine	U	356	ug/kg	71.1	356
62-53-3	Aniline	U	356	ug/kg	107	356
111-44-4	bis(2-Chloroethyl) ether	U	356	ug/kg	71.1	356
541-73-1	1,3-Dichlorobenzene	U	356	ug/kg	71.1	356
100-51-6	Benzyl alcohol	U	356	ug/kg	107	356
95-50-1	1,2-Dichlorobenzene	U	356	ug/kg	71.1	356
108-60-1	bis(2-Chloroisopropyl)ether	U	356	ug/kg	71.1	356
95-48-7	o-Cresol	U	356	ug/kg	71.1	356
65794-96-9	m,p-Cresols	U	356	ug/kg	107	356
67-72-1	Hexachloroethane	U	356	ug/kg	71.1	356
98-95-3	Nitrobenzene	U	356	ug/kg	71.1	356
78-59-1	Isophorone	U	356	ug/kg	71.1	356
88-75-5	2-Nitrophenol	U	356	ug/kg	71.1	356
105-67-9	2,4-Dimethylphenol	U	356	ug/kg	124	356
111-91-1	bis(2-Chloroethoxy)methane	U	356	ug/kg	71.1	356
120-83-2	2,4-Dichlorophenol	U	356	ug/kg	71.1	356
65-85-0	Benzoic acid	U	711	ug/kg	178	711
91-20-3	Naphthalene	U	35.6	ug/kg	10.7	35.6
106-47-8	4-Chloroaniline	U	356	ug/kg	71.1	356
87-68-3	Hexachlorobutadiene	U	356	ug/kg	71.1	356
91-57-6	2-Methylnaphthalene	U	35.6	ug/kg	7.11	35.6
77-47-4	Hexachlorocyclopentadiene	U	356	ug/kg	71.1	356
88-06-2	2,4,6-Trichlorophenol	U	356	ug/kg	71.1	356
95-95-4	2,4,5-Trichlorophenol	U	356	ug/kg	71.1	356
91-58-7	2-Chloronaphthalene	U	35.6	ug/kg	11.7	35.6
88-74-4	2-Nitroaniline	U	356	ug/kg	71.1	356
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	356	ug/kg	71.1	356

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:00	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.11 g	**Final Volume:**	1 mL
Data File:	s6g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	356	ug/kg	71.1	356
606-20-2	2,6-Dinitrotoluene	U	356	ug/kg	35.6	356
208-96-8	Acenaphthylene	U	35.6	ug/kg	10.7	35.6
51-28-5	2,4-Dinitrophenol	U	711	ug/kg	135	711
132-64-9	Dibenzofuran	U	356	ug/kg	71.1	356
84-66-2	Diethylphthalate	U	356	ug/kg	71.1	356
86-73-7	Fluorene	U	35.6	ug/kg	10.7	35.6
7005-72-3	4-Chlorophenylphenylether	U	356	ug/kg	71.1	356
534-52-1	2-Methyl-4,6-dinitrophenol	U	356	ug/kg	71.1	356
100-01-6	4-Nitroaniline	U	356	ug/kg	107	356
	p-Nitroaniline					
122-39-4	Diphenylamine	U	356	ug/kg	71.1	356
122-66-7	Azobenzene	U	356	ug/kg	71.1	356
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	356	ug/kg	71.1	356
118-74-1	Hexachlorobenzene	U	356	ug/kg	71.1	356
85-01-8	Phenanthrene	U	35.6	ug/kg	10.7	35.6
120-12-7	Anthracene	U	35.6	ug/kg	7.11	35.6
84-74-2	Di-n-butylphthalate	U	356	ug/kg	71.1	356
206-44-0	Fluoranthene	U	35.6	ug/kg	10.7	35.6
85-68-7	Butylbenzylphthalate	U	356	ug/kg	71.1	356
56-55-3	Benzo(a)anthracene	U	35.6	ug/kg	10.7	35.6
91-94-1	3,3'-Dichlorobenzidine	U	356	ug/kg	107	356
218-01-9	Chrysene	U	35.6	ug/kg	10.7	35.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	356	ug/kg	71.1	356
117-84-0	Di-n-octylphthalate	U	356	ug/kg	71.1	356
205-99-2	Benzo(b)fluoranthene	U	35.6	ug/kg	10.7	35.6
207-08-9	Benzo(k)fluoranthene	U	35.6	ug/kg	10.7	35.6
50-32-8	Benzo(a)pyrene	U	35.6	ug/kg	10.7	35.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.6	ug/kg	10.7	35.6
53-70-3	Dibenzo(a,h)anthracene	U	35.6	ug/kg	10.7	35.6
191-24-2	Benzo(ghi)perylene	U	35.6	ug/kg	10.7	35.6
120-82-1	1,2,4-Trichlorobenzene	U	356	ug/kg	71.1	356

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	312	ug/kg		JA
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.52	196	ug/kg	94	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:00	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.11 g	**Final Volume:**	1 mL
Data File:	s6g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	9.82	162	ug/kg		J
	Unknown	10.33	166	ug/kg		J

QC Summary

Surrogate Recovery Report

SDG Number: 09-2506

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201873125	MB for batch 881962	65	70	65	68	57	90
1201873126	LCS for batch 881962	66	65	70	70	61	81
232585001	CAMO-09-6605	44	49	45	46	53	72
232585002	CAMO-09-6603	59	67	60	67	60	75
232585003	CAMO-09-6604	46	49	43	49	47	53

Surrogate		Acceptance Limits
2FP	= 2-Fluorophenol	(35%-96%)
PHL	= Phenol-d5	(36%-96%)
NBZ	= Nitrobenzene-d5	(34%-104%)
FBP	= 2-Fluorobiphenyl	(36%-100%)
TBP	= 2,4,6-Tribromophenol	(37%-106%)
TPH	= p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: LCS for batch 881962
Lab Sample ID: 1201873126
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 16:54
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1130	68	31-95
108-95-2	LCS	Phenol	1670	0.0	1090	65	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1160	69	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	1090	65	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1140	68	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1160	70	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1100	66	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1170	70	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1070	64	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	966	58	38-116
129-00-0	LCS	Pyrene	1670	0.0	1220	73	43-108
110-86-1	LCS	Pyridine	1670	0.0	1100	66	13-129
62-53-3	LCS	Aniline	1670	0.0	1300	78	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1130	68	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	1100	66	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	727	44	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	1160	70	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1290	77	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1150	69	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1300	78	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	1080	65	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1210	73	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: LCS for batch 881962
Lab Sample ID: 1201873126
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/02/2009 16:54
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1190	72	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1200	72	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1180	71	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1200	72	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1160	70	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	1060	64	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1030	62	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1210	72	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1130	68	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1260	76	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1060	64	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1040	62	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1180	71	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1160	69	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1230	74	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1310	79	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1170	70	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1180	71	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1180	71	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	818	49	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1190	71	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1200	72	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 881962
Matrix: SOIL
Lab Sample ID: 1201873126
Instrument: MSD6.I
Analysis Date: 07/02/2009 16:54
Dilution: 1
Analyst: JMB3
Prep Batch ID: 881962
Inj. Vol: .5 uL
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1040	62	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1150	69	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	993	60	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	1390	84	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1200	72	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1280	77	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1130	68	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1150	69	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1120	67	45-107
120-12-7	LCS	Anthracene	1670	0.0	1170	70	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1250	75	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1180	71	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1310	79	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1170	70	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1200	72	45-98
218-01-9	LCS	Chrysene	1670	0.0	1240	74	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1360	81	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1340	81	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1210	73	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1280	77	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1250	75	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1200	72	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 881962 **Matrix:** SOIL

Lab Sample ID: 1201873126

Instrument: MSD6.I **Analysis Date:** 07/02/2009 16:54 **Dilution:** 1

Analyst: JMB3 **Prep Batch ID** 881962

Inj. Vol: .5 uL **Batch ID:** 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1190	71	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1170	70	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1170	70	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-9946MS
Lab Sample ID: 1201873127
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:30
Prep Batch ID: 881962
Batch ID: 881964
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	2040	0.00	U	888	44	32-90
108-95-2	MS	Phenol	2040	0.00	U	911	45	32-105
95-57-8	MS	2-Chlorophenol	2040	0.00	U	915	45	33-106
106-46-7	MS	1,4-Dichlorobenzene	2040	0.00	U	457	22 *	33-95
621-64-7	MS	N-Nitrosodipropylamine	2040	0.00	U	881	43	31-109
59-50-7	MS	4-Chloro-3-methylphenol	2040	0.00	U	1120	55	38-119
83-32-9	MS	Acenaphthene	2040	0.00	U	929	46	39-100
121-14-2	MS	2,4-Dinitrotoluene	2040	0.00	U	1130	56	42-107
100-02-7	MS	4-Nitrophenol	2040	0.00	U	1330	65	24-120
87-86-5	MS	Pentachlorophenol	2040	0.00	U	1040	51	26-121
129-00-0	MS	Pyrene	2040	0.00	U	1130	55	34-120
110-86-1	MS	Pyridine	2040	0.00	U	845	41	30-95
62-53-3	MS	Aniline	2040	0.00	U	752	37	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	2040	0.00	U	824	40	34-101
541-73-1	MS	1,3-Dichlorobenzene	2040	0.00	U	427	21 *	31-97
100-51-6	MS	Benzyl alcohol	2040	0.00	U	1900	93	17-120
95-50-1	MS	1,2-Dichlorobenzene	2040	0.00	U	555	27 *	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	2040	0.00	U	882	43	32-113
95-48-7	MS	o-Cresol	2040	0.00	U	1380	68	31-119
65794-96-9	MS	m,p-Cresols	2040	0.00	U	1130	55	35-125
67-72-1	MS	Hexachloroethane	2040	0.00	U	354	17 *	30-100
98-95-3	MS	Nitrobenzene	2040	0.00	U	940	46	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-9946MS
Lab Sample ID: 1201873127
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:30
Prep Batch ID: 881962
Batch ID: 881964

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	2040	0.00	U	1000	49	34-110
88-75-5	MS	2-Nitrophenol	2040	0.00	U	941	46	32-108
105-67-9	MS	2,4-Dimethylphenol	2040	0.00	U	903	44	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	2040	0.00	U	966	47	35-108
120-83-2	MS	2,4-Dichlorophenol	2040	0.00	U	1010	50	38-110
65-85-0	MS	Benzoic acid	2040	0.00	U	913	45	18-134
91-20-3	MS	Naphthalene	2040	0.00	U	729	36	31-105
106-47-8	MS	4-Chloroaniline	2040	0.00	U	975	48	29-123
87-68-3	MS	Hexachlorobutadiene	2040	0.00	U	516	25 *	31-109
91-57-6	MS	2-Methylnaphthalene	2040	0.00	U	935	46	32-110
77-47-4	MS	Hexachlorocyclopentadiene	2040	0.00	U	461	23	21-122
88-06-2	MS	2,4,6-Trichlorophenol	2040	0.00	U	981	48	37-108
95-95-4	MS	2,4,5-Trichlorophenol	2040	0.00	U	1070	52	37-116
91-58-7	MS	2-Chloronaphthalene	2040	0.00	U	922	45	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	2040	0.00	U	1160	57	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	2040	0.00	U	1260	62	39-117
131-11-3	MS	Dimethylphthalate	2040	0.00	U	1080	53	41-105
606-20-2	MS	2,6-Dinitrotoluene	2040	0.00	U	1090	54	41-103
208-96-8	MS	Acenaphthylene	2040	0.00	U	1000	49	41-103
51-28-5	MS	2,4-Dinitrophenol	2040	0.00	U	600	29	25-104
132-64-9	MS	Dibenzofuran	2040	0.00	U	1040	51	40-114
84-66-2	MS	Diethylphthalate	2040	0.00	U	1120	55	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-9946MS
Lab Sample ID: 1201873127
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:30
Prep Batch ID: 881962
Batch ID: 881964
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	2040	0.00	U	946	46 *	48-99
7005-72-3	MS	4-Chlorophenylphenylether	2040	0.00	U	1010	50	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	2040	0.00	U	847	42	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	2040	0.00	U	1390	68	35-139
122-39-4	MS	Diphenylamine	2040	0.00	U	965	47	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	2040	0.00	U	1140	56	37-118
101-55-3	MS	4-Bromophenylphenylether	2040	0.00	U	1020	50	39-112
118-74-1	MS	Hexachlorobenzene	2040	0.00	U	1050	51	38-113
85-01-8	MS	Phenanthrene	2040	0.00	U	1060	52	38-110
120-12-7	MS	Anthracene	2040	0.00	U	1100	54	38-112
84-74-2	MS	Di-n-butylphthalate	2040	0.00	U	1170	58	42-119
206-44-0	MS	Fluoranthene	2040	0.00	U	1130	55	38-119
85-68-7	MS	Butylbenzylphthalate	2040	0.00	U	1200	59	39-126
56-55-3	MS	Benzo(a)anthracene	2040	0.00	U	1100	54	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	2040	0.00	U	533	26 *	35-106
218-01-9	MS	Chrysene	2040	0.00	U	1120	55	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	2040	0.00	U	1230	61	40-125
117-84-0	MS	Di-n-octylphthalate	2040	0.00	U	1210	59	30-147
205-99-2	MS	Benzo(b)fluoranthene	2040	0.00	U	1070	53	38-117
207-08-9	MS	Benzo(k)fluoranthene	2040	0.00	U	1200	59	39-120
50-32-8	MS	Benzo(a)pyrene	2040	0.00	U	1140	56	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	2040	0.00	U	1070	53	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	09-2506	**Sample Type:**	Matrix Spike
Client ID:	CAMO-09-9946MS	**Matrix:**	R
Lab Sample ID:	1201873127	**%Moisture:**	18.7
Instrument:	MSD6.I	**Analysis Date:**	07/02/2009 19:30
Analyst:	JMB3	**Prep Batch ID:**	881962
Inj. Vol:	.5 uL	**Batch ID:**	881964

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	2040	0.00	U	1070	52	32-124
191-24-2	MS	Benzo(ghi)perylene	2040	0.00	U	993	49	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	2040	0.00	U	696	34	31-105

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Prep Batch ID: 881962
Batch ID: 881964
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD	N-Methyl-N-nitrosomethylam	2040	0.00	U	1130	55	32-90	24	0-30
108-95-2	MSD	Phenol	2040	0.00	U	1190	58	32-105	27	0-30
95-57-8	MSD	2-Chlorophenol	2040	0.00	U	1190	58	33-106	26	0-30
106-46-7	MSD	1,4-Dichlorobenzene	2040	0.00	U	513	25 *	33-95	12	0-30
621-64-7	MSD	N-Nitrosodipropylamine	2040	0.00	U	1140	56	31-109	25	0-30
59-50-7	MSD	4-Chloro-3-methylphenol	2040	0.00	U	1360	67	38-119	19	0-30
83-32-9	MSD	Acenaphthene	2040	0.00	U	1120	55	39-100	19	0-30
121-14-2	MSD	2,4-Dinitrotoluene	2040	0.00	U	1300	64	42-107	14	0-30
100-02-7	MSD	4-Nitrophenol	2040	0.00	U	1520	75	24-120	14	0-30
87-86-5	MSD	Pentachlorophenol	2040	0.00	U	1260	62	26-121	19	0-30
129-00-0	MSD	Pyrene	2040	0.00	U	1300	64	34-120	14	0-30
110-86-1	MSD	Pyridine	2040	0.00	U	982	48	30-95	15	0-30
62-53-3	MSD	Aniline	2040	0.00	U	918	45	34-111	20	0-30
111-44-4	MSD	bis(2-Chloroethyl) ether	2040	0.00	U	1030	50	34-101	22	0-30
541-73-1	MSD	1,3-Dichlorobenzene	2040	0.00	U	475	23 *	31-97	11	0-30
100-51-6	MSD	Benzyl alcohol	2040	0.00	U	315	15 *	17-120	143 *	0-30
95-50-1	MSD	1,2-Dichlorobenzene	2040	0.00	U	627	31 *	32-102	12	0-30
108-60-1	MSD	bis(2-Chloroisopropyl)ether	2040	0.00	U	1070	53	32-113	19	0-30
95-48-7	MSD	o-Cresol	2040	0.00	U	1270	62	31-119	8	0-30
65794-96-9	MSD	m,p-Cresols	2040	0.00	U	1390	68	35-125	21	0-30
67-72-1	MSD	Hexachloroethane	2040	0.00	U	375	18 *	30-100	6	0-30
98-95-3	MSD	Nitrobenzene	2040	0.00	U	1170	57	33-108	22	0-30

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506 **Sample Type:** Matrix Spike Duplicate
Client ID: CAMO-09-9946MSD **Matrix:** R
Lab Sample ID: 1201873128 **%Moisture:** 18.7
Instrument: MSD6.I **Analysis Date:** 07/02/2009 19:53 **Dilution:** 1
Analyst: JMB3 **Prep Batch ID:** 881962
Inj. Vol: .5 uL **Batch ID:** 881964

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD Isophorone	2040	0.00	U	1230	60	34-110	21	0-30
88-75-5	MSD 2-Nitrophenol	2040	0.00	U	1150	57	32-108	20	0-30
105-67-9	MSD 2,4-Dimethylphenol	2040	0.00	U	1100	54	32-115	20	0-30
111-91-1	MSD bis(2-Chloroethoxy)methane	2040	0.00	U	1190	59	35-108	21	0-30
120-83-2	MSD 2,4-Dichlorophenol	2040	0.00	U	1270	62	38-110	22	0-30
65-85-0	MSD Benzoic acid	2040	0.00	U	1120	55	18-134	20	0-30
91-20-3	MSD Naphthalene	2040	0.00	U	868	43	31-105	17	0-30
106-47-8	MSD 4-Chloroaniline	2040	0.00	U	1200	59	29-123	21	0-30
87-68-3	MSD Hexachlorobutadiene	2040	0.00	U	576	28 *	31-109	11	0-30
91-57-6	MSD 2-Methylnaphthalene	2040	0.00	U	1120	55	32-110	18	0-30
77-47-4	MSD Hexachlorocyclopentadiene	2040	0.00	U	602	30	21-122	27	0-30
88-06-2	MSD 2,4,6-Trichlorophenol	2040	0.00	U	1210	59	37-108	21	0-30
95-95-4	MSD 2,4,5-Trichlorophenol	2040	0.00	U	1270	62	37-116	17	0-30
91-58-7	MSD 2-Chloronaphthalene	2040	0.00	U	1120	55	37-103	19	0-30
88-74-4	MSD 2-Nitroaniline *o-Nitroaniline*	2040	0.00	U	1400	69	36-115	19	0-30
99-09-2	MSD 3-Nitroaniline *m-Nitroaniline*	2040	0.00	U	1520	74	39-117	19	0-30
131-11-3	MSD Dimethylphthalate	2040	0.00	U	1290	63	41-105	17	0-30
606-20-2	MSD 2,6-Dinitrotoluene	2040	0.00	U	1300	64	41-103	17	0-30
208-96-8	MSD Acenaphthylene	2040	0.00	U	1210	59	41-103	19	0-30
51-28-5	MSD 2,4-Dinitrophenol	2040	0.00	U	869	43	25-104	37 *	0-30
132-64-9	MSD Dibenzofuran	2040	0.00	U	1240	61	40-114	18	0-30
84-66-2	MSD Diethylphthalate	2040	0.00	U	1310	64	43-110	15	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
% Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	2040	0.00	U	1110	55	48-99	16	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	2040	0.00	U	1210	59	42-111	18	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	2040	0.00	U	1080	53	19-118	25	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	2040	0.00	U	1620	80	35-139	15	0-30
122-39-4	MSD	Diphenylamine	2040	0.00	U	1130	56	41-112	16	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	2040	0.00	U	1330	65	37-118	16	0-30
101-55-3	MSD	4-Bromophenylphenylether	2040	0.00	U	1220	60	39-112	17	0-30
118-74-1	MSD	Hexachlorobenzene	2040	0.00	U	1240	61	38-113	17	0-30
85-01-8	MSD	Phenanthrene	2040	0.00	U	1260	62	38-110	17	0-30
120-12-7	MSD	Anthracene	2040	0.00	U	1250	61	38-112	13	0-30
84-74-2	MSD	Di-n-butylphthalate	2040	0.00	U	1340	66	42-119	13	0-30
206-44-0	MSD	Fluoranthene	2040	0.00	U	1290	63	38-119	13	0-30
85-68-7	MSD	Butylbenzylphthalate	2040	0.00	U	1380	68	39-126	14	0-30
56-55-3	MSD	Benzo(a)anthracene	2040	0.00	U	1280	63	39-110	15	0-30
91-94-1	MSD	3,3'-Dichlorobenzidine	2040	0.00	U	643	32 *	35-106	19	0-30
218-01-9	MSD	Chrysene	2040	0.00	U	1310	64	39-109	16	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	2040	0.00	U	1430	70	40-125	15	0-30
117-84-0	MSD	Di-n-octylphthalate	2040	0.00	U	1400	69	30-147	15	0-30
205-99-2	MSD	Benzo(b)fluoranthene	2040	0.00	U	1350	66	38-117	23	0-30
207-08-9	MSD	Benzo(k)fluoranthene	2040	0.00	U	1280	63	39-120	7	0-30
50-32-8	MSD	Benzo(a)pyrene	2040	0.00	U	1330	65	40-115	15	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	2040	0.00	U	1330	65	32-120	21	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: CAMO-09-9946MSD
Lab Sample ID: 1201873128
Instrument: MSD6.I
Analyst: JMB3
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 18.7
Analysis Date: 07/02/2009 19:53
Dilution: 1
Prep Batch ID: 881962
Batch ID: 881964

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD	Dibenzo(a,h)anthracene	2040	0.00	U	1360	67	32-124	25	0-30
191-24-2	MSD	Benzo(ghi)perylene	2040	0.00	U	1260	62	28-119	24	0-30
120-82-1	MSD	1,2,4-Trichlorobenzene	2040	0.00	U	809	40	31-105	15	0-30

Method Blank Summary

SDG Number:	09-2506	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881962	Instrument ID:	MSD6.I	Data File:	s6g0209-1.d
Lab Sample ID:	1201873125	Prep Date:	07/02/2009 13:47	Analyzed:	07/02/09 16:31
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 881962	1201873126	s6g0210-1.d	07/02/09	1654
02 CAMO-09-6605	232585001	s6g0213.d	07/02/09	1800
03 CAMO-09-6603	232585002	s6g0214.d	07/02/09	1823
04 CAMO-09-6604	232585003	s6g0215.d	07/02/09	1846

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2506

Instrument ID: MSD6.I **Injection Date/Time:** 02-JUL-09 15:10

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD6.i/s070209.b/s6g0205.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	57
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	47.2
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	50.9
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	7
275	10 - 30% of mass 198	24.1
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	74.7
442	Greater than 40% of mass 198	82.6
443	17 - 23% of mass 442	19.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090626-05.3	/chem/MSD6.i/s070209.b/s6g020	02-JUL-09 15:23
APCVS	WBN090619-01.2	/chem/MSD6.i/s070209.b/s6g020	02-JUL-09 15:46
SBLK01	1201873125	/chem/MSD6.i/s070209.b/s6g020	02-JUL-09 16:31
SBLK01LCS	1201873126	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 16:54
CAMO-09-6605	232585001	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 18:00
CAMO-09-6603	232585002	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 18:23
CAMO-09-6604	232585003	/chem/MSD6.i/s070209.b/s6g021	02-JUL-09 18:46

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2506

Instrument ID: MSD6.I **Injection Date/Time:** 25-JUN-09 17:33

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD6.i/s062509.b/s6f2501.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	50.8
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	43.7
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	49.2
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	24.6
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	75.6
442	Greater than 40% of mass 198	95
443	17 - 23% of mass 442	19.1

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICAL	WBN090602-08	/chem/MSD6.i/s062509.b/s6f2503	25-JUN-09 18:09
MEGAICAL	WBN090602-07	/chem/MSD6.i/s062509.b/s6f2504	25-JUN-09 18:37
MEGAICAL	WBN090602-06	/chem/MSD6.i/s062509.b/s6f2505	25-JUN-09 19:04
MEGAICAL	WBN090602-05.1	/chem/MSD6.i/s062509.b/s6f2506	25-JUN-09 19:33
MEGAICAL	WBN090602-04	/chem/MSD6.i/s062509.b/s6f2507	25-JUN-09 20:01
MEGAICAL	WBN090602-03	/chem/MSD6.i/s062509.b/s6f2508	25-JUN-09 20:29
MEGAICAL	WBN090602-02	/chem/MSD6.i/s062509.b/s6f2509	25-JUN-09 20:56
MEGAICAL	WBN090602-01	/chem/MSD6.i/s062509.b/s6f2510	25-JUN-09 21:25
APICAL	WBN090528-07	/chem/MSD6.i/s062509.b/s6f2511	25-JUN-09 21:54
APICAL	WBN090528-06	/chem/MSD6.i/s062509.b/s6f2512	25-JUN-09 22:17
APICAL	WBN090528-05.1	/chem/MSD6.i/s062509.b/s6f2513	25-JUN-09 22:39
APICAL	WBN090528-04	/chem/MSD6.i/s062509.b/s6f2514	25-JUN-09 23:02
APICAL	WBN090528-03	/chem/MSD6.i/s062509.b/s6f2515	25-JUN-09 23:24
APICAL	WBN090528-02	/chem/MSD6.i/s062509.b/s6f2516	25-JUN-09 23:47
APICAL	WBN090528-01	/chem/MSD6.i/s062509.b/s6f2517	26-JUN-09 00:08
MEGAICV	WBN090602-09.1	/chem/MSD6.i/s062509.b/s6f2525	26-JUN-09 03:11

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2506

Instrument ID: MSD6.I **Injection Date/Time:** 25-JUN-09 17:33

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD6.i/s062509.b/s6f2501.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	50.8
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	43.7
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	49.2
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	24.6
365	Greater than 1% of mass 198	3.1
441	Present, but less than mass 443	75.6
442	Greater than 40% of mass 198	95
443	17 - 23% of mass 442	19.1

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
APICV	WBN090528-08.1	/chem/MSD6.i/s062509.b/s6f2526	26-JUN-09 03:39

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 09-2506

Instrument: MSD6.1

STD Analysis Time: 02-JUL-09 15:23

GC Column: J&W DB-5MS

Data File: s6g0206.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	532813		4	1990426		4.88	1102206		6.13	1854401		7.32	1763017		9.75	1624774		11.5
Upper Limit	1065626		4.5	3980852		5.38	2204412		6.63	3708802		7.82	3526034		10.3	3249548		12.0
Lower Limit	266407		3.5	995213		4.38	551103		5.63	927201		6.82	881509		9.25	812387		11.0
Sample ID																		
BLK01	385534		4	1450103		4.87	843657		6.13	1460742		7.31	1292833		9.74	1018273		11.5
BLK01LCS	373584		4	1481824		4.87	843469		6.13	1482578		7.31	1335253		9.74	1213021		11.5
CAMO-09-6605	444558		3.99	1630929		4.87	925439		6.13	1601030		7.31	1511030		9.74	1318961		11.5
CAMO-09-6603	417895		4	1551303		4.87	896053		6.13	1540189		7.31	1380858		9.75	1005109		11.5
CAMO-09-6604	396970		4	1524317		4.87	865079		6.13	1493204		7.31	1377462		9.75	1282398		11.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	7.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6603	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:23	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.22 g	**Final Volume:**	1 mL
Data File:	s6g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	357	ug/kg	71.4	357
108-95-2	Phenol	U	357	ug/kg	71.4	357
95-57-8	2-Chlorophenol	U	357	ug/kg	71.4	357
106-46-7	1,4-Dichlorobenzene	U	357	ug/kg	71.4	357
621-64-7	N-Nitrosodipropylamine	U	357	ug/kg	71.4	357
59-50-7	4-Chloro-3-methylphenol	U	357	ug/kg	71.4	357
83-32-9	Acenaphthene	U	35.7	ug/kg	11.8	35.7
121-14-2	2,4-Dinitrotoluene	U	357	ug/kg	35.7	357
100-02-7	4-Nitrophenol	U	357	ug/kg	118	357
87-86-5	Pentachlorophenol	U	357	ug/kg	89.2	357
129-00-0	Pyrene		66.1	ug/kg	10.7	35.7
110-86-1	Pyridine	U	357	ug/kg	71.4	357
62-53-3	Aniline	U	357	ug/kg	107	357
111-44-4	bis(2-Chloroethyl) ether	U	357	ug/kg	71.4	357
541-73-1	1,3-Dichlorobenzene	U	357	ug/kg	71.4	357
100-51-6	Benzyl alcohol	U	357	ug/kg	107	357
95-50-1	1,2-Dichlorobenzene	U	357	ug/kg	71.4	357
108-60-1	bis(2-Chloroisopropyl)ether	U	357	ug/kg	71.4	357
95-48-7	o-Cresol	U	357	ug/kg	71.4	357
65794-96-9	m,p-Cresols	U	357	ug/kg	107	357
67-72-1	Hexachloroethane	U	357	ug/kg	71.4	357
98-95-3	Nitrobenzene	U	357	ug/kg	71.4	357
78-59-1	Isophorone	U	357	ug/kg	71.4	357
88-75-5	2-Nitrophenol	U	357	ug/kg	71.4	357
105-67-9	2,4-Dimethylphenol	U	357	ug/kg	125	357
111-91-1	bis(2-Chloroethoxy)methane	U	357	ug/kg	71.4	357
120-83-2	2,4-Dichlorophenol	U	357	ug/kg	71.4	357
65-85-0	Benzoic acid	U	714	ug/kg	178	714
91-20-3	Naphthalene	U	35.7	ug/kg	10.7	35.7
106-47-8	4-Chloroaniline	U	357	ug/kg	71.4	357
87-68-3	Hexachlorobutadiene	U	357	ug/kg	71.4	357
91-57-6	2-Methylnaphthalene	U	35.7	ug/kg	7.14	35.7
77-47-4	Hexachlorocyclopentadiene	U	357	ug/kg	71.4	357
88-06-2	2,4,6-Trichlorophenol	U	357	ug/kg	71.4	357
95-95-4	2,4,5-Trichlorophenol	U	357	ug/kg	71.4	357
91-58-7	2-Chloronaphthalene	U	35.7	ug/kg	11.8	35.7
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	357	ug/kg	71.4	357
99-09-2	3-Nitroaniline	U	357	ug/kg	71.4	357

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	7.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6603	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:23	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.22 g	**Final Volume:**	1 mL
Data File:	s6g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	357	ug/kg	71.4	357
606-20-2	2,6-Dinitrotoluene	U	357	ug/kg	35.7	357
208-96-8	Acenaphthylene	U	35.7	ug/kg	10.7	35.7
51-28-5	2,4-Dinitrophenol	U	714	ug/kg	136	714
132-64-9	Dibenzofuran	U	357	ug/kg	71.4	357
84-66-2	Diethylphthalate	U	357	ug/kg	71.4	357
86-73-7	Fluorene	U	35.7	ug/kg	10.7	35.7
7005-72-3	4-Chlorophenylphenylether	U	357	ug/kg	71.4	357
534-52-1	2-Methyl-4,6-dinitrophenol	U	357	ug/kg	71.4	357
100-01-6	4-Nitroaniline	U	357	ug/kg	107	357
	p-Nitroaniline					
122-39-4	Diphenylamine	U	357	ug/kg	71.4	357
122-66-7	Azobenzene	U	357	ug/kg	71.4	357
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	357	ug/kg	71.4	357
118-74-1	Hexachlorobenzene	U	357	ug/kg	71.4	357
85-01-8	Phenanthrene	U	35.7	ug/kg	10.7	35.7
120-12-7	Anthracene	U	35.7	ug/kg	7.14	35.7
84-74-2	Di-n-butylphthalate	U	357	ug/kg	71.4	357
206-44-0	Fluoranthene		69.3	ug/kg	10.7	35.7
85-68-7	Butylbenzylphthalate	U	357	ug/kg	71.4	357
56-55-3	Benzo(a)anthracene	U	35.7	ug/kg	10.7	35.7
91-94-1	3,3'-Dichlorobenzidine	U	357	ug/kg	107	357
218-01-9	Chrysene		49.2	ug/kg	10.7	35.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	357	ug/kg	71.4	357
117-84-0	Di-n-octylphthalate	U	357	ug/kg	71.4	357
205-99-2	Benzo(b)fluoranthene		83.0	ug/kg	10.7	35.7
207-08-9	Benzo(k)fluoranthene	U	35.7	ug/kg	10.7	35.7
50-32-8	Benzo(a)pyrene		38.0	ug/kg	10.7	35.7
193-39-5	Indeno(1,2,3-cd)pyrene	J	22.3	ug/kg	10.7	35.7
53-70-3	Dibenzo(a,h)anthracene	U	35.7	ug/kg	10.7	35.7
191-24-2	Benzo(ghi)perylene	J	24.7	ug/kg	10.7	35.7
120-82-1	1,2,4-Trichlorobenzene	U	357	ug/kg	71.4	357

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1000197-14-1	4b,8-Dimethyl-2-isopropylphenanthrene, 4	8.11	522	ug/kg	95	NJ
	Unknown	8.32	680	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	7.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6603	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:23	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.22 g	**Final Volume:**	1 mL
Data File:	s6g0214.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.74	381	ug/kg		J
	Unknown	8.91	311	ug/kg		J
	Unknown	8.94	315	ug/kg		J
	Unknown	8.98	519	ug/kg		J
	Unknown	9.09	931	ug/kg		J
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.17	400	ug/kg	95	NJ
489-39-4	1H-Cycloprop[e]azulene, decahydro-1,1,7-	9.23	829	ug/kg	87	NJ
	Unknown	9.29	494	ug/kg		J
	Unknown	9.45	1650	ug/kg		J
	Unknown	9.55	2500	ug/kg		J
	Unknown	9.66	608	ug/kg		J
	Unknown	9.71	596	ug/kg		J
	Unknown	9.85	1350	ug/kg		J
	Unknown	10.17	482	ug/kg		J
	Unknown	10.3	420	ug/kg		J
	Unknown	10.34	507	ug/kg		J
	Unknown	10.54	548	ug/kg		J
55030-21-2	Cyclohexane, 1,1'-(2-propyl-1,3-propaned	12.35	1220	ug/kg	89	NJ

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0214.d
Lab Smp Id: 232585002 Client Smp ID: CAMO-09-6603
Inj Date : 02-JUL-2009 18:23
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232585002|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2506.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.22000	weight of sample
M	7.28380	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	3.999	(1.000)	417895	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1551303	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	896053	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1540189	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1380858	40.0000	
* 98 Perylene-d12	264	11.492	11.492	(1.000)	1005109	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.796)	670770	59.0789	2110
$ 5 Phenol-d5	99	3.710	3.710	(0.928)	1013811	66.6566	2380
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	410812	29.8928	1070
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	766638	33.6865	1200
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.099)	199971	60.3668	2150
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	831862	37.7221	1350
79 Pyrene	202	8.598	8.598	(0.882)	63672	1.85092	66.0

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
76 Fluoranthene	202	8.381	8.381	(1.146)	67076	1.94101	69.3
92 Chrysene	228	9.769	9.769	(1.002)	43647	1.37811	49.2
95 Benzo(b)fluoranthene	252	10.951	10.951	(0.953)	55672	2.32569	83.0
97 Benzo(a)pyrene	252	11.410	11.410	(0.993)	22035	1.06391	38.0
99 Indeno(1,2,3-cd)pyrene	276	13.333	13.357	(1.160)	12284	0.62461	22.3(a)
101 Benzo(ghi)perylene	276	13.915	13.927	(1.211)	11988	0.69087	24.6(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s6g0214.d
Report Date: 07/02/2009 18:59
Lab. ID: 232585002 SampleType: SAMPLE
Injection Date: 02-JUL-2009 18:23
Operator: JMB3 Instrument: MSD6.i
Sample Info: |232585002|881964|1|SVM|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2506
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
1 N-Methyl-N-nitrosomethylamine				CAS#: 62-75-9		
74	32591	2.18	2.47	80-120	100	(T)
42	5959	2.19	2.47	87-147	18	(QT)
43	22822	2.17	2.47	22- 82	70	(T)
4 Aniline				CAS#: 62-53-3		
66	53487	3.71	3.78	80-120	100	(T)
93	17307	3.68	3.79	361-421	32	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	58462	4.36	4.24	80-120	100	(T)
42	41019	4.36	4.24	57-117	70	(T)
21 Nitrobenzene				CAS#: 98-95-3		
77	30472	3.96	4.38	80-120	100	(T)
65	7618	3.96	4.38	0- 46	25	(T)
123	740	4.06	4.38	13- 73	2	(QT)
22 Isophorone				CAS#: 78-59-1		
82	410812	4.36	4.53	80-120	100	(T)
138	100	4.55	4.53	0- 47	0	( )
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	11835	5.86	5.72	80-120	100	(T)
164	1101	5.86	5.72	4- 64	9	(T)
127	1415	5.86	5.72	9- 69	12	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
42 o-Nitroaniline			CAS#: 88-74-4			
65	18464	5.86	5.78	80-120	100	(T)
92	19518	5.86	5.78	29- 89	106	(QT)
138	1642	5.86	5.78	58-118	9	(QT)
43 Dimethylphthalate			CAS#: 131-11-3			
163	195911	6.13	5.89	80-120	100	(T)
164	896053	6.13	5.89	0- 41	457	(QT)
45 Acenaphthylene			CAS#: 208-96-8			
152	21316	5.71	6.03	80-120	100	(T)
151	23133	5.71	6.03	0- 50	109	(QT)
153	2767	5.71	6.03	0- 44	13	(T)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	116971	6.13	6.25	80-120	100	(T)
89	2994	6.13	6.25	50-110	3	(QT)
63	3362	6.13	6.25	31- 91	3	(QT)
53 Fluorene			CAS#: 86-73-7			
166	10325	6.73	6.55	80-120	100	(T)
165	11053	6.73	6.55	60-120	107	(T)
167	4507	6.73	6.55	0- 44	44	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	663	6.73	6.56	80-120	100	(T)
105	3888	6.71	6.56	15- 75	586	(QT)
51	1602	6.73	6.56	63-123	242	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	13743	6.73	6.91	80-120	100	(T)
141	95680	6.73	6.91	50-110	696	(QT)
250	28162	6.73	6.91	68-128	205	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	21998	7.33	7.33	80-120	100	( )
179	4024	7.33	7.33	0- 46	18	( )
176	3969	7.33	7.33	0- 50	18	( )
69 Anthracene			CAS#: 120-12-7			
178	21998	7.33	7.37	80-120	100	( )
179	4024	7.33	7.37	0- 47	18	( )
176	3969	7.33	7.37	0- 49	18	( )
76 Fluoranthene			CAS#: 206-44-0			
202	67076	8.38	8.38	80-120	100	( )
203	11740	8.38	8.38	0- 48	18	( )
101	10344	8.38	8.38	0- 43	15	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
79 Pyrene		CAS#: 129-00-0				
202	63672	8.60	8.60	80-120	100	( )
200	13073	8.60	8.60	0- 51	21	( )
101	10365	8.60	8.60	0- 45	16	( )
89 Benzo(a)anthracene		CAS#: 56-55-3				
228	26495	9.73	9.73	80-120	100	( )
226	7876	9.73	9.73	0- 56	30	( )
229	10219	9.73	9.73	0- 50	39	( )
92 Chrysene		CAS#: 218-01-9				
228	43647	9.77	9.77	80-120	100	( )
229	17399	9.76	9.77	0- 51	40	( )
226	14742	9.77	9.77	0- 59	34	( )
95 Benzo(b)fluoranthene		CAS#: 205-99-2				
252	55672	10.95	10.95	80-120	100	( )
253	13338	10.95	10.95	0- 52	24	( )
125	9638	10.95	10.95	0- 42	17	( )
96 Benzo(k)fluoranthene		CAS#: 207-08-9				
252	55672	10.95	10.99	80-120	100	( )
253	13338	10.95	10.99	0- 52	24	( )
125	9680	10.95	10.99	0- 42	17	( )
97 Benzo(a)pyrene		CAS#: 50-32-8				
252	22035	11.41	11.41	80-120	100	( )
253	6293	11.40	11.41	0- 52	29	( )
125	2738	11.40	11.41	0- 42	12	( )
99 Indeno(1,2,3-cd)pyrene		CAS#: 193-39-5				
276	12284	13.33	13.36	80-120	100	( )
138	3216	13.34	13.36	2- 62	26	( )
101 Benzo(ghi)perylene		CAS#: 191-24-2				
276	11988	13.92	13.93	80-120	100	( )
138	3827	13.91	13.93	0- 57	32	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0214.d
Lab Smp Id: 232585002 Client Smp ID: CAMO-09-6603
Inj Date : 02-JUL-2009 18:23
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232585002|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2506.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.22000	weight of sample
M	7.28380	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 67 Phenanthrene-d10	7.310	4077726	40.000
* 91 Chrysene-d12	9.745	8135141	40.000
* 98 Perylene-d12	11.492	3329489	40.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

4b,8-Dimethyl-2-isopropylphenanthrene, 4 CAS #: 100019/-14-1

8.110	1489603	14.6120946	522	95	NTST05.L	963/3	67

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
8.316	1943278	19.0623616	680	0		0	67
Unknown				CAS #:			
8.739	2169556	10.6675751	381	0		0	91
Unknown				CAS #:			
8.910	1774960	8.72737042	311	0		0	91
Unknown				CAS #:			
8.939	1795926	8.83046074	315	0		0	91
Unknown				CAS #:			
8.980	2956112	14.5350231	519	0		0	91
Unknown				CAS #:			
9.086	5304570	26.0822518	931	0		0	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1235-74-1			
9.169	2279435	11.2078453	400	95	NIST05.L	133618	91
1H-Cycloprop[e]azulene, decahydro-1,1,7-				CAS #: 489-39-4			
9.233	4723006	23.2227337	829	87	NIST05.L	60078	91
Unknown				CAS #:			
9.286	2815162	13.8419792	494	0		0	91
Unknown				CAS #:			
9.451	9403050	46.2342263	1650	0		0	91
Unknown				CAS #:			
9.545	14222583	69.9315812	2500	0		0	91
Unknown				CAS #:			
9.663	3465182	17.0380905	608	0		0	91
Unknown				CAS #:			
9.710	3397790	16.7067271	596	0		0	91
Unknown				CAS #:			
9.851	7697827	37.8497474	1350	0		0	91
Unknown				CAS #:			
10.169	2745749	13.5006793	482	0		0	91

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown				CAS #:			
10.304	2391259	11.7576735	420	0		0	91
Unknown				CAS #:			
10.339	2886748	14.1939643	506	0		0	91
Unknown				CAS #:			
10.539	3123509	15.3581054	548	0		0	91
Cyclohexane, 1,1'-(2-propyl-1,3-propaned				CAS #: 55030-21-2			
12.351	2852424	34.2686146	1220	89	NIST05.L	92245	98

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Sample Info: |232585002|88196411|SVMI1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD6.i

Operator: JMB3

Column diameter: 0.20

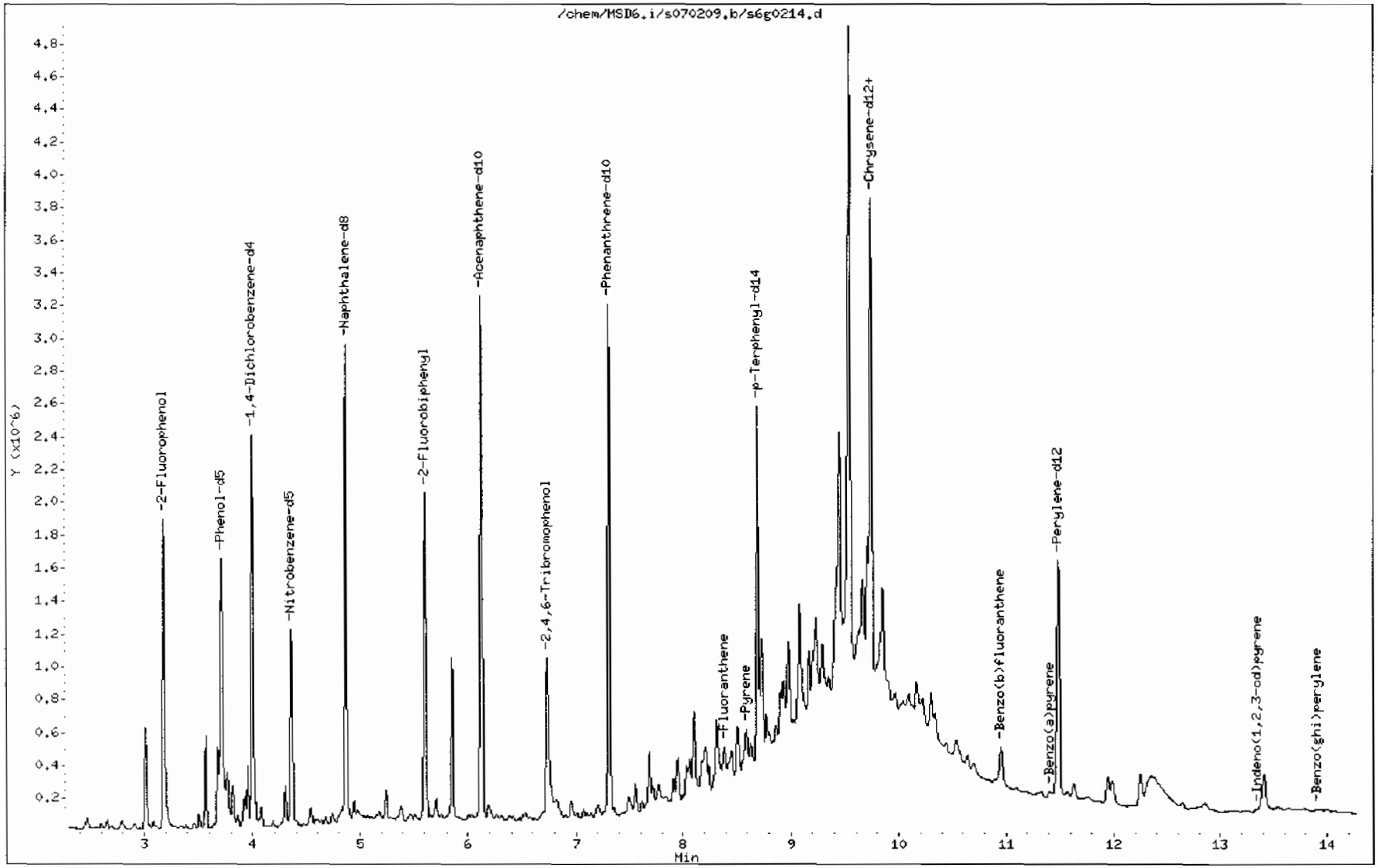

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: 1232585002188196411SVM11LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 66.0 ug/Kg

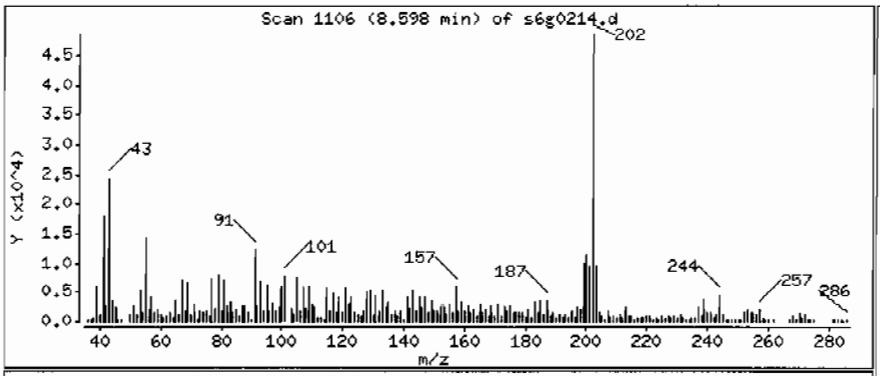

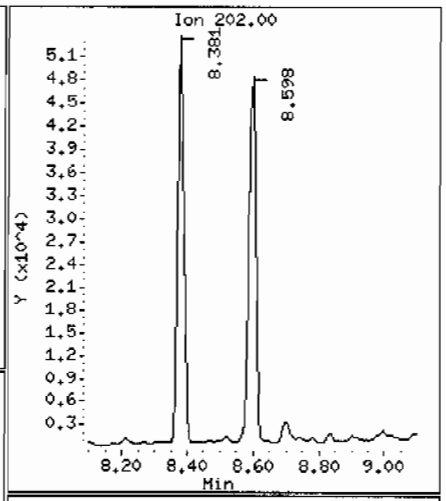

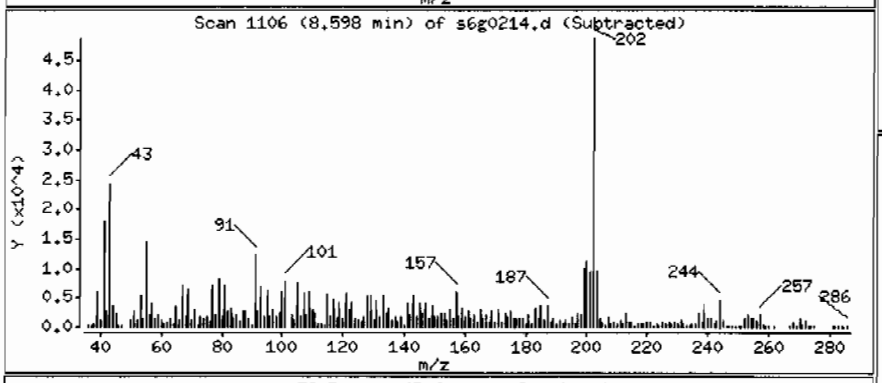

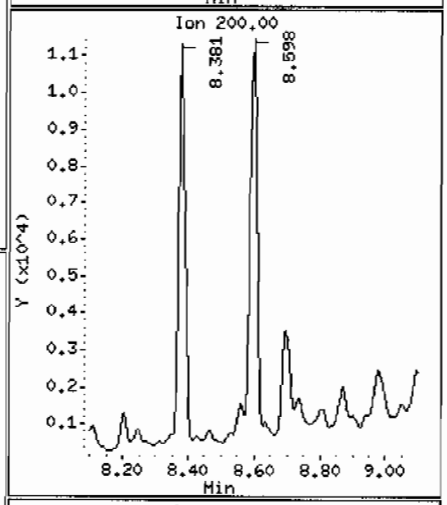

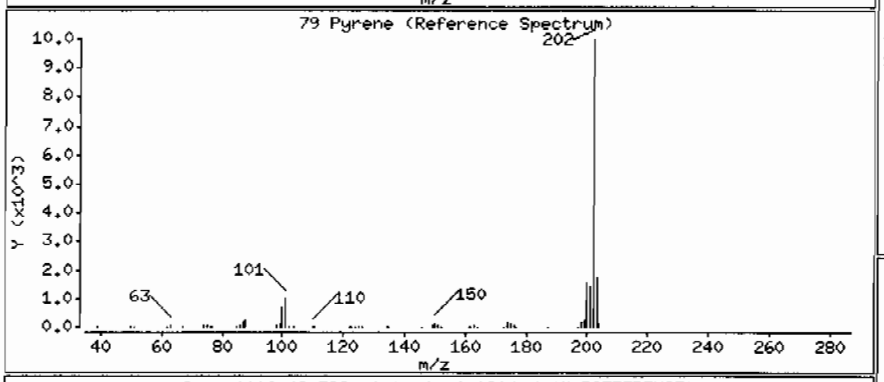

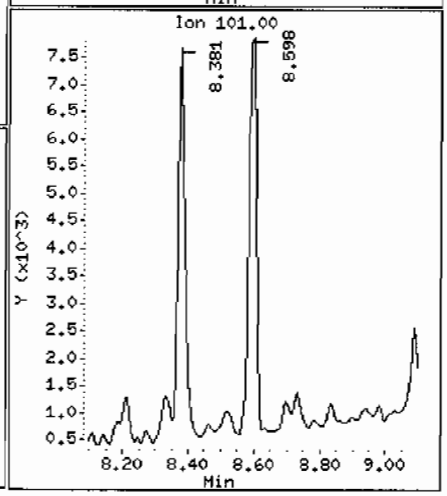

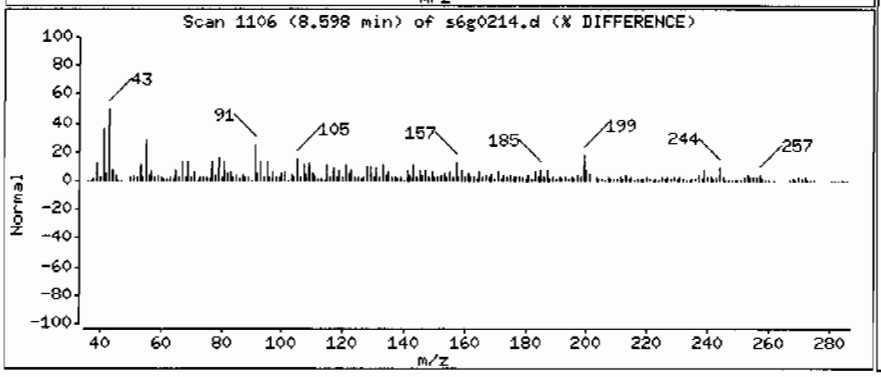

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: 1232585002188196411|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 69.3 ug/Kg

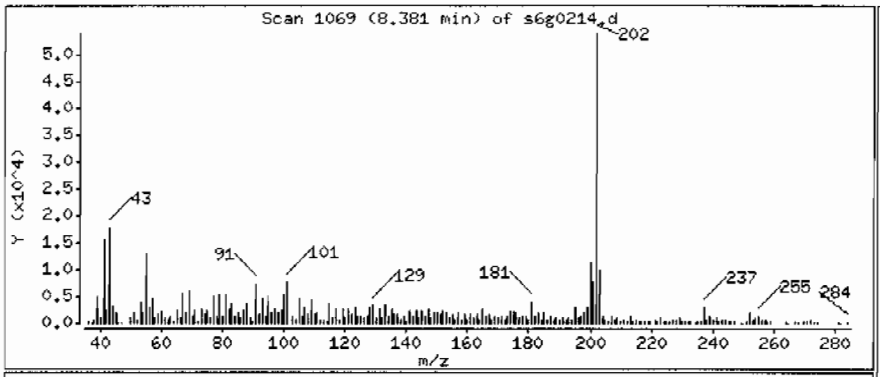

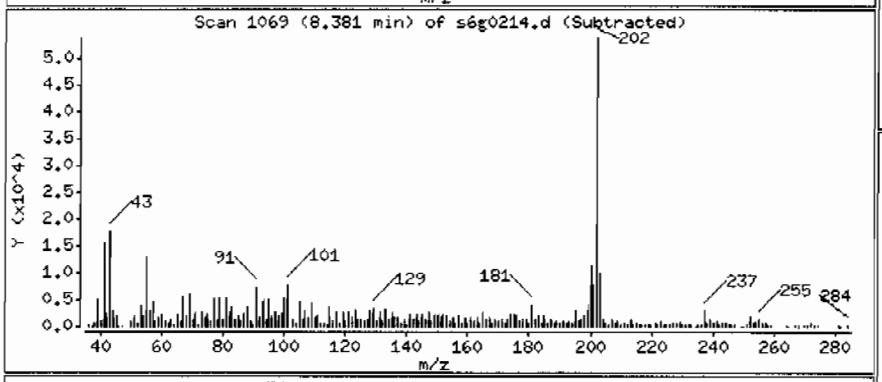

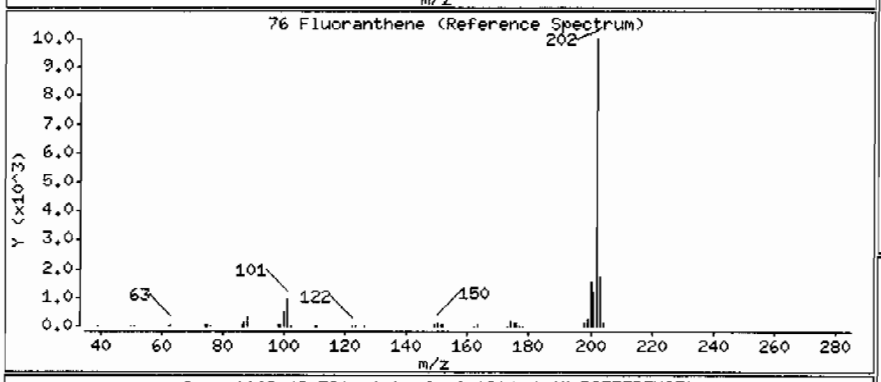

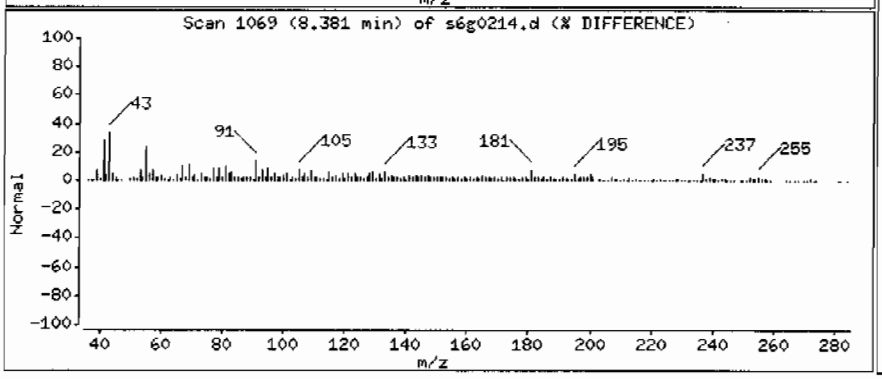

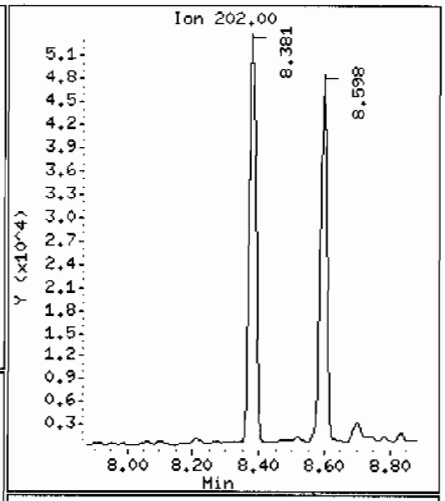

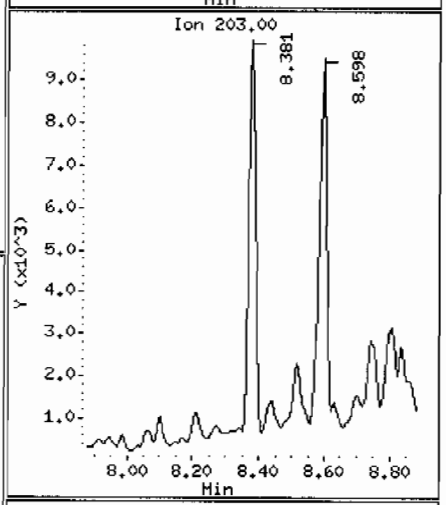

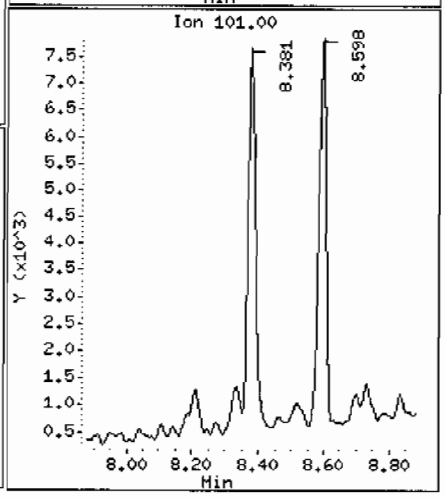

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: |2325850021881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 49.2 ug/Kg

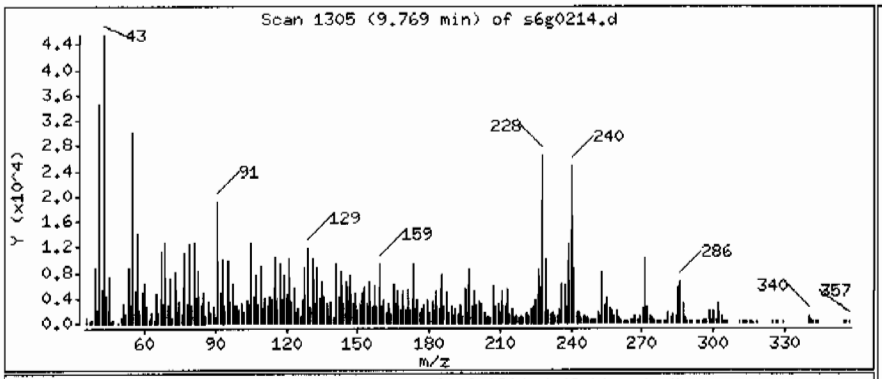

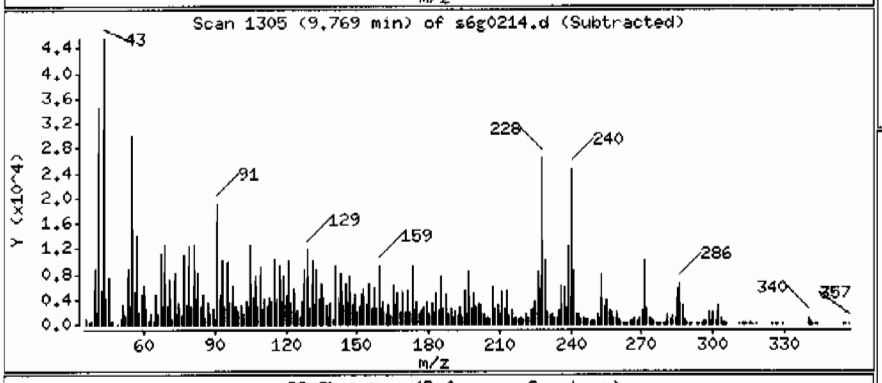

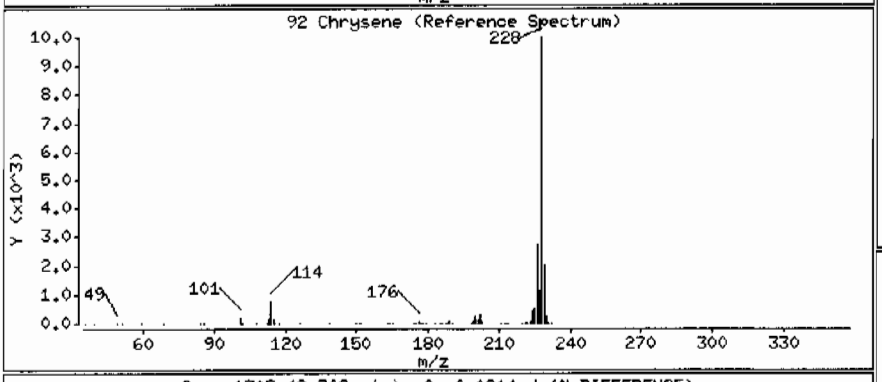

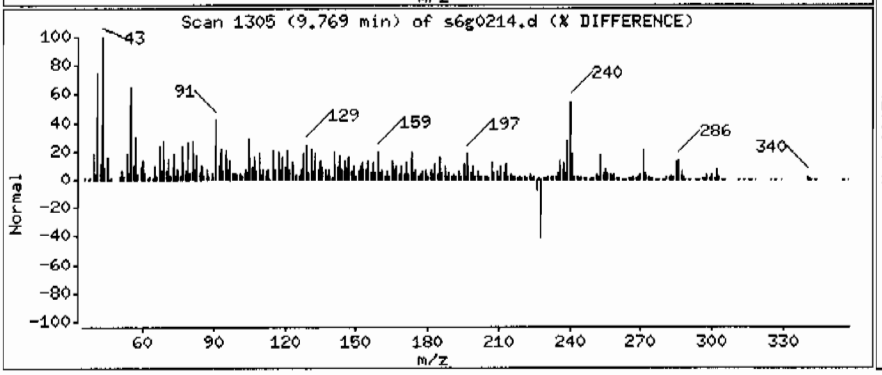

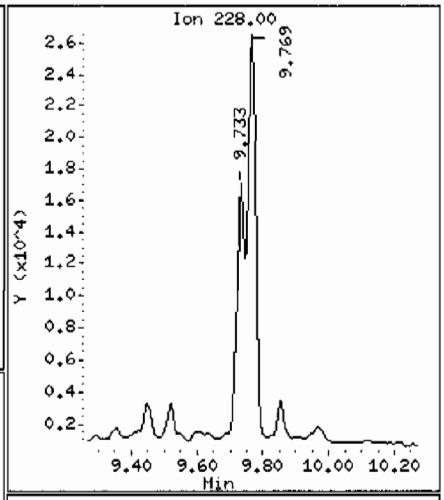

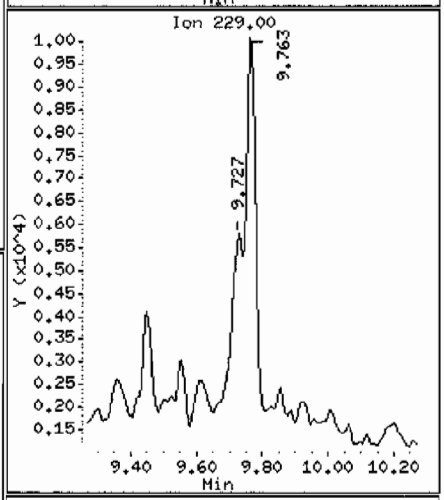

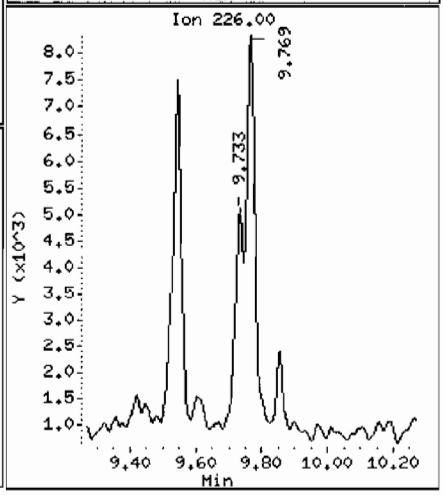

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: 1232585002|881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 83.0 ug/Kg

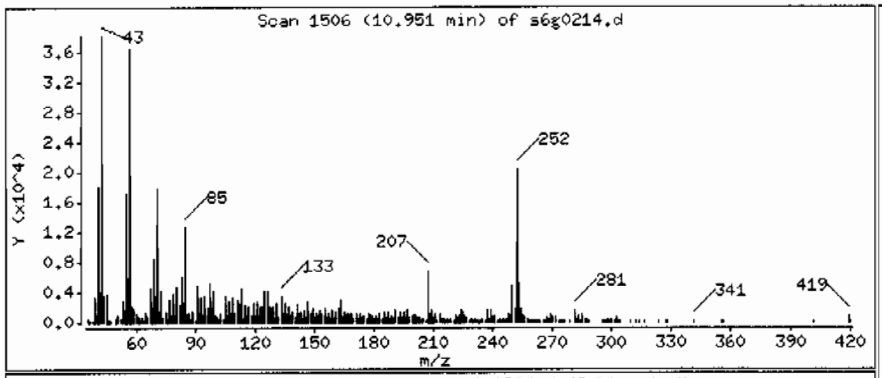

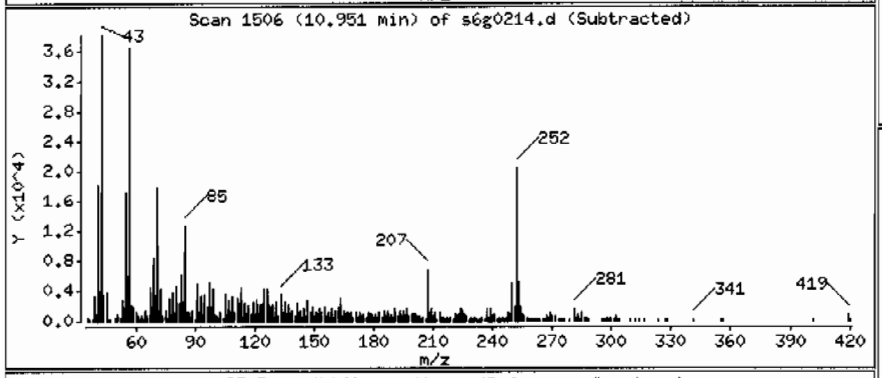

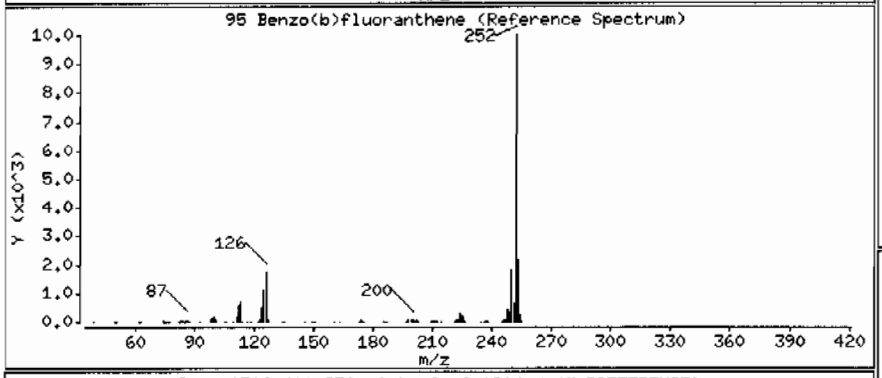

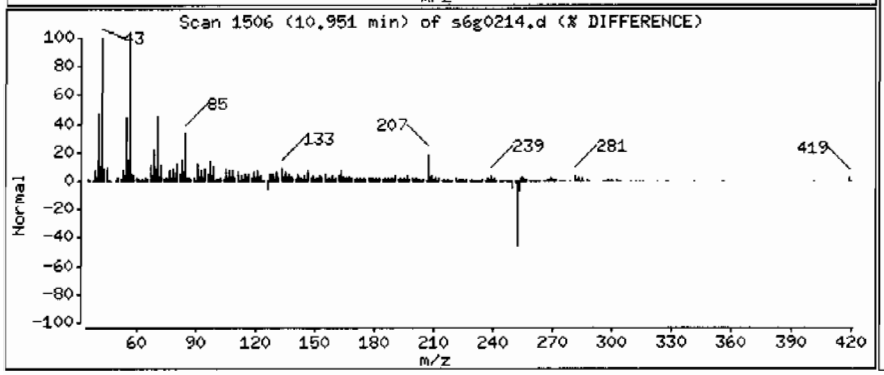

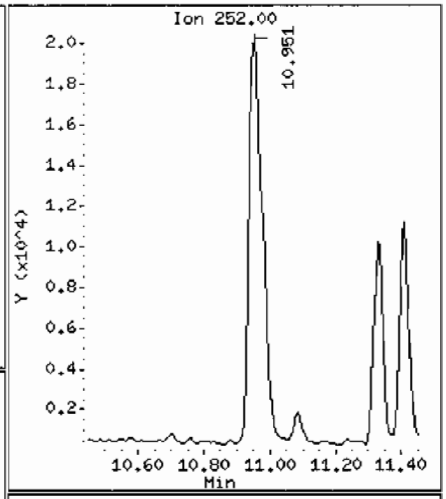

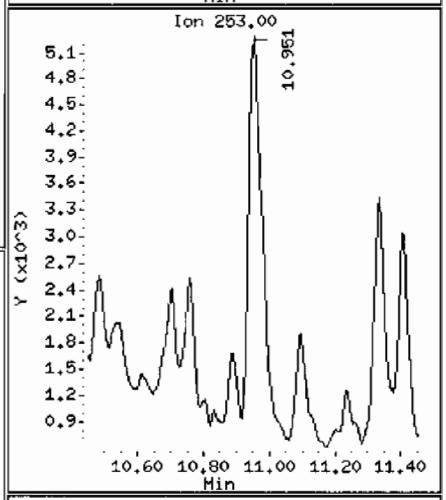

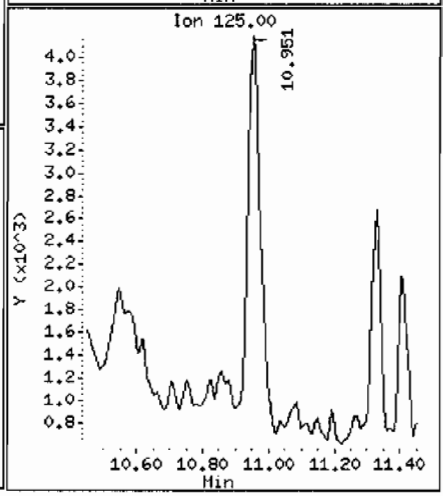

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: 1232585002|881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 38.0 ug/Kg

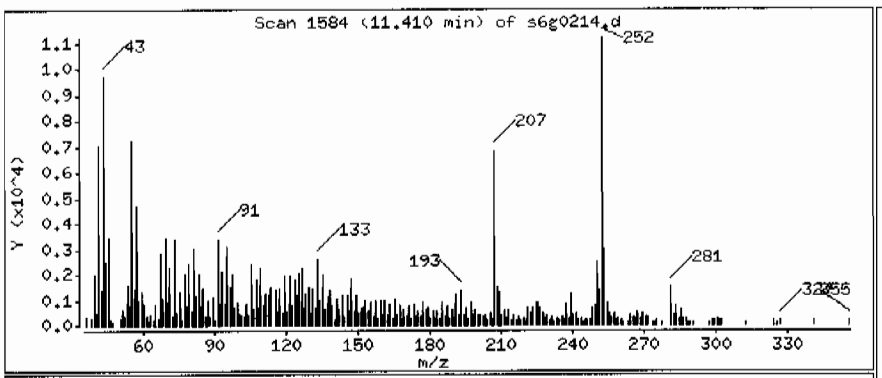

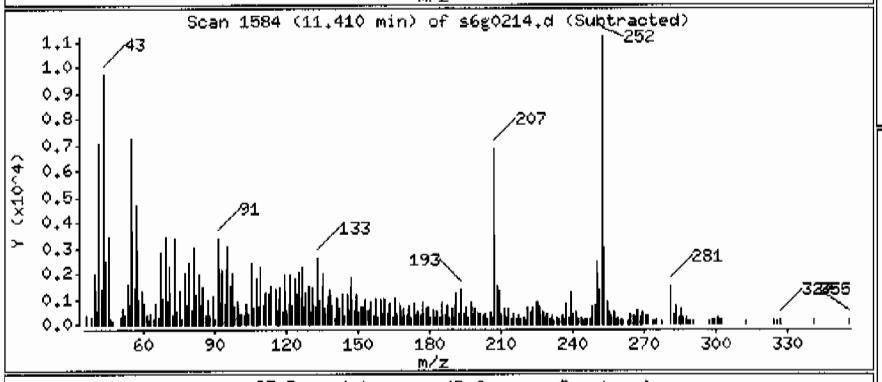

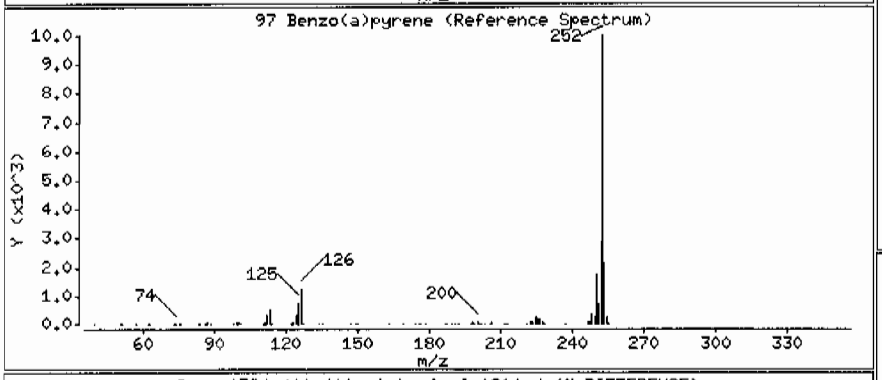

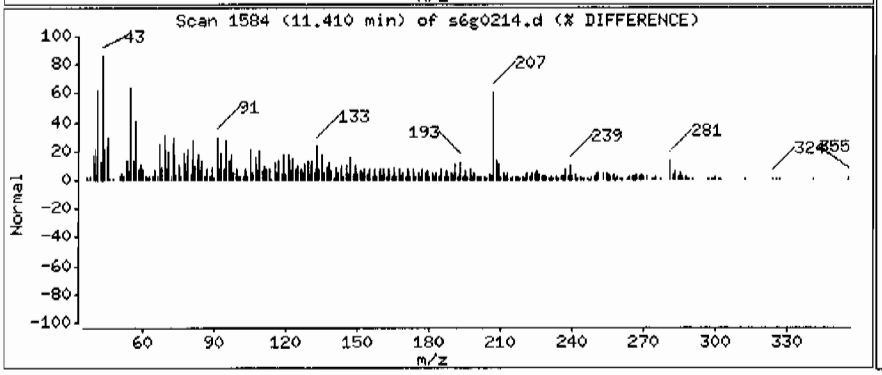

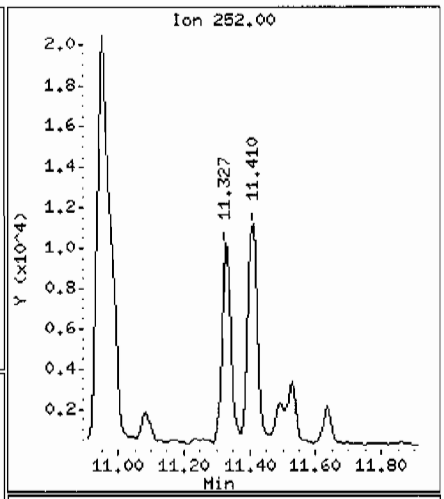

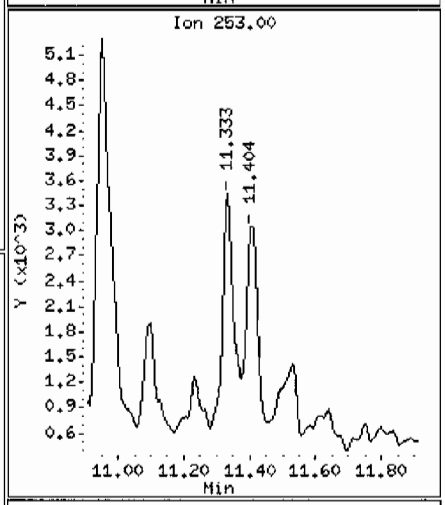

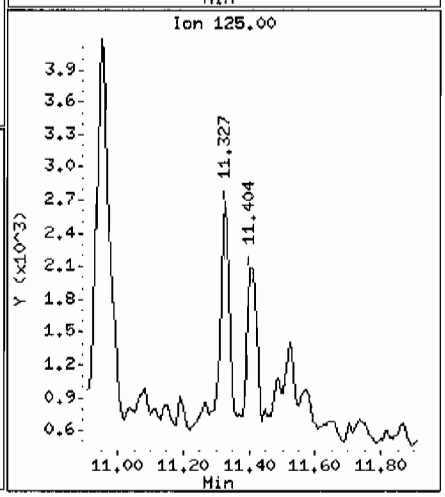

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: 1232585002188196411SWMI11LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 22.3 ug/Kg

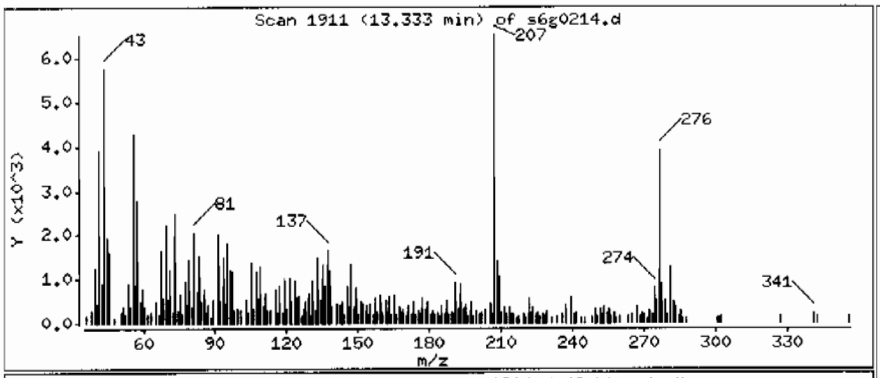

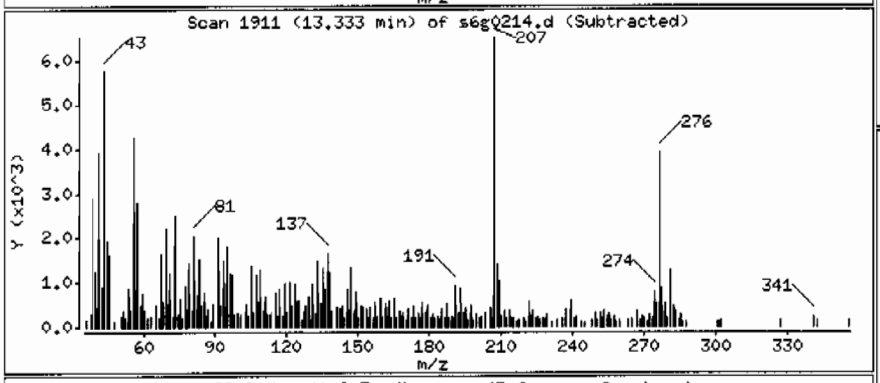

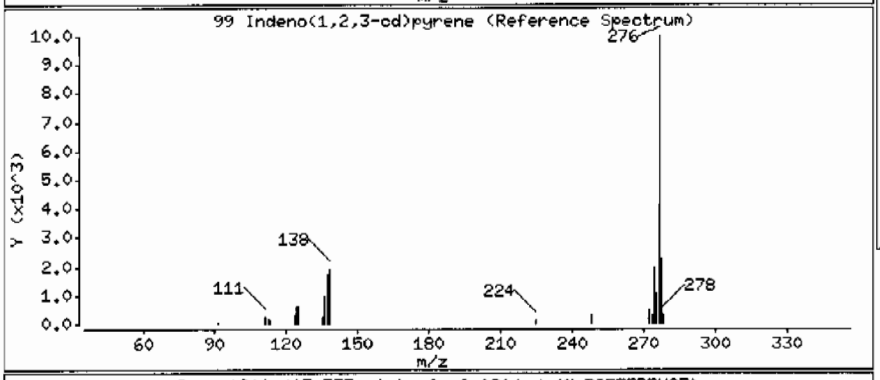

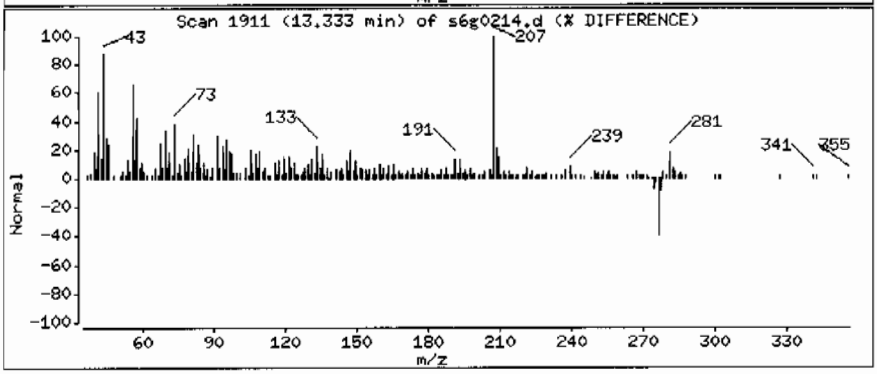

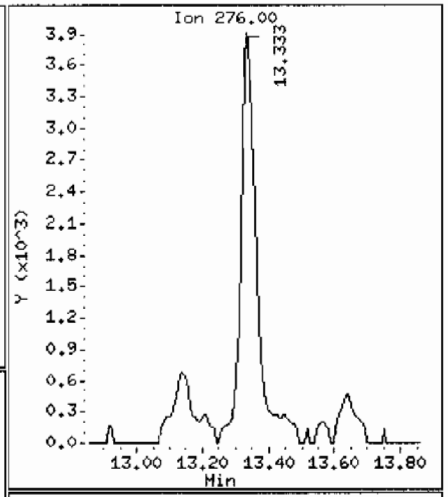

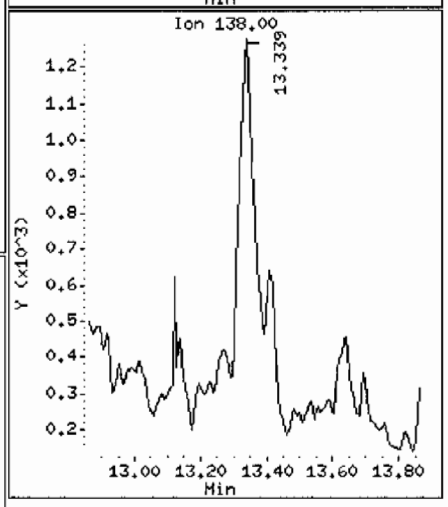

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: 1232585002188196411SVMI1LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 24.6 ug/Kg

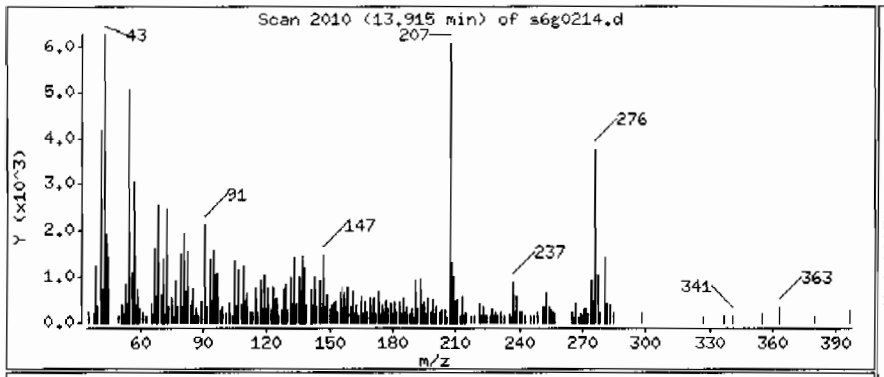

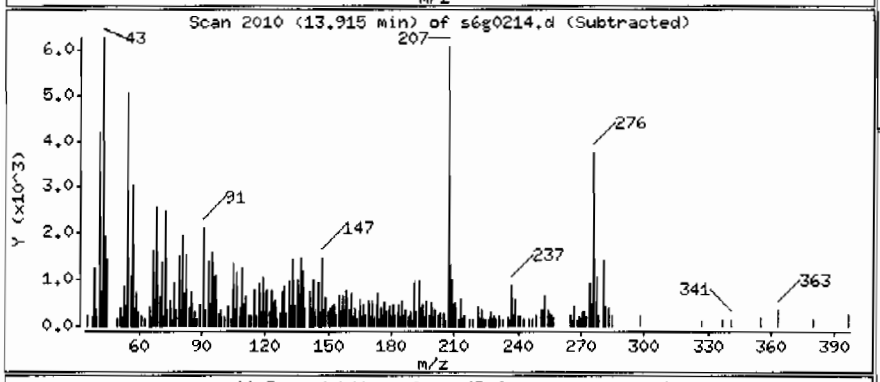

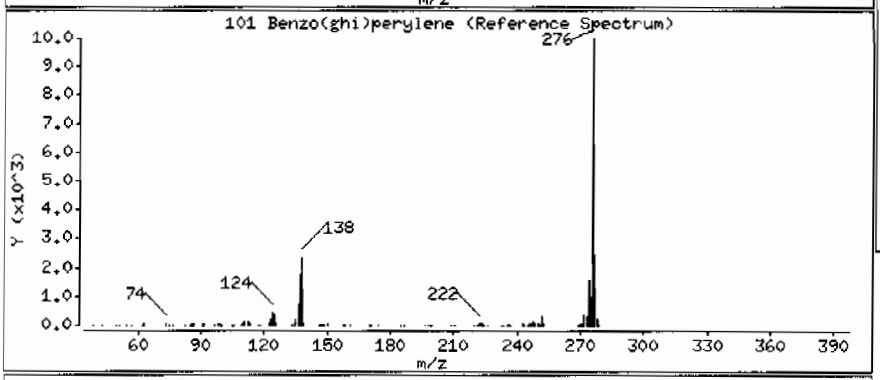

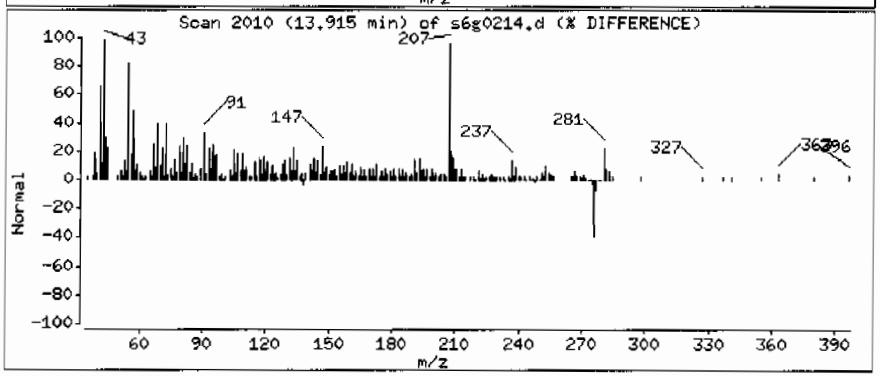

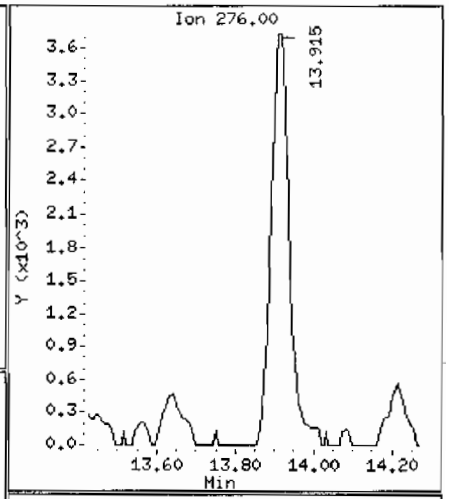

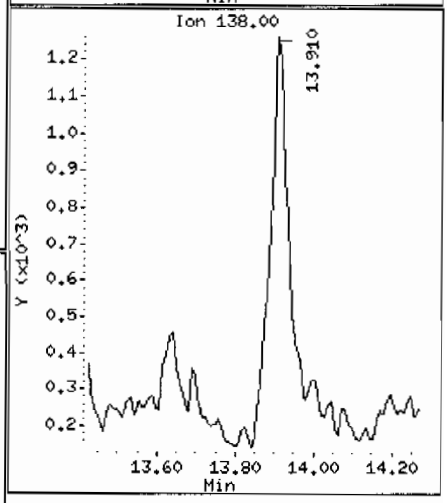

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: |2325850021881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
4b,8-Dimethyl-2-isopropylphenanthrene, 4	1000197-14-1	NIST05.L	96373	95	C19H28	256
s-Indacen-1(2H)-one, 3,5,6,7-tetrahydro-	38754-94-8	NIST05.L	96361	83	C18H24O	256
As-Indacene, 1,2,3,6,7,8-hexahydro-1,1,6	17465-47-3	NIST05.L	96374	74	C19H28	256

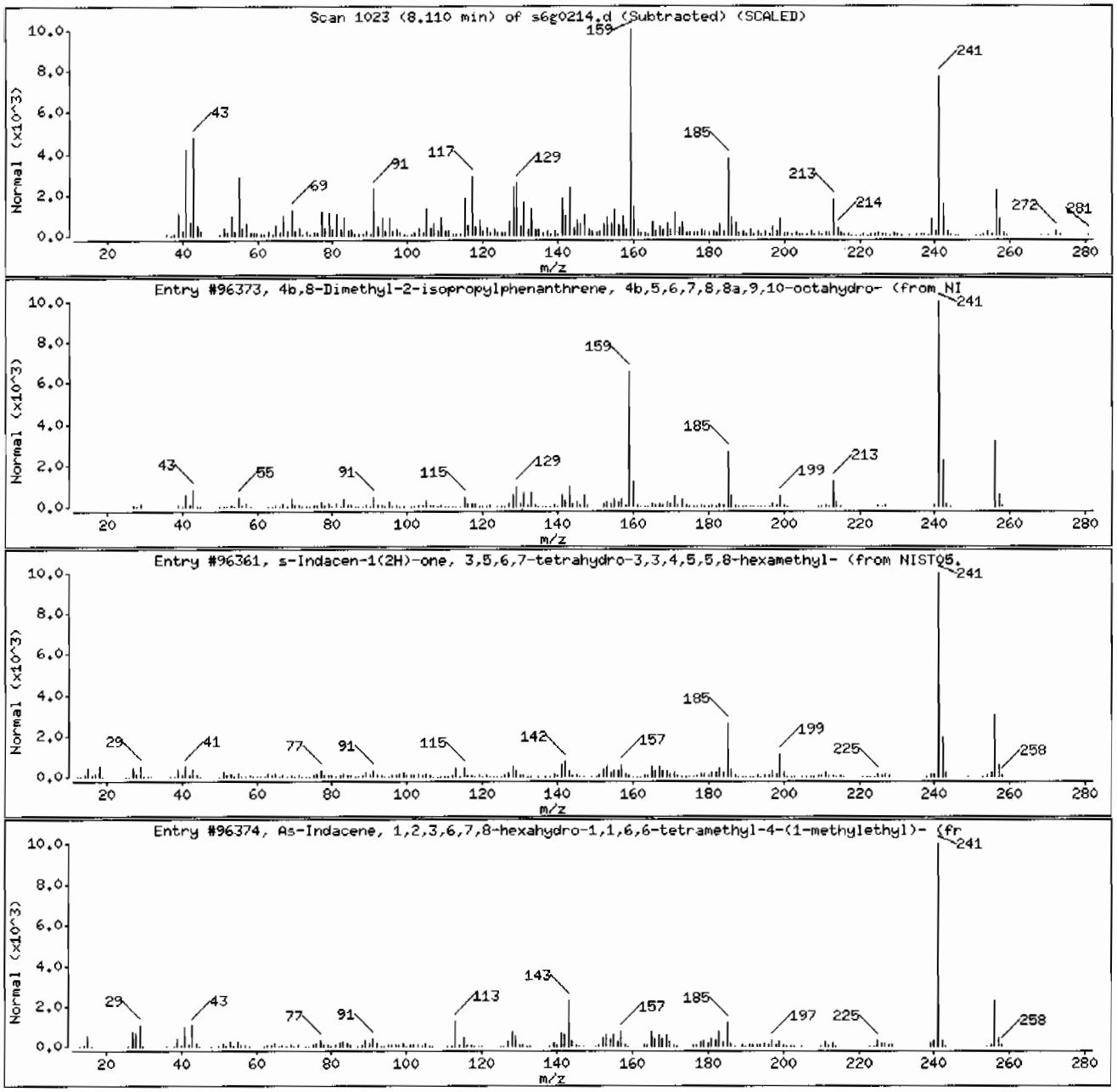

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: |2325850021881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Dimethylamino-6,7-dihydro-4H-triazolo[	83809-56-7	NIST05.L	95056	49	C9H14N6OS	254
6-Amino-.beta.-carboline-3-carboxylic ac	78539-57-8	NIST05.L	95295	43	C14H13N3O2	255
Benzoic acid, 4-[2-(3-methoxyphenyl)-1-e	1000197-90-6	NIST05.L	94691	38	C16H14O3	254

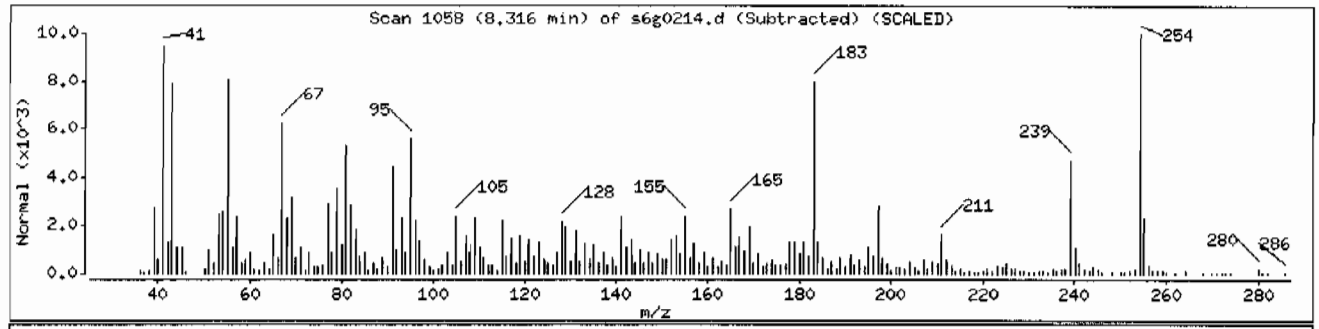

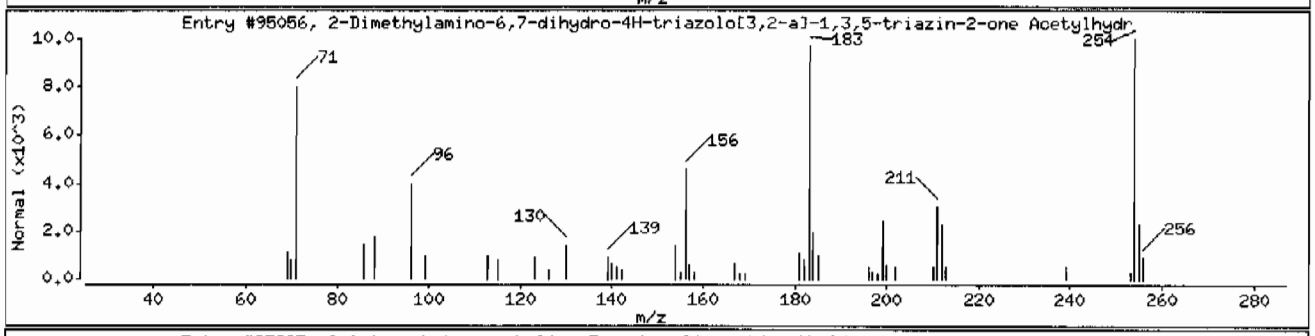

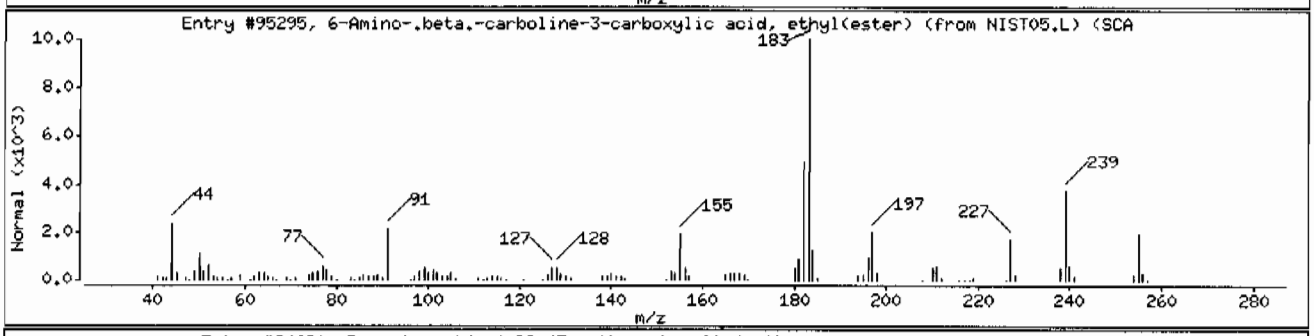

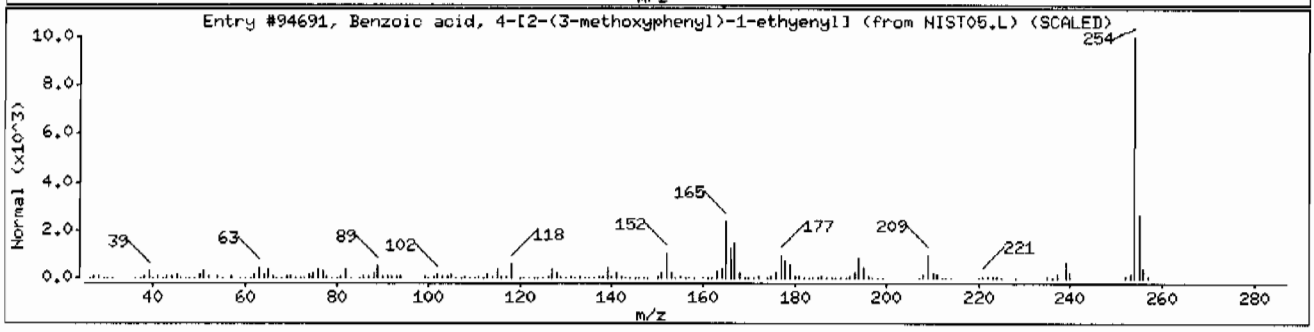

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: |2325850021881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Propene, 1,2-bis(4-methoxyphenyl)-	20802-02-2	NIST05.L	94847	78	C17H18O2	254
1-(1-Octynyl)-5-furfurylidene-1-cyclopen	111195-66-5	NIST05.L	94919	51	C18H22O	254
3-Phenylthio-2H-chromen-2-one	72167-95-4	NIST05.L	94547	46	C15H10O2S	254

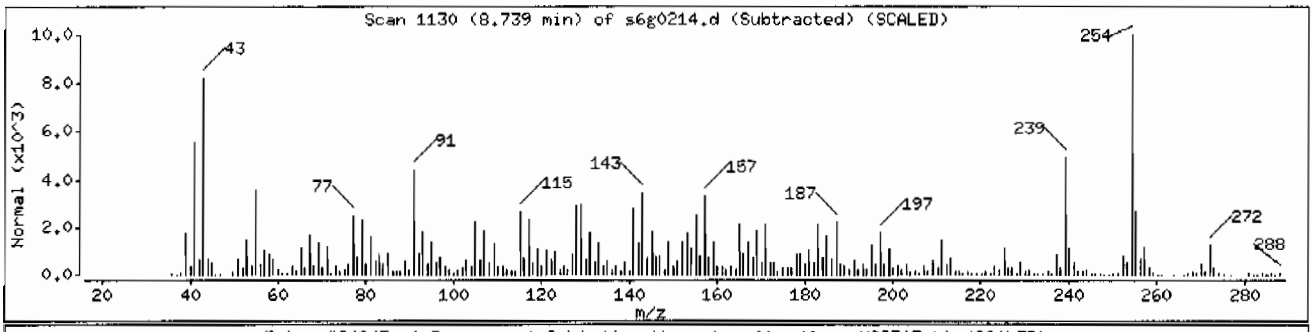

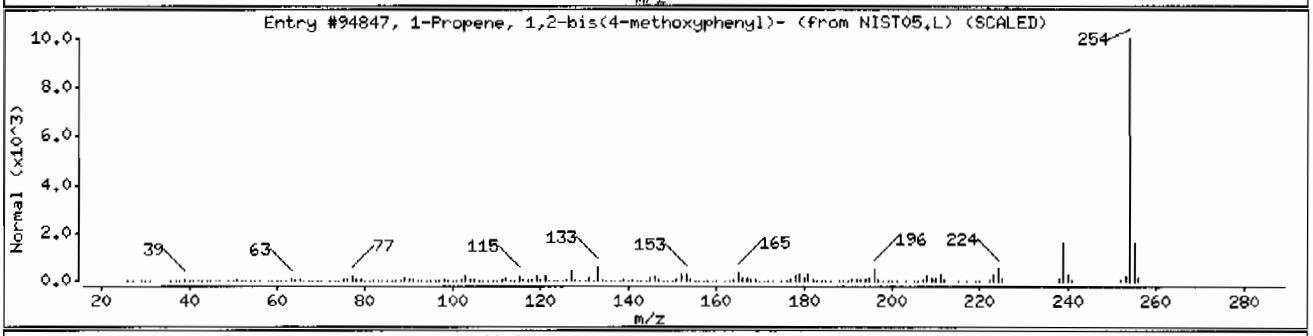

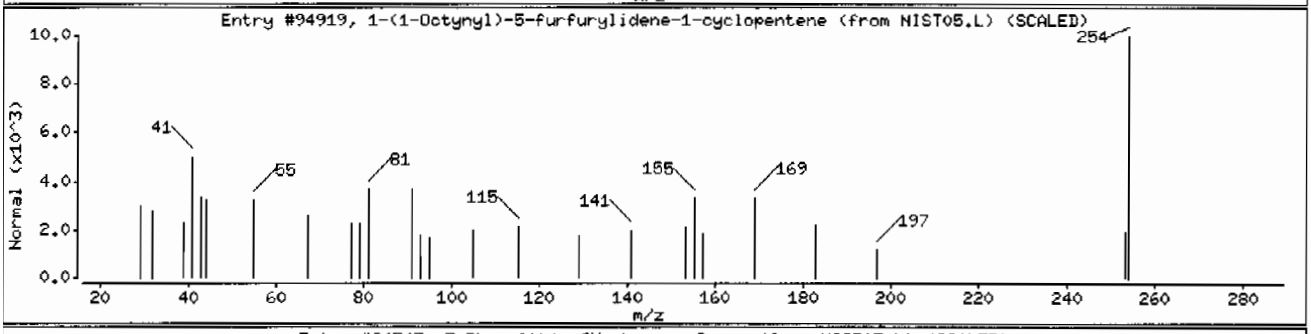

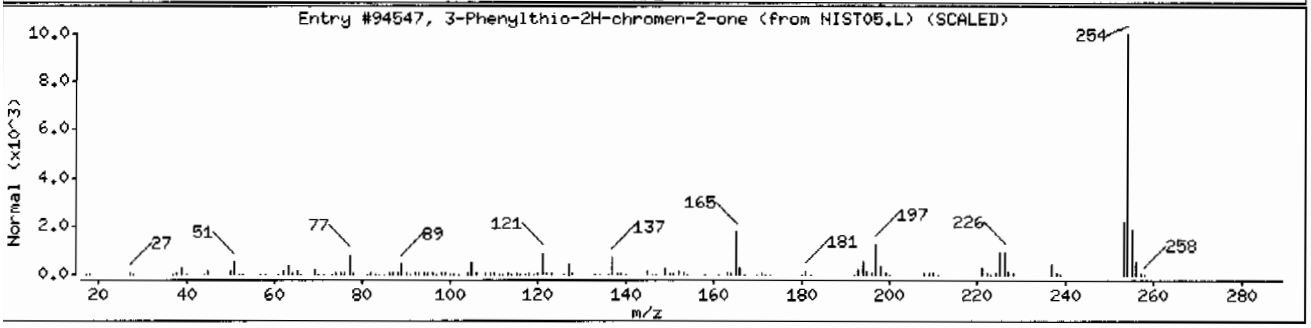

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Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: |2325850021881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
.beta.-D-Erythro-Pentopyranose, cyclic 3	53225-62-0	NIST05.L	70872	25	C11H13BO4	220
7-Ethylidenebicyclo[4.2.1]nona-2,4-diene	94400-10-9	NIST05.L	20835	22	C11H14	146
Tetracyclo[3.3.1.1(3,7).0(2,4)]decane	10501-16-3	NIST05.L	14434	18	C10H14	134

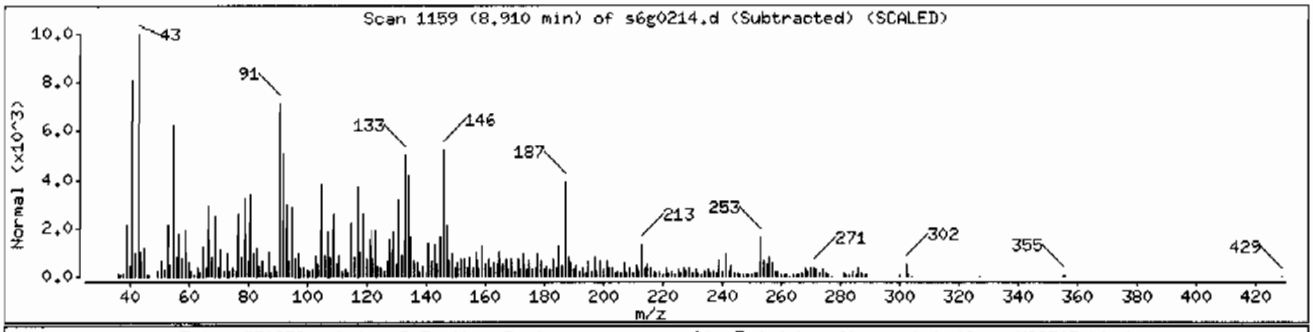

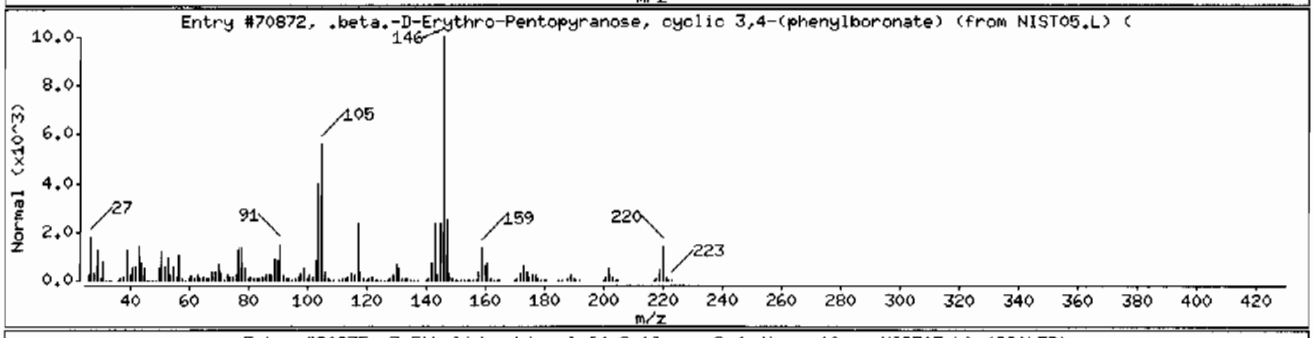

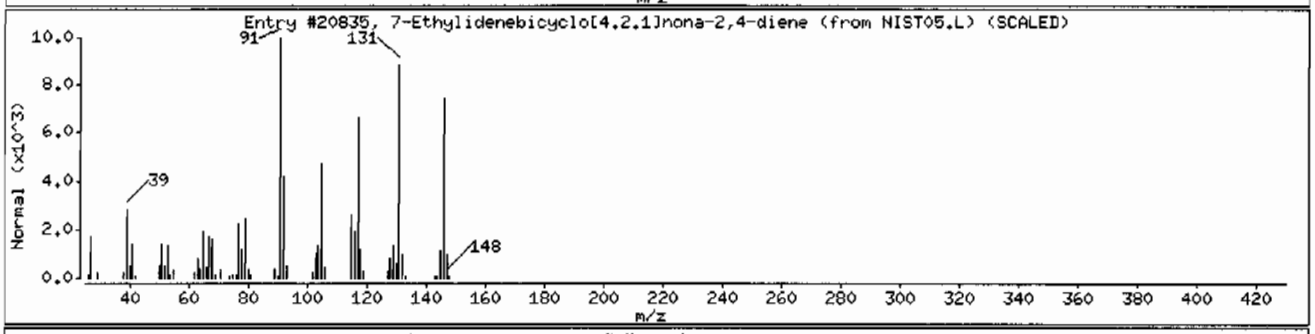

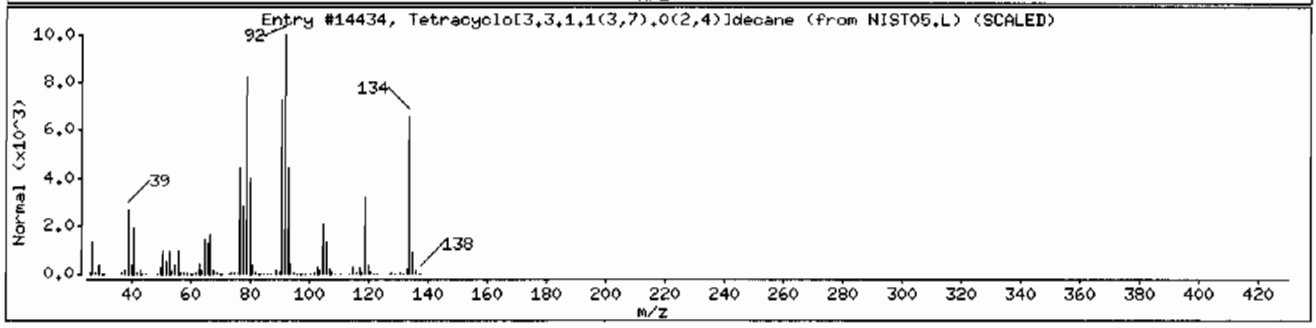

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603 Instrument: MSD6.i

Sample Info: |2325850021881964|1|SVM|1|LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
7-Ethylidenebicyclo[4.2.1]nona-2,4-diene	94400-10-9	NIST05.L	20835	38	C11H14	146
2(1H)-Quinolinone, 3,4-dihydro-	553-03-7	NIST05.L	21685	25	C9H9NO	147
.beta.-D-Erythro-Pentopyranose, cyclic 3	53225-62-0	NIST05.L	70872	25	C11H13BO4	220

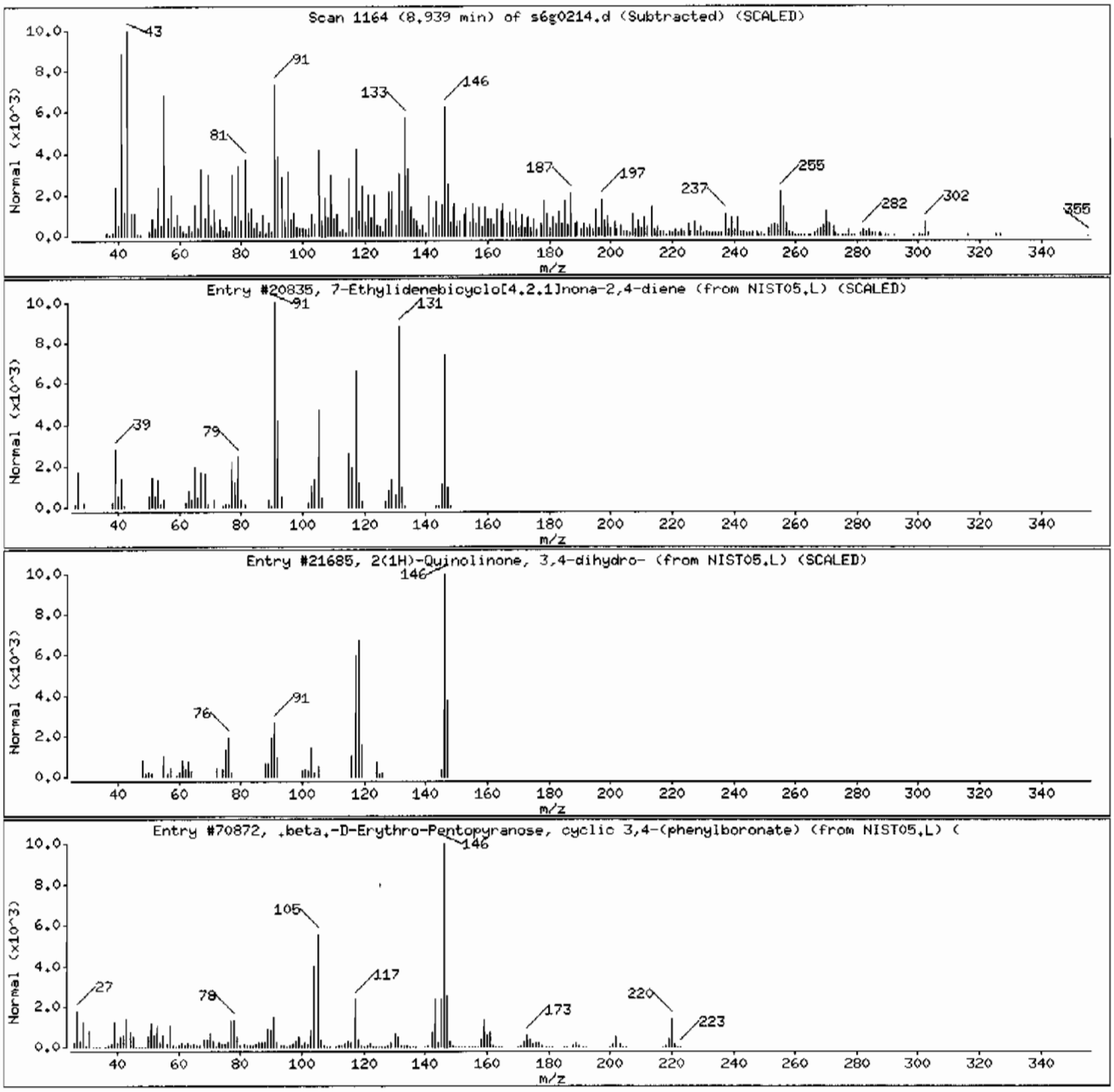

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: 1232585002188196411SVM11LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Androst-5-en-3-ol, 4,4-dimethyl-, (3.bet	7673-17-8	NIST05.L	126231	38	C21H340	302
2,9-Heptadecadiene-4,6-diyn-8-ol, (Z,E)-	50816-77-8	NIST05.L	88097	30	C17H240	244
Andrographolide	5508-58-7	NIST05.L	152634	27	C20H3005	350

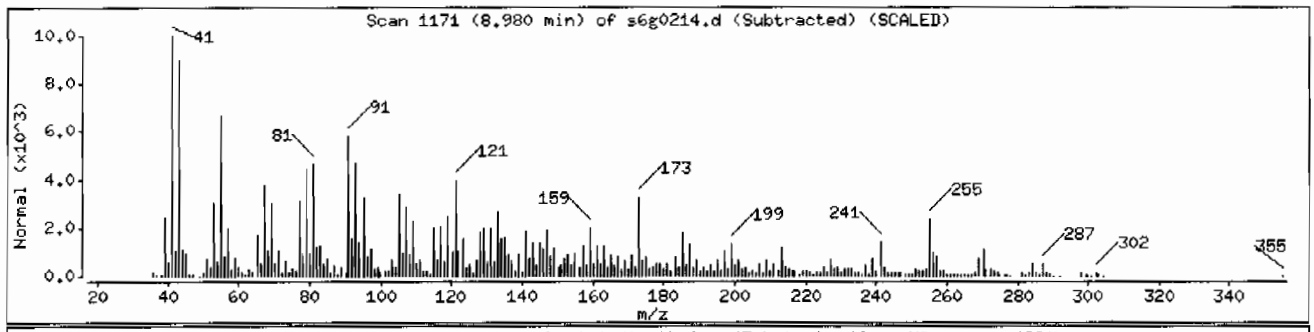

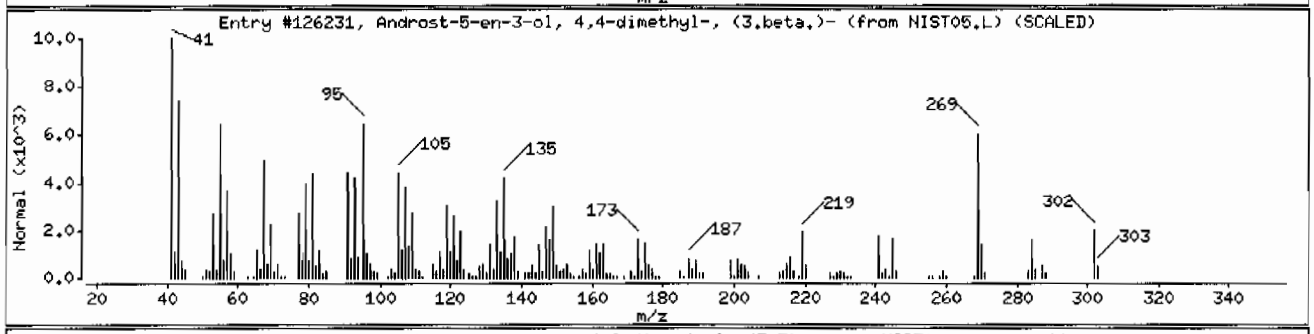

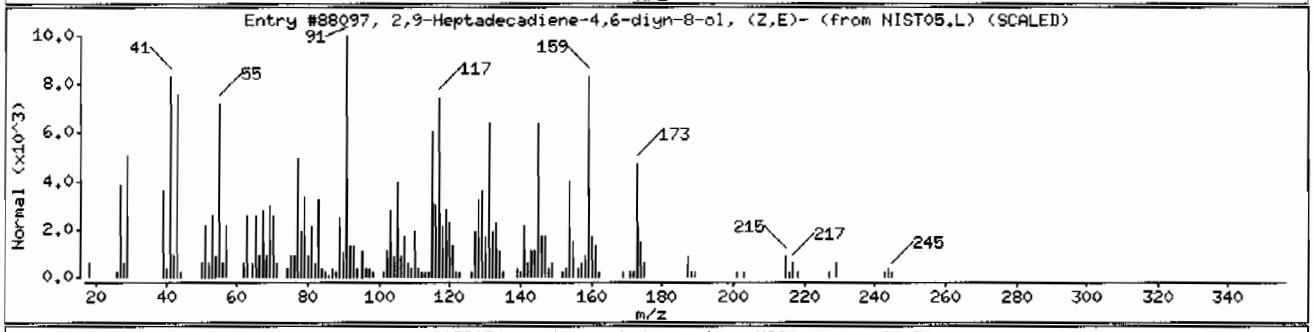

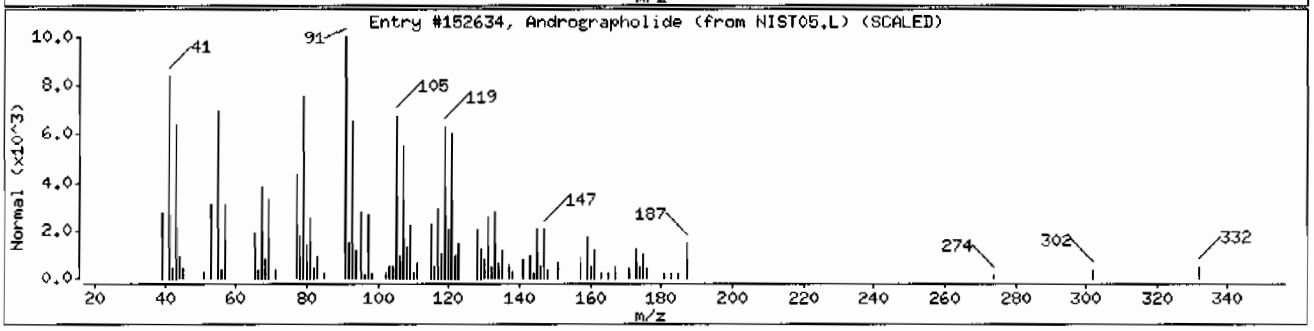

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603 Instrument: MSD6.i

Sample Info: 1232585002188196411SVM11LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1a,2,5,5-Tetramethyl-cis-1a,4a,5,6,7,8-h	1000215-77-7	NIST05.L	52873	58	C13H22O	194
2-(4-Chlorophenylsulfonylamino)-pyridin-	296772-59-3	NIST05.L	114205	49	C11H9ClN2O3S	284
2-(2-Hydroxycyclohexylmethyl)pyridine ox	1000195-29-8	NIST05.L	62111	43	C12H17NO2	207

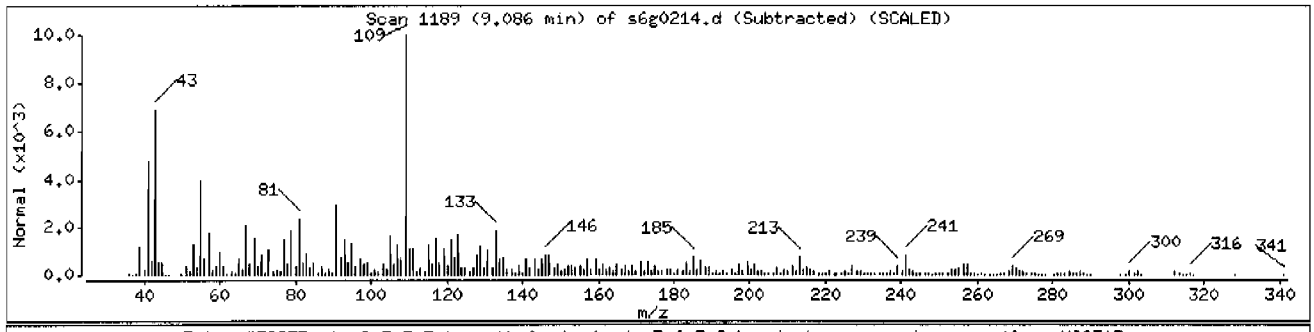

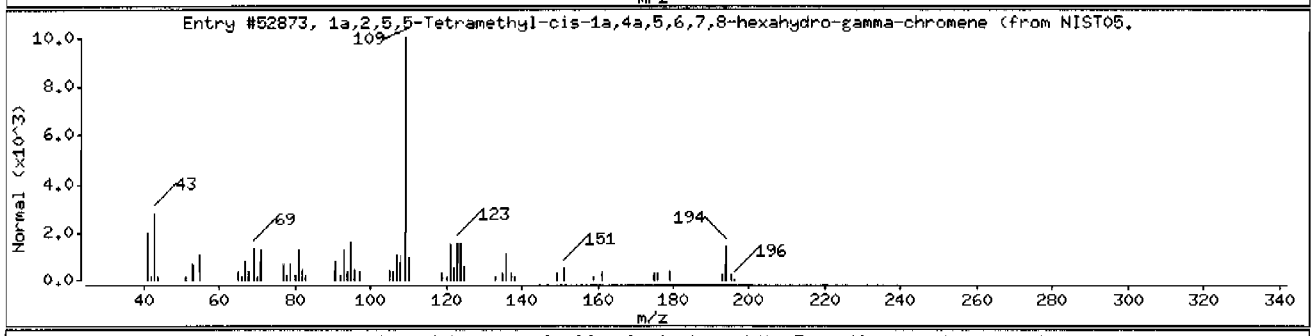

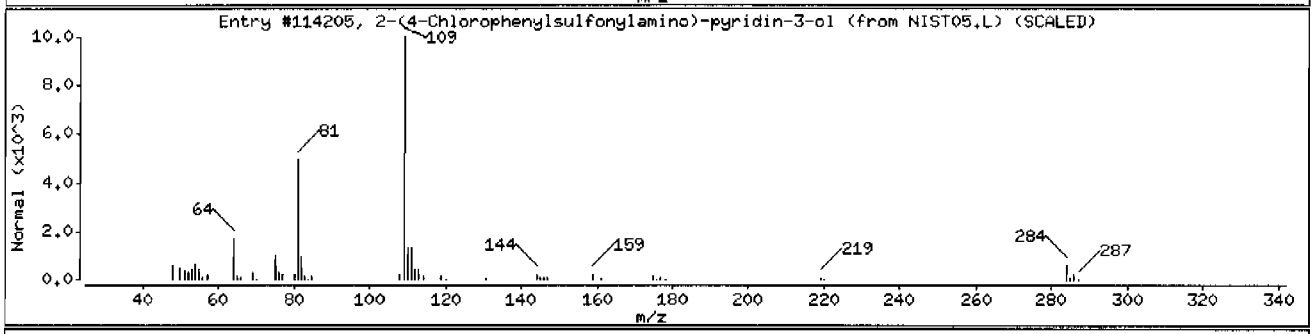

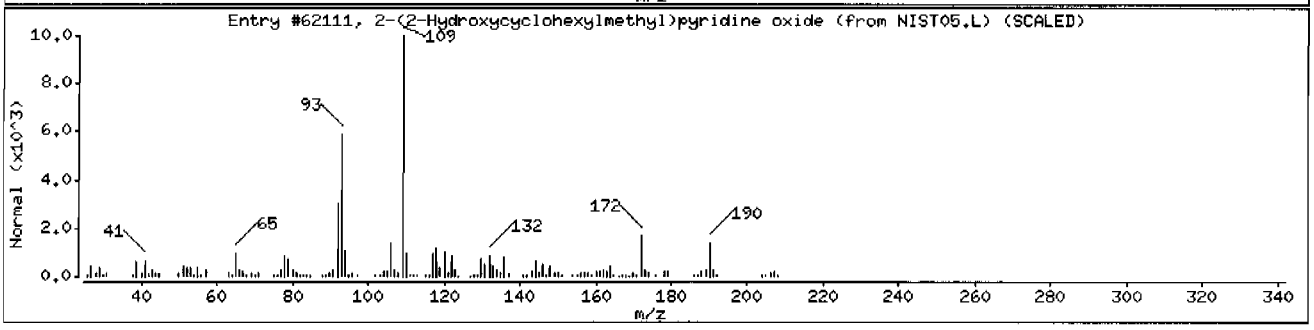

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: |2325850021881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	95	C21H30O2	314
Methyl abietate isomer	24563-92-6	NIST05.L	134719	52	C21H32O2	316
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133621	46	C21H30O2	314

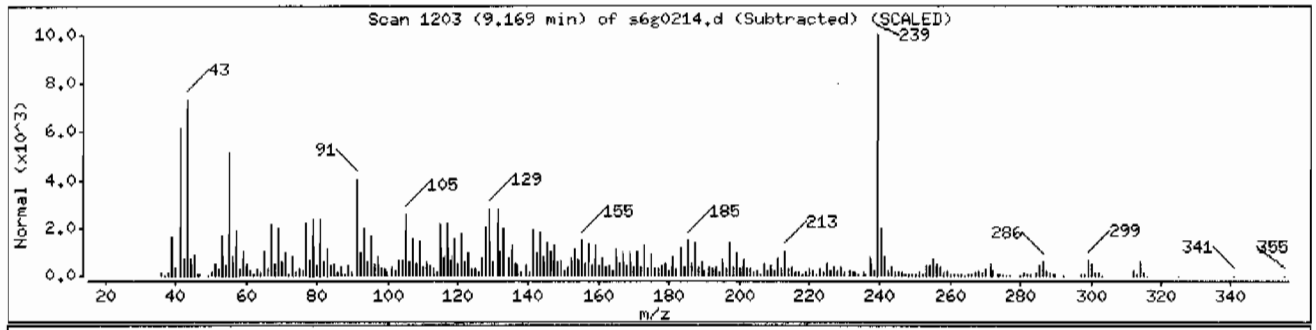

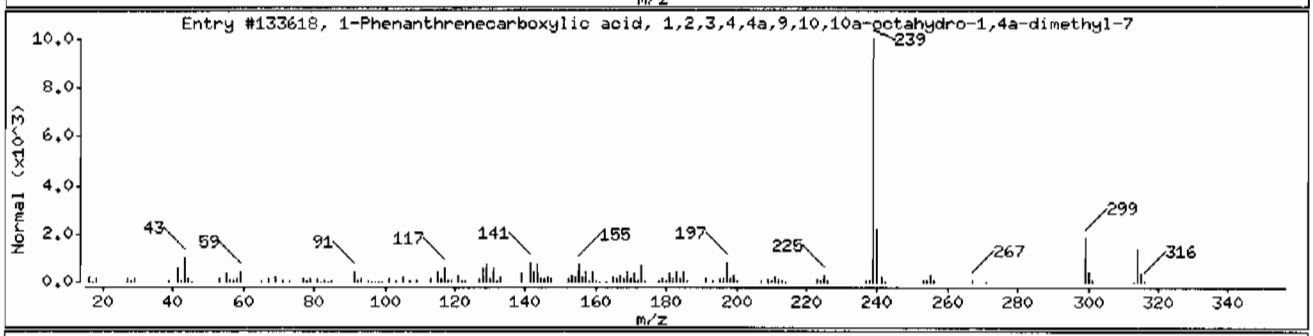

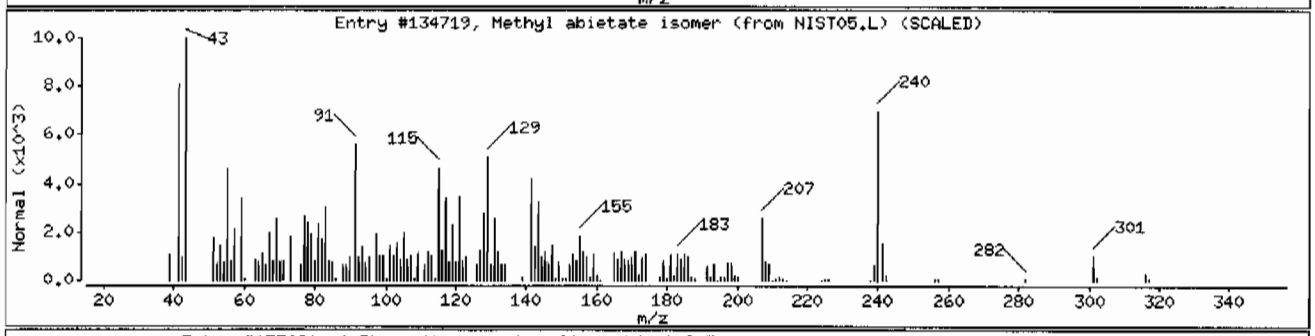

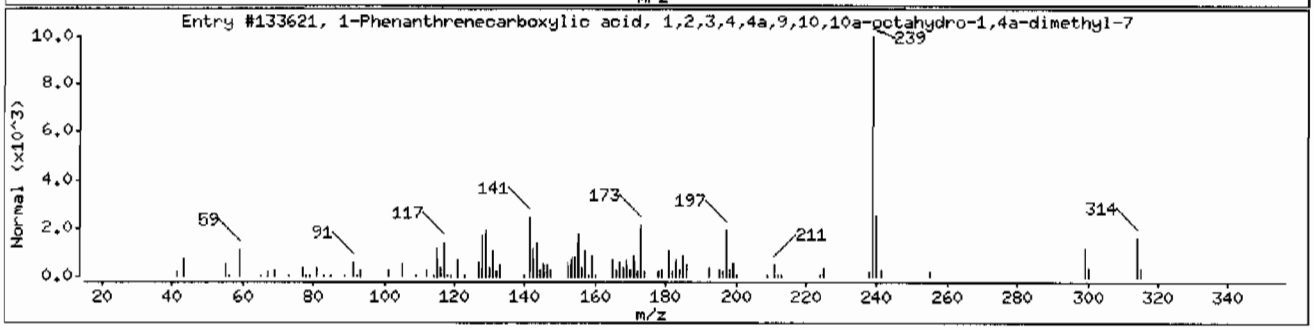

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Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603 Instrument: MSD6.i

Sample Info: |2325850021881964|1|SVMI1|LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1H-Cycloprop[e]azulene, decahydro-1,1,7-	489-39-4	NIST05.L	60078	87	C15H24	204
Caryophyllene-(I1)	1000158-18-5	NIST05.L	59838	78	C15H24	204
1-Hydroxy-6-(3-isopropenyl-cycloprop-1-e	1000189-14-9	NIST05.L	72783	60	C14H2202	222

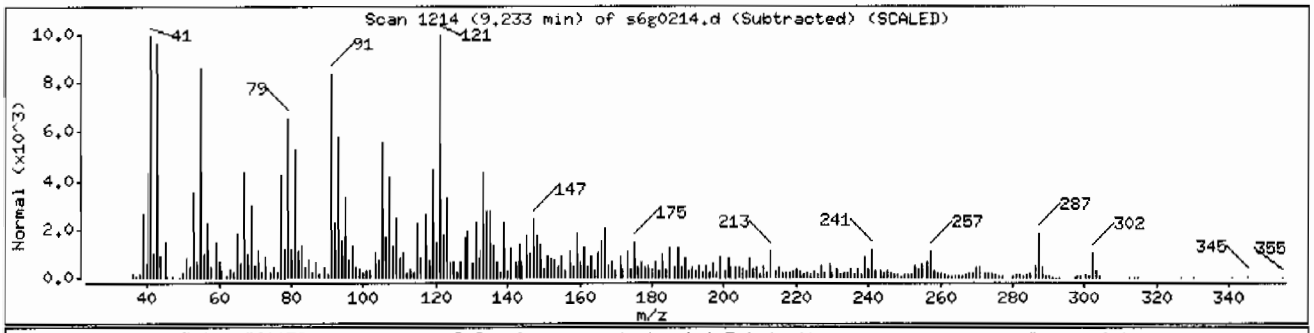

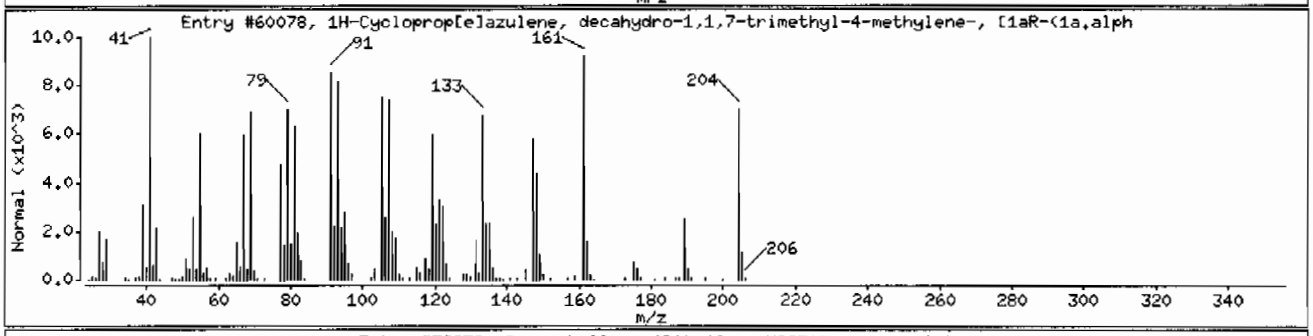

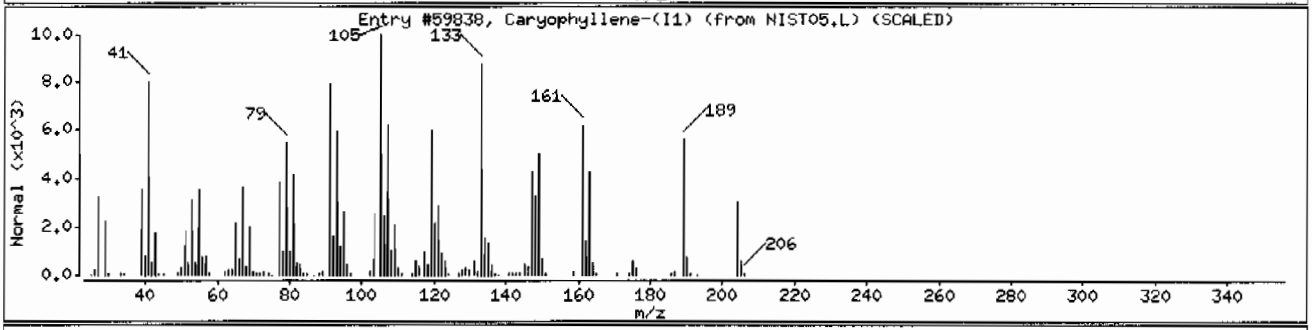

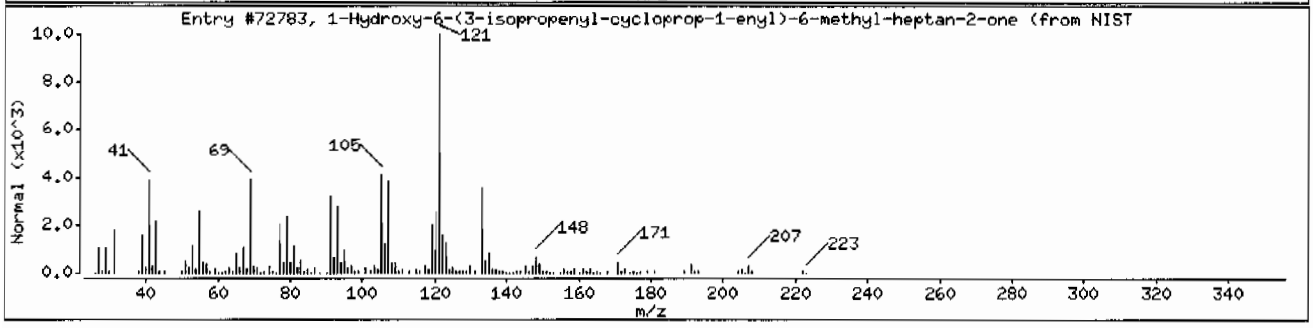

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603 Instrument: MSD6.i

Sample Info: 1232585002188196411SVHI1ILANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Thunbergol	25269-17-4	NIST05.L	118732	46	C20H340	290
Kauren-18-ol, acetate, (4.beta.)-	72150-74-4	NIST05.L	142610	45	C22H3402	330
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	41	C15H2602	238

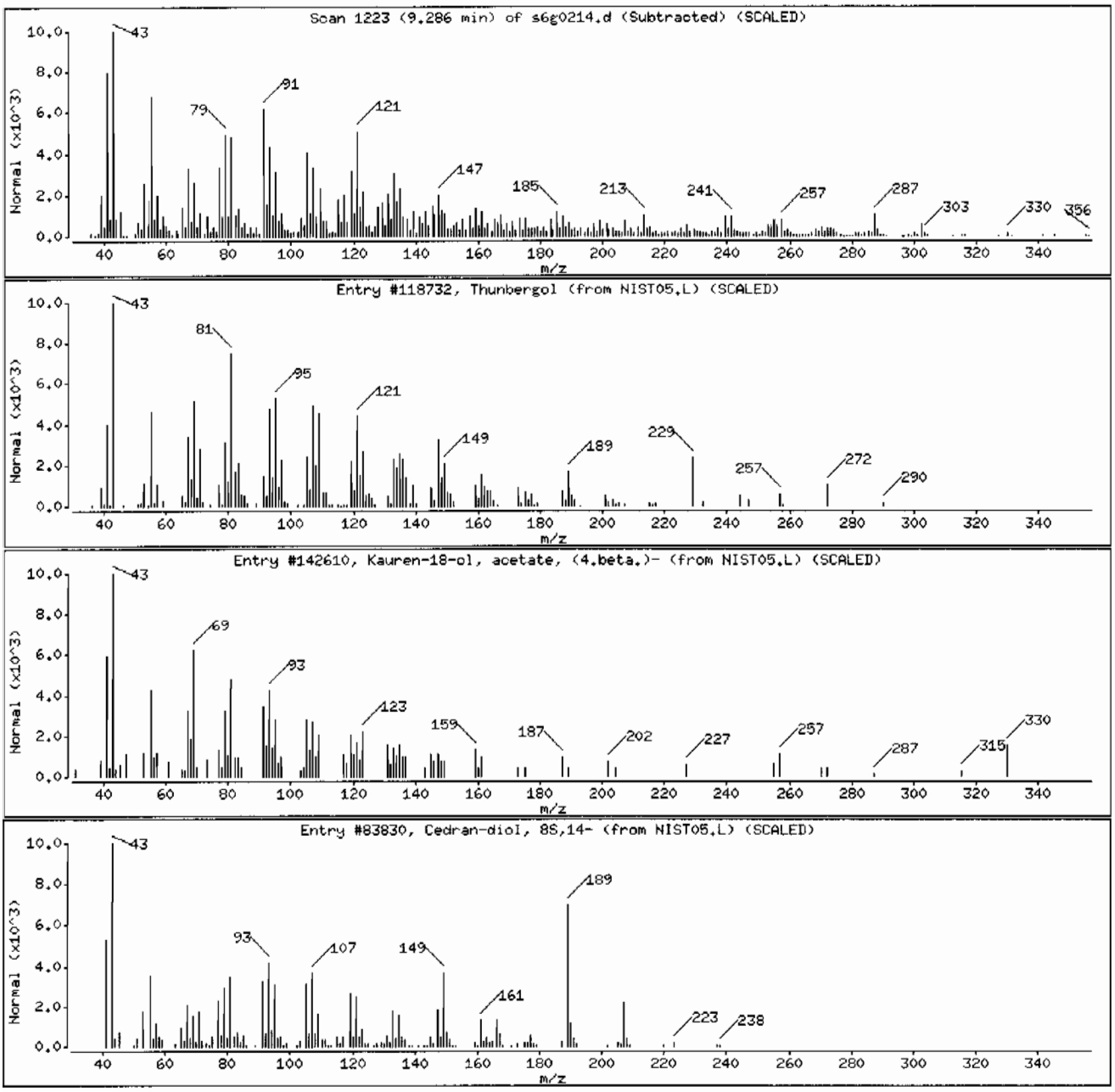

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Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: 1232585002|881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Andrographolide	5508-58-7	NIST05.L	152634	38	C20H3005	350
Bicyclo[10.8.0]eicosa-1(12),14-diene	1000155-84-9	NIST05.L	108368	35	C20H34	274
13,17-Seco-5.alpha.-pregn-13(18)-en-20-o	31239-27-7	NIST05.L	126228	30	C21H340	302

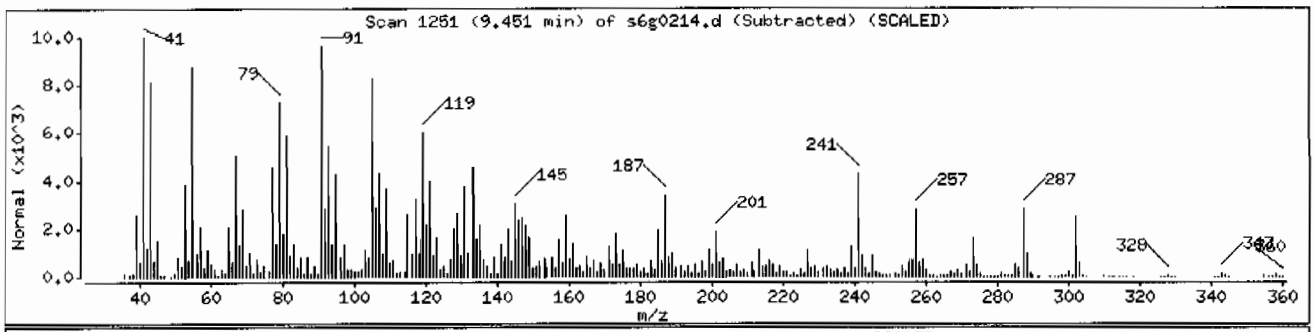

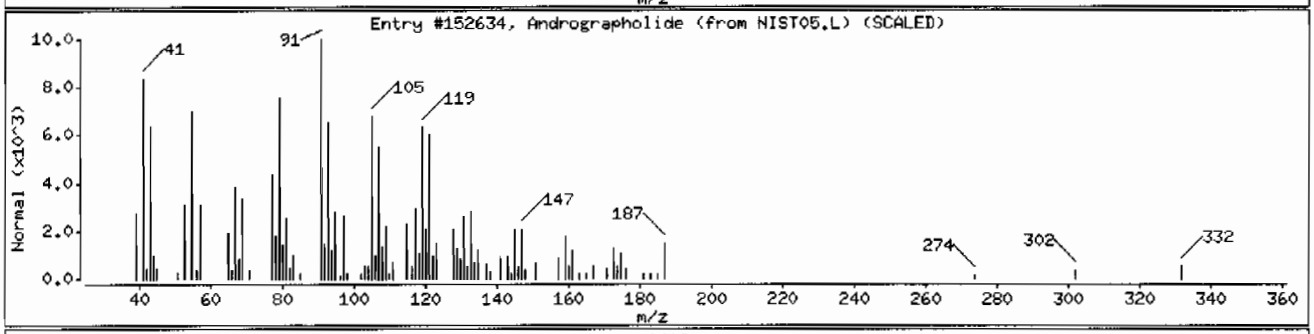

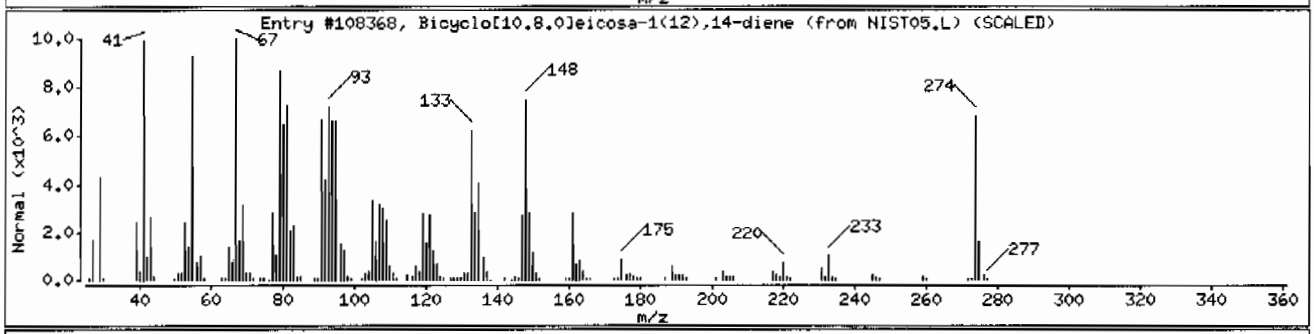

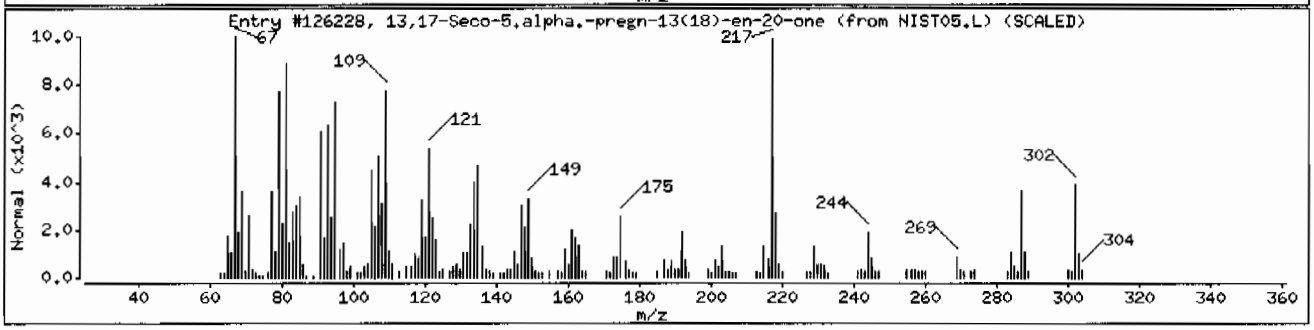

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603 Instrument: MSD6.i

Sample Info: 1232585002188196411ISVMI1ILANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	5155-70-4	NIST05.L	125035	94	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125037	81	C20H28O2	300
Butanoic acid, 2-(cyano)(2,4,6-trimethyl	1000267-71-7	NIST05.L	124759	70	C17H20N2O3	300

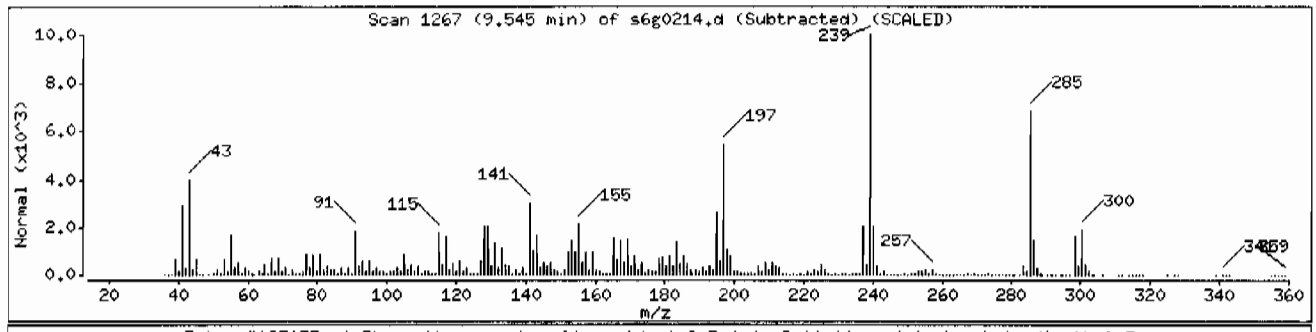

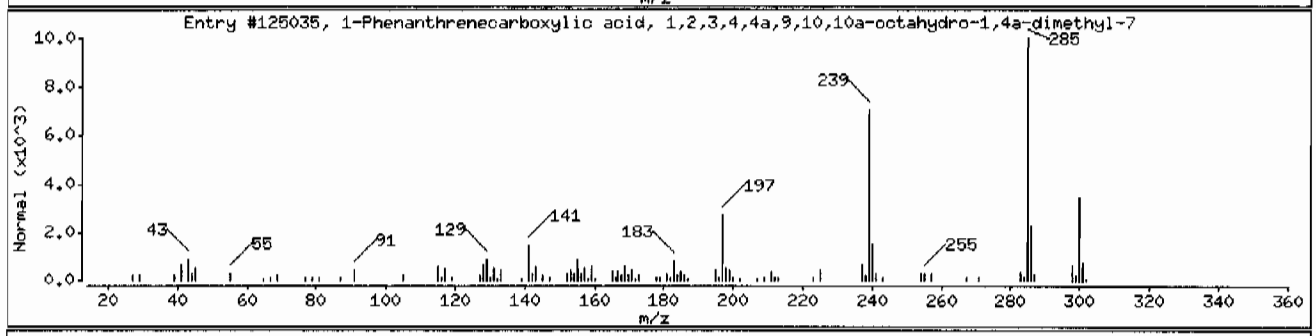

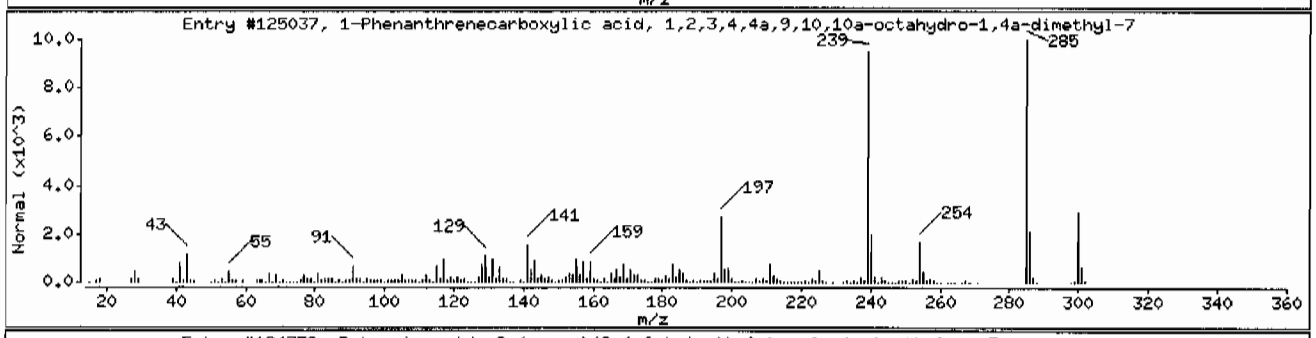

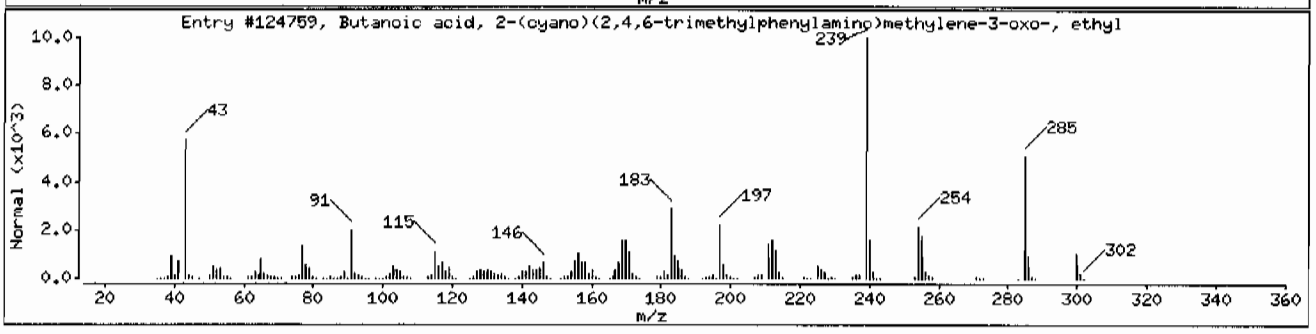

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: |232585002|881964|1|SVM|1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	11	C15H26O2	238
Cleomeolide ketone	72190-22-8	NIST05.L	134638	11	C20H28O3	316
p-Octyloxynitrobenzene	49562-76-7	NIST05.L	92592	10	C14H21NO3	251

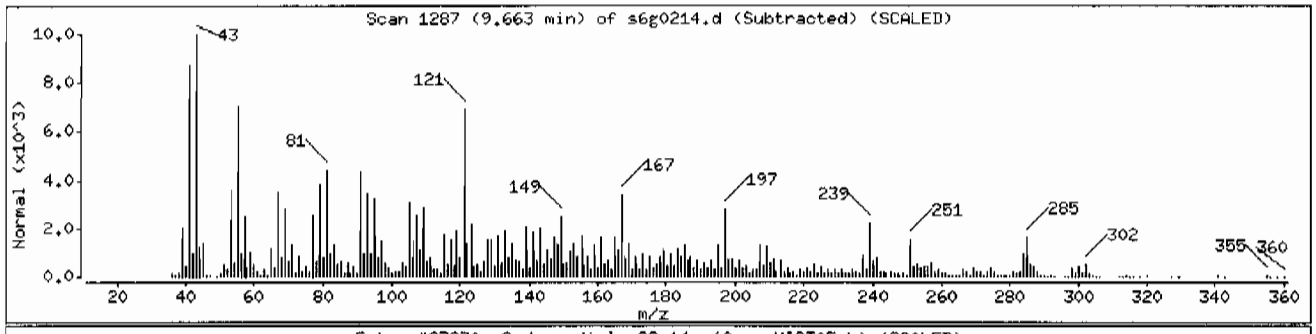

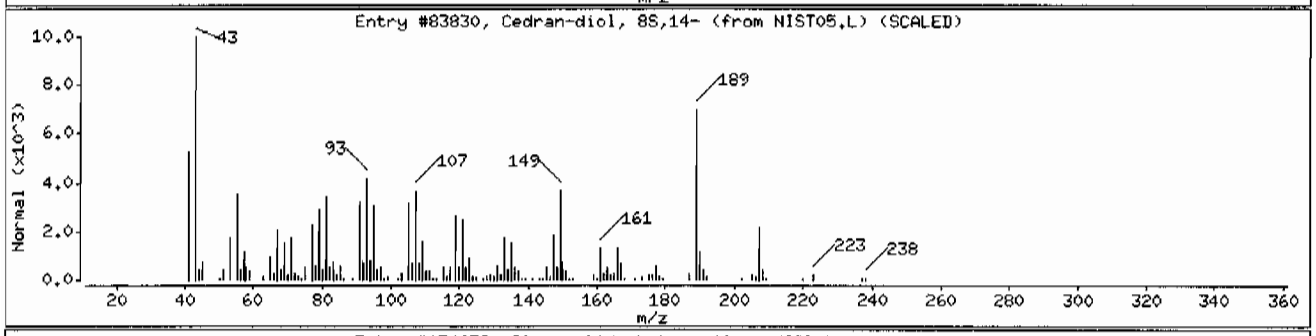

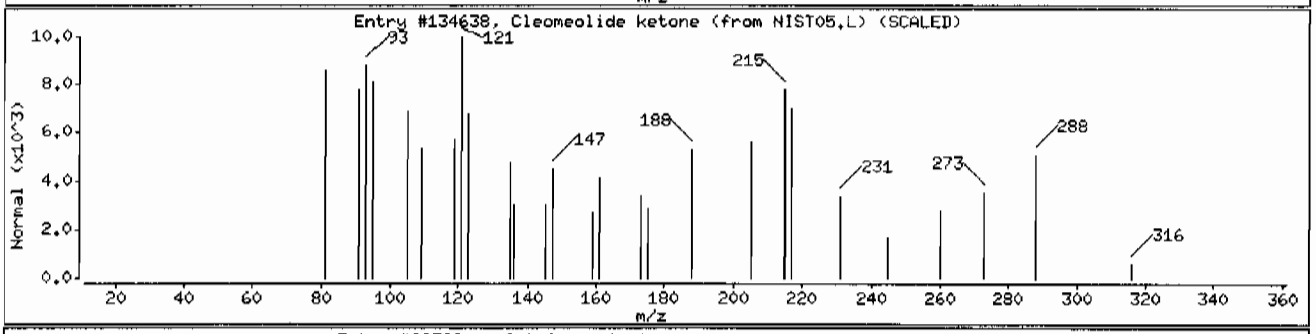

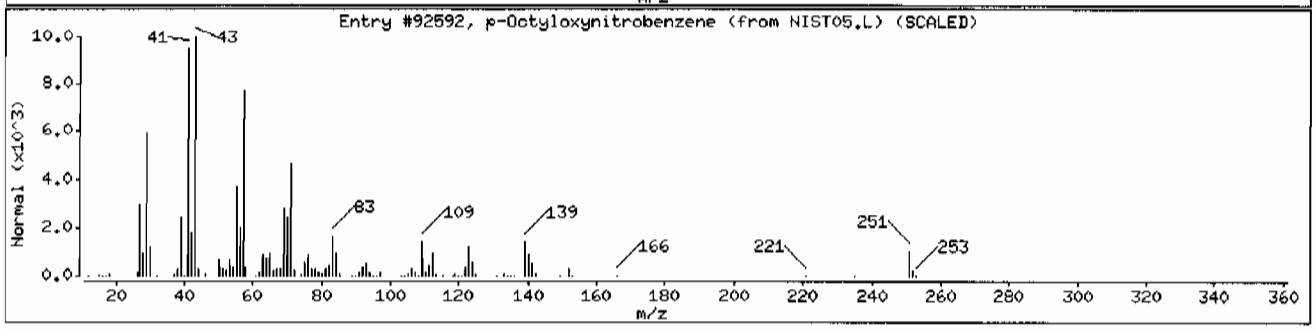

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603 Instrument: MSD6.i

Sample Info: 1232585002188196411SVM11LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Tricyclo[4.3.1.0(3,8)]dec-4-en-10-benzyl	1000197-67-3	NIST05.L	85515	11	C17H200	240
Tetraethyl 1,1,2,3-propanetetracarboxyla	635-03-0	NIST05.L	143320	10	C15H2408	332
2,3-Dibromobicyclo[4.1.1]oct-3-ene	103149-68-4	NIST05.L	101578	10	C8H10Br2	264

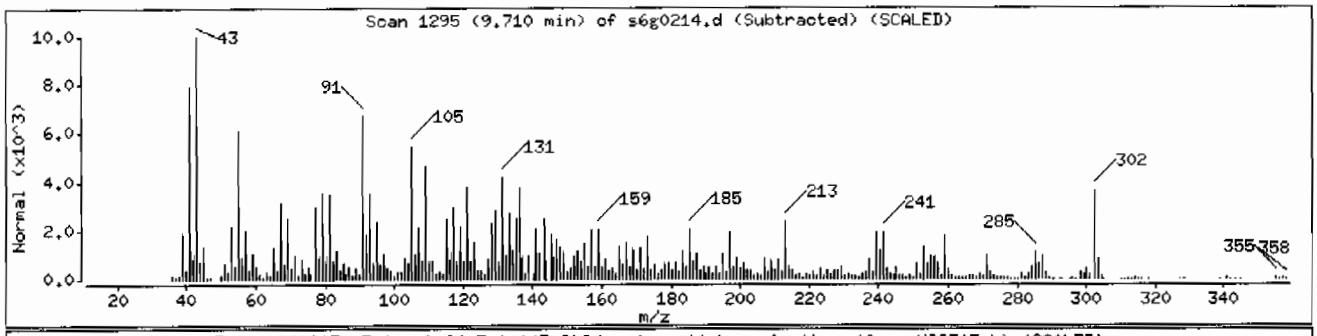

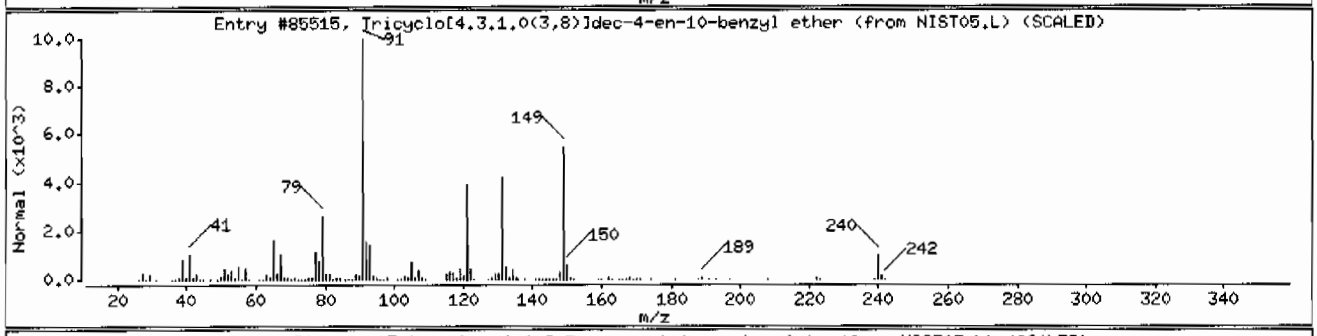

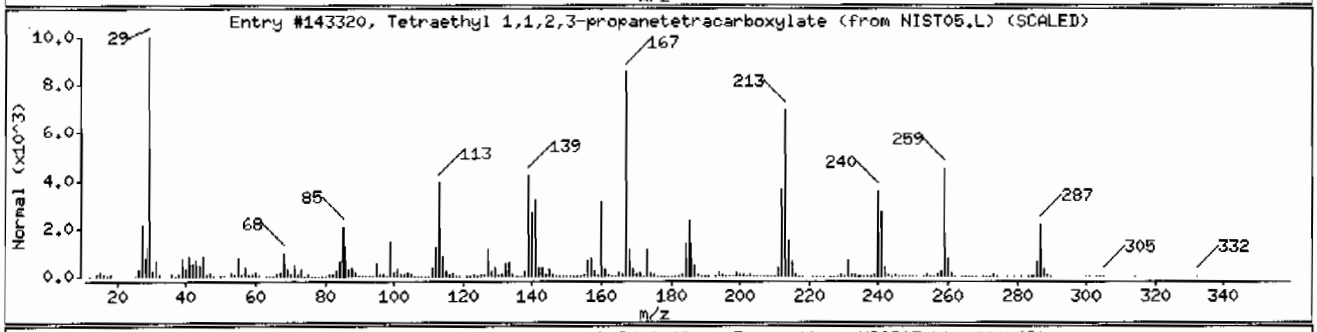

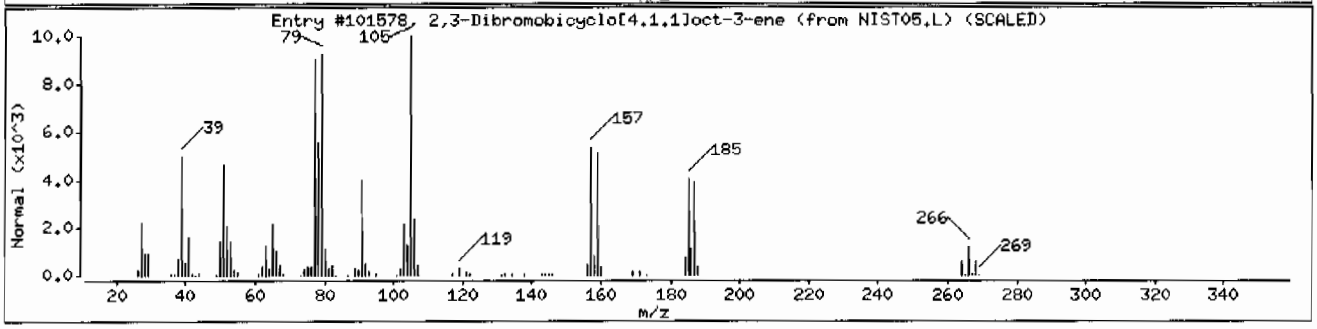

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603 Instrument: MSD6.i

Sample Info: 1232585002188196411SVMI1ILANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclohexane-1,3-dicarboxylic acid, 6-hyd	1000295-43-2	NIST05.L	162996	43	C21H2606	374
Benzothiophene-3-carboxylic acid, 2-amin	137987-78-1	NIST05.L	113658	35	C12H10C1NO3S	283
3,5-Dimethyl-1-[4-(1H-pyrrol-1-yl)phenyl	257863-12-0	NIST05.L	83193	35	C15H15N3	237

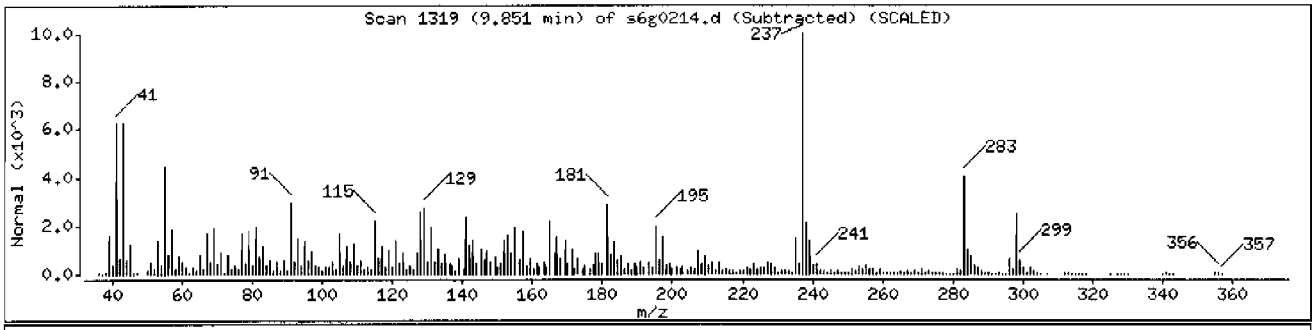

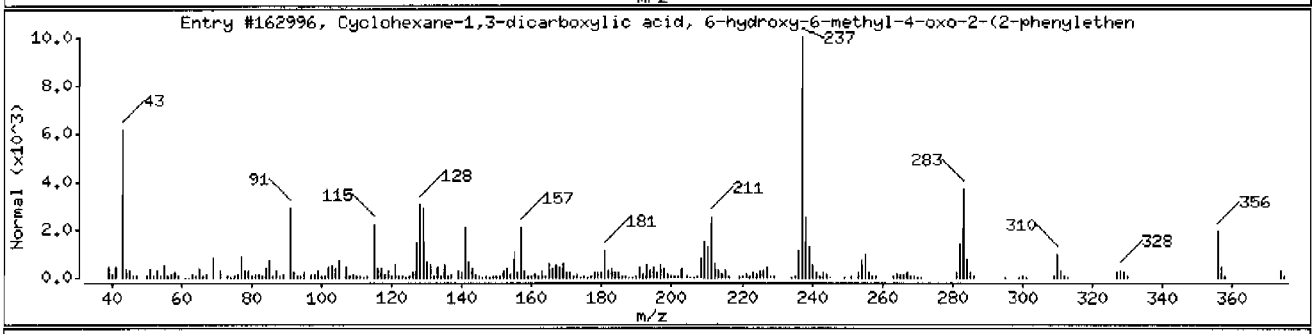

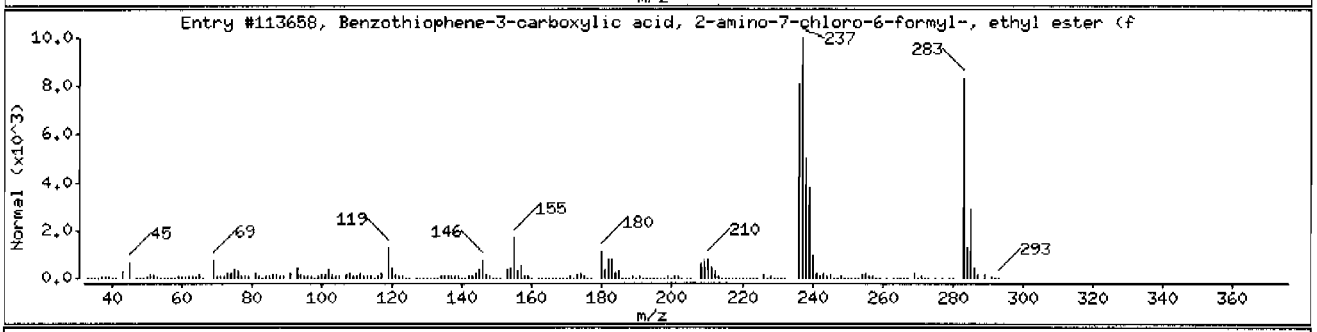

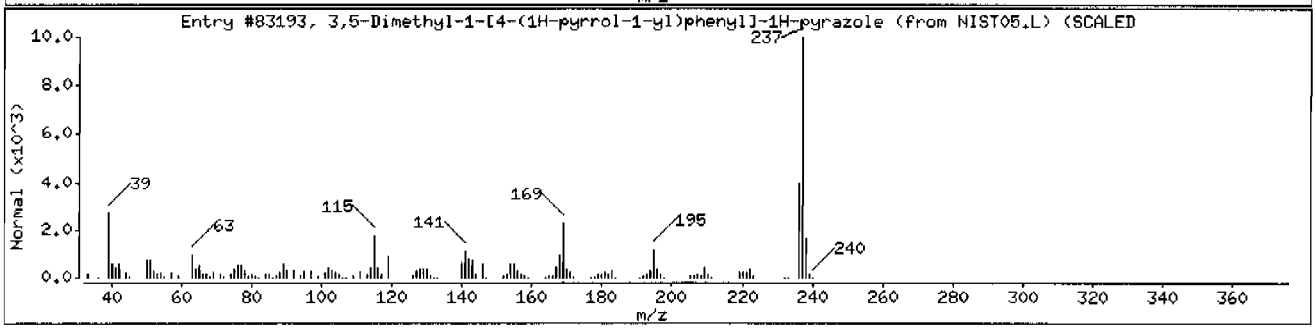

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: |2325850021881964111SVMI11LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Octadecane, 1-chloro-	3386-33-2	NIST05.L	117263	59	C18H37Cl	288
Octadecane, 1-chloro-	3386-33-2	NIST05.L	117264	56	C18H37Cl	288
Tetradecane	629-59-4	NIST05.L	55973	53	C14H30	198

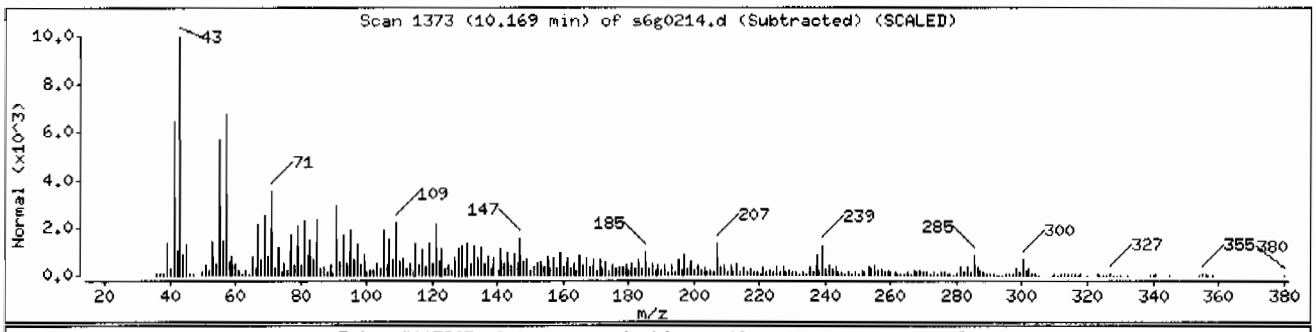

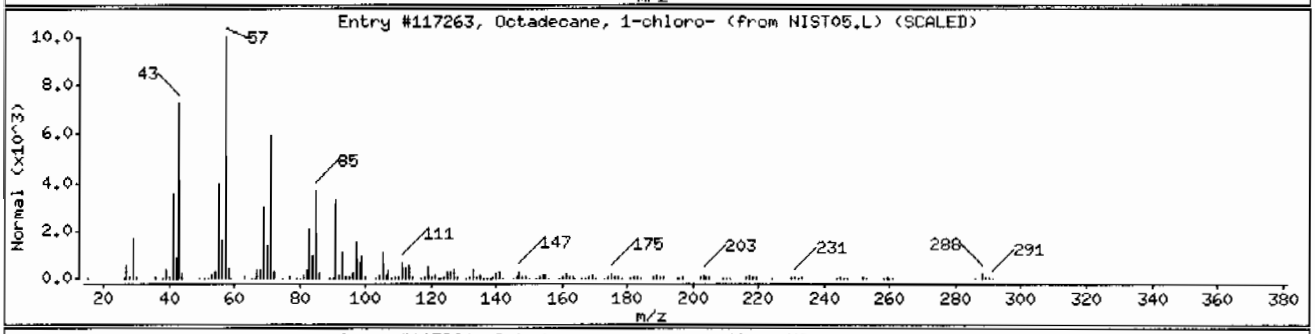

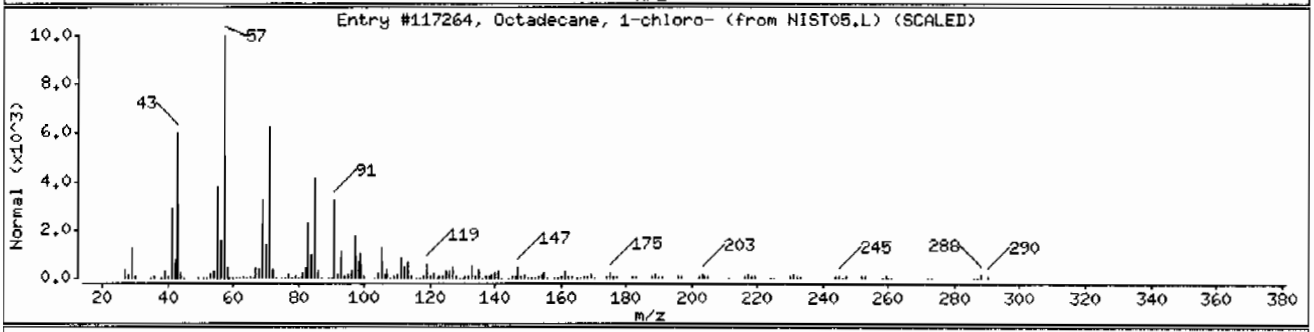

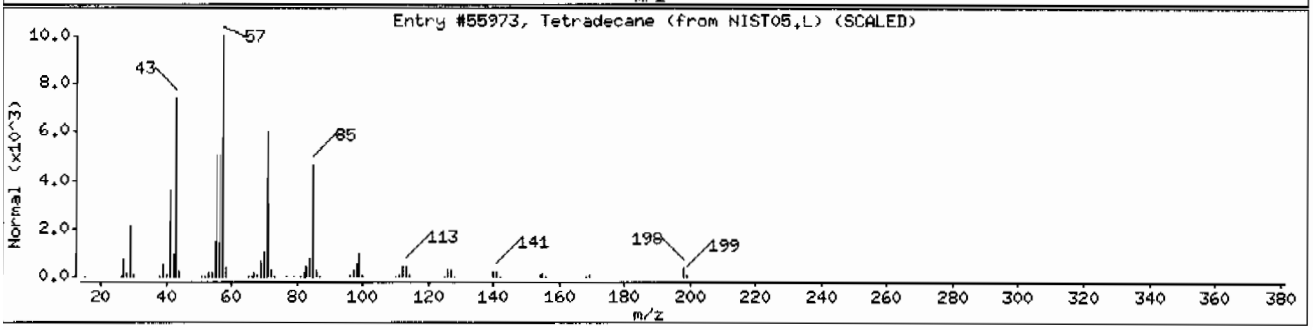

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603

Instrument: MSD6.i

Sample Info: |232585002|881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Thunbergol	25269-17-4	NIST05.L	118732	64	C20H34O	290
Retinol, acetate	127-47-9	NIST05.L	141518	49	C22H32O2	328
Isosteviol methyl ester	1000256-08-8	NIST05.L	143708	43	C21H32O3	332

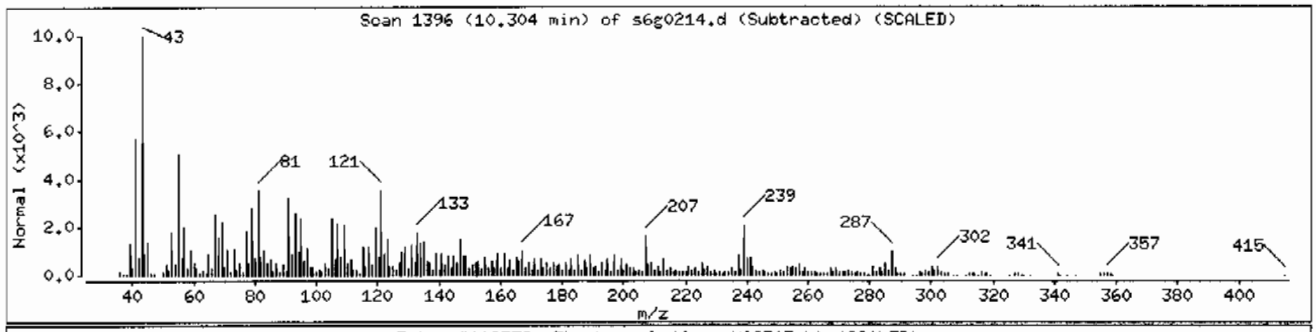

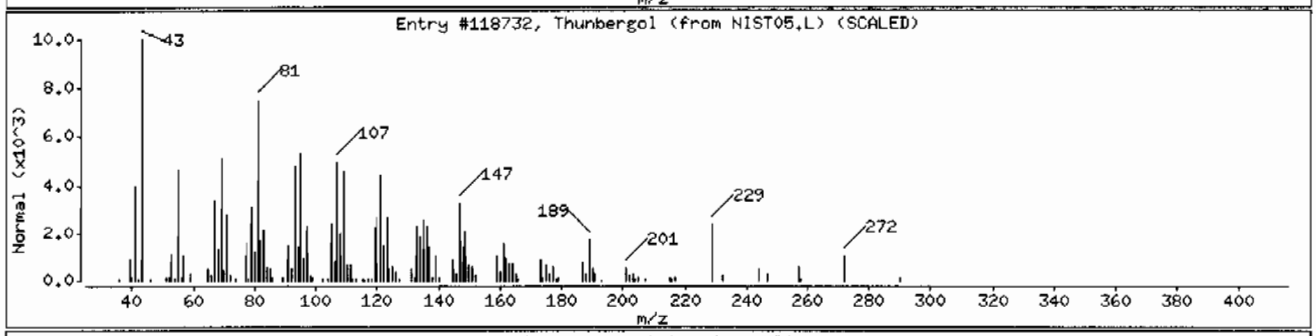

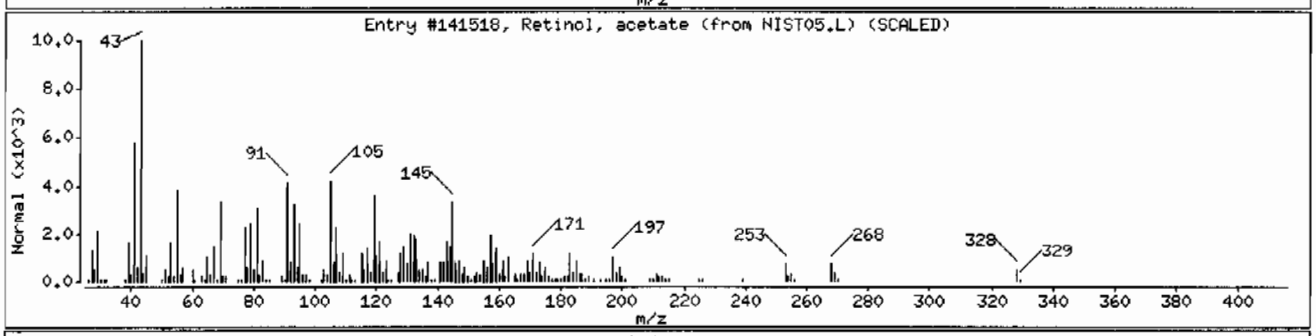

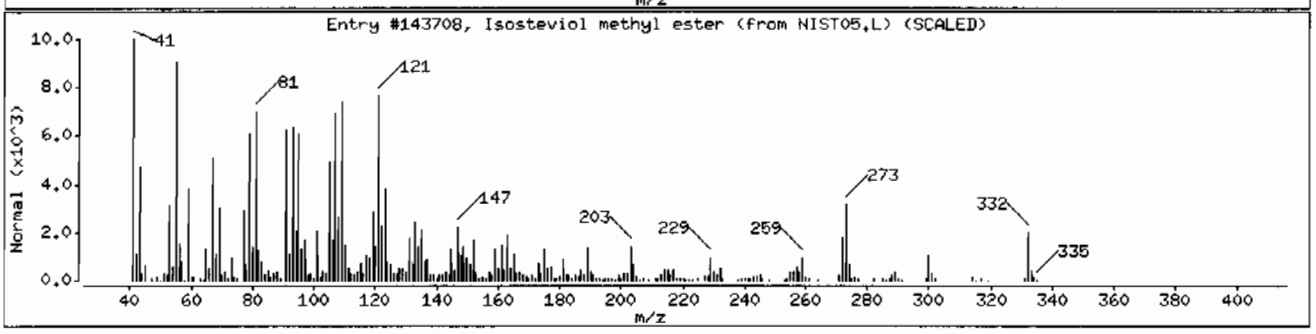

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603 Instrument: MSD6.i

Sample Info: |2325850021881964|1|SVM|1|LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Thunbergol	25269-17-4	NIST05.L	118732	70	C20H340	290
Spiro[2,4,5,6,7,7a-hexahydro-2-oxo-4,4,7	1000197-10-9	NIST05.L	62719	62	C12H1603	208
7-Oxabicyclo[4.1.0]heptane, 1-methyl-4-(	96-08-2	NIST05.L	34750	55	C10H1602	168

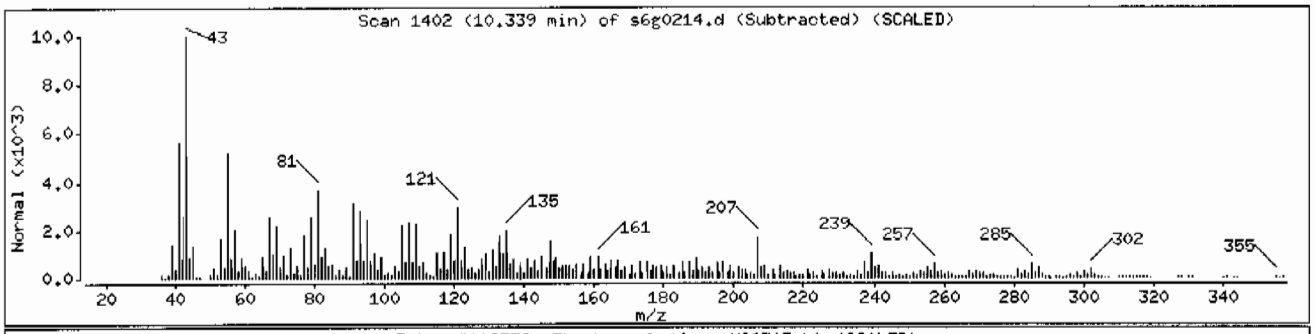

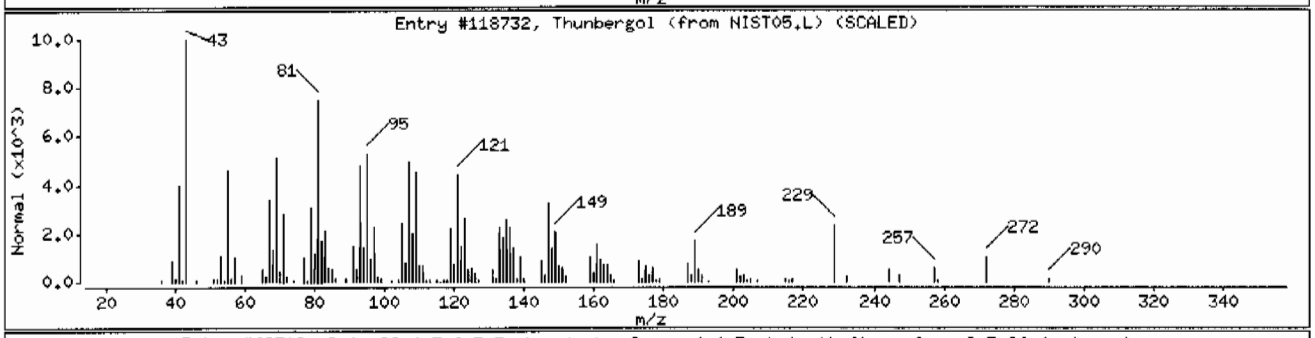

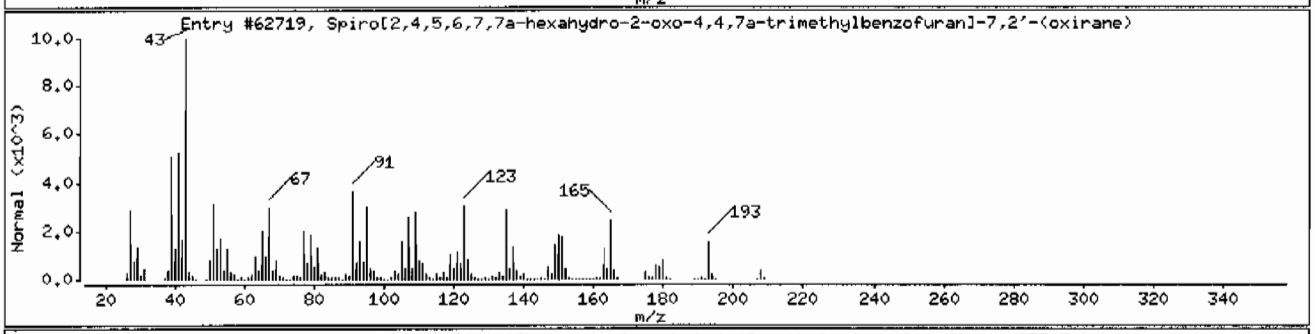

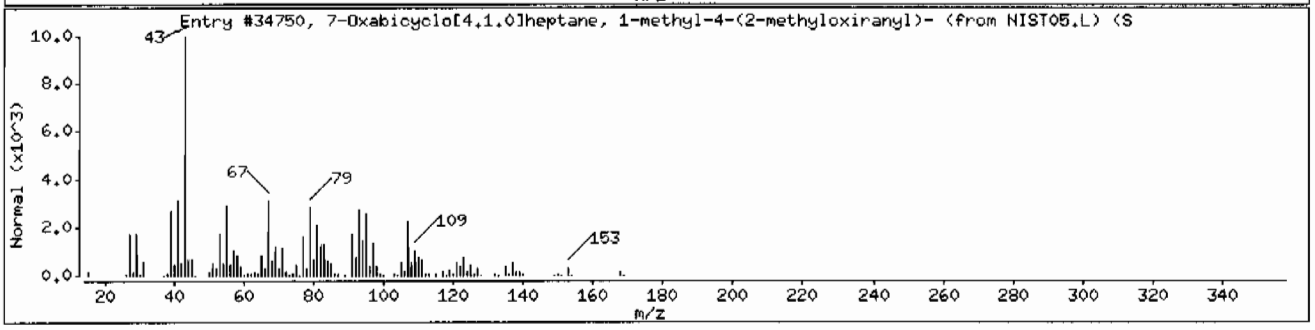

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603 Instrument: MSD6.i

Sample Info: 1232585002188196411ISVMI1ILANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Z-10-Tetradecen-1-ol acetate	1000130-99-3	NIST05.L	94763	44	C16H3OO2	254
Cyclopropane carboxamide, 2-cyclopropyl-	331416-19-4	NIST05.L	62199	42	C13H21NO	207
E-8-Methyl-9-tetradecen-1-ol acetate	1000130-81-4	NIST05.L	104138	41	C17H32O2	268

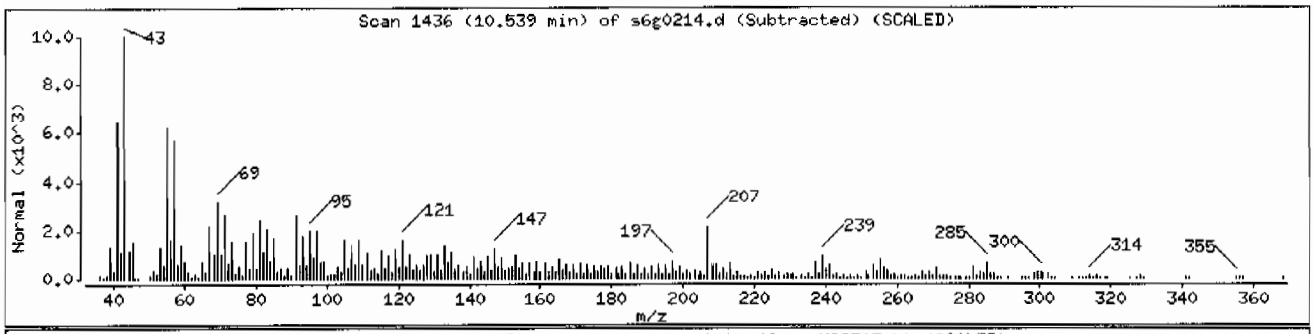

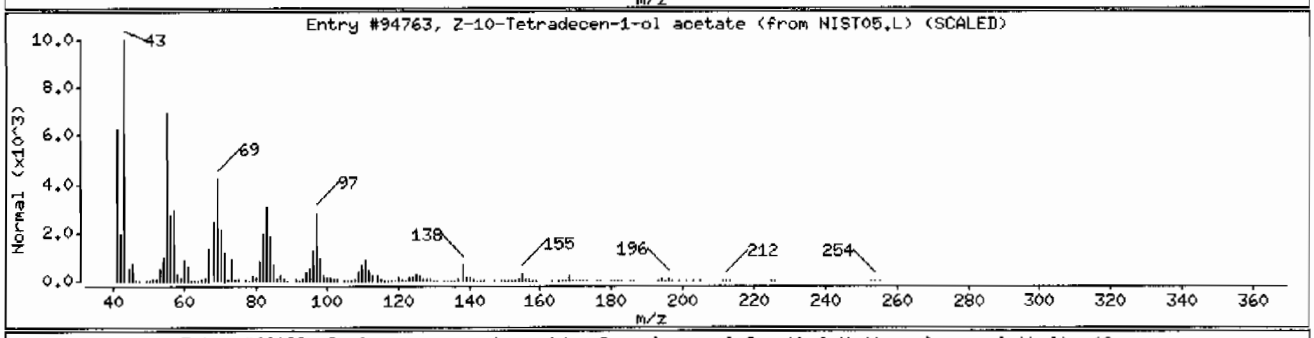

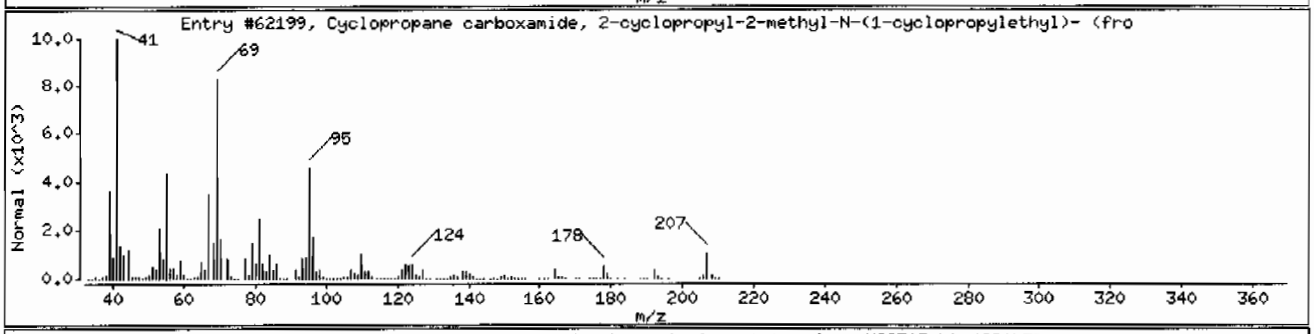

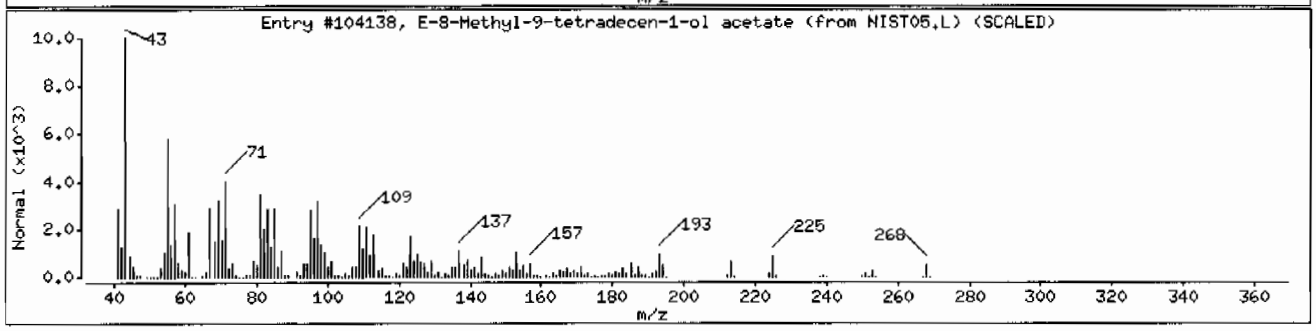

Data File: /chem/MSD6.i/s070209.b/s6g0214.d

Date : 02-JUL-2009 18:23

Client ID: CAMO-09-6603 Instrument: MSD6.i

Sample Info: 1232585002188196411|SVMI1|LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclohexane, 1,1'-(2-propyl-1,3-propaned	55030-21-2	NIST05.L	92245	89	C18H34	250
Cyclohexane, 1,1'-(2-methyl-1,3-propaned	2883-08-1	NIST05.L	73082	86	C16H30	222
Cyclohexane, 1,1'-(2-ethyl-1,3-propanedi	54833-34-0	NIST05.L	82661	86	C17H32	236

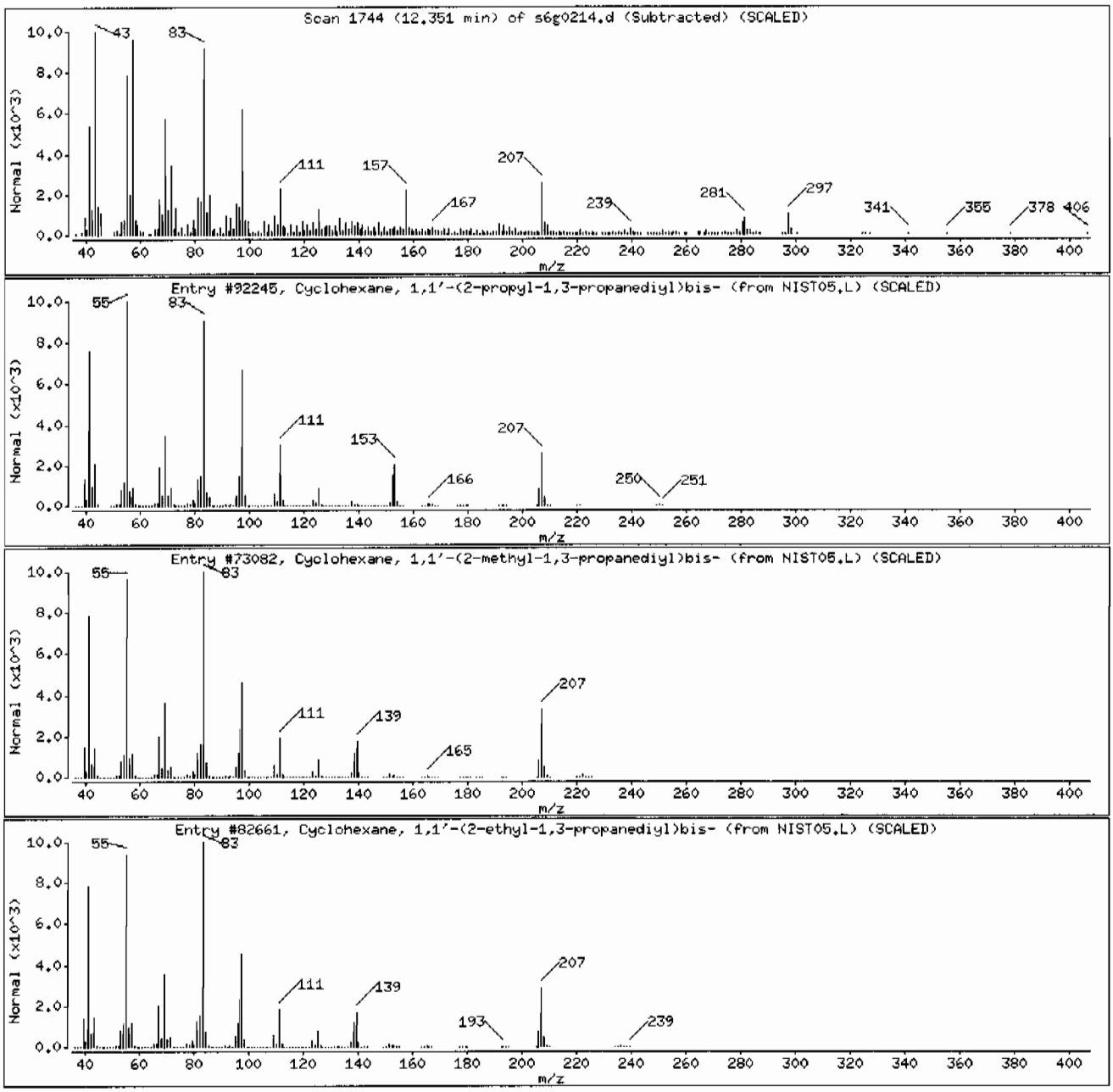

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:46	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s6g0215.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	370	ug/kg	74.0	370
108-95-2	Phenol	U	370	ug/kg	74.0	370
95-57-8	2-Chlorophenol	U	370	ug/kg	74.0	370
106-46-7	1,4-Dichlorobenzene	U	370	ug/kg	74.0	370
621-64-7	N-Nitrosodipropylamine	U	370	ug/kg	74.0	370
59-50-7	4-Chloro-3-methylphenol	U	370	ug/kg	74.0	370
83-32-9	Acenaphthene	U	37.0	ug/kg	12.2	37.0
121-14-2	2,4-Dinitrotoluene	U	370	ug/kg	37.0	370
100-02-7	4-Nitrophenol	U	370	ug/kg	122	370
87-86-5	Pentachlorophenol	U	370	ug/kg	92.5	370
129-00-0	Pyrene	U	37.0	ug/kg	11.1	37.0
110-86-1	Pyridine	U	370	ug/kg	74.0	370
62-53-3	Aniline	U	370	ug/kg	111	370
111-44-4	bis(2-Chloroethyl) ether	U	370	ug/kg	74.0	370
541-73-1	1,3-Dichlorobenzene	U	370	ug/kg	74.0	370
100-51-6	Benzyl alcohol	U	370	ug/kg	111	370
95-50-1	1,2-Dichlorobenzene	U	370	ug/kg	74.0	370
108-60-1	bis(2-Chloroisopropyl)ether	U	370	ug/kg	74.0	370
95-48-7	o-Cresol	U	370	ug/kg	74.0	370
65794-96-9	m,p-Cresols	U	370	ug/kg	111	370
67-72-1	Hexachloroethane	U	370	ug/kg	74.0	370
98-95-3	Nitrobenzene	U	370	ug/kg	74.0	370
78-59-1	Isophorone	U	370	ug/kg	74.0	370
88-75-5	2-Nitrophenol	U	370	ug/kg	74.0	370
105-67-9	2,4-Dimethylphenol	U	370	ug/kg	129	370
111-91-1	bis(2-Chloroethoxy)methane	U	370	ug/kg	74.0	370
120-83-2	2,4-Dichlorophenol	U	370	ug/kg	74.0	370
65-85-0	Benzoic acid	U	740	ug/kg	185	740
91-20-3	Naphthalene	U	37.0	ug/kg	11.1	37.0
106-47-8	4-Chloroaniline	U	370	ug/kg	74.0	370
87-68-3	Hexachlorobutadiene	U	370	ug/kg	74.0	370
91-57-6	2-Methylnaphthalene	U	37.0	ug/kg	7.40	37.0
77-47-4	Hexachlorocyclopentadiene	U	370	ug/kg	74.0	370
88-06-2	2,4,6-Trichlorophenol	U	370	ug/kg	74.0	370
95-95-4	2,4,5-Trichlorophenol	U	370	ug/kg	74.0	370
91-58-7	2-Chloronaphthalene	U	37.0	ug/kg	12.2	37.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	370	ug/kg	74.0	370
99-09-2	3-Nitroaniline	U	370	ug/kg	74.0	370

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:46	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s6g0215.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	370	ug/kg	74.0	370
606-20-2	2,6-Dinitrotoluene	U	370	ug/kg	37.0	370
208-96-8	Acenaphthylene	U	37.0	ug/kg	11.1	37.0
51-28-5	2,4-Dinitrophenol	U	740	ug/kg	141	740
132-64-9	Dibenzofuran	U	370	ug/kg	74.0	370
84-66-2	Diethylphthalate	U	370	ug/kg	74.0	370
86-73-7	Fluorene	U	37.0	ug/kg	11.1	37.0
7005-72-3	4-Chlorophenylphenylether	U	370	ug/kg	74.0	370
534-52-1	2-Methyl-4,6-dinitrophenol	U	370	ug/kg	74.0	370
100-01-6	4-Nitroaniline	U	370	ug/kg	111	370
	p-Nitroaniline					
122-39-4	Diphenylamine	U	370	ug/kg	74.0	370
122-66-7	Azobenzene	U	370	ug/kg	74.0	370
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	370	ug/kg	74.0	370
118-74-1	Hexachlorobenzene	U	370	ug/kg	74.0	370
85-01-8	Phenanthrene	U	37.0	ug/kg	11.1	37.0
120-12-7	Anthracene	U	37.0	ug/kg	7.40	37.0
84-74-2	Di-n-butylphthalate	U	370	ug/kg	74.0	370
206-44-0	Fluoranthene	U	37.0	ug/kg	11.1	37.0
85-68-7	Butylbenzylphthalate	U	370	ug/kg	74.0	370
56-55-3	Benzo(a)anthracene	U	37.0	ug/kg	11.1	37.0
91-94-1	3,3'-Dichlorobenzidine	U	370	ug/kg	111	370
218-01-9	Chrysene	U	37.0	ug/kg	11.1	37.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	370	ug/kg	74.0	370
117-84-0	Di-n-octylphthalate	U	370	ug/kg	74.0	370
205-99-2	Benzo(b)fluoranthene	U	37.0	ug/kg	11.1	37.0
207-08-9	Benzo(k)fluoranthene	U	37.0	ug/kg	11.1	37.0
50-32-8	Benzo(a)pyrene	U	37.0	ug/kg	11.1	37.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.0	ug/kg	11.1	37.0
53-70-3	Dibenzo(a,h)anthracene	U	37.0	ug/kg	11.1	37.0
191-24-2	Benzo(ghi)perylene	U	37.0	ug/kg	11.1	37.0
120-82-1	1,2,4-Trichlorobenzene	U	370	ug/kg	74.0	370

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	314	ug/kg		JA
57-10-3	n-Hexadecanoic acid	7.68	194	ug/kg	98	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 18:46	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.17 g	**Final Volume:**	1 mL
Data File:	s6g0215.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	7.92	204	ug/kg		J
1000130-90-5	2-Methyl-Z,Z-3,13-octadecadienol	8.33	380	ug/kg	90	NJ
	Unknown	8.47	870	ug/kg		J
	Unknown	8.9	221	ug/kg		J
	Unknown	9.09	149	ug/kg		J
	Unknown	9.24	594	ug/kg		J
	Unknown	9.29	239	ug/kg		J
	Unknown	9.35	232	ug/kg		J
	Unknown	9.45	1840	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.55	827	ug/kg	93	NJ
	Unknown	9.84	672	ug/kg		J
	Unknown	9.92	279	ug/kg		J
	Unknown	10.21	586	ug/kg		J
	Unknown	12.83	470	ug/kg		J
70038-20-9	7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet	13.57	444	ug/kg	90	NJ
	Unknown	13.63	493	ug/kg		J

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Data file : /chem/MSD6.i/s070209.b/s6g0215.d
Lab Smp Id: 232585003 Client Smp ID: CAMO-09-6604
Inj Date : 02-JUL-2009 18:46
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232585003|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2506.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.17000	weight of sample
M	10.41040	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.999	3.999	(1.000)	396970	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1524317	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	865079	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1493204	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1377462	40.0000	
* 98 Perylene-d12	264	11.498	11.492	(1.000)	1282398	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.796)	497830	46.1583	1710
$ 5 Phenol-d5	99	3.710	3.710	(0.928)	701584	48.5596	1800
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	291402	21.5793	798
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	536922	24.4374	904
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.099)	151638	47.4151	1750
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	584382	26.5650	983

ION RATIO REPORT

SV REPORT

Data file: s6g0215.d
Report Date: 07/02/2009 18:59
Lab. ID: 232585003 SampleType: SAMPLE
Injection Date: 02-JUL-2009 18:46
Operator: JMB3 Instrument: MSD6.i
Sample Info: |232585003|881964|1|SVM|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2506
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
1 N-Methyl-N-nitrosomethylamine				CAS#: 62-75-9		
74	28844	2.18	2.47	80-120	100	(T)
42	3373	2.18	2.47	87-147	12	(QT)
43	30131	2.21	2.47	22- 82	104	(QT)
4 Aniline			CAS#: 62-53-3			
66	36336	3.71	3.78	80-120	100	(T)
93	7439	3.68	3.79	361-421	20	(QT)
6 Phenol			CAS#: 108-95-2			
94	43258	3.57	3.72	80-120	100	(T)
66	9350	3.57	3.72	18- 78	22	(T)
65	36361	3.57	3.72	5- 65	84	(QT)
7 bis(2-Chloroethyl) ether				CAS#: 111-44-4		
63	25698	3.96	3.80	80-120	100	(T)
93	755446	3.96	3.79	203-263	2940	(QT)
95	11780	3.96	3.80	5- 65	46	(T)
12 Benzyl alcohol			CAS#: 100-51-6			
108	27791	4.06	4.07	80-120	100	( )
79	204472	4.06	4.07	108-168	736	(Q)
77	138589	4.06	4.07	57-117	499	(Q)
15 o-Cresol			CAS#: 95-48-7			
107	95564	4.06	4.12	80-120	100	( )
108	27791	4.06	4.12	88-148	29	(Q)
77	138699	4.06	4.12	30- 90	145	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	42310	4.36	4.24	80-120	100	(T)
42	30778	4.36	4.24	57-117	73	(T)
18 m,p-Cresols				CAS#: 65794-96-9		
107	95564	4.06	4.22	80-120	100	(T)
108	27791	4.06	4.22	73-133	29	(QT)
77	138589	4.06	4.22	8- 68	145	(QT)
21 Nitrobenzene				CAS#: 98-95-3		
77	30841	4.33	4.38	80-120	100	( )
65	12531	4.33	4.38	0- 46	41	( )
123	321	4.33	4.38	13- 73	1	(Q)
22 Isophorone				CAS#: 78-59-1		
82	291685	4.36	4.53	80-120	100	(T)
138	300	4.33	4.53	0- 47	0	(T)
23 2-Nitrophenol				CAS#: 88-75-5		
139	13522	4.86	4.59	80-120	100	(T)
65	17373	4.86	4.59	56-116	128	(QT)
109	15591	4.87	4.59	3- 63	115	(QT)
25 bis(2-Chloroethoxy)methane				CAS#: 111-91-1		
93	124645	4.86	4.65	80-120	100	(T)
123	1901	4.86	4.65	0- 47	2	(T)
95	30988	4.86	4.65	3- 63	25	(T)
33 4-Chloro-3-methylphenol				CAS#: 59-50-7		
107	20596	4.87	5.22	80-120	100	(T)
144	12517	5.61	5.22	0- 55	61	(QT)
142	267	5.59	5.22	48-108	1	(QT)
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	56238	5.86	5.72	80-120	100	(T)
164	3570	5.86	5.72	4- 64	6	(T)
127	5155	5.86	5.72	9- 69	9	(T)
42 o-Nitroaniline				CAS#: 88-74-4		
65	133905	5.86	5.78	80-120	100	(T)
92	114109	5.86	5.78	29- 89	85	(T)
138	30853	5.85	5.78	58-118	23	(QT)
41 m-Nitroaniline				CAS#: 99-09-2		
138	30870	5.85	6.08	80-120	100	(T)
92	114040	5.86	6.07	92-152	369	(QT)
108	106871	5.86	6.08	0- 40	346	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
43 Dimethylphthalate			CAS#: 131-11-3			
163	190094	6.13	5.89	80-120	100	(T)
164	865079	6.13	5.89	0- 41	455	(QT)
45 Acenaphthylene			CAS#: 208-96-8			
152	31672	5.61	6.03	80-120	100	(T)
151	29806	5.61	6.03	0- 50	94	(QT)
153	9084	5.61	6.03	0- 44	29	(T)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	9104	6.30	6.25	80-120	100	( )
89	351	6.32	6.25	50-110	4	(QT)
63	937	6.28	6.25	31- 91	10	(Q)
52 4-Nitrophenol			CAS#: 100-02-7			
139	13564	6.45	6.17	80-120	100	(T)
109	1937	6.47	6.17	44-104	14	(QT)
65	1383	6.40	6.17	90-150	10	(QT)
53 Fluorene			CAS#: 86-73-7			
166	15124	6.52	6.55	80-120	100	( )
165	1000	6.52	6.55	60-120	7	(Q)
167	2726	6.52	6.55	0- 44	18	( )
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	501	6.73	6.56	80-120	100	(T)
105	1803	6.73	6.56	15- 75	360	(QT)
51	1891	6.73	6.56	63-123	377	(QT)
85 Butylbenzylphthalate			CAS#: 85-68-7			
149	46282	9.21	9.13	80-120	100	(T)
91	89741	9.21	9.13	49-109	194	(QT)
206	9474	9.24	9.13	0- 53	20	(T)
93 bis(2-Ethylhexyl)phthalate			CAS#: 117-81-7			
149	71033	9.73	9.65	80-120	100	(T)
167	40761	9.73	9.66	4- 64	57	(T)
94 Di-n-octylphthalate			CAS#: 117-84-0			
149	88378	10.35	10.33	80-120	100	( )
43	1586906	10.35	10.33	0- 46	1796	(Q)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0215.d
Lab Smp Id: 232585003 Client Smp ID: CAMO-09-6604
Inj Date : 02-JUL-2009 18:46
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232585003|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2506.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.17000	weight of sample
M	10.41040	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.999	2739622	40.000
* 67 Phenanthrene-d10	7.310	3943590	40.000
* 91 Chrysene-d12	9.745	17132431	40.000
* 98 Perylene-d12	11.498	4406354	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.010	580729	8.47897139	314	0		0	10
n-Hexadecanoic acid				CAS #: 57-10-3			
7.681	516651	5.24041392	194	98	NIST05.L	96235	67
Unknown				CAS #:			
7.916	543990	5.51771640	204	0		0	67
2-Methyl-Z,Z-3,13-octadecadienol				CAS #: 1000130-90-5			
8.328	1013569	10.2806682	380	90	NIST05.L	112083	67
Unknown				CAS #:			
8.475	2317949	23.5110506	870	0		0	67
Unknown				CAS #:			
8.904	2560315	5.97770434	221	0		0	91
Unknown				CAS #:			
9.087	1719527	4.01467032	148	0		0	91
Unknown				CAS #:			
9.239	6870948	16.0419687	594	0		0	91
Unknown				CAS #:			
9.292	2763479	6.45204212	239	0		0	91
Unknown				CAS #:			
9.351	2690505	6.28166533	232	0		0	91
Unknown				CAS #:			
9.451	21245300	49.6025345	1840	0		0	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1740-19-8			
9.551	9575682	22.3568549	827	93	NIST05.L	125036	91
Unknown				CAS #:			
9.839	7780774	18.1661876	672	0		0	91
Unknown				CAS #:			
9.922	3226196	7.53237211	279	0		0	91
Unknown				CAS #:			
10.210	6778988	15.8272637	586	0		0	91

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
12.827	1399149	12.701917	470	0		0	98
7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet				CAS #: 70038-20-9			
13.569	1321964	12.0005194	444	90	NIST05.L	69982	98
Unknown				CAS #:			
13.627	1466794	13.3152641	493	0		0	98

Data File: /chem/MSD6.i/s070209.b/s6g0215.d
Date : 02-JUL-2009 18:46
Client ID: CAMO-09-6604
Sample Info: |2325850031881964|1|SVM|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

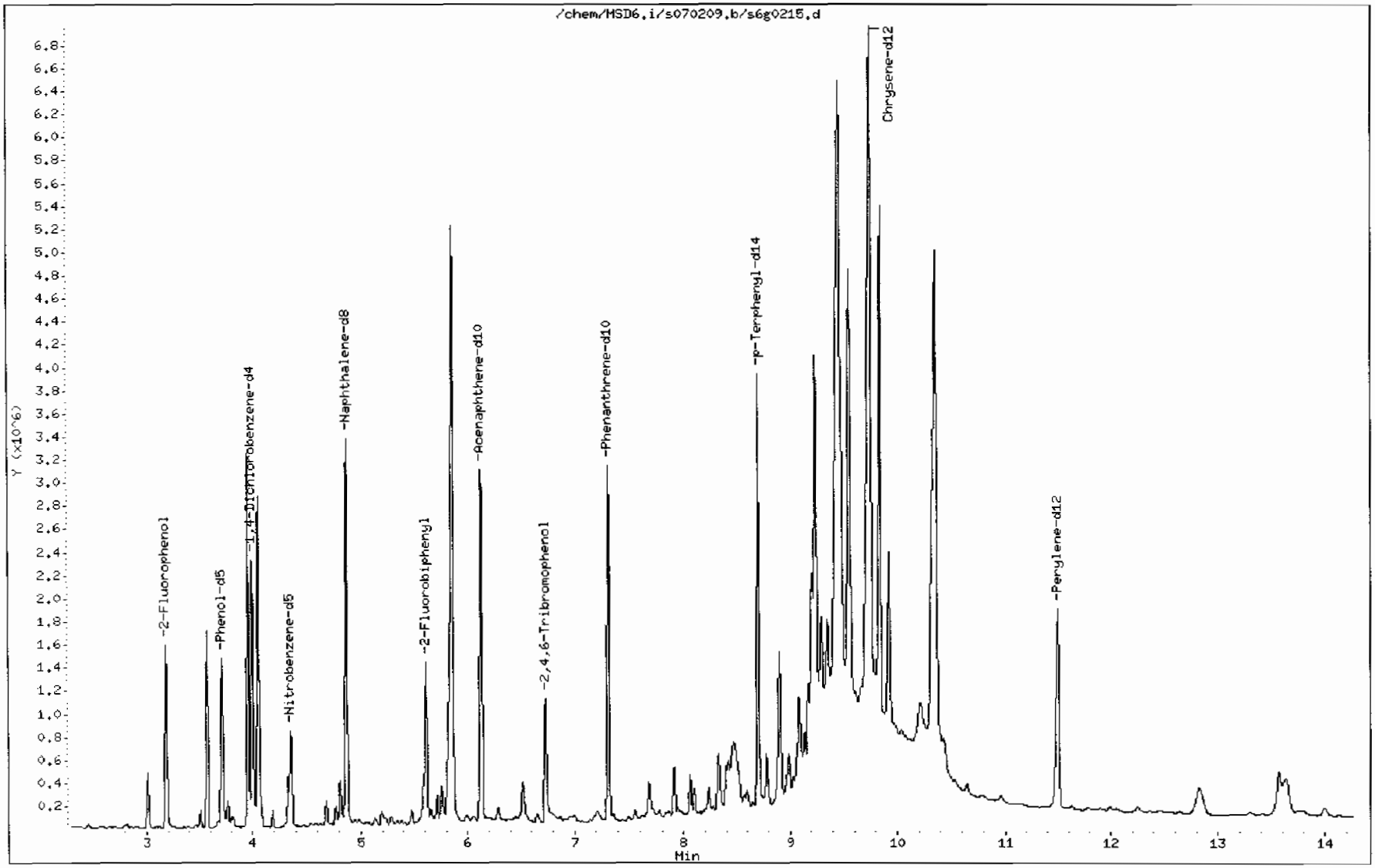

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604

Instrument: MSD6.i

Sample Info: 1232585003188196411ISVMI1ILANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7950	25	C6H12O2	116

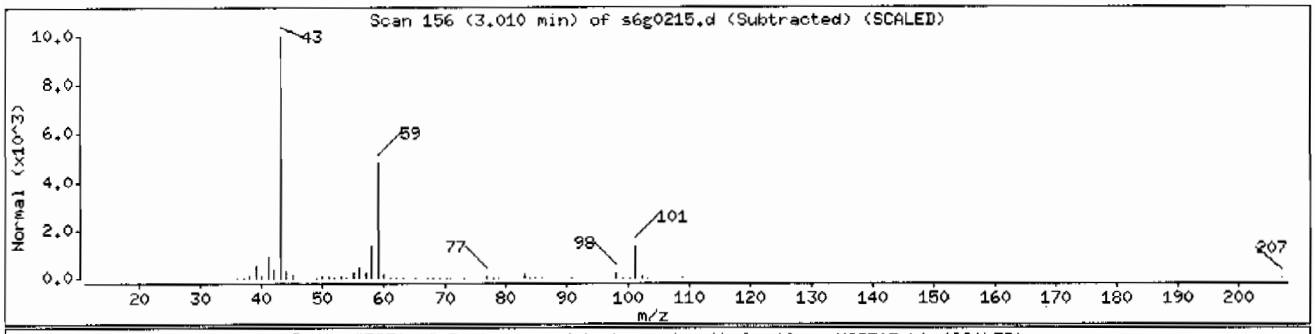

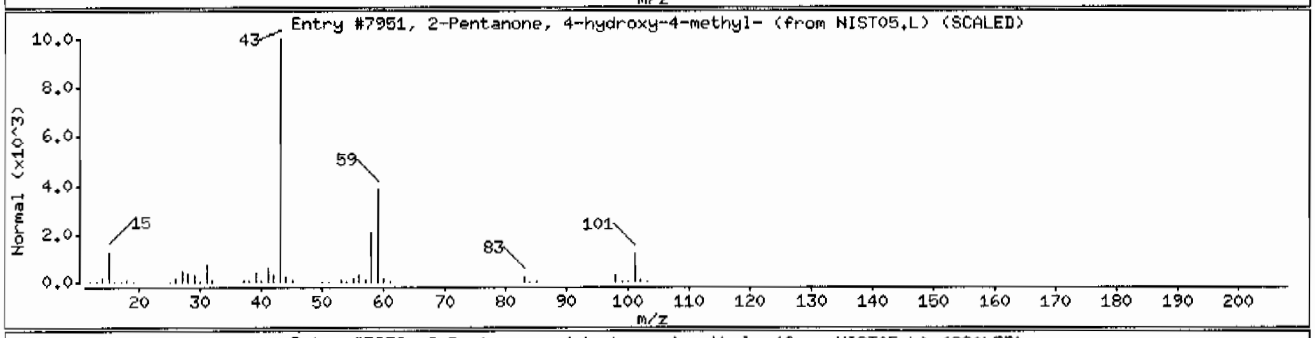

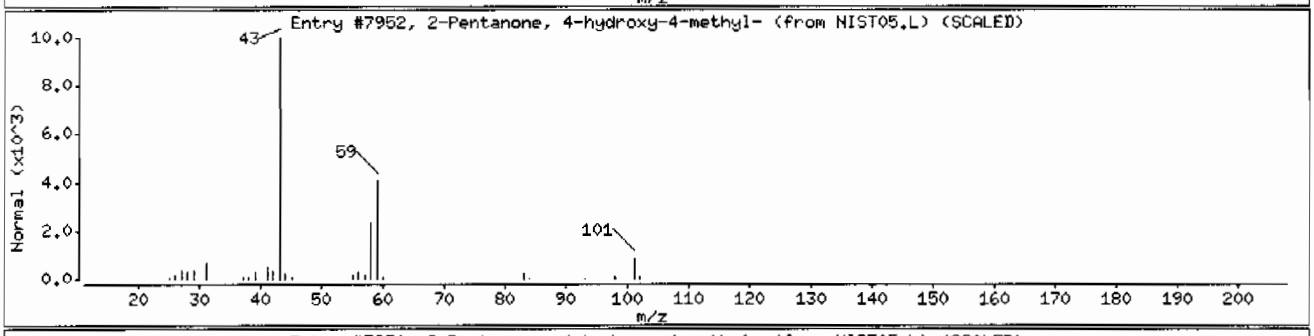

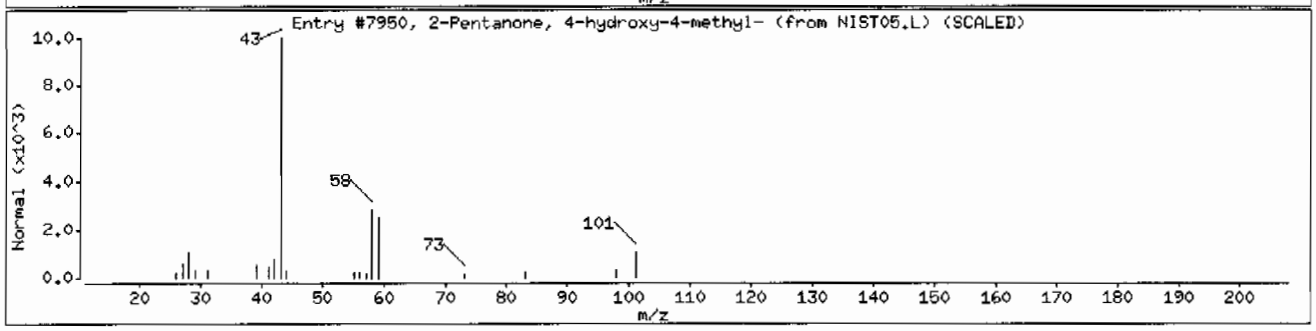

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604

Instrument: MSD6.i

Sample Info: 1232585003188196411SVMI1LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
n-Hexadecanoic acid	57-10-3	NIST05.L	96235	98	C16H32O2	256
n-Hexadecanoic acid	57-10-3	NIST05.L	96234	97	C16H32O2	256
Tetradecanoic acid	544-63-8	NIST05.L	77274	95	C14H28O2	228

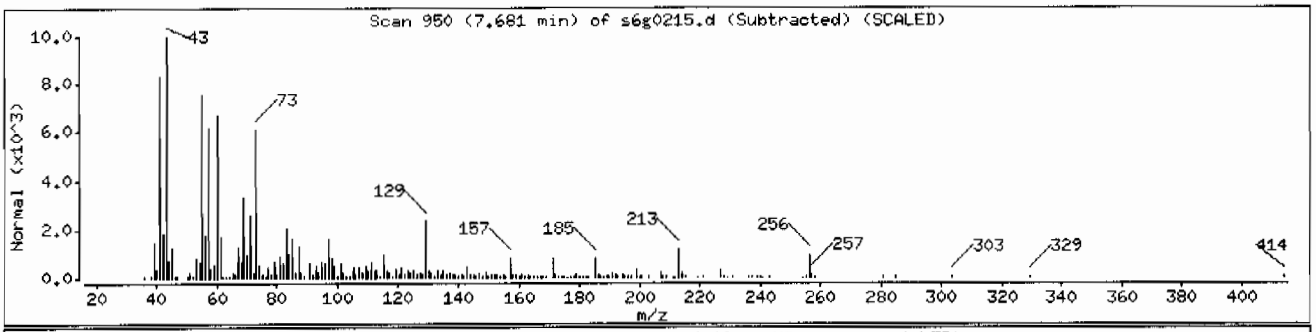

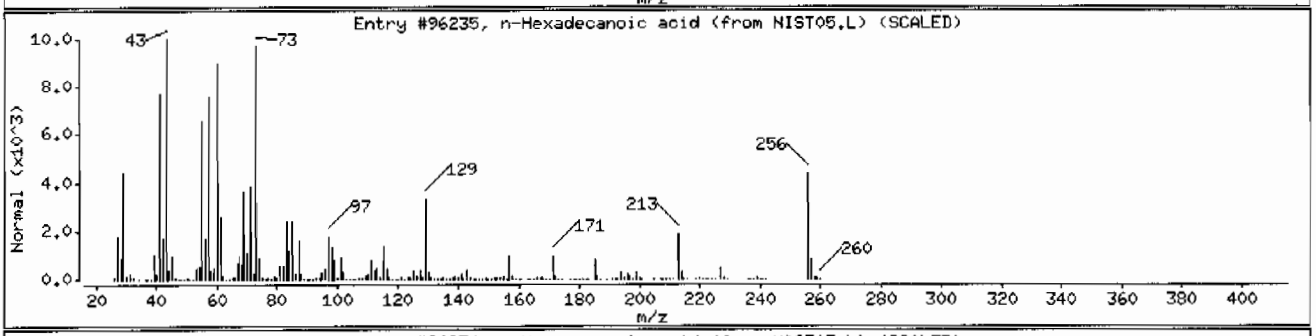

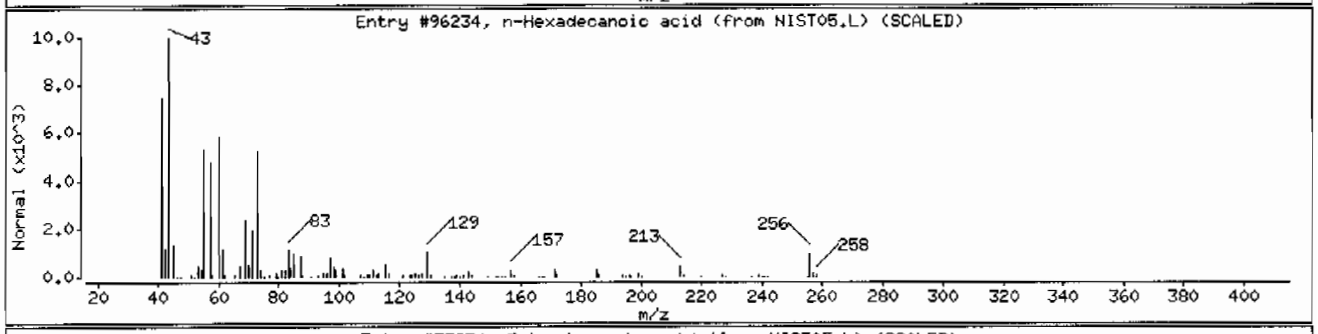

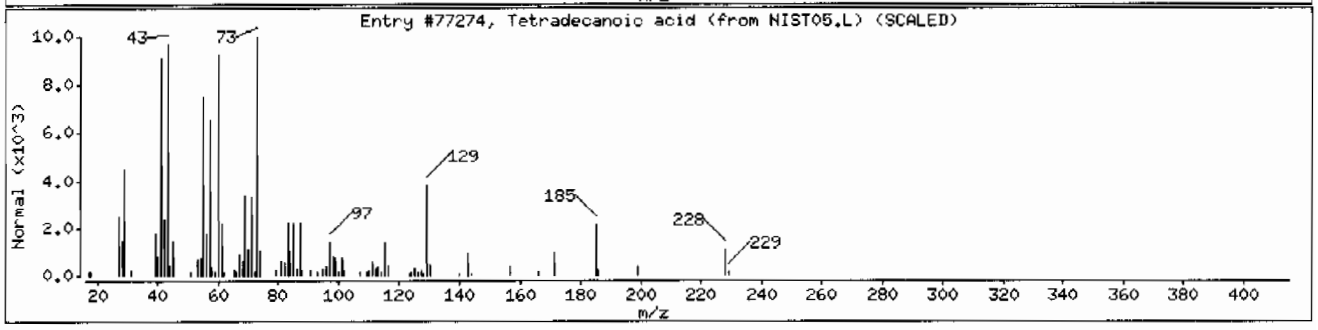

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604 Instrument: MSD6.i

Sample Info: 1232585003188196411SVMI1iLANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2(1H)-Pyridinone, 1-propyl-	19006-63-4	NIST05.L	16187	46	C8H11NO	137
m-Toluic acid, octadecyl ester	1000292-36-3	NIST05.L	167943	35	C26H44O2	388
m-Toluic acid, heptadecyl ester	1000292-24-0	NIST05.L	163196	35	C25H42O2	374

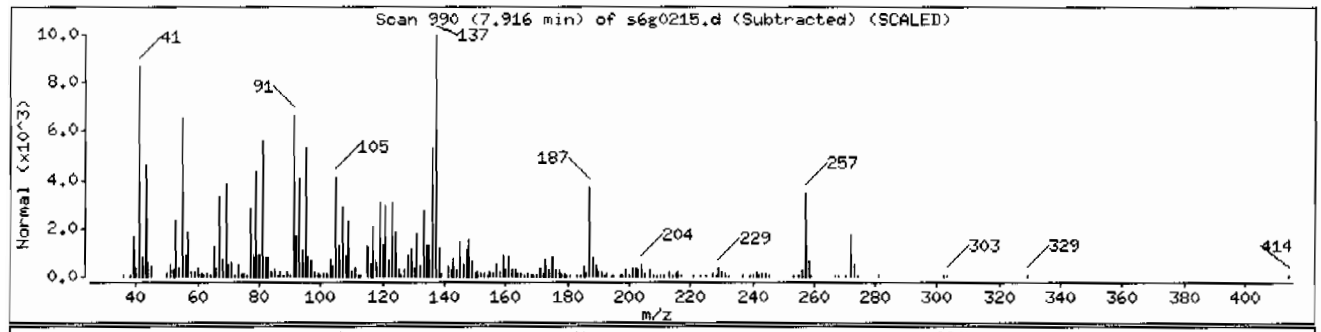

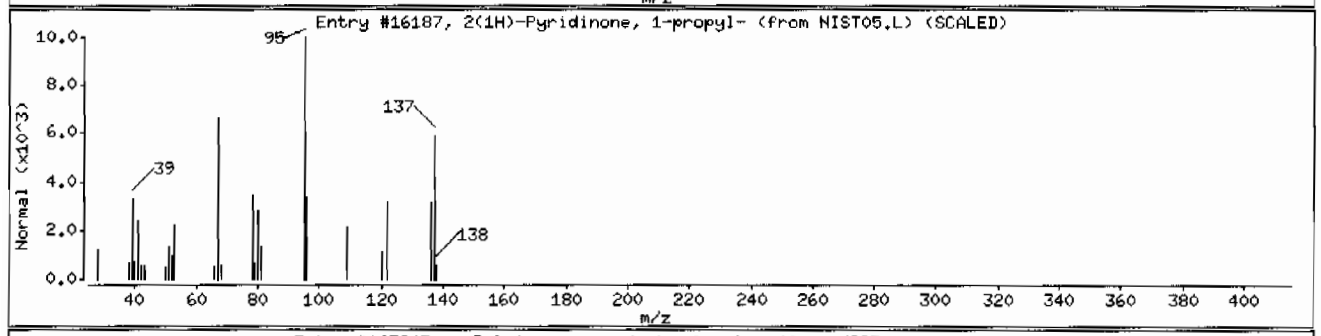

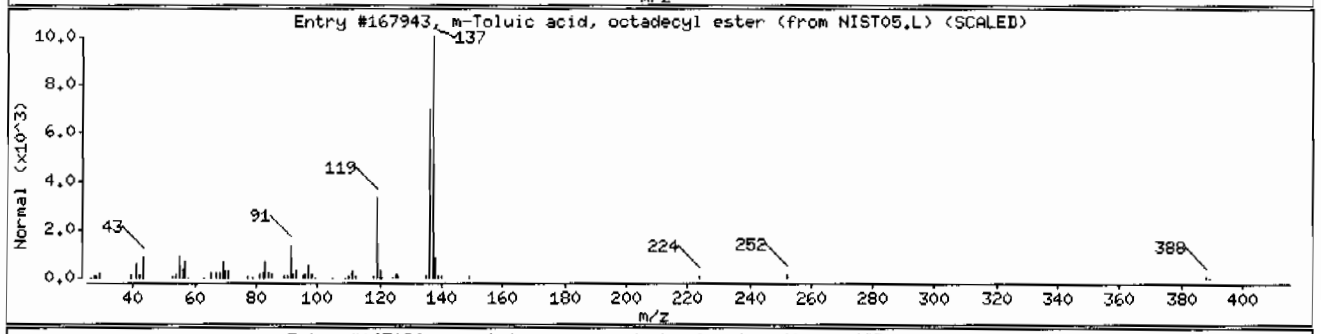

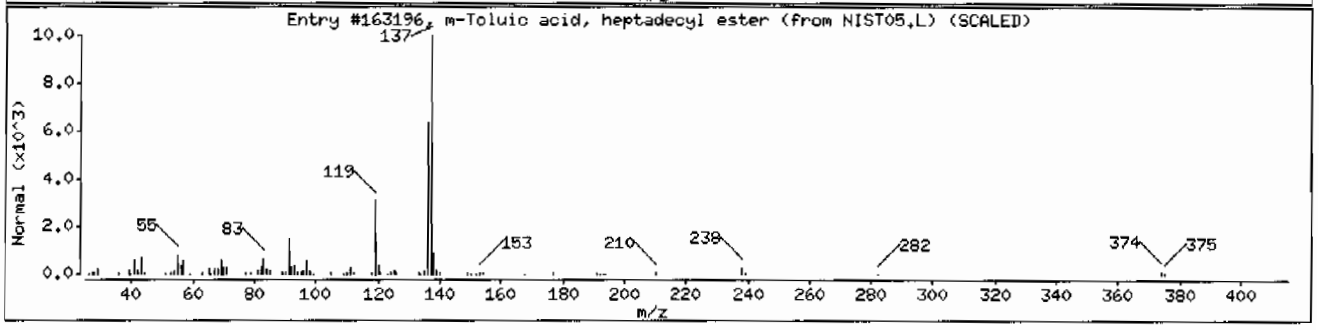

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604 Instrument: MSD6.i

Sample Info: 1232585003188196411ISVMI1ILANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2-Methyl-Z,Z-3,13-octadecadienol	1000130-90-5	NIST05.L	112083	90	C19H360	280
Oxacyclohexadecan-2-one	106-02-5	NIST05.L	85334	89	C15H2802	240
(R)-(-)-(Z)-14-Methyl-8-hexadecen-1-ol	30689-78-2	NIST05.L	94911	86	C17H340	254

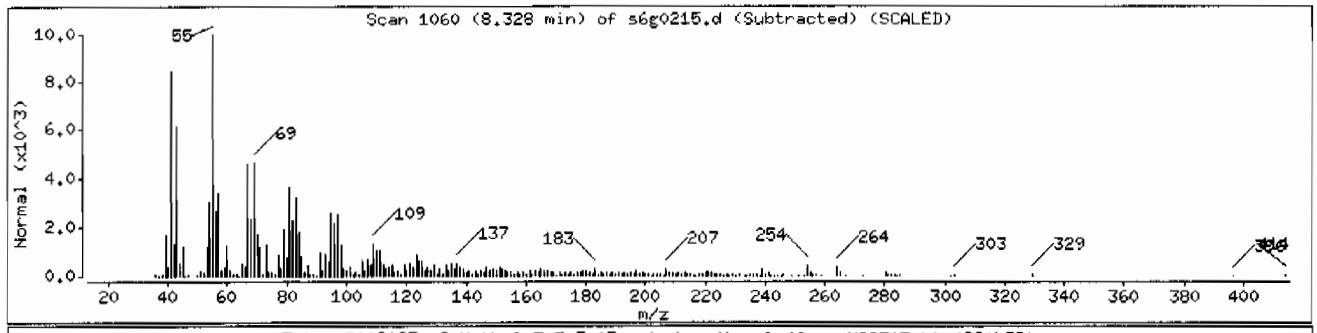

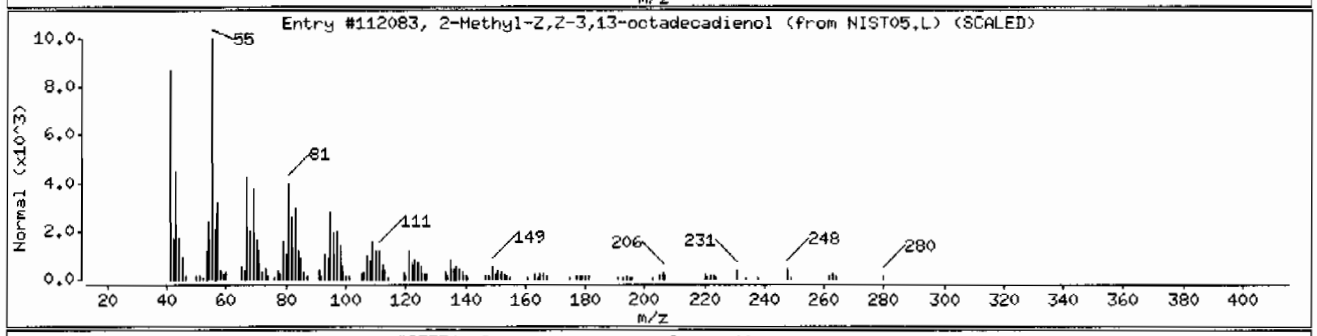

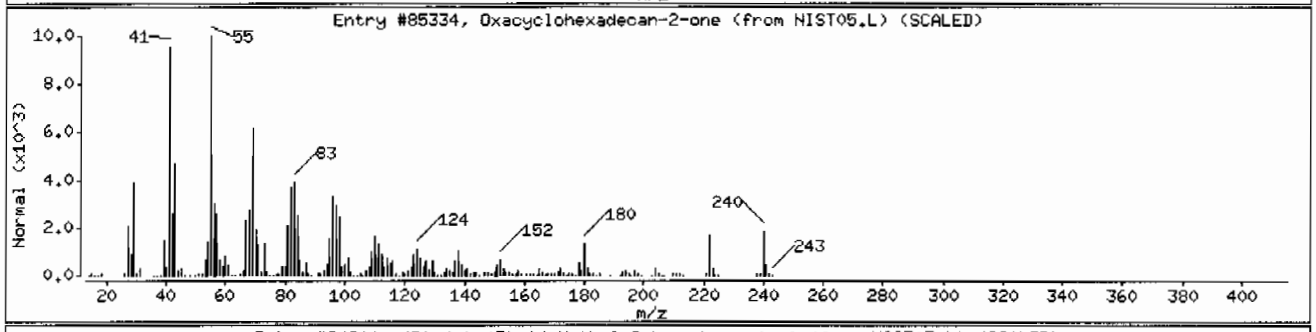

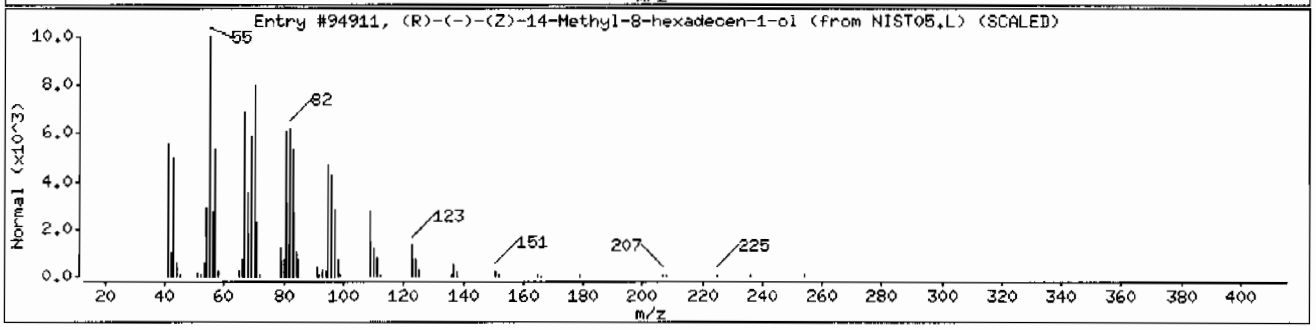

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604

Instrument: MSD6.i

Sample Info: 1232585003188196411SVMI1ILANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,3,5,7-Tetramethyl-adamantane	1687-36-1	NIST05.L	51363	43	C14H24	192
2-Hydroxy-5-thiocyanatobenzoic acid	21222-64-0	NIST05.L	53762	38	C8H5NO3S	195
2-Oxo-3-[3-methoxybenzoyl]propanoic acid	60943-40-0	NIST05.L	91758	35	C13H14O5	250

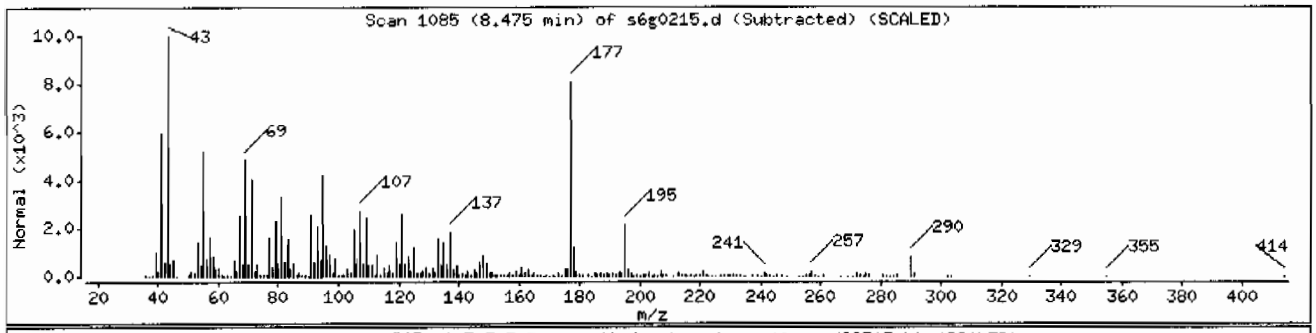

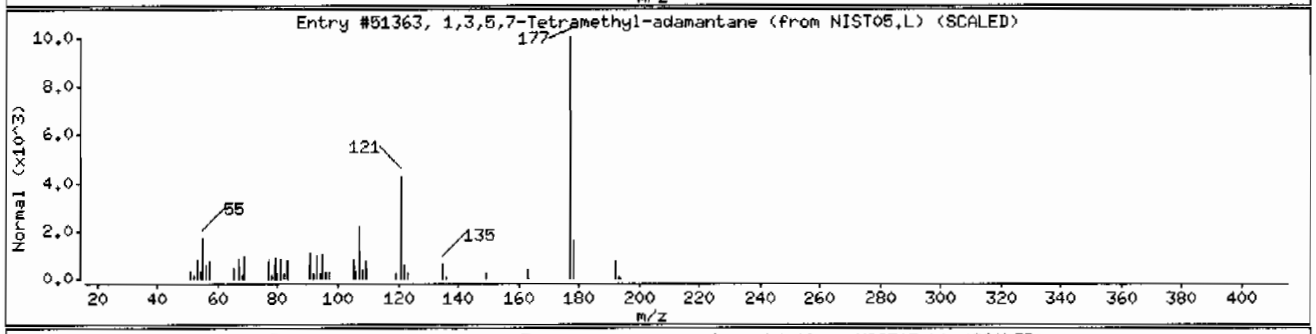

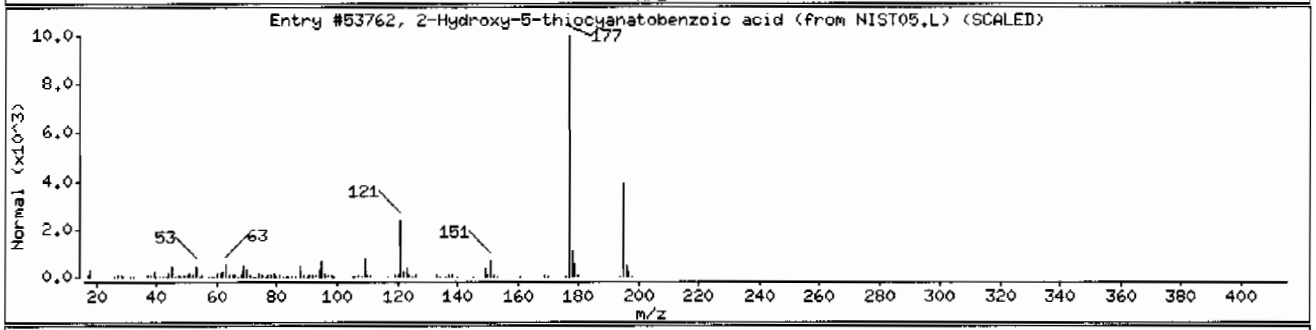

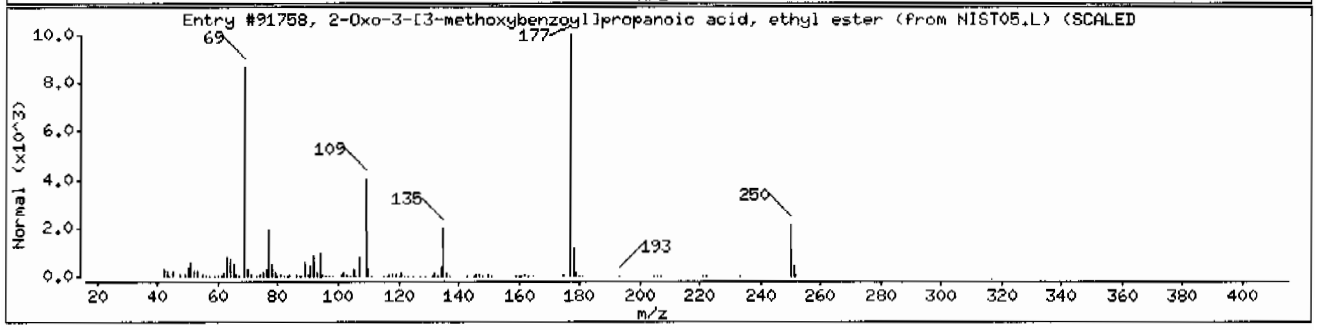

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604 Instrument: MSD6.i

Sample Info: 1232585003188196411ISVMI1ILANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,3,6,10-Cyclotetradecatetraene, 3,7,11-	1898-13-1	NIST05.L	107098	43	C20H32	272
Diazoprogesterone	1000255-30-9	NIST05.L	146829	35	C21H30N4	338
(E,Z)-.alpha.-Farnesene	1000293-03-2	NIST05.L	59856	32	C15H24	204

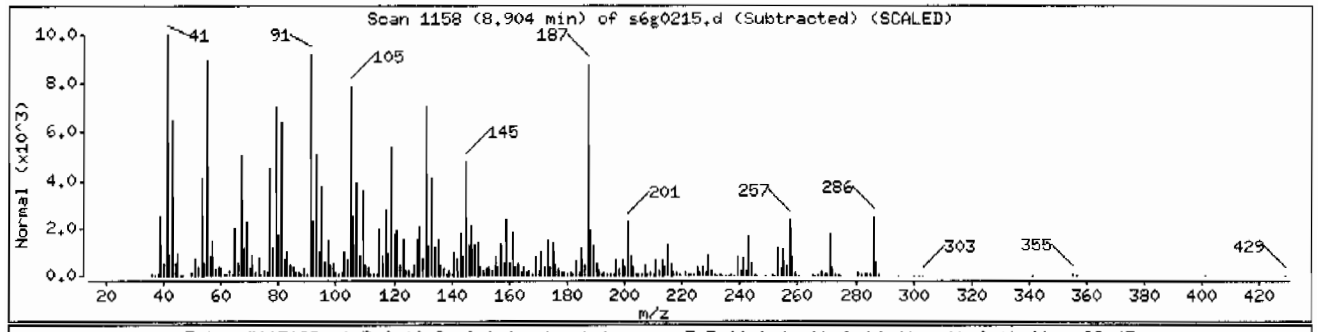

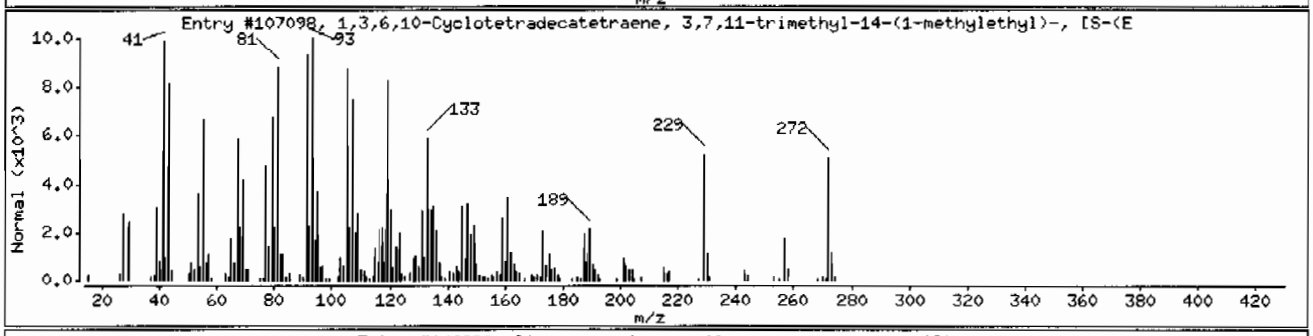

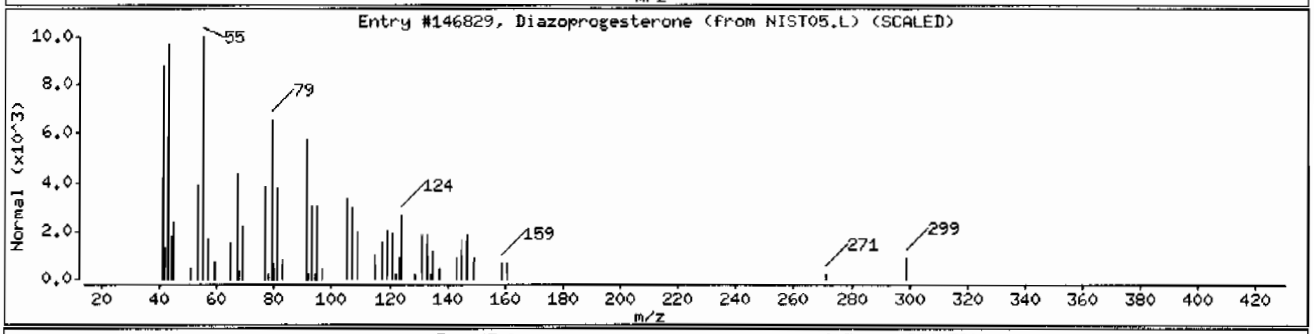

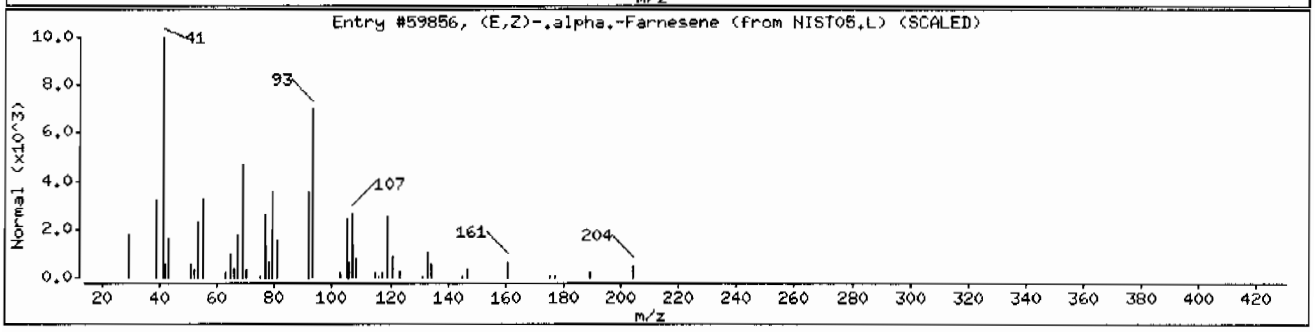

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAHO-09-6604

Instrument: MSD6.i

Sample Info: |2325850031881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Benzene, 1-(chloromethyl)-2-fluoro-	345-35-7	NIST05.L	20009	35	C7H6ClF	144
Benzene, 1-(chloromethyl)-2-fluoro-	345-35-7	NIST05.L	20015	35	C7H6ClF	144
4-(4-((4-Fluorobenzyl)oxy)phenyl)-1,3-th	1000298-20-0	NIST05.L	124640	35	C16H13FN2OS	300

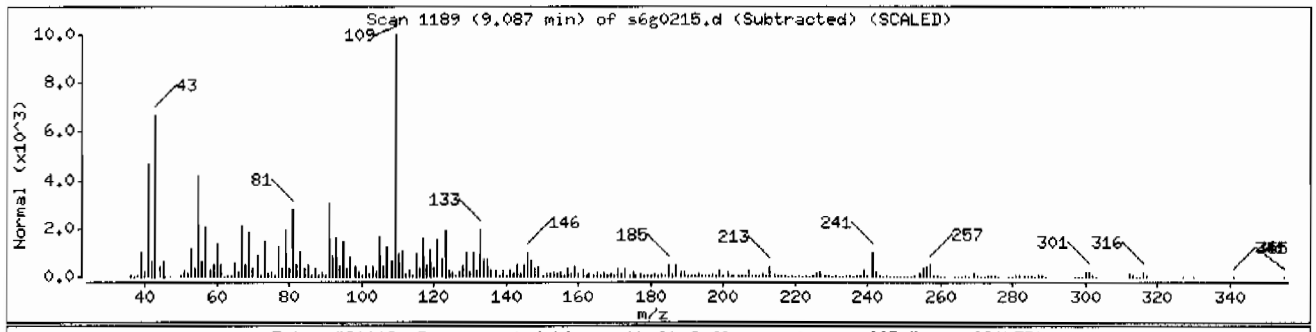

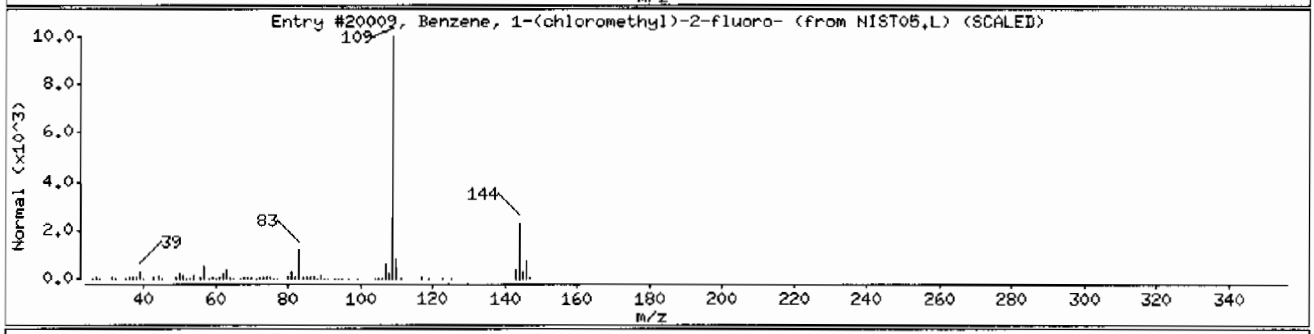

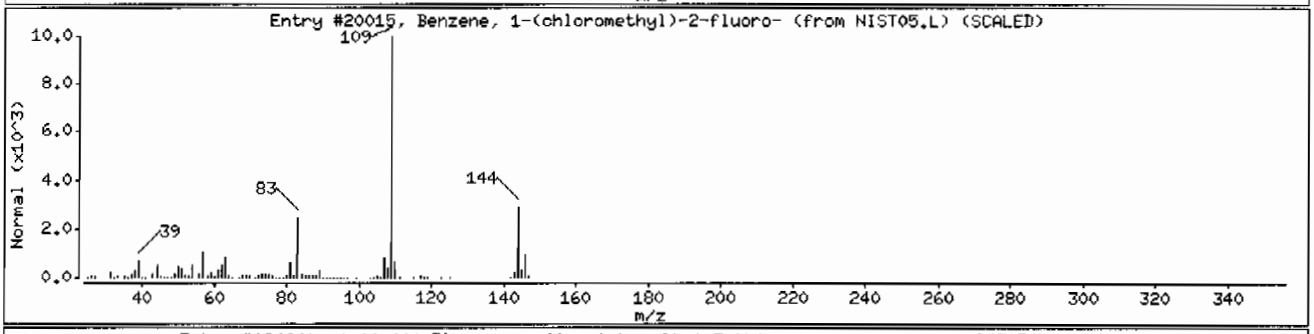

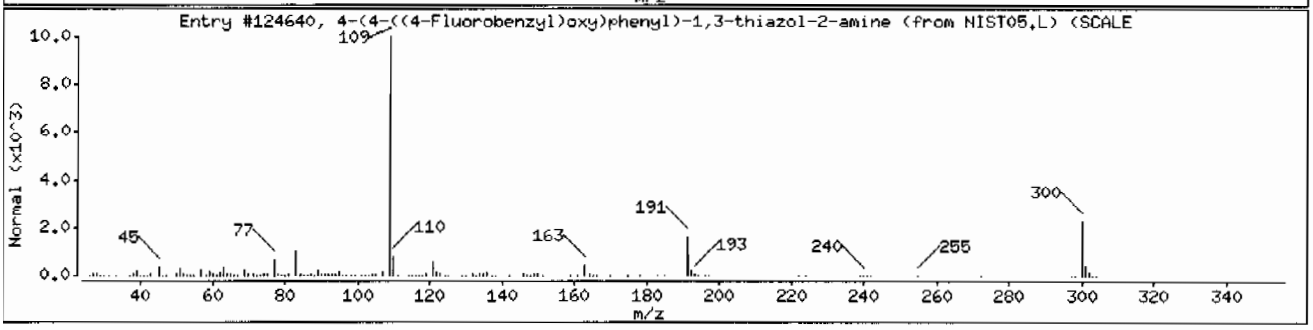

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Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604

Instrument: MSD6.i

Sample Info: 1232585003|881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,4-Cyclohexadiene, 3,3,6,6-tetramethyl-	2223-54-3	NIST05.L	15305	38	C10H16	136
Cyclohexene, 4-ethenyl-4-methyl-3-(1-met	20307-84-0	NIST05.L	59992	30	C15H24	204
4-Hydroxybenzoic acid, 3,10,10-trimethyl	1000310-95-7	NIST05.L	147929	27	C22H2803	340

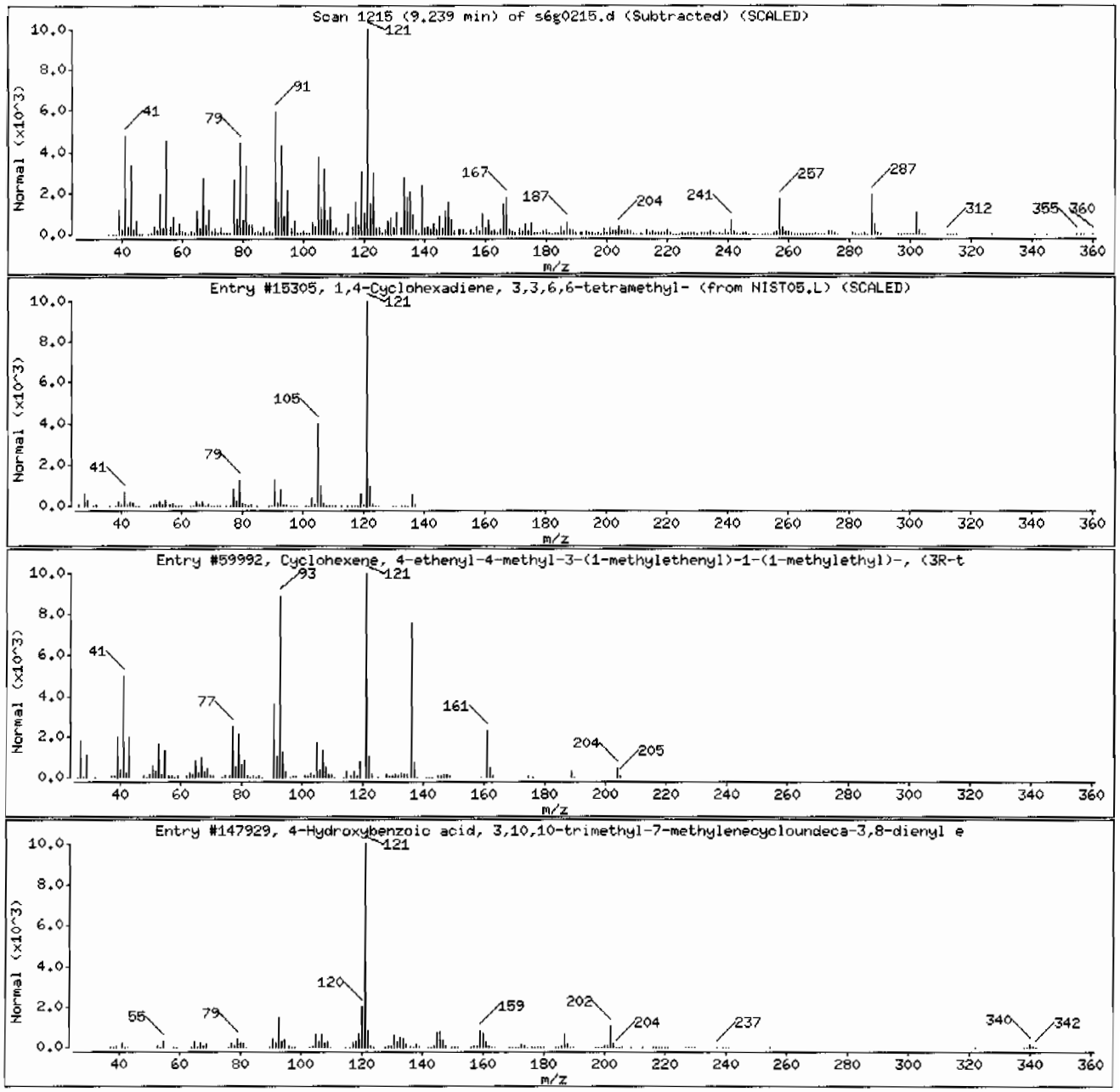

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Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604 Instrument: MSD6.i

Sample Info: |2325850031881964|1|SVH|1|LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
.gamma.-Elemene	339154-91-5	NIST05.L	59808	49	C15H24	204
1,5-Dimethyltricyclo[3.3.0.0(2,6)]octane	103240-54-6	NIST05.L	15297	47	C10H16	136
Tricyclo[3.2.2.0]nonane-2-carboxylic aci	33101-05-2	NIST05.L	33248	46	C10H14O2	166

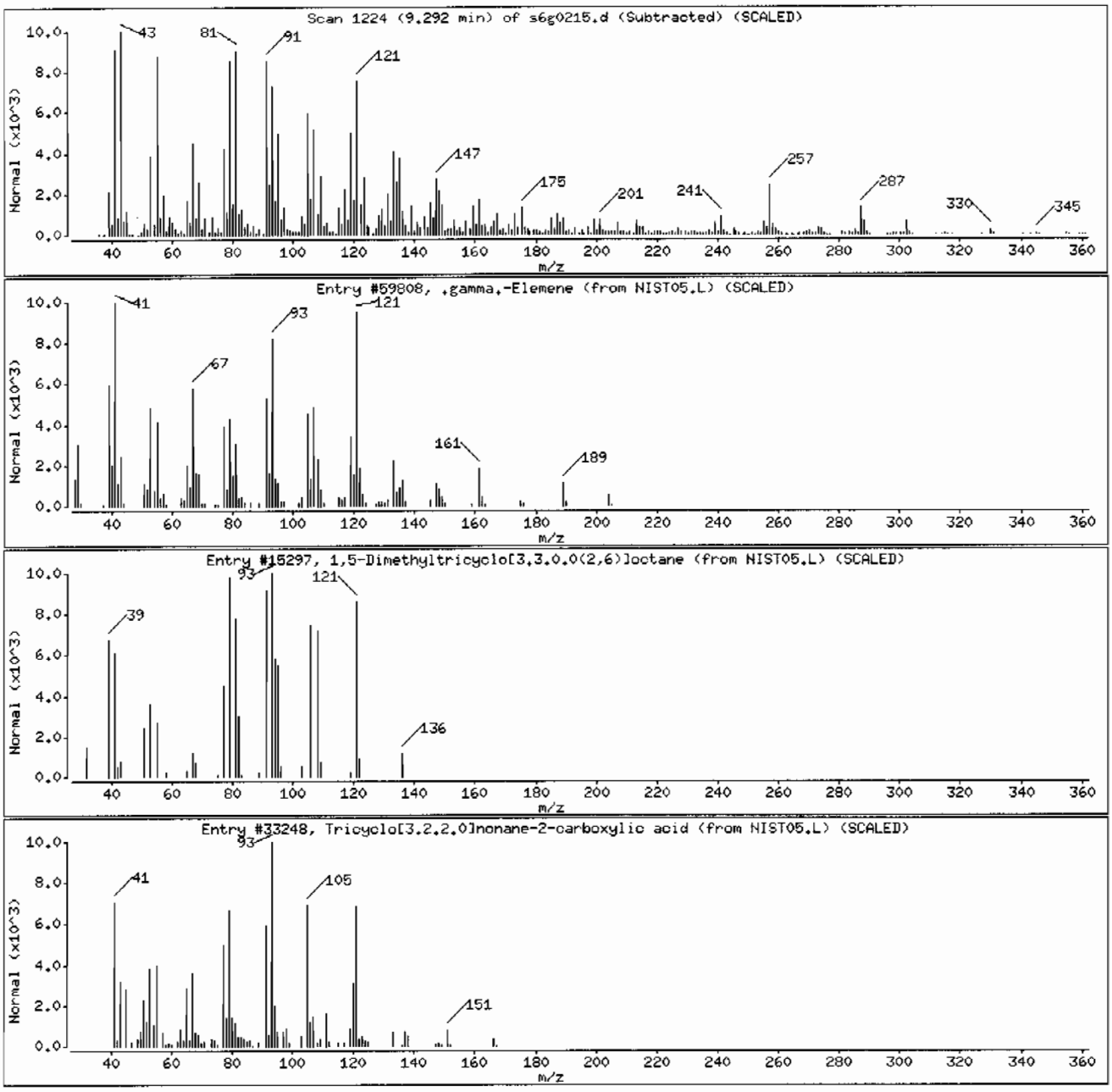

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Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604

Instrument: MSD6.i

Sample Info: 1232585003188196411SVMI1ILANL

Volume Injected (uL): 0.5

Operator: JHB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Ethyl 5,8,11,14,17-icosapentaenoate	84494-70-2	NIST05.L	142611	49	C22H3402	330
Phenanthrene, 7-ethenyl-1,2,3,4,4a,4b,5,	26549-04-2	NIST05.L	96376	45	C19H28	256
Andrographolide	5508-58-7	NIST05.L	152634	35	C20H3005	350

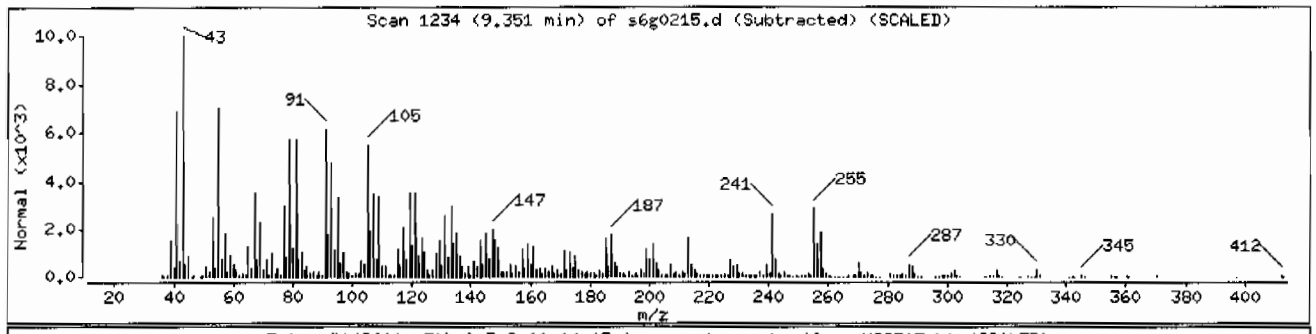

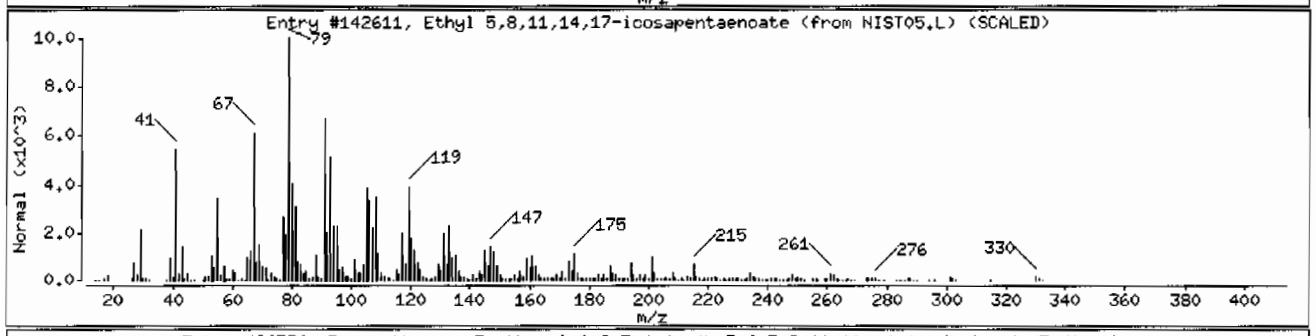

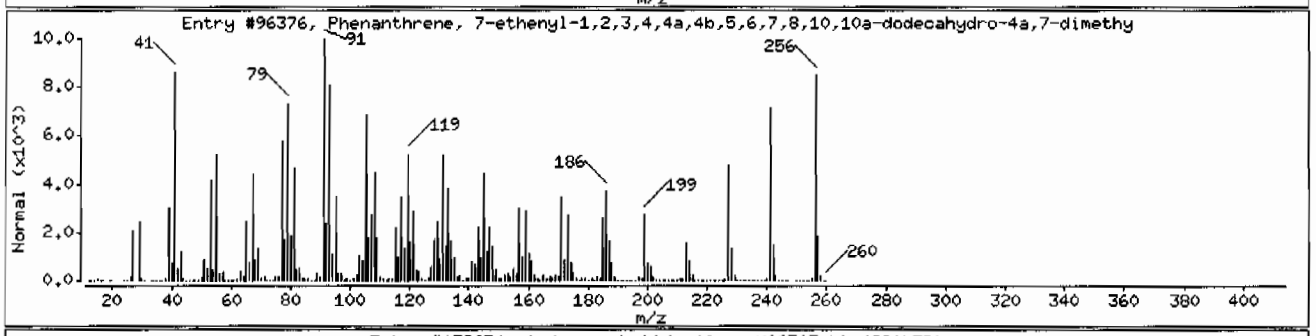

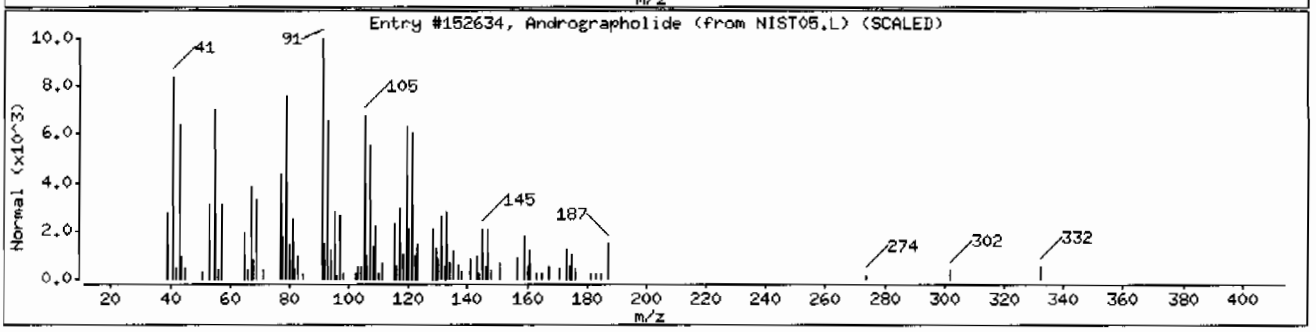

Data File: /chem/HSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604 Instrument: HSD6.i

Sample Info: 1232585003|881964|1|SVM|1|LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Xanthen-9-one, 1-hydroxy-3,5,8-trimethox	49599-09-9	NIST05.L	125840	43	C16H14O6	302
Phenol, 2,4-bis(1-phenylethyl)-	2769-94-0	NIST05.L	126238	38	C22H22O	302
Crinan, 1-methoxy-, (1.alpha.)-	41928-92-1	NIST05.L	116641	35	C17H21NO3	287

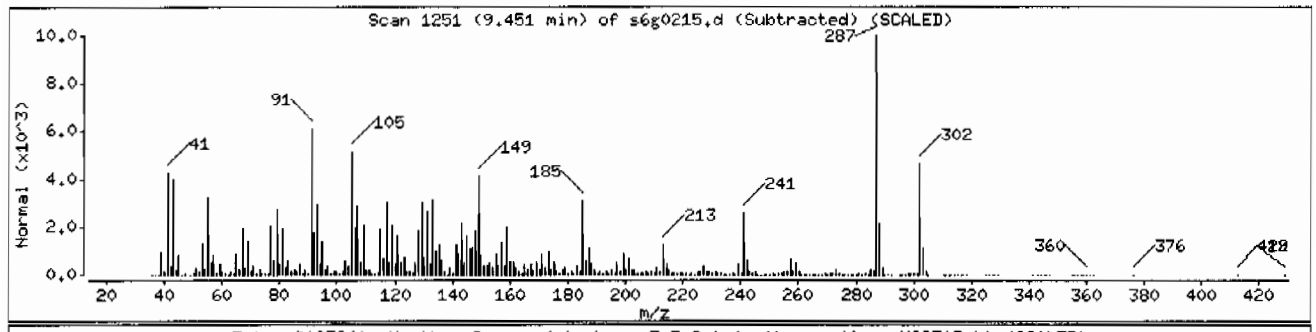

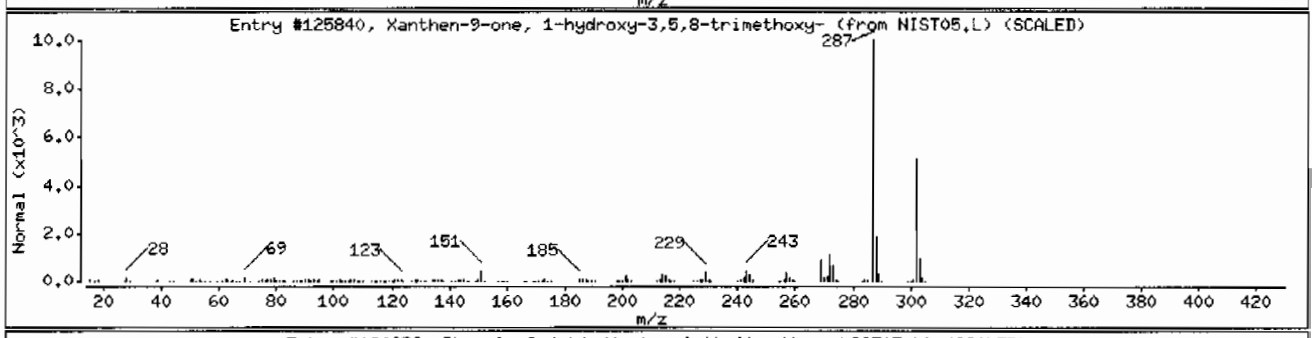

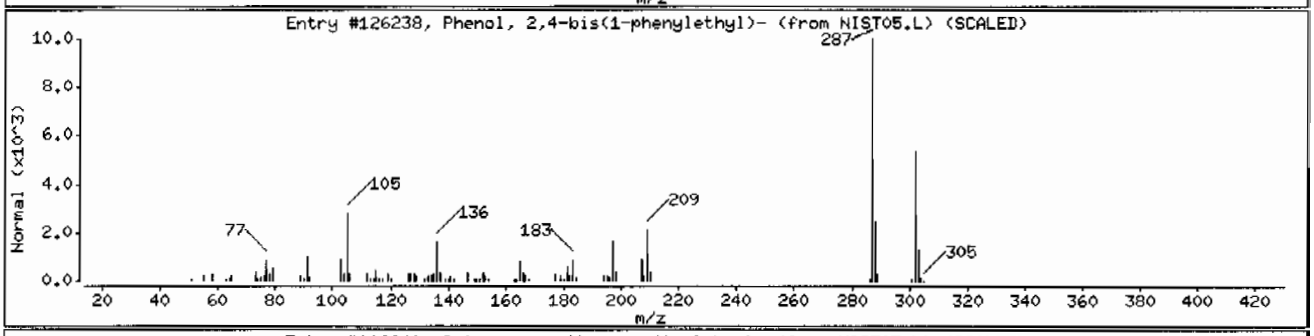

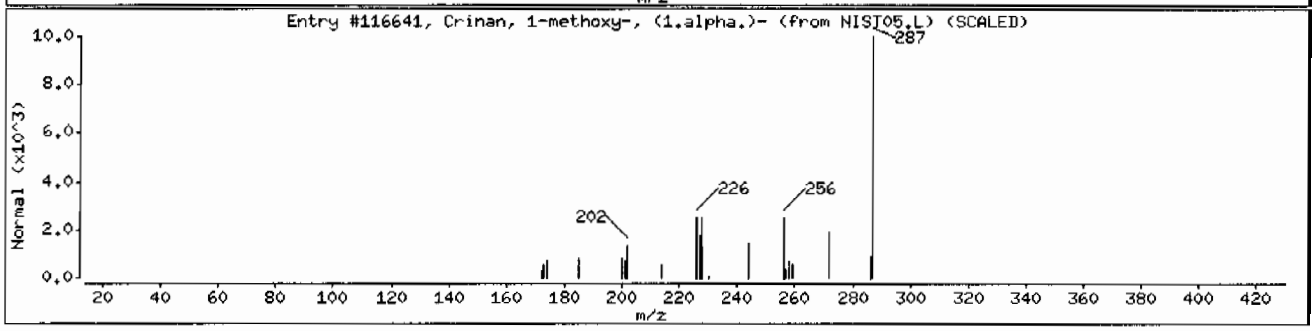

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604 Instrument: MSD6.i

Sample Info: 1232585003188196411SVMI1ILANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125036	93	C20H2802	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	92	C20H2802	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125037	91	C20H2802	300

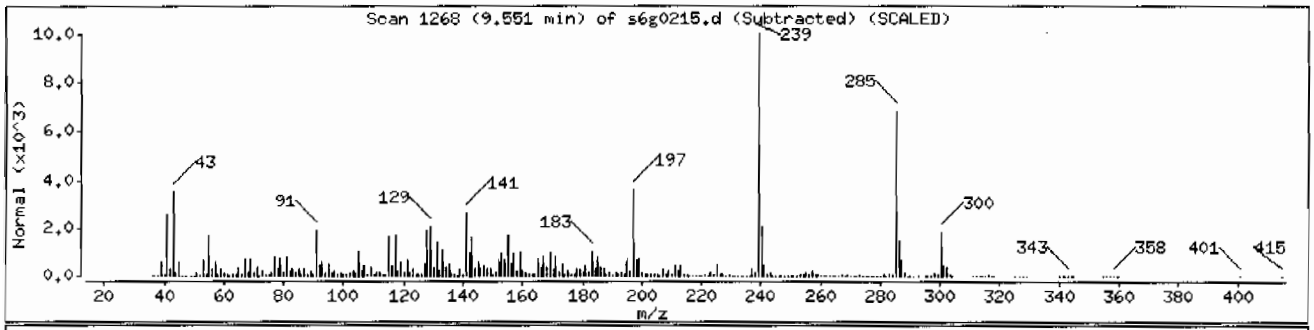

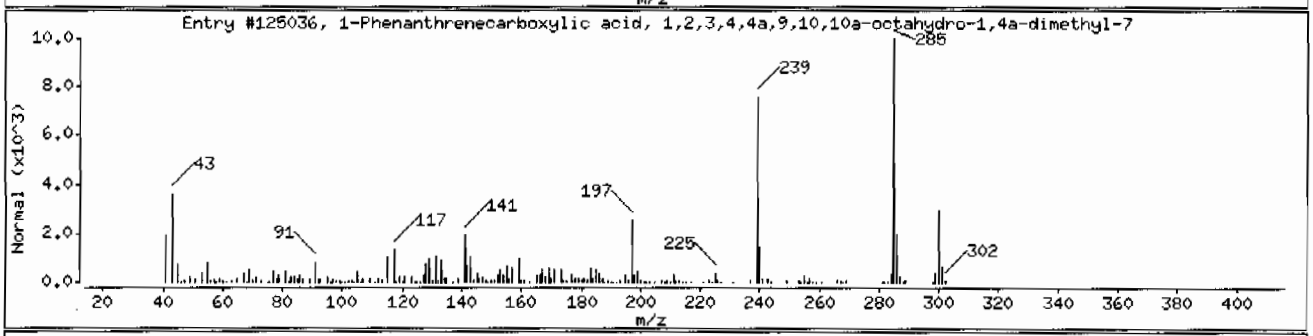

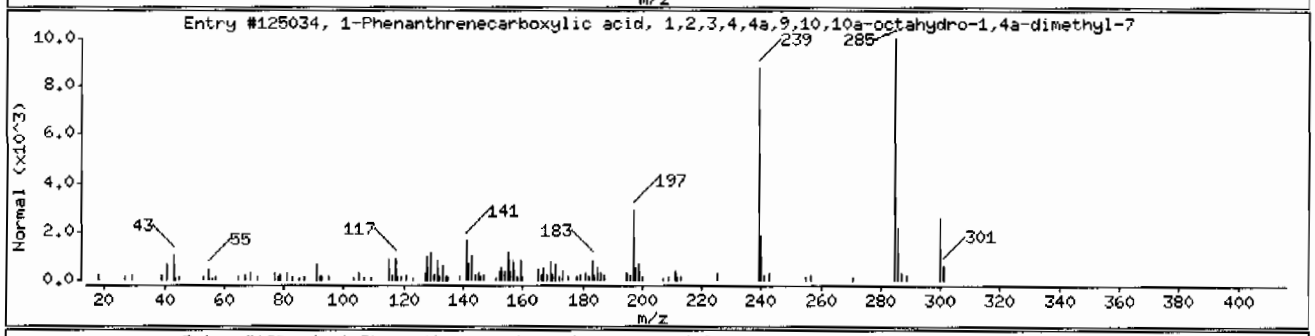

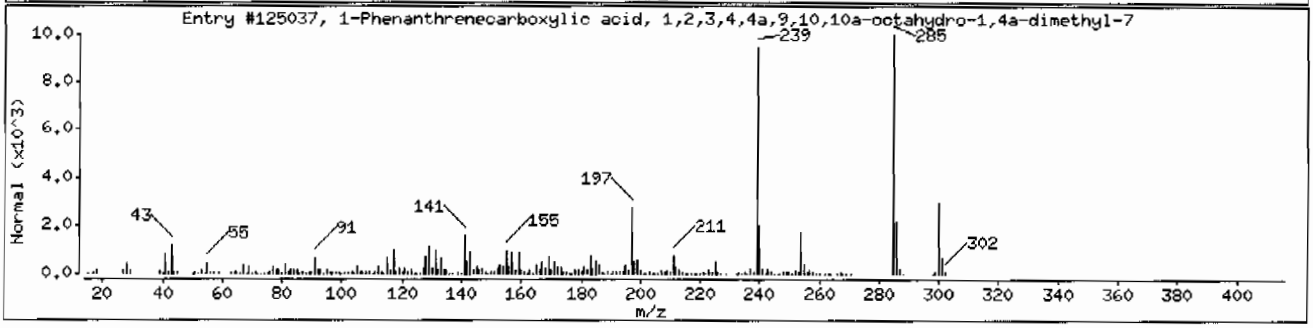

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604

Instrument: MSD6.i

Sample Info: 1232585003188196411SVMI1ILANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
(3E,5E,7E)-6-Methyl-8-(2,6,6-trimethyl-1	17974-57-1	NIST05.L	97615	38	C18H26O	258
Ledene oxide-(II)	1000159-36-7	NIST05.L	71337	37	C15H24O	220
Pregnane-3,20-dione	7350-00-7	NIST05.L	134715	32	C21H32O2	316

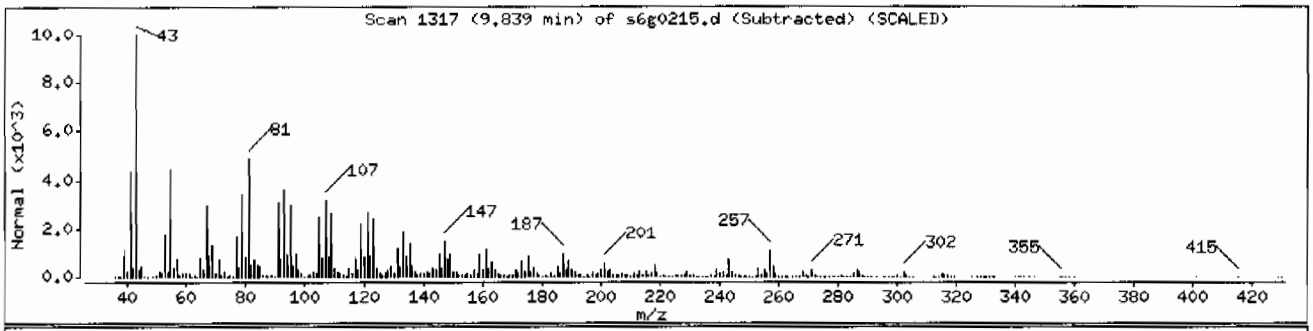

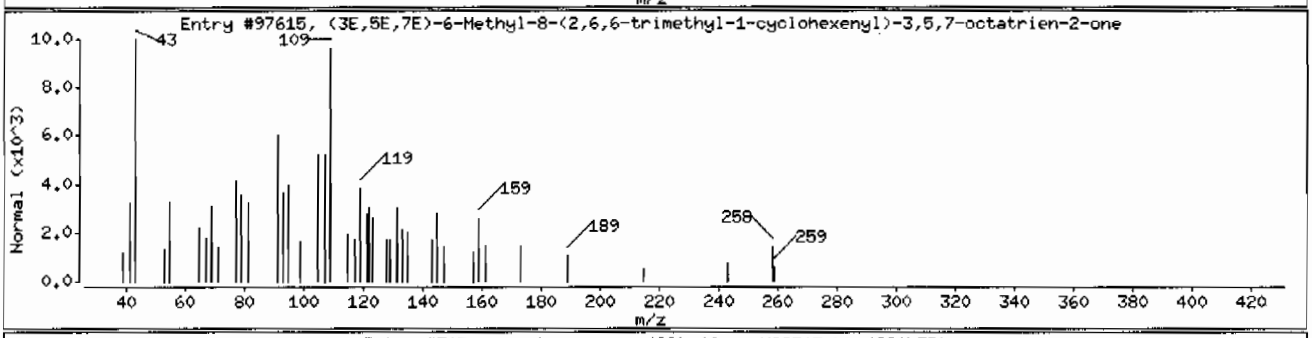

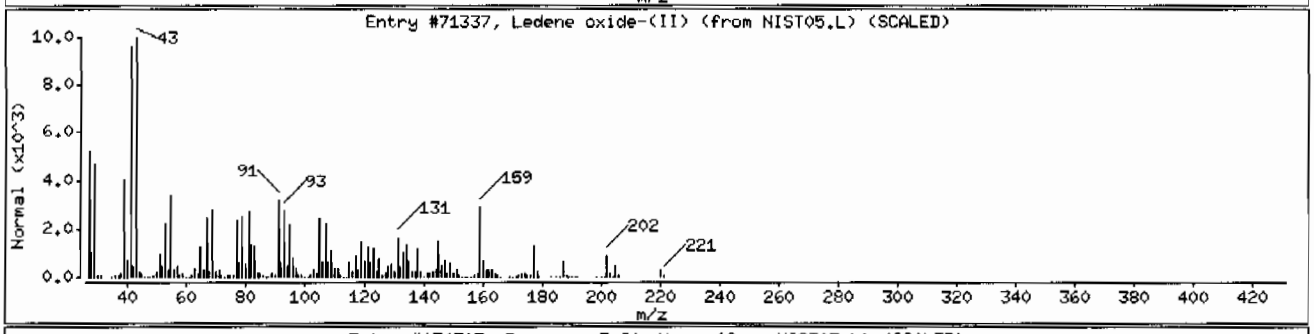

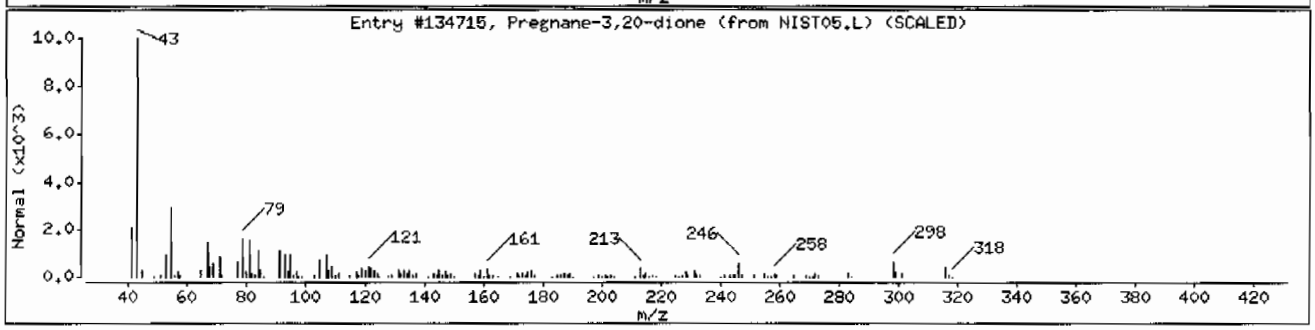

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604

Instrument: MSD6.i

Sample Info: 1232585003188196411ISVMI11LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	471-77-2	NIST05.L	126183	93	C20H3002	302
Bis[3,4-methylenedioxybenzyl]sulfide	49647-48-5	NIST05.L	125830	52	C16H1404S	302
Phosphonic dichloride, 1-adamantyl-	1000294-15-7	NIST05.L	92855	46	C10H15Cl2OP	252

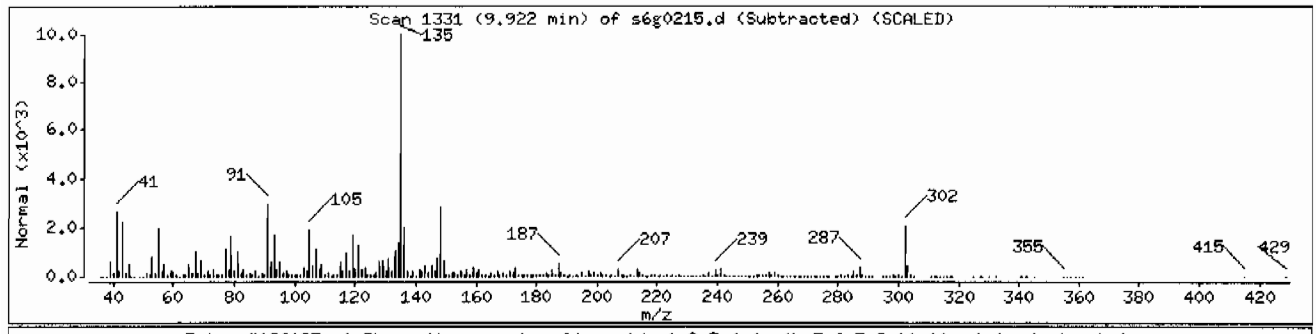

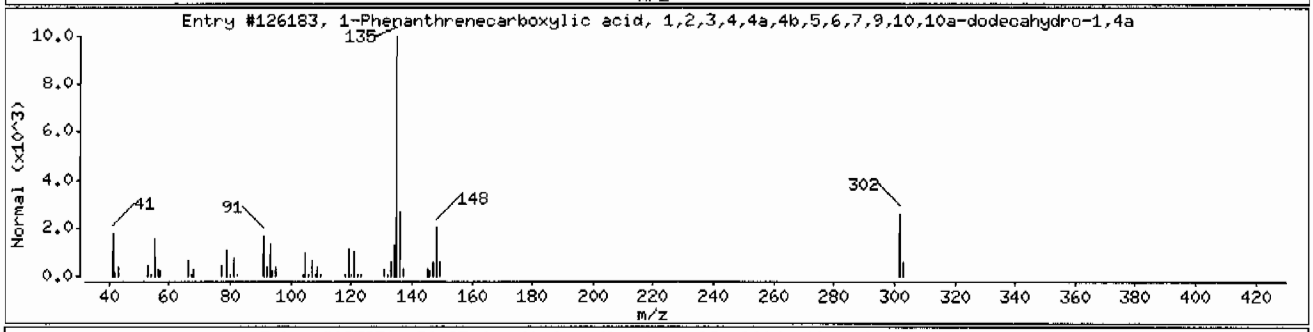

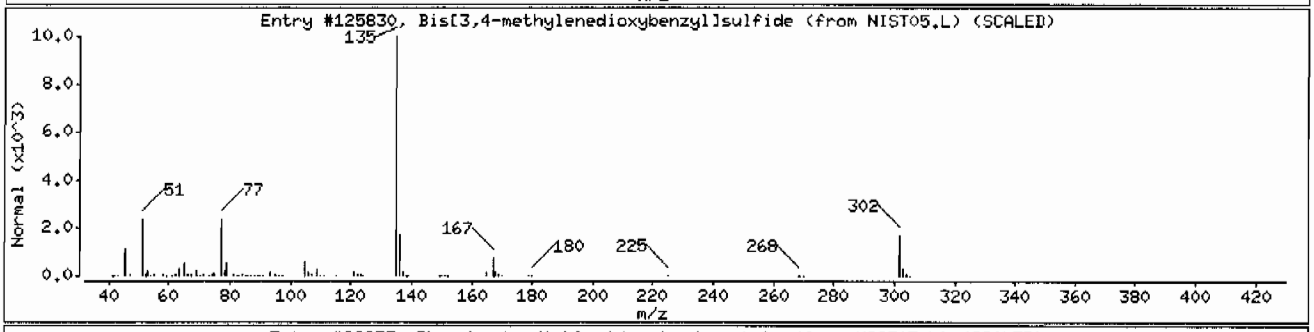

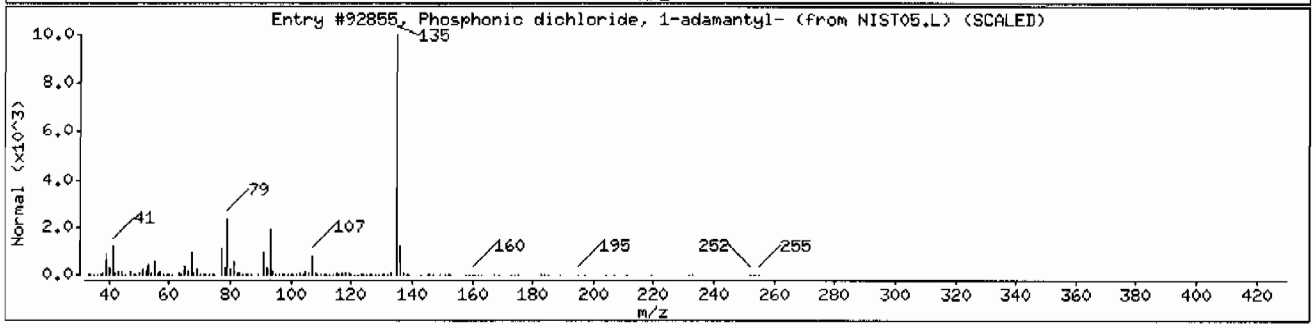

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604

Instrument: MSD6.i

Sample Info: 1232585003188196411ISVMI1ILANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Kauren-18-ol, acetate, (4.beta.)-	72150-74-4	NIST05.L	142610	70	C22H34O2	330
Isopulegyl acetate	89-49-6	NIST05.L	54240	46	C12H20O2	196
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	43	C15H26O2	238

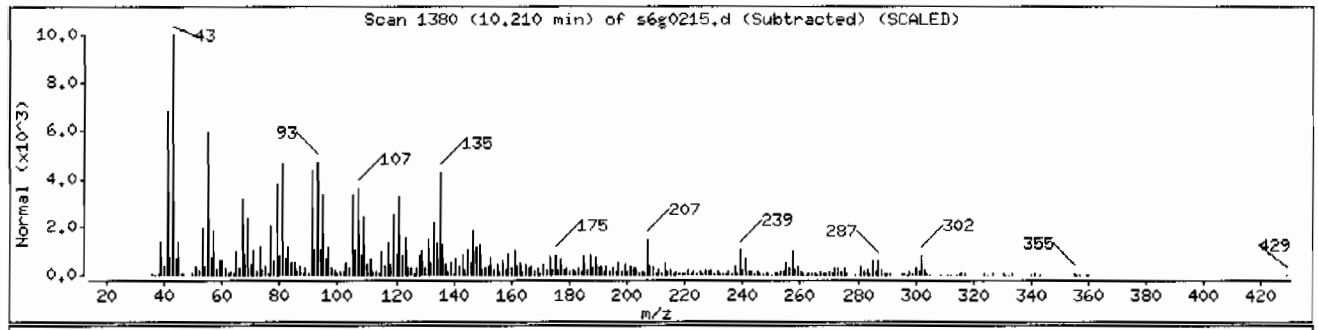

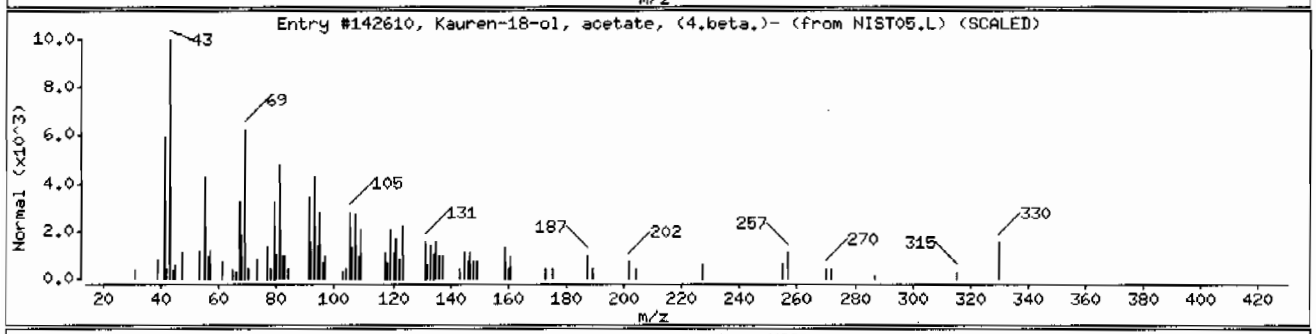

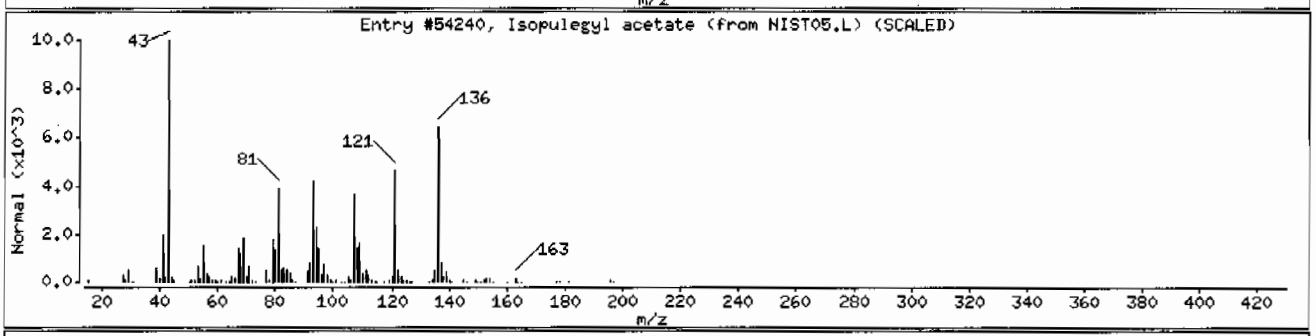

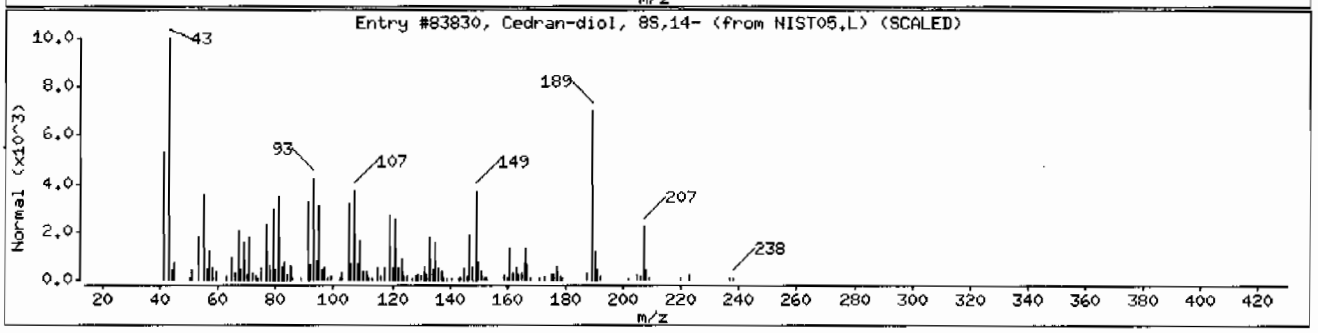

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604 Instrument: MSD6.i

Sample Info: 1232585003188196411ISVMI1ILANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Naphthalenol, decahydro-1,4a-dimethyl-	473-04-1	NIST05.L	72999	38	C15H26O	222
Acetate, (2,5,5,8a-tetramethyl-1,2,3,5,6	101447-86-3	NIST05.L	92152	38	C16H26O2	250
Phenol, 4-(2-thienylmethyl)-	91680-55-6	NIST05.L	49741	25	C11H10OS	190

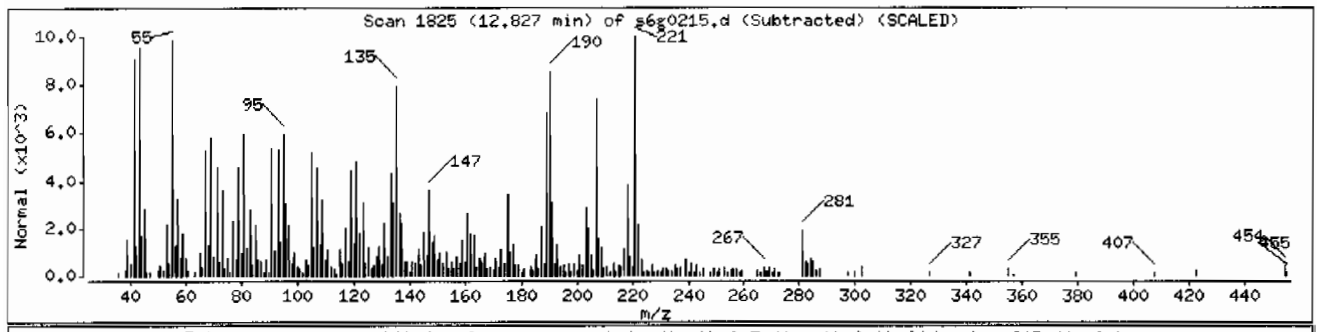

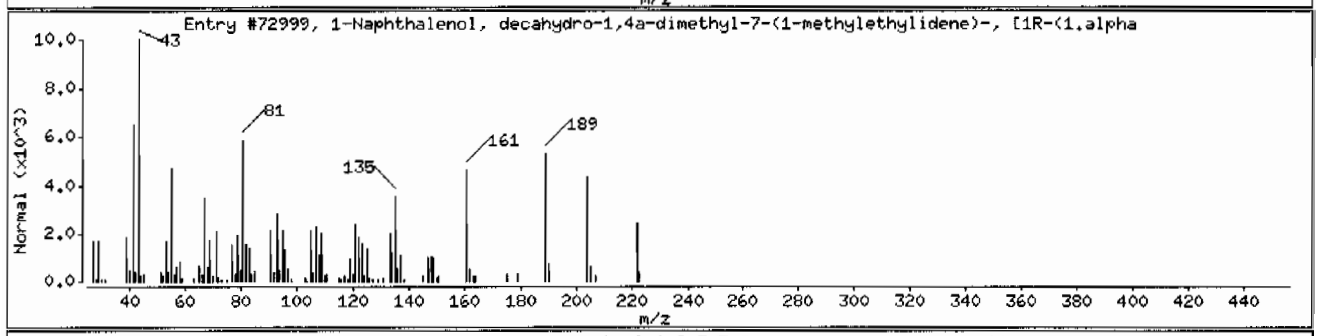

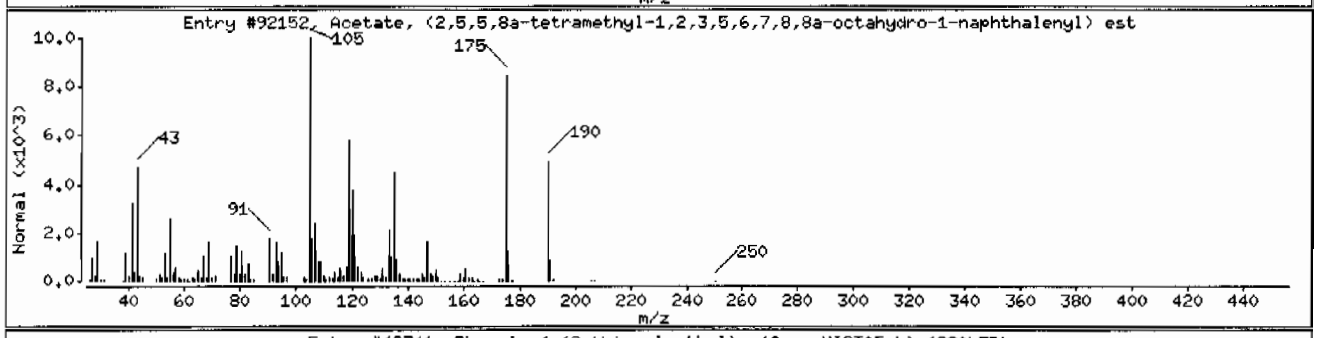

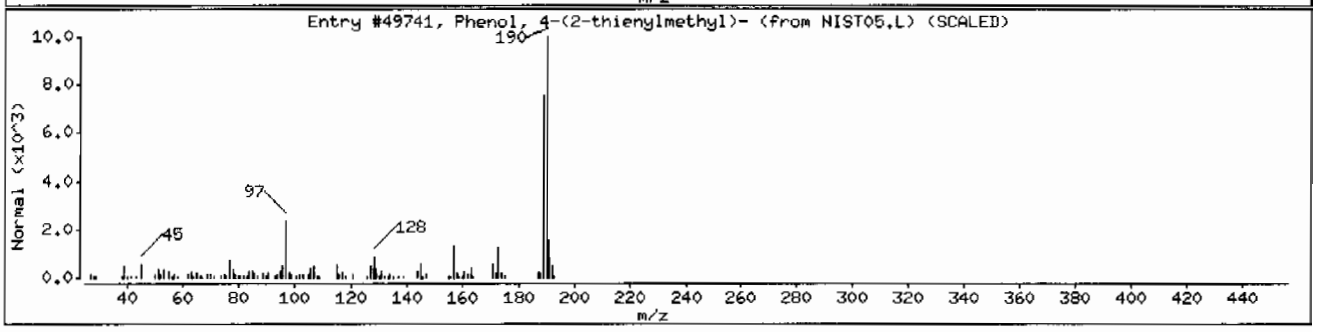

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604

Instrument: MSD6.i

Sample Info: 1232585003188196411|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
7-Oxabicyclo[4.1.0]heptane, 2,2,6-trimet	70038-20-9	NIST05.L	69982	90	C15H220	218
1H-Cycloprop[e]azulene, decahydro-1,1,7-	72747-25-2	NIST05.L	59928	83	C15H24	204
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60020	62	C15H24	204

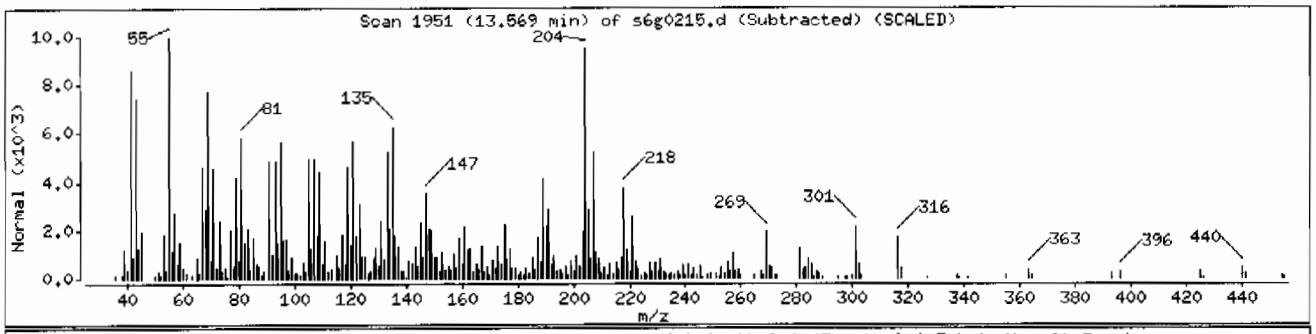

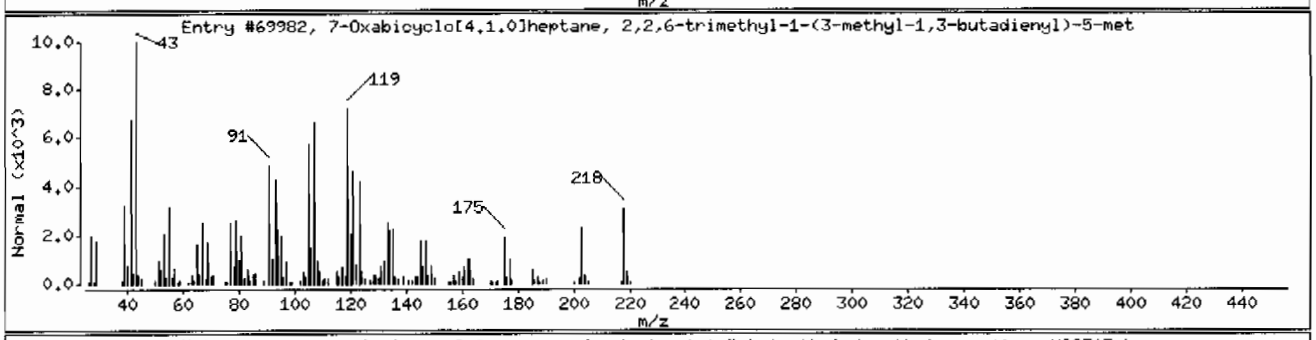

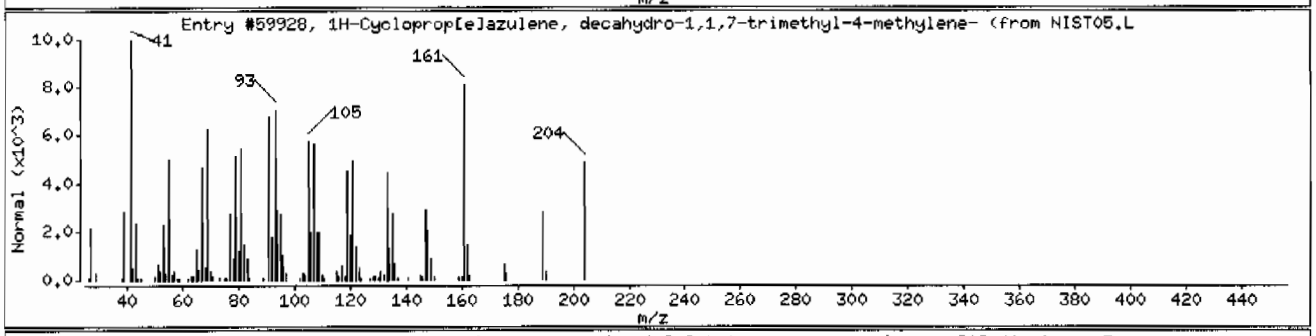

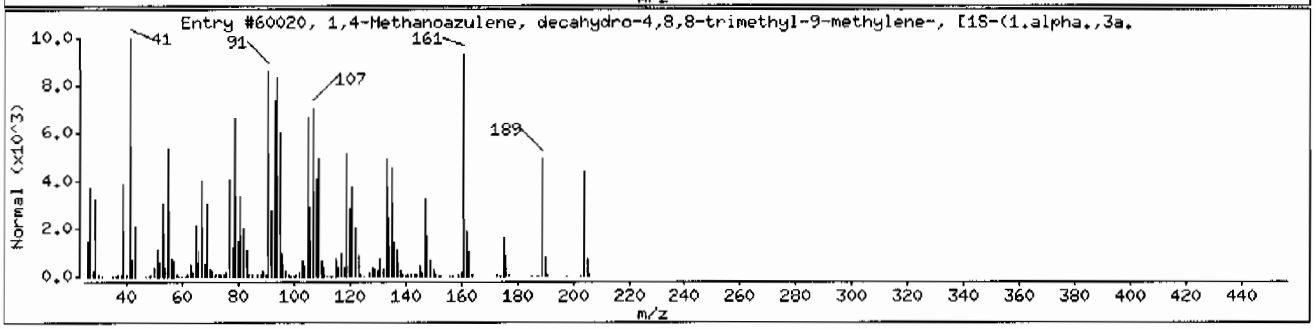

Data File: /chem/MSD6.i/s070209.b/s6g0215.d

Date : 02-JUL-2009 18:46

Client ID: CAMO-09-6604

Instrument: MSD6.i

Sample Info: |2325850031881964|1|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2(1H)Naphthalenone, 3,5,6,7,8,8a-hexahyd	1000188-66-5	NIST05.L	69976	51	C15H22O	218
2,2,6-Trimethyl-1-(2-methyl-cyclobut-2-e	1000188-72-8	NIST05.L	69963	30	C15H22O	218
Spiro[5.5]undec-2-ene, 3,7,7-trimethyl-1	18431-82-8	NIST05.L	59919	30	C15H24	204

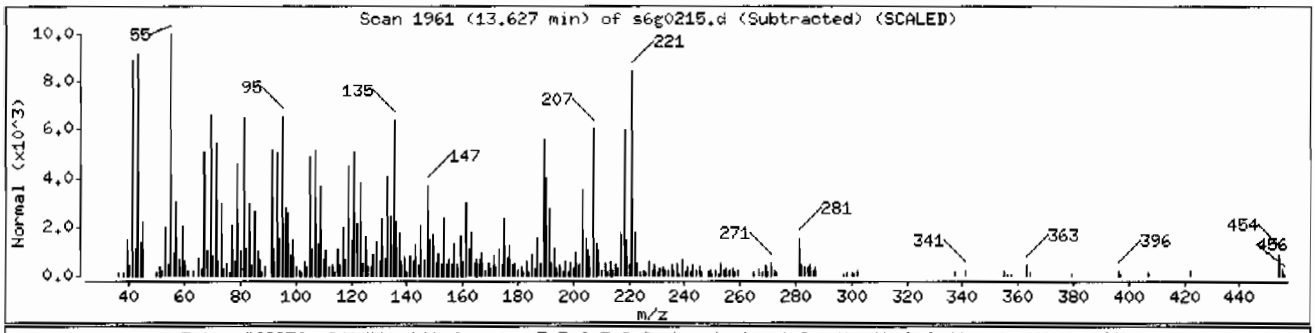

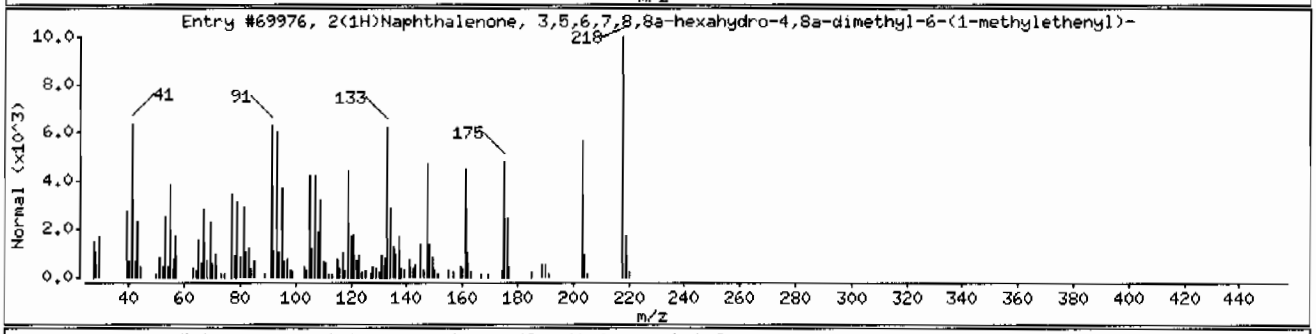

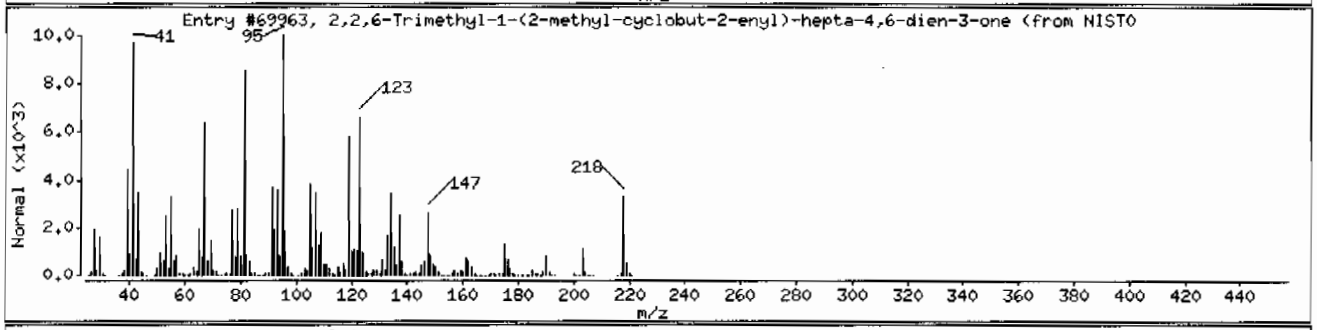

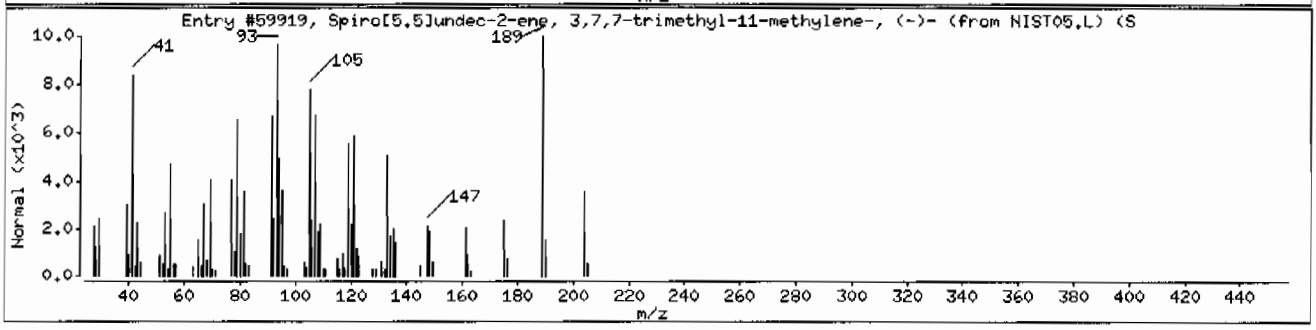

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585001	Date Received:	06/30/2009 09:15	%Moisture:	6.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6605	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 18:00	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.11 g	Final Volume:	1 mL
Data File:	s6g0213.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	356	ug/kg	71.1	356
108-95-2	Phenol	U	356	ug/kg	71.1	356
95-57-8	2-Chlorophenol	U	356	ug/kg	71.1	356
106-46-7	1,4-Dichlorobenzene	U	356	ug/kg	71.1	356
621-64-7	N-Nitrosodipropylamine	U	356	ug/kg	71.1	356
59-50-7	4-Chloro-3-methylphenol	U	356	ug/kg	71.1	356
83-32-9	Acenaphthene	U	35.6	ug/kg	11.7	35.6
121-14-2	2,4-Dinitrotoluene	U	356	ug/kg	35.6	356
100-02-7	4-Nitrophenol	U	356	ug/kg	117	356
87-86-5	Pentachlorophenol	U	356	ug/kg	88.9	356
129-00-0	Pyrene	U	35.6	ug/kg	10.7	35.6
110-86-1	Pyridine	U	356	ug/kg	71.1	356
62-53-3	Aniline	U	356	ug/kg	107	356
111-44-4	bis(2-Chloroethyl) ether	U	356	ug/kg	71.1	356
541-73-1	1,3-Dichlorobenzene	U	356	ug/kg	71.1	356
100-51-6	Benzyl alcohol	U	356	ug/kg	107	356
95-50-1	1,2-Dichlorobenzene	U	356	ug/kg	71.1	356
108-60-1	bis(2-Chloroisopropyl)ether	U	356	ug/kg	71.1	356
95-48-7	o-Cresol	U	356	ug/kg	71.1	356
65794-96-9	m,p-Cresols	U	356	ug/kg	107	356
67-72-1	Hexachloroethane	U	356	ug/kg	71.1	356
98-95-3	Nitrobenzene	U	356	ug/kg	71.1	356
78-59-1	Isophorone	U	356	ug/kg	71.1	356
88-75-5	2-Nitrophenol	U	356	ug/kg	71.1	356
105-67-9	2,4-Dimethylphenol	U	356	ug/kg	124	356
111-91-1	bis(2-Chloroethoxy)methane	U	356	ug/kg	71.1	356
120-83-2	2,4-Dichlorophenol	U	356	ug/kg	71.1	356
65-85-0	Benzoic acid	U	711	ug/kg	178	711
91-20-3	Naphthalene	U	35.6	ug/kg	10.7	35.6
106-47-8	4-Chloroaniline	U	356	ug/kg	71.1	356
87-68-3	Hexachlorobutadiene	U	356	ug/kg	71.1	356
91-57-6	2-Methylnaphthalene	U	35.6	ug/kg	7.11	35.6
77-47-4	Hexachlorocyclopentadiene	U	356	ug/kg	71.1	356
88-06-2	2,4,6-Trichlorophenol	U	356	ug/kg	71.1	356
95-95-4	2,4,5-Trichlorophenol	U	356	ug/kg	71.1	356
91-58-7	2-Chloronaphthalene	U	35.6	ug/kg	11.7	35.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	356	ug/kg	71.1	356
99-09-2	3-Nitroaniline	U	356	ug/kg	71.1	356

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6605	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.1	**Dilution:**	1
Run Date:	07/02/2009 18:00	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30.11 g	**Final Volume:**	1 mL
Data File:	s6g0213.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	356	ug/kg	71.1	356
606-20-2	2,6-Dinitrotoluene	U	356	ug/kg	35.6	356
208-96-8	Acenaphthylene	U	35.6	ug/kg	10.7	35.6
51-28-5	2,4-Dinitrophenol	U	711	ug/kg	135	711
132-64-9	Dibenzofuran	U	356	ug/kg	71.1	356
84-66-2	Diethylphthalate	U	356	ug/kg	71.1	356
86-73-7	Fluorene	U	35.6	ug/kg	10.7	35.6
7005-72-3	4-Chlorophenylphenylether	U	356	ug/kg	71.1	356
534-52-1	2-Methyl-4,6-dinitrophenol	U	356	ug/kg	71.1	356
100-01-6	4-Nitroaniline	U	356	ug/kg	107	356
	p-Nitroaniline					
122-39-4	Diphenylamine	U	356	ug/kg	71.1	356
122-66-7	Azobenzene	U	356	ug/kg	71.1	356
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	356	ug/kg	71.1	356
118-74-1	Hexachlorobenzene	U	356	ug/kg	71.1	356
85-01-8	Phenanthrene	U	35.6	ug/kg	10.7	35.6
120-12-7	Anthracene	U	35.6	ug/kg	7.11	35.6
84-74-2	Di-n-butylphthalate	U	356	ug/kg	71.1	356
206-44-0	Fluoranthene	U	35.6	ug/kg	10.7	35.6
85-68-7	Butylbenzylphthalate	U	356	ug/kg	71.1	356
56-55-3	Benzo(a)anthracene	U	35.6	ug/kg	10.7	35.6
91-94-1	3,3'-Dichlorobenzidine	U	356	ug/kg	107	356
218-01-9	Chrysene	U	35.6	ug/kg	10.7	35.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	356	ug/kg	71.1	356
117-84-0	Di-n-octylphthalate	U	356	ug/kg	71.1	356
205-99-2	Benzo(b)fluoranthene	U	35.6	ug/kg	10.7	35.6
207-08-9	Benzo(k)fluoranthene	U	35.6	ug/kg	10.7	35.6
50-32-8	Benzo(a)pyrene	U	35.6	ug/kg	10.7	35.6
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.6	ug/kg	10.7	35.6
53-70-3	Dibenzo(a,h)anthracene	U	35.6	ug/kg	10.7	35.6
191-24-2	Benzo(ghi)perylene	U	35.6	ug/kg	10.7	35.6
120-82-1	1,2,4-Trichlorobenzene	U	356	ug/kg	71.1	356

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	312	ug/kg		JA
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.52	196	ug/kg	94	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585001	Date Received:	06/30/2009 09:15	%Moisture:	6.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6605	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 18:00	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30.11 g	Final Volume:	1 mL
Data File:	s6g0213.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	9.82	162	ug/kg		J
	Unknown	10.33	166	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0213.d
Lab Smp Id: 232585001 Client Smp ID: CAMO-09-6605
Inj Date : 02-JUL-2009 18:00
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232585001|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2506.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.11000	weight of sample
M	6.61210	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.993	3.999	(1.000)	444558	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1630929	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	925439	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1601030	40.0000	
* 91 Chrysene-d12	240	9.739	9.745	(1.000)	1511030	40.0000	
* 98 Perylene-d12	264	11.486	11.492	(1.000)	1318961	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.797)	530142	43.8925	1560
$ 5 Phenol-d5	99	3.704	3.710	(0.928)	787108	48.6474	1730
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	321871	22.2775	792
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	541198	23.0255	819
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.099)	181265	52.9823	1880
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	869540	36.0338	1280

ION RATIO REPORT

SV REPORT

Data file: s6g0213.d
Report Date: 07/02/2009 18:18
Lab. ID: 232585001 SampleType: SAMPLE
Injection Date: 02-JUL-2009 18:00
Operator: JMB3 Instrument: MSD6.i
Sample Info: |232585001|881964|1|SVM|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2506
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
1 N-Methyl-N-nitrosomethylamine				CAS#: 62-75-9		
74	16097	2.19	2.47	80-120	100	(T)
42	1898	2.19	2.47	87-147	12	(QT)
43	38733	2.15	2.47	22- 82	241	(QT)
4 Aniline				CAS#: 62-53-3		
66	43511	3.70	3.78	80-120	100	(T)
93	2714	3.76	3.79	361-421	6	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	46157	4.36	4.24	80-120	100	(T)
42	30687	4.36	4.24	57-117	66	(T)
22 Isophorone				CAS#: 78-59-1		
82	321871	4.36	4.53	80-120	100	(T)
138	9199	4.87	4.53	0- 47	3	(T)
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	863910	6.13	5.72	80-120	100	(T)
164	925439	6.13	5.72	4- 64	107	(QT)
127	2052	5.61	5.72	9- 69	0	(QT)
43 Dimethylphthalate				CAS#: 131-11-3		
163	202154	6.13	5.89	80-120	100	(T)
164	925439	6.13	5.89	0- 41	458	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
45 Acenaphthylene			CAS#: 208-96-8			
152	29881	5.61	6.03	80-120	100	(T)
151	29109	5.61	6.03	0- 50	97	(QT)
153	9137	5.61	6.03	0- 44	31	(T)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	122538	6.13	6.25	80-120	100	(T)
89	2844	6.13	6.25	50-110	2	(QT)
63	1992	6.13	6.25	31- 91	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	10603	6.73	6.55	80-120	100	(T)
165	11468	6.73	6.55	60-120	108	(T)
167	4014	6.73	6.55	0- 44	38	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	485	6.73	6.56	80-120	100	(T)
105	1445	6.73	6.56	15- 75	298	(QT)
51	2148	6.73	6.56	63-123	442	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0213.d
Lab Smp Id: 232585001 Client Smp ID: CAMO-09-6605
Inj Date : 02-JUL-2009 18:00
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |232585001|881964|1|SVM|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2506.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.11000	weight of sample
M	6.61210	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.993	3034106	40.000
* 91 Chrysene-d12	9.739	4440011	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.010	664604	8.76177714	312	0		0	10

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	==========	======
1-Phenanthrenocarboxylic acid, 1,2,3,4,4					CAS #: 1740-19-8		
9.522	630549	5.50042660		196	94	NIST05.L 125034	91
Unknown					CAS #:		
9.822	506499	4.56303805		162	0	0	91
Unknown					CAS #:		
10.328	518503	4.67118222		166	0	0	91

Data File: /chem/MSD6.i/s070209.b/s6g0213.d
Date : 02-JUL-2009 18:00
Client ID: CAMO-09-6605
Sample Info: |232585001|881964|1|SVM|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD6.i

Operator: JMB3
Column diameter: 0.20

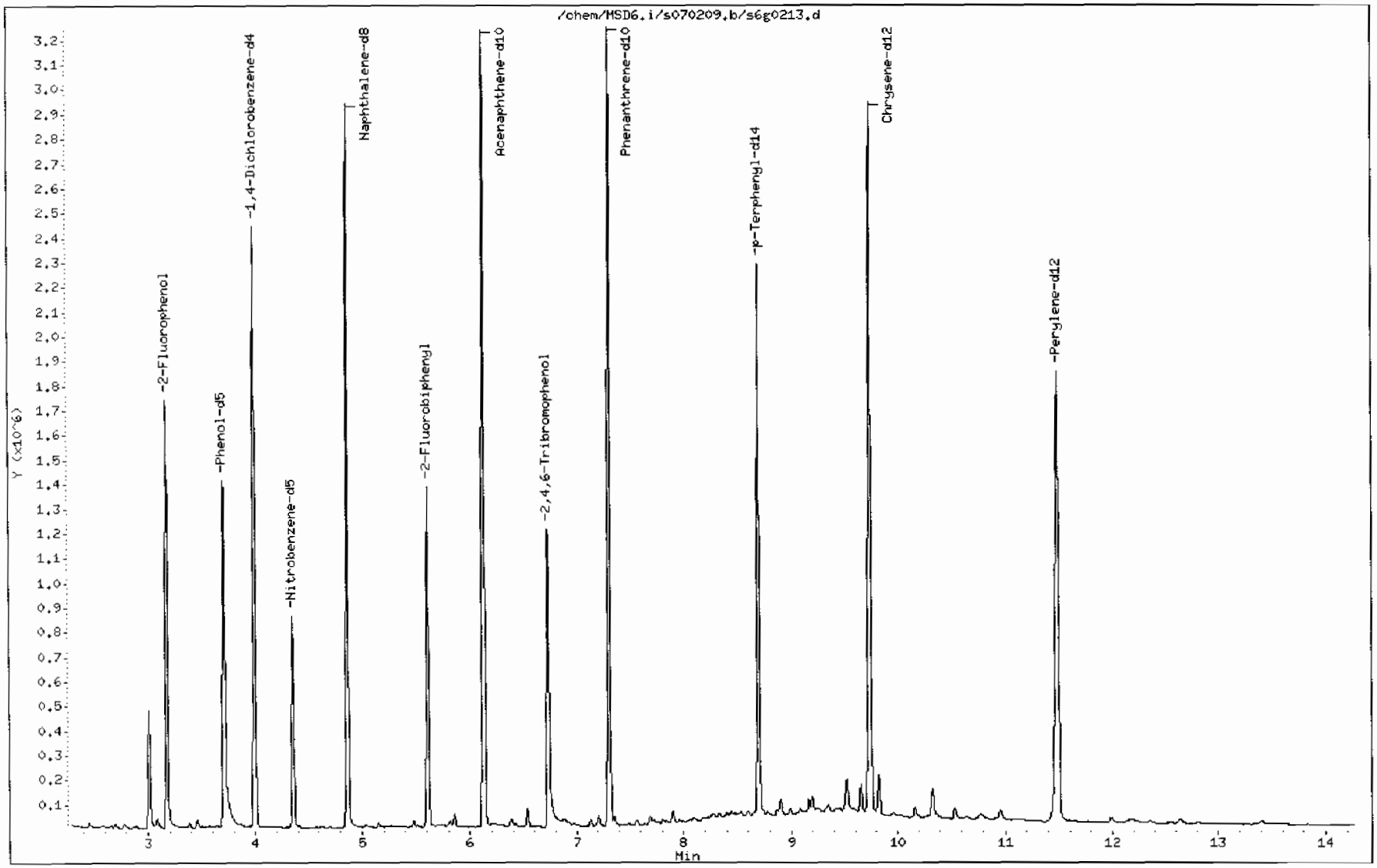

Data File: /chem/MSD6.i/s070209.b/s6g0213.d

Date : 02-JUL-2009 18:00

Client ID: CAMO-09-6605

Instrument: MSD6.i

Sample Info: |2325850011881964111SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	40	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

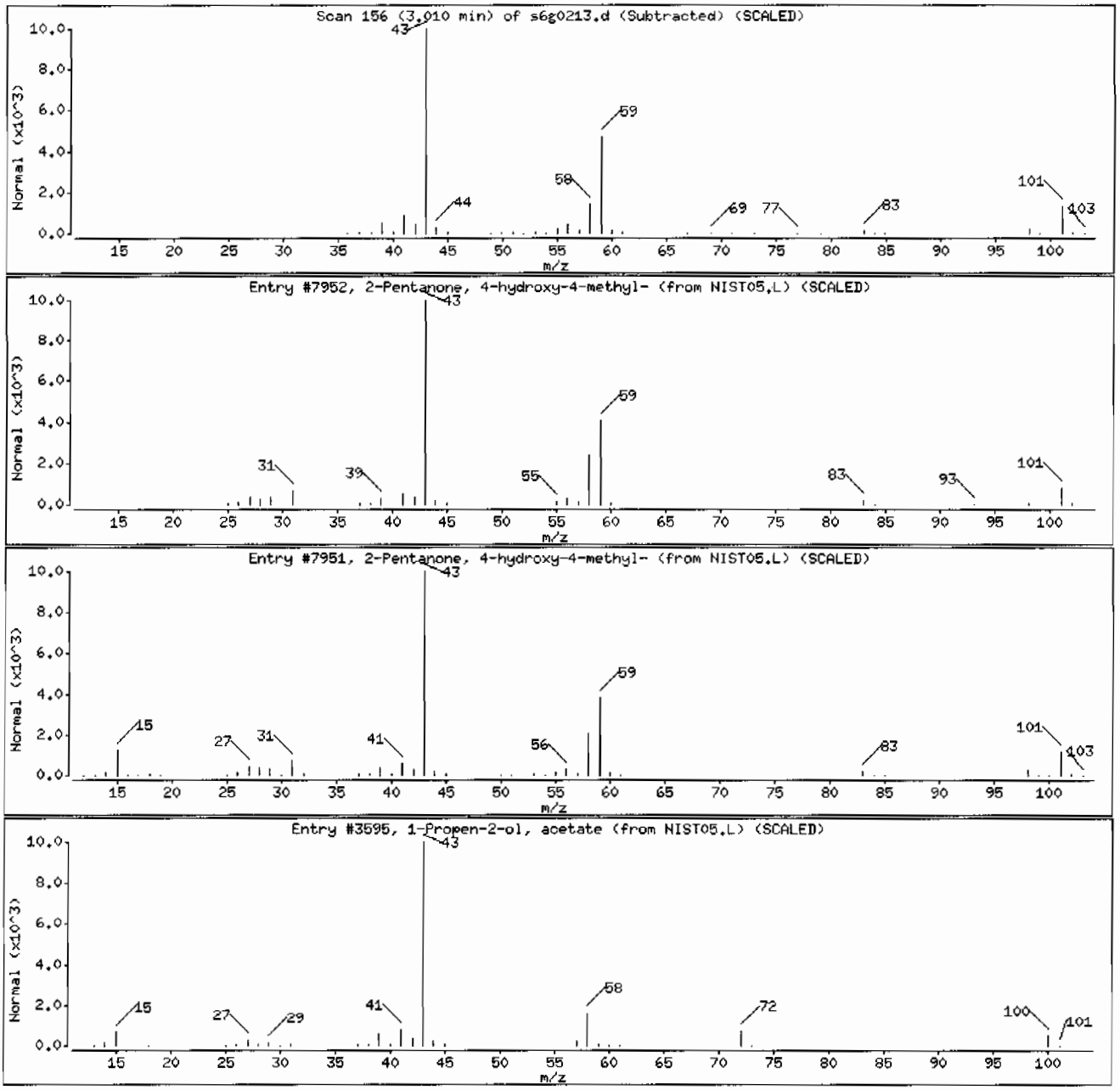

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Date : 02-JUL-2009 18:00

Client ID: CAMO-09-6605

Instrument: MSD6.i

Sample Info: |2325850018819641|SVMI1|LANL

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	94	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125037	93	C20H28O2	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	5155-70-4	NIST05.L	125035	91	C20H28O2	300

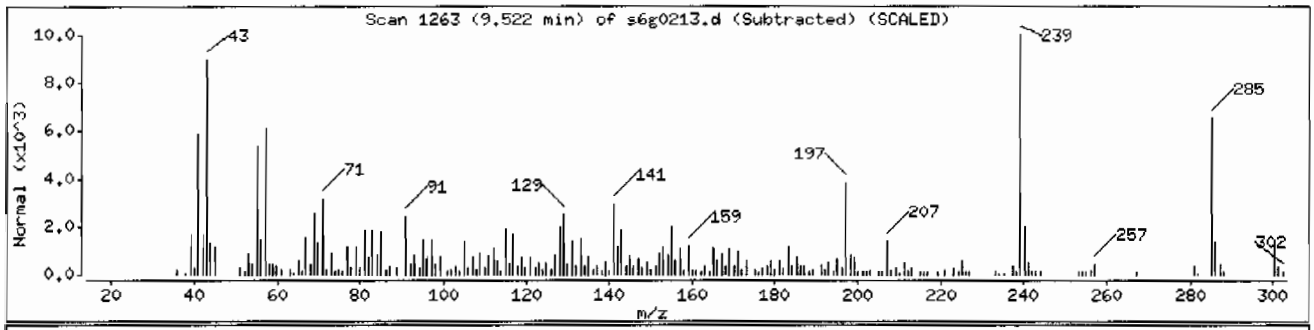

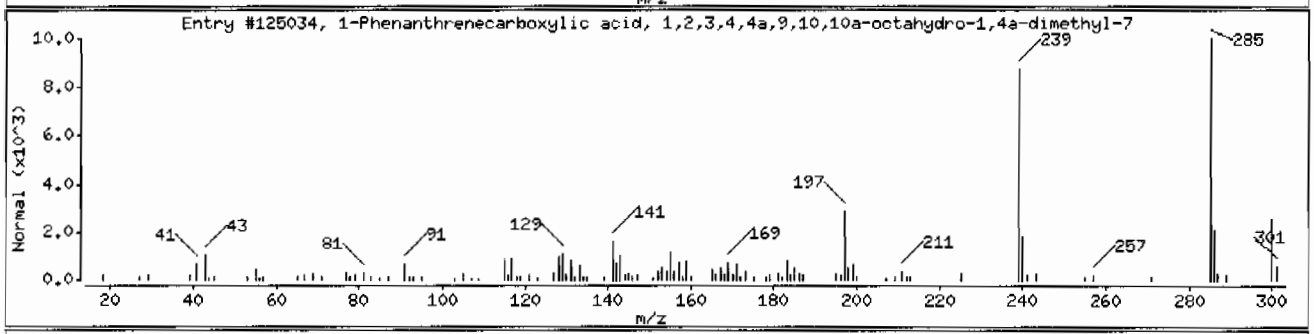

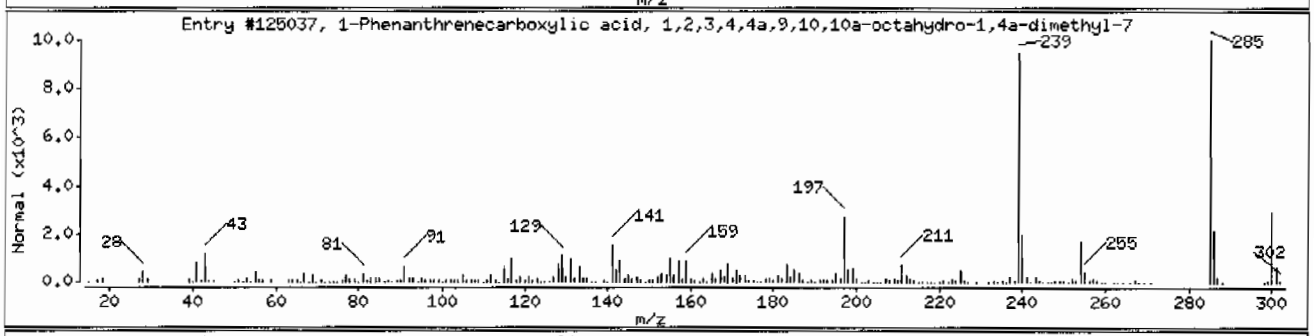

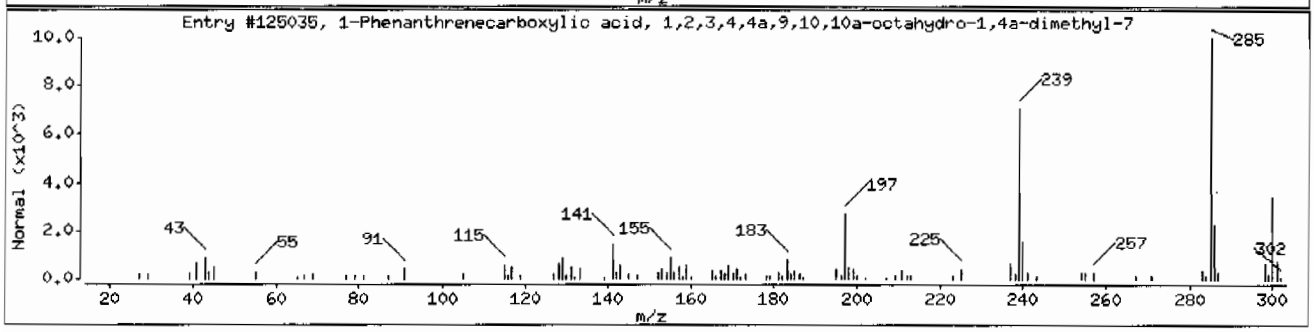

Data File: /chem/MSD6.i/s070209.b/s6g0213.d

Date : 02-JUL-2009 18:00

Client ID: CAMO-09-6605 Instrument: MSD6.i

Sample Info: 1232585001|881964|1|SVMI1|LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	78	C15H2602	238
Spiro[2,4,5,6,7,7a-hexahydro-2-oxo-4,4,7	1000197-10-9	NIST05.L	62719	43	C12H1603	208
7-Oxabicyclo[4.1.0]heptane, 1-methyl-4-(	96-08-2	NIST05.L	34753	43	C10H1602	168

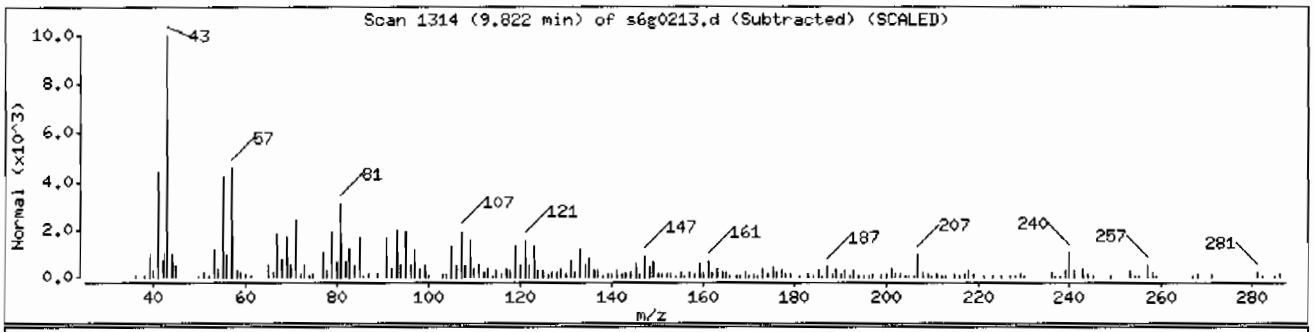

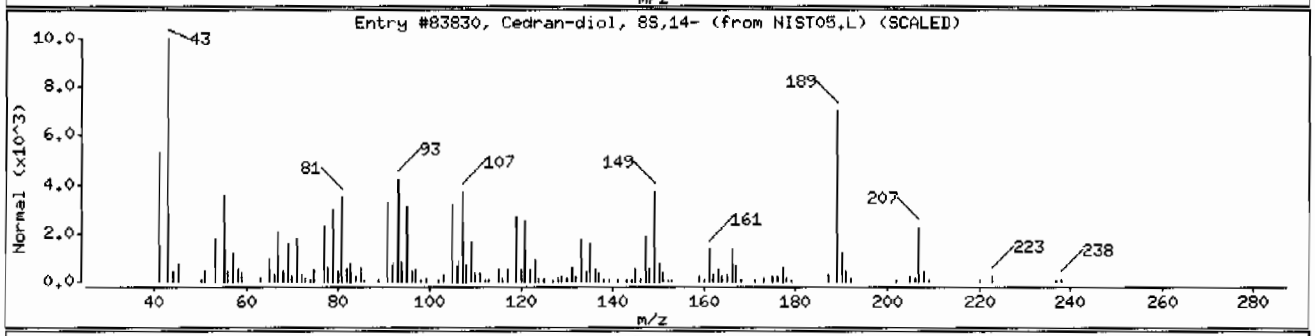

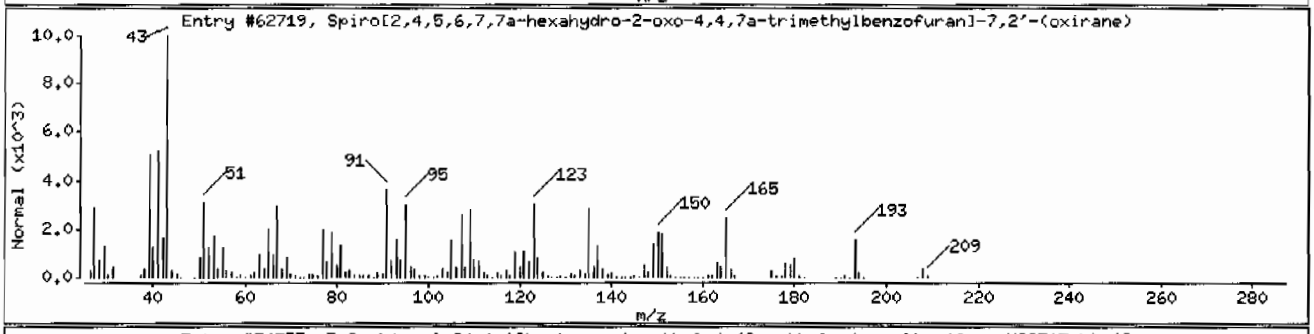

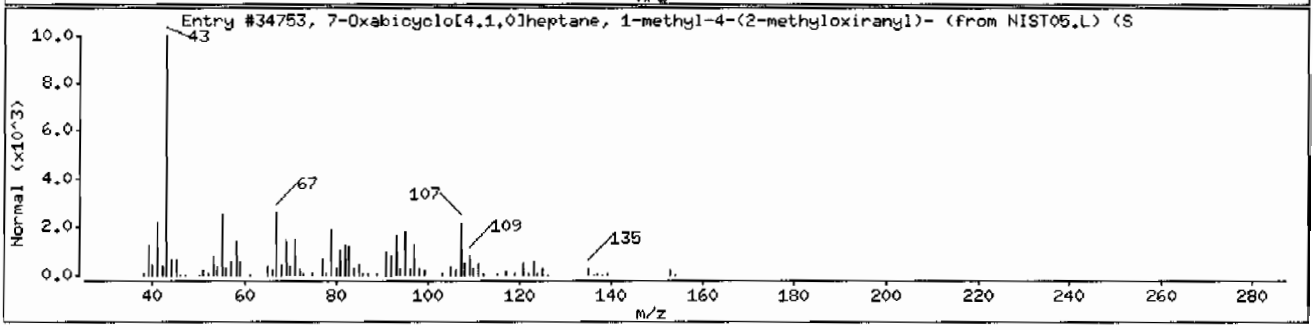

Data File: /chem/MSD6.i/s070209.b/s6g0213.d

Date : 02-JUL-2009 18:00

Client ID: CAMO-09-6605 Instrument: MSD6.i

Sample Info: |232585001|881964|1|SVMI1|LANL

Volume Injected (uL): 0.5 Operator: JMB3

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,2-Pentanediol, 5-(6-bromodecahydro-2-h	115334-14-0	NIST05.L	183500	38	C24H39BrO5	486
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	37	C15H26O2	238
Ledol	577-27-5	NIST05.L	72882	22	C15H26O	222

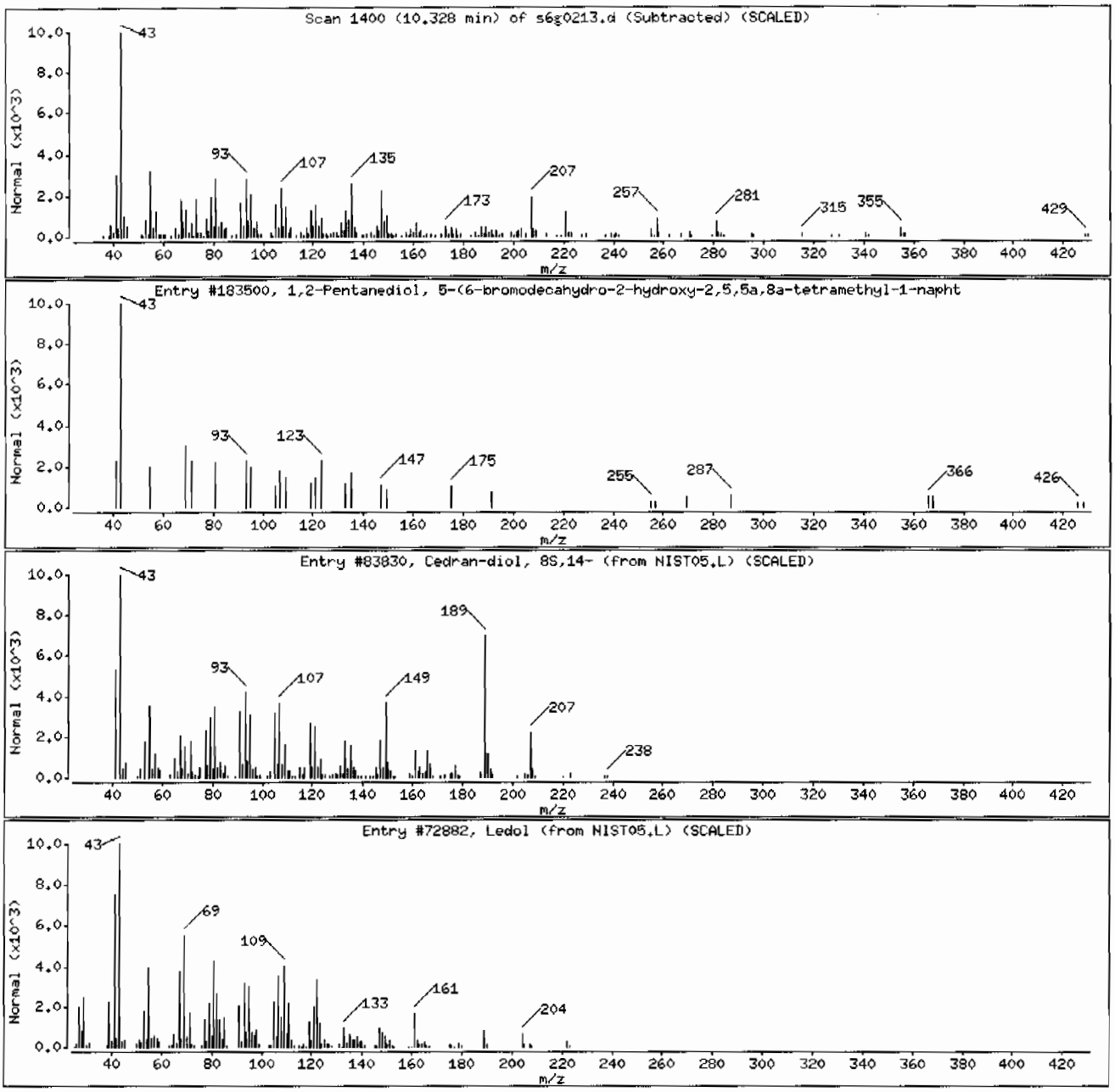

Standard Data

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 02-Jul-2009 16:06

Calibration History

Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Start Cal Date: 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
25-JUN-2009 18:09	MEGA	/chem/MSD6.i/s062509.b/s6f2503.d
Cal Level: 2 , Cal Amount: 10.00000		
26-JUN-2009 07:24	NEV	/chem/MSD6.i/s062509.b/s6f2536.d
26-JUN-2009 05:09	HEX	/chem/MSD6.i/s062509.b/s6f2530.d
26-JUN-2009 00:31	PEST	/chem/MSD6.i/s062509.b/s6f2518.d
25-JUN-2009 21:54	AP12	/chem/MSD6.i/s062509.b/s6f2511.d
25-JUN-2009 18:37	MEGA	/chem/MSD6.i/s062509.b/s6f2504.d
Cal Level: 3 , Cal Amount: 20.00000		
26-JUN-2009 07:47	NEV	/chem/MSD6.i/s062509.b/s6f2537.d
26-JUN-2009 05:32	HEX	/chem/MSD6.i/s062509.b/s6f2531.d
26-JUN-2009 00:54	PEST	/chem/MSD6.i/s062509.b/s6f2519.d
25-JUN-2009 22:17	AP12	/chem/MSD6.i/s062509.b/s6f2512.d
25-JUN-2009 19:04	MEGA	/chem/MSD6.i/s062509.b/s6f2505.d
Cal Level: 4 , Cal Amount: 40.00000		
26-JUN-2009 08:09	NEV	/chem/MSD6.i/s062509.b/s6f2538.d
26-JUN-2009 05:54	HEX	/chem/MSD6.i/s062509.b/s6f2532.d
26-JUN-2009 01:17	PEST	/chem/MSD6.i/s062509.b/s6f2520.d
25-JUN-2009 22:39	AP12	/chem/MSD6.i/s062509.b/s6f2513.d
25-JUN-2009 19:33	MEGA	/chem/MSD6.i/s062509.b/s6f2506.d
Cal Level: 5 , Cal Amount: 50.00000		
26-JUN-2009 08:31	NEV	/chem/MSD6.i/s062509.b/s6f2539.d
26-JUN-2009 06:18	HEX	/chem/MSD6.i/s062509.b/s6f2533.d
26-JUN-2009 01:40	PEST	/chem/MSD6.i/s062509.b/s6f2521.d
25-JUN-2009 23:02	AP12	/chem/MSD6.i/s062509.b/s6f2514.d
25-JUN-2009 20:01	MEGA	/chem/MSD6.i/s062509.b/s6f2507.d
Cal Level: 6 , Cal Amount: 80.00000		
26-JUN-2009 08:54	NEV	/chem/MSD6.i/s062509.b/s6f2540.d
26-JUN-2009 06:40	HEX	/chem/MSD6.i/s062509.b/s6f2534.d
26-JUN-2009 02:02	PEST	/chem/MSD6.i/s062509.b/s6f2522.d
25-JUN-2009 23:24	AP12	/chem/MSD6.i/s062509.b/s6f2515.d
25-JUN-2009 20:29	MEGA	/chem/MSD6.i/s062509.b/s6f2508.d
Cal Level: 7 , Cal Amount: 100.00000		

26-JUN-2009 09:17	NEV	/chem/MSD6.i/s062509.b/s6f2541.d
26-JUN-2009 07:02	HEX	/chem/MSD6.i/s062509.b/s6f2535.d
26-JUN-2009 02:25	PEST	/chem/MSD6.i/s062509.b/s6f2523.d
25-JUN-2009 23:47	AP12	/chem/MSD6.i/s062509.b/s6f2516.d
25-JUN-2009 20:56	MEGA	/chem/MSD6.i/s062509.b/s6f2509.d

Cal Level: 8 , Cal Amount: 120.00000		
26-JUN-2009 09:39	NEV	/chem/MSD6.i/s062509.b/s6f2542.d
26-JUN-2009 02:48	PEST	/chem/MSD6.i/s062509.b/s6f2524.d
26-JUN-2009 00:08	AP12	/chem/MSD6.i/s062509.b/s6f2517.d
25-JUN-2009 21:25	MEGA	/chem/MSD6.i/s062509.b/s6f2510.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 15:46	AP12	/chem/MSD6.i/s070209.b/s6g0207.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 15:23	MEGA	/chem/MSD6.i/s070209.b/s6g0206.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 08:30	MEGA	/chem/MSD6.i/s070209.b/s6g0202.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 09:21	PEST	/chem/MSD6.i/s070209.b/s6g0204.d
Ccal Level: 4 , Ccal Amount: 40.0		
02-JUL-2009 08:58	AP12	/chem/MSD6.i/s070209.b/s6g0203.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 llo00884

Calibration File Names:
Level 1: /chem/MSD6.i/s062509.b/s6f2503.d
Level 2: /chem/MSD6.i/s062509.b/s6f2536.d
Level 3: /chem/MSD6.i/s062509.b/s6f2537.d
Level 4: /chem/MSD6.i/s062509.b/s6f2538.d
Level 5: /chem/MSD6.i/s062509.b/s6f2539.d
Level 6: /chem/MSD6.i/s062509.b/s6f2540.d
Level 7: /chem/MSD6.i/s062509.b/s6f2541.d
Level 8: /chem/MSD6.i/s062509.b/s6f2542.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.63238	0.73990	0.67318	0.69361	0.63927					
	0.67481	0.66658					AVRG		0.67425		5.32083
2 Pyridine	+-+++	0.89908	1.05617	1.04091	0.98502	0.84792					
	0.99774	0.99755					AVRG		0.97491		7.71839
4 Aniline	+++++	0.61922	0.70141	0.65650	0.65708	0.63524					
	0.64072	0.63526					AVRG		0.64934		4.07488
209 Benzaldehyde	-++++-	1.09138	1.13361	0.96812	0.99945	0.93736					
	0.87088	0.82930					AVRG		0.97573		11.29153
6 Phenol	+++++	1.47658	1.62941	1.45952	1.43821	1.36229					
	1.35462	1.37334					AVRG		1.44200		6.66032

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Cal Date : 02-Jul-2009 15:59 llo00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	1.22043	1.12403	1.23954	1.14115	1.13328	1.05431					
	1.03435	1.02016					AVRG		1.12091		7.28122
8 2-Chlorophenol	+++++	1.11737	1.25274	1.13361	1.11969	1.06744					
	1.06241	1.06439					AVRG		1.11681		5.99703
203 n-Decane	+++++	1.96253	2.07733	1.73409	1.66770	1.48844					
	+++++	++++++					AVRG		1.78602		13.16870
9 1,3-Dichlorobenzene	+++++	1.33990	1.45795	1.29316	1.27395	1.18026					
	1.18100	1.14017					AVRG		1.26663		8.73889
11 1,4-Dichlorobenzene	+++++	1.29097	1.40125	1.26310	1.22752	1.16060					
	1.14473	1.12740					AVRG		1.23080		7.90198
12 Benzyl alcohol	+++++	0.70036	0.83012	0.78578	0.79077	0.74765					
	0.74896	0.77876					AVRG		0.76891		5.35051
13 1,2-Dichlorobenzene	+++++	1.25150	1.33180	1.14508	1.11789	1.04037					
	1.00839	0.98256					AVRG		1.12537		11.48739
14 bis(2-Chloroisopropyl)ether	+++++	2.66469	2.89578	2.58397	2.53373	2.34040					
	2.19885	2.08192					AVRG		2.47134		11.41098
15 o-Cresol	+++++	0.89019	0.98604	0.86828	0.85479	0.80508					
	0.79451	0.77266					AVRG		0.85308		8.49227

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Cal Date : 02-Jul-2009 15:59 llo00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
16 Acetophenone	++++-	1.39887	1.44475	1.23553	1.27881	1.20070					
	1.15679	1.12815					AVRG		1.26337		9.46771
17 N-Nitrosodipropylamine	0.79102	0.79932	0.94251	0.88832	0.90450	0.80701					
	0.82176	0.85235					AVRG		0.85085		6.54215
18 m,p-Cresols	+++++	1.13347	1.30237	1.23018	1.22211	1.15366					
	1.16247	1.19084					AVRG		1.19930		4.80697
19 Hexachloroethane	-++++	0.49257	0.55214	0.50513	0.49924	0.46948					
	0.47529	0.47152					AVRG		0.49505		5.82124
21 Nitrobenzene	+++++	0.34673	0.37307	0.33623	0.33251	0.29324					
	0.29158	0.28515					AVRG		0.32264		10.31000
22 Isophorone	+-+++	0.63552	0.68160	0.62967	0.62747	0.56153					
	0.56328	0.55319					AVRG		0.60747		8.00399
23 2-Nitrophenol	+++++	0.14310	0.16355	0.14738	0.14434	0.12728					
	0.12352	0.12042					AVRG		0.13851		11.18023
24 2,4-Dimethylphenol	-+-++	0.36654	0.45730	0.43271	0.43039	0.39398					
	0.40025	0.39904					AVRG		0.41146		7.36820
25 bis(2-Chloroethoxy)methane	+++++	0.37680	0.39766	0.35155	0.34440	0.30311					
	0.30215	0.29609					AVRG		0.33882		11.77117

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Cal Date : 02-Jul-2009 15:59 llo00884

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
26 2,4-Dichlorophenol	+++++-	0.24243	0.27366	0.24060	0.24186	0.21621					
	0.21044	0.21142					AVRG		0.23380		9.76984
27 Benzoic acid	+++++	-++++	0.20719	0.21760	0.22633	0.20373					
	0.21623	0.23652					AVRG		0.21793		5.56771
28 1,2,4-Trichlorobenzene	+++++	0.29641	0.31292	0.27213	0.26797	0.23908					
	0.23667	0.23062					AVRG		0.26511		11.92681
30 Naphthalene	1.05660	0.91934	0.94767	0.81076	0.78496	+++++					
	++++++	+++++					AVRG		0.90387		12.15635
204 alpha-Terpineol	-++++	0.32829	0.35279	0.30932	0.30322	0.26803					
	0.25451	0.24093					AVRG		0.29387		13.89383
31 4-Chloroaniline	+++++-	0.39692	0.43329	0.40027	0.39276	0.35630					
	0.34600	0.33896					AVRG		0.37979		9.26083
189 Caprolactam	+++++	0.09653	0.10516	0.09075	0.09598	0.09109					
	0.09196	0.08872					AVRG		0.09432		5.89285
32 Hexachlorobutadiene	++--+	0.17466	0.18478	0.16639	0.16258	0.14597					
	0.14659	0.14276					AVRG		0.16053		10.00655
33 4-Chloro-3-methylphenol	++-++	0.25394	0.28695	0.26318	0.25814	0.23584					
	0.23011	0.22741					AVRG		0.25080		8.49300

GEL Laboratories LLC

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.59901	0.53117	0.56501	0.49717	0.48140	0.42787					
	0.41481	0.40259					AVRG		0.48988		14.73728
35 1-Methylnaphthalene	0.63482	0.55611	0.58496	0.50370	0.48920	0.43330					
	+++++	+++++					AVRG		0.53368		13.59333
36 Hexachlorocyclopentadiene	+++++	0.15486	0.23705	0.22304	0.22443	0.17556					
	0.22833	0.20920					AVRG		0.20750		14.76227
208 1,1'-Biphenyl	+++++	1.34972	1.33011	1.08660	1.13652	1.05329					
	1.02023	0.97836					AVRG		1.13640		12.99693
205 2,3-Dichloroaniline	+++++	0.53146	0.58307	0.51668	0.51473	0.46598					
	0.45488	0.44984					AVRG		0.50238		9.63382
37 2,4,6-Trichlorophenol	+++++	0.33808	0.38712	0.32436	0.31922	0.28629					
	0.31080	0.29305					AVRG		0.32270		10.39191
38 2,4,5-Trichlorophenol	+++++	0.31059	0.36692	0.35695	0.36141	0.34591					
	0.30840	0.32982					AVRG		0.34000		7.07586
40 2-Chloronaphthalene	1.08311	0.96625	1.08309	0.95458	0.95054	0.85459					
	0.83946	0.81611					AVRG		0.94346		10.94370
42 o-Nitroaniline	+++++	0.32048	0.39114	0.38026	0.38066	0.35541					
	0.35712	0.35999					AVRG		0.36358		6.45864

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INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 llo00884

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	ml	r2	%RSD or R^2
41 m-Nitroaniline	++++	0.19621	0.24704	0.24753	0.24746	0.22586					
	0.23559	0.23726					AVRG		0.23385		7.88833
43 Dimethylphthalate	+-++-	1.11892	1.22487	1.11340	1.09849	1.00483					
	0.98565	0.98456					AVRG		1.07582		8.27040
44 2,6-Dinitrotoluene	++++	0.24806	0.29035	0.26917	0.26165	0.24535					
	0.23888	0.23798					AVRG		0.25592		7.44772
45 Acenaphthylene	1.60659	1.53781	1.67432	1.47738	1.44338	1.32386					
	1.28502	1.24642					AVRG		1.44935		10.68612
47 Acenaphthene	1.17616	0.93028	1.03086	0.90765	0.88512	0.80414					
	0.79484	0.78201					AVRG		0.91388		14.75125
48 2,4-Dinitrophenol	+++++	+++++	0.09751	0.12076	0.12130	0.11065					
	0.12950	0.12854					AVRG		0.11804		10.27624
49 Dibenzofuran	++++	1.34254	1.48066	1.30108	1.27535	1.15363					
	1.12634	1.10565					AVRG		1.25504		10.80137
50 2,4-Dinitrotoluene	+++++	0.30954	0.36989	0.35299	0.35627	0.33300					
	0.33191	0.33687					AVRG		0.34150		5.81138
51 Diethylphthalate	+++++	1.12629	1.23552	1.11421	1.07838	0.99981					
	0.96813	0.96038					AVRG		1.06896		9.34734

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Cal Date : 02-Jul-2009 15:59 11o00884

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
52 4-Nitrophenol	+++++	0.12172	0.18977	0.18570	0.17891	0.16720					
	0.17999	0.18374					AVRG		0.17244		13.60633
53 Fluorene	1.23458	1.10959	1.21151	1.04844	1.02561	0.94472					
	0.93277	0.92854					AVRG		1.05447		11.54391
54 4-Chlorophenylphenylether	++-++	0.52592	0.58667	0.52981	0.52080	0.48188					
	0.47877	0.47522					AVRG		0.51415		7.73736
55 2-Methyl-4,6-dinitrophenol	+++++-	14673	54481	130546	176239	210062					
	323694	446775					LINR	0.06881	0.10874		0.99699
56 p-Nitroaniline	+++++	0.15417	0.20937	0.22775	0.21681	0.19467					
	0.21378	0.21660					AVRG		0.20474		11.92703
133 Diphenylamine	-++-+	0.50284	0.56842	0.49877	0.50679	0.46297					
	0.47091	0.47387					AVRG		0.49779		7.15126
58 1,2-Diphenylhydrazine	++-++	0.69277	0.78732	0.68204	0.69087	0.63077					
	0.62255	0.60230					AVRG		0.67266		9.24165
59 Tributylphosphate	+++++	1.49739	1.49809	1.41024	1.35731	1.27906					
	++++-	1.16092					AVRG		1.36717		9.61235 <-
61 4-Bromophenylphenylether	+++++	0.17001	0.19429	0.17374	0.17586	0.16392					
	0.16534	0.16821					AVRG		0.17305		5.94476

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
63 Hexachlorobenzene	+++++	0.17966	0.20383	0.18218	0.18753	0.17462					
	0.17443	0.17775					AVRG		0.18286		5.63687
207 Atrazine	++++	0.04948	0.05016	0.04056	0.04359	0.03922					
	0.03784	0.03776					AVRG		0.04266		12.37688
65 Pentachlorophenol	+++++	0.08955	0.11829	0.11235	0.11551	0.10833					
	0.11174	0.11017					AVRG		0.10942		8.55946
206 n-Octadecane	+++++	0.59740	0.64721	0.54596	0.52896	0.47156					
	0.42954	+++++					AVRG		0.53677		14.84979
68 Phenanthrene	1.10228	0.93626	1.01017	0.87070	0.86565	0.79407					
	0.78281	0.75605					AVRG		0.88975		13.51659
69 Anthracene	1.03372	0.92010	1.02735	0.89651	0.88820	0.81272					
	0.78841	0.77473					AVRG		0.89272		11.20129
72 Di-n-butylphthalate	+++++	1.04790	1.18853	1.03601	1.01509	0.92636					
	0.88661	0.83125					AVRG		0.99025		12.05154
76 Fluoranthene	0.97712	0.94165	1.04211	0.90609	0.89912	0.83116					
	0.80860	0.77399					AVRG		0.89748		10.04012
77 Benzidine	+++++	0.34155	0.35663	0.31039	0.33428	0.40588					
	0.42170	0.35685					AVRG		0.36104		10.95672 <-

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
79 Pyrene	1.12547	1.05446	1.14289	0.99253	0.99961	0.91613					
	0.87703	0.86376					AVRG		0.99649		10.71467
85 Butylbenzylphthalate	++-++	0.44811	0.53082	0.48275	0.48534	0.45605					
	0.43387	0.42670					AVRG		0.46624		7.75863
89 Benzo(a)anthracene	1.06878	0.93271	1.04455	0.95285	0.94970	0.90136					
	0.91962	0.90813					AVRG		0.95971		6.54790
90 3,3'-Dichlorobenzidine	-++-+	0.30276	0.31909	0.28981	0.30002	0.29727					
	0.30592	0.28683					AVRG		0.30024		3.57517 <-
92 Chrysene	1.05133	0.91009	1.03072	0.91463	0.91130	0.86864					
	0.83552	0.81734					AVRG		0.91745		9.20942
93 bis(2-Ethylhexyl)phthalate	0.49158	0.63811	0.75021	0.66325	0.65721	0.61652					
	0.58257	0.55871					AVRG		0.61977		12.52725
94 Di-n-octylphthalate	+++++	1.08312	1.31488	1.20254	1.20913	1.12717					
	1.05515	1.07887					AVRG		1.15298		8.10764
95 Benzo(b)fluoranthene	0.89395	0.87170	1.07203	0.93108	0.99781	0.90434					
	0.98279	0.96748					AVRG		0.95265		6.89667
96 Benzo(k)fluoranthene	0.98876	0.95294	1.04515	0.98327	0.93287	0.93963					
	0.82454	0.88260					AVRG		0.94372		7.16897

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	0.68623	0.75974	0.91770	0.85651	0.87746	0.83819					
	0.82888	0.82925					AVRG		0.82425		8.70730
99 Indeno(1,2,3-cd)pyrene	0.58566	0.69956	0.88899	0.84947	0.84012	0.81240					
	0.83280	0.75233					AVRG		0.78267		12.69466
100 Dibenzo(a,h)anthracene	9132	108272	345404	788225	974912	1248454					
	1878464	2222689					LINR	-0.02288	0.63862		0.99559
101 Benzo(ghi)perylene	0.58949	0.64245	0.78144	0.73455	0.72810	0.70603					
	0.71181	0.63056					AVRG		0.69055		9.22805
102 1,4-Dioxane	-++++-	0.44847	0.46726	0.38659	0.40160	0.37556					
	0.36587	0.35293					AVRG		0.39975		10.72715
103 Methyl methacrylate	-++++-	0.23840	0.24200	0.20244	0.20616	0.19137					
	0.18583	0.18163					AVRG		0.20683		11.79096
104 Ethyl methacrylate	+++++	0.94259	0.99321	0.85643	0.86935	0.83614					
	0.80918	0.79053					AVRG		0.87106		8.35594
105 2-Picoline	+++-+	1.50203	1.56115	1.34043	1.36793	1.27566					
	1.23483	1.21493					AVRG		1.35671		9.74281
106 N-Nitrosomethylethylamine	++--+	0.56111	0.60482	0.54639	0.56485	0.56666					
	0.56403	0.53265					AVRG		0.56293		3.95047

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.64855	0.67082	0.59769	0.61259	0.60332					
	0.59897	0.55969					AVRG		0.61309		5.94648
108 N-Nitrosodiethylamine	+++++	0.56089	0.58157	0.51753	0.53600	0.52499					
	0.51871	0.48195					AVRG		0.53166		6.06915
109 Ethyl Methanesulfonate	+++++	0.75479	0.81335	0.71282	0.74358	0.73772					
	0.72871	0.69036					AVRG		0.74019		5.21699
110 Pentachloroethane	-++++	0.35241	0.36665	0.32462	0.33602	0.32435					
	0.31917	0.30641					AVRG		0.33280		6.20805
111 N-Nitrosopyrrolidine	-++++	0.56374	0.62352	0.54696	0.57663	0.55625					
	0.52695	0.50737					AVRG		0.55735		6.68229
113 N-Nitrosomorpholine	-++++	0.91613	0.98944	0.84178	0.87856	0.86554					
	0.79892	0.78054					AVRG		0.86727		8.19219
114 o-Toluidine	+++++	2.08041	2.12438	1.80435	1.84634	1.73950					
	1.64321	1.60168					AVRG		1.83427		11.02501
115 N-Nitrosopiperidine	++-++	0.16009	0.17196	0.14921	0.15676	0.15141					
	0.15201	0.14355					AVRG		0.15500		5.90728
116 a,a-Dimethylphenethylamine	++-++	1.04169	1.18296	1.07224	1.15686	1.09722					
	1.09706	1.08056					AVRG		1.10408		4.46213

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	100 Level 7	120 Level 8										
117 Triethylphosphorothioate	++++	0.16948	0.16571	0.15341	0.14957	0.14414						
	++++	0.13241					AVRG		0.15245		9.02058	<-
118 2,6-Dichlorophenol	++++	0.25500	0.26825	0.23342	0.24444	0.23410						
	0.22873	0.21899					AVRG		0.24042		6.97744	
119 Hexachloropropene	++++	0.11484	0.12831	0.12230	0.12741	0.12792						
	0.13619	0.11809					AVRG		0.12501		5.74024	
120 p-Phenylenediamine	++++	0.25894	0.30780	0.27024	0.28461	0.26455						
	0.24836	0.23651					AVRG		0.26729		8.81751	
121 N-Nitrosodi-n-butylamine	+++++	87162	186621	284343	380139	620307						
	847671	+++++					LINR	-0.13918	0.20871		0.99453	
122 Safrole	+++++	0.22777	0.23847	0.20280	0.21182	0.19756						
	0.19223	0.18415					AVRG		0.20783		9.39540	
123 1,2,4,5-Tetrachlorobenzene	+++++	0.49795	0.49761	0.41805	0.43378	0.41177						
	0.41519	0.38880					AVRG		0.43759		9.86893	
124 Isosafrole	+++++	0.38693	0.41188	0.34610	0.36809	0.34872						
	0.34982	0.32815					AVRG		0.36281		7.84845	
125 1,4-Naphthoquinone	+++++	0.39078	0.41091	0.32495	0.33865	0.28785						
	+++++	++++					AVRG		0.35063		14.25240	

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
126 m-Dinitrobenzene	+++++	0.16097	0.19752	0.19351	0.19372	0.17999						
	0.18095	0.18444					AVRG		0.18444		6.72107	
127 Pentachlorobenzene	++++-	0.43540	0.43757	0.36606	0.39115	0.36688						
	0.36403	0.35232					AVRG		0.38763		9.11345	
128 1-Naphthylamine	+++++	0.97305	1.01861	0.85254	0.90031	0.85212						
	0.83379	0.80334					AVRG		0.89054		8.82414	
129 2-Naphthylamine	+++++	1.07322	1.14238	0.91698	0.97159	0.93421						
	0.90628	0.87417					AVRG		0.97412		10.05716	
130 2,3,4,6-Tetrachlorophenol	-++++	0.29368	0.34460	0.30483	0.30498	0.29138						
	0.27715	0.29969					AVRG		0.30233		6.93290	
131 5-Nitro-o-toluidine	-+--+	0.29432	0.32388	0.28613	0.30788	0.30538						
	0.30976	0.29802					AVRG		0.30362		4.01840	
132 Thionazin	+++++	0.20129	0.20194	0.19423	0.18811	0.18439						
	+++++	0.16980					AVRG		0.18996		6.36401	<-
134 Sulfotepp	+++++	0.10066	0.09687	0.09515	0.09465	0.09522						
	+++++	0.09446					AVRG		0.09617		2.45134	<-
135 Phorate	+++++	0.44875	0.44740	0.42095	0.41385	0.39361						
	+++++	0.36053					AVRG		0.41418		8.11363	<-

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	100 Level 7	120 Level 8										
136 1,3,5-Trinitrobenzene	+++++	0.12191	0.14390	0.13612	0.15261	0.14765						
	0.14546	0.13994					AVRG		0.14108		7.06662	
137 Phenacetin	++--+	0.30142	0.31838	0.27624	0.29648	0.29352						
	0.29487	0.28222					AVRG		0.29473		4.60847	
138 Diallate	++++-	0.28510	0.28840	0.24021	0.25212	0.23986						
	0.23658	0.22590					AVRG		0.25260		9.72911	
139 Dimethoate	++--+	0.27503	0.28336	0.27756	0.27624	0.27526						
	++--+	0.26264					AVRG		0.27501		2.47074	<-
140 4-Aminobiphenyl	++--+	0.60580	0.59069	0.55478	0.60921	0.56737						
	0.53741	0.51964					AVRG		0.56927		6.03455	
141 Pentachloronitrobenzene	+++-+	0.08223	0.08464	0.07383	0.07728	0.07209						
	0.06879	0.06554					AVRG		0.07491		9.25205	
142 Pronamide	++--+	0.29474	0.29145	0.24443	0.25109	0.22669						
	0.21208	0.20918					AVRG		0.24710		14.15492	
143 Dinoseb	++-++	20780	84804	205850	273073	322340						
	491810	679849					LINR	0.05568	0.16509		0.99662	
144 Disulfoton	+++++	0.39188	0.38851	0.36073	0.35401	0.33180						
	++-++	0.30490					AVRG		0.35531		9.38910	<-

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	100 Level 7	120 Level 8										
145 Methyl parathion	-++++	0.18836	0.20650	0.20923	0.20867	0.21162						
	+++++	0.19926					AVRG		0.20394		4.27815	<-
146 4-Nitroquinoline-1-oxide	+++++	0.02893	0.02787	0.02388	0.02735	0.02367						
	0.02320	0.01981					AVRG		0.02496		12.92664	
147 Methapyrilene	+-+++	0.69107	0.70459	0.55190	0.58929	0.50570						
	+-+++	+++++					AVRG		0.60851		14.27692	
148 Isodrin	++++-	0.11695	0.12074	0.10177	0.10473	0.09801						
	0.09618	0.09359					AVRG		0.10457		10.00337	
149 Aramite	-++++	0.05314	0.05789	0.05104	0.05438	0.05075						
	0.04902	0.04800					AVRG		0.05203		6.52073	
150 Kepone	+++-+	0.07997	0.08705	0.07407	0.07973	0.07823						
	0.07875	0.07626					AVRG		0.07915		5.12259	
151 p-(Dimethylamino)azobenzene	+++++	0.31526	0.33187	0.27995	0.29674	0.27031						
	0.26417	0.25598					AVRG		0.28775		9.74134	
152 Chlorobenzilate	+++++	0.29629	0.31044	0.26389	0.27419	0.25693						
	0.25231	0.24702					AVRG		0.27158		8.73379	
153 3,3'-Dimethylbenzidine	+-+++	0.57410	0.58403	0.49595	0.50722	0.51863						
	0.52241	0.47909					AVRG		0.52592		7.44714	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 llo00884

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
154 Famphur	-++++	0.36885	0.37657	0.37753	0.36804	0.36180						
	-++++	0.33829					AVRG		0.36518		3.94658	<-
155 2-Acetylaminofluorene	++--+	0.29294	0.33610	0.33343	0.34644	0.34833						
	0.36163	0.34690					AVRG		0.33797		6.47209	
157 7,12Dimethylbenz(a)anthracene	+++++	0.47747	0.51000	0.45134	0.47249	0.45022						
	0.43701	0.43448					AVRG		0.46186		5.78794	
158 3-Methylcholanthrene	+-+++	0.40088	0.43440	0.40840	0.42321	0.42138						
	0.43256	0.41738					AVRG		0.41975		2.89156	
26 Phthalic anhydride	++++-	23445	60720	197326	265845	337032						
	482099	+-+++					LINR	0.07179	0.15263		0.99507	
173 Carbazole	0.81196	0.72552	0.79566	0.73346	0.74862	0.67642						
	0.68473	0.67787					AVRG		0.73178		7.12317	
174 Hexachlorophene	-++++	0.06404	0.06876	+-++-	0.06992	0.06842						
	0.06842	+++++					AVRG		0.06791		3.31731	<-
179 Dibenzo(a,e)pyrene	++-++	54048	207036	542567	609541	796137						
	1234418	-++++					LINR	0.04574	0.44281		0.99342	
185 (2,3-Dibromopropyl)phosphate	++++	-+-++	+-++-	+++++	+-+++	-++++						
	++-++	++-++					AVRG		0.000e+00		0.000e+00	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 11o00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
184 p-Benzoquinone	++++-	0.11972	0.13520	0.18226	0.19503	0.24392						
	0.18617	0.20906					AVRG		0.18162		23.38261	<-
191 Parathion	++-++	0.06720	0.07286	0.07495	0.07278	0.07512						
	++-++	0.07143					AVRG		0.07239		4.01730	<-
192 Methoxychlor	+++++	0.48449	0.63447	0.60076	0.57342	0.52057						
	0.52989	0.49268					AVRG		0.54804		10.28990	
210 m-Toluidine	++++-	1.27161	1.50282	1.83240	1.62568	1.67827						
	1.76658	1.71497					AVRG		1.62748		11.59788	
211 p-Toluidine	+++++	1.26022	1.29823	1.04873	1.26022	1.08002						
	0.96663	0.99825					AVRG		1.13033		12.26753	
212 Cis Diallate	+++++	0.28580	0.31986	0.26808	0.29504	0.28492						
	0.29015	0.27596					AVRG		0.28854		5.70060	
213 Trans Diallate	++++-	0.33542	0.33930	0.28260	0.29661	0.28219						
	0.27833	0.26577					AVRG		0.29717		9.72911	
214 1,4-Dinitrobenzene	+++++	0.20112	0.26188	0.25947	0.26034	0.24600						
	0.24565	0.25711					AVRG		0.24737		8.67601	
215 2-Ethoxyethanol	+++++	0.83491	0.96676	0.87277	0.89696	0.84090						
	0.87270	0.83176					AVRG		0.87382		5.43680	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 11o00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
216 Methylenebis(2-chloroaniline)	+++++	0.12685	0.15239	0.15319	0.15535	0.14874						
	0.15769	0.15392					AVRG		0.14973		6.98291	
229 2,2'-Dichlorobenzil	-++-+	0.63573	0.64426	+++++	0.60092	0.57475						
	0.53886	0.54002					AVRG		0.58909		7.77747	<-
230 4-Chlorothioanisole	+++++	0.25846	0.25468	++-++	0.24095	0.23047						
	0.22529	0.21821					AVRG		0.23801		6.81449	<-
231 4-Chlorothiophenol	+++++	38130	81557	+++++	295018	478312						
	546488	749391					LINR	0.12977	0.18954		0.99850	<-
232 bis(p-Chlorophenyl)sulfone	+++++	0.39228	0.38647	+++++	0.34476	0.32622						
	0.31133	0.31226					AVRG		0.34555		10.44268	<-
233 bis(p-Chlorophenyl)disulfide	++++-	0.13457	0.14423	+++++	0.16084	0.14151						
	0.12869	0.13535					AVRG		0.14086		7.96301	<-
234 Diphenyl disulfide	++++-	0.24323	0.25434	+++++	0.24239	0.22501						
	0.21705	0.21291					AVRG		0.23249		7.11578	<-
235 Diphenyl sulfide	+-+++	0.80808	0.81365	+++++	0.71378	0.65007						
	0.65795	0.61957					AVRG		0.71052		11.75053	<-
236 Phenyl sulfone	+-+++	0.48879	0.48533	+-+++	0.43294	0.41526						
	0.41473	0.39582					AVRG		0.43881		8.93060	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 11o00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
237 Hydroxymethyl phthalimide	+++++	0.20330	0.20564	+++++	0.15263	0.18504						
	0.15200	0.17312					AVRG		0.17862		13.23528	<-
238 Phthalic acid	+++++	0.08556	0.08708	+++++	0.06350	0.08083						
	0.06350	0.07171					AVRG		0.07537		14.11566	<-
239 Thiophenol	+++++	0.80251	0.91225	+++++	1.03227	1.05598						
	1.08387	1.02922					AVRG		0.98602		10.88473	<-
240 bis(Chloromethyl)ether	+++++	0.01688	0.01613	+++++	0.01507	0.01457						
	0.01518	0.01559					AVRG		0.01557		5.32579	<-
241 Octachlorostyrene	+++++	0.07992	0.08243	+++++	0.07682	0.07832						
	0.07523	0.07697					AVRG		0.07828		3.28717	<-
M 225 Trichlorophenols	+++++	0.32433	0.37702	0.34065	0.34032	0.31610						
	0.30960	0.31143					AVRG		0.33135		7.18860	
M 226 Tetrachlorophenols	+++++	0.29368	0.34460	0.30483	0.30498	0.29138						
	0.27715	0.29969					AVRG		0.30233		6.93290	
M 227 Benzo(b,k)fluoranthene	0.94136	0.91232	1.05859	0.95718	0.96534	0.92198						
	0.90366	0.92504					AVRG		0.94818		5.21284	
M 228 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 11o00884

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
$ 3 2-Fluorophenol	+++++	1.09198	1.23633	1.09570	1.08835	1.02368					
	1.04716	1.02413					AVRG		1.08676		6.71486
S 5 Phenol-d5	+++++	1.45254	1.60814	1.48373	1.47158	1.38721					
	1.38525	1.40226					AVRG		1.45582		5.37925
S 187 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-
S 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-
S 20 Nitrobenzene-d5	+++++	0.37314	0.40736	0.36335	0.36220	0.32849					
	0.32847	0.31748					AVRG		0.35436		8.92683
S 39 2-Fluorobiphenyl	+++++	1.10264	1.17960	1.05051	1.02767	0.93874					
	0.91574	0.89656					AVRG		1.01592		10.31484
S 60 2,4,6-Tribromophenol	+++++	0.12592	0.15525	0.15136	0.15448	0.14416					
	0.14889	0.15506					AVRG		0.14788		7.08436
S 81 p-Terphenyl-d14	+++++	0.64037	0.71369	0.64682	0.65851	0.61137					
	0.59847	0.60238					AVRG		0.63880		6.31654

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 18:09
End Cal Date : 26-JUN-2009 09:39
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Cal Date : 02-Jul-2009 15:59 llo00884

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:11
Lab File ID: s6f2525.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$	3 2-Fluorophenol	1.08676	1.12507	1.12507	0.000	3.52505	60.00000	Averaged
$	5 Phenol-d5	1.45582	1.43831	1.43831	0.000	-1.20235	60.00000	Averaged
$	20 Nitrobenzene-d5	0.35436	0.37614	0.37614	0.000	6.14854	60.00000	Averaged
$	39 2-Fluorobiphenyl	1.01592	1.04828	1.04828	0.000	3.18501	60.00000	Averaged
$	60 2,4,6-Tribromophenol	0.14788	0.14760	0.14760	0.000	-0.18414	60.00000	Averaged
$	81 p-Terphenyl-d14	0.63880	0.68459	0.68459	0.000	7.16687	60.00000	Averaged
	1 N-Methyl-N-nitrosomethylami	0.67425	0.74773	0.74773	0.000	10.89825	60.00000	Averaged
	2 Pyridine	0.97491	0.98397	0.98397	0.000	0.92879	60.00000	Averaged
	4 Aniline	0.64934	0.64911	0.64911	0.000	-0.03594	60.00000	Averaged
	6 Phenol	1.44200	1.43586	1.43586	0.001	-0.42533	20.00000	Averaged ccc
	7 bis(2-Chloroethyl) ether	1.12091	1.11791	1.11791	0.000	-0.26752	60.00000	Averaged
	8 2-Chlorophenol	1.11681	1.13103	1.13103	0.000	1.27363	60.00000	Averaged
	203 n-Decane	1.78602	1.72523	1.72523	0.000	-3.40342	60.00000	Averaged
	9 1,3-Dichlorobenzene	1.26663	1.30576	1.30576	0.000	3.08936	60.00000	Averaged
	11 1,4-Dichlorobenzene	1.23080	1.24134	1.24134	0.001	0.85660	20.00000	Averaged ccc
	13 1,2-Dichlorobenzene	1.12537	1.10040	1.10040	0.000	-2.21905	60.00000	Averaged
	14 bis(2-Chloroisopropyl)ether	2.47134	2.67528	2.67528	0.000	8.25224	60.00000	Averaged
	12 Benzyl alcohol	0.76891	0.79640	0.79640	0.000	3.57469	60.00000	Averaged
	15 o-Cresol	0.85308	0.80325	0.80325	0.000	-5.84059	60.00000	Averaged
	18 m,p-Cresols	1.19930	1.21301	1.21301	0.000	1.14345	60.00000	Averaged
	17 N-Nitrosodipropylamine	0.85085	0.89258	0.89258	0.050	4.90475	60.00000	Averaged spcc
	19 Hexachloroethane	0.49505	0.50346	0.50346	0.000	1.69837	60.00000	Averaged
	21 Nitrobenzene	0.32264	0.37193	0.37193	0.000	15.27721	60.00000	Averaged
	22 Isophorone	0.60747	0.68441	0.68441	0.000	12.66691	60.00000	Averaged
	23 2-Nitrophenol	0.13851	0.15084	0.15084	0.001	8.89680	20.00000	Averaged ccc
	24 2,4-Dimethylphenol	0.41146	0.47557	0.47557	0.000	15.58142	60.00000	Averaged
	25 bis(2-Chloroethoxy)methane	0.33882	0.34977	0.34977	0.000	3.23129	60.00000	Averaged
	26 2,4-Dichlorophenol	0.23380	0.24920	0.24920	0.001	6.58756	20.00000	Averaged ccc
	27 Benzoic acid	0.21793	0.26929	0.26929	0.000	23.56667	60.00000	Averaged
	28 1,2,4-Trichlorobenzene	0.26511	0.26543	0.26543	0.000	0.11934	60.00000	Averaged
	30 Naphthalene	0.90387	0.79867	0.79867	0.000	-11.63895	60.00000	Averaged
	204 alpha-Terpineol	0.29387	0.29863	0.29863	0.000	1.62032	60.00000	Averaged
	31 4-Chloroaniline	0.37979	0.40231	0.40231	0.000	5.93203	60.00000	Averaged
	32 Hexachlorobutadiene	0.16053	0.16187	0.16187	0.001	0.83340	20.00000	Averaged ccc
	33 4-Chloro-3-methylphenol	0.25080	0.26631	0.26631	0.001	6.18457	20.00000	Averaged ccc
	34 2-Methylnaphthalene	0.48988	0.53642	0.53642	0.000	9.50067	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i
Lab File ID: s6f2525.d
Analysis Type:
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

Injection Date: 26-JUN-2009 03:11
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 18:09 02:48

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35 1-Methylnaphthalene	0.53368	0.49710	0.49710	0.000	-6.85521	60.00000	Averaged	
36 Hexachlorocyclopentadiene	0.20750	0.22408	0.22408	0.050	7.98984	60.00000	Averaged	spcc
205 2,3-Dichloroaniline	0.50238	0.51351	0.51351	0.000	2.21657	60.00000	Averaged	
37 2,4,6-Trichlorophenol	0.32270	0.32519	0.32519	0.001	0.76942	20.00000	Averaged	ccc
38 2,4,5-Trichlorophenol	0.34000	0.36478	0.36478	0.000	7.28927	60.00000	Averaged	
40 2-Chloronaphthalene	0.94346	0.96190	0.96190	0.000	1.95373	60.00000	Averaged	
42 o-Nitroaniline	0.36358	0.37616	0.37616	0.000	3.46181	60.00000	Averaged	
41 m-Nitroaniline	0.23385	0.25713	0.25713	0.000	9.95646	60.00000	Averaged	
43 Dimethylphthalate	1.07582	1.08470	1.08470	0.000	0.82586	60.00000	Averaged	
44 2,6-Dinitrotoluene	0.25592	0.27912	0.27912	0.000	9.06572	60.00000	Averaged	
50 2,4-Dinitrotoluene	0.34150	0.38329	0.38329	0.000	12.23916	60.00000	Averaged	
45 Acenaphthylene	1.44935	1.47434	1.47434	0.000	1.72472	60.00000	Averaged	
47 Acenaphthene	0.91388	0.86637	0.86637	0.001	-5.19856	20.00000	Averaged	ccc
48 2,4-Dinitrophenol	0.11804	0.11708	0.11708	0.050	-0.81658	60.00000	Averaged	spcc
49 Dibenzofuran	1.25504	1.29079	1.29079	0.000	2.84851	60.00000	Averaged	
51 Diethylphthalate	1.06896	1.07295	1.07295	0.000	0.37315	60.00000	Averaged	
52 4-Nitrophenol	0.17244	0.18029	0.18029	0.050	4.55579	60.00000	Averaged	spcc
53 Fluorene	1.05447	1.02093	1.02093	0.000	-3.18079	60.00000	Averaged	
54 4-Chlorophenylphenylether	0.51415	0.52659	0.52659	0.000	2.41880	60.00000	Averaged	
55 2-Methyl-4,6-dinitrophenol	51.22713	40.00000	0.13178	0.000	28.06783	60.00000	Linear	
56 p-Nitroaniline	0.20474	0.23325	0.23325	0.000	13.92997	60.00000	Averaged	
133 Diphenylamine	0.49779	0.51316	0.51316	0.001	3.08663	20.00000	Averaged	ccc
58 1,2-Diphenylhydrazine	0.67266	0.70527	0.70527	0.000	4.84845	60.00000	Averaged	
61 4-Bromophenylphenylether	0.17305	0.17270	0.17270	0.000	-0.20251	60.00000	Averaged	
63 Hexachlorobenzene	0.18286	0.18012	0.18012	0.000	-1.49843	60.00000	Averaged	
65 Pentachlorophenol	0.10942	0.11892	0.11892	0.001	8.68470	20.00000	Averaged	ccc
206 n-Octadecane	0.53677	0.54324	0.54324	0.000	1.20503	60.00000	Averaged	
68 Phenanthrene	0.88975	0.85790	0.85790	0.000	-3.57959	60.00000	Averaged	
69 Anthracene	0.89272	0.89781	0.89781	0.000	0.56971	60.00000	Averaged	
72 Di-n-butylphthalate	0.99025	1.02820	1.02820	0.000	3.83261	60.00000	Averaged	
76 Fluoranthene	0.89748	0.92468	0.92468	0.001	3.03116	20.00000	Averaged	ccc
79 Pyrene	0.99649	0.96249	0.96249	0.000	-3.41158	60.00000	Averaged	
85 Butylbenzylphthalate	0.46624	0.47820	0.47820	0.000	2.56535	60.00000	Averaged	
89 Benzo(a)anthracene	0.95971	0.94279	0.94279	0.000	-1.76323	60.00000	Averaged	
92 Chrysene	0.91745	0.89686	0.89686	0.000	-2.24414	60.00000	Averaged	
93 bis(2-Ethylhexyl)phthalate	0.61977	0.63489	0.63489	0.000	2.43875	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:11
Lab File ID: s6f2525.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
94	Di-n-octylphthalate	1.15298	1.14240	1.14240	0.001	-0.91773	20.00000	Averaged	ccc
95	Benzo(b)fluoranthene	0.95265	0.91362	0.91362	0.000	-4.09634	60.00000	Averaged	
96	Benzo(k)fluoranthene	0.94372	0.94646	0.94646	0.000	0.28993	60.00000	Averaged	
97	Benzo(a)pyrene	0.82425	0.86191	0.86191	0.001	4.56914	20.00000	Averaged	ccc
99	Indeno(1,2,3-cd)pyrene	0.78267	0.80771	0.80771	0.000	3.19938	60.00000	Averaged	
100	Dibenzo(a,h)anthracene	41.39676	40.00000	0.67553	0.000	3.49191	60.00000	Linear	
101	Benzo(ghi)perylene	0.69055	0.71790	0.71790	0.000	3.96077	60.00000	Averaged	
126	m-Dinitrobenzene	0.18444	0.19364	0.19364	0.000	4.98399	60.00000	Averaged	
130	2,3,4,6-Tetrachlorophenol	0.30233	0.28586	0.28586	0.000	-5.44729	60.00000	Averaged	
143	Dinoseb	39.55810	40.00000	0.15407	0.000	-1.10476	60.00000	Linear	
173	Carbazole	0.73178	0.86805	0.86805	0.000	18.62108	60.00000	Averaged	
184	p-Benzoquinone	0.18162	0.15622	0.15622	0.000	-13.98438	60.00000	Averaged	
192	Methoxychlor	0.54804	0.60208	0.60208	0.000	9.86094	60.00000	Averaged	
211	p-Toluidine	1.13033	1.01568	1.01568	0.000	-10.14264	60.00000	Averaged	
210	m-Toluidine	1.62748	1.75274	1.75274	0.000	7.69678	60.00000	Averaged	
26	Phthalic anhydride	48.38615	40.00000	0.17367	0.000	20.96537	60.00000	Linear	
179	Dibenzo(a,e)pyrene	25.73629	40.00000	0.26466	0.000	-35.65928	60.00000	Linear	
214	1,4-Dinitrobenzene	0.24737	0.26229	0.26229	0.000	6.03366	60.00000	Averaged	
215	2-Ethoxyethanol	0.87382	0.93917	0.93917	0.000	7.47790	60.00000	Averaged	
216	Methylenebis(2-chloroanilin	0.14973	0.16493	0.16493	0.000	10.14881	60.00000	Averaged	
M 225	Trichlorophenols	0.33135	0.34498	0.34498	0.000	4.11443	60.00000	Averaged	
M 226	Tetrachlorophenols	0.30233	0.28586	0.28586	0.000	-5.44729	60.00000	Averaged	
M 227	Benzo(b,k)fluoranthene	0.94818	0.93004	0.93004	0.000	-1.91352	60.00000	Averaged	

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Data file : /chem/MSD6.i/s062509.b/s6f2525.d
Lab Smp Id: WBN090602-09.1 Client Smp ID: MEGAICV
Inj Date : 26-JUN-2009 03:11
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090602-09.1|40 PPM|1|SVM|1|MEGAICV
Misc Info : |MSD8270|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m
Meth Date : 26-Jun-2009 14:49 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 02:48 Cal File: s6f2524.d
Als bottle: 25 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGA.sub
Target Version: 3.50
Processing Host: hpclpl

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.087	4.087	(1.000)	354067	40.0000	
* 29 Naphthalene-d8	136	4.957	4.957	(1.000)	1383449	40.0000	
* 46 Acenaphthene-d10	164	6.228	6.228	(1.000)	765412	40.0000	
* 67 Phenanthrene-d10	188	7.422	7.422	(1.000)	1322524	40.0000	
* 91 Chrysene-d12	240	9.875	9.875	(1.000)	1289318	40.0000	
* 98 Perylene-d12	264	11.698	11.698	(1.000)	1228266	40.0000	
$ 3 2-Fluorophenol	112	3.251	3.251	(0.796)	398350	40.0000	41.4
$ 5 Phenol-d5	99	3.787	3.787	(0.927)	509259	40.0000	39.5
$ 20 Nitrobenzene-d5	82	4.451	4.451	(0.898)	520376	40.0000	42.4
$ 39 2-Fluorobiphenyl	172	5.704	5.704	(0.916)	802365	40.0000	41.3
$ 60 2,4,6-Tribromophenol	329	6.834	6.834	(1.097)	112977	40.0000	39.9
$ 81 p-Terphenyl-d14	244	8.810	8.810	(0.892)	882648	40.0000	42.9
1 N-Methyl-N-nitrosomethylamine	74	2.540	2.540	(0.621)	264746	40.0000	44.4
2 Pyridine	79	2.581	2.581	(0.632)	348391	40.0000	40.4
4 Aniline	66	3.863	3.863	(0.945)	229829	40.0000	40.0
6 Phenol	94	3.798	3.798	(0.929)	508392	40.0000	39.8(Q)
7 bis(2-Chloroethyl) ether	63	3.875	3.875	(0.948)	395815	40.0000	39.9
8 2-Chlorophenol	128	3.946	3.946	(0.965)	400461	40.0000	40.5
203 n-Decane	43	3.928	3.928	(0.961)	610847	40.0000	38.6
9 1,3-Dichlorobenzene	146	4.051	4.051	(0.991)	462325	40.0000	41.2
11 1,4-Dichlorobenzene	146	4.098	4.098	(1.003)	439517	40.0000	40.3
13 1,2-Dichlorobenzene	146	4.204	4.204	(1.029)	389615	40.0000	39.1
14 bis(2-Chloroisopropyl)ether	45	4.228	4.228	(1.035)	947227	40.0000	43.3
12 Benzyl alcohol	108	4.145	4.145	(1.014)	281979	40.0000	41.4
15 o-Cresol	107	4.193	4.193	(1.026)	284406	40.0000	37.7
18 m,p-Cresols	107	4.298	4.298	(1.052)	429488	40.0000	40.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.322	4.322	(1.058)	316033	40.0000	42.0
19 Hexachloroethane	117	4.434	4.434	(1.085)	178259	40.0000	40.7
21 Nitrobenzene	77	4.463	4.463	(0.900)	514553	40.0000	46.1
22 Isophorone	82	4.616	4.616	(0.931)	946851	40.0000	45.1
23 2-Nitrophenol	139	4.681	4.681	(0.944)	208674	40.0000	43.6
24 2,4-Dimethylphenol	122	4.663	4.663	(0.941)	657926	40.0000	46.2
25 bis(2-Chloroethoxy)methane	93	4.734	4.734	(0.955)	483889	40.0000	41.3
26 2,4-Dichlorophenol	162	4.840	4.840	(0.976)	344759	40.0000	42.6
27 Benzoic acid	105	4.722	4.722	(0.953)	372552	40.0000	49.4
28 1,2,4-Trichlorobenzene	180	4.904	4.904	(0.989)	367210	40.0000	40.0
30 Naphthalene	128	4.975	4.975	(1.004)	1104913	40.0000	35.3(Q)
204 alpha-Terpineol	59	4.945	4.945	(0.998)	413141	40.0000	40.6
31 4-Chloroaniline	127	4.987	4.987	(1.006)	556582	40.0000	42.4
32 Hexachlorobutadiene	225	5.040	5.040	(1.017)	223939	40.0000	40.3
33 4-Chloro-3-methylphenol	107	5.292	5.292	(1.068)	368422	40.0000	42.5
34 2-Methylnaphthalene	142	5.457	5.457	(1.101)	742112	40.0000	43.8
35 1-Methylnaphthalene	142	5.534	5.534	(1.116)	687710	40.0000	37.2
36 Hexachlorocyclopentadiene	237	5.563	5.563	(0.893)	171510	40.0000	43.2
205 2,3-Dichloroaniline	161	5.651	5.651	(0.907)	393048	40.0000	40.9
37 2,4,6-Trichlorophenol	196	5.645	5.645	(0.906)	248901	40.0000	40.3
38 2,4,5-Trichlorophenol	196	5.669	5.669	(0.910)	279210	40.0000	42.9
40 2-Chloronaphthalene	162	5.816	5.816	(0.934)	736248	40.0000	40.8
42 o-Nitroaniline	65	5.869	5.869	(0.942)	287920	40.0000	41.4
41 m-Nitroaniline	138	6.169	6.169	(0.991)	196814	40.0000	44.0
43 Dimethylphthalate	163	5.975	5.975	(0.959)	830243	40.0000	40.3
44 2,6-Dinitrotoluene	165	6.034	6.034	(0.969)	213643	40.0000	43.6
50 2,4-Dinitrotoluene	165	6.334	6.334	(1.017)	293377	40.0000	44.9
45 Acenaphthylene	152	6.128	6.128	(0.984)	1128481	40.0000	40.7
47 Acenaphthene	154	6.251	6.251	(1.004)	663132	40.0000	37.9
48 2,4-Dinitrophenol	184	6.239	6.239	(1.002)	89613	40.0000	39.7
49 Dibenzofuran	168	6.381	6.381	(1.025)	987984	40.0000	41.1
51 Diethylphthalate	149	6.492	6.492	(1.042)	821249	40.0000	40.1
52 4-Nitrophenol	139	6.251	6.251	(1.004)	137997	40.0000	41.8
53 Fluorene	166	6.645	6.645	(1.067)	781431	40.0000	38.7
54 4-Chlorophenylphenylether	204	6.616	6.616	(1.062)	403058	40.0000	41.0
55 2-Methyl-4,6-dinitrophenol	198	6.657	6.657	(0.897)	174281	40.0000	51.2
56 p-Nitroaniline	138	6.639	6.639	(1.066)	178536	40.0000	45.6
133 Diphenylamine	169	6.704	6.704	(0.903)	678665	40.0000	41.2
58 1,2-Diphenylhydrazine	77	6.745	6.745	(0.909)	932740	40.0000	41.9
61 4-Bromophenylphenylether	248	7.010	7.010	(0.945)	228404	40.0000	39.9
63 Hexachlorobenzene	284	7.086	7.086	(0.955)	238209	40.0000	39.4
65 Pentachlorophenol	266	7.234	7.234	(0.975)	157280	40.0000	43.5
206 n-Octadecane	57	7.216	7.216	(0.972)	718448	40.0000	40.5
68 Phenanthrene	178	7.439	7.439	(1.002)	1134592	40.0000	38.6
69 Anthracene	178	7.486	7.486	(1.009)	1187369	40.0000	40.2
72 Di-n-butylphthalate	149	7.833	7.833	(1.055)	1359822	40.0000	41.5
76 Fluoranthene	202	8.498	8.498	(1.145)	1222916	40.0000	41.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
79 Pyrene	202	8.716	8.716	(0.883)	1240958	40.0000	38.6
85 Butylbenzylphthalate	149	9.245	9.245	(0.936)	616547	40.0000	41.0
89 Benzo(a)anthracene	228	9.857	9.857	(0.998)	1215558	40.0000	39.3
92 Chrysene	228	9.898	9.898	(1.002)	1156333	40.0000	39.1
93 bis(2-Ethylhexyl)phthalate	149	9.775	9.775	(0.990)	818569	40.0000	41.0
94 Di-n-octylphthalate	149	10.474	10.474	(0.895)	1403169	40.0000	39.6
95 Benzo(b)fluoranthene	252	11.127	11.127	(0.951)	1122171	40.0000	38.4(H)
96 Benzo(k)fluoranthene	252	11.169	11.169	(0.955)	1162499	40.0000	40.1
97 Benzo(a)pyrene	252	11.610	11.610	(0.992)	1058650	40.0000	41.8
99 Indeno(1,2,3-cd)pyrene	276	13.657	13.657	(1.167)	992079	40.0000	41.3
100 Dibenzo(a,h)anthracene	278	13.674	13.674	(1.169)	829731	40.0000	41.4
101 Benzo(ghi)perylene	276	14.257	14.257	(1.219)	881777	40.0000	41.6
126 m-Dinitrobenzene	168	6.016	6.016	(0.966)	148211	40.0000	42.0
130 2,3,4,6-Tetrachlorophenol	232	6.457	6.457	(1.037)	218802	40.0000	37.8
143 Dinoseb	211	7.357	7.357	(0.991)	203767	40.0000	39.6
173 Carbazole	167	7.598	7.598	(1.024)	1148011	40.0000	47.4
184 p-Benzoquinone	54	3.557	3.557	(0.870)	55314	40.0000	34.4
192 Methoxychlor	227	9.727	9.727	(0.985)	776273	40.0000	43.9
211 p-Toluidine	106	4.363	4.363	(1.068)	359620	40.0000	35.9(H)
210 m-Toluidine	106	4.381	4.381	(1.072)	620587	40.0000	43.1
26 Phthalic anhydride	104	5.492	5.492	(1.108)	240268	40.0000	48.4
179 Dibenzo(a,e)pyrene	302	18.845	18.845	(1.611)	325067	40.0000	25.7
214 1,4-Dinitrobenzene	75	5.957	5.957	(0.957)	200762	40.0000	42.4
215 2-Ethoxyethanol	59	2.381	2.381	(0.583)	332528	40.0000	43.0
216 Methylenebis(2-chloroaniline)	231	9.792	9.792	(0.992)	212648	40.0000	44.0(Q)
M 225 Trichlorophenols	196				528111	80.0000	83.3
M 226 Tetrachlorophenols	232				218802	40.0000	37.8
M 227 Benzo(b,k)fluoranthene	252				2284670	80.0000	78.5

QC Flag Legend

Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: /chem/MSD6.i/s062509.b/s6f2525.d
Date : 26-JUN-2009 03:11
Client ID: MEGAICV
Sample Info: IWBK090602-09,1140 PPM11ISWM11MEGAICV

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

Column phase: J&W DB-5MS

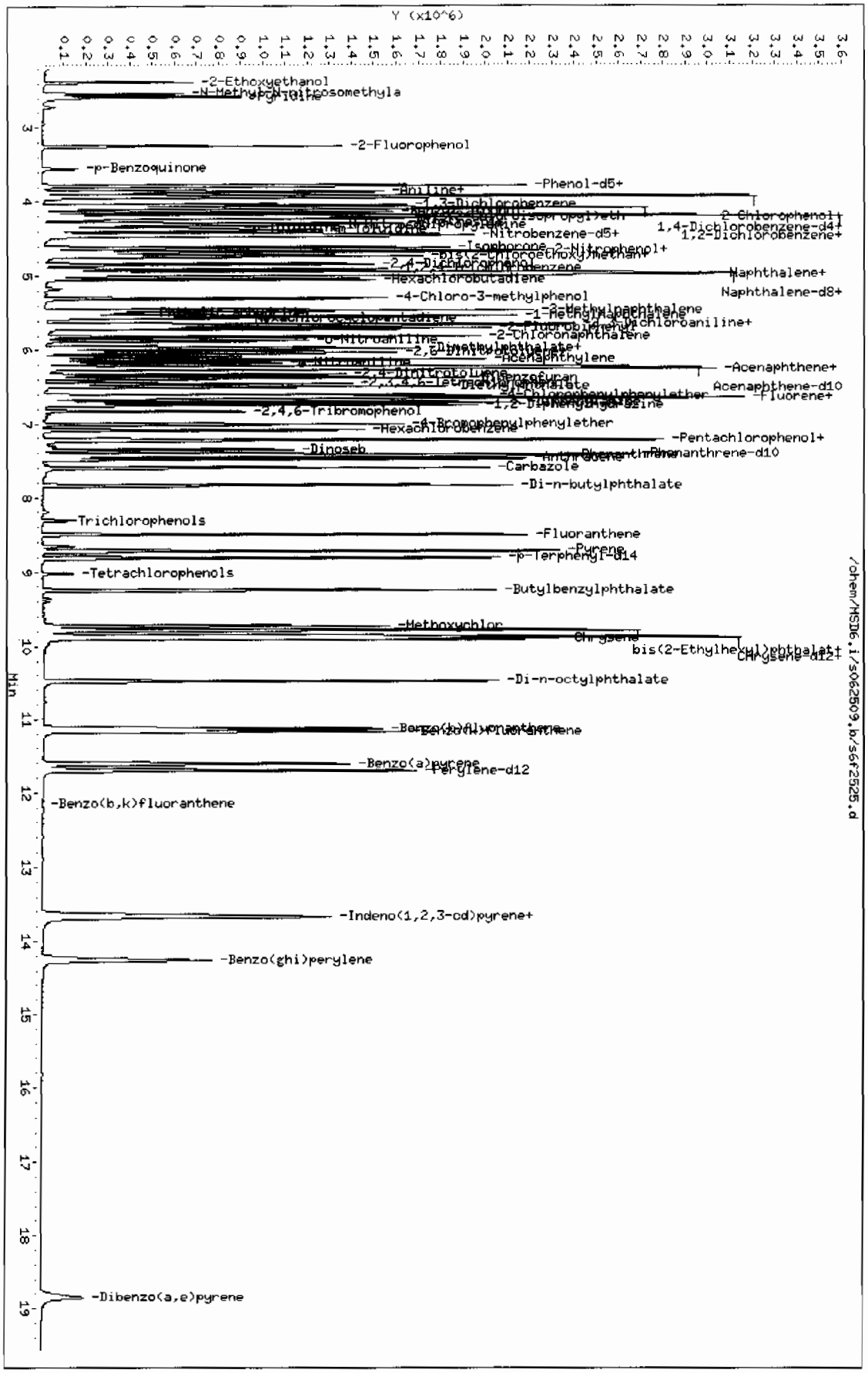

Column phase: J&W DB-5MS

Page 1

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:39
Lab File ID: s6f2526.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090528-08.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.97573	0.85474	0.85474	0.000	-12.39909	60.00000	Averaged
16 Acetophenone	1.26337	1.26773	1.26773	0.000	0.34482	60.00000	Averaged
189 Caprolactam	0.09432	0.09882	0.09882	0.000	4.78143	60.00000	Averaged
208 1,1'-Biphenyl	1.13640	1.15541	1.15541	0.000	1.67248	60.00000	Averaged
207 Atrazine	0.04266	0.04589	0.04589	0.000	7.56664	60.00000	Averaged
77 Benzidine	0.36104	0.32162	0.32162	0.000	-10.91903	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.30024	0.32436	0.32436	0.000	8.03186	60.00000	Averaged
102 1,4-Dioxane	0.39975	0.51116	0.51116	0.000	27.86716	60.00000	Averaged
103 Methyl methacrylate	0.20683	0.26052	0.26052	0.000	25.95766	60.00000	Averaged
104 Ethyl methacrylate	0.87106	1.06719	1.06719	0.000	22.51586	60.00000	Averaged
105 2-Picoline	1.35671	1.40000	1.40000	0.000	3.19115	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.56293	0.57743	0.57743	0.000	2.57564	60.00000	Averaged
107 Methyl methanesulfonate	0.61309	0.63913	0.63913	0.000	4.24822	60.00000	Averaged
108 N-Nitrosodiethylamine	0.53166	0.53602	0.53602	0.000	0.81888	60.00000	Averaged
109 Ethyl Methanesulfonate	0.74019	0.88027	0.88027	0.000	18.92575	60.00000	Averaged
110 Pentachloroethane	0.33280	0.45452	0.45452	0.000	36.57239	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.55735	0.55511	0.55511	0.000	-0.40075	60.00000	Averaged
113 N-Nitrosomorpholine	0.86727	0.88353	0.88353	0.000	1.87499	60.00000	Averaged
114 o-Toluidine	1.83427	1.88300	1.88300	0.000	2.65656	60.00000	Averaged
115 N-Nitrosopiperidine	0.15500	0.15559	0.15559	0.000	0.38169	60.00000	Averaged
116 a,a-Dimethylphenethylamine	1.10408	1.17215	1.17215	0.000	6.16470	60.00000	Averaged
118 2,6-Dichlorophenol	0.24042	0.24211	0.24211	0.000	0.70381	60.00000	Averaged
119 Hexachloropropene	0.12501	0.18290	0.18290	0.000	46.31422	60.00000	Averaged
120 p-Phenylenediamine	0.26729	0.28686	0.28686	0.000	7.32163	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	39.88942	40.00000	0.23719	0.000	-0.27646	60.00000	Linear
122 Safrole	0.20783	0.24376	0.24376	0.000	17.29032	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.43759	0.46722	0.46722	0.000	6.77091	60.00000	Averaged
124 Isosafrole	0.36281	0.47792	0.47792	0.000	31.72494	60.00000	Averaged
125 1,4-Naphthoquinone	0.35063	0.35471	0.35471	0.000	1.16483	60.00000	Averaged
127 Pentachlorobenzene	0.38763	0.40301	0.40301	0.000	3.96753	60.00000	Averaged
128 1-Naphthylamine	0.89054	0.93465	0.93465	0.000	4.95356	60.00000	Averaged
129 2-Naphthylamine	0.97412	0.97382	0.97382	0.000	-0.03014	60.00000	Averaged
131 5-Nitro-o-toluidine	0.30362	0.31239	0.31239	0.000	2.88681	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.14108	0.18201	0.18201	0.000	29.01178	60.00000	Averaged
137 Phenacetin	0.29473	0.31290	0.31290	0.000	6.16301	60.00000	Averaged
138 Diallate	0.25260	0.25908	0.25908	0.000	2.56483	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 26-JUN-2009 03:39
Lab File ID: s6f2526.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 02:48
Lab Sample ID: WBN090528-08.1 Quant Type: ISTD
Method: /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
140 4-Aminobiphenyl	0.56927	0.63568	0.63568	0.000	11.66505	60.00000	Averaged
141 Pentachloronitrobenzene	0.07491	0.07940	0.07940	0.000	5.98449	60.00000	Averaged
142 Pronamide	0.24710	0.26338	0.26338	0.000	6.59100	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.02496	0.03127	0.03127	0.000	25.30185	60.00000	Averaged
147 Methapyrilene	0.60851	0.60510	0.60510	0.000	-0.55987	60.00000	Averaged
148 Isodrin	0.10457	0.10307	0.10307	0.000	-1.42951	60.00000	Averaged
149 Aramite	0.05203	0.04863	0.04863	0.000	-6.54350	60.00000	Averaged
150 Kepone	0.07915	0.08086	0.08086	0.000	2.16027	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28775	0.29792	0.29792	0.000	3.53436	60.00000	Averaged
152 Chlorobenzilate	0.27158	0.28026	0.28026	0.000	3.19449	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.52592	0.54011	0.54011	0.000	2.69836	60.00000	Averaged
155 2-Acetylaminofluorene	0.33797	0.36567	0.36567	0.000	8.19644	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.46186	0.43514	0.43514	0.000	-5.78438	60.00000	Averaged
158 3-Methylcholanthrene	0.41975	0.42534	0.42534	0.000	1.33299	60.00000	Averaged
212 Cis Diallate	0.28854	0.31803	0.31803	0.000	10.21791	60.00000	Averaged
213 Trans Diallate	0.29717	0.30480	0.30480	0.000	2.56483	60.00000	Averaged

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Data file : /chem/MSD6.i/s062509.b/s6f2526.d
Lab Smp Id: WBN090528-08.1 Client Smp ID: APICV
Inj Date : 26-JUN-2009 03:39
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090528-08.1|40 PPM|1|SVM|1|APICV
Misc Info : |MSD8270|WBN090617-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s062509.b/MSD6-M8270C-AQA-062509.m
Meth Date : 26-Jun-2009 14:49 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 02:48 Cal File: s6f2524.d
Als bottle: 26 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.081	4.081	(1.000)	304698	40.0000	
* 29 Naphthalene-d8	136	4.957	4.957	(1.000)	1096680	40.0000	
* 46 Acenaphthene-d10	164	6.222	6.222	(1.000)	642057	40.0000	
* 67 Phenanthrene-d10	188	7.416	7.416	(1.000)	1121204	40.0000	
* 91 Chrysene-d12	240	9.863	9.863	(1.000)	1119311	40.0000	
* 98 Perylene-d12	264	11.686	11.686	(1.000)	997466	40.0000	
209 Benzaldehyde	77	3.805	3.805	(0.932)	260439	40.0000	35.0
16 Acetophenone	105	4.334	4.334	(1.062)	386274	40.0000	40.1
189 Caprolactam	113	5.228	5.228	(1.055)	108379	40.0000	41.9
208 1,1'-Biphenyl	154	5.781	5.781	(0.929)	741838	40.0000	40.7
207 Atrazine	173	7.104	7.104	(0.958)	51448	40.0000	43.0
77 Benzidine	184	8.581	8.581	(0.870)	359991	40.0000	35.6
90 3,3'-Dichlorobenzidine	252	9.792	9.792	(0.993)	363058	40.0000	43.2
102 1,4-Dioxane	88	2.381	2.381	(0.583)	155748	40.0000	51.1
103 Methyl methacrylate	100	2.375	2.375	(0.582)	79380	40.0000	50.4
104 Ethyl methacrylate	69	2.758	2.758	(0.676)	325170	40.0000	49.0
105 2-Picoline	93	2.958	2.958	(0.725)	426578	40.0000	41.3
106 N-Nitrosomethylethylamine	88	2.999	2.999	(0.735)	175941	40.0000	41.0
107 Methyl methanesulfonate	80	3.158	3.158	(0.774)	194743	40.0000	41.7
108 N-Nitrosodiethylamine	102	3.399	3.399	(0.833)	163323	40.0000	40.3
109 Ethyl Methanesulfonate	79	3.558	3.558	(0.872)	268218	40.0000	47.6
110 Pentachloroethane	167	3.905	3.905	(0.957)	138491	40.0000	54.6
111 N-Nitrosopyrrolidine	100	4.322	4.322	(1.059)	169142	40.0000	39.8(Q)
113 N-Nitrosomorpholine	56	4.340	4.340	(1.063)	269211	40.0000	40.7
114 o-Toluidine	106	4.357	4.357	(1.068)	573745	40.0000	41.1
115 N-Nitrosopiperidine	114	4.563	4.563	(0.920)	170631	40.0000	40.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.834	4.834	(0.975)	1285469	40.0000	42.5
118 2,6-Dichlorophenol	162	4.999	4.999	(1.008)	265518	40.0000	40.3
119 Hexachloropropene	213	5.028	5.028	(1.014)	200586	40.0000	58.5
120 p-Phenylenediamine	108	5.234	5.234	(1.056)	314590	40.0000	42.9
121 N-Nitrosodi-n-butylamine	84	5.199	5.199	(1.049)	260119	40.0000	39.9(T)
122 Safrole	162	5.369	5.369	(1.083)	267328	40.0000	46.9
123 1,2,4,5-Tetrachlorobenzene	216	5.575	5.575	(0.896)	299983	40.0000	42.7
124 Isosafrole	162	5.740	5.740	(0.922)	306850	40.0000	52.7
125 1,4-Naphthoquinone	158	5.928	5.928	(0.953)	227745	40.0000	40.5
127 Pentachlorobenzene	250	6.340	6.340	(1.019)	258754	40.0000	41.6
128 1-Naphthylamine	143	6.434	6.434	(1.034)	600100	40.0000	42.0
129 2-Naphthylamine	143	6.487	6.487	(1.043)	625251	40.0000	40.0
131 5-Nitro-o-toluidine	152	6.628	6.628	(1.065)	200571	40.0000	41.7
136 1,3,5-Trinitrobenzene	75	6.875	6.875	(0.927)	204074	40.0000	51.6
137 Phenacetin	108	6.922	6.922	(0.933)	350821	40.0000	42.5(Q)
138 Diallate	86	6.916	6.916	(0.933)	290478	40.0000	41.0
140 4-Aminobiphenyl	169	7.222	7.222	(0.974)	712723	40.0000	44.7
141 Pentachloronitrobenzene	237	7.246	7.246	(0.977)	89021	40.0000	42.4(Q)
142 Pronamide	173	7.234	7.234	(0.975)	295305	40.0000	42.6
146 4-Nitroquinoline-1-oxide	101	8.093	8.093	(1.091)	35063	40.0000	50.1
147 Methapyrilene	58	8.128	8.128	(1.096)	678443	40.0000	39.8
148 Isodrin	193	8.363	8.363	(1.128)	115566	40.0000	39.4
149 Aramite	185	8.751	8.751	(1.180)	54521	40.0000	37.4
150 Kepone	272	9.363	9.363	(1.263)	90661	40.0000	40.9
151 p-(Dimethylamino)azobenzene	120	8.940	8.940	(0.906)	333470	40.0000	41.4
152 Chlorobenzilate	251	8.969	8.969	(0.909)	313695	40.0000	41.3
153 3,3'-Dimethylbenzidine	212	9.257	9.257	(0.939)	604549	40.0000	41.1
155 2-Acetylaminofluorene	181	9.504	9.504	(0.964)	409299	40.0000	43.3
157 7,12Dimethylbenz(a)anthracene	256	11.092	11.092	(0.949)	434041	40.0000	37.7
158 3-Methylcholanthrene	268	12.139	12.139	(1.039)	424263	40.0000	40.5(Q)
212 Cis Diallate	86	6.993	6.993	(0.943)	53486	6.00000	6.6
213 Trans Diallate	86	6.916	6.916	(0.933)	290478	34.0000	34.9

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD6.i/s062509.b/s6f2526.d
Date : 26-JUN-2009 03:39
Client ID: APICV
Sample Info: IWBN090528-08,1|40 PPM|1|SWM|1|APICV
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JMB3
Column diameter: 0.20

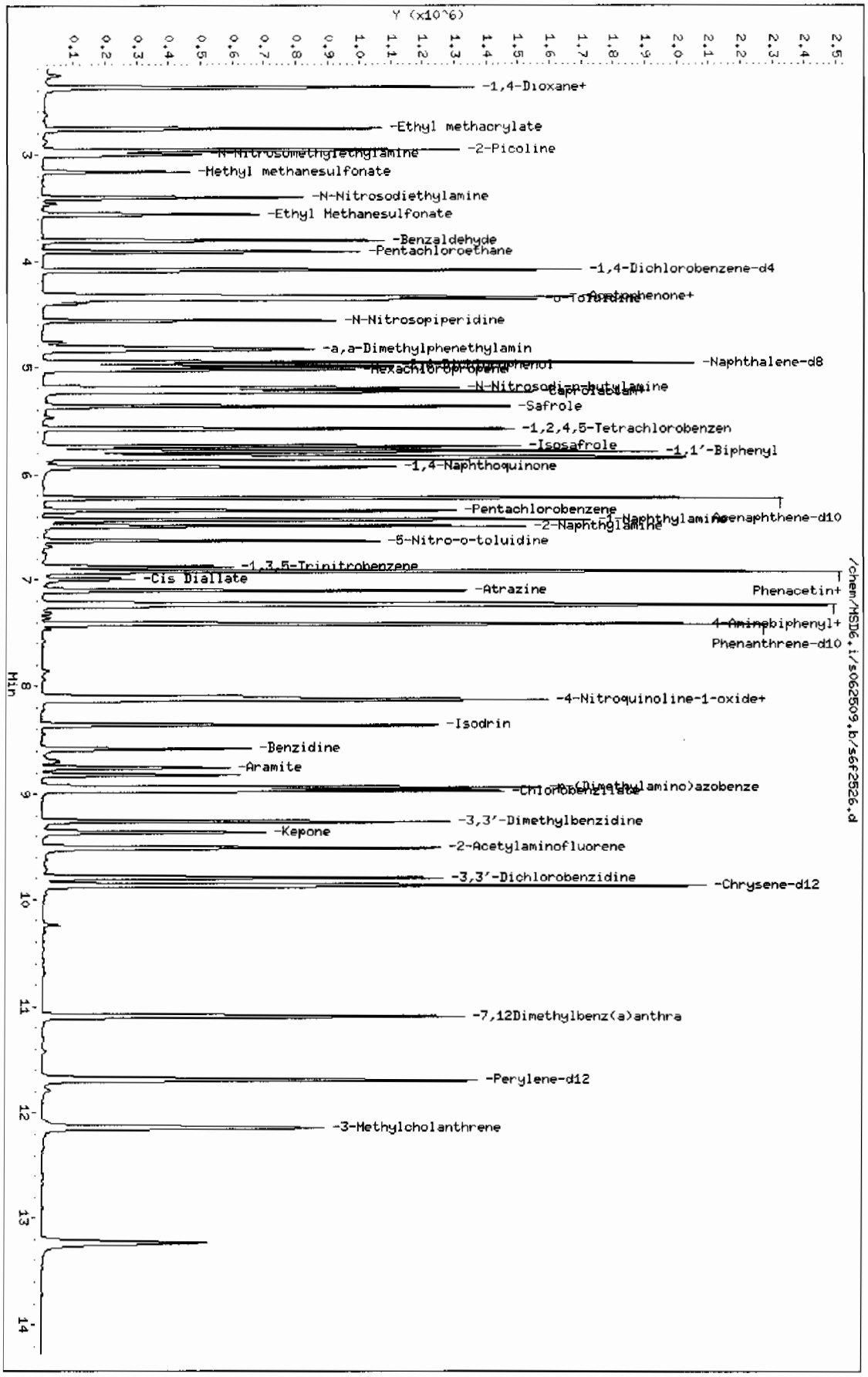

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:23
Lab File ID: s6g0206.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
|$	3 2-Fluorophenol	1.08676	1.12831	1.12831	0.000	3.82353	60.00000	Averaged	
|$	5 Phenol-d5	1.45582	1.49227	1.49227	0.000	2.50400	60.00000	Averaged	
|$	20 Nitrobenzene-d5	0.35436	0.39407	0.39407	0.000	11.20643	60.00000	Averaged	
|$	39 2-Fluorobiphenyl	1.01592	1.04471	1.04471	0.000	2.83333	60.00000	Averaged	
|$	60 2,4,6-Tribromophenol	0.14788	0.13810	0.13810	0.000	-6.60896	60.00000	Averaged	
|$	81 p-Terphenyl-d14	0.63880	0.66247	0.66247	0.000	3.70482	60.00000	Averaged	
|	1 N-Methyl-N-nitrosomethylami	0.67425	0.73310	0.73310	0.000	8.72858	60.00000	Averaged	
|	2 Pyridine	0.97491	1.02832	1.02832	0.000	5.47813	60.00000	Averaged	
|	4 Aniline	0.64934	0.70312	0.70312	0.000	8.28216	60.00000	Averaged	
|	6 Phenol	1.44200	1.40711	1.40711	0.001	-2.41942	20.00000	Averaged	ccc
|	7 bis(2-Chloroethyl) ether	1.12091	1.17938	1.17938	0.000	5.21677	60.00000	Averaged	
|	8 2-Chlorophenol	1.11681	1.13042	1.13042	0.000	1.21929	60.00000	Averaged	
|	203 n-Decane	1.78602	1.91923	1.91923	0.000	7.45900	60.00000	Averaged	
|	9 1,3-Dichlorobenzene	1.26663	1.29412	1.29412	0.000	2.17103	60.00000	Averaged	
|	11 1,4-Dichlorobenzene	1.23080	1.24722	1.24722	0.001	1.33431	20.00000	Averaged	ccc
|	13 1,2-Dichlorobenzene	1.12537	1.12714	1.12714	0.000	0.15733	60.00000	Averaged	
|	14 bis(2-Chloroisopropyl)ether	2.47134	2.82765	2.82765	0.000	14.41807	60.00000	Averaged	
|	12 Benzyl alcohol	0.76891	0.63216	0.63216	0.000	-17.78510	60.00000	Averaged	
|	15 o-Cresol	0.85308	0.83588	0.83588	0.000	-2.01656	60.00000	Averaged	
|	18 m,p-Cresols	1.19930	1.15750	1.15750	0.000	-3.48553	60.00000	Averaged	
|	17 N-Nitrosodipropylamine	0.85085	0.90475	0.90475	0.050	6.33522	60.00000	Averaged	spcc
|	19 Hexachloroethane	0.49505	0.51342	0.51342	0.000	3.70932	60.00000	Averaged	
|	21 Nitrobenzene	0.32264	0.36425	0.36425	0.000	12.89478	60.00000	Averaged	
|	22 Isophorone	0.60747	0.66831	0.66831	0.000	10.01587	60.00000	Averaged	
|	23 2-Nitrophenol	0.13851	0.15527	0.15527	0.001	12.09447	20.00000	Averaged	ccc
|	24 2,4-Dimethylphenol	0.41146	0.44124	0.44124	0.000	7.23886	60.00000	Averaged	
|	25 bis(2-Chloroethoxy)methane	0.33882	0.36971	0.36971	0.000	9.11544	60.00000	Averaged	
|	26 2,4-Dichlorophenol	0.23380	0.25904	0.25904	0.001	10.79542	20.00000	Averaged	ccc
|	27 Benzoic acid	0.21793	0.19751	0.19751	0.000	-9.37180	60.00000	Averaged	
|	28 1,2,4-Trichlorobenzene	0.26511	0.28363	0.28363	0.000	6.98256	60.00000	Averaged	
|	30 Naphthalene	0.90387	0.82015	0.82015	0.000	-9.26165	60.00000	Averaged	
|	204 alpha-Terpineol	0.29387	0.31444	0.31444	0.000	7.00079	60.00000	Averaged	
|	31 4-Chloroaniline	0.37979	0.41570	0.41570	0.000	9.45722	60.00000	Averaged	
|	32 Hexachlorobutadiene	0.16053	0.17089	0.17089	0.001	6.45345	20.00000	Averaged	ccc
|	33 4-Chloro-3-methylphenol	0.25080	0.27325	0.27325	0.001	8.95121	20.00000	Averaged	ccc
|	34 2-Methylnaphthalene	0.48988	0.50965	0.50965	0.000	4.03536	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:23
Lab File ID: s6g0206.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35	1-Methylnaphthalene	0.53368	0.52183	0.52183	0.000	-2.22170	60.00000	Averaged
36	Hexachlorocyclopentadiene	0.20750	0.23431	0.23431	0.050	12.92275	60.00000	Averaged spec
205	2,3-Dichloroaniline	0.50238	0.51906	0.51906	0.000	3.32134	60.00000	Averaged
37	2,4,6-Trichlorophenol	0.32270	0.32113	0.32113	0.001	-0.48691	20.00000	Averaged ccc
38	2,4,5-Trichlorophenol	0.34000	0.35213	0.35213	0.000	3.56705	60.00000	Averaged
40	2-Chloronaphthalene	0.94346	0.97660	0.97660	0.000	3.51231	60.00000	Averaged
42	o-Nitroaniline	0.36358	0.40457	0.40457	0.000	11.27602	60.00000	Averaged
41	m-Nitroaniline	0.23385	0.26672	0.26672	0.000	14.05402	60.00000	Averaged
43	Dimethylphthalate	1.07582	1.11310	1.11310	0.000	3.46535	60.00000	Averaged
44	2,6-Dinitrotoluene	0.25592	0.27155	0.27155	0.000	6.10537	60.00000	Averaged
50	2,4-Dinitrotoluene	0.34150	0.36231	0.36231	0.000	6.09442	60.00000	Averaged
45	Acenaphthylene	1.44935	1.50434	1.50434	0.000	3.79414	60.00000	Averaged
47	Acenaphthene	0.91388	0.92113	0.92113	0.001	0.79367	20.00000	Averaged ccc
48	2,4-Dinitrophenol	0.11804	0.11374	0.11374	0.050	-3.64134	60.00000	Averaged spec
49	Dibenzofuran	1.25504	1.31103	1.31103	0.000	4.46149	60.00000	Averaged
51	Diethylphthalate	1.06896	1.10009	1.10009	0.000	2.91189	60.00000	Averaged
52	4-Nitrophenol	0.17244	0.19304	0.19304	0.050	11.94824	60.00000	Averaged spec
53	Fluorene	1.05447	1.05139	1.05139	0.000	-0.29229	60.00000	Averaged
54	4-Chlorophenylphenylether	0.51415	0.53477	0.53477	0.000	4.00901	60.00000	Averaged
55	2-Methyl-4,6-dinitrophenol	42.29887	40.00000	0.10751	0.000	5.74716	60.00000	Linear
56	p-Nitroaniline	0.20474	0.24991	0.24991	0.000	22.06351	60.00000	Averaged
133	Diphenylamine	0.49779	0.53755	0.53755	0.001	7.98719	20.00000	Averaged ccc
58	1,2-Diphenylhydrazine	0.67266	0.74729	0.74729	0.000	11.09423	60.00000	Averaged
61	4-Bromophenylphenylether	0.17305	0.18267	0.18267	0.000	5.55959	60.00000	Averaged
63	Hexachlorobenzene	0.18286	0.19234	0.19234	0.000	5.18591	60.00000	Averaged
65	Pentachlorophenol	0.10942	0.10683	0.10683	0.001	-2.37139	20.00000	Averaged ccc
206	n-Octadecane	0.53677	0.59933	0.59933	0.000	11.65511	60.00000	Averaged
68	Phenanthrene	0.88975	0.91089	0.91089	0.000	2.37649	60.00000	Averaged
69	Anthracene	0.89272	0.90931	0.90931	0.000	1.85866	60.00000	Averaged
72	Di-n-butylphthalate	0.99025	1.06352	1.06352	0.000	7.39958	60.00000	Averaged
76	Fluoranthene	0.89748	0.92407	0.92407	0.001	2.96243	20.00000	Averaged ccc
79	Pyrene	0.99649	1.02035	1.02035	0.000	2.39472	60.00000	Averaged
85	Butylbenzylphthalate	0.46624	0.50215	0.50215	0.000	7.70208	60.00000	Averaged
89	Benzo(a)anthracene	0.95971	0.99455	0.99455	0.000	3.63016	60.00000	Averaged
92	Chrysene	0.91745	0.92376	0.92376	0.000	0.68859	60.00000	Averaged
93	bis(2-Ethylhexyl)phthalate	0.61977	0.67699	0.67699	0.000	9.23263	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i Injection Date: 02-JUL-2009 15:23
Lab File ID: s6g0206.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: Init. Cal. Times: 18:09 09:39
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MTN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n octylphthalate	1.15298	1.28440	1.28440	0.001	11.39792	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.95265	1.03463	1.03463	0.000	8.60609	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.94372	0.94756	0.94756	0.000	0.40705	60.00000	Averaged	
	97 Benzo(a)pyrene	0.82425	0.87958	0.87958	0.001	6.71371	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78267	0.80601	0.80601	0.000	2.98287	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	39.72438	40.00000	0.64883	0.000	-0.68905	60.00000	Linear	
	101 Benzo(ghi)perylene	0.69055	0.67356	0.67356	0.000	-2.46054	60.00000	Averaged	
	126 m-Dinitrobenzene	0.18444	0.20039	0.20039	0.000	8.64357	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30233	0.32744	0.32744	0.000	8.30430	60.00000	Averaged	
	143 Dinoseb	42.21911	40.00000	0.16506	0.000	5.54778	60.00000	Linear	
	173 Carbazole	0.73178	0.87747	0.87747	0.000	19.90939	60.00000	Averaged	
	184 p-Benzoquinone	0.18162	0.15324	0.15324	0.000	-15.62694	60.00000	Averaged	
	192 Methoxychlor	0.54804	0.58810	0.58810	0.000	7.31014	60.00000	Averaged	
	211 p-Toluidine	1.13033	1.07232	1.07232	0.000	-5.13235	60.00000	Averaged	
	210 m-Toluidine	1.62748	1.68076	1.68076	0.000	3.27396	60.00000	Averaged	
	26 Phthalic anhydride	29.77353	40.00000	0.10265	0.000	-25.56617	60.00000	Linear	
	214 1,4-Dinitrobenzene	0.24737	0.28015	0.28015	0.000	13.25405	60.00000	Averaged	
	215 2-Ethoxyethanol	0.87382	0.89123	0.89123	0.000	1.99160	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.14973	0.14106	0.14106	0.000	-5.79437	60.00000	Averaged	
M	225 Trichlorophenols	0.33135	0.33663	0.33663	0.000	1.59298	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30233	0.32744	0.32744	0.000	8.30430	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.94818	0.99110	0.99110	0.000	4.52587	60.00000	Averaged	

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Data file : /chem/MSD6.i/s070209.b/s6g0206.d
Lab Smp Id: WBN090626-05.3 Client Smp ID: MEGACVS
Inj Date : 02-JUL-2009 15:23
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090626-05.3|40 PPM|1|SVM|1|MEGACVS
Misc Info : |MSD8270|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 03-Jul-2009 09:01 jen00986 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGA.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.999	3.999	(1.000)	532813	40.0000	
* 29 Naphthalene-d8	136	4.875	4.875	(1.000)	1990426	40.0000	
* 46 Acenaphthene-d10	164	6.134	6.134	(1.000)	1102206	40.0000	
* 67 Phenanthrene-d10	188	7.316	7.316	(1.000)	1854401	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1763017	40.0000	
* 98 Perylene-d12	264	11.492	11.492	(1.000)	1624774	40.0000	
$ 3 2-Fluorophenol	112	3.175	3.175	(0.794)	601180	40.0000	41.5
$ 5 Phenol-d5	99	3.710	3.710	(0.928)	795101	40.0000	41.0
$ 20 Nitrobenzene-d5	82	4.363	4.363	(0.895)	784361	40.0000	44.5
$ 39 2-Fluorobiphenyl	172	5.616	5.616	(0.916)	1151481	40.0000	41.1
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.098)	152217	40.0000	37.4
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	1167945	40.0000	41.5
1 N-Methyl-N-nitrosomethylamine	74	2.469	2.469	(0.618)	390605	40.0000	43.5
2 Pyridine	79	2.505	2.505	(0.626)	547903	40.0000	42.2
4 Aniline	66	3.781	3.781	(0.946)	374634	40.0000	43.3
6 Phenol	94	3.722	3.722	(0.931)	749726	40.0000	39.0
7 bis(2-Chloroethyl) ether	63	3.799	3.799	(0.950)	628391	40.0000	42.1
8 2-Chlorophenol	128	3.863	3.863	(0.966)	602305	40.0000	40.5
203 n-Decane	43	3.846	3.846	(0.962)	1022593	40.0000	43.0
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.993)	689526	40.0000	40.9
11 1,4-Dichlorobenzene	146	4.010	4.010	(1.003)	664534	40.0000	40.5
13 1,2-Dichlorobenzene	146	4.116	4.116	(1.029)	600556	40.0000	40.1
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.035)	1506611	40.0000	45.8
12 Benzyl alcohol	108	4.069	4.069	(1.018)	336824	40.0000	32.9
15 o-Cresol	107	4.116	4.116	(1.029)	445366	40.0000	39.2
18 m,p-Cresols	107	4.222	4.222	(1.056)	616730	40.0000	38.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.240	4.240	(1.060)	482063	40.0000	42.5
19 Hexachloroethane	117	4.346	4.346	(1.087)	273555	40.0000	41.5
21 Nitrobenzene	77	4.381	4.381	(0.899)	725009	40.0000	45.2
22 Isophorone	82	4.534	4.534	(0.930)	1330220	40.0000	44.0
23 2-Nitrophenol	139	4.593	4.593	(0.942)	309044	40.0000	44.8
24 2,4-Dimethylphenol	122	4.599	4.599	(0.943)	878262	40.0000	42.9
25 bis(2-Chloroethoxy)methane	93	4.652	4.652	(0.954)	735874	40.0000	43.6
26 2,4-Dichlorophenol	162	4.763	4.763	(0.977)	515601	40.0000	44.3
27 Benzoic acid	105	4.640	4.640	(0.952)	393126	40.0000	36.2
28 1,2,4-Trichlorobenzene	180	4.822	4.822	(0.989)	564537	40.0000	42.8
30 Naphthalene	128	4.887	4.887	(1.002)	1632454	40.0000	36.3
204 alpha-Terpineol	59	4.863	4.863	(0.998)	625875	40.0000	42.8
31 4-Chloroaniline	127	4.899	4.899	(1.005)	827426	40.0000	43.8
32 Hexachlorobutadiene	225	4.951	4.951	(1.016)	340148	40.0000	42.6
33 4-Chloro-3-methylphenol	107	5.216	5.216	(1.070)	543875	40.0000	43.6
34 2-Methylnaphthalene	142	5.369	5.369	(1.101)	1014417	40.0000	41.6
35 1-Methylnaphthalene	142	5.446	5.446	(1.117)	1038657	40.0000	39.1
36 Hexachlorocyclopentadiene	237	5.475	5.475	(0.893)	258259	40.0000	45.2
205 2,3-Dichloroaniline	161	5.563	5.563	(0.907)	572113	40.0000	41.3
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.906)	353953	40.0000	39.8
38 2,4,5-Trichlorophenol	196	5.587	5.587	(0.911)	388118	40.0000	41.4
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	1076417	40.0000	41.4
42 o-Nitroaniline	65	5.781	5.781	(0.942)	445924	40.0000	44.5
41 m-Nitroaniline	138	6.081	6.081	(0.991)	293977	40.0000	45.6
43 Dimethylphthalate	163	5.887	5.887	(0.960)	1226862	40.0000	41.4
44 2,6-Dinitrotoluene	165	5.946	5.946	(0.969)	299299	40.0000	42.4
50 2,4-Dinitrotoluene	165	6.245	6.245	(1.018)	399339	40.0000	42.4
45 Acenaphthylene	152	6.034	6.034	(0.984)	1658090	40.0000	41.5
47 Acenaphthene	154	6.157	6.157	(1.004)	1015280	40.0000	40.3
48 2,4-Dinitrophenol	184	6.151	6.151	(1.003)	125369	40.0000	38.5
49 Dibenzofuran	168	6.281	6.281	(1.024)	1445026	40.0000	41.8
51 Diethylphthalate	149	6.398	6.398	(1.043)	1212524	40.0000	41.2
52 4-Nitrophenol	139	6.175	6.175	(1.007)	212768	40.0000	44.8
53 Fluorene	166	6.545	6.545	(1.067)	1158845	40.0000	39.9
54 4-Chlorophenylphenylether	204	6.522	6.522	(1.063)	589422	40.0000	41.6
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.896)	199362	40.0000	42.3
56 p-Nitroaniline	138	6.545	6.545	(1.067)	275449	40.0000	48.8
133 Diphenylamine	169	6.610	6.610	(0.904)	996840	40.0000	43.2
58 1,2-Diphenylhydrazine	77	6.645	6.645	(0.908)	1385767	40.0000	44.4
61 4-Bromophenylphenylether	248	6.910	6.910	(0.945)	338752	40.0000	42.2
63 Hexachlorobenzene	284	6.987	6.987	(0.955)	356675	40.0000	42.1
65 Pentachlorophenol	266	7.140	7.140	(0.976)	198099	40.0000	39.0
206 n-Octadecane	57	7.116	7.116	(0.973)	1111404	40.0000	44.7
68 Phenanthrene	178	7.334	7.334	(1.002)	1689161	40.0000	41.0
69 Anthracene	178	7.375	7.375	(1.008)	1686229	40.0000	40.7
72 Di-n-butylphthalate	149	7.728	7.728	(1.056)	1972200	40.0000	43.0
76 Fluoranthene	202	8.381	8.381	(1.146)	1713590	40.0000	41.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	8.598	8.598	(0.882)	1798896	40.0000	41.0
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	885291	40.0000	43.1
89 Benzo(a)anthracene	228	9.728	9.728	(0.998)	1753413	40.0000	41.4
92 Chrysene	228	9.769	9.769	(1.002)	1628609	40.0000	40.3
93 bis(2-Ethylhexyl)phthalate	149	9.651	9.651	(0.990)	1193548	40.0000	43.7
94 Di-n-octylphthalate	149	10.333	10.333	(0.899)	2086852	40.0000	44.6
95 Benzo(b)fluoranthene	252	10.951	10.951	(0.953)	1681042	40.0000	43.4
96 Benzo(k)fluoranthene	252	10.986	10.986	(0.956)	1539572	40.0000	40.2
97 Benzo(a)pyrene	252	11.410	11.410	(0.993)	1429123	40.0000	42.7
99 Indeno(1,2,3-cd)pyrene	276	13.357	13.357	(1.162)	1309588	40.0000	41.2
100 Dibenzo(a,h)anthracene	278	13.374	13.374	(1.164)	1054202	40.0000	39.7
101 Benzo(ghi)perylene	276	13.927	13.927	(1.212)	1094385	40.0000	39.0
126 m-Dinitrobenzene	168	5.928	5.928	(0.966)	220866	40.0000	43.4
130 2,3,4,6-Tetrachlorophenol	232	6.363	6.363	(1.037)	360903	40.0000	43.3
143 Dinoseb	211	7.257	7.257	(0.992)	306082	40.0000	42.2
173 Carbazole	167	7.492	7.492	(1.024)	1627187	40.0000	48.0
184 p-Benzoquinone	54	3.481	3.481	(0.871)	81649	40.0000	33.7
192 Methoxychlor	227	9.604	9.604	(0.986)	1036832	40.0000	42.9
211 p-Toluidine	106	4.281	4.281	(1.071)	571344	40.0000	37.9
210 m-Toluidine	106	4.299	4.299	(1.075)	895530	40.0000	41.3
26 Phthalic anhydride	104	5.404	5.404	(1.109)	204320	40.0000	29.8
214 1,4-Dinitrobenzene	75	5.869	5.869	(0.957)	308787	40.0000	45.3
215 2-Ethoxyethanol	59	2.310	2.310	(0.578)	474857	40.0000	40.8
216 Methylenebis(2-chloroaniline)	231	9.669	9.669	(0.992)	248688	40.0000	37.7
M 225 Trichlorophenols	196				742071	80.0000	81.3
M 226 Tetrachlorophenols	232				360903	40.0000	43.3
M 227 Benzo(b,k)fluoranthene	252				3220614	80.0000	83.6

Data File: /chem/HSD6.i/s070209.b/s6g0206.d
Date : 02-JUL-2009 15:23
Client ID: MEOACVS
Sample Info: IWBN090626-05,3140 PPM11ISVM11MEOACVS
Column phase: J&W DB-5HS

Instrument: HSD6.i
Operator: JMB3
Column diameter: 0.20

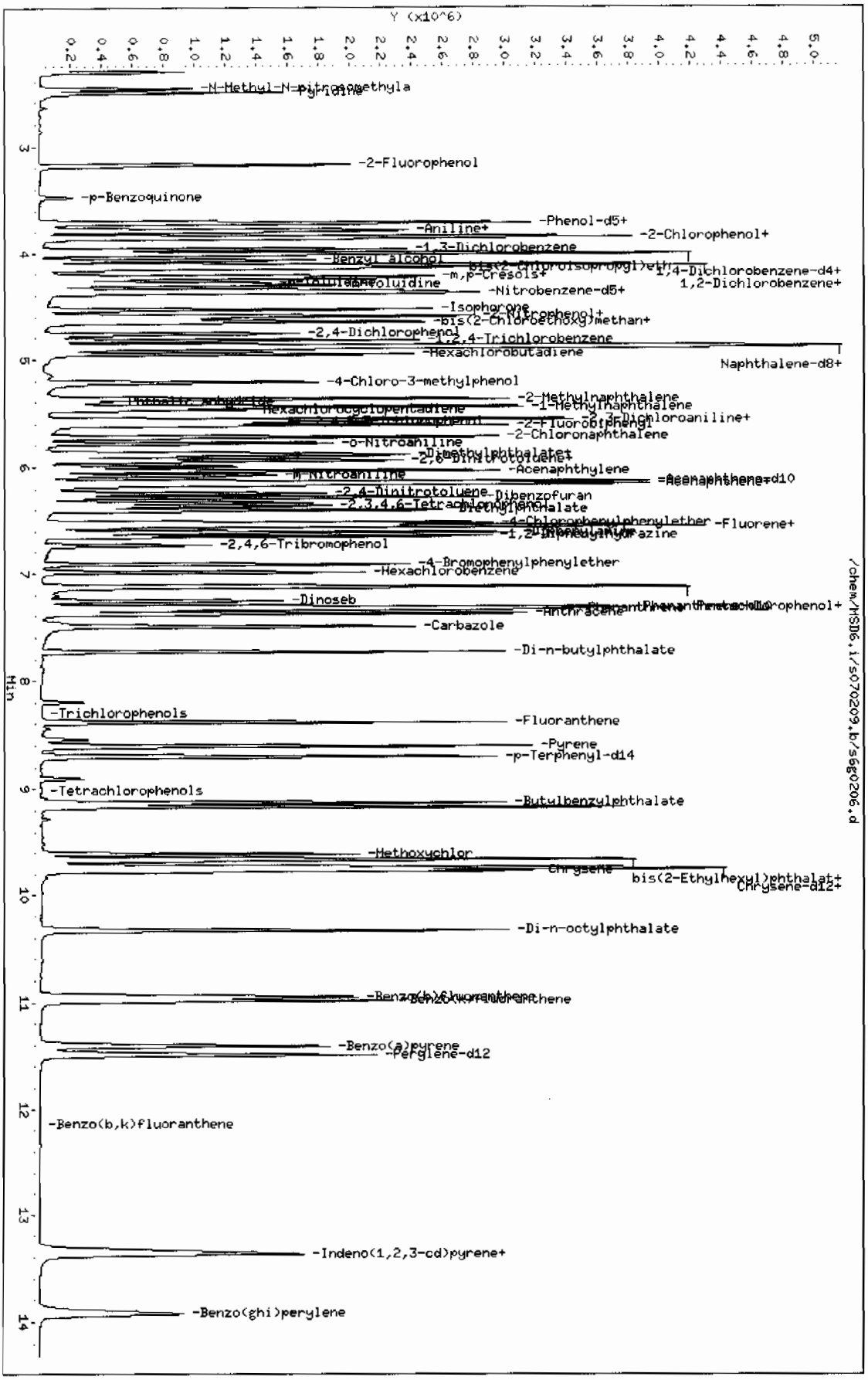

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i
Lab File ID: s6g0207.d
Analysis Type:
Lab Sample ID: WBN090619-01.2 Quant Type: ISTD
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

Injection Date: 02-JUL-2009 15:46
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 18:09 09:39

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.97573	1.03187	1.03187	0.000	5.75443	60.00000	Averaged
16 Acetophenone	1.26337	1.26297	1.26297	0.000	-0.03191	60.00000	Averaged
189 Caprolactam	0.09432	0.09953	0.09953	0.000	5.52832	60.00000	Averaged
208 1,1'-Biphenyl	1.13640	1.18279	1.18279	0.000	4.08182	60.00000	Averaged
207 Atrazine	0.04266	0.04348	0.04348	0.000	1.91761	60.00000	Averaged
77 Benzidine	0.36104	0.33583	0.33583	0.000	-6.98298	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.30024	0.30754	0.30754	0.000	2.43123	60.00000	Averaged
102 1,4-Dioxane	0.39975	0.40522	0.40522	0.000	1.36663	60.00000	Averaged
103 Methyl methacrylate	0.20683	0.20550	0.20550	0.000	-0.64360	60.00000	Averaged
104 Ethyl methacrylate	0.87106	0.89774	0.89774	0.000	3.06323	60.00000	Averaged
105 2-Picoline	1.35671	1.34961	1.34961	0.000	-0.52344	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.56293	0.57673	0.57673	0.000	2.45212	60.00000	Averaged
107 Methyl methanesulfonate	0.61309	0.60978	0.60978	0.000	-0.53948	60.00000	Averaged
108 N-Nitrosodiethylamine	0.53166	0.53462	0.53462	0.000	0.55558	60.00000	Averaged
109 Ethyl Methanesulfonate	0.74019	0.73954	0.73954	0.000	-0.08808	60.00000	Averaged
110 Pentachloroethane	0.33280	0.34067	0.34067	0.000	2.36301	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.55735	0.58087	0.58087	0.000	4.22073	60.00000	Averaged
113 N-Nitrosomorpholine	0.86727	0.89584	0.89584	0.000	3.29424	60.00000	Averaged
114 o-Toluidine	1.83427	1.82655	1.82655	0.000	-0.42090	60.00000	Averaged
115 N-Nitrosopiperidine	0.15500	0.16433	0.16433	0.000	6.02393	60.00000	Averaged
116 a,a-Dimethylphenethylamine	1.10408	1.02914	1.02914	0.000	-6.78737	60.00000	Averaged
118 2,6-Dichlorophenol	0.24042	0.23816	0.23816	0.000	-0.94037	60.00000	Averaged
119 Hexachloropropene	0.12501	0.13512	0.13512	0.000	8.08915	60.00000	Averaged
120 p-Phenylenediamine	0.26729	0.11686	0.11686	0.000	-56.27932	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	40.55536	40.00000	0.24066	0.000	1.38840	60.00000	Linear
122 Safrole	0.20783	0.21373	0.21373	0.000	2.84081	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.43759	0.44987	0.44987	0.000	2.80615	60.00000	Averaged
124 Isosafrole	0.36281	0.37654	0.37654	0.000	3.78265	60.00000	Averaged
125 1,4-Naphthoquinone	0.35063	0.37868	0.37868	0.000	7.99976	60.00000	Averaged
127 Pentachlorobenzene	0.38763	0.39994	0.39994	0.000	3.17578	60.00000	Averaged
128 1-Naphthylamine	0.89054	0.92251	0.92251	0.000	3.59017	60.00000	Averaged
129 2-Naphthylamine	0.97412	1.02369	1.02369	0.000	5.08909	60.00000	Averaged
131 5-Nitro-o-toluidine	0.30362	0.32164	0.32164	0.000	5.93339	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.14108	0.16767	0.16767	0.000	18.84568	60.00000	Averaged
137 Phenacetin	0.29473	0.31778	0.31778	0.000	7.82078	60.00000	Averaged
138 Diallate	0.25260	0.27826	0.27826	0.000	10.15770	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD6.i
Lab File ID: s6g0207.d
Analysis Type:
Lab Sample ID: WBN090619-01.2
Method: /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m

Injection Date: 02-JUL-2009 15:46
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 18:09 09:39
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
140 4-Aminobiphenyl	0.56927	0.60710	0.60710	0.000	6.64578	60.00000	Averaged
141 Pentachloronitrobenzene	0.07491	0.07646	0.07646	0.000	2.06416	60.00000	Averaged
142 Pronamide	0.24710	0.25909	0.25909	0.000	4.85452	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.02496	0.02193	0.02193	0.000	-12.13855	60.00000	Averaged
147 Methapyrilene	0.60851	0.60164	0.60164	0.000	-1.12915	60.00000	Averaged
148 Isodrin	0.10457	0.10704	0.10704	0.000	2.36022	60.00000	Averaged
149 Aramite	0.05203	0.05543	0.05543	0.000	6.52426	60.00000	Averaged
150 Kepone	0.07915	0.03649	0.03649	0.000	-53.90031	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.28775	0.30970	0.30970	0.000	7.62643	60.00000	Averaged
152 Chlorobenzilate	0.27158	0.29308	0.29308	0.000	7.91547	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.52592	0.53622	0.53622	0.000	1.95851	60.00000	Averaged
155 2-Acetylaminofluorene	0.33797	0.35084	0.35084	0.000	3.80702	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.46186	0.50569	0.50569	0.000	9.49022	60.00000	Averaged
158 3-Methylcholanthrene	0.41975	0.42089	0.42089	0.000	0.27175	60.00000	Averaged
212 Cis Diallate	0.28854	0.31206	0.31206	0.000	8.14908	60.00000	Averaged
213 Trans Diallate	0.29717	0.32736	0.32736	0.000	10.15770	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0207.d
Lab Smp Id: WBN090619-01.2 Client Smp ID: APCVS
Inj Date : 02-JUL-2009 15:46
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |WBN090619-01.2|40 PPM|1|SVM|1|APCVS
Misc Info : |MSD8270|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 16:07 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.998	3.998	(1.000)	551809	40.0000	
* 29 Naphthalene-d8	136	4.869	4.869	(1.000)	1923187	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.128	(1.000)	1106992	40.0000	
* 67 Phenanthrene-d10	188	7.316	7.316	(1.000)	1902426	40.0000	
* 91 Chrysene-d12	240	9.739	9.739	(1.000)	1761637	40.0000	
* 98 Perylene-d12	264	11.486	11.486	(1.000)	1422731	40.0000	
209 Benzaldehyde	77	3.722	3.722	(0.931)	569397	40.0000	42.3
16 Acetophenone	105	4.251	4.251	(1.063)	696917	40.0000	40.0
189 Caprolactam	113	5.145	5.145	(1.057)	191413	40.0000	42.2
208 1,1'-Biphenyl	154	5.692	5.692	(0.929)	1309337	40.0000	41.6
207 Atrazine	173	7.004	7.004	(0.957)	82711	40.0000	40.8
77 Benzidine	184	8.475	8.475	(0.870)	591609	40.0000	37.2
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	541779	40.0000	41.0
102 1,4-Dioxane	88	2.316	2.316	(0.579)	223603	40.0000	40.5
103 Methyl methacrylate	100	2.310	2.310	(0.578)	113397	40.0000	39.7
104 Ethyl methacrylate	69	2.687	2.687	(0.672)	495383	40.0000	41.2
105 2-Picoline	93	2.887	2.887	(0.722)	744725	40.0000	39.8
106 N-Nitrosomethylethylamine	88	2.922	2.922	(0.731)	318246	40.0000	41.0
107 Methyl methanesulfonate	80	3.081	3.081	(0.770)	336483	40.0000	39.8
108 N-Nitrosodiethylamine	102	3.322	3.322	(0.831)	295006	40.0000	40.2
109 Ethyl Methanesulfonate	79	3.481	3.481	(0.871)	408083	40.0000	40.0
110 Pentachloroethane	167	3.822	3.822	(0.956)	187984	40.0000	40.9
111 N-Nitrosopyrrolidine	100	4.240	4.240	(1.060)	320530	40.0000	41.7(Q)
113 N-Nitrosomorpholine	56	4.257	4.257	(1.065)	494334	40.0000	41.3
114 o-Toluidine	106	4.281	4.281	(1.071)	1007905	40.0000	39.8
115 N-Nitrosopiperidine	114	4.481	4.481	(0.920)	316045	40.0000	42.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.728	4.728	(0.971)	1979237	40.0000	37.3
118 2,6-Dichlorophenol	162	4.916	4.916	(1.010)	458022	40.0000	39.6
119 Hexachloropropene	213	4.940	4.940	(1.014)	259859	40.0000	43.2
120 p-Phenylenediamine	108	4.869	4.869	(1.000)	224743	40.0000	17.5
121 N-Nitrosodi-n-butylamine	84	5.110	5.110	(1.050)	462839	40.0000	40.6(T)
122 Safrole	162	5.281	5.281	(1.085)	411045	40.0000	41.1
123 1,2,4,5-Tetrachlorobenzene	216	5.487	5.487	(0.895)	498005	40.0000	41.1
124 Isosafrole	162	5.651	5.651	(0.922)	416825	40.0000	41.5
125 1,4-Naphthoquinone	158	5.840	5.840	(0.953)	419192	40.0000	43.2
127 Pentachlorobenzene	250	6.251	6.251	(1.020)	442729	40.0000	41.3
128 1-Naphthylamine	143	6.340	6.340	(1.035)	1021212	40.0000	41.4
129 2-Naphthylamine	143	6.398	6.398	(1.044)	1133219	40.0000	42.0
131 5-Nitro-o-toluidine	152	6.534	6.534	(1.066)	356051	40.0000	42.4
136 1,3,5-Trinitrobenzene	75	6.787	6.787	(0.928)	318981	40.0000	47.5
137 Phenacetin	108	6.828	6.828	(0.933)	604558	40.0000	43.1(Q)
138 Diallate	86	6.816	6.816	(0.932)	529362	40.0000	44.1
140 4-Aminobiphenyl	169	7.128	7.128	(0.974)	1154969	40.0000	42.6
141 Pentachloronitrobenzene	237	7.145	7.145	(0.977)	145461	40.0000	40.8(Q)
142 Pronamide	173	7.139	7.139	(0.976)	492902	40.0000	41.9
146 4-Nitroquinoline-1-oxide	101	7.986	7.986	(1.092)	41717	40.0000	35.1
147 Methapyrilene	58	8.016	8.016	(1.096)	1144572	40.0000	39.5
148 Isodrin	193	8.245	8.245	(1.127)	203628	40.0000	40.9
149 Aramite	185	8.639	8.639	(1.181)	105445	40.0000	42.6
150 Kepone	272	9.239	9.239	(1.263)	69416	40.0000	18.4
151 p-(Dimethylamino)azobenzene	120	8.828	8.828	(0.906)	545578	40.0000	43.0
152 Chlorobenzilate	251	8.857	8.857	(0.909)	516298	40.0000	43.2
153 3,3'-Dimethylbenzidine	212	9.145	9.145	(0.939)	944620	40.0000	40.8
155 2-Acetylaminofluorene	181	9.392	9.392	(0.964)	618045	40.0000	41.5
157 7,12Dimethylbenz(a)anthracene	256	10.922	10.922	(0.951)	719462	40.0000	43.8
158 3-Methylcholanthrene	268	11.916	11.916	(1.037)	598808	40.0000	40.1(Q)
212 Cis Diallate	86	6.892	6.892	(0.942)	89050	6.00000	6.5
213 Trans Diallate	86	6.816	6.816	(0.932)	529362	34.0000	37.4

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD6.i/s070209.b/s6g0207.d

Date : 02-JUL-2009 15:46

Client ID: APCVS

Sample Info: |WBN090619-01,2|40 PPM|1|SVH|1|APCVS

Column phase: J&W DB-5MS

Instrument: MSD6.i

Operator: JHB3

Column diameter: 0.20

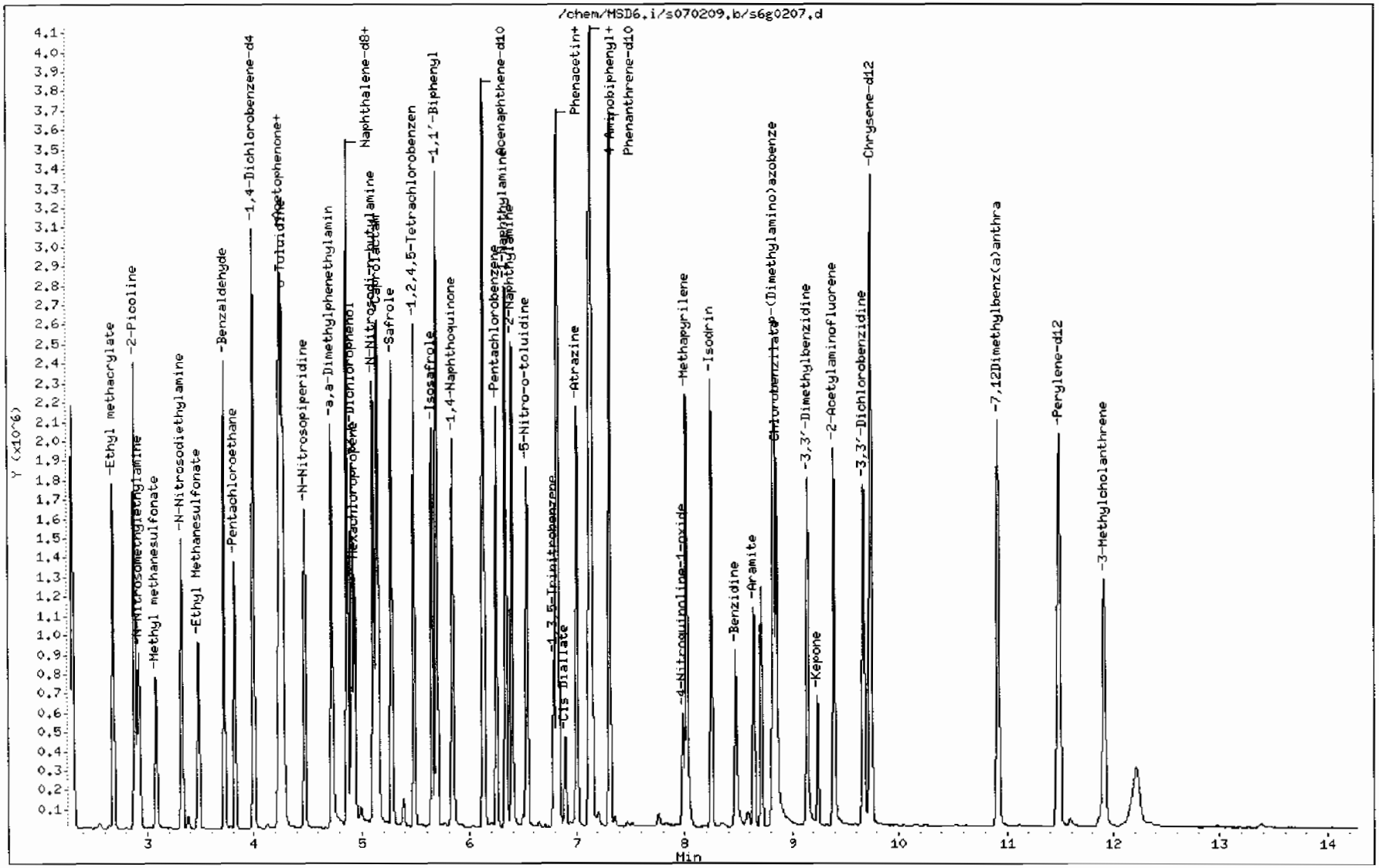

QC Data

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Page 1

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVHF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

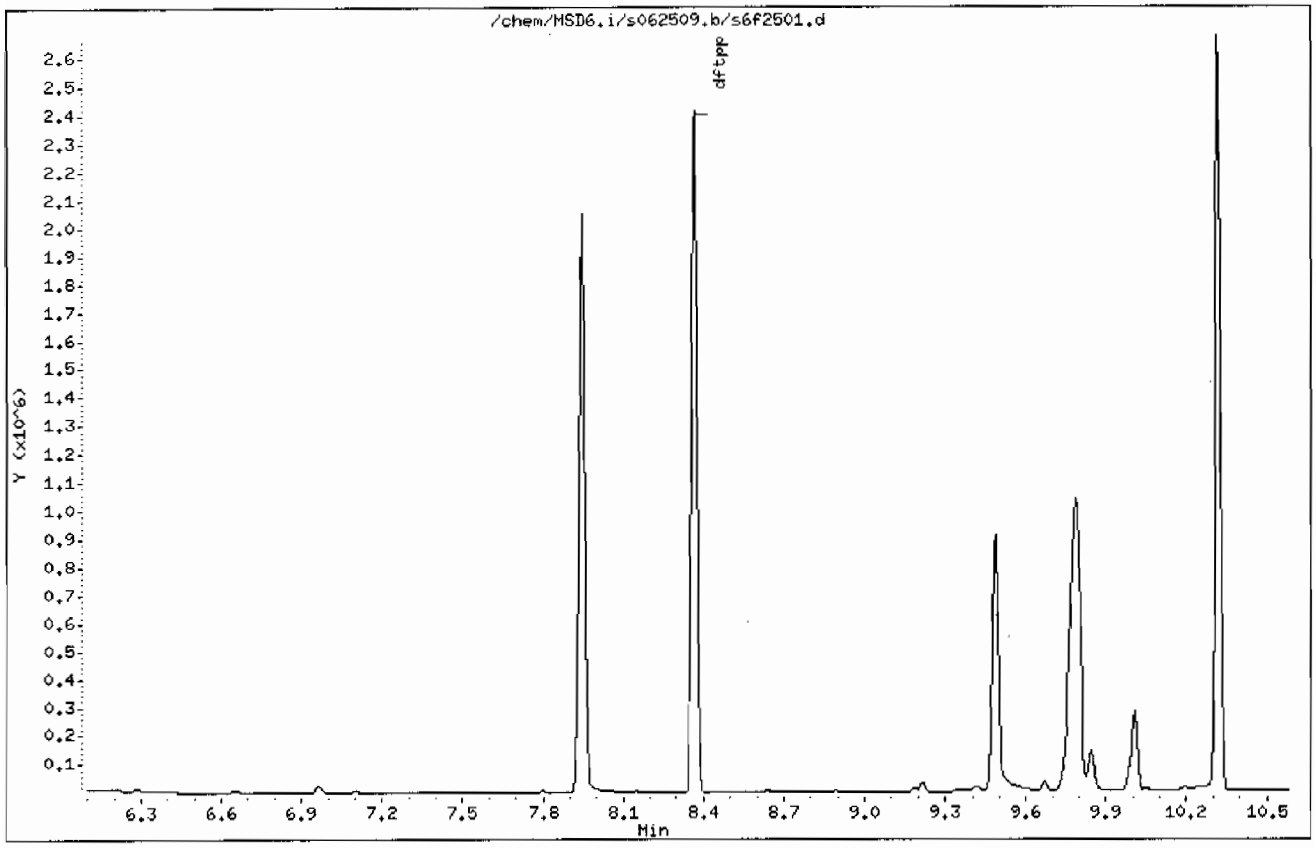

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

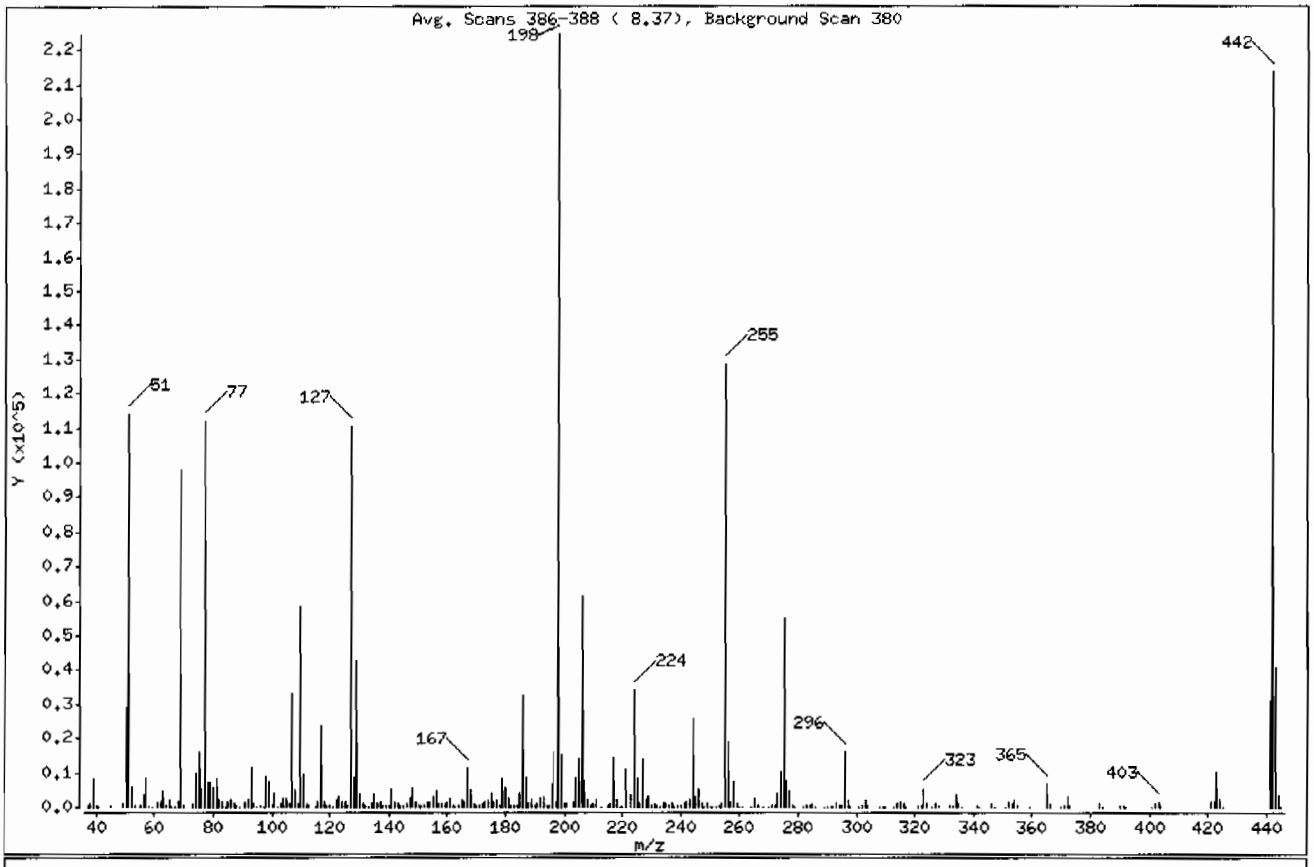

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	50.84
68	Less than 2.00% of mass 69	0.67 (1.54)
69	Mass 69 relative abundance	43.71
70	Less than 2.00% of mass 69	0.23 (0.52)
127	40.00 - 60.00% of mass 198	49.23
197	Less than 1.00% of mass 198	0.63
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 30.00% of mass 198	24.65
365	Greater than 1.00% of mass 198	3.08
441	Present, but less than mass 443	13.75
442	Greater than 40.00% of mass 198	95.04
443	17.00 - 23.00% of mass 442	18.18 (19.13)

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SWMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2501.d
Spectrum: Avg. Scans 386-388 (8.37), Background Scan 380
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	380	124.00	1407	199.00	15144	284.00	383
38.00	1194	125.00	1361	200.00	1160	285.00	878
39.00	8314	126.00	524	201.00	948	286.00	208
40.00	384	127.00	110392	203.00	1577	289.00	229
41.00	169	128.00	8539	204.00	8178	290.00	184
45.00	319	129.00	42552	205.00	13970	291.00	113
49.00	818	130.00	3564	206.00	61440	292.00	210
50.00	28640	131.00	777	207.00	7658	293.00	1007
51.00	114008	132.00	427	208.00	2082	294.00	327
52.00	5589	133.00	184	209.00	714	295.00	329
53.00	269	134.00	1125	210.00	964	296.00	15746
55.00	600	135.00	3598	211.00	2306	297.00	2256
56.00	3395	136.00	1287	213.00	140	298.00	102
57.00	8050	137.00	1683	215.00	662	301.00	201
58.00	382	138.00	443	216.00	1197	302.00	291
59.00	88	139.00	273	217.00	14470	303.00	2047
61.00	1368	140.00	528	218.00	2045	304.00	504
62.00	1576	141.00	5154	219.00	209	308.00	241
63.00	4421	142.00	1628	220.00	112	309.00	117
64.00	585	143.00	1204	221.00	11008	310.00	236
65.00	2030	144.00	314	223.00	3513	313.00	103
66.00	106	145.00	276	224.00	34016	314.00	838
67.00	47	146.00	1015	225.00	8500	315.00	1688
68.00	1508	147.00	2825	226.00	936	316.00	908
69.00	98016	148.00	5867	227.00	14012	317.00	147
70.00	508	149.00	1333	228.00	1985	321.00	588
73.00	834	150.00	353	229.00	3012	322.00	306
74.00	10005	151.00	729	230.00	417	323.00	5244
75.00	15723	152.00	303	231.00	1159	324.00	1139
76.00	5327	153.00	1698	232.00	315	326.00	44
77.00	111928	154.00	1345	233.00	210	327.00	881
78.00	7309	155.00	2915	234.00	840	328.00	497
79.00	7052	156.00	4517	235.00	902	332.00	357
80.00	5499	157.00	834	236.00	624	333.00	456
81.00	8440	158.00	964	237.00	1050	334.00	3461

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2501.d
Spectrum: Avg. Scans 386-388 (8.37), Background Scan 380
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	2146	159.00	790	238.00	124	335.00	852
83.00	1796	160.00	1763	239.00	467	336.00	92
84.00	211	161.00	2583	240.00	407	341.00	583
85.00	1335	162.00	743	241.00	794	342.00	104
86.00	2075	163.00	153	242.00	1781	346.00	1054
87.00	1073	164.00	278	243.00	1830	347.00	201
88.00	393	165.00	2121	244.00	25896	351.00	41
89.00	217	166.00	1593	245.00	3280	352.00	1702
91.00	1667	167.00	11253	246.00	4927	353.00	1159
92.00	1971	168.00	5111	247.00	1028	354.00	1868
93.00	11581	169.00	895	248.00	249	355.00	313
94.00	797	170.00	344	249.00	998	359.00	110
95.00	253	171.00	437	250.00	183	365.00	6910
96.00	561	172.00	1023	251.00	251	366.00	1010
97.00	230	173.00	1312	252.00	253	370.00	172
98.00	8937	174.00	2281	253.00	475	371.00	441
99.00	7279	175.00	4324	254.00	922	372.00	3125
100.00	668	176.00	1318	255.00	128088	373.00	714
101.00	4052	177.00	2047	256.00	18968	383.00	855
102.00	250	178.00	673	257.00	1390	384.00	244
103.00	1258	179.00	8395	258.00	7408	390.00	319
104.00	2462	180.00	5434	259.00	1207	391.00	303
105.00	2668	181.00	2410	260.00	171	392.00	169
106.00	834	182.00	477	261.00	241	401.00	159
107.00	32792	183.00	279	264.00	243	402.00	1125
108.00	5081	184.00	657	265.00	2623	403.00	1616
109.00	777	185.00	4121	266.00	496	404.00	580
110.00	58376	186.00	32256	268.00	46	421.00	1682
111.00	9066	187.00	8733	270.00	187	422.00	1471
112.00	1049	188.00	963	271.00	325	423.00	10525
113.00	339	189.00	1896	272.00	365	424.00	2479
115.00	127	190.00	361	273.00	4007	425.00	188
116.00	1669	191.00	974	274.00	10206	441.00	30840
117.00	23752	192.00	2616	275.00	55264	442.00	213120
118.00	1667	193.00	2857	276.00	7518	443.00	40776

Data File: /chem/MSD6.i/s062509.b/s6f2501.d

Date : 25-JUN-2009 17:33

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6f2501.d
Spectrum: Avg. Scans 386-388 (8.37), Background Scan 380
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	261	194.00	630	277.00	4827	444.00	3584
120.00	336	195.00	444	278.00	743	445.00	212
121.00	106	196.00	6470	279.00	105		
122.00	2090	197.00	1406	282.00	122		
123.00	3100	198.00	224192	283.00	497		

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Page 1

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

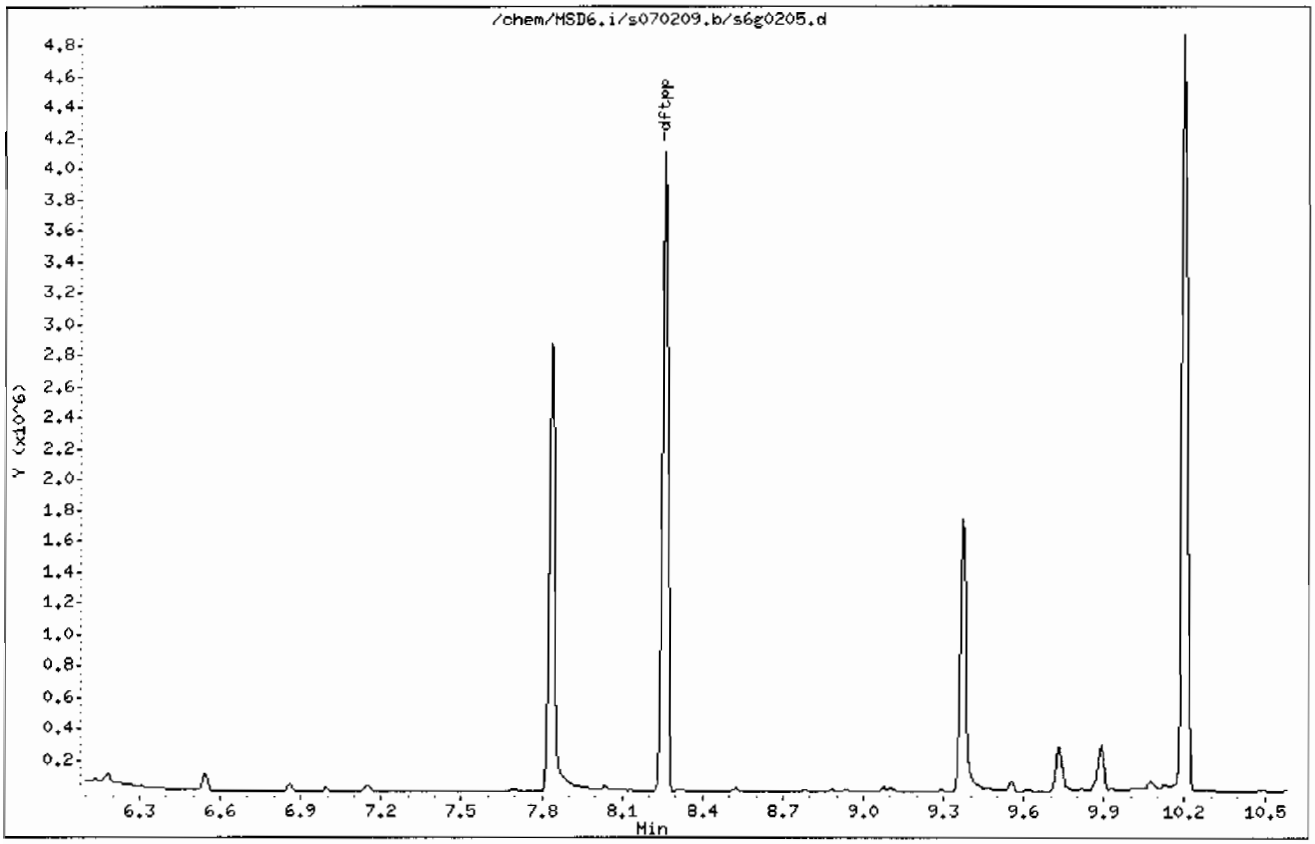

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: IWBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

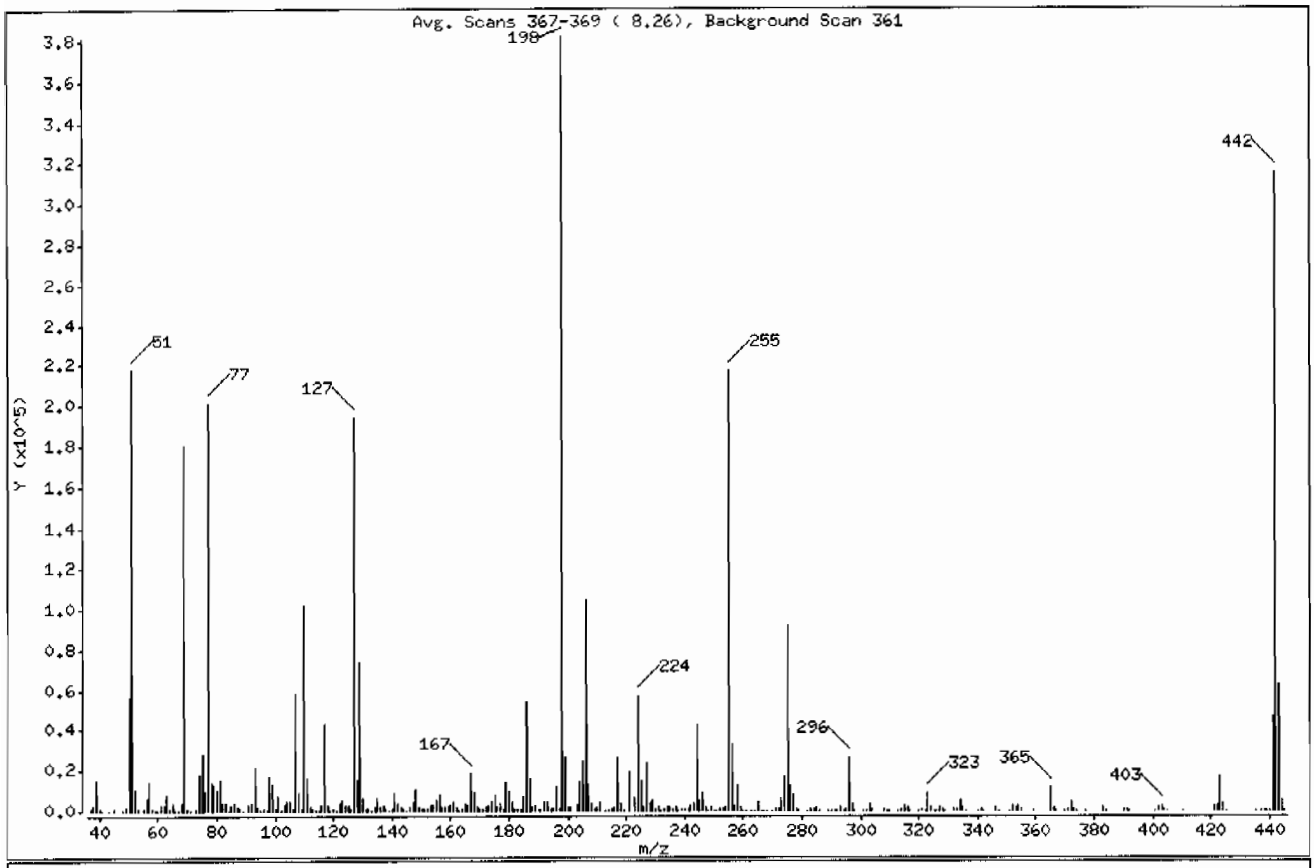

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	57.01
68	Less than 2.00% of mass 69	0.83 (1.76)
69	Mass 69 relative abundance	47.19
70	Less than 2.00% of mass 69	0.25 (0.54)
127	40.00 - 60.00% of mass 198	50.87
197	Less than 1.00% of mass 198	0.16
199	5.00 - 9.00% of mass 198	6.98
275	10.00 - 30.00% of mass 198	24.14
365	Greater than 1.00% of mass 198	3.09
441	Present, but less than mass 443	12.25
442	Greater than 40.00% of mass 198	82.59
443	17.00 - 23.00% of mass 442	16.39 (19.85)

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6g0205.d
Spectrum: Avg. Scans 367-369 (8.26), Background Scan 361
Location of Maximum: 198.00
Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	833	124.00	2365	205.00	24880	294.00	421
38.00	2585	125.00	2415	206.00	104112	295.00	520
39.00	15251	126.00	748	207.00	13523	296.00	26624
40.00	617	127.00	194240	208.00	3480	297.00	3659
41.00	377	128.00	14516	209.00	1072	298.00	313
43.00	22	129.00	74112	210.00	1701	301.00	407
45.00	491	130.00	6290	211.00	4429	302.00	400
48.00	42	131.00	1283	213.00	319	303.00	3155
49.00	1317	132.00	745	214.00	100	304.00	780
50.00	56160	133.00	300	215.00	1105	308.00	440
51.00	217664	134.00	2122	216.00	2186	309.00	304
52.00	10779	135.00	5841	217.00	26072	310.00	313
53.00	530	136.00	2150	218.00	3085	313.00	228
55.00	806	137.00	2930	219.00	355	314.00	1247
56.00	6210	138.00	688	221.00	19424	315.00	2987
57.00	13996	139.00	408	223.00	5905	316.00	1822
58.00	633	140.00	750	224.00	57336	317.00	342
59.00	203	141.00	8565	225.00	15195	320.00	43
60.00	37	142.00	3075	226.00	1554	321.00	763
61.00	2559	143.00	1955	227.00	24032	322.00	437
62.00	2960	144.00	624	228.00	3678	323.00	8545
63.00	7903	145.00	413	229.00	5251	324.00	1624
64.00	975	146.00	1650	230.00	741	325.00	94
65.00	3626	147.00	4705	231.00	1764	326.00	135
66.00	208	148.00	10670	232.00	384	327.00	1541
67.00	195	149.00	2183	233.00	477	328.00	826
68.00	3174	150.00	609	234.00	1466	329.00	168
69.00	180224	151.00	1148	235.00	1769	332.00	633
70.00	973	152.00	684	236.00	1137	333.00	867
71.00	164	153.00	2894	237.00	1902	334.00	5514
73.00	1239	154.00	2267	238.00	277	335.00	1541
74.00	17504	155.00	5143	239.00	960	336.00	179
75.00	28344	156.00	7953	240.00	860	340.00	98
76.00	9392	157.00	1353	241.00	1314	341.00	893
77.00	200704	158.00	1679	242.00	3025	342.00	266

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6g0205.d
Spectrum: Avg. Scans 367-369 (8.26), Background Scan 361
Location of Maximum: 198.00
Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	14191	159.00	1529	243.00	3159	346.00	1658
79.00	12417	160.00	2908	244.00	42168	347.00	332
80.00	9640	161.00	4483	245.00	5477	351.00	180
81.00	14653	162.00	1388	246.00	9025	352.00	2590
82.00	3411	163.00	430	247.00	1746	353.00	1916
83.00	3379	164.00	513	248.00	371	354.00	2863
84.00	333	165.00	3517	249.00	1406	355.00	621
85.00	2547	166.00	2880	250.00	279	359.00	208
86.00	3872	167.00	18640	251.00	297	365.00	11813
87.00	1949	168.00	9033	252.00	477	366.00	1661
88.00	707	169.00	1888	253.00	921	367.00	115
89.00	362	170.00	582	254.00	1562	370.00	291
91.00	2859	171.00	807	255.00	216576	371.00	635
92.00	3122	172.00	1669	256.00	32344	372.00	4691
93.00	21208	173.00	2213	257.00	2322	373.00	1168
94.00	1611	174.00	4321	258.00	12277	374.00	112
95.00	343	175.00	8142	259.00	1840	377.00	152
96.00	1072	176.00	2160	260.00	374	383.00	1318
97.00	431	177.00	3436	261.00	294	384.00	314
98.00	16544	178.00	1195	263.00	91	390.00	584
99.00	13351	179.00	13894	264.00	277	391.00	446
100.00	1116	180.00	9876	265.00	4577	392.00	260
101.00	7374	181.00	4483	266.00	370	401.00	218
102.00	424	182.00	746	267.00	53	402.00	1826
103.00	2426	183.00	506	268.00	83	403.00	2734
104.00	4622	184.00	1083	270.00	245	404.00	994
105.00	4428	185.00	6809	271.00	586	405.00	102
106.00	1283	186.00	54448	272.00	597	410.00	42
107.00	57672	187.00	15438	273.00	6394	421.00	2444
108.00	8936	188.00	1489	274.00	16480	422.00	2400
109.00	1236	189.00	2990	275.00	92208	423.00	16992
110.00	101992	190.00	621	276.00	12593	424.00	3592
111.00	15808	191.00	1309	277.00	8109	425.00	338
112.00	1902	192.00	4496	278.00	1255	435.00	140
113.00	667	193.00	4607	279.00	261	437.00	87

Data File: /chem/MSD6.i/s070209.b/s6g0205.d

Date : 02-JUL-2009 15:10

Client ID: DFTPP

Instrument: MSD6.i

Sample Info: |WBN090624-01|50 PPM|1|SVMF|1|DFTPP

Operator: JMB3

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s6g0205.d
Spectrum: Avg. Scans 367-369 (8.26), Background Scan 361
Location of Maximum: 198.00
Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
114.00	172	194.00	905	282.00	191	438.00	134
115.00	220	195.00	564	283.00	935	439.00	135
116.00	2953	196.00	11074	284.00	734	440.00	103
117.00	42760	197.00	592	285.00	1468	441.00	46768
118.00	3037	198.00	381888	286.00	246	442.00	315392
119.00	359	199.00	26656	289.00	295	443.00	62592
120.00	740	200.00	2126	290.00	255	444.00	5690
121.00	244	201.00	1693	291.00	174	445.00	405
122.00	3399	203.00	2743	292.00	414		
123.00	5680	204.00	13914	293.00	2026		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			**Matrix:**	SOIL
Lab Sample ID:	1201873125				
Client Sample:	QC for batch 881962	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881962	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881964	**Inst:**	MSD6.I	**Dilution:**	1
Run Date:	07/02/2009 16:31	**Analyst:**	JMB3	**Inj. Vol:**	.5 uL
Prep Date:	07/02/2009 13:47	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s6g0209-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	66.7	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	110	333
87-86-5	Pentachlorophenol	U	333	ug/kg	83.3	333
129-00-0	Pyrene	U	33.3	ug/kg	10.0	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	100	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline	U	333	ug/kg	66.7	333
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			Matrix:	SOIL
Lab Sample ID:	1201873125				
Client Sample:	QC for batch 881962	Client:	LANL010	Project:	QC
Client ID:	MB for batch 881962	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 16:31	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s6g0209-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	66.7	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	66.7	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	478	ug/kg		JA

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Data file : /chem/MSD6.i/s070209.b/s6g0209-1.d
Lab Smp Id: 1201873125 Client Smp ID: SBLK01
Inj Date : 02-JUL-2009 16:31
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873125|881964|1|SVM|1|SBLK01
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2506.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	3.999	(1.000)	385534	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1450103	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	843657	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1460742	40.0000	
* 91 Chrysene-d12	240	9.739	9.745	(1.000)	1292833	40.0000	
* 98 Perylene-d12	264	11.480	11.492	(1.000)	1018273	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.796)	679032	64.8267	2160
$ 5 Phenol-d5	99	3.704	3.710	(0.926)	975979	69.5554	2320
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	418240	32.5572	1080
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	723214	33.7521	1120
$ 60 2,4,6-Tribromophenol	329	6.728	6.734	(1.098)	178630	57.2734	1910
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	931989	45.1400	1500

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0209-1.d
Lab Smp Id: 1201873125 Client Smp ID: SBLK01
Inj Date : 02-JUL-2009 16:31
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873125|881964|1|SVM|1|SBLK01
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 11o00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2506.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2610732	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.010	936678	14.3511859	478	0		0	10

Data File: /chem/MSD6.i/s070209.b/s6g0209-1.d
Date : 02-JUL-2009 16:31
Client ID: SBLK01
Sample Info: |120187312518819641|1|SVM|1|SBLK01
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD6.i

Operator: JMB3
Column diameter: 0.20

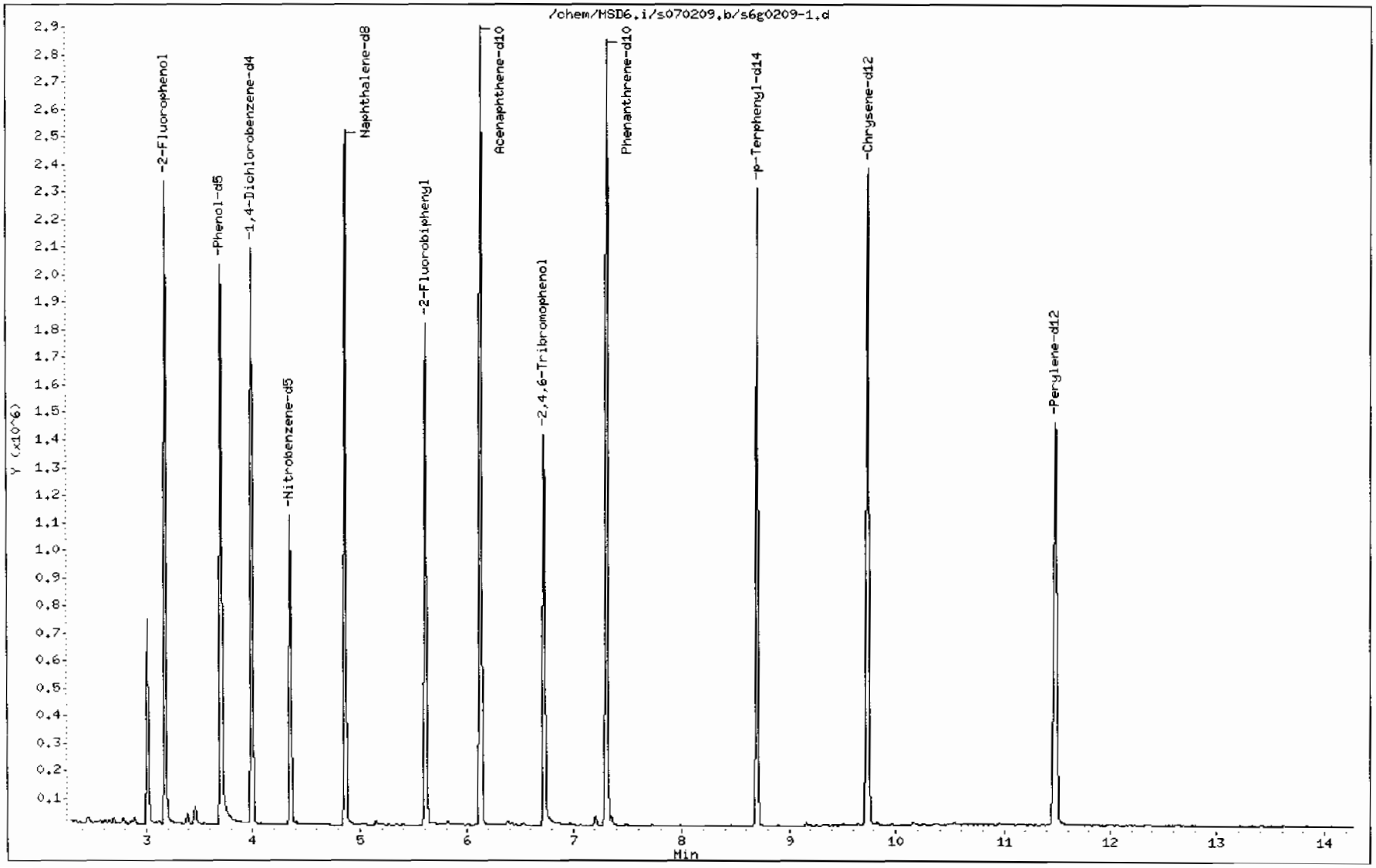

Data File: /chem/MSD6.i/s070209.b/s6g0209-1.d

Date : 02-JUL-2009 16:31

Client ID: SBLK01

Instrument: MSD6.i

Sample Info: |1201873125|881964|1|SVM|1|SBLK01

Volume Injected (uL): 0.5

Operator: JMB3

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

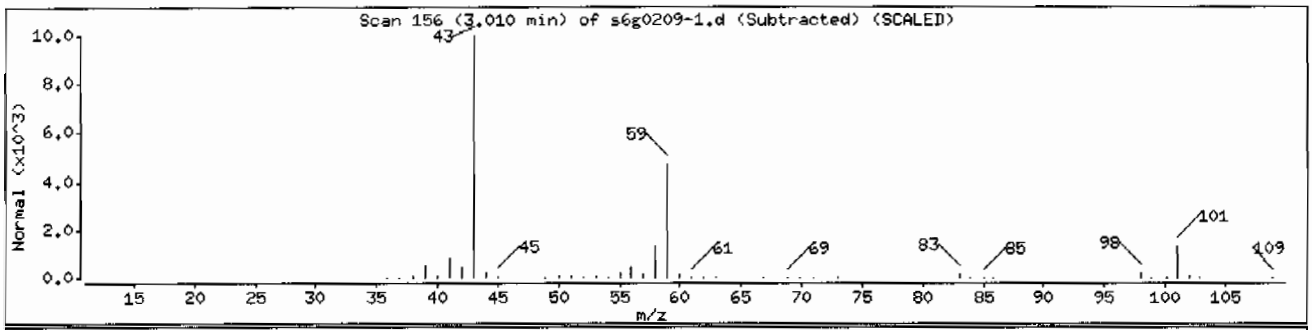

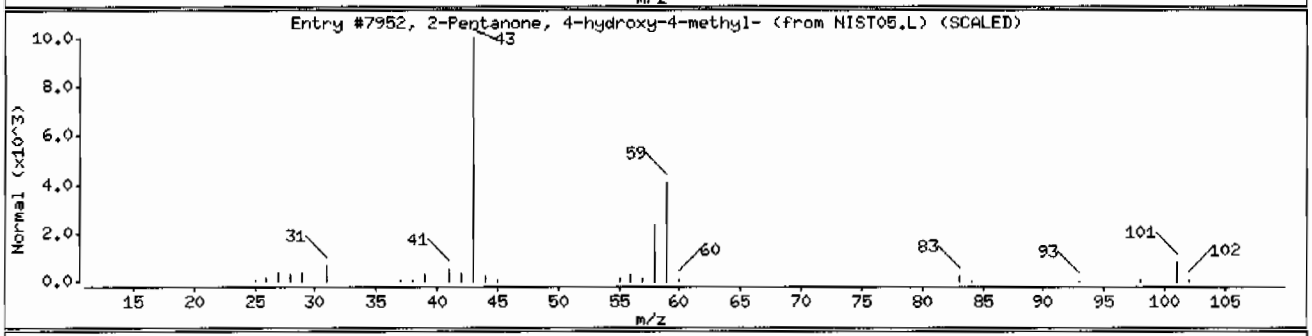

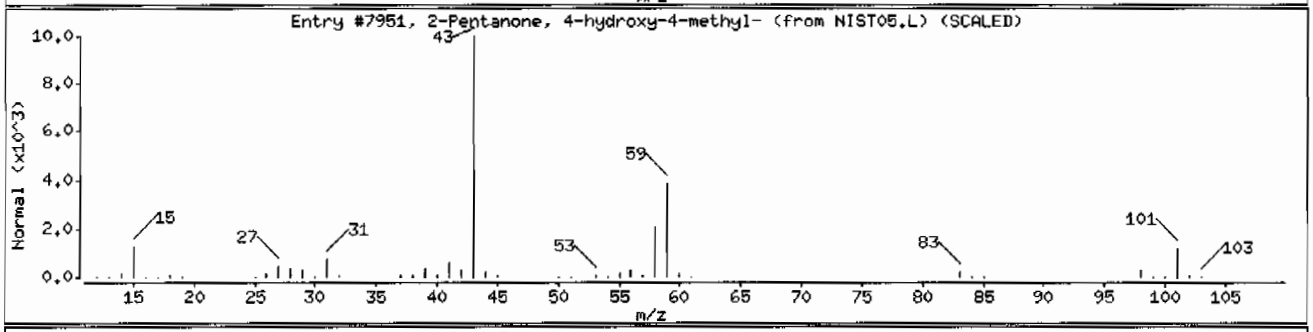

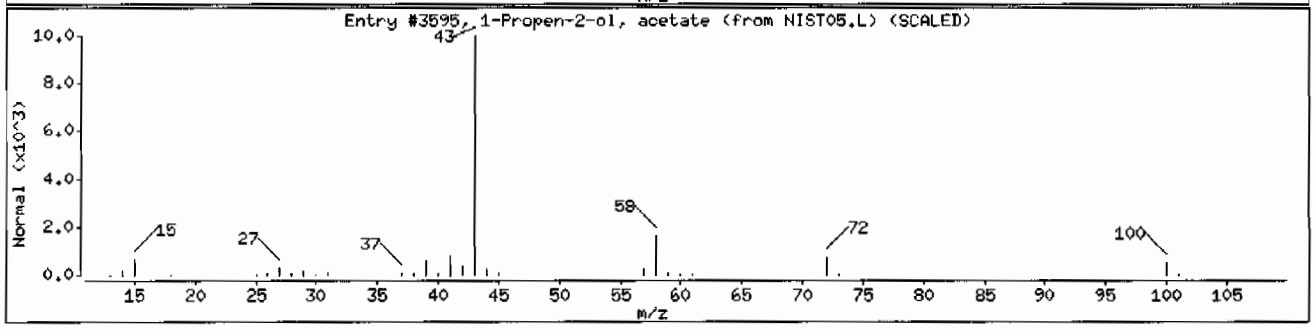

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			Matrix:	SOIL
Lab Sample ID:	1201873126				
Client Sample:	QC for batch 881962	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 881962	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 16:54	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s6g0210-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1130	ug/kg	66.7	333
108-95-2	Phenol		1090	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1160	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1090	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1140	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1160	ug/kg	66.7	333
83-32-9	Acenaphthene		1100	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene		1170	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1070	ug/kg	110	333
87-86-5	Pentachlorophenol		966	ug/kg	83.3	333
129-00-0	Pyrene		1220	ug/kg	10.0	33.3
110-86-1	Pyridine		1100	ug/kg	66.7	333
62-53-3	Aniline		1300	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether		1130	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1100	ug/kg	66.7	333
100-51-6	Benzyl alcohol		727	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1160	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1290	ug/kg	66.7	333
95-48-7	o-Cresol		1150	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1300	ug/kg	100	333
67-72-1	Hexachloroethane		1080	ug/kg	66.7	333
98-95-3	Nitrobenzene		1210	ug/kg	66.7	333
78-59-1	Isophorone		1190	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1200	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol		1180	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane		1200	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1160	ug/kg	66.7	333
65-85-0	Benzoic acid		1060	ug/kg	167	667
91-20-3	Naphthalene		1030	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1210	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1130	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1260	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1060	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1040	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1180	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1160	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline		1230	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline		1310	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2506			Matrix:	SOIL
Lab Sample ID:	1201873126				
Client Sample:	QC for batch 881962	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 881962	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881964	Inst:	MSD6.I	Dilution:	1
Run Date:	07/02/2009 16:54	Analyst:	JMB3	Inj. Vol:	.5 uL
Prep Date:	07/02/2009 13:47	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s6g0210-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1170	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1180	ug/kg	33.3	333
208-96-8	Acenaphthylene		1180	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		818	ug/kg	127	667
132-64-9	Dibenzofuran		1190	ug/kg	66.7	333
84-66-2	Diethylphthalate		1200	ug/kg	66.7	333
86-73-7	Fluorene		1040	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1150	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol		993	ug/kg	66.7	333
100-01-6	4-Nitroaniline		1390	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1200	ug/kg	66.7	333
122-66-7	Azobenzene		1280	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1130	ug/kg	66.7	333
118-74-1	Hexachlorobenzene		1150	ug/kg	66.7	333
85-01-8	Phenanthrene		1120	ug/kg	10.0	33.3
120-12-7	Anthracene		1170	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1250	ug/kg	66.7	333
206-44-0	Fluoranthene		1180	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1310	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1170	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1200	ug/kg	100	333
218-01-9	Chrysene		1240	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1360	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1340	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1210	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1280	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1250	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1200	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1190	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1170	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1170	ug/kg	66.7	333

GEL Laboratories LLC

Data file : /chem/MSD6.i/s070209.b/s6g0210-1.d
Lab Smp Id: 1201873126 Client Smp ID: SBLK01LCS
Inj Date : 02-JUL-2009 16:54
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873126|881964|1|SVM|1|SBLK01LCS
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2506.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.999	3.999	(1.000)	373584	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1481824	40.0000	
* 46 Acenaphthene-d10	164	6.128	6.134	(1.000)	843469	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1482578	40.0000	
* 91 Chrysene-d12	240	9.739	9.745	(1.000)	1335253	40.0000	
* 98 Perylene-d12	264	11.486	11.492	(1.000)	1213021	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.796)	672953	66.3014	2210
$ 5 Phenol-d5	99	3.710	3.710	(0.928)	879576	64.6902	2160
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	462432	35.2266	1170
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.916)	746455	34.8445	1160
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.099)	191160	61.3045	2040
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	865727	40.5985	1350

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.722	3.722	(0.931)	440433	32.7030	1090
8 2-Chlorophenol	128	3.863	3.863	(0.966)	362223	34.7272	1160
11 1,4-Dichlorobenzene	146	4.010	4.010	(1.003)	374967	32.6196	1090
17 N-Nitrosodipropylamine	70	4.228	4.240	(1.057)	270640	34.0574	1140(Q)
28 1,2,4-Trichlorobenzene	180	4.816	4.822	(0.989)	344653	35.0923	1170
33 4-Chloro-3-methylphenol	107	5.222	5.216	(1.072)	323922	34.8644	1160
47 Acenaphthene	154	6.151	6.157	(1.004)	635290	32.9665	1100
50 2,4-Dinitrotoluene	165	6.240	6.245	(1.018)	253739	35.2364	1170
52 4-Nitrophenol	139	6.181	6.175	(1.009)	116785	32.1182	1070
65 Pentachlorophenol	266	7.140	7.140	(0.977)	117589	28.9940	966
79 Pyrene	202	8.598	8.598	(0.883)	1220650	36.6957	1220
2 Pyridine	79	2.522	2.505	(0.631)	301745	33.1395	1100
4 Aniline	66	3.775	3.781	(0.944)	236286	38.9614	1300
7 bis(2-Chloroethyl) ether	63	3.787	3.799	(0.947)	353650	33.7812	1130
9 1,3-Dichlorobenzene	146	3.963	3.969	(0.991)	390447	33.0055	1100
12 Benzyl alcohol	108	4.063	4.069	(1.016)	156588	21.8048	727
13 1,2-Dichlorobenzene	146	4.110	4.116	(1.028)	366674	34.8864	1160
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.035)	893275	38.7013	1290
15 o-Cresol	107	4.116	4.116	(1.029)	275745	34.6091	1150
18 m,p-Cresols	107	4.216	4.222	(1.054)	437431	39.0529	1300
19 Hexachloroethane	117	4.346	4.346	(1.087)	150404	32.5296	1080
21 Nitrobenzene	77	4.375	4.381	(0.899)	434041	36.3137	1210
22 Isophorone	82	4.528	4.534	(0.930)	805560	35.7964	1190
23 2-Nitrophenol	139	4.587	4.593	(0.942)	184261	35.9093	1200
24 2,4-Dimethylphenol	122	4.604	4.599	(0.946)	539831	35.4157	1180
25 bis(2-Chloroethoxy)methane	93	4.646	4.652	(0.954)	451898	36.0025	1200
26 2,4-Dichlorophenol	162	4.757	4.763	(0.977)	302661	34.9441	1160
27 Benzoic acid	105	4.628	4.640	(0.950)	257376	31.8793	1060(Q)
30 Naphthalene	128	4.887	4.887	(1.004)	1036183	30.9454	1030
31 4-Chloroaniline	127	4.899	4.899	(1.006)	508737	36.1591	1200
32 Hexachlorobutadiene	225	4.946	4.951	(1.016)	201349	33.8572	1130
34 2-Methylnaphthalene	142	5.369	5.369	(1.103)	686739	37.8413	1260
36 Hexachlorocyclopentadiene	237	5.469	5.475	(0.892)	139368	31.8524	1060
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.907)	211753	31.1184	1040
38 2,4,5-Trichlorophenol	196	5.593	5.587	(0.913)	252929	35.2785	1180
40 2-Chloronaphthalene	162	5.722	5.722	(0.934)	690475	34.7067	1160
42 o-Nitroaniline	65	5.775	5.781	(0.942)	283763	37.0126	1230
41 m-Nitroaniline	138	6.075	6.081	(0.991)	193628	39.2662	1310
43 Dimethylphthalate	163	5.881	5.887	(0.960)	796727	35.1206	1170
44 2,6-Dinitrotoluene	165	5.940	5.946	(0.969)	191347	35.4574	1180
45 Acenaphthylene	152	6.028	6.034	(0.984)	1084481	35.4846	1180
48 2,4-Dinitrophenol	184	6.146	6.151	(1.003)	61109	24.5504	818(Q)
49 Dibenzofuran	168	6.281	6.281	(1.025)	945478	35.7261	1190
51 Diethylphthalate	149	6.398	6.398	(1.044)	812099	36.0278	1200
53 Fluorene	166	6.545	6.545	(1.068)	693761	31.2009	1040
54 4-Chlorophenylphenylether	204	6.516	6.522	(1.063)	373893	34.4862	1150
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.897)	108986	29.7934	993

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.067)	180488	41.8068	1390
133 Diphenylamine	169	6.604	6.610	(0.903)	661574	35.8568	1200
58 1,2-Diphenylhydrazine	77	6.645	6.645	(0.909)	954615	38.2891	1280
61 4-Bromophenylphenylether	248	6.910	6.910	(0.945)	217012	33.8334	1130
63 Hexachlorobenzene	284	6.981	6.987	(0.955)	233612	34.4688	1150
68 Phenanthrene	178	7.334	7.334	(1.003)	1112413	33.7319	1120
69 Anthracene	178	7.375	7.375	(1.009)	1156483	34.9516	1160
72 Di-n-butylphthalate	149	7.728	7.728	(1.057)	1375243	37.4694	1250
76 Fluoranthene	202	8.381	8.381	(1.146)	1178824	35.4378	1180
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	611649	39.3001	1310
89 Benzo(a)anthracene	228	9.728	9.728	(0.999)	1123480	35.0687	1170
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	361776	36.0963	1200
92 Chrysene	228	9.769	9.769	(1.003)	1139459	37.2062	1240
93 bis(2-Ethylhexyl)phthalate	149	9.651	9.651	(0.991)	842499	40.7225	1360
94 Di-n-octylphthalate	149	10.328	10.333	(0.899)	1409923	40.3242	1340
95 Benzo(b)fluoranthene	252	10.945	10.951	(0.953)	1050038	36.3467	1210
96 Benzo(k)fluoranthene	252	10.980	10.986	(0.956)	1097093	38.3347	1280
97 Benzo(a)pyrene	252	11.404	11.410	(0.993)	939400	37.5825	1250
99 Indeno(1,2,3-cd)pyrene	276	13.345	13.357	(1.162)	852868	35.9333	1200
100 Dibenzo(a,h)anthracene	278	13.363	13.374	(1.163)	706208	35.5504	1180
101 Benzo(ghi)perylene	276	13.916	13.927	(1.211)	735940	35.1429	1170
1 N-Methyl-N-nitrosomethylamine	74	2.475	2.469	(0.619)	212737	33.7828	1130

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/HSD6.i/s070209.b/s6g0210-1.d
Date : 02-JUL-2009 16:54
Client ID: SBLK01LCS
Sample Info: 1120187312618819641|1|SVM|1|SBLK01LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: HSD6.i
Operator: JHB3
Column diameter: 0.20

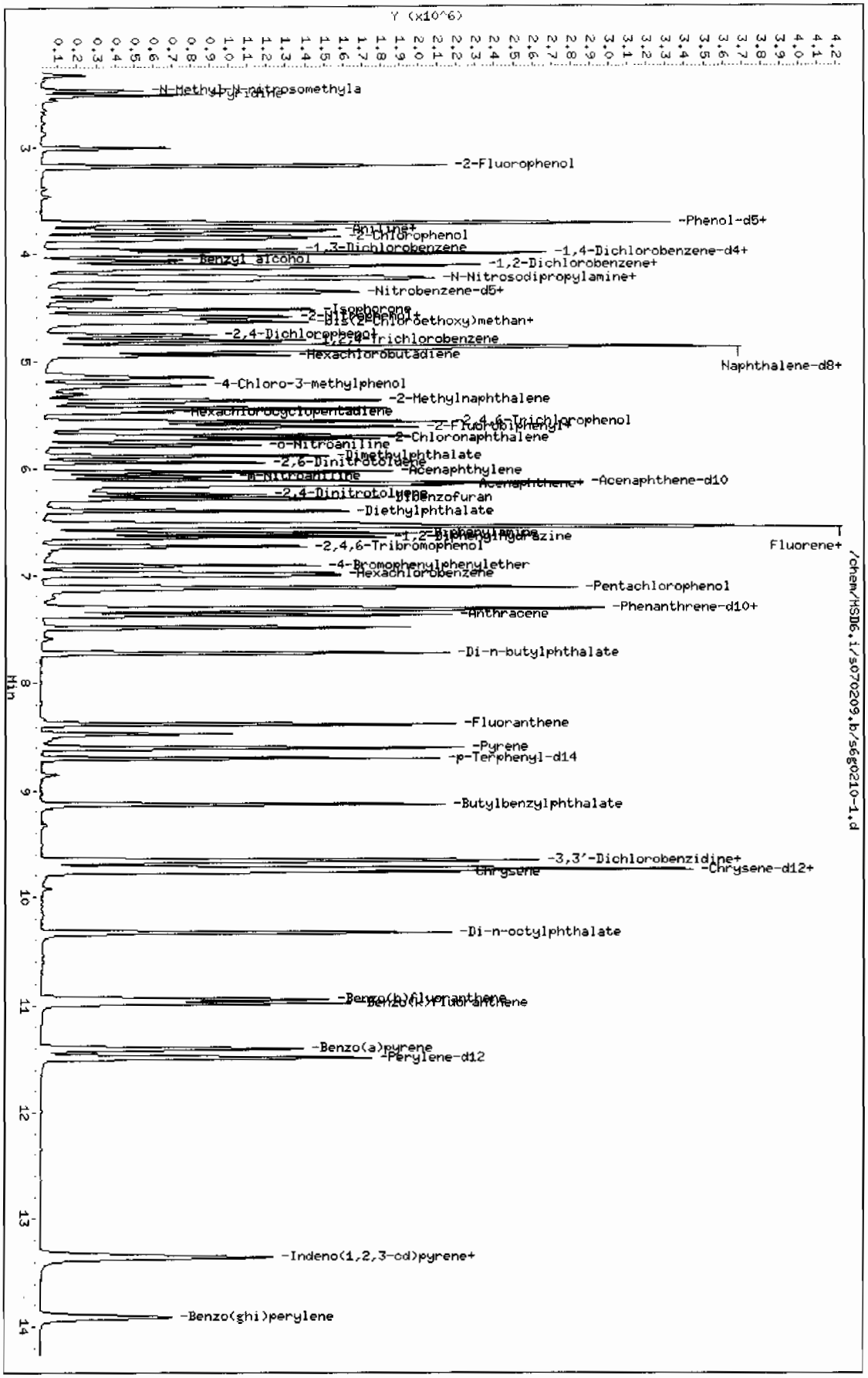

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 881962 **Verified by:** _____

Analyst: Robin Hunt

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201873125 MB	02-JUL-2009 13:47:46	30	1	0.03333
1201873126 LCS	02-JUL-2009 13:47:46	30	1	0.03333
232582001	02-JUL-2009 13:47:46	30.07	1	0.03326
232582002	02-JUL-2009 13:47:46	30.2	1	0.03311
232585001	02-JUL-2009 13:47:46	30.11	1	0.03321
232585002	02-JUL-2009 13:47:46	30.22	1	0.03309
232585003	02-JUL-2009 13:47:46	30.17	1	0.03315
232591001	02-JUL-2009 13:47:46	30.02	1	0.03331
1201873127 MS (232591001)	02-JUL-2009 13:47:46	30.19	1	0.03312
1201873128 MSD (232591001)	02-JUL-2009 13:47:46	30.17	1	0.03315
232634001	02-JUL-2009 13:47:46	30.05	1	0.03328
232634002	02-JUL-2009 13:47:46	30.17	1	0.03315

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201873126	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
LCS	1201873126	BENZIDINE LCS	UE090622-18	1	mL
MS	1201873127	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MS	1201873127	BENZIDINE LCS	UE090622-18	1	mL
MSD	1201873128	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MSD	1201873128	BENZIDINE LCS	UE090622-18	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1143854-D	150	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: RLC

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD6

DATE: 07/02/2009 METHOD: See raw data OPERATOR: JMB3 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:116462-D
Multiplier Voltage: 1482 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090628-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD6.i/s070209.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s6g0201.d	WBN090624-01	JMB3	02-JUL-2009 08:15	50 PPM	s070209	1.0	DFTPP	USE
s6g0202.d	WBN090626-05.3	JMB3	02-JUL-2009 08:30	40 PPM	s070209	1.0	MEGACVS	USE
s6g0203.d	WBN090619-01.2	JMB3	02-JUL-2009 08:58	40 PPM	s070209	1.0	APCVS	USE
s6g0204.d	WBN090609-22.5	JMB3	02-JUL-2009 09:21	40 PPM	s070209	1.0	PESTCVS	USE; **NO SAMPLES TO RUN**RE-STARTING SEQUENCE AT 15:10
s6g0205.d	WBN090624-01	JMB3	02-JUL-2009 15:10	50 PPM	s070209	1.0	DFTPP	USE
s6g0206.d	WBN090626-05.3	JMB3	02-JUL-2009 15:23	40 PPM	s070209	1.0	MEGACVS	USE; 537020
s6g0207.d	WBN090619-01.2	JMB3	02-JUL-2009 15:46	40 PPM	s070209	1.0	APCVS	USE
s6g0208.d	WBN090609-22.5	JMB3	02-JUL-2009 16:08	40 PPM	s070209	1.0	PESTCVS	USE
s6g0209-1.d	1201873125	JMB3	02-JUL-2009 16:31	881964	09-2506	1.0	SBLK01	USE
s6g0209-2.d	1201873125	JMB3	02-JUL-2009 16:31	881964	09-2510	1.0	SBLK01	USE
s6g0209-3.d	1201873125	JMB3	02-JUL-2009 16:31	881964	232634	1.0	SBLK01	USE
s6g0209.d	1201873125	JMB3	02-JUL-2009 16:31	881964	09-2508	1.0	SBLK01	USE
s6g0210-1.d	1201873126	JMB3	02-JUL-2009 16:54	881964	09-2506	1.0	SBLK01LCS	USE
s6g0210-2.d	1201873126	JMB3	02-JUL-2009 16:54	881964	09-2510	1.0	SBLK01LCS	USE
s6g0210-3.d	1201873126	JMB3	02-JUL-2009 16:54	881964	232634	1.0	SBLK01LCS	USE
s6g0210.d	1201873126	JMB3	02-JUL-2009 16:54	881964	09-2508	1.0	SBLK01LCS	USE
s6g0211.d	232582001	JMB3	02-JUL-2009 17:16	881964	09-2508	1.0	LANL	USE
s6g0212.d	232582002	JMB3	02-JUL-2009 17:38	881964	09-2508	1.0	LANL	USE
s6g0213.d	232585001	JMB3	02-JUL-2009 18:00	881964	09-2506	1.0	LANL	USE

s6g0214.d	232585002	JMB3	02-JUL-2009 18:23	881964	09-2506	1.0	LANL	USE
s6g0215.d	232585003	JMB3	02-JUL-2009 18:46	881964	09-2506	1.0	LANL	USE
s6g0216.d	232591001	JMB3	02-JUL-2009 19:08	881964	09-2510	1.0	LANL	USE
s6g0217.d	1201873127	JMB3	02-JUL-2009 19:30	881964	09-2510	1.0	MS	USE; SPIKE LOW
s6g0218.d	1201873128	JMB3	02-JUL-2009 19:53	881964	09-2510	1.0	MSD	USE; SPIKE LOW
s6g0219.d	232634001	JMB3	02-JUL-2009 20:15	881964	232634	4.0	MECP	DUSE: SURR LOW; RR NEAT - SEE S6G0314
s6g0220.d	232634002	JMB3	02-JUL-2009 20:38	881964	232634	4.0	MECP	DUSE: SURR LOW; RR NEAT - SEE S6G0315

Instrument Batch: /chem/MSD6.i/s070209.b

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD6

DATE: 06/25/2009 METHOD: See raw data OPERATOR: lof REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1116462-D
Multiplier Voltage: 1482 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD6.i/s062509.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s6f2501-d.d	WBN090624-01	JMB3	25-JUN-2009 17:33	50 PPM	s062509	1.0	DFTPP	8270d TUNE: MEGA - AP - PEST
s6f2501.d	WBN090624-01	JMB3	25-JUN-2009 17:33	50 PPM	s062509	1.0	DFTPP	8270c TUNE: MEGA - AP - PEST
s6f2502.d	INST BLK	JMB3	25-JUN-2009 17:46	-----	s062509	1.0	INST BLK	
s6f2503.d	WBN090602-08	JMB3	25-JUN-2009 18:09	1 PPM	s062509	1.0	MEGAICAL	
s6f2504.d	WBN090602-07	JMB3	25-JUN-2009 18:37	10 PPM	s062509	1.0	MEGAICAL	
s6f2505.d	WBN090602-06	JMB3	25-JUN-2009 19:04	20 PPM	s062509	1.0	MEGAICAL	
s6f2506.d	WBN090602-05.1	JMB3	25-JUN-2009 19:33	40 PPM	s062509	1.0	MEGAICAL	
s6f2507.d	WBN090602-04	JMB3	25-JUN-2009 20:01	50 PPM	s062509	1.0	MEGAICAL	
s6f2508.d	WBN090602-03	JMB3	25-JUN-2009 20:29	80 PPM	s062509	1.0	MEGAICAL	
s6f2509.d	WBN090602-02	JMB3	25-JUN-2009 20:56	100 PPM	s062509	1.0	MEGAICAL	
s6f2510.d	WBN090602-01	JMB3	25-JUN-2009 21:25	120 PPM	s062509	1.0	MEGAICAL	
s6f2511.d	WBN090528-07	JMB3	25-JUN-2009 21:54	10 PPM	s062509	1.0	APICAL	
s6f2512.d	WBN090528-06	JMB3	25-JUN-2009 22:17	20 PPM	s062509	1.0	APICAL	
s6f2513.d	WBN090528-05.1	JMB3	25-JUN-2009 22:39	40 PPM	s062509	1.0	APICAL	
s6f2514.d	WBN090528-04	JMB3	25-JUN-2009 23:02	50 PPM	s062509	1.0	APICAL	
s6f2515.d	WBN090528-03	JMB3	25-JUN-2009 23:24	80 PPM	s062509	1.0	APICAL	
s6f2516.d	WBN090528-02	JMB3	25-JUN-2009 23:47	100 PPM	s062509	1.0	APICAL	
s6f2517.d	WBN090528-01	JMB3	26-JUN-2009 00:08	120 PPM	s062509	1.0	APICAL	
s6f2518.d	WBN090609-24	JMB3	26-JUN-2009 00:31	10 PPM	s062509	1.0	PESTICAL	

s6f2519.d	WBN090609-23	JMB3	26-JUN-2009 00:54	20 PPM	s062509	1.0	PESTICAL	
s6f2520.d	WBN090609-22.1	JMB3	26-JUN-2009 01:17	40 PPM	s062509	1.0	PESTICAL	
s6f2521.d	WBN090609-21	JMB3	26-JUN-2009 01:40	50 PPM	s062509	1.0	PESTICAL	
s6f2522.d	WBN090609-20	JMB3	26-JUN-2009 02:02	80 PPM	s062509	1.0	PESTICAL	
s6f2523.d	WBN090609-19	JMB3	26-JUN-2009 02:25	100 PPM	s062509	1.0	PESTICAL	DUSE bad injection
s6f2524.d	WBN090609-18	JMB3	26-JUN-2009 02:48	120 PPM	s062509	1.0	PESTICAL	
s6f2525-BOE.d	WBN090602-09.1	JMB3	26-JUN-2009 03:11	40 PPM	s062509	1.0	MEGAICV	pass
s6f2525-D.d	WBN090602-09.1	JMB3	26-JUN-2009 03:11	40 PPM	s062509	1.0	MEGAICV	pass except c55,c26,c179 (>30%)
s6f2525.d	WBN090602-09.1	JMB3	26-JUN-2009 03:11	40 PPM	s062509	1.0	MEGAICV	pass 354067
s6f2526-D.d	WBN090528-08.1	JMB3	26-JUN-2009 03:39	40 PPM	s062509	1.0	APICV	pass except c110,c119,c124 (>30%)
s6f2526.d	WBN090528-08.1	JMB3	26-JUN-2009 03:39	40 PPM	s062509	1.0	APICV	pass
s6f2527-D.d	WBN090609-25.1	JMB3	26-JUN-2009 04:02	40 PPM	s062509	1.0	PESTICV	pass
s6f2527.d	WBN090609-25.1	JMB3	26-JUN-2009 04:02	40 PPM	s062509	1.0	PESTICV	pass
s6f2528-d.d	WBN090624-01	JMB3	26-JUN-2009 04:26	50 PPM	s062509	1.0	DFTPP	8270d TUNE: HEX - NEV
s6f2528.d	WBN090624-01	JMB3	26-JUN-2009 04:26	50 PPM	s062509	1.0	DFTPP	8270c TUNE: HEX - NEV
s6f2529.d	INST BLK	JMB3	26-JUN-2009 04:40	-----	s062509	1.0	INST BLK	
s6f2530.d	WBN090624-16	JMB3	26-JUN-2009 05:09	500 PPM	s062509	1.0	HEXICAL	
s6f2531.d	WBN090624-15	JMB3	26-JUN-2009 05:32	1000 PPM	s062509	1.0	HEXICAL	
s6f2532.d	WBN090624-14	JMB3	26-JUN-2009 05:54	1250 PPM	s062509	1.0	HEXICAL	DUSE bad inject
s6f2533.d	WBN090624-13	JMB3	26-JUN-2009 06:18	1500 PPM	s062509	1.0	HEXICAL	
s6f2534.d	WBN090624-12	JMB3	26-JUN-2009 06:40	1750 PPM	s062509	1.0	HEXICAL	
s6f2535.d	UBN090317-02.6	JMB3	26-JUN-2009 07:02	2000 PPM	s062509	1.0	HEXICAL	
s6f2536.d	UBN090428-01	JMB3	26-JUN-2009 07:24	10 PPM	s062509	1.0	NEVICAL	
s6f2537.d	UBN090428-02	JMB3	26-JUN-2009 07:47	20 PPM	s062509	1.0	NEVICAL	
s6f2538.d	UBN090428-03	JMB3	26-JUN-2009 08:09	40 PPM	s062509	1.0	NEVICAL	DUSE bad inject
s6f2539.d	UBN090428-04	JMB3	26-JUN-2009 08:31	50 PPM	s062509	1.0	NEVICAL	
s6f2540.d	UBN090428-05	JMB3	26-JUN-2009 08:54	80 PPM	s062509	1.0	NEVICAL	

s6f2541.d	UBN090428-06	JMB3	26-JUN-2009 09:17	100 PPM	s062509	1.0	NEVICAL	
s6f2542.d	UBN090428-07	JMB3	26-JUN-2009 09:39	120 PPM	s062509	1.0	NEVICAL	
s6f2543-D.d	WBN090624-10.1	JMB3	26-JUN-2009 10:01	1250 PPM	s062509	1.0	HEXICV	pass
s6f2543.d	WBN090624-10.1	JMB3	26-JUN-2009 10:01	1250 PPM	s062509	1.0	HEXICV	pass

Instrument Batch: /chem/MSD6.i/s062509.b

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Data file : /chem/MSD6.i/s070209.b/s6g0217.d
Lab Smp Id: 1201873127 Client Smp ID: CAMO-09-9946MS
Inj Date : 02-JUL-2009 19:30
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873127|881964|1|SVM|1|MS
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.19000	weight of sample
M	18.74130	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT STD MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.993	3.999	(1.000)	434735	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1644563	40.0000	
* 46 Acenaphthene-d10	164	6.134	6.134	(1.000)	931304	40.0000	
* 67 Phenanthrene-d10	188	7.310	7.316	(1.000)	1661789	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1548770	40.0000	
* 98 Perylene-d12	264	11.492	11.492	(1.000)	1413918	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.797)	503434	42.6230	1740
$ 5 Phenol-d5	99	3.710	3.710	(0.929)	685412	43.3192	1760
$ 20 Nitrobenzene-d5	82	4.357	4.363	(0.895)	318143	21.8369	890
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.915)	516368	21.8307	890
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.098)	166175	48.2657	1970
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	735579	29.7396	1210

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.722	3.722	(0.932)	350212	22.3461	911
8 2-Chlorophenol	128	3.863	3.863	(0.968)	272442	22.4456	915
11 1,4-Dichlorobenzene	146	4.004	4.010	(1.003)	149913	11.2070	457(R)
17 N-Nitrosodipropylamine	70	4.228	4.240	(1.059)	199912	21.6183	881(Q)
28 1,2,4-Trichlorobenzene	180	4.816	4.822	(0.989)	186002	17.0645	696
33 4-Chloro-3-methylphenol	107	5.222	5.216	(1.072)	283882	27.5313	1120
47 Acenaphthene	154	6.157	6.157	(1.004)	484810	22.7851	929
50 2,4-Dinitrotoluene	165	6.240	6.245	(1.017)	220752	27.7643	1130
52 4-Nitrophenol	139	6.187	6.175	(1.009)	131057	32.6439	1330
65 Pentachlorophenol	266	7.139	7.140	(0.977)	115700	25.4516	1040
79 Pyrene	202	8.598	8.598	(0.882)	1069763	27.7261	1130
2 Pyridine	79	2.534	2.505	(0.635)	219702	20.7349	845
4 Aniline	66	3.775	3.781	(0.945)	130146	18.4413	752(Q)
7 bis(2-Chloroethyl) ether	63	3.787	3.799	(0.948)	246317	20.2190	824
9 1,3-Dichlorobenzene	146	3.963	3.969	(0.993)	144211	10.4758	427(R)
12 Benzyl alcohol	108	4.122	4.069	(1.032)	390114	46.6820	1900(Q)
13 1,2-Dichlorobenzene	146	4.110	4.116	(1.029)	166509	13.6137	555(R)
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.037)	581360	21.6446	882(Q)
15 o-Cresol	107	4.122	4.116	(1.032)	313687	33.8331	1380(Q)
18 m,p-Cresols	107	4.216	4.222	(1.056)	361429	27.7288	1130
19 Hexachloroethane	117	4.346	4.346	(1.088)	46764	8.69151	354(aR)
21 Nitrobenzene	77	4.375	4.381	(0.899)	305928	23.0624	940
22 Isophorone	82	4.528	4.534	(0.930)	613310	24.5566	1000
23 2-Nitrophenol	139	4.593	4.593	(0.943)	131409	23.0751	941
24 2,4-Dimethylphenol	122	4.587	4.599	(0.942)	374943	22.1640	903
25 bis(2-Chloroethoxy)methane	93	4.646	4.652	(0.954)	330150	23.7001	966
26 2,4-Dichlorophenol	162	4.757	4.763	(0.977)	239258	24.8903	1010
27 Benzoic acid	105	4.628	4.640	(0.950)	200605	22.3887	913(Q)
30 Naphthalene	128	4.887	4.887	(1.004)	664727	17.8875	729
31 4-Chloroaniline	127	4.898	4.899	(1.006)	373653	23.9298	975
32 Hexachlorobutadiene	225	4.951	4.951	(1.017)	83553	12.6593	516(R)
34 2-Methylnaphthalene	142	5.369	5.369	(1.103)	461985	22.9376	935
36 Hexachlorocyclopentadiene	237	5.469	5.475	(0.892)	54577	11.2971	460
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.906)	180791	24.0626	981
38 2,4,5-Trichlorophenol	196	5.593	5.587	(0.912)	207608	26.2261	1070
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	497011	22.6261	922
42 o-Nitroaniline	65	5.781	5.781	(0.942)	240821	28.4490	1160
41 m-Nitroaniline	138	6.075	6.081	(0.990)	168345	30.9192	1260
43 Dimethylphthalate	163	5.881	5.887	(0.959)	664628	26.5344	1080
44 2,6-Dinitrotoluene	165	5.940	5.946	(0.968)	159762	26.8125	1090
45 Acenaphthylene	152	6.028	6.034	(0.983)	829345	24.5771	1000
48 2,4-Dinitrophenol	184	6.151	6.151	(1.003)	40466	14.7239	600(aQ)
49 Dibenzofuran	168	6.281	6.281	(1.024)	742251	25.4017	1040
51 Diethylphthalate	149	6.398	6.398	(1.043)	684965	27.5217	1120
53 Fluorene	166	6.545	6.545	(1.067)	570057	23.2195	946(R)
54 4-Chlorophenylphenylether	204	6.522	6.522	(1.063)	297596	24.8601	1010
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.897)	81423	20.7759	847

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.066)	162922	34.1787	1390
133 Diphenylamine	169	6.604	6.610	(0.903)	489736	23.6808	965
58 1,2-Diphenylhydrazine	77	6.645	6.645	(0.909)	778161	27.8457	1140
61 4-Bromophenylphenylether	248	6.910	6.910	(0.945)	180454	25.0998	1020
63 Hexachlorobenzene	284	6.987	6.987	(0.956)	195007	25.6698	1050
68 Phenanthrene	178	7.334	7.334	(1.003)	964900	26.1035	1060
69 Anthracene	178	7.375	7.375	(1.009)	1000512	26.9769	1100
72 Di-n-butylphthalate	149	7.734	7.728	(1.058)	1184760	28.7985	1170
76 Fluoranthene	202	8.381	8.381	(1.146)	1032729	27.6978	1130
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	530088	29.3640	1200
89 Benzo(a)anthracene	228	9.728	9.728	(0.998)	1006134	27.0762	1100
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	152141	13.0872	533(R)
92 Chrysene	228	9.769	9.769	(1.002)	973622	27.4084	1120
93 bis(2-Ethylhexyl)phthalate	149	9.657	9.651	(0.991)	726750	30.2850	1230
94 Di-n-octylphthalate	149	10.333	10.333	(0.899)	1206436	29.6018	1210
95 Benzo(b)fluoranthene	252	10.945	10.951	(0.952)	886939	26.3389	1070
96 Benzo(k)fluoranthene	252	10.980	10.986	(0.955)	980391	29.3895	1200
97 Benzo(a)pyrene	252	11.410	11.410	(0.993)	814962	27.9716	1140
99 Indeno(1,2,3-cd)pyrene	276	13.351	13.357	(1.162)	728677	26.3387	1070
100 Dibenzo(a,h)anthracene	278	13.369	13.374	(1.163)	610631	26.1352	1060
101 Benzo(ghi)perylene	276	13.921	13.927	(1.211)	594577	24.3583	993
1 N-Methyl-N-nitrosomethylamine	74	2.499	2.469	(0.626)	159555	21.7734	888

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD6.i/s070209.b/s6g0217.d
Date : 02-JUL-2009 19:30
Client ID: CAMO-09-9946MS
Sample Info: I120187312718819641|1|SVM1|MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JHB3
Column diameter: 0.20

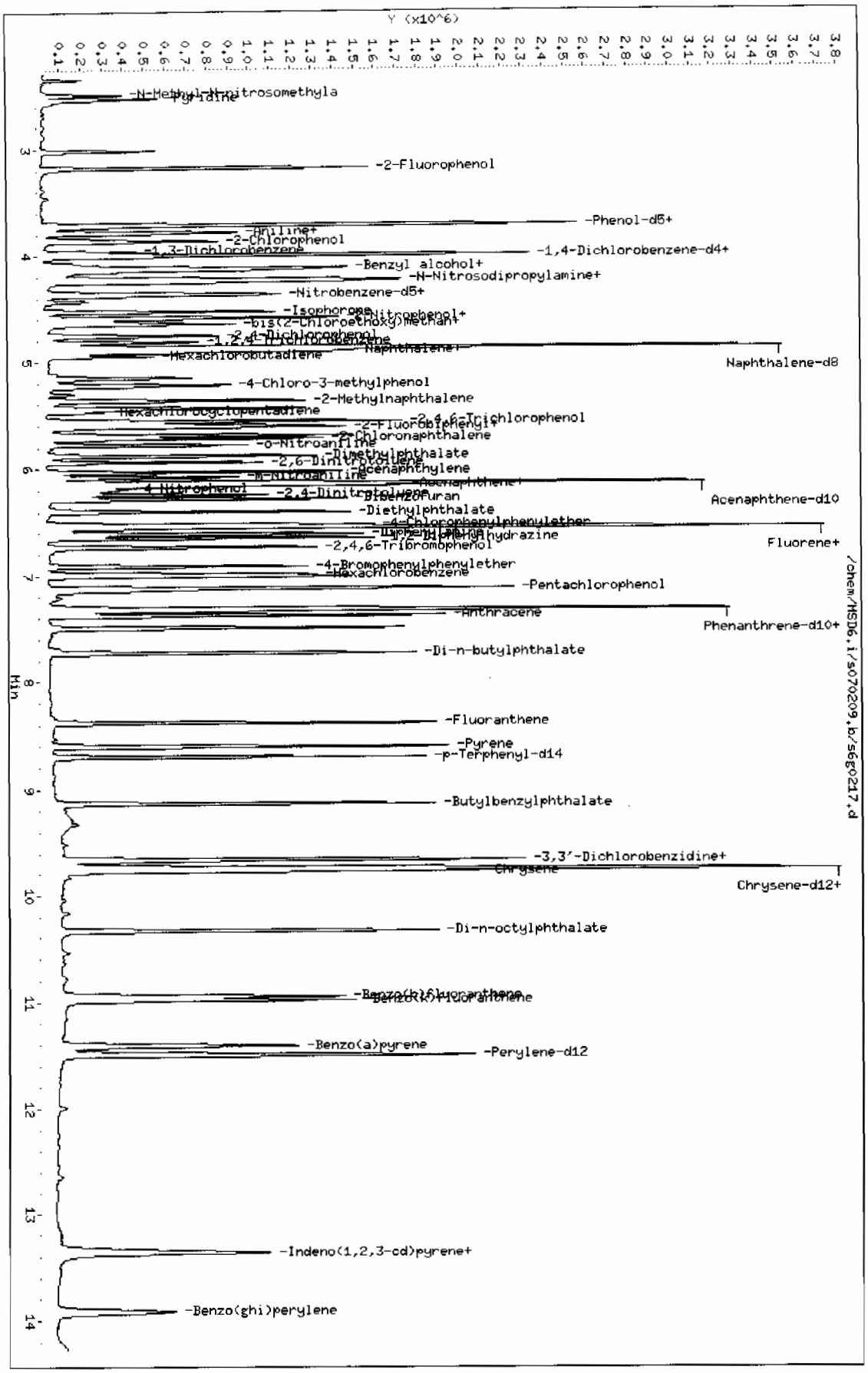

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Data file : /chem/MSD6.i/s070209.b/s6g0218.d
Lab Smp Id: 1201873128 Client Smp ID: CAMO-09-9946MSD
Inj Date : 02-JUL-2009 19:53
Operator : JMB3 Inst ID: MSD6.i
Smp Info : |1201873128|881964|1|SVM|1|MSD
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD6.i/s070209.b/MSD6-M8270C-AQA-062509.m
Meth Date : 02-Jul-2009 17:27 llo00884 Quant Type: ISTD
Cal Date : 26-JUN-2009 08:09 Cal File: s6f2538.d
Als bottle: 14 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2510.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.17000	weight of sample
M	18.74130	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.993	3.999	(1.000)	440612	40.0000	
* 29 Naphthalene-d8	136	4.869	4.875	(1.000)	1719388	40.0000	
* 46 Acenaphthene-d10	164	6.134	6.134	(1.000)	968859	40.0000	
* 67 Phenanthrene-d10	188	7.316	7.316	(1.000)	1683763	40.0000	
* 91 Chrysene-d12	240	9.745	9.745	(1.000)	1551911	40.0000	
* 98 Perylene-d12	264	11.492	11.492	(1.000)	1427959	40.0000	
$ 3 2-Fluorophenol	112	3.181	3.175	(0.797)	626183	52.3083	2130
$ 5 Phenol-d5	99	3.710	3.710	(0.929)	867531	54.0981	2210
$ 20 Nitrobenzene-d5	82	4.363	4.363	(0.896)	395059	25.9363	1060
$ 39 2-Fluorobiphenyl	172	5.610	5.616	(0.915)	645632	26.2376	1070
$ 60 2,4,6-Tribromophenol	329	6.734	6.734	(1.098)	199798	55.7823	2280
$ 81 p-Terphenyl-d14	244	8.698	8.698	(0.893)	812600	32.7871	1340

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.722	3.722	(0.937)	464493	29.2428	1190
8 2-Chlorophenol	128	3.863	3.863	(0.968)	357766	29.0820	1190
11 1,4-Dichlorobenzene	146	4.005	4.010	(1.003)	170417	12.5699	513(R)
17 N-Nitrosodipropylamine	70	4.234	4.240	(1.060)	261225	27.8719	1140(Q)
28 1,2,4-Trichlorobenzene	180	4.816	4.822	(0.989)	225980	19.8301	809
33 4-Chloro-3-methylphenol	107	5.222	5.216	(1.072)	360108	33.4040	1360
47 Acenaphthene	154	6.157	6.157	(1.004)	608077	27.4706	1120
50 2,4-Dinitrotoluene	165	6.240	6.245	(1.017)	264208	31.9418	1300
52 4-Nitrophenol	139	6.187	6.175	(1.009)	156120	37.3794	1520
65 Pentachlorophenol	266	7.140	7.140	(0.976)	141769	30.7795	1260
79 Pyrene	202	8.598	8.598	(0.882)	1235992	31.9696	1300
2 Pyridine	79	2.528	2.505	(0.633)	258463	24.0678	982
4 Aniline	66	3.775	3.781	(0.945)	161036	22.5140	918(Q)
7 bis(2-Chloroethyl) ether	63	3.787	3.799	(0.948)	311170	25.2018	1030
9 1,3-Dichlorobenzene	146	3.957	3.969	(0.991)	162607	11.6545	475(R)
12 Benzyl alcohol	108	4.075	4.069	(1.021)	65344	7.71498	315(aR)
13 1,2-Dichlorobenzene	146	4.110	4.116	(1.029)	190446	15.3631	627(R)
14 bis(2-Chloroisopropyl)ether	45	4.140	4.140	(1.037)	714675	26.2531	1070
15 o-Cresol	107	4.122	4.116	(1.032)	291888	31.0620	1270
18 m,p-Cresols	107	4.216	4.222	(1.056)	450029	34.0656	1390(Q)
19 Hexachloroethane	117	4.340	4.346	(1.087)	50141	9.19487	375(aR)
21 Nitrobenzene	77	4.375	4.381	(0.899)	398372	28.7244	1170
22 Isophorone	82	4.528	4.534	(0.930)	788198	30.1856	1230
23 2-Nitrophenol	139	4.593	4.593	(0.943)	168246	28.2581	1150
24 2,4-Dimethylphenol	122	4.587	4.599	(0.942)	477237	26.9833	1100
25 bis(2-Chloroethoxy)methane	93	4.646	4.652	(0.954)	426000	29.2500	1190
26 2,4-Dichlorophenol	162	4.757	4.763	(0.977)	311846	31.0299	1260
27 Benzoic acid	105	4.634	4.640	(0.952)	256949	27.4291	1120(Q)
30 Naphthalene	128	4.887	4.887	(1.004)	827086	21.2879	868
31 4-Chloroaniline	127	4.899	4.899	(1.006)	480825	29.4534	1200
32 Hexachlorobutadiene	225	4.952	4.951	(1.017)	97426	14.1189	576(R)
34 2-Methylnaphthalene	142	5.369	5.369	(1.103)	579247	27.5081	1120
36 Hexachlorocyclopentadiene	237	5.469	5.475	(0.892)	74192	14.7620	602
37 2,4,6-Trichlorophenol	196	5.557	5.557	(0.906)	232464	29.7409	1210
38 2,4,5-Trichlorophenol	196	5.593	5.587	(0.912)	257005	31.2078	1270
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	625194	27.3583	1120
42 o-Nitroaniline	65	5.781	5.781	(0.942)	301935	34.2860	1400
41 m-Nitroaniline	138	6.075	6.081	(0.990)	210987	37.2492	1520
43 Dimethylphthalate	163	5.881	5.887	(0.959)	822307	31.5570	1290
44 2,6-Dinitrotoluene	165	5.940	5.946	(0.968)	197723	31.8972	1300
45 Acenaphthylene	152	6.028	6.034	(0.983)	1039101	29.5995	1210
48 2,4-Dinitrophenol	184	6.151	6.151	(1.003)	60890	21.2965	869(Q)
49 Dibenzofuran	168	6.281	6.281	(1.024)	927181	30.5005	1240
51 Diethylphthalate	149	6.399	6.398	(1.043)	830080	32.0596	1310
53 Fluorene	166	6.546	6.545	(1.067)	696531	27.2713	1110
54 4-Chlorophenylphenylether	204	6.522	6.522	(1.063)	369237	29.6491	1210
55 2-Methyl-4,6-dinitrophenol	198	6.557	6.557	(0.896)	108932	26.5507	1080

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.066)	197361	39.7987	1620
133 Diphenylamine	169	6.610	6.610	(0.904)	582025	27.7761	1130
58 1,2-Diphenylhydrazine	77	6.646	6.645	(0.908)	922442	32.5779	1330
61 4-Bromophenylphenylether	248	6.910	6.910	(0.945)	217115	29.8051	1220
63 Hexachlorobenzene	284	6.987	6.987	(0.955)	234826	30.5080	1240
68 Phenanthrene	178	7.334	7.334	(1.002)	1155886	30.8622	1260
69 Anthracene	178	7.375	7.375	(1.008)	1148339	30.5587	1250
72 Di-n-butylphthalate	149	7.734	7.728	(1.057)	1366437	32.7811	1340
76 Fluoranthene	202	8.381	8.381	(1.146)	1196365	31.6678	1290
85 Butylbenzylphthalate	149	9.128	9.128	(0.937)	613373	33.9088	1380
89 Benzo(a)anthracene	228	9.728	9.728	(0.998)	1172607	31.4923	1280
90 3,3'-Dichlorobenzidine	252	9.675	9.675	(0.993)	183493	15.7522	642(R)
92 Chrysene	228	9.769	9.769	(1.002)	1142038	32.0844	1310
93 bis(2-Ethylhexyl)phthalate	149	9.651	9.651	(0.990)	842887	35.0535	1430
94 Di-n-octylphthalate	149	10.334	10.333	(0.899)	1416717	34.4196	1400
95 Benzo(b)fluoranthene	252	10.945	10.951	(0.952)	1126897	33.1358	1350
96 Benzo(k)fluoranthene	252	10.986	10.986	(0.956)	1060436	31.4765	1280
97 Benzo(a)pyrene	252	11.410	11.410	(0.993)	958190	32.5641	1330
99 Indeno(1,2,3-cd)pyrene	276	13.357	13.357	(1.162)	908384	32.5115	1330
100 Dibenzo(a,h)anthracene	278	13.369	13.374	(1.163)	783404	33.4476	1360
101 Benzo(ghi)perylene	276	13.922	13.927	(1.211)	762176	30.9174	1260
1 N-Methyl-N-nitrosomethylamine	74	2.493	2.469	(0.624)	204994	27.6011	1120

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD6.i/s070209.b/s6g0218.d
Date : 02-JUL-2009 19:53
Client ID: CAMO-09-9946MSD
Sample Info: 1201873128188196411ISWH11MSD
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD6.i
Operator: JHB3
Column diameter: 0.20

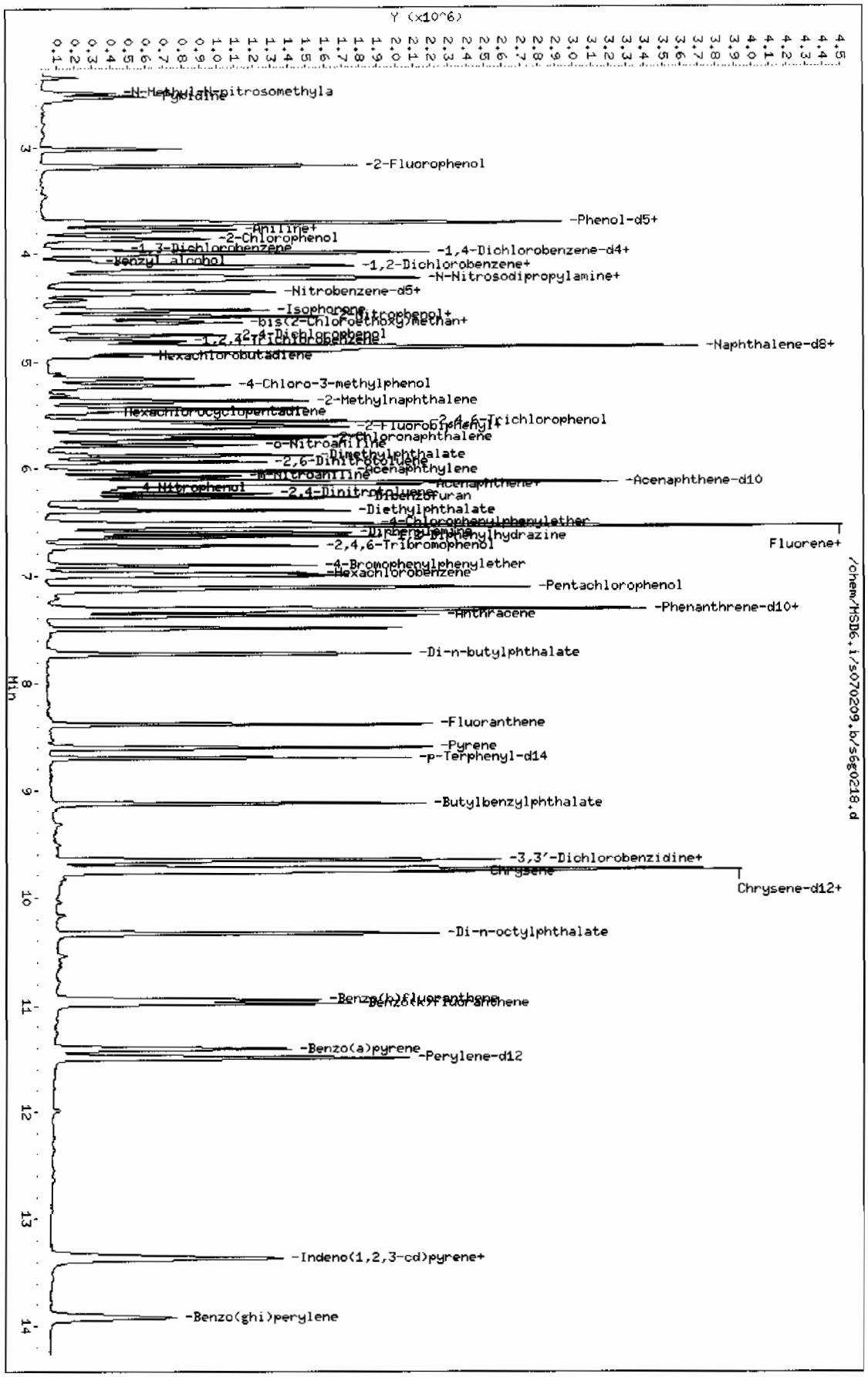

Page 1

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2506

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881646
Prep Batch Number:	881643

Sample Analysis

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201872346	Interference Check Sample (ICS)
1201872342	Method Blank (MB)
1201872343	Laboratory Control Sample (LCS)
1201872344	232591001(CAMO-09-9946) Matrix Spike (MS)
1201872345	232591001(CAMO-09-9946) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

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Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232591001 (CAMO-09-9946) from SDG 09-2510 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

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Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert M Mauer **Date:** 07/13/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6605

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 232585001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 93.4

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	0.535	ug/kg	U	1	08-JUL-09 20:05	per0708059a
	Perchlorate-O(18)			5.16	ug/kg		1	08-JUL-09 20:05	per0708059a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6603

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 232585002

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 92.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.539	2.16	0.655	ug/kg	J	1	08-JUL-09 20:13	per0708060a
	Perchlorate-O(18)			5.27	ug/kg		1	08-JUL-09 20:13	per0708060a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6604

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 232585003

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.558	2.23	1.12	ug/kg	J	1	08-JUL-09 20:21	per0708061a
	Perchlorate-O(18)			5.55	ug/kg		1	08-JUL-09 20:21	per0708061a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2506

Extract Batch Code: 881643

Date Filtered: 01–JUL–09

Matrix: SOIL

Sample ID: 1201872343

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.04	ug/kg	102		70 – 130
Perchlorate–O(18)		4.78	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2506

Extract Batch Code: 881643

Date Filtered: 01–JUL–09

Matrix: SOIL

Sample ID: 1201872346

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.15	ug/kg	108		70 – 130
Perchlorate–O(18)		5.09	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708047a
Date: 08-Jul-2009
Time: 18:32:44
ID: 1201872346
Vial: 2:1,C

|LANL|881646|50120|IC5|1|

07-09-09

Perchlorate

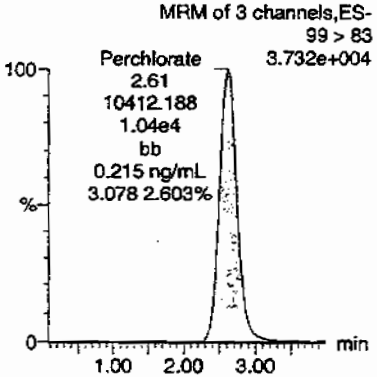

Perchlorate

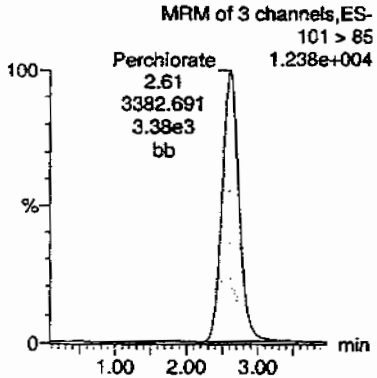

Perchlorate-101

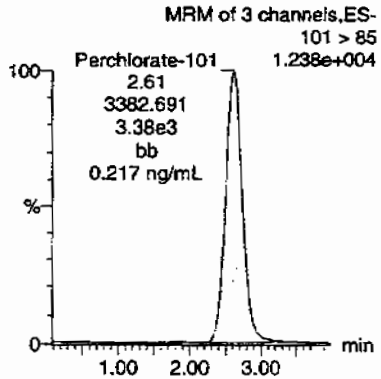

Perchlorate-O(18)

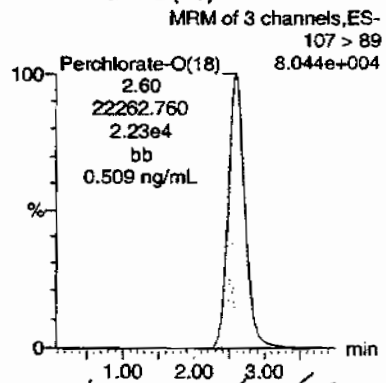

dmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872346	Perchlorate	99 > 83	2.61	10412.188	10412.188	bb			0.2154	107.71	7.71	2796.1...	3.08
1201872346	Perchlorate-101	101 > 85	2.61	3382.691	3382.691	bb			0.2173	108.63	8.63	1805.9...	
1201872346	Perchlorate-O(18)	107 > 89	2.60	22262.760	22262.760	bb			0.5086	101.72	1.72	10354....	

499

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2506

Extract Batch Code: 881643

Date Extracted: 01–JUL–09

GEL MS/PS ID: 1201872344

Client ID: CAMO–09–9946

GEL MSD/PSD ID: 1201872345

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.46	0.218	ug/kg	2.74	102	2.79	105	1.92	30	75 – 125
Perchlorate–O(18)	0	6.38	ug/kg	6.24		6.22		.283		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2506

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08–JUL–09	per0708001a	IPB001
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708001a	IPB001
Perchlorate	0.00	0	NA	08–JUL–09	per0708002a	IPB001
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708002a	IPB001

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Name: per0708001a
Date: 08-Jul-2009
Time: 12:35:59
ID: IPB001
Vial: 1:1,A

AWW 07-09-09

Perchlorate

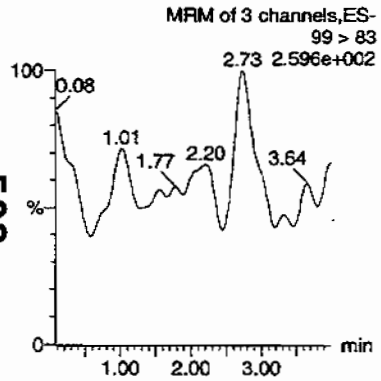

Perchlorate

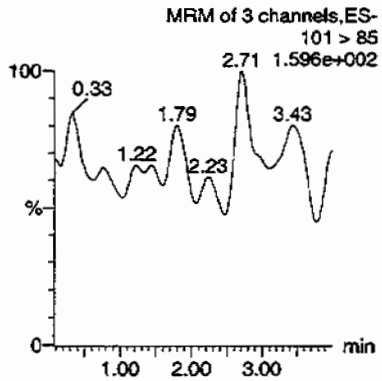

Perchlorate-101

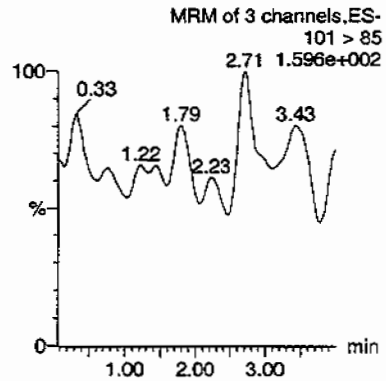

Perchlorate-O(18)

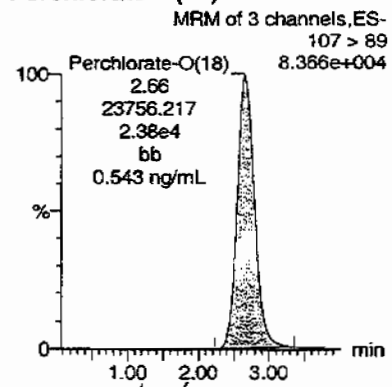

dww 08/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.66	23756.217	23756.217	bb			0.5427	108.54	8.54	2563.6...	

502

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708002a
Date: 08-Jul-2009
Time: 12:43:43
ID: IPB001
Vial: 1:1,A

AWJ
07-09-09

Perchlorate

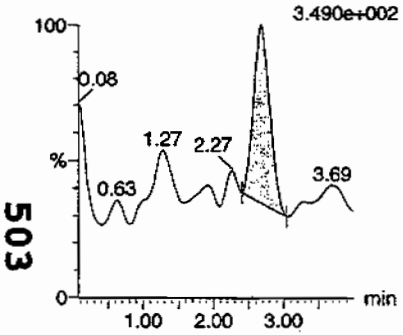

Perchlorate

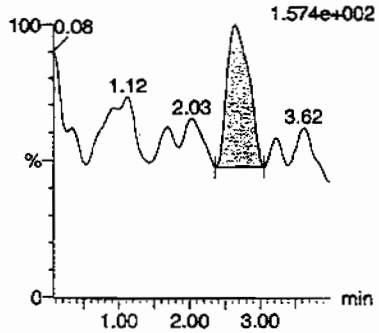

Perchlorate-101

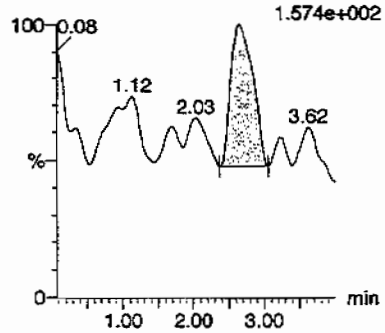

Perchlorate-O(18)

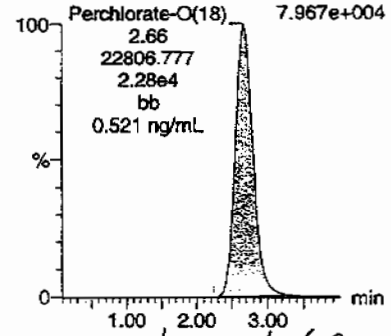

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.68	62.756	62.756	bb			0.0013			9.964	2.10
IPB001	Perchlorate-101	101 > 85	2.64	29.952	29.952	bb			0.0019			7.781	
IPB001	Perchlorate-O(18)	107 > 89	2.66	22806.777	22806.777	bb			0.5210	104.21	4.21	7277.3...	

AWJ
07-09-09

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2506

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08–JUL–09	per0708008a	IPB002
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708008a	IPB002
Perchlorate	0.00	0	NA	08–JUL–09	per0708010a	IPB003
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708010a	IPB003
Perchlorate	0.00	0	NA	08–JUL–09	per0708023a	IPB004
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708023a	IPB004
Perchlorate	0.00	0	NA	08–JUL–09	per0708034a	IPB005
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708034a	IPB005
Perchlorate	0.00	0	NA	08–JUL–09	per0708043a	IPB006
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708043a	IPB006
Perchlorate	0.00	0	NA	08–JUL–09	per0708055a	IPB007
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708055a	IPB007
Perchlorate	0.00	0	NA	08–JUL–09	per0708066a	IPB008

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2506

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708066a	IPB008

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708008a
Date: 08-Jul-2009
Time: 13:30:03
ID: IPB002
Vial: 1:1,A

CWW 07-07-09

Perchlorate

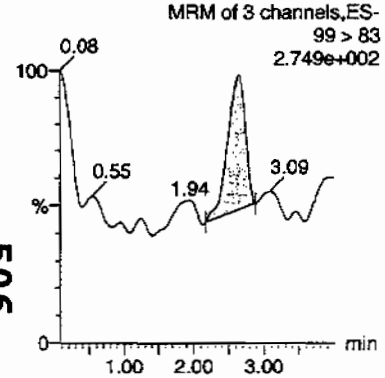

Perchlorate

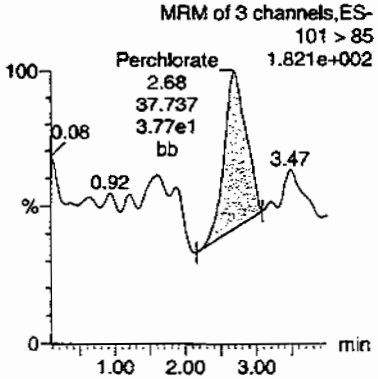

Perchlorate-101

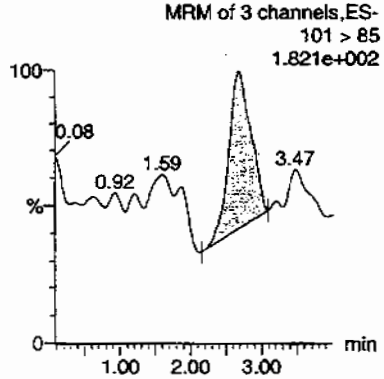

Perchlorate-O(18)

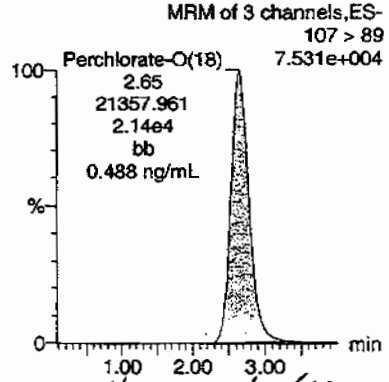

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.64	40.789	40.789	bb			0.0008			16.642	1.08
IPB002	Perchlorate-101	101 > 85	2.68	37.737	37.737	bb			0.0024			9.640	
IPB002	Perchlorate-O(18)	107 > 89	2.65	21357.961	21357.961	bb			0.4879	97.59	-2.41	8484.7...	

OKAY
LO.0500

506

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708010a
Date: 08-Jul-2009
Time: 13:45:31
ID: IPB003
Vial: 1:1,A

CWW
07-09-09

Perchlorate

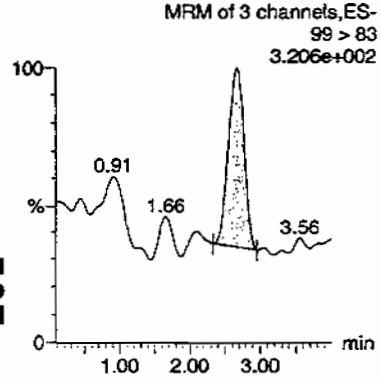

Perchlorate

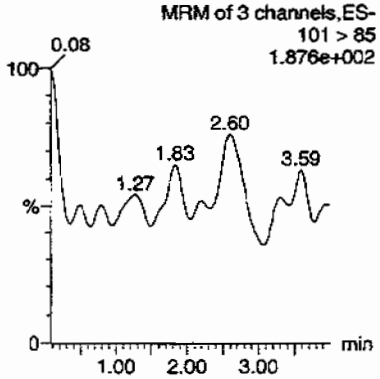

Perchlorate-101

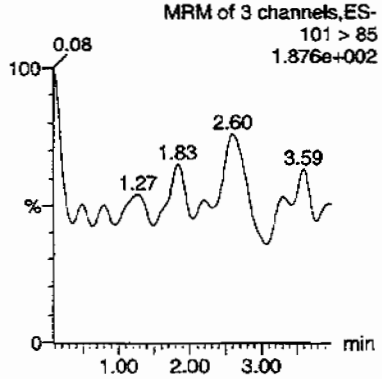

Perchlorate-O(18)

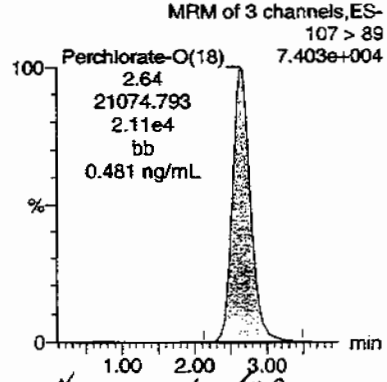

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.66	56.577	56.577	bb			0.0012			14.377	0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	2.64	21074.793	21074.793	bb			0.4815	96.29	-3.71	1018.8...	

507

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708023a
Date: 08-Jul-2009
Time: 15:26:24
ID: IPB004
Vial: 1:1,A

CWW 07-09-09

Perchlorate

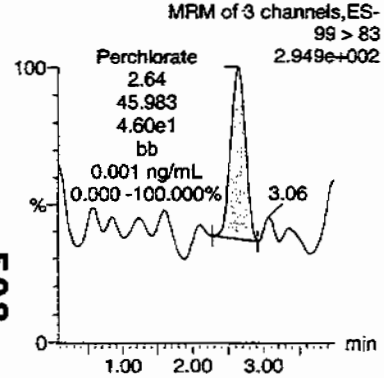

Perchlorate

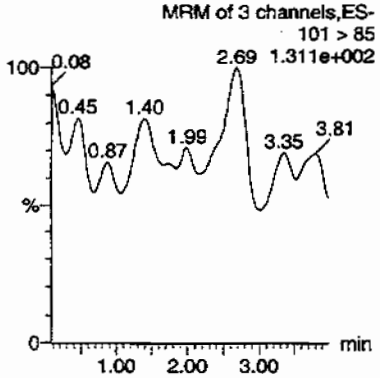

Perchlorate-101

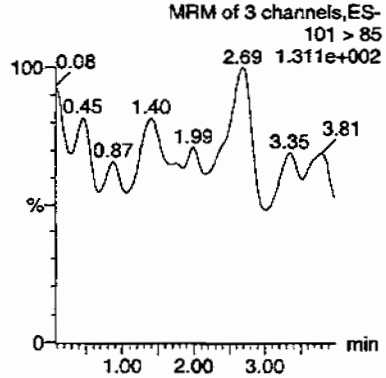

Perchlorate-O(18)

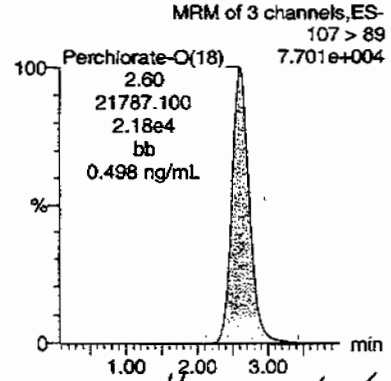

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.64	45.983	45.983	bb			0.0010			14.762	0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	2.60	21787.100	21787.100	bb			0.4977	99.55	-0.45	5673.5...	

508

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708034a
Date: 08-Jul-2009
Time: 16:51:46
ID: IPB005
Vial: 1:1,A

CWW 07-09-09

Perchlorate

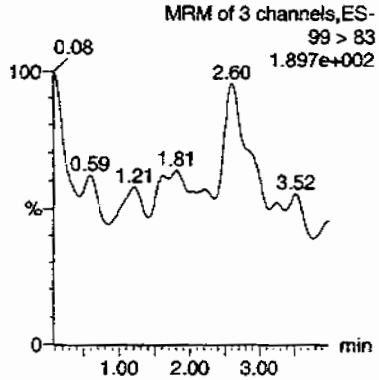

Perchlorate

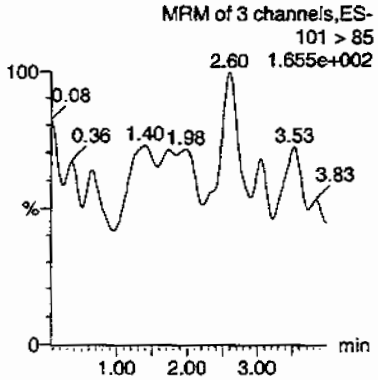

Perchlorate-101

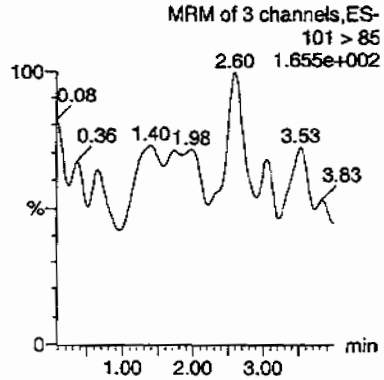

Perchlorate-O(18)

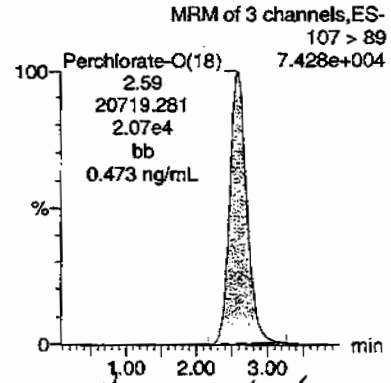

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.59	20719.281	20719.281	bb			0.4733	94.67	-5.33	6050.7...	

509

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708043a
Date: 08-Jul-2009
Time: 18:01:32
ID: IPB006
Vial: 1:1,A

CWW 07-09-09

Perchlorate

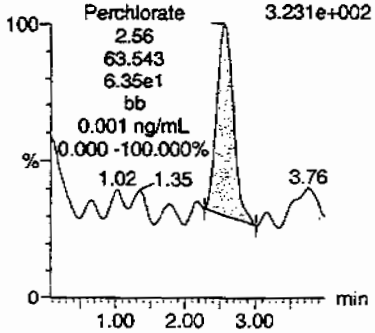

Perchlorate

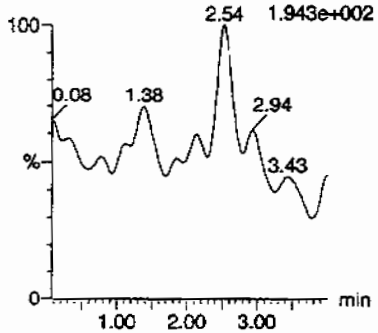

Perchlorate-101

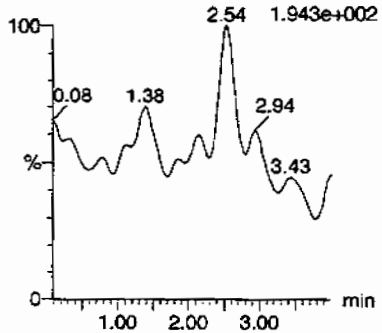

Perchlorate-O(18)

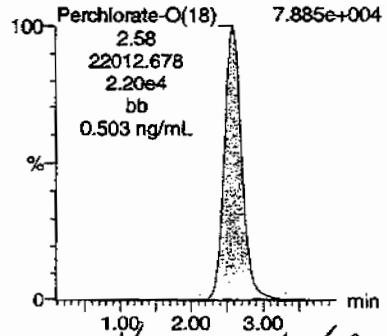

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	2.56	63.543	63.543	bb			0.0013			22.698	0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	2.58	22012.678	22012.678	bb			0.5029	100.58	0.58	3651.4...	

510

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708055a
Date: 08-Jul-2009
Time: 19:34:48
ID: IPB007
Vial: 1:1,A

CWW 07-09-09

Perchlorate

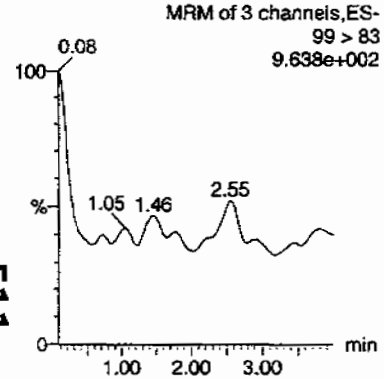

Perchlorate

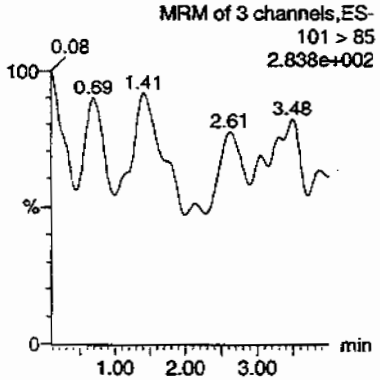

Perchlorate-101

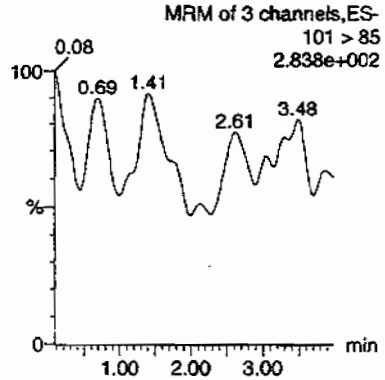

Perchlorate-O(18)

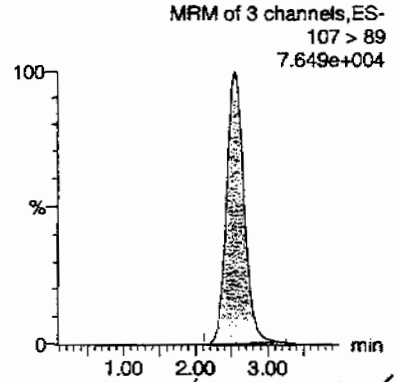

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83											0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	2.54	21404.643	21404.643	bb			0.4890	97.80	-2.20	2876.2...	

511

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708066a
Date: 08-Jul-2009
Time: 21:00:22
ID: IPB008
Vial: 1:1,A

07-01-09

Perchlorate

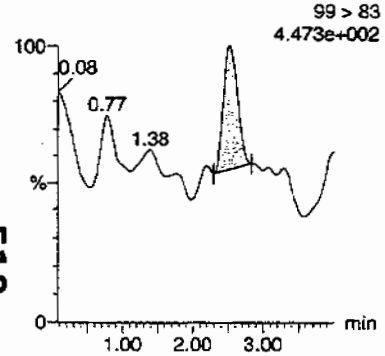

Perchlorate

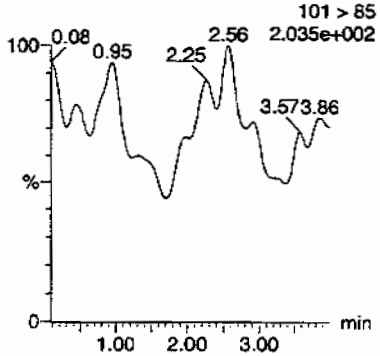

Perchlorate-101

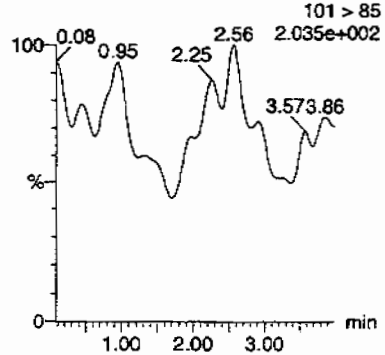

Perchlorate-O(18)

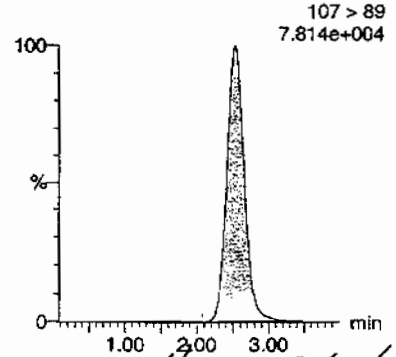

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83	2.53	48.016	48.016	bb			0.0010			5.114	0.00
IPB008	Perchlorate-101	101 > 85											
IPB008	Perchlorate-O(18)	107 > 89	2.53	21856.988	21856.988	bb			0.4993	99.87	-0.13	4600.7...	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWW 01-09-08

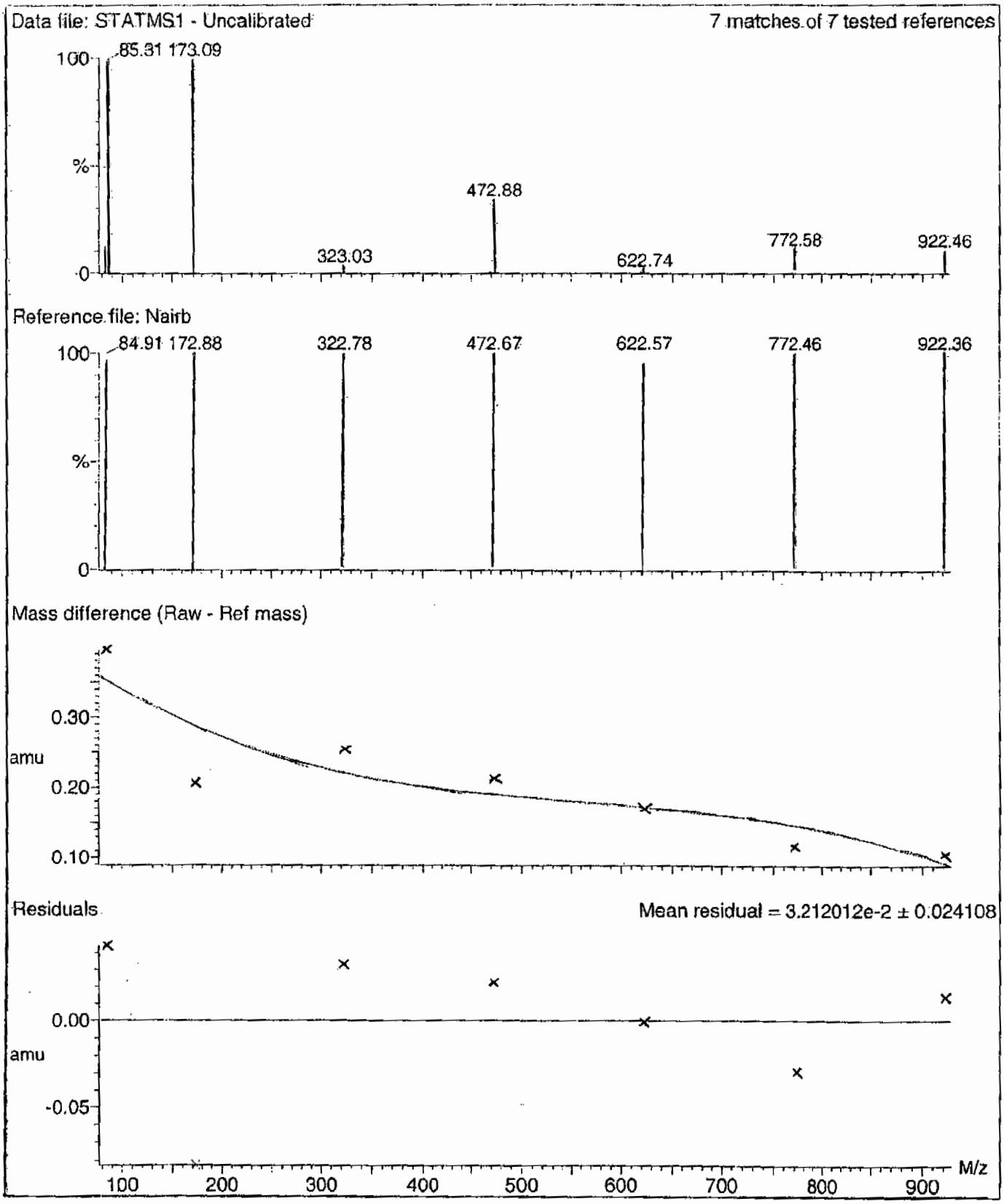

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

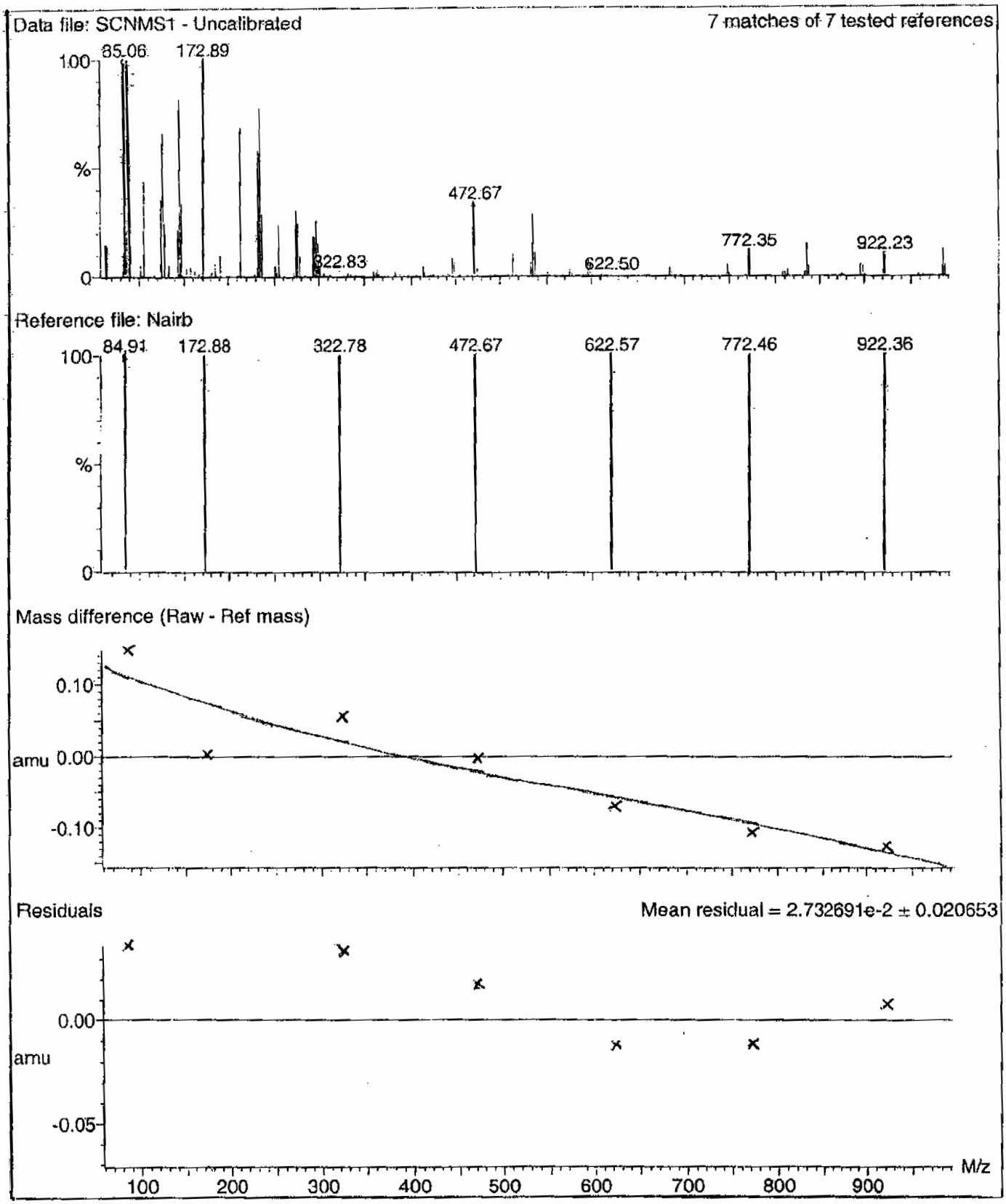

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Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

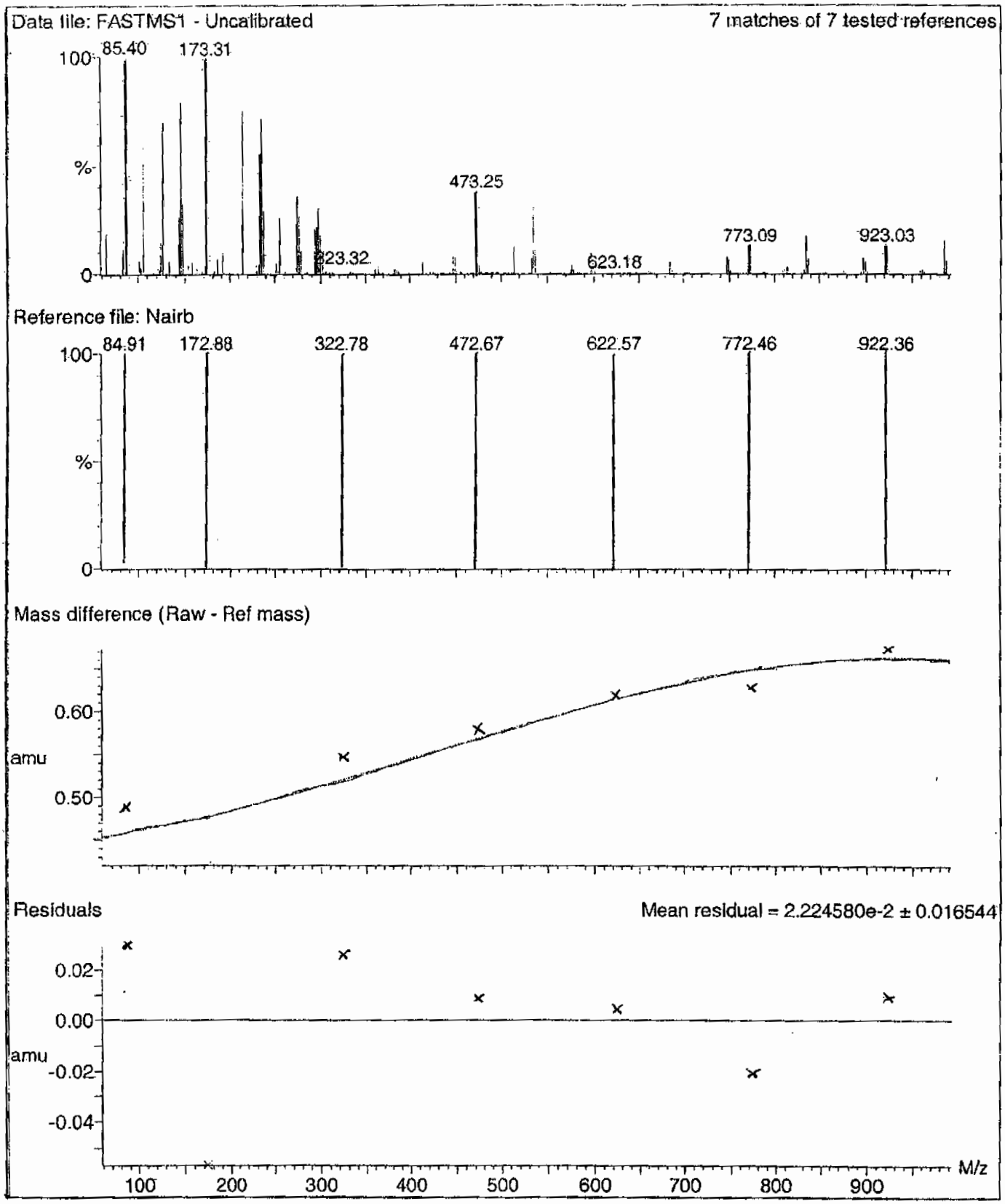

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Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

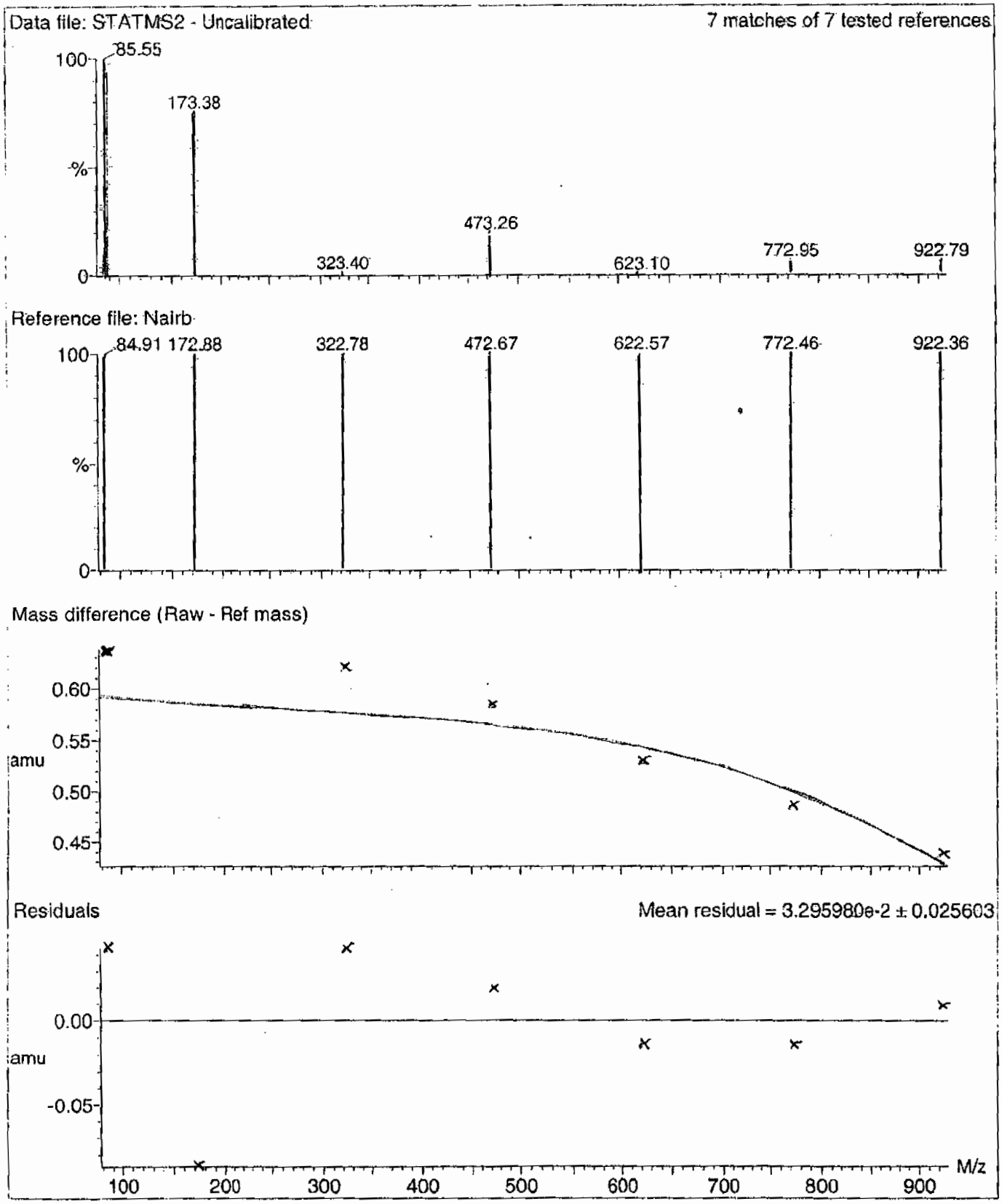

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Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

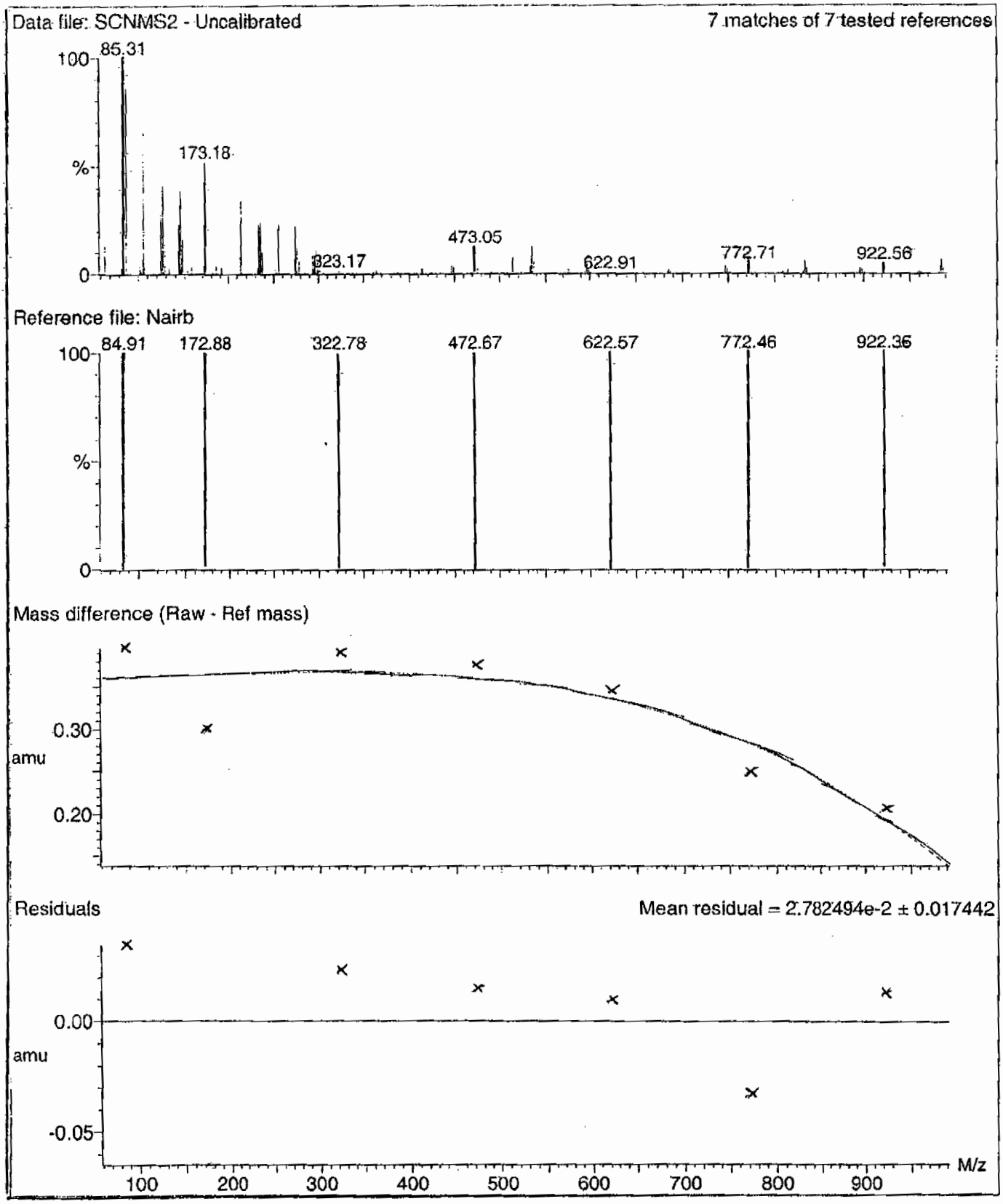

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Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

Data file: FASTMS2 - Uncalibrated

7 matches of 7 tested references

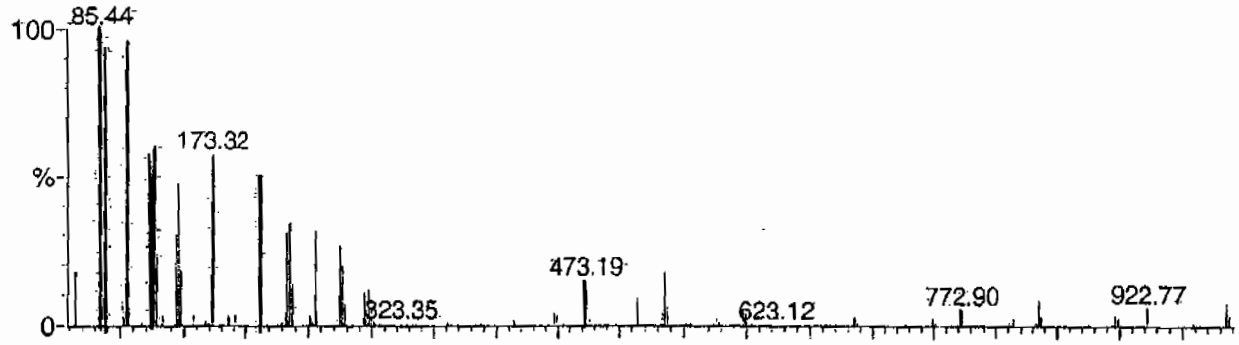

Reference file: Nairb

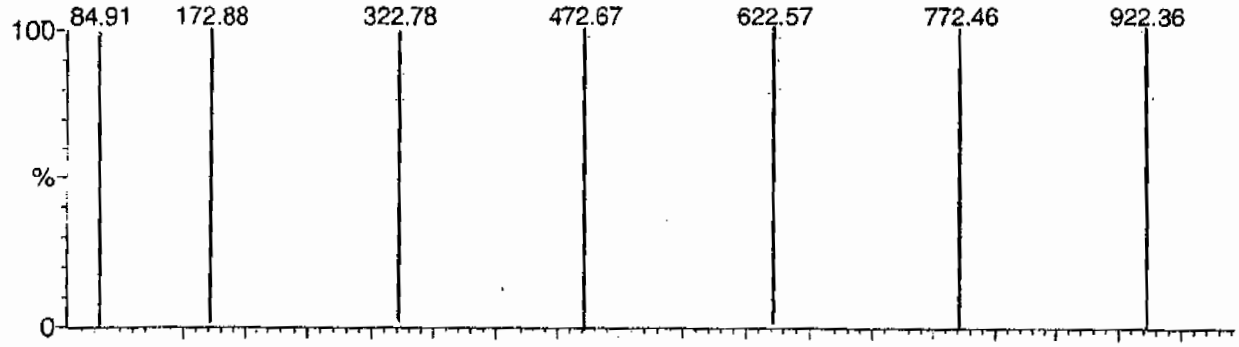

Mass difference (Raw - Ref mass)

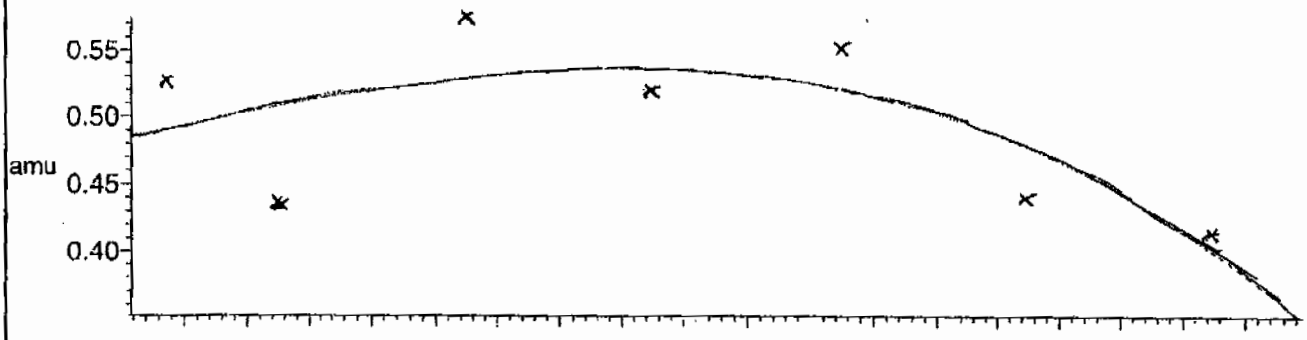

Residuals

Mean residual = 3.598289e-2 ± 0.017899

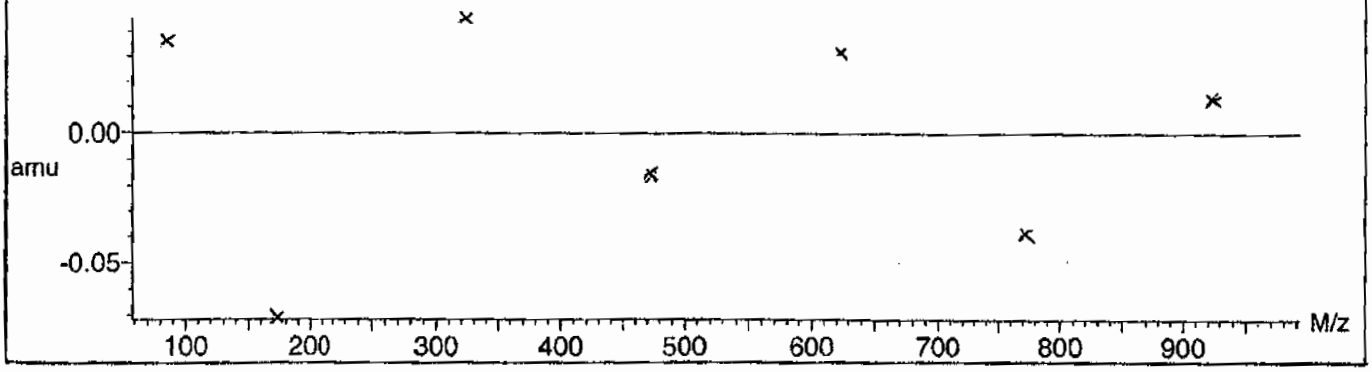

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File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Wednesday, July 08, 2009 11:04:53 Eastern Daylight Time

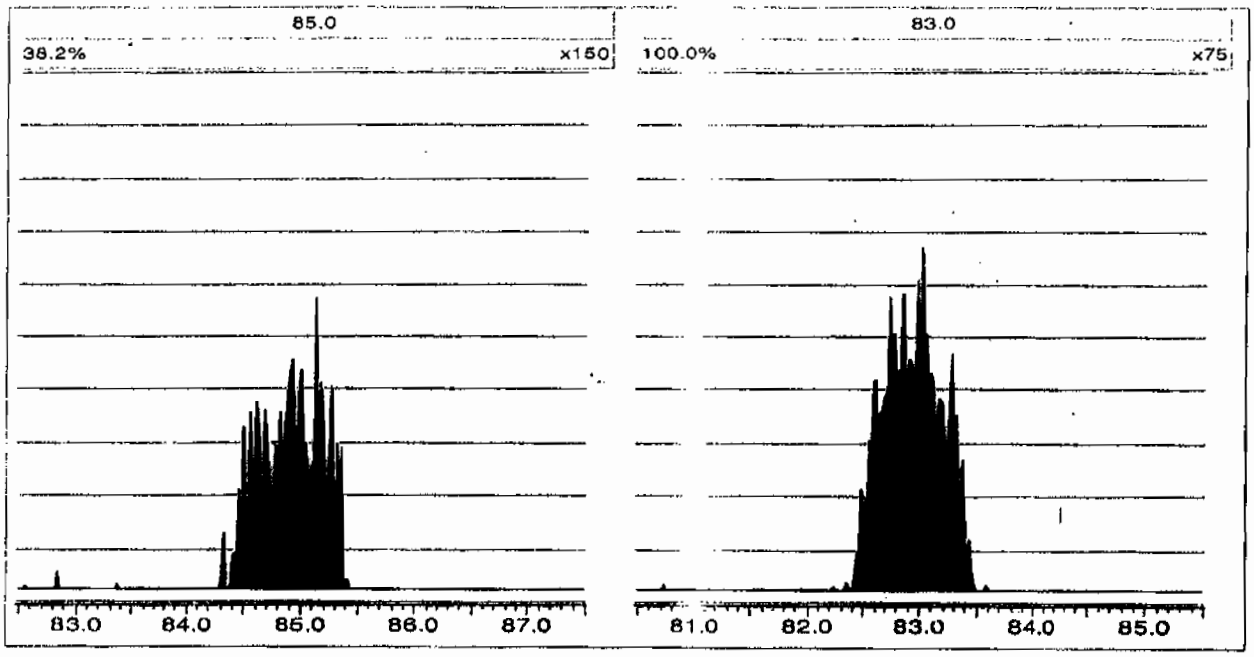

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2506

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0708006a**	**08–JUL–09**	**20767.2**				
Lower Area Limit			**10383.6**				
Upper Area Limit			**41534.4**				
1201872342	per0708045a	08–JUL–09 18:17	20710.1	2.56	2.5884	1.011	
1201872343	per0708046a	08–JUL–09 18:25	20944.1	2.58	2.5884	1.003	
1201872346	per0708047a	08–JUL–09 18:32	22262.8	2.6	2.6134	1.005	
232585001	per0708059a	08–JUL–09 20:05	21084	2.54	2.55122	1.004	
232585002	per0708060a	08–JUL–09 20:13	21368.3	2.54	2.55115	1.004	
232585003	per0708061a	08–JUL–09 20:21	21754.6	2.54	2.55115	1.004	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6605

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 232585001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 93.4

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	0.535	ug/kg	U	1	08-JUL-09 20:05	per0708059a
	Perchlorate-O(18)			5.16	ug/kg		1	08-JUL-09 20:05	per0708059a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708059a
Date: 08-Jul-2009
Time: 20:05:56
ID: 232585001
Vial: 2:2,F

|LANL| 881646 |SOLZO|1|

07-09-09

Perchlorate

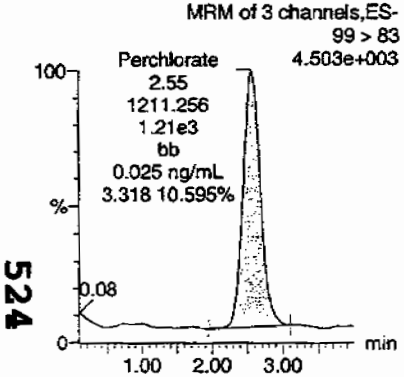

Perchlorate

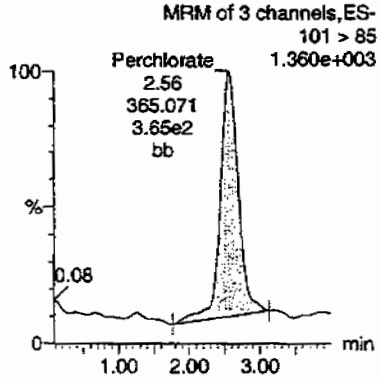

Perchlorate-101

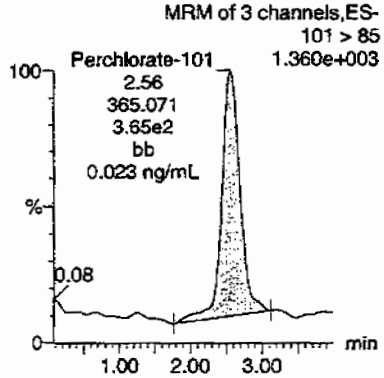

Perchlorate-O(18)

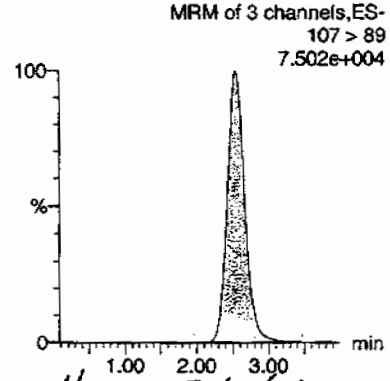

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232585001	Perchlorate	99 > 83	2.55	1211.256	1211.256	bb			0.0251			131.879	3.32
232585001	Perchlorate-101	101 > 85	2.56	365.071	365.071	bb			0.0234			96.715	
232585001	Perchlorate-O(18)	107 > 89	2.54	21084.016	21084.016	bb			0.4817	96.33	-3.67	13554....	

524

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6603

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 232585002

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 92.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.539	2.16	0.655	ug/kg	J	1	08-JUL-09 20:13	per0708060a
	Perchlorate-O(18)			5.27	ug/kg		1	08-JUL-09 20:13	per0708060a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708060a
Date: 08-Jul-2009
Time: 20:13:40
ID: 232585002
Vial: 2:3,A

LANL | 881646 | 5020 | 1

AWO 07-09-09

Perchlorate

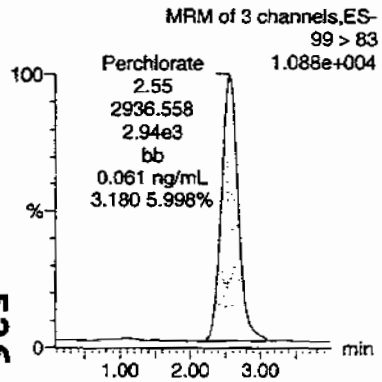

Perchlorate

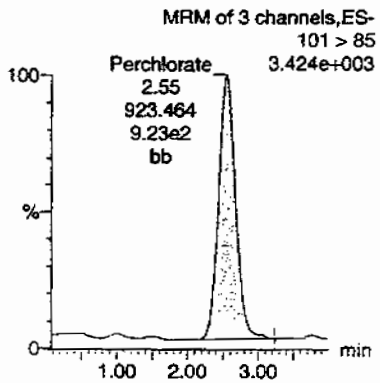

Perchlorate-101

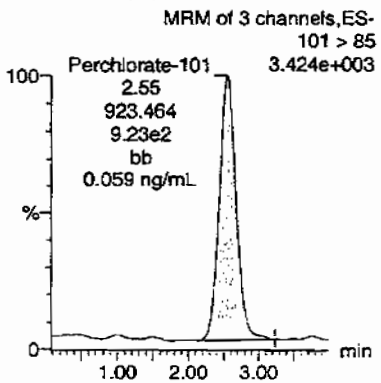

Perchlorate-O(18)

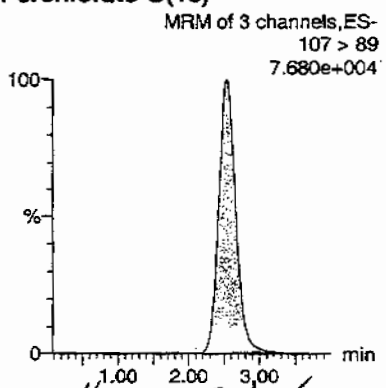

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec.	%Dev	S/N	Ion Ratio
232585002	Perchlorate	99 > 83	2.55	2936.558	2936.558	bb			0.0608			503.596	3.18
232585002	Perchlorate-101	101 > 85	2.55	923.464	923.464	bb			0.0593			150.203	
232585002	Perchlorate-O(18)	107 > 89	2.54	21368.279	21368.279	bb			0.4882	97.63	-2.37	5750.2...	

526

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6604

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 232585003

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.558	2.23	1.12	ug/kg	J	1	08-JUL-09 20:21	per0708061a
	Perchlorate-O(18)			5.55	ug/kg		1	08-JUL-09 20:21	per0708061a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708061a
Date: 08-Jul-2009
Time: 20:21:25
ID: 232585003
Vial: 2:3,B

|LAWL|881646|5020|1|

07-09-09

Perchlorate

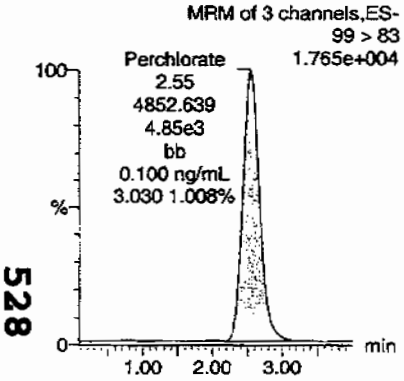

Perchlorate

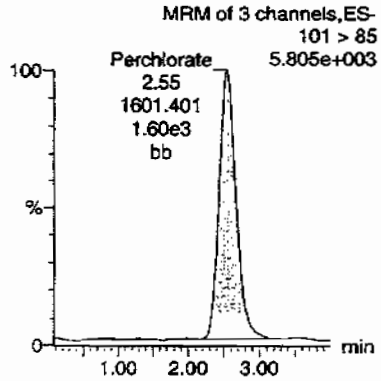

Perchlorate-101

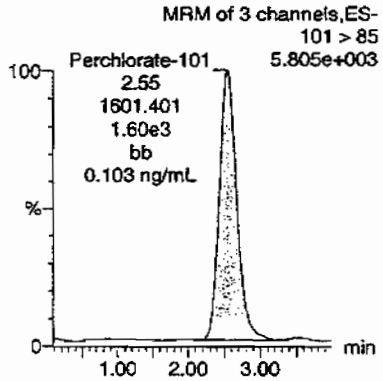

Perchlorate-O(18)

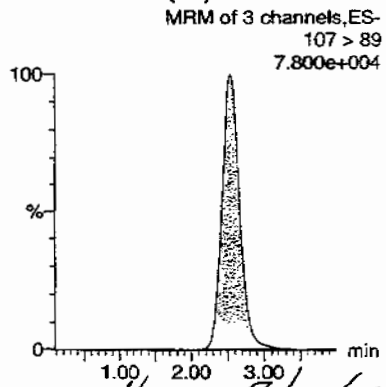

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232585003	Perchlorate	99 > 83	2.55	4852.639	4852.639	bb			0.1004			513.203	3.03
232585003	Perchlorate-101	101 > 85	2.55	1601.401	1601.401	bb			0.1028			239.712	
232585003	Perchlorate-O(18)	107 > 89	2.54	21754.561	21754.561	bb			0.4970	99.40	-0.60	8025.9...	

528

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2506

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08-JUL-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 48333.4

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2506

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08-JUL-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 15570.4

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Compound name: Perchlorate
Response Factor: 48333.4
RRF SD: 3128.21, % Relative SD: 6.47216
Response type: External Std, Area
Curve type: RF

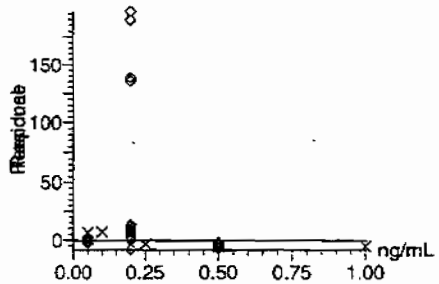

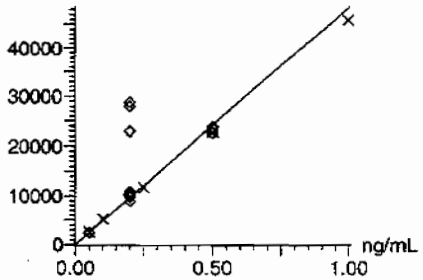

AW
07-09-09

532

Compound name: Perchlorate-101
Response Factor: 15570.4
RRF SD: 1259.19, % Relative SD: 8.08705
Response type: External Std, Area
Curve type: RF

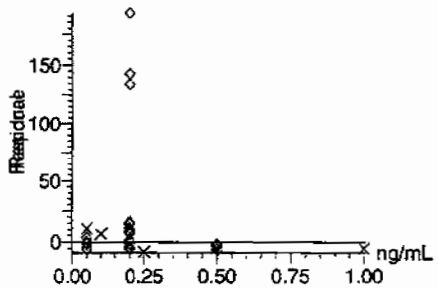

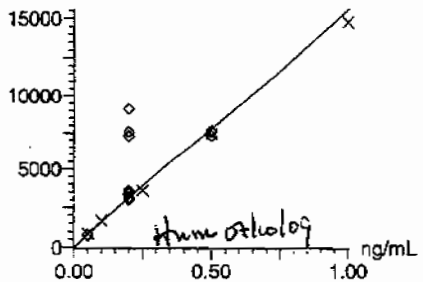

Hume 07/10/09

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 43772.6
RRF SD: 1463.7, % Relative SD: 3.34387
Response type: External Std, Area
Curve type: RF

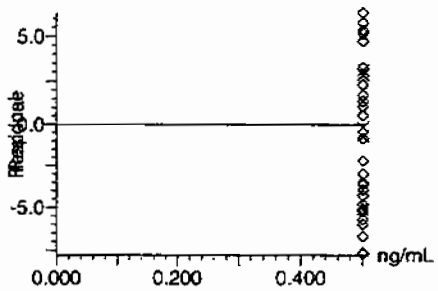

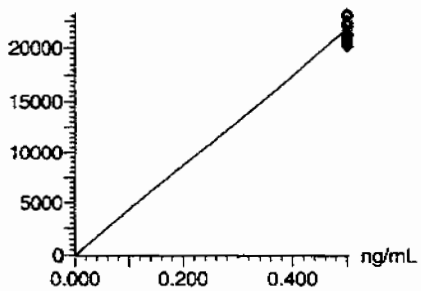

533

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2506

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	93.91	08–JUL–09 13:37	per0708009a
Perchlorate Isotope Ratio		2.99		08–JUL–09 13:37	per0708009a
Perchlorate–101	.5	.49	97.64	08–JUL–09 13:37	per0708009a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708009a
Date: 08-Jul-2009
Time: 13:37:46
ID: WCL090706-06ICV
Vial: 1:2,A

Pass
CWW
07-09-09

535

Perchlorate

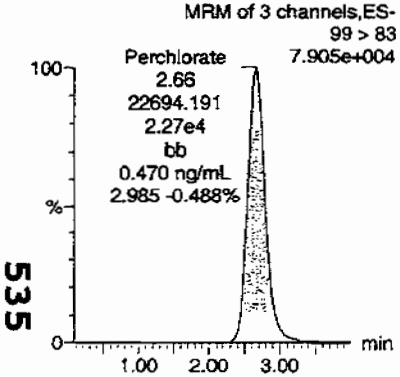

Perchlorate

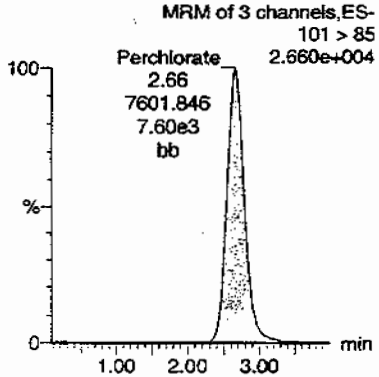

Perchlorate-101

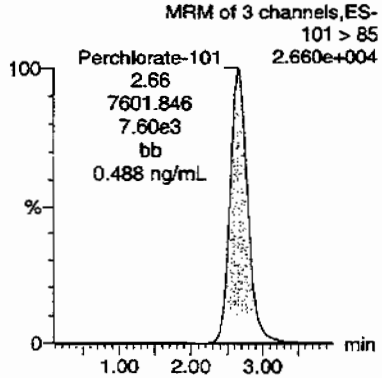

Perchlorate-O(18)

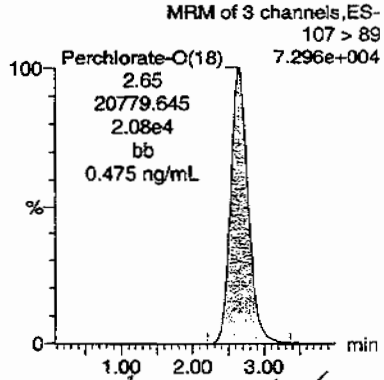

AMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06ICV	Perchlorate	99 > 83	2.66	22694.191	22694.191	bb			0.4695	93.91	-6.09	2453.8...	2.99
WCL090706-06ICV	Perchlorate-101	101 > 85	2.66	7601.846	7601.846	bb			0.4882	97.64	-2.36	2701.9...	
WCL090706-06ICV	Perchlorate-O(18)	107 > 89	2.65	20779.645	20779.645	bb			0.4747	94.94	-5.06	3233.6...	

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2506

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.46	92.96	08–JUL–09 15:18	per0708022a
Perchlorate Isotope Ratio		3.07		08–JUL–09 15:18	per0708022a
Perchlorate–101	.5	.47	94.1	08–JUL–09 15:18	per0708022a
Perchlorate	.5	.49	97.48	08–JUL–09 16:44	per0708033a
Perchlorate Isotope Ratio		3.09		08–JUL–09 16:44	per0708033a
Perchlorate–101	.5	.49	97.78	08–JUL–09 16:44	per0708033a
Perchlorate	.5	.49	97.63	08–JUL–09 17:53	per0708042a
Perchlorate Isotope Ratio		3.08		08–JUL–09 17:53	per0708042a
Perchlorate–101	.5	.49	98.44	08–JUL–09 17:53	per0708042a
Perchlorate	.5	.49	98.38	08–JUL–09 19:26	per0708054a
Perchlorate Isotope Ratio		3.1		08–JUL–09 19:26	per0708054a
Perchlorate–101	.5	.49	98.62	08–JUL–09 19:26	per0708054a
Perchlorate	.5	.48	95.92	08–JUL–09 20:52	per0708065a

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2506

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate Isotope Ratio		3.08		08-JUL-09 20:52	per0708065a
Perchlorate-101	.5	.48	96.73	08-JUL-09 20:52	per0708065a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708022a
Date: 08-Jul-2009
Time: 15:18:39
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
ans
07-09-09

Perchlorate

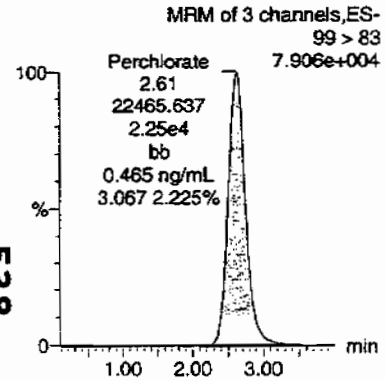

Perchlorate

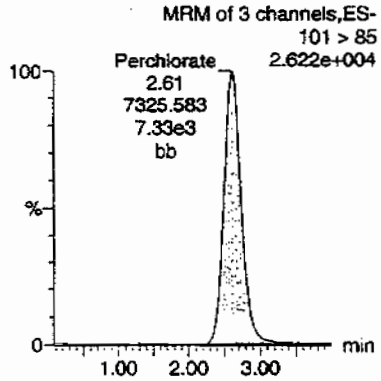

Perchlorate-101

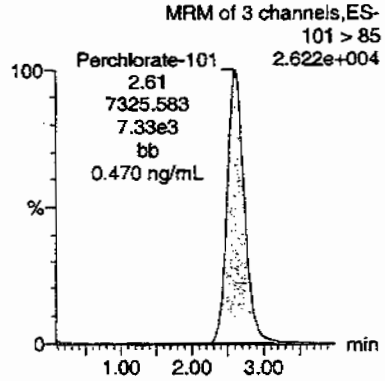

Perchlorate-O(18)

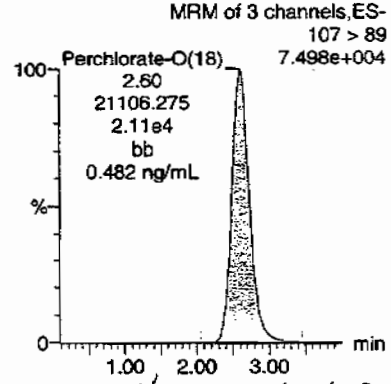

538

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.61	22465.637	22465.637	bb			0.4648	92.96	-7.04	5659.4...	3.07
WCL090706-06CCV	Perchlorate-101	101 > 85	2.61	7325.583	7325.583	bb			0.4705	94.10	-5.90	675.146	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.60	21106.275	21106.275	bb			0.4822	96.44	-3.56	2111.2...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708033a
Date: 08-Jul-2009
Time: 16:44:02
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
and
07-09-09

Perchlorate

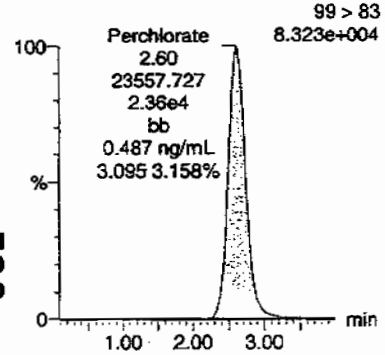

Perchlorate

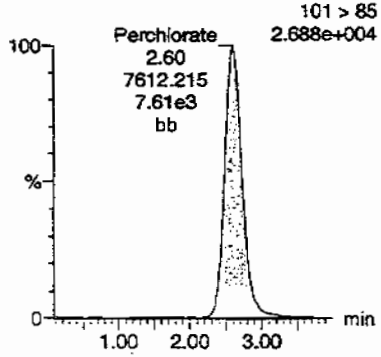

Perchlorate-101

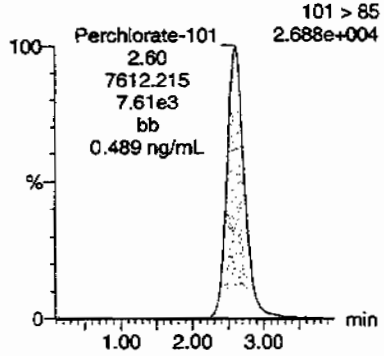

Perchlorate-O(18)

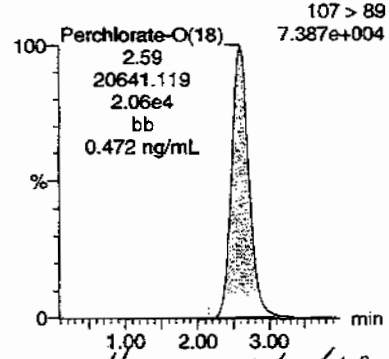

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.60	23557.727	23557.727	bb			0.4874	97.48	-2.52	5212.1...	3.09
WCL090706-06CCV	Perchlorate-101	101 > 85	2.60	7612.215	7612.215	bb			0.4889	97.78	-2.22	3842.9...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.59	20641.119	20641.119	bb			0.4716	94.31	-5.69	4254.1...	

539

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708042a
Date: 08-Jul-2009
Time: 17:53:47
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
ana
07-09-09

Perchlorate

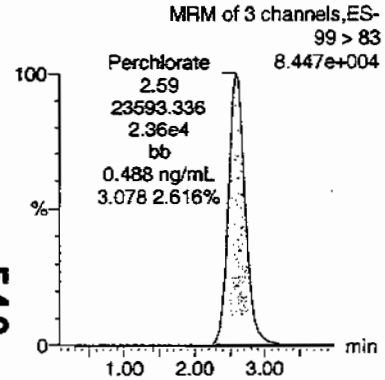

Perchlorate

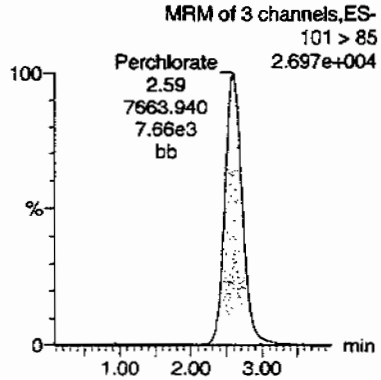

Perchlorate-101

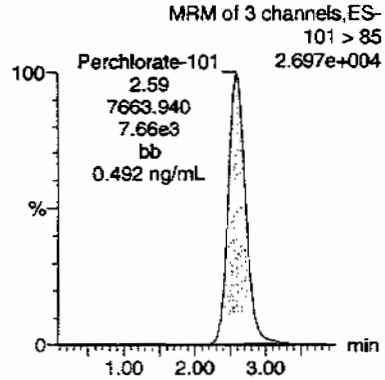

Perchlorate-O(18)

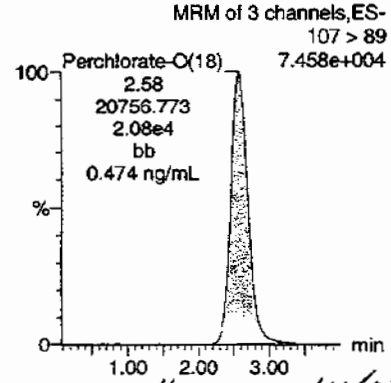

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.59	23593.336	23593.336	bb			0.4881	97.63	-2.37	5344.7...	3.08
WCL090706-06CCV	Perchlorate-101	101 > 85	2.59	7663.940	7663.940	bb			0.4922	98.44	-1.56	1302.8...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.58	20756.773	20756.773	bb			0.4742	94.84	-5.16	6634.2...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708054a
Date: 08-Jul-2009
Time: 19:26:49
ID: WCL090706-06CCV
Vial: 1:2,A

Pros
07-09-09

Perchlorate

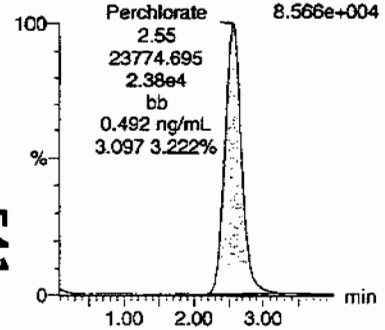

Perchlorate

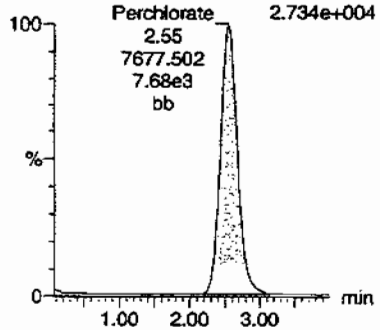

Perchlorate-101

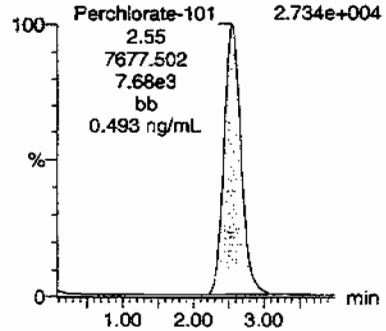

Perchlorate-O(18)

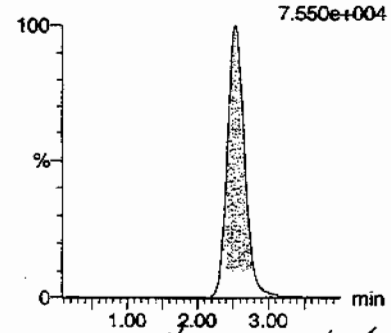

AMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.55	23774.695	23774.695	bb			0.4919	98.38	-1.62	3999.8...	3.10
WCL090706-06CCV	Perchlorate-101	101 > 85	2.55	7677.502	7677.502	bb			0.4931	98.62	-1.38	1650.2...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.54	21119.523	21119.523	bb			0.4825	96.50	-3.50	4934.7...	

541

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708065a
Date: 08-Jul-2009
Time: 20:52:23
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
07-31-09

Perchlorate

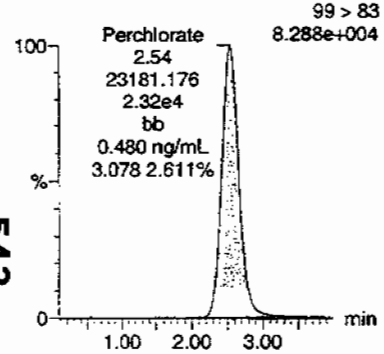

Perchlorate

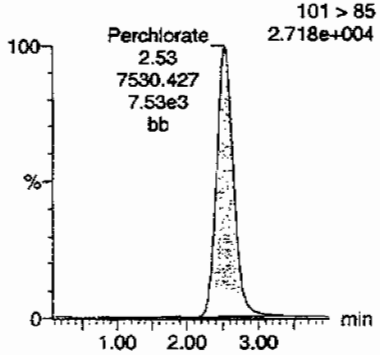

Perchlorate-101

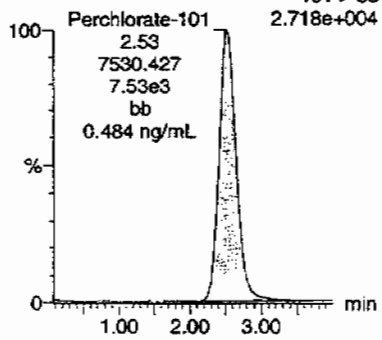

Perchlorate-O(18)

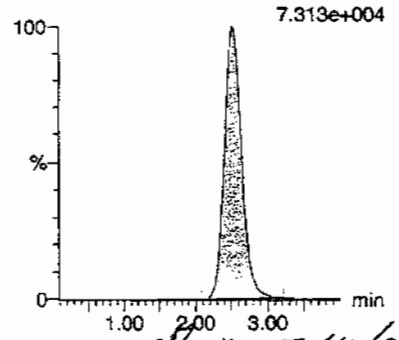

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.54	23181.176	23181.176	bb			0.4796	95.92	-4.08	358.773	3.08
WCL090706-06CCV	Perchlorate-101	101 > 85	2.53	7530.427	7530.427	bb			0.4836	96.73	-3.27	1346.6...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.51	20197.914	20197.914	bb			0.4614	92.29	-7.71	7608.4...	

542

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2506

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	102.31	08–JUL–09 13:53	per0708011a
Perchlorate Isotope Ratio		3.35		08–JUL–09 13:53	per0708011a
Perchlorate–101	.05	.05	94.69	08–JUL–09 13:53	per0708011a
Perchlorate	.05	.05	97.69	08–JUL–09 15:34	per0708024a
Perchlorate Isotope Ratio		3.08		08–JUL–09 15:34	per0708024a
Perchlorate–101	.05	.05	98.51	08–JUL–09 15:34	per0708024a
Perchlorate	.05	.05	99.89	08–JUL–09 16:59	per0708035a
Perchlorate Isotope Ratio		3.25		08–JUL–09 16:59	per0708035a
Perchlorate–101	.05	.05	95.4	08–JUL–09 16:59	per0708035a
Perchlorate	.05	.05	101.76	08–JUL–09 18:09	per0708044a
Perchlorate Isotope Ratio		3.06		08–JUL–09 18:09	per0708044a

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2506

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate–101	.05	.05	103.31	08–JUL–09 18:09	per0708044a
Perchlorate	.05	.05	99.09	08–JUL–09 19:42	per0708056a
Perchlorate Isotope Ratio		3.09		08–JUL–09 19:42	per0708056a
Perchlorate–101	.05	.05	99.47	08–JUL–09 19:42	per0708056a
Perchlorate	.05	.05	99.3	08–JUL–09 21:08	per0708067a
Perchlorate Isotope Ratio		3.07		08–JUL–09 21:08	per0708067a
Perchlorate–101	.05	.05	100.33	08–JUL–09 21:08	per0708067a

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708011a
Date: 08-Jul-2009
Time: 13:53:16
ID: WCL090706-07CRI
Vial: 1:2,B

CWW 07-09-09

Perchlorate

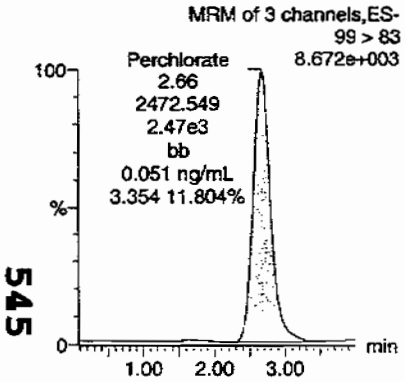

Perchlorate

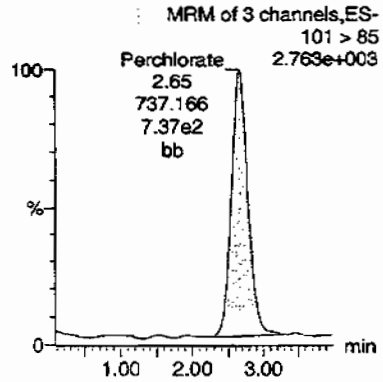

Perchlorate-101

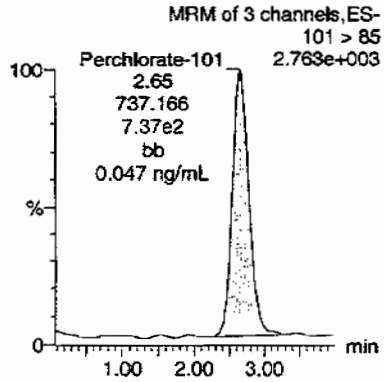

Perchlorate-O(18)

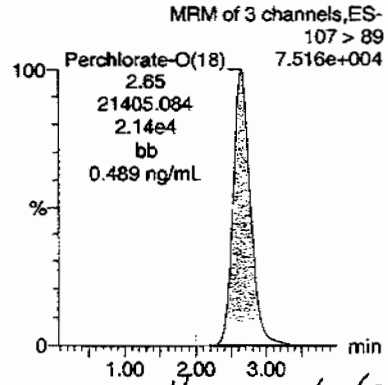

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.66	2472.549	2472.549	bb			0.0512	102.31	2.31	911.588	3.35
WCL090706-07CRI	Perchlorate-101	101 > 85	2.65	737.166	737.166	bb			0.0473	94.69	-5.31	141.523	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.65	21405.084	21405.084	bb			0.4890	97.80	-2.20	1236.3...	

545

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708024a
Date: 08-Jul-2009
Time: 15:34:09
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
aw
07-09-09

Perchlorate

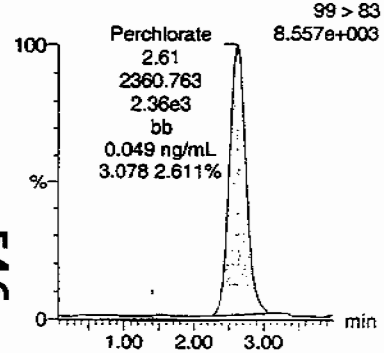

Perchlorate

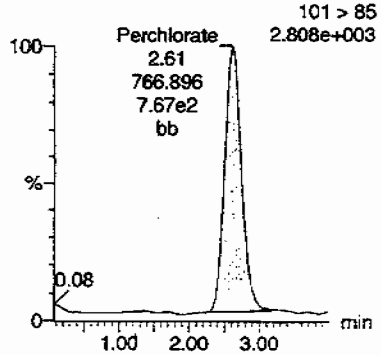

Perchlorate-101

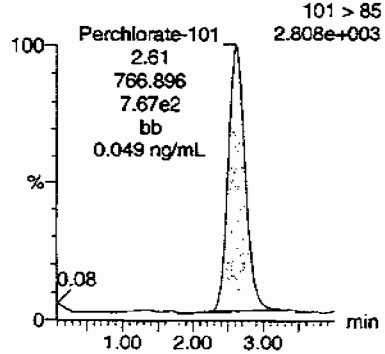

Perchlorate-O(18)

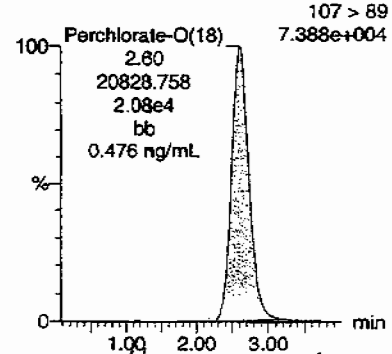

AMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.61	2360.763	2360.763	bb			0.0488	97.69	-2.31	448.651	3.08
WCL090706-07CRI	Perchlorate-101	101 > 85	2.61	766.896	766.896	bb			0.0493	98.51	-1.49	215.016	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.60	20828.758	20828.758	bb			0.4758	95.17	-4.83	12080....	

546

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708035a
Date: 08-Jul-2009
Time: 16:59:31
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
ow
07-09-09

Perchlorate

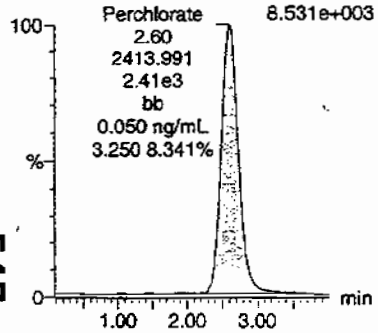

Perchlorate

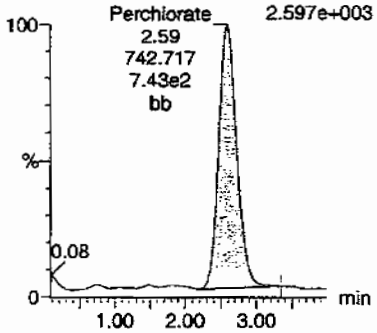

Perchlorate-101

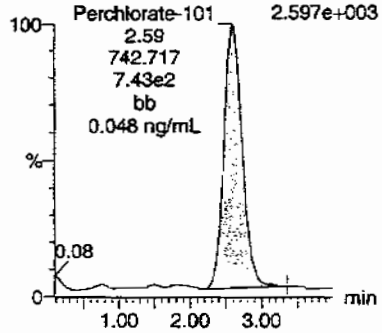

Perchlorate-O(18)

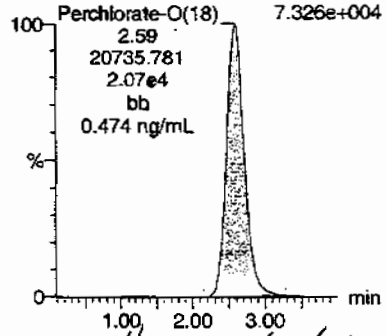

HNM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.60	2413.991	2413.991	bb			0.0499	99.89	-0.11	1123.0...	3.25
WCL090706-07CRI	Perchlorate-101	101 > 85	2.59	742.717	742.717	bb			0.0477	95.40	-4.60	195.036	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.59	20735.781	20735.781	bb			0.4737	94.74	-5.26	10141....	

547

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708044a
Date: 08-Jul-2009
Time: 18:09:17
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
CWO
07-09-09

Perchlorate

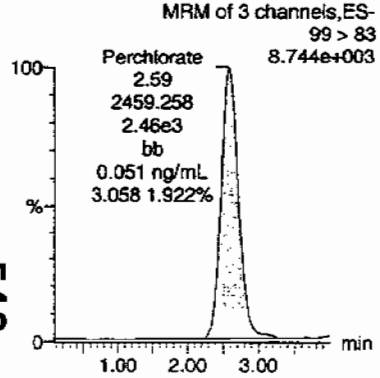

Perchlorate

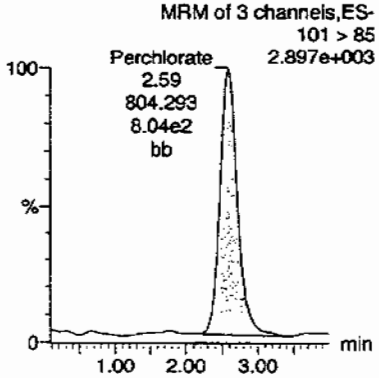

Perchlorate-101

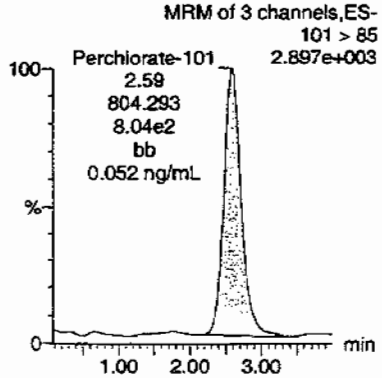

Perchlorate-O(18)

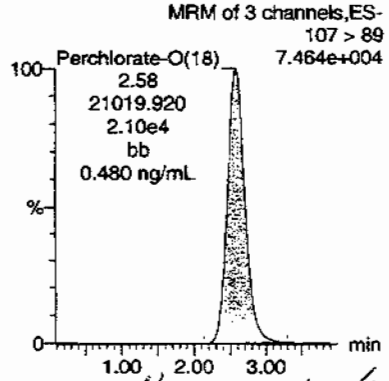

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.59	2459.258	2459.258	bb			0.0509	101.76	1.76	195.218	3.06
WCL090706-07CRI	Perchlorate-101	101 > 85	2.59	804.293	804.293	bb			0.0517	103.31	3.31	216.046	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.58	21019.920	21019.920	bb			0.4802	96.04	-3.96	3753.1...	

548

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708056a
Date: 08-Jul-2009
Time: 19:42:33
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
cmc
07-09-09

Perchlorate

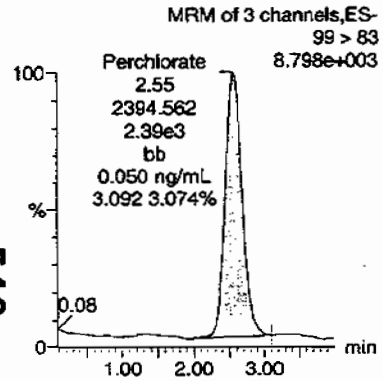

Perchlorate

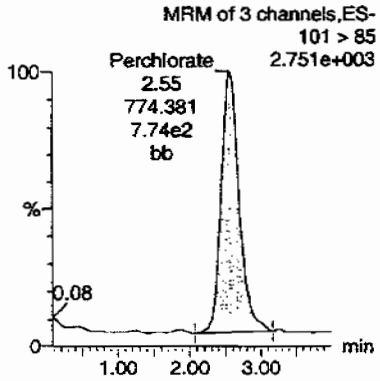

Perchlorate-101

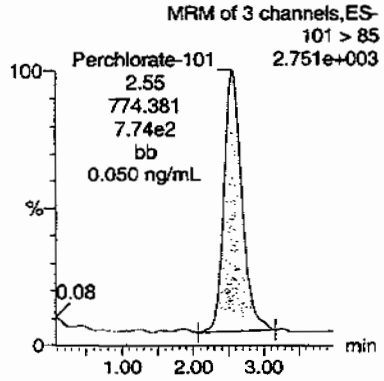

Perchlorate-O(18)

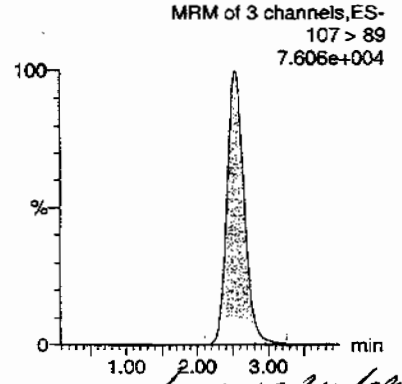

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.55	2394.562	2394.562	bb			0.0495	99.09	-0.91	283.551	3.09
WCL090706-07CRI	Perchlorate-101	101 > 85	2.55	774.381	774.381	bb			0.0497	99.47	-0.53	232.638	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.54	21226.893	21226.893	bb			0.4849	96.99	-3.01	4679.5...	

549

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708067a
Date: 08-Jul-2009
Time: 21:08:07
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
AMD
07-31-09

Perchlorate

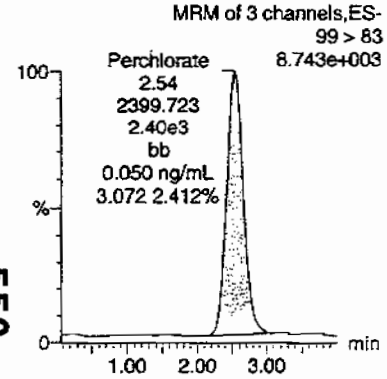

Perchlorate

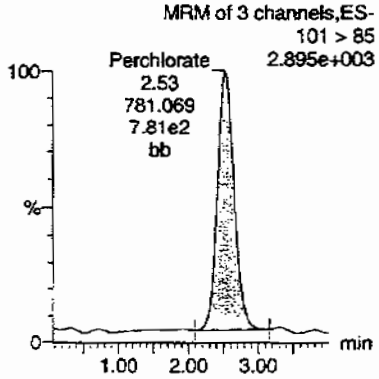

Perchlorate-101

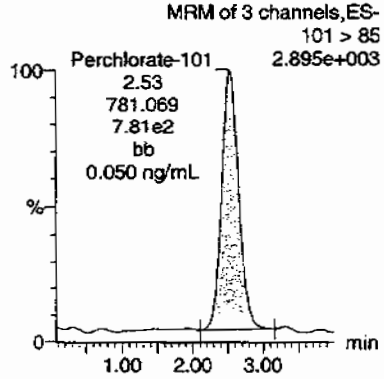

Perchlorate-O(18)

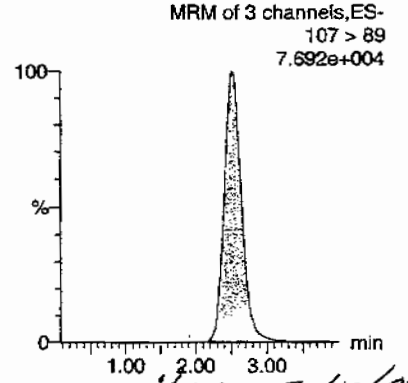

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.54	2399.723	2399.723	bb			0.0496	99.30	-0.70	206.912	3.07
WCL090706-07CRI	Perchlorate-101	101 > 85	2.53	781.069	781.069	bb			0.0502	100.33	0.33	112.139	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.51	21702.402	21702.402	bb			0.4958	99.16	-0.84	1034.6...	

550

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 1201872342

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	08-JUL-09 18:17	per0708045a
	Perchlorate-O(18)			4.73	ug/kg		1	08-JUL-09 18:17	per0708045a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708045a
Date: 08-Jul-2009
Time: 18:17:05
ID: 1201872342
Vial: 2:1,A

|LANL|881646|5020|MB|1|

CWW 07-31-09

Perchlorate

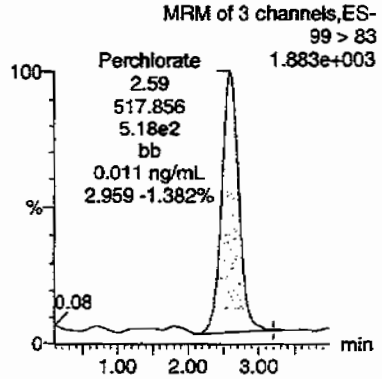

Perchlorate

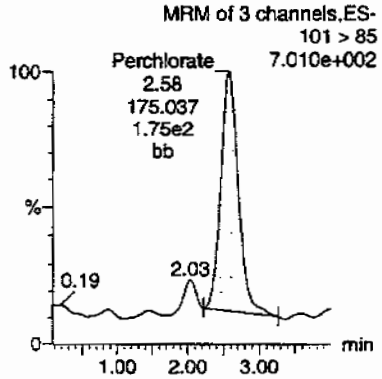

Perchlorate-101

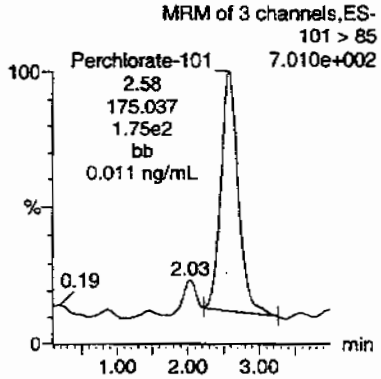

Perchlorate-O(18)

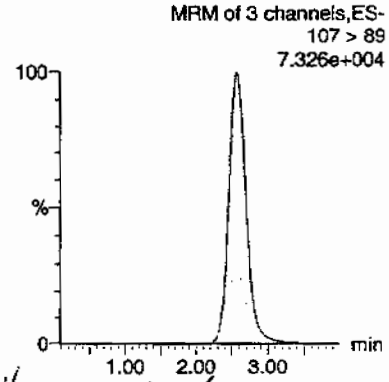

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872342	Perchlorate	99 > 83	2.59	517.856	517.856	bb			0.0107			140.764	2.96
1201872342	Perchlorate-101	101 > 85	2.58	175.037	175.037	bb			0.0112			80.373	
1201872342	Perchlorate-O(18)	107 > 89	2.56	20710.131	20710.131	bb			0.4731	94.63	-5.37	413.279	

553

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2506

GEL Sample ID: 1201872343

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.04	ug/kg		1	08-JUL-09 18:25	per0708046a
	Perchlorate-O(18)			4.78	ug/kg		1	08-JUL-09 18:25	per0708046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708046a
Date: 08-Jul-2009
Time: 18:25:00
ID: 1201872343
Vial: 2:1,B

|LANL| 881646 | 50620 | LCS | 1|

CWW 07-09-09

Perchlorate

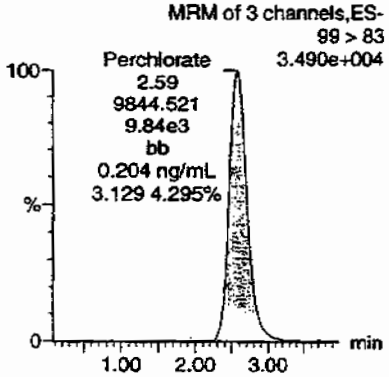

Perchlorate

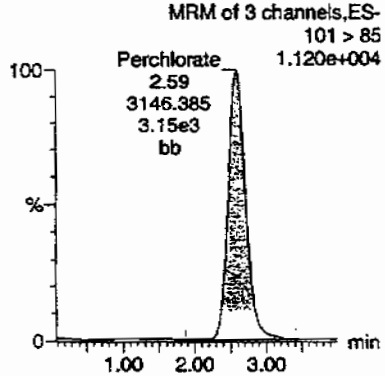

Perchlorate-101

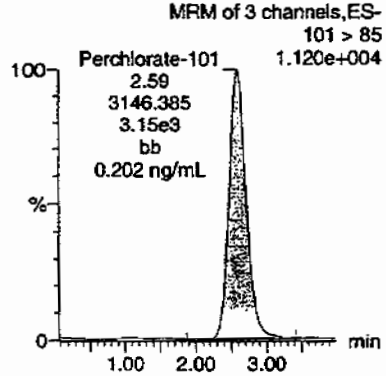

Perchlorate-O(18)

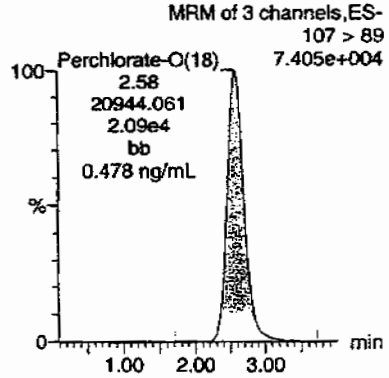

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872343	Perchlorate	99 > 83	2.59	9844.521	9844.521	bb			0.2037	101.84	1.84	733.467	3.13
1201872343	Perchlorate-101	101 > 85	2.59	3146.385	3146.385	bb			0.2021	101.04	1.04	1504.8...	
1201872343	Perchlorate-O(18)	107 > 89	2.58	20944.061	20944.061	bb			0.4785	95.69	-4.31	2058.2...	

$$\frac{9844.521}{48333.4} = 0.2037$$

HMW 07/10/09

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 881643 Verified by:
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201872342 MB	01-JUL-2009 13:18:37	2	20	10
1201872343 LCS	01-JUL-2009 13:18:37	2	20	10
232509001	01-JUL-2009 13:18:37	2	20	10
232509002	01-JUL-2009 13:18:37	2	20	10
232509003	01-JUL-2009 13:18:37	2	20	10
232509004	01-JUL-2009 13:18:37	2	20	10
232509005	01-JUL-2009 13:18:37	2	20	10
232509006	01-JUL-2009 13:18:37	2	20	10
232582001	01-JUL-2009 13:18:37	2	20	10
232582002	01-JUL-2009 13:18:37	2	20	10
232585001	01-JUL-2009 13:18:37	2	20	10
232585002	01-JUL-2009 13:18:37	2	20	10
232585003	01-JUL-2009 13:18:37	2	20	10
232591001	01-JUL-2009 13:18:37	2	20	10
1201872344 MS (232591001)	01-JUL-2009 13:18:37	2	20	10
1201872345 MSD (232591001)	01-JUL-2009 13:18:37	2	20	10
1201872346 ICS	01-JUL-2009 13:18:37	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201872346	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
LCS	1201872343	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MS	1201872344	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MSD	1201872345	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL

Comments:
Desalting cartridges used: 090408-1-Ba & 090608-1-H

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 07/08/09
Extr. Injection Volume: 20uL
Sequence Number: per070809a
Initial Calibration Date: 07/08/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: Hmc
Date: 07/10/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0708001a	IPB001	CWW	7/8/2009 12:35			1		USE	B
per0708002a	IPB001	CWW	7/8/2009 12:43			1		USE	B
per0708003a	WCLICAL-01	CWW	7/8/2009 12:51			1		USE	I
per0708004a	WCLICAL-02	CWW	7/8/2009 12:59			1		USE	I
per0708005a	WCLICAL-03	CWW	7/8/2009 13:06			1		USE	I
per0708006a	WCLICAL-04	CWW	7/8/2009 13:14			1		USE	I
per0708007a	WCLICAL-05	CWW	7/8/2009 13:22			1		USE	I
per0708008a	IPB002	CWW	7/8/2009 13:30			1		USE	B
per0708009a	WCLICV	CWW	7/8/2009 13:37			1		USE	C
per0708010a	IPB003	CWW	7/8/2009 13:45			1		USE	B
per0708011a	WCLCRI	CWW	7/8/2009 13:53			1		USE	C
per0708012a	1201874299	CWW	7/8/2009 14:01	882496	VARIOUS	1	LANL	USE	S
per0708013a	1201874300	CWW	7/8/2009 14:08	882496	VARIOUS	1	LANL	USE	S
per0708014a	1201874307	CWW	7/8/2009 14:16	882496	VARIOUS	1	LANL	USE	S
per0708015a	232662001	CWW	7/8/2009 14:24	882496	09-2516	1	LANL	USE	S
per0708016a	1201874303	CWW	7/8/2009 14:32	882496	09-2516	1	LANL	USE	S
per0708017a	1201874305	CWW	7/8/2009 14:39	882496	09-2516	1	LANL	USE	S
per0708018a	232674001	CWW	7/8/2009 14:47	882496	09-2519	1	LANL	USE	S
per0708019a	232675001	CWW	7/8/2009 14:55	882496	09-2522	1	LANL	USE	S
per0708020a	1201874304	CWW	7/8/2009 15:03	882496	09-2522	1	LANL	USE	S
per0708021a	1201874306	CWW	7/8/2009 15:10	882496	09-2522	1	LANL	USE	S
per0708022a	WCLCCV	CWW	7/8/2009 15:18			1		USE	C
per0708023a	IPB004	CWW	7/8/2009 15:26			1		USE	B
per0708024a	WCLCRI	CWW	7/8/2009 15:34			1		USE	C
per0708025a	232742001	CWW	7/8/2009 15:41	882496	09-2525	1	LANL	USE	S
per0708026a	232750001	CWW	7/8/2009 15:49	882496	09-2528	1	LANL	USE	S
per0708027a	232755001	CWW	7/8/2009 15:57	882496	09-2536-1	1	LANL	USE	S
per0708028a	232757001	CWW	7/8/2009 16:05	882496	09-2539	1	LANL	USE	S
per0708029a	232759001	CWW	7/8/2009 16:13	882496	09-2542	1	LANL	USE	S

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per0708030a	232761001	CWW	7/8/2009 16:20	882496	09-2543	1	LANL	USE	S
per0708031a	1201874301	CWW	7/8/2009 16:28	882496	09-2543	1	LANL	USE	S
per0708032a	1201874302	CWW	7/8/2009 16:36	882496	09-2543	1	LANL	USE	S
per0708033a	WCLCCV	CWW	7/8/2009 16:44			1		USE	C
per0708034a	IPB005	CWW	7/8/2009 16:51			1		USE	B
per0708035a	WCLCRI	CWW	7/8/2009 16:59			1		USE	C
per0708036a	1201876313	CWW	7/8/2009 17:07	883299	09-2549	1	LANL	USE	S
per0708037a	1201876314	CWW	7/8/2009 17:15	883299	09-2549	1	LANL	USE	S
per0708038a	1201876317	CWW	7/8/2009 17:22	883299	09-2549	1	LANL	USE	S
per0708039a	232855001	CWW	7/8/2009 17:30	883299	09-2549	1	LANL	USE	S
per0708040a	1201876315	CWW	7/8/2009 17:38	883299	09-2549	1	LANL	USE	S
per0708041a	1201876316	CWW	7/8/2009 17:46	883299	09-2549	1	LANL	USE	S
per0708042a	WCLCCV	CWW	7/8/2009 17:53			1		USE	C
per0708043a	IPB006	CWW	7/8/2009 18:01			1		USE	B
per0708044a	WCLCRI	CWW	7/8/2009 18:09			1		USE	C
per0708045a	1201872342	CWW	7/8/2009 18:17	881646	VARIOUS	1	LANL	USE	S
per0708046a	1201872343	CWW	7/8/2009 18:25	881646	VARIOUS	1	LANL	USE	S
per0708047a	1201872346	CWW	7/8/2009 18:32	881646	VARIOUS	1	LANL	USE	S
per0708048a	232509001	CWW	7/8/2009 18:40	881646	09-2500	1	LANL	DUSE-DL	S
per0708049a	232509002	CWW	7/8/2009 18:48	881646	09-2500	1	LANL	DUSE-RA	S
per0708050a	232509003	CWW	7/8/2009 18:55	881646	09-2500	1	LANL	USE	S
per0708051a	232509004	CWW	7/8/2009 19:03	881646	09-2500	1	LANL	DUSE-DL	S
per0708052a	232509005	CWW	7/8/2009 19:11	881646	09-2500	1	LANL	DUSE-DL	S
per0708053a	232509006	CWW	7/8/2009 19:19	881646	09-2500	1	LANL	DUSE-RA	S
per0708054a	WCLCCV	CWW	7/8/2009 19:26			1		USE	C
per0708055a	IPB007	CWW	7/8/2009 19:34			1		USE	B
per0708056a	WCLCRI	CWW	7/8/2009 19:42			1		USE	C
per0708057a	232582001	CWW	7/8/2009 19:50	881646	09-2508	1	LANL	USE	S
per0708058a	232582002	CWW	7/8/2009 19:58	881646	09-2508	1	LANL	USE	S
per0708059a	232585001	CWW	7/8/2009 20:05	881646	09-2506	1	LANL	USE	S
per0708060a	232585002	CWW	7/8/2009 20:13	881646	09-2506	1	LANL	USE	S
per0708061a	232585003	CWW	7/8/2009 20:21	881646	09-2506	1	LANL	USE	S
per0708062a	232591001	CWW	7/8/2009 20:29	881646	09-2510	1	LANL	USE	S
per0708063a	1201872344	CWW	7/8/2009 20:36	881646	09-2510	1	LANL	USE	S
per0708064a	1201872345	CWW	7/8/2009 20:44	881646	09-2510	1	LANL	USE	S
per0708065a	WCLCCV	CWW	7/8/2009 20:52			1		USE	C
per0708066a	IPB008	CWW	7/8/2009 21:00			1		USE	B

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per0708067a	WCLCRI	CWW	7/8/2009 21:08	1	USE	C

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708063a
Date: 08-Jul-2009
Time: 20:36:55
ID: 1201872344
Vial: 2:3,D

| LANL | 881646 | SOZO | MS | 11

07-09-09

Perchlorate

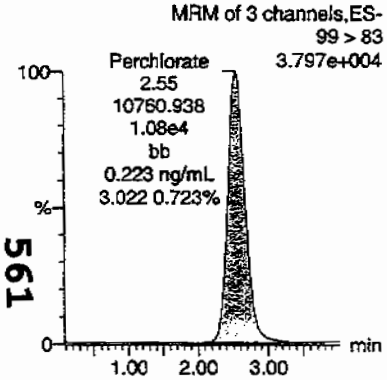

Perchlorate

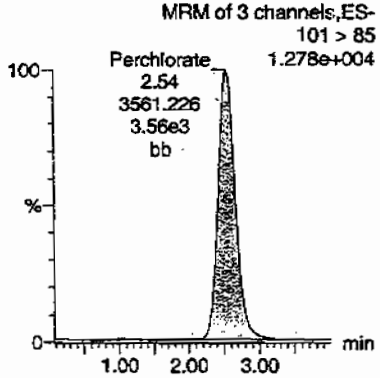

Perchlorate-101

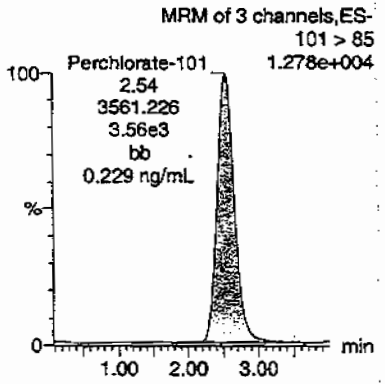

Perchlorate-O(18)

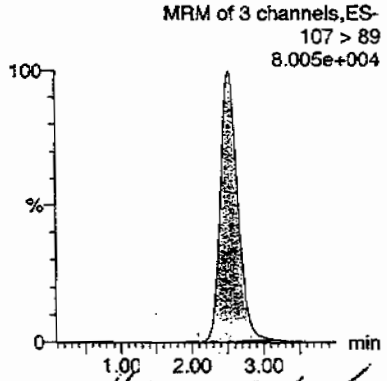

HMM 07/10/09

ID	Name	Trace	RT	Areas	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872344	Perchlorate	99 > 83	2.55	10760.938	10760.938	bb			0.2226	111.32	11.32	1778.7...	3.02
1201872344	Perchlorate-101	101 > 85	2.54	3561.226	3561.226	bb			0.2287	114.36	14.36	409.957	
1201872344	Perchlorate-O(18)	107 > 89	2.53	22184.420	22184.420	bb			0.5068	101.36	1.36	7341.0...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708064a
Date: 08-Jul-2009
Time: 20:44:39
ID: 1201872345
Vial: 2:3,E

|LANL|881646|3020|MSO|1|

07 09

Perchlorate

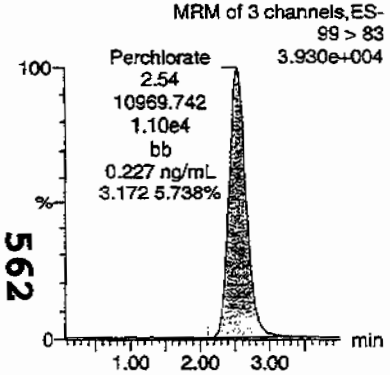

Perchlorate

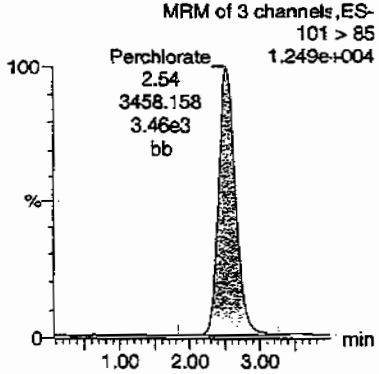

Perchlorate-101

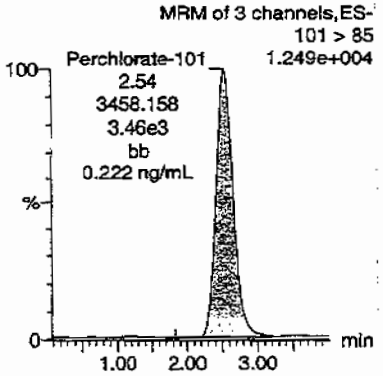

Perchlorate-O(18)

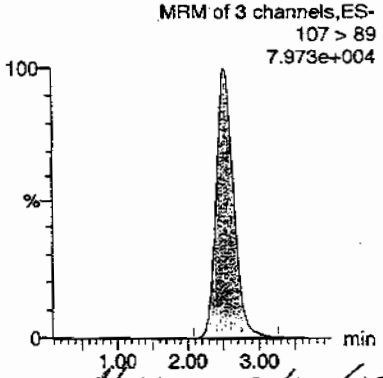

HNM 08/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872345	Perchlorate	99 > 83	2.54	10969.742	10969.742	bb			0.2270	113.48	13.48	2005.0...	3.17
1201872345	Perchlorate-101	101 > 85	2.54	3458.158	3458.158	bb			0.2221	111.05	11.05	2356.5...	
1201872345	Perchlorate-O(18)	107 > 89	2.53	22121.789	22121.789	bb			0.5054	101.08	1.08	4214.8...	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2506

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3550B
Analytical Batch Number:	884634
Prep Batch Number:	884632

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201879447	Method Blank (MB)
1201879448	Laboratory Control Sample (LCS)
1201879449	232661005(CAMO-09-10030) Matrix Spike (MS)
1201879450	232661005(CAMO-09-10030) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 13.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising

the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

One of the five quantified peaks did not meet the acceptance criteria in Aroclor-1016 standard analyzed for this SDG; however, the average concentration of the five peaks met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
A LANL sample of similar matrix associated with another SDG (#09-2515) was selected for the matrix spike and matrix spike duplicate analysis. A Form III and QC raw data are included in the package summarizing the results.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina.

Sample Dilutions
Sample 232585002 (CAMO-09-6603) was diluted at 1:5 due to the oily matrix of the extract.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
Nonconformance report (NCR) is for documentation of any procedural anomalies that may deviate from referenced SOP or contractual document. A NCR was not required for this SDG.

Manual Integration
Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD1A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide)
ECD1A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticideII)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Jimmi Cao Date: 7/20/09

Roadmap for LANL 09-2506 PCB

This roadmap was analyzed by yip00818 on 07-14-2009, 13:38.
This roadmap was reviewed by rob01090 on 07-14-2009, 15:40.
This roadmap was packaged by yml on 07-17-2009, 14:21.
This roadmap was validated by jim01140 on 07-20-2009, 08:21.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/024f2401.d	232585001	sample	14-JUL-2009	10:51	09-2506.sub	CAMO-09-6605	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/071409.b/025f2501.d	232585002	sample	14-JUL-2009	11:02	09-2506.sub	CAMO-09-6603	5.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/071409.b/026f2601.d	232585003	sample	14-JUL-2009	11:12	09-2506.sub	CAMO-09-6604	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/024b2401.d	232585001	sample	14-JUL-2009	10:51	09-2506.sub	CAMO-09-6605	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/071409.b/025b2501.d	232585002	sample	14-JUL-2009	11:02	09-2506.sub	CAMO-09-6603	5.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/071409.b/026b2601.d	232585003	sample	14-JUL-2009	11:12	09-2506.sub	CAMO-09-6604	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/021f2101.d	1201879447	mb	14-JUL-2009	10:21	09-2506.sub	PBLK01	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/071409.b/022f2201.d	1201879448	lcs	14-JUL-2009	10:31	09-2506.sub	PBLK01LCS	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/021b2101.d	1201879447	mb	14-JUL-2009	10:21	09-2506.sub	PBLK01	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/071409.b/022b2201.d	1201879448	lcs	14-JUL-2009	10:31	09-2506.sub	PBLK01LCS	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585002	Date Received:	06/30/2009 09:15	%Moisture:	7.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6603	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	884634	Inst:	ECD1A.I	Dilution:	5
Run Date:	07/14/2009 11:02	Analyst:	YS1	Inj. Vol:	1 uL
Prep Date:	07/13/2009 20:17	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	025f2501.d	Column:	1 CLP1	Level:	LOW
	025b2501.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	18.0	ug/kg	5.98	18.0	1
11104-28-2	Aroclor-1221	U	18.0	ug/kg	5.98	18.0	1
11141-16-5	Aroclor-1232	U	18.0	ug/kg	5.98	18.0	1
53469-21-9	Aroclor-1242	U	18.0	ug/kg	5.98	18.0	1
12672-29-6	Aroclor-1248	U	18.0	ug/kg	5.98	18.0	1
11097-69-1	Aroclor-1254	U	18.0	ug/kg	5.98	18.0	1
11096-82-5	Aroclor-1260	J	10.4	ug/kg	5.98	18.0	2

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585003	Date Received:	06/30/2009 09:15	%Moisture:	10.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6604	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	884634	Inst:	ECD1A.I	Dilution:	1
Run Date:	07/14/2009 11:12	Analyst:	YS1	Inj. Vol:	1 uL
Prep Date:	07/13/2009 20:17	Aliquot:	30.08 g	Final Volume:	1 mL
Data File:	026f2601.d	Column:	1 CLP1	Level:	LOW
	026b2601.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.71	ug/kg	1.24	3.71	1
11104-28-2	Aroclor-1221	U	3.71	ug/kg	1.24	3.71	1
11141-16-5	Aroclor-1232	U	3.71	ug/kg	1.24	3.71	1
53469-21-9	Aroclor-1242	U	3.71	ug/kg	1.24	3.71	1
12672-29-6	Aroclor-1248	U	3.71	ug/kg	1.24	3.71	1
11097-69-1	Aroclor-1254	U	3.71	ug/kg	1.24	3.71	1
11096-82-5	Aroclor-1260	U	3.71	ug/kg	1.24	3.71	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	Date Collected:	06/25/2009 12:00	Matrix:	R
Lab Sample ID:	232585001	Date Received:	06/30/2009 09:15	%Moisture:	6.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6605	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	884634	Inst:	ECD1A.I	Dilution:	1
Run Date:	07/14/2009 10:51	Analyst:	YS1	Inj. Vol:	1 uL
Prep Date:	07/13/2009 20:17	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	024f2401.d	Column:	1 CLP1	Level:	LOW
	024b2401.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.57	ug/kg	1.19	3.57	1
11104-28-2	Aroclor-1221	U	3.57	ug/kg	1.19	3.57	1
11141-16-5	Aroclor-1232	U	3.57	ug/kg	1.19	3.57	1
53469-21-9	Aroclor-1242	U	3.57	ug/kg	1.19	3.57	1
12672-29-6	Aroclor-1248	U	3.57	ug/kg	1.19	3.57	1
11097-69-1	Aroclor-1254	U	3.57	ug/kg	1.19	3.57	1
11096-82-5	Aroclor-1260	U	3.57	ug/kg	1.19	3.57	1

QUALITY CONTROL SUMMARY

Surrogate Recovery Report

SDG Number: 09-2506

Matrix Type: SOLID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1201879447	MB for batch 884632	90	90	86	84
1201879448	LCS for batch 884632	89	89	88	85
232585001	CAMO-09-6605	72	74	75	72
232585002	CAMO-09-6603	64 D	70 D	70 D	78 D
232585003	CAMO-09-6604	55	57	57	56

Surrogate	Acceptance Limits
4CMX = 4cmx	(34%-105%)
DCB = Decachlorobiphenyl	(33%-115%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2506
Client ID: LCS for batch 884632
Lab Sample ID: 1201879448
Instrument: ECD1A.I
Analyst: YS1
Inj. Vol: 1 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/14/2009 10:31
Dilution: 1
Prep Batch ID: 884632
Batch ID: 884634

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	LCS	Aroclor-1016	33.3	0.0	27.0	81	41-110
11096-82-5	LCS	Aroclor-1260	33.3	0.0	30.8	92	48-110

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-10030MS
Lab Sample ID: 1201879449
Instrument: ECD1A.I
Analyst: YS1
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 10
Analysis Date: 07/14/2009 11:32
Prep Batch ID: 884632
Batch ID: 884634
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	MS	Aroclor-1016	37.0	0.00	U	20.6	56	23-117
11096-82-5	MS	Aroclor-1260	37.0	8.90		32.9	65	27-116

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-10030MSD
Lab Sample ID: 1201879450
Instrument: ECD1A.I
Analyst: YS1
Inj. Vol: 1 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 10
Analysis Date: 07/14/2009 11:43
Dilution: 1
Prep Batch ID: 884632
Batch ID: 884634

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674-11-2	MSD Aroclor-1016	37.0	0.00	U	22.9	62	23-117	11	0-30
11096-82-5	MSD Aroclor-1260	37.0	8.90		37.1	76	27-116	12	0-30

Method Blank Summary

SDG Number:	09–2506	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 884632	Instrument ID:	ECD1A.I_2 ECD1A.I_1	Data File:	021b2101–1.d 021f2101–1.d
Lab Sample ID:	1201879447				
Column:	CLP2 CLP1	Prep Date:	07/13/2009 20:17	Analyzed:	07/14/09 10:21
		Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 884632	1201879448	022f2201–1.d 022b2201–1.d	07/14/09	1031
02 CAMO–09–6605	232585001	024f2401.d 024b2401.d	07/14/09	1051
03 CAMO–09–6603	232585002	025f2501.d 025b2501.d	07/14/09	1102
04 CAMO–09–6604	232585003	026f2601.d 026b2601.d	07/14/09	1112

SAMPLE DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585002	**Date Received:**	06/30/2009 09:15	**%Moisture:**	7.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6603	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	5
Run Date:	07/14/2009 11:02	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	025f2501.d	**Column:**	1 CLP1	**Level:**	LOW
	025b2501.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	18.0	ug/kg	5.98	18.0	1
11104-28-2	Aroclor-1221	U	18.0	ug/kg	5.98	18.0	1
11141-16-5	Aroclor-1232	U	18.0	ug/kg	5.98	18.0	1
53469-21-9	Aroclor-1242	U	18.0	ug/kg	5.98	18.0	1
12672-29-6	Aroclor-1248	U	18.0	ug/kg	5.98	18.0	1
11097-69-1	Aroclor-1254	U	18.0	ug/kg	5.98	18.0	1
11096-82-5	Aroclor-1260	J	10.4	ug/kg	5.98	18.0	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/025f2501.d
Lab Smp Id: 232585002 Client Smp ID: CAMO-09-6603
Inj Date : 14-JUL-2009 11:02
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232585002|5|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-6603|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 11:21 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 25
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2506.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	7.28380	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	8509285	25.6012	4.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	6527802	28.1867	5.1	80.00- 120.00	100.00
7 Aroclor-1260					CAS #: 11096-82-5		
3.933	3.933	0.000	496592	32.4874	5.8	80.00- 120.00	100.00(a)
4.097	4.096	0.001	709174	30.7099	5.5	133.87- 173.87	142.81
4.327	4.326	0.001	432080	37.1230	6.7	56.34- 96.34	87.01
4.471	4.470	0.001	481259	37.9930	6.8	63.12- 103.12	96.91

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260 (continued)							
4.836	4.835	0.001	506133	86.1753	15.5	17.64- 57.64	101.92
Average of Peak Concentrations =					8.1		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/ecd1a.i/071409.b/025f2501.d
Date : 14-JUL-2009 11:02
Client ID: CAMO-09-6603
Sample Info: |232585002|5|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

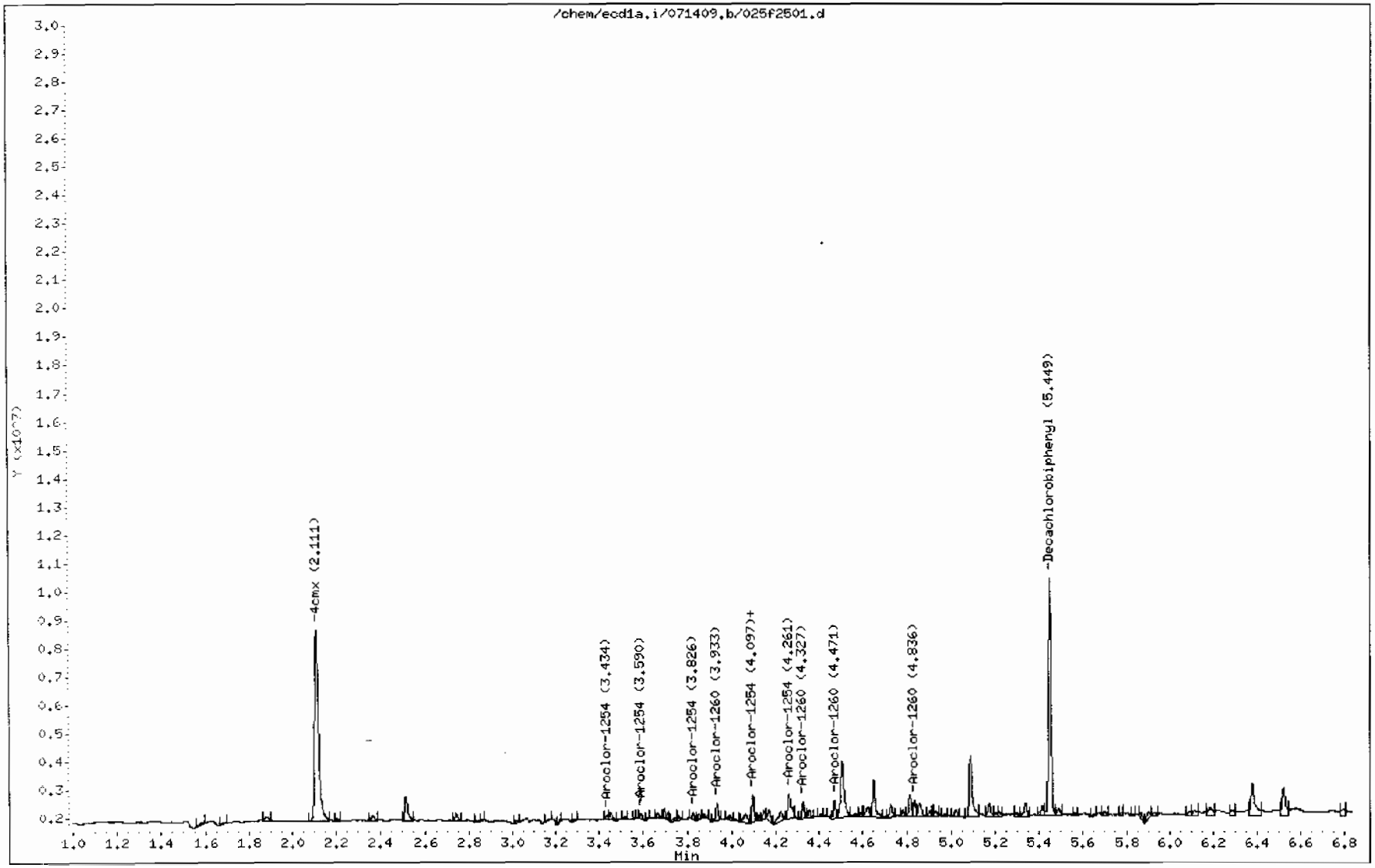

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/025b2501.d
Lab Smp Id: 232585002 Client Smp ID: CAMO-09-6603
Inj Date : 14-JUL-2009 11:02
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232585002|5|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-6603|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 11:20 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 25
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2506.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpc1p1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	7.28380	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	7540433	28.1604	5.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	4076018	31.1560	5.6	80.00- 120.00	100.00
7 Aroclor-1260					CAS #: 11096-82-5		
4.552	4.551	0.001	486543	42.9395	7.7	80.00- 120.00	100.00(a)
4.676	4.675	0.001	510407	40.9870	7.4	92.77- 132.77	104.90
4.945	4.944	0.001	517726	61.1486	11.0	54.09- 94.09	106.41
5.122	5.121	0.001	666518	75.9499	13.6	57.69- 97.69	136.99

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
? Aroclor-1260 (continued)							
5.268	5.267	0.001	1182424	69.2156	12.4	137.06- 177.06	243.03
Average of Peak Concentrations =					10.4		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/ecd1a.i/071409.b/025b2501.d

Date : 14-JUL-2009 11:02

Client ID: CAMO-09-6603

Sample Info: |232585002151

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

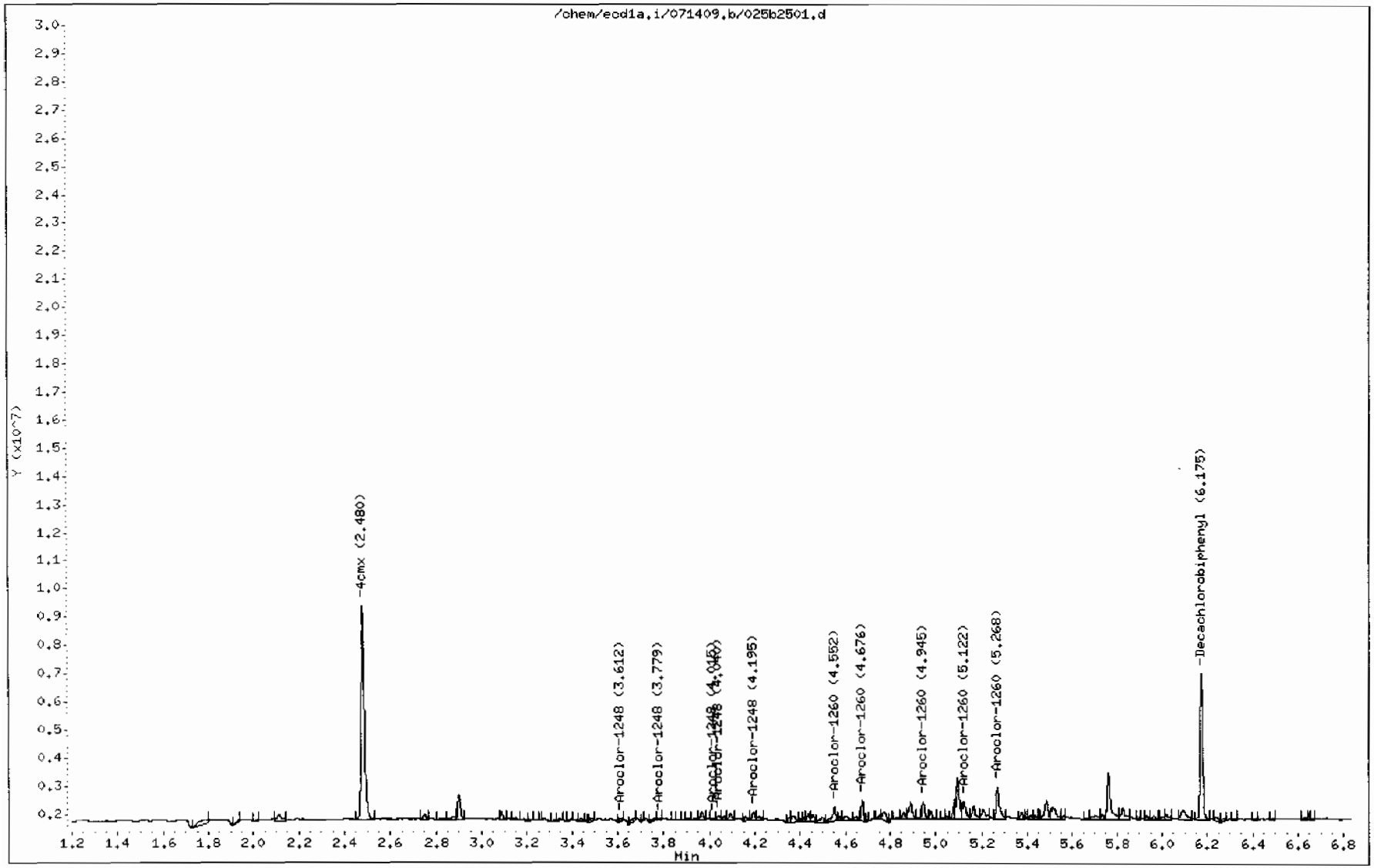

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585003	**Date Received:**	06/30/2009 09:15	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6604	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 11:12	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	026f2601.d	**Column:**	1 CLP1	**Level:**	LOW
	026b2601.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.71	ug/kg	1.24	3.71	1
11104-28-2	Aroclor-1221	U	3.71	ug/kg	1.24	3.71	1
11141-16-5	Aroclor-1232	U	3.71	ug/kg	1.24	3.71	1
53469-21-9	Aroclor-1242	U	3.71	ug/kg	1.24	3.71	1
12672-29-6	Aroclor-1248	U	3.71	ug/kg	1.24	3.71	1
11097-69-1	Aroclor-1254	U	3.71	ug/kg	1.24	3.71	1
11096-82-5	Aroclor-1260	U	3.71	ug/kg	1.24	3.71	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/026f2601.d
Lab Smp Id: 232585003 Client Smp ID: CAMO-09-6604
Inj Date : 14-JUL-2009 11:12
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232585003|1|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-6604|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 11:21 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2506.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.08000	Weight of sample extracted (g)
M	10.41040	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.110	2.112	-0.002	36507827	109.838	4.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	26377136	113.895	4.2	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/026f2601.d

Date : 14-JUL-2009 11:12

Client ID: CAMO-09-6604

Sample Info: 1232585003|1|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

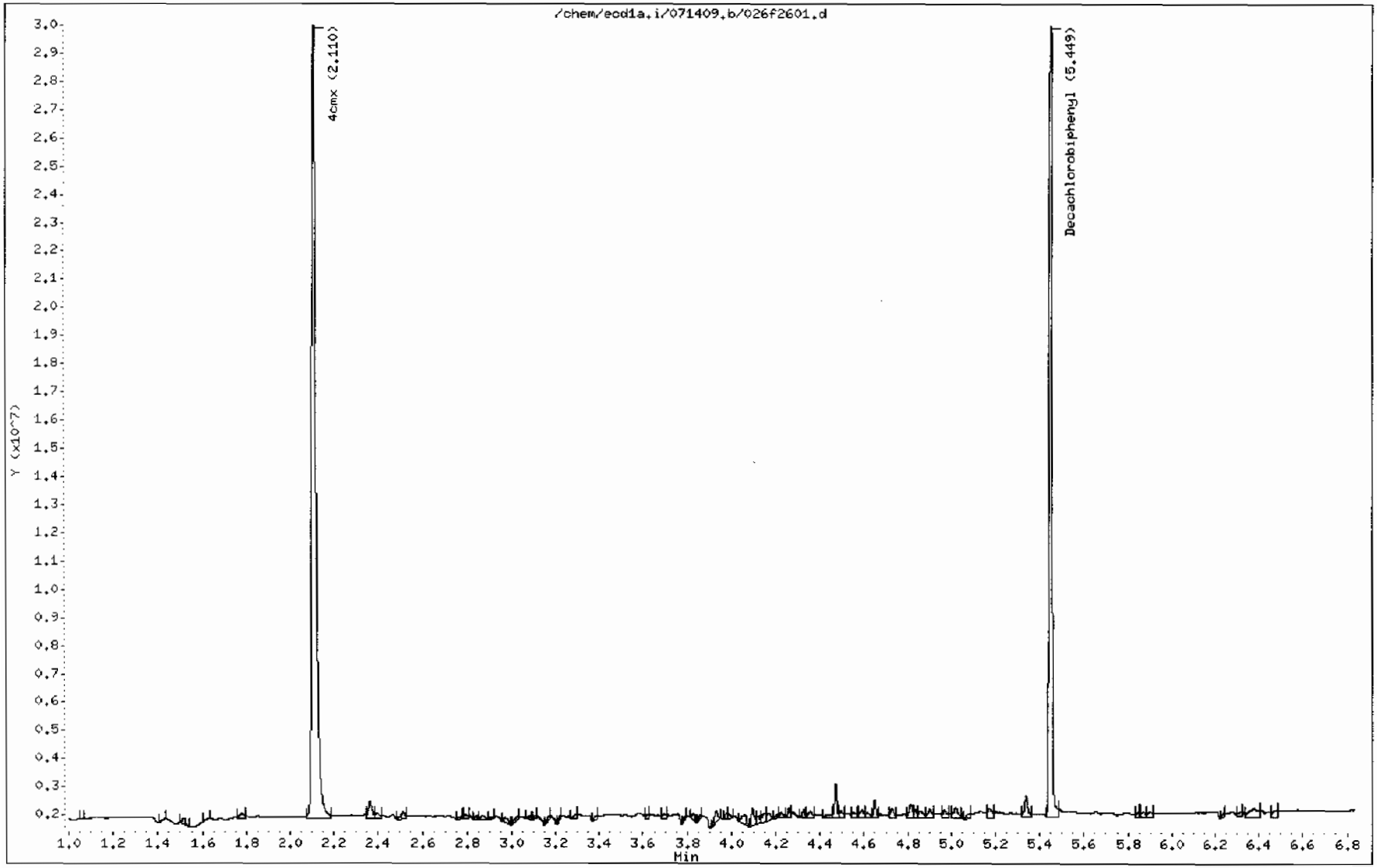

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/026b2601.d
Lab Smp Id: 232585003 Client Smp ID: CAMO-09-6604
Inj Date : 14-JUL-2009 11:12
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232585003|1|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-6604|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 11:20 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2506.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.08000	Weight of sample extracted (g)
M	10.41040	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.479	2.481	-0.002	30551057	114.096	4.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	14716129	112.486	4.2	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/026b2601.d
Date : 14-JUL-2009 11:12
Client ID: CAMD-09-6604
Sample Info: |232585003|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

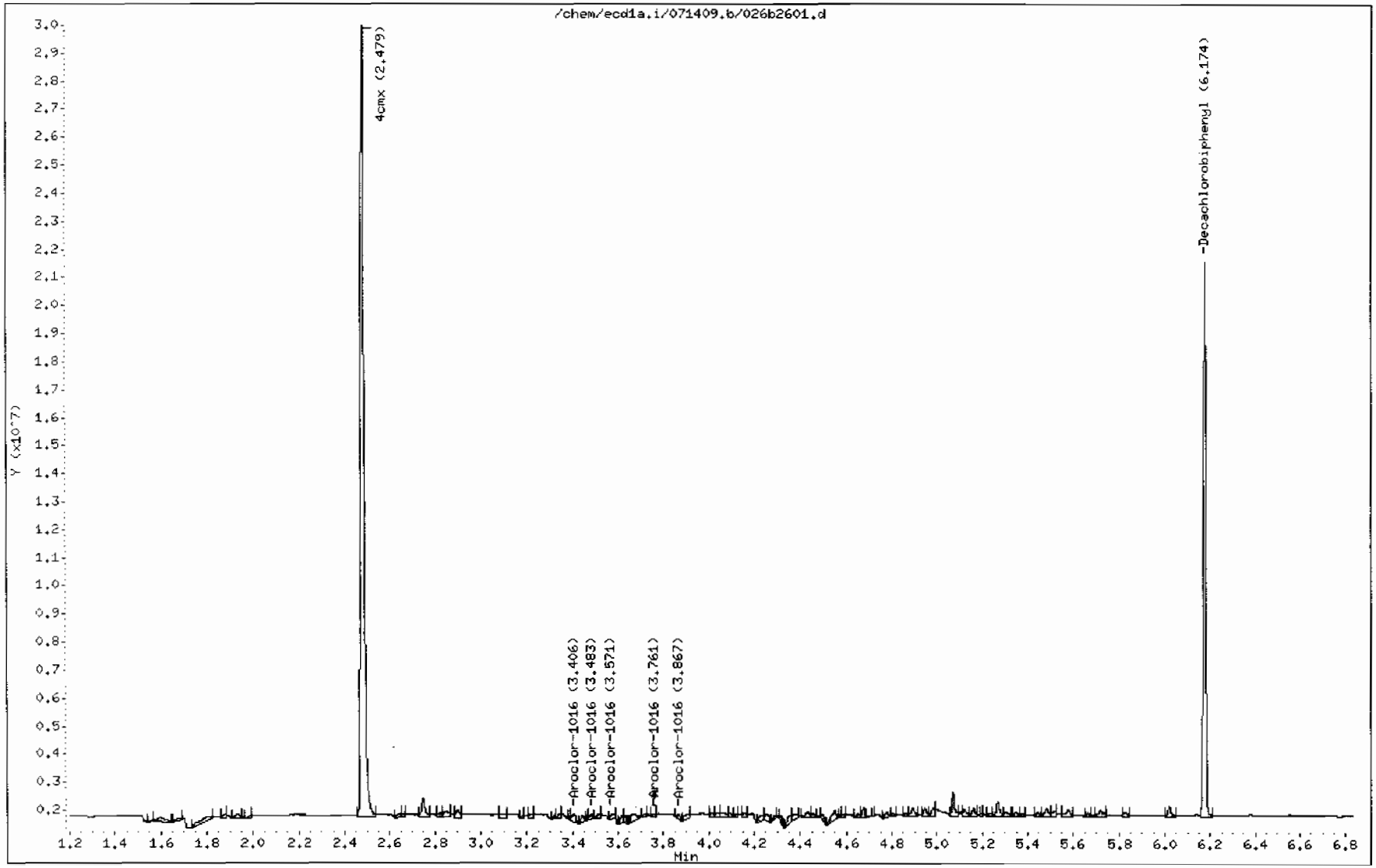

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2506	**Date Collected:**	06/25/2009 12:00	**Matrix:**	R
Lab Sample ID:	232585001	**Date Received:**	06/30/2009 09:15	**%Moisture:**	6.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6605	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 10:51	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	024f2401.d	**Column:**	1 CLP1	**Level:**	LOW
	024b2401.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.57	ug/kg	1.19	3.57	1
11104–28–2	Aroclor–1221	U	3.57	ug/kg	1.19	3.57	1
11141–16–5	Aroclor–1232	U	3.57	ug/kg	1.19	3.57	1
53469–21–9	Aroclor–1242	U	3.57	ug/kg	1.19	3.57	1
12672–29–6	Aroclor–1248	U	3.57	ug/kg	1.19	3.57	1
11097–69–1	Aroclor–1254	U	3.57	ug/kg	1.19	3.57	1
11096–82–5	Aroclor–1260	U	3.57	ug/kg	1.19	3.57	1

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/024f2401.d
Lab Smp Id: 232585001 Client Smp ID: CAMO-09-6605
Inj Date : 14-JUL-2009 10:51
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232585001|1|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-6605|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 11:21 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2506.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	6.61210	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.113	2.112	0.001	479/1083	144.327	5.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	34661305	149.666	5.3	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/024f2401.d
Date : 14-JUL-2009 10:51
Client ID: CAMO-09-6605
Sample Info: |23258500|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

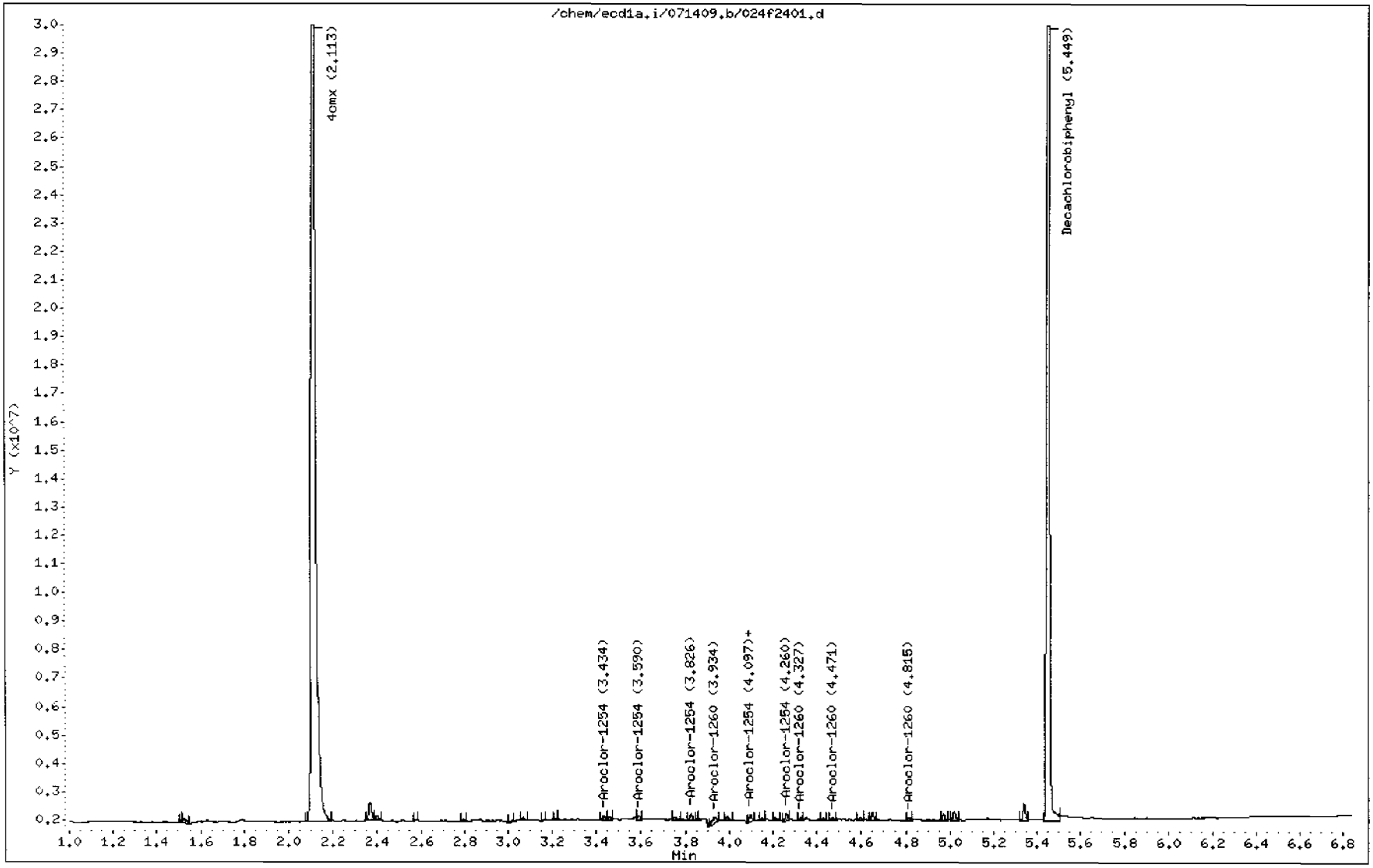

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/024b2401.d
Lab Smp Id: 232585001 Client Smp ID: CAMO-09-6605
Inj Date : 14-JUL-2009 10:51
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232585001|1|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-6605|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 11:20 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2506.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	6.61210	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	39611255	147.932	5.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	18858974	144.153	5.1	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/024b2401.d

Date : 14-JUL-2009 10:51

Client ID: CAMO-09-6605

Sample Info: |232585001|1|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

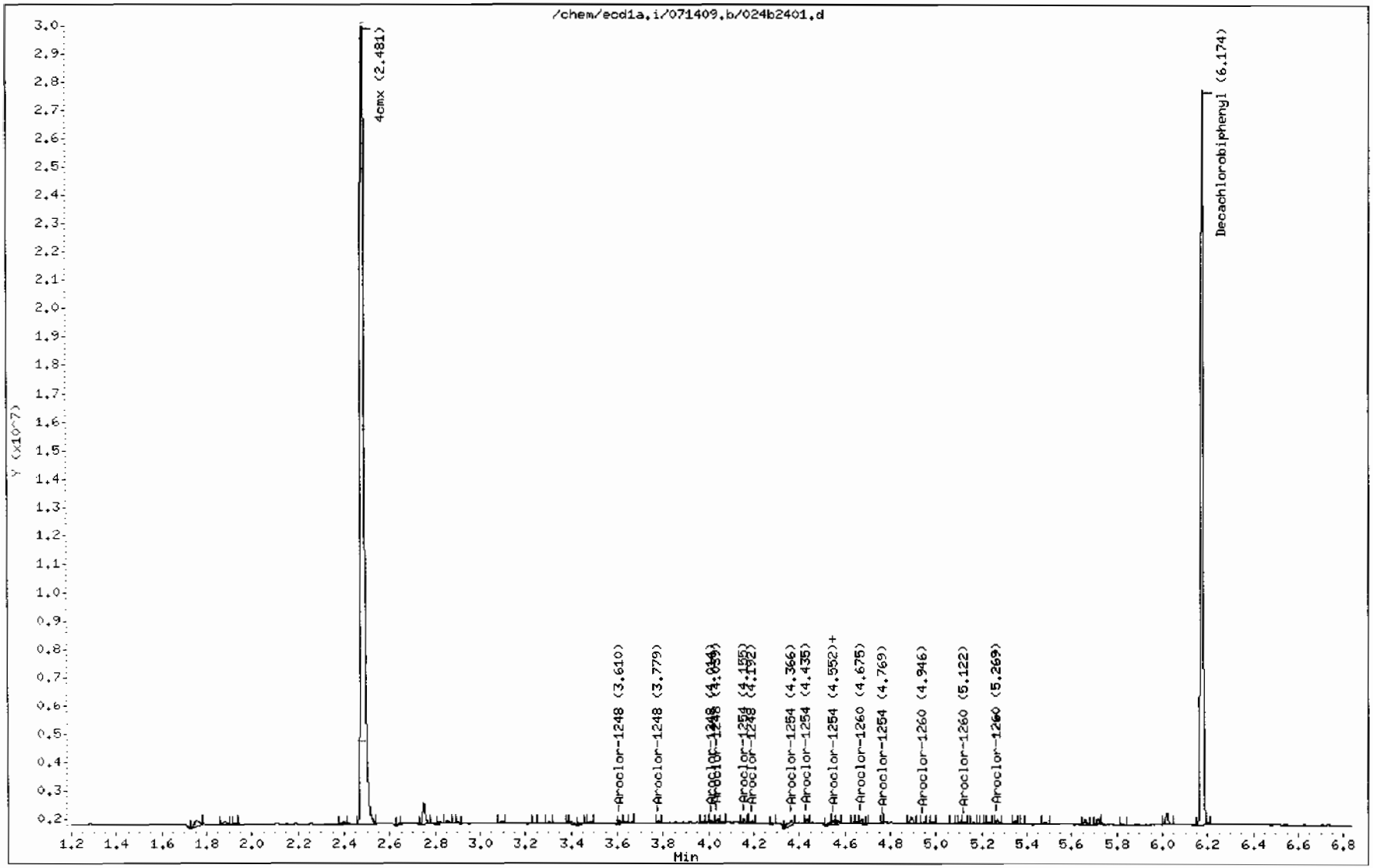

STANDARDS DATA

Report Date: 14-Jul-2009 13:21

Calibration History

Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Start Cal Date: 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
12-JUL-2009 20:14	AR1248	/chem/ecd1a.i/071109.b/020f2001.d
13-JUL-2009 10:14	AR1242	/chem/ecd1a.i/071309.b/004f0401.d
13-JUL-2009 12:28	AR1254	/chem/ecd1a.i/071309.b/017f1701.d
13-JUL-2009 11:27	AR1660	/chem/ecd1a.i/071309.b/011f1101.d
Cal Level: 2 , Cal Amount: 250.00000		
12-JUL-2009 20:24	AR1248	/chem/ecd1a.i/071109.b/021f2101.d
13-JUL-2009 10:25	AR1242	/chem/ecd1a.i/071309.b/005f0501.d
13-JUL-2009 12:39	AR1254	/chem/ecd1a.i/071309.b/018f1801.d
13-JUL-2009 11:37	AR1660	/chem/ecd1a.i/071309.b/012f1201.d
Cal Level: 3 , Cal Amount: 500.00000		
12-JUL-2009 20:34	AR1248	/chem/ecd1a.i/071109.b/022f2201.d
13-JUL-2009 10:35	AR1242	/chem/ecd1a.i/071309.b/006f0601.d
13-JUL-2009 12:49	AR1254	/chem/ecd1a.i/071309.b/019f1901.d
13-JUL-2009 11:47	AR1660	/chem/ecd1a.i/071309.b/013f1301.d
Cal Level: 4 , Cal Amount: 1000.00000		
13-JUL-2009 11:58	AR1660	/chem/ecd1a.i/071309.b/014f1401.d
13-JUL-2009 14:11	DDTANALOGSTD	/chem/ecd1a.i/071309.b/027f2701.d
13-JUL-2009 14:01	AR1268	/chem/ecd1a.i/071309.b/026f2601.d
13-JUL-2009 13:51	AR1262	/chem/ecd1a.i/071309.b/025f2501.d
13-JUL-2009 13:40	AR1221	/chem/ecd1a.i/071309.b/024f2401.d
13-JUL-2009 13:30	AR1232	/chem/ecd1a.i/071309.b/023f2301.d
12-JUL-2009 20:45	AR1248	/chem/ecd1a.i/071109.b/023f2301.d
13-JUL-2009 10:45	AR1242	/chem/ecd1a.i/071309.b/007f0701.d
13-JUL-2009 12:59	AR1254	/chem/ecd1a.i/071309.b/020f2001.d
Cal Level: 5 , Cal Amount: 4000.00000		
12-JUL-2009 20:55	AR1248	/chem/ecd1a.i/071109.b/024f2401.d
13-JUL-2009 10:56	AR1242	/chem/ecd1a.i/071309.b/008f0801.d
13-JUL-2009 13:10	AR1254	/chem/ecd1a.i/071309.b/021f2101.d
13-JUL-2009 12:08	AR1660	/chem/ecd1a.i/071309.b/015f1501.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 12:14	AR1660	/chem/ecd1a.i/071409.b/031f3101.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 10:00	AR1660	/chem/ecd1a.i/071409.b/019f1901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 08:06	AR1268	/chem/ecd1a.i/071409.b/009f0901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:56	AR1262	/chem/ecd1a.i/071409.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:46	AR1221	/chem/ecd1a.i/071409.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:36	AR1232	/chem/ecd1a.i/071409.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:25	AR1248	/chem/ecd1a.i/071409.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:15	AR1242	/chem/ecd1a.i/071409.b/004f0401.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:05	AR1254	/chem/ecd1a.i/071409.b/003f0301.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 06:54	AR1660	/chem/ecd1a.i/071409.b/002f0201.d

Report Date: 14-Jul-2009 13:21

Calibration History

Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Start Cal Date: 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
12-JUL-2009 20:14	AR1248	/chem/ecd1a.i/071109.b/020b2001.d
13-JUL-2009 10:14	AR1242	/chem/ecd1a.i/071309.b/004b0401.d
13-JUL-2009 12:28	AR1254	/chem/ecd1a.i/071309.b/017b1701.d
13-JUL-2009 11:27	AR1660	/chem/ecd1a.i/071309.b/011b1101.d
Cal Level: 2 , Cal Amount: 250.00000		
12-JUL-2009 20:24	AR1248	/chem/ecd1a.i/071109.b/021b2101.d
13-JUL-2009 10:25	AR1242	/chem/ecd1a.i/071309.b/005b0501.d
13-JUL-2009 12:39	AR1254	/chem/ecd1a.i/071309.b/018b1801.d
13-JUL-2009 11:37	AR1660	/chem/ecd1a.i/071309.b/012b1201.d
Cal Level: 3 , Cal Amount: 500.00000		
12-JUL-2009 20:34	AR1248	/chem/ecd1a.i/071109.b/022b2201.d
13-JUL-2009 10:35	AR1242	/chem/ecd1a.i/071309.b/006b0601.d
13-JUL-2009 12:49	AR1254	/chem/ecd1a.i/071309.b/019b1901.d
13-JUL-2009 11:47	AR1660	/chem/ecd1a.i/071309.b/013b1301.d
Cal Level: 4 , Cal Amount: 1000.00000		
13-JUL-2009 14:11	DDTANALOGSTD	/chem/ecd1a.i/071309.b/027b2701.d
13-JUL-2009 14:01	AR1268	/chem/ecd1a.i/071309.b/026b2601.d
13-JUL-2009 13:51	AR1262	/chem/ecd1a.i/071309.b/025b2501.d
13-JUL-2009 13:40	AR1221	/chem/ecd1a.i/071309.b/024b2401.d
13-JUL-2009 13:30	AR1232	/chem/ecd1a.i/071309.b/023b2301.d
12-JUL-2009 20:45	AR1248	/chem/ecd1a.i/071109.b/023b2301.d
13-JUL-2009 10:45	AR1242	/chem/ecd1a.i/071309.b/007b0701.d
13-JUL-2009 12:59	AR1254	/chem/ecd1a.i/071309.b/020b2001.d
13-JUL-2009 11:58	AR1660	/chem/ecd1a.i/071309.b/014b1401.d
Cal Level: 5 , Cal Amount: 4000.00000		
12-JUL-2009 20:55	AR1248	/chem/ecd1a.i/071109.b/024b2401.d
13-JUL-2009 10:56	AR1242	/chem/ecd1a.i/071309.b/008b0801.d
13-JUL-2009 13:10	AR1254	/chem/ecd1a.i/071309.b/021b2101.d
13-JUL-2009 12:08	AR1660	/chem/ecd1a.i/071309.b/015b1501.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 12:14	AR1660	/chem/ecd1a.i/071409.b/031b3101.d

Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 10:00	AR1660	/chem/ecd1a.i/071409.b/019b1901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 08:06	AR1268	/chem/ecd1a.i/071409.b/009b0901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:56	AR1262	/chem/ecd1a.i/071409.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:46	AR1221	/chem/ecd1a.i/071409.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:36	AR1232	/chem/ecd1a.i/071409.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:25	AR1248	/chem/ecd1a.i/071409.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:15	AR1242	/chem/ecd1a.i/071409.b/004b0401.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:05	AR1254	/chem/ecd1a.i/071409.b/003b0301.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 06:54	AR1660	/chem/ecd1a.i/071409.b/002b0201.d

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COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 14-Jul-2009 11:21 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	12031.000000
Initial:End Threshold	6015.500000
Initial:Area Threshold	15489.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	2.100000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.577	2.547-2.607	1.420e+04
	2.871	2.841-2.901	1.658e+04
	2.953	2.923-2.983	1.176e+04
	3.067	3.037-3.097	6.386e+03
	3.204	3.174-3.234	8.786e+03
63 4,4-DDD	4.113	4.093-4.133	1.737e+05
64 4,4-DDE	3.760	3.740-3.780	2.824e+05
62 4,4-DDT	4.277	4.257-4.297	1.087e+05
2 Aroclor-1221	2.226	2.196-2.256	3.603e+03
	2.323	2.293-2.353	2.093e+03
	2.350	2.320-2.380	8.763e+03
3 Aroclor-1232	2.578	2.548-2.608	5.881e+03
	2.871	2.841-2.901	6.649e+03
	2.953	2.923-2.983	4.841e+03
	3.204	3.174-3.234	3.329e+03
	3.475	3.445-3.505	3.163e+03
4 Aroclor-1242	2.871	2.841-2.901	1.180e+04
	2.953	2.923-2.983	8.492e+03
	3.083	3.053-3.113	4.671e+03
	3.204	3.174-3.234	6.573e+03
	3.476	3.446-3.506	6.305e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m

Compound	RT	RT Window	RF
5 Aroclor-1248	2.871	2.841-2.901	6.859e+03
	3.083	3.053-3.113	7.086e+03
	3.476	3.446-3.506	1.081e+04
	3.592	3.562-3.622	9.929e+03
	3.826	3.796-3.856	6.674e+03
6 Aroclor-1254	3.434	3.404-3.464	1.031e+04
	3.589	3.559-3.619	1.375e+04
	3.826	3.796-3.856	1.705e+04
	4.098	4.068-4.128	1.257e+04
	4.261	4.231-4.291	1.717e+04
7 Aroclor-1260	3.933	3.903-3.963	1.529e+04
	4.096	4.066-4.126	2.309e+04
	4.326	4.296-4.356	1.164e+04
	4.470	4.440-4.500	1.267e+04
	4.835	4.805-4.865	5.873e+03
8 Aroclor-1262	4.096	4.066-4.126	1.362e+04
	4.327	4.297-4.357	1.673e+04
	4.471	4.441-4.501	1.541e+04
	4.651	4.621-4.681	3.022e+04
	4.836	4.806-4.866	1.174e+04
9 Aroclor-1268	4.836	4.806-4.866	3.793e+04
	4.858	4.828-4.888	3.567e+04
	4.972	4.942-5.002	2.851e+04
	5.020	4.990-5.050	1.026e+04
	5.340	5.310-5.370	8.118e+04
M 10 Aroclor-Total	1.000	0.980-1.020	
$ 11 4cmx	2.112	2.082-2.142	3.324e+05
$ 12 Decachlorobiphenyl	5.450	5.420-5.480	2.316e+05

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COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 14-Jul-2009 11:20 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	7222.000000
Initial:End Threshold	3611.000000
Initial:Area Threshold	6833.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	1.500000

Compound	RT	RT Window	RF
1 Aroclor-1016	3.399	3.369-3.429	1.056e+04
	3.484	3.454-3.514	8.404e+03
	3.549	3.519-3.579	4.949e+03
	3.779	3.749-3.809	6.810e+03
	3.855	3.825-3.885	5.449e+03
62 4,4-DDT	4.889	4.869-4.909	1.398e+04
63 4,4-DDE	4.351	4.331-4.371	1.578e+05
64 4,4-DDD	4.699	4.680-4.720	1.020e+05
2 Aroclor-1221	2.684	2.654-2.714	2.867e+03
	2.781	2.751-2.811	1.893e+03
	2.823	2.793-2.853	6.284e+03
3 Aroclor-1232	3.387	3.357-3.417	3.439e+03
	3.484	3.454-3.514	3.620e+03
	3.550	3.520-3.580	2.104e+03
	3.779	3.749-3.809	2.601e+03
	4.042	4.012-4.072	2.590e+03
4 Aroclor-1242	3.399	3.369-3.429	7.855e+03
	3.484	3.454-3.514	6.237e+03
	3.549	3.519-3.579	3.663e+03
	3.779	3.749-3.809	5.090e+03
	4.184	4.154-4.214	5.348e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m

Compound	RT	RT Window	RF
5 Aroclor-1248	3.610	3.580-3.640	6.881e+03
	3.779	3.749-3.809	8.383e+03
	4.014	3.984-4.044	8.254e+03
	4.042	4.012-4.072	9.027e+03
	4.182	4.152-4.212	9.382e+03
6 Aroclor-1254	4.154	4.124-4.184	9.279e+03
	4.365	4.335-4.395	6.928e+03
	4.435	4.405-4.465	1.217e+04
	4.553	4.523-4.583	5.261e+03
	4.782	4.752-4.812	6.299e+03
7 Aroclor-1260	4.551	4.521-4.581	1.133e+04
	4.675	4.645-4.705	1.245e+04
	4.944	4.914-4.974	8.467e+03
	5.121	5.091-5.151	8.776e+03
	5.267	5.237-5.297	1.708e+04
8 Aroclor-1262	4.676	4.646-4.706	8.226e+03
	4.945	4.915-4.975	1.144e+04
	5.122	5.092-5.152	1.058e+04
	5.267	5.237-5.297	1.817e+04
	5.483	5.453-5.513	1.296e+04
9 Aroclor-1268	5.481	5.451-5.511	2.315e+04
	5.510	5.480-5.540	2.066e+04
	5.661	5.631-5.691	1.659e+04
	5.825	5.795-5.855	7.750e+03
	6.019	5.989-6.049	4.217e+04
M 10 Aroclor-Total	1.000	0.980-1.020	
$ 11 4cmx	2.481	2.451-2.511	2.678e+05
$ 12 Decachlorobiphenyl	6.175	6.145-6.205	1.308e+05

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : None
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Cal Date : 14-Jul-2009 11:21 yip00818
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd1a.i/071109.b/020f2001.d
Level 2: /chem/ecd1a.i/071109.b/021f2101.d
Level 3: /chem/ecd1a.i/071109.b/022f2201.d
Level 4: /chem/ecd1a.i/071309.b/014f1401.d
Level 5: /chem/ecd1a.i/071109.b/024f2401.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	16924	14564	13967	13438	12123	14203	12.449
(2)	18513	16515	16449	15988	15411	16575	7.058
(3)	13921	11878	11559	11159	10300	11763	11.420
(4)	7402	6602	6331	5895	5698	6386	10.494
(5)	10087	9011	8652	8280	7902	8786	9.518
63 4,4-DDD	+++++	+++++	+++++	173744	+++++	173744	0.000
64 4,4-DDE	+++++	+++++	+++++	282407	+++++	282407	0.000
62 4,4-DDT	+++++	+++++	+++++	108721	+++++	108721	0.000
2 Aroclor-1221(1)	+++++	+++++	+++++	3603	+++++	3603	0.000
(2)	+++++	+++++	+++++	2093	+++++	2093	0.000
(3)	+++++	+++++	+++++	8763	+++++	8763	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	5881	+++++	5881	0.000
(2)	+++++	+++++	+++++	6649	+++++	6649	0.000
(3)	+++++	+++++	+++++	4841	+++++	4841	0.000
(4)	+++++	+++++	+++++	3329	+++++	3329	0.000
(5)	+++++	+++++	+++++	3163	+++++	3163	0.000
4 Aroclor-1242(1)	12953	12079	12027	11524	10436	11804	7.804
(2)	9555	8853	8571	8115	7366	8492	9.631
(3)	5342	4870	4817	4469	3858	4671	11.791
(4)	7471	6850	6670	6304	5573	6573	10.662
(5)	7057	6557	6463	6010	5437	6305	9.694
5 Aroclor-1248(1)	6834	7144	7199	6590	6528	6859	4.489
(2)	7502	7359	7611	6506	6453	7086	7.920
(3)	10800	11014	11526	10636	10059	10807	4.960
(4)	10197	10234	10465	9642	9106	9929	5.543
(5)	6905	6860	7077	6483	6045	6674	6.187

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : None
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Cal Date : 14-Jul-2009 11:21 yip00818
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
6 Aroclor-1254 (1)	11907	10934	10030	9520	9154	10309	10.821
(2)	15730	14504	13344	12844	12317	13748	9.981
(3)	18697	18035	16757	16177	15575	17048	7.595
(4)	14120	13596	12332	11789	11033	12574	10.125
(5)	18902	18436	16710	16149	15635	17166	8.346
7 Aroclor-1260 (1)	17216	15216	15153	14709	14135	15286	7.607
(2)	25598	23029	23141	22211	21485	23093	6.724
(3)	13137	11670	11572	10959	10858	11639	7.830
(4)	14210	12690	12564	12011	11860	12667	7.357
(5)	6811	5968	5843	5315	5430	5873	10.062
8 Aroclor-1262 (1)	+++++	+++++	+++++	13625	+++++	13625	0.000
(2)	+++++	+++++	+++++	16733	+++++	16733	0.000
(3)	+++++	+++++	+++++	15410	+++++	15410	0.000
(4)	+++++	+++++	+++++	30218	+++++	30218	0.000
(5)	+++++	+++++	+++++	11738	+++++	11738	0.000
9 Aroclor-1268 (1)	+++++	+++++	+++++	37931	+++++	37931	0.000
(2)	+++++	+++++	+++++	35669	+++++	35669	0.000
(3)	+++++	+++++	+++++	28512	+++++	28512	0.000
(4)	+++++	+++++	+++++	10258	+++++	10258	0.000
(5)	+++++	+++++	+++++	81177	+++++	81177	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 11 4cmx	362221	322647	328629	330870	317524	332379	5.259
$ 12 Decachlorobiphenyl	254649	231990	231979	217250	222089	231591	6.212

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Cal Date : 14-Jul-2009 11:20 yip00818
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd1a.i/071109.b/020b2001.d
Level 2: /chem/ecd1a.i/071109.b/021b2101.d
Level 3: /chem/ecd1a.i/071109.b/022b2201.d
Level 4: /chem/ecd1a.i/071309.b/027b2701.d
Level 5: /chem/ecd1a.i/071109.b/024b2401.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	12372	10905	10724	9871	8926	10560	12.143
(2)	10554	8794	8237	7723	6710	8404	16.972
(3)	6020	5202	4919	4479	4124	4949	14.691
(4)	8364	7127	6732	6230	5598	6810	15.271
(5)	6766	5701	5407	4890	4481	5449	16.027
62 4,4-DDT	+++++	+++++	+++++	13984	+++++	13984	0.000
63 4,4-DDE	+++++	+++++	+++++	157795	+++++	157795	0.000
64 4,4-DDD	+++++	+++++	+++++	101978	+++++	101978	0.000
2 Aroclor-1221(1)	+++++	+++++	+++++	2867	+++++	2867	0.000
(2)	+++++	+++++	+++++	1893	+++++	1893	0.000
(3)	+++++	+++++	+++++	6284	+++++	6284	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	3439	+++++	3439	0.000
(2)	+++++	+++++	+++++	3620	+++++	3620	0.000
(3)	+++++	+++++	+++++	2104	+++++	2104	0.000
(4)	+++++	+++++	+++++	2601	+++++	2601	0.000
(5)	+++++	+++++	+++++	2590	+++++	2590	0.000
4 Aroclor-1242(1)	9217	8405	7931	7533	6192	7855	14.276
(2)	7778	6628	6169	5698	4912	6237	17.151
(3)	4478	3953	3677	3364	2843	3663	16.776
(4)	6197	5476	5107	4726	3943	5090	16.507
(5)	6587	5781	5394	4896	4082	5348	17.568
5 Aroclor-1248(1)	7568	7947	7100	6300	5491	6881	14.397
(2)	9176	9490	8664	7756	6830	8383	12.983
(3)	9183	9455	8421	7099	7113	8254	13.503
(4)	10315	10032	9379	7417	7989	9027	14.083
(5)	10004	10641	9758	8795	7712	9382	12.207

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Cal Date : 14-Jul-2009 11:20 yip00818
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
6 Aroclor-1254(1)	11228	10287	9085	8338	7457	9279	16.219
(2)	8282	7597	6851	6194	5715	6928	14.962
(3)	14447	13279	11987	11068	10071	12170	14.271
(4)	6500	5749	5240	4606	4211	5261	17.285
(5)	7341	7064	6143	5754	5193	6299	14.239
7 Aroclor-1260(1)	13958	11743	11149	10501	9303	11331	15.228
(2)	15079	12881	12435	11458	10411	12453	14.048
(3)	10349	8880	8366	7731	7008	8467	14.933
(4)	10513	9207	8743	8019	7396	8776	13.583
(5)	19838	17735	17267	15755	14821	17083	11.309
8 Aroclor-1262(1)	+++++	+++++	+++++	8226	+++++	8226	0.000
(2)	+++++	+++++	+++++	11437	+++++	11437	0.000
(3)	+++++	+++++	+++++	10579	+++++	10579	0.000
(4)	+++++	+++++	+++++	18172	+++++	18172	0.000
(5)	+++++	+++++	+++++	12963	+++++	12963	0.000
9 Aroclor-1268(1)	+++++	+++++	+++++	23151	+++++	23151	0.000
(2)	+++++	+++++	+++++	20662	+++++	20662	0.000
(3)	+++++	+++++	+++++	16588	+++++	16588	0.000
(4)	+++++	+++++	+++++	7750	+++++	7750	0.000
(5)	+++++	+++++	+++++	42173	+++++	42173	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 11 4cmx	309513	269887	264377	259792	235267	267767	10.018
$ 12 Decachlorobiphenyl	157032	136728	130596	117157	112618	130826	13.458

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2506

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 0654

Lab File ID: 002F0201 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	14203.241	13076.108	0.01	-7.9	15.0
(2)	16575.200	15186.652	0.01	-8.4	15.0
(3)	11763.386	10734.692	0.01	-8.7	15.0
(4)	6385.917	5640.692	0.01	-11.7	15.0
(5)	8786.443	7951.909	0.01	-9.5	15.0
Aroclor-1260	15285.677	14227.461	0.01	-6.9	15.0
(2)	23092.700	21553.043	0.01	-6.7	15.0
(3)	11639.153	10600.269	0.01	-8.9	15.0
(4)	12667.045	11656.883	0.01	-8.0	15.0
(5)	5873.295	5352.330	0.01	-8.9	15.0
4cmx	332378.50	321590.67	0.01	-3.2	15.0
Decachlorobiphenyl	231591.28	215001.14	0.01	-7.2	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2506

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 0654

Lab File ID: 002B0201 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	10559.500	9947.304	0.01	-5.8	15.0
(2)	8403.626	7716.737	0.01	-8.2	15.0
(3)	4948.505	4496.304	0.01	-9.1	15.0
(4)	6810.219	6210.739	0.01	-8.8	15.0
(5)	5449.030	4946.016	0.01	-9.2	15.0
Aroclor-1260	11330.884	10390.957	0.01	-8.3	15.0
(2)	12452.888	11322.174	0.01	-9.1	15.0
(3)	8466.689	7671.382	0.01	-9.4	15.0
(4)	8775.756	7929.019	0.01	-9.6	15.0
(5)	17083.207	15729.544	0.01	-7.9	15.0
4cmx	267767.10	261384.60	0.01	-2.4	15.0
Decachlorobiphenyl	130826.14	116586.63	0.01	-10.9	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2506

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1000

Lab File ID: 019F1901 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	14203.241	13623.921	0.01	-4.1	15.0
(2)	16575.200	17122.131	0.01	3.3	15.0
(3)	11763.386	11364.367	0.01	-3.4	15.0
(4)	6385.917	6093.521	0.01	-4.6	15.0
(5)	8786.443	8685.457	0.01	-1.1	15.0
Aroclor-1260	15285.677	15114.016	0.01	-1.1	15.0
(2)	23092.700	23255.466	0.01	0.7	15.0
(3)	11639.153	11537.482	0.01	-0.9	15.0
(4)	12667.045	12563.517	0.01	-0.8	15.0
(5)	5873.295	5688.421	0.01	-3.1	15.0
4cmx	332378.50	334439.59	0.01	0.6	15.0
Decachlorobiphenyl	231591.28	234979.91	0.01	1.5	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2506

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1000

Lab File ID: 019B1901 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	10559.500	11323.881	0.01	7.2	15.0
(2)	8403.626	8421.726	0.01	0.2	15.0
(3)	4948.505	5075.640	0.01	2.6	15.0
(4)	6810.219	6842.460	0.01	0.5	15.0
(5)	5449.030	5491.288	0.01	0.8	15.0
Aroclor-1260	11330.884	11292.830	0.01	-0.3	15.0
(2)	12452.888	12734.567	0.01	2.3	15.0
(3)	8466.689	8366.958	0.01	-1.2	15.0
(4)	8775.756	8773.824	0.01	-0.0	15.0
(5)	17083.207	17736.968	0.01	3.8	15.0
4cmx	267767.10	273990.38	0.01	2.3	15.0
Decachlorobiphenyl	130826.14	130995.57	0.01	0.1	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2506

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1214

Lab File ID: 031F3101 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	14203.241	13704.784	0.01	-3.5	15.0
(2)	16575.200	17150.581	0.01	3.5	15.0
(3)	11763.386	11437.580	0.01	-2.8	15.0
(4)	6385.917	6119.922	0.01	-4.2	15.0
(5)	8786.443	8707.678	0.01	-0.9	15.0
Aroclor-1260	15285.677	15218.428	0.01	-0.4	15.0
(2)	23092.700	23615.122	0.01	2.3	15.0
(3)	11639.153	11700.924	0.01	0.5	15.0
(4)	12667.045	12795.401	0.01	1.0	15.0
(5)	5873.295	5792.099	0.01	-1.4	15.0
4cmx	332378.50	333214.10	0.01	0.2	15.0
Decachlorobiphenyl	231591.28	240180.81	0.01	3.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2506

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1214

Lab File ID: 031B3101 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D	
Aroclor-1016	10559.500	12210.940	0.01	15.6	15.0	<-
(2)	8403.626	8750.467	0.01	4.1	15.0	
(3)	4948.505	5288.968	0.01	6.9	15.0	
(4)	6810.219	7094.884	0.01	4.2	15.0	
(5)	5449.030	5697.831	0.01	4.6	15.0	
Aroclor-1260	11330.884	11691.029	0.01	3.2	15.0	
(2)	12452.888	13289.261	0.01	6.7	15.0	
(3)	8466.689	8686.954	0.01	2.6	15.0	
(4)	8775.756	9136.766	0.01	4.1	15.0	
(5)	17083.207	18710.100	0.01	9.5	15.0	
4cmx	267767.10	276548.86	0.01	3.3	15.0	
Decachlorobiphenyl	130826.14	137306.68	0.01	5.0	15.0	

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/002f0201.d
Lab Smp Id: WAR090623-60 01 Client Smp ID: AR166001
Inj Date : 14-JUL-2009 06:54
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 01
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	32159067	100.000	96.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	21500114	100.000	92.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	13076108	1000.00	921	80.00- 120.00	100.00
2.871	2.871	0.000	15186652	1000.00	916	96.14- 136.14	116.14
2.953	2.953	0.000	10734692	1000.00	912	62.09- 102.09	82.09
3.067	3.067	0.000	5640692	1000.00	883	23.14- 63.14	43.14
3.204	3.204	0.000	7951909	1000.00	905	40.81- 80.81	60.81
Average of Peak Amounts =					908		
7 Aroclor-1260					CAS #: 11096-82-5		
3.933	3.933	0.000	14297461	1000.00	931	80.00- 120.00	100.00
4.096	4.096	0.000	21553043	1000.00	933	131.49- 171.49	151.49
4.326	4.326	0.000	10600269	1000.00	911	54.51- 94.51	74.51
4.470	4.470	0.000	11656883	1000.00	920	61.93- 101.93	81.93
4.835	4.835	0.000	5352330	1000.00	911	17.62- 57.62	37.62
Average of Peak Amounts =					921		

Data File: /chem/ecd1a.i/071409.b/002f0201.d
Date : 14-JUL-2009 06:54
Client ID: AR166001
Sample Info: IWAR090623-60 01

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

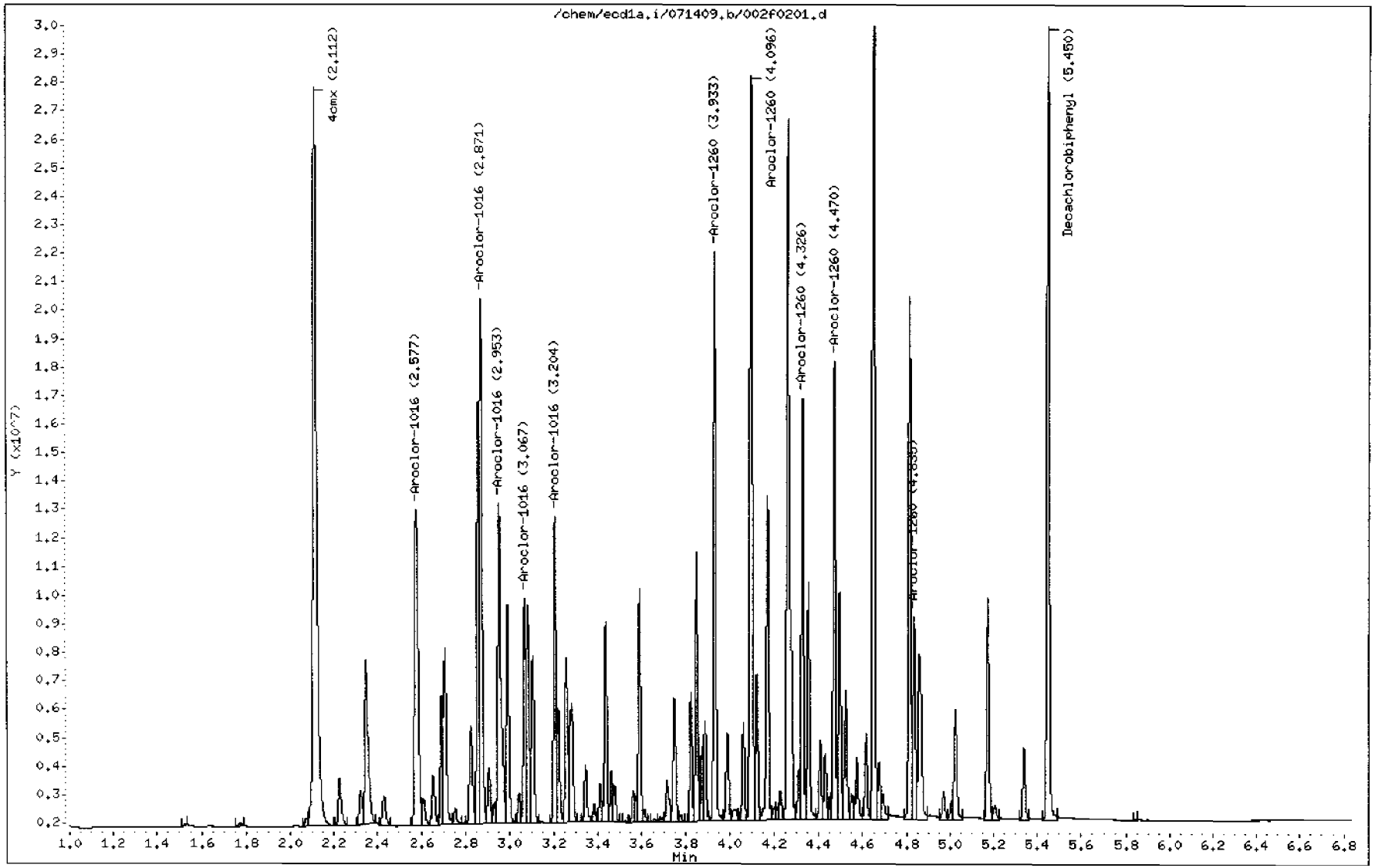

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/002b0201.d
Lab Smp Id: WAR090623-60 01 Client Smp ID: AR166001
Inj Date : 14-JUL-2009 06:54
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 01
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	26138460	100.000	97.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	11658663	100.000	89.1	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.399	3.399	0.000	9947304	1000.00	942	80.00- 120.00	100.00
3.484	3.484	0.000	7716737	1000.00	918	57.58- 97.58	77.58
3.549	3.549	0.000	4496304	1000.00	909	25.20- 65.20	45.20
3.779	3.779	0.000	6210739	1000.00	912	42.44- 82.44	62.44
3.855	3.855	0.000	4946016	1000.00	908	29.72- 69.72	49.72
Average of Peak Amounts =					918		
7 Aroclor-1260					CAS #: 11096-82-5		
4.551	4.551	0.000	10390957	1000.00	917	80.00- 120.00	100.00
4.675	4.675	0.000	11322174	1000.00	909	88.96- 128.96	108.96
4.944	4.944	0.000	7671382	1000.00	906	53.83- 93.83	73.83
5.121	5.121	0.000	7929019	1000.00	904	56.31- 96.31	76.31
5.267	5.267	0.000	15729544	1000.00	921	131.38- 171.38	151.38
Average of Peak Amounts =					911		

Data File: /chem/ecd1a.i/071409.b/002b0201.d
Date : 14-JUL-2009 06:54
Client ID: AR166001
Sample Info: IWAR090623-60 01

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

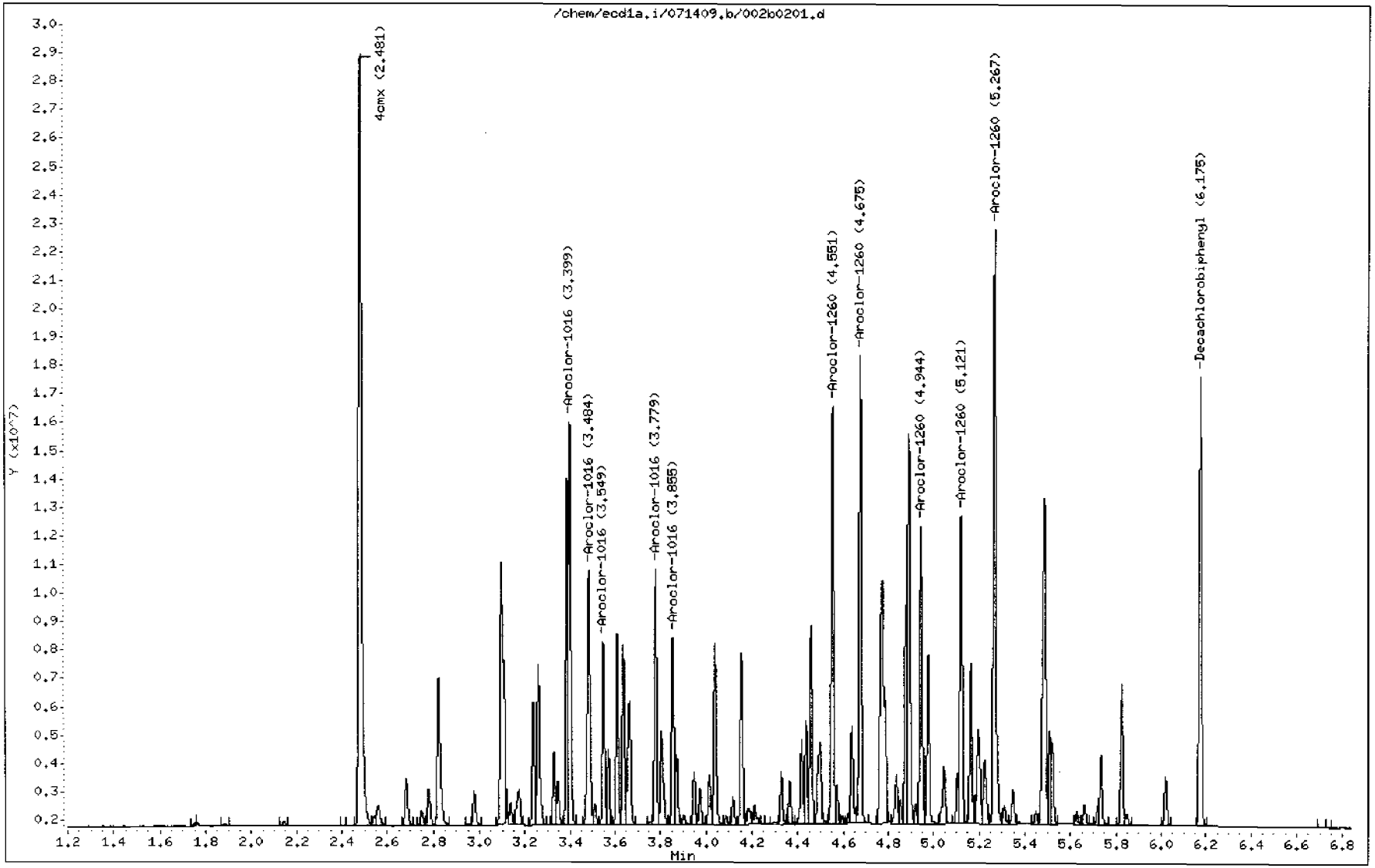

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/003f0301.d
Lab Smp Id: WAR090630-54 54 Client Smp ID: AR125401
Inj Date : 14-JUL-2009 07:05
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090630-54 54
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	31675454	100.000	95.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	21100892	100.000	91.1	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.434	3.434	0.000	9565161	1000.00	928	80.00- 120.00	100.00
3.589	3.589	0.000	12743688	1000.00	927	113.23- 153.23	133.23
3.826	3.826	0.000	16103412	1000.00	944	148.35- 188.35	168.35
4.098	4.098	0.000	11741256	1000.00	934	102.75- 142.75	122.75
4.261	4.261	0.000	16083550	1000.00	937	148.15- 188.15	168.15

Average of Peak Amounts = 934

Data File: /chem/ecd1a.i/071409.b/003f0301.d
Date : 14-JUL-2009 07:05
Client ID: AR125401
Sample Info: IWAR090630-54 54

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

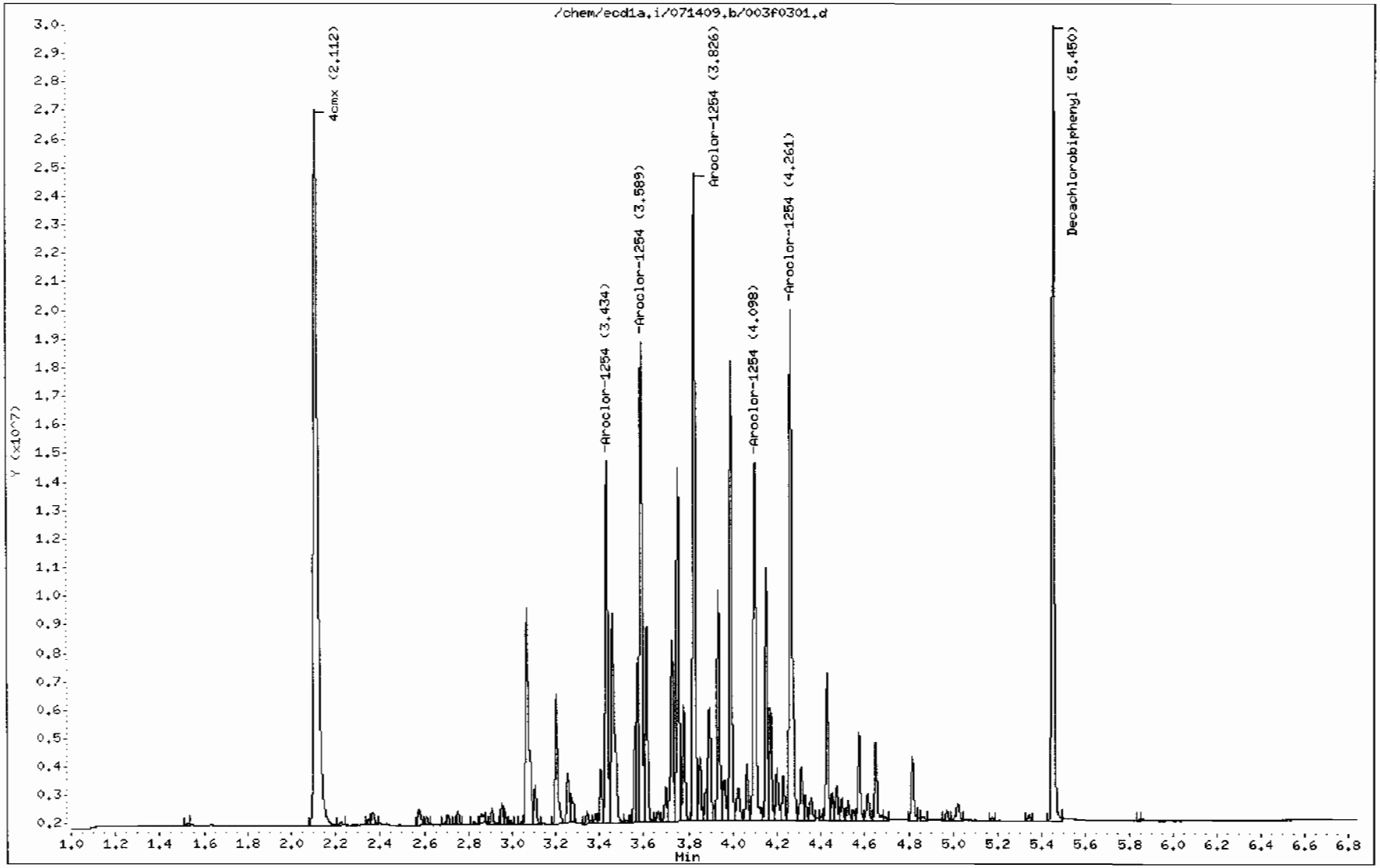

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/003b0301.d
Lab Smp Id: WAR090630-54 54 Client Smp ID: AR125401
Inj Date : 14-JUL-2009 07:05
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090630-54 54
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	25905797	100.000	96.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	11488712	100.000	87.8	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.154	4.154	0.000	8393889	1000.00	905	80.00- 120.00	100.00
4.365	4.365	0.000	6349023	1000.00	916	55.64- 95.64	75.64
4.435	4.435	0.000	11248393	1000.00	924	114.01- 154.01	134.01
4.553	4.553	0.000	4769142	1000.00	906	36.82- 76.82	56.82
4.782	4.782	0.000	5747266	1000.00	912	48.47- 88.47	68.47
Average of Peak Amounts =					913		

Data File: /chem/ecd1a.i/071409.b/003b0301.d

Date : 14-JUL-2009 07:05

Client ID: AR125401

Sample Info: IWAR090630-54 54

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

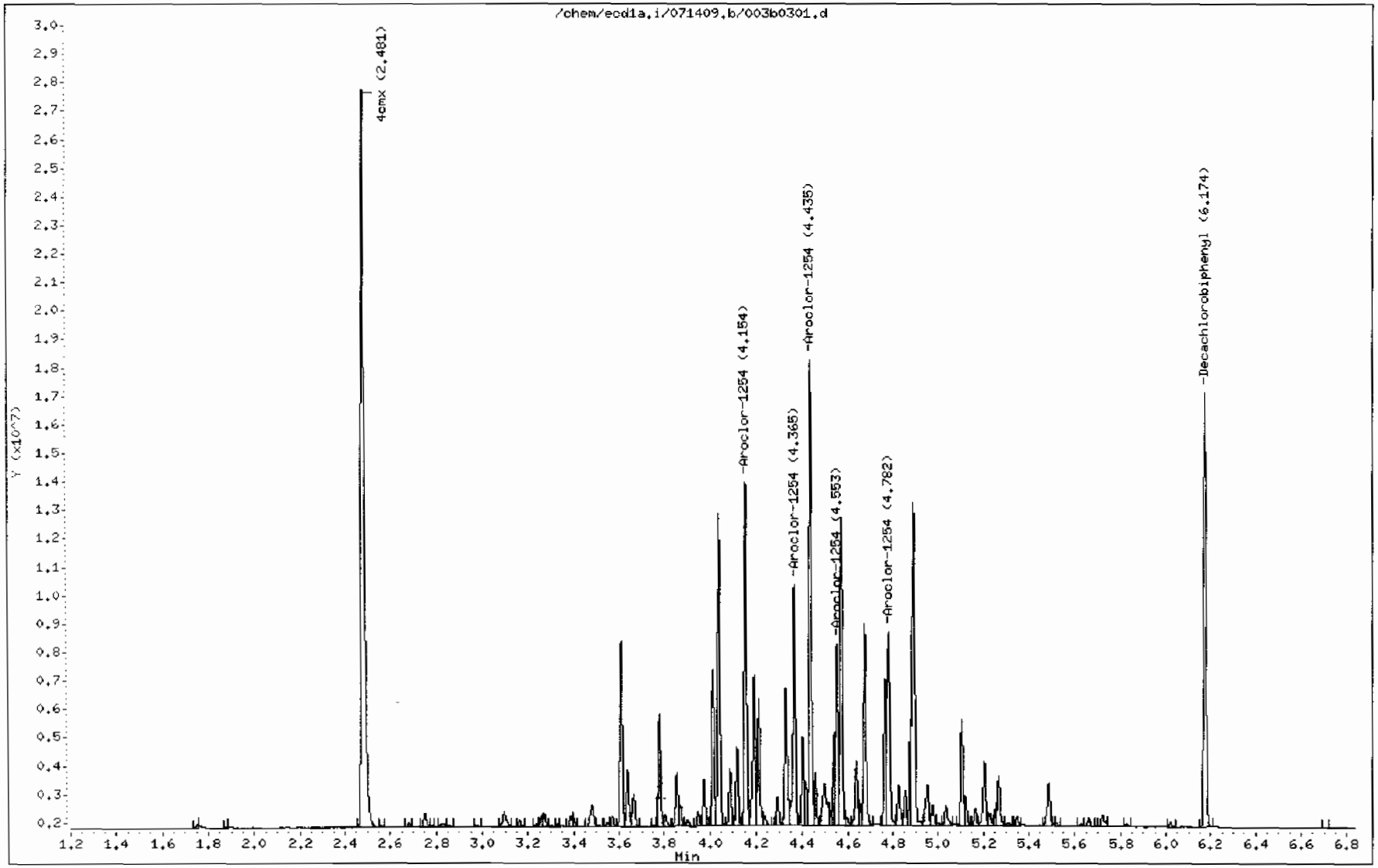

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/071409.b/004f0401.d
Lab Smp Id: WAR090519-42 42 Client Smp ID: AR124201
Inj Date : 14-JUL-2009 07:15
Operator : YS1 Inst ID: ecdla.i
Smp Info : ¦WAR090519-42 42
Misc Info :
Comment :
Method : /chem/ecdla.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	38183470	100.000	115	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.452	5.450	0.002	23487290	100.000	101	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.871	2.871	0.000	11039219	1000.00	935	80.00- 120.00	100.00
2.953	2.953	0.000	8204654	1000.00	966	54.32- 94.32	74.32
3.083	3.083	0.000	4130118	1000.00	884	17.41- 57.41	37.41
3.204	3.204	0.000	6014120	1000.00	915	34.48- 74.48	54.48
3.476	3.476	0.000	5681233	1000.00	901	31.46- 71.46	51.46
Average of Peak Amounts =					920		

Data File: /chem/ecd1a.i/071409.b/004f0401.d

Date : 14-JUL-2009 07:15

Client ID: AR124201

Sample Info: IWAR090519-42 42

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

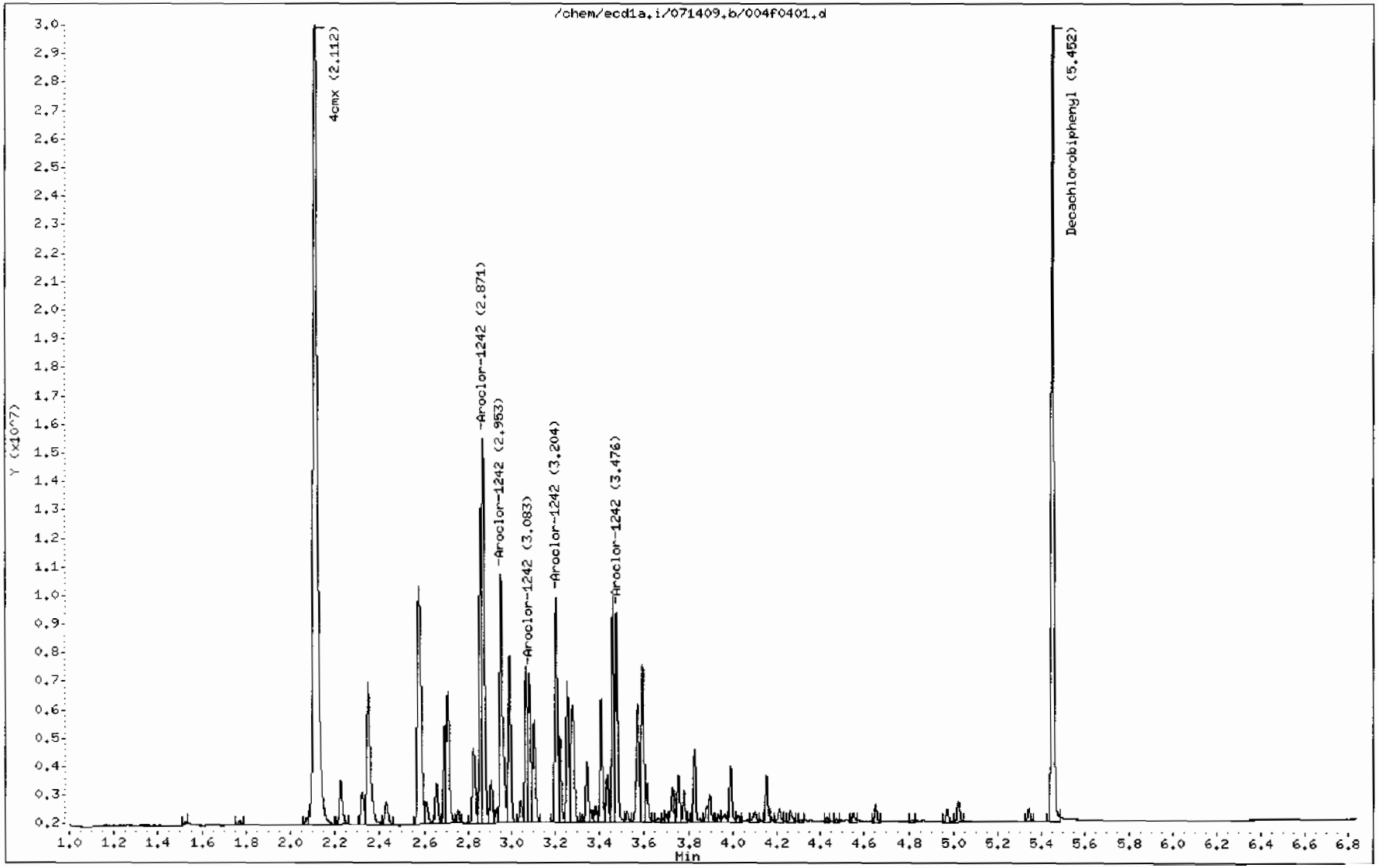

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/004b0401.d
Lab Smp Id: WAR090519-42 42 Client Smp ID: AR124201
Inj Date : 14-JUL-2009 07:15
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090519-42 42
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	30509789	100.000	114	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	12722039	100.000	97.2	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
3.399	3.399	0.000	7268225	1000.00	925	80.00- 120.00	100.00
3.484	3.484	0.000	6012073	1000.00	964	62.72- 102.72	82.72
3.549	3.549	0.000	3422273	1000.00	934	27.09- 67.09	47.09
3.779	3.779	0.000	4597945	1000.00	903	43.26- 83.26	63.26
4.184	4.184	0.000	4630615	1000.00	866	43.71- 83.71	63.71
Average of Peak Amounts =					919		

Data File: /chem/ecd1a.i/071409.b/004b0401.d
Date : 14-JUL-2009 07:15
Client ID: AR124201
Sample Info: IWAR090519-42 42

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

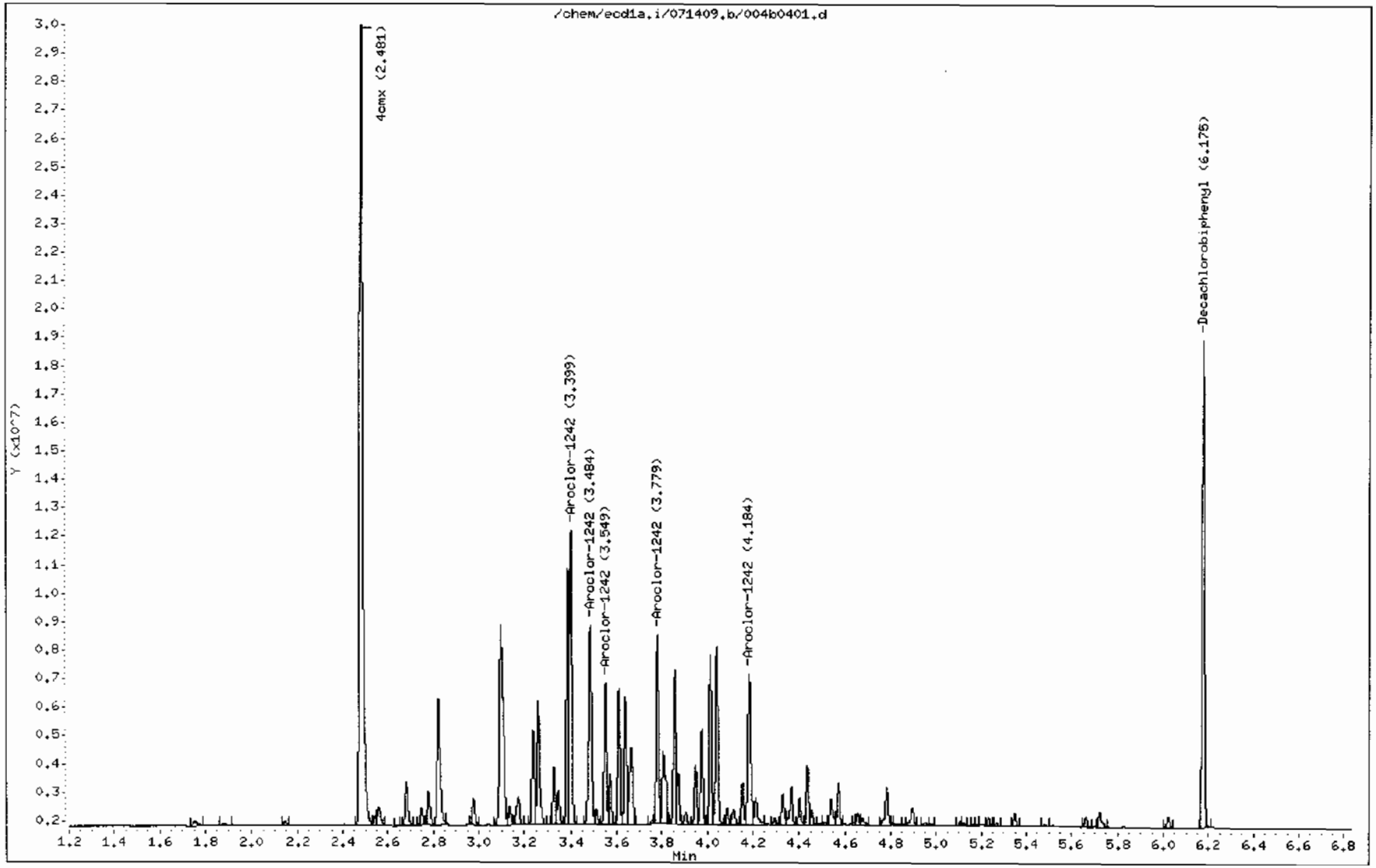

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/005f0501.d
Lab Smp Id: WAR090521-48 48 Client Smp ID: AR124801
Inj Date : 14-JUL-2009 07:25
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090521-48 48
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	35658363	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	23053211	100.000	99.5	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
2.871	2.871	0.000	6035408	1000.00	880	80.00- 120.00	100.00
3.083	3.083	0.000	6584538	1000.00	929	89.10- 129.10	109.10
3.476	3.476	0.000	9551014	1000.00	884	138.25- 178.25	158.25
3.592	3.592	0.000	8879871	1000.00	894	127.13- 167.13	147.13
3.826	3.826	0.000	5780985	1000.00	866	75.78- 115.78	95.78
Average of Peak Amounts =					891		

Data File: /chem/ecd1a.i/071409.b/005f0501.d
Date : 14-JUL-2009 07:25
Client ID: AR124801
Sample Info: IWAR090521-48 48

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

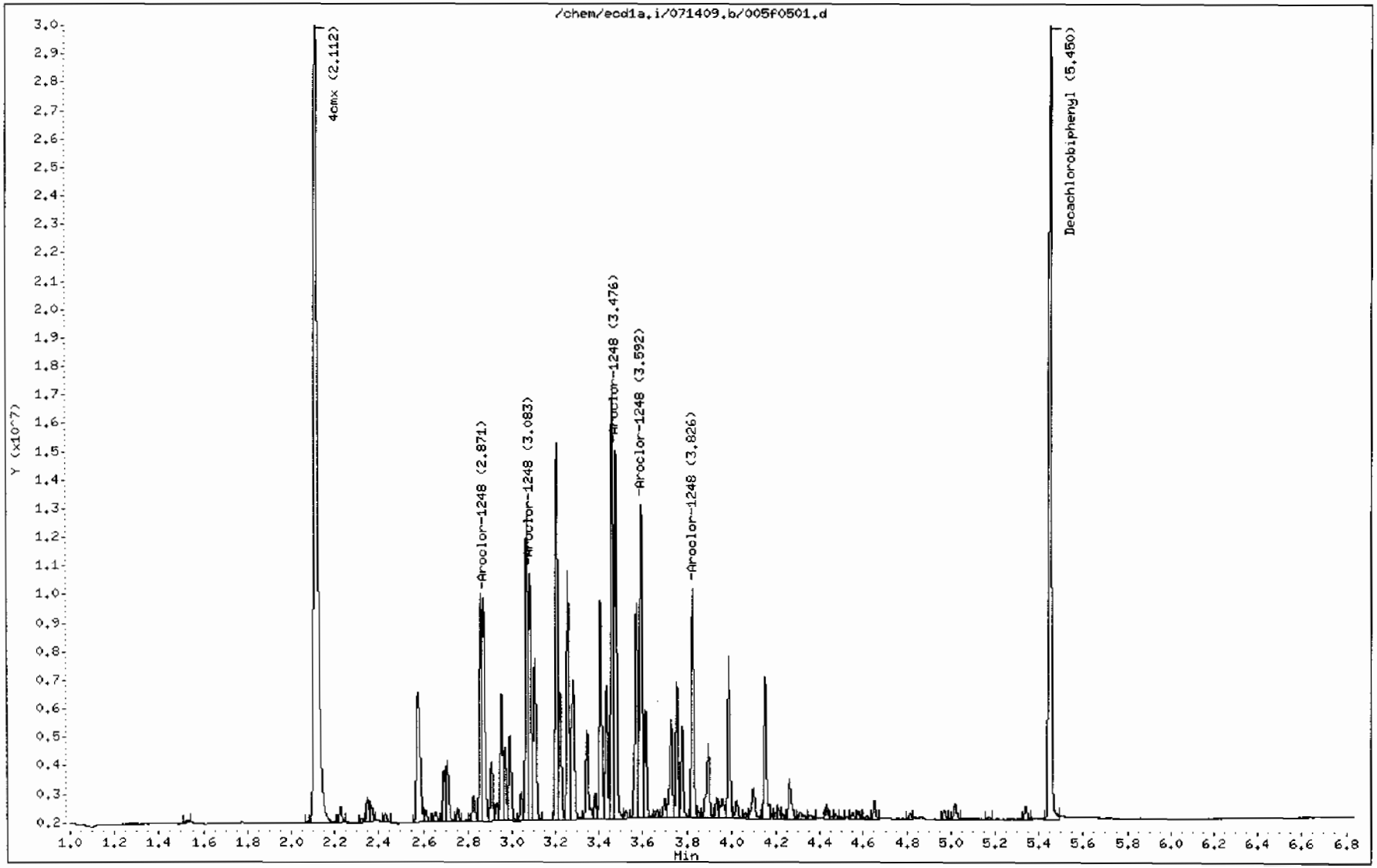

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/005b0501.d
Lab Smp Id: WAR090521-48 48 Client Smp ID: AR124801
Inj Date : 14-JUL-2009 07:25
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090521-48 48
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	28597785	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	12419027	100.000	94.9	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.610	3.610	0.000	6105006	1000.00	887	80.00- 120.00	100.00
3.779	3.779	0.000	7526110	1000.00	898	103.28- 143.28	123.28
4.014	4.014	0.000	7668276	1000.00	929	105.61- 145.61	125.61
4.042	4.042	0.000	8625235	1000.00	956	121.28- 161.28	141.28
4.182	4.182	0.000	8191750	1000.00	873	114.18- 154.18	134.18
Average of Peak Amounts =					909		

Data File: /chem/ecd1a.i/071409.b/005b0501.d
Date : 14-JUL-2009 07:25
Client ID: AR124801
Sample Info: iWAR090521-48 48

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

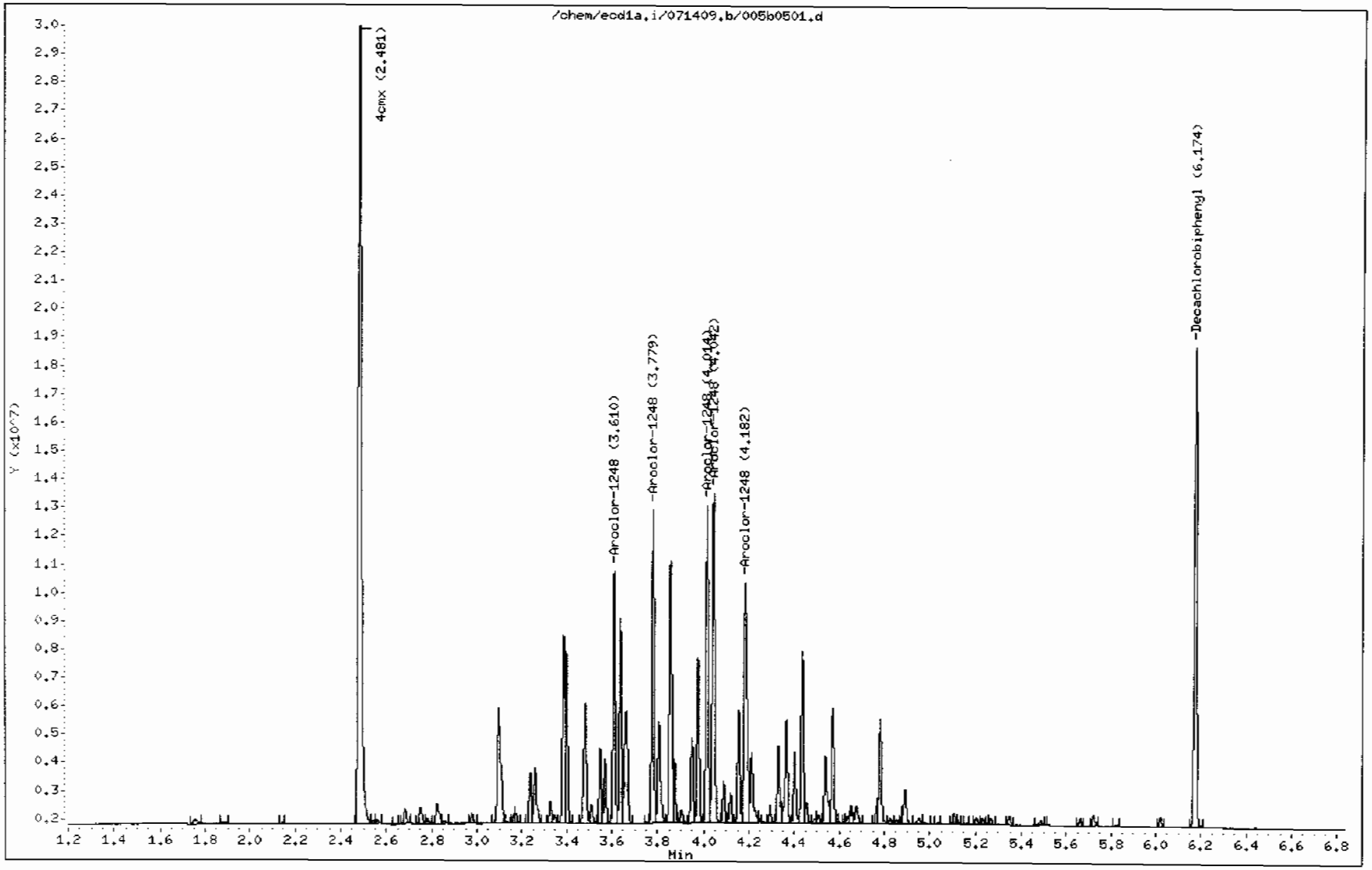

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/006f0601.d
Lab Smp Id: WAR090618-32 32 Client Smp ID: AR123201
Inj Date : 14-JUL-2009 07:36
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-32 32
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	35017783	100.000	105	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	23259425	100.000	100	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.578	2.578	0.000	5839184	1000.00	993	80.00- 120.00	100.00
2.871	2.871	0.000	6685163	1000.00	1000	94.49- 134.49	114.49
2.953	2.953	0.000	4781577	1000.00	988	61.89- 101.89	81.89
3.204	3.204	0.000	3277549	1000.00	985	36.13- 76.13	56.13
3.475	3.475	0.000	3068968	1000.00	970	32.56- 72.56	52.56
Average of Peak Amounts =					988		

Data File: /chem/ecd1a.i/071409.b/006f0601.d
Date : 14-JUL-2009 07:36
Client ID: AR123201
Sample Info: IWAR090618-32 32

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

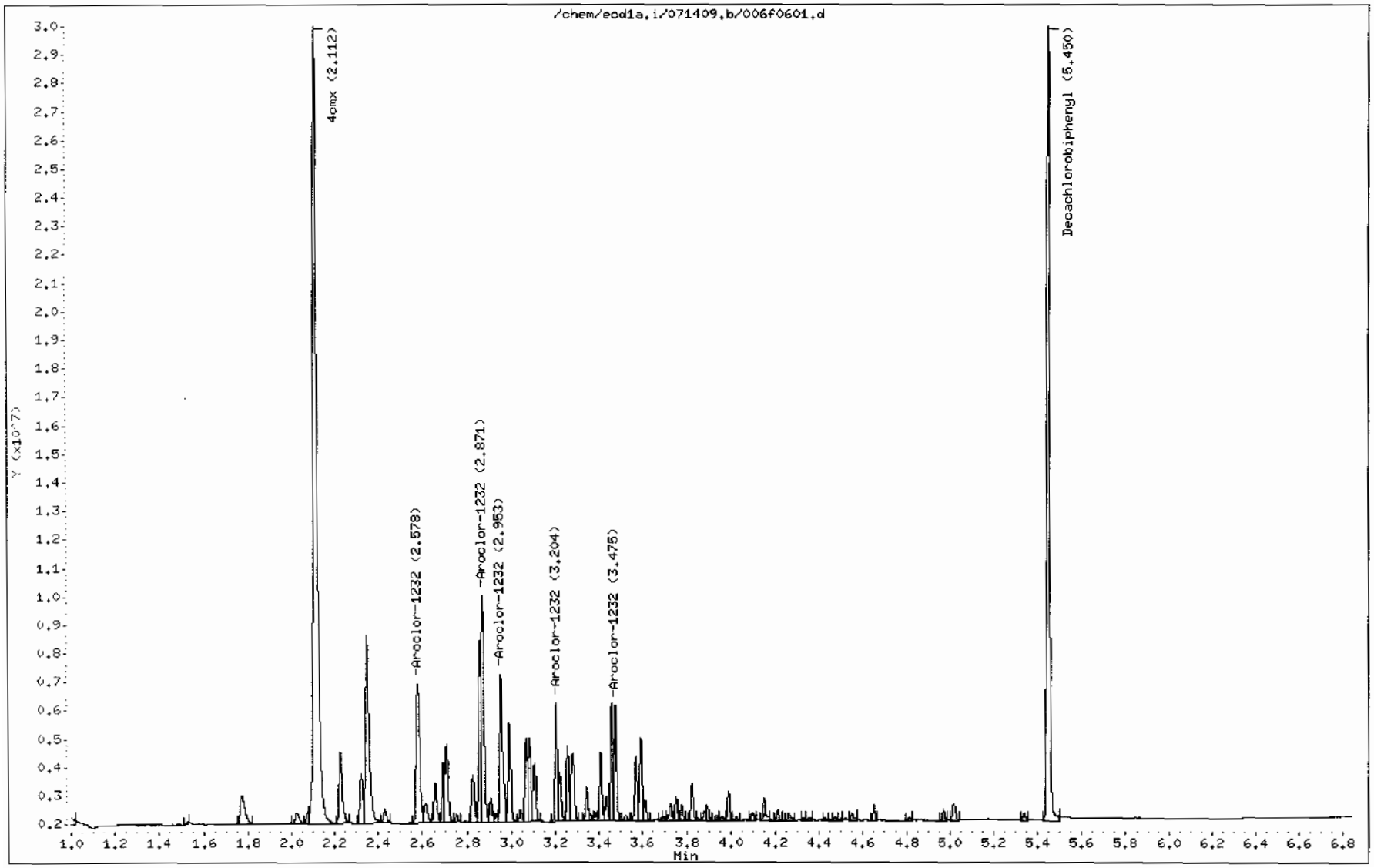

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/006b0601.d
Lab Smp Id: WAR090618-32 32 Client Smp ID: AR123201
Inj Date : 14-JUL-2009 07:36
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-32 32
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	27702633	100.000	103	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	12462199	100.000	95.2	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
3.387	3.387	0.000	3356033	1000.00	976	80.00- 120.00	100.00
3.484	3.484	0.000	3582746	1000.00	990	86.76- 126.76	106.76
3.550	3.550	0.000	2070080	1000.00	984	41.68- 81.68	61.68
3.779	3.779	0.000	2546736	1000.00	979	55.89- 95.89	75.89
4.042	4.042	0.000	2593997	1000.00	1000	57.29- 97.29	77.29
Average of Peak Amounts =					986		

Data File: /chem/ecd1a.i/071409.b/006b0601.d

Date : 14-JUL-2009 07:36

Client ID: AR123201

Sample Info: IWAR090618-32 32

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

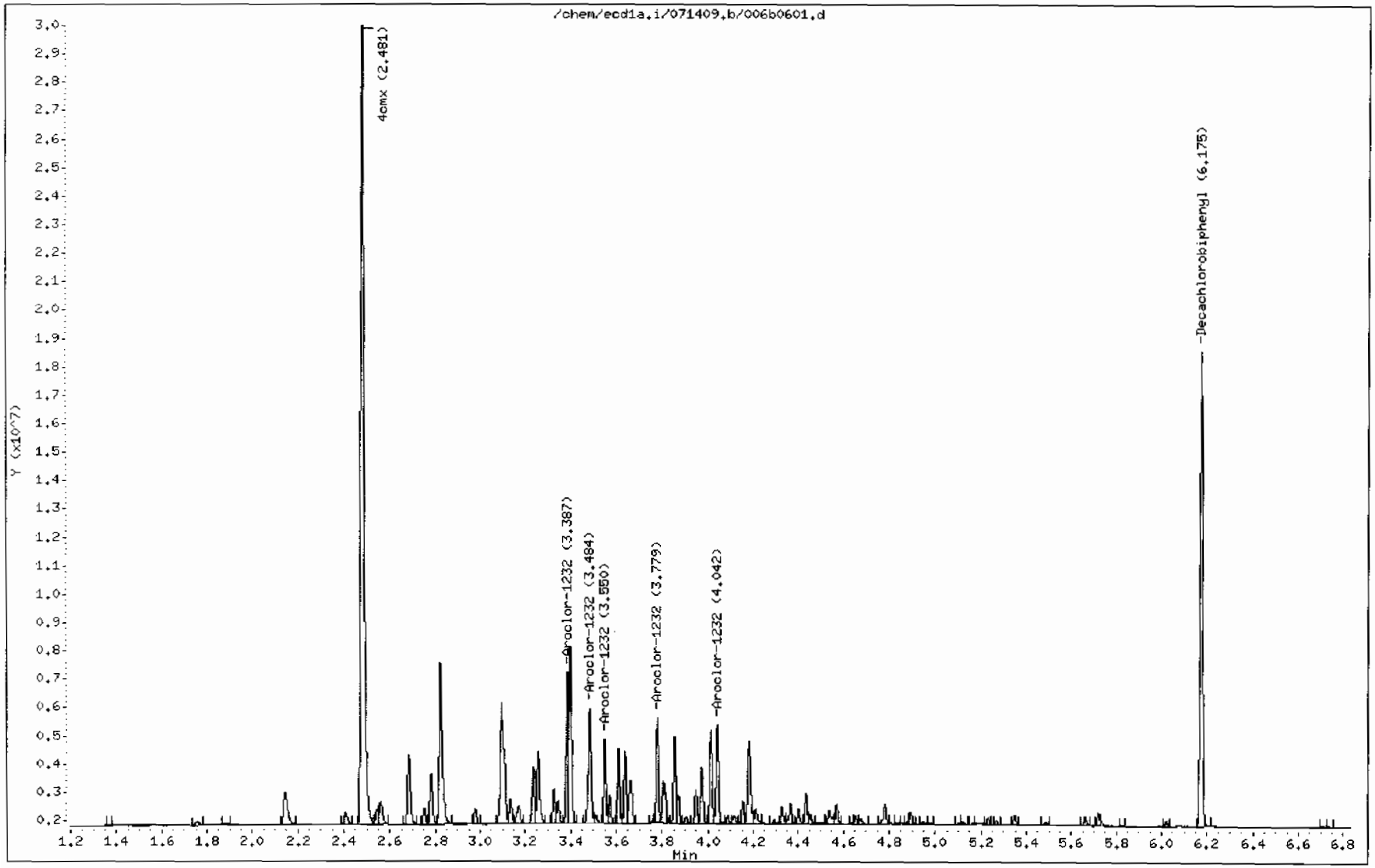

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/007f0701.d
Lab Smp Id: WAR090618-21 21 Client Smp ID: AR122101
Inj Date : 14-JUL-2009 07:46
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-21 21
Misc Info : |CVS|1221|
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:47 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclpl

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	36179109	100.000	109	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	23485598	100.000	101	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.226	2.226	0.000	3701247	1000.00	1030	80.00- 120.00	100.00
2.323	2.323	0.000	2073773	1000.00	991	36.03- 76.03	56.03
2.350	2.350	0.000	8757350	1000.00	999	216.61- 256.61	236.61

Average of Peak Amounts = 1.01e+03

Data File: /chem/ecd1a.i/071409.b/007f0701.d

Date : 14-JUL-2009 07:46

Client ID: AR122101

Sample Info: IWAR090618-21 21

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

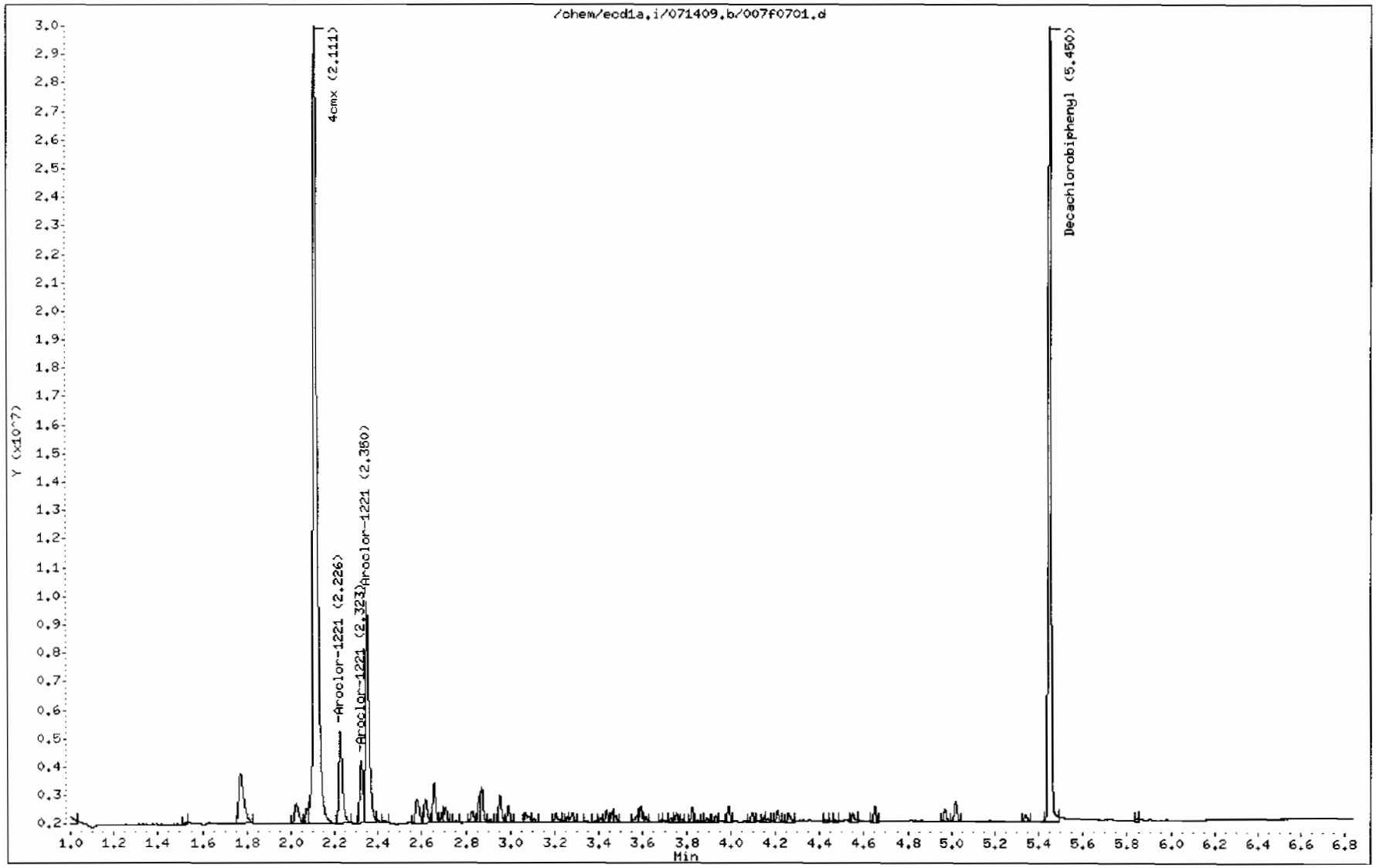

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/007b0701.d
Lab Smp Id: WAR090618-21 21 Client Smp ID: AR122101
Inj Date : 14-JUL-2009 07:46
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-21 21
Misc Info : |CVS|1221|
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	28526825	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	12651006	100.000	96.7	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.684	2.684	0.000	3181154	1000.00	1110	80.00- 120.00	100.00
2.781	2.781	0.000	1969114	1000.00	1040	41.90- 81.90	61.90
2.823	2.823	0.000	6360540	1000.00	1010	179.94- 219.94	199.94

Average of Peak Amounts = 1.05e+03

Data File: /chem/ecd1a.i/071409.b/007b0701.d

Date : 14-JUL-2009 07:46

Client ID: AR122101

Sample Info: IWAR090618-21 21

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

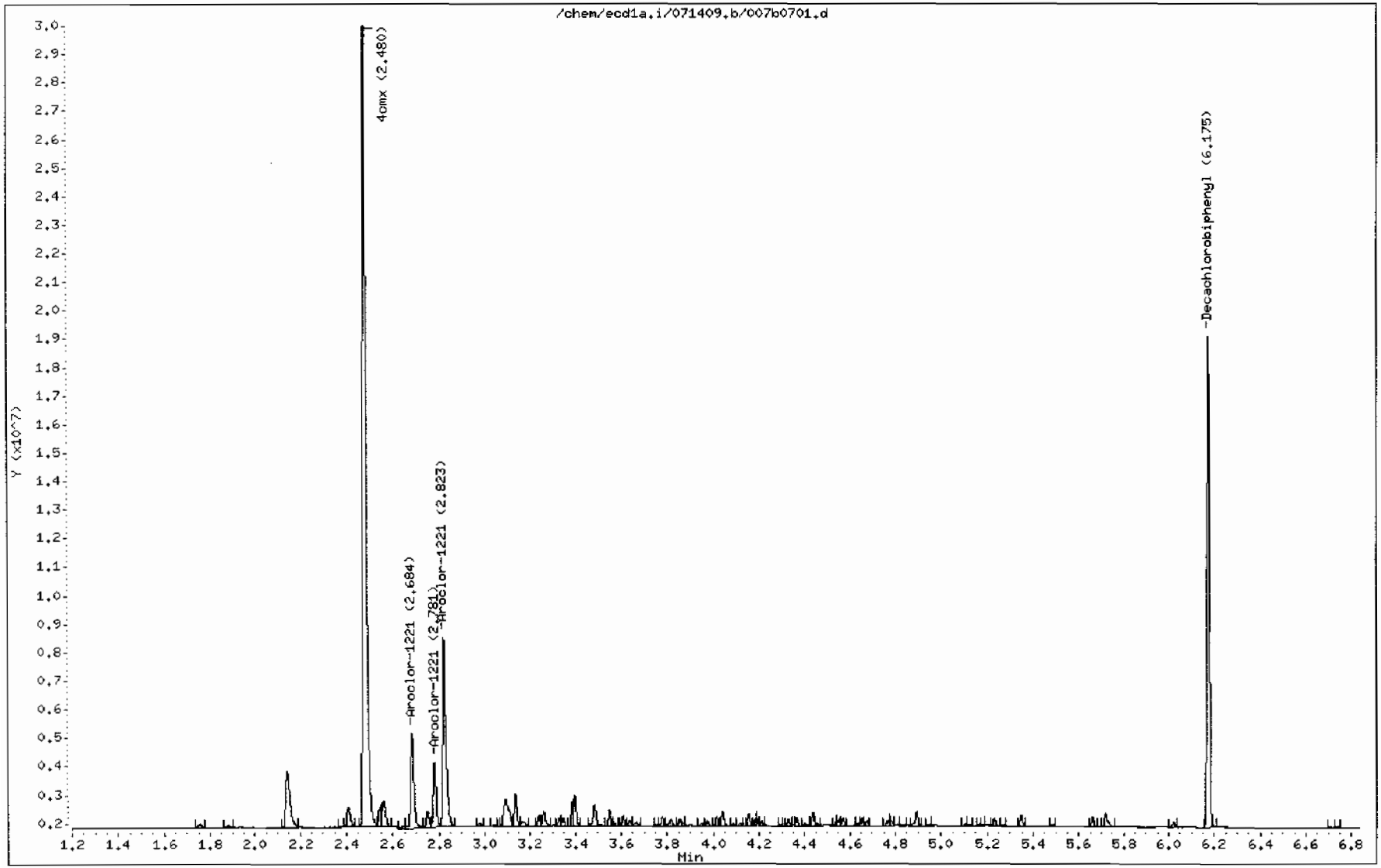

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/019f1901.d
Lab Smp Id: WAR090623-60 02 Client Smp ID: AR166002
Inj Date : 14-JUL-2009 10:00
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 02
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 11:21 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.109	2.112	-0.003	33443959	100.000	101	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.446	5.450	-0.004	23497991	100.000	101	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.573	2.577	-0.004	13623921	1000.00	959	80.00- 120.00	100.00
2.867	2.871	-0.004	17122131	1000.00	1030	105.68- 145.68	125.68
2.950	2.953	-0.003	11364367	1000.00	966	63.41- 103.41	83.41
3.064	3.067	-0.003	6093521	1000.00	954	24.73- 64.73	44.73
3.201	3.204	-0.003	8685457	1000.00	988	43.75- 83.75	63.75
Average of Peak Amounts =					980		
7 Aroclor-1260					CAS #: 11096-82-5		
3.930	3.933	-0.003	15114016	1000.00	989	80.00- 120.00	100.00
4.092	4.096	-0.004	23255466	1000.00	1010	133.87- 173.87	153.87
4.324	4.326	-0.002	11537482	1000.00	991	56.34- 96.34	76.34
4.468	4.470	-0.002	12563517	1000.00	992	63.12- 103.12	83.12
4.832	4.835	-0.003	5688421	1000.00	968	17.64- 57.64	37.64
Average of Peak Amounts =					989		

Data File: /chem/ecd1a.i/071409.b/019f1901.d

Date : 14-JUL-2009 10:00

Client ID: AR166002

Sample Info: IWAR090623-60 02

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

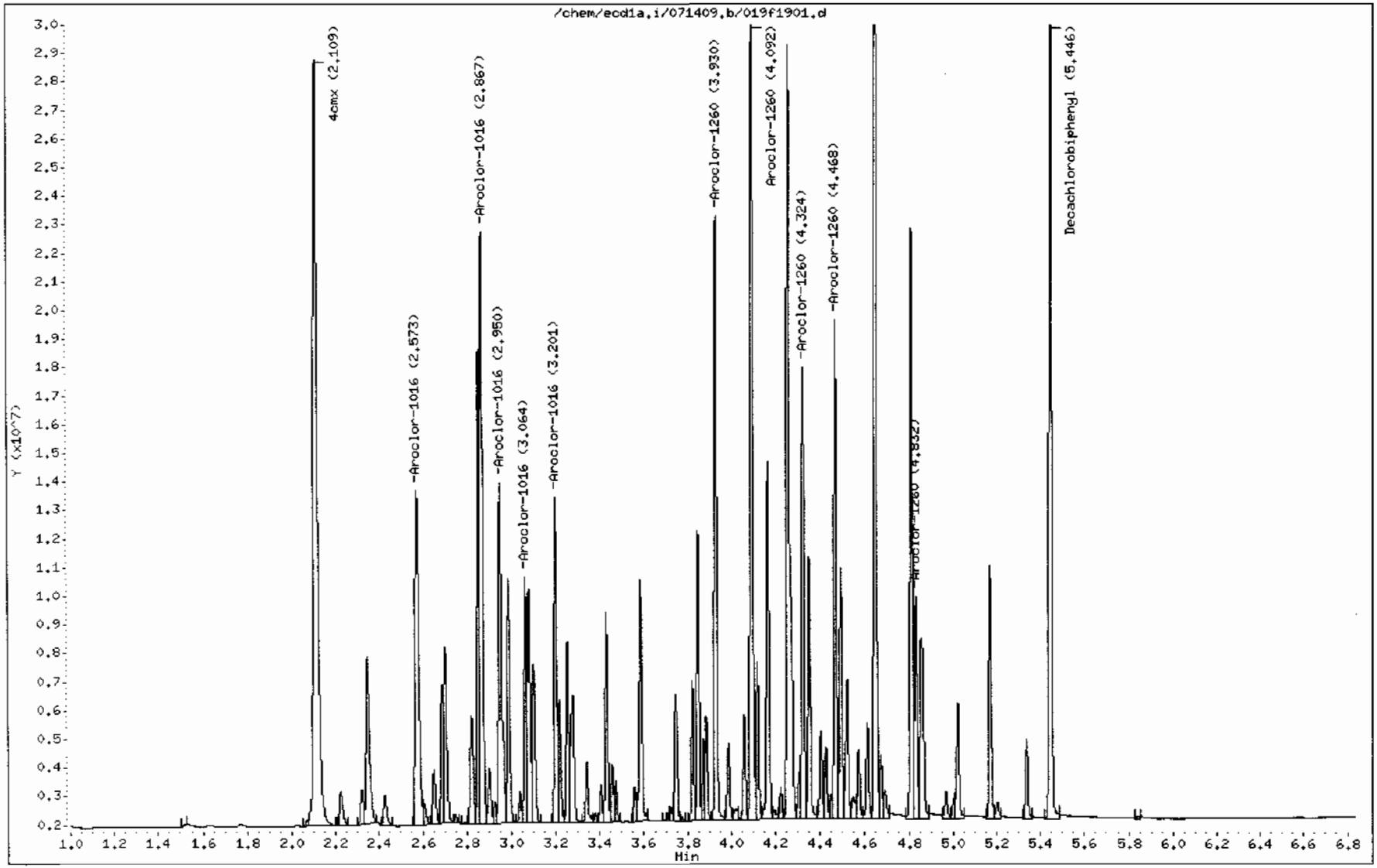

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/019b1901.d
Lab Smp Id: WAR090623-60 02 Client Smp ID: AR166002
Inj Date : 14-JUL-2009 10:00
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 02
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 11:20 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.478	2.481	-0.003	27399038	100.000	102	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.171	6.175	-0.004	13099557	100.000	100	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.396	3.399	-0.003	11323881	1000.00	1070	80.00- 120.00	100.00
3.480	3.484	-0.004	8421726	1000.00	1000	54.37- 94.37	74.37
3.546	3.549	-0.003	5075640	1000.00	1020	24.82- 64.82	44.82
3.775	3.779	-0.004	6842460	1000.00	1000	40.43- 80.43	60.43
3.852	3.855	-0.003	5491288	1000.00	1010	28.49- 68.49	48.49
Average of Peak Amounts =					1.02e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.549	4.551	-0.002	11292830	1000.00	997	80.00- 120.00	100.00
4.672	4.675	-0.003	12734567	1000.00	1020	92.77- 132.77	112.77
4.942	4.944	-0.002	8366958	1000.00	988	54.09- 94.09	74.09
5.118	5.121	-0.003	8773824	1000.00	1000	57.69- 97.69	77.69
5.263	5.267	-0.004	17736968	1000.00	1040	137.06- 177.06	157.06
Average of Peak Amounts =					1.01e+03		

Data File: /chem/ecd1a.i/071409.b/019b1901.d
Date : 14-JUL-2009 10:00
Client ID: AR166002
Sample Info: IWAR090623-60 02

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

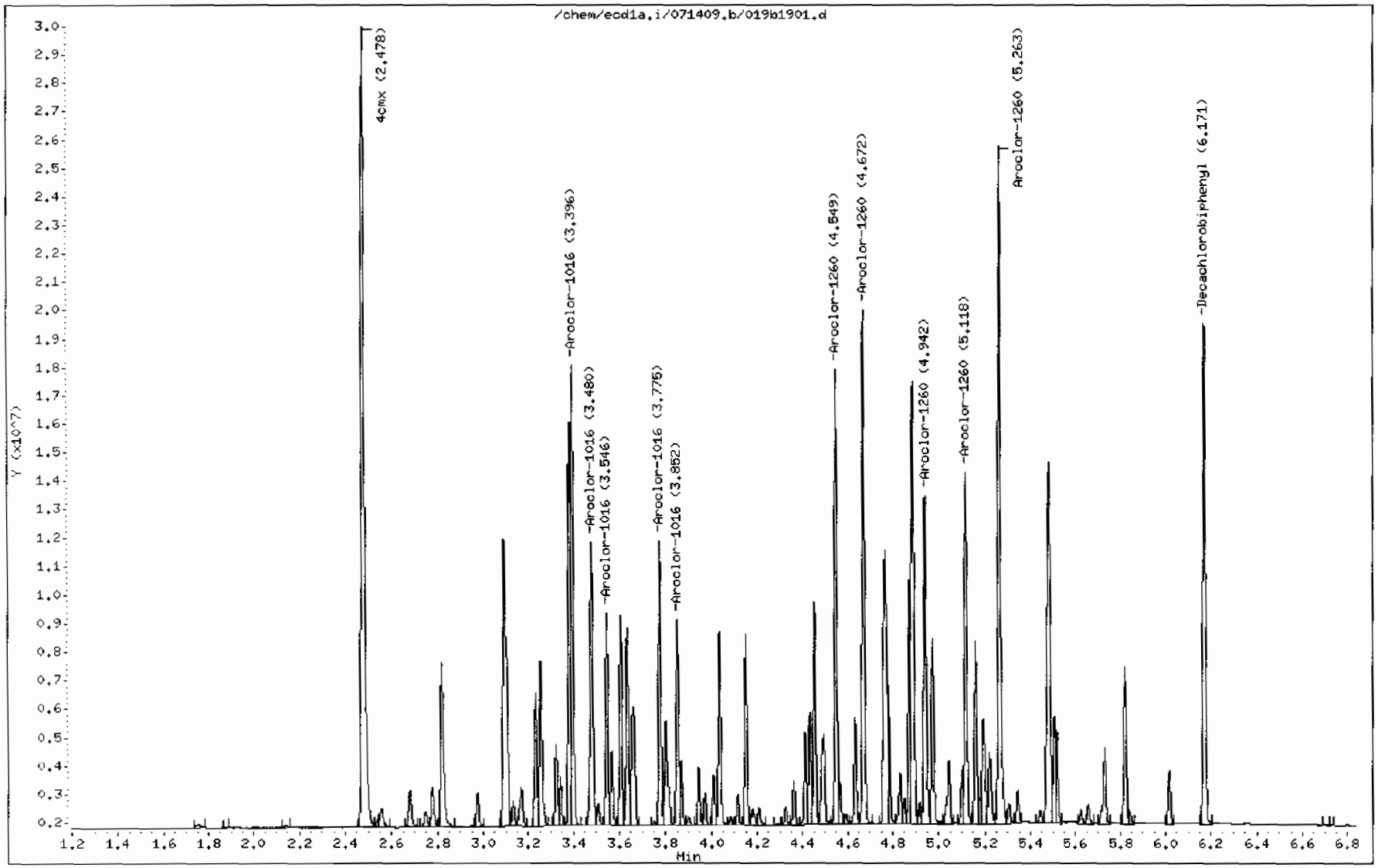

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/031f3101.d
Lab Smp Id: WAR090623-60 03 Client Smp ID: AR166003
Inj Date : 14-JUL-2009 12:14
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 03
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

AMOUNTS

RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.110	2.112	-0.002	33321410	100.000	100	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.448	5.450	-0.002	24018081	100.000	104	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.575	2.577	-0.002	13704784	1000.00	965	80.00- 120.00	100.00
2.868	2.871	-0.003	17150580	1000.00	1030	105.14- 145.14	125.14
2.950	2.953	-0.003	11437579	1000.00	972	63.46- 103.46	83.46
3.064	3.067	-0.003	6119921	1000.00	958	24.66- 64.66	44.66
3.201	3.204	-0.003	8707677	1000.00	991	43.54- 83.54	63.54
Average of Peak Amounts =					984		
7 Aroclor-1260					CAS #: 11096-82-5		
3.930	3.933	-0.003	15218428	1000.00	996	80.00- 120.00	100.00
4.093	4.096	-0.003	23615122	1000.00	1020	135.17- 175.17	155.17
4.324	4.326	-0.002	11700924	1000.00	1000	56.89- 96.89	76.89
4.468	4.470	-0.002	12795401	1000.00	1010	64.08- 104.08	84.08
4.833	4.835	-0.002	5792099	1000.00	986	18.06- 58.06	38.06
Average of Peak Amounts =					1e+03		

Data File: /chem/ecd1a.i/071409.b/031f3101.d
Date : 14-JUL-2009 12:14
Client ID: AR166003
Sample Info: IWAR090623-60 03

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

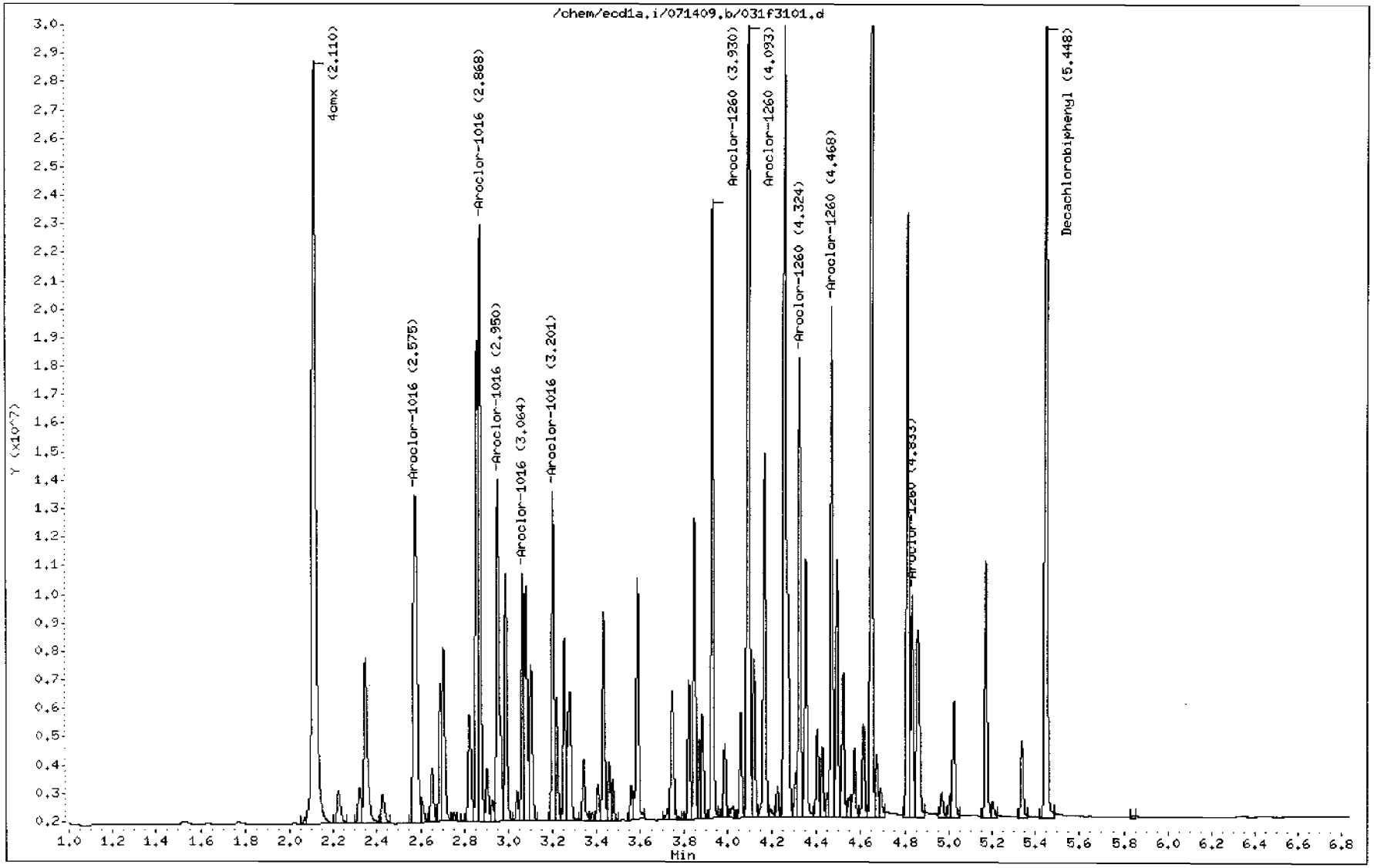

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/031b3101.d
Lab Smp Id: WAR090623-60 03 Client Smp ID: AR166003
Inj Date : 14-JUL-2009 12:14
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 03
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.479	2.481	-0.002	27654886	100.000	103	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.172	6.175	-0.003	13730668	100.000	105	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.396	3.399	-0.003	12210940	1000.00	1160	80.00- 120.00	100.00
3.481	3.484	-0.003	8750467	1000.00	1040	51.66- 91.66	71.66
3.546	3.549	-0.003	5288968	1000.00	1070	23.31- 63.31	43.31
3.776	3.779	-0.003	7094884	1000.00	1040	38.10- 78.10	58.10
3.853	3.855	-0.002	5697830	1000.00	1040	26.66- 66.66	46.66
Average of Peak Amounts =					1.07e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.549	4.551	-0.002	11691028	1000.00	1030	80.00- 120.00	100.00
4.673	4.675	-0.002	13289261	1000.00	1070	93.67- 133.67	113.67
4.943	4.944	-0.001	8686953	1000.00	1030	54.30- 94.30	74.30
5.119	5.121	-0.002	9136766	1000.00	1040	58.15- 98.15	78.15
5.265	5.267	-0.002	18710100	1000.00	1100	140.04- 180.04	160.04
Average of Peak Amounts =					1.05e+03		

Data File: /chem/ecd1a.i/071409.b/031b3101.d
Date : 14-JUL-2009 12:14
Client ID: AR166003
Sample Info: IWAR090623-60 03

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

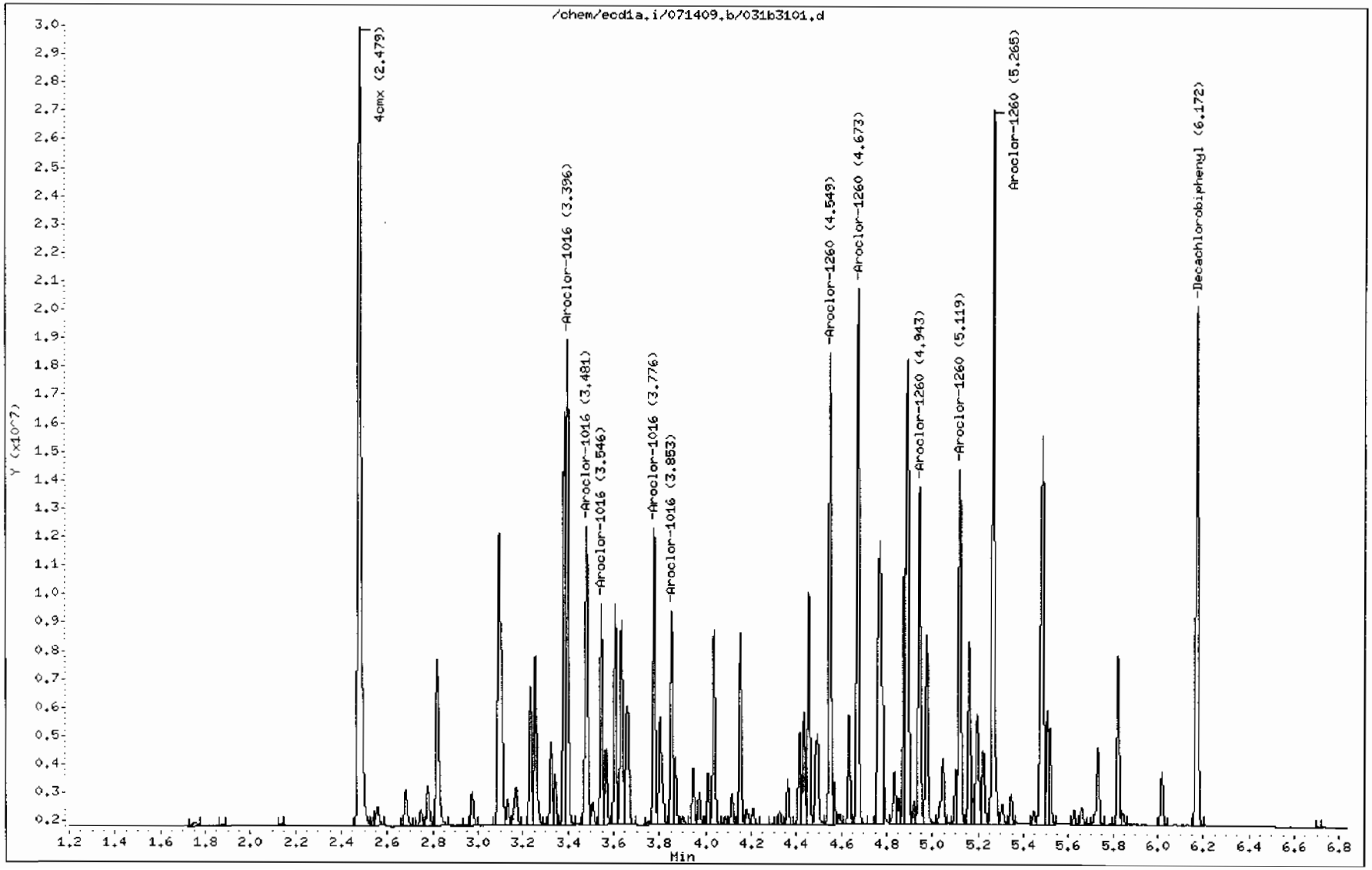

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2506

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.11 DCB: 5.45

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/13/09	0944	2.11	5.45
02	ZZZZZ	ZZZZZ	07/13/09	0954	2.11	5.45
03	ZZZZZ	ZZZZZ	07/13/09	1004	2.11	5.45
04	AR124201	WAR090713-09	07/13/09	1014	2.11	5.45
05	AR124202	WAR090713-10	07/13/09	1025	2.11	5.45
06	AR124203	WAR090713-11	07/13/09	1035	2.11	5.45
07	AR124204	WAR090713-12	07/13/09	1045	2.11	5.45
08	AR124205	IAR090711-01	07/13/09	1056	2.11	5.45
09	AR124201	WAR090519-42	07/13/09	1106	2.11	5.45
10	AR124801	WAR090521-48	07/13/09	1116	2.11	5.45
11	AR166001	WAR090713-01	07/13/09	1127	2.11	5.45
12	AR166002	WAR090713-02	07/13/09	1137	2.11	5.45
13	AR166003	WAR090713-03	07/13/09	1147	2.11	5.45
14	AR166004	WAR090713-04	07/13/09	1158	2.11	5.45
15	AR166005	IAR090623-01	07/13/09	1208	2.11	5.45
16	AR166001	WAR090623-60	07/13/09	1218	2.11	5.45
17	AR125401	WAR090713-05	07/13/09	1228	2.11	5.45
18	AR125402	WAR090713-06	07/13/09	1239	2.11	5.45
19	AR125403	WAR090713-07	07/13/09	1249	2.11	5.45
20	AR125404	WAR090713-08	07/13/09	1259	2.11	5.45
21	AR125405	IAR0900505-0	07/13/09	1310	2.11	5.45
22	AR125401	WAR090630-54	07/13/09	1320	2.11	5.45
23	AR123201	WAR090618-32	07/13/09	1330	2.11	5.45
24	AR122101	WAR090618-21	07/13/09	1340	2.11	5.45
25	AR126201	WAR090608-62	07/13/09	1351	2.11	5.45
26	AR126801	WAR090424-68	07/13/09	1401	2.11	5.45
27	DDTANALOGSTD	WAR090623-DD	07/13/09	1411		
28	PIBLK02	WAR090703-99	07/13/09	1514	2.11	5.46
29	ZZZZZ	ZZZZZ	07/13/09	1524	2.11	5.45
30	ZZZZZ	ZZZZZ	07/13/09	1534	2.11	5.45
31	ZZZZZ	ZZZZZ	07/13/09	1544	2.11	5.45
32	ZZZZZ	ZZZZZ	07/13/09	1555	2.11	5.45

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2506

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.48 DCB: 6.18

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/13/09	0944	2.48	6.17
02	ZZZZZ	ZZZZZ	07/13/09	0954	2.48	6.17
03	ZZZZZ	ZZZZZ	07/13/09	1004	2.48	6.17
04	AR124201	WAR090713-09	07/13/09	1014	2.48	6.17
05	AR124202	WAR090713-10	07/13/09	1025	2.48	6.17
06	AR124203	WAR090713-11	07/13/09	1035	2.48	6.18
07	AR124204	WAR090713-12	07/13/09	1045	2.48	6.18
08	AR124205	IAR090711-01	07/13/09	1056	2.48	6.18
09	AR124201	WAR090519-42	07/13/09	1106	2.48	6.17
10	AR124801	WAR090521-48	07/13/09	1116	2.48	6.18
11	AR166001	WAR090713-01	07/13/09	1127	2.48	6.18
12	AR166002	WAR090713-02	07/13/09	1137	2.48	6.17
13	AR166003	WAR090713-03	07/13/09	1147	2.48	6.18
14	AR166004	WAR090713-04	07/13/09	1158	2.48	6.18
15	AR166005	IAR090623-01	07/13/09	1208	2.48	6.18
16	AR166005	WAR090623-60	07/13/09	1218	2.48	6.18
17	AR125401	WAR090713-05	07/13/09	1228	2.48	6.17
18	AR125402	WAR090713-06	07/13/09	1239	2.48	6.17
19	AR125403	WAR090713-07	07/13/09	1249	2.48	6.18
20	AR125404	WAR090713-08	07/13/09	1259	2.48	6.17
21	AR125405	IAR0900505-0	07/13/09	1310	2.48	6.18
22	AR125401	WAR090630-54	07/13/09	1320	2.48	6.17
23	AR123201	WAR090618-32	07/13/09	1330	2.48	6.17
24	AR122101	WAR090618-21	07/13/09	1340	2.48	6.18
25	AR126201	WAR090608-62	07/13/09	1351	2.48	6.18
26	AR126801	WAR090424-68	07/13/09	1401	2.48	6.17
27	DDTANALOGSTD	WAR090623-DD	07/13/09	1411		
28	PIBLK02	WAR090703-99	07/13/09	1514	2.49	6.18
29	ZZZZZ	ZZZZZ	07/13/09	1524	2.48	6.18
30	ZZZZZ	ZZZZZ	07/13/09	1534	2.48	6.18
31	ZZZZZ	ZZZZZ	07/13/09	1544	2.48	6.18
32	ZZZZZ	ZZZZZ	07/13/09	1555	2.48	6.18

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2506

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.11 DCB: 5.45

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/14/09	0644	2.11	5.45
02	AR166001	WAR090623-60	07/14/09	0654	2.11	5.45
03	AR125401	WAR090630-54	07/14/09	0705	2.11	5.45
04	AR124201	WAR090519-42	07/14/09	0715	2.11	5.45
05	AR124801	WAR090521-48	07/14/09	0725	2.11	5.45
06	AR123201	WAR090618-32	07/14/09	0736	2.11	5.45
07	AR122101	WAR090618-21	07/14/09	0746	2.11	5.45
08	AR126201	WAR090608-62	07/14/09	0756	2.11	5.45
09	AR126801	WAR090424-68	07/14/09	0806	2.11	5.45
10	ZZZZZ	ZZZZZ	07/14/09	0817		
11	PIBLK02	WAR090703-99	07/14/09	0827	2.11	5.45
12	ZZZZZ	ZZZZZ	07/14/09	0837	2.11	5.45
13	ZZZZZ	ZZZZZ	07/14/09	0848	2.11	5.45
14	ZZZZZ	ZZZZZ	07/14/09	0858	2.11	5.45
15	ZZZZZ	ZZZZZ	07/14/09	0908	2.11	5.45
16	ZZZZZ	ZZZZZ	07/14/09	0919	2.11	5.45
17	ZZZZZ	ZZZZZ	07/14/09	0929	2.11	5.45
18	ZZZZZ	ZZZZZ	07/14/09	0944	2.11	5.45
19	AR166002	WAR090623-60	07/14/09	1000	2.11	5.45
20	PIBLK03	WAR090730-99	07/14/09	1010	2.11	5.45
21	PBLK01	1201879447	07/14/09	1021	2.11	5.45
22	PBLK01LCS	1201879448	07/14/09	1031	2.11	5.45
23	ZZZZZ	ZZZZZ	07/14/09	1041	2.11	5.45
24	CAMO-09-6605	232585001	07/14/09	1051	2.11	5.45
25	CAMO-09-6603	232585002	07/14/09	1102	2.11	5.45
26	CAMO-09-6604	232585003	07/14/09	1112	2.11	5.45
27	ZZZZZ	ZZZZZ	07/14/09	1122	2.11	5.45
28	ZZZZZ	ZZZZZ	07/14/09	1132	2.11	5.45
29	ZZZZZ	ZZZZZ	07/14/09	1143	2.11	5.45
30	ZZZZZ	ZZZZZ	07/14/09	1158	2.11	5.45
31	AR166003	WAR090623-60	07/14/09	1214	2.11	5.45
32	PIBLK04	WAR090730-99	07/14/09	1224	2.11	5.45

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2506

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.48 DCB: 6.17

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/14/09	0644	2.48	6.17
02	AR166001	WAR090623-60	07/14/09	0654	2.48	6.17
03	AR125401	WAR090630-54	07/14/09	0705	2.48	6.17
04	AR124201	WAR090519-42	07/14/09	0715	2.48	6.18
05	AR124801	WAR090521-48	07/14/09	0725	2.48	6.17
06	AR123201	WAR090618-32	07/14/09	0736	2.48	6.17
07	AR122101	WAR090618-21	07/14/09	0746	2.48	6.17
08	AR126201	WAR090608-62	07/14/09	0756	2.48	6.17
09	AR126801	WAR090424-68	07/14/09	0806	2.48	6.17
10	DDTANALOGSTD	WAR090623-DD	07/14/09	0817		
11	PIBLK02	WAR090703-99	07/14/09	0827	2.48	6.18
12	ZZZZZ	ZZZZZ	07/14/09	0837	2.48	6.17
13	ZZZZZ	ZZZZZ	07/14/09	0848	2.48	6.17
14	ZZZZZ	ZZZZZ	07/14/09	0858	2.48	6.17
15	ZZZZZ	ZZZZZ	07/14/09	0908	2.48	6.18
16	ZZZZZ	ZZZZZ	07/14/09	0919	2.48	6.18
17	ZZZZZ	ZZZZZ	07/14/09	0929	2.48	6.17
18	ZZZZZ	ZZZZZ	07/14/09	0944	2.48	6.17
19	AR166002	WAR090623-60	07/14/09	1000	2.48	6.17
20	PIBLK03	WAR090730-99	07/14/09	1010	2.48	6.17
21	PBLK01	1201879447	07/14/09	1021	2.48	6.17
22	PBLK01LCS	1201879448	07/14/09	1031	2.48	6.18
23	ZZZZZ	ZZZZZ	07/14/09	1041	2.48	6.17
24	CAMO-09-6605	232585001	07/14/09	1051	2.48	6.17
25	CAMO-09-6603	232585002	07/14/09	1102	2.48	6.18
26	CAMO-09-6604	232585003	07/14/09	1112	2.48	6.17
27	ZZZZZ	ZZZZZ	07/14/09	1122	2.48	6.17
28	ZZZZZ	ZZZZZ	07/14/09	1132	2.48	6.17
29	ZZZZZ	ZZZZZ	07/14/09	1143	2.48	6.17
30	ZZZZZ	ZZZZZ	07/14/09	1158	2.48	6.17
31	AR166003	WAR090623-60	07/14/09	1214	2.48	6.17
32	PIBLK04	WAR090730-99	07/14/09	1224	2.48	6.17

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Identification Summary

SDG Number: 09-2506 **Client ID:** CAMO-09-6603

Lab Sample ID: 232585002

Data File: 025f2501.d **Data File:** 025b2501.d
Inst: ECD1A.I_1 **Inst:** ECD1A.I_2
Column: CLP1 **Column:** CLP2
Analyzed: 14-JUL-09 11:02 **Analyzed:** 14-JUL-09 11:02

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1260							25.5
Column 1	1	3.93	3.9 – 3.96	5.84		ug/kg	
	2	4.1	4.07 – 4.13	5.52		ug/kg	
	3	4.33	4.3 – 4.36	6.67		ug/kg	
	4	4.47	4.44 – 4.5	6.83		ug/kg	
	5	4.84	4.81 – 4.87	15.5		ug/kg	
					8.07		
Column 2	1	4.55	4.52 – 4.58	7.72		ug/kg	
	2	4.68	4.64 – 4.7	7.36		ug/kg	
	3	4.95	4.91 – 4.97	11		ug/kg	
	4	5.12	5.09 – 5.15	13.6		ug/kg	
	5	5.27	5.24 – 5.3	12.4		ug/kg	
					10.4		

Identification Summary

SDG Number: 09-2506

Lab Sample ID: 1201879448

Client ID: LCS for batch 884632

Data File: 022f2201.d
Inst: ECD1A.I_1
Column: CLP1
Analyzed: 14-JUL-09 10:31

Data File: 022b2201.d
Inst: ECD1A.I_2
Column: CLP2
Analyzed: 14-JUL-09 10:31

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							5.55
Column 1	1	2.58	2.55 – 2.61	24.8		ug/kg	
	2	2.87	2.84 – 2.9	26.8		ug/kg	
	3	2.95	2.92 – 2.98	25.1		ug/kg	
	4	3.07	3.04 – 3.1	25.4		ug/kg	
	5	3.2	3.17 – 3.23	25.5		ug/kg	
					25.5		
Column 2	1	3.4	3.37 – 3.43	28.6		ug/kg	
	2	3.48	3.45 – 3.51	26.4		ug/kg	
	3	3.55	3.52 – 3.58	26.8		ug/kg	
	4	3.78	3.75 – 3.81	26.6		ug/kg	
	5	3.86	3.83 – 3.89	26.5		ug/kg	
					27		
Aroclor-1260							1.91
Column 1	1	3.93	3.9 – 3.96	26.8		ug/kg	
	2	4.1	4.07 – 4.13	27.1		ug/kg	
	3	4.33	4.3 – 4.36	32.5		ug/kg	
	4	4.47	4.44 – 4.5	30.4		ug/kg	
	5	4.84	4.81 – 4.87	33.9		ug/kg	
					30.2		
Column 2	1	4.55	4.52 – 4.58	27.6		ug/kg	
	2	4.68	4.64 – 4.7	29		ug/kg	
	3	4.94	4.91 – 4.97	32.7		ug/kg	
	4	5.12	5.09 – 5.15	31.6		ug/kg	
	5	5.27	5.24 – 5.3	32.9		ug/kg	
					30.7		

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2506**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201879447**				
Client Sample:	**QC for batch 884632**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 884632**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**884634**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 10:21**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/13/2009 20:17**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**021f2101-1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	021b2101-1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.33	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/021f2101.d
Lab Smp Id: 1201879447 Client Smp ID: PBLK01
Inj Date : 14-JUL-2009 10:21
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879447|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 11:21 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2506.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.110	2.112	-0.002	59713402	179.655	6.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.448	5.450	-0.002	39856330	172.098	5.7	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/021f2101.d

Date : 14-JUL-2009 10:21

Client ID: PBLK01

Sample Info: |1201879447|1|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

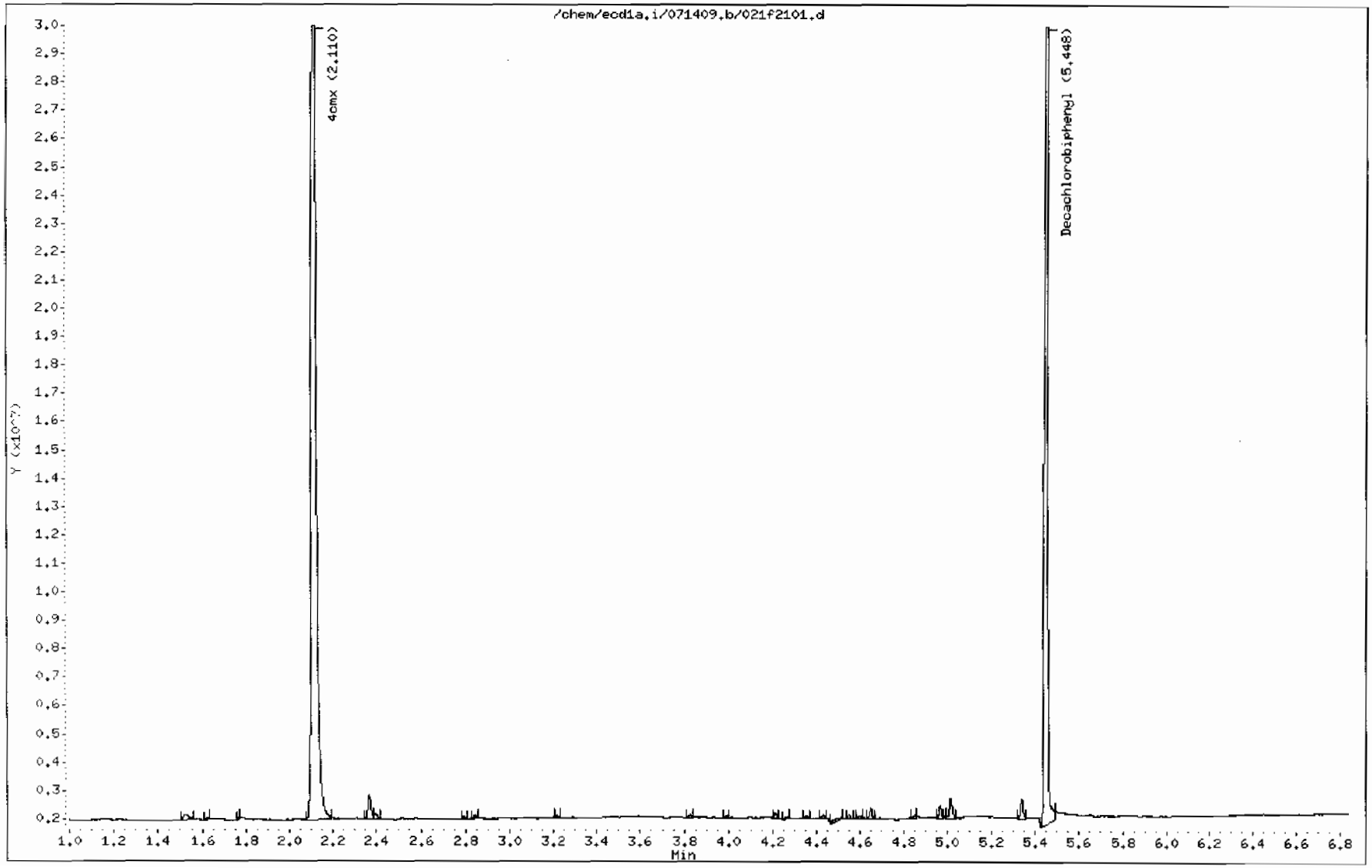

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/021b2101.d
Lab Smp Id: 1201879447 Client Smp ID: PBLK01
Inj Date : 14-JUL-2009 10:21
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879447|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 11:20 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2506.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	48222483	180.091	6.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	22089276	168.845	5.6	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/021b2101.d

Date : 14-JUL-2009 10:21

Client ID: PBLK01

Sample Info: |120187944 7|1|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

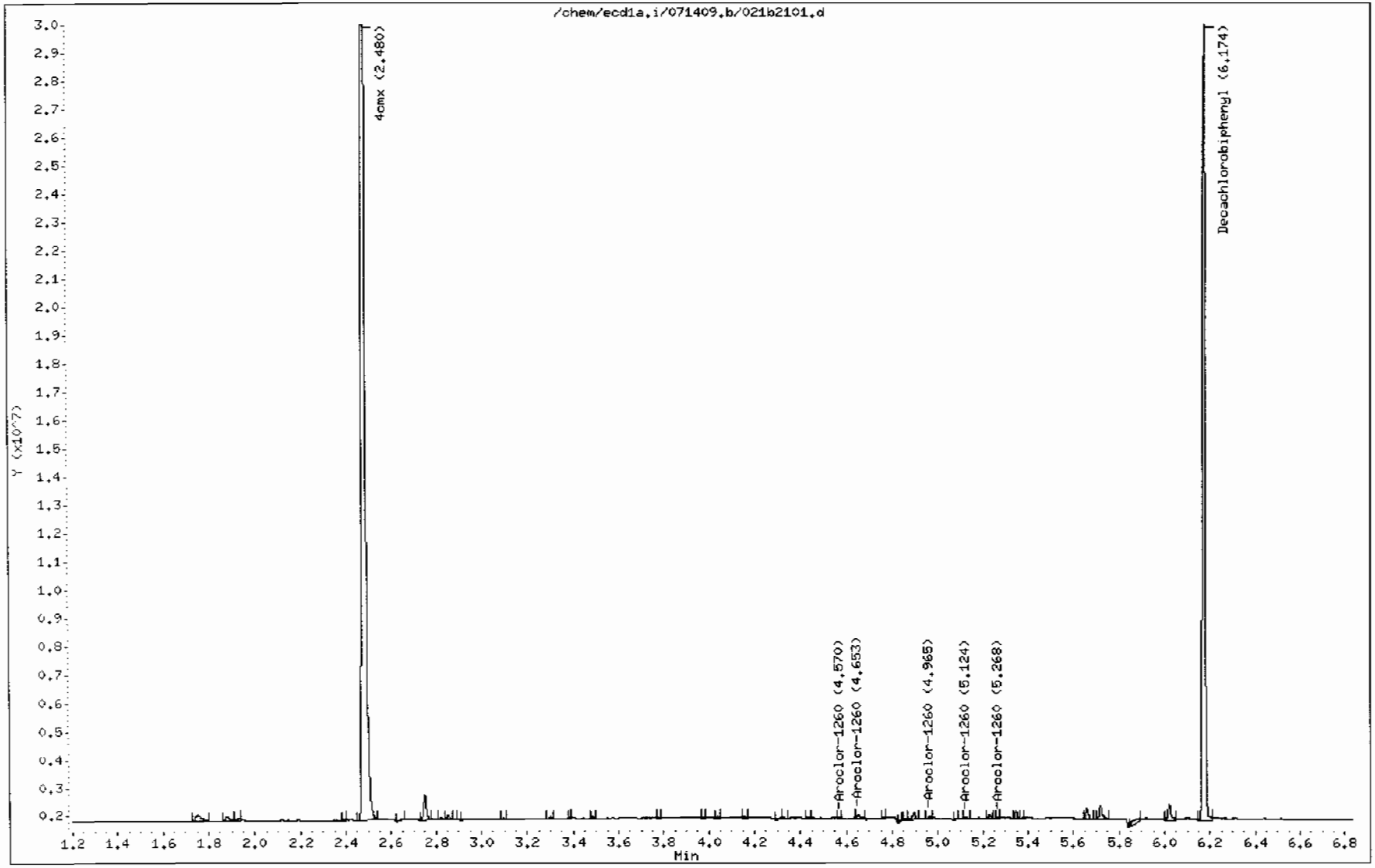

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09–2506**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201879448**				
Client Sample:	**QC for batch 884632**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 884632**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL–OA–E–040**
Batch ID:	**884634**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 10:31**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/13/2009 20:17**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**022f2201–1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	022b2201–1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016		27.0	ug/kg	1.11	3.33	2
11104–28–2	Aroclor–1221	U	3.33	ug/kg	1.11	3.33	1
11141–16–5	Aroclor–1232	U	3.33	ug/kg	1.11	3.33	1
53469–21–9	Aroclor–1242	U	3.33	ug/kg	1.11	3.33	1
12672–29–6	Aroclor–1248	U	3.33	ug/kg	1.11	3.33	1
11097–69–1	Aroclor–1254	U	3.33	ug/kg	1.11	3.33	1
11096–82–5	Aroclor–1260		30.8	ug/kg	1.11	3.33	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/022f2201.d
Lab Smp Id: 1201879448 Client Smp ID: PBLK01LCS
Inj Date : 14-JUL-2009 10:31
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879448|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 11:21 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2506.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	59003244	177.518	5.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	40963678	176.879	5.9	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	10574381	744.505	24.8	80.00- 120.00	100.00
2.871	2.871	0.000	13309920	803.002	26.8	105.68- 145.68	125.87
2.953	2.953	0.000	8844267	751.847	25.1	63.41- 103.41	83.64
3.068	3.067	0.001	4868383	762.362	25.4	24.73- 64.73	46.04

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.204	3.204	0.000	6728937	765.832	25.5	43.75- 83.75	63.63
		Average of Peak Concentrations =			25.5		
7 Aroclor-1260					CAS #: 11096-82-5		
3.934	3.933	0.001	12303572	804.909	26.8	80.00- 120.00	100.00
4.096	4.096	0.000	18767782	812.715	27.1	133.87- 173.87	152.54
4.327	4.326	0.001	11351598	975.294	32.5	56.34- 96.34	92.26
4.471	4.470	0.001	11569480	913.353	30.4	63.12- 103.12	94.03
4.835	4.835	0.000	5979829	1018.14	33.9	17.64- 57.64	48.60
		Average of Peak Concentrations =			30.1		

Data File: /chem/ecd1a.i/071409.b/022f2201.d
Date : 14-JUL-2009 10:31
Client ID: PBLK01LCS
Sample Info: |120187944811|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

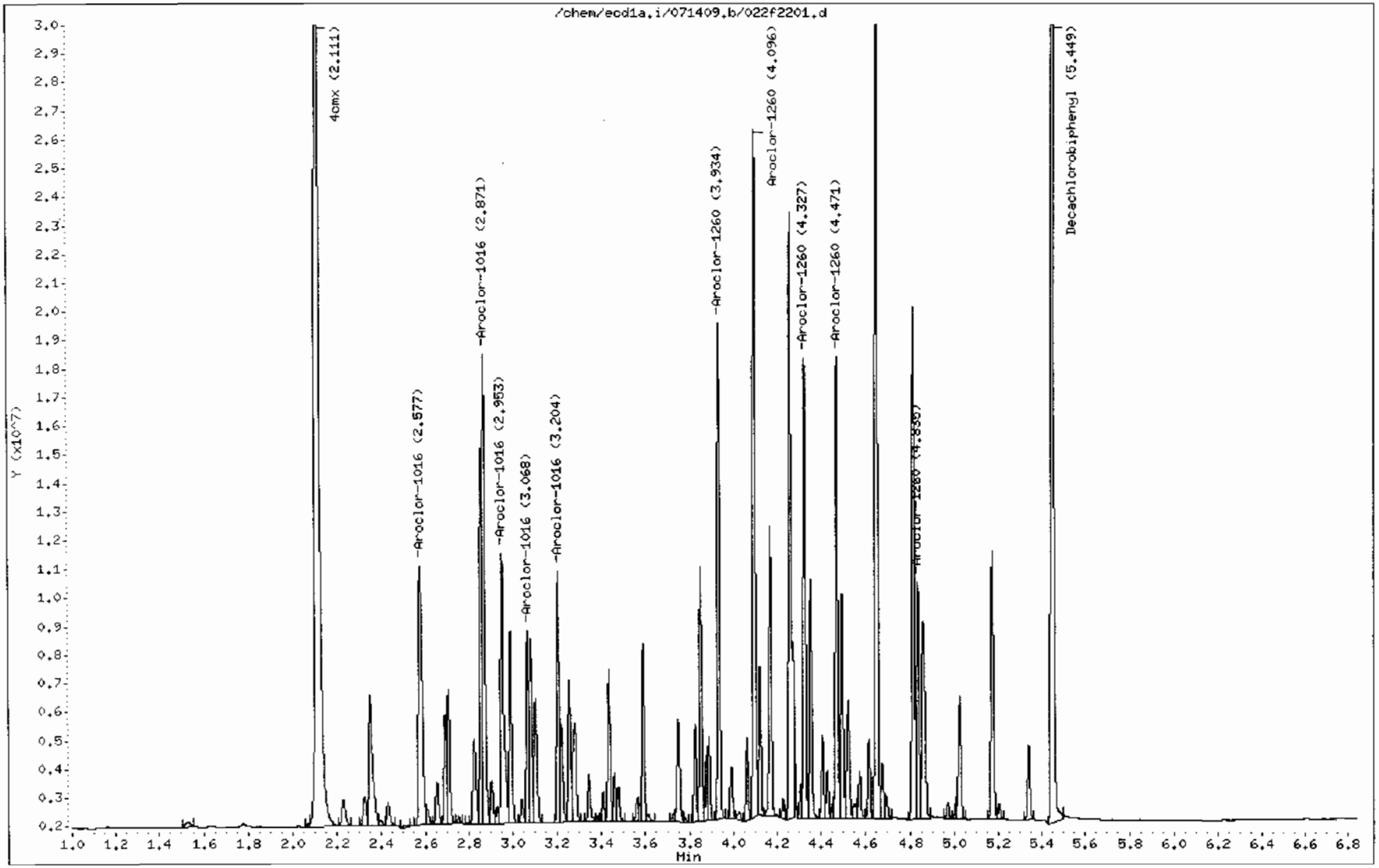

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/022b2201.d
Lab Smp Id: 1201879448 Client Smp ID: PBLK01LCS
Inj Date : 14-JUL-2009 10:31
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879448|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 11:20 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2506.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	47474534	177.298	5.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	22187769	169.597	5.6	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.399	3.399	0.000	9048836	856.938	28.6	80.00- 120.00	100.00
3.484	3.484	0.000	6663643	792.949	26.4	54.37- 94.37	73.64
3.549	3.549	0.000	3974316	803.135	26.8	24.82- 64.82	43.92
3.779	3.779	0.000	5441015	798.949	26.6	40.43- 80.43	60.13

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.856	3.855	0.001	4326487	793.992	26.5	28.49- 68.49	47.81
Average of Peak Concentrations =					27.0		
7 Aroclor-1260					CAS #: 11096-82-5		
4.553	4.551	0.002	9388284	828.557	27.6	80.00- 120.00	100.00
4.676	4.675	0.001	10833907	869.991	29.0	92.77- 132.77	115.40
4.944	4.944	0.000	8298200	980.100	32.7	54.09- 94.09	88.39
5.122	5.121	0.001	8313829	947.363	31.6	57.69- 97.69	88.56
5.268	5.267	0.001	16841603	985.857	32.9	137.06- 177.06	179.39
Average of Peak Concentrations =					30.8		

Data File: /chem/ecd1a.i/071409.b/022b2201.d
Date : 14-JUL-2009 10:31
Client ID: PBLK01LCS
Sample Info: |120187944811|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

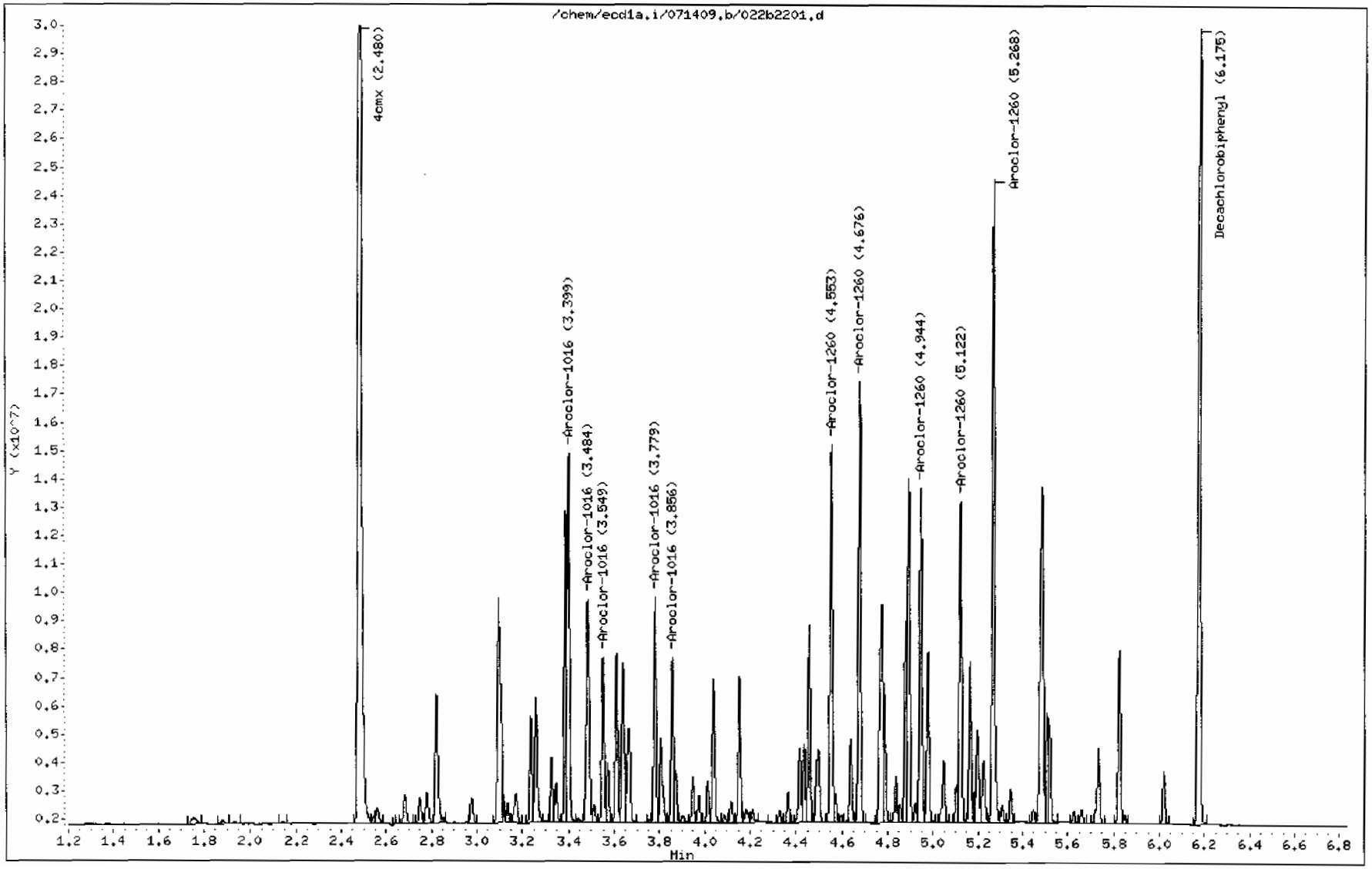

MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD1

DATE: 07/13/2009 METHOD: ECD1-F-8082-071109.m OPERATOR:YS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1

SOLVENT LOT CY613
ALUMINA LOT 1143678-A
COPPER LOT 090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
GEL SOP GL-OA-E-040 Polychlorinated Biphenyl: EPA 8082
Chromatogram Abbreviation Legend: AB-Assign Baseline, AP-Assign Peak,
DNC-Do Not Call, DMP-Doesn't Match Pattern, NC-Not Confirmed, RT-Retention Time,
BF-Before, AF-After.

Sequence Number: /chem/ecd1a.i/071309.b Injection Volume: 0.5 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090730-99 01	YS1	13-JUL-2009 09:44		071309	1.0		CLEAN
002f0201.d	WAR090623-60 01	YS1	13-JUL-2009 09:54		071309	1.0		DUSE RE-ICAL
003f0301.d	WAR090630-54 54	YS1	13-JUL-2009 10:04		071309	1.0		DUSE RE-ICAL
004f0401.d	WAR090713-09	YS1	13-JUL-2009 10:14		071309	1.0		AR1242 I-CAL LEVEL 1
005f0501.d	WAR090713-10	YS1	13-JUL-2009 10:25		071309	1.0		AR1242 I-CAL LEVEL 2
006f0601.d	WAR090713-11	YS1	13-JUL-2009 10:35		071309	1.0		AR1242 I-CAL LEVEL 3
007f0701.d	WAR090713-12	YS1	13-JUL-2009 10:45		071309	1.0		AR1242 I-CAL LEVEL 4
008f0801.d	IAR090711-01	YS1	13-JUL-2009 10:56		071309	1.0		AR1242 I-CAL LEVEL 5
009f0901.d	WAR090519-42 42	YS1	13-JUL-2009 11:06		071309	1.0		PASSED ON BOTH COLUMNS
010f1001.d	WAR090521-48 48	YS1	13-JUL-2009 11:16		071309	1.0		PASSED ON BOTH COLUMNS
011f1101.d	WAR090713-01	YS1	13-JUL-2009 11:27		071309	1.0		AR1660 I-CAL LEVEL 1
012f1201.d	WAR090713-02	YS1	13-JUL-2009 11:37		071309	1.0		AR1660 I-CAL LEVEL 2
013f1301.d	WAR090713-03	YS1	13-JUL-2009 11:47		071309	1.0		AR1660 I-CAL LEVEL 3
014f1401.d	WAR090713-04	YS1	13-JUL-2009 11:58		071309	1.0		AR1660 I-CAL LEVEL 4
015f1501.d	IAR090623-01	YS1	13-JUL-2009 12:08		071309	1.0		AR1660 I-CAL LEVEL 5

Instrument Batch: /chem/ecd1a.i/071309.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments

016f1601.d	WAR090623-60 01	YS1	13-JUL-2009 12:18			071309		1.0		PASSED ON BOTH COLUMNS
017f1701.d	WAR090713-05	YS1	13-JUL-2009 12:28			071309		1.0		AR1254 I-CAL LEVEL 1
018f1801.d	WAR090713-06	YS1	13-JUL-2009 12:39			071309		1.0		AR1254 I-CAL LEVEL 2
019f1901.d	WAR090713-07	YS1	13-JUL-2009 12:49			071309		1.0		AR1254 I-CAL LEVEL 3
020f2001.d	WAR090713-08	YS1	13-JUL-2009 12:59			071309		1.0		AR1254 I-CAL LEVEL 4
021f2101.d	IAR0900505-01	YS1	13-JUL-2009 13:10			071309		1.0		AR1254 I-CAL LEVEL 5
022f2201.d	WAR090630-54 54	YS1	13-JUL-2009 13:20			071309		1.0		PASSED ON BOTH COLUMNS
023f2301.d	WAR090618-32 32	YS1	13-JUL-2009 13:30			071309		1.0		PATTERN ONLY
024f2401.d	WAR090618-21 21	YS1	13-JUL-2009 13:40			071309		1.0		PATTERN ONLY
025f2501.d	WAR090608-62 62	YS1	13-JUL-2009 13:51			071309		1.0		PATTERN ONLY
026f2601.d	WAR090424-68 68	YS1	13-JUL-2009 14:01			071309		1.0		PATTERN ONLY
027f2701.d	WAR090623-DDT	YS1	13-JUL-2009 14:11			071309		1.0		DDT ANALOG STANDARD
028f2801.d	WAR090703-99 02	YS1	13-JUL-2009 15:14			071309		1.0		CLEAN
029f2901.d	1201878528	YS1	13-JUL-2009 15:24	884242	233214			1.0	MB	UPLOAD BOTH COLUMNS, USE HIGHER
030f3001.d	1201878529	YS1	13-JUL-2009 15:34	884242	233214			1.0	LCS	UPLOAD BOTH COLUMNS, USE HIGHER
031f3101.d	233214001	YS1	13-JUL-2009 15:44	884242	233214			5.0	WSRB	UPLOAD BOTH COLUMNS, USE HIGHER
032f3201.d	1201878530	YS1	13-JUL-2009 15:55	884242	233214			5.0	MS	UPLOAD BOTH COLUMNS, USE HIGHER
033f3301.d	1201878531	YS1	13-JUL-2009 16:05	884242	233214			5.0	MSD	UPLOAD BOTH COLUMNS, USE HIGHER
034f3401.d	233214002	YS1	13-JUL-2009 16:15	884242	233214			100.0	WSRB	UPLOAD BOTH COLUMNS, USE HIGHER
035f3501.d	233214003	YS1	13-JUL-2009 16:31	884242	233214			5.0	WSRB	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecd1a.i/071309.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	WAR090623-60 02	YS1	13-JUL-2009 16:46			071309		1.0		PASSED ON BOTH COLUMNS

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD1

DATE: 07/15/2009 METHOD: ECD1-F-8082-071109.m OPERATOR:YS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1

SOLVENT LOT CY613
ALUMINA LOT 1143678-A
COPPER LOT 090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
GEL SOP GL-OA-E-040 Polychlorinated Biphenyl: EPA 8082
Chromatogram Abbreviation Legend: AB-Assign Baseline, AP-Assign Peak,
DNC-Do Not Call, DMP-Doesn't Match Pattern, NC-Not Confirmed, RT-Retention Time,
BF-Before, AF-After.

Sequence Number: /chem/ecd1a.i/071409.b Injection Volume: 0.5 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090730-99 01	YS1	14-JUL-2009 06:44		071409	1.0		CLEAN
002f0201.d	WAR090623-60 01	YS1	14-JUL-2009 06:54		071409	1.0		PASSED ON BOTH COLUMNS
003f0301.d	WAR090630-54 54	YS1	14-JUL-2009 07:05		071409	1.0		PASSED ON BOTH COLUMNS
004f0401.d	WAR090519-42 42	YS1	14-JUL-2009 07:15		071409	1.0		PASSED ON BOTH COLUMNS
005f0501.d	WAR090521-48 48	YS1	14-JUL-2009 07:25		071409	1.0		PASSED ON BOTH COLUMNS
006f0601.d	WAR090618-32 32	YS1	14-JUL-2009 07:36		071409	1.0		PATTREN ONLY
007f0701.d	WAR090618-21 21	YS1	14-JUL-2009 07:46		071409	1.0		PATTREN ONLY
008f0801.d	WAR090608-62 62	YS1	14-JUL-2009 07:56		071409	1.0		PATTREN ONLY
009f0901.d	WAR090424-68 68	YS1	14-JUL-2009 08:06		071409	1.0		PATTREN ONLY
010f1001.d	WAR090623-DDT	YS1	14-JUL-2009 08:17		071409	1.0		DDT ANALOG STANDARD
011f1101.d	WAR090703-99 02	YS1	14-JUL-2009 08:27		071409	1.0		CLEAN
012f1201.d	1201878519	YS1	14-JUL-2009 08:37	884237	233254	1.0	MB	UPLOAD BOTH COLUMNS, USE FRONT
013f1301.d	1201878520	YS1	14-JUL-2009 08:48	884237	233254	1.0	LCS	UPLOAD BOTH COLUMNS, USE FRONT
014f1401.d	233254002	YS1	14-JUL-2009 08:58	884237	233254	5.0	BRKL	UPLOAD BOTH COLUMNS, USE FRONT
015f1501.d	1201878521	YS1	14-JUL-2009 09:08	884237	233254	5.0	MS	UPLOAD BOTH COLUMNS, USE FRONT

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Instrument Batch: /chem/ecd1a.i/071409.b Page: 1

10H16.6H

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments

016f1601.d	1201878522	YS1	14-JUL-2009 09:19	884237	233254	5.0	MSD	UPLOAD BOTH COLUMNS, USE FRONT
017f1701.d	233254004	YS1	14-JUL-2009 09:29	884237	233254	5.0	BRKL	UPLOAD BOTH COLUMNS, USE FRONT
018f1801.d	233254006	YS1	14-JUL-2009 09:44	884237	233254	5.0	BRKL	UPLOAD BOTH COLUMNS, USE FRONT
019f1901.d	WAR090623-60 02	YS1	14-JUL-2009 10:00		071409	1.0		PASSED ON BOTH COLUMNS
020f2001.d	WAR090730-99 03	YS1	14-JUL-2009 10:10		071409	1.0		CLEAN
021f2101.d	1201879447	YS1	14-JUL-2009 10:21	884634	071409	1.0	MB	UPLOAD BOTH COLUMNS, USE HIGHER
022f2201.d	1201879448	YS1	14-JUL-2009 10:31	884634	09-2506	1.0	LCS	UPLOAD BOTH COLUMNS, USE HIGHER
023f2301.d	232582002	YS1	14-JUL-2009 10:41	884634	09-2508	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
024f2401.d	232585001	YS1	14-JUL-2009 10:51	884634	09-2506	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
025f2501.d	232585002	YS1	14-JUL-2009 11:02	884634	09-2506	5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
026f2601.d	232585003	YS1	14-JUL-2009 11:12	884634	09-2506	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
027f2701.d	232661005	YS1	14-JUL-2009 11:22	884634	09-2515	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
028f2801.d	1201879449	YS1	14-JUL-2009 11:32	884634	09-2515	1.0	MS	UPLOAD BOTH COLUMNS, USE HIGHER
029f2901.d	1201879450	YS1	14-JUL-2009 11:43	884634	09-2515	1.0	MSD	UPLOAD BOTH COLUMNS, USE HIGHER
030f3001.d	232661006	YS1	14-JUL-2009 11:58	884634	09-2515	5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
031f3101.d	WAR090623-60 03	YS1	14-JUL-2009 12:14		071409	1.0		PASSED ON BOTH COLUMNS
032f3201.d	WAR090730-99 04	YS1	14-JUL-2009 12:24		071409	1.0		CLEAN
033f3301.d	WAR090623-60 04	YS1	14-JUL-2009 14:56		071409	1.0		PASSED ON BOTH COLUMNS
034f3401.d	WAR090730-99 05	YS1	14-JUL-2009 15:17		071409	1.0		CLEAN
035f3501.d	1201880244	YS1	14-JUL-2009 15:27	884939	233110	1.0	QC A	HAS 1242, 1254 AND 1260 HITS

Instrument Batch: /chem/ecd1a.i/071409.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	1201880245	YS1	14-JUL-2009 15:38	884939	233110	1.0	QC A	UPLOAD BOTH, USE HIGHER
037f3701.d	233110001	YS1	14-JUL-2009 15:48	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION
038f3801.d	233110002	YS1	14-JUL-2009 16:04	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION
039f3901.d	233110003	YS1	14-JUL-2009 16:19	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION
040f4001.d	233110004	YS1	14-JUL-2009 16:35	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION

041f4101.d	233317001	YS1	14-JUL-2009 16:50	884939	233317		1.0 PCGE	UPLOAD BOTH, USE HIGHER NO HITS
042f4201.d	1201880246	YS1	14-JUL-2009 17:06	884939	233317		1.0 QC A	UPLOAD BOTH, USE HIGHER
043f4301.d	1201880247	YS1	14-JUL-2009 17:21	884939	233317		1.0 QC A	UPLOAD BOTH, USE HIGHER
044f4401.d	WAR090730-99 06	YS1	14-JUL-2009 17:37		071409		1.0	CLEAN
045f4501.d	WAR090623-60 05	YS1	14-JUL-2009 17:47		071409		1.0	BACK FAILS HIGH, FRONT PASSING
046f4601.d	WAR090730-99 07	YS1	14-JUL-2009 17:57		071409		1.0	CLEAN
047f4701.d	GPC LCS SCR	YS1	14-JUL-2009 18:52		071409		1.0	DUSE

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/028b2801.d
Lab Smp Id: 1201879449 Client Smp ID: CAMO-09-10030MS
Inj Date : 14-JUL-2009 11:32
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879449|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 28 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.07000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	32715100	122.177	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	16847133	128.775	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.399	3.399	0.000	6803138	644.267	23.8	80.00- 120.00	100.00
3.484	3.484	0.000	5005912	595.685	22.0	51.66- 91.66	73.58
3.549	3.549	0.000	2987182	603.653	22.3	23.31- 63.31	43.91
3.779	3.779	0.000	4094035	601.161	22.2	38.10- 78.10	60.18

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.855	3.855	0.000	3320623	609.397	22.5	26.66- 66.66	48.81
Average of Peak Concentrations =					22.6		
6 Aroclor-1254					CAS #: 11097-69-1		
4.154	4.154	0.000	3144645	338.900	12.5	80.00- 120.00	100.00(M)
4.365	4.365	0.000	879777	126.994	4.7	55.64- 95.64	27.98
4.435	4.435	0.000	2323069	190.879	7.0	114.01- 154.01	73.87
4.552	4.553	-0.001	8888424	1689.45	62.4	36.82- 76.82	282.65
4.785	4.782	0.003	2448862	388.771	14.4	48.47- 88.47	77.87
Average of Peak Concentrations =					20.2		
7 Aroclor-1260					CAS #: 11096-82-5		
4.552	4.551	0.001	8888424	784.442	29.0	80.00- 120.00	100.00
4.675	4.675	0.000	10661150	856.119	31.6	93.67- 133.67	119.94
4.945	4.944	0.001	8147484	962.299	35.6	54.30- 94.30	91.66
5.121	5.121	0.000	7863655	896.066	33.1	58.15- 98.15	88.47
5.267	5.267	0.000	16344473	956.757	35.4	140.04- 180.04	183.88
Average of Peak Concentrations =					32.9		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd1a.i/071409.b/028b2801.d

Date : 14-JUL-2009 11:32

Client ID: CAMO-09-10030MS

Sample Info: |120187944911|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

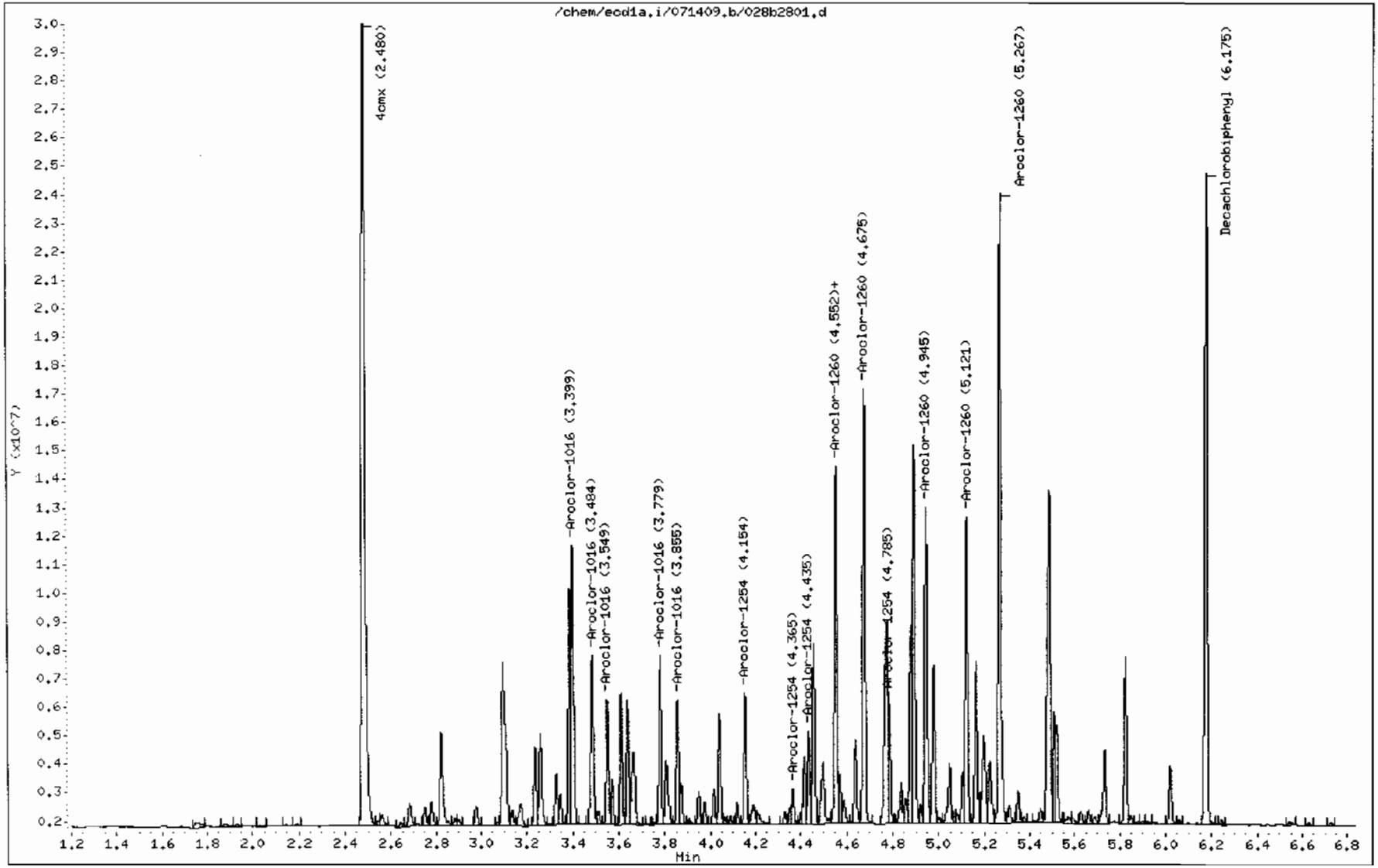

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/028f2801.d
Lab Smp Id: 1201879449 Client Smp ID: CAMO-09-10030MS
Inj Date : 14-JUL-2009 11:32
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879449|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 28 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.07000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	39557345	119.013	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	29987390	129.484	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	7742922	545.152	20.1	80.00- 120.00	100.00
2.870	2.871	-0.001	9420535	568.351	21.0	105.14- 145.14	121.67
2.952	2.953	-0.001	6374075	541.857	20.0	63.46- 103.46	82.32
3.067	3.067	0.000	3646296	570.990	21.1	24.66- 64.66	47.09

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.203	3.204	-0.001	4930431	561.141	20.7	43.54- 83.54	63.68
Average of Peak Concentrations =					20.6		
6 Aroclor-1254					CAS #: 11097-69-1		
3.434	3.434	0.000	3350299	324.987	12.0	80.00- 120.00	100.00
3.589	3.589	0.000	4389133	319.261	11.8	113.23- 153.23	131.01
3.825	3.826	-0.001	2780125	163.074	6.0	148.35- 188.35	82.98
4.095	4.098	-0.003	18056462	1436.02	53.1	102.75- 142.75	538.95
4.260	4.261	-0.001	20412016	1189.08	43.9	148.15- 188.15	609.26
Average of Peak Concentrations =					25.4		
7 Aroclor-1260					CAS #: 11096-82-5		
3.933	3.933	0.000	11437635	748.258	27.6	80.00- 120.00	100.00
4.095	4.096	-0.001	18056462	781.912	28.9	135.17- 175.17	157.87
4.326	4.326	0.000	10794042	927.391	34.3	56.89- 96.89	94.37
4.470	4.470	0.000	10628685	839.082	31.0	64.08- 104.08	92.93
4.835	4.835	0.000	5916293	1007.32	37.2	18.06- 58.06	51.73
Average of Peak Concentrations =					31.8		

Data File: /chem/ecd1a.i/071409.b/028f2801.d
Date : 14-JUL-2009 11:32
Client ID: CAMO-09-10030MS
Sample Info: |120187944911|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

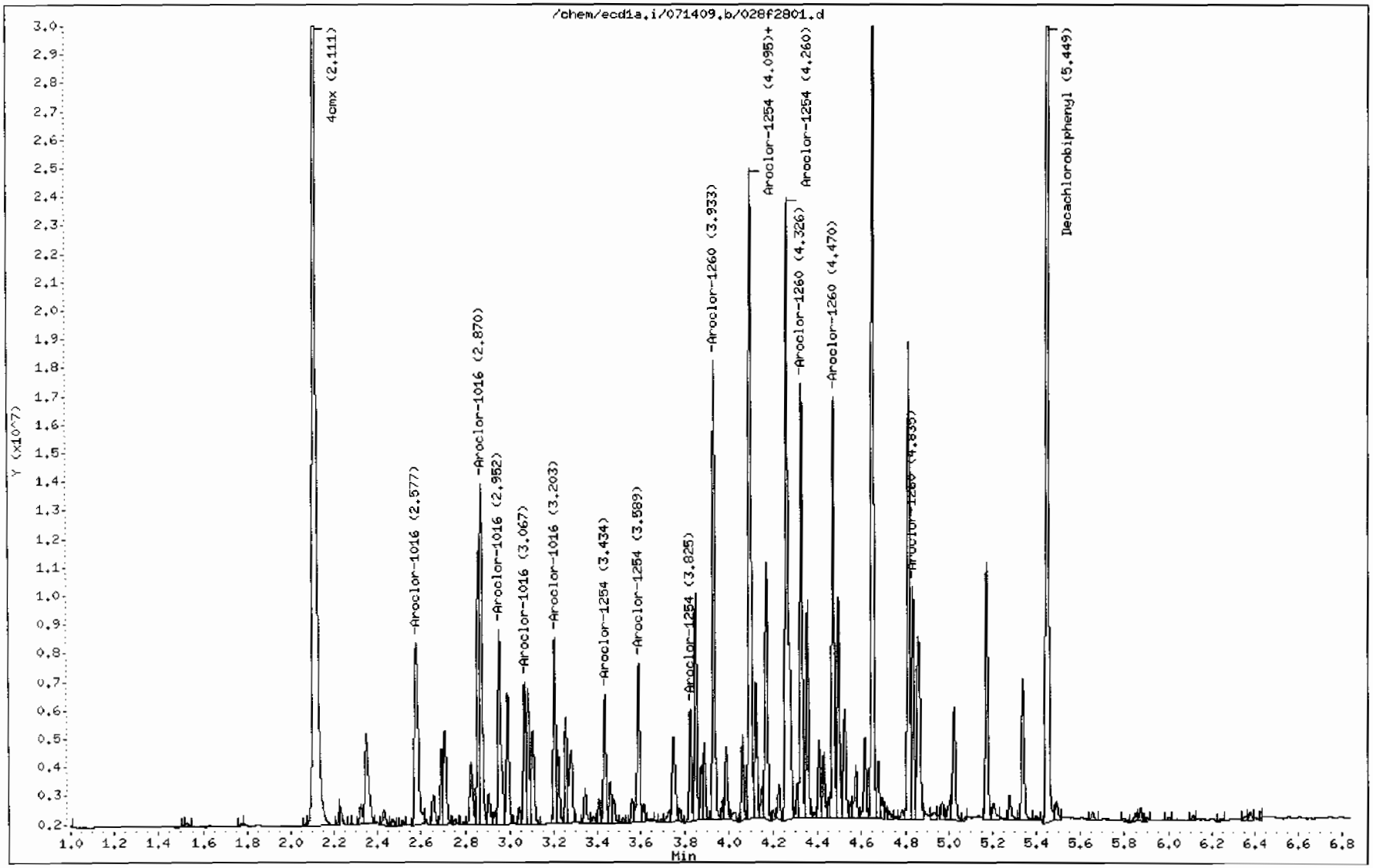

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/029b2901.d
Lab Smp Id: 1201879450 Client Smp ID: CAMO-09-10030MSD
Inj Date : 14-JUL-2009 11:43
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879450|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 29 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	36974162	138.083	5.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.173	6.175	-0.002	18637318	142.459	5.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.398	3.399	-0.001	7504153	710.654	26.3	80.00- 120.00	100.00
3.483	3.484	-0.001	5507162	655.332	24.2	51.66- 91.66	73.39
3.548	3.549	-0.001	3289940	664.835	24.6	23.31- 63.31	43.84
3.777	3.779	-0.002	4611261	677.109	25.0	38.10- 78.10	61.45

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.855	3.855	0.000	3701939	679.376	25.1	26.66- 66.66	49.33
Average of Peak Concentrations =					25.0		
6 Aroclor-1254					CAS #: 11097-69-1		
4.153	4.154	-0.001	3459280	372.809	13.8	80.00- 120.00	100.00(M)
4.364	4.365	-0.001	1029329	148.581	5.5	55.64- 95.64	29.76
4.434	4.435	-0.001	2675742	219.857	8.1	114.01- 154.01	77.35
4.551	4.553	-0.002	9898016	1881.35	69.6	36.82- 76.82	286.13
4.783	4.782	0.001	2758934	437.997	16.2	48.47- 88.47	79.75
Average of Peak Concentrations =					22.6		
7 Aroclor-1260					CAS #: 11096-82-5		
4.551	4.551	0.000	9898016	873.543	32.3	80.00- 120.00	100.00
4.674	4.675	-0.001	11981383	962.137	35.6	93.67- 133.67	121.05
4.943	4.944	-0.001	9198584	1086.44	40.2	54.30- 94.30	92.93
5.121	5.121	0.000	8903458	1014.55	37.5	58.15- 98.15	89.95
5.266	5.267	-0.001	18540621	1085.31	40.1	140.04- 180.04	187.32
Average of Peak Concentrations =					37.1		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecdia.i/071409.b/029b2901.d
Date : 14-JUL-2009 11:43
Client ID: CAMD-09-10030MSD
Sample Info: 1120187945011I
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecdia.i
Operator: YS1
Column diameter: 0.25

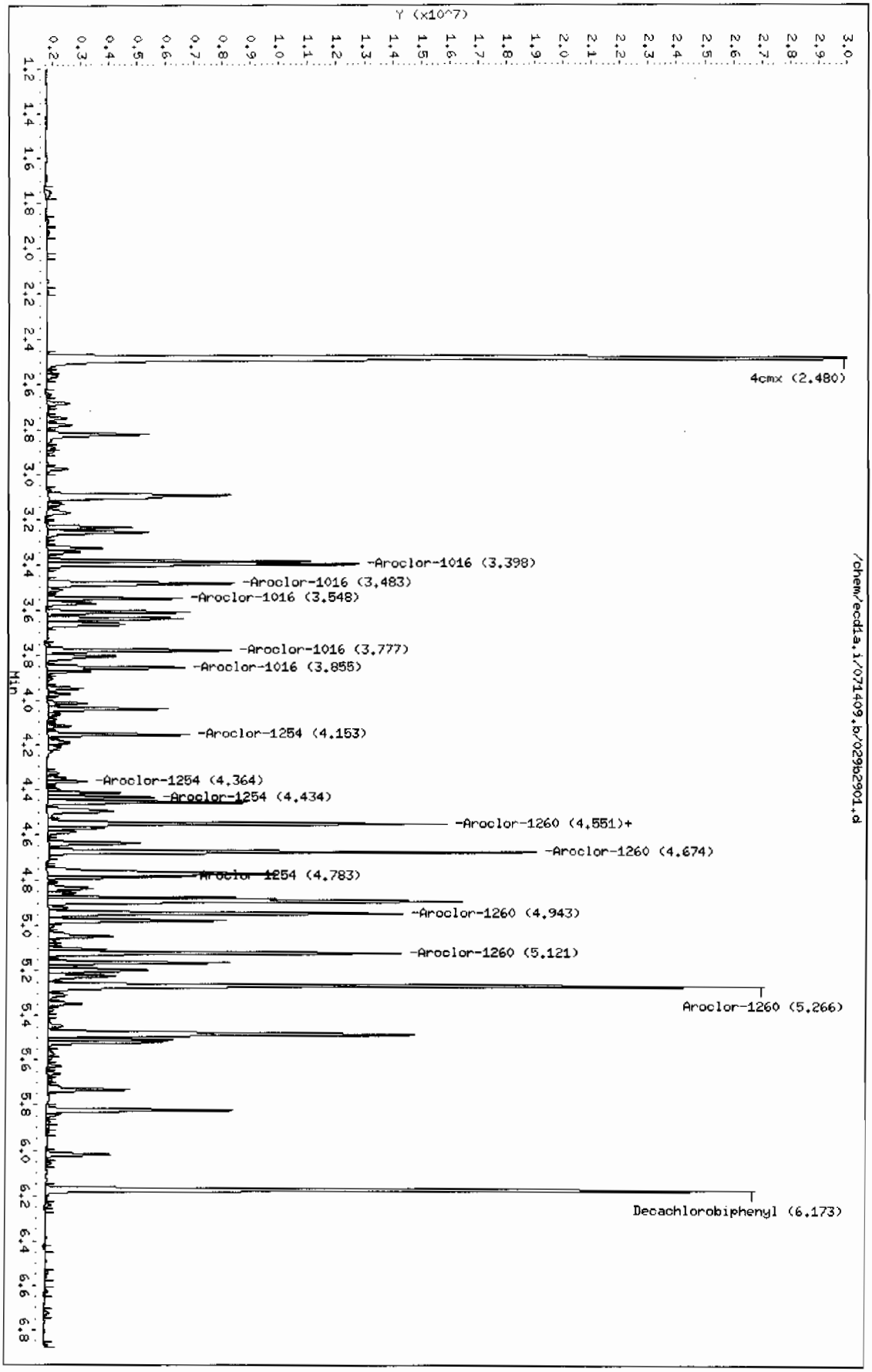

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/029f2901.d
Lab Smp Id: 1201879450 Client Smp ID: CAMO-09-10030MSD
Inj Date : 14-JUL-2009 11:43
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879450|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 29 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	44915075	135.132	5.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.447	5.450	-0.003	33179032	143.265	5.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	8706818	613.016	22.7	80.00- 120.00	100.00
2.870	2.871	-0.001	10626981	641.137	23.7	105.14- 145.14	122.05
2.952	2.953	-0.001	7011753	596.066	22.0	63.46- 103.46	80.53
3.067	3.067	0.000	4036913	632.159	23.4	24.66- 64.66	46.36

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.203	3.204	-0.001	5437028	618.797	22.9	43.54- 83.54	62.45
Average of Peak Concentrations =					22.9		
6 Aroclor-1254					CAS #: 11097-69-1		
3.433	3.434	-0.001	3694281	358.354	13.2	80.00- 120.00	100.00
3.588	3.589	-0.001	4899776	356.404	13.2	113.23- 153.23	132.63
3.824	3.826	-0.002	3272216	191.939	7.1	148.35- 188.35	88.58
4.094	4.098	-0.004	20533826	1633.04	60.4	102.75- 142.75	555.83
4.258	4.261	-0.003	23405843	1363.48	50.4	148.15- 188.15	633.57
Average of Peak Concentrations =					28.9		
7 Aroclor-1260					CAS #: 11096-82-5		
3.932	3.933	-0.001	13061538	854.495	31.6	80.00- 120.00	100.00
4.094	4.096	-0.002	20533826	889.191	32.9	135.17- 175.17	157.21
4.325	4.326	-0.001	12459657	1070.50	39.6	56.89- 96.89	95.39
4.469	4.470	-0.001	12448104	982.716	36.3	64.08- 104.08	95.30
4.833	4.835	-0.002	6937164	1181.14	43.7	18.06- 58.06	53.11
Average of Peak Concentrations =					36.8		

Data File: /chem/ecd1a.i/071409.b/029f2901.d

Date : 14-JUL-2009 11:43

Client ID: CAMO-09-10030MSD

Sample Info: |120187945011|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

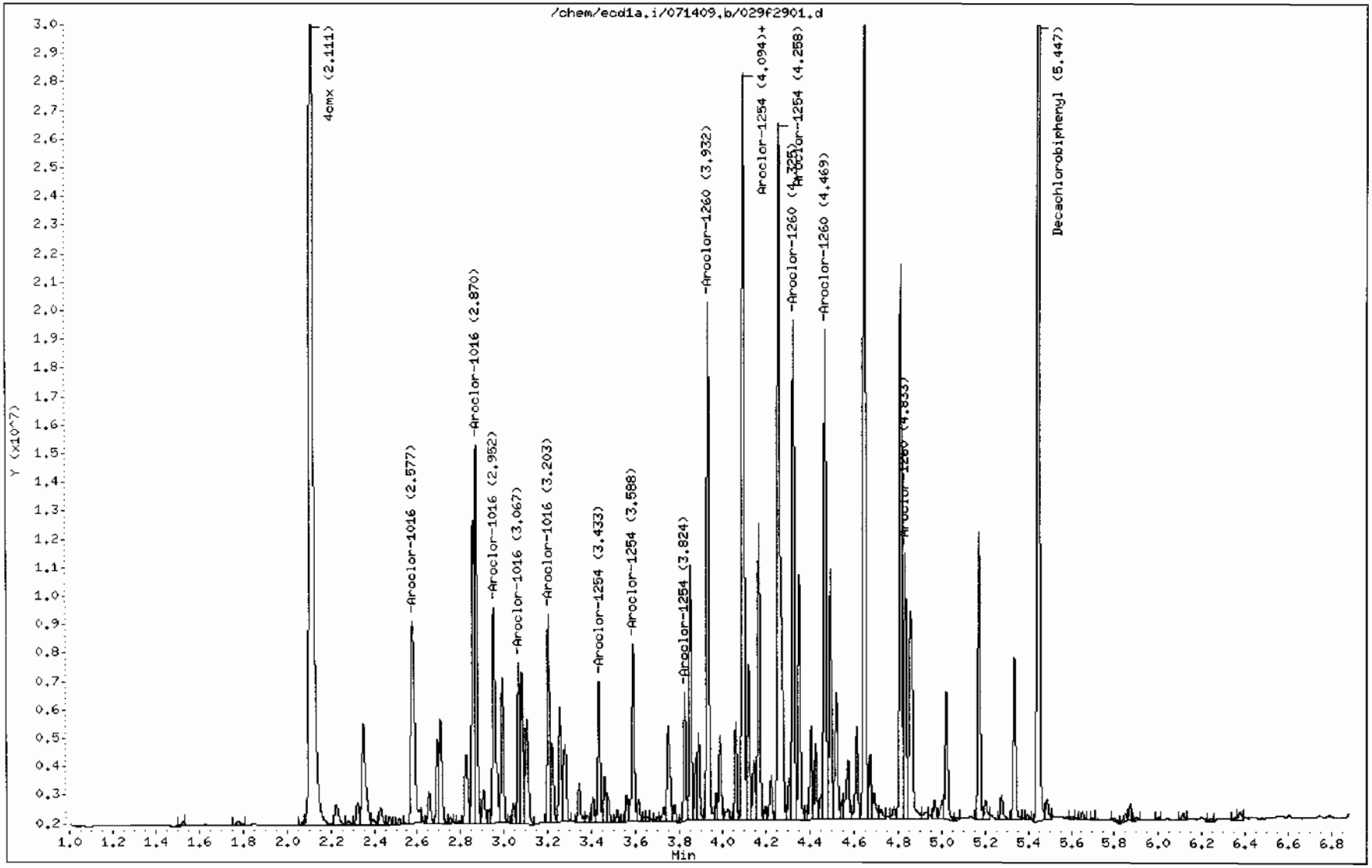

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 884632 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL–OA–E–010 REV# 18

Instrument: Semi–Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201879447 MB	13–JUL–2009 20:17:12	30	H2SO4/KMn2		2	9	1	0.03333
1201879448 LCS	13–JUL–2009 20:17:12	30	H2SO4/KMn2		2	9	1	0.03333
232582002 – 2	13–JUL–2009 20:17:12	30.03	H2SO4/KMn2		2	9	1	0.0333
232585001 – 2	13–JUL–2009 20:17:12	30.02	H2SO4/KMn2		2	9	1	0.03331
232585002 – 2	13–JUL–2009 20:17:12	30.01	H2SO4/KMn2		2	9	1	0.03332
232585003 – 2	13–JUL–2009 20:17:12	30.08	H2SO4/KMn2		2	9	1	0.03324
232661005 – 2	13–JUL–2009 20:17:12	30	H2SO4/KMn2		2	9	1	0.03333
1201879449 – 2 MS (232661005)	13–JUL–2009 20:17:12	30.07	H2SO4/KMn2		2	9	1	0.03326
1201879450 – 2 MSD (232661005)	13–JUL–2009 20:17:12	30.05	H2SO4/KMn2		2	9	1	0.03328
232661006 – 2	13–JUL–2009 20:17:12	30.08	H2SO4/KMn2		2	9	1	0.03324

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201879448	PCB Laboratory Control	WE090624–07	1	mL
MS	1201879449	PCB Laboratory Control	WE090624–07	1	mL
MSD	1201879450	PCB Laboratory Control	WE090624–07	1	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE090702–14	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	1:1 sulfuric acid	1133264a	5	mL
REGNT	All	Hexane	1149624–B2	150	mL
REGNT	All	5% Potassium Permanganate	B1133159–F	5	mL
SOURC	All	SODIUM SULFATE	1149626	30	g

Comments:

Clean up Date: 7/13/09

Clean up Initials: NBP

Verified By: AV

Final Solvent: Hexane

Clean Up SOP: GL–OA–E–037

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2506

Sample Analysis

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201872897	Method Blank (MB) **ICP**
1201872898	Laboratory Control Sample (LCS)
1201872901	232591001(CAMO-09-9946L) Serial Dilution (SD)
1201872899	232591001(CAMO-09-9946D) Sample Duplicate (DUP)
1201872900	232591001(CAMO-09-9946S) Matrix Spike (MS)
1201872902	232591001(CAMO-09-9946SD) Matrix Spike Duplicate (MSD)
1201872852	Method Blank (MB) **ICP-MS**
1201872853	Laboratory Control Sample (LCS)
1201872856	232591001(CAMO-09-9946L) Serial Dilution (SD)
1201872854	232591001(CAMO-09-9946D) Sample Duplicate (DUP)
1201872855	232591001(CAMO-09-9946S) Matrix Spike (MS)
1201872859	232591001(CAMO-09-9946SD) Matrix Spike Duplicate (MSD)
1201873038	Method Blank (MB) **CVAA**
1201873039	Laboratory Control Sample (LCS)
1201873042	232591001(CAMO-09-9946L) Serial Dilution (SD)
1201873040	232591001(CAMO-09-9946D) Sample Duplicate (DUP)
1201873041	232591001(CAMO-09-9946S) Matrix Spike (MS)
1201873043	232591001(CAMO-09-9946SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	881859, 881838 and 881916
Prep Batch :	881858, 881836 and 881915
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A

Prep Method : SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements

All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232591001 (CAMO-09-9946)-ICP, CVAA and ICP-MS.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exceptions of barium, magnesium and potassium, as indicated by the "N" qualifiers.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exceptions of barium and calcium, as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements, with the exception of aluminum, barium, calcium, cobalt, iron, magnesium, manganese and potassium, as indicated by the "*" qualifiers.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 710443. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: By Davis **Date:** 7-20-09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2506 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232585001 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-6605 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 93.4

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	935000	ug/Kg		7250	21300	21300	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-36-0	Antimony	1070	ug/Kg	U	352	1070	1070	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-38-2	Arsenic	559	ug/kg	J	204	1020	1020	2	MS	RMJ	07/14/09 16:05	090713-2	881838
7440-39-3	Barium	15700	ug/Kg		107	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-41-7	Beryllium	610	ug/kg		20.4	102	102	2	MS	RMJ	07/14/09 16:05	090713-2	881838
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-70-2	Calcium	138000	ug/Kg		8530	26700	26700	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-47-3	Chromium	22000	ug/Kg		160	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-48-4	Cobalt	533	ug/Kg		160	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-50-8	Copper	1500	ug/Kg		320	1070	1070	1	P	HSC	07/08/09 14:32	070809A-1	881859
7439-89-6	Iron	7540000	ug/Kg		8530	26700	26700	1	P	HSC	07/08/09 14:32	070809A-1	881859
7439-92-1	Lead	3660	ug/Kg		267	1070	1070	1	P	HSC	07/08/09 14:32	070809A-1	881859
7439-95-4	Magnesium	81300	ug/Kg		9070	32000	32000	1	P	HSC	07/08/09 14:32	070809A-1	881859
7439-96-5	Manganese	345000	ug/Kg		213	1070	1070	1	P	HSC	07/08/09 14:32	070809A-1	881859
7439-97-6	Mercury	12.1	ug/kg	U	4.12	12.1	12.1	1	AV	JXL1	07/13/09 12:05	071309S2-4	881916
7440-02-0	Nickel	1230	ug/kg		102	409	409	2	MS	RMJ	07/14/09 16:05	090713-2	881838
7440-09-7	Potassium	165000	ug/Kg		6830	26700	26700	1	P	HSC	07/08/09 14:32	070809A-1	881859
7782-49-2	Selenium	1020	ug/kg	U	511	1020	1020	2	MS	RMJ	07/14/09 23:20	090714-3	881838
7440-22-4	Silver	345	ug/Kg	J	107	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-23-5	Sodium	126000	ug/Kg		7470	26700	26700	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-28-0	Thallium	204	ug/kg	U	61.3	204	204	2	MS	RMJ	07/14/09 16:05	090713-2	881838
7440-62-2	Vanadium	3010	ug/Kg		107	533	533	1	P	HSC	07/08/09 14:32	070809A-1	881859
7440-66-6	Zinc	36600	ug/Kg		352	1070	1070	1	P	HSC	07/08/09 14:32	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.524	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.502	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.53	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2506 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232585002 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-6603 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 92.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3490000	ug/Kg		7250	21300	21300	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-36-0	Antimony	1070	ug/Kg	U	352	1070	1070	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-38-2	Arsenic	1790	ug/kg		209	1050	1050	2	MS	RMJ	07/14/09 16:11	090713-2	881838
7440-39-3	Barium	67700	ug/Kg		107	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-41-7	Beryllium	717	ug/kg		20.9	105	105	2	MS	RMJ	07/14/09 16:11	090713-2	881838
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-70-2	Calcium	1470000	ug/Kg		8530	26600	26600	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-47-3	Chromium	4030	ug/Kg		160	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-48-4	Cobalt	2080	ug/Kg		160	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-50-8	Copper	4460	ug/Kg		320	1070	1070	1	P	HSC	07/08/09 14:39	070809A-1	881859
7439-89-6	Iron	8130000	ug/Kg		8530	26600	26600	1	P	HSC	07/08/09 14:39	070809A-1	881859
7439-92-1	Lead	9290	ug/Kg		266	1070	1070	1	P	HSC	07/08/09 14:39	070809A-1	881859
7439-95-4	Magnesium	732000	ug/Kg		9060	32000	32000	1	P	HSC	07/08/09 14:39	070809A-1	881859
7439-96-5	Manganese	288000	ug/Kg		213	1070	1070	1	P	HSC	07/08/09 14:39	070809A-1	881859
7439-97-6	Mercury	16.1	ug/kg		3.81	11.2	11.2	1	AV	JXL1	07/13/09 12:07	071309S2-4	881916
7440-02-0	Nickel	3590	ug/kg		105	418	418	2	MS	RMJ	07/14/09 16:11	090713-2	881838
7440-09-7	Potassium	730000	ug/Kg		6820	26600	26600	1	P	HSC	07/08/09 14:39	070809A-1	881859
7782-49-2	Selenium	530	ug/kg	J	523	1050	1050	2	MS	RMJ	07/14/09 23:24	090714-3	881838
7440-22-4	Silver	413	ug/Kg	J	107	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-23-5	Sodium	46800	ug/Kg		7460	26600	26600	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-28-0	Thallium	125	ug/kg	J	62.7	209	209	2	MS	RMJ	07/14/09 16:11	090713-2	881838
7440-62-2	Vanadium	10300	ug/Kg		107	533	533	1	P	HSC	07/08/09 14:39	070809A-1	881859
7440-66-6	Zinc	35800	ug/Kg		352	1070	1070	1	P	HSC	07/08/09 14:39	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.516	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.506	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.578	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2506 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232585003 **BASIS:** Dry Weight **DATE COLLECTED** 25-JUN-09

CLIENT ID: CAMO-09-6604 **LEVEL:** Low **DATE RECEIVED** 30-JUN-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3570000	ug/Kg		7400	21800	21800	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-36-0	Antimony	1090	ug/Kg	U	359	1090	1090	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-38-2	Arsenic	1630	ug/kg		213	1060	1060	2	MS	RMJ	07/14/09 16:17	090713-2	881838
7440-39-3	Barium	42400	ug/Kg		109	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-41-7	Beryllium	819	ug/kg		21.3	106	106	2	MS	RMJ	07/14/09 16:17	090713-2	881838
7440-43-9	Cadmium	544	ug/Kg	U	109	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-70-2	Calcium	863000	ug/Kg		8700	27200	27200	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-47-3	Chromium	14000	ug/Kg		163	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-48-4	Cobalt	1380	ug/Kg		163	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-50-8	Copper	3760	ug/Kg		326	1090	1090	1	P	HSC	07/08/09 15:00	070809A-1	881859
7439-89-6	Iron	8980000	ug/Kg		8700	27200	27200	1	P	HSC	07/08/09 15:00	070809A-1	881859
7439-92-1	Lead	6530	ug/Kg		272	1090	1090	1	P	HSC	07/08/09 15:00	070809A-1	881859
7439-95-4	Magnesium	601000	ug/Kg		9250	32600	32600	1	P	HSC	07/08/09 15:00	070809A-1	881859
7439-96-5	Manganese	314000	ug/Kg		218	1090	1090	1	P	HSC	07/08/09 15:00	070809A-1	881859
7439-97-6	Mercury	16.1	ug/kg		3.98	11.7	11.7	1	AV	JXL1	07/13/09 12:09	071309S2-4	881916
7440-02-0	Nickel	2880	ug/kg		106	425	425	2	MS	RMJ	07/14/09 16:17	090713-2	881838
7440-09-7	Potassium	467000	ug/Kg		6960	27200	27200	1	P	HSC	07/08/09 15:00	070809A-1	881859
7782-49-2	Selenium	1060	ug/kg	U	532	1060	1060	2	MS	RMJ	07/14/09 23:28	090714-3	881838
7440-22-4	Silver	404	ug/Kg	J	109	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-23-5	Sodium	123000	ug/Kg		7620	27200	27200	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-28-0	Thallium	95.5	ug/kg	J	63.8	213	213	2	MS	RMJ	07/14/09 16:17	090713-2	881838
7440-62-2	Vanadium	8560	ug/Kg		109	544	544	1	P	HSC	07/08/09 15:00	070809A-1	881859
7440-66-6	Zinc	36400	ug/Kg		359	1090	1090	1	P	HSC	07/08/09 15:00	070809A-1	881859

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881838	881836	SW846 3050B	0.525	g	50	mL	07/06/09	CXS3
881859	881858	SW846 3050B	0.513	g	50	mL	07/06/09	CXS3
881916	881915	SW846 7471A Prep	0.572	g	30	mL	07/10/09	AXG2

Quality Control Summary

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2506

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Antimony	535	ug/L	500	ug/L	107.1	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Barium	539	ug/L	500	ug/L	107.8	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Cadmium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Chromium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Cobalt	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Copper	527	ug/L	500	ug/L	105.3	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Iron	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Lead	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Magnesium	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Manganese	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Potassium	2510	ug/L	2500	ug/L	100.4	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Silver	256	ug/L	250	ug/L	102.4	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Sodium	2550	ug/L	2500	ug/L	101.9	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Mercury	5.22	ug/L	5	ug/L	104.4	90.0 – 110.0	AV	13–JUL–09 09:48	071309S2–4
	Arsenic	50.5	ug/L	50	ug/L	101.1	90.0 – 110.0	MS	14–JUL–09 15:00	090713–2
	Beryllium	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	14–JUL–09 15:00	090713–2
	Nickel	52.7	ug/L	50	ug/L	105.4	90.0 – 110.0	MS	14–JUL–09 15:00	090713–2
	Thallium	48.8	ug/L	50	ug/L	97.5	90.0 – 110.0	MS	14–JUL–09 15:00	090713–2
	Selenium	49.1	ug/L	50	ug/L	98.3	90.0 – 110.0	MS	14–JUL–09 22:36	090714–3
CCV01										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Antimony	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Barium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Cadmium	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2506

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Lead	504	ug/L	500	ug/L	100.9	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Manganese	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Potassium	5270	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Sodium	9980	ug/L	10000	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Mercury	5.16	ug/L	5	ug/L	103.2	80.0 - 120.0	AV	13-JUL-09 09:54	071309S2-4
	Arsenic	51	ug/L	50	ug/L	101.9	90.0 - 110.0	MS	14-JUL-09 15:29	090713-2
	Beryllium	52.9	ug/L	50	ug/L	105.8	90.0 - 110.0	MS	14-JUL-09 15:29	090713-2
	Nickel	53.3	ug/L	50	ug/L	106.7	90.0 - 110.0	MS	14-JUL-09 15:29	090713-2
	Thallium	49	ug/L	50	ug/L	97.9	90.0 - 110.0	MS	14-JUL-09 15:29	090713-2
	Selenium	50.6	ug/L	50	ug/L	101.3	90.0 - 110.0	MS	14-JUL-09 22:56	090714-3
CCV02										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Antimony	500	ug/L	500	ug/L	99.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Cadmium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Chromium	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Cobalt	485	ug/L	500	ug/L	97	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Copper	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Lead	501	ug/L	500	ug/L	100.2	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Magnesium	5200	ug/L	5000	ug/L	103.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Manganese	495	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2506

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Silver	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Sodium	9940	ug/L	10000	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 – 120.0	AV	13-JUL-09 10:18	071309S2-4
	Arsenic	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Beryllium	54.3	ug/L	50	ug/L	108.6	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Nickel	53.5	ug/L	50	ug/L	107	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Thallium	49.5	ug/L	50	ug/L	99	90.0 – 110.0	MS	14-JUL-09 16:22	090713-2
	Selenium	51.1	ug/L	50	ug/L	102.2	90.0 – 110.0	MS	14-JUL-09 23:32	090714-3
CCV03										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Antimony	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Cobalt	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Iron	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Lead	505	ug/L	500	ug/L	101	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Potassium	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Sodium	10300	ug/L	10000	ug/L	102.9	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Mercury	5.04	ug/L	5	ug/L	100.9	80.0 – 120.0	AV	13-JUL-09 10:42	071309S2-4

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2506

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Arsenic	51.8	ug/L	50	ug/L	103.6	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Beryllium	54.8	ug/L	50	ug/L	109.7	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Nickel	54.6	ug/L	50	ug/L	109.3	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Thallium	50.6	ug/L	50	ug/L	101.3	90.0 – 110.0	MS	14-JUL-09 17:04	090713-2
	Selenium	52.2	ug/L	50	ug/L	104.5	90.0 – 110.0	MS	15-JUL-09 00:00	090714-3
CCV04										
	Aluminum	4910	ug/L	5000	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Antimony	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Iron	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Lead	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Magnesium	5130	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Manganese	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Potassium	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Sodium	10700	ug/L	10000	ug/L	106.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Mercury	5.1	ug/L	5	ug/L	102	80.0 – 120.0	AV	13-JUL-09 11:06	071309S2-4
CCV05										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Antimony	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Calcium	4900	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2506

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Iron	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Lead	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 – 120.0	AV	13-JUL-09 11:29	071309S2-4
CCV06										
	Aluminum	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Antimony	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Silver	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2506

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Zinc	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Mercury	5.13	ug/L	5	ug/L	102.6	80.0 - 120.0	AV	13-JUL-09 11:53	071309S2-4
CCV07										
	Aluminum	4870	ug/L	5000	ug/L	97.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Antimony	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.6	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.7	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Lead	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Manganese	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Potassium	5110	ug/L	5000	ug/L	102.1	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Mercury	5.01	ug/L	5	ug/L	100.2	80.0 - 120.0	AV	13-JUL-09 12:17	071309S2-4
CCV08										
	Mercury	5.15	ug/L	5	ug/L	103	80.0 - 120.0	AV	13-JUL-09 12:41	071309S2-4

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 09–2506

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.146	ug/L	.2	ug/L	72.8	70.0 – 130.0	AV	13–JUL–09 09:52	071309S2–4
	Arsenic	4.48	ug/L	5	ug/L	89.5	70.0 – 130.0	MS	14–JUL–09 15:12	090713–2
	Beryllium	.487	ug/L	.5	ug/L	97.4	70.0 – 130.0	MS	14–JUL–09 15:12	090713–2
	Nickel	2.02	ug/L	2	ug/L	100.9	70.0 – 130.0	MS	14–JUL–09 15:12	090713–2
	Thallium	1.05	ug/L	1	ug/L	104.6	70.0 – 130.0	MS	14–JUL–09 15:12	090713–2
	Selenium	5.04	ug/L	5	ug/L	100.8	70.0 – 130.0	MS	14–JUL–09 22:44	090714–3
PQL01										
	Antimony	11.1	ug/L	10	ug/L	111.2	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Barium	5.03	ug/L	5	ug/L	100.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Cadmium	4.87	ug/L	5	ug/L	97.4	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Aluminum	200	ug/L	200	ug/L	99.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Calcium	198	ug/L	200	ug/L	99	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Chromium	4.84	ug/L	5	ug/L	96.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Cobalt	5	ug/L	5	ug/L	100	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Copper	9.77	ug/L	10	ug/L	97.7	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Iron	102	ug/L	100	ug/L	102.1	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Lead	11.3	ug/L	10	ug/L	113.1	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Magnesium	326	ug/L	300	ug/L	108.5	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Manganese	10.4	ug/L	10	ug/L	104.4	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Potassium	172	ug/L	150	ug/L	114.5	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Silver	5.23	ug/L	5	ug/L	104.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Sodium	281	ug/L	300	ug/L	93.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Vanadium	5.27	ug/L	5	ug/L	105.3	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Zinc	9.6	ug/L	10	ug/L	96	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2506

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 10:08	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 10:08	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Mercury	–0.121	+/–.2	J	0.068	0.2	SOL	AV	13–JUL–09 09:50	071309S2–4
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	14–JUL–09 15:06	090713–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	14–JUL–09 15:06	090713–2
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	14–JUL–09 15:06	090713–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	14–JUL–09 15:06	090713–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	14–JUL–09 22:40	090714–3
CCB01										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 11:10	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 11:10	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 11:10	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 11:10	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 11:10	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 11:10	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 11:10	070809A–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2506

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:10	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Potassium	146.16	+/-250	J	64.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 09:56	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 15:35	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 15:35	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 15:35	090713-2
	Thallium	0.351	+/-1	J	0.3	1.0	SOL	MS	14-JUL-09 15:35	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 23:00	090714-3
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 11:31	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:31	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2506

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:20	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 16:28	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 16:28	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 16:28	090713-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 16:28	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 23:36	090714-3
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 12:44	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 12:44	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Potassium	65.21	+/-250	J	64.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:44	071309S2-4
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 17:10	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 17:10	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 17:10	090713-2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2506

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 17:10	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	15-JUL-09 00:04	090714-3
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 13:37	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 13:37	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:08	071309S2-4
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 13:57	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:57	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:57	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2506

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 13:57	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	13–JUL–09 11:31	071309S2–4
CCB06										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 14:53	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 14:53	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 14:53	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 14:53	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 14:53	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 14:53	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 14:53	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 14:53	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 14:53	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 14:53	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 14:53	070809A–1
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	13–JUL–09 11:55	071309S2–4
CCB07										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 15:48	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 15:48	070809A–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2506

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 15:48	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Mercury	-0.114	+/-.2	J	0.068	0.2	SOL	AV	13-JUL-09 12:19	071309S2-4
CCB08	Mercury	-0.127	+/-.2	J	0.068	0.2	SOL	AV	13-JUL-09 12:43	071309S2-4

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 09-2506

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201872852								
	Arsenic	193	ug/kg	+/-965.251	U	MS	193	965
	Beryllium	19.3	ug/kg	+/-96.525	U	MS	19.3	96.5
	Selenium	483	ug/kg	+/-965.251	U	MS	483	965
	Nickel	96.5	ug/kg	+/-386.1	U	MS	96.5	386
	Thallium	66.4	ug/kg	+/-193.05	J	MS	57.9	193
1201872897								
	Iron	7770	ug/Kg	+/-24271.845	U	P	7770	24300
	Lead	243	ug/Kg	+/-970.874	U	P	243	971
	Magnesium	8410	ug/Kg	+/-29126.214	J	P	8250	29100
	Aluminum	6600	ug/Kg	+/-19417.476	U	P	6600	19400
	Copper	291	ug/Kg	+/-970.874	U	P	291	971
	Cobalt	146	ug/Kg	+/-485.437	U	P	146	485
	Chromium	146	ug/Kg	+/-485.437	U	P	146	485
	Calcium	7770	ug/Kg	+/-24271.845	U	P	7770	24300
	Cadmium	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Barium	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Antimony	320	ug/Kg	+/-970.874	U	P	320	971
	Manganese	194	ug/Kg	+/-970.874	U	P	194	971
	Potassium	6210	ug/Kg	+/-24271.845	U	P	6210	24300
	Silver	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Sodium	6800	ug/Kg	+/-24271.845	U	P	6800	24300
	Vanadium	97.1	ug/Kg	+/-485.437	U	P	97.1	485
	Zinc	320	ug/Kg	+/-970.874	U	P	320	971
1201873038								
	Mercury	-7.18	ug/kg	+/-11.516	J	AV	3.92	11.5

METALS
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Interference Check Sample

SDG No: 09-2506

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Antimony	0.994	ug/L					08-JUL-09 10:22	070809A-1
	Barium	1.28	ug/L					08-JUL-09 10:22	070809A-1
	Cadmium	-1.01	ug/L					08-JUL-09 10:22	070809A-1
	Calcium	470000	ug/L	500000	ug/L	93.9	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Chromium	0.679	ug/L					08-JUL-09 10:22	070809A-1
	Cobalt	-1.77	ug/L					08-JUL-09 10:22	070809A-1
	Copper	4.61	ug/L					08-JUL-09 10:22	070809A-1
	Iron	185000	ug/L	200000	ug/L	92.3	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Lead	-1.9	ug/L					08-JUL-09 10:22	070809A-1
	Magnesium	493000	ug/L	500000	ug/L	98.6	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Manganese	11.9	ug/L					08-JUL-09 10:22	070809A-1
	Potassium	0.032	ug/L					08-JUL-09 10:22	070809A-1
	Silver	1.27	ug/L					08-JUL-09 10:22	070809A-1
	Sodium	-23.6	ug/L					08-JUL-09 10:22	070809A-1
	Vanadium	-2.21	ug/L					08-JUL-09 10:22	070809A-1
	Zinc	-8.84	ug/L					08-JUL-09 10:22	070809A-1
ICSAB01									
	Aluminum	513000	ug/L	500000	ug/L	103	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Antimony	568	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Barium	500	ug/L	500	ug/L	100	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cadmium	462	ug/L	500	ug/L	92.4	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Calcium	471000	ug/L	500000	ug/L	94.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Chromium	483	ug/L	500	ug/L	96.5	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cobalt	456	ug/L	500	ug/L	91.3	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Copper	571	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Iron	184000	ug/L	200000	ug/L	91.9	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Lead	475	ug/L	500	ug/L	95	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Magnesium	494000	ug/L	500000	ug/L	98.8	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
-4-
Interference Check Sample

SDG No: 09-2506

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	494	ug/L	500	ug/L	98.7	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Potassium	5890	ug/L	5000	ug/L	118	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Silver	284	ug/L	250	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Sodium	5600	ug/L	5000	ug/L	112	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Vanadium	523	ug/L	500	ug/L	105	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
–4–
Interference Check Sample

SDG No: 09–2506

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	1.39	ug/L					14–JUL–09 15:18	090713–2
	Beryllium	0.062	ug/L					14–JUL–09 15:18	090713–2
	Nickel	4.36	ug/L					14–JUL–09 15:18	090713–2
	Thallium	0.026	ug/L					14–JUL–09 15:18	090713–2
ICSAB01									
	Arsenic	23.1	ug/L	20	ug/L	115	80.0 – 120.0	14–JUL–09 15:24	090713–2
	Beryllium	20.7	ug/L	20	ug/L	103	80.0 – 120.0	14–JUL–09 15:24	090713–2
	Nickel	23.3	ug/L	22.1	ug/L	105	80.0 – 120.0	14–JUL–09 15:24	090713–2
	Thallium	18.0	ug/L	20	ug/L	89.8	80.0 – 120.0	14–JUL–09 15:24	090713–2

METALS
-4-
Interference Check Sample

SDG No: 09-2506

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Selenium	-1.09	ug/L					14-JUL-09 22:48	090714-3
ICSAB01									
	Selenium	20.8	ug/L	20	ug/L	104	80.0 - 120.0	14-JUL-09 22:52	090714-3

METALS
–5a–
Matrix Spike Summary

SDG NO. 09–2506 **Client ID** CAMO–09–9946S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872855

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Nickel	ug/kg	75–125	10200		3610		5910	112		MS
Selenium	ug/kg	75–125	2170		612	U	2360	84.5		MS
Thallium	ug/kg	75–125	11100		138	J	11800	92.7		MS
Arsenic	ug/kg	75–125	11700		2020		9450	102		MS
Beryllium	ug/kg	75–125	6890		746		5910	104		MS

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2506 **Client ID** CAMO-09-9946SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872859

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	12100		2020		9430	107		MS
Beryllium	ug/kg	75-125	7040		746		5890	107		MS
Nickel	ug/kg	75-125	10200		3610		5890	111		MS
Selenium	ug/kg	75-125	2230		612	U	2360	87.3		MS
Thallium	ug/kg	75-125	11400		138	J	11800	95.4		MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2506 **Client ID** CAMO-09-9946S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872900

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		8360000		4550000		610000	623	N/A	P
Antimony	ug/Kg	75-125	57700		389	U	61000	94.5		P
Barium	ug/Kg	75-125	128000		96100		61000	52.1	N	P
Cadmium	ug/Kg	75-125	58300		118	U	61000	95.4		P
Calcium	ug/Kg	75-125	1510000		993000		610000	85.2		P
Chromium	ug/Kg	75-125	72000		15900		61000	91.9		P
Cobalt	ug/Kg	75-125	59300		6950		61000	85.7		P
Copper	ug/Kg	75-125	77500		12700		61000	106		P
Iron	ug/Kg		11200000		16800000		610000	-912	N/A	P
Lead	ug/Kg	75-125	66900		8690		61000	95.4		P
Magnesium	ug/Kg	75-125	1580000		747000		610000	137	N	P
Manganese	ug/Kg		391000		790000		61000	-653	N/A	P
Potassium	ug/Kg	75-125	1500000		703000		610000	131	N	P
Silver	ug/Kg	75-125	60700		527	J	61000	98.6		P
Sodium	ug/Kg	75-125	692000		95500		610000	97.8		P
Vanadium	ug/Kg	75-125	70700		12200		61000	95.8		P
Zinc	ug/Kg	75-125	123000		57500		61000	107		P

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2506 **Client ID** CAMO-09-9946SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201872902

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		7780000		4550000		589000	548	N/A	P
Antimony	ug/Kg	75-125	55900		389	U	58900	94.7		P
Barium	ug/Kg	75-125	120000		96100		58900	40.7	N	P
Cadmium	ug/Kg	75-125	56200		118	U	58900	95.3		P
Calcium	ug/Kg	75-125	1400000		993000		589000	69.5	N	P
Chromium	ug/Kg	75-125	67800		15900		58900	88.1		P
Cobalt	ug/Kg	75-125	57200		6950		58900	85.3		P
Copper	ug/Kg	75-125	77300		12700		58900	110		P
Iron	ug/Kg		10700000		16800000		589000	-1020	N/A	P
Lead	ug/Kg	75-125	64700		8690		58900	94.9		P
Magnesium	ug/Kg	75-125	1450000		747000		589000	119		P
Manganese	ug/Kg		373000		790000		58900	-707	N/A	P
Potassium	ug/Kg	75-125	1400000		703000		589000	118		P
Silver	ug/Kg	75-125	58500		527	J	58900	98.4		P
Sodium	ug/Kg	75-125	651000		95500		589000	94.3		P
Vanadium	ug/Kg	75-125	67900		12200		58900	94.4		P
Zinc	ug/Kg	75-125	109000		57500		58900	87.6		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2506 **Client ID** CAMO-09-9946S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201873041

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	157		7.77	J	143	104		AV

METALS
–5a–
Matrix Spike Duplicate Summary

SDG NO. 09–2506 **Client ID** CAMO–09–9946SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 81

Sample ID: 232591001 **Spike ID:** 1201873043

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75–125	166		7.77	J	145	110		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2506

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–9946D

Sample ID: 232591001 **Duplicate ID:** 1201872854 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/–1200	2020		2160		6.93		MS
Beryllium	ug/kg	+/–20%	746		726		2.76		MS
Nickel	ug/kg	+/–20%	3610		3730		3.51		MS
Selenium	ug/kg		612	U	602	U			MS
Thallium	ug/kg	+/–241	138	J	129	J	7.02		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2506

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–9946SD

Sample ID: 1201872855 **Duplicate ID:** 1201872859 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/–20	11700		12100		3.38		MS
Beryllium	ug/kg	+/–20	6890		7040		2.1		MS
Nickel	ug/kg	+/–20	10200		10200		.328		MS
Selenium	ug/kg	+/–20	2170		2230		2.87		MS
Thallium	ug/kg	+/–20	11100		11400		2.68		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2506

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946D

Sample ID: 232591001 **Duplicate ID:** 1201872899 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	4550000		3490000		26.3	*	P
Antimony	ug/Kg		389	U	406	U			P
Barium	ug/Kg	+/-20%	96100		56700		51.6	*	P
Cadmium	ug/Kg		118	U	123	U			P
Calcium	ug/Kg	+/-20%	993000		778000		24.3	*	P
Chromium	ug/Kg	+/-20%	15900		18200		13.3		P
Cobalt	ug/Kg	+/-20%	6950		2290		101	*	P
Copper	ug/Kg	+/-20%	12700		15100		17.4		P
Iron	ug/Kg	+/-20%	16800000		9760000		52.8	*	P
Lead	ug/Kg	+/-20%	8690		7750		11.5		P
Magnesium	ug/Kg	+/-20%	747000		579000		25.4	*	P
Manganese	ug/Kg	+/-20%	790000		334000		81.1	*	P
Potassium	ug/Kg	+/-20%	703000		568000		21.3	*	P
Silver	ug/Kg	+/-615	527	J	321	J	48.7		P
Sodium	ug/Kg	+/-30800	95500		87400		8.9		P
Vanadium	ug/Kg	+/-20%	12200		10700		13.2		P
Zinc	ug/Kg	+/-20%	57500		54100		6.05		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2506

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946SD

Sample ID: 1201872900 **Duplicate ID:** 1201872902 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	8360000		7780000		7.11		P
Antimony	ug/Kg	+/-20	57700		55900		3.26		P
Barium	ug/Kg	+/-20	128000		120000		6.32		P
Cadmium	ug/Kg	+/-20	58300		56200		3.65		P
Calcium	ug/Kg	+/-20	1510000		1400000		7.59		P
Chromium	ug/Kg	+/-20	72000		67800		5.97		P
Cobalt	ug/Kg	+/-20	59300		57200		3.55		P
Copper	ug/Kg	+/-20	77500		77300		.22		P
Iron	ug/Kg	+/-20	11200000		10700000		4.04		P
Lead	ug/Kg	+/-20	66900		64700		3.42		P
Magnesium	ug/Kg	+/-20	1580000		1450000		9.02		P
Manganese	ug/Kg	+/-20	391000		373000		4.73		P
Potassium	ug/Kg	+/-20	1500000		1400000		7.14		P
Silver	ug/Kg	+/-20	60700		58500		3.69		P
Sodium	ug/Kg	+/-20	692000		651000		6.06		P
Vanadium	ug/Kg	+/-20	70700		67900		4.14		P
Zinc	ug/Kg	+/-20	123000		109000		11.7		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2506

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946D

Sample ID: 232591001 **Duplicate ID:** 1201873040 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-12.5	7.77	J	12.2	J	44.3		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2506

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9946SD

Sample ID: 1201873041 **Duplicate ID:** 1201873043 **Percent Solids for Dup:** 81

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	157		166		5.58		AV

METALS
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Laboratory Control Sample Summary

SDG NO. 09-2506

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201872853								
	Arsenic	ug/kg	255000	258000		101	83-120	MS
	Beryllium	ug/kg	86400	92400		107	81.2-126.8	MS
	Nickel	ug/kg	101000	108000		107	83.3-121.4	MS
	Selenium	ug/kg	171000	185000		108	80.2-125.9	MS
	Thallium	ug/kg	203000	205000		101	78-123.2	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2506

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201872898								
	Aluminum	ug/Kg	7290000	6410000		87.9	63.5-118	P
	Antimony	ug/Kg	121000	107000		88	39.1-132.1	P
	Barium	ug/Kg	475000	461000		97.1	82-110.6	P
	Cadmium	ug/Kg	116000	113000		97.5	77.9-115.2	P
	Calcium	ug/Kg	3720000	3420000		92	77.4-111.7	P
	Chromium	ug/Kg	84000	75100		89.4	66.6-116.5	P
	Cobalt	ug/Kg	83000	80200		96.6	79-113.9	P
	Copper	ug/Kg	105000	103000		97.7	77.6-112	P
	Iron	ug/Kg	20000000	18200000		91.2	51.5-145.5	P
	Lead	ug/Kg	161000	164000		102	83.1-114.7	P
	Magnesium	ug/Kg	2980000	2860000		95.9	81-114.3	P
	Manganese	ug/Kg	398000	365000		91.8	76.6-106.6	P
	Potassium	ug/Kg	2390000	2270000		95.2	72.2-111.1	P
	Silver	ug/Kg	133000	131000		98.6	81.7-115.7	P
	Sodium	ug/Kg	614000	573000		93.2	71.5-109.3	P
	Vanadium	ug/Kg	166000	147000		88.9	65-118.6	P
	Zinc	ug/Kg	195000	198000		101	82.8-111.9	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2506

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873039								
	Mercury	ug/kg	5150	5110		99.2	71.6-128.3	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2506 **Client ID** CAMO-09-9946L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232591001 **Serial Dilution ID:** 1201872856

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	8.25		5.1	J	38.2			MS
Beryllium	3.05		2.75		9.84			MS
Nickel	14.7		15.4		4.76			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.566	J	1.5	U	100			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2506 **Client ID** CAMO-09-9946L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232591001 **Serial Dilution ID:** 1201872901

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	38600		38400		.648		10	P
Antimony	3.3	U	16.5	U				P
Barium	816		835		2.33		10	P
Cadmium	1	U	5	U				P
Calcium	8430		8750		3.8		10	P
Chromium	135		139		2.59		10	P
Cobalt	59		61		3.39			P
Copper	108		104		4.17			P
Iron	142000		154000		8.1		10	P
Lead	73.7		78		5.83			P
Magnesium	6340		6650		4.89		10	P
Manganese	6700		7050		5.22		10	P
Potassium	5970		6050		1.34		10	P
Silver	4.47	J	6.35	J	42.1			P
Sodium	810		735	J	9.26			P
Vanadium	104		105		.481		10	P
Zinc	488		495		1.33		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2506 **Client ID** CAMO-09-9946L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232591001 **Serial Dilution ID:** 1201873042

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.116	J	.34	U	100			AV

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2506 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881858						
1201872897	MB for batch 881858	MB	S	06-JUL-09	.515g	50mL	
1201872898	LCS for batch 881858	LCS	S	06-JUL-09	.514g	50mL	
1201872900	CAMO-09-9946S	MS	S	06-JUL-09	.504g	50mL	
1201872902	CAMO-09-9946SD	MSD	S	06-JUL-09	.522g	50mL	
1201872899	CAMO-09-9946D	DUP	S	06-JUL-09	.5g	50mL	
232585001	CAMO-09-6605	SAMPLE	S	06-JUL-09	.502g	50mL	
232585002	CAMO-09-6603	SAMPLE	S	06-JUL-09	.506g	50mL	
232585003	CAMO-09-6604	SAMPLE	S	06-JUL-09	.513g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2506 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881836						
1201872852	MB for batch 881836	MB	S	06-JUL-09	.518g	50mL	
1201872853	LCS for batch 881836	LCS	S	06-JUL-09	.518g	50mL	
1201872855	CAMO-09-9946S	MS	S	06-JUL-09	.521g	50mL	
1201872859	CAMO-09-9946SD	MSD	S	06-JUL-09	.522g	50mL	
1201872854	CAMO-09-9946D	DUP	S	06-JUL-09	.511g	50mL	
232585001	CAMO-09-6605	SAMPLE	S	06-JUL-09	.524g	50mL	
232585002	CAMO-09-6603	SAMPLE	S	06-JUL-09	.516g	50mL	
232585003	CAMO-09-6604	SAMPLE	S	06-JUL-09	.525g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2506 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881915						
1201873038	MB for batch 881915	MB	S	10-JUL-09	.521g	30mL	
1201873039	LCS for batch 881915	LCS	S	10-JUL-09	.204g	30mL	
1201873041	CAMO-09-9946S	MS	S	10-JUL-09	.515g	30mL	
1201873043	CAMO-09-9946SD	MSD	S	10-JUL-09	.51g	30mL	
1201873040	CAMO-09-9946D	DUP	S	10-JUL-09	.593g	30mL	
232585001	CAMO-09-6605	SAMPLE	S	10-JUL-09	.53g	30mL	
232585002	CAMO-09-6603	SAMPLE	S	10-JUL-09	.578g	30mL	
232585003	CAMO-09-6604	SAMPLE	S	10-JUL-09	.572g	30mL	

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 14-JUL-09 **End Date:** 14-JUL-09

Client Sdg: 09-2506
Method MS
Data File: 090713-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	14:42			X		X											X					X		
S10	1	14:48			X		X											X					X		
S100	1	14:54			X		X											X					X		
ICV01	1	15:00			X		X											X					X		
ICB01	1	15:06			X		X											X					X		
CRDL01	1	15:12			X		X											X					X		
ICSA01	1	15:18			X		X											X					X		
ICSAB01	1	15:24			X		X											X					X		
CCV01	1	15:29			X		X											X					X		
CCB01	1	15:35			X		X											X					X		
1201872852	2	15:41			X		X											X					X		
1201872853	40	15:47			X		X											X					X		
ZZZZZZ	2	15:53																							
ZZZZZZ	2	15:59																							
232585001	2	16:05			X		X											X					X		
232585002	2	16:11			X		X											X					X		
232585003	2	16:17			X		X											X					X		
CCV02	1	16:22			X		X											X					X		
CCB02	1	16:28			X		X											X					X		
ZZZZZZ	2	16:34																							
1201872854	2	16:40			X		X											X					X		
1201872855	2	16:46			X		X											X					X		
1201872859	2	16:52			X		X											X					X		
1201872856	10	16:58			X		X											X					X		
CCV03	1	17:04			X		X											X					X		
CCB03	1	17:10			X		X											X					X		

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 14-JUL-09 **End Date:** 15-JUL-09

Client Sdg: 09-2506
Method MS
Data File: 090714-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	22:24																		X					
S10	1	22:28																		X					
S100	1	22:32																		X					
ICV01	1	22:36																		X					
ICB01	1	22:40																		X					
CRDL01	1	22:44																		X					
ICSA01	1	22:48																		X					
ICSAB01	1	22:52																		X					
CCV01	1	22:56																		X					
CCB01	1	23:00																		X					
1201872852	2	23:04																		X					
1201872853	40	23:08																		X					
ZZZZZZ	2	23:12																							
ZZZZZZ	2	23:16																							
232585001	2	23:20																		X					
232585002	2	23:24																		X					
232585003	2	23:28																		X					
CCV02	1	23:32																		X					
CCB02	1	23:36																		X					
ZZZZZZ	2	23:40																							
1201872854	2	23:44																		X					
1201872855	2	23:48																		X					
1201872859	2	23:52																		X					
1201872856	10	23:56																		X					
CCV03	1	00:00																		X					
CCB03	1	00:04																		X					

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 08-JUL-09 **End Date:** 08-JUL-09

Client Sdg: 09-2506
Method P
Data File: 070809A-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	09:35		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	09:41	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	09:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	09:55	X						X				X		X							X			
ICV01	1	10:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	10:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	10:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	10:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	10:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	10:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	10:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	10:47																							
ZZZZZZ	1	10:54																							
CCV01	1	11:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	11:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR03	1	11:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV02	1	11:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	11:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	11:42																							
ZZZZZZ	2	11:49																							
ZZZZZZ	1	11:56																							
ZZZZZZ	1	12:03																							
ZZZZZZ	1	12:10																							
ZZZZZZ	1	12:17																							
ZZZZZZ	5	12:23																							
ZZZZZZ	1	12:30																							
CCV03	1	12:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	12:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	5	12:49																							
ZZZZZZ	5	12:56																							
ZZZZZZ	5	13:03																							
ZZZZZZ	5	13:10																							
ZZZZZZ	25	13:16																							
ZZZZZZ	5	13:23																							
CCV04	1	13:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	13:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV05	1	13:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	13:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872897	1	14:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
1201872898	2	14:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	14:18																							
ZZZZZZ	1	14:25																							
232585001	1	14:32	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232585002	1	14:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV06	1	14:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	14:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232585003	1	15:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	15:07																							
1201872899	1	15:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872900	1	15:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872902	1	15:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201872901	5	15:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV07	1	15:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	15:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 13–JUL–09 **End Date:** 13–JUL–09

Client Sdg: 09–2506
Method AV
Data File: 071309S2–4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:36															X								
S0.2	1	09:38															X								
S0.5	1	09:40															X								
S2.0	1	09:42															X								
S5.0	1	09:44															X								
S10	1	09:46															X								
ICV01	1	09:48															X								
ICB01	1	09:50															X								
CRDL01	1	09:52															X								
CCV01	1	09:54															X								
CCB01	1	09:56															X								
ZZZZZZ	1	09:58																							
ZZZZZZ	10	10:00																							
ZZZZZZ	1	10:02																							
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
ZZZZZZ	1	10:08																							
ZZZZZZ	1	10:10																							
ZZZZZZ	1	10:12																							
ZZZZZZ	1	10:14																							
ZZZZZZ	5	10:16																							
CCV02	1	10:18															X								
CCB02	1	10:20															X								
ZZZZZZ	1	10:22																							
ZZZZZZ	1	10:24																							
ZZZZZZ	1	10:26																							
ZZZZZZ	1	10:28																							
ZZZZZZ	1	10:30																							
ZZZZZZ	1	10:32																							
ZZZZZZ	1	10:34																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:38																							
ZZZZZZ	1	10:40																							
CCV03	1	10:42															X								
CCB03	1	10:44															X								
ZZZZZZ	1	10:46																							
ZZZZZZ	1	10:48																							
ZZZZZZ	1	10:50																							
ZZZZZZ	1	10:52																							
ZZZZZZ	1	10:54																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	10	10:56																							
ZZZZZZ	1	10:58																							
ZZZZZZ	1	11:00																							
ZZZZZZ	1	11:02																							
ZZZZZZ	1	11:04																							
CCV04	1	11:06														X									
CCB04	1	11:08														X									
ZZZZZZ	1	11:10																							
ZZZZZZ	1	11:12																							
ZZZZZZ	1	11:14																							
ZZZZZZ	1	11:16																							
ZZZZZZ	1	11:18																							
ZZZZZZ	1	11:20																							
ZZZZZZ	1	11:22																							
ZZZZZZ	1	11:24																							
ZZZZZZ	1	11:26																							
ZZZZZZ	1	11:27																							
CCV05	1	11:29														X									
CCB05	1	11:31														X									
ZZZZZZ	1	11:33																							
ZZZZZZ	1	11:35																							
ZZZZZZ	1	11:37																							
ZZZZZZ	1	11:39																							
ZZZZZZ	5	11:41																							
ZZZZZZ	1	11:43																							
ZZZZZZ	1	11:45																							
ZZZZZZ	1	11:47																							
ZZZZZZ	1	11:49																							
ZZZZZZ	1	11:51																							
CCV06	1	11:53														X									
CCB06	1	11:55														X									
1201873038	1	11:57														X									
1201873039	10	11:59														X									
ZZZZZZ	1	12:01																							
ZZZZZZ	1	12:03																							
232585001	1	12:05														X									
232585002	1	12:07														X									
232585003	1	12:09														X									
ZZZZZZ	1	12:11																							
1201873040	1	12:13														X									

Metals
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Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
1201873041	1	12:15															X								
CCV07	1	12:17															X								
CCB07	1	12:19															X								
1201873043	1	12:21															X								
1201873042	5	12:23															X								
ZZZZZZ	1	12:25																							
ZZZZZZ	1	12:27																							
ZZZZZZ	1	12:29																							
ZZZZZZ	1	12:31																							
ZZZZZZ	1	12:33																							
ZZZZZZ	1	12:35																							
ZZZZZZ	5	12:37																							
ZZZZZZ	1	12:39																							
CCV08	1	12:41															X								
CCB08	1	12:43															X								

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2506

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2506

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2506

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2506
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2506
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2506
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2506
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2506
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 09-2506
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-MAY-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2506

Contract: LANL01004 **Lab Code:** GEL

Instrument ID ICPMS6

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2506

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

Raw Data

Reprocessing Begun
Logged In Analyst: Optima3 Technique: ICP Continuous

Results Data Set (original): 070809
Results Library (original): C:\pe\Optima3\Results\Results.mdb
Results Data Set (reprocessed): 070809A
Results Library (reprocessed): C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX Method Last Saved: 7/8/2009 11:38:58
IEC File: 070309.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 8
Sample ID: S0 Date Collected: 7/8/2009 09:28:56
Analyst: Data Type: Reprocessed on 7/8/2009 11:40:03
Logged In Analyst (Original) : Optima3
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1059810.6	1059810.6	99.899	%	09:32:05
1	Sc Radial	5668.6	5668.6	102	%	09:30:49
1	Y 371.029	851543.7	851543.7	99.804	%	09:32:05
1	Y RADIAL	4889.8	4889.8	101.5	%	09:30:49
1	Ag 328.068†	593.9	594.5	[0.00]	ug/L	09:32:10

1	Al 396.153Radial†	-88.0	-86.4	[0.00]	ug/L	09:30:49
1	As 188.979†	-33.0	-33.0	[0.00]	ug/L	09:32:31
1	B 249.677†	-395.5	-395.9	[0.00]	ug/L	09:32:31
1	Ba 233.527†	22.7	22.7	[0.00]	ug/L	09:32:31
1	Be 313.107†	-7253.6	-7260.9	[0.00]	ug/L	09:32:10
1	Ca 317.933Radial†	19.9	19.6	[0.00]	ug/L	09:31:09
1	Cd 226.502†	-262.6	-262.9	[0.00]	ug/L	09:32:31
1	Co 228.616†	-86.2	-86.3	[0.00]	ug/L	09:32:31
1	Cr 267.716†	-35.2	-35.2	[0.00]	ug/L	09:32:31
1	Cu 324.752†	10171.2	10181.5	[0.00]	ug/L	09:32:10
1	Fe 238.204 Radial†	0.0	0.0	[0.00]	ug/L	09:31:09
1	K 766.490 Radial†	1428.1	1402.0	[0.00]	ug/L	09:30:49
1	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:09
1	Mn 257.610†	823.1	823.9	[0.00]	ug/L	09:32:31
1	Mo 202.031†	40.3	40.4	[0.00]	ug/L	09:32:31
1	Na 589.592 Radial†	-169.9	-166.8	[0.00]	ug/L	09:31:09
1	Ni 231.604†	160.5	160.7	[0.00]	ug/L	09:32:31
1	P 214.914†	340.8	341.2	[0.00]	ug/L	09:32:31
1	Pb 220.353†	-23.8	-23.8	[0.00]	ug/L	09:32:31
1	S 181.975 Axial†	74.8	74.8	[0.00]	ug/L	09:32:31
1	Sb 206.836†	39.3	39.4	[0.00]	ug/L	09:32:31
1	Se 196.026†	-21.9	-21.9	[0.00]	ug/L	09:32:31
1	Si 251.611†	569.0	569.6	[0.00]	ug/L	09:32:31
1	Sn 189.927†	4.8	4.8	[0.00]	ug/L	09:32:31
1	Sr 421.552†	-1.3	-1.3	[0.00]	ug/L	09:31:09
1	Ti 334.940†	-1079.9	-1081.0	[0.00]	ug/L	09:32:10
1	Tl 190.801†	-58.7	-58.8	[0.00]	ug/L	09:32:31
1	U 409.014†	-3815.0	-3818.9	[0.00]	ug/L	09:32:05
1	V 292.402†	-1684.3	-1686.1	[0.00]	ug/L	09:32:10
1	Zn 213.857†	1110.4	1111.5	[0.00]	ug/L	09:32:31
1	SiO2†	589.5	590.1	[0.00]	ug/L	09:33:36
2	Sc 361.383	1062041.1	1062041.1	100.11	%	09:32:36
2	Sc Radial	5550.5	5550.5	99.7	%	09:31:14
2	Y 371.029	854666.6	854666.6	100.17	%	09:32:36
2	Y RADIAL	4806.6	4806.6	99.81	%	09:31:14
2	Ag 328.068†	684.5	683.8	[0.00]	ug/L	09:32:41
2	Al 396.153Radial†	-103.1	-103.4	[0.00]	ug/L	09:31:14
2	As 188.979†	-37.3	-37.3	[0.00]	ug/L	09:33:01
2	B 249.677†	-376.8	-376.4	[0.00]	ug/L	09:33:01
2	Ba 233.527†	27.0	27.0	[0.00]	ug/L	09:33:01
2	Be 313.107†	-7342.2	-7334.2	[0.00]	ug/L	09:32:41
2	Ca 317.933Radial†	15.3	15.3	[0.00]	ug/L	09:31:34
2	Cd 226.502†	-297.3	-297.0	[0.00]	ug/L	09:33:01
2	Co 228.616†	-91.0	-90.9	[0.00]	ug/L	09:33:01
2	Cr 267.716†	-33.4	-33.4	[0.00]	ug/L	09:33:01
2	Cu 324.752†	10260.8	10249.6	[0.00]	ug/L	09:32:41
2	Fe 238.204 Radial†	0.2	0.2	[0.00]	ug/L	09:31:34
2	K 766.490 Radial†	1490.1	1493.9	[0.00]	ug/L	09:31:14
2	Mg 279.077 IEC†	-0.2	-0.2	[0.00]	ug/L	09:31:34
2	Mn 257.610†	833.3	832.3	[0.00]	ug/L	09:33:01
2	Mo 202.031†	24.6	24.6	[0.00]	ug/L	09:33:01
2	Na 589.592 Radial†	-169.2	-169.6	[0.00]	ug/L	09:31:34
2	Ni 231.604†	145.4	145.2	[0.00]	ug/L	09:33:01
2	P 214.914†	336.1	335.8	[0.00]	ug/L	09:33:01
2	Pb 220.353†	-39.7	-39.7	[0.00]	ug/L	09:33:01
2	S 181.975 Axial†	63.8	63.7	[0.00]	ug/L	09:33:01
2	Sb 206.836†	49.0	48.9	[0.00]	ug/L	09:33:01
2	Se 196.026†	-25.3	-25.3	[0.00]	ug/L	09:33:01
2	Si 251.611†	569.7	569.1	[0.00]	ug/L	09:33:01
2	Sn 189.927†	5.1	5.0	[0.00]	ug/L	09:33:01
2	Sr 421.552†	11.5	11.5	[0.00]	ug/L	09:31:34
2	Ti 334.940†	-1116.4	-1115.1	[0.00]	ug/L	09:32:41
2	Tl 190.801†	-57.5	-57.4	[0.00]	ug/L	09:33:01
2	U 409.014†	-3873.4	-3869.2	[0.00]	ug/L	09:32:36
2	V 292.402†	-1699.0	-1697.1	[0.00]	ug/L	09:32:41
2	Zn 213.857†	1115.6	1114.3	[0.00]	ug/L	09:33:01
2	SiO2†	600.0	599.4	[0.00]	ug/L	09:33:42
3	Sc 361.383	1060796.0	1060796.0	99.992	%	09:33:06
3	Sc Radial	5475.5	5475.5	98.4	%	09:31:39
3	Y 371.029	853433.0	853433.0	100.03	%	09:33:06
3	Y RADIAL	4750.8	4750.8	98.65	%	09:31:39

3	Ag 328.068†	637.4	637.5	[0.00]	ug/L	09:33:11
3	Al 396.153Radial†	-85.4	-86.8	[0.00]	ug/L	09:31:39
3	As 188.979†	-40.4	-40.4	[0.00]	ug/L	09:33:31
3	B 249.677†	-372.3	-372.3	[0.00]	ug/L	09:33:31
3	Ba 233.527†	23.1	23.1	[0.00]	ug/L	09:33:31
3	Be 313.107†	-7353.0	-7353.6	[0.00]	ug/L	09:33:11
3	Ca 317.933Radial†	15.7	15.9	[0.00]	ug/L	09:31:59
3	Cd 226.502†	-273.1	-273.1	[0.00]	ug/L	09:33:31
3	Co 228.616†	-94.1	-94.1	[0.00]	ug/L	09:33:31
3	Cr 267.716†	-17.2	-17.2	[0.00]	ug/L	09:33:31
3	Cu 324.752†	10141.9	10142.7	[0.00]	ug/L	09:33:11
3	Fe 238.204 Radial†	0.8	0.8	[0.00]	ug/L	09:31:59
3	K 766.490 Radial†	1498.9	1523.4	[0.00]	ug/L	09:31:39
3	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:59
3	Mn 257.610†	824.8	824.9	[0.00]	ug/L	09:33:31
3	Mo 202.031†	30.4	30.4	[0.00]	ug/L	09:33:31
3	Na 589.592 Radial†	-172.0	-174.9	[0.00]	ug/L	09:31:59
3	Ni 231.604†	138.9	138.9	[0.00]	ug/L	09:33:31
3	P 214.914†	333.9	333.9	[0.00]	ug/L	09:33:31
3	Pb 220.353†	-23.7	-23.8	[0.00]	ug/L	09:33:31
3	S 181.975 Axial†	64.9	64.9	[0.00]	ug/L	09:33:31
3	Sb 206.836†	48.0	48.0	[0.00]	ug/L	09:33:31
3	Se 196.026†	-17.7	-17.7	[0.00]	ug/L	09:33:31
3	Si 251.611†	541.6	541.6	[0.00]	ug/L	09:33:31
3	Sn 189.927†	6.6	6.6	[0.00]	ug/L	09:33:31
3	Sr 421.552†	6.1	6.2	[0.00]	ug/L	09:31:59
3	Ti 334.940†	-1131.5	-1131.6	[0.00]	ug/L	09:33:11
3	Tl 190.801†	-67.9	-67.9	[0.00]	ug/L	09:33:31
3	U 409.014†	-3815.9	-3816.2	[0.00]	ug/L	09:33:06
3	V 292.402†	-1575.1	-1575.2	[0.00]	ug/L	09:33:11
3	Zn 213.857†	1141.3	1141.4	[0.00]	ug/L	09:33:31
3	SiO2†	617.5	617.6	[0.00]	ug/L	09:33:47

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1060882.6	1117.80	0.11%	100.00	%
Sc Radial	5564.8	97.34	1.75%	100	%
Y 371.029	853214.5	1572.88	0.18%	100.000	%
Y RADIAL	4815.7	69.94	1.45%	100.0	%
Ag 328.068†	638.6	44.64	6.99%	[0.00]	ug/L
Al 396.153Radial†	-92.2	9.68	10.50%	[0.00]	ug/L
As 188.979†	-36.9	3.70	10.03%	[0.00]	ug/L
B 249.677†	-381.5	12.62	3.31%	[0.00]	ug/L
Ba 233.527†	24.3	2.36	9.74%	[0.00]	ug/L
Be 313.107†	-7316.2	48.87	0.67%	[0.00]	ug/L
Ca 317.933Radial†	16.9	2.30	13.61%	[0.00]	ug/L
Cd 226.502†	-277.6	17.49	6.30%	[0.00]	ug/L
Co 228.616†	-90.4	3.95	4.37%	[0.00]	ug/L
Cr 267.716†	-28.6	9.91	34.66%	[0.00]	ug/L
Cu 324.752†	10191.3	54.11	0.53%	[0.00]	ug/L
Fe 238.204 Radial†	0.3	0.40	120.31%	[0.00]	ug/L
K 766.490 Radial†	1473.1	63.31	4.30%	[0.00]	ug/L
Mg 279.077 IEC†	0.2	0.34	192.62%	[0.00]	ug/L
Mn 257.610†	827.0	4.63	0.56%	[0.00]	ug/L
Mo 202.031†	31.8	8.00	25.18%	[0.00]	ug/L
Na 589.592 Radial†	-170.4	4.09	2.40%	[0.00]	ug/L
Ni 231.604†	148.3	11.22	7.57%	[0.00]	ug/L
P 214.914†	336.9	3.77	1.12%	[0.00]	ug/L
Pb 220.353†	-29.1	9.17	31.52%	[0.00]	ug/L
S 181.975 Axial†	67.8	6.10	8.99%	[0.00]	ug/L
Sb 206.836†	45.4	5.28	11.62%	[0.00]	ug/L
Se 196.026†	-21.6	3.82	17.66%	[0.00]	ug/L
Si 251.611†	560.1	16.01	2.86%	[0.00]	ug/L
Sn 189.927†	5.5	0.95	17.40%	[0.00]	ug/L
Sr 421.552†	5.5	6.43	117.38%	[0.00]	ug/L
Ti 334.940†	-1109.3	25.82	2.33%	[0.00]	ug/L
Tl 190.801†	-61.4	5.70	9.29%	[0.00]	ug/L
U 409.014†	-3834.7	29.86	0.78%	[0.00]	ug/L
V 292.402†	-1652.8	67.41	4.08%	[0.00]	ug/L

Zn 213.857†	1122.4	16.48	1.47%	[0.00] ug/L
SiO2†	602.4	13.95	2.32%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/8/2009 09:35:57
Data Type: Reprocessed on 7/8/2009 11:40:04

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1043904.5	1043904.5	98.400	%	09:38:07
1	Sc Radial	5586.9	5586.9	100	%	09:37:49
1	Y 371.029	838768.8	838768.8	98.307	%	09:38:07
1	Y RADIAL	4867.7	4867.7	101.1	%	09:37:49
1	Ag 328.068†	25884.2	25666.6	[100]	ug/L	09:38:07
1	As 188.979†	393.4	436.7	[100]	ug/L	09:38:27
1	B 249.677†	5686.4	6160.4	[100]	ug/L	09:38:07
1	Ba 233.527†	20371.1	20678.1	[100]	ug/L	09:38:07
1	Be 313.107†	314654.5	327088.3	[100]	ug/L	09:38:07
1	Cd 226.502†	13132.5	13623.8	[100]	ug/L	09:38:27
1	Co 228.616†	8083.3	8305.1	[100]	ug/L	09:38:27
1	Cr 267.716†	11753.9	11973.6	[100]	ug/L	09:38:07
1	Cu 324.752†	50132.0	40756.1	[100]	ug/L	09:38:07
1	K 766.490 Radial†	3887.5	2399.0	[1000]	ug/L	09:37:49
1	Mn 257.610†	129366.8	130643.8	[100]	ug/L	09:38:07
1	Mo 202.031†	2580.5	2590.7	[100]	ug/L	09:38:27
1	Ni 231.604†	6525.4	6483.3	[100]	ug/L	09:38:27
1	P 214.914†	1779.1	1471.1	[500]	ug/L	09:38:27
1	Pb 220.353†	1342.2	1393.1	[100]	ug/L	09:38:27
1	S 181.975 Axial†	300.2	237.3	[200]	ug/L	09:38:27
1	Sb 206.836†	547.4	510.9	[100]	ug/L	09:38:27
1	Se 196.026†	295.6	322.0	[100]	ug/L	09:38:27
1	Si 251.611†	24511.6	24350.2	[500]	ug/L	09:38:07
1	Sn 189.927†	971.4	981.7	[100]	ug/L	09:38:27
1	Sr 421.552†	6665.1	6633.3	[100]	ug/L	09:37:49
1	Ti 334.940†	74671.4	76995.2	[100]	ug/L	09:38:07
1	Tl 190.801†	543.4	613.6	[100]	ug/L	09:38:27
1	U 409.014†	237.6	4076.2	[100]	ug/L	09:38:07
1	V 292.402†	15937.1	17849.1	[100]	ug/L	09:38:07
1	Zn 213.857†	19207.8	18397.8	[100]	ug/L	09:38:07
1	SiO2†	24699.0	24498.4	[1069.5]	ug/L	09:39:24
2	Sc 361.383	1055210.6	1055210.6	99.465	%	09:38:33
2	Sc Radial	5609.2	5609.2	101	%	09:37:55
2	Y 371.029	845639.6	845639.6	99.112	%	09:38:33
2	Y RADIAL	4877.8	4877.8	101.3	%	09:37:55
2	Ag 328.068†	26093.0	25594.7	[100]	ug/L	09:38:33
2	As 188.979†	391.5	430.5	[100]	ug/L	09:38:53
2	B 249.677†	5785.4	6198.0	[100]	ug/L	09:38:33
2	Ba 233.527†	20469.8	20555.5	[100]	ug/L	09:38:33
2	Be 313.107†	317338.9	326360.9	[100]	ug/L	09:38:33
2	Cd 226.502†	13157.8	13506.1	[100]	ug/L	09:38:53
2	Co 228.616†	8095.3	8229.3	[100]	ug/L	09:38:53
2	Cr 267.716†	11903.1	11995.7	[100]	ug/L	09:38:33
2	Cu 324.752†	50854.5	40936.6	[100]	ug/L	09:38:33
2	K 766.490 Radial†	3819.2	2315.9	[1000]	ug/L	09:37:55
2	Mn 257.610†	130782.0	130658.0	[100]	ug/L	09:38:33
2	Mo 202.031†	2603.2	2585.4	[100]	ug/L	09:38:53
2	Ni 231.604†	6538.1	6425.0	[100]	ug/L	09:38:53
2	P 214.914†	1796.1	1468.9	[500]	ug/L	09:38:53
2	Pb 220.353†	1350.1	1386.4	[100]	ug/L	09:38:53
2	S 181.975 Axial†	299.5	233.3	[200]	ug/L	09:38:53
2	Sb 206.836†	557.9	515.5	[100]	ug/L	09:38:53
2	Se 196.026†	303.1	326.3	[100]	ug/L	09:38:53
2	Si 251.611†	24790.1	24363.3	[500]	ug/L	09:38:33
2	Sn 189.927†	961.1	960.8	[100]	ug/L	09:38:53
2	Sr 421.552†	6653.8	6595.7	[100]	ug/L	09:37:55
2	Ti 334.940†	75608.5	77124.2	[100]	ug/L	09:38:33
2	Tl 190.801†	543.4	607.7	[100]	ug/L	09:38:53

2	U 409.014†	413.3	4250.3	[100]	ug/L	09:38:33
2	V 292.402†	16008.2	17747.0	[100]	ug/L	09:38:33
2	Zn 213.857†	19396.4	18378.2	[100]	ug/L	09:38:33
2	SiO2†	24456.8	23985.9	[1069.5]	ug/L	09:39:29
3	Sc 361.383	1055128.5	1055128.5	99.458	%	09:38:59
3	Sc Radial	5546.9	5546.9	99.7	%	09:38:00
3	Y 371.029	846188.4	846188.4	99.177	%	09:38:59
3	Y RADIAL	4841.3	4841.3	100.5	%	09:38:00
3	Ag 328.068†	26072.8	25576.4	[100]	ug/L	09:38:59
3	As 188.979†	395.1	434.2	[100]	ug/L	09:39:19
3	B 249.677†	5816.4	6229.6	[100]	ug/L	09:38:59
3	Ba 233.527†	20495.9	20583.4	[100]	ug/L	09:38:59
3	Be 313.107†	317444.7	326492.1	[100]	ug/L	09:38:59
3	Cd 226.502†	13125.5	13474.7	[100]	ug/L	09:39:19
3	Co 228.616†	8079.1	8213.6	[100]	ug/L	09:39:19
3	Cr 267.716†	11888.0	11981.4	[100]	ug/L	09:38:59
3	Cu 324.752†	50658.9	40743.9	[100]	ug/L	09:38:59
3	K 766.490 Radial†	3845.0	2384.3	[1000]	ug/L	09:38:00
3	Mn 257.610†	131078.2	130966.0	[100]	ug/L	09:38:59
3	Mo 202.031†	2603.9	2586.4	[100]	ug/L	09:39:19
3	Ni 231.604†	6537.8	6425.2	[100]	ug/L	09:39:19
3	P 214.914†	1782.9	1455.7	[500]	ug/L	09:39:19
3	Pb 220.353†	1365.6	1402.1	[100]	ug/L	09:39:19
3	S 181.975 Axial†	309.0	242.8	[200]	ug/L	09:39:19
3	Sb 206.836†	556.1	513.7	[100]	ug/L	09:39:19
3	Se 196.026†	279.5	302.7	[100]	ug/L	09:39:19
3	Si 251.611†	24805.8	24381.0	[500]	ug/L	09:38:59
3	Sn 189.927†	963.2	962.9	[100]	ug/L	09:39:19
3	Sr 421.552†	6580.5	6596.3	[100]	ug/L	09:38:00
3	Ti 334.940†	75559.4	77080.7	[100]	ug/L	09:38:59
3	Tl 190.801†	539.9	604.2	[100]	ug/L	09:39:19
3	U 409.014†	236.8	4072.8	[100]	ug/L	09:38:59
3	V 292.402†	16050.8	17791.1	[100]	ug/L	09:38:59
3	Zn 213.857†	19356.9	18340.1	[100]	ug/L	09:38:59
3	SiO2†	24872.7	24406.0	[1069.5]	ug/L	09:39:34

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051414.5	6504.03	0.62%	99.108	%
Sc Radial	5581.0	31.57	0.57%	100	%
Y 371.029	843532.3	4134.44	0.49%	98.865	%
Y RADIAL	4862.3	18.86	0.39%	101.0	%
Ag 328.068†	25612.5	47.66	0.19%	[100]	ug/L
As 188.979†	433.8	3.14	0.72%	[100]	ug/L
B 249.677†	6196.0	34.67	0.56%	[100]	ug/L
Ba 233.527†	20605.7	64.24	0.31%	[100]	ug/L
Be 313.107†	326647.1	387.66	0.12%	[100]	ug/L
Cd 226.502†	13534.9	78.59	0.58%	[100]	ug/L
Co 228.616†	8249.3	48.95	0.59%	[100]	ug/L
Cr 267.716†	11983.6	11.20	0.09%	[100]	ug/L
Cu 324.752†	40812.2	107.89	0.26%	[100]	ug/L
K 766.490 Radial†	2366.4	44.37	1.88%	[1000]	ug/L
Mn 257.610†	130755.9	182.06	0.14%	[100]	ug/L
Mo 202.031†	2587.5	2.81	0.11%	[100]	ug/L
Ni 231.604†	6444.5	33.62	0.52%	[100]	ug/L
P 214.914†	1465.2	8.32	0.57%	[500]	ug/L
Pb 220.353†	1393.9	7.86	0.56%	[100]	ug/L
S 181.975 Axial†	237.8	4.79	2.02%	[200]	ug/L
Sb 206.836†	513.3	2.30	0.45%	[100]	ug/L
Se 196.026†	317.0	12.62	3.98%	[100]	ug/L
Si 251.611†	24364.8	15.45	0.06%	[500]	ug/L
Sn 189.927†	968.5	11.51	1.19%	[100]	ug/L
Sr 421.552†	6608.4	21.50	0.33%	[100]	ug/L
Ti 334.940†	77066.7	65.66	0.09%	[100]	ug/L
Tl 190.801†	608.5	4.73	0.78%	[100]	ug/L
U 409.014†	4133.1	101.47	2.46%	[100]	ug/L
V 292.402†	17795.7	51.23	0.29%	[100]	ug/L
Zn 213.857†	18372.0	29.33	0.16%	[100]	ug/L
SiO2†	24296.8	273.12	1.12%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/8/2009 09:41:45
Data Type: Reprocessed on 7/8/2009 11:40:06

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1064607.4	1064607.4	100.35	%	09:44:57
1	Sc Radial	5461.3	5461.3	98.1	%	09:43:38
1	Y 371.029	846628.0	846628.0	99.228	%	09:44:57
1	Y RADIAL	4696.9	4696.9	97.53	%	09:43:38
1	Ag 328.068†	126803.5	125721.3	[500]	ug/L	09:44:57
1	Al 396.153Radial†	5174.4	5364.7	[5000]	ug/L	09:43:38
1	As 188.979†	2072.9	2102.5	[500]	ug/L	09:45:17
1	B 249.677†	31257.3	31529.4	[500]	ug/L	09:44:57
1	Ba 233.527†	98225.0	97857.1	[500]	ug/L	09:44:57
1	Be 313.107†	1595363.0	1597097.3	[500]	ug/L	09:44:57
1	Ca 317.933Radial†	1956.1	1976.3	[5000]	ug/L	09:43:58
1	Cd 226.502†	66327.4	66373.0	[500]	ug/L	09:44:57
1	Co 228.616†	39082.0	39035.6	[500]	ug/L	09:45:17
1	Cr 267.716†	58209.2	58034.2	[500]	ug/L	09:44:57
1	Cu 324.752†	212770.9	201835.2	[500]	ug/L	09:44:57
1	K 766.490 Radial†	12752.1	11520.9	[5000]	ug/L	09:43:38
1	Mg 279.077 IEC†	62.9	63.9	[5000]	ug/L	09:43:58
1	Mn 257.610†	630898.9	627864.5	[500]	ug/L	09:44:57
1	Mo 202.031†	12608.3	12532.4	[500]	ug/L	09:45:17
1	Ni 231.604†	30724.5	30468.8	[500]	ug/L	09:45:17
1	P 214.914†	7382.5	7019.8	[2500]	ug/L	09:45:17
1	Pb 220.353†	6649.1	6654.9	[500]	ug/L	09:45:17
1	S 181.975 Axial†	1242.8	1170.6	[1000]	ug/L	09:45:17
1	Sb 206.836†	2606.1	2551.6	[500]	ug/L	09:45:17
1	Se 196.026†	1514.2	1530.5	[500]	ug/L	09:45:17
1	Si 251.611†	122499.0	121510.3	[2500]	ug/L	09:44:57
1	Sn 189.927†	4778.2	4756.0	[500]	ug/L	09:45:17
1	Sr 421.552†	28452.4	28986.5	[500]	ug/L	09:43:38
1	Ti 334.940†	380085.1	379864.5	[500]	ug/L	09:44:57
1	Tl 190.801†	2870.2	2921.5	[500]	ug/L	09:45:17
1	U 409.014†	15794.5	19574.0	[500]	ug/L	09:44:57
1	V 292.402†	85607.5	86960.7	[500]	ug/L	09:44:57
1	Zn 213.857†	90358.1	88919.6	[500]	ug/L	09:44:57
1	SiO2†	122852.3	121820.1	[5347.5]	ug/L	09:46:17
2	Sc 361.383	1044221.1	1044221.1	98.429	%	09:45:24
2	Sc Radial	5389.0	5389.0	96.8	%	09:44:03
2	Y 371.029	829032.4	829032.4	97.166	%	09:45:24
2	Y RADIAL	4652.3	4652.3	96.61	%	09:44:03
2	Ag 328.068†	124967.2	126322.6	[500]	ug/L	09:45:24
2	Al 396.153Radial†	5096.7	5355.2	[5000]	ug/L	09:44:03
2	As 188.979†	2073.2	2143.2	[500]	ug/L	09:45:44
2	B 249.677†	30724.1	31595.8	[500]	ug/L	09:45:24
2	Ba 233.527†	97214.1	98740.9	[500]	ug/L	09:45:24
2	Be 313.107†	1569041.1	1601392.7	[500]	ug/L	09:45:24
2	Ca 317.933Radial†	1923.3	1969.1	[5000]	ug/L	09:44:23
2	Cd 226.502†	65506.0	66828.8	[500]	ug/L	09:45:24
2	Co 228.616†	39155.7	39870.9	[500]	ug/L	09:45:44
2	Cr 267.716†	57418.9	58363.7	[500]	ug/L	09:45:24
2	Cu 324.752†	208685.4	201823.9	[500]	ug/L	09:45:24
2	K 766.490 Radial†	12541.0	11477.1	[5000]	ug/L	09:44:03
2	Mg 279.077 IEC†	61.0	62.8	[5000]	ug/L	09:44:23
2	Mn 257.610†	623183.7	632300.1	[500]	ug/L	09:45:24
2	Mo 202.031†	12645.3	12815.3	[500]	ug/L	09:45:44
2	Ni 231.604†	30816.1	31159.5	[500]	ug/L	09:45:44
2	P 214.914†	7382.7	7163.6	[2500]	ug/L	09:45:44
2	Pb 220.353†	6652.5	6787.7	[500]	ug/L	09:45:44
2	S 181.975 Axial†	1248.0	1200.1	[1000]	ug/L	09:45:44
2	Sb 206.836†	2600.7	2596.7	[500]	ug/L	09:45:44

2	Se 196.026†	1507.7	1553.3	[500]	ug/L	09:45:44
2	Si 251.611†	120777.2	122144.2	[2500]	ug/L	09:45:24
2	Sn 189.927†	4796.7	4867.8	[500]	ug/L	09:45:44
2	Sr 421.552†	27876.2	28780.3	[500]	ug/L	09:44:03
2	Ti 334.940†	374439.3	381523.0	[500]	ug/L	09:45:24
2	Tl 190.801†	2885.2	2992.7	[500]	ug/L	09:45:44
2	U 409.014†	15437.6	19518.7	[500]	ug/L	09:45:24
2	V 292.402†	84337.2	87335.7	[500]	ug/L	09:45:24
2	Zn 213.857†	89070.9	89369.7	[500]	ug/L	09:45:24
2	SiO2†	121800.6	123141.7	[5347.5]	ug/L	09:46:22
3	Sc 361.383	1046590.0	1046590.0	98.653	%	09:45:52
3	Sc Radial	5352.8	5352.8	96.2	%	09:44:28
3	Y 371.029	832934.3	832934.3	97.623	%	09:45:52
3	Y RADIAL	4634.7	4634.7	96.24	%	09:44:28
3	Ag 328.068†	125631.5	126708.6	[500]	ug/L	09:45:52
3	Al 396.153Radial†	5102.6	5396.9	[5000]	ug/L	09:44:28
3	As 188.979†	2098.8	2164.3	[500]	ug/L	09:46:12
3	B 249.677†	30976.6	31781.2	[500]	ug/L	09:45:52
3	Ba 233.527†	97581.9	98890.3	[500]	ug/L	09:45:52
3	Be 313.107†	1579797.0	1608687.5	[500]	ug/L	09:45:52
3	Ca 317.933Radial†	1928.2	1987.6	[5000]	ug/L	09:44:48
3	Cd 226.502†	65857.4	67034.4	[500]	ug/L	09:45:52
3	Co 228.616†	39345.8	39973.6	[500]	ug/L	09:46:12
3	Cr 267.716†	57872.1	58691.1	[500]	ug/L	09:45:52
3	Cu 324.752†	210164.3	202843.1	[500]	ug/L	09:45:52
3	K 766.490 Radial†	12562.3	11586.7	[5000]	ug/L	09:44:28
3	Mg 279.077 IEC†	60.6	62.8	[5000]	ug/L	09:44:48
3	Mn 257.610†	626191.1	633915.6	[500]	ug/L	09:45:52
3	Mo 202.031†	12686.5	12828.0	[500]	ug/L	09:46:12
3	Ni 231.604†	31017.8	31293.1	[500]	ug/L	09:46:12
3	P 214.914†	7417.6	7182.0	[2500]	ug/L	09:46:12
3	Pb 220.353†	6707.4	6828.1	[500]	ug/L	09:46:12
3	S 181.975 Axial†	1249.2	1198.4	[1000]	ug/L	09:46:12
3	Sb 206.836†	2624.9	2615.3	[500]	ug/L	09:46:12
3	Se 196.026†	1511.8	1554.0	[500]	ug/L	09:46:12
3	Si 251.611†	121349.2	122446.3	[2500]	ug/L	09:45:52
3	Sn 189.927†	4809.3	4869.5	[500]	ug/L	09:46:12
3	Sr 421.552†	27833.2	28930.1	[500]	ug/L	09:44:28
3	Ti 334.940†	376623.4	382875.9	[500]	ug/L	09:45:52
3	Tl 190.801†	2901.3	3002.3	[500]	ug/L	09:46:12
3	U 409.014†	15617.2	19665.2	[500]	ug/L	09:45:52
3	V 292.402†	84908.9	87721.2	[500]	ug/L	09:45:52
3	Zn 213.857†	89582.5	89683.5	[500]	ug/L	09:45:52
3	SiO2†	122195.3	123261.7	[5347.5]	ug/L	09:46:27

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051806.2	11149.30	1.06%	99.144	%
Sc Radial	5401.0	55.21	1.02%	97.1	%
Y 371.029	836198.2	9240.74	1.11%	98.006	%
Y RADIAL	4661.3	32.06	0.69%	96.79	%
Ag 328.068†	126250.8	497.54	0.39%	[500]	ug/L
Al 396.153Radial†	5372.3	21.86	0.41%	[5000]	ug/L
As 188.979†	2136.7	31.42	1.47%	[500]	ug/L
B 249.677†	31635.5	130.46	0.41%	[500]	ug/L
Ba 233.527†	98496.1	558.43	0.57%	[500]	ug/L
Be 313.107†	1602392.5	5859.39	0.37%	[500]	ug/L
Ca 317.933Radial†	1977.7	9.33	0.47%	[5000]	ug/L
Cd 226.502†	66745.4	338.47	0.51%	[500]	ug/L
Co 228.616†	39626.7	514.43	1.30%	[500]	ug/L
Cr 267.716†	58363.0	328.45	0.56%	[500]	ug/L
Cu 324.752†	202167.4	585.22	0.29%	[500]	ug/L
K 766.490 Radial†	11528.2	55.20	0.48%	[5000]	ug/L
Mg 279.077 IEC†	63.2	0.61	0.97%	[5000]	ug/L
Mn 257.610†	631360.0	3133.16	0.50%	[500]	ug/L
Mo 202.031†	12725.2	167.14	1.31%	[500]	ug/L
Ni 231.604†	30973.8	442.43	1.43%	[500]	ug/L
P 214.914†	7121.8	88.83	1.25%	[2500]	ug/L
Pb 220.353†	6756.9	90.64	1.34%	[500]	ug/L

S 181.975 Axial†	1189.7	16.55	1.39%	[1000]	ug/L
Sb 206.836†	2587.9	32.79	1.27%	[500]	ug/L
Se 196.026†	1546.0	13.38	0.87%	[500]	ug/L
Si 251.611†	122033.6	477.69	0.39%	[2500]	ug/L
Sn 189.927†	4831.1	65.06	1.35%	[500]	ug/L
Sr 421.552†	28899.0	106.56	0.37%	[500]	ug/L
Ti 334.940†	381421.2	1508.28	0.40%	[500]	ug/L
Tl 190.801†	2972.2	44.12	1.48%	[500]	ug/L
U 409.014†	19586.0	73.99	0.38%	[500]	ug/L
V 292.402†	87339.2	380.24	0.44%	[500]	ug/L
Zn 213.857†	89324.3	383.98	0.43%	[500]	ug/L
SiO2†	122741.2	799.91	0.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/8/2009 09:48:38
Data Type: Reprocessed on 7/8/2009 11:40:07

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1052663.5	1052663.5	99.225	%	09:51:50
1	Sc Radial	5805.9	5805.9	104	%	09:50:31
1	Y 371.029	835045.6	835045.6	97.871	%	09:51:50
1	Y RADIAL	5007.7	5007.7	104.0	%	09:50:31
1	Ag 328.068†	252879.2	254215.1	[1000]	ug/L	09:51:55
1	Al 396.153Radial†	10753.9	10399.5	[10000]	ug/L	09:50:31
1	As 188.979†	4213.7	4283.5	[1000]	ug/L	09:52:15
1	B 249.677†	63888.7	64769.0	[1000]	ug/L	09:51:55
1	Ba 233.527†	197687.1	199206.4	[1000]	ug/L	09:51:55
1	Be 313.107†	3194923.7	3227185.7	[1000]	ug/L	09:51:50
1	Ca 317.933Radial†	4055.7	3870.4	[10000]	ug/L	09:50:31
1	Cd 226.502†	133744.7	135066.6	[1000]	ug/L	09:51:55
1	Co 228.616†	80516.0	81235.0	[1000]	ug/L	09:51:55
1	Cr 267.716†	117606.8	118553.7	[1000]	ug/L	09:51:55
1	Cu 324.752†	414400.4	407444.8	[1000]	ug/L	09:51:55
1	Fe 238.204 Radial†	287.2	275.0	[10000]	ug/L	09:50:51
1	K 766.490 Radial†	24918.9	22410.9	[10000]	ug/L	09:50:31
1	Mg 279.077 IEC†	131.8	126.2	[10000]	ug/L	09:50:51
1	Mn 257.610†	1260730.8	1269747.4	[1000]	ug/L	09:51:50
1	Mo 202.031†	24798.5	24960.4	[1000]	ug/L	09:52:15
1	Na 589.592 Radial†	3522.0	3546.2	[10000]	ug/L	09:50:31
1	Ni 231.604†	62750.5	63092.2	[1000]	ug/L	09:51:55
1	P 214.914†	14401.2	14176.7	[5000]	ug/L	09:52:15
1	Pb 220.353†	13201.7	13333.9	[1000]	ug/L	09:52:15
1	S 181.975 Axial†	2419.1	2370.2	[2000]	ug/L	09:52:15
1	Sb 206.836†	5119.1	5113.6	[1000]	ug/L	09:52:15
1	Se 196.026†	3047.7	3093.1	[1000]	ug/L	09:52:15
1	Si 251.611†	242154.4	243485.1	[5000]	ug/L	09:51:55
1	Sn 189.927†	9581.3	9650.6	[1000]	ug/L	09:52:15
1	Sr 421.552†	68083.4	65250.5	[1000]	ug/L	09:50:31
1	Ti 334.940†	758941.9	765976.9	[1000]	ug/L	09:51:50
1	Tl 190.801†	5824.9	5931.8	[1000]	ug/L	09:52:15
1	U 409.014†	36638.9	40759.8	[1000]	ug/L	09:51:55
1	V 292.402†	175178.4	178199.0	[1000]	ug/L	09:51:55
1	Zn 213.857†	180211.9	180496.5	[1000]	ug/L	09:51:55
1	SiO2†	241738.8	243023.9	[10695]	ug/L	09:53:25
2	Sc 361.383	1058804.9	1058804.9	99.804	%	09:52:22
2	Sc Radial	5593.3	5593.3	101	%	09:50:56
2	Y 371.029	839441.5	839441.5	98.386	%	09:52:22
2	Y RADIAL	4835.2	4835.2	100.4	%	09:50:56
2	Ag 328.068†	252282.7	252139.2	[1000]	ug/L	09:52:27
2	Al 396.153Radial†	10627.1	10665.3	[10000]	ug/L	09:50:56
2	As 188.979†	4198.8	4244.0	[1000]	ug/L	09:52:48
2	B 249.677†	63795.4	64302.1	[1000]	ug/L	09:52:27
2	Ba 233.527†	196404.5	196765.7	[1000]	ug/L	09:52:27
2	Be 313.107†	3201165.9	3214763.8	[1000]	ug/L	09:52:22
2	Ca 317.933Radial†	4012.0	3974.7	[10000]	ug/L	09:50:56
2	Cd 226.502†	132496.4	133034.0	[1000]	ug/L	09:52:27
2	Co 228.616†	79902.6	80149.8	[1000]	ug/L	09:52:27
2	Cr 267.716†	116813.2	117071.0	[1000]	ug/L	09:52:27
2	Cu 324.752†	414708.3	405330.8	[1000]	ug/L	09:52:27
2	Fe 238.204 Radial†	289.6	287.8	[10000]	ug/L	09:51:16
2	K 766.490 Radial†	24624.2	23025.9	[10000]	ug/L	09:50:56
2	Mg 279.077 IEC†	127.7	126.9	[10000]	ug/L	09:51:16
2	Mn 257.610†	1263110.3	1264761.9	[1000]	ug/L	09:52:22
2	Mo 202.031†	24699.2	24715.9	[1000]	ug/L	09:52:48
2	Na 589.592 Radial†	3465.5	3618.3	[10000]	ug/L	09:50:56
2	Ni 231.604†	62172.3	62146.1	[1000]	ug/L	09:52:27

2	P 214.914†	14342.8	14034.0	[5000]	ug/L	09:52:48
2	Pb 220.353†	13188.3	13243.2	[1000]	ug/L	09:52:48
2	S 181.975 Axial†	2410.9	2347.8	[2000]	ug/L	09:52:48
2	Sb 206.836†	5080.8	5045.3	[1000]	ug/L	09:52:48
2	Se 196.026†	3016.0	3043.5	[1000]	ug/L	09:52:48
2	Si 251.611†	241232.5	241145.8	[5000]	ug/L	09:52:27
2	Sn 189.927†	9534.0	9547.2	[1000]	ug/L	09:52:48
2	Sr 421.552†	66922.4	66576.7	[1000]	ug/L	09:50:56
2	Ti 334.940†	761509.7	764113.3	[1000]	ug/L	09:52:22
2	Tl 190.801†	5811.7	5884.5	[1000]	ug/L	09:52:48
2	U 409.014†	36579.5	40486.0	[1000]	ug/L	09:52:27
2	V 292.402†	173954.8	175949.0	[1000]	ug/L	09:52:27
2	Zn 213.857†	179274.3	178503.7	[1000]	ug/L	09:52:27
2	SiO2†	237359.4	237222.8	[10695]	ug/L	09:53:31
3	Sc 361.383	1057400.6	1057400.6	99.672	%	09:52:54
3	Sc Radial	5464.1	5464.1	98.2	%	09:51:21
3	Y 371.029	838883.9	838883.9	98.320	%	09:52:54
3	Y RADIAL	4771.4	4771.4	99.08	%	09:51:21
3	Ag 328.068†	251287.3	251476.2	[1000]	ug/L	09:53:00
3	Al 396.153Radial†	10656.6	10945.2	[10000]	ug/L	09:51:21
3	As 188.979†	4194.8	4245.6	[1000]	ug/L	09:53:20
3	B 249.677†	63568.3	64159.1	[1000]	ug/L	09:53:00
3	Ba 233.527†	196293.8	196915.9	[1000]	ug/L	09:53:00
3	Be 313.107†	3195458.9	3213297.7	[1000]	ug/L	09:52:54
3	Ca 317.933Radial†	4035.9	4093.3	[10000]	ug/L	09:51:21
3	Cd 226.502†	132396.2	133109.8	[1000]	ug/L	09:53:00
3	Co 228.616†	79823.3	80176.5	[1000]	ug/L	09:53:00
3	Cr 267.716†	116636.7	117049.4	[1000]	ug/L	09:53:00
3	Cu 324.752†	412621.4	403788.9	[1000]	ug/L	09:53:00
3	Fe 238.204 Radial†	285.3	290.2	[10000]	ug/L	09:51:41
3	K 766.490 Radial†	24699.5	23681.6	[10000]	ug/L	09:51:21
3	Mg 279.077 IEC†	125.8	127.9	[10000]	ug/L	09:51:41
3	Mn 257.610†	1259027.5	1262346.4	[1000]	ug/L	09:52:54
3	Mo 202.031†	24845.2	24895.3	[1000]	ug/L	09:53:20
3	Na 589.592 Radial†	3441.7	3675.5	[10000]	ug/L	09:51:21
3	Ni 231.604†	62152.7	62209.1	[1000]	ug/L	09:53:00
3	P 214.914†	14439.3	14149.9	[5000]	ug/L	09:53:20
3	Pb 220.353†	13219.9	13292.5	[1000]	ug/L	09:53:20
3	S 181.975 Axial†	2417.3	2357.4	[2000]	ug/L	09:53:20
3	Sb 206.836†	5111.4	5082.8	[1000]	ug/L	09:53:20
3	Se 196.026†	3040.7	3072.3	[1000]	ug/L	09:53:20
3	Si 251.611†	240711.3	240943.9	[5000]	ug/L	09:53:00
3	Sn 189.927†	9583.2	9609.3	[1000]	ug/L	09:53:20
3	Sr 421.552†	66963.1	68191.7	[1000]	ug/L	09:51:21
3	Ti 334.940†	758629.2	762236.6	[1000]	ug/L	09:52:54
3	Tl 190.801†	5861.7	5942.4	[1000]	ug/L	09:53:20
3	U 409.014†	36527.5	40482.6	[1000]	ug/L	09:53:00
3	V 292.402†	173694.3	175919.0	[1000]	ug/L	09:53:00
3	Zn 213.857†	178849.9	178316.4	[1000]	ug/L	09:53:00
3	SiO2†	243076.9	243275.0	[10695]	ug/L	09:53:36

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1056289.6	3217.89	0.30%	99.567	%
Sc Radial	5621.1	172.60	3.07%	101	%
Y 371.029	837790.3	2393.27	0.29%	98.192	%
Y RADIAL	4871.4	122.27	2.51%	101.2	%
Ag 328.068†	252610.2	1428.92	0.57%	[1000]	ug/L
Al 396.153Radial†	10670.0	272.89	2.56%	[10000]	ug/L
As 188.979†	4257.7	22.40	0.53%	[1000]	ug/L
B 249.677†	64410.1	318.97	0.50%	[1000]	ug/L
Ba 233.527†	197629.3	1367.84	0.69%	[1000]	ug/L
Be 313.107†	3218415.7	7630.29	0.24%	[1000]	ug/L
Ca 317.933Radial†	3979.5	111.54	2.80%	[10000]	ug/L
Cd 226.502†	133736.8	1152.25	0.86%	[1000]	ug/L
Co 228.616†	80520.5	618.97	0.77%	[1000]	ug/L
Cr 267.716†	117558.0	862.30	0.73%	[1000]	ug/L
Cu 324.752†	405521.5	1835.38	0.45%	[1000]	ug/L
Fe 238.204 Radial†	284.3	8.19	2.88%	[10000]	ug/L

K 766.490 Radial†	23039.5	635.42	2.76%	[10000]	ug/L
Mg 279.077 IEC†	127.0	0.88	0.69%	[10000]	ug/L
Mn 257.610†	1265618.6	3774.16	0.30%	[1000]	ug/L
Mo 202.031†	24857.2	126.63	0.51%	[1000]	ug/L
Na 589.592 Radial†	3613.3	64.84	1.79%	[10000]	ug/L
Ni 231.604†	62482.4	529.00	0.85%	[1000]	ug/L
P 214.914†	14120.2	75.84	0.54%	[5000]	ug/L
Pb 220.353†	13289.9	45.38	0.34%	[1000]	ug/L
S 181.975 Axial†	2358.5	11.23	0.48%	[2000]	ug/L
Sb 206.836†	5080.6	34.22	0.67%	[1000]	ug/L
Se 196.026†	3069.7	24.93	0.81%	[1000]	ug/L
Si 251.611†	241858.2	1412.48	0.58%	[5000]	ug/L
Sn 189.927†	9602.4	52.05	0.54%	[1000]	ug/L
Sr 421.552†	66673.0	1472.96	2.21%	[1000]	ug/L
Ti 334.940†	764108.9	1870.18	0.24%	[1000]	ug/L
Tl 190.801†	5919.6	30.81	0.52%	[1000]	ug/L
U 409.014†	40576.1	159.04	0.39%	[1000]	ug/L
V 292.402†	176689.0	1307.77	0.74%	[1000]	ug/L
Zn 213.857†	179105.5	1208.27	0.67%	[1000]	ug/L
SiO2†	241173.9	3424.04	1.42%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/8/2009 09:55:46
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1045205.1	1045205.1	98.522	%	09:58:57
1	Sc Radial	5445.4	5445.4	97.9	%	09:58:00
1	Y 371.029	824719.2	824719.2	96.660	%	09:58:57
1	Y RADIAL	4697.0	4697.0	97.54	%	09:58:00
1	Al 396.153Radial†	53617.0	54885.6	[50000]	ug/L	09:57:40
1	Ca 317.933Radial†	19630.1	20043.9	[50000]	ug/L	09:57:40
1	Fe 238.204 Radial†	559.3	571.2	[20000]	ug/L	09:58:00
1	Mg 279.077 IEC†	611.6	624.9	[50000]	ug/L	09:58:00
1	Na 589.592 Radial†	7093.1	7419.2	[20000]	ug/L	09:57:40
2	Sc 361.383	1039938.4	1039938.4	98.026	%	09:59:03
2	Sc Radial	5322.6	5322.6	95.6	%	09:58:25
2	Y 371.029	821364.5	821364.5	96.267	%	09:59:03
2	Y RADIAL	4573.5	4573.5	94.97	%	09:58:25
2	Al 396.153Radial†	52922.6	55423.3	[50000]	ug/L	09:58:05
2	Ca 317.933Radial†	19349.8	20213.5	[50000]	ug/L	09:58:05
2	Fe 238.204 Radial†	548.4	573.0	[20000]	ug/L	09:58:25
2	Mg 279.077 IEC†	611.0	638.7	[50000]	ug/L	09:58:25
2	Na 589.592 Radial†	6990.6	7479.1	[20000]	ug/L	09:58:05
3	Sc 361.383	1037774.1	1037774.1	97.822	%	09:59:09
3	Sc Radial	5437.5	5437.5	97.7	%	09:58:50
3	Y 371.029	819757.6	819757.6	96.079	%	09:59:09
3	Y RADIAL	4679.6	4679.6	97.17	%	09:58:50
3	Al 396.153Radial†	53368.0	54709.6	[50000]	ug/L	09:58:30
3	Ca 317.933Radial†	19552.5	19993.3	[50000]	ug/L	09:58:30
3	Fe 238.204 Radial†	554.5	567.2	[20000]	ug/L	09:58:50
3	Mg 279.077 IEC†	615.8	630.0	[50000]	ug/L	09:58:50
3	Na 589.592 Radial†	7083.3	7419.6	[20000]	ug/L	09:58:30

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1040972.5	3821.89	0.37%	98.123	%
Sc Radial	5401.8	68.73	1.27%	97.1	%
Y 371.029	821947.1	2531.58	0.31%	96.335	%
Y RADIAL	4650.1	66.85	1.44%	96.56	%
Al 396.153Radial†	55006.2	371.83	0.68%	[50000]	ug/L
Ca 317.933Radial†	20083.6	115.30	0.57%	[50000]	ug/L
Fe 238.204 Radial†	570.5	2.97	0.52%	[20000]	ug/L
Mg 279.077 IEC†	631.2	6.96	1.10%	[50000]	ug/L
Na 589.592 Radial†	7439.3	34.51	0.46%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	252.6	0.00000	0.999999	
Al 396.153Radial	3	Lin Thru 0	0.0	1.099	0.00000	0.999981	
As 188.979	3	Lin Thru 0	0.0	4.261	0.00000	0.999998	
B 249.677	3	Lin Thru 0	0.0	64.16	0.00000	0.999970	
Ba 233.527	3	Lin Thru 0	0.0	197.6	0.00000	0.999992	
Be 313.107	3	Lin Thru 0	0.0	3216	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.4015	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	133.7	0.00000	0.999999	
Co 228.616	3	Lin Thru 0	0.0	80.28	0.00000	0.999977	
Cr 267.716	3	Lin Thru 0	0.0	117.4	0.00000	0.999994	
Cu 324.752	3	Lin Thru 0	0.0	405.3	0.00000	0.999999	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0285	0.00000	0.999999	

K 766.490 Radial	3	Lin Thru 0	0.0	2.305	0.00000	0.999997
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0126	0.00000	0.999999
Mn 257.610	3	Lin Thru 0	0.0	1265	0.00000	0.999995
Mo 202.031	3	Lin Thru 0	0.0	24.98	0.00000	0.999950
Na 589.592 Radia	2	Lin Thru 0	0.0	0.3698	0.00000	0.999934
Ni 231.604	3	Lin Thru 0	0.0	62.39	0.00000	0.999990
P 214.914	3	Lin Thru 0	0.0	2.830	0.00000	0.999989
Pb 220.353	3	Lin Thru 0	0.0	13.34	0.00000	0.999970
S 181.975 Axial	3	Lin Thru 0	0.0	1.181	0.00000	0.999994
Sb 206.836	3	Lin Thru 0	0.0	5.100	0.00000	0.999972
Se 196.026	3	Lin Thru 0	0.0	3.075	0.00000	0.999992
Si 251.611	3	Lin Thru 0	0.0	48.46	0.00000	0.999993
Sn 189.927	3	Lin Thru 0	0.0	9.615	0.00000	0.999997
Sr 421.552	3	Lin Thru 0	0.0	64.91	0.00000	0.998518
Ti 334.940	3	Lin Thru 0	0.0	763.9	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	5.926	0.00000	0.999996
U 409.014	3	Lin Thru 0	0.0	40.30	0.00000	0.999901
V 292.402	3	Lin Thru 0	0.0	176.3	0.00000	0.999989
Zn 213.857	3	Lin Thru 0	0.0	179.1	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	22.63	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/8/2009 10:01:20
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1055963.1	1055963.1	99.536	%			10:04:31
1	Sc Radial	5613.9	5613.9	101	%			10:03:13
1	Y 371.029	843980.3	843980.3	98.918	%			10:04:31
1	Y RADIAL	4850.5	4850.5	100.7	%			10:03:13
1	Ag 328.068†	64392.7	64054.1	256.65	ug/L	256.65	ppb	10:04:31
1	Al 396.153Radial†	5477.4	5521.7	5003.5	ug/L	5003.5	ppb	10:03:13
1	As 188.979†	2018.5	2064.8	487.93	ug/L	487.93	ppb	10:04:51
1	B 249.677†	32013.9	32544.6	505.32	ug/L	505.32	ppb	10:04:31
1	Ba 233.527†	105864.5	106333.4	539.45	ug/L	539.45	ppb	10:04:31
1	Be 313.107†	824616.8	835774.7	261.06	ug/L	261.06	ppb	10:04:31
1	Ca 317.933Radial†	1980.0	1945.8	4846.6	ug/L	4846.6	ppb	10:03:33
1	Cd 226.502†	67172.4	67763.0	506.57	ug/L	506.57	ppb	10:04:31
1	Co 228.616†	37965.2	38232.5	476.49	ug/L	476.49	ppb	10:04:51
1	Cr 267.716†	59214.9	59519.4	507.63	ug/L	507.63	ppb	10:04:31
1	Cu 324.752†	223133.1	213981.3	528.24	ug/L	528.24	ppb	10:04:31
1	Fe 238.204 Radial†	145.6	144.0	5067.1	ug/L	5067.1	ppb	10:03:33
1	K 766.490 Radial†	7308.0	5771.0	2501.1	ug/L	2501.1	ppb	10:03:13
1	Mg 279.077 IEC†	65.6	64.8	5140.2	ug/L	5140.2	ppb	10:03:33
1	Mn 257.610†	657421.5	659657.3	521.87	ug/L	521.87	ppb	10:04:31
1	Mo 202.031†	13087.3	13116.5	525.36	ug/L	525.36	ppb	10:04:51
1	Na 589.592 Radial†	775.6	939.2	2539.6	ug/L	2539.6	ppb	10:03:33
1	Ni 231.604†	33519.4	33527.3	537.06	ug/L	537.06	ppb	10:04:31
1	P 214.914†	7515.0	7213.0	2469.3	ug/L	2469.3	ppb	10:04:51
1	Pb 220.353†	6757.4	6817.9	512.49	ug/L	512.49	ppb	10:04:51
1	S 181.975 Axial†	3135.7	3082.5	2608.2	ug/L	2608.2	ppb	10:04:51
1	Sb 206.836†	2711.8	2679.0	533.63	ug/L	533.63	ppb	10:04:51
1	Se 196.026†	7950.7	8009.4	2624.5	ug/L	2624.5	ppb	10:04:51
1	Si 251.611†	241856.0	242422.6	4990.7	ug/L	4990.7	ppb	10:04:31
1	Sn 189.927†	5102.2	5120.5	533.02	ug/L	533.02	ppb	10:04:51
1	Sr 421.552†	33892.8	33591.0	517.48	ug/L	517.48	ppb	10:03:13
1	Ti 334.940†	386933.6	389845.5	510.25	ug/L	510.25	ppb	10:04:31
1	Tl 190.801†	2870.1	2944.9	498.92	ug/L	498.92	ppb	10:04:51
1	U 409.014†	16738.6	20651.3	510.79	ug/L	510.79	ppb	10:04:31
1	V 292.402†	86386.8	88442.0	507.92	ug/L	507.92	ppb	10:04:31
1	Zn 213.857†	92798.7	92108.6	509.43	ug/L	509.43	ppb	10:04:31
1	SiO2†	240647.4	241166.2	10631	ug/L	10631	ppb	10:05:48
2	Sc 361.383	1061154.8	1061154.8	100.03	%			10:04:57
2	Sc Radial	5574.6	5574.6	100	%			10:03:38
2	Y 371.029	847082.8	847082.8	99.281	%			10:04:57
2	Y RADIAL	4828.4	4828.4	100.3	%			10:03:38
2	Ag 328.068†	64498.9	63843.8	255.81	ug/L	255.81	ppb	10:04:57
2	Al 396.153Radial†	5433.4	5516.1	4998.6	ug/L	4998.6	ppb	10:03:38
2	As 188.979†	2002.8	2039.2	481.91	ug/L	481.91	ppb	10:05:17
2	B 249.677†	32167.6	32540.8	505.28	ug/L	505.28	ppb	10:04:57
2	Ba 233.527†	106144.9	106093.4	538.23	ug/L	538.23	ppb	10:04:57
2	Be 313.107†	824477.0	831581.7	259.75	ug/L	259.75	ppb	10:04:57
2	Ca 317.933Radial†	1968.2	1947.8	4851.6	ug/L	4851.6	ppb	10:03:58
2	Cd 226.502†	67276.9	67537.3	504.89	ug/L	504.89	ppb	10:04:57
2	Co 228.616†	37893.6	37974.3	473.26	ug/L	473.26	ppb	10:05:17
2	Cr 267.716†	59208.0	59221.4	505.09	ug/L	505.09	ppb	10:04:57
2	Cu 324.752†	224086.8	213838.1	527.89	ug/L	527.89	ppb	10:04:57
2	Fe 238.204 Radial†	144.3	143.7	5055.6	ug/L	5055.6	ppb	10:03:58
2	K 766.490 Radial†	7330.2	5844.2	2532.9	ug/L	2532.9	ppb	10:03:38
2	Mg 279.077 IEC†	68.0	67.7	5365.3	ug/L	5365.3	ppb	10:03:58
2	Mn 257.610†	658788.7	657792.7	520.39	ug/L	520.39	ppb	10:04:57
2	Mo 202.031†	13056.1	13020.9	521.54	ug/L	521.54	ppb	10:05:17
2	Na 589.592 Radial†	764.6	933.7	2524.5	ug/L	2524.5	ppb	10:03:58
2	Ni 231.604†	33627.1	33470.2	536.15	ug/L	536.15	ppb	10:04:57

2	P 214.914†	7509.3	7170.5	2454.3 ug/L	2454.3 ppb	10:05:17
2	Pb 220.353†	6755.8	6783.1	509.87 ug/L	509.87 ppb	10:05:17
2	S 181.975 Axial†	3111.7	3043.1	2574.9 ug/L	2574.9 ppb	10:05:17
2	Sb 206.836†	2721.3	2675.2	532.82 ug/L	532.82 ppb	10:05:17
2	Se 196.026†	7952.2	7971.8	2612.2 ug/L	2612.2 ppb	10:05:17
2	Si 251.611†	242445.6	241823.3	4978.4 ug/L	4978.4 ppb	10:04:57
2	Sn 189.927†	5103.9	5097.1	530.59 ug/L	530.59 ppb	10:05:17
2	Sr 421.552†	33672.4	33607.8	517.74 ug/L	517.74 ppb	10:03:38
2	Ti 334.940†	387671.3	388681.1	508.73 ug/L	508.73 ppb	10:04:57
2	Tl 190.801†	2874.3	2934.9	497.25 ug/L	497.25 ppb	10:05:17
2	U 409.014†	16726.6	20557.1	508.46 ug/L	508.46 ppb	10:04:57
2	V 292.402†	86445.6	88076.2	505.80 ug/L	505.80 ppb	10:04:57
2	Zn 213.857†	92897.2	91751.0	507.43 ug/L	507.43 ppb	10:04:57
2	SiO2†	237580.2	236916.9	10443 ug/L	10443 ppb	10:05:54
3	Sc 361.383	1046189.2	1046189.2	98.615 %		10:05:23
3	Sc Radial	5513.6	5513.6	99.1 %		10:04:03
3	Y 371.029	834847.1	834847.1	97.847 %		10:05:23
3	Y RADIAL	4760.8	4760.8	98.86 %		10:04:03
3	Ag 328.068†	63545.9	63799.7	255.72 ug/L	255.72 ppb	10:05:23
3	Al 396.153Radial†	5377.5	5519.7	5001.6 ug/L	5001.6 ppb	10:04:03
3	As 188.979†	2001.8	2066.8	488.43 ug/L	488.43 ppb	10:05:43
3	B 249.677†	31566.1	32390.9	502.89 ug/L	502.89 ppb	10:05:23
3	Ba 233.527†	104823.4	106271.3	539.14 ug/L	539.14 ppb	10:05:23
3	Be 313.107†	812519.1	831246.8	259.64 ug/L	259.64 ppb	10:05:23
3	Ca 317.933Radial†	1993.1	1994.7	4968.4 ug/L	4968.4 ppb	10:04:23
3	Cd 226.502†	66540.9	67753.1	506.47 ug/L	506.47 ppb	10:05:23
3	Co 228.616†	37778.7	38399.7	478.58 ug/L	478.58 ppb	10:05:43
3	Cr 267.716†	58457.7	59307.3	505.83 ug/L	505.83 ppb	10:05:23
3	Cu 324.752†	219384.3	212274.2	524.04 ug/L	524.04 ppb	10:05:23
3	Fe 238.204 Radial†	150.5	151.5	5330.8 ug/L	5330.8 ppb	10:04:23
3	K 766.490 Radial†	7160.3	5753.8	2493.9 ug/L	2493.9 ppb	10:04:03
3	Mg 279.077 IEC†	66.6	67.1	5318.0 ug/L	5318.0 ppb	10:04:23
3	Mn 257.610†	650091.5	658394.7	520.91 ug/L	520.91 ppb	10:05:23
3	Mo 202.031†	13030.1	13181.3	527.98 ug/L	527.98 ppb	10:05:43
3	Na 589.592 Radial†	777.1	954.8	2581.6 ug/L	2581.6 ppb	10:04:23
3	Ni 231.604†	33207.7	33525.8	537.04 ug/L	537.04 ppb	10:05:23
3	P 214.914†	7486.1	7254.4	2484.4 ug/L	2484.4 ppb	10:05:43
3	Pb 220.353†	6694.0	6817.1	512.41 ug/L	512.41 ppb	10:05:43
3	S 181.975 Axial†	3113.7	3089.6	2614.2 ug/L	2614.2 ppb	10:05:43
3	Sb 206.836†	2715.5	2708.2	539.48 ug/L	539.48 ppb	10:05:43
3	Se 196.026†	7890.8	8023.3	2629.9 ug/L	2629.9 ppb	10:05:43
3	Si 251.611†	238657.3	241449.0	4970.5 ug/L	4970.5 ppb	10:05:23
3	Sn 189.927†	5067.2	5132.9	534.33 ug/L	534.33 ppb	10:05:43
3	Sr 421.552†	33182.0	33485.1	515.84 ug/L	515.84 ppb	10:04:03
3	Ti 334.940†	381414.1	387880.2	507.69 ug/L	507.69 ppb	10:05:23
3	Tl 190.801†	2873.4	2975.2	504.01 ug/L	504.01 ppb	10:05:43
3	U 409.014†	16428.1	20493.6	506.85 ug/L	506.85 ppb	10:05:23
3	V 292.402†	84994.3	87840.8	504.50 ug/L	504.50 ppb	10:05:23
3	Zn 213.857†	91642.8	91807.5	507.72 ug/L	507.72 ppb	10:05:23
3	SiO2†	239859.9	242626.3	10695 ug/L	10695 ppb	10:05:59

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054435.7	99.392	%	0.7163				0.72%
Sc Radial	5567.4	100	%	0.9				0.91%
Y 371.029	841970.1	98.682	%	0.7455				0.76%
Y RADIAL	4813.2	99.95	%	0.971				0.97%
Ag 328.068†	63899.2	256.06	ug/L	0.515	256.06	ppb	0.515	0.20%
QC value within limits for Ag 328.068 Recovery = 102.42%								
Al 396.153Radial†	5519.1	5001.2	ug/L	2.50	5001.2	ppb	2.50	0.05%
QC value within limits for Al 396.153Radial Recovery = 100.02%								
As 188.979†	2056.9	486.09	ug/L	3.628	486.09	ppb	3.628	0.75%
QC value within limits for As 188.979 Recovery = 97.22%								
B 249.677†	32492.1	504.50	ug/L	1.392	504.50	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.90%								
Ba 233.527†	106232.7	538.94	ug/L	0.633	538.94	ppb	0.633	0.12%
QC value within limits for Ba 233.527 Recovery = 107.79%								
Be 313.107†	832867.8	260.15	ug/L	0.787	260.15	ppb	0.787	0.30%
QC value within limits for Be 313.107 Recovery = 104.06%								

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Ca 317.933Radial†        1962.7      4888.9 ug/L         68.91      4888.9 ppb          68.91   1.41%
   QC value within limits for Ca 317.933Radial  Recovery = 97.78%
Cd 226.502†             67684.5      505.98 ug/L         0.945      505.98 ppb          0.945   0.19%
   QC value within limits for Cd 226.502  Recovery = 101.20%
Co 228.616†             38202.2      476.11 ug/L         2.677      476.11 ppb          2.677   0.56%
   QC value within limits for Co 228.616  Recovery = 95.22%
Cr 267.716†             59349.4      506.19 ug/L         1.307      506.19 ppb          1.307   0.26%
   QC value within limits for Cr 267.716  Recovery = 101.24%
Cu 324.752†            213364.5      526.72 ug/L         2.327      526.72 ppb          2.327   0.44%
   QC value within limits for Cu 324.752  Recovery = 105.34%
Fe 238.204 Radial†        146.4      5151.2 ug/L        155.66      5151.2 ppb         155.66   3.02%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.02%
K 766.490 Radial†        5789.7      2509.3 ug/L         20.76      2509.3 ppb          20.76   0.83%
   QC value within limits for K 766.490 Radial  Recovery = 100.37%
Mg 279.077 IEC†           66.5      5274.5 ug/L        118.66      5274.5 ppb         118.66   2.25%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.49%
Mn 257.610†            658614.9      521.06 ug/L         0.751      521.06 ppb          0.751   0.14%
   QC value within limits for Mn 257.610  Recovery = 104.21%
Mo 202.031†             13106.2      524.96 ug/L         3.238      524.96 ppb          3.238   0.62%
   QC value within limits for Mo 202.031  Recovery = 104.99%
Na 589.592 Radial†        942.6      2548.6 ug/L         29.60      2548.6 ppb          29.60   1.16%
   QC value within limits for Na 589.592 Radial  Recovery = 101.94%
Ni 231.604†             33507.8      536.75 ug/L         0.520      536.75 ppb          0.520   0.10%
   QC value within limits for Ni 231.604  Recovery = 107.35%
P 214.914†               7212.6      2469.3 ug/L         15.04      2469.3 ppb          15.04   0.61%
   QC value within limits for P 214.914  Recovery = 98.77%
Pb 220.353†              6806.1      511.59 ug/L         1.490      511.59 ppb          1.490   0.29%
   QC value within limits for Pb 220.353  Recovery = 102.32%
S 181.975 Axial†         3071.7      2599.1 ug/L         21.20      2599.1 ppb          21.20   0.82%
   QC value within limits for S 181.975 Axial  Recovery = 103.96%
Sb 206.836†              2687.5      535.31 ug/L         3.632      535.31 ppb          3.632   0.68%
   QC value within limits for Sb 206.836  Recovery = 107.06%
Se 196.026†              8001.5      2622.2 ug/L          9.08      2622.2 ppb           9.08   0.35%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†            241898.3      4979.9 ug/L         10.15      4979.9 ppb          10.15   0.20%
   QC value within limits for Si 251.611  Recovery = 99.60%
Sn 189.927†              5116.8      532.64 ug/L         1.897      532.64 ppb          1.897   0.36%
   QC value within limits for Sn 189.927  Recovery = 106.53%
Sr 421.552†             33561.3      517.02 ug/L         1.026      517.02 ppb          1.026   0.20%
   QC value within limits for Sr 421.552  Recovery = 103.40%
Ti 334.940†            388802.3      508.89 ug/L         1.289      508.89 ppb          1.289   0.25%
   QC value within limits for Ti 334.940  Recovery = 101.78%
Tl 190.801†              2951.7      500.06 ug/L         3.524      500.06 ppb          3.524   0.70%
   QC value within limits for Tl 190.801  Recovery = 100.01%
U 409.014†              20567.3      508.70 ug/L         1.982      508.70 ppb          1.982   0.39%
   QC value within limits for U 409.014  Recovery = 101.74%
V 292.402†              88119.7      506.07 ug/L         1.724      506.07 ppb          1.724   0.34%
   QC value within limits for V 292.402  Recovery = 101.21%
Zn 213.857†             91889.0      508.19 ug/L         1.080      508.19 ppb          1.080   0.21%
   QC value within limits for Zn 213.857  Recovery = 101.64%
SiO2†                  240236.5       10590 ug/L         130.9       10590 ppb          130.9   1.24%
   QC value within limits for SiO2  Recovery = 99.02%
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/8/2009 10:08:09
Data Type: Reprocessed on 7/8/2009 11:40:09

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1062518.9	1062518.9	100.15	%			10:11:19
1	Sc Radial	5619.2	5619.2	101	%			10:10:02
1	Y 371.029	855063.0	855063.0	100.22	%			10:11:19
1	Y RADIAL	4891.2	4891.2	101.6	%			10:10:02
1	Ag 328.068†	686.9	47.3	0.1796	ug/L	0.1796	ppb	10:11:24
1	Al 396.153Radial†	-95.5	-2.4	-2.1842	ug/L	-2.1842	ppb	10:10:02
1	As 188.979†	-51.6	-14.6	-3.4416	ug/L	-3.4416	ppb	10:11:44
1	B 249.677†	-113.0	268.7	4.1899	ug/L	4.1899	ppb	10:11:24
1	Ba 233.527†	27.7	3.4	0.0163	ug/L	0.0163	ppb	10:11:44
1	Be 313.107†	-7419.2	-91.5	-0.0284	ug/L	-0.0284	ppb	10:11:24
1	Ca 317.933Radial†	20.0	2.8	7.0382	ug/L	7.0382	ppb	10:10:22
1	Cd 226.502†	-268.6	9.5	0.0735	ug/L	0.0735	ppb	10:11:44
1	Co 228.616†	-84.2	6.3	0.0795	ug/L	0.0795	ppb	10:11:44
1	Cr 267.716†	-63.7	-35.0	-0.2989	ug/L	-0.2989	ppb	10:11:24
1	Cu 324.752†	10404.8	197.5	0.4861	ug/L	0.4861	ppb	10:11:24
1	Fe 238.204 Radial†	-0.3	-0.6	-22.095	ug/L	-22.095	ppb	10:10:22
1	K 766.490 Radial†	1537.8	49.9	21.622	ug/L	21.622	ppb	10:10:02
1	Mg 279.077 IEC†	-0.3	-0.5	-40.804	ug/L	-40.804	ppb	10:10:22
1	Mn 257.610†	863.6	35.2	0.0257	ug/L	0.0257	ppb	10:11:44
1	Mo 202.031†	34.2	2.4	0.0952	ug/L	0.0952	ppb	10:11:44
1	Na 589.592 Radial†	-172.2	-0.1	-0.2094	ug/L	-0.2094	ppb	10:10:22
1	Ni 231.604†	165.5	17.0	0.2724	ug/L	0.2724	ppb	10:11:44
1	P 214.914†	359.3	21.8	7.6434	ug/L	7.6434	ppb	10:11:44
1	Pb 220.353†	-14.3	14.8	1.1103	ug/L	1.1103	ppb	10:11:44
1	S 181.975 Axial†	61.3	-6.6	-5.6162	ug/L	-5.6162	ppb	10:11:44
1	Sb 206.836†	50.7	5.2	1.0374	ug/L	1.0374	ppb	10:11:44
1	Se 196.026†	-15.1	6.5	2.0343	ug/L	2.0343	ppb	10:11:44
1	Si 251.611†	605.7	44.7	0.9121	ug/L	0.9121	ppb	10:11:44
1	Sn 189.927†	10.2	4.7	0.4889	ug/L	0.4889	ppb	10:11:44
1	Sr 421.552†	8.2	2.6	0.0401	ug/L	0.0401	ppb	10:10:22
1	Ti 334.940†	-1098.3	12.6	0.0172	ug/L	0.0172	ppb	10:11:24
1	Tl 190.801†	-61.2	0.3	0.0480	ug/L	0.0480	ppb	10:11:44
1	U 409.014†	-3850.0	-9.3	-0.2275	ug/L	-0.2275	ppb	10:11:19
1	V 292.402†	-1677.0	-21.6	-0.1194	ug/L	-0.1194	ppb	10:11:24
1	Zn 213.857†	1258.4	134.0	0.7499	ug/L	0.7499	ppb	10:11:44
1	SiO2†	620.8	17.5	0.7492	ug/L	0.7492	ppb	10:12:50
2	Sc 361.383	1069316.7	1069316.7	100.80	%			10:11:49
2	Sc Radial	5629.3	5629.3	101	%			10:10:27
2	Y 371.029	858517.5	858517.5	100.62	%			10:11:49
2	Y RADIAL	4855.9	4855.9	100.8	%			10:10:27
2	Ag 328.068†	676.2	32.3	0.1208	ug/L	0.1208	ppb	10:11:54
2	Al 396.153Radial†	-91.2	2.0	1.8521	ug/L	1.8521	ppb	10:10:27
2	As 188.979†	-44.8	-7.5	-1.7654	ug/L	-1.7654	ppb	10:12:14
2	B 249.677†	-123.3	259.2	4.0408	ug/L	4.0408	ppb	10:11:54
2	Ba 233.527†	23.9	-0.6	-0.0030	ug/L	-0.0030	ppb	10:12:14
2	Be 313.107†	-7510.8	-135.4	-0.0419	ug/L	-0.0419	ppb	10:11:54
2	Ca 317.933Radial†	16.0	-1.1	-2.7930	ug/L	-2.7930	ppb	10:10:47
2	Cd 226.502†	-288.6	-8.6	-0.0630	ug/L	-0.0630	ppb	10:12:14
2	Co 228.616†	-88.3	2.8	0.0352	ug/L	0.0352	ppb	10:12:14
2	Cr 267.716†	-28.7	0.1	0.0000	ug/L	0.0000	ppb	10:11:54
2	Cu 324.752†	10297.6	25.1	0.0611	ug/L	0.0611	ppb	10:11:54
2	Fe 238.204 Radial†	-0.0	-0.4	-13.229	ug/L	-13.229	ppb	10:10:47
2	K 766.490 Radial†	1552.5	61.7	26.759	ug/L	26.759	ppb	10:10:27
2	Mg 279.077 IEC†	2.2	2.0	160.02	ug/L	160.02	ppb	10:10:47
2	Mn 257.610†	868.0	34.2	0.0222	ug/L	0.0222	ppb	10:12:14
2	Mo 202.031†	38.9	6.8	0.2725	ug/L	0.2725	ppb	10:12:14
2	Na 589.592 Radial†	-186.1	-13.6	-36.706	ug/L	-36.706	ppb	10:10:47
2	Ni 231.604†	162.3	12.7	0.2043	ug/L	0.2043	ppb	10:12:14

2	P 214.914†	334.4	-5.1	-1.8065	ug/L	-1.8065	ppb	10:12:14
2	Pb 220.353†	-20.2	9.0	0.6783	ug/L	0.6783	ppb	10:12:14
2	S 181.975 Axial†	69.9	1.5	1.2588	ug/L	1.2588	ppb	10:12:14
2	Sb 206.836†	55.1	9.2	1.8205	ug/L	1.8205	ppb	10:12:14
2	Se 196.026†	-16.1	5.6	1.7877	ug/L	1.7877	ppb	10:12:14
2	Si 251.611†	597.5	32.7	0.6587	ug/L	0.6587	ppb	10:12:14
2	Sn 189.927†	12.0	6.5	0.6728	ug/L	0.6728	ppb	10:12:14
2	Sr 421.552†	-0.3	-5.8	-0.0892	ug/L	-0.0892	ppb	10:10:47
2	Ti 334.940†	-1058.2	59.4	0.0757	ug/L	0.0757	ppb	10:11:54
2	Tl 190.801†	-64.4	-2.5	-0.4195	ug/L	-0.4195	ppb	10:12:14
2	U 409.014†	-3694.3	169.6	4.2087	ug/L	4.2087	ppb	10:11:49
2	V 292.402†	-1628.9	36.7	0.2243	ug/L	0.2243	ppb	10:11:54
2	Zn 213.857†	1236.8	104.6	0.5788	ug/L	0.5788	ppb	10:12:14
2	SiO2†	605.7	-1.5	-0.0994	ug/L	-0.0994	ppb	10:12:55
3	Sc 361.383	1062135.4	1062135.4	100.12	%			10:12:20
3	Sc Radial	5726.3	5726.3	103	%			10:10:52
3	Y 371.029	854170.1	854170.1	100.11	%			10:12:20
3	Y RADIAL	4978.7	4978.7	103.4	%			10:10:52
3	Ag 328.068†	596.6	-42.7	-0.1739	ug/L	-0.1739	ppb	10:12:25
3	Al 396.153Radial†	-64.8	29.2	26.595	ug/L	26.595	ppb	10:10:52
3	As 188.979†	-48.3	-11.4	-2.6739	ug/L	-2.6739	ppb	10:12:45
3	B 249.677†	-137.5	244.2	3.8077	ug/L	3.8077	ppb	10:12:25
3	Ba 233.527†	32.8	8.5	0.0434	ug/L	0.0434	ppb	10:12:45
3	Be 313.107†	-7462.3	-137.3	-0.0426	ug/L	-0.0426	ppb	10:12:25
3	Ca 317.933Radial†	21.3	3.8	9.4766	ug/L	9.4766	ppb	10:11:12
3	Cd 226.502†	-293.9	-15.9	-0.1159	ug/L	-0.1159	ppb	10:12:45
3	Co 228.616†	-77.2	13.3	0.1659	ug/L	0.1659	ppb	10:12:45
3	Cr 267.716†	9.4	38.0	0.3245	ug/L	0.3245	ppb	10:12:25
3	Cu 324.752†	10285.9	82.5	0.2022	ug/L	0.2022	ppb	10:12:25
3	Fe 238.204 Radial†	-0.3	-0.6	-22.364	ug/L	-22.364	ppb	10:11:12
3	K 766.490 Radial†	1501.0	-14.5	-6.2704	ug/L	-6.2704	ppb	10:10:52
3	Mg 279.077 IEC†	-1.8	-1.9	-151.32	ug/L	-151.32	ppb	10:11:12
3	Mn 257.610†	857.0	29.0	0.0229	ug/L	0.0229	ppb	10:12:45
3	Mo 202.031†	36.6	4.8	0.1888	ug/L	0.1888	ppb	10:12:45
3	Na 589.592 Radial†	-183.0	-7.4	-20.091	ug/L	-20.091	ppb	10:11:12
3	Ni 231.604†	155.8	7.4	0.1180	ug/L	0.1180	ppb	10:12:45
3	P 214.914†	337.7	0.4	0.1410	ug/L	0.1410	ppb	10:12:45
3	Pb 220.353†	-5.3	23.7	1.7877	ug/L	1.7877	ppb	10:12:45
3	S 181.975 Axial†	71.0	3.0	2.5743	ug/L	2.5743	ppb	10:12:45
3	Sb 206.836†	52.0	6.6	1.2846	ug/L	1.2846	ppb	10:12:45
3	Se 196.026†	-12.9	8.7	2.7668	ug/L	2.7668	ppb	10:12:45
3	Si 251.611†	618.9	58.0	1.1952	ug/L	1.1952	ppb	10:12:45
3	Sn 189.927†	7.7	2.3	0.2347	ug/L	0.2347	ppb	10:12:45
3	Sr 421.552†	-1.2	-6.6	-0.1023	ug/L	-0.1023	ppb	10:11:12
3	Ti 334.940†	-1088.2	22.3	0.0301	ug/L	0.0301	ppb	10:12:25
3	Tl 190.801†	-57.0	4.4	0.7456	ug/L	0.7456	ppb	10:12:45
3	U 409.014†	-3872.6	-33.3	-0.8247	ug/L	-0.8247	ppb	10:12:20
3	V 292.402†	-1572.8	81.8	0.4653	ug/L	0.4653	ppb	10:12:25
3	Zn 213.857†	1256.5	132.6	0.7473	ug/L	0.7473	ppb	10:12:45
3	SiO2†	684.3	81.2	3.5825	ug/L	3.5825	ppb	10:13:00

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1064657.0	100.36	%	0.381				0.38%
Sc Radial	5658.3	102	%	1.1				1.05%
Y 371.029	855916.8	100.32	%	0.269				0.27%
Y RADIAL	4908.6	101.9	%	1.31				1.29%
Ag 328.068†	12.3	0.0422	ug/L	0.18942	0.0422	ppb	0.18942	448.85%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.6	8.7543	ug/L	15.58188	8.7543	ppb	15.58188	177.99%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.2	-2.6270	ug/L	0.83913	-2.6270	ppb	0.83913	31.94%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	257.3	4.0128	ug/L	0.19262	4.0128	ppb	0.19262	4.80%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.7	0.0189	ug/L	0.02328	0.0189	ppb	0.02328	123.18%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.4	-0.0376	ug/L	0.00800	-0.0376	ppb	0.00800	21.25%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          1.8      4.5739 ug/L       6.49541      4.5739 ppb        6.49541 142.01%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -5.0     -0.0351 ug/L       0.09773     -0.0351 ppb        0.09773 278.26%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                7.5      0.0936 ug/L       0.06649      0.0936 ppb        0.06649  71.07%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                1.1      0.0085 ug/L       0.31178      0.0085 ppb        0.31178 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              101.7      0.2498 ug/L       0.21648      0.2498 ppb        0.21648  86.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5     -19.229 ug/L        5.1983     -19.229 ppb         5.1983  27.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         32.4      14.037 ug/L       17.7734      14.037 ppb        17.7734 126.62%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.1     -10.703 ug/L      157.8385     -10.703 ppb       157.8385 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               32.8      0.0236 ug/L       0.00188      0.0236 ppb        0.00188   7.96%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.7      0.1855 ug/L       0.08870      0.1855 ppb        0.08870  47.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -7.0     -19.002 ug/L       18.2728     -19.002 ppb        18.2728  96.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               12.4      0.1983 ug/L       0.07739      0.1983 ppb        0.07739  39.03%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 5.7      1.9926 ug/L       4.98968      1.9926 ppb        4.98968 250.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               15.9      1.1921 ug/L       0.55921      1.1921 ppb        0.55921  46.91%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.7     -0.5944 ug/L       4.39850     -0.5944 ppb        4.39850 740.05%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.0      1.3808 ug/L       0.40029      1.3808 ppb        0.40029  28.99%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                7.0      2.1962 ug/L       0.50925      2.1962 ppb        0.50925  23.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               45.1      0.9220 ug/L       0.26841      0.9220 ppb        0.26841  29.11%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.5      0.4655 ug/L       0.22000      0.4655 ppb        0.22000  47.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -3.3     -0.0505 ug/L       0.07870     -0.0505 ppb        0.07870 155.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               31.5      0.0410 ug/L       0.03074      0.0410 ppb        0.03074  74.91%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.7      0.1247 ug/L       0.58632      0.1247 ppb        0.58632 470.17%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                42.3      1.0522 ug/L       2.74987      1.0522 ppb        2.74987 261.36%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                32.3      0.1900 ug/L       0.29386      0.1900 ppb        0.29386 154.62%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              123.8      0.6920 ug/L       0.09801      0.6920 ppb        0.09801  14.16%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     32.4      1.4108 ug/L       1.92802      1.4108 ppb        1.92802 136.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/8/2009 10:15:11
Data Type: Reprocessed on 7/8/2009 11:40:11

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1047868.8	1047868.8	98.773	%			10:18:21
1	Sc Radial	5489.2	5489.2	98.6	%			10:17:05
1	Y 371.029	843324.4	843324.4	98.841	%			10:18:21
1	Y RADIAL	4749.6	4749.6	98.63	%			10:17:05
1	Ag 328.068†	1908.9	1294.0	5.1281	ug/L	5.1281	ppb	10:18:26
1	Al 396.153Radial†	137.4	231.5	210.24	ug/L	210.24	ppb	10:17:05
1	As 188.979†	70.2	108.0	25.354	ug/L	25.354	ppb	10:18:47
1	B 249.677†	2924.9	3342.8	52.070	ug/L	52.070	ppb	10:18:26
1	Ba 233.527†	1019.6	1008.0	5.1161	ug/L	5.1161	ppb	10:18:47
1	Be 313.107†	8654.4	16078.1	5.0107	ug/L	5.0107	ppb	10:18:26
1	Ca 317.933Radial†	95.1	79.5	197.91	ug/L	197.91	ppb	10:17:25
1	Cd 226.502†	377.6	659.9	4.9265	ug/L	4.9265	ppb	10:18:47
1	Co 228.616†	298.6	392.8	4.9073	ug/L	4.9073	ppb	10:18:47
1	Cr 267.716†	559.7	595.3	5.0626	ug/L	5.0626	ppb	10:18:47
1	Cu 324.752†	13982.0	3964.4	9.7874	ug/L	9.7874	ppb	10:18:26
1	Fe 238.204 Radial†	3.4	3.1	108.63	ug/L	108.63	ppb	10:17:25
1	K 766.490 Radial†	1881.1	433.9	188.09	ug/L	188.09	ppb	10:17:05
1	Mg 279.077 IEC†	3.4	3.3	260.55	ug/L	260.55	ppb	10:17:25
1	Mn 257.610†	13937.0	13283.1	10.506	ug/L	10.506	ppb	10:18:26
1	Mo 202.031†	283.1	254.8	10.207	ug/L	10.207	ppb	10:18:47
1	Na 589.592 Radial†	-73.9	95.5	258.17	ug/L	258.17	ppb	10:17:25
1	Ni 231.604†	470.7	328.3	5.2585	ug/L	5.2585	ppb	10:18:47
1	P 214.914†	747.0	419.3	146.74	ug/L	146.74	ppb	10:18:47
1	Pb 220.353†	129.9	160.5	12.084	ug/L	12.084	ppb	10:18:47
1	S 181.975 Axial†	177.5	111.8	94.633	ug/L	94.633	ppb	10:18:47
1	Sb 206.836†	107.1	63.0	12.627	ug/L	12.627	ppb	10:18:47
1	Se 196.026†	79.0	101.6	33.458	ug/L	33.458	ppb	10:18:47
1	Si 251.611†	5379.4	4886.1	100.55	ug/L	100.55	ppb	10:18:26
1	Sn 189.927†	102.0	97.8	10.192	ug/L	10.192	ppb	10:18:47
1	Sr 421.552†	343.2	342.5	5.2744	ug/L	5.2744	ppb	10:17:25
1	Ti 334.940†	2629.6	3771.5	4.9245	ug/L	4.9245	ppb	10:18:26
1	Tl 190.801†	45.6	107.5	18.194	ug/L	18.194	ppb	10:18:47
1	U 409.014†	-1614.8	2199.9	54.559	ug/L	54.559	ppb	10:18:21
1	V 292.402†	-733.6	910.1	5.3790	ug/L	5.3790	ppb	10:18:26
1	Zn 213.857†	2833.5	1746.3	9.6832	ug/L	9.6832	ppb	10:18:47
1	SiO2†	5363.4	4827.7	212.72	ug/L	212.72	ppb	10:19:53
2	Sc 361.383	1047486.5	1047486.5	98.737	%			10:18:52
2	Sc Radial	5556.3	5556.3	99.8	%			10:17:30
2	Y 371.029	843422.2	843422.2	98.852	%			10:18:52
2	Y RADIAL	4839.9	4839.9	100.5	%			10:17:30
2	Ag 328.068†	1979.1	1365.8	5.4057	ug/L	5.4057	ppb	10:18:57
2	Al 396.153Radial†	131.7	224.1	203.50	ug/L	203.50	ppb	10:17:30
2	As 188.979†	79.1	117.0	27.460	ug/L	27.460	ppb	10:19:17
2	B 249.677†	2837.5	3255.3	50.709	ug/L	50.709	ppb	10:18:57
2	Ba 233.527†	999.5	988.0	5.0149	ug/L	5.0149	ppb	10:19:17
2	Be 313.107†	8590.8	16016.9	4.9918	ug/L	4.9918	ppb	10:18:57
2	Ca 317.933Radial†	97.2	80.4	200.20	ug/L	200.20	ppb	10:17:50
2	Cd 226.502†	375.2	657.6	4.9119	ug/L	4.9119	ppb	10:19:17
2	Co 228.616†	313.3	407.7	5.0943	ug/L	5.0943	ppb	10:19:17
2	Cr 267.716†	522.4	557.7	4.7420	ug/L	4.7420	ppb	10:19:17
2	Cu 324.752†	14012.6	4000.6	9.8754	ug/L	9.8754	ppb	10:18:57
2	Fe 238.204 Radial†	2.8	2.4	85.690	ug/L	85.690	ppb	10:17:50
2	K 766.490 Radial†	1891.7	421.5	182.69	ug/L	182.69	ppb	10:17:30
2	Mg 279.077 IEC†	3.4	3.3	259.03	ug/L	259.03	ppb	10:17:50
2	Mn 257.610†	13825.0	13174.8	10.418	ug/L	10.418	ppb	10:18:57
2	Mo 202.031†	288.8	260.7	10.442	ug/L	10.442	ppb	10:19:17
2	Na 589.592 Radial†	-60.0	110.3	298.35	ug/L	298.35	ppb	10:17:50
2	Ni 231.604†	467.6	325.3	5.2109	ug/L	5.2109	ppb	10:19:17

2	P 214.914†	747.1	419.7	146.89 ug/L	146.89 ppb	10:19:17
2	Pb 220.353†	109.3	139.8	10.531 ug/L	10.531 ppb	10:19:17
2	S 181.975 Axial†	174.7	109.1	92.292 ug/L	92.292 ppb	10:19:17
2	Sb 206.836†	103.9	59.8	12.037 ug/L	12.037 ppb	10:19:17
2	Se 196.026†	78.5	101.1	33.226 ug/L	33.226 ppb	10:19:17
2	Si 251.611†	5425.5	4934.8	101.55 ug/L	101.55 ppb	10:18:57
2	Sn 189.927†	110.5	106.5	11.091 ug/L	11.091 ppb	10:19:17
2	Sr 421.552†	350.2	345.2	5.3169 ug/L	5.3169 ppb	10:17:50
2	Ti 334.940†	2664.9	3808.2	4.9728 ug/L	4.9728 ppb	10:18:57
2	Tl 190.801†	64.2	126.4	21.375 ug/L	21.375 ppb	10:19:17
2	U 409.014†	-1616.1	2197.9	54.515 ug/L	54.515 ppb	10:18:52
2	V 292.402†	-696.6	947.3	5.5964 ug/L	5.5964 ppb	10:18:57
2	Zn 213.857†	2826.6	1740.4	9.6528 ug/L	9.6528 ppb	10:19:17
2	SiO2†	5326.0	4791.8	211.13 ug/L	211.13 ppb	10:19:58
3	Sc 361.383	1064715.9	1064715.9	100.36 %		10:19:22
3	Sc Radial	5636.0	5636.0	101 %		10:17:55
3	Y 371.029	857151.8	857151.8	100.46 %		10:19:22
3	Y RADIAL	4900.5	4900.5	101.8 %		10:17:55
3	Ag 328.068†	1947.8	1302.2	5.1615 ug/L	5.1615 ppb	10:19:27
3	Al 396.153Radial†	113.0	203.8	185.06 ug/L	185.06 ppb	10:17:55
3	As 188.979†	78.8	115.4	27.092 ug/L	27.092 ppb	10:19:47
3	B 249.677†	2917.2	3288.2	51.219 ug/L	51.219 ppb	10:19:27
3	Ba 233.527†	1004.9	977.0	4.9582 ug/L	4.9582 ppb	10:19:47
3	Be 313.107†	8767.1	16051.7	5.0025 ug/L	5.0025 ppb	10:19:27
3	Ca 317.933Radial†	96.9	78.7	196.13 ug/L	196.13 ppb	10:18:15
3	Cd 226.502†	363.6	640.0	4.7768 ug/L	4.7768 ppb	10:19:47
3	Co 228.616†	310.3	399.6	4.9919 ug/L	4.9919 ppb	10:19:47
3	Cr 267.716†	528.2	554.9	4.7188 ug/L	4.7188 ppb	10:19:47
3	Cu 324.752†	14146.2	3904.0	9.6387 ug/L	9.6387 ppb	10:19:27
3	Fe 238.204 Radial†	3.6	3.2	111.85 ug/L	111.85 ppb	10:18:15
3	K 766.490 Radial†	1829.8	333.6	144.57 ug/L	144.57 ppb	10:17:55
3	Mg 279.077 IEC†	6.0	5.8	456.93 ug/L	456.93 ppb	10:18:15
3	Mn 257.610†	14031.0	13153.4	10.401 ug/L	10.401 ppb	10:19:27
3	Mo 202.031†	277.9	245.2	9.8210 ug/L	9.8210 ppb	10:19:47
3	Na 589.592 Radial†	-65.4	105.8	286.15 ug/L	286.15 ppb	10:18:15
3	Ni 231.604†	473.1	323.1	5.1761 ug/L	5.1761 ppb	10:19:47
3	P 214.914†	766.3	426.6	149.31 ug/L	149.31 ppb	10:19:47
3	Pb 220.353†	121.9	150.5	11.326 ug/L	11.326 ppb	10:19:47
3	S 181.975 Axial†	173.4	104.9	88.788 ug/L	88.788 ppb	10:19:47
3	Sb 206.836†	88.6	42.9	8.6819 ug/L	8.6819 ppb	10:19:47
3	Se 196.026†	79.8	101.1	33.313 ug/L	33.313 ppb	10:19:47
3	Si 251.611†	5402.9	4823.3	99.277 ug/L	99.277 ppb	10:19:27
3	Sn 189.927†	103.1	97.3	10.137 ug/L	10.137 ppb	10:19:47
3	Sr 421.552†	361.1	351.1	5.4073 ug/L	5.4073 ppb	10:18:15
3	Ti 334.940†	2655.9	3755.6	4.9047 ug/L	4.9047 ppb	10:19:27
3	Tl 190.801†	61.2	122.4	20.700 ug/L	20.700 ppb	10:19:47
3	U 409.014†	-1729.9	2111.1	52.358 ug/L	52.358 ppb	10:19:22
3	V 292.402†	-842.5	813.3	4.8240 ug/L	4.8240 ppb	10:19:27
3	Zn 213.857†	2842.9	1710.3	9.4754 ug/L	9.4754 ppb	10:19:47
3	SiO2†	5379.4	4757.6	209.68 ug/L	209.68 ppb	10:20:03

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1053357.1	99.291	%	0.9274				0.93%
Sc Radial	5560.5	99.9	%	1.32				1.32%
Y 371.029	847966.2	99.385	%	0.9324				0.94%
Y RADIAL	4830.0	100.3	%	1.58				1.57%
Ag 328.068†	1320.7	5.2318	ug/L	0.15157	5.2318	ppb	0.15157	2.90%
QC value within limits for Ag 328.068 Recovery = 104.64%								
Al 396.153Radial†	219.8	199.60	ug/L	13.038	199.60	ppb	13.038	6.53%
QC value within limits for Al 396.153Radial Recovery = 99.80%								
As 188.979†	113.5	26.635	ug/L	1.1249	26.635	ppb	1.1249	4.22%
QC value within limits for As 188.979 Recovery = 88.78%								
B 249.677†	3295.4	51.333	ug/L	0.6874	51.333	ppb	0.6874	1.34%
QC value within limits for B 249.677 Recovery = 102.67%								
Ba 233.527†	991.0	5.0297	ug/L	0.08000	5.0297	ppb	0.08000	1.59%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	16048.9	5.0017	ug/L	0.00949	5.0017	ppb	0.00949	0.19%
QC value within limits for Be 313.107 Recovery = 100.03%								

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Ca 317.933Radial†          79.5      198.08 ug/L        2.042      198.08 ppb        2.042   1.03%
   QC value within limits for Ca 317.933Radial  Recovery = 99.04%
Cd 226.502†               652.5      4.8717 ug/L      0.08254      4.8717 ppb      0.08254   1.69%
   QC value within limits for Cd 226.502  Recovery = 97.43%
Co 228.616†               400.0      4.9978 ug/L      0.09363      4.9978 ppb      0.09363   1.87%
   QC value within limits for Co 228.616  Recovery = 99.96%
Cr 267.716†               569.3      4.8411 ug/L      0.19215      4.8411 ppb      0.19215   3.97%
   QC value within limits for Cr 267.716  Recovery = 96.82%
Cu 324.752†              3956.3      9.7672 ug/L      0.11961      9.7672 ppb      0.11961   1.22%
   QC value within limits for Cu 324.752  Recovery = 97.67%
Fe 238.204 Radial†          2.9      102.06 ug/L       14.266      102.06 ppb       14.266  13.98%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.06%
K 766.490 Radial†         396.3      171.78 ug/L       23.724      171.78 ppb       23.724  13.81%
   QC value within limits for K 766.490 Radial  Recovery = 114.52%
Mg 279.077 IEC†             4.1      325.50 ug/L      113.822      325.50 ppb      113.822  34.97%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.50%
Mn 257.610†             13203.8      10.442 ug/L       0.0568      10.442 ppb       0.0568   0.54%
   QC value within limits for Mn 257.610  Recovery = 104.42%
Mo 202.031†               253.6      10.157 ug/L       0.3133      10.157 ppb       0.3133   3.09%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†        103.9      280.89 ug/L       20.599      280.89 ppb       20.599   7.33%
   QC value within limits for Na 589.592 Radial  Recovery = 93.63%
Ni 231.604†               325.6      5.2152 ug/L      0.04137      5.2152 ppb      0.04137   0.79%
   QC value within limits for Ni 231.604  Recovery = 104.30%
P 214.914†                421.9      147.65 ug/L        1.445      147.65 ppb        1.445   0.98%
   QC value within limits for P 214.914  Recovery = 98.43%
Pb 220.353†               150.3      11.314 ug/L       0.7766      11.314 ppb       0.7766   6.86%
   QC value within limits for Pb 220.353  Recovery = 113.14%
S 181.975 Axial†          108.6      91.904 ug/L       2.9414      91.904 ppb       2.9414   3.20%
   QC value within limits for S 181.975 Axial  Recovery = 91.90%
Sb 206.836†                55.2      11.115 ug/L       2.1279      11.115 ppb       2.1279  19.14%
   QC value within limits for Sb 206.836  Recovery = 111.15%
Se 196.026†               101.3      33.332 ug/L       0.1173      33.332 ppb       0.1173   0.35%
   QC value within limits for Se 196.026  Recovery = 111.11%
Si 251.611†              4881.4      100.46 ug/L        1.140      100.46 ppb        1.140   1.13%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†               100.5      10.473 ug/L       0.5359      10.473 ppb       0.5359   5.12%
   QC value within limits for Sn 189.927  Recovery = 104.73%
Sr 421.552†               346.3      5.3328 ug/L      0.06788      5.3328 ppb      0.06788   1.27%
   QC value within limits for Sr 421.552  Recovery = 106.66%
Ti 334.940†              3778.5      4.9340 ug/L      0.03506      4.9340 ppb      0.03506   0.71%
   QC value within limits for Ti 334.940  Recovery = 98.68%
Tl 190.801†               118.8      20.090 ug/L       1.6764      20.090 ppb       1.6764   8.34%
   QC value within limits for Tl 190.801  Recovery = 100.45%
U 409.014†               2169.6      53.811 ug/L       1.2585      53.811 ppb       1.2585   2.34%
   QC value within limits for U 409.014  Recovery = 107.62%
V 292.402†                890.2      5.2665 ug/L      0.39826      5.2665 ppb      0.39826   7.56%
   QC value within limits for V 292.402  Recovery = 105.33%
Zn 213.857†              1732.3      9.6038 ug/L      0.11224      9.6038 ppb      0.11224   1.17%
   QC value within limits for Zn 213.857  Recovery = 96.04%
SiO2†                    4792.4      211.18 ug/L        1.524      211.18 ppb        1.524   0.72%
   QC value within limits for SiO2  Recovery = 99.14%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/8/2009 10:22:14
Data Type: Reprocessed on 7/8/2009 11:40:12

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	895501.5	895501.5	84.411	%			10:25:25
1	Sc Radial	5081.7	5081.7	91.3	%			10:24:27
1	Y 371.029	714523.0	714523.0	83.745	%			10:25:25
1	Y RADIAL	4391.8	4391.8	91.20	%			10:24:27
1	Ag 328.068†	-10393.0	-12951.0	1.0699	ug/L	1.0699	ppb	10:25:25
1	Al 396.153Radial†	511366.0	560078.8	509800	ug/L	509800	ppb	10:24:07
1	As 188.979†	-139.2	-128.0	6.5707	ug/L	6.5707	ppb	10:25:45
1	B 249.677†	908.6	1457.9	-1.6992	ug/L	-1.6992	ppb	10:25:25
1	Ba 233.527†	-495.8	-611.7	1.2025	ug/L	1.2025	ppb	10:25:45
1	Be 313.107†	-7530.9	-1605.5	-0.5734	ug/L	-0.5734	ppb	10:25:25
1	Ca 317.933Radial†	172461.7	188842.4	470380	ug/L	470380	ppb	10:24:07
1	Cd 226.502†	2108.2	2775.1	-0.9878	ug/L	-0.9878	ppb	10:25:45
1	Co 228.616†	-24.7	61.1	-1.8391	ug/L	-1.8391	ppb	10:25:45
1	Cr 267.716†	-320.2	-350.7	0.5961	ug/L	0.5961	ppb	10:25:45
1	Cu 324.752†	6421.7	-2583.6	4.2681	ug/L	4.2681	ppb	10:25:25
1	Fe 238.204 Radial†	4791.8	5247.1	184080	ug/L	184080	ppb	10:24:27
1	K 766.490 Radial†	1268.1	-84.4	17.211	ug/L	17.211	ppb	10:24:07
1	Mg 279.077 IEC†	5667.1	6205.7	491320	ug/L	491320	ppb	10:24:27
1	Mn 257.610†	-1965.4	-3155.4	12.011	ug/L	12.011	ppb	10:25:25
1	Mo 202.031†	-328.7	-421.2	-4.2268	ug/L	-4.2268	ppb	10:25:45
1	Na 589.592 Radial†	-173.4	-19.4	-52.528	ug/L	-52.528	ppb	10:24:27
1	Ni 231.604†	337.4	251.5	4.0300	ug/L	4.0300	ppb	10:25:45
1	P 214.914†	293.5	10.8	28.559	ug/L	28.559	ppb	10:25:45
1	Pb 220.353†	-942.6	-1087.6	0.6717	ug/L	0.6717	ppb	10:25:45
1	S 181.975 Axial†	128.7	84.6	-28.638	ug/L	-28.638	ppb	10:25:45
1	Sb 206.836†	101.4	74.7	-0.8382	ug/L	-0.8382	ppb	10:25:45
1	Se 196.026†	-1802.9	-2114.3	-13.357	ug/L	-13.357	ppb	10:25:45
1	Si 251.611†	614.8	168.2	3.9128	ug/L	3.9128	ppb	10:25:45
1	Sn 189.927†	-348.4	-418.3	-4.5225	ug/L	-4.5225	ppb	10:25:45
1	Sr 421.552†	258.7	277.9	-0.0791	ug/L	-0.0791	ppb	10:24:27
1	Ti 334.940†	-21523.1	-24388.8	-0.4475	ug/L	-0.4475	ppb	10:25:25
1	Tl 190.801†	-123.2	-84.6	-11.647	ug/L	-11.647	ppb	10:25:45
1	U 409.014†	-2645.4	700.7	-5.2282	ug/L	-5.2282	ppb	10:25:25
1	V 292.402†	867.3	2680.3	-1.8957	ug/L	-1.8957	ppb	10:25:45
1	Zn 213.857†	5199.0	5036.8	-8.7856	ug/L	-8.7856	ppb	10:25:45
1	SiO2†	554.5	54.6	3.3717	ug/L	3.3717	ppb	10:26:41
2	Sc 361.383	894719.3	894719.3	84.337	%			10:25:50
2	Sc Radial	5092.9	5092.9	91.5	%			10:24:53
2	Y 371.029	715579.1	715579.1	83.869	%			10:25:50
2	Y RADIAL	4406.9	4406.9	91.51	%			10:24:53
2	Ag 328.068†	-10345.8	-12905.8	1.4483	ug/L	1.4483	ppb	10:25:50
2	Al 396.153Radial†	515497.0	563358.3	512790	ug/L	512790	ppb	10:24:33
2	As 188.979†	-138.6	-127.5	6.8312	ug/L	6.8312	ppb	10:26:10
2	B 249.677†	761.2	1284.1	-4.5082	ug/L	-4.5082	ppb	10:25:50
2	Ba 233.527†	-460.6	-570.4	1.4270	ug/L	1.4270	ppb	10:26:10
2	Be 313.107†	-7458.7	-1527.7	-0.5517	ug/L	-0.5517	ppb	10:25:50
2	Ca 317.933Radial†	173876.6	189972.1	473190	ug/L	473190	ppb	10:24:33
2	Cd 226.502†	2120.9	2792.4	-0.9470	ug/L	-0.9470	ppb	10:26:10
2	Co 228.616†	-11.2	77.1	-1.6492	ug/L	-1.6492	ppb	10:26:10
2	Cr 267.716†	-331.2	-364.1	0.4968	ug/L	0.4968	ppb	10:26:10
2	Cu 324.752†	6524.1	-2455.6	4.6269	ug/L	4.6269	ppb	10:25:50
2	Fe 238.204 Radial†	4821.9	5268.4	184820	ug/L	184820	ppb	10:24:53
2	K 766.490 Radial†	1216.4	-143.9	-8.5744	ug/L	-8.5744	ppb	10:24:33
2	Mg 279.077 IEC†	5711.8	6240.9	494110	ug/L	494110	ppb	10:24:53
2	Mn 257.610†	-2242.7	-3486.2	11.793	ug/L	11.793	ppb	10:25:50
2	Mo 202.031†	-331.9	-425.4	-4.3417	ug/L	-4.3417	ppb	10:26:10
2	Na 589.592 Radial†	-158.9	-3.3	-8.8064	ug/L	-8.8064	ppb	10:24:53
2	Ni 231.604†	322.8	234.5	3.7578	ug/L	3.7578	ppb	10:26:10

2	P 214.914†	282.3	-2.2	24.298	ug/L	24.298 ppb	10:26:10
2	Pb 220.353†	-980.2	-1133.2	-2.2283	ug/L	-2.2283 ppb	10:26:10
2	S 181.975 Axial†	133.9	90.9	-23.927	ug/L	-23.927 ppb	10:26:10
2	Sb 206.836†	107.1	81.5	0.3983	ug/L	0.3983 ppb	10:26:10
2	Se 196.026†	-1828.8	-2146.8	-21.144	ug/L	-21.144 ppb	10:26:10
2	Si 251.611†	621.0	176.2	4.0917	ug/L	4.0917 ppb	10:26:10
2	Sn 189.927†	-354.8	-426.2	-5.1179	ug/L	-5.1179 ppb	10:26:10
2	Sr 421.552†	253.4	271.4	-0.2039	ug/L	-0.2039 ppb	10:24:53
2	Ti 334.940†	-22184.0	-25194.7	-1.3121	ug/L	-1.3121 ppb	10:25:50
2	Tl 190.801†	-105.2	-63.3	-8.0480	ug/L	-8.0480 ppb	10:26:10
2	U 409.014†	-2792.9	523.2	-9.7248	ug/L	-9.7248 ppb	10:25:50
2	V 292.402†	765.0	2559.9	-2.6434	ug/L	-2.6434 ppb	10:26:10
2	Zn 213.857†	5183.7	5024.0	-9.0326	ug/L	-9.0326 ppb	10:26:10
2	SiO2†	499.4	-10.2	0.5414	ug/L	0.5414 ppb	10:26:46
3	Sc 361.383	893780.1	893780.1	84.249	%		10:26:15
3	Sc Radial	5118.7	5118.7	92.0	%		10:25:18
3	Y 371.029	713970.1	713970.1	83.680	%		10:26:15
3	Y RADIAL	4426.1	4426.1	91.91	%		10:25:18
3	Ag 328.068†	-10409.3	-12994.0	1.2796	ug/L	1.2796 ppb	10:26:15
3	Al 396.153Radial†	508361.4	552762.3	503140	ug/L	503140 ppb	10:24:58
3	As 188.979†	-128.5	-115.7	9.6416	ug/L	9.6416 ppb	10:26:36
3	B 249.677†	835.5	1373.2	-3.1464	ug/L	-3.1464 ppb	10:26:15
3	Ba 233.527†	-496.7	-613.9	1.2131	ug/L	1.2131 ppb	10:26:36
3	Be 313.107†	-7571.9	-1671.3	-0.5963	ug/L	-0.5963 ppb	10:26:15
3	Ca 317.933Radial†	171828.3	186787.9	465260	ug/L	465260 ppb	10:24:58
3	Cd 226.502†	2103.7	2774.7	-1.1037	ug/L	-1.1037 ppb	10:26:36
3	Co 228.616†	-21.9	64.4	-1.8116	ug/L	-1.8116 ppb	10:26:36
3	Cr 267.716†	-287.1	-312.1	0.9428	ug/L	0.9428 ppb	10:26:36
3	Cu 324.752†	6618.2	-2335.7	4.9347	ug/L	4.9347 ppb	10:26:15
3	Fe 238.204 Radial†	4851.7	5274.3	185030	ug/L	185030 ppb	10:25:18
3	K 766.490 Radial†	1220.8	-145.9	-8.5400	ug/L	-8.5400 ppb	10:24:58
3	Mg 279.077 IEC†	5734.1	6233.7	493540	ug/L	493540 ppb	10:25:18
3	Mn 257.610†	-2195.1	-3432.5	11.873	ug/L	11.873 ppb	10:26:15
3	Mo 202.031†	-345.3	-441.6	-4.9774	ug/L	-4.9774 ppb	10:26:36
3	Na 589.592 Radial†	-160.0	-3.5	-9.5568	ug/L	-9.5568 ppb	10:25:18
3	Ni 231.604†	344.5	260.6	4.1763	ug/L	4.1763 ppb	10:26:36
3	P 214.914†	258.2	-30.4	10.851	ug/L	10.851 ppb	10:26:36
3	Pb 220.353†	-979.4	-1133.4	-4.1545	ug/L	-4.1545 ppb	10:26:36
3	S 181.975 Axial†	130.4	86.9	-25.395	ug/L	-25.395 ppb	10:26:36
3	Sb 206.836†	118.6	95.4	3.4218	ug/L	3.4218 ppb	10:26:36
3	Se 196.026†	-1802.6	-2118.0	-11.599	ug/L	-11.599 ppb	10:26:36
3	Si 251.611†	555.6	99.4	2.5199	ug/L	2.5199 ppb	10:26:36
3	Sn 189.927†	-358.0	-430.4	-6.1399	ug/L	-6.1399 ppb	10:26:36
3	Sr 421.552†	264.5	282.1	0.0330	ug/L	0.0330 ppb	10:25:18
3	Ti 334.940†	-22156.0	-25189.1	-1.8382	ug/L	-1.8382 ppb	10:26:15
3	Tl 190.801†	-115.0	-75.1	-10.083	ug/L	-10.083 ppb	10:26:36
3	U 409.014†	-2610.1	736.7	-4.4537	ug/L	-4.4537 ppb	10:26:15
3	V 292.402†	851.7	2663.7	-2.0904	ug/L	-2.0904 ppb	10:26:36
3	Zn 213.857†	5227.2	5082.1	-8.7142	ug/L	-8.7142 ppb	10:26:36
3	SiO2†	573.2	78.0	4.4641	ug/L	4.4641 ppb	10:26:51

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	894667.0	84.332	%	0.0812				0.10%
Sc Radial	5097.8	91.6	%	0.34				0.37%
Y 371.029	714690.7	83.764	%	0.0958				0.11%
Y RADIAL	4408.3	91.54	%	0.357				0.39%
Ag 328.068†	-12950.3	1.2659	ug/L	0.18957	1.2659	ppb	0.18957	14.97%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	558733.1	508580	ug/L	4937.7	508580	ppb	4937.7	0.97%
QC value within limits for Al 396.153Radial Recovery = 101.72%								
As 188.979†	-123.7	7.6812	ug/L	1.70280	7.6812	ppb	1.70280	22.17%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1371.7	-3.1179	ug/L	1.40468	-3.1179	ppb	1.40468	45.05%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-598.7	1.2809	ug/L	0.12664	1.2809	ppb	0.12664	9.89%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1601.5	-0.5738	ug/L	0.02233	-0.5738	ppb	0.02233	3.89%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†     188534.1      469610 ug/L        4021.0      469610 ppb        4021.0   0.86%
   QC value within limits for Ca 317.933Radial  Recovery = 93.92%
Cd 226.502†             2780.7     -1.0128 ug/L       0.08129     -1.0128 ppb       0.08129   8.03%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               67.6     -1.7666 ug/L       0.10262     -1.7666 ppb       0.10262   5.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -342.3      0.6786 ug/L       0.23414      0.6786 ppb       0.23414  34.51%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -2458.3      4.6099 ug/L       0.33361      4.6099 ppb       0.33361   7.24%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†      5263.2      184640 ug/L         500.8      184640 ppb         500.8   0.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 92.32%
K 766.490 Radial†       -124.8      0.0323 ug/L      14.87743      0.0323 ppb      14.87743 >999.9%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†         6226.8      492990 ug/L        1472.2      492990 ppb        1472.2   0.30%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.60%
Mn 257.610†            -3358.1      11.893 ug/L        0.1103      11.893 ppb        0.1103   0.93%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -429.4     -4.5153 ug/L       0.40430     -4.5153 ppb       0.40430   8.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.630 ug/L       25.0287     -23.630 ppb       25.0287 105.92%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               248.9      3.9880 ug/L       0.21242      3.9880 ppb       0.21242   5.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -7.3      21.236 ug/L        9.2429      21.236 ppb        9.2429  43.52%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -1118.1     -1.9037 ug/L       2.42937     -1.9037 ppb       2.42937 127.61%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          87.5     -25.987 ug/L        2.4107     -25.987 ppb        2.4107   9.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               83.9      0.9940 ug/L       2.19156      0.9940 ppb       2.19156 220.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†            -2126.4     -15.367 ug/L        5.0800     -15.367 ppb        5.0800  33.06%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              148.0      3.5081 ug/L       0.86048      3.5081 ppb       0.86048  24.53%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -424.9     -5.2601 ug/L       0.81802     -5.2601 ppb       0.81802  15.55%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              277.1     -0.0833 ug/L       0.11853     -0.0833 ppb       0.11853 142.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†           -24924.2     -1.1993 ug/L       0.70220     -1.1993 ppb       0.70220  58.55%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -74.3     -9.9258 ug/L       1.80446     -9.9258 ppb       1.80446  18.18%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               653.6     -6.4689 ug/L       2.84611     -6.4689 ppb       2.84611  44.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              2634.7     -2.2098 ug/L       0.38789     -2.2098 ppb       0.38789  17.55%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             5047.6     -8.8442 ug/L       0.16704     -8.8442 ppb       0.16704   1.89%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    40.8      2.7924 ug/L       2.02453      2.7924 ppb       2.02453  72.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/8/2009 10:29:02
Data Type: Reprocessed on 7/8/2009 11:40:13

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	922949.8	922949.8	86.998	%			10:31:27
1	Sc Radial	5088.8	5088.8	91.4	%			10:30:59
1	Y 371.029	724486.5	724486.5	84.913	%			10:31:27
1	Y RADIAL	4396.5	4396.5	91.29	%			10:30:59
1	Ag 328.068†	51134.8	58138.2	284.08	ug/L	284.08	ppb	10:31:27
1	Al 396.153Radial†	511214.8	559124.8	508910	ug/L	508910	ppb	10:30:54
1	As 188.979†	1778.1	2080.7	527.29	ug/L	527.29	ppb	10:31:32
1	B 249.677†	30305.4	35216.0	523.28	ug/L	523.28	ppb	10:31:27
1	Ba 233.527†	84926.5	97594.3	499.43	ug/L	499.43	ppb	10:31:27
1	Be 313.107†	685114.1	794819.0	248.28	ug/L	248.28	ppb	10:31:27
1	Ca 317.933Radial†	171487.2	187510.8	467060	ug/L	467060	ppb	10:30:54
1	Cd 226.502†	56191.8	64867.2	463.74	ug/L	463.74	ppb	10:31:32
1	Co 228.616†	32068.4	36951.4	457.93	ug/L	457.93	ppb	10:31:32
1	Cr 267.716†	48976.1	56324.0	483.93	ug/L	483.93	ppb	10:31:32
1	Cu 324.752†	206474.7	227140.6	571.05	ug/L	571.05	ppb	10:31:27
1	Fe 238.204 Radial†	4792.9	5240.9	183870	ug/L	183870	ppb	10:30:59
1	K 766.490 Radial†	13633.7	13435.9	5876.8	ug/L	5876.8	ppb	10:30:59
1	Mg 279.077 IEC†	5720.0	6254.8	495220	ug/L	495220	ppb	10:30:59
1	Mn 257.610†	527932.1	606003.4	493.31	ug/L	493.31	ppb	10:31:27
1	Mo 202.031†	10741.5	12315.0	505.56	ug/L	505.56	ppb	10:31:32
1	Na 589.592 Radial†	1742.5	2075.9	5612.9	ug/L	5612.9	ppb	10:30:59
1	Ni 231.604†	24947.6	28527.7	456.94	ug/L	456.94	ppb	10:31:32
1	P 214.914†	6681.5	7343.1	2535.6	ug/L	2535.6	ppb	10:31:32
1	Pb 220.353†	4555.0	5264.8	477.54	ug/L	477.54	ppb	10:31:32
1	S 181.975 Axial†	2933.7	3304.3	2696.9	ug/L	2696.9	ppb	10:31:32
1	Sb 206.836†	2595.0	2937.4	568.65	ug/L	568.65	ppb	10:31:32
1	Se 196.026†	4971.6	5736.2	2540.6	ug/L	2540.6	ppb	10:31:32
1	Si 251.611†	227538.2	260983.1	5373.3	ug/L	5373.3	ppb	10:31:27
1	Sn 189.927†	3829.4	4396.2	495.92	ug/L	495.92	ppb	10:31:32
1	Sr 421.552†	32732.9	35789.2	547.06	ug/L	547.06	ppb	10:30:59
1	Ti 334.940†	325076.1	374767.2	521.46	ug/L	521.46	ppb	10:31:27
1	Tl 190.801†	2320.9	2729.1	464.98	ug/L	464.98	ppb	10:31:32
1	U 409.014†	14389.0	20374.2	482.00	ug/L	482.00	ppb	10:31:27
1	V 292.402†	80410.6	94080.6	523.26	ug/L	523.26	ppb	10:31:27
1	Zn 213.857†	83783.0	95181.8	490.76	ug/L	490.76	ppb	10:31:27
1	SiO2†	225071.9	258106.1	11379	ug/L	11379	ppb	10:31:59
2	Sc 361.383	922512.9	922512.9	86.957	%			10:31:38
2	Sc Radial	5114.2	5114.2	91.9	%			10:31:09
2	Y 371.029	723615.1	723615.1	84.810	%			10:31:38
2	Y RADIAL	4434.0	4434.0	92.07	%			10:31:09
2	Ag 328.068†	51203.8	58245.4	284.11	ug/L	284.11	ppb	10:31:38
2	Al 396.153Radial†	516287.7	561868.9	511410	ug/L	511410	ppb	10:31:04
2	As 188.979†	1781.2	2085.2	528.14	ug/L	528.14	ppb	10:31:43
2	B 249.677†	30212.2	35125.3	522.01	ug/L	522.01	ppb	10:31:38
2	Ba 233.527†	84896.2	97605.7	499.46	ug/L	499.46	ppb	10:31:38
2	Be 313.107†	684415.6	794388.8	248.15	ug/L	248.15	ppb	10:31:38
2	Ca 317.933Radial†	173685.3	188971.4	470700	ug/L	470700	ppb	10:31:04
2	Cd 226.502†	56169.1	64871.7	463.90	ug/L	463.90	ppb	10:31:43
2	Co 228.616†	32009.7	36901.3	457.33	ug/L	457.33	ppb	10:31:43
2	Cr 267.716†	48984.7	56360.6	484.22	ug/L	484.22	ppb	10:31:43
2	Cu 324.752†	206739.8	227557.9	572.02	ug/L	572.02	ppb	10:31:38
2	Fe 238.204 Radial†	4789.5	5211.1	182830	ug/L	182830	ppb	10:31:09
2	K 766.490 Radial†	13696.8	13430.5	5873.6	ug/L	5873.6	ppb	10:31:09
2	Mg 279.077 IEC†	5700.6	6202.7	491090	ug/L	491090	ppb	10:31:09
2	Mn 257.610†	527491.9	605784.5	493.08	ug/L	493.08	ppb	10:31:38
2	Mo 202.031†	10795.6	12383.1	508.21	ug/L	508.21	ppb	10:31:43
2	Na 589.592 Radial†	1739.5	2063.2	5578.5	ug/L	5578.5	ppb	10:31:09
2	Ni 231.604†	25007.5	28610.2	458.26	ug/L	458.26	ppb	10:31:43

2	P 214.914†	6657.3	7318.9	2528.5	ug/L	2528.5 ppb	10:31:43
2	Pb 220.353†	4521.9	5229.2	475.47	ug/L	475.47 ppb	10:31:43
2	S 181.975 Axial†	2966.6	3343.8	2729.8	ug/L	2729.8 ppb	10:31:43
2	Sb 206.836†	2571.5	2911.7	563.53	ug/L	563.53 ppb	10:31:43
2	Se 196.026†	5128.9	5919.8	2596.7	ug/L	2596.7 ppb	10:31:43
2	Si 251.611†	227663.7	261251.4	5378.8	ug/L	5378.8 ppb	10:31:38
2	Sn 189.927†	3812.8	4379.2	494.42	ug/L	494.42 ppb	10:31:43
2	Sr 421.552†	32971.9	35871.6	548.29	ug/L	548.29 ppb	10:31:09
2	Ti 334.940†	325093.7	374964.5	521.96	ug/L	521.96 ppb	10:31:38
2	Tl 190.801†	2278.3	2681.4	456.94	ug/L	456.94 ppb	10:31:43
2	U 409.014†	14518.6	20531.0	486.02	ug/L	486.02 ppb	10:31:38
2	V 292.402†	80202.9	93885.5	522.26	ug/L	522.26 ppb	10:31:38
2	Zn 213.857†	83836.4	95288.9	491.61	ug/L	491.61 ppb	10:31:38
2	SiO2†	226952.2	260390.9	11480	ug/L	11480 ppb	10:32:04
3	Sc 361.383	916394.6	916394.6	86.380	%		10:31:49
3	Sc Radial	5092.1	5092.1	91.5	%		10:31:20
3	Y 371.029	718336.1	718336.1	84.192	%		10:31:49
3	Y RADIAL	4424.4	4424.4	91.87	%		10:31:20
3	Ag 328.068†	50974.6	58373.2	285.14	ug/L	285.14 ppb	10:31:49
3	Al 396.153Radial†	519866.9	568222.7	517200	ug/L	517200 ppb	10:31:15
3	As 188.979†	1750.1	2062.9	523.28	ug/L	523.28 ppb	10:31:54
3	B 249.677†	30095.4	35222.0	523.28	ug/L	523.28 ppb	10:31:49
3	Ba 233.527†	84510.6	97811.1	500.55	ug/L	500.55 ppb	10:31:49
3	Be 313.107†	680536.4	795152.9	248.38	ug/L	248.38 ppb	10:31:49
3	Ca 317.933Radial†	174798.8	191009.9	475780	ug/L	475780 ppb	10:31:15
3	Cd 226.502†	55239.4	64226.6	458.85	ug/L	458.85 ppb	10:31:54
3	Co 228.616†	31559.8	36626.3	453.86	ug/L	453.86 ppb	10:31:54
3	Cr 267.716†	48208.5	55838.2	479.81	ug/L	479.81 ppb	10:31:54
3	Cu 324.752†	204835.2	226940.4	570.60	ug/L	570.60 ppb	10:31:49
3	Fe 238.204 Radial†	4816.3	5263.1	184650	ug/L	184650 ppb	10:31:20
3	K 766.490 Radial†	13730.6	13532.3	5918.2	ug/L	5918.2 ppb	10:31:20
3	Mg 279.077 IEC†	5726.3	6257.7	495450	ug/L	495450 ppb	10:31:20
3	Mn 257.610†	525190.6	607170.3	494.33	ug/L	494.33 ppb	10:31:49
3	Mo 202.031†	10571.3	12206.3	501.26	ug/L	501.26 ppb	10:31:54
3	Na 589.592 Radial†	1746.4	2079.0	5621.3	ug/L	5621.3 ppb	10:31:20
3	Ni 231.604†	24590.8	28319.8	453.61	ug/L	453.61 ppb	10:31:54
3	P 214.914†	6490.6	7177.1	2479.1	ug/L	2479.1 ppb	10:31:54
3	Pb 220.353†	4444.7	5174.6	472.31	ug/L	472.31 ppb	10:31:54
3	S 181.975 Axial†	2922.3	3315.2	2704.5	ug/L	2704.5 ppb	10:31:54
3	Sb 206.836†	2597.2	2961.2	572.95	ug/L	572.95 ppb	10:31:54
3	Se 196.026†	4938.2	5738.4	2544.4	ug/L	2544.4 ppb	10:31:54
3	Si 251.611†	226292.7	261412.2	5382.3	ug/L	5382.3 ppb	10:31:49
3	Sn 189.927†	3753.4	4339.7	490.73	ug/L	490.73 ppb	10:31:54
3	Sr 421.552†	32971.1	36026.6	550.64	ug/L	550.64 ppb	10:31:20
3	Ti 334.940†	322933.2	374959.4	522.30	ug/L	522.30 ppb	10:31:49
3	Tl 190.801†	2336.1	2765.8	471.25	ug/L	471.25 ppb	10:31:54
3	U 409.014†	14229.3	20307.5	480.26	ug/L	480.26 ppb	10:31:49
3	V 292.402†	79923.8	94178.2	523.65	ug/L	523.65 ppb	10:31:49
3	Zn 213.857†	83231.3	95232.0	490.97	ug/L	490.97 ppb	10:31:49
3	SiO2†	228890.9	264377.8	11656	ug/L	11656 ppb	10:32:10

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	920619.1	86.779	%	0.3455				0.40%
Sc Radial	5098.4	91.6	%	0.25				0.27%
Y 371.029	722145.9	84.638	%	0.3901				0.46%
Y RADIAL	4418.3	91.75	%	0.405				0.44%
Ag 328.068†	58252.3	284.44	ug/L	0.602	284.44	ppb	0.602	0.21%
QC value within limits for Ag 328.068 Recovery = 113.78%								
Al 396.153Radial†	563072.2	512510	ug/L	4248.0	512510	ppb	4248.0	0.83%
QC value within limits for Al 396.153Radial Recovery = 102.50%								
As 188.979†	2076.3	526.24	ug/L	2.594	526.24	ppb	2.594	0.49%
QC value within limits for As 188.979 Recovery = 105.25%								
B 249.677†	35187.8	522.85	ug/L	0.735	522.85	ppb	0.735	0.14%
QC value within limits for B 249.677 Recovery = 104.57%								
Ba 233.527†	97670.4	499.82	ug/L	0.636	499.82	ppb	0.636	0.13%
QC value within limits for Ba 233.527 Recovery = 99.96%								
Be 313.107†	794786.9	248.27	ug/L	0.119	248.27	ppb	0.119	0.05%
QC value within limits for Be 313.107 Recovery = 99.31%								

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Ca 317.933Radial†     189164.0      471180 ug/L        4377.5      471180 ppb         4377.5   0.93%
   QC value within limits for Ca 317.933Radial  Recovery = 94.24%
Cd 226.502†            64655.2      462.16 ug/L         2.867      462.16 ppb          2.867   0.62%
   QC value within limits for Cd 226.502  Recovery = 92.43%
Co 228.616†            36826.3      456.37 ug/L         2.197      456.37 ppb          2.197   0.48%
   QC value within limits for Co 228.616  Recovery = 91.27%
Cr 267.716†            56174.3      482.66 ug/L         2.467      482.66 ppb          2.467   0.51%
   QC value within limits for Cr 267.716  Recovery = 96.53%
Cu 324.752†           227213.0      571.22 ug/L         0.725      571.22 ppb          0.725   0.13%
   QC value within limits for Cu 324.752  Recovery = 114.24%
Fe 238.204 Radial†      5238.4      183780 ug/L         913.9      183780 ppb          913.9   0.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.89%
K 766.490 Radial†      13466.2      5889.5 ug/L         24.91      5889.5 ppb          24.91   0.42%
   QC value within limits for K 766.490 Radial  Recovery = 117.79%
Mg 279.077 IEC†         6238.4      493920 ug/L        2453.5      493920 ppb         2453.5   0.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.78%
Mn 257.610†           606319.4      493.58 ug/L         0.664      493.58 ppb          0.664   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.72%
Mo 202.031†            12301.5      505.01 ug/L         3.509      505.01 ppb          3.509   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.00%
Na 589.592 Radial†      2072.7      5604.3 ug/L         22.66      5604.3 ppb          22.66   0.40%
   QC value within limits for Na 589.592 Radial  Recovery = 112.09%
Ni 231.604†            28485.9      456.27 ug/L         2.398      456.27 ppb          2.398   0.53%
   QC value within limits for Ni 231.604  Recovery = 91.25%
P 214.914†              7279.7      2514.4 ug/L         30.79      2514.4 ppb          30.79   1.22%
   QC value within limits for P 214.914  Recovery = 100.58%
Pb 220.353†             5222.9      475.11 ug/L         2.633      475.11 ppb          2.633   0.55%
   QC value within limits for Pb 220.353  Recovery = 95.02%
S 181.975 Axial†        3321.1      2710.4 ug/L         17.23      2710.4 ppb          17.23   0.64%
   QC value within limits for S 181.975 Axial  Recovery = 108.42%
Sb 206.836†             2936.8      568.38 ug/L         4.717      568.38 ppb          4.717   0.83%
   QC value within limits for Sb 206.836  Recovery = 113.68%
Se 196.026†             5798.1      2560.6 ug/L         31.38      2560.6 ppb          31.38   1.23%
   QC value within limits for Se 196.026  Recovery = 102.42%
Si 251.611†           261215.6      5378.2 ug/L          4.51      5378.2 ppb           4.51   0.08%
   QC value within limits for Si 251.611  Recovery = 107.56%
Sn 189.927†             4371.7      493.69 ug/L         2.669      493.69 ppb          2.669   0.54%
   QC value within limits for Sn 189.927  Recovery = 98.74%
Sr 421.552†            35895.8      548.66 ug/L         1.817      548.66 ppb          1.817   0.33%
   QC value within limits for Sr 421.552  Recovery = 109.73%
Ti 334.940†           374897.0      521.91 ug/L         0.421      521.91 ppb          0.421   0.08%
   QC value within limits for Ti 334.940  Recovery = 104.38%
Tl 190.801†             2725.5      464.39 ug/L         7.171      464.39 ppb          7.171   1.54%
   QC value within limits for Tl 190.801  Recovery = 92.88%
U 409.014†             20404.2      482.76 ug/L         2.954      482.76 ppb          2.954   0.61%
   QC value within limits for U 409.014  Recovery = 96.55%
V 292.402†             94048.1      523.06 ug/L         0.714      523.06 ppb          0.714   0.14%
   QC value within limits for V 292.402  Recovery = 104.61%
Zn 213.857†            95234.2      491.11 ug/L         0.439      491.11 ppb          0.439   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.22%
SiO2†                 260958.2       11505 ug/L         140.4       11505 ppb          140.4   1.22%
   QC value within limits for SiO2  Recovery = 107.57%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: LR1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/8/2009 10:34:19
Data Type: Reprocessed on 7/8/2009 11:40:14

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	903068.1	903068.1	85.124	%			10:37:30
1	Sc Radial	4907.1	4907.1	88.2	%			10:36:32
1	Y 371.029	711048.9	711048.9	83.338	%			10:37:30
1	Y RADIAL	4267.0	4267.0	88.60	%			10:36:32
1	Ag 328.068†	-24652.6	-29599.4	5.2180	ug/L	5.2180	ppb	10:37:30
1	Al 396.153Radial†	501001.0	568251.7	517240	ug/L	517240	ppb	10:36:12
1	As 188.979†	-286.0	-299.1	17.474	ug/L	17.474	ppb	10:37:35
1	B 249.677†	2112.7	2863.4	-13.637	ug/L	-13.637	ppb	10:37:30
1	Ba 233.527†	-1436.5	-1711.8	1.5622	ug/L	1.5622	ppb	10:37:35
1	Be 313.107†	-14446.8	-9655.2	-3.0542	ug/L	-3.0542	ppb	10:37:35
1	Ca 317.933Radial†	166917.5	189275.7	471460	ug/L	471460	ppb	10:36:12
1	Cd 226.502†	5594.5	6849.8	-0.6386	ug/L	-0.6386	ppb	10:37:35
1	Co 228.616†	294.3	436.1	-0.8830	ug/L	-0.8830	ppb	10:37:35
1	Cr 267.716†	-12.1	14.4	4.1493	ug/L	4.1493	ppb	10:37:35
1	Cu 324.752†	3503.0	-6076.1	10.395	ug/L	10.395	ppb	10:37:30
1	Fe 238.204 Radial†	11037.4	12516.6	439100	ug/L	439100	ppb	10:36:32
1	K 766.490 Radial†	1318.5	22.1	26.226	ug/L	26.226	ppb	10:36:12
1	Mg 279.077 IEC†	5521.4	6261.4	495510	ug/L	495510	ppb	10:36:32
1	Mn 257.610†	-38315.8	-45838.6	11.430	ug/L	11.430	ppb	10:37:30
1	Mo 202.031†	-778.9	-946.7	-7.7594	ug/L	-7.7594	ppb	10:37:35
1	Na 589.592 Radial†	171624.9	194801.4	526720	ug/L	526720	ppb	10:36:12
1	Ni 231.604†	465.6	398.7	6.3863	ug/L	6.3863	ppb	10:37:35
1	P 214.914†	838.8	648.5	52.119	ug/L	52.119	ppb	10:37:35
1	Pb 220.353†	-640.5	-723.3	5.3786	ug/L	5.3786	ppb	10:37:35
1	S 181.975 Axial†	149.8	108.1	-10.229	ug/L	-10.229	ppb	10:37:35
1	Sb 206.836†	146.8	127.0	13.157	ug/L	13.157	ppb	10:37:35
1	Se 196.026†	-4401.3	-5148.9	-103.95	ug/L	-103.95	ppb	10:37:35
1	Si 251.611†	-979.0	-1710.1	-34.481	ug/L	-34.481	ppb	10:37:35
1	Sn 189.927†	-388.8	-462.3	-4.5333	ug/L	-4.5333	ppb	10:37:35
1	Sr 421.552†	319.3	356.6	1.1243	ug/L	1.1243	ppb	10:36:32
1	Ti 334.940†	-15490.5	-17088.2	2.9945	ug/L	2.9945	ppb	10:37:35
1	Tl 190.801†	-133.6	-95.5	-13.648	ug/L	-13.648	ppb	10:37:35
1	U 409.014†	478080.9	565462.0	13976	ug/L	13976	ppb	10:37:30
1	V 292.402†	2200.9	4238.3	-0.8487	ug/L	-0.8487	ppb	10:37:35
1	Zn 213.857†	10091.7	10732.9	-4.6503	ug/L	-4.6503	ppb	10:37:35
1	SiO2†	-858.7	-1611.1	-69.439	ug/L	-69.439	ppb	10:38:03
2	Sc 361.383	901598.6	901598.6	84.986	%			10:37:41
2	Sc Radial	4913.8	4913.8	88.3	%			10:36:57
2	Y 371.029	709120.5	709120.5	83.112	%			10:37:41
2	Y RADIAL	4292.7	4292.7	89.14	%			10:36:57
2	Ag 328.068†	-24814.9	-29837.5	4.1617	ug/L	4.1617	ppb	10:37:41
2	Al 396.153Radial†	499453.7	565720.2	514940	ug/L	514940	ppb	10:36:37
2	As 188.979†	-323.1	-343.3	7.0255	ug/L	7.0255	ppb	10:37:46
2	B 249.677†	2057.8	2802.9	-14.529	ug/L	-14.529	ppb	10:37:41
2	Ba 233.527†	-1538.0	-1834.0	0.9343	ug/L	0.9343	ppb	10:37:46
2	Be 313.107†	-14278.5	-9484.8	-2.9994	ug/L	-2.9994	ppb	10:37:46
2	Ca 317.933Radial†	166575.3	188628.5	469840	ug/L	469840	ppb	10:36:37
2	Cd 226.502†	5560.2	6820.2	-0.8124	ug/L	-0.8124	ppb	10:37:46
2	Co 228.616†	329.8	478.5	-0.3494	ug/L	-0.3494	ppb	10:37:46
2	Cr 267.716†	64.5	104.5	4.9068	ug/L	4.9068	ppb	10:37:46
2	Cu 324.752†	3384.0	-6209.4	10.043	ug/L	10.043	ppb	10:37:41
2	Fe 238.204 Radial†	11042.3	12505.0	438690	ug/L	438690	ppb	10:36:57
2	K 766.490 Radial†	1363.1	70.6	47.960	ug/L	47.960	ppb	10:36:37
2	Mg 279.077 IEC†	5523.4	6255.1	495010	ug/L	495010	ppb	10:36:57
2	Mn 257.610†	-38665.9	-46324.0	11.003	ug/L	11.003	ppb	10:37:41
2	Mo 202.031†	-762.0	-928.4	-7.0553	ug/L	-7.0553	ppb	10:37:46
2	Na 589.592 Radial†	171230.3	194087.6	524790	ug/L	524790	ppb	10:36:37
2	Ni 231.604†	460.5	393.6	6.3048	ug/L	6.3048	ppb	10:37:46

2	P 214.914†	942.4	772.0	95.294	ug/L	95.294 ppb	10:37:46
2	Pb 220.353†	-620.4	-700.9	6.6499	ug/L	6.6499 ppb	10:37:46
2	S 181.975 Axial†	185.9	150.9	26.429	ug/L	26.429 ppb	10:37:46
2	Sb 206.836†	108.8	82.6	4.4435	ug/L	4.4435 ppb	10:37:46
2	Se 196.026†	-4291.9	-5028.5	-66.360	ug/L	-66.360 ppb	10:37:46
2	Si 251.611†	-923.9	-1647.3	-33.191	ug/L	-33.191 ppb	10:37:46
2	Sn 189.927†	-421.4	-501.3	-8.7146	ug/L	-8.7146 ppb	10:37:46
2	Sr 421.552†	322.3	359.5	1.1835	ug/L	1.1835 ppb	10:36:57
2	Ti 334.940†	-14961.4	-16495.3	3.6589	ug/L	3.6589 ppb	10:37:46
2	Tl 190.801†	-157.6	-124.0	-18.471	ug/L	-18.471 ppb	10:37:46
2	U 409.014†	477587.6	565796.9	13984	ug/L	13984 ppb	10:37:41
2	V 292.402†	2214.6	4258.6	-0.6621	ug/L	-0.6621 ppb	10:37:46
2	Zn 213.857†	9931.6	10563.8	-5.5320	ug/L	-5.5320 ppb	10:37:46
2	SiO2†	-947.4	-1717.2	-74.141	ug/L	-74.141 ppb	10:38:08
3	Sc 361.383	901333.6	901333.6	84.961	%		10:37:52
3	Sc Radial	4898.6	4898.6	88.0	%		10:37:23
3	Y 371.029	709314.8	709314.8	83.134	%		10:37:52
3	Y RADIAL	4273.7	4273.7	88.74	%		10:37:23
3	Ag 328.068†	-24785.9	-29811.9	3.2059	ug/L	3.2059 ppb	10:37:52
3	Al 396.153Radial†	500210.2	568328.0	517310	ug/L	517310 ppb	10:37:02
3	As 188.979†	-299.6	-315.7	12.839	ug/L	12.839 ppb	10:37:57
3	B 249.677†	2166.2	2931.2	-12.096	ug/L	-12.096 ppb	10:37:52
3	Ba 233.527†	-1531.2	-1826.5	0.8994	ug/L	0.8994 ppb	10:37:57
3	Be 313.107†	-14414.9	-9650.3	-3.0517	ug/L	-3.0517 ppb	10:37:57
3	Ca 317.933Radial†	166348.8	188954.3	470650	ug/L	470650 ppb	10:37:02
3	Cd 226.502†	5540.8	6799.3	-0.5842	ug/L	-0.5842 ppb	10:37:57
3	Co 228.616†	326.0	474.1	-0.3588	ug/L	-0.3588 ppb	10:37:57
3	Cr 267.716†	-19.8	5.3	3.9998	ug/L	3.9998 ppb	10:37:57
3	Cu 324.752†	3399.1	-6190.5	9.9012	ug/L	9.9012 ppb	10:37:52
3	Fe 238.204 Radial†	10926.4	12412.0	435430	ug/L	435430 ppb	10:37:23
3	K 766.490 Radial†	1311.1	16.4	22.386	ug/L	22.386 ppb	10:37:02
3	Mg 279.077 IEC†	5483.5	6229.0	492950	ug/L	492950 ppb	10:37:23
3	Mn 257.610†	-38504.0	-46146.8	10.758	ug/L	10.758 ppb	10:37:52
3	Mo 202.031†	-779.9	-949.7	-8.1288	ug/L	-8.1288 ppb	10:37:57
3	Na 589.592 Radial†	170529.0	193890.3	524260	ug/L	524260 ppb	10:37:02
3	Ni 231.604†	397.1	319.1	5.1105	ug/L	5.1105 ppb	10:37:57
3	P 214.914†	880.7	699.7	73.222	ug/L	73.222 ppb	10:37:57
3	Pb 220.353†	-643.4	-728.2	5.3697	ug/L	5.3697 ppb	10:37:57
3	S 181.975 Axial†	158.0	118.1	-1.7772	ug/L	-1.7772 ppb	10:37:57
3	Sb 206.836†	116.9	92.2	6.2449	ug/L	6.2449 ppb	10:37:57
3	Se 196.026†	-4293.9	-5032.4	-78.955	ug/L	-78.955 ppb	10:37:57
3	Si 251.611†	-893.4	-1611.7	-32.442	ug/L	-32.442 ppb	10:37:57
3	Sn 189.927†	-398.8	-474.9	-5.9803	ug/L	-5.9803 ppb	10:37:57
3	Sr 421.552†	302.5	338.2	0.8478	ug/L	0.8478 ppb	10:37:23
3	Ti 334.940†	-15207.4	-16790.1	3.3272	ug/L	3.3272 ppb	10:37:57
3	Tl 190.801†	-172.7	-141.9	-21.477	ug/L	-21.477 ppb	10:37:57
3	U 409.014†	477482.3	565838.3	13986	ug/L	13986 ppb	10:37:52
3	V 292.402†	2380.5	4454.7	0.8529	ug/L	0.8529 ppb	10:37:57
3	Zn 213.857†	9939.8	10576.9	-5.0280	ug/L	-5.0280 ppb	10:37:57
3	SiO2†	-939.4	-1708.1	-73.708	ug/L	-73.708 ppb	10:38:13

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	902000.1	85.024	%	0.0881				0.10%
Sc Radial	4906.5	88.2	%	0.14				0.15%
Y 371.029	709828.1	83.195	%	0.1244				0.15%
Y RADIAL	4277.8	88.83	%	0.277				0.31%
Ag 328.068†	-29749.6	4.1952	ug/L	1.00645	4.1952	ppb	1.00645	23.99%
Al 396.153Radial†	567433.3	516500	ug/L	1350.9	516500	ppb	1350.9	0.26%
QC value within limits for Al 396.153Radial Recovery = 103.30%								
As 188.979†	-319.4	12.446	ug/L	5.2351	12.446	ppb	5.2351	42.06%
B 249.677†	2865.8	-13.421	ug/L	1.2309	-13.421	ppb	1.2309	9.17%
Ba 233.527†	-1790.8	1.1320	ug/L	0.37301	1.1320	ppb	0.37301	32.95%
Be 313.107†	-9596.8	-3.0351	ug/L	0.03096	-3.0351	ppb	0.03096	1.02%
Ca 317.933Radial†	188952.8	470650	ug/L	805.9	470650	ppb	805.9	0.17%
QC value within limits for Ca 317.933Radial Recovery = 94.13%								
Cd 226.502†	6823.1	-0.6784	ug/L	0.11915	-0.6784	ppb	0.11915	17.56%
Co 228.616†	462.9	-0.5304	ug/L	0.30543	-0.5304	ppb	0.30543	57.59%
Cr 267.716†	41.4	4.3520	ug/L	0.48630	4.3520	ppb	0.48630	11.17%

Cu 324.752†	-6158.7	10.113 ug/L	0.2544	10.113 ppb	0.2544	2.52%
Fe 238.204 Radial†	12477.9	437740 ug/L	2010.7	437740 ppb	2010.7	0.46%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.55%						
K 766.490 Radial†	36.3	32.190 ug/L	13.7909	32.190 ppb	13.7909	42.84%
Mg 279.077 IEC†	6248.5	494490 ug/L	1357.9	494490 ppb	1357.9	0.27%
QC value within limits for Mg 279.077 IEC Recovery = 98.90%						
Mn 257.610†	-46103.1	11.063 ug/L	0.3401	11.063 ppb	0.3401	3.07%
Mo 202.031†	-941.6	-7.6478 ug/L	0.54541	-7.6478 ppb	0.54541	7.13%
Na 589.592 Radial†	194259.8	525260 ug/L	1296.0	525260 ppb	1296.0	0.25%
QC value within limits for Na 589.592 Radial Recovery = 105.05%						
Ni 231.604†	370.5	5.9339 ug/L	0.71420	5.9339 ppb	0.71420	12.04%
P 214.914†	706.7	73.545 ug/L	21.5891	73.545 ppb	21.5891	29.35%
Pb 220.353†	-717.5	5.7994 ug/L	0.73655	5.7994 ppb	0.73655	12.70%
S 181.975 Axial†	125.7	4.8073 ug/L	19.19563	4.8073 ppb	19.19563	399.30%
Sb 206.836†	100.6	7.9483 ug/L	4.59954	7.9483 ppb	4.59954	57.87%
Se 196.026†	-5069.9	-83.089 ug/L	19.1336	-83.089 ppb	19.1336	23.03%
Si 251.611†	-1656.4	-33.371 ug/L	1.0313	-33.371 ppb	1.0313	3.09%
Sn 189.927†	-479.5	-6.4094 ug/L	2.12342	-6.4094 ppb	2.12342	33.13%
Sr 421.552†	351.4	1.0519 ug/L	0.17919	1.0519 ppb	0.17919	17.04%
Ti 334.940†	-16791.2	3.3269 ug/L	0.33215	3.3269 ppb	0.33215	9.98%
Tl 190.801†	-120.5	-17.865 ug/L	3.9499	-17.865 ppb	3.9499	22.11%
U 409.014†	565699.1	13982 ug/L	5.3	13982 ppb	5.3	0.04%
QC value within limits for U 409.014 Recovery = 93.21%						
V 292.402†	4317.2	-0.2193 ug/L	0.93321	-0.2193 ppb	0.93321	425.48%
Zn 213.857†	10624.5	-5.0701 ug/L	0.44239	-5.0701 ppb	0.44239	8.73%
SiO2†	-1678.8	-72.429 ug/L	2.5989	-72.429 ppb	2.5989	3.59%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/8/2009 10:40:22
Data Type: Reprocessed on 7/8/2009 11:40:15

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1014953.4	1014953.4	95.671	%			10:43:57
1	Sc Radial	5417.4	5417.4	97.3	%			10:42:20
1	Y 371.029	800941.5	800941.5	93.873	%			10:43:57
1	Y RADIAL	4706.4	4706.4	97.73	%			10:42:20
1	Ag 328.068†	-7110.5	-8070.8	7.1415	ug/L	7.1415	ppb	10:44:02
1	Al 396.153Radial†	449.0	553.4	87.615	ug/L	87.615	ppb	10:42:20
1	As 188.979†	40482.4	42351.3	9989.0	ug/L	9989.0	ppb	10:44:02
1	B 249.677†	309866.7	324270.4	5029.0	ug/L	5029.0	ppb	10:43:57
1	Ba 233.527†	2664318.6	2784861.5	14118	ug/L	14118	ppb	10:43:57
1	Be 313.107†	8856992.8	9265110.5	2903.5	ug/L	2903.5	ppb	10:43:50
1	Ca 317.933Radial†	25.7	9.5	23.698	ug/L	23.698	ppb	10:42:40
1	Cd 226.502†	1280128.2	1338334.9	10016	ug/L	10016	ppb	10:43:57
1	Co 228.616†	749635.6	783648.9	9762.7	ug/L	9762.7	ppb	10:43:57
1	Cr 267.716†	2711737.5	2834479.1	24157	ug/L	24157	ppb	10:43:57
1	Cu 324.752†	7865610.7	8211358.3	20260	ug/L	20260	ppb	10:43:50
1	Fe 238.204 Radial†	-7.6	-8.1	23.148	ug/L	23.148	ppb	10:42:40
1	K 766.490 Radial†	684372.6	701529.4	304300	ug/L	304300	ppb	10:42:15
1	Mg 279.077 IEC†	-2.9	-3.1	-51.980	ug/L	-51.980	ppb	10:42:40
1	Mn 257.610†	11427294.3	11943581.3	9438.7	ug/L	9438.7	ppb	10:43:50
1	Mo 202.031†	232338.7	242820.8	9719.4	ug/L	9719.4	ppb	10:44:02
1	Na 589.592 Radial†	-122.5	44.6	120.62	ug/L	120.62	ppb	10:42:40
1	Ni 231.604†	591314.2	617924.4	9897.7	ug/L	9897.7	ppb	10:43:57
1	P 214.914†	48706.9	50574.1	14767	ug/L	14767	ppb	10:44:02
1	Pb 220.353†	309384.9	323414.5	24253	ug/L	24253	ppb	10:44:02
1	S 181.975 Axial†	58295.0	60865.2	51520	ug/L	51520	ppb	10:44:02
1	Sb 206.836†	53440.0	55812.8	10745	ug/L	10745	ppb	10:44:02
1	Se 196.026†	29668.4	31032.6	10122	ug/L	10122	ppb	10:44:02
1	Si 251.611†	2155853.2	2252850.9	46184	ug/L	46184	ppb	10:43:57
1	Sn 189.927†	95946.9	100283.2	10430	ug/L	10430	ppb	10:44:02
1	Sr 421.552†	646073.6	663655.5	10225	ug/L	10225	ppb	10:42:15
1	Ti 334.940†	7127693.7	7451349.2	9745.7	ug/L	9745.7	ppb	10:43:50
1	Tl 190.801†	55066.4	57619.7	9753.1	ug/L	9753.1	ppb	10:44:02
1	U 409.014†	-2611.3	1105.2	-19.174	ug/L	-19.174	ppb	10:44:02
1	V 292.402†	1681684.2	1759437.4	10082	ug/L	10082	ppb	10:43:57
1	Zn 213.857†	2418310.9	2526623.2	14016	ug/L	14016	ppb	10:43:57
1	SiO2†	2181096.5	2279194.3	100050	ug/L	100050	ppb	10:44:49
2	Sc 361.383	1029870.2	1029870.2	97.077	%			10:44:17
2	Sc Radial	5497.9	5497.9	98.8	%			10:42:50
2	Y 371.029	811966.1	811966.1	95.166	%			10:44:17
2	Y RADIAL	4740.4	4740.4	98.44	%			10:42:50
2	Ag 328.068†	-7088.1	-7940.1	6.7301	ug/L	6.7301	ppb	10:44:22
2	Al 396.153Radial†	473.1	571.1	109.77	ug/L	109.77	ppb	10:42:50
2	As 188.979†	40474.1	41729.8	9842.3	ug/L	9842.3	ppb	10:44:22
2	B 249.677†	307090.3	316719.2	4911.8	ug/L	4911.8	ppb	10:44:17
2	Ba 233.527†	2644634.7	2724248.1	13811	ug/L	13811	ppb	10:44:17
2	Be 313.107†	8832006.5	9105280.2	2853.4	ug/L	2853.4	ppb	10:44:10
2	Ca 317.933Radial†	28.1	11.5	28.754	ug/L	28.754	ppb	10:43:10
2	Cd 226.502†	1271277.6	1309837.1	9803.0	ug/L	9803.0	ppb	10:44:17
2	Co 228.616†	743954.7	766447.7	9548.5	ug/L	9548.5	ppb	10:44:17
2	Cr 267.716†	2688484.5	2769471.3	23603	ug/L	23603	ppb	10:44:17
2	Cu 324.752†	7842993.7	8068977.9	19908	ug/L	19908	ppb	10:44:10
2	Fe 238.204 Radial†	-5.8	-6.2	84.443	ug/L	84.443	ppb	10:43:10
2	K 766.490 Radial†	684716.9	691584.4	299980	ug/L	299980	ppb	10:42:45
2	Mg 279.077 IEC†	-2.0	-2.2	19.126	ug/L	19.126	ppb	10:43:10
2	Mn 257.610†	11404692.0	11747293.6	9283.6	ug/L	9283.6	ppb	10:44:10
2	Mo 202.031†	232311.4	239275.2	9577.5	ug/L	9577.5	ppb	10:44:22
2	Na 589.592 Radial†	-129.4	39.4	106.58	ug/L	106.58	ppb	10:43:10
2	Ni 231.604†	586038.5	603537.6	9667.2	ug/L	9667.2	ppb	10:44:17

2	P 214.914†	48755.1	49886.4	14579 ug/L	14579 ppb	10:44:22
2	Pb 220.353†	309441.3	318788.5	23906 ug/L	23906 ppb	10:44:22
2	S 181.975 Axial†	58411.2	60102.3	50874 ug/L	50874 ppb	10:44:22
2	Sb 206.836†	53362.1	54923.6	10578 ug/L	10578 ppb	10:44:22
2	Se 196.026†	29761.5	30679.3	10007 ug/L	10007 ppb	10:44:22
2	Si 251.611†	2138710.2	2202552.9	45150 ug/L	45150 ppb	10:44:17
2	Sn 189.927†	95957.5	98841.5	10280 ug/L	10280 ppb	10:44:22
2	Sr 421.552†	646581.7	654452.3	10083 ug/L	10083 ppb	10:42:45
2	Ti 334.940†	7109976.4	7325187.8	9580.8 ug/L	9580.8 ppb	10:44:10
2	Tl 190.801†	55268.7	56994.4	9647.5 ug/L	9647.5 ppb	10:44:22
2	U 409.014†	-2581.0	1176.0	-16.357 ug/L	-16.357 ppb	10:44:22
2	V 292.402†	1665056.2	1716848.7	9839.4 ug/L	9839.4 ppb	10:44:17
2	Zn 213.857†	2400720.5	2471890.8	13712 ug/L	13712 ppb	10:44:17
2	SiO2†	2194108.9	2259577.6	99188 ug/L	99188 ppb	10:44:57
3	Sc 361.383	1027984.8	1027984.8	96.899 %		10:44:37
3	Sc Radial	5311.1	5311.1	95.4 %		10:43:20
3	Y 371.029	810508.3	810508.3	94.995 %		10:44:37
3	Y RADIAL	4586.5	4586.5	95.24 %		10:43:20
3	Ag 328.068†	-7268.9	-8140.1	6.0153 ug/L	6.0153 ppb	10:44:42
3	Al 396.153Radial†	472.0	586.8	121.54 ug/L	121.54 ppb	10:43:20
3	As 188.979†	40697.9	42037.3	9914.2 ug/L	9914.2 ppb	10:44:42
3	B 249.677†	308195.5	318440.0	4938.5 ug/L	4938.5 ppb	10:44:37
3	Ba 233.527†	2647831.5	2732543.7	13853 ug/L	13853 ppb	10:44:37
3	Be 313.107†	8792922.6	9081631.8	2846.1 ug/L	2846.1 ppb	10:44:30
3	Ca 317.933Radial†	29.0	13.4	33.386 ug/L	33.386 ppb	10:43:40
3	Cd 226.502†	1272287.1	1313280.7	9828.8 ug/L	9828.8 ppb	10:44:37
3	Co 228.616†	745426.9	769372.6	9585.2 ug/L	9585.2 ppb	10:44:37
3	Cr 267.716†	2688412.8	2774476.6	23645 ug/L	23645 ppb	10:44:37
3	Cu 324.752†	7782720.1	8021593.1	19791 ug/L	19791 ppb	10:44:30
3	Fe 238.204 Radial†	-6.7	-7.3	44.771 ug/L	44.771 ppb	10:43:40
3	K 766.490 Radial†	683971.3	715172.9	310220 ug/L	310220 ppb	10:43:15
3	Mg 279.077 IEC†	-3.7	-4.1	-128.19 ug/L	-128.19 ppb	10:43:40
3	Mn 257.610†	11381446.6	11744851.0	9281.7 ug/L	9281.7 ppb	10:44:30
3	Mo 202.031†	233312.1	240746.8	9636.4 ug/L	9636.4 ppb	10:44:42
3	Na 589.592 Radial†	-122.9	41.6	112.55 ug/L	112.55 ppb	10:43:40
3	Ni 231.604†	587015.1	605652.6	9701.1 ug/L	9701.1 ppb	10:44:37
3	P 214.914†	49152.9	50388.9	14776 ug/L	14776 ppb	10:44:42
3	Pb 220.353†	310539.8	320506.8	24035 ug/L	24035 ppb	10:44:42
3	S 181.975 Axial†	58718.6	60529.9	51236 ug/L	51236 ppb	10:44:42
3	Sb 206.836†	53615.8	55286.2	10651 ug/L	10651 ppb	10:44:42
3	Se 196.026†	29842.3	30818.9	10053 ug/L	10053 ppb	10:44:42
3	Si 251.611†	2145121.2	2213209.7	45366 ug/L	45366 ppb	10:44:37
3	Sn 189.927†	96345.6	99423.4	10341 ug/L	10341 ppb	10:44:42
3	Sr 421.552†	646025.5	676882.0	10428 ug/L	10428 ppb	10:43:15
3	Ti 334.940†	7084549.3	7312379.8	9564.0 ug/L	9564.0 ppb	10:44:30
3	Tl 190.801†	55398.8	57233.1	9687.5 ug/L	9687.5 ppb	10:44:42
3	U 409.014†	-2499.7	1255.0	-14.474 ug/L	-14.474 ppb	10:44:42
3	V 292.402†	1665986.8	1720954.9	9863.5 ug/L	9863.5 ppb	10:44:37
3	Zn 213.857†	2405918.3	2481790.6	13767 ug/L	13767 ppb	10:44:37
3	SiO2†	2167381.8	2236140.5	98142 ug/L	98142 ppb	10:45:04

Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1024269.4	96.549	%	0.7657				0.79%
Sc Radial	5408.8	97.2	%	1.68				1.73%
Y 371.029	807805.3	94.678	%	0.7019				0.74%
Y RADIAL	4677.8	97.14	%	1.679				1.73%
Ag 328.068†	-8050.3	6.6290	ug/L	0.56988	6.6290	ppb	0.56988	8.60%
Al 396.153Radial†	570.4	106.31	ug/L	17.224	106.31	ppb	17.224	16.20%
As 188.979†	42039.5	9915.2	ug/L	73.36	9915.2	ppb	73.36	0.74%
QC value within limits for As 188.979 Recovery = 99.15%								
B 249.677†	319809.9	4959.8	ug/L	61.39	4959.8	ppb	61.39	1.24%
QC value within limits for B 249.677 Recovery = 99.20%								
Ba 233.527†	2747217.8	13927	ug/L	166.6	13927	ppb	166.6	1.20%
QC value within limits for Ba 233.527 Recovery = 92.85%								
Be 313.107†	9150674.2	2867.7	ug/L	31.27	2867.7	ppb	31.27	1.09%
QC value within limits for Be 313.107 Recovery = 95.59%								
Ca 317.933Radial†	11.5	28.613	ug/L	4.8452	28.613	ppb	4.8452	16.93%
Cd 226.502†	1320484.3	9882.7	ug/L	116.42	9882.7	ppb	116.42	1.18%

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   QC value within limits for Cd 226.502  Recovery = 98.83%
Co 228.616†          773156.4      9632.2 ug/L        114.57      9632.2 ppb        114.57   1.19%
   QC value within limits for Co 228.616  Recovery = 96.32%
Cr 267.716†         2792809.0       23802 ug/L         308.3       23802 ppb         308.3   1.30%
   QC value within limits for Cr 267.716  Recovery = 95.21%
Cu 324.752†         8100643.1       19986 ug/L         243.7       19986 ppb         243.7   1.22%
   QC value within limits for Cu 324.752  Recovery = 99.93%
Fe 238.204 Radial†       -7.2      50.787 ug/L       31.0875      50.787 ppb       31.0875  61.21%
K 766.490 Radial†     702762.2      304830 ug/L        5138.4      304830 ppb        5138.4   1.69%
   QC value within limits for K 766.490 Radial  Recovery = 101.61%
Mg 279.077 IEC†          -3.1     -53.681 ug/L       73.6715     -53.681 ppb       73.6715 137.24%
Mn 257.610†        11811908.6      9334.7 ug/L         90.12      9334.7 ppb         90.12   0.97%
   QC value within limits for Mn 257.610  Recovery = 93.35%
Mo 202.031†          240947.6      9644.5 ug/L         71.30      9644.5 ppb         71.30   0.74%
   QC value within limits for Mo 202.031  Recovery = 96.44%
Na 589.592 Radial†       41.9      113.25 ug/L         7.046      113.25 ppb         7.046   6.22%
Ni 231.604†          609038.2      9755.3 ug/L        124.43      9755.3 ppb        124.43   1.28%
   QC value within limits for Ni 231.604  Recovery = 97.55%
P 214.914†            50283.1       14707 ug/L         111.5       14707 ppb         111.5   0.76%
   QC value within limits for P 214.914  Recovery = 98.05%
Pb 220.353†          320903.3       24065 ug/L         175.3       24065 ppb         175.3   0.73%
   QC value within limits for Pb 220.353  Recovery = 96.26%
S 181.975 Axial†      60499.1       51210 ug/L         323.6       51210 ppb         323.6   0.63%
   QC value within limits for S 181.975 Axial  Recovery = 102.42%
Sb 206.836†           55340.9       10658 ug/L          83.6       10658 ppb          83.6   0.78%
   QC value within limits for Sb 206.836  Recovery = 106.58%
Se 196.026†           30843.6       10061 ug/L          58.0       10061 ppb          58.0   0.58%
   QC value within limits for Se 196.026  Recovery = 100.61%
Si 251.611†         2222871.2       45567 ug/L         545.3       45567 ppb         545.3   1.20%
   QC value within limits for Si 251.611  Recovery = 91.13%
Sn 189.927†           99516.1       10350 ug/L          75.4       10350 ppb          75.4   0.73%
   QC value within limits for Sn 189.927  Recovery = 103.50%
Sr 421.552†          664996.6       10245 ug/L         173.7       10245 ppb         173.7   1.70%
   QC value within limits for Sr 421.552  Recovery = 102.45%
Ti 334.940†         7362972.3      9630.2 ug/L        100.43      9630.2 ppb        100.43   1.04%
   QC value within limits for Ti 334.940  Recovery = 96.30%
Tl 190.801†           57282.4      9696.0 ug/L         53.30      9696.0 ppb         53.30   0.55%
   QC value within limits for Tl 190.801  Recovery = 96.96%
U 409.014†             1178.7     -16.669 ug/L        2.3653     -16.669 ppb        2.3653  14.19%
V 292.402†          1732413.7      9928.4 ug/L        133.88      9928.4 ppb        133.88   1.35%
   QC value within limits for V 292.402  Recovery = 99.28%
Zn 213.857†         2493434.9       13832 ug/L         161.7       13832 ppb         161.7   1.17%
   QC value within limits for Zn 213.857  Recovery = 92.21%
SiO2†               2258304.1       99125 ug/L         953.1       99125 ppb         953.1   0.96%
   QC value within limits for SiO2  Recovery = 92.64%
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:03:37
Data Type: Reprocessed on 7/8/2009 11:40:18

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1067409.9	1067409.9	100.62	%			11:06:48
1	Sc Radial	5545.0	5545.0	99.6	%			11:05:29
1	Y 371.029	849738.5	849738.5	99.593	%			11:06:48
1	Y RADIAL	4788.0	4788.0	99.42	%			11:05:29
1	Ag 328.068†	127524.3	126105.9	502.25	ug/L	502.25	ppb	11:06:48
1	Al 396.153Radial†	5299.4	5410.6	4903.4	ug/L	4903.4	ppb	11:05:29
1	As 188.979†	2078.4	2102.6	496.72	ug/L	496.72	ppb	11:07:08
1	B 249.677†	31751.6	31939.0	495.88	ug/L	495.88	ppb	11:06:48
1	Ba 233.527†	98259.2	97634.0	495.40	ug/L	495.40	ppb	11:06:48
1	Be 313.107†	1589957.2	1587550.7	494.78	ug/L	494.78	ppb	11:06:48
1	Ca 317.933Radial†	2000.8	1991.0	4959.2	ug/L	4959.2	ppb	11:05:49
1	Cd 226.502†	66514.3	66385.2	496.24	ug/L	496.24	ppb	11:06:48
1	Co 228.616†	38913.1	38765.6	483.08	ug/L	483.08	ppb	11:07:08
1	Cr 267.716†	58344.9	58016.7	494.83	ug/L	494.83	ppb	11:06:48
1	Cu 324.752†	211137.7	199655.3	492.89	ug/L	492.89	ppb	11:06:48
1	Fe 238.204 Radial†	142.3	142.5	5015.0	ug/L	5015.0	ppb	11:05:49
1	K 766.490 Radial†	13511.2	12086.4	5238.2	ug/L	5238.2	ppb	11:05:29
1	Mg 279.077 IEC†	62.2	62.2	4932.1	ug/L	4932.1	ppb	11:05:49
1	Mn 257.610†	629929.2	625250.1	494.68	ug/L	494.68	ppb	11:06:48
1	Mo 202.031†	12643.5	12534.4	502.06	ug/L	502.06	ppb	11:07:08
1	Na 589.592 Radial†	3490.6	3673.5	9932.6	ug/L	9932.6	ppb	11:05:29
1	Ni 231.604†	30743.5	30407.2	487.05	ug/L	487.05	ppb	11:07:08
1	P 214.914†	7354.4	6972.5	2389.5	ug/L	2389.5	ppb	11:07:08
1	Pb 220.353†	6693.1	6681.2	502.20	ug/L	502.20	ppb	11:07:08
1	S 181.975 Axial†	1258.3	1182.8	1000.2	ug/L	1000.2	ppb	11:07:08
1	Sb 206.836†	2588.5	2527.3	503.10	ug/L	503.10	ppb	11:07:08
1	Se 196.026†	1499.7	1512.2	511.22	ug/L	511.22	ppb	11:07:08
1	Si 251.611†	122687.2	121376.8	2492.5	ug/L	2492.5	ppb	11:06:48
1	Sn 189.927†	4831.3	4796.3	499.31	ug/L	499.31	ppb	11:07:08
1	Sr 421.552†	33822.5	33937.9	522.82	ug/L	522.82	ppb	11:05:29
1	Ti 334.940†	380487.1	379269.6	496.43	ug/L	496.43	ppb	11:06:48
1	Tl 190.801†	2880.1	2923.9	495.14	ug/L	495.14	ppb	11:07:08
1	U 409.014†	15659.6	19398.6	479.74	ug/L	479.74	ppb	11:06:48
1	V 292.402†	85512.2	86642.1	497.38	ug/L	497.38	ppb	11:06:48
1	Zn 213.857†	90296.7	88622.2	490.34	ug/L	490.34	ppb	11:06:48
1	SiO2†	123097.1	121742.0	5353.1	ug/L	5353.1	ppb	11:08:09
2	Sc 361.383	1057828.3	1057828.3	99.712	%			11:07:16
2	Sc Radial	5453.0	5453.0	98.0	%			11:05:54
2	Y 371.029	842848.9	842848.9	98.785	%			11:07:16
2	Y RADIAL	4734.2	4734.2	98.31	%			11:05:54
2	Ag 328.068†	126253.5	125979.4	501.76	ug/L	501.76	ppb	11:07:16
2	Al 396.153Radial†	5204.3	5403.2	4896.6	ug/L	4896.6	ppb	11:05:54
2	As 188.979†	2077.1	2120.0	500.82	ug/L	500.82	ppb	11:07:36
2	B 249.677†	31594.9	32067.6	497.87	ug/L	497.87	ppb	11:07:16
2	Ba 233.527†	97420.0	97677.0	495.62	ug/L	495.62	ppb	11:07:16
2	Be 313.107†	1578761.2	1590635.7	495.74	ug/L	495.74	ppb	11:07:16
2	Ca 317.933Radial†	1973.0	1996.5	4973.1	ug/L	4973.1	ppb	11:06:14
2	Cd 226.502†	65741.0	66208.5	494.92	ug/L	494.92	ppb	11:07:16
2	Co 228.616†	38917.3	39120.1	487.50	ug/L	487.50	ppb	11:07:36
2	Cr 267.716†	57810.8	58006.3	494.74	ug/L	494.74	ppb	11:07:16
2	Cu 324.752†	209446.8	199860.3	493.40	ug/L	493.40	ppb	11:07:16
2	Fe 238.204 Radial†	140.5	143.1	5035.0	ug/L	5035.0	ppb	11:06:14
2	K 766.490 Radial†	13401.9	12203.6	5289.1	ug/L	5289.1	ppb	11:05:54
2	Mg 279.077 IEC†	61.6	62.7	4968.4	ug/L	4968.4	ppb	11:06:14
2	Mn 257.610†	623982.1	624956.7	494.45	ug/L	494.45	ppb	11:07:16
2	Mo 202.031†	12615.6	12620.3	505.50	ug/L	505.50	ppb	11:07:36
2	Na 589.592 Radial†	3446.1	3687.2	9969.7	ug/L	9969.7	ppb	11:05:54
2	Ni 231.604†	30735.8	30676.3	491.36	ug/L	491.36	ppb	11:07:36

2	P 214.914†	7337.1	7021.4	2406.8 ug/L	2406.8 ppb		11:07:36
2	Pb 220.353†	6673.6	6722.0	505.26 ug/L	505.26 ppb		11:07:36
2	S 181.975 Axial†	1264.2	1200.1	1014.8 ug/L	1014.8 ppb		11:07:36
2	Sb 206.836†	2593.9	2556.0	508.91 ug/L	508.91 ppb		11:07:36
2	Se 196.026†	1503.2	1529.2	516.82 ug/L	516.82 ppb		11:07:36
2	Si 251.611†	121455.1	121245.6	2489.7 ug/L	2489.7 ppb		11:07:16
2	Sn 189.927†	4839.5	4848.0	504.69 ug/L	504.69 ppb		11:07:36
2	Sr 421.552†	33228.1	33904.0	522.30 ug/L	522.30 ppb		11:05:54
2	Ti 334.940†	377267.8	379466.3	496.69 ug/L	496.69 ppb		11:07:16
2	Tl 190.801†	2881.9	2951.6	499.79 ug/L	499.79 ppb		11:07:36
2	U 409.014†	15609.8	19489.6	482.00 ug/L	482.00 ppb		11:07:16
2	V 292.402†	84902.2	86800.1	498.32 ug/L	498.32 ppb		11:07:16
2	Zn 213.857†	89406.2	88541.9	489.86 ug/L	489.86 ppb		11:07:16
2	SiO2†	122640.5	122392.2	5381.6 ug/L	5381.6 ppb		11:08:14
3	Sc 361.383	1055071.7	1055071.7	99.452 %			11:07:43
3	Sc Radial	5432.7	5432.7	97.6 %			11:06:19
3	Y 371.029	840276.0	840276.0	98.484 %			11:07:43
3	Y RADIAL	4696.8	4696.8	97.53 %			11:06:19
3	Ag 328.068†	126120.7	126176.7	502.55 ug/L	502.55 ppb		11:07:43
3	Al 396.153Radial†	5181.8	5400.1	4893.7 ug/L	4893.7 ppb		11:06:19
3	As 188.979†	2085.4	2133.8	504.06 ug/L	504.06 ppb		11:08:03
3	B 249.677†	31427.7	31982.3	496.53 ug/L	496.53 ppb		11:07:43
3	Ba 233.527†	97457.1	97969.6	497.10 ug/L	497.10 ppb		11:07:43
3	Be 313.107†	1576182.4	1592179.6	496.22 ug/L	496.22 ppb		11:07:43
3	Ca 317.933Radial†	1975.0	2006.1	4996.9 ug/L	4996.9 ppb		11:06:39
3	Cd 226.502†	65930.8	66571.6	497.63 ug/L	497.63 ppb		11:07:43
3	Co 228.616†	38836.3	39140.6	487.76 ug/L	487.76 ppb		11:08:03
3	Cr 267.716†	57863.2	58210.5	496.48 ug/L	496.48 ppb		11:07:43
3	Cu 324.752†	208532.5	199489.8	492.49 ug/L	492.49 ppb		11:07:43
3	Fe 238.204 Radial†	141.4	144.5	5084.1 ug/L	5084.1 ppb		11:06:39
3	K 766.490 Radial†	13356.4	12208.3	5291.1 ug/L	5291.1 ppb		11:06:19
3	Mg 279.077 IEC†	60.3	61.6	4883.3 ug/L	4883.3 ppb		11:06:39
3	Mn 257.610†	623827.7	626436.5	495.63 ug/L	495.63 ppb		11:07:43
3	Mo 202.031†	12607.0	12644.6	506.48 ug/L	506.48 ppb		11:08:03
3	Na 589.592 Radial†	3459.6	3714.2	10043 ug/L	10043 ppb		11:06:19
3	Ni 231.604†	30656.7	30677.3	491.38 ug/L	491.38 ppb		11:08:03
3	P 214.914†	7338.8	7042.2	2414.3 ug/L	2414.3 ppb		11:08:03
3	Pb 220.353†	6655.9	6721.6	505.23 ug/L	505.23 ppb		11:08:03
3	S 181.975 Axial†	1273.7	1212.9	1025.7 ug/L	1025.7 ppb		11:08:03
3	Sb 206.836†	2578.9	2547.6	507.27 ug/L	507.27 ppb		11:08:03
3	Se 196.026†	1491.2	1521.0	514.35 ug/L	514.35 ppb		11:08:03
3	Si 251.611†	121268.2	121376.0	2492.4 ug/L	2492.4 ppb		11:07:43
3	Sn 189.927†	4839.7	4860.9	506.04 ug/L	506.04 ppb		11:08:03
3	Sr 421.552†	33109.5	33909.5	522.38 ug/L	522.38 ppb		11:06:19
3	Ti 334.940†	376709.4	379893.4	497.25 ug/L	497.25 ppb		11:07:43
3	Tl 190.801†	2882.8	2960.1	501.23 ug/L	501.23 ppb		11:08:03
3	U 409.014†	15694.8	19616.0	485.13 ug/L	485.13 ppb		11:07:43
3	V 292.402†	84699.0	86818.3	498.43 ug/L	498.43 ppb		11:07:43
3	Zn 213.857†	89588.7	88959.8	492.20 ug/L	492.20 ppb		11:07:43
3	SiO2†	121565.4	121632.6	5348.0 ug/L	5348.0 ppb		11:08:19

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060103.3	99.927	%	0.6104				0.61%
Sc Radial	5476.9	98.4	%	1.08				1.09%
Y 371.029	844287.8	98.954	%	0.5734				0.58%
Y RADIAL	4739.7	98.42	%	0.952				0.97%
Ag 328.068†	126087.3	502.19	ug/L	0.401	502.19	ppb	0.401	0.08%
QC value within limits for Ag 328.068 Recovery = 100.44%								
Al 396.153Radial†	5404.6	4897.9	ug/L	5.00	4897.9	ppb	5.00	0.10%
QC value within limits for Al 396.153Radial Recovery = 97.96%								
As 188.979†	2118.8	500.53	ug/L	3.674	500.53	ppb	3.674	0.73%
QC value within limits for As 188.979 Recovery = 100.11%								
B 249.677†	31996.3	496.76	ug/L	1.015	496.76	ppb	1.015	0.20%
QC value within limits for B 249.677 Recovery = 99.35%								
Ba 233.527†	97760.2	496.04	ug/L	0.926	496.04	ppb	0.926	0.19%
QC value within limits for Ba 233.527 Recovery = 99.21%								
Be 313.107†	1590122.0	495.58	ug/L	0.734	495.58	ppb	0.734	0.15%
QC value within limits for Be 313.107 Recovery = 99.12%								

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Ca 317.933Radial†        1997.9      4976.4 ug/L         19.05      4976.4 ppb          19.05   0.38%
   QC value within limits for Ca 317.933Radial  Recovery = 99.53%
Cd 226.502†             66388.4      496.27 ug/L          1.355      496.27 ppb          1.355   0.27%
   QC value within limits for Cd 226.502  Recovery = 99.25%
Co 228.616†             39008.8      486.11 ug/L          2.631      486.11 ppb          2.631   0.54%
   QC value within limits for Co 228.616  Recovery = 97.22%
Cr 267.716†             58077.8      495.35 ug/L          0.980      495.35 ppb          0.980   0.20%
   QC value within limits for Cr 267.716  Recovery = 99.07%
Cu 324.752†            199668.4      492.93 ug/L          0.457      492.93 ppb          0.457   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†        143.4      5044.7 ug/L         35.56      5044.7 ppb         35.56   0.70%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.89%
K 766.490 Radial†       12166.1      5272.8 ug/L         29.98      5272.8 ppb         29.98   0.57%
   QC value within limits for K 766.490 Radial  Recovery = 105.46%
Mg 279.077 IEC†            62.1      4927.9 ug/L         42.66      4927.9 ppb         42.66   0.87%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.56%
Mn 257.610†            625547.8      494.92 ug/L          0.624      494.92 ppb          0.624   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.98%
Mo 202.031†             12599.8      504.68 ug/L          2.320      504.68 ppb          2.320   0.46%
   QC value within limits for Mo 202.031  Recovery = 100.94%
Na 589.592 Radial†       3691.6      9981.7 ug/L         56.08      9981.7 ppb         56.08   0.56%
   QC value within limits for Na 589.592 Radial  Recovery = 99.82%
Ni 231.604†             30586.9      489.93 ug/L          2.493      489.93 ppb          2.493   0.51%
   QC value within limits for Ni 231.604  Recovery = 97.99%
P 214.914†               7012.0      2403.5 ug/L         12.69      2403.5 ppb         12.69   0.53%
   QC value within limits for P 214.914  Recovery = 96.14%
Pb 220.353†              6708.3      504.23 ug/L          1.758      504.23 ppb          1.758   0.35%
   QC value within limits for Pb 220.353  Recovery = 100.85%
S 181.975 Axial†         1198.6      1013.6 ug/L         12.78      1013.6 ppb         12.78   1.26%
   QC value within limits for S 181.975 Axial  Recovery = 101.36%
Sb 206.836†              2543.6      506.43 ug/L          2.994      506.43 ppb          2.994   0.59%
   QC value within limits for Sb 206.836  Recovery = 101.29%
Se 196.026†              1520.8      514.13 ug/L          2.806      514.13 ppb          2.806   0.55%
   QC value within limits for Se 196.026  Recovery = 102.83%
Si 251.611†            121332.8      2491.6 ug/L          1.58      2491.6 ppb          1.58   0.06%
   QC value within limits for Si 251.611  Recovery = 99.66%
Sn 189.927†              4835.1      503.35 ug/L          3.557      503.35 ppb          3.557   0.71%
   QC value within limits for Sn 189.927  Recovery = 100.67%
Sr 421.552†             33917.1      522.50 ug/L          0.280      522.50 ppb          0.280   0.05%
   QC value within limits for Sr 421.552  Recovery = 104.50%
Ti 334.940†            379543.1      496.79 ug/L          0.417      496.79 ppb          0.417   0.08%
   QC value within limits for Ti 334.940  Recovery = 99.36%
Tl 190.801†              2945.2      498.72 ug/L          3.184      498.72 ppb          3.184   0.64%
   QC value within limits for Tl 190.801  Recovery = 99.74%
U 409.014†              19501.4      482.29 ug/L          2.703      482.29 ppb          2.703   0.56%
   QC value within limits for U 409.014  Recovery = 96.46%
V 292.402†              86753.5      498.04 ug/L          0.579      498.04 ppb          0.579   0.12%
   QC value within limits for V 292.402  Recovery = 99.61%
Zn 213.857†             88708.0      490.80 ug/L          1.232      490.80 ppb          1.232   0.25%
   QC value within limits for Zn 213.857  Recovery = 98.16%
SiO2†                  121922.3      5360.9 ug/L         18.12      5360.9 ppb         18.12   0.34%
   QC value within limits for SiO2  Recovery = 100.25%
All analyte(s) passed QC.
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Sequence No.: 16
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:10:29
Data Type: Reprocessed on 7/8/2009 11:40:19

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1056286.1	1056286.1	99.567	%			11:13:38
1	Sc Radial	5577.8	5577.8	100	%			11:12:21
1	Y 371.029	851747.2	851747.2	99.828	%			11:13:38
1	Y RADIAL	4867.5	4867.5	101.1	%			11:12:21
1	Ag 328.068†	792.7	157.6	0.6291	ug/L	0.6291	ppb	11:13:43
1	Al 396.153Radial†	-60.0	32.4	29.446	ug/L	29.446	ppb	11:12:21
1	As 188.979†	-47.8	-11.1	-2.5990	ug/L	-2.5990	ppb	11:14:03
1	B 249.677†	436.8	820.2	12.780	ug/L	12.780	ppb	11:13:43
1	Ba 233.527†	31.5	7.4	0.0373	ug/L	0.0373	ppb	11:14:03
1	Be 313.107†	-7422.8	-138.9	-0.0432	ug/L	-0.0432	ppb	11:13:43
1	Ca 317.933Radial†	33.6	16.5	41.209	ug/L	41.209	ppb	11:12:41
1	Cd 226.502†	-287.1	-10.7	-0.0827	ug/L	-0.0827	ppb	11:14:03
1	Co 228.616†	-82.2	7.8	0.0972	ug/L	0.0972	ppb	11:14:03
1	Cr 267.716†	-32.4	-4.0	-0.0341	ug/L	-0.0341	ppb	11:14:03
1	Cu 324.752†	10356.0	209.8	0.5189	ug/L	0.5189	ppb	11:13:43
1	Fe 238.204 Radial†	1.0	0.7	23.570	ug/L	23.570	ppb	11:12:41
1	K 766.490 Radial†	1855.2	377.8	163.93	ug/L	163.93	ppb	11:12:21
1	Mg 279.077 IEC†	1.4	1.2	93.519	ug/L	93.519	ppb	11:12:41
1	Mn 257.610†	821.4	-2.0	-0.0003	ug/L	-0.0003	ppb	11:14:03
1	Mo 202.031†	33.3	1.7	0.0702	ug/L	0.0702	ppb	11:14:03
1	Na 589.592 Radial†	-185.2	-14.4	-38.901	ug/L	-38.901	ppb	11:12:41
1	Ni 231.604†	168.8	21.3	0.3412	ug/L	0.3412	ppb	11:14:03
1	P 214.914†	333.0	-2.5	-0.9562	ug/L	-0.9562	ppb	11:14:03
1	Pb 220.353†	11.5	40.6	3.0505	ug/L	3.0505	ppb	11:14:03
1	S 181.975 Axial†	72.5	5.0	4.2399	ug/L	4.2399	ppb	11:14:03
1	Sb 206.836†	55.9	10.7	2.1229	ug/L	2.1229	ppb	11:14:03
1	Se 196.026†	-17.3	4.3	1.4749	ug/L	1.4749	ppb	11:14:03
1	Si 251.611†	665.9	108.7	2.1852	ug/L	2.1852	ppb	11:14:03
1	Sn 189.927†	14.7	9.3	0.9689	ug/L	0.9689	ppb	11:14:03
1	Sr 421.552†	24.7	19.1	0.2942	ug/L	0.2942	ppb	11:12:41
1	Ti 334.940†	-1110.3	-5.8	-0.0052	ug/L	-0.0052	ppb	11:13:43
1	Tl 190.801†	-57.1	4.0	0.6835	ug/L	0.6835	ppb	11:14:03
1	U 409.014†	-3785.0	33.2	0.8217	ug/L	0.8217	ppb	11:13:38
1	V 292.402†	-1685.0	-39.6	-0.2237	ug/L	-0.2237	ppb	11:13:43
1	Zn 213.857†	1105.7	-11.9	-0.0751	ug/L	-0.0751	ppb	11:14:03
1	SiO2†	681.4	82.0	3.4918	ug/L	3.4918	ppb	11:15:09
2	Sc 361.383	1055939.4	1055939.4	99.534	%			11:14:08
2	Sc Radial	5379.7	5379.7	96.7	%			11:12:46
2	Y 371.029	851096.0	851096.0	99.752	%			11:14:08
2	Y RADIAL	4702.4	4702.4	97.65	%			11:12:46
2	Ag 328.068†	776.8	141.8	0.5427	ug/L	0.5427	ppb	11:14:13
2	Al 396.153Radial†	-76.7	12.9	11.716	ug/L	11.716	ppb	11:12:46
2	As 188.979†	-40.2	-3.5	-0.8491	ug/L	-0.8491	ppb	11:14:33
2	B 249.677†	486.5	870.3	13.572	ug/L	13.572	ppb	11:14:13
2	Ba 233.527†	62.3	38.3	0.1924	ug/L	0.1924	ppb	11:14:33
2	Be 313.107†	-7290.4	-8.3	-0.0025	ug/L	-0.0025	ppb	11:14:13
2	Ca 317.933Radial†	28.6	12.6	31.463	ug/L	31.463	ppb	11:13:06
2	Cd 226.502†	-289.0	-12.7	-0.0867	ug/L	-0.0867	ppb	11:14:33
2	Co 228.616†	-77.8	12.3	0.1535	ug/L	0.1535	ppb	11:14:33
2	Cr 267.716†	-16.8	11.7	0.0997	ug/L	0.0997	ppb	11:14:33
2	Cu 324.752†	10238.9	95.6	0.2319	ug/L	0.2319	ppb	11:14:13
2	Fe 238.204 Radial†	-1.5	-1.9	-67.871	ug/L	-67.871	ppb	11:13:06
2	K 766.490 Radial†	1812.4	401.6	174.21	ug/L	174.21	ppb	11:12:46
2	Mg 279.077 IEC†	1.0	0.8	66.268	ug/L	66.268	ppb	11:13:06
2	Mn 257.610†	855.6	32.6	0.0157	ug/L	0.0157	ppb	11:14:33
2	Mo 202.031†	30.0	-1.6	-0.0706	ug/L	-0.0706	ppb	11:14:33
2	Na 589.592 Radial†	-174.9	-10.5	-28.379	ug/L	-28.379	ppb	11:13:06
2	Ni 231.604†	168.3	20.8	0.3332	ug/L	0.3332	ppb	11:14:33

2	P 214.914†	337.1	1.8	0.6504 ug/L	0.6504 ppb		11:14:33
2	Pb 220.353†	5.9	23.2	1.7452 ug/L	1.7452 ppb		11:14:33
2	S 181.975 Axial†	79.7	12.3	10.368 ug/L	10.368 ppb		11:14:33
2	Sb 206.836†	62.7	17.5	3.4466 ug/L	3.4466 ppb		11:14:33
2	Se 196.026†	-10.1	11.5	3.4915 ug/L	3.4915 ppb		11:14:33
2	Si 251.611†	654.2	97.1	1.9448 ug/L	1.9448 ppb		11:14:33
2	Sn 189.927†	12.6	7.2	0.7527 ug/L	0.7527 ppb		11:14:33
2	Sr 421.552†	34.7	30.4	0.4675 ug/L	0.4675 ppb		11:13:06
2	Ti 334.940†	-1082.3	21.9	0.0326 ug/L	0.0326 ppb		11:14:13
2	Tl 190.801†	-39.2	22.0	3.7138 ug/L	3.7138 ppb		11:14:33
2	U 409.014†	-3991.4	-175.3	-4.3425 ug/L	-4.3425 ppb		11:14:08
2	V 292.402†	-1651.7	-6.6	-0.0367 ug/L	-0.0367 ppb		11:14:13
2	Zn 213.857†	1118.7	1.5	0.0109 ug/L	0.0109 ppb		11:14:33
2	SiO2†	678.0	78.8	3.3488 ug/L	3.3488 ppb		11:15:14
3	Sc 361.383	1066175.5	1066175.5	100.50 %			11:14:39
3	Sc Radial	5571.9	5571.9	100 %			11:13:11
3	Y 371.029	858182.7	858182.7	100.58 %			11:14:39
3	Y RADIAL	4847.5	4847.5	100.7 %			11:13:11
3	Ag 328.068†	733.0	90.7	0.3451 ug/L	0.3451 ppb		11:14:44
3	Al 396.153Radial†	-63.8	28.4	25.885 ug/L	25.885 ppb		11:13:11
3	As 188.979†	-36.2	0.9	0.1978 ug/L	0.1978 ppb		11:15:04
3	B 249.677†	438.0	817.4	12.743 ug/L	12.743 ppb		11:14:44
3	Ba 233.527†	45.2	20.7	0.1045 ug/L	0.1045 ppb		11:15:04
3	Be 313.107†	-7375.6	-22.8	-0.0070 ug/L	-0.0070 ppb		11:14:44
3	Ca 317.933Radial†	31.4	14.4	35.975 ug/L	35.975 ppb		11:13:31
3	Cd 226.502†	-275.1	4.0	0.0342 ug/L	0.0342 ppb		11:15:04
3	Co 228.616†	-85.2	5.6	0.0709 ug/L	0.0709 ppb		11:15:04
3	Cr 267.716†	-11.4	17.3	0.1457 ug/L	0.1457 ppb		11:15:04
3	Cu 324.752†	10202.8	-39.1	-0.0986 ug/L	-0.0986 ppb		11:14:44
3	Fe 238.204 Radial†	-0.7	-1.1	-36.971 ug/L	-36.971 ppb		11:13:31
3	K 766.490 Radial†	1706.6	231.3	100.35 ug/L	100.35 ppb		11:13:11
3	Mg 279.077 IEC†	0.4	0.2	14.946 ug/L	14.946 ppb		11:13:31
3	Mn 257.610†	832.1	0.9	-0.0044 ug/L	-0.0044 ppb		11:15:04
3	Mo 202.031†	38.5	6.5	0.2593 ug/L	0.2593 ppb		11:15:04
3	Na 589.592 Radial†	-180.8	-10.1	-27.397 ug/L	-27.397 ppb		11:13:31
3	Ni 231.604†	170.2	21.1	0.3376 ug/L	0.3376 ppb		11:15:04
3	P 214.914†	362.2	23.5	8.3827 ug/L	8.3827 ppb		11:15:04
3	Pb 220.353†	-20.1	9.1	0.6925 ug/L	0.6925 ppb		11:15:04
3	S 181.975 Axial†	80.7	12.5	10.586 ug/L	10.586 ppb		11:15:04
3	Sb 206.836†	62.0	16.3	3.2114 ug/L	3.2114 ppb		11:15:04
3	Se 196.026†	-17.5	4.2	1.2231 ug/L	1.2231 ppb		11:15:04
3	Si 251.611†	661.8	98.4	1.9887 ug/L	1.9887 ppb		11:15:04
3	Sn 189.927†	17.9	12.4	1.2868 ug/L	1.2868 ppb		11:15:04
3	Sr 421.552†	29.8	24.3	0.3745 ug/L	0.3745 ppb		11:13:31
3	Ti 334.940†	-1085.5	29.2	0.0391 ug/L	0.0391 ppb		11:14:44
3	Tl 190.801†	-66.9	-5.2	-0.8818 ug/L	-0.8818 ppb		11:15:04
3	U 409.014†	-3721.1	132.1	3.2823 ug/L	3.2823 ppb		11:14:39
3	V 292.402†	-1611.3	49.5	0.2955 ug/L	0.2955 ppb		11:14:44
3	Zn 213.857†	1113.1	-14.8	-0.0813 ug/L	-0.0813 ppb		11:15:04
3	SiO2†	689.8	84.0	3.6182 ug/L	3.6182 ppb		11:15:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1059467.0	99.867	%	0.5479				0.55%
Sc Radial	5509.8	99.0	%	2.03				2.05%
Y 371.029	853675.3	100.05	%	0.459				0.46%
Y RADIAL	4805.8	99.79	%	1.872				1.88%
Ag 328.068†	130.0	0.5056	ug/L	0.14559	0.5056	ppb	0.14559	28.79%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	24.6	22.349	ug/L	9.3789	22.349	ppb	9.3789	41.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.6	-1.0834	ug/L	1.41306	-1.0834	ppb	1.41306	130.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	836.0	13.032	ug/L	0.4684	13.032	ppb	0.4684	3.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.1	0.1114	ug/L	0.07778	0.1114	ppb	0.07778	69.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-56.7	-0.0176	ug/L	0.02232	-0.0176	ppb	0.02232	127.00%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          14.5      36.216 ug/L        4.8774      36.216 ppb        4.8774  13.47%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.5     -0.0451 ug/L       0.06867     -0.0451 ppb       0.06867 152.40%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 8.6      0.1072 ug/L       0.04222      0.1072 ppb       0.04222  39.39%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 8.3      0.0704 ug/L       0.09343      0.0704 ppb       0.09343 132.64%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                88.8      0.2174 ug/L       0.30899      0.2174 ppb       0.30899 142.11%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.8     -27.091 ug/L       46.5144     -27.091 ppb       46.5144 171.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         336.9      146.16 ug/L        40.010      146.16 ppb        40.010  27.37%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.7      58.244 ug/L       39.8965      58.244 ppb       39.8965  68.50%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                10.5      0.0036 ug/L       0.01059      0.0036 ppb       0.01059 290.42%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.2      0.0863 ug/L       0.16552      0.0863 ppb       0.16552 191.79%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -11.7     -31.559 ug/L        6.3772     -31.559 ppb        6.3772  20.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.1      0.3373 ug/L       0.00401      0.3373 ppb       0.00401   1.19%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  7.6      2.6923 ug/L       4.99307      2.6923 ppb       4.99307 185.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                24.3      1.8294 ug/L       1.18127      1.8294 ppb       1.18127  64.57%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            9.9      8.3978 ug/L       3.60254      8.3978 ppb       3.60254  42.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                14.8      2.9269 ug/L       0.70621      2.9269 ppb       0.70621  24.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 6.6      2.0632 ug/L       1.24335      2.0632 ppb       1.24335  60.26%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               101.4      2.0396 ug/L       0.12804      2.0396 ppb       0.12804   6.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.6      1.0028 ug/L       0.26867      1.0028 ppb       0.26867  26.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                24.6      0.3787 ug/L       0.08674      0.3787 ppb       0.08674  22.90%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                15.1      0.0222 ug/L       0.02395      0.0222 ppb       0.02395 107.99%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.1719 ug/L       2.33641      1.1719 ppb       2.33641 199.38%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 -3.3     -0.0795 ug/L       3.89151     -0.0795 ppb       3.89151 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  1.1      0.0117 ug/L       0.26296      0.0117 ppb       0.26296 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                -8.4     -0.0485 ug/L       0.05156     -0.0485 ppb       0.05156 106.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      81.6      3.4863 ug/L       0.13480      3.4863 ppb       0.13480   3.87%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: LR1
Analyst: HSC
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/8/2009 11:17:30
Data Type: Reprocessed on 7/8/2009 11:40:20

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1046705.1	1046705.1	98.664	%			11:20:42
1	Sc Radial	5285.9	5285.9	95.0	%			11:19:24
1	Y 371.029	838520.8	838520.8	98.278	%			11:20:42
1	Y RADIAL	4594.7	4594.7	95.41	%			11:19:24
1	Ag 328.068†	-28259.2	-29280.5	9.7367	ug/L	9.7367	ppb	11:20:42
1	Al 396.153Radial†	-104.1	-17.4	-14.625	ug/L	-14.625	ppb	11:19:24
1	As 188.979†	-375.6	-343.8	-2.6523	ug/L	-2.6523	ppb	11:21:02
1	B 249.677†	2868.7	3289.1	-0.5237	ug/L	-0.5237	ppb	11:20:42
1	Ba 233.527†	-1751.7	-1799.7	0.0492	ug/L	0.0492	ppb	11:21:02
1	Be 313.107†	-7239.6	-21.4	-0.0064	ug/L	-0.0064	ppb	11:20:42
1	Ca 317.933Radial†	22.3	6.5	16.305	ug/L	16.305	ppb	11:19:44
1	Cd 226.502†	5204.4	5552.6	-4.5755	ug/L	-4.5755	ppb	11:21:02
1	Co 228.616†	250.1	343.9	-1.3538	ug/L	-1.3538	ppb	11:21:02
1	Cr 267.716†	-824.6	-807.2	0.7505	ug/L	0.7505	ppb	11:21:02
1	Cu 324.752†	802.5	-9377.9	-0.5740	ug/L	-0.5740	ppb	11:20:42
1	Fe 238.204 Radial†	10567.5	11124.8	390270	ug/L	390270	ppb	11:19:24
1	K 766.490 Radial†	1599.4	210.8	389.48	ug/L	389.48	ppb	11:19:24
1	Mg 279.077 IEC†	6.2	6.3	166.70	ug/L	166.70	ppb	11:19:44
1	Mn 257.610†	-57355.3	-58959.2	4.2573	ug/L	4.2573	ppb	11:20:42
1	Mo 202.031†	-642.9	-683.4	-0.5684	ug/L	-0.5684	ppb	11:20:42
1	Na 589.592 Radial†	-176.8	-15.7	-42.375	ug/L	-42.375	ppb	11:19:44
1	Ni 231.604†	294.0	149.8	2.3977	ug/L	2.3977	ppb	11:21:02
1	P 214.914†	1226.8	906.5	9.2980	ug/L	9.2980	ppb	11:21:02
1	Pb 220.353†	427.8	462.7	-2.1099	ug/L	-2.1099	ppb	11:21:02
1	S 181.975 Axial†	88.8	22.2	18.788	ug/L	18.788	ppb	11:21:02
1	Sb 206.836†	15.9	-29.3	0.9649	ug/L	0.9649	ppb	11:21:02
1	Se 196.026†	-3818.0	-3848.1	119.57	ug/L	119.57	ppb	11:21:02
1	Si 251.611†	-912.5	-1484.9	-30.180	ug/L	-30.180	ppb	11:21:02
1	Sn 189.927†	-36.6	-42.6	2.5556	ug/L	2.5556	ppb	11:21:02
1	Sr 421.552†	22.5	18.2	0.2804	ug/L	0.2804	ppb	11:19:44
1	Ti 334.940†	-991.5	104.3	0.1206	ug/L	0.1206	ppb	11:21:02
1	Tl 190.801†	-76.4	-16.1	-3.1221	ug/L	-3.1221	ppb	11:21:02
1	U 409.014†	-2034.4	1772.8	-3.9602	ug/L	-3.9602	ppb	11:20:42
1	V 292.402†	7424.0	9177.3	-1.4441	ug/L	-1.4441	ppb	11:21:02
1	Zn 213.857†	8001.3	6987.3	-3.0916	ug/L	-3.0916	ppb	11:21:02
1	SiO2†	-992.8	-1608.6	-70.084	ug/L	-70.084	ppb	11:22:00
2	Sc 361.383	1052226.2	1052226.2	99.184	%			11:21:08
2	Sc Radial	5401.8	5401.8	97.1	%			11:19:49
2	Y 371.029	842665.3	842665.3	98.764	%			11:21:08
2	Y RADIAL	4714.0	4714.0	97.89	%			11:19:49
2	Ag 328.068†	-28377.9	-29249.9	9.3733	ug/L	9.3733	ppb	11:21:08
2	Al 396.153Radial†	-122.8	-34.3	-30.134	ug/L	-30.134	ppb	11:19:49
2	As 188.979†	-364.1	-330.2	0.2438	ug/L	0.2438	ppb	11:21:28
2	B 249.677†	3058.2	3464.9	2.4165	ug/L	2.4165	ppb	11:21:08
2	Ba 233.527†	-1739.0	-1777.6	0.1263	ug/L	0.1263	ppb	11:21:28
2	Be 313.107†	-7287.8	-31.5	-0.0094	ug/L	-0.0094	ppb	11:21:08
2	Ca 317.933Radial†	23.0	6.7	16.789	ug/L	16.789	ppb	11:20:09
2	Cd 226.502†	5255.4	5576.3	-4.2206	ug/L	-4.2206	ppb	11:21:28
2	Co 228.616†	235.9	328.3	-1.5227	ug/L	-1.5227	ppb	11:21:28
2	Cr 267.716†	-795.1	-773.0	1.0118	ug/L	1.0118	ppb	11:21:28
2	Cu 324.752†	938.3	-9245.3	-0.3338	ug/L	-0.3338	ppb	11:21:08
2	Fe 238.204 Radial†	10757.5	11081.9	388770	ug/L	388770	ppb	11:19:49
2	K 766.490 Radial†	1494.6	66.6	325.81	ug/L	325.81	ppb	11:19:49
2	Mg 279.077 IEC†	5.9	5.9	130.42	ug/L	130.42	ppb	11:20:09
2	Mn 257.610†	-57434.3	-58733.8	4.2400	ug/L	4.2400	ppb	11:21:08
2	Mo 202.031†	-612.5	-649.3	0.6913	ug/L	0.6913	ppb	11:21:08
2	Na 589.592 Radial†	-180.6	-15.6	-42.212	ug/L	-42.212	ppb	11:20:09
2	Ni 231.604†	278.0	132.1	2.1139	ug/L	2.1139	ppb	11:21:28

2	P 214.914†	1227.8	901.0	8.4921	ug/L	8.4921 ppb	11:21:28
2	Pb 220.353†	449.1	481.9	-0.5307	ug/L	-0.5307 ppb	11:21:28
2	S 181.975 Axial†	80.8	13.6	11.530	ug/L	11.530 ppb	11:21:28
2	Sb 206.836†	33.2	-12.0	4.3505	ug/L	4.3505 ppb	11:21:28
2	Se 196.026†	-3813.6	-3823.4	122.34	ug/L	122.34 ppb	11:21:28
2	Si 251.611†	-923.6	-1491.3	-30.313	ug/L	-30.313 ppb	11:21:28
2	Sn 189.927†	-40.9	-46.7	2.1032	ug/L	2.1032 ppb	11:21:28
2	Sr 421.552†	35.7	31.3	0.4814	ug/L	0.4814 ppb	11:20:09
2	Ti 334.940†	-974.5	126.7	0.1495	ug/L	0.1495 ppb	11:21:28
2	Tl 190.801†	-70.5	-9.6	-2.0337	ug/L	-2.0337 ppb	11:21:28
2	U 409.014†	-2005.9	1812.3	-2.7948	ug/L	-2.7948 ppb	11:21:08
2	V 292.402†	7472.6	9186.8	-1.1665	ug/L	-1.1665 ppb	11:21:28
2	Zn 213.857†	8017.0	6960.5	-3.0760	ug/L	-3.0760 ppb	11:21:28
2	SiO2†	-1024.5	-1635.3	-71.266	ug/L	-71.266 ppb	11:22:05
3	Sc 361.383	1038864.2	1038864.2	97.925	%		11:21:35
3	Sc Radial	5569.7	5569.7	100	%		11:20:14
3	Y 371.029	832242.4	832242.4	97.542	%		11:21:35
3	Y RADIAL	4850.2	4850.2	100.7	%		11:20:14
3	Ag 328.068†	-28102.1	-29336.3	7.7693	ug/L	7.7693 ppb	11:21:35
3	Al 396.153Radial†	-102.4	-10.1	-8.1423	ug/L	-8.1423 ppb	11:20:14
3	As 188.979†	-361.3	-332.1	-0.9980	ug/L	-0.9980 ppb	11:21:55
3	B 249.677†	2847.5	3289.3	0.2032	ug/L	0.2032 ppb	11:21:35
3	Ba 233.527†	-1784.8	-1846.9	-0.3157	ug/L	-0.3157 ppb	11:21:55
3	Be 313.107†	-7215.4	-52.1	-0.0159	ug/L	-0.0159 ppb	11:21:35
3	Ca 317.933Radial†	20.5	3.5	8.8182	ug/L	8.8182 ppb	11:20:34
3	Cd 226.502†	5264.7	5654.0	-3.1736	ug/L	-3.1736 ppb	11:21:55
3	Co 228.616†	244.1	339.7	-1.3213	ug/L	-1.3213 ppb	11:21:55
3	Cr 267.716†	-801.4	-789.8	0.7943	ug/L	0.7943 ppb	11:21:55
3	Cu 324.752†	902.1	-9270.0	-0.6227	ug/L	-0.6227 ppb	11:21:35
3	Fe 238.204 Radial†	10979.5	10969.5	384830	ug/L	384830 ppb	11:20:14
3	K 766.490 Radial†	1427.0	-47.3	273.35	ug/L	273.35 ppb	11:20:14
3	Mg 279.077 IEC†	6.1	5.9	137.86	ug/L	137.86 ppb	11:20:34
3	Mn 257.610†	-56773.9	-58804.2	3.6706	ug/L	3.6706 ppb	11:21:35
3	Mo 202.031†	-575.4	-619.4	1.6175	ug/L	1.6175 ppb	11:21:35
3	Na 589.592 Radial†	-177.6	-7.0	-19.058	ug/L	-19.058 ppb	11:20:34
3	Ni 231.604†	287.7	145.5	2.3298	ug/L	2.3298 ppb	11:21:55
3	P 214.914†	1224.2	913.2	16.013	ug/L	16.013 ppb	11:21:55
3	Pb 220.353†	422.9	460.9	-1.7263	ug/L	-1.7263 ppb	11:21:55
3	S 181.975 Axial†	81.7	15.6	13.165	ug/L	13.165 ppb	11:21:55
3	Sb 206.836†	38.2	-6.4	5.3941	ug/L	5.3941 ppb	11:21:55
3	Se 196.026†	-3850.1	-3910.1	80.299	ug/L	80.299 ppb	11:21:55
3	Si 251.611†	-924.9	-1504.6	-30.592	ug/L	-30.592 ppb	11:21:55
3	Sn 189.927†	-42.3	-48.7	1.8220	ug/L	1.8220 ppb	11:21:55
3	Sr 421.552†	28.6	23.1	0.3559	ug/L	0.3559 ppb	11:20:34
3	Ti 334.940†	-986.5	101.9	0.1187	ug/L	0.1187 ppb	11:21:55
3	Tl 190.801†	-94.3	-34.9	-6.3034	ug/L	-6.3034 ppb	11:21:55
3	U 409.014†	-2185.9	1602.5	-7.5175	ug/L	-7.5175 ppb	11:21:35
3	V 292.402†	7401.4	9211.1	-0.4859	ug/L	-0.4859 ppb	11:21:55
3	Zn 213.857†	8037.4	7085.4	-1.9547	ug/L	-1.9547 ppb	11:21:55
3	SiO2†	-936.7	-1558.9	-67.898	ug/L	-67.898 ppb	11:22:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1045931.8	98.591	%	0.6329				0.64%
Sc Radial	5419.1	97.4	%	2.56				2.63%
Y 371.029	837809.5	98.194	%	0.6151				0.63%
Y RADIAL	4719.6	98.00	%	2.655				2.71%
Ag 328.068†	-29288.9	8.9598	ug/L	1.04683	8.9598	ppb	1.04683	11.68%
Al 396.153Radial†	-20.6	-17.634	ug/L	11.3004	-17.634	ppb	11.3004	64.08%
As 188.979†	-335.4	-1.1355	ug/L	1.45294	-1.1355	ppb	1.45294	127.95%
B 249.677†	3347.8	0.6987	ug/L	1.53142	0.6987	ppb	1.53142	219.19%
Ba 233.527†	-1808.0	-0.0467	ug/L	0.23610	-0.0467	ppb	0.23610	505.55%
Be 313.107†	-35.0	-0.0105	ug/L	0.00487	-0.0105	ppb	0.00487	46.13%
Ca 317.933Radial†	5.6	13.971	ug/L	4.4688	13.971	ppb	4.4688	31.99%
Cd 226.502†	5594.3	-3.9899	ug/L	0.72889	-3.9899	ppb	0.72889	18.27%
Co 228.616†	337.3	-1.3993	ug/L	0.10812	-1.3993	ppb	0.10812	7.73%
Cr 267.716†	-790.0	0.8522	ug/L	0.13996	0.8522	ppb	0.13996	16.42%
Cu 324.752†	-9297.7	-0.5102	ug/L	0.15464	-0.5102	ppb	0.15464	30.31%
Fe 238.204 Radial†	11058.7	387960	ug/L	2812.7	387960	ppb	2812.7	0.72%

K 766.490 Radial†	76.7	329.55	ug/L	58.152	329.55	ppb	58.152	17.65%
Mg 279.077 IEC†	6.0	144.99	ug/L	19.161	144.99	ppb	19.161	13.21%
Mn 257.610†	-58832.4	4.0559	ug/L	0.33383	4.0559	ppb	0.33383	8.23%
Mo 202.031†	-650.7	0.5801	ug/L	1.09717	0.5801	ppb	1.09717	189.12%
Na 589.592 Radial†	-12.8	-34.548	ug/L	13.4155	-34.548	ppb	13.4155	38.83%
Ni 231.604†	142.4	2.2805	ug/L	0.14816	2.2805	ppb	0.14816	6.50%
P 214.914†	906.9	11.268	ug/L	4.1293	11.268	ppb	4.1293	36.65%
Pb 220.353†	468.5	-1.4556	ug/L	0.82364	-1.4556	ppb	0.82364	56.58%
S 181.975 Axial†	17.1	14.494	ug/L	3.8072	14.494	ppb	3.8072	26.27%
Sb 206.836†	-15.9	3.5699	ug/L	2.31548	3.5699	ppb	2.31548	64.86%
Se 196.026†	-3860.5	107.40	ug/L	23.512	107.40	ppb	23.512	21.89%
Si 251.611†	-1493.6	-30.362	ug/L	0.2100	-30.362	ppb	0.2100	0.69%
Sn 189.927†	-46.0	2.1603	ug/L	0.37012	2.1603	ppb	0.37012	17.13%
Sr 421.552†	24.2	0.3726	ug/L	0.10154	0.3726	ppb	0.10154	27.25%
Ti 334.940†	111.0	0.1296	ug/L	0.01724	0.1296	ppb	0.01724	13.30%
Tl 190.801†	-20.2	-3.8197	ug/L	2.21870	-3.8197	ppb	2.21870	58.09%
U 409.014†	1729.2	-4.7575	ug/L	2.46022	-4.7575	ppb	2.46022	51.71%
V 292.402†	9191.8	-1.0321	ug/L	0.49303	-1.0321	ppb	0.49303	47.77%
Zn 213.857†	7011.0	-2.7074	ug/L	0.65195	-2.7074	ppb	0.65195	24.08%
SiO2†	-1600.9	-69.749	ug/L	1.7089	-69.749	ppb	1.7089	2.45%

Sequence No.: 18
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:24:21
Data Type: Reprocessed on 7/8/2009 11:40:21

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1059944.6	1059944.6	99.912	%			11:27:33
1	Sc Radial	5479.4	5479.4	98.5	%			11:26:14
1	Y 371.029	844640.7	844640.7	98.995	%			11:27:33
1	Y RADIAL	4754.7	4754.7	98.73	%			11:26:14
1	Ag 328.068†	125630.8	125103.4	498.29	ug/L	498.29	ppb	11:27:33
1	Al 396.153Radial†	5189.1	5362.2	4859.2	ug/L	4859.2	ppb	11:26:14
1	As 188.979†	2086.1	2124.9	501.95	ug/L	501.95	ppb	11:27:53
1	B 249.677†	31012.2	31421.1	487.79	ug/L	487.79	ppb	11:27:33
1	Ba 233.527†	97648.8	97711.0	495.79	ug/L	495.79	ppb	11:27:33
1	Be 313.107†	1580190.1	1588904.8	495.20	ug/L	495.20	ppb	11:27:33
1	Ca 317.933Radial†	1996.6	2010.8	5008.6	ug/L	5008.6	ppb	11:26:34
1	Cd 226.502†	66244.6	66580.8	497.71	ug/L	497.71	ppb	11:27:33
1	Co 228.616†	39192.8	39317.9	489.98	ug/L	489.98	ppb	11:27:53
1	Cr 267.716†	57869.2	57949.0	494.25	ug/L	494.25	ppb	11:27:33
1	Cu 324.752†	208005.6	197998.5	488.80	ug/L	488.80	ppb	11:27:33
1	Fe 238.204 Radial†	141.0	142.8	5026.5	ug/L	5026.5	ppb	11:26:34
1	K 766.490 Radial†	13180.0	11912.5	5162.7	ug/L	5162.7	ppb	11:26:14
1	Mg 279.077 IEC†	65.0	65.8	5216.9	ug/L	5216.9	ppb	11:26:34
1	Mn 257.610†	624970.8	624696.8	494.24	ug/L	494.24	ppb	11:27:33
1	Mo 202.031†	12690.5	12670.0	507.49	ug/L	507.49	ppb	11:27:53
1	Na 589.592 Radial†	3480.4	3705.1	10018	ug/L	10018	ppb	11:26:14
1	Ni 231.604†	30935.7	30814.9	493.58	ug/L	493.58	ppb	11:27:53
1	P 214.914†	7423.2	7092.8	2432.7	ug/L	2432.7	ppb	11:27:53
1	Pb 220.353†	6700.4	6735.4	506.26	ug/L	506.26	ppb	11:27:53
1	S 181.975 Axial†	1257.4	1190.7	1006.9	ug/L	1006.9	ppb	11:27:53
1	Sb 206.836†	2570.6	2527.4	503.36	ug/L	503.36	ppb	11:27:53
1	Se 196.026†	1498.7	1521.6	514.33	ug/L	514.33	ppb	11:27:53
1	Si 251.611†	121332.8	120880.1	2482.2	ug/L	2482.2	ppb	11:27:33
1	Sn 189.927†	4849.4	4848.2	504.72	ug/L	504.72	ppb	11:27:53
1	Sr 421.552†	33394.2	33909.5	522.38	ug/L	522.38	ppb	11:26:14
1	Ti 334.940†	376930.4	378373.2	495.26	ug/L	495.26	ppb	11:27:33
1	Tl 190.801†	2903.5	2967.5	502.45	ug/L	502.45	ppb	11:27:53
1	U 409.014†	15423.9	19272.3	476.61	ug/L	476.61	ppb	11:27:33
1	V 292.402†	84907.4	86635.3	497.41	ug/L	497.41	ppb	11:27:33
1	Zn 213.857†	89673.2	88630.1	490.34	ug/L	490.34	ppb	11:27:33
1	SiO2†	121738.4	121243.8	5330.9	ug/L	5330.9	ppb	11:28:53
2	Sc 361.383	1066729.6	1066729.6	100.55	%			11:28:00
2	Sc Radial	5456.8	5456.8	98.1	%			11:26:39
2	Y 371.029	848088.2	848088.2	99.399	%			11:28:00
2	Y RADIAL	4734.1	4734.1	98.31	%			11:26:39
2	Ag 328.068†	126873.6	125539.5	500.03	ug/L	500.03	ppb	11:28:00
2	Al 396.153Radial†	5194.2	5389.3	4884.0	ug/L	4884.0	ppb	11:26:39
2	As 188.979†	2073.2	2098.8	495.85	ug/L	495.85	ppb	11:28:20
2	B 249.677†	31532.7	31741.4	492.78	ug/L	492.78	ppb	11:28:00
2	Ba 233.527†	98315.7	97752.5	496.00	ug/L	496.00	ppb	11:28:00
2	Be 313.107†	1590346.7	1588945.7	495.21	ug/L	495.21	ppb	11:28:00
2	Ca 317.933Radial†	1979.2	2001.5	4985.4	ug/L	4985.4	ppb	11:26:59
2	Cd 226.502†	66641.4	66553.8	497.50	ug/L	497.50	ppb	11:28:00
2	Co 228.616†	39043.6	38920.0	485.00	ug/L	485.00	ppb	11:28:20
2	Cr 267.716†	58361.0	58069.7	495.28	ug/L	495.28	ppb	11:28:00
2	Cu 324.752†	210274.7	198930.9	491.11	ug/L	491.11	ppb	11:28:00
2	Fe 238.204 Radial†	141.8	144.2	5075.0	ug/L	5075.0	ppb	11:26:59
2	K 766.490 Radial†	13045.1	11830.3	5127.1	ug/L	5127.1	ppb	11:26:39
2	Mg 279.077 IEC†	64.4	65.5	5190.8	ug/L	5190.8	ppb	11:26:59
2	Mn 257.610†	630407.8	626125.3	495.37	ug/L	495.37	ppb	11:28:00
2	Mo 202.031†	12642.8	12541.7	502.36	ug/L	502.36	ppb	11:28:20
2	Na 589.592 Radial†	3436.0	3674.5	9935.3	ug/L	9935.3	ppb	11:26:39
2	Ni 231.604†	30760.2	30443.3	487.63	ug/L	487.63	ppb	11:28:20

2	P 214.914†	7393.8	7016.4	2405.2 ug/L	2405.2 ppb	11:28:20
2	Pb 220.353†	6660.2	6652.8	500.06 ug/L	500.06 ppb	11:28:20
2	S 181.975 Axial†	1241.1	1166.5	986.41 ug/L	986.41 ppb	11:28:20
2	Sb 206.836†	2563.0	2503.6	498.42 ug/L	498.42 ppb	11:28:20
2	Se 196.026†	1509.3	1522.7	514.83 ug/L	514.83 ppb	11:28:20
2	Si 251.611†	122522.7	121291.0	2490.8 ug/L	2490.8 ppb	11:28:00
2	Sn 189.927†	4810.7	4778.9	497.51 ug/L	497.51 ppb	11:28:20
2	Sr 421.552†	33200.1	33852.0	521.50 ug/L	521.50 ppb	11:26:39
2	Ti 334.940†	380050.3	379076.4	496.18 ug/L	496.18 ppb	11:28:00
2	Tl 190.801†	2886.0	2931.6	496.43 ug/L	496.43 ppb	11:28:20
2	U 409.014†	15484.1	19233.9	475.65 ug/L	475.65 ppb	11:28:00
2	V 292.402†	85441.7	86626.2	497.28 ug/L	497.28 ppb	11:28:00
2	Zn 213.857†	90424.6	88806.6	491.36 ug/L	491.36 ppb	11:28:00
2	SiO2†	122259.9	120987.4	5319.9 ug/L	5319.9 ppb	11:28:58
3	Sc 361.383	1082048.6	1082048.6	102.00 %		11:28:28
3	Sc Radial	5526.8	5526.8	99.3 %		11:27:04
3	Y 371.029	860676.7	860676.7	100.87 %		11:28:28
3	Y RADIAL	4799.7	4799.7	99.67 %		11:27:04
3	Ag 328.068†	128584.5	125430.6	499.55 ug/L	499.55 ppb	11:28:28
3	Al 396.153Radial†	5214.3	5342.4	4841.4 ug/L	4841.4 ppb	11:27:04
3	As 188.979†	2101.0	2096.8	495.36 ug/L	495.36 ppb	11:28:48
3	B 249.677†	31978.4	31734.4	492.71 ug/L	492.71 ppb	11:28:28
3	Ba 233.527†	99589.5	97617.2	495.31 ug/L	495.31 ppb	11:28:28
3	Be 313.107†	1612564.5	1588337.3	495.03 ug/L	495.03 ppb	11:28:28
3	Ca 317.933Radial†	1986.9	1983.6	4940.9 ug/L	4940.9 ppb	11:27:24
3	Cd 226.502†	67416.7	66375.6	496.18 ug/L	496.18 ppb	11:28:28
3	Co 228.616†	39220.9	38544.1	480.32 ug/L	480.32 ppb	11:28:48
3	Cr 267.716†	58998.1	57872.6	493.60 ug/L	493.60 ppb	11:28:28
3	Cu 324.752†	213337.9	198973.6	491.20 ug/L	491.20 ppb	11:28:28
3	Fe 238.204 Radial†	139.2	139.9	4921.4 ug/L	4921.4 ppb	11:27:24
3	K 766.490 Radial†	13032.9	11649.4	5048.6 ug/L	5048.6 ppb	11:27:04
3	Mg 279.077 IEC†	65.0	65.3	5178.3 ug/L	5178.3 ppb	11:27:24
3	Mn 257.610†	638129.7	624820.2	494.32 ug/L	494.32 ppb	11:28:28
3	Mo 202.031†	12745.8	12464.7	499.27 ug/L	499.27 ppb	11:28:48
3	Na 589.592 Radial†	3456.2	3650.4	9870.2 ug/L	9870.2 ppb	11:27:04
3	Ni 231.604†	30951.5	30197.8	483.70 ug/L	483.70 ppb	11:28:48
3	P 214.914†	7425.2	6943.1	2379.4 ug/L	2379.4 ppb	11:28:48
3	Pb 220.353†	6701.0	6599.0	496.02 ug/L	496.02 ppb	11:28:48
3	S 181.975 Axial†	1257.6	1165.2	985.32 ug/L	985.32 ppb	11:28:48
3	Sb 206.836†	2594.2	2498.0	497.25 ug/L	497.25 ppb	11:28:48
3	Se 196.026†	1502.3	1494.6	505.14 ug/L	505.14 ppb	11:28:48
3	Si 251.611†	124261.8	121271.0	2490.5 ug/L	2490.5 ppb	11:28:28
3	Sn 189.927†	4852.5	4752.1	494.71 ug/L	494.71 ppb	11:28:48
3	Sr 421.552†	33364.0	33587.9	517.43 ug/L	517.43 ppb	11:27:04
3	Ti 334.940†	385685.4	379250.3	496.41 ug/L	496.41 ppb	11:28:28
3	Tl 190.801†	2899.8	2904.5	491.88 ug/L	491.88 ppb	11:28:48
3	U 409.014†	15696.4	19224.1	475.43 ug/L	475.43 ppb	11:28:28
3	V 292.402†	86520.6	86480.9	496.44 ug/L	496.44 ppb	11:28:28
3	Zn 213.857†	91402.4	88492.1	489.64 ug/L	489.64 ppb	11:28:28
3	SiO2†	123096.2	120085.9	5280.2 ug/L	5280.2 ppb	11:29:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1069574.3	100.82	%	1.067				1.06%
Sc Radial	5487.7	98.6	%	0.64				0.65%
Y 371.029	851135.2	99.756	%	0.9893				0.99%
Y RADIAL	4762.9	98.90	%	0.696				0.70%
Ag 328.068†	125357.9	499.29	ug/L	0.900	499.29	ppb	0.900	0.18%
QC value within limits for Ag 328.068 Recovery = 99.86%								
Al 396.153Radial†	5364.6	4861.5	ug/L	21.38	4861.5	ppb	21.38	0.44%
QC value within limits for Al 396.153Radial Recovery = 97.23%								
As 188.979†	2106.8	497.72	ug/L	3.671	497.72	ppb	3.671	0.74%
QC value within limits for As 188.979 Recovery = 99.54%								
B 249.677†	31632.3	491.09	ug/L	2.863	491.09	ppb	2.863	0.58%
QC value within limits for B 249.677 Recovery = 98.22%								
Ba 233.527†	97693.6	495.70	ug/L	0.354	495.70	ppb	0.354	0.07%
QC value within limits for Ba 233.527 Recovery = 99.14%								
Be 313.107†	1588729.2	495.15	ug/L	0.105	495.15	ppb	0.105	0.02%
QC value within limits for Be 313.107 Recovery = 99.03%								

Ca 317.933Radial†	1998.7	4978.3 ug/L	34.43	4978.3 ppb	34.43	0.69%
QC value within limits for Ca 317.933Radial Recovery = 99.57%						
Cd 226.502†	66503.4	497.13 ug/L	0.828	497.13 ppb	0.828	0.17%
QC value within limits for Cd 226.502 Recovery = 99.43%						
Co 228.616†	38927.4	485.10 ug/L	4.831	485.10 ppb	4.831	1.00%
QC value within limits for Co 228.616 Recovery = 97.02%						
Cr 267.716†	57963.8	494.38 ug/L	0.848	494.38 ppb	0.848	0.17%
QC value within limits for Cr 267.716 Recovery = 98.88%						
Cu 324.752†	198634.3	490.37 ug/L	1.359	490.37 ppb	1.359	0.28%
QC value within limits for Cu 324.752 Recovery = 98.07%						
Fe 238.204 Radial†	142.3	5007.6 ug/L	78.49	5007.6 ppb	78.49	1.57%
QC value within limits for Fe 238.204 Radial Recovery = 100.15%						
K 766.490 Radial†	11797.4	5112.8 ug/L	58.43	5112.8 ppb	58.43	1.14%
QC value within limits for K 766.490 Radial Recovery = 102.26%						
Mg 279.077 IEC†	65.5	5195.3 ug/L	19.71	5195.3 ppb	19.71	0.38%
QC value within limits for Mg 279.077 IEC Recovery = 103.91%						
Mn 257.610†	625214.1	494.64 ug/L	0.633	494.64 ppb	0.633	0.13%
QC value within limits for Mn 257.610 Recovery = 98.93%						
Mo 202.031†	12558.8	503.04 ug/L	4.154	503.04 ppb	4.154	0.83%
QC value within limits for Mo 202.031 Recovery = 100.61%						
Na 589.592 Radial†	3676.6	9941.2 ug/L	74.10	9941.2 ppb	74.10	0.75%
QC value within limits for Na 589.592 Radial Recovery = 99.41%						
Ni 231.604†	30485.3	488.30 ug/L	4.976	488.30 ppb	4.976	1.02%
QC value within limits for Ni 231.604 Recovery = 97.66%						
P 214.914†	7017.4	2405.8 ug/L	26.68	2405.8 ppb	26.68	1.11%
QC value within limits for P 214.914 Recovery = 96.23%						
Pb 220.353†	6662.4	500.78 ug/L	5.161	500.78 ppb	5.161	1.03%
QC value within limits for Pb 220.353 Recovery = 100.16%						
S 181.975 Axial†	1174.1	992.89 ug/L	12.183	992.89 ppb	12.183	1.23%
QC value within limits for S 181.975 Axial Recovery = 99.29%						
Sb 206.836†	2509.7	499.68 ug/L	3.243	499.68 ppb	3.243	0.65%
QC value within limits for Sb 206.836 Recovery = 99.94%						
Se 196.026†	1512.9	511.43 ug/L	5.455	511.43 ppb	5.455	1.07%
QC value within limits for Se 196.026 Recovery = 102.29%						
Si 251.611†	121147.3	2487.8 ug/L	4.88	2487.8 ppb	4.88	0.20%
QC value within limits for Si 251.611 Recovery = 99.51%						
Sn 189.927†	4793.1	498.98 ug/L	5.163	498.98 ppb	5.163	1.03%
QC value within limits for Sn 189.927 Recovery = 99.80%						
Sr 421.552†	33783.1	520.44 ug/L	2.642	520.44 ppb	2.642	0.51%
QC value within limits for Sr 421.552 Recovery = 104.09%						
Ti 334.940†	378899.9	495.95 ug/L	0.606	495.95 ppb	0.606	0.12%
QC value within limits for Ti 334.940 Recovery = 99.19%						
Tl 190.801†	2934.5	496.92 ug/L	5.303	496.92 ppb	5.303	1.07%
QC value within limits for Tl 190.801 Recovery = 99.38%						
U 409.014†	19243.5	475.90 ug/L	0.628	475.90 ppb	0.628	0.13%
QC value within limits for U 409.014 Recovery = 95.18%						
V 292.402†	86580.8	497.04 ug/L	0.527	497.04 ppb	0.527	0.11%
QC value within limits for V 292.402 Recovery = 99.41%						
Zn 213.857†	88642.9	490.45 ug/L	0.862	490.45 ppb	0.862	0.18%
QC value within limits for Zn 213.857 Recovery = 98.09%						
SiO2†	120772.4	5310.3 ug/L	26.66	5310.3 ppb	26.66	0.50%
QC value within limits for SiO2 Recovery = 99.30%						

All analyte(s) passed QC.

Sequence No.: 19
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:31:14
Data Type: Reprocessed on 7/8/2009 11:40:22

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1063802.9	1063802.9	100.28	%			11:34:23
1	Sc Radial	5561.9	5561.9	99.9	%			11:33:06
1	Y 371.029	855860.4	855860.4	100.31	%			11:34:23
1	Y RADIAL	4822.6	4822.6	100.1	%			11:33:06
1	Ag 328.068†	690.4	49.9	0.1978	ug/L	0.1978	ppb	11:34:28
1	Al 396.153Radial†	-87.8	4.4	3.9546	ug/L	3.9546	ppb	11:33:06
1	As 188.979†	-50.4	-13.3	-3.1357	ug/L	-3.1357	ppb	11:34:48
1	B 249.677†	268.9	649.6	10.124	ug/L	10.124	ppb	11:34:28
1	Ba 233.527†	37.8	13.4	0.0677	ug/L	0.0677	ppb	11:34:48
1	Be 313.107†	-7293.5	42.7	0.0128	ug/L	0.0128	ppb	11:34:28
1	Ca 317.933Radial†	28.8	11.8	29.483	ug/L	29.483	ppb	11:33:26
1	Cd 226.502†	-277.0	1.4	0.0100	ug/L	0.0100	ppb	11:34:48
1	Co 228.616†	-86.2	4.5	0.0585	ug/L	0.0585	ppb	11:34:48
1	Cr 267.716†	-5.4	23.2	0.1973	ug/L	0.1973	ppb	11:34:48
1	Cu 324.752†	10006.5	-212.2	-0.5235	ug/L	-0.5235	ppb	11:34:28
1	Fe 238.204 Radial†	0.4	0.1	3.2855	ug/L	3.2855	ppb	11:33:26
1	K 766.490 Radial†	1523.7	51.4	22.290	ug/L	22.290	ppb	11:33:06
1	Mg 279.077 IEC†	-1.0	-1.1	-89.992	ug/L	-89.992	ppb	11:33:26
1	Mn 257.610†	795.0	-34.2	-0.0249	ug/L	-0.0249	ppb	11:34:48
1	Mo 202.031†	53.0	21.1	0.8462	ug/L	0.8462	ppb	11:34:48
1	Na 589.592 Radial†	-162.4	7.9	21.478	ug/L	21.478	ppb	11:33:26
1	Ni 231.604†	144.6	-4.1	-0.0650	ug/L	-0.0650	ppb	11:34:48
1	P 214.914†	355.6	17.7	6.3689	ug/L	6.3689	ppb	11:34:48
1	Pb 220.353†	-11.4	17.7	1.3309	ug/L	1.3309	ppb	11:34:48
1	S 181.975 Axial†	60.0	-8.0	-6.7972	ug/L	-6.7972	ppb	11:34:48
1	Sb 206.836†	53.2	7.6	1.5394	ug/L	1.5394	ppb	11:34:48
1	Se 196.026†	-14.3	7.3	2.4023	ug/L	2.4023	ppb	11:34:48
1	Si 251.611†	618.5	56.7	1.1410	ug/L	1.1410	ppb	11:34:48
1	Sn 189.927†	25.8	20.2	2.1070	ug/L	2.1070	ppb	11:34:48
1	Sr 421.552†	21.5	16.0	0.2468	ug/L	0.2468	ppb	11:33:26
1	Ti 334.940†	-1262.3	-149.6	-0.1941	ug/L	-0.1941	ppb	11:34:28
1	Tl 190.801†	-62.7	-1.1	-0.1937	ug/L	-0.1937	ppb	11:34:48
1	U 409.014†	-3836.3	9.0	0.2216	ug/L	0.2216	ppb	11:34:23
1	V 292.402†	-1663.5	-6.2	-0.0256	ug/L	-0.0256	ppb	11:34:28
1	Zn 213.857†	1135.7	10.2	0.0608	ug/L	0.0608	ppb	11:34:48
1	SiO2†	634.2	30.1	1.2681	ug/L	1.2681	ppb	11:35:54
2	Sc 361.383	1062791.4	1062791.4	100.18	%			11:34:53
2	Sc Radial	5538.6	5538.6	99.5	%			11:33:31
2	Y 371.029	855845.5	855845.5	100.31	%			11:34:53
2	Y RADIAL	4808.4	4808.4	99.85	%			11:33:31
2	Ag 328.068†	769.1	129.1	0.5079	ug/L	0.5079	ppb	11:34:58
2	Al 396.153Radial†	-67.1	24.8	22.522	ug/L	22.522	ppb	11:33:31
2	As 188.979†	-45.9	-8.9	-2.0961	ug/L	-2.0961	ppb	11:35:18
2	B 249.677†	275.1	656.1	10.227	ug/L	10.227	ppb	11:34:58
2	Ba 233.527†	41.5	17.1	0.0865	ug/L	0.0865	ppb	11:35:18
2	Be 313.107†	-7364.6	-35.1	-0.0111	ug/L	-0.0111	ppb	11:34:58
2	Ca 317.933Radial†	27.0	10.2	25.462	ug/L	25.462	ppb	11:33:51
2	Cd 226.502†	-277.0	1.1	0.0093	ug/L	0.0093	ppb	11:35:18
2	Co 228.616†	-96.9	-6.3	-0.0770	ug/L	-0.0770	ppb	11:35:18
2	Cr 267.716†	3.5	32.1	0.2730	ug/L	0.2730	ppb	11:35:18
2	Cu 324.752†	10207.0	-2.6	-0.0068	ug/L	-0.0068	ppb	11:34:58
2	Fe 238.204 Radial†	0.1	-0.2	-6.6396	ug/L	-6.6396	ppb	11:33:51
2	K 766.490 Radial†	1591.7	126.2	54.709	ug/L	54.709	ppb	11:33:31
2	Mg 279.077 IEC†	3.9	3.7	294.15	ug/L	294.15	ppb	11:33:51
2	Mn 257.610†	810.3	-18.2	-0.0209	ug/L	-0.0209	ppb	11:35:18
2	Mo 202.031†	40.3	8.4	0.3367	ug/L	0.3367	ppb	11:35:18
2	Na 589.592 Radial†	-165.4	4.2	11.404	ug/L	11.404	ppb	11:33:51
2	Ni 231.604†	155.5	7.0	0.1119	ug/L	0.1119	ppb	11:35:18

2	P 214.914†	350.7	13.1	4.6724 ug/L	4.6724 ppb	11:35:18
2	Pb 220.353†	1.3	30.4	2.2862 ug/L	2.2862 ppb	11:35:18
2	S 181.975 Axial†	62.4	-5.5	-4.6975 ug/L	-4.6975 ppb	11:35:18
2	Sb 206.836†	46.9	1.4	0.3030 ug/L	0.3030 ppb	11:35:18
2	Se 196.026†	-24.0	-2.3	-0.7802 ug/L	-0.7802 ppb	11:35:18
2	Si 251.611†	641.1	79.9	1.6204 ug/L	1.6204 ppb	11:35:18
2	Sn 189.927†	17.4	11.9	1.2429 ug/L	1.2429 ppb	11:35:18
2	Sr 421.552†	27.5	22.2	0.3413 ug/L	0.3413 ppb	11:33:51
2	Ti 334.940†	-1173.5	-62.1	-0.0801 ug/L	-0.0801 ppb	11:34:58
2	Tl 190.801†	-57.3	4.2	0.7097 ug/L	0.7097 ppb	11:35:18
2	U 409.014†	-3809.4	32.2	0.7987 ug/L	0.7987 ppb	11:34:53
2	V 292.402†	-1655.4	0.3	0.0135 ug/L	0.0135 ppb	11:34:58
2	Zn 213.857†	1139.0	14.5	0.0708 ug/L	0.0708 ppb	11:35:18
2	SiO2†	668.5	65.0	2.8084 ug/L	2.8084 ppb	11:35:59
3	Sc 361.383	1063088.1	1063088.1	100.21 %		11:35:23
3	Sc Radial	5440.7	5440.7	97.8 %		11:33:56
3	Y 371.029	856947.0	856947.0	100.44 %		11:35:23
3	Y RADIAL	4756.3	4756.3	98.77 %		11:33:56
3	Ag 328.068†	752.9	112.7	0.4282 ug/L	0.4282 ppb	11:35:29
3	Al 396.153Radial†	-61.7	29.0	26.426 ug/L	26.426 ppb	11:33:56
3	As 188.979†	-51.0	-14.0	-3.3000 ug/L	-3.3000 ppb	11:35:49
3	B 249.677†	248.8	629.8	9.8225 ug/L	9.8225 ppb	11:35:29
3	Ba 233.527†	49.3	24.9	0.1240 ug/L	0.1240 ppb	11:35:49
3	Be 313.107†	-7424.6	-93.0	-0.0288 ug/L	-0.0288 ppb	11:35:29
3	Ca 317.933Radial†	29.0	12.8	31.771 ug/L	31.771 ppb	11:34:16
3	Cd 226.502†	-284.9	-6.6	-0.0439 ug/L	-0.0439 ppb	11:35:49
3	Co 228.616†	-101.2	-10.6	-0.1306 ug/L	-0.1306 ppb	11:35:49
3	Cr 267.716†	-30.9	-2.2	-0.0206 ug/L	-0.0206 ppb	11:35:49
3	Cu 324.752†	10236.2	23.7	0.0558 ug/L	0.0558 ppb	11:35:29
3	Fe 238.204 Radial†	-1.0	-1.4	-48.298 ug/L	-48.298 ppb	11:34:16
3	K 766.490 Radial†	1505.5	66.8	28.927 ug/L	28.927 ppb	11:33:56
3	Mg 279.077 IEC†	0.6	0.4	33.239 ug/L	33.239 ppb	11:34:16
3	Mn 257.610†	805.7	-23.0	-0.0251 ug/L	-0.0251 ppb	11:35:49
3	Mo 202.031†	36.0	4.1	0.1614 ug/L	0.1614 ppb	11:35:49
3	Na 589.592 Radial†	-166.0	0.6	1.7302 ug/L	1.7302 ppb	11:34:16
3	Ni 231.604†	154.3	5.8	0.0925 ug/L	0.0925 ppb	11:35:49
3	P 214.914†	333.2	-4.4	-1.5177 ug/L	-1.5177 ppb	11:35:49
3	Pb 220.353†	8.6	37.6	2.8325 ug/L	2.8325 ppb	11:35:49
3	S 181.975 Axial†	65.9	-2.0	-1.7280 ug/L	-1.7280 ppb	11:35:49
3	Sb 206.836†	54.2	8.7	1.7131 ug/L	1.7131 ppb	11:35:49
3	Se 196.026†	-34.5	-12.8	-4.3231 ug/L	-4.3231 ppb	11:35:49
3	Si 251.611†	617.8	56.4	1.1483 ug/L	1.1483 ppb	11:35:49
3	Sn 189.927†	12.9	7.4	0.7752 ug/L	0.7752 ppb	11:35:49
3	Sr 421.552†	24.1	19.1	0.2946 ug/L	0.2946 ppb	11:34:16
3	Ti 334.940†	-1056.8	54.6	0.0735 ug/L	0.0735 ppb	11:35:29
3	Tl 190.801†	-54.8	6.7	1.1352 ug/L	1.1352 ppb	11:35:49
3	U 409.014†	-3836.0	6.7	0.1717 ug/L	0.1717 ppb	11:35:23
3	V 292.402†	-1740.9	-84.5	-0.4699 ug/L	-0.4699 ppb	11:35:29
3	Zn 213.857†	1112.0	-12.7	-0.0677 ug/L	-0.0677 ppb	11:35:49
3	SiO2†	666.7	63.0	2.7492 ug/L	2.7492 ppb	11:36:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1063227.5	100.22	%	0.049				0.05%
Sc Radial	5513.8	99.1	%	1.16				1.17%
Y 371.029	856217.6	100.35	%	0.074				0.07%
Y RADIAL	4795.8	99.59	%	0.725				0.73%
Ag 328.068†	97.2	0.3779	ug/L	0.16103	0.3779	ppb	0.16103	42.61%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.4	17.634	ug/L	12.0065	17.634	ppb	12.0065	68.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.1	-2.8439	ug/L	0.65284	-2.8439	ppb	0.65284	22.96%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	645.2	10.058	ug/L	0.2102	10.058	ppb	0.2102	2.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	18.5	0.0927	ug/L	0.02864	0.0927	ppb	0.02864	30.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-28.5	-0.0090	ug/L	0.02087	-0.0090	ppb	0.02087	231.41%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          11.6      28.906 ug/L        3.1943      28.906 ppb        3.1943  11.05%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -1.4     -0.0082 ug/L       0.03088     -0.0082 ppb       0.03088 375.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -4.1     -0.0497 ug/L       0.09746     -0.0497 ppb       0.09746 196.02%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.7      0.1499 ug/L       0.15243      0.1499 ppb       0.15243 101.68%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -63.7     -0.1582 ug/L       0.31790     -0.1582 ppb       0.31790 200.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.5     -17.217 ug/L       27.3704     -17.217 ppb       27.3704 158.97%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          81.4      35.309 ug/L       17.1254      35.309 ppb       17.1254  48.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.0      79.132 ug/L      196.1394      79.132 ppb      196.1394 247.86%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -25.1     -0.0236 ug/L       0.00236     -0.0236 ppb       0.00236   9.98%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                11.2      0.4481 ug/L       0.35572      0.4481 ppb       0.35572  79.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†          4.3      11.538 ug/L        9.8746      11.538 ppb        9.8746  85.59%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 2.9      0.0465 ug/L       0.09700      0.0465 ppb       0.09700 208.67%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  8.8      3.1745 ug/L       4.15119      3.1745 ppb       4.15119 130.77%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                28.6      2.1499 ug/L       0.76002      2.1499 ppb       0.76002  35.35%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.2     -4.4076 ug/L       2.54698     -4.4076 ppb       2.54698  57.79%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 5.9      1.1852 ug/L       0.76889      1.1852 ppb       0.76889  64.88%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.6     -0.9003 ug/L       3.36431     -0.9003 ppb       3.36431 373.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                64.3      1.3033 ug/L       0.27467      1.3033 ppb       0.27467  21.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                13.2      1.3751 ug/L       0.67567      1.3751 ppb       0.67567  49.14%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                19.1      0.2942 ug/L       0.04727      0.2942 ppb       0.04727  16.07%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -52.4     -0.0669 ug/L       0.13429     -0.0669 ppb       0.13429 200.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.3      0.5504 ug/L       0.67863      0.5504 ppb       0.67863 123.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 15.9      0.3973 ug/L       0.34848      0.3973 ppb       0.34848  87.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -30.1     -0.1607 ug/L       0.26848     -0.1607 ppb       0.26848 167.11%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 4.0      0.0213 ug/L       0.07726      0.0213 ppb       0.07726 362.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      52.7      2.2752 ug/L       0.87275      2.2752 ppb       0.87275  38.36%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 12:37:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5606.1	5606.1	101	%			12:39:25
1	Y RADIAL	4851.1	4851.1	100.7	%			12:39:25
1	Al 396.153Radial†	5378.2	5430.8	4921.6	ug/L	4921.6	ppb	12:39:25
1	Ca 317.933Radial†	2021.2	1989.4	4955.2	ug/L	4955.2	ppb	12:39:45
1	Fe 238.204 Radial†	140.8	139.5	4908.3	ug/L	4908.3	ppb	12:39:45
1	K 766.490 Radial†	13453.7	11881.6	5149.1	ug/L	5149.1	ppb	12:39:25
1	Mg 279.077 IEC†	63.3	62.7	4971.3	ug/L	4971.3	ppb	12:39:45
1	Na 589.592 Radial†	3647.9	3791.5	10252	ug/L	10252	ppb	12:39:25
1	Sr 421.552†	35108.7	34844.6	536.79	ug/L	536.79	ppb	12:39:25
1	Sc 361.383	1058412.2	1058412.2	99.767	%			12:40:44
1	Y 371.029	842280.3	842280.3	98.718	%			12:40:44
1	Ag 328.068†	126383.3	126039.7	501.96	ug/L	501.96	ppb	12:40:44
1	As 188.979†	2067.2	2108.9	498.21	ug/L	498.21	ppb	12:41:04
1	B 249.677†	31249.4	31703.9	492.21	ug/L	492.21	ppb	12:40:44
1	Ba 233.527†	97896.4	98100.6	497.76	ug/L	497.76	ppb	12:40:44
1	Be 313.107†	1582299.5	1593308.9	496.58	ug/L	496.58	ppb	12:40:44
1	Cd 226.502†	66319.2	66751.6	499.00	ug/L	499.00	ppb	12:40:44
1	Co 228.616†	39106.2	39287.9	489.60	ug/L	489.60	ppb	12:41:04
1	Cr 267.716†	58017.2	58181.2	496.23	ug/L	496.23	ppb	12:40:44
1	Cu 324.752†	209452.1	199749.8	493.12	ug/L	493.12	ppb	12:40:44
1	Mn 257.610†	627242.3	627879.2	496.74	ug/L	496.74	ppb	12:40:44
1	Mo 202.031†	12652.8	12650.6	506.70	ug/L	506.70	ppb	12:41:04
1	Ni 231.604†	30863.4	30787.2	493.14	ug/L	493.14	ppb	12:41:04
1	P 214.914†	7409.4	7089.8	2431.0	ug/L	2431.0	ppb	12:41:04
1	Pb 220.353†	6655.3	6699.9	503.62	ug/L	503.62	ppb	12:41:04
1	S 181.975 Axial†	1267.1	1202.2	1016.6	ug/L	1016.6	ppb	12:41:04
1	Sb 206.836†	2567.2	2527.8	503.31	ug/L	503.31	ppb	12:41:04
1	Se 196.026†	1499.0	1524.1	514.74	ug/L	514.74	ppb	12:41:04
1	Si 251.611†	123740.7	123469.4	2535.6	ug/L	2535.6	ppb	12:40:44
1	Sn 189.927†	4813.6	4819.3	501.70	ug/L	501.70	ppb	12:41:04
1	Ti 334.940†	379065.1	381059.1	498.77	ug/L	498.77	ppb	12:40:44
1	Tl 190.801†	2892.3	2960.4	501.29	ug/L	501.29	ppb	12:41:04
1	U 409.014†	15455.7	19326.6	477.97	ug/L	477.97	ppb	12:40:44
1	V 292.402†	85007.9	86859.1	498.67	ug/L	498.67	ppb	12:40:44
1	Zn 213.857†	90043.3	89131.1	493.16	ug/L	493.16	ppb	12:40:44
1	SiO2†	124276.3	123964.1	5451.2	ug/L	5451.2	ppb	12:42:04
2	Sc Radial	5585.7	5585.7	100	%			12:39:50
2	Y RADIAL	4837.6	4837.6	100.5	%			12:39:50
2	Al 396.153Radial†	5301.2	5373.6	4869.5	ug/L	4869.5	ppb	12:39:50
2	Ca 317.933Radial†	2018.6	1994.2	4967.2	ug/L	4967.2	ppb	12:40:10
2	Fe 238.204 Radial†	146.6	145.8	5129.1	ug/L	5129.1	ppb	12:40:10
2	K 766.490 Radial†	13445.7	11922.5	5167.1	ug/L	5167.1	ppb	12:39:50
2	Mg 279.077 IEC†	62.9	62.5	4955.1	ug/L	4955.1	ppb	12:40:10
2	Na 589.592 Radial†	3631.8	3788.6	10244	ug/L	10244	ppb	12:39:50
2	Sr 421.552†	34927.0	34791.2	535.97	ug/L	535.97	ppb	12:39:50
2	Sc 361.383	1052564.2	1052564.2	99.216	%			12:41:12
2	Y 371.029	837846.1	837846.1	98.199	%			12:41:12
2	Ag 328.068†	125844.2	126200.1	502.67	ug/L	502.67	ppb	12:41:12
2	As 188.979†	2073.2	2126.5	502.37	ug/L	502.37	ppb	12:41:32
2	B 249.677†	31117.5	31744.9	492.82	ug/L	492.82	ppb	12:41:12
2	Ba 233.527†	97205.3	97949.3	496.99	ug/L	496.99	ppb	12:41:12
2	Be 313.107†	1572088.7	1591829.1	496.11	ug/L	496.11	ppb	12:41:12
2	Cd 226.502†	65885.5	66683.9	498.47	ug/L	498.47	ppb	12:41:12
2	Co 228.616†	38903.8	39301.7	489.77	ug/L	489.77	ppb	12:41:32
2	Cr 267.716†	57670.9	58155.3	496.01	ug/L	496.01	ppb	12:41:12
2	Cu 324.752†	208260.2	199714.8	493.05	ug/L	493.05	ppb	12:41:12
2	Mn 257.610†	622713.6	626807.8	495.92	ug/L	495.92	ppb	12:41:12
2	Mo 202.031†	12649.0	12717.2	509.38	ug/L	509.38	ppb	12:41:32
2	Ni 231.604†	30707.2	30801.6	493.37	ug/L	493.37	ppb	12:41:32

2	P 214.914†	7360.8	7082.0	2428.1 ug/L	2428.1 ppb	12:41:32
2	Pb 220.353†	6668.7	6750.4	507.38 ug/L	507.38 ppb	12:41:32
2	S 181.975 Axial†	1268.3	1210.5	1023.7 ug/L	1023.7 ppb	12:41:32
2	Sb 206.836†	2554.2	2529.0	503.61 ug/L	503.61 ppb	12:41:32
2	Se 196.026†	1489.9	1523.3	515.24 ug/L	515.24 ppb	12:41:32
2	Si 251.611†	122736.1	123146.0	2528.9 ug/L	2528.9 ppb	12:41:12
2	Sn 189.927†	4784.8	4817.1	501.48 ug/L	501.48 ppb	12:41:32
2	Ti 334.940†	376326.4	380409.8	497.92 ug/L	497.92 ppb	12:41:12
2	Tl 190.801†	2869.4	2953.4	500.11 ug/L	500.11 ppb	12:41:32
2	U 409.014†	15348.9	19304.9	477.40 ug/L	477.40 ppb	12:41:12
2	V 292.402†	84354.4	86673.8	497.63 ug/L	497.63 ppb	12:41:12
2	Zn 213.857†	89243.2	88826.1	491.43 ug/L	491.43 ppb	12:41:12
2	SiO2†	123446.6	123819.8	5444.7 ug/L	5444.7 ppb	12:42:10
3	Sc Radial	5622.4	5622.4	101 %		12:40:15
3	Y RADIAL	4895.1	4895.1	101.6 %		12:40:15
3	Al 396.153Radial†	5385.6	5422.7	4914.2 ug/L	4914.2 ppb	12:40:15
3	Ca 317.933Radial†	2021.8	1984.1	4942.2 ug/L	4942.2 ppb	12:40:35
3	Fe 238.204 Radial†	143.1	141.3	4973.4 ug/L	4973.4 ppb	12:40:35
3	K 766.490 Radial†	13475.9	11864.8	5141.9 ug/L	5141.9 ppb	12:40:15
3	Mg 279.077 IEC†	64.9	64.0	5076.8 ug/L	5076.8 ppb	12:40:35
3	Na 589.592 Radial†	3704.4	3836.9	10375 ug/L	10375 ppb	12:40:15
3	Sr 421.552†	35367.4	34999.8	539.18 ug/L	539.18 ppb	12:40:15
3	Sc 361.383	1055266.8	1055266.8	99.471 %		12:41:39
3	Y 371.029	840466.9	840466.9	98.506 %		12:41:39
3	Ag 328.068†	125875.6	125906.9	501.45 ug/L	501.45 ppb	12:41:39
3	As 188.979†	2070.2	2118.1	500.36 ug/L	500.36 ppb	12:41:59
3	B 249.677†	31096.7	31643.7	491.26 ug/L	491.26 ppb	12:41:39
3	Ba 233.527†	97326.4	97820.1	496.34 ug/L	496.34 ppb	12:41:39
3	Be 313.107†	1575608.3	1591309.3	495.95 ug/L	495.95 ppb	12:41:39
3	Cd 226.502†	65831.5	66459.5	496.81 ug/L	496.81 ppb	12:41:39
3	Co 228.616†	38937.8	39235.4	488.94 ug/L	488.94 ppb	12:41:59
3	Cr 267.716†	57725.3	58061.1	495.21 ug/L	495.21 ppb	12:41:39
3	Cu 324.752†	208650.8	199569.9	492.68 ug/L	492.68 ppb	12:41:39
3	Mn 257.610†	623476.5	625967.4	495.24 ug/L	495.24 ppb	12:41:39
3	Mo 202.031†	12620.8	12656.2	506.93 ug/L	506.93 ppb	12:41:59
3	Ni 231.604†	30715.0	30730.2	492.22 ug/L	492.22 ppb	12:41:59
3	P 214.914†	7373.4	7075.7	2426.1 ug/L	2426.1 ppb	12:41:59
3	Pb 220.353†	6643.3	6707.8	504.20 ug/L	504.20 ppb	12:41:59
3	S 181.975 Axial†	1267.5	1206.4	1020.2 ug/L	1020.2 ppb	12:41:59
3	Sb 206.836†	2557.1	2525.3	502.87 ug/L	502.87 ppb	12:41:59
3	Se 196.026†	1494.6	1524.2	514.98 ug/L	514.98 ppb	12:41:59
3	Si 251.611†	122713.6	122806.5	2522.0 ug/L	2522.0 ppb	12:41:39
3	Sn 189.927†	4806.5	4826.6	502.46 ug/L	502.46 ppb	12:41:59
3	Ti 334.940†	376677.4	379791.2	497.11 ug/L	497.11 ppb	12:41:39
3	Tl 190.801†	2887.1	2963.8	501.86 ug/L	501.86 ppb	12:41:59
3	U 409.014†	15446.1	19363.0	478.87 ug/L	478.87 ppb	12:41:39
3	V 292.402†	84553.0	86655.7	497.52 ug/L	497.52 ppb	12:41:39
3	Zn 213.857†	89401.2	88754.6	491.05 ug/L	491.05 ppb	12:41:39
3	SiO2†	122933.1	122984.9	5407.9 ug/L	5407.9 ppb	12:42:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055414.4	99.485	%	0.2759				0.28%
Sc Radial	5604.7	101	%	0.3				0.33%
Y 371.029	840197.8	98.474	%	0.2613				0.27%
Y RADIAL	4861.2	100.9	%	0.62				0.62%
Ag 328.068†	126048.9	502.03	ug/L	0.609	502.03	ppb	0.609	0.12%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5409.0	4901.8	ug/L	28.21	4901.8	ppb	28.21	0.58%
QC value within limits for Al 396.153Radial Recovery = 98.04%								
As 188.979†	2117.9	500.31	ug/L	2.082	500.31	ppb	2.082	0.42%
QC value within limits for As 188.979 Recovery = 100.06%								
B 249.677†	31697.5	492.10	ug/L	0.784	492.10	ppb	0.784	0.16%
QC value within limits for B 249.677 Recovery = 98.42%								
Ba 233.527†	97956.7	497.03	ug/L	0.711	497.03	ppb	0.711	0.14%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1592149.1	496.21	ug/L	0.324	496.21	ppb	0.324	0.07%
QC value within limits for Be 313.107 Recovery = 99.24%								
Ca 317.933Radial†	1989.2	4954.9	ug/L	12.52	4954.9	ppb	12.52	0.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.10%
Cd 226.502†            66631.7      498.09 ug/L         1.144      498.09 ppb          1.144   0.23%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39275.0      489.44 ug/L         0.436      489.44 ppb          0.436   0.09%
   QC value within limits for Co 228.616  Recovery = 97.89%
Cr 267.716†            58132.5      495.82 ug/L         0.539      495.82 ppb          0.539   0.11%
   QC value within limits for Cr 267.716  Recovery = 99.16%
Cu 324.752†           199678.2      492.95 ug/L         0.236      492.95 ppb          0.236   0.05%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†       142.2      5003.6 ug/L        113.48      5003.6 ppb         113.48   2.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.07%
K 766.490 Radial†      11889.6      5152.7 ug/L         12.97      5152.7 ppb          12.97   0.25%
   QC value within limits for K 766.490 Radial  Recovery = 103.05%
Mg 279.077 IEC†           63.1      5001.1 ug/L         66.09      5001.1 ppb          66.09   1.32%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.02%
Mn 257.610†           626884.8      495.97 ug/L         0.753      495.97 ppb          0.753   0.15%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†            12674.6      507.67 ug/L         1.485      507.67 ppb          1.485   0.29%
   QC value within limits for Mo 202.031  Recovery = 101.53%
Na 589.592 Radial†      3805.7       10290 ug/L          73.3       10290 ppb           73.3   0.71%
   QC value within limits for Na 589.592 Radial  Recovery = 102.90%
Ni 231.604†            30773.0      492.91 ug/L         0.605      492.91 ppb          0.605   0.12%
   QC value within limits for Ni 231.604  Recovery = 98.58%
P 214.914†              7082.5      2428.4 ug/L          2.49      2428.4 ppb           2.49   0.10%
   QC value within limits for P 214.914  Recovery = 97.14%
Pb 220.353†             6719.4      505.07 ug/L         2.026      505.07 ppb          2.026   0.40%
   QC value within limits for Pb 220.353  Recovery = 101.01%
S 181.975 Axial†        1206.4      1020.2 ug/L          3.51      1020.2 ppb           3.51   0.34%
   QC value within limits for S 181.975 Axial  Recovery = 102.02%
Sb 206.836†             2527.4      503.26 ug/L         0.369      503.26 ppb          0.369   0.07%
   QC value within limits for Sb 206.836  Recovery = 100.65%
Se 196.026†             1523.9      514.99 ug/L         0.251      514.99 ppb          0.251   0.05%
   QC value within limits for Se 196.026  Recovery = 103.00%
Si 251.611†           123140.6      2528.8 ug/L          6.84      2528.8 ppb           6.84   0.27%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†             4821.0      501.88 ug/L         0.511      501.88 ppb          0.511   0.10%
   QC value within limits for Sn 189.927  Recovery = 100.38%
Sr 421.552†            34878.5      537.31 ug/L         1.669      537.31 ppb          1.669   0.31%
   QC value within limits for Sr 421.552  Recovery = 107.46%
Ti 334.940†           380420.0      497.94 ug/L         0.830      497.94 ppb          0.830   0.17%
   QC value within limits for Ti 334.940  Recovery = 99.59%
Tl 190.801†             2959.2      501.08 ug/L         0.893      501.08 ppb          0.893   0.18%
   QC value within limits for Tl 190.801  Recovery = 100.22%
U 409.014†             19331.5      478.08 ug/L         0.738      478.08 ppb          0.738   0.15%
   QC value within limits for U 409.014  Recovery = 95.62%
V 292.402†             86729.6      497.94 ug/L         0.638      497.94 ppb          0.638   0.13%
   QC value within limits for V 292.402  Recovery = 99.59%
Zn 213.857†            88903.9      491.88 ug/L         1.123      491.88 ppb          1.123   0.23%
   QC value within limits for Zn 213.857  Recovery = 98.38%
SiO2†                 123589.6      5434.6 ug/L         23.34      5434.6 ppb          23.34   0.43%
   QC value within limits for SiO2  Recovery = 101.63%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 12:44:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5518.3	5518.3	99.2	%			12:46:17
1	Y RADIAL	4806.7	4806.7	99.81	%			12:46:17
1	Al 396.153Radial†	-80.6	10.9	9.9589	ug/L	9.9589	ppb	12:46:17
1	Ca 317.933Radial†	44.1	27.5	68.573	ug/L	68.573	ppb	12:46:37
1	Fe 238.204 Radial†	0.0	-0.3	-9.9293	ug/L	-9.9293	ppb	12:46:37
1	K 766.490 Radial†	1698.7	239.9	104.08	ug/L	104.08	ppb	12:46:17
1	Mg 279.077 IEC†	-1.8	-2.0	-155.04	ug/L	-155.04	ppb	12:46:37
1	Na 589.592 Radial†	-174.1	-5.2	-13.943	ug/L	-13.943	ppb	12:46:37
1	Sr 421.552†	32.4	27.2	0.4180	ug/L	0.4180	ppb	12:46:37
1	Sc 361.383	1052130.1	1052130.1	99.175	%			12:47:34
1	Y 371.029	846654.6	846654.6	99.231	%			12:47:34
1	Ag 328.068†	745.4	113.0	0.4445	ug/L	0.4445	ppb	12:47:39
1	As 188.979†	-50.6	-14.1	-3.3222	ug/L	-3.3222	ppb	12:47:59
1	B 249.677†	375.6	760.3	11.850	ug/L	11.850	ppb	12:47:39
1	Ba 233.527†	45.5	21.6	0.1076	ug/L	0.1076	ppb	12:47:59
1	Be 313.107†	-7407.1	-152.6	-0.0474	ug/L	-0.0474	ppb	12:47:39
1	Cd 226.502†	-302.4	-27.3	-0.2026	ug/L	-0.2026	ppb	12:47:59
1	Co 228.616†	-78.2	11.6	0.1438	ug/L	0.1438	ppb	12:47:59
1	Cr 267.716†	-24.3	4.1	0.0351	ug/L	0.0351	ppb	12:47:59
1	Cu 324.752†	10111.8	4.6	0.0108	ug/L	0.0108	ppb	12:47:39
1	Mn 257.610†	869.1	49.3	0.0406	ug/L	0.0406	ppb	12:47:59
1	Mo 202.031†	26.7	-4.8	-0.1934	ug/L	-0.1934	ppb	12:47:59
1	Ni 231.604†	157.5	10.6	0.1698	ug/L	0.1698	ppb	12:47:59
1	P 214.914†	363.5	29.6	10.483	ug/L	10.483	ppb	12:47:59
1	Pb 220.353†	-2.2	26.8	2.0130	ug/L	2.0130	ppb	12:47:59
1	S 181.975 Axial†	74.3	7.1	5.9751	ug/L	5.9751	ppb	12:47:59
1	Sb 206.836†	39.2	-5.9	-1.1554	ug/L	-1.1554	ppb	12:47:59
1	Se 196.026†	-23.4	-2.0	-0.6703	ug/L	-0.6703	ppb	12:47:59
1	Si 251.611†	1253.7	704.0	14.495	ug/L	14.495	ppb	12:47:59
1	Sn 189.927†	8.5	3.1	0.3237	ug/L	0.3237	ppb	12:47:59
1	Ti 334.940†	-1083.2	17.0	0.0287	ug/L	0.0287	ppb	12:47:39
1	Tl 190.801†	-53.7	7.3	1.2282	ug/L	1.2282	ppb	12:47:59
1	U 409.014†	-3965.4	-163.6	-4.0586	ug/L	-4.0586	ppb	12:47:34
1	V 292.402†	-1733.9	-95.6	-0.5536	ug/L	-0.5536	ppb	12:47:39
1	Zn 213.857†	1100.4	-12.8	-0.0663	ug/L	-0.0663	ppb	12:47:59
1	SiO2†	1196.6	604.2	26.624	ug/L	26.624	ppb	12:49:05
2	Sc Radial	5530.0	5530.0	99.4	%			12:46:42
2	Y RADIAL	4804.0	4804.0	99.76	%			12:46:42
2	Al 396.153Radial†	-46.8	45.1	41.028	ug/L	41.028	ppb	12:46:42
2	Ca 317.933Radial†	43.2	26.6	66.161	ug/L	66.161	ppb	12:47:02
2	Fe 238.204 Radial†	0.2	-0.1	-3.2086	ug/L	-3.2086	ppb	12:47:02
2	K 766.490 Radial†	1500.2	36.5	15.864	ug/L	15.864	ppb	12:46:42
2	Mg 279.077 IEC†	0.1	-0.0	-2.9802	ug/L	-2.9802	ppb	12:47:02
2	Na 589.592 Radial†	-185.3	-16.0	-43.367	ug/L	-43.367	ppb	12:47:02
2	Sr 421.552†	24.3	19.0	0.2916	ug/L	0.2916	ppb	12:47:02
2	Sc 361.383	1055228.2	1055228.2	99.467	%			12:48:04
2	Y 371.029	850024.5	850024.5	99.626	%			12:48:04
2	Ag 328.068†	646.4	11.3	0.0443	ug/L	0.0443	ppb	12:48:09
2	As 188.979†	-42.6	-5.9	-1.4010	ug/L	-1.4010	ppb	12:48:29
2	B 249.677†	320.9	704.1	10.974	ug/L	10.974	ppb	12:48:09
2	Ba 233.527†	61.0	37.0	0.1867	ug/L	0.1867	ppb	12:48:29
2	Be 313.107†	-7402.9	-126.4	-0.0393	ug/L	-0.0393	ppb	12:48:09
2	Cd 226.502†	-287.6	-11.5	-0.0851	ug/L	-0.0851	ppb	12:48:29
2	Co 228.616†	-95.0	-5.1	-0.0621	ug/L	-0.0621	ppb	12:48:29
2	Cr 267.716†	-27.2	1.3	0.0113	ug/L	0.0113	ppb	12:48:29
2	Cu 324.752†	10074.9	-62.4	-0.1541	ug/L	-0.1541	ppb	12:48:09
2	Mn 257.610†	873.6	51.3	0.0402	ug/L	0.0402	ppb	12:48:29
2	Mo 202.031†	40.5	8.9	0.3563	ug/L	0.3563	ppb	12:48:29
2	Ni 231.604†	174.4	27.0	0.4336	ug/L	0.4336	ppb	12:48:29

2	P 214.914†	361.0	26.0	9.2291	ug/L	9.2291 ppb	12:48:29
2	Pb 220.353†	-10.0	19.1	1.4379	ug/L	1.4379 ppb	12:48:29
2	S 181.975 Axial†	81.6	14.2	11.973	ug/L	11.973 ppb	12:48:29
2	Sb 206.836†	42.3	-2.9	-0.5447	ug/L	-0.5447 ppb	12:48:29
2	Se 196.026†	-24.2	-2.7	-0.8785	ug/L	-0.8785 ppb	12:48:29
2	Si 251.611†	1175.1	621.2	12.805	ug/L	12.805 ppb	12:48:29
2	Sn 189.927†	14.8	9.4	0.9833	ug/L	0.9833 ppb	12:48:29
2	Ti 334.940†	-1119.7	-16.5	-0.0158	ug/L	-0.0158 ppb	12:48:09
2	Tl 190.801†	-65.4	-4.3	-0.7287	ug/L	-0.7287 ppb	12:48:29
2	U 409.014†	-3934.1	-120.4	-2.9874	ug/L	-2.9874 ppb	12:48:04
2	V 292.402†	-1688.4	-44.7	-0.2542	ug/L	-0.2542 ppb	12:48:09
2	Zn 213.857†	1094.3	-22.2	-0.1261	ug/L	-0.1261 ppb	12:48:29
2	SiO2†	1154.6	558.4	24.643	ug/L	24.643 ppb	12:49:10
3	Sc Radial	5536.9	5536.9	99.5	%		12:47:07
3	Y RADIAL	4795.3	4795.3	99.58	%		12:47:07
3	Al 396.153Radial†	-88.7	3.1	2.7784	ug/L	2.7784 ppb	12:47:07
3	Ca 317.933Radial†	38.0	21.3	52.934	ug/L	52.934 ppb	12:47:27
3	Fe 238.204 Radial†	0.3	-0.0	-1.5937	ug/L	-1.5937 ppb	12:47:27
3	K 766.490 Radial†	1639.2	174.4	75.680	ug/L	75.680 ppb	12:47:07
3	Mg 279.077 IEC†	-0.9	-1.1	-89.124	ug/L	-89.124 ppb	12:47:27
3	Na 589.592 Radial†	-174.5	-4.9	-13.365	ug/L	-13.365 ppb	12:47:27
3	Sr 421.552†	25.1	19.8	0.3045	ug/L	0.3045 ppb	12:47:27
3	Sc 361.383	1057181.0	1057181.0	99.651	%		12:48:34
3	Y 371.029	851270.4	851270.4	99.772	%		12:48:34
3	Ag 328.068†	674.9	38.7	0.1554	ug/L	0.1554 ppb	12:48:39
3	As 188.979†	-44.5	-7.8	-1.8396	ug/L	-1.8396 ppb	12:48:59
3	B 249.677†	378.7	761.6	11.869	ug/L	11.869 ppb	12:48:39
3	Ba 233.527†	63.9	39.8	0.2017	ug/L	0.2017 ppb	12:48:59
3	Be 313.107†	-7375.2	-84.8	-0.0266	ug/L	-0.0266 ppb	12:48:39
3	Cd 226.502†	-299.1	-22.5	-0.1676	ug/L	-0.1676 ppb	12:48:59
3	Co 228.616†	-94.7	-4.6	-0.0558	ug/L	-0.0558 ppb	12:48:59
3	Cr 267.716†	-31.6	-3.1	-0.0251	ug/L	-0.0251 ppb	12:48:59
3	Cu 324.752†	10184.5	28.9	0.0711	ug/L	0.0711 ppb	12:48:39
3	Mn 257.610†	910.4	86.5	0.0699	ug/L	0.0699 ppb	12:48:59
3	Mo 202.031†	44.9	13.3	0.5325	ug/L	0.5325 ppb	12:48:59
3	Ni 231.604†	167.2	19.5	0.3133	ug/L	0.3133 ppb	12:48:59
3	P 214.914†	336.4	0.6	0.2154	ug/L	0.2154 ppb	12:48:59
3	Pb 220.353†	-22.4	6.6	0.4997	ug/L	0.4997 ppb	12:48:59
3	S 181.975 Axial†	69.3	1.8	1.4809	ug/L	1.4809 ppb	12:48:59
3	Sb 206.836†	57.9	12.6	2.5004	ug/L	2.5004 ppb	12:48:59
3	Se 196.026†	-30.6	-9.1	-2.9626	ug/L	-2.9626 ppb	12:48:59
3	Si 251.611†	1139.2	583.1	11.995	ug/L	11.995 ppb	12:48:59
3	Sn 189.927†	11.6	6.1	0.6428	ug/L	0.6428 ppb	12:48:59
3	Ti 334.940†	-1167.7	-62.5	-0.0766	ug/L	-0.0766 ppb	12:48:39
3	Tl 190.801†	-61.2	0.0	0.0020	ug/L	0.0020 ppb	12:48:59
3	U 409.014†	-3975.3	-154.5	-3.8330	ug/L	-3.8330 ppb	12:48:34
3	V 292.402†	-1637.3	9.7	0.0534	ug/L	0.0534 ppb	12:48:39
3	Zn 213.857†	1125.6	7.1	0.0408	ug/L	0.0408 ppb	12:48:59
3	SiO2†	1173.0	574.8	25.317	ug/L	25.317 ppb	12:49:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054846.5	99.431	%	0.2401				0.24%
Sc Radial	5528.4	99.3	%	0.17				0.17%
Y 371.029	849316.5	99.543	%	0.2799				0.28%
Y RADIAL	4802.0	99.72	%	0.125				0.12%
Ag 328.068†	54.3	0.2147	ug/L	0.20658	0.2147	ppb	0.20658	96.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.7	17.922	ug/L	20.3303	17.922	ppb	20.3303	113.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-9.3	-2.1876	ug/L	1.00674	-2.1876	ppb	1.00674	46.02%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	742.0	11.565	ug/L	0.5111	11.565	ppb	0.5111	4.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.8	0.1653	ug/L	0.05052	0.1653	ppb	0.05052	30.56%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.3	-0.0378	ug/L	0.01050	-0.0378	ppb	0.01050	27.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	25.1	62.556	ug/L	8.4198	62.556	ppb	8.4198	13.46%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -20.4     -0.1518 ug/L       0.06032     -0.1518 ppb        0.06032  39.74%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                0.6      0.0086 ug/L       0.11710      0.0086 ppb        0.11710 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                0.8      0.0071 ug/L       0.03031      0.0071 ppb        0.03031 424.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -9.6     -0.0240 ug/L       0.11658     -0.0240 ppb        0.11658 485.05%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.1     -4.9105 ug/L       4.42071     -4.9105 ppb        4.42071  90.02%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        150.3      65.208 ug/L       45.0299      65.208 ppb        45.0299  69.06%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.0     -82.381 ug/L       76.2536     -82.381 ppb        76.2536  92.56%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               62.3      0.0502 ug/L       0.01702      0.0502 ppb        0.01702  33.90%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                5.8      0.2318 ug/L       0.37863      0.2318 ppb        0.37863 163.36%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.558 ug/L       17.1571     -23.558 ppb        17.1571  72.83%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               19.1      0.3055 ug/L       0.13208      0.3055 ppb        0.13208  43.23%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                18.7      6.6426 ug/L       5.60129      6.6426 ppb        5.60129  84.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               17.5      1.3169 ug/L       0.76385      1.3169 ppb        0.76385  58.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           7.7      6.4762 ug/L       5.26375      6.4762 ppb        5.26375  81.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                1.3      0.2668 ug/L       1.95832      0.2668 ppb        1.95832 734.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.6     -1.5038 ug/L       1.26762     -1.5038 ppb        1.26762  84.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              636.1      13.098 ug/L        1.2757      13.098 ppb         1.2757   9.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.2      0.6499 ug/L       0.32985      0.6499 ppb        0.32985  50.75%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               22.0      0.3380 ug/L       0.06959      0.3380 ppb        0.06959  20.59%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -20.6     -0.0212 ug/L       0.05284     -0.0212 ppb        0.05284 248.77%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.0      0.1672 ug/L       0.98883      0.1672 ppb        0.98883 591.54%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -146.2     -3.6263 ug/L       0.56469     -3.6263 ppb        0.56469  15.57%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -43.5     -0.2515 ug/L       0.30350     -0.2515 ppb        0.30350 120.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -9.3     -0.0505 ug/L       0.08455     -0.0505 ppb        0.08455 167.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    579.1      25.528 ug/L        1.0068      25.528 ppb         1.0068   3.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 13:30:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5593.8	5593.8	101	%			13:32:15
1	Y RADIAL	4842.5	4842.5	100.6	%			13:32:15
1	Al 396.153Radial†	5375.4	5439.8	4930.0	ug/L	4930.0	ppb	13:32:15
1	Ca 317.933Radial†	2030.0	2002.6	4988.1	ug/L	4988.1	ppb	13:32:35
1	Fe 238.204 Radial†	143.1	142.0	4997.8	ug/L	4997.8	ppb	13:32:35
1	K 766.490 Radial†	13576.3	12032.8	5214.6	ug/L	5214.6	ppb	13:32:15
1	Mg 279.077 IEC†	64.5	64.0	5074.9	ug/L	5074.9	ppb	13:32:35
1	Na 589.592 Radial†	3820.6	3971.3	10738	ug/L	10738	ppb	13:32:15
1	Sr 421.552†	36184.6	35991.7	554.46	ug/L	554.46	ppb	13:32:15
1	Sc 361.383	1067935.1	1067935.1	100.66	%			13:33:34
1	Y 371.029	850350.6	850350.6	99.664	%			13:33:34
1	Ag 328.068†	127384.2	125904.4	501.45	ug/L	501.45	ppb	13:33:34
1	As 188.979†	2071.9	2095.1	494.98	ug/L	494.98	ppb	13:33:49
1	B 249.677†	31471.2	31644.9	491.29	ug/L	491.29	ppb	13:33:34
1	Ba 233.527†	98516.8	97841.9	496.45	ug/L	496.45	ppb	13:33:34
1	Be 313.107†	1595916.3	1592693.3	496.38	ug/L	496.38	ppb	13:33:34
1	Cd 226.502†	66618.5	66456.2	496.78	ug/L	496.78	ppb	13:33:34
1	Co 228.616†	39113.3	38945.4	485.32	ug/L	485.32	ppb	13:33:49
1	Cr 267.716†	58357.9	58001.1	494.70	ug/L	494.70	ppb	13:33:34
1	Cu 324.752†	211740.1	200150.5	494.11	ug/L	494.11	ppb	13:33:34
1	Mn 257.610†	631157.2	626162.1	495.39	ug/L	495.39	ppb	13:33:34
1	Mo 202.031†	12651.2	12535.9	502.12	ug/L	502.12	ppb	13:33:49
1	Ni 231.604†	30868.2	30516.1	488.79	ug/L	488.79	ppb	13:33:49
1	P 214.914†	7390.5	7004.7	2400.7	ug/L	2400.7	ppb	13:33:49
1	Pb 220.353†	6658.3	6643.4	499.37	ug/L	499.37	ppb	13:33:49
1	S 181.975 Axial†	1261.6	1185.4	1002.5	ug/L	1002.5	ppb	13:33:49
1	Sb 206.836†	2570.5	2508.1	499.32	ug/L	499.32	ppb	13:33:49
1	Se 196.026†	1503.6	1515.3	512.16	ug/L	512.16	ppb	13:33:49
1	Si 251.611†	123414.2	122039.0	2506.2	ug/L	2506.2	ppb	13:33:34
1	Sn 189.927†	4826.6	4789.2	498.58	ug/L	498.58	ppb	13:33:49
1	Ti 334.940†	381885.1	380472.4	498.01	ug/L	498.01	ppb	13:33:34
1	Tl 190.801†	2890.2	2932.5	496.60	ug/L	496.60	ppb	13:33:49
1	U 409.014†	15716.9	19447.9	480.97	ug/L	480.97	ppb	13:33:34
1	V 292.402†	85492.2	86580.4	497.03	ug/L	497.03	ppb	13:33:34
1	Zn 213.857†	90459.6	88739.9	490.98	ug/L	490.98	ppb	13:33:34
1	SiO2†	121080.0	119678.0	5261.9	ug/L	5261.9	ppb	13:34:50
2	Sc Radial	5672.4	5672.4	102	%			13:32:40
2	Y RADIAL	4945.5	4945.5	102.7	%			13:32:40
2	Al 396.153Radial†	5436.6	5425.7	4917.2	ug/L	4917.2	ppb	13:32:40
2	Ca 317.933Radial†	2037.9	1982.3	4937.6	ug/L	4937.6	ppb	13:33:00
2	Fe 238.204 Radial†	144.7	141.6	4983.6	ug/L	4983.6	ppb	13:33:00
2	K 766.490 Radial†	13656.0	11923.8	5167.3	ug/L	5167.3	ppb	13:32:40
2	Mg 279.077 IEC†	65.5	64.0	5077.9	ug/L	5077.9	ppb	13:33:00
2	Na 589.592 Radial†	3830.1	3927.9	10620	ug/L	10620	ppb	13:32:40
2	Sr 421.552†	36620.5	35920.3	553.36	ug/L	553.36	ppb	13:32:40
2	Sc 361.383	1070653.1	1070653.1	100.92	%			13:33:57
2	Y 371.029	851300.7	851300.7	99.776	%			13:33:57
2	Ag 328.068†	127724.7	125920.6	501.52	ug/L	501.52	ppb	13:33:57
2	As 188.979†	2076.5	2094.5	494.83	ug/L	494.83	ppb	13:34:17
2	B 249.677†	31609.9	31703.0	492.20	ug/L	492.20	ppb	13:33:57
2	Ba 233.527†	98878.2	97951.6	497.00	ug/L	497.00	ppb	13:33:57
2	Be 313.107†	1599999.7	1592714.8	496.39	ug/L	496.39	ppb	13:33:57
2	Cd 226.502†	67082.9	66748.4	498.96	ug/L	498.96	ppb	13:33:57
2	Co 228.616†	39157.1	38890.2	484.63	ug/L	484.63	ppb	13:34:17
2	Cr 267.716†	58566.4	58060.5	495.20	ug/L	495.20	ppb	13:33:57
2	Cu 324.752†	211700.3	199577.1	492.70	ug/L	492.70	ppb	13:33:57
2	Mn 257.610†	634065.3	627452.0	496.41	ug/L	496.41	ppb	13:33:57
2	Mo 202.031†	12650.3	12503.1	500.81	ug/L	500.81	ppb	13:34:17
2	Ni 231.604†	30868.0	30438.0	487.54	ug/L	487.54	ppb	13:34:17

2	P 214.914†	7401.9	6997.4	2398.4 ug/L	2398.4 ppb	13:34:17
2	Pb 220.353†	6676.9	6645.0	499.48 ug/L	499.48 ppb	13:34:17
2	S 181.975 Axial†	1250.3	1171.1	990.32 ug/L	990.32 ppb	13:34:17
2	Sb 206.836†	2582.9	2513.9	500.41 ug/L	500.41 ppb	13:34:17
2	Se 196.026†	1510.6	1518.4	513.14 ug/L	513.14 ppb	13:34:17
2	Si 251.611†	123797.7	122107.8	2507.7 ug/L	2507.7 ppb	13:33:57
2	Sn 189.927†	4829.4	4779.9	497.60 ug/L	497.60 ppb	13:34:17
2	Ti 334.940†	383068.5	380682.0	498.28 ug/L	498.28 ppb	13:33:57
2	Tl 190.801†	2883.4	2918.5	494.24 ug/L	494.24 ppb	13:34:17
2	U 409.014†	15572.6	19265.3	476.44 ug/L	476.44 ppb	13:33:57
2	V 292.402†	85872.5	86741.7	497.92 ug/L	497.92 ppb	13:33:57
2	Zn 213.857†	90799.4	88848.4	491.60 ug/L	491.60 ppb	13:33:57
2	SiO2†	123201.1	121474.4	5341.4 ug/L	5341.4 ppb	13:34:55
3	Sc Radial	5530.2	5530.2	99.4 %		13:33:05
3	Y RADIAL	4824.8	4824.8	100.2 %		13:33:05
3	Al 396.153Radial†	5269.6	5394.8	4888.9 ug/L	4888.9 ppb	13:33:05
3	Ca 317.933Radial†	2016.5	2012.2	5012.0 ug/L	5012.0 ppb	13:33:25
3	Fe 238.204 Radial†	142.0	142.6	5017.8 ug/L	5017.8 ppb	13:33:25
3	K 766.490 Radial†	13240.5	11850.4	5135.5 ug/L	5135.5 ppb	13:33:05
3	Mg 279.077 IEC†	66.0	66.2	5249.4 ug/L	5249.4 ppb	13:33:25
3	Na 589.592 Radial†	3727.2	3921.0	10602 ug/L	10602 ppb	13:33:05
3	Sr 421.552†	35503.6	35720.6	550.29 ug/L	550.29 ppb	13:33:05
3	Sc 361.383	1058446.8	1058446.8	99.770 %		13:34:24
3	Y 371.029	840681.7	840681.7	98.531 %		13:34:24
3	Ag 328.068†	126248.3	125900.3	501.44 ug/L	501.44 ppb	13:34:24
3	As 188.979†	2075.8	2117.5	500.23 ug/L	500.23 ppb	13:34:44
3	B 249.677†	31241.6	31695.0	492.06 ug/L	492.06 ppb	13:34:24
3	Ba 233.527†	97802.6	98003.4	497.27 ug/L	497.27 ppb	13:34:24
3	Be 313.107†	1580830.6	1591784.7	496.10 ug/L	496.10 ppb	13:34:24
3	Cd 226.502†	66147.2	66577.1	497.68 ug/L	497.68 ppb	13:34:24
3	Co 228.616†	38965.8	39145.9	487.83 ug/L	487.83 ppb	13:34:44
3	Cr 267.716†	57808.5	57970.1	494.43 ug/L	494.43 ppb	13:34:24
3	Cu 324.752†	209941.6	200233.4	494.32 ug/L	494.32 ppb	13:34:24
3	Mn 257.610†	627495.4	628112.4	496.93 ug/L	496.93 ppb	13:34:24
3	Mo 202.031†	12657.7	12655.1	506.89 ug/L	506.89 ppb	13:34:44
3	Ni 231.604†	30736.2	30658.7	491.08 ug/L	491.08 ppb	13:34:44
3	P 214.914†	7364.3	7044.3	2414.7 ug/L	2414.7 ppb	13:34:44
3	Pb 220.353†	6650.9	6695.3	503.26 ug/L	503.26 ppb	13:34:44
3	S 181.975 Axial†	1250.1	1185.1	1002.2 ug/L	1002.2 ppb	13:34:44
3	Sb 206.836†	2580.3	2540.8	505.92 ug/L	505.92 ppb	13:34:44
3	Se 196.026†	1500.2	1525.3	515.51 ug/L	515.51 ppb	13:34:44
3	Si 251.611†	122421.6	122143.2	2508.3 ug/L	2508.3 ppb	13:34:24
3	Sn 189.927†	4816.0	4821.6	501.94 ug/L	501.94 ppb	13:34:44
3	Ti 334.940†	378995.5	380976.9	498.67 ug/L	498.67 ppb	13:34:24
3	Tl 190.801†	2891.6	2959.6	501.16 ug/L	501.16 ppb	13:34:44
3	U 409.014†	15388.1	19258.2	476.26 ug/L	476.26 ppb	13:34:24
3	V 292.402†	84860.2	86708.3	497.81 ug/L	497.81 ppb	13:34:24
3	Zn 213.857†	89990.4	89075.1	492.83 ug/L	492.83 ppb	13:34:24
3	SiO2†	121574.6	121252.0	5331.3 ug/L	5331.3 ppb	13:35:00

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065678.3	100.45	%	0.604				0.60%
Sc Radial	5598.8	101	%	1.3				1.27%
Y 371.029	847444.4	99.324	%	0.6887				0.69%
Y RADIAL	4870.9	101.1	%	1.35				1.34%
Ag 328.068†	125908.4	501.47	ug/L	0.040	501.47	ppb	0.040	0.01%
QC value within limits for Ag 328.068 Recovery = 100.29%								
Al 396.153Radial†	5420.1	4912.0	ug/L	21.04	4912.0	ppb	21.04	0.43%
QC value within limits for Al 396.153Radial Recovery = 98.24%								
As 188.979†	2102.3	496.68	ug/L	3.073	496.68	ppb	3.073	0.62%
QC value within limits for As 188.979 Recovery = 99.34%								
B 249.677†	31681.0	491.85	ug/L	0.490	491.85	ppb	0.490	0.10%
QC value within limits for B 249.677 Recovery = 98.37%								
Ba 233.527†	97932.3	496.91	ug/L	0.418	496.91	ppb	0.418	0.08%
QC value within limits for Ba 233.527 Recovery = 99.38%								
Be 313.107†	1592397.6	496.29	ug/L	0.164	496.29	ppb	0.164	0.03%
QC value within limits for Be 313.107 Recovery = 99.26%								
Ca 317.933Radial†	1999.0	4979.2	ug/L	37.99	4979.2	ppb	37.99	0.76%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.58%
Cd 226.502†            66593.9      497.81 ug/L         1.099      497.81 ppb          1.099   0.22%
   QC value within limits for Cd 226.502  Recovery = 99.56%
Co 228.616†            38993.8      485.92 ug/L         1.684      485.92 ppb          1.684   0.35%
   QC value within limits for Co 228.616  Recovery = 97.18%
Cr 267.716†            58010.6      494.78 ug/L         0.391      494.78 ppb          0.391   0.08%
   QC value within limits for Cr 267.716  Recovery = 98.96%
Cu 324.752†           199987.0      493.71 ug/L         0.883      493.71 ppb          0.883   0.18%
   QC value within limits for Cu 324.752  Recovery = 98.74%
Fe 238.204 Radial†       142.1      4999.7 ug/L         17.21      4999.7 ppb          17.21   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.99%
K 766.490 Radial†      11935.7      5172.5 ug/L         39.80      5172.5 ppb          39.80   0.77%
   QC value within limits for K 766.490 Radial  Recovery = 103.45%
Mg 279.077 IEC†           64.8      5134.0 ug/L         99.90      5134.0 ppb          99.90   1.95%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.68%
Mn 257.610†           627242.2      496.25 ug/L         0.783      496.25 ppb          0.783   0.16%
   QC value within limits for Mn 257.610  Recovery = 99.25%
Mo 202.031†            12564.7      503.27 ug/L         3.202      503.27 ppb          3.202   0.64%
   QC value within limits for Mo 202.031  Recovery = 100.65%
Na 589.592 Radial†      3940.0       10653 ug/L          73.7       10653 ppb           73.7   0.69%
   QC value within limits for Na 589.592 Radial  Recovery = 106.53%
Ni 231.604†            30537.6      489.14 ug/L         1.792      489.14 ppb          1.792   0.37%
   QC value within limits for Ni 231.604  Recovery = 97.83%
P 214.914†              7015.5      2404.6 ug/L          8.82      2404.6 ppb           8.82   0.37%
   QC value within limits for P 214.914  Recovery = 96.18%
Pb 220.353†             6661.2      500.70 ug/L         2.213      500.70 ppb          2.213   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.14%
S 181.975 Axial†        1180.6      998.33 ug/L         6.940      998.33 ppb          6.940   0.70%
   QC value within limits for S 181.975 Axial  Recovery = 99.83%
Sb 206.836†             2520.9      501.88 ug/L         3.538      501.88 ppb          3.538   0.70%
   QC value within limits for Sb 206.836  Recovery = 100.38%
Se 196.026†             1519.7      513.60 ug/L         1.722      513.60 ppb          1.722   0.34%
   QC value within limits for Se 196.026  Recovery = 102.72%
Si 251.611†           122096.7      2507.4 ug/L          1.07      2507.4 ppb           1.07   0.04%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4796.9      499.37 ug/L         2.279      499.37 ppb          2.279   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.87%
Sr 421.552†            35877.5      552.70 ug/L         2.165      552.70 ppb          2.165   0.39%
   QC value greater than the upper limit for Sr 421.552  Recovery = 110.54%
Ti 334.940†           380710.4      498.32 ug/L         0.334      498.32 ppb          0.334   0.07%
   QC value within limits for Ti 334.940  Recovery = 99.66%
Tl 190.801†             2936.9      497.33 ug/L         3.520      497.33 ppb          3.520   0.71%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19323.8      477.89 ug/L         2.668      477.89 ppb          2.668   0.56%
   QC value within limits for U 409.014  Recovery = 95.58%
V 292.402†             86676.8      497.59 ug/L         0.485      497.59 ppb          0.485   0.10%
   QC value within limits for V 292.402  Recovery = 99.52%
Zn 213.857†            88887.8      491.81 ug/L         0.941      491.81 ppb          0.941   0.19%
   QC value within limits for Zn 213.857  Recovery = 98.36%
SiO2†                 120801.5      5311.6 ug/L         43.27      5311.6 ppb          43.27   0.81%
   QC value within limits for SiO2  Recovery = 99.33%
QC Failed.  Continue with analysis.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:37:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5413.7	5413.7	97.3	%			13:39:02
1	Y RADIAL	4722.7	4722.7	98.07	%			13:39:02
1	Al 396.153Radial†	-76.0	14.1	12.785	ug/L	12.785	ppb	13:39:02
1	Ca 317.933Radial†	35.2	19.2	47.934	ug/L	47.934	ppb	13:39:22
1	Fe 238.204 Radial†	1.2	0.9	31.911	ug/L	31.911	ppb	13:39:22
1	K 766.490 Radial†	1580.2	151.2	65.626	ug/L	65.626	ppb	13:39:02
1	Mg 279.077 IEC†	-0.2	-0.4	-31.882	ug/L	-31.882	ppb	13:39:22
1	Na 589.592 Radial†	-172.1	-6.5	-17.590	ug/L	-17.590	ppb	13:39:22
1	Sr 421.552†	25.9	21.2	0.3255	ug/L	0.3255	ppb	13:39:22
1	Sc 361.383	1053963.2	1053963.2	99.348	%			13:40:19
1	Y 371.029	848397.9	848397.9	99.435	%			13:40:19
1	Ag 328.068†	697.3	63.3	0.2597	ug/L	0.2597	ppb	13:40:24
1	As 188.979†	-43.2	-6.6	-1.5430	ug/L	-1.5430	ppb	13:40:44
1	B 249.677†	186.7	569.4	8.8696	ug/L	8.8696	ppb	13:40:24
1	Ba 233.527†	25.2	1.1	0.0062	ug/L	0.0062	ppb	13:40:44
1	Be 313.107†	-7423.5	-156.0	-0.0488	ug/L	-0.0488	ppb	13:40:24
1	Cd 226.502†	-280.8	-5.0	-0.0412	ug/L	-0.0412	ppb	13:40:44
1	Co 228.616†	-84.6	5.2	0.0655	ug/L	0.0655	ppb	13:40:44
1	Cr 267.716†	-15.0	13.5	0.1154	ug/L	0.1154	ppb	13:40:44
1	Cu 324.752†	10214.2	90.0	0.2240	ug/L	0.2240	ppb	13:40:24
1	Mn 257.610†	861.8	40.4	0.0367	ug/L	0.0367	ppb	13:40:44
1	Mo 202.031†	34.4	2.9	0.1183	ug/L	0.1183	ppb	13:40:44
1	Ni 231.604†	156.3	9.1	0.1453	ug/L	0.1453	ppb	13:40:44
1	P 214.914†	354.0	19.4	6.7924	ug/L	6.7924	ppb	13:40:44
1	Pb 220.353†	-16.7	12.3	0.9181	ug/L	0.9181	ppb	13:40:44
1	S 181.975 Axial†	70.6	3.2	2.7071	ug/L	2.7071	ppb	13:40:44
1	Sb 206.836†	39.9	-5.3	-1.0467	ug/L	-1.0467	ppb	13:40:44
1	Se 196.026†	-22.9	-1.5	-0.3668	ug/L	-0.3668	ppb	13:40:44
1	Si 251.611†	869.2	314.8	6.4745	ug/L	6.4745	ppb	13:40:44
1	Sn 189.927†	0.9	-4.6	-0.4731	ug/L	-0.4731	ppb	13:40:44
1	Ti 334.940†	-1211.1	-109.8	-0.1404	ug/L	-0.1404	ppb	13:40:24
1	Tl 190.801†	-59.9	1.1	0.1786	ug/L	0.1786	ppb	13:40:44
1	U 409.014†	-3817.1	-7.5	-0.1890	ug/L	-0.1890	ppb	13:40:19
1	V 292.402†	-1664.4	-22.5	-0.1316	ug/L	-0.1316	ppb	13:40:24
1	Zn 213.857†	1133.9	18.9	0.1021	ug/L	0.1021	ppb	13:40:44
1	SiO2†	854.9	258.2	11.358	ug/L	11.358	ppb	13:41:50
2	Sc Radial	5529.6	5529.6	99.4	%			13:39:27
2	Y RADIAL	4800.3	4800.3	99.68	%			13:39:27
2	Al 396.153Radial†	-66.9	24.8	22.617	ug/L	22.617	ppb	13:39:27
2	Ca 317.933Radial†	32.0	15.3	38.110	ug/L	38.110	ppb	13:39:47
2	Fe 238.204 Radial†	-0.4	-0.7	-24.391	ug/L	-24.391	ppb	13:39:47
2	K 766.490 Radial†	1456.8	-7.0	-3.0184	ug/L	-3.0184	ppb	13:39:27
2	Mg 279.077 IEC†	-1.1	-1.3	-105.28	ug/L	-105.28	ppb	13:39:47
2	Na 589.592 Radial†	-182.7	-13.4	-36.229	ug/L	-36.229	ppb	13:39:47
2	Sr 421.552†	13.5	8.1	0.1251	ug/L	0.1251	ppb	13:39:47
2	Sc 361.383	1050298.1	1050298.1	99.002	%			13:40:49
2	Y 371.029	845092.6	845092.6	99.048	%			13:40:49
2	Ag 328.068†	722.6	91.3	0.3522	ug/L	0.3522	ppb	13:40:54
2	As 188.979†	-47.8	-11.4	-2.6790	ug/L	-2.6790	ppb	13:41:14
2	B 249.677†	113.4	496.1	7.7347	ug/L	7.7347	ppb	13:40:54
2	Ba 233.527†	39.8	15.9	0.0791	ug/L	0.0791	ppb	13:41:14
2	Be 313.107†	-7481.4	-240.6	-0.0748	ug/L	-0.0748	ppb	13:40:54
2	Cd 226.502†	-281.1	-6.3	-0.0443	ug/L	-0.0443	ppb	13:41:14
2	Co 228.616†	-106.2	-16.8	-0.2105	ug/L	-0.2105	ppb	13:41:14
2	Cr 267.716†	-17.2	11.3	0.0951	ug/L	0.0951	ppb	13:41:14
2	Cu 324.752†	10211.9	123.5	0.3033	ug/L	0.3033	ppb	13:40:54
2	Mn 257.610†	849.4	30.9	0.0233	ug/L	0.0233	ppb	13:41:14
2	Mo 202.031†	18.3	-13.3	-0.5352	ug/L	-0.5352	ppb	13:41:14
2	Ni 231.604†	164.4	17.8	0.2854	ug/L	0.2854	ppb	13:41:14

2	P 214.914†	350.8	17.5	6.1379 ug/L	6.1379 ppb	13:41:14
2	Pb 220.353†	-10.6	18.4	1.3861 ug/L	1.3861 ppb	13:41:14
2	S 181.975 Axial†	62.6	-4.6	-3.8702 ug/L	-3.8702 ppb	13:41:14
2	Sb 206.836†	45.8	0.8	0.1341 ug/L	0.1341 ppb	13:41:14
2	Se 196.026†	-24.4	-3.1	-1.0828 ug/L	-1.0828 ppb	13:41:14
2	Si 251.611†	863.1	311.7	6.4431 ug/L	6.4431 ppb	13:41:14
2	Sn 189.927†	0.2	-5.3	-0.5453 ug/L	-0.5453 ppb	13:41:14
2	Ti 334.940†	-1096.8	1.4	0.0048 ug/L	0.0048 ppb	13:40:54
2	Tl 190.801†	-63.6	-2.9	-0.4817 ug/L	-0.4817 ppb	13:41:14
2	U 409.014†	-3840.4	-44.4	-1.0988 ug/L	-1.0988 ppb	13:40:49
2	V 292.402†	-1708.7	-73.1	-0.4221 ug/L	-0.4221 ppb	13:40:54
2	Zn 213.857†	1132.6	21.6	0.1245 ug/L	0.1245 ppb	13:41:14
2	SiO2†	832.1	238.2	10.549 ug/L	10.549 ppb	13:41:55
3	Sc Radial	5577.9	5577.9	100 %		13:39:52
3	Y RADIAL	4835.1	4835.1	100.4 %		13:39:52
3	Al 396.153Radial†	-70.3	22.1	20.104 ug/L	20.104 ppb	13:39:52
3	Ca 317.933Radial†	35.5	18.5	45.957 ug/L	45.957 ppb	13:40:12
3	Fe 238.204 Radial†	0.8	0.4	15.248 ug/L	15.248 ppb	13:40:12
3	K 766.490 Radial†	1595.4	118.6	51.472 ug/L	51.472 ppb	13:39:52
3	Mg 279.077 IEC†	1.1	0.9	72.486 ug/L	72.486 ppb	13:40:12
3	Na 589.592 Radial†	-180.7	-9.9	-26.682 ug/L	-26.682 ppb	13:40:12
3	Sr 421.552†	20.5	15.0	0.2301 ug/L	0.2301 ppb	13:40:12
3	Sc 361.383	1059808.1	1059808.1	99.899 %		13:41:19
3	Y 371.029	852835.7	852835.7	99.956 %		13:41:19
3	Ag 328.068†	652.2	14.3	0.0614 ug/L	0.0614 ppb	13:41:24
3	As 188.979†	-45.4	-8.6	-2.0185 ug/L	-2.0185 ppb	13:41:44
3	B 249.677†	65.4	446.9	6.9635 ug/L	6.9635 ppb	13:41:24
3	Ba 233.527†	22.1	-2.1	-0.0105 ug/L	-0.0105 ppb	13:41:44
3	Be 313.107†	-7445.6	-136.9	-0.0427 ug/L	-0.0427 ppb	13:41:24
3	Cd 226.502†	-289.9	-12.6	-0.0960 ug/L	-0.0960 ppb	13:41:44
3	Co 228.616†	-93.1	-2.8	-0.0344 ug/L	-0.0344 ppb	13:41:44
3	Cr 267.716†	-11.2	17.4	0.1485 ug/L	0.1485 ppb	13:41:44
3	Cu 324.752†	10243.7	62.8	0.1558 ug/L	0.1558 ppb	13:41:24
3	Mn 257.610†	848.9	22.8	0.0186 ug/L	0.0186 ppb	13:41:44
3	Mo 202.031†	37.0	5.3	0.2126 ug/L	0.2126 ppb	13:41:44
3	Ni 231.604†	140.9	-7.2	-0.1159 ug/L	-0.1159 ppb	13:41:44
3	P 214.914†	339.1	2.5	0.8606 ug/L	0.8606 ppb	13:41:44
3	Pb 220.353†	-19.1	9.9	0.7469 ug/L	0.7469 ppb	13:41:44
3	S 181.975 Axial†	72.1	4.4	3.7018 ug/L	3.7018 ppb	13:41:44
3	Sb 206.836†	45.8	0.4	0.0909 ug/L	0.0909 ppb	13:41:44
3	Se 196.026†	-18.5	3.1	1.0727 ug/L	1.0727 ppb	13:41:44
3	Si 251.611†	817.6	258.4	5.3084 ug/L	5.3084 ppb	13:41:44
3	Sn 189.927†	11.2	5.7	0.5975 ug/L	0.5975 ppb	13:41:44
3	Ti 334.940†	-1138.5	-30.4	-0.0364 ug/L	-0.0364 ppb	13:41:24
3	Tl 190.801†	-59.9	1.4	0.2410 ug/L	0.2410 ppb	13:41:44
3	U 409.014†	-3866.5	-35.7	-0.8885 ug/L	-0.8885 ppb	13:41:19
3	V 292.402†	-1658.7	-7.6	-0.0432 ug/L	-0.0432 ppb	13:41:24
3	Zn 213.857†	1144.7	23.5	0.1274 ug/L	0.1274 ppb	13:41:44
3	SiO2†	856.3	254.8	11.208 ug/L	11.208 ppb	13:42:00

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054689.8	99.416	%	0.4521				0.45%
Sc Radial	5507.0	99.0	%	1.52				1.53%
Y 371.029	848775.4	99.480	%	0.4554				0.46%
Y RADIAL	4786.0	99.38	%	1.195				1.20%
Ag 328.068†	56.3	0.2244	ug/L	0.14858	0.2244	ppb	0.14858	66.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.3	18.502	ug/L	5.1080	18.502	ppb	5.1080	27.61%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-8.9	-2.0802	ug/L	0.57051	-2.0802	ppb	0.57051	27.43%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	504.1	7.8559	ug/L	0.95880	7.8559	ppb	0.95880	12.20%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.0	0.0249	ug/L	0.04766	0.0249	ppb	0.04766	191.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-177.8	-0.0554	ug/L	0.01705	-0.0554	ppb	0.01705	30.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	17.7	44.000	ug/L	5.1960	44.000	ppb	5.1960	11.81%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -8.0     -0.0605 ug/L       0.03078     -0.0605 ppb        0.03078  50.88%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -4.8     -0.0598 ug/L       0.13974     -0.0598 ppb        0.13974 233.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.0      0.1197 ug/L       0.02695      0.1197 ppb        0.02695  22.52%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                92.1      0.2277 ug/L       0.07381      0.2277 ppb        0.07381  32.42%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.2      7.5897 ug/L      28.92162      7.5897 ppb       28.92162 381.07%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          87.6       38.027 ug/L       36.2437      38.027 ppb        36.2437  95.31%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -21.559 ug/L       89.3317     -21.559 ppb        89.3317 414.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                31.4      0.0262 ug/L       0.00940      0.0262 ppb        0.00940  35.89%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -1.7     -0.0681 ug/L       0.40727     -0.0681 ppb        0.40727 597.93%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -9.9     -26.834 ug/L        9.3203     -26.834 ppb         9.3203  34.73%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 6.5      0.1049 ug/L       0.20368      0.1049 ppb        0.20368 194.15%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 13.1      4.5970 ug/L       3.25230      4.5970 ppb        3.25230  70.75%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                13.5      1.0170 ug/L       0.33087      1.0170 ppb        0.33087  32.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            1.0      0.8462 ug/L       4.11469      0.8462 ppb        4.11469 486.24%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -1.4     -0.2739 ug/L       0.66961     -0.2739 ppb        0.66961 244.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -0.5     -0.1256 ug/L       1.09782     -0.1256 ppb        1.09782 873.95%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               295.0      6.0753 ug/L       0.66436      6.0753 ppb        0.66436  10.94%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.4     -0.1403 ug/L       0.63995     -0.1403 ppb        0.63995 456.09%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                14.8      0.2269 ug/L       0.10024      0.2269 ppb        0.10024  44.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -46.3     -0.0574 ug/L       0.07484     -0.0574 ppb        0.07484 130.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -0.1     -0.0207 ug/L       0.40044     -0.0207 ppb        0.40044 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -29.2     -0.7254 ug/L       0.47631     -0.7254 ppb        0.47631  65.66%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -34.4     -0.1990 ug/L       0.19822     -0.1990 ppb        0.19822  99.63%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                21.3      0.1180 ug/L       0.01386      0.1180 ppb        0.01386  11.75%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     250.4       11.038 ug/L        0.4304      11.038 ppb         0.4304   3.90%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/8/2009 13:50:46 Plasma On Time: 00:00:00
Logged In Analyst: Optima3 Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070809A.sif
Batch ID:
Results Data Set: 070809A
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1 Autosampler Location: 7
Sample ID: CCV Date Collected: 7/8/2009 13:50:47
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5532.4	5532.4	99.4	%			13:52:39
1	Y RADIAL	4797.0	4797.0	99.61	%			13:52:39
1	Al 396.153Radial†	5229.0	5351.8	4849.9	ug/L	4849.9	ppb	13:52:39
1	Ca 317.933Radial†	1958.2	1952.7	4863.9	ug/L	4863.9	ppb	13:52:59
1	Fe 238.204 Radial†	138.6	139.1	4894.2	ug/L	4894.2	ppb	13:52:59
1	K 766.490 Radial†	13095.3	11698.9	5070.2	ug/L	5070.2	ppb	13:52:39
1	Mg 279.077 IEC†	62.6	62.8	4978.5	ug/L	4978.5	ppb	13:52:59
1	Na 589.592 Radial†	3365.0	3555.1	9612.7	ug/L	9612.7	ppb	13:52:39
1	Sr 421.552†	32629.9	32815.6	505.53	ug/L	505.53	ppb	13:52:39
1	Sc 361.383	1065706.7	1065706.7	100.45	%			13:53:58
1	Y 371.029	846819.9	846819.9	99.251	%			13:53:58
1	Ag 328.068†	126960.9	125747.6	500.80	ug/L	500.80	ppb	13:53:58
1	As 188.979†	2061.4	2089.0	493.53	ug/L	493.53	ppb	13:54:18
1	B 249.677†	31314.7	31554.4	489.90	ug/L	489.90	ppb	13:53:58
1	Ba 233.527†	98387.1	97917.5	496.83	ug/L	496.83	ppb	13:53:58
1	Be 313.107†	1590293.1	1590410.5	495.67	ug/L	495.67	ppb	13:53:58
1	Cd 226.502†	66680.2	66656.0	498.28	ug/L	498.28	ppb	13:53:58
1	Co 228.616†	38914.5	38828.7	483.86	ug/L	483.86	ppb	13:54:18
1	Cr 267.716†	58123.4	57888.9	493.74	ug/L	493.74	ppb	13:53:58
1	Cu 324.752†	211262.3	200114.7	494.02	ug/L	494.02	ppb	13:53:58
1	Mn 257.610†	631066.9	627383.2	496.35	ug/L	496.35	ppb	13:53:58
1	Mo 202.031†	12608.8	12520.0	501.47	ug/L	501.47	ppb	13:54:18
1	Ni 231.604†	30720.7	30433.4	487.47	ug/L	487.47	ppb	13:54:18
1	P 214.914†	7349.3	6979.1	2391.7	ug/L	2391.7	ppb	13:54:18
1	Pb 220.353†	6619.8	6619.0	497.53	ug/L	497.53	ppb	13:54:18
1	S 181.975 Axial†	1249.9	1176.4	994.81	ug/L	994.81	ppb	13:54:18
1	Sb 206.836†	2566.6	2509.6	499.57	ug/L	499.57	ppb	13:54:18
1	Se 196.026†	1498.0	1512.8	511.00	ug/L	511.00	ppb	13:54:18
1	Si 251.611†	122865.0	121748.7	2500.3	ug/L	2500.3	ppb	13:53:58
1	Sn 189.927†	4783.6	4756.4	495.16	ug/L	495.16	ppb	13:54:18
1	Ti 334.940†	381207.0	380590.6	498.15	ug/L	498.15	ppb	13:53:58
1	Tl 190.801†	2869.1	2917.5	494.08	ug/L	494.08	ppb	13:54:18
1	U 409.014†	15602.1	19366.2	478.96	ug/L	478.96	ppb	13:53:58
1	V 292.402†	85431.5	86697.6	497.70	ug/L	497.70	ppb	13:53:58
1	Zn 213.857†	90487.4	88955.4	492.21	ug/L	492.21	ppb	13:53:58
1	SiO2†	122908.9	121750.2	5353.7	ug/L	5353.7	ppb	13:55:18
2	Sc Radial	5478.6	5478.6	98.5	%			13:53:04
2	Y RADIAL	4737.8	4737.8	98.38	%			13:53:04
2	Al 396.153Radial†	5218.1	5392.4	4886.9	ug/L	4886.9	ppb	13:53:04
2	Ca 317.933Radial†	1985.5	1999.9	4981.3	ug/L	4981.3	ppb	13:53:24
2	Fe 238.204 Radial†	138.0	139.8	4919.3	ug/L	4919.3	ppb	13:53:24
2	K 766.490 Radial†	13047.9	11780.2	5105.5	ug/L	5105.5	ppb	13:53:04
2	Mg 279.077 IEC†	63.8	64.6	5122.0	ug/L	5122.0	ppb	13:53:24
2	Na 589.592 Radial†	3309.4	3531.9	9549.8	ug/L	9549.8	ppb	13:53:04
2	Sr 421.552†	32384.5	32888.7	506.66	ug/L	506.66	ppb	13:53:04
2	Sc 361.383	1063461.6	1063461.6	100.24	%			13:54:25
2	Y 371.029	846126.2	846126.2	99.169	%			13:54:25

2	Ag 328.068†	126811.5	125865.3	501.27 ug/L	501.27 ppb	13:54:25
2	As 188.979†	2058.4	2090.4	493.85 ug/L	493.85 ppb	13:54:45
2	B 249.677†	31323.3	31628.9	491.05 ug/L	491.05 ppb	13:54:25
2	Ba 233.527†	98085.9	97823.8	496.36 ug/L	496.36 ppb	13:54:25
2	Be 313.107†	1587952.8	1591418.1	495.99 ug/L	495.99 ppb	13:54:25
2	Cd 226.502†	66376.1	66492.8	497.06 ug/L	497.06 ppb	13:54:25
2	Co 228.616†	38816.9	38813.2	483.67 ug/L	483.67 ppb	13:54:45
2	Cr 267.716†	58135.0	58022.7	494.88 ug/L	494.88 ppb	13:54:25
2	Cu 324.752†	210177.7	199476.8	492.45 ug/L	492.45 ppb	13:54:25
2	Mn 257.610†	628370.5	626019.6	495.27 ug/L	495.27 ppb	13:54:25
2	Mo 202.031†	12579.9	12517.6	501.38 ug/L	501.38 ppb	13:54:45
2	Ni 231.604†	30677.7	30455.1	487.82 ug/L	487.82 ppb	13:54:45
2	P 214.914†	7338.8	6984.1	2393.7 ug/L	2393.7 ppb	13:54:45
2	Pb 220.353†	6619.2	6632.2	498.52 ug/L	498.52 ppb	13:54:45
2	S 181.975 Axial†	1248.9	1178.1	996.23 ug/L	996.23 ppb	13:54:45
2	Sb 206.836†	2544.9	2493.3	496.34 ug/L	496.34 ppb	13:54:45
2	Se 196.026†	1498.5	1516.5	512.27 ug/L	512.27 ppb	13:54:45
2	Si 251.611†	122326.0	121469.2	2494.5 ug/L	2494.5 ppb	13:54:25
2	Sn 189.927†	4769.0	4752.0	494.70 ug/L	494.70 ppb	13:54:45
2	Ti 334.940†	380132.8	380320.2	497.81 ug/L	497.81 ppb	13:54:25
2	Tl 190.801†	2870.3	2924.7	495.28 ug/L	495.28 ppb	13:54:45
2	U 409.014†	15658.2	19455.0	481.15 ug/L	481.15 ppb	13:54:25
2	V 292.402†	85307.7	86753.6	498.02 ug/L	498.02 ppb	13:54:25
2	Zn 213.857†	90245.0	88903.8	491.92 ug/L	491.92 ppb	13:54:25
2	SiO2†	123285.6	122384.3	5381.7 ug/L	5381.7 ppb	13:55:23
3	Sc Radial	5573.7	5573.7	100 %		13:53:29
3	Y RADIAL	4812.9	4812.9	99.94 %		13:53:29
3	Al 396.153Radial†	5255.8	5339.6	4838.8 ug/L	4838.8 ppb	13:53:29
3	Ca 317.933Radial†	1973.1	1953.0	4864.6 ug/L	4864.6 ppb	13:53:49
3	Fe 238.204 Radial†	139.2	138.6	4878.6 ug/L	4878.6 ppb	13:53:49
3	K 766.490 Radial†	13120.0	11626.0	5038.5 ug/L	5038.5 ppb	13:53:29
3	Mg 279.077 IEC†	64.1	63.8	5056.8 ug/L	5056.8 ppb	13:53:49
3	Na 589.592 Radial†	3353.7	3518.8	9514.4 ug/L	9514.4 ppb	13:53:29
3	Sr 421.552†	32719.5	32661.7	503.16 ug/L	503.16 ppb	13:53:29
3	Sc 361.383	1058179.3	1058179.3	99.745 %		13:54:53
3	Y 371.029	842497.6	842497.6	98.744 %		13:54:53
3	Ag 328.068†	126330.4	126014.5	501.86 ug/L	501.86 ppb	13:54:53
3	As 188.979†	2057.5	2099.7	496.03 ug/L	496.03 ppb	13:55:13
3	B 249.677†	31210.0	31671.2	491.71 ug/L	491.71 ppb	13:54:53
3	Ba 233.527†	97758.5	97984.0	497.17 ug/L	497.17 ppb	13:54:53
3	Be 313.107†	1583127.1	1594487.7	496.94 ug/L	496.94 ppb	13:54:53
3	Cd 226.502†	66127.5	66574.1	497.67 ug/L	497.67 ppb	13:54:53
3	Co 228.616†	38831.5	39021.1	486.27 ug/L	486.27 ppb	13:55:13
3	Cr 267.716†	57986.8	58163.5	496.08 ug/L	496.08 ppb	13:54:53
3	Cu 324.752†	209484.3	199828.2	493.31 ug/L	493.31 ppb	13:54:53
3	Mn 257.610†	626333.1	627106.1	496.12 ug/L	496.12 ppb	13:54:53
3	Mo 202.031†	12578.2	12578.6	503.82 ug/L	503.82 ppb	13:55:13
3	Ni 231.604†	30631.5	30561.5	489.52 ug/L	489.52 ppb	13:55:13
3	P 214.914†	7330.3	7012.1	2403.5 ug/L	2403.5 ppb	13:55:13
3	Pb 220.353†	6608.7	6654.6	500.21 ug/L	500.21 ppb	13:55:13
3	S 181.975 Axial†	1242.9	1178.2	996.34 ug/L	996.34 ppb	13:55:13
3	Sb 206.836†	2548.0	2509.1	499.55 ug/L	499.55 ppb	13:55:13
3	Se 196.026†	1496.7	1522.2	513.99 ug/L	513.99 ppb	13:55:13
3	Si 251.611†	122075.1	121826.8	2501.8 ug/L	2501.8 ppb	13:54:53
3	Sn 189.927†	4792.6	4799.3	499.62 ug/L	499.62 ppb	13:55:13
3	Ti 334.940†	378543.4	380619.7	498.19 ug/L	498.19 ppb	13:54:53
3	Tl 190.801†	2875.5	2944.2	498.57 ug/L	498.57 ppb	13:55:13
3	U 409.014†	15463.5	19337.7	478.25 ug/L	478.25 ppb	13:54:53
3	V 292.402†	84999.2	86869.1	498.70 ug/L	498.70 ppb	13:54:53
3	Zn 213.857†	89816.3	88923.4	492.02 ug/L	492.02 ppb	13:54:53
3	SiO2†	121842.0	121550.9	5344.7 ug/L	5344.7 ppb	13:55:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1062449.2	100.15	%	0.364				0.36%
Sc Radial	5528.3	99.3	%	0.86				0.86%
Y 371.029	845147.9	99.055	%	0.2721				0.27%
Y RADIAL	4782.6	99.31	%	0.822				0.83%
Ag 328.068†	125875.8	501.31	ug/L	0.529	501.31	ppb	0.529	0.11%

```
   QC value within limits for Ag 328.068  Recovery = 100.26%
Al 396.153Radial†       5361.3      4858.5 ug/L         25.19      4858.5 ppb          25.19   0.52%
   QC value within limits for Al 396.153Radial  Recovery = 97.17%
As 188.979†             2093.0      494.47 ug/L         1.360      494.47 ppb          1.360   0.27%
   QC value within limits for As 188.979  Recovery = 98.89%
B 249.677†             31618.2      490.89 ug/L         0.920      490.89 ppb          0.920   0.19%
   QC value within limits for B 249.677  Recovery = 98.18%
Ba 233.527†            97908.4      496.78 ug/L         0.408      496.78 ppb          0.408   0.08%
   QC value within limits for Ba 233.527  Recovery = 99.36%
Be 313.107†          1592105.4      496.20 ug/L         0.661      496.20 ppb          0.661   0.13%
   QC value within limits for Be 313.107  Recovery = 99.24%
Ca 317.933Radial†       1968.5      4903.3 ug/L         67.61      4903.3 ppb          67.61   1.38%
   QC value within limits for Ca 317.933Radial  Recovery = 98.07%
Cd 226.502†            66574.3      497.67 ug/L         0.612      497.67 ppb          0.612   0.12%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            38887.7      484.60 ug/L         1.446      484.60 ppb          1.446   0.30%
   QC value within limits for Co 228.616  Recovery = 96.92%
Cr 267.716†            58025.0      494.90 ug/L         1.170      494.90 ppb          1.170   0.24%
   QC value within limits for Cr 267.716  Recovery = 98.98%
Cu 324.752†           199806.6      493.26 ug/L         0.788      493.26 ppb          0.788   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.65%
Fe 238.204 Radial†       139.2      4897.4 ug/L         20.54      4897.4 ppb          20.54   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.95%
K 766.490 Radial†      11701.7      5071.4 ug/L         33.47      5071.4 ppb          33.47   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 101.43%
Mg 279.077 IEC†           63.7      5052.4 ug/L         71.88      5052.4 ppb          71.88   1.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.05%
Mn 257.610†           626836.3      495.91 ug/L         0.569      495.91 ppb          0.569   0.11%
   QC value within limits for Mn 257.610  Recovery = 99.18%
Mo 202.031†            12538.7      502.23 ug/L         1.381      502.23 ppb          1.381   0.27%
   QC value within limits for Mo 202.031  Recovery = 100.45%
Na 589.592 Radial†      3535.3      9559.0 ug/L         49.77      9559.0 ppb          49.77   0.52%
   QC value within limits for Na 589.592 Radial  Recovery = 95.59%
Ni 231.604†            30483.3      488.27 ug/L         1.098      488.27 ppb          1.098   0.22%
   QC value within limits for Ni 231.604  Recovery = 97.65%
P 214.914†              6991.7      2396.3 ug/L          6.34      2396.3 ppb           6.34   0.26%
   QC value within limits for P 214.914  Recovery = 95.85%
Pb 220.353†             6635.3      498.75 ug/L         1.354      498.75 ppb          1.354   0.27%
   QC value within limits for Pb 220.353  Recovery = 99.75%
S 181.975 Axial†        1177.6      995.80 ug/L         0.853      995.80 ppb          0.853   0.09%
   QC value within limits for S 181.975 Axial  Recovery = 99.58%
Sb 206.836†             2504.0      498.48 ug/L         1.857      498.48 ppb          1.857   0.37%
   QC value within limits for Sb 206.836  Recovery = 99.70%
Se 196.026†             1517.2      512.42 ug/L         1.501      512.42 ppb          1.501   0.29%
   QC value within limits for Se 196.026  Recovery = 102.48%
Si 251.611†           121681.6      2498.9 ug/L          3.87      2498.9 ppb           3.87   0.15%
   QC value within limits for Si 251.611  Recovery = 99.96%
Sn 189.927†             4769.3      496.49 ug/L         2.717      496.49 ppb          2.717   0.55%
   QC value within limits for Sn 189.927  Recovery = 99.30%
Sr 421.552†            32788.7      505.12 ug/L         1.785      505.12 ppb          1.785   0.35%
   QC value within limits for Sr 421.552  Recovery = 101.02%
Ti 334.940†           380510.2      498.05 ug/L         0.212      498.05 ppb          0.212   0.04%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2928.8      495.98 ug/L         2.322      495.98 ppb          2.322   0.47%
   QC value within limits for Tl 190.801  Recovery = 99.20%
U 409.014†             19386.3      479.45 ug/L         1.515      479.45 ppb          1.515   0.32%
   QC value within limits for U 409.014  Recovery = 95.89%
V 292.402†             86773.4      498.14 ug/L         0.513      498.14 ppb          0.513   0.10%
   QC value within limits for V 292.402  Recovery = 99.63%
Zn 213.857†            88927.5      492.05 ug/L         0.150      492.05 ppb          0.150   0.03%
   QC value within limits for Zn 213.857  Recovery = 98.41%
SiO2†                 121895.1      5360.0 ug/L         19.26      5360.0 ppb          19.26   0.36%
   QC value within limits for SiO2  Recovery = 100.23%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:57:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5512.4	5512.4	99.1	%			13:59:32
1	Y RADIAL	4836.2	4836.2	100.4	%			13:59:32
1	Al 396.153Radial†	-55.4	36.2	32.965	ug/L	32.965	ppb	13:59:32
1	Ca 317.933Radial†	28.9	12.2	30.392	ug/L	30.392	ppb	13:59:52
1	Fe 238.204 Radial†	1.4	1.1	39.203	ug/L	39.203	ppb	13:59:52
1	K 766.490 Radial†	1556.0	97.7	42.443	ug/L	42.443	ppb	13:59:32
1	Mg 279.077 IEC†	-0.5	-0.7	-54.448	ug/L	-54.448	ppb	13:59:52
1	Na 589.592 Radial†	-170.4	-1.6	-4.3331	ug/L	-4.3331	ppb	13:59:52
1	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431	ppb	13:59:52
1	Sc 361.383	1045095.6	1045095.6	98.512	%			14:00:48
1	Y 371.029	840297.9	840297.9	98.486	%			14:00:48
1	Ag 328.068†	669.1	40.6	0.1714	ug/L	0.1714	ppb	14:00:53
1	As 188.979†	-47.0	-10.8	-2.5308	ug/L	-2.5308	ppb	14:01:14
1	B 249.677†	41.0	423.1	6.5884	ug/L	6.5884	ppb	14:00:53
1	Ba 233.527†	26.8	2.9	0.0152	ug/L	0.0152	ppb	14:01:14
1	Be 313.107†	-7456.8	-253.3	-0.0788	ug/L	-0.0788	ppb	14:00:53
1	Cd 226.502†	-287.1	-13.8	-0.1077	ug/L	-0.1077	ppb	14:01:14
1	Co 228.616†	-82.7	6.5	0.0810	ug/L	0.0810	ppb	14:01:14
1	Cr 267.716†	-22.8	5.4	0.0463	ug/L	0.0463	ppb	14:01:14
1	Cu 324.752†	10117.6	79.2	0.1976	ug/L	0.1976	ppb	14:00:53
1	Mn 257.610†	832.3	17.8	0.0203	ug/L	0.0203	ppb	14:01:14
1	Mo 202.031†	36.8	5.6	0.2251	ug/L	0.2251	ppb	14:01:14
1	Ni 231.604†	175.4	29.8	0.4780	ug/L	0.4780	ppb	14:01:14
1	P 214.914†	347.7	16.0	5.6120	ug/L	5.6120	ppb	14:01:14
1	Pb 220.353†	-10.0	18.9	1.4202	ug/L	1.4202	ppb	14:01:14
1	S 181.975 Axial†	68.0	1.2	0.9994	ug/L	0.9994	ppb	14:01:14
1	Sb 206.836†	66.3	21.9	4.3017	ug/L	4.3017	ppb	14:01:14
1	Se 196.026†	-16.7	4.6	1.6497	ug/L	1.6497	ppb	14:01:14
1	Si 251.611†	727.7	178.6	3.6667	ug/L	3.6667	ppb	14:01:14
1	Sn 189.927†	7.0	1.6	0.1723	ug/L	0.1723	ppb	14:01:14
1	Ti 334.940†	-1108.8	-16.3	-0.0199	ug/L	-0.0199	ppb	14:00:53
1	Tl 190.801†	-63.4	-2.9	-0.4929	ug/L	-0.4929	ppb	14:01:14
1	U 409.014†	-3726.3	52.2	1.2899	ug/L	1.2899	ppb	14:00:48
1	V 292.402†	-1652.5	-24.6	-0.1406	ug/L	-0.1406	ppb	14:00:53
1	Zn 213.857†	1130.3	25.0	0.1340	ug/L	0.1340	ppb	14:01:14
1	SiO2†	726.7	135.3	5.9362	ug/L	5.9362	ppb	14:02:19
2	Sc Radial	5511.5	5511.5	99.0	%			13:59:57
2	Y RADIAL	4786.2	4786.2	99.39	%			13:59:57
2	Al 396.153Radial†	-72.0	19.5	17.796	ug/L	17.796	ppb	13:59:57
2	Ca 317.933Radial†	29.7	13.1	32.554	ug/L	32.554	ppb	14:00:17
2	Fe 238.204 Radial†	-0.3	-0.7	-23.581	ug/L	-23.581	ppb	14:00:17
2	K 766.490 Radial†	1595.9	138.3	59.989	ug/L	59.989	ppb	13:59:57
2	Mg 279.077 IEC†	-0.0	-0.2	-16.582	ug/L	-16.582	ppb	14:00:17
2	Na 589.592 Radial†	-181.5	-12.8	-34.604	ug/L	-34.604	ppb	14:00:17
2	Sr 421.552†	12.3	7.0	0.1070	ug/L	0.1070	ppb	14:00:17
2	Sc 361.383	1050518.5	1050518.5	99.023	%			14:01:19
2	Y 371.029	845673.2	845673.2	99.116	%			14:01:19
2	Ag 328.068†	645.1	12.9	0.0438	ug/L	0.0438	ppb	14:01:24
2	As 188.979†	-49.5	-13.1	-3.0770	ug/L	-3.0770	ppb	14:01:44
2	B 249.677†	118.8	501.5	7.8188	ug/L	7.8188	ppb	14:01:24
2	Ba 233.527†	40.4	16.5	0.0832	ug/L	0.0832	ppb	14:01:44
2	Be 313.107†	-7364.0	-120.4	-0.0373	ug/L	-0.0373	ppb	14:01:24
2	Cd 226.502†	-300.7	-26.0	-0.1917	ug/L	-0.1917	ppb	14:01:44
2	Co 228.616†	-75.1	14.6	0.1807	ug/L	0.1807	ppb	14:01:44
2	Cr 267.716†	-8.5	20.0	0.1703	ug/L	0.1703	ppb	14:01:44
2	Cu 324.752†	10243.6	153.4	0.3772	ug/L	0.3772	ppb	14:01:24
2	Mn 257.610†	843.7	25.0	0.0170	ug/L	0.0170	ppb	14:01:44
2	Mo 202.031†	21.8	-9.8	-0.3926	ug/L	-0.3926	ppb	14:01:44
2	Ni 231.604†	171.6	25.1	0.4014	ug/L	0.4014	ppb	14:01:44

2	P 214.914†	348.3	14.8	5.2050	ug/L	5.2050 ppb	14:01:44
2	Pb 220.353†	-12.7	16.3	1.2244	ug/L	1.2244 ppb	14:01:44
2	S 181.975 Axial†	60.3	-6.9	-5.8538	ug/L	-5.8538 ppb	14:01:44
2	Sb 206.836†	37.3	-7.8	-1.5329	ug/L	-1.5329 ppb	14:01:44
2	Se 196.026†	-18.7	2.7	0.8056	ug/L	0.8056 ppb	14:01:44
2	Si 251.611†	723.3	170.4	3.5003	ug/L	3.5003 ppb	14:01:44
2	Sn 189.927†	11.3	6.0	0.6230	ug/L	0.6230 ppb	14:01:44
2	Ti 334.940†	-1056.9	41.9	0.0571	ug/L	0.0571 ppb	14:01:24
2	Tl 190.801†	-56.2	4.7	0.7874	ug/L	0.7874 ppb	14:01:44
2	U 409.014†	-3810.6	-13.5	-0.3320	ug/L	-0.3320 ppb	14:01:19
2	V 292.402†	-1611.2	25.7	0.1429	ug/L	0.1429 ppb	14:01:24
2	Zn 213.857†	1136.7	25.5	0.1424	ug/L	0.1424 ppb	14:01:44
2	SiO2†	739.3	144.2	6.3394	ug/L	6.3394 ppb	14:02:24
3	Sc Radial	5518.7	5518.7	99.2	%		14:00:22
3	Y RADIAL	4792.7	4792.7	99.52	%		14:00:22
3	Al 396.153Radial†	-86.9	4.6	4.1447	ug/L	4.1447 ppb	14:00:22
3	Ca 317.933Radial†	25.9	9.2	22.974	ug/L	22.974 ppb	14:00:42
3	Fe 238.204 Radial†	-0.1	-0.4	-15.497	ug/L	-15.497 ppb	14:00:42
3	K 766.490 Radial†	1555.4	95.3	41.343	ug/L	41.343 ppb	14:00:22
3	Mg 279.077 IEC†	-0.0	-0.2	-17.227	ug/L	-17.227 ppb	14:00:42
3	Na 589.592 Radial†	-174.6	-5.6	-15.194	ug/L	-15.194 ppb	14:00:42
3	Sr 421.552†	23.6	18.4	0.2827	ug/L	0.2827 ppb	14:00:42
3	Sc 361.383	1057245.8	1057245.8	99.657	%		14:01:49
3	Y 371.029	850037.2	850037.2	99.628	%		14:01:49
3	Ag 328.068†	694.9	58.7	0.2256	ug/L	0.2256 ppb	14:01:54
3	As 188.979†	-47.5	-10.8	-2.5338	ug/L	-2.5338 ppb	14:02:14
3	B 249.677†	68.0	449.8	7.0124	ug/L	7.0124 ppb	14:01:54
3	Ba 233.527†	35.7	11.5	0.0574	ug/L	0.0574 ppb	14:02:14
3	Be 313.107†	-7483.5	-193.0	-0.0600	ug/L	-0.0600 ppb	14:01:54
3	Cd 226.502†	-289.4	-12.7	-0.0931	ug/L	-0.0931 ppb	14:02:14
3	Co 228.616†	-98.9	-8.8	-0.1094	ug/L	-0.1094 ppb	14:02:14
3	Cr 267.716†	5.9	34.5	0.2927	ug/L	0.2927 ppb	14:02:14
3	Cu 324.752†	10251.7	95.7	0.2352	ug/L	0.2352 ppb	14:01:54
3	Mn 257.610†	869.3	45.2	0.0341	ug/L	0.0341 ppb	14:02:14
3	Mo 202.031†	34.7	3.0	0.1197	ug/L	0.1197 ppb	14:02:14
3	Ni 231.604†	157.2	9.4	0.1515	ug/L	0.1515 ppb	14:02:14
3	P 214.914†	335.6	-0.2	-0.0906	ug/L	-0.0906 ppb	14:02:14
3	Pb 220.353†	2.8	31.9	2.3909	ug/L	2.3909 ppb	14:02:14
3	S 181.975 Axial†	65.8	-1.8	-1.5179	ug/L	-1.5179 ppb	14:02:14
3	Sb 206.836†	43.4	-1.9	-0.3829	ug/L	-0.3829 ppb	14:02:14
3	Se 196.026†	-16.8	4.8	1.5002	ug/L	1.5002 ppb	14:02:14
3	Si 251.611†	726.0	168.4	3.4599	ug/L	3.4599 ppb	14:02:14
3	Sn 189.927†	2.6	-2.9	-0.3010	ug/L	-0.3010 ppb	14:02:14
3	Ti 334.940†	-1099.9	5.6	0.0087	ug/L	0.0087 ppb	14:01:54
3	Tl 190.801†	-56.6	4.6	0.7834	ug/L	0.7834 ppb	14:02:14
3	U 409.014†	-3812.4	9.3	0.2316	ug/L	0.2316 ppb	14:01:49
3	V 292.402†	-1702.0	-55.1	-0.3086	ug/L	-0.3086 ppb	14:01:54
3	Zn 213.857†	1134.7	16.2	0.0914	ug/L	0.0914 ppb	14:02:14
3	SiO2†	754.5	154.7	6.8042	ug/L	6.8042 ppb	14:02:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1050953.3	99.064	%	0.5737				0.58%
Sc Radial	5514.2	99.1	%	0.07				0.07%
Y 371.029	845336.1	99.077	%	0.5718				0.58%
Y RADIAL	4805.0	99.78	%	0.565				0.57%
Ag 328.068†	37.4	0.1469	ug/L	0.09332	0.1469	ppb	0.09332	63.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.1	18.302	ug/L	14.4166	18.302	ppb	14.4166	78.77%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.5	-2.7138	ug/L	0.31447	-2.7138	ppb	0.31447	11.59%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	458.1	7.1399	ug/L	0.62502	7.1399	ppb	0.62502	8.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.3	0.0519	ug/L	0.03434	0.0519	ppb	0.03434	66.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-188.9	-0.0587	ug/L	0.02078	-0.0587	ppb	0.02078	35.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.5	28.640	ug/L	5.0242	28.640	ppb	5.0242	17.54%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -17.5     -0.1308 ug/L       0.05322     -0.1308 ppb        0.05322  40.67%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.1      0.0508 ug/L       0.14740      0.0508 ppb        0.14740 290.21%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               20.0      0.1698 ug/L       0.12323      0.1698 ppb        0.12323  72.58%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              109.4      0.2700 ug/L       0.09473      0.2700 ppb        0.09473  35.09%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.0      0.0417 ug/L      34.15450      0.0417 ppb       34.15450 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.4     47.925 ug/L       10.4622     47.925 ppb        10.4622  21.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4    -29.419 ug/L       21.6782    -29.419 ppb        21.6782  73.69%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               29.4      0.0238 ug/L       0.00904      0.0238 ppb        0.00904  38.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.4     -0.0160 ug/L       0.33043     -0.0160 ppb        0.33043 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -6.7    -18.043 ug/L       15.3353    -18.043 ppb        15.3353  84.99%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.4      0.3436 ug/L       0.17075      0.3436 ppb        0.17075  49.69%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                10.2      3.5755 ug/L       3.18145      3.5755 ppb        3.18145  88.98%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               22.3      1.6785 ug/L       0.62466      1.6785 ppb        0.62466  37.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -2.5     -2.1241 ug/L       3.46659     -2.1241 ppb        3.46659 163.20%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.1      0.7953 ug/L       3.09058      0.7953 ppb        3.09058 388.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.1      1.3185 ug/L       0.45042      1.3185 ppb        0.45042  34.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              172.4      3.5423 ug/L       0.10965      3.5423 ppb        0.10965   3.10%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.6      0.1647 ug/L       0.46206      0.1647 ppb        0.46206 280.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               15.9      0.2443 ug/L       0.12268      0.2443 ppb        0.12268  50.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               10.4      0.0153 ug/L       0.03894      0.0153 ppb        0.03894 254.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                2.1      0.3593 ug/L       0.73803      0.3593 ppb        0.73803 205.41%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                16.0      0.3965 ug/L       0.82342      0.3965 ppb        0.82342 207.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -18.0     -0.1021 ug/L       0.22820     -0.1021 ppb        0.22820 223.47%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               22.2      0.1226 ug/L       0.02735      0.1226 ppb        0.02735  22.32%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    144.8      6.3599 ug/L       0.43437      6.3599 ppb        0.43437   6.83%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 3
Sample ID: 1201872897|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 38
Date Collected: 7/8/2009 14:04:40
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872897|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5504.9	5504.9	98.9	%			14:06:32
1	Y RADIAL	4784.7	4784.7	99.36	%			14:06:32
1	Al 396.153Radial†	-64.6	26.9	24.470	ug/L	24.470	ppb	14:06:32
1	Ca 317.933Radial†	20.6	3.9	9.8127	ug/L	9.8127	ppb	14:06:53
1	Fe 238.204 Radial†	0.3	-0.0	-1.2944	ug/L	-1.2944	ppb	14:06:53
1	K 766.490 Radial†	1531.7	75.2	32.625	ug/L	32.625	ppb	14:06:32
1	Mg 279.077 IEC†	2.4	2.2	177.56	ug/L	177.56	ppb	14:06:53
1	Na 589.592 Radial†	-172.0	-3.5	-9.4695	ug/L	-9.4695	ppb	14:06:53
1	Sr 421.552†	10.0	4.6	0.0706	ug/L	0.0706	ppb	14:06:53
1	Sc 361.383	1062639.7	1062639.7	100.17	%			14:07:49
1	Y 371.029	852972.0	852972.0	99.972	%			14:07:49
1	Ag 328.068†	710.6	70.8	0.2807	ug/L	0.2807	ppb	14:07:54
1	As 188.979†	-48.2	-11.2	-2.6342	ug/L	-2.6342	ppb	14:08:14
1	B 249.677†	-45.1	336.5	5.2445	ug/L	5.2445	ppb	14:07:54
1	Ba 233.527†	49.0	24.7	0.1259	ug/L	0.1259	ppb	14:08:14
1	Be 313.107†	-7572.9	-244.1	-0.0752	ug/L	-0.0752	ppb	14:07:54
1	Cd 226.502†	-280.8	-2.7	-0.0198	ug/L	-0.0198	ppb	14:08:14
1	Co 228.616†	-85.4	5.1	0.0624	ug/L	0.0624	ppb	14:08:14
1	Cr 267.716†	-20.3	8.4	0.0717	ug/L	0.0717	ppb	14:07:54
1	Cu 324.752†	10306.8	98.5	0.2429	ug/L	0.2429	ppb	14:07:54
1	Mn 257.610†	1540.2	710.6	0.5580	ug/L	0.5580	ppb	14:07:54
1	Mo 202.031†	24.7	-7.1	-0.2859	ug/L	-0.2859	ppb	14:08:14
1	Ni 231.604†	168.8	20.2	0.3245	ug/L	0.3245	ppb	14:08:14
1	P 214.914†	336.4	-1.1	-0.3766	ug/L	-0.3766	ppb	14:08:14
1	Pb 220.353†	7.8	36.8	2.7663	ug/L	2.7663	ppb	14:08:14
1	S 181.975 Axial†	68.4	0.4	0.3506	ug/L	0.3506	ppb	14:08:14
1	Sb 206.836†	57.7	12.2	2.4208	ug/L	2.4208	ppb	14:08:14
1	Se 196.026†	-33.3	-11.6	-3.7842	ug/L	-3.7842	ppb	14:08:14
1	Si 251.611†	1538.2	975.6	20.119	ug/L	20.119	ppb	14:08:14
1	Sn 189.927†	24.1	18.6	1.9356	ug/L	1.9356	ppb	14:08:14
1	Ti 334.940†	-874.2	236.5	0.3098	ug/L	0.3098	ppb	14:07:54
1	Tl 190.801†	-51.7	9.8	1.6513	ug/L	1.6513	ppb	14:08:14
1	U 409.014†	-3803.4	37.6	0.9329	ug/L	0.9329	ppb	14:07:49
1	V 292.402†	-1577.4	78.0	0.4435	ug/L	0.4435	ppb	14:07:54
1	Zn 213.857†	1169.7	45.4	0.2451	ug/L	0.2451	ppb	14:08:14
1	SiO2†	1635.6	1030.6	45.510	ug/L	45.510	ppb	14:09:20
2	Sc Radial	5453.4	5453.4	98.0	%			14:06:58
2	Y RADIAL	4732.3	4732.3	98.27	%			14:06:58
2	Al 396.153Radial†	-47.5	43.7	39.779	ug/L	39.779	ppb	14:06:58
2	Ca 317.933Radial†	20.6	4.1	10.254	ug/L	10.254	ppb	14:07:18
2	Fe 238.204 Radial†	0.8	0.5	17.176	ug/L	17.176	ppb	14:07:18
2	K 766.490 Radial†	1458.2	14.9	6.4519	ug/L	6.4519	ppb	14:06:58
2	Mg 279.077 IEC†	0.4	0.3	20.619	ug/L	20.619	ppb	14:07:18
2	Na 589.592 Radial†	-166.0	1.0	2.8109	ug/L	2.8109	ppb	14:07:18
2	Sr 421.552†	7.6	2.3	0.0357	ug/L	0.0357	ppb	14:07:18
2	Sc 361.383	1048830.6	1048830.6	98.864	%			14:08:20
2	Y 371.029	841877.7	841877.7	98.671	%			14:08:20
2	Ag 328.068†	653.9	22.8	0.0959	ug/L	0.0959	ppb	14:08:25
2	As 188.979†	-50.5	-14.2	-3.3239	ug/L	-3.3239	ppb	14:08:45
2	B 249.677†	-103.5	276.9	4.3130	ug/L	4.3130	ppb	14:08:25
2	Ba 233.527†	50.8	27.1	0.1373	ug/L	0.1373	ppb	14:08:45
2	Be 313.107†	-7547.9	-318.4	-0.0984	ug/L	-0.0984	ppb	14:08:25
2	Cd 226.502†	-282.1	-7.7	-0.0595	ug/L	-0.0595	ppb	14:08:45
2	Co 228.616†	-102.6	-13.3	-0.1682	ug/L	-0.1682	ppb	14:08:45
2	Cr 267.716†	51.0	80.2	0.6832	ug/L	0.6832	ppb	14:08:25
2	Cu 324.752†	10372.8	300.7	0.7429	ug/L	0.7429	ppb	14:08:25
2	Mn 257.610†	1663.9	856.0	0.6783	ug/L	0.6783	ppb	14:08:25
2	Mo 202.031†	20.6	-10.9	-0.4346	ug/L	-0.4346	ppb	14:08:45
2	Ni 231.604†	177.9	31.7	0.5080	ug/L	0.5080	ppb	14:08:45

2	P 214.914†	346.1	13.1	4.5598	ug/L	4.5598 ppb	14:08:45
2	Pb 220.353†	-18.9	10.0	0.7505	ug/L	0.7505 ppb	14:08:45
2	S 181.975 Axial†	70.7	3.6	3.0677	ug/L	3.0677 ppb	14:08:45
2	Sb 206.836†	57.3	12.5	2.4701	ug/L	2.4701 ppb	14:08:45
2	Se 196.026†	-23.2	-1.8	-0.5257	ug/L	-0.5257 ppb	14:08:45
2	Si 251.611†	1542.1	999.8	20.627	ug/L	20.627 ppb	14:08:45
2	Sn 189.927†	31.9	26.8	2.7852	ug/L	2.7852 ppb	14:08:45
2	Ti 334.940†	-904.8	194.1	0.2548	ug/L	0.2548 ppb	14:08:25
2	Tl 190.801†	-55.9	4.9	0.8301	ug/L	0.8301 ppb	14:08:45
2	U 409.014†	-3818.7	-27.8	-0.6935	ug/L	-0.6935 ppb	14:08:20
2	V 292.402†	-1652.1	-18.3	-0.1129	ug/L	-0.1129 ppb	14:08:25
2	Zn 213.857†	1176.2	67.4	0.3692	ug/L	0.3692 ppb	14:08:45
2	SiO2†	1673.9	1090.7	48.188	ug/L	48.188 ppb	14:09:25
3	Sc Radial	5463.6	5463.6	98.2	%		14:07:23
3	Y RADIAL	4757.9	4757.9	98.80	%		14:07:23
3	Al 396.153Radial†	-69.6	21.3	19.382	ug/L	19.382 ppb	14:07:23
3	Ca 317.933Radial†	21.6	5.0	12.575	ug/L	12.575 ppb	14:07:43
3	Fe 238.204 Radial†	0.1	-0.2	-8.1710	ug/L	-8.1710 ppb	14:07:43
3	K 766.490 Radial†	1659.8	217.5	94.353	ug/L	94.353 ppb	14:07:23
3	Mg 279.077 IEC†	0.9	0.8	61.641	ug/L	61.641 ppb	14:07:43
3	Na 589.592 Radial†	-163.6	3.8	10.206	ug/L	10.206 ppb	14:07:43
3	Sr 421.552†	0.6	-4.9	-0.0755	ug/L	-0.0755 ppb	14:07:43
3	Sc 361.383	1057777.2	1057777.2	99.707	%		14:08:50
3	Y 371.029	848980.8	848980.8	99.504	%		14:08:50
3	Ag 328.068†	745.9	109.5	0.4330	ug/L	0.4330 ppb	14:08:55
3	As 188.979†	-49.7	-12.9	-3.0366	ug/L	-3.0366 ppb	14:09:15
3	B 249.677†	-147.6	233.5	3.6396	ug/L	3.6396 ppb	14:08:55
3	Ba 233.527†	44.1	19.9	0.1017	ug/L	0.1017 ppb	14:09:15
3	Be 313.107†	-7560.9	-266.9	-0.0819	ug/L	-0.0819 ppb	14:08:55
3	Cd 226.502†	-278.1	-1.3	-0.0081	ug/L	-0.0081 ppb	14:09:15
3	Co 228.616†	-82.5	7.7	0.0951	ug/L	0.0951 ppb	14:09:15
3	Cr 267.716†	17.3	45.9	0.3918	ug/L	0.3918 ppb	14:08:55
3	Cu 324.752†	10240.7	79.5	0.1958	ug/L	0.1958 ppb	14:08:55
3	Mn 257.610†	1667.0	844.9	0.6654	ug/L	0.6654 ppb	14:08:55
3	Mo 202.031†	37.1	5.4	0.2163	ug/L	0.2163 ppb	14:09:15
3	Ni 231.604†	193.4	45.7	0.7328	ug/L	0.7328 ppb	14:09:15
3	P 214.914†	346.5	10.6	3.7725	ug/L	3.7725 ppb	14:09:15
3	Pb 220.353†	-13.9	15.2	1.1425	ug/L	1.1425 ppb	14:09:15
3	S 181.975 Axial†	74.2	6.6	5.5607	ug/L	5.5607 ppb	14:09:15
3	Sb 206.836†	58.5	13.3	2.6452	ug/L	2.6452 ppb	14:09:15
3	Se 196.026†	-20.8	0.7	0.2047	ug/L	0.2047 ppb	14:09:15
3	Si 251.611†	1525.3	969.7	19.966	ug/L	19.966 ppb	14:09:15
3	Sn 189.927†	32.9	27.5	2.8651	ug/L	2.8651 ppb	14:09:15
3	Ti 334.940†	-752.8	354.3	0.4648	ug/L	0.4648 ppb	14:08:55
3	Tl 190.801†	-60.8	0.4	0.0793	ug/L	0.0793 ppb	14:09:15
3	U 409.014†	-3849.6	-26.2	-0.6499	ug/L	-0.6499 ppb	14:08:50
3	V 292.402†	-1569.1	79.1	0.4518	ug/L	0.4518 ppb	14:08:55
3	Zn 213.857†	1149.9	30.9	0.1661	ug/L	0.1661 ppb	14:09:15
3	SiO2†	1628.5	1030.9	45.456	ug/L	45.456 ppb	14:09:30

Mean Data: 1201872897|881859|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1056415.8	99.579	%	0.6603				0.66%
Sc Radial	5473.9	98.4	%	0.49				0.50%
Y 371.029	847943.5	99.382	%	0.6586				0.66%
Y RADIAL	4758.3	98.81	%	0.544				0.55%
Ag 328.068†	67.7	0.2699	ug/L	0.16879	0.2699	ppb	0.16879	62.54%
Al 396.153Radial†	30.6	27.877	ug/L	10.6168	27.877	ppb	10.6168	38.08%
As 188.979†	-12.8	-2.9982	ug/L	0.34648	-2.9982	ppb	0.34648	11.56%
B 249.677†	282.3	4.3990	ug/L	0.80590	4.3990	ppb	0.80590	18.32%
Ba 233.527†	23.9	0.1216	ug/L	0.01820	0.1216	ppb	0.01820	14.96%
Be 313.107†	-276.5	-0.0852	ug/L	0.01194	-0.0852	ppb	0.01194	14.02%
Ca 317.933Radial†	4.4	10.880	ug/L	1.4838	10.880	ppb	1.4838	13.64%
Cd 226.502†	-3.9	-0.0292	ug/L	0.02695	-0.0292	ppb	0.02695	92.44%
Co 228.616†	-0.2	-0.0036	ug/L	0.14350	-0.0036	ppb	0.14350	>999.9%
Cr 267.716†	44.8	0.3822	ug/L	0.30587	0.3822	ppb	0.30587	80.02%
Cu 324.752†	159.6	0.3939	ug/L	0.30322	0.3939	ppb	0.30322	76.98%
Fe 238.204 Radial†	0.1	2.5702	ug/L	13.10795	2.5702	ppb	13.10795	510.00%
K 766.490 Radial†	102.5	44.477	ug/L	45.1333	44.477	ppb	45.1333	101.48%

Mg 279.077 IEC†	1.1	86.607 ug/L	81.3956	86.607 ppb	81.3956	93.98%
Mn 257.610†	803.8	0.6339 ug/L	0.06607	0.6339 ppb	0.06607	10.42%
Mo 202.031†	-4.2	-0.1681 ug/L	0.34108	-0.1681 ppb	0.34108	202.96%
Na 589.592 Radial†	0.4	1.1824 ug/L	9.93825	1.1824 ppb	9.93825	840.49%
Ni 231.604†	32.6	0.5218 ug/L	0.20448	0.5218 ppb	0.20448	39.19%
P 214.914†	7.6	2.6519 ug/L	2.65214	2.6519 ppb	2.65214	100.01%
Pb 220.353†	20.7	1.5531 ug/L	1.06880	1.5531 ppb	1.06880	68.82%
S 181.975 Axial†	3.5	2.9930 ug/L	2.60587	2.9930 ppb	2.60587	87.07%
Sb 206.836†	12.7	2.5120 ug/L	0.11792	2.5120 ppb	0.11792	4.69%
Se 196.026†	-4.2	-1.3684 ug/L	2.12381	-1.3684 ppb	2.12381	155.20%
Si 251.611†	981.7	20.237 ug/L	0.3459	20.237 ppb	0.3459	1.71%
Sn 189.927†	24.3	2.5286 ug/L	0.51515	2.5286 ppb	0.51515	20.37%
Sr 421.552†	0.7	0.0102 ug/L	0.07628	0.0102 ppb	0.07628	744.23%
Ti 334.940†	261.6	0.3431 ug/L	0.10886	0.3431 ppb	0.10886	31.73%
Tl 190.801†	5.0	0.8536 ug/L	0.78623	0.8536 ppb	0.78623	92.11%
U 409.014†	-5.5	-0.1368 ug/L	0.92665	-0.1368 ppb	0.92665	677.25%
V 292.402†	46.3	0.2608 ug/L	0.32371	0.2608 ppb	0.32371	124.12%
Zn 213.857†	47.9	0.2602 ug/L	0.10237	0.2602 ppb	0.10237	39.35%
SiO2†	1050.7	46.385 ug/L	1.5621	46.385 ppb	1.5621	3.37%

Sequence No.: 4
Sample ID: 1201872898|881859|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 39
Date Collected: 7/8/2009 14:11:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872898|881859|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5813.9	5813.9	104	%			14:13:33
1	Y RADIAL	5396.0	5396.0	112.0	%			14:13:33
1	Al 396.153Radial†	37735.0	36210.8	32942	ug/L	32942	ppb	14:13:33
1	Ca 317.933Radial†	7391.1	7057.5	17579	ug/L	17579	ppb	14:13:33
1	Fe 238.204 Radial†	2737.8	2620.2	91933	ug/L	91933	ppb	14:13:54
1	K 766.490 Radial†	29433.4	26699.5	11630	ug/L	11630	ppb	14:13:33
1	Mg 279.077 IEC†	191.6	183.2	14439	ug/L	14439	ppb	14:13:54
1	Na 589.592 Radial†	954.0	1083.5	2929.8	ug/L	2929.8	ppb	14:13:33
1	Sr 421.552†	60112.5	57532.0	886.21	ug/L	886.21	ppb	14:13:33
1	Sc 361.383	1076768.0	1076768.0	101.50	%			14:14:53
1	Y 371.029	912800.2	912800.2	106.98	%			14:14:53
1	Ag 328.068†	164734.1	161665.2	672.43	ug/L	672.43	ppb	14:14:53
1	As 188.979†	5577.8	5532.4	1327.1	ug/L	1327.1	ppb	14:15:13
1	B 249.677†	44893.2	44612.4	682.03	ug/L	682.03	ppb	14:14:53
1	Ba 233.527†	474729.7	467701.8	2371.1	ug/L	2371.1	ppb	14:14:53
1	Be 313.107†	1479814.6	1465299.3	459.73	ug/L	459.73	ppb	14:14:53
1	Cd 226.502†	80061.0	79157.5	581.53	ug/L	581.53	ppb	14:14:53
1	Co 228.616†	33805.0	33396.7	412.93	ug/L	412.93	ppb	14:15:13
1	Cr 267.716†	45606.3	44962.0	385.96	ug/L	385.96	ppb	14:14:53
1	Cu 324.752†	224812.0	211304.1	526.66	ug/L	526.66	ppb	14:14:53
1	Mn 257.610†	2397013.7	2360823.9	1877.4	ug/L	1877.4	ppb	14:14:53
1	Mo 202.031†	10634.4	10445.7	424.42	ug/L	424.42	ppb	14:15:13
1	Ni 231.604†	33353.3	32713.0	524.05	ug/L	524.05	ppb	14:14:53
1	P 214.914†	10970.2	10471.4	3561.5	ug/L	3561.5	ppb	14:15:13
1	Pb 220.353†	11407.4	11268.2	843.12	ug/L	843.12	ppb	14:15:13
1	S 181.975 Axial†	1314.6	1227.3	1032.4	ug/L	1032.4	ppb	14:15:13
1	Sb 206.836†	2846.8	2759.4	548.21	ug/L	548.21	ppb	14:15:13
1	Se 196.026†	2017.0	2008.8	979.36	ug/L	979.36	ppb	14:15:13
1	Si 251.611†	363978.2	358048.4	7375.4	ug/L	7375.4	ppb	14:14:53
1	Sn 189.927†	5374.1	5289.4	552.92	ug/L	552.92	ppb	14:15:13
1	Ti 334.940†	1370165.8	1351061.2	1769.7	ug/L	1769.7	ppb	14:14:53
1	Tl 190.801†	5739.1	5715.8	980.36	ug/L	980.36	ppb	14:15:13
1	U 409.014†	-11211.0	-7210.8	-190.95	ug/L	-190.95	ppb	14:14:53
1	V 292.402†	135747.3	135397.4	758.53	ug/L	758.53	ppb	14:14:53
1	Zn 213.857†	188145.9	184247.8	1014.4	ug/L	1014.4	ppb	14:14:53
1	SiO2†	364794.2	358810.1	15826	ug/L	15826	ppb	14:16:13
2	Sc Radial	5773.4	5773.4	104	%			14:13:59
2	Y RADIAL	5336.8	5336.8	110.8	%			14:13:59
2	Al 396.153Radial†	37366.6	36108.9	32850	ug/L	32850	ppb	14:13:59
2	Ca 317.933Radial†	7361.8	7079.0	17633	ug/L	17633	ppb	14:13:59
2	Fe 238.204 Radial†	2747.8	2648.2	92916	ug/L	92916	ppb	14:14:19
2	K 766.490 Radial†	29307.4	26775.6	11663	ug/L	11663	ppb	14:13:59
2	Mg 279.077 IEC†	191.7	184.6	14552	ug/L	14552	ppb	14:14:19
2	Na 589.592 Radial†	958.4	1094.2	2958.7	ug/L	2958.7	ppb	14:13:59
2	Sr 421.552†	59570.4	57412.9	884.37	ug/L	884.37	ppb	14:13:59
2	Sc 361.383	1078422.7	1078422.7	101.65	%			14:15:20
2	Y 371.029	914296.8	914296.8	107.16	%			14:15:20
2	Ag 328.068†	165375.4	162047.1	674.25	ug/L	674.25	ppb	14:15:20
2	As 188.979†	5612.6	5558.2	1333.4	ug/L	1333.4	ppb	14:15:40
2	B 249.677†	45071.3	44719.8	683.57	ug/L	683.57	ppb	14:15:20
2	Ba 233.527†	475248.7	467494.7	2370.1	ug/L	2370.1	ppb	14:15:20
2	Be 313.107†	1480385.5	1463623.7	459.21	ug/L	459.21	ppb	14:15:20
2	Cd 226.502†	80217.6	79190.6	581.66	ug/L	581.66	ppb	14:15:20
2	Co 228.616†	33928.4	33467.0	413.79	ug/L	413.79	ppb	14:15:40
2	Cr 267.716†	45747.6	45032.1	386.58	ug/L	386.58	ppb	14:15:20
2	Cu 324.752†	225500.9	211642.0	527.55	ug/L	527.55	ppb	14:15:20
2	Mn 257.610†	2401708.1	2361818.2	1878.3	ug/L	1878.3	ppb	14:15:20
2	Mo 202.031†	10672.1	10466.8	425.33	ug/L	425.33	ppb	14:15:40
2	Ni 231.604†	33419.6	32727.8	524.29	ug/L	524.29	ppb	14:15:20

2	P 214.914†	11020.6	10504.5	3572.3	ug/L	3572.3 ppb	14:15:40
2	Pb 220.353†	11436.7	11279.8	843.88	ug/L	843.88 ppb	14:15:40
2	S 181.975 Axial†	1322.6	1233.3	1037.4	ug/L	1037.4 ppb	14:15:40
2	Sb 206.836†	2861.2	2769.3	550.23	ug/L	550.23 ppb	14:15:40
2	Se 196.026†	2035.9	2024.4	987.87	ug/L	987.87 ppb	14:15:40
2	Si 251.611†	365006.4	358509.6	7384.8	ug/L	7384.8 ppb	14:15:20
2	Sn 189.927†	5415.8	5322.3	556.37	ug/L	556.37 ppb	14:15:40
2	Ti 334.940†	1373598.5	1352366.7	1771.4	ug/L	1771.4 ppb	14:15:20
2	Tl 190.801†	5734.3	5702.4	978.11	ug/L	978.11 ppb	14:15:40
2	U 409.014†	-11180.6	-7164.0	-189.91	ug/L	-189.91 ppb	14:15:20
2	V 292.402†	135922.1	135364.2	758.22	ug/L	758.22 ppb	14:15:20
2	Zn 213.857†	188904.2	184709.4	1016.9	ug/L	1016.9 ppb	14:15:20
2	SiO2†	366938.9	360368.4	15895	ug/L	15895 ppb	14:16:19
3	Sc Radial	5598.9	5598.9	101	%		14:14:24
3	Y RADIAL	5189.2	5189.2	107.8	%		14:14:24
3	Al 396.153Radial†	36453.9	36324.4	33046	ug/L	33046 ppb	14:14:24
3	Ca 317.933Radial†	7120.5	7060.3	17586	ug/L	17586 ppb	14:14:24
3	Fe 238.204 Radial†	2743.0	2726.0	95645	ug/L	95645 ppb	14:14:44
3	K 766.490 Radial†	28597.7	26950.7	11741	ug/L	11741 ppb	14:14:24
3	Mg 279.077 IEC†	192.4	191.1	15058	ug/L	15058 ppb	14:14:44
3	Na 589.592 Radial†	922.6	1087.4	2940.3	ug/L	2940.3 ppb	14:14:24
3	Sr 421.552†	57772.2	57415.3	884.41	ug/L	884.41 ppb	14:14:24
3	Sc 361.383	1080956.7	1080956.7	101.89	%		14:15:48
3	Y 371.029	916798.2	916798.2	107.45	%		14:15:48
3	Ag 328.068†	165825.4	162107.3	675.36	ug/L	675.36 ppb	14:15:48
3	As 188.979†	5592.3	5525.4	1326.2	ug/L	1326.2 ppb	14:16:08
3	B 249.677†	45250.8	44792.0	684.34	ug/L	684.34 ppb	14:15:48
3	Ba 233.527†	476791.7	467913.1	2372.3	ug/L	2372.3 ppb	14:15:48
3	Be 313.107†	1484068.0	1463824.0	459.27	ug/L	459.27 ppb	14:15:48
3	Cd 226.502†	80441.0	79224.8	581.59	ug/L	581.59 ppb	14:15:48
3	Co 228.616†	33688.8	33153.6	409.83	ug/L	409.83 ppb	14:16:08
3	Cr 267.716†	45759.0	44937.8	385.82	ug/L	385.82 ppb	14:15:48
3	Cu 324.752†	226248.3	211855.5	528.23	ug/L	528.23 ppb	14:15:48
3	Mn 257.610†	2406494.6	2360977.2	1878.0	ug/L	1878.0 ppb	14:15:48
3	Mo 202.031†	10589.8	10361.4	421.30	ug/L	421.30 ppb	14:16:08
3	Ni 231.604†	33460.9	32691.3	523.70	ug/L	523.70 ppb	14:15:48
3	P 214.914†	10952.5	10412.2	3537.3	ug/L	3537.3 ppb	14:16:08
3	Pb 220.353†	11362.5	11180.6	836.22	ug/L	836.22 ppb	14:16:08
3	S 181.975 Axial†	1306.4	1214.3	1021.4	ug/L	1021.4 ppb	14:16:08
3	Sb 206.836†	2837.1	2739.0	544.16	ug/L	544.16 ppb	14:16:08
3	Se 196.026†	2022.3	2006.4	991.60	ug/L	991.60 ppb	14:16:08
3	Si 251.611†	365674.5	358323.5	7381.1	ug/L	7381.1 ppb	14:15:48
3	Sn 189.927†	5371.7	5266.5	550.61	ug/L	550.61 ppb	14:16:08
3	Ti 334.940†	1377628.0	1353153.7	1772.5	ug/L	1772.5 ppb	14:15:48
3	Tl 190.801†	5717.8	5673.1	973.18	ug/L	973.18 ppb	14:16:08
3	U 409.014†	-10950.5	-6912.4	-184.00	ug/L	-184.00 ppb	14:15:48
3	V 292.402†	136211.6	135334.8	757.65	ug/L	757.65 ppb	14:15:48
3	Zn 213.857†	188950.2	184318.8	1014.4	ug/L	1014.4 ppb	14:15:48
3	SiO2†	363527.9	356174.6	15710	ug/L	15710 ppb	14:16:24

Mean Data: 1201872898|881859|2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1078715.8	101.68	%	0.199				0.20%
Sc Radial	5728.7	103	%	2.1				1.99%
Y 371.029	914631.7	107.20	%	0.237				0.22%
Y RADIAL	5307.3	110.2	%	2.21				2.01%
Ag 328.068†	161939.9	674.02	ug/L	1.482	674.02	ppb	1.482	0.22%
Al 396.153Radial†	36214.7	32946	ug/L	98.2	32946	ppb	98.2	0.30%
As 188.979†	5538.7	1328.9	ug/L	3.90	1328.9	ppb	3.90	0.29%
B 249.677†	44708.1	683.31	ug/L	1.178	683.31	ppb	1.178	0.17%
Ba 233.527†	467703.2	2371.2	ug/L	1.09	2371.2	ppb	1.09	0.05%
Be 313.107†	1464249.0	459.40	ug/L	0.282	459.40	ppb	0.282	0.06%
Ca 317.933Radial†	7065.6	17599	ug/L	29.0	17599	ppb	29.0	0.16%
Cd 226.502†	79190.9	581.59	ug/L	0.066	581.59	ppb	0.066	0.01%
Co 228.616†	33339.1	412.18	ug/L	2.080	412.18	ppb	2.080	0.50%
Cr 267.716†	44977.3	386.12	ug/L	0.401	386.12	ppb	0.401	0.10%
Cu 324.752†	211600.5	527.48	ug/L	0.790	527.48	ppb	0.790	0.15%
Fe 238.204 Radial†	2664.8	93498	ug/L	1923.5	93498	ppb	1923.5	2.06%
K 766.490 Radial†	26808.6	11678	ug/L	57.3	11678	ppb	57.3	0.49%

Mg 279.077 IEC†	186.3	14683	ug/L	329.6	14683	ppb	329.6	2.24%
Mn 257.610†	2361206.4	1877.9	ug/L	0.46	1877.9	ppb	0.46	0.02%
Mo 202.031†	10424.6	423.68	ug/L	2.115	423.68	ppb	2.115	0.50%
Na 589.592 Radial†	1088.4	2942.9	ug/L	14.64	2942.9	ppb	14.64	0.50%
Ni 231.604†	32710.7	524.01	ug/L	0.293	524.01	ppb	0.293	0.06%
P 214.914†	10462.7	3557.0	ug/L	17.88	3557.0	ppb	17.88	0.50%
Pb 220.353†	11242.8	841.07	ug/L	4.223	841.07	ppb	4.223	0.50%
S 181.975 Axial†	1225.0	1030.4	ug/L	8.22	1030.4	ppb	8.22	0.80%
Sb 206.836†	2755.9	547.53	ug/L	3.093	547.53	ppb	3.093	0.56%
Se 196.026†	2013.2	986.28	ug/L	6.276	986.28	ppb	6.276	0.64%
Si 251.611†	358293.8	7380.4	ug/L	4.77	7380.4	ppb	4.77	0.06%
Sn 189.927†	5292.7	553.30	ug/L	2.900	553.30	ppb	2.900	0.52%
Sr 421.552†	57453.4	885.00	ug/L	1.049	885.00	ppb	1.049	0.12%
Ti 334.940†	1352193.9	1771.2	ug/L	1.38	1771.2	ppb	1.38	0.08%
Tl 190.801†	5697.1	977.22	ug/L	3.672	977.22	ppb	3.672	0.38%
U 409.014†	-7095.8	-188.29	ug/L	3.748	-188.29	ppb	3.748	1.99%
V 292.402†	135365.5	758.13	ug/L	0.448	758.13	ppb	0.448	0.06%
Zn 213.857†	184425.3	1015.2	ug/L	1.43	1015.2	ppb	1.43	0.14%
SiO2†	358451.0	15811	ug/L	93.6	15811	ppb	93.6	0.59%

Sequence No.: 7
Sample ID: 232585001|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 42
Date Collected: 7/8/2009 14:32:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232585001|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5681.5	5681.5	102	%			14:34:25
1	Y RADIAL	6585.1	6585.1	136.7	%			14:34:25
1	Al 396.153Radial†	9777.7	9669.1	8800.8	ug/L	8800.8	ppb	14:34:25
1	Ca 317.933Radial†	550.6	522.4	1301.1	ug/L	1301.1	ppb	14:34:45
1	Fe 238.204 Radial†	2054.2	2011.7	70572	ug/L	70572	ppb	14:34:45
1	K 766.490 Radial†	5127.4	3549.1	1553.4	ug/L	1553.4	ppb	14:34:25
1	Mg 279.077 IEC†	9.8	9.4	687.96	ug/L	687.96	ppb	14:34:45
1	Na 589.592 Radial†	268.3	433.2	1171.4	ug/L	1171.4	ppb	14:34:45
1	Sr 421.552†	1013.5	987.2	15.197	ug/L	15.197	ppb	14:34:25
1	Sc 361.383	1081416.5	1081416.5	101.94	%			14:35:43
1	Y 371.029	1147952.8	1147952.8	134.54	%			14:35:43
1	Ag 328.068†	-4452.4	-5006.5	3.2584	ug/L	3.2584	ppb	14:35:49
1	As 188.979†	-63.2	-25.1	20.194	ug/L	20.194	ppb	14:36:09
1	B 249.677†	422.6	796.1	3.0207	ug/L	3.0207	ppb	14:35:49
1	Ba 233.527†	29236.3	28656.9	146.77	ug/L	146.77	ppb	14:35:49
1	Be 313.107†	-6735.4	708.7	4.5550	ug/L	4.5550	ppb	14:35:49
1	Cd 226.502†	771.4	1034.4	-0.5396	ug/L	-0.5396	ppb	14:36:09
1	Co 228.616†	716.3	793.1	4.9161	ug/L	4.9161	ppb	14:36:09
1	Cr 267.716†	24493.7	24057.2	206.42	ug/L	206.42	ppb	14:35:49
1	Cu 324.752†	14569.2	4101.3	14.199	ug/L	14.199	ppb	14:35:49
1	Mn 257.610†	4163698.7	4083811.4	3236.5	ug/L	3236.5	ppb	14:35:43
1	Mo 202.031†	254.4	217.8	13.560	ug/L	13.560	ppb	14:36:09
1	Ni 231.604†	6195.1	5929.2	95.025	ug/L	95.025	ppb	14:36:09
1	P 214.914†	1952.9	1578.9	502.50	ug/L	502.50	ppb	14:36:09
1	Pb 220.353†	514.2	533.5	35.085	ug/L	35.085	ppb	14:36:09
1	S 181.975 Axial†	112.6	42.6	34.325	ug/L	34.325	ppb	14:36:09
1	Sb 206.836†	84.6	37.5	-1.6264	ug/L	-1.6264	ppb	14:36:09
1	Se 196.026†	-715.3	-680.1	27.255	ug/L	27.255	ppb	14:36:09
1	Si 251.611†	248018.9	242749.4	5008.4	ug/L	5008.4	ppb	14:35:49
1	Sn 189.927†	63.9	57.2	7.2137	ug/L	7.2137	ppb	14:36:09
1	Ti 334.940†	1451129.4	1424684.6	1865.1	ug/L	1865.1	ppb	14:35:43
1	Tl 190.801†	-261.0	-194.6	-5.0115	ug/L	-5.0115	ppb	14:36:09
1	U 409.014†	-15797.9	-11663.1	-298.45	ug/L	-298.45	ppb	14:35:43
1	V 292.402†	5586.6	7133.3	28.258	ug/L	28.258	ppb	14:35:49
1	Zn 213.857†	65309.5	62947.0	343.29	ug/L	343.29	ppb	14:35:49
1	SiO2†	251661.5	246280.6	10881	ug/L	10881	ppb	14:37:18
2	Sc Radial	5658.7	5658.7	102	%			14:34:50
2	Y RADIAL	6571.5	6571.5	136.5	%			14:34:50
2	Al 396.153Radial†	9683.7	9615.3	8751.8	ug/L	8751.8	ppb	14:34:50
2	Ca 317.933Radial†	545.3	519.3	1293.5	ug/L	1293.5	ppb	14:35:10
2	Fe 238.204 Radial†	2049.7	2015.4	70702	ug/L	70702	ppb	14:35:10
2	K 766.490 Radial†	5043.3	3486.5	1526.4	ug/L	1526.4	ppb	14:34:50
2	Mg 279.077 IEC†	10.4	10.0	732.84	ug/L	732.84	ppb	14:35:10
2	Na 589.592 Radial†	279.0	444.8	1202.7	ug/L	1202.7	ppb	14:35:10
2	Sr 421.552†	994.0	972.1	14.964	ug/L	14.964	ppb	14:34:50
2	Sc 361.383	1094479.4	1094479.4	103.17	%			14:36:15
2	Y 371.029	1162460.9	1162460.9	136.24	%			14:36:15
2	Ag 328.068†	-4475.1	-4976.3	3.4168	ug/L	3.4168	ppb	14:36:20
2	As 188.979†	-62.3	-23.5	20.590	ug/L	20.590	ppb	14:36:40
2	B 249.677†	473.7	840.7	3.6982	ug/L	3.6982	ppb	14:36:20
2	Ba 233.527†	29376.7	28450.6	145.73	ug/L	145.73	ppb	14:36:20
2	Be 313.107†	-6932.0	597.0	4.5145	ug/L	4.5145	ppb	14:36:20
2	Cd 226.502†	781.9	1035.6	-0.5470	ug/L	-0.5470	ppb	14:36:40
2	Co 228.616†	727.9	796.0	4.9535	ug/L	4.9535	ppb	14:36:40
2	Cr 267.716†	24526.9	23802.6	204.25	ug/L	204.25	ppb	14:36:20
2	Cu 324.752†	14444.6	3809.9	13.488	ug/L	13.488	ppb	14:36:20
2	Mn 257.610†	4208006.4	4078007.9	3232.0	ug/L	3232.0	ppb	14:36:15
2	Mo 202.031†	235.9	196.9	12.735	ug/L	12.735	ppb	14:36:40
2	Ni 231.604†	6195.7	5857.2	93.872	ug/L	93.872	ppb	14:36:40

2	P 214.914†	1972.3	1574.9	501.07	ug/L	501.07 ppb	14:36:40
2	Pb 220.353†	503.5	517.1	33.831	ug/L	33.831 ppb	14:36:40
2	S 181.975 Axial†	104.6	33.5	26.664	ug/L	26.664 ppb	14:36:40
2	Sb 206.836†	102.0	53.5	1.5590	ug/L	1.5590 ppb	14:36:40
2	Se 196.026†	-708.5	-665.1	32.581	ug/L	32.581 ppb	14:36:40
2	Si 251.611†	247813.6	239646.5	4944.4	ug/L	4944.4 ppb	14:36:20
2	Sn 189.927†	71.1	63.5	7.8722	ug/L	7.8722 ppb	14:36:40
2	Ti 334.940†	1466683.7	1422770.8	1862.6	ug/L	1862.6 ppb	14:36:15
2	Tl 190.801†	-269.3	-199.7	-5.9035	ug/L	-5.9035 ppb	14:36:40
2	U 409.014†	-15950.1	-11625.7	-297.53	ug/L	-297.53 ppb	14:36:15
2	V 292.402†	5566.6	7048.5	27.755	ug/L	27.755 ppb	14:36:20
2	Zn 213.857†	65628.2	62491.2	340.74	ug/L	340.74 ppb	14:36:20
2	SiO2†	252197.9	243854.0	10774	ug/L	10774 ppb	14:37:23
3	Sc Radial	5619.1	5619.1	101	%		14:35:15
3	Y RADIAL	6512.1	6512.1	135.2	%		14:35:15
3	Al 396.153Radial†	9598.1	9597.7	8735.8	ug/L	8735.8 ppb	14:35:15
3	Ca 317.933Radial†	538.0	515.9	1285.1	ug/L	1285.1 ppb	14:35:35
3	Fe 238.204 Radial†	2035.7	2015.7	70713	ug/L	70713 ppb	14:35:35
3	K 766.490 Radial†	5095.2	3572.9	1563.9	ug/L	1563.9 ppb	14:35:15
3	Mg 279.077 IEC†	12.0	11.7	867.24	ug/L	867.24 ppb	14:35:35
3	Na 589.592 Radial†	264.2	432.1	1168.4	ug/L	1168.4 ppb	14:35:35
3	Sr 421.552†	981.1	966.1	14.873	ug/L	14.873 ppb	14:35:15
3	Sc 361.383	1084947.2	1084947.2	102.27	%		14:36:47
3	Y 371.029	1150471.5	1150471.5	134.84	%		14:36:47
3	Ag 328.068†	-4535.6	-5073.6	3.0421	ug/L	3.0421 ppb	14:36:52
3	As 188.979†	-69.7	-31.3	18.756	ug/L	18.756 ppb	14:37:12
3	B 249.677†	431.4	803.3	3.1134	ug/L	3.1134 ppb	14:36:52
3	Ba 233.527†	29711.9	29028.6	148.66	ug/L	148.66 ppb	14:36:52
3	Be 313.107†	-6936.7	533.3	4.4900	ug/L	4.4900 ppb	14:36:52
3	Cd 226.502†	797.1	1057.1	-0.3862	ug/L	-0.3862 ppb	14:37:12
3	Co 228.616†	735.8	809.9	5.1323	ug/L	5.1323 ppb	14:37:12
3	Cr 267.716†	24785.9	24264.7	208.19	ug/L	208.19 ppb	14:36:52
3	Cu 324.752†	14755.7	4237.1	14.542	ug/L	14.542 ppb	14:36:52
3	Mn 257.610†	4177677.5	4084187.9	3236.8	ug/L	3236.8 ppb	14:36:47
3	Mo 202.031†	253.2	215.8	13.492	ug/L	13.492 ppb	14:37:12
3	Ni 231.604†	6276.1	5988.6	95.978	ug/L	95.978 ppb	14:37:12
3	P 214.914†	1992.4	1611.3	513.76	ug/L	513.76 ppb	14:37:12
3	Pb 220.353†	502.0	519.9	34.038	ug/L	34.038 ppb	14:37:12
3	S 181.975 Axial†	108.6	38.3	30.715	ug/L	30.715 ppb	14:37:12
3	Sb 206.836†	94.8	47.3	0.2750	ug/L	0.2750 ppb	14:37:12
3	Se 196.026†	-723.7	-686.0	25.820	ug/L	25.820 ppb	14:37:12
3	Si 251.611†	250485.8	244369.9	5041.8	ug/L	5041.8 ppb	14:36:52
3	Sn 189.927†	70.2	63.1	7.8339	ug/L	7.8339 ppb	14:37:12
3	Ti 334.940†	1452331.7	1421227.7	1860.6	ug/L	1860.6 ppb	14:36:47
3	Tl 190.801†	-271.7	-204.2	-6.6599	ug/L	-6.6599 ppb	14:37:12
3	U 409.014†	-15939.5	-11751.2	-300.66	ug/L	-300.66 ppb	14:36:47
3	V 292.402†	5690.7	7217.3	28.717	ug/L	28.717 ppb	14:36:52
3	Zn 213.857†	66123.2	63534.2	346.54	ug/L	346.54 ppb	14:36:52
3	SiO2†	252897.5	246685.7	10899	ug/L	10899 ppb	14:37:28

Mean Data: 232585001|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1086947.7	102.46	%	0.637				0.62%
Sc Radial	5653.1	102	%	0.6				0.56%
Y 371.029	1153628.4	135.21	%	0.909				0.67%
Y RADIAL	6556.2	136.1	%	0.81				0.59%
Ag 328.068†	-5018.8	3.2391	ug/L	0.18809	3.2391	ppb	0.18809	5.81%
Al 396.153Radial†	9627.4	8762.8	ug/L	33.89	8762.8	ppb	33.89	0.39%
As 188.979†	-26.6	19.847	ug/L	0.9653	19.847	ppb	0.9653	4.86%
B 249.677†	813.4	3.2774	ug/L	0.36732	3.2774	ppb	0.36732	11.21%
Ba 233.527†	28712.1	147.05	ug/L	1.484	147.05	ppb	1.484	1.01%
Be 313.107†	613.0	4.5198	ug/L	0.03285	4.5198	ppb	0.03285	0.73%
Ca 317.933Radial†	519.2	1293.2	ug/L	8.01	1293.2	ppb	8.01	0.62%
Cd 226.502†	1042.3	-0.4909	ug/L	0.09078	-0.4909	ppb	0.09078	18.49%
Co 228.616†	799.7	5.0006	ug/L	0.11553	5.0006	ppb	0.11553	2.31%
Cr 267.716†	24041.5	206.29	ug/L	1.972	206.29	ppb	1.972	0.96%
Cu 324.752†	4049.4	14.076	ug/L	0.5380	14.076	ppb	0.5380	3.82%
Fe 238.204 Radial†	2014.2	70662	ug/L	78.5	70662	ppb	78.5	0.11%
K 766.490 Radial†	3536.2	1547.9	ug/L	19.32	1547.9	ppb	19.32	1.25%

Mg 279.077 IEC†	10.4	762.68	ug/L	93.292	762.68	ppb	93.292	12.23%
Mn 257.610†	4082002.4	3235.1	ug/L	2.73	3235.1	ppb	2.73	0.08%
Mo 202.031†	210.2	13.262	ug/L	0.4578	13.262	ppb	0.4578	3.45%
Na 589.592 Radial†	436.7	1180.8	ug/L	19.02	1180.8	ppb	19.02	1.61%
Ni 231.604†	5925.0	94.958	ug/L	1.0546	94.958	ppb	1.0546	1.11%
P 214.914†	1588.4	505.78	ug/L	6.951	505.78	ppb	6.951	1.37%
Pb 220.353†	523.5	34.318	ug/L	0.6721	34.318	ppb	0.6721	1.96%
S 181.975 Axial†	38.1	30.568	ug/L	3.8325	30.568	ppb	3.8325	12.54%
Sb 206.836†	46.1	0.0692	ug/L	1.60264	0.0692	ppb	1.60264	>999.9%
Se 196.026†	-677.1	28.552	ug/L	3.5621	28.552	ppb	3.5621	12.48%
Si 251.611†	242255.2	4998.2	ug/L	49.51	4998.2	ppb	49.51	0.99%
Sn 189.927†	61.3	7.6399	ug/L	0.36961	7.6399	ppb	0.36961	4.84%
Sr 421.552†	975.1	15.011	ug/L	0.1674	15.011	ppb	0.1674	1.12%
Ti 334.940†	1422894.4	1862.8	ug/L	2.27	1862.8	ppb	2.27	0.12%
Tl 190.801†	-199.5	-5.8583	ug/L	0.82517	-5.8583	ppb	0.82517	14.09%
U 409.014†	-11680.0	-298.88	ug/L	1.606	-298.88	ppb	1.606	0.54%
V 292.402†	7133.0	28.244	ug/L	0.4813	28.244	ppb	0.4813	1.70%
Zn 213.857†	62990.8	343.53	ug/L	2.909	343.53	ppb	2.909	0.85%
SiO2†	245606.8	10851	ug/L	67.6	10851	ppb	67.6	0.62%

Sequence No.: 8
Sample ID: 232585002|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 43
Date Collected: 7/8/2009 14:39:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232585002|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5709.3	5709.3	103	%			14:41:30
1	Y RADIAL	5935.1	5935.1	123.2	%			14:41:30
1	Al 396.153Radial†	36725.8	35888.8	32667	ug/L	32667	ppb	14:41:30
1	Ca 317.933Radial†	5664.2	5504.0	13709	ug/L	13709	ppb	14:41:30
1	Fe 238.204 Radial†	2225.1	2168.5	76074	ug/L	76074	ppb	14:41:51
1	K 766.490 Radial†	17662.5	15742.5	6854.1	ug/L	6854.1	ppb	14:41:30
1	Mg 279.077 IEC†	92.1	89.6	7030.7	ug/L	7030.7	ppb	14:41:51
1	Na 589.592 Radial†	-12.5	158.2	427.78	ug/L	427.78	ppb	14:41:51
1	Sr 421.552†	8086.6	7876.5	121.22	ug/L	121.22	ppb	14:41:30
1	Sc 361.383	1095356.2	1095356.2	103.25	%			14:42:49
1	Y 371.029	1046315.6	1046315.6	122.63	%			14:42:49
1	Ag 328.068†	-4800.9	-5288.4	3.9269	ug/L	3.9269	ppb	14:43:14
1	As 188.979†	-46.4	-8.0	29.310	ug/L	29.310	ppb	14:43:14
1	B 249.677†	1215.0	1558.3	14.129	ug/L	14.129	ppb	14:42:54
1	Ba 233.527†	128930.2	124848.2	633.93	ug/L	633.93	ppb	14:42:54
1	Be 313.107†	-11493.8	-3815.9	4.6055	ug/L	4.6055	ppb	14:42:54
1	Cd 226.502†	997.9	1244.2	0.3390	ug/L	0.3390	ppb	14:43:14
1	Co 228.616†	2035.7	2062.1	19.577	ug/L	19.577	ppb	14:43:14
1	Cr 267.716†	4317.4	4210.1	37.565	ug/L	37.565	ppb	14:43:14
1	Cu 324.752†	26002.7	14993.0	41.390	ug/L	41.390	ppb	14:42:54
1	Mn 257.610†	3517963.0	3406416.7	2701.8	ug/L	2701.8	ppb	14:42:49
1	Mo 202.031†	87.6	53.1	7.3460	ug/L	7.3460	ppb	14:43:14
1	Ni 231.604†	2211.0	1993.1	31.929	ug/L	31.929	ppb	14:43:14
1	P 214.914†	2938.8	2509.4	830.50	ug/L	830.50	ppb	14:43:14
1	Pb 220.353†	1175.7	1167.8	86.741	ug/L	86.741	ppb	14:43:14
1	S 181.975 Axial†	947.1	849.5	712.61	ug/L	712.61	ppb	14:43:14
1	Sb 206.836†	79.2	31.3	-1.3183	ug/L	-1.3183	ppb	14:43:14
1	Se 196.026†	-776.2	-730.1	31.586	ug/L	31.586	ppb	14:43:14
1	Si 251.611†	566032.6	547658.0	11298	ug/L	11298	ppb	14:42:54
1	Sn 189.927†	-51.8	-55.7	-3.6168	ug/L	-3.6168	ppb	14:43:14
1	Ti 334.940†	1964380.5	1903665.7	2493.0	ug/L	2493.0	ppb	14:42:49
1	Tl 190.801†	-264.7	-195.0	-5.2828	ug/L	-5.2828	ppb	14:43:14
1	U 409.014†	-12433.1	-8207.0	-213.05	ug/L	-213.05	ppb	14:42:54
1	V 292.402†	18211.5	19291.2	96.033	ug/L	96.033	ppb	14:43:14
1	Zn 213.857†	64642.7	61485.9	334.68	ug/L	334.68	ppb	14:42:54
1	SiO2†	565315.6	546921.4	24161	ug/L	24161	ppb	14:44:23
2	Sc Radial	5721.7	5721.7	103	%			14:41:56
2	Y RADIAL	5984.0	5984.0	124.3	%			14:41:56
2	Al 396.153Radial†	36863.6	35945.0	32718	ug/L	32718	ppb	14:41:56
2	Ca 317.933Radial†	5682.4	5509.7	13724	ug/L	13724	ppb	14:41:56
2	Fe 238.204 Radial†	2229.1	2167.6	76044	ug/L	76044	ppb	14:42:16
2	K 766.490 Radial†	17638.8	15682.0	6827.8	ug/L	6827.8	ppb	14:41:56
2	Mg 279.077 IEC†	87.9	85.3	6693.8	ug/L	6693.8	ppb	14:42:16
2	Na 589.592 Radial†	-0.5	169.9	459.35	ug/L	459.35	ppb	14:42:16
2	Sr 421.552†	8080.5	7853.5	120.87	ug/L	120.87	ppb	14:41:56
2	Sc 361.383	1089730.0	1089730.0	102.72	%			14:43:21
2	Y 371.029	1041126.9	1041126.9	122.02	%			14:43:21
2	Ag 328.068†	-4808.7	-5320.0	3.7986	ug/L	3.7986	ppb	14:43:46
2	As 188.979†	-56.2	-17.8	27.012	ug/L	27.012	ppb	14:43:46
2	B 249.677†	1193.8	1543.7	13.906	ug/L	13.906	ppb	14:43:26
2	Ba 233.527†	129658.5	126201.9	640.78	ug/L	640.78	ppb	14:43:26
2	Be 313.107†	-11565.4	-3943.1	4.5682	ug/L	4.5682	ppb	14:43:26
2	Cd 226.502†	1007.5	1258.5	0.4497	ug/L	0.4497	ppb	14:43:46
2	Co 228.616†	2010.0	2047.2	19.393	ug/L	19.393	ppb	14:43:46
2	Cr 267.716†	4331.4	4245.4	37.867	ug/L	37.867	ppb	14:43:46
2	Cu 324.752†	26462.8	15571.0	42.814	ug/L	42.814	ppb	14:43:26
2	Mn 257.610†	3505206.7	3411589.7	2705.9	ug/L	2705.9	ppb	14:43:21
2	Mo 202.031†	81.6	47.6	7.1252	ug/L	7.1252	ppb	14:43:46
2	Ni 231.604†	2208.9	2002.1	32.073	ug/L	32.073	ppb	14:43:46

2	P 214.914†	2965.9	2550.4	844.79	ug/L	844.79 ppb	14:43:46
2	Pb 220.353†	1171.3	1169.3	86.866	ug/L	86.866 ppb	14:43:46
2	S 181.975 Axial†	951.1	858.0	719.87	ug/L	719.87 ppb	14:43:46
2	Sb 206.836†	92.8	44.9	1.3185	ug/L	1.3185 ppb	14:43:46
2	Se 196.026†	-776.8	-734.7	30.010	ug/L	30.010 ppb	14:43:46
2	Si 251.611†	570554.5	554890.6	11448	ug/L	11448 ppb	14:43:26
2	Sn 189.927†	-62.7	-66.6	-4.7480	ug/L	-4.7480 ppb	14:43:46
2	Ti 334.940†	1955047.1	1904402.3	2494.0	ug/L	2494.0 ppb	14:43:21
2	Tl 190.801†	-266.1	-197.6	-5.7048	ug/L	-5.7048 ppb	14:43:46
2	U 409.014†	-12486.0	-8320.7	-215.87	ug/L	-215.87 ppb	14:43:26
2	V 292.402†	18310.9	19478.9	97.087	ug/L	97.087 ppb	14:43:46
2	Zn 213.857†	65044.7	62200.4	338.68	ug/L	338.68 ppb	14:43:26
2	SiO2†	564550.2	549003.0	24253	ug/L	24253 ppb	14:44:29
3	Sc Radial	5634.6	5634.6	101	%		14:42:21
3	Y RADIAL	5916.8	5916.8	122.9	%		14:42:21
3	Al 396.153Radial†	36338.8	35981.2	32751	ug/L	32751 ppb	14:42:21
3	Ca 317.933Radial†	5659.2	5572.2	13879	ug/L	13879 ppb	14:42:21
3	Fe 238.204 Radial†	2217.9	2190.1	76833	ug/L	76833 ppb	14:42:41
3	K 766.490 Radial†	17470.0	15780.7	6871.2	ug/L	6871.2 ppb	14:42:21
3	Mg 279.077 IEC†	89.1	87.8	6889.9	ug/L	6889.9 ppb	14:42:41
3	Na 589.592 Radial†	-11.1	159.5	431.15	ug/L	431.15 ppb	14:42:41
3	Sr 421.552†	7955.6	7851.6	120.84	ug/L	120.84 ppb	14:42:21
3	Sc 361.383	1082982.3	1082982.3	102.08	%		14:43:52
3	Y 371.029	1034197.7	1034197.7	121.21	%		14:43:52
3	Ag 328.068†	-4819.1	-5359.4	3.8947	ug/L	3.8947 ppb	14:44:18
3	As 188.979†	-47.4	-9.5	29.142	ug/L	29.142 ppb	14:44:18
3	B 249.677†	1300.3	1655.3	15.541	ug/L	15.541 ppb	14:43:58
3	Ba 233.527†	126720.3	124110.1	630.21	ug/L	630.21 ppb	14:43:58
3	Be 313.107†	-11221.1	-3675.9	4.6587	ug/L	4.6587 ppb	14:43:58
3	Cd 226.502†	1019.1	1276.0	0.4876	ug/L	0.4876 ppb	14:44:18
3	Co 228.616†	2004.4	2054.0	19.454	ug/L	19.454 ppb	14:44:18
3	Cr 267.716†	4326.3	4266.6	38.064	ug/L	38.064 ppb	14:44:18
3	Cu 324.752†	25668.0	14952.9	41.335	ug/L	41.335 ppb	14:43:58
3	Mn 257.610†	3491076.6	3419009.3	2711.8	ug/L	2711.8 ppb	14:43:52
3	Mo 202.031†	83.6	50.2	7.2804	ug/L	7.2804 ppb	14:44:18
3	Ni 231.604†	2226.9	2033.2	32.572	ug/L	32.572 ppb	14:44:18
3	P 214.914†	2963.4	2566.0	849.95	ug/L	849.95 ppb	14:44:18
3	Pb 220.353†	1177.4	1182.5	87.784	ug/L	87.784 ppb	14:44:18
3	S 181.975 Axial†	949.6	862.4	723.54	ug/L	723.54 ppb	14:44:18
3	Sb 206.836†	88.1	40.9	0.5531	ug/L	0.5531 ppb	14:44:18
3	Se 196.026†	-763.0	-725.8	35.658	ug/L	35.658 ppb	14:44:18
3	Si 251.611†	556937.7	545012.5	11244	ug/L	11244 ppb	14:43:58
3	Sn 189.927†	-46.7	-51.2	-3.1255	ug/L	-3.1255 ppb	14:44:18
3	Ti 334.940†	1945438.6	1906848.5	2497.2	ug/L	2497.2 ppb	14:43:52
3	Tl 190.801†	-266.7	-199.9	-6.0401	ug/L	-6.0401 ppb	14:44:18
3	U 409.014†	-12315.1	-8229.1	-213.69	ug/L	-213.69 ppb	14:43:58
3	V 292.402†	18302.6	19581.9	97.569	ug/L	97.569 ppb	14:44:18
3	Zn 213.857†	63725.8	61303.0	333.58	ug/L	333.58 ppb	14:43:58
3	SiO2†	563512.6	551411.0	24360	ug/L	24360 ppb	14:44:34

Mean Data: 232585002|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1089356.2	102.68	%	0.584				0.57%
Sc Radial	5688.5	102	%	0.8				0.83%
Y 371.029	1040546.7	121.96	%	0.713				0.58%
Y RADIAL	5945.3	123.5	%	0.72				0.58%
Ag 328.068†	-5322.6	3.8734	ug/L	0.06671	3.8734	ppb	0.06671	1.72%
Al 396.153Radial†	35938.3	32712	ug/L	42.4	32712	ppb	42.4	0.13%
As 188.979†	-11.8	28.488	ug/L	1.2813	28.488	ppb	1.2813	4.50%
B 249.677†	1585.8	14.525	ug/L	0.8866	14.525	ppb	0.8866	6.10%
Ba 233.527†	125053.4	634.97	ug/L	5.361	634.97	ppb	5.361	0.84%
Be 313.107†	-3811.6	4.6108	ug/L	0.04549	4.6108	ppb	0.04549	0.99%
Ca 317.933Radial†	5528.6	13771	ug/L	94.2	13771	ppb	94.2	0.68%
Cd 226.502†	1259.6	0.4254	ug/L	0.07721	0.4254	ppb	0.07721	18.15%
Co 228.616†	2054.4	19.475	ug/L	0.0936	19.475	ppb	0.0936	0.48%
Cr 267.716†	4240.7	37.832	ug/L	0.2511	37.832	ppb	0.2511	0.66%
Cu 324.752†	15172.3	41.846	ug/L	0.8387	41.846	ppb	0.8387	2.00%
Fe 238.204 Radial†	2175.4	76317	ug/L	447.4	76317	ppb	447.4	0.59%
K 766.490 Radial†	15735.1	6851.0	ug/L	21.82	6851.0	ppb	21.82	0.32%

Mg 279.077 IEC†	87.6	6871.5	ug/L	169.20	6871.5	ppb	169.20	2.46%
Mn 257.610†	3412338.6	2706.5	ug/L	5.06	2706.5	ppb	5.06	0.19%
Mo 202.031†	50.3	7.2505	ug/L	0.11340	7.2505	ppb	0.11340	1.56%
Na 589.592 Radial†	162.5	439.43	ug/L	17.338	439.43	ppb	17.338	3.95%
Ni 231.604†	2009.5	32.191	ug/L	0.3371	32.191	ppb	0.3371	1.05%
P 214.914†	2542.0	841.75	ug/L	10.077	841.75	ppb	10.077	1.20%
Pb 220.353†	1173.2	87.130	ug/L	0.5693	87.130	ppb	0.5693	0.65%
S 181.975 Axial†	856.6	718.67	ug/L	5.560	718.67	ppb	5.560	0.77%
Sb 206.836†	39.0	0.1844	ug/L	1.35654	0.1844	ppb	1.35654	735.53%
Se 196.026†	-730.2	32.418	ug/L	2.9145	32.418	ppb	2.9145	8.99%
Si 251.611†	549187.1	11330	ug/L	105.5	11330	ppb	105.5	0.93%
Sn 189.927†	-57.8	-3.8301	ug/L	0.83200	-3.8301	ppb	0.83200	21.72%
Sr 421.552†	7860.5	120.98	ug/L	0.214	120.98	ppb	0.214	0.18%
Ti 334.940†	1904972.2	2494.7	ug/L	2.19	2494.7	ppb	2.19	0.09%
Tl 190.801†	-197.5	-5.6759	ug/L	0.37946	-5.6759	ppb	0.37946	6.69%
U 409.014†	-8252.3	-214.20	ug/L	1.477	-214.20	ppb	1.477	0.69%
V 292.402†	19450.7	96.896	ug/L	0.7854	96.896	ppb	0.7854	0.81%
Zn 213.857†	61663.1	335.65	ug/L	2.686	335.65	ppb	2.686	0.80%
SiO2†	549111.8	24258	ug/L	99.3	24258	ppb	99.3	0.41%

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 14:46:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5663.2	5663.2	102	%			14:48:38
1	Y RADIAL	4921.9	4921.9	102.2	%			14:48:38
1	Al 396.153Radial†	5410.9	5409.1	4902.2	ug/L	4902.2	ppb	14:48:38
1	Ca 317.933Radial†	1995.4	1943.8	4841.7	ug/L	4841.7	ppb	14:48:58
1	Fe 238.204 Radial†	141.6	138.8	4883.9	ug/L	4883.9	ppb	14:48:58
1	K 766.490 Radial†	13474.7	11767.5	5099.6	ug/L	5099.6	ppb	14:48:38
1	Mg 279.077 IEC†	63.7	62.4	4947.6	ug/L	4947.6	ppb	14:48:58
1	Na 589.592 Radial†	3686.9	3793.3	10257	ug/L	10257	ppb	14:48:38
1	Sr 421.552†	35305.4	34686.6	534.36	ug/L	534.36	ppb	14:48:38
1	Sc 361.383	1067499.7	1067499.7	100.62	%			14:49:57
1	Y 371.029	849118.5	849118.5	99.520	%			14:49:57
1	Ag 328.068†	127285.3	125857.7	501.23	ug/L	501.23	ppb	14:49:57
1	As 188.979†	2071.6	2095.7	495.11	ug/L	495.11	ppb	14:50:17
1	B 249.677†	31156.7	31345.1	486.64	ug/L	486.64	ppb	14:49:57
1	Ba 233.527†	98393.7	97759.6	496.03	ug/L	496.03	ppb	14:49:57
1	Be 313.107†	1596893.7	1594311.3	496.89	ug/L	496.89	ppb	14:49:57
1	Cd 226.502†	66558.7	66423.8	496.55	ug/L	496.55	ppb	14:49:57
1	Co 228.616†	38907.9	38757.1	482.97	ug/L	482.97	ppb	14:50:17
1	Cr 267.716†	58242.4	57910.0	493.92	ug/L	493.92	ppb	14:49:57
1	Cu 324.752†	211606.8	200103.9	493.99	ug/L	493.99	ppb	14:49:57
1	Mn 257.610†	631676.1	626933.6	495.99	ug/L	495.99	ppb	14:49:57
1	Mo 202.031†	12587.0	12477.2	499.76	ug/L	499.76	ppb	14:50:17
1	Ni 231.604†	30647.6	30309.4	485.48	ug/L	485.48	ppb	14:50:17
1	P 214.914†	7375.2	6992.6	2396.5	ug/L	2396.5	ppb	14:50:17
1	Pb 220.353†	6646.8	6634.7	498.71	ug/L	498.71	ppb	14:50:17
1	S 181.975 Axial†	1245.2	1169.7	989.10	ug/L	989.10	ppb	14:50:17
1	Sb 206.836†	2573.9	2512.6	500.11	ug/L	500.11	ppb	14:50:17
1	Se 196.026†	1503.7	1516.0	511.99	ug/L	511.99	ppb	14:50:17
1	Si 251.611†	123652.9	122326.3	2512.2	ug/L	2512.2	ppb	14:49:57
1	Sn 189.927†	4790.4	4755.2	495.03	ug/L	495.03	ppb	14:50:17
1	Ti 334.940†	382199.7	380939.8	498.61	ug/L	498.61	ppb	14:49:57
1	Tl 190.801†	2862.4	2906.0	492.14	ug/L	492.14	ppb	14:50:17
1	U 409.014†	15590.1	19328.2	478.01	ug/L	478.01	ppb	14:49:57
1	V 292.402†	85513.5	86636.2	497.33	ug/L	497.33	ppb	14:49:57
1	Zn 213.857†	90612.3	88928.3	492.08	ug/L	492.08	ppb	14:49:57
1	SiO2†	124200.5	122828.2	5401.3	ug/L	5401.3	ppb	14:51:17
2	Sc Radial	5446.9	5446.9	97.9	%			14:49:03
2	Y RADIAL	4712.8	4712.8	97.86	%			14:49:03
2	Al 396.153Radial†	5213.9	5419.0	4910.9	ug/L	4910.9	ppb	14:49:03
2	Ca 317.933Radial†	1989.6	2015.7	5020.8	ug/L	5020.8	ppb	14:49:23
2	Fe 238.204 Radial†	140.2	142.9	5030.3	ug/L	5030.3	ppb	14:49:23
2	K 766.490 Radial†	13037.0	11846.3	5133.9	ug/L	5133.9	ppb	14:49:03
2	Mg 279.077 IEC†	62.1	63.2	5014.8	ug/L	5014.8	ppb	14:49:23
2	Na 589.592 Radial†	3542.3	3789.5	10246	ug/L	10246	ppb	14:49:03
2	Sr 421.552†	33787.9	34514.2	531.70	ug/L	531.70	ppb	14:49:03
2	Sc 361.383	1055183.8	1055183.8	99.463	%			14:50:24
2	Y 371.029	838651.5	838651.5	98.293	%			14:50:24
2	Ag 328.068†	126214.7	126257.7	502.87	ug/L	502.87	ppb	14:50:24
2	As 188.979†	2075.2	2123.3	501.61	ug/L	501.61	ppb	14:50:44
2	B 249.677†	30917.9	31466.4	488.49	ug/L	488.49	ppb	14:50:24
2	Ba 233.527†	97565.5	98068.1	497.60	ug/L	497.60	ppb	14:50:24
2	Be 313.107†	1577953.1	1593791.5	496.73	ug/L	496.73	ppb	14:50:24
2	Cd 226.502†	66051.4	66685.8	498.49	ug/L	498.49	ppb	14:50:24
2	Co 228.616†	39043.3	39344.5	490.30	ug/L	490.30	ppb	14:50:44
2	Cr 267.716†	57589.2	57928.8	494.08	ug/L	494.08	ppb	14:50:24
2	Cu 324.752†	209513.9	200454.2	494.86	ug/L	494.86	ppb	14:50:24
2	Mn 257.610†	625453.1	628004.0	496.86	ug/L	496.86	ppb	14:50:24
2	Mo 202.031†	12625.4	12661.8	507.16	ug/L	507.16	ppb	14:50:44
2	Ni 231.604†	30744.2	30762.0	492.73	ug/L	492.73	ppb	14:50:44

2	P 214.914†	7400.3	7103.3	2435.4 ug/L	2435.4 ppb	14:50:44
2	Pb 220.353†	6622.3	6687.2	502.65 ug/L	502.65 ppb	14:50:44
2	S 181.975 Axial†	1258.3	1197.3	1012.5 ug/L	1012.5 ppb	14:50:44
2	Sb 206.836†	2580.0	2548.5	507.42 ug/L	507.42 ppb	14:50:44
2	Se 196.026†	1502.6	1532.3	517.83 ug/L	517.83 ppb	14:50:44
2	Si 251.611†	122528.7	122630.3	2518.3 ug/L	2518.3 ppb	14:50:24
2	Sn 189.927†	4790.5	4810.9	500.83 ug/L	500.83 ppb	14:50:44
2	Ti 334.940†	378341.9	381494.5	499.35 ug/L	499.35 ppb	14:50:24
2	Tl 190.801†	2870.9	2947.8	499.17 ug/L	499.17 ppb	14:50:44
2	U 409.014†	15257.4	19174.6	474.18 ug/L	474.18 ppb	14:50:24
2	V 292.402†	84668.4	86778.5	498.20 ug/L	498.20 ppb	14:50:24
2	Zn 213.857†	89929.9	89293.2	494.05 ug/L	494.05 ppb	14:50:24
2	SiO2†	124500.2	124570.2	5478.0 ug/L	5478.0 ppb	14:51:22
3	Sc Radial	5449.0	5449.0	97.9 %		14:49:28
3	Y RADIAL	4751.1	4751.1	98.66 %		14:49:28
3	Al 396.153Radial†	5174.8	5377.0	4872.7 ug/L	4872.7 ppb	14:49:28
3	Ca 317.933Radial†	2014.0	2039.9	5081.0 ug/L	5081.0 ppb	14:49:48
3	Fe 238.204 Radial†	143.3	146.0	5137.0 ug/L	5137.0 ppb	14:49:48
3	K 766.490 Radial†	13008.8	11812.4	5119.3 ug/L	5119.3 ppb	14:49:28
3	Mg 279.077 IEC†	65.2	66.4	5266.1 ug/L	5266.1 ppb	14:49:48
3	Na 589.592 Radial†	3500.5	3745.4	10127 ug/L	10127 ppb	14:49:28
3	Sr 421.552†	33740.1	34452.0	530.74 ug/L	530.74 ppb	14:49:28
3	Sc 361.383	1058649.0	1058649.0	99.789 %		14:50:52
3	Y 371.029	841526.8	841526.8	98.630 %		14:50:52
3	Ag 328.068†	126556.5	126184.9	502.61 ug/L	502.61 ppb	14:50:52
3	As 188.979†	2067.1	2108.3	498.11 ug/L	498.11 ppb	14:51:12
3	B 249.677†	31071.1	31518.1	489.29 ug/L	489.29 ppb	14:50:52
3	Ba 233.527†	97563.9	97745.5	495.96 ug/L	495.96 ppb	14:50:52
3	Be 313.107†	1581052.4	1591704.4	496.08 ug/L	496.08 ppb	14:50:52
3	Cd 226.502†	66155.8	66573.0	497.64 ug/L	497.64 ppb	14:50:52
3	Co 228.616†	38962.9	39135.5	487.69 ug/L	487.69 ppb	14:51:12
3	Cr 267.716†	57794.8	57945.3	494.22 ug/L	494.22 ppb	14:50:52
3	Cu 324.752†	210072.8	200324.8	494.55 ug/L	494.55 ppb	14:50:52
3	Mn 257.610†	626128.3	626622.3	495.77 ug/L	495.77 ppb	14:50:52
3	Mo 202.031†	12621.3	12616.2	505.34 ug/L	505.34 ppb	14:51:12
3	Ni 231.604†	30683.7	30600.2	490.14 ug/L	490.14 ppb	14:51:12
3	P 214.914†	7387.7	7066.4	2422.3 ug/L	2422.3 ppb	14:51:12
3	Pb 220.353†	6644.7	6687.8	502.68 ug/L	502.68 ppb	14:51:12
3	S 181.975 Axial†	1254.7	1189.5	1005.9 ug/L	1005.9 ppb	14:51:12
3	Sb 206.836†	2576.1	2536.1	504.89 ug/L	504.89 ppb	14:51:12
3	Se 196.026†	1509.7	1534.5	518.90 ug/L	518.90 ppb	14:51:12
3	Si 251.611†	122635.6	122334.2	2512.3 ug/L	2512.3 ppb	14:50:52
3	Sn 189.927†	4780.2	4784.8	498.13 ug/L	498.13 ppb	14:51:12
3	Ti 334.940†	379019.7	380928.6	498.61 ug/L	498.61 ppb	14:50:52
3	Tl 190.801†	2889.3	2956.8	500.68 ug/L	500.68 ppb	14:51:12
3	U 409.014†	15553.0	19420.5	480.27 ug/L	480.27 ppb	14:50:52
3	V 292.402†	84924.5	86756.4	498.05 ug/L	498.05 ppb	14:50:52
3	Zn 213.857†	89838.3	88905.4	491.88 ug/L	491.88 ppb	14:50:52
3	SiO2†	123331.7	122989.5	5408.2 ug/L	5408.2 ppb	14:51:27

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060444.2	99.959	%	0.5987				0.60%
Sc Radial	5519.7	99.2	%	2.23				2.25%
Y 371.029	843098.9	98.814	%	0.6338				0.64%
Y RADIAL	4795.3	99.58	%	2.312				2.32%
Ag 328.068†	126100.1	502.23	ug/L	0.878	502.23	ppb	0.878	0.17%
QC value within limits for Ag 328.068 Recovery = 100.45%								
Al 396.153Radial†	5401.7	4895.3	ug/L	19.99	4895.3	ppb	19.99	0.41%
QC value within limits for Al 396.153Radial Recovery = 97.91%								
As 188.979†	2109.1	498.28	ug/L	3.254	498.28	ppb	3.254	0.65%
QC value within limits for As 188.979 Recovery = 99.66%								
B 249.677†	31443.2	488.14	ug/L	1.360	488.14	ppb	1.360	0.28%
QC value within limits for B 249.677 Recovery = 97.63%								
Ba 233.527†	97857.7	496.53	ug/L	0.924	496.53	ppb	0.924	0.19%
QC value within limits for Ba 233.527 Recovery = 99.31%								
Be 313.107†	1593269.0	496.56	ug/L	0.429	496.56	ppb	0.429	0.09%
QC value within limits for Be 313.107 Recovery = 99.31%								
Ca 317.933Radial†	1999.8	4981.2	ug/L	124.51	4981.2	ppb	124.51	2.50%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.62%
Cd 226.502†            66560.8      497.56 ug/L         0.976      497.56 ppb          0.976   0.20%
   QC value within limits for Cd 226.502  Recovery = 99.51%
Co 228.616†            39079.1      486.99 ug/L         3.717      486.99 ppb          3.717   0.76%
   QC value within limits for Co 228.616  Recovery = 97.40%
Cr 267.716†            57928.0      494.08 ug/L         0.153      494.08 ppb          0.153   0.03%
   QC value within limits for Cr 267.716  Recovery = 98.82%
Cu 324.752†           200294.3      494.47 ug/L         0.442      494.47 ppb          0.442   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.89%
Fe 238.204 Radial†       142.6      5017.1 ug/L        127.10      5017.1 ppb         127.10   2.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.34%
K 766.490 Radial†      11808.7      5117.6 ug/L         17.20      5117.6 ppb          17.20   0.34%
   QC value within limits for K 766.490 Radial  Recovery = 102.35%
Mg 279.077 IEC†           64.0      5076.2 ug/L        167.87      5076.2 ppb         167.87   3.31%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.52%
Mn 257.610†           627186.6      496.21 ug/L         0.573      496.21 ppb          0.573   0.12%
   QC value within limits for Mn 257.610  Recovery = 99.24%
Mo 202.031†            12585.1      504.09 ug/L         3.856      504.09 ppb          3.856   0.76%
   QC value within limits for Mo 202.031  Recovery = 100.82%
Na 589.592 Radial†      3776.0       10210 ug/L          71.9       10210 ppb           71.9   0.70%
   QC value within limits for Na 589.592 Radial  Recovery = 102.10%
Ni 231.604†            30557.2      489.45 ug/L         3.673      489.45 ppb          3.673   0.75%
   QC value within limits for Ni 231.604  Recovery = 97.89%
P 214.914†              7054.1      2418.1 ug/L         19.82      2418.1 ppb          19.82   0.82%
   QC value within limits for P 214.914  Recovery = 96.72%
Pb 220.353†             6669.9      501.35 ug/L         2.283      501.35 ppb          2.283   0.46%
   QC value within limits for Pb 220.353  Recovery = 100.27%
S 181.975 Axial†        1185.5      1002.5 ug/L         12.05      1002.5 ppb          12.05   1.20%
   QC value within limits for S 181.975 Axial  Recovery = 100.25%
Sb 206.836†             2532.4      504.14 ug/L         3.715      504.14 ppb          3.715   0.74%
   QC value within limits for Sb 206.836  Recovery = 100.83%
Se 196.026†             1527.6      516.24 ug/L         3.717      516.24 ppb          3.717   0.72%
   QC value within limits for Se 196.026  Recovery = 103.25%
Si 251.611†           122430.3      2514.3 ug/L          3.52      2514.3 ppb           3.52   0.14%
   QC value within limits for Si 251.611  Recovery = 100.57%
Sn 189.927†             4783.6      498.00 ug/L         2.905      498.00 ppb          2.905   0.58%
   QC value within limits for Sn 189.927  Recovery = 99.60%
Sr 421.552†            34550.9      532.27 ug/L         1.873      532.27 ppb          1.873   0.35%
   QC value within limits for Sr 421.552  Recovery = 106.45%
Ti 334.940†           381121.0      498.86 ug/L         0.427      498.86 ppb          0.427   0.09%
   QC value within limits for Ti 334.940  Recovery = 99.77%
Tl 190.801†             2936.9      497.33 ug/L         4.557      497.33 ppb          4.557   0.92%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19307.8      477.49 ug/L         3.078      477.49 ppb          3.078   0.64%
   QC value within limits for U 409.014  Recovery = 95.50%
V 292.402†             86723.7      497.86 ug/L         0.468      497.86 ppb          0.468   0.09%
   QC value within limits for V 292.402  Recovery = 99.57%
Zn 213.857†            89042.3      492.67 ug/L         1.200      492.67 ppb          1.200   0.24%
   QC value within limits for Zn 213.857  Recovery = 98.53%
SiO2†                 123462.7      5429.2 ug/L         42.40      5429.2 ppb          42.40   0.78%
   QC value within limits for SiO2  Recovery = 101.53%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 14:53:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5472.3	5472.3	98.3	%			14:55:30
1	Y RADIAL	4760.3	4760.3	98.85	%			14:55:30
1	Al 396.153Radial†	-81.1	9.7	8.8083	ug/L	8.8083	ppb	14:55:30
1	Ca 317.933Radial†	30.8	14.4	35.761	ug/L	35.761	ppb	14:55:50
1	Fe 238.204 Radial†	0.5	0.2	5.6899	ug/L	5.6899	ppb	14:55:50
1	K 766.490 Radial†	1569.9	123.4	53.550	ug/L	53.550	ppb	14:55:30
1	Mg 279.077 IEC†	-0.7	-0.9	-68.768	ug/L	-68.768	ppb	14:55:50
1	Na 589.592 Radial†	-177.5	-10.1	-27.266	ug/L	-27.266	ppb	14:55:50
1	Sr 421.552†	35.3	30.4	0.4686	ug/L	0.4686	ppb	14:55:50
1	Sc 361.383	1053868.2	1053868.2	99.339	%			14:56:47
1	Y 371.029	847547.6	847547.6	99.336	%			14:56:47
1	Ag 328.068†	611.0	-23.5	-0.0912	ug/L	-0.0912	ppb	14:56:52
1	As 188.979†	-59.7	-23.1	-5.4331	ug/L	-5.4331	ppb	14:57:12
1	B 249.677†	-115.7	265.0	4.1295	ug/L	4.1295	ppb	14:56:52
1	Ba 233.527†	39.3	15.3	0.0772	ug/L	0.0772	ppb	14:57:12
1	Be 313.107†	-7467.3	-200.8	-0.0623	ug/L	-0.0623	ppb	14:56:52
1	Cd 226.502†	-282.8	-7.0	-0.0528	ug/L	-0.0528	ppb	14:57:12
1	Co 228.616†	-98.5	-8.7	-0.1082	ug/L	-0.1082	ppb	14:57:12
1	Cr 267.716†	-17.9	10.6	0.0901	ug/L	0.0901	ppb	14:57:12
1	Cu 324.752†	10191.0	67.6	0.1671	ug/L	0.1671	ppb	14:56:52
1	Mn 257.610†	957.5	136.8	0.1102	ug/L	0.1102	ppb	14:57:12
1	Mo 202.031†	35.6	4.1	0.1634	ug/L	0.1634	ppb	14:57:12
1	Ni 231.604†	164.1	16.9	0.2714	ug/L	0.2714	ppb	14:57:12
1	P 214.914†	332.8	-1.9	-0.6902	ug/L	-0.6902	ppb	14:57:12
1	Pb 220.353†	-0.7	28.4	2.1276	ug/L	2.1276	ppb	14:57:12
1	S 181.975 Axial†	64.3	-3.1	-2.6380	ug/L	-2.6380	ppb	14:57:12
1	Sb 206.836†	50.1	5.0	0.9831	ug/L	0.9831	ppb	14:57:12
1	Se 196.026†	-20.4	1.0	0.3567	ug/L	0.3567	ppb	14:57:12
1	Si 251.611†	771.9	216.9	4.4555	ug/L	4.4555	ppb	14:57:12
1	Sn 189.927†	3.4	-2.0	-0.2090	ug/L	-0.2090	ppb	14:57:12
1	Ti 334.940†	-1048.8	53.5	0.0729	ug/L	0.0729	ppb	14:56:52
1	Tl 190.801†	-48.9	12.2	2.0617	ug/L	2.0617	ppb	14:57:12
1	U 409.014†	-3860.6	-51.6	-1.2803	ug/L	-1.2803	ppb	14:56:47
1	V 292.402†	-1672.4	-30.8	-0.1770	ug/L	-0.1770	ppb	14:56:52
1	Zn 213.857†	1170.2	55.5	0.3100	ug/L	0.3100	ppb	14:57:12
1	SiO2†	796.6	199.5	8.7725	ug/L	8.7725	ppb	14:58:18
2	Sc Radial	5640.5	5640.5	101	%			14:55:55
2	Y RADIAL	4909.7	4909.7	102.0	%			14:55:55
2	Al 396.153Radial†	-62.3	30.8	28.013	ug/L	28.013	ppb	14:55:55
2	Ca 317.933Radial†	30.3	12.9	32.245	ug/L	32.245	ppb	14:56:15
2	Fe 238.204 Radial†	-0.5	-0.8	-29.760	ug/L	-29.760	ppb	14:56:15
2	K 766.490 Radial†	1516.6	23.1	10.017	ug/L	10.017	ppb	14:55:55
2	Mg 279.077 IEC†	0.3	0.1	8.2285	ug/L	8.2285	ppb	14:56:15
2	Na 589.592 Radial†	-177.1	-4.3	-11.518	ug/L	-11.518	ppb	14:56:15
2	Sr 421.552†	6.1	0.6	0.0086	ug/L	0.0086	ppb	14:56:15
2	Sc 361.383	1063342.1	1063342.1	100.23	%			14:57:17
2	Y 371.029	854778.4	854778.4	100.18	%			14:57:17
2	Ag 328.068†	643.4	3.4	0.0032	ug/L	0.0032	ppb	14:57:22
2	As 188.979†	-51.2	-14.2	-3.3303	ug/L	-3.3303	ppb	14:57:42
2	B 249.677†	-29.0	352.6	5.4981	ug/L	5.4981	ppb	14:57:22
2	Ba 233.527†	26.1	1.8	0.0085	ug/L	0.0085	ppb	14:57:42
2	Be 313.107†	-7456.4	-123.0	-0.0382	ug/L	-0.0382	ppb	14:57:22
2	Cd 226.502†	-288.4	-10.1	-0.0717	ug/L	-0.0717	ppb	14:57:42
2	Co 228.616†	-70.3	20.3	0.2517	ug/L	0.2517	ppb	14:57:42
2	Cr 267.716†	-12.6	16.0	0.1359	ug/L	0.1359	ppb	14:57:42
2	Cu 324.752†	10255.5	40.5	0.0983	ug/L	0.0983	ppb	14:57:22
2	Mn 257.610†	981.3	152.0	0.1161	ug/L	0.1161	ppb	14:57:42
2	Mo 202.031†	22.2	-9.6	-0.3874	ug/L	-0.3874	ppb	14:57:42
2	Ni 231.604†	156.9	8.2	0.1321	ug/L	0.1321	ppb	14:57:42

2	P 214.914†	349.2	11.4	4.0629	ug/L	4.0629 ppb	14:57:42
2	Pb 220.353†	-26.9	2.3	0.1761	ug/L	0.1761 ppb	14:57:42
2	S 181.975 Axial†	69.4	1.4	1.1802	ug/L	1.1802 ppb	14:57:42
2	Sb 206.836†	51.9	6.4	1.2457	ug/L	1.2457 ppb	14:57:42
2	Se 196.026†	-27.8	-6.2	-2.1074	ug/L	-2.1074 ppb	14:57:42
2	Si 251.611†	798.7	236.8	4.8879	ug/L	4.8879 ppb	14:57:42
2	Sn 189.927†	9.7	4.2	0.4366	ug/L	0.4366 ppb	14:57:42
2	Ti 334.940†	-1103.0	8.8	0.0133	ug/L	0.0133 ppb	14:57:22
2	Tl 190.801†	-47.5	14.0	2.3645	ug/L	2.3645 ppb	14:57:42
2	U 409.014†	-3819.8	23.8	0.5932	ug/L	0.5932 ppb	14:57:17
2	V 292.402†	-1637.6	19.0	0.1084	ug/L	0.1084 ppb	14:57:22
2	Zn 213.857†	1144.2	19.2	0.1089	ug/L	0.1089 ppb	14:57:42
2	SiO2†	764.0	159.9	7.0706	ug/L	7.0706 ppb	14:58:23
3	Sc Radial	5502.0	5502.0	98.9	%		14:56:20
3	Y RADIAL	4784.6	4784.6	99.35	%		14:56:20
3	Al 396.153Radial†	-79.0	12.3	11.188	ug/L	11.188 ppb	14:56:20
3	Ca 317.933Radial†	25.1	8.5	21.069	ug/L	21.069 ppb	14:56:40
3	Fe 238.204 Radial†	1.2	0.9	30.106	ug/L	30.106 ppb	14:56:40
3	K 766.490 Radial†	1574.7	119.6	51.922	ug/L	51.922 ppb	14:56:20
3	Mg 279.077 IEC†	2.6	2.5	197.62	ug/L	197.62 ppb	14:56:40
3	Na 589.592 Radial†	-180.3	-11.9	-32.235	ug/L	-32.235 ppb	14:56:40
3	Sr 421.552†	15.5	10.2	0.1562	ug/L	0.1562 ppb	14:56:40
3	Sc 361.383	1051449.5	1051449.5	99.111	%		14:57:47
3	Y 371.029	846638.2	846638.2	99.229	%		14:57:47
3	Ag 328.068†	588.3	-45.1	-0.1673	ug/L	-0.1673 ppb	14:57:52
3	As 188.979†	-54.8	-18.3	-4.3026	ug/L	-4.3026 ppb	14:58:13
3	B 249.677†	-85.6	295.2	4.5964	ug/L	4.5964 ppb	14:57:52
3	Ba 233.527†	31.6	7.6	0.0395	ug/L	0.0395 ppb	14:58:13
3	Be 313.107†	-7461.5	-212.2	-0.0661	ug/L	-0.0661 ppb	14:57:52
3	Cd 226.502†	-273.8	1.4	0.0072	ug/L	0.0072 ppb	14:58:13
3	Co 228.616†	-94.2	-4.7	-0.0576	ug/L	-0.0576 ppb	14:58:13
3	Cr 267.716†	-11.6	16.9	0.1449	ug/L	0.1449 ppb	14:58:13
3	Cu 324.752†	10178.7	78.7	0.1959	ug/L	0.1959 ppb	14:57:52
3	Mn 257.610†	987.9	169.8	0.1343	ug/L	0.1343 ppb	14:58:13
3	Mo 202.031†	39.6	8.2	0.3293	ug/L	0.3293 ppb	14:58:13
3	Ni 231.604†	164.9	18.1	0.2903	ug/L	0.2903 ppb	14:58:13
3	P 214.914†	362.0	28.3	9.9383	ug/L	9.9383 ppb	14:58:13
3	Pb 220.353†	-9.5	19.5	1.4654	ug/L	1.4654 ppb	14:58:13
3	S 181.975 Axial†	64.0	-3.2	-2.7432	ug/L	-2.7432 ppb	14:58:13
3	Sb 206.836†	52.1	7.2	1.4070	ug/L	1.4070 ppb	14:58:13
3	Se 196.026†	-24.8	-3.4	-0.9905	ug/L	-0.9905 ppb	14:58:13
3	Si 251.611†	779.4	226.3	4.6478	ug/L	4.6478 ppb	14:58:13
3	Sn 189.927†	2.2	-3.2	-0.3355	ug/L	-0.3355 ppb	14:58:13
3	Ti 334.940†	-1145.5	-46.5	-0.0588	ug/L	-0.0588 ppb	14:57:52
3	Tl 190.801†	-50.5	10.5	1.7647	ug/L	1.7647 ppb	14:58:13
3	U 409.014†	-3862.5	-62.4	-1.5531	ug/L	-1.5531 ppb	14:57:47
3	V 292.402†	-1624.6	13.6	0.0773	ug/L	0.0773 ppb	14:57:52
3	Zn 213.857†	1159.9	47.9	0.2551	ug/L	0.2551 ppb	14:58:13
3	SiO2†	806.9	211.8	9.3098	ug/L	9.3098 ppb	14:58:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1056219.9	99.560	%	0.5925				0.60%
Sc Radial	5538.3	99.5	%	1.61				1.62%
Y 371.029	849654.7	99.583	%	0.5228				0.52%
Y RADIAL	4818.2	100.1	%	1.66				1.66%
Ag 328.068†	-21.7	-0.0851	ug/L	0.08542	-0.0851	ppb	0.08542	100.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.6	16.003	ug/L	10.4684	16.003	ppb	10.4684	65.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-18.6	-4.3553	ug/L	1.05239	-4.3553	ppb	1.05239	24.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	304.2	4.7413	ug/L	0.69569	4.7413	ppb	0.69569	14.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.2	0.0417	ug/L	0.03442	0.0417	ppb	0.03442	82.50%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-178.7	-0.0555	ug/L	0.01513	-0.0555	ppb	0.01513	27.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.9	29.692	ug/L	7.6715	29.692	ppb	7.6715	25.84%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -5.2     -0.0391 ug/L       0.04120     -0.0391 ppb        0.04120 105.48%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 2.3      0.0286 ug/L       0.19481      0.0286 ppb        0.19481 680.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.5      0.1236 ug/L       0.02938      0.1236 ppb        0.02938  23.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                62.3      0.1538 ug/L       0.05016      0.1538 ppb        0.05016  32.62%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.1      2.0121 ug/L      30.10210      2.0121 ppb       30.10210 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          88.7     38.496 ug/L       24.6777     38.496 ppb        24.6777  64.10%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.6     45.694 ug/L      137.0902     45.694 ppb       137.0902 300.02%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               152.9      0.1202 ug/L       0.01255      0.1202 ppb        0.01255  10.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 0.9      0.0351 ug/L       0.37516      0.0351 ppb        0.37516 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -8.8    -23.673 ug/L       10.8153    -23.673 ppb        10.8153  45.69%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.4      0.2313 ug/L       0.08644      0.2313 ppb        0.08644  37.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 12.6      4.4370 ug/L       5.32411      4.4370 ppb        5.32411 119.99%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                16.7      1.2563 ug/L       0.99239      1.2563 ppb        0.99239  78.99%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -1.7    -1.4003 ug/L       2.23542     -1.4003 ppb        2.23542 159.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.2      1.2119 ug/L       0.21396      1.2119 ppb        0.21396  17.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.8    -0.9137 ug/L       1.23385     -0.9137 ppb        1.23385 135.04%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               226.7      4.6637 ug/L       0.21666      4.6637 ppb        0.21666   4.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -0.4    -0.0360 ug/L       0.41410     -0.0360 ppb        0.41410 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                13.7      0.2112 ug/L       0.23488      0.2112 ppb        0.23488 111.23%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 5.2      0.0091 ug/L       0.06596      0.0091 ppb        0.06596 721.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                12.2      2.0636 ug/L       0.29992      2.0636 ppb        0.29992  14.53%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -30.1    -0.7468 ug/L       1.16839     -0.7468 ppb        1.16839 156.46%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  0.6      0.0029 ug/L       0.15653      0.0029 ppb        0.15653 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                40.9      0.2247 ug/L       0.10391      0.2247 ppb        0.10391  46.25%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     190.4      8.3843 ug/L       1.16902      8.3843 ppb        1.16902  13.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: 232585003|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 44
Date Collected: 7/8/2009 15:00:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232585003|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5659.8	5659.8	102	%			15:02:31
1	Y RADIAL	6188.9	6188.9	128.5	%			15:02:31
1	Al 396.153Radial†	36581.5	36059.6	32822	ug/L	32822	ppb	15:02:31
1	Ca 317.933Radial†	3266.0	3194.2	7956.2	ug/L	7956.2	ppb	15:02:51
1	Fe 238.204 Radial†	2398.3	2357.7	82712	ug/L	82712	ppb	15:02:51
1	K 766.490 Radial†	11510.2	9843.9	4298.4	ug/L	4298.4	ppb	15:02:31
1	Mg 279.077 IEC†	70.5	69.1	5403.9	ug/L	5403.9	ppb	15:02:51
1	Na 589.592 Radial†	255.4	421.5	1139.8	ug/L	1139.8	ppb	15:02:51
1	Sr 421.552†	5460.6	5363.4	82.558	ug/L	82.558	ppb	15:02:31
1	Sc 361.383	1092127.9	1092127.9	102.95	%			15:03:49
1	Y 371.029	1085007.2	1085007.2	127.17	%			15:03:49
1	Ag 328.068†	-5303.4	-5790.3	4.1587	ug/L	4.1587	ppb	15:03:54
1	As 188.979†	-27.0	10.7	33.615	ug/L	33.615	ppb	15:04:14
1	B 249.677†	890.7	1246.7	8.4107	ug/L	8.4107	ppb	15:03:54
1	Ba 233.527†	77936.8	75682.8	385.19	ug/L	385.19	ppb	15:03:54
1	Be 313.107†	-7530.5	1.2	5.2760	ug/L	5.2760	ppb	15:03:54
1	Cd 226.502†	991.7	1241.0	-0.4435	ug/L	-0.4435	ppb	15:04:14
1	Co 228.616†	1440.3	1489.5	12.691	ug/L	12.691	ppb	15:04:14
1	Cr 267.716†	15091.3	14688.1	126.93	ug/L	126.93	ppb	15:03:54
1	Cu 324.752†	22475.5	11641.2	33.504	ug/L	33.504	ppb	15:03:54
1	Mn 257.610†	3752975.0	3644776.9	2891.1	ug/L	2891.1	ppb	15:03:49
1	Mo 202.031†	226.8	188.5	13.222	ug/L	13.222	ppb	15:04:14
1	Ni 231.604†	4753.1	4468.8	71.614	ug/L	71.614	ppb	15:04:14
1	P 214.914†	1812.4	1423.7	442.92	ug/L	442.92	ppb	15:04:14
1	Pb 220.353†	829.2	834.5	61.179	ug/L	61.179	ppb	15:04:14
1	S 181.975 Axial†	433.8	353.5	292.79	ug/L	292.79	ppb	15:04:14
1	Sb 206.836†	100.5	52.2	1.4941	ug/L	1.4941	ppb	15:04:14
1	Se 196.026†	-825.1	-779.9	38.748	ug/L	38.748	ppb	15:04:14
1	Si 251.611†	553826.9	537422.1	11088	ug/L	11088	ppb	15:03:49
1	Sn 189.927†	9.4	3.6	2.1506	ug/L	2.1506	ppb	15:04:14
1	Ti 334.940†	1783881.7	1733954.8	2270.5	ug/L	2270.5	ppb	15:03:49
1	Tl 190.801†	-273.3	-204.0	-6.7068	ug/L	-6.7068	ppb	15:04:14
1	U 409.014†	-15680.2	-11396.9	-293.18	ug/L	-293.18	ppb	15:03:49
1	V 292.402†	15026.1	16249.0	77.969	ug/L	77.969	ppb	15:03:54
1	Zn 213.857†	63764.6	60817.9	330.05	ug/L	330.05	ppb	15:03:54
1	SiO2†	554015.1	537562.6	23749	ug/L	23749	ppb	15:05:24
2	Sc Radial	5702.7	5702.7	102	%			15:02:56
2	Y RADIAL	6184.7	6184.7	128.4	%			15:02:56
2	Al 396.153Radial†	36880.3	36081.2	32842	ug/L	32842	ppb	15:02:56
2	Ca 317.933Radial†	3274.6	3178.5	7917.1	ug/L	7917.1	ppb	15:03:16
2	Fe 238.204 Radial†	2400.2	2341.8	82156	ug/L	82156	ppb	15:03:16
2	K 766.490 Radial†	11571.0	9818.3	4287.0	ug/L	4287.0	ppb	15:02:56
2	Mg 279.077 IEC†	73.5	71.5	5594.9	ug/L	5594.9	ppb	15:03:16
2	Na 589.592 Radial†	251.4	415.8	1124.2	ug/L	1124.2	ppb	15:03:16
2	Sr 421.552†	5471.7	5334.0	82.105	ug/L	82.105	ppb	15:02:56
2	Sc 361.383	1084036.7	1084036.7	102.18	%			15:04:21
2	Y 371.029	1079776.3	1079776.3	126.55	%			15:04:21
2	Ag 328.068†	-5429.6	-5952.2	3.3418	ug/L	3.3418	ppb	15:04:26
2	As 188.979†	-37.0	0.7	31.141	ug/L	31.141	ppb	15:04:46
2	B 249.677†	941.3	1302.7	9.3576	ug/L	9.3576	ppb	15:04:26
2	Ba 233.527†	78785.1	77078.1	392.24	ug/L	392.24	ppb	15:04:26
2	Be 313.107†	-7727.3	-246.0	5.1918	ug/L	5.1918	ppb	15:04:26
2	Cd 226.502†	995.4	1251.8	-0.2968	ug/L	-0.2968	ppb	15:04:46
2	Co 228.616†	1426.0	1486.0	12.662	ug/L	12.662	ppb	15:04:46
2	Cr 267.716†	15272.8	14975.2	129.37	ug/L	129.37	ppb	15:04:26
2	Cu 324.752†	22997.7	12315.2	35.135	ug/L	35.135	ppb	15:04:26
2	Mn 257.610†	3713987.2	3633832.4	2882.3	ug/L	2882.3	ppb	15:04:21
2	Mo 202.031†	204.9	168.7	12.392	ug/L	12.392	ppb	15:04:46
2	Ni 231.604†	4772.1	4521.9	72.464	ug/L	72.464	ppb	15:04:46

2	P 214.914†	1817.5	1441.8	449.49	ug/L	449.49 ppb	15:04:46
2	Pb 220.353†	797.6	809.6	59.368	ug/L	59.368 ppb	15:04:46
2	S 181.975 Axial†	440.8	363.5	301.25	ug/L	301.25 ppb	15:04:46
2	Sb 206.836†	85.6	38.3	-1.3314	ug/L	-1.3314 ppb	15:04:46
2	Se 196.026†	-842.5	-802.8	29.333	ug/L	29.333 ppb	15:04:46
2	Si 251.611†	546908.3	534666.6	11031	ug/L	11031 ppb	15:04:21
2	Sn 189.927†	-3.2	-8.6	0.8679	ug/L	0.8679 ppb	15:04:46
2	Ti 334.940†	1768190.5	1731532.6	2267.3	ug/L	2267.3 ppb	15:04:21
2	Tl 190.801†	-282.3	-214.9	-8.6112	ug/L	-8.6112 ppb	15:04:46
2	U 409.014†	-15461.7	-11296.7	-290.63	ug/L	-290.63 ppb	15:04:21
2	V 292.402†	15127.5	16457.1	79.226	ug/L	79.226 ppb	15:04:26
2	Zn 213.857†	64576.1	62074.4	337.11	ug/L	337.11 ppb	15:04:26
2	SiO2†	553352.9	540931.3	23898	ug/L	23898 ppb	15:05:30
3	Sc Radial	5717.3	5717.3	103	%		15:03:21
3	Y RADIAL	6187.5	6187.5	128.5	%		15:03:21
3	Al 396.153Radial†	36885.3	35994.0	32763	ug/L	32763 ppb	15:03:21
3	Ca 317.933Radial†	3288.0	3183.4	7929.4	ug/L	7929.4 ppb	15:03:41
3	Fe 238.204 Radial†	2422.0	2357.1	82690	ug/L	82690 ppb	15:03:41
3	K 766.490 Radial†	11587.6	9805.5	4281.7	ug/L	4281.7 ppb	15:03:21
3	Mg 279.077 IEC†	73.5	71.4	5581.2	ug/L	5581.2 ppb	15:03:41
3	Na 589.592 Radial†	254.4	418.1	1130.4	ug/L	1130.4 ppb	15:03:41
3	Sr 421.552†	5488.5	5336.7	82.146	ug/L	82.146 ppb	15:03:21
3	Sc 361.383	1081661.3	1081661.3	101.96	%		15:04:53
3	Y 371.029	1076412.1	1076412.1	126.16	%		15:04:53
3	Ag 328.068†	-5387.9	-5923.0	3.6346	ug/L	3.6346 ppb	15:04:58
3	As 188.979†	-30.8	6.6	32.660	ug/L	32.660 ppb	15:05:18
3	B 249.677†	944.9	1308.2	9.3725	ug/L	9.3725 ppb	15:04:58
3	Ba 233.527†	78535.6	77002.7	391.87	ug/L	391.87 ppb	15:04:58
3	Be 313.107†	-7802.1	-336.0	5.1706	ug/L	5.1706 ppb	15:04:58
3	Cd 226.502†	953.0	1212.4	-0.6546	ug/L	-0.6546 ppb	15:05:18
3	Co 228.616†	1416.4	1479.6	12.570	ug/L	12.570 ppb	15:05:18
3	Cr 267.716†	15277.7	15012.8	129.70	ug/L	129.70 ppb	15:04:58
3	Cu 324.752†	22937.1	12305.2	35.141	ug/L	35.141 ppb	15:04:58
3	Mn 257.610†	3720018.0	3647729.3	2893.4	ug/L	2893.4 ppb	15:04:53
3	Mo 202.031†	220.9	184.9	13.075	ug/L	13.075 ppb	15:05:18
3	Ni 231.604†	4755.3	4515.7	72.365	ug/L	72.365 ppb	15:05:18
3	P 214.914†	1802.8	1431.2	445.32	ug/L	445.32 ppb	15:05:18
3	Pb 220.353†	798.0	811.7	59.459	ug/L	59.459 ppb	15:05:18
3	S 181.975 Axial†	435.7	359.5	297.86	ug/L	297.86 ppb	15:05:18
3	Sb 206.836†	94.4	47.1	0.4238	ug/L	0.4238 ppb	15:05:18
3	Se 196.026†	-843.4	-805.6	30.316	ug/L	30.316 ppb	15:05:18
3	Si 251.611†	547116.2	536046.0	11060	ug/L	11060 ppb	15:04:53
3	Sn 189.927†	7.7	2.1	1.9891	ug/L	1.9891 ppb	15:05:18
3	Ti 334.940†	1766584.9	1733758.0	2270.2	ug/L	2270.2 ppb	15:04:53
3	Tl 190.801†	-276.2	-209.5	-7.6174	ug/L	-7.6174 ppb	15:05:18
3	U 409.014†	-15763.2	-11625.6	-298.86	ug/L	-298.86 ppb	15:04:53
3	V 292.402†	15021.3	16385.5	78.736	ug/L	78.736 ppb	15:04:58
3	Zn 213.857†	64583.3	62220.2	337.87	ug/L	337.87 ppb	15:04:58
3	SiO2†	560008.6	548648.5	24239	ug/L	24239 ppb	15:05:35

Mean Data: 232585003|881859|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1085942.0	102.36	%	0.517				0.51%
Sc Radial	5693.3	102	%	0.5				0.52%
Y 371.029	1080398.5	126.63	%	0.508				0.40%
Y RADIAL	6187.1	128.5	%	0.04				0.03%
Ag 328.068†	-5888.5	3.7117	ug/L	0.41386	3.7117	ppb	0.41386	11.15%
Al 396.153Radial†	36044.9	32809	ug/L	41.4	32809	ppb	41.4	0.13%
As 188.979†	6.0	32.472	ug/L	1.2476	32.472	ppb	1.2476	3.84%
B 249.677†	1285.9	9.0470	ug/L	0.55104	9.0470	ppb	0.55104	6.09%
Ba 233.527†	76587.9	389.77	ug/L	3.969	389.77	ppb	3.969	1.02%
Be 313.107†	-193.6	5.2128	ug/L	0.05577	5.2128	ppb	0.05577	1.07%
Ca 317.933Radial†	3185.4	7934.2	ug/L	20.00	7934.2	ppb	20.00	0.25%
Cd 226.502†	1235.0	-0.4649	ug/L	0.17986	-0.4649	ppb	0.17986	38.68%
Co 228.616†	1485.0	12.641	ug/L	0.0630	12.641	ppb	0.0630	0.50%
Cr 267.716†	14892.0	128.67	ug/L	1.511	128.67	ppb	1.511	1.17%
Cu 324.752†	12087.2	34.593	ug/L	0.9434	34.593	ppb	0.9434	2.73%
Fe 238.204 Radial†	2352.2	82519	ug/L	315.0	82519	ppb	315.0	0.38%
K 766.490 Radial†	9822.6	4289.1	ug/L	8.54	4289.1	ppb	8.54	0.20%

Mg 279.077 IEC†	70.7	5526.7	ug/L	106.53	5526.7	ppb	106.53	1.93%
Mn 257.610†	3642112.9	2888.9	ug/L	5.83	2888.9	ppb	5.83	0.20%
Mo 202.031†	180.7	12.896	ug/L	0.4426	12.896	ppb	0.4426	3.43%
Na 589.592 Radial†	418.5	1131.5	ug/L	7.85	1131.5	ppb	7.85	0.69%
Ni 231.604†	4502.2	72.147	ug/L	0.4649	72.147	ppb	0.4649	0.64%
P 214.914†	1432.2	445.91	ug/L	3.323	445.91	ppb	3.323	0.75%
Pb 220.353†	818.6	60.002	ug/L	1.0204	60.002	ppb	1.0204	1.70%
S 181.975 Axial†	358.9	297.30	ug/L	4.261	297.30	ppb	4.261	1.43%
Sb 206.836†	45.9	0.1955	ug/L	1.42652	0.1955	ppb	1.42652	729.58%
Se 196.026†	-796.1	32.799	ug/L	5.1754	32.799	ppb	5.1754	15.78%
Si 251.611†	536044.9	11060	ug/L	28.4	11060	ppb	28.4	0.26%
Sn 189.927†	-1.0	1.6692	ug/L	0.69864	1.6692	ppb	0.69864	41.85%
Sr 421.552†	5344.7	82.270	ug/L	0.2508	82.270	ppb	0.2508	0.30%
Ti 334.940†	1733081.8	2269.3	ug/L	1.76	2269.3	ppb	1.76	0.08%
Tl 190.801†	-209.5	-7.6451	ug/L	0.95251	-7.6451	ppb	0.95251	12.46%
U 409.014†	-11439.7	-294.23	ug/L	4.211	-294.23	ppb	4.211	1.43%
V 292.402†	16363.9	78.644	ug/L	0.6336	78.644	ppb	0.6336	0.81%
Zn 213.857†	61704.2	335.01	ug/L	4.313	335.01	ppb	4.313	1.29%
SiO2†	542380.8	23962	ug/L	251.1	23962	ppb	251.1	1.05%

Sequence No.: 13
Sample ID: 1201872899|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 46
Date Collected: 7/8/2009 15:14:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872899|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5642.7	5642.7	101	%			15:16:48
1	Y RADIAL	5772.0	5772.0	119.9	%			15:16:48
1	Al 396.153Radial†	31493.9	31151.3	28355	ug/L	28355	ppb	15:16:48
1	Ca 317.933Radial†	2607.1	2554.2	6362.0	ug/L	6362.0	ppb	15:17:08
1	Fe 238.204 Radial†	2312.8	2280.5	80005	ug/L	80005	ppb	15:17:08
1	K 766.490 Radial†	12221.7	10579.9	4618.1	ug/L	4618.1	ppb	15:16:48
1	Mg 279.077 IEC†	62.5	61.4	4797.3	ug/L	4797.3	ppb	15:17:08
1	Na 589.592 Radial†	95.1	264.2	714.50	ug/L	714.50	ppb	15:17:08
1	Sr 421.552†	4203.3	4139.8	63.721	ug/L	63.721	ppb	15:16:48
1	Sc 361.383	1077997.6	1077997.6	101.61	%			15:18:06
1	Y 371.029	1011721.1	1011721.1	118.58	%			15:18:06
1	Ag 328.068†	-5414.1	-5966.7	2.5865	ug/L	2.5865	ppb	15:18:12
1	As 188.979†	-35.2	2.2	31.880	ug/L	31.880	ppb	15:18:32
1	B 249.677†	794.2	1163.1	7.4507	ug/L	7.4507	ppb	15:18:12
1	Ba 233.527†	92385.6	90894.6	462.14	ug/L	462.14	ppb	15:18:12
1	Be 313.107†	-11434.9	-3937.1	4.3355	ug/L	4.3355	ppb	15:18:12
1	Cd 226.502†	954.0	1216.5	-0.3042	ug/L	-0.3042	ppb	15:18:32
1	Co 228.616†	1926.2	1986.0	18.680	ug/L	18.680	ppb	15:18:32
1	Cr 267.716†	17492.4	17243.3	148.63	ug/L	148.63	ppb	15:18:12
1	Cu 324.752†	59186.3	48055.4	123.19	ug/L	123.19	ppb	15:18:12
1	Mn 257.610†	3471145.0	3415207.6	2709.3	ug/L	2709.3	ppb	15:18:06
1	Mo 202.031†	218.1	182.9	12.810	ug/L	12.810	ppb	15:18:32
1	Ni 231.604†	4935.9	4709.3	75.464	ug/L	75.464	ppb	15:18:32
1	P 214.914†	2732.0	2351.7	757.22	ug/L	757.22	ppb	15:18:32
1	Pb 220.353†	852.6	868.2	63.014	ug/L	63.014	ppb	15:18:32
1	S 181.975 Axial†	440.4	365.5	303.84	ug/L	303.84	ppb	15:18:32
1	Sb 206.836†	106.4	59.3	2.2483	ug/L	2.2483	ppb	15:18:32
1	Se 196.026†	-806.2	-771.8	31.634	ug/L	31.634	ppb	15:18:32
1	Si 251.611†	529721.2	520750.9	10744	ug/L	10744	ppb	15:18:06
1	Sn 189.927†	79.7	73.0	9.2299	ug/L	9.2299	ppb	15:18:32
1	Ti 334.940†	1855685.6	1827332.7	2392.5	ug/L	2392.5	ppb	15:18:06
1	Tl 190.801†	-260.7	-195.2	-5.7602	ug/L	-5.7602	ppb	15:18:32
1	U 409.014†	-12568.6	-8534.3	-221.87	ug/L	-221.87	ppb	15:18:06
1	V 292.402†	16381.7	17774.4	86.973	ug/L	86.973	ppb	15:18:12
1	Zn 213.857†	83128.9	80686.7	441.16	ug/L	441.16	ppb	15:18:12
1	SiO2†	527379.3	518403.9	22903	ug/L	22903	ppb	15:19:41
2	Sc Radial	5682.9	5682.9	102	%			15:17:13
2	Y RADIAL	5838.7	5838.7	121.2	%			15:17:13
2	Al 396.153Radial†	31871.9	31301.6	28492	ug/L	28492	ppb	15:17:13
2	Ca 317.933Radial†	2583.7	2513.1	6259.7	ug/L	6259.7	ppb	15:17:33
2	Fe 238.204 Radial†	2287.3	2239.4	78564	ug/L	78564	ppb	15:17:33
2	K 766.490 Radial†	12345.0	10615.3	4632.4	ug/L	4632.4	ppb	15:17:13
2	Mg 279.077 IEC†	62.4	61.0	4760.7	ug/L	4760.7	ppb	15:17:33
2	Na 589.592 Radial†	92.2	260.7	704.94	ug/L	704.94	ppb	15:17:33
2	Sr 421.552†	4209.3	4116.4	63.361	ug/L	63.361	ppb	15:17:13
2	Sc 361.383	1076250.4	1076250.4	101.45	%			15:18:38
2	Y 371.029	1007927.0	1007927.0	118.13	%			15:18:38
2	Ag 328.068†	-5391.7	-5953.3	2.1827	ug/L	2.1827	ppb	15:18:44
2	As 188.979†	-45.6	-8.0	29.208	ug/L	29.208	ppb	15:19:04
2	B 249.677†	845.3	1214.7	8.4470	ug/L	8.4470	ppb	15:18:44
2	Ba 233.527†	92594.7	91248.2	463.90	ug/L	463.90	ppb	15:18:44
2	Be 313.107†	-11301.2	-3823.6	4.3788	ug/L	4.3788	ppb	15:18:44
2	Cd 226.502†	937.9	1202.2	-0.2419	ug/L	-0.2419	ppb	15:19:04
2	Co 228.616†	1910.7	1973.8	18.540	ug/L	18.540	ppb	15:19:04
2	Cr 267.716†	17452.1	17231.5	148.51	ug/L	148.51	ppb	15:18:44
2	Cu 324.752†	59272.6	48235.0	123.55	ug/L	123.55	ppb	15:18:44
2	Mn 257.610†	3473558.2	3423132.2	2715.4	ug/L	2715.4	ppb	15:18:38
2	Mo 202.031†	203.1	168.5	12.135	ug/L	12.135	ppb	15:19:04
2	Ni 231.604†	4866.9	4649.1	74.499	ug/L	74.499	ppb	15:19:04

2	P 214.914†	2718.0	2342.3	755.03	ug/L	755.03 ppb	15:19:04
2	Pb 220.353†	844.8	861.9	62.701	ug/L	62.701 ppb	15:19:04
2	S 181.975 Axial†	423.8	349.9	290.60	ug/L	290.60 ppb	15:19:04
2	Sb 206.836†	100.3	53.5	1.0368	ug/L	1.0368 ppb	15:19:04
2	Se 196.026†	-792.5	-759.6	30.547	ug/L	30.547 ppb	15:19:04
2	Si 251.611†	530935.7	522794.4	10786	ug/L	10786 ppb	15:18:38
2	Sn 189.927†	69.4	63.0	8.1511	ug/L	8.1511 ppb	15:19:04
2	Ti 334.940†	1855340.3	1829957.1	2396.0	ug/L	2396.0 ppb	15:18:38
2	Tl 190.801†	-253.5	-188.5	-4.5703	ug/L	-4.5703 ppb	15:19:04
2	U 409.014†	-12669.2	-8653.6	-224.65	ug/L	-224.65 ppb	15:18:38
2	V 292.402†	16471.6	17889.2	87.803	ug/L	87.803 ppb	15:18:44
2	Zn 213.857†	83116.2	80807.0	441.99	ug/L	441.99 ppb	15:18:44
2	SiO2†	534304.3	526072.5	23242	ug/L	23242 ppb	15:19:47
3	Sc Radial	5667.0	5667.0	102	%		15:17:38
3	Y RADIAL	5780.9	5780.9	120.0	%		15:17:38
3	Al 396.153Radial†	31573.1	31095.9	28304	ug/L	28304 ppb	15:17:38
3	Ca 317.933Radial†	2611.2	2547.2	6344.6	ug/L	6344.6 ppb	15:17:58
3	Fe 238.204 Radial†	2301.9	2260.0	79286	ug/L	79286 ppb	15:17:58
3	K 766.490 Radial†	12229.9	10536.2	4598.6	ug/L	4598.6 ppb	15:17:38
3	Mg 279.077 IEC†	59.6	58.4	4555.2	ug/L	4555.2 ppb	15:17:58
3	Na 589.592 Radial†	94.0	262.7	710.32	ug/L	710.32 ppb	15:17:58
3	Sr 421.552†	4174.4	4093.7	63.011	ug/L	63.011 ppb	15:17:38
3	Sc 361.383	1087003.8	1087003.8	102.46	%		15:19:10
3	Y 371.029	1017791.3	1017791.3	119.29	%		15:19:10
3	Ag 328.068†	-5278.3	-5790.0	3.0511	ug/L	3.0511 ppb	15:19:16
3	As 188.979†	-42.1	-4.1	30.258	ug/L	30.258 ppb	15:19:36
3	B 249.677†	766.4	1129.5	7.0225	ug/L	7.0225 ppb	15:19:16
3	Ba 233.527†	92059.9	89823.4	456.70	ug/L	456.70 ppb	15:19:16
3	Be 313.107†	-11347.7	-3758.8	4.3978	ug/L	4.3978 ppb	15:19:16
3	Cd 226.502†	959.8	1214.4	-0.2360	ug/L	-0.2360 ppb	15:19:36
3	Co 228.616†	1928.6	1972.7	18.514	ug/L	18.514 ppb	15:19:36
3	Cr 267.716†	17376.4	16987.4	146.44	ug/L	146.44 ppb	15:19:16
3	Cu 324.752†	59022.8	47413.2	121.56	ug/L	121.56 ppb	15:19:16
3	Mn 257.610†	3505151.6	3420093.9	2713.1	ug/L	2713.1 ppb	15:19:10
3	Mo 202.031†	194.5	158.0	11.767	ug/L	11.767 ppb	15:19:36
3	Ni 231.604†	4897.1	4631.1	74.211	ug/L	74.211 ppb	15:19:36
3	P 214.914†	2725.8	2323.3	748.03	ug/L	748.03 ppb	15:19:36
3	Pb 220.353†	860.2	868.6	63.103	ug/L	63.103 ppb	15:19:36
3	S 181.975 Axial†	419.4	341.5	283.49	ug/L	283.49 ppb	15:19:36
3	Sb 206.836†	82.2	34.8	-2.5571	ug/L	-2.5571 ppb	15:19:36
3	Se 196.026†	-804.8	-763.8	31.693	ug/L	31.693 ppb	15:19:36
3	Si 251.611†	535281.2	521858.0	10767	ug/L	10767 ppb	15:19:10
3	Sn 189.927†	76.6	69.3	8.8317	ug/L	8.8317 ppb	15:19:36
3	Ti 334.940†	1873474.0	1829562.7	2395.5	ug/L	2395.5 ppb	15:19:10
3	Tl 190.801†	-265.1	-197.3	-6.0823	ug/L	-6.0823 ppb	15:19:36
3	U 409.014†	-12627.8	-8489.6	-220.66	ug/L	-220.66 ppb	15:19:10
3	V 292.402†	16373.0	17632.3	86.248	ug/L	86.248 ppb	15:19:16
3	Zn 213.857†	82871.5	79757.6	436.07	ug/L	436.07 ppb	15:19:16
3	SiO2†	527978.3	514688.3	22739	ug/L	22739 ppb	15:19:52

Mean Data: 1201872899|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1080417.3	101.84	%	0.544				0.53%
Sc Radial	5664.2	102	%	0.4				0.36%
Y 371.029	1012479.8	118.67	%	0.583				0.49%
Y RADIAL	5797.2	120.4	%	0.75				0.63%
Ag 328.068†	-5903.4	2.6068	ug/L	0.43458	2.6068	ppb	0.43458	16.67%
Al 396.153Radial†	31183.0	28384	ug/L	96.9	28384	ppb	96.9	0.34%
As 188.979†	-3.3	30.449	ug/L	1.3459	30.449	ppb	1.3459	4.42%
B 249.677†	1169.1	7.6401	ug/L	0.73090	7.6401	ppb	0.73090	9.57%
Ba 233.527†	90655.4	460.92	ug/L	3.753	460.92	ppb	3.753	0.81%
Be 313.107†	-3839.8	4.3707	ug/L	0.03190	4.3707	ppb	0.03190	0.73%
Ca 317.933Radial†	2538.1	6322.1	ug/L	54.76	6322.1	ppb	54.76	0.87%
Cd 226.502†	1211.0	-0.2607	ug/L	0.03781	-0.2607	ppb	0.03781	14.50%
Co 228.616†	1977.5	18.578	ug/L	0.0893	18.578	ppb	0.0893	0.48%
Cr 267.716†	17154.1	147.86	ug/L	1.232	147.86	ppb	1.232	0.83%
Cu 324.752†	47901.2	122.77	ug/L	1.058	122.77	ppb	1.058	0.86%
Fe 238.204 Radial†	2260.0	79285	ug/L	720.7	79285	ppb	720.7	0.91%
K 766.490 Radial†	10577.1	4616.4	ug/L	16.95	4616.4	ppb	16.95	0.37%

Mg 279.077 IEC†	60.3	4704.4	ug/L	130.48	4704.4	ppb	130.48	2.77%
Mn 257.610†	3419477.9	2712.6	ug/L	3.07	2712.6	ppb	3.07	0.11%
Mo 202.031†	169.8	12.237	ug/L	0.5293	12.237	ppb	0.5293	4.33%
Na 589.592 Radial†	262.6	709.92	ug/L	4.793	709.92	ppb	4.793	0.68%
Ni 231.604†	4663.2	74.725	ug/L	0.6562	74.725	ppb	0.6562	0.88%
P 214.914†	2339.1	753.43	ug/L	4.800	753.43	ppb	4.800	0.64%
Pb 220.353†	866.2	62.939	ug/L	0.2108	62.939	ppb	0.2108	0.33%
S 181.975 Axial†	352.3	292.65	ug/L	10.331	292.65	ppb	10.331	3.53%
Sb 206.836†	49.2	0.2426	ug/L	2.49918	0.2426	ppb	2.49918	>999.9%
Se 196.026†	-765.1	31.291	ug/L	0.6451	31.291	ppb	0.6451	2.06%
Si 251.611†	521801.1	10766	ug/L	21.1	10766	ppb	21.1	0.20%
Sn 189.927†	68.4	8.7376	ug/L	0.54555	8.7376	ppb	0.54555	6.24%
Sr 421.552†	4116.6	63.364	ug/L	0.3549	63.364	ppb	0.3549	0.56%
Ti 334.940†	1828950.8	2394.7	ug/L	1.85	2394.7	ppb	1.85	0.08%
Tl 190.801†	-193.7	-5.4709	ug/L	0.79643	-5.4709	ppb	0.79643	14.56%
U 409.014†	-8559.2	-222.39	ug/L	2.043	-222.39	ppb	2.043	0.92%
V 292.402†	17765.3	87.008	ug/L	0.7779	87.008	ppb	0.7779	0.89%
Zn 213.857†	80417.1	439.74	ug/L	3.208	439.74	ppb	3.208	0.73%
SiO2†	519721.6	22961	ug/L	256.5	22961	ppb	256.5	1.12%

Sequence No.: 14
Sample ID: 1201872900|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 47
Date Collected: 7/8/2009 15:22:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872900|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5540.9	5540.9	99.6	%			15:23:57
1	Y RADIAL	5700.5	5700.5	118.4	%			15:23:57
1	Al 396.153Radial†	75109.5	75525.8	68726	ug/L	68726	ppb	15:23:57
1	Ca 317.933Radial†	4990.2	4994.8	12441	ug/L	12441	ppb	15:23:57
1	Fe 238.204 Radial†	2647.2	2658.3	93271	ug/L	93271	ppb	15:24:17
1	K 766.490 Radial†	29823.0	28478.6	12389	ug/L	12389	ppb	15:23:57
1	Mg 279.077 IEC†	169.7	170.3	13416	ug/L	13416	ppb	15:24:17
1	Na 589.592 Radial†	1922.2	2100.9	5680.6	ug/L	5680.6	ppb	15:23:57
1	Sr 421.552†	37980.7	38139.1	587.48	ug/L	587.48	ppb	15:23:57
1	Sc 361.383	1084770.4	1084770.4	102.25	%			15:25:18
1	Y 371.029	1010939.2	1010939.2	118.49	%			15:25:18
1	Ag 328.068†	120873.4	117573.1	497.29	ug/L	497.29	ppb	15:25:18
1	As 188.979†	2048.6	2040.4	518.28	ug/L	518.28	ppb	15:25:23
1	B 249.677†	32326.7	31996.4	485.04	ug/L	485.04	ppb	15:25:18
1	Ba 233.527†	210968.4	206298.4	1047.7	ug/L	1047.7	ppb	15:25:18
1	Be 313.107†	1605277.2	1577243.6	498.25	ug/L	498.25	ppb	15:25:18
1	Cd 226.502†	66436.9	65251.6	477.37	ug/L	477.37	ppb	15:25:23
1	Co 228.616†	40369.9	39571.3	485.86	ug/L	485.86	ppb	15:25:23
1	Cr 267.716†	70360.4	68839.6	588.93	ug/L	588.93	ppb	15:25:18
1	Cu 324.752†	271286.3	255121.1	634.84	ug/L	634.84	ppb	15:25:18
1	Mn 257.610†	4130821.2	4039029.1	3203.9	ug/L	3203.9	ppb	15:25:18
1	Mo 202.031†	11860.9	11567.9	469.43	ug/L	469.43	ppb	15:25:23
1	Ni 231.604†	34300.5	33396.9	534.96	ug/L	534.96	ppb	15:25:23
1	P 214.914†	4649.8	4210.4	1341.7	ug/L	1341.7	ppb	15:25:23
1	Pb 220.353†	7337.0	7204.5	545.38	ug/L	545.38	ppb	15:25:23
1	S 181.975 Axial†	6376.4	6168.1	5207.6	ug/L	5207.6	ppb	15:25:23
1	Sb 206.836†	2566.3	2464.4	478.84	ug/L	478.84	ppb	15:25:23
1	Se 196.026†	620.6	628.6	537.25	ug/L	537.25	ppb	15:25:23
1	Si 251.611†	897298.9	876979.4	18082	ug/L	18082	ppb	15:25:18
1	Sn 189.927†	4752.0	4641.9	484.69	ug/L	484.69	ppb	15:25:23
1	Ti 334.940†	2630214.7	2573403.8	3369.2	ug/L	3369.2	ppb	15:25:18
1	Tl 190.801†	2584.8	2589.3	468.45	ug/L	468.45	ppb	15:25:23
1	U 409.014†	7690.6	11356.0	269.17	ug/L	269.17	ppb	15:25:18
1	V 292.402†	104391.5	103745.5	578.41	ug/L	578.41	ppb	15:25:18
1	Zn 213.857†	187789.8	182532.0	1004.5	ug/L	1004.5	ppb	15:25:18
1	SiO2†	898095.0	877715.7	38753	ug/L	38753	ppb	15:25:58
2	Sc Radial	5687.9	5687.9	102	%			15:24:22
2	Y RADIAL	5805.7	5805.7	120.6	%			15:24:22
2	Al 396.153Radial†	76762.1	75193.3	68424	ug/L	68424	ppb	15:24:22
2	Ca 317.933Radial†	5098.6	4971.4	12383	ug/L	12383	ppb	15:24:22
2	Fe 238.204 Radial†	2664.2	2606.2	91446	ug/L	91446	ppb	15:24:42
2	K 766.490 Radial†	30393.1	28262.3	12294	ug/L	12294	ppb	15:24:22
2	Mg 279.077 IEC†	166.1	162.3	12788	ug/L	12788	ppb	15:24:42
2	Na 589.592 Radial†	1963.3	2091.3	5654.6	ug/L	5654.6	ppb	15:24:22
2	Sr 421.552†	38670.4	37828.2	582.69	ug/L	582.69	ppb	15:24:22
2	Sc 361.383	1081688.1	1081688.1	101.96	%			15:25:32
2	Y 371.029	1007673.6	1007673.6	118.10	%			15:25:32
2	Ag 328.068†	120765.4	117804.0	497.63	ug/L	497.63	ppb	15:25:32
2	As 188.979†	2021.4	2019.4	513.00	ug/L	513.00	ppb	15:25:37
2	B 249.677†	32283.7	32044.2	486.02	ug/L	486.02	ppb	15:25:32
2	Ba 233.527†	210351.7	206281.5	1047.5	ug/L	1047.5	ppb	15:25:32
2	Be 313.107†	1600902.1	1577426.0	498.31	ug/L	498.31	ppb	15:25:32
2	Cd 226.502†	66520.6	65518.8	479.58	ug/L	479.58	ppb	15:25:37
2	Co 228.616†	40455.0	39767.3	488.33	ug/L	488.33	ppb	15:25:37
2	Cr 267.716†	70278.3	68955.2	589.88	ug/L	589.88	ppb	15:25:32
2	Cu 324.752†	270712.4	255314.1	635.21	ug/L	635.21	ppb	15:25:32
2	Mn 257.610†	4118901.9	4038850.5	3203.5	ug/L	3203.5	ppb	15:25:32
2	Mo 202.031†	11888.5	11628.0	471.71	ug/L	471.71	ppb	15:25:37
2	Ni 231.604†	34326.8	33518.3	536.91	ug/L	536.91	ppb	15:25:37

2	P 214.914†	4624.2	4198.3	1338.7	ug/L	1338.7 ppb	15:25:37
2	Pb 220.353†	7394.3	7281.1	551.24	ug/L	551.24 ppb	15:25:37
2	S 181.975 Axial†	6331.1	6141.5	5185.1	ug/L	5185.1 ppb	15:25:37
2	Sb 206.836†	2533.1	2439.0	473.88	ug/L	473.88 ppb	15:25:37
2	Se 196.026†	627.4	636.9	533.54	ug/L	533.54 ppb	15:25:37
2	Si 251.611†	895695.8	877907.6	18102	ug/L	18102 ppb	15:25:32
2	Sn 189.927†	4744.5	4647.7	485.26	ug/L	485.26 ppb	15:25:37
2	Ti 334.940†	2624352.1	2574983.7	3371.3	ug/L	3371.3 ppb	15:25:32
2	Tl 190.801†	2589.3	2600.9	470.40	ug/L	470.40 ppb	15:25:37
2	U 409.014†	7420.5	11112.5	263.35	ug/L	263.35 ppb	15:25:32
2	V 292.402†	104292.9	103939.7	579.77	ug/L	579.77 ppb	15:25:32
2	Zn 213.857†	187523.5	182794.2	1006.2	ug/L	1006.2 ppb	15:25:32
2	SiO2†	882975.7	865389.9	38208	ug/L	38208 ppb	15:26:04
3	Sc Radial	5711.4	5711.4	103	%		15:24:47
3	Y RADIAL	5831.0	5831.0	121.1	%		15:24:47
3	Al 396.153Radial†	76802.3	74923.5	68178	ug/L	68178 ppb	15:24:47
3	Ca 317.933Radial†	5110.5	4962.4	12361	ug/L	12361 ppb	15:24:47
3	Fe 238.204 Radial†	2633.5	2565.6	90020	ug/L	90020 ppb	15:25:07
3	K 766.490 Radial†	30284.5	28034.2	12193	ug/L	12193 ppb	15:24:47
3	Mg 279.077 IEC†	166.0	161.6	12730	ug/L	12730 ppb	15:25:07
3	Na 589.592 Radial†	1979.0	2098.6	5674.4	ug/L	5674.4 ppb	15:24:47
3	Sr 421.552†	38726.1	37726.8	581.13	ug/L	581.13 ppb	15:24:47
3	Sc 361.383	1080555.3	1080555.3	101.85	%		15:25:47
3	Y 371.029	1008101.8	1008101.8	118.15	%		15:25:47
3	Ag 328.068†	120551.5	117718.2	496.83	ug/L	496.83 ppb	15:25:47
3	As 188.979†	1985.7	1986.5	504.99	ug/L	504.99 ppb	15:25:52
3	B 249.677†	32093.2	31890.5	483.83	ug/L	483.83 ppb	15:25:47
3	Ba 233.527†	210478.4	206622.1	1049.2	ug/L	1049.2 ppb	15:25:47
3	Be 313.107†	1601180.5	1579345.5	498.91	ug/L	498.91 ppb	15:25:47
3	Cd 226.502†	65758.4	64838.8	474.66	ug/L	474.66 ppb	15:25:52
3	Co 228.616†	39908.4	39272.2	482.17	ug/L	482.17 ppb	15:25:52
3	Cr 267.716†	70309.3	69057.8	590.73	ug/L	590.73 ppb	15:25:47
3	Cu 324.752†	269950.6	254844.6	633.97	ug/L	633.97 ppb	15:25:47
3	Mn 257.610†	4116256.3	4040488.2	3204.6	ug/L	3204.6 ppb	15:25:47
3	Mo 202.031†	11765.1	11519.1	467.26	ug/L	467.26 ppb	15:25:52
3	Ni 231.604†	33861.2	33096.5	530.15	ug/L	530.15 ppb	15:25:52
3	P 214.914†	4615.3	4194.3	1338.6	ug/L	1338.6 ppb	15:25:52
3	Pb 220.353†	7331.4	7227.0	547.26	ug/L	547.26 ppb	15:25:52
3	S 181.975 Axial†	6216.2	6035.1	5095.1	ug/L	5095.1 ppb	15:25:52
3	Sb 206.836†	2489.4	2398.6	465.83	ug/L	465.83 ppb	15:25:52
3	Se 196.026†	669.8	679.3	542.28	ug/L	542.28 ppb	15:25:52
3	Si 251.611†	893579.0	876750.3	18078	ug/L	18078 ppb	15:25:47
3	Sn 189.927†	4738.8	4647.0	485.17	ug/L	485.17 ppb	15:25:52
3	Ti 334.940†	2620847.7	2574241.5	3370.3	ug/L	3370.3 ppb	15:25:47
3	Tl 190.801†	2535.7	2550.9	462.00	ug/L	462.00 ppb	15:25:52
3	U 409.014†	7407.0	11106.9	263.38	ug/L	263.38 ppb	15:25:47
3	V 292.402†	104142.5	103899.3	579.68	ug/L	579.68 ppb	15:25:47
3	Zn 213.857†	187212.0	182681.2	1005.7	ug/L	1005.7 ppb	15:25:47
3	SiO2†	888355.3	871579.4	38482	ug/L	38482 ppb	15:26:10

Mean Data: 1201872900|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1082337.9	102.02	%	0.206				0.20%
Sc Radial	5646.7	101	%	1.7				1.64%
Y 371.029	1008904.8	118.25	%	0.208				0.18%
Y RADIAL	5779.1	120.0	%	1.44				1.20%
Ag 328.068†	117698.4	497.25	ug/L	0.401	497.25	ppb	0.401	0.08%
Al 396.153Radial†	75214.2	68443	ug/L	274.6	68443	ppb	274.6	0.40%
As 188.979†	2015.4	512.09	ug/L	6.692	512.09	ppb	6.692	1.31%
B 249.677†	31977.0	484.96	ug/L	1.098	484.96	ppb	1.098	0.23%
Ba 233.527†	206400.7	1048.1	ug/L	0.94	1048.1	ppb	0.94	0.09%
Be 313.107†	1578005.0	498.49	ug/L	0.362	498.49	ppb	0.362	0.07%
Ca 317.933Radial†	4976.2	12395	ug/L	41.7	12395	ppb	41.7	0.34%
Cd 226.502†	65203.0	477.21	ug/L	2.465	477.21	ppb	2.465	0.52%
Co 228.616†	39536.9	485.45	ug/L	3.098	485.45	ppb	3.098	0.64%
Cr 267.716†	68950.9	589.85	ug/L	0.900	589.85	ppb	0.900	0.15%
Cu 324.752†	255093.2	634.68	ug/L	0.637	634.68	ppb	0.637	0.10%
Fe 238.204 Radial†	2610.0	91579	ug/L	1629.7	91579	ppb	1629.7	1.78%
K 766.490 Radial†	28258.4	12292	ug/L	97.7	12292	ppb	97.7	0.79%

Mg 279.077 1EC†	164.7	12978	ug/L	380.1	12978	ppb	380.1	2.93%
Mn 257.610†	4039456.0	3204.0	ug/L	0.57	3204.0	ppb	0.57	0.02%
Mo 202.031†	11571.7	469.47	ug/L	2.229	469.47	ppb	2.229	0.47%
Na 589.592 Radial†	2096.9	5669.9	ug/L	13.59	5669.9	ppb	13.59	0.24%
Ni 231.604†	33337.2	534.01	ug/L	3.479	534.01	ppb	3.479	0.65%
P 214.914†	4201.0	1339.7	ug/L	1.77	1339.7	ppb	1.77	0.13%
Pb 220.353†	7237.6	547.96	ug/L	2.993	547.96	ppb	2.993	0.55%
S 181.975 Axial†	6114.9	5162.6	ug/L	59.50	5162.6	ppb	59.50	1.15%
Sb 206.836†	2434.0	472.85	ug/L	6.567	472.85	ppb	6.567	1.39%
Se 196.026†	648.3	537.69	ug/L	4.386	537.69	ppb	4.386	0.82%
Si 251.611†	877212.4	18087	ug/L	12.6	18087	ppb	12.6	0.07%
Sn 189.927†	4645.6	485.04	ug/L	0.308	485.04	ppb	0.308	0.06%
Sr 421.552†	37898.0	583.76	ug/L	3.310	583.76	ppb	3.310	0.57%
Ti 334.940†	2574209.7	3370.3	ug/L	1.03	3370.3	ppb	1.03	0.03%
Tl 190.801†	2580.4	466.95	ug/L	4.395	466.95	ppb	4.395	0.94%
U 409.014†	11191.8	265.30	ug/L	3.349	265.30	ppb	3.349	1.26%
V 292.402†	103861.5	579.29	ug/L	0.758	579.29	ppb	0.758	0.13%
Zn 213.857†	182669.1	1005.5	ug/L	0.87	1005.5	ppb	0.87	0.09%
SiO2†	871561.7	38481	ug/L	272.3	38481	ppb	272.3	0.71%

Sequence No.: 15
Sample ID: 1201872902|881859|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 48
Date Collected: 7/8/2009 15:28:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872902|881859|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5583.4	5583.4	100	%			15:30:14
1	Y RADIAL	5790.9	5790.9	120.3	%			15:30:14
1	Al 396.153Radial†	73241.5	73090.6	66510	ug/L	66510	ppb	15:30:14
1	Ca 317.933Radial†	4839.3	4806.3	11972	ug/L	11972	ppb	15:30:14
1	Fe 238.204 Radial†	2632.9	2623.8	92062	ug/L	92062	ppb	15:30:34
1	K 766.490 Radial†	28960.9	27391.7	11917	ug/L	11917	ppb	15:30:14
1	Mg 279.077 IEC†	158.0	157.3	12386	ug/L	12386	ppb	15:30:34
1	Na 589.592 Radial†	1903.7	2067.8	5591.1	ug/L	5591.1	ppb	15:30:14
1	Sr 421.552†	37761.5	37630.7	579.65	ug/L	579.65	ppb	15:30:14
1	Sc 361.383	1087220.9	1087220.9	102.48	%			15:31:35
1	Y 371.029	1026354.9	1026354.9	120.29	%			15:31:35
1	Ag 328.068†	120887.5	117320.4	495.91	ug/L	495.91	ppb	15:31:35
1	As 188.979†	2028.0	2015.8	511.20	ug/L	511.20	ppb	15:31:40
1	B 249.677†	32547.7	32140.7	487.46	ug/L	487.46	ppb	15:31:35
1	Ba 233.527†	205741.7	200733.3	1019.5	ug/L	1019.5	ppb	15:31:35
1	Be 313.107†	1616551.9	1584706.6	500.19	ug/L	500.19	ppb	15:31:35
1	Cd 226.502†	66034.1	64712.0	473.47	ug/L	473.47	ppb	15:31:40
1	Co 228.616†	40082.1	39201.5	481.61	ug/L	481.61	ppb	15:31:40
1	Cr 267.716†	68906.6	67266.0	575.51	ug/L	575.51	ppb	15:31:35
1	Cu 324.752†	280368.1	263384.8	655.16	ug/L	655.16	ppb	15:31:35
1	Mn 257.610†	4088876.6	3988995.2	3164.2	ug/L	3164.2	ppb	15:31:35
1	Mo 202.031†	11861.8	11542.7	468.34	ug/L	468.34	ppb	15:31:40
1	Ni 231.604†	33673.3	32709.3	523.94	ug/L	523.94	ppb	15:31:40
1	P 214.914†	4370.8	3927.9	1238.7	ug/L	1238.7	ppb	15:31:40
1	Pb 220.353†	7360.9	7211.7	545.58	ug/L	545.58	ppb	15:31:40
1	S 181.975 Axial†	6292.1	6071.9	5126.5	ug/L	5126.5	ppb	15:31:40
1	Sb 206.836†	2524.9	2418.3	470.46	ug/L	470.46	ppb	15:31:40
1	Se 196.026†	630.9	637.3	535.70	ug/L	535.70	ppb	15:31:40
1	Si 251.611†	878164.7	856330.8	17657	ug/L	17657	ppb	15:31:35
1	Sn 189.927†	4661.2	4542.8	474.35	ug/L	474.35	ppb	15:31:40
1	Ti 334.940†	2506711.6	2447095.0	3203.9	ug/L	3203.9	ppb	15:31:35
1	Tl 190.801†	2571.3	2570.4	464.24	ug/L	464.24	ppb	15:31:40
1	U 409.014†	7034.4	10698.8	253.04	ug/L	253.04	ppb	15:31:35
1	V 292.402†	104047.5	103179.7	575.50	ug/L	575.50	ppb	15:31:35
1	Zn 213.857†	173618.2	168289.9	925.14	ug/L	925.14	ppb	15:31:35
1	SiO2†	858838.0	837430.0	36974	ug/L	36974	ppb	15:32:15
2	Sc Radial	5705.4	5705.4	103	%			15:30:39
2	Y RADIAL	5904.3	5904.3	122.6	%			15:30:39
2	Al 396.153Radial†	74259.7	72522.4	65992	ug/L	65992	ppb	15:30:39
2	Ca 317.933Radial†	4933.8	4795.3	11944	ug/L	11944	ppb	15:30:39
2	Fe 238.204 Radial†	2622.5	2557.6	89740	ug/L	89740	ppb	15:30:59
2	K 766.490 Radial†	29439.8	27241.4	11850	ug/L	11850	ppb	15:30:39
2	Mg 279.077 IEC†	158.7	154.6	12178	ug/L	12178	ppb	15:30:59
2	Na 589.592 Radial†	1925.2	2048.2	5538.0	ug/L	5538.0	ppb	15:30:39
2	Sr 421.552†	38291.3	37342.5	575.21	ug/L	575.21	ppb	15:30:39
2	Sc 361.383	1075949.9	1075949.9	101.42	%			15:31:50
2	Y 371.029	1015444.3	1015444.3	119.01	%			15:31:50
2	Ag 328.068†	119813.9	117497.5	495.87	ug/L	495.87	ppb	15:31:50
2	As 188.979†	2018.9	2027.5	513.48	ug/L	513.48	ppb	15:31:55
2	B 249.677†	32256.5	32186.3	488.46	ug/L	488.46	ppb	15:31:50
2	Ba 233.527†	203497.9	200623.9	1018.9	ug/L	1018.9	ppb	15:31:50
2	Be 313.107†	1599397.7	1584316.4	500.07	ug/L	500.07	ppb	15:31:50
2	Cd 226.502†	66092.8	65444.9	479.23	ug/L	479.23	ppb	15:31:55
2	Co 228.616†	40216.4	39743.6	488.41	ug/L	488.41	ppb	15:31:55
2	Cr 267.716†	68245.8	67318.7	575.91	ug/L	575.91	ppb	15:31:50
2	Cu 324.752†	277666.4	263586.8	655.53	ug/L	655.53	ppb	15:31:50
2	Mn 257.610†	4049189.8	3991659.0	3166.0	ug/L	3166.0	ppb	15:31:50
2	Mo 202.031†	11875.4	11677.3	473.57	ug/L	473.57	ppb	15:31:55
2	Ni 231.604†	33683.6	33063.6	529.62	ug/L	529.62	ppb	15:31:55

2	P 214.914†	4334.9	3937.3	1243.8 ug/L	1243.8 ppb	15:31:55
2	Pb 220.353†	7372.0	7297.8	552.17 ug/L	552.17 ppb	15:31:55
2	S 181.975 Axial†	6319.9	6163.6	5204.2 ug/L	5204.2 ppb	15:31:55
2	Sb 206.836†	2546.0	2464.9	479.88 ug/L	479.88 ppb	15:31:55
2	Se 196.026†	656.0	668.5	537.68 ug/L	537.68 ppb	15:31:55
2	Si 251.611†	869389.5	856654.7	17663 ug/L	17663 ppb	15:31:50
2	Sn 189.927†	4723.0	4651.4	485.60 ug/L	485.60 ppb	15:31:55
2	Ti 334.940†	2480432.5	2446806.4	3203.5 ug/L	3203.5 ppb	15:31:50
2	Tl 190.801†	2580.4	2605.7	470.17 ug/L	470.17 ppb	15:31:55
2	U 409.014†	6844.4	10583.3	250.46 ug/L	250.46 ppb	15:31:50
2	V 292.402†	102943.9	103155.1	575.73 ug/L	575.73 ppb	15:31:50
2	Zn 213.857†	171988.0	168457.1	926.30 ug/L	926.30 ppb	15:31:50
2	SiO2†	878228.5	865327.7	38206 ug/L	38206 ppb	15:32:21
3	Sc Radial	5608.7	5608.7	101 %		15:31:04
3	Y RADIAL	5759.7	5759.7	119.6 %		15:31:04
3	Al 396.153Radial†	72520.6	72045.6	65559 ug/L	65559 ppb	15:31:04
3	Ca 317.933Radial†	4784.4	4730.0	11782 ug/L	11782 ppb	15:31:04
3	Fe 238.204 Radial†	2628.5	2607.6	91494 ug/L	91494 ppb	15:31:24
3	K 766.490 Radial†	28801.7	27103.3	11791 ug/L	11791 ppb	15:31:04
3	Mg 279.077 IEC†	157.3	155.9	12280 ug/L	12280 ppb	15:31:24
3	Na 589.592 Radial†	1860.4	2016.2	5451.7 ug/L	5451.7 ppb	15:31:04
3	Sr 421.552†	37355.1	37057.4	570.82 ug/L	570.82 ppb	15:31:04
3	Sc 361.383	1082947.7	1082947.7	102.08 %		15:32:04
3	Y 371.029	1021512.4	1021512.4	119.73 %		15:32:04
3	Ag 328.068†	120820.1	117719.8	497.31 ug/L	497.31 ppb	15:32:04
3	As 188.979†	2047.1	2042.3	517.32 ug/L	517.32 ppb	15:32:09
3	B 249.677†	32599.7	32317.0	490.27 ug/L	490.27 ppb	15:32:04
3	Ba 233.527†	204763.0	200566.6	1018.6 ug/L	1018.6 ppb	15:32:04
3	Be 313.107†	1608274.7	1582822.2	499.61 ug/L	499.61 ppb	15:32:04
3	Cd 226.502†	66234.2	65162.4	476.91 ug/L	476.91 ppb	15:32:09
3	Co 228.616†	40266.2	39536.2	485.79 ug/L	485.79 ppb	15:32:09
3	Cr 267.716†	68579.1	67210.4	575.02 ug/L	575.02 ppb	15:32:04
3	Cu 324.752†	280050.6	264153.3	657.03 ug/L	657.03 ppb	15:32:04
3	Mn 257.610†	4073637.2	3989809.4	3164.7 ug/L	3164.7 ppb	15:32:04
3	Mo 202.031†	11846.9	11573.8	469.54 ug/L	469.54 ppb	15:32:09
3	Ni 231.604†	33781.7	32945.1	527.72 ug/L	527.72 ppb	15:32:09
3	P 214.914†	4421.6	3994.5	1262.2 ug/L	1262.2 ppb	15:32:09
3	Pb 220.353†	7362.3	7241.4	547.68 ug/L	547.68 ppb	15:32:09
3	S 181.975 Axial†	6345.7	6148.6	5191.6 ug/L	5191.6 ppb	15:32:09
3	Sb 206.836†	2520.8	2424.0	471.81 ug/L	471.81 ppb	15:32:09
3	Se 196.026†	625.5	634.4	532.72 ug/L	532.72 ppb	15:32:09
3	Si 251.611†	876856.4	858430.2	17700 ug/L	17700 ppb	15:32:04
3	Sn 189.927†	4748.4	4646.2	485.09 ug/L	485.09 ppb	15:32:09
3	Ti 334.940†	2498337.1	2448542.5	3205.7 ug/L	3205.7 ppb	15:32:04
3	Tl 190.801†	2580.8	2589.6	467.47 ug/L	467.47 ppb	15:32:09
3	U 409.014†	7066.8	10757.6	254.57 ug/L	254.57 ppb	15:32:04
3	V 292.402†	103651.8	103192.7	575.66 ug/L	575.66 ppb	15:32:04
3	Zn 213.857†	173141.7	168491.6	926.31 ug/L	926.31 ppb	15:32:04
3	SiO2†	871980.1	853611.1	37688 ug/L	37688 ppb	15:32:27

Mean Data: 1201872902|881859|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1082039.5	101.99	%	0.536				0.53%
Sc Radial	5632.5	101	%	1.2				1.14%
Y 371.029	1021103.8	119.68	%	0.641				0.54%
Y RADIAL	5818.3	120.8	%	1.58				1.31%
Ag 328.068†	117512.5	496.36	ug/L	0.821	496.36	ppb	0.821	0.17%
Al 396.153Radial†	72552.9	66020	ug/L	476.3	66020	ppb	476.3	0.72%
As 188.979†	2028.5	514.00	ug/L	3.095	514.00	ppb	3.095	0.60%
B 249.677†	32214.7	488.73	ug/L	1.425	488.73	ppb	1.425	0.29%
Ba 233.527†	200641.3	1019.0	ug/L	0.44	1019.0	ppb	0.44	0.04%
Be 313.107†	1583948.4	499.95	ug/L	0.307	499.95	ppb	0.307	0.06%
Ca 317.933Radial†	4777.2	11899	ug/L	102.7	11899	ppb	102.7	0.86%
Cd 226.502†	65106.4	476.53	ug/L	2.898	476.53	ppb	2.898	0.61%
Co 228.616†	39493.8	485.27	ug/L	3.430	485.27	ppb	3.430	0.71%
Cr 267.716†	67265.0	575.48	ug/L	0.446	575.48	ppb	0.446	0.08%
Cu 324.752†	263708.3	655.90	ug/L	0.988	655.90	ppb	0.988	0.15%
Fe 238.204 Radial†	2596.3	91098	ug/L	1210.4	91098	ppb	1210.4	1.33%
K 766.490 Radial†	27245.5	11853	ug/L	62.8	11853	ppb	62.8	0.53%

Mg 279.077 IEC†	155.9	12282	ug/L	103.9	12282	ppb	103.9	0.85%
Mn 257.610†	3990154.5	3165.0	ug/L	0.92	3165.0	ppb	0.92	0.03%
Mo 202.031†	11597.9	470.48	ug/L	2.738	470.48	ppb	2.738	0.58%
Na 589.592 Radial†	2044.1	5526.9	ug/L	70.34	5526.9	ppb	70.34	1.27%
Ni 231.604†	32906.0	527.09	ug/L	2.889	527.09	ppb	2.889	0.55%
P 214.914†	3953.2	1248.2	ug/L	12.37	1248.2	ppb	12.37	0.99%
Pb 220.353†	7250.3	548.47	ug/L	3.367	548.47	ppb	3.367	0.61%
S 181.975 Axial†	6128.0	5174.1	ug/L	41.70	5174.1	ppb	41.70	0.81%
Sb 206.836†	2435.7	474.05	ug/L	5.093	474.05	ppb	5.093	1.07%
Se 196.026†	646.7	535.37	ug/L	2.497	535.37	ppb	2.497	0.47%
Si 251.611†	857138.6	17673	ug/L	23.3	17673	ppb	23.3	0.13%
Sn 189.927†	4613.5	481.68	ug/L	6.355	481.68	ppb	6.355	1.32%
Sr 421.552†	37343.5	575.23	ug/L	4.415	575.23	ppb	4.415	0.77%
Ti 334.940†	2447481.3	3204.4	ug/L	1.21	3204.4	ppb	1.21	0.04%
Tl 190.801†	2588.5	467.29	ug/L	2.968	467.29	ppb	2.968	0.64%
U 409.014†	10679.9	252.69	ug/L	2.078	252.69	ppb	2.078	0.82%
V 292.402†	103175.9	575.63	ug/L	0.121	575.63	ppb	0.121	0.02%
Zn 213.857†	168412.8	925.92	ug/L	0.669	925.92	ppb	0.669	0.07%
SiO2†	852122.9	37623	ug/L	618.9	37623	ppb	618.9	1.64%

Sequence No.: 16
Sample ID: 1201872901|881859|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 49
Date Collected: 7/8/2009 15:34:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201872901|881859|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5615.1	5615.1	101	%			15:36:31
1	Y RADIAL	5016.5	5016.5	104.2	%			15:36:31
1	Al 396.153Radial†	8390.5	8407.5	7652.7	ug/L	7652.7	ppb	15:36:31
1	Ca 317.933Radial†	727.4	703.9	1753.4	ug/L	1753.4	ppb	15:36:51
1	Fe 238.204 Radial†	892.5	884.2	31020	ug/L	31020	ppb	15:36:51
1	K 766.490 Radial†	4296.5	2785.0	1214.6	ug/L	1214.6	ppb	15:36:31
1	Mg 279.077 IEC†	16.1	15.8	1221.0	ug/L	1221.0	ppb	15:36:51
1	Na 589.592 Radial†	-122.4	49.1	132.68	ug/L	132.68	ppb	15:36:51
1	Sr 421.552†	1214.0	1197.6	18.435	ug/L	18.435	ppb	15:36:31
1	Sc 361.383	1087781.7	1087781.7	102.54	%			15:37:48
1	Y 371.029	899296.3	899296.3	105.40	%			15:37:48
1	Ag 328.068†	-1653.4	-2251.1	1.1704	ug/L	1.1704	ppb	15:37:54
1	As 188.979†	-38.6	-0.8	9.4668	ug/L	9.4668	ppb	15:38:14
1	B 249.677†	201.5	578.1	4.8596	ug/L	4.8596	ppb	15:37:54
1	Ba 233.527†	33350.7	32501.8	165.28	ug/L	165.28	ppb	15:37:54
1	Be 313.107†	-8193.4	-674.6	1.0376	ug/L	1.0376	ppb	15:37:54
1	Cd 226.502†	188.3	461.2	-0.2043	ug/L	-0.2043	ppb	15:38:14
1	Co 228.616†	1027.2	1092.2	12.089	ug/L	12.089	ppb	15:38:14
1	Cr 267.716†	3194.3	3143.9	27.429	ug/L	27.429	ppb	15:38:14
1	Cu 324.752†	18014.9	7378.1	19.997	ug/L	19.997	ppb	15:37:54
1	Mn 257.610†	1822004.0	1776121.7	1407.6	ug/L	1407.6	ppb	15:37:48
1	Mo 202.031†	76.2	42.5	3.8310	ug/L	3.8310	ppb	15:38:14
1	Ni 231.604†	1194.1	1016.3	16.280	ug/L	16.280	ppb	15:38:14
1	P 214.914†	1179.0	812.9	261.91	ug/L	261.91	ppb	15:38:14
1	Pb 220.353†	203.7	227.7	15.636	ug/L	15.636	ppb	15:38:14
1	S 181.975 Axial†	174.1	101.9	84.763	ug/L	84.763	ppb	15:38:14
1	Sb 206.836†	47.2	0.6	-1.6786	ug/L	-1.6786	ppb	15:38:14
1	Se 196.026†	-325.2	-295.5	13.288	ug/L	13.288	ppb	15:38:14
1	Si 251.611†	116606.7	113163.1	2334.7	ug/L	2334.7	ppb	15:37:54
1	Sn 189.927†	-0.7	-6.2	-0.0297	ug/L	-0.0297	ppb	15:38:14
1	Ti 334.940†	419231.8	409974.1	536.80	ug/L	536.80	ppb	15:37:48
1	Tl 190.801†	-117.5	-53.2	1.7511	ug/L	1.7511	ppb	15:38:14
1	U 409.014†	-5557.5	-1585.3	-43.198	ug/L	-43.198	ppb	15:37:54
1	V 292.402†	2930.4	4510.7	20.717	ug/L	20.717	ppb	15:38:14
1	Zn 213.857†	19726.4	18116.2	97.655	ug/L	97.655	ppb	15:37:54
1	SiO2†	115100.0	111651.4	4932.5	ug/L	4932.5	ppb	15:39:21
2	Sc Radial	5460.2	5460.2	98.1	%			15:36:56
2	Y RADIAL	4876.4	4876.4	101.3	%			15:36:56
2	Al 396.153Radial†	8206.7	8456.2	7697.1	ug/L	7697.1	ppb	15:36:56
2	Ca 317.933Radial†	721.3	718.2	1788.9	ug/L	1788.9	ppb	15:37:16
2	Fe 238.204 Radial†	874.9	891.3	31269	ug/L	31269	ppb	15:37:16
2	K 766.490 Radial†	4218.1	2825.9	1232.5	ug/L	1232.5	ppb	15:36:56
2	Mg 279.077 IEC†	17.9	18.1	1407.7	ug/L	1407.7	ppb	15:37:16
2	Na 589.592 Radial†	-110.2	58.1	156.99	ug/L	156.99	ppb	15:37:16
2	Sr 421.552†	1169.9	1186.9	18.269	ug/L	18.269	ppb	15:36:56
2	Sc 361.383	1071002.7	1071002.7	100.95	%			15:38:19
2	Y 371.029	884378.6	884378.6	103.65	%			15:38:19
2	Ag 328.068†	-1598.0	-2221.4	1.3699	ug/L	1.3699	ppb	15:38:25
2	As 188.979†	-36.2	1.0	9.9392	ug/L	9.9392	ppb	15:38:45
2	B 249.677†	192.1	571.8	4.7289	ug/L	4.7289	ppb	15:38:25
2	Ba 233.527†	33619.8	33277.8	169.22	ug/L	169.22	ppb	15:38:25
2	Be 313.107†	-8293.6	-899.0	0.9679	ug/L	0.9679	ppb	15:38:25
2	Cd 226.502†	172.6	448.6	-0.3280	ug/L	-0.3280	ppb	15:38:45
2	Co 228.616†	1020.8	1101.6	12.204	ug/L	12.204	ppb	15:38:45
2	Cr 267.716†	3202.4	3200.7	27.920	ug/L	27.920	ppb	15:38:45
2	Cu 324.752†	18248.2	7884.5	21.261	ug/L	21.261	ppb	15:38:25
2	Mn 257.610†	1798592.1	1780769.9	1411.4	ug/L	1411.4	ppb	15:38:19
2	Mo 202.031†	72.3	39.9	3.7426	ug/L	3.7426	ppb	15:38:45
2	Ni 231.604†	1218.3	1058.5	16.956	ug/L	16.956	ppb	15:38:45

2	P 214.914†	1181.2	833.1	268.69	ug/L	268.69 ppb	15:38:45
2	Pb 220.353†	184.3	211.6	14.411	ug/L	14.411 ppb	15:38:45
2	S 181.975 Axial†	192.4	122.8	102.42	ug/L	102.42 ppb	15:38:45
2	Sb 206.836†	60.7	14.7	1.1028	ug/L	1.1028 ppb	15:38:45
2	Se 196.026†	-300.8	-276.3	20.404	ug/L	20.404 ppb	15:38:45
2	Si 251.611†	117305.4	115636.9	2385.7	ug/L	2385.7 ppb	15:38:25
2	Sn 189.927†	7.9	2.4	0.8698	ug/L	0.8698 ppb	15:38:45
2	Ti 334.940†	412774.3	409983.2	536.82	ug/L	536.82 ppb	15:38:19
2	Tl 190.801†	-119.0	-56.5	1.2152	ug/L	1.2152 ppb	15:38:45
2	U 409.014†	-5536.8	-1649.7	-44.827	ug/L	-44.827 ppb	15:38:25
2	V 292.402†	2939.4	4564.4	20.986	ug/L	20.986 ppb	15:38:45
2	Zn 213.857†	19838.2	18528.3	99.917	ug/L	99.917 ppb	15:38:25
2	SiO2†	116183.4	114483.2	5057.6	ug/L	5057.6 ppb	15:39:26
3	Sc Radial	5696.0	5696.0	102	%		15:37:21
3	Y RADIAL	5089.9	5089.9	105.7	%		15:37:21
3	Al 396.153Radial†	8510.9	8407.2	7652.4	ug/L	7652.4 ppb	15:37:21
3	Ca 317.933Radial†	719.4	685.9	1708.6	ug/L	1708.6 ppb	15:37:41
3	Fe 238.204 Radial†	874.0	853.5	29942	ug/L	29942 ppb	15:37:41
3	K 766.490 Radial†	4282.5	2710.8	1181.6	ug/L	1181.6 ppb	15:37:21
3	Mg 279.077 IEC†	18.2	17.6	1367.3	ug/L	1367.3 ppb	15:37:41
3	Na 589.592 Radial†	-117.4	55.8	150.78	ug/L	150.78 ppb	15:37:41
3	Sr 421.552†	1223.4	1189.8	18.315	ug/L	18.315 ppb	15:37:21
3	Sc 361.383	1072873.8	1072873.8	101.13	%		15:38:50
3	Y 371.029	884785.5	884785.5	103.70	%		15:38:50
3	Ag 328.068†	-1517.1	-2138.8	1.2739	ug/L	1.2739 ppb	15:38:56
3	As 188.979†	-33.1	4.2	10.413	ug/L	10.413 ppb	15:39:16
3	B 249.677†	220.6	599.7	5.3388	ug/L	5.3388 ppb	15:38:56
3	Ba 233.527†	33392.2	32994.7	167.75	ug/L	167.75 ppb	15:38:56
3	Be 313.107†	-8235.6	-827.4	0.9915	ug/L	0.9915 ppb	15:38:56
3	Cd 226.502†	163.1	439.0	-0.2434	ug/L	-0.2434 ppb	15:39:16
3	Co 228.616†	1036.2	1115.1	12.389	ug/L	12.389 ppb	15:39:16
3	Cr 267.716†	3208.3	3201.0	27.897	ug/L	27.897 ppb	15:39:16
3	Cu 324.752†	18118.8	7725.0	20.791	ug/L	20.791 ppb	15:38:56
3	Mn 257.610†	1802975.3	1781996.8	1412.1	ug/L	1412.1 ppb	15:38:50
3	Mo 202.031†	75.1	42.5	3.7576	ug/L	3.7576 ppb	15:39:16
3	Ni 231.604†	1211.5	1049.7	16.816	ug/L	16.816 ppb	15:39:16
3	P 214.914†	1170.7	820.6	265.40	ug/L	265.40 ppb	15:39:16
3	Pb 220.353†	212.6	239.3	16.606	ug/L	16.606 ppb	15:39:16
3	S 181.975 Axial†	183.3	113.4	94.470	ug/L	94.470 ppb	15:39:16
3	Sb 206.836†	59.2	13.2	0.7809	ug/L	0.7809 ppb	15:39:16
3	Se 196.026†	-320.2	-295.0	9.6678	ug/L	9.6678 ppb	15:39:16
3	Si 251.611†	116528.9	114666.3	2365.7	ug/L	2365.7 ppb	15:38:56
3	Sn 189.927†	13.5	7.9	1.4084	ug/L	1.4084 ppb	15:39:16
3	Ti 334.940†	413937.3	410420.0	537.39	ug/L	537.39 ppb	15:38:50
3	Tl 190.801†	-132.5	-69.6	-0.9822	ug/L	-0.9822 ppb	15:39:16
3	U 409.014†	-5663.6	-1765.6	-47.539	ug/L	-47.539 ppb	15:38:56
3	V 292.402†	2917.7	4537.9	21.012	ug/L	21.012 ppb	15:39:16
3	Zn 213.857†	19715.8	18373.1	99.196	ug/L	99.196 ppb	15:38:56
3	SiO2†	116568.8	114663.6	5065.6	ug/L	5065.6 ppb	15:39:31

Mean Data: 1201872901|881859|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1077219.4	101.54	%	0.867				0.85%
Sc Radial	5590.4	100	%	2.2				2.14%
Y 371.029	889486.8	104.25	%	0.996				0.96%
Y RADIAL	4994.3	103.7	%	2.25				2.17%
Ag 328.068†	-2203.8	1.2714	ug/L	0.09976	1.2714	ppb	0.09976	7.85%
Al 396.153Radial†	8423.6	7667.4	ug/L	25.70	7667.4	ppb	25.70	0.34%
As 188.979†	1.5	9.9398	ug/L	0.47328	9.9398	ppb	0.47328	4.76%
B 249.677†	583.2	4.9757	ug/L	0.32111	4.9757	ppb	0.32111	6.45%
Ba 233.527†	32924.8	167.42	ug/L	1.989	167.42	ppb	1.989	1.19%
Be 313.107†	-800.3	0.9990	ug/L	0.03548	0.9990	ppb	0.03548	3.55%
Ca 317.933Radial†	702.7	1750.3	ug/L	40.24	1750.3	ppb	40.24	2.30%
Cd 226.502†	449.6	-0.2586	ug/L	0.06324	-0.2586	ppb	0.06324	24.46%
Co 228.616†	1102.9	12.227	ug/L	0.1513	12.227	ppb	0.1513	1.24%
Cr 267.716†	3181.9	27.749	ug/L	0.2768	27.749	ppb	0.2768	1.00%
Cu 324.752†	7662.5	20.683	ug/L	0.6388	20.683	ppb	0.6388	3.09%
Fe 238.204 Radial†	876.3	30744	ug/L	704.9	30744	ppb	704.9	2.29%
K 766.490 Radial†	2773.9	1209.6	ug/L	25.85	1209.6	ppb	25.85	2.14%

Mg 279.077 IEC†	17.2	1332.0	ug/L	98.23	1332.0	ppb	98.23	7.37%
Mn 257.610†	1779629.5	1410.4	ug/L	2.40	1410.4	ppb	2.40	0.17%
Mo 202.031†	41.7	3.7771	ug/L	0.04730	3.7771	ppb	0.04730	1.25%
Na 589.592 Radial†	54.3	146.82	ug/L	12.629	146.82	ppb	12.629	8.60%
Ni 231.604†	1041.5	16.684	ug/L	0.3570	16.684	ppb	0.3570	2.14%
P 214.914†	822.2	265.34	ug/L	3.394	265.34	ppb	3.394	1.28%
Pb 220.353†	226.2	15.551	ug/L	1.0999	15.551	ppb	1.0999	7.07%
S 181.975 Axial†	112.7	93.885	ug/L	8.8434	93.885	ppb	8.8434	9.42%
Sb 206.836†	9.5	0.0684	ug/L	1.52148	0.0684	ppb	1.52148	>999.9%
Se 196.026†	-289.0	14.453	ug/L	5.4623	14.453	ppb	5.4623	37.79%
Si 251.611†	114488.8	2362.0	ug/L	25.72	2362.0	ppb	25.72	1.09%
Sn 189.927†	1.3	0.7495	ug/L	0.72656	0.7495	ppb	0.72656	96.94%
Sr 421.552†	1191.4	18.340	ug/L	0.0860	18.340	ppb	0.0860	0.47%
Ti 334.940†	410125.8	537.00	ug/L	0.332	537.00	ppb	0.332	0.06%
Tl 190.801†	-59.8	0.6614	ug/L	1.44839	0.6614	ppb	1.44839	219.00%
U 409.014†	-1666.9	-45.188	ug/L	2.1929	-45.188	ppb	2.1929	4.85%
V 292.402†	4537.7	20.905	ug/L	0.1630	20.905	ppb	0.1630	0.78%
Zn 213.857†	18339.2	98.922	ug/L	1.1555	98.922	ppb	1.1555	1.17%
SiO2†	113599.4	5018.6	ug/L	74.65	5018.6	ppb	74.65	1.49%

Sequence No.: 17
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 15:41:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5550.0	5550.0	99.7	%			15:43:35
1	Y RADIAL	4798.2	4798.2	99.64	%			15:43:35
1	Al 396.153Radial†	5250.4	5356.7	4854.3	ug/L	4854.3	ppb	15:43:35
1	Ca 317.933Radial†	1970.4	1958.7	4878.8	ug/L	4878.8	ppb	15:43:55
1	Fe 238.204 Radial†	137.3	137.4	4834.0	ug/L	4834.0	ppb	15:43:55
1	K 766.490 Radial†	13208.1	11770.2	5101.0	ug/L	5101.0	ppb	15:43:35
1	Mg 279.077 IEC†	62.7	62.7	4968.1	ug/L	4968.1	ppb	15:43:55
1	Na 589.592 Radial†	3392.0	3571.5	9656.9	ug/L	9656.9	ppb	15:43:35
1	Sr 421.552†	32852.9	32935.1	507.37	ug/L	507.37	ppb	15:43:35
1	Sc 361.383	1064992.1	1064992.1	100.39	%			15:44:54
1	Y 371.029	848241.6	848241.6	99.417	%			15:44:54
1	Ag 328.068†	127421.5	126291.3	502.94	ug/L	502.94	ppb	15:44:54
1	As 188.979†	2061.8	2090.8	493.94	ug/L	493.94	ppb	15:45:14
1	B 249.677†	31095.4	31357.0	486.83	ug/L	486.83	ppb	15:44:54
1	Ba 233.527†	98115.4	97712.5	495.79	ug/L	495.79	ppb	15:44:54
1	Be 313.107†	1594280.0	1595444.2	497.24	ug/L	497.24	ppb	15:44:54
1	Cd 226.502†	66508.1	66529.1	497.34	ug/L	497.34	ppb	15:44:54
1	Co 228.616†	38950.3	38890.4	484.63	ug/L	484.63	ppb	15:45:14
1	Cr 267.716†	58229.3	58033.2	494.97	ug/L	494.97	ppb	15:44:54
1	Cu 324.752†	211193.1	200186.9	494.19	ug/L	494.19	ppb	15:44:54
1	Mn 257.610†	629952.0	626694.1	495.80	ug/L	495.80	ppb	15:44:54
1	Mo 202.031†	12627.7	12547.2	502.56	ug/L	502.56	ppb	15:45:14
1	Ni 231.604†	30770.4	30503.4	488.59	ug/L	488.59	ppb	15:45:14
1	P 214.914†	7365.6	7000.2	2399.2	ug/L	2399.2	ppb	15:45:14
1	Pb 220.353†	6628.4	6631.9	498.51	ug/L	498.51	ppb	15:45:14
1	S 181.975 Axial†	1254.4	1181.7	999.29	ug/L	999.29	ppb	15:45:14
1	Sb 206.836†	2567.0	2511.7	499.99	ug/L	499.99	ppb	15:45:14
1	Se 196.026†	1506.6	1522.4	513.89	ug/L	513.89	ppb	15:45:14
1	Si 251.611†	123069.6	122034.6	2506.1	ug/L	2506.1	ppb	15:44:54
1	Sn 189.927†	4784.8	4760.9	495.62	ug/L	495.62	ppb	15:45:14
1	Ti 334.940†	381087.6	380726.3	498.33	ug/L	498.33	ppb	15:44:54
1	Tl 190.801†	2886.0	2936.3	497.24	ug/L	497.24	ppb	15:45:14
1	U 409.014†	15577.1	19351.8	478.60	ug/L	478.60	ppb	15:44:54
1	V 292.402†	85505.0	86827.9	498.46	ug/L	498.46	ppb	15:44:54
1	Zn 213.857†	90597.9	89125.9	493.16	ug/L	493.16	ppb	15:44:54
1	SiO2†	122068.2	120994.8	5320.2	ug/L	5320.2	ppb	15:46:14
2	Sc Radial	5447.3	5447.3	97.9	%			15:44:00
2	Y RADIAL	4711.7	4711.7	97.84	%			15:44:00
2	Al 396.153Radial†	5172.6	5376.3	4872.0	ug/L	4872.0	ppb	15:44:00
2	Ca 317.933Radial†	1978.6	2004.4	4992.5	ug/L	4992.5	ppb	15:44:20
2	Fe 238.204 Radial†	139.0	141.6	4983.9	ug/L	4983.9	ppb	15:44:20
2	K 766.490 Radial†	12957.8	11764.2	5098.5	ug/L	5098.5	ppb	15:44:00
2	Mg 279.077 IEC†	62.4	63.6	5042.1	ug/L	5042.1	ppb	15:44:20
2	Na 589.592 Radial†	3337.3	3579.7	9679.1	ug/L	9679.1	ppb	15:44:00
2	Sr 421.552†	32178.4	32867.1	506.32	ug/L	506.32	ppb	15:44:00
2	Sc 361.383	1051068.9	1051068.9	99.075	%			15:45:22
2	Y 371.029	835857.7	835857.7	97.966	%			15:45:22
2	Ag 328.068†	126172.9	126712.4	504.65	ug/L	504.65	ppb	15:45:22
2	As 188.979†	2053.8	2109.9	498.46	ug/L	498.46	ppb	15:45:42
2	B 249.677†	30728.4	31396.9	487.41	ug/L	487.41	ppb	15:45:22
2	Ba 233.527†	97233.2	98116.8	497.84	ug/L	497.84	ppb	15:45:22
2	Be 313.107†	1574216.1	1596230.6	497.49	ug/L	497.49	ppb	15:45:22
2	Cd 226.502†	65742.7	66634.2	498.11	ug/L	498.11	ppb	15:45:22
2	Co 228.616†	38877.4	39330.9	490.13	ug/L	490.13	ppb	15:45:42
2	Cr 267.716†	57664.8	58231.8	496.66	ug/L	496.66	ppb	15:45:22
2	Cu 324.752†	208926.4	200685.8	495.43	ug/L	495.43	ppb	15:45:22
2	Mn 257.610†	623851.7	628849.5	497.52	ug/L	497.52	ppb	15:45:22
2	Mo 202.031†	12603.0	12688.9	508.24	ug/L	508.24	ppb	15:45:42
2	Ni 231.604†	30731.8	30870.5	494.47	ug/L	494.47	ppb	15:45:42

2	P 214.914†	7351.1	7082.8	2428.1 ug/L	2428.1 ppb	15:45:42
2	Pb 220.353†	6620.8	6711.7	504.49 ug/L	504.49 ppb	15:45:42
2	S 181.975 Axial†	1262.4	1206.4	1020.2 ug/L	1020.2 ppb	15:45:42
2	Sb 206.836†	2541.1	2519.4	501.67 ug/L	501.67 ppb	15:45:42
2	Se 196.026†	1500.7	1536.3	518.98 ug/L	518.98 ppb	15:45:42
2	Si 251.611†	121951.6	122530.2	2516.3 ug/L	2516.3 ppb	15:45:22
2	Sn 189.927†	4769.9	4808.9	500.63 ug/L	500.63 ppb	15:45:42
2	Ti 334.940†	377304.3	381936.4	499.92 ug/L	499.92 ppb	15:45:22
2	Tl 190.801†	2878.0	2966.2	502.28 ug/L	502.28 ppb	15:45:42
2	U 409.014†	15599.1	19579.5	484.23 ug/L	484.23 ppb	15:45:22
2	V 292.402†	84556.2	86998.4	499.49 ug/L	499.49 ppb	15:45:22
2	Zn 213.857†	89634.5	89349.0	494.35 ug/L	494.35 ppb	15:45:22
2	SiO2†	124157.3	124714.2	5484.3 ug/L	5484.3 ppb	15:46:20
3	Sc Radial	5536.4	5536.4	99.5 %		15:44:25
3	Y RADIAL	4822.5	4822.5	100.1 %		15:44:25
3	Al 396.153Radial†	5265.5	5384.7	4879.5 ug/L	4879.5 ppb	15:44:25
3	Ca 317.933Radial†	1962.2	1955.4	4870.5 ug/L	4870.5 ppb	15:44:45
3	Fe 238.204 Radial†	137.2	137.6	4842.9 ug/L	4842.9 ppb	15:44:45
3	K 766.490 Radial†	13216.2	11810.9	5118.7 ug/L	5118.7 ppb	15:44:25
3	Mg 279.077 IEC†	62.7	62.8	4983.0 ug/L	4983.0 ppb	15:44:45
3	Na 589.592 Radial†	3349.3	3536.8	9563.2 ug/L	9563.2 ppb	15:44:25
3	Sr 421.552†	32669.2	32831.2	505.77 ug/L	505.77 ppb	15:44:25
3	Sc 361.383	1057782.7	1057782.7	99.708 %		15:45:49
3	Y 371.029	842128.4	842128.4	98.701 %		15:45:49
3	Ag 328.068†	126824.6	126557.6	504.00 ug/L	504.00 ppb	15:45:49
3	As 188.979†	2088.9	2131.9	503.59 ug/L	503.59 ppb	15:46:09
3	B 249.677†	31037.4	31509.9	489.19 ug/L	489.19 ppb	15:45:49
3	Ba 233.527†	97777.3	98039.6	497.45 ug/L	497.45 ppb	15:45:49
3	Be 313.107†	1585103.6	1597065.1	497.75 ug/L	497.75 ppb	15:45:49
3	Cd 226.502†	66249.3	66721.1	498.78 ug/L	498.78 ppb	15:45:49
3	Co 228.616†	39095.7	39300.7	489.76 ug/L	489.76 ppb	15:46:09
3	Cr 267.716†	57940.4	58138.8	495.87 ug/L	495.87 ppb	15:45:49
3	Cu 324.752†	210463.9	200889.4	495.93 ug/L	495.93 ppb	15:45:49
3	Mn 257.610†	627057.2	628067.8	496.88 ug/L	496.88 ppb	15:45:49
3	Mo 202.031†	12692.2	12697.7	508.58 ug/L	508.58 ppb	15:46:09
3	Ni 231.604†	30844.9	30787.0	493.13 ug/L	493.13 ppb	15:46:09
3	P 214.914†	7405.1	7089.9	2430.6 ug/L	2430.6 ppb	15:46:09
3	Pb 220.353†	6652.2	6700.8	503.69 ug/L	503.69 ppb	15:46:09
3	S 181.975 Axial†	1250.4	1186.2	1003.1 ug/L	1003.1 ppb	15:46:09
3	Sb 206.836†	2566.7	2528.8	503.51 ug/L	503.51 ppb	15:46:09
3	Se 196.026†	1528.1	1554.1	524.28 ug/L	524.28 ppb	15:46:09
3	Si 251.611†	122522.5	122321.5	2511.9 ug/L	2511.9 ppb	15:45:49
3	Sn 189.927†	4781.4	4789.9	498.63 ug/L	498.63 ppb	15:46:09
3	Ti 334.940†	379146.9	381367.2	499.17 ug/L	499.17 ppb	15:45:49
3	Tl 190.801†	2882.7	2952.6	499.96 ug/L	499.96 ppb	15:46:09
3	U 409.014†	15482.2	19362.3	478.86 ug/L	478.86 ppb	15:45:49
3	V 292.402†	85105.0	87007.2	499.55 ug/L	499.55 ppb	15:45:49
3	Zn 213.857†	90130.2	89272.0	493.95 ug/L	493.95 ppb	15:45:49
3	SiO2†	121770.0	121524.5	5343.3 ug/L	5343.3 ppb	15:46:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1057947.9	99.723	%	0.6563				0.66%
Sc Radial	5511.3	99.0	%	1.00				1.01%
Y 371.029	842075.9	98.695	%	0.7257				0.74%
Y RADIAL	4777.5	99.21	%	1.210				1.22%
Ag 328.068†	126520.4	503.86	ug/L	0.864	503.86	ppb	0.864	0.17%
QC value within limits for Ag 328.068 Recovery = 100.77%								
Al 396.153Radial†	5372.6	4868.6	ug/L	12.94	4868.6	ppb	12.94	0.27%
QC value within limits for Al 396.153Radial Recovery = 97.37%								
As 188.979†	2110.9	498.66	ug/L	4.828	498.66	ppb	4.828	0.97%
QC value within limits for As 188.979 Recovery = 99.73%								
B 249.677†	31421.2	487.81	ug/L	1.234	487.81	ppb	1.234	0.25%
QC value within limits for B 249.677 Recovery = 97.56%								
Ba 233.527†	97956.3	497.03	ug/L	1.089	497.03	ppb	1.089	0.22%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1596246.7	497.49	ug/L	0.253	497.49	ppb	0.253	0.05%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	1972.8	4913.9	ug/L	68.18	4913.9	ppb	68.18	1.39%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.28%
Cd 226.502†            66628.1      498.08 ug/L         0.720      498.08 ppb          0.720   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39174.0      488.17 ug/L         3.072      488.17 ppb          3.072   0.63%
   QC value within limits for Co 228.616  Recovery = 97.63%
Cr 267.716†            58134.6      495.83 ug/L         0.848      495.83 ppb          0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 99.17%
Cu 324.752†           200587.4      495.18 ug/L         0.893      495.18 ppb          0.893   0.18%
   QC value within limits for Cu 324.752  Recovery = 99.04%
Fe 238.204 Radial†       138.9      4886.9 ug/L         84.13      4886.9 ppb          84.13   1.72%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.74%
K 766.490 Radial†      11781.8      5106.1 ug/L         11.02      5106.1 ppb          11.02   0.22%
   QC value within limits for K 766.490 Radial  Recovery = 102.12%
Mg 279.077 IEC†           63.0      4997.8 ug/L         39.10      4997.8 ppb          39.10   0.78%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.96%
Mn 257.610†           627870.5      496.73 ug/L         0.871      496.73 ppb          0.871   0.18%
   QC value within limits for Mn 257.610  Recovery = 99.35%
Mo 202.031†            12644.6      506.46 ug/L         3.383      506.46 ppb          3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.29%
Na 589.592 Radial†      3562.7      9633.1 ug/L         61.49      9633.1 ppb          61.49   0.64%
   QC value within limits for Na 589.592 Radial  Recovery = 96.33%
Ni 231.604†            30720.3      492.07 ug/L         3.082      492.07 ppb          3.082   0.63%
   QC value within limits for Ni 231.604  Recovery = 98.41%
P 214.914†              7057.6      2419.3 ug/L         17.48      2419.3 ppb          17.48   0.72%
   QC value within limits for P 214.914  Recovery = 96.77%
Pb 220.353†             6681.5      502.23 ug/L         3.248      502.23 ppb          3.248   0.65%
   QC value within limits for Pb 220.353  Recovery = 100.45%
S 181.975 Axial†        1191.4      1007.5 ug/L         11.14      1007.5 ppb          11.14   1.11%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             2520.0      501.72 ug/L         1.761      501.72 ppb          1.761   0.35%
   QC value within limits for Sb 206.836  Recovery = 100.34%
Se 196.026†             1537.6      519.05 ug/L         5.195      519.05 ppb          5.195   1.00%
   QC value within limits for Se 196.026  Recovery = 103.81%
Si 251.611†           122295.4      2511.5 ug/L          5.07      2511.5 ppb           5.07   0.20%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†             4786.6      498.30 ug/L         2.522      498.30 ppb          2.522   0.51%
   QC value within limits for Sn 189.927  Recovery = 99.66%
Sr 421.552†            32877.8      506.49 ug/L         0.813      506.49 ppb          0.813   0.16%
   QC value within limits for Sr 421.552  Recovery = 101.30%
Ti 334.940†           381343.3      499.14 ug/L         0.795      499.14 ppb          0.795   0.16%
   QC value within limits for Ti 334.940  Recovery = 99.83%
Tl 190.801†             2951.7      499.83 ug/L         2.522      499.83 ppb          2.522   0.50%
   QC value within limits for Tl 190.801  Recovery = 99.97%
U 409.014†             19431.2      480.57 ug/L         3.177      480.57 ppb          3.177   0.66%
   QC value within limits for U 409.014  Recovery = 96.11%
V 292.402†             86944.5      499.16 ug/L         0.613      499.16 ppb          0.613   0.12%
   QC value within limits for V 292.402  Recovery = 99.83%
Zn 213.857†            89249.0      493.82 ug/L         0.604      493.82 ppb          0.604   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.76%
SiO2†                 122411.2      5382.6 ug/L         88.82      5382.6 ppb          88.82   1.65%
   QC value within limits for SiO2  Recovery = 100.66%
All analyte(s) passed QC.
```

Sequence No.: 18
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 15:48:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5444.7	5444.7	97.8	%			15:50:26
1	Y RADIAL	4754.6	4754.6	98.73	%			15:50:26
1	Al 396.153Radial†	-89.0	1.3	1.1300	ug/L	1.1300	ppb	15:50:26
1	Ca 317.933Radial†	24.6	8.2	20.486	ug/L	20.486	ppb	15:50:46
1	Fe 238.204 Radial†	1.6	1.3	45.016	ug/L	45.016	ppb	15:50:46
1	K 766.490 Radial†	1541.6	102.5	44.484	ug/L	44.484	ppb	15:50:26
1	Mg 279.077 IEC†	0.2	0.0	0.5452	ug/L	0.5452	ppb	15:50:46
1	Na 589.592 Radial†	-165.9	0.9	2.3237	ug/L	2.3237	ppb	15:50:46
1	Sr 421.552†	27.6	22.8	0.3506	ug/L	0.3506	ppb	15:50:46
1	Sc 361.383	1056924.6	1056924.6	99.627	%			15:51:43
1	Y 371.029	852084.4	852084.4	99.868	%			15:51:43
1	Ag 328.068†	677.5	41.4	0.1786	ug/L	0.1786	ppb	15:51:48
1	As 188.979†	-48.7	-12.0	-2.7987	ug/L	-2.7987	ppb	15:52:08
1	B 249.677†	-15.3	366.2	5.7014	ug/L	5.7014	ppb	15:51:48
1	Ba 233.527†	58.9	34.8	0.1773	ug/L	0.1773	ppb	15:52:08
1	Be 313.107†	-7518.0	-229.9	-0.0713	ug/L	-0.0713	ppb	15:51:48
1	Cd 226.502†	-272.1	4.5	0.0287	ug/L	0.0287	ppb	15:52:08
1	Co 228.616†	-101.3	-11.3	-0.1398	ug/L	-0.1398	ppb	15:52:08
1	Cr 267.716†	-33.1	-4.6	-0.0380	ug/L	-0.0380	ppb	15:51:48
1	Cu 324.752†	10167.5	14.3	0.0379	ug/L	0.0379	ppb	15:51:48
1	Mn 257.610†	919.8	96.2	0.0819	ug/L	0.0819	ppb	15:52:08
1	Mo 202.031†	42.0	10.4	0.4188	ug/L	0.4188	ppb	15:52:08
1	Ni 231.604†	169.3	21.7	0.3482	ug/L	0.3482	ppb	15:52:08
1	P 214.914†	354.3	18.7	6.5814	ug/L	6.5814	ppb	15:52:08
1	Pb 220.353†	-16.7	12.4	0.9234	ug/L	0.9234	ppb	15:52:08
1	S 181.975 Axial†	61.6	-6.0	-5.0843	ug/L	-5.0843	ppb	15:52:08
1	Sb 206.836†	53.3	8.1	1.6077	ug/L	1.6077	ppb	15:52:08
1	Se 196.026†	-12.1	9.5	3.2413	ug/L	3.2413	ppb	15:52:08
1	Si 251.611†	756.7	199.4	4.0905	ug/L	4.0905	ppb	15:52:08
1	Sn 189.927†	12.1	6.6	0.6931	ug/L	0.6931	ppb	15:52:08
1	Ti 334.940†	-1028.7	76.7	0.1021	ug/L	0.1021	ppb	15:51:48
1	Tl 190.801†	-51.6	9.6	1.6197	ug/L	1.6197	ppb	15:52:08
1	U 409.014†	-3848.7	-28.4	-0.7103	ug/L	-0.7103	ppb	15:51:43
1	V 292.402†	-1650.6	-3.9	-0.0247	ug/L	-0.0247	ppb	15:51:48
1	Zn 213.857†	1092.3	-26.1	-0.1527	ug/L	-0.1527	ppb	15:52:08
1	SiO2†	812.7	213.4	9.3760	ug/L	9.3760	ppb	15:53:14
2	Sc Radial	5363.3	5363.3	96.4	%			15:50:52
2	Y RADIAL	4689.7	4689.7	97.38	%			15:50:52
2	Al 396.153Radial†	-93.9	-5.3	-4.8063	ug/L	-4.8063	ppb	15:50:52
2	Ca 317.933Radial†	33.6	17.9	44.640	ug/L	44.640	ppb	15:51:12
2	Fe 238.204 Radial†	-0.5	-0.8	-29.258	ug/L	-29.258	ppb	15:51:12
2	K 766.490 Radial†	1469.5	51.7	22.381	ug/L	22.381	ppb	15:50:52
2	Mg 279.077 IEC†	0.5	0.4	29.965	ug/L	29.965	ppb	15:51:12
2	Na 589.592 Radial†	-167.6	-3.4	-9.2756	ug/L	-9.2756	ppb	15:51:12
2	Sr 421.552†	18.3	13.5	0.2083	ug/L	0.2083	ppb	15:51:12
2	Sc 361.383	1064727.6	1064727.6	100.36	%			15:52:14
2	Y 371.029	856448.2	856448.2	100.38	%			15:52:14
2	Ag 328.068†	654.6	13.6	0.0456	ug/L	0.0456	ppb	15:52:19
2	As 188.979†	-55.1	-18.0	-4.2429	ug/L	-4.2429	ppb	15:52:39
2	B 249.677†	-27.0	354.6	5.5302	ug/L	5.5302	ppb	15:52:19
2	Ba 233.527†	26.3	1.9	0.0090	ug/L	0.0090	ppb	15:52:39
2	Be 313.107†	-7608.1	-264.4	-0.0820	ug/L	-0.0820	ppb	15:52:19
2	Cd 226.502†	-292.9	-14.2	-0.1025	ug/L	-0.1025	ppb	15:52:39
2	Co 228.616†	-105.7	-14.9	-0.1859	ug/L	-0.1859	ppb	15:52:39
2	Cr 267.716†	-9.5	19.1	0.1627	ug/L	0.1627	ppb	15:52:19
2	Cu 324.752†	10209.3	-18.8	-0.0481	ug/L	-0.0481	ppb	15:52:19
2	Mn 257.610†	890.8	60.5	0.0435	ug/L	0.0435	ppb	15:52:39
2	Mo 202.031†	30.8	-1.1	-0.0470	ug/L	-0.0470	ppb	15:52:39
2	Ni 231.604†	166.7	17.8	0.2862	ug/L	0.2862	ppb	15:52:39

2	P 214.914†	351.3	13.1	4.6814	ug/L	4.6814 ppb	15:52:39
2	Pb 220.353†	0.4	29.5	2.2147	ug/L	2.2147 ppb	15:52:39
2	S 181.975 Axial†	58.3	-9.7	-8.2376	ug/L	-8.2376 ppb	15:52:39
2	Sb 206.836†	44.7	-0.9	-0.1791	ug/L	-0.1791 ppb	15:52:39
2	Se 196.026†	-22.7	-1.0	-0.4269	ug/L	-0.4269 ppb	15:52:39
2	Si 251.611†	732.9	170.1	3.5028	ug/L	3.5028 ppb	15:52:39
2	Sn 189.927†	9.3	3.8	0.3997	ug/L	0.3997 ppb	15:52:39
2	Ti 334.940†	-1052.4	60.6	0.0833	ug/L	0.0833 ppb	15:52:19
2	Tl 190.801†	-73.7	-12.1	-2.0323	ug/L	-2.0323 ppb	15:52:39
2	U 409.014†	-3937.4	-88.5	-2.1916	ug/L	-2.1916 ppb	15:52:14
2	V 292.402†	-1664.6	-5.8	-0.0333	ug/L	-0.0333 ppb	15:52:19
2	Zn 213.857†	1086.7	-39.7	-0.2212	ug/L	-0.2212 ppb	15:52:39
2	SiO2†	810.0	204.8	9.0296	ug/L	9.0296 ppb	15:53:19
3	Sc Radial	5503.9	5503.9	98.9	%		15:51:17
3	Y RADIAL	4786.1	4786.1	99.38	%		15:51:17
3	Al 396.153Radial†	-55.5	36.1	32.846	ug/L	32.846 ppb	15:51:17
3	Ca 317.933Radial†	29.6	13.0	32.437	ug/L	32.437 ppb	15:51:37
3	Fe 238.204 Radial†	1.1	0.8	28.650	ug/L	28.650 ppb	15:51:37
3	K 766.490 Radial†	1444.0	-13.2	-5.6858	ug/L	-5.6858 ppb	15:51:17
3	Mg 279.077 IEC†	-0.3	-0.5	-38.345	ug/L	-38.345 ppb	15:51:37
3	Na 589.592 Radial†	-167.4	1.1	3.0210	ug/L	3.0210 ppb	15:51:37
3	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431 ppb	15:51:37
3	Sc 361.383	1059763.4	1059763.4	99.895	%		15:52:44
3	Y 371.029	853150.8	853150.8	99.993	%		15:52:44
3	Ag 328.068†	638.8	0.9	0.0116	ug/L	0.0116 ppb	15:52:49
3	As 188.979†	-47.8	-11.0	-2.5746	ug/L	-2.5746 ppb	15:53:09
3	B 249.677†	-68.1	313.4	4.8798	ug/L	4.8798 ppb	15:52:49
3	Ba 233.527†	39.3	15.1	0.0771	ug/L	0.0771 ppb	15:53:09
3	Be 313.107†	-7522.3	-214.0	-0.0666	ug/L	-0.0666 ppb	15:52:49
3	Cd 226.502†	-285.9	-8.6	-0.0673	ug/L	-0.0673 ppb	15:53:09
3	Co 228.616†	-84.6	5.7	0.0719	ug/L	0.0719 ppb	15:53:09
3	Cr 267.716†	-51.0	-22.5	-0.1911	ug/L	-0.1911 ppb	15:52:49
3	Cu 324.752†	9963.6	-217.1	-0.5340	ug/L	-0.5340 ppb	15:52:49
3	Mn 257.610†	951.3	125.3	0.1035	ug/L	0.1035 ppb	15:53:09
3	Mo 202.031†	38.3	6.6	0.2645	ug/L	0.2645 ppb	15:53:09
3	Ni 231.604†	159.8	11.7	0.1876	ug/L	0.1876 ppb	15:53:09
3	P 214.914†	347.1	10.6	3.7978	ug/L	3.7978 ppb	15:53:09
3	Pb 220.353†	-25.4	3.7	0.2791	ug/L	0.2791 ppb	15:53:09
3	S 181.975 Axial†	64.7	-3.1	-2.6014	ug/L	-2.6014 ppb	15:53:09
3	Sb 206.836†	43.5	-1.9	-0.3719	ug/L	-0.3719 ppb	15:53:09
3	Se 196.026†	-24.2	-2.6	-0.7417	ug/L	-0.7417 ppb	15:53:09
3	Si 251.611†	723.7	164.4	3.3914	ug/L	3.3914 ppb	15:53:09
3	Sn 189.927†	-1.8	-7.3	-0.7591	ug/L	-0.7591 ppb	15:53:09
3	Ti 334.940†	-1125.7	-17.7	-0.0213	ug/L	-0.0213 ppb	15:52:49
3	Tl 190.801†	-47.4	13.9	2.3508	ug/L	2.3508 ppb	15:53:09
3	U 409.014†	-3791.5	39.2	0.9702	ug/L	0.9702 ppb	15:52:44
3	V 292.402†	-1640.9	10.2	0.0584	ug/L	0.0584 ppb	15:52:49
3	Zn 213.857†	1086.8	-34.5	-0.1947	ug/L	-0.1947 ppb	15:53:09
3	SiO2†	778.6	177.1	7.8246	ug/L	7.8246 ppb	15:53:24

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060471.9	99.961	%	0.3723				0.37%
Sc Radial	5437.3	97.7	%	1.27				1.30%
Y 371.029	853894.4	100.08	%	0.267				0.27%
Y RADIAL	4743.4	98.50	%	1.020				1.04%
Ag 328.068†	18.6	0.0786	ug/L	0.08825	0.0786	ppb	0.08825	112.24%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	10.7	9.7234	ug/L	20.24395	9.7234	ppb	20.24395	208.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-13.7	-3.2054	ug/L	0.90543	-3.2054	ppb	0.90543	28.25%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	344.7	5.3705	ug/L	0.43345	5.3705	ppb	0.43345	8.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	17.3	0.0878	ug/L	0.08464	0.0878	ppb	0.08464	96.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-236.1	-0.0733	ug/L	0.00791	-0.0733	ppb	0.00791	10.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.1	32.521	ug/L	12.0776	32.521	ppb	12.0776	37.14%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.1      -0.0470 ug/L        0.06789      -0.0470 ppb        0.06789 144.30%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -6.8      -0.0846 ug/L        0.13746      -0.0846 ppb        0.13746 162.45%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -2.7      -0.0221 ug/L        0.17746      -0.0221 ppb        0.17746 801.61%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -73.9      -0.1814 ug/L        0.30837      -0.1814 ppb        0.30837 170.01%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.4       14.803 ug/L       39.0249       14.803 ppb       39.0249 263.64%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          47.0       20.393 ug/L       25.1438       20.393 ppb       25.1438 123.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.0      -2.6115 ug/L      34.26394      -2.6115 ppb      34.26394 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                94.0       0.0763 ug/L       0.03041       0.0763 ppb       0.03041  39.87%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 5.3       0.2121 ug/L       0.23732       0.2121 ppb       0.23732 111.89%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -0.5      -1.3103 ug/L       6.90696      -1.3103 ppb       6.90696 527.13%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                17.1       0.2740 ug/L       0.08098       0.2740 ppb       0.08098  29.55%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 14.1       5.0202 ug/L       1.42236       5.0202 ppb       1.42236  28.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                15.2       1.1391 ug/L       0.98566       1.1391 ppb       0.98566  86.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -6.3      -5.3078 ug/L       2.82471      -5.3078 ppb       2.82471  53.22%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 1.8       0.3522 ug/L       1.09156       0.3522 ppb       1.09156 309.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 2.0       0.6909 ug/L       2.21432       0.6909 ppb       2.21432 320.50%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               178.0       3.6616 ug/L       0.37560       3.6616 ppb       0.37560  10.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.0       0.1112 ug/L       0.76790       0.1112 ppb       0.76790 690.45%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                19.5       0.3006 ug/L       0.08009       0.3006 ppb       0.08009  26.64%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                39.9       0.0547 ug/L       0.06651       0.0547 ppb       0.06651 121.59%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.8       0.6461 ug/L       2.34820       0.6461 ppb       2.34820 363.46%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -25.9      -0.6439 ug/L       1.58194      -0.6439 ppb       1.58194 245.69%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  0.1       0.0001 ug/L       0.05062       0.0001 ppb       0.05062 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -33.4      -0.1895 ug/L       0.03453      -0.1895 ppb       0.03453  18.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     198.4       8.7434 ug/L       0.81433       8.7434 ppb       0.81433   9.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Monday, July 13, 2009 21:52:36
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090704\Sample.060
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	813.4	813.423	35.566	4.4
	Mg	24.0	13233.5	13233.528	231.778	1.8
	Co	58.9	16639.5	16639.489	380.771	2.3
	Rh	102.9	26958.8	26958.823	586.949	2.2
	In	114.9	28207.6	28207.626	441.465	1.6
	Pb	208.0	15069.1	15069.144	161.587	1.1
⌈>	Ba	137.9	23069.3	23069.340	298.488	1.3
⌊	Ba++	69.0	787.2	0.034	0.001	2.6
⌈>	Ce	139.9	31217.7	31217.679	499.349	1.6
⌊	CeO	155.9	652.0	0.021	0.000	1.8
	Bkgd	220.0	2.5	2.500	0.612	24.5

Current Optimization File Data

Current Value	Description
0.89	Nebulizer Gas Flow
6.50	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	9.0	2062.8
Co	59	25	10.3	23764.8
In	115	25	11.8	35194.3

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	585	2080	0.631
Be	9.0	9.1	2051	2080	0.639
Mg	24.0	24.0	5690	2120	0.584
Mg	25.0	24.9	5912	2080	0.665
Mg	26.0	25.9	6145	2120	0.658
Co	58.9	58.9	14169	2170	0.632
Rh	102.9	103.0	24867	2230	0.697
In	114.9	115.0	27803	2260	0.687
Ce	139.9	140.0	33869	2280	0.763
Pb	206.0	206.0	49936	2420	0.663
Pb	207.0	206.9	50183	2385	0.775
Pb	208.0	208.0	50427	2430	0.720
U	238.1	238.0	57732	2470	0.709

Report Date/Time: Monday, July 13, 2009 21:54:10

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 14:42:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Blank.172

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		43	
	Be	9		ug/L		4	
	B	11		ug/L		345	
	Na	23		ug/L		9670	
	Mg	24		ug/L		1667	
	Al	27		ug/L		4334	
	P	31		ug/L		2996	
	K	39		ug/L		240341	
	Ca	43		ug/L		150	
>	Sc	45		ug/L		611775	
	V	51		ug/L		3052	
	Cr	52		ug/L		1534	
	Cr	53		ug/L		34600	
	Mn	55		ug/L		598	
	Fe	57		ug/L		2081	
	Co	59		ug/L		106	
	Ni	60		ug/L		39	
	Cu	63		ug/L		168	
	Cu	65		ug/L		31	
	Zn	66		ug/L		238	
	Zn	67		ug/L		3209	
	Zn	68		ug/L		334	
>	Ge	74		ug/L		68213	
	As	75		ug/L		152	
	Se	77		ug/L		1519	
	Se	82		ug/L		-6	
	Kr	83		ug/L		28	
	Sr	88		ug/L		59	
	Y	89		ug/L		10	
	Ag	107		ug/L		13	
	Cd	111		ug/L		8	
	Cd	114		ug/L		17	
>	In	115		ug/L		30621	
	Sn	120		ug/L		192	
	Sb	121		ug/L		63	
	Sb	123		ug/L		59	
	Ba	135		ug/L		5	
	Ba	137		ug/L		11	
	Ho	165		ug/L		5	
>	Lu	175		ug/L		33228	
	Tl	205		ug/L		359	
	Pb	208		ug/L		1360	
	Bi	209		ug/L		56	
	U	238		ug/L		32	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 14:48:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Standard 1.173

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	3.718	3601	0.006
	Be	9	**10.000**	**ug/L**	2.664	1216	0.002
	B	11	**20.000**	**ug/L**	4.448	2423	0.003
	Na	23	**1000.000**	**ug/L**	4.906	1225238	1.978
	Mg	24	**1000.000**	**ug/L**	6.541	827013	1.344
	Al	27	**1000.000**	**ug/L**	0.929	1193540	1.938
	P	31	**1000.000**	**ug/L**	0.662	68920	0.107
	K	39	**1000.000**	**ug/L**	7.330	1522134	2.088
	Ca	43	**1000.000**	**ug/L**	3.096	2850	0.004
>	Sc	45		**ug/L**		613828	613827.680
	V	51	**10.000**	**ug/L**	5.856	15535	0.020
	Cr	52	**10.000**	**ug/L**	1.463	12502	0.018
	Cr	53		**ug/L**		36034	0.002
	Mn	55	**10.000**	**ug/L**	2.100	16343	0.026
	Fe	57	**1000.000**	**ug/L**	1.256	32629	0.050
	Co	59	**10.000**	**ug/L**	1.412	11509	0.019
	Ni	60	**10.000**	**ug/L**	4.697	2328	0.004
	Cu	63		**ug/L**		5454	0.009
	Cu	65	**10.000**	**ug/L**	0.975	2548	0.004
	Zn	66	**10.000**	**ug/L**	2.118	1795	0.023
	Zn	67		**ug/L**		3460	0.004
	Zn	68		**ug/L**		1479	0.017
>	Ge	74		**ug/L**		67548	67547.675
	As	75	**10.000**	**ug/L**	6.032	1768	0.024
	Se	77		**ug/L**		1686	0.003
	Se	82	**10.000**	**ug/L**	6.152	160	0.002
	Kr	83		**ug/L**		29	0.000
	Sr	88	**10.000**	**ug/L**	1.334	18603	0.606
	Y	89		**ug/L**		13	0.000
	Ag	107	**10.000**	**ug/L**	0.527	6995	0.228
	Cd	111	**10.000**	**ug/L**	4.566	1612	0.052
	Cd	114		**ug/L**		3708	0.121
>	In	115		**ug/L**		30599	30598.594
	Sn	120	**10.000**	**ug/L**	3.150	6806	0.216
	Sb	121	**10.000**	**ug/L**	5.195	5499	0.178
	Sb	123		**ug/L**		4126	0.133
	Ba	135		**ug/L**		1416	0.042
	Ba	137	**10.000**	**ug/L**	3.872	2498	0.074
	Ho	165		**ug/L**		5	0.000
>	Lu	175		**ug/L**		33669	33668.633
	Tl	205	**10.000**	**ug/L**	3.447	10592	0.304
	Pb	208	**10.000**	**ug/L**	0.499	16273	0.442
	Bi	209		**ug/L**		47	-0.000
	U	238	**10.000**	**ug/L**	0.746	15226	0.451

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 14:54:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Standard 2.174

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.028**	**ug/L**	3.455	35918	0.060
	Be	9	**100.022**	**ug/L**	1.892	12134	0.020
	B	11	**200.038**	**ug/L**	1.971	21085	0.035
	Na	23	**9997.440**	**ug/L**	10.537	11612681	19.285
	Mg	24	**10000.093**	**ug/L**	7.180	8094019	13.457
	Al	27	**10002.767**	**ug/L**	5.641	11980037	19.934
	P	31	**9996.580**	**ug/L**	0.363	626968	1.038
	K	39	**10002.575**	**ug/L**	2.341	13125196	21.440
	Ca	43	**9998.155**	**ug/L**	0.715	26082	0.043
>	Sc	45		**ug/L**		601124	601123.943
	V	51	**100.058**	**ug/L**	1.683	132622	0.216
	Cr	52	**99.979**	**ug/L**	0.063	106617	0.175
	Cr	53		**ug/L**		45963	0.020
	Mn	55	**99.978**	**ug/L**	0.384	151354	0.251
	Fe	57	**9998.054**	**ug/L**	0.692	295390	0.488
	Co	59	**99.972**	**ug/L**	0.557	108720	0.181
	Ni	60	**100.001**	**ug/L**	0.528	22486	0.037
	Cu	63		**ug/L**		50588	0.084
	Cu	65	**99.974**	**ug/L**	0.246	24051	0.040
	Zn	66	**99.981**	**ug/L**	0.455	15196	0.226
	Zn	67		**ug/L**		5646	0.038
	Zn	68		**ug/L**		11243	0.165
>	Ge	74		**ug/L**		66088	66087.516
	As	75	**100.103**	**ug/L**	0.998	17799	0.267
	Se	77		**ug/L**		2903	0.022
	Se	82	**99.974**	**ug/L**	0.509	1579	0.024
	Kr	83		**ug/L**		29	0.000
	Sr	88	**100.005**	**ug/L**	2.173	182133	6.094
	Y	89		**ug/L**		31	0.001
	Ag	107	**100.003**	**ug/L**	1.238	68416	2.289
	Cd	111	**100.005**	**ug/L**	1.078	15749	0.527
	Cd	114		**ug/L**		36066	1.206
>	In	115		**ug/L**		29880	29880.429
	Sn	120	**100.005**	**ug/L**	0.968	65079	2.172
	Sb	121	**100.064**	**ug/L**	4.672	56818	1.900
	Sb	123		**ug/L**		43306	1.448
	Ba	135		**ug/L**		13924	0.418
	Ba	137	**99.989**	**ug/L**	2.228	24350	0.731
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		33303	33303.117
	Tl	205	**99.997**	**ug/L**	2.642	101170	3.028
	Pb	208	**99.984**	**ug/L**	1.553	146394	4.356
	Bi	209		**ug/L**		105	0.001
	U	238	**99.993**	**ug/L**	2.161	149169	4.479

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 15:00:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 1.175

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.547**	ug/L	5.656	18366	0.031
	Be	9	**50.922**	ug/L	4.909	6125	0.010
	B	11	**103.528**	ug/L	4.433	10980	0.018
	Na	23	**5250.664**	ug/L	7.026	6041488	10.128
	Mg	24	**5074.585**	ug/L	2.648	4074365	6.829
	Al	27	**4913.706**	ug/L	6.512	5835709	9.792
	P	31	**5130.564**	ug/L	1.038	320592	0.533
	K	39	**4744.805**	ug/L	4.422	6304787	10.170
	Ca	43	**4944.423**	ug/L	0.973	12872	0.021
>	Sc	45		ug/L		596397	596397.425
	V	51	**50.580**	ug/L	3.212	67930	0.109
	Cr	52	**52.275**	ug/L	1.213	56006	0.091
	Cr	53		ug/L		40544	0.011
	Mn	55	**49.475**	ug/L	0.769	74597	0.124
	Fe	57	**5068.071**	ug/L	1.637	149506	0.247
	Co	59	**52.490**	ug/L	1.397	56663	0.095
	Ni	60	**52.720**	ug/L	1.784	11776	0.020
	Cu	63		ug/L		24897	0.041
	Cu	65	**49.825**	ug/L	2.143	11902	0.020
	Zn	66	**51.506**	ug/L	2.205	7892	0.117
	Zn	67		ug/L		4391	0.020
	Zn	68		ug/L		6024	0.087
>	Ge	74		ug/L		65705	65705.138
	As	75	**50.532**	ug/L	2.039	9009	0.135
	Se	77		ug/L		2253	0.012
	Se	82	**52.413**	ug/L	0.721	820	0.013
	Kr	83		ug/L		28	0.000
	Sr	88	**51.242**	ug/L	0.788	92810	3.122
	Y	89		ug/L		24	0.001
	Ag	107	**50.719**	ug/L	1.058	34503	1.161
	Cd	111	**53.161**	ug/L	2.046	8326	0.280
	Cd	114		ug/L		19069	0.641
>	In	115		ug/L		29705	29705.289
	Sn	120	**49.914**	ug/L	0.402	32386	1.084
	Sb	121	**49.047**	ug/L	3.460	27727	0.931
	Sb	123		ug/L		20958	0.703
	Ba	135		ug/L		7063	0.214
	Ba	137	**51.526**	ug/L	2.077	12423	0.377
	Ho	165		ug/L		7	0.000
>	Lu	175		ug/L		32950	32949.618
	Tl	205	**48.755**	ug/L	3.625	48996	1.476
	Pb	208	**51.879**	ug/L	0.698	75815	2.260
	Bi	209		ug/L		65	0.000
	U	238	**52.414**	ug/L	2.093	77393	2.348

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	103.093				
	Be	9	101.845				
	B	11	103.528				
	Na	23	105.013				
	Mg	24	101.492				
	Al	27	97.301				
	P	31	102.611				
	K	39	94.896				
	Ca	43	98.888				
>	Sc	45		97.5			
	V	51	101.161				
	Cr	52	104.550				
	Cr	53					
	Mn	55	98.951				
	Fe	57	101.361				
	Co	59	104.980				
	Ni	60	105.440				
	Cu	63					
	Cu	65	99.651				
	Zn	66	103.012				
	Zn	67					
	Zn	68					
>	Ge	74		96.3			
	As	75	101.063				
	Se	77					
	Se	82	104.825				
	Kr	83					
	Sr	88	102.484				
	Y	89					
	Ag	107	101.438				
	Cd	111	106.322				
	Cd	114					
>	In	115		97.0			
	Sn	120	99.827				
	Sb	121	98.094				
	Sb	123					
	Ba	135					
	Ba	137	103.052				
	Ho	165					
>	Lu	175		99.2			
	Tl	205	97.511				
	Pb	208	103.757				
	Bi	209					
	U	238	104.828				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 15:06:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 2.176

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.054**	**ug/L**	74.326	61	0.000
	Be	9	**0.019**	**ug/L**	144.611	6	0.000
	B	11	**3.066**	**ug/L**	16.005	657	0.001
	Na	23	**-1.460**	**ug/L**	414.458	7670	-0.003
	Mg	24	**0.922**	**ug/L**	326.322	2334	0.001
	Al	27	**-1.345**	**ug/L**	67.462	2667	-0.003
	P	31	**0.313**	**ug/L**	468.250	2971	0.000
	K	39	**-0.634**	**ug/L**	464.789	235935	-0.001
	Ca	43	**4.720**	**ug/L**	203.743	160	0.000
>	Sc	45		**ug/L**		602450	602450.222
	V	51	**0.448**	**ug/L**	106.313	3601	0.001
	Cr	52	**0.049**	**ug/L**	202.714	1560	0.000
	Cr	53		**ug/L**		34784	0.001
	Mn	55	**-0.011**	**ug/L**	19.864	572	-0.000
	Fe	57	**2.533**	**ug/L**	74.926	2124	0.000
	Co	59	**0.014**	**ug/L**	27.721	120	0.000
	Ni	60	**0.010**	**ug/L**	243.314	41	0.000
	Cu	63		**ug/L**		163	-0.000
	Cu	65	**0.023**	**ug/L**	161.947	36	0.000
	Zn	66	**-0.040**	**ug/L**	147.872	227	-0.000
	Zn	67		**ug/L**		3183	0.001
	Zn	68		**ug/L**		340	0.000
>	Ge	74		**ug/L**		66661	66660.902
	As	75	**0.092**	**ug/L**	850.679	164	0.000
	Se	77		**ug/L**		1582	0.001
	Se	82	**0.411**	**ug/L**	41.400	1	0.000
	Kr	83		**ug/L**		25	-0.000
	Sr	88	**0.000**	**ug/L**	2873.639	58	0.000
	Y	89		**ug/L**		12	0.000
	Ag	107	**0.008**	**ug/L**	72.154	18	0.000
	Cd	111	**0.017**	**ug/L**	49.745	11	0.000
	Cd	114		**ug/L**		17	0.000
>	In	115		**ug/L**		30095	30094.765
	Sn	120	**0.254**	**ug/L**	9.585	354	0.006
	Sb	121	**0.534**	**ug/L**	20.074	367	0.010
	Sb	123		**ug/L**		291	0.008
	Ba	135		**ug/L**		8	0.000
	Ba	137	**-0.001**	**ug/L**	184.268	10	-0.000
	Ho	165		**ug/L**		6	0.000
>	Lu	175		**ug/L**		33178	33177.816
	Tl	205	**0.261**	**ug/L**	35.993	621	0.008
	Pb	208	**-0.154**	**ug/L**	5.162	1135	-0.007
	Bi	209		**ug/L**		43	-0.000
	U	238	**0.038**	**ug/L**	33.584	89	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		98.5			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 15:12:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 3.177

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**9.987**	ug/L	6.325	3676	0.006
	Be	9	**0.487**	ug/L	15.478	64	0.000
	B	11	**15.588**	ug/L	1.417	1986	0.003
	Na	23	**259.976**	ug/L	16.917	315157	0.501
	Mg	24	**22.824**	ug/L	19.097	20348	0.031
	Al	27	**31.952**	ug/L	14.968	43065	0.064
	P	31	**57.315**	ug/L	4.865	6625	0.006
	K	39	**294.724**	ug/L	3.785	625413	0.632
	Ca	43	**208.804**	ug/L	4.472	700	0.001
>	Sc	45		ug/L		610326	610325.637
	V	51	**10.064**	ug/L	3.329	16287	0.022
	Cr	52	**10.012**	ug/L	2.221	12218	0.018
	Cr	53		ug/L		36412	0.003
	Mn	55	**5.187**	ug/L	1.269	8535	0.013
	Fe	57	**111.639**	ug/L	5.057	5404	0.005
	Co	59	**1.042**	ug/L	1.600	1255	0.002
	Ni	60	**2.017**	ug/L	5.034	499	0.001
	Cu	63		ug/L		734	0.001
	Cu	65	**1.037**	ug/L	2.385	284	0.000
	Zn	66	**9.939**	ug/L	3.570	1763	0.023
	Zn	67		ug/L		3397	0.003
	Zn	68		ug/L		1464	0.017
>	Ge	74		ug/L		67776	67775.784
	As	75	**4.477**	ug/L	15.004	963	0.012
	Se	77		ug/L		1651	0.002
	Se	82	**5.835**	ug/L	11.775	89	0.001
	Kr	83		ug/L		25	-0.000
	Sr	88	**10.097**	ug/L	0.716	18892	0.615
	Y	89		ug/L		14	0.000
	Ag	107	**0.986**	ug/L	1.810	704	0.023
	Cd	111	**0.969**	ug/L	6.956	165	0.005
	Cd	114		ug/L		377	0.012
>	In	115		ug/L		30610	30610.355
	Sn	120	**4.993**	ug/L	3.184	3512	0.108
	Sb	121	**2.592**	ug/L	7.686	1570	0.049
	Sb	123		ug/L		1200	0.037
	Ba	135		ug/L		289	0.008
	Ba	137	**2.018**	ug/L	4.448	504	0.015
	Ho	165		ug/L		7	0.000
>	Lu	175		ug/L		33437	33437.087
	Tl	205	**1.046**	ug/L	2.532	1421	0.032
	Pb	208	**1.823**	ug/L	3.668	4025	0.079
	Bi	209		ug/L		50	-0.000
	U	238	**0.224**	ug/L	3.678	367	0.010

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	99.871				
	Be	9	97.431				
	B	11	103.919				
	Na	23	103.991				
	Mg	24	152.162				
	Al	27	106.505				
	P	31	114.631				
	K	39	98.241				
	Ca	43	104.402				
>	Sc	45		99.8			
	V	51	100.643				
	Cr	52	100.125				
	Cr	53					
	Mn	55	103.736				
	Fe	57	111.639				
	Co	59	104.198				
	Ni	60	100.831				
	Cu	63					
	Cu	65	103.656				
	Zn	66	99.388				
	Zn	67					
	Zn	68					
>	Ge	74		99.4			
	As	75	89.545				
	Se	77					
	Se	82	116.698				
	Kr	83					
	Sr	88	100.968				
	Y	89					
	Ag	107	98.611				
	Cd	111	96.855				
	Cd	114					
>	In	115		100.0			
	Sn	120	99.869				
	Sb	121	86.397				
	Sb	123					
	Ba	135					
	Ba	137	100.884				
	Ho	165					
>	Lu	175		100.6			
	Tl	205	104.641				
	Pb	208	91.155				
	Bi	209					
	U	238	111.880				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Mg	24	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 15:18:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 4.178

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.231**	ug/L	13.563	117	0.000
	Be	9	**0.062**	ug/L	70.170	11	0.000
	B	11	**1.732**	ug/L	18.507	487	0.000
	Na	23	**105969.456**	ug/L	2.967	115554565	204.410
	Mg	24	**99363.215**	ug/L	1.809	75591383	133.714
	Al	27	**97038.889**	ug/L	4.528	109332259	193.383
	P	31	**99968.856**	ug/L	2.210	5871451	10.381
	K	39	**100083.882**	ug/L	5.726	121526166	214.529
	Ca	43	**95541.804**	ug/L	0.551	233161	0.412
>	Sc	45		ug/L		565208	565208.445
	V	51	**0.106**	ug/L	1122.765	2964	0.000
	Cr	52	**4.252**	ug/L	0.981	5620	0.007
	Cr	53		ug/L		30986	-0.002
	Mn	55	**5.766**	ug/L	0.578	8727	0.014
	Fe	57	**96477.786**	ug/L	0.408	2663324	4.709
	Co	59	**0.420**	ug/L	12.206	527	0.001
	Ni	60	**4.355**	ug/L	4.161	955	0.002
	Cu	63		ug/L		1357	0.002
	Cu	65	**4.742**	ug/L	1.545	1100	0.002
	Zn	66	**5.781**	ug/L	1.410	1004	0.013
	Zn	67		ug/L		3373	0.009
	Zn	68		ug/L		432	0.002
>	Ge	74		ug/L		60551	60550.991
	As	75	**1.390**	ug/L	53.101	360	0.004
	Se	77		ug/L		1786	0.007
	Se	82	**8.565**	ug/L	20.259	119	0.002
	Kr	83		ug/L		58	0.001
	Sr	88	**1.200**	ug/L	3.687	2068	0.073
	Y	89		ug/L		76	0.002
	Ag	107	**0.415**	ug/L	57.030	274	0.010
	Cd	111	**1.588**	ug/L	57.661	238	0.008
	Cd	114		ug/L		1142	0.041
>	In	115		ug/L		27568	27567.722
	Sn	120	**0.233**	ug/L	20.937	312	0.005
	Sb	121	**0.234**	ug/L	15.211	180	0.004
	Sb	123		ug/L		147	0.003
	Ba	135		ug/L		96	0.003
	Ba	137	**0.664**	ug/L	1.736	158	0.005
	Ho	165		ug/L		78	0.002
>	Lu	175		ug/L		30477	30477.117
	Tl	205	**0.026**	ug/L	72.758	354	0.001
	Pb	208	**1.181**	ug/L	5.676	2816	0.051
	Bi	209		ug/L		82	0.001
	U	238	**-0.003**	ug/L	69.168	26	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	105.969				
	Mg	24	99.363				
	Al	27	97.039				
	P	31	99.969				
	K	39	100.084				
	Ca	43	95.542				
>	Sc	45			92.4		
	V	51					
	Cr	52	114.922				
	Cr	53					
	Mn	55	99.407				
	Fe	57	96.478				
	Co	59	168.197				
	Ni	60	161.290				
	Cu	63					
	Cu	65	163.511				
	Zn	66	160.592				
	Zn	67					
	Zn	68					
>	Ge	74			88.8		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	99.983				
	Y	89					
	Ag	107					
	Cd	111	396.895				
	Cd	114					
>	In	115			90.0		
	Sn	120					
	Sb	121	234.303				
	Sb	123					
	Ba	135					
	Ba	137	99.070				
	Ho	165					
>	Lu	175			91.7		
	Tl	205					
	Pb	208	590.467				
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 15:24:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 5.179

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**20.769**	**ug/L**	6.436	6760	0.012
	Be	9	**20.698**	**ug/L**	3.644	2269	0.004
	B	11	**21.656**	**ug/L**	3.809	2333	0.004
	Na	23	**107360.828**	**ug/L**	2.070	112397336	207.094
	Mg	24	**106324.697**	**ug/L**	7.903	77651094	143.083
	Al	27	**96762.489**	**ug/L**	5.331	104743496	192.832
	P	31	**100445.030**	**ug/L**	1.813	5665803	10.430
	K	39	**102370.861**	**ug/L**	3.372	119352527	219.431
	Ca	43	**94830.500**	**ug/L**	1.498	222284	0.409
>	Sc	45		**ug/L**		542809	542809.463
	V	51	**19.097**	**ug/L**	5.824	25065	0.041
	Cr	52	**23.582**	**ug/L**	0.904	23747	0.041
	Cr	53		**ug/L**		31819	0.002
	Mn	55	**25.611**	**ug/L**	0.784	35408	0.064
	Fe	57	**98078.171**	**ug/L**	0.308	2600162	4.787
	Co	59	**20.254**	**ug/L**	1.269	19961	0.037
	Ni	60	**23.266**	**ug/L**	0.856	4751	0.009
	Cu	63		**ug/L**		9816	0.018
	Cu	65	**23.577**	**ug/L**	2.238	5141	0.009
	Zn	66	**24.752**	**ug/L**	1.870	3487	0.056
	Zn	67		**ug/L**		3681	0.016
	Zn	68		**ug/L**		2268	0.034
>	Ge	74		**ug/L**		58555	58555.347
	As	75	**23.056**	**ug/L**	3.849	3733	0.062
	Se	77		**ug/L**		1923	0.011
	Se	82	**25.585**	**ug/L**	5.301	354	0.006
	Kr	83		**ug/L**		50	0.000
	Sr	88	**21.694**	**ug/L**	0.976	35214	1.322
	Y	89		**ug/L**		69	0.002
	Ag	107	**19.536**	**ug/L**	1.735	11908	0.447
	Cd	111	**19.869**	**ug/L**	1.868	2792	0.105
	Cd	114		**ug/L**		7432	0.279
>	In	115		**ug/L**		26601	26600.503
	Sn	120	**20.248**	**ug/L**	0.575	11864	0.440
	Sb	121	**21.211**	**ug/L**	0.487	10766	0.403
	Sb	123		**ug/L**		8326	0.311
	Ba	135		**ug/L**		2531	0.086
	Ba	137	**22.769**	**ug/L**	12.402	4910	0.166
	Ho	165		**ug/L**		76	0.002
>	Lu	175		**ug/L**		29417	29417.223
	Tl	205	**17.963**	**ug/L**	5.224	16311	0.544
	Pb	208	**20.659**	**ug/L**	1.315	27676	0.900
	Bi	209		**ug/L**		87	0.001
	U	238	**20.366**	**ug/L**	1.924	26862	0.912

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	103.846				
	Be	9	103.492				
	B	11	108.281				
	Na	23	107.361				
	Mg	24	106.325				
	Al	27	96.762				
	P	31	100.445				
	K	39	102.371				
	Ca	43	94.830				
>	Sc	45		88.7			
	V	51	95.483				
	Cr	52	99.503				
	Cr	53					
	Mn	55	99.269				
	Fe	57	98.078				
	Co	59	100.021				
	Ni	60	102.494				
	Cu	63					
	Cu	65	102.958				
	Zn	66	104.881				
	Zn	67					
	Zn	68					
>	Ge	74		85.8			
	As	75	115.280				
	Se	77					
	Se	82	127.927				
	Kr	83					
	Sr	88	102.328				
	Y	89					
	Ag	107	97.680				
	Cd	111	97.398				
	Cd	114					
>	In	115		86.9			
	Sn	120	101.242				
	Sb	121	105.526				
	Sb	123					
	Ba	135					
	Ba	137	110.155				
	Ho	165					
>	Lu	175		88.5			
	Tl	205	89.813				
	Pb	208	102.274				
	Bi	209					
	U	238	101.828				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Se	82	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 15:29:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.180

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.743**	**ug/L**	4.706	17774	0.031
	Be	9	**52.889**	**ug/L**	3.096	6017	0.011
	B	11	**104.923**	**ug/L**	1.843	10523	0.018
	Na	23	**5117.498**	**ug/L**	3.754	5577770	9.871
	Mg	24	**5033.112**	**ug/L**	7.456	3826556	6.773
	Al	27	**4887.371**	**ug/L**	0.872	5495916	9.740
	P	31	**5123.540**	**ug/L**	0.496	302746	0.532
	K	39	**5082.747**	**ug/L**	1.602	6363451	10.895
	Ca	43	**5033.740**	**ug/L**	1.033	12387	0.022
>	Sc	45		**ug/L**		563898	563898.248
	V	51	**50.967**	**ug/L**	2.261	64766	0.110
	Cr	52	**51.705**	**ug/L**	0.664	52412	0.090
	Cr	53		**ug/L**		37276	0.010
	Mn	55	**48.820**	**ug/L**	0.531	69617	0.122
	Fe	57	**5076.650**	**ug/L**	1.482	141671	0.248
	Co	59	**52.075**	**ug/L**	0.681	53167	0.094
	Ni	60	**53.329**	**ug/L**	0.987	11266	0.020
	Cu	63		**ug/L**		23535	0.041
	Cu	65	**49.341**	**ug/L**	2.150	11144	0.020
	Zn	66	**51.772**	**ug/L**	1.011	7412	0.117
	Zn	67		**ug/L**		4189	0.021
	Zn	68		**ug/L**		5624	0.087
>	Ge	74		**ug/L**		61388	61388.239
	As	75	**50.969**	**ug/L**	1.808	8487	0.136
	Se	77		**ug/L**		1998	0.010
	Se	82	**50.978**	**ug/L**	3.685	745	0.012
	Kr	83		**ug/L**		23	-0.000
	Sr	88	**50.850**	**ug/L**	1.242	87451	3.099
	Y	89		**ug/L**		23	0.000
	Ag	107	**50.353**	**ug/L**	0.741	32525	1.153
	Cd	111	**52.479**	**ug/L**	0.080	7805	0.276
	Cd	114		**ug/L**		18196	0.645
>	In	115		**ug/L**		28205	28204.700
	Sn	120	**48.975**	**ug/L**	0.794	30176	1.064
	Sb	121	**48.495**	**ug/L**	3.235	26028	0.921
	Sb	123		**ug/L**		19885	0.703
	Ba	135		**ug/L**		6544	0.216
	Ba	137	**51.463**	**ug/L**	2.595	11421	0.376
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		30329	30329.465
	Tl	205	**48.949**	**ug/L**	2.938	45285	1.482
	Pb	208	**51.505**	**ug/L**	1.008	69296	2.244
	Bi	209		**ug/L**		55	0.000
	U	238	**52.370**	**ug/L**	0.093	71184	2.346

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	105.486				
	Be	9	105.778				
	B	11	104.923				
	Na	23	102.350				
	Mg	24	100.662				
	Al	27	96.780				
	P	31	102.471				
	K	39	101.655				
	Ca	43	100.675				
>	Sc	45		92.2			
	V	51	101.935				
	Cr	52	103.410				
	Cr	53					
	Mn	55	97.641				
	Fe	57	101.533				
	Co	59	104.149				
	Ni	60	106.658				
	Cu	63					
	Cu	65	98.681				
	Zn	66	103.544				
	Zn	67					
	Zn	68					
>	Ge	74		90.0			
	As	75	101.937				
	Se	77					
	Se	82	101.956				
	Kr	83					
	Sr	88	101.700				
	Y	89					
	Ag	107	100.707				
	Cd	111	104.959				
	Cd	114					
>	In	115		92.1			
	Sn	120	97.950				
	Sb	121	96.990				
	Sb	123					
	Ba	135					
	Ba	137	102.926				
	Ho	165					
>	Lu	175		91.3			
	Tl	205	97.899				
	Pb	208	103.010				
	Bi	209					
	U	238	104.739				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 15:35:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.181

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.167**	ug/L	10.181	96	0.000
	Be	9	**-0.006**	ug/L	270.071	3	-0.000
	B	11	**2.272**	ug/L	18.903	538	0.000
	Na	23	**5.511**	ug/L	69.369	15008	0.011
	Mg	24	**0.593**	ug/L	377.031	2000	0.001
	Al	27	**1.133**	ug/L	229.531	5335	0.002
	P	31	**0.613**	ug/L	94.385	2800	0.000
	K	39	**20.174**	ug/L	182.050	245806	0.043
	Ca	43	**-0.593**	ug/L	1396.506	137	-0.000
>	Sc	45		ug/L		564338	564337.700
	V	51	**0.018**	ug/L	2854.598	2850	0.000
	Cr	52	**-0.127**	ug/L	20.089	1289	-0.000
	Cr	53		ug/L		32355	0.001
	Mn	55	**-0.059**	ug/L	3.411	467	-0.000
	Fe	57	**2.854**	ug/L	82.657	1997	0.000
	Co	59	**0.014**	ug/L	41.944	112	0.000
	Ni	60	**-0.031**	ug/L	106.273	29	-0.000
	Cu	63		ug/L		98	-0.000
	Cu	65	**0.028**	ug/L	61.027	35	0.000
	Zn	66	**0.076**	ug/L	120.957	227	0.000
	Zn	67		ug/L		2992	0.001
	Zn	68		ug/L		325	0.000
>	Ge	74		ug/L		62060	62060.490
	As	75	**-0.070**	ug/L	784.294	126	-0.000
	Se	77		ug/L		1474	0.001
	Se	82	**1.179**	ug/L	17.542	12	0.000
	Kr	83		ug/L		18	-0.000
	Sr	88	**0.006**	ug/L	65.144	64	0.000
	Y	89		ug/L		9	0.000
	Ag	107	**0.013**	ug/L	15.955	20	0.000
	Cd	111	**-0.036**	ug/L	47.292	2	-0.000
	Cd	114		ug/L		16	0.000
>	In	115		ug/L		28003	28003.098
	Sn	120	**0.093**	ug/L	28.075	232	0.002
	Sb	121	**0.395**	ug/L	31.452	267	0.007
	Sb	123		ug/L		213	0.006
	Ba	135		ug/L		8	0.000
	Ba	137	**-0.011**	ug/L	88.480	7	-0.000
	Ho	165		ug/L		3	-0.000
>	Lu	175		ug/L		30420	30420.331
	Tl	205	**0.351**	ug/L	17.395	653	0.011
	Pb	208	**-0.299**	ug/L	4.929	850	-0.013
	Bi	209		ug/L		46	-0.000
	U	238	**0.032**	ug/L	15.376	73	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		92.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		91.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.6			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872852
Sample Date/Time: Tuesday, July 14, 2009 15:41:44
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872852.182

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.159**	ug/L	100.006	89	0.000
	Be	9	**-0.001**	ug/L	8733.463	3	-0.000
	B	11	**1.423**	ug/L	15.029	438	0.000
	Na	23	**17.704**	ug/L	25.193	27026	0.034
	Mg	24	**2.113**	ug/L	128.678	3000	0.003
	Al	27	**8.254**	ug/L	49.096	12673	0.016
	P	31	**43.006**	ug/L	4.207	5070	0.004
	K	39	**-8.806**	ug/L	87.318	202425	-0.019
	Ca	43	**-1.799**	ug/L	520.346	128	-0.000
>	Sc	45		ug/L		541758	541758.180
	V	51	**-0.757**	ug/L	18.030	1815	-0.002
	Cr	52	**0.091**	ug/L	74.773	1442	0.000
	Cr	53		ug/L		24288	-0.012
	Mn	55	**0.234**	ug/L	4.013	847	0.001
	Fe	57	**10.872**	ug/L	40.249	2127	0.001
	Co	59	**0.137**	ug/L	9.081	228	0.000
	Ni	60	**0.167**	ug/L	13.765	68	0.000
	Cu	63		ug/L		132	-0.000
	Cu	65	**0.110**	ug/L	56.625	51	0.000
	Zn	66	**0.137**	ug/L	125.072	225	0.000
	Zn	67		ug/L		2345	-0.007
	Zn	68		ug/L		324	0.001
>	Ge	74		ug/L		59150	59149.507
	As	75	**0.064**	ug/L	752.548	143	0.000
	Se	77		ug/L		988	-0.006
	Se	82	**0.541**	ug/L	155.660	2	0.000
	Kr	83		ug/L		20	-0.000
	Sr	88	**0.006**	ug/L	78.172	63	0.000
	Y	89		ug/L		20	0.000
	Ag	107	**-0.002**	ug/L	154.306	10	-0.000
	Cd	111	**0.007**	ug/L	797.194	8	0.000
	Cd	114		ug/L		12	-0.000
>	In	115		ug/L		27656	27656.059
	Sn	120	**0.091**	ug/L	72.133	228	0.002
	Sb	121	**0.075**	ug/L	45.016	96	0.001
	Sb	123		ug/L		74	0.001
	Ba	135		ug/L		10	0.000
	Ba	137	**0.050**	ug/L	51.394	21	0.000
	Ho	165		ug/L		6	0.000
>	Lu	175		ug/L		29993	29993.088
	Tl	205	**0.344**	ug/L	9.399	637	0.010
	Pb	208	**0.370**	ug/L	19.626	1711	0.016
	Bi	209		ug/L		63	0.000
	U	238	**0.120**	ug/L	173.284	189	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		88.6			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		86.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		90.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		90.3			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872853
Sample Date/Time: Tuesday, July 14, 2009 15:47:38
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881838|40|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872853.183

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.238**	ug/L	8.378	810	0.001
	Be	9	**23.932**	ug/L	1.292	2791	0.005
	B	11	**37.764**	ug/L	3.911	4084	0.007
	Na	23	**166.110**	ug/L	8.525	194322	0.320
	Mg	24	**823.499**	ug/L	6.171	640742	1.108
	Al	27	**2218.608**	ug/L	6.102	2553123	4.421
	P	31	**200.544**	ug/L	1.333	14851	0.021
	K	39	**693.308**	ug/L	7.340	1085958	1.486
	Ca	43	**980.004**	ug/L	3.549	2581	0.004
>	Sc	45		ug/L		577297	577297.259
	V	51	**35.775**	ug/L	2.776	47393	0.077
	Cr	52	**18.278**	ug/L	0.670	19904	0.032
	Cr	53		ug/L		33718	0.002
	Mn	55	**97.047**	ug/L	1.163	141067	0.243
	Fe	57	**2773.679**	ug/L	1.479	80089	0.135
	Co	59	**22.498**	ug/L	0.762	23575	0.041
	Ni	60	**27.985**	ug/L	2.800	6067	0.010
	Cu	63		ug/L		13043	0.022
	Cu	65	**26.692**	ug/L	3.281	6184	0.011
	Zn	66	**54.083**	ug/L	0.596	7974	0.122
	Zn	67		ug/L		4201	0.019
	Zn	68		ug/L		6176	0.093
>	Ge	74		ug/L		63295	63294.567
	As	75	**66.751**	ug/L	0.533	11415	0.178
	Se	77		ug/L		1981	0.009
	Se	82	**48.549**	ug/L	3.515	731	0.012
	Kr	83		ug/L		24	-0.000
	Sr	88	**43.193**	ug/L	0.865	75741	2.632
	Y	89		ug/L		6920	0.240
	Ag	107	**4.487**	ug/L	0.253	2966	0.103
	Cd	111	**31.931**	ug/L	0.582	4845	0.168
	Cd	114		ug/L		11078	0.385
>	In	115		ug/L		28757	28756.940
	Sn	120	**9.480**	ug/L	1.137	6100	0.206
	Sb	121	**7.872**	ug/L	1.711	4358	0.149
	Sb	123		ug/L		3403	0.116
	Ba	135		ug/L		17003	0.546
	Ba	137	**130.341**	ug/L	0.107	29693	0.953
	Ho	165		ug/L		248	0.008
>	Lu	175		ug/L		31148	31148.236
	Tl	205	**53.020**	ug/L	2.134	50352	1.606
	Pb	208	**46.196**	ug/L	1.374	63953	2.012
	Bi	209		ug/L		141	0.003
	U	238	**0.458**	ug/L	3.533	670	0.021

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		94.4			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		93.7			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232585001
Sample Date/Time: Tuesday, July 14, 2009 16:05:18
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\232585001.186

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**13.906**	ug/L	3.915	4447	0.008
	Be	9	**2.985**	ug/L	5.501	323	0.001
	B	11	**1.260**	ug/L	23.039	415	0.000
	Na	23	**1260.501**	ug/L	3.111	1301450	2.431
	Mg	24	**626.899**	ug/L	3.395	450340	0.844
	Al	27	**6256.605**	ug/L	3.440	6630637	12.468
	P	31	**252.983**	ug/L	1.359	16581	0.026
	K	39	**1494.251**	ug/L	12.775	1906753	3.203
	Ca	43	**697.992**	ug/L	1.917	1731	0.003
>	Sc	45		ug/L		531861	531861.482
	V	51	**7.937**	ug/L	4.192	11740	0.017
	Cr	52	**12.926**	ug/L	2.100	13350	0.023
	Cr	53		ug/L		22261	-0.015
	Mn	55	**1091.333**	ug/L	1.406	1456021	2.738
	Fe	57	**13665.115**	ug/L	0.583	356470	0.667
	Co	59	**2.324**	ug/L	2.590	2328	0.004
	Ni	60	**6.035**	ug/L	1.325	1232	0.002
	Cu	63		ug/L		2873	0.005
	Cu	65	**6.519**	ug/L	2.396	1412	0.003
	Zn	66	**101.214**	ug/L	2.054	13329	0.229
	Zn	67		ug/L		4136	0.025
	Zn	68		ug/L		9911	0.168
>	Ge	74		ug/L		57260	57260.473
	As	75	**2.734**	ug/L	20.402	547	0.007
	Se	77		ug/L		863	-0.007
	Se	82	**1.258**	ug/L	13.475	12	0.000
	Kr	83		ug/L		43	0.000
	Sr	88	**8.326**	ug/L	0.492	13886	0.507
	Y	89		ug/L		212002	7.775
	Ag	107	**0.173**	ug/L	12.390	120	0.004
	Cd	111	**1.049**	ug/L	11.420	158	0.006
	Cd	114		ug/L		47	0.001
>	In	115		ug/L		27270	27269.603
	Sn	120	**2.110**	ug/L	2.483	1420	0.046
	Sb	121	**0.180**	ug/L	26.237	150	0.003
	Sb	123		ug/L		111	0.002
	Ba	135		ug/L		9182	0.284
	Ba	137	**67.718**	ug/L	1.643	16028	0.495
	Ho	165		ug/L		7394	0.228
>	Lu	175		ug/L		32351	32350.912
	Tl	205	**0.290**	ug/L	11.863	634	0.009
	Pb	208	**10.855**	ug/L	0.695	16623	0.473
	Bi	209		ug/L		96	0.001
	U	238	**2.181**	ug/L	3.016	3192	0.098

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		86.9			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		83.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		89.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.4			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232585002
Sample Date/Time: Tuesday, July 14, 2009 16:11:12
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\232585002.187

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**28.293**	ug/L	5.029	8996	0.017
	Be	9	**3.428**	ug/L	7.280	370	0.001
	B	11	**10.493**	ug/L	2.502	1261	0.002
	Na	23	**423.586**	ug/L	13.885	441085	0.817
	Mg	24	**4883.153**	ug/L	4.352	3495072	6.571
	Al	27	**29951.716**	ug/L	2.232	31722316	59.689
	P	31	**558.632**	ug/L	0.979	33419	0.058
	K	39	**4884.814**	ug/L	3.553	5767553	10.471
	Ca	43	**6419.283**	ug/L	0.346	14842	0.028
>	Sc	45		ug/L		531149	531148.552
	V	51	**44.358**	ug/L	0.839	53422	0.096
	Cr	52	**18.934**	ug/L	1.358	18918	0.033
	Cr	53		ug/L		22909	-0.013
	Mn	55	**1057.224**	ug/L	0.978	1408912	2.652
	Fe	57	**28362.169**	ug/L	0.888	736891	1.384
	Co	59	**10.250**	ug/L	1.486	9928	0.019
	Ni	60	**17.153**	ug/L	0.253	3436	0.006
	Cu	63		ug/L		9803	0.018
	Cu	65	**22.532**	ug/L	1.105	4809	0.009
	Zn	66	**139.657**	ug/L	0.590	18243	0.316
	Zn	67		ug/L		5216	0.044
	Zn	68		ug/L		13857	0.238
>	Ge	74		ug/L		57046	57045.934
	As	75	**8.587**	ug/L	7.030	1436	0.023
	Se	77		ug/L		843	-0.007
	Se	82	**1.726**	ug/L	40.444	19	0.000
	Kr	83		ug/L		48	0.000
	Sr	88	**59.366**	ug/L	1.247	97081	3.617
	Y	89		ug/L		140531	5.239
	Ag	107	**0.525**	ug/L	9.491	333	0.012
	Cd	111	**2.367**	ug/L	16.833	342	0.012
	Cd	114		ug/L		127	0.004
>	In	115		ug/L		26822	26821.515
	Sn	120	**0.661**	ug/L	1.417	553	0.014
	Sb	121	**0.317**	ug/L	3.568	217	0.006
	Sb	123		ug/L		154	0.004
	Ba	135		ug/L		39298	1.278
	Ba	137	**302.914**	ug/L	1.060	68083	2.215
	Ho	165		ug/L		4839	0.157
>	Lu	175		ug/L		30736	30735.669
	Tl	205	**0.599**	ug/L	8.310	890	0.018
	Pb	208	**39.244**	ug/L	0.690	53805	1.710
	Bi	209		ug/L		932	0.029
	U	238	**9.929**	ug/L	0.788	13701	0.445

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		86.8			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		83.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		87.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		92.5			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 232585003
Sample Date/Time: Tuesday, July 14, 2009 16:17:05
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\232585003.188

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**25.109**	**ug/L**	5.000	7994	0.015
	Be	9	**3.852**	**ug/L**	2.585	417	0.001
	B	11	**6.684**	**ug/L**	1.615	912	0.001
	Na	23	**786.009**	**ug/L**	7.992	814345	1.516
	Mg	24	**3473.858**	**ug/L**	1.865	2487744	4.675
	Al	27	**26210.631**	**ug/L**	1.633	27760144	52.233
	P	31	**320.246**	**ug/L**	1.123	20286	0.033
	K	39	**3000.142**	**ug/L**	4.634	3624790	6.431
	Ca	43	**4264.335**	**ug/L**	2.128	9907	0.018
>	Sc	45		**ug/L**		531612	531611.622
	V	51	**33.358**	**ug/L**	2.636	40885	0.072
	Cr	52	**15.576**	**ug/L**	1.538	15814	0.027
	Cr	53		**ug/L**		22487	-0.014
	Mn	55	**871.738**	**ug/L**	0.581	1162881	2.187
	Fe	57	**23392.746**	**ug/L**	0.299	608744	1.142
	Co	59	**6.207**	**ug/L**	1.427	6058	0.011
	Ni	60	**13.549**	**ug/L**	0.786	2723	0.005
	Cu	63		**ug/L**		7704	0.014
	Cu	65	**17.679**	**ug/L**	2.352	3781	0.007
	Zn	66	**105.130**	**ug/L**	0.824	13672	0.238
	Zn	67		**ug/L**		4366	0.030
	Zn	68		**ug/L**		10493	0.180
>	Ge	74		**ug/L**		56590	56590.126
	As	75	**7.666**	**ug/L**	17.526	1284	0.020
	Se	77		**ug/L**		856	-0.007
	Se	82	**2.118**	**ug/L**	9.153	24	0.001
	Kr	83		**ug/L**		51	0.001
	Sr	88	**41.682**	**ug/L**	0.720	68471	2.540
	Y	89		**ug/L**		196498	7.294
	Ag	107	**0.355**	**ug/L**	10.081	230	0.008
	Cd	111	**1.530**	**ug/L**	5.907	224	0.008
	Cd	114		**ug/L**		42	0.001
>	In	115		**ug/L**		26938	26938.186
	Sn	120	**0.602**	**ug/L**	3.354	521	0.013
	Sb	121	**0.187**	**ug/L**	12.648	151	0.004
	Sb	123		**ug/L**		124	0.003
	Ba	135		**ug/L**		22195	0.702
	Ba	137	**167.739**	**ug/L**	0.937	38758	1.226
	Ho	165		**ug/L**		6913	0.219
>	Lu	175		**ug/L**		31596	31595.553
	Tl	205	**0.449**	**ug/L**	9.395	772	0.014
	Pb	208	**23.172**	**ug/L**	1.325	33185	1.009
	Bi	209		**ug/L**		483	0.014
	U	238	**2.983**	**ug/L**	1.242	4252	0.134

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		86.9			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		83.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		88.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		95.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 16:22:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.189

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.721**	ug/L	2.434	17869	0.032
	Be	9	**54.294**	ug/L	4.369	6094	0.011
	B	11	**104.977**	ug/L	1.577	10388	0.018
	Na	23	**5409.349**	ug/L	3.581	5814563	10.434
	Mg	24	**5281.969**	ug/L	5.019	3958507	7.108
	Al	27	**4903.249**	ug/L	0.471	5439804	9.771
	P	31	**5149.329**	ug/L	1.246	300269	0.535
	K	39	**5246.163**	ug/L	8.536	6483866	11.245
	Ca	43	**4978.417**	ug/L	0.968	12085	0.021
>	Sc	45		ug/L		556333	556332.751
	V	51	**51.258**	ug/L	1.257	64231	0.110
	Cr	52	**51.867**	ug/L	0.657	51865	0.091
	Cr	53		ug/L		35368	0.007
	Mn	55	**49.355**	ug/L	1.214	69438	0.124
	Fe	57	**5071.933**	ug/L	0.850	139600	0.248
	Co	59	**52.347**	ug/L	0.386	52727	0.095
	Ni	60	**53.501**	ug/L	1.682	11154	0.020
	Cu	63		ug/L		23485	0.042
	Cu	65	**49.602**	ug/L	0.768	11057	0.020
	Zn	66	**51.667**	ug/L	0.846	7370	0.117
	Zn	67		ug/L		4040	0.019
	Zn	68		ug/L		5580	0.086
>	Ge	74		ug/L		61156	61155.930
	As	75	**51.747**	ug/L	2.972	8582	0.138
	Se	77		ug/L		1917	0.009
	Se	82	**49.926**	ug/L	1.390	727	0.012
	Kr	83		ug/L		22	-0.000
	Sr	88	**51.633**	ug/L	1.276	87910	3.146
	Y	89		ug/L		39	0.001
	Ag	107	**51.037**	ug/L	0.214	32637	1.168
	Cd	111	**53.839**	ug/L	2.029	7928	0.284
	Cd	114		ug/L		18352	0.657
>	In	115		ug/L		27922	27922.409
	Sn	120	**49.809**	ug/L	1.071	30381	1.082
	Sb	121	**48.806**	ug/L	4.243	25936	0.927
	Sb	123		ug/L		19812	0.708
	Ba	135		ug/L		6589	0.215
	Ba	137	**51.731**	ug/L	1.499	11566	0.378
	Ho	165		ug/L		9	0.000
>	Lu	175		ug/L		30558	30557.955
	Tl	205	**49.519**	ug/L	2.808	46158	1.499
	Pb	208	**52.204**	ug/L	0.850	70745	2.274
	Bi	209		ug/L		62	0.000
	U	238	**53.470**	ug/L	0.536	73225	2.395

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	107.442				
	Be	9	108.587				
	B	11	104.977				
	Na	23	108.187				
	Mg	24	105.639				
	Al	27	97.094				
	P	31	102.987				
	K	39	104.923				
	Ca	43	99.568				
>	Sc	45		90.9			
	V	51	102.515				
	Cr	52	103.734				
	Cr	53					
	Mn	55	98.710				
	Fe	57	101.439				
	Co	59	104.695				
	Ni	60	107.002				
	Cu	63					
	Cu	65	99.203				
	Zn	66	103.334				
	Zn	67					
	Zn	68					
>	Ge	74		89.7			
	As	75	103.494				
	Se	77					
	Se	82	99.852				
	Kr	83					
	Sr	88	103.267				
	Y	89					
	Ag	107	102.073				
	Cd	111	107.677				
	Cd	114					
>	In	115		91.2			
	Sn	120	99.619				
	Sb	121	97.612				
	Sb	123					
	Ba	135					
	Ba	137	103.463				
	Ho	165					
>	Lu	175		92.0			
	Tl	205	99.038				
	Pb	208	104.408				
	Bi	209					
	U	238	106.941				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 16:28:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.190

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.057**	ug/L	69.534	57	0.000
	Be	9	**0.006**	ug/L	208.472	4	0.000
	B	11	**1.907**	ug/L	28.261	494	0.000
	Na	23	**-1.062**	ug/L	166.187	7669	-0.002
	Mg	24	**0.273**	ug/L	1068.655	1667	0.000
	Al	27	**0.656**	ug/L	410.139	4668	0.001
	P	31	**3.072**	ug/L	35.580	2898	0.000
	K	39	**8.429**	ug/L	306.635	227475	0.018
	Ca	43	**3.566**	ug/L	60.540	145	0.000
>	Sc	45		ug/L		555287	555287.441
	V	51	**-0.260**	ug/L	240.975	2468	-0.001
	Cr	52	**-0.055**	ug/L	97.101	1338	-0.000
	Cr	53		ug/L		30764	-0.001
	Mn	55	**0.069**	ug/L	16.198	638	0.000
	Fe	57	**2.563**	ug/L	78.733	1958	0.000
	Co	59	**0.023**	ug/L	23.944	120	0.000
	Ni	60	**-0.027**	ug/L	61.293	30	-0.000
	Cu	63		ug/L		113	-0.000
	Cu	65	**0.028**	ug/L	128.583	34	0.000
	Zn	66	**0.012**	ug/L	895.728	217	0.000
	Zn	67		ug/L		3000	0.002
	Zn	68		ug/L		309	0.000
>	Ge	74		ug/L		61688	61688.200
	As	75	**-0.098**	ug/L	677.838	122	-0.000
	Se	77		ug/L		1336	-0.001
	Se	82	**0.161**	ug/L	385.184	-3	0.000
	Kr	83		ug/L		26	0.000
	Sr	88	**0.002**	ug/L	503.934	57	0.000
	Y	89		ug/L		13	0.000
	Ag	107	**0.008**	ug/L	55.130	17	0.000
	Cd	111	**0.014**	ug/L	376.666	10	0.000
	Cd	114		ug/L		16	0.000
>	In	115		ug/L		28220	28219.783
	Sn	120	**0.083**	ug/L	10.475	228	0.002
	Sb	121	**0.459**	ug/L	28.864	303	0.009
	Sb	123		ug/L		227	0.006
	Ba	135		ug/L		7	0.000
	Ba	137	**-0.003**	ug/L	353.555	9	-0.000
	Ho	165		ug/L		5	0.000
>	Lu	175		ug/L		30918	30918.065
	Tl	205	**0.208**	ug/L	27.535	529	0.006
	Pb	208	**-0.289**	ug/L	16.715	877	-0.013
	Bi	209		ug/L		52	-0.000
	U	238	**0.025**	ug/L	35.695	65	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		90.8			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		90.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		93.0			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872854
Sample Date/Time: Tuesday, July 14, 2009 16:40:43
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872854.192

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**47.982**	ug/L	7.841	15252	0.029
	Be	9	**3.015**	ug/L	0.933	327	0.001
	B	11	**7.643**	ug/L	3.513	1001	0.001
	Na	23	**556.618**	ug/L	6.458	579185	1.074
	Mg	24	**3851.292**	ug/L	3.425	2758081	5.183
	Al	27	**25356.739**	ug/L	7.628	26958981	50.532
	P	31	**420.832**	ug/L	1.840	25860	0.044
	K	39	**3848.579**	ug/L	3.196	4600457	8.249
	Ca	43	**3390.607**	ug/L	0.224	7920	0.015
>	Sc	45		ug/L		532377	532376.974
	V	51	**38.281**	ug/L	1.500	46586	0.082
	Cr	52	**19.627**	ug/L	1.132	19604	0.034
	Cr	53		ug/L		22761	-0.014
	Mn	55	**1205.019**	ug/L	1.551	1609174	3.023
	Fe	57	**28235.936**	ug/L	1.061	735254	1.378
	Co	59	**9.737**	ug/L	1.317	9461	0.018
	Ni	60	**15.505**	ug/L	2.101	3115	0.006
	Cu	63		ug/L		30270	0.057
	Cu	65	**68.333**	ug/L	1.802	14561	0.027
	Zn	66	**203.434**	ug/L	0.099	26044	0.461
	Zn	67		ug/L		6417	0.067
	Zn	68		ug/L		19463	0.342
>	Ge	74		ug/L		56101	56101.199
	As	75	**8.977**	ug/L	1.537	1469	0.024
	Se	77		ug/L		822	-0.008
	Se	82	**1.948**	ug/L	37.116	21	0.000
	Kr	83		ug/L		38	0.000
	Sr	88	**36.049**	ug/L	1.472	59076	2.197
	Y	89		ug/L		122968	4.576
	Ag	107	**0.263**	ug/L	11.707	173	0.006
	Cd	111	**1.147**	ug/L	3.023	170	0.006
	Cd	114		ug/L		95	0.003
>	In	115		ug/L		26871	26870.543
	Sn	120	**1.770**	ug/L	5.434	1201	0.038
	Sb	121	**0.257**	ug/L	11.926	187	0.005
	Sb	123		ug/L		139	0.003
	Ba	135		ug/L		31538	1.042
	Ba	137	**252.209**	ug/L	1.265	55809	1.844
	Ho	165		ug/L		4277	0.141
>	Lu	175		ug/L		30263	30263.329
	Tl	205	**0.536**	ug/L	6.417	819	0.016
	Pb	208	**29.906**	ug/L	1.817	40660	1.303
	Bi	209		ug/L		1889	0.061
	U	238	**4.680**	ug/L	0.867	6374	0.210

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		87.0			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		82.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		87.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201872855
Sample Date/Time: Tuesday, July 14, 2009 16:46:37
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872855.193

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**73.101**	ug/L	6.208	22891	0.044
	Be	9	**29.176**	ug/L	1.449	3090	0.006
	B	11	**62.863**	ug/L	1.940	5983	0.011
	Na	23	**1556.808**	ug/L	6.407	1585870	3.003
	Mg	24	**5919.560**	ug/L	8.813	4174132	7.966
	Al	27	**38755.377**	ug/L	5.826	40500818	77.233
	P	31	**1482.507**	ug/L	1.830	83355	0.154
	K	39	**6202.737**	ug/L	6.581	7190916	13.296
	Ca	43	**5083.430**	ug/L	0.409	11635	0.022
>	Sc	45		ug/L		524553	524552.689
	V	51	**75.090**	ug/L	1.616	87517	0.162
	Cr	52	**50.045**	ug/L	0.971	47237	0.088
	Cr	53		ug/L		25731	-0.007
	Mn	55	**1269.432**	ug/L	1.321	1670470	3.184
	Fe	57	**39403.716**	ug/L	1.145	1010311	1.923
	Co	59	**38.403**	ug/L	0.380	36496	0.069
	Ni	60	**43.208**	ug/L	1.586	8495	0.016
	Cu	63		ug/L		36854	0.070
	Cu	65	**84.255**	ug/L	1.176	17688	0.034
	Zn	66	**302.295**	ug/L	0.619	38179	0.685
	Zn	67		ug/L		8335	0.103
	Zn	68		ug/L		28205	0.504
>	Ge	74		ug/L		55478	55477.777
	As	75	**49.483**	ug/L	1.239	7450	0.132
	Se	77		ug/L		892	-0.006
	Se	82	**9.532**	ug/L	10.561	122	0.002
	Kr	83		ug/L		42	0.000
	Sr	88	**69.568**	ug/L	0.394	112204	4.239
	Y	89		ug/L		129465	4.893
	Ag	107	**24.444**	ug/L	0.937	14816	0.560
	Cd	111	**7.046**	ug/L	1.104	989	0.037
	Cd	114		ug/L		1714	0.064
>	In	115		ug/L		26457	26456.843
	Sn	120	**17.379**	ug/L	1.336	10152	0.377
	Sb	121	**49.528**	ug/L	1.426	24929	0.940
	Sb	123		ug/L		19249	0.726
	Ba	135		ug/L		40873	1.349
	Ba	137	**321.430**	ug/L	0.644	71201	2.350
	Ho	165		ug/L		4541	0.150
>	Lu	175		ug/L		30292	30292.387
	Tl	205	**46.912**	ug/L	1.907	43363	1.421
	Pb	208	**126.561**	ug/L	0.065	168258	5.514
	Bi	209		ug/L		1921	0.062
	U	238	**30.650**	ug/L	0.672	41622	1.373

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		85.7			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		81.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		86.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		91.2			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201872859
Sample Date/Time: Tuesday, July 14, 2009 16:52:31
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872859.194

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**71.306**	ug/L	6.199	21946	0.043
	Be	9	**29.853**	ug/L	2.337	3107	0.006
	B	11	**64.334**	ug/L	1.593	6011	0.011
	Na	23	**1591.443**	ug/L	5.810	1589142	3.070
	Mg	24	**4698.432**	ug/L	3.508	3263354	6.323
	Al	27	**31282.846**	ug/L	2.354	32146278	62.342
	P	31	**1465.578**	ug/L	0.737	80980	0.152
	K	39	**4843.969**	ug/L	3.960	5557599	10.383
	Ca	43	**4299.868**	ug/L	1.449	9695	0.019
>	Sc	45		ug/L		515537	515536.979
	V	51	**65.640**	ug/L	1.662	75495	0.141
	Cr	52	**44.886**	ug/L	0.966	41764	0.079
	Cr	53		ug/L		24655	-0.009
	Mn	55	**3677.763**	ug/L	0.124	4756880	9.226
	Fe	57	**37361.626**	ug/L	0.913	941640	1.823
	Co	59	**46.798**	ug/L	1.027	43683	0.085
	Ni	60	**43.149**	ug/L	2.531	8336	0.016
	Cu	63		ug/L		40046	0.077
	Cu	65	**93.783**	ug/L	0.899	19348	0.037
	Zn	66	**248.906**	ug/L	0.940	31070	0.564
	Zn	67		ug/L		7232	0.085
	Zn	68		ug/L		23337	0.421
>	Ge	74		ug/L		54786	54786.446
	As	75	**51.282**	ug/L	0.469	7619	0.137
	Se	77		ug/L		822	-0.007
	Se	82	**10.123**	ug/L	5.705	128	0.002
	Kr	83		ug/L		42	0.000
	Sr	88	**61.553**	ug/L	0.855	98443	3.751
	Y	89		ug/L		131223	5.002
	Ag	107	**24.744**	ug/L	1.875	14870	0.566
	Cd	111	**7.036**	ug/L	5.090	979	0.037
	Cd	114		ug/L		1642	0.062
>	In	115		ug/L		26232	26231.836
	Sn	120	**20.332**	ug/L	0.891	11748	0.442
	Sb	121	**56.852**	ug/L	0.300	28366	1.079
	Sb	123		ug/L		21530	0.819
	Ba	135		ug/L		50629	1.693
	Ba	137	**406.013**	ug/L	1.716	88768	2.969
	Ho	165		ug/L		4554	0.152
>	Lu	175		ug/L		29900	29899.891
	Tl	205	**48.279**	ug/L	1.172	44034	1.462
	Pb	208	**124.852**	ug/L	0.953	163849	5.439
	Bi	209		ug/L		1946	0.063
	U	238	**29.952**	ug/L	1.043	40147	1.342

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			84.3		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			80.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			85.7		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			90.0		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201872856
Sample Date/Time: Tuesday, July 14, 2009 16:58:25
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881838|10|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201872856.195

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**7.367**	**ug/L**	6.391	2402	0.004
	Be	9	**0.550**	**ug/L**	8.099	63	0.000
	B	11	**2.524**	**ug/L**	15.694	537	0.000
	Na	23	**92.830**	**ug/L**	5.881	105053	0.179
	Mg	24	**738.712**	**ug/L**	4.798	536215	0.994
	Al	27	**5563.289**	**ug/L**	7.317	5979108	11.087
	P	31	**86.810**	**ug/L**	3.926	7487	0.009
	K	39	**720.022**	**ug/L**	6.002	1042434	1.543
	Ca	43	**692.209**	**ug/L**	4.944	1739	0.003
>	Sc	45		**ug/L**		538457	538457.228
	V	51	**7.825**	**ug/L**	5.814	11761	0.017
	Cr	52	**3.781**	**ug/L**	1.957	4910	0.007
	Cr	53		**ug/L**		26359	-0.008
	Mn	55	**189.892**	**ug/L**	0.753	256986	0.476
	Fe	57	**5945.090**	**ug/L**	1.088	158034	0.290
	Co	59	**1.761**	**ug/L**	3.043	1808	0.003
	Ni	60	**3.083**	**ug/L**	4.678	654	0.001
	Cu	63		**ug/L**		4626	0.008
	Cu	65	**10.253**	**ug/L**	1.994	2234	0.004
	Zn	66	**37.926**	**ug/L**	1.430	5303	0.086
	Zn	67		**ug/L**		3432	0.011
	Zn	68		**ug/L**		4108	0.064
>	Ge	74		**ug/L**		59322	59322.205
	As	75	**1.019**	**ug/L**	55.469	293	0.003
	Se	77		**ug/L**		997	-0.005
	Se	82	**0.461**	**ug/L**	69.429	1	0.000
	Kr	83		**ug/L**		24	-0.000
	Sr	88	**7.139**	**ug/L**	0.841	11962	0.435
	Y	89		**ug/L**		22831	0.834
	Ag	107	**0.041**	**ug/L**	21.278	37	0.001
	Cd	111	**0.158**	**ug/L**	10.596	30	0.001
	Cd	114		**ug/L**		29	0.001
>	In	115		**ug/L**		27377	27377.423
	Sn	120	**0.272**	**ug/L**	12.669	334	0.006
	Sb	121	**0.079**	**ug/L**	35.014	98	0.002
	Sb	123		**ug/L**		79	0.001
	Ba	135		**ug/L**		6013	0.200
	Ba	137	**48.102**	**ug/L**	2.746	10586	0.352
	Ho	165		**ug/L**		761	0.025
>	Lu	175		**ug/L**		30078	30077.934
	Tl	205	**0.238**	**ug/L**	14.738	542	0.007
	Pb	208	**5.505**	**ug/L**	1.307	8444	0.240
	Bi	209		**ug/L**		362	0.010
	U	238	**1.029**	**ug/L**	1.161	1416	0.046

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		88.0			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		87.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		89.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		90.5			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 17:04:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.196

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.919**	**ug/L**	6.410	17207	0.032
	Be	9	**54.843**	**ug/L**	1.820	5916	0.011
	B	11	**108.476**	**ug/L**	2.848	10298	0.019
	Na	23	**5468.215**	**ug/L**	4.115	5643546	10.548
	Mg	24	**5192.128**	**ug/L**	2.690	3739662	6.987
	Al	27	**5142.074**	**ug/L**	8.580	5483447	10.247
	P	31	**5248.839**	**ug/L**	1.066	293913	0.545
	K	39	**4932.597**	**ug/L**	5.250	5872530	10.573
	Ca	43	**5035.777**	**ug/L**	1.322	11744	0.022
>	Sc	45		**ug/L**		534634	534634.036
	V	51	**52.445**	**ug/L**	2.690	63028	0.113
	Cr	52	**53.255**	**ug/L**	1.409	51112	0.093
	Cr	53		**ug/L**		34500	0.008
	Mn	55	**50.223**	**ug/L**	1.965	67835	0.126
	Fe	57	**5202.995**	**ug/L**	2.866	137450	0.254
	Co	59	**53.741**	**ug/L**	2.620	51975	0.097
	Ni	60	**54.635**	**ug/L**	3.331	10930	0.020
	Cu	63		**ug/L**		22880	0.043
	Cu	65	**51.097**	**ug/L**	2.128	10939	0.020
	Zn	66	**52.237**	**ug/L**	4.014	7232	0.118
	Zn	67		**ug/L**		4045	0.021
	Zn	68		**ug/L**		5529	0.088
>	Ge	74		**ug/L**		59443	59443.167
	As	75	**51.784**	**ug/L**	0.710	8345	0.138
	Se	77		**ug/L**		1820	0.008
	Se	82	**50.310**	**ug/L**	5.085	712	0.012
	Kr	83		**ug/L**		30	0.000
	Sr	88	**52.709**	**ug/L**	3.750	86074	3.212
	Y	89		**ug/L**		34	0.001
	Ag	107	**52.406**	**ug/L**	4.577	32135	1.200
	Cd	111	**55.669**	**ug/L**	5.658	7857	0.293
	Cd	114		**ug/L**		17892	0.668
>	In	115		**ug/L**		26819	26818.880
	Sn	120	**51.268**	**ug/L**	5.180	29979	1.113
	Sb	121	**50.360**	**ug/L**	1.385	25688	0.956
	Sb	123		**ug/L**		19625	0.730
	Ba	135		**ug/L**		6609	0.225
	Ba	137	**53.845**	**ug/L**	3.247	11538	0.394
	Ho	165		**ug/L**		7	0.000
>	Lu	175		**ug/L**		29304	29304.343
	Tl	205	**50.636**	**ug/L**	0.253	45252	1.533
	Pb	208	**53.735**	**ug/L**	3.895	69737	2.341
	Bi	209		**ug/L**		51	0.000
	U	238	**54.667**	**ug/L**	3.788	71731	2.449

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	107.839				
	Be	9	109.686				
	B	11	108.476				
	Na	23	109.364				
	Mg	24	103.843				
	Al	27	101.823				
	P	31	104.977				
	K	39	98.652				
	Ca	43	100.716				
>	Sc	45		87.4			
	V	51	104.890				
	Cr	52	106.509				
	Cr	53					
	Mn	55	100.446				
	Fe	57	104.060				
	Co	59	107.481				
	Ni	60	109.269				
	Cu	63					
	Cu	65	102.194				
	Zn	66	104.473				
	Zn	67					
	Zn	68					
>	Ge	74		87.1			
	As	75	103.568				
	Se	77					
	Se	82	100.620				
	Kr	83					
	Sr	88	105.417				
	Y	89					
	Ag	107	104.811				
	Cd	111	111.339				
	Cd	114					
>	In	115		87.6			
	Sn	120	102.535				
	Sb	121	100.719				
	Sb	123					
	Ba	135					
	Ba	137	107.690				
	Ho	165					
>	Lu	175		88.2			
	Tl	205	101.273				
	Pb	208	107.470				
	Bi	209					
	U	238	109.334				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Cd	111	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 17:10:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.197

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.057**	ug/L	21.924	57	0.000
	Be	9	**0.010**	ug/L	143.757	5	0.000
	B	11	**2.103**	ug/L	21.688	507	0.000
	Na	23	**-1.282**	ug/L	292.138	7336	-0.002
	Mg	24	**0.261**	ug/L	817.365	1667	0.000
	Al	27	**-1.115**	ug/L	168.542	2667	-0.002
	P	31	**1.770**	ug/L	66.105	2788	0.000
	K	39	**17.161**	ug/L	64.299	235596	0.037
	Ca	43	**1.921**	ug/L	423.510	139	0.000
>	Sc	45		ug/L		548825	548825.465
	V	51	**-0.918**	ug/L	36.992	1661	-0.002
	Cr	52	**-0.201**	ug/L	22.424	1183	-0.000
	Cr	53		ug/L		29729	-0.002
	Mn	55	**0.127**	ug/L	25.490	710	0.000
	Fe	57	**3.311**	ug/L	68.990	1954	0.000
	Co	59	**0.011**	ug/L	90.639	106	0.000
	Ni	60	**0.005**	ug/L	545.329	36	0.000
	Cu	63		ug/L		97	-0.000
	Cu	65	**0.024**	ug/L	13.865	33	0.000
	Zn	66	**-0.002**	ug/L	953.717	211	-0.000
	Zn	67		ug/L		2969	0.002
	Zn	68		ug/L		348	0.001
>	Ge	74		ug/L		60487	60486.735
	As	75	**-0.229**	ug/L	412.924	100	-0.001
	Se	77		ug/L		1191	-0.003
	Se	82	**0.459**	ug/L	136.846	1	0.000
	Kr	83		ug/L		22	-0.000
	Sr	88	**-0.000**	ug/L	610.028	53	-0.000
	Y	89		ug/L		17	0.000
	Ag	107	**0.004**	ug/L	146.616	14	0.000
	Cd	111	**-0.014**	ug/L	248.996	5	-0.000
	Cd	114		ug/L		17	0.000
>	In	115		ug/L		27764	27763.733
	Sn	120	**0.135**	ug/L	49.600	255	0.003
	Sb	121	**0.465**	ug/L	19.822	302	0.009
	Sb	123		ug/L		233	0.006
	Ba	135		ug/L		12	0.000
	Ba	137	**-0.007**	ug/L	310.791	8	-0.000
	Ho	165		ug/L		2	-0.000
>	Lu	175		ug/L		30026	30026.490
	Tl	205	**0.229**	ug/L	5.810	533	0.007
	Pb	208	**-0.321**	ug/L	8.890	810	-0.014
	Bi	209		ug/L		40	-0.000
	U	238	**0.032**	ug/L	5.554	72	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		89.7			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		88.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		90.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		90.4			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, July 14, 2009 19:53:01
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090704\Sample.062
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	820.4	820.424	38.923	4.7
	Mg	24.0	13528.4	13528.403	144.156	1.1
	Co	58.9	20541.2	20541.160	298.001	1.5
	Rh	102.9	32961.2	32961.187	455.921	1.4
	In	114.9	36375.7	36375.658	432.887	1.2
	Pb	208.0	16323.7	16323.722	232.178	1.4
⌈>	Ba	137.9	31346.3	31346.326	459.318	1.5
⌊	Ba++	69.0	1245.3	0.040	0.000	1.2
⌈>	Ce	139.9	42282.1	42282.081	197.657	0.5
⌊	CeO	155.9	884.0	0.021	0.000	2.0
	Bkgd	220.0	4.3	4.300	1.441	33.5

Current Optimization File Data

Current Value	Description
0.86	Nebulizer Gas Flow
6.50	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	9.3	2341.9
Co	59	25	10.5	32482.6
In	115	25	12.5	43915.1

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	587	2080	0.616
Be	9.0	9.0	2043	2080	0.614
Mg	24.0	24.0	5700	2120	0.603
Mg	25.0	25.0	5922	2080	0.689
Mg	26.0	26.1	6167	2120	0.663
Co	58.9	58.9	14167	2170	0.630
Rh	102.9	102.9	24872	2230	0.697
In	114.9	114.8	27784	2260	0.707
Ce	139.9	139.9	33862	2280	0.775
Pb	206.0	206.0	49936	2420	0.660
Pb	207.0	207.0	50183	2385	0.734
Pb	208.0	208.0	50439	2430	0.738
U	238.1	238.1	57737	2470	0.720

Report Date/Time: Tuesday, July 14, 2009 19:50:13

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 22:24:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Blank.098

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		657008	
⌊	Ni	60		ug/L		199	
⌈>	Ge	74		ug/L		139642	
|	As	75		ug/L		433	
|	Se	77		ug/L		4579	
|	Se	82		ug/L		-30	
⌊	Kr	83		ug/L		75	
⌈>	Lu	175		ug/L		62258	
⌊	Tl	205		ug/L		612	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45					
⌊	Ni	60					
⌈>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175					
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 22:28:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Standard 1.099

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		625204	625203.538
	Ni	60	**10.000**	**ug/L**	2.103	5180	0.008
>	Ge	74		**ug/L**		138863	138862.562
	As	75	**10.000**	**ug/L**	7.356	4250	0.028
	Se	77		**ug/L**		4993	0.003
	Se	82	**10.000**	**ug/L**	2.294	273	0.002
	Kr	83		**ug/L**		89	0.000
>	Lu	175		**ug/L**		62108	62108.009
	Tl	205	**10.000**	**ug/L**	1.705	21724	0.340

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 22:32:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Standard 2.100

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		625395	625394.863
	Ni	60	**99.981**	**ug/L**	6.692	49086	0.078
>	Ge	74		**ug/L**		138384	138383.549
	As	75	**100.050**	**ug/L**	2.493	40530	0.290
	Se	77		**ug/L**		7887	0.024
	Se	82	**100.049**	**ug/L**	2.656	3149	0.023
	Kr	83		**ug/L**		84	0.000
>	Lu	175		**ug/L**		61801	61800.677
	Tl	205	**99.992**	**ug/L**	1.819	209020	3.372

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 22:36:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 1.101

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		621903	621902.817
⌊	Ni	60	**53.641**	**ug/L**	6.065	26280	0.042
⌈>	Ge	74		**ug/L**		137728	137727.518
|	As	75	**49.430**	**ug/L**	2.066	20142	0.143
|	Se	77		**ug/L**		6835	0.017
|	Se	82	**49.144**	**ug/L**	2.595	1524	0.011
⌊	Kr	83		**ug/L**		86	0.000
⌈>	Lu	175		**ug/L**		62219	62218.898
⌊	Tl	205	**50.970**	**ug/L**	2.434	107526	1.719

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		94.7			
⌊	Ni	60	107.283				
⌈>	Ge	74		98.6			
|	As	75	98.859				
|	Se	77					
|	Se	82	98.288				
⌊	Kr	83					
⌈>	Lu	175		99.9			
⌊	Tl	205	101.940				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 22:40:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 2.102

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		638028	638028.154
⌊	Ni	60	**0.021**	**ug/L**	15.899	204	0.000
⌈>	Ge	74		**ug/L**		138914	138913.830
|	As	75	**0.514**	**ug/L**	100.192	640	0.001
|	Se	77		**ug/L**		5620	0.008
|	Se	82	**0.081**	**ug/L**	231.553	-27	0.000
⌊	Kr	83		**ug/L**		79	0.000
⌈>	Lu	175		**ug/L**		61573	61572.703
⌊	Tl	205	**0.030**	**ug/L**	26.830	668	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		97.1			
⌊	Ni	60					
⌈>	Ge	74		99.5			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		98.9			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 22:44:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 3.103

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		672410	672409.502
⌊	Ni	60	**1.935**	**ug/L**	3.900	1222	0.002
⌈>	Ge	74		**ug/L**		139193	139192.553
|	As	75	**6.170**	**ug/L**	9.997	2919	0.018
|	Se	77		**ug/L**		5443	0.006
|	Se	82	**5.039**	**ug/L**	10.843	131	0.001
⌊	Kr	83		**ug/L**		71	-0.000
⌈>	Lu	175		**ug/L**		62075	62074.939
⌊	Tl	205	**1.043**	**ug/L**	4.211	2792	0.035

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovr	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		102.3			
	Ni	60	96.758				
>	Ge	74		99.7			
	As	75	123.408				
	Se	77					
	Se	82	100.772				
	Kr	83					
>	Lu	175		99.7			
	Tl	205	104.270				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 22:48:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 4.104

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		593709	593709.396
⌊	Ni	60	**4.248**	**ug/L**	0.888	2155	0.003
⌈>	Ge	74		**ug/L**		126707	126706.888
|	As	75	**2.085**	**ug/L**	32.591	1155	0.006
|	Se	77		**ug/L**		6543	0.019
|	Se	82	**-1.091**	**ug/L**	36.458	-59	-0.000
⌊	Kr	83		**ug/L**		137	0.001
⌈>	Lu	175		**ug/L**		59433	59432.644
⌊	Tl	205	**-0.000**	**ug/L**	2029.393	584	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		90.4			
	Ni	60	157.343				
>	Ge	74		90.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		95.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 22:52:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 5.105

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		ug/L		581319	581319.085
	Ni	60	**22.668**	ug/L	1.325	10497	0.018
>	Ge	74		ug/L		125137	125136.997
	As	75	**22.580**	ug/L	4.145	8572	0.065
	Se	77		ug/L		6637	0.020
	Se	82	**20.745**	ug/L	2.965	569	0.005
	Kr	83		ug/L		129	0.000
>	Lu	175		ug/L		59386	59385.775
	Tl	205	**17.962**	ug/L	0.466	36559	0.606

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		88.5			
	Ni	60	99.860				
>	Ge	74		89.6			
	As	75	112.901				
	Se	77					
	Se	82	103.726				
	Kr	83					
>	Lu	175		95.4			
	Tl	205	89.811				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 22:56:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.106

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		623646	623645.642
⌊	Ni	60	**53.457**	**ug/L**	2.546	26291	0.042
⌈>	Ge	74		**ug/L**		135006	135006.379
|	As	75	**48.647**	**ug/L**	1.214	19448	0.141
|	Se	77		**ug/L**		7079	0.020
|	Se	82	**50.626**	**ug/L**	1.623	1540	0.012
⌊	Kr	83		**ug/L**		74	0.000
⌈>	Lu	175		**ug/L**		60927	60926.599
⌊	Tl	205	**49.647**	**ug/L**	2.083	102595	1.674

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		94.9			
	Ni	60	106.914				
>	Ge	74		96.7			
	As	75	97.294				
	Se	77					
	Se	82	101.253				
	Kr	83					
>	Lu	175		97.9			
	Tl	205	99.294				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 23:00:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.107

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		623407	623407.475
⌊	Ni	60	-0.024	ug/L	223.586	177	-0.000
⌈>	Ge	74		ug/L		137165	137164.983
|	As	75	0.403	ug/L	199.518	587	0.001
|	Se	77		ug/L		6289	0.013
|	Se	82	-0.087	ug/L	570.190	-32	-0.000
⌊	Kr	83		ug/L		80	0.000
⌈>	Lu	175		ug/L		61198	61198.427
⌊	Tl	205	0.007	ug/L	188.729	616	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		94.9			
⌊	Ni	60					
⌈>	Ge	74		98.2			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		98.3			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872852
Sample Date/Time: Tuesday, July 14, 2009 23:04:42
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872852.108

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		656617	656617.301
⌊	Ni	60	**0.162**	**ug/L**	40.244	281	0.000
⌈>	Ge	74		**ug/L**		135207	135206.881
|	As	75	**0.046**	**ug/L**	1554.634	440	0.000
|	Se	77		**ug/L**		4571	0.001
|	Se	82	**-0.148**	**ug/L**	162.716	-34	-0.000
⌊	Kr	83		**ug/L**		79	0.000
⌈>	Lu	175		**ug/L**		62186	62186.351
⌊	Tl	205	**0.214**	**ug/L**	2.849	1061	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		99.9			
⌊	Ni	60					
⌈>	Ge	74		96.8			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		99.9			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872853
Sample Date/Time: Tuesday, July 14, 2009 23:08:41
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881838|40|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872853.109

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		ug/L		629928	629927.659
	Ni	60	**27.948**	ug/L	3.616	13976	0.022
>	Ge	74		ug/L		137456	137455.728
	As	75	**67.220**	ug/L	2.629	27185	0.195
	Se	77		ug/L		7315	0.020
	Se	82	**47.852**	ug/L	1.730	1481	0.011
	Kr	83		ug/L		83	0.000
>	Lu	175		ug/L		62363	62363.479
	Tl	205	**47.611**	ug/L	5.125	100726	1.606

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		95.9			
	Ni	60					
>	Ge	74		98.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.2			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232585001
Sample Date/Time: Tuesday, July 14, 2009 23:20:37
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\232585001.112

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		631589	631589.227
⌊	Ni	60	**5.746**	ug/L	4.041	3034	0.005
⌈>	Ge	74		ug/L		132763	132763.181
|	As	75	**3.329**	ug/L	14.748	1691	0.010
|	Se	77		ug/L		3325	-0.008
|	Se	82	**2.131**	ug/L	21.153	37	0.000
⌊	Kr	83		ug/L		130	0.000
⌈>	Lu	175		ug/L		69067	69066.604
⌊	Tl	205	**0.228**	ug/L	3.028	1209	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		96.1			
⌊	Ni	60					
⌈>	Ge	74		95.1			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		110.9			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232585002
Sample Date/Time: Tuesday, July 14, 2009 23:24:36
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\232585002.113

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		654153	654153.490
	Ni	60	**16.036**	**ug/L**	5.029	8408	0.013
>	Ge	74		**ug/L**		131272	131272.054
	As	75	**8.102**	**ug/L**	9.281	3489	0.023
	Se	77		**ug/L**		3254	-0.008
	Se	82	**2.536**	**ug/L**	10.301	48	0.001
	Kr	83		**ug/L**		122	0.000
>	Lu	175		**ug/L**		65611	65611.333
	Tl	205	**0.525**	**ug/L**	5.952	1808	0.018

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		99.6			
⌊	Ni	60					
⌈>	Ge	74		94.0			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		105.4			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232585003
Sample Date/Time: Tuesday, July 14, 2009 23:28:34
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\232585003.114

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		661929	661928.957
⌊	Ni	60	**12.791**	**ug/L**	2.664	6833	0.010
⌈>	Ge	74		**ug/L**		130613	130612.706
|	As	75	**7.552**	**ug/L**	5.973	3263	0.022
|	Se	77		**ug/L**		3083	-0.009
|	Se	82	**2.477**	**ug/L**	24.129	46	0.001
⌊	Kr	83		**ug/L**		138	0.001
⌈>	Lu	175		**ug/L**		66788	66787.519
⌊	Tl	205	**0.384**	**ug/L**	5.474	1520	0.013

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		100.7			
	Ni	60					
>	Ge	74		93.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		107.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 23:32:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.115

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		639620	639619.673
	Ni	60	**50.965**	**ug/L**	1.773	25729	0.040
>	Ge	74		**ug/L**		132949	132948.783
	As	75	**49.172**	**ug/L**	2.618	19350	0.142
	Se	77		**ug/L**		6005	0.012
	Se	82	**51.118**	**ug/L**	2.412	1531	0.012
	Kr	83		**ug/L**		78	0.000
>	Lu	175		**ug/L**		61428	61428.114
	Tl	205	**47.386**	**ug/L**	1.524	98782	1.598

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		97.4			
	Ni	60	101.929				
>	Ge	74		95.2			
	As	75	98.344				
	Se	77					
	Se	82	102.235				
	Kr	83					
>	Lu	175		98.7			
	Tl	205	94.771				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 23:36:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.116

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		665749	665749.038
	Ni	60	**0.040**	**ug/L**	50.394	222	0.000
>	Ge	74		**ug/L**		137288	137288.069
	As	75	**0.679**	**ug/L**	215.234	695	0.002
	Se	77		**ug/L**		4997	0.004
	Se	82	**0.132**	**ug/L**	389.412	-25	0.000
	Kr	83		**ug/L**		74	0.000
>	Lu	175		**ug/L**		61419	61418.742
	Tl	205	**0.127**	**ug/L**	11.783	867	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		101.3			
	Ni	60					
>	Ge	74		98.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		98.7			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872854
Sample Date/Time: Tuesday, July 14, 2009 23:44:32
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872854.118

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		664451	664450.730
⌊	Ni	60	**14.618**	**ug/L**	5.280	7801	0.011
⌈>	Ge	74		**ug/L**		129667	129666.865
|	As	75	**8.226**	**ug/L**	8.305	3492	0.024
|	Se	77		**ug/L**		2877	-0.011
|	Se	82	**1.058**	**ug/L**	93.832	4	0.000
⌊	Kr	83		**ug/L**		121	0.000
⌈>	Lu	175		**ug/L**		64317	64317.121
⌊	Tl	205	**0.455**	**ug/L**	3.323	1619	0.015

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		101.1			
⌊	Ni	60					
⌈>	Ge	74		92.9			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		103.3			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872855
Sample Date/Time: Tuesday, July 14, 2009 23:48:31
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872855.119

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		652467	652466.704
⌊	Ni	60	**40.805**	**ug/L**	1.330	21053	0.032
⌈>	Ge	74		**ug/L**		130186	130186.475
|	As	75	**48.353**	**ug/L**	2.185	18641	0.140
|	Se	77		**ug/L**		3036	-0.009
|	Se	82	**9.177**	**ug/L**	10.620	246	0.002
⌊	Kr	83		**ug/L**		126	0.000
⌈>	Lu	175		**ug/L**		64348	64347.593
⌊	Tl	205	**44.274**	**ug/L**	2.140	96710	1.493

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		99.3			
	Ni	60					
>	Ge	74		93.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		103.4			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872859
Sample Date/Time: Tuesday, July 14, 2009 23:52:30
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 881838|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872859.120

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		667009	667008.928
⌊	Ni	60	**39.297**	**ug/L**	5.508	20709	0.031
⌈>	Ge	74		**ug/L**		130477	130476.859
|	As	75	**50.004**	**ug/L**	0.806	19309	0.145
|	Se	77		**ug/L**		3016	-0.010
|	Se	82	**9.462**	**ug/L**	7.844	256	0.002
⌊	Kr	83		**ug/L**		123	0.000
⌈>	Lu	175		**ug/L**		64951	64951.324
⌊	Tl	205	**45.459**	**ug/L**	0.806	100217	1.533

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		101.5			
	Ni	60					
>	Ge	74		93.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		104.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201872856
Sample Date/Time: Tuesday, July 14, 2009 23:56:29
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881838|10|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201872856.121

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		635635	635635.271
	Ni	60	**3.098**	**ug/L**	7.416	1734	0.002
>	Ge	74		**ug/L**		130839	130839.181
	As	75	**1.921**	**ug/L**	31.857	1132	0.006
	Se	77		**ug/L**		3460	-0.006
	Se	82	**0.065**	**ug/L**	706.903	-26	0.000
	Kr	83		**ug/L**		84	0.000
>	Lu	175		**ug/L**		61607	61607.188
	Tl	205	**0.270**	**ug/L**	5.910	1167	0.009

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		96.7			
	Ni	60					
>	Ge	74		93.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		99.0			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 15, 2009 00:00:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.122

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		664694	664694.302
⌊	Ni	60	**48.496**	**ug/L**	3.407	25441	0.038
⌈>	Ge	74		**ug/L**		129524	129523.731
|	As	75	**48.978**	**ug/L**	2.888	18775	0.142
|	Se	77		**ug/L**		5593	0.010
|	Se	82	**52.232**	**ug/L**	1.816	1525	0.012
⌊	Kr	83		**ug/L**		79	0.000
⌈>	Lu	175		**ug/L**		60100	60099.823
⌊	Tl	205	**48.249**	**ug/L**	1.863	98382	1.627

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		101.2			
	Ni	60	96.992				
>	Ge	74		92.8			
	As	75	97.955				
	Se	77					
	Se	82	104.465				
	Kr	83					
>	Lu	175		96.5			
	Tl	205	96.498				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 15, 2009 00:04:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.123

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		657563	657563.488
⌊	Ni	60	**0.065**	**ug/L**	158.866	232	0.000
⌈>	Ge	74		**ug/L**		134753	134752.611
|	As	75	**0.709**	**ug/L**	53.863	695	0.002
|	Se	77		**ug/L**		4604	0.001
|	Se	82	**-0.277**	**ug/L**	244.659	-37	-0.000
⌊	Kr	83		**ug/L**		86	0.000
⌈>	Lu	175		**ug/L**		60276	60275.942
⌊	Tl	205	**0.133**	**ug/L**	7.473	863	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		100.1			
⌊	Ni	60					
⌈>	Ge	74		96.5			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		96.8			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL
Method Description: 7471A, 1LM04 ANALYST JXL1
Element: Hg

Date: 07/13/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 071309S1.SIF Results Data Set Name: 071309S2

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/13/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0026	0.0026	09:36:04	No
2			0.0025	0.0025	09:36:39	No
Mean:			0.0025			
SD :			0.0001			
%RSD:			2.0116			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/13/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0047	0.0072	09:38:01	No
2			0.0046	0.0071	09:38:35	No
Mean:			0.0046			
SD :			0.0001			
%RSD:			1.1672			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.02310
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/13/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0089	0.0114	09:39:58	No
2			0.0089	0.0115	09:40:33	No
Mean:			0.0089			
SD :			0.0001			
%RSD:			0.5682			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99055 Slope: 0.01750
Intercept : 0.00042

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/13/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0294	0.0320	09:41:58	No
2			0.0290	0.0315	09:42:33	No
Mean:			0.0292			
SD :			0.0003			
%RSD:			1.1424			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99775 Slope: 0.01416
Intercept : 0.00112

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/13/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0650	0.0676	09:43:58	No
2			0.0670	0.0695	09:44:32	No
Mean:			0.0660			
SD :			0.0014			
%RSD:			2.0933			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99895 Slope: 0.01299
Intercept : 0.00174

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/13/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1277	0.1302	09:45:59	No
2			0.1281	0.1306	09:46:33	No
Mean:			0.1279			
SD :			0.0003			
%RSD:			0.1987			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99964 Slope: 0.01265
Intercept : 0.00213

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0025	---	----	----	----
S0.2	0.0046	0.200	0.197	0.0001	1.2
S0.5	0.0089	0.500	0.535	0.0001	0.6
S2.0	0.0292	2.000	2.141	0.0003	1.1
S5.0	0.0660	5.000	5.051	0.0014	2.1
S10	0.1279	10.000	9.945	0.0003	0.2
Calib Blank	0.0025	---	----	----	----

Correlation Coefficient: 0.99964 Slope: 0.01265 Intercept: 0.0021

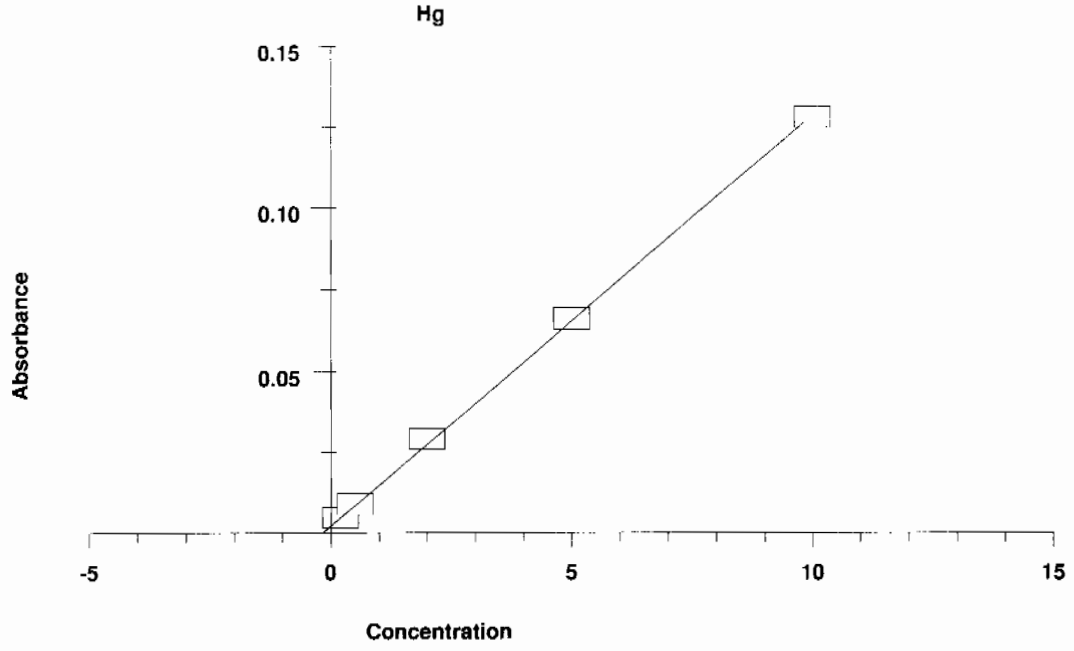

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/13/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.179	5.179	0.0676	0.0702	09:48:02	No
2	5.264	5.264	0.0687	0.0712	09:48:37	No
Mean:	5.221	5.221	0.0682			
SD :	0.0602	0.0602	0.0008			
%RSD:	1.2	1.2	1.1171			

QC value within specified limits.

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/13/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.117	-0.117	0.0007	0.0032	09:49:59	No
2	-0.126	-0.126	0.0005	0.0031	09:50:34	No
Mean:	-0.121	-0.121	0.0006			
SD :	0.0064	0.0064	0.0001			
%RSD:	5.3	5.3	13.7540			

QC value within specified limits.

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/13/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.156	0.156	0.0041	0.0066	09:51:56	No
2	0.135	0.135	0.0038	0.0064	09:52:31	No
Mean:	0.146	0.146	0.0040			
SD :	0.0146	0.0146	0.0002			
%RSD:	10.0	10.0	4.6526			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	09:53:56	No
2	5.219	5.219	0.0681	0.0707	09:54:31	No
Mean:	5.160	5.160	0.0674			
SD :	0.0831	0.0831	0.0011			
%RSD:	1.6	1.6	1.5602			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.014	0.014	0.0023	0.0048	09:55:59	No
2	0.023	0.023	0.0024	0.0050	09:56:34	No
Mean:	0.019	0.019	0.0024			
SD :	0.0063	0.0063	0.0001			
%RSD:	33.8	33.8	3.3712			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/13/2009
Sample ID: 1201870737|i||880997|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.145	-0.145	0.0003	0.0028	09:58:00	No
2	-0.154	-0.154	0.0002	0.0027	09:58:35	No
Mean:	-0.150	-0.150	0.0002			
SD :	0.0066	0.0066	0.0001			
%RSD:	4.4	4.4	35.8425			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/13/2009
Sample ID: 1201870738|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.783	3.783	0.0500	0.0525	10:00:01	No
2	3.816	3.816	0.0504	0.0529	10:00:35	No
Mean:	3.800	3.800	0.0502			
SD :	0.0230	0.0230	0.0003			
%RSD:	0.6	0.6	0.5806			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/13/2009
Sample ID: 232424001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.002	-0.002	0.0021	0.0046	10:02:01	No
2	-0.007	-0.007	0.0020	0.0046	10:02:35	No
Mean:	-0.005	-0.005	0.0021			
SD :	0.0040	0.0040	0.0001			
%RSD:	86.6	86.6	2.4535			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/13/2009
Sample ID: 232426001|i|||

```
%RSD:       1.7        1.7    1.5996

==========================================================================================
Element: Hg    Seq. No.: 21       AS Loc.: 21   Date: 07/13/2009
Sample ID: 1201870745|i|5||SDILT
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.025     0.025    0.0024     0.0050   10:15:50  No
 2       -0.002    -0.002    0.0021     0.0046   10:16:25  No
Mean:     0.012     0.012    0.0023
SD  :    0.0185    0.0185    0.0002
%RSD:     159.8     159.8   10.3056

==========================================================================================
Element: Hg    Seq. No.: 22       AS Loc.: 7    Date: 07/13/2009
Sample ID: CCV
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        5.101     5.101    0.0666     0.0692   10:17:50  No
 2        4.942     4.942    0.0646     0.0672   10:18:24  No
Mean:     5.022     5.022    0.0656
SD  :    0.1122    0.1122    0.0014
%RSD:       2.2       2.2    2.1625
QC value within specified limits.

==========================================================================================
Element: Hg    Seq. No.: 23       AS Loc.: 8    Date: 07/13/2009
Sample ID: CCB
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1       -0.043    -0.043    0.0016     0.0041   10:19:52  No
 2       -0.052    -0.052    0.0015     0.0040   10:20:27  No
Mean:    -0.048    -0.048    0.0015
SD  :    0.0057    0.0057    0.0001
%RSD:      11.9      11.9    4.7042
QC value within specified limits.

==========================================================================================
Element: Hg    Seq. No.: 24       AS Loc.: 22   Date: 07/13/2009
Sample ID: 232429002|i|||
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.240     0.240    0.0052     0.0077   10:21:52  No
 2        0.235     0.235    0.0051     0.0076   10:22:27  No
Mean:     0.238     0.238    0.0051
SD  :    0.0035    0.0035    0.0000
%RSD:       1.5       1.5    0.8527

==========================================================================================
Element: Hg    Seq. No.: 25       AS Loc.: 23   Date: 07/13/2009
Sample ID: 232429003|i|||
------------------------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.189     0.189    0.0045     0.0070   10:23:51  No
 2        0.176     0.176    0.0044     0.0069   10:24:26  No
Mean:     0.183     0.183    0.0044
SD  :    0.0087    0.0087    0.0001
%RSD:       4.8       4.8    2.4733

==========================================================================================
Element: Hg    Seq. No.: 26       AS Loc.: 24   Date: 07/13/2009
Sample ID: 232429004|i|||
```

%RSD: 1.7 1.7 1.4172

==========

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/13/2009
Sample ID: 232429010|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.233	0.233	0.0051	0.0076	10:37:52	No
2	0.223	0.223	0.0049	0.0075	10:38:27	No
Mean:	0.228	0.228	0.0050			
SD :	0.0069	0.0069	0.0001			
%RSD:	3.0	3.0	1.7516			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/13/2009
Sample ID: 232429011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.044	0.044	0.0027	0.0052	10:39:54	No
2	0.039	0.039	0.0026	0.0052	10:40:28	No
Mean:	0.042	0.042	0.0027			
SD :	0.0041	0.0041	0.0001			
%RSD:	9.8	9.8	1.9407			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.042	5.042	0.0659	0.0684	10:41:55	No
2	5.045	5.045	0.0659	0.0685	10:42:29	No
Mean:	5.044	5.044	0.0659			
SD :	0.0015	0.0015	0.0000			
%RSD:						

QC value within specified limits.

==========

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.064	-0.064	0.0013	0.0039	10:43:58	No
2	-0.060	-0.060	0.0014	0.0039	10:44:32	No
Mean:	-0.062	-0.062	0.0013			
SD :	0.0028	0.0028	0.0000			
%RSD:	4.5	4.5	2.6158			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/13/2009
Sample ID: 232429012|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.371	0.371	0.0068	0.0093	10:45:57	No
2	0.372	0.372	0.0068	0.0094	10:46:32	No
Mean:	0.371	0.371	0.0068			
SD :	0.0010	0.0010	0.0000			
%RSD:	0.3	0.3	0.1822			

==========

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/13/2009
Sample ID: 232429013|i|||

%RSD: 2.2 2.2 0.9016

==========

Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 07/13/2009
Sample ID: 232504002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.105	0.105	0.0035	0.0060	10:59:32	No
2	0.090	0.090	0.0033	0.0058	11:00:07	No
Mean:	0.097	0.097	0.0034			
SD :	0.0108	0.0108	0.0001			
%RSD:	11.0	11.0	4.0497			

==========

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 07/13/2009
Sample ID: 232504003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.390	0.390	0.0071	0.0096	11:01:30	No
2	0.372	0.372	0.0068	0.0094	11:02:05	No
Mean:	0.381	0.381	0.0069			
SD :	0.0123	0.0123	0.0002			
%RSD:	3.2	3.2	2.2337			

==========

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 07/13/2009
Sample ID: 232504004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.166	0.166	0.0042	0.0068	11:03:29	No
2	0.150	0.150	0.0040	0.0066	11:04:04	No
Mean:	0.158	0.158	0.0041			
SD :	0.0114	0.0114	0.0001			
%RSD:	7.2	7.2	3.4993			

==========

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.130	5.130	0.0670	0.0695	11:05:30	No
2	5.073	5.073	0.0663	0.0688	11:06:05	No
Mean:	5.101	5.101	0.0666			
SD :	0.0403	0.0403	0.0005			
%RSD:	0.8	0.8	0.7652			

QC value within specified limits.

==========

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.056	-0.056	0.0014	0.0040	11:07:33	No
2	-0.058	-0.058	0.0014	0.0039	11:08:08	No
Mean:	-0.057	-0.057	0.0014			
SD :	0.0014	0.0014	0.0000			
%RSD:	2.4	2.4	1.2413			

QC value within specified limits.

==========

Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 07/13/2009
Sample ID: 232504005|i|||

%RSD: 6.0 6.0 2.5541

Element: Hg Seq. No.: 54 AS Loc.: 48 Date: 07/13/2009
Sample ID: 232504011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.022	-0.022	0.0019	0.0044	11:21:35	No
2	-0.036	-0.036	0.0017	0.0042	11:22:10	No
Mean:	-0.029	-0.029	0.0018			
SD :	0.0101	0.0101	0.0001			
%RSD:	35.2	35.2	7.2230			

Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 07/13/2009
Sample ID: 232504012|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.073	0.073	0.0030	0.0056	11:23:30	No
2	0.069	0.069	0.0030	0.0055	11:24:05	No
Mean:	0.071	0.071	0.0030			
SD :	0.0030	0.0030	0.0000			
%RSD:	4.3	4.3	1.2653			

Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 07/13/2009
Sample ID: 232504013|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.132	0.132	0.0038	0.0063	11:25:25	No
2	0.124	0.124	0.0037	0.0062	11:26:00	No
Mean:	0.128	0.128	0.0037			
SD :	0.0058	0.0058	0.0001			
%RSD:	4.5	4.5	1.9637			

Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 07/13/2009
Sample ID: 232504014|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.072	-0.072	0.0012	0.0037	11:27:22	No
2	-0.079	-0.079	0.0011	0.0037	11:27:57	No
Mean:	-0.075	-0.075	0.0012			
SD :	0.0047	0.0047	0.0001			
%RSD:	6.2	6.2	5.0576			

Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.976	4.976	0.0651	0.0676	11:29:22	No
2	5.108	5.108	0.0667	0.0693	11:29:57	No
Mean:	5.042	5.042	0.0659			
SD :	0.0927	0.0927	0.0012			
%RSD:	1.8	1.8	1.7799			

QC value within specified limits.

Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	0.0015	0.0040	11:31:25	No
2	-0.046	-0.046	0.0015	0.0041	11:31:59	No
Mean:	-0.050	-0.050	0.0015			
SD :	0.0051	0.0051	0.0001			
%RSD:	10.2	10.2	4.2953			

QC value within specified limits.

==========

Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 07/13/2009
Sample ID: 232509001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.787	1.787	0.0247	0.0273	11:33:23	No
2	1.785	1.785	0.0247	0.0272	11:33:58	No
Mean:	1.786	1.786	0.0247			
SD :	0.0015	0.0015	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 07/13/2009
Sample ID: 1201873033|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.961	0.961	0.0143	0.0168	11:35:20	No
2	0.924	0.924	0.0138	0.0163	11:35:55	No
Mean:	0.942	0.942	0.0140			
SD :	0.0259	0.0259	0.0003			
%RSD:	2.8	2.8	2.3359			

==========

Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 07/13/2009
Sample ID: 1201873034|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.725	3.725	0.0492	0.0518	11:37:17	No
2	3.714	3.714	0.0491	0.0516	11:37:52	No
Mean:	3.720	3.720	0.0492			
SD :	0.0083	0.0083	0.0001			
%RSD:	0.2	0.2	0.2132			

==========

Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 07/13/2009
Sample ID: 1201873037|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.892	3.892	0.0514	0.0539	11:39:15	No
2	3.893	3.893	0.0514	0.0539	11:39:49	No
Mean:	3.893	3.893	0.0514			
SD :	0.0008	0.0008	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 07/13/2009
Sample ID: 1201873036|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.267	0.267	0.0055	0.0080	11:41:13	No
2	0.248	0.248	0.0053	0.0078	11:41:48	No
Mean:	0.258	0.258	0.0054			
SD :	0.0134	0.0134	0.0002			

%RSD:	5.2	5.2	3.1457

Element: Hg Seq. No.: 65 AS Loc.: 57 Date: 07/13/2009
Sample ID: 232509002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.313	0.313	0.0061	0.0086	11:43:12	No
2	0.292	0.292	0.0058	0.0084	11:43:47	No
Mean:	0.303	0.303	0.0060			
SD :	0.0145	0.0145	0.0002			
%RSD:	4.8	4.8	3.0720			

Element: Hg Seq. No.: 66 AS Loc.: 58 Date: 07/13/2009
Sample ID: 232509003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	0.0013	0.0038	11:45:11	No
2	-0.067	-0.067	0.0013	0.0038	11:45:46	No
Mean:	-0.067	-0.067	0.0013			
SD :	0.0003	0.0003	0.0000			
%RSD:	0.5	0.5	0.3351			

Element: Hg Seq. No.: 67 AS Loc.: 59 Date: 07/13/2009
Sample ID: 232509004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.344	1.344	0.0191	0.0217	11:47:11	No
2	1.328	1.328	0.0189	0.0215	11:47:45	No
Mean:	1.336	1.336	0.0190			
SD :	0.0116	0.0116	0.0001			
%RSD:	0.9	0.9	0.7745			

Element: Hg Seq. No.: 68 AS Loc.: 60 Date: 07/13/2009
Sample ID: 232509005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.566	0.566	0.0093	0.0118	11:49:10	No
2	0.563	0.563	0.0093	0.0118	11:49:45	No
Mean:	0.565	0.565	0.0093			
SD :	0.0016	0.0016	0.0000			
%RSD:	0.3	0.3	0.2214			

Element: Hg Seq. No.: 69 AS Loc.: 61 Date: 07/13/2009
Sample ID: 232509006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.184	0.184	0.0045	0.0070	11:51:12	No
2	0.171	0.171	0.0043	0.0068	11:51:47	No
Mean:	0.178	0.178	0.0044			
SD :	0.0089	0.0089	0.0001			
%RSD:	5.0	5.0	2.5778			

Element: Hg Seq. No.: 70 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	5.144	5.144	0.0672	0.0697	11:53:13	No
2	5.119	5.119	0.0669	0.0694	11:53:48	No
Mean:	5.131	5.131	0.0670			
SD :	0.0183	0.0183	0.0002			
%RSD:	0.4	0.4	0.3449			

QC value within specified limits.

Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	0.0014	0.0039	11:55:16	No
2	-0.064	-0.064	0.0013	0.0038	11:55:51	No
Mean:	-0.061	-0.061	0.0014			
SD :	0.0051	0.0051	0.0001			
%RSD:	8.4	8.4	4.7284			

QC value within specified limits.

Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 07/13/2009
Sample ID: 1201873038|i||881916|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.121	-0.121	0.0006	0.0031	11:57:18	No
2	-0.129	-0.129	0.0005	0.0030	11:57:53	No
Mean:	-0.125	-0.125	0.0006			
SD :	0.0055	0.0055	0.0001			
%RSD:	4.4	4.4	12.7065			

Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 07/13/2009
Sample ID: 1201873039|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.532	3.532	0.0468	0.0493	11:59:16	No
2	3.416	3.416	0.0453	0.0479	11:59:50	No
Mean:	3.474	3.474	0.0461			
SD :	0.0817	0.0817	0.0010			
%RSD:	2.4	2.4	2.2434			

Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 07/13/2009
Sample ID: 232582001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.170	0.170	0.0043	0.0068	12:01:10	No
2	0.157	0.157	0.0041	0.0066	12:01:46	No
Mean:	0.163	0.163	0.0042			
SD :	0.0090	0.0090	0.0001			
%RSD:	5.5	5.5	2.7076			

Element: Hg Seq. No.: 75 AS Loc.: 65 Date: 07/13/2009
Sample ID: 232582002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.106	0.106	0.0035	0.0060	12:03:06	No
2	0.108	0.108	0.0035	0.0060	12:03:40	No
Mean:	0.107	0.107	0.0035			
SD :	0.0013	0.0013	0.0000			

```
%RSD:        1.2         1.2     0.4770

==========================================================================
Element: Hg    Seq. No.: 76       AS Loc.: 66   Date: 07/13/2009
Sample ID: 232585001|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1       -0.047    -0.047    0.0015     0.0041   12:05:01  No
 2       -0.050    -0.050    0.0015     0.0040   12:05:36  No
Mean:    -0.048    -0.048    0.0015
SD  :    0.0022    0.0022    0.0000
%RSD:       4.5        4.5    1.7908

==========================================================================
Element: Hg    Seq. No.: 77       AS Loc.: 67   Date: 07/13/2009
Sample ID: 232585002|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.282     0.282    0.0057     0.0082   12:06:57  No
 2        0.292     0.292    0.0058     0.0084   12:07:32  No
Mean:     0.287     0.287    0.0058
SD  :    0.0073    0.0073    0.0001
%RSD:       2.6        2.6    1.6139

==========================================================================
Element: Hg    Seq. No.: 78       AS Loc.: 68   Date: 07/13/2009
Sample ID: 232585003|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.276     0.276    0.0056     0.0082   12:08:54  No
 2        0.274     0.274    0.0056     0.0081   12:09:29  No
Mean:     0.275     0.275    0.0056
SD  :    0.0013    0.0013    0.0000
%RSD:       0.5        0.5    0.2824

==========================================================================
Element: Hg    Seq. No.: 79       AS Loc.: 69   Date: 07/13/2009
Sample ID: 232591001|i|||
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.119     0.119    0.0036     0.0062   12:10:51  No
 2        0.112     0.112    0.0035     0.0061   12:11:26  No
Mean:     0.116     0.116    0.0036
SD  :    0.0047    0.0047    0.0001
%RSD:       4.1        4.1    1.6549

==========================================================================
Element: Hg    Seq. No.: 80       AS Loc.: 70   Date: 07/13/2009
Sample ID: 1201873040|i|||DUP
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
 #     µg/L        µg/L       Signal     Height            Stored
 1        0.204     0.204    0.0047     0.0072   12:12:48  No
 2        0.188     0.188    0.0045     0.0070   12:13:22  No
Mean:     0.196     0.196    0.0046
SD  :    0.0116    0.0116    0.0001
%RSD:       5.9        5.9    3.1890

==========================================================================
Element: Hg    Seq. No.: 81       AS Loc.: 71   Date: 07/13/2009
Sample ID: 1201873041|i|||MS
--------------------------------------------------------------------------
Repl   SampleConc  StndConc   BlnkCorr   Peak      Time    Peak
```

#	µg/L	µg/L	Signal	Height		Stored
1	2.167	2.167	0.0295	0.0321	12:14:46	No
2	2.222	2.222	0.0302	0.0328	12:15:21	No
Mean:	2.194	2.194	0.0299			
SD :	0.0391	0.0391	0.0005			
%RSD:	1.8	1.8	1.6559			

==========

Element: Hg Seq. No.: 82 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.016	5.016	0.0656	0.0681	12:16:46	No
2	5.000	5.000	0.0654	0.0679	12:17:21	No
Mean:	5.008	5.008	0.0655			
SD :	0.0112	0.0112	0.0001			
%RSD:	0.2	0.2	0.2155			

QC value within specified limits.

==========

Element: Hg Seq. No.: 83 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.111	-0.111	0.0007	0.0033	12:18:49	No
2	-0.116	-0.116	0.0007	0.0032	12:19:24	No
Mean:	-0.114	-0.114	0.0007			
SD :	0.0038	0.0038	0.0000			
%RSD:	3.4	3.4	7.0276			

QC value within specified limits.

==========

Element: Hg Seq. No.: 84 AS Loc.: 72 Date: 07/13/2009
Sample ID: 1201873043|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.305	2.305	0.0313	0.0338	12:20:50	No
2	2.291	2.291	0.0311	0.0336	12:21:25	No
Mean:	2.298	2.298	0.0312			
SD :	0.0099	0.0099	0.0001			
%RSD:	0.4	0.4	0.4008			

==========

Element: Hg Seq. No.: 85 AS Loc.: 73 Date: 07/13/2009
Sample ID: 1201873042|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.081	-0.081	0.0011	0.0036	12:22:49	No
2	-0.094	-0.094	0.0009	0.0035	12:23:24	No
Mean:	-0.087	-0.087	0.0010			
SD :	0.0093	0.0093	0.0001			
%RSD:	10.7	10.7	11.5399			

==========

Element: Hg Seq. No.: 86 AS Loc.: 74 Date: 07/13/2009
Sample ID: 1201877904|i||883966|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.087	-0.087	0.0010	0.0036	12:24:48	No
2	-0.106	-0.106	0.0008	0.0033	12:25:23	No
Mean:	-0.096	-0.096	0.0009			
SD :	0.0137	0.0137	0.0002			

#	µg/L	µg/L	Signal	Height		Stored
1	-0.100	-0.100	0.0009	0.0034	12:36:36	No
2	-0.113	-0.113	0.0007	0.0032	12:37:12	No
Mean:	-0.106	-0.106	0.0008			
SD :	0.0093	0.0093	0.0001			
%RSD:	8.7	8.7	14.9573			

==========

Element: Hg Seq. No.: 93 AS Loc.: 81 Date: 07/13/2009
Sample ID: 233081003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.184	0.184	0.0045	0.0070	12:38:31	No
2	0.164	0.164	0.0042	0.0067	12:39:07	No
Mean:	0.174	0.174	0.0043			
SD :	0.0138	0.0138	0.0002			
%RSD:	7.9	7.9	4.0292			

==========

Element: Hg Seq. No.: 94 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.133	5.133	0.0670	0.0696	12:40:30	No
2	5.164	5.164	0.0674	0.0700	12:41:05	No
Mean:	5.148	5.148	0.0672			
SD :	0.0216	0.0216	0.0003			
%RSD:	0.4	0.4	0.4055			

QC value within specified limits.

==========

Element: Hg Seq. No.: 95 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.129	-0.129	0.0005	0.0030	12:42:33	No
2	-0.125	-0.125	0.0005	0.0031	12:43:08	No
Mean:	-0.127	-0.127	0.0005			
SD :	0.0026	0.0026	0.0000			
%RSD:	2.0	2.0	6.2605			

QC value within specified limits.

==========

Element: Hg Seq. No.: 96 AS Loc.: 82 Date: 07/13/2009
Sample ID: 233081004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.216	0.216	0.0049	0.0074	12:44:32	No
2	0.211	0.211	0.0048	0.0073	12:45:07	No
Mean:	0.214	0.214	0.0048			
SD :	0.0034	0.0034	0.0000			
%RSD:	1.6	1.6	0.8786			

==========

Element: Hg Seq. No.: 97 AS Loc.: 83 Date: 07/13/2009
Sample ID: 233081005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.140	0.140	0.0039	0.0064	12:46:28	No
2	0.154	0.154	0.0041	0.0066	12:47:03	No
Mean:	0.147	0.147	0.0040			
SD :	0.0098	0.0098	0.0001			

Miscellaneous

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 881836

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201872853	UI647733-01	.518	g
MS	1201872855	UI042709-A	.5	mL
MS	1201872855	UI042709-B	.5	mL
MSD	1201872859	UI042709-A	.5	mL
MSD	1201872859	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872852		SW846 3050B	06-JUL-2009 07:45	0.518 g	50 mL	96.5251	SOIL
LCS	1201872853		SW846 3050B	06-JUL-2009 07:45	0.518 g	50 mL	96.5251	SOIL
SAMPLE	232582001		SW846 3050B	06-JUL-2009 07:45	0.524 g	50 mL	95.41985	SOIL
SAMPLE	232582002		SW846 3050B	06-JUL-2009 07:45	0.512 g	50 mL	97.65625	SOIL
SAMPLE	232585001		SW846 3050B	06-JUL-2009 07:45	0.524 g	50 mL	95.41985	SOIL
SAMPLE	232585002		SW846 3050B	06-JUL-2009 07:45	0.516 g	50 mL	96.89922	SOIL
SAMPLE	232585003		SW846 3050B	06-JUL-2009 07:45	0.525 g	50 mL	95.2381	SOIL
SAMPLE	232591001		SW846 3050B	06-JUL-2009 07:45	0.503 g	50 mL	99.40358	SOIL
DUP	1201872854	232591001	SW846 3050B	06-JUL-2009 07:45	0.511 g	50 mL	97.84736	SOIL
MS	1201872855	232591001	SW846 3050B	06-JUL-2009 07:45	0.521 g	50 mL	95.96929	SOIL
MSD	1201872859	232591001	SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL
SDILT	1201872856	232591001	SW846 3050B	06-JUL-2009 07:45	0.503 g	50 mL	99.40358	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments QC Sample #232591001 is a tan soil.

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 881858

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201872898	UI652380	.514	g
MS	1201872900	UI090622-01	.25	mL
MS	1201872900	UI090622-06	.25	mL
MSD	1201872902	UI090622-01	.25	mL
MSD	1201872902	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872897		SW846 3050B	06-JUL-2009 07:45	0.515 g	50 mL	97.08738	SOIL
LCS	1201872898		SW846 3050B	06-JUL-2009 07:45	0.514 g	50 mL	97.27626	SOIL
SAMPLE	232582001		SW846 3050B	06-JUL-2009 07:45	0.51 g	50 mL	98.03922	SOIL
SAMPLE	232582002		SW846 3050B	06-JUL-2009 07:45	0.514 g	50 mL	97.27626	SOIL
SAMPLE	232585001		SW846 3050B	06-JUL-2009 07:45	0.502 g	50 mL	99.60159	SOIL
SAMPLE	232585002		SW846 3050B	06-JUL-2009 07:45	0.506 g	50 mL	98.81423	SOIL
SAMPLE	232585003		SW846 3050B	06-JUL-2009 07:45	0.513 g	50 mL	97.46589	SOIL
SAMPLE	232591001		SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL
DUP	1201872899	232591001	SW846 3050B	06-JUL-2009 07:45	0.5 g	50 mL	100	SOIL
MS	1201872900	232591001	SW846 3050B	06-JUL-2009 07:45	0.504 g	50 mL	99.20635	SOIL
MSD	1201872902	232591001	SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL
SDILT	1201872901	232591001	SW846 3050B	06-JUL-2009 07:45	0.522 g	50 mL	95.78544	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881915

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873039	UI031809A	.204	g
MS	1201873041	WHG090710-14	.3	mL
MSD	1201873043	WHG090710-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873038		SW846 7471A Prep	10-JUL-2009 14:20	0.521 g	30 mL	57.58157	SOIL
LCS	1201873039		SW846 7471A Prep	10-JUL-2009 14:20	0.204 g	30 mL	147.05882	SOIL
SAMPLE	232582001		SW846 7471A Prep	10-JUL-2009 14:20	0.53 g	30 mL	56.60377	SOIL
SAMPLE	232582002		SW846 7471A Prep	10-JUL-2009 14:20	0.508 g	30 mL	59.05512	SOIL
SAMPLE	232585001		SW846 7471A Prep	10-JUL-2009 14:20	0.53 g	30 mL	56.60377	SOIL
SAMPLE	232585002		SW846 7471A Prep	10-JUL-2009 14:20	0.578 g	30 mL	51.90311	SOIL
SAMPLE	232585003		SW846 7471A Prep	10-JUL-2009 14:20	0.572 g	30 mL	52.44755	SOIL
SAMPLE	232591001		SW846 7471A Prep	10-JUL-2009 14:20	0.55 g	30 mL	54.54545	SOIL
DUP	1201873040	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.593 g	30 mL	50.59022	SOIL
MS	1201873041	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.515 g	30 mL	58.25243	SOIL
MSD	1201873043	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.51 g	30 mL	58.82353	SOIL
SDILT	1201873042	232591001	SW846 7471A Prep	10-JUL-2009 14:20	0.55 g	30 mL	54.54545	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution
1144356-C	2 mL	Hg reducing agent
WHG090710-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090710-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG090710-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090710-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090710-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090710-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

Comments Sample 232591001 consist of brown, clumpy soil.
Digestion Start Date: 10-JUL-09 14:20
Digestion End Date: 10-JUL-09 14:50

NCR Report No.: 710443
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
10-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
881859	See Below		

Potentially affected work order(s)(SDG): 232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201872900MS 2. Failed RPD for DUP: QC 1201872899DUP 3. Failed Recovery for MSD/PSD: QC 1201872902MSD	1. The matrix spike recovery failed outside of the control limits for barium,magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The sample and sample duplicate % RPD failed outside the control limits for aluminum,barium,calcium,cobalt,iron,magnesium,manganese and potassium due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike duplicate recovery failed outside of the control limits for barium and calcium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Helen Camello 10-JUL-09

Data Validator/Group Leader:

Louise Smith 13-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.18 **Opened:** 08-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 09-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L

Analyte	Concentration	Analyte	Concentration
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Standard Logbook

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI647733-01 **Opened:** 02-APR-07 **Amount :** 80 g
Name: ICPMSSOILSRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis
Supplier: ERA
Description: ICPMS Soil LCS (Reference)
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	8270 mg/kg	Antimony	55.8 mg/kg
Arsenic	255 mg/kg	Barium	469 mg/kg
Beryllium	86.4 mg/kg	Boron	138 mg/kg
Cadmium	119 mg/kg	Calcium	3760 mg/kg
Chromium	71.2 mg/kg	Cobalt	79.6 mg/kg
Copper	96.2 mg/kg	Iron	13200 mg/kg
Lead	169 mg/kg	Lithium	8.01 mg/kg
Magnesium	2990 mg/kg	Manganese	364 mg/kg
Mercury	4.18 mg/kg	Molybdenum	79.6 mg/kg
Nickel	101 mg/kg	Phosphorous	752 mg/kg
Potassium	2420 mg/kg	Selenium	171 mg/kg

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Silver	116 mg/kg	Sodium	575 mg/kg
Strontium	144 mg/kg	Thallium	203 mg/kg
Thorium	17.2 mg/kg	Titanium	255 mg/kg
Uranium	2.12 mg/kg	Uranium-235	.0153 mg/kg
Uranium-238	2.105 mg/kg	Vanadium	134 mg/kg
Zinc	202 mg/kg	Zirconium	6.83 mg/kg

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090710-01 **Opened:** 10-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 10-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: IHG090710-02 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 10-JUL-09
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090710-07 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090710-08 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090710-09 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Standard Logbook

Serial ID: WHG090710-10 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-11 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090710-12 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-14 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: WI090708-42 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090708-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090708-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090708-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Serial ID: WI090708-43 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Standard Logbook

Serial ID: WI090708-44 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1150990
Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Serial ID: WI090708-45 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1150990
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090708-46 **Opened:** 08-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1150990
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090708-47 **Opened:** 08-JUL-09 **Solvent :** 3%HCL &1%HNO3-1150990
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090713-04AB **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090713-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090713-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090713-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090713-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090713-04B **Opened:** 13-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090713-05B **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS090713-06B
Name: ICPMS CRDL
Type: Working
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Opened: 13-JUL-09
Received: 13-JUL-09
Expires: 14-JUL-09

Solvent : 2%HNO3/1%HCl - 1143705

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS090713-07B **Opened:** 13-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090713-08B **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-04AB **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705

Name: ICPMS Cal Standard 10 **Received:** 14-JUL-09

Type: Working **Expires:** 15-JUL-09

Employee: Rose Jenkins

Supplier: GEL

Description: ICPMS Calibration Standard (10 ppb)

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090714-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090714-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090714-04B **Opened:** 14-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090714-05B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090714-06B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090714-07B **Opened:** 14-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-08B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Standard Logbook

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCI-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1150990 **Opened:** 06-JUL-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 06-JUL-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 13-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Louise Smith
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1153776 **Opened:** 13-JUL-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 13-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Standard Logbook

Serial ID:	908024-A	**Opened:**	22-DEC-08	**Lot Number :**	48053817
Name:	B-NH2OH.HCl-MER	**Received:**	22-DEC-08		
Type:	Reagent/Solvent	**Expires:**	22-DEC-09		
Employee:	Tara Griffin				
Supplier:	Fisher Scientific				
Description:	Hydroxlyamine Hydrochloride				
Comments:	None				

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2506

Method/Analysis Information

Product: **pH**

Analytical Batch: 881740 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201872623	232582001(CAMO-09-10464) Sample Duplicate (DUP)
1201872624	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHect pH Meter Orion 370.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232582001 (CAMO-09-10464).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 1201872623 (CAMO-09-10464), 232585001 (CAMO-09-6605), 232585002 (CAMO-09-6603) and 232585003 (CAMO-09-6604).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881270	**Method:**	SW846 9012A
Prep Batch :	881268	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201871532	Method Blank (MB)
1201871533	232509006(CAMO-09-6531) Sample Duplicate (DUP)
1201871534	232509006(CAMO-09-6531) Matrix Spike (MS)
1201871535	232509006(CAMO-09-6531) Matrix Spike Duplicate (MSD)
1201871536	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232509006 (CAMO-09-6531).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recovery for this sample set was within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recovery for this sample set was within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1201871536 (LCS).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	881671	**Method:**	EPA 300.0
Prep Batch :	881669	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201872402	Method Blank (MB)
1201872403	232585001(CAMO-09-6605) Sample Duplicate (DUP)
1201872404	232585001(CAMO-09-6605) Matrix Spike (MS)
1201872405	232585001(CAMO-09-6605) Matrix Spike Duplicate (MSD)
1201872406	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232585001 (CAMO-09-6605).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recovery for this sample set was within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recovery for this sample set was within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232585001 (CAMO-09-6605), 232585002 (CAMO-09-6603) and 232585003 (CAMO-09-6604).

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Manual Integrations
Manual integrations were not required for the samples in this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 20July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2506 GEL Work Order: 232585

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2506

Client Sample ID:	CAMO-09-6605	Project:	LANL01004
Sample ID:	232585001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	6.61%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.2C	H	7.74	0.010	0.100	SU	1	TXT1 07/01/09	1247	881740	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	72.8	268	ug/kg	1	AXC2 07/02/09	1002	881270	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.321	1.07	mg/kg	1	MAR1 07/10/09	1906	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2506

Client Sample ID:	CAMO-09-6603	Project:	LANL01004
Sample ID:	232585002	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	7.28%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 22.3C	H	6.60	0.010	0.100	SU	1	TXT1	07/01/09	1251	881740	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	243	73.3	270	ug/kg	1	AXC2	07/02/09	1003	881270	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	1.28	0.323	1.08	mg/kg	1	MAR1	07/10/09	2159	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 14, 2009

Client SDG: 09-2506

Client Sample ID:	CAMO-09-6604	Project:	LANL01004
Sample ID:	232585003	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09 12:00		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	10.4%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.4C	H	6.61	0.010	0.100	SU	1	TXT1 07/01/09	1257	881740	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.6	263	ug/kg	1	AXC2 07/02/09	1004	881270	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.335	1.12	mg/kg	1	MAR1 07/10/09	2228	881671	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/10/09	0850	881669
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 14, 2009
Page 1 of 2

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232585

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis											
Batch 881740											
QC1201872623 232582001 DUP											
pH		H	7.57	H	7.60	SU	0.396		(0%-10%)	TXT1	07/01/09 12:39
QC1201872624 LCS											
pH	7.00				7.02	SU		100	(95%-105%)		07/01/09 12:33
Flow Injection Analysis											
Batch 881270											
QC1201871533 232509006 DUP											
Cyanide, Total		J	208	J	212	ug/kg	N/A ^		(+/-263)	AXC2	07/02/09 09:54
QC1201871536 LCS											
Cyanide, Total	174000				175000	ug/kg		101	(46%-145%)		07/02/09 09:51
QC1201871532 MB											
Cyanide, Total				J	167	ug/kg					07/02/09 09:50
QC1201871534 232509006 MS											
Cyanide, Total	5350	J	208		5610	ug/kg		101	(50%-130%)		07/02/09 09:55
QC1201871535 232509006 MSD											
Cyanide, Total	5350	J	208		5300	ug/kg	5.68	95.3	(0%-30%)		07/02/09 09:59
Ion Chromatography											
Batch 881671											
QC1201872403 232585001 DUP											
Nitrate-N		HUh	ND	HUh	ND	mg/kg	N/A		(+/-1.07)	MAR1	07/10/09 19:35
QC1201872406 LCS											
Nitrate-N	50.0				46.6	mg/kg		93.3	(90%-110%)		07/10/09 17:39
QC1201872402 MB											
Nitrate-N				U	1.00	mg/kg					07/10/09 17:10
QC1201872404 232585001 MS											
Nitrate-N	53.5	HUh	ND	Hh	49.0	mg/kg		91.6	(90%-110%)		07/10/09 20:04
QC1201872405 232585001 MSD											
Nitrate-N	53.5	HUh	ND	Hh	49.0	mg/kg	0.0611	91.6	(0%-20%)		07/10/09 20:33

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

QC Summary

Workorder: 232585

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 14-JUL-2009 16:37

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2506

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**02-JUL-2009 09:29:22**	**OM_7-2-2009_09-19-36**	**143**	**150**	**95**	**(90%-110%)**	**Yes**
CCV	02-JUL-2009 09:43:39	OM_7-2-2009_09-19-36	95.6	100	96	(90%-110%)	Yes
CCV	02-JUL-2009 09:56:05	OM_7-2-2009_09-19-36	103	100	103	(90%-110%)	Yes
CCV	02-JUL-2009 10:08:28	OM_7-2-2009_09-19-36	102	100	102	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**02-JUL-2009 09:31:12**	**OM_7-2-2009_09-19-36**	**-1.5**	**5**	**Yes**
CCB	02-JUL-2009 09:45:29	OM_7-2-2009_09-19-36	-1.03	5	Yes
CCB	02-JUL-2009 09:57:55	OM_7-2-2009_09-19-36	-0.586	5	Yes
CCB	02-JUL-2009 10:10:18	OM_7-2-2009_09-19-36	-1.57	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 14-JUL-2009 16:37

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2506

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**10-JUL-2009 10:55:00**	**090710**	**4.6565**	**5**	**93**	**(90%-110%)**	**Yes**
CCV	10-JUL-2009 16:12:00	090710	7.2904	7.5	97	(90%-110%)	Yes
CCV	10-JUL-2009 21:01:00	090710	4.6637	5	93	(90%-110%)	Yes
CCV	10-JUL-2009 23:26:00	090710	7.288	7.5	97	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**10-JUL-2009 11:24:00**	**090710**	**0**	**0.1**	**Yes**
CCB	10-JUL-2009 16:41:00	090710	0	0.1	Yes
CCB	10-JUL-2009 21:30:00	090710	0	0.1	Yes
CCB	10-JUL-2009 23:55:00	090710	0	0.1	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881268

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871536	URF071009-01	.25	g
MS	1201871534	URF1091135-02	.025	mL
MSD	1201871535	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871532		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	MISC SOLID
LCS	1201871536		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.25 g	25 mL	100	MISC SOLID
SAMPLE	232465001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	MISC SOLID
SAMPLE	232509006		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.54 g	25 mL	46.2963	SOIL
DUP	1201871533	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.56 g	25 mL	44.64286	SOIL
MS	1201871534	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.55 g	25 mL	45.45455	SOIL
MSD	1201871535	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232582001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232582002		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232585001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232585002		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232585003		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232591001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.56 g	25 mL	44.64286	SOIL

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090702-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/2/2009 9:22:13	OM_7-2-2009_09-19-36
150 ppb		1	axc2	7/2/2009 9:23:04	OM_7-2-2009_09-19-36
100 ppb		1	axc2	7/2/2009 9:23:57	OM_7-2-2009_09-19-36
50 ppb		1	axc2	7/2/2009 9:24:50	OM_7-2-2009_09-19-36
10 ppb		1	axc2	7/2/2009 9:25:43	OM_7-2-2009_09-19-36
CRDL 5.0 ppb		1	axc2	7/2/2009 9:26:37	OM_7-2-2009_09-19-36
ICAL-00		1	axc2	7/2/2009 9:27:31	OM_7-2-2009_09-19-36
ICV		1	axc2	7/2/2009 9:29:22	OM_7-2-2009_09-19-36
ICB		1	axc2	7/2/2009 9:31:12	OM_7-2-2009_09-19-36
CRDL		1	axc2	7/2/2009 9:33:01	OM_7-2-2009_09-19-36
1201870882	881036	1	axc2	7/2/2009 9:34:51	OM_7-2-2009_09-19-36
1201870889	881036	1	axc2	7/2/2009 9:35:44	OM_7-2-2009_09-19-36
232341002	881036	1	axc2	7/2/2009 9:36:37	OM_7-2-2009_09-19-36
1201870884	881036	1	axc2	7/2/2009 9:37:31	OM_7-2-2009_09-19-36
1201870886	881036	1	axc2	7/2/2009 9:38:24	OM_7-2-2009_09-19-36
1201870888	881036	1	axc2	7/2/2009 9:39:17	OM_7-2-2009_09-19-36
232370001	881036	1	axc2	7/2/2009 9:40:09	OM_7-2-2009_09-19-36
1201870883	881036	1	axc2	7/2/2009 9:41:02	OM_7-2-2009_09-19-36
1201870885	881036	1	axc2	7/2/2009 9:41:55	OM_7-2-2009_09-19-36
1201870887	881036	1	axc2	7/2/2009 9:42:47	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:43:39	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:45:29	OM_7-2-2009_09-19-36
232425001	881036	1	axc2	7/2/2009 9:47:17	OM_7-2-2009_09-19-36
232432001	881036	1	axc2	7/2/2009 9:48:10	OM_7-2-2009_09-19-36
232482002	881036	1	axc2	7/2/2009 9:49:02	OM_7-2-2009_09-19-36
232510001	881036	1	axc2	7/2/2009 9:49:54	OM_7-2-2009_09-19-36
1201871532	881270	1	axc2	7/2/2009 9:50:45	OM_7-2-2009_09-19-36
1201871536	881270	50	axc2	7/2/2009 9:51:39	OM_7-2-2009_09-19-36
232465001	881270	1	axc2	7/2/2009 9:52:32	OM_7-2-2009_09-19-36
232509006	881270	1	axc2	7/2/2009 9:53:26	OM_7-2-2009_09-19-36
1201871533	881270	1	axc2	7/2/2009 9:54:19	OM_7-2-2009_09-19-36
1201871534	881270	1	axc2	7/2/2009 9:55:12	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:56:05	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:57:55	OM_7-2-2009_09-19-36
1201871535	881270	1	axc2	7/2/2009 9:59:45	OM_7-2-2009_09-19-36
232582001	881270	1	axc2	7/2/2009 10:00:37	OM_7-2-2009_09-19-36
232582002	881270	1	axc2	7/2/2009 10:01:30	OM_7-2-2009_09-19-36
232585001	881270	1	axc2	7/2/2009 10:02:23	OM_7-2-2009_09-19-36
232585002	881270	1	axc2	7/2/2009 10:03:15	OM_7-2-2009_09-19-36
232585003	881270	1	axc2	7/2/2009 10:04:07	OM_7-2-2009_09-19-36
232591001	881270	1	axc2	7/2/2009 10:05:00	OM_7-2-2009_09-19-36
1201871541	881272	1	axc2	7/2/2009 10:05:51	OM_7-2-2009_09-19-36
1201871543	881272	1	axc2	7/2/2009 10:06:44	OM_7-2-2009_09-19-36
232465001	881272	1	axc2	7/2/2009 10:07:35	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:08:28	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:10:18	OM_7-2-2009_09-19-36
1201871542	881272	1	axc2	7/2/2009 10:12:09	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:13:01	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:14:52	OM_7-2-2009_09-19-36

Author: axc2 Date : 7/2/2009

Original Run Filename: OM_7-2-2009_09-19-36.OMN created 7/2/2009 09:19:36
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-2-2009_09-19-36.OMN last modified 7/2/2009 10:15:57
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090702-01	1	S1	200	8.98	7/2/2009@09:22:13			200 ppb
WCN090702-02	1	S2	150	6.83	7/2/2009@09:23:04			150 ppb
WCN090702-03	1	S3	100	4.37	7/2/2009@09:23:57			100 ppb
WCN090702-04	1	S4	50.0	2.32	7/2/2009@09:24:50			50 ppb
WCN090702-05	1	S5	10.0	0.586	7/2/2009@09:25:43			10 ppb
WCN090702-06	1	S6	5.00	0.295	7/2/2009@09:26:37			CRDL 5.0 ppb
WCN090702-08	1	S7	0.00	0.0308	7/2/2009@09:27:31			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99974 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090702-07	1	S8	143	6.45	7/2/2009@09:29:22			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090702-08	1	S7	-1.50	-3.75e-4	7/2/2009@09:31:12			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.50 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.50 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090702-06	1	S6	5.03	0.291	7/2/2009@09:33:01			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	5.03 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	5.03 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870882|881036|MB	1	1	0.440	0.0860	7/2/2009@09:34:51			
1201870889||LCS	1	2	51.2	2.35	7/2/2009@09:35:44			
232341002	1	3	-0.350	0.0509	7/2/2009@09:36:37			
1201870884||DUP	1	4	0.739	0.0994	7/2/2009@09:37:31			
1201870886||MS	1	5	102	4.60	7/2/2009@09:38:24			
1201870888||MSD	1	6	106	4.80	7/2/2009@09:39:17			
232370001	1	7	0.145	0.0729	7/2/2009@09:40:09			
1201870883||DUP	1	8	-0.522	0.0432	7/2/2009@09:41:02			
1201870885||MS	1	9	103	4.66	7/2/2009@09:41:55			
1201870887||MSD	1	10	106	4.79	7/2/2009@09:42:47			
WCN090702-03	1	S3	95.6	4.32	7/2/2009@09:43:39			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-4.4 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.03	0.0204	7/2/2009@09:45:29			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.03 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.03 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232425001	1	11	2.25	0.167	7/2/2009@09:47:17			
232432001	1	12	0.839	0.104	7/2/2009@09:48:10			
232482002	1	13	3.65	0.229	7/2/2009@09:49:02			
232510001	1	14	-0.112	0.0615	7/2/2009@09:49:54			
1201871532|881270|MB	1	15	3.33	0.215	7/2/2009@09:50:45			
1201871536||LCS	1	16	35.0	1.62	7/2/2009@09:51:39		50.00	
232465001	1	17	7.81	0.414	7/2/2009@09:52:32			
232509006	1	18	3.82	0.237	7/2/2009@09:53:26			
1201871533||DUP	1	19	4.04	0.246	7/2/2009@09:54:19			
1201871534||MS	1	20	105	4.73	7/2/2009@09:55:12			
WCN090702-03	1	S3	103	4.64	7/2/2009@09:56:05			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-0.586	0.0403	7/2/2009@09:57:55			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.586 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.586 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201871535||MSD	1	21	99.2	4.49	7/2/2009@09:59:45			
232582001	1	22	0.545	0.0907	7/2/2009@10:00:37			
232582002	1	23	3.17	0.208	7/2/2009@10:01:30			
232585001	1	24	0.846	0.104	7/2/2009@10:02:23			
232585002	1	25	4.51	0.267	7/2/2009@10:03:15			
232585003	1	26	1.34	0.126	7/2/2009@10:04:07			
232591001	1	27	1.16	0.118	7/2/2009@10:05:00			
1201871541|881272|MB	1	28	-0.342	0.0512	7/2/2009@10:05:51			
1201871543||LCS	1	29	0.253	0.0777	7/2/2009@10:06:44			
232465001	1	30	27.3	1.28	7/2/2009@10:07:35			
WCN090702-03	1	S3	102	4.62	7/2/2009@10:08:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.57	-0.00337	7/2/2009@10:10:18			CCB
		Known Conc:	0.00					

DQM Test: > + Concentration Limit								
Result:	-1.57 < 5.00							
Message	CCB Passed							
Action	Continue							
DQM Test: < - Concentration Limit								
Result:	-1.57 > -5.00							
Message	CCB Passed							
Action	Continue							
1201871542||DUP	1	31	48.0	2.20	7/2/2009@10:12:09			
WCN090702-03	1	S3	108	4.87	7/2/2009@10:13:01			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:	7.7 < 10.0							
Message	CCV Passed							
Action	Continue							
DQM Test: < - Percent Relative Difference								
Result:	7.7 < 10.0							
Message	CCV Passed							
Action	Continue							
WCN090702-08	1	S7	-0.342	0.0512	7/2/2009@10:14:52			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:	-0.342 < 5.00							
Message	CCB Passed							
Action	Continue							
DQM Test: < - Concentration Limit								
Result:	-0.342 > -5.00							
Message	CCB Passed							
Action	Continue							

Analyte Properties Table for OM_7-2-2009_09-19-36.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author. axc2 Date : 7/2/2009

Channel 1: Current View

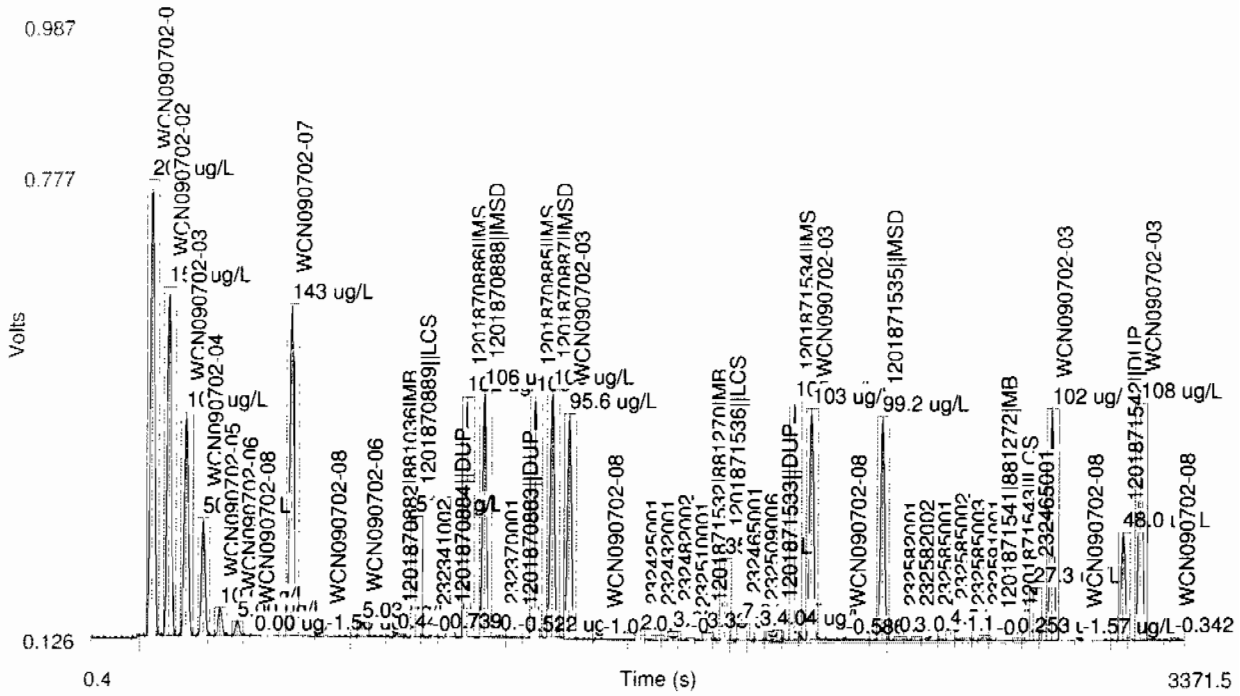

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.98	0.640	-0.0	7/2/2009	09:23:15
2	150	1	6.83	0.489	-1.3	7/2/2009	09:24:07
3	100	1	4.37	0.313	3.4	7/2/2009	09:25:00
4	50.0	1	2.32	0.165	-1.2	7/2/2009	09:25:53
5	10.0	1	0.586	0.0398	-14.0	7/2/2009	09:26:46
6	5.00	1	0.295	0.0201	-1.4	7/2/2009	09:27:40
7	0.00	1	0.0308	8.07e-4		7/2/2009	09:28:34

Figure 1: TCYANIDE

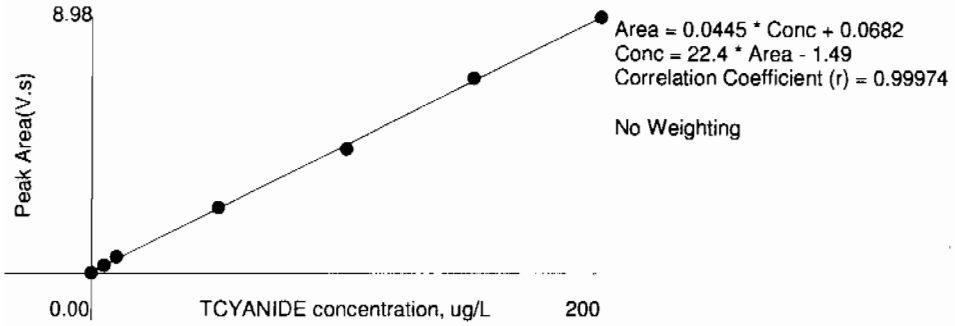

Ion Chromatography

Prep LogBook

Analyst: MAR1 Verified by:_____

Batch: 881669

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201872406	UIC090627SPK	.8	mL
MS	1201872404	UIC090627SPK	.8	mL
MSD	1201872405	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872402		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
LCS	1201872406		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232582001		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232582002		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232585001		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
DUP	1201872403	232585001	EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
MS	1201872404	232585001	EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
MSD	1201872405	232585001	EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232585002		EPA 300.0 PREP	10-JUL-2009 08:50	4.01 g	40 mL	9.97506	SOIL
SAMPLE	232585003		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232591001		EPA 300.0 PREP	10-JUL-2009 08:50	4 g	40 mL	10	SOIL

Comments

This is runlog for Sequence 090707.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	07/03/09 22:08		1	090707	MAR1
ICAL-06	07/03/09 22:41		1	090707	MAR1
ICAL-05	07/03/09 23:14		1	090707	MAR1
ICAL-04	07/03/09 23:47		1	090707	MAR1

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

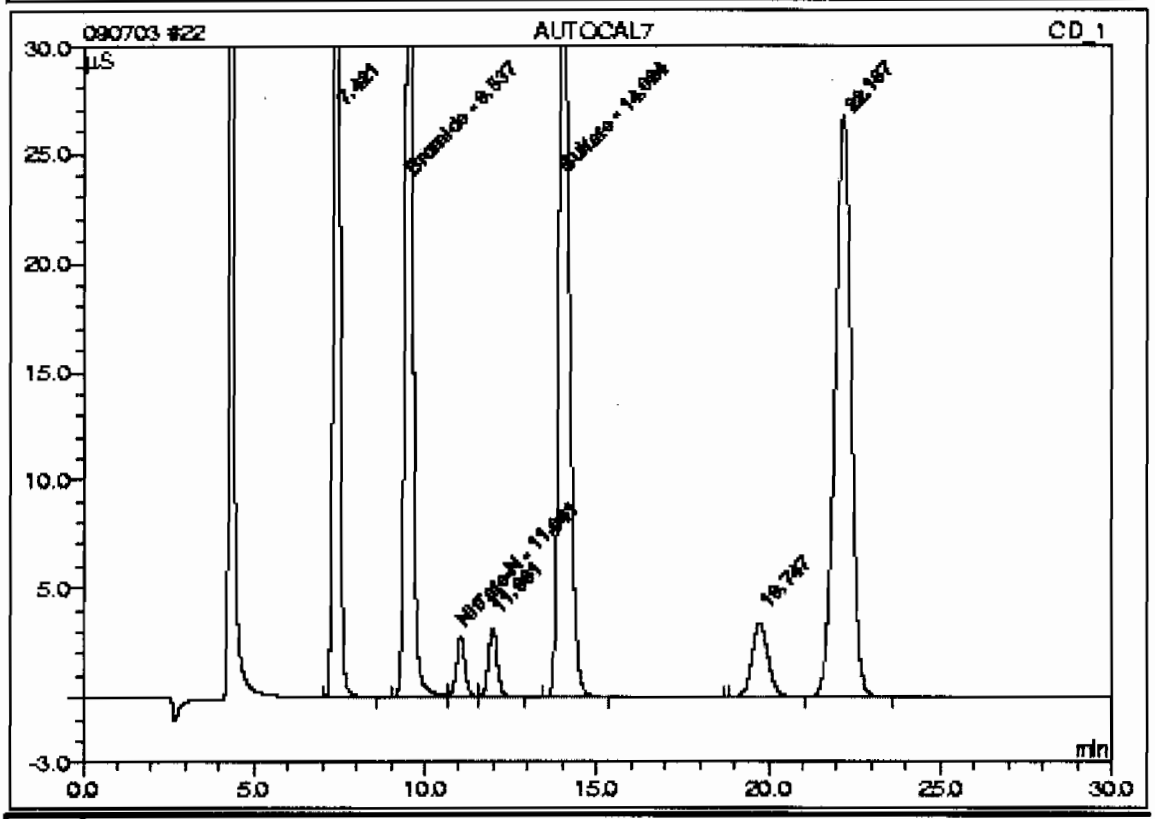

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	20.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	5.0000	n.a.	n.a.	n.a.	n.a.
2	9.54	Bromide	5.0000	5.0000		10.49618	20.17
n.a.	n.a.	Chlorate	5.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	10.0000	10.0000		0.81946	1.58
5	14.02	Sulfate	40.0000	40.0000		12.51803	24.06
Total:				55.0000	0.000	23.834	45.81

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

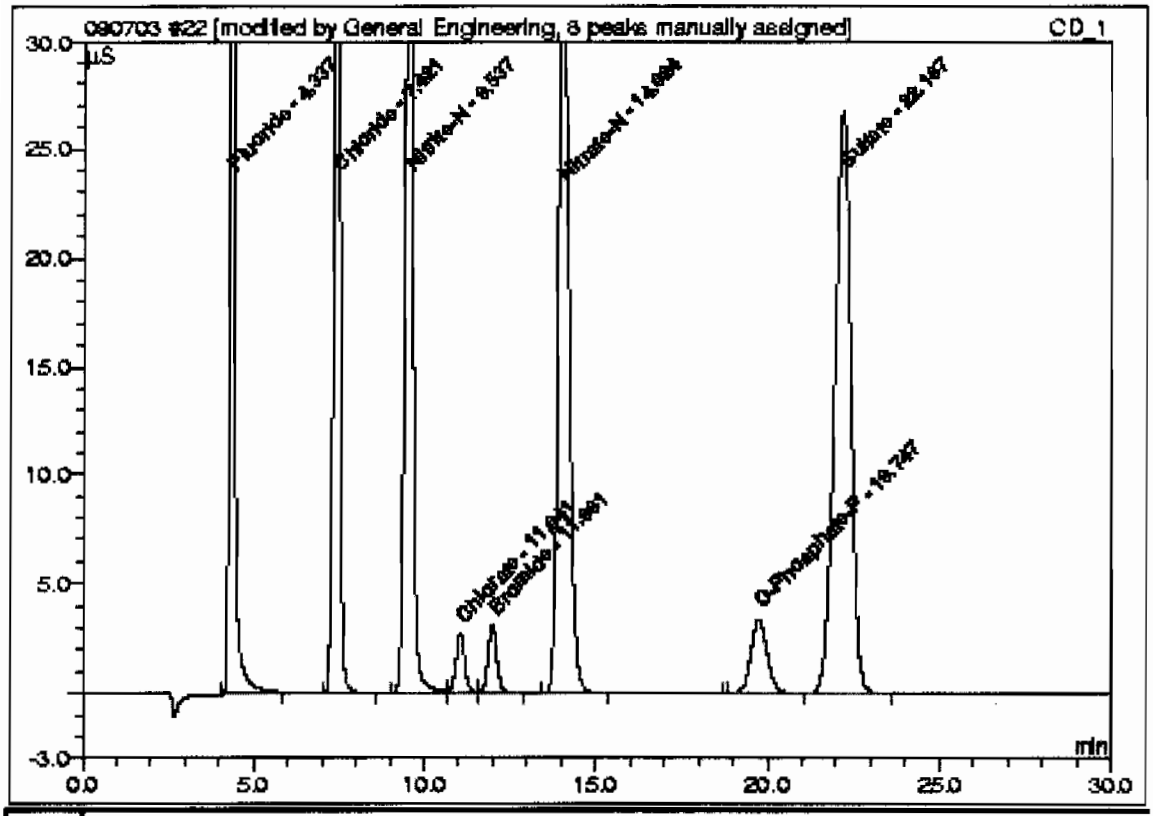

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	10.0000	10.0444	*	6.95356	11.79
2	7.42	Chloride	20.0000	20.3404		10.85875	18.41
3	9.54	Nitrite-N	10.0000	10.0541		10.49618	17.80
4	11.04	Chlorate	5.0000	4.9982		0.81946	1.39
5	11.98	Bromide	5.0000	5.0134		0.92846	1.57
6	14.02	Nitrate-N	10.0000	10.1573		12.51803	21.22
7	19.75	O-Phosphate-P	5.0000	5.0143		1.85201	3.14
8	22.19	Sulfate	40.0000	40.5382		14.55536	24.68
Total:				106.1605	0.000	59.982	100.00

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

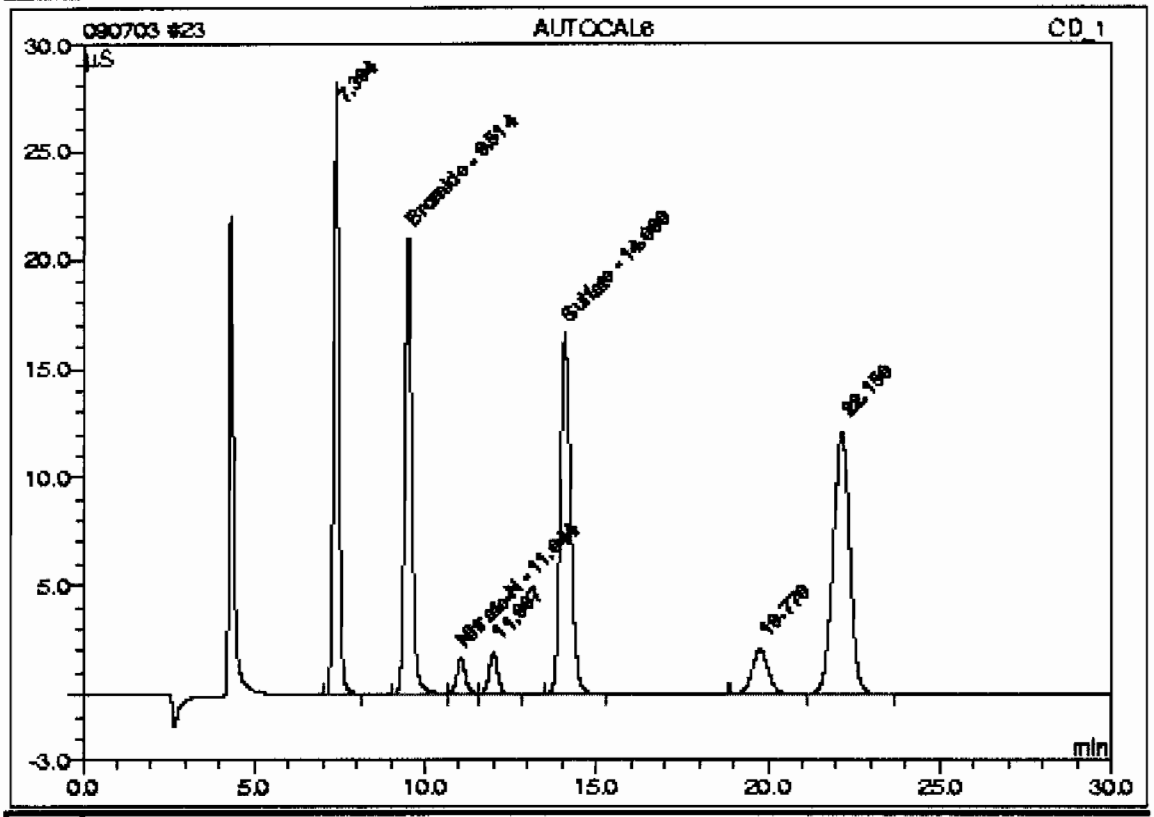

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	3.0000	n.a.	n.a.	n.a.	n.a.
2	9.51	Bromide	3.0000	2.6148		5.09735	20.64
n.a.	n.a.	Chlorate	3.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	5.0000	5.6894		0.49447	2.01
5	14.09	Sulfate	20.0000	18.8591		5.72345	23.22
Total:				27.1634	0.000	11.305	45.87

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703sn	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE086;300;9056

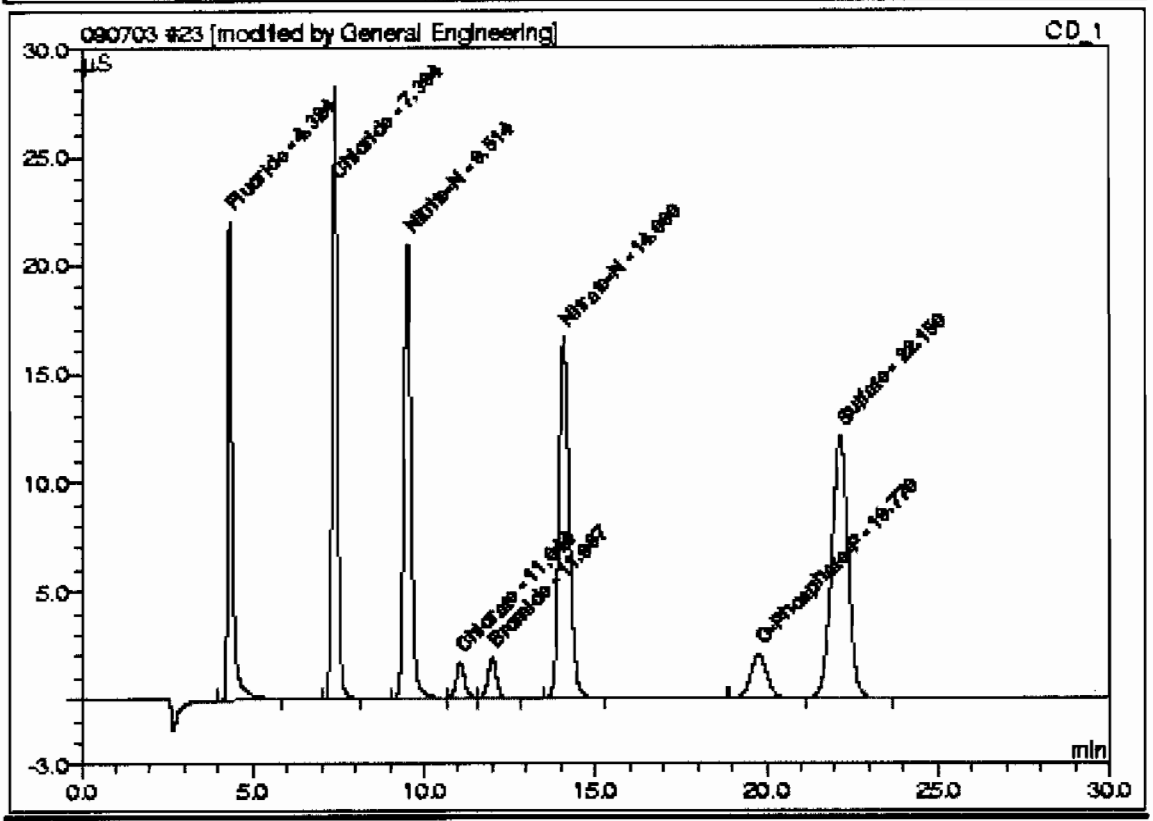

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	5.0000	4.9254	*	3.39643	12.08
2	7.39	Chloride	10.0000	9.3510		4.93051	17.59
3	9.51	Nitrite-N	5.0000	4.9036		5.08735	18.15
4	11.04	Chlorate	3.0000	3.0239		0.49447	1.76
5	11.99	Bromide	3.0000	3.0288		0.55878	1.99
6	14.09	Nitrate-N	5.0000	4.6989		5.72345	20.42
7	19.77	O-Phosphate-P	3.0000	3.0156		1.10727	3.95
8	22.15	Sulfate	20.0000	18.9608		6.74477	24.06
Total:				51.9078	0.000	28.033	100.00

24 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;905B

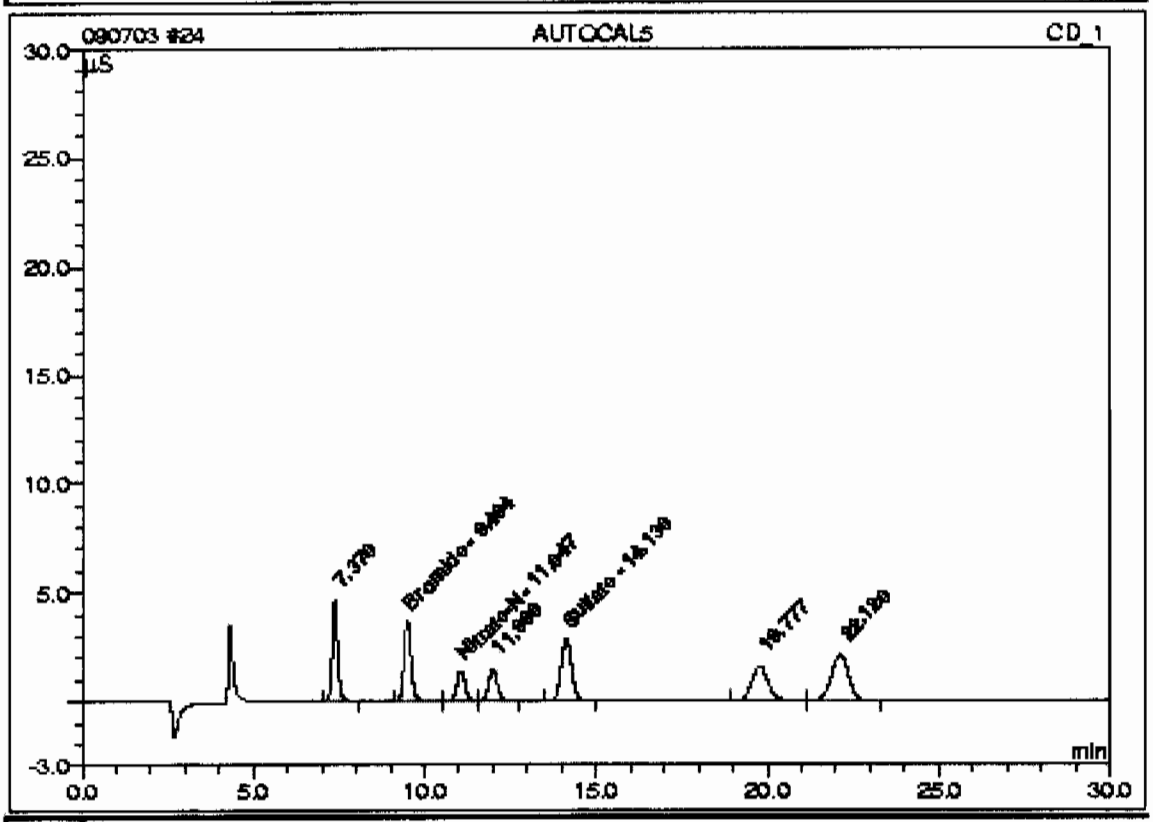

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	2.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	2.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	2.5000	1.1051		0.92663	15.98
n.a.	n.a.	Chlorate	2.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	1.0000	3.6480		0.40624	7.01
5	14.13	Sulfate	4.0000	3.8794		1.01074	17.44
Total:				8.6325	0.000	2.344	40.43

24 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

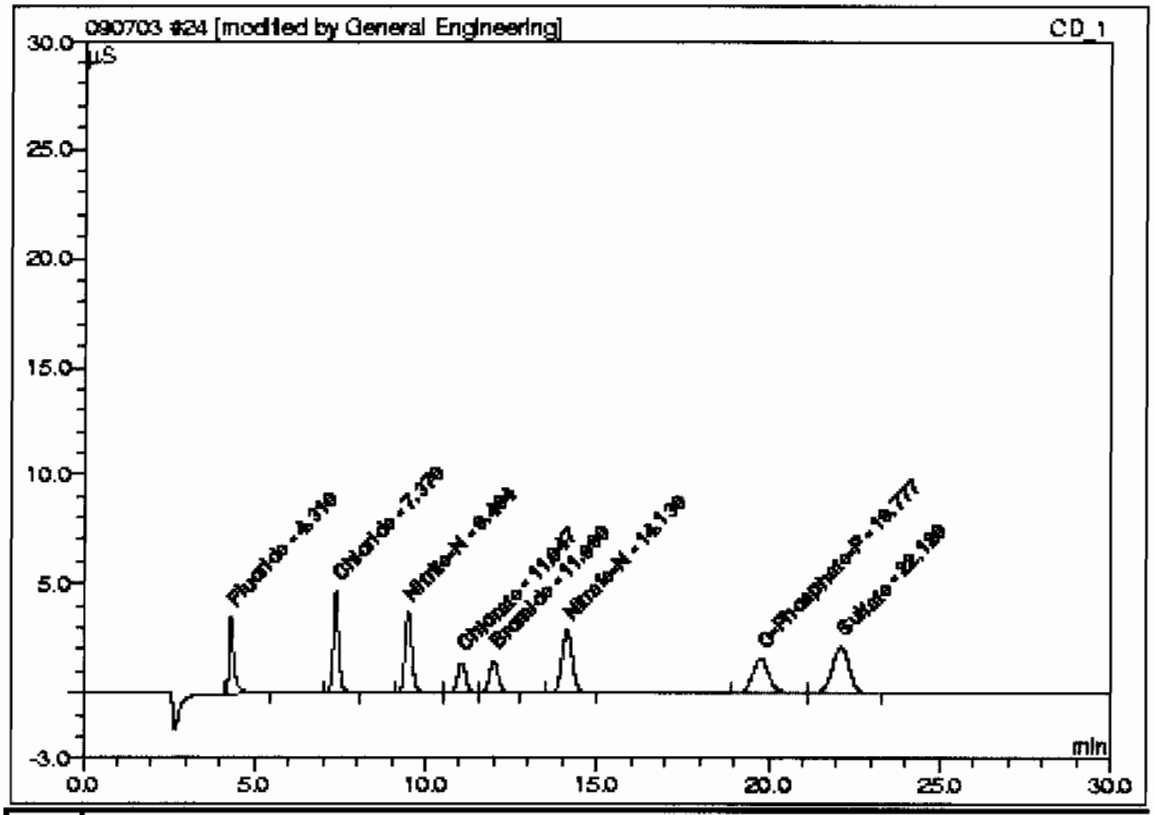

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	1.0000	0.9326	*	0.60409	9.44
2	7.37	Chloride	2.0000	1.7967		0.85540	13.36
3	9.49	Nitrite-N	1.0000	0.9416		0.92663	14.48
4	11.05	Chlorate	2.5000	2.4878		0.40624	6.35
5	11.99	Bromide	2.5000	2.4502		0.45103	7.05
6	14.13	Nitrate-N	1.0000	0.9129		1.01074	15.79
7	19.78	O-Phosphate-P	2.5000	2.4771		0.90660	14.16
8	22.12	Sulfate	4.0000	3.7545		1.24042	19.38
Total:				15.7534	0.000	6.401	100.00

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

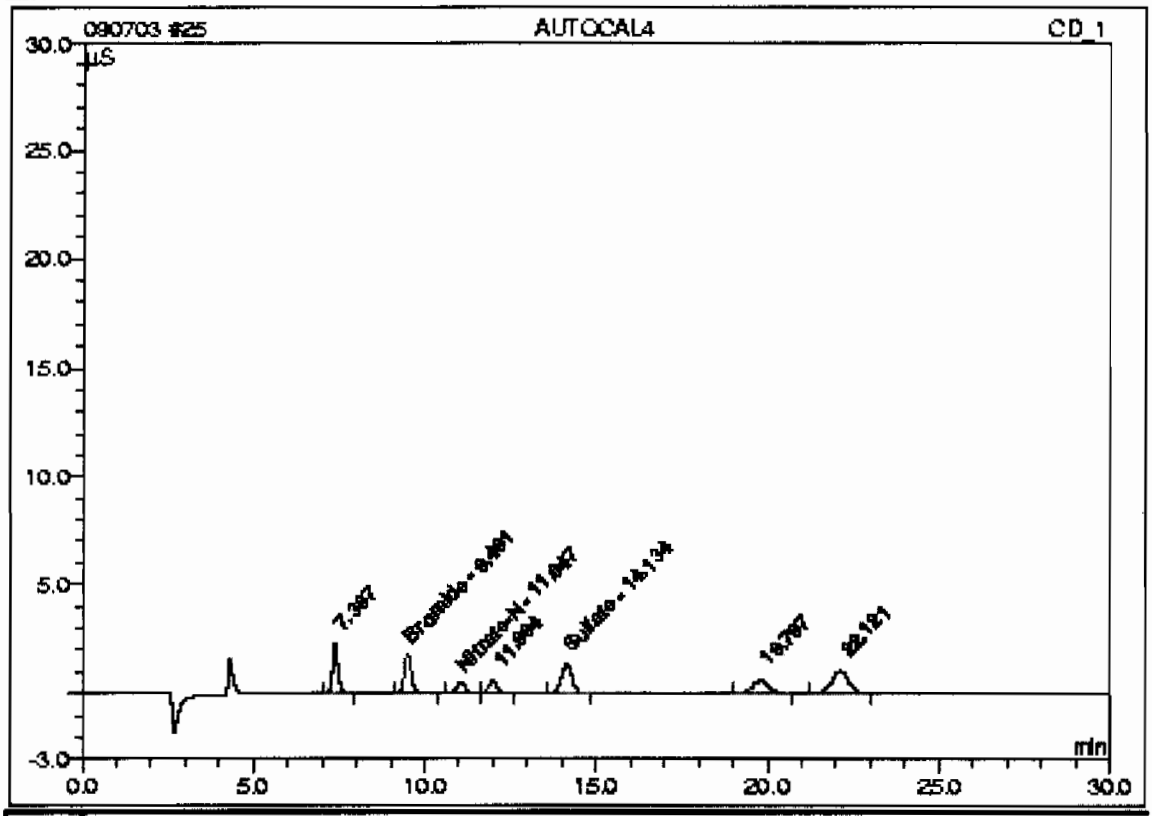

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	1.0000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	1.0000	0.9160		0.44459	16.96
n.a.	n.a.	Chlorate	1.0000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.5000	0.1296		0.15634	5.97
5	14.13	Sulfate	2.0000	2.1573		0.49242	18.79
Total:				3.2029	0.000	1.093	41.72

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9058

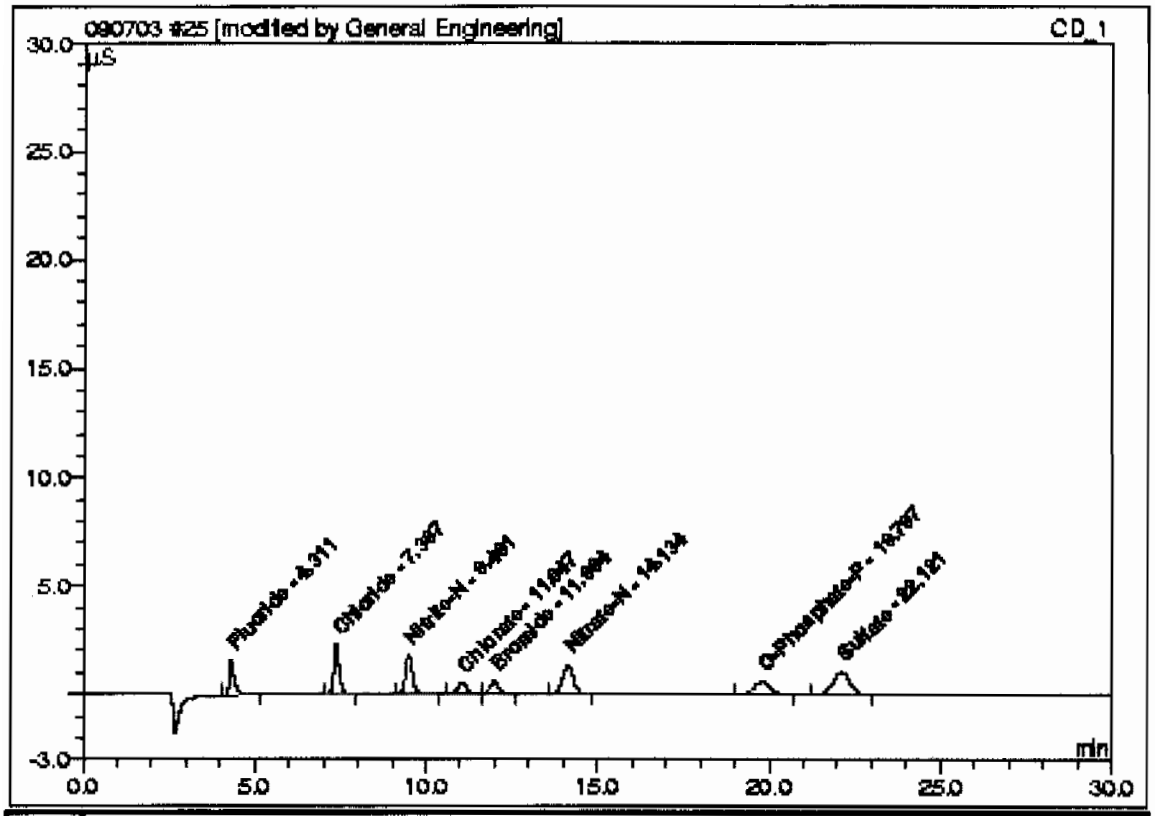

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.5000	0.4772	*	0.28671	9.86
2	7.37	Chloride	1.0000	0.9876		0.41893	14.41
3	9.49	Nitrite-N	0.5000	0.4826		0.44459	15.29
4	11.05	Chlorate	1.0000	0.9695		0.15634	5.38
5	11.99	Bromide	1.0000	0.9693		0.17517	6.02
6	14.13	Nitrate-N	0.5000	0.4966		0.49242	16.94
7	19.80	O-Phosphate-P	1.0000	0.9414		0.33440	11.50
8	22.12	Sulfate	2.0000	1.9824		0.59899	20.60
Total:				7.3065	0.000	2.908	100.00

This is runlog for Sequence 090703.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-03	07/04/09 00:20		1	090703	MAR1
ICAL-02	07/04/09 00:53		1	090703	MAR1
ICAL-01	07/04/09 01:26		1	090703	MAR1
ICV	07/04/09 01:59		1	090703	MAR1
ICB	07/04/09 02:32		1	090703	MAR1

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

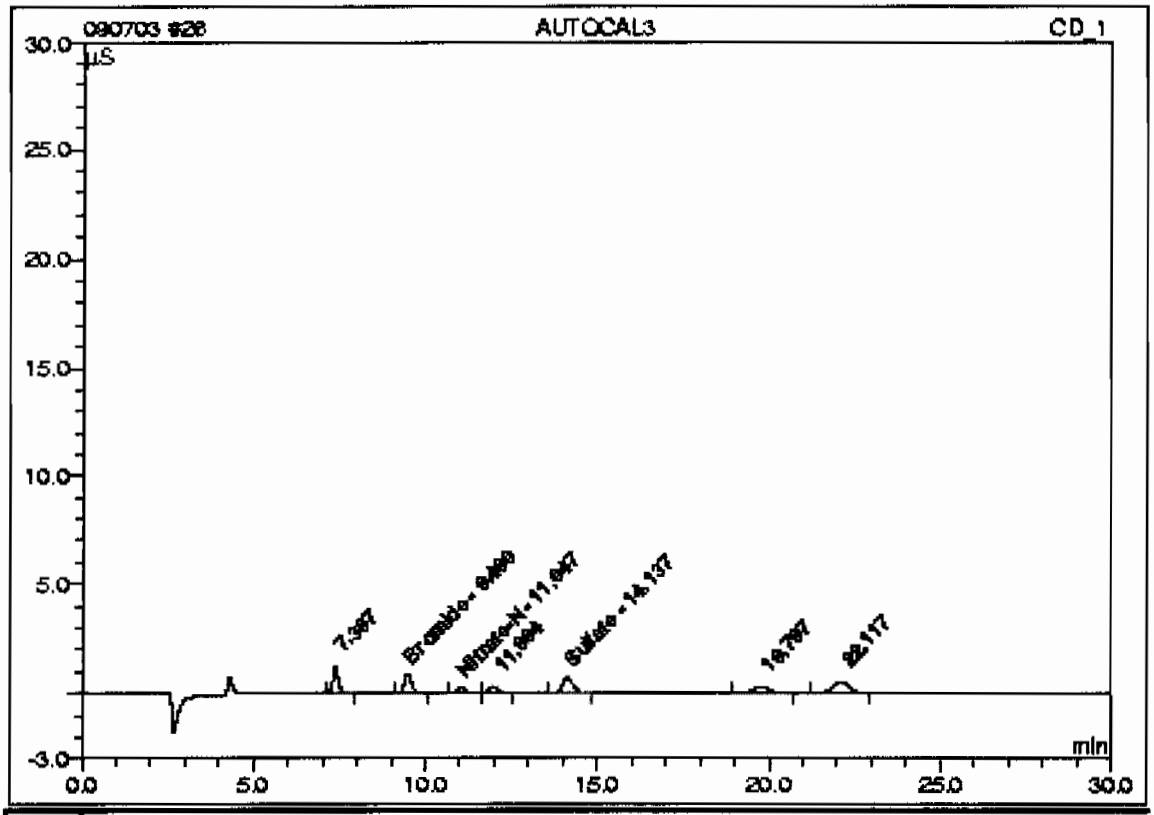

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.5000	0.7242		0.21812	16.45
n.a.	n.a.	Chlorate	0.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.2500	-0.6565		0.07808	5.89
5	14.14	Sulfate	1.0000	1.2880		0.24968	18.83
Total:				1.3557	0.000	0.546	41.17

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703sn	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9058

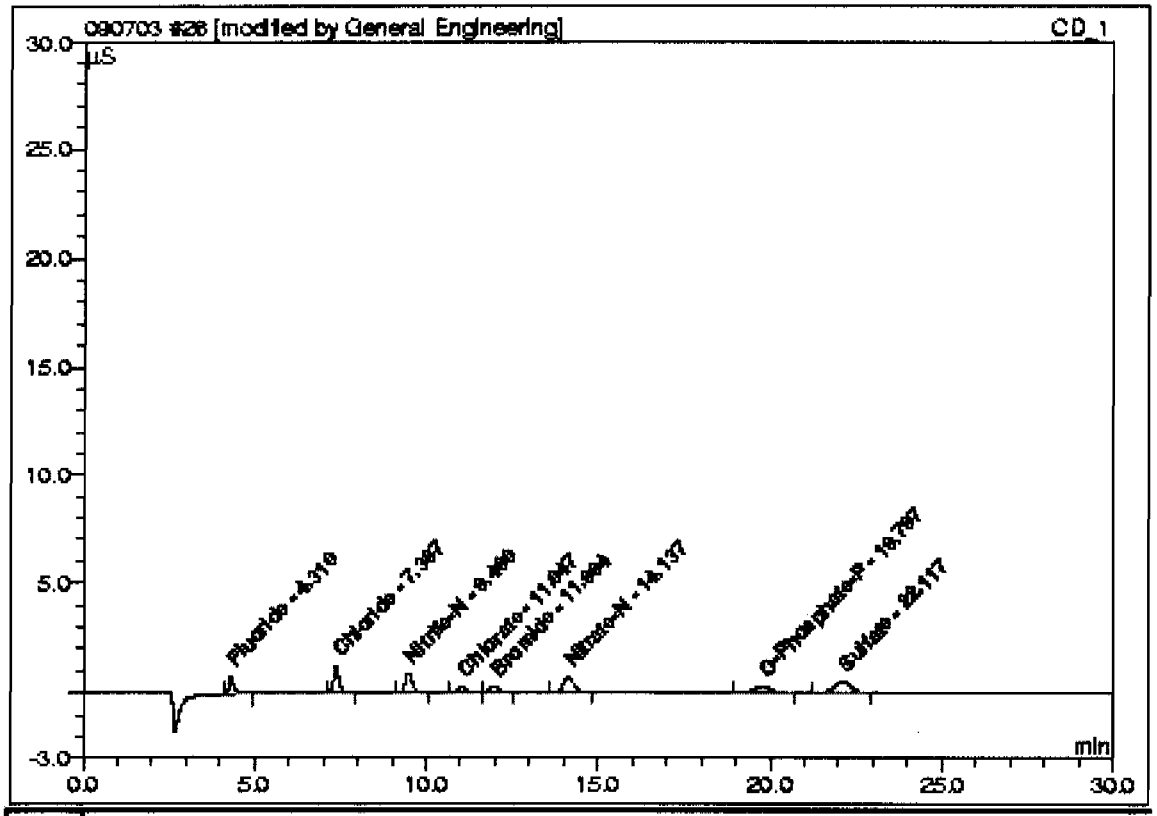

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.2500	0.2638	*	0.13800	9.43
2	7.37	Chloride	0.5000	0.6284		0.22515	15.38
3	9.49	Nitrite-N	0.2500	0.2669		0.21812	14.90
4	11.05	Chlorate	0.5000	0.4940		0.07808	5.33
5	11.99	Bromide	0.5000	0.4991		0.08759	5.98
6	14.14	Nitrate-N	0.2500	0.3016		0.24968	17.05
7	19.80	O-Phosphate-P	0.5000	0.4865		0.16491	11.26
8	22.12	Sulfate	1.0000	1.1634		0.30252	20.66
Total:				4.1037	0.000	1.464	100.00

27 AUTOCAL2

Sample Name:	**AUTOCAL2**	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	**AS23_HC**	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	**AS9HC-014108;GLGCE088;300;9058**

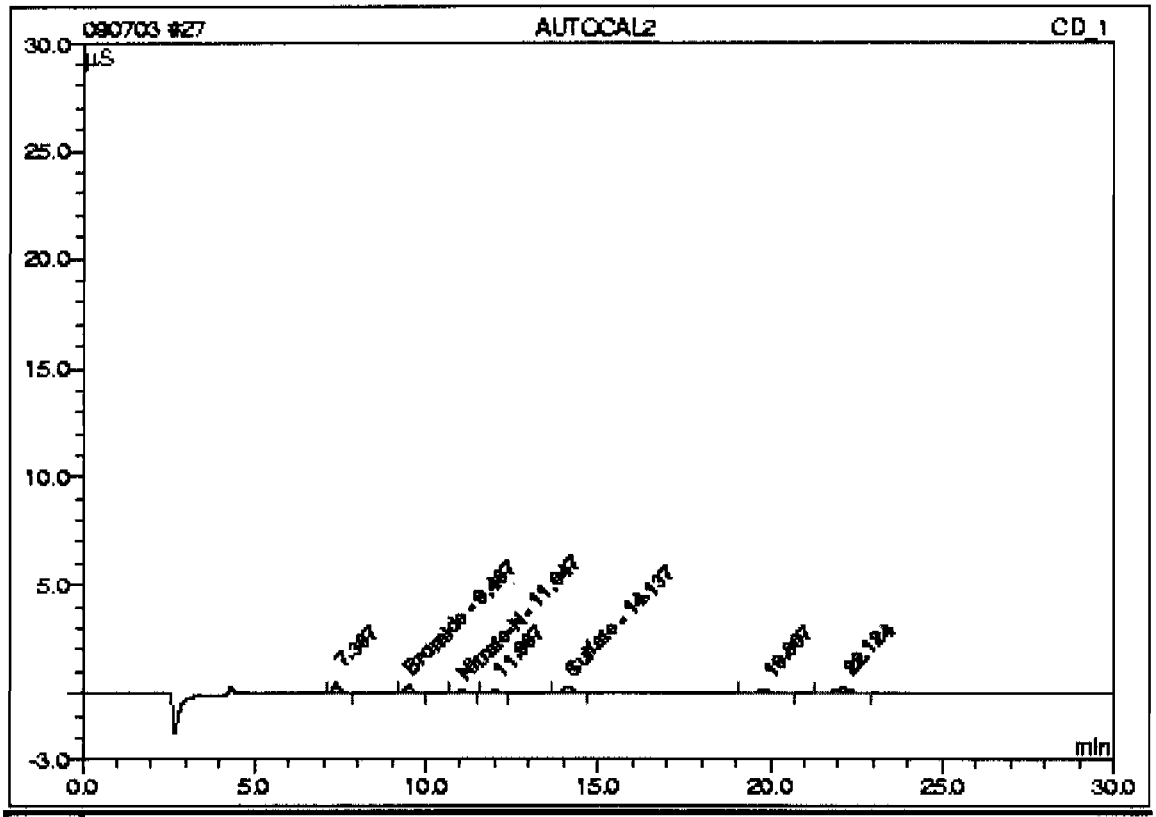

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.2000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.2000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.2000	0.5534		0.08703	16.21
n.a.	n.a.	Chlorate	0.2000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.1000	-0.9832		0.03083	5.74
5	14.14	Sulfate	0.4000	0.7269		0.10053	18.72
Total:				0.2971	0.000	0.218	40.67

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

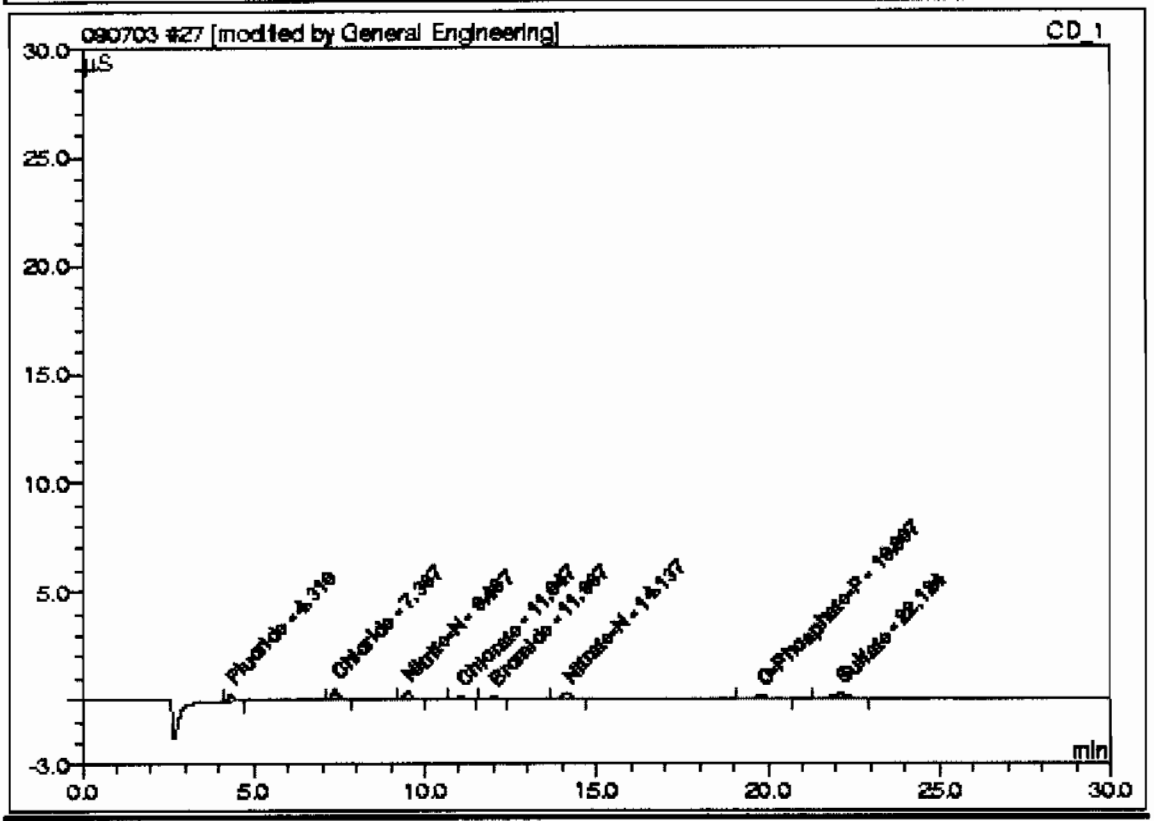

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.1000	0.1408 *		0.05234	8.89
2	7.37	Chloride	0.2000	0.3848		0.09372	15.91
3	9.49	Nitrite-N	0.1000	0.1421		0.08703	14.77
4	11.05	Chlorate	0.2000	0.2070		0.03083	5.23
5	11.99	Bromide	0.2000	0.2104		0.03382	5.74
6	14.14	Nitrate-N	0.1000	0.1817		0.10053	17.06
7	19.81	O-Phosphate-P	0.2000	0.2212		0.06603	11.21
8	22.12	Sulfate	0.4000	0.6729		0.12497	21.21
Total:				2.1609	0.000	0.589	100.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

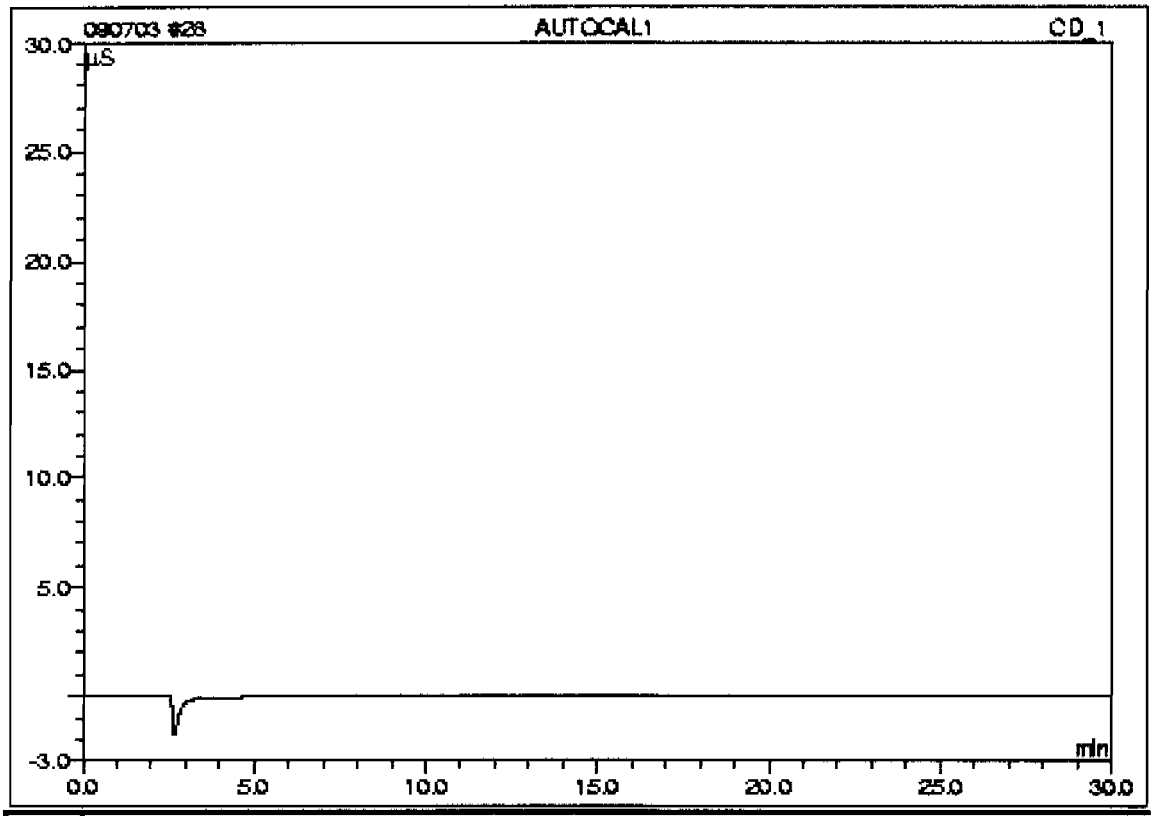

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:25	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-015580;GLGCE085;300;9055

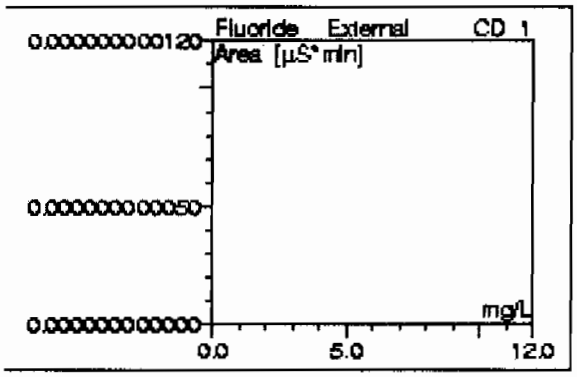

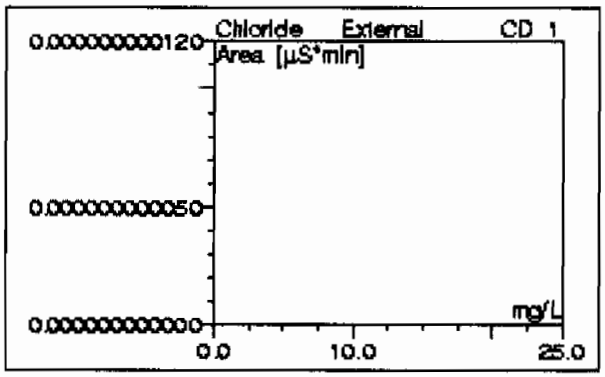

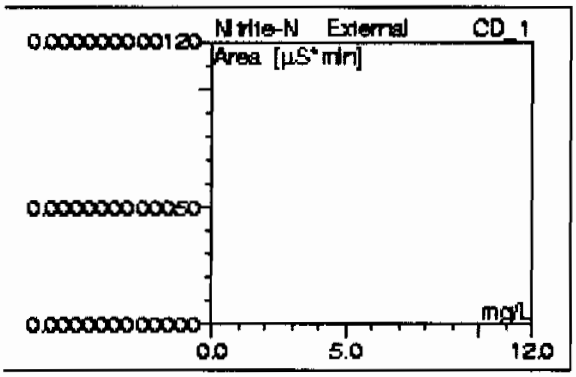

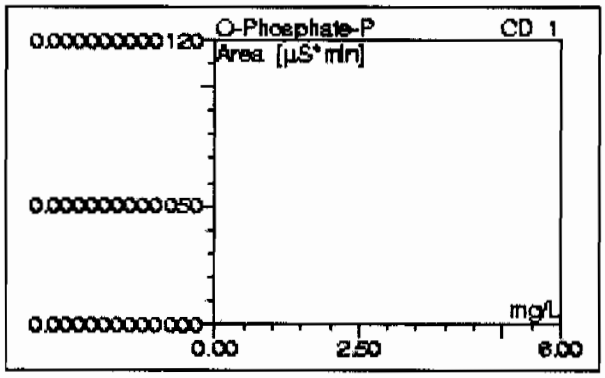

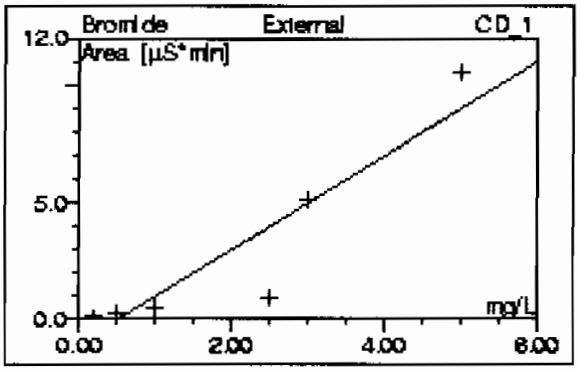

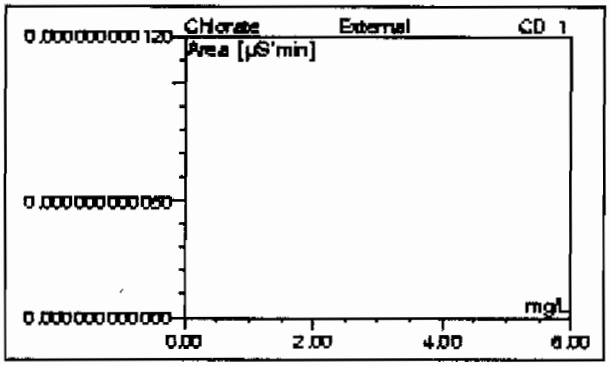

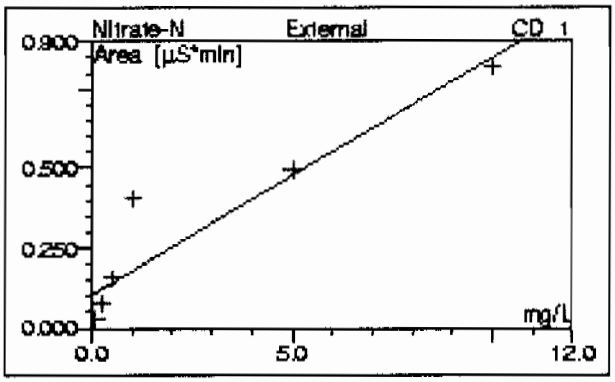

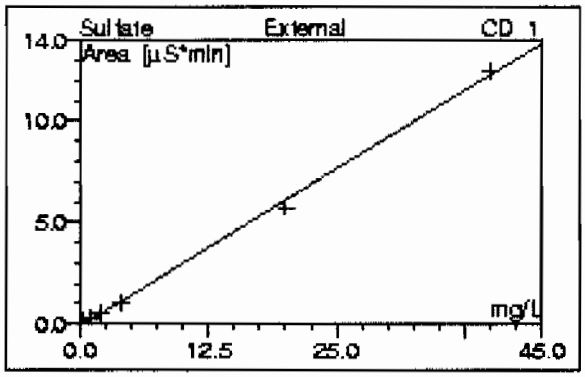

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Chloride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrite-N	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Bromide	0LOff	85.7419	-1.0196	1.9997	0.0000
n.a.	n.a.	Chlorate	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrate-N	0LOff	86.4468	0.1041	0.0746	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8340	-0.1257	0.3112	0.0000
Average:				90.6742	-0.1301	0.2982	0.0000

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:26	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

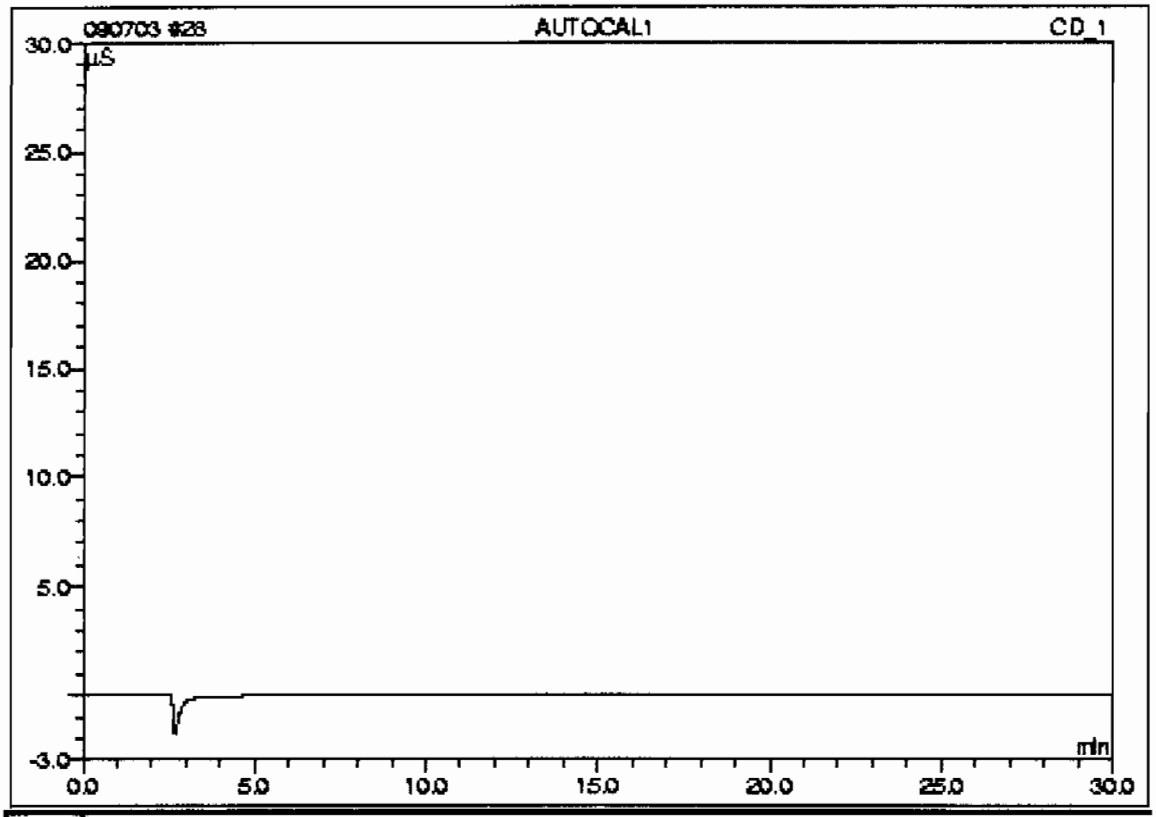

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantit. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:25	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9056

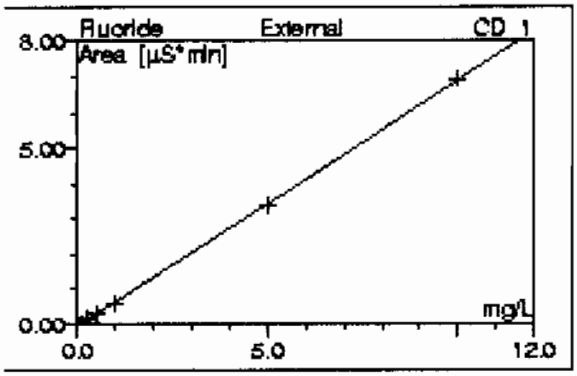

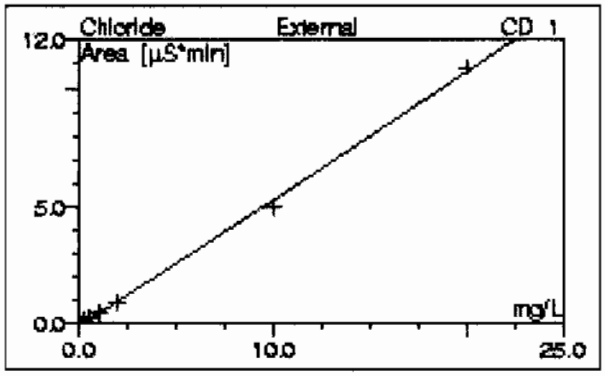

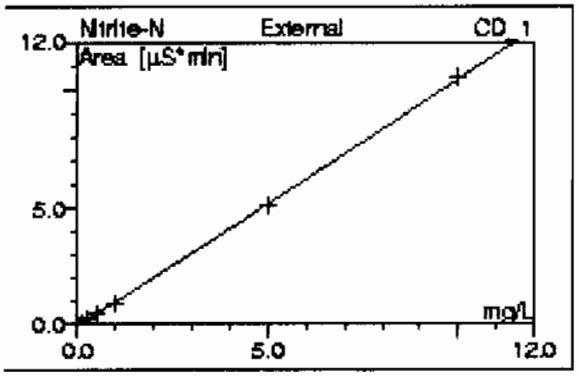

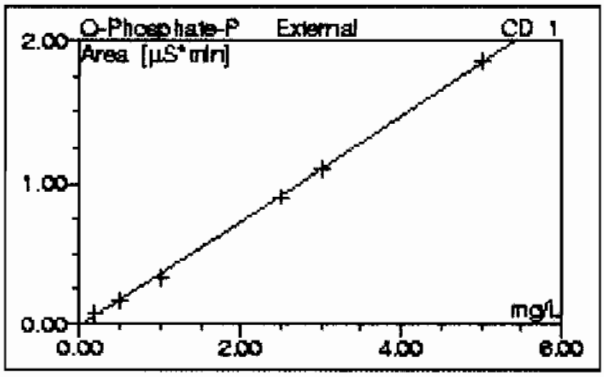

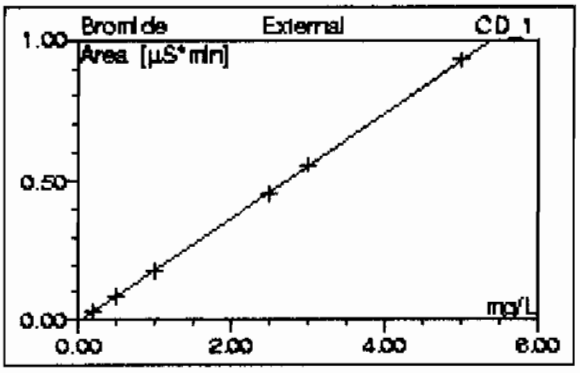

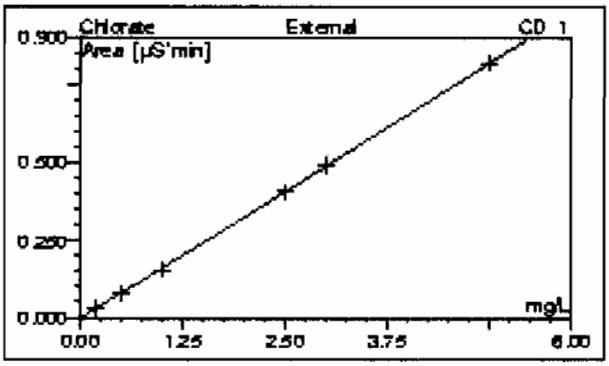

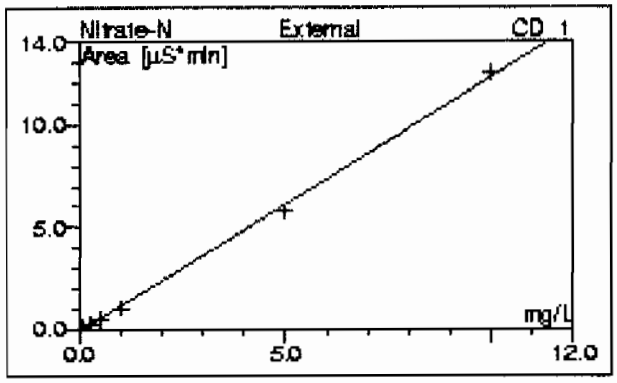

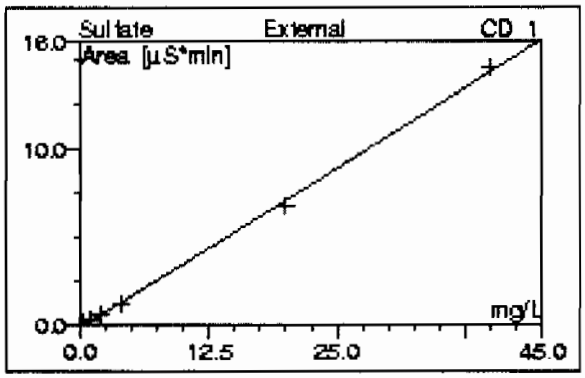

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9818	-0.0458	0.6968	0.0000
n.a.	n.a.	Chloride	0LOff	99.8028	-0.1138	0.5394	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9773	-0.0622	1.0502	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	99.9702	-0.0164	0.3726	0.0000
n.a.	n.a.	Bromide	0LOff	99.9731	-0.0054	0.1863	0.0000
n.a.	n.a.	Chlorate	0LOff	99.9897	-0.0032	0.1646	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.8340	-0.1257	1.2448	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8797	-0.1186	0.3620	0.0000
Average:				99.9261	-0.0614	0.5771	0.0000

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantit. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

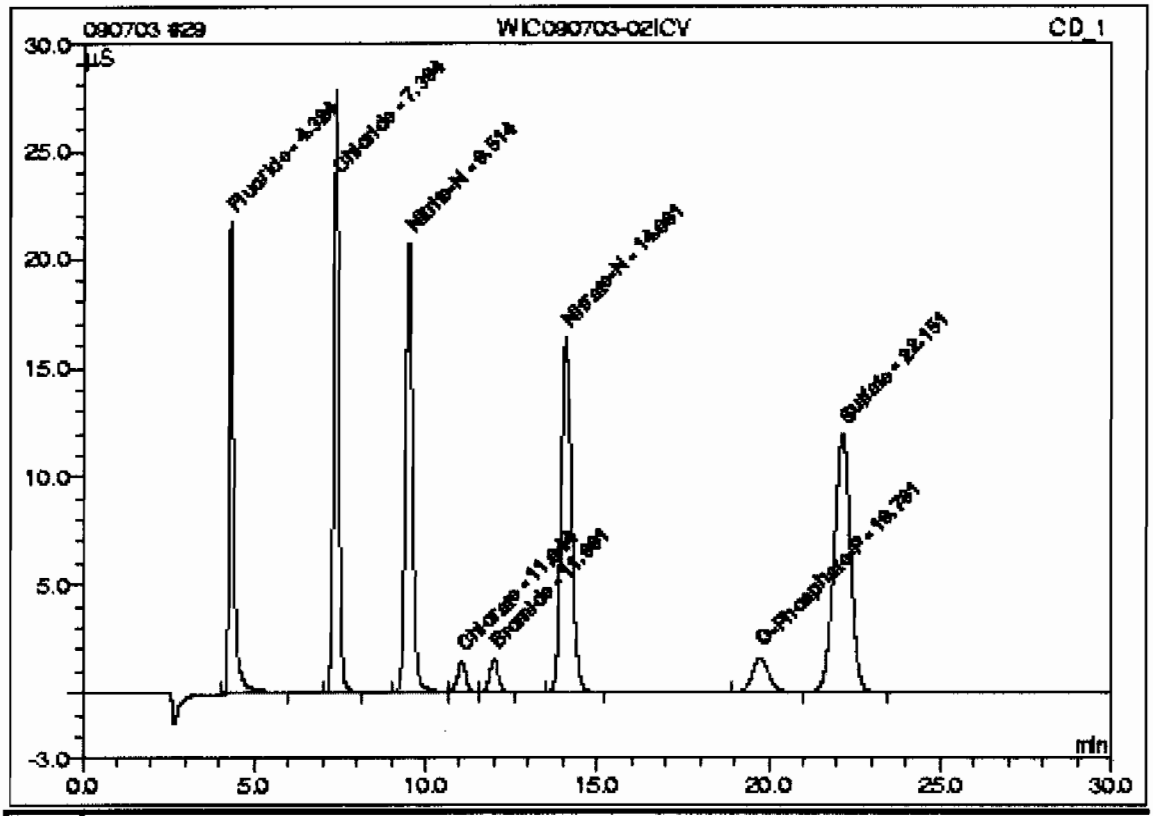

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86495	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.09	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65338	24.40
Total:				49.6694	0.000	27.271	100.00

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9055

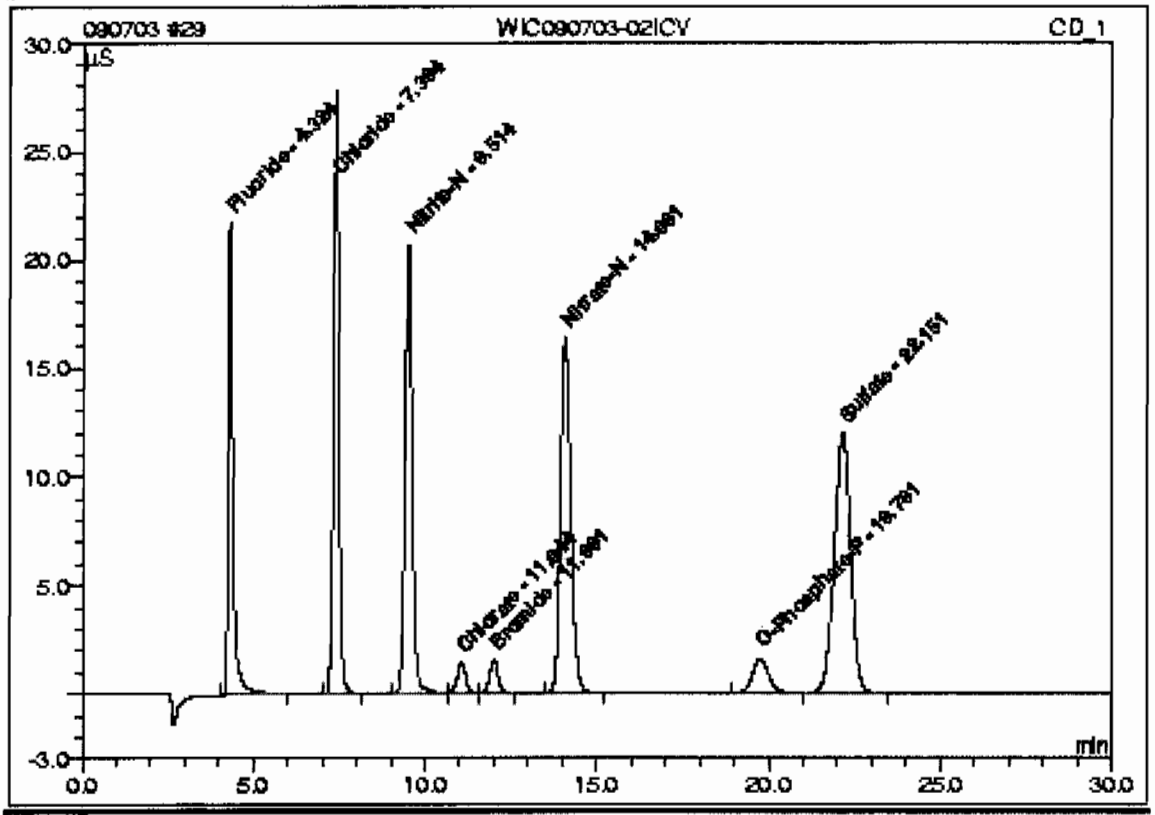

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.09	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65398	24.40
Total:				49.6694	0.000	27.271	100.00

30 ICB

Sample Name:	**ICB**	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	**AS23_HC**	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	**MAR1**
Run Time (min):	30.00	Column:	**AS9HC-014108;GLGCE088;300;9058**

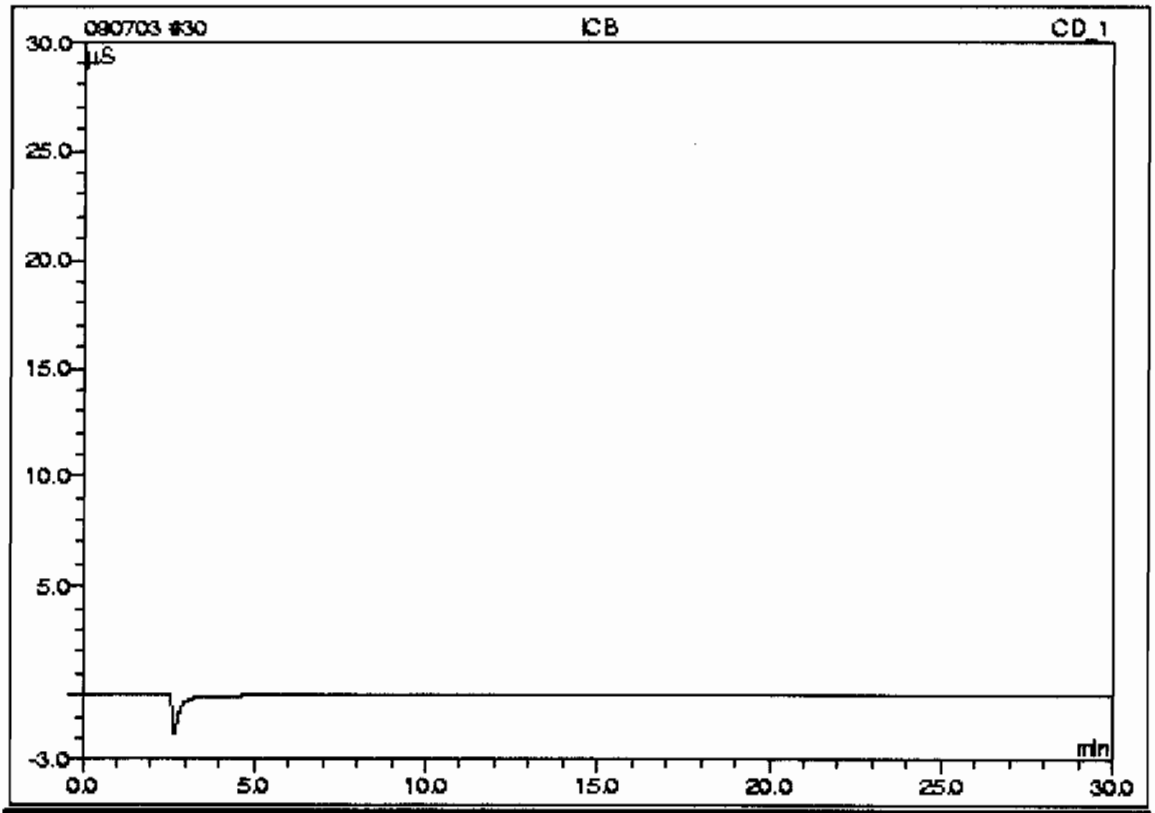

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE088;300;9058

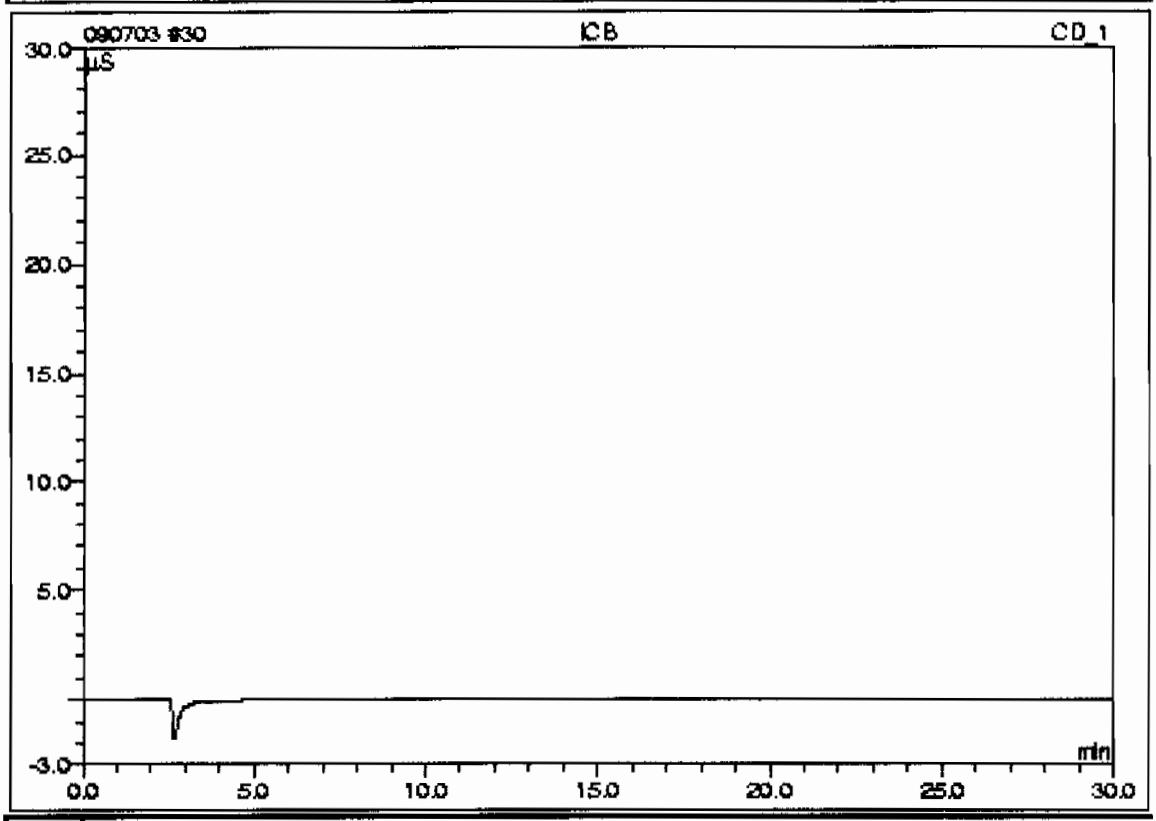

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 090710.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/10/09 10:27		1	090710	MAR1
ICV	07/10/09 10:55		1	090710	MAR1
ICB	07/10/09 11:24		1	090710	MAR1
1201869897	07/10/09 11:53	880627	1	090710	MAR1
1201869901	07/10/09 12:22	880627	1	090710	MAR1
232347001	07/10/09 12:50	880627	1	090710	MAR1
1201869898	07/10/09 13:19	880627	1	090710	MAR1
1201869899	07/10/09 13:48	880627	1	090710	MAR1
1201869900	07/10/09 14:17	880627	1	090710	MAR1
232347002	07/10/09 14:46	880627	1	090710	MAR1
232347003	07/10/09 15:15	880627	1	090710	MAR1
232347004	07/10/09 15:43	880627	1	090710	MAR1
CVH	07/10/09 16:12		1	090710	MAR1
CCB	07/10/09 16:41		1	090710	MAR1
1201872402	07/10/09 17:10	881671	1	090710	MAR1
1201872406	07/10/09 17:39	881671	1	090710	MAR1
232582001	07/10/09 18:08	881671	1	090710	MAR1
232582002	07/10/09 18:37	881671	1	090710	MAR1
232585001	07/10/09 19:06	881671	1	090710	MAR1
1201872403	07/10/09 19:35	881671	1	090710	MAR1
1201872404	07/10/09 20:04	881671	1	090710	MAR1
1201872405	07/10/09 20:33	881671	1	090710	MAR1
CCV	07/10/09 21:01		1	090710	MAR1
CCB	07/10/09 21:30		1	090710	MAR1
232585002	07/10/09 21:59	881671	1	090710	MAR1
232585003	07/10/09 22:28	881671	1	090710	MAR1
232591001	07/10/09 22:57	881671	1	090710	MAR1
CVH	07/10/09 23:26		1	090710	MAR1

9 WIC090710-02ICV

Sample Name:	WIC090710-02ICV	*Injection Volume:*	1.0
Vial Number:	2	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 10:55	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

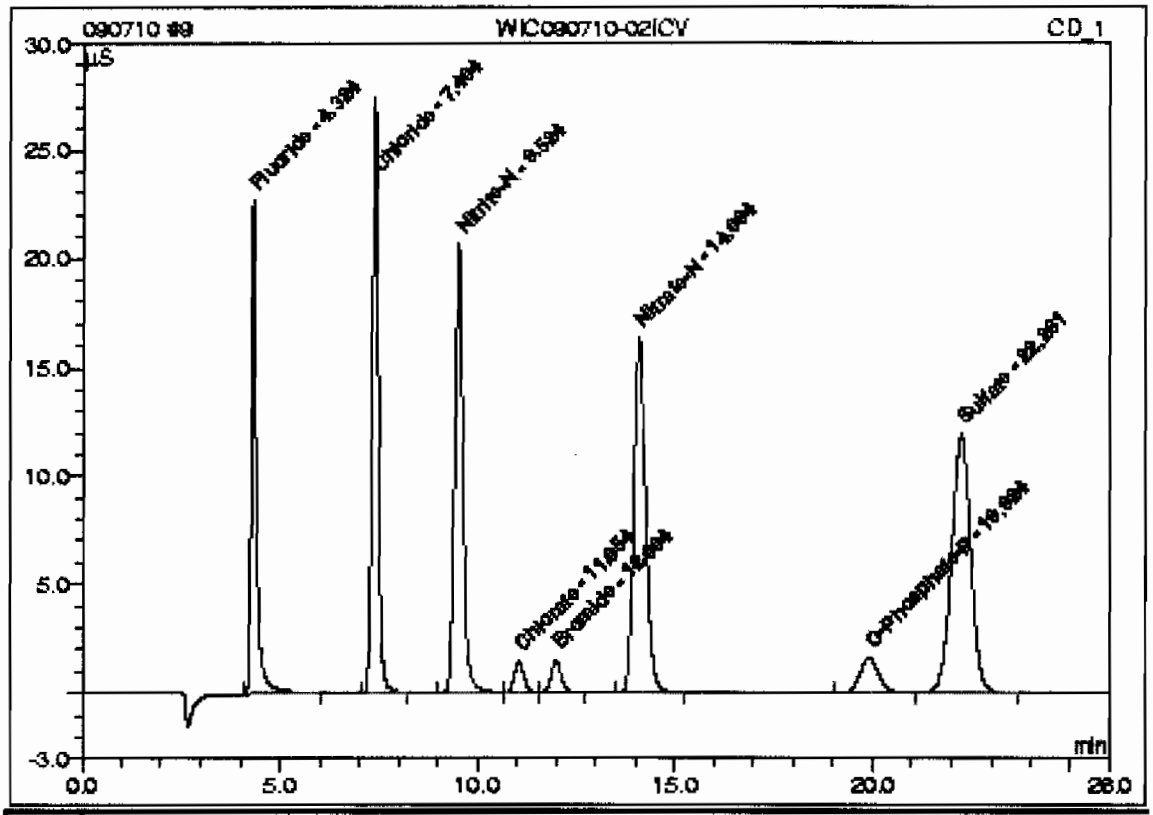

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.9513		3.40445	12.40
2	7.40	Chloride	n.a.	9.2589		4.88087	17.78
3	9.52	Nitrite-N	n.a.	4.8602		5.04179	18.37
4	11.05	Chlorate	n.a.	2.5352		0.41404	1.51
5	12.00	Bromide	n.a.	2.4394		0.44900	1.64
6	14.09	Nitrate-N	n.a.	4.6565		5.67065	20.66
7	19.92	O-Phosphate-P	n.a.	2.4520		0.89726	3.27
8	22.26	Sulfate	n.a.	18.8047		6.68826	24.37
Total:				49.9581	0.000	27.446	100.00

10 ICB

Sample Name:	**ICB**	*Injection Volume:*	1.0
Vial Number:	3	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 11:24	Analyst:	**MAR1**
Run Time (min):	28.00	Column:	**AS9HC-014108;GLGCE088;300;9058**

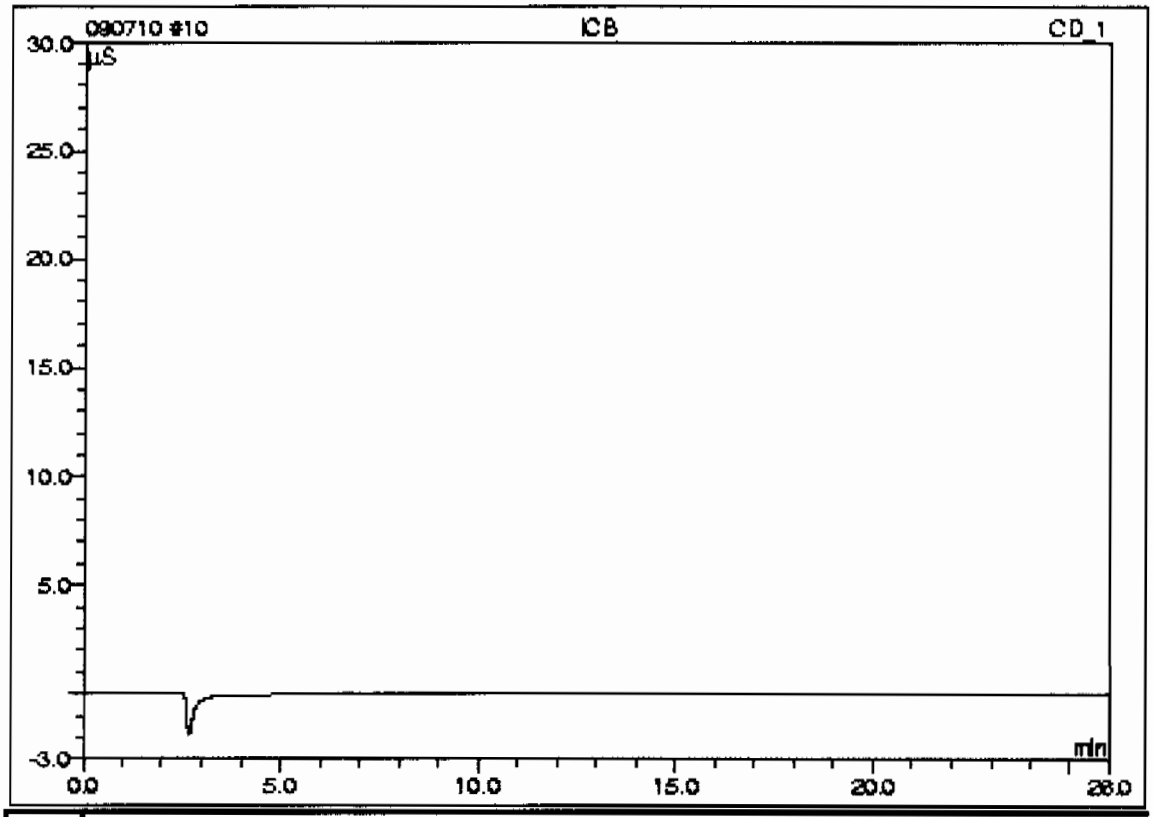

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

20 WIC090710-02CVH

Sample Name:	**WIC090710-02CVH**	*Injection Volume:*	1.0
Vial Number:	13	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 15:12	Analyst:	**MAR1**
Run Time (min):	28.00	Column:	**AS9HC-014108;GLGCE085;300;9058**

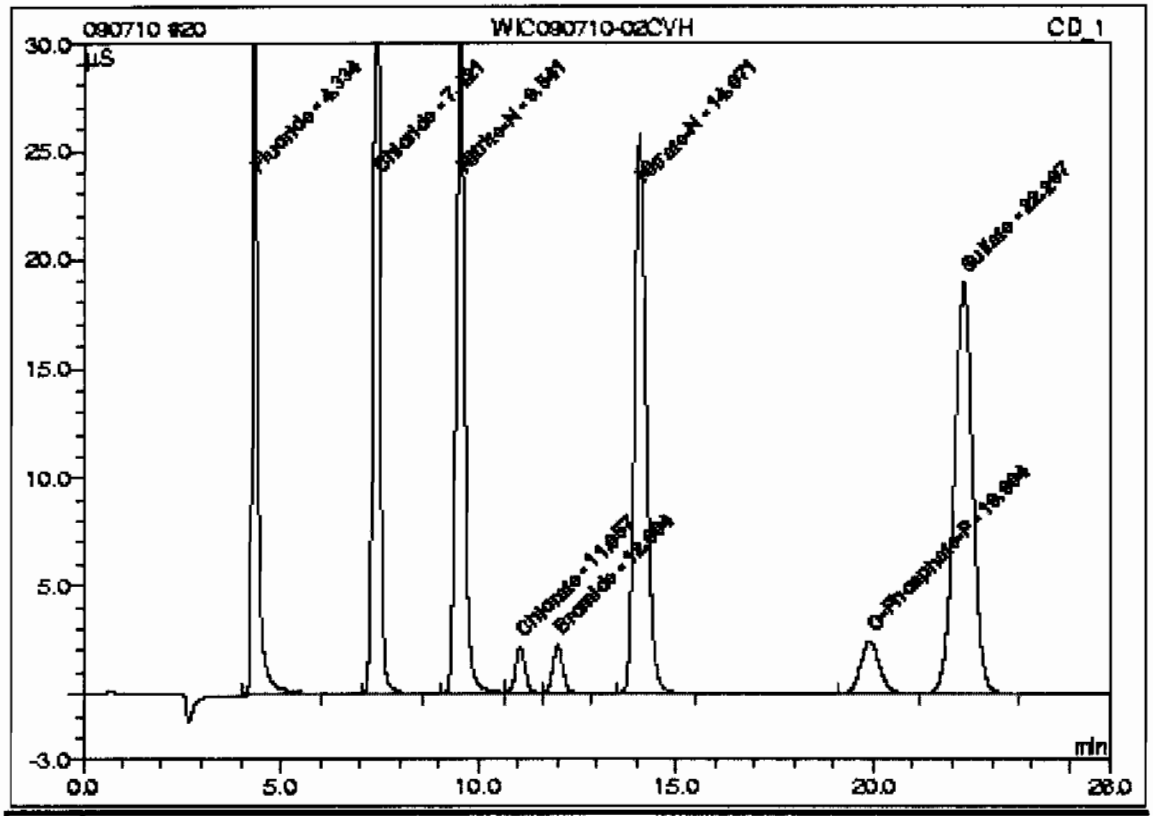

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	7.5118		5.18871	12.15
2	7.42	Chloride	n.a.	14.5867		7.75491	18.16
3	9.54	Nitrite-N	n.a.	7.4133		7.72299	18.08
4	11.06	Chlorate	n.a.	3.8270		0.62667	1.47
5	12.00	Bromide	n.a.	3.6753		0.67921	1.59
6	14.07	Nitrate-N	n.a.	7.2904		8.94931	20.95
7	19.90	O-Phosphate-P	n.a.	3.6723		1.35196	3.17
8	22.30	Sulfate	n.a.	29.1672		10.43929	24.44
Total:				77.1440	0.000	42.713	100.00

21 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	14	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 16:41	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

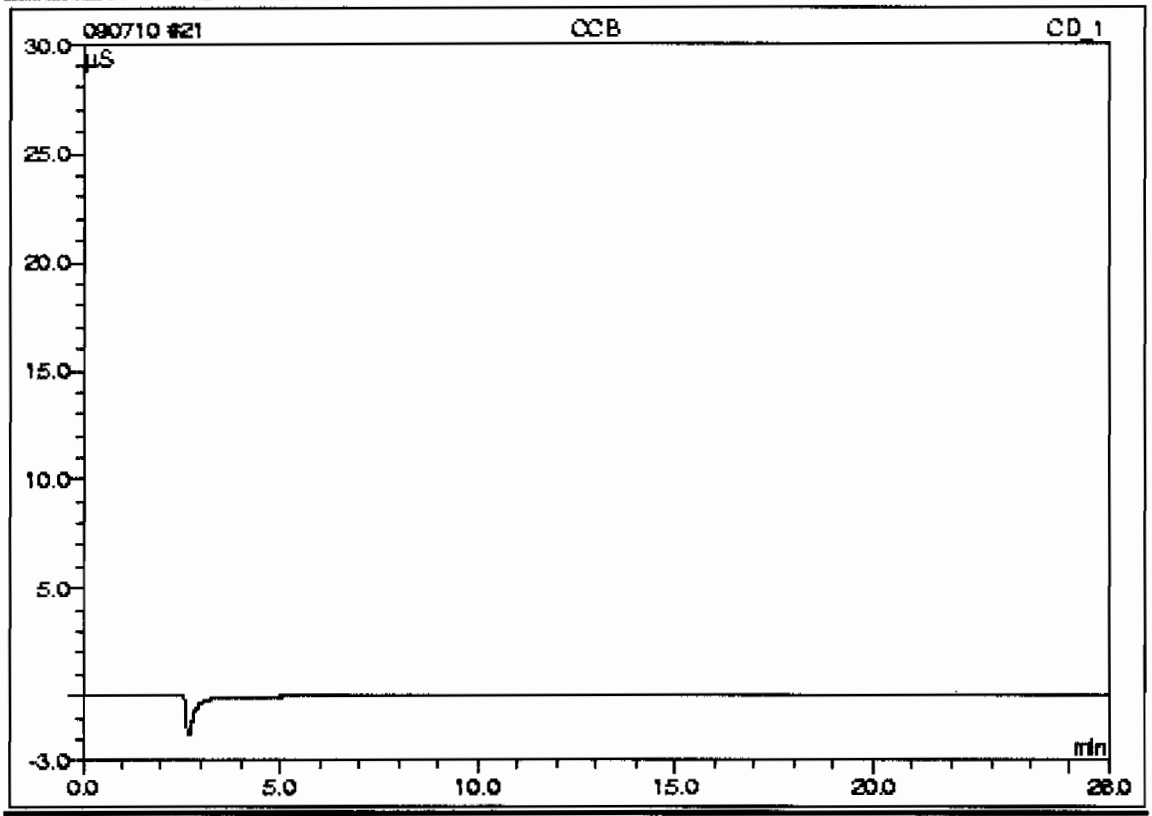

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

22 1201872402/881671/1/1/MB

Sample Name:	1201872402/881671/1/1/MB	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 17:10	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

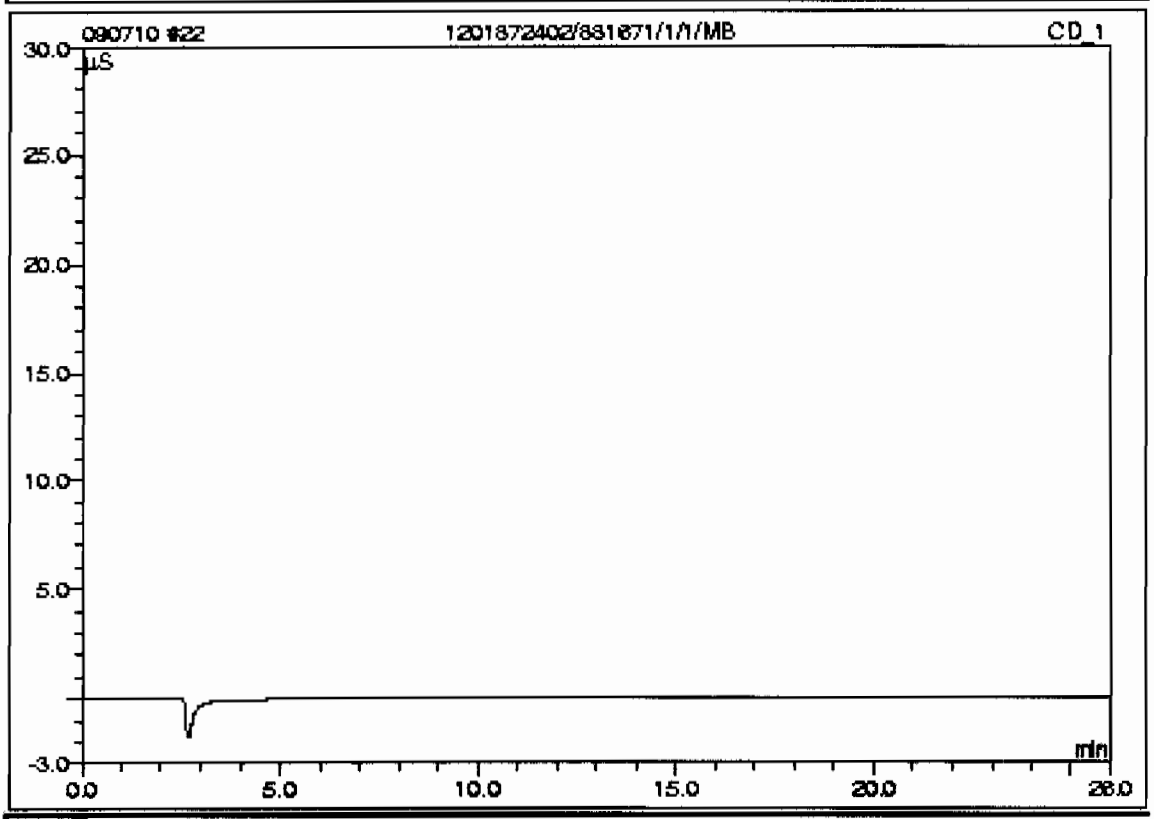

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

23 1201872406/881671/1/1/LCS

Sample Name:	1201872406/881671/1/1/LCS	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 17:39	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9055

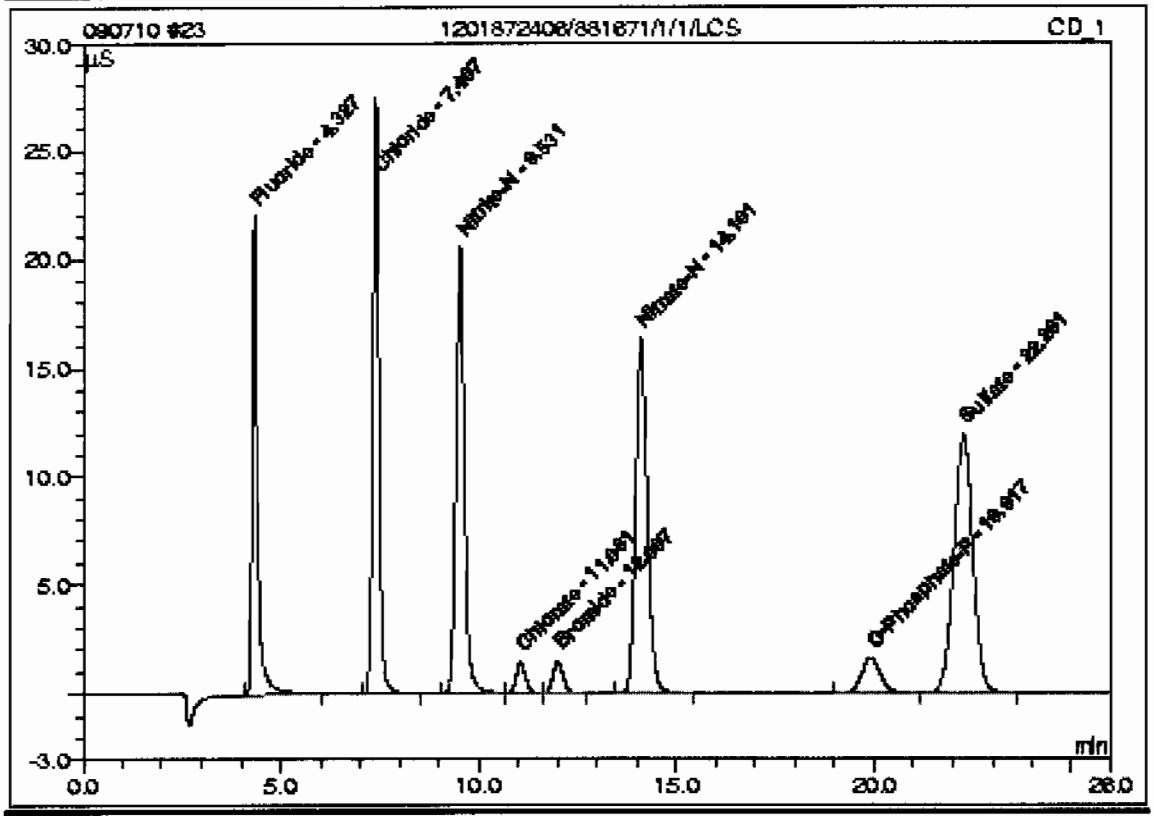

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9238		3.38533	12.33
2	7.41	Chloride	n.a.	9.2994		4.90269	17.85
3	9.53	Nitrite-N	n.a.	4.8611		5.04275	18.36
4	11.06	Chlorate	n.a.	2.5549		0.41727	1.52
5	12.01	Bromide	n.a.	2.4424		0.44957	1.64
6	14.10	Nitrate-N	n.a.	4.6625		5.67819	20.68
7	19.92	O-Phosphate-P	n.a.	2.4455		0.89486	3.26
8	22.28	Sulfate	n.a.	18.8109		6.69052	24.36
Total:				50.0006	0.000	27.461	100.00

26 232585001/881671/1/1/

Sample Name:	232585001/881671/1/1/	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 19:06	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

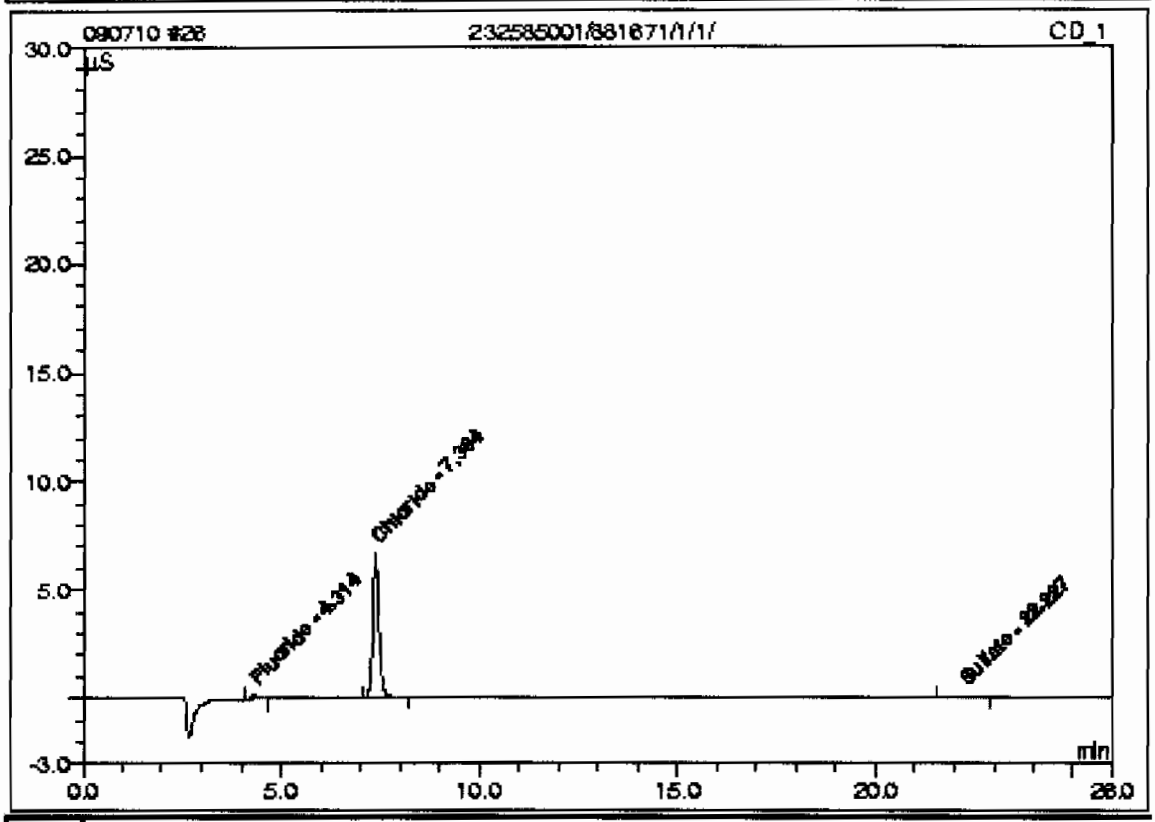

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.1102		0.03098	2.38
2	7.38	Chloride	n.a.	2.4952		1.23216	94.54
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.23	Sulfate	n.a.	0.4385		0.04011	3.08
Total:				3.0439	0.000	1.303	100.00

27 1201872403/881671/1/1/DUP

Sample Name:	1201872403/881671/1/1/**DUP**	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 19:35	Analyst:	**MAR1**
Run Time (min):	28.00 Column:	**AS9HC-014108;GLGCE085;300;9055**	

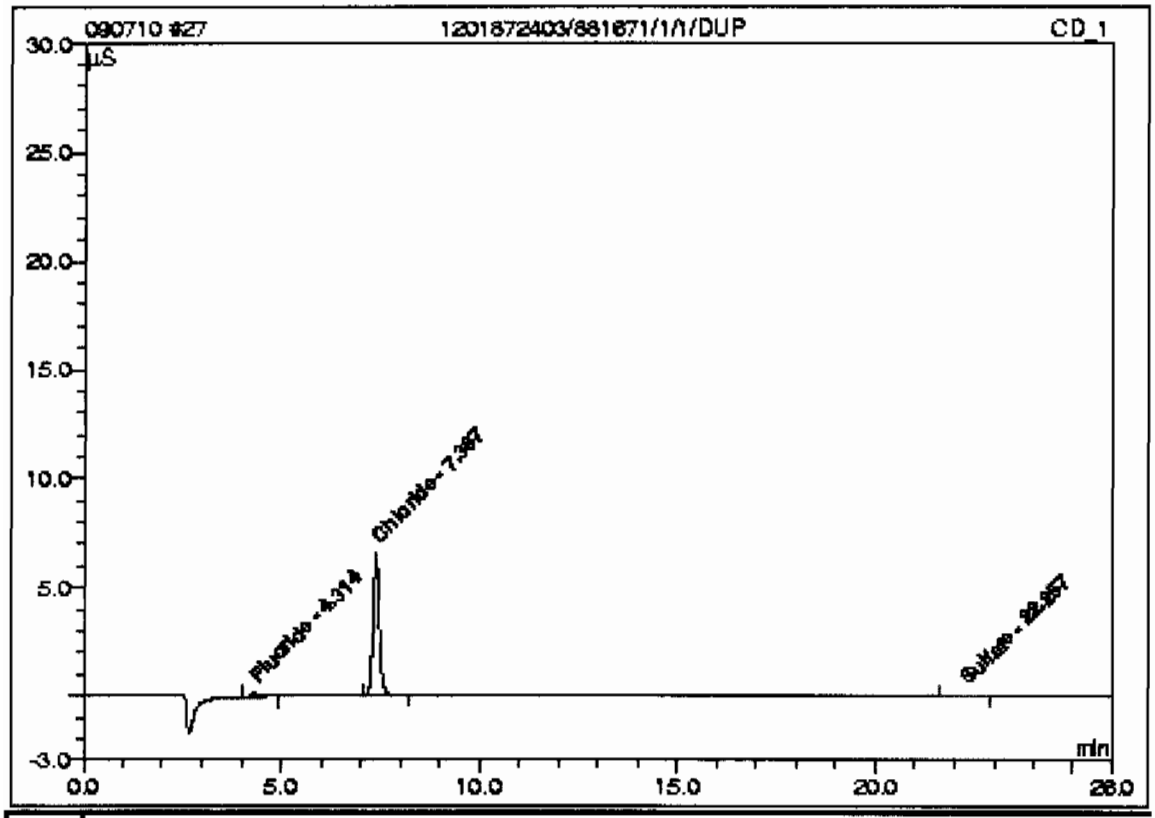

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.1193		0.03732	2.89
2	7.39	Chloride	n.a.	2.4674		1.21721	94.33
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.26	Sulfate	n.a.	0.4266		0.03592	2.78
Total:				3.0134	0.000	1.290	100.00

28 1201872404/881671/1/1/MS

Sample Name:	1201872404/881671/1/1/MS	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 20:04	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE085;300;9058

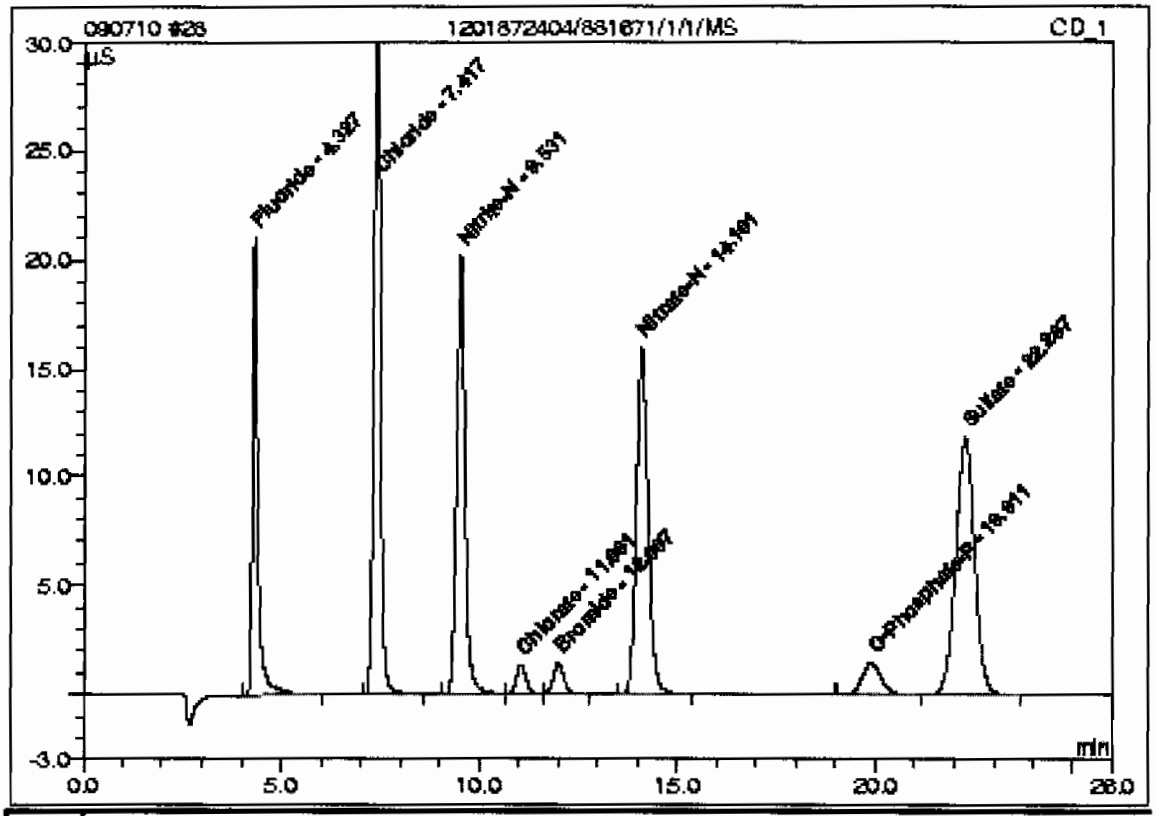

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.7485		3.26313	11.38
2	7.42	Chloride	n.a.	12.4254		6.58900	22.97
3	9.53	Nitrite-N	n.a.	4.7764		4.95382	17.27
4	11.06	Chlorate	n.a.	2.4951		0.40745	1.42
5	12.01	Bromide	n.a.	2.4017		0.44199	1.54
6	14.10	Nitrate-N	n.a.	4.5778		5.57264	19.43
7	19.91	O-Phosphate-P	n.a.	2.2616		0.82634	2.88
8	22.29	Sulfate	n.a.	18.6398		6.62859	23.11
Total:				52.3263	0.000	28.683	100.00

29 1201872405/881671/1/1/MSD

Sample Name:	1201872405/881671/1/1/**MSD**	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 20:33	Analyst:	**MAR1**
Run Time (min):	25.00 Column:	**AS9HC-014108;GLGCE085;300;9055**	

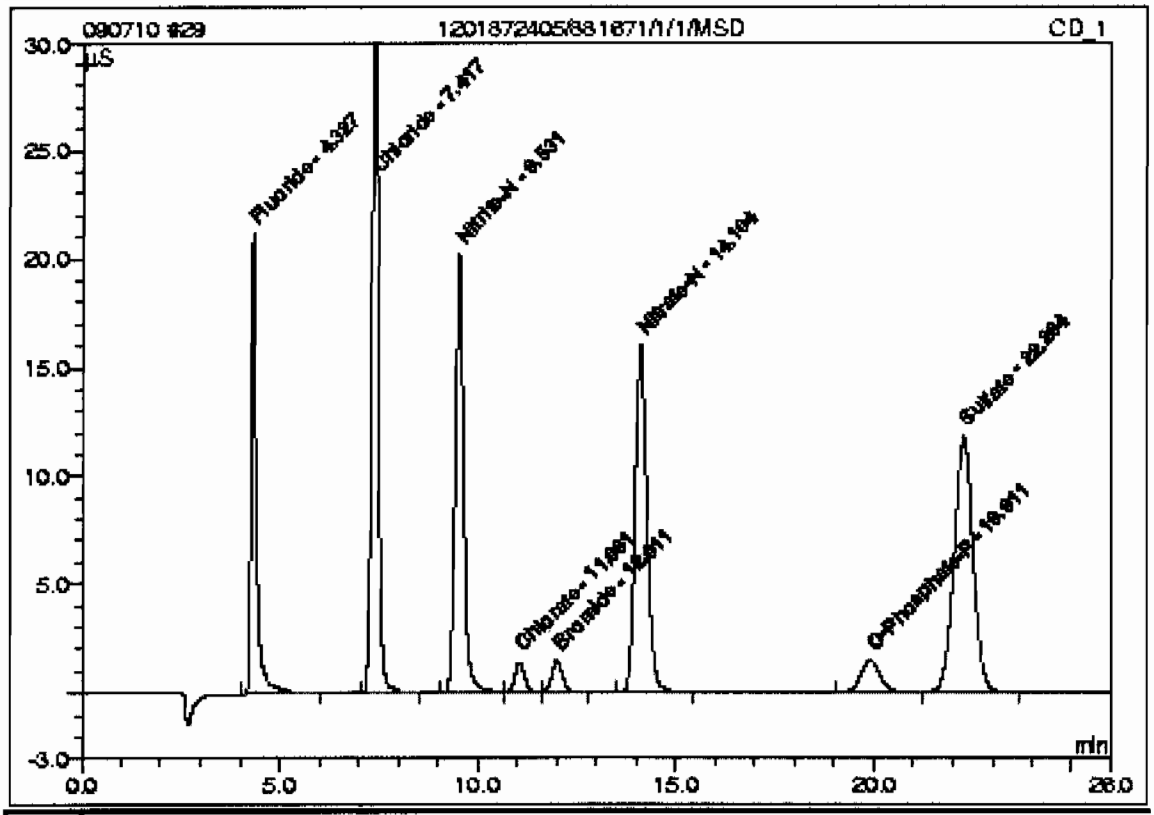

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.7534		3.26656	11.39
2	7.42	Chloride	n.a.	12.4318		6.59249	22.96
3	9.53	Nitrite-N	n.a.	4.7852		4.96307	17.28
4	11.06	Chlorate	n.a.	2.5168		0.41101	1.43
5	12.01	Bromide	n.a.	2.4189		0.44517	1.55
6	14.10	Nitrate-N	n.a.	4.5806		5.57615	19.42
7	19.91	O-Phosphate-P	n.a.	2.2642		0.82728	2.89
8	22.28	Sulfate	n.a.	18.6560		6.63444	23.10
Total:				52.4067	0.000	28.716	100.00

30 WIC090710-02CCV

Sample Name:	WIC090710-02CCV	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantit. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 21:01	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

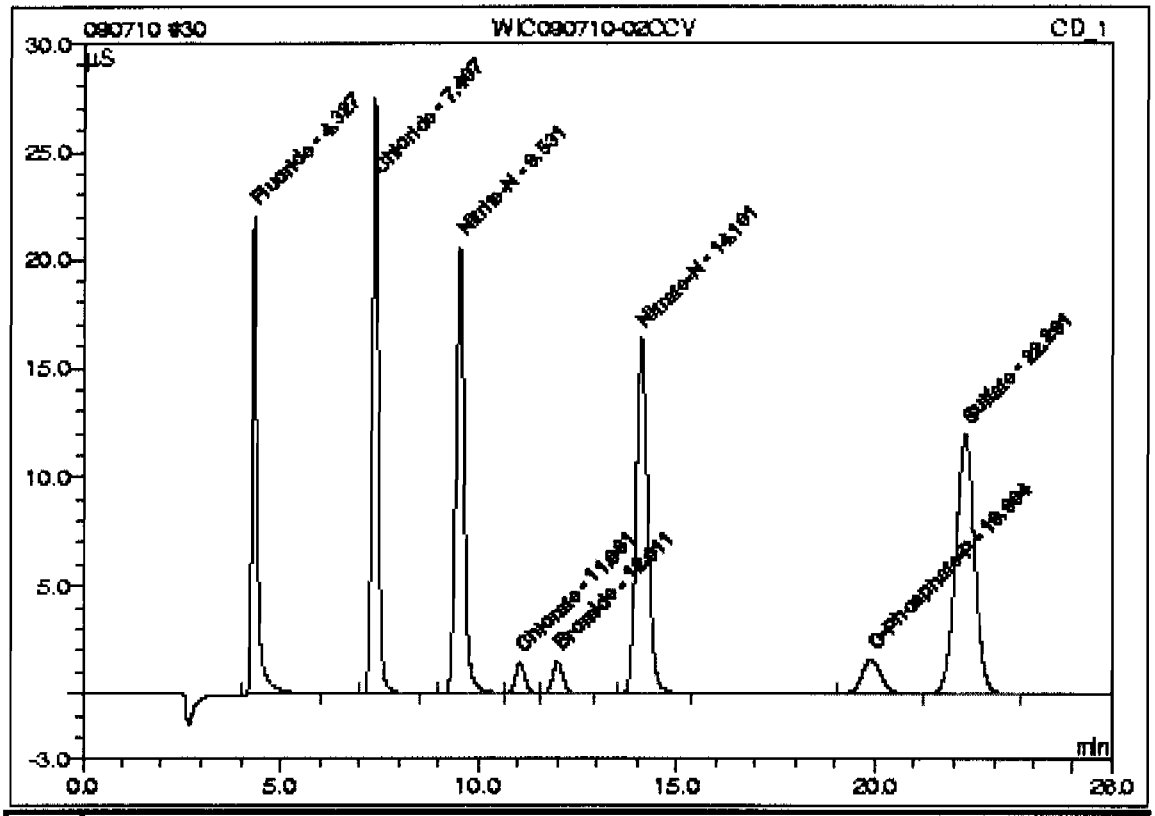

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9947		3.39290	12.34
2	7.41	Chloride	n.a.	9.3011		4.90363	17.84
3	9.53	Nitrite-N	n.a.	4.8658		5.04763	18.36
4	11.06	Chlorate	n.a.	2.5539		0.41710	1.52
5	12.01	Bromide	n.a.	2.4641		0.45360	1.65
6	14.10	Nitrate-N	n.a.	4.6637		5.67962	20.66
7	19.90	O-Phosphate-P	n.a.	2.4489		0.89612	3.26
8	22.29	Sulfate	n.a.	18.8318		6.69809	24.37
Total:				50.0638	0.000	27.489	100.00

31 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	24	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 21:30	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE088;300;9058

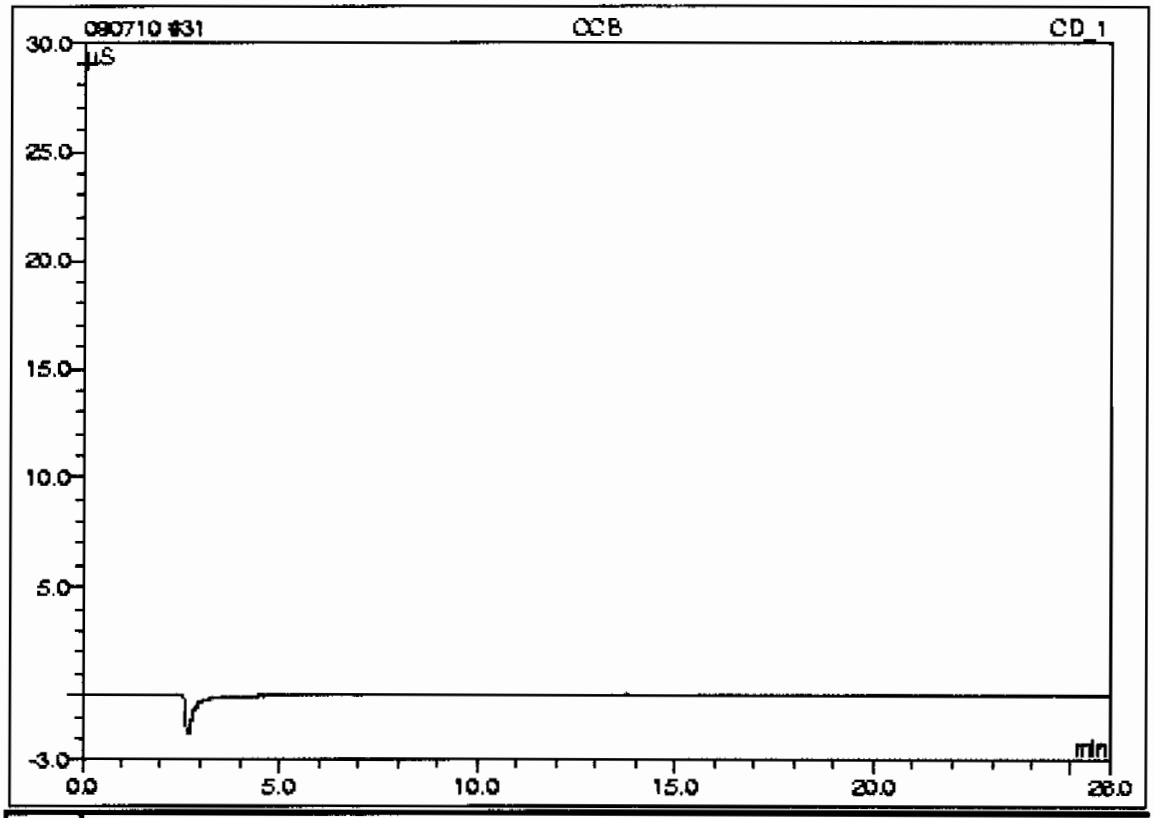

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

32 232585002/881671/1/1/

Sample Name:	232585002/881671/1/1/	*Injection Volume:*	1.0
Vial Number:	25	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 21:59	Analyst:	**MAR1**
Run Time (min):	26.00	Column:	**AS9HC-014108;GLGCE088;300;9058**

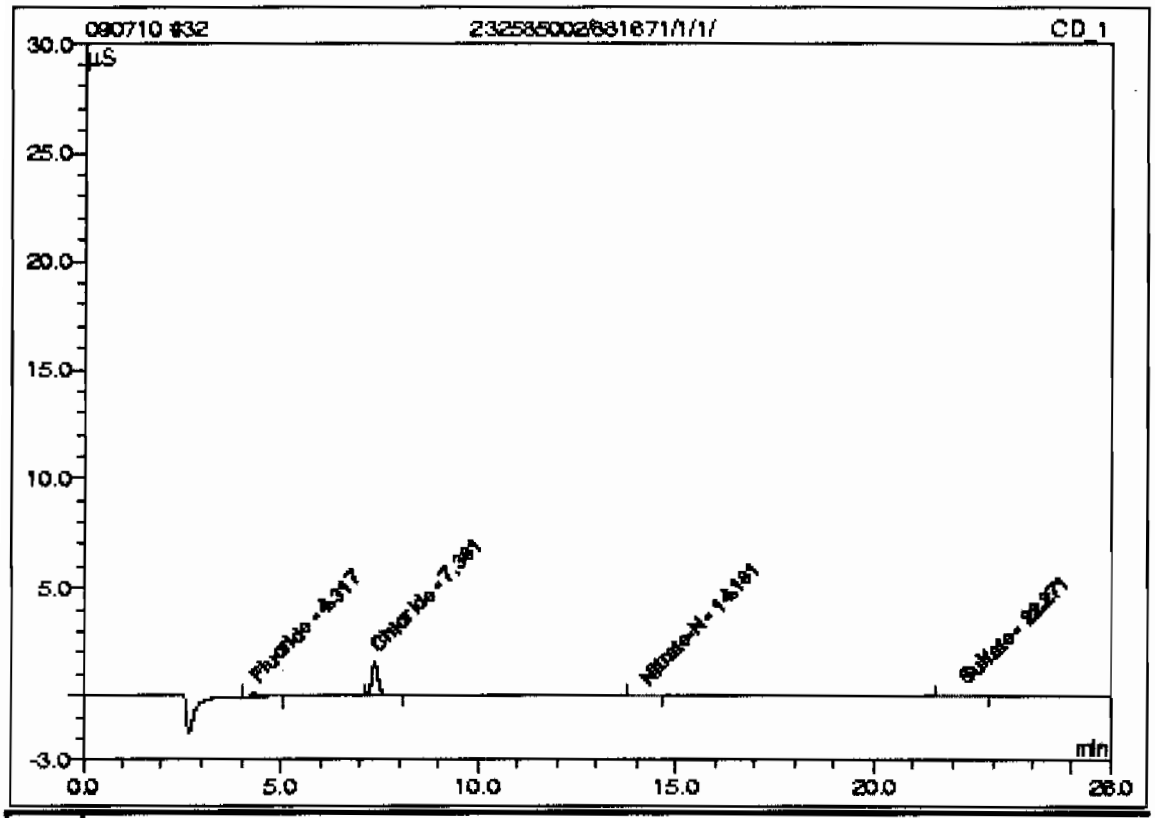

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.1248		0.04114	10.26
2	7.38	Chloride	n.a.	0.7632		0.29787	74.30
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.16	Nitrate-N	n.a.	0.1189		0.02236	5.58
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
4	22.27	Sulfate	n.a.	0.4369		0.03954	9.86
Total:				1.4439	0.000	0.401	100.00

33 232585003/881671/1/1/

Sample Name:	232585003/881671/1/1/	*Injection Volume:*	1.0
Vial Number:	28	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 22:28	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

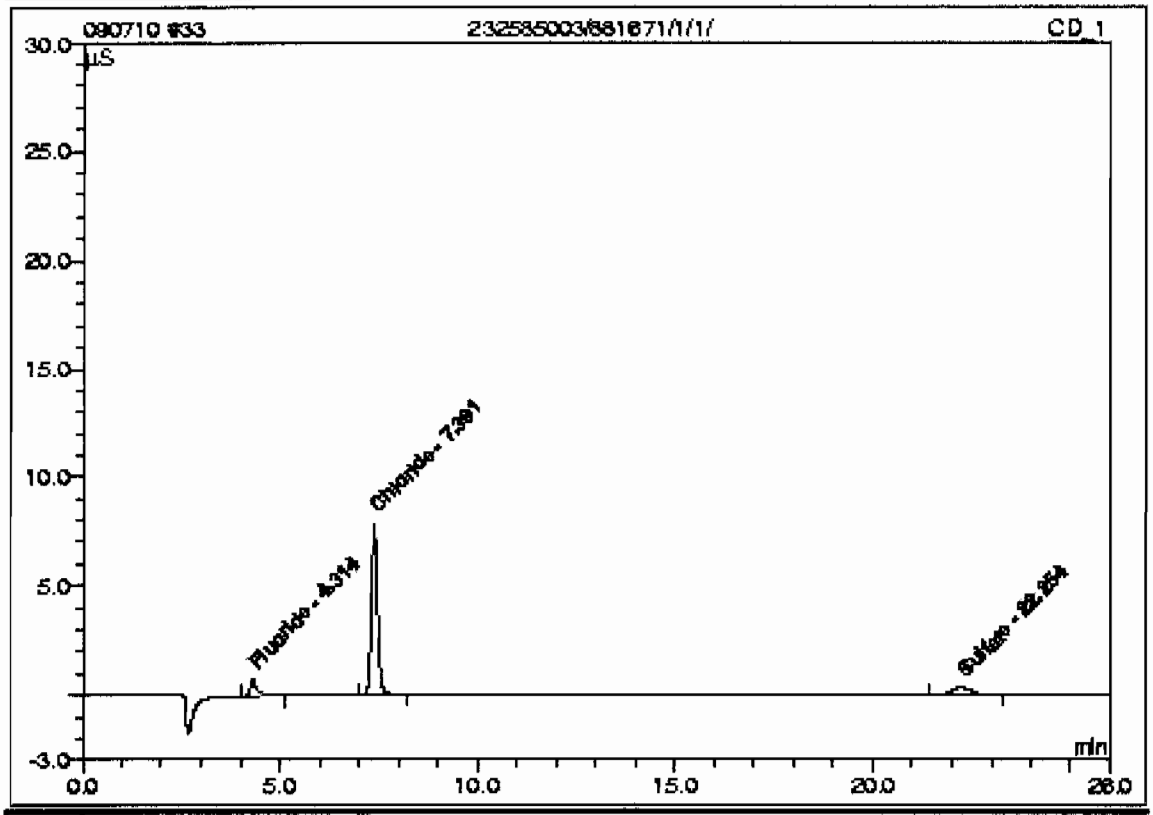

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.2728		0.14429	8.10
2	7.39	Chloride	n.a.	2.8516		1.42443	79.98
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.25	Sulfate	n.a.	0.9140		0.21225	11.92
Total:				4.0384	0.000	1.781	100.00

35 WIC090710-02CVH

Sample Name:	WIC090710-02CVH	*Injection Volume:*	1.0
Vial Number:	28	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 23:28	Analyst:	MAR1
Run Time (min):	28.00 Column:	AS9HC-014108;GLGCE088;300;9058	

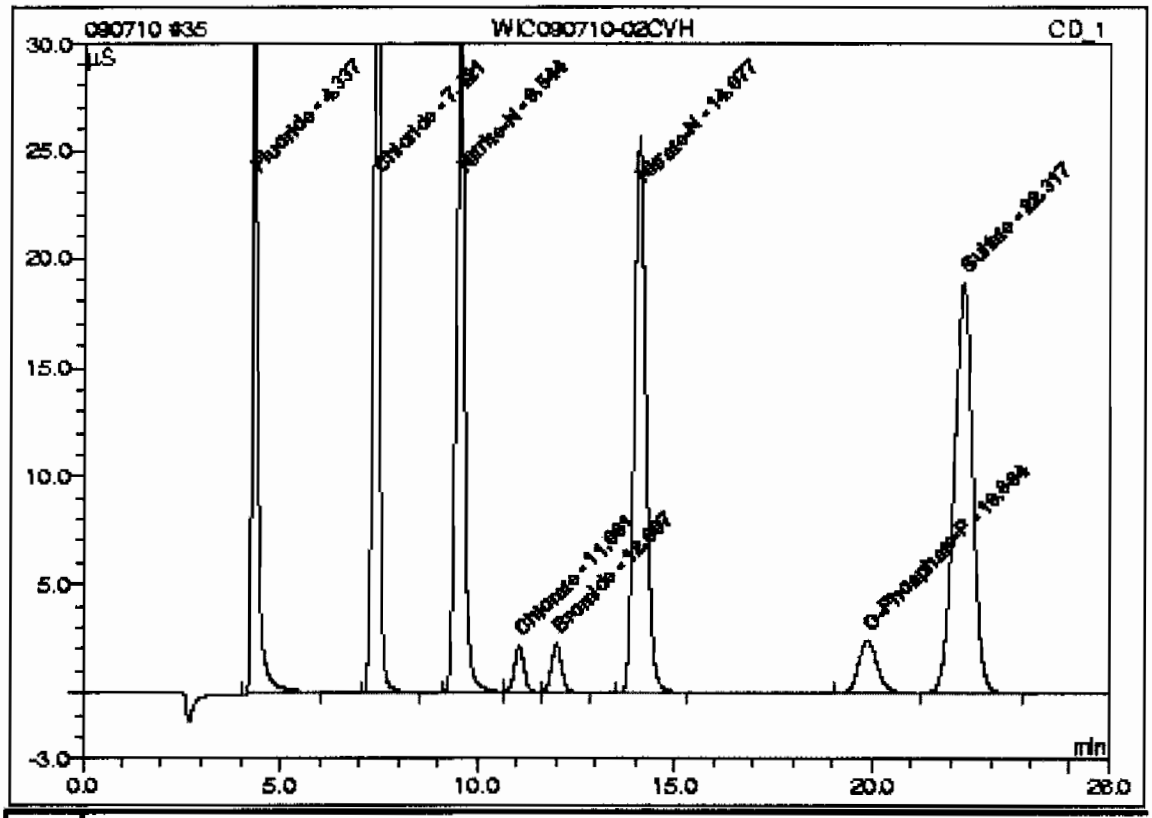

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	n.a.	7.5130		5.18953	12.14
2	7.42	Chloride	n.a.	14.6083		7.76658	18.17
3	9.54	Nitrite-N	n.a.	7.4154		7.72511	18.07
4	11.06	Chlorate	n.a.	3.8970		0.62892	1.47
5	12.01	Bromide	n.a.	3.6802		0.68013	1.59
6	14.08	Nitrate-N	n.a.	7.2880		8.94637	20.93
7	19.89	O-Phosphate-P	n.a.	3.6811		1.35522	3.17
8	22.32	Sulfate	n.a.	29.2139		10.45598	24.46
Total:				77.2362	0.000	42.747	100.00

36 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	29	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 23:55	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE088;300;9058

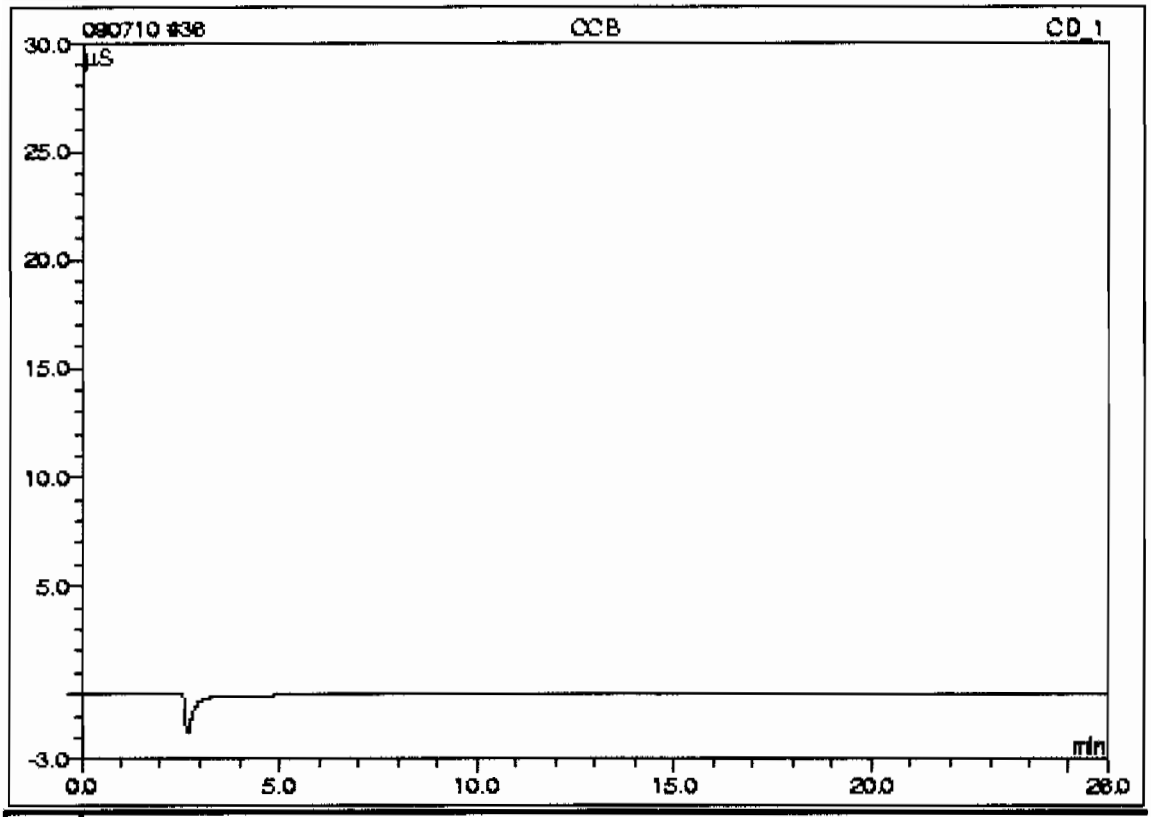

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

pH

pH / Corrosivity LogBook

Analyst: TXT1
Batch: 881740
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201872624	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201872624 LCS		Soil	10:00	10:05	01-JUL-09 12:33	pH	20	20	7.02	21.7'C	7	100.286	
1201872624 LCS		Soil	10:00	10:05	01-JUL-09 12:33	pH 2	20	20	7.02	21.7'C	7	100.286	
232582001		Soil	10:00	10:05	01-JUL-09 12:36	pH	20	20	7.57	22.1'C			
232582001		Soil	10:00	10:05	01-JUL-09 12:36	pH 2	20	20	7.59	22.2'C			
1201872623 DUP	232582001	Soil	10:00	10:05	01-JUL-09 12:39	pH	20	20	7.6	22.2'C			.396
1201872623 DUP	232582001	Soil	10:00	10:05	01-JUL-09 12:39	pH 2	20	20	7.58	22.4'C			.132
232582002		Soil	10:00	10:05	01-JUL-09 12:44	pH	20	20	8.34	22.2'C			
232582002		Soil	10:00	10:05	01-JUL-09 12:44	pH 2	20	20	8.29	22.4'C			
232585001		Soil	10:00	10:05	01-JUL-09 12:47	pH	20	20	7.74	22.2'C			
232585001		Soil	10:00	10:05	01-JUL-09 12:47	pH 2	20	20	7.7	22.3'C			
CCV			10:00	10:05	01-JUL-09 12:49	pH	20	20	7.02	21.6'C	7	100.286	
CCV			10:00	10:05	01-JUL-09 12:49	pH 2	20	20	7.01	21.7'C	7	100.143	
232585002		Soil	10:00	10:05	01-JUL-09 12:51	pH	20	20	6.6	22.3'C			
232585002		Soil	10:00	10:05	01-JUL-09 12:51	pH 2	20	20	6.57	22.7'C			
232585003		Soil	10:00	10:05	01-JUL-09 12:57	pH	20	20	6.61	22.4'C			
232585003		Soil	10:00	10:05	01-JUL-09 12:57	pH 2	20	20	6.58	22.8'C			
232591001		Soil	10:00	10:05	01-JUL-09 13:04	pH	20	20	6.68	22.6'C			
232591001		Soil	10:00	10:05	01-JUL-09 13:04	pH 2	20	20	6.64	22.7'C			
CCV			10:00	10:05	01-JUL-09 13:09	pH	20	20	7	22.0'C	7	100	
CCV			10:00	10:05	01-JUL-09 13:09	pH 2	20	20	6.99	22.1'C	7	99.857	

Calibration Information:
Run Date: 01-JUL-09 12:13
Instrument: PHX370
Analyst: TXT1

	Standard	Observed	Theoretical		C	%Recovery
12:13	IMM090701-PH1	4.01	4	SU	21.9	100.25
12:13	IMM090701-PH-	7.02	7	SU	21.9	100.29
12:13	UPH090701b3-1	10.03	10	SU	21.9	100.3
12:13	UPH090701-03e-	2.04	2	SU	21.9	102
12:13	090701F30-1	11.97	12	SU	21.9	99.75
12:13	IMM090701g3-1	7.03	7	SU	21.9	100.43

Comments:

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2506

Method/Analysis Information

Procedure:	**Dry Weight-Percent Moisture**
Analytical Method:	
Analytical Batch Number:	881796

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201872768	232585001(CAMO-09-6605) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-020 REV# 9.

Calibration Information:

Quality Control (QC) Information:

Designated QC
The following sample was used for QC: 232585001 (CAMO-09-6605). The QC was from LANL work order 232585.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU. Not Applicable.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
Not Applicable. The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882671
Prep Batch Number:	881800

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201874683	Method Blank (MB)
1201874684	232278002(CAMO-09-10459) Sample Duplicate (DUP)
1201874685	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874683 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232278002 (CAMO-09-10459). The QC was from LANL work order 232278.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
Manual integration of alpha spectroscopy spectra 1201874685 (LCS) was performed to fully separate counts in Regions of Interest which would have been biased.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882673
Prep Batch Number:	881800

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201874686	Method Blank (MB)
1201874687	232278002(CAMO-09-10459) Sample Duplicate (DUP)
1201874688	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874686 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232278002 (CAMO-09-10459). The QC was from LANL work order 232278.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples 1201874687 (CAMO-09-10459) and 232585002 (CAMO-09-6603) were cleaned-up and recounted due to poor resolution.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 710606 was generated due to RDL less than MDA. 1. Sample 232585001 does not meet the detection limits for U-235/236 due to the high standard deviation. 1. When a blank population is performed, the MDA is greater than the RDL due to the high standard deviation. Reporting results.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881931
Prep Batch Number:	881800

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201873069	Method Blank (MB)
1201873070	232591001(CAMO-09-9946) Sample Duplicate (DUP)
1201873071	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, November 2008, January 2009, February 2009, March 2009 and June 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232591001 (CAMO-09-9946). The QC was from LANL work order 232591.

QC Information
Refer to Non-Conformance Report.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 711888 was generated due to Failed RPD for DUP. 1. Failed RPD for DUP: QC 1201873070DUP 1. Precision was not demonstrated for Pb-212, however precison was demonstrated for all other requested isotopes.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232585001	CAMO-09-6605
			232585002	CAMO-09-6603
			232585003	CAMO-09-6604
			1201873070	CAMO-09-9946(232591001DUP)
		Cadmium-109	232585001	CAMO-09-6605
			232585002	CAMO-09-6603
			232585003	CAMO-09-6604
			1201873070	CAMO-09-9946(232591001DUP)
		Radium-224	232585001	CAMO-09-6605
			232585002	CAMO-09-6603
			232585003	CAMO-09-6604
			1201873070	CAMO-09-9946(232591001DUP)
UI	Data rejected due to low abundance.	Cesium-134	232585001	CAMO-09-6605
			232585003	CAMO-09-6604
		Cesium-137	232585002	CAMO-09-6603
		Strontium-85	232585001	CAMO-09-6605
			232585002	CAMO-09-6603
			232585003	CAMO-09-6604

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883020

Sample ID	Client ID
232585001	CAMO-09-6605
232585002	CAMO-09-6603
232585003	CAMO-09-6604
1201875586	Method Blank (MB)
1201875587	232347003(CAMO-09-10461) Sample Duplicate (DUP)
1201875588	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232347003 (CAMO-09-10461). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 7/17/09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 710606
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
12-JUL-09	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ALPHA SPECTROMETER	DOE EML HASL-300, U-02-RC Modified	Solid	LANL
Batch ID:	**Sample Numbers:**		
882673	See Below		

Potentially affected work order(s)(SDG): 232211(09-2425),232212(09-2427),232278(09-2437),232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

RDL less than MDA

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Sample 232585001 does not meet the detection limits for U-235/236 due to the high standard deviation.	1. When a blank population is performed, the MDA is greater than the RDL due to the high standard deviation. Reporting results.

Originator's Name:
Jessica Downey 12-JUL-09

Data Validator/Group Leader:
Eric Brimstin 12-JUL-09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 711888
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
15-JUL-09	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
GAMMA SPECTROMETER	EML HASL 300, 4.5.2.3	Solid	LANL
Batch ID:	**Sample Numbers:**		
881931	See Below		

Potentially affected work order(s)(SDG): 232582(09-2508),232585(09-2506),232591(09-2510)

Application Issues:

Failed RPD for DUP

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed RPD for DUP: QC 1201873070DUP	1. Precision was not demonstrated for Pb-212, however precison was demonstrated for all other requested isotopes.

Originator's Name:

Maggie Stamps 15-JUL-09

Data Validator/Group Leader:

Michael Hilton 17-JUL-09

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2506 GEL Work Order: 232585

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/17/09

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6605	Project:	LANL01004
Sample ID:	232585001	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	6.61%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00111	0.0197	+/-0.00111	0.050	pCi/g		KXM4	07/09/09	2051	882671	2
Plutonium-239/240	U	0.00999	0.024	+/-0.00337	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.716	0.329	+/-0.0916	0.100	pCi/g		KXM4	07/09/09	2053	882673	3
Uranium-235/236	U	0.109	0.151	+/-0.0346	0.100	pCi/g						
Uranium-238		0.753	0.128	+/-0.0952	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0977	0.217	+/-0.070	0.200	pCi/g		MXR1	07/09/09	0816	881931	4
Bismuth-211	UI	4.04	0.290	+/-0.212		pCi/g						
Bismuth-214		1.23	0.0952	+/-0.0881	0.200	pCi/g						
Cadmium-109	UI	2.70	1.44	+/-0.452		pCi/g						
Cerium-139	U	0.0204	0.0462	+/-0.0133	0.050	pCi/g						
Cesium-134	UI	0.0941	0.0755	+/-0.0347	0.100	pCi/g						
Cesium-137	U	0.0183	0.0539	+/-0.0157	0.100	pCi/g						
Cobalt-60	U	0.0158	0.058	+/-0.0169	0.100	pCi/g						
Europium-152	U	-0.00139	0.138	+/-0.0541	0.200	pCi/g						
Lanthanum-140	U	-0.113	0.096	+/-0.0356		pCi/g						
Lead-212		1.73	0.0816	+/-0.0783	0.100	pCi/g						
Lead-214		1.41	0.100	+/-0.0825	0.100	pCi/g						
Mercury-203	U	0.0553	0.063	+/-0.0174	0.100	pCi/g						
Potassium-40		36.4	0.399	+/-1.48	1.00	pCi/g						
Radium-223	U	0.214	0.930	+/-0.309		pCi/g						
Radium-224	UI	4.76	0.927	+/-0.585		pCi/g						
Radium-226		1.23	0.0952	+/-0.0881		pCi/g						
Radium-228		1.91	0.174	+/-0.168	0.500	pCi/g						
Ruthenium-106	U	-0.19	0.407	+/-0.127	0.800	pCi/g						
Sodium-22	U	-9.61E-05	0.0676	+/-0.0202	0.080	pCi/g						
Strontium-85	UI	0.154	0.066	+/-0.0187		pCi/g						
Thallium-208		0.534	0.0465	+/-0.040	0.080	pCi/g						
Thorium-227	U	0.349	0.576	+/-0.162		pCi/g						
Thorium-231	U	0.214	0.930	+/-0.309		pCi/g						
Thorium-234	U	0.582	1.90	+/-0.667	2.00	pCi/g						

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6605
Sample ID: 232585001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Tin-113	U	0.0208	0.0609	+/-0.0177	0.100	pCi/g						
Uranium-235	U	0.0706	0.336	+/-0.0982	0.500	pCi/g						
Yttrium-88	U	-0.0219	0.0399	+/-0.0143	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	100	219	+/-66.8	250	pCi/L		KXK2	07/15/09	0508	883020	5

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	87.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	50.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated

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Report Date: July 17, 2009

Client Sample ID: CAMO-09-6605
Sample ID: 232585001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6603	Project:	LANL01004
Sample ID:	232585002	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	7.28%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238		0.0525	0.0194	+/-0.00798	0.050	pCi/g		KXM4	07/09/09	2052	882671	2
Plutonium-239/240		1.25	0.0237	+/-0.0701	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.36	0.309	+/-0.140	0.100	pCi/g		KXM4	07/10/09	2123	882673	3
Uranium-235/236	U	0.0336	0.142	+/-0.0239	0.100	pCi/g						
Uranium-238		1.44	0.120	+/-0.147	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.270	0.362	+/-0.115	0.200	pCi/g		MXR1	07/09/09	0834	881931	4
Bismuth-211	UI	4.34	0.393	+/-0.297		pCi/g						
Bismuth-214		1.37	0.124	+/-0.116	0.200	pCi/g						
Cadmium-109	UI	2.98	1.52	+/-0.606		pCi/g						
Cerium-139	U	-0.0163	0.0547	+/-0.0164	0.050	pCi/g						
Cesium-134	U	0.0824	0.105	+/-0.0317	0.100	pCi/g						
Cesium-137	UI	0.196	0.112	+/-0.0297	0.100	pCi/g						
Cobalt-60	U	-0.0679	0.0729	+/-0.0264	0.100	pCi/g						
Europium-152	U	0.0169	0.200	+/-0.0624	0.200	pCi/g						
Lanthanum-140	U	0.017	0.180	+/-0.0539		pCi/g						
Lead-212		1.57	0.123	+/-0.0958	0.100	pCi/g						
Lead-214		1.51	0.137	+/-0.111	0.100	pCi/g						
Mercury-203	U	-0.0202	0.081	+/-0.0249	0.100	pCi/g						
Potassium-40		29.3	0.577	+/-1.45	1.00	pCi/g						
Radium-223	U	-0.102	1.37	+/-0.419		pCi/g						
Radium-224	UI	2.99	1.72	+/-0.556		pCi/g						
Radium-226		1.37	0.124	+/-0.116		pCi/g						
Radium-228		1.87	0.229	+/-0.214	0.500	pCi/g						
Ruthenium-106	U	0.026	0.639	+/-0.190	0.800	pCi/g						
Sodium-22	U	-0.0104	0.0774	+/-0.0239	0.080	pCi/g						
Strontium-85	UI	0.113	0.0935	+/-0.0284		pCi/g						
Thallium-208		0.464	0.0698	+/-0.0566	0.080	pCi/g						
Thorium-227	U	0.136	0.759	+/-0.224		pCi/g						
Thorium-231	U	-0.102	1.37	+/-0.419		pCi/g						
Thorium-234	U	2.34	2.64	+/-1.12	2.00	pCi/g						
Tin-113	U	0.0653	0.0865	+/-0.0567	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6603
Sample ID: 232585002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Uranium-235	U	0.114	0.417	+/-0.124	0.500	pCi/g						
Yttrium-88	U	-0.00369	0.0574	+/-0.0183	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	-59.9	244	+/-70.3	250	pCi/L		KXK2	07/15/09	0741	883020	5

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	90.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	51.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD

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Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6603
Sample ID: 232585002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6604	Project:	LANL01004
Sample ID:	232585003	Client ID:	LANL010
Matrix:	R		
Collect Date:	25-JUN-09		
Receive Date:	30-JUN-09		
Collector:	Client		
Moisture:	10.4%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Alpha Spec Analysis											
ISOPU "Dry Weight Corrected"											
Plutonium-238	U	0.00367	0.0217	+/-0.00213	0.050	pCi/g		KXM4	07/09/09 2052	882671	2
Plutonium-239/240		0.211	0.0265	+/-0.019	0.050	pCi/g					
ISOU "Dry Weight Corrected"											
Uranium-233/234		1.04	0.298	+/-0.114	0.100	pCi/g		KXM4	07/09/09 2053	882673	3
Uranium-235/236	U	0.0654	0.137	+/-0.0236	0.100	pCi/g					
Uranium-238		0.965	0.116	+/-0.108	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.0211	0.105	+/-0.034	0.200	pCi/g		MXR1	07/09/09 0834	881931	4
Bismuth-211	UI	3.55	0.367	+/-0.280		pCi/g					
Bismuth-214		0.920	0.123	+/-0.0976	0.200	pCi/g					
Cadmium-109	UI	3.57	1.01	+/-0.435		pCi/g					
Cerium-139	U	-0.0163	0.0508	+/-0.0154	0.050	pCi/g					
Cesium-134	UI	0.113	0.105	+/-0.0425	0.100	pCi/g					
Cesium-137	U	-0.00722	0.073	+/-0.0227	0.100	pCi/g					
Cobalt-60	U	0.00361	0.0824	+/-0.0253	0.100	pCi/g					
Europium-152	U	-0.10	0.157	+/-0.0611	0.200	pCi/g					
Lanthanum-140	U	-0.0864	0.137	+/-0.0482		pCi/g					
Lead-212		1.43	0.0882	+/-0.0945	0.100	pCi/g					
Lead-214		1.24	0.124	+/-0.103	0.100	pCi/g					
Mercury-203	U	-0.0108	0.0724	+/-0.0212	0.100	pCi/g					
Potassium-40		29.1	0.633	+/-1.36	1.00	pCi/g					
Radium-223	U	0.131	1.25	+/-0.415		pCi/g					
Radium-224	UI	4.22	1.00	+/-0.732		pCi/g					
Radium-226		0.920	0.123	+/-0.0976		pCi/g					
Radium-228		1.40	0.268	+/-0.173	0.500	pCi/g					
Ruthenium-106	U	0.250	0.612	+/-0.176	0.800	pCi/g					
Sodium-22	U	0.0106	0.092	+/-0.0279	0.080	pCi/g					
Strontium-85	UI	0.118	0.0806	+/-0.023		pCi/g					
Thallium-208		0.528	0.0641	+/-0.0476	0.080	pCi/g					
Thorium-227	U	-0.123	0.678	+/-0.210		pCi/g					
Thorium-231	U	0.131	1.25	+/-0.415		pCi/g					
Thorium-234		1.35	1.02	+/-0.501	2.00	pCi/g					
Tin-113	U	0.0041	0.0821	+/-0.0241	0.100	pCi/g					

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6604
Sample ID: 232585003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Uranium-235	U	0.0777	0.373	+/-0.111	0.500	pCi/g					
Yttrium-88	U	-0.0504	0.045	+/-0.0198	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	191	236	+/-74.3	250	pCi/L		KXK2	07/15/09 0843	883020	5

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	79.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	57.6	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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- < Result is less than value reported
- > Result is greater than value reported
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- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD

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Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6604
Sample ID: 232585003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

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QC Summary

Report Date: July 17, 2009

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232585

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882671										
QC1201874684 232278002 DUP										
Plutonium-238	U	-0.0021	U	0.00	pCi/g	0.347		(0-1)	KXM4	07/09/0920:52
	TPU:	+/-0.00184		+/-0.00118						
	Yield:	90.8		83.8						
Plutonium-239/240	U	0.00	U	0.00236	pCi/g	0.427		(0-1)		
	TPU:	+/-0.00109		+/-0.00167						
	Yield:	90.8		83.8						
QC1201874685 LCS										
Plutonium-238				5.53	pCi/g			(75%-125%)		07/09/0920:52
	TPU:			+/-0.402						
	Yield:			99.4						
Plutonium-239/240	41.8			32.8	pCi/g		78.5	(75%-125%)		
	TPU:			+/-1.94						
	Yield:			99.4						
QC1201874683 MB										
Plutonium-238			U	-0.00134	pCi/g					07/09/0920:52
	TPU:			+/-0.00193						
	Yield:			88.6						
Plutonium-239/240			U	0.00	pCi/g					
	TPU:			+/-0.00139						
	Yield:			88.6						
Batch 882673										
QC1201874687 232278002 DUP										
Uranium-233/234		0.547		0.506	pCi/g	0.152		(0-1)	KXM4	07/10/0921:23
	TPU:	+/-0.0729		+/-0.0631						
	Yield:	57.9		72.9						
Uranium-235/236	U	0.0159	U	0.0242	pCi/g	0.158		(0-1)		
	TPU:	+/-0.0113		+/-0.0149						
	Yield:	57.9		72.9						
Uranium-238		0.561		0.456	pCi/g	0.398		(0-1)		
	TPU:	+/-0.073		+/-0.0583						
	Yield:	57.9		72.9						
QC1201874688 LCS										
Uranium-233/234				6.01	pCi/g			(75%-125%)		07/09/0920:53
	TPU:			+/-0.584						
	Yield:			92.0						
Uranium-235/236			U	0.277	pCi/g			(75%-125%)		
	TPU:			+/-0.0863						
	Yield:			92.0						
Uranium-238	5.75			6.18	pCi/g		107	(75%-125%)		
	TPU:			+/-0.596						
	Yield:			92.0						
QC1201874686 MB										
Uranium-233/234			U	-0.00338	pCi/g					07/09/0920:53

QC Summary

Workorder: 232585

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882673										
	TPU:			+/-0.0026						
	Yield:			98.8						
Uranium-235/236			U	0.00241	pCi/g					
	TPU:			+/-0.00396						
	Yield:			98.8						
Uranium-238			U	7.52E-05	pCi/g					
	TPU:			+/-0.0026						
	Yield:			98.8						
Rad Gamma Spec										
Batch 881931										
QC1201873070 232591001 DUP										
Americium-241	U	0.273	U	0.130	pCi/g	0.387		(0-1)	MXR1	07/09/0908:36
	TPU:	+/-0.116		+/-0.0691						
Bismuth-211	UI	4.16	UI	3.34	pCi/g	0.804		(0-1)		
	TPU:	+/-0.282		+/-0.227						
Bismuth-214		1.28		1.07	pCi/g	0.596		(0-1)		
	TPU:	+/-0.0925		+/-0.0844						
Cadmium-109	UI	3.01	UI	2.50	pCi/g	0.259		(0-1)		
	TPU:	+/-0.582		+/-0.397						
Cerium-139	U	0.0331	U	0.00333	pCi/g	0.510		(0-1)		
	TPU:	+/-0.0147		+/-0.0146						
Cesium-134	UI	0.127	U	0.0632	pCi/g	0.605		(0-1)		
	TPU:	+/-0.0293		+/-0.0231						
Cesium-137	U	0.0456	U	0.0355	pCi/g	0.128		(0-1)		
	TPU:	+/-0.0201		+/-0.0196						
Cobalt-60	U	-0.0188	U	0.0051	pCi/g	0.289		(0-1)		
	TPU:	+/-0.0205		+/-0.0208						
Europium-152	U	-0.029	U	0.0493	pCi/g	0.392		(0-1)		
	TPU:	+/-0.0478		+/-0.0521						
Lanthanum-140	U	0.0338	U	-0.0841	pCi/g	0.795		(0-1)		
	TPU:	+/-0.0399		+/-0.0343						
Lead-212		1.73		1.35	pCi/g	1.16		(0-1)		
	TPU:	+/-0.0873		+/-0.0733						
Lead-214		1.45		1.16	pCi/g	0.751		(0-1)		
	TPU:	+/-0.105		+/-0.0844						
Mercury-203	U	0.0254	U	0.0271	pCi/g	0.0189		(0-1)		
	TPU:	+/-0.0218		+/-0.0222						
Potassium-40		32.8		32.7	pCi/g	0.0256		(0-1)		
	TPU:	+/-1.71		+/-1.42						
Radium-223	U	-0.07	U	0.299	pCi/g	0.260		(0-1)		
	TPU:	+/-0.369		+/-0.340						
Radium-224	UI	4.42	UI	3.48	pCi/g	0.382		(0-1)		
	TPU:	+/-0.591		+/-0.638						
Radium-226		1.28		1.07	pCi/g	0.596		(0-1)		
	TPU:	+/-0.0925		+/-0.0844						
Radium-228		1.54		1.22	pCi/g	0.453		(0-1)		
	TPU:	+/-0.200		+/-0.144						
Ruthenium-106	U	-0.223	U	-0.182	pCi/g	0.0664		(0-1)		
	TPU:	+/-0.152		+/-0.154						
Sodium-22	U	-0.0151	U	-0.0142	pCi/g	0.00966		(0-1)		

QC Summary

Workorder: 232585

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881931										
	TPU:	+/-0.0242		+/-0.0239						
Strontium-85	UI	0.0887	U	0.0422	pCi/g	0.587		(0-1)		
	TPU:	+/-0.0188		+/-0.0208						
Thallium-208		0.471		0.485	pCi/g	0.0825		(0-1)		
	TPU:	+/-0.0437		+/-0.040						
Thorium-227	U	0.127	U	0.111	pCi/g	0.0213		(0-1)		
	TPU:	+/-0.186		+/-0.190						
Thorium-231	U	-0.07	U	0.299	pCi/g	0.260		(0-1)		
	TPU:	+/-0.369		+/-0.340						
Thorium-234	U	2.54		2.21	pCi/g	0.0941		(0-1)		
	TPU:	+/-0.968		+/-0.759						
Tin-113	U	0.018	U	-0.0207	pCi/g	0.454		(0-1)		
	TPU:	+/-0.0212		+/-0.0214						
Uranium-235	U	0.179	U	0.187	pCi/g	0.0126		(0-1)		
	TPU:	+/-0.112		+/-0.185						
Yttrium-88	U	0.0323	U	-0.00432	pCi/g	0.663		(0-1)		
	TPU:	+/-0.0138		+/-0.0138						
QC1201873071 LCS										
Americium-241	16.3			13.5	pCi/g		83	(75%-125%)		07/09/0908:51
	TPU:			+/-0.596						
Bismuth-211				2.66	pCi/g					
	TPU:			+/-0.329						
Bismuth-214				0.831	pCi/g					
	TPU:			+/-0.107						
Cadmium-109				47.7	pCi/g					
	TPU:			+/-2.15						
Cerium-139			U	0.0776	pCi/g					
	TPU:			+/-0.030						
Cesium-134			U	0.127	pCi/g					
	TPU:			+/-0.0499						
Cesium-137	5.78			5.95	pCi/g		103	(75%-125%)		
	TPU:			+/-0.234						
Cobalt-60	7.10			7.37	pCi/g		104	(75%-125%)		
	TPU:			+/-0.278						
Europium-152			U	-0.136	pCi/g					
	TPU:			+/-0.0998						
Lanthanum-140			U	-0.101	pCi/g					
	TPU:			+/-0.0411						
Lead-212				1.33	pCi/g					
	TPU:			+/-0.101						
Lead-214				0.926	pCi/g					
	TPU:			+/-0.117						
Mercury-203			U	0.0673	pCi/g					
	TPU:			+/-0.0369						
Potassium-40			U	0.520	pCi/g					
	TPU:			+/-0.310						
Radium-223			U	-0.219	pCi/g					
	TPU:			+/-0.601						
Radium-224				5.59	pCi/g					
	TPU:			+/-0.742						
Radium-226				0.831	pCi/g					

QC Summary

Workorder: 232585

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881931										
	TPU:			+/-0.107						
Radium-228				1.89	pCi/g					
	TPU:			+/-0.300						
Ruthenium-106			U	-0.253	pCi/g					
	TPU:			+/-0.307						
Sodium-22			U	-0.0081	pCi/g					
	TPU:			+/-0.0262						
Strontium-85			U	0.0816	pCi/g					
	TPU:			+/-0.0327						
Thallium-208				0.471	pCi/g					
	TPU:			+/-0.0678						
Thorium-227			U	0.550	pCi/g					
	TPU:			+/-0.329						
Thorium-231			U	-0.219	pCi/g					
	TPU:			+/-0.601						
Thorium-234			U	0.0802	pCi/g					
	TPU:			+/-0.849						
Tin-113			U	0.0472	pCi/g					
	TPU:			+/-0.0434						
Uranium-235			U	0.0049	pCi/g					
	TPU:			+/-0.160						
Yttrium-88			U	0.114	pCi/g					
	TPU:			+/-0.0319						
QC1201873069 MB										
Americium-241			U	0.00385	pCi/g					07/09/0908:22
	TPU:			+/-0.0104						
Bismuth-211			U	-0.0219	pCi/g					
	TPU:			+/-0.0685						
Bismuth-214			U	0.00628	pCi/g					
	TPU:			+/-0.0301						
Cadmium-109			U	-0.175	pCi/g					
	TPU:			+/-0.107						
Cerium-139			U	-0.00397	pCi/g					
	TPU:			+/-0.00608						
Cesium-134			U	-0.0285	pCi/g					
	TPU:			+/-0.0165						
Cesium-137			U	0.0203	pCi/g					
	TPU:			+/-0.0126						
Cobalt-60			U	0.00695	pCi/g					
	TPU:			+/-0.0166						
Europium-152			U	-0.0219	pCi/g					
	TPU:			+/-0.028						
Lanthanum-140			U	-0.022	pCi/g					
	TPU:			+/-0.024						
Lead-212			U	0.00214	pCi/g					
	TPU:			+/-0.0161						
Lead-214			U	-0.00926	pCi/g					
	TPU:			+/-0.0238						
Mercury-203			U	-0.00418	pCi/g					
	TPU:			+/-0.00888						
Potassium-40			U	0.116	pCi/g					

QC Summary

Workorder: 232585

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881931										
	TPU:			+/-0.168						
Radium-223			U	0.0636	pCi/g					
	TPU:			+/-0.186						
Radium-224			U	0.032	pCi/g					
	TPU:			+/-0.158						
Radium-226			U	0.00628	pCi/g					
	TPU:			+/-0.0301						
Radium-228			U	0.0764	pCi/g					
	TPU:			+/-0.0545						
Ruthenium-106			U	0.108	pCi/g					
	TPU:			+/-0.132						
Sodium-22			U	0.00551	pCi/g					
	TPU:			+/-0.0149						
Strontium-85			U	-0.0332	pCi/g					
	TPU:			+/-0.0162						
Thallium-208			U	-0.0174	pCi/g					
	TPU:			+/-0.0165						
Thorium-227			U	0.164	pCi/g					
	TPU:			+/-0.111						
Thorium-231			U	0.0636	pCi/g					
	TPU:			+/-0.186						
Thorium-234			U	0.0343	pCi/g					
	TPU:			+/-0.101						
Tin-113			U	0.0191	pCi/g					
	TPU:			+/-0.0135						
Uranium-235			U	-0.061	pCi/g					
	TPU:			+/-0.047						
Yttrium-88			U	-0.00129	pCi/g					
	TPU:			+/-0.0186						
Rad Liquid Scintillation										
Batch 883020										
QC1201875587 232347003 DUP										
Tritium		1170		1050	pCi/L	0.266		(0-1)	KXK2	07/15/0917:03
	TPU:	+/-113		+/-116						
QC1201875588 LCS										
Tritium	5730			6320	pCi/L		110	(75%-125%)		07/15/0918:05
	TPU:			+/-529						
QC1201875586 MB										
Tritium			U	-126	pCi/L					07/15/0916:01
	TPU:			+/-66.4						

Notes:
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

QC Summary

Workorder: 232585

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time

B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 882671 Product: PU Date: 7/12/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/12/09

Secondary Review Performed By: [signature] 7/12/09

7/10-7/14

LAN

Plutonium Que Sheet

06-JUL-09

Batch #: 882671 **Analyst:** KXM4 **First Client Due Date:** ~~21-JUL-09~~ 14-JUL-09 **Internal Due Date:** 10-JUL-09

Tracer Isotope(s): Pu-242/Pu-238 **Tracer Code:** 1762-A **Expiration Date:** 5-11-10 **Vol:** 0.1mL

LCS Isotope(s): Pu-239/Pu-238 **LCS Code:** SKM 0244-B **Expiration Date:** 4-30-10 **Vol:** 0.1g

Spike Isotope(s): Pu-239/Pu-238 **Spike Code:** NA **Expiration Date:** NA **Vol:** NA

Prep Date: 7-7-09 **Initials:** KM **Pipet ID:** 2971038 **Balance ID:** 51410272 **Witness:** MDA 7/7/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Pu Det #
~~232211001-1~~	~~CAMO-09-10155~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~1~~	~~1~~	~~1.250~~	~~209 213~~
232211002-1	CAMO-09-10156	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	2	2	1.247	210
232211003-1	CAMO-09-10146	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	3	3	1.251	211
232211004-1	CAMO-09-10158	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	4	4	1.252	212
~~232211005-1~~	~~CAMO-09-10145~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~5~~	~~5~~	~~1.255~~	~~213 214~~
232211006-1	CAMO-09-10157	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	6	6	1.250	214
~~232211007-1~~	~~CAMO-09-10162~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~7~~	~~7~~	~~1.249~~	~~215 218~~
232211008-1	CAMO-09-10163	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	8	8	1.250	216
232212001-1	CAMO-09-9944	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	9	9	1.251	217
232212002-1	CAMO-09-9945	SAMPLE		.05 pCi/g	SOIL	LANL010	18-JUN-09	10	10	1.257	~~218~~ 114
~~232212003-1~~	~~CAMO-09-10029~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~18-JUN-09~~	~~11~~	~~11~~	~~1.248~~	~~219 216~~
232278001-1	CAMO-09-10458	SAMPLE		.05 pCi/g	SOIL	LANL010	19-JUN-09	12	12	1.250	220
232278002-1	CAMO-09-10459	SAMPLE		.05 pCi/g	SOIL	LANL010	19-JUN-09	13	13	1.249	221
~~232582001-1~~	~~CAMO-09-10464~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~25-JUN-09~~	~~14~~	~~14~~	~~1.253~~	~~222 217~~
232582002-1	CAMO-09-10465	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	15	15	1.249	223
232585001-1	CAMO-09-6605	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	16	16	1.249	224
232585002-1	CAMO-09-6603	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	17	17	1.247	225
232585003-1	CAMO-09-6604	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	18	18	1.250	226
232591001-1	CAMO-09-9946	SAMPLE		.05 pCi/g	SOIL	LANL010	25-JUN-09	19	19	1.254	227
1201874683-1	MB for batch 882671	MB		.05 pCi/g	SOIL	QC ACCOUNT		20	20	~~1.257~~ 1.0	228
1201874684-1	CAMO-09-10459(232278002DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	19-JUN-09	21	21	1.253	229
1201874685-1	LCS for batch 882671	LCS		.05 pCi/g	SOIL	QC ACCOUNT		22	22	0.107	230

#SKM 0244-B exp 4-30-10

1170

Choose SOP Used: GL-RAD-A-011 / GL-RAD-A-045 / GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: 7/12/09

Blank Correction Report

Batch ID 882671

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874684	DUP	Plutonium-238	1.25 g	0.00	0.00118	0.0209	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00236	0.00167	0.0255	0	pCi/g	NO
1201874685	LCS	Plutonium-238	0.107 g	5.41	0.393	0.205	-.01252336	pCi/g	NO
		Plutonium-239/240	0.107 g	31.5	1.86	0.251	0	pCi/g	NO
1201874683	MB	Plutonium-238	1.00 g	-0.00134	0.00193	0.0246	-.00134	pCi/g	NO
		Plutonium-239/240	1.00 g	0.00	0.00139	0.030	0	pCi/g	NO
232211002	CAMO-09-10156	Plutonium-238	1.25 g	0.00243	0.00172	0.0215	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00126	0.00207	0.0262	0	pCi/g	NO
232211003	CAMO-09-10146	Plutonium-238	1.25 g	0.00121	0.002	0.0207	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	4.33E-05	0.00162	0.0253	0	pCi/g	NO
232211004	CAMO-09-10158	Plutonium-238	1.25 g	0.00	0.00142	0.0251	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00283	0.00201	0.0306	0	pCi/g	NO
232211006	CAMO-09-10157	Plutonium-238	1.25 g	0.0828	0.0108	0.0216	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.134	0.0143	0.0264	0	pCi/g	NO
232211008	CAMO-09-10163	Plutonium-238	1.25 g	0.00966	0.00345	0.0214	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0906	0.0116	0.0261	0	pCi/g	NO
232212001	CAMO-09-9944	Plutonium-238	1.25 g	0.0405	0.00693	0.0194	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.708	0.0438	0.0237	0	pCi/g	NO
232212002	CAMO-09-9945	Plutonium-238	1.26 g	0.0699	0.0157	0.0453	-.00106349	pCi/g	NO
		Plutonium-239/240	1.26 g	7.04	0.438	0.0551	0	pCi/g	NO
232278001	CAMO-09-10458	Plutonium-238	1.25 g	0.00	0.00109	0.0193	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00113	0.00186	0.0236	0	pCi/g	NO
232278002	CAMO-09-10459	Plutonium-238	1.25 g	-0.0021	0.00184	0.0193	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00	0.00109	0.0236	0	pCi/g	NO
232582002	CAMO-09-10465	Plutonium-238	1.25 g	0.00118	0.00243	0.0195	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00	0.0011	0.0239	0	pCi/g	NO
232585001	CAMO-09-6605	Plutonium-238	1.25 g	0.00111	0.00111	0.0197	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00999	0.00337	0.024	0	pCi/g	NO
232585002	CAMO-09-6603	Plutonium-238	1.25 g	0.0525	0.00798	0.0194	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	1.25	0.0701	0.0237	0	pCi/g	NO
232585003	CAMO-09-6604	Plutonium-238	1.25 g	0.00367	0.00213	0.0217	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.211	0.019	0.0265	0	pCi/g	NO
232591001	CAMO-09-9946	Plutonium-238	1.25 g	0.0119	0.0038	0.0211	-.001072	pCi/g	NO
		Plutonium-239/240	1.25 g	0.627	0.0409	0.0257	0	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S0232278002_PU
SAMPLE QTY: 1.249 G

DETECTOR NUMBER :79414
AVERAGE %EFFICIENCY :37.9316
% YIELD : 90.810

COUNT DATE: 9-JUL-2009 20:51:52
ELAPSED LIVE TIME(SEC): 57797.41
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B221.CNF;13
PCI/G : 1.478E+00	PCI/G : 1.478E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.82067 dpm	EFF FILE : W221.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	0.000	0.000	0.000	4.1106	99.90000	0.00E+00	1.09E-03	1.03E-02	2.36E-02	1.09E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.10E-03	6.80E-03	1.66E-02	1.10E-03
PU-238	5499.000	0.000	-1.927	1.927	3.2589	99.90000	-2.10E-03	1.84E-03	8.17E-03	1.93E-02	1.84E-03
PU242	4890.000	1397.000	1396.037	0.963	0.9815	100.0000	1.52E+00	8.31E-02	2.46E-03	7.86E-03	4.06E-02
PU-244	4589.000	6.000	6.000	0.000	4.8319	99.90000	6.53E-03	2.68E-03	1.21E-02	2.72E-02	2.67E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

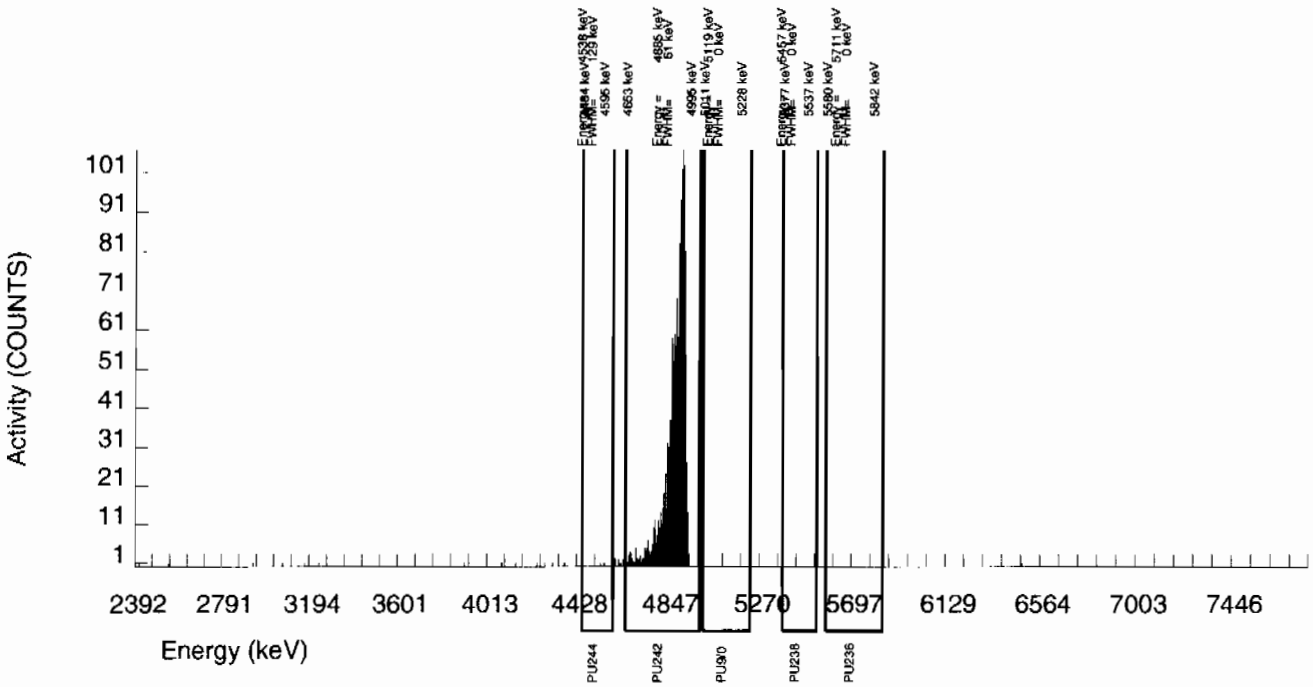

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232585001_PU
SAMPLE QTY: 1.249 G

DETECTOR NUMBER :79417
AVERAGE %EFFICIENCY :38.5536
% YIELD : 87.539

COUNT DATE: 9-JUL-2009 20:51:59
ELAPSED LIVE TIME(SEC): 57805.13
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B224.CNF;13
PCI/G : 1.478E+00	PCI/G : 1.478E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.68304 dpm	EFF FILE : W224.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	9.000	9.000	0.000	4.1106	99.90000	9.99E-03	3.37E-03	1.05E-02	2.40E-02	3.33E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.12E-03	6.94E-03	1.69E-02	1.12E-03
PU-238	5499.000	1.000	1.000	0.000	3.2589	99.90000	1.11E-03	1.11E-03	8.34E-03	1.97E-02	1.11E-03
PU242	4890.000	1368.000	1368.000	0.000	0.0000	100.0000	1.52E+00	8.35E-02	0.00E+00	3.01E-03	4.10E-02
PU-244	4589.000	5.000	5.000	0.000	4.8319	99.90000	5.55E-03	2.50E-03	1.24E-02	2.77E-02	2.48E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

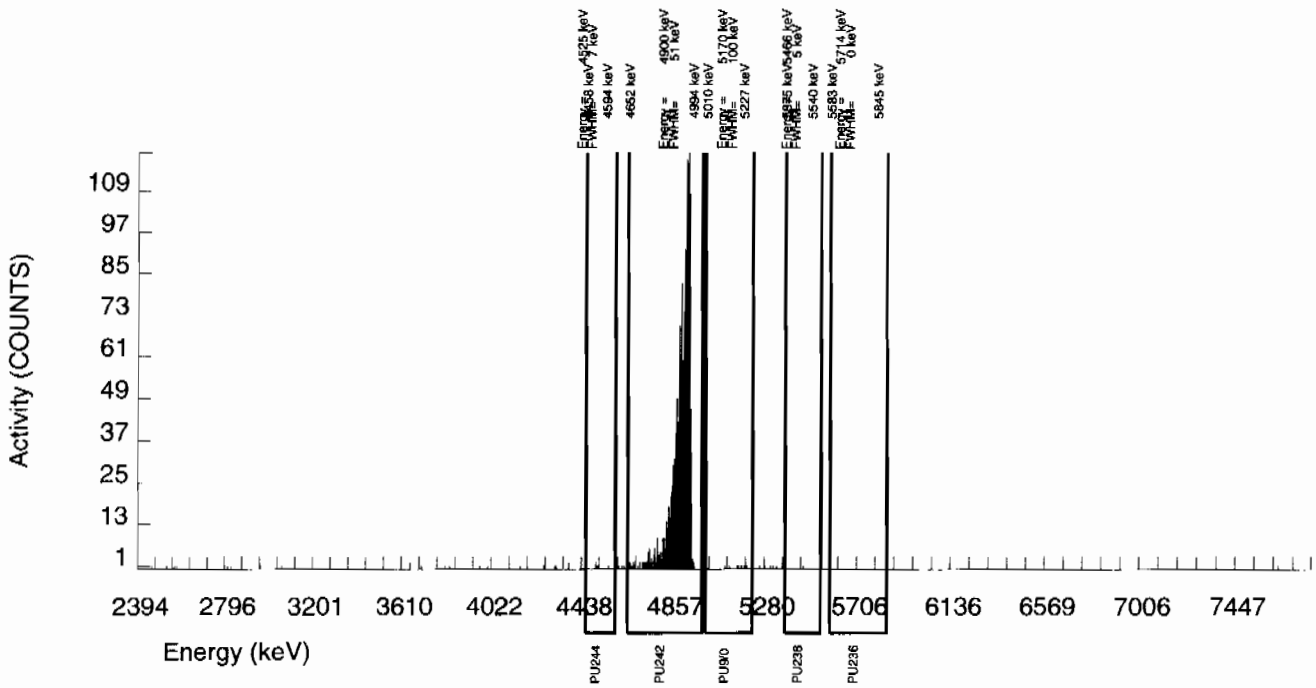

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232585002_PU
SAMPLE QTY: 1.247 G

DETECTOR NUMBER :79418
AVERAGE %EFFICIENCY :37.8446
% YIELD : 90.739

COUNT DATE: 9-JUL-2009 20:52:01
ELAPSED LIVE TIME(SEC): 57807.58
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B225.CNF;13
PCI/G : 1.480E+00	PCI/G : 1.480E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.81770 dpm	EFF FILE : W225.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	1142.000	1141.036	0.963	4.1106	99.90000	1.25E+00	7.01E-02	1.04E-02	2.37E-02	3.69E-02
PU-236	5749.000	1.000	1.000	0.000	2.7154	100.0000	1.10E-03	1.10E-03	6.83E-03	1.66E-02	1.10E-03
PU-238	5499.000	48.000	48.000	0.000	3.2589	99.90000	5.25E-02	7.98E-03	8.21E-03	1.94E-02	7.57E-03
PU242	4890.000	1392.000	1392.000	0.000	0.0000	100.0000	1.52E+00	8.32E-02	0.00E+00	2.96E-03	4.07E-02
PU-244	4589.000	13.000	13.000	0.000	4.8319	99.90000	1.42E-02	4.00E-03	1.22E-02	2.73E-02	3.94E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

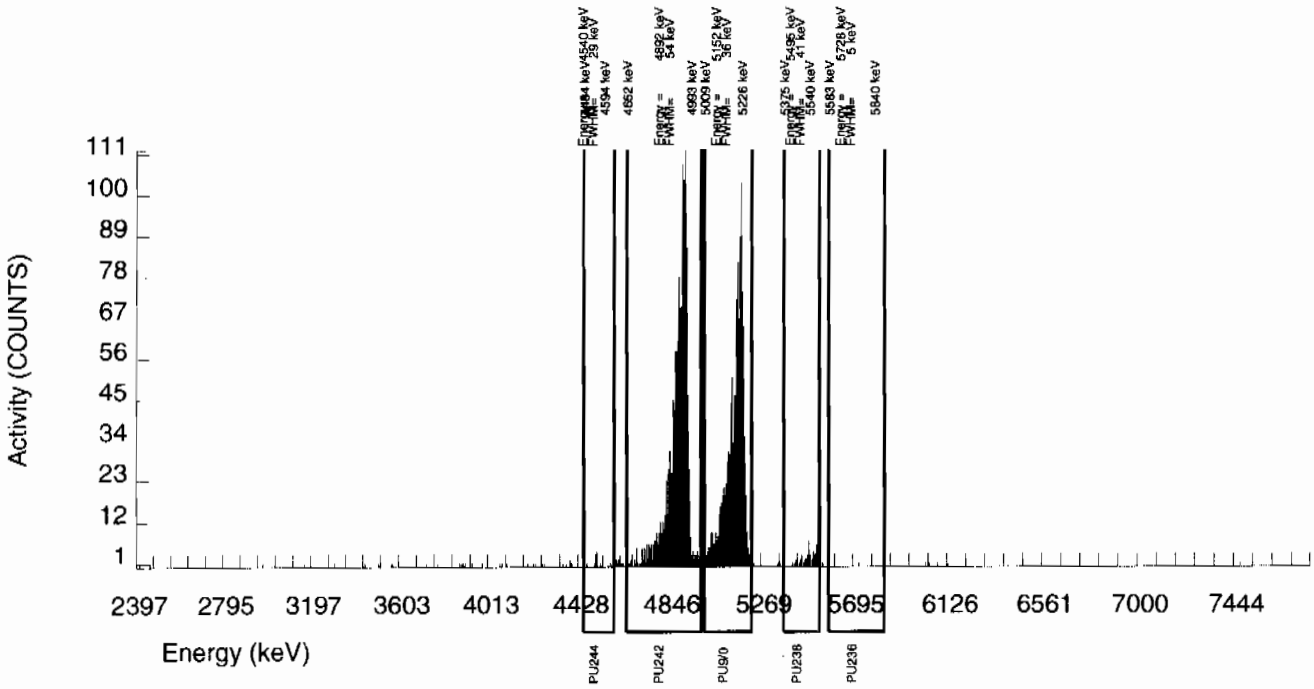

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232585003_PU
SAMPLE QTY: 1.250 G

DETECTOR NUMBER :79419
AVERAGE %EFFICIENCY :38.3791
% YIELD : 79.701

COUNT DATE: 9-JUL-2009 20:52:04
ELAPSED LIVE TIME(SEC): 57810.43
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B226.CNF;13
PCI/G : 1.477E+00	PCI/G : 1.477E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.35329 dpm	EFF FILE : W226.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	172.000	172.000	0.000	4.1106	99.90000	2.11E-01	1.90E-02	1.16E-02	2.65E-02	1.61E-02
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.24E-03	7.65E-03	1.86E-02	1.24E-03
PU-238	5499.000	3.000	3.000	0.000	3.2589	99.90000	3.67E-03	2.13E-03	9.19E-03	2.17E-02	2.12E-03
PU242	4890.000	1240.000	1240.000	0.000	0.0000	100.0000	1.52E+00	8.54E-02	0.00E+00	3.31E-03	4.31E-02
PU-244	4589.000	5.000	3.073	1.927	4.8319	99.90000	3.76E-03	3.21E-03	1.36E-02	3.06E-02	3.20E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

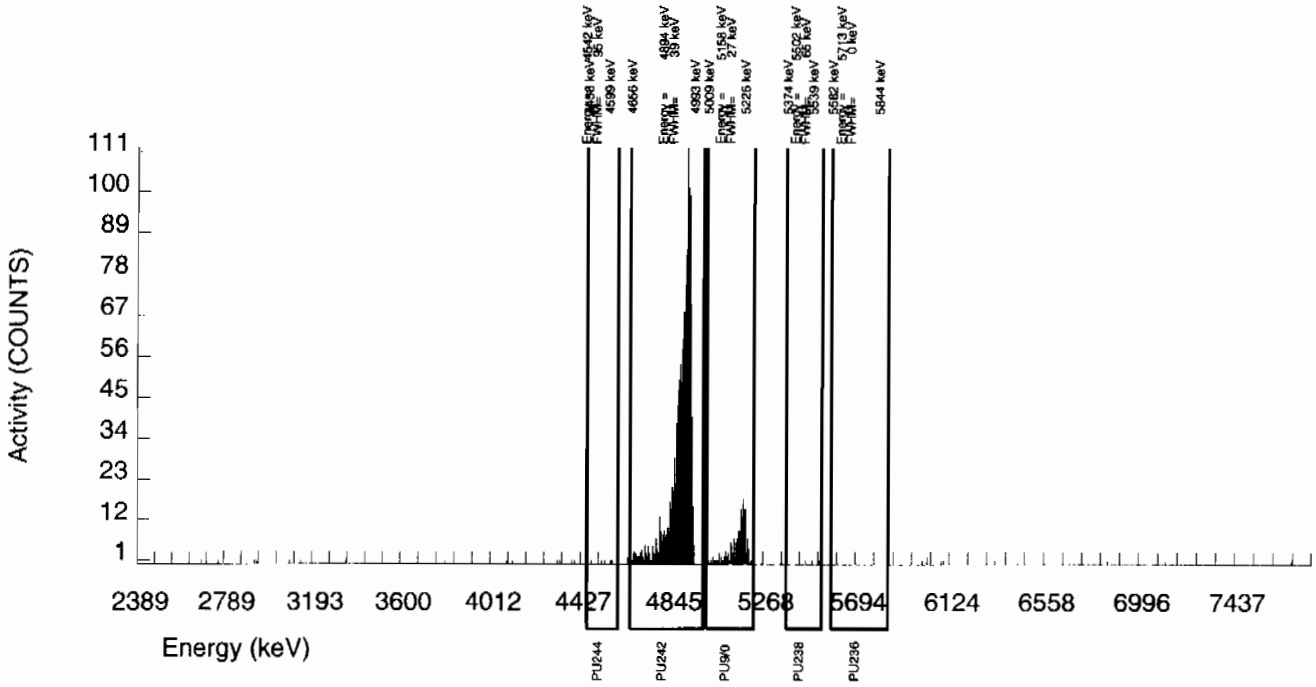

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 7-JUL-2009 00:00:00.

SAMPLE ID : S1201874683_PU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :79421
AVERAGE %EFFICIENCY :38.1208
% YIELD : 88.584

COUNT DATE: 9-JUL-2009 20:52:09
ELAPSED LIVE TIME(SEC): 57818.27
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B228.CNF;13
PCI/G : 1.846E+00	PCI/G : 1.846E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.72702 dpm	EFF FILE : W228.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	0.000	0.000	0.000	4.1106	99.90000	0.00E+00	1.39E-03	1.31E-02	3.00E-02	1.39E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.39E-03	8.66E-03	2.11E-02	1.39E-03
PU-238	5499.000	0.000	-0.964	0.964	3.2589	99.90000	-1.34E-03	1.93E-03	1.04E-02	2.46E-02	1.92E-03
PU242	4890.000	1372.000	1369.109	2.891	1.7003	100.0000	1.90E+00	1.04E-01	5.43E-03	1.46E-02	5.13E-02
PU-244	4589.000	7.000	7.000	0.000	4.8319	99.90000	9.70E-03	3.70E-03	1.54E-02	3.46E-02	3.67E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

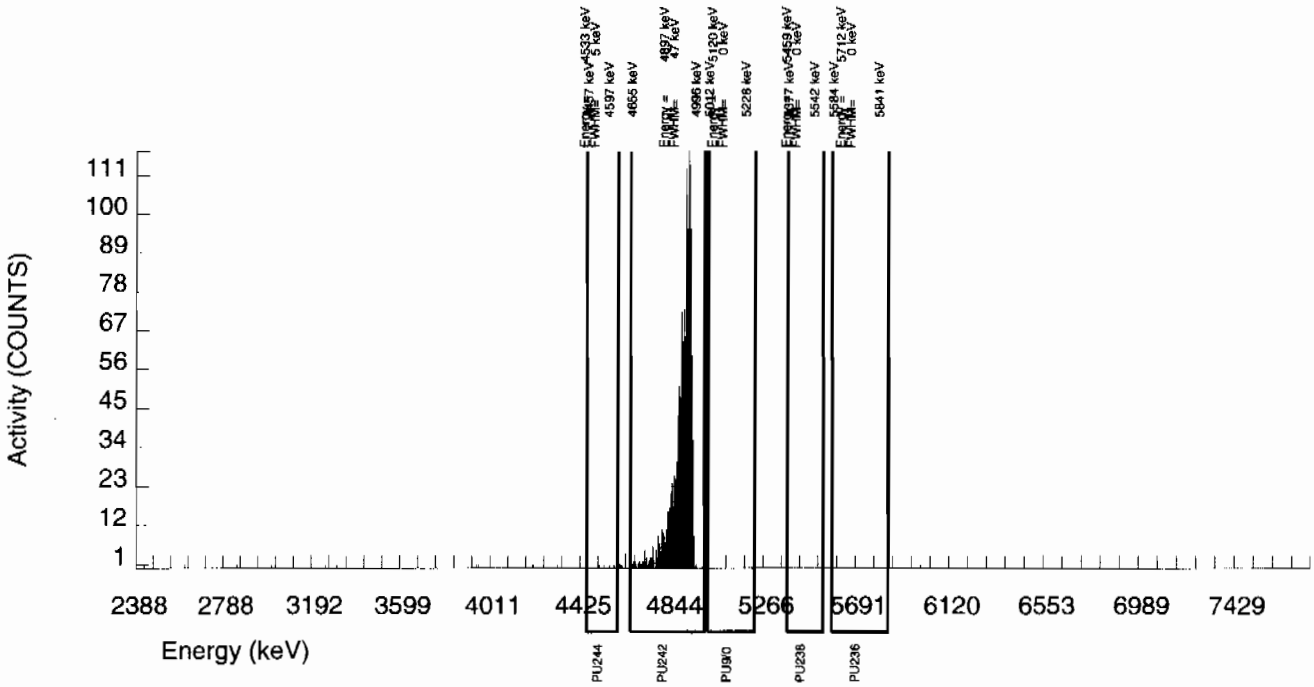

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S1201874684_PU
SAMPLE QTY: 1.253 G

DETECTOR NUMBER :79422
AVERAGE %EFFICIENCY :37.7719
% YIELD : 83.844

COUNT DATE: 9-JUL-2009 20:52:12
ELAPSED LIVE TIME(SEC): 57820.21
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B229.CNF;13
PCI/G : 1.473E+00	PCI/G : 1.473E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.52761 dpm	EFF FILE : W229.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2.000	2.000	0.000	4.1106	99.90000	2.36E-03	1.67E-03	1.12E-02	2.55E-02	1.67E-03
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.20E-03	7.37E-03	1.79E-02	1.19E-03
PU-238	5499.000	0.000	0.000	0.000	3.2589	99.90000	0.00E+00	1.18E-03	8.86E-03	2.09E-02	1.18E-03
PU242	4890.000	1285.000	1284.036	0.964	0.9817	100.0000	1.51E+00	8.45E-02	2.67E-03	8.52E-03	4.22E-02
PU-244	4589.000	7.000	6.036	0.964	4.8319	99.90000	7.12E-03	3.34E-03	1.31E-02	2.95E-02	3.32E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

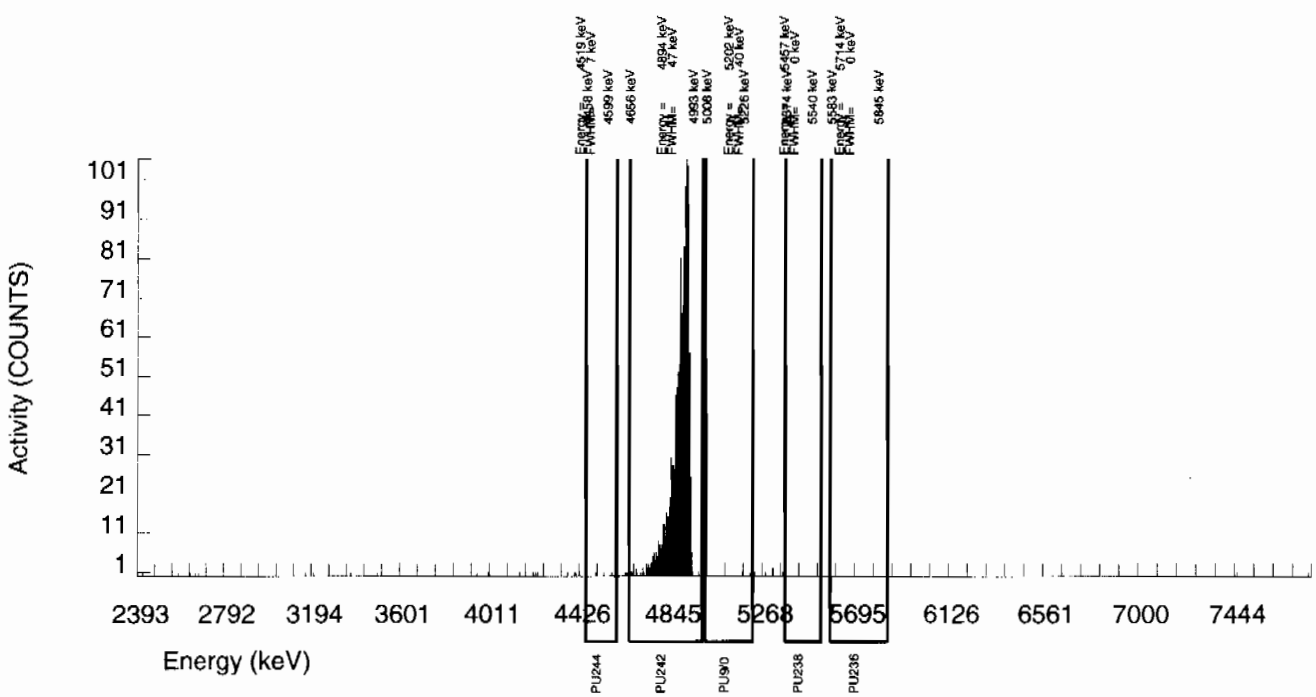

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671
SAMPLE DATE : 7-JUL-2009 00:00:00.

SAMPLE ID : S1201874685_PU
SAMPLE QTY: 0.107 G

DETECTOR NUMBER :79423
AVERAGE %EFFICIENCY :37.2375
% YIELD : 99.406

COUNT DATE: 9-JUL-2009 20:52:14
ELAPSED LIVE TIME(SEC): 57827.62
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B230.CNF;13
PCI/G : 1.725E+01	PCI/G : 1.725E+01	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.18231 dpm	EFF FILE : W230.CNF;8
			CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2775.000	2774.036	0.964	4.1106	99.90000	3.28E+01	1.94E+00	1.12E-01	2.56E-01	6.22E-01
PU-236	5749.000	0.000	0.000	0.000	2.7154	100.0000	0.00E+00	1.18E-02	7.39E-02	1.80E-01	1.18E-02
PU-238	5499.000	469.000	468.036	0.964	3.2589	99.90000	5.53E+00	4.02E-01	8.87E-02	2.09E-01	2.56E-01
PU242	4890.000	1501.000	1501.000	0.000	0.0000	100.0000	1.77E+01	1.09E+00	0.00E+00	3.20E-02	4.57E-01
PU-244	4589.000	10.000	9.036	0.964	4.8319	99.90000	1.07E-01	3.95E-02	1.32E-01	2.95E-01	3.90E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

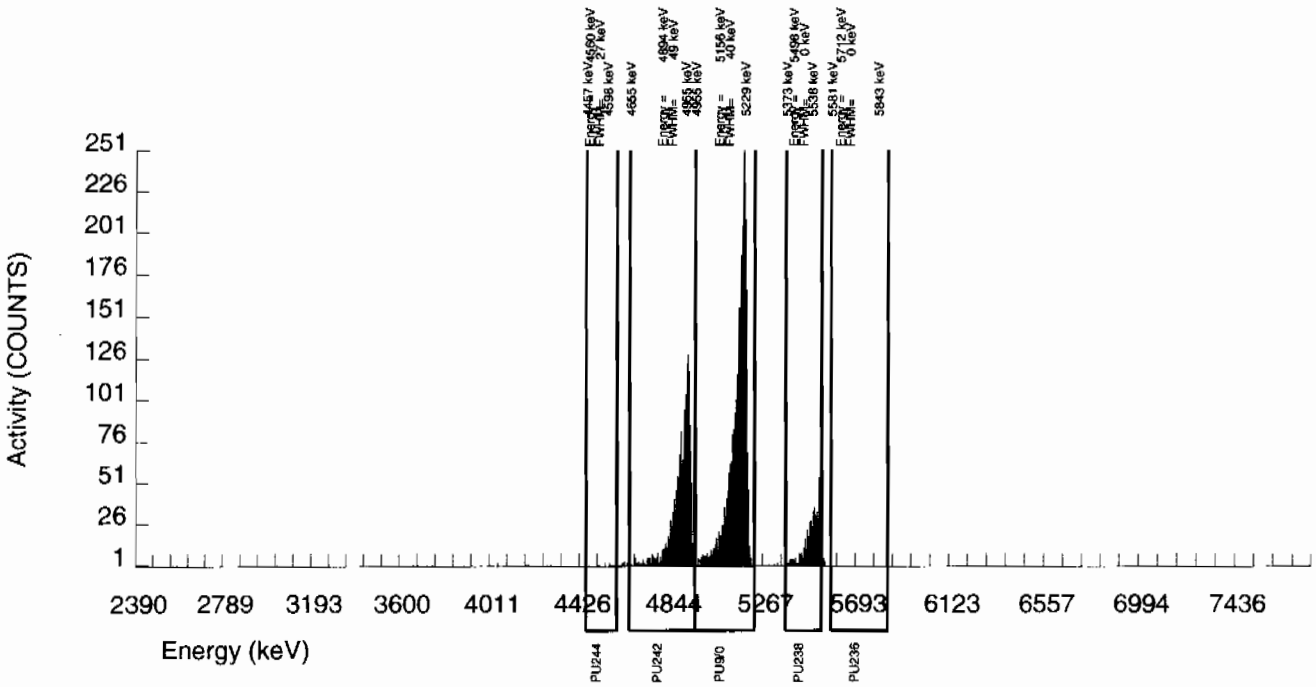

Alpha Spectroscopy Software Version 2.0
effective date: 06-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882671 SAMPLE DATE : 7-JUL-2009 00:00:00.	SAMPLE ID : S1201874685_PU SAMPLE QTY: 0.107 G
DETECTOR NUMBER :79423 AVERAGE %EFFICIENCY :37.2375 % YIELD : 102.324	COUNT DATE: 9-JUL-2009 20:52:14 ELAPSED LIVE TIME(SEC): 52061.47 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.725E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.725E+01	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.30509 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B230.CNF;13 BKG DATE : 5-JUL-2009 EFF FILE : W230.CNF;8 CAL DATE : 30-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2472.000	2471.132	0.868	4.1684	99.90000	3.15E+01	1.89E+00	1.19E-01	2.73E-01	6.34E-01
PU-236	5749.000	0.000	0.000	0.000	3.3854	100.0000	0.00E+00	1.28E-02	9.69E-02	2.28E-01	1.28E-02
PU-238	5499.000	412.000	411.132	0.868	3.3734	99.90000	5.24E+00	3.93E-01	9.67E-02	2.28E-01	2.59E-01
PU242	4890.000	1391.000	1391.000	0.000	0.0000	100.0000	1.77E+01	1.11E+00	0.00E+00	3.45E-02	4.75E-01
PU-244	4589.000	10.000	9.132	0.868	4.1569	99.90000	1.16E-01	4.23E-02	1.19E-01	2.73E-01	4.18E-02

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

Integrate

DO NOT REPORT

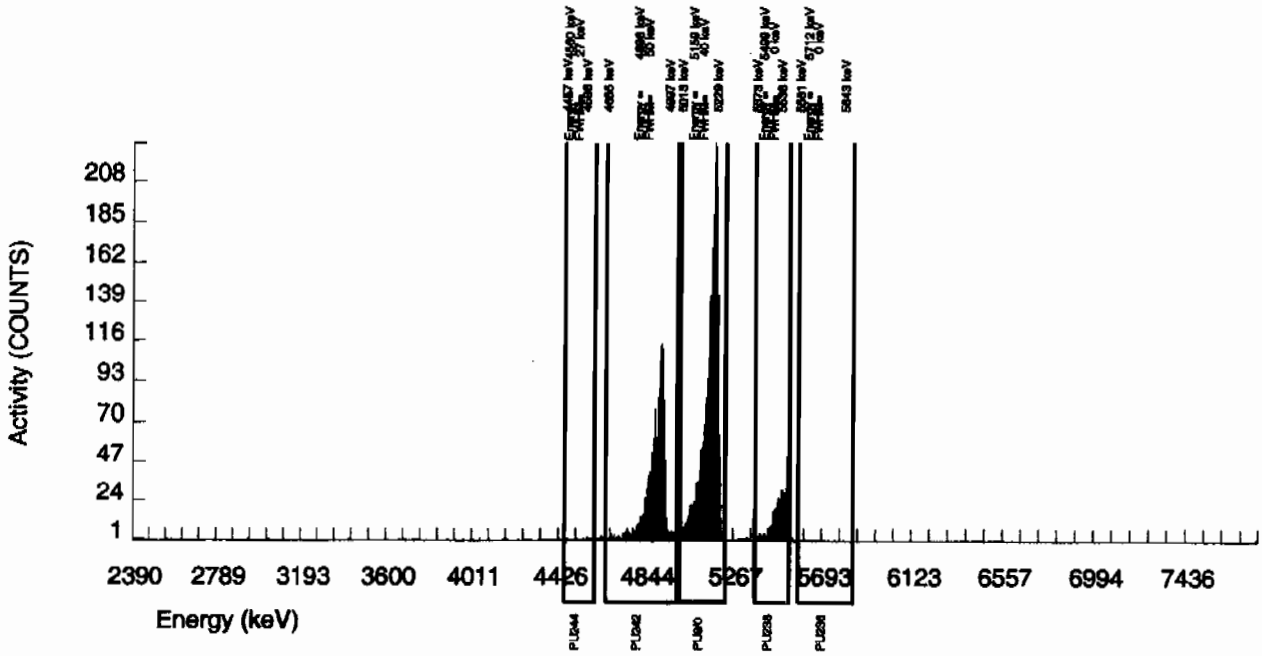

Radiochemistry Batch Checklist, Rev 9

Batch# 882673 Product: U Date: 7/12/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.		✓	NCR# 710606
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		case narrative
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		NCR# 710606
Batch non-conformances second reviewed and disposition verified to be completed.	✓		NCR# 710606
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/12/09

Specialty Review Performed By: [signature] 7/12/09

7/10-7/14
CANL

P ✓

Uranium Que Sheet

06-JUL-09

Batch #: 882673 Analyst: KXM4 First Client Due Date: ~~21-JUL-09~~ 14-JUL-09 OD 7/10/09 Internal Due Date: 10-JUL-09

Tracer Isotope: U-232/U-236 Tracer Code: VLBJ-B Expiration Date: 12-16-09 Vol: 0.1ml

LCS Isotope: U-238 LCS Code: SRM 0244-A Expiration Date: 10-31-20 Vol: 0.1g

Spike Isotope: U-238 Spike Code: NA Expiration Date: NA Vol: NA

Prep Date: 7-7-09 Initials: KM Pipet ID: 20710758 Balance ID: 50410272 Witness: MDA 7/7/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/ml/l)	U Det #
232211001-1	CAMO-09-10155	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	1	21	0.500	113 OD 7/12/09
232211002-1	CAMO-09-10156	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	2	22	0.502	~~119~~ 113
232211003-1	CAMO-09-10146	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	3	23	0.507	~~115~~ 170 – 7/17/09
232211004-1	CAMO-09-10158	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	4	24	0.503	116
232211005-1	CAMO-09-10145	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	5	25	0.500	117
232211006-1	CAMO-09-10157	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	6	26	0.508	118
232211007-1	CAMO-09-10162	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	7	27	0.504	121
232211008-1	CAMO-09-10163	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	8	28	0.506	122
232212001-1	CAMO-09-9944	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	9	29	0.500	123
232212002-1	CAMO-09-9945	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	10	30	0.505	124
232212003-1	CAMO-09-10029	SAMPLE		.1 pCi/g	SOIL	LANL010	18-JUN-09	11	31	0.500	125
232278001-1	CAMO-09-10458	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	12	32	0.504	126
232278002-1	CAMO-09-10459	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	13	33	0.509	127
232582001-1	CAMO-09-10464	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	14	34	0.501	129
232582002-1	CAMO-09-10465	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	15	35	0.499	130
232585001-1	CAMO-09-6605	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	16	36	0.499	131 OD 7/12/09
232585002-1	CAMO-09-6603	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	17	37	0.503	~~132~~ 155
232585003-1	CAMO-09-6604	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	18	38	0.503	133
232591001-1	CAMO-09-9946	SAMPLE		.1 pCi/g	SOIL	LANL010	25-JUN-09	19	39	0.503	134
1201874686-1	MB for batch 882673	MB		.1 pCi/g	SOIL	QC ACCOUNT		20	40	~~0.509~~ 1.0	135 OD 7/12/09
1201874687-1	CAMO-09-10459(232278002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	19-JUN-09	21	41	0.506	~~136~~ 156
1201874688-1	LCS for batch 882673	*LCS		.1 pCi/g	SOIL	QC ACCOUNT		22	42	0.101	144

*SRM 0244-A exp. 10-31-20

Choose SOP used: GL-RAD-A-011
GL-RAD-A-038
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: 7/12/09

GEL Laboratories LLC, Radiochemistry Division

1181

Blank Correction Report

Batch ID 882673

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874687	DUP	Uranium-233/234	0.506 g	0.506	0.0631	0.223	-.00667984	pCi/g	NO
		Uranium-235/236	0.506 g	0.0242	0.0149	0.102	.004762846	pCi/g	NO
		Uranium-238	0.506 g	0.456	0.0583	0.0868	.000148617	pCi/g	NO
1201874688	LCS	Uranium-233/234	0.101 g	6.01	0.584	0.919	-.03346535	pCi/g	NO
		Uranium-235/236	0.101 g	0.277	0.0863	0.421	.023861386	pCi/g	NO
		Uranium-238	0.101 g	6.18	0.596	0.358	.000744554	pCi/g	NO
1201874686	MB	Uranium-233/234	1.00 g	-0.00338	0.0026	0.0643	-.00338	pCi/g	NO
		Uranium-235/236	1.00 g	0.00241	0.00396	0.0387	.00241	pCi/g	YES
		Uranium-238	1.00 g	7.52E-05	0.0026	0.0328	.0000752	pCi/g	YES
232211001	CAMO-09-10155	Uranium-233/234	0.500 g	0.765	0.0813	0.213	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.0294	0.0155	0.0975	.00482	pCi/g	NO
		Uranium-238	0.500 g	0.925	0.0933	0.0828	.0001504	pCi/g	NO
232211002	CAMO-09-10156	Uranium-233/234	0.502 g	0.698	0.0788	0.257	-.00673307	pCi/g	NO
		Uranium-235/236	0.502 g	0.0481	0.0214	0.117	.004800797	pCi/g	NO
		Uranium-238	0.502 g	0.756	0.0828	0.0991	.000149801	pCi/g	NO
232211003	CAMO-09-10146	Uranium-233/234	0.507 g	0.958	0.095	0.193	-.00666667	pCi/g	NO
		Uranium-235/236	0.507 g	0.016	0.00929	0.0885	.004753452	pCi/g	YES
		Uranium-238	0.507 g	0.944	0.0928	0.0752	.000148323	pCi/g	NO
232211004	CAMO-09-10158	Uranium-233/234	0.503 g	0.758	0.0934	0.304	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0425	0.025	0.140	.004791252	pCi/g	NO
		Uranium-238	0.503 g	0.798	0.0944	0.119	.000149503	pCi/g	NO
232211005	CAMO-09-10145	Uranium-233/234	0.500 g	1.05	0.113	0.279	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.0612	0.0221	0.128	.00482	pCi/g	NO
		Uranium-238	0.500 g	1.15	0.120	0.109	.0001504	pCi/g	NO
232211006	CAMO-09-10157	Uranium-233/234	0.508 g	1.00	0.103	0.227	-.00665354	pCi/g	NO
		Uranium-235/236	0.508 g	0.0497	0.0179	0.104	.004744094	pCi/g	NO
		Uranium-238	0.508 g	1.14	0.112	0.0883	.000148031	pCi/g	NO
232211007	CAMO-09-10162	Uranium-233/234	0.504 g	1.08	0.114	0.271	-.00670635	pCi/g	NO
		Uranium-235/236	0.504 g	0.0521	0.020	0.124	.004781746	pCi/g	NO
		Uranium-238	0.504 g	0.934	0.102	0.106	.000149206	pCi/g	NO
232211008	CAMO-09-10163	Uranium-233/234	0.506 g	0.864	0.0909	0.223	-.00667984	pCi/g	NO
		Uranium-235/236	0.506 g	0.049	0.0177	0.102	.004762846	pCi/g	NO
		Uranium-238	0.506 g	0.977	0.0994	0.087	.000148617	pCi/g	NO
232212001	CAMO-09-9944	Uranium-233/234	0.500 g	0.887	0.0902	0.209	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.109	0.0262	0.096	.00482	pCi/g	NO
		Uranium-238	0.500 g	1.06	0.103	0.0815	.0001504	pCi/g	NO
232212002	CAMO-09-9945	Uranium-233/234	0.505 g	0.903	0.0964	0.239	-.00669307	pCi/g	NO
		Uranium-235/236	0.505 g	0.0786	0.0234	0.109	.004772277	pCi/g	NO
		Uranium-238	0.505 g	0.848	0.091	0.093	.000148911	pCi/g	NO
232212003	CAMO-09-10029	Uranium-233/234	0.500 g	0.814	0.0854	0.208	-.00676	pCi/g	NO
		Uranium-235/236	0.500 g	0.0178	0.017	0.0955	.00482	pCi/g	YES

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232212003	CAMO-09-10029	Uranium-238	0.500 g	0.850	0.0873	0.0811	.0001504	pCi/g	NO
232278001	CAMO-09-10458	Uranium-233/234	0.504 g	0.354	0.0519	0.229	-.00670635	pCi/g	NO
		Uranium-235/236	0.504 g	0.0129	0.0125	0.105	.004781746	pCi/g	YES
		Uranium-238	0.504 g	0.352	0.0508	0.0894	.000149206	pCi/g	NO
232278002	CAMO-09-10459	Uranium-233/234	0.509 g	0.547	0.0729	0.290	-.00664047	pCi/g	NO
		Uranium-235/236	0.509 g	0.0159	0.0113	0.133	.004734774	pCi/g	YES
		Uranium-238	0.509 g	0.561	0.073	0.113	.000147741	pCi/g	NO
232582001	CAMO-09-10464	Uranium-233/234	0.501 g	0.508	0.0715	0.305	-.00674651	pCi/g	NO
		Uranium-235/236	0.501 g	0.0254	0.0187	0.140	.004810379	pCi/g	NO
		Uranium-238	0.501 g	0.387	0.0608	0.119	.000150100	pCi/g	NO
232582002	CAMO-09-10465	Uranium-233/234	0.499 g	0.334	0.0532	0.244	-.00677355	pCi/g	NO
		Uranium-235/236	0.499 g	0.0142	0.0187	0.112	.004829659	pCi/g	YES
		Uranium-238	0.499 g	0.428	0.0586	0.095	.000150701	pCi/g	NO
232585001	CAMO-09-6605	Uranium-233/234	0.499 g	0.716	0.0916	0.329	-.00677355	pCi/g	NO
		Uranium-235/236	0.499 g	0.109	0.0346	0.151	.004829659	pCi/g	NO
		Uranium-238	0.499 g	0.753	0.0952	0.128	.000150701	pCi/g	NO
232585002	CAMO-09-6603	Uranium-233/234	0.503 g	1.36	0.140	0.309	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0336	0.0239	0.142	.004791252	pCi/g	NO
		Uranium-238	0.503 g	1.44	0.147	0.120	.000149503	pCi/g	NO
232585003	CAMO-09-6604	Uranium-233/234	0.503 g	1.04	0.114	0.298	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0654	0.0236	0.137	.004791252	pCi/g	NO
		Uranium-238	0.503 g	0.965	0.108	0.116	.000149503	pCi/g	NO
232591001	CAMO-09-9946	Uranium-233/234	0.503 g	0.840	0.0897	0.219	-.00671968	pCi/g	NO
		Uranium-235/236	0.503 g	0.0494	0.0255	0.101	.004791252	pCi/g	NO
		Uranium-238	0.503 g	1.03	0.103	0.0855	.000149503	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S0232278002_UU
SAMPLE QTY: 0.509 G

DETECTOR NUMBER :78770
AVERAGE %EFFICIENCY :24.7595
% YIELD : 57.937

COUNT DATE: 9-JUL-2009 20:53:30
ELAPSED LIVE TIME(SEC): 57449.93
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B127.CNF;382
PCI/G : 2.310E+01	PCI/G : 2.310E+01	NOMINAL : 5.29685 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.06884 dpm	EFF FILE : W127.CNF;108
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	89.000	84.891	1.915	9.1924	100.0000	5.47E-01	7.29E-02	1.36E-01	2.90E-01	6.07E-02
U232	5302.100	730.000	727.128	2.872	1.6948	100.0000	4.69E+00	3.87E-01	2.51E-02	6.77E-02	1.75E-01
U-235	4391.000	2.000	2.000	0.000	3.0409	80.90000	1.59E-02	1.13E-02	5.57E-02	1.33E-01	1.13E-02
U-238	4184.730	87.000	87.000	0.000	3.2215	100.0000	5.61E-01	7.30E-02	4.78E-02	1.13E-01	6.01E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

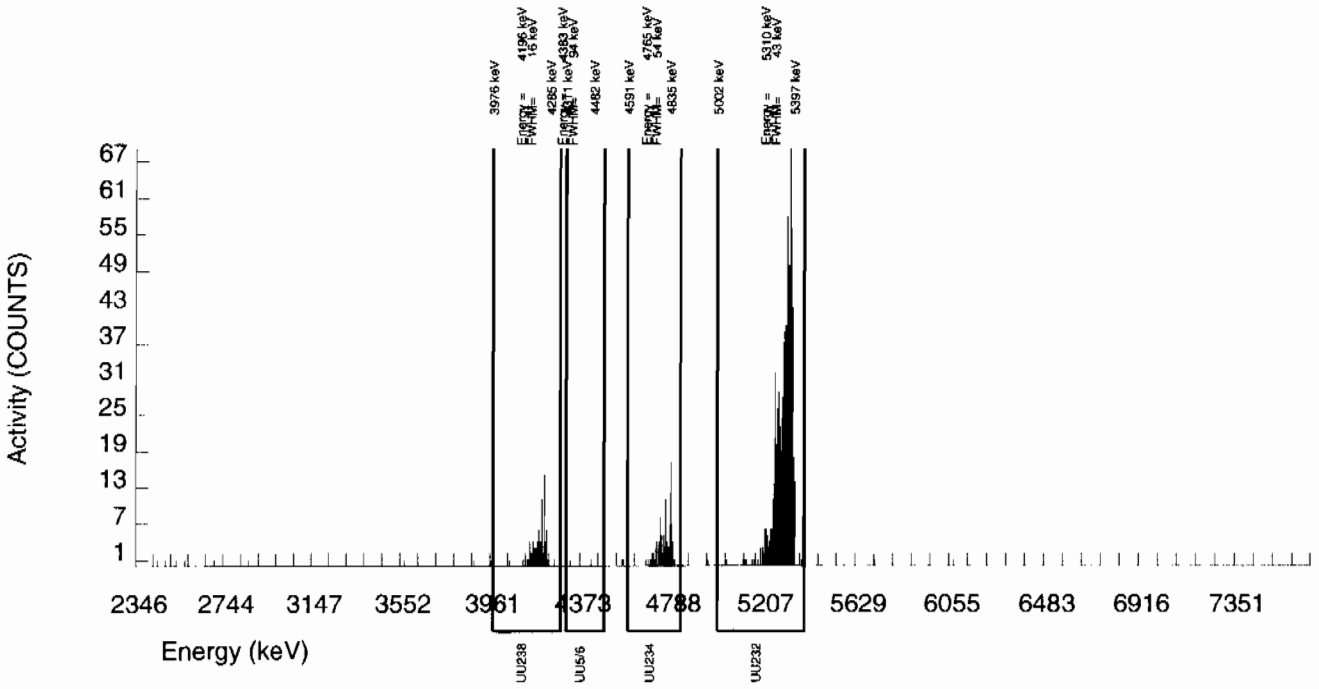

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232585001_UU
SAMPLE QTY: 0.499 G

DETECTOR NUMBER :33448
AVERAGE %EFFICIENCY :25.4349
% YIELD : 50.699

COUNT DATE: 9-JUL-2009 20:53:37
ELAPSED LIVE TIME(SEC): 57576.46
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B131.CNF;373
PCI/G : 2.357E+01	PCI/G : 2.357E+01	NOMINAL : 5.29601 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.68501 dpm	EFF FILE : W131.CNF;112
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	103.000	98.145	2.879	9.1924	100.0000	7.16E-01	9.16E-02	1.54E-01	3.29E-01	7.43E-02
U232	5302.100	657.000	655.081	1.919	1.3854	100.0000	4.78E+00	4.04E-01	2.33E-02	6.63E-02	1.87E-01
U-235	4391.000	13.000	12.040	0.960	3.0409	80.90000	1.09E-01	3.46E-02	6.31E-02	1.51E-01	3.36E-02
U-238	4184.730	107.000	103.162	3.838	3.2215	100.0000	7.53E-01	9.52E-02	5.41E-02	1.28E-01	7.67E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

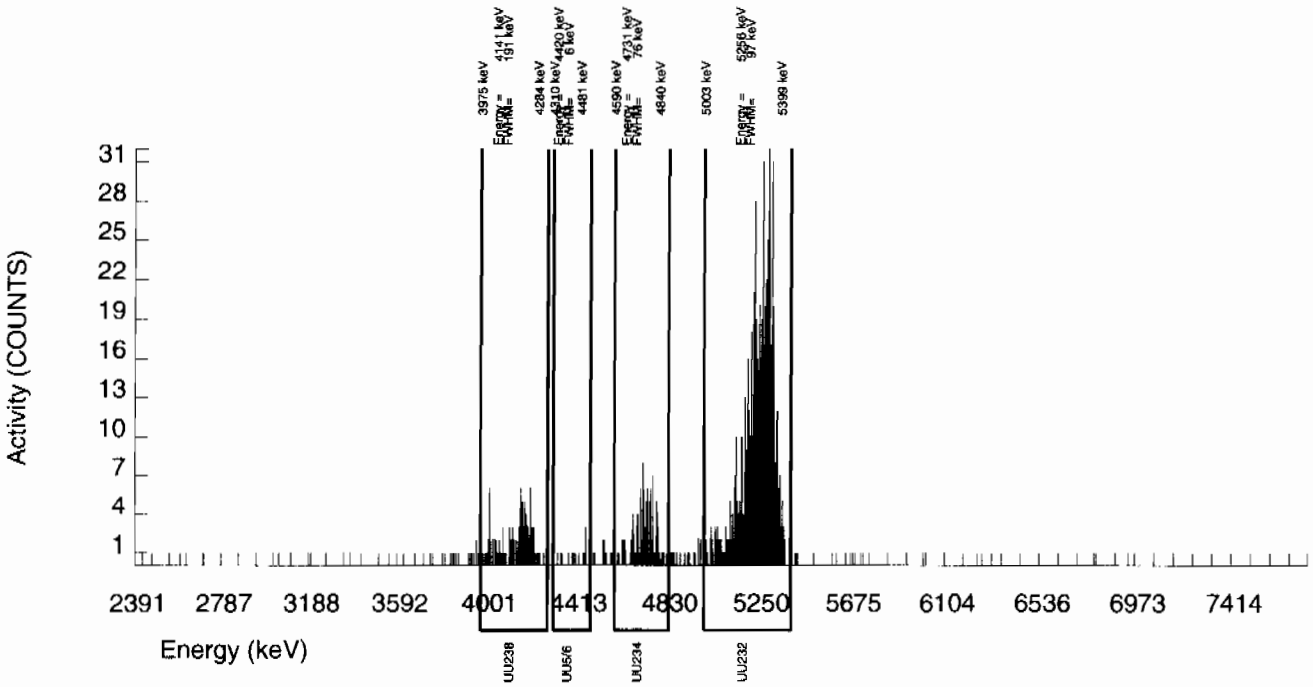

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232585002_UU
SAMPLE QTY: 0.503 G

DETECTOR NUMBER :75553
AVERAGE %EFFICIENCY :25.6275
% YIELD : 51.450

COUNT DATE:10-JUL-2009 21:23:08
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B155.CNF;330
PCI/G : 2.338E+01	PCI/G : 2.338E+01	NOMINAL : 5.29601 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 2.72480 dpm	EFF FILE : W155.CNF;101
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	204.000	200.894	1.000	9.1924	100.0000	1.36E+00	1.40E-01	1.45E-01	3.09E-01	9.67E-02
U232	5302.100	706.000	698.000	8.000	2.8284	100.0000	4.74E+00	3.97E-01	4.47E-02	1.08E-01	1.82E-01
U-235	4391.000	6.000	4.000	2.000	3.0409	80.90000	3.36E-02	2.39E-02	5.94E-02	1.42E-01	2.37E-02
U-238	4184.730	217.000	212.000	5.000	3.2215	100.0000	1.44E+00	1.47E-01	5.09E-02	1.20E-01	1.01E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

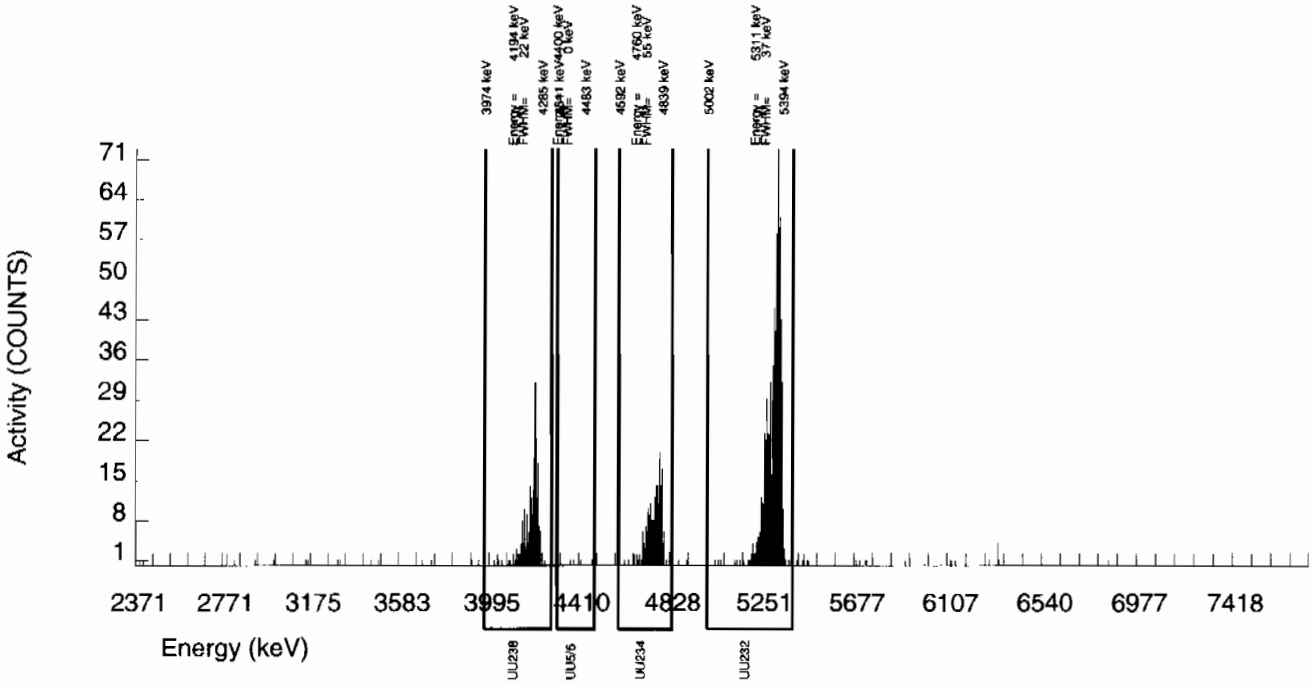

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 25-JUN-2009 00:00:00

SAMPLE ID : S0232585003_UU
SAMPLE QTY: 0.503 G

DETECTOR NUMBER :76229
AVERAGE %EFFICIENCY :24.5240
% YIELD : 57.563

COUNT DATE: 9-JUL-2009 20:53:42
ELAPSED LIVE TIME(SEC): 57581.48
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B133.CNF;361
PCI/G : 2.338E+01	PCI/G : 2.338E+01	NOMINAL : 5.29601 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.04854 dpm	EFF FILE : W133.CNF;107
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	162.000	157.917	1.919	9.1924	100.0000	1.04E+00	1.14E-01	1.40E-01	2.98E-01	8.41E-02
U232	5302.100	722.000	717.202	4.798	2.1905	100.0000	4.74E+00	3.94E-01	3.33E-02	8.46E-02	1.78E-01
U-235	4391.000	8.000	8.000	0.000	3.0409	80.90000	6.54E-02	2.36E-02	5.72E-02	1.37E-01	2.31E-02
U-238	4184.730	147.000	146.040	0.960	3.2215	100.0000	9.65E-01	1.08E-01	4.90E-02	1.16E-01	8.04E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

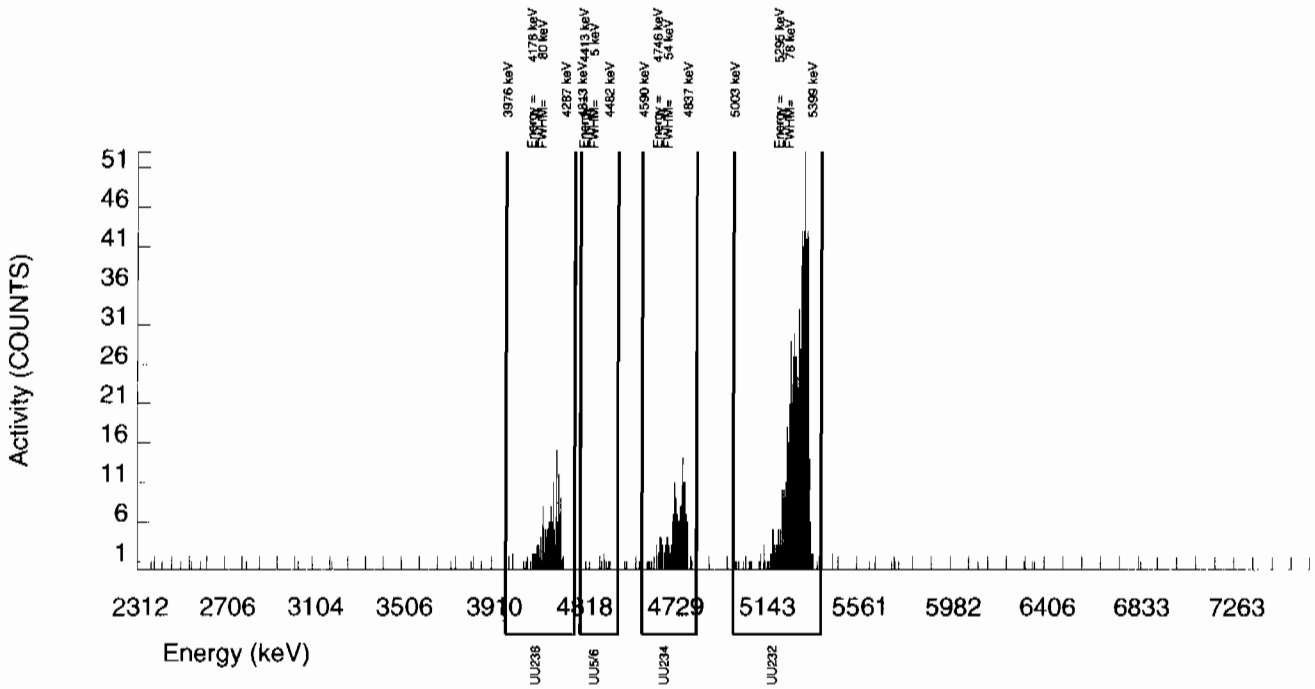

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673 SAMPLE DATE : 7-JUL-2009 00:00:00.	SAMPLE ID : S1201874686_UU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :64270 AVERAGE %EFFICIENCY :25.3758 % YIELD : 98.818	COUNT DATE: 9-JUL-2009 20:53:48 ELAPSED LIVE TIME(SEC): 57588.11 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29434 dpm RESULTS : 5.23175 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B135.CNF;372 BKG DATE : 5-JUL-2009 EFF FILE : W135.CNF;122 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	3.000	-1.804	0.960	9.1924	100.0000	-3.38E-03	2.60E-03	3.96E-02	8.43E-02	2.59E-03
U232	5302.100	1277.000	1274.121	2.879	1.6969	100.0000	2.38E+00	1.79E-01	7.31E-03	1.97E-02	6.70E-02
U-235	4391.000	2.000	1.040	0.960	3.0409	80.90000	2.41E-03	3.96E-03	1.62E-02	3.87E-02	3.95E-03
U-238	4184.730	1.000	0.040	0.960	3.2215	100.0000	7.52E-05	2.60E-03	1.39E-02	3.28E-02	2.59E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

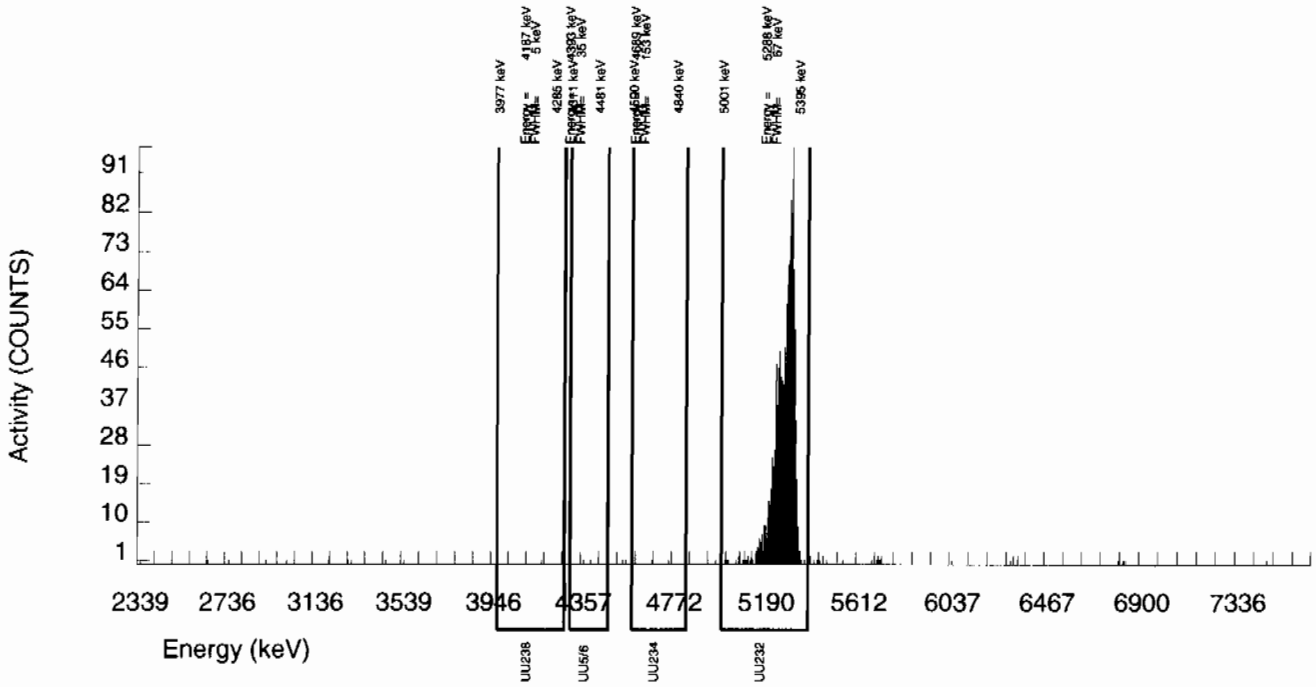

Alpha Spectroscopy Software Version 2 0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673
SAMPLE DATE : 19-JUN-2009 00:00:00

SAMPLE ID : S1201874687_UU
SAMPLE QTY: 0.506 G

DETECTOR NUMBER :75554
AVERAGE %EFFICIENCY :24.9092
% YIELD : 72.878

COUNT DATE:10-JUL-2009 21:23:10
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B156.CNF;331
PCI/G : 2.324E+01	PCI/G : 2.324E+01	NOMINAL : 5.29685 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.86027 dpm	EFF FILE : W156.CNF;105
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	110.000	103.101	4.000	9.1924	100.0000	5.06E-01	6.31E-02	1.05E-01	2.23E-01	5.17E-02
U232	5302.100	972.000	961.000	11.000	3.3166	100.0000	4.72E+00	3.71E-01	3.78E-02	8.90E-02	1.54E-01
U-235	4391.000	5.000	4.000	1.000	3.0409	80.90000	2.42E-02	1.49E-02	4.29E-02	1.02E-01	1.48E-02
U-238	4184.730	95.000	93.000	2.000	3.2215	100.0000	4.56E-01	5.83E-02	3.68E-02	8.68E-02	4.83E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

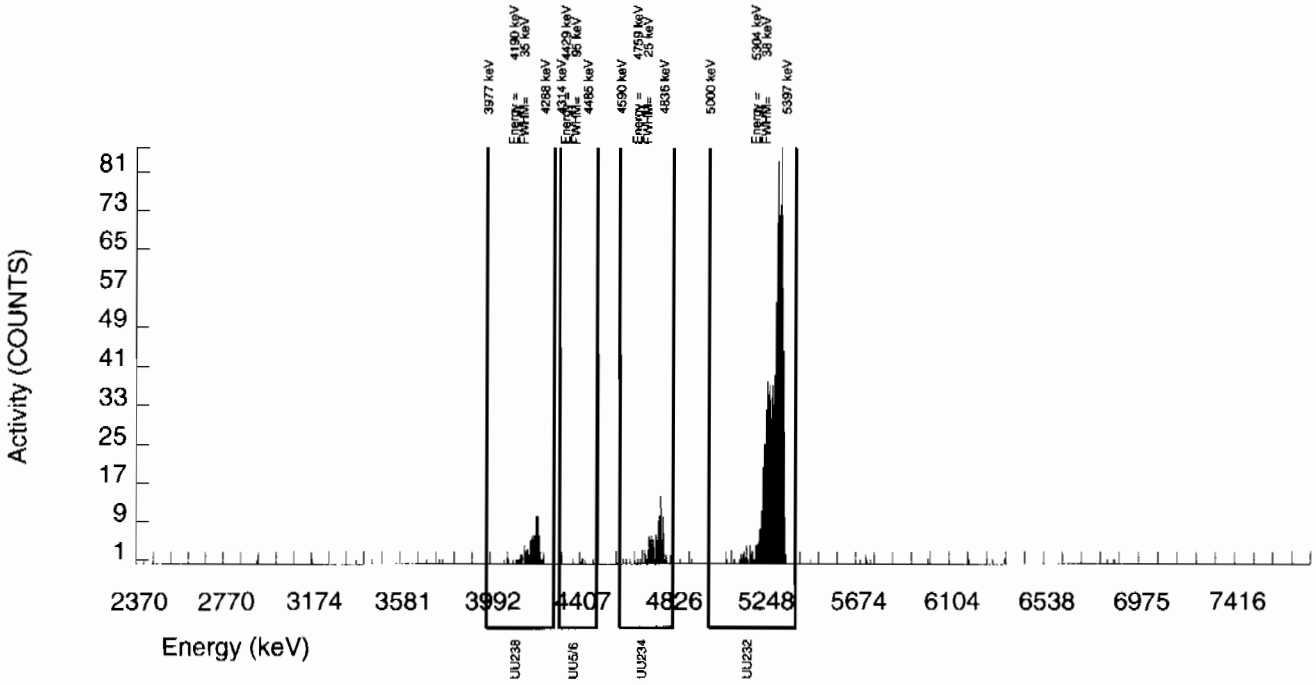

Alpha Spectroscopy Software Version 2 0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882673 SAMPLE DATE : 7-JUL-2009 00:00:00.	SAMPLE ID : S1201874688_UU SAMPLE QTY: 0.101 G
DETECTOR NUMBER :75551 AVERAGE %EFFICIENCY :24.7777 % YIELD : 92.048	COUNT DATE: 9-JUL-2009 20:53:53 ELAPSED LIVE TIME(SEC): 57526.06 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 1.164E+02	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.164E+02	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29434 dpm RESULTS : 4.87335 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B144.CNF;327 BKG DATE : 5-JUL-2009 EFF FILE : W144.CNF;92 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	303.000	294.714	4.794	9.1924	100.0000	6.01E+00	5.84E-01	4.32E-01	9.19E-01	3.56E-01
U232	5302.100	1172.000	1157.619	14.382	3.7923	100.0000	2.36E+01	1.95E+00	1.78E-01	4.11E-01	7.02E-01
U-235	4391.000	11.000	11.000	0.000	3.0409	80.90000	2.77E-01	8.63E-02	1.77E-01	4.21E-01	8.36E-02
U-238	4184.730	306.000	303.124	2.876	3.2215	100.0000	6.18E+00	5.96E-01	1.51E-01	3.58E-01	3.58E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

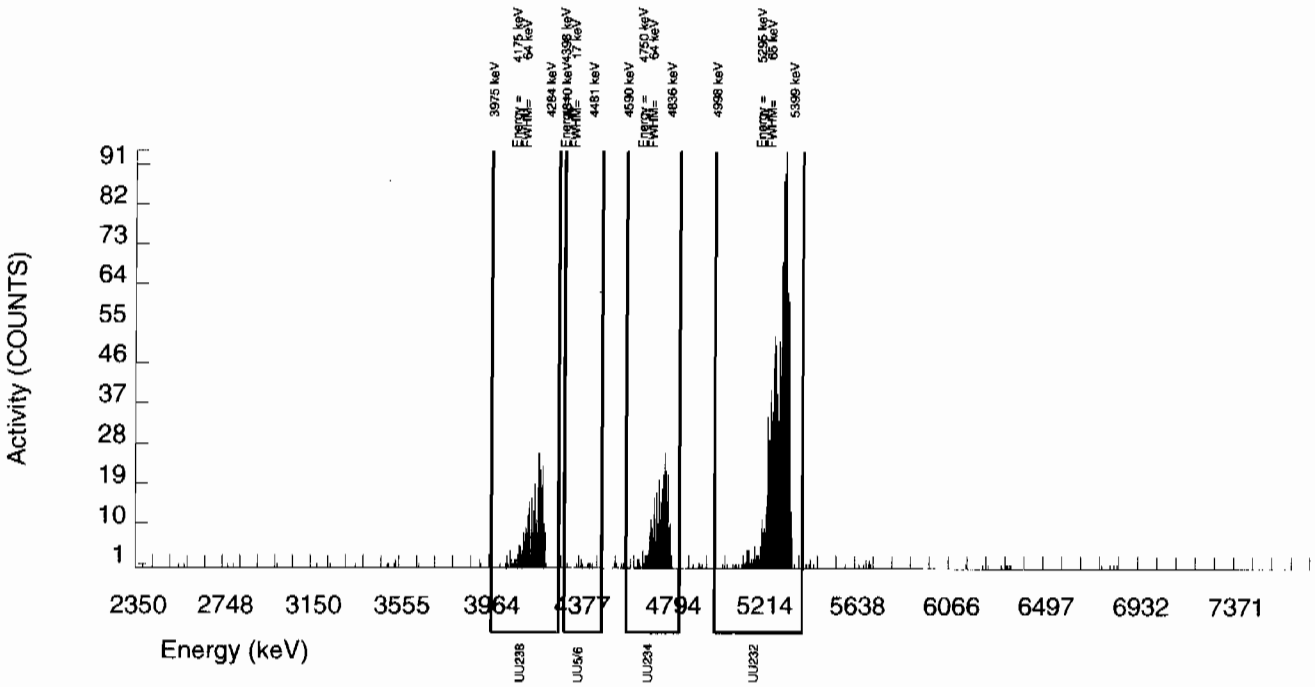

Radiochemistry Batch Checklist, Rev 9

Batch# 881931 Product: r|LANL Date: 7/15/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			n/a
Samples have been blank corrected (if required)			n/a
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.		✓	See NCR#711888
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			n/a
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			n/a
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent	✓		
Aux data is correct.			n/a
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			n/a
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		#711888
Batch non-conformances second reviewed and disposition verified to be completed.	✓		
Aliquot Correction completed if required.			n/a
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Maggie Stamps 7/15/09

Secondary Review Performed By: [illegible] 7/16/09

7/22

Gamma Spec Que Sheet

I.G. - 7/9/09

07/01/2009

Batch #: 881931 **Analyst:** MXR1 **First Client DueDate** 07/22/2009 **Internal Due Date:** 07/11/2009

Gamma Spike Isotope: Mixed Gamma **Spike Code:** n/a **Expiration Date:** n/a **Vol:** n/a **Nominal Concentration:** n/a

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1.0mL **Nominal Concentration:** Cs137-5.775 Co60-7.096 Am241-16.31

Initials: MS **Prep Date:** 7/2/09 **Witness:** n/a

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
232582001-1	CAMO-09-10464	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	117.26	2	7/2/09
232582002-1	CAMO-09-10465	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	116.70	17	
232585001-1	CAMO-09-6605	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	132.82	22 ~~22~~	mga 7/7/09
232585002-1	CAMO-09-6603	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	112.05	1	
232585003-1	CAMO-09-6604	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	128.17	5	
232591001-1	CAMO-09-9946	SAMPLE		.05 pCi/g	LANL010	SOIL	25-JUN-09 12:00:00	125.48	10	
1201873069-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	7/2/09	122.82	21	
1201873070-1	DUP CAMO-09-9946(232591001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	25-JUN-09 12:00:00	125.46	11	
1201873071-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	7/2/09	151.73	7	

1192

GEL Laboratories LLC, Radiochemistry Division

Michael Pritchard 7/17/09

Data Reviewed By: Maggie Stamps 7/15/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881931	232582001	SAMPLE	09-JUL-09	Americium-241	0.06977	0.3255	0.200
				Cerium-139	-0.01258	0.05217	0.050
				Sodium-22	-0.03963	0.08342	0.080
				Thorium-234	0.05884	2.529	2.00
881931	232582002	SAMPLE	09-JUL-09	Cerium-139	-0.0006	0.05723	0.050
				Cesium-134	0.109	0.1147	0.100
				Europium-152	-0.02628	0.2032	0.200
				Sodium-22	-0.01125	0.1185	0.080
881931	232585001	SAMPLE	09-JUL-09	Americium-241	0.09767	0.2167	0.200
881931	232585002	SAMPLE	09-JUL-09	Americium-241	0.2703	0.3619	0.200
				Cerium-139	-0.01626	0.05466	0.050
				Cesium-134	0.08236	0.1046	0.100
				Thorium-234	2.336	2.637	2.00
881931	232585003	SAMPLE	09-JUL-09	Cerium-139	-0.01625	0.05081	0.050
				Sodium-22	0.01058	0.09204	0.080
881931	232591001	SAMPLE	09-JUL-09	Americium-241	0.2727	0.4166	0.200
				Cerium-139	0.0331	0.05069	0.050
				Thorium-234	2.539	3.366	2.00
881931	1201873069	MB	09-JUL-09				
881931	1201873070	DUP	09-JUL-09	Americium-241	0.1295	0.2217	0.200
881931	1201873071	LCS	09-JUL-09	Cerium-139	0.07764	0.07837	0.050
				Cesium-134	0.1268	0.1799	0.100
				Europium-152	-0.1355	0.3004	0.200
				Mercury-203	0.06733	0.1188	0.100
				Potassium-40	0.5196	1.16	1.00
				Ruthenium-106	-0.2528	1.004	0.800
				Sodium-22	-0.0081	0.08536	0.080
				Thorium-234	0.08022	2.751	2.00
				Tin-113	0.04723	0.1505	0.100
				Uranium-235	0.0049	0.5453	0.500
				Yttrium-88	0.1137	0.1219	0.100

Gamma Review Report based on Result > MDA for Batch:881931

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232582001	25-JUN-09 12:00	09-JUL-09 08:14	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓		1.616	0.1779	pCi/g	0.2114	N	911.1	3	1.71	IDENTIFIED	9.328	☐	
	Americium-243 INT		0.2659	0.04062	pCi/g	0.09595	N	74.81	2	0.9552	IDENTIFIED	14.38	☐	
	Annihilation Rad.	HE	0.1046	0.0398	pCi/g	0.0515	N	510.6	2	1.94	IDENTIFIED	37.91	☐	
Pb214	Bismuth-211 INT		3.386	0.2745	pCi/g	0.364	Y	352	4	1.421	IDENTIFIED	7.032	☑ U1	
	Bismuth-212	HE	1.048	0.2828	pCi/g	0.7344	N	728	1	0.8624	FAIL_ABUND	26.63	☐	
	Bismuth-214 ✓		0.953	0.081	pCi/g	0.1268	0.200	609.2	4	1.462	IDENTIFIED	7.411	☐	
Pb214	Cadmium-109 INT		2.044	0.5019	pCi/g	1.329	Y	87.17	3	1.068	IDENTIFIED	23.85	☑ U1	
	Cerium-143		225.4	53.18	pCi/g	0	N	328.1	1	1.028	FAIL_DECAY	67.79	☐	
	Gross Gamma	HE	8.441	3.649	pCi/g	2.78	N		0				☐	
	Iodine-135	HE	1.74E+12	1.34E+14	pCi/g	0	N	510.6	2	1.94	NOT_IDENTI	37.91	☐	
	Lead-212 ✓		1.434	0.09031	pCi/g	0.0967	0.100	238.6	5	1.096	IDENTIFIED	4.15	☐	
	Lead-214 ✓		1.178	0.1003	pCi/g	0.1326	0.100	352	4	1.421	IDENTIFIED	7.032	☐	
	Lutetium-177	HE	2.991	0.9182	pCi/g	1.918	N	209.2	1	1.362	FAIL_ABUND	30.46	☐	
	Neptunium-237	HE	0.591	0.1574	pCi/g	0.3705	N	87.17	3	1.068	IDENTIFIED	23.85	☐	
	Polonium-212 NV		1.434	0.09031	pCi/g	0.0967	N	238.6	5	1.096	IDENTIFIED	4.15	☐	
	Polonium-214 NV		1.178	0.1003	pCi/g	0.1326	N	352	4	1.421	IDENTIFIED	7.032	☐	
	Polonium-216 NV		1.434	0.09031	pCi/g	0.0967	N	238.6	5	1.096	IDENTIFIED	4.15	☐	
	Polonium-218 NV		1.178	0.1003	pCi/g	0.1326	N	352	4	1.421	IDENTIFIED	7.032	☐	
	Potassium-40 ✓		33.47	1.628	pCi/g	0.6941	1.00	1461	1	2.199	IDENTIFIED	3.15	☐	
Pb214	Radium-224 INT		3.621	0.6572	pCi/g	1.101	Y	241.7	1	2.085	IDENTIFIED	17.66	☑ U1	
	Radium-226 ✓		0.953	0.081	pCi/g	0.1268	Y	609.2	4	1.462	IDENTIFIED	7.411	☐	
	Radium-228 ✓		1.616	0.1779	pCi/g	0.2114	0.500	911.1	3	1.71	IDENTIFIED	9.328	☐	
	Thallium-200	HE	14.94	110.7	pCi/g	0	N	74.81	2	0.9552	NOT_IDENTI	14.38	☐	
	Thallium-208 ✓		0.4636	0.04702	pCi/g	0.06445	0.080	583.2	1	1.419	IDENTIFIED	9.454	☐	
	Thorium-228 ✓		1.434	0.09031	pCi/g	0.09669	N	238.6	5	1.096	IDENTIFIED	4.15	☐	
	Thorium-230 ✓		0.9529	0.081	pCi/g	0.1268	N	609.2	4	1.462	IDENTIFIED	7.411	☐	
	Thorium-232 ✓		1.616	0.1779	pCi/g	0.2114	N	911.1	3	1.71	IDENTIFIED	9.328	☐	
	Tin-126	HE	0.2012	0.04943	pCi/g	0.1317	N	87.17	3	1.068	IDENTIFIED	23.85	☐	
	Titanium-44 LA		0.31	0.03112	pCi/g	0.0738	N	76.99	1	0.9832	FAIL_ABUND	8.552	☐	
	Uranium-234 ✓		0.9529	0.081	pCi/g	0.1268	N	609.2	4	1.462	IDENTIFIED	7.411	☐	
	Zirconium-97		1.16E+06	3.05E+05	pCi/g	0	N	238.6	5	1.096	NOT_IDENTI	4.15	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232582002	25-JUN-09 12:00	09-JUL-09 08:15	13.8	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓		1.524	0.2065	pCi/g	0.2841	N	911.1	3	1.605	IDENTIFIED	12.54	☐	
	Americium-243 INT		0.4978	0.0399	pCi/g	0.06964	N	74.91	1	1.439	IDENTIFIED	6.802	☐	
	Annihilation Rad.	HE	0.09121	0.04112	pCi/g	0.06191	N	510.8	2	1.287	IDENTIFIED	44.95	☐	
Pb-214	Bismuth-211 INT		2.891	0.2707	pCi/g	0.4491	Y	352.1	4	1.017	IDENTIFIED	8.647	☑ U1	
	Bismuth-214 ✓		1.019	0.1061	pCi/g	0.1518	0.200	609.4	4	1.32	IDENTIFIED	9.386	☐	
Pb214	Cadmium-109 INT		3.94	0.4907	pCi/g	1.122	Y	87.43	3	1.287	IDENTIFIED	11.78	☑ U1	
	Cerium-143		339.3	65.4	pCi/g	0	N	330.1	1	4.945	NOT_IDENTI	33.72	☐	
	Gross Gamma		9.003	1.583	pCi/g	4.435	N		0				☐	
	Iodine-133	HE	843.8	1497	pCi/g	0	N	510.8	2	1.287	FAIL_DECAY	44.95	☐	
	Krypton-85	HE	20.76	5.224	pCi/g	17.96	N	238.8	8	0.9946	NOT_IDENTI	4.6	☐	
	Lead-212 ✓		1.259	0.08005	pCi/g	0.1071	0.100	238.8	8	0.9946	IDENTIFIED	4.6	☐	
	Lead-214 ✓		1.006	0.09774	pCi/g	0.1377	0.100	352.1	4	1.017	IDENTIFIED	8.647	☐	

	Mercury-203 nvp	0.137	0.03805	pCi/g	0.08005	0.100	278.2	1	1.143	IDENTIFIED	27.5	☑ UI	
	Neptunium-237 INT	1.139	0.1843	pCi/g	0.3235	N	87.43	3	1.287	IDENTIFIED	11.78	☐	
	Niobium-97 HE	1448	18980	pCi/g	0	N	238.8	8	0.9946	NOT_IDENTI	4.6	☐	
	Polonium-212 nv	1.259	0.08005	pCi/g	0.1071	N	238.8	8	0.9946	IDENTIFIED	4.6	☐	
	Polonium-214 nv	1.006	0.09774	pCi/g	0.1377	N	352.1	4	1.017	IDENTIFIED	8.647	☐	
	Polonium-216 nv	1.259	0.08005	pCi/g	0.1071	N	238.8	8	0.9946	IDENTIFIED	4.6	☐	
	Polonium-218 nv	1.006	0.09774	pCi/g	0.1377	N	352.1	4	1.017	IDENTIFIED	8.647	☐	
	Potassium-40 ✓	34.75	1.588	pCi/g	0.5307	1.00	1460	1	1.875	IDENTIFIED	3.383	☐	
Pb214	Radium-224 INT	4.118	0.727	pCi/g	1.219	Y	241.9	1	1.734	IDENTIFIED	17.25	☑ UI	
	Radium-226 ✓	1.019	0.1061	pCi/g	0.1518	Y	609.4	4	1.32	IDENTIFIED	9.386	☐	
	Radium-228 ✓	1.524	0.2065	pCi/g	0.2841	0.500	911.1	3	1.605	IDENTIFIED	12.54	☐	
	Sodium-24 HE	1.54E+05	1.22E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Strontium-85 LA	0.105	0.02643	pCi/g	0.09085	Y	238.8	8	0.9946	NOT_IDENTI	4.6	☑ UI	Data rejected due to low abundance.
	Thallium-208 ✓	0.3836	0.05485	pCi/g	0.09095	0.080	583.1	1	1.429	IDENTIFIED	13.74	☐	
	Thorium-228 ✓	1.259	0.08005	pCi/g	0.1071	N	238.8	8	0.9946	IDENTIFIED	4.6	☐	
	Thorium-230 ✓	1.019	0.106	pCi/g	0.1518	N	609.4	4	1.32	IDENTIFIED	9.386	☐	
	Thorium-232 ✓	1.524	0.2065	pCi/g	0.2841	N	911.1	3	1.605	IDENTIFIED	12.54	☐	
	Thorium-234 ✓	1.599	0.5054	pCi/g	1.286	2.00	63.49	2	0.8711	IDENTIFIED	30.29	☐	
	Tin-126 INT	0.388	0.04832	pCi/g	0.1104	N	87.43	3	1.287	IDENTIFIED	11.78	☐	
	Titanium-44 LA	0.3778	0.02461	pCi/g	0.07695	N	77.37	1	1.024	FAIL_ABUND	4.986	☐	
	Total Uranium	4.7829	1.50E-06	ug/g	1.916	N		0				☐	
	Uranium-234 ✓	1.019	0.106	pCi/g	0.1518	N	609.4	4	1.32	IDENTIFIED	9.386	☐	
	Uranium-238 HE	1.599	0.5054	pCi/g	1.286	N	63.49	2	0.8711	IDENTIFIED	30.29	☐	
	Zirconium-97	9.18E+05	4.00E+05	pCi/g	0	N	238.8	8	0.9946	NOT_IDENTI	4.6	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232585001	25-JUN-09 12:00	09-JUL-09 08:16	13.8	SAMPLE	LOAD	1	LANL	LANL01004/GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.912	0.1679	pCi/g	0.1737	N	911.6	3	2.164	IDENTIFIED	6.165	☐	
	Americium-243 INT	0.3876	0.03637	pCi/g	0.08295	N	74.83	1	1.127	IDENTIFIED	8.538	☐	
	Annihilation Rad.	0.1624	0.02641	pCi/g	0.03815	N	511	1	2.072	IDENTIFIED	15.94	☐	
Pb214	Bismuth-211 INT	4.04	0.2123	pCi/g	0.29	Y	352.1	4	1.421	IDENTIFIED	4.19	☑ UI	
	Bismuth-212 HE	0.9779	0.2233	pCi/g	0.5588	N	727.8	1	1.815	FAIL_ABUND	22.32	☐	
	Bismuth-214 ✓	1.232	0.0881	pCi/g	0.09523	0.200	609.6	4	1.937	IDENTIFIED	5.64	☐	
Pb214	Cadmium-109 INT	2.695	0.4517	pCi/g	1.438	Y	87.08	4	1.25	IDENTIFIED	16.16	☑ UI	
	Cerium-143	474.7	64.7	pCi/g	0	N	328.2	1	1.043	FAIL_DECAY	27.03	☐	
	Cesium-134 LA	0.09407	0.03466	pCi/g	0.07548	0.100	795.7	2	1.595	FAIL_ABUND	36.57	☑ UI	Data rejected due to low abundance.
	Cesium-135 HE	0.2999	0.07734	pCi/g	0.2527	N	795.7	2	1.595	NOT_IDENTI	36.57	☐	
	Gross Gamma	10.15	1.448	pCi/g	2.273	N		0				☐	
	Iodine-123 HE	3.97E+05	5.54E+05	pCi/g	0	N	87.08	4	1.25	NOT_IDENTI	16.16	☐	
	Krypton-85 LA	30.47	3.688	pCi/g	13.04	N	238.8	8	1.344	NOT_IDENTI	2.843	☐	
	Lead-212 ✓	1.726	0.07831	pCi/g	0.08155	0.100	238.8	8	1.344	IDENTIFIED	2.843	☐	
	Lead-214 ✓	1.405	0.08246	pCi/g	0.1004	0.100	352.1	4	1.421	IDENTIFIED	4.19	☐	
	Lutetium-177 HE	1.815	0.5455	pCi/g	1.582	N	209.3	1	1.438	FAIL_ABUND	29.93	☐	
	Neptunium-237 INT	0.7794	0.1534	pCi/g	0.3236	N	87.08	4	1.25	IDENTIFIED	16.16	☐	
	Niobium-95m HE	0.3014	0.06609	pCi/g	0.208	N	238.8	8	1.344	NOT_IDENTI	2.843	☐	
	Polonium-212 nv	1.726	0.07831	pCi/g	0.08155	N	238.8	8	1.344	IDENTIFIED	2.843	☐	
	Polonium-214 nv	1.405	0.08246	pCi/g	0.1004	N	352.1	4	1.421	IDENTIFIED	4.19	☐	
	Polonium-216 nv	1.726	0.07831	pCi/g	0.08155	N	238.8	8	1.344	IDENTIFIED	2.843	☐	
	Polonium-218 nv	1.405	0.08246	pCi/g	0.1004	N	352.1	4	1.421	IDENTIFIED	4.19	☐	
	Potassium-40 ✓	36.37	1.479	pCi/g	0.3988	1.00	1461	1	3.092	IDENTIFIED	2.106	☑ ~~UI~~	~~Data rejected due to high peak width.~~ MS 7/17/09
Pb214	Radium-224 INT	4.762	0.5846	pCi/g	0.9266	Y	241.7	1	1.823	IDENTIFIED	11.97	☑ UI	
	Radium-226 ✓	1.232	0.0881	pCi/g	0.09523	Y	609.6	4	1.937	IDENTIFIED	5.64	☐	
	Radium-228 ✓	1.912	0.1679	pCi/g	0.1737	0.500	911.6	3	2.164	IDENTIFIED	6.165	☐	
	Strontium-85 LA	0.1541	0.01866	pCi/g	0.06599	Y	238.8	8	1.344	NOT_IDENTI	2.843	☑ UI	Data rejected due to low abundance.

Thallium-208 ✓	0.5336	0.03997	pCi/g	0.04646	0.080	583.3	1	1.533	IDENTIFIED	6.425	☐
Thorium-228 ✓	1.726	0.07831	pCi/g	0.08154	N	238.8	8	1.344	IDENTIFIED	2.843	☐
Thorium-230 ✓	1.232	0.0881	pCi/g	0.09523	N	609.6	4	1.937	IDENTIFIED	5.64	☐
Thorium-232 ✓	1.912	0.1679	pCi/g	0.1737	N	911.6	3	2.164	IDENTIFIED	6.165	☐
Tin-126 INT	0.2654	0.04448	pCi/g	0.1328	N	87.08	4	1.25	IDENTIFIED	16.16	☐
Titanium-44 LA	0.4118	0.02944	pCi/g	0.07566	N	77.16	1	1.266	FAIL_ABUND	5.941	☐
Uranium-234 ✓	1.232	0.0881	pCi/g	0.09523	N	609.6	4	1.937	IDENTIFIED	5.64	☐
Zirconium-97	1.17E+06	2.48E+05	pCi/g	0	N	238.8	8	1.344	NOT_IDENTI	2.843	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232585002	25-JUN-09 12:00	09-JUL-09 08:34	13.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.866	0.2138	pCi/g	0.229	N	911.6	3	1.461	IDENTIFIED	10.28	☐	
Americium-243 INT	0.4852	0.05931	pCi/g	0.1126	N	74.9	1	1.435	IDENTIFIED	11.47	☐	
Annihilation Rad.	0.179	0.03983	pCi/g	0.06033	N	511.1	1	1.844	IDENTIFIED	22.07	☐	
Barium-137m LA	0.1855	0.02811	pCi/g	0.1056	N	87.22	6	1.183	NOT_IDENTI	19.83	☐	
Pb214 Bismuth-211 INT	4.338	0.2972	pCi/g	0.393	Y	352.3	4	1.349	IDENTIFIED	6.077	☑ UI	
Bismuth-212 HE	1.181	0.2435	pCi/g	0.7532	N	727.6	1	1.173	FAIL_ABUND	20.28	☐	
Bismuth-214 ✓	1.373	0.1156	pCi/g	0.1239	0.200	609.7	4	1.52	IDENTIFIED	7.558	☐	
Pb214 Cadmium-109 INT	2.978	0.6059	pCi/g	1.515	Y	87.22	6	1.183	IDENTIFIED	19.83	☑ UI	
Cerium-143	126.2	53.39	pCi/g	0	N	87.22	6	1.183	FAIL_DECAY	19.83	☐	
Cesium-137 LA	0.1961	0.02972	pCi/g	0.1116	0.100	87.22	6	1.183	NOT_IDENTI	19.83	☑ UI	Data rejected due to low abundance.
Gross Gamma	9.541	1.605	pCi/g	3.538	N		0				☐	
Iodine-135 HE	1.39E+14	1.39E+14	pCi/g	0	N	796	1	1.671	NOT_IDENTI	38.38	☐	
Krypton-85 HE	22.27	5.607	pCi/g	18.48	N	239	6	1.219	NOT_IDENTI	4.902	☐	
Lead-212 ✓	1.569	0.09584	pCi/g	0.1228	0.100	239	6	1.219	IDENTIFIED	4.902	☐	
Lead-214 ✓	1.509	0.1106	pCi/g	0.137	0.100	352.3	4	1.349	IDENTIFIED	6.077	☐	
Lutetium-177 HE	3.06	1.016	pCi/g	2.039	N	209.8	1	1.212	FAIL_ABUND	33.07	☐	
Neptunium-237 HE	0.861	0.1964	pCi/g	0.5156	N	87.22	6	1.183	IDENTIFIED	19.83	☐	
Niobium-97 HE	10970	16160	pCi/g	0	N	392.8	2	5.769	NOT_IDENTI	86.76	☐	
Polonium-212 nr	1.569	0.09584	pCi/g	0.1228	N	239	6	1.219	IDENTIFIED	4.902	☐	
Polonium-214 nr	1.509	0.1106	pCi/g	0.137	N	352.3	4	1.349	IDENTIFIED	6.077	☐	
Polonium-216 nr	1.569	0.09584	pCi/g	0.1228	N	239	6	1.219	IDENTIFIED	4.902	☐	
Polonium-218 nr	1.509	0.1106	pCi/g	0.137	N	352.3	4	1.349	IDENTIFIED	6.077	☐	
Potassium-40 ✓	29.25	1.454	pCi/g	0.5769	1.00	1461	1	1.904	IDENTIFIED	3.478	☐	
Pb214 Radium-224 INT	2.993	0.5555	pCi/g	1.715	Y	242.2	1	1.526	IDENTIFIED	18.33	☑ UI	
Radium-226 ✓	1.373	0.1156	pCi/g	0.1239	Y	609.7	4	1.52	IDENTIFIED	7.558	☐	
Radium-228 ✓	1.866	0.2138	pCi/g	0.229	0.500	911.6	3	1.461	IDENTIFIED	10.28	☐	
Strontium-85 LA	0.1127	0.02837	pCi/g	0.09353	Y	239	6	1.219	NOT_IDENTI	4.902	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.4639	0.05657	pCi/g	0.06977	0.080	583.5	1	1.394	IDENTIFIED	11.78	☐	
Thorium-228 ✓	1.569	0.09584	pCi/g	0.1228	N	239	6	1.219	IDENTIFIED	4.902	☐	
Thorium-230 ✓	1.373	0.1156	pCi/g	0.1239	N	609.7	4	1.52	IDENTIFIED	7.558	☐	
Thorium-232 ✓	1.866	0.2138	pCi/g	0.229	N	911.6	3	1.461	IDENTIFIED	10.28	☐	
Tin-126 INT	0.2932	0.05966	pCi/g	0.15	N	87.22	6	1.183	IDENTIFIED	19.83	☐	
Titanium-44 LA	0.3707	0.03476	pCi/g	0.09604	N	77.11	1	1.13	FAIL_ABUND	8.354	☐	
Total Uranium	7.0023	3.32E-06	ug/g	3.9262	N		0				☐	
Uranium-234 ✓	1.373	0.1156	pCi/g	0.1239	N	609.7	4	1.52	IDENTIFIED	7.558	☐	
Zirconium-97 HE	86680	3.48E+05	pCi/g	0	N	392.8	2	5.769	NOT_IDENTI	86.76	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232585003	25-JUN-09 12:00	09-JUL-09 08:34	13.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.403	0.1734	pCi/g	0.2684	N	911.2	3	1.728	IDENTIFIED	10.7	☐	
Americium-243 INT	0.3538	0.03283	pCi/g	0.06154	N	74.68	2	1.493	IDENTIFIED	8.411	☐	

	Annihilation Rad.	HE	0.1226	0.04088	pCi/g	0.05069	N	510.8	1	2.036	IDENTIFIED	33.19	☐	
Pb214	Bismuth-211	INT	3.551	0.2804	pCi/g	0.3672	Y	351.9	4	1.521	IDENTIFIED	6.839	☑ UI	
	Bismuth-212	HE	1.12	0.2753	pCi/g	0.7816	N	726.9	1	2.207	FAIL_ABUND	24.15	☐	
	Bismuth-214 ✓		0.9202	0.0976	pCi/g	0.1234	0.200	609.4	4	1.686	IDENTIFIED	9.743	☐	
Pb214	Cadmium-109	INT	3.57	0.4352	pCi/g	1.008	Y	87.21	4	1.306	IDENTIFIED	11.58	☑ UI	
	Cerium-143		408.7	67.12	pCi/g	0	N	925.8	1	1.274	FAIL_DECAY	54.38	☐	
	Cesium-134	LA	0.1126	0.04248	pCi/g	0.1051	0.100	794.6	2	1.371	FAIL_ABUND	37.47	☑ UI	Data rejected due to low abundance.
	Gross Gamma		8.995	1.481	pCi/g	4.879	N		0				☐	
	Iodine-123	HE	9.38E+05	6.20E+05	pCi/g	0	N	87.21	4	1.306	NOT_IDENTI	11.58	☐	
	Iodine-135	HE	4.00E+13	1.28E+14	pCi/g	0	N	794.6	2	1.371	NOT_IDENTI	37.47	☐	
	Krypton-85	HE	23.38	4.541	pCi/g	15.93	N	238.7	8	1.327	NOT_IDENTI	3.812	☐	
	Lead-212 ✓		1.431	0.0945	pCi/g	0.08821	0.100	238.7	8	1.327	IDENTIFIED	3.812	☐	
	Lead-214 ✓		1.235	0.1027	pCi/g	0.1241	0.100	351.9	4	1.521	IDENTIFIED	6.839	☐	
	Neptunium-237	INT	1.032	0.1649	pCi/g	0.2902	N	87.21	4	1.306	IDENTIFIED	11.58	☐	
	Niobium-95m	HE	0.3593	0.07505	pCi/g	0.2418	N	238.7	8	1.327	NOT_IDENTI	3.812	☐	
	Polonium-212	NV	1.431	0.0945	pCi/g	0.08821	N	238.7	8	1.327	IDENTIFIED	3.812	☐	
	Polonium-214	NV	1.235	0.1027	pCi/g	0.1241	N	351.9	4	1.521	IDENTIFIED	6.839	☐	
	Polonium-216	NV	1.431	0.0945	pCi/g	0.08821	N	238.7	8	1.327	IDENTIFIED	3.812	☐	
	Polonium-218	NV	1.235	0.1027	pCi/g	0.1241	N	351.9	4	1.521	IDENTIFIED	6.839	☐	
	Potassium-40 ✓		29.05	1.357	pCi/g	0.6328	1.00	1460	1	2.103	IDENTIFIED	3.487	☐	
Pb214	Radium-224	INT	4.222	0.7317	pCi/g	1.004	Y	241.6	1	1.95	IDENTIFIED	16.63	☑ UI	
	Radium-226 ✓		0.9202	0.0976	pCi/g	0.1234	Y	609.4	4	1.686	IDENTIFIED	9.743	☐	
	Radium-228 ✓		1.403	0.1734	pCi/g	0.2684	0.500	911.2	3	1.728	IDENTIFIED	10.7	☐	
	Sodium-24	HE	1.33E+05	1.07E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Strontium-85	LA	0.1183	0.02298	pCi/g	0.08062	Y	238.7	8	1.327	NOT_IDENTI	3.812	☑ UI	Data rejected due to low abundance.
	Thallium-200	HE	112.4	112.7	pCi/g	0	N	74.68	2	1.493	NOT_IDENTI	8.411	☐	
	Thallium-208 ✓		0.5281	0.04764	pCi/g	0.06405	0.080	583	1	1.411	IDENTIFIED	8.237	☐	
	Thorium-228 ✓		1.431	0.0945	pCi/g	0.0882	N	238.7	8	1.327	IDENTIFIED	3.812	☐	
	Thorium-230 ✓		0.9201	0.09759	pCi/g	0.1234	N	609.4	4	1.686	IDENTIFIED	9.743	☐	
	Thorium-232 ✓		1.403	0.1734	pCi/g	0.2684	N	911.2	3	1.728	IDENTIFIED	10.7	☐	
	Thorium-234 ✓		1.347	0.5008	pCi/g	1.018	2.00	63.16	2	1.128	IDENTIFIED	36.1	☐	
	Tin-126	INT	0.3516	0.04286	pCi/g	0.09912	N	87.21	4	1.306	IDENTIFIED	11.58	☐	
	Titanium-44	LA	0.3284	0.02213	pCi/g	0.06315	N	77	1	1.191	FAIL_ABUND	5.501	☐	
	Total Uranium		4.0437	1.49E-06	ug/g	1.5174	N		0				☐	
	Uranium-234 ✓		0.9201	0.09759	pCi/g	0.1234	N	609.4	4	1.686	IDENTIFIED	9.743	☐	
	Uranium-238	HE	1.347	0.5008	pCi/g	1.018	N	63.16	2	1.128	IDENTIFIED	36.1	☐	
	Zirconium-97		1.37E+06	3.55E+05	pCi/g	0	N	238.7	8	1.327	NOT_IDENTI	3.812	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232591001	25-JUN-09 12:00	09-JUL-09 08:35	13.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓		1.536	0.2004	pCi/g	0.2186	N	911.4	3	1.533	IDENTIFIED	11.5	☐	
	Americium-243	INT	0.4028	0.05381	pCi/g	0.1088	N	74.89	2	1.301	IDENTIFIED	12.19	☐	
	Annihilation Rad.		0.1231	0.03741	pCi/g	0.04303	N	511.3	2	1.949	IDENTIFIED	30.21	☐	
Pb214	Bismuth-211	INT	4.159	0.2823	pCi/g	0.3136	Y	352	4	1.156	IDENTIFIED	5.725	☑ UI	
	Bismuth-212	LA	1.221	0.2658	pCi/g	0.6807	N	727.9	1	1.325	FAIL_ABUND	21.4	☐	
	Bismuth-214 ✓		1.282	0.09253	pCi/g	0.1167	0.200	609.6	4	1.56	IDENTIFIED	6.133	☐	
Pb214	Cadmium-109	INT	3.011	0.5822	pCi/g	1.422	Y	87.46	3	1.106	IDENTIFIED	18.49	☑ UI	
	Cerium-143		194.2	45.55	pCi/g	0	N	328.3	1	1.408	FAIL_DECAY	53.93	☐	
	Cesium-134	LA	0.1266	0.02932	pCi/g	0.09517	0.100	795.2	2	1.483	FAIL_ABUND	22.84	☑ UI	Data rejected due to low abundance.
	Gross Gamma		9.669	1.637	pCi/g	2.944	N		0				☐	
	Iodine-133	HE	490.2	1135	pCi/g	0	N	511.3	2	1.949	FAIL_DECAY	30.21	☐	
	Iodine-135	HE	3.72E+13	1.33E+14	pCi/g	0	N	795.2	2	1.483	NOT_IDENTI	22.84	☐	
	Krypton-85	HE	17.53	3.723	pCi/g	13.87	N	238.8	7	1.116	NOT_IDENTI	3.354	☐	
	Lead-212 ✓		1.725	0.08734	pCi/g	0.09533	0.100	238.8	7	1.116	IDENTIFIED	3.354	☐	

Lead-214 ✓	1.447	0.1052	pCi/g	0.1093	0.100	352	4	1.156	IDENTIFIED	5.725	☐	
Neptunium-237 INT	0.8708	0.1908	pCi/g	0.4697	N	87.46	3	1.106	IDENTIFIED	18.49	☐	
Polonium-212 nv	1.725	0.08734	pCi/g	0.09533	N	238.8	7	1.116	IDENTIFIED	3.354	☐	
Polonium-214 nv	1.447	0.1052	pCi/g	0.1093	N	352	4	1.156	IDENTIFIED	5.725	☐	
Polonium-216 nv	1.725	0.08734	pCi/g	0.09533	N	238.8	7	1.116	IDENTIFIED	3.354	☐	
Polonium-218 nv	1.447	0.1052	pCi/g	0.1093	N	352	4	1.156	IDENTIFIED	5.725	☐	
Potassium-40 ✓	32.82	1.707	pCi/g	0.6215	1.00	1461	1	1.97	IDENTIFIED	2.918	☐	
Pb214 Radium-224 INT	4.42	0.5914	pCi/g	1.085	Y	241.8	1	1.617	IDENTIFIED	13.02	☑ UI	
Radium-226 ✓	1.282	0.09253	pCi/g	0.1167	Y	609.6	4	1.56	IDENTIFIED	6.133	☐	
Radium-228 ✓	1.536	0.2004	pCi/g	0.2186	0.500	911.4	3	1.533	IDENTIFIED	11.5	☐	
Strontium-85 LA	0.08869	0.01884	pCi/g	0.07016	Y	238.8	7	1.116	NOT_IDENTI	3.354	☑ UI	Data rejected due to low abundance.
Thallium-200 HE	150.2	116.4	pCi/g	0	N	74.89	2	1.301	NOT_IDENTI	12.19	☐	
Thallium-208 ✓	0.4707	0.04366	pCi/g	0.05247	0.080	583.5	1	1.293	IDENTIFIED	8.646	☐	
Thorium-228 ✓	1.725	0.08734	pCi/g	0.09532	N	238.8	7	1.116	IDENTIFIED	3.354	☐	
Thorium-230 ✓	1.282	0.09253	pCi/g	0.1167	N	609.6	4	1.56	IDENTIFIED	6.133	☐	
Thorium-232 ✓	1.536	0.2004	pCi/g	0.2186	N	911.4	3	1.533	IDENTIFIED	11.5	☐	
Tin-126 INT	0.2966	0.05733	pCi/g	0.141	N	87.46	3	1.106	IDENTIFIED	18.49	☐	
Titanium-44 LA	0.4128	0.03948	pCi/g	0.09352	N	77.27	1	1.303	FAIL_ABUND	7.848	☐	
Total Uranium	7.637	2.88E-06	ug/g	5.01	N		0				☐	
Uranium-234 ✓	1.282	0.09253	pCi/g	0.1167	N	609.6	4	1.56	IDENTIFIED	6.133	☐	
Zirconium-97 HE	3.36E+05	2.63E+05	pCi/g	0	N	238.8	7	1.116	NOT_IDENTI	3.354	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201873069		09-JUL-09 08:22	0	MB	LOAD	1		GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Iodine-133 HE	6.452	4.264	pCi/g	0	N	0	2	0	NOT_IDENTI	0	☐	
Technetium-99m HE	1.83E+06	3.91E+06	pCi/g	0	N	0	2	0	NOT_IDENTI	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201873070	25-JUN-09 12:00	09-JUL-09 08:36	13.9	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.224	0.144	pCi/g	0.238	N	911.2	3	1.181	IDENTIFIED	10.46	☐	
Americium-243 INT	0.4284	0.04129	pCi/g	0.08027	N	74.09	1	1.458	IDENTIFIED	8.847	☐	
Annihilation Rad.	0.138	0.03484	pCi/g	0.04602	N	510.6	3	1.671	IDENTIFIED	25.06	☐	
Pb214 Bismuth-211 INT	3.341	0.2265	pCi/g	0.2909	Y	351.4	4	1.067	IDENTIFIED	5.806	☑ UI	
Bismuth-212 HE	0.9922	0.2052	pCi/g	0.6127	N	727.5	1	1.272	FAIL_ABUND	20.19	☐	
Bismuth-214 ✓	1.071	0.08443	pCi/g	0.1112	0.200	609.1	4	1.339	IDENTIFIED	6.632	☐	
Pb214 Cadmium-109 INT	2.504	0.3966	pCi/g	1.105	Y	89.36	2	1.155	IDENTIFIED	15.19	☑ UI	
Cerium-143	537.5	75.47	pCi/g	0	N	86.52	3	1.548	FAIL_DECAY	12.73	☐	
Gross Gamma	9.303	1.519	pCi/g	3.886	N		0				☐	
Iodine-123 HE	3.52E+05	5.90E+05	pCi/g	0	N	89.36	2	1.155	NOT_IDENTI	15.19	☐	
Iodine-133 HE	312	1082	pCi/g	0	N	510.6	3	1.671	FAIL_DECAY	25.06	☐	
Iodine-135 HE	2.49E+13	1.31E+14	pCi/g	0	N	510.6	3	1.671	NOT_IDENTI	25.06	☐	
Lead-212 ✓	1.351	0.07326	pCi/g	0.09253	0.100	238.1	6	0.9598	IDENTIFIED	3.587	☐	
Lead-214 ✓	1.162	0.08443	pCi/g	0.09541	0.100	351.4	4	1.067	IDENTIFIED	5.806	☐	
Lutetium-177 HE	2.953	0.7007	pCi/g	1.725	N	209.3	1	1.082	FAIL_ABUND	23.53	☐	
Neptunium-237 INT	1.09	0.1852	pCi/g	0.3235	N	86.52	3	1.548	IDENTIFIED	12.73	☐	
Niobium-95m LA	0.7866	0.08748	pCi/g	0.2884	N	238.1	6	0.9598	NOT_IDENTI	3.587	☐	
Polonium-212 nv	1.351	0.07326	pCi/g	0.09253	N	238.1	6	0.9598	IDENTIFIED	3.587	☐	
Polonium-214 nv	1.162	0.08443	pCi/g	0.09541	N	351.4	4	1.067	IDENTIFIED	5.806	☐	
Polonium-216 nv	1.351	0.07326	pCi/g	0.09253	N	238.1	6	0.9598	IDENTIFIED	3.587	☐	
Polonium-218 nv	1.162	0.08443	pCi/g	0.09541	N	351.4	4	1.067	IDENTIFIED	5.806	☐	
Potassium-40 ✓	32.66	1.415	pCi/g	0.4295	1.00	1461	2	1.913	IDENTIFIED	2.745	☐	
Pb214 Radium-224 INT	3.482	0.6379	pCi/g	1.053	Y	241.3	1	1.97	IDENTIFIED	18	☑ UI	

Radium-226 ✓		1.071	0.08443	pCi/g	0.1112	Y	609.1	4	1.339	IDENTIFIED	6.632	☐
Radium-228 ✓		1.224	0.144	pCi/g	0.238	0.500	911.2	3	1.181	IDENTIFIED	10.46	☐
Thallium-208 ✓		0.4845	0.03997	pCi/g	0.05676	0.080	582.7	1	1.303	IDENTIFIED	7.372	☐
Thorium-228 ✓		1.351	0.07326	pCi/g	0.09252	N	238.1	6	0.9598	IDENTIFIED	3.587	☐
Thorium-230 ✓		1.071	0.08443	pCi/g	0.1112	N	609.1	4	1.339	IDENTIFIED	6.632	☐
Thorium-232 ✓		1.224	0.144	pCi/g	0.238	N	911.2	3	1.181	IDENTIFIED	10.46	☐
Thorium-234 ✓		2.214	0.7594	pCi/g	1.845	2.00	63.05	2	1.053	IDENTIFIED	33.2	☐
Tin-126 INT		0.3711	0.05009	pCi/g	0.1092	N	86.52	3	1.548	IDENTIFIED	12.73	☐
Titanium-44 LA		0.1963	0.02153	pCi/g	0.06532	N	1461	2	1.913	NOT_IDENTI	2.745	☐
Total Uranium		6.6737	2.26E-06	ug/g	2.7471	N		0				☐
Uranium-234 ✓		1.071	0.08443	pCi/g	0.1112	N	609.1	4	1.339	IDENTIFIED	6.632	☐
Uranium-238	HE	2.214	0.7594	pCi/g	1.845	N	63.05	2	1.053	IDENTIFIED	33.2	☐
Zirconium-97		1.29E+06	3.27E+05	pCi/g	0	N	238.1	6	0.9598	NOT_IDENTI	3.587	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201873071		09-JUL-09 08:51	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228		1.885	0.3002	pCi/g	0.574	N	911	3	1.548	IDENTIFIED	14.99	☐	
Americium-241		13.53	0.5961	pCi/g	0.4161	0.200	59.5	1	1.011	IDENTIFIED	2.239	☐ 83%	
Americium-243		0.3194	0.05083	pCi/g	0.1365	N	74.93	1	1.164	IDENTIFIED	15.54	☐	
Annihilation Rad.	HE	0.1259	0.04647	pCi/g	0.09813	N	510.5	3	1.548	IDENTIFIED	36.8	☐	
Barium-137m		5.633	0.2209	pCi/g	0.1274	N	661.6	2	1.499	IDENTIFIED	2.293	☐	
Bismuth-211		2.663	0.329	pCi/g	0.6399	Y	352	4	1.108	IDENTIFIED	11.92	☐	
Bismuth-212	HE	1.2	0.4061	pCi/g	1.156	N	727	1	3.148	FAIL_ABUND	33.56	☐	
Bismuth-214		0.8307	0.1074	pCi/g	0.359	0.200	609.2	4	1.25	FAIL_ABUND	12.28	☐	
Cadmium-109		47.72	2.146	pCi/g	2.27	Y	88.04	2	1.052	IDENTIFIED	2.372	☐	
Cerium-143	HE	9.634	2.852	pCi/g	8.999	N	165.7	1	1.091	FAIL_ABUND	38.54	☐	
Cesium-137		5.954	0.234	pCi/g	0.1346	0.100	661.6	2	1.499	IDENTIFIED	2.293	☐ 103%	
Cobalt-57		0.3682	0.03668	pCi/g	0.06741	N	122.1	2	0.9431	IDENTIFIED	8.776	☐	
Cobalt-60		7.374	0.2776	pCi/g	0.09091	0.100	1332	1	1.707	IDENTIFIED	2.369	☐ 104%	
Gross Gamma		31	3.157	pCi/g	6.206	N		0				☐	
Iodine-133	HE	10.98	11.47	pCi/g	0	N	510.5	3	1.548	FAIL_DECAY	36.8	☐	
Iodine-135	HE	5.32E+06	1.16E+07	pCi/g	0	N	510.5	3	1.548	NOT_IDENTI	36.8	☐	
Lead-212		1.331	0.1009	pCi/g	0.1947	0.100	238.6	4	1.043	IDENTIFIED	6.415	☐	
Lead-214		0.9262	0.117	pCi/g	0.2269	0.100	352	4	1.108	IDENTIFIED	11.92	☐	
Neptunium-237		6.807	0.8032	pCi/g	1.196	N	92.96	1	1.55	NOT_IDENTI	37.62	☐	
Niobium-97		168.9	60.48	pCi/g	0	N	1836	2	1.412	NOT_IDENTI	27.92	☐	
Polonium-212		1.331	0.1009	pCi/g	0.1947	N	238.6	4	1.043	IDENTIFIED	6.415	☐	
Polonium-214		0.9262	0.117	pCi/g	0.2269	N	352	4	1.108	IDENTIFIED	11.92	☐	
Polonium-216		1.331	0.1009	pCi/g	0.1947	N	238.6	4	1.043	IDENTIFIED	6.415	☐	
Polonium-218		0.9262	0.117	pCi/g	0.2269	N	352	4	1.108	IDENTIFIED	11.92	☐	
Radium-224		5.593	0.742	pCi/g	2.62	Y	122.1	2	0.9431	NOT_IDENTI	8.776	☐	
Radium-226		0.8307	0.1074	pCi/g	0.359	Y	609.2	4	1.25	FAIL_ABUND	12.28	☐	
Radium-228		1.885	0.3002	pCi/g	0.574	0.500	911	3	1.548	IDENTIFIED	14.99	☐	
Thallium-208		0.4711	0.06782	pCi/g	0.1159	0.080	583	1	1.289	IDENTIFIED	13.96	☐	
Thorium-228		1.331	0.1009	pCi/g	0.1946	N	238.6	4	1.043	IDENTIFIED	6.415	☐	
Thorium-230		0.8307	0.1074	pCi/g	0.359	N	609.2	4	1.25	FAIL_ABUND	12.28	☐	
Thorium-232		1.885	0.3002	pCi/g	0.574	N	911	3	1.548	IDENTIFIED	14.99	☐	
Tin-126		4.745	0.2134	pCi/g	0.2262	N	88.04	2	1.052	IDENTIFIED	2.372	☐	
Titanium-44		0.3128	0.03911	pCi/g	0.1058	N	77.2	1	1.262	FAIL_ABUND	12	☐	
Uranium-234		0.8307	0.1074	pCi/g	0.359	N	609.2	4	1.25	FAIL_ABUND	12.28	☐	
Zirconium-97	HE	1458	837.9	pCi/g	0	N	1836	2	1.412	NOT_IDENTI	27.92	☐	

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 881931

Report run on: July 15, 2009 4:23 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232585003-1 09-JUL-2009 08:34	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.57			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1126		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.222			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1183			
232591001-1 09-JUL-2009 08:35	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.159			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.011			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1266		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.42			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08869			
1201873070-1 DUP 09-JUL-2009 08:36	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.341			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.504			
	Radium-224	UI	UI	UI	~~NA~~ DATA REJECTED DUE TO INTERFERENCE.		3.482			

LWGH
7/17/09

1200

GEL QUALS

Batch ID: 881931

Report run on: July 15, 2009 4:23 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232582001-1 09-JUL-2009 08:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.386			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.044			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.621			
232582002-1 09-JUL-2009 08:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.891			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.94			
	Mercury-203	UI	UI	UI	Data rejected due to no valid peak.		.137		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.118			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.105			
232585001-1 09-JUL-2009 08:16	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.04			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.695			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09407		.1	.1
	~~Potassium-40~~	~~UI~~	~~UI~~	~~UI~~	~~Data rejected due to high peak width.~~	7/17/09	36.37		1	1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.762			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1541			
232585002-1 09-JUL-2009 08:34	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.338			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.978			
	Cesium-137	UI	UI	UI	Data rejected due to low abundance.		.1961		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.993			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1127			
232585003-1 09-JUL-2009 08:34	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.551			

Blank Results Greater Than CSU

Batch ID	Blank ID & Run Seq.	Run Date	Parmname	Result Units	1 Sigma TPU	1 Sigma TPU x1.65	1 Sigma TPU x2	RDL	MDA	Report Parm?
881931	1201873069-1	09-JUL-09 08:22	Actinium-227	0.164 pCi/g	0.111	0.183	0.222		0.4047	N
881931	1201873069-1	09-JUL-09 08:22	Actinium-228	0.0764 pCi/g	0.0545	0.0899	0.109		0.2009	N
881931	1201873069-1	09-JUL-09 08:22	Antimony-125	0.0326 pCi/g	0.0266	0.044	0.0533		0.09677	N
881931	1201873069-1	09-JUL-09 08:22	Barium-137m	0.0192 pCi/g	0.0119	0.0196	0.0238		0.04519	N
881931	1201873069-1	09-JUL-09 08:22	Bismuth-207	0.0291 pCi/g	0.0187	0.0308	0.0374		0.0709	N
881931	1201873069-1	09-JUL-09 08:22	Cesium-135	0.0378 pCi/g	0.0409	0.0674	0.0817		0.1464	N
881931	1201873069-1	09-JUL-09 08:22	Cesium-137	0.0203 pCi/g	0.0126	0.0207	0.0251	0.100	0.04777	Y
881931	1201873069-1	09-JUL-09 08:22	Chromium-51	0.100 pCi/g	0.0888	0.146	0.178		0.3201	N
881931	1201873069-1	09-JUL-09 08:22	Cobalt-58	0.0147 pCi/g	0.0146	0.024	0.0291		0.05269	N
881931	1201873069-1	09-JUL-09 08:22	Hafnium-181	0.00912 pCi/g	0.0106	0.0175	0.0212		0.03768	N
881931	1201873069-1	09-JUL-09 08:22	Indium-113m	0.0191 pCi/g	0.0135	0.0222	0.0269		0.04901	N
881931	1201873069-1	09-JUL-09 08:22	Iodine-131	0.0192 pCi/g	0.0189	0.0311	0.0377		0.0673	N
881931	1201873069-1	09-JUL-09 08:22	Iodine-133	6.45 pCi/g	4.26	7.04	8.53		0	N
881931	1201873069-1	09-JUL-09 08:22	Iridium-192	0.014 pCi/g	0.00947	0.0156	0.0189		0.03468	N
881931	1201873069-1	09-JUL-09 08:22	Lutetium-177	0.106 pCi/g	0.117	0.193	0.234		0.4218	N
881931	1201873069-1	09-JUL-09 08:22	Neodymium-147	0.253 pCi/g	0.122	0.202	0.245		0.4582	N
881931	1201873069-1	09-JUL-09 08:22	Protactinium-233	0.0284 pCi/g	0.0192	0.0316	0.0383		0.07012	N
881931	1201873069-1	09-JUL-09 08:22	Protactinium-234m	2.40 pCi/g	2.63	4.34	5.26		9.388	N
881931	1201873069-1	09-JUL-09 08:22	Radium-228	0.0764 pCi/g	0.0545	0.0899	0.109	0.500	0.2009	Y
881931	1201873069-1	09-JUL-09 08:22	Rhodium-101	0.0161 pCi/g	0.00782	0.0129	0.0156		0.02947	N
881931	1201873069-1	09-JUL-09 08:22	Rubidium-84	0.0145 pCi/g	0.0169	0.0279	0.0338		0.06197	N
881931	1201873069-1	09-JUL-09 08:22	Tantalum-182	0.0797 pCi/g	0.0609	0.101	0.122		0.2255	N
881931	1201873069-1	09-JUL-09 08:22	Tellurium-132	0.0426 pCi/g	0.0359	0.0592	0.0718		0.1298	N
881931	1201873069-1	09-JUL-09 08:22	Thorium-227	0.164 pCi/g	0.111	0.184	0.223		0.4047	Y
881931	1201873069-1	09-JUL-09 08:22	Thorium-232	0.0764 pCi/g	0.0545	0.0899	0.109		0.2009	N
881931	1201873069-1	09-JUL-09 08:22	Tin-113	0.0191 pCi/g	0.0135	0.0222	0.0269	0.100	0.04901	Y
881931	1201873069-1	09-JUL-09 08:22	Tin-117m	0.013 pCi/g	0.00861	0.0142	0.0172		0.03061	N
881931	1201873069-1	09-JUL-09 08:22	Zinc-65	0.0334 pCi/g	0.0283	0.0467	0.0566		0.1044	N

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertanty	Units	DL	RDL
881931	232591001	SAMPLE	09-JUL-09	Iodine-135	3.72E+13	1.33E+14	pCi/g	0	N
				Krypton-85	17.53	3.723	pCi/g	6.938	N
				Lead-212	1.725	0.08734	pCi/g	0.04769	0.100
				Lead-214	1.447	0.1052	pCi/g	0.05469	0.100
				Potassium-40	32.82	1.707	pCi/g	0.311	1.00
				Radium-224	4.42	0.5914	pCi/g	0.5426	Y
				Radium-226	1.282	0.09253	pCi/g	0.0584	Y
				Radium-228	1.536	0.2004	pCi/g	0.1094	0.500
				Strontium-85	0.08869	0.01884	pCi/g	0.0351	Y
				Thallium-200	150.2	116.4	pCi/g	0	N
				Thallium-208	0.4707	0.04366	pCi/g	0.02625	0.080
				Thorium-234	2.539	0.9677	pCi/g	1.684	2.00
				Yttrium-88	0.03231	0.01382	pCi/g	0.02828	0.100
				Zirconium-97	3.36E+05	2.63E+05	pCi/g	0	N
881931	1201873069	MB	09-JUL-09	Iodine-133	6.452	4.264	pCi/g	0	N
				Technetium-99m	1.83E+06	3.91E+06	pCi/g	0	N
881931	1201873070	DUP	09-JUL-09	Americium-241	0.1295	0.06908	pCi/g	0.1109	0.200
				Bismuth-211	3.341	0.2265	pCi/g	0.1455	Y
				Bismuth-214	1.071	0.08443	pCi/g	0.05563	0.200
				Cadmium-109	2.504	0.3966	pCi/g	0.553	Y
				Cerium-143	537.5	75.47	pCi/g	0	N
				Cesium-134	0.06318	0.02308	pCi/g	0.04261	0.100
				Cesium-137	0.03546	0.01962	pCi/g	0.03421	0.100
				Gross Gamma	9.303	1.519	pCi/g	1.89	N
				Iodine-123	3.52E+05	5.90E+05	pCi/g	0	N
				Iodine-133	312	1082	pCi/g	0	N
				Iodine-135	2.49E+13	1.31E+14	pCi/g	0	N
				Krypton-85	8.332	4.104	pCi/g	6.436	N
				Lead-212	1.351	0.07326	pCi/g	0.04629	0.100
				Lead-214	1.162	0.08443	pCi/g	0.04774	0.100
				Polonium-209	7.048	3.38	pCi/g	6.177	N
				Potassium-40	32.66	1.415	pCi/g	0.2149	1.00
				Radium-224	3.482	0.6379	pCi/g	0.5266	Y
				Radium-226	1.071	0.08443	pCi/g	0.05563	Y
				Radium-228	1.224	0.144	pCi/g	0.1191	0.500
				Strontium-85	0.04216	0.02077	pCi/g	0.03257	Y
				Thallium-208	0.4845	0.03997	pCi/g	0.0284	0.080

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:17:11.36

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585001.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:16:01.
Sample ID         : G232585001           Sample quantity  : 1.32820E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.89  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.41*	38	618	1.16	126.19	123	7	5.26E-03	114.4	
2	4	74.83*	602	725	1.13	149.03	144	21	8.36E-02	8.5	7.56E-01
3	4	77.16*	987	707	1.27	153.68	144	21	1.37E-01	5.9	
4	0	84.03*	166	503	1.60	167.43	164	7	2.30E-02	24.2	
5	0	87.08	275	629	1.25	173.52	171	7	3.83E-02	16.2	
6	0	93.54*	137	1047	1.43	186.43	180	10	1.90E-02	47.5	
7	0	129.63	71	527	0.76	258.61	255	8	9.86E-03	57.4	
8	0	153.89	60	407	1.50	307.12	303	8	8.39E-03	59.1	
9	0	185.67*	372	568	1.31	370.67	365	13	5.17E-02	14.6	
10	0	209.27	129	419	1.44	417.86	414	9	1.80E-02	29.9	
11	2	238.78*	1959	304	1.34	476.87	471	17	2.72E-01	2.8	1.42E+00
12	2	241.70	476	337	1.82	482.70	471	17	6.61E-02	12.0	
13	0	270.23	170	360	1.35	539.77	534	12	2.37E-02	23.5	
14	2	295.45	716	266	1.61	590.20	582	24	9.94E-02	5.6	2.28E+00
15	2	300.31*	144	300	1.93	599.93	582	24	2.00E-02	26.5	
16	0	328.24	133	287	1.04	655.78	650	12	1.85E-02	27.0	
17	0	338.44*	433	372	1.30	676.17	668	16	6.02E-02	11.2	
18	0	352.08*	1068	237	1.42	703.46	697	11	1.48E-01	4.2	
19	0	462.96	136	156	1.73	925.23	918	13	1.89E-02	20.8	
20	0	511.05*	260	192	2.07	1021.42	1013	18	3.62E-02	15.9	
21	0	583.33*	655	212	1.53	1166.00	1158	16	9.09E-02	6.4	
22	0	609.57*	804	221	1.94	1218.50	1210	17	1.12E-01	5.6	
23	0	727.80	141	181	1.81	1455.01	1446	15	1.96E-02	22.3	
24	0	770.18	134	204	2.32	1539.81	1528	23	1.86E-02	29.2	
25	0	795.73	81	153	1.59	1590.92	1581	17	1.13E-02	36.6	
26	0	860.92	78	110	1.18	1721.35	1715	13	1.09E-02	29.9	
27	0	911.58*	538	109	2.16	1822.72	1815	15	7.47E-02	6.2	
28	0	969.68*	217	159	1.66	1938.98	1933	13	3.01E-02	14.5	
29	0	1120.85	207	119	2.22	2241.48	2232	17	2.87E-02	13.9	
30	0	1461.40*	2721	68	3.09	2923.12	2910	27	3.78E-01	2.1	
31	0	1765.23	181	19	3.92	3531.41	3522	19	2.51E-02	9.4	
32	0	1849.07	31	14	2.44	3699.29	3689	18	4.36E-03	32.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:17:13

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:16:01
Sample ID : G232585001 Sample quantity : 132.82 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.89 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.637E+01	2.959E+00	3.982E-01	2.771E-02	91.356
CD-109	+	88.03	*	2.695E+00	9.034E-01	1.369E+00	1.223E-01	1.969
SN-126	+	64.28		2.302E-01	5.276E-01	7.177E-01	1.035E-01	0.321
	+	86.94		1.103E+00	5.796E-01	5.394E-01	2.233E-01	2.046
	+	87.57	*	2.654E-01	8.896E-02	1.263E-01	1.124E-02	2.101
RE-188	+	155.03	*	1.504E-01	1.779E-01	2.446E-01	1.306E-02	0.615
		477.96		-7.499E-01	2.446E+00	3.853E+00	2.414E-01	-0.195
		633.10		-5.946E-01	2.279E+00	3.689E+00	2.674E-01	-0.161
TL-208		277.35		5.759E-01	3.430E-01	5.708E-01	5.965E-02	1.009
	+	510.84		7.517E-01	2.524E-01	1.730E-01	1.827E-02	4.344
	+	583.14	*	5.336E-01	7.993E-02	4.564E-02	3.513E-03	11.692
	+	860.37		5.891E-01	3.575E-01	3.944E-01	4.114E-02	1.494
BI-211		72.87		8.693E+00	3.298E+00	4.988E+00	3.818E-01	1.743
	+	351.07	*	4.040E+00	4.246E-01	2.824E-01	1.791E-02	14.307
PB-212	+	74.81		2.391E+00	5.012E-01	4.842E-01	5.890E-02	4.937
	+	77.11		2.231E+00	3.191E-01	2.766E-01	2.200E-02	8.068
	+	87.30		1.228E+00	4.294E-01	6.308E-01	8.431E-02	1.946
	+	238.63	*	1.726E+00	1.566E-01	7.889E-02	5.578E-03	21.880
	+	300.09		1.884E+00	1.011E+00	1.000E+00	8.148E-02	1.883
PO-212	+	74.81		2.391E+00	5.012E-01	4.842E-01	5.890E-02	4.937
	+	77.11		2.231E+00	3.191E-01	2.766E-01	2.200E-02	8.068
	+	87.30		1.228E+00	4.294E-01	6.308E-01	8.431E-02	1.946
		115.19		5.497E+00	3.263E+00	5.680E+00	3.687E-01	0.968
	+	238.63	*	1.726E+00	1.566E-01	7.889E-02	5.578E-03	21.880
	+	300.09		1.884E+00	1.011E+00	1.000E+00	8.148E-02	1.883
BI-214	+	609.31	*	1.232E+00	1.762E-01	9.362E-02	8.234E-03	13.156
		768.36		1.860E+00	6.663E-01	1.188E+00	1.252E-01	1.565
		934.06		1.578E+00	1.035E+00	1.834E+00	2.150E-01	0.860
	+	1120.29		1.607E+00	4.729E-01	4.113E-01	3.900E-02	3.907
		1238.11		1.669E+00	8.208E-01	1.482E+00	1.239E-01	1.126
		1377.67		1.126E+00	8.952E-01	1.600E+00	1.479E-01	0.703
	+	1764.49		1.787E+00	3.524E-01	2.481E-01	1.453E-02	7.204
PB-214	+	74.81		4.119E+00	8.311E-01	8.344E-01	8.966E-02	4.937
	+	77.11		3.825E+00	6.199E-01	4.741E-01	5.223E-02	8.068

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.103E+00	7.232E-01	1.081E+00	1.270E-01	1.946
	+	241.98		2.511E+00	6.325E-01	4.452E-01	3.491E-02	5.641
	+	295.21		1.646E+00	2.306E-01	1.756E-01	1.479E-02	9.370
	+	351.92	*	1.405E+00	1.649E-01	9.778E-02	8.031E-03	14.374
PO-214	+	74.81		4.119E+00	8.311E-01	8.344E-01	8.966E-02	4.937
	+	77.11		3.825E+00	6.199E-01	4.741E-01	5.223E-02	8.068
	+	87.30		2.103E+00	7.232E-01	1.081E+00	1.270E-01	1.946
	+	241.98		2.511E+00	6.325E-01	4.452E-01	3.491E-02	5.641
	+	295.21		1.646E+00	2.306E-01	1.756E-01	1.479E-02	9.370
	+	351.92	*	1.405E+00	1.649E-01	9.778E-02	8.031E-03	14.374
PO-216	+	74.81		2.391E+00	5.012E-01	4.842E-01	5.890E-02	4.937
	+	77.11		2.231E+00	3.191E-01	2.766E-01	2.200E-02	8.068
	+	87.30		1.228E+00	4.294E-01	6.308E-01	8.431E-02	1.946
	+	238.63	*	1.726E+00	1.566E-01	7.889E-02	5.578E-03	21.880
	+	300.09		1.884E+00	1.011E+00	1.000E+00	8.148E-02	1.883
PO-218	+	74.81		4.119E+00	8.311E-01	8.344E-01	8.966E-02	4.937
	+	77.11		3.825E+00	6.199E-01	4.741E-01	5.223E-02	8.068
	+	87.30		2.103E+00	7.232E-01	1.081E+00	1.270E-01	1.946
	+	241.98		2.511E+00	6.325E-01	4.452E-01	3.491E-02	5.641
	+	295.21		1.646E+00	2.306E-01	1.756E-01	1.479E-02	9.370
	+	351.92	*	1.405E+00	1.649E-01	9.778E-02	8.031E-03	14.374
RA-224	+	240.98	*	4.762E+00	1.169E+00	8.965E-01	4.909E-02	5.312
RA-226	+	609.31	*	1.232E+00	1.762E-01	9.362E-02	8.234E-03	13.156
		768.36		1.860E+00	6.663E-01	1.188E+00	1.252E-01	1.565
		934.06		1.578E+00	1.035E+00	1.834E+00	2.150E-01	0.860
	+	1120.29		1.607E+00	4.729E-01	4.113E-01	3.900E-02	3.907
		1238.11		1.669E+00	8.208E-01	1.482E+00	1.239E-01	1.126
		1377.67		1.126E+00	8.952E-01	1.600E+00	1.479E-01	0.703
	+	1764.49		1.787E+00	3.524E-01	2.481E-01	1.453E-02	7.204
AC-228	+	338.32		1.817E+00	8.441E-01	2.993E-01	1.220E-01	6.069
	+	911.07	*	1.912E+00	3.358E-01	1.720E-01	2.151E-02	11.120
	+	969.11		1.356E+00	5.067E-01	3.875E-01	9.166E-02	3.498
RA-228	+	338.32		1.817E+00	8.441E-01	2.993E-01	1.220E-01	6.069
	+	911.07	*	1.912E+00	3.358E-01	1.720E-01	2.151E-02	11.120
	+	969.11		1.356E+00	5.067E-01	3.875E-01	9.166E-02	3.498
TH-228	+	84.40		5.042E+00	2.530E+00	3.272E+00	4.291E-01	1.541
	+	238.60	*	1.726E+00	1.566E-01	7.888E-02	5.577E-03	21.882
	+	300.10		1.884E+00	1.494E+00	1.000E+00	5.894E-01	1.883
TH-230	+	609.31	*	1.232E+00	1.762E-01	9.362E-02	8.234E-03	13.156
		768.36		1.860E+00	6.663E-01	1.188E+00	1.252E-01	1.565
		934.06		1.578E+00	1.035E+00	1.834E+00	2.150E-01	0.860
	+	1120.29		1.607E+00	4.729E-01	4.113E-01	3.900E-02	3.907
		1238.11		1.669E+00	8.208E-01	1.482E+00	1.238E-01	1.126
		1377.67		1.126E+00	8.952E-01	1.600E+00	1.479E-01	0.703
	+	1764.49		1.787E+00	3.524E-01	2.481E-01	1.453E-02	7.204
TH-232	+	338.32		1.817E+00	4.186E-01	2.993E-01	1.705E-02	6.069
	+	911.07	*	1.912E+00	3.358E-01	1.720E-01	2.151E-02	11.120
	+	969.11		1.356E+00	5.067E-01	3.875E-01	9.166E-02	3.498
TH-234	+	63.29	*	5.815E-01	1.334E+00	1.797E+00	3.115E-01	0.324

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		8.537E-01	8.248E-01	7.464E-01	1.341E-01	1.144
U-234	+	609.31	*	1.232E+00	1.762E-01	9.362E-02	8.234E-03	13.156
		768.36		1.860E+00	6.663E-01	1.188E+00	1.252E-01	1.565
		934.06		1.578E+00	1.035E+00	1.834E+00	2.150E-01	0.860
	+	1120.29		1.607E+00	4.729E-01	4.113E-01	3.900E-02	3.907
		1238.11		1.669E+00	8.208E-01	1.482E+00	1.238E-01	1.126
		1377.67		1.126E+00	8.952E-01	1.600E+00	1.479E-01	0.703
	+	1764.49		1.787E+00	3.524E-01	2.481E-01	1.453E-02	7.204
NP-237	+	86.50	*	7.794E-01	3.068E-01	3.078E-01	6.904E-02	2.532
		95.87		-1.275E-01	9.179E-01	1.354E+00	3.306E-01	-0.094
U-238	+	63.29	*	5.815E-01	1.334E+00	1.797E+00	3.115E-01	0.324
	+	92.38		8.537E-01	8.136E-01	7.464E-01	6.244E-02	1.144
AM-243	+	74.67	*	3.876E-01	7.274E-02	7.871E-02	6.120E-03	4.924
	+	86.72		2.923E+01	9.796E+00	1.152E+01	1.015E+00	2.537
		117.66		-6.960E-01	3.439E+00	5.690E+00	3.611E-01	-0.122
		142.18		3.205E+00	1.572E+01	2.607E+01	1.461E+00	0.123
ANH-511	+	511.00	*	1.624E-01	5.282E-02	3.739E-02	2.424E-03	4.343

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-3.195E-02	2.533E-01	4.035E-01	2.886E-02	-0.079
NA-22		1274.54	*	-9.607E-05	4.047E-02	6.732E-02	4.284E-03	-0.001
NA-24		1368.53	*	-2.068E-03	4.047E-02	Half-Life too short		
AL-26		1129.67		-3.787E-01	1.666E+00	2.423E+00	1.597E-01	-0.156
		1808.65	*	-6.553E-03	2.200E-02	3.497E-02	1.990E-03	-0.187
TI-44		67.85		7.284E-04	4.325E-02	6.553E-02	4.823E-03	0.011
	+	78.38	*	4.118E-01	5.888E-02	7.185E-02	5.788E-03	5.731
SC-46		889.25	*	6.096E-03	3.263E-02	5.482E-02	5.620E-03	0.111
	+	1120.51		2.722E-01	7.806E-02	1.081E-01	7.332E-03	2.518
V-48		944.10		-1.765E-01	7.014E-01	1.139E+00	1.116E-01	-0.155
		983.50	*	-2.663E-02	5.694E-02	9.070E-02	8.376E-03	-0.294
		1312.09		-1.304E-02	6.231E-02	1.017E-01	6.732E-03	-0.128
CR-51		320.08	*	-1.359E-01	2.979E-01	4.827E-01	3.068E-02	-0.281
MN-52		744.21		-5.826E-02	1.697E-01	2.691E-01	2.261E-02	-0.216
		848.13		-3.766E+00	5.135E+00	8.172E+00	7.937E-01	-0.461
		935.52		3.478E-01	1.948E-01	3.503E-01	3.471E-02	0.993
		1246.25		-7.221E+00	6.126E+00	9.534E+00	5.864E-01	-0.757
		1333.61		5.330E-01	3.675E+00	6.159E+00	4.165E-01	0.087
		1434.06	*	-1.091E-01	1.678E-01	2.587E-01	1.729E-02	-0.422
MN-54		834.83	*	-1.261E-02	3.364E-02	5.501E-02	5.248E-03	-0.229
CO-56		846.75	*	-3.070E-02	3.515E-02	5.545E-02	5.375E-03	-0.554
		977.42		5.469E-01	2.883E+00	4.274E+00	3.985E-01	0.128
		1037.82		1.085E-02	2.633E-01	4.328E-01	3.821E-02	0.025
		1175.09		2.645E-01	2.038E+00	3.331E+00	1.881E-01	0.079
		1238.25		1.660E-01	8.168E-02	1.482E-01	9.550E-03	1.120
		1360.21		1.461E-01	7.584E-01	1.277E+00	8.617E-02	0.114
		1771.40		1.625E-01	2.207E-01	3.491E-01	2.036E-02	0.466

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	6.759E-03	2.237E-02	3.754E-02	2.296E-03	0.180
		136.48		2.328E-02	1.905E-01	3.159E-01	2.104E-02	0.074
CO-58		810.76	*	-2.724E-02	3.176E-02	5.015E-02	4.640E-03	-0.543
FE-59		142.65		1.728E+00	2.438E+00	4.047E+00	2.264E-01	0.427
		192.34		-4.434E-01	8.995E-01	1.312E+00	1.516E-01	-0.338
		1099.22	*	-3.054E-02	8.217E-02	1.307E-01	1.051E-02	-0.234
		1291.56		-5.599E-02	1.021E-01	1.629E-01	1.296E-02	-0.344
CO-60		1173.22		1.643E-02	4.066E-02	6.758E-02	3.808E-03	0.243
		1332.49	*	1.577E-02	3.373E-02	5.786E-02	3.913E-03	0.273
ZN-65		1115.52	*	6.963E-02	9.305E-02	1.375E-01	9.481E-03	0.506
GE-68		1077.35	*	7.871E-01	1.153E+00	1.961E+00	1.498E-01	0.401
AS-73		53.44	*	1.287E-01	6.826E-01	1.078E+00	7.488E-02	0.119
AS-74		595.88	*	-8.003E-02	7.193E-02	1.110E-01	7.795E-03	-0.721
		634.78		1.379E-01	2.779E-01	4.697E-01	3.409E-02	0.294
SE-75		66.05		1.643E+00	4.706E+00	6.757E+00	6.319E-01	0.243
		96.73		-4.203E-01	7.476E-01	1.080E+00	1.424E-01	-0.389
		121.11		-5.929E-02	1.199E-01	1.959E-01	1.853E-02	-0.303
		136.00		-1.311E-03	3.603E-02	5.947E-02	3.467E-03	-0.022
		198.60		-3.974E-01	1.739E+00	2.712E+00	1.819E-01	-0.146
		264.65	*	2.673E-02	4.145E-02	6.253E-02	3.517E-03	0.427
		279.53		1.199E-01	9.453E-02	1.645E-01	1.002E-02	0.729
		303.91		6.715E-01	1.883E+00	2.772E+00	2.621E-01	0.242
		400.65		2.054E-01	2.045E-01	3.483E-01	3.157E-02	0.590
BR-77	+	87.88		4.026E+02	1.349E+02	2.102E+02	1.877E+01	1.915
		200.40		6.975E+01	1.033E+02	1.705E+02	9.017E+00	0.409
	+	239.00		1.913E+02	1.509E+01	2.287E+01	1.250E+00	8.364
		249.79		3.707E+00	3.788E+01	6.393E+01	3.523E+00	0.058
		281.68		-7.867E+01	5.499E+01	8.645E+01	4.851E+00	-0.910
		297.23		3.425E+02	4.474E+01	8.191E+01	4.625E+00	4.181
		303.76		4.497E+01	1.117E+02	1.649E+02	9.330E+00	0.273
		439.47		-5.624E+01	8.201E+01	1.274E+02	7.651E+00	-0.442
		484.57		-1.010E+01	1.267E+02	2.118E+02	1.336E+01	-0.048
		520.65	*	2.106E+00	5.879E+00	9.575E+00	6.268E-01	0.220
		574.64		-8.705E+01	1.349E+02	1.983E+02	1.366E+01	-0.439
		578.91		7.687E+00	5.666E+01	8.154E+01	5.639E+00	0.094
		585.48		1.473E+03	1.893E+02	3.184E+02	2.215E+01	4.627
		755.35		8.509E+01	9.924E+01	1.687E+02	1.440E+01	0.504
		817.79		1.026E+01	7.205E+01	1.216E+02	1.133E+01	0.084
SR-82		698.33		-1.648E+01	2.842E+01	4.477E+01	3.513E+00	-0.368
		776.49	*	-8.264E-03	3.382E-01	4.661E-01	4.101E-02	-0.018
		1395.20		-1.068E+01	8.899E+00	1.299E+01	8.732E-01	-0.822
RB-83		520.41	*	1.187E-02	5.530E-02	8.932E-02	5.845E-03	0.133
		529.64		-2.890E-03	8.325E-02	1.385E-01	9.149E-03	-0.021
		552.65		4.053E-02	1.547E-01	2.607E-01	1.760E-02	0.155
RB-84		881.50	*	2.542E-02	5.733E-02	9.783E-02	9.929E-03	0.260
KR-85		513.99	*	3.047E+01	7.376E+00	1.279E+01	8.314E-01	2.383
SR-85		513.99	*	1.541E-01	3.732E-02	6.468E-02	4.206E-03	2.383
RB-86		1076.63	*	5.175E-01	7.021E-01	1.198E+00	9.165E-02	0.432
Y-88		898.02		-7.047E-05	3.444E-02	5.715E-02	5.946E-03	-0.001

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	-2.190E-02	2.862E-02	4.002E-02	2.240E-03	-0.547
ZR-88		392.90	*	2.988E-03	2.450E-02	4.018E-02	2.283E-03	0.074
Y-91		1204.90	*	-1.564E+00	1.694E+01	2.725E+01	1.596E+00	-0.057
NB-94		702.63	*	2.187E-02	2.851E-02	4.840E-02	3.823E-03	0.452
		871.10		-1.898E-02	2.744E-02	4.341E-02	4.347E-03	-0.437
NB-95		765.79	*	3.589E-02	4.157E-02	6.152E-02	5.331E-03	0.583
NB-95M		235.69	*	3.014E-01	1.322E-01	2.011E-01	1.461E-02	1.499
ZR-95		724.18		1.501E-01	9.205E-02	1.434E-01	1.282E-02	1.047
		756.15	*	4.351E-02	6.069E-02	1.024E-01	9.650E-03	0.425
NB-97		657.90	*	-5.659E-03	6.069E-02	Half-Life too short		
		1024.50		1.328E+00	6.069E-02	Half-Life too short		
ZR-97		254.15		-1.166E+00	6.069E-02	Half-Life too short		
		355.39		2.672E+00	6.069E-02	Half-Life too short		
		507.63	*	1.169E+00	6.069E-02	Half-Life too short		
		602.52		1.420E+00	6.069E-02	Half-Life too short		
		1021.30		-1.266E+00	6.069E-02	Half-Life too short		
		1147.95		-1.033E+00	6.069E-02	Half-Life too short		
		1362.66		-1.112E+00	6.069E-02	Half-Life too short		
		1750.46		-1.208E-01	6.069E-02	Half-Life too short		
MO-99		140.51		-2.231E+01	1.868E+01	2.759E+01	7.425E+00	-0.809
		181.06		7.875E+00	1.173E+01	1.714E+01	2.904E+00	0.459
		366.43		6.598E+00	5.215E+01	8.360E+01	4.763E+00	0.079
		739.58	*	3.992E-01	7.151E+00	1.165E+01	1.750E+00	0.034
		778.00		1.563E-01	2.293E+01	3.169E+01	2.794E+00	0.005
TC-99M		140.51	*	-1.328E+09	2.293E+01	Half-Life too short		
RH-101		127.23		-1.066E-02	3.346E-02	4.808E-02	2.864E-03	-0.222
		198.01	*	-2.388E-03	3.171E-02	4.971E-02	2.623E-03	-0.048
		325.23		1.867E-01	2.101E-01	3.168E-01	1.802E-02	0.590
RH-102		418.52		7.171E-02	2.441E-01	4.017E-01	2.355E-02	0.179
		475.06	*	1.667E-02	2.289E-02	3.831E-02	2.393E-03	0.435
		631.29		-2.511E-02	4.493E-02	7.138E-02	5.167E-03	-0.352
		697.49		-3.927E-02	6.557E-02	1.031E-01	8.083E-03	-0.381
		766.84		2.021E-01	1.100E-01	1.723E-01	1.495E-02	1.173
		1046.59		-1.023E-02	1.032E-01	1.679E-01	1.377E-02	-0.061
		1112.84		-3.442E-02	2.470E-01	3.378E-01	2.345E-02	-0.102
RU-103		497.08	*	-1.629E-02	3.087E-02	5.014E-02	6.481E-03	-0.325
	+	610.33		1.301E+01	2.541E+00	2.347E+00	3.746E-01	5.541
RH-106	+	511.85		8.090E-01	2.632E-01	3.614E-01	2.345E-02	2.238
		621.84	*	-1.901E-01	2.553E-01	3.997E-01	4.988E-02	-0.476
		1050.47		-9.448E-02	2.086E+00	3.406E+00	2.770E-01	-0.028
RU-106	+	511.85		8.090E-01	2.632E-01	3.614E-01	2.345E-02	2.238
		621.84	*	-1.901E-01	2.546E-01	3.997E-01	2.870E-02	-0.476
		1050.47		-9.448E-02	2.086E+00	3.406E+00	2.770E-01	-0.028
AG-108M		433.93	*	-1.368E-02	2.728E-02	4.289E-02	2.768E-03	-0.319
		614.37		1.224E-02	3.556E-02	5.175E-02	3.902E-03	0.237
		722.95		-2.614E-04	4.047E-02	5.631E-02	4.785E-03	-0.005
AG-110M		657.75	*	-5.089E-03	2.914E-02	4.728E-02	3.638E-03	-0.108
		677.61		-2.446E-02	2.517E-01	4.090E-01	3.222E-02	-0.060
		706.67		-1.001E-01	1.793E-01	2.823E-01	2.316E-02	-0.355

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		763.93		-1.519E-02	1.547E-01	2.122E-01	1.885E-02	-0.072
		884.67		-1.867E-02	4.173E-02	6.728E-02	7.016E-03	-0.277
		937.48		1.145E-01	9.903E-02	1.738E-01	1.765E-02	0.659
		1384.27		-1.696E-01	1.497E-01	2.236E-01	1.574E-02	-0.759
IN-111		171.28		1.219E-01	6.652E-01	1.091E+00	5.612E-02	0.112
		245.39	*	5.137E-01	6.870E-01	1.048E+00	5.759E-02	0.490
IN-113M		391.69	*	2.081E-02	3.543E-02	5.942E-02	3.607E-03	0.350
SN-113		391.69	*	2.081E-02	3.543E-02	5.942E-02	3.607E-03	0.350
IN-114M		190.27	*	9.465E-02	1.783E-01	2.590E-01	1.357E-02	0.365
CD-115		260.90		-5.409E+01	7.502E+01	1.223E+02	6.787E+00	-0.442
		492.35		-1.233E+01	1.942E+01	3.145E+01	2.001E+00	-0.392
		527.90	*	-1.331E+00	5.753E+00	9.472E+00	6.245E-01	-0.140
SN-117M		156.02		-2.054E-01	2.188E+00	3.130E+00	1.664E-01	-0.066
		158.56	*	7.305E-03	5.175E-02	7.475E-02	3.937E-03	0.098
SB-122		563.90	*	1.475E-01	1.244E+00	2.077E+00	1.417E-01	0.071
		692.80		2.294E+01	2.527E+01	4.336E+01	3.375E+00	0.529
I-123		159.00	*	3.973E-01	2.527E+01	Half-Life too short		
		528.96		-1.004E+01	2.527E+01	Half-Life too short		
TE-123M		159.00	*	9.769E-03	2.723E-02	4.186E-02	2.237E-03	0.233
I-124		602.71	*	3.801E-01	5.084E-01	7.616E-01	5.380E-02	0.499
		722.78		-2.560E-01	3.412E+00	4.718E+00	3.841E-01	-0.054
		1325.50		-8.506E+00	2.387E+01	3.846E+01	2.582E+00	-0.221
		1376.25		3.735E+01	2.272E+01	4.161E+01	2.804E+00	0.898
		1509.49		4.910E+00	9.980E+00	1.714E+01	1.126E+00	0.286
		1691.02		1.070E+00	2.164E+00	3.756E+00	2.295E-01	0.285
SB-124		602.71		2.688E-02	3.596E-02	5.387E-02	3.806E-03	0.499
		645.85		2.059E-01	3.894E-01	6.593E-01	5.227E-02	0.312
		709.31		-1.459E+00	2.318E+00	3.628E+00	2.895E-01	-0.402
		713.82		4.463E-01	1.362E+00	2.259E+00	2.626E-01	0.198
		722.78		-2.625E-02	3.498E-01	4.838E-01	4.033E-02	-0.054
	+	968.20		1.375E+01	4.187E+00	6.228E+00	5.891E-01	2.208
		1045.16		-5.728E-01	2.176E+00	3.502E+00	2.881E-01	-0.164
		1325.50		-9.315E-01	2.614E+00	4.211E+00	2.827E-01	-0.221
		1368.21		9.830E-03	1.443E+00	2.388E+00	2.951E-01	0.004
		1436.60		2.182E+00	3.081E+00	5.394E+00	3.603E-01	0.405
		1691.02	*	2.588E-02	5.235E-02	9.084E-02	5.979E-03	0.285
SB-125		427.89	*	9.204E-02	7.368E-02	1.269E-01	7.825E-03	0.725
	+	463.38		7.728E-01	3.259E-01	4.280E-01	3.030E-02	1.806
		600.56		1.657E-01	1.564E-01	2.548E-01	1.991E-02	0.650
		635.90		1.195E-01	2.238E-01	3.788E-01	3.061E-02	0.316
TE-125M		109.28	*	-9.184E+00	8.433E+00	1.325E+01	1.181E+00	-0.693
I-126		388.63		7.948E-03	1.595E-01	2.545E-01	1.445E-02	0.031
		666.33	*	7.576E-02	1.360E-01	2.298E-01	1.717E-02	0.330
		753.82		2.930E-01	1.179E+00	1.940E+00	1.652E-01	0.151
SB-126		223.80		-1.914E+00	3.452E+00	5.337E+00	2.883E-01	-0.359
		278.60		3.582E+00	1.993E+00	3.523E+00	1.974E-01	1.017
	+	296.50		1.526E+01	1.914E+00	3.032E+00	1.712E-01	5.032
		414.70		-1.968E-02	6.185E-02	9.881E-02	5.766E-03	-0.199
		415.30		2.463E+00	5.055E+00	8.394E+00	4.902E-01	0.293

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		555.20		7.511E-01	3.077E+00	5.081E+00	3.439E-01	0.148
		573.80		-2.209E-01	8.710E-01	1.356E+00	9.337E-02	-0.163
		593.00		-1.326E-01	7.030E-01	1.123E+00	7.868E-02	-0.118
		656.30		7.529E-01	2.533E+00	4.225E+00	3.121E-01	0.178
		666.33		3.156E-02	5.668E-02	9.575E-02	7.156E-03	0.330
		675.00		-4.275E-01	1.535E+00	2.468E+00	1.869E-01	-0.173
		695.00		-3.292E-02	6.138E-02	9.691E-02	7.567E-03	-0.340
		697.00		-1.420E-01	2.127E-01	3.330E-01	2.608E-02	-0.426
		720.50	*	-4.561E-02	1.331E-01	1.796E-01	1.457E-02	-0.254
		856.80		2.951E-01	4.308E-01	6.494E-01	6.380E-02	0.454
		989.30		1.446E-01	9.751E-01	1.621E+00	1.483E-01	0.089
		1034.80		8.820E-01	6.891E+00	1.140E+01	9.583E-01	0.077
		1213.00		1.306E+00	4.073E+00	6.706E+00	3.967E-01	0.195
SB-127		61.10		3.505E+00	4.301E+01	6.147E+01	5.900E+00	0.057
		252.40		-2.161E+00	3.023E+00	4.715E+00	1.952E+00	-0.458
		290.80		4.283E-01	1.587E+01	2.299E+01	1.976E+00	0.019
		411.60		5.590E+00	8.345E+00	1.392E+01	1.963E+00	0.401
		444.90		-1.782E+00	6.672E+00	1.061E+01	1.119E+00	-0.168
		473.00		-6.048E-01	1.094E+00	1.698E+00	1.875E-01	-0.356
		543.00		-1.576E+00	1.027E+01	1.694E+01	2.206E+00	-0.093
		603.60		9.849E-01	8.771E+00	1.255E+01	1.397E+00	0.079
		685.20	*	-7.227E-01	8.676E-01	1.336E+00	1.378E-01	-0.541
		698.50		-4.058E+00	1.035E+01	1.647E+01	2.494E+00	-0.246
		722.20		-8.618E+00	2.270E+01	3.048E+01	3.173E+00	-0.283
		783.80		1.144E+00	2.381E+00	3.957E+00	4.860E-01	0.289
XE-127		57.60		1.749E+00	4.785E+00	7.774E+00	5.434E-01	0.225
		145.22		4.489E-01	6.201E-01	1.029E+00	5.699E-02	0.436
		172.10		2.524E-02	1.060E-01	1.741E-01	8.961E-03	0.145
		202.84	*	-3.297E-02	4.156E-02	6.500E-02	3.445E-03	-0.507
		374.96		7.786E-02	1.578E-01	2.642E-01	1.503E-02	0.295
I-131		80.18		-5.713E+00	3.884E+00	5.469E+00	4.513E-01	-1.045
		284.30		-3.122E-01	1.131E+00	1.865E+00	1.170E-01	-0.167
		364.48	*	3.673E-03	8.867E-02	1.417E-01	9.029E-03	0.026
		636.97		6.340E-01	1.152E+00	1.950E+00	1.527E-01	0.325
		722.89		-1.278E-01	6.104E+00	8.481E+00	6.946E-01	-0.015
TE-132		49.72		-5.131E+00	1.119E+01	1.776E+01	1.619E+00	-0.289
		111.76		-1.045E+01	2.066E+01	3.370E+01	3.042E+00	-0.310
		116.30		1.983E+01	1.922E+01	3.290E+01	2.902E+00	0.603
		228.16	*	-2.567E-01	4.792E-01	7.482E-01	1.045E-01	-0.343
BA-133		53.15		9.790E-01	2.975E+00	4.721E+00	3.277E-01	0.207
		79.62		-2.205E-01	1.340E+00	1.865E+00	2.791E-01	-0.118
		81.00		9.321E-02	1.087E-01	1.254E-01	1.968E-02	0.743
		276.40		3.757E-01	3.624E-01	5.503E-01	7.084E-02	0.683
		302.84		8.953E-02	1.379E-01	2.057E-01	2.384E-02	0.435
		356.01	*	1.754E-02	4.128E-02	6.023E-02	6.933E-03	0.291
		383.85		9.125E-03	2.409E-01	3.940E-01	4.259E-02	0.023
I-133	+	510.53		5.970E-01	2.409E-01	Half-Life too short		
		529.87	*	-6.052E-05	2.409E-01	Half-Life too short		
		706.58		-7.162E-02	2.409E-01	Half-Life too short		

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		856.28		1.131E-01	2.409E-01	Half-Life too short		
		875.33		-2.922E-02	2.409E-01	Half-Life too short		
		1236.41		3.538E-01	2.409E-01	Half-Life too short		
		1298.22		8.841E-02	2.409E-01	Half-Life too short		
CS-134		475.35		1.149E+00	1.499E+00	2.514E+00	1.571E-01	0.457
		563.23		-8.727E-03	3.002E-01	4.974E-01	3.443E-02	-0.018
		569.32		3.011E-02	1.743E-01	2.875E-01	2.013E-02	0.105
		604.70		-4.474E-03	3.295E-02	4.624E-02	3.284E-03	-0.097
	+	795.84	*	9.407E-02	6.933E-02	7.455E-02	6.785E-03	1.262
		801.93		-3.197E-01	4.174E-01	5.300E-01	4.857E-02	-0.603
		1038.57		7.372E-01	3.340E+00	5.554E+00	4.633E-01	0.133
		1167.94		1.102E+00	2.196E+00	3.676E+00	2.115E-01	0.300
		1365.15		-1.279E+00	1.025E+00	1.494E+00	1.082E-01	-0.856
CS-135		268.24	*	2.999E-01	1.547E-01	2.449E-01	1.834E-02	1.225
I-135		288.45		5.885E+08	1.547E-01	Half-Life too short		
		417.63		4.680E+08	1.547E-01	Half-Life too short		
		546.56		-6.914E+07	1.547E-01	Half-Life too short		
		836.80		1.002E+08	1.547E-01	Half-Life too short		
		1038.76		1.782E+08	1.547E-01	Half-Life too short		
		1124.00		6.592E+09	1.547E-01	Half-Life too short		
		1131.51		5.964E+07	1.547E-01	Half-Life too short		
		1260.41	*	-2.234E+08	1.547E-01	Half-Life too short		
		1457.56		3.405E+10	1.547E-01	Half-Life too short		
		1678.03		6.360E+07	1.547E-01	Half-Life too short		
		1706.46		-3.744E+08	1.547E-01	Half-Life too short		
		1791.20		-9.038E+07	1.547E-01	Half-Life too short		
CS-136		66.91		5.745E-01	7.125E-01	1.034E+00	1.525E-01	0.555
	+	86.29		3.239E+00	1.129E+00	1.666E+00	2.157E-01	1.944
	+	153.22		5.471E-01	6.476E-01	9.137E-01	6.290E-02	0.599
		163.89		3.427E-02	9.209E-01	1.493E+00	1.008E-01	0.023
		176.55		-2.348E-01	3.069E-01	4.849E-01	2.890E-02	-0.484
		273.65		-6.622E-01	4.241E-01	5.621E-01	3.614E-02	-1.178
		340.57		5.697E-01	1.362E-01	2.253E-01	1.367E-02	2.529
		818.51		9.703E-03	5.416E-02	9.160E-02	8.551E-03	0.106
		1048.07	*	-9.796E-03	9.045E-02	1.471E-01	1.259E-02	-0.067
		1235.34		4.492E-01	4.995E-01	8.671E-01	8.798E-02	0.518
BA-137M		661.65	*	1.733E-02	2.966E-02	5.015E-02	3.721E-03	0.346
CS-137		661.65	*	1.832E-02	3.135E-02	5.302E-02	3.944E-03	0.346
CE-139		165.85	*	2.037E-02	2.653E-02	4.441E-02	2.276E-03	0.459
BA-140		162.64		-3.056E-01	6.489E-01	1.034E+00	6.188E-02	-0.295
		304.84		3.555E-01	1.083E+00	1.586E+00	4.325E-01	0.224
		423.70		-4.822E-01	1.483E+00	2.349E+00	7.471E-01	-0.205
		537.32	*	2.424E-02	1.920E-01	3.217E-01	1.052E-01	0.075
LA-140	+	328.77		6.462E-01	3.518E-01	4.293E-01	2.747E-02	1.505
		432.53		-4.036E-01	1.580E+00	2.520E+00	1.651E-01	-0.160
		487.03		1.036E-01	1.047E-01	1.836E-01	1.291E-02	0.564
		751.79		-8.071E-01	1.371E+00	2.135E+00	2.012E-01	-0.378
		815.85		-2.042E-01	2.368E-01	3.722E-01	3.805E-02	-0.549
		867.82		1.138E+00	1.120E+00	1.751E+00	1.815E-01	0.650

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		-9.896E-01	2.458E+00	3.470E+00	4.125E-01	-0.285
		925.24		8.742E-01	8.847E-01	1.549E+00	1.628E-01	0.564
		1596.49	*	-1.131E-01	7.129E-02	9.603E-02	6.127E-03	-1.178
CE-141		145.44	*	6.478E-02	5.488E-02	9.349E-02	5.401E-03	0.693
CE-143		57.37		7.217E-05	5.488E-02	Half-Life too short		
		231.56		-4.660E-04	5.488E-02	Half-Life too short		
		293.26	*	4.747E-04	5.488E-02	Half-Life too short		
	+	350.59		1.686E-02	5.488E-02	Half-Life too short		
		490.36		-4.857E-05	5.488E-02	Half-Life too short		
		664.57		3.158E-04	5.488E-02	Half-Life too short		
		721.93		-1.280E-04	5.488E-02	Half-Life too short		
CE-144		80.11		-2.747E+00	1.991E+00	2.818E+00	2.310E-01	-0.975
		133.54	*	-2.503E-02	2.143E-01	3.097E-01	4.398E-02	-0.081
PM-144		476.78		1.861E-02	5.357E-02	8.774E-02	6.430E-03	0.212
		618.01		4.569E-04	2.889E-02	4.264E-02	3.174E-03	0.011
		696.49	*	-1.722E-02	2.939E-02	4.627E-02	3.622E-03	-0.372
		778.57		4.102E-02	2.107E+00	2.916E+00	2.574E-01	0.014
PR-144		696.49	*	-1.166E+00	1.990E+00	3.133E+00	2.452E-01	-0.372
		1489.15		-7.868E+00	9.635E+00	1.438E+01	9.494E-01	-0.547
PM-146		453.90	*	-1.075E-03	3.832E-02	5.995E-02	5.293E-03	-0.018
		633.02		-3.926E-01	1.153E+00	1.842E+00	6.832E-01	-0.213
		735.90		3.433E-02	1.365E-01	2.143E-01	6.108E-02	0.160
		747.13		5.437E-03	7.486E-02	1.220E-01	1.699E-02	0.045
ND-147		91.11		5.731E-01	3.755E-01	4.372E-01	4.040E-02	1.311
		319.41		-1.625E+00	2.526E+00	4.057E+00	2.306E-01	-0.401
		439.89		-4.832E-02	4.388E+00	7.086E+00	4.259E-01	-0.007
		531.02	*	1.429E-01	4.131E-01	7.006E-01	9.731E-02	0.204
PM-149		285.90	*	-2.951E+01	5.185E+01	8.417E+01	1.187E+01	-0.351
EU-152		121.78		2.032E-02	6.478E-02	1.087E-01	8.543E-03	0.187
		244.69		4.833E-01	3.115E-01	4.908E-01	2.695E-02	0.985
		344.27	*	-1.389E-03	1.081E-01	1.344E-01	8.669E-03	-0.010
		443.98		-1.993E-01	8.191E-01	1.305E+00	7.879E-02	-0.153
		778.89		-9.371E-02	2.558E-01	3.403E-01	3.004E-02	-0.275
		867.32		8.394E-01	7.171E-01	1.134E+00	1.130E-01	0.740
		964.01		2.892E-01	3.259E-01	4.874E-01	4.640E-02	0.593
		1085.78		-3.147E-01	3.578E-01	5.480E-01	4.098E-02	-0.574
		1112.02		-1.211E-02	3.473E-01	4.798E-01	3.338E-02	-0.025
		1407.95		1.972E-02	1.716E-01	2.854E-01	1.916E-02	0.069
GD-153		69.67		-1.598E+00	1.682E+00	2.281E+00	1.701E-01	-0.700
	+	83.37		2.886E+01	1.419E+01	2.148E+01	1.823E+00	1.343
		97.43	*	-3.782E-02	7.702E-02	1.118E-01	8.746E-03	-0.338
		103.18		-1.319E-01	9.313E-02	1.485E-01	1.087E-02	-0.888
EU-154		123.07		3.318E-02	4.584E-02	7.775E-02	7.447E-03	0.427
		247.94		-4.860E-02	3.160E-01	4.991E-01	4.673E-02	-0.097
		591.81		1.360E-02	5.270E-01	8.086E-01	8.514E-02	0.017
		723.30		6.554E-03	1.706E-01	2.382E-01	2.168E-02	0.028
		756.87		5.532E-01	6.681E-01	1.131E+00	1.350E-01	0.489
		873.19		-1.067E-01	2.375E-01	3.824E-01	5.079E-02	-0.279
		996.32		-4.295E-01	3.292E-01	4.788E-01	8.605E-02	-0.897

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		1.516E-01	1.856E-01	3.194E-01	3.786E-02	0.475
		1274.45	*	-1.588E-03	1.130E-01	1.879E-01	1.821E-02	-0.008
EU-155		48.70		-1.990E+00	1.808E+00	2.797E+00	1.887E-01	-0.712
		60.01		-4.602E-01	4.696E+00	6.638E+00	4.667E-01	-0.069
	+	86.54		3.195E-01	1.072E-01	1.638E-01	1.454E-02	1.951
		105.31	*	9.922E-02	9.408E-02	1.622E-01	1.180E-02	0.612
TB-160	+	86.79		8.435E-01	2.827E-01	4.319E-01	3.808E-02	1.953
		197.04		4.063E-02	5.293E-01	8.340E-01	4.397E-02	0.049
		215.65		3.864E-01	6.952E-01	1.101E+00	5.905E-02	0.351
		298.57		3.055E-01	1.001E-01	1.814E-01	1.025E-02	1.684
		879.36	*	9.211E-02	1.135E-01	1.978E-01	2.002E-02	0.466
		962.29		1.320E-01	5.737E-01	8.223E-01	7.848E-02	0.161
		966.15		1.021E+00	2.667E-01	4.367E-01	4.144E-02	2.339
		1177.93		-7.022E-02	3.317E-01	5.304E-01	3.007E-02	-0.132
		1271.85		-3.730E-01	6.563E-01	1.053E+00	6.666E-02	-0.354
HO-166M		80.57		-4.561E-01	2.544E-01	3.519E-01	2.898E-02	-1.296
	+	184.41		1.801E-01	5.329E-02	6.117E-02	3.186E-03	2.944
		280.46		1.907E-02	7.447E-02	1.254E-01	7.035E-03	0.152
		410.95		6.932E-02	2.096E-01	3.457E-01	2.008E-02	0.200
		711.68	*	-1.146E-03	5.055E-02	8.219E-02	6.581E-03	-0.014
		752.31		-3.865E-02	2.352E-01	3.772E-01	3.206E-02	-0.102
		810.29		-1.953E-02	4.842E-02	7.901E-02	7.288E-03	-0.247
TM-171		51.35		8.329E+00	2.397E+01	3.913E+01	2.700E+00	0.213
		52.39		1.563E+01	1.286E+01	2.097E+01	1.453E+00	0.745
		59.40		4.719E+00	2.455E+01	3.516E+01	2.465E+00	0.134
		66.72	*	8.784E+00	2.809E+01	4.026E+01	2.940E+00	0.218
LU-176	+	88.36		6.295E-01	2.110E-01	3.328E-01	2.958E-02	1.892
		201.83		-7.587E-03	2.631E-02	4.199E-02	2.224E-03	-0.181
		306.84	*	5.859E-03	2.179E-02	3.335E-02	1.889E-03	0.176
		401.10		1.877E+00	5.580E+00	9.094E+00	5.220E-01	0.206
LU-177		112.95		-7.252E-01	1.314E+00	2.140E+00	1.418E-01	-0.339
	+	208.36	*	1.815E+00	1.091E+00	1.527E+00	8.135E-02	1.189
LU-177M		52.97		4.563E-01	1.339E+00	2.126E+00	1.475E-01	0.215
		54.07		3.123E-01	7.011E-01	1.116E+00	7.761E-02	0.280
		61.30		7.822E-01	1.380E+00	2.010E+00	1.423E-01	0.389
		121.62		6.574E-02	3.309E-01	5.535E-01	3.391E-02	0.119
		147.16		-9.503E-01	5.914E-01	9.173E-01	5.044E-02	-1.036
		171.86		9.743E-02	4.360E-01	7.159E-01	3.684E-02	0.136
		218.09		4.456E-01	7.571E-01	1.241E+00	6.674E-02	0.359
	+	268.79		2.236E+00	1.060E+00	1.252E+00	6.980E-02	1.785
		319.02		-1.053E-01	2.099E-01	3.393E-01	1.928E-02	-0.310
		367.43		-1.073E-01	7.510E-01	1.221E+00	6.958E-02	-0.088
		413.65	*	-1.257E-01	1.560E-01	2.431E-01	1.417E-02	-0.517
HF-181		56.28		-4.039E-01	7.553E-01	1.190E+00	8.306E-02	-0.339
		57.53		1.399E-01	4.037E-01	6.555E-01	4.582E-02	0.213
		65.20		7.195E-01	9.189E-01	1.341E+00	9.697E-02	0.537
		133.02		-3.552E-03	6.737E-02	9.766E-02	5.675E-03	-0.036
		136.25		6.841E-02	4.108E-01	6.821E-01	3.912E-02	0.100
		345.85		1.851E-01	2.190E-01	2.658E-01	1.515E-02	0.696

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	-1.446E-02	3.293E-02	5.402E-02	3.399E-03	-0.268
W-181		56.28		-1.594E-01	2.997E-01	4.724E-01	3.296E-02	-0.337
		57.53		5.547E-02	1.603E-01	2.603E-01	1.819E-02	0.213
		65.20	*	2.834E-01	3.620E-01	5.281E-01	3.820E-02	0.537
TA-182		67.75		-1.526E-02	1.108E-01	1.559E-01	1.146E-02	-0.098
		100.10		1.573E-01	1.523E-01	2.630E-01	1.992E-02	0.598
	+	152.43		2.979E-01	3.524E-01	4.972E-01	2.680E-02	0.599
		222.10		-1.276E-01	3.056E-01	4.815E-01	2.598E-02	-0.265
		1001.68		2.121E+00	1.819E+00	3.140E+00	2.811E-01	0.675
	+	1121.28		7.539E-01	2.162E-01	2.958E-01	2.002E-02	2.548
		1189.05		-2.756E-01	2.832E-01	4.294E-01	2.468E-02	-0.642
		1221.42	*	7.708E-02	1.749E-01	2.988E-01	1.785E-02	0.258
		1230.97		-6.178E-01	4.272E-01	6.534E-01	3.948E-02	-0.945
RE-183		57.98		-3.891E-03	1.620E-01	2.597E-01	1.816E-02	-0.015
		59.32		2.368E-02	9.994E-02	1.434E-01	1.005E-02	0.165
		67.20		1.663E-01	1.921E-01	2.808E-01	2.057E-02	0.592
		162.32	*	-6.756E-02	1.008E-01	1.595E-01	8.283E-03	-0.423
	+	208.81		1.838E+00	1.105E+00	1.547E+00	8.248E-02	1.188
		291.72		2.769E-01	8.479E-01	1.250E+00	7.041E-02	0.222
RE-184		57.98		-1.445E-02	6.013E-01	9.640E-01	6.743E-02	-0.015
		59.32		8.782E-02	3.707E-01	5.320E-01	3.729E-02	0.165
		67.20		6.173E-01	7.127E-01	1.042E+00	7.634E-02	0.592
		161.27		-5.173E-02	3.180E-01	5.173E-01	2.696E-02	-0.100
		216.55		1.467E-01	2.400E-01	3.938E-01	2.114E-02	0.372
		252.85	*	-1.423E-01	1.953E-01	3.190E-01	1.761E-02	-0.446
		318.01		1.874E-02	3.589E-01	5.953E-01	3.381E-02	0.031
		792.07		-4.637E-01	1.047E+00	1.385E+00	1.246E-01	-0.335
		903.28		-2.936E-01	9.488E-01	1.304E+00	1.344E-01	-0.225
		920.93		-1.632E-01	3.954E-01	6.098E-01	6.155E-02	-0.268
OS-185		59.72		1.941E-01	2.635E-01	3.860E-01	2.710E-02	0.503
		61.14		1.835E-02	1.525E-01	2.184E-01	1.544E-02	0.084
		69.30		-2.205E-01	2.780E-01	4.082E-01	3.036E-02	-0.540
		592.07		2.312E-01	2.061E+00	3.274E+00	2.291E-01	0.071
		646.12	*	7.390E-03	3.405E-02	5.661E-02	4.148E-03	0.131
		717.42		-1.250E-01	7.709E-01	1.213E+00	9.798E-02	-0.103
		874.81		-4.167E-01	4.739E-01	7.386E-01	7.431E-02	-0.564
		880.27		3.950E-01	6.312E-01	1.089E+00	1.104E-01	0.363
W-188	+	63.58		2.308E+01	5.282E+01	7.579E+01	5.430E+00	0.304
		227.08		7.249E-01	1.139E+01	1.826E+01	9.893E-01	0.040
		290.67	*	2.488E-01	6.824E+00	9.893E+00	5.572E-01	0.025
IR-192	+	295.96		1.240E+00	1.560E-01	2.474E-01	1.420E-02	5.012
		308.46		2.476E-02	7.650E-02	1.286E-01	7.376E-03	0.193
		316.51	*	8.018E-03	2.759E-02	4.625E-02	2.640E-03	0.173
		468.07		5.837E-02	5.685E-02	8.542E-02	6.010E-03	0.683
		604.41		-3.155E-02	4.361E-01	6.149E-01	7.410E-02	-0.051
		612.46		7.043E+00	1.106E+00	1.779E+00	1.535E-01	3.958
AU-195		65.12		1.414E-01	1.684E-01	2.461E-01	1.779E-02	0.575
		66.83		5.955E-02	9.119E-02	1.323E-01	9.673E-03	0.450
	+	75.70		1.248E+00	2.342E-01	4.199E-01	3.296E-02	2.973

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	1.457E-01	2.002E-01	3.327E-01	2.557E-02	0.438
	+	129.76		2.900E+00	3.333E+00	4.594E+00	2.706E-01	0.631
TL-200		367.94	*	-3.804E-05	3.333E+00	Half-Life too short		
		579.30		8.043E-04	3.333E+00	Half-Life too short		
		828.27		-2.566E-04	3.333E+00	Half-Life too short		
		1205.75		-1.739E-04	3.333E+00	Half-Life too short		
TL-201		68.90		-4.106E+00	3.394E+00	4.898E+00	3.632E-01	-0.838
		70.82		7.799E-02	2.037E+00	2.881E+00	2.168E-01	0.027
		80.30		-5.745E+00	3.527E+00	4.924E+00	4.045E-01	-1.167
		135.34		4.476E+00	1.803E+01	2.904E+01	1.671E+00	0.154
		167.43	*	8.764E-01	4.704E+00	7.727E+00	3.961E-01	0.113
TL-202		68.90		-4.591E-01	3.794E-01	5.476E-01	4.061E-02	-0.838
		70.82		8.696E-03	2.272E-01	3.213E-01	2.418E-02	0.027
		80.30		-6.408E-01	3.933E-01	5.492E-01	4.511E-02	-1.167
		439.56	*	-3.428E-02	5.365E-02	8.358E-02	5.021E-03	-0.410
HG-203		70.83		4.889E-02	1.038E+00	1.469E+00	1.901E-01	0.033
		72.87		1.697E+00	6.657E-01	9.736E-01	1.226E-01	1.743
	+	82.60		2.113E+00	1.064E+00	1.519E+00	2.068E-01	1.391
		279.20	*	5.531E-02	3.478E-02	6.112E-02	3.652E-03	0.905
BI-207		72.80		4.519E-01	1.906E-01	2.870E-01	2.195E-02	1.575
	+	74.97		6.956E-01	1.306E-01	2.088E-01	1.628E-02	3.332
	+	84.90		3.746E-01	1.842E-01	2.875E-01	2.481E-02	1.303
		569.67		1.063E-02	2.725E-02	4.542E-02	3.115E-03	0.234
		1063.62	*	2.446E-03	4.792E-02	7.863E-02	6.208E-03	0.031
		1770.23		1.210E+00	5.214E-01	9.530E-01	5.562E-02	1.269
TL-207		81.07		2.004E-01	2.383E-01	2.763E-01	2.288E-02	0.725
	+	83.78		2.470E-01	1.215E-01	1.836E-01	1.565E-02	1.346
	+	94.90		4.124E-01	3.930E-01	3.717E-01	3.004E-02	1.109
		122.32		7.786E-01	1.565E+00	2.640E+00	1.837E-01	0.295
		144.24		4.736E-01	6.274E-01	1.042E+00	7.335E-02	0.455
	+	154.21		3.520E-01	4.166E-01	6.010E-01	3.996E-02	0.586
	+	269.46		5.263E-01	2.497E-01	3.013E-01	1.763E-02	1.747
		323.87	*	2.142E-01	6.185E-01	9.042E-01	1.490E-01	0.237
	+	338.28		7.586E+00	1.871E+00	2.085E+00	2.184E-01	3.638
		445.03		-1.565E-01	1.935E+00	3.109E+00	3.237E-01	-0.050
PO-209		260.50		-2.859E+00	8.195E+00	1.356E+01	7.525E-01	-0.211
		262.80		-1.536E+01	2.418E+01	3.719E+01	2.066E+00	-0.413
		896.60	*	1.472E+00	6.266E+00	1.055E+01	1.092E+00	0.139
BI-210		46.50	*	-8.058E-01	2.542E+00	4.041E+00	3.055E-01	-0.199
PB-210		46.50	*	-8.058E-01	2.542E+00	4.041E+00	3.055E-01	-0.199
PO-210		46.50	*	-8.058E-01	2.542E+00	4.041E+00	2.605E-01	-0.199
PB-211		404.84	*	-4.540E-01	8.211E-01	1.216E+00	7.580E-01	-0.373
		427.08		1.344E+00	1.852E+00	2.796E+00	1.729E+00	0.480
		831.96		-2.875E-01	1.073E+00	1.740E+00	1.093E+00	-0.165
BI-212	+	727.18	*	9.779E-01	4.466E-01	5.511E-01	5.314E-02	1.774
		785.46		1.704E+00	1.560E+00	2.513E+00	2.239E-01	0.678
		1620.62		1.118E+00	9.961E-01	1.815E+00	1.146E-01	0.616
PO-215		81.07		2.004E-01	2.383E-01	2.763E-01	2.288E-02	0.725
	+	83.78		2.470E-01	1.215E-01	1.836E-01	1.565E-02	1.346

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	94.90		4.124E-01	3.930E-01	3.717E-01	3.004E-02	1.109
		122.32		7.786E-01	1.565E+00	2.640E+00	1.837E-01	0.295
		144.24		4.736E-01	6.274E-01	1.042E+00	7.335E-02	0.455
	+	154.21		3.520E-01	4.166E-01	6.010E-01	3.996E-02	0.586
	+	269.46		5.263E-01	2.497E-01	3.013E-01	1.763E-02	1.747
		323.87	*	2.142E-01	6.185E-01	9.042E-01	1.490E-01	0.237
	+	338.28		7.586E+00	1.871E+00	2.085E+00	2.184E-01	3.638
		445.03		-1.565E-01	1.935E+00	3.109E+00	3.237E-01	-0.050
RN-219	+	271.23		6.752E-01	3.224E-01	3.853E-01	3.063E-02	1.753
		401.81	*	-7.183E-02	3.483E-01	5.523E-01	7.501E-02	-0.130
RN-220		549.76	*	-1.332E+01	2.029E+01	3.243E+01	2.183E+00	-0.411
RA-223		81.07		2.004E-01	2.383E-01	2.763E-01	2.288E-02	0.725
	+	83.78		2.470E-01	1.215E-01	1.836E-01	1.565E-02	1.346
	+	94.90		4.124E-01	3.930E-01	3.717E-01	3.004E-02	1.109
		122.32		7.786E-01	1.565E+00	2.640E+00	1.837E-01	0.295
		144.24		4.736E-01	6.274E-01	1.042E+00	7.335E-02	0.455
	+	154.21		3.520E-01	4.166E-01	6.010E-01	3.996E-02	0.586
	+	269.46		5.263E-01	2.497E-01	3.013E-01	1.763E-02	1.747
		323.87	*	2.142E-01	6.185E-01	9.042E-01	1.490E-01	0.237
	+	338.28		7.586E+00	1.871E+00	2.085E+00	2.184E-01	3.638
		445.03		-1.565E-01	1.935E+00	3.109E+00	3.237E-01	-0.050
AC-227		79.80		-1.429E+00	1.584E+00	2.256E+00	4.811E-01	-0.633
		236.00		1.289E+00	2.960E-01	4.431E-01	4.549E-02	2.910
		256.20	*	3.492E-01	3.231E-01	5.576E-01	7.724E-02	0.626
		286.10		-4.316E-01	1.283E+00	2.109E+00	2.419E-01	-0.205
	+	299.80		3.492E+00	1.937E+00	2.259E+00	3.668E-01	1.545
		304.40		6.648E-01	1.684E+00	2.481E+00	4.281E-01	0.268
		334.20		1.380E+00	3.045E+00	3.067E+00	5.612E-01	0.450
TH-227		79.80		-1.429E+00	1.585E+00	2.256E+00	4.873E-01	-0.633
	+	94.00		3.299E+00	3.212E+00	3.537E+00	7.643E-01	0.933
		236.00		1.289E+00	2.883E-01	4.431E-01	3.917E-02	2.910
		256.20	*	3.492E-01	3.248E-01	5.576E-01	9.374E-02	0.626
		286.10		-4.316E-01	1.353E+00	2.109E+00	2.112E+00	-0.205
	+	299.80		3.492E+00	1.937E+00	2.259E+00	3.668E-01	1.545
		304.40		6.648E-01	1.684E+00	2.481E+00	4.281E-01	0.268
		334.20		1.380E+00	3.045E+00	3.067E+00	5.612E-01	0.450
TH-229	+	85.43		3.698E-01	1.819E-01	2.949E-01	2.560E-02	1.254
	+	88.47		3.624E-01	1.215E-01	1.907E-01	1.692E-02	1.900
		100.00		1.679E-01	1.595E-01	2.754E-01	2.089E-02	0.610
		193.63	*	-5.150E-01	4.607E-01	7.133E-01	3.748E-02	-0.722
		210.97		1.157E+00	7.887E-01	1.182E+00	6.314E-02	0.979
PA-231		283.67	*	-3.724E-01	1.294E+00	2.132E+00	2.922E-01	-0.175
	+	301.29		1.397E+00	7.549E-01	8.803E-01	9.131E-02	1.587
TH-231		81.07		2.004E-01	2.383E-01	2.763E-01	2.288E-02	0.725
	+	83.78		2.470E-01	1.215E-01	1.836E-01	1.565E-02	1.346
	+	94.90		4.124E-01	3.930E-01	3.717E-01	3.004E-02	1.109
		122.32		7.786E-01	1.565E+00	2.640E+00	1.837E-01	0.295
		144.24		4.736E-01	6.274E-01	1.042E+00	7.335E-02	0.455
	+	154.21		3.520E-01	4.166E-01	6.010E-01	3.996E-02	0.586

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.263E-01	2.497E-01	3.013E-01	1.763E-02	1.747
		323.87	*	2.142E-01	6.185E-01	9.042E-01	1.490E-01	0.237
	+	338.28		7.586E+00	1.871E+00	2.085E+00	2.184E-01	3.638
		445.03		-1.565E-01	1.935E+00	3.109E+00	3.237E-01	-0.050
U-231	+	84.21		8.621E+00	4.240E+00	6.425E+00	5.503E-01	1.342
	+	92.29		2.641E+00	2.517E+00	3.012E+00	2.523E-01	0.877
		95.87	*	-1.171E-01	8.427E-01	1.244E+00	9.925E-02	-0.094
		108.00		-1.073E+00	1.468E+00	2.397E+00	1.667E-01	-0.448
PA-233	+	75.28		2.030E+01	4.600E+00	6.439E+00	9.602E-01	3.153
	+	86.59		5.196E+00	2.185E+00	2.663E+00	7.157E-01	1.951
	+	300.12		9.735E-01	5.325E-01	6.234E-01	8.337E-02	1.562
		311.98	*	-1.679E-02	5.151E-02	8.408E-02	5.077E-03	-0.200
		340.50		3.063E+00	9.826E-01	1.179E+00	2.704E-01	2.598
		398.62		4.954E-01	1.738E+00	2.862E+00	7.394E-01	0.173
		415.76		1.218E+00	1.439E+00	2.395E+00	4.934E-01	0.508
PA-234	+	63.00		6.779E-01	1.554E+00	2.277E+00	3.354E-01	0.298
	+	94.67		2.942E-01	2.816E-01	2.807E-01	3.383E-02	1.048
		98.44		1.094E-02	8.201E-02	1.336E-01	7.435E-02	0.082
		99.86		3.777E-01	4.054E-01	6.980E-01	5.304E-02	0.541
		111.00		-1.028E-01	1.697E-01	2.712E-01	2.939E-02	-0.379
		131.20		1.017E-01	1.116E-01	1.683E-01	9.854E-03	0.604
	+	152.70		2.888E-01	3.443E-01	4.832E-01	7.567E-02	0.598
	+	186.00		6.483E+00	2.732E+00	2.335E+00	7.111E-01	2.776
		226.40		2.430E-01	3.593E-01	5.885E-01	6.692E-02	0.413
		227.20		2.181E-03	3.887E-01	6.221E-01	3.370E-02	0.004
		248.90		-1.638E-01	6.749E-01	1.123E+00	2.405E-01	-0.146
		293.70		6.479E+00	1.272E+00	1.499E+00	2.402E-01	4.323
		369.80		-1.447E-01	7.096E-01	1.149E+00	2.389E-01	-0.126
		568.70		-1.783E-01	8.889E-01	1.439E+00	9.864E-02	-0.124
		569.50		8.601E-02	2.414E-01	4.017E-01	2.755E-02	0.214
		574.00		-9.130E-01	1.354E+00	2.053E+00	1.414E-01	-0.445
		699.00		-4.696E-02	6.052E-01	9.826E-01	1.842E-01	-0.048
		706.10		-1.109E-02	8.900E-01	1.449E+00	6.443E-01	-0.008
		733.00		-7.557E-03	3.760E-01	5.216E-01	1.151E-01	-0.014
		742.81		-1.981E-01	1.141E+00	1.818E+00	1.222E+00	-0.109
	+	796.30		1.830E+00	1.428E+00	1.446E+00	3.933E-01	1.266
		805.60		6.507E-01	8.813E-01	1.450E+00	4.467E-01	0.449
		819.60		5.534E-01	9.919E-01	1.679E+00	6.413E-01	0.330
		826.30		-6.052E-01	7.399E-01	1.088E+00	4.884E-01	-0.556
		831.60		5.796E-02	5.391E-01	9.053E-01	2.726E-01	0.064
		876.40		-2.141E-01	7.125E-01	1.103E+00	1.136E+00	-0.194
		880.51		1.058E-01	2.325E-01	3.973E-01	4.027E-02	0.266
		883.24		7.654E-02	2.432E-01	4.030E-01	2.718E-01	0.190
		899.00		-8.896E-02	6.959E-01	1.143E+00	5.042E-01	-0.078
		925.00		1.154E+00	9.771E-01	1.729E+00	1.736E-01	0.668
		926.50		3.766E-02	1.478E-01	2.481E-01	6.399E-02	0.152
		946.00	*	-1.042E-01	2.545E-01	4.078E-01	7.878E-02	-0.256
		949.00		-6.389E-02	3.804E-01	6.215E-01	6.046E-02	-0.103
		980.50		9.009E-02	6.323E-01	1.051E+00	9.754E-02	0.086

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-1.228E+00	1.251E+00	1.397E+00	9.062E-01	-0.879
PA-234M		766.41		2.757E+01	2.730E+01	2.697E+01	2.068E+01	1.022
		1001.03	*	7.977E+00	5.891E+00	1.022E+01	1.170E+00	0.781
U-235		89.95		-2.527E+00	1.861E+00	1.677E+00	5.179E-01	-1.506
	+	93.35		1.026E+00	1.016E+00	1.155E+00	3.225E-01	0.888
		105.00		1.017E+00	9.673E-01	1.592E+00	4.691E-01	0.638
		143.76	*	7.064E-02	1.963E-01	3.220E-01	5.225E-02	0.219
		163.35		-3.069E-01	4.378E-01	6.865E-01	1.221E-01	-0.447
	+	185.71		2.401E-01	7.106E-02	8.671E-02	4.521E-03	2.769
		205.31		-2.266E-01	5.283E-01	7.244E-01	1.292E-01	-0.313
NP-236	+	94.67		2.231E-01	2.126E-01	2.131E-01	1.728E-02	1.047
		98.44		8.243E-03	6.183E-02	1.010E-01	7.804E-03	0.082
		111.00		-7.777E-02	1.282E-01	2.052E-01	1.385E-02	-0.379
		160.31	*	1.192E-02	7.125E-02	1.173E-01	6.135E-03	0.102
NP-239		99.55		1.212E-01	1.353E-01	2.328E-01	1.776E-02	0.520
		117.00	*	5.464E-02	1.747E-01	2.937E-01	1.875E-02	0.186
	+	209.75		1.468E+00	8.824E-01	1.223E+00	6.524E-02	1.201
		228.18		-1.093E-01	2.050E-01	3.209E-01	1.740E-02	-0.341
		277.60		2.722E-01	1.601E-01	2.762E-01	1.547E-02	0.985
		334.30		8.331E-01	1.722E+00	1.745E+00	9.938E-02	0.477
AM-241		59.54	*	9.767E-02	1.401E-01	2.048E-01	1.592E-02	0.477
CM-243		99.55		1.247E-01	1.392E-01	2.396E-01	1.827E-02	0.520
		103.76	*	-1.558E-02	8.501E-02	1.417E-01	1.030E-02	-0.110
		117.00		5.621E-02	1.797E-01	3.021E-01	1.929E-02	0.186
	+	209.75		1.447E+00	8.698E-01	1.205E+00	6.430E-02	1.201
		228.18		-1.105E-01	2.071E-01	3.242E-01	1.758E-02	-0.341
		277.60		2.744E-01	1.614E-01	2.784E-01	1.559E-02	0.985
CM-247		278.00		1.107E+00	6.500E-01	1.146E+00	6.418E-02	0.966
		287.40		4.060E-02	1.120E+00	1.701E+00	9.567E-02	0.024
		402.60	*	-2.231E-02	3.109E-02	4.794E-02	2.757E-03	-0.465
CF-249		252.85		-5.368E-01	7.367E-01	1.203E+00	6.643E-02	-0.446
		333.44		3.674E-02	2.230E-01	2.175E-01	1.238E-02	0.169
		387.95	*	1.614E-02	3.305E-02	5.386E-02	3.058E-03	0.300
CF-251		176.60	*	-8.564E-02	1.132E-01	1.789E-01	9.248E-03	-0.479
		227.00		3.600E-02	3.465E-01	5.567E-01	3.015E-02	0.065
		285.00		-7.136E-01	1.460E+00	2.385E+00	1.340E-01	-0.299

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585001      *
* Acquisition date :  9-JUL-2009 08:16:01 Detector SN#     :               *
* Detector ID        : GAM22               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.89     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232585001           Analyst initials: MXR1         *
* Batch Number       : 881931               Sample Quantity : 1.3282E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.637E+01	2.900E+00	3.988E-01	0.000E+00
CD-109	2.695E+00	8.853E-01	1.438E+00	0.000E+00
SN-126	2.654E-01	8.718E-02	1.328E-01	0.000E+00
RE-188	1.504E-01	1.744E-01	2.547E-01	0.000E+00
TL-208	5.336E-01	7.833E-02	4.646E-02	0.000E+00
BI-211	4.040E+00	4.161E-01	2.900E-01	0.000E+00
PB-212	1.726E+00	1.535E-01	8.155E-02	0.000E+00
PO-212	1.726E+00	1.535E-01	8.155E-02	0.000E+00
BI-214	1.232E+00	1.727E-01	9.523E-02	0.000E+00
PB-214	1.405E+00	1.616E-01	1.004E-01	0.000E+00
PO-214	1.405E+00	1.616E-01	1.004E-01	0.000E+00
PO-216	1.726E+00	1.535E-01	8.155E-02	0.000E+00
PO-218	1.405E+00	1.616E-01	1.004E-01	0.000E+00
RA-224	4.762E+00	1.146E+00	9.266E-01	0.000E+00
RA-226	1.232E+00	1.727E-01	9.523E-02	0.000E+00
AC-228	1.912E+00	3.291E-01	1.737E-01	0.000E+00
RA-228	1.912E+00	3.291E-01	1.737E-01	0.000E+00
TH-228	1.726E+00	1.535E-01	8.154E-02	0.000E+00
TH-230	1.232E+00	1.727E-01	9.523E-02	0.000E+00
TH-232	1.912E+00	3.291E-01	1.737E-01	0.000E+00
TH-234	5.815E-01	1.307E+00	1.899E+00	0.000E+00
U-234	1.232E+00	1.727E-01	9.523E-02	0.000E+00
NP-237	7.794E-01	3.006E-01	3.236E-01	0.000E+00
U-238	5.815E-01	1.307E+00	1.899E+00	0.000E+00
AM-243	3.876E-01	7.128E-02	8.295E-02	0.000E+00
ANH-511	1.624E-01	5.176E-02	3.815E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-3.195E-02	2.482E-01	4.122E-01	0.000E+00	NOT IDENT.

NA-22	-9.607E-05	3.966E-02	6.759E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.495E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-6.553E-03	2.156E-02	3.489E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.771E-02	7.566E-02	0.000E+00	FAIL ABUN
SC-46	6.096E-03	3.197E-02	5.540E-02	0.000E+00	FAIL ABUN
V-48	-2.663E-02	5.580E-02	9.149E-02	0.000E+00	NOT IDENT.
CR-51	-1.359E-01	2.920E-01	4.965E-01	0.000E+00	NOT IDENT.
MN-52	-1.091E-01	1.644E-01	2.592E-01	0.000E+00	NOT IDENT.
MN-54	-1.261E-02	3.297E-02	5.565E-02	0.000E+00	NOT IDENT.
CO-56	-3.070E-02	3.444E-02	5.608E-02	0.000E+00	NOT IDENT.
CO-57	6.759E-03	2.192E-02	3.924E-02	0.000E+00	NOT IDENT.
CO-58	-2.724E-02	3.112E-02	5.076E-02	0.000E+00	NOT IDENT.
FE-59	-3.054E-02	8.053E-02	1.316E-01	0.000E+00	NOT IDENT.
CO-60	1.577E-02	3.305E-02	5.804E-02	0.000E+00	NOT IDENT.
ZN-65	6.963E-02	9.119E-02	1.383E-01	0.000E+00	NOT IDENT.
GE-68	7.871E-01	1.130E+00	1.975E+00	0.000E+00	NOT IDENT.
AS-73	1.287E-01	6.689E-01	1.142E+00	0.000E+00	NOT IDENT.
AS-74	-8.003E-02	7.049E-02	1.130E-01	0.000E+00	NOT IDENT.
SE-75	2.673E-02	4.062E-02	6.453E-02	0.000E+00	NOT IDENT.
BR-77	2.106E+00	5.762E+00	9.767E+00	0.000E+00	FAIL ABUN
SR-82	-8.264E-03	3.314E-01	4.721E-01	0.000E+00	NOT IDENT.
RB-83	1.187E-02	5.419E-02	9.111E-02	0.000E+00	NOT IDENT.
RB-84	2.542E-02	5.618E-02	9.887E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.228E+00	1.304E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.657E-02	6.599E-02	0.000E+00	NOT IDENT.
RB-86	5.175E-01	6.881E-01	1.206E+00	0.000E+00	NOT IDENT.
Y-88	-2.190E-02	2.805E-02	3.992E-02	0.000E+00	NOT IDENT.
ZR-88	2.988E-03	2.401E-02	4.118E-02	0.000E+00	NOT IDENT.
Y-91	-1.564E+00	1.661E+01	2.738E+01	0.000E+00	NOT IDENT.
NB-94	2.187E-02	2.794E-02	4.911E-02	0.000E+00	NOT IDENT.
NB-95	3.589E-02	4.073E-02	6.233E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.295E-01	2.080E-01	0.000E+00	NOT IDENT.
ZR-95	4.351E-02	5.947E-02	1.037E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.275E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.865E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.992E-01	7.008E+00	1.181E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.086E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.388E-03	3.108E-02	5.155E-02	0.000E+00	NOT IDENT.
RH-102	1.667E-02	2.244E-02	3.914E-02	0.000E+00	NOT IDENT.
RU-103	-1.629E-02	3.025E-02	5.118E-02	0.000E+00	FAIL ABUN
RH-106	-1.901E-01	2.502E-01	4.065E-01	0.000E+00	FAIL ABUN
RU-106	-1.901E-01	2.495E-01	4.065E-01	0.000E+00	FAIL ABUN
AG-108M	-1.368E-02	2.673E-02	4.389E-02	0.000E+00	NOT IDENT.
AG-110M	-5.089E-03	2.856E-02	4.803E-02	0.000E+00	NOT IDENT.
IN-111	5.137E-01	6.733E-01	1.083E+00	0.000E+00	NOT IDENT.
IN-113M	2.081E-02	3.472E-02	6.091E-02	0.000E+00	NOT IDENT.
SN-113	2.081E-02	3.472E-02	6.091E-02	0.000E+00	NOT IDENT.
IN-114M	9.465E-02	1.748E-01	2.688E-01	0.000E+00	NOT IDENT.
CD-115	-1.331E+00	5.638E+00	9.659E+00	0.000E+00	NOT IDENT.
SN-117M	7.305E-03	5.071E-02	7.781E-02	0.000E+00	NOT IDENT.
SB-122	1.475E-01	1.219E+00	2.116E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.085E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	9.769E-03	2.669E-02	4.357E-02	0.000E+00	NOT IDENT.
I-124	3.801E-01	4.982E-01	7.748E-01	0.000E+00	NOT IDENT.
SB-124	2.588E-02	5.130E-02	9.074E-02	0.000E+00	FAIL ABUN
SB-125	9.204E-02	7.221E-02	1.299E-01	0.000E+00	FAIL ABUN
TE-125M	-9.184E+00	8.264E+00	1.387E+01	0.000E+00	NOT IDENT.
I-126	7.576E-02	1.333E-01	2.334E-01	0.000E+00	NOT IDENT.
SB-126	-4.561E-02	1.305E-01	1.822E-01	0.000E+00	FAIL ABUN
SB-127	-7.227E-01	8.502E-01	1.356E+00	0.000E+00	NOT IDENT.
XE-127	-3.297E-02	4.072E-02	6.737E-02	0.000E+00	NOT IDENT.
I-131	3.673E-03	8.689E-02	1.454E-01	0.000E+00	NOT IDENT.
TE-132	-2.567E-01	4.696E-01	7.740E-01	0.000E+00	NOT IDENT.
BA-133	1.754E-02	4.045E-02	6.184E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.706E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.794E-02	7.548E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.516E-01	2.527E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.049E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-9.796E-03	8.864E-02	1.482E-01	0.000E+00	FAIL ABUN
BA-137M	1.733E-02	2.907E-02	5.094E-02	0.000E+00	NOT IDENT.
CS-137	1.832E-02	3.073E-02	5.385E-02	0.000E+00	NOT IDENT.
CE-139	2.037E-02	2.600E-02	4.619E-02	0.000E+00	NOT IDENT.
BA-140	2.424E-02	1.882E-01	3.280E-01	0.000E+00	NOT IDENT.
LA-140	-1.131E-01	6.986E-02	9.602E-02	0.000E+00	FAIL ABUN
CE-141	6.478E-02	5.378E-02	9.745E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.268E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.503E-02	2.100E-01	3.233E-01	0.000E+00	NOT IDENT.
PM-144	-1.722E-02	2.880E-02	4.695E-02	0.000E+00	NOT IDENT.

PR-144	-1.166E+00	1.951E+00	3.180E+00	0.000E+00	NOT IDENT.
PM-146	-1.075E-03	3.755E-02	6.129E-02	0.000E+00	NOT IDENT.
ND-147	1.429E-01	4.049E-01	7.144E-01	0.000E+00	NOT IDENT.
PM-149	-2.951E+01	5.082E+01	8.675E+01	0.000E+00	NOT IDENT.
EU-152	-1.389E-03	1.060E-01	1.381E-01	0.000E+00	NOT IDENT.
GD-153	-3.782E-02	7.548E-02	1.173E-01	0.000E+00	FAIL ABUN
EU-154	-1.588E-03	1.108E-01	1.886E-01	0.000E+00	NOT IDENT.
EU-155	9.922E-02	9.220E-02	1.699E-01	0.000E+00	FAIL ABUN
TB-160	9.211E-02	1.113E-01	1.999E-01	0.000E+00	FAIL ABUN
HO-166M	-1.146E-03	4.953E-02	8.338E-02	0.000E+00	FAIL ABUN
TM-171	8.784E+00	2.753E+01	4.250E+01	0.000E+00	NOT IDENT.
LU-176	5.859E-03	2.135E-02	3.433E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.069E+00	1.582E+00	0.000E+00	FAIL ABUN
LU-177M	-1.257E-01	1.529E-01	2.490E-01	0.000E+00	FAIL ABUN
HF-181	-1.446E-02	3.227E-02	5.518E-02	0.000E+00	NOT IDENT.
W-181	2.834E-01	3.547E-01	5.578E-01	0.000E+00	NOT IDENT.
TA-182	7.708E-02	1.714E-01	3.002E-01	0.000E+00	FAIL ABUN
RE-183	-6.756E-02	9.878E-02	1.660E-01	0.000E+00	FAIL ABUN
RE-184	-1.423E-01	1.914E-01	3.294E-01	0.000E+00	NOT IDENT.
OS-185	7.390E-03	3.337E-02	5.753E-02	0.000E+00	NOT IDENT.
W-188	2.488E-01	6.688E+00	1.019E+01	0.000E+00	FAIL ABUN
IR-192	8.018E-03	2.704E-02	4.758E-02	0.000E+00	FAIL ABUN
AU-195	1.457E-01	1.961E-01	3.490E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.665E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	8.764E-01	4.610E+00	8.035E+00	0.000E+00	NOT IDENT.
TL-202	-3.428E-02	5.258E-02	8.551E-02	0.000E+00	NOT IDENT.
HG-203	5.531E-02	3.409E-02	6.301E-02	0.000E+00	FAIL ABUN
BI-207	2.446E-03	4.696E-02	7.920E-02	0.000E+00	FAIL ABUN
TL-207	2.142E-01	6.062E-01	9.299E-01	0.000E+00	FAIL ABUN
PO-209	1.472E+00	6.141E+00	1.066E+01	0.000E+00	NOT IDENT.
BI-210	-8.058E-01	2.491E+00	4.291E+00	0.000E+00	NOT IDENT.
PB-210	-8.058E-01	2.491E+00	4.291E+00	0.000E+00	NOT IDENT.
PO-210	-8.058E-01	2.491E+00	4.291E+00	0.000E+00	NOT IDENT.
PB-211	-4.540E-01	8.047E-01	1.246E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.376E-01	5.588E-01	0.000E+00	FAIL ABUN
PO-215	2.142E-01	6.062E-01	9.299E-01	0.000E+00	FAIL ABUN
RN-219	-7.183E-02	3.413E-01	5.659E-01	0.000E+00	FAIL ABUN
RN-220	-1.332E+01	1.988E+01	3.305E+01	0.000E+00	NOT IDENT.
RA-223	2.142E-01	6.062E-01	9.299E-01	0.000E+00	FAIL ABUN
AC-227	3.492E-01	3.166E-01	5.758E-01	0.000E+00	FAIL ABUN
TH-227	3.492E-01	3.183E-01	5.758E-01	0.000E+00	FAIL ABUN
TH-229	-5.150E-01	4.515E-01	7.400E-01	0.000E+00	FAIL ABUN
PA-231	-3.724E-01	1.268E+00	2.197E+00	0.000E+00	FAIL ABUN
TH-231	2.142E-01	6.062E-01	9.299E-01	0.000E+00	FAIL ABUN
U-231	-1.171E-01	8.258E-01	1.305E+00	0.000E+00	FAIL ABUN
PA-233	-1.679E-02	5.047E-02	8.652E-02	0.000E+00	FAIL ABUN
PA-234	-1.042E-01	2.494E-01	4.116E-01	0.000E+00	FAIL ABUN
PA-234M	7.977E+00	5.773E+00	1.030E+01	0.000E+00	NOT IDENT.
U-235	7.064E-02	1.924E-01	3.357E-01	0.000E+00	FAIL ABUN
NP-236	1.192E-02	6.983E-02	1.220E-01	0.000E+00	FAIL ABUN
NP-239	5.464E-02	1.712E-01	3.072E-01	0.000E+00	FAIL ABUN
AM-241	9.767E-02	1.373E-01	2.167E-01	0.000E+00	NOT IDENT.
CM-243	-1.558E-02	8.331E-02	1.485E-01	0.000E+00	FAIL ABUN
CM-247	-2.231E-02	3.047E-02	4.911E-02	0.000E+00	NOT IDENT.
CF-249	1.614E-02	3.239E-02	5.522E-02	0.000E+00	NOT IDENT.
CF-251	-8.564E-02	1.109E-01	1.859E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:17:12.25

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585001.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:16:01.
Sample ID         : G232585001           Sample quantity  : 1.32820E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.89  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	2721	10.67*	1.981E+00	3.637E+01	3.637E+01	8.13
CD-109	88.03	275	3.72*	7.926E+00	2.640E+00	2.695E+00	33.52
SN-126	64.28	38	9.60	4.843E+00	2.302E-01	2.302E-01	229.19
	86.94	275	8.90	7.926E+00	1.103E+00	1.103E+00	52.53
	87.57	275	37.00*	7.926E+00	2.654E-01	2.654E-01	33.52
RE-188	155.03	60	15.00*	8.696E+00	1.309E-01	1.504E-01	118.30
	477.96	------	1.04	4.747E+00	------ Line Not Found		------
	633.10	------	1.26	3.870E+00	------ Line Not Found		------
TL-208	277.35	------	6.80	6.634E+00	------ Line Not Found		------
	510.84	260	21.60	4.532E+00	7.517E-01	7.517E-01	33.58
	583.14	655	84.20*	4.118E+00	5.336E-01	5.336E-01	14.98
	860.37	78	12.46	3.013E+00	5.891E-01	5.891E-01	60.68
BI-211	72.87	------	1.27	6.380E+00	------ Line Not Found		------
	351.07	1068	12.94*	5.776E+00	4.040E+00	4.040E+00	10.51
PB-212	74.81	602	10.70	6.648E+00	2.391E+00	2.391E+00	20.97
	77.11	987	18.00	6.942E+00	2.231E+00	2.231E+00	14.30
	87.30	275	8.00	7.926E+00	1.228E+00	1.228E+00	34.98
	238.63	1959	44.60*	7.193E+00	1.726E+00	1.726E+00	9.07
	300.09	144	3.41	6.342E+00	1.884E+00	1.884E+00	53.66
PO-212	74.81	602	10.70	6.648E+00	2.391E+00	2.391E+00	20.97
	77.11	987	18.00	6.942E+00	2.231E+00	2.231E+00	14.30
	87.30	275	8.00	7.926E+00	1.228E+00	1.228E+00	34.98
	115.19	------	0.60	8.992E+00	------ Line Not Found		------
	238.63	1959	44.60*	7.193E+00	1.726E+00	1.726E+00	9.07
	300.09	144	3.41	6.342E+00	1.884E+00	1.884E+00	53.66
BI-214	609.31	804	46.30*	3.984E+00	1.232E+00	1.232E+00	14.30
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	207	15.10	2.411E+00	1.607E+00	1.607E+00	29.43
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	181	15.80	1.811E+00	1.787E+00	1.787E+00	19.71

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	602	6.21	6.648E+00	4.119E+00	4.119E+00	20.18
	77.11	987	10.50	6.942E+00	3.825E+00	3.825E+00	16.20
	87.30	275	4.67	7.926E+00	2.103E+00	2.103E+00	34.39
	241.98	476	7.49	7.147E+00	2.511E+00	2.511E+00	25.18
	295.21	716	19.20	6.402E+00	1.646E+00	1.646E+00	14.01
	351.92	1068	37.20*	5.776E+00	1.405E+00	1.405E+00	11.73
PO-214	74.81	602	6.21	6.648E+00	4.119E+00	4.119E+00	20.18
	77.11	987	10.50	6.942E+00	3.825E+00	3.825E+00	16.20
	87.30	275	4.67	7.926E+00	2.103E+00	2.103E+00	34.39
	241.98	476	7.49	7.147E+00	2.511E+00	2.511E+00	25.18
	295.21	716	19.20	6.402E+00	1.646E+00	1.646E+00	14.01
	351.92	1068	37.20*	5.776E+00	1.405E+00	1.405E+00	11.73
PO-216	74.81	602	10.70	6.648E+00	2.391E+00	2.391E+00	20.97
	77.11	987	18.00	6.942E+00	2.231E+00	2.231E+00	14.30
	87.30	275	8.00	7.926E+00	1.228E+00	1.228E+00	34.98
	238.63	1959	44.60*	7.193E+00	1.726E+00	1.726E+00	9.07
	300.09	144	3.41	6.342E+00	1.884E+00	1.884E+00	53.66
PO-218	74.81	602	6.21	6.648E+00	4.119E+00	4.119E+00	20.18
	77.11	987	10.50	6.942E+00	3.825E+00	3.825E+00	16.20
	87.30	275	4.67	7.926E+00	2.103E+00	2.103E+00	34.39
	241.98	476	7.49	7.147E+00	2.511E+00	2.511E+00	25.18
	295.21	716	19.20	6.402E+00	1.646E+00	1.646E+00	14.01
	351.92	1068	37.20*	5.776E+00	1.405E+00	1.405E+00	11.73
RA-224	240.98	476	3.95*	7.147E+00	4.762E+00	4.762E+00	24.55
RA-226	609.31	804	46.30*	3.984E+00	1.232E+00	1.232E+00	14.30
	768.36	------	5.04	3.314E+00	------	Line Not Found	------
	934.06	------	3.21	2.811E+00	------	Line Not Found	------
	1120.29	207	15.10	2.411E+00	1.607E+00	1.607E+00	29.43
	1238.11	------	5.94	2.227E+00	------	Line Not Found	------
	1377.67	------	4.11	2.059E+00	------	Line Not Found	------
	1764.49	181	15.80	1.811E+00	1.787E+00	1.787E+00	19.71
AC-228	338.32	433	11.40	5.914E+00	1.817E+00	1.817E+00	46.47
	911.07	538	27.70*	2.870E+00	1.912E+00	1.912E+00	17.56
	969.11	217	16.60	2.723E+00	1.356E+00	1.356E+00	37.38
RA-228	338.32	433	11.40	5.914E+00	1.817E+00	1.817E+00	46.47
	911.07	538	27.70*	2.870E+00	1.912E+00	1.912E+00	17.56
	969.11	217	16.60	2.723E+00	1.356E+00	1.356E+00	37.38
TH-228	84.40	166	1.21	7.668E+00	5.042E+00	5.042E+00	50.17
	238.60	1959	44.60*	7.193E+00	1.726E+00	1.726E+00	9.07
	300.10	144	3.41	6.342E+00	1.884E+00	1.884E+00	79.28
TH-230	609.31	804	46.30*	3.984E+00	1.232E+00	1.232E+00	14.30
	768.36	------	5.04	3.314E+00	------	Line Not Found	------
	934.06	------	3.21	2.811E+00	------	Line Not Found	------
	1120.29	207	15.10	2.411E+00	1.607E+00	1.607E+00	29.43
	1238.11	------	5.94	2.227E+00	------	Line Not Found	------
	1377.67	------	4.11	2.059E+00	------	Line Not Found	------
	1764.49	181	15.80	1.811E+00	1.787E+00	1.787E+00	19.71
TH-232	338.32	433	11.40	5.914E+00	1.817E+00	1.817E+00	23.04
	911.07	538	27.70*	2.870E+00	1.912E+00	1.912E+00	17.56

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	217	16.60	2.723E+00	1.356E+00	1.356E+00	37.38
TH-234	63.29	38	3.80*	4.843E+00	5.815E-01	5.815E-01	229.40
	92.38	137	5.41	8.359E+00	8.537E-01	8.537E-01	96.61
U-234	609.31	804	46.30*	3.984E+00	1.232E+00	1.232E+00	14.30
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	207	15.10	2.411E+00	1.607E+00	1.607E+00	29.43
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	181	15.80	1.811E+00	1.787E+00	1.787E+00	19.71
NP-237	86.50	275	12.60*	7.926E+00	7.794E-01	7.794E-01	39.36
	95.87	------	2.60	8.481E+00	------ Line Not Found		------
U-238	63.29	38	3.80*	4.843E+00	5.815E-01	5.815E-01	229.40
	92.38	137	5.41	8.359E+00	8.537E-01	8.537E-01	95.30
AM-243	74.67	602	66.00*	6.648E+00	3.876E-01	3.876E-01	18.77
	86.72	275	0.34	7.926E+00	2.923E+01	2.923E+01	33.52
	117.66	------	0.55	9.009E+00	------ Line Not Found		------
	142.18	------	0.13	8.872E+00	------ Line Not Found		------
ANH-511	511.00	260	100.00*	4.532E+00	1.624E-01	1.624E-01	32.53

Flag: "*" = Keyline

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

Total number of lines in spectrum	32	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	30	93.75%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.637E+01	3.637E+01	0.296E+01	8.13	
CD-109	464.00D	1.02	2.640E+00	2.695E+00	0.903E+00	33.52	
SN-126	1.00E+05Y	1.00	2.654E-01	2.654E-01	0.890E-01	33.52	
RE-188	69.40D	1.15	1.309E-01	1.504E-01	1.779E-01	118.30	
TL-208	1.41E+10Y	1.00	5.336E-01	5.336E-01	0.799E-01	14.98	
BI-211	7.04E+08Y	1.00	4.040E+00	4.040E+00	0.425E+00	10.51	
PB-212	1.41E+10Y	1.00	1.726E+00	1.726E+00	0.157E+00	9.07	
PO-212	1.41E+10Y	1.00	1.726E+00	1.726E+00	0.157E+00	9.07	
BI-214	1600.00Y	1.00	1.232E+00	1.232E+00	0.176E+00	14.30	
PB-214	1600.00Y	1.00	1.405E+00	1.405E+00	0.165E+00	11.73	
PO-214	1600.00Y	1.00	1.405E+00	1.405E+00	0.165E+00	11.73	
PO-216	1.41E+10Y	1.00	1.726E+00	1.726E+00	0.157E+00	9.07	
PO-218	1600.00Y	1.00	1.405E+00	1.405E+00	0.165E+00	11.73	
RA-224	1.41E+10Y	1.00	4.762E+00	4.762E+00	1.169E+00	24.55	
RA-226	1600.00Y	1.00	1.232E+00	1.232E+00	0.176E+00	14.30	
AC-228	1.41E+10Y	1.00	1.912E+00	1.912E+00	0.336E+00	17.56	
RA-228	1.41E+10Y	1.00	1.912E+00	1.912E+00	0.336E+00	17.56	
TH-228	1.41E+10Y	1.00	1.726E+00	1.726E+00	0.157E+00	9.07	
TH-230	4.47E+09Y	1.00	1.232E+00	1.232E+00	0.176E+00	14.30	
TH-232	1.41E+10Y	1.00	1.912E+00	1.912E+00	0.336E+00	17.56	
TH-234	4.47E+09Y	1.00	5.815E-01	5.815E-01	13.34E-01	229.40	
U-234	4.47E+09Y	1.00	1.232E+00	1.232E+00	0.176E+00	14.30	
NP-237	2.14E+06Y	1.00	7.794E-01	7.794E-01	3.068E-01	39.36	
U-238	4.47E+09Y	1.00	5.815E-01	5.815E-01	13.34E-01	229.40	
AM-243	7380.00Y	1.00	3.876E-01	3.876E-01	0.727E-01	18.77	
ANH-511	1.00E+09Y	1.00	1.624E-01	1.624E-01	0.528E-01	32.53	
	Total Activity :		7.302E+01	7.310E+01			

Grand Total Activity : 7.302E+01 7.310E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	129.63	71	527	0.76	258.61	255	8	9.86E-03	****	9.00E+00	T
0	185.67	372	568	1.31	370.67	365	13	5.17E-02	29.1	8.12E+00	T
0	209.27	129	419	1.44	417.86	414	9	1.80E-02	59.9	7.69E+00	T
0	270.23	170	360	1.35	539.77	534	12	2.37E-02	47.1	6.73E+00	T
0	328.24	133	287	1.04	655.78	650	12	1.85E-02	54.1	6.02E+00	T
0	462.96	136	156	1.73	925.23	918	13	1.89E-02	41.6	4.85E+00	T
0	727.80	141	181	1.81	1455.01	1446	15	1.96E-02	44.6	3.47E+00	T
0	770.18	134	204	2.32	1539.81	1528	23	1.86E-02	58.5	3.31E+00	
0	795.73	81	153	1.59	1590.92	1581	17	1.13E-02	73.1	3.22E+00	T
0	1849.07	31	14	2.44	3699.29	3689	18	4.36E-03	65.5	1.79E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:17:16.53

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585001.CNF;1 *
* Acquisition date  : 9-JUL-2009 08:16:01.  Detector SN#     :             *
* Detector ID       : GAM22                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.89          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232585001            Analyst initials: MXR1         *
* Batch Number      : 881931                Sample Quantity : 1.32820E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45.3MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1032-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.637E+01	2.959E+00	3.982E-01	2.771E-02	91.356
CD-109	2.695E+00	9.034E-01	1.369E+00	1.223E-01	1.969
SN-126	2.654E-01	8.896E-02	1.263E-01	1.124E-02	2.101
RE-188	1.504E-01	1.779E-01	2.446E-01	1.306E-02	0.615
TL-208	5.336E-01	7.993E-02	4.564E-02	3.513E-03	11.692
BI-211	4.040E+00	4.246E-01	2.824E-01	1.791E-02	14.307
PB-212	1.726E+00	1.566E-01	7.889E-02	5.578E-03	21.880
PO-212	1.726E+00	1.566E-01	7.889E-02	5.578E-03	21.880
BI-214	1.232E+00	1.762E-01	9.362E-02	8.234E-03	13.156
PB-214	1.405E+00	1.649E-01	9.778E-02	8.031E-03	14.374
PO-214	1.405E+00	1.649E-01	9.778E-02	8.031E-03	14.374
PO-216	1.726E+00	1.566E-01	7.889E-02	5.578E-03	21.880
PO-218	1.405E+00	1.649E-01	9.778E-02	8.031E-03	14.374
RA-224	4.762E+00	1.169E+00	8.965E-01	4.909E-02	5.312
RA-226	1.232E+00	1.762E-01	9.362E-02	8.234E-03	13.156
AC-228	1.912E+00	3.358E-01	1.720E-01	2.151E-02	11.120
RA-228	1.912E+00	3.358E-01	1.720E-01	2.151E-02	11.120
TH-228	1.726E+00	1.566E-01	7.888E-02	5.577E-03	21.882

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.232E+00	1.762E-01	9.362E-02	8.234E-03	13.156
TH-232	1.912E+00	3.358E-01	1.720E-01	2.151E-02	11.120
TH-234	5.815E-01	1.334E+00	1.797E+00	3.115E-01	0.324
U-234	1.232E+00	1.762E-01	9.362E-02	8.234E-03	13.156
NP-237	7.794E-01	3.068E-01	3.078E-01	6.904E-02	2.532
U-238	5.815E-01	1.334E+00	1.797E+00	3.115E-01	0.324
AM-243	3.876E-01	7.274E-02	7.871E-02	6.120E-03	4.924
ANH-511	1.624E-01	5.282E-02	3.739E-02	2.424E-03	4.343

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-3.195E-02		2.533E-01	4.035E-01	2.886E-02	-0.079
NA-22	-9.607E-05		4.047E-02	6.732E-02	4.284E-03	-0.001
NA-24	-2.068E-03		7.628E-02	Half-Life too short		
AL-26	-6.553E-03		2.200E-02	3.497E-02	1.990E-03	-0.187
TI-44	4.118E-01	+	5.888E-02	7.185E-02	5.788E-03	5.731
SC-46	6.096E-03		3.263E-02	5.482E-02	5.620E-03	0.111
V-48	-2.663E-02		5.694E-02	9.070E-02	8.376E-03	-0.294
CR-51	-1.359E-01		2.979E-01	4.827E-01	3.068E-02	-0.281
MN-52	-1.091E-01		1.678E-01	2.587E-01	1.729E-02	-0.422
MN-54	-1.261E-02		3.364E-02	5.501E-02	5.248E-03	-0.229
CO-56	-3.070E-02		3.515E-02	5.545E-02	5.375E-03	-0.554
CO-57	6.759E-03		2.237E-02	3.754E-02	2.296E-03	0.180
CO-58	-2.724E-02		3.176E-02	5.015E-02	4.640E-03	-0.543
FE-59	-3.054E-02		8.217E-02	1.307E-01	1.051E-02	-0.234
CO-60	1.577E-02		3.373E-02	5.786E-02	3.913E-03	0.273
ZN-65	6.963E-02		9.305E-02	1.375E-01	9.481E-03	0.506
GE-68	7.871E-01		1.153E+00	1.961E+00	1.498E-01	0.401
AS-73	1.287E-01		6.826E-01	1.078E+00	7.488E-02	0.119
AS-74	-8.003E-02		7.193E-02	1.110E-01	7.795E-03	-0.721
SE-75	2.673E-02		4.145E-02	6.253E-02	3.517E-03	0.427
BR-77	2.106E+00		5.879E+00	9.575E+00	6.268E-01	0.220
SR-82	-8.264E-03		3.382E-01	4.661E-01	4.101E-02	-0.018
RB-83	1.187E-02		5.530E-02	8.932E-02	5.845E-03	0.133
RB-84	2.542E-02		5.733E-02	9.783E-02	9.929E-03	0.260
KR-85	3.047E+01		7.376E+00	1.279E+01	8.314E-01	2.383
SR-85	1.541E-01		3.732E-02	6.468E-02	4.206E-03	2.383
RB-86	5.175E-01		7.021E-01	1.198E+00	9.165E-02	0.432
Y-88	-2.190E-02		2.862E-02	4.002E-02	2.240E-03	-0.547
ZR-88	2.988E-03		2.450E-02	4.018E-02	2.283E-03	0.074
Y-91	-1.564E+00		1.694E+01	2.725E+01	1.596E+00	-0.057
NB-94	2.187E-02		2.851E-02	4.840E-02	3.823E-03	0.452
NB-95	3.589E-02		4.157E-02	6.152E-02	5.331E-03	0.583
NB-95M	3.014E-01		1.322E-01	2.011E-01	1.461E-02	1.499
ZR-95	4.351E-02		6.069E-02	1.024E-01	9.650E-03	0.425
NB-97	-5.659E-03		1.161E-02	Half-Life too short		

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1.169E+00		2.482E-01	Half-Life too short		
MO-99	3.992E-01		7.151E+00	1.165E+01	1.750E+00	0.034
TC-99M	-1.328E+09		5.542E+08	Half-Life too short		
RH-101	-2.388E-03		3.171E-02	4.971E-02	2.623E-03	-0.048
RH-102	1.667E-02		2.289E-02	3.831E-02	2.393E-03	0.435
RU-103	-1.629E-02		3.087E-02	5.014E-02	6.481E-03	-0.325
RH-106	-1.901E-01		2.553E-01	3.997E-01	4.988E-02	-0.476
RU-106	-1.901E-01		2.546E-01	3.997E-01	2.870E-02	-0.476
AG-108M	-1.368E-02		2.728E-02	4.289E-02	2.768E-03	-0.319
AG-110M	-5.089E-03		2.914E-02	4.728E-02	3.638E-03	-0.108
IN-111	5.137E-01		6.870E-01	1.048E+00	5.759E-02	0.490
IN-113M	2.081E-02		3.543E-02	5.942E-02	3.607E-03	0.350
SN-113	2.081E-02		3.543E-02	5.942E-02	3.607E-03	0.350
IN-114M	9.465E-02		1.783E-01	2.590E-01	1.357E-02	0.365
CD-115	-1.331E+00		5.753E+00	9.472E+00	6.245E-01	-0.140
SN-117M	7.305E-03		5.175E-02	7.475E-02	3.937E-03	0.098
SB-122	1.475E-01		1.244E+00	2.077E+00	1.417E-01	0.071
I-123	3.973E-01		5.537E-01	Half-Life too short		
TE-123M	9.769E-03		2.723E-02	4.186E-02	2.237E-03	0.233
I-124	3.801E-01		5.084E-01	7.616E-01	5.380E-02	0.499
SB-124	2.588E-02		5.235E-02	9.084E-02	5.979E-03	0.285
SB-125	9.204E-02		7.368E-02	1.269E-01	7.825E-03	0.725
TE-125M	-9.184E+00		8.433E+00	1.325E+01	1.181E+00	-0.693
I-126	7.576E-02		1.360E-01	2.298E-01	1.717E-02	0.330
SB-126	-4.561E-02		1.331E-01	1.796E-01	1.457E-02	-0.254
SB-127	-7.227E-01		8.676E-01	1.336E+00	1.378E-01	-0.541
XE-127	-3.297E-02		4.156E-02	6.500E-02	3.445E-03	-0.507
I-131	3.673E-03		8.867E-02	1.417E-01	9.029E-03	0.026
TE-132	-2.567E-01		4.792E-01	7.482E-01	1.045E-01	-0.343
BA-133	1.754E-02		4.128E-02	6.023E-02	6.933E-03	0.291
I-133	-6.052E-05		8.702E-04	Half-Life too short		
CS-134	9.407E-02	+	6.933E-02	7.455E-02	6.785E-03	1.262
CS-135	2.999E-01		1.547E-01	2.449E-01	1.834E-02	1.225
I-135	-2.234E+08		1.046E+08	Half-Life too short		
CS-136	-9.796E-03		9.045E-02	1.471E-01	1.259E-02	-0.067
BA-137M	1.733E-02		2.966E-02	5.015E-02	3.721E-03	0.346
CS-137	1.832E-02		3.135E-02	5.302E-02	3.944E-03	0.346
CE-139	2.037E-02		2.653E-02	4.441E-02	2.276E-03	0.459
BA-140	2.424E-02		1.920E-01	3.217E-01	1.052E-01	0.075
LA-140	-1.131E-01		7.129E-02	9.603E-02	6.127E-03	-1.178
CE-141	6.478E-02		5.488E-02	9.349E-02	5.401E-03	0.693
CE-143	4.747E-04		6.470E-05	Half-Life too short		
CE-144	-2.503E-02		2.143E-01	3.097E-01	4.398E-02	-0.081
PM-144	-1.722E-02		2.939E-02	4.627E-02	3.622E-03	-0.372
PR-144	-1.166E+00		1.990E+00	3.133E+00	2.452E-01	-0.372
PM-146	-1.075E-03		3.832E-02	5.995E-02	5.293E-03	-0.018
ND-147	1.429E-01		4.131E-01	7.006E-01	9.731E-02	0.204
PM-149	-2.951E+01		5.185E+01	8.417E+01	1.187E+01	-0.351

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-1.389E-03		1.081E-01	1.344E-01	8.669E-03	-0.010
GD-153	-3.782E-02		7.702E-02	1.118E-01	8.746E-03	-0.338
EU-154	-1.588E-03		1.130E-01	1.879E-01	1.821E-02	-0.008
EU-155	9.922E-02		9.408E-02	1.622E-01	1.180E-02	0.612
TB-160	9.211E-02		1.135E-01	1.978E-01	2.002E-02	0.466
HO-166M	-1.146E-03		5.055E-02	8.219E-02	6.581E-03	-0.014
TM-171	8.784E+00		2.809E+01	4.026E+01	2.940E+00	0.218
LU-176	5.859E-03		2.179E-02	3.335E-02	1.889E-03	0.176
LU-177	1.815E+00	+	1.091E+00	1.527E+00	8.135E-02	1.189
LU-177M	-1.257E-01		1.560E-01	2.431E-01	1.417E-02	-0.517
HF-181	-1.446E-02		3.293E-02	5.402E-02	3.399E-03	-0.268
W-181	2.834E-01		3.620E-01	5.281E-01	3.820E-02	0.537
TA-182	7.708E-02		1.749E-01	2.988E-01	1.785E-02	0.258
RE-183	-6.756E-02		1.008E-01	1.595E-01	8.283E-03	-0.423
RE-184	-1.423E-01		1.953E-01	3.190E-01	1.761E-02	-0.446
OS-185	7.390E-03		3.405E-02	5.661E-02	4.148E-03	0.131
W-188	2.488E-01		6.824E+00	9.893E+00	5.572E-01	0.025
IR-192	8.018E-03		2.759E-02	4.625E-02	2.640E-03	0.173
AU-195	1.457E-01		2.002E-01	3.327E-01	2.557E-02	0.438
TL-200	-3.804E-05		8.496E-05	Half-Life too short		
TL-201	8.764E-01		4.704E+00	7.727E+00	3.961E-01	0.113
TL-202	-3.428E-02		5.365E-02	8.358E-02	5.021E-03	-0.410
HG-203	5.531E-02		3.478E-02	6.112E-02	3.652E-03	0.905
BI-207	2.446E-03		4.792E-02	7.863E-02	6.208E-03	0.031
TL-207	2.142E-01		6.185E-01	9.042E-01	1.490E-01	0.237
PO-209	1.472E+00		6.266E+00	1.055E+01	1.092E+00	0.139
BI-210	-8.058E-01		2.542E+00	4.041E+00	3.055E-01	-0.199
PB-210	-8.058E-01		2.542E+00	4.041E+00	3.055E-01	-0.199
PO-210	-8.058E-01		2.542E+00	4.041E+00	2.605E-01	-0.199
PB-211	-4.540E-01		8.211E-01	1.216E+00	7.580E-01	-0.373
BI-212	9.779E-01	+	4.466E-01	5.511E-01	5.314E-02	1.774
PO-215	2.142E-01		6.185E-01	9.042E-01	1.490E-01	0.237
RN-219	-7.183E-02		3.483E-01	5.523E-01	7.501E-02	-0.130
RN-220	-1.332E+01		2.029E+01	3.243E+01	2.183E+00	-0.411
RA-223	2.142E-01		6.185E-01	9.042E-01	1.490E-01	0.237
AC-227	3.492E-01		3.231E-01	5.576E-01	7.724E-02	0.626
TH-227	3.492E-01		3.248E-01	5.576E-01	9.374E-02	0.626
TH-229	-5.150E-01		4.607E-01	7.133E-01	3.748E-02	-0.722
PA-231	-3.724E-01		1.294E+00	2.132E+00	2.922E-01	-0.175
TH-231	2.142E-01		6.185E-01	9.042E-01	1.490E-01	0.237
U-231	-1.171E-01		8.427E-01	1.244E+00	9.925E-02	-0.094
PA-233	-1.679E-02		5.151E-02	8.408E-02	5.077E-03	-0.200
PA-234	-1.042E-01		2.545E-01	4.078E-01	7.878E-02	-0.256
PA-234M	7.977E+00		5.891E+00	1.022E+01	1.170E+00	0.781
U-235	7.064E-02		1.963E-01	3.220E-01	5.225E-02	0.219
NP-236	1.192E-02		7.125E-02	1.173E-01	6.135E-03	0.102
NP-239	5.464E-02		1.747E-01	2.937E-01	1.875E-02	0.186
AM-241	9.767E-02		1.401E-01	2.048E-01	1.592E-02	0.477

Sample ID : G232585001 Acquisition date : 9-JUL-2009 08:16:01

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.558E-02		8.501E-02	1.417E-01	1.030E-02	-0.110
CM-247	-2.231E-02		3.109E-02	4.794E-02	2.757E-03	-0.465
CF-249	1.614E-02		3.305E-02	5.386E-02	3.058E-03	0.300
CF-251	-8.564E-02		1.132E-01	1.789E-01	9.248E-03	-0.479

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232585001           *
* Acquisition date  :  9-JUL-2009 08:16:01 Detector SN#     :               *
* Detector ID       : GAM22                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.89     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232585001           Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.3282E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.637E+01	2.900E+00	1.995E-01	1.479E+00
CD-109	2.695E+00	8.853E-01	7.196E-01	4.517E-01
SN-126	2.654E-01	8.718E-02	6.644E-02	4.448E-02
RE-188	1.504E-01	1.744E-01	1.274E-01	8.897E-02
TL-208	5.336E-01	7.833E-02	2.324E-02	3.997E-02
BI-211	4.040E+00	4.161E-01	1.451E-01	2.123E-01
PB-212	1.726E+00	1.535E-01	4.080E-02	7.831E-02
PO-212	1.726E+00	1.535E-01	4.080E-02	7.831E-02
BI-214	1.232E+00	1.727E-01	4.764E-02	8.810E-02
PB-214	1.405E+00	1.616E-01	5.023E-02	8.246E-02
PO-214	1.405E+00	1.616E-01	5.023E-02	8.246E-02
PO-216	1.726E+00	1.535E-01	4.080E-02	7.831E-02
PO-218	1.405E+00	1.616E-01	5.023E-02	8.246E-02
RA-224	4.762E+00	1.146E+00	4.636E-01	5.846E-01
RA-226	1.232E+00	1.727E-01	4.764E-02	8.810E-02
AC-228	1.912E+00	3.291E-01	8.689E-02	1.679E-01
RA-228	1.912E+00	3.291E-01	8.689E-02	1.679E-01
TH-228	1.726E+00	1.535E-01	4.080E-02	7.831E-02
TH-230	1.232E+00	1.727E-01	4.764E-02	8.810E-02
TH-232	1.912E+00	3.291E-01	8.689E-02	1.679E-01
TH-234	5.815E-01	1.307E+00	9.501E-01	6.670E-01
U-234	1.232E+00	1.727E-01	4.764E-02	8.810E-02
NP-237	7.794E-01	3.006E-01	1.619E-01	1.534E-01
U-238	5.815E-01	1.307E+00	9.501E-01	6.670E-01
AM-243	3.876E-01	7.128E-02	4.150E-02	3.637E-02
ANH-511	1.624E-01	5.176E-02	1.908E-02	2.641E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-3.195E-02	2.482E-01	2.062E-01	1.266E-01 NOT IDENT.

NA-22	-9.607E-05	3.966E-02	3.382E-02	2.023E-02	NOT IDENT.
NA-24	-2.068E+03	1.495E+05	0.000E+00	7.628E+04	SHORT HLIF
AL-26	-6.553E-03	2.156E-02	1.745E-02	1.100E-02	NOT IDENT.
TI-44	4.118E-01	5.771E-02	3.785E-02	2.944E-02	FAIL ABUN
SC-46	6.096E-03	3.197E-02	2.771E-02	1.631E-02	FAIL ABUN
V-48	-2.663E-02	5.580E-02	4.577E-02	2.847E-02	NOT IDENT.
CR-51	-1.359E-01	2.920E-01	2.484E-01	1.490E-01	NOT IDENT.
MN-52	-1.091E-01	1.644E-01	1.297E-01	8.390E-02	NOT IDENT.
MN-54	-1.261E-02	3.297E-02	2.784E-02	1.682E-02	NOT IDENT.
CO-56	-3.070E-02	3.444E-02	2.805E-02	1.757E-02	NOT IDENT.
CO-57	6.759E-03	2.192E-02	1.963E-02	1.118E-02	NOT IDENT.
CO-58	-2.724E-02	3.112E-02	2.540E-02	1.588E-02	NOT IDENT.
FE-59	-3.054E-02	8.053E-02	6.584E-02	4.109E-02	NOT IDENT.
CO-60	1.577E-02	3.305E-02	2.904E-02	1.686E-02	NOT IDENT.
ZN-65	6.963E-02	9.119E-02	6.922E-02	4.653E-02	NOT IDENT.
GE-68	7.871E-01	1.130E+00	9.882E-01	5.766E-01	NOT IDENT.
AS-73	1.287E-01	6.689E-01	5.714E-01	3.413E-01	NOT IDENT.
AS-74	-8.003E-02	7.049E-02	5.652E-02	3.597E-02	NOT IDENT.
SE-75	2.673E-02	4.062E-02	3.228E-02	2.072E-02	NOT IDENT.
BR-77	2.106E+00	5.762E+00	4.886E+00	2.940E+00	FAIL ABUN
SR-82	-8.264E-03	3.314E-01	2.362E-01	1.691E-01	NOT IDENT.
RB-83	1.187E-02	5.419E-02	4.558E-02	2.765E-02	NOT IDENT.
RB-84	2.542E-02	5.618E-02	4.946E-02	2.866E-02	NOT IDENT.
KR-85	3.047E+01	7.228E+00	6.526E+00	3.688E+00	NOT IDENT.
SR-85	1.541E-01	3.657E-02	3.302E-02	1.866E-02	NOT IDENT.
RB-86	5.175E-01	6.881E-01	6.034E-01	3.511E-01	NOT IDENT.
Y-88	-2.190E-02	2.805E-02	1.997E-02	1.431E-02	NOT IDENT.
ZR-88	2.988E-03	2.401E-02	2.060E-02	1.225E-02	NOT IDENT.
Y-91	-1.564E+00	1.661E+01	1.370E+01	8.472E+00	NOT IDENT.
NB-94	2.187E-02	2.794E-02	2.457E-02	1.425E-02	NOT IDENT.
NB-95	3.589E-02	4.073E-02	3.118E-02	2.078E-02	NOT IDENT.
NB-95M	3.014E-01	1.295E-01	1.040E-01	6.609E-02	NOT IDENT.
ZR-95	4.351E-02	5.947E-02	5.190E-02	3.034E-02	NOT IDENT.
NB-97	-5.659E+03	2.275E+04	0.000E+00	1.161E+04	SHORT HLIF
ZR-97	1.169E+06	4.865E+05	0.000E+00	2.482E+05	SHORT HLIF
MO-99	3.992E-01	7.008E+00	5.907E+00	3.576E+00	NOT IDENT.
TC-99M	-1.328E+15	1.086E+15	0.000E+00	5.542E+14	SHORT HLIF
RH-101	-2.388E-03	3.108E-02	2.579E-02	1.586E-02	NOT IDENT.
RH-102	1.667E-02	2.244E-02	1.958E-02	1.145E-02	NOT IDENT.
RU-103	-1.629E-02	3.025E-02	2.561E-02	1.544E-02	FAIL ABUN
RH-106	-1.901E-01	2.502E-01	2.034E-01	1.277E-01	FAIL ABUN
RU-106	-1.901E-01	2.495E-01	2.034E-01	1.273E-01	FAIL ABUN
AG-108M	-1.368E-02	2.673E-02	2.196E-02	1.364E-02	NOT IDENT.
AG-110M	-5.089E-03	2.856E-02	2.403E-02	1.457E-02	NOT IDENT.
IN-111	5.137E-01	6.733E-01	5.419E-01	3.435E-01	NOT IDENT.
IN-113M	2.081E-02	3.472E-02	3.047E-02	1.771E-02	NOT IDENT.
SN-113	2.081E-02	3.472E-02	3.047E-02	1.771E-02	NOT IDENT.
IN-114M	9.465E-02	1.748E-01	1.345E-01	8.917E-02	NOT IDENT.
CD-115	-1.331E+00	5.638E+00	4.832E+00	2.876E+00	NOT IDENT.
SN-117M	7.305E-03	5.071E-02	3.893E-02	2.587E-02	NOT IDENT.
SB-122	1.475E-01	1.219E+00	1.058E+00	6.221E-01	NOT IDENT.
I-123	3.973E+05	1.085E+06	0.000E+00	5.537E+05	SHORT HLIF
TE-123M	9.769E-03	2.669E-02	2.180E-02	1.361E-02	NOT IDENT.
I-124	3.801E-01	4.982E-01	3.877E-01	2.542E-01	NOT IDENT.
SB-124	2.588E-02	5.130E-02	4.540E-02	2.617E-02	FAIL ABUN
SB-125	9.204E-02	7.221E-02	6.497E-02	3.684E-02	FAIL ABUN
TE-125M	-9.184E+00	8.264E+00	6.941E+00	4.216E+00	NOT IDENT.
I-126	7.576E-02	1.333E-01	1.168E-01	6.802E-02	NOT IDENT.
SB-126	-4.561E-02	1.305E-01	9.115E-02	6.656E-02	FAIL ABUN
SB-127	-7.227E-01	8.502E-01	6.783E-01	4.338E-01	NOT IDENT.
XE-127	-3.297E-02	4.072E-02	3.371E-02	2.078E-02	NOT IDENT.
I-131	3.673E-03	8.689E-02	7.275E-02	4.433E-02	NOT IDENT.
TE-132	-2.567E-01	4.696E-01	3.872E-01	2.396E-01	NOT IDENT.
BA-133	1.754E-02	4.045E-02	3.094E-02	2.064E-02	NOT IDENT.
I-133	-6.052E+01	1.706E+03	0.000E+00	8.702E+02	SHORT HLIF
CS-134	9.407E-02	6.794E-02	3.776E-02	3.466E-02	FAIL ABUN
CS-135	2.999E-01	1.516E-01	1.264E-01	7.734E-02	NOT IDENT.
I-135	-2.234E+14	2.049E+14	0.000E+00	1.046E+14	SHORT HLIF
CS-136	-9.796E-03	8.864E-02	7.414E-02	4.522E-02	FAIL ABUN
BA-137M	1.733E-02	2.907E-02	2.549E-02	1.483E-02	NOT IDENT.
CS-137	1.832E-02	3.073E-02	2.694E-02	1.568E-02	NOT IDENT.
CE-139	2.037E-02	2.600E-02	2.311E-02	1.326E-02	NOT IDENT.
BA-140	2.424E-02	1.882E-01	1.641E-01	9.602E-02	NOT IDENT.
LA-140	-1.131E-01	6.986E-02	4.804E-02	3.564E-02	FAIL ABUN
CE-141	6.478E-02	5.378E-02	4.876E-02	2.744E-02	NOT IDENT.
CE-143	4.747E+02	1.268E+02	0.000E+00	6.470E+01	SHORT HLIF
CE-144	-2.503E-02	2.100E-01	1.617E-01	1.072E-01	NOT IDENT.
PM-144	-1.722E-02	2.880E-02	2.349E-02	1.470E-02	NOT IDENT.

PR-144	-1.166E+00	1.951E+00	1.591E+00	9.952E-01	NOT IDENT.
PM-146	-1.075E-03	3.755E-02	3.066E-02	1.916E-02	NOT IDENT.
ND-147	1.429E-01	4.049E-01	3.574E-01	2.066E-01	NOT IDENT.
PM-149	-2.951E+01	5.082E+01	4.340E+01	2.593E+01	NOT IDENT.
EU-152	-1.389E-03	1.060E-01	6.909E-02	5.407E-02	NOT IDENT.
GD-153	-3.782E-02	7.548E-02	5.868E-02	3.851E-02	FAIL ABUN
EU-154	-1.588E-03	1.108E-01	9.438E-02	5.651E-02	NOT IDENT.
EU-155	9.922E-02	9.220E-02	8.501E-02	4.704E-02	FAIL ABUN
TB-160	9.211E-02	1.113E-01	1.000E-01	5.676E-02	FAIL ABUN
HO-166M	-1.146E-03	4.953E-02	4.172E-02	2.527E-02	FAIL ABUN
TM-171	8.784E+00	2.753E+01	2.126E+01	1.405E+01	NOT IDENT.
LU-176	5.859E-03	2.135E-02	1.717E-02	1.089E-02	FAIL ABUN
LU-177	1.815E+00	1.069E+00	7.913E-01	5.455E-01	FAIL ABUN
LU-177M	-1.257E-01	1.529E-01	1.246E-01	7.799E-02	FAIL ABUN
HF-181	-1.446E-02	3.227E-02	2.760E-02	1.646E-02	NOT IDENT.
W-181	2.834E-01	3.547E-01	2.791E-01	1.810E-01	NOT IDENT.
TA-182	7.708E-02	1.714E-01	1.502E-01	8.743E-02	FAIL ABUN
RE-183	-6.756E-02	9.878E-02	8.304E-02	5.040E-02	FAIL ABUN
RE-184	-1.423E-01	1.914E-01	1.648E-01	9.765E-02	NOT IDENT.
OS-185	7.390E-03	3.337E-02	2.878E-02	1.703E-02	NOT IDENT.
W-188	2.488E-01	6.688E+00	5.099E+00	3.412E+00	FAIL ABUN
IR-192	8.018E-03	2.704E-02	2.380E-02	1.379E-02	FAIL ABUN
AU-195	1.457E-01	1.961E-01	1.746E-01	1.001E-01	FAIL ABUN
TL-200	-3.804E+01	1.665E+02	0.000E+00	8.496E+01	SHORT HLIF
TL-201	8.764E-01	4.610E+00	4.020E+00	2.352E+00	NOT IDENT.
TL-202	-3.428E-02	5.258E-02	4.278E-02	2.683E-02	NOT IDENT.
HG-203	5.531E-02	3.409E-02	3.153E-02	1.739E-02	FAIL ABUN
BI-207	2.446E-03	4.696E-02	3.962E-02	2.396E-02	FAIL ABUN
TL-207	2.142E-01	6.062E-01	4.652E-01	3.093E-01	FAIL ABUN
PO-209	1.472E+00	6.141E+00	5.334E+00	3.133E+00	NOT IDENT.
BI-210	-8.058E-01	2.491E+00	2.147E+00	1.271E+00	NOT IDENT.
PB-210	-8.058E-01	2.491E+00	2.147E+00	1.271E+00	NOT IDENT.
PO-210	-8.058E-01	2.491E+00	2.147E+00	1.271E+00	NOT IDENT.
PB-211	-4.540E-01	8.047E-01	6.232E-01	4.106E-01	NOT IDENT.
BI-212	9.779E-01	4.376E-01	2.796E-01	2.233E-01	FAIL ABUN
PO-215	2.142E-01	6.062E-01	4.652E-01	3.093E-01	FAIL ABUN
RN-219	-7.183E-02	3.413E-01	2.831E-01	1.741E-01	FAIL ABUN
RN-220	-1.332E+01	1.988E+01	1.653E+01	1.014E+01	NOT IDENT.
RA-223	2.142E-01	6.062E-01	4.652E-01	3.093E-01	FAIL ABUN
AC-227	3.492E-01	3.166E-01	2.881E-01	1.615E-01	FAIL ABUN
TH-227	3.492E-01	3.183E-01	2.881E-01	1.624E-01	FAIL ABUN
TH-229	-5.150E-01	4.515E-01	3.702E-01	2.304E-01	FAIL ABUN
PA-231	-3.724E-01	1.268E+00	1.099E+00	6.471E-01	FAIL ABUN
TH-231	2.142E-01	6.062E-01	4.652E-01	3.093E-01	FAIL ABUN
U-231	-1.171E-01	8.258E-01	6.530E-01	4.213E-01	FAIL ABUN
PA-233	-1.679E-02	5.047E-02	4.329E-02	2.575E-02	FAIL ABUN
PA-234	-1.042E-01	2.494E-01	2.059E-01	1.272E-01	FAIL ABUN
PA-234M	7.977E+00	5.773E+00	5.155E+00	2.946E+00	NOT IDENT.
U-235	7.064E-02	1.924E-01	1.680E-01	9.817E-02	FAIL ABUN
NP-236	1.192E-02	6.983E-02	6.105E-02	3.563E-02	FAIL ABUN
NP-239	5.464E-02	1.712E-01	1.537E-01	8.733E-02	FAIL ABUN
AM-241	9.767E-02	1.373E-01	1.084E-01	7.004E-02	NOT IDENT.
CM-243	-1.558E-02	8.331E-02	7.431E-02	4.250E-02	FAIL ABUN
CM-247	-2.231E-02	3.047E-02	2.457E-02	1.554E-02	NOT IDENT.
CF-249	1.614E-02	3.239E-02	2.762E-02	1.653E-02	NOT IDENT.
CF-251	-8.564E-02	1.109E-01	9.300E-02	5.658E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	399.1469
46.50	399.1469
46.50	399.1469
48.70	449.1743
49.72	440.0374
51.35	435.9948
52.39	407.2479
52.97	451.3115
53.15	451.5761
53.44	457.4200
54.07	442.0583
56.28	499.8466
56.28	499.8519
57.37	0.0000
57.53	471.0484
57.53	471.0516
57.60	471.1498
57.98	505.7852
57.98	505.7852
59.32	505.0888
59.32	505.0888
59.40	505.2109
59.54	470.6242
59.72	470.8788
60.01	549.2832
61.10	572.7092
61.14	572.7774
61.30	549.7260
63.00	609.3831
63.29	627.7665
63.29	627.7665
63.58	647.2970
64.28	687.2434
65.12	616.4606
65.20	616.6002
65.20	616.6002
66.05	614.6999
66.72	627.6901
66.83	597.4219
66.91	584.0142
67.20	584.4827
67.20	584.4827
67.75	661.7224
67.85	659.8702
68.90	723.0435
68.90	723.0435
69.30	708.8364
69.67	723.1957
70.82	686.0768
70.82	686.0768
70.83	686.0951
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74.67	686.1268
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74.81	686.3752
74.81	686.3752
74.81	686.3752
74.81	686.3752
74.97	686.6569
75.28	687.2021
75.70	687.9411
77.11	690.4036
77.11	690.4036
77.11	690.4036

77.11	690.4036
77.11	690.4036
77.11	690.4036
78.38	692.6025
79.62	694.7349
79.80	691.8895
79.80	691.8895
80.11	692.4171
80.18	692.5362
80.30	692.7397
80.30	692.7397
80.57	693.1981
81.00	456.5294
81.07	456.6068
81.07	456.6068
81.07	456.6068
81.07	456.6068
82.60	458.2988
83.37	554.4997
83.78	555.0459
83.78	555.0459
83.78	555.0459
83.78	555.0459
84.21	506.0685
84.40	538.1602
84.90	538.7957
85.43	539.4659
86.29	540.5514
86.50	540.8158
86.54	540.8668
86.59	540.9294
86.72	541.0918
86.79	541.1776
86.94	835.7959
87.30	930.3621
87.30	930.3621
87.30	930.3621
87.30	930.3621
87.30	930.3621
87.30	930.3621
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87.88	920.8965
88.03	921.2155
88.36	979.0851
88.47	979.3318
89.95	982.6347
91.11	819.8064
92.29	648.9212
92.38	649.0503
92.38	649.0503
93.35	492.8911
94.00	480.5692
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94.67	468.2278
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94.90	487.3169
94.90	487.3169
94.90	487.3169
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95.87	526.1329
96.73	525.6556
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98.44	484.3582
98.88	462.8676
99.55	452.2743
99.55	452.2743
99.86	450.7379
100.00	442.6235
100.10	442.7193
103.18	534.1102
103.76	484.8736
105.00	437.0255
105.31	439.1530
108.00	505.8001
109.28	515.4869
111.00	494.7382
111.00	494.7382

111.76	507.6684
112.95	516.3608
115.19	442.0653
116.30	455.2990
117.00	479.5944
117.00	479.5944
117.66	479.2379
121.11	458.4283
121.62	434.0003
121.78	429.3456
122.06	434.3484
122.32	435.5100
122.32	435.5100
122.32	435.5100
122.32	435.5100
123.07	421.7265
127.23	517.5734
129.76	481.0761
131.20	485.3900
133.02	494.7127
133.54	495.1539
135.34	476.7465
136.00	491.1422
136.25	475.6569
136.48	475.8419
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140.51	0.0000
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142.65	446.0209
143.76	472.6408
144.24	445.1836
144.24	445.1836
144.24	445.1836
144.24	445.1836
145.22	437.9221
145.44	438.0765
147.16	534.1265
152.43	434.8707
152.70	465.6668
153.22	471.6848
154.21	437.6789
154.21	437.6789
154.21	437.6789
154.21	437.6789
155.03	444.6997
156.02	466.4250
158.56	425.9515
159.00	0.0000
159.00	429.7545
160.31	437.0516
161.27	451.9565
162.32	475.1393
162.64	465.1434
163.35	467.6761
163.89	444.4897
165.85	415.9784
167.43	432.3752
171.28	427.5164
171.86	429.9413
172.10	428.0142
176.55	443.2066
176.60	443.2358
181.06	359.2885
184.41	428.3800
185.71	455.1030
186.00	455.2806
190.27	394.3349
192.34	431.7614
193.63	460.9380
197.04	406.1660
198.01	419.5452
198.60	435.9655
200.40	419.7427
201.83	450.6881
202.84	454.4977
205.31	433.1573
208.36	403.4823
208.81	414.1467

209.75	406.1304
209.75	406.1304
210.97	403.0262
215.65	391.0147
216.55	386.4180
218.09	370.6275
222.10	388.9558
223.80	397.4741
226.40	356.4718
227.00	382.2785
227.08	382.3126
227.20	382.3651
228.16	400.5890
228.18	400.6000
228.18	400.6000
231.56	0.0000
235.69	402.2184
236.00	407.7466
236.00	407.7466
238.60	371.0942
238.63	371.1068
238.63	371.1068
238.63	371.1068
239.00	371.2577
240.98	372.0699
241.98	328.4791
241.98	328.4791
241.98	328.4791
244.69	302.2481
245.39	273.7408
247.94	318.4756
248.90	316.0699
249.79	309.9885
252.40	334.6206
252.85	340.2697
252.85	340.2697
254.15	0.0000
256.20	289.1496
256.20	289.1496
260.50	331.0145
260.90	341.2970
262.80	336.1890
264.65	283.9699
268.24	291.2026
268.79	308.4152
269.46	300.5572
269.46	300.5572
269.46	300.5572
269.46	300.5572
271.23	287.4215
273.65	398.6875
276.40	306.0786
277.35	291.9071
277.60	296.0182
277.60	296.0182
278.00	297.4932
278.60	291.0942
279.20	292.2041
279.53	304.5173
280.46	328.3122
281.68	371.0872
283.67	302.9163
284.30	301.2120
285.00	298.5799
285.90	305.4621
286.10	296.0586
286.10	296.0586
287.40	281.4115
288.45	0.0000
290.67	283.4240
290.80	283.4567
291.72	269.4399
293.26	0.0000
293.70	269.6273
295.21	270.0107
295.21	270.0107
295.21	270.0107
295.96	270.2007

296.50	270.3355
297.23	270.5220
298.57	270.8606
299.80	271.1680
299.80	271.1680
300.09	271.2406
300.09	271.2406
300.09	271.2406
300.10	271.2440
300.12	271.2509
301.29	254.2732
302.84	272.2518
303.76	243.6323
303.91	243.6633
304.40	237.3595
304.40	237.3595
304.84	242.2691
306.84	239.7264
308.46	239.5265
311.98	249.0095
316.51	235.4271
318.01	237.6885
319.02	257.4032
319.41	266.2683
320.08	263.4972
323.87	244.7937
323.87	244.7937
323.87	244.7937
323.87	244.7937
325.23	245.0836
328.77	221.2509
333.44	222.1408
334.20	222.2836
334.20	222.2836
334.30	222.3029
338.28	235.9431
338.28	235.9431
338.28	235.9431
338.28	235.9431
338.32	235.9489
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338.32	235.9489
340.50	264.8568
340.57	264.8698
344.27	251.5753
345.85	209.5078
350.59	0.0000
351.07	258.8379
351.92	255.6755
351.92	255.6755
351.92	255.6755
355.39	0.0000
356.01	226.3486
364.48	217.7662
366.43	211.0012
367.43	224.3668
367.94	0.0000
369.80	224.7850
374.96	202.2056
383.85	201.5412
387.95	191.8556
388.63	205.3694
391.69	189.2940
391.69	189.2940
392.90	199.8181
398.62	206.9119
400.65	180.1485
401.10	195.8326
401.81	212.6112
402.60	221.0770
404.84	226.6633
410.95	224.5250
411.60	215.1849
413.65	258.6033
414.70	239.8620
415.30	213.6530
415.76	200.0358
417.63	0.0000

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423.70	205.4051
427.08	168.7473
427.89	157.1633
432.53	191.7642
433.93	201.5462
439.47	202.3190
439.56	202.3306
439.89	183.1028
443.98	202.9420
444.90	204.1433
445.03	196.6401
445.03	196.6401
445.03	196.6401
445.03	196.6401
453.90	196.9766
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511.00	166.2784
511.85	166.3653
511.85	166.3653
513.99	150.8051
513.99	150.8051
520.41	148.8126
520.65	148.8319
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528.96	0.0000
529.64	160.5855
529.87	0.0000
531.02	152.2084
537.32	154.6696
543.00	152.3242
546.56	0.0000
549.76	158.6510
552.65	146.4694
555.20	151.4745
563.23	176.2388
563.90	173.4155
568.70	185.4727
569.32	175.8719
569.50	172.0247
569.67	172.0428
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574.00	196.4831
574.64	196.4241
578.91	169.8696
579.30	0.0000
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591.81	144.7902
592.07	142.0686
593.00	150.5761
595.88	182.3634
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602.52	0.0000
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602.71	156.8824
603.60	173.8305
604.41	185.7247
604.70	190.8215
609.31	172.8068
609.31	172.8068
609.31	172.8068

609.31	172.8068
610.33	172.8994
612.46	171.2547
614.37	149.3594
618.01	150.2825
621.84	155.0542
621.84	155.0542
631.29	155.8096
633.02	152.9471
633.10	150.9539
634.78	136.0747
635.90	137.1533
636.97	138.2302
645.85	122.7521
646.12	133.8388
656.30	138.5637
657.75	156.8826
657.90	0.0000
661.65	143.9992
661.65	143.9992
664.57	0.0000
666.33	135.1837
666.33	135.1837
675.00	148.0031
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685.20	144.6260
692.80	124.5621
695.00	166.9406
696.49	171.1841
696.49	171.1841
697.00	171.2246
697.49	172.2969
698.33	176.4933
698.50	170.3140
699.00	161.0623
702.63	144.7880
706.10	157.4551
706.58	0.0000
706.67	169.9291
709.31	161.8398
711.68	143.3232
713.82	139.3053
717.42	147.6782
720.50	153.7364
721.93	0.0000
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722.78	150.3193
722.89	150.3252
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742.81	133.7774
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747.13	125.5926
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753.82	136.5507
755.35	128.1686
756.15	130.3322
756.87	127.1948
763.93	136.7013
765.79	142.2836
766.41	136.8478
766.84	135.0490
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768.36	118.2469
768.36	118.2469
768.36	118.2469
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778.00	115.5300
778.57	113.7243
778.89	130.2500
783.80	124.3970

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792.07	166.0379
795.84	109.0200
796.30	110.8887
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805.60	117.9702
810.29	130.1294
810.76	136.6641
815.85	122.9766
817.79	107.2249
818.51	105.3916
819.60	100.7735
826.30	139.4121
828.27	0.0000
831.60	139.7135
831.96	150.9880
834.83	170.8821
836.80	0.0000
846.75	159.4395
848.13	151.0296
856.28	0.0000
856.80	121.0065
860.37	127.1042
867.32	78.2310
867.82	79.9116
871.10	117.1636
873.19	111.5401
874.81	123.0566
875.33	0.0000
876.40	113.5879
879.36	99.3843
880.27	101.3307
880.51	106.1221
881.50	109.9884
883.24	108.1485
884.67	124.4866
889.25	113.1951
896.60	113.5141
898.02	116.4633
899.00	116.5056
903.28	118.1421
911.07	108.3340
911.07	108.3340
911.07	108.3340
919.63	117.7384
920.93	120.0609
925.00	90.4262
925.24	95.2964
926.50	108.9609
934.06	108.2900
934.06	108.2900
934.06	108.2900
934.06	108.2900
935.52	101.5153
937.48	111.3560
944.10	112.6055
946.00	119.5427
949.00	119.6746
962.29	172.4915
964.01	172.5983
966.15	160.6384
968.20	188.4149
969.11	177.8530
969.11	177.8530
969.11	177.8530
977.42	115.6169
980.50	112.1054
983.50	117.1892
989.30	102.5025
996.32	140.6631
1001.03	90.9318
1001.68	96.9492
1004.76	106.0573
1021.30	0.0000
1024.50	0.0000
1034.80	102.0991
1037.82	109.2882
1038.57	108.3024

1038.76	0.0000
1045.16	124.7717
1046.59	123.8169
1048.07	122.8653
1050.47	124.9948
1050.47	124.9948
1063.62	125.5396
1076.63	117.8798
1077.35	117.9079
1085.78	133.6499
1099.22	135.2628
1112.02	139.7082
1112.84	143.3707
1115.52	123.5156
1120.29	129.9395
1120.29	129.9395
1120.29	129.9395
1120.29	129.9395
1120.51	129.9482
1121.28	120.1003
1124.00	0.0000
1129.67	129.9061
1131.51	0.0000
1147.95	0.0000
1167.94	118.1602
1173.22	127.8577
1175.09	136.3876
1177.93	146.0330
1189.05	160.3216
1204.90	147.2170
1205.75	0.0000
1213.00	149.7070
1221.42	147.2642
1230.97	190.0038
1235.34	161.0483
1236.41	0.0000
1238.11	144.2126
1238.11	144.2126
1238.11	144.2126
1238.11	144.2126
1238.25	144.2173
1246.25	188.9587
1260.41	0.0000
1271.85	132.2892
1274.45	121.9102
1274.54	121.9141
1291.56	101.4453
1298.22	0.0000
1312.09	82.7745
1325.50	84.0450
1325.50	84.0450
1332.49	73.5601
1333.61	76.4854
1360.21	54.6089
1362.66	0.0000
1365.15	78.1152
1368.21	64.4974
1368.53	0.0000
1376.25	67.5723
1377.67	72.4960
1377.67	72.4960
1377.67	72.4960
1377.67	72.4960
1384.27	95.1943
1394.10	72.8121
1395.20	75.7851
1407.95	79.9865
1434.06	63.6250
1436.60	48.7443
1457.56	0.0000
1460.81	41.0375
1489.15	54.4318
1509.49	44.5747
1596.49	72.4011
1620.62	30.1620
1678.03	0.0000
1691.02	21.1340
1691.02	21.1340

1706.46	0.0000
1750.46	0.0000
1764.49	29.2046
1764.49	29.2046
1764.49	29.2046
1764.49	29.2046
1770.23	27.5203
1771.40	29.2478
1791.20	0.0000
1808.65	26.9731
1836.01	37.2021

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232585001

Total Uranium Activity	1.7628E+00	ug/g
Total Uranium Counting Unc.	3.8905E+00	ug/g
Total Uranium Tpu	1.9849E-06	ug/g
Total Uranium Mda	2.8277E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID  : G232585001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM22            *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:16:01.92    SAMPLE ALQT:  132.820 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.015E+01
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.448E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 2.273E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 1.108E+00
```

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:34:37.11

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585002.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:34:16.
Sample ID         : G232585002           Sample quantity  : 1.12050E+02 GRAM
Detector name     : GAM01                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.07  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881931                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.27*	72	319	1.54	127.30	124	8	9.99E-03	46.9	
2	3	74.90	391	451	1.43	150.56	144	16	5.43E-02	11.5	1.95E+00
3	3	77.11	466	363	1.13	154.98	144	16	6.47E-02	8.4	
4	6	87.22*	166	363	1.18	175.21	172	21	2.31E-02	19.8	1.64E+00
5	6	89.90*	124	373	1.30	180.57	172	21	1.72E-02	28.9	
6	6	92.82*	214	367	1.58	186.40	172	21	2.97E-02	19.4	
7	0	186.26*	184	293	1.21	373.27	369	10	2.55E-02	20.1	
8	0	209.75	116	322	1.21	420.25	414	13	1.62E-02	33.1	
9	0	238.97*	928	333	1.22	478.67	474	9	1.29E-01	4.9	
10	0	242.22*	155	198	1.53	485.17	483	7	2.16E-02	18.3	
11	0	270.06	91	169	1.71	540.85	537	9	1.27E-02	27.6	
12	0	295.56	336	183	1.39	591.83	585	12	4.67E-02	9.7	
13	0	300.76	70	159	1.32	602.24	598	11	9.76E-03	36.8	
14	0	338.61	223	90	1.51	677.92	674	8	3.09E-02	10.0	
15	0	352.25*	552	138	1.35	705.20	699	12	7.67E-02	6.1	
16	0	392.79	35	173	5.77	786.27	775	16	4.88E-03	86.8	
17	0	410.03	45	96	1.43	820.72	815	10	6.21E-03	43.9	
18	0	511.07*	130	108	1.84	1022.76	1015	15	1.81E-02	22.1	
19	0	583.54*	254	121	1.39	1167.66	1160	16	3.53E-02	11.8	
20	0	609.67*	399	94	1.52	1219.91	1213	16	5.54E-02	7.6	
21	0	663.31	129	102	2.13	1327.15	1320	20	1.79E-02	20.9	
22	0	727.56	75	39	1.17	1455.62	1449	12	1.04E-02	20.3	
23	0	796.02	31	35	1.67	1592.48	1588	9	4.31E-03	38.4	
24	0	861.18	60	54	1.82	1722.76	1716	16	8.32E-03	30.0	
25	0	911.62*	227	61	1.46	1823.60	1816	16	3.15E-02	10.3	
26	0	969.85*	114	66	1.75	1940.00	1933	16	1.58E-02	19.2	
27	0	1121.09*	65	63	1.97	2242.34	2235	18	9.03E-03	31.9	
28	0	1378.95	30	20	1.43	2757.77	2750	14	4.22E-03	36.6	
29	0	1461.32*	898	15	1.90	2922.40	2916	14	1.25E-01	3.5	
30	0	1765.47*	45	12	2.23	3530.26	3522	16	6.28E-03	24.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:34:39

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:34:16
Sample ID : G232585002 Sample quantity : 112.05 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA1 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.07 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.925E+01	2.909E+00	5.798E-01	4.121E-02	50.453
ZR-88	+	392.90	*	4.493E-02	7.801E-02	5.895E-02	3.187E-03	0.762
CD-109	+	88.03	*	2.978E+00	1.212E+00	1.488E+00	1.370E-01	2.000
IN-113M	+	391.69	*	6.527E-02	1.133E-01	8.594E-02	5.000E-03	0.759
SN-113	+	391.69	*	6.527E-02	1.133E-01	8.594E-02	5.000E-03	0.759
SN-126	+	64.28		9.247E-01	8.787E-01	1.045E+00	1.571E-01	0.885
	+	86.94		1.219E+00	6.994E-01	7.102E-01	2.945E-01	1.716
	+	87.57	*	2.932E-01	1.193E-01	1.474E-01	1.352E-02	1.990
TL-208		277.35		3.889E-01	4.639E-01	7.954E-01	8.418E-02	0.489
	+	510.84		8.288E-01	3.752E-01	2.782E-01	2.783E-02	2.980
	+	583.14	*	4.639E-01	1.131E-01	6.958E-02	4.409E-03	6.667
	+	860.37		1.039E+00	6.274E-01	5.965E-01	4.508E-02	1.742
BI-211		72.87		4.907E+00	4.358E+00	6.589E+00	5.519E-01	0.745
	+	351.07	*	4.338E+00	5.945E-01	3.903E-01	2.472E-02	11.115
PB-212	+	74.81		2.993E+00	7.833E-01	6.788E-01	8.544E-02	4.410
	+	77.11		2.009E+00	3.768E-01	3.825E-01	3.259E-02	5.252
	+	87.30		1.356E+00	5.683E-01	6.838E-01	9.270E-02	1.983
	+	238.63	*	1.569E+00	1.917E-01	1.216E-01	8.857E-03	12.909
	+	300.09		1.851E+00	1.369E+00	1.362E+00	1.128E-01	1.359
PO-212	+	74.81		2.993E+00	7.833E-01	6.788E-01	8.544E-02	4.410
	+	77.11		2.009E+00	3.768E-01	3.825E-01	3.259E-02	5.252
	+	87.30		1.356E+00	5.683E-01	6.838E-01	9.270E-02	1.983
		115.19		3.548E+00	4.425E+00	7.286E+00	4.738E-01	0.487
	+	238.63	*	1.569E+00	1.917E-01	1.216E-01	8.857E-03	12.909
	+	300.09		1.851E+00	1.369E+00	1.362E+00	1.128E-01	1.359
BI-214	+	609.31	*	1.373E+00	2.311E-01	1.236E-01	9.164E-03	11.107
		768.36		2.953E-01	9.806E-01	1.655E+00	1.392E-01	0.178
		934.06		6.640E-01	1.372E+00	2.349E+00	2.199E-01	0.283
	+	1120.29		1.185E+00	7.631E-01	5.374E-01	4.779E-02	2.205
		1238.11		2.189E+00	1.185E+00	2.234E+00	1.864E-01	0.980
	+	1377.67		2.448E+00	1.804E+00	1.797E+00	1.682E-01	1.362
	+	1764.49		1.146E+00	5.616E-01	3.973E-01	2.364E-02	2.884
PB-214	+	74.81		5.157E+00	1.317E+00	1.170E+00	1.313E-01	4.410
	+	77.11		3.444E+00	6.972E-01	6.558E-01	7.495E-02	5.252

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.323E+00	9.622E-01	1.171E+00	1.402E-01	1.983
	+	241.98		1.579E+00	5.925E-01	6.961E-01	5.594E-02	2.268
	+	295.21		1.551E+00	3.295E-01	2.763E-01	2.365E-02	5.614
	+	351.92	*	1.509E+00	2.213E-01	1.361E-01	1.116E-02	11.091
PO-214	+	74.81		5.157E+00	1.317E+00	1.170E+00	1.313E-01	4.410
	+	77.11		3.444E+00	6.972E-01	6.558E-01	7.495E-02	5.252
	+	87.30		2.323E+00	9.622E-01	1.171E+00	1.402E-01	1.983
	+	241.98		1.579E+00	5.925E-01	6.961E-01	5.594E-02	2.268
	+	295.21		1.551E+00	3.295E-01	2.763E-01	2.365E-02	5.614
	+	351.92	*	1.509E+00	2.213E-01	1.361E-01	1.116E-02	11.091
PO-216	+	74.81		2.993E+00	7.833E-01	6.788E-01	8.544E-02	4.410
	+	77.11		2.009E+00	3.768E-01	3.825E-01	3.259E-02	5.252
	+	87.30		1.356E+00	5.683E-01	6.838E-01	9.270E-02	1.983
	+	238.63	*	1.569E+00	1.917E-01	1.216E-01	8.857E-03	12.909
	+	300.09		1.851E+00	1.369E+00	1.362E+00	1.128E-01	1.359
PO-218	+	74.81		5.157E+00	1.317E+00	1.170E+00	1.313E-01	4.410
	+	77.11		3.444E+00	6.972E-01	6.558E-01	7.495E-02	5.252
	+	87.30		2.323E+00	9.622E-01	1.171E+00	1.402E-01	1.983
	+	241.98		1.579E+00	5.925E-01	6.961E-01	5.594E-02	2.268
	+	295.21		1.551E+00	3.295E-01	2.763E-01	2.365E-02	5.614
	+	351.92	*	1.509E+00	2.213E-01	1.361E-01	1.116E-02	11.091
RA-224	+	240.98	*	2.993E+00	1.111E+00	1.698E+00	9.769E-02	1.763
RA-226	+	609.31	*	1.373E+00	2.311E-01	1.236E-01	9.164E-03	11.107
		768.36		2.953E-01	9.806E-01	1.655E+00	1.392E-01	0.178
		934.06		6.640E-01	1.372E+00	2.349E+00	2.199E-01	0.283
	+	1120.29		1.185E+00	7.631E-01	5.374E-01	4.779E-02	2.205
		1238.11		2.189E+00	1.185E+00	2.234E+00	1.864E-01	0.980
	+	1377.67		2.448E+00	1.804E+00	1.797E+00	1.682E-01	1.362
	+	1764.49		1.146E+00	5.616E-01	3.973E-01	2.364E-02	2.884
AC-228	+	338.32		1.924E+00	8.732E-01	4.882E-01	1.990E-01	3.941
	+	911.07	*	1.866E+00	4.276E-01	2.293E-01	2.316E-02	8.140
	+	969.11		1.649E+00	7.365E-01	4.878E-01	1.109E-01	3.380
RA-228	+	338.32		1.924E+00	8.732E-01	4.882E-01	1.990E-01	3.941
	+	911.07	*	1.866E+00	4.276E-01	2.293E-01	2.316E-02	8.140
	+	969.11		1.649E+00	7.365E-01	4.878E-01	1.109E-01	3.380
TH-228		84.40		2.555E+00	3.553E+00	5.178E+00	6.912E-01	0.493
	+	238.60	*	1.569E+00	1.917E-01	1.215E-01	8.856E-03	12.910
	+	300.10		1.851E+00	1.744E+00	1.362E+00	8.029E-01	1.359
TH-230	+	609.31	*	1.373E+00	2.311E-01	1.236E-01	9.164E-03	11.107
		768.36		2.953E-01	9.806E-01	1.655E+00	1.392E-01	0.178
		934.06		6.640E-01	1.372E+00	2.349E+00	2.199E-01	0.283
	+	1120.29		1.185E+00	7.631E-01	5.373E-01	4.779E-02	2.205
		1238.11		2.189E+00	1.185E+00	2.234E+00	1.864E-01	0.980
	+	1377.67		2.448E+00	1.804E+00	1.797E+00	1.682E-01	1.362
	+	1764.49		1.146E+00	5.616E-01	3.973E-01	2.364E-02	2.884
TH-232	+	338.32		1.924E+00	3.996E-01	4.882E-01	2.807E-02	3.941
	+	911.07	*	1.866E+00	4.276E-01	2.293E-01	2.316E-02	8.140
	+	969.11		1.649E+00	7.365E-01	4.878E-01	1.109E-01	3.380
TH-234	+	63.29	*	2.336E+00	2.231E+00	2.583E+00	4.617E-01	0.904

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.420E+00	1.035E+00	9.591E-01	1.730E-01	2.523
U-234	+	609.31	*	1.373E+00	2.311E-01	1.236E-01	9.164E-03	11.107
		768.36		2.953E-01	9.806E-01	1.655E+00	1.392E-01	0.178
		934.06		6.640E-01	1.372E+00	2.349E+00	2.199E-01	0.283
	+	1120.29		1.185E+00	7.631E-01	5.373E-01	4.779E-02	2.205
		1238.11		2.189E+00	1.185E+00	2.234E+00	1.864E-01	0.980
	+	1377.67		2.448E+00	1.804E+00	1.797E+00	1.682E-01	1.362
	+	1764.49		1.146E+00	5.616E-01	3.973E-01	2.364E-02	2.884
NP-237	+	86.50	*	8.610E-01	3.929E-01	5.063E-01	1.142E-01	1.701
		95.87		-9.665E-01	1.284E+00	1.711E+00	4.184E-01	-0.565
U-238	+	63.29	*	2.336E+00	2.231E+00	2.583E+00	4.617E-01	0.904
	+	92.38		2.420E+00	9.612E-01	9.591E-01	8.184E-02	2.523
AM-243	+	74.67	*	4.852E-01	1.186E-01	1.104E-01	9.306E-03	4.394
	+	86.72		3.229E+01	1.314E+01	1.886E+01	1.718E+00	1.712
		117.66		-1.834E+00	4.747E+00	7.396E+00	4.704E-01	-0.248
		142.18		-5.485E+00	1.975E+01	3.309E+01	1.884E+00	-0.166
ANH-511	+	511.00	*	1.790E-01	7.966E-02	6.010E-02	3.328E-03	2.979

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-7.173E-02	3.965E-01	6.260E-01	4.092E-02	-0.115
NA-22		1274.54	*	-1.041E-02	4.785E-02	7.770E-02	4.980E-03	-0.134
NA-24		1368.53	*	-9.408E-02	4.785E-02	Half-Life too short		
AL-26		1129.67		1.892E-01	2.424E+00	3.400E+00	1.994E-01	0.056
		1808.65	*	-1.648E-02	3.962E-02	5.842E-02	3.369E-03	-0.282
TI-44		67.85		5.824E-03	6.535E-02	9.469E-02	7.874E-03	0.062
	+	78.38	*	3.707E-01	6.953E-02	9.424E-02	8.084E-03	3.934
SC-46		889.25	*	-1.080E-02	4.596E-02	7.313E-02	5.139E-03	-0.148
	+	1120.51		2.007E-01	1.286E-01	1.561E-01	9.263E-03	1.286
V-48		944.10		-4.956E-02	1.064E+00	1.724E+00	1.198E-01	-0.029
		983.50	*	1.816E-02	8.272E-02	1.376E-01	9.328E-03	0.132
		1312.09		5.869E-02	8.906E-02	1.601E-01	1.079E-02	0.367
CR-51		320.08	*	2.770E-02	4.340E-01	7.139E-01	4.621E-02	0.039
MN-52		744.21		-3.034E-03	2.476E-01	4.088E-01	2.346E-02	-0.007
		848.13		4.072E-01	6.369E+00	1.052E+01	6.996E-01	0.039
		935.52		3.385E-01	2.538E-01	4.701E-01	3.282E-02	0.720
		1246.25		-3.540E+00	7.519E+00	1.196E+01	7.345E-01	-0.296
		1333.61		-4.212E+00	5.541E+00	8.306E+00	5.755E-01	-0.507
		1434.06	*	-9.530E-02	2.339E-01	3.611E-01	2.470E-02	-0.264
MN-54		834.83	*	1.982E-02	4.676E-02	7.969E-02	5.206E-03	0.249
CO-56		846.75	*	-9.468E-03	4.063E-02	6.472E-02	4.297E-03	-0.146
		977.42		-5.914E-01	4.092E+00	5.600E+00	3.813E-01	-0.106
		1037.82		2.899E-01	3.948E-01	6.881E-01	4.879E-02	0.421
		1175.09		2.686E+00	3.021E+00	5.442E+00	3.004E-01	0.494
		1238.25		2.166E-01	1.179E-01	2.231E-01	1.433E-02	0.971
		1360.21		5.100E-01	1.160E+00	2.044E+00	1.413E-01	0.249
		1771.40		1.250E-01	2.553E-01	4.212E-01	2.495E-02	0.297

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-8.881E-03	3.082E-02	4.816E-02	2.958E-03	-0.184
		136.48		2.249E-02	2.377E-01	4.050E-01	2.720E-02	0.056
CO-58		810.76	*	-4.609E-02	4.593E-02	6.711E-02	4.259E-03	-0.687
FE-59		142.65		1.086E-02	2.965E+00	5.025E+00	2.857E-01	0.002
		192.34		4.053E-02	1.107E+00	1.798E+00	2.097E-01	0.023
		1099.22	*	2.812E-02	1.071E-01	1.779E-01	1.254E-02	0.158
		1291.56		-1.046E-01	1.327E-01	1.973E-01	1.583E-02	-0.530
CO-60		1173.22		4.411E-02	6.254E-02	1.110E-01	6.110E-03	0.397
		1332.49	*	-6.785E-02	5.281E-02	7.315E-02	5.069E-03	-0.928
ZN-65		1115.52	*	-1.701E-02	1.327E-01	1.803E-01	1.079E-02	-0.094
GE-68		1077.35	*	1.024E+00	1.569E+00	2.711E+00	1.693E-01	0.378
AS-73		53.44	*	-2.210E-01	1.133E+00	1.828E+00	1.556E-01	-0.121
AS-74		595.88	*	-1.505E-02	1.074E-01	1.780E-01	9.522E-03	-0.085
		634.78		-3.802E-03	3.823E-01	6.374E-01	3.308E-02	-0.006
SE-75		66.05		-4.260E+00	6.554E+00	9.086E+00	9.262E-01	-0.469
		96.73		-3.078E-01	1.000E+00	1.394E+00	1.846E-01	-0.221
		121.11		5.590E-02	1.649E-01	2.658E-01	2.518E-02	0.210
		136.00		1.303E-02	4.449E-02	7.639E-02	4.500E-03	0.171
		198.60		6.451E-01	2.140E+00	3.539E+00	2.445E-01	0.182
		264.65	*	-3.397E-02	5.542E-02	8.113E-02	4.774E-03	-0.419
		279.53		-3.988E-02	1.304E-01	2.113E-01	1.334E-02	-0.189
		303.91		-1.741E+00	2.699E+00	3.650E+00	3.492E-01	-0.477
		400.65		-2.247E-01	3.215E-01	4.931E-01	4.376E-02	-0.456
BR-77	+	87.88		4.464E+02	1.816E+02	2.844E+02	2.617E+01	1.569
		200.40		-1.585E+02	1.355E+02	2.144E+02	1.188E+01	-0.739
	+	239.00		1.745E+02	1.983E+01	3.087E+01	1.773E+00	5.652
		249.79		2.982E-02	5.483E+01	9.087E+01	5.256E+00	0.000
		281.68		-6.195E+01	7.420E+01	1.162E+02	6.793E+00	-0.533
		297.23		2.811E+02	7.604E+01	1.093E+02	6.394E+00	2.572
		303.76		-3.975E+01	1.564E+02	2.200E+02	1.285E+01	-0.181
		439.47		1.617E+01	1.246E+02	2.028E+02	1.118E+01	0.080
		484.57		5.445E+01	2.018E+02	3.304E+02	1.833E+01	0.165
		520.65	*	-4.443E+00	9.205E+00	1.404E+01	7.764E-01	-0.316
		574.64		6.746E+01	1.714E+02	2.963E+02	1.606E+01	0.228
		578.91		-2.705E+01	8.684E+01	1.230E+02	6.648E+00	-0.220
		585.48		1.044E+03	2.103E+02	4.059E+02	2.186E+01	2.572
		755.35		-6.318E+00	1.414E+02	2.326E+02	1.357E+01	-0.027
		817.79		3.689E+01	1.076E+02	1.831E+02	1.168E+01	0.202
SR-82		698.33		-1.903E+01	4.052E+01	6.452E+01	3.453E+00	-0.295
		776.49	*	-1.458E-01	4.756E-01	7.622E-01	4.586E-02	-0.191
		1395.20		8.992E+00	1.299E+01	2.357E+01	1.622E+00	0.382
RB-83		520.41	*	-4.524E-02	8.673E-02	1.318E-01	7.287E-03	-0.343
		529.64		1.096E-02	1.164E-01	1.977E-01	1.091E-02	0.055
		552.65		8.433E-02	2.285E-01	3.954E-01	2.164E-02	0.213
RB-84		881.50	*	-1.698E-02	8.340E-02	1.334E-01	9.278E-03	-0.127
KR-85		513.99	*	2.227E+01	1.121E+01	1.842E+01	1.019E+00	1.210
SR-85		513.99	*	1.127E-01	5.674E-02	9.318E-02	5.158E-03	1.210
RB-86		1076.63	*	2.627E-01	9.730E-01	1.616E+00	1.010E-01	0.163
Y-88		898.02		9.864E-03	5.135E-02	8.555E-02	6.125E-03	0.115

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	-3.689E-03	3.652E-02	5.778E-02	3.270E-03	-0.064
Y-91		1204.90	*	-1.657E+01	2.287E+01	3.559E+01	2.057E+00	-0.466
NB-94		702.63	*	1.080E-02	4.245E-02	7.186E-02	3.871E-03	0.150
		871.10		-6.682E-03	4.033E-02	6.479E-02	4.445E-03	-0.103
NB-95		765.79	*	-1.514E-03	5.172E-02	8.513E-02	5.043E-03	-0.018
NB-95M		235.69	*	3.335E-02	1.586E-01	2.349E-01	1.756E-02	0.142
ZR-95		724.18		3.209E-02	1.139E-01	1.699E-01	1.132E-02	0.189
		756.15	*	5.910E-02	8.106E-02	1.429E-01	1.010E-02	0.413
NB-97		657.90	*	1.097E-02	8.106E-02	Half-Life too short		
		1024.50		5.397E-01	8.106E-02	Half-Life too short		
ZR-97		254.15		-1.814E+00	8.106E-02	Half-Life too short		
		355.39		1.544E+00	8.106E-02	Half-Life too short		
		507.63	*	8.668E-02	8.106E-02	Half-Life too short		
		602.52		1.004E+00	8.106E-02	Half-Life too short		
		1021.30		-2.599E+00	8.106E-02	Half-Life too short		
		1147.95		-7.587E-01	8.106E-02	Half-Life too short		
		1362.66		-1.842E-01	8.106E-02	Half-Life too short		
		1750.46		-1.278E-02	8.106E-02	Half-Life too short		
MO-99		140.51		-1.003E+01	2.163E+01	3.569E+01	9.613E+00	-0.281
		181.06		-9.589E+00	1.626E+01	2.308E+01	3.927E+00	-0.416
		366.43		-1.467E+01	7.391E+01	1.185E+02	6.636E+00	-0.124
		739.58	*	-4.949E+00	1.061E+01	1.676E+01	2.302E+00	-0.295
		778.00		-2.305E+01	3.163E+01	4.850E+01	2.925E+00	-0.475
TC-99M		140.51	*	-6.164E+08	3.163E+01	Half-Life too short		
RH-101		127.23		-6.444E-03	3.898E-02	6.122E-02	3.668E-03	-0.105
		198.01	*	1.828E-02	3.876E-02	6.454E-02	3.568E-03	0.283
		325.23		-2.642E-01	2.902E-01	4.473E-01	2.593E-02	-0.591
RH-102		418.52		1.695E-01	3.719E-01	6.201E-01	3.395E-02	0.273
		475.06	*	-1.953E-02	3.645E-02	5.577E-02	3.094E-03	-0.350
		631.29		-2.993E-02	6.114E-02	9.737E-02	5.069E-03	-0.307
		697.49		5.133E-03	9.493E-02	1.582E-01	8.457E-03	0.032
		766.84		1.053E-01	1.386E-01	2.423E-01	1.438E-02	0.435
		1046.59		4.096E-02	1.194E-01	2.019E-01	1.300E-02	0.203
		1112.84		-4.272E-02	3.206E-01	4.774E-01	2.861E-02	-0.089
RU-103		497.08	*	3.474E-02	4.700E-02	7.980E-02	9.999E-03	0.435
	+	610.33		1.450E+01	3.112E+00	3.632E+00	5.533E-01	3.993
RH-106	+	511.85		8.921E-01	3.969E-01	5.597E-01	3.099E-02	1.594
		621.84	*	2.600E-02	3.796E-01	6.378E-01	7.319E-02	0.041
		1050.47		4.753E-01	2.482E+00	4.111E+00	2.638E-01	0.116
RU-106	+	511.85		8.921E-01	3.969E-01	5.597E-01	3.099E-02	1.594
		621.84	*	2.600E-02	3.796E-01	6.378E-01	3.347E-02	0.041
		1050.47		4.753E-01	2.482E+00	4.111E+00	2.638E-01	0.116
AG-108M		433.93	*	1.620E-02	4.284E-02	7.097E-02	4.277E-03	0.228
		614.37		-1.763E-02	4.987E-02	6.929E-02	4.030E-03	-0.254
		722.95		-3.006E-03	5.382E-02	7.674E-02	4.657E-03	-0.039
AG-110M		657.75	*	1.593E-02	3.942E-02	6.039E-02	3.319E-03	0.264
		677.61		-4.775E-02	3.704E-01	6.087E-01	3.393E-02	-0.078
		706.67		4.190E-02	2.602E-01	4.372E-01	2.532E-02	0.096
		763.93		-7.930E-02	2.018E-01	3.211E-01	2.010E-02	-0.247

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		2.467E-03	5.792E-02	9.515E-02	6.970E-03	0.026
		937.48		-4.993E-02	1.349E-01	2.105E-01	1.549E-02	-0.237
		1384.27		2.171E-02	2.004E-01	2.934E-01	2.112E-02	0.074
IN-111		171.28		9.517E-01	8.876E-01	1.557E+00	8.354E-02	0.611
		245.39	*	2.323E-01	9.871E-01	1.465E+00	8.450E-02	0.159
IN-114M		190.27	*	9.323E-03	2.337E-01	3.461E-01	1.897E-02	0.027
CD-115		260.90		-3.427E+01	1.031E+02	1.672E+02	9.727E+00	-0.205
		492.35		1.015E+01	3.028E+01	4.984E+01	2.765E+00	0.204
		527.90	*	-2.172E+00	8.238E+00	1.359E+01	7.500E-01	-0.160
SN-117M		156.02		2.486E+00	2.509E+00	4.397E+00	2.409E-01	0.565
		158.56	*	-2.755E-02	5.930E-02	9.813E-02	5.340E-03	-0.281
SB-122		563.90	*	2.130E+00	1.759E+00	3.216E+00	1.752E-01	0.662
		692.80		-1.147E+00	3.647E+01	6.038E+01	3.204E+00	-0.019
I-123		159.00	*	-3.218E-01	3.647E+01	Half-Life too short		
		528.96		1.365E+01	3.647E+01	Half-Life too short		
TE-123M		159.00	*	-7.788E-03	3.212E-02	5.366E-02	2.961E-03	-0.145
I-124		602.71	*	1.944E-01	7.272E-01	1.087E+00	5.788E-02	0.179
		722.78		-6.777E-01	4.595E+00	6.469E+00	3.594E-01	-0.105
		1325.50		-1.553E+00	3.722E+01	6.166E+01	4.232E+00	-0.025
		1376.25		5.300E+01	3.635E+01	6.425E+01	4.434E+00	0.825
		1509.49		1.948E+01	1.586E+01	3.061E+01	2.056E+00	0.637
		1691.02		-1.984E+00	3.761E+00	5.427E+00	3.377E-01	-0.366
SB-124		602.71		1.373E-02	5.134E-02	7.672E-02	4.088E-03	0.179
		645.85		-1.712E-01	5.809E-01	9.427E-01	5.620E-02	-0.182
		709.31		-2.764E+00	3.583E+00	5.286E+00	2.877E-01	-0.523
		713.82		7.061E-01	1.898E+00	3.249E+00	3.260E-01	0.217
		722.78		-6.935E-02	4.702E-01	6.619E-01	3.867E-02	-0.105
		968.20		1.202E+01	4.883E+00	8.380E+00	5.740E-01	1.434
		1045.16		-5.572E-01	2.670E+00	4.198E+00	2.707E-01	-0.133
		1325.50		-1.698E-01	4.068E+00	6.739E+00	4.626E-01	-0.025
		1368.21		-7.612E-01	1.904E+00	2.956E+00	3.681E-01	-0.257
		1436.60		-5.245E-02	4.137E+00	6.834E+00	4.672E-01	-0.008
		1691.02	*	-4.789E-02	9.079E-02	1.310E-01	8.760E-03	-0.366
SB-125		427.89	*	-3.754E-02	1.167E-01	1.836E-01	1.056E-02	-0.204
		463.38		6.091E-01	3.924E-01	6.916E-01	4.525E-02	0.881
		600.56		-5.232E-02	2.121E-01	3.481E-01	2.196E-02	-0.150
		635.90		-5.981E-04	3.138E-01	5.236E-01	3.285E-02	-0.001
TE-125M		109.28	*	-1.149E+01	1.090E+01	1.600E+01	1.428E+00	-0.718
I-126		388.63		7.457E-02	2.840E-01	4.126E-01	2.240E-02	0.181
		666.33	*	2.446E-01	2.099E-01	3.805E-01	1.936E-02	0.643
		753.82		3.362E-01	1.671E+00	2.810E+00	1.636E-01	0.120
SB-126		223.80		-6.598E-01	4.528E+00	7.489E+00	4.250E-01	-0.088
		278.60		6.374E-01	2.836E+00	4.733E+00	2.767E-01	0.135
	+	296.50		1.439E+01	2.922E+00	4.195E+00	2.454E-01	3.431
		414.70		4.388E-02	1.002E-01	1.478E-01	8.079E-03	0.297
		415.30		5.403E+00	7.871E+00	1.246E+01	6.811E-01	0.434
		555.20		1.869E+00	4.210E+00	7.330E+00	4.009E-01	0.255
		573.80		2.072E-01	1.126E+00	1.918E+00	1.040E-01	0.108
		593.00		3.170E-01	1.051E+00	1.803E+00	9.664E-02	0.176

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		656.30		5.932E-01	3.597E+00	5.331E+00	2.708E-01	0.111
		666.33		1.019E-01	8.745E-02	1.586E-01	8.066E-03	0.643
		675.00		1.969E-01	2.255E+00	3.777E+00	1.948E-01	0.052
		695.00		5.937E-02	8.645E-02	1.517E-01	8.077E-03	0.391
		697.00		-8.272E-02	3.082E-01	4.997E-01	2.669E-02	-0.166
		720.50	*	1.556E-01	1.543E-01	2.613E-01	1.447E-02	0.595
		856.80		-9.807E-02	6.227E-01	8.624E-01	5.805E-02	-0.114
		989.30		-8.232E-01	1.480E+00	2.247E+00	1.517E-01	-0.366
		1034.80		2.681E+00	1.109E+01	1.840E+01	1.198E+00	0.146
		1213.00		-1.603E+00	5.601E+00	9.137E+00	5.344E-01	-0.175
SB-127		61.10		2.122E+01	6.693E+01	9.852E+01	1.050E+01	0.215
		252.40		5.214E+00	4.628E+00	7.232E+00	2.998E+00	0.721
		290.80		5.356E+00	2.279E+01	3.352E+01	2.932E+00	0.160
		411.60		1.236E+01	1.326E+01	2.035E+01	2.840E+00	0.607
		444.90		-1.658E+00	8.631E+00	1.365E+01	1.401E+00	-0.121
		473.00		-2.406E-01	1.684E+00	2.670E+00	2.851E-01	-0.090
		543.00		2.646E+00	1.577E+01	2.689E+01	3.348E+00	0.098
		603.60		4.313E+00	1.191E+01	1.805E+01	1.827E+00	0.239
		685.20	*	4.535E-01	1.226E+00	2.106E+00	1.821E-01	0.215
		698.50		-8.806E+00	1.489E+01	2.336E+01	3.276E+00	-0.377
		722.20		-2.650E+00	3.025E+01	4.293E+01	3.669E+00	-0.062
		783.80		2.613E+00	3.540E+00	6.201E+00	6.470E-01	0.421
XE-127		57.60		-4.829E+00	8.254E+00	1.306E+01	1.114E+00	-0.370
		145.22		-1.261E-02	7.994E-01	1.303E+00	7.351E-02	-0.010
		172.10		1.162E-01	1.411E-01	2.453E-01	1.317E-02	0.474
		202.84	*	4.416E-02	5.600E-02	9.392E-02	5.220E-03	0.470
		374.96		-1.584E-01	2.283E-01	3.513E-01	1.946E-02	-0.451
I-131		80.18		3.237E+00	5.464E+00	8.073E+00	7.037E-01	0.401
		284.30		4.697E-01	1.555E+00	2.608E+00	1.690E-01	0.180
		364.48	*	1.770E-02	1.205E-01	1.983E-01	1.248E-02	0.089
		636.97		3.074E-01	1.625E+00	2.756E+00	1.635E-01	0.112
		722.89		-1.058E+00	8.202E+00	1.158E+01	6.517E-01	-0.091
TE-132		49.72		1.805E+00	2.105E+01	3.447E+01	3.492E+00	0.052
		111.76		-2.342E+00	2.656E+01	4.146E+01	3.748E+00	-0.056
		116.30		1.428E+01	2.622E+01	4.268E+01	3.770E+00	0.335
		228.16	*	2.872E-01	6.570E-01	1.113E+00	1.567E-01	0.258
BA-133		53.15		-2.447E-01	4.957E+00	8.054E+00	6.847E-01	-0.030
		79.62		2.364E+00	1.721E+00	2.596E+00	3.955E-01	0.911
		81.00		-1.840E-01	1.435E-01	1.874E-01	2.985E-02	-0.982
		276.40		7.110E-01	4.789E-01	8.332E-01	1.082E-01	0.853
		302.84		1.066E-01	1.899E-01	2.859E-01	3.339E-02	0.373
		356.01	*	2.587E-02	5.459E-02	8.150E-02	9.366E-03	0.317
		383.85		-1.635E-01	4.407E-01	6.023E-01	6.444E-02	-0.271
I-133	+	510.53		6.650E-01	4.407E-01	Half-Life too short		
		529.87	*	-4.097E-04	4.407E-01	Half-Life too short		
		706.58		1.896E-02	4.407E-01	Half-Life too short		
		856.28		1.619E-02	4.407E-01	Half-Life too short		
		875.33		-7.270E-03	4.407E-01	Half-Life too short		
		1236.41		1.850E-01	4.407E-01	Half-Life too short		

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1298.22		3.188E-02	4.407E-01	Half-Life too short		
CS-134		475.35		-3.140E-01	2.343E+00	3.716E+00	2.061E-01	-0.084
		563.23		5.109E-01	4.255E-01	7.771E-01	4.335E-02	0.657
		569.32		-1.143E-01	2.230E-01	3.584E-01	2.013E-02	-0.319
		604.70		3.555E-03	4.162E-02	6.122E-02	3.277E-03	0.058
	+	795.84	*	8.236E-02	6.342E-02	1.045E-01	6.558E-03	0.788
		801.93		-7.308E-01	5.475E-01	6.674E-01	4.209E-02	-1.095
		1038.57		3.693E+00	4.912E+00	8.583E+00	5.569E-01	0.430
		1167.94		-4.881E-01	3.255E+00	5.390E+00	2.992E-01	-0.091
		1365.15		2.668E-01	1.415E+00	2.415E+00	1.786E-01	0.110
CS-135		268.24	*	1.309E-01	2.130E-01	3.226E-01	2.478E-02	0.406
I-135		288.45		3.037E+08	2.130E-01	Half-Life too short		
		417.63		1.009E+09	2.130E-01	Half-Life too short		
		546.56		6.754E+07	2.130E-01	Half-Life too short		
		836.80		8.476E+08	2.130E-01	Half-Life too short		
		1038.76		6.394E+08	2.130E-01	Half-Life too short		
		1124.00		1.704E+09	2.130E-01	Half-Life too short		
		1131.51		3.815E+07	2.130E-01	Half-Life too short		
		1260.41	*	1.388E+08	2.130E-01	Half-Life too short		
		1457.56		8.620E+09	2.130E-01	Half-Life too short		
		1678.03		3.914E+08	2.130E-01	Half-Life too short		
		1706.46		-6.178E+08	2.130E-01	Half-Life too short		
		1791.20		-3.326E+08	2.130E-01	Half-Life too short		
CS-136		66.91		-6.670E-01	1.045E+00	1.448E+00	2.211E-01	-0.461
	+	86.29		3.581E+00	1.497E+00	2.266E+00	2.982E-01	1.580
		153.22		-1.848E-01	7.379E-01	1.235E+00	8.643E-02	-0.150
		163.89		-5.539E-01	1.092E+00	1.798E+00	1.242E-01	-0.308
		176.55		1.776E-02	3.994E-01	6.729E-01	4.145E-02	0.026
		273.65		-2.018E-01	6.134E-01	8.677E-01	5.769E-02	-0.233
		340.57		5.596E-01	1.890E-01	3.203E-01	1.956E-02	1.747
		818.51		-3.220E-04	8.356E-02	1.373E-01	8.778E-03	-0.002
		1048.07	*	5.650E-02	1.060E-01	1.833E-01	1.267E-02	0.308
		1235.34		-2.725E-01	7.387E-01	1.198E+00	1.213E-01	-0.228
BA-137M		661.65	*	1.855E-01	5.621E-02	1.054E-01	5.321E-03	1.761
CS-137		661.65	*	1.961E-01	5.943E-02	1.114E-01	5.657E-03	1.761
CE-139		165.85	*	-1.626E-02	3.275E-02	5.396E-02	2.882E-03	-0.301
BA-140		162.64		-3.764E-01	7.690E-01	1.268E+00	7.807E-02	-0.297
		304.84		-6.495E-01	1.572E+00	2.166E+00	5.912E-01	-0.300
		423.70		1.166E+00	2.268E+00	3.751E+00	1.190E+00	0.311
		537.32	*	-1.099E-01	2.825E-01	4.573E-01	1.485E-01	-0.240
LA-140		328.77		1.302E-01	3.558E-01	5.940E-01	3.851E-02	0.219
		432.53		-7.826E-01	2.529E+00	3.983E+00	2.445E-01	-0.196
		487.03		-1.039E-01	1.641E-01	2.484E-01	1.576E-02	-0.418
		751.79		-2.894E-01	1.984E+00	3.233E+00	2.296E-01	-0.090
		815.85		1.134E-01	3.574E-01	6.063E-01	4.641E-02	0.187
		867.82		2.878E-01	1.747E+00	2.538E+00	1.877E-01	0.113
		919.63		2.788E+00	3.079E+00	5.161E+00	4.858E-01	0.540
		925.24		-6.402E-01	1.214E+00	1.850E+00	1.420E-01	-0.346
		1596.49	*	1.700E-02	1.078E-01	1.813E-01	1.181E-02	0.094

---- Non-Identified Nuclides ----

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CE-141		145.44	*	-1.221E-02	7.186E-02	1.163E-01	6.833E-03	-0.105
CE-143		57.37		-3.646E-04	7.186E-02	Half-Life too short		
		231.56		-4.477E-05	7.186E-02	Half-Life too short		
		293.26	*	1.262E-04	7.186E-02	Half-Life too short		
		350.59		1.343E-02	7.186E-02	Half-Life too short		
		490.36		4.348E-04	7.186E-02	Half-Life too short		
	+	664.57		4.700E-03	7.186E-02	Half-Life too short		
		721.93		-9.108E-05	7.186E-02	Half-Life too short		
CE-144		80.11		1.723E+00	2.798E+00	4.139E+00	3.588E-01	0.416
		133.54	*	-2.496E-01	2.548E-01	3.789E-01	5.389E-02	-0.659
PM-144		476.78		-1.512E-02	8.421E-02	1.330E-01	8.955E-03	-0.114
		618.01		1.399E-02	4.014E-02	6.549E-02	3.697E-03	0.214
		696.49	*	-9.450E-03	4.069E-02	6.614E-02	3.532E-03	-0.143
		778.57		-2.649E+00	2.822E+00	4.213E+00	2.544E-01	-0.629
PR-144		696.49	*	-6.399E-01	2.755E+00	4.479E+00	2.390E-01	-0.143
		1489.15		-6.685E+00	1.281E+01	1.895E+01	1.280E+00	-0.353
PM-146		453.90	*	3.046E-02	5.290E-02	8.893E-02	7.509E-03	0.343
		633.02		-1.593E-01	1.533E+00	2.532E+00	9.301E-01	-0.063
		735.90		3.204E-02	1.920E-01	3.219E-01	8.967E-02	0.100
		747.13		-6.926E-02	1.174E-01	1.829E-01	2.284E-02	-0.379
ND-147	+	91.11		6.712E-01	3.928E-01	5.834E-01	5.495E-02	1.150
		319.41		-1.204E+00	3.733E+00	5.989E+00	3.483E-01	-0.201
		439.89		2.899E+00	6.558E+00	1.093E+01	6.031E-01	0.265
		531.02	*	-9.302E-02	5.913E-01	9.839E-01	1.319E-01	-0.095
PM-149		285.90	*	-2.583E+01	7.308E+01	1.177E+02	1.670E+01	-0.219
EU-152		121.78		-1.394E-02	9.021E-02	1.420E-01	1.118E-02	-0.098
		244.69		2.224E-01	4.372E-01	6.602E-01	3.807E-02	0.337
		344.27	*	1.689E-02	1.248E-01	1.986E-01	1.285E-02	0.085
		443.98		-1.089E+00	1.093E+00	1.598E+00	8.820E-02	-0.682
		778.89		-2.866E-01	3.283E-01	4.942E-01	2.984E-02	-0.580
		867.32		1.451E-01	1.111E+00	1.606E+00	1.096E-01	0.090
		964.01		3.852E-01	3.989E-01	6.328E-01	4.346E-02	0.609
		1085.78		5.445E-02	4.601E-01	7.528E-01	4.658E-02	0.072
		1112.02		2.248E-01	4.462E-01	7.361E-01	4.416E-02	0.305
		1407.95		2.328E-02	2.238E-01	3.764E-01	2.586E-02	0.062
GD-153		69.67		2.906E-01	2.315E+00	3.358E+00	2.794E-01	0.087
		83.37		-9.050E+00	2.114E+01	2.916E+01	2.585E+00	-0.310
		97.43	*	-3.417E-04	1.040E-01	1.479E-01	1.171E-02	-0.002
		103.18		-5.895E-02	1.230E-01	1.914E-01	1.408E-02	-0.308
EU-154		123.07		2.962E-03	6.379E-02	1.014E-01	9.725E-03	0.029
		247.94		-4.890E-02	4.401E-01	7.006E-01	6.675E-02	-0.070
		591.81		-1.499E-01	7.680E-01	1.232E+00	1.173E-01	-0.122
		723.30		-3.400E-02	2.232E-01	3.139E-01	2.162E-02	-0.108
		756.87		5.590E-01	8.942E-01	1.562E+00	1.587E-01	0.358
		873.19		-6.354E-02	3.436E-01	5.503E-01	6.101E-02	-0.115
		996.32		-1.476E-01	4.657E-01	7.277E-01	1.232E-01	-0.203
		1004.76		1.723E-01	2.497E-01	4.355E-01	4.478E-02	0.396
		1274.45	*	-2.751E-02	1.340E-01	2.179E-01	2.118E-02	-0.126
EU-155		48.70		1.001E+00	3.537E+00	5.847E+00	4.601E-01	0.171

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		9.564E+00	7.252E+00	1.121E+01	9.514E-01	0.853
	+	86.54		3.530E-01	1.437E-01	2.238E-01	2.054E-02	1.577
		105.31	*	1.102E-01	1.253E-01	2.078E-01	1.518E-02	0.530
TB-160	+	86.79		9.320E-01	3.793E-01	5.898E-01	5.375E-02	1.580
		197.04		1.592E-01	6.350E-01	1.075E+00	5.936E-02	0.148
		215.65		1.167E-01	9.553E-01	1.414E+00	7.963E-02	0.083
		298.57		9.570E-02	2.001E-01	2.224E-01	1.301E-02	0.430
		879.36	*	2.400E-02	1.784E-01	2.860E-01	1.984E-02	0.084
		962.29		-1.287E-01	7.014E-01	1.008E+00	6.931E-02	-0.128
		966.15		5.321E-01	2.905E-01	4.965E-01	3.406E-02	1.072
		1177.93		3.999E-02	4.541E-01	7.682E-01	4.260E-02	0.052
		1271.85		1.277E-01	7.853E-01	1.336E+00	8.516E-02	0.096
HO-166M		80.57		-5.054E-02	3.690E-01	5.249E-01	4.563E-02	-0.096
		184.41		1.217E-01	4.751E-02	7.888E-02	4.295E-03	1.542
		280.46		-1.371E-01	1.018E-01	1.540E-01	9.005E-03	-0.890
	+	410.95		4.586E-01	4.031E-01	5.365E-01	2.928E-02	0.855
		711.68	*	-2.789E-03	7.115E-02	1.175E-01	6.419E-03	-0.024
		752.31		1.337E-02	3.372E-01	5.590E-01	3.247E-02	0.024
		810.29		-7.383E-02	7.109E-02	1.036E-01	6.542E-03	-0.713
TM-171		51.35		-2.183E+01	4.191E+01	6.652E+01	5.570E+00	-0.328
		52.39		-3.437E+00	2.218E+01	3.588E+01	3.035E+00	-0.096
		59.40		4.181E+01	3.995E+01	6.101E+01	5.192E+00	0.685
		66.72	*	-2.252E+01	3.961E+01	5.527E+01	4.598E+00	-0.407
LU-176	+	88.36		6.954E-01	2.830E-01	4.461E-01	4.081E-02	1.559
		201.83		1.146E-02	3.394E-02	5.760E-02	3.198E-03	0.199
		306.84	*	-5.799E-03	3.375E-02	4.784E-02	2.793E-03	-0.121
		401.10		-5.608E+00	8.474E+00	1.305E+01	7.090E-01	-0.430
LU-177		112.95		-1.666E-01	1.746E+00	2.728E+00	1.811E-01	-0.061
	+	208.36	*	3.060E+00	2.031E+00	2.017E+00	1.127E-01	1.517
LU-177M		52.97		8.786E-02	2.246E+00	3.664E+00	3.112E-01	0.024
		54.07		5.099E-01	1.170E+00	1.942E+00	1.656E-01	0.263
		61.30		5.993E-01	2.149E+00	3.158E+00	2.664E-01	0.190
		121.62		-6.942E-02	4.634E-01	7.295E-01	4.486E-02	-0.095
		147.16		-3.833E-01	7.489E-01	1.241E+00	6.966E-02	-0.309
		171.86		4.550E-01	5.783E-01	1.004E+00	5.390E-02	0.453
		218.09		2.312E-01	9.848E-01	1.660E+00	9.371E-02	0.139
	+	268.79		2.355E+00	1.308E+00	1.756E+00	1.024E-01	1.341
		319.02		-7.063E-02	3.053E-01	4.927E-01	2.865E-02	-0.143
		367.43		-4.801E-01	1.103E+00	1.738E+00	9.716E-02	-0.276
		413.65	*	-1.841E-01	2.555E-01	3.335E-01	1.822E-02	-0.552
HF-181		56.28		-1.033E+00	1.306E+00	2.045E+00	1.747E-01	-0.505
		57.53		-4.352E-01	6.965E-01	1.099E+00	9.382E-02	-0.396
		65.20		-6.215E-01	1.294E+00	1.816E+00	1.514E-01	-0.342
		133.02		-3.671E-02	7.939E-02	1.226E-01	7.185E-03	-0.299
		136.25		6.998E-02	5.128E-01	8.751E-01	5.075E-02	0.080
		345.85		-2.174E-01	2.790E-01	3.704E-01	2.117E-02	-0.587
		482.03	*	1.068E-02	5.595E-02	8.966E-02	4.975E-03	0.119
W-181		56.28		-4.093E-01	5.181E-01	8.112E-01	6.931E-02	-0.505
		57.53		-1.731E-01	2.765E-01	4.365E-01	3.725E-02	-0.397

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20	*	-2.448E-01	5.096E-01	7.154E-01	5.964E-02	-0.342
TA-182		67.75		-5.460E-02	1.575E-01	2.227E-01	1.852E-02	-0.245
		100.10		8.864E-02	2.116E-01	3.445E-01	2.632E-02	0.257
		152.43		-2.564E-01	3.971E-01	6.537E-01	3.616E-02	-0.392
		222.10		5.042E-02	4.076E-01	6.830E-01	3.870E-02	0.074
		1001.68		-1.534E+00	2.589E+00	4.056E+00	2.714E-01	-0.378
	+	1121.28		5.559E-01	3.562E-01	4.229E-01	2.508E-02	1.314
		1189.05		-1.598E-02	3.593E-01	5.998E-01	3.384E-02	-0.027
		1221.42	*	2.030E-01	2.383E-01	4.290E-01	2.541E-02	0.473
		1230.97		-2.196E-01	5.870E-01	9.482E-01	5.696E-02	-0.232
RE-183		57.98		3.749E-02	2.708E-01	4.426E-01	3.774E-02	0.085
		59.32		1.674E-01	1.625E-01	2.480E-01	2.111E-02	0.675
		67.20		3.445E-03	2.741E-01	3.956E-01	3.290E-02	0.009
		162.32	*	-2.086E-02	1.179E-01	1.974E-01	1.063E-02	-0.106
	+	208.81		3.094E+00	2.054E+00	2.084E+00	1.166E-01	1.485
		291.72		-1.265E-01	1.285E+00	1.840E+00	1.077E-01	-0.069
RE-184		57.98		1.392E-01	1.005E+00	1.643E+00	1.401E-01	0.085
		59.32		6.208E-01	6.028E-01	9.199E-01	7.828E-02	0.675
		67.20		1.278E-02	1.017E+00	1.468E+00	1.221E-01	0.009
		161.27		2.153E-01	3.849E-01	6.649E-01	3.592E-02	0.324
		216.55		-1.037E-03	3.139E-01	5.061E-01	2.853E-02	-0.002
		252.85	*	1.470E-01	2.771E-01	4.716E-01	2.732E-02	0.312
		318.01		-8.659E-02	5.363E-01	8.698E-01	5.059E-02	-0.100
		792.07		-6.750E-02	1.174E+00	1.659E+00	1.021E-01	-0.041
		903.28		5.543E-01	1.194E+00	1.947E+00	1.381E-01	0.285
		920.93		-7.877E-02	5.075E-01	8.121E-01	5.713E-02	-0.097
OS-185		59.72		5.041E-01	4.326E-01	6.641E-01	5.644E-02	0.759
		61.14		7.268E-02	2.364E-01	3.478E-01	2.936E-02	0.209
		69.30		2.377E-01	4.050E-01	6.014E-01	5.003E-02	0.395
		592.07		-5.391E-01	3.112E+00	5.003E+00	2.684E-01	-0.108
		646.12	*	-2.624E-03	5.040E-02	8.363E-02	4.293E-03	-0.031
		717.42		-7.624E-01	1.014E+00	1.552E+00	8.556E-02	-0.491
		874.81		6.769E-02	6.647E-01	1.100E+00	7.585E-02	0.062
		880.27		2.391E-01	9.229E-01	1.551E+00	1.077E-01	0.154
RE-188		155.03	*	3.236E-01	1.981E-01	3.547E-01	1.948E-02	0.912
		477.96		-7.104E-01	3.837E+00	6.058E+00	3.361E-01	-0.117
		633.10		-3.181E-01	3.059E+00	5.056E+00	2.627E-01	-0.063
W-188	+	63.58		9.272E+01	8.734E+01	1.154E+02	9.658E+00	0.803
		227.08		5.328E+00	1.557E+01	2.632E+01	1.498E+00	0.202
		290.67	*	2.496E+00	9.785E+00	1.442E+01	8.437E-01	0.173
IR-192	+	295.96		1.169E+00	2.376E-01	3.427E-01	2.036E-02	3.411
		308.46		4.790E-02	1.130E-01	1.902E-01	1.123E-02	0.252
		316.51	*	-9.051E-03	4.043E-02	6.530E-02	3.820E-03	-0.139
		468.07		-1.138E-01	9.295E-02	1.350E-01	8.729E-03	-0.843
		604.41		1.156E-01	5.623E-01	8.385E-01	9.317E-02	0.138
		612.46		3.392E+00	1.124E+00	2.018E+00	1.450E-01	1.681
AU-195		65.12		-9.800E-02	2.373E-01	3.346E-01	2.790E-02	-0.293
		66.83		-9.604E-02	1.329E-01	1.837E-01	1.528E-02	-0.523
	+	75.70		1.563E+00	3.820E-01	5.699E-01	4.824E-02	2.742

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	3.346E-01	2.779E-01	4.460E-01	3.462E-02	0.750
		129.76		4.324E+00	3.507E+00	5.850E+00	3.470E-01	0.739
TL-200		367.94	*	-1.130E-04	3.507E+00	Half-Life too short		
		579.30		1.034E-04	3.507E+00	Half-Life too short		
		828.27		-3.257E-03	3.507E+00	Half-Life too short		
		1205.75		-5.001E-04	3.507E+00	Half-Life too short		
TL-201		68.90		4.843E+00	4.892E+00	7.405E+00	6.159E-01	0.654
		70.82		1.227E+00	2.801E+00	4.124E+00	3.438E-01	0.298
		80.30		-3.711E-01	5.137E+00	7.335E+00	6.365E-01	-0.051
		135.34		-2.649E+00	2.183E+01	3.688E+01	2.145E+00	-0.072
		167.43	*	-2.741E+00	6.005E+00	9.915E+00	5.299E-01	-0.276
TL-202		68.90		5.403E-01	5.457E-01	8.261E-01	6.871E-02	0.654
		70.82		1.365E-01	3.116E-01	4.588E-01	3.824E-02	0.298
		80.30		-4.130E-02	5.717E-01	8.163E-01	7.083E-02	-0.051
		439.56	*	1.368E-02	8.134E-02	1.327E-01	7.320E-03	0.103
HG-203		70.83		6.321E-01	1.425E+00	2.097E+00	2.815E-01	0.301
		72.87		9.578E-01	8.561E-01	1.286E+00	1.678E-01	0.745
		82.60		-4.649E-01	1.412E+00	2.126E+00	2.948E-01	-0.219
		279.20	*	-2.021E-02	4.978E-02	8.026E-02	4.978E-03	-0.252
BI-207		72.80		2.186E-01	2.520E-01	3.772E-01	3.159E-02	0.579
	+	74.97		8.710E-01	2.129E-01	2.873E-01	2.424E-02	3.032
		84.90		3.787E-01	2.555E-01	3.851E-01	3.455E-02	0.983
		569.67		-2.092E-02	3.455E-02	5.503E-02	2.989E-03	-0.380
		1063.62	*	1.294E-02	6.827E-02	1.125E-01	7.126E-03	0.115
		1770.23		2.496E-01	5.745E-01	9.194E-01	5.450E-02	0.271
TL-207		81.07		-3.689E-01	3.089E-01	4.122E-01	3.595E-02	-0.895
		83.78		1.221E-02	1.784E-01	2.527E-01	2.247E-02	0.048
		94.90		5.379E-01	3.067E-01	4.752E-01	3.900E-02	1.132
		122.32		-4.716E-01	2.139E+00	3.354E+00	2.341E-01	-0.141
		144.24		2.917E-01	7.964E-01	1.318E+00	9.382E-02	0.221
		154.21		5.127E-01	4.634E-01	8.149E-01	5.518E-02	0.629
	+	269.46		5.544E-01	3.080E-01	4.322E-01	2.634E-02	1.283
		323.87	*	-1.015E-01	8.387E-01	1.358E+00	2.243E-01	-0.075
	+	338.28		8.035E+00	1.812E+00	2.979E+00	3.129E-01	2.697
		445.03		-4.301E-01	2.527E+00	4.006E+00	4.052E-01	-0.107
PO-209		260.50		-3.696E+00	1.144E+01	1.858E+01	1.081E+00	-0.199
		262.80		7.659E+00	3.046E+01	5.109E+01	2.974E+00	0.150
		896.60	*	5.789E+00	9.321E+00	1.618E+01	1.148E+00	0.358
BI-210		46.50	*	-2.323E+00	5.302E+00	8.371E+00	6.631E-01	-0.277
PB-210		46.50	*	-2.323E+00	5.302E+00	8.371E+00	6.631E-01	-0.277
PO-210		46.50	*	-2.323E+00	5.301E+00	8.371E+00	5.748E-01	-0.277
PB-211		404.84	*	-2.380E-02	1.312E+00	1.852E+00	1.154E+00	-0.013
		427.08		-6.041E-01	2.631E+00	4.128E+00	2.550E+00	-0.146
		831.96		-1.400E-01	1.440E+00	2.336E+00	1.458E+00	-0.060
BI-212	+	727.18	*	1.181E+00	4.870E-01	7.526E-01	5.689E-02	1.569
		785.46		9.128E-01	2.173E+00	3.714E+00	2.264E-01	0.246
		1620.62		-6.195E-02	1.448E+00	2.356E+00	1.519E-01	-0.026
PO-215		81.07		-3.689E-01	3.089E-01	4.122E-01	3.595E-02	-0.895
		83.78		1.221E-02	1.784E-01	2.527E-01	2.247E-02	0.048

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		5.379E-01	3.067E-01	4.752E-01	3.900E-02	1.132
		122.32		-4.716E-01	2.139E+00	3.354E+00	2.341E-01	-0.141
		144.24		2.917E-01	7.964E-01	1.318E+00	9.382E-02	0.221
		154.21		5.127E-01	4.634E-01	8.149E-01	5.518E-02	0.629
	+	269.46		5.544E-01	3.080E-01	4.322E-01	2.634E-02	1.283
		323.87	*	-1.015E-01	8.387E-01	1.358E+00	2.243E-01	-0.075
	+	338.28		8.035E+00	1.812E+00	2.979E+00	3.129E-01	2.697
		445.03		-4.301E-01	2.527E+00	4.006E+00	4.052E-01	-0.107
RN-219	+	271.23		7.112E-01	3.970E-01	5.642E-01	4.587E-02	1.261
		401.81	*	-1.695E-01	5.035E-01	7.939E-01	1.068E-01	-0.214
RN-220		549.76	*	-2.072E+01	2.995E+01	4.745E+01	2.601E+00	-0.437
RA-223		81.07		-3.689E-01	3.089E-01	4.122E-01	3.595E-02	-0.895
		83.78		1.221E-02	1.784E-01	2.527E-01	2.247E-02	0.048
		94.90		5.379E-01	3.067E-01	4.752E-01	3.900E-02	1.132
		122.32		-4.716E-01	2.139E+00	3.354E+00	2.341E-01	-0.141
		144.24		2.917E-01	7.964E-01	1.318E+00	9.382E-02	0.221
		154.21		5.127E-01	4.634E-01	8.149E-01	5.518E-02	0.629
	+	269.46		5.544E-01	3.080E-01	4.322E-01	2.634E-02	1.283
		323.87	*	-1.015E-01	8.387E-01	1.358E+00	2.243E-01	-0.075
	+	338.28		8.035E+00	1.812E+00	2.979E+00	3.129E-01	2.697
		445.03		-4.301E-01	2.527E+00	4.006E+00	4.052E-01	-0.107
AC-227		79.80		1.800E+00	2.223E+00	3.276E+00	7.048E-01	0.550
		236.00		1.589E-01	3.015E-01	4.550E-01	4.738E-02	0.349
		256.20	*	1.364E-01	4.469E-01	7.515E-01	1.049E-01	0.181
		286.10		-7.848E-01	1.841E+00	2.952E+00	3.420E-01	-0.266
	+	299.80		3.430E+00	2.583E+00	3.132E+00	5.106E-01	1.095
		304.40		-1.197E+00	2.448E+00	3.356E+00	5.810E-01	-0.357
		334.20		-3.390E-01	3.134E+00	4.444E+00	8.142E-01	-0.076
TH-227		79.80		1.800E+00	2.224E+00	3.276E+00	7.138E-01	0.550
	+	94.00		9.352E+00	4.159E+00	4.702E+00	1.018E+00	1.989
		236.00		1.589E-01	3.014E-01	4.550E-01	4.101E-02	0.349
		256.20	*	1.364E-01	4.471E-01	7.515E-01	1.270E-01	0.181
		286.10		-7.848E-01	2.000E+00	2.952E+00	2.957E+00	-0.266
	+	299.80		3.430E+00	2.583E+00	3.132E+00	5.106E-01	1.095
		304.40		-1.197E+00	2.448E+00	3.356E+00	5.810E-01	-0.357
		334.20		-3.390E-01	3.134E+00	4.444E+00	8.142E-01	-0.076
TH-229		85.43		4.166E-01	2.624E-01	3.961E-01	3.569E-02	1.052
	+	88.47		4.003E-01	1.629E-01	2.566E-01	2.343E-02	1.560
		100.00		1.534E-01	2.209E-01	3.613E-01	2.764E-02	0.425
		193.63	*	-3.556E-01	6.018E-01	9.812E-01	5.398E-02	-0.362
	+	210.97		2.454E+00	1.629E+00	1.647E+00	9.232E-02	1.490
PA-231		283.67	*	5.939E-01	1.776E+00	2.981E+00	4.114E-01	0.199
	+	301.29		1.372E+00	1.019E+00	1.250E+00	1.310E-01	1.098
TH-231		81.07		-3.689E-01	3.089E-01	4.122E-01	3.595E-02	-0.895
		83.78		1.221E-02	1.784E-01	2.527E-01	2.247E-02	0.048
		94.90		5.379E-01	3.067E-01	4.752E-01	3.900E-02	1.132
		122.32		-4.716E-01	2.139E+00	3.354E+00	2.341E-01	-0.141
		144.24		2.917E-01	7.964E-01	1.318E+00	9.382E-02	0.221
		154.21		5.127E-01	4.634E-01	8.149E-01	5.518E-02	0.629

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.544E-01	3.080E-01	4.322E-01	2.634E-02	1.283
		323.87	*	-1.015E-01	8.387E-01	1.358E+00	2.243E-01	-0.075
	+	338.28		8.035E+00	1.812E+00	2.979E+00	3.129E-01	2.697
		445.03		-4.301E-01	2.527E+00	4.006E+00	4.052E-01	-0.107
U-231		84.21		4.290E+00	6.084E+00	8.885E+00	7.927E-01	0.483
	+	92.29		7.502E+00	2.979E+00	4.101E+00	3.505E-01	1.829
		95.87	*	-8.896E-01	1.164E+00	1.575E+00	1.274E-01	-0.565
		108.00		-1.550E+00	1.968E+00	2.943E+00	2.053E-01	-0.527
PA-233	+	75.28		2.542E+01	7.001E+00	8.681E+00	1.324E+00	2.928
	+	86.59		5.740E+00	2.754E+00	3.640E+00	9.820E-01	1.577
	+	300.12		9.562E-01	7.148E-01	8.729E-01	1.175E-01	1.095
		311.98	*	-1.286E-03	7.972E-02	1.306E-01	8.083E-03	-0.010
		340.50		3.137E+00	1.211E+00	1.693E+00	3.887E-01	1.852
		398.62		1.942E+00	2.656E+00	4.320E+00	1.113E+00	0.449
		415.76		6.372E-01	2.187E+00	3.483E+00	7.139E-01	0.183
PA-234	+	63.00		2.723E+00	2.589E+00	3.541E+00	5.442E-01	0.769
		94.67		7.276E-01	2.320E-01	3.621E-01	4.395E-02	2.010
		98.44		8.512E-02	1.321E-01	1.828E-01	1.018E-01	0.466
		99.86		4.249E-01	5.610E-01	9.202E-01	7.051E-02	0.462
		111.00		-1.244E-02	2.116E-01	3.357E-01	3.640E-02	-0.037
		131.20		4.051E-02	1.321E-01	2.119E-01	1.250E-02	0.191
		152.70		-1.386E-01	3.849E-01	6.404E-01	1.006E-01	-0.216
	+	186.00		5.854E+00	2.953E+00	3.269E+00	9.969E-01	1.791
		226.40		-1.789E-01	4.998E-01	8.174E-01	9.403E-02	-0.219
		227.20		2.314E-01	5.351E-01	9.079E-01	5.167E-02	0.255
		248.90		-1.605E-01	9.724E-01	1.597E+00	3.430E-01	-0.101
		293.70		3.319E+00	1.190E+00	1.823E+00	2.936E-01	1.820
		369.80		1.078E+00	1.050E+00	1.790E+00	3.717E-01	0.602
		568.70		-2.521E-01	1.144E+00	1.887E+00	1.026E-01	-0.134
		569.50		-1.731E-01	3.077E-01	4.921E-01	2.674E-02	-0.352
		574.00		5.312E-01	1.754E+00	3.013E+00	1.633E-01	0.176
		699.00		-6.554E-01	8.920E-01	1.374E+00	2.451E-01	-0.477
		706.10		3.837E-01	1.339E+00	2.254E+00	9.935E-01	0.170
		733.00		2.611E-02	5.432E-01	7.843E-01	1.664E-01	0.033
		742.81		9.569E-03	1.642E+00	2.717E+00	1.818E+00	0.004
	+	796.30		1.602E+00	1.300E+00	2.099E+00	5.538E-01	0.763
		805.60		5.568E-01	1.179E+00	2.011E+00	6.047E-01	0.277
		819.60		-1.990E-01	1.468E+00	2.374E+00	8.924E-01	-0.084
		826.30		-7.913E-02	9.369E-01	1.523E+00	6.760E-01	-0.052
		831.60		-7.251E-02	7.442E-01	1.209E+00	3.543E-01	-0.060
		876.40		-2.858E-01	1.054E+00	1.606E+00	1.648E+00	-0.178
		880.51		1.168E-01	3.280E-01	5.573E-01	3.871E-02	0.210
		883.24		-7.007E-02	3.471E-01	5.497E-01	3.685E-01	-0.127
		899.00		-2.642E-01	1.049E+00	1.657E+00	7.196E-01	-0.159
		925.00		-8.658E-01	1.314E+00	1.961E+00	1.377E-01	-0.441
		926.50		7.910E-02	1.981E-01	3.364E-01	8.334E-02	0.235
		946.00	*	-5.699E-02	3.863E-01	6.187E-01	1.117E-01	-0.092
		949.00		-4.749E-03	6.020E-01	9.789E-01	6.785E-02	-0.005
		980.50		1.509E-01	8.968E-01	1.484E+00	1.008E-01	0.102

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		1.697E+00	1.855E+00	2.841E+00	1.843E+00	0.597
PA-234M		766.41		7.801E+00	2.284E+01	3.743E+01	2.860E+01	0.208
		1001.03	*	-7.237E+00	8.315E+00	1.257E+01	1.228E+00	-0.576
U-235	+	89.95		2.895E+00	1.896E+00	2.264E+00	7.004E-01	1.279
	+	93.35		2.910E+00	1.392E+00	1.566E+00	4.380E-01	1.857
		105.00		1.123E+00	1.261E+00	2.028E+00	5.977E-01	0.554
		143.76	*	1.136E-01	2.478E-01	4.109E-01	6.679E-02	0.277
		163.35		-4.066E-01	5.264E-01	8.488E-01	1.515E-01	-0.479
	+	185.71		2.168E-01	8.794E-02	1.200E-01	6.545E-03	1.806
		205.31		-3.023E-01	6.991E-01	9.978E-01	1.787E-01	-0.303
NP-236		94.67		5.550E-01	1.691E-01	2.750E-01	2.264E-02	2.018
		98.44		6.433E-02	9.335E-02	1.382E-01	1.079E-02	0.465
		111.00		-9.412E-03	1.600E-01	2.539E-01	1.718E-02	-0.037
		160.31	*	9.682E-03	8.947E-02	1.517E-01	8.216E-03	0.064
NP-239		99.55		1.833E-01	1.889E-01	3.124E-01	2.403E-02	0.587
		117.00	*	6.825E-02	2.420E-01	3.894E-01	2.491E-02	0.175
	+	209.75		2.472E+00	1.641E+00	1.683E+00	9.420E-02	1.469
		228.18		1.209E-01	2.804E-01	4.757E-01	2.710E-02	0.254
		277.60		1.561E-01	2.221E-01	3.795E-01	2.218E-02	0.411
		334.30		-2.690E-01	1.772E+00	2.502E+00	1.443E-01	-0.108
AM-241		59.54	*	2.703E-01	2.309E-01	3.544E-01	3.238E-02	0.763
CM-243		99.55		1.886E-01	1.943E-01	3.214E-01	2.473E-02	0.587
		103.76	*	-3.337E-03	1.135E-01	1.808E-01	1.321E-02	-0.018
		117.00		7.021E-02	2.490E-01	4.006E-01	2.563E-02	0.175
	+	209.75		2.437E+00	1.617E+00	1.659E+00	9.286E-02	1.469
		228.18		1.222E-01	2.833E-01	4.806E-01	2.738E-02	0.254
		277.60		1.574E-01	2.239E-01	3.826E-01	2.236E-02	0.411
CM-247		278.00		6.635E-01	9.127E-01	1.562E+00	9.128E-02	0.425
		287.40		-7.676E-01	1.485E+00	2.370E+00	1.386E-01	-0.324
		402.60	*	2.027E-02	4.475E-02	7.481E-02	4.066E-03	0.271
CF-249		252.85		5.544E-01	1.045E+00	1.779E+00	1.031E-01	0.312
		333.44		-1.106E-01	2.461E-01	3.389E-01	1.955E-02	-0.326
		387.95	*	2.057E-02	6.004E-02	8.783E-02	4.774E-03	0.234
CF-251		176.60	*	1.395E-03	1.475E-01	2.482E-01	1.339E-02	0.006
		227.00		1.316E-01	4.716E-01	7.950E-01	4.524E-02	0.166
		285.00		-6.028E-01	2.047E+00	3.311E+00	1.937E-01	-0.182

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585002     *
* Acquisition date :  9-JUL-2009 08:34:16 Detector SN#    :                 *
* Detector ID        : GAM01               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.07      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232585002           Analyst initials: MXR1          *
* Batch Number       : 881931               Sample Quantity : 1.1205E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.925E+01	2.851E+00	5.769E-01	0.000E+00
ZR-88	4.493E-02	7.645E-02	5.930E-02	0.000E+00
CD-109	2.978E+00	1.187E+00	1.515E+00	0.000E+00
IN-113M	6.527E-02	1.111E-01	8.646E-02	0.000E+00
SN-113	6.527E-02	1.111E-01	8.646E-02	0.000E+00
SN-126	2.932E-01	1.169E-01	1.500E-01	0.000E+00
TL-208	4.639E-01	1.109E-01	6.977E-02	0.000E+00
BI-211	4.338E+00	5.826E-01	3.930E-01	0.000E+00
PB-212	1.569E+00	1.878E-01	1.228E-01	0.000E+00
PO-212	1.569E+00	1.878E-01	1.228E-01	0.000E+00
BI-214	1.373E+00	2.265E-01	1.239E-01	0.000E+00
PB-214	1.509E+00	2.168E-01	1.370E-01	0.000E+00
PO-214	1.509E+00	2.168E-01	1.370E-01	0.000E+00
PO-216	1.569E+00	1.878E-01	1.228E-01	0.000E+00
PO-218	1.509E+00	2.168E-01	1.370E-01	0.000E+00
RA-224	2.993E+00	1.089E+00	1.715E+00	0.000E+00
RA-226	1.373E+00	2.265E-01	1.239E-01	0.000E+00
AC-228	1.866E+00	4.190E-01	2.290E-01	0.000E+00
RA-228	1.866E+00	4.190E-01	2.290E-01	0.000E+00
TH-228	1.569E+00	1.878E-01	1.228E-01	0.000E+00
TH-230	1.373E+00	2.265E-01	1.239E-01	0.000E+00
TH-232	1.866E+00	4.190E-01	2.290E-01	0.000E+00
TH-234	2.336E+00	2.187E+00	2.637E+00	0.000E+00
U-234	1.373E+00	2.265E-01	1.239E-01	0.000E+00
NP-237	8.610E-01	3.850E-01	5.156E-01	0.000E+00
U-238	2.336E+00	2.187E+00	2.637E+00	0.000E+00
AM-243	4.852E-01	1.162E-01	1.126E-01	0.000E+00
ANH-511	1.790E-01	7.806E-02	6.033E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-7.173E-02	3.885E-01	6.288E-01	0.000E+00	NOT IDENT.
NA-22	-1.041E-02	4.689E-02	7.741E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.048E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.648E-02	3.883E-02	5.803E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.814E-02	9.604E-02	0.000E+00	FAIL ABUN
SC-46	-1.080E-02	4.505E-02	7.307E-02	0.000E+00	FAIL ABUN
V-48	1.816E-02	8.107E-02	1.374E-01	0.000E+00	NOT IDENT.
CR-51	2.770E-02	4.254E-01	7.193E-01	0.000E+00	NOT IDENT.
MN-52	-9.530E-02	2.292E-01	3.594E-01	0.000E+00	NOT IDENT.
MN-54	1.982E-02	4.582E-02	7.967E-02	0.000E+00	NOT IDENT.
CO-56	-9.468E-03	3.981E-02	6.469E-02	0.000E+00	NOT IDENT.
CO-57	-8.881E-03	3.020E-02	4.891E-02	0.000E+00	NOT IDENT.
CO-58	-4.609E-02	4.501E-02	6.711E-02	0.000E+00	NOT IDENT.
FE-59	2.812E-02	1.050E-01	1.774E-01	0.000E+00	NOT IDENT.
CO-60	-6.785E-02	5.175E-02	7.285E-02	0.000E+00	NOT IDENT.
ZN-65	-1.701E-02	1.300E-01	1.798E-01	0.000E+00	NOT IDENT.
GE-68	1.024E+00	1.537E+00	2.705E+00	0.000E+00	NOT IDENT.
AS-73	-2.210E-01	1.111E+00	1.869E+00	0.000E+00	NOT IDENT.
AS-74	-1.505E-02	1.053E-01	1.784E-01	0.000E+00	NOT IDENT.
SE-75	-3.397E-02	5.431E-02	8.188E-02	0.000E+00	NOT IDENT.
BR-77	-4.443E+00	9.021E+00	1.410E+01	0.000E+00	FAIL ABUN
SR-82	-1.458E-01	4.661E-01	7.625E-01	0.000E+00	NOT IDENT.
RB-83	-4.524E-02	8.500E-02	1.323E-01	0.000E+00	NOT IDENT.
RB-84	-1.698E-02	8.174E-02	1.333E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.099E+01	1.848E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.561E-02	9.353E-02	0.000E+00	NOT IDENT.
RB-86	2.627E-01	9.535E-01	1.612E+00	0.000E+00	NOT IDENT.
Y-88	-3.689E-03	3.579E-02	5.739E-02	0.000E+00	NOT IDENT.
Y-91	-1.657E+01	2.241E+01	3.547E+01	0.000E+00	NOT IDENT.
NB-94	1.080E-02	4.160E-02	7.194E-02	0.000E+00	NOT IDENT.
NB-95	-1.514E-03	5.069E-02	8.517E-02	0.000E+00	NOT IDENT.
NB-95M	3.335E-02	1.554E-01	2.373E-01	0.000E+00	NOT IDENT.
ZR-95	5.910E-02	7.944E-02	1.430E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.167E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.820E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-4.949E+00	1.040E+01	1.677E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.301E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.828E-02	3.798E-02	6.529E-02	0.000E+00	NOT IDENT.
RH-102	-1.953E-02	3.572E-02	5.602E-02	0.000E+00	NOT IDENT.
RU-103	3.474E-02	4.606E-02	8.012E-02	0.000E+00	FAIL ABUN
RH-106	2.600E-02	3.720E-01	6.392E-01	0.000E+00	FAIL ABUN
RU-106	2.600E-02	3.720E-01	6.392E-01	0.000E+00	FAIL ABUN
AG-108M	1.620E-02	4.198E-02	7.133E-02	0.000E+00	NOT IDENT.
AG-110M	1.593E-02	3.863E-02	6.049E-02	0.000E+00	NOT IDENT.
IN-111	2.323E-01	9.674E-01	1.479E+00	0.000E+00	NOT IDENT.
IN-114M	9.323E-03	2.291E-01	3.503E-01	0.000E+00	NOT IDENT.
CD-115	-2.172E+00	8.073E+00	1.364E+01	0.000E+00	NOT IDENT.
SN-117M	-2.755E-02	5.811E-02	9.944E-02	0.000E+00	NOT IDENT.
SB-122	2.130E+00	1.724E+00	3.226E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.301E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-7.788E-03	3.148E-02	5.438E-02	0.000E+00	NOT IDENT.
I-124	1.944E-01	7.127E-01	1.089E+00	0.000E+00	NOT IDENT.
SB-124	-4.789E-02	8.898E-02	1.302E-01	0.000E+00	NOT IDENT.
SB-125	-3.754E-02	1.143E-01	1.845E-01	0.000E+00	NOT IDENT.
TE-125M	-1.149E+01	1.068E+01	1.627E+01	0.000E+00	NOT IDENT.
I-126	2.446E-01	2.057E-01	3.811E-01	0.000E+00	NOT IDENT.
SB-126	1.556E-01	1.512E-01	2.616E-01	0.000E+00	FAIL ABUN
SB-127	4.535E-01	1.202E+00	2.109E+00	0.000E+00	NOT IDENT.
XE-127	4.416E-02	5.488E-02	9.499E-02	0.000E+00	NOT IDENT.
I-131	1.770E-02	1.181E-01	1.996E-01	0.000E+00	NOT IDENT.
TE-132	2.872E-01	6.439E-01	1.125E+00	0.000E+00	NOT IDENT.
BA-133	2.587E-02	5.350E-02	8.205E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.453E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.236E-02	6.215E-02	1.046E-01	0.000E+00	FAIL ABUN
CS-135	1.309E-01	2.087E-01	3.256E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.727E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.650E-02	1.039E-01	1.829E-01	0.000E+00	FAIL ABUN
BA-137M	0.000E+00	5.509E-02	1.056E-01	0.000E+00	NOT IDENT.
CS-137	0.000E+00	5.824E-02	1.116E-01	0.000E+00	NOT IDENT.
CE-139	-1.626E-02	3.209E-02	5.466E-02	0.000E+00	NOT IDENT.
BA-140	-1.099E-01	2.769E-01	4.588E-01	0.000E+00	NOT IDENT.
LA-140	1.700E-02	1.056E-01	1.803E-01	0.000E+00	NOT IDENT.
CE-141	-1.221E-02	7.042E-02	1.179E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.047E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.496E-01	2.497E-01	3.845E-01	0.000E+00	NOT IDENT.
PM-144	-9.450E-03	3.988E-02	6.622E-02	0.000E+00	NOT IDENT.
PR-144	-6.399E-01	2.700E+00	4.484E+00	0.000E+00	NOT IDENT.

PM-146	3.046E-02	5.184E-02	8.935E-02	0.000E+00	NOT IDENT.
ND-147	-9.302E-02	5.795E-01	9.873E-01	0.000E+00	FAIL ABUN
PM-149	-2.583E+01	7.162E+01	1.187E+02	0.000E+00	NOT IDENT.
EU-152	1.689E-02	1.223E-01	2.000E-01	0.000E+00	NOT IDENT.
GD-153	-3.417E-04	1.019E-01	1.505E-01	0.000E+00	NOT IDENT.
EU-154	-2.751E-02	1.313E-01	2.170E-01	0.000E+00	NOT IDENT.
EU-155	1.102E-01	1.227E-01	2.113E-01	0.000E+00	FAIL ABUN
TB-160	2.400E-02	1.748E-01	2.858E-01	0.000E+00	FAIL ABUN
HO-166M	-2.789E-03	6.973E-02	1.176E-01	0.000E+00	FAIL ABUN
TM-171	-2.252E+01	3.881E+01	5.640E+01	0.000E+00	NOT IDENT.
LU-176	-5.799E-03	3.307E-02	4.822E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.990E+00	2.039E+00	0.000E+00	FAIL ABUN
LU-177M	-1.841E-01	2.504E-01	3.354E-01	0.000E+00	FAIL ABUN
HF-181	1.068E-02	5.483E-02	9.005E-02	0.000E+00	NOT IDENT.
W-181	-2.448E-01	4.994E-01	7.302E-01	0.000E+00	NOT IDENT.
TA-182	2.030E-01	2.336E-01	4.275E-01	0.000E+00	FAIL ABUN
RE-183	-2.086E-02	1.156E-01	2.000E-01	0.000E+00	FAIL ABUN
RE-184	1.470E-01	2.715E-01	4.761E-01	0.000E+00	NOT IDENT.
OS-185	-2.624E-03	4.939E-02	8.378E-02	0.000E+00	NOT IDENT.
RE-188	3.236E-01	1.942E-01	3.595E-01	0.000E+00	NOT IDENT.
W-188	2.496E+00	9.589E+00	1.454E+01	0.000E+00	FAIL ABUN
IR-192	-9.051E-03	3.962E-02	6.580E-02	0.000E+00	FAIL ABUN
AU-195	3.346E-01	2.723E-01	4.537E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.521E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.741E+00	5.885E+00	1.004E+01	0.000E+00	NOT IDENT.
TL-202	1.368E-02	7.971E-02	1.334E-01	0.000E+00	NOT IDENT.
HG-203	-2.021E-02	4.878E-02	8.096E-02	0.000E+00	NOT IDENT.
BI-207	1.294E-02	6.690E-02	1.122E-01	0.000E+00	FAIL ABUN
TL-207	-1.015E-01	8.219E-01	1.368E+00	0.000E+00	FAIL ABUN
PO-209	5.789E+00	9.135E+00	1.616E+01	0.000E+00	NOT IDENT.
BI-210	-2.323E+00	5.196E+00	8.567E+00	0.000E+00	NOT IDENT.
PB-210	-2.323E+00	5.196E+00	8.567E+00	0.000E+00	NOT IDENT.
PO-210	-2.323E+00	5.195E+00	8.567E+00	0.000E+00	NOT IDENT.
PB-211	-2.380E-02	1.286E+00	1.863E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.772E-01	7.532E-01	0.000E+00	FAIL ABUN
PO-215	-1.015E-01	8.219E-01	1.368E+00	0.000E+00	FAIL ABUN
RN-219	-1.695E-01	4.934E-01	7.985E-01	0.000E+00	FAIL ABUN
RN-220	-2.072E+01	2.935E+01	4.760E+01	0.000E+00	NOT IDENT.
RA-223	-1.015E-01	8.219E-01	1.368E+00	0.000E+00	FAIL ABUN
AC-227	1.364E-01	4.380E-01	7.586E-01	0.000E+00	FAIL ABUN
TH-227	1.364E-01	4.382E-01	7.586E-01	0.000E+00	FAIL ABUN
TH-229	-3.556E-01	5.897E-01	9.927E-01	0.000E+00	FAIL ABUN
PA-231	5.939E-01	1.740E+00	3.006E+00	0.000E+00	FAIL ABUN
TH-231	-1.015E-01	8.219E-01	1.368E+00	0.000E+00	FAIL ABUN
U-231	-8.896E-01	1.141E+00	1.602E+00	0.000E+00	FAIL ABUN
PA-233	-1.286E-03	7.812E-02	1.317E-01	0.000E+00	FAIL ABUN
PA-234	-5.699E-02	3.785E-01	6.178E-01	0.000E+00	FAIL ABUN
PA-234M	-7.237E+00	8.149E+00	1.254E+01	0.000E+00	NOT IDENT.
U-235	1.136E-01	2.429E-01	4.167E-01	0.000E+00	FAIL ABUN
NP-236	9.682E-03	8.768E-02	1.537E-01	0.000E+00	NOT IDENT.
NP-239	6.825E-02	2.372E-01	3.956E-01	0.000E+00	FAIL ABUN
AM-241	2.703E-01	2.263E-01	3.619E-01	0.000E+00	NOT IDENT.
CM-243	-3.337E-03	1.112E-01	1.839E-01	0.000E+00	FAIL ABUN
CM-247	2.027E-02	4.385E-02	7.524E-02	0.000E+00	NOT IDENT.
CF-249	2.057E-02	5.884E-02	8.836E-02	0.000E+00	NOT IDENT.
CF-251	1.395E-03	1.446E-01	2.513E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:34:37.99

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585002.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:34:16.
Sample ID         : G232585002           Sample quantity  : 1.12050E+02 GRAM
Detector name     : GAM01                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.07  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881931                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	898	10.67*	9.639E-01	2.925E+01	2.925E+01	9.94
ZR-88	392.90	35	97.32*	3.019E+00	4.003E-02	4.493E-02	173.61
CD-109	88.03	166	3.72*	5.139E+00	2.916E+00	2.978E+00	40.70
IN-113M	391.69	35	64.90*	3.019E+00	6.003E-02	6.527E-02	173.62
SN-113	391.69	35	64.90*	3.019E+00	6.003E-02	6.527E-02	173.62
SN-126	64.28	72	9.60	2.713E+00	9.247E-01	9.247E-01	95.02
	86.94	166	8.90	5.139E+00	1.219E+00	1.219E+00	57.38
	87.57	166	37.00*	5.139E+00	2.932E-01	2.932E-01	40.70
TL-208	277.35	------	6.80	3.972E+00	------	Line Not Found	------
	510.84	130	21.60	2.437E+00	8.288E-01	8.288E-01	45.27
	583.14	254	84.20*	2.181E+00	4.639E-01	4.639E-01	24.39
	860.37	60	12.46	1.550E+00	1.039E+00	1.039E+00	60.39
BI-211	72.87	------	1.27	3.875E+00	------	Line Not Found	------
	351.07	552	12.94*	3.294E+00	4.338E+00	4.338E+00	13.70
PB-212	74.81	391	10.70	4.092E+00	2.993E+00	2.993E+00	26.17
	77.11	466	18.00	4.314E+00	2.009E+00	2.009E+00	18.76
	87.30	166	8.00	5.139E+00	1.356E+00	1.356E+00	41.91
	238.63	928	44.60*	4.443E+00	1.569E+00	1.569E+00	12.22
	300.09	70	3.41	3.731E+00	1.851E+00	1.851E+00	73.99
PO-212	74.81	391	10.70	4.092E+00	2.993E+00	2.993E+00	26.17
	77.11	466	18.00	4.314E+00	2.009E+00	2.009E+00	18.76
	87.30	166	8.00	5.139E+00	1.356E+00	1.356E+00	41.91
	115.19	------	0.60	6.067E+00	------	Line Not Found	------
	238.63	928	44.60*	4.443E+00	1.569E+00	1.569E+00	12.22
	300.09	70	3.41	3.731E+00	1.851E+00	1.851E+00	73.99
BI-214	609.31	399	46.30*	2.101E+00	1.373E+00	1.373E+00	16.84
	768.36	------	5.04	1.718E+00	------	Line Not Found	------
	934.06	------	3.21	1.440E+00	------	Line Not Found	------
	1120.29	65	15.10	1.218E+00	1.185E+00	1.185E+00	64.41
	1238.11	------	5.94	1.113E+00	------	Line Not Found	------
	1377.67	30	4.11	1.012E+00	2.448E+00	2.448E+00	73.71
	1764.49	45	15.80	8.365E-01	1.146E+00	1.146E+00	49.01

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	391	6.21	4.092E+00	5.157E+00	5.157E+00	25.54
	77.11	466	10.50	4.314E+00	3.444E+00	3.444E+00	20.24
	87.30	166	4.67	5.139E+00	2.323E+00	2.323E+00	41.42
	241.98	155	7.49	4.399E+00	1.579E+00	1.579E+00	37.53
	295.21	336	19.20	3.782E+00	1.551E+00	1.551E+00	21.24
	351.92	552	37.20*	3.294E+00	1.509E+00	1.509E+00	14.66
PO-214	74.81	391	6.21	4.092E+00	5.157E+00	5.157E+00	25.54
	77.11	466	10.50	4.314E+00	3.444E+00	3.444E+00	20.24
	87.30	166	4.67	5.139E+00	2.323E+00	2.323E+00	41.42
	241.98	155	7.49	4.399E+00	1.579E+00	1.579E+00	37.53
	295.21	336	19.20	3.782E+00	1.551E+00	1.551E+00	21.24
	351.92	552	37.20*	3.294E+00	1.509E+00	1.509E+00	14.66
PO-216	74.81	391	10.70	4.092E+00	2.993E+00	2.993E+00	26.17
	77.11	466	18.00	4.314E+00	2.009E+00	2.009E+00	18.76
	87.30	166	8.00	5.139E+00	1.356E+00	1.356E+00	41.91
	238.63	928	44.60*	4.443E+00	1.569E+00	1.569E+00	12.22
	300.09	70	3.41	3.731E+00	1.851E+00	1.851E+00	73.99
PO-218	74.81	391	6.21	4.092E+00	5.157E+00	5.157E+00	25.54
	77.11	466	10.50	4.314E+00	3.444E+00	3.444E+00	20.24
	87.30	166	4.67	5.139E+00	2.323E+00	2.323E+00	41.42
	241.98	155	7.49	4.399E+00	1.579E+00	1.579E+00	37.53
	295.21	336	19.20	3.782E+00	1.551E+00	1.551E+00	21.24
	351.92	552	37.20*	3.294E+00	1.509E+00	1.509E+00	14.66
RA-224	240.98	155	3.95*	4.399E+00	2.993E+00	2.993E+00	37.11
RA-226	609.31	399	46.30*	2.101E+00	1.373E+00	1.373E+00	16.84
	768.36	------	5.04	1.718E+00	------	Line Not Found	------
	934.06	------	3.21	1.440E+00	------	Line Not Found	------
	1120.29	65	15.10	1.218E+00	1.185E+00	1.185E+00	64.41
	1238.11	------	5.94	1.113E+00	------	Line Not Found	------
	1377.67	30	4.11	1.012E+00	2.448E+00	2.448E+00	73.71
	1764.49	45	15.80	8.365E-01	1.146E+00	1.146E+00	49.01
AC-228	338.32	223	11.40	3.399E+00	1.924E+00	1.924E+00	45.38
	911.07	227	27.70*	1.472E+00	1.866E+00	1.866E+00	22.91
	969.11	114	16.60	1.391E+00	1.649E+00	1.649E+00	44.67
RA-228	338.32	223	11.40	3.399E+00	1.924E+00	1.924E+00	45.38
	911.07	227	27.70*	1.472E+00	1.866E+00	1.866E+00	22.91
	969.11	114	16.60	1.391E+00	1.649E+00	1.649E+00	44.67
TH-228	84.40	------	1.21	4.941E+00	------	Line Not Found	------
	238.60	928	44.60*	4.443E+00	1.569E+00	1.569E+00	12.22
	300.10	70	3.41	3.731E+00	1.851E+00	1.851E+00	94.23
TH-230	609.31	399	46.30*	2.101E+00	1.373E+00	1.373E+00	16.84
	768.36	------	5.04	1.718E+00	------	Line Not Found	------
	934.06	------	3.21	1.440E+00	------	Line Not Found	------
	1120.29	65	15.10	1.218E+00	1.185E+00	1.185E+00	64.41
	1238.11	------	5.94	1.113E+00	------	Line Not Found	------
	1377.67	30	4.11	1.012E+00	2.448E+00	2.448E+00	73.71
	1764.49	45	15.80	8.365E-01	1.146E+00	1.146E+00	49.01
TH-232	338.32	223	11.40	3.399E+00	1.924E+00	1.924E+00	20.77
	911.07	227	27.70*	1.472E+00	1.866E+00	1.866E+00	22.91

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	114	16.60	1.391E+00	1.649E+00	1.649E+00	44.67
TH-234	63.29	72	3.80*	2.713E+00	2.336E+00	2.336E+00	95.51
	92.38	214	5.41	5.466E+00	2.420E+00	2.420E+00	42.78
U-234	609.31	399	46.30*	2.101E+00	1.373E+00	1.373E+00	16.84
	768.36	------	5.04	1.718E+00	------	Line Not Found	------
	934.06	------	3.21	1.440E+00	------	Line Not Found	------
	1120.29	65	15.10	1.218E+00	1.185E+00	1.185E+00	64.41
	1238.11	------	5.94	1.113E+00	------	Line Not Found	------
	1377.67	30	4.11	1.012E+00	2.448E+00	2.448E+00	73.71
	1764.49	45	15.80	8.365E-01	1.146E+00	1.146E+00	49.01
NP-237	86.50	166	12.60*	5.139E+00	8.610E-01	8.610E-01	45.63
	95.87	------	2.60	5.609E+00	------	Line Not Found	------
U-238	63.29	72	3.80*	2.713E+00	2.336E+00	2.336E+00	95.51
	92.38	214	5.41	5.466E+00	2.420E+00	2.420E+00	39.72
AM-243	74.67	391	66.00*	4.092E+00	4.852E-01	4.852E-01	24.44
	86.72	166	0.34	5.139E+00	3.229E+01	3.229E+01	40.70
	117.66	------	0.55	6.083E+00	------	Line Not Found	------
	142.18	------	0.13	5.960E+00	------	Line Not Found	------
ANH-511	511.00	130	100.00*	2.437E+00	1.790E-01	1.790E-01	44.49

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

Total number of lines in spectrum 30
Number of unidentified lines 0
Number of lines tentatively identified by NID 30 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.925E+01	2.925E+01	0.291E+01	9.94	
ZR-88	83.40D	1.12	4.003E-02	4.493E-02	7.801E-02	173.61	
CD-109	464.00D	1.02	2.916E+00	2.978E+00	1.212E+00	40.70	
IN-113M	115.10D	1.09	6.003E-02	6.527E-02	11.33E-02	173.62	
SN-113	115.10D	1.09	6.003E-02	6.527E-02	11.33E-02	173.62	
SN-126	1.00E+05Y	1.00	2.932E-01	2.932E-01	1.193E-01	40.70	
TL-208	1.41E+10Y	1.00	4.639E-01	4.639E-01	1.131E-01	24.39	
BI-211	7.04E+08Y	1.00	4.338E+00	4.338E+00	0.594E+00	13.70	
PB-212	1.41E+10Y	1.00	1.569E+00	1.569E+00	0.192E+00	12.22	
PO-212	1.41E+10Y	1.00	1.569E+00	1.569E+00	0.192E+00	12.22	
BI-214	1600.00Y	1.00	1.373E+00	1.373E+00	0.231E+00	16.84	
PB-214	1600.00Y	1.00	1.509E+00	1.509E+00	0.221E+00	14.66	
PO-214	1600.00Y	1.00	1.509E+00	1.509E+00	0.221E+00	14.66	
PO-216	1.41E+10Y	1.00	1.569E+00	1.569E+00	0.192E+00	12.22	
PO-218	1600.00Y	1.00	1.509E+00	1.509E+00	0.221E+00	14.66	
RA-224	1.41E+10Y	1.00	2.993E+00	2.993E+00	1.111E+00	37.11	
RA-226	1600.00Y	1.00	1.373E+00	1.373E+00	0.231E+00	16.84	
AC-228	1.41E+10Y	1.00	1.866E+00	1.866E+00	0.428E+00	22.91	
RA-228	1.41E+10Y	1.00	1.866E+00	1.866E+00	0.428E+00	22.91	
TH-228	1.41E+10Y	1.00	1.569E+00	1.569E+00	0.192E+00	12.22	
TH-230	4.47E+09Y	1.00	1.373E+00	1.373E+00	0.231E+00	16.84	
TH-232	1.41E+10Y	1.00	1.866E+00	1.866E+00	0.428E+00	22.91	
TH-234	4.47E+09Y	1.00	2.336E+00	2.336E+00	2.231E+00	95.51	
U-234	4.47E+09Y	1.00	1.373E+00	1.373E+00	0.231E+00	16.84	
NP-237	2.14E+06Y	1.00	8.610E-01	8.610E-01	3.929E-01	45.63	
U-238	4.47E+09Y	1.00	2.336E+00	2.336E+00	2.231E+00	95.51	
AM-243	7380.00Y	1.00	4.852E-01	4.852E-01	1.186E-01	24.44	
ANH-511	1.00E+09Y	1.00	1.790E-01	1.790E-01	0.797E-01	44.49	
	Total Activity :		6.851E+01	6.858E+01			

Grand Total Activity : 6.851E+01 6.858E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
6	89.90	124	373	1.30	180.57	172	21	1.72E-02	57.7	5.31E+00	T
0	186.26	184	293	1.21	373.27	369	10	2.55E-02	40.2	5.26E+00	T
0	209.75	116	322	1.21	420.25	414	13	1.62E-02	66.1	4.87E+00	T
0	270.06	91	169	1.71	540.85	537	9	1.27E-02	55.2	4.05E+00	T
0	410.03	45	96	1.43	820.72	815	10	6.21E-03	87.7	2.92E+00	T
0	663.31	129	102	2.13	1327.15	1320	20	1.79E-02	41.9	1.95E+00	T
0	727.56	75	39	1.17	1455.62	1449	12	1.04E-02	40.6	1.80E+00	T
0	796.02	31	35	1.67	1592.48	1588	9	4.31E-03	76.8	1.66E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:34:42.55

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585002.CNF;1  *
* Acquisition date : 9-JUL-2009 08:34:16.  Detector SN#    :                *
* Detector ID      : GAM01                 Sensitivity     : 5.00000        *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:01.07         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 25-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232585002            Analyst initials: MXR1           *
* Batch Number     : 881931                Sample Quantity : 1.12050E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56.1MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.925E+01	2.909E+00	5.798E-01	4.121E-02	50.453
ZR-88	4.493E-02	7.801E-02	5.895E-02	3.187E-03	0.762
CD-109	2.978E+00	1.212E+00	1.488E+00	1.370E-01	2.000
IN-113M	6.527E-02	1.133E-01	8.594E-02	5.000E-03	0.759
SN-113	6.527E-02	1.133E-01	8.594E-02	5.000E-03	0.759
SN-126	2.932E-01	1.193E-01	1.474E-01	1.352E-02	1.990
TL-208	4.639E-01	1.131E-01	6.958E-02	4.409E-03	6.667
BI-211	4.338E+00	5.945E-01	3.903E-01	2.472E-02	11.115
PB-212	1.569E+00	1.917E-01	1.216E-01	8.857E-03	12.909
PO-212	1.569E+00	1.917E-01	1.216E-01	8.857E-03	12.909
BI-214	1.373E+00	2.311E-01	1.236E-01	9.164E-03	11.107
PB-214	1.509E+00	2.213E-01	1.361E-01	1.116E-02	11.091
PO-214	1.509E+00	2.213E-01	1.361E-01	1.116E-02	11.091
PO-216	1.569E+00	1.917E-01	1.216E-01	8.857E-03	12.909
PO-218	1.509E+00	2.213E-01	1.361E-01	1.116E-02	11.091
RA-224	2.993E+00	1.111E+00	1.698E+00	9.769E-02	1.763
RA-226	1.373E+00	2.311E-01	1.236E-01	9.164E-03	11.107
AC-228	1.866E+00	4.276E-01	2.293E-01	2.316E-02	8.140

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.866E+00	4.276E-01	2.293E-01	2.316E-02	8.140
TH-228	1.569E+00	1.917E-01	1.215E-01	8.856E-03	12.910
TH-230	1.373E+00	2.311E-01	1.236E-01	9.164E-03	11.107
TH-232	1.866E+00	4.276E-01	2.293E-01	2.316E-02	8.140
TH-234	2.336E+00	2.231E+00	2.583E+00	4.617E-01	0.904
U-234	1.373E+00	2.311E-01	1.236E-01	9.164E-03	11.107
NP-237	8.610E-01	3.929E-01	5.063E-01	1.142E-01	1.701
U-238	2.336E+00	2.231E+00	2.583E+00	4.617E-01	0.904
AM-243	4.852E-01	1.186E-01	1.104E-01	9.306E-03	4.394
ANH-511	1.790E-01	7.966E-02	6.010E-02	3.328E-03	2.979

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-7.173E-02		3.965E-01	6.260E-01	4.092E-02	-0.115
NA-22	-1.041E-02		4.785E-02	7.770E-02	4.980E-03	-0.134
NA-24	-9.408E-02		1.045E-01	Half-Life too short		
AL-26	-1.648E-02		3.962E-02	5.842E-02	3.369E-03	-0.282
TI-44	3.707E-01	+	6.953E-02	9.424E-02	8.084E-03	3.934
SC-46	-1.080E-02		4.596E-02	7.313E-02	5.139E-03	-0.148
V-48	1.816E-02		8.272E-02	1.376E-01	9.328E-03	0.132
CR-51	2.770E-02		4.340E-01	7.139E-01	4.621E-02	0.039
MN-52	-9.530E-02		2.339E-01	3.611E-01	2.470E-02	-0.264
MN-54	1.982E-02		4.676E-02	7.969E-02	5.206E-03	0.249
CO-56	-9.468E-03		4.063E-02	6.472E-02	4.297E-03	-0.146
CO-57	-8.881E-03		3.082E-02	4.816E-02	2.958E-03	-0.184
CO-58	-4.609E-02		4.593E-02	6.711E-02	4.259E-03	-0.687
FE-59	2.812E-02		1.071E-01	1.779E-01	1.254E-02	0.158
CO-60	-6.785E-02		5.281E-02	7.315E-02	5.069E-03	-0.928
ZN-65	-1.701E-02		1.327E-01	1.803E-01	1.079E-02	-0.094
GE-68	1.024E+00		1.569E+00	2.711E+00	1.693E-01	0.378
AS-73	-2.210E-01		1.133E+00	1.828E+00	1.556E-01	-0.121
AS-74	-1.505E-02		1.074E-01	1.780E-01	9.522E-03	-0.085
SE-75	-3.397E-02		5.542E-02	8.113E-02	4.774E-03	-0.419
BR-77	-4.443E+00		9.205E+00	1.404E+01	7.764E-01	-0.316
SR-82	-1.458E-01		4.756E-01	7.622E-01	4.586E-02	-0.191
RB-83	-4.524E-02		8.673E-02	1.318E-01	7.287E-03	-0.343
RB-84	-1.698E-02		8.340E-02	1.334E-01	9.278E-03	-0.127
KR-85	2.227E+01		1.121E+01	1.842E+01	1.019E+00	1.210
SR-85	1.127E-01		5.674E-02	9.318E-02	5.158E-03	1.210
RB-86	2.627E-01		9.730E-01	1.616E+00	1.010E-01	0.163
Y-88	-3.689E-03		3.652E-02	5.778E-02	3.270E-03	-0.064
Y-91	-1.657E+01		2.287E+01	3.559E+01	2.057E+00	-0.466
NB-94	1.080E-02		4.245E-02	7.186E-02	3.871E-03	0.150
NB-95	-1.514E-03		5.172E-02	8.513E-02	5.043E-03	-0.018
NB-95M	3.335E-02		1.586E-01	2.349E-01	1.756E-02	0.142
ZR-95	5.910E-02		8.106E-02	1.429E-01	1.010E-02	0.413

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	1.097E-02		1.616E-02	Half-Life too short		
ZR-97	8.668E-02		3.480E-01	Half-Life too short		
MO-99	-4.949E+00		1.061E+01	1.676E+01	2.302E+00	-0.295
TC-99M	-6.164E+08		6.639E+08	Half-Life too short		
RH-101	1.828E-02		3.876E-02	6.454E-02	3.568E-03	0.283
RH-102	-1.953E-02		3.645E-02	5.577E-02	3.094E-03	-0.350
RU-103	3.474E-02		4.700E-02	7.980E-02	9.999E-03	0.435
RH-106	2.600E-02		3.796E-01	6.378E-01	7.319E-02	0.041
RU-106	2.600E-02		3.796E-01	6.378E-01	3.347E-02	0.041
AG-108M	1.620E-02		4.284E-02	7.097E-02	4.277E-03	0.228
AG-110M	1.593E-02		3.942E-02	6.039E-02	3.319E-03	0.264
IN-111	2.323E-01		9.871E-01	1.465E+00	8.450E-02	0.159
IN-114M	9.323E-03		2.337E-01	3.461E-01	1.897E-02	0.027
CD-115	-2.172E+00		8.238E+00	1.359E+01	7.500E-01	-0.160
SN-117M	-2.755E-02		5.930E-02	9.813E-02	5.340E-03	-0.281
SB-122	2.130E+00		1.759E+00	3.216E+00	1.752E-01	0.662
I-123	-3.218E-01		6.637E-01	Half-Life too short		
TE-123M	-7.788E-03		3.212E-02	5.366E-02	2.961E-03	-0.145
I-124	1.944E-01		7.272E-01	1.087E+00	5.788E-02	0.179
SB-124	-4.789E-02		9.079E-02	1.310E-01	8.760E-03	-0.366
SB-125	-3.754E-02		1.167E-01	1.836E-01	1.056E-02	-0.204
TE-125M	-1.149E+01		1.090E+01	1.600E+01	1.428E+00	-0.718
I-126	2.446E-01		2.099E-01	3.805E-01	1.936E-02	0.643
SB-126	1.556E-01		1.543E-01	2.613E-01	1.447E-02	0.595
SB-127	4.535E-01		1.226E+00	2.106E+00	1.821E-01	0.215
XE-127	4.416E-02		5.600E-02	9.392E-02	5.220E-03	0.470
I-131	1.770E-02		1.205E-01	1.983E-01	1.248E-02	0.089
TE-132	2.872E-01		6.570E-01	1.113E+00	1.567E-01	0.258
BA-133	2.587E-02		5.459E-02	8.150E-02	9.366E-03	0.317
I-133	-4.097E-04		1.251E-03	Half-Life too short		
CS-134	8.236E-02	+	6.342E-02	1.045E-01	6.558E-03	0.788
CS-135	1.309E-01		2.130E-01	3.226E-01	2.478E-02	0.406
I-135	1.388E+08		1.392E+08	Half-Life too short		
CS-136	5.650E-02		1.060E-01	1.833E-01	1.267E-02	0.308
BA-137M	1.855E-01		5.621E-02	1.054E-01	5.321E-03	1.761
CS-137	1.961E-01		5.943E-02	1.114E-01	5.657E-03	1.761
CE-139	-1.626E-02		3.275E-02	5.396E-02	2.882E-03	-0.301
BA-140	-1.099E-01		2.825E-01	4.573E-01	1.485E-01	-0.240
LA-140	1.700E-02		1.078E-01	1.813E-01	1.181E-02	0.094
CE-141	-1.221E-02		7.186E-02	1.163E-01	6.833E-03	-0.105
CE-143	1.262E-04		5.339E-05	Half-Life too short		
CE-144	-2.496E-01		2.548E-01	3.789E-01	5.389E-02	-0.659
PM-144	-9.450E-03		4.069E-02	6.614E-02	3.532E-03	-0.143
PR-144	-6.399E-01		2.755E+00	4.479E+00	2.390E-01	-0.143
PM-146	3.046E-02		5.290E-02	8.893E-02	7.509E-03	0.343
ND-147	-9.302E-02		5.913E-01	9.839E-01	1.319E-01	-0.095
PM-149	-2.583E+01		7.308E+01	1.177E+02	1.670E+01	-0.219
EU-152	1.689E-02		1.248E-01	1.986E-01	1.285E-02	0.085

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-3.417E-04		1.040E-01	1.479E-01	1.171E-02	-0.002
EU-154	-2.751E-02		1.340E-01	2.179E-01	2.118E-02	-0.126
EU-155	1.102E-01		1.253E-01	2.078E-01	1.518E-02	0.530
TB-160	2.400E-02		1.784E-01	2.860E-01	1.984E-02	0.084
HO-166M	-2.789E-03		7.115E-02	1.175E-01	6.419E-03	-0.024
TM-171	-2.252E+01		3.961E+01	5.527E+01	4.598E+00	-0.407
LU-176	-5.799E-03		3.375E-02	4.784E-02	2.793E-03	-0.121
LU-177	3.060E+00	+	2.031E+00	2.017E+00	1.127E-01	1.517
LU-177M	-1.841E-01		2.555E-01	3.335E-01	1.822E-02	-0.552
HF-181	1.068E-02		5.595E-02	8.966E-02	4.975E-03	0.119
W-181	-2.448E-01		5.096E-01	7.154E-01	5.964E-02	-0.342
TA-182	2.030E-01		2.383E-01	4.290E-01	2.541E-02	0.473
RE-183	-2.086E-02		1.179E-01	1.974E-01	1.063E-02	-0.106
RE-184	1.470E-01		2.771E-01	4.716E-01	2.732E-02	0.312
OS-185	-2.624E-03		5.040E-02	8.363E-02	4.293E-03	-0.031
RE-188	3.236E-01		1.981E-01	3.547E-01	1.948E-02	0.912
W-188	2.496E+00		9.785E+00	1.442E+01	8.437E-01	0.173
IR-192	-9.051E-03		4.043E-02	6.530E-02	3.820E-03	-0.139
AU-195	3.346E-01		2.779E-01	4.460E-01	3.462E-02	0.750
TL-200	-1.130E-04		1.286E-04	Half-Life too short		
TL-201	-2.741E+00		6.005E+00	9.915E+00	5.299E-01	-0.276
TL-202	1.368E-02		8.134E-02	1.327E-01	7.320E-03	0.103
HG-203	-2.021E-02		4.978E-02	8.026E-02	4.978E-03	-0.252
BI-207	1.294E-02		6.827E-02	1.125E-01	7.126E-03	0.115
TL-207	-1.015E-01		8.387E-01	1.358E+00	2.243E-01	-0.075
PO-209	5.789E+00		9.321E+00	1.618E+01	1.148E+00	0.358
BI-210	-2.323E+00		5.302E+00	8.371E+00	6.631E-01	-0.277
PB-210	-2.323E+00		5.302E+00	8.371E+00	6.631E-01	-0.277
PO-210	-2.323E+00		5.301E+00	8.371E+00	5.748E-01	-0.277
PB-211	-2.380E-02		1.312E+00	1.852E+00	1.154E+00	-0.013
BI-212	1.181E+00	+	4.870E-01	7.526E-01	5.689E-02	1.569
PO-215	-1.015E-01		8.387E-01	1.358E+00	2.243E-01	-0.075
RN-219	-1.695E-01		5.035E-01	7.939E-01	1.068E-01	-0.214
RN-220	-2.072E+01		2.995E+01	4.745E+01	2.601E+00	-0.437
RA-223	-1.015E-01		8.387E-01	1.358E+00	2.243E-01	-0.075
AC-227	1.364E-01		4.469E-01	7.515E-01	1.049E-01	0.181
TH-227	1.364E-01		4.471E-01	7.515E-01	1.270E-01	0.181
TH-229	-3.556E-01		6.018E-01	9.812E-01	5.398E-02	-0.362
PA-231	5.939E-01		1.776E+00	2.981E+00	4.114E-01	0.199
TH-231	-1.015E-01		8.387E-01	1.358E+00	2.243E-01	-0.075
U-231	-8.896E-01		1.164E+00	1.575E+00	1.274E-01	-0.565
PA-233	-1.286E-03		7.972E-02	1.306E-01	8.083E-03	-0.010
PA-234	-5.699E-02		3.863E-01	6.187E-01	1.117E-01	-0.092
PA-234M	-7.237E+00		8.315E+00	1.257E+01	1.228E+00	-0.576
U-235	1.136E-01		2.478E-01	4.109E-01	6.679E-02	0.277
NP-236	9.682E-03		8.947E-02	1.517E-01	8.216E-03	0.064
NP-239	6.825E-02		2.420E-01	3.894E-01	2.491E-02	0.175
AM-241	2.703E-01		2.309E-01	3.544E-01	3.238E-02	0.763

Sample ID : G232585002 Acquisition date : 9-JUL-2009 08:34:16

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.337E-03		1.135E-01	1.808E-01	1.321E-02	-0.018
CM-247	2.027E-02		4.475E-02	7.481E-02	4.066E-03	0.271
CF-249	2.057E-02		6.004E-02	8.783E-02	4.774E-03	0.234
CF-251	1.395E-03		1.475E-01	2.482E-01	1.339E-02	0.006

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232585002           *
* Acquisition date  :  9-JUL-2009 08:34:16 Detector SN#     :               *
* Detector ID       : GAM01                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.07      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232585002           Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.1205E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.925E+01	2.851E+00	2.886E-01	1.454E+00
ZR-88	4.493E-02	7.645E-02	2.967E-02	3.900E-02
CD-109	2.978E+00	1.187E+00	7.582E-01	6.059E-01
IN-113M	6.527E-02	1.111E-01	4.325E-02	5.666E-02
SN-113	6.527E-02	1.111E-01	4.325E-02	5.666E-02
SN-126	2.932E-01	1.169E-01	7.507E-02	5.966E-02
TL-208	4.639E-01	1.109E-01	3.490E-02	5.657E-02
BI-211	4.338E+00	5.826E-01	1.966E-01	2.972E-01
PB-212	1.569E+00	1.878E-01	6.142E-02	9.584E-02
PO-212	1.569E+00	1.878E-01	6.142E-02	9.584E-02
BI-214	1.373E+00	2.265E-01	6.199E-02	1.156E-01
PB-214	1.509E+00	2.168E-01	6.854E-02	1.106E-01
PO-214	1.509E+00	2.168E-01	6.854E-02	1.106E-01
PO-216	1.569E+00	1.878E-01	6.142E-02	9.584E-02
PO-218	1.509E+00	2.168E-01	6.854E-02	1.106E-01
RA-224	2.993E+00	1.089E+00	8.580E-01	5.555E-01
RA-226	1.373E+00	2.265E-01	6.199E-02	1.156E-01
AC-228	1.866E+00	4.190E-01	1.146E-01	2.138E-01
RA-228	1.866E+00	4.190E-01	1.146E-01	2.138E-01
TH-228	1.569E+00	1.878E-01	6.142E-02	9.584E-02
TH-230	1.373E+00	2.265E-01	6.199E-02	1.156E-01
TH-232	1.866E+00	4.190E-01	1.146E-01	2.138E-01
TH-234	2.336E+00	2.187E+00	1.319E+00	1.116E+00
U-234	1.373E+00	2.265E-01	6.199E-02	1.156E-01
NP-237	8.610E-01	3.850E-01	2.579E-01	1.964E-01
U-238	2.336E+00	2.187E+00	1.319E+00	1.116E+00
AM-243	4.852E-01	1.162E-01	5.632E-02	5.931E-02
ANH-511	1.790E-01	7.806E-02	3.018E-02	3.983E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-7.173E-02	3.885E-01	3.146E-01	1.982E-01	NOT IDENT.
NA-22	-1.041E-02	4.689E-02	3.873E-02	2.393E-02	NOT IDENT.
NA-24	-9.408E+04	2.048E+05	0.000E+00	1.045E+05	SHORT HLIF
AL-26	-1.648E-02	3.883E-02	2.903E-02	1.981E-02	NOT IDENT.
TI-44	3.707E-01	6.814E-02	4.805E-02	3.476E-02	FAIL ABUN
SC-46	-1.080E-02	4.505E-02	3.656E-02	2.298E-02	FAIL ABUN
V-48	1.816E-02	8.107E-02	6.872E-02	4.136E-02	NOT IDENT.
CR-51	2.770E-02	4.254E-01	3.599E-01	2.170E-01	NOT IDENT.
MN-52	-9.530E-02	2.292E-01	1.798E-01	1.170E-01	NOT IDENT.
MN-54	1.982E-02	4.582E-02	3.986E-02	2.338E-02	NOT IDENT.
CO-56	-9.468E-03	3.981E-02	3.237E-02	2.031E-02	NOT IDENT.
CO-57	-8.881E-03	3.020E-02	2.447E-02	1.541E-02	NOT IDENT.
CO-58	-4.609E-02	4.501E-02	3.358E-02	2.296E-02	NOT IDENT.
FE-59	2.812E-02	1.050E-01	8.878E-02	5.356E-02	NOT IDENT.
CO-60	-6.785E-02	5.175E-02	3.644E-02	2.640E-02	NOT IDENT.
ZN-65	-1.701E-02	1.300E-01	8.996E-02	6.634E-02	NOT IDENT.
GE-68	1.024E+00	1.537E+00	1.353E+00	7.843E-01	NOT IDENT.
AS-73	-2.210E-01	1.111E+00	9.350E-01	5.666E-01	NOT IDENT.
AS-74	-1.505E-02	1.053E-01	8.926E-02	5.372E-02	NOT IDENT.
SE-75	-3.397E-02	5.431E-02	4.096E-02	2.771E-02	NOT IDENT.
BR-77	-4.443E+00	9.021E+00	7.052E+00	4.602E+00	FAIL ABUN
SR-82	-1.458E-01	4.661E-01	3.815E-01	2.378E-01	NOT IDENT.
RB-83	-4.524E-02	8.500E-02	6.619E-02	4.337E-02	NOT IDENT.
RB-84	-1.698E-02	8.174E-02	6.668E-02	4.170E-02	NOT IDENT.
KR-85	2.227E+01	1.099E+01	9.248E+00	5.607E+00	NOT IDENT.
SR-85	1.127E-01	5.561E-02	4.679E-02	2.837E-02	NOT IDENT.
RB-86	2.627E-01	9.535E-01	8.067E-01	4.865E-01	NOT IDENT.
Y-88	-3.689E-03	3.579E-02	2.871E-02	1.826E-02	NOT IDENT.
Y-91	-1.657E+01	2.241E+01	1.775E+01	1.143E+01	NOT IDENT.
NB-94	1.080E-02	4.160E-02	3.599E-02	2.122E-02	NOT IDENT.
NB-95	-1.514E-03	5.069E-02	4.261E-02	2.586E-02	NOT IDENT.
NB-95M	3.335E-02	1.554E-01	1.187E-01	7.930E-02	NOT IDENT.
ZR-95	5.910E-02	7.944E-02	7.155E-02	4.053E-02	NOT IDENT.
NB-97	1.097E+04	3.167E+04	0.000E+00	1.616E+04	SHORT HLIF
ZR-97	8.668E+04	6.820E+05	0.000E+00	3.480E+05	SHORT HLIF
MO-99	-4.949E+00	1.040E+01	8.390E+00	5.306E+00	NOT IDENT.
TC-99M	-6.164E+14	1.301E+15	0.000E+00	6.639E+14	SHORT HLIF
RH-101	1.828E-02	3.798E-02	3.266E-02	1.938E-02	NOT IDENT.
RH-102	-1.953E-02	3.572E-02	2.803E-02	1.822E-02	NOT IDENT.
RU-103	3.474E-02	4.606E-02	4.008E-02	2.350E-02	FAIL ABUN
RH-106	2.600E-02	3.720E-01	3.198E-01	1.898E-01	FAIL ABUN
RU-106	2.600E-02	3.720E-01	3.198E-01	1.898E-01	FAIL ABUN
AG-108M	1.620E-02	4.198E-02	3.569E-02	2.142E-02	NOT IDENT.
AG-110M	1.593E-02	3.863E-02	3.026E-02	1.971E-02	NOT IDENT.
IN-111	2.323E-01	9.674E-01	7.400E-01	4.935E-01	NOT IDENT.
IN-114M	9.323E-03	2.291E-01	1.752E-01	1.169E-01	NOT IDENT.
CD-115	-2.172E+00	8.073E+00	6.823E+00	4.119E+00	NOT IDENT.
SN-117M	-2.755E-02	5.811E-02	4.975E-02	2.965E-02	NOT IDENT.
SB-122	2.130E+00	1.724E+00	1.614E+00	8.795E-01	NOT IDENT.
I-123	-3.218E+05	1.301E+06	0.000E+00	6.637E+05	SHORT HLIF
TE-123M	-7.788E-03	3.148E-02	2.720E-02	1.606E-02	NOT IDENT.
I-124	1.944E-01	7.127E-01	5.450E-01	3.636E-01	NOT IDENT.
SB-124	-4.789E-02	8.898E-02	6.513E-02	4.540E-02	NOT IDENT.
SB-125	-3.754E-02	1.143E-01	9.232E-02	5.833E-02	NOT IDENT.
TE-125M	-1.149E+01	1.068E+01	8.138E+00	5.450E+00	NOT IDENT.
I-126	2.446E-01	2.057E-01	1.907E-01	1.049E-01	NOT IDENT.
SB-126	1.556E-01	1.512E-01	1.309E-01	7.713E-02	FAIL ABUN
SB-127	4.535E-01	1.202E+00	1.055E+00	6.132E-01	NOT IDENT.
XE-127	4.416E-02	5.488E-02	4.752E-02	2.800E-02	NOT IDENT.
I-131	1.770E-02	1.181E-01	9.984E-02	6.027E-02	NOT IDENT.
TE-132	2.872E-01	6.439E-01	5.627E-01	3.285E-01	NOT IDENT.
BA-133	2.587E-02	5.350E-02	4.105E-02	2.730E-02	NOT IDENT.
I-133	-4.097E+02	2.453E+03	0.000E+00	1.251E+03	SHORT HLIF
CS-134	8.236E-02	6.215E-02	5.231E-02	3.171E-02	FAIL ABUN
CS-135	1.309E-01	2.087E-01	1.629E-01	1.065E-01	NOT IDENT.
I-135	1.388E+14	2.727E+14	0.000E+00	1.392E+14	SHORT HLIF
CS-136	5.650E-02	1.039E-01	9.148E-02	5.300E-02	FAIL ABUN
BA-137M	1.855E-01	5.509E-02	5.281E-02	2.811E-02	NOT IDENT.
CS-137	1.961E-01	5.824E-02	5.582E-02	2.972E-02	NOT IDENT.
CE-139	-1.626E-02	3.209E-02	2.735E-02	1.637E-02	NOT IDENT.
BA-140	-1.099E-01	2.769E-01	2.295E-01	1.413E-01	NOT IDENT.
LA-140	1.700E-02	1.056E-01	9.021E-02	5.390E-02	NOT IDENT.
CE-141	-1.221E-02	7.042E-02	5.899E-02	3.593E-02	NOT IDENT.
CE-143	1.262E+02	1.047E+02	0.000E+00	5.339E+01	SHORT HLIF
CE-144	-2.496E-01	2.497E-01	1.924E-01	1.274E-01	NOT IDENT.
PM-144	-9.450E-03	3.988E-02	3.313E-02	2.034E-02	NOT IDENT.
PR-144	-6.399E-01	2.700E+00	2.244E+00	1.378E+00	NOT IDENT.

PM-146	3.046E-02	5.184E-02	4.470E-02	2.645E-02	NOT IDENT.
ND-147	-9.302E-02	5.795E-01	4.939E-01	2.957E-01	FAIL ABUN
PM-149	-2.583E+01	7.162E+01	5.938E+01	3.654E+01	NOT IDENT.
EU-152	1.689E-02	1.223E-01	1.001E-01	6.241E-02	NOT IDENT.
GD-153	-3.417E-04	1.019E-01	7.530E-02	5.199E-02	NOT IDENT.
EU-154	-2.751E-02	1.313E-01	1.086E-01	6.698E-02	NOT IDENT.
EU-155	1.102E-01	1.227E-01	1.057E-01	6.263E-02	FAIL ABUN
TB-160	2.400E-02	1.748E-01	1.430E-01	8.921E-02	FAIL ABUN
HO-166M	-2.789E-03	6.973E-02	5.885E-02	3.558E-02	FAIL ABUN
TM-171	-2.252E+01	3.881E+01	2.822E+01	1.980E+01	NOT IDENT.
LU-176	-5.799E-03	3.307E-02	2.412E-02	1.687E-02	FAIL ABUN
LU-177	3.060E+00	1.990E+00	1.020E+00	1.016E+00	FAIL ABUN
LU-177M	-1.841E-01	2.504E-01	1.678E-01	1.278E-01	FAIL ABUN
HF-181	1.068E-02	5.483E-02	4.505E-02	2.798E-02	NOT IDENT.
W-181	-2.448E-01	4.994E-01	3.653E-01	2.548E-01	NOT IDENT.
TA-182	2.030E-01	2.336E-01	2.139E-01	1.192E-01	FAIL ABUN
RE-183	-2.086E-02	1.156E-01	1.000E-01	5.897E-02	FAIL ABUN
RE-184	1.470E-01	2.715E-01	2.382E-01	1.385E-01	NOT IDENT.
OS-185	-2.624E-03	4.939E-02	4.192E-02	2.520E-02	NOT IDENT.
RE-188	3.236E-01	1.942E-01	1.799E-01	9.906E-02	NOT IDENT.
W-188	2.496E+00	9.589E+00	7.274E+00	4.892E+00	FAIL ABUN
IR-192	-9.051E-03	3.962E-02	3.292E-02	2.021E-02	FAIL ABUN
AU-195	3.346E-01	2.723E-01	2.270E-01	1.389E-01	FAIL ABUN
TL-200	-1.130E+02	2.521E+02	0.000E+00	1.286E+02	SHORT HLIF
TL-201	-2.741E+00	5.885E+00	5.024E+00	3.002E+00	NOT IDENT.
TL-202	1.368E-02	7.971E-02	6.674E-02	4.067E-02	NOT IDENT.
HG-203	-2.021E-02	4.878E-02	4.050E-02	2.489E-02	NOT IDENT.
BI-207	1.294E-02	6.690E-02	5.616E-02	3.413E-02	FAIL ABUN
TL-207	-1.015E-01	8.219E-01	6.845E-01	4.193E-01	FAIL ABUN
PO-209	5.789E+00	9.135E+00	8.085E+00	4.661E+00	NOT IDENT.
BI-210	-2.323E+00	5.196E+00	4.286E+00	2.651E+00	NOT IDENT.
PB-210	-2.323E+00	5.196E+00	4.286E+00	2.651E+00	NOT IDENT.
PO-210	-2.323E+00	5.195E+00	4.286E+00	2.650E+00	NOT IDENT.
PB-211	-2.380E-02	1.286E+00	9.318E-01	6.559E-01	NOT IDENT.
BI-212	1.181E+00	4.772E-01	3.768E-01	2.435E-01	FAIL ABUN
PO-215	-1.015E-01	8.219E-01	6.845E-01	4.193E-01	FAIL ABUN
RN-219	-1.695E-01	4.934E-01	3.995E-01	2.517E-01	FAIL ABUN
RN-220	-2.072E+01	2.935E+01	2.381E+01	1.498E+01	NOT IDENT.
RA-223	-1.015E-01	8.219E-01	6.845E-01	4.193E-01	FAIL ABUN
AC-227	1.364E-01	4.380E-01	3.795E-01	2.235E-01	FAIL ABUN
TH-227	1.364E-01	4.382E-01	3.795E-01	2.236E-01	FAIL ABUN
TH-229	-3.556E-01	5.897E-01	4.967E-01	3.009E-01	FAIL ABUN
PA-231	5.939E-01	1.740E+00	1.504E+00	8.878E-01	FAIL ABUN
TH-231	-1.015E-01	8.219E-01	6.845E-01	4.193E-01	FAIL ABUN
U-231	-8.896E-01	1.141E+00	8.016E-01	5.820E-01	FAIL ABUN
PA-233	-1.286E-03	7.812E-02	6.587E-02	3.986E-02	FAIL ABUN
PA-234	-5.699E-02	3.785E-01	3.091E-01	1.931E-01	FAIL ABUN
PA-234M	-7.237E+00	8.149E+00	6.276E+00	4.158E+00	NOT IDENT.
U-235	1.136E-01	2.429E-01	2.085E-01	1.239E-01	FAIL ABUN
NP-236	9.682E-03	8.768E-02	7.690E-02	4.473E-02	NOT IDENT.
NP-239	6.825E-02	2.372E-01	1.979E-01	1.210E-01	FAIL ABUN
AM-241	2.703E-01	2.263E-01	1.811E-01	1.154E-01	NOT IDENT.
CM-243	-3.337E-03	1.112E-01	9.199E-02	5.676E-02	FAIL ABUN
CM-247	2.027E-02	4.385E-02	3.764E-02	2.237E-02	NOT IDENT.
CF-249	2.057E-02	5.884E-02	4.421E-02	3.002E-02	NOT IDENT.
CF-251	1.395E-03	1.446E-01	1.257E-01	7.377E-02	NOT IDENT.

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*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                           CHARLESTON ,SC 29417                        *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT              *
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ENERGY	MDA COUNTS
46.50	250.9123
46.50	250.9123
46.50	250.9123
48.70	237.6660
49.72	236.1015
51.35	239.9828
52.39	252.9182
52.97	246.9809
53.15	247.0681
53.44	251.3626
54.07	241.2714
56.28	301.8215
56.28	301.8237
57.37	0.0000
57.53	305.6734
57.53	305.6749
57.60	305.7135
57.98	287.0709
57.98	287.0709
59.32	272.5523
59.32	272.5523
59.40	272.5926
59.54	266.3576
59.72	266.4453
60.01	258.6993
61.10	301.8846
61.14	301.9064
61.30	301.9931
63.00	292.8645
63.29	293.0142
63.29	293.0142
63.58	293.1639
64.28	335.3798
65.12	327.9102
65.20	327.9557
65.20	327.9557
66.05	320.4649
66.72	336.7932
66.83	352.8207
66.91	352.8696
67.20	322.6911
67.20	322.6911
67.75	353.3720
67.85	332.6426
68.90	296.3822
68.90	296.3822
69.30	315.8174
69.67	341.6788
70.82	332.6842
70.82	332.6842
70.83	332.6890
72.80	361.1699
72.87	361.2109
72.87	361.2109
74.67	362.2534
74.81	362.3337
74.81	362.3337
74.81	362.3337
74.81	362.3337
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74.81	362.3337
74.97	362.4260
75.28	362.6055
75.70	362.8447
77.11	363.6479
77.11	363.6479
77.11	363.6479

77.11	363.6479
77.11	363.6479
77.11	363.6479
78.38	359.4858
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79.80	319.5154
79.80	319.5154
80.11	319.6664
80.18	319.7008
80.30	357.2819
80.30	357.2819
80.57	357.4289
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81.07	416.4995
81.07	416.4995
81.07	416.4995
81.07	416.4995
82.60	377.1861
83.37	385.1560
83.78	367.3530
83.78	367.3530
83.78	367.3530
83.78	367.3530
84.21	336.4063
84.40	336.5017
84.90	297.3246
85.43	327.1463
86.29	434.5490
86.50	434.6819
86.54	431.4129
86.59	431.4449
86.72	431.5258
86.79	431.5688
86.94	431.6628
87.30	326.3891
87.30	326.3891
87.30	326.3891
87.30	326.3891
87.30	326.3891
87.30	326.3891
87.57	326.5160
87.88	326.6610
88.03	326.7320
88.36	326.8861
88.47	326.9375
89.95	327.6278
91.11	328.1641
92.29	328.7064
92.38	328.7472
92.38	328.7472
93.35	329.1913
94.00	329.4859
94.67	221.5243
94.67	221.5253
94.90	261.5824
94.90	261.5824
94.90	261.5824
94.90	261.5824
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95.87	298.6333
96.73	268.9176
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98.44	237.7269
98.44	237.7269
98.88	213.0749
99.55	225.7839
99.55	225.7839
99.86	226.9956
100.00	227.0379
100.10	253.9144
103.18	258.3101
103.76	247.2650
105.00	219.5178
105.31	224.1098
108.00	246.3488
109.28	254.6688
111.00	237.0661
111.00	237.0661

111.76	236.1540
112.95	258.1033
115.19	253.1081
116.30	255.7313
117.00	270.8007
117.00	270.8007
117.66	274.4446
121.11	241.1217
121.62	258.4991
121.78	255.0999
122.06	255.1835
122.32	254.1104
122.32	254.1104
122.32	254.1104
122.32	254.1104
123.07	254.3330
127.23	268.2707
129.76	247.0049
131.20	268.3110
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133.54	282.9809
135.34	260.7864
136.00	247.8388
136.25	252.2856
136.48	252.3494
140.51	266.6438
140.51	0.0000
142.18	262.7098
142.65	254.0193
143.76	240.1893
144.24	238.5427
144.24	238.5427
144.24	238.5427
144.24	238.5427
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145.44	251.2258
147.16	276.4872
152.43	288.6737
152.70	280.7295
153.22	284.4453
154.21	236.5292
154.21	236.5292
154.21	236.5292
154.21	236.5292
155.03	222.4305
156.02	241.4287
158.56	255.4828
159.00	0.0000
159.00	243.9351
160.31	229.8809
161.27	205.8278
162.32	221.3328
162.64	231.3024
163.35	241.3681
163.89	228.8775
165.85	232.0180
167.43	244.1210
171.28	225.9526
171.86	233.3396
172.10	233.3906
176.55	231.6176
176.60	233.4531
181.06	247.5875
184.41	233.6380
185.71	242.7345
186.00	251.0741
190.27	225.9850
192.34	220.8962
193.63	245.3482
197.04	215.4238
198.01	205.3800
198.60	217.5683
200.40	260.7355
201.83	222.8244
202.84	212.2166
205.31	242.3613
208.36	207.1639
208.81	207.2398

209.75	207.3999
209.75	207.3999
210.97	207.6057
215.65	193.1172
216.55	197.3543
218.09	194.6275
222.10	200.9335
223.80	210.6927
226.40	226.3371
227.00	208.3651
227.08	208.3785
227.20	208.3969
228.16	207.6000
228.18	207.6033
228.18	207.6033
231.56	0.0000
235.69	202.2845
236.00	202.3313
236.00	202.3313
238.60	239.5872
238.63	239.5929
238.63	239.5929
238.63	239.5929
239.00	361.0256
240.98	361.5592
241.98	217.0973
241.98	217.0973
241.98	217.0973
244.69	169.7064
245.39	154.3579
247.94	167.9027
248.90	170.2301
249.79	168.4059
252.40	139.6335
252.85	157.1390
252.85	157.1390
254.15	0.0000
256.20	153.6273
256.20	153.6273
260.50	165.8003
260.90	159.9936
262.80	140.6711
264.65	163.0249
268.24	156.8945
268.79	139.6883
269.46	138.1832
269.46	138.1832
269.46	138.1832
269.46	138.1832
271.23	190.2353
273.65	199.9971
276.40	156.7874
277.35	158.8627
277.60	159.8766
277.60	159.8766
278.00	155.9700
278.60	167.8833
279.20	178.8209
279.53	166.0133
280.46	177.9813
281.68	164.2725
283.67	131.7925
284.30	131.8473
285.00	143.8097
285.90	147.8655
286.10	152.8462
286.10	152.8462
287.40	155.9579
288.45	0.0000
290.67	141.7590
290.80	141.7720
291.72	159.3896
293.26	0.0000
293.70	165.9810
295.21	166.1436
295.21	166.1436
295.21	166.1436
295.96	119.8737

296.50	135.9025
297.23	135.9668
298.57	136.0851
299.80	136.1930
299.80	136.1930
300.09	124.1987
300.09	124.1987
300.09	124.1987
300.10	124.1987
300.12	124.2006
301.29	121.8876
302.84	125.2189
303.76	123.6869
303.91	134.9435
304.40	133.3775
304.40	133.3775
304.84	133.4160
306.84	133.5842
308.46	121.8382
311.98	138.2543
316.51	126.4992
318.01	128.6414
319.02	126.6956
319.41	134.8366
320.08	125.7634
323.87	137.2371
323.87	137.2371
323.87	137.2371
323.87	137.2371
325.23	162.7856
328.77	150.8974
333.44	152.1376
334.20	130.9297
334.20	130.9297
334.30	130.9375
338.28	147.6541
338.28	147.6541
338.28	147.6541
338.28	147.6541
338.32	147.6563
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338.32	147.6563
340.50	131.4180
340.57	131.4238
344.27	123.4772
345.85	148.3088
350.59	0.0000
351.07	114.6652
351.92	114.7211
351.92	114.7211
351.92	114.7211
355.39	0.0000
356.01	89.5061
364.48	95.7636
366.43	106.2879
367.43	113.6453
367.94	0.0000
369.80	88.7392
374.96	108.8845
383.85	119.5109
387.95	116.4004
388.63	114.7566
391.69	99.3070
391.69	99.3070
392.90	98.1030
398.62	88.4621
400.65	118.8838
401.10	118.9128
401.81	106.2103
402.60	93.5040
404.84	103.8251
410.95	85.3723
411.60	83.6924
413.65	116.2674
414.70	95.8002
415.30	91.2669
415.76	100.2535
417.63	0.0000

418.52	99.6285
423.70	91.2969
427.08	101.1358
427.89	102.2523
432.53	106.8039
433.93	96.0821
439.47	90.9316
439.56	90.9355
439.89	81.2061
443.98	86.7932
444.90	72.7210
445.03	72.7261
445.03	72.7261
445.03	72.7261
445.03	72.7261
453.90	76.3083
463.38	95.2678
468.07	129.4982
473.00	86.8981
475.06	90.2843
475.35	82.5886
476.78	85.9481
477.59	85.9802
477.96	87.0982
482.03	83.9472
484.57	80.7271
487.03	91.8882
490.36	0.0000
492.35	73.2449
497.08	61.1667
507.63	0.0000
510.53	0.0000
510.84	88.3958
511.00	88.4031
511.85	88.4356
511.85	88.4356
513.99	84.2603
513.99	84.2603
520.41	83.1484
520.65	83.1574
527.90	69.4391
528.96	0.0000
529.64	64.0768
529.87	0.0000
531.02	69.5331
537.32	74.2464
543.00	70.7941
546.56	0.0000
549.76	74.6348
552.65	63.7896
555.20	59.2950
563.23	57.6613
563.90	56.7612
568.70	70.6328
569.32	72.4848
569.50	72.4906
569.67	72.4964
573.80	66.1834
574.00	66.1887
574.64	66.2045
578.91	84.4336
579.30	0.0000
583.14	67.3539
585.48	53.8715
591.81	72.0090
592.07	72.0166
593.00	66.6914
595.88	76.0402
600.56	76.1803
602.52	0.0000
602.71	63.5370
602.71	63.5370
603.60	63.5587
604.41	62.0280
604.70	62.0345
609.31	59.6594
609.31	59.6594
609.31	59.6594

609.31	59.6594
610.33	59.6828
612.46	62.2217
614.37	66.9373
618.01	61.9638
621.84	63.6936
621.84	63.6936
631.29	60.1625
633.02	54.5577
633.10	54.5591
634.78	55.5343
635.90	58.3838
636.97	57.4645
645.85	62.3810
646.12	61.4421
656.30	42.6962
657.75	39.5538
657.90	0.0000
661.65	44.3641
661.65	44.3641
664.57	0.0000
666.33	55.2317
666.33	55.2317
675.00	61.1359
677.61	62.1483
685.20	48.8945
692.80	58.6395
695.00	54.8361
696.49	64.4908
696.49	64.4908
697.00	70.2785
697.49	67.4023
698.33	73.2001
698.50	74.1670
699.00	77.0703
702.63	67.5220
706.10	66.6382
706.58	0.0000
706.67	65.6857
709.31	70.5797
711.68	57.0900
713.82	52.2901
717.42	60.1109
720.50	36.0492
721.93	0.0000
722.20	53.4115
722.78	56.6600
722.78	56.6600
722.89	56.6628
722.95	55.0439
723.30	55.0508
724.18	48.5889
727.18	56.4211
733.00	61.7299
735.90	61.4650
739.58	64.4708
742.81	54.7627
744.21	55.7656
747.13	62.6750
751.79	59.8294
752.31	56.8969
753.82	53.9808
755.35	57.9370
756.15	43.2180
756.87	44.2112
763.93	66.9624
765.79	66.0169
766.41	67.0172
766.84	63.0828
768.36	76.9203
768.36	76.9203
768.36	76.9203
768.36	76.9203
776.49	65.2588
778.00	67.2679
778.57	65.3023
778.89	65.3087
783.80	49.5544

785.46	53.5478
792.07	41.4042
795.84	44.7704
796.30	39.8018
801.93	68.3538
805.60	42.9129
810.29	58.9669
810.76	56.9763
815.85	43.0504
817.79	41.0731
818.51	47.0941
819.60	47.1102
826.30	43.1900
828.27	0.0000
831.60	50.3027
831.96	50.3076
834.83	53.3727
836.80	0.0000
846.75	37.3957
848.13	38.4221
856.28	0.0000
856.80	52.3781
860.37	54.8016
867.32	40.6777
867.82	40.6836
871.10	43.7779
873.19	41.7677
874.81	38.7301
875.33	0.0000
876.40	46.9052
879.36	40.8232
880.27	40.8340
880.51	37.7741
881.50	46.9759
883.24	44.9561
884.67	40.8867
889.25	44.0120
896.60	41.0283
898.02	45.1494
899.00	49.2680
903.28	35.9690
911.07	36.0502
911.07	36.0502
911.07	36.0502
919.63	26.5505
920.93	38.2168
925.00	41.3633
925.24	42.4004
926.50	33.1047
934.06	39.3953
934.06	39.3953
934.06	39.3953
934.06	39.3953
935.52	29.0404
937.48	47.7351
944.10	45.7445
946.00	48.8887
949.00	53.0943
962.29	55.2290
964.01	43.5567
966.15	41.8389
968.20	64.5377
969.11	52.3413
969.11	52.3413
969.11	52.3413
977.42	41.9678
980.50	39.9028
983.50	39.9353
989.30	48.4179
996.32	48.5089
1001.03	47.5137
1001.68	46.4664
1004.76	32.7642
1021.30	0.0000
1024.50	0.0000
1034.80	45.8072
1037.82	37.3140
1038.57	36.2545

1038.76	0.0000
1045.16	34.1797
1046.59	26.7139
1048.07	25.6547
1050.47	29.9482
1050.47	29.9482
1063.62	44.0009
1076.63	41.9916
1077.35	36.6147
1085.78	34.5344
1099.22	36.8156
1112.02	48.2769
1112.84	52.9656
1115.52	50.7340
1120.29	40.2718
1120.29	40.2718
1120.29	40.2718
1120.29	40.2718
1120.51	40.2754
1121.28	40.2827
1124.00	0.0000
1129.67	41.8185
1131.51	0.0000
1147.95	0.0000
1167.94	55.0488
1173.22	53.2799
1175.09	48.7084
1177.93	50.5800
1189.05	45.1799
1204.90	58.3011
1205.75	0.0000
1213.00	59.3385
1221.42	42.7319
1230.97	59.5807
1235.34	74.5508
1236.41	0.0000
1238.11	46.6227
1238.11	46.6227
1238.11	46.6227
1238.11	46.6227
1238.25	46.6248
1246.25	49.5107
1260.41	0.0000
1271.85	30.0651
1274.45	31.9622
1274.54	31.9635
1291.56	33.9697
1298.22	0.0000
1312.09	23.6959
1325.50	34.2202
1325.50	34.2202
1332.49	44.7433
1333.61	37.1354
1360.21	20.1088
1362.66	0.0000
1365.15	20.1301
1368.21	22.0613
1368.53	0.0000
1376.25	19.7645
1377.67	23.0654
1377.67	23.0654
1377.67	23.0654
1377.67	23.0654
1384.27	18.1482
1394.10	16.3940
1395.20	18.3266
1407.95	23.2100
1434.06	21.3886
1436.60	17.5085
1457.56	0.0000
1460.81	14.6613
1489.15	16.7095
1509.49	12.8281
1596.49	20.0627
1620.62	14.1065
1678.03	0.0000
1691.02	14.2860
1691.02	14.2860

1706.46	0.0000
1750.46	0.0000
1764.49	11.3688
1764.49	11.3688
1764.49	11.3688
1764.49	11.3688
1770.23	7.0940
1771.40	5.3216
1791.20	0.0000
1808.65	13.5364
1836.01	8.3682

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232585002

Total Uranium Activity	7.0023E+00	ug/g
Total Uranium Counting Unc.	6.5061E+00	ug/g
Total Uranium Tpu	3.3194E-06	ug/g
Total Uranium Mda	3.9262E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID   : G232585002      *
*   ANALYST       : MXR1                      DETECTOR    : GAM01           *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:34:16.70    SAMPLE ALQT:  112.050 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.541E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.605E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.538E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.709E+00
```

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:35:32.40

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585003.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:34:51.
Sample ID         : G232585003           Sample quantity  : 1.28170E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.70  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.29*	68	478	1.36	93.76	90	10	9.38E-03	67.8	
2	0	63.16*	141	664	1.13	127.49	122	10	1.96E-02	36.1	
3	2	74.68*	641	616	1.49	150.52	143	19	8.90E-02	8.4	1.43E+00
4	2	77.00*	877	442	1.19	155.15	143	19	1.22E-01	5.5	
5	9	84.25*	135	428	1.24	169.64	166	28	1.88E-02	26.0	1.36E+00
6	9	87.21	349	443	1.31	175.56	166	28	4.85E-02	11.6	
7	9	89.82	204	461	1.48	180.77	166	28	2.83E-02	21.4	
8	9	92.85*	357	411	1.53	186.83	166	28	4.96E-02	12.7	
9	0	186.01*	199	384	1.40	373.07	367	13	2.76E-02	22.1	
10	0	209.30	82	218	1.25	419.64	416	8	1.14E-02	32.9	
11	3	238.68*	1040	154	1.33	478.35	470	22	1.44E-01	3.8	2.49E+00
12	3	241.61	269	196	1.95	484.22	470	22	3.74E-02	16.6	
13	0	270.23	86	136	1.18	541.42	537	8	1.20E-02	25.9	
14	0	295.24	314	173	1.29	591.42	587	10	4.36E-02	9.7	
15	0	300.51	102	193	1.67	601.95	597	13	1.42E-02	29.9	
16	0	328.16	39	149	1.44	657.22	653	9	5.46E-03	58.4	
17	0	338.14*	222	202	1.12	677.16	671	13	3.09E-02	15.0	
18	0	351.95*	551	172	1.52	704.76	699	15	7.66E-02	6.8	
19	0	510.78*	107	158	2.04	1022.21	1014	19	1.48E-02	33.2	
20	0	583.02*	343	95	1.41	1166.58	1159	14	4.76E-02	8.2	
21	0	609.39*	316	119	1.69	1219.29	1213	15	4.39E-02	9.7	
22	0	726.89	84	80	2.21	1454.07	1448	12	1.16E-02	24.2	
23	0	769.60	65	74	0.80	1539.41	1533	15	9.02E-03	32.1	
24	0	794.61	50	66	1.37	1589.39	1583	14	6.92E-03	37.5	
25	0	861.63	58	69	1.13	1723.30	1715	16	8.08E-03	35.0	
26	0	911.15*	200	53	1.73	1822.24	1817	14	2.78E-02	10.7	
27	0	925.76	19	27	1.27	1851.42	1847	9	2.64E-03	54.4	
28	0	949.14	21	30	0.70	1898.12	1894	8	2.96E-03	49.5	
29	6	964.43	44	41	2.43	1928.68	1924	20	6.13E-03	28.6	2.51E+00
30	6	969.01	120	39	2.06	1937.83	1924	20	1.66E-02	14.5	
31	0	1119.66	128	34	2.10	2238.77	2230	15	1.78E-02	13.3	
32	0	1377.16	27	19	1.58	2753.09	2746	15	3.75E-03	39.9	
33	0	1460.49*	1062	47	2.10	2919.51	2910	21	1.47E-01	3.5	
34	0	1537.76*	7	2	0.60	3073.82	3070	8	9.37E-04	60.7	
35	0	1629.73	23	6	0.75	3257.46	3251	12	3.19E-03	29.8	
36	0	1764.39*	57	7	2.21	3526.34	3519	13	7.90E-03	17.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:35:35

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:34:51
Sample ID : G232585003 Sample quantity : 128.17 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.70 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.905E+01	2.714E+00	6.328E-01	3.935E-02	45.907
CD-109	+	88.03	*	3.570E+00	8.704E-01	9.657E-01	7.353E-02	3.697
SN-126	+	64.28		5.332E-01	3.931E-01	4.025E-01	5.998E-02	1.325
	+	86.94		1.462E+00	6.903E-01	3.940E-01	1.622E-01	3.709
	+	87.57	*	3.516E-01	8.572E-02	9.496E-02	7.232E-03	3.702
TL-208		277.35		2.965E-01	3.907E-01	6.788E-01	8.707E-02	0.437
	+	510.84		5.676E-01	3.814E-01	2.307E-01	2.424E-02	2.460
	+	583.14	*	5.281E-01	9.528E-02	6.313E-02	4.645E-03	8.365
	+	860.37		8.612E-01	6.095E-01	5.310E-01	5.388E-02	1.622
BI-210	+	46.50	*	6.417E-01	8.715E-01	8.340E-01	6.506E-02	0.769
PB-210	+	46.50	*	6.417E-01	8.715E-01	8.340E-01	6.506E-02	0.769
PO-210	+	46.50	*	6.417E-01	8.712E-01	8.340E-01	5.609E-02	0.769
BI-211		72.87		1.019E+01	2.308E+00	3.983E+00	3.135E-01	2.558
	+	351.07	*	3.551E+00	5.608E-01	3.592E-01	2.846E-02	9.886
PB-212	+	74.81		2.182E+00	4.534E-01	3.629E-01	4.424E-02	6.014
	+	77.11		1.780E+00	2.399E-01	2.168E-01	1.687E-02	8.212
	+	87.30		1.626E+00	4.285E-01	4.388E-01	5.517E-02	3.705
	+	238.63	*	1.431E+00	1.890E-01	8.577E-02	9.247E-03	16.688
	+	300.09		2.188E+00	1.329E+00	1.237E+00	1.315E-01	1.769
PO-212	+	74.81		2.182E+00	4.534E-01	3.629E-01	4.424E-02	6.014
	+	77.11		1.780E+00	2.399E-01	2.168E-01	1.687E-02	8.212
	+	87.30		1.626E+00	4.285E-01	4.388E-01	5.517E-02	3.705
		115.19		-2.514E+00	3.408E+00	5.446E+00	6.930E-01	-0.462
	+	238.63	*	1.431E+00	1.890E-01	8.577E-02	9.247E-03	16.688
	+	300.09		2.188E+00	1.329E+00	1.237E+00	1.315E-01	1.769
BI-214	+	609.31	*	9.202E-01	1.952E-01	1.217E-01	1.020E-02	7.563
	+	768.36		2.146E+00	1.395E+00	1.388E+00	1.398E-01	1.546
		934.06		1.454E+00	1.314E+00	2.365E+00	2.744E-01	0.615
	+	1120.29		1.970E+00	5.565E-01	5.558E-01	5.309E-02	3.545
		1238.11		2.082E+00	1.192E+00	2.155E+00	1.758E-01	0.966
	+	1377.67		1.828E+00	1.467E+00	1.610E+00	1.384E-01	1.135
	+	1764.49		1.224E+00	4.274E-01	3.011E-01	1.741E-02	4.065
PB-214	+	74.81		3.760E+00	7.513E-01	6.253E-01	6.739E-02	6.014
	+	77.11		3.051E+00	4.724E-01	3.716E-01	4.047E-02	8.212

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.785E+00	7.123E-01	7.517E-01	8.148E-02	3.705
	+	241.98		2.226E+00	7.818E-01	5.166E-01	5.822E-02	4.310
	+	295.21		1.180E+00	2.625E-01	2.208E-01	2.414E-02	5.345
	+	351.92	*	1.235E+00	2.054E-01	1.213E-01	1.149E-02	10.178
PO-214	+	74.81		3.760E+00	7.513E-01	6.253E-01	6.739E-02	6.014
	+	77.11		3.051E+00	4.724E-01	3.716E-01	4.047E-02	8.212
	+	87.30		2.785E+00	7.123E-01	7.517E-01	8.148E-02	3.705
	+	241.98		2.226E+00	7.818E-01	5.166E-01	5.822E-02	4.310
	+	295.21		1.180E+00	2.625E-01	2.208E-01	2.414E-02	5.345
	+	351.92	*	1.235E+00	2.054E-01	1.213E-01	1.149E-02	10.178
PO-216	+	74.81		2.182E+00	4.534E-01	3.629E-01	4.424E-02	6.014
	+	77.11		1.780E+00	2.399E-01	2.168E-01	1.687E-02	8.212
	+	87.30		1.626E+00	4.285E-01	4.388E-01	5.517E-02	3.705
	+	238.63	*	1.431E+00	1.890E-01	8.577E-02	9.247E-03	16.688
	+	300.09		2.188E+00	1.329E+00	1.237E+00	1.315E-01	1.769
PO-218	+	74.81		3.760E+00	7.513E-01	6.253E-01	6.739E-02	6.014
	+	77.11		3.051E+00	4.724E-01	3.716E-01	4.047E-02	8.212
	+	87.30		2.785E+00	7.123E-01	7.517E-01	8.148E-02	3.705
	+	241.98		2.226E+00	7.818E-01	5.166E-01	5.822E-02	4.310
	+	295.21		1.180E+00	2.625E-01	2.208E-01	2.414E-02	5.345
	+	351.92	*	1.235E+00	2.054E-01	1.213E-01	1.149E-02	10.178
RA-224	+	240.98	*	4.222E+00	1.463E+00	9.762E-01	9.552E-02	4.324
RA-226	+	609.31	*	9.202E-01	1.952E-01	1.217E-01	1.020E-02	7.563
	+	768.36		2.146E+00	1.395E+00	1.388E+00	1.398E-01	1.546
		934.06		1.454E+00	1.314E+00	2.365E+00	2.744E-01	0.615
	+	1120.29		1.970E+00	5.565E-01	5.558E-01	5.309E-02	3.545
		1238.11		2.082E+00	1.192E+00	2.155E+00	1.758E-01	0.966
	+	1377.67		1.828E+00	1.467E+00	1.610E+00	1.384E-01	1.135
	+	1764.49		1.224E+00	4.274E-01	3.011E-01	1.741E-02	4.065
AC-228	+	338.32		1.572E+00	8.000E-01	3.934E-01	1.617E-01	3.995
	+	911.07	*	1.403E+00	3.467E-01	2.664E-01	3.296E-02	5.267
	+	969.11		1.477E+00	5.535E-01	3.743E-01	8.839E-02	3.946
RA-228	+	338.32		1.572E+00	8.000E-01	3.934E-01	1.617E-01	3.995
	+	911.07	*	1.403E+00	3.467E-01	2.664E-01	3.296E-02	5.267
	+	969.11		1.477E+00	5.535E-01	3.743E-01	8.839E-02	3.946
TH-228	+	84.40		4.135E+00	2.215E+00	2.877E+00	3.605E-01	1.437
	+	238.60	*	1.431E+00	1.890E-01	8.576E-02	9.247E-03	16.690
	+	300.10		2.188E+00	1.843E+00	1.237E+00	7.338E-01	1.769
TH-230	+	609.31	*	9.201E-01	1.952E-01	1.217E-01	1.020E-02	7.563
	+	768.36		2.146E+00	1.395E+00	1.388E+00	1.398E-01	1.546
		934.06		1.454E+00	1.314E+00	2.364E+00	2.744E-01	0.615
	+	1120.29		1.970E+00	5.565E-01	5.558E-01	5.309E-02	3.545
		1238.11		2.082E+00	1.192E+00	2.155E+00	1.758E-01	0.966
	+	1377.67		1.828E+00	1.467E+00	1.610E+00	1.384E-01	1.135
	+	1764.49		1.224E+00	4.274E-01	3.011E-01	1.741E-02	4.065
TH-232	+	338.32		1.572E+00	4.876E-01	3.934E-01	3.085E-02	3.995
	+	911.07	*	1.403E+00	3.467E-01	2.664E-01	3.296E-02	5.267
	+	969.11		1.477E+00	5.535E-01	3.743E-01	8.839E-02	3.946
TH-234	+	63.29	*	1.347E+00	1.002E+00	9.705E-01	1.724E-01	1.388

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.496E+00	7.766E-01	6.594E-01	1.185E-01	3.785
U-234	+	609.31	*	9.201E-01	1.952E-01	1.217E-01	1.020E-02	7.563
	+	768.36		2.146E+00	1.395E+00	1.388E+00	1.398E-01	1.546
		934.06		1.454E+00	1.314E+00	2.364E+00	2.744E-01	0.615
	+	1120.29		1.970E+00	5.565E-01	5.558E-01	5.309E-02	3.545
		1238.11		2.082E+00	1.192E+00	2.155E+00	1.758E-01	0.966
	+	1377.67		1.828E+00	1.467E+00	1.610E+00	1.384E-01	1.135
	+	1764.49		1.224E+00	4.274E-01	3.011E-01	1.741E-02	4.065
NP-237	+	86.50	*	1.032E+00	3.298E-01	2.780E-01	6.115E-02	3.714
		95.87		-2.209E-02	8.818E-01	1.288E+00	3.190E-01	-0.017
U-238	+	63.29	*	1.347E+00	1.002E+00	9.705E-01	1.724E-01	1.388
	+	92.38		2.496E+00	6.676E-01	6.594E-01	5.517E-02	3.785
AM-243	+	74.67	*	3.538E-01	6.566E-02	5.882E-02	4.607E-03	6.016
	+	86.72		3.871E+01	9.439E+00	1.043E+01	7.955E-01	3.712
		117.66		8.066E-01	3.642E+00	6.066E+00	8.032E-01	0.133
		142.18		8.258E+00	1.804E+01	3.009E+01	3.739E+00	0.274
ANH-511	+	511.00	*	1.226E-01	8.175E-02	4.986E-02	3.191E-03	2.459

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-3.055E-01	3.488E-01	5.343E-01	3.828E-02	-0.572
NA-22		1274.54	*	1.058E-02	5.575E-02	9.184E-02	5.349E-03	0.115
NA-24		1368.53	*	1.332E-01	5.575E-02	Half-Life too short		
AL-26		1129.67		4.995E-01	2.116E+00	3.524E+00	2.361E-01	0.142
		1808.65	*	3.657E-03	3.219E-02	5.405E-02	3.101E-03	0.068
TI-44		67.85		-9.250E-03	3.897E-02	4.121E-02	3.298E-03	-0.224
	+	78.38	*	3.284E-01	4.427E-02	6.040E-02	4.687E-03	5.438
SC-46		889.25	*	-1.927E-02	5.131E-02	8.243E-02	8.280E-03	-0.234
	+	1120.51		3.338E-01	9.164E-02	1.490E-01	1.025E-02	2.240
V-48		944.10		-4.765E-01	1.098E+00	1.454E+00	1.406E-01	-0.328
		983.50	*	-8.637E-03	7.780E-02	1.266E-01	1.160E-02	-0.068
		1312.09		6.780E-03	9.533E-02	1.550E-01	8.988E-03	0.044
CR-51		320.08	*	2.096E-01	3.941E-01	6.777E-01	5.994E-02	0.309
MN-52		744.21		5.233E-02	2.185E-01	3.733E-01	2.898E-02	0.140
		848.13		1.057E+00	6.451E+00	1.088E+01	1.019E+00	0.097
		935.52		-5.890E-03	2.476E-01	4.079E-01	3.987E-02	-0.014
		1246.25		5.076E+00	8.222E+00	1.401E+01	8.146E-01	0.362
		1333.61		1.761E+00	5.575E+00	9.306E+00	5.386E-01	0.189
		1434.06	*	2.794E-02	2.227E-01	3.774E-01	2.210E-02	0.074
MN-54		834.83	*	-3.526E-02	4.294E-02	6.619E-02	6.064E-03	-0.533
CO-56		846.75	*	1.755E-02	4.452E-02	7.645E-02	7.149E-03	0.230
		977.42		3.247E+00	3.392E+00	5.967E+00	5.515E-01	0.544
		1037.82		3.210E-01	3.684E-01	6.512E-01	5.744E-02	0.493
		1175.09		5.821E-01	2.884E+00	4.771E+00	2.768E-01	0.122
		1238.25		2.086E-01	1.189E-01	2.159E-01	1.334E-02	0.966
		1360.21		-2.392E-01	1.153E+00	1.882E+00	1.093E-01	-0.127
		1771.40		-9.773E-01	3.751E-01	3.269E-01	1.888E-02	-2.989

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	6.516E-03	2.468E-02	4.112E-02	5.834E-03	0.158
		136.48		-6.435E-02	2.186E-01	3.548E-01	4.752E-02	-0.181
CO-58		810.76	*	-3.294E-03	4.346E-02	7.191E-02	6.329E-03	-0.046
FE-59		142.65		7.921E-01	2.797E+00	4.534E+00	5.615E-01	0.175
		192.34		-2.243E-01	1.023E+00	1.512E+00	2.168E-01	-0.148
		1099.22	*	-9.063E-02	1.119E-01	1.682E-01	1.362E-02	-0.539
		1291.56		1.029E-02	1.488E-01	2.422E-01	1.799E-02	0.042
CO-60		1173.22		3.132E-02	5.608E-02	9.565E-02	5.548E-03	0.327
		1332.49	*	3.613E-03	5.064E-02	8.227E-02	4.761E-03	0.044
ZN-65		1115.52	*	-5.400E-02	1.328E-01	1.752E-01	1.224E-02	-0.308
GE-68		1077.35	*	1.924E-01	1.616E+00	2.671E+00	2.051E-01	0.072
AS-73		53.44	*	-1.257E-01	2.292E-01	3.758E-01	2.829E-02	-0.334
AS-74		595.88	*	1.433E-02	1.030E-01	1.687E-01	1.110E-02	0.085
		634.78		2.094E-02	3.830E-01	6.216E-01	4.097E-02	0.034
SE-75		66.05		7.757E-01	2.764E+00	4.142E+00	4.132E-01	0.187
		96.73		-4.746E-01	7.236E-01	1.017E+00	1.420E-01	-0.467
		121.11		-4.131E-02	1.343E-01	2.187E-01	3.437E-02	-0.189
		136.00		3.195E-03	4.036E-02	6.653E-02	8.676E-03	0.048
		198.60		3.720E-01	2.023E+00	3.212E+00	3.472E-01	0.116
		264.65	*	-4.297E-02	5.397E-02	7.003E-02	6.685E-03	-0.614
		279.53		-7.773E-02	1.144E-01	1.862E-01	1.783E-02	-0.417
		303.91		-6.485E-01	2.457E+00	3.520E+00	4.082E-01	-0.184
		400.65		1.997E-01	2.777E-01	4.792E-01	4.385E-02	0.417
BR-77	+	87.88		5.352E+02	1.305E+02	2.042E+02	1.554E+01	2.622
		200.40		1.019E+02	1.218E+02	2.038E+02	2.035E+01	0.500
	+	239.00		1.592E+02	1.977E+01	2.601E+01	2.550E+00	6.120
		249.79		-3.542E+00	4.759E+01	7.594E+01	7.363E+00	-0.047
		281.68		-1.347E+01	6.434E+01	1.073E+02	9.909E+00	-0.126
		297.23		2.354E+02	6.833E+01	9.112E+01	8.135E+00	2.583
		303.76		-4.178E+01	1.459E+02	2.086E+02	1.832E+01	-0.200
		439.47		6.369E+01	1.098E+02	1.878E+02	1.145E+01	0.339
		484.57		9.603E+01	1.751E+02	2.984E+02	1.881E+01	0.322
		520.65	*	2.068E+00	8.017E+00	1.302E+01	8.376E-01	0.159
		574.64		-1.234E+02	1.809E+02	2.590E+02	1.697E+01	-0.477
		578.91		6.005E+01	7.542E+01	1.150E+02	7.544E+00	0.522
		585.48		9.203E+02	2.091E+02	3.733E+02	2.451E+01	2.465
		755.35		1.533E+02	1.428E+02	2.563E+02	2.032E+01	0.598
		817.79		-8.735E+00	1.036E+02	1.713E+02	1.523E+01	-0.051
SR-82		698.33		-1.251E+01	4.040E+01	6.321E+01	4.484E+00	-0.198
		776.49	*	2.262E-01	4.617E-01	7.046E-01	5.813E-02	0.321
		1395.20		2.451E+00	9.187E+00	1.600E+01	9.337E-01	0.153
RB-83		520.41	*	1.900E-02	7.673E-02	1.209E-01	7.773E-03	0.157
		529.64		1.476E-02	1.124E-01	1.854E-01	1.197E-02	0.080
		552.65		-3.703E-02	2.323E-01	3.738E-01	2.434E-02	-0.099
RB-84		881.50	*	1.008E-02	8.322E-02	1.394E-01	1.382E-02	0.072
KR-85		513.99	*	2.338E+01	9.082E+00	1.567E+01	1.005E+00	1.492
SR-85		513.99	*	1.183E-01	4.595E-02	7.931E-02	5.084E-03	1.492
RB-86		1076.63	*	1.733E-01	9.700E-01	1.612E+00	1.240E-01	0.107
Y-88		898.02		-6.697E-02	5.406E-02	7.924E-02	8.102E-03	-0.845

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	-5.035E-02	3.950E-02	4.512E-02	2.581E-03	-1.116
ZR-88		392.90	*	-7.029E-03	3.392E-02	5.556E-02	3.236E-03	-0.127
Y-91		1204.90	*	-2.160E+01	2.462E+01	3.687E+01	2.142E+00	-0.586
NB-94		702.63	*	-1.019E-02	4.117E-02	6.472E-02	4.631E-03	-0.157
		871.10		2.050E-02	3.958E-02	6.737E-02	6.566E-03	0.304
NB-95		765.79	*	4.279E-02	5.929E-02	9.153E-02	7.403E-03	0.467
NB-95M		235.69	*	3.593E-01	1.501E-01	2.350E-01	2.571E-02	1.529
ZR-95		724.18		1.076E-01	1.403E-01	2.169E-01	1.804E-02	0.496
		756.15	*	8.944E-02	8.780E-02	1.569E-01	1.394E-02	0.570
NB-97		657.90	*	-2.550E-02	8.780E-02	Half-Life too short		
		1024.50		2.306E+00	8.780E-02	Half-Life too short		
ZR-97		254.15		1.127E+00	8.780E-02	Half-Life too short		
		355.39		2.949E-01	8.780E-02	Half-Life too short		
		507.63	*	1.368E+00	8.780E-02	Half-Life too short		
		602.52		3.428E-01	8.780E-02	Half-Life too short		
		1021.30		1.994E-01	8.780E-02	Half-Life too short		
		1147.95		-9.078E-01	8.780E-02	Half-Life too short		
		1362.66		-1.937E+00	8.780E-02	Half-Life too short		
		1750.46		-6.645E-01	8.780E-02	Half-Life too short		
MO-99		140.51		-1.169E+01	2.011E+01	3.177E+01	9.266E+00	-0.368
		181.06		1.341E+01	1.480E+01	2.190E+01	4.152E+00	0.612
		366.43		1.273E+01	6.925E+01	1.165E+02	7.993E+00	0.109
		739.58	*	-2.187E+00	9.906E+00	1.630E+01	2.392E+00	-0.134
		778.00		8.541E+00	3.045E+01	4.851E+01	4.014E+00	0.176
TC-99M		140.51	*	-7.190E+08	3.045E+01	Half-Life too short		
RH-101		127.23		-4.714E-04	3.095E-02	5.095E-02	7.014E-03	-0.009
		198.01	*	-4.645E-03	3.721E-02	5.828E-02	5.820E-03	-0.080
		325.23		-8.853E-02	2.810E-01	3.997E-01	3.289E-02	-0.221
RH-102		418.52		3.822E-01	3.100E-01	5.511E-01	3.295E-02	0.694
		475.06	*	7.761E-03	3.159E-02	5.280E-02	3.308E-03	0.147
		631.29		-4.394E-02	6.172E-02	9.324E-02	6.146E-03	-0.471
		697.49		-4.268E-02	9.582E-02	1.482E-01	1.050E-02	-0.288
		766.84		1.746E-01	1.520E-01	2.429E-01	1.969E-02	0.719
		1046.59		-6.383E-02	1.419E-01	2.224E-01	1.825E-02	-0.287
		1112.84		1.145E-01	3.116E-01	4.574E-01	3.214E-02	0.250
RU-103		497.08	*	-5.330E-03	4.283E-02	6.950E-02	8.970E-03	-0.077
	+	610.33		9.718E+00	2.434E+00	2.916E+00	4.587E-01	3.333
RH-106	+	511.85		6.109E-01	4.074E-01	4.813E-01	3.082E-02	1.269
		621.84	*	2.501E-01	3.533E-01	6.036E-01	7.332E-02	0.414
		1050.47		9.383E-01	2.927E+00	4.931E+00	4.015E-01	0.190
RU-106	+	511.85		6.109E-01	4.074E-01	4.813E-01	3.082E-02	1.269
		621.84	*	2.501E-01	3.524E-01	6.036E-01	3.979E-02	0.414
		1050.47		9.383E-01	2.927E+00	4.931E+00	4.015E-01	0.190
AG-108M		433.93	*	-3.903E-02	3.900E-02	6.011E-02	3.933E-03	-0.649
		614.37		6.907E-03	4.755E-02	6.757E-02	4.748E-03	0.102
		722.95		1.366E-02	5.937E-02	8.793E-02	6.893E-03	0.155
AG-110M		657.75	*	-3.406E-02	4.288E-02	6.445E-02	4.455E-03	-0.529
		677.61		1.244E-01	3.453E-01	5.734E-01	4.073E-02	0.217
		706.67		-7.358E-02	2.558E-01	4.004E-01	3.002E-02	-0.184

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		6.265E-03	2.210E-01	3.196E-01	2.659E-02	0.020
		884.67		2.161E-02	6.172E-02	1.052E-01	1.074E-02	0.205
		937.48		-1.262E-01	1.251E-01	1.844E-01	1.850E-02	-0.684
		1384.27		4.093E-03	1.867E-01	2.684E-01	1.659E-02	0.015
IN-111		171.28		-1.049E-01	7.957E-01	1.289E+00	1.281E-01	-0.081
		245.39	*	2.961E-01	8.720E-01	1.252E+00	1.220E-01	0.236
IN-113M		391.69	*	4.100E-03	4.819E-02	8.038E-02	4.986E-03	0.051
SN-113		391.69	*	4.100E-03	4.819E-02	8.038E-02	4.986E-03	0.051
IN-114M		190.27	*	4.309E-03	2.059E-01	2.925E-01	2.921E-02	0.015
CD-115		260.90		6.386E+01	9.306E+01	1.543E+02	1.475E+01	0.414
		492.35		-2.433E+00	2.648E+01	4.310E+01	2.730E+00	-0.056
		527.90	*	7.339E-01	8.247E+00	1.356E+01	8.748E-01	0.054
SN-117M		156.02		3.811E-01	2.251E+00	3.706E+00	4.086E-01	0.103
		158.56	*	2.509E-02	5.552E-02	9.229E-02	9.922E-03	0.272
SB-122		563.90	*	1.730E+00	1.771E+00	3.077E+00	2.011E-01	0.562
		692.80		7.003E-01	3.886E+01	6.253E+01	4.386E+00	0.011
I-123		159.00	*	9.380E-01	3.886E+01	Half-Life too short		
		528.96		1.758E+01	3.886E+01	Half-Life too short		
TE-123M		159.00	*	2.269E-02	3.001E-02	5.039E-02	5.414E-03	0.450
I-124		602.71	*	7.776E-02	7.276E-01	1.029E+00	6.776E-02	0.076
		722.78		2.570E+00	4.823E+00	7.363E+00	5.483E-01	0.349
		1325.50		-6.863E+00	3.625E+01	5.715E+01	3.310E+00	-0.120
	+	1376.25		4.648E+01	3.718E+01	5.136E+01	2.991E+00	0.905
		1509.49		6.239E+00	1.210E+01	2.172E+01	1.277E+00	0.287
		1691.02		2.359E-01	3.714E+00	6.184E+00	3.609E-01	0.038
SB-124		602.71		5.489E-03	5.136E-02	7.265E-02	4.785E-03	0.076
		645.85		-8.624E-02	5.637E-01	8.972E-01	6.506E-02	-0.096
		709.31		-5.550E-01	3.209E+00	5.320E+00	3.858E-01	-0.104
		713.82		3.564E-01	1.841E+00	3.136E+00	3.494E-01	0.114
		722.78		2.630E-01	4.935E-01	7.534E-01	5.773E-02	0.349
	+	968.20		1.499E+01	4.580E+00	7.676E+00	7.190E-01	1.952
		1045.16		-1.650E+00	2.985E+00	4.627E+00	3.807E-01	-0.357
		1325.50		-7.501E-01	3.962E+00	6.246E+00	3.617E-01	-0.120
		1368.21		1.176E+00	2.013E+00	3.363E+00	3.996E-01	0.350
		1436.60		9.698E-01	4.086E+00	7.027E+00	4.116E-01	0.138
		1691.02	*	5.692E-03	8.963E-02	1.492E-01	9.446E-03	0.038
SB-125		427.89	*	6.354E-03	1.069E-01	1.773E-01	1.111E-02	0.036
		463.38		5.460E-01	3.296E-01	5.921E-01	4.216E-02	0.922
		600.56		1.932E-02	2.068E-01	3.376E-01	2.497E-02	0.057
		635.90		1.610E-01	3.071E-01	5.179E-01	3.873E-02	0.311
TE-125M		109.28	*	-5.672E+00	8.672E+00	1.396E+01	1.794E+00	-0.406
I-126		388.63		3.880E-02	2.095E-01	3.516E-01	2.092E-02	0.110
		666.33	*	-6.851E-02	2.023E-01	3.165E-01	2.102E-02	-0.216
		753.82		1.048E+00	1.678E+00	2.933E+00	2.319E-01	0.357
SB-126		223.80		-1.440E-01	4.053E+00	6.516E+00	6.457E-01	-0.022
		278.60		2.171E-01	2.389E+00	4.045E+00	3.757E-01	0.054
	+	296.50		1.095E+01	2.338E+00	3.492E+00	3.123E-01	3.135
		414.70		-1.138E-01	7.834E-02	1.168E-01	6.956E-03	-0.975
		415.30		-6.437E+00	6.356E+00	9.788E+00	5.835E-01	-0.658

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		-2.973E+00	4.319E+00	6.642E+00	4.329E-01	-0.448
		573.80		3.874E-01	1.089E+00	1.818E+00	1.191E-01	0.213
		593.00		-3.753E-03	9.985E-01	1.619E+00	1.065E-01	-0.002
		656.30		1.261E+00	3.718E+00	6.159E+00	4.053E-01	0.205
		666.33		-2.855E-02	8.428E-02	1.319E-01	8.757E-03	-0.216
		675.00		-1.483E+00	2.202E+00	3.329E+00	2.251E-01	-0.445
		695.00		1.152E-01	8.574E-02	1.521E-01	1.071E-02	0.758
		697.00		3.835E-02	3.047E-01	4.944E-01	3.498E-02	0.078
		720.50	*	2.082E-01	1.781E-01	2.890E-01	2.143E-02	0.721
		856.80		1.400E-01	5.796E-01	8.534E-01	8.119E-02	0.164
		989.30		-7.996E-01	1.437E+00	2.235E+00	2.029E-01	-0.358
		1034.80		-7.932E-01	1.008E+01	1.641E+01	1.378E+00	-0.048
		1213.00		-5.713E+00	5.729E+00	8.470E+00	4.923E-01	-0.675
SB-127		61.10		2.838E+01	2.166E+01	3.362E+01	3.527E+00	0.844
		252.40		-4.944E-01	3.742E+00	5.941E+00	2.505E+00	-0.083
		290.80		-5.950E+00	2.019E+01	2.896E+01	3.229E+00	-0.205
		411.60		1.162E+01	1.063E+01	1.854E+01	2.624E+00	0.627
		444.90		8.853E-01	8.356E+00	1.387E+01	1.470E+00	0.064
		473.00		4.869E-01	1.464E+00	2.461E+00	2.721E-01	0.198
		543.00		-6.187E+00	1.513E+01	2.384E+01	3.080E+00	-0.260
		603.60		7.116E-01	1.241E+01	1.745E+01	1.892E+00	0.041
		685.20	*	1.717E+00	1.323E+00	2.333E+00	2.274E-01	0.736
		698.50		-2.408E+00	1.464E+01	2.318E+01	3.425E+00	-0.104
		722.20		3.055E+01	3.173E+01	5.035E+01	4.974E+00	0.607
		783.80		2.132E+00	3.415E+00	5.955E+00	7.091E-01	0.358
XE-127		57.60		1.919E+00	2.300E+00	3.545E+00	2.854E-01	0.541
		145.22		4.687E-01	6.961E-01	1.141E+00	1.385E-01	0.411
		172.10		6.713E-02	1.246E-01	2.074E-01	2.063E-02	0.324
		202.84	*	-2.027E-02	4.814E-02	7.627E-02	7.612E-03	-0.266
		374.96		1.280E-01	2.094E-01	3.605E-01	2.353E-02	0.355
I-131		80.18		1.129E+00	4.445E+00	4.843E+00	3.767E-01	0.233
		284.30		-2.611E-01	1.397E+00	2.331E+00	2.238E-01	-0.112
		364.48	*	-6.874E-02	1.200E-01	1.933E-01	1.449E-02	-0.356
		636.97		7.453E-01	1.568E+00	2.634E+00	1.897E-01	0.283
		722.89		1.647E+00	8.943E+00	1.319E+01	9.894E-01	0.125
TE-132		49.72		-4.226E+00	3.439E+00	4.810E+00	4.482E-01	-0.879
		111.76		7.106E+00	2.116E+01	3.542E+01	4.767E+00	0.201
		116.30		-9.101E+00	2.050E+01	3.323E+01	4.752E+00	-0.274
		228.16	*	-1.246E-02	5.444E-01	8.750E-01	1.420E-01	-0.014
BA-133		53.15		-4.049E-01	9.723E-01	1.601E+00	1.200E-01	-0.253
		79.62		8.961E-01	1.417E+00	1.580E+00	2.329E-01	0.567
		81.00		-1.134E-02	1.079E-01	1.143E-01	1.760E-02	-0.099
		276.40		4.128E-01	3.989E-01	6.814E-01	1.014E-01	0.606
		302.84		3.476E-02	1.703E-01	2.528E-01	3.389E-02	0.138
		356.01	*	-3.064E-02	5.283E-02	7.252E-02	8.955E-03	-0.423
		383.85		2.454E-01	3.335E-01	5.759E-01	6.373E-02	0.426
I-133	+	510.53		4.555E-01	3.335E-01	Half-Life too short		
		529.87	*	-1.675E-04	3.335E-01	Half-Life too short		
		706.58		-5.580E-02	3.335E-01	Half-Life too short		

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		856.28		3.913E-02	3.335E-01	Half-Life too short		
		875.33		-6.127E-02	3.335E-01	Half-Life too short		
		1236.41		4.158E-01	3.335E-01	Half-Life too short		
		1298.22		-3.787E-02	3.335E-01	Half-Life too short		
CS-134		475.35		2.033E-01	2.042E+00	3.379E+00	2.117E-01	0.060
		563.23		1.074E-01	4.373E-01	7.238E-01	4.807E-02	0.148
		569.32		-6.351E-03	2.292E-01	3.719E-01	2.491E-02	-0.017
		604.70		-9.555E-03	4.623E-02	6.319E-02	4.179E-03	-0.151
	+	795.84	*	1.126E-01	8.497E-02	1.041E-01	8.967E-03	1.082
		801.93		1.341E-01	5.459E-01	8.065E-01	7.010E-02	0.166
		1038.57		1.377E+00	4.753E+00	8.001E+00	6.669E-01	0.172
		1167.94		8.543E-01	3.338E+00	5.475E+00	3.237E-01	0.156
		1365.15		8.217E-01	1.375E+00	2.463E+00	1.572E-01	0.334
CS-135		268.24	*	2.100E-01	1.922E-01	2.877E-01	3.078E-02	0.730
I-135		288.45		7.391E+07	1.922E-01	Half-Life too short		
		417.63		3.844E+08	1.922E-01	Half-Life too short		
		546.56		-2.003E+08	1.922E-01	Half-Life too short		
		836.80		-8.593E+08	1.922E-01	Half-Life too short		
		1038.76		2.346E+08	1.922E-01	Half-Life too short		
		1124.00		1.871E+09	1.922E-01	Half-Life too short		
		1131.51		-6.942E+07	1.922E-01	Half-Life too short		
		1260.41	*	3.996E+07	1.922E-01	Half-Life too short		
		1457.56		3.873E+10	1.922E-01	Half-Life too short		
		1678.03		-1.347E+08	1.922E-01	Half-Life too short		
		1706.46		-1.273E+09	1.922E-01	Half-Life too short		
		1791.20		-3.553E+08	1.922E-01	Half-Life too short		
CS-136		66.91		-6.952E-02	4.672E-01	6.412E-01	9.690E-02	-0.108
	+	86.29		4.293E+00	1.124E+00	1.614E+00	1.970E-01	2.660
		153.22		6.721E-02	6.383E-01	1.049E+00	1.270E-01	0.064
		163.89		-1.495E-01	1.033E+00	1.675E+00	1.850E-01	-0.089
		176.55		-4.082E-01	3.702E-01	5.687E-01	5.910E-02	-0.718
		273.65		-2.949E-01	5.420E-01	7.214E-01	7.140E-02	-0.409
		340.57		4.308E-01	1.499E-01	2.542E-01	2.045E-02	1.695
		818.51		-2.853E-02	7.929E-02	1.277E-01	1.138E-02	-0.223
		1048.07	*	-5.720E-04	1.247E-01	2.043E-01	1.750E-02	-0.003
		1235.34		6.484E-01	7.443E-01	1.279E+00	1.278E-01	0.507
BA-137M		661.65	*	-6.825E-03	4.289E-02	6.821E-02	4.485E-03	-0.100
CS-137		661.65	*	-7.215E-03	4.534E-02	7.210E-02	4.757E-03	-0.100
CE-139		165.85	*	-1.625E-02	3.088E-02	4.914E-02	4.879E-03	-0.331
BA-140		162.64		-2.596E-02	7.358E-01	1.199E+00	1.286E-01	-0.022
		304.84		-2.007E-01	1.386E+00	2.001E+00	5.618E-01	-0.100
		423.70		-1.370E+00	2.041E+00	3.147E+00	1.002E+00	-0.435
		537.32	*	-5.182E-02	2.681E-01	4.297E-01	1.403E-01	-0.121
LA-140	+	328.77		3.203E-01	3.751E-01	5.247E-01	4.533E-02	0.610
		432.53		-4.543E-01	2.259E+00	3.681E+00	2.445E-01	-0.123
		487.03		-4.636E-03	1.403E-01	2.296E-01	1.613E-02	-0.020
		751.79		-7.967E-01	1.954E+00	3.082E+00	2.735E-01	-0.259
		815.85		6.579E-02	3.296E-01	5.587E-01	5.492E-02	0.118
		867.82		-1.349E+00	1.851E+00	2.381E+00	2.405E-01	-0.566

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		9.967E-01	4.449E+00	4.923E+00	5.788E-01	0.202
	+	925.24		1.120E+00	1.223E+00	1.999E+00	2.073E-01	0.560
		1596.49	*	-8.642E-02	9.633E-02	1.373E-01	8.072E-03	-0.629
CE-141		145.44	*	1.613E-02	6.370E-02	1.030E-01	1.259E-02	0.157
CE-143		57.37		5.357E-05	6.370E-02	Half-Life too short		
		231.56		-1.402E-03	6.370E-02	Half-Life too short		
		293.26	*	4.087E-04	6.370E-02	Half-Life too short		
	+	350.59		1.492E-02	6.370E-02	Half-Life too short		
		490.36		-6.105E-04	6.370E-02	Half-Life too short		
		664.57		-1.947E-06	6.370E-02	Half-Life too short		
		721.93		1.057E-03	6.370E-02	Half-Life too short		
CE-144		80.11		5.966E-01	2.272E+00	2.477E+00	1.914E-01	0.241
		133.54	*	-2.814E-02	2.127E-01	3.479E-01	6.442E-02	-0.081
PM-144		476.78		-4.013E-02	7.461E-02	1.176E-01	8.635E-03	-0.341
		618.01		-2.322E-02	3.878E-02	5.544E-02	3.825E-03	-0.419
		696.49	*	1.225E-02	4.244E-02	6.972E-02	4.929E-03	0.176
		778.57		-1.816E+00	2.868E+00	4.299E+00	3.562E-01	-0.423
PR-144		696.49	*	8.299E-01	2.874E+00	4.721E+00	3.337E-01	0.176
		1489.15		-2.831E+00	1.138E+01	1.808E+01	1.062E+00	-0.157
PM-146		453.90	*	2.506E-02	4.789E-02	8.157E-02	7.239E-03	0.307
		633.02		-1.416E+00	1.651E+00	2.322E+00	8.581E-01	-0.610
		735.90		2.293E-01	1.868E-01	3.218E-01	9.114E-02	0.713
		747.13		-5.566E-03	9.692E-02	1.614E-01	2.188E-02	-0.034
ND-147	+	91.11		6.559E-01	2.863E-01	4.211E-01	3.746E-02	1.557
		319.41		-7.411E-01	3.328E+00	5.510E+00	4.624E-01	-0.135
		439.89		1.754E+00	6.004E+00	1.009E+01	6.156E-01	0.174
		531.02	*	-2.423E-01	5.617E-01	8.829E-01	1.220E-01	-0.274
PM-149		285.90	*	-5.874E+00	6.429E+01	1.078E+02	1.707E+01	-0.055
EU-152		121.78		2.548E-02	7.208E-02	1.204E-01	1.801E-02	0.212
		244.69		1.844E-01	3.864E-01	5.593E-01	5.453E-02	0.330
		344.27	*	-1.000E-01	1.223E-01	1.536E-01	1.263E-02	-0.651
		443.98		2.286E-01	1.028E+00	1.721E+00	1.053E-01	0.133
		778.89		-2.888E-01	3.336E-01	4.875E-01	4.040E-02	-0.592
		867.32		-8.015E-01	1.199E+00	1.561E+00	1.512E-01	-0.513
	+	964.01		6.263E-01	3.628E-01	6.546E-01	6.167E-02	0.957
		1085.78		-8.621E-02	4.577E-01	7.338E-01	5.526E-02	-0.117
		1112.02		2.362E-02	4.635E-01	6.526E-01	4.596E-02	0.036
		1407.95		1.086E-01	1.973E-01	3.520E-01	2.057E-02	0.308
GD-153		69.67		1.001E-01	1.065E+00	1.582E+00	1.258E-01	0.063
	+	83.37		2.367E+01	1.246E+01	2.002E+01	1.537E+00	1.182
		97.43	*	1.197E-02	7.247E-02	1.068E-01	9.904E-03	0.112
		103.18		-1.292E-01	9.372E-02	1.456E-01	1.505E-02	-0.887
EU-154		123.07		3.185E-03	5.037E-02	8.329E-02	1.327E-02	0.038
		247.94		5.332E-02	4.199E-01	5.930E-01	7.307E-02	0.090
		591.81		2.818E-02	7.068E-01	1.150E+00	1.179E-01	0.025
		723.30		1.245E-01	2.527E-01	3.831E-01	3.253E-02	0.325
		756.87		1.002E+00	9.618E-01	1.717E+00	1.976E-01	0.583
		873.19		9.497E-02	3.301E-01	5.619E-01	7.354E-02	0.169
		996.32		-9.051E-02	4.626E-01	7.383E-01	1.325E-01	-0.123

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		1.125E-01	2.532E-01	4.326E-01	5.111E-02	0.260
		1274.45	*	3.614E-02	1.549E-01	2.563E-01	2.396E-02	0.141
EU-155		48.70		3.863E-01	4.926E-01	7.629E-01	5.317E-02	0.506
		60.01		-4.172E-01	2.222E+00	3.276E+00	2.713E-01	-0.127
	+	86.54		4.232E-01	1.033E-01	1.565E-01	1.209E-02	2.705
		105.31	*	9.837E-02	9.690E-02	1.658E-01	1.796E-02	0.593
TB-160	+	86.79		1.117E+00	2.725E-01	4.098E-01	3.126E-02	2.726
		197.04		-2.029E-01	6.190E-01	9.595E-01	9.582E-02	-0.212
		215.65		-6.419E-01	8.099E-01	1.253E+00	1.247E-01	-0.512
		298.57		2.283E-01	1.841E-01	2.120E-01	1.887E-02	1.077
		879.36	*	9.538E-02	1.615E-01	2.750E-01	2.717E-02	0.347
		962.29		1.027E+00	7.375E-01	1.197E+00	1.130E-01	0.858
		966.15		1.044E+00	3.018E-01	5.741E-01	5.393E-02	1.819
		1177.93		3.565E-02	4.716E-01	7.717E-01	4.478E-02	0.046
		1271.85		1.616E-01	8.236E-01	1.360E+00	7.904E-02	0.119
HO-166M		80.57		7.619E-03	2.970E-01	3.179E-01	2.455E-02	0.024
		184.41		5.317E-02	4.542E-02	6.822E-02	6.807E-03	0.779
		280.46		-7.547E-02	8.832E-02	1.421E-01	1.316E-02	-0.531
		410.95		3.636E-01	2.673E-01	4.769E-01	2.831E-02	0.762
		711.68	*	2.937E-02	6.973E-02	1.207E-01	8.793E-03	0.243
		752.31		1.345E-01	3.247E-01	5.601E-01	4.417E-02	0.240
		810.29		-2.355E-02	6.662E-02	1.075E-01	9.428E-03	-0.219
TM-171		51.35		-2.095E-01	7.824E+00	1.167E+01	8.494E-01	-0.018
		52.39		-2.659E+00	4.344E+00	6.601E+00	4.885E-01	-0.403
		59.40		-6.136E-01	1.145E+01	1.699E+01	1.408E+00	-0.036
		66.72	*	-3.429E-01	1.672E+01	2.476E+01	1.989E+00	-0.014
LU-176	+	88.36		8.338E-01	2.033E-01	3.244E-01	2.488E-02	2.570
		201.83		8.894E-03	3.063E-02	5.019E-02	5.010E-03	0.177
		306.84	*	9.107E-03	2.947E-02	4.408E-02	3.839E-03	0.207
		401.10		2.354E+00	7.393E+00	1.248E+01	7.335E-01	0.189
LU-177		112.95		2.568E-02	1.337E+00	2.213E+00	2.714E-01	0.012
	+	208.36	*	1.757E+00	1.170E+00	1.739E+00	1.734E-01	1.010
LU-177M		52.97		-1.966E-01	4.318E-01	7.103E-01	5.306E-02	-0.277
		54.07		5.310E-03	2.447E-01	4.090E-01	3.110E-02	0.013
		61.30		1.204E+00	7.125E-01	1.121E+00	9.217E-02	1.074
		121.62		6.944E-02	3.694E-01	6.139E-01	8.647E-02	0.113
		147.16		-4.324E-01	6.552E-01	1.041E+00	1.243E-01	-0.416
		171.86		2.600E-01	5.108E-01	8.492E-01	8.445E-02	0.306
		218.09		-1.854E-01	9.235E-01	1.475E+00	1.465E-01	-0.126
	+	268.79		1.811E+00	9.545E-01	1.523E+00	1.439E-01	1.189
		319.02		-1.068E-02	2.798E-01	4.680E-01	3.932E-02	-0.023
		367.43		1.649E-01	1.006E+00	1.691E+00	1.154E-01	0.098
		413.65	*	-2.302E-01	1.946E-01	2.965E-01	1.765E-02	-0.776
HF-181		56.28		-9.692E-02	3.063E-01	5.117E-01	4.033E-02	-0.189
		57.53		1.586E-01	1.934E-01	2.979E-01	2.396E-02	0.532
		65.20		3.698E-01	5.304E-01	8.067E-01	6.522E-02	0.458
		133.02		-5.849E-02	6.808E-02	1.075E-01	1.426E-02	-0.544
		136.25		-1.679E-01	4.694E-01	7.598E-01	9.861E-02	-0.221
		345.85		1.151E-01	2.224E-01	3.201E-01	2.431E-02	0.360

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	1.134E-02	4.721E-02	7.878E-02	4.958E-03	0.144
W-181		56.28		-3.835E-02	1.215E-01	2.030E-01	1.600E-02	-0.189
		57.53		6.291E-02	7.678E-02	1.183E-01	9.511E-03	0.532
		65.20	*	1.456E-01	2.089E-01	3.177E-01	2.569E-02	0.458
TA-182		67.75		-5.793E-02	8.132E-02	9.760E-02	7.813E-03	-0.594
		100.10		1.907E-01	1.483E-01	2.563E-01	2.502E-02	0.744
		152.43		6.329E-02	3.331E-01	5.495E-01	6.267E-02	0.115
		222.10		-2.219E-02	3.679E-01	5.910E-01	5.862E-02	-0.038
		1001.68		4.613E-01	2.389E+00	3.996E+00	3.557E-01	0.115
		1121.28		5.863E-01	2.400E-01	4.098E-01	2.813E-02	1.431
		1189.05		1.185E-01	3.876E-01	6.464E-01	3.754E-02	0.183
		1221.42	*	-1.503E-02	2.575E-01	4.155E-01	2.416E-02	-0.036
		1230.97		-5.839E-01	6.146E-01	9.134E-01	5.311E-02	-0.639
RE-183		57.98		7.766E-02	7.766E-02	1.204E-01	9.751E-03	0.645
		59.32		-2.776E-03	4.638E-02	6.880E-02	5.695E-03	-0.040
		67.20		-1.385E-02	1.269E-01	1.745E-01	1.399E-02	-0.079
		162.32	*	-1.597E-02	1.132E-01	1.837E-01	1.898E-02	-0.087
	+	208.81		1.776E+00	1.183E+00	1.778E+00	1.772E-01	0.999
		291.72		-7.524E-01	1.120E+00	1.560E+00	1.411E-01	-0.482
RE-184		57.98		2.883E-01	2.883E-01	4.468E-01	3.620E-02	0.645
		59.32		-1.030E-02	1.720E-01	2.552E-01	2.112E-02	-0.040
		67.20		-5.138E-02	4.708E-01	6.474E-01	5.193E-02	-0.079
		161.27		-1.838E-01	3.754E-01	5.995E-01	6.265E-02	-0.307
		216.55		1.688E-02	2.855E-01	4.618E-01	4.592E-02	0.037
		252.85	*	2.081E-02	2.429E-01	3.910E-01	3.778E-02	0.053
		318.01		5.212E-01	4.722E-01	8.338E-01	7.027E-02	0.625
		792.07		8.319E-01	1.327E+00	2.041E+00	1.733E-01	0.408
		903.28		5.086E-01	1.258E+00	2.062E+00	2.090E-01	0.247
		920.93		-7.486E-02	6.068E-01	8.038E-01	7.993E-02	-0.093
OS-185		59.72		-3.378E-02	1.288E-01	1.893E-01	1.570E-02	-0.178
		61.14		1.066E-01	7.667E-02	1.197E-01	9.851E-03	0.891
		69.30		3.350E-02	1.863E-01	2.777E-01	2.211E-02	0.121
		592.07		5.530E-01	2.819E+00	4.647E+00	3.055E-01	0.119
		646.12	*	-1.374E-02	4.770E-02	7.496E-02	4.938E-03	-0.183
		717.42		-4.630E-01	1.070E+00	1.738E+00	1.280E-01	-0.266
		874.81		-3.251E-01	6.580E-01	1.038E+00	1.018E-01	-0.313
		880.27		3.581E-01	9.156E-01	1.534E+00	1.518E-01	0.233
RE-188		155.03	*	3.029E-02	1.769E-01	2.914E-01	3.244E-02	0.104
		477.96		-1.065E+00	3.258E+00	5.217E+00	3.275E-01	-0.204
		633.10		-2.889E+00	3.128E+00	4.618E+00	3.044E-01	-0.626
W-188	+	63.58		5.347E+01	3.885E+01	4.598E+01	3.743E+00	1.163
		227.08		2.837E+00	1.317E+01	2.143E+01	2.119E+00	0.132
		290.67	*	-2.122E+00	8.680E+00	1.250E+01	1.133E+00	-0.170
IR-192	+	295.96		8.892E-01	1.901E-01	2.869E-01	2.586E-02	3.100
		308.46		4.434E-02	1.053E-01	1.713E-01	1.492E-02	0.259
		316.51	*	1.454E-02	3.538E-02	6.060E-02	5.143E-03	0.240
		468.07		-9.913E-02	7.496E-02	1.111E-01	7.852E-03	-0.892
		604.41		-1.541E-01	6.171E-01	8.391E-01	9.876E-02	-0.184
		612.46		2.634E+00	9.618E-01	1.663E+00	1.363E-01	1.584

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		8.198E-02	9.722E-02	1.486E-01	1.201E-02	0.552
		66.83		-1.827E-03	5.526E-02	8.177E-02	6.568E-03	-0.022
	+	75.70		1.140E+00	2.115E-01	3.558E-01	2.779E-02	3.203
		98.88	*	2.794E-01	2.085E-01	3.238E-01	3.087E-02	0.863
		129.76		2.728E+00	2.863E+00	4.845E+00	6.565E-01	0.563
TL-200		367.94	*	1.124E-04	2.863E+00	Half-Life too short		
		579.30		2.358E-03	2.863E+00	Half-Life too short		
		828.27		-1.039E-03	2.863E+00	Half-Life too short		
		1205.75		-1.252E-03	2.863E+00	Half-Life too short		
TL-201		68.90		-1.118E-01	2.437E+00	3.358E+00	2.677E-01	-0.033
		70.82		9.700E-01	1.357E+00	2.060E+00	1.632E-01	0.471
		80.30		9.701E-01	4.060E+00	4.418E+00	3.413E-01	0.220
		135.34		2.911E+00	1.967E+01	3.252E+01	4.247E+00	0.090
		167.43	*	-1.283E+00	5.506E+00	8.885E+00	8.820E-01	-0.144
TL-202		68.90		-1.247E-02	2.718E-01	3.746E-01	2.986E-02	-0.033
		70.82		1.079E-01	1.509E-01	2.291E-01	1.815E-02	0.471
		80.30		1.079E-01	4.518E-01	4.916E-01	3.798E-02	0.220
		439.56	*	4.014E-02	7.133E-02	1.219E-01	7.434E-03	0.329
HG-203		70.83		4.977E-01	6.917E-01	1.047E+00	1.380E-01	0.475
		72.87		1.989E+00	4.925E-01	7.775E-01	9.895E-02	2.558
		82.60		1.161E+00	1.272E+00	1.438E+00	1.895E-01	0.807
		279.20	*	-1.076E-02	4.235E-02	7.052E-02	6.705E-03	-0.153
BI-207		72.80		5.484E-01	1.322E-01	2.286E-01	1.800E-02	2.399
	+	74.97		6.351E-01	1.178E-01	1.767E-01	1.383E-02	3.595
	+	84.90		3.072E-01	1.617E-01	2.707E-01	2.071E-02	1.135
		569.67		6.975E-03	3.536E-02	5.835E-02	3.819E-03	0.120
		1063.62	*	1.026E-02	6.238E-02	1.037E-01	8.216E-03	0.099
		1770.23		8.559E-02	4.030E-01	6.138E-01	3.545E-02	0.139
TL-207		81.07		-2.957E-02	2.382E-01	2.520E-01	1.943E-02	-0.117
	+	83.78		2.026E-01	1.066E-01	1.700E-01	1.304E-02	1.192
		94.90		6.468E-01	2.290E-01	3.660E-01	3.226E-02	1.767
		122.32		3.752E-01	1.710E+00	2.844E+00	4.143E-01	0.132
		144.24		4.841E-01	7.128E-01	1.169E+00	1.516E-01	0.414
		154.21		3.334E-04	4.089E-01	6.690E-01	7.956E-02	0.000
	+	269.46		4.263E-01	2.248E-01	3.576E-01	3.433E-02	1.192
		323.87	*	1.308E-01	8.295E-01	1.222E+00	2.143E-01	0.107
	+	338.28		6.564E+00	2.116E+00	2.643E+00	3.114E-01	2.483
		445.03		4.077E-01	2.429E+00	4.050E+00	4.234E-01	0.101
PO-209		260.50		7.091E+00	1.024E+01	1.697E+01	1.624E+00	0.418
		262.80		-6.577E+00	2.813E+01	4.435E+01	4.229E+00	-0.148
		896.60	*	-3.666E+00	9.588E+00	1.535E+01	1.561E+00	-0.239
PB-211		404.84	*	-1.645E+00	1.440E+00	1.494E+00	9.314E-01	-1.101
		427.08		1.270E-01	2.348E+00	3.889E+00	2.405E+00	0.033
		831.96		7.628E-01	1.484E+00	2.440E+00	1.531E+00	0.313
BI-212	+	727.18	*	1.120E+00	5.505E-01	7.730E-01	7.012E-02	1.449
		785.46		1.697E+00	2.090E+00	3.633E+00	3.048E-01	0.467
		1620.62		8.579E-01	1.139E+00	2.075E+00	1.218E-01	0.413
PO-215		81.07		-2.957E-02	2.382E-01	2.520E-01	1.943E-02	-0.117
	+	83.78		2.026E-01	1.066E-01	1.700E-01	1.304E-02	1.192

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		6.468E-01	2.290E-01	3.660E-01	3.226E-02	1.767
		122.32		3.752E-01	1.710E+00	2.844E+00	4.143E-01	0.132
		144.24		4.841E-01	7.128E-01	1.169E+00	1.516E-01	0.414
		154.21		3.334E-04	4.089E-01	6.690E-01	7.956E-02	0.000
	+	269.46		4.263E-01	2.248E-01	3.576E-01	3.433E-02	1.192
		323.87	*	1.308E-01	8.295E-01	1.222E+00	2.143E-01	0.107
	+	338.28		6.564E+00	2.116E+00	2.643E+00	3.114E-01	2.483
		445.03		4.077E-01	2.429E+00	4.050E+00	4.234E-01	0.101
RN-219	+	271.23		5.470E-01	2.899E-01	4.626E-01	5.081E-02	1.182
		401.81	*	1.413E-01	4.471E-01	7.547E-01	1.029E-01	0.187
RN-220		549.76	*	1.439E+01	3.118E+01	5.250E+01	3.416E+00	0.274
RA-223		81.07		-2.957E-02	2.382E-01	2.520E-01	1.943E-02	-0.117
	+	83.78		2.026E-01	1.066E-01	1.700E-01	1.304E-02	1.192
		94.90		6.468E-01	2.290E-01	3.660E-01	3.226E-02	1.767
		122.32		3.752E-01	1.710E+00	2.844E+00	4.143E-01	0.132
		144.24		4.841E-01	7.128E-01	1.169E+00	1.516E-01	0.414
		154.21		3.334E-04	4.089E-01	6.690E-01	7.956E-02	0.000
	+	269.46		4.263E-01	2.248E-01	3.576E-01	3.433E-02	1.192
		323.87	*	1.308E-01	8.295E-01	1.222E+00	2.143E-01	0.107
	+	338.28		6.564E+00	2.116E+00	2.643E+00	3.114E-01	2.483
		445.03		4.077E-01	2.429E+00	4.050E+00	4.234E-01	0.101
AC-227		79.80		7.582E-01	1.795E+00	1.972E+00	4.174E-01	0.384
		236.00		1.271E+00	3.369E-01	5.109E-01	6.704E-02	2.488
		256.20	*	-1.233E-01	4.195E-01	6.599E-01	1.051E-01	-0.187
		286.10		3.045E-01	1.574E+00	2.675E+00	3.627E-01	0.114
	+	299.80		4.056E+00	2.528E+00	2.788E+00	4.910E-01	1.455
		304.40		-3.665E-01	2.200E+00	3.175E+00	5.874E-01	-0.115
		334.20		1.796E+00	3.171E+00	4.243E+00	8.117E-01	0.423
TH-227		79.80		7.582E-01	1.795E+00	1.972E+00	4.229E-01	0.384
	+	94.00		9.644E+00	3.221E+00	3.445E+00	7.508E-01	2.799
		236.00		1.271E+00	3.303E-01	5.109E-01	6.151E-02	2.488
		256.20	*	-1.233E-01	4.197E-01	6.599E-01	1.225E-01	-0.187
		286.10		3.045E-01	1.603E+00	2.675E+00	2.686E+00	0.114
	+	299.80		4.056E+00	2.528E+00	2.788E+00	4.910E-01	1.455
		304.40		-3.665E-01	2.200E+00	3.175E+00	5.874E-01	-0.115
		334.20		1.796E+00	3.171E+00	4.243E+00	8.117E-01	0.423
TH-229	+	85.43		3.033E-01	1.596E-01	2.879E-01	2.201E-02	1.053
	+	88.47		4.800E-01	1.170E-01	1.868E-01	1.436E-02	2.570
		100.00		2.507E-01	1.588E-01	2.689E-01	2.620E-02	0.932
		193.63	*	-2.649E-01	5.279E-01	8.344E-01	8.334E-02	-0.318
		210.97		1.513E+00	9.499E-01	1.451E+00	1.446E-01	1.042
PA-231		283.67	*	-5.046E-01	1.597E+00	2.645E+00	4.106E-01	-0.191
	+	301.29		1.622E+00	9.907E-01	1.125E+00	1.395E-01	1.442
TH-231		81.07		-2.957E-02	2.382E-01	2.520E-01	1.943E-02	-0.117
	+	83.78		2.026E-01	1.066E-01	1.700E-01	1.304E-02	1.192
		94.90		6.468E-01	2.290E-01	3.660E-01	3.226E-02	1.767
		122.32		3.752E-01	1.710E+00	2.844E+00	4.143E-01	0.132
		144.24		4.841E-01	7.128E-01	1.169E+00	1.516E-01	0.414
		154.21		3.334E-04	4.089E-01	6.690E-01	7.956E-02	0.000

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.263E-01	2.248E-01	3.576E-01	3.433E-02	1.192
		323.87	*	1.308E-01	8.295E-01	1.222E+00	2.143E-01	0.107
	+	338.28		6.564E+00	2.116E+00	2.643E+00	3.114E-01	2.483
		445.03		4.077E-01	2.429E+00	4.050E+00	4.234E-01	0.101
U-231	+	84.21		7.086E+00	3.730E+00	5.944E+00	4.555E-01	1.192
	+	92.29		7.737E+00	2.070E+00	2.889E+00	2.412E-01	2.678
		95.87	*	-2.033E-02	8.117E-01	1.186E+00	1.066E-01	-0.017
		108.00		3.772E-01	1.534E+00	2.565E+00	2.891E-01	0.147
PA-233	+	75.28		1.853E+01	4.167E+00	5.513E+00	8.221E-01	3.362
	+	86.59		6.882E+00	2.423E+00	2.539E+00	6.732E-01	2.711
	+	300.12		1.131E+00	6.971E-01	7.861E-01	1.180E-01	1.438
		311.98	*	-2.311E-02	6.648E-02	1.093E-01	9.655E-03	-0.211
		340.50		2.452E+00	9.590E-01	1.349E+00	3.176E-01	1.817
		398.62		2.315E+00	2.410E+00	4.095E+00	1.059E+00	0.565
		415.76		-1.649E+00	1.839E+00	2.809E+00	5.797E-01	-0.587
PA-234	+	63.00		1.570E+00	1.159E+00	1.349E+00	2.058E-01	1.164
		94.67		7.087E-01	1.814E-01	2.757E-01	3.449E-02	2.570
		98.44		8.712E-02	9.668E-02	1.289E-01	7.207E-02	0.676
		99.86		6.627E-01	4.033E-01	6.838E-01	6.644E-02	0.969
		111.00		5.803E-02	1.717E-01	2.875E-01	4.192E-02	0.202
		131.20		2.217E-02	1.084E-01	1.797E-01	2.412E-02	0.123
		152.70		7.937E-02	3.273E-01	5.404E-01	1.005E-01	0.147
	+	186.00		5.139E+00	2.789E+00	2.624E+00	8.296E-01	1.958
		226.40		3.621E-01	4.246E-01	7.075E-01	9.953E-02	0.512
		227.20		6.957E-02	4.493E-01	7.287E-01	7.207E-02	0.095
		248.90		3.117E-02	9.325E-01	1.382E+00	3.159E-01	0.023
		293.70		5.222E+00	1.320E+00	1.781E+00	3.116E-01	2.931
		369.80		-9.259E-02	9.286E-01	1.536E+00	3.241E-01	-0.060
		568.70		-4.033E-01	1.182E+00	1.871E+00	1.224E-01	-0.216
		569.50		3.815E-02	3.156E-01	5.178E-01	3.389E-02	0.074
		574.00		5.757E-01	1.716E+00	2.789E+00	1.827E-01	0.206
		699.00		-4.051E-01	8.822E-01	1.358E+00	2.504E-01	-0.298
		706.10		-2.678E-01	1.286E+00	2.019E+00	8.953E-01	-0.133
		733.00		-5.402E-01	5.453E-01	6.806E-01	1.485E-01	-0.794
		742.81		-1.424E+00	1.783E+00	2.316E+00	1.554E+00	-0.615
		796.30		1.116E+00	1.304E+00	1.995E+00	5.394E-01	0.559
		805.60		6.376E-01	1.174E+00	2.016E+00	6.184E-01	0.316
		819.60		-2.274E-01	1.370E+00	2.242E+00	8.541E-01	-0.101
		826.30		-1.114E-01	9.656E-01	1.589E+00	7.121E-01	-0.070
		831.60		4.944E-01	7.402E-01	1.273E+00	3.819E-01	0.388
		876.40		-1.258E+00	1.614E+00	1.393E+00	1.434E+00	-0.903
		880.51		8.123E-02	3.375E-01	5.584E-01	5.528E-02	0.145
		883.24		-8.634E-02	3.629E-01	5.814E-01	3.919E-01	-0.149
		899.00		-4.736E-01	1.037E+00	1.612E+00	7.100E-01	-0.294
	+	925.00		1.246E+00	1.361E+00	2.214E+00	2.191E-01	0.563
	+	926.50		1.850E-01	2.068E-01	3.434E-01	8.837E-02	0.539
		946.00	*	1.591E-01	3.921E-01	5.859E-01	1.128E-01	0.272
	+	949.00		5.247E-01	5.219E-01	9.393E-01	9.029E-02	0.559
		980.50		-5.042E-01	8.812E-01	1.369E+00	1.259E-01	-0.368

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-3.343E-01	1.030E+00	1.584E+00	1.026E+00	-0.211
PA-234M		766.41		2.730E+01	3.200E+01	3.880E+01	2.973E+01	0.704
		1001.03	*	-2.144E+00	8.031E+00	1.288E+01	1.469E+00	-0.166
U-235	+	89.95		2.828E+00	1.489E+00	1.612E+00	4.945E-01	1.755
	+	93.35		3.000E+00	1.133E+00	1.108E+00	3.101E-01	2.709
		105.00		9.079E-01	9.822E-01	1.619E+00	4.939E-01	0.561
		143.76	*	7.770E-02	2.217E-01	3.597E-01	7.039E-02	0.216
		163.35		8.590E-02	4.849E-01	7.970E-01	1.582E-01	0.108
	+	185.71		1.903E-01	8.607E-02	9.679E-02	9.660E-03	1.966
		205.31		-4.618E-01	6.186E-01	8.204E-01	1.619E-01	-0.563
NP-236		94.67		5.398E-01	1.291E-01	2.093E-01	1.836E-02	2.579
		98.44		6.584E-02	6.344E-02	9.743E-02	9.211E-03	0.676
		111.00		4.390E-02	1.298E-01	2.174E-01	2.581E-02	0.202
		160.31	*	8.210E-03	8.533E-02	1.399E-01	1.477E-02	0.059
NP-239		99.55		2.335E-01	1.405E-01	2.303E-01	2.225E-02	1.014
		117.00	*	-1.318E-02	1.839E-01	3.030E-01	3.970E-02	-0.044
	+	209.75		1.419E+00	9.450E-01	1.450E+00	1.445E-01	0.979
		228.18		-5.547E-03	2.328E-01	3.741E-01	3.697E-02	-0.015
		277.60		8.673E-02	1.884E-01	3.242E-01	3.017E-02	0.268
		334.30		1.010E+00	1.788E+00	2.403E+00	1.914E-01	0.420
AM-241		59.54	*	-2.112E-02	6.790E-02	9.957E-02	8.909E-03	-0.212
CM-243		99.55		2.403E-01	1.446E-01	2.370E-01	2.289E-02	1.014
		103.76	*	5.729E-03	8.430E-02	1.402E-01	1.465E-02	0.041
		117.00		-1.356E-02	1.892E-01	3.117E-01	4.084E-02	-0.044
	+	209.75		1.399E+00	9.315E-01	1.429E+00	1.424E-01	0.979
		228.18		-5.605E-03	2.352E-01	3.780E-01	3.736E-02	-0.015
		277.60		8.743E-02	1.899E-01	3.268E-01	3.042E-02	0.268
CM-247		278.00		2.631E-01	7.769E-01	1.330E+00	1.237E-01	0.198
		287.40		3.280E-01	1.292E+00	2.203E+00	2.011E-01	0.149
		402.60	*	-2.593E-02	4.015E-02	6.375E-02	3.751E-03	-0.407
CF-249		252.85		7.849E-02	9.163E-01	1.475E+00	1.425E-01	0.053
		333.44		2.575E-02	3.090E-01	3.057E-01	2.443E-02	0.084
		387.95	*	-1.551E-02	4.425E-02	7.188E-02	4.299E-03	-0.216
CF-251		176.60	*	-1.490E-01	1.364E-01	2.098E-01	2.089E-02	-0.710
		227.00		1.937E-01	3.966E-01	6.536E-01	6.464E-02	0.296
		285.00		-8.751E-01	1.836E+00	3.015E+00	2.767E-01	-0.290

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585003      *
* Acquisition date :  9-JUL-2009 08:34:51 Detector SN#    :                 *
* Detector ID        : GAM05               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.70      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232585003           Analyst initials: MXR1          *
* Batch Number       : 881931               Sample Quantity : 1.2817E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.905E+01	2.660E+00	6.328E-01	0.000E+00
CD-109	3.570E+00	8.530E-01	1.008E+00	0.000E+00
SN-126	3.516E-01	8.400E-02	9.912E-02	0.000E+00
TL-208	5.281E-01	9.337E-02	6.405E-02	0.000E+00
BI-210	6.417E-01	8.541E-01	8.785E-01	0.000E+00
PB-210	6.417E-01	8.541E-01	8.785E-01	0.000E+00
PO-210	6.417E-01	8.537E-01	8.785E-01	0.000E+00
BI-211	3.551E+00	5.496E-01	3.672E-01	0.000E+00
PB-212	1.431E+00	1.852E-01	8.821E-02	0.000E+00
PO-212	1.431E+00	1.852E-01	8.821E-02	0.000E+00
BI-214	9.202E-01	1.913E-01	1.234E-01	0.000E+00
PB-214	1.235E+00	2.013E-01	1.241E-01	0.000E+00
PO-214	1.235E+00	2.013E-01	1.241E-01	0.000E+00
PO-216	1.431E+00	1.852E-01	8.821E-02	0.000E+00
PO-218	1.235E+00	2.013E-01	1.241E-01	0.000E+00
RA-224	4.222E+00	1.434E+00	1.004E+00	0.000E+00
RA-226	9.202E-01	1.913E-01	1.234E-01	0.000E+00
AC-228	1.403E+00	3.398E-01	2.684E-01	0.000E+00
RA-228	1.403E+00	3.398E-01	2.684E-01	0.000E+00
TH-228	1.431E+00	1.852E-01	8.820E-02	0.000E+00
TH-230	9.201E-01	1.913E-01	1.234E-01	0.000E+00
TH-232	1.403E+00	3.398E-01	2.684E-01	0.000E+00
TH-234	1.347E+00	9.816E-01	1.018E+00	0.000E+00
U-234	9.201E-01	1.913E-01	1.234E-01	0.000E+00
NP-237	1.032E+00	3.232E-01	2.902E-01	0.000E+00
U-238	1.347E+00	9.816E-01	1.018E+00	0.000E+00
AM-243	3.538E-01	6.434E-02	6.154E-02	0.000E+00
ANH-511	1.226E-01	8.012E-02	5.069E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-3.055E-01	3.418E-01	5.438E-01	0.000E+00	NOT IDENT.
NA-22	1.058E-02	5.464E-02	9.204E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.098E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.657E-03	3.155E-02	5.387E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.338E-02	6.315E-02	0.000E+00	FAIL ABUN
SC-46	-1.927E-02	5.028E-02	8.309E-02	0.000E+00	FAIL ABUN
V-48	-8.637E-03	7.625E-02	1.275E-01	0.000E+00	NOT IDENT.
CR-51	2.096E-01	3.863E-01	6.939E-01	0.000E+00	NOT IDENT.
MN-52	2.794E-02	2.182E-01	3.775E-01	0.000E+00	NOT IDENT.
MN-54	-3.526E-02	4.208E-02	6.678E-02	0.000E+00	NOT IDENT.
CO-56	1.755E-02	4.363E-02	7.712E-02	0.000E+00	NOT IDENT.
CO-57	6.516E-03	2.419E-02	4.271E-02	0.000E+00	NOT IDENT.
CO-58	-3.294E-03	4.259E-02	7.259E-02	0.000E+00	NOT IDENT.
FE-59	-9.063E-02	1.097E-01	1.690E-01	0.000E+00	NOT IDENT.
CO-60	3.613E-03	4.962E-02	8.240E-02	0.000E+00	NOT IDENT.
ZN-65	-5.400E-02	1.302E-01	1.760E-01	0.000E+00	NOT IDENT.
GE-68	1.924E-01	1.583E+00	2.684E+00	0.000E+00	NOT IDENT.
AS-73	-1.257E-01	2.246E-01	3.951E-01	0.000E+00	NOT IDENT.
AS-74	1.433E-02	1.009E-01	1.711E-01	0.000E+00	NOT IDENT.
SE-75	-4.297E-02	5.289E-02	7.191E-02	0.000E+00	NOT IDENT.
BR-77	2.068E+00	7.857E+00	1.324E+01	0.000E+00	FAIL ABUN
SR-82	2.262E-01	4.525E-01	7.117E-01	0.000E+00	NOT IDENT.
RB-83	1.900E-02	7.520E-02	1.229E-01	0.000E+00	NOT IDENT.
RB-84	1.008E-02	8.156E-02	1.405E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.900E+00	1.593E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.503E-02	8.062E-02	0.000E+00	NOT IDENT.
RB-86	1.733E-01	9.506E-01	1.620E+00	0.000E+00	NOT IDENT.
Y-88	-5.035E-02	3.871E-02	4.496E-02	0.000E+00	NOT IDENT.
ZR-88	-7.029E-03	3.324E-02	5.672E-02	0.000E+00	NOT IDENT.
Y-91	-2.160E+01	2.413E+01	3.699E+01	0.000E+00	NOT IDENT.
NB-94	-1.019E-02	4.035E-02	6.548E-02	0.000E+00	NOT IDENT.
NB-95	4.279E-02	5.810E-02	9.248E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.471E-01	2.418E-01	0.000E+00	NOT IDENT.
ZR-95	8.944E-02	8.604E-02	1.585E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.397E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.950E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.187E+00	9.708E+00	1.647E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.211E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-4.645E-03	3.647E-02	6.011E-02	0.000E+00	NOT IDENT.
RH-102	7.761E-03	3.096E-02	5.374E-02	0.000E+00	NOT IDENT.
RU-103	-5.330E-03	4.197E-02	7.069E-02	0.000E+00	FAIL ABUN
RH-106	2.501E-01	3.463E-01	6.118E-01	0.000E+00	FAIL ABUN
RU-106	2.501E-01	3.454E-01	6.118E-01	0.000E+00	FAIL ABUN
AG-108M	-3.903E-02	3.822E-02	6.126E-02	0.000E+00	NOT IDENT.
AG-110M	-3.406E-02	4.202E-02	6.527E-02	0.000E+00	NOT IDENT.
IN-111	2.961E-01	8.545E-01	1.287E+00	0.000E+00	NOT IDENT.
IN-113M	4.100E-03	4.723E-02	8.205E-02	0.000E+00	NOT IDENT.
SN-113	4.100E-03	4.723E-02	8.205E-02	0.000E+00	NOT IDENT.
IN-114M	4.309E-03	2.018E-01	3.019E-01	0.000E+00	NOT IDENT.
CD-115	7.339E-01	8.083E+00	1.378E+01	0.000E+00	NOT IDENT.
SN-117M	2.509E-02	5.441E-02	9.549E-02	0.000E+00	NOT IDENT.
SB-122	1.730E+00	1.735E+00	3.124E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.216E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.269E-02	2.941E-02	5.214E-02	0.000E+00	NOT IDENT.
I-124	7.776E-02	7.130E-01	1.044E+00	0.000E+00	FAIL ABUN
SB-124	5.692E-03	8.784E-02	1.489E-01	0.000E+00	FAIL ABUN
SB-125	6.354E-03	1.048E-01	1.807E-01	0.000E+00	NOT IDENT.
TE-125M	-5.672E+00	8.499E+00	1.452E+01	0.000E+00	NOT IDENT.
I-126	-6.851E-02	1.982E-01	3.204E-01	0.000E+00	NOT IDENT.
SB-126	2.082E-01	1.746E-01	2.923E-01	0.000E+00	FAIL ABUN
SB-127	1.717E+00	1.296E+00	2.362E+00	0.000E+00	NOT IDENT.
XE-127	-2.027E-02	4.718E-02	7.863E-02	0.000E+00	NOT IDENT.
I-131	-6.874E-02	1.176E-01	1.975E-01	0.000E+00	NOT IDENT.
TE-132	-1.246E-02	5.335E-01	9.006E-01	0.000E+00	NOT IDENT.
BA-133	-3.064E-02	5.177E-02	7.413E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.363E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	8.327E-02	1.051E-01	0.000E+00	FAIL ABUN
CS-135	2.100E-01	1.884E-01	2.954E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.517E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.720E-04	1.222E-01	2.054E-01	0.000E+00	FAIL ABUN
BA-137M	-6.825E-03	4.204E-02	6.907E-02	0.000E+00	NOT IDENT.
CS-137	-7.215E-03	4.444E-02	7.301E-02	0.000E+00	NOT IDENT.
CE-139	-1.625E-02	3.026E-02	5.081E-02	0.000E+00	NOT IDENT.
BA-140	-5.182E-02	2.627E-01	4.365E-01	0.000E+00	NOT IDENT.
LA-140	-8.642E-02	9.440E-02	1.372E-01	0.000E+00	FAIL ABUN
CE-141	1.613E-02	6.243E-02	1.067E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.315E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-2.814E-02	2.084E-01	3.609E-01	0.000E+00	NOT IDENT.
PM-144	1.225E-02	4.159E-02	7.054E-02	0.000E+00	NOT IDENT.
PR-144	8.299E-01	2.816E+00	4.777E+00	0.000E+00	NOT IDENT.
PM-146	2.506E-02	4.694E-02	8.308E-02	0.000E+00	NOT IDENT.
ND-147	-2.423E-01	5.504E-01	8.971E-01	0.000E+00	FAIL ABUN
PM-149	-5.874E+00	6.300E+01	1.105E+02	0.000E+00	NOT IDENT.
EU-152	-1.000E-01	1.198E-01	1.571E-01	0.000E+00	FAIL ABUN
GD-153	1.197E-02	7.102E-02	1.114E-01	0.000E+00	FAIL ABUN
EU-154	3.614E-02	1.518E-01	2.569E-01	0.000E+00	NOT IDENT.
EU-155	9.837E-02	9.496E-02	1.726E-01	0.000E+00	FAIL ABUN
TB-160	9.538E-02	1.583E-01	2.772E-01	0.000E+00	FAIL ABUN
HO-166M	2.937E-02	6.834E-02	1.221E-01	0.000E+00	NOT IDENT.
TM-171	-3.429E-01	1.639E+01	2.595E+01	0.000E+00	NOT IDENT.
LU-176	9.107E-03	2.888E-02	4.517E-02	0.000E+00	FAIL ABUN
LU-177	1.757E+00	1.146E+00	1.792E+00	0.000E+00	FAIL ABUN
LU-177M	-2.302E-01	1.907E-01	3.024E-01	0.000E+00	FAIL ABUN
HF-181	1.134E-02	4.627E-02	8.017E-02	0.000E+00	NOT IDENT.
W-181	1.456E-01	2.047E-01	3.331E-01	0.000E+00	NOT IDENT.
TA-182	-1.503E-02	2.523E-01	4.167E-01	0.000E+00	NOT IDENT.
RE-183	-1.597E-02	1.109E-01	1.900E-01	0.000E+00	FAIL ABUN
RE-184	2.081E-02	2.381E-01	4.018E-01	0.000E+00	NOT IDENT.
OS-185	-1.374E-02	4.675E-02	7.593E-02	0.000E+00	NOT IDENT.
RE-188	3.029E-02	1.734E-01	3.016E-01	0.000E+00	NOT IDENT.
W-188	-2.122E+00	8.506E+00	1.282E+01	0.000E+00	FAIL ABUN
IR-192	1.454E-02	3.468E-02	6.206E-02	0.000E+00	FAIL ABUN
AU-195	2.794E-01	2.043E-01	3.374E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.209E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.283E+00	5.396E+00	9.186E+00	0.000E+00	NOT IDENT.
TL-202	4.014E-02	6.991E-02	1.243E-01	0.000E+00	NOT IDENT.
HG-203	-1.076E-02	4.150E-02	7.235E-02	0.000E+00	NOT IDENT.
BI-207	1.026E-02	6.113E-02	1.043E-01	0.000E+00	FAIL ABUN
TL-207	1.308E-01	8.129E-01	1.251E+00	0.000E+00	FAIL ABUN
PO-209	-3.666E+00	9.396E+00	1.547E+01	0.000E+00	NOT IDENT.
PB-211	-1.645E+00	1.411E+00	1.524E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.395E-01	7.816E-01	0.000E+00	FAIL ABUN
PO-215	1.308E-01	8.129E-01	1.251E+00	0.000E+00	FAIL ABUN
RN-219	1.413E-01	4.382E-01	7.701E-01	0.000E+00	FAIL ABUN
RN-220	1.439E+01	3.056E+01	5.331E+01	0.000E+00	NOT IDENT.
RA-223	1.308E-01	8.129E-01	1.251E+00	0.000E+00	FAIL ABUN
AC-227	-1.233E-01	4.111E-01	6.780E-01	0.000E+00	FAIL ABUN
TH-227	-1.233E-01	4.113E-01	6.780E-01	0.000E+00	FAIL ABUN
TH-229	-2.649E-01	5.174E-01	8.609E-01	0.000E+00	FAIL ABUN
PA-231	-5.046E-01	1.565E+00	2.714E+00	0.000E+00	FAIL ABUN
TH-231	1.308E-01	8.129E-01	1.251E+00	0.000E+00	FAIL ABUN
U-231	-2.033E-02	7.954E-01	1.236E+00	0.000E+00	FAIL ABUN
PA-233	-2.311E-02	6.515E-02	1.120E-01	0.000E+00	FAIL ABUN
PA-234	1.591E-01	3.843E-01	5.900E-01	0.000E+00	FAIL ABUN
PA-234M	-2.144E+00	7.870E+00	1.296E+01	0.000E+00	NOT IDENT.
U-235	7.770E-02	2.173E-01	3.728E-01	0.000E+00	FAIL ABUN
NP-236	8.210E-03	8.362E-02	1.448E-01	0.000E+00	NOT IDENT.
NP-239	-1.318E-02	1.802E-01	3.149E-01	0.000E+00	FAIL ABUN
AM-241	-2.112E-02	6.654E-02	1.045E-01	0.000E+00	NOT IDENT.
CM-243	5.729E-03	8.261E-02	1.460E-01	0.000E+00	FAIL ABUN
CM-247	-2.593E-02	3.935E-02	6.505E-02	0.000E+00	NOT IDENT.
CF-249	-1.551E-02	4.336E-02	7.339E-02	0.000E+00	NOT IDENT.
CF-251	-1.490E-01	1.337E-01	2.167E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:35:33.35

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585003.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:34:51.
Sample ID         : G232585003           Sample quantity  : 1.28170E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.70  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1062	10.67*	1.003E+00	2.905E+01	2.905E+01	9.34
CD-109	88.03	349	3.72*	7.859E+00	3.497E+00	3.570E+00	24.38
SN-126	64.28	141	9.60	8.064E+00	5.332E-01	5.332E-01	73.73
	86.94	349	8.90	7.859E+00	1.462E+00	1.462E+00	47.23
	87.57	349	37.00*	7.859E+00	3.516E-01	3.516E-01	24.38
TL-208	277.35	------	6.80	4.261E+00	------ Line Not Found		------
	510.84	107	21.60	2.544E+00	5.676E-01	5.676E-01	67.20
	583.14	343	84.20*	2.260E+00	5.281E-01	5.281E-01	18.04
	860.37	58	12.46	1.588E+00	8.612E-01	8.612E-01	70.78
BI-210	46.50	68	4.05*	7.620E+00	6.409E-01	6.417E-01	135.82
PB-210	46.50	68	4.05*	7.620E+00	6.409E-01	6.417E-01	135.82
PO-210	46.50	68	4.05*	7.620E+00	6.409E-01	6.417E-01	135.77
BI-211	72.87	------	1.27	8.052E+00	------ Line Not Found		------
	351.07	551	12.94*	3.515E+00	3.551E+00	3.551E+00	15.79
PB-212	74.81	641	10.70	8.037E+00	2.182E+00	2.182E+00	20.78
	77.11	877	18.00	8.013E+00	1.780E+00	1.780E+00	13.48
	87.30	349	8.00	7.859E+00	1.626E+00	1.626E+00	26.35
	238.63	1040	44.60*	4.772E+00	1.431E+00	1.431E+00	13.20
	300.09	102	3.41	4.000E+00	2.188E+00	2.188E+00	60.73
PO-212	74.81	641	10.70	8.037E+00	2.182E+00	2.182E+00	20.78
	77.11	877	18.00	8.013E+00	1.780E+00	1.780E+00	13.48
	87.30	349	8.00	7.859E+00	1.626E+00	1.626E+00	26.35
	115.19	------	0.60	7.241E+00	------ Line Not Found		------
	238.63	1040	44.60*	4.772E+00	1.431E+00	1.431E+00	13.20
	300.09	102	3.41	4.000E+00	2.188E+00	2.188E+00	60.73
BI-214	609.31	316	46.30*	2.171E+00	9.201E-01	9.202E-01	21.21
	768.36	65	5.04	1.758E+00	2.146E+00	2.146E+00	64.99
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	128	15.10	1.258E+00	1.970E+00	1.970E+00	28.24
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	27	4.11	1.054E+00	1.828E+00	1.828E+00	80.25
	1764.49	57	15.80	8.612E-01	1.224E+00	1.224E+00	34.92

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	641	6.21	8.037E+00	3.760E+00	3.760E+00	19.98
	77.11	877	10.50	8.013E+00	3.051E+00	3.051E+00	15.48
	87.30	349	4.67	7.859E+00	2.785E+00	2.785E+00	25.57
	241.98	269	7.49	4.729E+00	2.226E+00	2.226E+00	35.11
	295.21	314	19.20	4.057E+00	1.180E+00	1.180E+00	22.25
	351.92	551	37.20*	3.515E+00	1.235E+00	1.235E+00	16.63
PO-214	74.81	641	6.21	8.037E+00	3.760E+00	3.760E+00	19.98
	77.11	877	10.50	8.013E+00	3.051E+00	3.051E+00	15.48
	87.30	349	4.67	7.859E+00	2.785E+00	2.785E+00	25.57
	241.98	269	7.49	4.729E+00	2.226E+00	2.226E+00	35.11
	295.21	314	19.20	4.057E+00	1.180E+00	1.180E+00	22.25
	351.92	551	37.20*	3.515E+00	1.235E+00	1.235E+00	16.63
PO-216	74.81	641	10.70	8.037E+00	2.182E+00	2.182E+00	20.78
	77.11	877	18.00	8.013E+00	1.780E+00	1.780E+00	13.48
	87.30	349	8.00	7.859E+00	1.626E+00	1.626E+00	26.35
	238.63	1040	44.60*	4.772E+00	1.431E+00	1.431E+00	13.20
	300.09	102	3.41	4.000E+00	2.188E+00	2.188E+00	60.73
PO-218	74.81	641	6.21	8.037E+00	3.760E+00	3.760E+00	19.98
	77.11	877	10.50	8.013E+00	3.051E+00	3.051E+00	15.48
	87.30	349	4.67	7.859E+00	2.785E+00	2.785E+00	25.57
	241.98	269	7.49	4.729E+00	2.226E+00	2.226E+00	35.11
	295.21	314	19.20	4.057E+00	1.180E+00	1.180E+00	22.25
	351.92	551	37.20*	3.515E+00	1.235E+00	1.235E+00	16.63
RA-224	240.98	269	3.95*	4.729E+00	4.222E+00	4.222E+00	34.66
RA-226	609.31	316	46.30*	2.171E+00	9.201E-01	9.202E-01	21.21
	768.36	65	5.04	1.758E+00	2.146E+00	2.146E+00	64.99
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	128	15.10	1.258E+00	1.970E+00	1.970E+00	28.24
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	27	4.11	1.054E+00	1.828E+00	1.828E+00	80.25
	1764.49	57	15.80	8.612E-01	1.224E+00	1.224E+00	34.92
AC-228	338.32	222	11.40	3.634E+00	1.572E+00	1.572E+00	50.89
	911.07	200	27.70*	1.510E+00	1.403E+00	1.403E+00	24.71
	969.11	120	16.60	1.429E+00	1.477E+00	1.477E+00	37.48
RA-228	338.32	222	11.40	3.634E+00	1.572E+00	1.572E+00	50.89
	911.07	200	27.70*	1.510E+00	1.403E+00	1.403E+00	24.71
	969.11	120	16.60	1.429E+00	1.477E+00	1.477E+00	37.48
TH-228	84.40	135	1.21	7.911E+00	4.135E+00	4.135E+00	53.57
	238.60	1040	44.60*	4.772E+00	1.431E+00	1.431E+00	13.20
	300.10	102	3.41	4.000E+00	2.188E+00	2.188E+00	84.23
TH-230	609.31	316	46.30*	2.171E+00	9.201E-01	9.201E-01	21.21
	768.36	65	5.04	1.758E+00	2.146E+00	2.146E+00	64.99
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	128	15.10	1.258E+00	1.970E+00	1.970E+00	28.24
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	27	4.11	1.054E+00	1.828E+00	1.828E+00	80.25
	1764.49	57	15.80	8.612E-01	1.224E+00	1.224E+00	34.92
TH-232	338.32	222	11.40	3.634E+00	1.572E+00	1.572E+00	31.02
	911.07	200	27.70*	1.510E+00	1.403E+00	1.403E+00	24.71

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	120	16.60	1.429E+00	1.477E+00	1.477E+00	37.48
TH-234	63.29	141	3.80*	8.064E+00	1.347E+00	1.347E+00	74.35
	92.38	357	5.41	7.751E+00	2.496E+00	2.496E+00	31.12
U-234	609.31	316	46.30*	2.171E+00	9.201E-01	9.201E-01	21.21
	768.36	65	5.04	1.758E+00	2.146E+00	2.146E+00	64.99
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	128	15.10	1.258E+00	1.970E+00	1.970E+00	28.24
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	27	4.11	1.054E+00	1.828E+00	1.828E+00	80.25
	1764.49	57	15.80	8.612E-01	1.224E+00	1.224E+00	34.92
NP-237	86.50	349	12.60*	7.859E+00	1.032E+00	1.032E+00	31.94
	95.87	------	2.60	7.687E+00	------ Line Not Found		------
U-238	63.29	141	3.80*	8.064E+00	1.347E+00	1.347E+00	74.35
	92.38	357	5.41	7.751E+00	2.496E+00	2.496E+00	26.75
AM-243	74.67	641	66.00*	8.037E+00	3.538E-01	3.538E-01	18.56
	86.72	349	0.34	7.859E+00	3.871E+01	3.871E+01	24.38
	117.66	------	0.55	7.181E+00	------ Line Not Found		------
	142.18	------	0.13	6.593E+00	------ Line Not Found		------
ANH-511	511.00	107	100.00*	2.544E+00	1.226E-01	1.226E-01	66.68

Flag: "*" = Keyline

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

Total number of lines in spectrum 36
Number of unidentified lines 2
Number of lines tentatively identified by NID 34 94.44%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.905E+01	2.905E+01	0.271E+01	9.34	
CD-109	464.00D	1.02	3.497E+00	3.570E+00	0.870E+00	24.38	
SN-126	1.00E+05Y	1.00	3.516E-01	3.516E-01	0.857E-01	24.38	
TL-208	1.41E+10Y	1.00	5.281E-01	5.281E-01	0.953E-01	18.04	
BI-210	22.26Y	1.00	6.409E-01	6.417E-01	8.715E-01	135.82	
PB-210	22.26Y	1.00	6.409E-01	6.417E-01	8.715E-01	135.82	
PO-210	22.26Y	1.00	6.409E-01	6.417E-01	8.712E-01	135.77	
BI-211	7.04E+08Y	1.00	3.551E+00	3.551E+00	0.561E+00	15.79	
PB-212	1.41E+10Y	1.00	1.431E+00	1.431E+00	0.189E+00	13.20	
PO-212	1.41E+10Y	1.00	1.431E+00	1.431E+00	0.189E+00	13.20	
BI-214	1600.00Y	1.00	9.201E-01	9.202E-01	1.952E-01	21.21	
PB-214	1600.00Y	1.00	1.235E+00	1.235E+00	0.205E+00	16.63	
PO-214	1600.00Y	1.00	1.235E+00	1.235E+00	0.205E+00	16.63	
PO-216	1.41E+10Y	1.00	1.431E+00	1.431E+00	0.189E+00	13.20	
PO-218	1600.00Y	1.00	1.235E+00	1.235E+00	0.205E+00	16.63	
RA-224	1.41E+10Y	1.00	4.222E+00	4.222E+00	1.463E+00	34.66	
RA-226	1600.00Y	1.00	9.201E-01	9.202E-01	1.952E-01	21.21	
AC-228	1.41E+10Y	1.00	1.403E+00	1.403E+00	0.347E+00	24.71	
RA-228	1.41E+10Y	1.00	1.403E+00	1.403E+00	0.347E+00	24.71	
TH-228	1.41E+10Y	1.00	1.431E+00	1.431E+00	0.189E+00	13.20	
TH-230	4.47E+09Y	1.00	9.201E-01	9.201E-01	1.952E-01	21.21	
TH-232	1.41E+10Y	1.00	1.403E+00	1.403E+00	0.347E+00	24.71	
TH-234	4.47E+09Y	1.00	1.347E+00	1.347E+00	1.002E+00	74.35	
U-234	4.47E+09Y	1.00	9.201E-01	9.201E-01	1.952E-01	21.21	
NP-237	2.14E+06Y	1.00	1.032E+00	1.032E+00	0.330E+00	31.94	
U-238	4.47E+09Y	1.00	1.347E+00	1.347E+00	1.002E+00	74.35	
AM-243	7380.00Y	1.00	3.538E-01	3.538E-01	0.657E-01	18.56	
ANH-511	1.00E+09Y	1.00	1.226E-01	1.226E-01	0.818E-01	66.68	
	Total Activity :		6.464E+01	6.472E+01			

Grand Total Activity : 6.464E+01 6.472E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
9	89.82	204	461	1.48	180.77	166	28	2.83E-02	42.8	7.81E+00	T
0	186.01	199	384	1.40	373.07	367	13	2.76E-02	44.1	5.66E+00	T
0	209.30	82	218	1.25	419.64	416	8	1.14E-02	65.8	5.24E+00	T
0	270.23	86	136	1.18	541.42	537	8	1.20E-02	51.8	4.35E+00	T
0	328.16	39	149	1.44	657.22	653	9	5.46E-03	****	3.73E+00	T
0	726.89	84	80	2.21	1454.07	1448	12	1.16E-02	48.3	1.85E+00	T
0	794.61	50	66	1.37	1589.39	1583	14	6.92E-03	74.9	1.71E+00	T
0	925.76	19	27	1.27	1851.42	1847	9	2.64E-03	****	1.49E+00	T
0	949.14	21	30	0.70	1898.12	1894	8	2.96E-03	99.0	1.46E+00	T
6	964.43	44	41	2.43	1928.68	1924	20	6.13E-03	57.2	1.44E+00	T
0	1537.76	7	2	0.60	3073.82	3070	8	9.37E-04	****	9.62E-01	
0	1629.73	23	6	0.75	3257.46	3251	12	3.19E-03	59.6	9.17E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:35:38.24

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232585003.CNF;1  *
* Acquisition date : 9-JUL-2009 08:34:51.  Detector SN#     :               *
* Detector ID      : GAM05                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:01.70         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 25-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232585003            Analyst initials: MXR1           *
* Batch Number     : 881931                Sample Quantity : 1.28170E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00.5MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.905E+01	2.714E+00	6.328E-01	3.935E-02	45.907
CD-109	3.570E+00	8.704E-01	9.657E-01	7.353E-02	3.697
SN-126	3.516E-01	8.572E-02	9.496E-02	7.232E-03	3.702
TL-208	5.281E-01	9.528E-02	6.313E-02	4.645E-03	8.365
BI-210	6.417E-01	8.715E-01	8.340E-01	6.506E-02	0.769
PB-210	6.417E-01	8.715E-01	8.340E-01	6.506E-02	0.769
PO-210	6.417E-01	8.712E-01	8.340E-01	5.609E-02	0.769
BI-211	3.551E+00	5.608E-01	3.592E-01	2.846E-02	9.886
PB-212	1.431E+00	1.890E-01	8.577E-02	9.247E-03	16.688
PO-212	1.431E+00	1.890E-01	8.577E-02	9.247E-03	16.688
BI-214	9.202E-01	1.952E-01	1.217E-01	1.020E-02	7.563
PB-214	1.235E+00	2.054E-01	1.213E-01	1.149E-02	10.178
PO-214	1.235E+00	2.054E-01	1.213E-01	1.149E-02	10.178
PO-216	1.431E+00	1.890E-01	8.577E-02	9.247E-03	16.688
PO-218	1.235E+00	2.054E-01	1.213E-01	1.149E-02	10.178
RA-224	4.222E+00	1.463E+00	9.762E-01	9.552E-02	4.324
RA-226	9.202E-01	1.952E-01	1.217E-01	1.020E-02	7.563
AC-228	1.403E+00	3.467E-01	2.664E-01	3.296E-02	5.267

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.403E+00	3.467E-01	2.664E-01	3.296E-02	5.267
TH-228	1.431E+00	1.890E-01	8.576E-02	9.247E-03	16.690
TH-230	9.201E-01	1.952E-01	1.217E-01	1.020E-02	7.563
TH-232	1.403E+00	3.467E-01	2.664E-01	3.296E-02	5.267
TH-234	1.347E+00	1.002E+00	9.705E-01	1.724E-01	1.388
U-234	9.201E-01	1.952E-01	1.217E-01	1.020E-02	7.563
NP-237	1.032E+00	3.298E-01	2.780E-01	6.115E-02	3.714
U-238	1.347E+00	1.002E+00	9.705E-01	1.724E-01	1.388
AM-243	3.538E-01	6.566E-02	5.882E-02	4.607E-03	6.016
ANH-511	1.226E-01	8.175E-02	4.986E-02	3.191E-03	2.459

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-3.055E-01		3.488E-01	5.343E-01	3.828E-02	-0.572
NA-22	1.058E-02		5.575E-02	9.184E-02	5.349E-03	0.115
NA-24	1.332E-01		1.071E-01	Half-Life too short		
AL-26	3.657E-03		3.219E-02	5.405E-02	3.101E-03	0.068
TI-44	3.284E-01	+	4.427E-02	6.040E-02	4.687E-03	5.438
SC-46	-1.927E-02		5.131E-02	8.243E-02	8.280E-03	-0.234
V-48	-8.637E-03		7.780E-02	1.266E-01	1.160E-02	-0.068
CR-51	2.096E-01		3.941E-01	6.777E-01	5.994E-02	0.309
MN-52	2.794E-02		2.227E-01	3.774E-01	2.210E-02	0.074
MN-54	-3.526E-02		4.294E-02	6.619E-02	6.064E-03	-0.533
CO-56	1.755E-02		4.452E-02	7.645E-02	7.149E-03	0.230
CO-57	6.516E-03		2.468E-02	4.112E-02	5.834E-03	0.158
CO-58	-3.294E-03		4.346E-02	7.191E-02	6.329E-03	-0.046
FE-59	-9.063E-02		1.119E-01	1.682E-01	1.362E-02	-0.539
CO-60	3.613E-03		5.064E-02	8.227E-02	4.761E-03	0.044
ZN-65	-5.400E-02		1.328E-01	1.752E-01	1.224E-02	-0.308
GE-68	1.924E-01		1.616E+00	2.671E+00	2.051E-01	0.072
AS-73	-1.257E-01		2.292E-01	3.758E-01	2.829E-02	-0.334
AS-74	1.433E-02		1.030E-01	1.687E-01	1.110E-02	0.085
SE-75	-4.297E-02		5.397E-02	7.003E-02	6.685E-03	-0.614
BR-77	2.068E+00		8.017E+00	1.302E+01	8.376E-01	0.159
SR-82	2.262E-01		4.617E-01	7.046E-01	5.813E-02	0.321
RB-83	1.900E-02		7.673E-02	1.209E-01	7.773E-03	0.157
RB-84	1.008E-02		8.322E-02	1.394E-01	1.382E-02	0.072
KR-85	2.338E+01		9.082E+00	1.567E+01	1.005E+00	1.492
SR-85	1.183E-01		4.595E-02	7.931E-02	5.084E-03	1.492
RB-86	1.733E-01		9.700E-01	1.612E+00	1.240E-01	0.107
Y-88	-5.035E-02		3.950E-02	4.512E-02	2.581E-03	-1.116
ZR-88	-7.029E-03		3.392E-02	5.556E-02	3.236E-03	-0.127
Y-91	-2.160E+01		2.462E+01	3.687E+01	2.142E+00	-0.586
NB-94	-1.019E-02		4.117E-02	6.472E-02	4.631E-03	-0.157
NB-95	4.279E-02		5.929E-02	9.153E-02	7.403E-03	0.467
NB-95M	3.593E-01		1.501E-01	2.350E-01	2.571E-02	1.529

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	8.944E-02		8.780E-02	1.569E-01	1.394E-02	0.570
NB-97	-2.550E-02		1.733E-02	Half-Life too short		
ZR-97	1.368E+00		3.546E-01	Half-Life too short		
MO-99	-2.187E+00		9.906E+00	1.630E+01	2.392E+00	-0.134
TC-99M	-7.190E+08		6.177E+08	Half-Life too short		
RH-101	-4.645E-03		3.721E-02	5.828E-02	5.820E-03	-0.080
RH-102	7.761E-03		3.159E-02	5.280E-02	3.308E-03	0.147
RU-103	-5.330E-03		4.283E-02	6.950E-02	8.970E-03	-0.077
RH-106	2.501E-01		3.533E-01	6.036E-01	7.332E-02	0.414
RU-106	2.501E-01		3.524E-01	6.036E-01	3.979E-02	0.414
AG-108M	-3.903E-02		3.900E-02	6.011E-02	3.933E-03	-0.649
AG-110M	-3.406E-02		4.288E-02	6.445E-02	4.455E-03	-0.529
IN-111	2.961E-01		8.720E-01	1.252E+00	1.220E-01	0.236
IN-113M	4.100E-03		4.819E-02	8.038E-02	4.986E-03	0.051
SN-113	4.100E-03		4.819E-02	8.038E-02	4.986E-03	0.051
IN-114M	4.309E-03		2.059E-01	2.925E-01	2.921E-02	0.015
CD-115	7.339E-01		8.247E+00	1.356E+01	8.748E-01	0.054
SN-117M	2.509E-02		5.552E-02	9.229E-02	9.922E-03	0.272
SB-122	1.730E+00		1.771E+00	3.077E+00	2.011E-01	0.562
I-123	9.380E-01		6.204E-01	Half-Life too short		
TE-123M	2.269E-02		3.001E-02	5.039E-02	5.414E-03	0.450
I-124	7.776E-02		7.276E-01	1.029E+00	6.776E-02	0.076
SB-124	5.692E-03		8.963E-02	1.492E-01	9.446E-03	0.038
SB-125	6.354E-03		1.069E-01	1.773E-01	1.111E-02	0.036
TE-125M	-5.672E+00		8.672E+00	1.396E+01	1.794E+00	-0.406
I-126	-6.851E-02		2.023E-01	3.165E-01	2.102E-02	-0.216
SB-126	2.082E-01		1.781E-01	2.890E-01	2.143E-02	0.721
SB-127	1.717E+00		1.323E+00	2.333E+00	2.274E-01	0.736
XE-127	-2.027E-02		4.814E-02	7.627E-02	7.612E-03	-0.266
I-131	-6.874E-02		1.200E-01	1.933E-01	1.449E-02	-0.356
TE-132	-1.246E-02		5.444E-01	8.750E-01	1.420E-01	-0.014
BA-133	-3.064E-02		5.283E-02	7.252E-02	8.955E-03	-0.423
I-133	-1.675E-04		1.206E-03	Half-Life too short		
CS-134	1.126E-01	+	8.497E-02	1.041E-01	8.967E-03	1.082
CS-135	2.100E-01		1.922E-01	2.877E-01	3.078E-02	0.730
I-135	3.996E+07		1.284E+08	Half-Life too short		
CS-136	-5.720E-04		1.247E-01	2.043E-01	1.750E-02	-0.003
BA-137M	-6.825E-03		4.289E-02	6.821E-02	4.485E-03	-0.100
CS-137	-7.215E-03		4.534E-02	7.210E-02	4.757E-03	-0.100
CE-139	-1.625E-02		3.088E-02	4.914E-02	4.879E-03	-0.331
BA-140	-5.182E-02		2.681E-01	4.297E-01	1.403E-01	-0.121
LA-140	-8.642E-02		9.633E-02	1.373E-01	8.072E-03	-0.629
CE-141	1.613E-02		6.370E-02	1.030E-01	1.259E-02	0.157
CE-143	4.087E-04		6.712E-05	Half-Life too short		
CE-144	-2.814E-02		2.127E-01	3.479E-01	6.442E-02	-0.081
PM-144	1.225E-02		4.244E-02	6.972E-02	4.929E-03	0.176
PR-144	8.299E-01		2.874E+00	4.721E+00	3.337E-01	0.176
PM-146	2.506E-02		4.789E-02	8.157E-02	7.239E-03	0.307

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-2.423E-01		5.617E-01	8.829E-01	1.220E-01	-0.274
PM-149	-5.874E+00		6.429E+01	1.078E+02	1.707E+01	-0.055
EU-152	-1.000E-01		1.223E-01	1.536E-01	1.263E-02	-0.651
GD-153	1.197E-02		7.247E-02	1.068E-01	9.904E-03	0.112
EU-154	3.614E-02		1.549E-01	2.563E-01	2.396E-02	0.141
EU-155	9.837E-02		9.690E-02	1.658E-01	1.796E-02	0.593
TB-160	9.538E-02		1.615E-01	2.750E-01	2.717E-02	0.347
HO-166M	2.937E-02		6.973E-02	1.207E-01	8.793E-03	0.243
TM-171	-3.429E-01		1.672E+01	2.476E+01	1.989E+00	-0.014
LU-176	9.107E-03		2.947E-02	4.408E-02	3.839E-03	0.207
LU-177	1.757E+00	+	1.170E+00	1.739E+00	1.734E-01	1.010
LU-177M	-2.302E-01		1.946E-01	2.965E-01	1.765E-02	-0.776
HF-181	1.134E-02		4.721E-02	7.878E-02	4.958E-03	0.144
W-181	1.456E-01		2.089E-01	3.177E-01	2.569E-02	0.458
TA-182	-1.503E-02		2.575E-01	4.155E-01	2.416E-02	-0.036
RE-183	-1.597E-02		1.132E-01	1.837E-01	1.898E-02	-0.087
RE-184	2.081E-02		2.429E-01	3.910E-01	3.778E-02	0.053
OS-185	-1.374E-02		4.770E-02	7.496E-02	4.938E-03	-0.183
RE-188	3.029E-02		1.769E-01	2.914E-01	3.244E-02	0.104
W-188	-2.122E+00		8.680E+00	1.250E+01	1.133E+00	-0.170
IR-192	1.454E-02		3.538E-02	6.060E-02	5.143E-03	0.240
AU-195	2.794E-01		2.085E-01	3.238E-01	3.087E-02	0.863
TL-200	1.124E-04		1.127E-04	Half-Life too short		
TL-201	-1.283E+00		5.506E+00	8.885E+00	8.820E-01	-0.144
TL-202	4.014E-02		7.133E-02	1.219E-01	7.434E-03	0.329
HG-203	-1.076E-02		4.235E-02	7.052E-02	6.705E-03	-0.153
BI-207	1.026E-02		6.238E-02	1.037E-01	8.216E-03	0.099
TL-207	1.308E-01		8.295E-01	1.222E+00	2.143E-01	0.107
PO-209	-3.666E+00		9.588E+00	1.535E+01	1.561E+00	-0.239
PB-211	-1.645E+00		1.440E+00	1.494E+00	9.314E-01	-1.101
BI-212	1.120E+00	+	5.505E-01	7.730E-01	7.012E-02	1.449
PO-215	1.308E-01		8.295E-01	1.222E+00	2.143E-01	0.107
RN-219	1.413E-01		4.471E-01	7.547E-01	1.029E-01	0.187
RN-220	1.439E+01		3.118E+01	5.250E+01	3.416E+00	0.274
RA-223	1.308E-01		8.295E-01	1.222E+00	2.143E-01	0.107
AC-227	-1.233E-01		4.195E-01	6.599E-01	1.051E-01	-0.187
TH-227	-1.233E-01		4.197E-01	6.599E-01	1.225E-01	-0.187
TH-229	-2.649E-01		5.279E-01	8.344E-01	8.334E-02	-0.318
PA-231	-5.046E-01		1.597E+00	2.645E+00	4.106E-01	-0.191
TH-231	1.308E-01		8.295E-01	1.222E+00	2.143E-01	0.107
U-231	-2.033E-02		8.117E-01	1.186E+00	1.066E-01	-0.017
PA-233	-2.311E-02		6.648E-02	1.093E-01	9.655E-03	-0.211
PA-234	1.591E-01		3.921E-01	5.859E-01	1.128E-01	0.272
PA-234M	-2.144E+00		8.031E+00	1.288E+01	1.469E+00	-0.166
U-235	7.770E-02		2.217E-01	3.597E-01	7.039E-02	0.216
NP-236	8.210E-03		8.533E-02	1.399E-01	1.477E-02	0.059
NP-239	-1.318E-02		1.839E-01	3.030E-01	3.970E-02	-0.044
AM-241	-2.112E-02		6.790E-02	9.957E-02	8.909E-03	-0.212

Sample ID : G232585003 Acquisition date : 9-JUL-2009 08:34:51

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	5.729E-03		8.430E-02	1.402E-01	1.465E-02	0.041
CM-247	-2.593E-02		4.015E-02	6.375E-02	3.751E-03	-0.407
CF-249	-1.551E-02		4.425E-02	7.188E-02	4.299E-03	-0.216
CF-251	-1.490E-01		1.364E-01	2.098E-01	2.089E-02	-0.710

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232585003           *
* Acquisition date  :  9-JUL-2009 08:34:51 Detector SN#     :               *
* Detector ID       : GAM05                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.70      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232585003           Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.2817E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.905E+01	2.660E+00	3.166E-01	1.357E+00
CD-109	3.570E+00	8.530E-01	5.043E-01	4.352E-01
SN-126	3.516E-01	8.400E-02	4.959E-02	4.286E-02
TL-208	5.281E-01	9.337E-02	3.204E-02	4.764E-02
BI-210	6.417E-01	8.541E-01	4.395E-01	4.358E-01
PB-210	6.417E-01	8.541E-01	4.395E-01	4.358E-01
PO-210	6.417E-01	8.537E-01	4.395E-01	4.356E-01
BI-211	3.551E+00	5.496E-01	1.837E-01	2.804E-01
PB-212	1.431E+00	1.852E-01	4.413E-02	9.450E-02
PO-212	1.431E+00	1.852E-01	4.413E-02	9.450E-02
BI-214	9.202E-01	1.913E-01	6.172E-02	9.760E-02
PB-214	1.235E+00	2.013E-01	6.207E-02	1.027E-01
PO-214	1.235E+00	2.013E-01	6.207E-02	1.027E-01
PO-216	1.431E+00	1.852E-01	4.413E-02	9.450E-02
PO-218	1.235E+00	2.013E-01	6.207E-02	1.027E-01
RA-224	4.222E+00	1.434E+00	5.022E-01	7.317E-01
RA-226	9.202E-01	1.913E-01	6.172E-02	9.760E-02
AC-228	1.403E+00	3.398E-01	1.343E-01	1.734E-01
RA-228	1.403E+00	3.398E-01	1.343E-01	1.734E-01
TH-228	1.431E+00	1.852E-01	4.413E-02	9.450E-02
TH-230	9.201E-01	1.913E-01	6.171E-02	9.759E-02
TH-232	1.403E+00	3.398E-01	1.343E-01	1.734E-01
TH-234	1.347E+00	9.816E-01	5.092E-01	5.008E-01
U-234	9.201E-01	1.913E-01	6.171E-02	9.759E-02
NP-237	1.032E+00	3.232E-01	1.452E-01	1.649E-01
U-238	1.347E+00	9.816E-01	5.092E-01	5.008E-01
AM-243	3.538E-01	6.434E-02	3.079E-02	3.283E-02
ANH-511	1.226E-01	8.012E-02	2.536E-02	4.088E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-3.055E-01	3.418E-01	2.720E-01	1.744E-01	NOT IDENT.
NA-22	1.058E-02	5.464E-02	4.605E-02	2.788E-02	NOT IDENT.
NA-24	1.332E+05	2.098E+05	0.000E+00	1.071E+05	SHORT HLIF
AL-26	3.657E-03	3.155E-02	2.695E-02	1.610E-02	NOT IDENT.
TI-44	3.284E-01	4.338E-02	3.159E-02	2.213E-02	FAIL ABUN
SC-46	-1.927E-02	5.028E-02	4.157E-02	2.565E-02	FAIL ABUN
V-48	-8.637E-03	7.625E-02	6.376E-02	3.890E-02	NOT IDENT.
CR-51	2.096E-01	3.863E-01	3.472E-01	1.971E-01	NOT IDENT.
MN-52	2.794E-02	2.182E-01	1.889E-01	1.113E-01	NOT IDENT.
MN-54	-3.526E-02	4.208E-02	3.341E-02	2.147E-02	NOT IDENT.
CO-56	1.755E-02	4.363E-02	3.858E-02	2.226E-02	NOT IDENT.
CO-57	6.516E-03	2.419E-02	2.137E-02	1.234E-02	NOT IDENT.
CO-58	-3.294E-03	4.259E-02	3.631E-02	2.173E-02	NOT IDENT.
FE-59	-9.063E-02	1.097E-01	8.454E-02	5.596E-02	NOT IDENT.
CO-60	3.613E-03	4.962E-02	4.123E-02	2.532E-02	NOT IDENT.
ZN-65	-5.400E-02	1.302E-01	8.804E-02	6.641E-02	NOT IDENT.
GE-68	1.924E-01	1.583E+00	1.343E+00	8.079E-01	NOT IDENT.
AS-73	-1.257E-01	2.246E-01	1.977E-01	1.146E-01	NOT IDENT.
AS-74	1.433E-02	1.009E-01	8.562E-02	5.148E-02	NOT IDENT.
SE-75	-4.297E-02	5.289E-02	3.598E-02	2.699E-02	NOT IDENT.
BR-77	2.068E+00	7.857E+00	6.623E+00	4.009E+00	FAIL ABUN
SR-82	2.262E-01	4.525E-01	3.560E-01	2.309E-01	NOT IDENT.
RB-83	1.900E-02	7.520E-02	6.147E-02	3.837E-02	NOT IDENT.
RB-84	1.008E-02	8.156E-02	7.029E-02	4.161E-02	NOT IDENT.
KR-85	2.338E+01	8.900E+00	7.971E+00	4.541E+00	NOT IDENT.
SR-85	1.183E-01	4.503E-02	4.033E-02	2.298E-02	NOT IDENT.
RB-86	1.733E-01	9.506E-01	8.105E-01	4.850E-01	NOT IDENT.
Y-88	-5.035E-02	3.871E-02	2.249E-02	1.975E-02	NOT IDENT.
ZR-88	-7.029E-03	3.324E-02	2.837E-02	1.696E-02	NOT IDENT.
Y-91	-2.160E+01	2.413E+01	1.850E+01	1.231E+01	NOT IDENT.
NB-94	-1.019E-02	4.035E-02	3.276E-02	2.058E-02	NOT IDENT.
NB-95	4.279E-02	5.810E-02	4.627E-02	2.964E-02	NOT IDENT.
NB-95M	3.593E-01	1.471E-01	1.210E-01	7.505E-02	NOT IDENT.
ZR-95	8.944E-02	8.604E-02	7.931E-02	4.390E-02	NOT IDENT.
NB-97	-2.550E+04	3.397E+04	0.000E+00	1.733E+04	SHORT HLIF
ZR-97	1.368E+06	6.950E+05	0.000E+00	3.546E+05	SHORT HLIF
MO-99	-2.187E+00	9.708E+00	8.242E+00	4.953E+00	NOT IDENT.
TC-99M	-7.190E+14	1.211E+15	0.000E+00	6.177E+14	SHORT HLIF
RH-101	-4.645E-03	3.647E-02	3.007E-02	1.861E-02	NOT IDENT.
RH-102	7.761E-03	3.096E-02	2.689E-02	1.580E-02	NOT IDENT.
RU-103	-5.330E-03	4.197E-02	3.536E-02	2.142E-02	FAIL ABUN
RH-106	2.501E-01	3.463E-01	3.061E-01	1.767E-01	FAIL ABUN
RU-106	2.501E-01	3.454E-01	3.061E-01	1.762E-01	FAIL ABUN
AG-108M	-3.903E-02	3.822E-02	3.065E-02	1.950E-02	NOT IDENT.
AG-110M	-3.406E-02	4.202E-02	3.265E-02	2.144E-02	NOT IDENT.
IN-111	2.961E-01	8.545E-01	6.441E-01	4.360E-01	NOT IDENT.
IN-113M	4.100E-03	4.723E-02	4.105E-02	2.410E-02	NOT IDENT.
SN-113	4.100E-03	4.723E-02	4.105E-02	2.410E-02	NOT IDENT.
IN-114M	4.309E-03	2.018E-01	1.510E-01	1.030E-01	NOT IDENT.
CD-115	7.339E-01	8.083E+00	6.893E+00	4.124E+00	NOT IDENT.
SN-117M	2.509E-02	5.441E-02	4.778E-02	2.776E-02	NOT IDENT.
SB-122	1.730E+00	1.735E+00	1.563E+00	8.853E-01	NOT IDENT.
I-123	9.380E+05	1.216E+06	0.000E+00	6.204E+05	SHORT HLIF
TE-123M	2.269E-02	2.941E-02	2.609E-02	1.500E-02	NOT IDENT.
I-124	7.776E-02	7.130E-01	5.222E-01	3.638E-01	FAIL ABUN
SB-124	5.692E-03	8.784E-02	7.450E-02	4.482E-02	FAIL ABUN
SB-125	6.354E-03	1.048E-01	9.040E-02	5.346E-02	NOT IDENT.
TE-125M	-5.672E+00	8.499E+00	7.265E+00	4.336E+00	NOT IDENT.
I-126	-6.851E-02	1.982E-01	1.603E-01	1.011E-01	NOT IDENT.
SB-126	2.082E-01	1.746E-01	1.462E-01	8.906E-02	FAIL ABUN
SB-127	1.717E+00	1.296E+00	1.181E+00	6.614E-01	NOT IDENT.
XE-127	-2.027E-02	4.718E-02	3.934E-02	2.407E-02	NOT IDENT.
I-131	-6.874E-02	1.176E-01	9.881E-02	6.002E-02	NOT IDENT.
TE-132	-1.246E-02	5.335E-01	4.506E-01	2.722E-01	NOT IDENT.
BA-133	-3.064E-02	5.177E-02	3.709E-02	2.641E-02	NOT IDENT.
I-133	-1.675E+02	2.363E+03	0.000E+00	1.206E+03	SHORT HLIF
CS-134	1.126E-01	8.327E-02	5.260E-02	4.248E-02	FAIL ABUN
CS-135	2.100E-01	1.884E-01	1.478E-01	9.610E-02	NOT IDENT.
I-135	3.996E+13	2.517E+14	0.000E+00	1.284E+14	SHORT HLIF
CS-136	-5.720E-04	1.222E-01	1.028E-01	6.235E-02	FAIL ABUN
BA-137M	-6.825E-03	4.204E-02	3.455E-02	2.145E-02	NOT IDENT.
CS-137	-7.215E-03	4.444E-02	3.653E-02	2.267E-02	NOT IDENT.
CE-139	-1.625E-02	3.026E-02	2.542E-02	1.544E-02	NOT IDENT.
BA-140	-5.182E-02	2.627E-01	2.184E-01	1.340E-01	NOT IDENT.
LA-140	-8.642E-02	9.440E-02	6.862E-02	4.816E-02	FAIL ABUN
CE-141	1.613E-02	6.243E-02	5.340E-02	3.185E-02	NOT IDENT.
CE-143	4.087E+02	1.315E+02	0.000E+00	6.712E+01	SHORT HLIF

CE-144	-2.814E-02	2.084E-01	1.806E-01	1.063E-01	NOT IDENT.
PM-144	1.225E-02	4.159E-02	3.529E-02	2.122E-02	NOT IDENT.
PR-144	8.299E-01	2.816E+00	2.390E+00	1.437E+00	NOT IDENT.
PM-146	2.506E-02	4.694E-02	4.157E-02	2.395E-02	NOT IDENT.
ND-147	-2.423E-01	5.504E-01	4.488E-01	2.808E-01	FAIL ABUN
PM-149	-5.874E+00	6.300E+01	5.530E+01	3.214E+01	NOT IDENT.
EU-152	-1.000E-01	1.198E-01	7.861E-02	6.114E-02	FAIL ABUN
GD-153	1.197E-02	7.102E-02	5.571E-02	3.623E-02	FAIL ABUN
EU-154	3.614E-02	1.518E-01	1.285E-01	7.747E-02	NOT IDENT.
EU-155	9.837E-02	9.496E-02	8.636E-02	4.845E-02	FAIL ABUN
TB-160	9.538E-02	1.583E-01	1.387E-01	8.075E-02	FAIL ABUN
HO-166M	2.937E-02	6.834E-02	6.107E-02	3.487E-02	NOT IDENT.
TM-171	-3.429E-01	1.639E+01	1.298E+01	8.361E+00	NOT IDENT.
LU-176	9.107E-03	2.888E-02	2.260E-02	1.474E-02	FAIL ABUN
LU-177	1.757E+00	1.146E+00	8.965E-01	5.849E-01	FAIL ABUN
LU-177M	-2.302E-01	1.907E-01	1.513E-01	9.728E-02	FAIL ABUN
HF-181	1.134E-02	4.627E-02	4.011E-02	2.361E-02	NOT IDENT.
W-181	1.456E-01	2.047E-01	1.667E-01	1.044E-01	NOT IDENT.
TA-182	-1.503E-02	2.523E-01	2.085E-01	1.287E-01	NOT IDENT.
RE-183	-1.597E-02	1.109E-01	9.505E-02	5.660E-02	FAIL ABUN
RE-184	2.081E-02	2.381E-01	2.010E-01	1.215E-01	NOT IDENT.
OS-185	-1.374E-02	4.675E-02	3.799E-02	2.385E-02	NOT IDENT.
RE-188	3.029E-02	1.734E-01	1.509E-01	8.847E-02	NOT IDENT.
W-188	-2.122E+00	8.506E+00	6.412E+00	4.340E+00	FAIL ABUN
IR-192	1.454E-02	3.468E-02	3.105E-02	1.769E-02	FAIL ABUN
AU-195	2.794E-01	2.043E-01	1.688E-01	1.042E-01	FAIL ABUN
TL-200	1.124E+02	2.209E+02	0.000E+00	1.127E+02	SHORT HLIF
TL-201	-1.283E+00	5.396E+00	4.596E+00	2.753E+00	NOT IDENT.
TL-202	4.014E-02	6.991E-02	6.217E-02	3.567E-02	NOT IDENT.
HG-203	-1.076E-02	4.150E-02	3.620E-02	2.117E-02	NOT IDENT.
BI-207	1.026E-02	6.113E-02	5.217E-02	3.119E-02	FAIL ABUN
TL-207	1.308E-01	8.129E-01	6.260E-01	4.147E-01	FAIL ABUN
PO-209	-3.666E+00	9.396E+00	7.741E+00	4.794E+00	NOT IDENT.
PB-211	-1.645E+00	1.411E+00	7.625E-01	7.198E-01	NOT IDENT.
BI-212	1.120E+00	5.395E-01	3.910E-01	2.753E-01	FAIL ABUN
PO-215	1.308E-01	8.129E-01	6.260E-01	4.147E-01	FAIL ABUN
RN-219	1.413E-01	4.382E-01	3.853E-01	2.236E-01	FAIL ABUN
RN-220	1.439E+01	3.056E+01	2.667E+01	1.559E+01	NOT IDENT.
RA-223	1.308E-01	8.129E-01	6.260E-01	4.147E-01	FAIL ABUN
AC-227	-1.233E-01	4.111E-01	3.392E-01	2.098E-01	FAIL ABUN
TH-227	-1.233E-01	4.113E-01	3.392E-01	2.098E-01	FAIL ABUN
TH-229	-2.649E-01	5.174E-01	4.307E-01	2.640E-01	FAIL ABUN
PA-231	-5.046E-01	1.565E+00	1.358E+00	7.987E-01	FAIL ABUN
TH-231	1.308E-01	8.129E-01	6.260E-01	4.147E-01	FAIL ABUN
U-231	-2.033E-02	7.954E-01	6.184E-01	4.058E-01	FAIL ABUN
PA-233	-2.311E-02	6.515E-02	5.604E-02	3.324E-02	FAIL ABUN
PA-234	1.591E-01	3.843E-01	2.952E-01	1.961E-01	FAIL ABUN
PA-234M	-2.144E+00	7.870E+00	6.482E+00	4.016E+00	NOT IDENT.
U-235	7.770E-02	2.173E-01	1.865E-01	1.109E-01	FAIL ABUN
NP-236	8.210E-03	8.362E-02	7.242E-02	4.266E-02	NOT IDENT.
NP-239	-1.318E-02	1.802E-01	1.576E-01	9.195E-02	FAIL ABUN
AM-241	-2.112E-02	6.654E-02	5.229E-02	3.395E-02	NOT IDENT.
CM-243	5.729E-03	8.261E-02	7.304E-02	4.215E-02	FAIL ABUN
CM-247	-2.593E-02	3.935E-02	3.254E-02	2.007E-02	NOT IDENT.
CF-249	-1.551E-02	4.336E-02	3.672E-02	2.212E-02	NOT IDENT.
CF-251	-1.490E-01	1.337E-01	1.084E-01	6.819E-02	NOT IDENT.

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*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                            CHARLESTON ,SC 29417                       *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                *
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ENERGY	MDA COUNTS
46.50	357.3184
46.50	357.3184
46.50	357.3184
48.70	346.5597
49.72	426.6488
51.35	371.1476
52.39	404.9124
52.97	401.2057
53.15	401.3443
53.44	413.1692
54.07	390.4367
56.28	439.6091
56.28	439.6119
57.37	0.0000
57.53	385.5935
57.53	385.5951
57.60	385.6426
57.98	381.5909
57.98	381.5909
59.32	446.0310
59.32	446.0310
59.40	446.0952
59.54	464.9799
59.72	465.1302
60.01	468.2615
61.10	443.1042
61.14	443.1360
61.30	443.2611
63.00	476.7260
63.29	476.9654
63.29	476.9654
63.58	523.5606
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65.12	524.9438
65.20	525.0146
65.20	525.0146
66.05	514.0867
66.72	524.8973
66.83	524.9959
66.91	533.8415
67.20	528.6136
67.20	528.6136
67.75	568.7647
67.85	527.3547
68.90	533.7716
68.90	533.7716
69.30	516.8668
69.67	528.9368
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74.81	524.9569
74.97	525.0889
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75.70	525.6837
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77.11	526.8278
77.11	526.8278

77.11	526.8278
77.11	526.8278
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79.80	492.5951
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83.78	525.5298
84.21	408.4796
84.40	408.5924
84.90	408.8878
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86.29	409.7042
86.50	409.8270
86.54	409.8503
86.59	409.8801
86.72	409.9565
86.79	409.9963
86.94	410.0842
87.30	410.2933
87.30	410.2933
87.30	410.2933
87.30	410.2933
87.30	410.2933
87.30	410.2933
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87.88	410.6302
88.03	410.7181
88.36	410.9089
88.47	410.9720
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91.11	412.4870
92.29	413.1574
92.38	413.2089
92.38	413.2089
93.35	413.7564
94.00	414.1215
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94.67	307.9662
94.90	347.7125
94.90	347.7125
94.90	347.7125
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99.55	268.5359
99.86	265.3543
100.00	265.4028
100.10	279.2865
103.18	365.1900
103.76	312.4252
105.00	300.3618
105.31	299.5131
108.00	327.6657
109.28	363.1400
111.00	317.2016
111.00	317.2016

111.76	318.4690
112.95	324.7799
115.19	341.2996
116.30	337.8327
117.00	319.4911
117.00	319.4911
117.66	303.0662
121.11	323.9811
121.62	305.4495
121.78	297.6223
122.06	297.7179
122.32	297.8066
122.32	297.8066
122.32	297.8066
122.32	297.8066
123.07	300.0363
127.23	308.3906
129.76	305.2808
131.20	329.6692
133.02	364.2537
133.54	335.5027
135.34	318.1456
136.00	319.3724
136.25	336.4819
136.48	336.5640
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140.51	0.0000
142.18	308.3626
142.65	307.5038
143.76	303.8200
144.24	287.8137
144.24	287.8137
144.24	287.8137
144.24	287.8137
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147.16	313.9970
152.43	276.9711
152.70	282.1375
153.22	301.6458
154.21	299.9015
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154.21	299.9015
154.21	299.9015
155.03	301.1646
156.02	306.5666
158.56	299.1311
159.00	0.0000
159.00	280.8107
160.31	302.7153
161.27	310.1841
162.32	291.9888
162.64	292.0776
163.35	274.7815
163.89	284.1891
165.85	293.9998
167.43	287.2029
171.28	291.3420
171.86	267.6392
172.10	267.6982
176.55	306.2896
176.60	306.3031
181.06	249.3713
184.41	310.5389
185.71	270.9795
186.00	271.0484
190.27	244.6362
192.34	247.8867
193.63	263.3163
197.04	265.1367
198.01	267.4751
198.60	261.2343
200.40	247.8025
201.83	257.6789
202.84	264.2871
205.31	264.8245
208.36	217.5231
208.81	252.7270

209.75	244.3461
209.75	244.3461
210.97	240.2935
215.65	271.3395
216.55	244.5958
218.09	251.3649
222.10	234.8372
223.80	235.1451
226.40	201.9560
227.00	203.1345
227.08	212.9245
227.20	212.9439
228.16	210.9250
228.18	210.9294
228.18	210.9294
231.56	0.0000
235.69	192.4436
236.00	190.7380
236.00	190.7380
238.60	179.7091
238.63	179.7128
238.63	179.7128
238.63	179.7128
239.00	179.7629
240.98	180.0244
241.98	180.1564
241.98	180.1564
241.98	180.1564
244.69	184.9151
245.39	165.6268
247.94	171.2277
248.90	184.0057
249.79	180.0733
252.40	193.6893
252.85	179.3591
252.85	179.3591
254.15	0.0000
256.20	203.0889
256.20	203.0889
260.50	166.9693
260.90	163.6748
262.80	178.3838
264.65	192.8997
268.24	168.3096
268.79	164.7892
269.46	168.0016
269.46	168.0016
269.46	168.0016
269.46	168.0016
271.23	206.3290
273.65	219.2456
276.40	175.0404
277.35	179.2530
277.60	186.4921
277.60	186.4921
278.00	186.5401
278.60	190.2220
279.20	200.2173
279.53	207.4773
280.46	199.4827
281.68	181.5772
283.67	180.9106
284.30	177.3642
285.00	184.6882
285.90	174.8332
286.10	163.9848
286.10	163.9848
287.40	170.4691
288.45	0.0000
290.67	181.7358
290.80	181.7505
291.72	197.0127
293.26	0.0000
293.70	163.8809
295.21	159.4824
295.21	159.4824
295.21	159.4824
295.96	145.8828

296.50	145.9336
297.23	146.0000
298.57	146.1250
299.80	146.2383
299.80	146.2383
300.09	153.8836
300.09	153.8836
300.09	153.8836
300.10	153.8847
300.12	153.8857
301.29	154.0008
302.84	163.3082
303.76	166.4561
303.91	166.4716
304.40	161.9394
304.40	161.9394
304.84	157.4002
306.84	149.9449
308.46	149.3306
311.98	156.5631
316.51	140.3736
318.01	132.1825
319.02	162.7871
319.41	165.5990
320.08	153.6351
323.87	165.4264
323.87	165.4264
323.87	165.4264
323.87	165.4264
325.23	179.4871
328.77	169.0108
333.44	158.5947
334.20	146.9987
334.20	146.9987
334.30	147.0064
338.28	143.1387
338.28	143.1387
338.28	143.1387
338.28	143.1387
338.32	143.1424
338.32	143.1424
338.32	143.1424
340.50	123.3395
340.57	123.3443
344.27	146.4519
345.85	112.7563
350.59	0.0000
351.07	144.5062
351.92	135.7769
351.92	135.7769
351.92	135.7769
355.39	0.0000
356.01	144.9105
364.48	160.4695
366.43	137.8297
367.43	136.0036
367.94	0.0000
369.80	133.3230
374.96	119.3726
383.85	119.9432
387.95	138.4752
388.63	126.9807
391.69	125.2583
391.69	125.2583
392.90	134.9790
398.62	114.1065
400.65	113.2581
401.10	122.9677
401.81	118.1696
402.60	133.7212
404.84	149.3980
410.95	103.1520
411.60	104.1604
413.65	143.2460
414.70	146.2482
415.30	132.6382
415.76	131.6926
417.63	0.0000

418.52	93.7781
423.70	130.2579
427.08	120.6652
427.89	124.6389
432.53	127.8735
433.93	143.7098
439.47	100.6715
439.56	100.6752
439.89	106.6144
443.98	97.9220
444.90	98.9551
445.03	96.9820
445.03	96.9820
445.03	96.9820
445.03	96.9820
453.90	96.3985
463.38	99.8230
468.07	129.0520
473.00	92.2459
475.06	91.3288
475.35	91.3410
476.78	106.4671
477.59	109.5202
477.96	96.4746
482.03	97.6595
484.57	87.6924
487.03	92.8344
490.36	0.0000
492.35	90.0212
497.08	89.1978
507.63	0.0000
510.53	0.0000
510.84	86.6773
511.00	86.6840
511.85	86.7157
511.85	86.7157
513.99	71.4787
513.99	71.4787
520.41	76.7963
520.65	79.6482
527.90	87.3138
528.96	0.0000
529.64	79.1543
529.87	0.0000
531.02	86.4015
537.32	86.6291
543.00	94.0704
546.56	0.0000
549.76	89.1515
552.65	95.4837
555.20	98.7017
563.23	97.9817
563.90	82.3675
568.70	100.2867
569.32	92.9980
569.50	89.8696
569.67	87.7857
573.80	79.5551
574.00	79.0972
574.64	100.7876
578.91	73.4231
579.30	0.0000
583.14	77.7488
585.48	78.8727
591.81	81.1771
592.07	76.9672
593.00	83.3242
595.88	87.6404
600.56	89.9161
602.52	0.0000
602.71	91.7554
602.71	91.7554
603.60	93.5501
604.41	102.4086
604.70	102.4204
609.31	80.6646
609.31	80.6646
609.31	80.6646

609.31	80.6646
610.33	80.6962
612.46	61.9891
614.37	72.6676
618.01	86.5225
621.84	63.9858
621.84	63.9858
631.29	81.3363
633.02	83.5301
633.10	83.5320
634.78	71.7976
635.90	66.4668
636.97	66.4926
645.85	74.2424
646.12	74.2491
656.30	76.6855
657.75	97.2576
657.90	0.0000
661.65	86.5723
661.65	86.5723
664.57	0.0000
666.33	87.8008
666.33	87.8008
675.00	84.8117
677.61	64.2115
685.20	62.2004
692.80	85.3411
695.00	62.4133
696.49	83.2604
696.49	83.2604
697.00	83.2753
697.49	95.3432
698.33	90.9859
698.50	86.6068
699.00	93.2012
702.63	88.9260
706.10	86.8325
706.58	0.0000
706.67	87.9492
709.31	84.3614
711.68	71.5809
713.82	72.5517
717.42	88.2715
720.50	63.1166
721.93	0.0000
722.20	69.4682
722.78	78.9568
722.78	78.9568
722.89	90.0148
722.95	90.0167
723.30	90.0267
724.18	97.9519
727.18	60.0960
733.00	95.0725
735.90	58.2883
739.58	75.9591
742.81	76.0409
744.21	58.4485
747.13	60.3622
751.79	79.0563
752.31	69.7662
753.82	71.6627
755.35	67.9741
756.15	69.8547
756.87	68.0068
763.93	78.4338
765.79	81.6850
766.41	76.8951
766.84	76.9051
768.36	81.7526
768.36	81.7526
768.36	81.7526
768.36	81.7526
776.49	56.2512
778.00	63.7818
778.57	81.0545
778.89	84.4409
783.80	67.6582

785.46	62.5651
792.07	66.2189
795.84	69.5316
796.30	69.5421
801.93	68.0449
805.60	59.6072
810.29	64.4307
810.76	60.6497
815.85	53.1517
817.79	58.8818
818.51	63.6440
819.60	57.9644
826.30	64.7475
828.27	0.0000
831.60	58.1766
831.96	60.0905
834.83	78.2814
836.80	0.0000
846.75	55.5680
848.13	54.6320
856.28	0.0000
856.80	59.3036
860.37	59.6412
867.32	74.3602
867.82	72.7185
871.10	49.4775
873.19	49.2444
874.81	59.8947
875.33	0.0000
876.40	70.5539
879.36	47.3990
880.27	51.2812
880.51	54.1885
881.50	61.9466
883.24	68.7567
884.67	62.0039
889.25	73.7271
896.60	74.8554
898.02	87.5281
899.00	68.0973
903.28	59.6087
911.07	66.9364
911.07	66.9364
911.07	66.9364
919.63	46.9688
920.93	50.9008
925.00	54.8789
925.24	50.9622
926.50	50.9801
934.06	44.2108
934.06	44.2108
934.06	44.2108
934.06	44.2108
935.52	56.0224
937.48	63.9209
944.10	54.0446
946.00	47.3135
949.00	51.2986
962.29	59.4061
964.01	67.9241
966.15	55.5033
968.20	55.5340
969.11	42.5110
969.11	42.5110
969.11	42.5110
977.42	41.2116
980.50	62.6834
983.50	53.7715
989.30	63.8281
996.32	59.9500
1001.03	66.0269
1001.68	57.0325
1004.76	52.0719
1021.30	0.0000
1024.50	0.0000
1034.80	57.5265
1037.82	45.4504
1038.57	54.5515

1038.76	0.0000
1045.16	63.7511
1046.59	63.7742
1048.07	58.7340
1050.47	58.7694
1050.47	58.7694
1063.62	52.8654
1076.63	61.1963
1077.35	63.2488
1085.78	52.1351
1099.22	69.7459
1112.02	63.4972
1112.84	54.6890
1115.52	70.6111
1120.29	60.0882
1120.29	60.0882
1120.29	60.0882
1120.29	60.0882
1120.51	65.3952
1121.28	67.1733
1124.00	0.0000
1129.67	59.9305
1131.51	0.0000
1147.95	0.0000
1167.94	64.6464
1173.22	58.4609
1175.09	67.8882
1177.93	72.1136
1189.05	64.9643
1204.90	88.3374
1205.75	0.0000
1213.00	89.5516
1221.42	80.2243
1230.97	92.0339
1235.34	81.5336
1236.41	0.0000
1238.11	68.8694
1238.11	68.8694
1238.11	68.8694
1238.11	68.8694
1238.25	68.8721
1246.25	63.6865
1260.41	0.0000
1271.85	43.7660
1274.45	51.2676
1274.54	52.3377
1291.56	46.0987
1298.22	0.0000
1312.09	43.0713
1325.50	44.2749
1325.50	44.2749
1332.49	41.0955
1333.61	38.9429
1360.21	34.4978
1362.66	0.0000
1365.15	24.2671
1368.21	22.2270
1368.53	0.0000
1376.25	18.0079
1377.67	26.2012
1377.67	26.2012
1377.67	26.2012
1377.67	26.2012
1384.27	22.9568
1394.10	17.8390
1395.20	15.0257
1407.95	22.5971
1434.06	23.6625
1436.60	22.7277
1457.56	0.0000
1460.81	24.7395
1489.15	17.2222
1509.49	14.4083
1596.49	30.2659
1620.62	7.4883
1678.03	0.0000
1691.02	15.8873
1691.02	15.8873

1706.46	0.0000
1750.46	0.0000
1764.49	9.0502
1764.49	9.0502
1764.49	9.0502
1764.49	9.0502
1770.23	5.2844
1771.40	47.3180
1791.20	0.0000
1808.65	10.1304
1836.01	19.3353

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232585003

Total Uranium Activity	4.0437E+00	ug/g
Total Uranium Counting Unc.	2.9220E+00	ug/g
Total Uranium Tpu	1.4908E-06	ug/g
Total Uranium Mda	1.5174E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID   : G232585003      *
*   ANALYST       : MXR1                      DETECTOR    : GAM05           *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:34:51.71    SAMPLE ALQT:  128.170 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.995E+00
GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.481E+00
GROSS GAMMA MDA    (pCi/GRAM  )   : 4.879E+00
GROSS GAMMA DLC    (pCi/GRAM  )   : 2.376E+00
```

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:36:26.36

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:35:24.
Sample ID         : G232591001           Sample quantity  : 1.25480E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.07  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	74.89*	347	420	1.30	149.93	144	18	4.82E-02	12.2	3.11E+00
2	3	77.27	566	435	1.30	154.67	144	18	7.86E-02	7.8	
3	3	87.46	194	426	1.11	175.03	171	20	2.70E-02	18.5	1.13E+00
4	3	90.06	133	399	1.10	180.24	171	20	1.85E-02	26.0	
5	3	93.08*	212	414	1.26	186.27	171	20	2.95E-02	19.2	
6	0	185.91*	185	367	1.33	371.77	367	10	2.57E-02	21.5	
7	0	209.26	82	327	1.09	418.42	414	9	1.14E-02	41.3	
8	3	238.84*	1314	207	1.12	477.55	470	21	1.83E-01	3.4	2.27E+00
9	3	241.77	296	280	1.62	483.39	470	21	4.11E-02	13.0	
10	2	295.45*	399	125	1.23	590.68	585	20	5.54E-02	7.0	7.65E-01
11	2	300.22	69	173	1.54	600.21	585	20	9.63E-03	35.3	
12	0	328.31	46	177	1.41	656.35	653	9	6.43E-03	53.9	
13	0	338.40	273	142	1.11	676.52	671	10	3.80E-02	10.2	
14	0	352.01*	699	193	1.16	703.72	697	14	9.71E-02	5.7	
15	0	375.01	12	201	2.89	749.70	738	13	1.70E-03	241.7	
16	0	409.92	30	132	1.12	819.47	815	9	4.16E-03	71.6	
17	0	463.40	95	92	1.09	926.36	922	10	1.33E-02	21.4	
18	0	511.33*	120	177	1.95	1022.18	1014	19	1.67E-02	30.2	
19	0	583.54*	348	114	1.29	1166.52	1160	14	4.83E-02	8.6	
20	0	609.55	502	108	1.56	1218.52	1213	13	6.97E-02	6.1	
21	0	727.88	104	82	1.32	1455.10	1447	15	1.44E-02	21.4	
22	0	795.21	64	42	1.48	1589.70	1584	10	8.86E-03	22.8	
23	0	861.55	77	84	2.92	1722.35	1712	21	1.07E-02	31.9	
24	0	911.38*	247	116	1.53	1821.99	1816	15	3.43E-02	11.5	
25	2	964.75	66	44	2.12	1928.71	1924	20	9.22E-03	20.5	6.13E-01
26	2	969.13	186	30	1.63	1937.47	1924	20	2.58E-02	9.5	
27	0	1120.64*	103	89	2.05	2240.49	2232	17	1.43E-02	23.5	
28	0	1460.77*	1296	19	1.97	2920.85	2910	19	1.80E-01	2.9	
29	0	1764.79*	96	4	2.15	3529.15	3522	17	1.34E-02	12.1	
30	0	1848.24	9	9	0.69	3696.16	3689	12	1.24E-03	75.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:36:29

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:35:24
Sample ID : G232591001 Sample quantity : 125.48 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA10 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.07 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.282E+01	3.415E+00	6.220E-01	5.357E-02	52.766
CD-109	+	88.03	*	3.011E+00	1.164E+00	1.367E+00	1.550E-01	2.202
SN-126		64.28		6.826E-01	7.126E-01	1.196E+00	2.045E-01	0.571
	+	86.94		1.233E+00	6.899E-01	5.697E-01	2.392E-01	2.164
	+	87.57	*	2.966E-01	1.147E-01	1.356E-01	1.535E-02	2.186
TL-208		277.35		4.290E-01	4.025E-01	6.906E-01	7.532E-02	0.621
	+	510.84		5.701E-01	3.497E-01	1.963E-01	2.063E-02	2.904
	+	583.14	*	4.707E-01	8.732E-02	5.182E-02	3.482E-03	9.084
	+	860.37		1.006E+00	6.484E-01	4.400E-01	4.297E-02	2.285
BI-211		72.87		3.542E+00	4.022E+00	6.174E+00	6.790E-01	0.574
	+	351.07	*	4.159E+00	5.646E-01	3.075E-01	2.242E-02	13.525
PB-212	+	74.81		2.485E+00	7.033E-01	6.410E-01	9.228E-02	3.876
	+	77.11		2.237E+00	4.279E-01	3.552E-01	3.884E-02	6.298
	+	87.30		1.372E+00	5.478E-01	6.300E-01	9.507E-02	2.177
	+	238.63	*	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
	+	300.09		1.395E+00	9.926E-01	1.186E+00	1.042E-01	1.176
PO-212	+	74.81		2.485E+00	7.033E-01	6.410E-01	9.228E-02	3.876
	+	77.11		2.237E+00	4.279E-01	3.552E-01	3.884E-02	6.298
	+	87.30		1.372E+00	5.478E-01	6.300E-01	9.507E-02	2.177
		115.19		-8.830E-01	3.544E+00	5.693E+00	4.073E-01	-0.155
	+	238.63	*	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
	+	300.09		1.395E+00	9.926E-01	1.186E+00	1.042E-01	1.176
BI-214	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.111E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
PB-214	+	74.81		4.281E+00	1.187E+00	1.105E+00	1.460E-01	3.876
	+	77.11		3.835E+00	7.896E-01	6.089E-01	8.115E-02	6.298
	+	87.30		2.350E+00	9.264E-01	1.079E+00	1.476E-01	2.177
	+	241.98		2.331E+00	6.374E-01	5.597E-01	4.657E-02	4.165
	+	295.21		1.409E+00	2.342E-01	2.078E-01	1.876E-02	6.782

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-214	+	74.81		4.281E+00	1.187E+00	1.105E+00	1.460E-01	3.876
	+	77.11		3.835E+00	7.896E-01	6.089E-01	8.115E-02	6.298
	+	87.30		2.350E+00	9.264E-01	1.079E+00	1.476E-01	2.177
	+	241.98		2.331E+00	6.374E-01	5.597E-01	4.657E-02	4.165
	+	295.21		1.409E+00	2.342E-01	2.078E-01	1.876E-02	6.782
	+	351.92	*	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-216	+	74.81		2.485E+00	7.033E-01	6.410E-01	9.228E-02	3.876
	+	77.11		2.237E+00	4.279E-01	3.552E-01	3.884E-02	6.298
	+	87.30		1.372E+00	5.478E-01	6.300E-01	9.507E-02	2.177
	+	238.63	*	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
	+	300.09		1.395E+00	9.926E-01	1.186E+00	1.042E-01	1.176
PO-218	+	74.81		4.281E+00	1.187E+00	1.105E+00	1.460E-01	3.876
	+	77.11		3.835E+00	7.896E-01	6.089E-01	8.115E-02	6.298
	+	87.30		2.350E+00	9.264E-01	1.079E+00	1.476E-01	2.177
	+	241.98		2.331E+00	6.374E-01	5.597E-01	4.657E-02	4.165
	+	295.21		1.409E+00	2.342E-01	2.078E-01	1.876E-02	6.782
	+	351.92	*	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
RA-224	+	240.98	*	4.420E+00	1.183E+00	1.058E+00	6.493E-02	4.178
RA-226	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.111E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
AC-228	+	338.32		1.794E+00	8.194E-01	3.668E-01	1.500E-01	4.891
	+	911.07	*	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
	+	969.11		2.047E+00	6.206E-01	3.559E-01	8.414E-02	5.753
RA-228	+	338.32		1.794E+00	8.194E-01	3.668E-01	1.500E-01	4.891
	+	911.07	*	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
	+	969.11		2.047E+00	6.206E-01	3.559E-01	8.414E-02	5.753
TH-228		84.40		3.561E-01	3.163E+00	4.691E+00	6.993E-01	0.076
	+	238.60	*	1.725E+00	1.747E-01	9.296E-02	7.051E-03	18.556
	+	300.10		1.395E+00	1.284E+00	1.186E+00	6.998E-01	1.176
TH-230	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.110E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
TH-232	+	338.32		1.794E+00	3.838E-01	3.668E-01	2.459E-02	4.891
	+	911.07	*	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
	+	969.11		2.047E+00	6.206E-01	3.559E-01	8.414E-02	5.753
U-234	+	609.31	*	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
		768.36		1.463E+00	7.925E-01	1.455E+00	1.341E-01	1.005
		934.06		1.188E+00	1.195E+00	2.110E+00	2.449E-01	0.563
	+	1120.29		1.441E+00	6.929E-01	4.918E-01	4.807E-02	2.929

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.736E+00	1.142E+00	2.067E+00	1.894E-01	0.840
		1377.67		1.434E+00	1.149E+00	2.122E+00	2.266E-01	0.676
	+	1764.49		1.865E+00	4.679E-01	2.458E-01	1.641E-02	7.589
NP-237	+	86.50	*	8.708E-01	3.817E-01	4.517E-01	1.062E-01	1.928
		95.87		-5.570E-02	1.057E+00	1.543E+00	3.855E-01	-0.036
AM-243	+	74.67	*	4.028E-01	1.076E-01	1.044E-01	1.143E-02	3.858
	+	86.72		3.266E+01	1.263E+01	1.515E+01	1.706E+00	2.156
		117.66		-3.122E-01	3.860E+00	6.243E+00	4.332E-01	-0.050
		142.18		-2.781E+00	1.847E+01	2.951E+01	1.762E+00	-0.094
ANH-511	+	511.00	*	1.231E-01	7.483E-02	4.241E-02	2.717E-03	2.904

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-9.064E-02	3.155E-01	4.982E-01	3.705E-02	-0.182
NA-22		1274.54	*	-1.508E-02	4.842E-02	7.809E-02	6.049E-03	-0.193
NA-24		1368.53	*	-8.263E-02	4.842E-02	Half-Life too short		
AL-26		1129.67		6.643E-01	1.964E+00	3.251E+00	2.280E-01	0.204
		1808.65	*	9.558E-03	3.255E-02	5.565E-02	3.529E-03	0.172
TI-44		67.85		-1.904E-02	5.878E-02	9.588E-02	1.082E-02	-0.199
	+	78.38	*	4.128E-01	7.896E-02	8.983E-02	9.829E-03	4.595
SC-46		889.25	*	-5.161E-02	4.183E-02	5.954E-02	5.892E-03	-0.867
	+	1120.51		2.441E-01	1.163E-01	1.427E-01	1.025E-02	1.711
V-48		944.10		-4.294E-02	8.072E-01	1.306E+00	1.265E-01	-0.033
		983.50	*	-4.840E-02	6.817E-02	1.018E-01	9.410E-03	-0.476
		1312.09		-8.588E-03	8.022E-02	1.316E-01	1.098E-02	-0.065
CR-51		320.08	*	1.789E-01	3.426E-01	5.842E-01	4.220E-02	0.306
MN-52		744.21		-3.669E-02	1.960E-01	3.193E-01	2.083E-02	-0.115
		848.13		5.144E-01	6.007E+00	9.932E+00	8.803E-01	0.052
		935.52		2.966E-01	2.264E-01	4.098E-01	4.006E-02	0.724
		1246.25		1.854E-01	6.899E+00	1.152E+01	8.394E-01	0.016
		1333.61		5.701E-01	4.446E+00	7.482E+00	6.501E-01	0.076
		1434.06	*	-1.546E-02	1.985E-01	3.233E-01	2.732E-02	-0.048
MN-54		834.83	*	-2.184E-03	4.137E-02	6.767E-02	5.781E-03	-0.032
CO-56		846.75	*	-7.039E-04	3.946E-02	6.464E-02	5.708E-03	-0.011
		977.42		1.075E+00	3.033E+00	5.095E+00	4.749E-01	0.211
		1037.82		-2.759E-01	3.436E-01	5.077E-01	4.565E-02	-0.543
		1175.09		2.413E-01	2.374E+00	4.010E+00	2.484E-01	0.060
		1238.25		1.806E-01	1.146E-01	2.084E-01	1.554E-02	0.866
		1360.21		-1.920E-01	9.739E-01	1.569E+00	1.355E-01	-0.122
		1771.40		4.531E-02	1.869E-01	2.847E-01	1.886E-02	0.159
CO-57		122.06	*	-2.309E-02	2.592E-02	4.025E-02	2.655E-03	-0.574
		136.48		-5.861E-02	2.143E-01	3.412E-01	2.386E-02	-0.172
CO-58		810.76	*	-3.084E-02	4.298E-02	6.635E-02	5.308E-03	-0.465
FE-59		142.65		-2.519E-01	2.829E+00	4.533E+00	2.701E-01	-0.056
		192.34		-6.185E-01	9.448E-01	1.442E+00	1.695E-01	-0.429
		1099.22	*	6.530E-03	9.298E-02	1.506E-01	1.257E-02	0.043
		1291.56		1.513E-02	1.224E-01	2.061E-01	1.907E-02	0.073

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60		1173.22		-1.094E-02	4.987E-02	8.196E-02	5.054E-03	-0.134
		1332.49	*	-1.882E-02	4.100E-02	6.411E-02	5.571E-03	-0.294
ZN-65		1115.52	*	-2.451E-02	1.090E-01	1.458E-01	1.062E-02	-0.168
GE-68		1077.35	*	-7.842E-01	1.459E+00	2.225E+00	1.762E-01	-0.352
AS-73		53.44	*	1.012E-02	1.471E+00	2.463E+00	3.259E-01	0.004
AS-74		595.88	*	6.989E-02	8.065E-02	1.441E-01	8.229E-03	0.485
		634.78		1.939E-01	3.209E-01	5.622E-01	2.967E-02	0.345
SE-75		66.05		-1.182E+01	6.624E+00	9.940E+00	1.280E+00	-1.189
		96.73		-7.547E-02	8.681E-01	1.264E+00	1.789E-01	-0.060
		121.11		-1.712E-02	1.381E-01	2.226E-01	2.180E-02	-0.077
		136.00		-1.641E-02	4.032E-02	6.382E-02	3.963E-03	-0.257
		198.60		-1.331E+00	1.898E+00	2.864E+00	2.029E-01	-0.465
		264.65	*	3.492E-03	4.207E-02	7.073E-02	4.512E-03	0.049
		279.53		6.998E-02	1.153E-01	1.951E-01	1.337E-02	0.359
		303.91		-1.130E+00	2.247E+00	3.148E+00	3.156E-01	-0.359
		400.65		2.400E-01	2.382E-01	4.136E-01	4.039E-02	0.580
BR-77	+	87.88		4.515E+02	1.746E+02	2.487E+02	2.820E+01	1.816
		200.40		-3.199E+01	1.160E+02	1.806E+02	1.042E+01	-0.177
	+	239.00		1.919E+02	1.742E+01	2.714E+01	1.661E+00	7.070
		249.79		-2.092E+01	4.428E+01	7.262E+01	4.510E+00	-0.288
		281.68		-3.046E+01	6.348E+01	1.033E+02	6.653E+00	-0.295
		297.23		2.098E+02	4.577E+01	8.584E+01	5.604E+00	2.444
		303.76		-7.007E+01	1.334E+02	1.866E+02	1.224E+01	-0.376
		439.47		6.282E+01	1.022E+02	1.727E+02	1.161E+01	0.364
		484.57		-6.321E+00	1.605E+02	2.582E+02	1.692E+01	-0.024
		520.65	*	3.239E+00	7.361E+00	1.184E+01	7.513E-01	0.274
		574.64		-2.901E+01	1.375E+02	2.282E+02	1.351E+01	-0.127
		578.91		-2.654E+01	6.221E+01	8.709E+01	5.120E+00	-0.305
		585.48		9.355E+02	1.751E+02	3.326E+02	1.935E+01	2.812
		755.35		9.730E+01	1.084E+02	1.929E+02	1.303E+01	0.504
		817.79		-7.808E+00	1.027E+02	1.678E+02	1.366E+01	-0.047
SR-82		698.33		-1.991E+01	3.226E+01	5.103E+01	2.863E+00	-0.390
		776.49	*	1.128E-01	3.624E-01	6.143E-01	4.429E-02	0.184
		1395.20		6.731E+00	1.100E+01	1.958E+01	1.676E+00	0.344
RB-83		520.41	*	2.455E-02	6.909E-02	1.104E-01	7.006E-03	0.222
		529.64		-2.663E-03	1.088E-01	1.740E-01	1.094E-02	-0.015
		552.65		-1.149E-01	2.059E-01	3.138E-01	1.917E-02	-0.366
RB-84		881.50	*	5.841E-03	7.004E-02	1.155E-01	1.120E-02	0.051
KR-85		513.99	*	1.753E+01	7.447E+00	1.367E+01	8.732E-01	1.282
SR-85		513.99	*	8.869E-02	3.768E-02	6.917E-02	4.418E-03	1.282
RB-86		1076.63	*	-8.853E-01	9.051E-01	1.314E+00	1.042E-01	-0.674
Y-88		898.02		-5.945E-02	4.424E-02	6.192E-02	6.290E-03	-0.960
		1836.01	*	3.231E-02	2.763E-02	5.675E-02	3.482E-03	0.569
ZR-88		392.90	*	-1.567E-03	2.967E-02	4.836E-02	3.286E-03	-0.032
Y-91		1204.90	*	-7.518E+00	2.100E+01	3.407E+01	2.263E+00	-0.221
NB-94		702.63	*	2.083E-02	3.521E-02	6.100E-02	3.473E-03	0.342
		871.10		1.016E-02	3.585E-02	5.709E-02	5.386E-03	0.178
NB-95		765.79	*	1.715E-02	4.398E-02	7.478E-02	5.218E-03	0.229
NB-95M		235.69	*	5.289E-02	1.337E-01	2.041E-01	1.583E-02	0.259

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95		724.18		-1.587E-02	1.016E-01	1.438E-01	1.025E-02	-0.110
		756.15	*	8.356E-02	6.697E-02	1.219E-01	9.573E-03	0.686
NB-97		657.90	*	-2.431E-02	6.697E-02	Half-Life too short		
		1024.50		-2.921E+00	6.697E-02	Half-Life too short		
ZR-97		254.15		1.833E-01	6.697E-02	Half-Life too short		
		355.39		7.792E-02	6.697E-02	Half-Life too short		
		507.63	*	3.355E-01	6.697E-02	Half-Life too short		
		602.52		-1.383E+00	6.697E-02	Half-Life too short		
		1021.30		-6.472E-01	6.697E-02	Half-Life too short		
		1147.95		-3.776E-01	6.697E-02	Half-Life too short		
		1362.66		-1.486E+00	6.697E-02	Half-Life too short		
		1750.46		2.399E-01	6.697E-02	Half-Life too short		
MO-99		140.51		-3.754E+00	1.987E+01	3.168E+01	8.551E+00	-0.118
		181.06		1.521E+00	1.409E+01	2.003E+01	3.419E+00	0.076
		366.43		2.036E+01	6.826E+01	1.009E+02	6.835E+00	0.202
		739.58	*	5.319E+00	7.876E+00	1.376E+01	1.935E+00	0.386
		778.00		-2.984E+01	2.584E+01	3.821E+01	2.768E+00	-0.781
TC-99M		140.51	*	-2.310E+08	2.584E+01	Half-Life too short		
RH-101		127.23		-2.271E-02	3.307E-02	5.185E-02	3.314E-03	-0.438
		198.01	*	-6.641E-03	3.420E-02	5.297E-02	3.043E-03	-0.125
		325.23		5.673E-02	2.434E-01	3.603E-01	2.399E-02	0.157
RH-102		418.52		-1.175E-01	2.878E-01	4.556E-01	3.084E-02	-0.258
		475.06	*	1.030E-02	2.952E-02	4.890E-02	3.225E-03	0.211
		631.29		1.872E-02	5.369E-02	9.229E-02	4.910E-03	0.203
		697.49		-5.078E-02	7.459E-02	1.173E-01	6.560E-03	-0.433
		766.84		2.216E-01	1.154E-01	2.143E-01	1.500E-02	1.034
		1046.59		4.933E-03	1.349E-01	2.185E-01	1.835E-02	0.023
		1112.84		2.645E-02	2.703E-01	3.793E-01	2.777E-02	0.070
RU-103		497.08	*	-5.403E-03	3.855E-02	6.054E-02	7.854E-03	-0.089
	+	610.33		1.354E+01	2.659E+00	3.013E+00	4.618E-01	4.494
RH-106	+	511.85		6.136E-01	3.729E-01	4.164E-01	2.665E-02	1.474
		621.84	*	-2.228E-01	3.048E-01	4.800E-01	5.549E-02	-0.464
		1050.47		8.834E-01	2.654E+00	4.397E+00	3.667E-01	0.201
RU-106	+	511.85		6.136E-01	3.729E-01	4.164E-01	2.665E-02	1.474
		621.84	*	-2.228E-01	3.040E-01	4.800E-01	2.607E-02	-0.464
		1050.47		8.834E-01	2.654E+00	4.397E+00	3.667E-01	0.201
AG-108M		433.93	*	-1.683E-02	3.401E-02	5.336E-02	3.826E-03	-0.315
		614.37		-7.708E-03	4.378E-02	6.283E-02	3.789E-03	-0.123
		722.95		-3.553E-02	4.651E-02	6.072E-02	3.984E-03	-0.585
AG-110M		657.75	*	-2.666E-02	3.625E-02	5.722E-02	3.100E-03	-0.466
		677.61		-6.304E-02	2.910E-01	4.765E-01	2.675E-02	-0.132
		706.67		-2.419E-02	2.232E-01	3.682E-01	2.254E-02	-0.066
		763.93		-2.848E-01	1.768E-01	2.523E-01	1.827E-02	-1.129
		884.67		1.969E-02	5.004E-02	8.486E-02	8.506E-03	0.232
		937.48		8.203E-03	1.147E-01	1.880E-01	1.887E-02	0.044
		1384.27		8.943E-02	1.748E-01	3.065E-01	2.706E-02	0.292
IN-111		171.28		5.066E-02	7.431E-01	1.188E+00	6.534E-02	0.043
		245.39	*	4.085E-01	8.444E-01	1.290E+00	7.967E-02	0.317
IN-113M		391.69	*	1.800E-02	4.244E-02	7.135E-02	5.088E-03	0.252

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---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113		391.69	*	1.800E-02	4.244E-02	7.135E-02	5.088E-03	0.252
IN-114M		190.27	*	-1.782E-02	1.992E-01	2.781E-01	1.577E-02	-0.064
CD-115		260.90		-3.726E+00	8.422E+01	1.408E+02	8.864E+00	-0.026
		492.35		-1.164E+01	2.295E+01	3.537E+01	2.303E+00	-0.329
		527.90	*	-3.477E+00	7.157E+00	1.099E+01	6.922E-01	-0.316
SN-117M		156.02		-1.596E+00	2.240E+00	3.470E+00	1.965E-01	-0.460
		158.56	*	-3.871E-02	5.220E-02	8.051E-02	4.515E-03	-0.481
SB-122		563.90	*	2.901E-01	1.583E+00	2.563E+00	1.542E-01	0.113
		692.80		1.431E+01	3.280E+01	5.631E+01	3.100E+00	0.254
I-123		159.00	*	-4.774E-01	3.280E+01	Half-Life too short		
		528.96		1.694E+01	3.280E+01	Half-Life too short		
TE-123M		159.00	*	-1.154E-02	2.876E-02	4.513E-02	2.563E-03	-0.256
I-124		602.71	*	-3.886E-01	5.675E-01	8.499E-01	4.795E-02	-0.457
		722.78		-3.157E+00	3.932E+00	5.104E+00	3.107E-01	-0.619
		1325.50		4.357E+01	2.960E+01	5.652E+01	4.845E+00	0.771
		1376.25		4.684E+01	2.900E+01	5.524E+01	4.753E+00	0.848
		1509.49		9.572E+00	1.386E+01	2.480E+01	2.027E+00	0.386
		1691.02		1.597E-01	2.785E+00	4.584E+00	3.297E-01	0.035
SB-124		602.71		-2.743E-02	4.005E-02	5.999E-02	3.386E-03	-0.457
		645.85		-1.617E-01	4.810E-01	7.832E-01	4.673E-02	-0.206
		709.31		1.576E+00	2.781E+00	4.817E+00	2.805E-01	0.327
		713.82		-1.264E+00	1.669E+00	2.598E+00	2.669E-01	-0.487
		722.78		-3.230E-01	4.024E-01	5.222E-01	3.316E-02	-0.619
	+	968.20		2.077E+01	4.399E+00	7.880E+00	7.429E-01	2.636
		1045.16		-1.802E+00	2.870E+00	4.347E+00	3.660E-01	-0.414
		1325.50		4.762E+00	3.234E+00	6.176E+00	5.295E-01	0.771
		1368.21		-7.803E-01	1.746E+00	2.705E+00	3.646E-01	-0.288
		1436.60		-3.598E+00	3.737E+00	5.200E+00	4.391E-01	-0.692
		1691.02	*	3.855E-03	6.722E-02	1.106E-01	8.406E-03	0.035
SB-125		427.89	*	4.778E-02	9.394E-02	1.579E-01	1.100E-02	0.303
	+	463.38		8.807E-01	3.831E-01	5.628E-01	4.221E-02	1.565
		600.56		-4.321E-02	1.735E-01	2.865E-01	1.888E-02	-0.151
		635.90		-1.567E-02	2.570E-01	4.284E-01	2.716E-02	-0.037
TE-125M		109.28	*	1.314E+00	9.268E+00	1.518E+01	1.457E+00	0.087
I-126		388.63		3.800E-03	1.884E-01	3.087E-01	2.098E-02	0.012
		666.33	*	-1.524E-01	1.742E-01	2.715E-01	1.362E-02	-0.561
		753.82		1.864E-01	1.266E+00	2.123E+00	1.427E-01	0.088
SB-126		223.80		-8.506E-01	3.686E+00	6.163E+00	3.690E-01	-0.138
		278.60		2.881E+00	2.486E+00	4.297E+00	2.758E-01	0.670
	+	296.50		1.307E+01	2.013E+00	3.498E+00	2.282E-01	3.738
		414.70		1.951E-02	7.487E-02	1.096E-01	7.425E-03	0.178
		415.30		9.457E-01	5.919E+00	9.045E+00	6.128E-01	0.105
		555.20		3.742E+00	3.881E+00	6.658E+00	4.054E-01	0.562
		573.80		-5.550E-01	9.415E-01	1.520E+00	9.006E-02	-0.365
		593.00		-7.672E-01	7.997E-01	1.241E+00	7.126E-02	-0.618
		656.30		-1.208E+00	3.066E+00	4.966E+00	2.486E-01	-0.243
		666.33		-6.349E-02	7.258E-02	1.131E-01	5.674E-03	-0.561
		675.00		-4.838E-01	1.729E+00	2.815E+00	1.457E-01	-0.172
		695.00		-9.198E-03	7.210E-02	1.188E-01	6.591E-03	-0.077

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---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		697.00		-1.949E-01	2.460E-01	3.830E-01	2.139E-02	-0.509
		720.50	*	1.378E-02	1.513E-01	2.204E-01	1.331E-02	0.063
		856.80		-9.038E-03	4.806E-01	6.800E-01	6.173E-02	-0.013
		989.30		-5.313E-01	1.269E+00	1.968E+00	1.806E-01	-0.270
		1034.80		1.527E+00	8.821E+00	1.450E+01	1.243E+00	0.105
		1213.00		6.605E-01	5.040E+00	8.502E+00	5.752E-01	0.078
SB-127		61.10		-8.116E+01	6.972E+01	1.097E+02	1.509E+01	-0.740
		252.40		-8.558E-01	3.370E+00	5.555E+00	2.306E+00	-0.154
		290.80		-1.507E+01	1.952E+01	2.693E+01	2.474E+00	-0.559
		411.60		1.246E+01	1.094E+01	1.700E+01	2.469E+00	0.733
		444.90		3.447E+00	7.003E+00	1.179E+01	1.290E+00	0.292
		473.00		6.678E-02	1.374E+00	2.228E+00	2.509E-01	0.030
		543.00		-3.624E+00	1.316E+01	2.055E+01	2.625E+00	-0.176
		603.60		6.603E+00	9.561E+00	1.496E+01	1.539E+00	0.441
		685.20	*	-5.456E-01	1.086E+00	1.736E+00	1.514E-01	-0.314
		698.50		-7.414E+00	1.197E+01	1.886E+01	2.664E+00	-0.393
		722.20		-9.172E+00	2.564E+01	3.530E+01	3.141E+00	-0.260
		783.80		6.548E+00	3.099E+00	5.775E+00	6.487E-01	1.134
XE-127		57.60		-1.306E+01	9.447E+00	1.462E+01	1.859E+00	-0.893
		145.22		2.997E-01	7.284E-01	1.173E+00	6.919E-02	0.255
		172.10		1.126E-01	1.138E-01	1.898E-01	1.045E-02	0.594
		202.84	*	-6.192E-03	4.408E-02	7.432E-02	4.304E-03	-0.083
	+	374.96		7.404E-02	3.579E-01	2.976E-01	2.019E-02	0.249
I-131		80.18		-1.431E+00	4.974E+00	7.234E+00	7.966E-01	-0.198
		284.30		-7.286E-01	1.294E+00	2.091E+00	1.471E-01	-0.348
		364.48	*	-2.209E-02	1.011E-01	1.637E-01	1.202E-02	-0.135
		636.97		-1.663E+00	1.357E+00	2.042E+00	1.224E-01	-0.815
		722.89		-5.460E+00	7.020E+00	9.147E+00	5.631E-01	-0.597
TE-132		49.72		-2.375E+01	3.211E+01	5.193E+01	7.286E+00	-0.457
		111.76		-5.662E+00	2.328E+01	3.747E+01	3.604E+00	-0.151
		116.30		-1.520E+01	2.147E+01	3.370E+01	3.133E+00	-0.451
		228.16	*	-2.278E-01	5.190E-01	8.573E-01	1.219E-01	-0.266
BA-133		53.15		5.710E-02	6.557E+00	1.098E+01	1.454E+00	0.005
		79.62		4.025E-03	1.591E+00	2.349E+00	3.914E-01	0.002
		81.00		-1.577E-01	1.251E-01	1.687E-01	2.915E-02	-0.935
		276.40		6.567E-01	3.955E-01	6.927E-01	9.176E-02	0.948
		302.84		-3.245E-02	1.543E-01	2.217E-01	2.672E-02	-0.146
		356.01	*	-1.897E-02	4.734E-02	6.584E-02	7.944E-03	-0.288
		383.85		-3.724E-02	3.010E-01	4.892E-01	5.592E-02	-0.076
I-133	+	510.53		4.577E-01	3.010E-01	Half-Life too short		
		529.87	*	4.902E-04	3.010E-01	Half-Life too short		
		706.58		-2.190E-02	3.010E-01	Half-Life too short		
		856.28		-1.409E-01	3.010E-01	Half-Life too short		
		875.33		-1.905E-02	3.010E-01	Half-Life too short		
		1236.41		2.717E-01	3.010E-01	Half-Life too short		
		1298.22		5.477E-02	3.010E-01	Half-Life too short		
CS-134		475.35		1.136E+00	1.889E+00	3.186E+00	2.101E-01	0.357
		563.23		-6.400E-02	3.867E-01	6.094E-01	3.740E-02	-0.105
		569.32		2.235E-02	2.293E-01	3.635E-01	2.230E-02	0.061

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---- Non-Identified Nuclides ----

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		604.70		-4.815E-03	3.545E-02	5.113E-02	2.891E-03	-0.094
	+	795.84	*	1.266E-01	5.863E-02	9.440E-02	7.278E-03	1.341
		801.93		-2.435E-01	4.122E-01	6.225E-01	4.874E-02	-0.391
		1038.57		-3.634E+00	4.310E+00	6.335E+00	5.395E-01	-0.574
		1167.94		1.056E-01	2.859E+00	4.803E+00	3.013E-01	0.022
		1365.15		3.901E-01	1.141E+00	1.978E+00	1.785E-01	0.197
CS-135		268.24	*	-8.035E-02	1.559E-01	2.541E-01	2.054E-02	-0.316
I-135		288.45		1.752E+09	1.559E-01	Half-Life too short		
		417.63		1.449E+08	1.559E-01	Half-Life too short		
		546.56		2.257E+08	1.559E-01	Half-Life too short		
		836.80		4.372E+08	1.559E-01	Half-Life too short		
		1038.76		-6.913E+08	1.559E-01	Half-Life too short		
		1124.00		1.467E+09	1.559E-01	Half-Life too short		
		1131.51		2.441E+08	1.559E-01	Half-Life too short		
		1260.41	*	3.716E+07	1.559E-01	Half-Life too short		
		1457.56		2.491E+10	1.559E-01	Half-Life too short		
		1678.03		-5.040E+08	1.559E-01	Half-Life too short		
		1706.46		3.345E+08	1.559E-01	Half-Life too short		
		1791.20		2.216E+08	1.559E-01	Half-Life too short		
CS-136		66.91		-6.468E-01	9.382E-01	1.500E+00	2.568E-01	-0.431
	+	86.29		3.622E+00	1.442E+00	2.005E+00	2.954E-01	1.806
		153.22		8.122E-01	6.448E-01	1.085E+00	7.765E-02	0.749
		163.89		-6.992E-01	1.030E+00	1.590E+00	1.115E-01	-0.440
		176.55		-9.662E-02	3.525E-01	5.532E-01	3.480E-02	-0.175
		273.65		-8.606E-01	4.373E-01	6.546E-01	4.669E-02	-1.315
		340.57		3.692E-01	1.394E-01	2.347E-01	1.650E-02	1.573
		818.51		-2.647E-02	7.785E-02	1.244E-01	1.015E-02	-0.213
		1048.07	*	6.555E-02	1.174E-01	1.990E-01	1.742E-02	0.329
		1235.34		5.231E-01	6.694E-01	1.171E+00	1.265E-01	0.447
BA-137M		661.65	*	4.316E-02	3.793E-02	6.811E-02	3.361E-03	0.634
CS-137		661.65	*	4.562E-02	4.010E-02	7.200E-02	3.573E-03	0.634
CE-139		165.85	*	3.310E-02	2.931E-02	4.918E-02	2.686E-03	0.673
BA-140		162.64		2.272E-01	7.086E-01	1.149E+00	7.214E-02	0.198
		304.84		4.797E-01	1.218E+00	1.825E+00	5.012E-01	0.263
		423.70		-1.242E+00	1.874E+00	2.843E+00	9.090E-01	-0.437
		537.32	*	-4.333E-02	2.518E-01	3.971E-01	1.295E-01	-0.109
LA-140	+	328.77		3.509E-01	3.794E-01	5.023E-01	3.659E-02	0.699
		432.53		-1.383E+00	1.991E+00	3.075E+00	2.235E-01	-0.450
		487.03		4.103E-02	1.304E-01	2.152E-01	1.555E-02	0.191
		751.79		-2.234E+00	1.479E+00	2.065E+00	1.618E-01	-1.082
		815.85		1.483E-01	3.349E-01	5.706E-01	5.219E-02	0.260
		867.82		-8.989E-01	1.562E+00	2.068E+00	2.021E-01	-0.435
		919.63		1.602E+00	3.078E+00	4.821E+00	5.657E-01	0.332
		925.24		-1.267E-01	1.072E+00	1.726E+00	1.787E-01	-0.073
		1596.49	*	3.378E-02	7.981E-02	1.391E-01	1.079E-02	0.243
CE-141		145.44	*	2.914E-02	6.534E-02	1.054E-01	6.448E-03	0.277
CE-143		57.37		-1.158E-03	6.534E-02	Half-Life too short		
		231.56		4.494E-04	6.534E-02	Half-Life too short		
		293.26	*	1.942E-04	6.534E-02	Half-Life too short		

---- Non-Identified Nuclides ----

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	+	350.59		1.748E-02	6.534E-02	Half-Life too short		
		490.36		-1.500E-03	6.534E-02	Half-Life too short		
		664.57		7.155E-05	6.534E-02	Half-Life too short		
		721.93		-6.207E-04	6.534E-02	Half-Life too short		
CE-144		80.11		-6.585E-01	2.549E+00	3.713E+00	4.074E-01	-0.177
		133.54	*	-3.818E-02	2.138E-01	3.422E-01	4.916E-02	-0.112
PM-144		476.78		1.722E-02	6.586E-02	1.085E-01	8.258E-03	0.159
		618.01		-3.956E-03	3.146E-02	5.231E-02	3.056E-03	-0.076
		696.49	*	-1.945E-02	3.420E-02	5.435E-02	3.032E-03	-0.358
		778.57		-3.144E+00	2.387E+00	3.466E+00	2.516E-01	-0.907
PR-144		696.49	*	-1.317E+00	2.316E+00	3.680E+00	2.052E-01	-0.358
		1489.15		-4.508E+00	1.127E+01	1.720E+01	1.421E+00	-0.262
PM-146		453.90	*	-2.150E-02	4.191E-02	6.516E-02	6.019E-03	-0.330
		633.02		5.759E-01	1.373E+00	2.345E+00	8.616E-01	0.246
		735.90		-1.592E-01	1.565E-01	2.174E-01	6.089E-02	-0.732
		747.13		9.017E-02	8.472E-02	1.520E-01	1.959E-02	0.593
ND-147	+	91.11		6.215E-01	3.312E-01	4.746E-01	5.291E-02	1.309
		319.41		6.443E-01	2.940E+00	4.930E+00	3.272E-01	0.131
		439.89		1.575E+00	5.580E+00	9.233E+00	6.208E-01	0.171
		531.02	*	7.212E-02	5.292E-01	8.575E-01	1.177E-01	0.084
PM-149		285.90	*	-6.997E+01	6.103E+01	9.403E+01	1.359E+01	-0.744
EU-152		121.78		-7.386E-02	7.630E-02	1.179E-01	9.717E-03	-0.626
		244.69		1.154E-01	3.558E-01	5.384E-01	3.322E-02	0.214
		344.27	*	-2.895E-02	9.556E-02	1.491E-01	1.098E-02	-0.194
		443.98		-9.275E-02	8.774E-01	1.412E+00	9.476E-02	-0.066
		778.89		-2.991E-01	2.774E-01	4.139E-01	3.006E-02	-0.723
		867.32		-5.944E-01	9.946E-01	1.313E+00	1.226E-01	-0.453
	+	964.01		8.406E-01	3.545E-01	6.496E-01	6.154E-02	1.294
		1085.78		1.445E-02	4.641E-01	7.492E-01	5.832E-02	0.019
		1112.02		-1.572E-01	3.829E-01	5.254E-01	3.853E-02	-0.299
		1407.95		2.012E-01	2.017E-01	3.706E-01	3.160E-02	0.543
GD-153		69.67		1.725E+00	2.196E+00	3.376E+00	3.765E-01	0.511
		83.37		4.881E+00	1.988E+01	2.730E+01	3.025E+00	0.179
		97.43	*	-5.452E-02	9.228E-02	1.303E-01	1.213E-02	-0.418
		103.18		-3.323E-02	1.107E-01	1.770E-01	1.496E-02	-0.188
EU-154		123.07		-2.155E-02	5.160E-02	8.192E-02	8.095E-03	-0.263
		247.94		1.349E-01	3.941E-01	5.968E-01	5.840E-02	0.226
		591.81		-1.885E-01	5.555E-01	9.091E-01	8.861E-02	-0.207
		723.30		-1.536E-01	1.983E-01	2.590E-01	1.897E-02	-0.593
		756.87		8.339E-01	7.269E-01	1.312E+00	1.408E-01	0.636
		873.19		2.397E-02	2.907E-01	4.798E-01	6.175E-02	0.050
		996.32		-3.120E-01	4.160E-01	6.187E-01	1.113E-01	-0.504
		1004.76		-2.748E-02	2.369E-01	3.793E-01	4.518E-02	-0.072
		1274.45	*	-3.573E-02	1.347E-01	2.183E-01	2.325E-02	-0.164
EU-155		48.70		1.281E+00	5.517E+00	9.342E+00	1.122E+00	0.137
		60.01		4.527E+00	7.326E+00	1.246E+01	1.535E+00	0.363
	+	86.54		3.570E-01	1.381E-01	1.988E-01	2.250E-02	1.795
		105.31	*	9.777E-03	1.114E-01	1.824E-01	1.513E-02	0.054
TB-160	+	86.79		9.426E-01	3.645E-01	5.270E-01	5.937E-02	1.789

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		197.04		7.566E-02	5.704E-01	9.079E-01	5.207E-02	0.083
		215.65		-1.886E-01	7.122E-01	1.192E+00	7.045E-02	-0.158
		298.57		1.107E-01	1.084E-01	1.890E-01	1.235E-02	0.586
		879.36	*	5.561E-02	1.352E-01	2.300E-01	2.218E-02	0.242
		962.29		1.155E+00	6.024E-01	1.028E+00	9.760E-02	1.124
	+	966.15		5.704E-01	2.405E-01	5.194E-01	4.908E-02	1.098
		1177.93		-7.527E-02	3.765E-01	6.191E-01	3.861E-02	-0.122
		1271.85		-2.279E-01	7.813E-01	1.263E+00	9.716E-02	-0.180
HO-166M		80.57		-2.541E-01	3.325E-01	4.704E-01	5.167E-02	-0.540
	+	184.41		1.285E-01	5.584E-02	6.464E-02	3.630E-03	1.988
		280.46		-1.132E-01	8.965E-02	1.400E-01	9.001E-03	-0.809
	+	410.95		2.305E-01	3.305E-01	4.401E-01	2.984E-02	0.524
		711.68	*	-2.530E-02	6.245E-02	1.005E-01	5.895E-03	-0.252
		752.31		-1.684E-01	2.464E-01	3.805E-01	2.546E-02	-0.443
		810.29		-5.964E-02	6.583E-02	9.976E-02	7.948E-03	-0.598
TM-171		51.35		-8.971E+00	6.057E+01	1.009E+02	1.326E+01	-0.089
		52.39		5.675E+00	2.982E+01	5.031E+01	6.664E+00	0.113
		59.40		4.870E+01	4.001E+01	6.906E+01	8.580E+00	0.705
		66.72	*	-2.673E+01	3.660E+01	5.863E+01	6.680E+00	-0.456
LU-176	+	88.36		7.034E-01	2.720E-01	3.869E-01	4.352E-02	1.818
		201.83		-9.915E-03	2.739E-02	4.581E-02	2.648E-03	-0.216
		306.84	*	-7.786E-03	2.282E-02	3.711E-02	2.441E-03	-0.210
		401.10		5.478E+00	6.283E+00	1.085E+01	7.367E-01	0.505
LU-177		112.95		1.389E-01	1.429E+00	2.334E+00	1.718E-01	0.060
	+	208.36	*	1.679E+00	1.391E+00	1.751E+00	1.023E-01	0.959
LU-177M		52.97		8.921E-01	2.951E+00	4.998E+00	6.622E-01	0.178
		54.07		-3.171E-01	1.496E+00	2.479E+00	3.270E-01	-0.128
		61.30		-2.399E+00	2.212E+00	3.505E+00	4.241E-01	-0.684
		121.62		-2.138E-01	3.835E-01	6.056E-01	4.007E-02	-0.353
		147.16		-3.809E-01	6.763E-01	1.059E+00	6.196E-02	-0.360
		171.86		3.380E-01	4.734E-01	7.799E-01	4.293E-02	0.433
		218.09		4.986E-02	8.371E-01	1.419E+00	8.423E-02	0.035
		268.79		2.634E-01	7.884E-01	1.339E+00	8.507E-02	0.197
		319.02		2.108E-02	2.473E-01	4.117E-01	2.731E-02	0.051
		367.43		5.376E-01	1.027E+00	1.545E+00	1.046E-01	0.348
		413.65	*	-6.891E-02	1.930E-01	2.657E-01	1.801E-02	-0.259
HF-181		56.28		-1.539E+00	1.492E+00	2.361E+00	3.050E-01	-0.652
		57.53		-1.032E+00	7.944E-01	1.236E+00	1.573E-01	-0.835
		65.20		-9.696E-01	1.249E+00	2.009E+00	2.322E-01	-0.483
		133.02		1.483E-02	6.651E-02	1.084E-01	6.729E-03	0.137
		136.25		-1.633E-01	4.634E-01	7.352E-01	4.499E-02	-0.222
		345.85		-3.549E-02	2.023E-01	2.882E-01	1.938E-02	-0.123
		482.03	*	1.992E-02	3.954E-02	6.632E-02	4.353E-03	0.300
W-181		56.28		-6.096E-01	5.919E-01	9.367E-01	1.210E-01	-0.651
		57.53		-4.096E-01	3.154E-01	4.909E-01	6.246E-02	-0.834
		65.20	*	-3.819E-01	4.920E-01	7.914E-01	9.144E-02	-0.483
TA-182		67.75		-4.519E-02	1.395E-01	2.276E-01	2.571E-02	-0.199
		100.10		2.753E-02	1.809E-01	2.975E-01	2.644E-02	0.093
		152.43		-8.415E-02	3.489E-01	5.532E-01	3.174E-02	-0.152

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		-1.140E-01	3.397E-01	5.657E-01	3.378E-02	-0.202
		1001.68		1.639E+00	2.265E+00	3.879E+00	3.499E-01	0.422
	+	1121.28		6.761E-01	3.220E-01	3.946E-01	2.829E-02	1.713
		1189.05		-1.092E-01	3.499E-01	5.704E-01	3.652E-02	-0.191
		1221.42	*	6.860E-02	2.162E-01	3.698E-01	2.550E-02	0.186
		1230.97		5.432E-04	5.273E-01	8.797E-01	6.197E-02	0.001
RE-183		57.98		-2.236E-01	3.048E-01	4.912E-01	6.215E-02	-0.455
		59.32		2.023E-01	1.634E-01	2.821E-01	3.508E-02	0.717
		67.20		-1.263E-01	2.488E-01	4.026E-01	4.568E-02	-0.314
		162.32	*	3.392E-02	1.092E-01	1.770E-01	9.790E-03	0.192
	+	208.81		1.697E+00	1.406E+00	1.785E+00	1.044E-01	0.951
		291.72		-1.142E+00	1.054E+00	1.417E+00	9.209E-02	-0.806
RE-184		57.98		-8.301E-01	1.131E+00	1.823E+00	2.307E-01	-0.455
		59.32		7.503E-01	6.059E-01	1.046E+00	1.301E-01	0.717
		67.20		-4.688E-01	9.234E-01	1.494E+00	1.695E-01	-0.314
		161.27		9.536E-02	3.626E-01	5.865E-01	3.257E-02	0.163
		216.55		-4.397E-03	2.541E-01	4.295E-01	2.543E-02	-0.010
		252.85	*	6.263E-02	2.221E-01	3.778E-01	2.355E-02	0.166
		318.01		-1.529E-01	4.297E-01	6.969E-01	4.620E-02	-0.219
		792.07		6.512E-01	1.020E+00	1.577E+00	1.192E-01	0.413
		903.28		5.580E-01	1.075E+00	1.793E+00	1.807E-01	0.311
		920.93		2.927E-01	4.872E-01	8.368E-01	8.299E-02	0.350
OS-185		59.72		3.771E-01	4.339E-01	7.432E-01	9.192E-02	0.507
		61.14		-2.880E-01	2.454E-01	3.870E-01	4.693E-02	-0.744
		69.30		3.114E-01	3.907E-01	6.013E-01	6.721E-02	0.518
		592.07		-6.119E-01	2.259E+00	3.720E+00	2.140E-01	-0.164
		646.12	*	-1.091E-02	4.164E-02	6.823E-02	3.505E-03	-0.160
		717.42		2.194E-01	8.890E-01	1.505E+00	9.003E-02	0.146
		874.81		-3.210E-01	6.033E-01	9.352E-01	8.910E-02	-0.343
		880.27		1.763E-01	7.724E-01	1.292E+00	1.248E-01	0.136
RE-188		155.03	*	2.252E-01	1.770E-01	2.983E-01	1.695E-02	0.755
		477.96		-2.981E-01	2.939E+00	4.708E+00	3.099E-01	-0.063
		633.10		1.097E+00	2.705E+00	4.668E+00	2.473E-01	0.235
W-188		63.58		9.587E+01	7.366E+01	1.253E+02	1.473E+01	0.765
		227.08		7.377E+00	1.215E+01	2.103E+01	1.265E+00	0.351
		290.67	*	-2.290E+00	8.133E+00	1.167E+01	7.576E-01	-0.196
IR-192	+	295.96		1.062E+00	1.639E-01	2.895E-01	1.912E-02	3.668
		308.46		-6.226E-02	8.826E-02	1.401E-01	9.312E-03	-0.444
		316.51	*	-1.050E-02	3.274E-02	5.323E-02	3.538E-03	-0.197
		468.07		-3.004E-02	7.402E-02	1.000E-01	7.417E-03	-0.300
		604.41		1.126E-02	4.794E-01	7.033E-01	7.920E-02	0.016
		612.46		1.863E+00	9.127E-01	1.535E+00	1.132E-01	1.214
AU-195		65.12		-1.647E-01	2.293E-01	3.698E-01	4.276E-02	-0.445
		66.83		-8.025E-02	1.197E-01	1.923E-01	2.188E-02	-0.417
	+	75.70		1.297E+00	3.466E-01	5.069E-01	5.545E-02	2.559
		98.88	*	6.436E-02	2.323E-01	3.821E-01	3.467E-02	0.168
		129.76		2.595E+00	2.983E+00	4.983E+00	3.144E-01	0.521
TL-200		367.94	*	1.502E-04	2.983E+00	Half-Life too short		
		579.30		-8.372E-04	2.983E+00	Half-Life too short		

---- Non-Identified Nuclides ----

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		828.27		-4.670E-04	2.983E+00	Half-Life too short		
		1205.75		-1.485E-04	2.983E+00	Half-Life too short		
TL-201		68.90		2.712E+00	4.518E+00	7.319E+00	8.201E-01	0.371
		70.82		2.612E-01	2.640E+00	3.939E+00	4.366E-01	0.066
		80.30		-3.292E+00	4.633E+00	6.578E+00	7.221E-01	-0.500
		135.34		-6.923E+00	1.985E+01	3.151E+01	1.936E+00	-0.220
		167.43	*	-7.308E-01	5.405E+00	8.568E+00	4.686E-01	-0.085
TL-202		68.90		3.025E-01	5.040E-01	8.163E-01	9.148E-02	0.371
		70.82		2.906E-02	2.937E-01	4.381E-01	4.857E-02	0.066
		80.30		-3.663E-01	5.155E-01	7.319E-01	8.035E-02	-0.500
		439.56	*	1.979E-02	6.722E-02	1.113E-01	7.484E-03	0.178
HG-203		70.83		1.383E-01	1.341E+00	2.002E+00	3.060E-01	0.069
		72.87		6.915E-01	7.882E-01	1.205E+00	1.792E-01	0.574
		82.60		3.832E-01	1.458E+00	1.992E+00	3.064E-01	0.192
		279.20	*	2.544E-02	4.360E-02	7.368E-02	4.972E-03	0.345
BI-207		72.80		1.624E-01	2.332E-01	3.558E-01	3.914E-02	0.457
	+	74.97		7.230E-01	1.932E-01	2.600E-01	2.846E-02	2.781
		84.90		1.845E-02	2.313E-01	3.425E-01	3.821E-02	0.054
		569.67		2.680E-03	3.574E-02	5.657E-02	3.373E-03	0.047
		1063.62	*	-8.850E-03	5.659E-02	8.975E-02	7.306E-03	-0.099
		1770.23		4.045E-01	3.388E-01	6.871E-01	4.559E-02	0.589
TL-207		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281
PO-209		260.50		-3.695E-01	9.478E+00	1.561E+01	9.822E-01	-0.024
		262.80		-1.607E+01	2.562E+01	4.150E+01	2.619E+00	-0.387
		896.60	*	-7.020E+00	7.909E+00	1.175E+01	1.185E+00	-0.598
BI-210		46.50	*	4.094E+00	8.988E+00	1.536E+01	1.506E+00	0.267
PB-210		46.50	*	4.094E+00	8.988E+00	1.536E+01	1.506E+00	0.267
PO-210		46.50	*	4.094E+00	8.987E+00	1.536E+01	1.379E+00	0.267
PB-211		404.84	*	-1.141E+00	1.256E+00	1.318E+00	8.232E-01	-0.865
		427.08		8.632E-01	2.167E+00	3.511E+00	2.173E+00	0.246
		831.96		-7.025E-02	1.361E+00	2.226E+00	1.394E+00	-0.032
BI-212	+	727.18	*	1.221E+00	5.317E-01	6.744E-01	5.395E-02	1.811
		785.46		1.252E+00	1.886E+00	3.267E+00	2.420E-01	0.383
		1620.62		8.307E-01	1.433E+00	2.535E+00	1.933E-01	0.328
PO-215		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281
RN-219		271.23		2.783E-01	2.412E-01	4.226E-01	3.601E-02	0.659
		401.81	*	3.097E-01	3.872E-01	6.627E-01	9.315E-02	0.467
RN-220		549.76	*	-1.556E+01	2.573E+01	3.894E+01	2.388E+00	-0.400
RA-223		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281
AC-227		79.80		-1.856E-01	1.996E+00	2.933E+00	6.614E-01	-0.063
		236.00		1.366E-01	2.521E-01	3.875E-01	4.115E-02	0.353
		256.20	*	1.274E-01	3.714E-01	6.324E-01	8.954E-02	0.201
		286.10		-1.425E+00	1.507E+00	2.368E+00	2.820E-01	-0.602
	+	299.80		2.585E+00	1.875E+00	2.501E+00	4.143E-01	1.034
		304.40		1.225E+00	1.903E+00	2.906E+00	5.106E-01	0.421
		334.20		2.485E-01	2.897E+00	3.578E+00	6.666E-01	0.069
TH-227		79.80		-1.856E-01	1.996E+00	2.933E+00	6.691E-01	-0.063
	+	94.00		7.884E+00	3.510E+00	4.027E+00	8.994E-01	1.958
		236.00		1.366E-01	2.520E-01	3.875E-01	3.584E-02	0.353
		256.20	*	1.274E-01	3.716E-01	6.324E-01	1.079E-01	0.201
		286.10		-1.425E+00	2.069E+00	2.368E+00	2.373E+00	-0.602
	+	299.80		2.585E+00	1.875E+00	2.501E+00	4.143E-01	1.034
		304.40		1.225E+00	1.903E+00	2.906E+00	5.106E-01	0.421
		334.20		2.485E-01	2.897E+00	3.578E+00	6.666E-01	0.069
TH-229		85.43		-5.554E-02	2.310E-01	3.367E-01	3.766E-02	-0.165
	+	88.47		4.049E-01	1.566E-01	2.229E-01	2.501E-02	1.816
		100.00		-1.297E-02	1.927E-01	3.124E-01	2.781E-02	-0.042
		193.63	*	1.027E-01	5.095E-01	8.146E-01	4.646E-02	0.126
		210.97		1.244E+00	8.520E-01	1.369E+00	8.033E-02	0.909
PA-231		283.67	*	-9.014E-01	1.495E+00	2.404E+00	3.382E-01	-0.375
	+	301.29		1.034E+00	7.388E-01	9.982E-01	1.087E-01	1.036
TH-231		81.07		-3.492E-01	2.719E-01	3.719E-01	4.090E-02	-0.939
		83.78		1.117E-02	1.583E-01	2.343E-01	2.602E-02	0.048
		94.90		3.620E-01	2.682E-01	4.161E-01	4.062E-02	0.870
		122.32		-8.110E-01	1.767E+00	2.803E+00	2.068E-01	-0.289
		144.24		5.941E-01	7.287E-01	1.192E+00	8.735E-02	0.499
		154.21		7.107E-01	4.116E-01	7.035E-01	4.876E-02	1.010
		269.46		2.936E-01	1.876E-01	3.342E-01	2.205E-02	0.878
		323.87	*	-6.999E-02	7.383E-01	1.065E+00	1.793E-01	-0.066
	+	338.28		7.492E+00	1.733E+00	2.499E+00	2.762E-01	2.998
		445.03		9.666E-01	2.043E+00	3.434E+00	3.712E-01	0.281

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		7.101E-01	5.443E+00	8.079E+00	8.986E-01	0.088
	+	92.29		6.325E+00	2.516E+00	3.410E+00	3.510E-01	1.855
		95.87	*	-5.128E-02	9.732E-01	1.420E+00	1.361E-01	-0.036
		108.00		6.975E-01	1.696E+00	2.809E+00	2.211E-01	0.248
PA-233	+	75.28		2.110E+01	6.242E+00	7.715E+00	1.293E+00	2.735
	+	86.59		5.805E+00	2.686E+00	3.237E+00	8.992E-01	1.793
	+	300.12		7.208E-01	5.185E-01	6.962E-01	9.590E-02	1.035
		311.98	*	8.658E-02	6.151E-02	1.095E-01	7.578E-03	0.791
		340.50		2.168E+00	8.797E-01	1.254E+00	2.910E-01	1.729
		398.62		-4.594E-01	2.060E+00	3.312E+00	8.642E-01	-0.139
		415.76		-5.727E-01	1.669E+00	2.549E+00	5.324E-01	-0.225
PA-234		63.00		2.506E+00	2.279E+00	3.825E+00	6.693E-01	0.655
		94.67		4.555E-01	2.022E-01	3.150E-01	4.175E-02	1.446
		98.44		1.979E-02	9.605E-02	1.566E-01	8.748E-02	0.126
		99.86		-5.072E-03	4.892E-01	7.951E-01	7.095E-02	-0.006
		111.00		-9.004E-02	1.892E-01	3.011E-01	3.419E-02	-0.299
		131.20		1.473E-02	1.109E-01	1.800E-01	1.128E-02	0.082
		152.70		1.577E-01	3.390E-01	5.529E-01	8.726E-02	0.285
	+	186.00		4.627E+00	2.443E+00	2.610E+00	7.967E-01	1.773
		226.40		1.976E-01	3.909E-01	6.729E-01	7.851E-02	0.294
		227.20		1.473E-01	4.195E-01	7.186E-01	4.325E-02	0.205
		248.90		-4.331E-01	8.191E-01	1.284E+00	2.774E-01	-0.337
		293.70		3.719E+00	1.055E+00	1.552E+00	2.537E-01	2.397
		369.80		-4.680E-01	1.014E+00	1.395E+00	2.945E-01	-0.336
		568.70		9.477E-01	1.120E+00	1.871E+00	1.117E-01	0.507
		569.50		2.727E-02	3.174E-01	5.027E-01	2.999E-02	0.054
		574.00		-7.653E-01	1.457E+00	2.365E+00	1.401E-01	-0.324
		699.00		-6.104E-01	7.244E-01	1.112E+00	1.994E-01	-0.549
		706.10		-2.417E-01	1.132E+00	1.845E+00	8.143E-01	-0.131
		733.00		3.138E-01	3.719E-01	5.861E-01	1.254E-01	0.535
		742.81		-9.768E-01	1.535E+00	2.101E+00	1.407E+00	-0.465
	+	796.30		2.463E+00	1.304E+00	1.834E+00	4.906E-01	1.343
		805.60		4.202E-01	1.080E+00	1.788E+00	5.444E-01	0.235
		819.60		-1.857E-01	1.391E+00	2.259E+00	8.568E-01	-0.082
		826.30		-1.077E+00	1.022E+00	1.323E+00	5.913E-01	-0.814
		831.60		-1.383E-01	7.105E-01	1.147E+00	3.419E-01	-0.121
		876.40		-4.174E-01	9.522E-01	1.323E+00	1.362E+00	-0.315
		880.51		9.694E-02	2.851E-01	4.814E-01	4.656E-02	0.201
		883.24		-6.914E-02	2.931E-01	4.621E-01	3.113E-01	-0.150
		899.00		-9.601E-01	9.954E-01	1.327E+00	5.844E-01	-0.723
		925.00		-1.693E-01	1.201E+00	1.930E+00	1.907E-01	-0.088
		926.50		-6.522E-02	1.756E-01	2.738E-01	7.045E-02	-0.238
		946.00	*	-8.805E-02	3.049E-01	4.805E-01	9.258E-02	-0.183
		949.00		-2.228E-01	4.976E-01	7.746E-01	7.466E-02	-0.288
		980.50		-2.996E-01	7.643E-01	1.189E+00	1.103E-01	-0.252
		1394.10		5.157E-01	1.242E+00	2.089E+00	1.359E+00	0.247
PA-234M		766.41		2.728E+01	2.763E+01	3.313E+01	2.535E+01	0.823
		1001.03	*	8.629E-01	7.515E+00	1.223E+01	1.406E+00	0.071
TH-234		63.29	*	2.539E+00	1.935E+00	3.223E+00	6.353E-01	0.788

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.040E+00	8.739E-01	1.102E+00	2.085E-01	1.852
U-235	+	89.95		2.680E+00	1.631E+00	1.991E+00	6.282E-01	1.346
	+	93.35		2.453E+00	1.175E+00	1.311E+00	3.738E-01	1.871
		105.00		7.549E-01	1.098E+00	1.806E+00	5.369E-01	0.418
		143.76	*	1.791E-01	2.248E-01	3.651E-01	5.969E-02	0.491
		163.35		7.108E-02	4.842E-01	7.785E-01	1.393E-01	0.091
	+	185.71		1.714E-01	7.445E-02	9.675E-02	5.445E-03	1.771
		205.31		-1.983E-01	5.701E-01	8.321E-01	1.497E-01	-0.238
NP-236		94.67		3.481E-01	1.504E-01	2.392E-01	2.346E-02	1.455
		98.44		1.497E-02	7.214E-02	1.184E-01	1.082E-02	0.126
		111.00		-6.811E-02	1.430E-01	2.278E-01	1.721E-02	-0.299
		160.31	*	7.273E-02	7.887E-02	1.314E-01	7.320E-03	0.554
U-238		63.29	*	2.539E+00	1.935E+00	3.223E+00	6.353E-01	0.788
	+	92.38		2.040E+00	8.115E-01	1.102E+00	1.132E-01	1.852
NP-239		99.55		4.582E-02	1.624E-01	2.670E-01	2.396E-02	0.172
		117.00	*	-1.044E-01	1.939E-01	3.071E-01	2.148E-02	-0.340
	+	209.75		1.356E+00	1.123E+00	1.426E+00	8.353E-02	0.951
		228.18		-9.974E-02	2.214E-01	3.662E-01	2.207E-02	-0.272
		277.60		2.178E-01	1.924E-01	3.323E-01	2.131E-02	0.655
		334.30		1.482E-01	1.642E+00	2.029E+00	1.357E-01	0.073
AM-241		59.54	*	2.727E-01	2.313E-01	3.987E-01	5.120E-02	0.684
CM-243		99.55		4.714E-02	1.670E-01	2.748E-01	2.465E-02	0.172
		103.76	*	1.633E-02	1.000E-01	1.644E-01	1.377E-02	0.099
		117.00		-1.074E-01	1.995E-01	3.159E-01	2.210E-02	-0.340
	+	209.75		1.337E+00	1.107E+00	1.406E+00	8.233E-02	0.951
		228.18		-1.008E-01	2.237E-01	3.700E-01	2.230E-02	-0.272
		277.60		2.196E-01	1.939E-01	3.350E-01	2.148E-02	0.655
CM-247		278.00		1.015E+00	8.013E-01	1.391E+00	8.923E-02	0.730
		287.40		7.788E-01	1.208E+00	2.079E+00	1.346E-01	0.375
		402.60	*	-9.905E-03	3.493E-02	5.591E-02	3.796E-03	-0.177
CF-249		252.85		2.362E-01	8.376E-01	1.425E+00	8.883E-02	0.166
		333.44		4.259E-02	2.533E-01	2.720E-01	1.819E-02	0.157
		387.95	*	6.521E-03	3.907E-02	6.466E-02	4.393E-03	0.101
CF-251		176.60	*	-2.943E-02	1.299E-01	2.043E-01	1.133E-02	-0.144
		227.00		2.120E-01	3.701E-01	6.396E-01	3.848E-02	0.331
		285.00		-2.449E+00	1.715E+00	2.625E+00	1.696E-01	-0.933

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001      *
* Acquisition date :  9-JUL-2009 08:35:24 Detector SN#     :               *
* Detector ID        : GAM10               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:02.07      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232591001           Analyst initials: MXR1          *
* Batch Number       : 881931               Sample Quantity : 1.2548E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM            :    0.000            MSD Isotope     :               *
* LCS DPM            :    0.000            LCS Isotope     :               *
* LCSD DPM           :    0.000            LCSD Isotope    :               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.282E+01	3.346E+00	6.215E-01	0.000E+00
CD-109	3.011E+00	1.141E+00	1.422E+00	0.000E+00
SN-126	2.966E-01	1.124E-01	1.410E-01	0.000E+00
TL-208	4.707E-01	8.557E-02	5.247E-02	0.000E+00
BI-211	4.159E+00	5.533E-01	3.136E-01	0.000E+00
PB-212	1.725E+00	1.712E-01	9.533E-02	0.000E+00
PO-212	1.725E+00	1.712E-01	9.533E-02	0.000E+00
BI-214	1.282E+00	1.814E-01	1.167E-01	0.000E+00
PB-214	1.447E+00	2.062E-01	1.093E-01	0.000E+00
PO-214	1.447E+00	2.062E-01	1.093E-01	0.000E+00
PO-216	1.725E+00	1.712E-01	9.533E-02	0.000E+00
PO-218	1.447E+00	2.062E-01	1.093E-01	0.000E+00
RA-224	4.420E+00	1.159E+00	1.085E+00	0.000E+00
RA-226	1.282E+00	1.814E-01	1.167E-01	0.000E+00
AC-228	1.536E+00	3.928E-01	2.186E-01	0.000E+00
RA-228	1.536E+00	3.928E-01	2.186E-01	0.000E+00
TH-228	1.725E+00	1.712E-01	9.532E-02	0.000E+00
TH-230	1.282E+00	1.813E-01	1.167E-01	0.000E+00
TH-232	1.536E+00	3.928E-01	2.186E-01	0.000E+00
U-234	1.282E+00	1.813E-01	1.167E-01	0.000E+00
NP-237	8.708E-01	3.740E-01	4.697E-01	0.000E+00
AM-243	4.028E-01	1.055E-01	1.088E-01	0.000E+00
ANH-511	1.231E-01	7.333E-02	4.303E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-9.064E-02	3.092E-01	5.059E-01	0.000E+00	NOT IDENT.
NA-22	-1.508E-02	4.745E-02	7.819E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.811E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	9.558E-03	3.190E-02	5.544E-02	0.000E+00	NOT IDENT.

TI-44	0.000E+00	7.738E-02	9.352E-02	0.000E+00	FAIL ABUN
SC-46	-5.161E-02	4.099E-02	5.992E-02	0.000E+00	FAIL ABUN
V-48	-4.840E-02	6.681E-02	1.023E-01	0.000E+00	NOT IDENT.
CR-51	1.789E-01	3.358E-01	5.966E-01	0.000E+00	NOT IDENT.
MN-52	-1.546E-02	1.945E-01	3.231E-01	0.000E+00	NOT IDENT.
MN-54	-2.184E-03	4.054E-02	6.817E-02	0.000E+00	NOT IDENT.
CO-56	-7.039E-04	3.867E-02	6.510E-02	0.000E+00	NOT IDENT.
CO-57	-2.309E-02	2.541E-02	4.166E-02	0.000E+00	NOT IDENT.
CO-58	-3.084E-02	4.212E-02	6.687E-02	0.000E+00	NOT IDENT.
FE-59	6.530E-03	9.113E-02	1.511E-01	0.000E+00	NOT IDENT.
CO-60	-1.882E-02	4.018E-02	6.415E-02	0.000E+00	NOT IDENT.
ZN-65	-2.451E-02	1.069E-01	1.462E-01	0.000E+00	NOT IDENT.
GE-68	-7.842E-01	1.430E+00	2.233E+00	0.000E+00	NOT IDENT.
AS-73	1.012E-02	1.442E+00	2.577E+00	0.000E+00	NOT IDENT.
AS-74	6.989E-02	7.903E-02	1.458E-01	0.000E+00	NOT IDENT.
SE-75	3.492E-03	4.123E-02	7.242E-02	0.000E+00	NOT IDENT.
BR-77	3.239E+00	7.214E+00	1.201E+01	0.000E+00	FAIL ABUN
SR-82	1.128E-01	3.552E-01	6.195E-01	0.000E+00	NOT IDENT.
RB-83	2.455E-02	6.771E-02	1.120E-01	0.000E+00	NOT IDENT.
RB-84	5.841E-03	6.864E-02	1.163E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.298E+00	1.387E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.692E-02	7.016E-02	0.000E+00	NOT IDENT.
RB-86	-8.853E-01	8.870E-01	1.319E+00	0.000E+00	NOT IDENT.
Y-88	3.231E-02	2.708E-02	5.652E-02	0.000E+00	NOT IDENT.
ZR-88	-1.567E-03	2.907E-02	4.924E-02	0.000E+00	NOT IDENT.
Y-91	-7.518E+00	2.058E+01	3.414E+01	0.000E+00	NOT IDENT.
NB-94	2.083E-02	3.451E-02	6.161E-02	0.000E+00	NOT IDENT.
NB-95	1.715E-02	4.310E-02	7.543E-02	0.000E+00	NOT IDENT.
NB-95M	5.289E-02	1.310E-01	2.094E-01	0.000E+00	NOT IDENT.
ZR-95	8.356E-02	6.564E-02	1.230E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.858E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.150E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.319E+00	7.719E+00	1.389E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.198E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.641E-03	3.352E-02	5.446E-02	0.000E+00	NOT IDENT.
RH-102	1.030E-02	2.893E-02	4.966E-02	0.000E+00	NOT IDENT.
RU-103	-5.403E-03	3.778E-02	6.144E-02	0.000E+00	FAIL ABUN
RH-106	-2.228E-01	2.988E-01	4.856E-01	0.000E+00	FAIL ABUN
RU-106	-2.228E-01	2.979E-01	4.856E-01	0.000E+00	FAIL ABUN
AG-108M	-1.683E-02	3.333E-02	5.426E-02	0.000E+00	NOT IDENT.
AG-110M	-2.666E-02	3.552E-02	5.784E-02	0.000E+00	NOT IDENT.
IN-111	4.085E-01	8.275E-01	1.323E+00	0.000E+00	NOT IDENT.
IN-113M	1.800E-02	4.159E-02	7.266E-02	0.000E+00	NOT IDENT.
SN-113	1.800E-02	4.159E-02	7.266E-02	0.000E+00	NOT IDENT.
IN-114M	-1.782E-02	1.952E-01	2.861E-01	0.000E+00	NOT IDENT.
CD-115	-3.477E+00	7.014E+00	1.115E+01	0.000E+00	NOT IDENT.
SN-117M	-3.871E-02	5.115E-02	8.302E-02	0.000E+00	NOT IDENT.
SB-122	2.901E-01	1.552E+00	2.597E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.166E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.154E-02	2.818E-02	4.653E-02	0.000E+00	NOT IDENT.
I-124	-3.886E-01	5.561E-01	8.602E-01	0.000E+00	NOT IDENT.
SB-124	3.855E-03	6.587E-02	1.103E-01	0.000E+00	FAIL ABUN
SB-125	4.778E-02	9.206E-02	1.606E-01	0.000E+00	FAIL ABUN
TE-125M	1.314E+00	9.082E+00	1.574E+01	0.000E+00	NOT IDENT.
I-126	-1.524E-01	1.707E-01	2.744E-01	0.000E+00	NOT IDENT.
SB-126	1.378E-02	1.482E-01	2.225E-01	0.000E+00	FAIL ABUN
SB-127	-5.456E-01	1.065E+00	1.754E+00	0.000E+00	NOT IDENT.
XE-127	-6.192E-03	4.319E-02	7.638E-02	0.000E+00	FAIL ABUN
I-131	-2.209E-02	9.904E-02	1.669E-01	0.000E+00	NOT IDENT.
TE-132	-2.278E-01	5.086E-01	8.797E-01	0.000E+00	NOT IDENT.
BA-133	-1.897E-02	4.640E-02	6.714E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.225E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.746E-02	9.517E-02	0.000E+00	FAIL ABUN
CS-135	-8.035E-02	1.528E-01	2.602E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.607E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.555E-02	1.150E-01	1.998E-01	0.000E+00	FAIL ABUN
BA-137M	4.316E-02	3.718E-02	6.885E-02	0.000E+00	NOT IDENT.
CS-137	4.562E-02	3.930E-02	7.278E-02	0.000E+00	NOT IDENT.
CE-139	3.310E-02	2.872E-02	5.069E-02	0.000E+00	NOT IDENT.
BA-140	-4.333E-02	2.468E-01	4.026E-01	0.000E+00	NOT IDENT.
LA-140	3.378E-02	7.821E-02	1.388E-01	0.000E+00	FAIL ABUN
CE-141	2.914E-02	6.403E-02	1.088E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.928E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.818E-02	2.095E-01	3.537E-01	0.000E+00	NOT IDENT.
PM-144	-1.945E-02	3.351E-02	5.489E-02	0.000E+00	NOT IDENT.
PR-144	-1.317E+00	2.269E+00	3.717E+00	0.000E+00	NOT IDENT.
PM-146	-2.150E-02	4.107E-02	6.622E-02	0.000E+00	NOT IDENT.
ND-147	7.212E-02	5.186E-01	8.695E-01	0.000E+00	FAIL ABUN

PM-149	-6.997E+01	5.981E+01	9.617E+01	0.000E+00	NOT IDENT.
EU-152	-2.895E-02	9.365E-02	1.521E-01	0.000E+00	FAIL ABUN
GD-153	-5.452E-02	9.043E-02	1.353E-01	0.000E+00	NOT IDENT.
EU-154	-3.573E-02	1.320E-01	2.185E-01	0.000E+00	NOT IDENT.
EU-155	9.777E-03	1.092E-01	1.892E-01	0.000E+00	FAIL ABUN
TB-160	5.561E-02	1.325E-01	2.315E-01	0.000E+00	FAIL ABUN
HO-166M	-2.530E-02	6.120E-02	1.014E-01	0.000E+00	FAIL ABUN
TM-171	-2.673E+01	3.587E+01	6.118E+01	0.000E+00	NOT IDENT.
LU-176	-7.786E-03	2.236E-02	3.792E-02	0.000E+00	FAIL ABUN
LU-177	1.679E+00	1.363E+00	1.799E+00	0.000E+00	FAIL ABUN
LU-177M	-6.891E-02	1.891E-01	2.704E-01	0.000E+00	NOT IDENT.
HF-181	1.992E-02	3.875E-02	6.733E-02	0.000E+00	NOT IDENT.
W-181	-3.819E-01	4.822E-01	8.260E-01	0.000E+00	NOT IDENT.
TA-182	6.860E-02	2.118E-01	3.705E-01	0.000E+00	FAIL ABUN
RE-183	3.392E-02	1.070E-01	1.825E-01	0.000E+00	FAIL ABUN
RE-184	6.263E-02	2.176E-01	3.871E-01	0.000E+00	NOT IDENT.
OS-185	-1.091E-02	4.081E-02	6.899E-02	0.000E+00	NOT IDENT.
RE-188	2.252E-01	1.735E-01	3.077E-01	0.000E+00	NOT IDENT.
W-188	-2.290E+00	7.971E+00	1.193E+01	0.000E+00	NOT IDENT.
IR-192	-1.050E-02	3.208E-02	5.436E-02	0.000E+00	FAIL ABUN
AU-195	6.436E-02	2.276E-01	3.966E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.281E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-7.308E-01	5.297E+00	8.829E+00	0.000E+00	NOT IDENT.
TL-202	1.979E-02	6.587E-02	1.132E-01	0.000E+00	NOT IDENT.
HG-203	2.544E-02	4.272E-02	7.538E-02	0.000E+00	NOT IDENT.
BI-207	-8.850E-03	5.546E-02	9.010E-02	0.000E+00	FAIL ABUN
TL-207	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
PO-209	-7.020E+00	7.750E+00	1.182E+01	0.000E+00	NOT IDENT.
BI-210	4.094E+00	8.809E+00	1.610E+01	0.000E+00	NOT IDENT.
PB-210	4.094E+00	8.809E+00	1.610E+01	0.000E+00	NOT IDENT.
PO-210	4.094E+00	8.807E+00	1.610E+01	0.000E+00	NOT IDENT.
PB-211	-1.141E+00	1.231E+00	1.342E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.211E-01	6.807E-01	0.000E+00	FAIL ABUN
PO-215	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
RN-219	3.097E-01	3.794E-01	6.746E-01	0.000E+00	NOT IDENT.
RN-220	-1.556E+01	2.522E+01	3.946E+01	0.000E+00	NOT IDENT.
RA-223	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
AC-227	1.274E-01	3.640E-01	6.479E-01	0.000E+00	FAIL ABUN
TH-227	1.274E-01	3.642E-01	6.479E-01	0.000E+00	FAIL ABUN
TH-229	1.027E-01	4.993E-01	8.378E-01	0.000E+00	FAIL ABUN
PA-231	-9.014E-01	1.465E+00	2.459E+00	0.000E+00	FAIL ABUN
TH-231	-6.999E-02	7.235E-01	1.088E+00	0.000E+00	FAIL ABUN
U-231	-5.128E-02	9.537E-01	1.475E+00	0.000E+00	FAIL ABUN
PA-233	8.658E-02	6.028E-02	1.119E-01	0.000E+00	FAIL ABUN
PA-234	-8.805E-02	2.988E-01	4.832E-01	0.000E+00	FAIL ABUN
PA-234M	8.629E-01	7.364E+00	1.229E+01	0.000E+00	NOT IDENT.
TH-234	2.539E+00	1.897E+00	3.366E+00	0.000E+00	FAIL ABUN
U-235	1.791E-01	2.203E-01	3.770E-01	0.000E+00	FAIL ABUN
NP-236	7.273E-02	7.729E-02	1.355E-01	0.000E+00	NOT IDENT.
U-238	2.539E+00	1.897E+00	3.366E+00	0.000E+00	FAIL ABUN
NP-239	-1.044E-01	1.900E-01	3.180E-01	0.000E+00	FAIL ABUN
AM-241	2.727E-01	2.267E-01	4.166E-01	0.000E+00	NOT IDENT.
CM-243	1.633E-02	9.805E-02	1.705E-01	0.000E+00	FAIL ABUN
CM-247	-9.905E-03	3.423E-02	5.691E-02	0.000E+00	NOT IDENT.
CF-249	6.521E-03	3.829E-02	6.585E-02	0.000E+00	NOT IDENT.
CF-251	-2.943E-02	1.273E-01	2.104E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:36:27.60

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:35:24.
Sample ID         : G232591001           Sample quantity  : 1.25480E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.07  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1296	10.67*	1.107E+00	3.282E+01	3.282E+01	10.40
CD-109	88.03	194	3.72*	5.295E+00	2.950E+00	3.011E+00	38.67
SN-126	64.28	------	9.60	2.419E+00	------ Line Not Found		------
	86.94	194	8.90	5.295E+00	1.233E+00	1.233E+00	55.96
	87.57	194	37.00*	5.295E+00	2.966E-01	2.966E-01	38.67
TL-208	277.35	------	6.80	4.610E+00	------ Line Not Found		------
	510.84	120	21.60	2.927E+00	5.701E-01	5.701E-01	61.34
	583.14	348	84.20*	2.626E+00	4.707E-01	4.707E-01	18.55
	860.37	77	12.46	1.838E+00	1.006E+00	1.006E+00	64.48
BI-211	72.87	------	1.27	3.633E+00	------ Line Not Found		------
	351.07	699	12.94*	3.886E+00	4.159E+00	4.159E+00	13.58
PB-212	74.81	347	10.70	3.902E+00	2.485E+00	2.485E+00	28.30
	77.11	566	18.00	4.203E+00	2.237E+00	2.237E+00	19.13
	87.30	194	8.00	5.295E+00	1.372E+00	1.372E+00	39.94
	238.63	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.09	69	3.41	4.358E+00	1.395E+00	1.395E+00	71.15
PO-212	74.81	347	10.70	3.902E+00	2.485E+00	2.485E+00	28.30
	77.11	566	18.00	4.203E+00	2.237E+00	2.237E+00	19.13
	87.30	194	8.00	5.295E+00	1.372E+00	1.372E+00	39.94
	115.19	------	0.60	6.657E+00	------ Line Not Found		------
	238.63	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.09	69	3.41	4.358E+00	1.395E+00	1.395E+00	71.15
BI-214	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------ Line Not Found		------
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	------	4.11	1.163E+00	------ Line Not Found		------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
PB-214	74.81	347	6.21	3.902E+00	4.281E+00	4.281E+00	27.72
	77.11	566	10.50	4.203E+00	3.835E+00	3.835E+00	20.59
	87.30	194	4.67	5.295E+00	2.350E+00	2.350E+00	39.43

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	296	7.49	5.069E+00	2.331E+00	2.331E+00	27.34
	295.21	399	19.20	4.408E+00	1.409E+00	1.409E+00	16.62
	351.92	699	37.20*	3.886E+00	1.447E+00	1.447E+00	14.54
PO-214	74.81	347	6.21	3.902E+00	4.281E+00	4.281E+00	27.72
	77.11	566	10.50	4.203E+00	3.835E+00	3.835E+00	20.59
	87.30	194	4.67	5.295E+00	2.350E+00	2.350E+00	39.43
	241.98	296	7.49	5.069E+00	2.331E+00	2.331E+00	27.34
	295.21	399	19.20	4.408E+00	1.409E+00	1.409E+00	16.62
	351.92	699	37.20*	3.886E+00	1.447E+00	1.447E+00	14.54
PO-216	74.81	347	10.70	3.902E+00	2.485E+00	2.485E+00	28.30
	77.11	566	18.00	4.203E+00	2.237E+00	2.237E+00	19.13
	87.30	194	8.00	5.295E+00	1.372E+00	1.372E+00	39.94
	238.63	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.09	69	3.41	4.358E+00	1.395E+00	1.395E+00	71.15
PO-218	74.81	347	6.21	3.902E+00	4.281E+00	4.281E+00	27.72
	77.11	566	10.50	4.203E+00	3.835E+00	3.835E+00	20.59
	87.30	194	4.67	5.295E+00	2.350E+00	2.350E+00	39.43
	241.98	296	7.49	5.069E+00	2.331E+00	2.331E+00	27.34
	295.21	399	19.20	4.408E+00	1.409E+00	1.409E+00	16.62
	351.92	699	37.20*	3.886E+00	1.447E+00	1.447E+00	14.54
RA-224	240.98	296	3.95*	5.069E+00	4.420E+00	4.420E+00	26.76
RA-226	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------	Line Not Found	------
	934.06	------	3.21	1.697E+00	------	Line Not Found	------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------	Line Not Found	------
	1377.67	------	4.11	1.163E+00	------	Line Not Found	------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
AC-228	338.32	273	11.40	3.999E+00	1.794E+00	1.794E+00	45.67
	911.07	247	27.70*	1.739E+00	1.536E+00	1.536E+00	26.10
	969.11	186	16.60	1.636E+00	2.047E+00	2.047E+00	30.31
RA-228	338.32	273	11.40	3.999E+00	1.794E+00	1.794E+00	45.67
	911.07	247	27.70*	1.739E+00	1.536E+00	1.536E+00	26.10
	969.11	186	16.60	1.636E+00	2.047E+00	2.047E+00	30.31
TH-228	84.40	------	1.21	5.004E+00	------	Line Not Found	------
	238.60	1314	44.60*	5.111E+00	1.725E+00	1.725E+00	10.13
	300.10	69	3.41	4.358E+00	1.395E+00	1.395E+00	92.02
TH-230	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------	Line Not Found	------
	934.06	------	3.21	1.697E+00	------	Line Not Found	------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------	Line Not Found	------
	1377.67	------	4.11	1.163E+00	------	Line Not Found	------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
TH-232	338.32	273	11.40	3.999E+00	1.794E+00	1.794E+00	21.39
	911.07	247	27.70*	1.739E+00	1.536E+00	1.536E+00	26.10
	969.11	186	16.60	1.636E+00	2.047E+00	2.047E+00	30.31
U-234	609.31	502	46.30*	2.530E+00	1.282E+00	1.282E+00	14.43
	768.36	------	5.04	2.053E+00	------	Line Not Found	------

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	103	15.10	1.415E+00	1.441E+00	1.441E+00	48.09
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	------	4.11	1.163E+00	------ Line Not Found		------
	1764.49	96	15.80	9.764E-01	1.865E+00	1.865E+00	25.08
NP-237	86.50	194	12.60*	5.295E+00	8.708E-01	8.708E-01	43.83
	95.87	------	2.60	5.933E+00	------ Line Not Found		------
AM-243	74.67	347	66.00*	3.902E+00	4.028E-01	4.028E-01	26.72
	86.72	194	0.34	5.295E+00	3.266E+01	3.266E+01	38.67
	117.66	------	0.55	6.694E+00	------ Line Not Found		------
	142.18	------	0.13	6.676E+00	------ Line Not Found		------
ANH-511	511.00	120	100.00*	2.927E+00	1.231E-01	1.231E-01	60.77

Flag: "*" = Keyline

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

Total number of lines in spectrum 30
Number of unidentified lines 1
Number of lines tentatively identified by NID 29 96.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.282E+01	3.282E+01	0.341E+01	10.40	
CD-109	464.00D	1.02	2.950E+00	3.011E+00	1.164E+00	38.67	
SN-126	1.00E+05Y	1.00	2.966E-01	2.966E-01	1.147E-01	38.67	
TL-208	1.41E+10Y	1.00	4.707E-01	4.707E-01	0.873E-01	18.55	
BI-211	7.04E+08Y	1.00	4.159E+00	4.159E+00	0.565E+00	13.58	
PB-212	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
PO-212	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
BI-214	1600.00Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
PB-214	1600.00Y	1.00	1.447E+00	1.447E+00	0.210E+00	14.54	
PO-214	1600.00Y	1.00	1.447E+00	1.447E+00	0.210E+00	14.54	
PO-216	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
PO-218	1600.00Y	1.00	1.447E+00	1.447E+00	0.210E+00	14.54	
RA-224	1.41E+10Y	1.00	4.420E+00	4.420E+00	1.183E+00	26.76	
RA-226	1600.00Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
AC-228	1.41E+10Y	1.00	1.536E+00	1.536E+00	0.401E+00	26.10	
RA-228	1.41E+10Y	1.00	1.536E+00	1.536E+00	0.401E+00	26.10	
TH-228	1.41E+10Y	1.00	1.725E+00	1.725E+00	0.175E+00	10.13	
TH-230	4.47E+09Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
TH-232	1.41E+10Y	1.00	1.536E+00	1.536E+00	0.401E+00	26.10	
U-234	4.47E+09Y	1.00	1.282E+00	1.282E+00	0.185E+00	14.43	
NP-237	2.14E+06Y	1.00	8.708E-01	8.708E-01	3.817E-01	43.83	
AM-243	7380.00Y	1.00	4.028E-01	4.028E-01	1.076E-01	26.72	
ANH-511	1.00E+09Y	1.00	1.231E-01	1.231E-01	0.748E-01	60.77	
	Total Activity :		6.749E+01	6.755E+01			

Grand Total Activity : 6.749E+01 6.755E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	90.06	133	399	1.10	180.24	171	20	1.85E-02	52.1	5.52E+00	T
3	93.08	212	414	1.26	186.27	171	20	2.95E-02	38.5	5.75E+00	T
0	185.91	185	367	1.33	371.77	367	10	2.57E-02	43.1	5.98E+00	T
0	209.26	82	327	1.09	418.42	414	9	1.14E-02	82.6	5.57E+00	T
0	328.31	46	177	1.41	656.35	653	9	6.43E-03	****	4.09E+00	T
0	375.01	12	201	2.89	749.70	738	13	1.70E-03	****	3.71E+00	T
0	409.92	30	132	1.12	819.47	815	9	4.16E-03	****	3.47E+00	T
0	463.40	95	92	1.09	926.36	922	10	1.33E-02	42.8	3.16E+00	T
0	727.88	104	82	1.32	1455.10	1447	15	1.44E-02	42.8	2.16E+00	T
0	795.21	64	42	1.48	1589.70	1584	10	8.86E-03	45.7	1.99E+00	T
2	964.75	66	44	2.12	1928.71	1924	20	9.22E-03	41.1	1.64E+00	T
0	1848.24	9	9	0.69	3696.16	3689	12	1.24E-03	****	9.57E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:36:32.15

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232591001.CNF;1 *
* Acquisition date  : 9-JUL-2009 08:35:24.  Detector SN#     :             *
* Detector ID       : GAM10                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:02.07          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232591001            Analyst initials: MXR1         *
* Batch Number      : 881931                Sample Quantity : 1.25480E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08.8MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.282E+01	3.415E+00	6.220E-01	5.357E-02	52.766
CD-109	3.011E+00	1.164E+00	1.367E+00	1.550E-01	2.202
SN-126	2.966E-01	1.147E-01	1.356E-01	1.535E-02	2.186
TL-208	4.707E-01	8.732E-02	5.182E-02	3.482E-03	9.084
BI-211	4.159E+00	5.646E-01	3.075E-01	2.242E-02	13.525
PB-212	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
PO-212	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
BI-214	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
PB-214	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-214	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
PO-216	1.725E+00	1.747E-01	9.297E-02	7.052E-03	18.554
PO-218	1.447E+00	2.104E-01	1.072E-01	9.612E-03	13.498
RA-224	4.420E+00	1.183E+00	1.058E+00	6.493E-02	4.178
RA-226	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
AC-228	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
RA-228	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
TH-228	1.725E+00	1.747E-01	9.296E-02	7.051E-03	18.556
TH-230	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.536E+00	4.008E-01	2.172E-01	2.681E-02	7.069
U-234	1.282E+00	1.851E-01	1.153E-01	8.777E-03	11.115
NP-237	8.708E-01	3.817E-01	4.517E-01	1.062E-01	1.928
AM-243	4.028E-01	1.076E-01	1.044E-01	1.143E-02	3.858
ANH-511	1.231E-01	7.483E-02	4.241E-02	2.717E-03	2.904

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-9.064E-02		3.155E-01	4.982E-01	3.705E-02	-0.182
NA-22	-1.508E-02		4.842E-02	7.809E-02	6.049E-03	-0.193
NA-24	-8.263E-02		9.241E-02	Half-Life too short		
AL-26	9.558E-03		3.255E-02	5.565E-02	3.529E-03	0.172
TI-44	4.128E-01	+	7.896E-02	8.983E-02	9.829E-03	4.595
SC-46	-5.161E-02		4.183E-02	5.954E-02	5.892E-03	-0.867
V-48	-4.840E-02		6.817E-02	1.018E-01	9.410E-03	-0.476
CR-51	1.789E-01		3.426E-01	5.842E-01	4.220E-02	0.306
MN-52	-1.546E-02		1.985E-01	3.233E-01	2.732E-02	-0.048
MN-54	-2.184E-03		4.137E-02	6.767E-02	5.781E-03	-0.032
CO-56	-7.039E-04		3.946E-02	6.464E-02	5.708E-03	-0.011
CO-57	-2.309E-02		2.592E-02	4.025E-02	2.655E-03	-0.574
CO-58	-3.084E-02		4.298E-02	6.635E-02	5.308E-03	-0.465
FE-59	6.530E-03		9.298E-02	1.506E-01	1.257E-02	0.043
CO-60	-1.882E-02		4.100E-02	6.411E-02	5.571E-03	-0.294
ZN-65	-2.451E-02		1.090E-01	1.458E-01	1.062E-02	-0.168
GE-68	-7.842E-01		1.459E+00	2.225E+00	1.762E-01	-0.352
AS-73	1.012E-02		1.471E+00	2.463E+00	3.259E-01	0.004
AS-74	6.989E-02		8.065E-02	1.441E-01	8.229E-03	0.485
SE-75	3.492E-03		4.207E-02	7.073E-02	4.512E-03	0.049
BR-77	3.239E+00		7.361E+00	1.184E+01	7.513E-01	0.274
SR-82	1.128E-01		3.624E-01	6.143E-01	4.429E-02	0.184
RB-83	2.455E-02		6.909E-02	1.104E-01	7.006E-03	0.222
RB-84	5.841E-03		7.004E-02	1.155E-01	1.120E-02	0.051
KR-85	1.753E+01		7.447E+00	1.367E+01	8.732E-01	1.282
SR-85	8.869E-02		3.768E-02	6.917E-02	4.418E-03	1.282
RB-86	-8.853E-01		9.051E-01	1.314E+00	1.042E-01	-0.674
Y-88	3.231E-02		2.763E-02	5.675E-02	3.482E-03	0.569
ZR-88	-1.567E-03		2.967E-02	4.836E-02	3.286E-03	-0.032
Y-91	-7.518E+00		2.100E+01	3.407E+01	2.263E+00	-0.221
NB-94	2.083E-02		3.521E-02	6.100E-02	3.473E-03	0.342
NB-95	1.715E-02		4.398E-02	7.478E-02	5.218E-03	0.229
NB-95M	5.289E-02		1.337E-01	2.041E-01	1.583E-02	0.259
ZR-95	8.356E-02		6.697E-02	1.219E-01	9.573E-03	0.686
NB-97	-2.431E-02		1.458E-02	Half-Life too short		
ZR-97	3.355E-01		2.627E-01	Half-Life too short		
MO-99	5.319E+00		7.876E+00	1.376E+01	1.935E+00	0.386
TC-99M	-2.310E+08		6.114E+08	Half-Life too short		

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101	-6.641E-03		3.420E-02	5.297E-02	3.043E-03	-0.125
RH-102	1.030E-02		2.952E-02	4.890E-02	3.225E-03	0.211
RU-103	-5.403E-03		3.855E-02	6.054E-02	7.854E-03	-0.089
RH-106	-2.228E-01		3.048E-01	4.800E-01	5.549E-02	-0.464
RU-106	-2.228E-01		3.040E-01	4.800E-01	2.607E-02	-0.464
AG-108M	-1.683E-02		3.401E-02	5.336E-02	3.826E-03	-0.315
AG-110M	-2.666E-02		3.625E-02	5.722E-02	3.100E-03	-0.466
IN-111	4.085E-01		8.444E-01	1.290E+00	7.967E-02	0.317
IN-113M	1.800E-02		4.244E-02	7.135E-02	5.088E-03	0.252
SN-113	1.800E-02		4.244E-02	7.135E-02	5.088E-03	0.252
IN-114M	-1.782E-02		1.992E-01	2.781E-01	1.577E-02	-0.064
CD-115	-3.477E+00		7.157E+00	1.099E+01	6.922E-01	-0.316
SN-117M	-3.871E-02		5.220E-02	8.051E-02	4.515E-03	-0.481
SB-122	2.901E-01		1.583E+00	2.563E+00	1.542E-01	0.113
I-123	-4.774E-01		5.948E-01	Half-Life too short		
TE-123M	-1.154E-02		2.876E-02	4.513E-02	2.563E-03	-0.256
I-124	-3.886E-01		5.675E-01	8.499E-01	4.795E-02	-0.457
SB-124	3.855E-03		6.722E-02	1.106E-01	8.406E-03	0.035
SB-125	4.778E-02		9.394E-02	1.579E-01	1.100E-02	0.303
TE-125M	1.314E+00		9.268E+00	1.518E+01	1.457E+00	0.087
I-126	-1.524E-01		1.742E-01	2.715E-01	1.362E-02	-0.561
SB-126	1.378E-02		1.513E-01	2.204E-01	1.331E-02	0.063
SB-127	-5.456E-01		1.086E+00	1.736E+00	1.514E-01	-0.314
XE-127	-6.192E-03		4.408E-02	7.432E-02	4.304E-03	-0.083
I-131	-2.209E-02		1.011E-01	1.637E-01	1.202E-02	-0.135
TE-132	-2.278E-01		5.190E-01	8.573E-01	1.219E-01	-0.266
BA-133	-1.897E-02		4.734E-02	6.584E-02	7.944E-03	-0.288
I-133	4.902E-04		1.135E-03	Half-Life too short		
CS-134	1.266E-01	+	5.863E-02	9.440E-02	7.278E-03	1.341
CS-135	-8.035E-02		1.559E-01	2.541E-01	2.054E-02	-0.316
I-135	3.716E+07		1.330E+08	Half-Life too short		
CS-136	6.555E-02		1.174E-01	1.990E-01	1.742E-02	0.329
BA-137M	4.316E-02		3.793E-02	6.811E-02	3.361E-03	0.634
CS-137	4.562E-02		4.010E-02	7.200E-02	3.573E-03	0.634
CE-139	3.310E-02		2.931E-02	4.918E-02	2.686E-03	0.673
BA-140	-4.333E-02		2.518E-01	3.971E-01	1.295E-01	-0.109
LA-140	3.378E-02		7.981E-02	1.391E-01	1.079E-02	0.243
CE-141	2.914E-02		6.534E-02	1.054E-01	6.448E-03	0.277
CE-143	1.942E-04		4.555E-05	Half-Life too short		
CE-144	-3.818E-02		2.138E-01	3.422E-01	4.916E-02	-0.112
PM-144	-1.945E-02		3.420E-02	5.435E-02	3.032E-03	-0.358
PR-144	-1.317E+00		2.316E+00	3.680E+00	2.052E-01	-0.358
PM-146	-2.150E-02		4.191E-02	6.516E-02	6.019E-03	-0.330
ND-147	7.212E-02		5.292E-01	8.575E-01	1.177E-01	0.084
PM-149	-6.997E+01		6.103E+01	9.403E+01	1.359E+01	-0.744
EU-152	-2.895E-02		9.556E-02	1.491E-01	1.098E-02	-0.194
GD-153	-5.452E-02		9.228E-02	1.303E-01	1.213E-02	-0.418
EU-154	-3.573E-02		1.347E-01	2.183E-01	2.325E-02	-0.164

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	9.777E-03		1.114E-01	1.824E-01	1.513E-02	0.054
TB-160	5.561E-02		1.352E-01	2.300E-01	2.218E-02	0.242
HO-166M	-2.530E-02		6.245E-02	1.005E-01	5.895E-03	-0.252
TM-171	-2.673E+01		3.660E+01	5.863E+01	6.680E+00	-0.456
LU-176	-7.786E-03		2.282E-02	3.711E-02	2.441E-03	-0.210
LU-177	1.679E+00	+	1.391E+00	1.751E+00	1.023E-01	0.959
LU-177M	-6.891E-02		1.930E-01	2.657E-01	1.801E-02	-0.259
HF-181	1.992E-02		3.954E-02	6.632E-02	4.353E-03	0.300
W-181	-3.819E-01		4.920E-01	7.914E-01	9.144E-02	-0.483
TA-182	6.860E-02		2.162E-01	3.698E-01	2.550E-02	0.186
RE-183	3.392E-02		1.092E-01	1.770E-01	9.790E-03	0.192
RE-184	6.263E-02		2.221E-01	3.778E-01	2.355E-02	0.166
OS-185	-1.091E-02		4.164E-02	6.823E-02	3.505E-03	-0.160
RE-188	2.252E-01		1.770E-01	2.983E-01	1.695E-02	0.755
W-188	-2.290E+00		8.133E+00	1.167E+01	7.576E-01	-0.196
IR-192	-1.050E-02		3.274E-02	5.323E-02	3.538E-03	-0.197
AU-195	6.436E-02		2.323E-01	3.821E-01	3.467E-02	0.168
TL-200	1.502E-04		1.164E-04	Half-Life too short		
TL-201	-7.308E-01		5.405E+00	8.568E+00	4.686E-01	-0.085
TL-202	1.979E-02		6.722E-02	1.113E-01	7.484E-03	0.178
HG-203	2.544E-02		4.360E-02	7.368E-02	4.972E-03	0.345
BI-207	-8.850E-03		5.659E-02	8.975E-02	7.306E-03	-0.099
TL-207	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
PO-209	-7.020E+00		7.909E+00	1.175E+01	1.185E+00	-0.598
BI-210	4.094E+00		8.988E+00	1.536E+01	1.506E+00	0.267
PB-210	4.094E+00		8.988E+00	1.536E+01	1.506E+00	0.267
PO-210	4.094E+00		8.987E+00	1.536E+01	1.379E+00	0.267
PB-211	-1.141E+00		1.256E+00	1.318E+00	8.232E-01	-0.865
BI-212	1.221E+00	+	5.317E-01	6.744E-01	5.395E-02	1.811
PO-215	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
RN-219	3.097E-01		3.872E-01	6.627E-01	9.315E-02	0.467
RN-220	-1.556E+01		2.573E+01	3.894E+01	2.388E+00	-0.400
RA-223	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
AC-227	1.274E-01		3.714E-01	6.324E-01	8.954E-02	0.201
TH-227	1.274E-01		3.716E-01	6.324E-01	1.079E-01	0.201
TH-229	1.027E-01		5.095E-01	8.146E-01	4.646E-02	0.126
PA-231	-9.014E-01		1.495E+00	2.404E+00	3.382E-01	-0.375
TH-231	-6.999E-02		7.383E-01	1.065E+00	1.793E-01	-0.066
U-231	-5.128E-02		9.732E-01	1.420E+00	1.361E-01	-0.036
PA-233	8.658E-02		6.151E-02	1.095E-01	7.578E-03	0.791
PA-234	-8.805E-02		3.049E-01	4.805E-01	9.258E-02	-0.183
PA-234M	8.629E-01		7.515E+00	1.223E+01	1.406E+00	0.071
TH-234	2.539E+00		1.935E+00	3.223E+00	6.353E-01	0.788
U-235	1.791E-01		2.248E-01	3.651E-01	5.969E-02	0.491
NP-236	7.273E-02		7.887E-02	1.314E-01	7.320E-03	0.554
U-238	2.539E+00		1.935E+00	3.223E+00	6.353E-01	0.788
NP-239	-1.044E-01		1.939E-01	3.071E-01	2.148E-02	-0.340
AM-241	2.727E-01		2.313E-01	3.987E-01	5.120E-02	0.684

Sample ID : G232591001 Acquisition date : 9-JUL-2009 08:35:24

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.633E-02		1.000E-01	1.644E-01	1.377E-02	0.099
CM-247	-9.905E-03		3.493E-02	5.591E-02	3.796E-03	-0.177
CF-249	6.521E-03		3.907E-02	6.466E-02	4.393E-03	0.101
CF-251	-2.943E-02		1.299E-01	2.043E-01	1.133E-02	-0.144

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232591001           *
* Acquisition date  :  9-JUL-2009 08:35:24 Detector SN#     :               *
* Detector ID       : GAM10                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:02.07      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232591001           Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.2548E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.282E+01	3.346E+00	3.110E-01	1.707E+00
CD-109	3.011E+00	1.141E+00	7.112E-01	5.822E-01
SN-126	2.966E-01	1.124E-01	7.055E-02	5.733E-02
TL-208	4.707E-01	8.557E-02	2.625E-02	4.366E-02
BI-211	4.159E+00	5.533E-01	1.569E-01	2.823E-01
PB-212	1.725E+00	1.712E-01	4.769E-02	8.734E-02
PO-212	1.725E+00	1.712E-01	4.769E-02	8.734E-02
BI-214	1.282E+00	1.814E-01	5.840E-02	9.253E-02
PB-214	1.447E+00	2.062E-01	5.469E-02	1.052E-01
PO-214	1.447E+00	2.062E-01	5.469E-02	1.052E-01
PO-216	1.725E+00	1.712E-01	4.769E-02	8.734E-02
PO-218	1.447E+00	2.062E-01	5.469E-02	1.052E-01
RA-224	4.420E+00	1.159E+00	5.426E-01	5.914E-01
RA-226	1.282E+00	1.814E-01	5.840E-02	9.253E-02
AC-228	1.536E+00	3.928E-01	1.094E-01	2.004E-01
RA-228	1.536E+00	3.928E-01	1.094E-01	2.004E-01
TH-228	1.725E+00	1.712E-01	4.769E-02	8.734E-02
TH-230	1.282E+00	1.813E-01	5.840E-02	9.253E-02
TH-232	1.536E+00	3.928E-01	1.094E-01	2.004E-01
U-234	1.282E+00	1.813E-01	5.840E-02	9.253E-02
NP-237	8.708E-01	3.740E-01	2.350E-01	1.908E-01
AM-243	4.028E-01	1.055E-01	5.442E-02	5.381E-02
ANH-511	1.231E-01	7.333E-02	2.153E-02	3.741E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-9.064E-02	3.092E-01	2.531E-01	1.577E-01	NOT IDENT.
NA-22	-1.508E-02	4.745E-02	3.912E-02	2.421E-02	NOT IDENT.
NA-24	-8.263E+04	1.811E+05	0.000E+00	9.241E+04	SHORT HLIF
AL-26	9.558E-03	3.190E-02	2.774E-02	1.628E-02	NOT IDENT.

TI-44	4.128E-01	7.738E-02	4.679E-02	3.948E-02	FAIL ABUN
SC-46	-5.161E-02	4.099E-02	2.998E-02	2.092E-02	FAIL ABUN
V-48	-4.840E-02	6.681E-02	5.117E-02	3.409E-02	NOT IDENT.
CR-51	1.789E-01	3.358E-01	2.985E-01	1.713E-01	NOT IDENT.
MN-52	-1.546E-02	1.945E-01	1.617E-01	9.924E-02	NOT IDENT.
MN-54	-2.184E-03	4.054E-02	3.411E-02	2.068E-02	NOT IDENT.
CO-56	-7.039E-04	3.867E-02	3.257E-02	1.973E-02	NOT IDENT.
CO-57	-2.309E-02	2.541E-02	2.084E-02	1.296E-02	NOT IDENT.
CO-58	-3.084E-02	4.212E-02	3.345E-02	2.149E-02	NOT IDENT.
FE-59	6.530E-03	9.113E-02	7.561E-02	4.649E-02	NOT IDENT.
CO-60	-1.882E-02	4.018E-02	3.209E-02	2.050E-02	NOT IDENT.
ZN-65	-2.451E-02	1.069E-01	7.316E-02	5.452E-02	NOT IDENT.
GE-68	-7.842E-01	1.430E+00	1.117E+00	7.296E-01	NOT IDENT.
AS-73	1.012E-02	1.442E+00	1.289E+00	7.356E-01	NOT IDENT.
AS-74	6.989E-02	7.903E-02	7.296E-02	4.032E-02	NOT IDENT.
SE-75	3.492E-03	4.123E-02	3.623E-02	2.104E-02	NOT IDENT.
BR-77	3.239E+00	7.214E+00	6.009E+00	3.681E+00	FAIL ABUN
SR-82	1.128E-01	3.552E-01	3.099E-01	1.812E-01	NOT IDENT.
RB-83	2.455E-02	6.771E-02	5.602E-02	3.455E-02	NOT IDENT.
RB-84	5.841E-03	6.864E-02	5.817E-02	3.502E-02	NOT IDENT.
KR-85	1.753E+01	7.298E+00	6.938E+00	3.723E+00	NOT IDENT.
SR-85	8.869E-02	3.692E-02	3.510E-02	1.884E-02	NOT IDENT.
RB-86	-8.853E-01	8.870E-01	6.597E-01	4.525E-01	NOT IDENT.
Y-88	3.231E-02	2.708E-02	2.828E-02	1.382E-02	NOT IDENT.
ZR-88	-1.567E-03	2.907E-02	2.464E-02	1.483E-02	NOT IDENT.
Y-91	-7.518E+00	2.058E+01	1.708E+01	1.050E+01	NOT IDENT.
NB-94	2.083E-02	3.451E-02	3.082E-02	1.761E-02	NOT IDENT.
NB-95	1.715E-02	4.310E-02	3.774E-02	2.199E-02	NOT IDENT.
NB-95M	5.289E-02	1.310E-01	1.047E-01	6.684E-02	NOT IDENT.
ZR-95	8.356E-02	6.564E-02	6.151E-02	3.349E-02	NOT IDENT.
NB-97	-2.431E+04	2.858E+04	0.000E+00	1.458E+04	SHORT HLIF
ZR-97	3.355E+05	5.150E+05	0.000E+00	2.627E+05	SHORT HLIF
MO-99	5.319E+00	7.719E+00	6.950E+00	3.938E+00	NOT IDENT.
TC-99M	-2.310E+14	1.198E+15	0.000E+00	6.114E+14	SHORT HLIF
RH-101	-6.641E-03	3.352E-02	2.725E-02	1.710E-02	NOT IDENT.
RH-102	1.030E-02	2.893E-02	2.484E-02	1.476E-02	NOT IDENT.
RU-103	-5.403E-03	3.778E-02	3.074E-02	1.928E-02	FAIL ABUN
RH-106	-2.228E-01	2.988E-01	2.430E-01	1.524E-01	FAIL ABUN
RU-106	-2.228E-01	2.979E-01	2.430E-01	1.520E-01	FAIL ABUN
AG-108M	-1.683E-02	3.333E-02	2.714E-02	1.701E-02	NOT IDENT.
AG-110M	-2.666E-02	3.552E-02	2.894E-02	1.812E-02	NOT IDENT.
IN-111	4.085E-01	8.275E-01	6.617E-01	4.222E-01	NOT IDENT.
IN-113M	1.800E-02	4.159E-02	3.635E-02	2.122E-02	NOT IDENT.
SN-113	1.800E-02	4.159E-02	3.635E-02	2.122E-02	NOT IDENT.
IN-114M	-1.782E-02	1.952E-01	1.431E-01	9.960E-02	NOT IDENT.
CD-115	-3.477E+00	7.014E+00	5.578E+00	3.578E+00	NOT IDENT.
SN-117M	-3.871E-02	5.115E-02	4.153E-02	2.610E-02	NOT IDENT.
SB-122	2.901E-01	1.552E+00	1.299E+00	7.916E-01	NOT IDENT.
I-123	-4.774E+05	1.166E+06	0.000E+00	5.948E+05	SHORT HLIF
TE-123M	-1.154E-02	2.818E-02	2.328E-02	1.438E-02	NOT IDENT.
I-124	-3.886E-01	5.561E-01	4.303E-01	2.837E-01	NOT IDENT.
SB-124	3.855E-03	6.587E-02	5.519E-02	3.361E-02	FAIL ABUN
SB-125	4.778E-02	9.206E-02	8.036E-02	4.697E-02	FAIL ABUN
TE-125M	1.314E+00	9.082E+00	7.873E+00	4.634E+00	NOT IDENT.
I-126	-1.524E-01	1.707E-01	1.373E-01	8.709E-02	NOT IDENT.
SB-126	1.378E-02	1.482E-01	1.113E-01	7.563E-02	FAIL ABUN
SB-127	-5.456E-01	1.065E+00	8.774E-01	5.432E-01	NOT IDENT.
XE-127	-6.192E-03	4.319E-02	3.821E-02	2.204E-02	FAIL ABUN
I-131	-2.209E-02	9.904E-02	8.350E-02	5.053E-02	NOT IDENT.
TE-132	-2.278E-01	5.086E-01	4.401E-01	2.595E-01	NOT IDENT.
BA-133	-1.897E-02	4.640E-02	3.359E-02	2.367E-02	NOT IDENT.
I-133	4.902E+02	2.225E+03	0.000E+00	1.135E+03	SHORT HLIF
CS-134	1.266E-01	5.746E-02	4.761E-02	2.932E-02	FAIL ABUN
CS-135	-8.035E-02	1.528E-01	1.302E-01	7.795E-02	NOT IDENT.
I-135	3.716E+13	2.607E+14	0.000E+00	1.330E+14	SHORT HLIF
CS-136	6.555E-02	1.150E-01	9.996E-02	5.869E-02	FAIL ABUN
BA-137M	4.316E-02	3.718E-02	3.444E-02	1.897E-02	NOT IDENT.
CS-137	4.562E-02	3.930E-02	3.641E-02	2.005E-02	NOT IDENT.
CE-139	3.310E-02	2.872E-02	2.536E-02	1.465E-02	NOT IDENT.
BA-140	-4.333E-02	2.468E-01	2.014E-01	1.259E-01	NOT IDENT.
LA-140	3.378E-02	7.821E-02	6.945E-02	3.990E-02	FAIL ABUN
CE-141	2.914E-02	6.403E-02	5.443E-02	3.267E-02	NOT IDENT.
CE-143	1.942E+02	8.928E+01	0.000E+00	4.555E+01	SHORT HLIF
CE-144	-3.818E-02	2.095E-01	1.770E-01	1.069E-01	NOT IDENT.
PM-144	-1.945E-02	3.351E-02	2.746E-02	1.710E-02	NOT IDENT.
PR-144	-1.317E+00	2.269E+00	1.860E+00	1.158E+00	NOT IDENT.
PM-146	-2.150E-02	4.107E-02	3.313E-02	2.096E-02	NOT IDENT.
ND-147	7.212E-02	5.186E-01	4.350E-01	2.646E-01	FAIL ABUN

PM-149	-6.997E+01	5.981E+01	4.812E+01	3.052E+01	NOT IDENT.
EU-152	-2.895E-02	9.365E-02	7.609E-02	4.778E-02	FAIL ABUN
GD-153	-5.452E-02	9.043E-02	6.767E-02	4.614E-02	NOT IDENT.
EU-154	-3.573E-02	1.320E-01	1.093E-01	6.736E-02	NOT IDENT.
EU-155	9.777E-03	1.092E-01	9.465E-02	5.572E-02	FAIL ABUN
TB-160	5.561E-02	1.325E-01	1.158E-01	6.760E-02	FAIL ABUN
HO-166M	-2.530E-02	6.120E-02	5.075E-02	3.122E-02	FAIL ABUN
TM-171	-2.673E+01	3.587E+01	3.061E+01	1.830E+01	NOT IDENT.
LU-176	-7.786E-03	2.236E-02	1.897E-02	1.141E-02	FAIL ABUN
LU-177	1.679E+00	1.363E+00	8.999E-01	6.953E-01	FAIL ABUN
LU-177M	-6.891E-02	1.891E-01	1.353E-01	9.648E-02	NOT IDENT.
HF-181	1.992E-02	3.875E-02	3.369E-02	1.977E-02	NOT IDENT.
W-181	-3.819E-01	4.822E-01	4.133E-01	2.460E-01	NOT IDENT.
TA-182	6.860E-02	2.118E-01	1.854E-01	1.081E-01	FAIL ABUN
RE-183	3.392E-02	1.070E-01	9.129E-02	5.460E-02	FAIL ABUN
RE-184	6.263E-02	2.176E-01	1.936E-01	1.110E-01	NOT IDENT.
OS-185	-1.091E-02	4.081E-02	3.452E-02	2.082E-02	NOT IDENT.
RE-188	2.252E-01	1.735E-01	1.539E-01	8.850E-02	NOT IDENT.
W-188	-2.290E+00	7.971E+00	5.970E+00	4.067E+00	NOT IDENT.
IR-192	-1.050E-02	3.208E-02	2.720E-02	1.637E-02	FAIL ABUN
AU-195	6.436E-02	2.276E-01	1.984E-01	1.161E-01	FAIL ABUN
TL-200	1.502E+02	2.281E+02	0.000E+00	1.164E+02	SHORT HLIF
TL-201	-7.308E-01	5.297E+00	4.417E+00	2.703E+00	NOT IDENT.
TL-202	1.979E-02	6.587E-02	5.662E-02	3.361E-02	NOT IDENT.
HG-203	2.544E-02	4.272E-02	3.771E-02	2.180E-02	NOT IDENT.
BI-207	-8.850E-03	5.546E-02	4.508E-02	2.829E-02	FAIL ABUN
TL-207	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
PO-209	-7.020E+00	7.750E+00	5.914E+00	3.954E+00	NOT IDENT.
BI-210	4.094E+00	8.809E+00	8.056E+00	4.494E+00	NOT IDENT.
PB-210	4.094E+00	8.809E+00	8.056E+00	4.494E+00	NOT IDENT.
PO-210	4.094E+00	8.807E+00	8.056E+00	4.493E+00	NOT IDENT.
PB-211	-1.141E+00	1.231E+00	6.713E-01	6.282E-01	NOT IDENT.
BI-212	1.221E+00	5.211E-01	3.406E-01	2.658E-01	FAIL ABUN
PO-215	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
RN-219	3.097E-01	3.794E-01	3.375E-01	1.936E-01	NOT IDENT.
RN-220	-1.556E+01	2.522E+01	1.974E+01	1.286E+01	NOT IDENT.
RA-223	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
AC-227	1.274E-01	3.640E-01	3.241E-01	1.857E-01	FAIL ABUN
TH-227	1.274E-01	3.642E-01	3.241E-01	1.858E-01	FAIL ABUN
TH-229	1.027E-01	4.993E-01	4.191E-01	2.547E-01	FAIL ABUN
PA-231	-9.014E-01	1.465E+00	1.230E+00	7.474E-01	FAIL ABUN
TH-231	-6.999E-02	7.235E-01	5.441E-01	3.691E-01	FAIL ABUN
U-231	-5.128E-02	9.537E-01	7.378E-01	4.866E-01	FAIL ABUN
PA-233	8.658E-02	6.028E-02	5.597E-02	3.076E-02	FAIL ABUN
PA-234	-8.805E-02	2.988E-01	2.417E-01	1.524E-01	FAIL ABUN
PA-234M	8.629E-01	7.364E+00	6.148E+00	3.757E+00	NOT IDENT.
TH-234	2.539E+00	1.897E+00	1.684E+00	9.677E-01	FAIL ABUN
U-235	1.791E-01	2.203E-01	1.886E-01	1.124E-01	FAIL ABUN
NP-236	7.273E-02	7.729E-02	6.777E-02	3.943E-02	NOT IDENT.
U-238	2.539E+00	1.897E+00	1.684E+00	9.677E-01	FAIL ABUN
NP-239	-1.044E-01	1.900E-01	1.591E-01	9.695E-02	FAIL ABUN
AM-241	2.727E-01	2.267E-01	2.084E-01	1.157E-01	NOT IDENT.
CM-243	1.633E-02	9.805E-02	8.531E-02	5.002E-02	FAIL ABUN
CM-247	-9.905E-03	3.423E-02	2.847E-02	1.746E-02	NOT IDENT.
CF-249	6.521E-03	3.829E-02	3.294E-02	1.954E-02	NOT IDENT.
CF-251	-2.943E-02	1.273E-01	1.053E-01	6.493E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	274.0410
46.50	274.0410
46.50	274.0410
48.70	269.2525
49.72	290.2568
51.35	268.3630
52.39	260.7319
52.97	252.7546
53.15	264.0262
53.44	259.5680
54.07	269.2985
56.28	285.7653
56.28	285.7676
57.37	0.0000
57.53	311.0710
57.53	311.0722
57.60	315.8229
57.98	299.1772
57.98	299.1772
59.32	268.0433
59.32	268.0433
59.40	268.0939
59.54	268.1827
59.72	281.5228
60.01	293.0587
61.10	387.6334
61.14	387.6688
61.30	381.1750
63.00	323.6470
63.29	311.4773
63.29	311.4773
63.58	311.6819
64.28	328.4034
65.12	383.5391
65.20	383.6069
65.20	383.6069
66.05	410.2080
66.72	357.0601
66.83	352.3467
66.91	352.4083
67.20	342.0630
67.20	342.0630
67.75	349.2062
67.85	349.2819
68.90	319.4063
68.90	319.4063
69.30	314.1792
69.67	320.2251
70.82	341.3391
70.82	341.3391
70.83	341.3463
72.80	352.9653
72.87	353.0170
72.87	353.0170
74.67	367.9896
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.81	368.0950
74.97	368.2139
75.28	368.4459
75.70	368.7585
77.11	369.8035
77.11	369.8035
77.11	369.8035

77.11	369.8035
77.11	369.8035
77.11	369.8035
78.38	370.7374
79.62	371.1476
79.80	366.8403
79.80	366.8403
80.11	367.0635
80.18	367.1127
80.30	392.3687
80.30	392.3687
80.57	392.5749
81.00	424.0381
81.07	424.0948
81.07	424.0948
81.07	424.0948
81.07	424.0948
82.60	378.7417
83.37	371.3521
83.78	393.5045
83.78	393.5045
83.78	393.5045
83.78	393.5045
84.21	384.8722
84.40	385.0100
84.90	380.8911
85.43	406.6864
86.29	453.7603
86.50	453.9383
86.54	453.9706
86.59	454.0122
86.72	365.6966
86.79	365.7412
86.94	365.8436
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.30	366.0875
87.57	366.2681
87.88	366.4766
88.03	366.5771
88.36	366.7986
88.47	366.8712
89.95	367.8578
91.11	368.6248
92.29	369.3992
92.38	369.4588
92.38	369.4588
93.35	370.0917
94.00	285.4782
94.67	293.4109
94.67	293.4138
94.90	307.2196
94.90	307.2196
94.90	307.2196
94.90	307.2196
95.87	295.5484
95.87	295.5484
96.73	297.5137
97.43	308.5620
98.44	279.5104
98.44	279.5104
98.88	274.6151
99.55	273.9037
99.55	273.9037
99.86	285.2950
100.00	285.3631
100.10	285.4128
103.18	299.2131
103.76	288.1775
105.00	269.1669
105.31	294.0672
108.00	279.7984
109.28	284.5220
111.00	305.0757
111.00	305.0757

111.76	303.3544
112.95	280.9389
115.19	280.8610
116.30	300.2310
117.00	294.2444
117.00	294.2444
117.66	280.8628
121.11	281.2545
121.62	292.0483
121.78	309.0515
122.06	301.7659
122.32	282.8143
122.32	282.8143
122.32	282.8143
122.32	282.8143
123.07	276.7643
127.23	323.2375
129.76	300.8464
131.20	311.1104
133.02	293.6144
133.54	308.8934
135.34	308.5794
136.00	304.5390
136.25	302.4817
136.48	298.2560
140.51	314.0035
140.51	0.0000
142.18	321.2368
142.65	330.1518
143.76	285.8962
144.24	289.3504
144.24	289.3504
144.24	289.3504
144.24	289.3504
145.22	301.7487
145.44	295.2740
147.16	320.0463
152.43	306.7604
152.70	289.2037
153.22	270.6155
154.21	252.1489
154.21	252.1489
154.21	252.1489
154.21	252.1489
155.03	267.9075
156.02	319.2246
158.56	287.9815
159.00	0.0000
159.00	282.5745
160.31	237.3412
161.27	271.0860
162.32	260.2620
162.64	261.4790
163.35	274.0050
163.89	293.2068
165.85	228.8339
167.43	275.3409
171.28	251.7506
171.86	227.0676
172.10	214.7009
176.55	266.9114
176.60	265.7899
181.06	260.2828
184.41	247.5044
185.71	270.8080
186.00	270.8944
190.27	235.2545
192.34	262.3625
193.63	237.2627
197.04	255.5455
198.01	238.3638
198.60	261.7813
200.40	256.4451
201.83	260.0381
202.84	249.7925
205.31	255.8753
208.36	253.8501
208.81	246.9119

209.75	235.8488
209.75	235.8488
210.97	241.7943
215.65	242.3908
216.55	233.7207
218.09	242.0840
222.10	246.6064
223.80	238.0610
226.40	215.3284
227.00	210.9625
227.08	209.1831
227.20	219.0847
228.16	239.0554
228.18	239.0595
228.18	239.0595
231.56	0.0000
235.69	237.4917
236.00	237.5618
236.00	237.5618
238.60	232.3242
238.63	232.3301
238.63	232.3301
238.63	232.3301
239.00	232.4082
240.98	232.8301
241.98	233.0430
241.98	233.0430
241.98	233.0430
244.69	197.1145
245.39	189.9330
247.94	183.0460
248.90	197.8594
249.79	197.1008
252.40	192.0436
252.85	178.3316
252.85	178.3316
254.15	0.0000
256.20	181.6214
256.20	181.6214
260.50	174.8977
260.90	177.7354
262.80	188.2248
264.65	175.5235
268.24	210.5232
268.79	197.5757
269.46	173.4413
269.46	173.4413
269.46	173.4413
269.46	173.4413
271.23	181.1705
273.65	259.2057
276.40	181.0141
277.35	193.3576
277.60	189.6432
277.60	189.6432
278.00	187.8265
278.60	192.6192
279.20	204.9338
279.53	194.6468
280.46	233.3779
281.68	199.6978
283.67	179.2644
284.30	174.6372
285.00	194.5709
285.90	189.0411
286.10	185.2902
286.10	185.2902
287.40	157.0916
288.45	0.0000
290.67	180.6557
290.80	198.8923
291.72	203.5975
293.26	0.0000
293.70	161.3084
295.21	159.9763
295.21	159.9763
295.21	159.9763
295.96	160.0712

296.50	160.1378
297.23	160.2301
298.57	160.3993
299.80	160.5531
299.80	160.5531
300.09	160.5890
300.09	160.5890
300.09	160.5890
300.10	160.5890
300.12	160.5916
301.29	150.0218
302.84	151.7363
303.76	154.9102
303.91	154.9300
304.40	124.2962
304.40	124.2962
304.84	128.9449
306.84	142.2097
308.46	149.1203
311.98	118.6514
316.51	147.1271
318.01	148.2608
319.02	140.6148
319.41	137.7445
320.08	130.0497
323.87	154.1606
323.87	154.1606
323.87	154.1606
323.87	154.1606
325.23	146.5216
328.77	160.1863
333.44	141.1260
334.20	138.5902
334.20	138.5902
334.30	138.5988
338.28	144.5663
338.28	144.5663
338.28	144.5663
338.28	144.5663
338.32	144.5708
338.32	144.5708
338.32	144.5708
340.50	130.8081
340.57	130.8142
344.27	135.4457
345.85	131.3025
350.59	0.0000
351.07	124.0406
351.92	124.1150
351.92	124.1150
351.92	124.1150
355.39	0.0000
356.01	133.8237
364.48	126.1846
366.43	117.1262
367.43	120.4156
367.94	0.0000
369.80	144.7273
374.96	129.0879
383.85	127.8111
387.95	117.9807
388.63	122.1021
391.69	108.0687
391.69	108.0687
392.90	118.3541
398.62	121.8562
400.65	92.2783
401.10	95.3812
401.81	95.4238
402.60	113.9488
404.84	131.5840
410.95	97.4119
411.60	100.7542
413.65	115.7649
414.70	99.2915
415.30	100.7077
415.76	114.7325
417.63	0.0000

418.52	121.2936
423.70	129.9934
427.08	109.4156
427.89	107.3849
432.53	125.4547
433.93	123.4646
439.47	103.9231
439.56	111.2777
439.89	110.2487
443.98	89.4630
444.90	77.9261
445.03	77.9328
445.03	77.9328
445.03	77.9328
445.03	77.9328
453.90	102.6777
463.38	108.5524
468.07	104.1438
473.00	102.7178
475.06	95.3366
475.35	87.8520
476.78	90.0652
477.59	100.8317
477.96	92.2700
482.03	79.5724
484.57	97.9872
487.03	92.7279
490.36	0.0000
492.35	87.5877
497.08	81.3046
507.63	0.0000
510.53	0.0000
510.84	79.7140
511.00	79.7207
511.85	79.7552
511.85	79.7552
513.99	79.8443
513.99	79.8443
520.41	79.0137
520.65	79.0225
527.90	88.1299
528.96	0.0000
529.64	93.7210
529.87	0.0000
531.02	87.1657
537.32	94.0842
543.00	86.5812
546.56	0.0000
549.76	87.9866
552.65	98.1487
555.20	77.0544
563.23	100.9012
563.90	93.0837
568.70	87.6786
569.32	106.8199
569.50	106.8286
569.67	106.8373
573.80	95.5553
574.00	95.5630
574.64	86.5758
578.91	84.3418
579.30	0.0000
583.14	67.9102
585.48	67.9852
591.81	74.5507
592.07	74.5607
593.00	86.4185
595.88	65.5840
600.56	93.1099
602.52	0.0000
602.71	103.9385
602.71	103.9385
603.60	71.6073
604.41	85.3512
604.70	85.3626
609.31	94.4024
609.31	94.4024
609.31	94.4024

609.31	94.4024
610.33	94.4452
612.46	96.3713
614.37	91.8628
618.01	84.6530
621.84	84.7990
621.84	84.7990
631.29	73.1232
633.02	71.3265
633.10	71.3303
634.78	63.9665
635.90	72.3461
636.97	90.9395
645.85	78.2517
646.12	79.1915
656.30	82.3496
657.75	97.3832
657.90	0.0000
661.65	76.9110
661.65	76.9110
664.57	0.0000
666.33	98.6785
666.33	98.6785
675.00	69.8014
677.61	70.8215
685.20	81.4669
692.80	79.8226
695.00	80.8475
696.49	86.6055
696.49	86.6055
697.00	87.5774
697.49	84.7369
698.33	85.7197
698.50	86.6788
699.00	92.4129
702.63	80.1466
706.10	94.5914
706.58	0.0000
706.67	91.7461
709.31	71.7535
711.68	84.2703
713.82	88.1771
717.42	70.0682
720.50	70.4750
721.93	0.0000
722.20	72.1252
722.78	81.7606
722.78	81.7606
722.89	81.7648
722.95	81.7668
723.30	84.9863
724.18	75.3901
727.18	65.5230
733.00	43.4608
735.90	78.4279
739.58	51.3205
742.81	69.8063
744.21	64.9946
747.13	45.6448
751.79	73.9423
752.31	62.2797
753.82	56.4735
755.35	50.6606
756.15	47.7535
756.87	46.7918
763.93	106.5438
765.79	80.2083
766.41	66.5308
766.84	62.6266
768.36	66.5789
768.36	66.5789
768.36	66.5789
768.36	66.5789
776.49	60.8920
778.00	84.5114
778.57	86.4961
778.89	84.5387
783.80	48.2571

785.46	69.9669
792.07	49.3933
795.84	61.0042
796.30	57.7153
801.93	71.6068
805.60	57.5823
810.29	85.5276
810.76	82.5583
815.85	66.7661
817.79	72.7968
818.51	76.8064
819.60	74.8407
826.30	84.0226
828.27	0.0000
831.60	82.1782
831.96	79.1813
834.83	81.2690
836.80	0.0000
846.75	59.4465
848.13	60.4834
856.28	0.0000
856.80	53.9258
860.37	52.6437
867.32	60.8892
867.82	60.8994
871.10	49.5367
873.19	49.8266
874.81	63.0808
875.33	0.0000
876.40	60.0616
879.36	46.8749
880.27	50.9668
880.51	50.9705
881.50	55.0666
883.24	56.1199
884.67	50.0216
889.25	73.6154
896.60	68.6734
898.02	74.8589
899.00	69.7548
903.28	54.7878
911.07	56.6462
911.07	56.6462
911.07	56.6462
919.63	53.1186
920.93	52.6983
925.00	53.8040
925.24	52.7730
926.50	53.8294
934.06	46.6985
934.06	46.6985
934.06	46.6985
934.06	46.6985
935.52	42.5675
937.48	55.0613
944.10	45.8101
946.00	54.1722
949.00	67.7803
962.29	41.8877
964.01	47.1500
966.15	48.2304
968.20	48.2618
969.11	48.2753
969.11	48.2753
969.11	48.2753
977.42	48.4022
980.50	55.8208
983.50	55.8739
989.30	59.1432
996.32	69.8559
1001.03	60.4178
1001.68	50.8875
1004.76	61.5471
1021.30	0.0000
1024.50	0.0000
1034.80	50.3299
1037.82	65.3814
1038.57	65.3963

1038.76	0.0000
1045.16	70.8952
1046.59	63.4048
1048.07	55.9051
1050.47	54.8698
1050.47	54.8698
1063.62	55.0815
1076.63	75.8892
1077.35	68.3156
1085.78	60.8727
1099.22	49.1045
1112.02	61.0164
1112.84	51.1191
1115.52	58.4661
1120.29	57.0807
1120.29	57.0807
1120.29	57.0807
1120.29	57.0807
1120.51	57.0857
1121.28	57.0984
1124.00	0.0000
1129.67	59.4330
1131.51	0.0000
1147.95	0.0000
1167.94	68.5891
1173.22	67.7603
1175.09	59.4349
1177.93	61.3406
1189.05	74.5736
1204.90	75.8254
1205.75	0.0000
1213.00	74.1107
1221.42	66.7532
1230.97	74.4579
1235.34	83.9807
1236.41	0.0000
1238.11	84.0387
1238.11	84.0387
1238.11	84.0387
1238.11	84.0387
1238.25	84.0423
1246.25	62.4524
1260.41	0.0000
1271.85	54.2887
1274.45	53.3727
1274.54	54.3258
1291.56	38.2878
1298.22	0.0000
1312.09	39.4452
1325.50	22.2008
1325.50	22.2008
1332.49	37.7083
1333.61	31.9164
1360.21	28.2283
1362.66	0.0000
1365.15	20.4651
1368.21	30.2331
1368.53	0.0000
1376.25	26.3815
1377.67	30.2999
1377.67	30.2999
1377.67	30.2999
1377.67	30.2999
1384.27	27.4110
1394.10	22.5686
1395.20	22.5742
1407.95	23.6260
1434.06	22.7782
1436.60	29.7278
1457.56	0.0000
1460.81	27.8997
1489.15	20.0545
1509.49	21.1521
1596.49	16.4199
1620.62	18.5654
1678.03	0.0000
1691.02	10.4626
1691.02	10.4626

1706.46	0.0000
1750.46	0.0000
1764.49	7.4301
1764.49	7.4301
1764.49	7.4301
1764.49	7.4301
1770.23	1.8216
1771.40	5.4662
1791.20	0.0000
1808.65	11.7748
1836.01	3.2278

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232591001

Total Uranium Activity	7.6370E+00	ug/g
Total Uranium Counting Unc.	5.6433E+00	ug/g
Total Uranium Tpu	2.8793E-06	ug/g
Total Uranium Mda	5.0100E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID  : G232591001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM10            *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:35:24.45    SAMPLE ALQT:  125.480 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.669E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.637E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.944E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.424E+00
```

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:24:24.14

```
*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:22:22.
Sample ID         : G1201873069          Sample quantity  : 1.32820E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.24  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
No peaks were found
```

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:24:26

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 2-JUL-2009 00:00:00
Sample ID : G1201873069
Sample type : SOLID
Detector name : GAMMA21
Elapsed live time: 0 02:00:00.00
Peak Width (FWHM): 3.00
Energy tolerance : 1.50 keV
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 75.00

Acquisition date : 9-JUL-2009 08:22:22
Sample quantity : 132.82 GRAM
Sample geometry :
Detector geometry: CAN
Elapsed real time: 0 02:00:08.24 0.1%
Confidence level : 5.00 %
Half life ratio : 8.00
Systematic Error : 0.00 %
Efficiencies at : Peak Energy
WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.057E-01	1.934E-01	2.700E-01	1.900E-02	-0.391
NA-22		1274.54	*	5.508E-03	2.973E-02	5.040E-02	2.981E-03	0.109
NA-24		1368.53	*	-7.892E-05	2.973E-02	Half-Life too short		
AL-26		1129.67		4.667E-01	1.039E+00	1.871E+00	1.126E-01	0.249
		1808.65	*	1.059E-03	3.994E-02	6.649E-02	3.702E-03	0.016
K-40		1460.81	*	1.161E-01	3.351E-01	5.820E-01	3.704E-02	0.199
TI-44		67.85		-7.748E-04	7.801E-03	1.258E-02	9.152E-04	-0.062
		78.38	*	-1.007E-02	9.084E-03	1.264E-02	9.775E-04	-0.797
SC-46		889.25	*	-2.137E-02	2.307E-02	2.953E-02	2.120E-03	-0.724
		1120.51		1.462E-02	2.791E-02	5.092E-02	3.099E-03	0.287
V-48		944.10		-8.409E-02	3.584E-01	5.559E-01	3.907E-02	-0.151
		983.50	*	-4.730E-02	3.639E-02	4.128E-02	2.840E-03	-1.146
		1312.09		3.372E-02	4.415E-02	8.348E-02	4.989E-03	0.404
CR-51		320.08	*	1.004E-01	1.776E-01	3.112E-01	2.024E-02	0.323
MN-52		744.21		4.783E-02	5.771E-02	1.097E-01	8.023E-03	0.436
		848.13		-6.448E-01	1.954E+00	3.055E+00	2.222E-01	-0.211
		935.52		-3.590E-02	6.326E-02	8.721E-02	6.153E-03	-0.412
		1246.25		-7.159E-01	1.946E+00	2.906E+00	1.697E-01	-0.246
		1333.61		9.273E-01	1.592E+00	2.908E+00	1.749E-01	0.319
		1434.06	*	-1.474E-03	1.064E-01	1.712E-01	1.032E-02	-0.009
MN-54		834.83	*	-1.609E-02	2.456E-02	3.563E-02	2.599E-03	-0.452
CO-56		846.75	*	-1.989E-02	2.822E-02	4.090E-02	2.976E-03	-0.486
		977.42		1.769E+00	1.721E+00	3.431E+00	2.369E-01	0.516
		1037.82		-5.063E-02	1.982E-01	3.071E-01	2.213E-02	-0.165
		1175.09		1.363E-01	1.506E+00	2.501E+00	1.418E-01	0.055
		1238.25		-1.818E-02	4.966E-02	7.391E-02	4.572E-03	-0.246
		1360.21		1.702E-01	5.896E-01	1.040E+00	6.264E-02	0.164
		1771.40		-8.956E-02	2.088E-01	2.983E-01	1.685E-02	-0.300
CO-57		122.06	*	3.399E-03	1.035E-02	1.714E-02	1.973E-03	0.198
		136.48		-1.248E-02	9.135E-02	1.444E-01	1.520E-02	-0.086
CO-58		810.76	*	1.470E-02	2.914E-02	5.206E-02	3.824E-03	0.282
FE-59		142.65		-3.457E-01	1.101E+00	1.624E+00	1.499E-01	-0.213
		192.34		-1.990E-01	4.011E-01	6.427E-01	7.712E-02	-0.310
		1099.22	*	-8.377E-03	5.121E-02	8.059E-02	5.780E-03	-0.104

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1291.56		6.178E-02	6.019E-02	1.250E-01	9.409E-03	0.494
CO-60		1173.22		-1.927E-02	3.303E-02	4.726E-02	2.678E-03	-0.408
		1332.49	*	6.945E-03	3.313E-02	5.617E-02	3.379E-03	0.124
ZN-65		1115.52	*	3.344E-02	5.662E-02	1.038E-01	6.367E-03	0.322
GE-68		1077.35	*	-4.615E-01	9.392E-01	1.385E+00	8.839E-02	-0.333
AS-73		53.44	*	-4.483E-02	6.811E-02	1.029E-01	6.917E-03	-0.435
AS-74		595.88	*	2.940E-04	4.642E-02	7.485E-02	5.151E-03	0.004
		634.78		-4.344E-02	1.929E-01	2.979E-01	2.100E-02	-0.146
SE-75		66.05		-1.929E-01	8.358E-01	1.223E+00	1.139E-01	-0.158
		96.73		-4.775E-02	2.200E-01	3.473E-01	4.817E-02	-0.137
		121.11		-7.184E-03	5.325E-02	8.444E-02	1.138E-02	-0.085
		136.00		-1.189E-04	1.632E-02	2.613E-02	2.630E-03	-0.005
		198.60		7.542E-01	8.064E-01	1.456E+00	1.084E-01	0.518
		264.65	*	5.518E-03	2.170E-02	3.703E-02	2.240E-03	0.149
		279.53		-1.524E-02	5.127E-02	8.215E-02	5.181E-03	-0.186
		303.91		-3.904E-01	1.050E+00	1.660E+00	1.591E-01	-0.235
		400.65		-1.097E-02	1.410E-01	2.285E-01	2.033E-02	-0.048
BR-77		87.88		-4.030E+00	4.829E+00	7.173E+00	5.937E-01	-0.562
		200.40		-3.975E+00	7.850E+00	1.254E+01	7.766E-01	-0.317
		239.00		1.968E-01	5.248E-01	8.868E-01	5.461E-02	0.222
		249.79		-9.218E-01	3.792E+00	6.168E+00	3.765E-01	-0.149
		281.68		-1.400E+00	4.516E+00	7.212E+00	4.216E-01	-0.194
		297.23		2.705E-01	3.036E+00	5.073E+00	2.976E-01	0.053
		303.76		-2.400E+00	9.849E+00	1.584E+01	9.290E-01	-0.152
		439.47		-7.344E+00	8.570E+00	1.199E+01	6.977E-01	-0.613
		484.57		1.763E+00	1.506E+01	2.492E+01	1.542E+00	0.071
		520.65	*	4.969E-02	6.918E-01	1.134E+00	7.311E-02	0.044
		574.64		-4.187E+00	1.299E+01	1.968E+01	1.333E+00	-0.213
		578.91		-6.964E+00	6.344E+00	8.306E+00	5.645E-01	-0.838
		585.48		7.615E+00	1.311E+01	2.279E+01	1.557E+00	0.334
		755.35		-4.746E+00	1.007E+01	1.515E+01	1.109E+00	-0.313
		817.79		-5.644E+00	1.024E+01	1.531E+01	1.120E+00	-0.369
SR-82		698.33		6.945E+00	2.232E+01	3.882E+01	2.811E+00	0.179
		776.49	*	8.230E-02	2.442E-01	4.264E-01	3.126E-02	0.193
		1395.20		-4.113E+00	8.390E+00	1.194E+01	7.198E-01	-0.345
RB-83		520.41	*	-1.084E-02	4.349E-02	6.769E-02	4.362E-03	-0.160
		529.64		4.077E-02	7.105E-02	1.243E-01	8.087E-03	0.328
		552.65		-1.064E-01	1.166E-01	1.553E-01	1.032E-02	-0.685
RB-84		881.50	*	1.453E-02	3.378E-02	6.132E-02	4.416E-03	0.237
KR-85		513.99	*	-7.030E+00	6.860E+00	9.933E+00	6.357E-01	-0.708
SR-85		513.99	*	-3.322E-02	3.241E-02	4.693E-02	3.004E-03	-0.708
RB-86		1076.63	*	-3.497E-01	4.476E-01	6.100E-01	3.896E-02	-0.573
Y-88		898.02		-2.582E-02	2.935E-02	3.999E-02	2.881E-03	-0.646
		1836.01	*	-1.293E-03	3.715E-02	6.083E-02	3.357E-03	-0.021
ZR-88		392.90	*	1.199E-03	1.880E-02	3.106E-02	1.675E-03	0.039
Y-91		1204.90	*	3.325E+00	1.149E+01	1.984E+01	1.140E+00	0.168
NB-94		702.63	*	3.184E-03	2.812E-02	4.772E-02	3.460E-03	0.067
		871.10		2.300E-02	2.529E-02	4.819E-02	3.483E-03	0.477
NB-95		765.79	*	-7.575E-04	2.960E-02	4.917E-02	3.603E-03	-0.015

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M		235.69	*	-1.457E-02	5.331E-02	8.659E-02	6.770E-03	-0.168
ZR-95		724.18		1.333E-03	5.531E-02	9.280E-02	7.570E-03	0.014
		756.15	*	-9.515E-03	4.136E-02	6.604E-02	5.504E-03	-0.144
NB-97		657.90	*	-1.058E-05	4.136E-02	Half-Life too short		
		1024.50		-1.480E-03	4.136E-02	Half-Life too short		
ZR-97		254.15		-6.006E-04	4.136E-02	Half-Life too short		
		355.39		4.877E-04	4.136E-02	Half-Life too short		
		507.63	*	-1.086E-03	4.136E-02	Half-Life too short		
		602.52		4.356E-04	4.136E-02	Half-Life too short		
		1021.30		-2.393E-04	4.136E-02	Half-Life too short		
		1147.95		-4.800E-05	4.136E-02	Half-Life too short		
		1362.66		1.347E-03	4.136E-02	Half-Life too short		
		1750.46		-2.149E-03	4.136E-02	Half-Life too short		
MO-99		140.51		3.734E-01	1.598E+00	2.610E+00	7.301E-01	0.143
		181.06		1.360E-01	1.131E+00	1.919E+00	3.312E-01	0.071
		366.43		7.154E+00	7.521E+00	1.368E+01	7.686E-01	0.523
		739.58	*	-1.366E+00	1.047E+00	1.230E+00	1.781E-01	-1.111
		778.00		3.937E-01	3.523E+00	5.973E+00	4.379E-01	0.066
TC-99M		140.51	*	1.829E+00	3.523E+00	Half-Life too short		
RH-101		127.23		-7.711E-04	1.395E-02	2.228E-02	2.445E-03	-0.035
		198.01	*	1.608E-02	1.565E-02	2.842E-02	1.759E-03	0.566
		325.23		-6.497E-02	1.196E-01	1.841E-01	1.074E-02	-0.353
RH-102		418.52		-7.247E-02	1.617E-01	2.461E-01	1.386E-02	-0.295
		475.06	*	5.059E-03	1.847E-02	3.125E-02	1.910E-03	0.162
		631.29		-7.177E-03	3.779E-02	5.865E-02	4.127E-03	-0.122
		697.49		1.685E-02	6.079E-02	1.054E-01	7.629E-03	0.160
		766.84		5.067E-02	8.031E-02	1.454E-01	1.065E-02	0.349
		1046.59		-3.891E-02	8.084E-02	1.187E-01	7.795E-03	-0.328
		1112.84		-4.620E-02	1.544E-01	2.362E-01	1.451E-02	-0.196
RU-103		497.08	*	-3.365E-03	2.156E-02	3.409E-02	4.388E-03	-0.099
		610.33		1.421E-01	5.508E-01	9.104E-01	1.446E-01	0.156
RH-106		511.85		-2.514E-01	1.764E-01	3.054E-01	1.950E-02	-0.823
		621.84	*	1.076E-01	2.637E-01	4.126E-01	5.106E-02	0.261
		1050.47		4.422E-02	1.770E+00	2.919E+00	1.911E-01	0.015
RU-106		511.85		-2.514E-01	1.764E-01	3.054E-01	1.950E-02	-0.823
		621.84	*	1.076E-01	2.634E-01	4.126E-01	2.888E-02	0.261
		1050.47		4.422E-02	1.770E+00	2.919E+00	1.911E-01	0.015
AG-108M		433.93	*	-4.853E-03	1.679E-02	2.602E-02	1.632E-03	-0.186
		614.37		-1.633E-02	2.798E-02	4.066E-02	3.001E-03	-0.401
		722.95		-6.763E-04	2.836E-02	4.724E-02	3.629E-03	-0.014
CD-109		88.03	*	-1.750E-01	2.132E-01	3.172E-01	2.629E-02	-0.552
AG-110M		657.75	*	-8.917E-03	2.339E-02	3.693E-02	2.747E-03	-0.241
		677.61		-5.004E-02	2.091E-01	3.373E-01	2.523E-02	-0.148
		706.67		-2.677E-02	1.548E-01	2.527E-01	1.905E-02	-0.106
		763.93		-3.088E-02	1.230E-01	1.975E-01	1.504E-02	-0.156
		884.67		7.463E-03	2.810E-02	4.930E-02	3.709E-03	0.151
		937.48		2.162E-02	5.359E-02	9.783E-02	7.266E-03	0.221
		1384.27		-1.023E-01	1.238E-01	1.530E-01	9.749E-03	-0.669
IN-111		171.28		-2.810E-02	6.480E-02	1.047E-01	6.367E-03	-0.268

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	245.39	*	-1.061E-02	7.656E-02	1.257E-01	7.705E-03	-0.084
IN-113M	391.69	*	1.913E-02	2.691E-02	4.781E-02	2.772E-03	0.400
SN-113	391.69	*	1.913E-02	2.691E-02	4.781E-02	2.772E-03	0.400
IN-114M	190.27	*	-4.911E-02	7.510E-02	1.185E-01	7.309E-03	-0.414
CD-115	260.90		2.075E-01	6.444E+00	1.075E+01	6.476E-01	0.019
	492.35		-8.954E-01	1.913E+00	2.852E+00	1.781E-01	-0.314
	527.90	*	1.549E-01	7.020E-01	1.173E+00	7.615E-02	0.132
SN-117M	156.02		-7.826E-01	7.705E-01	1.109E+00	8.306E-02	-0.706
	158.56	*	1.304E-02	1.722E-02	2.941E-02	2.097E-03	0.443
SB-122	563.90	*	-9.189E-02	1.942E-01	2.893E-01	1.942E-02	-0.318
	692.80		-1.868E+00	4.289E+00	6.710E+00	4.850E-01	-0.278
I-123	159.00	*	-9.611E-06	4.289E+00	Half-Life too short		
	528.96		3.152E-03	4.289E+00	Half-Life too short		
TE-123M	159.00	*	-8.537E-04	1.292E-02	2.048E-02	1.461E-03	-0.042
I-124	602.71	*	2.069E-02	1.369E-01	2.252E-01	1.557E-02	0.092
	722.78		-7.515E-02	8.079E-01	1.330E+00	9.694E-02	-0.056
	1325.50		3.041E+00	7.882E+00	1.386E+01	8.321E-01	0.219
	1376.25		5.574E+00	6.597E+00	1.271E+01	7.660E-01	0.439
	1509.49		-1.564E-01	3.947E+00	6.539E+00	3.922E-01	-0.024
	1691.02		1.386E-01	1.129E+00	1.933E+00	1.120E-01	0.072
SB-124	602.71		3.987E-03	2.638E-02	4.340E-02	3.002E-03	0.092
	645.85		1.246E-02	3.541E-01	5.715E-01	4.407E-02	0.022
	709.31		2.564E-01	1.919E+00	3.271E+00	2.376E-01	0.078
	713.82		-5.655E-01	1.136E+00	1.749E+00	1.944E-01	-0.323
	722.78		-2.099E-02	2.257E-01	3.717E-01	2.790E-02	-0.056
	968.20		1.664E-01	1.472E+00	2.480E+00	1.722E-01	0.067
	1045.16		-3.284E-01	1.479E+00	2.305E+00	1.516E-01	-0.142
	1325.50		9.072E-01	2.352E+00	4.136E+00	2.483E-01	0.219
	1368.21		-1.045E+00	1.333E+00	1.664E+00	1.994E-01	-0.628
	1436.60		3.080E-01	4.139E+00	6.770E+00	4.081E-01	0.045
	1691.02	*	9.132E-03	7.437E-02	1.273E-01	8.012E-03	0.072
SB-125	427.89	*	3.257E-02	5.328E-02	9.455E-02	5.641E-03	0.345
	463.38		6.311E-02	1.708E-01	2.925E-01	2.034E-02	0.216
	600.56		5.480E-03	1.255E-01	2.035E-01	1.564E-02	0.027
	635.90		-4.296E-02	1.930E-01	2.978E-01	2.350E-02	-0.144
TE-125M	109.28	*	8.374E-01	3.256E+00	5.369E+00	6.241E-01	0.156
I-126	388.63		7.935E-03	8.057E-02	1.338E-01	7.245E-03	0.059
	666.33	*	-3.197E-02	7.910E-02	1.241E-01	8.884E-03	-0.258
	753.82		-5.222E-01	6.239E-01	8.694E-01	6.365E-02	-0.601
SB-126	223.80		4.478E-01	1.370E+00	2.354E+00	1.460E-01	0.190
	278.60		-3.562E-01	7.925E-01	1.247E+00	7.294E-02	-0.286
	296.50		-2.686E-01	5.567E-01	8.018E-01	4.703E-02	-0.335
	414.70		8.592E-03	2.779E-02	4.745E-02	2.656E-03	0.181
	415.30		3.339E-01	2.312E+00	3.861E+00	2.164E-01	0.086
	555.20		1.346E+00	1.555E+00	2.878E+00	1.918E-01	0.468
	573.80		-1.894E-01	4.440E-01	6.631E-01	4.488E-02	-0.286
	593.00		-1.835E-01	4.636E-01	7.014E-01	4.817E-02	-0.262
	656.30		-1.326E+00	1.507E+00	2.170E+00	1.546E-01	-0.611
	666.33		-1.312E-02	3.247E-02	5.095E-02	3.647E-03	-0.258

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		-3.618E-01	9.704E-01	1.538E+00	1.105E-01	-0.235
		695.00		-6.849E-03	3.836E-02	6.264E-02	4.531E-03	-0.109
		697.00		3.380E-02	1.355E-01	2.343E-01	1.696E-02	0.144
		720.50	*	2.150E-02	6.239E-02	1.100E-01	8.009E-03	0.196
		856.80		-1.079E-01	2.392E-01	3.667E-01	2.661E-02	-0.294
		989.30		9.436E-01	7.306E-01	1.428E+00	9.787E-02	0.661
		1034.80		1.690E+00	3.776E+00	6.792E+00	4.506E-01	0.249
		1213.00		-2.480E+00	1.923E+00	2.036E+00	1.173E-01	-1.218
SN-126		64.28		4.832E-02	7.627E-02	1.311E-01	1.889E-02	0.369
		86.94		-8.608E-02	1.003E-01	1.320E-01	5.450E-02	-0.652
		87.57	*	-1.780E-02	2.256E-02	3.212E-02	2.653E-03	-0.554
SB-127		61.10		9.014E-01	2.028E+00	3.440E+00	2.711E-01	0.262
		252.40		-8.092E-02	6.148E-01	1.010E+00	4.152E-01	-0.080
		290.80		-5.656E-01	2.678E+00	4.330E+00	2.946E-01	-0.131
		411.60		1.071E+00	1.789E+00	3.148E+00	4.053E-01	0.340
		444.90		6.568E-01	1.522E+00	2.629E+00	2.334E-01	0.250
		473.00		2.296E-01	2.575E-01	4.713E-01	4.473E-02	0.487
		543.00		-1.378E+00	3.112E+00	4.674E+00	5.491E-01	-0.295
		603.60		3.287E-02	2.205E+00	3.558E+00	3.407E-01	0.009
		685.20	*	4.538E-02	2.101E-01	3.648E-01	3.029E-02	0.124
		698.50		7.343E-01	3.068E+00	5.287E+00	7.289E-01	0.139
		722.20		-1.244E+00	4.836E+00	7.738E+00	6.240E-01	-0.161
		783.80		-2.007E-01	5.914E-01	9.242E-01	9.023E-02	-0.217
XE-127		57.60		1.397E-01	6.193E-01	1.034E+00	7.176E-02	0.135
		145.22		3.266E-02	2.365E-01	3.838E-01	3.421E-02	0.085
		172.10		-2.785E-03	4.371E-02	7.316E-02	4.451E-03	-0.038
		202.84	*	-1.710E-02	1.808E-02	2.743E-02	1.700E-03	-0.623
		374.96		3.703E-02	1.020E-01	1.750E-01	9.710E-03	0.212
I-131		80.18		-2.794E-01	5.555E-01	8.581E-01	6.729E-02	-0.326
		284.30		4.377E-02	3.600E-01	6.060E-01	3.902E-02	0.072
		364.48	*	1.915E-02	3.773E-02	6.558E-02	4.111E-03	0.292
		636.97		-3.224E-02	5.818E-01	9.256E-01	7.027E-02	-0.035
		722.89		-1.073E-01	2.437E+00	4.046E+00	2.954E-01	-0.027
TE-132		49.72		1.980E-02	2.641E-01	4.359E-01	3.186E-02	0.045
		111.76		1.958E-01	2.243E+00	3.641E+00	3.965E-01	0.054
		116.30		3.788E-01	2.090E+00	3.421E+00	3.879E-01	0.111
		228.16	*	4.258E-02	7.178E-02	1.255E-01	1.674E-02	0.339
BA-133		53.15		-2.876E-01	3.143E-01	4.597E-01	3.083E-02	-0.625
		79.62		9.013E-03	2.983E-01	4.855E-01	7.173E-02	0.019
		81.00		-2.582E-02	2.810E-02	3.671E-02	5.684E-03	-0.703
		276.40		3.814E-02	1.879E-01	3.185E-01	4.139E-02	0.120
		302.84		1.504E-02	8.120E-02	1.370E-01	1.601E-02	0.110
		356.01	*	-5.253E-03	2.557E-02	4.100E-02	4.718E-03	-0.128
		383.85		7.443E-02	1.744E-01	3.017E-01	3.227E-02	0.247
I-133		510.53		-6.178E-04	1.744E-01	Half-Life too short		
		529.87	*	6.452E-06	1.744E-01	Half-Life too short		
		706.58		-9.986E-05	1.744E-01	Half-Life too short		
		856.28		-5.634E-04	1.744E-01	Half-Life too short		
		875.33		-6.788E-05	1.744E-01	Half-Life too short		

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1236.41		-1.178E-03	1.744E-01	Half-Life too short		
		1298.22		-4.196E-04	1.744E-01	Half-Life too short		
CS-134		475.35		1.004E-01	1.198E+00	1.973E+00	1.207E-01	0.051
		563.23		-1.263E-01	2.453E-01	3.624E-01	2.470E-02	-0.349
		569.32		6.186E-02	1.348E-01	2.327E-01	1.604E-02	0.266
		604.70		-9.211E-03	2.726E-02	4.187E-02	2.910E-03	-0.220
		795.84	*	-2.848E-02	3.303E-02	4.653E-02	3.444E-03	-0.612
		801.93		2.503E-01	2.922E-01	5.488E-01	4.052E-02	0.456
		1038.57		5.810E-01	2.399E+00	4.158E+00	2.750E-01	0.140
		1167.94		-4.173E-01	1.745E+00	2.703E+00	1.544E-01	-0.154
		1365.15		1.913E-01	9.269E-01	1.583E+00	1.041E-01	0.121
CS-135		268.24	*	3.782E-02	8.169E-02	1.420E-01	1.104E-02	0.266
I-135		288.45		-3.497E+00	8.169E-02	Half-Life too short		
		417.63		-3.041E+01	8.169E-02	Half-Life too short		
		546.56		1.504E+01	8.169E-02	Half-Life too short		
		836.80		2.305E+01	8.169E-02	Half-Life too short		
		1038.76		8.728E+00	8.169E-02	Half-Life too short		
		1124.00		-7.283E+01	8.169E-02	Half-Life too short		
		1131.51		-3.659E+00	8.169E-02	Half-Life too short		
		1260.41	*	-7.742E+00	8.169E-02	Half-Life too short		
		1457.56		2.876E+01	8.169E-02	Half-Life too short		
		1678.03		6.065E+01	8.169E-02	Half-Life too short		
		1706.46		-7.754E+01	8.169E-02	Half-Life too short		
		1791.20		5.515E+01	8.169E-02	Half-Life too short		
CS-136		66.91		-6.624E-02	9.735E-02	1.350E-01	1.986E-02	-0.491
		86.29		-1.327E-01	1.941E-01	2.788E-01	3.501E-02	-0.476
		153.22		1.955E-01	2.030E-01	3.516E-01	3.153E-02	0.556
		163.89		-1.445E-01	3.085E-01	4.984E-01	3.835E-02	-0.290
		176.55		2.958E-02	1.088E-01	1.874E-01	1.271E-02	0.158
		273.65		5.427E-02	1.570E-01	2.697E-01	1.806E-02	0.201
		340.57		-2.616E-03	4.315E-02	7.057E-02	4.331E-03	-0.037
		818.51		-2.141E-02	3.741E-02	5.586E-02	4.087E-03	-0.383
		1048.07	*	-1.052E-02	5.357E-02	8.448E-02	5.936E-03	-0.125
		1235.34		-2.750E-01	2.697E-01	3.398E-01	3.394E-02	-0.809
BA-137M		661.65	*	1.923E-02	2.377E-02	4.449E-02	3.178E-03	0.432
CS-137		661.65	*	2.032E-02	2.513E-02	4.703E-02	3.369E-03	0.432
CE-139		165.85	*	-3.965E-03	1.215E-02	1.987E-02	1.204E-03	-0.199
BA-140		162.64		-1.475E-01	2.172E-01	3.442E-01	2.474E-02	-0.429
		304.84		-1.057E-01	4.437E-01	7.120E-01	1.944E-01	-0.148
		423.70		1.648E-01	7.254E-01	1.221E+00	3.879E-01	0.135
		537.32	*	-5.633E-02	1.171E-01	1.723E-01	5.627E-02	-0.327
LA-140		328.77		-1.608E-02	1.096E-01	1.779E-01	1.159E-02	-0.090
		432.53		-2.777E-01	7.190E-01	1.097E+00	6.985E-02	-0.253
		487.03		1.050E-02	5.815E-02	9.705E-02	6.722E-03	0.108
		751.79		-2.539E-01	5.864E-01	8.795E-01	7.375E-02	-0.289
		815.85		5.232E-02	1.666E-01	2.904E-01	2.458E-02	0.180
		867.82		-1.717E-01	6.966E-01	1.104E+00	8.581E-02	-0.156
		919.63		1.656E-01	1.370E+00	2.314E+00	2.189E-01	0.072
		925.24		-5.961E-01	5.122E-01	6.125E-01	4.738E-02	-0.973

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1596.49	*	-2.203E-02	4.805E-02	6.985E-02	4.139E-03	-0.315
CE-141		145.44	*	2.015E-03	2.101E-02	3.394E-02	3.067E-03	0.059
CE-143		57.37		3.923E-01	2.464E+00	4.089E+00	3.381E-01	0.096
		231.56		6.425E+00	2.719E+01	4.461E+01	1.381E+01	0.144
		293.26	*	7.068E-02	1.291E+00	2.152E+00	4.397E-01	0.033
		350.59		-1.084E+01	2.155E+01	3.237E+01	9.809E+00	-0.335
		490.36		1.540E+01	3.436E+01	5.928E+01	1.836E+01	0.260
		664.57		-1.061E+01	1.796E+01	2.682E+01	8.558E+00	-0.396
		721.93		-5.383E+00	1.862E+01	2.956E+01	8.501E+00	-0.182
CE-144		80.11		-1.727E-01	4.838E-01	7.583E-01	5.933E-02	-0.228
		133.54	*	-4.773E-02	8.784E-02	1.327E-01	2.197E-02	-0.360
PM-144		476.78		-2.779E-02	4.453E-02	6.133E-02	4.425E-03	-0.453
		618.01		-1.881E-02	2.306E-02	3.178E-02	2.311E-03	-0.592
		696.49	*	1.055E-02	2.656E-02	4.675E-02	3.384E-03	0.226
		778.57		5.137E-02	1.676E+00	2.806E+00	2.058E-01	0.018
PR-144		696.49	*	7.120E-01	1.792E+00	3.155E+00	2.283E-01	0.226
		1489.15		1.857E+00	1.181E+01	2.040E+01	1.226E+00	0.091
PM-146		453.90	*	-1.187E-02	3.139E-02	4.864E-02	4.240E-03	-0.244
		633.02		9.231E-02	9.507E-01	1.552E+00	5.750E-01	0.059
		735.90		2.482E-02	8.280E-02	1.460E-01	4.123E-02	0.170
		747.13		3.150E-03	5.901E-02	9.941E-02	1.320E-02	0.032
ND-147		91.11		3.721E-02	4.374E-02	7.609E-02	7.034E-03	0.489
		319.41		-5.592E-01	1.202E+00	1.880E+00	1.100E-01	-0.297
		439.89		-8.555E-01	2.002E+00	3.038E+00	1.769E-01	-0.282
		531.02	*	2.533E-01	2.446E-01	4.494E-01	6.221E-02	0.564
PM-149		285.90	*	6.789E-01	3.934E+00	6.654E+00	9.433E-01	0.102
EU-152		121.78		8.845E-03	3.074E-02	5.072E-02	6.331E-03	0.174
		244.69		-8.233E-02	1.590E-01	2.504E-01	1.536E-02	-0.329
		344.27	*	-2.187E-02	5.606E-02	8.790E-02	5.717E-03	-0.249
		443.98		1.970E-01	5.803E-01	9.930E-01	5.817E-02	0.198
		778.89		-1.299E-02	1.981E-01	3.266E-01	2.395E-02	-0.040
		867.32		-2.220E-01	6.200E-01	9.604E-01	6.949E-02	-0.231
		964.01		1.247E-01	1.931E-01	3.540E-01	2.463E-02	0.352
		1085.78		-6.668E-02	3.221E-01	5.072E-01	3.209E-02	-0.131
		1112.02		-1.324E-01	2.339E-01	3.374E-01	2.074E-02	-0.392
		1407.95		1.183E-01	1.425E-01	2.771E-01	1.671E-02	0.427
GD-153		69.67		-1.679E-01	2.853E-01	4.365E-01	3.205E-02	-0.385
		83.37		3.213E+00	3.385E+00	5.962E+00	4.773E-01	0.539
		97.43	*	-2.600E-03	2.276E-02	3.632E-02	3.288E-03	-0.072
		103.18		1.651E-02	3.378E-02	5.716E-02	5.469E-03	0.289
EU-154		123.07		3.869E-03	2.168E-02	3.541E-02	4.815E-03	0.109
		247.94		1.939E-02	1.854E-01	3.121E-01	3.038E-02	0.062
		591.81		-3.149E-01	4.897E-01	7.099E-01	7.411E-02	-0.444
		723.30		1.835E-02	1.129E-01	1.936E-01	1.615E-02	0.095
		756.87		3.703E-01	5.003E-01	9.353E-01	1.036E-01	0.396
		873.19		1.175E-01	2.124E-01	3.860E-01	4.363E-02	0.304
		996.32		-4.089E-01	3.289E-01	4.062E-01	6.891E-02	-1.007
		1004.76		2.102E-02	1.848E-01	3.096E-01	3.206E-02	0.068
		1274.45	*	1.545E-02	8.339E-02	1.414E-01	1.329E-02	0.109

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		48.70		-2.072E-03	1.630E-01	2.668E-01	1.741E-02	-0.008
		60.01		-1.377E-01	6.898E-01	1.105E+00	7.803E-02	-0.125
		86.54		-2.212E-02	2.696E-02	3.822E-02	3.167E-03	-0.579
		105.31	*	-2.227E-02	3.802E-02	5.756E-02	5.676E-03	-0.387
TB-160		86.79		-5.424E-02	6.665E-02	9.445E-02	7.754E-03	-0.574
		197.04		2.169E-01	2.520E-01	4.520E-01	2.796E-02	0.480
		215.65		-2.815E-02	3.605E-01	5.990E-01	3.719E-02	-0.047
		298.57		8.949E-03	5.925E-02	9.959E-02	5.842E-03	0.090
		879.36	*	-6.171E-02	8.345E-02	1.148E-01	8.274E-03	-0.538
		962.29		-4.598E-02	3.273E-01	5.252E-01	3.658E-02	-0.088
		966.15		1.007E-01	1.189E-01	2.254E-01	1.567E-02	0.447
		1177.93		2.942E-02	2.419E-01	4.042E-01	2.295E-02	0.073
		1271.85		-1.459E-01	4.509E-01	6.723E-01	3.963E-02	-0.217
HO-166M		80.57		-7.362E-02	7.610E-02	9.931E-02	7.795E-03	-0.741
		184.41		-3.568E-03	1.686E-02	2.581E-02	1.585E-03	-0.138
		280.46		-4.335E-03	4.105E-02	6.726E-02	3.930E-03	-0.064
		410.95		9.358E-02	1.478E-01	2.612E-01	1.453E-02	0.358
		711.68	*	-4.423E-03	4.480E-02	7.383E-02	5.366E-03	-0.060
		752.31		-7.121E-02	1.479E-01	2.198E-01	1.609E-02	-0.324
		810.29		2.780E-02	4.439E-02	8.101E-02	5.930E-03	0.343
TM-171		51.35		-3.846E-01	2.354E+00	3.784E+00	2.507E-01	-0.102
		52.39		-7.148E-01	1.296E+00	1.989E+00	1.327E-01	-0.359
		59.40		5.184E-01	3.515E+00	5.818E+00	4.100E-01	0.089
		66.72	*	-3.822E+00	5.292E+00	7.354E+00	5.322E-01	-0.520
LU-176		88.36		-2.737E-02	4.981E-02	7.634E-02	6.346E-03	-0.358
		201.83		-1.141E-02	1.319E-02	2.027E-02	1.256E-03	-0.563
		306.84	*	-1.577E-02	1.363E-02	1.927E-02	1.130E-03	-0.818
		401.10		-1.628E+00	3.967E+00	6.128E+00	3.353E-01	-0.266
LU-177		112.95		3.924E-02	2.892E-01	4.714E-01	4.960E-02	0.083
		208.36	*	1.063E-01	2.342E-01	4.071E-01	2.526E-02	0.261
LU-177M		52.97		-1.224E-01	1.363E-01	2.000E-01	1.339E-02	-0.612
		54.07		-2.412E-02	7.612E-02	1.201E-01	8.108E-03	-0.201
		61.30		8.534E-02	2.061E-01	3.487E-01	2.472E-02	0.245
		121.62		4.602E-02	1.527E-01	2.522E-01	2.888E-02	0.182
		147.16		-9.780E-02	2.562E-01	3.925E-01	3.402E-02	-0.249
		171.86		-5.369E-02	2.003E-01	3.289E-01	2.000E-02	-0.163
		218.09		2.455E-01	4.231E-01	7.423E-01	4.607E-02	0.331
		268.79		5.153E-02	3.962E-01	6.670E-01	3.970E-02	0.077
		319.02		-1.079E-01	1.526E-01	2.320E-01	1.357E-02	-0.465
		367.43		2.002E-01	5.445E-01	9.337E-01	5.239E-02	0.214
		413.65	*	-1.332E-02	1.018E-01	1.636E-01	9.141E-03	-0.081
HF-181		56.28		-4.056E-02	9.065E-02	1.411E-01	9.684E-03	-0.287
		57.53		1.091E-02	5.293E-02	8.823E-02	6.119E-03	0.124
		65.20		-2.797E-02	1.480E-01	2.180E-01	1.567E-02	-0.128
		133.02		-3.936E-03	2.436E-02	3.843E-02	3.977E-03	-0.102
		136.25		-2.804E-02	1.794E-01	2.831E-01	2.827E-02	-0.099
		345.85		2.370E-02	9.686E-02	1.642E-01	9.444E-03	0.144
		482.03	*	9.115E-03	2.119E-02	3.689E-02	2.275E-03	0.247
W-181		56.28		-1.722E-02	3.854E-02	5.999E-02	4.118E-03	-0.287

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		57.53		4.627E-03	2.252E-02	3.753E-02	2.602E-03	0.123
		65.20	*	-1.181E-02	6.244E-02	9.200E-02	6.613E-03	-0.128
TA-182		67.75		-2.832E-03	1.779E-02	2.851E-02	2.073E-03	-0.099
		100.10		-5.173E-02	5.537E-02	8.013E-02	7.443E-03	-0.646
		152.43		6.417E-02	1.495E-01	2.483E-01	1.981E-02	0.258
		222.10		-6.757E-02	1.742E-01	2.811E-01	1.744E-02	-0.240
		1001.68		1.080E+00	1.573E+00	2.873E+00	1.954E-01	0.376
		1121.28		-5.403E-03	7.625E-02	1.226E-01	7.453E-03	-0.044
		1189.05		3.407E-03	1.577E-01	2.587E-01	1.476E-02	0.013
		1221.42	*	7.968E-02	1.219E-01	2.245E-01	1.298E-02	0.355
		1230.97		2.849E-01	3.211E-01	6.054E-01	3.514E-02	0.471
RE-183		57.98		1.459E-02	2.178E-02	3.789E-02	2.637E-03	0.385
		59.32		1.686E-03	1.342E-02	2.216E-02	1.561E-03	0.076
		67.20		-2.589E-02	3.476E-02	4.796E-02	3.479E-03	-0.540
		162.32	*	-2.091E-02	4.495E-02	7.273E-02	4.790E-03	-0.288
		208.81		3.032E-01	4.326E-01	7.663E-01	4.755E-02	0.396
		291.72		-5.991E-02	4.310E-01	7.026E-01	4.118E-02	-0.085
RE-184		57.98		5.624E-02	8.394E-02	1.460E-01	1.017E-02	0.385
		59.32		6.495E-03	5.168E-02	8.536E-02	6.011E-03	0.076
		67.20		-9.976E-02	1.340E-01	1.848E-01	1.340E-02	-0.540
		161.27		6.382E-02	1.497E-01	2.614E-01	1.762E-02	0.244
		216.55		5.767E-02	1.314E-01	2.280E-01	1.416E-02	0.253
		252.85	*	1.452E-02	1.309E-01	2.201E-01	1.339E-02	0.066
		318.01		-1.513E-01	2.658E-01	4.113E-01	2.407E-02	-0.368
		792.07		-3.580E-02	6.290E-01	1.036E+00	7.597E-02	-0.035
		903.28		4.103E-02	7.372E-01	1.231E+00	8.793E-02	0.033
		920.93		1.192E-01	2.975E-01	5.298E-01	3.761E-02	0.225
OS-185		59.72		-4.840E-03	3.869E-02	6.242E-02	4.405E-03	-0.078
		61.14		1.108E-02	2.201E-02	3.753E-02	2.659E-03	0.295
		69.30		-1.773E-02	4.670E-02	7.300E-02	5.349E-03	-0.243
		592.07		-8.153E-01	1.825E+00	2.736E+00	1.878E-01	-0.298
		646.12	*	8.206E-03	3.061E-02	5.123E-02	3.633E-03	0.160
		717.42		-2.496E-01	6.034E-01	9.418E-01	6.854E-02	-0.265
		874.81		-1.564E-01	4.192E-01	6.470E-01	4.670E-02	-0.242
		880.27		-2.517E-01	4.521E-01	6.512E-01	4.691E-02	-0.386
RE-188		155.03	*	1.859E-02	7.528E-02	1.229E-01	9.375E-03	0.151
		477.96		-1.309E+00	1.899E+00	2.575E+00	1.580E-01	-0.508
		633.10		1.500E-01	1.778E+00	2.899E+00	2.042E-01	0.052
W-188		63.58		5.059E-01	7.408E+00	1.215E+01	8.681E-01	0.042
		227.08		1.079E+00	6.460E+00	1.094E+01	6.779E-01	0.099
		290.67	*	-7.870E-01	3.468E+00	5.596E+00	3.280E-01	-0.141
IR-192		295.96		-2.240E-02	5.917E-02	8.561E-02	5.099E-03	-0.262
		308.46		6.926E-03	4.703E-02	7.915E-02	4.693E-03	0.088
		316.51	*	1.399E-02	1.894E-02	3.371E-02	1.983E-03	0.415
		468.07		-3.303E-02	4.114E-02	5.892E-02	4.072E-03	-0.561
		604.41		-7.965E-02	3.380E-01	5.263E-01	6.296E-02	-0.151
		612.46		-3.016E-02	4.910E-01	7.829E-01	6.649E-02	-0.039
AU-195		65.12		4.404E-05	2.913E-02	4.372E-02	3.142E-03	0.001
		66.83		-1.128E-02	1.702E-02	2.377E-02	1.721E-03	-0.474

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		75.70		1.373E-02	4.418E-02	6.817E-02	5.181E-03	0.201
		98.88	*	-6.205E-03	6.704E-02	1.072E-01	9.841E-03	-0.058
		129.76		4.202E-01	1.178E+00	1.951E+00	2.088E-01	0.215
TL-200		367.94	*	-1.230E-01	2.000E+00	3.262E+00	1.829E-01	-0.038
		579.30		-1.598E+01	1.760E+01	2.408E+01	1.637E+00	-0.664
		828.27		1.996E+01	2.242E+01	4.319E+01	3.154E+00	0.462
		1205.75		6.058E+00	1.176E+01	2.114E+01	1.215E+00	0.287
TL-201		68.90		-5.777E-02	1.380E-01	2.150E-01	1.572E-02	-0.269
		70.82		-7.079E-02	8.569E-02	1.278E-01	9.443E-03	-0.554
		80.30		-1.058E-01	2.017E-01	3.108E-01	2.435E-02	-0.340
		135.34		-9.988E-01	1.857E+00	2.810E+00	2.835E-01	-0.355
		167.43	*	-1.634E-01	5.147E-01	8.424E-01	5.102E-02	-0.194
TL-202		68.90		-1.961E-02	4.685E-02	7.300E-02	5.338E-03	-0.269
		70.82		-2.397E-02	2.902E-02	4.329E-02	3.198E-03	-0.554
		80.30		-3.585E-02	6.832E-02	1.053E-01	8.248E-03	-0.340
		439.56	*	-1.993E-02	2.546E-02	3.610E-02	2.101E-03	-0.552
HG-203		70.83		-1.435E-01	1.747E-01	2.597E-01	3.340E-02	-0.552
		72.87		1.497E-02	1.043E-01	1.718E-01	2.144E-02	0.087
		82.60		4.755E-02	2.750E-01	4.021E-01	5.364E-02	0.118
		279.20	*	-4.180E-03	1.775E-02	2.865E-02	1.775E-03	-0.146
BI-207		72.80		1.920E-03	3.402E-02	5.561E-02	4.153E-03	0.035
		74.97		-8.555E-03	2.515E-02	3.661E-02	2.770E-03	-0.234
		84.90		-5.406E-02	5.239E-02	7.291E-02	5.902E-03	-0.741
		569.67		-6.770E-04	2.262E-02	3.636E-02	2.453E-03	-0.019
		1063.62	*	2.911E-02	3.736E-02	7.038E-02	4.552E-03	0.414
		1770.23		-5.799E-02	4.021E-01	6.336E-01	3.580E-02	-0.092
TL-207		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
TL-208		277.35		-4.420E-02	1.930E-01	3.124E-01	3.309E-02	-0.142
		510.84		-1.338E-01	1.629E-01	2.950E-01	3.096E-02	-0.453
		583.14	*	-1.740E-02	3.308E-02	4.150E-02	3.148E-03	-0.419
		860.37		1.495E-01	2.133E-01	3.928E-01	3.141E-02	0.381
PO-209		260.50		3.092E-01	5.434E+00	9.086E+00	5.476E-01	0.034
		262.80		-1.532E+01	1.492E+01	2.213E+01	1.330E+00	-0.692
		896.60	*	-1.517E+00	5.039E+00	7.820E+00	5.598E-01	-0.194
BI-210		46.50	*	4.000E-02	1.928E-01	3.223E-01	2.441E-02	0.124
PB-210		46.50	*	4.000E-02	1.928E-01	3.223E-01	2.441E-02	0.124
PO-210		46.50	*	4.000E-02	1.927E-01	3.223E-01	2.083E-02	0.124
BI-211		72.87		8.446E-02	5.883E-01	9.694E-01	7.243E-02	0.087
		351.07	*	-2.192E-02	1.370E-01	2.171E-01	1.382E-02	-0.101
PB-211		404.84	*	7.020E-02	5.240E-01	8.712E-01	5.429E-01	0.081

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		427.08		4.011E-01	1.171E+00	1.968E+00	1.216E+00	0.204
		831.96		-7.895E-02	7.797E-01	1.267E+00	7.918E-01	-0.062
BI-212		727.18	*	1.162E-02	1.805E-01	3.050E-01	2.711E-02	0.038
		785.46		-7.482E-02	1.226E+00	2.021E+00	1.482E-01	-0.037
		1620.62		2.336E-01	9.297E-01	1.667E+00	9.828E-02	0.140
PB-212		74.81		-3.141E-02	8.637E-02	1.253E-01	1.506E-02	-0.251
		77.11		-1.145E-03	4.815E-02	7.461E-02	5.723E-03	-0.015
		87.30		-8.987E-02	1.056E-01	1.489E-01	1.929E-02	-0.604
		238.63	*	2.140E-03	3.217E-02	5.303E-02	4.040E-03	0.040
		300.09		4.644E-01	4.293E-01	7.837E-01	6.502E-02	0.593
PO-212		74.81		-3.141E-02	8.637E-02	1.253E-01	1.506E-02	-0.251
		77.11		-1.145E-03	4.815E-02	7.461E-02	5.723E-03	-0.015
		87.30		-8.987E-02	1.056E-01	1.489E-01	1.929E-02	-0.604
		115.19		-5.504E-02	1.413E+00	2.266E+00	2.437E-01	-0.024
		238.63	*	2.140E-03	3.217E-02	5.303E-02	4.040E-03	0.040
		300.09		4.644E-01	4.293E-01	7.837E-01	6.502E-02	0.593
BI-214		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.713E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
PB-214		74.81		-5.412E-02	1.488E-01	2.159E-01	2.285E-02	-0.251
		77.11		-1.962E-03	8.254E-02	1.279E-01	1.383E-02	-0.015
		87.30		-1.540E-01	1.806E-01	2.551E-01	2.878E-02	-0.604
		241.98		-2.196E-01	1.725E-01	2.495E-01	2.076E-02	-0.880
		295.21		-6.632E-02	8.225E-02	1.118E-01	9.582E-03	-0.593
		351.92	*	-9.257E-03	4.764E-02	7.516E-02	6.183E-03	-0.123
PO-214		74.81		-5.412E-02	1.488E-01	2.159E-01	2.285E-02	-0.251
		77.11		-1.962E-03	8.254E-02	1.279E-01	1.383E-02	-0.015
		87.30		-1.540E-01	1.806E-01	2.551E-01	2.878E-02	-0.604
		241.98		-2.196E-01	1.725E-01	2.495E-01	2.076E-02	-0.880
		295.21		-6.632E-02	8.225E-02	1.118E-01	9.582E-03	-0.593
		351.92	*	-9.257E-03	4.764E-02	7.516E-02	6.183E-03	-0.123
PO-215		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
PO-216		74.81		-3.141E-02	8.637E-02	1.253E-01	1.506E-02	-0.251
		77.11		-1.145E-03	4.815E-02	7.461E-02	5.723E-03	-0.015
		87.30		-8.987E-02	1.056E-01	1.489E-01	1.929E-02	-0.604
		238.63	*	2.140E-03	3.217E-02	5.303E-02	4.040E-03	0.040

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		300.09		4.644E-01	4.293E-01	7.837E-01	6.502E-02	0.593
PO-218		74.81		-5.412E-02	1.488E-01	2.159E-01	2.285E-02	-0.251
		77.11		-1.962E-03	8.254E-02	1.279E-01	1.383E-02	-0.015
		87.30		-1.540E-01	1.806E-01	2.551E-01	2.878E-02	-0.604
		241.98		-2.196E-01	1.725E-01	2.495E-01	2.076E-02	-0.880
		295.21		-6.632E-02	8.225E-02	1.118E-01	9.582E-03	-0.593
		351.92	*	-9.257E-03	4.764E-02	7.516E-02	6.183E-03	-0.123
RN-219		271.23		-3.627E-02	1.280E-01	2.065E-01	1.692E-02	-0.176
		401.81	*	-8.733E-02	2.377E-01	3.686E-01	4.965E-02	-0.237
RN-220		549.76	*	-8.942E+00	1.528E+01	2.183E+01	1.448E+00	-0.410
RA-223		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
RA-224		240.98	*	3.196E-02	3.157E-01	5.314E-01	3.268E-02	0.060
RA-226		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.713E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
AC-227		79.80		-3.067E-02	3.762E-01	6.058E-01	1.284E-01	-0.051
		236.00		-4.848E-03	1.095E-01	1.820E-01	1.940E-02	-0.027
		256.20	*	1.643E-01	2.222E-01	3.920E-01	5.515E-02	0.419
		286.10		-5.719E-02	7.618E-01	1.252E+00	1.451E-01	-0.046
		299.80		6.476E-01	8.273E-01	1.462E+00	2.384E-01	0.443
		304.40		-6.040E-01	1.028E+00	1.577E+00	2.732E-01	-0.383
		334.20		9.312E-01	1.371E+00	2.406E+00	4.410E-01	0.387
TH-227		79.80		-3.067E-02	3.762E-01	6.058E-01	1.301E-01	-0.051
		94.00		-3.833E-01	6.106E-01	8.571E-01	1.872E-01	-0.447
		236.00		-4.848E-03	1.095E-01	1.820E-01	1.692E-02	-0.027
		256.20	*	1.643E-01	2.227E-01	3.920E-01	6.660E-02	0.419
		286.10		-5.719E-02	7.640E-01	1.252E+00	1.254E+00	-0.046
		299.80		6.476E-01	8.273E-01	1.462E+00	2.384E-01	0.443
		304.40		-6.040E-01	1.028E+00	1.577E+00	2.732E-01	-0.383
		334.20		9.312E-01	1.371E+00	2.406E+00	4.410E-01	0.387
AC-228		338.32		3.153E-02	1.270E-01	2.145E-01	8.745E-02	0.147
		911.07	*	7.644E-02	1.090E-01	1.989E-01	2.018E-02	0.384
		969.11		-4.660E-03	1.520E-01	2.489E-01	5.668E-02	-0.019
RA-228		338.32		3.153E-02	1.270E-01	2.145E-01	8.745E-02	0.147
		911.07	*	7.644E-02	1.090E-01	1.989E-01	2.018E-02	0.384
		969.11		-4.660E-03	1.520E-01	2.489E-01	5.668E-02	-0.019

---- Non-Identified Nuclides ----

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TH-228		84.40		-2.520E-02	6.199E-01	1.001E+00	1.279E-01	-0.025
		238.60	*	1.972E-03	3.215E-02	5.297E-02	4.036E-03	0.037
		300.10		4.644E-01	5.077E-01	7.838E-01	4.620E-01	0.593
TH-229		85.43		-6.099E-02	5.197E-02	7.110E-02	5.778E-03	-0.858
		88.47		-1.493E-02	2.875E-02	4.422E-02	3.679E-03	-0.338
		100.00		-5.564E-02	6.024E-02	8.731E-02	8.101E-03	-0.637
		193.63	*	-2.919E-03	2.394E-01	4.012E-01	2.478E-02	-0.007
		210.97		1.769E-01	3.759E-01	6.536E-01	4.057E-02	0.271
TH-230		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.712E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
PA-231		283.67	*	6.319E-02	7.262E-01	1.217E+00	1.680E-01	0.052
		301.29		2.754E-01	3.191E-01	5.716E-01	5.996E-02	0.482
TH-231		81.07		-5.617E-02	6.176E-02	8.149E-02	6.418E-03	-0.689
		83.78		1.985E-02	2.957E-02	5.093E-02	4.089E-03	0.390
		94.90		-3.572E-02	6.754E-02	1.033E-01	9.125E-03	-0.346
		122.32		-4.658E-02	7.503E-01	1.199E+00	1.434E-01	-0.039
		144.24		-6.849E-02	2.962E-01	4.371E-01	4.378E-02	-0.157
		154.21		1.285E-01	1.850E-01	3.138E-01	2.726E-02	0.410
		269.46		-3.645E-02	1.002E-01	1.604E-01	9.946E-03	-0.227
		323.87	*	6.360E-02	3.711E-01	6.244E-01	1.032E-01	0.102
		338.28		1.342E-01	5.282E-01	8.967E-01	9.439E-02	0.150
		445.03		6.197E-01	1.436E+00	2.480E+00	2.556E-01	0.250
U-231		84.21		4.040E-02	3.612E-01	5.918E-01	4.766E-02	0.068
		92.29		-1.310E-02	1.674E-01	2.524E-01	2.176E-02	-0.052
		95.87	*	-2.747E-02	9.025E-02	1.413E-01	1.261E-02	-0.194
		108.00		5.401E-02	2.074E-01	3.425E-01	3.435E-02	0.158
TH-232		338.32		3.153E-02	1.264E-01	2.145E-01	1.242E-02	0.147
		911.07	*	7.644E-02	1.090E-01	1.989E-01	2.018E-02	0.384
		969.11		-4.660E-03	1.520E-01	2.489E-01	5.668E-02	-0.019
PA-233		75.28		4.864E-02	7.229E-01	1.089E+00	1.611E-01	0.045
		86.59		-3.660E-01	4.489E-01	6.215E-01	1.659E-01	-0.589
		300.12		2.400E-01	2.233E-01	4.050E-01	5.454E-02	0.593
		311.98	*	2.836E-02	3.833E-02	6.814E-02	4.236E-03	0.416
		340.50		-8.019E-02	3.224E-01	5.141E-01	1.181E-01	-0.156
		398.62		2.153E-01	1.270E+00	2.125E+00	5.478E-01	0.101
		415.76		-8.639E-02	9.336E-01	1.506E+00	3.092E-01	-0.057
PA-234		63.00		6.963E-02	2.354E-01	3.938E-01	5.798E-02	0.177
		94.67		-1.652E-02	4.806E-02	7.497E-02	9.402E-03	-0.220
		98.44		1.311E-03	2.802E-02	4.547E-02	2.540E-02	0.029
		99.86		-9.036E-02	1.477E-01	2.223E-01	2.060E-02	-0.406
		111.00		-3.456E-03	7.429E-02	1.192E-01	1.592E-02	-0.029
		131.20		1.259E-02	4.508E-02	7.417E-02	7.824E-03	0.170
		152.70		1.101E-01	1.507E-01	2.552E-01	4.266E-02	0.432
		186.00		-2.533E-02	6.089E-01	9.459E-01	2.897E-01	-0.027

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		226.40		1.015E-01	2.174E-01	3.769E-01	4.433E-02	0.269
		227.20		1.095E-01	2.317E-01	4.024E-01	2.493E-02	0.272
		248.90		-1.525E-01	4.383E-01	7.028E-01	1.516E-01	-0.217
		293.70		4.186E-03	3.298E-01	5.471E-01	8.812E-02	0.008
		369.80		-3.676E-01	5.463E-01	8.137E-01	1.690E-01	-0.452
		568.70		4.508E-01	6.913E-01	1.224E+00	8.250E-02	0.368
		569.50		-1.306E-03	2.015E-01	3.249E-01	2.192E-02	-0.004
		574.00		-3.910E-01	9.620E-01	1.440E+00	9.747E-02	-0.272
		699.00		2.437E-01	5.912E-01	1.037E+00	1.918E-01	0.235
		706.10		-5.155E-02	8.185E-01	1.357E+00	6.019E-01	-0.038
		733.00		8.463E-02	2.191E-01	3.909E-01	8.489E-02	0.217
		742.81		7.076E-01	9.828E-01	1.638E+00	1.098E+00	0.432
		796.30		-5.903E-01	6.759E-01	9.243E-01	2.465E-01	-0.639
		805.60		-7.220E-01	8.270E-01	1.128E+00	3.420E-01	-0.640
		819.60		-2.437E-02	8.912E-01	1.474E+00	5.564E-01	-0.017
		826.30		-8.353E-04	5.763E-01	9.572E-01	4.260E-01	-0.001
		831.60		-1.844E-01	4.078E-01	6.102E-01	1.799E-01	-0.302
		876.40		-1.949E-01	6.130E-01	8.954E-01	9.195E-01	-0.218
		880.51		-9.536E-02	1.734E-01	2.503E-01	1.803E-02	-0.381
		883.24		9.185E-02	1.708E-01	2.984E-01	2.001E-01	0.308
		899.00		-4.341E-01	6.500E-01	8.899E-01	3.866E-01	-0.488
		925.00		-1.080E+00	8.161E-01	9.168E-01	6.497E-02	-1.178
		926.50		-3.909E-02	1.166E-01	1.780E-01	4.414E-02	-0.220
		946.00	*	6.598E-02	1.745E-01	3.124E-01	5.650E-02	0.211
		949.00		2.999E-02	2.701E-01	4.569E-01	3.203E-02	0.066
		980.50		-1.015E-01	4.704E-01	7.366E-01	5.077E-02	-0.138
		1394.10		2.053E-02	1.074E+00	1.743E+00	1.130E+00	0.012
PA-234M		766.41		5.768E+00	1.357E+01	2.273E+01	1.740E+01	0.254
		1001.03	*	2.399E+00	5.263E+00	9.310E+00	9.167E-01	0.258
TH-234		63.29	*	3.425E-02	2.012E-01	3.330E-01	5.769E-02	0.103
		92.38		6.530E-03	1.574E-01	2.399E-01	4.340E-02	0.027
U-234		609.31	*	6.284E-03	6.013E-02	9.755E-02	8.454E-03	0.064
		768.36		8.908E-02	5.474E-01	9.332E-01	8.811E-02	0.095
		934.06		-2.201E-01	6.771E-01	1.031E+00	9.712E-02	-0.213
		1120.29		1.028E-01	1.766E-01	3.250E-01	2.924E-02	0.316
		1238.11		-3.836E-01	5.595E-01	7.679E-01	6.269E-02	-0.500
		1377.67		2.275E-01	8.030E-01	1.383E+00	1.208E-01	0.165
		1764.49		-1.075E-01	2.121E-01	3.347E-01	1.895E-02	-0.321
U-235		89.95		1.779E-01	2.822E-01	4.753E-01	1.464E-01	0.374
		93.35		-8.292E-02	1.921E-01	2.771E-01	7.774E-02	-0.299
		105.00		-1.819E-01	3.730E-01	5.651E-01	1.706E-01	-0.322
		143.76	*	-6.096E-02	9.401E-02	1.317E-01	2.338E-02	-0.463
		163.35		-1.382E-01	2.082E-01	3.281E-01	5.969E-02	-0.421
		185.71		-3.935E-04	2.257E-02	3.514E-02	2.161E-03	-0.011
		205.31		-4.013E-02	2.393E-01	3.946E-01	7.149E-02	-0.102
NP-236		94.67		-1.246E-02	3.644E-02	5.688E-02	5.015E-03	-0.219
		98.44		9.953E-04	2.117E-02	3.437E-02	3.142E-03	0.029
		111.00		-2.614E-03	5.620E-02	9.014E-02	9.306E-03	-0.029
		160.31	*	6.951E-03	3.743E-02	6.078E-02	4.182E-03	0.114

---- Non-Identified Nuclides ----

Nuclide	Line Jded	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237		86.50	*	-5.344E-02	6.688E-02	9.366E-02	2.079E-02	-0.571
		95.87		-8.737E-02	2.877E-01	4.495E-01	1.112E-01	-0.194
U-238		63.29	*	3.425E-02	2.012E-01	3.330E-01	5.769E-02	0.103
		92.38		6.530E-03	1.574E-01	2.399E-01	2.070E-02	0.027
NP-239		99.55		-1.756E-02	4.929E-02	7.655E-02	7.072E-03	-0.229
		117.00	*	2.319E-03	7.434E-02	1.200E-01	1.313E-02	0.019
		209.75		2.255E-01	3.782E-01	6.640E-01	4.121E-02	0.340
		228.18		7.225E-02	1.222E-01	2.141E-01	1.326E-02	0.337
		277.60		-4.439E-02	9.488E-02	1.496E-01	8.762E-03	-0.297
		334.30		5.363E-01	7.723E-01	1.366E+00	7.930E-02	0.393
AM-241		59.54	*	3.850E-03	2.077E-02	3.449E-02	2.692E-03	0.112
AM-243		74.67	*	-7.902E-03	1.411E-02	2.013E-02	1.520E-03	-0.393
		86.72		-1.986E+00	2.459E+00	3.487E+00	2.861E-01	-0.570
		117.66		-6.764E-01	1.542E+00	2.370E+00	2.611E-01	-0.285
		142.18		1.644E+00	7.580E+00	1.238E+01	1.150E+00	0.133
CM-243		99.55		-1.806E-02	5.069E-02	7.873E-02	7.273E-03	-0.229
		103.76	*	9.780E-03	3.209E-02	5.337E-02	5.136E-03	0.183
		117.00		2.384E-03	7.645E-02	1.234E-01	1.350E-02	0.019
		209.75		2.222E-01	3.727E-01	6.543E-01	4.061E-02	0.340
		228.18		7.297E-02	1.234E-01	2.163E-01	1.339E-02	0.337
		277.60		-4.473E-02	9.560E-02	1.507E-01	8.829E-03	-0.297
CM-247		278.00		-2.061E-01	3.917E-01	6.131E-01	3.589E-02	-0.336
		287.40		-2.389E-01	5.976E-01	9.413E-01	5.512E-02	-0.254
		402.60	*	-7.342E-03	2.013E-02	3.116E-02	1.709E-03	-0.236
CF-249		252.85		5.626E-02	5.070E-01	8.526E-01	5.187E-02	0.066
		333.44		8.682E-02	1.003E-01	1.804E-01	1.048E-02	0.481
		387.95	*	-1.636E-02	2.427E-02	3.618E-02	1.962E-03	-0.452
CF-251		176.60	*	1.384E-02	5.681E-02	9.760E-02	5.960E-03	0.142
		227.00		3.500E-02	2.095E-01	3.548E-01	2.198E-02	0.099
		285.00		1.172E-02	8.264E-01	1.373E+00	8.034E-02	0.009
ANH-511		511.00	*	-2.890E-02	3.513E-02	6.374E-02	4.067E-03	-0.453

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069    *
* Acquisition date :  9-JUL-2009 08:22:22 Detector SN#     :               *
* Detector ID        : GAM21               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:08.24      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        :  2-JUL-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201873069          Analyst initials: MXR1          *
* Batch Number       : 881931               Sample Quantity : 1.3282E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope       :                *
* MSD DPM          :    0.000             MSD Isotope      :               *
* LCS DPM          :    0.000             LCS Isotope      :               *
* LCSD DPM         :    0.000             LCSD Isotope     :               *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)	
BE-7	-1.057E-01	1.896E-01	2.758E-01	0.000E+00 NOT IDENT.
NA-22	5.508E-03	2.914E-02	5.061E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	1.109E+02	0.000E+00	0.000E+00 SHORT HLIF
AL-26	1.059E-03	3.915E-02	6.633E-02	0.000E+00 NOT IDENT.
K-40	1.161E-01	3.284E-01	5.829E-01	0.000E+00 NOT IDENT.
TI-44	-1.007E-02	8.902E-03	1.331E-02	0.000E+00 NOT IDENT.
SC-46	-2.137E-02	2.261E-02	2.984E-02	0.000E+00 NOT IDENT.
V-48	-4.730E-02	3.567E-02	4.163E-02	0.000E+00 NOT IDENT.
CR-51	1.004E-01	1.740E-01	3.201E-01	0.000E+00 NOT IDENT.
MN-52	-1.474E-03	1.043E-01	1.716E-01	0.000E+00 NOT IDENT.
MN-54	-1.609E-02	2.407E-02	3.605E-02	0.000E+00 NOT IDENT.
CO-56	-1.989E-02	2.766E-02	4.136E-02	0.000E+00 NOT IDENT.
CO-57	3.399E-03	1.015E-02	1.792E-02	0.000E+00 NOT IDENT.
CO-58	1.470E-02	2.855E-02	5.269E-02	0.000E+00 NOT IDENT.
FE-59	-8.377E-03	5.018E-02	8.112E-02	0.000E+00 NOT IDENT.
CO-60	6.945E-03	3.247E-02	5.635E-02	0.000E+00 NOT IDENT.
ZN-65	3.344E-02	5.549E-02	1.044E-01	0.000E+00 NOT IDENT.
GE-68	-4.615E-01	9.204E-01	1.395E+00	0.000E+00 NOT IDENT.
AS-73	-4.483E-02	6.675E-02	1.091E-01	0.000E+00 NOT IDENT.
AS-74	2.940E-04	4.549E-02	7.617E-02	0.000E+00 NOT IDENT.
SE-75	5.518E-03	2.127E-02	3.821E-02	0.000E+00 NOT IDENT.
BR-77	4.969E-02	6.780E-01	1.157E+00	0.000E+00 NOT IDENT.
SR-82	8.230E-02	2.393E-01	4.319E-01	0.000E+00 NOT IDENT.
RB-83	-1.084E-02	4.262E-02	6.905E-02	0.000E+00 NOT IDENT.
RB-84	1.453E-02	3.310E-02	6.197E-02	0.000E+00 NOT IDENT.
KR-85	-7.030E+00	6.722E+00	1.013E+01	0.000E+00 NOT IDENT.

SR-85	-3.322E-02	3.176E-02	4.788E-02	0.000E+00	NOT IDENT.
RB-86	-3.497E-01	4.387E-01	6.143E-01	0.000E+00	NOT IDENT.
Y-88	-1.293E-03	3.641E-02	6.067E-02	0.000E+00	NOT IDENT.
ZR-88	1.199E-03	1.843E-02	3.184E-02	0.000E+00	NOT IDENT.
Y-91	3.325E+00	1.126E+01	1.994E+01	0.000E+00	NOT IDENT.
NB-94	3.184E-03	2.756E-02	4.842E-02	0.000E+00	NOT IDENT.
NB-95	-7.575E-04	2.901E-02	4.981E-02	0.000E+00	NOT IDENT.
NB-95M	-1.457E-02	5.225E-02	8.953E-02	0.000E+00	NOT IDENT.
ZR-95	-9.515E-03	4.053E-02	6.692E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.144E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.731E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.366E+00	1.026E+00	1.247E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.657E+06	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.608E-02	1.534E-02	2.947E-02	0.000E+00	NOT IDENT.
RH-102	5.059E-03	1.810E-02	3.192E-02	0.000E+00	NOT IDENT.
RU-103	-3.365E-03	2.113E-02	3.480E-02	0.000E+00	NOT IDENT.
RH-106	1.076E-01	2.584E-01	4.196E-01	0.000E+00	NOT IDENT.
RU-106	1.076E-01	2.582E-01	4.196E-01	0.000E+00	NOT IDENT.
AG-108M	-4.853E-03	1.645E-02	2.663E-02	0.000E+00	NOT IDENT.
CD-109	-1.750E-01	2.089E-01	3.334E-01	0.000E+00	NOT IDENT.
AG-110M	-8.917E-03	2.292E-02	3.751E-02	0.000E+00	NOT IDENT.
IN-111	-1.061E-02	7.503E-02	1.299E-01	0.000E+00	NOT IDENT.
IN-113M	1.913E-02	2.637E-02	4.901E-02	0.000E+00	NOT IDENT.
SN-113	1.913E-02	2.637E-02	4.901E-02	0.000E+00	NOT IDENT.
IN-114M	-4.911E-02	7.360E-02	1.230E-01	0.000E+00	NOT IDENT.
CD-115	1.549E-01	6.879E-01	1.196E+00	0.000E+00	NOT IDENT.
SN-117M	1.304E-02	1.687E-02	3.061E-02	0.000E+00	NOT IDENT.
SB-122	-9.189E-02	1.903E-01	2.946E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.426E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-8.537E-04	1.266E-02	2.132E-02	0.000E+00	NOT IDENT.
I-124	2.069E-02	1.341E-01	2.291E-01	0.000E+00	NOT IDENT.
SB-124	9.132E-03	7.289E-02	1.272E-01	0.000E+00	NOT IDENT.
SB-125	3.257E-02	5.222E-02	9.677E-02	0.000E+00	NOT IDENT.
TE-125M	8.374E-01	3.191E+00	5.623E+00	0.000E+00	NOT IDENT.
I-126	-3.197E-02	7.751E-02	1.261E-01	0.000E+00	NOT IDENT.
SB-126	2.150E-02	6.114E-02	1.115E-01	0.000E+00	NOT IDENT.
SN-126	-1.780E-02	2.211E-02	3.377E-02	0.000E+00	NOT IDENT.
SB-127	4.538E-02	2.059E-01	3.703E-01	0.000E+00	NOT IDENT.
XE-127	-1.710E-02	1.772E-02	2.843E-02	0.000E+00	NOT IDENT.
I-131	1.915E-02	3.697E-02	6.730E-02	0.000E+00	NOT IDENT.
TE-132	4.258E-02	7.035E-02	1.298E-01	0.000E+00	NOT IDENT.
BA-133	-5.253E-03	2.505E-02	4.209E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	8.357E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	-2.848E-02	3.237E-02	4.711E-02	0.000E+00	NOT IDENT.
CS-135	3.782E-02	8.006E-02	1.464E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.425E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.052E-02	5.250E-02	8.511E-02	0.000E+00	NOT IDENT.
BA-137M	1.923E-02	2.330E-02	4.519E-02	0.000E+00	NOT IDENT.
CS-137	2.032E-02	2.463E-02	4.777E-02	0.000E+00	NOT IDENT.
CE-139	-3.965E-03	1.191E-02	2.067E-02	0.000E+00	NOT IDENT.
BA-140	-5.633E-02	1.147E-01	1.756E-01	0.000E+00	NOT IDENT.
LA-140	-2.203E-02	4.709E-02	6.985E-02	0.000E+00	NOT IDENT.
CE-141	2.015E-03	2.059E-02	3.538E-02	0.000E+00	NOT IDENT.
CE-143	7.068E-02	1.265E+00	2.216E+00	0.000E+00	NOT IDENT.
CE-144	-4.773E-02	8.608E-02	1.386E-01	0.000E+00	NOT IDENT.
PM-144	1.055E-02	2.603E-02	4.744E-02	0.000E+00	NOT IDENT.
PR-144	7.120E-01	1.757E+00	3.202E+00	0.000E+00	NOT IDENT.
PM-146	-1.187E-02	3.076E-02	4.973E-02	0.000E+00	NOT IDENT.
ND-147	2.533E-01	2.397E-01	4.582E-01	0.000E+00	NOT IDENT.
PM-149	6.789E-01	3.855E+00	6.858E+00	0.000E+00	NOT IDENT.
EU-152	-2.187E-02	5.493E-02	9.030E-02	0.000E+00	NOT IDENT.
GD-153	-2.600E-03	2.231E-02	3.812E-02	0.000E+00	NOT IDENT.
EU-154	1.545E-02	8.172E-02	1.419E-01	0.000E+00	NOT IDENT.
EU-155	-2.227E-02	3.726E-02	6.032E-02	0.000E+00	NOT IDENT.
TB-160	-6.171E-02	8.178E-02	1.160E-01	0.000E+00	NOT IDENT.
HO-166M	-4.423E-03	4.390E-02	7.490E-02	0.000E+00	NOT IDENT.
TM-171	-3.822E+00	5.186E+00	7.765E+00	0.000E+00	NOT IDENT.
LU-176	-1.577E-02	1.335E-02	1.984E-02	0.000E+00	NOT IDENT.
LU-177	1.063E-01	2.296E-01	4.218E-01	0.000E+00	NOT IDENT.
LU-177M	-1.332E-02	9.977E-02	1.675E-01	0.000E+00	NOT IDENT.
HF-181	9.115E-03	2.076E-02	3.768E-02	0.000E+00	NOT IDENT.
W-181	-1.181E-02	6.120E-02	9.717E-02	0.000E+00	NOT IDENT.
TA-182	7.968E-02	1.194E-01	2.255E-01	0.000E+00	NOT IDENT.
RE-183	-2.091E-02	4.405E-02	7.567E-02	0.000E+00	NOT IDENT.
RE-184	1.452E-02	1.283E-01	2.273E-01	0.000E+00	NOT IDENT.
OS-185	8.206E-03	3.000E-02	5.206E-02	0.000E+00	NOT IDENT.
RE-188	1.859E-02	7.377E-02	1.280E-01	0.000E+00	NOT IDENT.
W-188	-7.870E-01	3.399E+00	5.766E+00	0.000E+00	NOT IDENT.

IR-192	1.399E-02	1.856E-02	3.468E-02	0.000E+00	NOT IDENT.
AU-195	-6.205E-03	6.570E-02	1.125E-01	0.000E+00	NOT IDENT.
TL-200	-1.230E-01	1.960E+00	3.348E+00	0.000E+00	NOT IDENT.
TL-201	-1.634E-01	5.044E-01	8.760E-01	0.000E+00	NOT IDENT.
TL-202	-1.993E-02	2.495E-02	3.693E-02	0.000E+00	NOT IDENT.
HG-203	-4.180E-03	1.739E-02	2.954E-02	0.000E+00	NOT IDENT.
BI-207	2.911E-02	3.661E-02	7.090E-02	0.000E+00	NOT IDENT.
TL-207	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
TL-208	-1.740E-02	3.242E-02	4.225E-02	0.000E+00	NOT IDENT.
PO-209	-1.517E+00	4.938E+00	7.901E+00	0.000E+00	NOT IDENT.
BI-210	4.000E-02	1.889E-01	3.423E-01	0.000E+00	NOT IDENT.
PB-210	4.000E-02	1.889E-01	3.423E-01	0.000E+00	NOT IDENT.
PO-210	4.000E-02	1.889E-01	3.423E-01	0.000E+00	NOT IDENT.
BI-211	-2.192E-02	1.343E-01	2.230E-01	0.000E+00	NOT IDENT.
PB-211	7.020E-02	5.135E-01	8.925E-01	0.000E+00	NOT IDENT.
BI-212	1.162E-02	1.769E-01	3.093E-01	0.000E+00	NOT IDENT.
PB-212	2.140E-03	3.153E-02	5.482E-02	0.000E+00	NOT IDENT.
PO-212	2.140E-03	3.153E-02	5.482E-02	0.000E+00	NOT IDENT.
BI-214	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
PB-214	-9.257E-03	4.668E-02	7.718E-02	0.000E+00	NOT IDENT.
PO-214	-9.257E-03	4.668E-02	7.718E-02	0.000E+00	NOT IDENT.
PO-215	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
PO-216	2.140E-03	3.153E-02	5.482E-02	0.000E+00	NOT IDENT.
PO-218	-9.257E-03	4.668E-02	7.718E-02	0.000E+00	NOT IDENT.
RN-219	-8.733E-02	2.330E-01	3.776E-01	0.000E+00	NOT IDENT.
RN-220	-8.942E+00	1.497E+01	2.225E+01	0.000E+00	NOT IDENT.
RA-223	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
RA-224	3.196E-02	3.094E-01	5.493E-01	0.000E+00	NOT IDENT.
RA-226	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
AC-227	1.643E-01	2.178E-01	4.047E-01	0.000E+00	NOT IDENT.
TH-227	1.643E-01	2.183E-01	4.047E-01	0.000E+00	NOT IDENT.
AC-228	7.644E-02	1.068E-01	2.009E-01	0.000E+00	NOT IDENT.
RA-228	7.644E-02	1.068E-01	2.009E-01	0.000E+00	NOT IDENT.
TH-228	1.972E-03	3.151E-02	5.476E-02	0.000E+00	NOT IDENT.
TH-229	-2.919E-03	2.346E-01	4.162E-01	0.000E+00	NOT IDENT.
TH-230	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
PA-231	6.319E-02	7.117E-01	1.255E+00	0.000E+00	NOT IDENT.
TH-231	6.360E-02	3.636E-01	6.421E-01	0.000E+00	NOT IDENT.
U-231	-2.747E-02	8.845E-02	1.483E-01	0.000E+00	NOT IDENT.
TH-232	7.644E-02	1.068E-01	2.009E-01	0.000E+00	NOT IDENT.
PA-233	2.836E-02	3.756E-02	7.012E-02	0.000E+00	NOT IDENT.
PA-234	6.598E-02	1.710E-01	3.153E-01	0.000E+00	NOT IDENT.
PA-234M	2.399E+00	5.158E+00	9.388E+00	0.000E+00	NOT IDENT.
TH-234	3.425E-02	1.972E-01	3.519E-01	0.000E+00	NOT IDENT.
U-234	6.284E-03	5.893E-02	9.923E-02	0.000E+00	NOT IDENT.
U-235	-6.096E-02	9.213E-02	1.373E-01	0.000E+00	NOT IDENT.
NP-236	6.951E-03	3.668E-02	6.325E-02	0.000E+00	NOT IDENT.
NP-237	-5.344E-02	6.554E-02	9.847E-02	0.000E+00	NOT IDENT.
U-238	3.425E-02	1.972E-01	3.519E-01	0.000E+00	NOT IDENT.
NP-239	2.319E-03	7.286E-02	1.255E-01	0.000E+00	NOT IDENT.
AM-241	3.850E-03	2.036E-02	3.648E-02	0.000E+00	NOT IDENT.
AM-243	-7.902E-03	1.383E-02	2.121E-02	0.000E+00	NOT IDENT.
CM-243	9.780E-03	3.145E-02	5.595E-02	0.000E+00	NOT IDENT.
CM-247	-7.342E-03	1.973E-02	3.192E-02	0.000E+00	NOT IDENT.
CF-249	-1.636E-02	2.378E-02	3.709E-02	0.000E+00	NOT IDENT.
CF-251	1.384E-02	5.568E-02	1.014E-01	0.000E+00	NOT IDENT.
ANH-511	-2.890E-02	3.442E-02	6.504E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:24:25.15

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:22:22.
Sample ID         : G1201873069          Sample quantity  : 1.32820E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.24  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Flag: "*" = Keyline

Sample ID : G1201873069 Acquisition date : 9-JUL-2009 08:22:22

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201873069
Acquisition date : 9-JUL-2009 08:22:22

None

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:24:29.68

```
*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                 DETECTOR DATA                               *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873069.CNF;1  *
* Acquisition date  : 9-JUL-2009 08:22:22.  Detector SN#     :                *
* Detector ID       : GAM21                 Sensitivity      : 5.00000       *
* Geometry          : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:08.24          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                                 SAMPLE DATA                                 *
*                                                                             *
* Sample date       : 2-JUL-2009 00:00:00.  Nuclide Library : SOLID           *
* Sample ID         : G1201873069           Analyst initials: MXR1            *
* Batch Number      : 881931                Sample Quantity : 1.32820E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                   QC DATA                                   *
*                                                                             *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :                  *
* MSD ID           :                      MSD Isotope     :                  *
* LCS ID           : 1032-A               LCS Isotope     :                  *
*******************************************************************************
```

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.057E-01		1.934E-01	2.700E-01	1.900E-02	-0.391
NA-22	5.508E-03		2.973E-02	5.040E-02	2.981E-03	0.109
NA-24	-7.892E-05		5.659E-05	Half-Life too short		
AL-26	1.059E-03		3.994E-02	6.649E-02	3.702E-03	0.016
K-40	1.161E-01		3.351E-01	5.820E-01	3.704E-02	0.199
TI-44	-1.007E-02		9.084E-03	1.264E-02	9.775E-04	-0.797
SC-46	-2.137E-02		2.307E-02	2.953E-02	2.120E-03	-0.724
V-48	-4.730E-02		3.639E-02	4.128E-02	2.840E-03	-1.146
CR-51	1.004E-01		1.776E-01	3.112E-01	2.024E-02	0.323
MN-52	-1.474E-03		1.064E-01	1.712E-01	1.032E-02	-0.009
MN-54	-1.609E-02		2.456E-02	3.563E-02	2.599E-03	-0.452
CO-56	-1.989E-02		2.822E-02	4.090E-02	2.976E-03	-0.486
CO-57	3.399E-03		1.035E-02	1.714E-02	1.973E-03	0.198
CO-58	1.470E-02		2.914E-02	5.206E-02	3.824E-03	0.282
FE-59	-8.377E-03		5.121E-02	8.059E-02	5.780E-03	-0.104
CO-60	6.945E-03		3.313E-02	5.617E-02	3.379E-03	0.124
ZN-65	3.344E-02		5.662E-02	1.038E-01	6.367E-03	0.322

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	-4.615E-01		9.392E-01	1.385E+00	8.839E-02	-0.333
AS-73	-4.483E-02		6.811E-02	1.029E-01	6.917E-03	-0.435
AS-74	2.940E-04		4.642E-02	7.485E-02	5.151E-03	0.004
SE-75	5.518E-03		2.170E-02	3.703E-02	2.240E-03	0.149
BR-77	4.969E-02		6.918E-01	1.134E+00	7.311E-02	0.044
SR-82	8.230E-02		2.442E-01	4.264E-01	3.126E-02	0.193
RB-83	-1.084E-02		4.349E-02	6.769E-02	4.362E-03	-0.160
RB-84	1.453E-02		3.378E-02	6.132E-02	4.416E-03	0.237
KR-85	-7.030E+00		6.860E+00	9.933E+00	6.357E-01	-0.708
SR-85	-3.322E-02		3.241E-02	4.693E-02	3.004E-03	-0.708
RB-86	-3.497E-01		4.476E-01	6.100E-01	3.896E-02	-0.573
Y-88	-1.293E-03		3.715E-02	6.083E-02	3.357E-03	-0.021
ZR-88	1.199E-03		1.880E-02	3.106E-02	1.675E-03	0.039
Y-91	3.325E+00		1.149E+01	1.984E+01	1.140E+00	0.168
NB-94	3.184E-03		2.812E-02	4.772E-02	3.460E-03	0.067
NB-95	-7.575E-04		2.960E-02	4.917E-02	3.603E-03	-0.015
NB-95M	-1.457E-02		5.331E-02	8.659E-02	6.770E-03	-0.168
ZR-95	-9.515E-03		4.136E-02	6.604E-02	5.504E-03	-0.144
NB-97	-1.058E-05		1.604E-05	Half-Life too short		
ZR-97	-1.086E-03		3.944E-04	Half-Life too short		
MO-99	-1.366E+00		1.047E+00	1.230E+00	1.781E-01	-1.111
TC-99M	1.829E+00		3.906E+00	Half-Life too short		
RH-101	1.608E-02		1.565E-02	2.842E-02	1.759E-03	0.566
RH-102	5.059E-03		1.847E-02	3.125E-02	1.910E-03	0.162
RU-103	-3.365E-03		2.156E-02	3.409E-02	4.388E-03	-0.099
RH-106	1.076E-01		2.637E-01	4.126E-01	5.106E-02	0.261
RU-106	1.076E-01		2.634E-01	4.126E-01	2.888E-02	0.261
AG-108M	-4.853E-03		1.679E-02	2.602E-02	1.632E-03	-0.186
CD-109	-1.750E-01		2.132E-01	3.172E-01	2.629E-02	-0.552
AG-110M	-8.917E-03		2.339E-02	3.693E-02	2.747E-03	-0.241
IN-111	-1.061E-02		7.656E-02	1.257E-01	7.705E-03	-0.084
IN-113M	1.913E-02		2.691E-02	4.781E-02	2.772E-03	0.400
SN-113	1.913E-02		2.691E-02	4.781E-02	2.772E-03	0.400
IN-114M	-4.911E-02		7.510E-02	1.185E-01	7.309E-03	-0.414
CD-115	1.549E-01		7.020E-01	1.173E+00	7.615E-02	0.132
SN-117M	1.304E-02		1.722E-02	2.941E-02	2.097E-03	0.443
SB-122	-9.189E-02		1.942E-01	2.893E-01	1.942E-02	-0.318
I-123	-9.611E-06		7.273E-05	Half-Life too short		
TE-123M	-8.537E-04		1.292E-02	2.048E-02	1.461E-03	-0.042
I-124	2.069E-02		1.369E-01	2.252E-01	1.557E-02	0.092
SB-124	9.132E-03		7.437E-02	1.273E-01	8.012E-03	0.072
SB-125	3.257E-02		5.328E-02	9.455E-02	5.641E-03	0.345
TE-125M	8.374E-01		3.256E+00	5.369E+00	6.241E-01	0.156
I-126	-3.197E-02		7.910E-02	1.241E-01	8.884E-03	-0.258
SB-126	2.150E-02		6.239E-02	1.100E-01	8.009E-03	0.196
SN-126	-1.780E-02		2.256E-02	3.212E-02	2.653E-03	-0.554
SB-127	4.538E-02		2.101E-01	3.648E-01	3.029E-02	0.124
XE-127	-1.710E-02		1.808E-02	2.743E-02	1.700E-03	-0.623

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	1.915E-02		3.773E-02	6.558E-02	4.111E-03	0.292
TE-132	4.258E-02		7.178E-02	1.255E-01	1.674E-02	0.339
BA-133	-5.253E-03		2.557E-02	4.100E-02	4.718E-03	-0.128
I-133	6.452E-06		4.264E-06	Half-Life too short		
CS-134	-2.848E-02		3.303E-02	4.653E-02	3.444E-03	-0.612
CS-135	3.782E-02		8.169E-02	1.420E-01	1.104E-02	0.266
I-135	-7.742E+00		7.272E+00	Half-Life too short		
CS-136	-1.052E-02		5.357E-02	8.448E-02	5.936E-03	-0.125
BA-137M	1.923E-02		2.377E-02	4.449E-02	3.178E-03	0.432
CS-137	2.032E-02		2.513E-02	4.703E-02	3.369E-03	0.432
CE-139	-3.965E-03		1.215E-02	1.987E-02	1.204E-03	-0.199
BA-140	-5.633E-02		1.171E-01	1.723E-01	5.627E-02	-0.327
LA-140	-2.203E-02		4.805E-02	6.985E-02	4.139E-03	-0.315
CE-141	2.015E-03		2.101E-02	3.394E-02	3.067E-03	0.059
CE-143	7.068E-02		1.291E+00	2.152E+00	4.397E-01	0.033
CE-144	-4.773E-02		8.784E-02	1.327E-01	2.197E-02	-0.360
PM-144	1.055E-02		2.656E-02	4.675E-02	3.384E-03	0.226
PR-144	7.120E-01		1.792E+00	3.155E+00	2.283E-01	0.226
PM-146	-1.187E-02		3.139E-02	4.864E-02	4.240E-03	-0.244
ND-147	2.533E-01		2.446E-01	4.494E-01	6.221E-02	0.564
PM-149	6.789E-01		3.934E+00	6.654E+00	9.433E-01	0.102
EU-152	-2.187E-02		5.606E-02	8.790E-02	5.717E-03	-0.249
GD-153	-2.600E-03		2.276E-02	3.632E-02	3.288E-03	-0.072
EU-154	1.545E-02		8.339E-02	1.414E-01	1.329E-02	0.109
EU-155	-2.227E-02		3.802E-02	5.756E-02	5.676E-03	-0.387
TB-160	-6.171E-02		8.345E-02	1.148E-01	8.274E-03	-0.538
HO-166M	-4.423E-03		4.480E-02	7.383E-02	5.366E-03	-0.060
TM-171	-3.822E+00		5.292E+00	7.354E+00	5.322E-01	-0.520
LU-176	-1.577E-02		1.363E-02	1.927E-02	1.130E-03	-0.818
LU-177	1.063E-01		2.342E-01	4.071E-01	2.526E-02	0.261
LU-177M	-1.332E-02		1.018E-01	1.636E-01	9.141E-03	-0.081
HF-181	9.115E-03		2.119E-02	3.689E-02	2.275E-03	0.247
W-181	-1.181E-02		6.244E-02	9.200E-02	6.613E-03	-0.128
TA-182	7.968E-02		1.219E-01	2.245E-01	1.298E-02	0.355
RE-183	-2.091E-02		4.495E-02	7.273E-02	4.790E-03	-0.288
RE-184	1.452E-02		1.309E-01	2.201E-01	1.339E-02	0.066
OS-185	8.206E-03		3.061E-02	5.123E-02	3.633E-03	0.160
RE-188	1.859E-02		7.528E-02	1.229E-01	9.375E-03	0.151
W-188	-7.870E-01		3.468E+00	5.596E+00	3.280E-01	-0.141
IR-192	1.399E-02		1.894E-02	3.371E-02	1.983E-03	0.415
AU-195	-6.205E-03		6.704E-02	1.072E-01	9.841E-03	-0.058
TL-200	-1.230E-01		2.000E+00	3.262E+00	1.829E-01	-0.038
TL-201	-1.634E-01		5.147E-01	8.424E-01	5.102E-02	-0.194
TL-202	-1.993E-02		2.546E-02	3.610E-02	2.101E-03	-0.552
HG-203	-4.180E-03		1.775E-02	2.865E-02	1.775E-03	-0.146
BI-207	2.911E-02		3.736E-02	7.038E-02	4.552E-03	0.414
TL-207	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
TL-208	-1.740E-02		3.308E-02	4.150E-02	3.148E-03	-0.419

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	-1.517E+00		5.039E+00	7.820E+00	5.598E-01	-0.194
BI-210	4.000E-02		1.928E-01	3.223E-01	2.441E-02	0.124
PB-210	4.000E-02		1.928E-01	3.223E-01	2.441E-02	0.124
PO-210	4.000E-02		1.927E-01	3.223E-01	2.083E-02	0.124
BI-211	-2.192E-02		1.370E-01	2.171E-01	1.382E-02	-0.101
PB-211	7.020E-02		5.240E-01	8.712E-01	5.429E-01	0.081
BI-212	1.162E-02		1.805E-01	3.050E-01	2.711E-02	0.038
PB-212	2.140E-03		3.217E-02	5.303E-02	4.040E-03	0.040
PO-212	2.140E-03		3.217E-02	5.303E-02	4.040E-03	0.040
BI-214	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
PB-214	-9.257E-03		4.764E-02	7.516E-02	6.183E-03	-0.123
PO-214	-9.257E-03		4.764E-02	7.516E-02	6.183E-03	-0.123
PO-215	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
PO-216	2.140E-03		3.217E-02	5.303E-02	4.040E-03	0.040
PO-218	-9.257E-03		4.764E-02	7.516E-02	6.183E-03	-0.123
RN-219	-8.733E-02		2.377E-01	3.686E-01	4.965E-02	-0.237
RN-220	-8.942E+00		1.528E+01	2.183E+01	1.448E+00	-0.410
RA-223	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
RA-224	3.196E-02		3.157E-01	5.314E-01	3.268E-02	0.060
RA-226	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
AC-227	1.643E-01		2.222E-01	3.920E-01	5.515E-02	0.419
TH-227	1.643E-01		2.227E-01	3.920E-01	6.660E-02	0.419
AC-228	7.644E-02		1.090E-01	1.989E-01	2.018E-02	0.384
RA-228	7.644E-02		1.090E-01	1.989E-01	2.018E-02	0.384
TH-228	1.972E-03		3.215E-02	5.297E-02	4.036E-03	0.037
TH-229	-2.919E-03		2.394E-01	4.012E-01	2.478E-02	-0.007
TH-230	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
PA-231	6.319E-02		7.262E-01	1.217E+00	1.680E-01	0.052
TH-231	6.360E-02		3.711E-01	6.244E-01	1.032E-01	0.102
U-231	-2.747E-02		9.025E-02	1.413E-01	1.261E-02	-0.194
TH-232	7.644E-02		1.090E-01	1.989E-01	2.018E-02	0.384
PA-233	2.836E-02		3.833E-02	6.814E-02	4.236E-03	0.416
PA-234	6.598E-02		1.745E-01	3.124E-01	5.650E-02	0.211
PA-234M	2.399E+00		5.263E+00	9.310E+00	9.167E-01	0.258
TH-234	3.425E-02		2.012E-01	3.330E-01	5.769E-02	0.103
U-234	6.284E-03		6.013E-02	9.755E-02	8.454E-03	0.064
U-235	-6.096E-02		9.401E-02	1.317E-01	2.338E-02	-0.463
NP-236	6.951E-03		3.743E-02	6.078E-02	4.182E-03	0.114
NP-237	-5.344E-02		6.688E-02	9.366E-02	2.079E-02	-0.571
U-238	3.425E-02		2.012E-01	3.330E-01	5.769E-02	0.103
NP-239	2.319E-03		7.434E-02	1.200E-01	1.313E-02	0.019
AM-241	3.850E-03		2.077E-02	3.449E-02	2.692E-03	0.112
AM-243	-7.902E-03		1.411E-02	2.013E-02	1.520E-03	-0.393
CM-243	9.780E-03		3.209E-02	5.337E-02	5.136E-03	0.183
CM-247	-7.342E-03		2.013E-02	3.116E-02	1.709E-03	-0.236
CF-249	-1.636E-02		2.427E-02	3.618E-02	1.962E-03	-0.452
CF-251	1.384E-02		5.681E-02	9.760E-02	5.960E-03	0.142
ANH-511	-2.890E-02		3.513E-02	6.374E-02	4.067E-03	-0.453

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
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*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201873069          *
* Acquisition date  :  9-JUL-2009 08:22:22 Detector SN#     :               *
* Detector ID       : GAM21                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:08.24      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       :  2-JUL-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201873069          Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.3282E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.057E-01	1.896E-01	1.380E-01	9.671E-02 NOT IDENT.
NA-22	5.508E-03	2.914E-02	2.532E-02	1.487E-02 NOT IDENT.
NA-24	-7.892E+01	1.109E+02	0.000E+00	5.659E+01 SHORT HLIF
AL-26	1.059E-03	3.915E-02	3.319E-02	1.997E-02 NOT IDENT.
K-40	1.161E-01	3.284E-01	2.916E-01	1.675E-01 NOT IDENT.
TI-44	-1.007E-02	8.902E-03	6.659E-03	4.542E-03 NOT IDENT.
SC-46	-2.137E-02	2.261E-02	1.493E-02	1.154E-02 NOT IDENT.
V-48	-4.730E-02	3.567E-02	2.083E-02	1.820E-02 NOT IDENT.
CR-51	1.004E-01	1.740E-01	1.601E-01	8.878E-02 NOT IDENT.
MN-52	-1.474E-03	1.043E-01	8.583E-02	5.322E-02 NOT IDENT.
MN-54	-1.609E-02	2.407E-02	1.803E-02	1.228E-02 NOT IDENT.
CO-56	-1.989E-02	2.766E-02	2.069E-02	1.411E-02 NOT IDENT.
CO-57	3.399E-03	1.015E-02	8.966E-03	5.176E-03 NOT IDENT.
CO-58	1.470E-02	2.855E-02	2.636E-02	1.457E-02 NOT IDENT.
FE-59	-8.377E-03	5.018E-02	4.059E-02	2.560E-02 NOT IDENT.
CO-60	6.945E-03	3.247E-02	2.819E-02	1.656E-02 NOT IDENT.
ZN-65	3.344E-02	5.549E-02	5.225E-02	2.831E-02 NOT IDENT.
GE-68	-4.615E-01	9.204E-01	6.977E-01	4.696E-01 NOT IDENT.
AS-73	-4.483E-02	6.675E-02	5.457E-02	3.405E-02 NOT IDENT.
AS-74	2.940E-04	4.549E-02	3.811E-02	2.321E-02 NOT IDENT.
SE-75	5.518E-03	2.127E-02	1.912E-02	1.085E-02 NOT IDENT.
BR-77	4.969E-02	6.780E-01	5.788E-01	3.459E-01 NOT IDENT.
SR-82	8.230E-02	2.393E-01	2.161E-01	1.221E-01 NOT IDENT.
RB-83	-1.084E-02	4.262E-02	3.454E-02	2.174E-02 NOT IDENT.
RB-84	1.453E-02	3.310E-02	3.101E-02	1.689E-02 NOT IDENT.
KR-85	-7.030E+00	6.722E+00	5.070E+00	3.430E+00 NOT IDENT.

SR-85	-3.322E-02	3.176E-02	2.396E-02	1.621E-02	NOT IDENT.
RB-86	-3.497E-01	4.387E-01	3.073E-01	2.238E-01	NOT IDENT.
Y-88	-1.293E-03	3.641E-02	3.035E-02	1.858E-02	NOT IDENT.
ZR-88	1.199E-03	1.843E-02	1.593E-02	9.402E-03	NOT IDENT.
Y-91	3.325E+00	1.126E+01	9.976E+00	5.747E+00	NOT IDENT.
NB-94	3.184E-03	2.756E-02	2.423E-02	1.406E-02	NOT IDENT.
NB-95	-7.575E-04	2.901E-02	2.492E-02	1.480E-02	NOT IDENT.
NB-95M	-1.457E-02	5.225E-02	4.479E-02	2.666E-02	NOT IDENT.
ZR-95	-9.515E-03	4.053E-02	3.348E-02	2.068E-02	NOT IDENT.
NB-97	-1.058E+01	3.144E+01	0.000E+00	1.604E+01	SHORT HLIF
ZR-97	-1.086E+03	7.731E+02	0.000E+00	3.944E+02	SHORT HLIF
MO-99	-1.366E+00	1.026E+00	6.239E-01	5.233E-01	NOT IDENT.
TC-99M	1.829E+06	7.657E+06	0.000E+00	3.906E+06	SHORT HLIF
RH-101	1.608E-02	1.534E-02	1.475E-02	7.824E-03	NOT IDENT.
RH-102	5.059E-03	1.810E-02	1.597E-02	9.233E-03	NOT IDENT.
RU-103	-3.365E-03	2.113E-02	1.741E-02	1.078E-02	NOT IDENT.
RH-106	1.076E-01	2.584E-01	2.099E-01	1.318E-01	NOT IDENT.
RU-106	1.076E-01	2.582E-01	2.099E-01	1.317E-01	NOT IDENT.
AG-108M	-4.853E-03	1.645E-02	1.332E-02	8.395E-03	NOT IDENT.
CD-109	-1.750E-01	2.089E-01	1.668E-01	1.066E-01	NOT IDENT.
AG-110M	-8.917E-03	2.292E-02	1.877E-02	1.169E-02	NOT IDENT.
IN-111	-1.061E-02	7.503E-02	6.500E-02	3.828E-02	NOT IDENT.
IN-113M	1.913E-02	2.637E-02	2.452E-02	1.345E-02	NOT IDENT.
SN-113	1.913E-02	2.637E-02	2.452E-02	1.345E-02	NOT IDENT.
IN-114M	-4.911E-02	7.360E-02	6.154E-02	3.755E-02	NOT IDENT.
CD-115	1.549E-01	6.879E-01	5.983E-01	3.510E-01	NOT IDENT.
SN-117M	1.304E-02	1.687E-02	1.532E-02	8.608E-03	NOT IDENT.
SB-122	-9.189E-02	1.903E-01	1.474E-01	9.709E-02	NOT IDENT.
I-123	-9.611E+00	1.426E+02	0.000E+00	7.273E+01	SHORT HLIF
TE-123M	-8.537E-04	1.266E-02	1.066E-02	6.460E-03	NOT IDENT.
I-124	2.069E-02	1.341E-01	1.146E-01	6.844E-02	NOT IDENT.
SB-124	9.132E-03	7.289E-02	6.364E-02	3.719E-02	NOT IDENT.
SB-125	3.257E-02	5.222E-02	4.841E-02	2.664E-02	NOT IDENT.
TE-125M	8.374E-01	3.191E+00	2.813E+00	1.628E+00	NOT IDENT.
I-126	-3.197E-02	7.751E-02	6.306E-02	3.955E-02	NOT IDENT.
SB-126	2.150E-02	6.114E-02	5.580E-02	3.120E-02	NOT IDENT.
SN-126	-1.780E-02	2.211E-02	1.689E-02	1.128E-02	NOT IDENT.
SB-127	4.538E-02	2.059E-01	1.853E-01	1.051E-01	NOT IDENT.
XE-127	-1.710E-02	1.772E-02	1.422E-02	9.040E-03	NOT IDENT.
I-131	1.915E-02	3.697E-02	3.367E-02	1.886E-02	NOT IDENT.
TE-132	4.258E-02	7.035E-02	6.495E-02	3.589E-02	NOT IDENT.
BA-133	-5.253E-03	2.505E-02	2.106E-02	1.278E-02	NOT IDENT.
I-133	6.452E+00	8.357E+00	0.000E+00	4.264E+00	SHORT HLIF
CS-134	-2.848E-02	3.237E-02	2.357E-02	1.651E-02	NOT IDENT.
CS-135	3.782E-02	8.006E-02	7.327E-02	4.085E-02	NOT IDENT.
I-135	-7.742E+06	1.425E+07	0.000E+00	7.272E+06	SHORT HLIF
CS-136	-1.052E-02	5.250E-02	4.258E-02	2.679E-02	NOT IDENT.
BA-137M	1.923E-02	2.330E-02	2.261E-02	1.189E-02	NOT IDENT.
CS-137	2.032E-02	2.463E-02	2.390E-02	1.257E-02	NOT IDENT.
CE-139	-3.965E-03	1.191E-02	1.034E-02	6.076E-03	NOT IDENT.
BA-140	-5.633E-02	1.147E-01	8.785E-02	5.854E-02	NOT IDENT.
LA-140	-2.203E-02	4.709E-02	3.494E-02	2.403E-02	NOT IDENT.
CE-141	2.015E-03	2.059E-02	1.770E-02	1.050E-02	NOT IDENT.
CE-143	7.068E-02	1.265E+00	1.109E+00	6.454E-01	NOT IDENT.
CE-144	-4.773E-02	8.608E-02	6.932E-02	4.392E-02	NOT IDENT.
PM-144	1.055E-02	2.603E-02	2.373E-02	1.328E-02	NOT IDENT.
PR-144	7.120E-01	1.757E+00	1.602E+00	8.962E-01	NOT IDENT.
PM-146	-1.187E-02	3.076E-02	2.488E-02	1.569E-02	NOT IDENT.
ND-147	2.533E-01	2.397E-01	2.292E-01	1.223E-01	NOT IDENT.
PM-149	6.789E-01	3.855E+00	3.431E+00	1.967E+00	NOT IDENT.
EU-152	-2.187E-02	5.493E-02	4.518E-02	2.803E-02	NOT IDENT.
GD-153	-2.600E-03	2.231E-02	1.907E-02	1.138E-02	NOT IDENT.
EU-154	1.545E-02	8.172E-02	7.100E-02	4.169E-02	NOT IDENT.
EU-155	-2.227E-02	3.726E-02	3.018E-02	1.901E-02	NOT IDENT.
TB-160	-6.171E-02	8.178E-02	5.805E-02	4.172E-02	NOT IDENT.
HO-166M	-4.423E-03	4.390E-02	3.747E-02	2.240E-02	NOT IDENT.
TM-171	-3.822E+00	5.186E+00	3.885E+00	2.646E+00	NOT IDENT.
LU-176	-1.577E-02	1.335E-02	9.926E-03	6.813E-03	NOT IDENT.
LU-177	1.063E-01	2.296E-01	2.110E-01	1.171E-01	NOT IDENT.
LU-177M	-1.332E-02	9.977E-02	8.380E-02	5.091E-02	NOT IDENT.
HF-181	9.115E-03	2.076E-02	1.885E-02	1.059E-02	NOT IDENT.
W-181	-1.181E-02	6.120E-02	4.861E-02	3.122E-02	NOT IDENT.
TA-182	7.968E-02	1.194E-01	1.128E-01	6.093E-02	NOT IDENT.
RE-183	-2.091E-02	4.405E-02	3.786E-02	2.247E-02	NOT IDENT.
RE-184	1.452E-02	1.283E-01	1.137E-01	6.545E-02	NOT IDENT.
OS-185	8.206E-03	3.000E-02	2.604E-02	1.531E-02	NOT IDENT.
RE-188	1.859E-02	7.377E-02	6.404E-02	3.764E-02	NOT IDENT.
W-188	-7.870E-01	3.399E+00	2.885E+00	1.734E+00	NOT IDENT.

IR-192	1.399E-02	1.856E-02	1.735E-02	9.469E-03	NOT IDENT.
AU-195	-6.205E-03	6.570E-02	5.627E-02	3.352E-02	NOT IDENT.
TL-200	-1.230E-01	1.960E+00	1.675E+00	1.000E+00	NOT IDENT.
TL-201	-1.634E-01	5.044E-01	4.383E-01	2.573E-01	NOT IDENT.
TL-202	-1.993E-02	2.495E-02	1.848E-02	1.273E-02	NOT IDENT.
HG-203	-4.180E-03	1.739E-02	1.478E-02	8.875E-03	NOT IDENT.
BI-207	2.911E-02	3.661E-02	3.547E-02	1.868E-02	NOT IDENT.
TL-207	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
TL-208	-1.740E-02	3.242E-02	2.114E-02	1.654E-02	NOT IDENT.
PO-209	-1.517E+00	4.938E+00	3.953E+00	2.519E+00	NOT IDENT.
BI-210	4.000E-02	1.889E-01	1.712E-01	9.638E-02	NOT IDENT.
PB-210	4.000E-02	1.889E-01	1.712E-01	9.638E-02	NOT IDENT.
PO-210	4.000E-02	1.889E-01	1.712E-01	9.637E-02	NOT IDENT.
BI-211	-2.192E-02	1.343E-01	1.116E-01	6.852E-02	NOT IDENT.
PB-211	7.020E-02	5.135E-01	4.465E-01	2.620E-01	NOT IDENT.
BI-212	1.162E-02	1.769E-01	1.547E-01	9.026E-02	NOT IDENT.
PB-212	2.140E-03	3.153E-02	2.742E-02	1.609E-02	NOT IDENT.
PO-212	2.140E-03	3.153E-02	2.742E-02	1.609E-02	NOT IDENT.
BI-214	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
PB-214	-9.257E-03	4.668E-02	3.861E-02	2.382E-02	NOT IDENT.
PO-214	-9.257E-03	4.668E-02	3.861E-02	2.382E-02	NOT IDENT.
PO-215	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
PO-216	2.140E-03	3.153E-02	2.742E-02	1.609E-02	NOT IDENT.
PO-218	-9.257E-03	4.668E-02	3.861E-02	2.382E-02	NOT IDENT.
RN-219	-8.733E-02	2.330E-01	1.889E-01	1.189E-01	NOT IDENT.
RN-220	-8.942E+00	1.497E+01	1.113E+01	7.640E+00	NOT IDENT.
RA-223	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
RA-224	3.196E-02	3.094E-01	2.748E-01	1.578E-01	NOT IDENT.
RA-226	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
AC-227	1.643E-01	2.178E-01	2.025E-01	1.111E-01	NOT IDENT.
TH-227	1.643E-01	2.183E-01	2.025E-01	1.114E-01	NOT IDENT.
AC-228	7.644E-02	1.068E-01	1.005E-01	5.451E-02	NOT IDENT.
RA-228	7.644E-02	1.068E-01	1.005E-01	5.451E-02	NOT IDENT.
TH-228	1.972E-03	3.151E-02	2.740E-02	1.608E-02	NOT IDENT.
TH-229	-2.919E-03	2.346E-01	2.082E-01	1.197E-01	NOT IDENT.
TH-230	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
PA-231	6.319E-02	7.117E-01	6.277E-01	3.631E-01	NOT IDENT.
TH-231	6.360E-02	3.636E-01	3.212E-01	1.855E-01	NOT IDENT.
U-231	-2.747E-02	8.845E-02	7.422E-02	4.513E-02	NOT IDENT.
TH-232	7.644E-02	1.068E-01	1.005E-01	5.451E-02	NOT IDENT.
PA-233	2.836E-02	3.756E-02	3.508E-02	1.916E-02	NOT IDENT.
PA-234	6.598E-02	1.710E-01	1.578E-01	8.726E-02	NOT IDENT.
PA-234M	2.399E+00	5.158E+00	4.697E+00	2.631E+00	NOT IDENT.
TH-234	3.425E-02	1.972E-01	1.760E-01	1.006E-01	NOT IDENT.
U-234	6.284E-03	5.893E-02	4.965E-02	3.007E-02	NOT IDENT.
U-235	-6.096E-02	9.213E-02	6.871E-02	4.701E-02	NOT IDENT.
NP-236	6.951E-03	3.668E-02	3.164E-02	1.872E-02	NOT IDENT.
NP-237	-5.344E-02	6.554E-02	4.926E-02	3.344E-02	NOT IDENT.
U-238	3.425E-02	1.972E-01	1.760E-01	1.006E-01	NOT IDENT.
NP-239	2.319E-03	7.286E-02	6.279E-02	3.717E-02	NOT IDENT.
AM-241	3.850E-03	2.036E-02	1.825E-02	1.039E-02	NOT IDENT.
AM-243	-7.902E-03	1.383E-02	1.061E-02	7.055E-03	NOT IDENT.
CM-243	9.780E-03	3.145E-02	2.799E-02	1.605E-02	NOT IDENT.
CM-247	-7.342E-03	1.973E-02	1.597E-02	1.007E-02	NOT IDENT.
CF-249	-1.636E-02	2.378E-02	1.856E-02	1.213E-02	NOT IDENT.
CF-251	1.384E-02	5.568E-02	5.073E-02	2.841E-02	NOT IDENT.
ANH-511	-2.890E-02	3.442E-02	3.254E-02	1.756E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	51.5619
46.50	51.5619
46.50	51.5619
48.70	51.7203
49.72	47.7304
51.35	45.7999
52.39	48.9207
52.97	53.0379
53.15	53.0504
53.44	48.9882
54.07	46.9856
56.28	53.2646
56.28	53.2648
57.37	49.2351
57.53	49.2450
57.53	49.2451
57.60	49.2493
57.98	43.1136
57.98	43.1136
59.32	56.5521
59.32	56.5521
59.40	56.5576
59.54	56.5674
59.72	63.7809
60.01	63.8035
61.10	56.6750
61.14	55.6472
61.30	56.6886
63.00	59.9027
63.29	60.9564
63.29	60.9564
63.58	60.9774
64.28	50.6840
65.12	52.8046
65.20	55.9159
65.20	55.9159
66.05	54.9347
66.72	63.2753
66.83	61.2086
66.91	61.2142
67.20	61.2347
67.20	61.2347
67.75	58.1576
67.85	57.1256
68.90	58.2334
68.90	58.2334
69.30	55.1386
69.67	62.4472
70.82	68.7800
70.82	68.7800
70.83	68.7808
72.80	59.5308
72.87	59.5352
72.87	59.5352
74.67	65.9308
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.81	61.7539
74.97	61.7645
75.28	53.4076
75.70	53.4315
77.11	59.8071
77.11	59.8071
77.11	59.8071

77.11	59.8071
77.11	59.8071
77.11	59.8071
78.38	76.6976
79.62	62.0686
79.80	62.0803
79.80	62.0803
80.11	66.3102
80.18	69.4729
80.30	69.4815
80.30	69.4815
80.57	71.6069
81.00	72.6921
81.07	72.6974
81.07	72.6974
81.07	72.6974
81.07	72.6974
82.60	49.5960
83.37	46.4663
83.78	49.6553
83.78	49.6553
83.78	49.6553
83.78	49.6553
84.21	58.1322
84.40	60.2577
84.90	67.6917
85.43	69.8440
86.29	58.2531
86.50	60.3838
86.54	60.3862
86.59	60.3892
86.72	59.3374
86.79	59.3413
86.94	62.5297
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.30	62.5520
87.57	60.4475
87.88	73.1956
88.03	73.2064
88.36	68.9846
88.47	68.9921
89.95	51.0212
91.11	51.0784
92.29	56.4626
92.38	54.3365
92.38	54.3365
93.35	60.7850
94.00	60.8223
94.67	60.8604
94.67	60.8606
94.90	63.0097
94.90	63.0097
94.90	63.0097
94.90	63.0097
95.87	58.7910
95.87	58.7910
96.73	53.4893
97.43	49.2417
98.44	49.2875
98.44	49.2875
98.88	50.3793
99.55	54.7003
99.55	54.7003
99.86	56.8614
100.00	63.3067
100.10	63.3126
103.18	46.2708
103.76	48.4480
105.00	61.4349
105.31	63.6079
108.00	56.1932
109.28	61.6645
111.00	69.3396
111.00	69.3396

111.76	65.0480
112.95	64.0282
115.19	63.0616
116.30	58.7669
117.00	57.7120
117.00	57.7120
117.66	66.4595
121.11	61.1842
121.62	59.0234
121.78	59.0310
122.06	57.9510
122.32	65.6186
122.32	65.6186
122.32	65.6186
122.32	65.6186
123.07	60.1867
127.23	70.2672
129.76	61.6056
131.20	60.5729
133.02	61.7610
133.54	69.5085
135.34	66.2892
136.00	61.9011
136.25	66.3350
136.48	66.3464
140.51	58.7827
140.51	0.0000
142.18	58.8555
142.65	61.0975
143.76	60.0354
144.24	52.2715
144.24	52.2715
144.24	52.2715
144.24	52.2715
145.22	48.9699
145.44	48.9777
147.16	55.7255
152.43	60.4101
152.70	55.9460
153.22	53.7279
154.21	57.1256
154.21	57.1256
154.21	57.1256
154.21	57.1256
155.03	63.8828
156.02	86.3571
158.56	52.8044
159.00	0.0000
159.00	64.0589
160.31	59.6169
161.27	54.0282
162.32	65.7811
162.64	67.5980
163.35	66.7287
163.89	63.1448
165.85	57.8086
167.43	58.7737
171.28	58.0172
171.86	55.3189
172.10	51.6994
176.55	52.7586
176.60	53.6701
181.06	62.0338
184.41	59.4224
185.71	56.7260
186.00	56.7366
190.27	64.2271
192.34	65.2273
193.63	57.9235
197.04	51.5939
198.01	47.9365
198.60	47.0315
200.40	60.0068
201.83	62.8294
202.84	60.0937
205.31	56.4779
208.36	55.6512
208.81	51.9545

209.75	55.6959
209.75	55.6959
210.97	56.6644
215.65	62.4052
216.55	54.0500
218.09	52.2320
222.10	64.5026
223.80	55.2066
226.40	56.2233
227.00	60.9288
227.08	60.9315
227.20	55.3107
228.16	54.4019
228.18	54.4026
228.18	54.4026
231.56	46.0461
235.69	53.6838
236.00	53.6929
236.00	53.6929
238.60	42.4482
238.63	42.4490
238.63	42.4490
238.63	42.4490
239.00	35.8528
240.98	49.1134
241.98	66.1497
241.98	66.1497
241.98	66.1497
244.69	49.2099
245.39	44.4945
247.94	44.5542
248.90	52.1641
249.79	54.0860
252.40	56.0594
252.85	55.1219
252.85	55.1219
254.15	0.0000
256.20	47.6007
256.20	47.6007
260.50	50.5674
260.90	48.6691
262.80	59.2232
264.65	39.1997
268.24	40.2281
268.79	43.1131
269.46	51.7529
269.46	51.7529
269.46	51.7529
269.46	51.7529
271.23	49.8799
273.65	42.2565
276.40	39.4285
277.35	44.2570
277.60	48.1116
277.60	48.1116
278.00	48.1207
278.60	42.3586
279.20	38.5190
279.53	39.4880
280.46	35.6518
281.68	36.6367
283.67	30.8816
284.30	29.9257
285.00	30.9012
285.90	31.8805
286.10	34.7823
286.10	34.7823
287.40	35.7706
288.45	0.0000
290.67	38.7310
290.80	38.7329
291.72	36.8125
293.26	36.8389
293.70	37.8165
295.21	46.5762
295.21	46.5762
295.21	46.5762
295.96	43.6805

296.50	48.5461
297.23	44.6776
298.57	45.6776
299.80	39.8689
299.80	39.8689
300.09	34.0391
300.09	34.0391
300.09	34.0391
300.10	34.0391
300.12	34.0396
301.29	36.0041
302.84	40.8987
303.76	38.9673
303.91	38.9702
304.40	43.8514
304.40	43.8514
304.84	38.0121
306.84	46.8270
308.46	32.2173
311.98	35.2022
316.51	33.3144
318.01	48.0436
319.02	49.0466
319.41	44.1491
320.08	33.3671
323.87	35.3892
323.87	35.3892
323.87	35.3892
323.87	35.3892
325.23	39.3447
328.77	40.3909
333.44	32.5758
334.20	34.5616
334.20	34.5616
334.30	34.5629
338.28	31.6547
338.28	31.6547
338.28	31.6547
338.28	31.6547
338.32	31.6551
338.32	31.6551
338.32	31.6551
340.50	35.6454
340.57	32.6757
344.27	37.6860
345.85	31.7566
350.59	37.7862
351.07	35.8049
351.92	35.8176
351.92	35.8176
351.92	35.8176
355.39	0.0000
356.01	35.8785
364.48	32.0031
366.43	27.0244
367.43	31.0405
367.94	34.0515
369.80	41.0931
374.96	28.1217
383.85	25.1978
387.95	36.3432
388.63	29.2843
391.69	27.2973
391.69	27.2973
392.90	34.3906
398.62	28.3845
400.65	27.3919
401.10	31.4556
401.81	29.4340
402.60	26.3974
404.84	24.3876
410.95	24.4441
411.60	23.4312
413.65	28.5472
414.70	22.4388
415.30	23.4638
415.76	24.4884
417.63	0.0000

418.52	26.5564
423.70	22.5140
427.08	19.4683
427.89	19.4741
432.53	21.5606
433.93	19.5172
439.47	27.7907
439.56	26.7624
439.89	23.6772
443.98	21.6501
444.90	22.6886
445.03	22.6896
445.03	22.6896
445.03	22.6896
445.03	22.6896
453.90	36.2112
463.38	22.8374
468.07	33.2719
473.00	16.6643
475.06	21.8875
475.35	22.9319
476.78	25.0289
477.59	23.9928
477.96	25.0392
482.03	15.6711
484.57	21.9585
487.03	21.9767
490.36	16.7629
492.35	22.0162
497.08	21.0007
507.63	0.0000
510.53	0.0000
510.84	16.8771
511.00	16.8779
511.85	27.4343
511.85	27.4343
513.99	68.6340
513.99	68.6340
520.41	24.3364
520.65	20.1054
527.90	24.3948
528.96	0.0000
529.64	21.2251
529.87	0.0000
531.02	16.9875
537.32	25.5322
543.00	22.3807
546.56	0.0000
549.76	19.2239
552.65	23.5168
555.20	11.7678
563.23	25.7385
563.90	25.7438
568.70	18.2621
569.32	19.3399
569.50	25.7877
569.67	25.7895
573.80	22.5940
574.00	21.5190
574.64	18.2949
578.91	31.2493
579.30	30.1752
583.14	28.0522
585.48	23.7531
591.81	31.3697
592.07	28.1265
593.00	28.1347
595.88	20.5771
600.56	22.7744
602.52	0.0000
602.71	24.9592
602.71	24.9592
603.60	28.2223
604.41	32.5715
604.70	34.7461
609.31	26.0947
609.31	26.0947
609.31	26.0947

609.31	26.0947
610.33	22.8396
612.46	27.2070
614.37	27.2217
618.01	27.2504
621.84	14.1857
621.84	14.1857
631.29	19.6950
633.02	17.5152
633.10	17.5156
634.78	21.9048
635.90	20.8160
636.97	20.8225
645.85	21.9731
646.12	19.7771
656.30	25.7094
657.75	22.0454
657.90	0.0000
661.65	13.7933
661.65	13.7933
664.57	23.9275
666.33	21.1769
666.33	21.1769
675.00	19.3812
677.61	20.3184
685.20	13.8818
692.80	24.1105
695.00	25.0527
696.49	22.2778
696.49	22.2778
697.00	23.2091
697.49	24.1407
698.33	25.0746
698.50	26.0045
699.00	25.0790
702.63	27.8925
706.10	25.1263
706.58	0.0000
706.67	24.1989
709.31	21.4216
711.68	21.4348
713.82	22.3794
717.42	21.4670
720.50	14.9456
721.93	19.6234
722.20	18.6902
722.78	18.6930
722.78	18.6930
722.89	18.6934
722.95	18.6938
723.30	15.8912
724.18	16.8296
727.18	14.9714
733.00	10.3082
735.90	9.3781
739.58	20.6510
742.81	9.3945
744.21	9.3978
747.13	14.1071
751.79	11.2991
752.31	12.2422
753.82	18.8411
755.35	14.1364
756.15	15.0820
756.87	10.3707
763.93	23.6115
765.79	22.6772
766.41	18.9006
766.84	17.9575
768.36	21.7464
768.36	21.7464
768.36	21.7464
768.36	21.7464
776.49	18.9478
778.00	17.0592
778.57	18.0096
778.89	18.9591
783.80	17.0837

785.46	17.0907
792.07	15.2161
795.84	22.8447
796.30	23.7996
801.93	12.3925
805.60	25.7607
810.29	13.3725
810.76	16.2398
815.85	16.2595
817.79	19.1378
818.51	20.0981
819.60	15.3167
826.30	14.3823
828.27	7.6742
831.60	15.3604
831.96	13.4414
834.83	18.2539
836.80	0.0000
846.75	21.1952
848.13	18.3108
856.28	0.0000
856.80	21.2440
860.37	12.5636
867.32	17.4236
867.82	17.4254
871.10	9.6881
873.19	10.6618
874.81	17.4532
875.33	0.0000
876.40	14.5496
879.36	14.5593
880.27	12.6207
880.51	12.6213
881.50	6.7976
883.24	5.8289
884.67	7.7743
889.25	14.5917
896.60	13.6414
898.02	19.4938
899.00	18.5230
903.28	15.6133
911.07	14.6625
911.07	14.6625
911.07	14.6625
919.63	13.7109
920.93	9.7961
925.00	18.6293
925.24	17.6497
926.50	12.7506
934.06	10.8066
934.06	10.8066
934.06	10.8066
934.06	10.8066
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944.10	8.8608
946.00	6.8946
949.00	8.8702
962.29	14.8257
964.01	10.8760
966.15	8.9026
968.20	11.8752
969.11	11.8777
969.11	11.8777
969.11	11.8777
977.42	4.9577
980.50	10.9138
983.50	18.8632
989.30	10.9340
996.32	26.8770
1001.03	13.9496
1001.68	12.9550
1004.76	17.9491
1021.30	0.0000
1024.50	0.0000
1034.80	8.0264
1037.82	12.0469
1038.57	8.0322

1038.76	0.0000
1045.16	11.0591
1046.59	14.0792
1048.07	14.0832
1050.47	14.0900
1050.47	14.0900
1063.62	8.0726
1076.63	17.1978
1077.35	16.1888
1085.78	16.2148
1099.22	10.1607
1112.02	16.2975
1112.84	13.2439
1115.52	8.1543
1120.29	7.1413
1120.29	7.1413
1120.29	7.1413
1120.29	7.1413
1120.51	7.1416
1121.28	9.1835
1124.00	0.0000
1129.67	7.1541
1131.51	0.0000
1147.95	0.0000
1167.94	13.3814
1173.22	16.4857
1175.09	12.3687
1177.93	12.3750
1189.05	7.2333
1204.90	10.3630
1205.75	9.3281
1213.00	16.6055
1221.42	8.3151
1230.97	9.3706
1235.34	19.7979
1236.41	0.0000
1238.11	15.6372
1238.11	15.6372
1238.11	15.6372
1238.11	15.6372
1238.25	12.5103
1246.25	13.5718
1260.41	0.0000
1271.85	10.4867
1274.45	8.3932
1274.54	8.3932
1291.56	2.1045
1298.22	0.0000
1312.09	6.3357
1325.50	8.4668
1325.50	8.4668
1332.49	9.5361
1333.61	7.4184
1360.21	4.2580
1362.66	0.0000
1365.15	6.3921
1368.21	11.7251
1368.53	0.0000
1376.25	5.3365
1377.67	8.5404
1377.67	8.5404
1377.67	8.5404
1377.67	8.5404
1384.27	5.3436
1394.10	9.6339
1395.20	12.8472
1407.95	4.2913
1434.06	15.0824
1436.60	15.0886
1457.56	0.0000
1460.81	8.6553
1489.15	9.3143
1509.49	9.3436
1596.49	8.5201
1620.62	3.8001
1678.03	0.0000
1691.02	6.7175
1691.02	6.7175

1706.46	0.0000
1750.46	0.0000
1764.49	5.8169
1764.49	5.8169
1764.49	5.8169
1764.49	5.8169
1770.23	4.8512
1771.40	6.7927
1791.20	0.0000
1808.65	8.7778
1836.01	6.8521

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201873069

Total Uranium Activity	7.3681E-02	ug/g
Total Uranium Counting Unc.	5.8811E-01	ug/g
Total Uranium Tpu	3.0006E-07	ug/g
Total Uranium Mda	5.2465E-01	ug/g

THERE ARE NO PEAKS !

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:37:18.35

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:36:12.
Sample ID         : G1201873070          Sample quantity  : 1.25460E+02 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.66  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.05*	125	468	1.05	126.10	122	9	1.74E-02	33.2	
2	3	74.09	555	564	1.46	148.18	141	16	7.71E-02	8.8	6.21E+00
3	3	76.55*	621	334	0.94	153.10	141	16	8.63E-02	6.4	
4	2	83.69*	124	302	1.46	167.39	164	29	1.73E-02	25.3	1.49E+00
5	2	86.52	317	384	1.55	173.04	164	29	4.40E-02	12.7	
6	2	89.36	215	294	1.15	178.72	164	29	2.99E-02	15.2	
7	2	92.23*	270	330	1.37	184.46	164	29	3.75E-02	14.3	
8	0	128.41	69	307	0.74	256.83	254	8	9.52E-03	45.9	
9	0	143.92*	48	495	0.63	287.84	280	13	6.62E-03	98.6	
10	0	185.56*	212	401	1.49	371.12	366	13	2.95E-02	21.3	
11	0	209.33	155	313	1.08	418.65	414	11	2.15E-02	23.5	
12	4	238.13*	1105	178	0.96	476.26	472	19	1.53E-01	3.6	2.03E+00
13	4	241.30*	250	300	1.97	482.60	472	19	3.47E-02	18.0	
14	0	269.83	131	192	1.23	539.65	535	10	1.82E-02	21.6	
15	0	277.18	80	254	0.80	554.36	547	13	1.11E-02	42.9	
16	0	294.77	339	180	1.07	589.53	584	10	4.71E-02	9.2	
17	0	326.80	85	217	2.44	653.59	648	15	1.19E-02	38.9	
18	0	337.67*	187	155	1.07	675.34	671	10	2.59E-02	14.7	
19	0	351.41*	596	141	1.07	702.83	697	12	8.28E-02	5.8	
20	0	462.92*	67	100	1.47	925.85	920	11	9.29E-03	32.7	
21	0	510.58*	142	174	1.67	1021.16	1013	17	1.97E-02	25.1	
22	0	582.72*	377	79	1.30	1165.44	1157	14	5.24E-02	7.4	
23	0	609.08*	442	85	1.34	1218.17	1213	13	6.14E-02	6.6	
24	0	727.54	90	59	1.27	1455.08	1450	12	1.25E-02	20.2	
25	0	860.75	55	42	1.82	1721.51	1715	13	7.59E-03	28.0	
26	0	911.18*	214	65	1.18	1822.36	1816	12	2.97E-02	10.5	
27	0	934.47	60	57	1.73	1868.95	1859	19	8.33E-03	32.8	
28	8	964.64	41	49	2.62	1929.28	1924	21	5.68E-03	35.6	1.19E+00
29	8	968.84*	162	42	1.58	1937.67	1924	21	2.25E-02	10.8	
30	0	1120.59	93	63	1.36	2241.18	2236	12	1.30E-02	19.9	
31	0	1238.62	95	64	2.16	2477.25	2470	18	1.32E-02	22.2	
32	0	1378.20	20	19	0.98	2756.40	2751	10	2.73E-03	48.0	
33	0	1460.86*	1464	24	1.91	2921.73	2912	19	2.03E-01	2.7	
34	0	1496.29	22	3	1.98	2992.58	2985	13	3.09E-03	26.8	
35	0	1730.11	29	6	1.90	3460.21	3453	13	3.98E-03	26.2	
36	0	1764.61*	73	3	2.34	3529.22	3522	13	1.01E-02	13.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 10:37:21

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:36:12
Sample ID : G1201873070 Sample quantity : 125.46 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA11 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.66 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.266E+01	2.830E+00	4.298E-01	2.881E-02	75.996
CD-109	+	88.03	*	2.504E+00	7.932E-01	1.063E+00	9.739E-02	2.355
SN-126	+	64.28		8.765E-01	5.952E-01	6.766E-01	9.629E-02	1.295
	+	86.94		1.543E+00	7.503E-01	4.389E-01	1.819E-01	3.516
	+	87.57	*	3.711E-01	1.002E-01	1.051E-01	9.572E-03	3.532
TL-208	+	277.35		7.111E-01	6.164E-01	5.847E-01	6.855E-02	1.216
	+	510.84		6.388E-01	3.270E-01	2.099E-01	2.176E-02	3.043
	+	583.14	*	4.845E-01	7.994E-02	5.606E-02	4.154E-03	8.642
	+	860.37		6.610E-01	3.747E-01	4.496E-01	3.877E-02	1.470
BI-211	+	72.87		2.226E+01	4.291E+00	4.134E+00	3.114E-01	5.385
	+	351.07	*	3.341E+00	4.530E-01	2.852E-01	1.999E-02	11.713
PB-212	+	74.81		2.642E+00	5.660E-01	4.741E-01	5.745E-02	5.573
	+	77.11		1.684E+00	2.545E-01	2.644E-01	2.099E-02	6.370
	+	87.30		1.717E+00	4.941E-01	4.869E-01	6.576E-02	3.525
	+	238.63	*	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
		300.09		1.059E+00	7.986E-01	1.311E+00	1.245E-01	0.808
PO-212	+	74.81		2.642E+00	5.660E-01	4.741E-01	5.745E-02	5.573
	+	77.11		1.684E+00	2.545E-01	2.644E-01	2.099E-02	6.370
	+	87.30		1.717E+00	4.941E-01	4.869E-01	6.576E-02	3.525
		115.19		-1.084E+00	3.376E+00	5.492E+00	3.792E-01	-0.197
	+	238.63	*	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
		300.09		1.059E+00	7.986E-01	1.311E+00	1.245E-01	0.808
BI-214	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.302E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
PB-214	+	74.81		4.553E+00	9.402E-01	8.169E-01	8.737E-02	5.573
	+	77.11		2.888E+00	4.886E-01	4.533E-01	4.988E-02	6.370
	+	87.30		2.941E+00	8.255E-01	8.341E-01	9.933E-02	3.525
	+	241.98		1.836E+00	6.806E-01	5.432E-01	4.822E-02	3.380
	+	295.21		1.122E+00	2.336E-01	2.437E-01	2.388E-02	4.606

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-214	+	74.81		4.553E+00	9.402E-01	8.169E-01	8.737E-02	5.573
	+	77.11		2.888E+00	4.886E-01	4.533E-01	4.988E-02	6.370
	+	87.30		2.941E+00	8.255E-01	8.341E-01	9.933E-02	3.525
	+	241.98		1.836E+00	6.806E-01	5.432E-01	4.822E-02	3.380
	+	295.21		1.122E+00	2.336E-01	2.437E-01	2.388E-02	4.606
	+	351.92	*	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-216	+	74.81		2.642E+00	5.660E-01	4.741E-01	5.745E-02	5.573
	+	77.11		1.684E+00	2.545E-01	2.644E-01	2.099E-02	6.370
	+	87.30		1.717E+00	4.941E-01	4.869E-01	6.576E-02	3.525
	+	238.63	*	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
		300.09		1.059E+00	7.986E-01	1.311E+00	1.245E-01	0.808
PO-218	+	74.81		4.553E+00	9.402E-01	8.169E-01	8.737E-02	5.573
	+	77.11		2.888E+00	4.886E-01	4.533E-01	4.988E-02	6.370
	+	87.30		2.941E+00	8.255E-01	8.341E-01	9.933E-02	3.525
	+	241.98		1.836E+00	6.806E-01	5.432E-01	4.822E-02	3.380
	+	295.21		1.122E+00	2.336E-01	2.437E-01	2.388E-02	4.606
	+	351.92	*	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
RA-224	+	240.98	*	3.482E+00	1.276E+00	1.027E+00	7.041E-02	3.391
RA-226	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.302E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
AC-228	+	338.32		1.151E+00	5.806E-01	3.434E-01	1.405E-01	3.353
	+	911.07	*	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
	+	969.11		1.629E+00	5.128E-01	3.658E-01	8.405E-02	4.454
RA-228	+	338.32		1.151E+00	5.806E-01	3.434E-01	1.405E-01	3.353
	+	911.07	*	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
	+	969.11		1.629E+00	5.128E-01	3.658E-01	8.405E-02	4.454
TH-228	+	84.40		4.575E+00	2.392E+00	3.299E+00	4.358E-01	1.387
	+	238.60	*	1.351E+00	1.465E-01	9.023E-02	7.352E-03	14.967
		300.10		1.060E+00	1.010E+00	1.311E+00	7.751E-01	0.808
TH-230	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.301E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
TH-232	+	338.32		1.151E+00	3.482E-01	3.434E-01	2.313E-02	3.353
	+	911.07	*	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
	+	969.11		1.629E+00	5.128E-01	3.658E-01	8.405E-02	4.454
TH-234	+	63.29	*	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
	+	92.38		2.075E+00	7.032E-01	6.971E-01	1.261E-01	2.977
U-234	+	609.31	*	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
		768.36		8.862E-01	7.733E-01	1.339E+00	1.291E-01	0.662

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	934.06		3.029E+00	2.011E+00	1.764E+00	1.767E-01	1.717
	+	1120.29		1.176E+00	4.797E-01	4.761E-01	4.301E-02	2.470
	+	1238.11		3.307E+00	1.494E+00	1.454E+00	1.194E-01	2.275
	+	1377.67		1.086E+00	1.047E+00	1.446E+00	1.307E-01	0.751
	+	1764.49		1.258E+00	3.501E-01	2.962E-01	1.680E-02	4.248
U-235	+	89.95		3.379E+00	1.466E+00	1.416E+00	4.383E-01	2.386
	+	93.35		2.495E+00	1.000E+00	8.340E-01	2.335E-01	2.991
		105.00		9.097E-01	1.077E+00	1.775E+00	5.245E-01	0.512
	+	143.76	*	1.866E-01	3.692E-01	3.234E-01	5.281E-02	0.577
		163.35		-5.409E-01	4.844E-01	7.368E-01	1.314E-01	-0.734
	+	185.71		1.825E-01	7.826E-02	6.717E-02	3.783E-03	2.717
		205.31		3.979E-01	5.417E-01	7.943E-01	1.435E-01	0.501
NP-237	+	86.50	*	1.090E+00	3.703E-01	3.111E-01	7.001E-02	3.503
		95.87		-6.682E-01	1.004E+00	1.393E+00	3.416E-01	-0.480
U-238	+	63.29	*	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
	+	92.38		2.075E+00	6.210E-01	6.971E-01	6.020E-02	2.977
AM-243	+	74.67	*	4.284E-01	8.257E-02	7.705E-02	5.933E-03	5.560
	+	86.72		4.087E+01	1.103E+01	1.165E+01	1.049E+00	3.509
		117.66		8.843E-01	3.665E+00	6.089E+00	4.123E-01	0.145
		142.18		1.041E+01	1.757E+01	2.909E+01	1.723E+00	0.358
ANH-511	+	511.00	*	1.380E-01	6.968E-02	4.536E-02	2.796E-03	3.042

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.576E-01	3.119E-01	4.955E-01	3.402E-02	-0.318
NA-22		1274.54	*	-1.415E-02	4.788E-02	7.585E-02	4.649E-03	-0.187
NA-24		1368.53	*	-9.176E-02	4.788E-02	Half-Life too short		
AL-26		1129.67		-7.109E-01	1.842E+00	2.852E+00	1.721E-01	-0.249
		1808.65	*	3.332E-03	2.269E-02	3.883E-02	2.142E-03	0.086
TI-44		67.85		-1.635E-03	6.094E-02	6.493E-02	4.605E-03	-0.025
		78.38	*	1.963E-01	4.306E-02	6.274E-02	5.062E-03	3.129
SC-46		889.25	*	-1.814E-04	3.810E-02	6.345E-02	5.097E-03	-0.003
	+	1120.51		1.992E-01	8.019E-02	1.240E-01	7.614E-03	1.607
V-48		944.10		-6.102E-02	8.783E-01	1.382E+00	1.074E-01	-0.044
		983.50	*	-4.293E-03	6.598E-02	1.086E-01	8.128E-03	-0.040
		1312.09		1.439E-02	7.607E-02	1.263E-01	8.023E-03	0.114
CR-51		320.08	*	1.827E-01	3.621E-01	5.720E-01	4.386E-02	0.319
MN-52		744.21		-1.376E-02	2.124E-01	3.397E-01	2.538E-02	-0.041
		848.13		-8.041E-01	5.670E+00	9.360E+00	7.390E-01	-0.086
	+	935.52		5.764E-01	3.810E-01	4.167E-01	3.264E-02	1.383
		1246.25		3.804E+00	7.133E+00	1.067E+01	6.342E-01	0.356
		1333.61		3.426E+00	4.614E+00	8.082E+00	5.237E-01	0.424
		1434.06	*	-1.269E-01	1.818E-01	2.600E-01	1.666E-02	-0.488
MN-54		834.83	*	-1.561E-02	3.781E-02	6.120E-02	4.802E-03	-0.255
CO-56		846.75	*	3.360E-03	3.707E-02	6.240E-02	4.924E-03	0.054
		977.42		8.720E-01	2.874E+00	4.689E+00	3.531E-01	0.186
		1037.82		-7.461E-02	3.132E-01	5.058E-01	3.828E-02	-0.148

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1175.09		3.776E+00	2.356E+00	4.338E+00	2.388E-01	0.870
	+	1238.25		3.313E-01	1.487E-01	1.786E-01	1.116E-02	1.855
		1360.21		9.527E-01	8.968E-01	1.653E+00	1.069E-01	0.576
		1771.40		-9.566E-01	3.441E-01	3.370E-01	1.903E-02	-2.839
CO-57		122.06	*	-1.308E-02	2.436E-02	3.918E-02	2.570E-03	-0.334
		136.48		-9.111E-03	2.221E-01	3.362E-01	2.343E-02	-0.027
CO-58		810.76	*	-1.763E-02	3.418E-02	5.450E-02	4.239E-03	-0.323
FE-59	+	142.65		2.361E+00	4.656E+00	4.377E+00	2.587E-01	0.539
		192.34		-2.170E-02	1.021E+00	1.443E+00	1.702E-01	-0.015
		1099.22	*	-3.286E-02	9.838E-02	1.572E-01	1.148E-02	-0.209
		1291.56		-3.502E-02	1.197E-01	1.887E-01	1.464E-02	-0.186
CO-60		1173.22		6.154E-02	5.037E-02	9.007E-02	4.948E-03	0.683
		1332.49	*	5.103E-03	4.164E-02	6.858E-02	4.444E-03	0.074
ZN-65		1115.52	*	-4.993E-02	1.091E-01	1.480E-01	9.195E-03	-0.337
GE-68		1077.35	*	-8.634E-01	1.364E+00	2.122E+00	1.404E-01	-0.407
AS-73		53.44	*	-4.229E-01	6.012E-01	9.710E-01	6.196E-02	-0.436
AS-74		595.88	*	-2.167E-02	8.228E-02	1.311E-01	8.782E-03	-0.165
		634.78		-1.123E-01	3.434E-01	5.423E-01	3.754E-02	-0.207
SE-75		66.05		-2.393E+00	4.526E+00	6.481E+00	5.897E-01	-0.369
		96.73		-6.573E-01	8.101E-01	1.115E+00	1.491E-01	-0.589
		121.11		-1.208E-01	1.339E-01	2.116E-01	2.064E-02	-0.571
		136.00		-7.753E-03	4.021E-02	6.312E-02	3.904E-03	-0.123
		198.60		2.046E+00	1.693E+00	2.874E+00	2.072E-01	0.712
		264.65	*	2.699E-02	5.076E-02	7.342E-02	5.480E-03	0.368
		279.53		1.725E-02	1.190E-01	1.740E-01	1.413E-02	0.099
		303.91		-1.846E+00	1.997E+00	3.184E+00	3.374E-01	-0.580
		400.65		1.284E-01	2.531E-01	4.320E-01	3.814E-02	0.297
BR-77	+	87.88		5.652E+02	1.526E+02	2.268E+02	2.075E+01	2.492
		200.40		-1.994E+01	1.106E+02	1.774E+02	1.054E+01	-0.112
	+	239.00		1.502E+02	1.484E+01	2.435E+01	1.659E+00	6.169
		249.79		-2.718E+01	4.604E+01	7.139E+01	5.043E+00	-0.381
		281.68		1.522E+00	6.635E+01	9.766E+01	7.554E+00	0.016
		297.23		1.052E+02	4.258E+01	7.052E+01	5.301E+00	1.491
		303.76		-9.738E+01	1.190E+02	1.915E+02	1.420E+01	-0.508
		439.47		6.531E+01	9.611E+01	1.656E+02	9.370E+00	0.394
		484.57		6.658E+01	1.546E+02	2.619E+02	1.567E+01	0.254
		520.65	*	-1.642E-01	7.335E+00	1.201E+01	7.479E-01	-0.014
		574.64		1.722E+01	1.465E+02	2.192E+02	1.441E+01	0.079
		578.91		7.170E+01	6.055E+01	9.639E+01	6.359E+00	0.744
		585.48		6.777E+02	1.658E+02	2.957E+02	1.963E+01	2.292
		755.35		2.557E+01	1.155E+02	1.891E+02	1.422E+01	0.135
		817.79		3.003E+01	7.947E+01	1.376E+02	1.071E+01	0.218
SR-82		698.33		3.380E+00	3.281E+01	5.339E+01	3.873E+00	0.063
		776.49	*	-3.198E-01	3.591E-01	5.586E-01	4.254E-02	-0.572
		1395.20		-6.903E+00	9.221E+00	1.311E+01	8.448E-01	-0.527
RB-83		520.41	*	7.665E-03	6.992E-02	1.155E-01	7.193E-03	0.066
		529.64		-7.905E-03	1.034E-01	1.685E-01	1.059E-02	-0.047
		552.65		-1.225E-01	1.926E-01	2.991E-01	1.925E-02	-0.410
RB-84		881.50	*	4.069E-02	6.633E-02	1.162E-01	9.305E-03	0.350

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
KR-85		513.99	*	8.332E+00	8.208E+00	1.268E+01	7.842E-01	0.657
SR-85		513.99	*	4.216E-02	4.153E-02	6.417E-02	3.968E-03	0.657
RB-86		1076.63	*	-2.606E-01	8.021E-01	1.283E+00	8.504E-02	-0.203
Y-88		898.02		1.179E-02	3.717E-02	6.369E-02	5.163E-03	0.185
		1836.01	*	-4.315E-03	2.756E-02	4.395E-02	2.387E-03	-0.098
ZR-88		392.90	*	-4.245E-03	2.956E-02	4.872E-02	2.580E-03	-0.087
Y-91		1204.90	*	-6.113E+00	1.958E+01	3.117E+01	1.773E+00	-0.196
NB-94		702.63	*	9.777E-03	3.395E-02	5.601E-02	4.075E-03	0.175
		871.10		-3.420E-02	3.145E-02	4.674E-02	3.727E-03	-0.732
NB-95		765.79	*	5.387E-02	4.425E-02	7.725E-02	5.847E-03	0.697
NB-95M		235.69	*	7.866E-01	1.750E-01	2.812E-01	2.325E-02	2.798
ZR-95		724.18		3.758E-02	1.091E-01	1.572E-01	1.295E-02	0.239
		756.15	*	1.922E-02	6.968E-02	1.146E-01	9.757E-03	0.168
NB-97		657.90	*	-2.090E-02	6.968E-02	Half-Life too short		
		1024.50		-5.956E-01	6.968E-02	Half-Life too short		
ZR-97		254.15		-1.512E-01	6.968E-02	Half-Life too short		
		355.39		-9.791E-01	6.968E-02	Half-Life too short		
		507.63	*	1.287E+00	6.968E-02	Half-Life too short		
		602.52		1.759E+00	6.968E-02	Half-Life too short		
		1021.30		-3.345E-01	6.968E-02	Half-Life too short		
		1147.95		5.146E-01	6.968E-02	Half-Life too short		
		1362.66		8.360E-01	6.968E-02	Half-Life too short		
		1750.46		2.917E-01	6.968E-02	Half-Life too short		
MO-99		140.51		-9.984E+00	2.137E+01	2.962E+01	7.992E+00	-0.337
		181.06		2.943E+00	1.378E+01	1.980E+01	3.376E+00	0.149
		366.43		-1.070E+00	5.792E+01	9.646E+01	5.821E+00	-0.011
		739.58	*	1.180E+00	8.180E+00	1.333E+01	1.939E+00	0.089
		778.00		-1.787E+01	2.423E+01	3.822E+01	2.913E+00	-0.467
TC-99M		140.51	*	-6.153E+08	2.423E+01	Half-Life too short		
RH-101	+	127.23		4.043E-02	3.718E-02	5.306E-02	3.380E-03	0.762
		198.01	*	4.171E-02	3.271E-02	5.395E-02	3.178E-03	0.773
		325.23		4.143E-02	2.401E-01	3.547E-01	2.488E-02	0.117
RH-102		418.52		6.576E-02	2.716E-01	4.569E-01	2.512E-02	0.144
		475.06	*	-2.080E-02	2.812E-02	4.386E-02	2.595E-03	-0.474
		631.29		-1.657E-02	5.454E-02	8.630E-02	5.956E-03	-0.192
		697.49		-5.457E-03	7.518E-02	1.206E-01	8.744E-03	-0.045
		766.84		1.276E-01	1.155E-01	1.999E-01	1.514E-02	0.638
		1046.59		6.595E-02	1.212E-01	2.090E-01	1.448E-02	0.316
		1112.84		1.243E-01	2.579E-01	4.116E-01	2.565E-02	0.302
RU-103		497.08	*	6.784E-03	3.757E-02	6.253E-02	7.986E-03	0.108
	+	610.33		1.131E+01	2.334E+00	2.685E+00	4.247E-01	4.211
RH-106	+	511.85		6.876E-01	3.472E-01	4.282E-01	2.642E-02	1.606
		621.84	*	-1.822E-01	3.082E-01	4.746E-01	5.833E-02	-0.384
		1050.47		3.959E-01	2.348E+00	3.931E+00	2.709E-01	0.101
RU-106	+	511.85		6.876E-01	3.472E-01	4.282E-01	2.642E-02	1.606
		621.84	*	-1.822E-01	3.077E-01	4.746E-01	3.250E-02	-0.384
		1050.47		3.959E-01	2.348E+00	3.931E+00	2.709E-01	0.101
AG-108M		433.93	*	-2.249E-03	3.102E-02	5.107E-02	3.129E-03	-0.044
		614.37		-2.689E-03	4.160E-02	5.796E-02	4.190E-03	-0.046

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.95		3.988E-02	4.508E-02	6.908E-02	5.365E-03	0.577
AG-110M		657.75	*	-2.736E-02	3.610E-02	5.481E-02	4.033E-03	-0.499
		677.61		-3.349E-02	2.921E-01	4.675E-01	3.479E-02	-0.072
		706.67		-1.732E-01	2.062E-01	3.077E-01	2.331E-02	-0.563
		763.93		-1.177E-01	1.775E-01	2.694E-01	2.111E-02	-0.437
		884.67		8.849E-03	4.954E-02	8.379E-02	6.968E-03	0.106
		937.48		4.808E-03	1.257E-01	1.805E-01	1.473E-02	0.027
		1384.27		-1.376E-01	1.986E-01	2.385E-01	1.616E-02	-0.577
IN-111		171.28		-1.747E-01	7.227E-01	1.163E+00	6.214E-02	-0.150
		245.39	*	3.128E-01	8.684E-01	1.245E+00	8.668E-02	0.251
IN-113M		391.69	*	-2.074E-02	4.285E-02	6.914E-02	3.949E-03	-0.300
SN-113		391.69	*	-2.074E-02	4.285E-02	6.914E-02	3.949E-03	-0.300
IN-114M		190.27	*	1.299E-01	1.874E-01	2.769E-01	1.585E-02	0.469
CD-115		260.90		-1.143E+02	8.972E+01	1.328E+02	9.729E+00	-0.861
		492.35		1.074E+01	2.244E+01	3.818E+01	2.305E+00	0.281
		527.90	*	-2.229E+00	7.137E+00	1.142E+01	7.166E-01	-0.195
SN-117M		156.02		-2.252E+00	2.137E+00	3.332E+00	1.842E-01	-0.676
		158.56	*	1.662E-02	5.144E-02	8.495E-02	4.635E-03	0.196
SB-122		563.90	*	1.145E+00	1.485E+00	2.555E+00	1.662E-01	0.448
		692.80		-1.096E+01	3.095E+01	4.846E+01	3.502E+00	-0.226
I-123		159.00	*	3.523E-01	3.095E+01	Half-Life too short		
		528.96		-6.184E+01	3.095E+01	Half-Life too short		
TE-123M		159.00	*	8.512E-03	2.850E-02	4.700E-02	2.598E-03	0.181
I-124		602.71	*	5.147E-01	6.160E-01	9.385E-01	6.324E-02	0.548
		722.78		3.199E+00	3.808E+00	5.812E+00	4.285E-01	0.550
		1325.50		-1.232E+01	2.992E+01	4.562E+01	2.936E+00	-0.270
		1376.25		2.694E+01	2.749E+01	4.443E+01	2.869E+00	0.607
		1509.49		1.472E+01	1.286E+01	2.379E+01	1.501E+00	0.619
		1691.02		3.064E+00	2.819E+00	5.514E+00	3.253E-01	0.556
SB-124		602.71		3.633E-02	4.348E-02	6.624E-02	4.465E-03	0.548
		645.85		-3.194E-01	4.881E-01	7.462E-01	5.679E-02	-0.428
		709.31		-2.132E+00	2.775E+00	4.176E+00	3.052E-01	-0.511
		713.82		7.200E-01	1.567E+00	2.621E+00	2.923E-01	0.275
		722.78		3.273E-01	3.896E-01	5.946E-01	4.513E-02	0.550
	+	968.20		1.653E+01	3.771E+00	6.975E+00	5.301E-01	2.370
		1045.16		8.243E-02	2.571E+00	4.254E+00	2.953E-01	0.019
		1325.50		-1.347E+00	3.270E+00	4.985E+00	3.209E-01	-0.270
		1368.21		-1.181E+00	1.616E+00	2.330E+00	2.845E-01	-0.507
		1436.60		1.432E+00	3.270E+00	5.638E+00	3.612E-01	0.254
		1691.02	*	7.395E-02	6.806E-02	1.331E-01	8.499E-03	0.556
SB-125		427.89	*	4.226E-02	8.733E-02	1.490E-01	8.678E-03	0.284
	+	463.38		5.859E-01	3.850E-01	5.160E-01	3.504E-02	1.135
		600.56		1.423E-01	1.797E-01	3.083E-01	2.320E-02	0.461
		635.90		-1.176E-01	2.877E-01	4.517E-01	3.513E-02	-0.260
TE-125M		109.28	*	-6.013E+00	8.708E+00	1.396E+01	1.287E+00	-0.431
I-126		388.63		5.932E-02	1.792E-01	3.038E-01	1.636E-02	0.195
		666.33	*	-1.306E-01	1.752E-01	2.662E-01	1.888E-02	-0.491
		753.82		6.338E-01	1.376E+00	2.297E+00	1.727E-01	0.276
SB-126		223.80		4.490E-01	3.746E+00	6.063E+00	3.918E-01	0.074

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	278.60		4.382E+00	3.778E+00	3.991E+00	3.094E-01	1.098
		296.50		8.132E+00	1.847E+00	3.129E+00	2.356E-01	2.599
		414.70		1.534E-02	6.492E-02	1.092E-01	5.974E-03	0.140
		415.30		2.171E+00	5.452E+00	9.263E+00	5.070E-01	0.234
		555.20		2.425E+00	3.444E+00	5.930E+00	3.825E-01	0.409
		573.80		-2.978E-01	9.686E-01	1.445E+00	9.490E-02	-0.206
		593.00		-2.509E-01	7.928E-01	1.256E+00	8.394E-02	-0.200
		656.30		-1.076E+00	2.954E+00	4.631E+00	3.259E-01	-0.232
		666.33		-5.443E-02	7.299E-02	1.109E-01	7.867E-03	-0.491
		675.00		-6.907E-01	1.718E+00	2.675E+00	1.909E-01	-0.258
		695.00		-1.371E-02	6.972E-02	1.106E-01	8.008E-03	-0.124
		697.00		-2.093E-02	2.470E-01	3.959E-01	2.870E-02	-0.053
		720.50	*	6.378E-02	1.369E-01	2.172E-01	1.599E-02	0.294
		856.80		-3.979E-01	4.933E-01	6.352E-01	5.035E-02	-0.626
		989.30		1.259E-02	1.110E+00	1.840E+00	1.368E-01	0.007
		1034.80		-6.015E-01	8.420E+00	1.381E+01	9.725E-01	-0.044
		1213.00		3.142E+00	4.719E+00	8.112E+00	4.653E-01	0.387
SB-127		61.10		1.934E+01	4.211E+01	6.333E+01	5.841E+00	0.305
		252.40		-1.752E+00	3.530E+00	5.380E+00	2.241E+00	-0.326
		290.80		-2.459E+00	1.806E+01	2.624E+01	2.626E+00	-0.094
		411.60		-5.988E+00	9.413E+00	1.494E+01	2.085E+00	-0.401
		444.90		-2.763E+00	7.295E+00	1.173E+01	1.215E+00	-0.236
		473.00		8.086E-01	1.271E+00	2.181E+00	2.369E-01	0.371
		543.00		-3.426E+00	1.209E+01	1.932E+01	2.486E+00	-0.177
		603.60		5.499E+00	1.052E+01	1.555E+01	1.701E+00	0.354
		685.20	*	3.891E-01	1.043E+00	1.737E+00	1.728E-01	0.224
		698.50		2.680E+00	1.203E+01	1.974E+01	2.932E+00	0.136
		722.20		2.111E+01	2.570E+01	3.911E+01	3.843E+00	0.540
		783.80		4.126E+00	2.920E+00	5.322E+00	6.076E-01	0.775
XE-127		57.60		9.575E+00	4.998E+00	8.319E+00	5.317E-01	1.151
	+	145.22		6.022E-01	1.188E+00	1.090E+00	6.358E-02	0.553
		172.10		-4.537E-02	1.128E-01	1.802E-01	9.656E-03	-0.252
		202.84	*	-4.291E-02	4.678E-02	6.948E-02	4.165E-03	-0.618
		374.96		-5.921E-02	1.779E-01	2.902E-01	1.681E-02	-0.204
I-131		80.18		4.870E+00	4.844E+00	5.576E+00	4.632E-01	0.873
		284.30		-2.427E-01	1.327E+00	2.159E+00	1.769E-01	-0.112
		364.48	*	1.449E-02	9.637E-02	1.621E-01	1.090E-02	0.089
		636.97		4.746E-01	1.453E+00	2.415E+00	1.814E-01	0.197
		722.89		5.911E+00	6.802E+00	1.041E+01	7.733E-01	0.568
TE-132		49.72		-1.049E+01	9.983E+00	1.608E+01	1.413E+00	-0.652
		111.76		-7.958E+00	2.115E+01	3.435E+01	3.204E+00	-0.232
		116.30		1.512E+01	2.022E+01	3.417E+01	3.121E+00	0.443
		228.16	*	-1.990E-01	5.253E-01	8.281E-01	1.197E-01	-0.240
BA-133		53.15		-1.977E+00	2.586E+00	4.163E+00	2.657E-01	-0.475
		79.62		6.987E-01	1.597E+00	1.754E+00	2.630E-01	0.398
		81.00		5.518E-02	1.198E-01	1.317E-01	2.072E-02	0.419
	+	276.40		7.026E-01	6.112E-01	6.453E-01	8.981E-02	1.089
		302.84		-1.233E-01	1.380E-01	2.201E-01	2.762E-02	-0.560
		356.01	*	-1.406E-03	4.353E-02	6.300E-02	7.450E-03	-0.022

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		383.85		-8.561E-02	2.927E-01	4.784E-01	5.134E-02	-0.179
I-133	+	510.53		5.131E-01	2.927E-01	Half-Life too short		
		529.87	*	3.120E-04	2.927E-01	Half-Life too short		
		706.58		-1.193E-01	2.927E-01	Half-Life too short		
		856.28		-2.217E-01	2.927E-01	Half-Life too short		
		875.33		3.371E-03	2.927E-01	Half-Life too short		
		1236.41		4.498E-01	2.927E-01	Half-Life too short		
		1298.22		-1.935E-02	2.927E-01	Half-Life too short		
CS-134		475.35		-1.860E+00	1.866E+00	2.852E+00	1.688E-01	-0.652
		563.23		3.616E-01	3.559E-01	6.219E-01	4.110E-02	0.582
		569.32		-1.703E-01	2.084E-01	3.118E-01	2.087E-02	-0.546
		604.70		-3.943E-03	3.920E-02	5.452E-02	3.695E-03	-0.072
		795.84	*	6.318E-02	4.616E-02	8.449E-02	6.561E-03	0.748
		801.93		8.575E-02	4.224E-01	7.103E-01	5.522E-02	0.121
		1038.57		9.597E-01	3.922E+00	6.615E+00	4.634E-01	0.145
		1167.94		-5.475E-01	2.896E+00	4.676E+00	2.601E-01	-0.117
		1365.15		4.446E-01	1.142E+00	1.950E+00	1.361E-01	0.228
CS-135		268.24	*	2.581E-01	1.960E-01	2.943E-01	2.654E-02	0.877
I-135		288.45		-6.455E+08	1.960E-01	Half-Life too short		
		417.63		2.448E+08	1.960E-01	Half-Life too short		
		546.56		1.469E+08	1.960E-01	Half-Life too short		
		836.80		1.713E+09	1.960E-01	Half-Life too short		
		1038.76		4.206E+08	1.960E-01	Half-Life too short		
		1124.00		1.947E+09	1.960E-01	Half-Life too short		
		1131.51		-7.347E+04	1.960E-01	Half-Life too short		
		1260.41	*	2.488E+07	1.960E-01	Half-Life too short		
		1457.56		2.878E+10	1.960E-01	Half-Life too short		
		1678.03		-1.043E+08	1.960E-01	Half-Life too short		
		1706.46		-7.569E+08	1.960E-01	Half-Life too short		
		1791.20		-4.349E+08	1.960E-01	Half-Life too short		
CS-136		66.91		-4.095E-01	8.257E-01	9.951E-01	1.453E-01	-0.412
	+	86.29		4.533E+00	1.298E+00	1.720E+00	2.249E-01	2.635
		153.22		3.754E-01	6.055E-01	1.012E+00	7.151E-02	0.371
		163.89		-5.789E-01	9.958E-01	1.582E+00	1.085E-01	-0.366
		176.55		1.020E-01	3.322E-01	5.467E-01	3.391E-02	0.187
		273.65		1.054E-01	6.317E-01	6.414E-01	5.303E-02	0.164
		340.57		3.270E-02	1.256E-01	1.862E-01	1.304E-02	0.176
		818.51		2.471E-02	5.956E-02	1.035E-01	8.061E-03	0.239
		1048.07	*	8.441E-02	1.052E-01	1.851E-01	1.363E-02	0.456
		1235.34		8.103E-01	7.037E-01	1.096E+00	1.099E-01	0.739
BA-137M		661.65	*	3.354E-02	3.711E-02	6.399E-02	4.522E-03	0.524
CS-137		661.65	*	3.546E-02	3.923E-02	6.764E-02	4.793E-03	0.524
CE-139		165.85	*	3.330E-03	2.910E-02	4.760E-02	2.497E-03	0.070
BA-140		162.64		-1.847E-01	7.037E-01	1.134E+00	6.936E-02	-0.163
		304.84		-5.769E-01	1.104E+00	1.785E+00	4.941E-01	-0.323
		423.70		-1.128E+00	1.712E+00	2.649E+00	8.407E-01	-0.426
		537.32	*	5.998E-02	2.205E-01	3.672E-01	1.198E-01	0.163
LA-140		328.77		2.717E-01	2.669E-01	4.678E-01	3.525E-02	0.581
		432.53		-8.887E-01	1.897E+00	3.044E+00	1.896E-01	-0.292

---- Non-Identified Nuclides ----

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		487.03		-4.823E-02	1.242E-01	1.986E-01	1.339E-02	-0.243
		751.79		-1.406E-01	1.696E+00	2.707E+00	2.314E-01	-0.052
		815.85		-5.707E-02	2.617E-01	4.292E-01	3.804E-02	-0.133
		867.82		3.476E-01	1.300E+00	2.010E+00	1.699E-01	0.173
		919.63		-8.941E-03	2.712E+00	4.509E+00	4.554E-01	-0.002
		925.24		9.245E-01	1.175E+00	1.902E+00	1.614E-01	0.486
		1596.49	*	-8.414E-02	6.859E-02	8.954E-02	5.499E-03	-0.940
CE-141		145.44	*	3.443E-02	6.644E-02	9.787E-02	5.930E-03	0.352
CE-143		57.37		8.664E-04	6.644E-02	Half-Life too short		
		231.56		6.752E-04	6.644E-02	Half-Life too short		
		293.26	*	5.375E-04	6.644E-02	Half-Life too short		
	+	350.59		1.404E-02	6.644E-02	Half-Life too short		
		490.36		-7.215E-04	6.644E-02	Half-Life too short		
		664.57		-3.287E-04	6.644E-02	Half-Life too short		
		721.93		7.507E-04	6.644E-02	Half-Life too short		
CE-144		80.11		1.369E+00	2.575E+00	2.854E+00	2.355E-01	0.480
		133.54	*	-1.116E-02	2.288E-01	3.280E-01	4.710E-02	-0.034
PM-144		476.78		-3.139E-02	6.608E-02	1.052E-01	7.417E-03	-0.298
		618.01		-7.659E-04	3.014E-02	4.887E-02	3.482E-03	-0.016
		696.49	*	-1.524E-02	3.393E-02	5.268E-02	3.818E-03	-0.289
		778.57		-1.207E+00	2.143E+00	3.427E+00	2.614E-01	-0.352
PR-144		696.49	*	-1.032E+00	2.298E+00	3.567E+00	2.585E-01	-0.289
		1489.15		1.702E-01	1.085E+01	1.501E+01	9.512E-01	0.011
PM-146		453.90	*	2.502E-02	3.986E-02	6.854E-02	5.893E-03	0.365
		633.02		3.677E-01	1.374E+00	2.267E+00	8.390E-01	0.162
		735.90		2.295E-02	1.424E-01	2.262E-01	6.393E-02	0.101
		747.13		5.502E-02	9.579E-02	1.609E-01	2.151E-02	0.342
ND-147	+	91.11		9.642E-01	2.906E-01	4.735E-01	4.488E-02	2.037
		319.41		-9.452E-01	2.944E+00	4.721E+00	3.367E-01	-0.200
		439.89		3.340E+00	5.115E+00	8.809E+00	4.988E-01	0.379
		531.02	*	-1.824E-01	5.141E-01	8.191E-01	1.126E-01	-0.223
PM-149		285.90	*	2.539E+01	5.906E+01	1.013E+02	1.524E+01	0.251
EU-152		121.78		-4.508E-02	7.066E-02	1.131E-01	9.280E-03	-0.399
		244.69		1.739E-01	3.652E-01	5.278E-01	3.665E-02	0.329
		344.27	*	4.934E-02	1.043E-01	1.572E-01	1.141E-02	0.314
		443.98		-4.865E-01	9.093E-01	1.447E+00	8.236E-02	-0.336
		778.89		-1.257E-01	2.491E-01	4.006E-01	3.055E-02	-0.314
		867.32		3.278E-01	8.647E-01	1.306E+00	1.040E-01	0.251
	+	964.01		4.739E-01	3.394E-01	5.437E-01	4.149E-02	0.872
		1085.78		-3.373E-01	4.367E-01	6.694E-01	4.371E-02	-0.504
		1112.02		2.226E-01	3.465E-01	5.878E-01	3.668E-02	0.379
		1407.95		5.617E-02	1.698E-01	2.873E-01	1.849E-02	0.195
GD-153		69.67		2.571E-01	1.601E+00	2.370E+00	1.718E-01	0.108
	+	83.37		2.618E+01	1.344E+01	2.124E+01	1.829E+00	1.233
		97.43	*	-5.330E-03	8.317E-02	1.198E-01	9.746E-03	-0.044
		103.18		-4.003E-02	1.040E-01	1.695E-01	1.299E-02	-0.236
EU-154		123.07		2.218E-02	5.104E-02	8.254E-02	8.139E-03	0.269
		247.94		2.128E-01	3.942E-01	5.725E-01	5.913E-02	0.372
		591.81		-5.130E-02	5.652E-01	9.135E-01	9.425E-02	-0.056

---- Non-Identified Nuclides ----

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		723.30		1.718E-01	1.842E-01	2.841E-01	2.392E-02	0.605
		756.87		1.069E-01	7.540E-01	1.226E+00	1.376E-01	0.087
		873.19		-5.712E-02	2.690E-01	4.396E-01	5.189E-02	-0.130
		996.32		-1.937E-01	3.509E-01	5.475E-01	9.415E-02	-0.354
		1004.76		-2.468E-01	2.195E-01	3.232E-01	3.459E-02	-0.763
		1274.45	*	-3.848E-02	1.340E-01	2.123E-01	2.026E-02	-0.181
EU-155		48.70		-1.626E+00	1.610E+00	2.606E+00	1.656E-01	-0.624
		60.01		2.453E+00	4.411E+00	6.674E+00	4.307E-01	0.368
	+	86.54		4.468E-01	1.207E-01	1.692E-01	1.534E-02	2.641
		105.31	*	1.117E-01	1.067E-01	1.821E-01	1.390E-02	0.614
TB-160	+	86.79		1.180E+00	3.185E-01	4.476E-01	4.035E-02	2.636
		197.04		1.102E-01	5.590E-01	8.828E-01	5.182E-02	0.125
		215.65		4.248E-02	7.805E-01	1.165E+00	7.316E-02	0.036
		298.57		1.166E-01	1.220E-01	1.894E-01	1.420E-02	0.616
		879.36	*	-1.992E-02	1.317E-01	2.166E-01	1.733E-02	-0.092
		962.29		7.098E-01	6.259E-01	9.968E-01	7.620E-02	0.712
		966.15		1.069E+00	2.646E-01	5.136E-01	3.911E-02	2.081
		1177.93		-4.384E-01	3.947E-01	5.841E-01	3.225E-02	-0.751
		1271.85		3.806E-01	7.474E-01	1.276E+00	7.782E-02	0.298
HO-166M		80.57		2.974E-01	3.177E-01	3.639E-01	3.021E-02	0.817
	+	184.41		1.369E-01	5.869E-02	6.766E-02	3.792E-03	2.023
		280.46		3.807E-02	8.901E-02	1.346E-01	1.044E-02	0.283
		410.95		4.920E-02	2.342E-01	3.934E-01	2.140E-02	0.125
		711.68	*	7.009E-02	5.789E-02	1.025E-01	7.501E-03	0.684
		752.31		-4.284E-02	2.892E-01	4.588E-01	3.446E-02	-0.093
		810.29		-3.565E-02	5.257E-02	8.246E-02	6.393E-03	-0.432
TM-171		51.35		1.666E+01	2.079E+01	3.593E+01	2.293E+00	0.464
		52.39		-1.066E+00	1.095E+01	1.808E+01	1.154E+00	-0.059
		59.40		2.216E+01	2.373E+01	3.646E+01	2.336E+00	0.608
		66.72	*	-1.863E+01	2.897E+01	3.838E+01	2.686E+00	-0.485
LU-176	+	88.36		5.849E-01	1.853E-01	3.430E-01	3.127E-02	1.705
		201.83		-2.646E-02	2.756E-02	4.247E-02	2.537E-03	-0.623
		306.84	*	-1.219E-02	2.272E-02	3.703E-02	2.726E-03	-0.329
		401.10		1.675E+00	6.689E+00	1.127E+01	6.041E-01	0.149
LU-177		112.95		6.788E-01	1.323E+00	2.222E+00	1.563E-01	0.305
	+	208.36	*	2.953E+00	1.401E+00	1.679E+00	1.027E-01	1.759
LU-177M		52.97		-9.010E-01	1.152E+00	1.853E+00	1.183E-01	-0.486
		54.07		-6.738E-01	6.258E-01	9.947E-01	6.347E-02	-0.677
		61.30		3.005E-01	1.403E+00	2.090E+00	1.371E-01	0.144
		121.62		-3.340E-01	3.660E-01	5.792E-01	3.803E-02	-0.577
		147.16		7.775E-02	6.914E-01	9.964E-01	5.760E-02	0.078
		171.86		-1.260E-01	4.657E-01	7.481E-01	4.006E-02	-0.168
		218.09		-8.761E-02	8.437E-01	1.353E+00	8.566E-02	-0.065
	+	268.79		2.442E+00	1.071E+00	1.473E+00	1.107E-01	1.657
		319.02		-6.541E-02	2.430E-01	3.908E-01	2.790E-02	-0.167
		367.43		-1.547E-01	8.457E-01	1.394E+00	8.374E-02	-0.111
		413.65	*	-2.036E-01	1.715E-01	2.626E-01	1.434E-02	-0.775
HF-181		56.28		-9.536E-02	7.157E-01	1.196E+00	7.634E-02	-0.080
		57.53		9.467E-01	4.161E-01	7.003E-01	4.475E-02	1.352

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		65.20		-7.613E-02	8.566E-01	1.252E+00	8.609E-02	-0.061
		133.02		3.661E-04	7.090E-02	1.020E-01	6.311E-03	0.004
		136.25		-1.425E-01	4.873E-01	7.286E-01	4.440E-02	-0.196
		345.85		8.382E-02	1.981E-01	2.978E-01	1.954E-02	0.281
		482.03	*	2.746E-03	4.269E-02	7.056E-02	4.209E-03	0.039
W-181		56.28		-3.693E-02	2.840E-01	4.745E-01	3.029E-02	-0.078
		57.53		3.757E-01	1.652E-01	2.780E-01	1.777E-02	1.351
		65.20	*	-2.998E-02	3.374E-01	4.932E-01	3.391E-02	-0.061
TA-182		67.75		-4.179E-03	1.443E-01	1.537E-01	1.089E-02	-0.027
		100.10		1.491E-01	1.733E-01	2.859E-01	2.260E-02	0.521
		152.43		2.368E-01	3.298E-01	5.532E-01	3.115E-02	0.428
		222.10		1.631E-01	3.445E-01	5.666E-01	3.640E-02	0.288
		1001.68		1.484E+00	2.039E+00	3.588E+00	2.631E-01	0.414
	+	1121.28		5.518E-01	2.221E-01	3.427E-01	2.102E-02	1.610
		1189.05		-2.512E-02	3.205E-01	5.211E-01	2.913E-02	-0.048
		1221.42	*	1.258E-01	2.112E-01	3.609E-01	2.089E-02	0.348
		1230.97		2.878E-01	5.774E-01	8.544E-01	4.995E-02	0.337
RE-183		57.98		3.364E-01	1.742E-01	2.780E-01	1.777E-02	1.210
		59.32		9.084E-02	9.648E-02	1.483E-01	9.502E-03	0.613
		67.20		-1.730E-03	2.188E-01	2.721E-01	1.915E-02	-0.006
		162.32	*	1.862E-02	1.081E-01	1.774E-01	9.485E-03	0.105
	+	208.81		2.986E+00	1.417E+00	1.721E+00	1.054E-01	1.735
		291.72		3.571E-01	1.004E+00	1.508E+00	1.146E-01	0.237
RE-184		57.98		1.249E+00	6.467E-01	1.032E+00	6.597E-02	1.210
		59.32		3.369E-01	3.578E-01	5.500E-01	3.524E-02	0.613
		67.20		-6.421E-03	8.119E-01	1.010E+00	7.106E-02	-0.006
		161.27		3.660E-01	3.500E-01	5.933E-01	3.191E-02	0.617
		216.55		6.582E-02	2.627E-01	4.282E-01	2.697E-02	0.154
		252.85	*	-1.269E-01	2.292E-01	3.558E-01	2.539E-02	-0.357
		318.01		-9.083E-02	4.096E-01	6.786E-01	4.858E-02	-0.134
		792.07		-1.154E-01	9.398E-01	1.561E+00	1.199E-01	-0.074
		903.28		-7.028E-01	1.071E+00	1.535E+00	1.233E-01	-0.458
		920.93		-1.791E-01	4.611E-01	7.407E-01	5.870E-02	-0.242
OS-185		59.72		1.787E-01	2.612E-01	3.972E-01	2.554E-02	0.450
		61.14		-6.470E-03	1.527E-01	2.249E-01	1.472E-02	-0.029
		69.30		1.711E-02	2.835E-01	4.179E-01	3.015E-02	0.041
		592.07		-8.321E-02	2.281E+00	3.703E+00	2.472E-01	-0.022
		646.12	*	-6.817E-03	4.052E-02	6.472E-02	4.520E-03	-0.105
		717.42		-1.087E+00	8.773E-01	1.247E+00	9.161E-02	-0.872
		874.81		2.438E-01	5.120E-01	8.912E-01	7.118E-02	0.274
		880.27		-2.520E-01	7.587E-01	1.228E+00	9.829E-02	-0.205
RE-188		155.03	*	1.161E-02	1.676E-01	2.743E-01	1.524E-02	0.042
		477.96		-9.953E-01	2.993E+00	4.816E+00	2.859E-01	-0.207
		633.10		8.017E-01	2.736E+00	4.543E+00	3.140E-01	0.176
W-188	+	63.58		8.788E+01	5.866E+01	7.567E+01	5.103E+00	1.161
		227.08		-1.014E+01	1.254E+01	1.934E+01	1.264E+00	-0.524
		290.67	*	-6.750E-01	7.764E+00	1.132E+01	8.619E-01	-0.060
IR-192	+	295.96		8.458E-01	1.681E-01	2.612E-01	1.987E-02	3.238
		308.46		-3.049E-03	8.672E-02	1.454E-01	1.074E-02	-0.021

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		316.51	*	1.097E-03	3.209E-02	5.394E-02	3.889E-03	0.020
		468.07		-1.962E-02	7.117E-02	9.882E-02	6.664E-03	-0.198
		604.41		-2.762E-02	5.260E-01	7.351E-01	8.720E-02	-0.038
		612.46		7.629E-01	7.507E-01	1.164E+00	9.730E-02	0.655
AU-195		65.12		-1.394E-02	1.566E-01	2.290E-01	1.573E-02	-0.061
		66.83		-5.828E-02	9.553E-02	1.268E-01	8.887E-03	-0.460
	+	75.70		1.480E+00	2.235E-01	4.266E-01	3.328E-02	3.468
		98.88	*	2.054E-01	2.375E-01	3.572E-01	2.861E-02	0.575
	+	129.76		3.549E+00	3.263E+00	4.639E+00	2.918E-01	0.765
TL-200		367.94	*	-7.708E-05	3.263E+00	Half-Life too short		
		579.30		2.319E-03	3.263E+00	Half-Life too short		
		828.27		2.461E-04	3.263E+00	Half-Life too short		
		1205.75		-2.960E-04	3.263E+00	Half-Life too short		
TL-201		68.90		1.593E-01	3.686E+00	5.066E+00	3.638E-01	0.031
		70.82		1.563E+00	1.992E+00	3.017E+00	2.217E-01	0.518
		80.30		4.300E+00	4.413E+00	5.070E+00	4.193E-01	0.848
		135.34		7.459E+00	1.860E+01	3.095E+01	1.894E+00	0.241
		167.43	*	2.954E+00	5.149E+00	8.576E+00	4.520E-01	0.344
TL-202		68.90		1.777E-02	4.111E-01	5.651E-01	4.058E-02	0.031
		70.82		1.739E-01	2.216E-01	3.356E-01	2.465E-02	0.518
		80.30		4.785E-01	4.910E-01	5.641E-01	4.666E-02	0.848
		439.56	*	4.174E-02	6.248E-02	1.076E-01	6.089E-03	0.388
HG-203		70.83		7.998E-01	1.016E+00	1.533E+00	1.968E-01	0.522
	+	72.87		4.346E+00	9.437E-01	1.138E+00	1.425E-01	3.818
	+	82.60		1.917E+00	1.005E+00	1.552E+00	2.124E-01	1.235
		279.20	*	2.710E-02	4.444E-02	6.692E-02	5.379E-03	0.405
BI-207	+	72.80		1.298E+00	2.502E-01	3.370E-01	2.536E-02	3.851
	+	74.97		7.689E-01	1.482E-01	2.370E-01	1.832E-02	3.244
	+	84.90		3.399E-01	1.745E-01	3.206E-01	2.818E-02	1.060
		569.67		-2.172E-02	3.207E-02	4.850E-02	3.172E-03	-0.448
		1063.62	*	6.754E-03	5.248E-02	8.753E-02	5.917E-03	0.077
		1770.23		2.271E-02	4.242E-01	6.109E-01	3.452E-02	0.037
TL-207		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
PO-209		260.50		-8.023E+00	9.721E+00	1.482E+01	1.084E+00	-0.541
		262.80		-8.635E+00	2.709E+01	4.256E+01	3.137E+00	-0.203
		896.60	*	7.048E+00	6.760E+00	1.227E+01	9.884E-01	0.574
BI-210		46.50	*	1.210E+00	2.260E+00	3.826E+00	2.836E-01	0.316
PB-210		46.50	*	1.210E+00	2.260E+00	3.826E+00	2.836E-01	0.316
PO-210		46.50	*	1.210E+00	2.259E+00	3.826E+00	2.400E-01	0.316
PB-211		404.84	*	-6.519E-01	1.061E+00	1.567E+00	9.761E-01	-0.416

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		427.08		4.322E-01	1.981E+00	3.296E+00	2.036E+00	0.131
		831.96		-3.714E-01	1.156E+00	1.842E+00	1.153E+00	-0.202
BI-212	+	727.18	*	9.922E-01	4.104E-01	6.070E-01	5.447E-02	1.635
		785.46		5.603E-01	1.768E+00	3.033E+00	2.321E-01	0.185
		1620.62		8.202E-01	1.102E+00	2.043E+00	1.243E-01	0.401
PO-215		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
RN-219	+	271.23		7.374E-01	3.262E-01	4.494E-01	4.249E-02	1.641
		401.81	*	1.474E-01	4.182E-01	7.073E-01	9.497E-02	0.208
RN-220		549.76	*	1.033E+01	2.402E+01	4.059E+01	2.604E+00	0.254
RA-223		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
AC-227		79.80		8.188E-01	2.028E+00	2.218E+00	4.735E-01	0.369
		236.00		3.026E+00	4.831E-01	6.610E-01	7.273E-02	4.577
		256.20	*	1.114E-01	3.799E-01	6.169E-01	9.009E-02	0.181
		286.10		7.799E-01	1.466E+00	2.526E+00	3.185E-01	0.309
		299.80		1.774E+00	1.579E+00	2.442E+00	4.140E-01	0.726
		304.40		-1.394E+00	1.800E+00	2.878E+00	5.152E-01	-0.484
		334.20		2.023E+00	3.320E+00	3.595E+00	6.716E-01	0.563
TH-227		79.80		8.188E-01	2.028E+00	2.218E+00	4.797E-01	0.369
		94.00		6.394E+00	2.298E+00	3.348E+00	7.272E-01	1.910
		236.00		3.026E+00	4.566E-01	6.610E-01	6.404E-02	4.577
		256.20	*	1.114E-01	3.800E-01	6.169E-01	1.076E-01	0.181
		286.10		7.799E-01	1.659E+00	2.526E+00	2.534E+00	0.309
		299.80		1.774E+00	1.579E+00	2.442E+00	4.140E-01	0.726
		304.40		-1.394E+00	1.800E+00	2.878E+00	5.152E-01	-0.484
		334.20		2.023E+00	3.320E+00	3.595E+00	6.716E-01	0.563
TH-229	+	85.43		8.323E-01	2.247E-01	3.262E-01	2.887E-02	2.552
	+	88.47		3.367E-01	1.066E-01	1.943E-01	1.768E-02	1.733
		100.00		1.613E-01	1.815E-01	2.996E-01	2.372E-02	0.538
		193.63	*	-2.191E-01	4.853E-01	7.690E-01	4.458E-02	-0.285
		210.97		1.435E+00	8.583E-01	1.323E+00	8.165E-02	1.085
PA-231		283.67	*	-1.733E-01	1.562E+00	2.473E+00	3.632E-01	-0.070

---- Non-Identified Nuclides ----

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		301.29		7.054E-01	5.570E-01	9.607E-01	1.100E-01	0.734
TH-231		81.07		1.253E-01	2.640E-01	2.912E-01	2.433E-02	0.430
	+	83.78		2.241E-01	1.150E-01	1.844E-01	1.597E-02	1.215
		94.90		9.741E-02	2.344E-01	3.479E-01	2.913E-02	0.280
		122.32		2.553E-01	1.654E+00	2.736E+00	2.011E-01	0.093
	+	144.24		6.048E-01	1.193E+00	1.135E+00	8.269E-02	0.533
		154.21		2.997E-01	3.899E-01	6.547E-01	4.474E-02	0.458
	+	269.46		5.748E-01	2.524E-01	3.547E-01	2.743E-02	1.621
		323.87	*	2.990E-01	6.805E-01	1.024E+00	1.740E-01	0.292
	+	338.28		4.808E+00	1.514E+00	2.230E+00	2.470E-01	2.156
		445.03		-8.073E-01	2.132E+00	3.428E+00	3.501E-01	-0.236
U-231	+	84.21		7.840E+00	4.025E+00	6.782E+00	5.906E-01	1.156
	+	92.29		6.434E+00	1.925E+00	2.972E+00	2.570E-01	2.165
		95.87	*	-6.152E-01	9.137E-01	1.283E+00	1.062E-01	-0.480
		108.00		-3.399E-01	1.623E+00	2.658E+00	1.949E-01	-0.128
PA-233	+	75.28		2.244E+01	5.180E+00	7.063E+00	1.051E+00	3.177
	+	86.59		7.266E+00	2.693E+00	2.750E+00	7.410E-01	2.642
		300.12		5.488E-01	4.168E-01	6.776E-01	9.647E-02	0.810
		311.98	*	-1.306E-02	5.849E-02	9.699E-02	7.332E-03	-0.135
		340.50		3.544E-01	6.645E-01	9.969E-01	2.313E-01	0.355
		398.62		-4.695E-01	2.095E+00	3.429E+00	8.833E-01	-0.137
		415.76		4.759E-01	1.536E+00	2.592E+00	5.312E-01	0.184
PA-234	+	63.00		2.581E+00	1.755E+00	2.268E+00	3.293E-01	1.138
		94.67		2.671E-01	1.670E-01	2.569E-01	3.147E-02	1.040
		98.44		4.685E-02	1.013E-01	1.448E-01	8.065E-02	0.324
		99.86		4.268E-01	4.602E-01	7.606E-01	6.029E-02	0.561
		111.00		-1.063E-01	1.750E-01	2.814E-01	3.119E-02	-0.378
		131.20		-5.722E-02	1.155E-01	1.615E-01	1.009E-02	-0.354
		152.70		2.262E-01	3.211E-01	5.356E-01	8.432E-02	0.422
	+	186.00		4.927E+00	2.579E+00	2.469E+00	7.538E-01	1.995
		226.40		-1.076E-01	3.978E-01	6.312E-01	7.536E-02	-0.170
		227.20		-3.424E-01	4.291E-01	6.624E-01	4.331E-02	-0.517
		248.90		-2.218E-01	8.799E-01	1.277E+00	2.792E-01	-0.174
	+	293.70		5.387E+00	1.341E+00	1.663E+00	2.795E-01	3.239
		369.80		-3.500E-01	8.060E-01	1.303E+00	2.718E-01	-0.269
		568.70		-1.089E+00	1.062E+00	1.562E+00	1.021E-01	-0.697
		569.50		-1.895E-01	2.848E-01	4.312E-01	2.820E-02	-0.439
		574.00		-2.266E-01	1.486E+00	2.251E+00	1.478E-01	-0.101
		699.00		2.493E-01	7.186E-01	1.189E+00	2.200E-01	0.210
		706.10		-5.572E-01	1.070E+00	1.604E+00	7.113E-01	-0.347
		733.00		1.257E-01	3.675E-01	5.331E-01	1.160E-01	0.236
		742.81		-9.160E-01	1.551E+00	2.161E+00	1.449E+00	-0.424
		796.30		1.237E+00	9.487E-01	1.639E+00	4.387E-01	0.755
		805.60		1.098E+00	1.040E+00	1.789E+00	5.442E-01	0.614
		819.60		1.536E-01	1.070E+00	1.812E+00	6.857E-01	0.085
		826.30		-3.878E-01	7.135E-01	1.094E+00	4.880E-01	-0.354
		831.60		-1.093E-01	5.736E-01	9.421E-01	2.791E-01	-0.116
		876.40		9.890E-02	7.737E-01	1.294E+00	1.330E+00	0.076
		880.51		1.644E-02	2.719E-01	4.557E-01	3.648E-02	0.036

---- Non-Identified Nuclides ----

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		883.24		6.912E-02	2.952E-01	4.954E-01	3.326E-01	0.140
		899.00		-2.104E-01	7.911E-01	1.276E+00	5.566E-01	-0.165
		925.00		1.169E+00	1.288E+00	2.112E+00	1.669E-01	0.553
		926.50		9.396E-02	2.048E-01	3.079E-01	7.710E-02	0.305
		946.00	*	-9.030E-02	2.896E-01	4.662E-01	8.571E-02	-0.194
		949.00		4.422E-02	4.254E-01	7.128E-01	5.517E-02	0.062
		980.50		-1.696E-01	7.141E-01	1.157E+00	8.682E-02	-0.147
		1394.10		-1.402E+00	1.375E+00	1.282E+00	8.310E-01	-1.094
PA-234M		766.41		2.572E+01	2.695E+01	3.257E+01	2.494E+01	0.790
		1001.03	*	5.944E+00	6.703E+00	1.190E+01	1.217E+00	0.500
NP-236		94.67		2.048E-01	1.254E-01	1.951E-01	1.638E-02	1.050
		98.44		3.541E-02	7.403E-02	1.095E-01	8.808E-03	0.324
		111.00		-8.039E-02	1.322E-01	2.128E-01	1.521E-02	-0.378
		160.31	*	5.222E-02	8.047E-02	1.344E-01	7.268E-03	0.388
NP-239		99.55		2.088E-01	1.568E-01	2.533E-01	2.015E-02	0.824
		117.00	*	5.517E-02	1.821E-01	3.033E-01	2.065E-02	0.182
	+	209.75		2.385E+00	1.132E+00	1.448E+00	8.900E-02	1.647
		228.18		-8.408E-02	2.244E-01	3.542E-01	2.324E-02	-0.237
	+	277.60		3.429E-01	2.957E-01	3.191E-01	2.466E-02	1.075
		334.30		1.160E+00	1.871E+00	2.039E+00	1.392E-01	0.569
AM-241		59.54	*	1.295E-01	1.382E-01	2.122E-01	1.535E-02	0.610
CM-243		99.55		2.148E-01	1.614E-01	2.606E-01	2.073E-02	0.824
		103.76	*	2.890E-02	9.506E-02	1.588E-01	1.211E-02	0.182
		117.00		5.676E-02	1.873E-01	3.120E-01	2.124E-02	0.182
	+	209.75		2.351E+00	1.116E+00	1.427E+00	8.772E-02	1.647
		228.18		-8.495E-02	2.267E-01	3.578E-01	2.348E-02	-0.237
	+	277.60		3.457E-01	2.981E-01	3.217E-01	2.486E-02	1.075
CM-247	+	278.00		1.422E+00	1.226E+00	1.306E+00	1.010E-01	1.089
		287.40		8.563E-02	1.209E+00	1.993E+00	1.526E-01	0.043
		402.60	*	1.383E-02	3.751E-02	6.355E-02	3.415E-03	0.218
CF-249		252.85		-4.787E-01	8.645E-01	1.342E+00	9.575E-02	-0.357
		333.44		1.444E-01	2.442E-01	2.652E-01	1.815E-02	0.544
		387.95	*	3.826E-03	3.815E-02	6.382E-02	3.449E-03	0.060
CF-251		176.60	*	3.375E-02	1.222E-01	2.009E-01	1.094E-02	0.168
		227.00		-2.829E-01	3.803E-01	5.888E-01	3.848E-02	-0.480
		285.00		-9.285E-02	1.679E+00	2.821E+00	2.170E-01	-0.033

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070    *
* Acquisition date :  9-JUL-2009 08:36:12 Detector SN#    :                *
* Detector ID        : GAM11               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.66      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 25-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201873070          Analyst initials: MXR1          *
* Batch Number       : 881931               Sample Quantity : 1.2546E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.266E+01	2.773E+00	4.295E-01	0.000E+00
CD-109	2.504E+00	7.773E-01	1.105E+00	0.000E+00
SN-126	3.711E-01	9.818E-02	1.092E-01	0.000E+00
TL-208	4.845E-01	7.834E-02	5.676E-02	0.000E+00
BI-211	3.341E+00	4.440E-01	2.909E-01	0.000E+00
PB-212	1.351E+00	1.436E-01	9.253E-02	0.000E+00
PO-212	1.351E+00	1.436E-01	9.253E-02	0.000E+00
BI-214	1.071E+00	1.655E-01	1.112E-01	0.000E+00
PB-214	1.162E+00	1.655E-01	9.541E-02	0.000E+00
PO-214	1.162E+00	1.655E-01	9.541E-02	0.000E+00
PO-216	1.351E+00	1.436E-01	9.253E-02	0.000E+00
PO-218	1.162E+00	1.655E-01	9.541E-02	0.000E+00
RA-224	3.482E+00	1.250E+00	1.053E+00	0.000E+00
RA-226	1.071E+00	1.655E-01	1.112E-01	0.000E+00
AC-228	1.224E+00	2.823E-01	2.380E-01	0.000E+00
RA-228	1.224E+00	2.823E-01	2.380E-01	0.000E+00
TH-228	1.351E+00	1.436E-01	9.252E-02	0.000E+00
TH-230	1.071E+00	1.655E-01	1.112E-01	0.000E+00
TH-232	1.224E+00	2.823E-01	2.380E-01	0.000E+00
TH-234	2.214E+00	1.488E+00	1.845E+00	0.000E+00
U-234	1.071E+00	1.655E-01	1.112E-01	0.000E+00
U-235	1.866E-01	3.618E-01	3.339E-01	0.000E+00
NP-237	1.090E+00	3.629E-01	3.235E-01	0.000E+00
U-238	2.214E+00	1.488E+00	1.845E+00	0.000E+00
AM-243	4.284E-01	8.092E-02	8.027E-02	0.000E+00
ANH-511	1.380E-01	6.829E-02	4.602E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-1.576E-01	3.056E-01	5.031E-01	0.000E+00	NOT IDENT.

NA-22	-1.415E-02	4.693E-02	7.594E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.654E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.332E-03	2.224E-02	3.868E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.220E-02	6.532E-02	0.000E+00	NOT IDENT.
SC-46	-1.814E-04	3.733E-02	6.386E-02	0.000E+00	FAIL ABUN
V-48	-4.293E-03	6.466E-02	1.092E-01	0.000E+00	NOT IDENT.
CR-51	1.827E-01	3.548E-01	5.841E-01	0.000E+00	NOT IDENT.
MN-52	-1.269E-01	1.782E-01	2.599E-01	0.000E+00	FAIL ABUN
MN-54	-1.561E-02	3.705E-02	6.165E-02	0.000E+00	NOT IDENT.
CO-56	3.360E-03	3.632E-02	6.285E-02	0.000E+00	FAIL ABUN
CO-57	-1.308E-02	2.387E-02	4.055E-02	0.000E+00	NOT IDENT.
CO-58	-1.763E-02	3.350E-02	5.492E-02	0.000E+00	NOT IDENT.
FE-59	-3.286E-02	9.641E-02	1.578E-01	0.000E+00	FAIL ABUN
CO-60	5.103E-03	4.081E-02	6.862E-02	0.000E+00	NOT IDENT.
ZN-65	-4.993E-02	1.069E-01	1.485E-01	0.000E+00	NOT IDENT.
GE-68	-8.634E-01	1.337E+00	2.129E+00	0.000E+00	NOT IDENT.
AS-73	-4.229E-01	5.892E-01	1.016E+00	0.000E+00	NOT IDENT.
AS-74	-2.167E-02	8.064E-02	1.327E-01	0.000E+00	NOT IDENT.
SE-75	2.699E-02	4.975E-02	7.518E-02	0.000E+00	NOT IDENT.
BR-77	-1.642E-01	7.188E+00	1.218E+01	0.000E+00	FAIL ABUN
SR-82	-3.198E-01	3.519E-01	5.634E-01	0.000E+00	NOT IDENT.
RB-83	7.665E-03	6.852E-02	1.172E-01	0.000E+00	NOT IDENT.
RB-84	4.069E-02	6.500E-02	1.170E-01	0.000E+00	NOT IDENT.
KR-85	8.332E+00	8.044E+00	1.286E+01	0.000E+00	NOT IDENT.
SR-85	4.216E-02	4.070E-02	6.509E-02	0.000E+00	NOT IDENT.
RB-86	-2.606E-01	7.861E-01	1.288E+00	0.000E+00	NOT IDENT.
Y-88	-4.315E-03	2.701E-02	4.377E-02	0.000E+00	NOT IDENT.
ZR-88	-4.245E-03	2.897E-02	4.961E-02	0.000E+00	NOT IDENT.
Y-91	-6.113E+00	1.919E+01	3.124E+01	0.000E+00	NOT IDENT.
NB-94	9.777E-03	3.327E-02	5.657E-02	0.000E+00	NOT IDENT.
NB-95	5.387E-02	4.336E-02	7.792E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.715E-01	2.884E-01	0.000E+00	NOT IDENT.
ZR-95	1.922E-02	6.828E-02	1.156E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.876E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.404E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.180E+00	8.016E+00	1.345E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.290E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.171E-02	3.206E-02	5.546E-02	0.000E+00	FAIL ABUN
RH-102	-2.080E-02	2.756E-02	4.454E-02	0.000E+00	NOT IDENT.
RU-103	6.784E-03	3.682E-02	6.346E-02	0.000E+00	FAIL ABUN
RH-106	-1.822E-01	3.021E-01	4.802E-01	0.000E+00	FAIL ABUN
RU-106	-1.822E-01	3.015E-01	4.802E-01	0.000E+00	FAIL ABUN
AG-108M	-2.249E-03	3.040E-02	5.193E-02	0.000E+00	NOT IDENT.
AG-110M	-2.736E-02	3.537E-02	5.541E-02	0.000E+00	NOT IDENT.
IN-111	3.128E-01	8.510E-01	1.276E+00	0.000E+00	NOT IDENT.
IN-113M	-2.074E-02	4.199E-02	7.041E-02	0.000E+00	NOT IDENT.
SN-113	-2.074E-02	4.199E-02	7.041E-02	0.000E+00	NOT IDENT.
IN-114M	1.299E-01	1.837E-01	2.848E-01	0.000E+00	NOT IDENT.
CD-115	-2.229E+00	6.994E+00	1.158E+01	0.000E+00	NOT IDENT.
SN-117M	1.662E-02	5.041E-02	8.760E-02	0.000E+00	NOT IDENT.
SB-122	1.145E+00	1.455E+00	2.589E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.156E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	8.512E-03	2.793E-02	4.847E-02	0.000E+00	NOT IDENT.
I-124	5.147E-01	6.037E-01	9.498E-01	0.000E+00	NOT IDENT.
SB-124	7.395E-02	6.670E-02	1.327E-01	0.000E+00	FAIL ABUN
SB-125	4.226E-02	8.558E-02	1.515E-01	0.000E+00	FAIL ABUN
TE-125M	-6.013E+00	8.534E+00	1.447E+01	0.000E+00	NOT IDENT.
I-126	-1.306E-01	1.717E-01	2.691E-01	0.000E+00	NOT IDENT.
SB-126	6.378E-02	1.342E-01	2.192E-01	0.000E+00	FAIL ABUN
SB-127	3.891E-01	1.022E+00	1.755E+00	0.000E+00	NOT IDENT.
XE-127	-4.291E-02	4.585E-02	7.140E-02	0.000E+00	FAIL ABUN
I-131	1.449E-02	9.445E-02	1.653E-01	0.000E+00	NOT IDENT.
TE-132	-1.990E-01	5.148E-01	8.497E-01	0.000E+00	NOT IDENT.
BA-133	-1.406E-03	4.266E-02	6.424E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.120E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.318E-02	4.524E-02	8.517E-02	0.000E+00	NOT IDENT.
CS-135	2.581E-01	1.920E-01	3.013E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.563E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.441E-02	1.031E-01	1.859E-01	0.000E+00	FAIL ABUN
BA-137M	3.354E-02	3.637E-02	6.468E-02	0.000E+00	NOT IDENT.
CS-137	3.546E-02	3.845E-02	6.837E-02	0.000E+00	NOT IDENT.
CE-139	3.330E-03	2.852E-02	4.905E-02	0.000E+00	NOT IDENT.
BA-140	5.998E-02	2.160E-01	3.723E-01	0.000E+00	NOT IDENT.
LA-140	-8.414E-02	6.722E-02	8.936E-02	0.000E+00	NOT IDENT.
CE-141	3.443E-02	6.511E-02	1.010E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.479E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.116E-02	2.242E-01	3.391E-01	0.000E+00	NOT IDENT.
PM-144	-1.524E-02	3.325E-02	5.320E-02	0.000E+00	NOT IDENT.

PR-144	-1.032E+00	2.252E+00	3.603E+00	0.000E+00	NOT IDENT.
PM-146	2.502E-02	3.906E-02	6.965E-02	0.000E+00	NOT IDENT.
ND-147	-1.824E-01	5.039E-01	8.305E-01	0.000E+00	FAIL ABUN
PM-149	2.539E+01	5.788E+01	1.036E+02	0.000E+00	NOT IDENT.
EU-152	4.934E-02	1.022E-01	1.604E-01	0.000E+00	FAIL ABUN
GD-153	-5.330E-03	8.151E-02	1.243E-01	0.000E+00	FAIL ABUN
EU-154	-3.848E-02	1.313E-01	2.126E-01	0.000E+00	NOT IDENT.
EU-155	1.117E-01	1.045E-01	1.888E-01	0.000E+00	FAIL ABUN
TB-160	-1.992E-02	1.291E-01	2.181E-01	0.000E+00	FAIL ABUN
HO-166M	7.009E-02	5.673E-02	1.035E-01	0.000E+00	FAIL ABUN
TM-171	-1.863E+01	2.839E+01	4.005E+01	0.000E+00	NOT IDENT.
LU-176	-1.219E-02	2.226E-02	3.784E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.373E+00	1.725E+00	0.000E+00	FAIL ABUN
LU-177M	-2.036E-01	1.680E-01	2.672E-01	0.000E+00	FAIL ABUN
HF-181	2.746E-03	4.183E-02	7.164E-02	0.000E+00	NOT IDENT.
W-181	-2.998E-02	3.306E-01	5.148E-01	0.000E+00	NOT IDENT.
TA-182	1.258E-01	2.070E-01	3.616E-01	0.000E+00	FAIL ABUN
RE-183	1.862E-02	1.060E-01	1.828E-01	0.000E+00	FAIL ABUN
RE-184	-1.269E-01	2.246E-01	3.645E-01	0.000E+00	NOT IDENT.
OS-185	-6.817E-03	3.971E-02	6.544E-02	0.000E+00	NOT IDENT.
RE-188	1.161E-02	1.643E-01	2.829E-01	0.000E+00	NOT IDENT.
W-188	-6.750E-01	7.609E+00	1.158E+01	0.000E+00	FAIL ABUN
IR-192	1.097E-03	3.145E-02	5.509E-02	0.000E+00	FAIL ABUN
AU-195	2.054E-01	2.328E-01	3.708E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.900E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.954E+00	5.046E+00	8.837E+00	0.000E+00	NOT IDENT.
TL-202	4.174E-02	6.123E-02	1.094E-01	0.000E+00	NOT IDENT.
HG-203	2.710E-02	4.355E-02	6.847E-02	0.000E+00	FAIL ABUN
BI-207	6.754E-03	5.143E-02	8.787E-02	0.000E+00	FAIL ABUN
TL-207	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
PO-209	7.048E+00	6.625E+00	1.235E+01	0.000E+00	NOT IDENT.
BI-210	1.210E+00	2.215E+00	4.011E+00	0.000E+00	NOT IDENT.
PB-210	1.210E+00	2.215E+00	4.011E+00	0.000E+00	NOT IDENT.
PO-210	1.210E+00	2.214E+00	4.011E+00	0.000E+00	NOT IDENT.
PB-211	-6.519E-01	1.040E+00	1.595E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.022E-01	6.127E-01	0.000E+00	FAIL ABUN
PO-215	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
RN-219	1.474E-01	4.098E-01	7.200E-01	0.000E+00	FAIL ABUN
RN-220	1.033E+01	2.354E+01	4.113E+01	0.000E+00	NOT IDENT.
RA-223	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
AC-227	1.114E-01	3.723E-01	6.319E-01	0.000E+00	NOT IDENT.
TH-227	1.114E-01	3.724E-01	6.319E-01	0.000E+00	NOT IDENT.
TH-229	-2.191E-01	4.756E-01	7.909E-01	0.000E+00	FAIL ABUN
PA-231	-1.733E-01	1.531E+00	2.530E+00	0.000E+00	NOT IDENT.
TH-231	2.990E-01	6.669E-01	1.046E+00	0.000E+00	FAIL ABUN
U-231	-6.152E-01	8.954E-01	1.332E+00	0.000E+00	FAIL ABUN
PA-233	-1.306E-02	5.732E-02	9.909E-02	0.000E+00	FAIL ABUN
PA-234	-9.030E-02	2.838E-01	4.688E-01	0.000E+00	FAIL ABUN
PA-234M	5.944E+00	6.569E+00	1.196E+01	0.000E+00	NOT IDENT.
NP-236	5.222E-02	7.886E-02	1.386E-01	0.000E+00	NOT IDENT.
NP-239	5.517E-02	1.785E-01	3.141E-01	0.000E+00	FAIL ABUN
AM-241	1.295E-01	1.354E-01	2.217E-01	0.000E+00	NOT IDENT.
CM-243	2.890E-02	9.316E-02	1.647E-01	0.000E+00	FAIL ABUN
CM-247	1.383E-02	3.676E-02	6.469E-02	0.000E+00	FAIL ABUN
CF-249	3.826E-03	3.739E-02	6.500E-02	0.000E+00	NOT IDENT.
CF-251	3.375E-02	1.198E-01	2.069E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:37:19.41

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1
Sample date       : 25-JUN-2009 12:00:00 Acquisition date : 9-JUL-2009 08:36:12.
Sample ID         : G1201873070          Sample quantity  : 1.25460E+02 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.66  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881931                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1464	10.67*	1.257E+00	3.266E+01	3.266E+01	8.66
CD-109	88.03	215	3.72*	7.058E+00	2.453E+00	2.504E+00	31.68
SN-126	64.28	125	9.60	4.447E+00	8.765E-01	8.765E-01	67.91
	86.94	317	8.90	6.901E+00	1.543E+00	1.543E+00	48.63
	87.57	317	37.00*	6.901E+00	3.711E-01	3.711E-01	26.99
TL-208	277.35	80	6.80	4.926E+00	7.111E-01	7.111E-01	86.68
	510.84	142	21.60	3.080E+00	6.388E-01	6.388E-01	51.18
	583.14	377	84.20*	2.766E+00	4.845E-01	4.845E-01	16.50
	860.37	55	12.46	1.985E+00	6.610E-01	6.610E-01	56.70
BI-211	72.87	555	1.27	5.878E+00	2.226E+01	2.226E+01	19.28
	351.07	596	12.94*	4.126E+00	3.341E+00	3.341E+00	13.56
PB-212	74.81	555	10.70	5.878E+00	2.642E+00	2.642E+00	21.42
	77.11	621	18.00	6.128E+00	1.684E+00	1.684E+00	15.11
	87.30	317	8.00	6.901E+00	1.717E+00	1.717E+00	28.79
	238.63	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.09	------	3.41	4.646E+00	------ Line Not Found		------
PO-212	74.81	555	10.70	5.878E+00	2.642E+00	2.642E+00	21.42
	77.11	621	18.00	6.128E+00	1.684E+00	1.684E+00	15.11
	87.30	317	8.00	6.901E+00	1.717E+00	1.717E+00	28.79
	115.19	------	0.60	7.604E+00	------ Line Not Found		------
	238.63	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.09	------	3.41	4.646E+00	------ Line Not Found		------
BI-214	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
PB-214	74.81	555	6.21	5.878E+00	4.553E+00	4.553E+00	20.65
	77.11	621	10.50	6.128E+00	2.887E+00	2.888E+00	16.92
	87.30	317	4.67	6.901E+00	2.941E+00	2.941E+00	28.07

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	250	7.49	5.438E+00	1.836E+00	1.836E+00	37.07
	295.21	339	19.20	4.708E+00	1.122E+00	1.122E+00	20.81
	351.92	596	37.20*	4.126E+00	1.162E+00	1.162E+00	14.53
PO-214	74.81	555	6.21	5.878E+00	4.553E+00	4.553E+00	20.65
	77.11	621	10.50	6.128E+00	2.887E+00	2.888E+00	16.92
	87.30	317	4.67	6.901E+00	2.941E+00	2.941E+00	28.07
	241.98	250	7.49	5.438E+00	1.836E+00	1.836E+00	37.07
	295.21	339	19.20	4.708E+00	1.122E+00	1.122E+00	20.81
	351.92	596	37.20*	4.126E+00	1.162E+00	1.162E+00	14.53
PO-216	74.81	555	10.70	5.878E+00	2.642E+00	2.642E+00	21.42
	77.11	621	18.00	6.128E+00	1.684E+00	1.684E+00	15.11
	87.30	317	8.00	6.901E+00	1.717E+00	1.717E+00	28.79
	238.63	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.09	------	3.41	4.646E+00	------ Line Not Found		------
PO-218	74.81	555	6.21	5.878E+00	4.553E+00	4.553E+00	20.65
	77.11	621	10.50	6.128E+00	2.887E+00	2.888E+00	16.92
	87.30	317	4.67	6.901E+00	2.941E+00	2.941E+00	28.07
	241.98	250	7.49	5.438E+00	1.836E+00	1.836E+00	37.07
	295.21	339	19.20	4.708E+00	1.122E+00	1.122E+00	20.81
	351.92	596	37.20*	4.126E+00	1.162E+00	1.162E+00	14.53
RA-224	240.98	250	3.95*	5.438E+00	3.482E+00	3.482E+00	36.64
RA-226	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
AC-228	338.32	187	11.40	4.253E+00	1.151E+00	1.151E+00	50.42
	911.07	214	27.70*	1.888E+00	1.224E+00	1.224E+00	23.53
	969.11	162	16.60	1.789E+00	1.629E+00	1.629E+00	31.48
RA-228	338.32	187	11.40	4.253E+00	1.151E+00	1.151E+00	50.42
	911.07	214	27.70*	1.888E+00	1.224E+00	1.224E+00	23.53
	969.11	162	16.60	1.789E+00	1.629E+00	1.629E+00	31.48
TH-228	84.40	124	1.21	6.719E+00	4.575E+00	4.575E+00	52.28
	238.60	1105	44.60*	5.488E+00	1.351E+00	1.351E+00	10.85
	300.10	------	3.41	4.646E+00	------ Line Not Found		------
TH-230	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
TH-232	338.32	187	11.40	4.253E+00	1.151E+00	1.151E+00	30.24
	911.07	214	27.70*	1.888E+00	1.224E+00	1.224E+00	23.53
	969.11	162	16.60	1.789E+00	1.629E+00	1.629E+00	31.48
TH-234	63.29	125	3.80*	4.447E+00	2.214E+00	2.214E+00	68.59
	92.38	270	5.41	7.192E+00	2.075E+00	2.075E+00	33.89

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	442	46.30*	2.667E+00	1.071E+00	1.071E+00	15.77
	768.36	------	5.04	2.191E+00	------ Line Not Found		------
	934.06	60	3.21	1.847E+00	3.029E+00	3.029E+00	66.40
	1120.29	93	15.10	1.573E+00	1.176E+00	1.176E+00	40.79
	1238.11	95	5.94	1.442E+00	3.307E+00	3.307E+00	45.19
	1377.67	20	4.11	1.318E+00	1.086E+00	1.086E+00	96.36
	1764.49	73	15.80	1.095E+00	1.258E+00	1.258E+00	27.82
U-235	89.95	215	2.70	7.058E+00	3.379E+00	3.379E+00	43.37
	93.35	270	4.50	7.192E+00	2.495E+00	2.495E+00	40.08
	105.00	------	2.10	7.539E+00	------ Line Not Found		------
	143.76	48	10.50*	7.283E+00	1.866E-01	1.866E-01	197.81
	163.35	------	4.70	6.902E+00	------ Line Not Found		------
	185.71	212	54.00	6.446E+00	1.825E-01	1.825E-01	42.88
	205.31	------	4.70	6.059E+00	------ Line Not Found		------
NP-237	86.50	317	12.60*	6.901E+00	1.090E+00	1.090E+00	33.98
	95.87	------	2.60	7.329E+00	------ Line Not Found		------
U-238	63.29	125	3.80*	4.447E+00	2.214E+00	2.214E+00	68.59
	92.38	270	5.41	7.192E+00	2.075E+00	2.075E+00	29.93
AM-243	74.67	555	66.00*	5.878E+00	4.284E-01	4.284E-01	19.28
	86.72	317	0.34	6.901E+00	4.087E+01	4.087E+01	26.99
	117.66	------	0.55	7.600E+00	------ Line Not Found		------
	142.18	------	0.13	7.314E+00	------ Line Not Found		------
ANH-511	511.00	142	100.00*	3.080E+00	1.380E-01	1.380E-01	50.50

Flag: "*" = Keyline

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

Total number of lines in spectrum 36
Number of unidentified lines 3
Number of lines tentatively identified by NID 33 91.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.266E+01	3.266E+01	0.283E+01	8.66	
CD-109	464.00D	1.02	2.453E+00	2.504E+00	0.793E+00	31.68	
SN-126	1.00E+05Y	1.00	3.711E-01	3.711E-01	1.002E-01	26.99	
TL-208	1.41E+10Y	1.00	4.845E-01	4.845E-01	0.799E-01	16.50	
BI-211	7.04E+08Y	1.00	3.341E+00	3.341E+00	0.453E+00	13.56	
PB-212	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
PO-212	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
BI-214	1600.00Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
PB-214	1600.00Y	1.00	1.162E+00	1.162E+00	0.169E+00	14.53	
PO-214	1600.00Y	1.00	1.162E+00	1.162E+00	0.169E+00	14.53	
PO-216	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
PO-218	1600.00Y	1.00	1.162E+00	1.162E+00	0.169E+00	14.53	
RA-224	1.41E+10Y	1.00	3.482E+00	3.482E+00	1.276E+00	36.64	
RA-226	1600.00Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
AC-228	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.288E+00	23.53	
RA-228	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.288E+00	23.53	
TH-228	1.41E+10Y	1.00	1.351E+00	1.351E+00	0.147E+00	10.85	
TH-230	4.47E+09Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
TH-232	1.41E+10Y	1.00	1.224E+00	1.224E+00	0.288E+00	23.53	
TH-234	4.47E+09Y	1.00	2.214E+00	2.214E+00	1.519E+00	68.59	
U-234	4.47E+09Y	1.00	1.071E+00	1.071E+00	0.169E+00	15.77	
U-235	7.04E+08Y	1.00	1.866E-01	1.866E-01	3.692E-01	197.81	
NP-237	2.14E+06Y	1.00	1.090E+00	1.090E+00	0.370E+00	33.98	
U-238	4.47E+09Y	1.00	2.214E+00	2.214E+00	1.519E+00	68.59	
AM-243	7380.00Y	1.00	4.284E-01	4.284E-01	0.826E-01	19.28	
ANH-511	1.00E+09Y	1.00	1.380E-01	1.380E-01	0.697E-01	50.50	
	Total Activity :		6.591E+01	6.596E+01			

Grand Total Activity : 6.591E+01 6.596E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	128.41	69	307	0.74	256.83	254	8	9.52E-03	91.7	7.52E+00	T
0	209.33	155	313	1.08	418.65	414	11	2.15E-02	47.1	5.98E+00	T
0	269.83	131	192	1.23	539.65	535	10	1.82E-02	43.2	5.02E+00	T
0	326.80	85	217	2.44	653.59	648	15	1.19E-02	77.8	4.36E+00	
0	462.92	67	100	1.47	925.85	920	11	9.29E-03	65.4	3.33E+00	T
0	727.54	90	59	1.27	1455.08	1450	12	1.25E-02	40.4	2.30E+00	T
8	964.64	41	49	2.62	1929.28	1924	21	5.68E-03	71.2	1.80E+00	T
0	1496.29	22	3	1.98	2992.58	2985	13	3.09E-03	53.6	1.23E+00	
0	1730.11	29	6	1.90	3460.21	3453	13	3.98E-03	52.3	1.11E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 10:37:24.03

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873070.CNF;1  *
* Acquisition date  : 9-JUL-2009 08:36:12.  Detector SN#     :             *
* Detector ID       : GAM11                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.66          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 25-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201873070           Analyst initials: MXR1         *
* Batch Number      : 881931                Sample Quantity : 1.25460E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 1-NOV-2008 15:37:21.59MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.266E+01	2.830E+00	4.298E-01	2.881E-02	75.996
CD-109	2.504E+00	7.932E-01	1.063E+00	9.739E-02	2.355
SN-126	3.711E-01	1.002E-01	1.051E-01	9.572E-03	3.532
TL-208	4.845E-01	7.994E-02	5.606E-02	4.154E-03	8.642
BI-211	3.341E+00	4.530E-01	2.852E-01	1.999E-02	11.713
PB-212	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
PO-212	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
BI-214	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
PB-214	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-214	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
PO-216	1.351E+00	1.465E-01	9.024E-02	7.353E-03	14.966
PO-218	1.162E+00	1.689E-01	9.356E-02	8.161E-03	12.423
RA-224	3.482E+00	1.276E+00	1.027E+00	7.041E-02	3.391
RA-226	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
AC-228	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
RA-228	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
TH-228	1.351E+00	1.465E-01	9.023E-02	7.352E-03	14.967
TH-230	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.224E+00	2.881E-01	2.365E-01	2.546E-02	5.176
TH-234	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
U-234	1.071E+00	1.689E-01	1.099E-01	9.376E-03	9.743
U-235	1.866E-01	3.692E-01	3.234E-01	5.281E-02	0.577
NP-237	1.090E+00	3.703E-01	3.111E-01	7.001E-02	3.503
U-238	2.214E+00	1.519E+00	1.767E+00	3.032E-01	1.253
AM-243	4.284E-01	8.257E-02	7.705E-02	5.933E-03	5.560
ANH-511	1.380E-01	6.968E-02	4.536E-02	2.796E-03	3.042

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.576E-01		3.119E-01	4.955E-01	3.402E-02	-0.318
NA-22	-1.415E-02		4.788E-02	7.585E-02	4.649E-03	-0.187
NA-24	-9.176E-02		8.439E-02	Half-Life too short		
AL-26	3.332E-03		2.269E-02	3.883E-02	2.142E-03	0.086
TI-44	1.963E-01		4.306E-02	6.274E-02	5.062E-03	3.129
SC-46	-1.814E-04		3.810E-02	6.345E-02	5.097E-03	-0.003
V-48	-4.293E-03		6.598E-02	1.086E-01	8.128E-03	-0.040
CR-51	1.827E-01		3.621E-01	5.720E-01	4.386E-02	0.319
MN-52	-1.269E-01		1.818E-01	2.600E-01	1.666E-02	-0.488
MN-54	-1.561E-02		3.781E-02	6.120E-02	4.802E-03	-0.255
CO-56	3.360E-03		3.707E-02	6.240E-02	4.924E-03	0.054
CO-57	-1.308E-02		2.436E-02	3.918E-02	2.570E-03	-0.334
CO-58	-1.763E-02		3.418E-02	5.450E-02	4.239E-03	-0.323
FE-59	-3.286E-02		9.838E-02	1.572E-01	1.148E-02	-0.209
CO-60	5.103E-03		4.164E-02	6.858E-02	4.444E-03	0.074
ZN-65	-4.993E-02		1.091E-01	1.480E-01	9.195E-03	-0.337
GE-68	-8.634E-01		1.364E+00	2.122E+00	1.404E-01	-0.407
AS-73	-4.229E-01		6.012E-01	9.710E-01	6.196E-02	-0.436
AS-74	-2.167E-02		8.228E-02	1.311E-01	8.782E-03	-0.165
SE-75	2.699E-02		5.076E-02	7.342E-02	5.480E-03	0.368
BR-77	-1.642E-01		7.335E+00	1.201E+01	7.479E-01	-0.014
SR-82	-3.198E-01		3.591E-01	5.586E-01	4.254E-02	-0.572
RB-83	7.665E-03		6.992E-02	1.155E-01	7.193E-03	0.066
RB-84	4.069E-02		6.633E-02	1.162E-01	9.305E-03	0.350
KR-85	8.332E+00		8.208E+00	1.268E+01	7.842E-01	0.657
SR-85	4.216E-02		4.153E-02	6.417E-02	3.968E-03	0.657
RB-86	-2.606E-01		8.021E-01	1.283E+00	8.504E-02	-0.203
Y-88	-4.315E-03		2.756E-02	4.395E-02	2.387E-03	-0.098
ZR-88	-4.245E-03		2.956E-02	4.872E-02	2.580E-03	-0.087
Y-91	-6.113E+00		1.958E+01	3.117E+01	1.773E+00	-0.196
NB-94	9.777E-03		3.395E-02	5.601E-02	4.075E-03	0.175
NB-95	5.387E-02		4.425E-02	7.725E-02	5.847E-03	0.697
NB-95M	7.866E-01		1.750E-01	2.812E-01	2.325E-02	2.798
ZR-95	1.922E-02		6.968E-02	1.146E-01	9.757E-03	0.168
NB-97	-2.090E-02		1.467E-02	Half-Life too short		

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1.287E+00		3.267E-01	Half-Life too short		
MO-99	1.180E+00		8.180E+00	1.333E+01	1.939E+00	0.089
TC-99M	-6.153E+08		6.582E+08	Half-Life too short		
RH-101	4.171E-02		3.271E-02	5.395E-02	3.178E-03	0.773
RH-102	-2.080E-02		2.812E-02	4.386E-02	2.595E-03	-0.474
RU-103	6.784E-03		3.757E-02	6.253E-02	7.986E-03	0.108
RH-106	-1.822E-01		3.082E-01	4.746E-01	5.833E-02	-0.384
RU-106	-1.822E-01		3.077E-01	4.746E-01	3.250E-02	-0.384
AG-108M	-2.249E-03		3.102E-02	5.107E-02	3.129E-03	-0.044
AG-110M	-2.736E-02		3.610E-02	5.481E-02	4.033E-03	-0.499
IN-111	3.128E-01		8.684E-01	1.245E+00	8.668E-02	0.251
IN-113M	-2.074E-02		4.285E-02	6.914E-02	3.949E-03	-0.300
SN-113	-2.074E-02		4.285E-02	6.914E-02	3.949E-03	-0.300
IN-114M	1.299E-01		1.874E-01	2.769E-01	1.585E-02	0.469
CD-115	-2.229E+00		7.137E+00	1.142E+01	7.166E-01	-0.195
SN-117M	1.662E-02		5.144E-02	8.495E-02	4.635E-03	0.196
SB-122	1.145E+00		1.485E+00	2.555E+00	1.662E-01	0.448
I-123	3.523E-01		5.898E-01	Half-Life too short		
TE-123M	8.512E-03		2.850E-02	4.700E-02	2.598E-03	0.181
I-124	5.147E-01		6.160E-01	9.385E-01	6.324E-02	0.548
SB-124	7.395E-02		6.806E-02	1.331E-01	8.499E-03	0.556
SB-125	4.226E-02		8.733E-02	1.490E-01	8.678E-03	0.284
TE-125M	-6.013E+00		8.708E+00	1.396E+01	1.287E+00	-0.431
I-126	-1.306E-01		1.752E-01	2.662E-01	1.888E-02	-0.491
SB-126	6.378E-02		1.369E-01	2.172E-01	1.599E-02	0.294
SB-127	3.891E-01		1.043E+00	1.737E+00	1.728E-01	0.224
XE-127	-4.291E-02		4.678E-02	6.948E-02	4.165E-03	-0.618
I-131	1.449E-02		9.637E-02	1.621E-01	1.090E-02	0.089
TE-132	-1.990E-01		5.253E-01	8.281E-01	1.197E-01	-0.240
BA-133	-1.406E-03		4.353E-02	6.300E-02	7.450E-03	-0.022
I-133	3.120E-04		1.082E-03	Half-Life too short		
CS-134	6.318E-02		4.616E-02	8.449E-02	6.561E-03	0.748
CS-135	2.581E-01		1.960E-01	2.943E-01	2.654E-02	0.877
I-135	2.488E+07		1.307E+08	Half-Life too short		
CS-136	8.441E-02		1.052E-01	1.851E-01	1.363E-02	0.456
BA-137M	3.354E-02		3.711E-02	6.399E-02	4.522E-03	0.524
CS-137	3.546E-02		3.923E-02	6.764E-02	4.793E-03	0.524
CE-139	3.330E-03		2.910E-02	4.760E-02	2.497E-03	0.070
BA-140	5.998E-02		2.205E-01	3.672E-01	1.198E-01	0.163
LA-140	-8.414E-02		6.859E-02	8.954E-02	5.499E-03	-0.940
CE-141	3.443E-02		6.644E-02	9.787E-02	5.930E-03	0.352
CE-143	5.375E-04		7.547E-05	Half-Life too short		
CE-144	-1.116E-02		2.288E-01	3.280E-01	4.710E-02	-0.034
PM-144	-1.524E-02		3.393E-02	5.268E-02	3.818E-03	-0.289
PR-144	-1.032E+00		2.298E+00	3.567E+00	2.585E-01	-0.289
PM-146	2.502E-02		3.986E-02	6.854E-02	5.893E-03	0.365
ND-147	-1.824E-01		5.141E-01	8.191E-01	1.126E-01	-0.223
PM-149	2.539E+01		5.906E+01	1.013E+02	1.524E+01	0.251

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	4.934E-02		1.043E-01	1.572E-01	1.141E-02	0.314
GD-153	-5.330E-03		8.317E-02	1.198E-01	9.746E-03	-0.044
EU-154	-3.848E-02		1.340E-01	2.123E-01	2.026E-02	-0.181
EU-155	1.117E-01		1.067E-01	1.821E-01	1.390E-02	0.614
TB-160	-1.992E-02		1.317E-01	2.166E-01	1.733E-02	-0.092
HO-166M	7.009E-02		5.789E-02	1.025E-01	7.501E-03	0.684
TM-171	-1.863E+01		2.897E+01	3.838E+01	2.686E+00	-0.485
LU-176	-1.219E-02		2.272E-02	3.703E-02	2.726E-03	-0.329
LU-177	2.953E+00	+	1.401E+00	1.679E+00	1.027E-01	1.759
LU-177M	-2.036E-01		1.715E-01	2.626E-01	1.434E-02	-0.775
HF-181	2.746E-03		4.269E-02	7.056E-02	4.209E-03	0.039
W-181	-2.998E-02		3.374E-01	4.932E-01	3.391E-02	-0.061
TA-182	1.258E-01		2.112E-01	3.609E-01	2.089E-02	0.348
RE-183	1.862E-02		1.081E-01	1.774E-01	9.485E-03	0.105
RE-184	-1.269E-01		2.292E-01	3.558E-01	2.539E-02	-0.357
OS-185	-6.817E-03		4.052E-02	6.472E-02	4.520E-03	-0.105
RE-188	1.161E-02		1.676E-01	2.743E-01	1.524E-02	0.042
W-188	-6.750E-01		7.764E+00	1.132E+01	8.619E-01	-0.060
IR-192	1.097E-03		3.209E-02	5.394E-02	3.889E-03	0.020
AU-195	2.054E-01		2.375E-01	3.572E-01	2.861E-02	0.575
TL-200	-7.708E-05		9.691E-05	Half-Life too short		
TL-201	2.954E+00		5.149E+00	8.576E+00	4.520E-01	0.344
TL-202	4.174E-02		6.248E-02	1.076E-01	6.089E-03	0.388
HG-203	2.710E-02		4.444E-02	6.692E-02	5.379E-03	0.405
BI-207	6.754E-03		5.248E-02	8.753E-02	5.917E-03	0.077
TL-207	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
PO-209	7.048E+00		6.760E+00	1.227E+01	9.884E-01	0.574
BI-210	1.210E+00		2.260E+00	3.826E+00	2.836E-01	0.316
PB-210	1.210E+00		2.260E+00	3.826E+00	2.836E-01	0.316
PO-210	1.210E+00		2.259E+00	3.826E+00	2.400E-01	0.316
PB-211	-6.519E-01		1.061E+00	1.567E+00	9.761E-01	-0.416
BI-212	9.922E-01	+	4.104E-01	6.070E-01	5.447E-02	1.635
PO-215	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
RN-219	1.474E-01		4.182E-01	7.073E-01	9.497E-02	0.208
RN-220	1.033E+01		2.402E+01	4.059E+01	2.604E+00	0.254
RA-223	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
AC-227	1.114E-01		3.799E-01	6.169E-01	9.009E-02	0.181
TH-227	1.114E-01		3.800E-01	6.169E-01	1.076E-01	0.181
TH-229	-2.191E-01		4.853E-01	7.690E-01	4.458E-02	-0.285
PA-231	-1.733E-01		1.562E+00	2.473E+00	3.632E-01	-0.070
TH-231	2.990E-01		6.805E-01	1.024E+00	1.740E-01	0.292
U-231	-6.152E-01		9.137E-01	1.283E+00	1.062E-01	-0.480
PA-233	-1.306E-02		5.849E-02	9.699E-02	7.332E-03	-0.135
PA-234	-9.030E-02		2.896E-01	4.662E-01	8.571E-02	-0.194
PA-234M	5.944E+00		6.703E+00	1.190E+01	1.217E+00	0.500
NP-236	5.222E-02		8.047E-02	1.344E-01	7.268E-03	0.388
NP-239	5.517E-02		1.821E-01	3.033E-01	2.065E-02	0.182
AM-241	1.295E-01		1.382E-01	2.122E-01	1.535E-02	0.610

Sample ID : G1201873070 Acquisition date : 9-JUL-2009 08:36:12

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.890E-02		9.506E-02	1.588E-01	1.211E-02	0.182
CM-247	1.383E-02		3.751E-02	6.355E-02	3.415E-03	0.218
CF-249	3.826E-03		3.815E-02	6.382E-02	3.449E-03	0.060
CF-251	3.375E-02		1.222E-01	2.009E-01	1.094E-02	0.168

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201873070          *
* Acquisition date :  9-JUL-2009 08:36:12 Detector SN#    :                 *
* Detector ID      : GAM11                Sensitivity     : 5.000          *
* Geometry         : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.66     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 25-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID        : G1201873070          Analyst initials: MXR1           *
* Batch Number     : 881931               Sample Quantity : 1.2546E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.266E+01	2.773E+00	2.149E-01	1.415E+00
CD-109	2.504E+00	7.773E-01	5.530E-01	3.966E-01
SN-126	3.711E-01	9.818E-02	5.465E-02	5.009E-02
TL-208	4.845E-01	7.834E-02	2.840E-02	3.997E-02
BI-211	3.341E+00	4.440E-01	1.455E-01	2.265E-01
PB-212	1.351E+00	1.436E-01	4.629E-02	7.326E-02
PO-212	1.351E+00	1.436E-01	4.629E-02	7.326E-02
BI-214	1.071E+00	1.655E-01	5.563E-02	8.443E-02
PB-214	1.162E+00	1.655E-01	4.774E-02	8.443E-02
PO-214	1.162E+00	1.655E-01	4.774E-02	8.443E-02
PO-216	1.351E+00	1.436E-01	4.629E-02	7.326E-02
PO-218	1.162E+00	1.655E-01	4.774E-02	8.443E-02
RA-224	3.482E+00	1.250E+00	5.266E-01	6.379E-01
RA-226	1.071E+00	1.655E-01	5.563E-02	8.443E-02
AC-228	1.224E+00	2.823E-01	1.191E-01	1.440E-01
RA-228	1.224E+00	2.823E-01	1.191E-01	1.440E-01
TH-228	1.351E+00	1.436E-01	4.629E-02	7.326E-02
TH-230	1.071E+00	1.655E-01	5.563E-02	8.443E-02
TH-232	1.224E+00	2.823E-01	1.191E-01	1.440E-01
TH-234	2.214E+00	1.488E+00	9.230E-01	7.594E-01
U-234	1.071E+00	1.655E-01	5.563E-02	8.443E-02
U-235	1.866E-01	3.618E-01	1.670E-01	1.846E-01
NP-237	1.090E+00	3.629E-01	1.618E-01	1.852E-01
U-238	2.214E+00	1.488E+00	9.230E-01	7.594E-01
AM-243	4.284E-01	8.092E-02	4.016E-02	4.129E-02
ANH-511	1.380E-01	6.829E-02	2.302E-02	3.484E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.576E-01	3.056E-01	2.517E-01	1.559E-01 NOT IDENT.

NA-22	-1.415E-02	4.693E-02	3.799E-02	2.394E-02	NOT IDENT.
NA-24	-9.176E+04	1.654E+05	0.000E+00	8.439E+04	SHORT HLIF
AL-26	3.332E-03	2.224E-02	1.935E-02	1.134E-02	NOT IDENT.
TI-44	1.963E-01	4.220E-02	3.268E-02	2.153E-02	NOT IDENT.
SC-46	-1.814E-04	3.733E-02	3.195E-02	1.905E-02	FAIL ABUN
V-48	-4.293E-03	6.466E-02	5.462E-02	3.299E-02	NOT IDENT.
CR-51	1.827E-01	3.548E-01	2.922E-01	1.810E-01	NOT IDENT.
MN-52	-1.269E-01	1.782E-01	1.300E-01	9.089E-02	FAIL ABUN
MN-54	-1.561E-02	3.705E-02	3.084E-02	1.890E-02	NOT IDENT.
CO-56	3.360E-03	3.632E-02	3.144E-02	1.853E-02	FAIL ABUN
CO-57	-1.308E-02	2.387E-02	2.029E-02	1.218E-02	NOT IDENT.
CO-58	-1.763E-02	3.350E-02	2.748E-02	1.709E-02	NOT IDENT.
FE-59	-3.286E-02	9.641E-02	7.893E-02	4.919E-02	FAIL ABUN
CO-60	5.103E-03	4.081E-02	3.433E-02	2.082E-02	NOT IDENT.
ZN-65	-4.993E-02	1.069E-01	7.428E-02	5.456E-02	NOT IDENT.
GE-68	-8.634E-01	1.337E+00	1.065E+00	6.819E-01	NOT IDENT.
AS-73	-4.229E-01	5.892E-01	5.084E-01	3.006E-01	NOT IDENT.
AS-74	-2.167E-02	8.064E-02	6.639E-02	4.114E-02	NOT IDENT.
SE-75	2.699E-02	4.975E-02	3.761E-02	2.538E-02	NOT IDENT.
BR-77	-1.642E-01	7.188E+00	6.093E+00	3.667E+00	FAIL ABUN
SR-82	-3.198E-01	3.519E-01	2.818E-01	1.795E-01	NOT IDENT.
RB-83	7.665E-03	6.852E-02	5.861E-02	3.496E-02	NOT IDENT.
RB-84	4.069E-02	6.500E-02	5.851E-02	3.317E-02	NOT IDENT.
KR-85	8.332E+00	8.044E+00	6.436E+00	4.104E+00	NOT IDENT.
SR-85	4.216E-02	4.070E-02	3.257E-02	2.077E-02	NOT IDENT.
RB-86	-2.606E-01	7.861E-01	6.444E-01	4.011E-01	NOT IDENT.
Y-88	-4.315E-03	2.701E-02	2.190E-02	1.378E-02	NOT IDENT.
ZR-88	-4.245E-03	2.897E-02	2.482E-02	1.478E-02	NOT IDENT.
Y-91	-6.113E+00	1.919E+01	1.563E+01	9.788E+00	NOT IDENT.
NB-94	9.777E-03	3.327E-02	2.830E-02	1.698E-02	NOT IDENT.
NB-95	5.387E-02	4.336E-02	3.898E-02	2.212E-02	NOT IDENT.
NB-95M	7.866E-01	1.715E-01	1.443E-01	8.748E-02	NOT IDENT.
ZR-95	1.922E-02	6.828E-02	5.785E-02	3.484E-02	NOT IDENT.
NB-97	-2.090E+04	2.876E+04	0.000E+00	1.467E+04	SHORT HLIF
ZR-97	1.287E+06	6.404E+05	0.000E+00	3.267E+05	SHORT HLIF
MO-99	1.180E+00	8.016E+00	6.728E+00	4.090E+00	NOT IDENT.
TC-99M	-6.153E+14	1.290E+15	0.000E+00	6.582E+14	SHORT HLIF
RH-101	4.171E-02	3.206E-02	2.775E-02	1.636E-02	FAIL ABUN
RH-102	-2.080E-02	2.756E-02	2.229E-02	1.406E-02	NOT IDENT.
RU-103	6.784E-03	3.682E-02	3.175E-02	1.878E-02	FAIL ABUN
RH-106	-1.822E-01	3.021E-01	2.402E-01	1.541E-01	FAIL ABUN
RU-106	-1.822E-01	3.015E-01	2.402E-01	1.538E-01	FAIL ABUN
AG-108M	-2.249E-03	3.040E-02	2.598E-02	1.551E-02	NOT IDENT.
AG-110M	-2.736E-02	3.537E-02	2.772E-02	1.805E-02	NOT IDENT.
IN-111	3.128E-01	8.510E-01	6.386E-01	4.342E-01	NOT IDENT.
IN-113M	-2.074E-02	4.199E-02	3.523E-02	2.143E-02	NOT IDENT.
SN-113	-2.074E-02	4.199E-02	3.523E-02	2.143E-02	NOT IDENT.
IN-114M	1.299E-01	1.837E-01	1.425E-01	9.370E-02	NOT IDENT.
CD-115	-2.229E+00	6.994E+00	5.793E+00	3.568E+00	NOT IDENT.
SN-117M	1.662E-02	5.041E-02	4.383E-02	2.572E-02	NOT IDENT.
SB-122	1.145E+00	1.455E+00	1.295E+00	7.426E-01	NOT IDENT.
I-123	3.523E+05	1.156E+06	0.000E+00	5.898E+05	SHORT HLIF
TE-123M	8.512E-03	2.793E-02	2.425E-02	1.425E-02	NOT IDENT.
I-124	5.147E-01	6.037E-01	4.752E-01	3.080E-01	NOT IDENT.
SB-124	7.395E-02	6.670E-02	6.638E-02	3.403E-02	FAIL ABUN
SB-125	4.226E-02	8.558E-02	7.580E-02	4.366E-02	FAIL ABUN
TE-125M	-6.013E+00	8.534E+00	7.241E+00	4.354E+00	NOT IDENT.
I-126	-1.306E-01	1.717E-01	1.346E-01	8.759E-02	NOT IDENT.
SB-126	6.378E-02	1.342E-01	1.097E-01	6.847E-02	FAIL ABUN
SB-127	3.891E-01	1.022E+00	8.779E-01	5.213E-01	NOT IDENT.
XE-127	-4.291E-02	4.585E-02	3.572E-02	2.339E-02	FAIL ABUN
I-131	1.449E-02	9.445E-02	8.269E-02	4.819E-02	NOT IDENT.
TE-132	-1.990E-01	5.148E-01	4.251E-01	2.627E-01	NOT IDENT.
BA-133	-1.406E-03	4.266E-02	3.214E-02	2.177E-02	FAIL ABUN
I-133	3.120E+02	2.120E+03	0.000E+00	1.082E+03	SHORT HLIF
CS-134	6.318E-02	4.524E-02	4.261E-02	2.308E-02	NOT IDENT.
CS-135	2.581E-01	1.920E-01	1.508E-01	9.798E-02	NOT IDENT.
I-135	2.488E+13	2.563E+14	0.000E+00	1.307E+14	SHORT HLIF
CS-136	8.441E-02	1.031E-01	9.299E-02	5.260E-02	FAIL ABUN
BA-137M	3.354E-02	3.637E-02	3.236E-02	1.856E-02	NOT IDENT.
CS-137	3.546E-02	3.845E-02	3.421E-02	1.962E-02	NOT IDENT.
CE-139	3.330E-03	2.852E-02	2.454E-02	1.455E-02	NOT IDENT.
BA-140	5.998E-02	2.160E-01	1.862E-01	1.102E-01	NOT IDENT.
LA-140	-8.414E-02	6.722E-02	4.470E-02	3.430E-02	NOT IDENT.
CE-141	3.443E-02	6.511E-02	5.055E-02	3.322E-02	NOT IDENT.
CE-143	5.375E+02	1.479E+02	0.000E+00	7.547E+01	SHORT HLIF
CE-144	-1.116E-02	2.242E-01	1.696E-01	1.144E-01	NOT IDENT.
PM-144	-1.524E-02	3.325E-02	2.662E-02	1.696E-02	NOT IDENT.

PR-144	-1.032E+00	2.252E+00	1.803E+00	1.149E+00	NOT IDENT.
PM-146	2.502E-02	3.906E-02	3.485E-02	1.993E-02	NOT IDENT.
ND-147	-1.824E-01	5.039E-01	4.155E-01	2.571E-01	FAIL ABUN
PM-149	2.539E+01	5.788E+01	5.185E+01	2.953E+01	NOT IDENT.
EU-152	4.934E-02	1.022E-01	8.023E-02	5.213E-02	FAIL ABUN
GD-153	-5.330E-03	8.151E-02	6.221E-02	4.159E-02	FAIL ABUN
EU-154	-3.848E-02	1.313E-01	1.064E-01	6.698E-02	NOT IDENT.
EU-155	1.117E-01	1.045E-01	9.445E-02	5.333E-02	FAIL ABUN
TB-160	-1.992E-02	1.291E-01	1.091E-01	6.585E-02	FAIL ABUN
HO-166M	7.009E-02	5.673E-02	5.176E-02	2.895E-02	FAIL ABUN
TM-171	-1.863E+01	2.839E+01	2.004E+01	1.448E+01	NOT IDENT.
LU-176	-1.219E-02	2.226E-02	1.893E-02	1.136E-02	FAIL ABUN
LU-177	2.953E+00	1.373E+00	8.628E-01	7.007E-01	FAIL ABUN
LU-177M	-2.036E-01	1.680E-01	1.337E-01	8.573E-02	FAIL ABUN
HF-181	2.746E-03	4.183E-02	3.584E-02	2.134E-02	NOT IDENT.
W-181	-2.998E-02	3.306E-01	2.576E-01	1.687E-01	NOT IDENT.
TA-182	1.258E-01	2.070E-01	1.809E-01	1.056E-01	FAIL ABUN
RE-183	1.862E-02	1.060E-01	9.148E-02	5.406E-02	FAIL ABUN
RE-184	-1.269E-01	2.246E-01	1.824E-01	1.146E-01	NOT IDENT.
OS-185	-6.817E-03	3.971E-02	3.274E-02	2.026E-02	NOT IDENT.
RE-188	1.161E-02	1.643E-01	1.415E-01	8.381E-02	NOT IDENT.
W-188	-6.750E-01	7.609E+00	5.791E+00	3.882E+00	FAIL ABUN
IR-192	1.097E-03	3.145E-02	2.756E-02	1.605E-02	FAIL ABUN
AU-195	2.054E-01	2.328E-01	1.855E-01	1.188E-01	FAIL ABUN
TL-200	-7.708E+01	1.900E+02	0.000E+00	9.691E+01	SHORT HLIF
TL-201	2.954E+00	5.046E+00	4.421E+00	2.575E+00	NOT IDENT.
TL-202	4.174E-02	6.123E-02	5.474E-02	3.124E-02	NOT IDENT.
HG-203	2.710E-02	4.355E-02	3.426E-02	2.222E-02	FAIL ABUN
BI-207	6.754E-03	5.143E-02	4.396E-02	2.624E-02	FAIL ABUN
TL-207	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
PO-209	7.048E+00	6.625E+00	6.177E+00	3.380E+00	NOT IDENT.
BI-210	1.210E+00	2.215E+00	2.007E+00	1.130E+00	NOT IDENT.
PB-210	1.210E+00	2.215E+00	2.007E+00	1.130E+00	NOT IDENT.
PO-210	1.210E+00	2.214E+00	2.007E+00	1.130E+00	NOT IDENT.
PB-211	-6.519E-01	1.040E+00	7.978E-01	5.305E-01	NOT IDENT.
BI-212	9.922E-01	4.022E-01	3.066E-01	2.052E-01	FAIL ABUN
PO-215	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
RN-219	1.474E-01	4.098E-01	3.602E-01	2.091E-01	FAIL ABUN
RN-220	1.033E+01	2.354E+01	2.058E+01	1.201E+01	NOT IDENT.
RA-223	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
AC-227	1.114E-01	3.723E-01	3.161E-01	1.899E-01	NOT IDENT.
TH-227	1.114E-01	3.724E-01	3.161E-01	1.900E-01	NOT IDENT.
TH-229	-2.191E-01	4.756E-01	3.957E-01	2.427E-01	FAIL ABUN
PA-231	-1.733E-01	1.531E+00	1.266E+00	7.809E-01	NOT IDENT.
TH-231	2.990E-01	6.669E-01	5.232E-01	3.403E-01	FAIL ABUN
U-231	-6.152E-01	8.954E-01	6.664E-01	4.569E-01	FAIL ABUN
PA-233	-1.306E-02	5.732E-02	4.957E-02	2.925E-02	FAIL ABUN
PA-234	-9.030E-02	2.838E-01	2.345E-01	1.448E-01	FAIL ABUN
PA-234M	5.944E+00	6.569E+00	5.982E+00	3.351E+00	NOT IDENT.
NP-236	5.222E-02	7.886E-02	6.935E-02	4.024E-02	NOT IDENT.
NP-239	5.517E-02	1.785E-01	1.571E-01	9.106E-02	FAIL ABUN
AM-241	1.295E-01	1.354E-01	1.109E-01	6.908E-02	NOT IDENT.
CM-243	2.890E-02	9.316E-02	8.238E-02	4.753E-02	FAIL ABUN
CM-247	1.383E-02	3.676E-02	3.236E-02	1.875E-02	FAIL ABUN
CF-249	3.826E-03	3.739E-02	3.252E-02	1.907E-02	NOT IDENT.
CF-251	3.375E-02	1.198E-01	1.035E-01	6.112E-02	NOT IDENT.

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*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                           CHARLESTON ,SC 29417                        *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT              *
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ENERGY	MDA COUNTS
46.50	300.8419
46.50	300.8419
46.50	300.8419
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49.72	364.3700
51.35	305.2627
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52.97	351.7958
53.15	357.3872
53.44	364.8776
54.07	375.3334
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56.28	397.8381
57.37	0.0000
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57.53	325.3006
57.60	347.4346
57.98	347.8926
57.98	347.8926
59.32	394.4312
59.32	394.4312
59.40	394.4809
59.54	394.5681
59.72	406.5062
60.01	406.6917
61.10	450.3455
61.14	488.8921
61.30	489.0139
63.00	468.0088
63.29	468.2150
63.29	468.2150
63.58	463.9610
64.28	467.4295
65.12	456.0958
65.20	456.1499
65.20	456.1499
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66.72	493.0362
66.83	493.1188
66.91	490.6864
67.20	473.4518
67.20	473.4518
67.75	486.3019
67.85	486.3733
68.90	488.9907
68.90	488.9907
69.30	494.8973
69.67	498.1642
70.82	492.9689
70.82	492.9689
70.83	492.9769
72.80	470.0472
72.87	470.0929
72.87	470.0929
74.67	471.2693
74.81	471.3607
74.81	471.3607
74.81	471.3607
74.81	471.3607
74.81	471.3607
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74.97	471.4635
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75.70	471.9355
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77.11	447.2570
77.11	447.2570

77.11	447.2570
77.11	447.2570
77.11	447.2570
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79.80	384.2010
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80.57	335.0905
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81.07	373.4142
81.07	373.4142
81.07	373.4142
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83.78	376.6420
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83.78	376.6420
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84.40	376.9426
84.90	377.1830
85.43	377.4370
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86.50	377.9496
86.54	377.9676
86.59	377.9916
86.72	378.0548
86.79	378.0863
86.94	378.1585
87.30	378.3298
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87.57	378.4576
87.88	378.6049
88.03	378.6755
88.36	378.8303
88.47	378.8829
89.95	379.5773
91.11	380.1184
92.29	380.6640
92.38	380.7061
92.38	380.7061
93.35	381.1524
94.00	381.4500
94.67	344.1590
94.67	344.1610
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94.90	390.7769
94.90	390.7769
94.90	390.7769
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95.87	406.7524
96.73	386.9637
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98.44	345.6948
98.88	327.1752
99.55	319.6343
99.55	319.6343
99.86	345.3726
100.00	345.4280
100.10	345.4699
103.18	402.1840
103.76	372.0925
105.00	359.8642
105.31	355.0844
108.00	376.8052
109.28	369.4525
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111.00	360.2743

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115.19	343.0540
116.30	315.6612
117.00	322.8465
117.00	322.8465
117.66	327.0459
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121.62	354.3378
121.78	337.4236
122.06	337.5204
122.32	306.6451
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122.32	306.6451
122.32	306.6451
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136.48	337.6185
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140.51	0.0000
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142.65	315.8064
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144.24	300.3544
144.24	300.3544
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145.44	307.2212
147.16	301.1563
152.43	311.4215
152.70	310.4675
153.22	311.6389
154.21	306.7623
154.21	306.7623
154.21	306.7623
154.21	306.7623
155.03	327.5881
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162.64	329.7474
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163.89	331.1360
165.85	302.5714
167.43	286.3129
171.28	296.6278
171.86	291.5460
172.10	291.6035
176.55	273.7800
176.60	273.7899
181.06	289.7188
184.41	293.8629
185.71	282.1169
186.00	282.1821
190.27	237.5215
192.34	270.1835
193.63	275.3397
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201.83	287.7355
202.84	299.7260
205.31	226.4899
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208.81	275.2344

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209.75	264.6613
210.97	248.0959
215.65	252.0966
216.55	255.1397
218.09	260.8284
222.10	246.3675
223.80	248.8317
226.40	251.4543
227.00	262.4482
227.08	264.6411
227.20	264.6633
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228.18	253.9407
228.18	253.9407
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236.00	268.2151
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238.63	251.3441
238.63	251.3441
238.63	251.3441
239.00	251.4052
240.98	251.7354
241.98	251.9014
241.98	251.9014
241.98	251.9014
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248.90	212.1548
249.79	223.3324
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252.85	214.9094
252.85	214.9094
254.15	0.0000
256.20	199.8248
256.20	199.8248
260.50	222.6288
260.90	232.7077
262.80	211.8018
264.65	194.6353
268.24	221.9103
268.79	227.3567
269.46	225.6588
269.46	225.6588
269.46	225.6588
269.46	225.6588
271.23	183.7718
273.65	184.0421
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277.60	194.3789
277.60	194.3789
278.00	175.5238
278.60	172.5842
279.20	177.1512
279.53	181.6895
280.46	174.2785
281.68	183.4269
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284.30	194.7552
285.00	189.8126
285.90	178.1585
286.10	175.4644
286.10	175.4644
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290.80	184.4123
291.72	186.0240
293.26	0.0000
293.70	177.1544
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295.21	250.0479
295.21	250.0479
295.96	242.5781

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297.23	174.4794
298.57	183.7230
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299.80	174.7367
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300.09	166.7321
300.09	166.7321
300.10	166.7321
300.12	166.7344
301.29	166.2666
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303.76	199.1911
303.91	199.2071
304.40	193.7787
304.40	193.7787
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306.84	166.5860
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319.02	155.6305
319.41	161.8081
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323.87	140.1306
323.87	140.1306
323.87	140.1306
323.87	140.1306
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334.20	120.7784
334.30	120.7848
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338.28	142.7636
338.28	142.7636
338.28	142.7636
338.32	142.7655
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338.32	142.7655
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340.57	163.1311
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351.92	106.2694
351.92	106.2694
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367.43	133.2495
367.94	0.0000
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387.95	130.7721
388.63	122.2203
391.69	142.4794
391.69	142.4794
392.90	136.8206
398.62	144.8656
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401.81	139.3182
402.60	139.3696
404.84	169.3420
410.95	127.3658
411.60	141.8823
413.65	150.7099
414.70	112.1201
415.30	111.1844
415.76	110.2413
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423.70	125.1955
427.08	112.7502
427.89	106.9573
432.53	127.6403
433.93	112.1194
439.47	104.5758
439.56	104.5797
439.89	100.6853
443.98	116.5334
444.90	110.7019
445.03	110.7088
445.03	110.7088
445.03	110.7088
445.03	110.7088
453.90	90.4805
463.38	88.8728
468.07	107.1881
473.00	92.2076
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475.35	122.0706
476.78	115.1915
477.59	116.2245
477.96	113.2611
482.03	114.4469
484.57	97.6303
487.03	106.7048
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497.08	92.1213
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510.53	0.0000
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511.00	100.6891
511.85	100.7239
511.85	100.7239
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513.99	109.2088
520.41	104.0939
520.65	104.1039
527.90	98.3167
528.96	0.0000
529.64	98.3830
529.87	0.0000
531.02	101.4795
537.32	77.3100
543.00	84.6130
546.56	0.0000
549.76	75.6314
552.65	100.2682
555.20	72.7126
563.23	82.1738
563.90	86.3051
568.70	108.0710
569.32	103.9787
569.50	98.8383
569.67	98.8430
573.80	88.9390
574.00	86.3672
574.64	79.5724
578.91	63.7067
579.30	0.0000
583.14	87.9468
585.48	84.5697
591.81	76.8039
592.07	75.7731
593.00	79.9514
595.88	86.2685
600.56	88.4946
602.52	0.0000
602.71	86.8245
602.71	86.8245
603.60	92.0642
604.41	105.9905
604.70	106.0004
609.31	95.0324
609.31	95.0324
609.31	95.0324

609.31	95.0324
610.33	87.0565
612.46	76.6670
614.37	83.6934
618.01	79.6089
621.84	88.1036
621.84	88.1036
631.29	87.3385
633.02	77.9132
633.10	77.9150
634.78	89.5488
635.90	99.0672
636.97	86.4523
645.85	87.7680
646.12	77.2007
656.30	79.5850
657.75	100.8563
657.90	0.0000
661.65	80.7890
661.65	80.7890
664.57	0.0000
666.33	102.2063
666.33	102.2063
675.00	73.6679
677.61	73.7303
685.20	68.5547
692.80	84.8286
695.00	80.5902
696.49	88.1540
696.49	88.1540
697.00	83.8671
697.49	82.8051
698.33	83.9014
698.50	81.7557
699.00	81.7687
702.63	82.9385
706.10	89.4986
706.58	0.0000
706.67	91.6718
709.31	92.8279
711.68	57.2506
713.82	68.0972
717.42	89.8167
720.50	67.6971
721.93	0.0000
722.20	63.2175
722.78	63.2281
722.78	63.2281
722.89	63.2310
722.95	63.2324
723.30	59.6259
724.18	84.9446
727.18	79.5960
733.00	50.7420
735.90	61.6707
739.58	66.4596
742.81	87.2461
744.21	79.6459
747.13	72.0731
751.79	83.1083
752.31	83.1213
753.82	67.8413
755.35	71.1556
756.15	68.9832
756.87	67.9033
763.93	102.0684
765.79	75.7703
766.41	76.8821
766.84	81.2862
768.36	80.2234
768.36	80.2234
768.36	80.2234
768.36	80.2234
776.49	85.3730
778.00	82.6556
778.57	74.4016
778.89	74.4082
783.80	62.5561

785.46	77.3127
792.07	75.6171
795.84	61.8515
796.30	60.9364
801.93	70.2836
805.60	58.3217
810.29	63.9617
810.76	61.1888
815.85	54.7783
817.79	47.3767
818.51	46.4569
819.60	50.1888
826.30	54.9392
828.27	0.0000
831.60	64.3464
831.96	69.0167
834.83	85.8738
836.80	0.0000
846.75	61.8079
848.13	67.4531
856.28	0.0000
856.80	75.6619
860.37	63.9188
867.32	50.0474
867.82	50.8612
871.10	65.9896
873.19	54.7078
874.81	45.2959
875.33	0.0000
876.40	52.8669
879.36	60.4674
880.27	66.1534
880.51	59.5419
881.50	53.8851
883.24	63.3673
884.67	62.4457
889.25	61.5749
896.60	41.7629
898.02	49.3742
899.00	59.8341
903.28	73.5305
911.07	79.0790
911.07	79.0790
911.07	79.0790
919.63	67.7961
920.93	69.7296
925.00	50.2003
925.24	53.0723
926.50	57.3950
934.06	56.5477
934.06	56.5477
934.06	56.5477
934.06	56.5477
935.52	56.5693
937.48	60.8451
944.10	61.1130
946.00	60.5660
949.00	55.8016
962.29	69.5024
964.01	86.0869
966.15	60.8736
968.20	60.9044
969.11	60.9185
969.11	60.9185
969.11	60.9185
977.42	49.9980
980.50	59.1508
983.50	58.2251
989.30	52.4773
996.32	61.3286
1001.03	48.7295
1001.68	49.7113
1004.76	77.0616
1021.30	0.0000
1024.50	0.0000
1034.80	60.9177
1037.82	62.9271
1038.57	57.0371

1038.76	0.0000
1045.16	65.0063
1046.59	59.1162
1048.07	54.2078
1050.47	59.1699
1050.47	59.1699
1063.62	57.3746
1076.63	69.4531
1077.35	77.4033
1085.78	78.5468
1099.22	75.7959
1112.02	63.2856
1112.84	65.3599
1115.52	73.7863
1120.29	66.1370
1120.29	66.1370
1120.29	66.1370
1120.29	66.1370
1120.51	66.1396
1121.28	60.1367
1124.00	0.0000
1129.67	73.3943
1131.51	0.0000
1147.95	0.0000
1167.94	87.0848
1173.22	63.8690
1175.09	51.7242
1177.93	91.3330
1189.05	72.2249
1204.90	78.5916
1205.75	0.0000
1213.00	71.5694
1221.42	73.7461
1230.97	73.8926
1235.34	79.2428
1236.41	0.0000
1238.11	80.1677
1238.11	80.1677
1238.11	80.1677
1238.11	80.1677
1238.25	80.1709
1246.25	54.7127
1260.41	0.0000
1271.85	51.7476
1274.45	64.1999
1274.54	64.2024
1291.56	48.8359
1298.22	0.0000
1312.09	40.6901
1325.50	42.8902
1325.50	42.8902
1332.49	41.9027
1333.61	36.6720
1360.21	20.0112
1362.66	0.0000
1365.15	25.3008
1368.21	33.7552
1368.53	0.0000
1376.25	27.1666
1377.67	31.7029
1377.67	31.7029
1377.67	31.7029
1377.67	31.7029
1384.27	41.7196
1394.10	32.8618
1395.20	28.6282
1407.95	25.5078
1434.06	27.7689
1436.60	19.2334
1457.56	0.0000
1460.81	17.1732
1489.15	14.7958
1509.49	19.4897
1596.49	26.3838
1620.62	13.2461
1678.03	0.0000
1691.02	8.6155
1691.02	8.6155

1706.46	0.0000
1750.46	0.0000
1764.49	13.5610
1764.49	13.5610
1764.49	13.5610
1764.49	13.5610
1770.23	10.1799
1771.40	61.0906
1791.20	0.0000
1808.65	7.8030
1836.01	10.7744

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201873070

Total Uranium Activity	6.6737E+00	ug/g
Total Uranium Counting Unc.	4.4310E+00	ug/g
Total Uranium Tpu	2.2607E-06	ug/g
Total Uranium Mda	2.7471E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID   : G1201873070     *
*   ANALYST       : MXR1                      DETECTOR    : GAM11           *
*   SAMPLE DATE   : 25-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:36:12.08    SAMPLE ALQT:  125.460 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.303E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.519E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.886E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.890E+00
```

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 09:51:53.32

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:51:19.
Sample ID         : G1201873071          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM07                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.46  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881931               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.50	4585	1430	1.01	118.60	113	12	1.27E+00	2.2	
2	3	74.93*	271	564	1.16	149.47	146	14	7.54E-02	15.5	1.84E+00
3	3	77.20*	403	594	1.26	154.01	146	14	1.12E-01	12.0	
4	2	88.04*	2521	413	1.05	175.68	171	11	7.00E-01	2.4	5.39E+00
5	2	89.71*	72	359	1.05	179.02	171	11	1.99E-02	70.4	
6	0	92.96*	90	358	1.55	185.53	182	7	2.49E-02	37.6	
7	0	122.05	459	358	0.94	243.71	240	9	1.27E-01	8.8	
8	0	165.66	80	291	1.09	330.94	328	8	2.22E-02	38.5	
9	0	186.00*	164	365	1.41	371.61	366	12	4.56E-02	24.9	
10	0	209.69	76	324	1.23	419.00	414	10	2.11E-02	45.9	
11	0	238.62*	629	323	1.04	476.87	473	8	1.75E-01	6.4	
12	0	277.42	50	190	1.10	554.48	551	7	1.39E-02	48.1	
13	0	295.44*	176	254	1.26	590.52	585	10	4.90E-02	18.6	
14	0	338.36	143	210	1.04	676.37	672	10	3.97E-02	20.7	
15	0	352.02*	272	220	1.11	703.70	699	10	7.57E-02	11.9	
16	0	510.45*	73	141	1.55	1020.63	1014	12	2.04E-02	36.8	
17	0	582.98*	207	148	1.29	1165.72	1161	13	5.74E-02	14.0	
18	0	609.24*	193	100	1.25	1218.27	1213	10	5.35E-02	12.3	
19	0	661.62	2363	140	1.50	1323.05	1317	13	6.56E-01	2.3	
20	0	726.96*	61	95	3.15	1453.77	1449	11	1.69E-02	33.6	
21	0	911.03*	184	133	1.55	1822.07	1815	13	5.10E-02	15.0	
22	0	968.67*	94	108	1.29	1937.38	1932	11	2.60E-02	24.1	
23	0	1172.95	2061	77	1.88	2346.16	2337	19	5.73E-01	2.4	
24	0	1332.16	1867	17	1.71	2664.77	2656	17	5.19E-01	2.4	
25	0	1764.24*	30	12	1.44	3529.54	3522	16	8.34E-03	32.7	
26	0	1836.27	22	3	1.41	3673.71	3666	14	6.07E-03	27.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 9-JUL-2009 09:51:56

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 2-JUL-2009 00:00:00 Acquisition date : 9-JUL-2009 08:51:19
Sample ID : G1201873071 Sample quantity : 151.73 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA7 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.46 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	3.682E-01	7.337E-02	6.289E-02	5.931E-03	5.855
		136.48		2.672E-01	3.385E-01	5.559E-01	5.084E-02	0.481
CO-60	+	1173.22		7.330E+00	5.564E-01	1.307E-01	7.630E-03	56.073
	+	1332.49	*	7.374E+00	5.551E-01	9.002E-02	5.266E-03	81.914
CD-109	+	88.03	*	4.772E+01	4.292E+00	2.102E+00	1.606E-01	22.705
SN-126		64.28		-2.176E-01	6.695E-01	9.784E-01	1.388E-01	-0.222
	+	86.94		1.973E+01	8.174E+00	9.134E-01	3.759E-01	21.597
	+	87.57	*	4.745E+00	4.268E-01	2.094E-01	1.593E-02	22.659
BA-137M	+	661.65	*	5.633E+00	4.417E-01	1.238E-01	7.877E-03	45.485
CS-137	+	661.65	*	5.954E+00	4.680E-01	1.309E-01	8.356E-03	45.485
CE-139	+	165.85	*	7.764E-02	6.006E-02	7.365E-02	4.823E-03	1.054
TL-208	+	277.35		7.734E-01	7.485E-01	1.075E+00	1.185E-01	0.720
	+	510.84		5.827E-01	4.330E-01	4.387E-01	4.486E-02	1.328
	+	583.14	*	4.711E-01	1.356E-01	1.124E-01	7.890E-03	4.193
		860.37		5.862E-01	6.850E-01	1.175E+00	9.983E-02	0.499
BI-211		72.87		3.643E+00	4.667E+00	7.016E+00	4.793E-01	0.519
	+	351.07	*	2.663E+00	6.580E-01	6.124E-01	4.018E-02	4.348
PB-212	+	74.81		1.970E+00	6.535E-01	7.756E-01	9.009E-02	2.540
	+	77.11		1.696E+00	4.240E-01	4.499E-01	3.148E-02	3.769
	+	87.30		2.195E+01	2.952E+00	9.697E-01	1.217E-01	22.632
	+	238.63	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.09		1.163E+00	1.487E+00	2.252E+00	1.968E-01	0.517
PO-212	+	74.81		1.970E+00	6.535E-01	7.756E-01	9.009E-02	2.540
	+	77.11		1.696E+00	4.240E-01	4.499E-01	3.148E-02	3.769
	+	87.30		2.195E+01	2.952E+00	9.697E-01	1.217E-01	22.632
		115.19		-6.885E-01	5.271E+00	8.399E+00	7.506E-01	-0.082
	+	238.63	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.09		1.163E+00	1.487E+00	2.252E+00	1.968E-01	0.517
PB-214	+	74.81		3.394E+00	1.109E+00	1.336E+00	1.353E-01	2.540
	+	77.11		2.907E+00	7.599E-01	7.713E-01	7.979E-02	3.769
	+	87.30		3.759E+01	4.453E+00	1.661E+00	1.797E-01	22.632
		241.98		1.666E+00	7.002E-01	1.132E+00	9.906E-02	1.472
	+	295.21		1.013E+00	3.887E-01	3.751E-01	3.387E-02	2.701
	+	351.92	*	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.394E+00	1.109E+00	1.336E+00	1.353E-01	2.540
	+	77.11		2.907E+00	7.599E-01	7.713E-01	7.979E-02	3.769
	+	87.30		3.759E+01	4.453E+00	1.661E+00	1.797E-01	22.632
		241.98		1.666E+00	7.002E-01	1.132E+00	9.906E-02	1.472
	+	295.21		1.013E+00	3.887E-01	3.751E-01	3.387E-02	2.701
	+	351.92	*	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
PO-216	+	74.81		1.970E+00	6.535E-01	7.756E-01	9.009E-02	2.540
	+	77.11		1.696E+00	4.240E-01	4.499E-01	3.148E-02	3.769
	+	87.30		2.195E+01	2.952E+00	9.697E-01	1.217E-01	22.632
	+	238.63	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.09		1.163E+00	1.487E+00	2.252E+00	1.968E-01	0.517
PO-218	+	74.81		3.394E+00	1.109E+00	1.336E+00	1.353E-01	2.540
	+	77.11		2.907E+00	7.599E-01	7.713E-01	7.979E-02	3.769
	+	87.30		3.759E+01	4.453E+00	1.661E+00	1.797E-01	22.632
		241.98		1.666E+00	7.002E-01	1.132E+00	9.906E-02	1.472
	+	295.21		1.013E+00	3.887E-01	3.751E-01	3.387E-02	2.701
	+	351.92	*	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
AC-228	+	338.32		1.536E+00	8.923E-01	6.779E-01	2.767E-01	2.266
	+	911.07	*	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
	+	969.11		1.693E+00	9.046E-01	8.852E-01	2.036E-01	1.912
RA-228	+	338.32		1.536E+00	8.923E-01	6.779E-01	2.767E-01	2.266
	+	911.07	*	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
	+	969.11		1.693E+00	9.046E-01	8.852E-01	2.036E-01	1.912
TH-228		84.40		2.855E+00	4.485E+00	6.664E+00	8.244E-01	0.428
	+	238.60	*	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
		300.10		1.165E+00	1.635E+00	2.252E+00	1.329E+00	0.517
TH-232	+	338.32		1.536E+00	6.418E-01	6.779E-01	4.139E-02	2.266
	+	911.07	*	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
	+	969.11		1.693E+00	9.046E-01	8.852E-01	2.036E-01	1.912
AM-241	+	59.54	*	1.353E+01	1.192E+00	3.818E-01	2.899E-02	35.426
AM-243	+	74.67	*	3.194E-01	1.017E-01	1.259E-01	8.682E-03	2.536
	+	86.72		5.225E+02	4.699E+01	2.422E+01	1.829E+00	21.575
		117.66		3.305E-01	6.537E+00	9.346E+00	8.510E-01	0.035
		142.18		1.288E+01	2.671E+01	4.335E+01	3.524E+00	0.297
ANH-511	+	511.00	*	1.259E-01	9.293E-02	9.479E-02	5.616E-03	1.328

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.247E-01	6.608E-01	1.085E+00	7.297E-02	0.299
NA-22		1274.54	*	-8.096E-03	5.236E-02	8.442E-02	4.963E-03	-0.096
NA-24		1368.53	*	-1.036E-04	5.236E-02	Half-Life too short		
AL-26		1129.67		7.417E-01	3.193E+00	5.416E+00	3.421E-01	0.137
		1808.65	*	1.288E-02	3.861E-02	6.928E-02	3.801E-03	0.186
K-40		1460.81	*	5.196E-01	6.208E-01	1.152E+00	7.168E-02	0.451
TI-44		67.85		6.559E-02	5.960E-02	1.007E-01	6.768E-03	0.651
	+	78.38	*	3.128E-01	7.823E-02	9.767E-02	6.891E-03	3.203
SC-46		889.25	*	-7.621E-02	9.696E-02	1.485E-01	1.187E-02	-0.513

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1120.51		1.856E-01	9.812E-02	1.828E-01	1.172E-02	1.016
V-48		944.10		8.665E-01	1.751E+00	2.910E+00	2.275E-01	0.298
		983.50	*	1.783E-02	1.348E-01	2.186E-01	1.656E-02	0.082
		1312.09		-3.195E-02	7.611E-02	1.174E-01	6.878E-03	-0.272
CR-51		320.08	*	2.993E-01	5.470E-01	9.213E-01	6.376E-02	0.325
MN-52		744.21		-9.880E-02	1.876E-01	2.959E-01	2.063E-02	-0.334
		848.13		-2.725E-01	6.235E+00	1.010E+01	7.793E-01	-0.027
		935.52		1.639E-01	2.574E-01	4.315E-01	3.395E-02	0.380
		1246.25		3.597E+00	2.860E+00	5.545E+00	3.252E-01	0.649
	+	1333.61		3.626E+02	2.730E+01	3.831E+01	2.241E+00	9.466
		1434.06	*	8.301E-02	1.197E-01	2.183E-01	1.282E-02	0.380
MN-54		834.83	*	4.738E-03	7.601E-02	1.243E-01	9.468E-03	0.038
CO-56		846.75	*	-5.056E-03	8.659E-02	1.402E-01	1.080E-02	-0.036
		977.42		-7.633E-01	7.193E+00	1.148E+01	8.741E-01	-0.066
		1037.82		5.973E-03	7.104E-01	1.191E+00	9.189E-02	0.005
		1175.09		2.810E+02	2.178E+01	3.236E+01	1.889E+00	8.682
		1238.25		8.100E-02	9.751E-02	1.762E-01	1.097E-02	0.460
		1360.21		-5.600E-01	1.176E+00	1.766E+00	1.035E-01	-0.317
		1771.40		-1.717E-01	3.619E-01	4.366E-01	2.426E-02	-0.393
CO-58		810.76	*	-7.497E-02	7.901E-02	1.193E-01	8.917E-03	-0.628
FE-59		142.65		2.202E+00	3.621E+00	5.923E+00	4.797E-01	0.372
		192.34		1.137E+00	1.361E+00	2.287E+00	2.802E-01	0.497
		1099.22	*	9.180E-02	1.861E-01	3.204E-01	2.406E-02	0.287
		1291.56		6.692E-02	1.413E-01	2.477E-01	1.850E-02	0.270
ZN-65		1115.52	*	-2.741E-01	2.000E-01	3.008E-01	1.947E-02	-0.911
GE-68		1077.35	*	-4.716E-01	2.887E+00	4.771E+00	3.258E-01	-0.099
AS-73		53.44	*	-7.070E-01	1.185E+00	1.927E+00	1.272E-01	-0.367
AS-74		595.88	*	-9.255E-02	1.296E-01	2.057E-01	1.280E-02	-0.450
		634.78		-6.066E-02	5.033E-01	8.280E-01	5.228E-02	-0.073
SE-75		66.05		-8.618E+00	5.872E+00	9.079E+00	8.099E-01	-0.949
		96.73		-4.633E-01	1.184E+00	1.665E+00	2.197E-01	-0.278
	+	121.11		1.931E+00	4.089E-01	5.177E-01	6.106E-02	3.730
		136.00		6.178E-02	6.150E-02	1.018E-01	8.740E-03	0.607
		198.60		3.840E-01	2.762E+00	4.641E+00	3.641E-01	0.083
		264.65	*	-8.727E-03	7.360E-02	1.212E-01	8.150E-03	-0.072
		279.53		1.416E-01	2.076E-01	3.138E-01	2.205E-02	0.451
		303.91		-4.460E+00	3.654E+00	5.586E+00	5.559E-01	-0.798
		400.65		7.135E-03	4.973E-01	8.043E-01	7.093E-02	0.009
BR-77	+	87.88		1.082E+03	9.733E+01	1.089E+02	8.314E+00	9.934
		200.40		-4.400E+00	2.713E+01	4.525E+01	3.019E+00	-0.097
	+	239.00		2.217E+01	3.211E+00	5.122E+00	3.443E-01	4.329
		249.79		6.986E+00	1.178E+01	2.008E+01	1.348E+00	0.348
		281.68		1.430E+00	1.871E+01	2.724E+01	1.798E+00	0.052
		297.23		1.386E+01	1.197E+01	1.841E+01	1.197E+00	0.753
		303.76		-4.049E+01	3.367E+01	5.177E+01	3.341E+00	-0.782
		439.47		-2.573E+01	3.362E+01	5.166E+01	2.878E+00	-0.498
		484.57		4.308E+00	4.932E+01	7.915E+01	4.595E+00	0.054
		520.65	*	1.078E+00	2.068E+00	3.579E+00	2.135E-01	0.301
		574.64		7.379E+00	4.082E+01	6.893E+01	4.246E+00	0.107

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		578.91		5.285E+00	1.887E+01	2.807E+01	1.733E+00	0.188
		585.48		1.249E+02	4.313E+01	7.439E+01	4.606E+00	1.679
		755.35		5.140E+01	3.731E+01	6.634E+01	4.679E+00	0.775
		817.79		1.659E+01	3.121E+01	5.271E+01	3.953E+00	0.315
SR-82		698.33		-1.531E+00	5.203E+01	8.558E+01	5.678E+00	-0.018
		776.49	*	7.426E-02	6.398E-01	1.055E+00	7.604E-02	0.070
		1395.20		3.687E+00	1.284E+01	2.195E+01	1.289E+00	0.168
RB-83		520.41	*	6.617E-02	1.225E-01	2.123E-01	1.266E-02	0.312
		529.64		8.491E-02	1.882E-01	3.243E-01	1.946E-02	0.262
		552.65		-7.131E-03	3.647E-01	6.098E-01	3.712E-02	-0.012
RB-84		881.50	*	-3.667E-02	1.532E-01	2.443E-01	1.940E-02	-0.150
KR-85		513.99	*	1.727E+01	1.382E+01	2.230E+01	1.324E+00	0.775
SR-85		513.99	*	8.162E-02	6.529E-02	1.054E-01	6.255E-03	0.775
RB-86		1076.63	*	-9.497E-01	1.392E+00	2.215E+00	1.514E-01	-0.429
Y-88		898.02		5.016E-02	1.080E-01	1.796E-01	1.455E-02	0.279
	+	1836.01	*	1.137E-01	6.377E-02	1.217E-01	6.629E-03	0.934
ZR-88		392.90	*	-3.081E-02	5.899E-02	9.266E-02	4.902E-03	-0.333
Y-91		1204.90	*	6.839E+00	2.269E+01	3.885E+01	2.274E+00	0.176
NB-94		702.63	*	-3.199E-02	6.382E-02	1.013E-01	6.753E-03	-0.316
		871.10		2.528E-04	8.364E-02	1.357E-01	1.068E-02	0.002
NB-95		765.79	*	4.730E-02	7.796E-02	1.328E-01	9.465E-03	0.356
NB-95M		235.69	*	1.443E-01	2.101E-01	3.196E-01	2.640E-02	0.451
ZR-95		724.18		9.030E-02	1.965E-01	2.919E-01	2.261E-02	0.309
		756.15	*	1.133E-01	1.403E-01	2.418E-01	1.959E-02	0.469
NB-97		657.90	*	1.689E-04	1.403E-01	Half-Life too short		
		1024.50		-2.623E-03	1.403E-01	Half-Life too short		
ZR-97		254.15		-4.919E-03	1.403E-01	Half-Life too short		
		355.39		9.816E-04	1.403E-01	Half-Life too short		
		507.63	*	1.458E-03	1.403E-01	Half-Life too short		
		602.52		5.141E-04	1.403E-01	Half-Life too short		
		1021.30		4.397E-03	1.403E-01	Half-Life too short		
		1147.95		2.985E-03	1.403E-01	Half-Life too short		
		1362.66		2.715E-03	1.403E-01	Half-Life too short		
		1750.46		3.236E-04	1.403E-01	Half-Life too short		
MO-99		140.51		-3.040E+00	5.826E+00	8.928E+00	2.462E+00	-0.341
		181.06		6.190E-01	4.065E+00	6.105E+00	1.064E+00	0.101
		366.43		-8.329E+00	2.361E+01	3.761E+01	2.150E+00	-0.221
		739.58	*	2.758E+00	3.359E+00	5.791E+00	8.279E-01	0.476
		778.00		8.184E-01	9.960E+00	1.639E+01	1.183E+00	0.050
TC-99M		140.51	*	-1.488E+01	9.960E+00	Half-Life too short		
RH-101		127.23		-4.636E-03	5.332E-02	8.058E-02	7.320E-03	-0.058
		198.01	*	3.477E-03	5.284E-02	8.856E-02	5.902E-03	0.039
		325.23		-3.972E-01	4.257E-01	6.633E-01	4.149E-02	-0.599
RH-102		418.52		4.878E-01	5.773E-01	9.741E-01	5.309E-02	0.501
		475.06	*	3.956E-02	6.577E-02	1.087E-01	6.258E-03	0.364
		631.29		-1.799E-03	1.073E-01	1.779E-01	1.122E-02	-0.010
		697.49		8.633E-02	1.451E-01	2.488E-01	1.649E-02	0.347
		766.84		2.000E-01	2.186E-01	3.786E-01	2.701E-02	0.528
		1046.59		-2.754E-01	2.622E-01	4.054E-01	2.878E-02	-0.679

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1112.84		9.768E-02	5.006E-01	8.452E-01	5.484E-02	0.116
RU-103		497.08	*	-3.235E-02	6.980E-02	1.144E-01	1.449E-02	-0.283
	+	610.33		7.822E+00	2.275E+00	3.234E+00	5.044E-01	2.419
RH-106	+	511.85		6.196E-01	4.574E-01	6.004E-01	3.559E-02	1.032
		621.84	*	-2.528E-01	6.136E-01	9.752E-01	1.169E-01	-0.259
		1050.47		1.164E-02	5.137E+00	8.601E+00	6.077E-01	0.001
RU-106	+	511.85		6.196E-01	4.574E-01	6.004E-01	3.559E-02	1.032
		621.84	*	-2.528E-01	6.130E-01	9.752E-01	6.130E-02	-0.259
		1050.47		1.164E-02	5.137E+00	8.601E+00	6.077E-01	0.001
AG-108M		433.93	*	7.341E-02	7.131E-02	1.209E-01	7.325E-03	0.607
		614.37		-1.680E-02	8.475E-02	1.201E-01	8.079E-03	-0.140
		722.95		4.224E-02	9.252E-02	1.377E-01	9.964E-03	0.307
AG-110M		657.75	*	1.081E-01	8.647E-02	1.365E-01	9.146E-03	0.792
		677.61		5.684E-01	5.789E-01	1.019E+00	6.926E-02	0.558
		706.67		-1.973E-01	4.007E-01	6.367E-01	4.456E-02	-0.310
		763.93		-2.363E-01	3.419E-01	5.329E-01	3.948E-02	-0.443
		884.67		-1.967E-02	1.254E-01	2.010E-01	1.661E-02	-0.098
		937.48		-1.770E-01	3.041E-01	4.720E-01	3.870E-02	-0.375
		1384.27		1.470E-02	1.977E-01	3.282E-01	2.042E-02	0.045
IN-111		171.28		-1.557E-01	2.333E-01	3.700E-01	2.429E-02	-0.421
		245.39	*	-6.233E-01	2.868E-01	4.256E-01	2.859E-02	-1.464
IN-113M		391.69	*	4.723E-02	8.672E-02	1.444E-01	8.239E-03	0.327
SN-113		391.69	*	4.723E-02	8.672E-02	1.444E-01	8.239E-03	0.327
IN-114M		190.27	*	7.153E-02	2.836E-01	4.272E-01	2.836E-02	0.167
CD-115		260.90		-7.816E+00	2.047E+01	3.331E+01	2.227E+00	-0.235
		492.35		4.924E+00	6.340E+00	1.113E+01	6.502E-01	0.442
		527.90	*	2.130E-01	1.808E+00	3.056E+00	1.832E-01	0.070
SN-117M		156.02		1.113E+00	2.421E+00	3.908E+00	2.823E-01	0.285
		158.56	*	1.677E-03	5.561E-02	9.451E-02	6.666E-03	0.018
SB-122		563.90	*	8.205E-02	5.115E-01	8.640E-01	5.292E-02	0.095
		692.80		-8.855E+00	1.171E+01	1.831E+01	1.207E+00	-0.484
I-123		159.00	*	-1.432E-05	1.171E+01	Half-Life too short		
		528.96		2.500E-02	1.171E+01	Half-Life too short		
TE-123M		159.00	*	-1.273E-03	4.067E-02	6.895E-02	4.886E-03	-0.018
I-124		602.71	*	3.729E-02	3.896E-01	5.944E-01	3.709E-02	0.063
		722.78		1.362E+00	2.652E+00	3.968E+00	2.704E-01	0.343
		1325.50		8.605E+00	1.643E+01	2.549E+01	1.492E+00	0.338
		1376.25		6.416E+00	1.021E+01	1.841E+01	1.080E+00	0.348
		1509.49		2.307E+00	5.366E+00	9.440E+00	5.528E-01	0.244
		1691.02		-1.302E+00	1.598E+00	2.077E+00	1.181E-01	-0.627
SB-124		602.71		7.186E-03	7.509E-02	1.146E-01	7.151E-03	0.063
		645.85		4.610E-01	9.438E-01	1.612E+00	1.132E-01	0.286
		709.31		7.656E+00	4.901E+00	8.877E+00	5.962E-01	0.862
		713.82		-1.563E+00	2.909E+00	4.590E+00	4.948E-01	-0.340
		722.78		3.805E-01	7.410E-01	1.109E+00	7.814E-02	0.343
	+	968.20		1.593E+01	7.783E+00	1.134E+01	8.700E-01	1.406
		1045.16		-2.198E+00	5.309E+00	8.641E+00	6.144E-01	-0.254
		1325.50		2.568E+00	4.904E+00	7.607E+00	4.452E-01	0.338
		1368.21		-1.256E+00	2.140E+00	3.144E+00	3.742E-01	-0.400

---- Non-Identified Nuclides ----

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		1436.60		-2.227E+00	4.352E+00	6.388E+00	3.752E-01	-0.349
		1691.02	*	-8.578E-02	1.054E-01	1.368E-01	8.471E-03	-0.627
SB-125		427.89	*	-1.887E-02	1.971E-01	3.156E-01	1.819E-02	-0.060
		463.38		8.876E-01	6.167E-01	1.057E+00	7.056E-02	0.840
		600.56		9.117E-02	3.419E-01	5.785E-01	4.100E-02	0.158
		635.90		-5.191E-02	5.151E-01	8.484E-01	6.140E-02	-0.061
TE-125M		109.28	*	1.229E+01	1.243E+01	2.075E+01	2.130E+00	0.592
I-126		388.63		-1.216E-01	2.815E-01	4.451E-01	2.377E-02	-0.273
		666.33	*	3.226E-02	2.468E-01	3.588E-01	2.295E-02	0.090
		753.82		3.256E-01	2.155E+00	3.568E+00	2.513E-01	0.091
SB-126		223.80		-1.816E+00	4.277E+00	7.008E+00	4.709E-01	-0.259
	+	278.60		3.312E+00	3.192E+00	5.156E+00	3.411E-01	0.642
	+	296.50		6.533E+00	2.473E+00	3.376E+00	2.197E-01	1.935
		414.70		-7.210E-02	9.856E-02	1.520E-01	8.249E-03	-0.474
		415.30		-2.939E+00	8.302E+00	1.311E+01	7.121E-01	-0.224
		555.20		-2.340E-01	4.919E+00	8.208E+00	5.004E-01	-0.029
		573.80		-7.540E-02	1.268E+00	2.110E+00	1.299E-01	-0.036
		593.00		1.665E-01	1.130E+00	1.901E+00	1.181E-01	0.088
		656.30		9.949E-01	5.233E+00	7.643E+00	4.855E-01	0.130
		666.33		1.324E-02	1.013E-01	1.473E-01	9.419E-03	0.090
		675.00		-1.907E+00	2.487E+00	3.875E+00	2.504E-01	-0.492
		695.00		-5.137E-02	9.860E-02	1.566E-01	1.035E-02	-0.328
		697.00		1.077E-01	3.293E-01	5.551E-01	3.677E-02	0.194
		720.50	*	9.278E-02	1.950E-01	3.038E-01	2.065E-02	0.305
		856.80		-2.882E-01	7.473E-01	1.182E+00	9.190E-02	-0.244
		989.30		-5.105E-01	2.108E+00	3.328E+00	2.507E-01	-0.153
		1034.80		-5.467E-01	1.397E+01	2.335E+01	1.680E+00	-0.023
		1213.00		-1.054E+00	3.916E+00	6.281E+00	3.679E-01	-0.168
SB-127		61.10		5.629E+02	5.291E+01	6.379E+01	4.845E+00	8.824
		252.40		2.658E-01	1.809E+00	3.018E+00	1.244E+00	0.088
		290.80		5.454E-01	1.026E+01	1.488E+01	1.101E+00	0.037
		411.60		-2.042E+00	6.105E+00	9.654E+00	1.236E+00	-0.212
		444.90		7.976E-02	5.245E+00	8.427E+00	7.337E-01	0.009
		473.00		-4.252E-02	9.523E-01	1.518E+00	1.408E-01	-0.028
		543.00		-9.072E-01	7.507E+00	1.248E+01	1.430E+00	-0.073
		603.60		1.196E+00	6.245E+00	9.183E+00	8.356E-01	0.130
		685.20	*	-4.450E-01	6.728E-01	1.057E+00	8.169E-02	-0.421
		698.50		-9.432E-01	7.151E+00	1.168E+01	1.574E+00	-0.081
		722.20		1.084E+00	1.627E+01	2.332E+01	1.781E+00	0.047
		783.80		8.806E-01	1.775E+00	3.004E+00	2.916E-01	0.293
XE-127		57.60		7.414E+01	1.246E+01	1.944E+01	1.310E+00	3.813
		145.22		-6.360E-01	9.094E-01	1.394E+00	1.106E-01	-0.456
		172.10		-1.041E-01	1.556E-01	2.557E-01	1.679E-02	-0.407
		202.84	*	2.011E-02	6.279E-02	1.068E-01	7.130E-03	0.188
		374.96		-9.102E-02	3.305E-01	5.279E-01	2.945E-02	-0.172
I-131		80.18		-1.559E+00	3.765E+00	5.376E+00	3.851E-01	-0.290
		284.30		9.853E-02	1.362E+00	2.254E+00	1.603E-01	0.044
		364.48	*	9.314E-02	1.140E-01	1.934E-01	1.232E-02	0.482
		636.97		4.288E-01	1.459E+00	2.470E+00	1.707E-01	0.174

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.89		3.758E+00	7.983E+00	1.189E+01	8.126E-01	0.316
TE-132		49.72		3.924E+00	4.613E+00	7.776E+00	5.648E-01	0.505
		111.76		-7.171E+00	8.482E+00	1.305E+01	1.212E+00	-0.550
		116.30		-3.259E+00	7.954E+00	1.249E+01	1.195E+00	-0.261
		228.16	*	2.445E-02	2.174E-01	3.644E-01	4.952E-02	0.067
BA-133		53.15		-3.948E+00	5.383E+00	8.725E+00	5.752E-01	-0.453
		79.62		-3.686E-01	2.035E+00	2.937E+00	4.237E-01	-0.126
		81.00		-1.549E-01	1.656E-01	2.287E-01	3.464E-02	-0.678
	+	276.40		7.632E-01	7.408E-01	1.175E+00	1.569E-01	0.649
		302.84		-1.904E-01	2.531E-01	3.983E-01	4.779E-02	-0.478
		356.01	*	-4.231E-02	9.453E-02	1.308E-01	1.516E-02	-0.324
		383.85		-2.053E-01	5.568E-01	8.816E-01	9.413E-02	-0.233
I-133	+	510.53		2.565E-03	5.568E-01	Half-Life too short		
		529.87	*	1.098E-05	5.568E-01	Half-Life too short		
		706.58		-8.081E-04	5.568E-01	Half-Life too short		
		856.28		-6.935E-04	5.568E-01	Half-Life too short		
		875.33		3.390E-05	5.568E-01	Half-Life too short		
		1236.41		1.561E-03	5.568E-01	Half-Life too short		
		1298.22		-3.429E-04	5.568E-01	Half-Life too short		
CS-134		475.35		1.645E+00	4.377E+00	7.141E+00	4.113E-01	0.230
		563.23		1.936E-01	6.507E-01	1.108E+00	6.915E-02	0.175
		569.32		4.674E-02	3.582E-01	6.044E-01	3.811E-02	0.077
		604.70		-2.344E-02	7.279E-02	1.022E-01	6.410E-03	-0.229
		795.84	*	1.268E-01	9.976E-02	1.758E-01	1.304E-02	0.721
		801.93		-4.513E-01	8.591E-01	1.352E+00	1.006E-01	-0.334
		1038.57		-5.601E+00	9.501E+00	1.530E+01	1.096E+00	-0.366
		1167.94		1.493E+00	5.264E+00	7.784E+00	4.590E-01	0.192
		1365.15		8.718E-01	1.527E+00	2.743E+00	1.763E-01	0.318
CS-135		268.24	*	-1.096E-01	2.755E-01	4.473E-01	3.725E-02	-0.245
I-135		288.45		-3.029E+01	2.755E-01	Half-Life too short		
		417.63		1.686E+02	2.755E-01	Half-Life too short		
		546.56		4.834E+01	2.755E-01	Half-Life too short		
		836.80		-3.815E+01	2.755E-01	Half-Life too short		
		1038.76		-8.591E+01	2.755E-01	Half-Life too short		
		1124.00		-4.717E+02	2.755E-01	Half-Life too short		
		1131.51		-1.636E+01	2.755E-01	Half-Life too short		
		1260.41	*	5.315E+00	2.755E-01	Half-Life too short		
		1457.56		2.467E+01	2.755E-01	Half-Life too short		
		1678.03		-3.250E+00	2.755E-01	Half-Life too short		
		1706.46		1.243E+01	2.755E-01	Half-Life too short		
		1791.20		4.264E+01	2.755E-01	Half-Life too short		
CS-136		66.91		6.458E-02	6.537E-01	1.074E+00	1.553E-01	0.060
		86.29		1.351E+01	2.293E+00	2.890E+00	3.508E-01	4.675
		153.22		-1.405E-01	6.921E-01	1.084E+00	9.284E-02	-0.130
		163.89		9.516E-01	1.223E+00	1.905E+00	1.518E-01	0.500
		176.55		2.515E-01	3.790E-01	6.564E-01	4.738E-02	0.383
		273.65		-6.554E-01	6.380E-01	8.646E-01	6.358E-02	-0.758
		340.57		2.507E-01	1.753E-01	2.736E-01	1.757E-02	0.916
		818.51		6.898E-02	1.154E-01	1.955E-01	1.467E-02	0.353

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1048.07	*	-7.661E-02	1.644E-01	2.663E-01	2.002E-02	-0.288
		1235.34		2.034E-01	4.746E-01	8.216E-01	8.231E-02	0.248
BA-140		162.64		1.382E-01	8.243E-01	1.247E+00	9.225E-02	0.111
		304.84		-9.552E-01	1.523E+00	2.385E+00	6.543E-01	-0.401
		423.70		1.401E+00	2.587E+00	4.233E+00	1.343E+00	0.331
		537.32	*	-1.421E-02	3.030E-01	5.066E-01	1.650E-01	-0.028
LA-140		328.77		3.395E-01	3.681E-01	6.272E-01	4.309E-02	0.541
		432.53		-2.461E+00	3.090E+00	4.746E+00	2.926E-01	-0.519
		487.03		3.572E-02	1.873E-01	3.026E-01	1.991E-02	0.118
		751.79		1.061E+00	2.461E+00	4.148E+00	3.373E-01	0.256
		815.85		-3.581E-03	4.655E-01	7.583E-01	6.530E-02	-0.005
		867.82		1.060E-01	2.204E+00	3.589E+00	2.996E-01	0.030
		919.63		-5.117E+00	5.143E+00	7.735E+00	7.823E-01	-0.662
		925.24		-5.853E-01	2.087E+00	3.309E+00	2.816E-01	-0.177
		1596.49	*	-1.005E-01	8.226E-02	9.888E-02	5.733E-03	-1.016
CE-141		145.44	*	-5.040E-02	8.083E-02	1.241E-01	1.004E-02	-0.406
CE-143		57.37		1.277E+02	4.417E+01	6.829E+01	5.533E+00	1.871
		231.56		-4.291E+01	8.715E+01	1.406E+02	4.368E+01	-0.305
		293.26	*	9.634E+00	5.704E+00	8.573E+00	1.769E+00	1.124
	+	350.59		4.203E+02	1.622E+02	1.493E+02	4.529E+01	2.816
		490.36		-1.562E+01	1.126E+02	1.882E+02	5.815E+01	-0.083
		664.57		8.777E+02	2.937E+02	1.946E+02	6.178E+01	4.510
		721.93		6.117E+00	6.133E+01	8.819E+01	2.526E+01	0.069
CE-144		80.11		-1.402E+00	3.321E+00	4.740E+00	3.386E-01	-0.296
		133.54	*	-3.740E-01	3.346E-01	4.974E-01	7.759E-02	-0.752
PM-144		476.78		2.733E-02	1.545E-01	2.493E-01	1.723E-02	0.110
		618.01		3.228E-02	6.138E-02	1.054E-01	6.952E-03	0.306
		696.49	*	-9.839E-03	6.472E-02	1.055E-01	6.989E-03	-0.093
		778.57		-7.354E-01	4.625E+00	7.475E+00	5.398E-01	-0.098
PR-144		696.49	*	-6.640E-01	4.367E+00	7.122E+00	4.716E-01	-0.093
		1489.15		1.068E+01	1.821E+01	3.241E+01	1.901E+00	0.330
PM-146		453.90	*	1.391E-02	9.380E-02	1.517E-01	1.292E-02	0.092
		633.02		-1.468E+00	2.738E+00	4.286E+00	1.582E+00	-0.343
		735.90		-1.332E-01	3.080E-01	4.864E-01	1.368E-01	-0.274
		747.13		8.176E-02	1.852E-01	3.129E-01	4.099E-02	0.261
ND-147	+	91.11		2.825E-01	3.982E-01	3.891E-01	3.311E-02	0.726
		319.41		-2.105E-02	3.613E+00	5.917E+00	3.736E-01	-0.004
		439.89		-1.352E+00	7.878E+00	1.253E+01	6.987E-01	-0.108
		531.02	*	2.985E-01	6.419E-01	1.106E+00	1.505E-01	0.270
PM-149		285.90	*	-1.865E+00	1.428E+01	2.339E+01	3.390E+00	-0.080
EU-152	+	121.78		1.089E+00	2.235E-01	2.980E-01	3.163E-02	3.655
		244.69		-1.429E+00	6.100E-01	8.995E-01	6.043E-02	-1.588
		344.27	*	-1.355E-01	1.997E-01	2.873E-01	1.938E-02	-0.471
		443.98		5.799E-01	2.110E+00	3.440E+00	1.925E-01	0.169
		778.89		-1.280E-01	5.412E-01	8.695E-01	6.280E-02	-0.147
		867.32		1.409E-01	1.993E+00	3.250E+00	2.550E-01	0.043
		964.01		3.191E-01	8.342E-01	1.196E+00	9.207E-02	0.267
		1085.78		-5.221E-01	9.030E-01	1.445E+00	9.757E-02	-0.361
		1112.02		1.962E-01	7.194E-01	1.221E+00	7.929E-02	0.161

---- Non-Identified Nuclides ----

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		1407.95		1.028E-01	2.389E-01	4.184E-01	2.457E-02	0.246
GD-153		69.67		-3.803E-01	2.177E+00	3.541E+00	2.390E-01	-0.107
		83.37		3.046E+01	2.474E+01	3.764E+01	2.760E+00	0.809
		97.43	*	1.535E-02	1.148E-01	1.775E-01	1.412E-02	0.086
		103.18		-7.519E-02	1.523E-01	2.398E-01	1.972E-02	-0.313
EU-154	+	123.07		7.641E-01	1.624E-01	2.051E-01	2.449E-02	3.725
		247.94		4.016E-01	6.109E-01	1.043E+00	1.056E-01	0.385
		591.81		6.948E-02	1.194E+00	1.998E+00	2.002E-01	0.035
		723.30		1.433E-01	3.842E-01	5.673E-01	4.502E-02	0.253
		756.87		-1.784E-01	1.667E+00	2.712E+00	2.959E-01	-0.066
		873.19		-1.976E-01	7.313E-01	1.163E+00	1.365E-01	-0.170
		996.32		-3.163E-01	9.815E-01	1.539E+00	2.654E-01	-0.206
		1004.76		-5.805E-01	5.322E-01	8.268E-01	8.917E-02	-0.702
		1274.45	*	-4.580E-02	1.496E-01	2.358E-01	2.212E-02	-0.194
EU-155		48.70		-1.604E+00	2.840E+00	4.631E+00	3.006E-01	-0.346
	+	60.01		4.387E+02	3.578E+01	3.103E+01	2.110E+00	14.136
		86.54		2.921E+00	3.316E-01	4.632E-01	3.538E-02	6.306
		105.31	*	1.421E-01	1.592E-01	2.654E-01	2.241E-02	0.536
TB-160	+	86.79		1.417E+01	1.274E+00	1.303E+00	9.847E-02	10.871
		197.04		9.956E-03	8.364E-01	1.399E+00	9.318E-02	0.007
		215.65		5.598E-01	1.204E+00	1.988E+00	1.333E-01	0.282
		298.57		1.110E-01	2.017E-01	3.018E-01	1.959E-02	0.368
		879.36	*	5.609E-02	3.205E-01	5.256E-01	4.167E-02	0.107
		962.29		5.631E-02	1.448E+00	2.016E+00	1.554E-01	0.028
		966.15		8.240E-01	5.573E-01	8.614E-01	6.622E-02	0.957
		1177.93		3.286E-01	7.005E-01	1.057E+00	6.173E-02	0.311
		1271.85		-5.117E-01	8.066E-01	1.204E+00	7.060E-02	-0.425
HO-166M		80.57		-1.730E-01	4.362E-01	6.232E-01	4.468E-02	-0.278
		184.41		8.336E-02	6.033E-02	9.730E-02	6.438E-03	0.857
		280.46		-2.214E-02	1.713E-01	2.461E-01	1.626E-02	-0.090
		410.95		3.969E-01	4.855E-01	8.181E-01	4.421E-02	0.485
		711.68	*	-1.142E-02	1.229E-01	2.011E-01	1.354E-02	-0.057
		752.31		2.083E-01	5.912E-01	9.919E-01	6.974E-02	0.210
		810.29		-4.595E-02	1.247E-01	1.976E-01	1.471E-02	-0.233
TM-171		51.35		1.503E+01	4.165E+01	6.941E+01	4.545E+00	0.217
		52.39		-9.529E+00	2.259E+01	3.693E+01	2.427E+00	-0.258
	+	59.40		2.296E+03	1.873E+02	1.689E+02	1.151E+01	13.592
		66.72	*	-2.136E+00	3.524E+01	5.762E+01	3.867E+00	-0.037
LU-176	+	88.36		1.125E+01	1.012E+00	1.130E+00	8.643E-02	9.959
		201.83		-1.747E-02	4.533E-02	7.485E-02	4.997E-03	-0.233
		306.84	*	3.208E-02	4.449E-02	7.564E-02	4.862E-03	0.424
		401.10		-1.904E+00	1.365E+01	2.188E+01	1.169E+00	-0.087
LU-177		112.95		-2.157E-01	1.052E+00	1.671E+00	1.469E-01	-0.129
	+	208.36	*	1.280E+00	1.177E+00	1.361E+00	9.112E-02	0.940
LU-177M		52.97		-2.214E+00	2.345E+00	3.779E+00	2.490E-01	-0.586
		54.07		6.093E-01	1.421E+00	2.126E+00	1.407E-01	0.287
		61.30		3.405E+01	3.576E+00	5.317E+00	3.593E-01	6.405
	+	121.62		5.407E+00	1.077E+00	1.477E+00	1.387E-01	3.661
		147.16		-1.953E-01	9.484E-01	1.488E+00	1.162E-01	-0.131

---- Non-Identified Nuclides ----

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		171.86		-4.470E-01	7.041E-01	1.159E+00	7.608E-02	-0.386
		218.09		1.083E+00	1.383E+00	2.383E+00	1.600E-01	0.454
		268.79		2.928E-01	1.365E+00	2.279E+00	1.518E-01	0.128
		319.02		-3.016E-02	4.570E-01	7.461E-01	4.714E-02	-0.040
		367.43		-1.131E+00	1.697E+00	2.651E+00	1.511E-01	-0.426
		413.65	*	-1.054E-01	3.388E-01	5.365E-01	2.908E-02	-0.196
HF-181		56.28		1.759E+00	1.559E+00	2.368E+00	1.584E-01	0.743
		57.53		4.744E+00	1.004E+00	1.577E+00	1.062E-01	3.009
		65.20		-1.123E+00	1.071E+00	1.603E+00	1.075E-01	-0.700
		133.02		1.053E-02	9.067E-02	1.452E-01	1.265E-02	0.073
		136.25		5.744E-01	6.682E-01	1.100E+00	9.359E-02	0.522
		345.85		5.910E-02	3.245E-01	5.164E-01	3.104E-02	0.114
		482.03	*	-4.113E-02	8.134E-02	1.257E-01	7.283E-03	-0.327
W-181		56.28		7.488E-01	6.629E-01	1.007E+00	6.735E-02	0.744
		57.53		1.998E+00	4.262E-01	6.697E-01	4.510E-02	2.984
		65.20	*	-4.739E-01	4.520E-01	6.766E-01	4.538E-02	-0.700
TA-182		67.75		1.458E-01	1.355E-01	2.288E-01	1.538E-02	0.637
		100.10		-3.942E-02	2.455E-01	3.932E-01	3.173E-02	-0.100
		152.43		-9.436E-04	5.007E-01	7.921E-01	5.913E-02	-0.001
		222.10		-3.501E-01	5.421E-01	8.786E-01	5.901E-02	-0.398
		1001.68		4.464E+00	4.996E+00	8.488E+00	6.321E-01	0.526
		1121.28		4.281E-01	2.780E-01	5.083E-01	3.254E-02	0.842
		1189.05		-3.773E-02	4.163E-01	6.838E-01	3.997E-02	-0.055
		1221.42	*	2.526E-02	2.147E-01	3.607E-01	2.113E-02	0.070
		1230.97		-1.319E-02	5.656E-01	9.331E-01	5.470E-02	-0.014
RE-183		57.98		7.351E+00	6.518E-01	8.722E-01	5.890E-02	8.428
	+	59.32		8.780E+00	7.161E-01	6.486E-01	4.417E-02	13.536
		67.20		2.261E-01	2.319E-01	3.910E-01	2.625E-02	0.578
		162.32	*	4.824E-02	1.707E-01	2.598E-01	1.765E-02	0.186
	+	208.81		2.377E+00	2.187E+00	2.542E+00	1.702E-01	0.935
		291.72		-5.797E-01	1.671E+00	2.354E+00	1.540E-01	-0.246
RE-184		57.98		2.834E+01	2.512E+00	3.362E+00	2.270E-01	8.428
	+	59.32		3.382E+01	2.758E+00	2.498E+00	1.701E-01	13.536
		67.20		8.712E-01	8.937E-01	1.507E+00	1.012E-01	0.578
		161.27		2.600E-02	5.829E-01	8.759E-01	6.015E-02	0.030
		216.55		4.763E-01	4.394E-01	7.647E-01	5.130E-02	0.623
		252.85	*	-1.115E-01	3.798E-01	6.214E-01	4.166E-02	-0.180
		318.01		-4.111E-01	8.037E-01	1.281E+00	8.107E-02	-0.321
		792.07		7.514E-01	2.052E+00	3.434E+00	2.513E-01	0.219
		903.28		-8.622E-01	2.834E+00	4.043E+00	3.247E-01	-0.213
		920.93		-7.726E-01	1.215E+00	1.879E+00	1.493E-01	-0.411
OS-185	+	59.72		2.442E+01	1.992E+00	1.763E+00	1.200E-01	13.856
		61.14		5.630E+00	5.043E-01	6.712E-01	4.539E-02	8.389
		69.30		1.615E-01	3.723E-01	6.172E-01	4.161E-02	0.262
		592.07		-7.559E-01	4.657E+00	7.681E+00	4.771E-01	-0.098
		646.12	*	2.726E-02	8.271E-02	1.399E-01	8.864E-03	0.195
		717.42		-5.668E-01	1.625E+00	2.603E+00	1.763E-01	-0.218
		874.81		6.640E-02	1.368E+00	2.225E+00	1.757E-01	0.030
		880.27		4.141E-01	1.849E+00	3.041E+00	2.413E-01	0.136

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188		155.03	*	1.502E-02	2.501E-01	3.965E-01	2.891E-02	0.038
		477.96		1.216E+00	6.479E+00	1.046E+01	6.040E-01	0.116
		633.10		-2.837E+00	5.030E+00	8.017E+00	5.059E-01	-0.354
W-188		63.58		-1.866E+01	6.368E+01	9.331E+01	6.267E+00	-0.200
		227.08		1.366E+01	1.953E+01	3.353E+01	2.254E+00	0.407
		290.67	*	7.071E-01	1.331E+01	1.931E+01	1.264E+00	0.037
IR-192	+	295.96		7.183E-01	2.720E-01	3.744E-01	2.468E-02	1.919
		308.46		7.001E-03	1.641E-01	2.700E-01	1.748E-02	0.026
		316.51	*	3.291E-02	5.713E-02	9.642E-02	6.140E-03	0.341
		468.07		-4.268E-02	1.329E-01	2.085E-01	1.380E-02	-0.205
		604.41		-2.336E-01	9.254E-01	1.307E+00	1.514E-01	-0.179
		612.46		1.614E-01	1.433E+00	2.091E+00	1.659E-01	0.077
AU-195		65.12		-2.170E-01	2.125E-01	3.185E-01	2.136E-02	-0.681
		66.83		3.730E-03	1.145E-01	1.877E-01	1.260E-02	0.020
	+	75.70		1.004E+00	3.195E-01	5.183E-01	3.595E-02	1.936
		98.88	*	4.923E-02	3.171E-01	5.151E-01	4.128E-02	0.096
		129.76		4.411E+00	4.411E+00	7.311E+00	6.522E-01	0.603
TL-200		367.94	*	-1.060E+00	6.273E+00	1.009E+01	5.746E-01	-0.105
		579.30		5.987E+00	5.310E+01	7.782E+01	4.805E+00	0.077
		828.27		-6.752E+01	7.769E+01	1.180E+02	8.940E+00	-0.572
		1205.75		1.566E+01	2.358E+01	4.181E+01	2.447E+00	0.375
TL-201		68.90		5.697E-01	1.071E+00	1.781E+00	1.200E-01	0.320
		70.82		-4.879E-01	7.072E-01	1.002E+00	6.788E-02	-0.487
		80.30		-5.478E-01	1.368E+00	1.955E+00	1.399E-01	-0.280
		135.34		6.234E+00	6.971E+00	1.151E+01	9.855E-01	0.542
		167.43	*	1.921E+00	2.138E+00	3.344E+00	2.190E-01	0.574
TL-202		68.90		1.935E-01	3.638E-01	6.049E-01	4.074E-02	0.320
		70.82		-1.652E-01	2.395E-01	3.393E-01	2.299E-02	-0.487
		80.30		-1.856E-01	4.635E-01	6.622E-01	4.738E-02	-0.280
		439.56	*	-7.685E-02	1.010E-01	1.553E-01	8.651E-03	-0.495
HG-203		70.83		-9.870E-01	1.440E+00	2.035E+00	2.548E-01	-0.485
		72.87		6.454E-01	8.295E-01	1.243E+00	1.506E-01	0.519
		82.60		7.050E-01	1.681E+00	2.478E+00	3.209E-01	0.284
		279.20	*	6.733E-02	7.388E-02	1.130E-01	7.832E-03	0.596
BI-207		72.80		1.878E-01	2.715E-01	4.069E-01	2.779E-02	0.462
	+	74.97		5.730E-01	1.824E-01	2.740E-01	1.892E-02	2.091
		84.90		2.873E-01	3.287E-01	4.935E-01	3.666E-02	0.582
		569.67		1.970E-02	5.613E-02	9.600E-02	5.898E-03	0.205
		1063.62	*	8.285E-02	1.231E-01	2.146E-01	1.492E-02	0.386
		1770.23		-1.718E-01	8.032E-01	1.075E+00	5.973E-02	-0.160
TL-207		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
PO-209		260.50		-1.269E+01	1.702E+01	2.719E+01	1.818E+00	-0.467
		262.80		1.163E+01	4.573E+01	7.665E+01	5.120E+00	0.152
		896.60	*	1.794E+01	2.057E+01	3.496E+01	2.813E+00	0.513
BI-210		46.50	*	-1.828E+00	3.396E+00	5.587E+00	4.220E-01	-0.327
PB-210		46.50	*	-1.828E+00	3.396E+00	5.587E+00	4.220E-01	-0.327
PO-210		46.50	*	-1.828E+00	3.395E+00	5.587E+00	3.597E-01	-0.327
PB-211		404.84	*	-1.065E+00	2.037E+00	3.015E+00	1.878E+00	-0.353
		427.08		5.883E-01	4.378E+00	7.075E+00	4.371E+00	0.083
		831.96		2.532E-01	2.525E+00	4.132E+00	2.584E+00	0.061
BI-212	+	727.18	*	1.200E+00	8.121E-01	1.127E+00	9.614E-02	1.065
		785.46		9.555E-01	3.469E+00	5.785E+00	4.205E-01	0.165
		1620.62		2.570E+00	1.850E+00	3.694E+00	2.132E-01	0.696
BI-214	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.613E-01	5.353E-02	0.952
PO-215		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
RN-219		271.23		5.087E-01	4.349E-01	7.516E-01	6.563E-02	0.677
		401.81	*	4.775E-01	8.398E-01	1.395E+00	1.872E-01	0.342
RN-220		549.76	*	2.311E+01	4.922E+01	8.479E+01	5.152E+00	0.273
RA-223		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
RA-224		240.98	*	5.593E+00	1.484E+00	2.484E+00	1.670E-01	2.252
RA-226	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.613E-01	5.353E-02	0.952
AC-227		79.80		-4.543E-01	2.588E+00	3.735E+00	7.826E-01	-0.122
		236.00		2.850E-01	4.389E-01	6.647E-01	7.306E-02	0.429
		256.20	*	5.496E-01	6.550E-01	1.120E+00	1.608E-01	0.491
		286.10		-2.669E-02	2.696E+00	4.442E+00	5.316E-01	-0.006
		299.80		2.645E+00	2.749E+00	4.170E+00	6.898E-01	0.634
		304.40		-3.110E+00	3.425E+00	5.296E+00	9.281E-01	-0.587
		334.20		-1.829E+00	4.617E+00	6.391E+00	1.179E+00	-0.286
TH-227		79.80		-4.543E-01	2.588E+00	3.735E+00	7.931E-01	-0.122
	+	94.00		4.374E+00	3.422E+00	4.641E+00	9.965E-01	0.943
		236.00		2.850E-01	4.386E-01	6.647E-01	6.431E-02	0.429
		256.20	*	5.496E-01	6.571E-01	1.120E+00	1.930E-01	0.491
		286.10		-2.669E-02	2.696E+00	4.442E+00	4.452E+00	-0.006
		299.80		2.645E+00	2.749E+00	4.170E+00	6.898E-01	0.634
		304.40		-3.110E+00	3.425E+00	5.296E+00	9.281E-01	-0.587
		334.20		-1.829E+00	4.617E+00	6.391E+00	1.179E+00	-0.286
TH-229		85.43		4.121E-01	3.329E-01	5.049E-01	3.768E-02	0.816
	+	88.47		6.478E+00	5.827E-01	6.488E-01	4.964E-02	9.985
		100.00		-9.504E-03	2.659E-01	4.282E-01	3.453E-02	-0.022
		193.63	*	-8.969E-02	8.033E-01	1.345E+00	8.945E-02	-0.067
	+	210.97		2.010E+00	1.850E+00	2.109E+00	1.413E-01	0.953
TH-230	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.612E-01	5.353E-02	0.952
PA-231		283.67	*	-7.883E-01	2.730E+00	4.436E+00	6.268E-01	-0.178
		301.29		3.034E-01	1.024E+00	1.647E+00	1.785E-01	0.184
TH-231		81.07		-3.385E-01	3.633E-01	5.059E-01	3.641E-02	-0.669
		83.78		1.706E-01	2.187E-01	3.275E-01	2.409E-02	0.521
		94.90		1.127E-01	3.510E-01	5.146E-01	4.039E-02	0.219
	+	122.32		2.596E+01	5.245E+00	7.076E+00	7.071E-01	3.669
		144.24		-2.120E-01	1.025E+00	1.614E+00	1.467E-01	-0.131
		154.21		-9.700E-02	6.333E-01	9.939E-01	8.287E-02	-0.098
		269.46		3.359E-01	3.314E-01	5.711E-01	3.933E-02	0.588
		323.87	*	-2.186E-01	1.201E+00	1.947E+00	3.249E-01	-0.112
	+	338.28		6.416E+00	2.739E+00	3.703E+00	3.964E-01	1.732
		445.03		-1.624E-01	4.936E+00	7.908E+00	8.034E-01	-0.021
U-231		84.21		1.645E+00	2.621E+00	3.902E+00	2.881E-01	0.422
	+	92.29		1.198E+00	9.064E-01	1.359E+00	1.054E-01	0.882
		95.87	*	-5.597E-02	4.613E-01	6.599E-01	5.204E-02	-0.085
		108.00		-3.793E-01	8.492E-01	1.337E+00	1.135E-01	-0.284
PA-233	+	75.28		1.673E+01	5.733E+00	8.222E+00	1.189E+00	2.035
	+	86.59		9.289E+01	2.503E+01	7.762E+00	2.056E+00	11.967
		300.12		6.031E-01	7.713E-01	1.164E+00	1.600E-01	0.518
		311.98	*	-7.700E-02	1.131E-01	1.785E-01	1.198E-02	-0.431

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		340.50		2.026E+00	1.365E+00	2.026E+00	4.669E-01	1.000
		398.62		4.225E-01	4.313E+00	7.007E+00	1.805E+00	0.060
		415.76		-7.584E-01	3.357E+00	5.336E+00	1.093E+00	-0.142
PA-234		63.00		1.467E-01	1.995E+00	2.972E+00	4.320E-01	0.049
		94.67		1.909E-01	2.521E-01	3.768E-01	4.474E-02	0.507
		98.44		1.002E-01	1.424E-01	2.184E-01	1.216E-01	0.459
		99.86		-1.109E-03	6.738E-01	1.087E+00	8.758E-02	-0.001
		111.00		-1.451E-01	2.721E-01	4.254E-01	5.156E-02	-0.341
		131.20		-1.716E-01	1.728E-01	2.620E-01	2.313E-02	-0.655
		152.70		-1.092E-01	5.123E-01	8.017E-01	1.322E-01	-0.136
	+	186.00		6.582E+00	3.849E+00	3.766E+00	1.157E+00	1.748
		226.40		3.482E-01	6.601E-01	1.124E+00	1.355E-01	0.310
		227.20		4.794E-01	7.120E-01	1.221E+00	8.208E-02	0.393
		248.90		2.195E-01	1.405E+00	2.350E+00	5.111E-01	0.093
		293.70		4.121E+00	1.565E+00	2.377E+00	3.888E-01	1.734
		369.80		2.459E-01	1.640E+00	2.685E+00	5.581E-01	0.092
		568.70		4.117E-02	1.837E+00	3.079E+00	1.891E-01	0.013
		569.50		8.362E-02	5.004E-01	8.463E-01	5.199E-02	0.099
		574.00		-9.128E-02	2.817E+00	4.695E+00	2.891E-01	-0.019
		699.00		-2.872E-01	1.371E+00	2.225E+00	4.065E-01	-0.129
		706.10		-5.236E-01	2.051E+00	3.296E+00	1.459E+00	-0.159
		733.00		2.529E-02	8.525E-01	1.216E+00	2.625E-01	0.021
		742.81		1.948E-01	2.801E+00	4.614E+00	3.093E+00	0.042
		796.30		2.298E+00	2.036E+00	3.418E+00	9.117E-01	0.672
		805.60		8.993E-01	2.227E+00	3.708E+00	1.125E+00	0.243
		819.60		1.254E+00	3.015E+00	4.985E+00	1.884E+00	0.251
		826.30		-2.784E-01	1.855E+00	2.981E+00	1.328E+00	-0.093
		831.60		7.011E-01	1.305E+00	2.181E+00	6.449E-01	0.321
		876.40		-4.021E-01	2.125E+00	3.334E+00	3.426E+00	-0.121
		880.51		8.483E-02	7.157E-01	1.169E+00	9.279E-02	0.073
		883.24		3.180E-01	7.464E-01	1.194E+00	8.014E-01	0.266
		899.00		-4.153E-01	2.314E+00	3.691E+00	1.610E+00	-0.113
		925.00		-9.946E-02	3.288E+00	5.300E+00	4.199E-01	-0.019
		926.50		2.785E-02	4.918E-01	7.967E-01	1.995E-01	0.035
		946.00	*	-3.701E-01	8.448E-01	1.319E+00	2.428E-01	-0.281
		949.00		-2.333E-01	1.208E+00	1.923E+00	1.498E-01	-0.121
		980.50		-1.740E-02	1.924E+00	3.090E+00	2.347E-01	-0.006
		1394.10		-1.702E-01	1.785E+00	2.877E+00	1.864E+00	-0.059
PA-234M		766.41		3.380E+01	4.320E+01	6.031E+01	4.615E+01	0.560
		1001.03	*	1.554E+01	1.727E+01	2.927E+01	3.016E+00	0.531
TH-234		63.29	*	8.022E-02	1.698E+00	2.528E+00	4.338E-01	0.032
	+	92.38		1.132E+00	8.748E-01	1.284E+00	2.271E-01	0.882
U-234	+	609.31	*	8.307E-01	2.148E-01	3.483E-01	2.830E-02	2.385
		768.36		6.087E-01	1.460E+00	2.454E+00	2.283E-01	0.248
		934.06		-1.306E+00	3.086E+00	4.839E+00	4.860E-01	-0.270
		1120.29		7.701E-01	6.311E-01	1.129E+00	1.041E-01	0.682
		1238.11		1.063E+00	1.014E+00	1.871E+00	1.533E-01	0.569
		1377.67		1.315E-01	1.213E+00	2.023E+00	1.746E-01	0.065
	+	1764.49		9.149E-01	6.011E-01	9.612E-01	5.353E-02	0.952

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-235	+	89.95		1.837E+00	2.646E+00	3.780E+00	1.157E+00	0.486
	+	93.35		1.361E+00	1.091E+00	1.513E+00	4.204E-01	0.899
		105.00		1.097E+00	1.613E+00	2.619E+00	7.793E-01	0.419
		143.76	*	4.902E-03	3.208E-01	5.107E-01	8.796E-02	0.010
		163.35		1.487E-01	7.970E-01	1.206E+00	2.206E-01	0.123
	+	185.71		2.438E-01	1.224E-01	1.388E-01	9.189E-03	1.757
		205.31		1.446E-01	8.938E-01	1.333E+00	2.438E-01	0.108
NP-236		94.67		1.460E-01	1.908E-01	2.859E-01	2.242E-02	0.511
		98.44		7.576E-02	9.924E-02	1.651E-01	1.320E-02	0.459
		111.00		-1.098E-01	2.056E-01	3.217E-01	2.789E-02	-0.341
		160.31	*	-5.327E-02	1.244E-01	2.004E-01	1.389E-02	-0.266
NP-237		86.50	*	6.807E+00	1.606E+00	1.107E+00	2.432E-01	6.148
		95.87		-1.780E-01	1.468E+00	2.099E+00	5.119E-01	-0.085
U-238		63.29	*	8.022E-02	1.698E+00	2.528E+00	4.338E-01	0.032
	+	92.38		1.132E+00	8.561E-01	1.284E+00	9.963E-02	0.882
NP-239		99.55		-4.534E-02	2.286E-01	3.656E-01	2.941E-02	-0.124
		117.00	*	-1.367E-01	3.069E-01	4.564E-01	4.135E-02	-0.299
	+	209.75		2.025E+00	1.863E+00	2.183E+00	1.462E-01	0.928
		228.18		4.038E-02	3.711E-01	6.221E-01	4.182E-02	0.065
	+	277.60		3.730E-01	3.595E-01	5.661E-01	3.748E-02	0.659
		334.30		-1.156E+00	2.605E+00	3.600E+00	2.215E-01	-0.321
CM-243		99.55		-4.663E-02	2.351E-01	3.760E-01	3.025E-02	-0.124
		103.76	*	-1.683E-02	1.429E-01	2.290E-01	1.890E-02	-0.073
		117.00		-1.406E-01	3.156E-01	4.693E-01	4.252E-02	-0.299
	+	209.75		1.996E+00	1.836E+00	2.151E+00	1.440E-01	0.928
		228.18		4.079E-02	3.748E-01	6.283E-01	4.224E-02	0.065
	+	277.60		3.758E-01	3.622E-01	5.704E-01	3.776E-02	0.659
CM-247	+	278.00		1.547E+00	1.491E+00	2.373E+00	1.570E-01	0.652
		287.40		4.304E-01	2.181E+00	3.621E+00	2.378E-01	0.119
		402.60	*	1.226E-02	7.487E-02	1.221E-01	6.533E-03	0.100
CF-249		252.85		-4.321E-01	1.471E+00	2.407E+00	1.614E-01	-0.180
		333.44		-9.629E-02	3.443E-01	4.824E-01	2.973E-02	-0.200
		387.95	*	-1.435E-03	8.213E-02	1.329E-01	7.112E-03	-0.011
CF-251		176.60	*	1.337E-01	1.969E-01	3.412E-01	2.247E-02	0.392
		227.00		5.780E-01	6.279E-01	1.087E+00	7.307E-02	0.532
		285.00		1.488E+00	3.095E+00	5.219E+00	3.435E-01	0.285

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071    *
* Acquisition date :  9-JUL-2009 08:51:19 Detector SN#     :               *
* Detector ID        : GAM07               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 01:00:01.46      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        :  2-JUL-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201873071         Analyst initials: MXR1          *
* Batch Number       : 881931              Sample Quantity : 1.5173E+02 GRAM *
* Recovery           :    1.00000          Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-NOV-2008 14:41:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	3.682E-01	7.190E-02	6.741E-02	0.000E+00
CO-60	7.374E+00	5.440E-01	9.091E-02	0.000E+00
CD-109	4.772E+01	4.206E+00	2.270E+00	0.000E+00
SN-126	4.745E+00	4.182E-01	2.262E-01	0.000E+00
BA-137M	5.633E+00	4.329E-01	1.274E-01	0.000E+00
CS-137	5.954E+00	4.586E-01	1.346E-01	0.000E+00
CE-139	7.764E-02	5.886E-02	7.837E-02	0.000E+00
TL-208	4.711E-01	1.329E-01	1.159E-01	0.000E+00
BI-211	2.663E+00	6.449E-01	6.399E-01	0.000E+00
PB-212	1.331E+00	1.977E-01	1.947E-01	0.000E+00
PO-212	1.331E+00	1.977E-01	1.947E-01	0.000E+00
PB-214	9.262E-01	2.293E-01	2.269E-01	0.000E+00
PO-214	9.262E-01	2.293E-01	2.269E-01	0.000E+00
PO-216	1.331E+00	1.977E-01	1.947E-01	0.000E+00
PO-218	9.262E-01	2.293E-01	2.269E-01	0.000E+00
AC-228	1.885E+00	5.884E-01	5.740E-01	0.000E+00
RA-228	1.885E+00	5.884E-01	5.740E-01	0.000E+00
TH-228	1.331E+00	1.977E-01	1.946E-01	0.000E+00
TH-232	1.885E+00	5.884E-01	5.740E-01	0.000E+00
AM-241	1.353E+01	1.168E+00	4.161E-01	0.000E+00
AM-243	3.194E-01	9.963E-02	1.365E-01	0.000E+00
ANH-511	1.259E-01	9.107E-02	9.813E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	3.247E-01	6.476E-01	1.125E+00	0.000E+00	NOT IDENT.
NA-22	-8.096E-03	5.131E-02	8.536E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.752E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.288E-02	3.784E-02	6.939E-02	0.000E+00	NOT IDENT.
K-40	5.196E-01	6.084E-01	1.160E+00	0.000E+00	NOT IDENT.

TI-44	0.000E+00	7.666E-02	1.058E-01	0.000E+00	FAIL ABUN
SC-46	-7.621E-02	9.502E-02	1.516E-01	0.000E+00	NOT IDENT.
V-48	1.783E-02	1.321E-01	2.225E-01	0.000E+00	NOT IDENT.
CR-51	2.993E-01	5.361E-01	9.649E-01	0.000E+00	NOT IDENT.
MN-52	8.301E-02	1.173E-01	2.200E-01	0.000E+00	FAIL ABUN
MN-54	4.738E-03	7.449E-02	1.270E-01	0.000E+00	NOT IDENT.
CO-56	-5.056E-03	8.486E-02	1.433E-01	0.000E+00	NOT IDENT.
CO-58	-7.497E-02	7.743E-02	1.220E-01	0.000E+00	NOT IDENT.
FE-59	9.180E-02	1.823E-01	3.252E-01	0.000E+00	NOT IDENT.
ZN-65	-2.741E-01	1.960E-01	3.052E-01	0.000E+00	NOT IDENT.
GE-68	-4.716E-01	2.829E+00	4.845E+00	0.000E+00	NOT IDENT.
AS-73	-7.070E-01	1.161E+00	2.105E+00	0.000E+00	NOT IDENT.
AS-74	-9.255E-02	1.270E-01	2.121E-01	0.000E+00	NOT IDENT.
SE-75	-8.727E-03	7.213E-02	1.275E-01	0.000E+00	FAIL ABUN
BR-77	1.078E+00	2.027E+00	3.703E+00	0.000E+00	FAIL ABUN
SR-82	7.426E-02	6.270E-01	1.081E+00	0.000E+00	NOT IDENT.
RB-83	6.617E-02	1.201E-01	2.197E-01	0.000E+00	NOT IDENT.
RB-84	-3.667E-02	1.501E-01	2.494E-01	0.000E+00	NOT IDENT.
KR-85	1.727E+01	1.354E+01	2.308E+01	0.000E+00	NOT IDENT.
SR-85	8.162E-02	6.399E-02	1.090E-01	0.000E+00	NOT IDENT.
RB-86	-9.497E-01	1.364E+00	2.250E+00	0.000E+00	NOT IDENT.
Y-88	1.137E-01	6.250E-02	1.219E-01	0.000E+00	FAIL ABUN
ZR-88	-3.081E-02	5.781E-02	9.655E-02	0.000E+00	NOT IDENT.
Y-91	6.839E+00	2.224E+01	3.934E+01	0.000E+00	NOT IDENT.
NB-94	-3.199E-02	6.254E-02	1.040E-01	0.000E+00	NOT IDENT.
NB-95	4.730E-02	7.640E-02	1.360E-01	0.000E+00	NOT IDENT.
NB-95M	1.443E-01	2.059E-01	3.372E-01	0.000E+00	NOT IDENT.
ZR-95	1.133E-01	1.375E-01	2.478E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.185E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.642E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.758E+00	3.292E+00	5.939E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.776E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.477E-03	5.179E-02	9.384E-02	0.000E+00	NOT IDENT.
RH-102	3.956E-02	6.446E-02	1.127E-01	0.000E+00	NOT IDENT.
RU-103	-3.235E-02	6.841E-02	1.185E-01	0.000E+00	FAIL ABUN
RH-106	-2.528E-01	6.013E-01	1.004E+00	0.000E+00	FAIL ABUN
RU-106	-2.528E-01	6.008E-01	1.004E+00	0.000E+00	FAIL ABUN
AG-108M	7.341E-02	6.989E-02	1.257E-01	0.000E+00	NOT IDENT.
AG-110M	1.081E-01	8.474E-02	1.404E-01	0.000E+00	NOT IDENT.
IN-111	-6.233E-01	2.810E-01	4.487E-01	0.000E+00	NOT IDENT.
IN-113M	4.723E-02	8.498E-02	1.505E-01	0.000E+00	NOT IDENT.
SN-113	4.723E-02	8.498E-02	1.505E-01	0.000E+00	NOT IDENT.
IN-114M	7.153E-02	2.780E-01	4.532E-01	0.000E+00	NOT IDENT.
CD-115	2.130E-01	1.771E+00	3.161E+00	0.000E+00	NOT IDENT.
SN-117M	1.677E-03	5.450E-02	1.007E-01	0.000E+00	NOT IDENT.
SB-122	8.205E-02	5.013E-01	8.921E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.485E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.273E-03	3.986E-02	7.344E-02	0.000E+00	NOT IDENT.
I-124	3.729E-02	3.818E-01	6.127E-01	0.000E+00	NOT IDENT.
SB-124	-8.578E-02	1.033E-01	1.373E-01	0.000E+00	FAIL ABUN
SB-125	-1.887E-02	1.932E-01	3.281E-01	0.000E+00	NOT IDENT.
TE-125M	1.229E+01	1.218E+01	2.230E+01	0.000E+00	NOT IDENT.
I-126	3.226E-02	2.419E-01	3.689E-01	0.000E+00	NOT IDENT.
SB-126	9.278E-02	1.911E-01	3.118E-01	0.000E+00	FAIL ABUN
SB-127	-4.450E-01	6.594E-01	1.086E+00	0.000E+00	NOT IDENT.
XE-127	2.011E-02	6.153E-02	1.131E-01	0.000E+00	NOT IDENT.
I-131	9.314E-02	1.118E-01	2.019E-01	0.000E+00	NOT IDENT.
TE-132	2.445E-02	2.130E-01	3.848E-01	0.000E+00	NOT IDENT.
BA-133	-4.231E-02	9.264E-02	1.366E-01	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.248E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.268E-01	9.777E-02	1.799E-01	0.000E+00	NOT IDENT.
CS-135	-1.096E-01	2.700E-01	4.705E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.266E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.661E-02	1.611E-01	2.706E-01	0.000E+00	NOT IDENT.
BA-140	-1.421E-02	2.970E-01	5.237E-01	0.000E+00	NOT IDENT.
LA-140	-1.005E-01	8.062E-02	9.938E-02	0.000E+00	NOT IDENT.
CE-141	-5.040E-02	7.922E-02	1.324E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.590E+00	8.999E+00	0.000E+00	FAIL ABUN
CE-144	-3.740E-01	3.279E-01	5.320E-01	0.000E+00	NOT IDENT.
PM-144	-9.839E-03	6.342E-02	1.084E-01	0.000E+00	NOT IDENT.
PR-144	-6.640E-01	4.280E+00	7.315E+00	0.000E+00	NOT IDENT.
PM-146	1.391E-02	9.193E-02	1.575E-01	0.000E+00	NOT IDENT.
ND-147	2.985E-01	6.290E-01	1.143E+00	0.000E+00	FAIL ABUN
PM-149	-1.865E+00	1.400E+01	2.457E+01	0.000E+00	NOT IDENT.
EU-152	-1.355E-01	1.957E-01	3.004E-01	0.000E+00	FAIL ABUN
GD-153	1.535E-02	1.125E-01	1.913E-01	0.000E+00	NOT IDENT.
EU-154	-4.580E-02	1.466E-01	2.384E-01	0.000E+00	FAIL ABUN
EU-155	1.421E-01	1.560E-01	2.854E-01	0.000E+00	FAIL ABUN

TB-160	5.609E-02	3.141E-01	5.366E-01	0.000E+00	FAIL ABUN
HO-166M	-1.142E-02	1.205E-01	2.064E-01	0.000E+00	NOT IDENT.
TM-171	-2.136E+00	3.454E+01	6.264E+01	0.000E+00	FAIL ABUN
LU-176	3.208E-02	4.360E-02	7.930E-02	0.000E+00	FAIL ABUN
LU-177	1.280E+00	1.154E+00	1.441E+00	0.000E+00	FAIL ABUN
LU-177M	-1.054E-01	3.321E-01	5.583E-01	0.000E+00	FAIL ABUN
HF-181	-4.113E-02	7.971E-02	1.303E-01	0.000E+00	NOT IDENT.
W-181	-4.739E-01	4.429E-01	7.359E-01	0.000E+00	NOT IDENT.
TA-182	2.526E-02	2.104E-01	3.650E-01	0.000E+00	NOT IDENT.
RE-183	4.824E-02	1.673E-01	2.766E-01	0.000E+00	FAIL ABUN
RE-184	-1.115E-01	3.722E-01	6.546E-01	0.000E+00	FAIL ABUN
OS-185	2.726E-02	8.105E-02	1.440E-01	0.000E+00	FAIL ABUN
RE-188	1.502E-02	2.451E-01	4.226E-01	0.000E+00	NOT IDENT.
W-188	7.071E-01	1.304E+01	2.027E+01	0.000E+00	NOT IDENT.
IR-192	3.291E-02	5.598E-02	1.010E-01	0.000E+00	FAIL ABUN
AU-195	4.923E-02	3.107E-01	5.548E-01	0.000E+00	FAIL ABUN
TL-200	-1.060E+00	6.147E+00	1.054E+01	0.000E+00	NOT IDENT.
TL-201	1.921E+00	2.095E+00	3.558E+00	0.000E+00	NOT IDENT.
TL-202	-7.685E-02	9.900E-02	1.613E-01	0.000E+00	NOT IDENT.
HG-203	6.733E-02	7.240E-02	1.188E-01	0.000E+00	NOT IDENT.
BI-207	8.285E-02	1.206E-01	2.180E-01	0.000E+00	FAIL ABUN
TL-207	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
PO-209	1.794E+01	2.016E+01	3.568E+01	0.000E+00	NOT IDENT.
BI-210	-1.828E+00	3.328E+00	6.123E+00	0.000E+00	NOT IDENT.
PB-210	-1.828E+00	3.328E+00	6.123E+00	0.000E+00	NOT IDENT.
PO-210	-1.828E+00	3.327E+00	6.123E+00	0.000E+00	NOT IDENT.
PB-211	-1.065E+00	1.996E+00	3.139E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	7.959E-01	1.156E+00	0.000E+00	FAIL ABUN
BI-214	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
PO-215	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
RN-219	4.775E-01	8.230E-01	1.453E+00	0.000E+00	NOT IDENT.
RN-220	2.311E+01	4.824E+01	8.761E+01	0.000E+00	NOT IDENT.
RA-223	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.454E+00	2.620E+00	0.000E+00	NOT IDENT.
RA-226	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
AC-227	5.496E-01	6.419E-01	1.180E+00	0.000E+00	NOT IDENT.
TH-227	5.496E-01	6.439E-01	1.180E+00	0.000E+00	FAIL ABUN
TH-229	-8.969E-02	7.872E-01	1.426E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
PA-231	-7.883E-01	2.676E+00	4.660E+00	0.000E+00	NOT IDENT.
TH-231	-2.186E-01	1.177E+00	2.039E+00	0.000E+00	FAIL ABUN
U-231	-5.597E-02	4.521E-01	7.113E-01	0.000E+00	FAIL ABUN
PA-233	-7.700E-02	1.108E-01	1.870E-01	0.000E+00	FAIL ABUN
PA-234	-3.701E-01	8.279E-01	1.344E+00	0.000E+00	FAIL ABUN
PA-234M	1.554E+01	1.693E+01	2.978E+01	0.000E+00	NOT IDENT.
TH-234	8.022E-02	1.664E+00	2.751E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	2.105E-01	3.590E-01	0.000E+00	FAIL ABUN
U-235	4.902E-03	3.144E-01	5.453E-01	0.000E+00	FAIL ABUN
NP-236	-5.327E-02	1.219E-01	2.134E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	1.574E+00	1.196E+00	0.000E+00	NOT IDENT.
U-238	8.022E-02	1.664E+00	2.751E+00	0.000E+00	FAIL ABUN
NP-239	-1.367E-01	3.008E-01	4.897E-01	0.000E+00	FAIL ABUN
CM-243	-1.683E-02	1.401E-01	2.464E-01	0.000E+00	FAIL ABUN
CM-247	1.226E-02	7.338E-02	1.271E-01	0.000E+00	FAIL ABUN
CF-249	-1.435E-03	8.049E-02	1.385E-01	0.000E+00	NOT IDENT.
CF-251	1.337E-01	1.930E-01	3.626E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 09:51:54.27

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1
Sample date       : 2-JUL-2009 00:00:00. Acquisition date : 9-JUL-2009 08:51:19.
Sample ID         : G1201873071          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM07                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.46  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881931                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	459	85.51*	7.349E+00	3.613E-01	3.682E-01	19.92
	136.48	------	10.60	7.139E+00	------ Line Not Found		------
CO-60	1173.22	2061	100.00	1.395E+00	7.310E+00	7.330E+00	7.59
	1332.49	1867	100.00*	1.256E+00	7.355E+00	7.374E+00	7.53
CD-109	88.03	2521	3.72*	7.106E+00	4.720E+01	4.772E+01	8.99
SN-126	64.28	------	9.60	5.307E+00	------ Line Not Found		------
	86.94	2521	8.90	7.106E+00	1.973E+01	1.973E+01	41.44
	87.57	2521	37.00*	7.106E+00	4.745E+00	4.745E+00	8.99
BA-137M	661.65	2363	89.98*	2.308E+00	5.630E+00	5.633E+00	7.84
CS-137	661.65	2363	85.12*	2.308E+00	5.952E+00	5.954E+00	7.86
CE-139	165.85	80	80.35*	6.573E+00	7.480E-02	7.764E-02	77.36
TL-208	277.35	50	6.80	4.700E+00	7.734E-01	7.734E-01	96.78
	510.84	73	21.60	2.885E+00	5.827E-01	5.827E-01	74.30
	583.14	207	84.20*	2.576E+00	4.711E-01	4.711E-01	28.79
	860.37	------	12.46	1.830E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	6.202E+00	------ Line Not Found		------
	351.07	272	12.94*	3.913E+00	2.663E+00	2.663E+00	24.71
PB-212	74.81	271	10.70	6.372E+00	1.970E+00	1.970E+00	33.18
	77.11	403	18.00	6.540E+00	1.696E+00	1.696E+00	25.01
	87.30	2521	8.00	7.106E+00	2.195E+01	2.195E+01	13.45
	238.63	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.09	------	3.41	4.430E+00	------ Line Not Found		------
PO-212	74.81	271	10.70	6.372E+00	1.970E+00	1.970E+00	33.18
	77.11	403	18.00	6.540E+00	1.696E+00	1.696E+00	25.01
	87.30	2521	8.00	7.106E+00	2.195E+01	2.195E+01	13.45
	115.19	------	0.60	7.410E+00	------ Line Not Found		------
	238.63	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.09	------	3.41	4.430E+00	------ Line Not Found		------
PB-214	74.81	271	6.21	6.372E+00	3.394E+00	3.394E+00	32.68
	77.11	403	10.50	6.540E+00	2.907E+00	2.907E+00	26.14
	87.30	2521	4.67	7.106E+00	3.759E+01	3.759E+01	11.85
	241.98	------	7.49	5.191E+00	------ Line Not Found		------

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	176	19.20	4.483E+00	1.013E+00	1.013E+00	38.37
	351.92	272	37.20*	3.913E+00	9.262E-01	9.262E-01	25.26
PO-214	74.81	271	6.21	6.372E+00	3.394E+00	3.394E+00	32.68
	77.11	403	10.50	6.540E+00	2.907E+00	2.907E+00	26.14
	87.30	2521	4.67	7.106E+00	3.759E+01	3.759E+01	11.85
	241.98	------	7.49	5.191E+00	------ Line Not Found		------
	295.21	176	19.20	4.483E+00	1.013E+00	1.013E+00	38.37
	351.92	272	37.20*	3.913E+00	9.262E-01	9.262E-01	25.26
PO-216	74.81	271	10.70	6.372E+00	1.970E+00	1.970E+00	33.18
	77.11	403	18.00	6.540E+00	1.696E+00	1.696E+00	25.01
	87.30	2521	8.00	7.106E+00	2.195E+01	2.195E+01	13.45
	238.63	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.09	------	3.41	4.430E+00	------ Line Not Found		------
PO-218	74.81	271	6.21	6.372E+00	3.394E+00	3.394E+00	32.68
	77.11	403	10.50	6.540E+00	2.907E+00	2.907E+00	26.14
	87.30	2521	4.67	7.106E+00	3.759E+01	3.759E+01	11.85
	241.98	------	7.49	5.191E+00	------ Line Not Found		------
	295.21	176	19.20	4.483E+00	1.013E+00	1.013E+00	38.37
	351.92	272	37.20*	3.913E+00	9.262E-01	9.262E-01	25.26
AC-228	338.32	143	11.40	4.037E+00	1.536E+00	1.536E+00	58.08
	911.07	184	27.70*	1.739E+00	1.885E+00	1.885E+00	31.86
	969.11	94	16.60	1.648E+00	1.693E+00	1.693E+00	53.44
RA-228	338.32	143	11.40	4.037E+00	1.536E+00	1.536E+00	58.08
	911.07	184	27.70*	1.739E+00	1.885E+00	1.885E+00	31.86
	969.11	94	16.60	1.648E+00	1.693E+00	1.693E+00	53.44
TH-228	84.40	------	1.21	6.955E+00	------ Line Not Found		------
	238.60	629	44.60*	5.243E+00	1.331E+00	1.331E+00	15.16
	300.10	------	3.41	4.430E+00	------ Line Not Found		------
TH-232	338.32	143	11.40	4.037E+00	1.536E+00	1.536E+00	41.77
	911.07	184	27.70*	1.739E+00	1.885E+00	1.885E+00	31.86
	969.11	94	16.60	1.648E+00	1.693E+00	1.693E+00	53.44
AM-241	59.54	4585	35.90*	4.672E+00	1.353E+01	1.353E+01	8.81
AM-243	74.67	271	66.00*	6.372E+00	3.194E-01	3.194E-01	31.83
	86.72	2521	0.34	7.106E+00	5.225E+02	5.225E+02	8.99
	117.66	------	0.55	7.392E+00	------ Line Not Found		------
	142.18	------	0.13	7.037E+00	------ Line Not Found		------
ANH-511	511.00	73	100.00*	2.885E+00	1.259E-01	1.259E-01	73.83

Flag: "*" = Keyline

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

Total number of lines in spectrum 26
Number of unidentified lines 0
Number of lines tentatively identified by NID 26 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	3.613E-01	3.682E-01	0.734E-01	19.92	
CO-60	5.27Y	1.00	7.355E+00	7.374E+00	0.555E+00	7.53	
CD-109	464.00D	1.01	4.720E+01	4.772E+01	0.429E+01	8.99	
SN-126	1.00E+05Y	1.00	4.745E+00	4.745E+00	0.427E+00	8.99	
BA-137M	30.17Y	1.00	5.630E+00	5.633E+00	0.442E+00	7.84	
CS-137	30.17Y	1.00	5.952E+00	5.954E+00	0.468E+00	7.86	
CE-139	137.66D	1.04	7.480E-02	7.764E-02	6.006E-02	77.36	
TL-208	1.41E+10Y	1.00	4.711E-01	4.711E-01	1.356E-01	28.79	
BI-211	7.04E+08Y	1.00	2.663E+00	2.663E+00	0.658E+00	24.71	
PB-212	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
PO-212	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
PB-214	1600.00Y	1.00	9.262E-01	9.262E-01	2.339E-01	25.26	
PO-214	1600.00Y	1.00	9.262E-01	9.262E-01	2.339E-01	25.26	
PO-216	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
PO-218	1600.00Y	1.00	9.262E-01	9.262E-01	2.339E-01	25.26	
AC-228	1.41E+10Y	1.00	1.885E+00	1.885E+00	0.600E+00	31.86	
RA-228	1.41E+10Y	1.00	1.885E+00	1.885E+00	0.600E+00	31.86	
TH-228	1.41E+10Y	1.00	1.331E+00	1.331E+00	0.202E+00	15.16	
TH-232	1.41E+10Y	1.00	1.885E+00	1.885E+00	0.600E+00	31.86	
AM-241	432.20Y	1.00	1.353E+01	1.353E+01	0.119E+01	8.81	
AM-243	7380.00Y	1.00	3.194E-01	3.194E-01	1.017E-01	31.83	
ANH-511	1.00E+09Y	1.00	1.259E-01	1.259E-01	0.929E-01	73.83	
	Total Activity :		1.022E+02	1.027E+02			

Grand Total Activity : 1.022E+02 1.027E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.71	72	359	1.05	179.02	171	11	1.99E-02	****	7.16E+00	T
0	92.96	90	358	1.55	185.53	182	7	2.49E-02	75.2	7.26E+00	T
0	186.00	164	365	1.41	371.61	366	12	4.56E-02	49.8	6.17E+00	T
0	209.69	76	324	1.23	419.00	414	10	2.11E-02	91.8	5.72E+00	T
0	609.24	193	100	1.25	1218.27	1213	10	5.35E-02	24.6	2.48E+00	T
0	726.96	61	95	3.15	1453.77	1449	11	1.69E-02	67.1	2.12E+00	T
0	1764.24	30	12	1.44	3529.54	3522	16	8.34E-03	65.5	1.03E+00	T
0	1836.27	22	3	1.41	3673.71	3666	14	6.07E-03	55.8	1.00E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 9-JUL-2009 09:51:59.08

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201873071.CNF;1  *
* Acquisition date  : 9-JUL-2009 08:51:19.  Detector SN#     :             *
* Detector ID       : GAM07                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 01:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 01:00:01.46          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 2-JUL-2009 00:00:00.  Nuclide Library : SOLID        *
* Sample ID         : G1201873071           Analyst initials: MXR1         *
* Batch Number      : 881931                Sample Quantity : 1.51730E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 2-NOV-2008 14:41:14.60MS Isotope      :                *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	3.682E-01	7.337E-02	6.289E-02	5.931E-03	5.855
CO-60	7.374E+00	5.551E-01	9.002E-02	5.266E-03	81.914
CD-109	4.772E+01	4.292E+00	2.102E+00	1.606E-01	22.705
SN-126	4.745E+00	4.268E-01	2.094E-01	1.593E-02	22.659
BA-137M	5.633E+00	4.417E-01	1.238E-01	7.877E-03	45.485
CS-137	5.954E+00	4.680E-01	1.309E-01	8.356E-03	45.485
CE-139	7.764E-02	6.006E-02	7.365E-02	4.823E-03	1.054
TL-208	4.711E-01	1.356E-01	1.124E-01	7.890E-03	4.193
BI-211	2.663E+00	6.580E-01	6.124E-01	4.018E-02	4.348
PB-212	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
PO-212	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
PB-214	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
PO-214	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
PO-216	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212
PO-218	9.262E-01	2.339E-01	2.171E-01	1.818E-02	4.266
AC-228	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
RA-228	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
TH-228	1.331E+00	2.018E-01	1.845E-01	1.491E-02	7.212

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.885E+00	6.004E-01	5.628E-01	6.062E-02	3.349
AM-241	1.353E+01	1.192E+00	3.818E-01	2.899E-02	35.426
AM-243	3.194E-01	1.017E-01	1.259E-01	8.682E-03	2.536
ANH-511	1.259E-01	9.293E-02	9.479E-02	5.616E-03	1.328

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.247E-01		6.608E-01	1.085E+00	7.297E-02	0.299
NA-22	-8.096E-03		5.236E-02	8.442E-02	4.963E-03	-0.096
NA-24	-1.036E-04		8.941E-05	Half-Life too short		
AL-26	1.288E-02		3.861E-02	6.928E-02	3.801E-03	0.186
K-40	5.196E-01		6.208E-01	1.152E+00	7.168E-02	0.451
TI-44	3.128E-01	+	7.823E-02	9.767E-02	6.891E-03	3.203
SC-46	-7.621E-02		9.696E-02	1.485E-01	1.187E-02	-0.513
V-48	1.783E-02		1.348E-01	2.186E-01	1.656E-02	0.082
CR-51	2.993E-01		5.470E-01	9.213E-01	6.376E-02	0.325
MN-52	8.301E-02		1.197E-01	2.183E-01	1.282E-02	0.380
MN-54	4.738E-03		7.601E-02	1.243E-01	9.468E-03	0.038
CO-56	-5.056E-03		8.659E-02	1.402E-01	1.080E-02	-0.036
CO-58	-7.497E-02		7.901E-02	1.193E-01	8.917E-03	-0.628
FE-59	9.180E-02		1.861E-01	3.204E-01	2.406E-02	0.287
ZN-65	-2.741E-01		2.000E-01	3.008E-01	1.947E-02	-0.911
GE-68	-4.716E-01		2.887E+00	4.771E+00	3.258E-01	-0.099
AS-73	-7.070E-01		1.185E+00	1.927E+00	1.272E-01	-0.367
AS-74	-9.255E-02		1.296E-01	2.057E-01	1.280E-02	-0.450
SE-75	-8.727E-03		7.360E-02	1.212E-01	8.150E-03	-0.072
BR-77	1.078E+00		2.068E+00	3.579E+00	2.135E-01	0.301
SR-82	7.426E-02		6.398E-01	1.055E+00	7.604E-02	0.070
RB-83	6.617E-02		1.225E-01	2.123E-01	1.266E-02	0.312
RB-84	-3.667E-02		1.532E-01	2.443E-01	1.940E-02	-0.150
KR-85	1.727E+01		1.382E+01	2.230E+01	1.324E+00	0.775
SR-85	8.162E-02		6.529E-02	1.054E-01	6.255E-03	0.775
RB-86	-9.497E-01		1.392E+00	2.215E+00	1.514E-01	-0.429
Y-88	1.137E-01	+	6.377E-02	1.217E-01	6.629E-03	0.934
ZR-88	-3.081E-02		5.899E-02	9.266E-02	4.902E-03	-0.333
Y-91	6.839E+00		2.269E+01	3.885E+01	2.274E+00	0.176
NB-94	-3.199E-02		6.382E-02	1.013E-01	6.753E-03	-0.316
NB-95	4.730E-02		7.796E-02	1.328E-01	9.465E-03	0.356
NB-95M	1.443E-01		2.101E-01	3.196E-01	2.640E-02	0.451
ZR-95	1.133E-01		1.403E-01	2.418E-01	1.959E-02	0.469
NB-97	1.689E-04		6.048E-05	Half-Life too short		
ZR-97	1.458E-03		8.379E-04	Half-Life too short		
MO-99	2.758E+00		3.359E+00	5.791E+00	8.279E-01	0.476
TC-99M	-1.488E+01		1.416E+01	Half-Life too short		
RH-101	3.477E-03		5.284E-02	8.856E-02	5.902E-03	0.039
RH-102	3.956E-02		6.577E-02	1.087E-01	6.258E-03	0.364

Sample ID : G1201873071 Acquisition date : 9-JUL-2009 08:51:19

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RU-103	-3.235E-02		6.980E-02	1.144E-01	1.449E-02	-0.283
RH-106	-2.528E-01		6.136E-01	9.752E-01	1.169E-01	-0.259
RU-106	-2.528E-01		6.130E-01	9.752E-01	6.130E-02	-0.259
AG-108M	7.341E-02		7.131E-02	1.209E-01	7.325E-03	0.607
AG-110M	1.081E-01		8.647E-02	1.365E-01	9.146E-03	0.792
IN-111	-6.233E-01		2.868E-01	4.256E-01	2.859E-02	-1.464
IN-113M	4.723E-02		8.672E-02	1.444E-01	8.239E-03	0.327
SN-113	4.723E-02		8.672E-02	1.444E-01	8.239E-03	0.327
IN-114M	7.153E-02		2.836E-01	4.272E-01	2.836E-02	0.167
CD-115	2.130E-01		1.808E+00	3.056E+00	1.832E-01	0.070
SN-117M	1.677E-03		5.561E-02	9.451E-02	6.666E-03	0.018
SB-122	8.205E-02		5.115E-01	8.640E-01	5.292E-02	0.095
I-123	-1.432E-05		2.288E-04	Half-Life too short		
TE-123M	-1.273E-03		4.067E-02	6.895E-02	4.886E-03	-0.018
I-124	3.729E-02		3.896E-01	5.944E-01	3.709E-02	0.063
SB-124	-8.578E-02		1.054E-01	1.368E-01	8.471E-03	-0.627
SB-125	-1.887E-02		1.971E-01	3.156E-01	1.819E-02	-0.060
TE-125M	1.229E+01		1.243E+01	2.075E+01	2.130E+00	0.592
I-126	3.226E-02		2.468E-01	3.588E-01	2.295E-02	0.090
SB-126	9.278E-02		1.950E-01	3.038E-01	2.065E-02	0.305
SB-127	-4.450E-01		6.728E-01	1.057E+00	8.169E-02	-0.421
XE-127	2.011E-02		6.279E-02	1.068E-01	7.130E-03	0.188
I-131	9.314E-02		1.140E-01	1.934E-01	1.232E-02	0.482
TE-132	2.445E-02		2.174E-01	3.644E-01	4.952E-02	0.067
BA-133	-4.231E-02		9.453E-02	1.308E-01	1.516E-02	-0.324
I-133	1.098E-05		1.147E-05	Half-Life too short		
CS-134	1.268E-01		9.976E-02	1.758E-01	1.304E-02	0.721
CS-135	-1.096E-01		2.755E-01	4.473E-01	3.725E-02	-0.245
I-135	5.315E+00		1.156E+01	Half-Life too short		
CS-136	-7.661E-02		1.644E-01	2.663E-01	2.002E-02	-0.288
BA-140	-1.421E-02		3.030E-01	5.066E-01	1.650E-01	-0.028
LA-140	-1.005E-01		8.226E-02	9.888E-02	5.733E-03	-1.016
CE-141	-5.040E-02		8.083E-02	1.241E-01	1.004E-02	-0.406
CE-143	9.634E+00		5.704E+00	8.573E+00	1.769E+00	1.124
CE-144	-3.740E-01		3.346E-01	4.974E-01	7.759E-02	-0.752
PM-144	-9.839E-03		6.472E-02	1.055E-01	6.989E-03	-0.093
PR-144	-6.640E-01		4.367E+00	7.122E+00	4.716E-01	-0.093
PM-146	1.391E-02		9.380E-02	1.517E-01	1.292E-02	0.092
ND-147	2.985E-01		6.419E-01	1.106E+00	1.505E-01	0.270
PM-149	-1.865E+00		1.428E+01	2.339E+01	3.390E+00	-0.080
EU-152	-1.355E-01		1.997E-01	2.873E-01	1.938E-02	-0.471
GD-153	1.535E-02		1.148E-01	1.775E-01	1.412E-02	0.086
EU-154	-4.580E-02		1.496E-01	2.358E-01	2.212E-02	-0.194
EU-155	1.421E-01		1.592E-01	2.654E-01	2.241E-02	0.536
TB-160	5.609E-02		3.205E-01	5.256E-01	4.167E-02	0.107
HO-166M	-1.142E-02		1.229E-01	2.011E-01	1.354E-02	-0.057
TM-171	-2.136E+00		3.524E+01	5.762E+01	3.867E+00	-0.037
LU-176	3.208E-02		4.449E-02	7.564E-02	4.862E-03	0.424

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	1.280E+00	+	1.177E+00	1.361E+00	9.112E-02	0.940
LU-177M	-1.054E-01		3.388E-01	5.365E-01	2.908E-02	-0.196
HF-181	-4.113E-02		8.134E-02	1.257E-01	7.283E-03	-0.327
W-181	-4.739E-01		4.520E-01	6.766E-01	4.538E-02	-0.700
TA-182	2.526E-02		2.147E-01	3.607E-01	2.113E-02	0.070
RE-183	4.824E-02		1.707E-01	2.598E-01	1.765E-02	0.186
RE-184	-1.115E-01		3.798E-01	6.214E-01	4.166E-02	-0.180
OS-185	2.726E-02		8.271E-02	1.399E-01	8.864E-03	0.195
RE-188	1.502E-02		2.501E-01	3.965E-01	2.891E-02	0.038
W-188	7.071E-01		1.331E+01	1.931E+01	1.264E+00	0.037
IR-192	3.291E-02		5.713E-02	9.642E-02	6.140E-03	0.341
AU-195	4.923E-02		3.171E-01	5.151E-01	4.128E-02	0.096
TL-200	-1.060E+00		6.273E+00	1.009E+01	5.746E-01	-0.105
TL-201	1.921E+00		2.138E+00	3.344E+00	2.190E-01	0.574
TL-202	-7.685E-02		1.010E-01	1.553E-01	8.651E-03	-0.495
HG-203	6.733E-02		7.388E-02	1.130E-01	7.832E-03	0.596
BI-207	8.285E-02		1.231E-01	2.146E-01	1.492E-02	0.386
TL-207	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
PO-209	1.794E+01		2.057E+01	3.496E+01	2.813E+00	0.513
BI-210	-1.828E+00		3.396E+00	5.587E+00	4.220E-01	-0.327
PB-210	-1.828E+00		3.396E+00	5.587E+00	4.220E-01	-0.327
PO-210	-1.828E+00		3.395E+00	5.587E+00	3.597E-01	-0.327
PB-211	-1.065E+00		2.037E+00	3.015E+00	1.878E+00	-0.353
BI-212	1.200E+00	+	8.121E-01	1.127E+00	9.614E-02	1.065
BI-214	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
PO-215	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
RN-219	4.775E-01		8.398E-01	1.395E+00	1.872E-01	0.342
RN-220	2.311E+01		4.922E+01	8.479E+01	5.152E+00	0.273
RA-223	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
RA-224	5.593E+00		1.484E+00	2.484E+00	1.670E-01	2.252
RA-226	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
AC-227	5.496E-01		6.550E-01	1.120E+00	1.608E-01	0.491
TH-227	5.496E-01		6.571E-01	1.120E+00	1.930E-01	0.491
TH-229	-8.969E-02		8.033E-01	1.345E+00	8.945E-02	-0.067
TH-230	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
PA-231	-7.883E-01		2.730E+00	4.436E+00	6.268E-01	-0.178
TH-231	-2.186E-01		1.201E+00	1.947E+00	3.249E-01	-0.112
U-231	-5.597E-02		4.613E-01	6.599E-01	5.204E-02	-0.085
PA-233	-7.700E-02		1.131E-01	1.785E-01	1.198E-02	-0.431
PA-234	-3.701E-01		8.448E-01	1.319E+00	2.428E-01	-0.281
PA-234M	1.554E+01		1.727E+01	2.927E+01	3.016E+00	0.531
TH-234	8.022E-02		1.698E+00	2.528E+00	4.338E-01	0.032
U-234	8.307E-01	+	2.148E-01	3.483E-01	2.830E-02	2.385
U-235	4.902E-03		3.208E-01	5.107E-01	8.796E-02	0.010
NP-236	-5.327E-02		1.244E-01	2.004E-01	1.389E-02	-0.266
NP-237	6.807E+00		1.606E+00	1.107E+00	2.432E-01	6.148
U-238	8.022E-02		1.698E+00	2.528E+00	4.338E-01	0.032
NP-239	-1.367E-01		3.069E-01	4.564E-01	4.135E-02	-0.299

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.683E-02		1.429E-01	2.290E-01	1.890E-02	-0.073
CM-247	1.226E-02		7.487E-02	1.221E-01	6.533E-03	0.100
CF-249	-1.435E-03		8.213E-02	1.329E-01	7.112E-03	-0.011
CF-251	1.337E-01		1.969E-01	3.412E-01	2.247E-02	0.392

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201873071          *
* Acquisition date  :  9-JUL-2009 08:51:19 Detector SN#     :               *
* Detector ID       : GAM07                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 01:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 01:00:01.46     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       :  2-JUL-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201873071          Analyst initials: MXR1           *
* Batch Number      : 881931               Sample Quantity : 1.5173E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  2-NOV-2008 14:41:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	3.682E-01	7.190E-02	3.372E-02	3.668E-02
CO-60	7.374E+00	5.440E-01	4.548E-02	2.776E-01
CD-109	4.772E+01	4.206E+00	1.136E+00	2.146E+00
SN-126	4.745E+00	4.182E-01	1.132E-01	2.134E-01
BA-137M	5.633E+00	4.329E-01	6.372E-02	2.209E-01
CS-137	5.954E+00	4.586E-01	6.735E-02	2.340E-01
CE-139	7.764E-02	5.886E-02	3.921E-02	3.003E-02
TL-208	4.711E-01	1.329E-01	5.799E-02	6.782E-02
BI-211	2.663E+00	6.449E-01	3.202E-01	3.290E-01
PB-212	1.331E+00	1.977E-01	9.739E-02	1.009E-01
PO-212	1.331E+00	1.977E-01	9.739E-02	1.009E-01
PB-214	9.262E-01	2.293E-01	1.135E-01	1.170E-01
PO-214	9.262E-01	2.293E-01	1.135E-01	1.170E-01
PO-216	1.331E+00	1.977E-01	9.739E-02	1.009E-01
PO-218	9.262E-01	2.293E-01	1.135E-01	1.170E-01
AC-228	1.885E+00	5.884E-01	2.872E-01	3.002E-01
RA-228	1.885E+00	5.884E-01	2.872E-01	3.002E-01
TH-228	1.331E+00	1.977E-01	9.738E-02	1.009E-01
TH-232	1.885E+00	5.884E-01	2.872E-01	3.002E-01
AM-241	1.353E+01	1.168E+00	2.082E-01	5.961E-01
AM-243	3.194E-01	9.963E-02	6.831E-02	5.083E-02
ANH-511	1.259E-01	9.107E-02	4.909E-02	4.647E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	3.247E-01	6.476E-01	5.628E-01	3.304E-01	NOT IDENT.
NA-22	-8.096E-03	5.131E-02	4.270E-02	2.618E-02	NOT IDENT.
NA-24	-1.036E+02	1.752E+02	0.000E+00	8.941E+01	SHORT HLIF
AL-26	1.288E-02	3.784E-02	3.472E-02	1.930E-02	NOT IDENT.
K-40	5.196E-01	6.084E-01	5.806E-01	3.104E-01	NOT IDENT.

TI-44	3.128E-01	7.666E-02	5.292E-02	3.911E-02	FAIL ABUN
SC-46	-7.621E-02	9.502E-02	7.583E-02	4.848E-02	NOT IDENT.
V-48	1.783E-02	1.321E-01	1.113E-01	6.740E-02	NOT IDENT.
CR-51	2.993E-01	5.361E-01	4.827E-01	2.735E-01	NOT IDENT.
MN-52	8.301E-02	1.173E-01	1.101E-01	5.983E-02	FAIL ABUN
MN-54	4.738E-03	7.449E-02	6.355E-02	3.801E-02	NOT IDENT.
CO-56	-5.056E-03	8.486E-02	7.167E-02	4.329E-02	NOT IDENT.
CO-58	-7.497E-02	7.743E-02	6.106E-02	3.950E-02	NOT IDENT.
FE-59	9.180E-02	1.823E-01	1.627E-01	9.303E-02	NOT IDENT.
ZN-65	-2.741E-01	1.960E-01	1.527E-01	9.999E-02	NOT IDENT.
GE-68	-4.716E-01	2.829E+00	2.424E+00	1.443E+00	NOT IDENT.
AS-73	-7.070E-01	1.161E+00	1.053E+00	5.923E-01	NOT IDENT.
AS-74	-9.255E-02	1.270E-01	1.061E-01	6.481E-02	NOT IDENT.
SE-75	-8.727E-03	7.213E-02	6.379E-02	3.680E-02	FAIL ABUN
BR-77	1.078E+00	2.027E+00	1.853E+00	1.034E+00	FAIL ABUN
SR-82	7.426E-02	6.270E-01	5.407E-01	3.199E-01	NOT IDENT.
RB-83	6.617E-02	1.201E-01	1.099E-01	6.125E-02	NOT IDENT.
RB-84	-3.667E-02	1.501E-01	1.248E-01	7.660E-02	NOT IDENT.
KR-85	1.727E+01	1.354E+01	1.155E+01	6.909E+00	NOT IDENT.
SR-85	8.162E-02	6.399E-02	5.456E-02	3.265E-02	NOT IDENT.
RB-86	-9.497E-01	1.364E+00	1.126E+00	6.960E-01	NOT IDENT.
Y-88	1.137E-01	6.250E-02	6.098E-02	3.189E-02	FAIL ABUN
ZR-88	-3.081E-02	5.781E-02	4.830E-02	2.950E-02	NOT IDENT.
Y-91	6.839E+00	2.224E+01	1.968E+01	1.135E+01	NOT IDENT.
NB-94	-3.199E-02	6.254E-02	5.204E-02	3.191E-02	NOT IDENT.
NB-95	4.730E-02	7.640E-02	6.806E-02	3.898E-02	NOT IDENT.
NB-95M	1.443E-01	2.059E-01	1.687E-01	1.051E-01	NOT IDENT.
ZR-95	1.133E-01	1.375E-01	1.240E-01	7.014E-02	NOT IDENT.
NB-97	1.689E+02	1.185E+02	0.000E+00	6.048E+01	SHORT HLIF
ZR-97	1.458E+03	1.642E+03	0.000E+00	8.379E+02	SHORT HLIF
MO-99	2.758E+00	3.292E+00	2.971E+00	1.679E+00	NOT IDENT.
TC-99M	-1.488E+07	2.776E+07	0.000E+00	1.416E+07	SHORT HLIF
RH-101	3.477E-03	5.179E-02	4.695E-02	2.642E-02	NOT IDENT.
RH-102	3.956E-02	6.446E-02	5.638E-02	3.289E-02	NOT IDENT.
RU-103	-3.235E-02	6.841E-02	5.926E-02	3.490E-02	FAIL ABUN
RH-106	-2.528E-01	6.013E-01	5.025E-01	3.068E-01	FAIL ABUN
RU-106	-2.528E-01	6.008E-01	5.025E-01	3.065E-01	FAIL ABUN
AG-108M	7.341E-02	6.989E-02	6.287E-02	3.566E-02	NOT IDENT.
AG-110M	1.081E-01	8.474E-02	7.026E-02	4.324E-02	NOT IDENT.
IN-111	-6.233E-01	2.810E-01	2.245E-01	1.434E-01	NOT IDENT.
IN-113M	4.723E-02	8.498E-02	7.527E-02	4.336E-02	NOT IDENT.
SN-113	4.723E-02	8.498E-02	7.527E-02	4.336E-02	NOT IDENT.
IN-114M	7.153E-02	2.780E-01	2.267E-01	1.418E-01	NOT IDENT.
CD-115	2.130E-01	1.771E+00	1.582E+00	9.038E-01	NOT IDENT.
SN-117M	1.677E-03	5.450E-02	5.037E-02	2.781E-02	NOT IDENT.
SB-122	8.205E-02	5.013E-01	4.463E-01	2.558E-01	NOT IDENT.
I-123	-1.432E+01	4.485E+02	0.000E+00	2.288E+02	SHORT HLIF
TE-123M	-1.273E-03	3.986E-02	3.674E-02	2.034E-02	NOT IDENT.
I-124	3.729E-02	3.818E-01	3.065E-01	1.948E-01	NOT IDENT.
SB-124	-8.578E-02	1.033E-01	6.870E-02	5.268E-02	FAIL ABUN
SB-125	-1.887E-02	1.932E-01	1.642E-01	9.857E-02	NOT IDENT.
TE-125M	1.229E+01	1.218E+01	1.116E+01	6.215E+00	NOT IDENT.
I-126	3.226E-02	2.419E-01	1.846E-01	1.234E-01	NOT IDENT.
SB-126	9.278E-02	1.911E-01	1.560E-01	9.751E-02	FAIL ABUN
SB-127	-4.450E-01	6.594E-01	5.435E-01	3.364E-01	NOT IDENT.
XE-127	2.011E-02	6.153E-02	5.656E-02	3.139E-02	NOT IDENT.
I-131	9.314E-02	1.118E-01	1.010E-01	5.702E-02	NOT IDENT.
TE-132	2.445E-02	2.130E-01	1.925E-01	1.087E-01	NOT IDENT.
BA-133	-4.231E-02	9.264E-02	6.833E-02	4.726E-02	FAIL ABUN
I-133	1.098E+01	2.248E+01	0.000E+00	1.147E+01	SHORT HLIF
CS-134	1.268E-01	9.777E-02	9.001E-02	4.988E-02	NOT IDENT.
CS-135	-1.096E-01	2.700E-01	2.354E-01	1.378E-01	NOT IDENT.
I-135	5.315E+06	2.266E+07	0.000E+00	1.156E+07	SHORT HLIF
CS-136	-7.661E-02	1.611E-01	1.354E-01	8.219E-02	NOT IDENT.
BA-140	-1.421E-02	2.970E-01	2.620E-01	1.515E-01	NOT IDENT.
LA-140	-1.005E-01	8.062E-02	4.972E-02	4.113E-02	NOT IDENT.
CE-141	-5.040E-02	7.922E-02	6.626E-02	4.042E-02	NOT IDENT.
CE-143	9.634E+00	5.590E+00	4.502E+00	2.852E+00	FAIL ABUN
CE-144	-3.740E-01	3.279E-01	2.662E-01	1.673E-01	NOT IDENT.
PM-144	-9.839E-03	6.342E-02	5.423E-02	3.236E-02	NOT IDENT.
PR-144	-6.640E-01	4.280E+00	3.660E+00	2.184E+00	NOT IDENT.
PM-146	1.391E-02	9.193E-02	7.878E-02	4.690E-02	NOT IDENT.
ND-147	2.985E-01	6.290E-01	5.721E-01	3.209E-01	FAIL ABUN
PM-149	-1.865E+00	1.400E+01	1.229E+01	7.142E+00	NOT IDENT.
EU-152	-1.355E-01	1.957E-01	1.503E-01	9.983E-02	FAIL ABUN
GD-153	1.535E-02	1.125E-01	9.572E-02	5.738E-02	NOT IDENT.
EU-154	-4.580E-02	1.466E-01	1.193E-01	7.481E-02	FAIL ABUN
EU-155	1.421E-01	1.560E-01	1.428E-01	7.958E-02	FAIL ABUN

TB-160	5.609E-02	3.141E-01	2.685E-01	1.602E-01	FAIL ABUN
HO-166M	-1.142E-02	1.205E-01	1.033E-01	6.147E-02	NOT IDENT.
TM-171	-2.136E+00	3.454E+01	3.134E+01	1.762E+01	FAIL ABUN
LU-176	3.208E-02	4.360E-02	3.968E-02	2.225E-02	FAIL ABUN
LU-177	1.280E+00	1.154E+00	7.209E-01	5.887E-01	FAIL ABUN
LU-177M	-1.054E-01	3.321E-01	2.793E-01	1.694E-01	FAIL ABUN
HF-181	-4.113E-02	7.971E-02	6.521E-02	4.067E-02	NOT IDENT.
W-181	-4.739E-01	4.429E-01	3.682E-01	2.260E-01	NOT IDENT.
TA-182	2.526E-02	2.104E-01	1.826E-01	1.073E-01	NOT IDENT.
RE-183	4.824E-02	1.673E-01	1.384E-01	8.536E-02	FAIL ABUN
RE-184	-1.115E-01	3.722E-01	3.275E-01	1.899E-01	FAIL ABUN
OS-185	2.726E-02	8.105E-02	7.203E-02	4.135E-02	FAIL ABUN
RE-188	1.502E-02	2.451E-01	2.114E-01	1.250E-01	NOT IDENT.
W-188	7.071E-01	1.304E+01	1.014E+01	6.655E+00	NOT IDENT.
IR-192	3.291E-02	5.598E-02	5.053E-02	2.856E-02	FAIL ABUN
AU-195	4.923E-02	3.107E-01	2.776E-01	1.585E-01	FAIL ABUN
TL-200	-1.060E+00	6.147E+00	5.271E+00	3.136E+00	NOT IDENT.
TL-201	1.921E+00	2.095E+00	1.780E+00	1.069E+00	NOT IDENT.
TL-202	-7.685E-02	9.900E-02	8.072E-02	5.051E-02	NOT IDENT.
HG-203	6.733E-02	7.240E-02	5.943E-02	3.694E-02	NOT IDENT.
BI-207	8.285E-02	1.206E-01	1.090E-01	6.153E-02	FAIL ABUN
TL-207	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
PO-209	1.794E+01	2.016E+01	1.785E+01	1.029E+01	NOT IDENT.
BI-210	-1.828E+00	3.328E+00	3.063E+00	1.698E+00	NOT IDENT.
PB-210	-1.828E+00	3.328E+00	3.063E+00	1.698E+00	NOT IDENT.
PO-210	-1.828E+00	3.327E+00	3.063E+00	1.697E+00	NOT IDENT.
PB-211	-1.065E+00	1.996E+00	1.570E+00	1.018E+00	NOT IDENT.
BI-212	1.200E+00	7.959E-01	5.786E-01	4.061E-01	FAIL ABUN
BI-214	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
PO-215	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
RN-219	4.775E-01	8.230E-01	7.268E-01	4.199E-01	NOT IDENT.
RN-220	2.311E+01	4.824E+01	4.383E+01	2.461E+01	NOT IDENT.
RA-223	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
RA-224	5.593E+00	1.454E+00	1.311E+00	7.420E-01	NOT IDENT.
RA-226	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
AC-227	5.496E-01	6.419E-01	5.902E-01	3.275E-01	NOT IDENT.
TH-227	5.496E-01	6.439E-01	5.902E-01	3.285E-01	FAIL ABUN
TH-229	-8.969E-02	7.872E-01	7.134E-01	4.016E-01	FAIL ABUN
TH-230	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
PA-231	-7.883E-01	2.676E+00	2.331E+00	1.365E+00	NOT IDENT.
TH-231	-2.186E-01	1.177E+00	1.020E+00	6.006E-01	FAIL ABUN
U-231	-5.597E-02	4.521E-01	3.559E-01	2.307E-01	FAIL ABUN
PA-233	-7.700E-02	1.108E-01	9.357E-02	5.654E-02	FAIL ABUN
PA-234	-3.701E-01	8.279E-01	6.725E-01	4.224E-01	FAIL ABUN
PA-234M	1.554E+01	1.693E+01	1.490E+01	8.637E+00	NOT IDENT.
TH-234	8.022E-02	1.664E+00	1.376E+00	8.492E-01	FAIL ABUN
U-234	8.307E-01	2.105E-01	1.796E-01	1.074E-01	FAIL ABUN
U-235	4.902E-03	3.144E-01	2.728E-01	1.604E-01	FAIL ABUN
NP-236	-5.327E-02	1.219E-01	1.068E-01	6.218E-02	NOT IDENT.
NP-237	6.807E+00	1.574E+00	5.986E-01	8.032E-01	NOT IDENT.
U-238	8.022E-02	1.664E+00	1.376E+00	8.492E-01	FAIL ABUN
NP-239	-1.367E-01	3.008E-01	2.450E-01	1.535E-01	FAIL ABUN
CM-243	-1.683E-02	1.401E-01	1.233E-01	7.147E-02	FAIL ABUN
CM-247	1.226E-02	7.338E-02	6.359E-02	3.744E-02	FAIL ABUN
CF-249	-1.435E-03	8.049E-02	6.929E-02	4.107E-02	NOT IDENT.
CF-251	1.337E-01	1.930E-01	1.814E-01	9.845E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	639.0174
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46.50	639.0174
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49.72	749.6448
51.35	835.9173
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52.97	962.0948
53.15	956.6166
53.44	966.1468
54.07	914.8989
56.28	967.2495
56.28	967.2569
57.37	1033.7673
57.53	1035.6414
57.53	1035.6466
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57.98	773.6828
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59.32	776.0551
59.40	776.1956
59.54	776.4409
59.72	776.7575
60.01	777.2660
61.10	500.2469
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61.30	500.4692
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63.29	440.7736
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65.20	512.9211
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66.72	486.5942
66.83	486.7090
66.91	486.7920
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67.20	448.5263
67.75	459.2005
67.85	459.2970
68.90	493.9028
68.90	493.9028
69.30	505.5185
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70.82	564.3395
70.83	564.3507
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72.87	518.9315
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77.11	528.9362

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83.78	525.0756
83.78	525.0756
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84.40	536.6811
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86.72	622.6771
86.79	622.7522
86.94	622.9205
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88.36	570.5942
88.47	570.7040
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91.11	369.4756
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92.38	304.8419
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94.67	307.6260
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94.90	315.7588
94.90	315.7588
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98.44	277.3059
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99.55	306.8800
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100.00	292.0175
100.10	297.4558
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103.76	293.7763
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105.31	268.4113
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109.28	253.6591
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111.00	288.3050

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121.78	283.9743
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144.24	254.7612
144.24	254.7612
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154.21	276.5070
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163.89	252.4245
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171.28	265.1259
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172.10	265.1152
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176.60	247.6668
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198.60	259.8863
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208.81	233.8829

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209.75	234.0972
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228.18	240.0975
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236.00	273.1003
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238.63	351.6852
238.63	351.6852
238.63	351.6852
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241.98	234.8989
241.98	234.8989
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252.85	218.4532
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256.20	198.8089
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269.46	218.5757
269.46	218.5757
269.46	218.5757
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277.60	226.8901
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285.90	209.5965
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286.10	201.7183
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291.72	201.8078
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295.21	197.1692
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323.87	195.2813
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338.28	183.9109
338.28	183.9109
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338.32	183.9164
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367.94	176.0750
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374.96	176.8748
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387.95	191.0715
388.63	204.9594
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391.69	174.4927
392.90	194.8536
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445.03	173.4948
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511.85	138.0774
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513.99	101.7711
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537.32	105.1104
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552.65	122.6124
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568.70	107.6356
569.32	104.8578
569.50	104.8688
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574.00	114.4703
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578.91	108.1494
579.30	114.4397
583.14	112.1290
585.48	110.0472
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593.00	104.1160
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600.56	116.8170
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602.71	122.2276
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609.31	109.6487
609.31	109.6487

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612.46	120.9395
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621.84	108.3376
621.84	108.3376
631.29	107.8191
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633.10	111.7576
634.78	102.1984
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656.30	118.3785
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657.90	0.0000
661.65	124.8219
661.65	124.8219
664.57	82.9891
666.33	89.5630
666.33	89.5630
675.00	108.8429
677.61	82.4558
685.20	113.2340
692.80	115.5575
695.00	111.7061
696.49	102.8701
696.49	102.8701
697.00	94.9758
697.49	92.0260
698.33	100.9666
698.50	103.9438
699.00	105.9446
702.63	107.0877
706.10	107.2354
706.58	0.0000
706.67	111.2344
709.31	75.5584
711.68	107.4727
713.82	103.5785
717.42	97.7416
720.50	87.0173
721.93	98.2469
722.20	98.2565
722.78	93.2809
722.78	93.2809
722.89	94.9513
722.95	94.9536
723.30	94.9675
724.18	103.3333
727.18	97.1113
733.00	95.3247
735.90	107.4833
739.58	86.5102
742.81	98.7034
744.21	107.8255
747.13	90.7954
751.79	107.1257
752.31	105.1248
753.82	115.2998
755.35	90.0647
756.15	97.1789
756.87	112.3929
763.93	126.9043
765.79	98.5440
766.41	95.5192
766.84	99.6006
768.36	105.7570
768.36	105.7570
768.36	105.7570
768.36	105.7570
776.49	98.9348
778.00	96.9506
778.57	97.9898
778.89	99.0224
783.80	87.9505

785.46	89.0284
792.07	104.6284
795.84	92.4456
796.30	93.4883
801.93	111.1772
805.60	101.0146
810.29	99.1195
810.76	112.5606
815.85	99.3164
817.79	96.2786
818.51	102.5143
819.60	111.8786
826.30	105.9122
828.27	114.2969
831.60	85.3012
831.96	93.6365
834.83	97.8945
836.80	0.0000
846.75	113.9843
848.13	118.2252
856.28	0.0000
856.80	133.2663
860.37	105.0610
867.32	111.6261
867.82	112.6974
871.10	113.8773
873.19	118.1769
874.81	115.0754
875.33	0.0000
876.40	120.4181
879.36	113.1363
880.27	116.3433
880.51	120.5823
881.50	129.0859
883.24	110.1039
884.67	128.1637
889.25	142.1493
896.60	128.6689
898.02	134.0473
899.00	146.8608
903.28	141.5856
911.07	138.8931
911.07	138.8931
911.07	138.8931
919.63	159.6330
920.93	150.0557
925.00	141.6647
925.24	147.0409
926.50	141.7324
934.06	146.3793
934.06	146.3793
934.06	146.3793
934.06	146.3793
935.52	123.8356
937.48	156.2361
944.10	127.4089
946.00	149.0946
949.00	137.3405
962.29	146.5983
964.01	137.6201
966.15	132.2769
968.20	141.4258
969.11	110.6345
969.11	110.6345
969.11	110.6345
977.42	121.1000
980.50	120.1218
983.50	121.3250
989.30	118.2542
996.32	132.7691
1001.03	110.9816
1001.68	106.6076
1004.76	138.4228
1021.30	0.0000
1024.50	0.0000
1034.80	110.0663
1037.82	111.0889
1038.57	122.2246

1038.76	0.0000
1045.16	109.4678
1046.59	113.2283
1048.07	104.9213
1050.47	95.6991
1050.47	95.6991
1063.62	93.2658
1076.63	112.3340
1077.35	105.8042
1085.78	103.2414
1099.22	93.2677
1112.02	95.4889
1112.84	94.5638
1115.52	129.6528
1120.29	81.4928
1120.29	81.4928
1120.29	81.4928
1120.29	81.4928
1120.51	66.3342
1121.28	72.9833
1124.00	0.0000
1129.67	66.5023
1131.51	0.0000
1147.95	0.0000
1167.94	64.1748
1173.22	62.4795
1175.09	62.6459
1177.93	61.0438
1189.05	42.4692
1204.90	34.8911
1205.75	32.9610
1213.00	38.8493
1221.42	28.2271
1230.97	36.1012
1235.34	33.2114
1236.41	0.0000
1238.11	24.4375
1238.11	24.4375
1238.11	24.4375
1238.11	24.4375
1238.25	27.3711
1246.25	12.7334
1260.41	0.0000
1271.85	28.5882
1274.45	26.6331
1274.54	24.6613
1291.56	21.7923
1298.22	0.0000
1312.09	26.8792
1325.50	23.9697
1325.50	23.9697
1332.49	24.0098
1333.61	13.7238
1360.21	20.1400
1362.66	0.0000
1365.15	13.1063
1368.21	22.1952
1368.53	0.0000
1376.25	14.1510
1377.67	18.2000
1377.67	18.2000
1377.67	18.2000
1377.67	18.2000
1384.27	16.2025
1394.10	23.3435
1395.20	19.2891
1407.95	15.2728
1434.06	12.2905
1436.60	17.4213
1457.56	0.0000
1460.81	19.5760
1489.15	15.5511
1509.49	11.4548
1596.49	23.3320
1620.62	7.4606
1678.03	0.0000
1691.02	16.2128
1691.02	16.2128

1706.46	0.0000
1750.46	0.0000
1764.49	5.6380
1764.49	5.6380
1764.49	5.6380
1764.49	5.6380
1770.23	13.1694
1771.40	13.1724
1791.20	0.0000
1808.65	6.6321
1836.01	11.6647

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201873071

Total Uranium Activity	2.4094E-01	ug/g
Total Uranium Counting Unc.	4.9539E+00	ug/g
Total Uranium Tpu	2.5275E-06	ug/g
Total Uranium Mda	4.0966E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881931                    SAMPLE ID   : G1201873071     *
*   ANALYST       : MXR1                      DETECTOR    : GAM07           *
*   SAMPLE DATE   :  2-JUL-2009 00:00:00.00   COUNT TIME  :    0 01:00:00.00 *
*   ANALYSIS DATE:  9-JUL-2009 08:51:19.80    SAMPLE ALQT:  151.730 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 3.100E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.157E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 6.206E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 3.042E+00
```

Radiochemistry Batch Checklist, Rev 9

Batch# 883020 Product: H3 Date: 7/16/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Diana Marie [illegible]

Secondary Review Performed By: [illegible]

LANL 7-22-09

LANL 7/22/09

Tritium Que Sheet

13-JUL-09

Batch #: 883020 **Analyst:** KXK2 **First Client Due Date** 22-JUL-09 **Internal Due Date:** 11-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** ~~0~~ KKG 7/13/09 **Expiration Date:** ——— **Vol:** ——

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.2

Prep Date: 7/10/09 **Initials:** KXK2 **Pipet ID:** 2970968 **Witness:** MSP 7/13/09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Total Moisture ~~Dist Vol (mL)~~ KKG 7/13/09
232347001-1	CAMO-09-10462	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-2	1		382.65	357.78	24.87
232347002-1	CAMO-09-10460	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-3	2		451.25	413.80	37.45
232347003-1	CAMO-09-10461	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-4	3		524.03	463.77	60.26
232347004-1	CAMO-09-10467	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6-5	4		293.05	279.86	13.19
232582001-1	CAMO-09-10464	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	6-6	5		480.42	448.23	32.19
232582002-1	CAMO-09-10465	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	6-7	6	KKG 7/14/09	492.49	408.94	20.62
232585001-1	CAMO-09-6605	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-1	7		445.56	416.15	29.41
232585002-1	CAMO-09-6603	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-2	8		401.80	372.87	28.93
232585003-1	CAMO-09-6604	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-3	9		475.14	425.73	49.41
232591001-1	CAMO-09-9946	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-4	10		665.38	541.44	124.54
232664001-1	CAMO-09-9942	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-5	11		416.90	367.71	49.19
232664002-1	CAMO-09-9941	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-6	12		502.20	447.96	54.24
232664003-1	CAMO-09-9943	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-7	13		521.28	449.34	71.94
232664004-1	CAMO-09-10030	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-8	14		480.98	432.88	48.10
232664005-1	CAMO-09-9989	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-9	15		573.89	478.62	95.27
1201875586-1	MB for batch 883020	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	41-10	16		40.00	0	40.00
1201875587-1	~~CAMO-09-10463(232347001DUP)~~ CAMO-09-10462(232347003DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	22-JUN-09	10	41-11	8		524.03	463.77	60.26
1201875588-1	LCS for batch 883020	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	27-1	17		40.00	0	40.00

Bkg Rack #: 6-1

daitier

1509

Comments:

Bkg prepared with dead water? Yes/No

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, ~~LS6000 (Brown)~~ 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069128, Silver 7060656*

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Econscint Ultra)*

Data Reviewed By: Nana Manetta

GEL Laboratories LLC, Radiochemistry Division

DATE	7/10/2009	INITIALS	KXK2		BATCH NUMBER	883020

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232347001	382.65	0.065	24.87	357.78	10	602
232347002	451.25	0.083	37.45	413.80	10	18
232347003	524.03	0.115	60.26	463.77	10	11
232347004	293.05	0.045	13.19	279.86	10	722
232582001	480.42	0.067	32.19	448.23	10	521
232582002	429.56	0.048	20.62	408.94	10	908
232585001	445.56	0.066	29.41	416.15	10	200
232585002	401.80	0.072	28.93	372.87	10	55
232585003	475.14	0.104	49.41	425.73	10	40
232591001	665.98	0.187	124.54	541.44	10	50
232664001	416.90	0.118	49.19	367.71	10	85
232664002	502.20	0.108	54.24	447.96	10	812
232664003	521.28	0.138	71.94	449.34	10	62
232664004	480.98	0.100	48.10	432.88	10	49
232664005	573.89	0.166	95.27	478.62	10	614
MB			0.00	0.00	10	74
LCS			0.00	0.00	10	10

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.5

Batch : 883020
Analyst : KXK2
Prep Date : 7/10/2009

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2545.47
LCS Volume Added: 0.20

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL Ecoscint Ultra

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1.0 ml Stdev : +/- 0.005480 ml
Pipet, 5.0 ml Stdev : +/- 0.025729 ml

Procedure Code : LSC_VH3S
Parmname : Tritium
Required MDC : 250 pCi/L
Halflife of Tritium : 12.28 years

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232347001.1	382.65	0.0249	0.0100	2.5729E-05	357.78	6.50%	1	6/22/2009 12:00
2	232347002.1	451.25	0.0375	0.0100	2.5729E-05	413.80	8.30%	2	6/22/2009 12:00
3	232347003.1	524.03	0.0603	0.0100	2.5729E-05	463.77	11.50%	3	6/22/2009 12:00
4	232347004.1	293.05	0.0132	0.0100	2.5729E-05	279.86	4.50%	4	6/22/2009 12:00
5	232582001.1	480.42	0.0322	0.0100	2.5729E-05	448.23	6.70%	5	6/25/2009 12:00
6	232582002.1	429.56	0.0206	0.0100	2.5729E-05	408.94	4.80%	6	6/25/2009 12:00
7	232585001.1	445.56	0.0294	0.0100	2.5729E-05	416.15	6.60%	7	6/25/2009 12:00
8	232585002.1	401.80	0.0289	0.0100	2.5729E-05	372.87	7.20%	8	6/25/2009 12:00
9	232585003.1	475.14	0.0494	0.0100	2.5729E-05	425.73	10.40%	9	6/25/2009 12:00
10	232591001.1	665.38	0.1245	0.0100	2.5729E-05	541.44	18.63%	10	6/25/2009 12:00
11	232664001.1	416.90	0.0492	0.0100	2.5729E-05	367.71	11.80%	11	6/26/2009 12:00
12	232664002.1	502.20	0.0542	0.0100	2.5729E-05	447.96	10.80%	12	6/26/2009 12:00
13	232664003.1	521.28	0.0719	0.0100	2.5729E-05	449.34	13.80%	13	6/26/2009 12:00
14	232664004.1	480.98	0.0481	0.0100	2.5729E-05	432.88	10.00%	14	6/26/2009 12:00
15	232664005.1	573.89	0.0953	0.0100	2.5729E-05	478.62	16.60%	15	6/26/2009 12:00
16	1201875586.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	16	7/10/2009 0:00
17	1201875587.1	524.03	0.0603	0.0100	2.5729E-05	463.77	11.50%	3	6/22/2009 12:00
18	1201875588.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	17	7/10/2009 0:00

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	6-2	95	129.2	7.93	6.06	95	7/14/2009 18:04	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2644	0.00792	6-1	7/14/2009 16:25
2	6-3	95	132.5	11.58	6.06	95	7/14/2009 19:43	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2585	0.00792	6-1	7/14/2009 16:25
3	6-4	95	132	12.78	6.06	95	7/14/2009 21:21	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2594	0.00792	6-1	7/14/2009 16:25
4	6-5	95	129.8	6.93	6.06	95	7/14/2009 22:59	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2633	0.00792	6-1	7/14/2009 16:25
5	6-6	95	133.6	9.14	6.06	95	7/15/2009 0:38	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2565	0.00792	6-1	7/14/2009 16:25
6	6-7	95	136.8	8.04	6.06	95	7/15/2009 2:16	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2508	0.00792	6-1	7/14/2009 16:25
7	41-1	95	138.1	6.61	6.06	95	7/15/2009 5:08	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2484	0.00792	6-1	7/14/2009 16:25
8	41-2	60	133.7	5.72	6.06	95	7/15/2009 7:41	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2564	0.00792	6-1	7/14/2009 16:25
9	41-3	60	128.9	7.18	6.06	95	7/15/2009 8:43	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2649	0.00792	6-1	7/14/2009 16:25
10	41-4	60	128.5	6.6	6.06	95	7/15/2009 9:46	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2656	0.00792	6-1	7/14/2009 16:25
11	41-5	60	129.1	6.02	6.06	95	7/15/2009 10:48	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2645	0.00792	6-1	7/14/2009 16:25
12	41-6	60	130.5	7.48	6.06	95	7/15/2009 11:51	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2621	0.00792	6-1	7/14/2009 16:25
13	41-7	60	128.4	6.85	6.06	95	7/15/2009 12:53	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2658	0.00792	6-1	7/14/2009 16:25
14	41-8	60	128.7	7.33	6.06	95	7/15/2009 13:56	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2652	0.00792	6-1	7/14/2009 16:25
15	41-9	60	129.3	6.7	6.06	95	7/15/2009 14:58	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2642	0.00792	6-1	7/14/2009 16:25
16	41-10	60	128.8	5.32	6.06	95	7/15/2009 16:01	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2651	0.00792	6-1	7/14/2009 16:25
17	41-11	60	132.3	12.07	6.06	95	7/15/2009 17:03	0.996	LSCSILVER	8/6/2008	8/31/2009	0.2589	0.00792	6-1	7/14/2009 16:25
18	29-1	15	130.3	42.87	6.06	95	7/15/2009 18:05	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2624	0.00792	6-1	7/14/2009 16:25

1512

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	142.2958	100.4620	250	206.3234	**319.7335**	0.205	1.870	0.384	65.6136	69.2895		SAMPLE				
2	145.5156	102.7353	250	210.9921	**965.1686**	0.079	5.520	0.431	75.3445	100.9729		SAMPLE				
3	145.0171	102.3833	250	210.2692	**1170.9623**	0.067	6.720	0.445	77.5983	112.5729		SAMPLE				
4	142.8712	100.8683	250	207.1578	**149.3545**	0.425	0.870	0.370	63.4807	64.3274		SAMPLE				
5	146.5684	103.4785	250	212.5185	**542.4323**	0.130	3.080	0.400	70.4457	79.9366		SAMPLE				
6	149.9428	105.8609	250	217.4113	**356.7346**	0.195	1.980	0.385	69.4109	73.7237		SAMPLE				
7	151.3714	106.8695	250	219.4827	**100.0371**	0.664	0.550	0.365	66.4240	66.7884		SAMPLE				
8	168.7009	117.6923	250	244.1968	**-59.9234**	1.173	-0.340	0.399	70.3046	70.3049		SAMPLE				
9	161.3397	113.9072	250	236.3432	**191.0462**	0.383	1.120	0.428	73.0612	74.2629		SAMPLE				
10	160.9146	113.6071	250	235.7206	**91.8689**	0.772	0.540	0.417	70.9229	71.2110		SAMPLE				
11	161.5311	114.0423	250	236.6236	**-6.8312**	10.128	-0.040	0.405	69.1863	69.1866		SAMPLE				
12	163.0536	115.1173	250	238.8540	**244.7925**	0.306	1.420	0.434	74.8368	76.7543		SAMPLE				
13	160.7870	113.5170	250	235.5336	**134.2942**	0.534	0.790	0.422	71.7112	72.3186		SAMPLE				
14	161.1067	113.7427	250	236.0020	**216.3200**	0.340	1.270	0.431	73.4511	74.9803		SAMPLE				
15	161.7504	114.1972	250	236.9449	**109.4472**	0.655	0.640	0.419	71.8323	72.0368		SAMPLE				
16	160.8795	113.5823	250	235.6691	**-125.8670**	0.528	-0.740	0.390	66.4129	66.4132		MB				
17	165.1751	116.6150	250	241.9617	**1049.5386**	0.086	6.010	0.515	89.8899	115.8597	232347003.1	DUP	10.9%	0.2658		
18	273.7688	193.2972	250	420.9553	**6324.1227**	0.047	36.810	1.709	293.6696	529.3829		LCS			5733.0311	110.3%

ID:TRITIUM 14 JUL 2009 16:15

USER: 2 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	6-1	95.00	129.3	6.06	9.08	43.93	3.14	2.66	98.03
2	6-2	95.00	129.2	7.93	7.72	45.81	3.06	2.19	196.53
3	6-3	95.00	132.5	11.58	6.35	52.07	2.88	2.49	295.12
4	6-4	95.00	132.0	12.78	5.99	51.79	2.88	2.21	393.67
5	6-5	95.00	129.8	6.93	8.06	44.73	3.08	1.15	491.96
6	6-6	95.00	133.6	9.14	7.09	47.08	3.02	1.87	590.42
7	6-7	95.00	136.8	8.04	7.53	46.39	3.03	1.48	688.79

QP

INSTRUMENT CALIBRATION: Maxi 15 JUL 2009 03:46
Calibration successful

QP

Calibrating Auto DPM
Counting Standard for 14C
Calibration Complete: 14C
Counting Standard for 3H
Calibration Complete: 3H
Calibration Successful

QPQP

ID:TRITIUM 15 JUL 2002 04:50

USER: 2 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	41-1	95.00	138.1	6.61	8.35	46.37	3.03	1.43	97.83
2	41-2	38.80	133.6	6.34	13.51	44.48	4.86	1.82	138.62
3	41-3	0.05	128.1	0.00	0.00	0.00	0.00	0.00	139.45
4	41-4	0.05	128.4	20.00	200.00	80.00	100.00	3.13	140.35
5	41-5	0.05	129.2	40.00	141.42	60.00	115.47	4.18	141.23
6	41-6	0.05	130.8	0.00	0.00	20.00	200.00	17.61	142.13
7	41-7	0.05	128.6	20.00	200.00	80.00	100.00	2.99	143.03
8	41-8	0.05	129.7	0.00	0.00	80.00	200.00	10.08	143.95
9	41-9	0.05	129.4	0.00	0.00	20.00	200.00	9.09	144.83
10	41-10	0.05	128.7	40.00	141.42	100.00	89.44	1.77	145.72
11	41-11	0.05	132.5	40.00	141.42	80.00	100.00	2.87	146.62
12	41-12	0.05	130.0	60.00	115.47	160.00	70.71	0.90	147.52

7-16-09

ID:TRITIUM 15 JUL 2002 07:22

USER: 2 COMMENT:SILVER

PRESET TIME : 60.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
2	41-2	60.00	133.7	5.72	11.55	42.37	4.00	2.01	62.01
3	41-3	60.00	128.9	7.18	10.14	46.35	3.82	1.77	124.55
4	41-4	60.00	128.5	6.60	10.50	45.68	3.85	1.43	187.03
5	41-5	60.00	129.1	6.02	11.11	45.95	3.84	1.59	249.54
6	41-6	60.00	130.5	7.48	9.90	46.02	3.84	1.72	312.05
7	41-7	60.00	128.4	6.85	10.25	45.47	3.85	1.29	374.51
8	41-8	60.00	128.7	7.33	9.88	45.47	3.85	1.25	436.97
9	41-9	60.00	129.3	6.70	10.23	45.85	3.83	0.85	499.36
10	41-10	60.00	128.8	5.32	11.48	43.70	3.92	0.72	561.73
11	41-11	60.00	132.3	12.07	7.58	50.98	3.63	1.03	624.18

QPQP

ID:TRITIUM 15 JUL 2009 17:57

USER: 3 COMMENT:SILVER

PRESET TIME : 15.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	29-1	15.00	130.3	42.87	7.90	81.20	5.74	0.33	15.80
MISSING SAMPLE									
13	30-1	15.00	127.5	6.60	21.29	44.13	7.84	2.02	32.40
14	30-2	15.00	127.6	9.60	17.46	44.27	7.84	2.26	48.76
15	30-3	15.00	127.7	13.13	14.68	51.80	7.23	1.67	65.11
16	30-4	15.00	128.5	7.53	19.79	46.33	7.65	1.96	81.47
17	30-5	15.00	128.4	5.53	23.36	42.47	7.99	2.00	97.83
18	30-6	15.00	124.2	6.20	21.93	42.67	7.88	1.86	114.20
19	30-7	15.00	128.0	7.67	19.52	43.73	7.97	1.96	130.56
20	30-8	15.00	128.5	22.07	11.17	60.87	6.66	1.31	146.93
21	30-9	15.00	121.9	19.60	11.88	58.07	6.82	1.43	163.30

QPQ'

SCB
7.15.09

Sample Count Start Time:	14 Jul 2009 16:25:55		
Data Capture Date	14 Jul 2009 18:01:14		
User Filename	S02071406-1A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	6-1	95.00
H#, Total Counts:	129.3	3859	
Start, End, X-Axis:	0	990	Channel Number

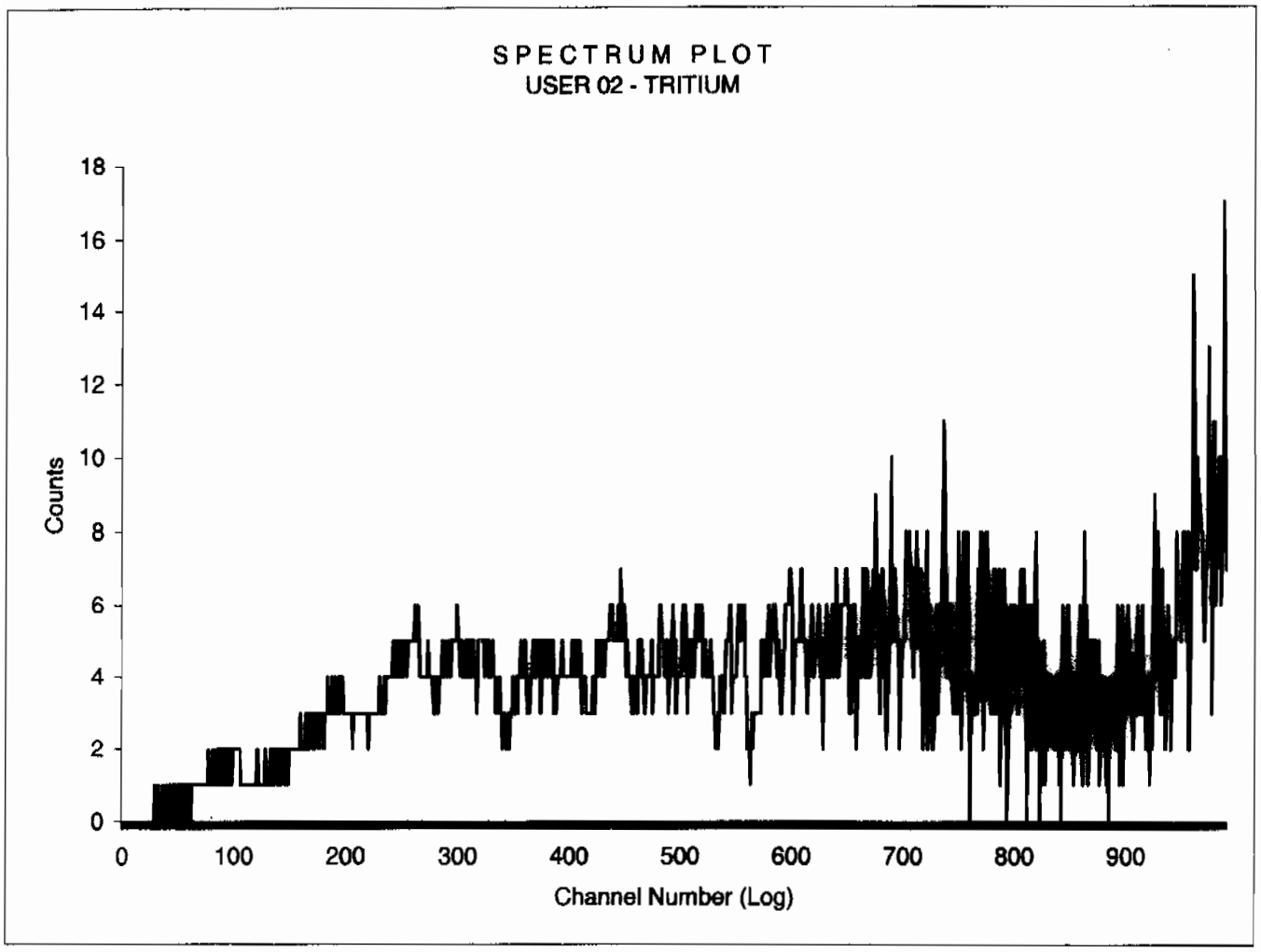

Sample Count Start Time:	14 Jul 2009 18:04:25		
Data Capture Date	14 Jul 2009 19:39:44		
User Filename	S02071406-2A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	6-2	95.00
H#, Total Counts:	129.2	4087	
Start, End, X-Axis:	0	990	Channel Number

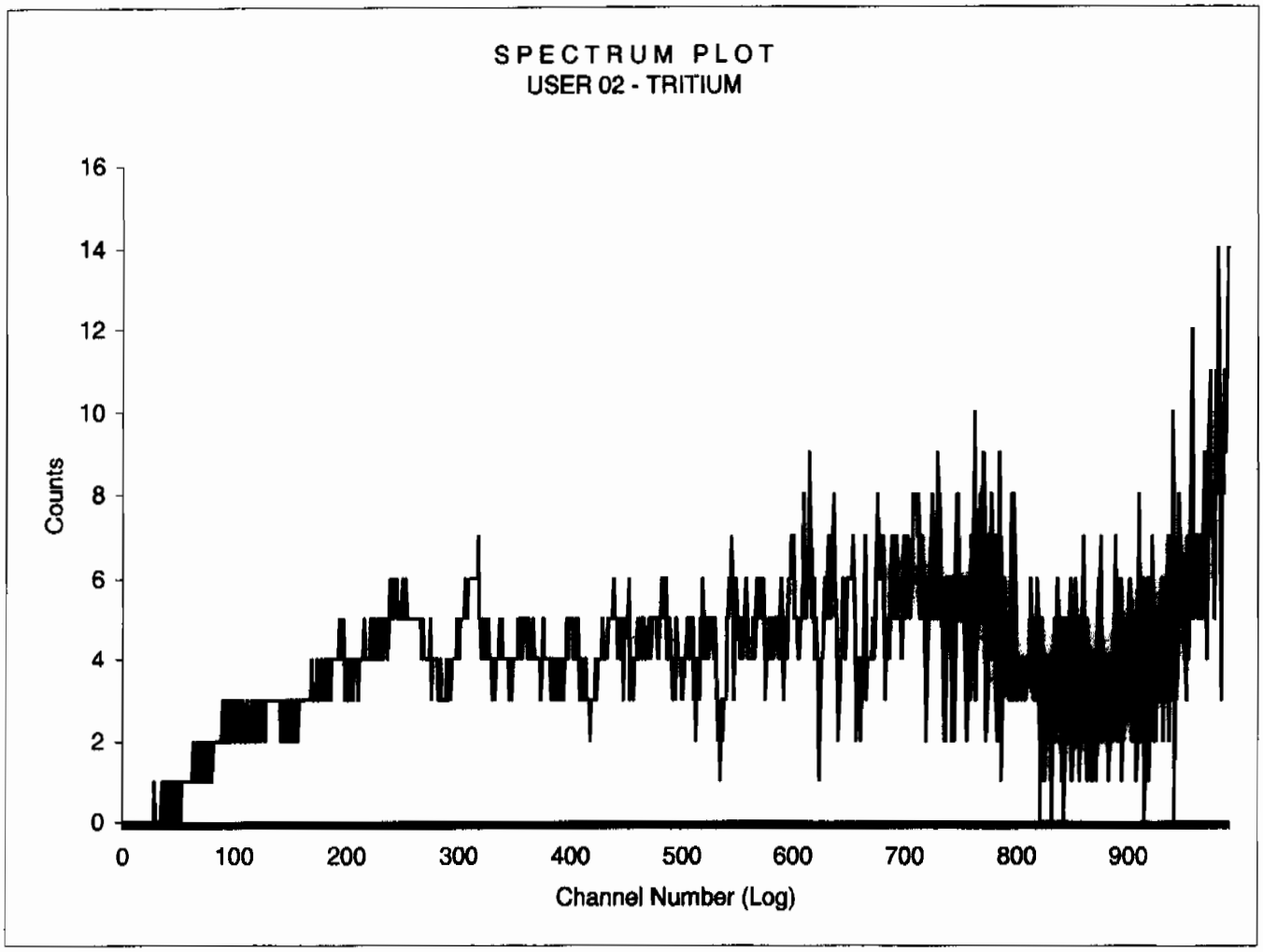

Sample Count Start Time:	14 Jul 2009 19:43:00		
Data Capture Date	14 Jul 2009 21:18:20		
User Filename	S02071406-3A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	6-3	95.00
H#, Total Counts:	132.5	4672	
Start, End, X-Axis:	0	990	Channel Number

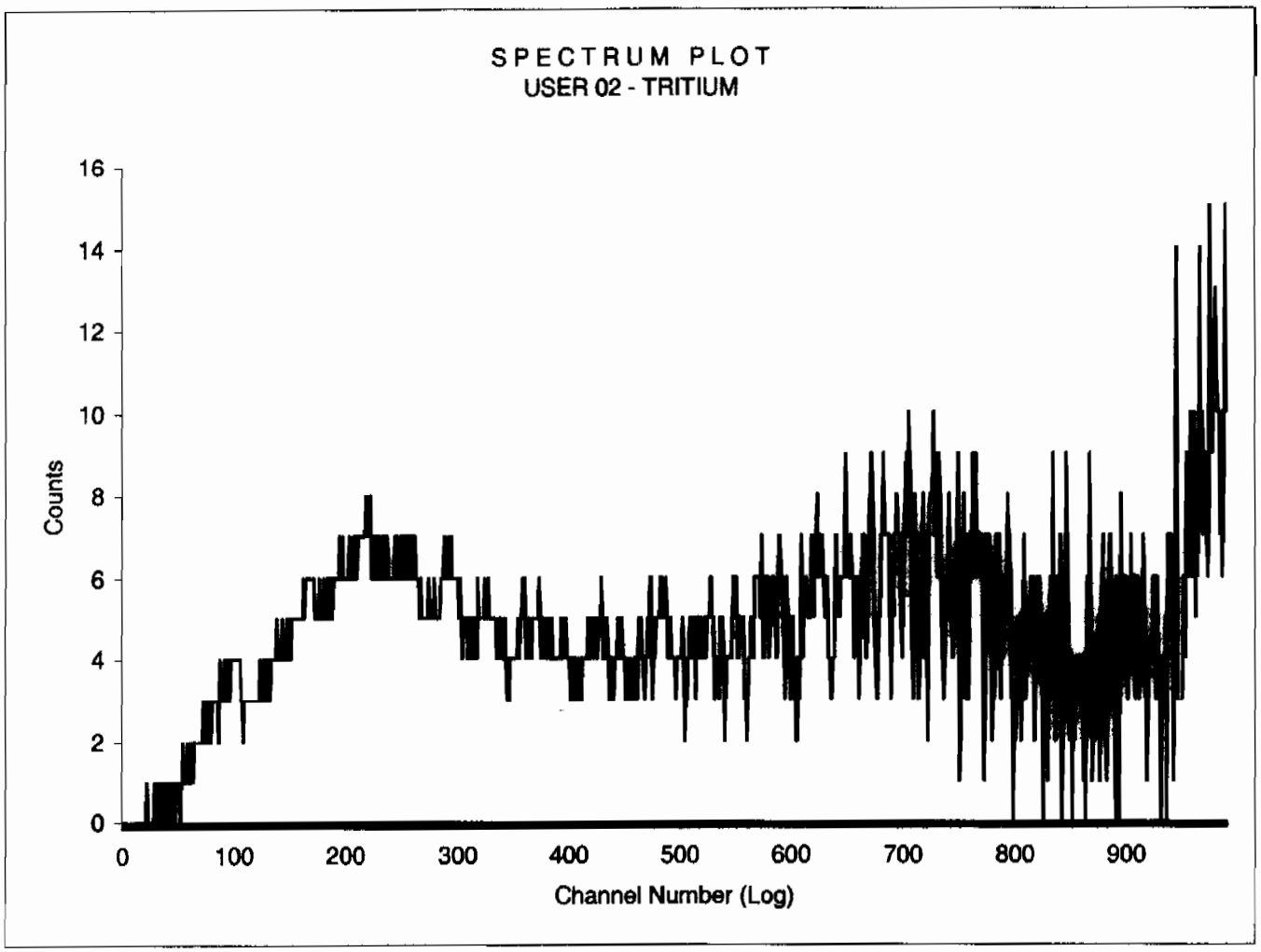

Sample Count Start Time:	14 Jul 2009 21:21:33		
Data Capture Date	14 Jul 2009 22:56:53		
User Filename	S02071406-4A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	6-4	95.00
H#, Total Counts:	132.0	4609	
Start, End, X-Axis:	0	990	Channel Number

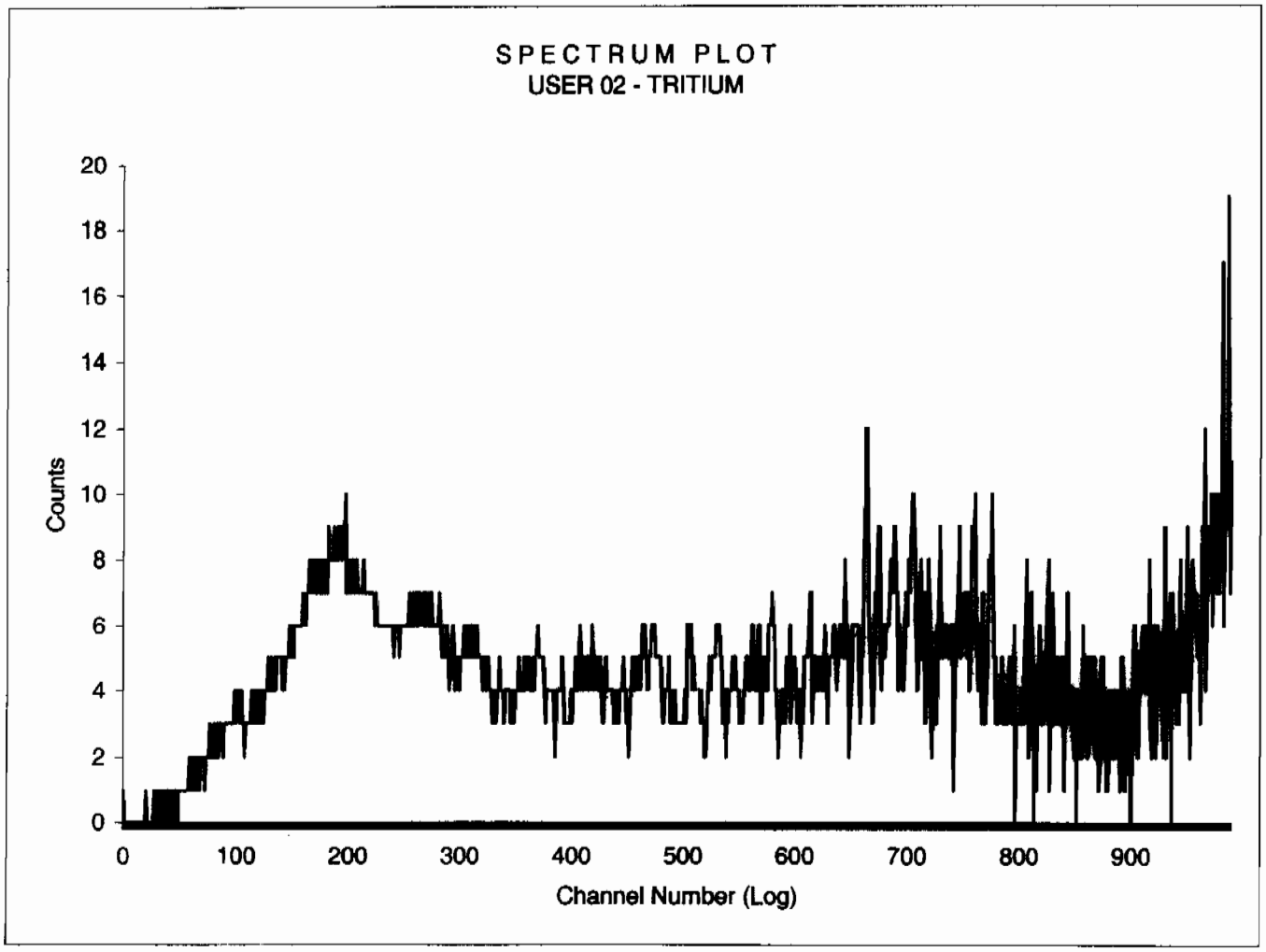

Sample Count Start Time:	14 Jul 2009 22:59:51		
Data Capture Date	15 Jul 2009 00:35:10		
User Filename	S02071506-5A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	6-5	95.00
H#, Total Counts:	129.8	3966	
Start, End, X-Axis:	0	990	Channel Number

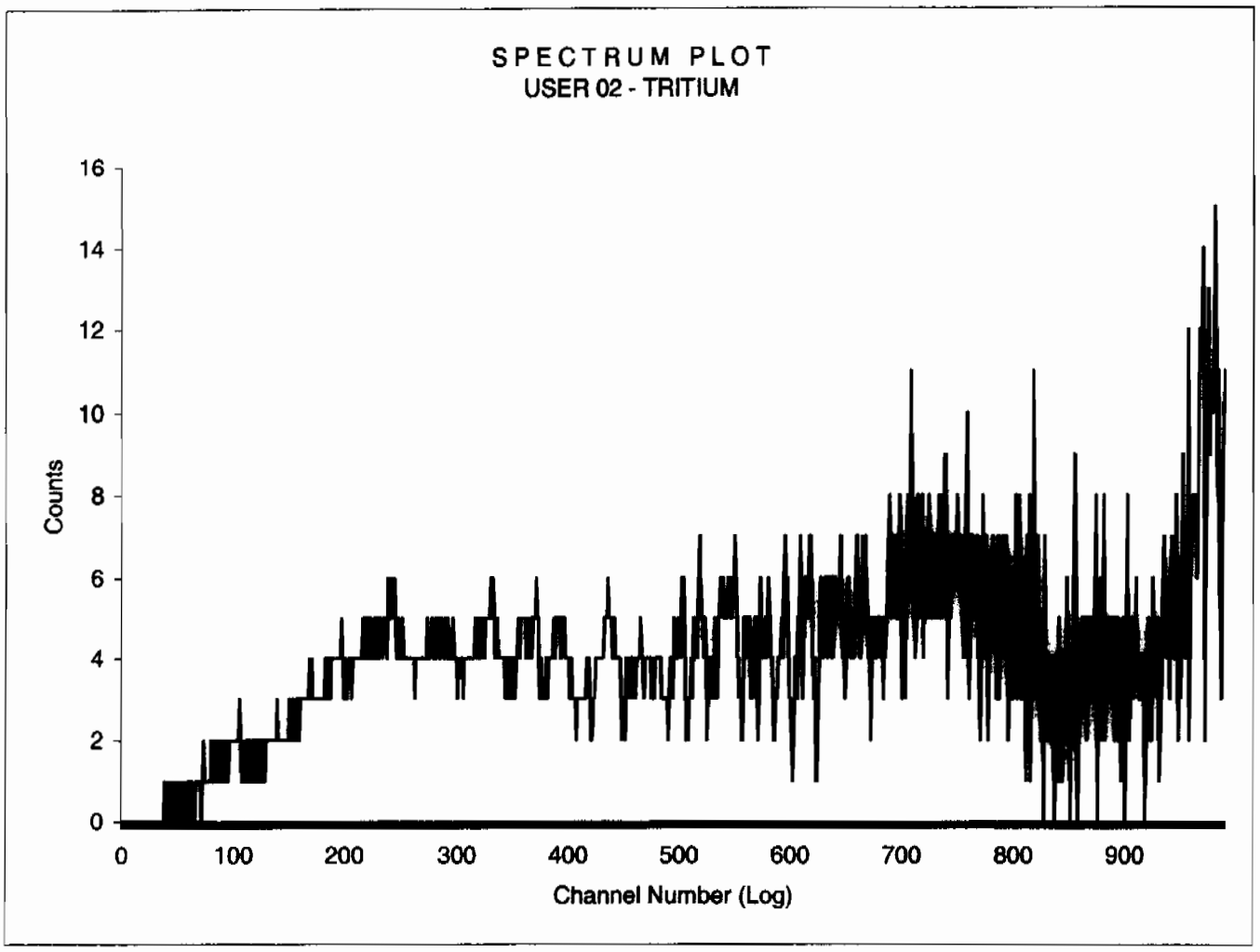

Sample Count Start Time:	15 Jul 2009 00:38:18		
Data Capture Date	15 Jul 2009 02:13:38		
User Filename	S02071506-6A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	6-6	95.00
H#, Total Counts:	133.6	4213	
Start, End, X-Axis:	0	990	Channel Number

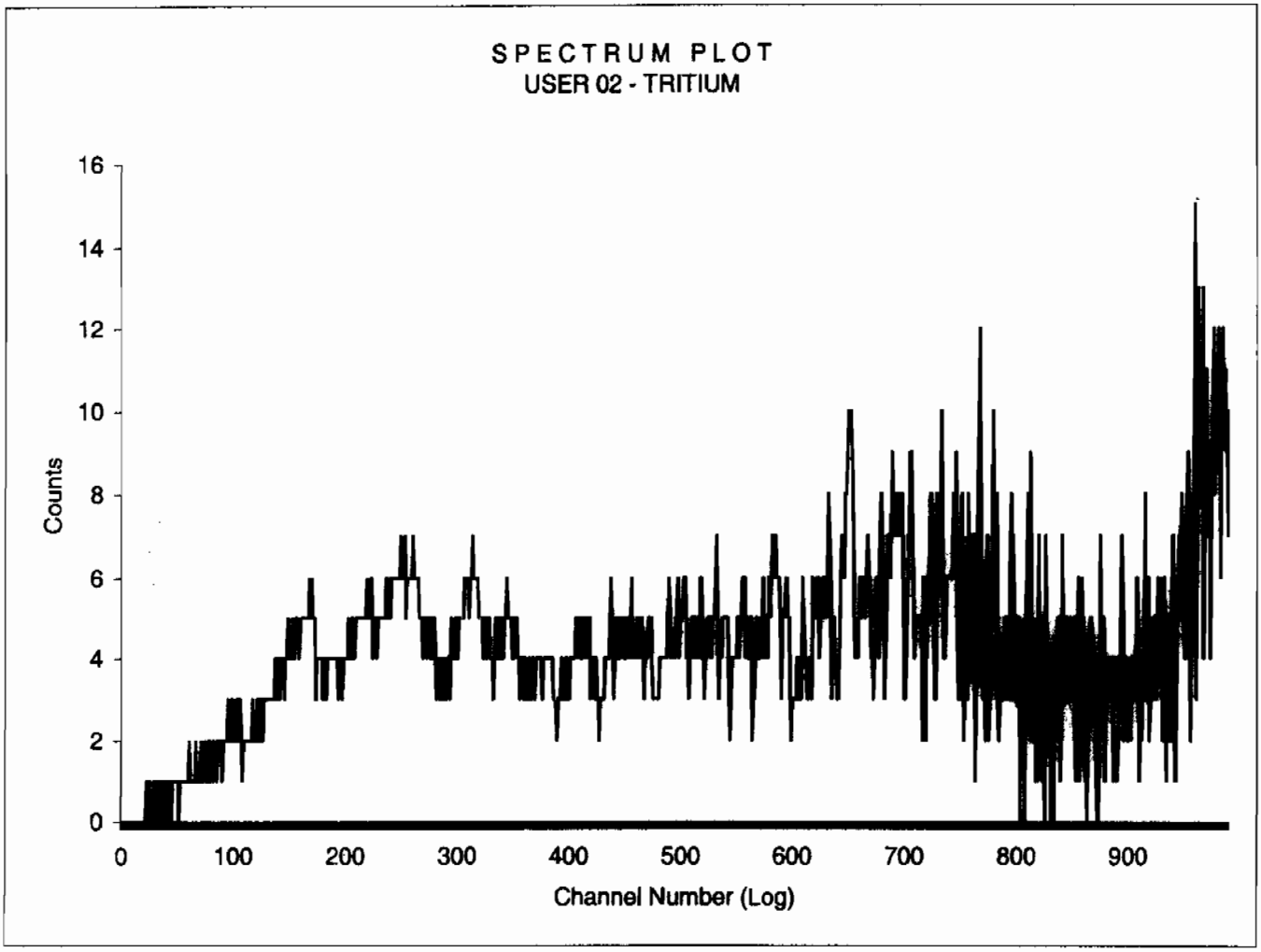

Sample Count Start Time:	15 Jul 2009 02:16:40		
Data Capture Date	15 Jul 2009 03:52:00		
User Filename	S02071506-7A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	6-7	95.00
H#, Total Counts:	136.8	4152	
Start, End, X-Axis:	0	990	Channel Number

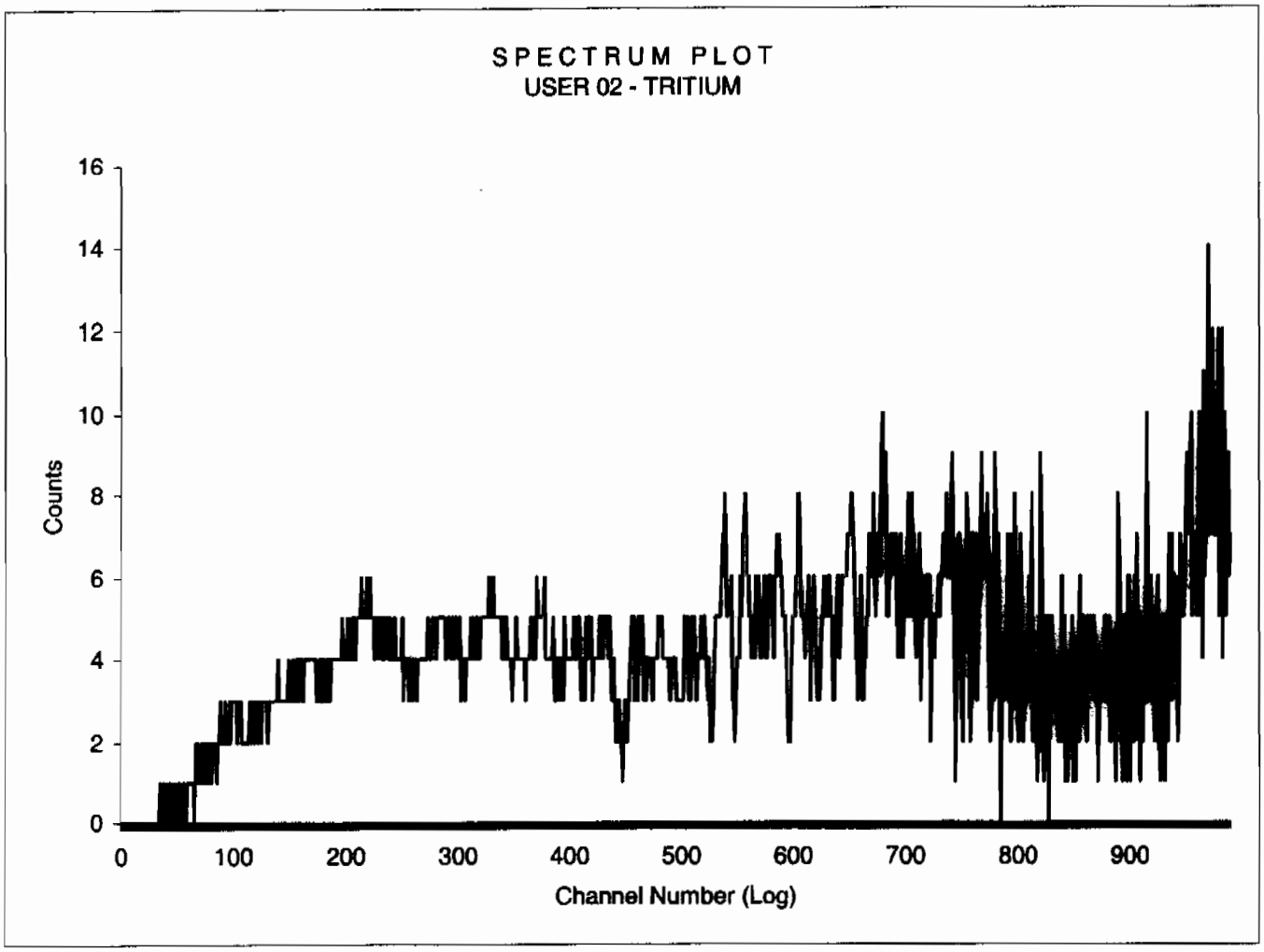

Sample Count Start Time:	15 Jul 2009 05:08:32		
Data Capture Date	15 Jul 2009 06:43:58		
User Filename	S02071541-1A.XLS		
	U02071541-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	41-1	95.00
H#, Total Counts:	138.1	4171	
Start, End, X-Axis:	0	990	Channel Number

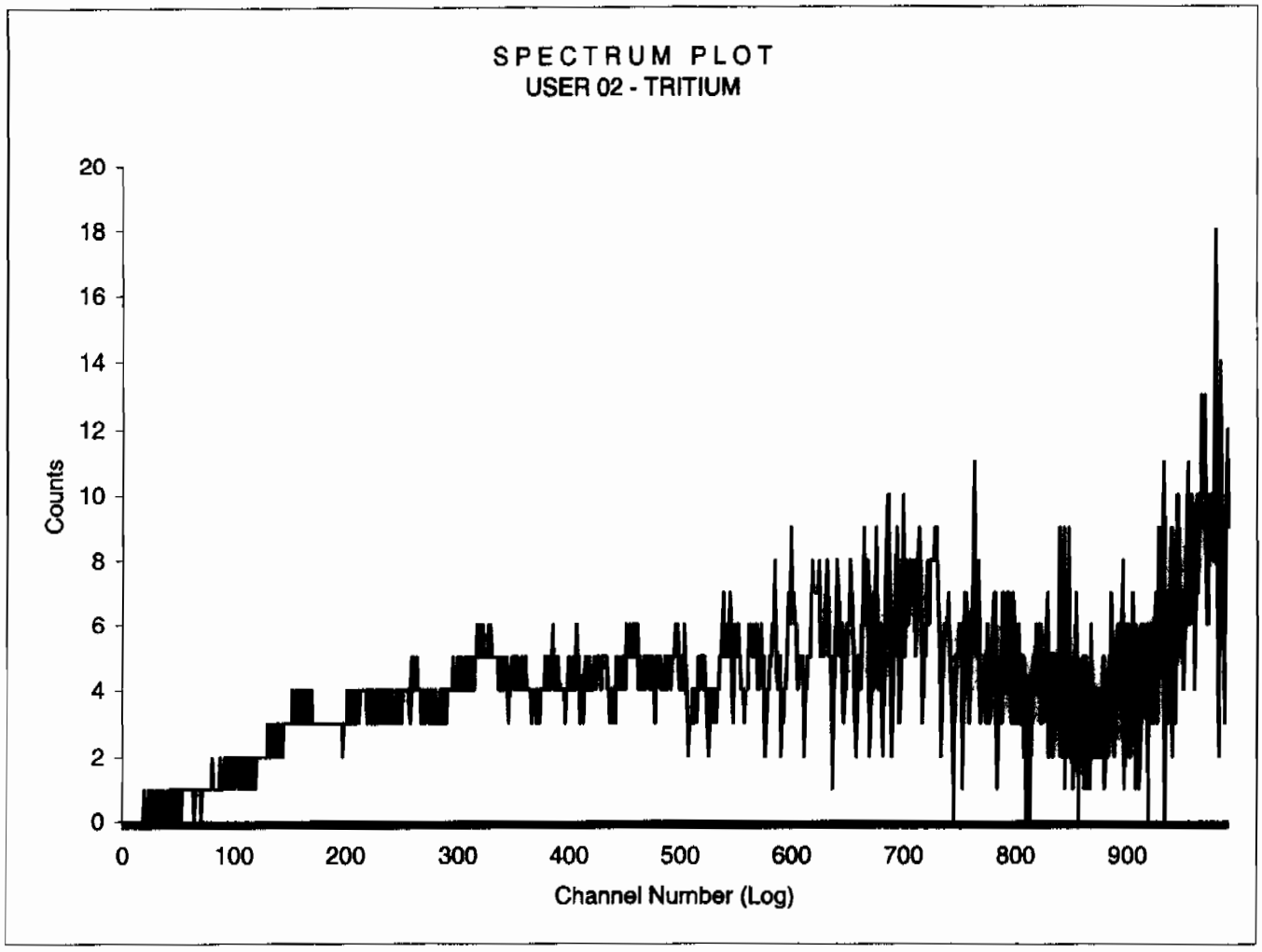

Sample Count Start Time:	15 Jul 2009 07:41:21		
Data Capture Date	15 Jul 2009 08:41:47		
User Filename	S02071541-2B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	41-2	60.00
H#, Total Counts:	133.7	2407	
Start, End, X-Axis:	0	990	Channel Number

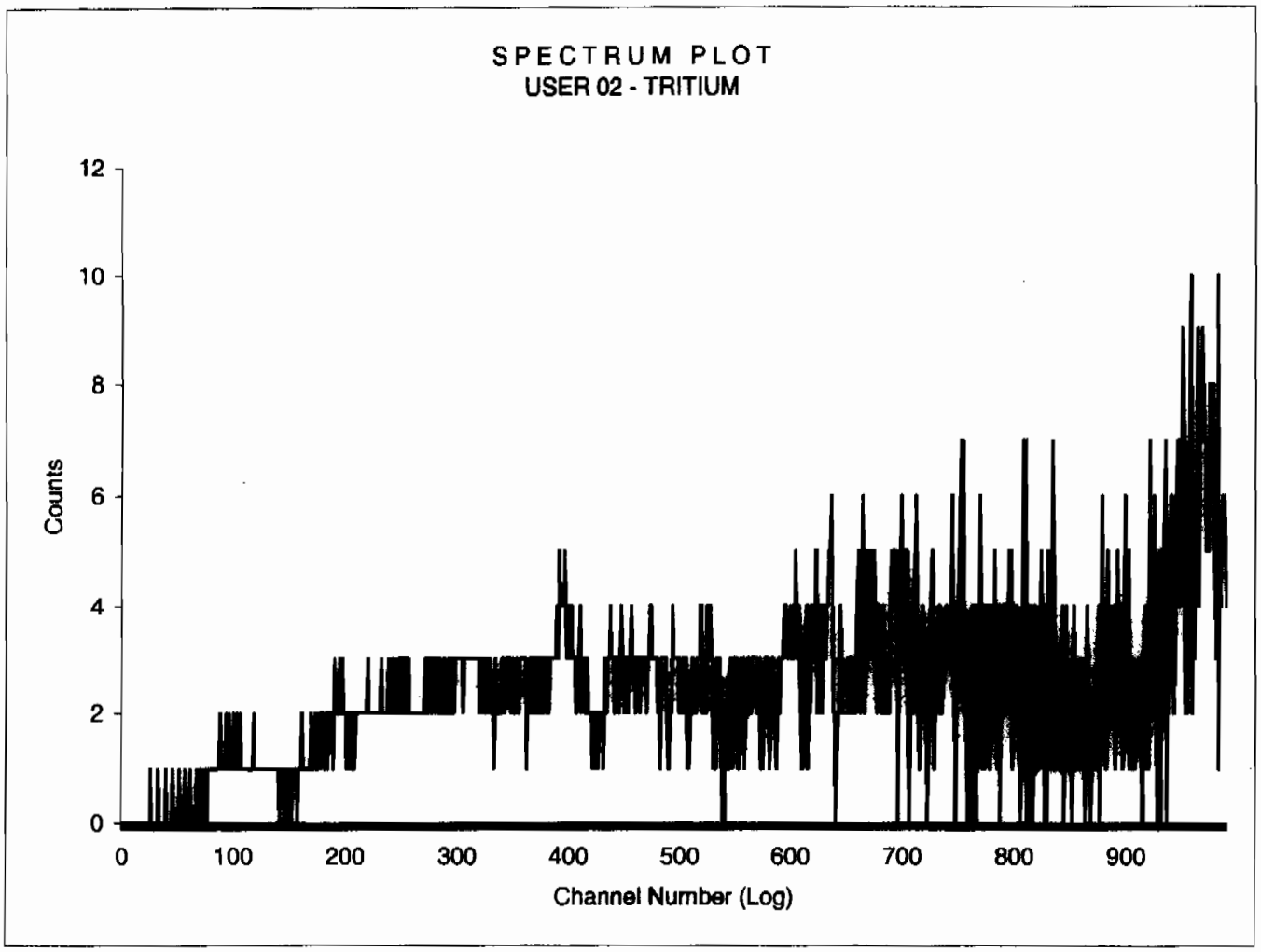

Sample Count Start Time:	15 Jul 2009 08:43:53		
Data Capture Date	15 Jul 2009 09:44:21		
User Filename	S02071541-3B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	41-3	60.00
H#, Total Counts:	128.9	2594	
Start, End, X-Axis:	0	990	Channel Number

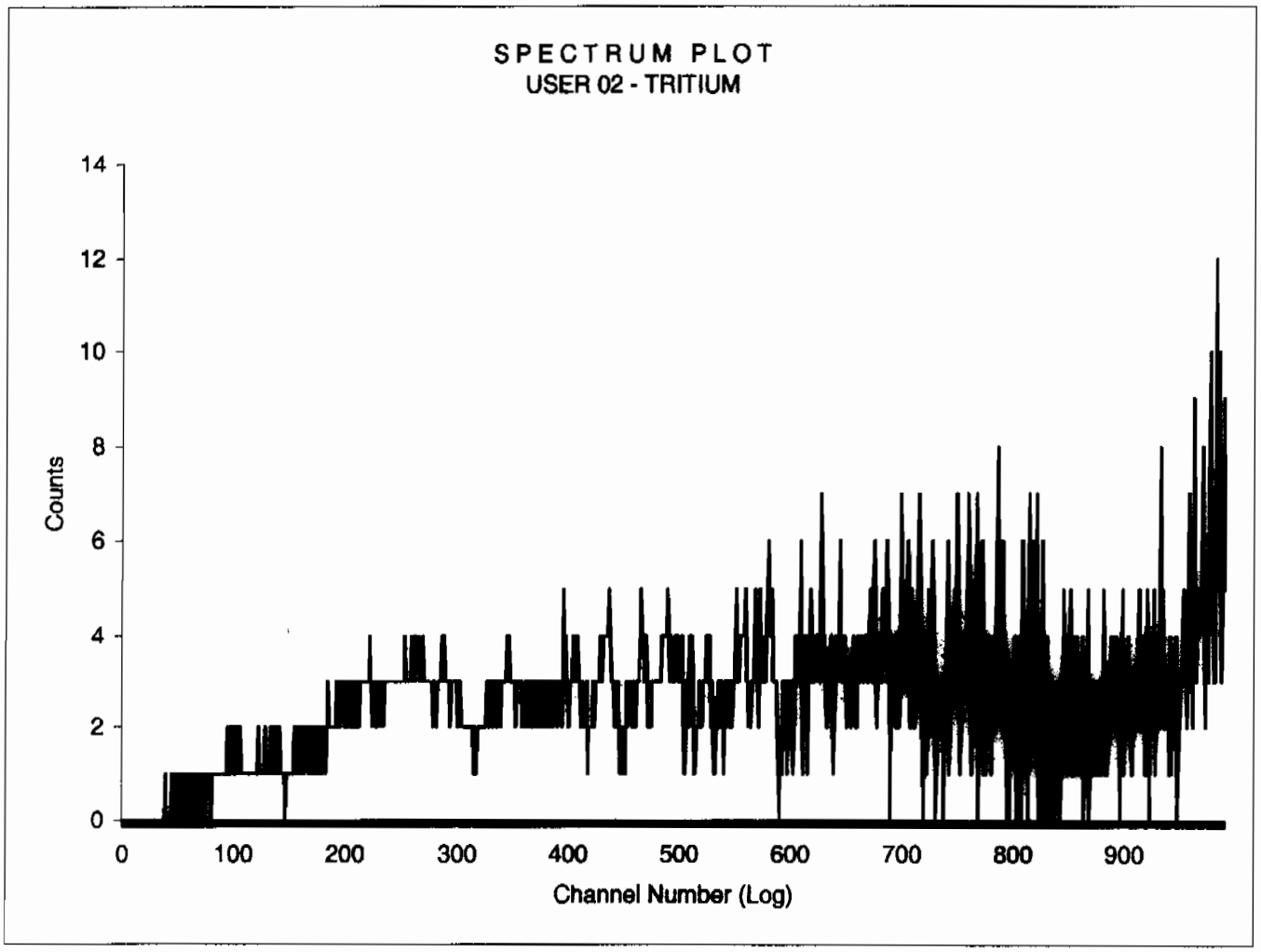

Sample Count Start Time:	15 Jul 2009 09:46:22		
Data Capture Date	15 Jul 2009 10:46:48		
User Filename	S02071541-4B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	41-4	60.00
H#, Total Counts:	128.5	2530	
Start, End, X-Axis:	0	990	Channel Number

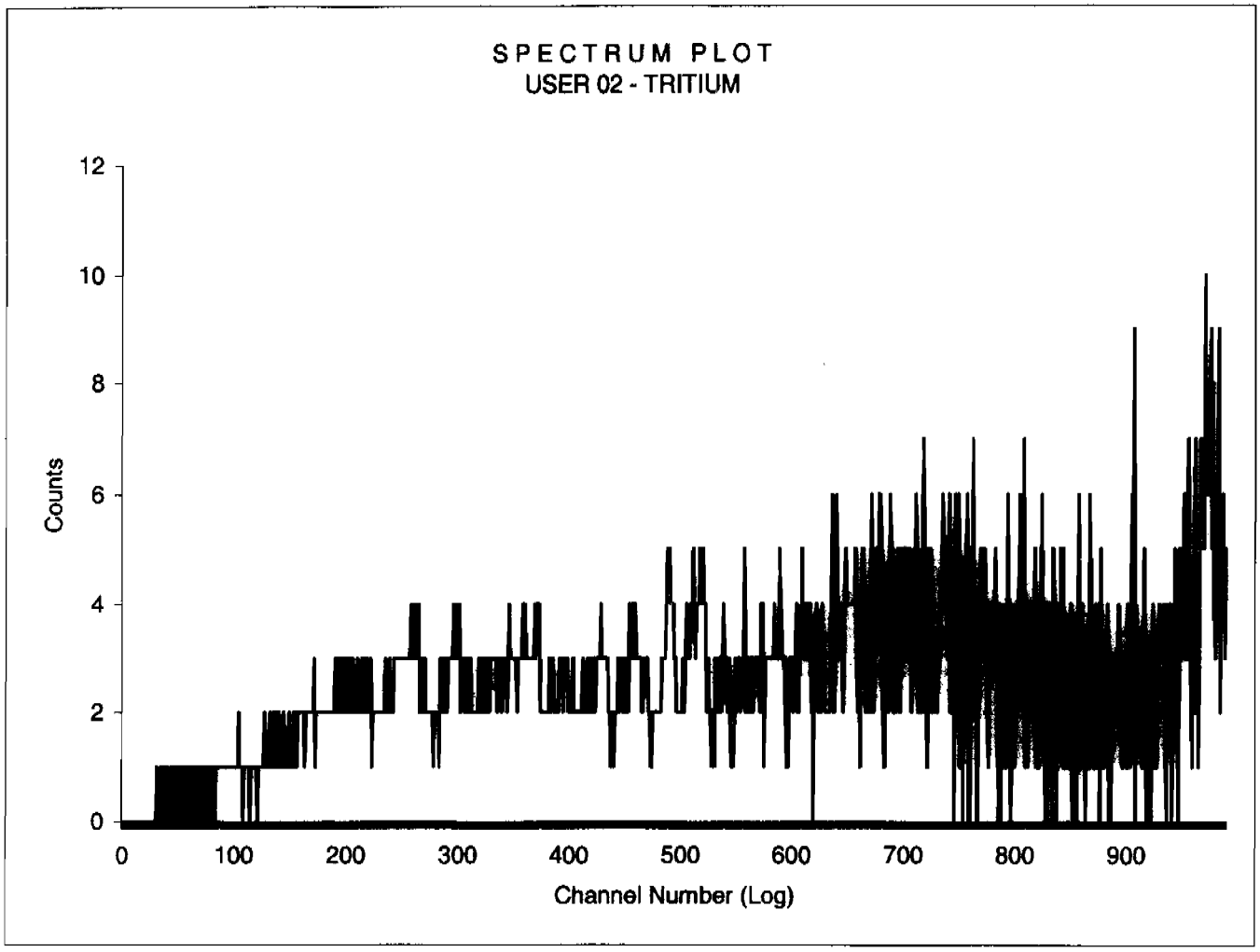

Sample Count Start Time:	15 Jul 2009 10:48:52		
Data Capture Date	15 Jul 2009 11:49:19		
User Filename	S02071541-5B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	41-5	60.00
H#, Total Counts:	129.1	2559	
Start, End, X-Axis:	0	990	Channel Number

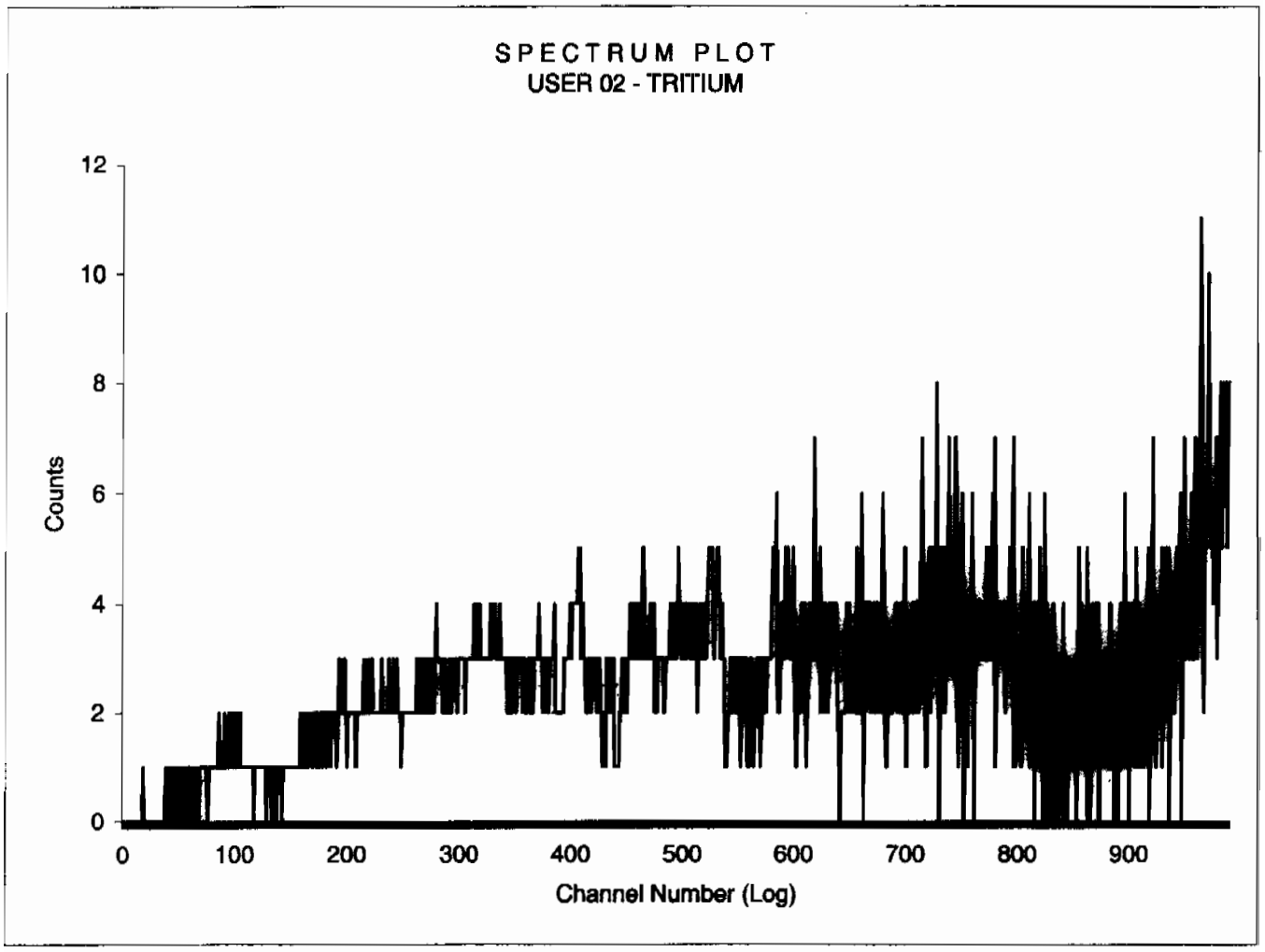

Sample Count Start Time:	15 Jul 2009 11:51:23		
Data Capture Date	15 Jul 2009 12:51:49		
User Filename	S02071541-6B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	41-6	60.00
H#, Total Counts:	130.5	2579	
Start, End, X-Axis:	0	990	Channel Number

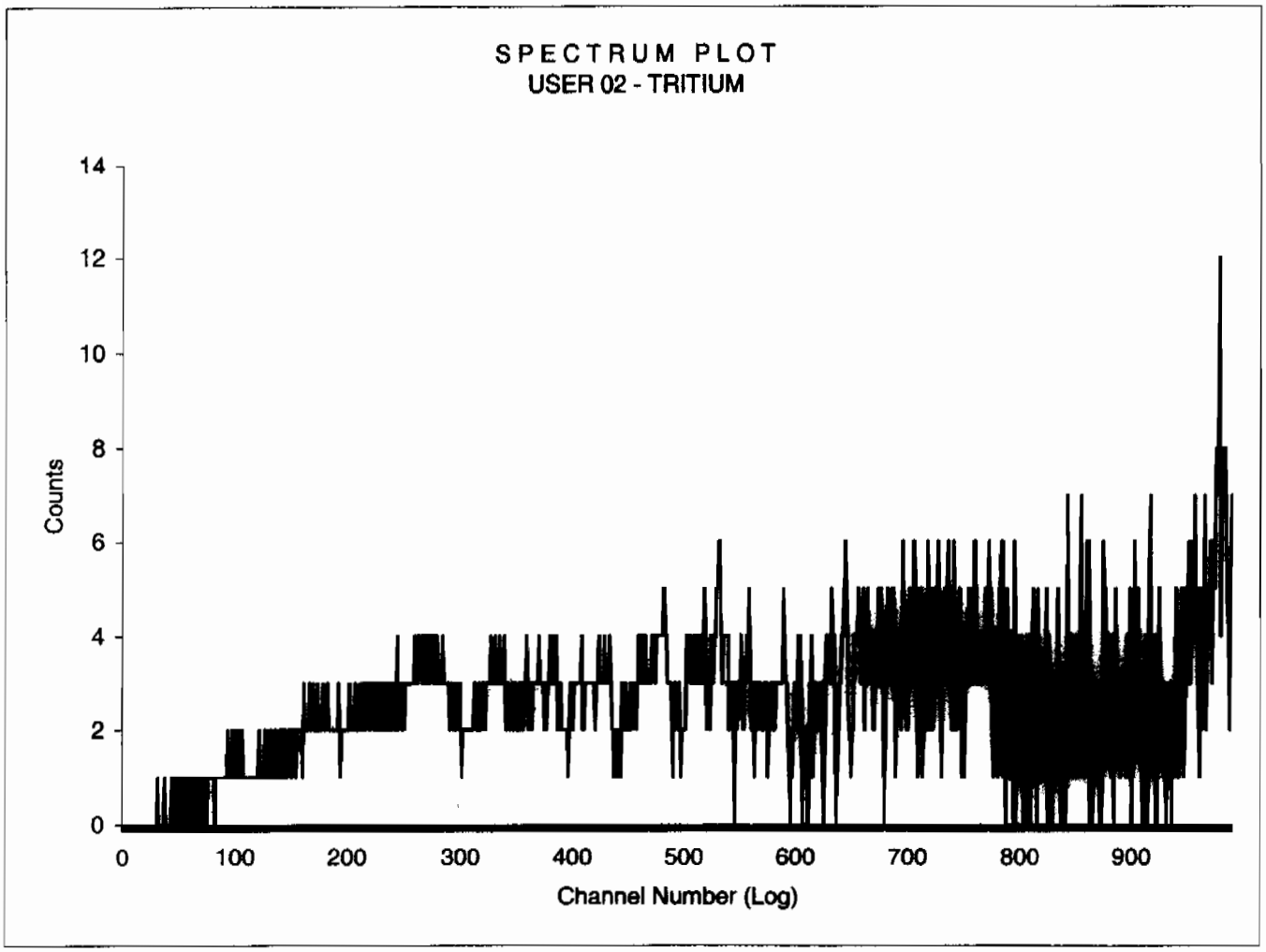

Sample Count Start Time:	15 Jul 2009 12:53:51		
Data Capture Date	15 Jul 2009 13:54:17		
User Filename	S02071541-7B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	41-7	60.00
H#, Total Counts:	128.4	2542	
Start, End, X-Axis:	0	990	Channel Number

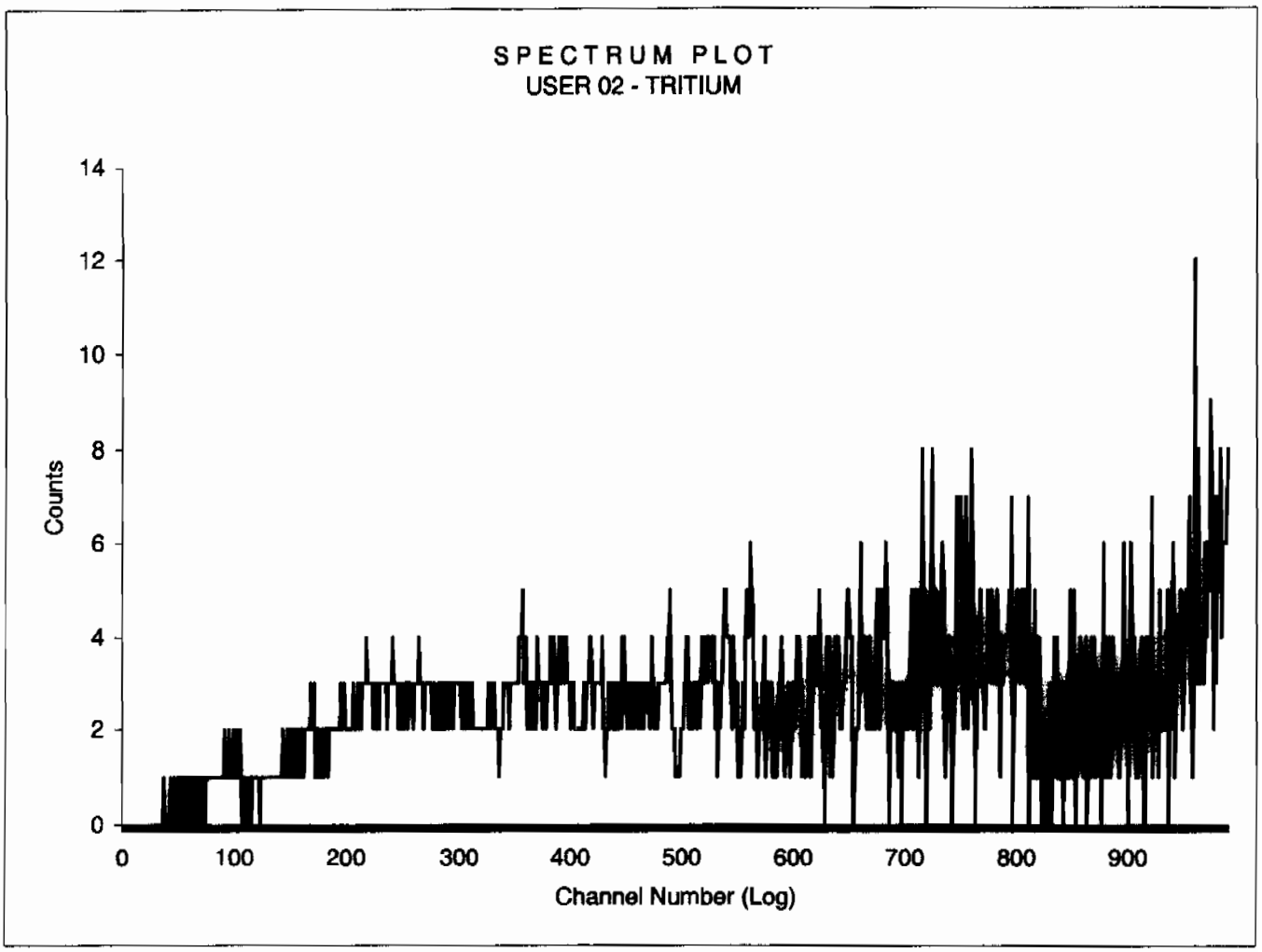

Sample Count Start Time:	15 Jul 2009 13:56:18		
Data Capture Date	15 Jul 2009 14:56:44		
User Filename	S02071541-8B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	41-8	60.00
H#, Total Counts:	128.7	2548	
Start, End, X-Axis:	0	990	Channel Number

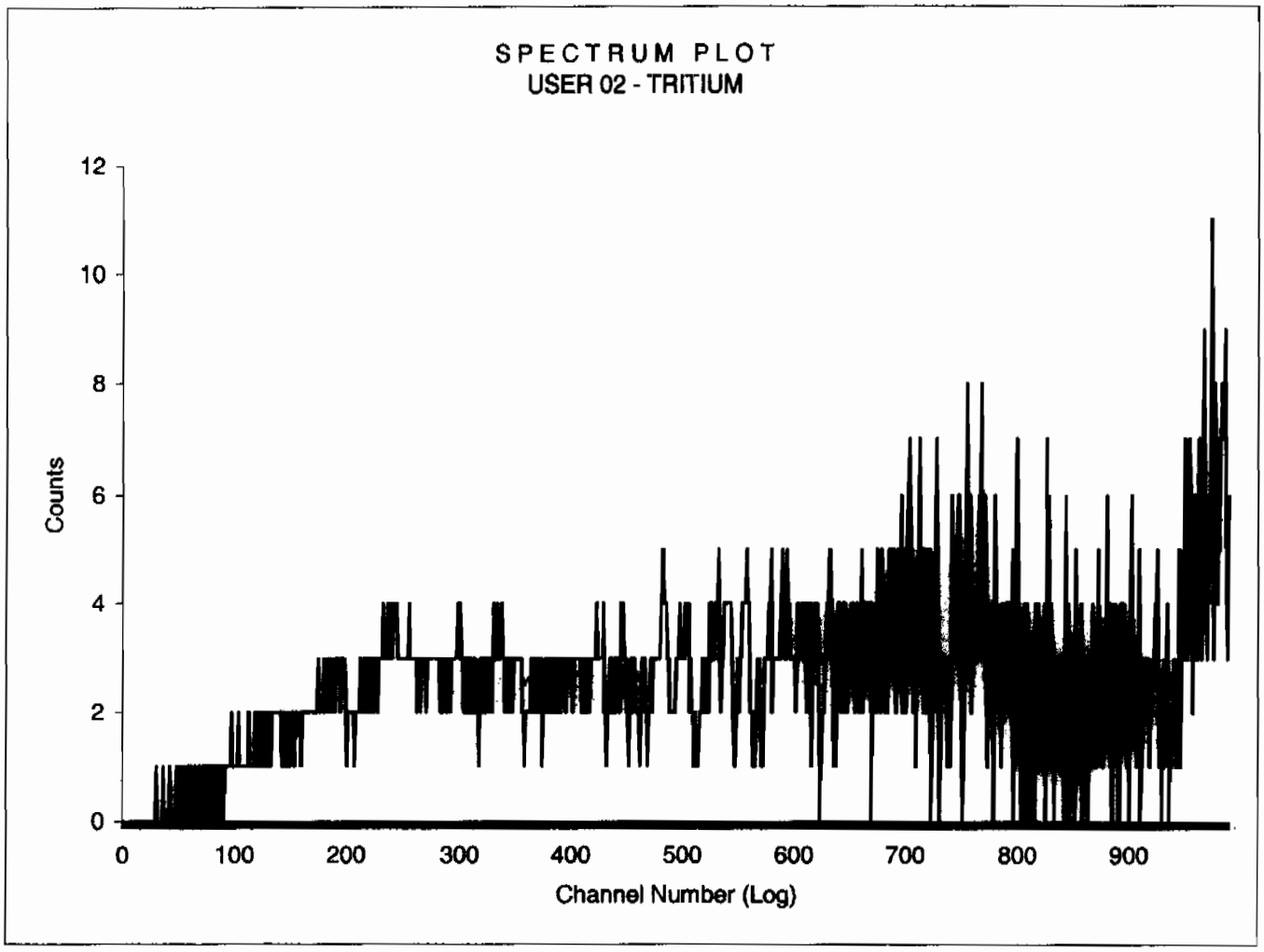

Sample Count Start Time:	15 Jul 2009 14:58:42		
Data Capture Date	15 Jul 2009 15:59:08		
User Filename	S02071541-9B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	41-9	60.00
H#, Total Counts:	129.3	2573	
Start, End, X-Axis:	0	990	Channel Number

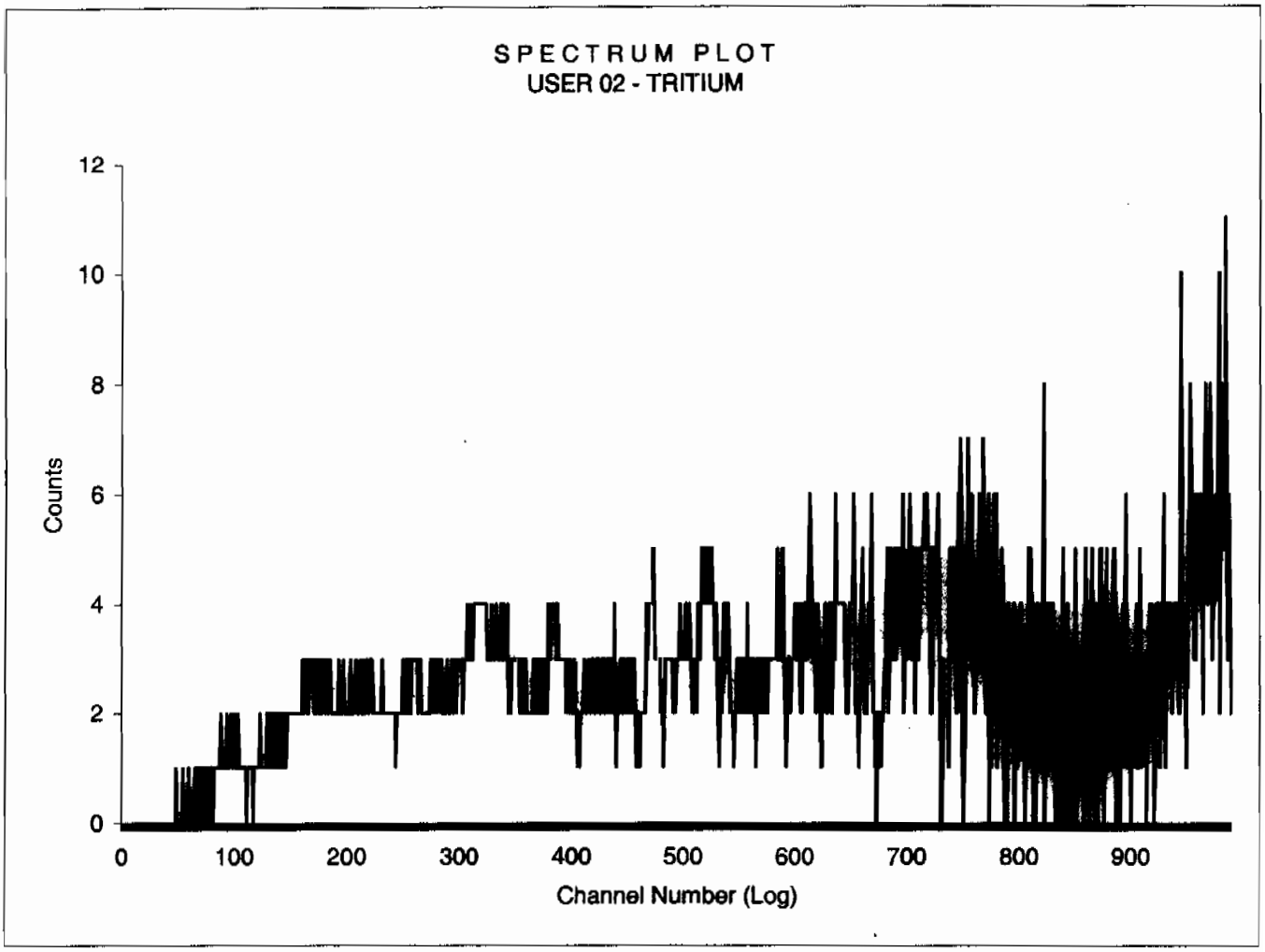

Sample Count Start Time:	15 Jul 2009 16:01:04		
Data Capture Date	15 Jul 2009 17:01:30		
User Filename	S02071541-10B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	41-10	60.00
H#, Total Counts:	128.8	2395	
Start, End, X-Axis:	0	990	Channel Number

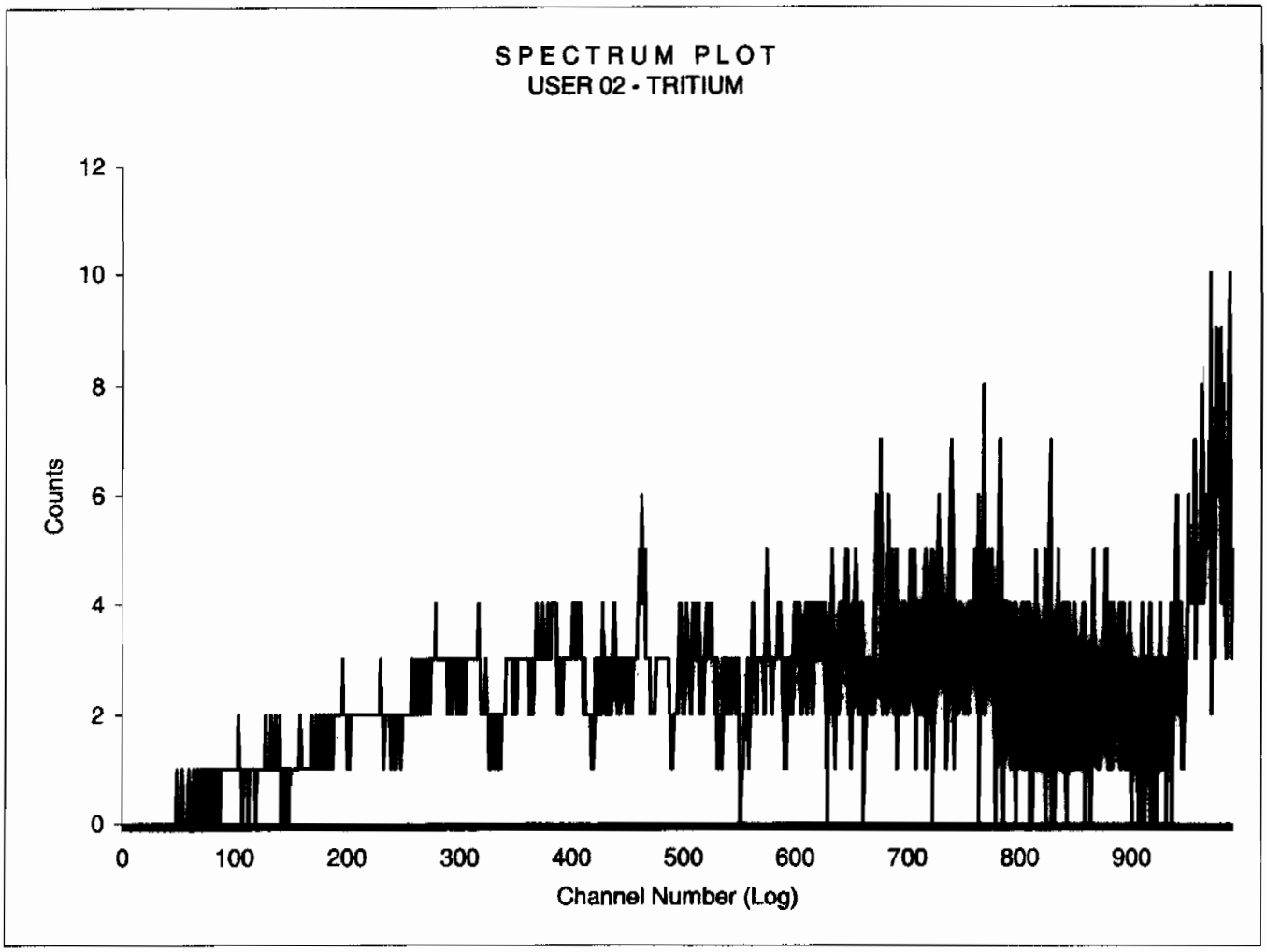

Sample Count Start Time:	15 Jul 2009 17:03:31		
Data Capture Date	15 Jul 2009 18:03:57		
User Filename	S02071541-11B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	41-11	60.00
H#, Total Counts:	132.3	2870	
Start, End, X-Axis:	0	990	Channel Number

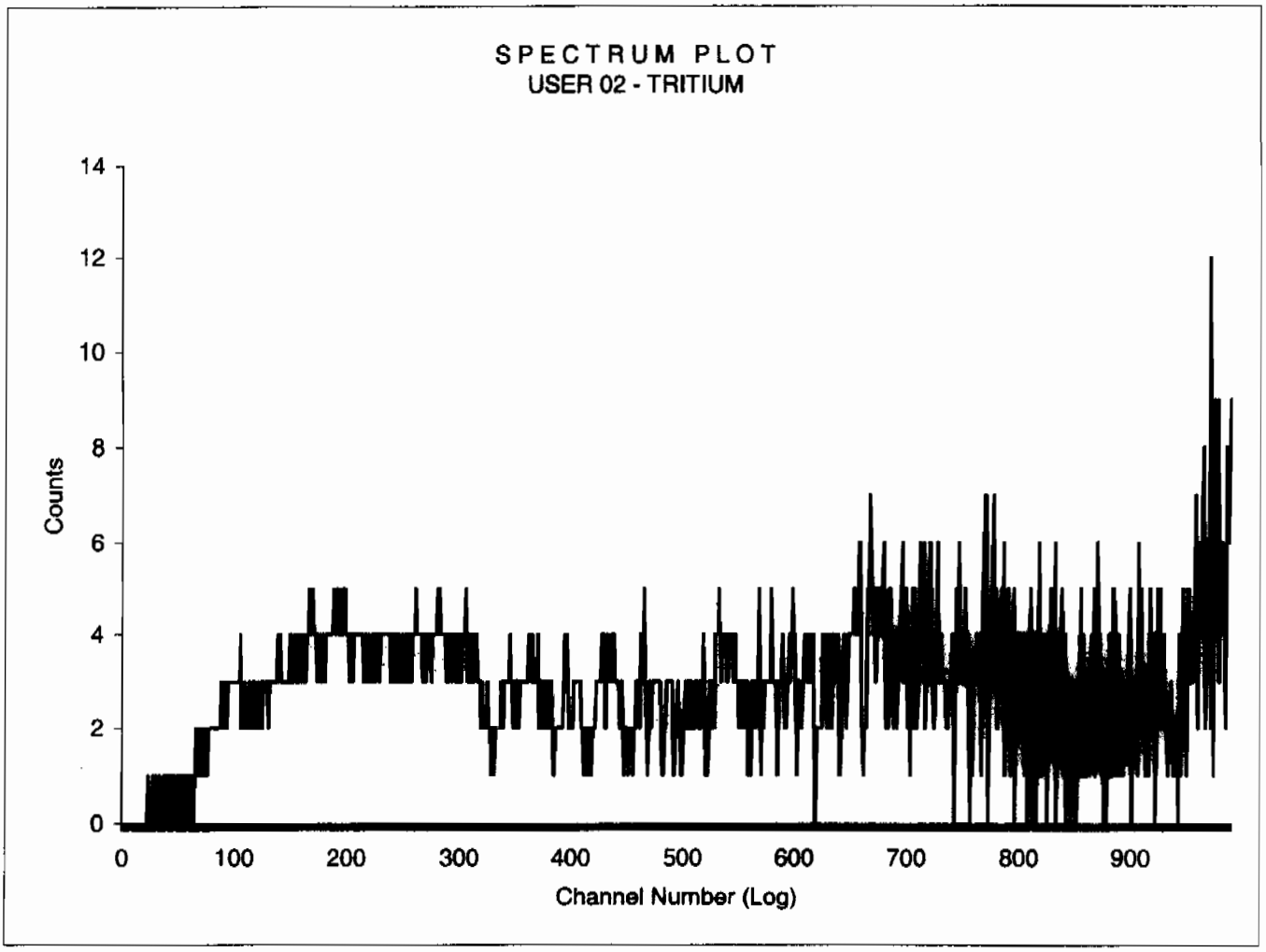

Sample Count Start Time:	15 Jul 2009 18:05:02		
Data Capture Date	15 Jul 2009 18:20:26		
User Filename	S03071529-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	29-1	15.00
H#, Total Counts:	130.3	1167	
Start, End, X-Axis:	0	990	Channel Number

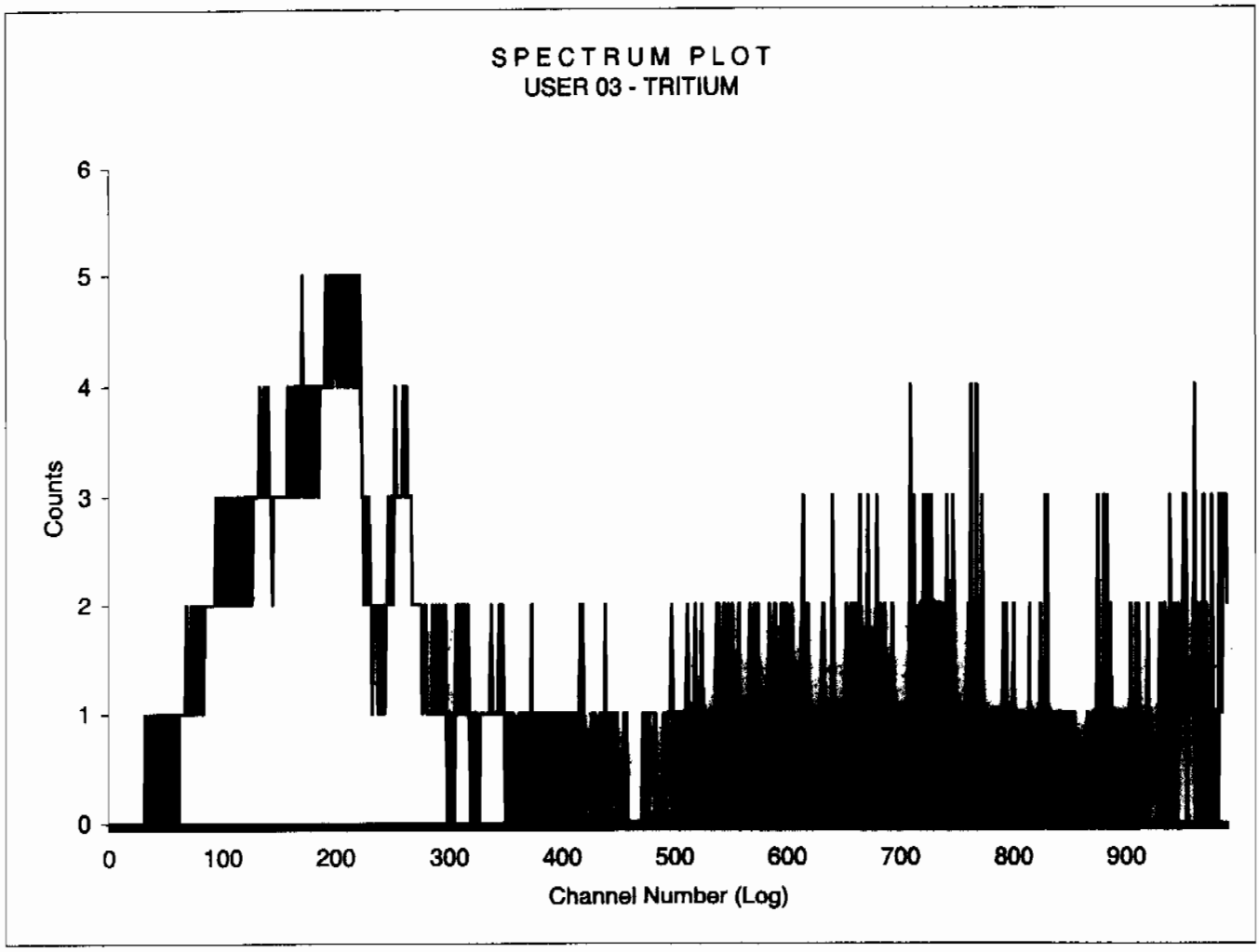

BACKGROUND AND EFFICIENCY DATA

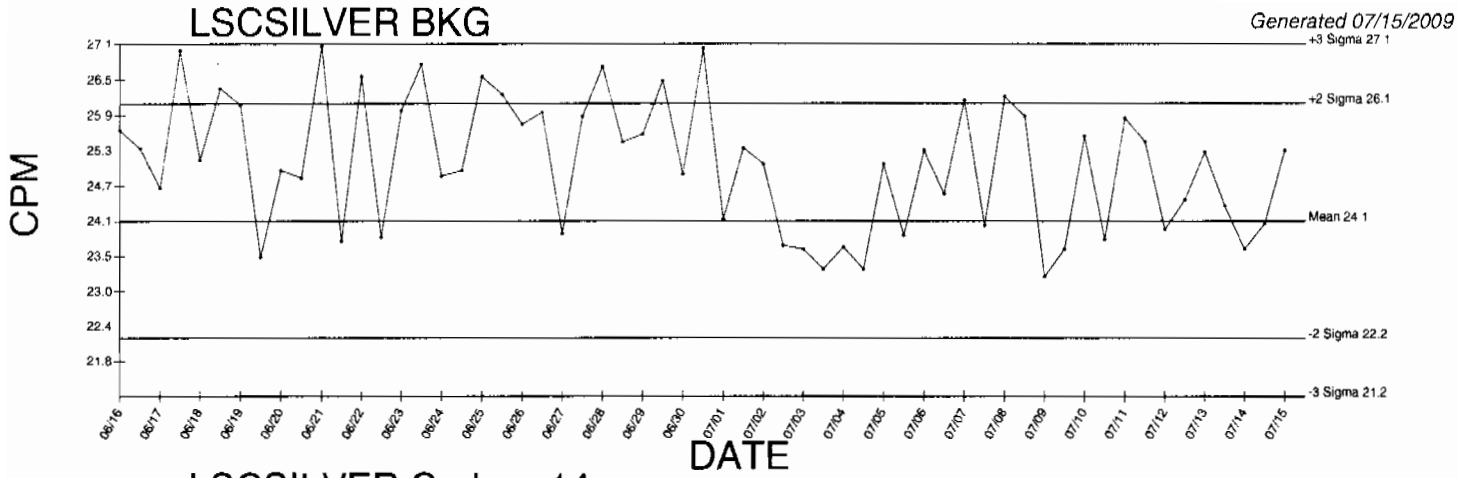

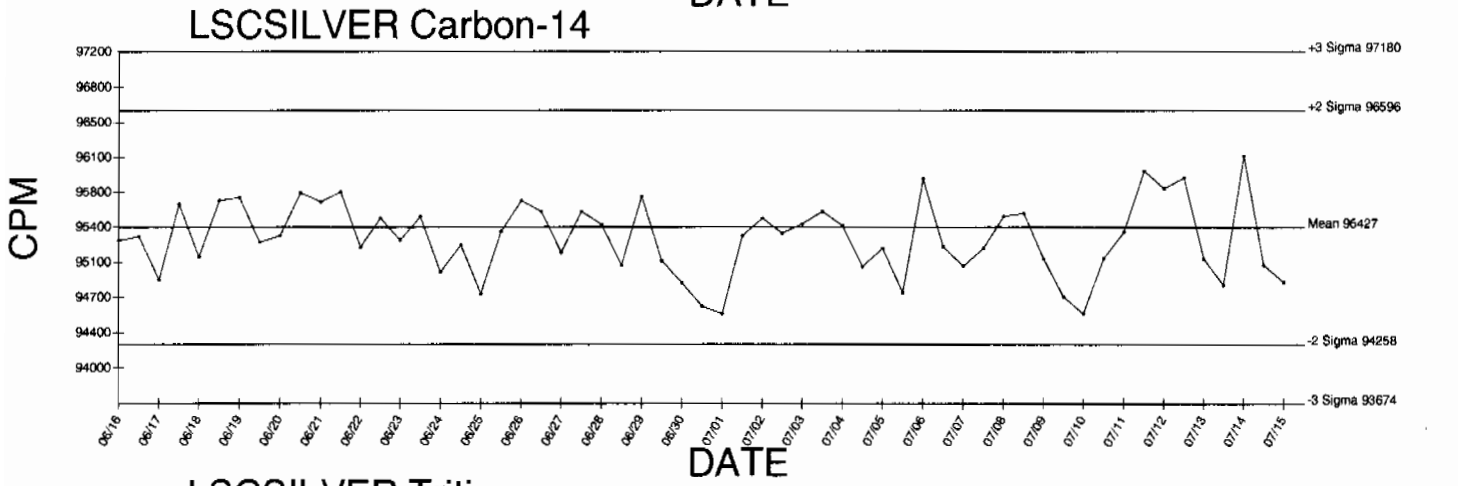

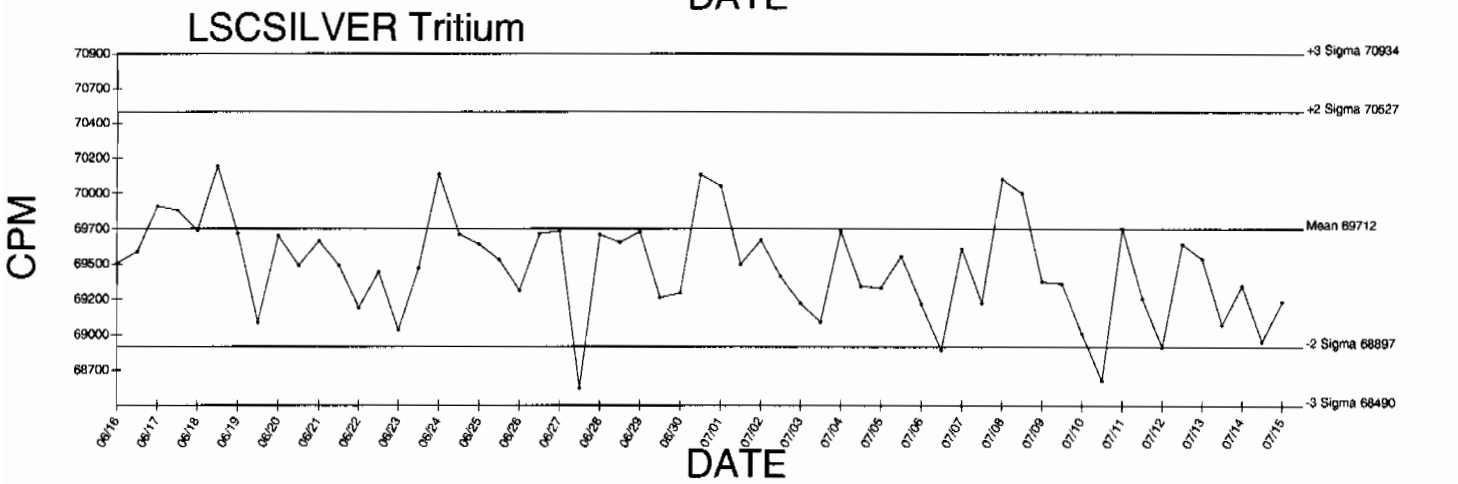

● Denotes Outlier

QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:23:48 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.237773 through 0.257773

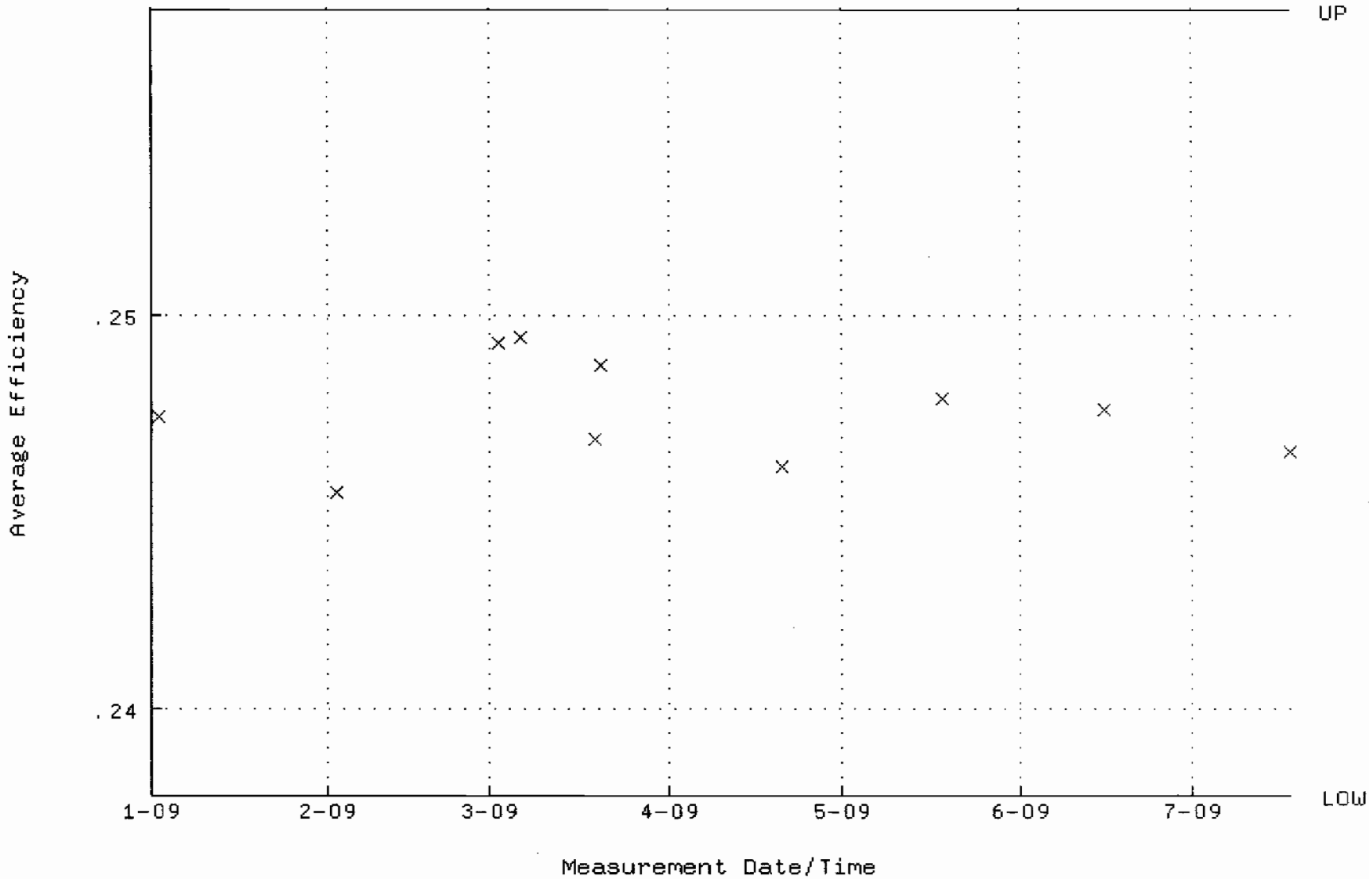

QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:23:48 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 90.4503 through 99.9713

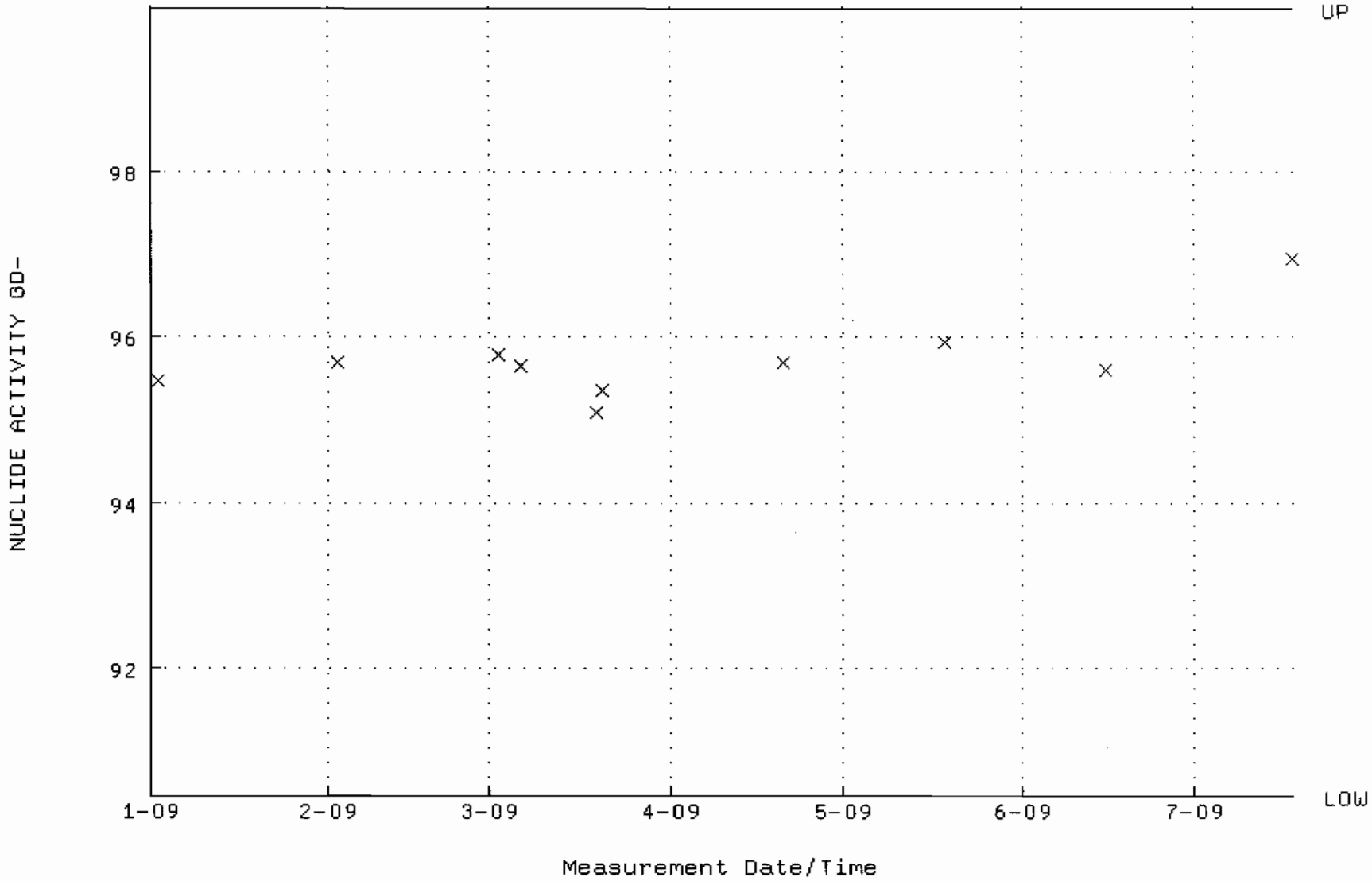

QA filename : DKA100:[ENV_ALPHA.QA.B]B127.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:22:48 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

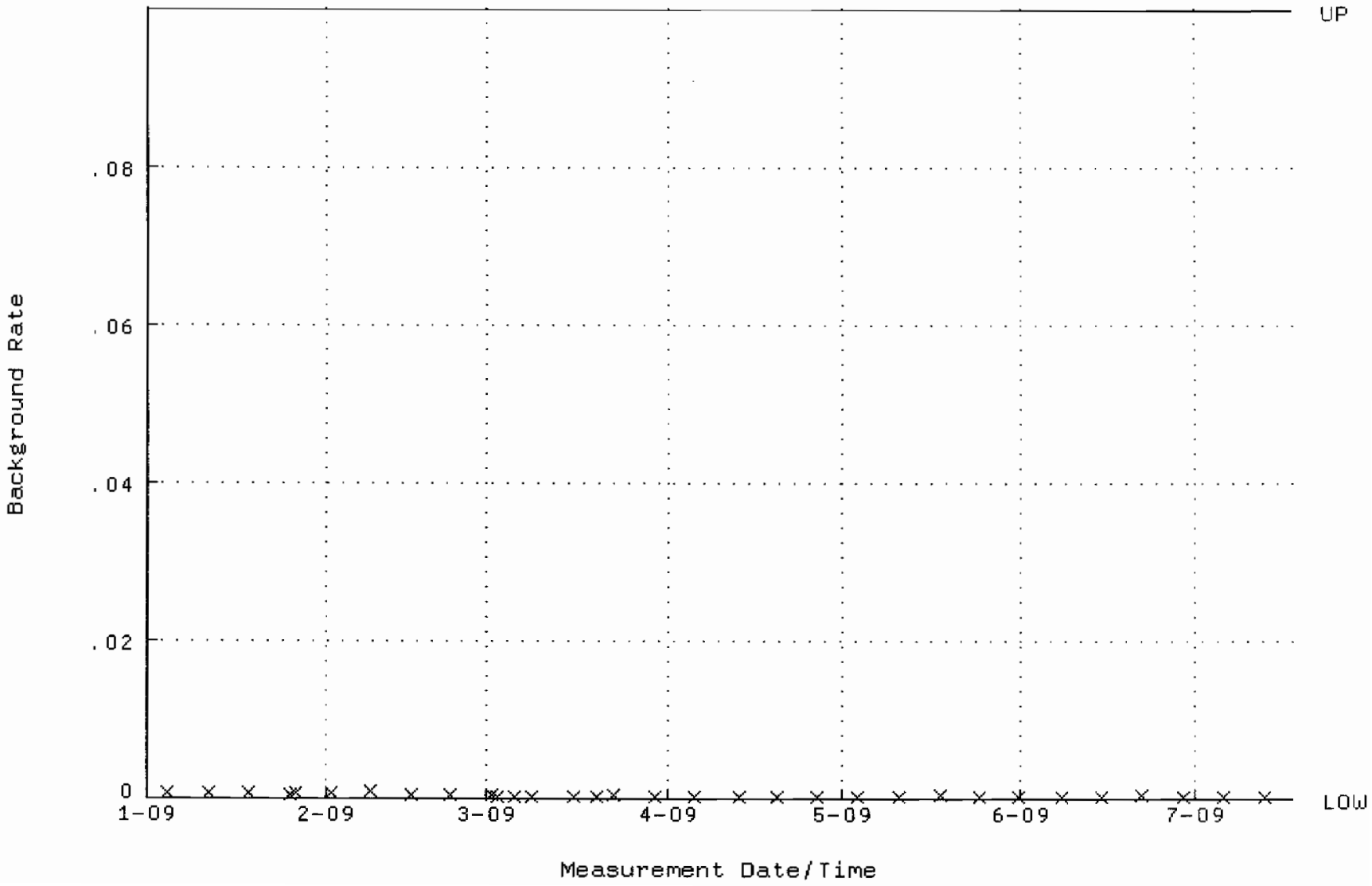

QA filename : DKA100:[ENV_ALPHA.QA.W]W131.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:10 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.247185 through 0.267185

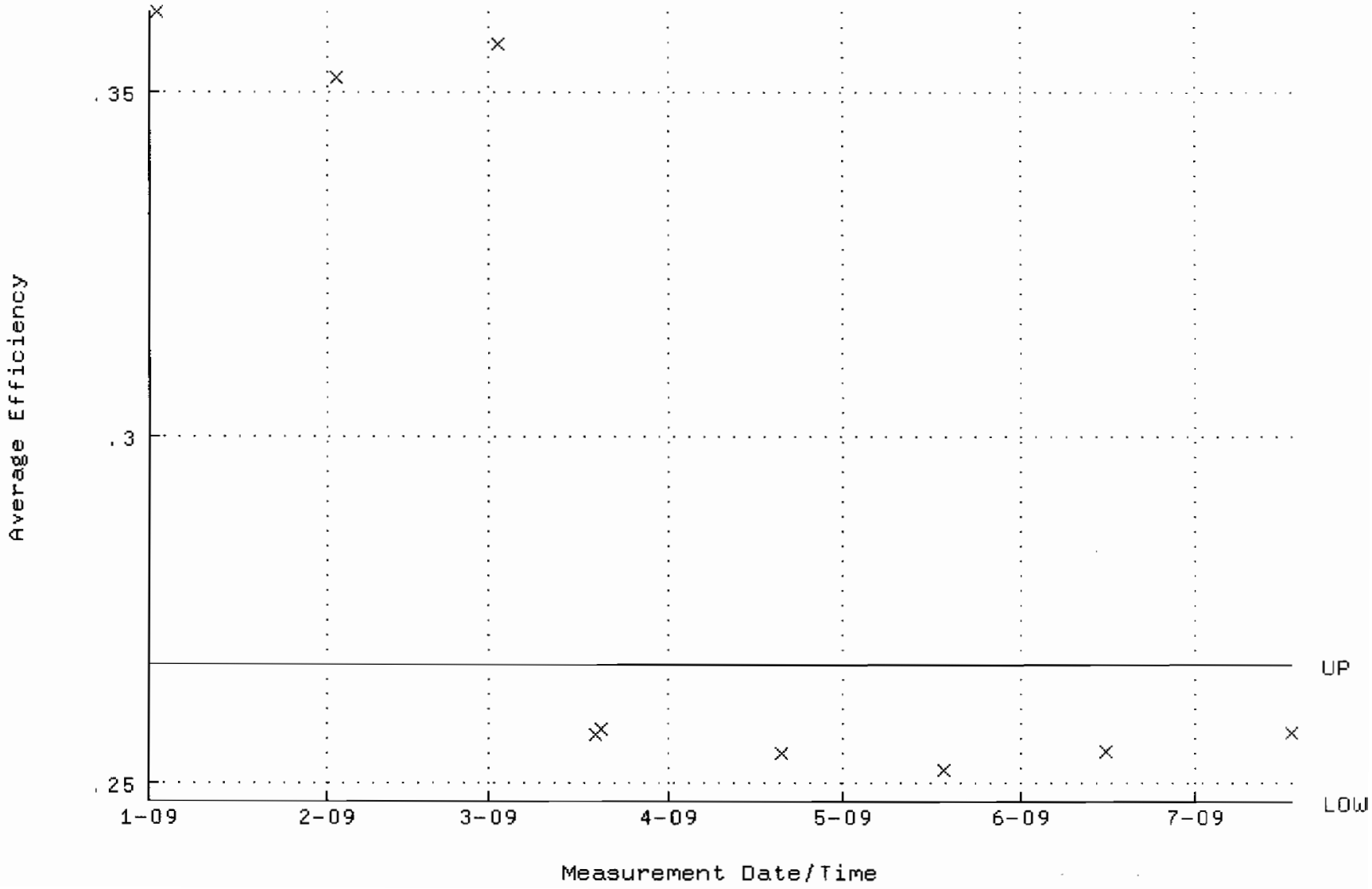

QA filename : DKA100:[ENV_ALPHA.QA.W]W131.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:10 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 85.9407 through 94.9871

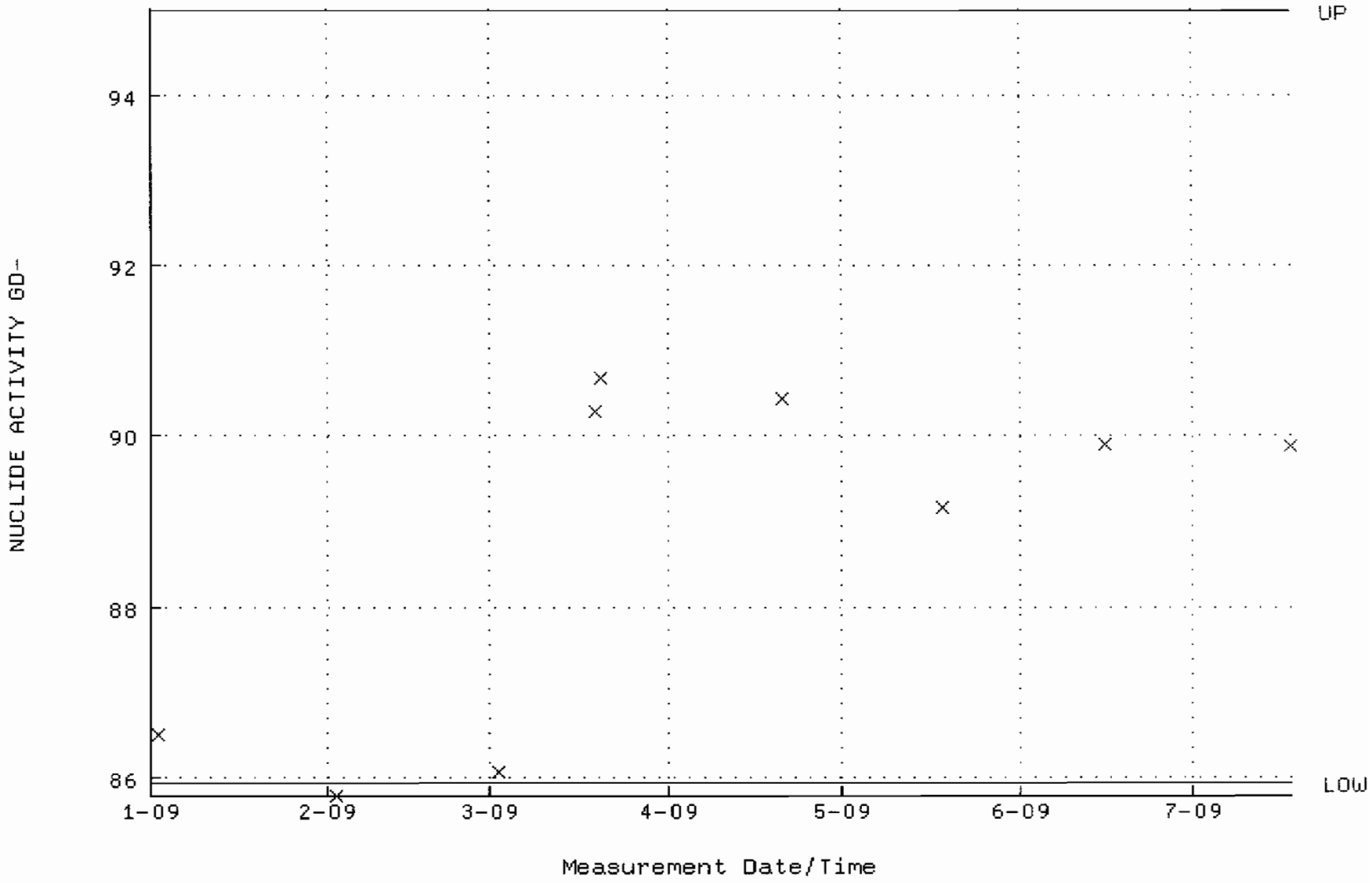

QA filename : DKA100:[ENV_ALPHA.QA.B]B131.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:06 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

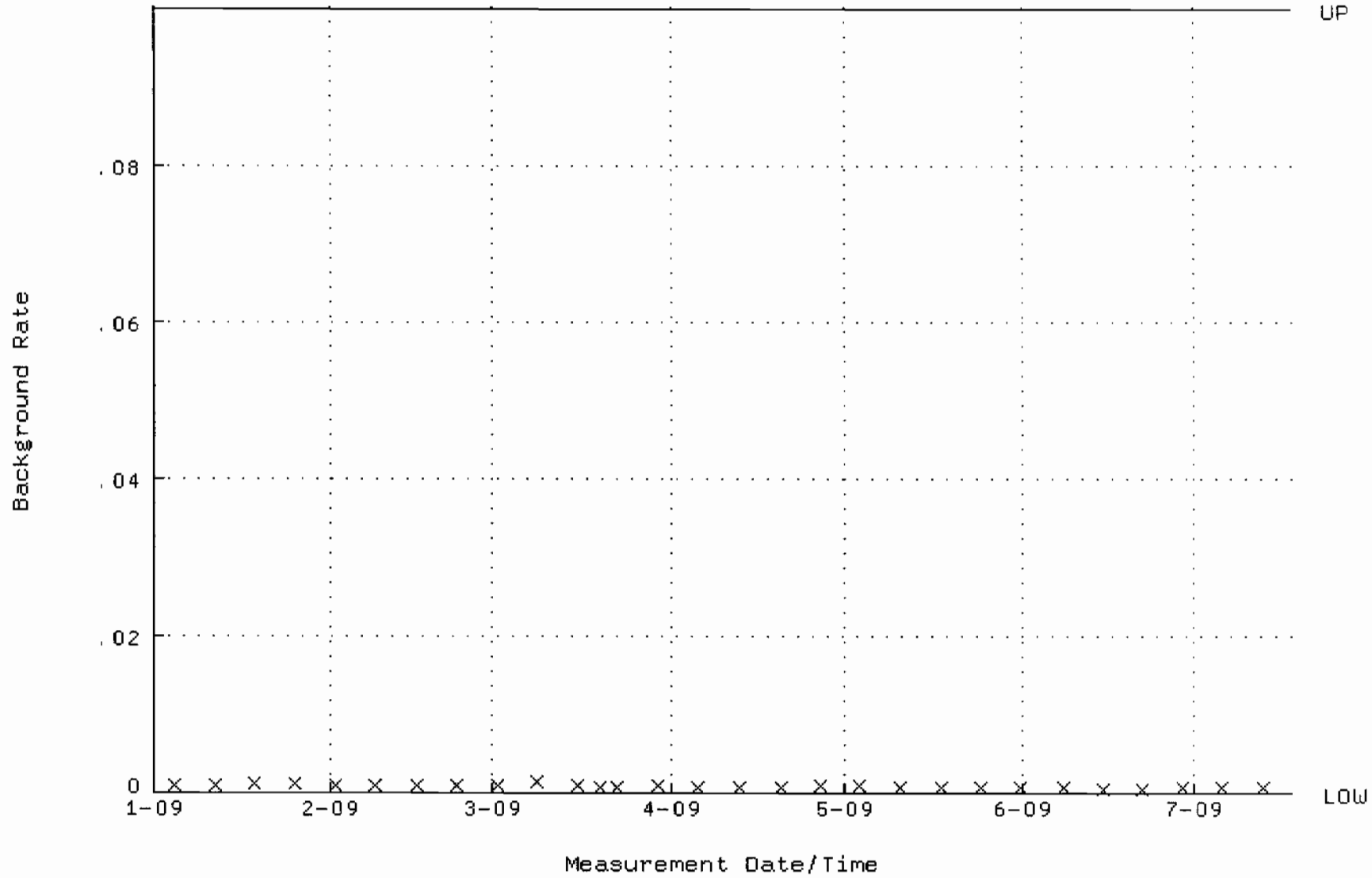

QA filename : DKA100:[ENV_ALPHA.QA.W]W133.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:19 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.235007 through 0.255007

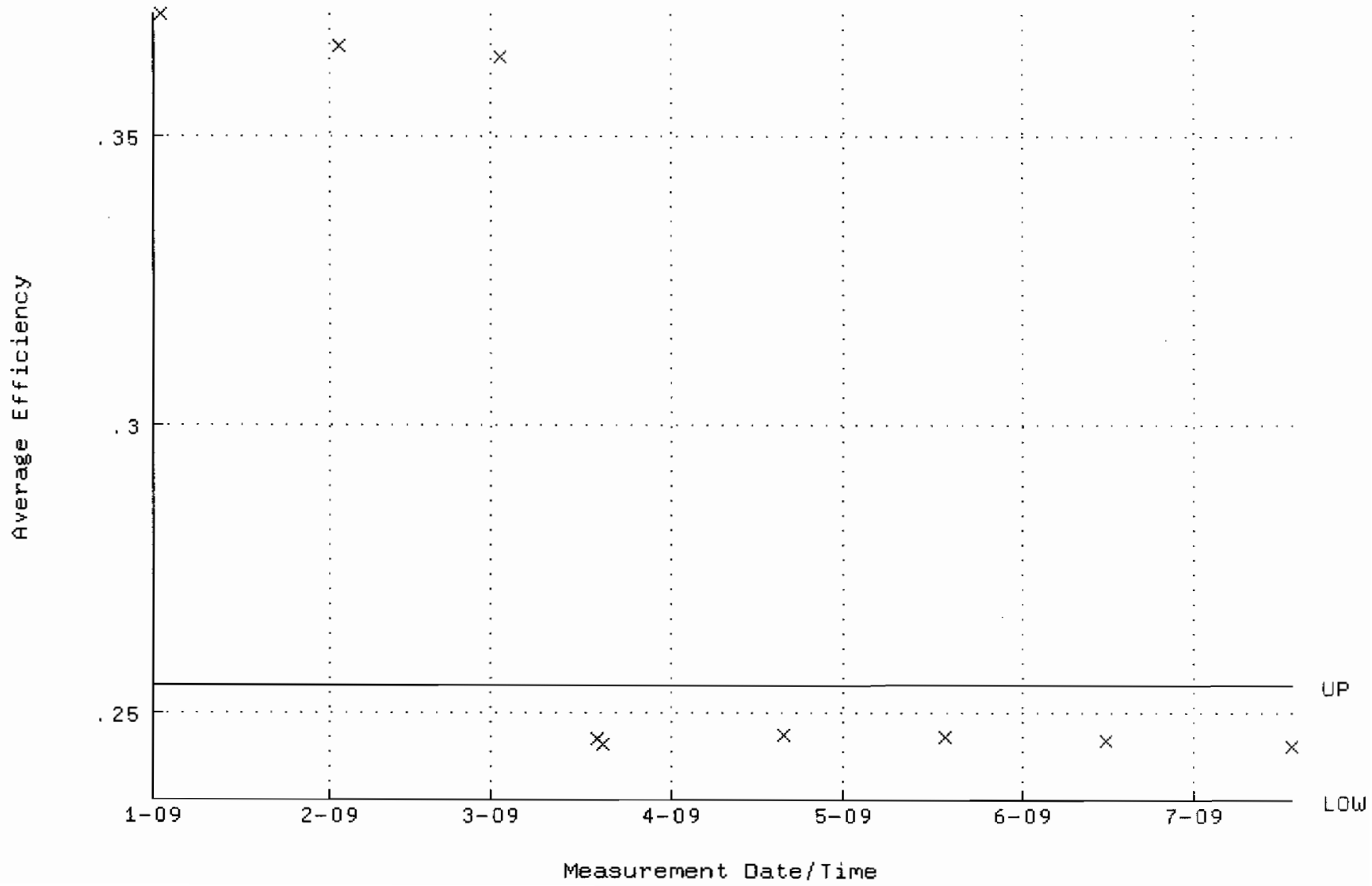

QA filename : DKA100:[ENV_ALPHA.QA.W]W133.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:19 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 90.1899 through 99.6835

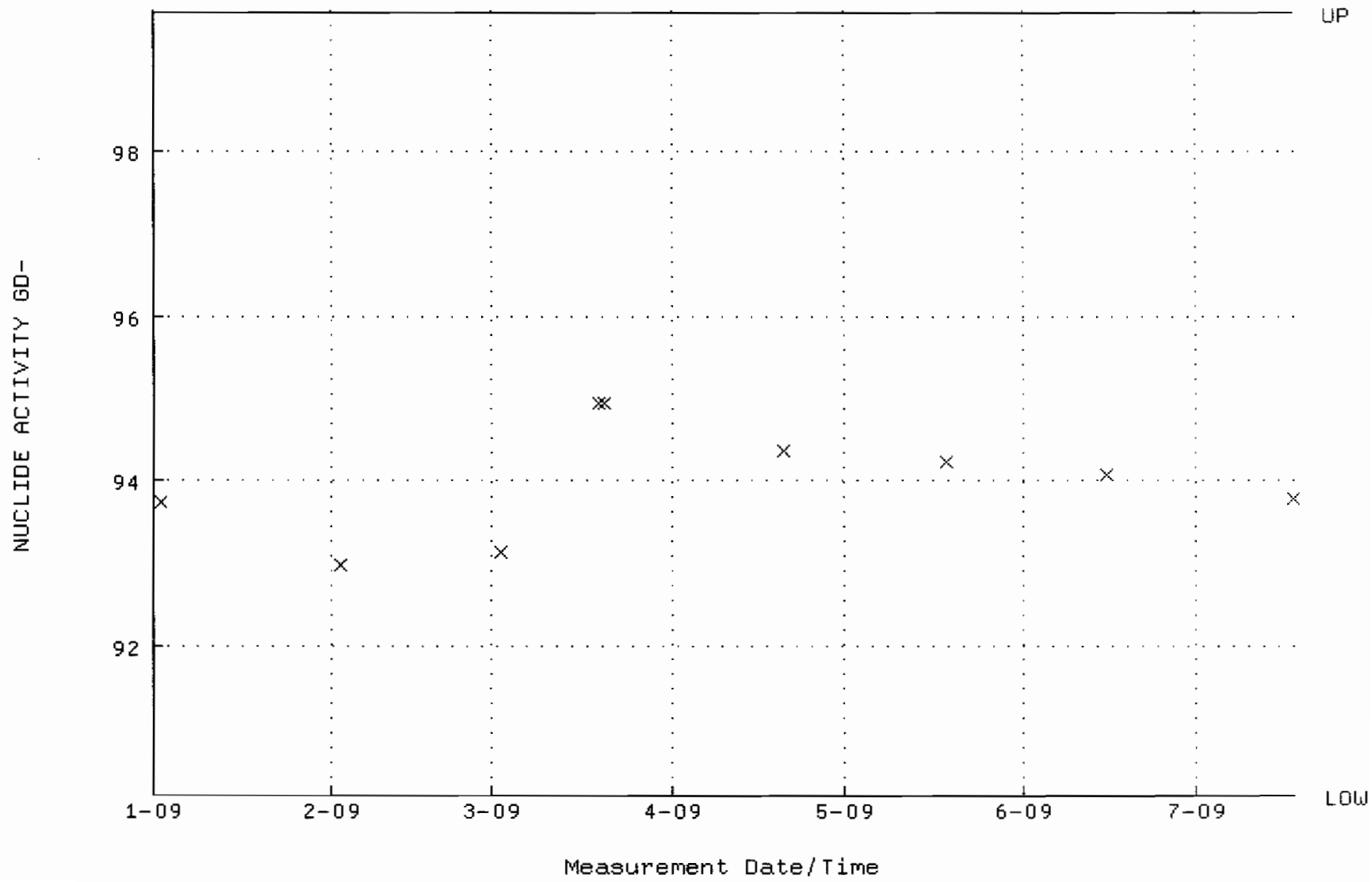

QA filename : DKA100:[ENV_ALPHA.QA.B]B133.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:14 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

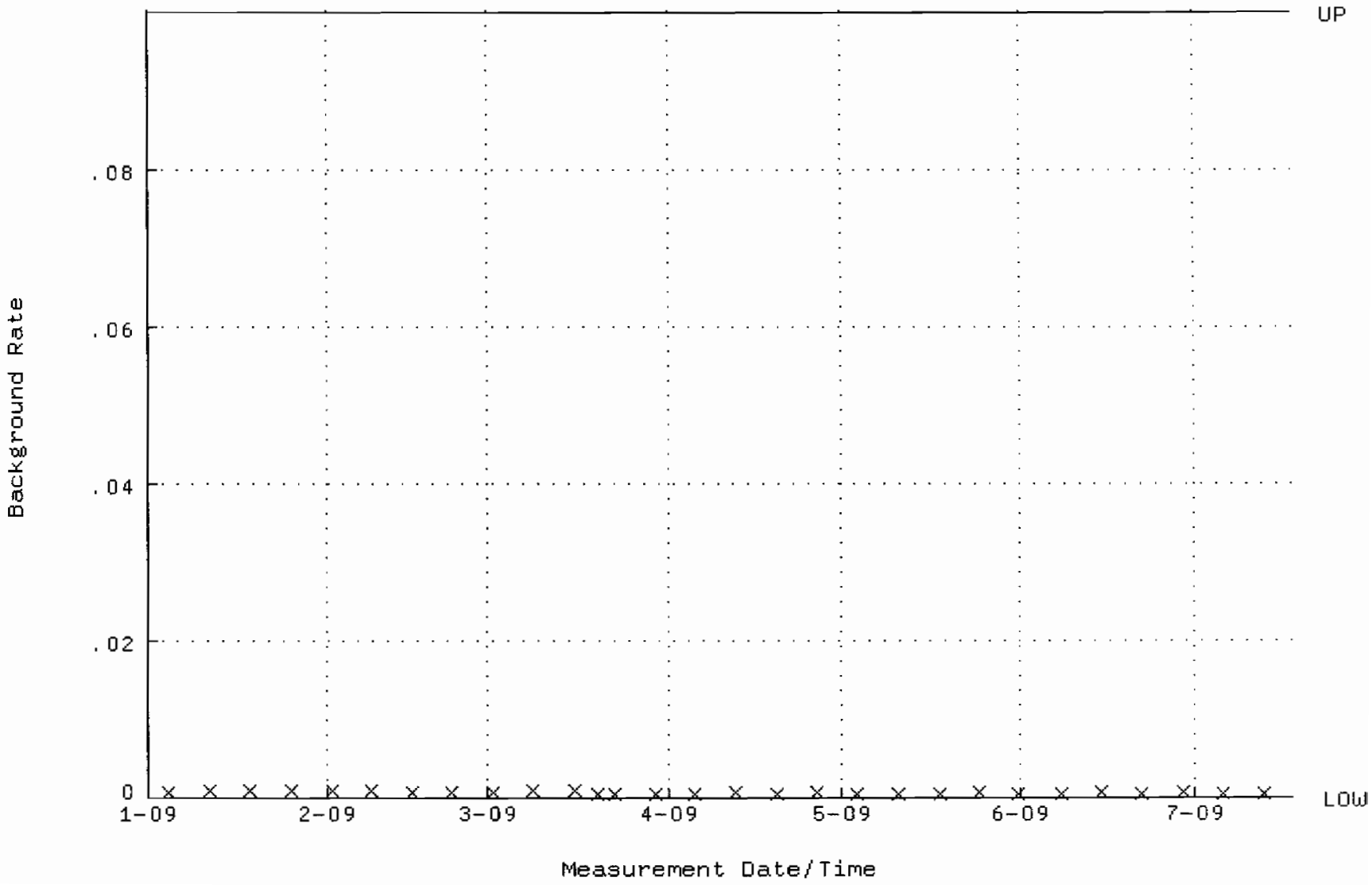

QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:28 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.244305 through 0.264305

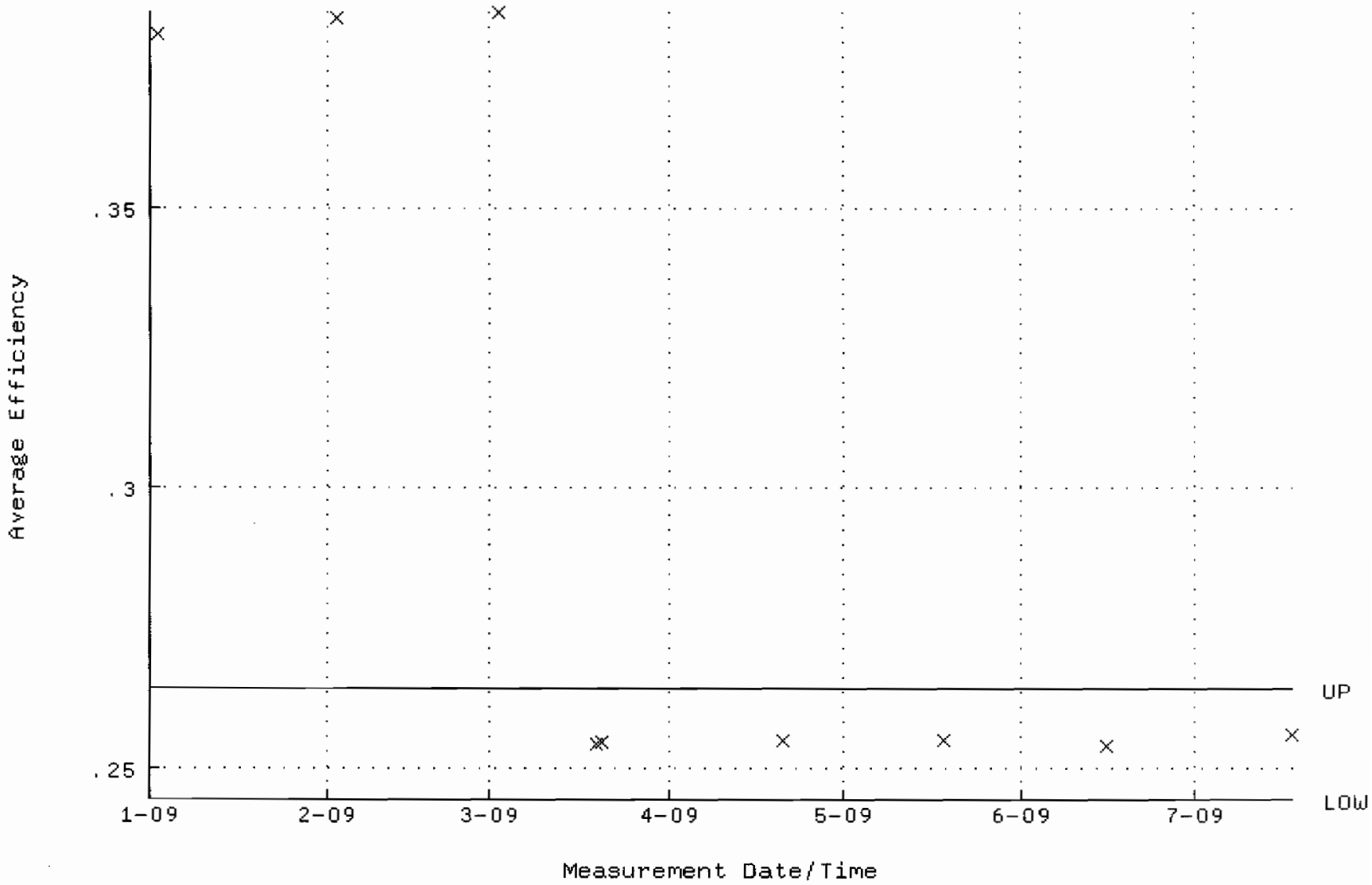

QA filename : DKA100:[ENV_ALPHA.QA.W]W135.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:28 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 87.1482 through 96.3217

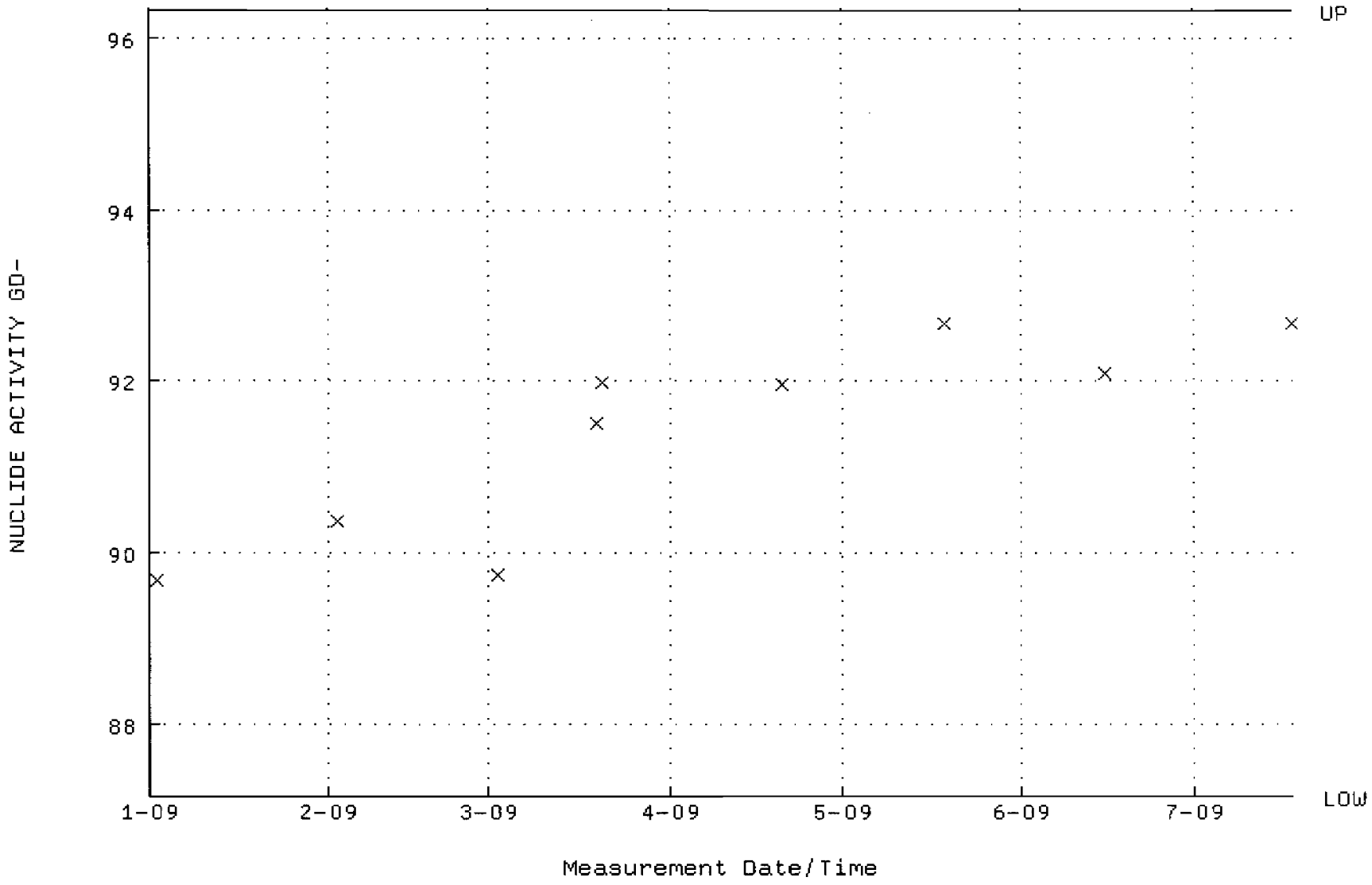

QA filename : DKA100:[ENV_ALPHA.QA.B]B135.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:22 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

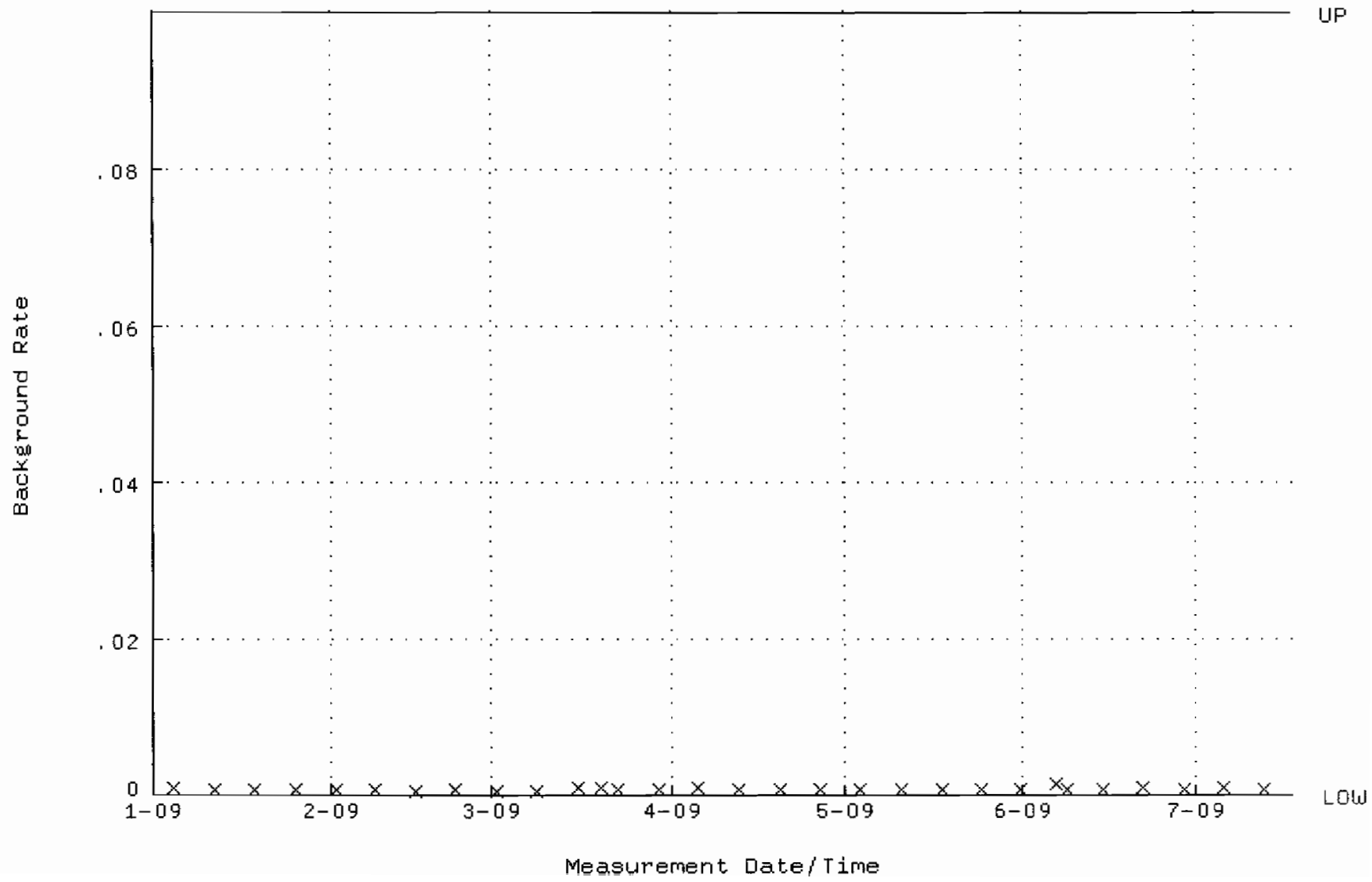

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:11 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.237963 through 0.257963

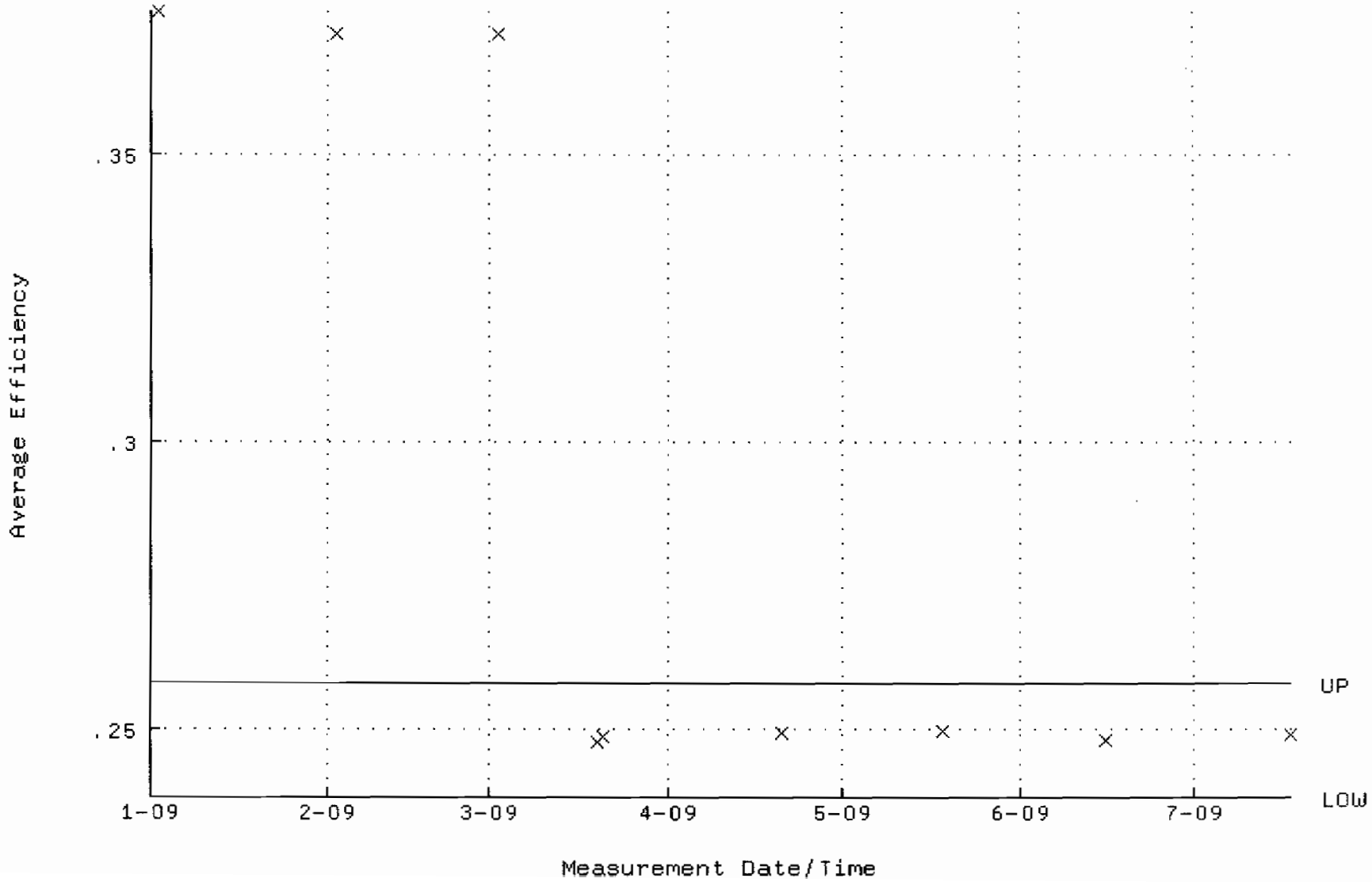

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:11 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 84.6507 through 93.5613

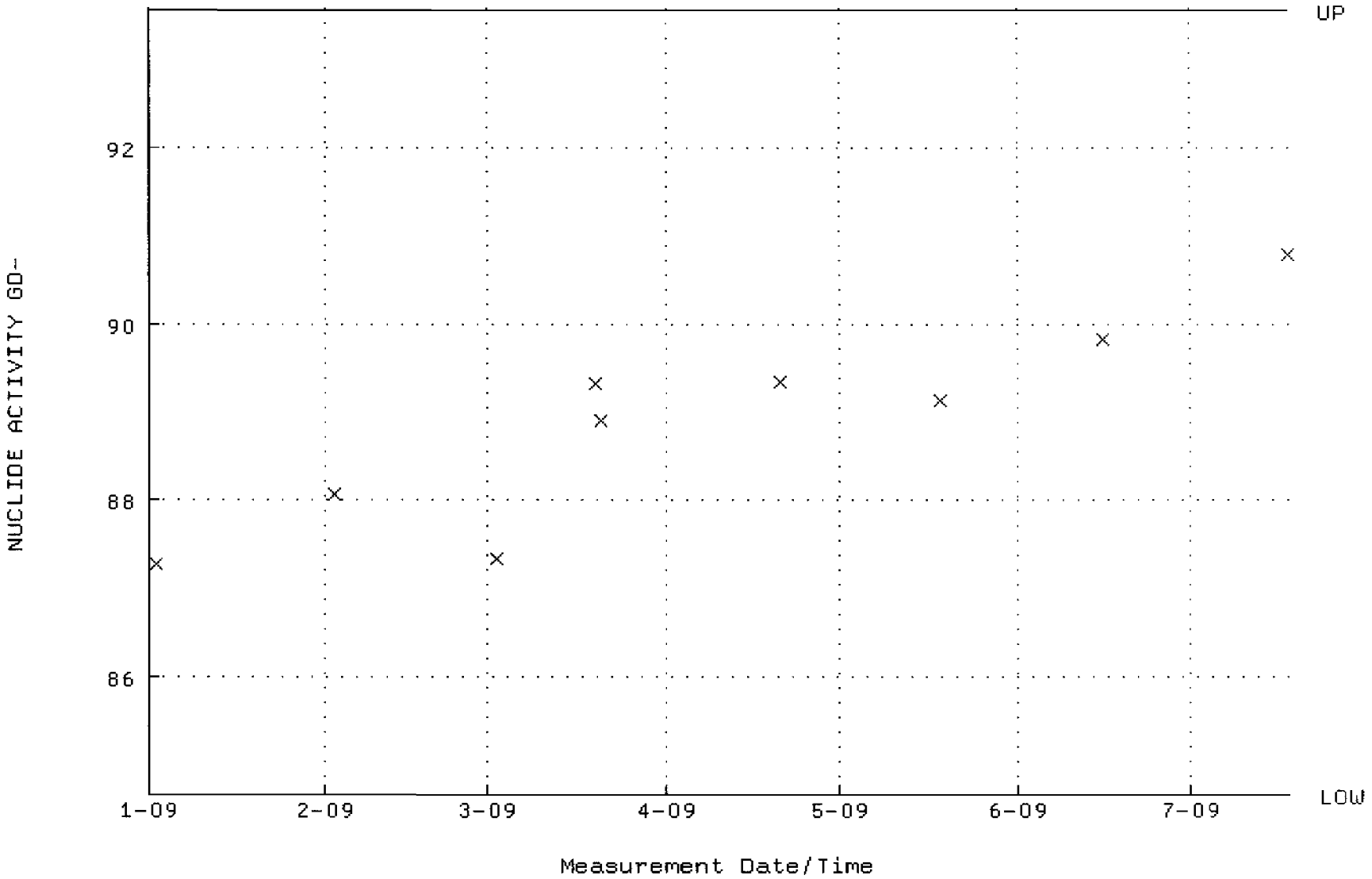

QA filename : DKA100:[ENV_ALPHA.QA.B]B144.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:00 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

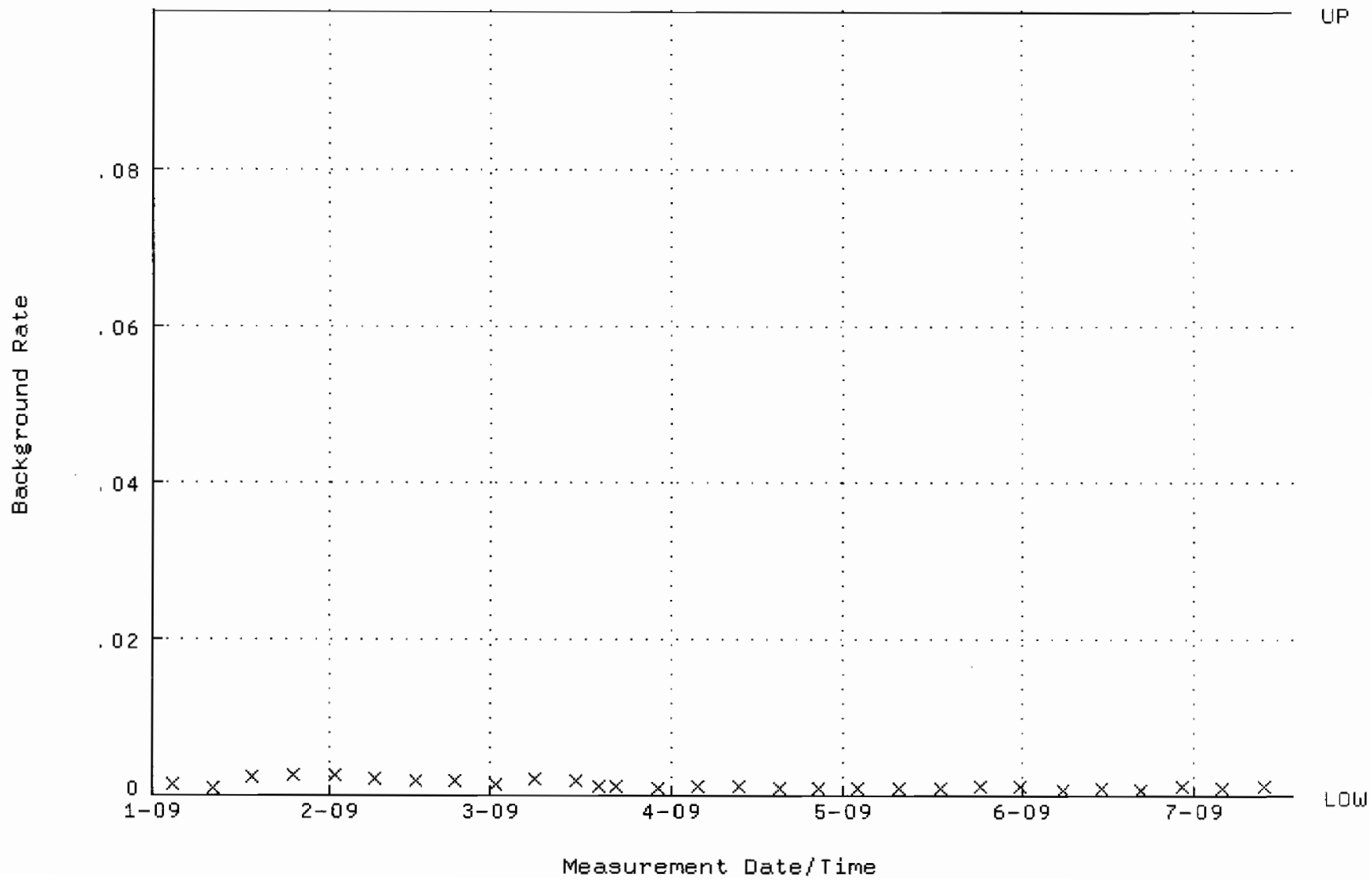

QA filename : DKA100:[ENV_ALPHA.QA.W]W155.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:01 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.247241 through 0.267241

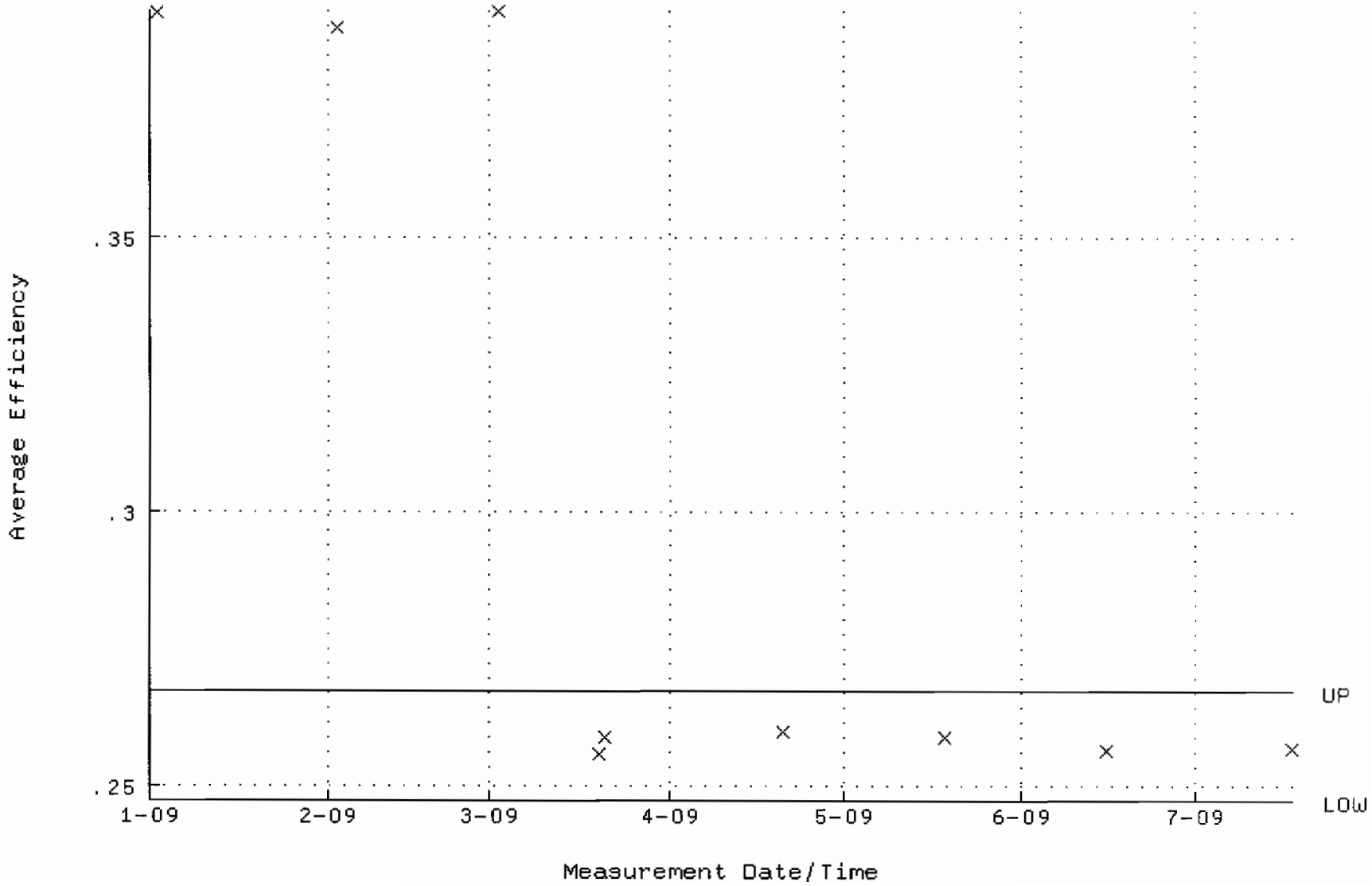

QA filename : DKA100:[ENV_ALPHA.QA.W]W155.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:01 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 83.6873 through 92.4965

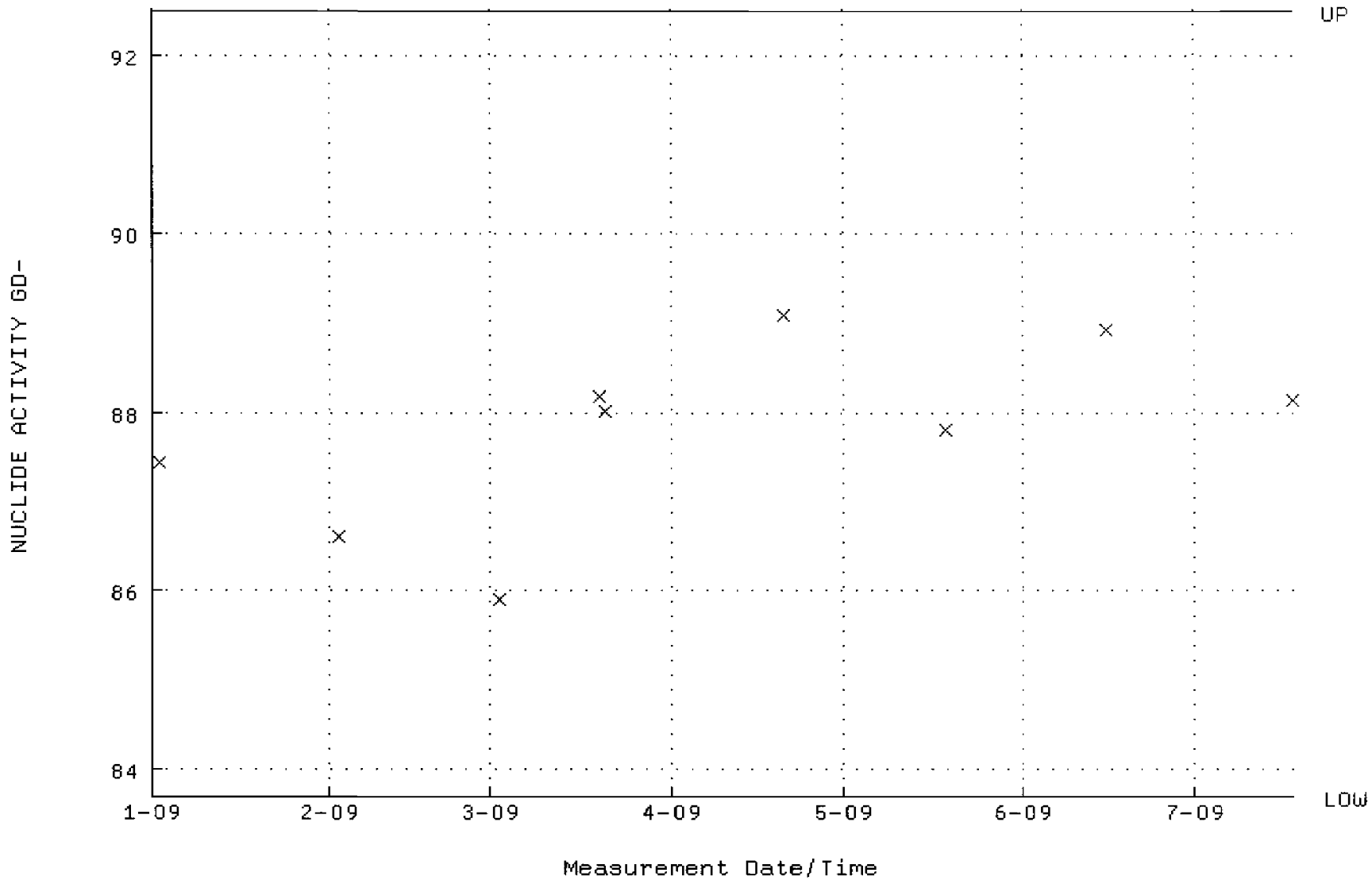

QA filename : DKA100:[ENV_ALPHA.QA.B]B155.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:44 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

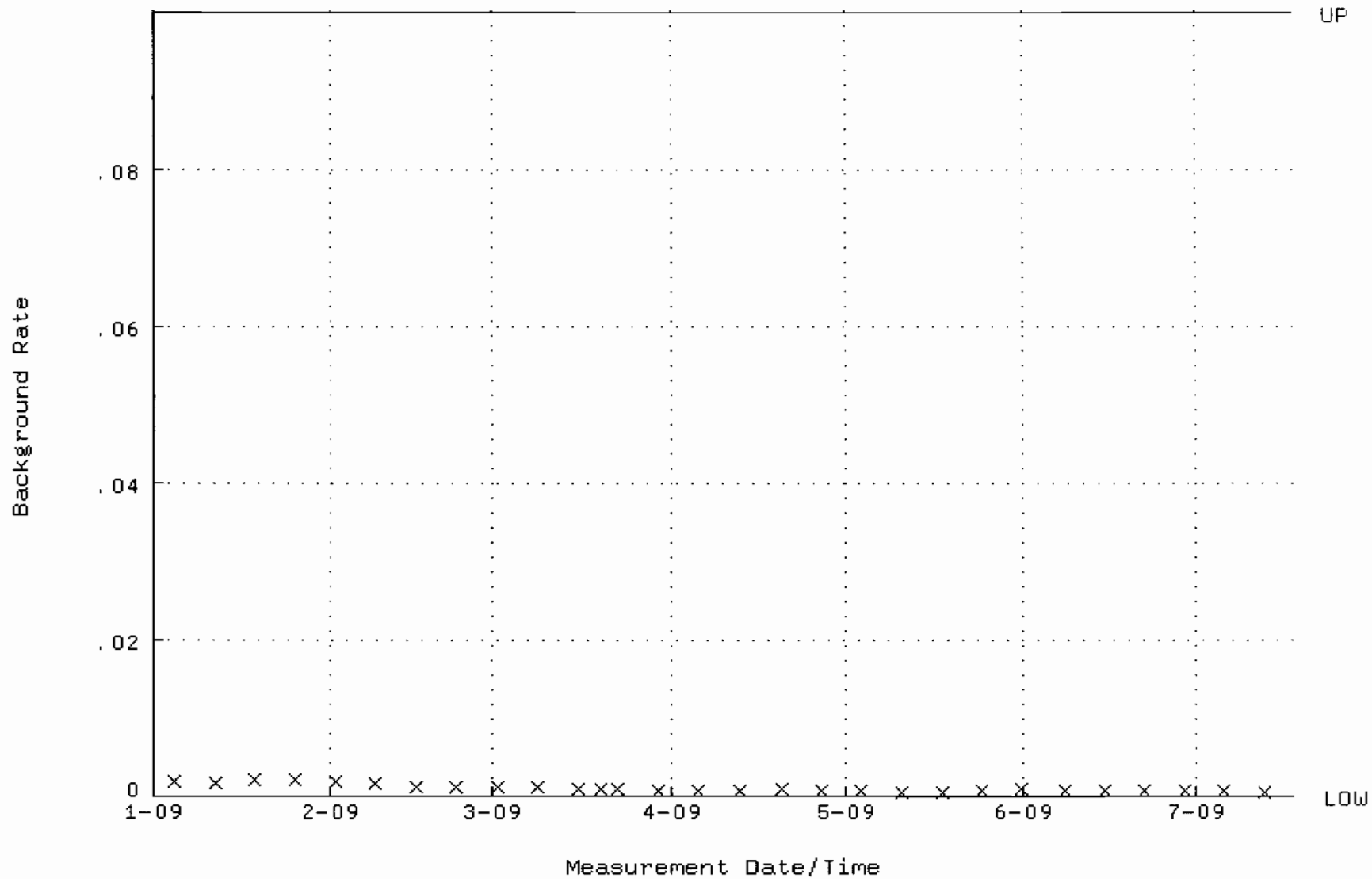

QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:06 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.241250 through 0.261250

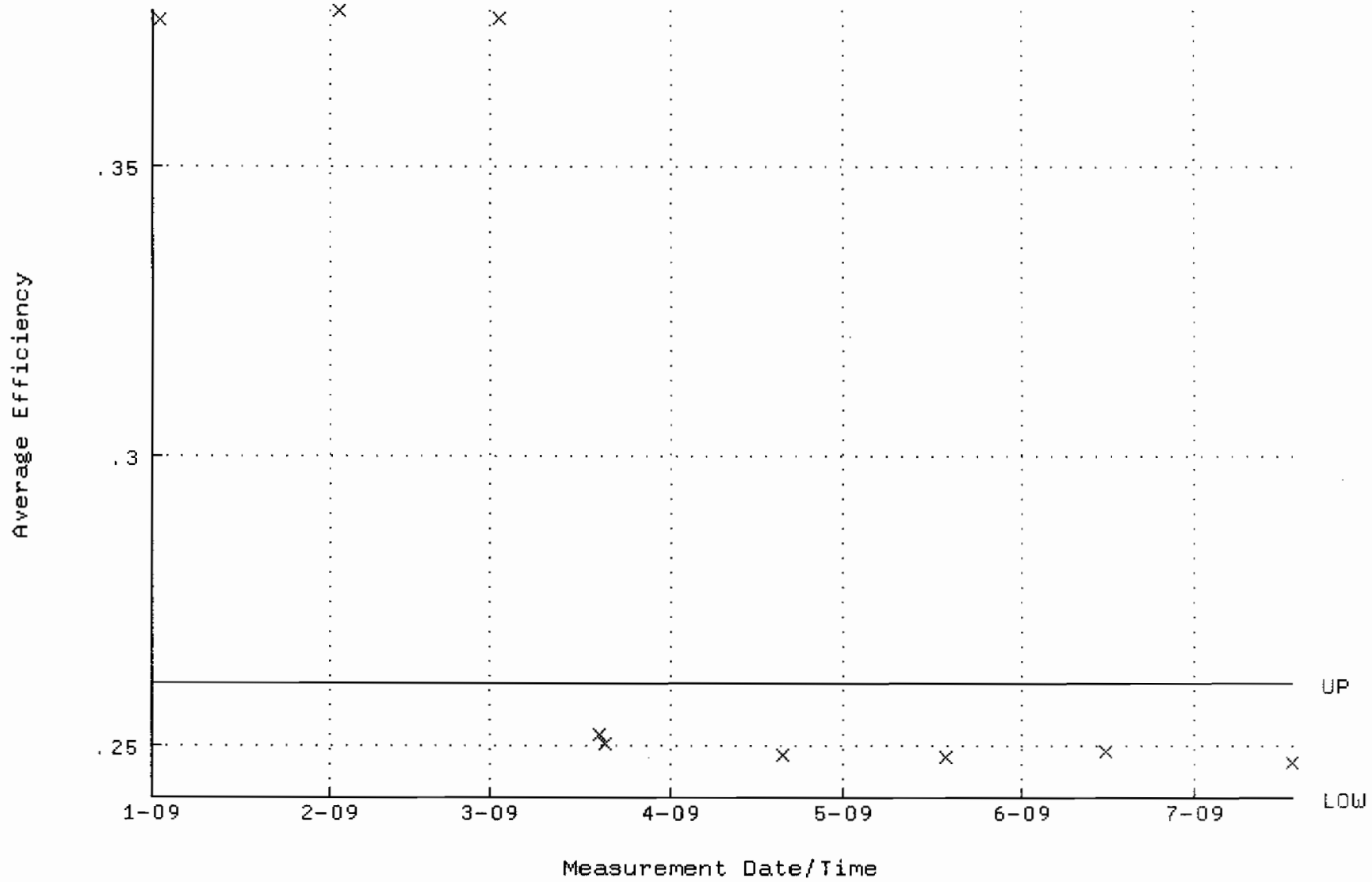

QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:06 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 82.7847 through 91.4989

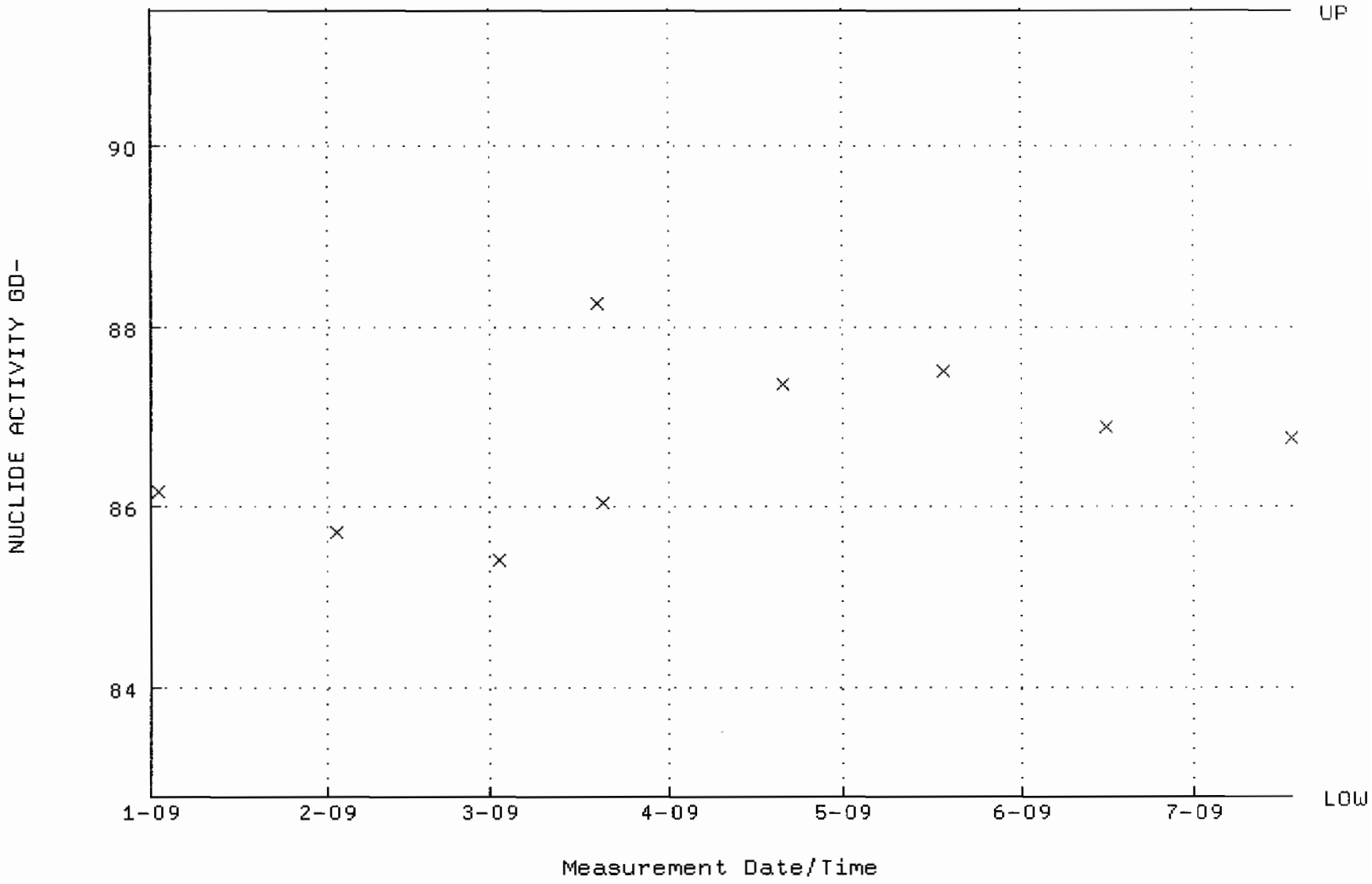

QA filename : DKA100:[ENV_ALPHA.QA.B]B156.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:47 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

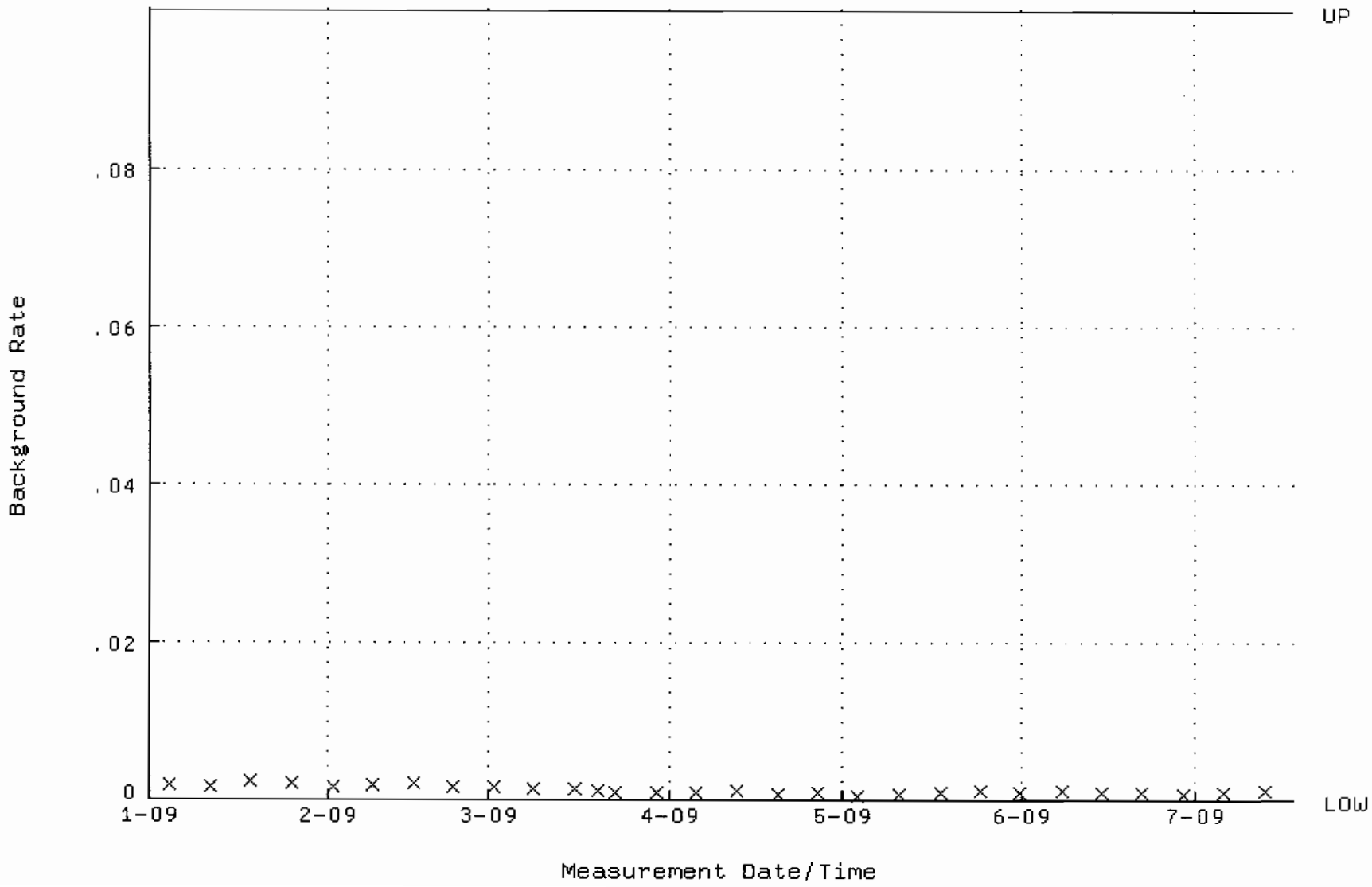

QA filename : DKA100:[ENV_ALPHA.QA.W]W221.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:31:39 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.366972 through 0.386972

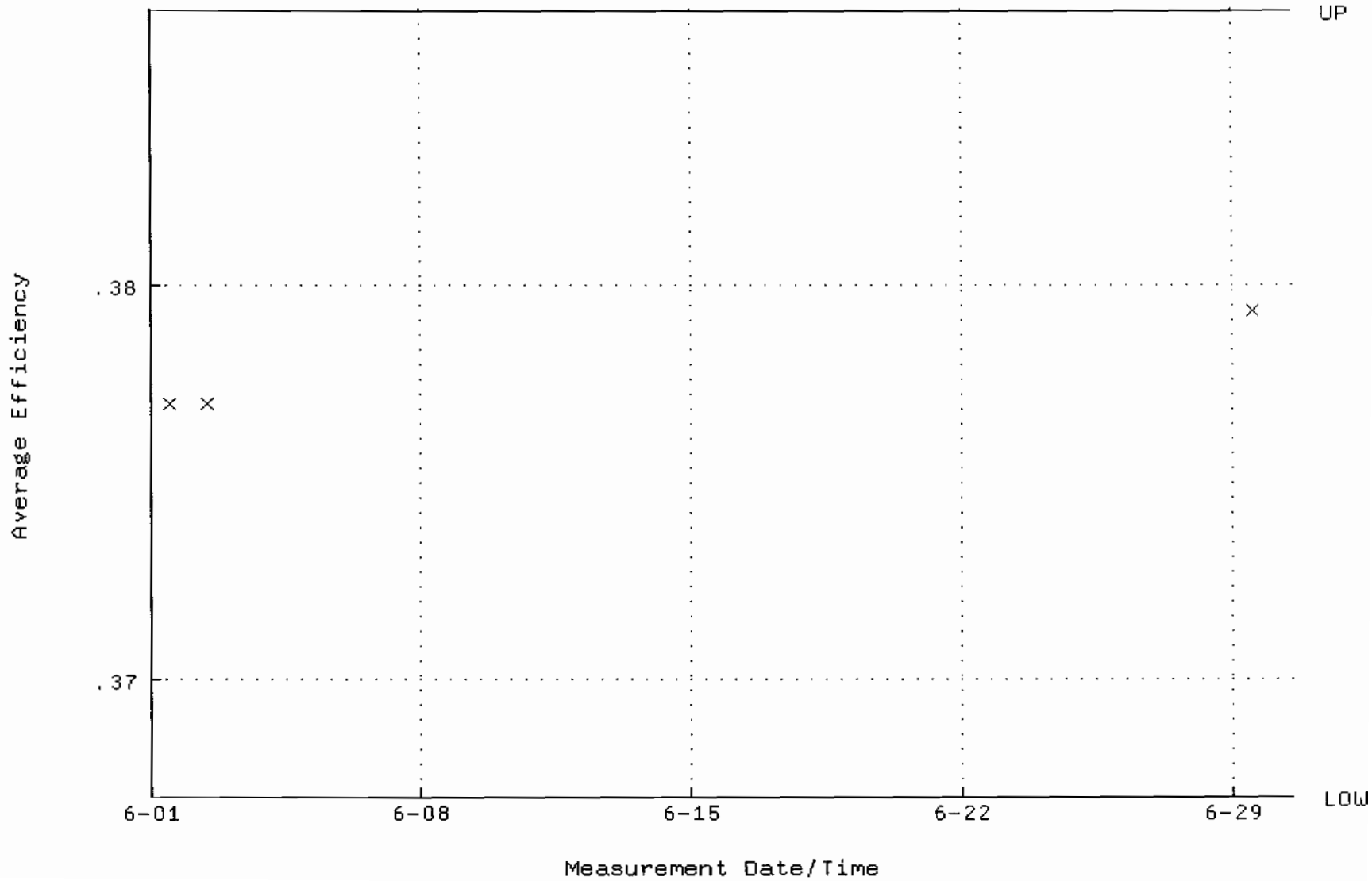

QA filename : DKA100:[ENV_ALPHA.QA.W]W221.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:31:39 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 86.3706 through 95.4622

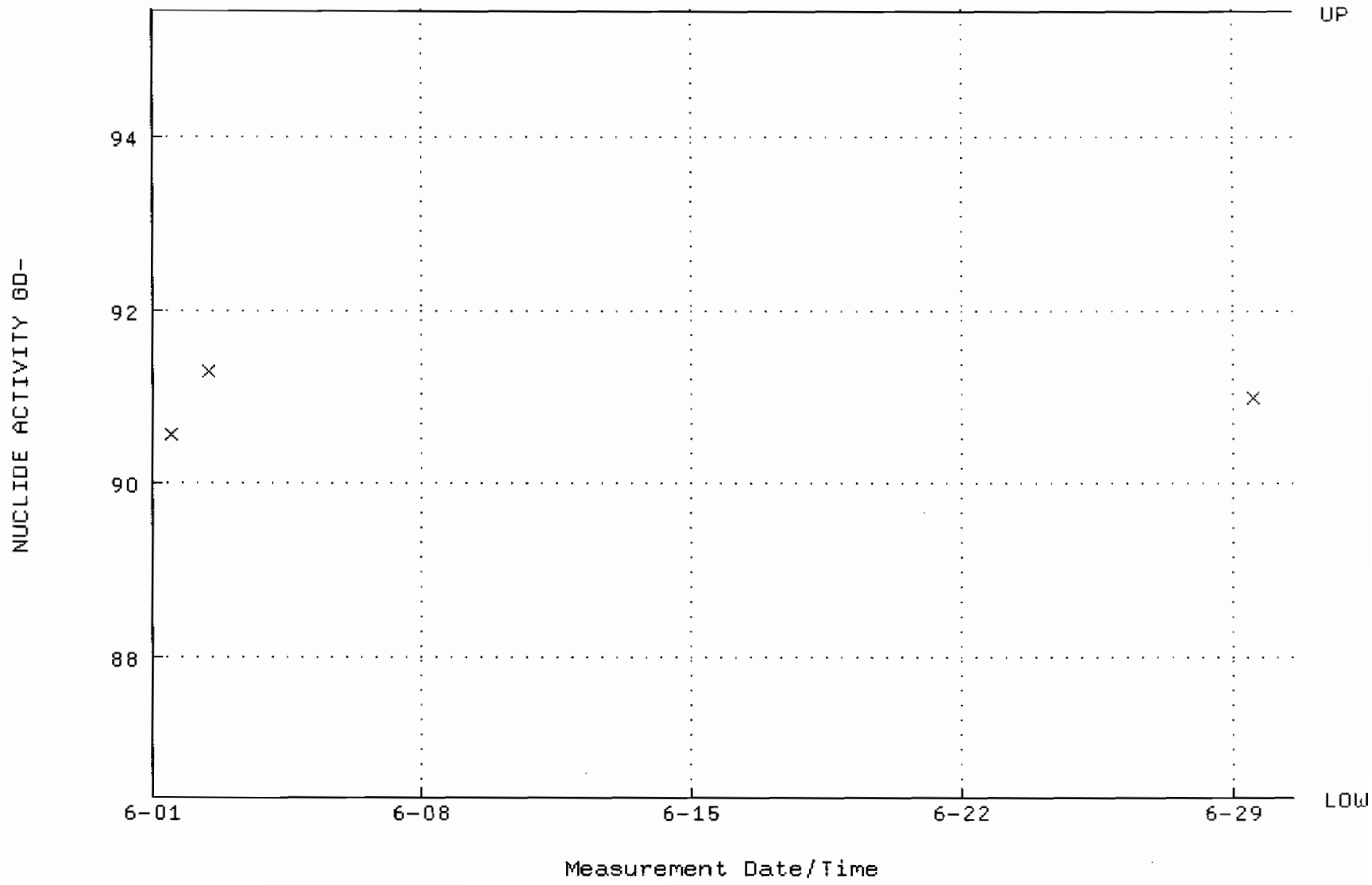

QA filename : DKA100:[ENV_ALPHA.QA.B]B221.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:25 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

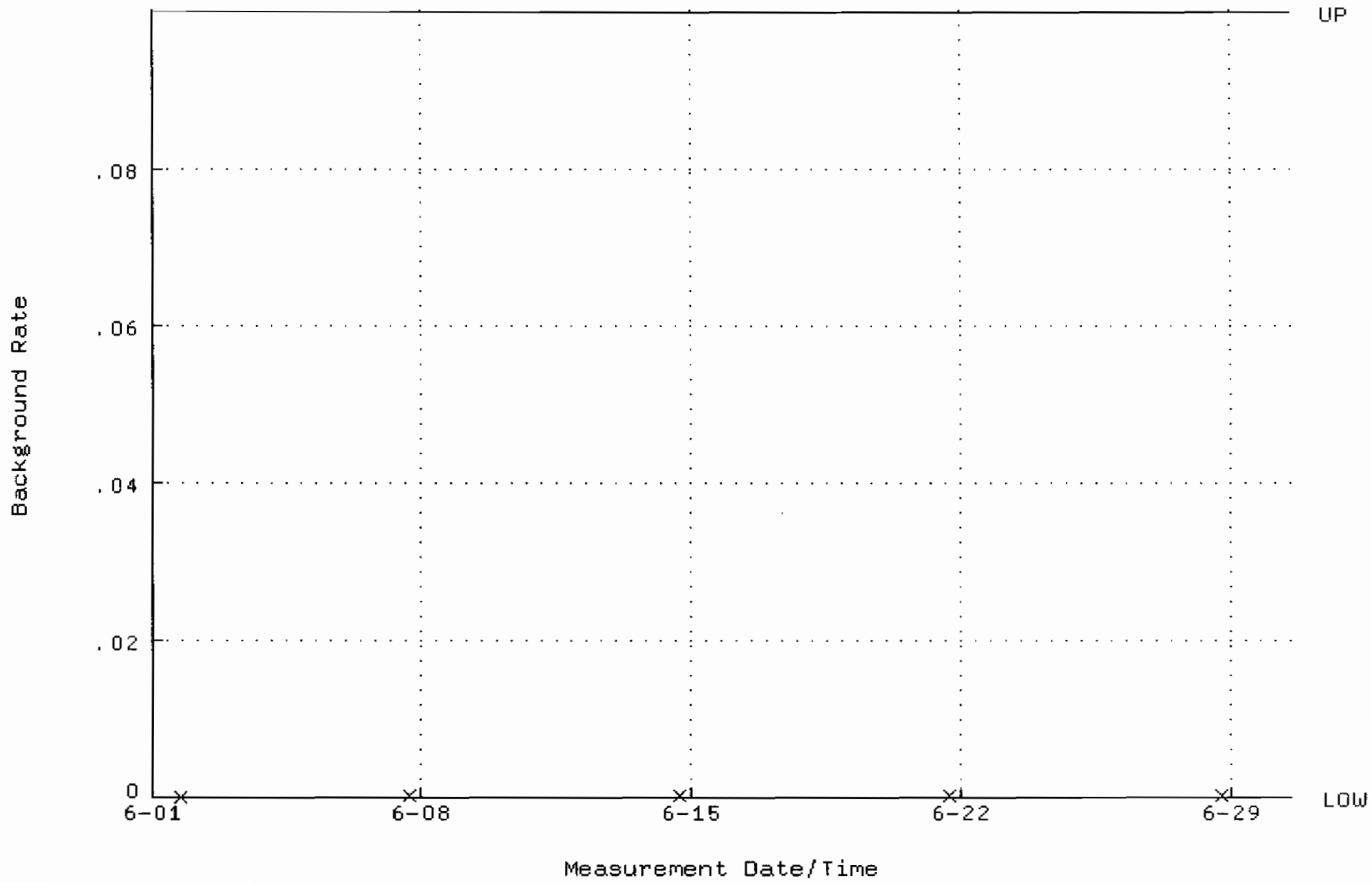

QA filename : DKA100:[ENV_ALPHA.QA.W]W224.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:31:54 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.370893 through 0.390893

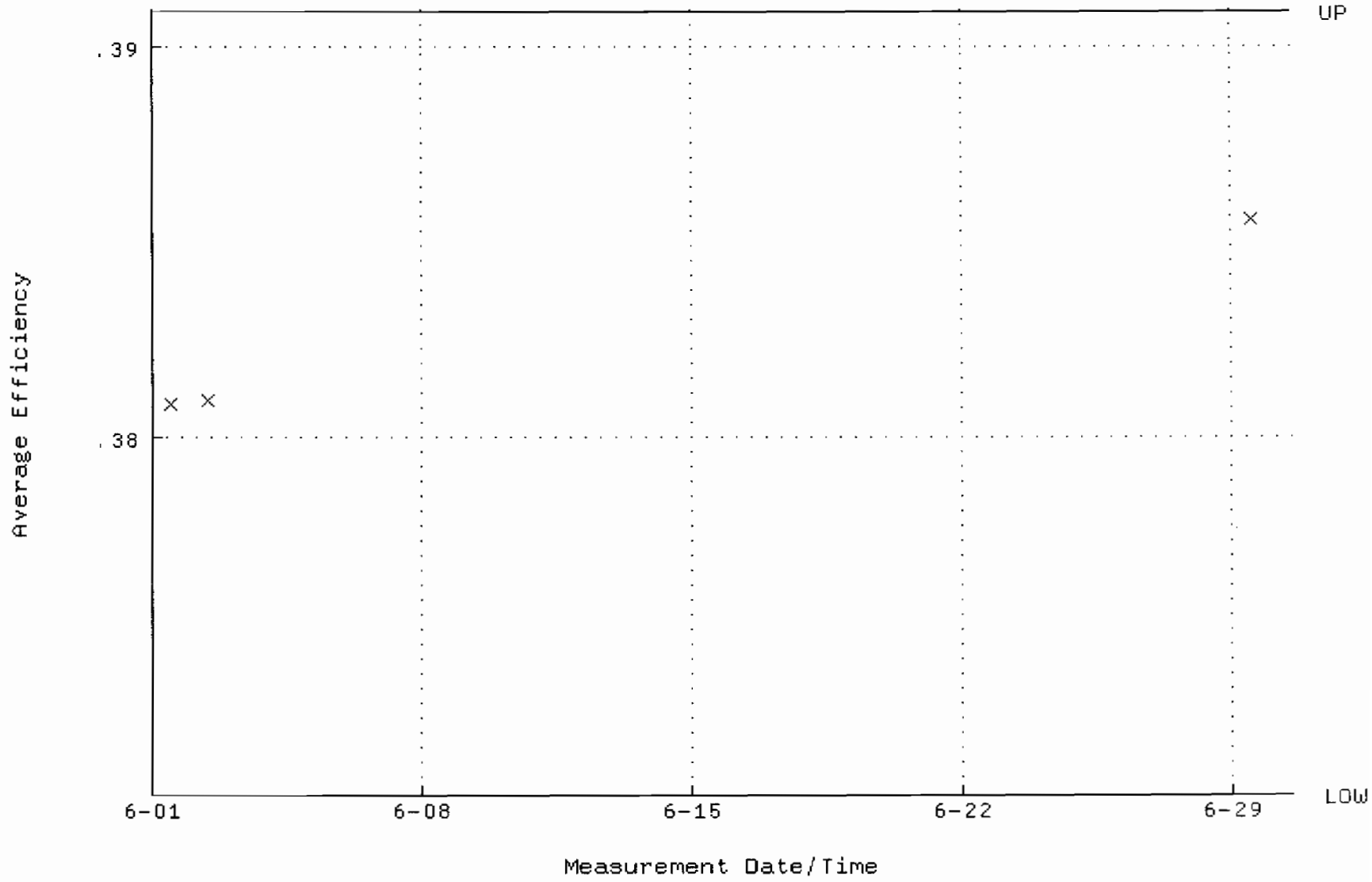

QA filename : DKA100:[ENV_ALPHA.QA.W]W224.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:31:54 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 83.9352 through 92.7704

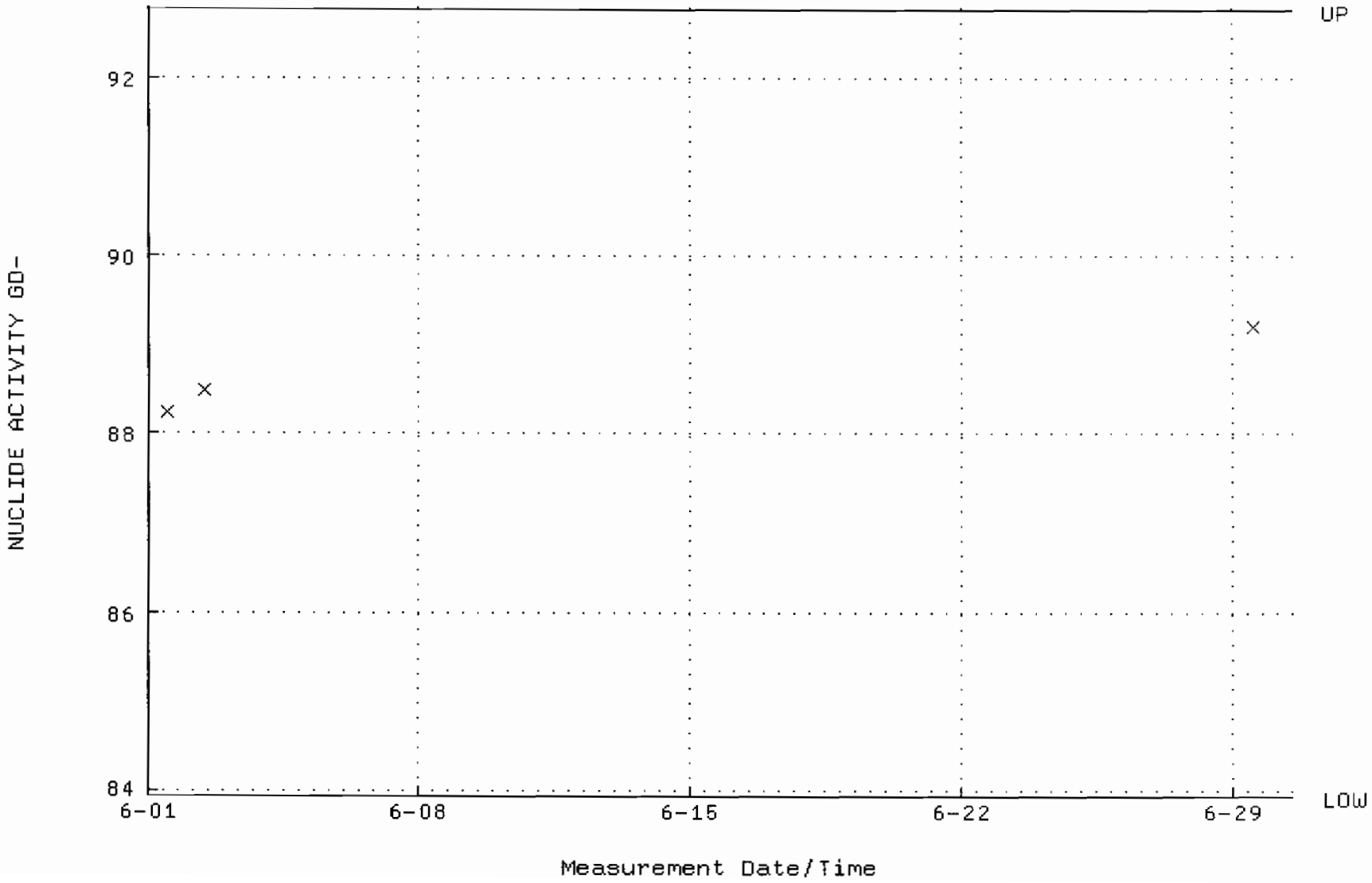

QA filename : DKA100:[ENV_ALPHA.QA.B]B224.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:39 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

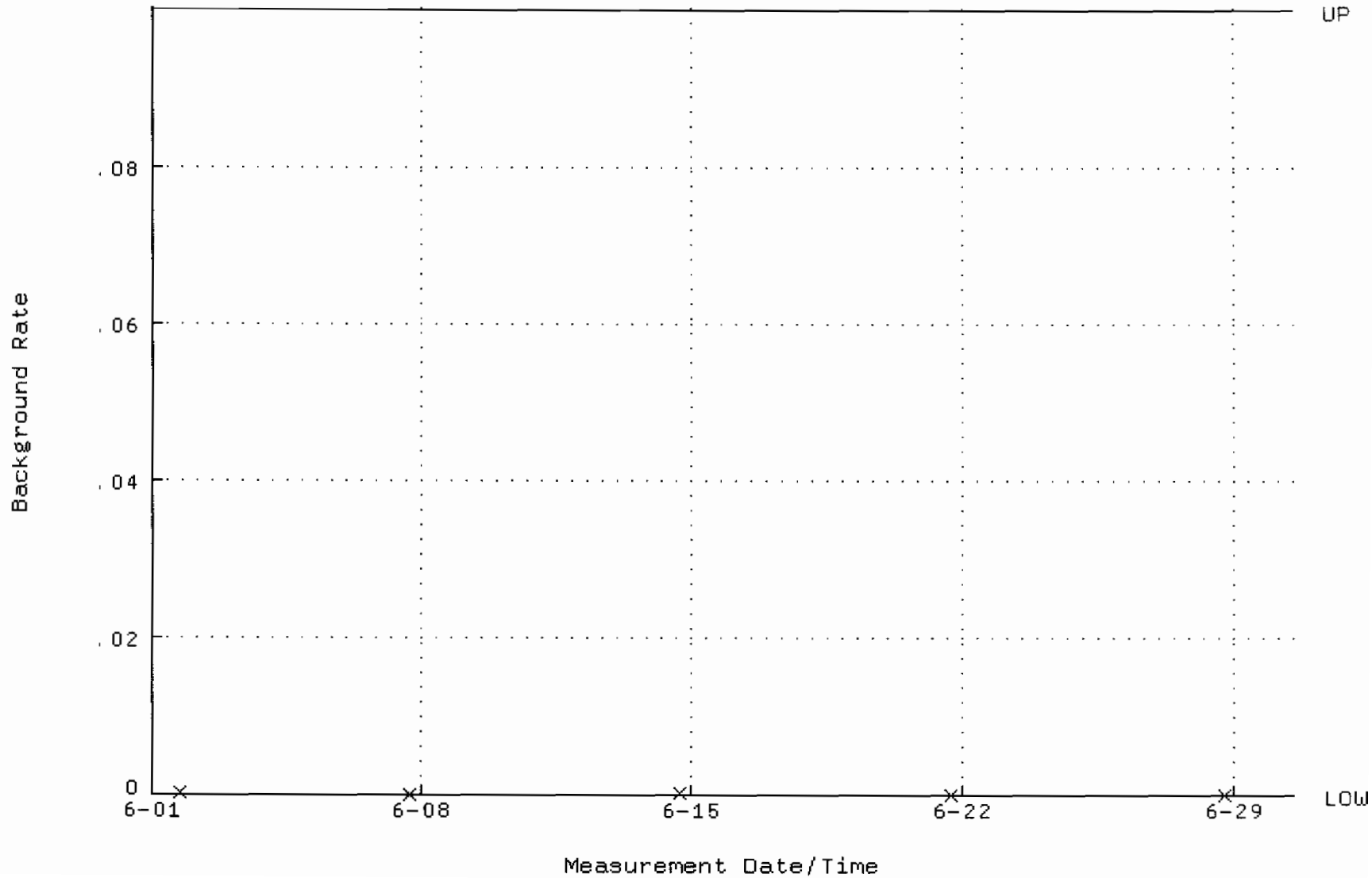

QA filename : DKA100:[ENV_ALPHA.QA.W]W225.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:31:59 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.367031 through 0.387031

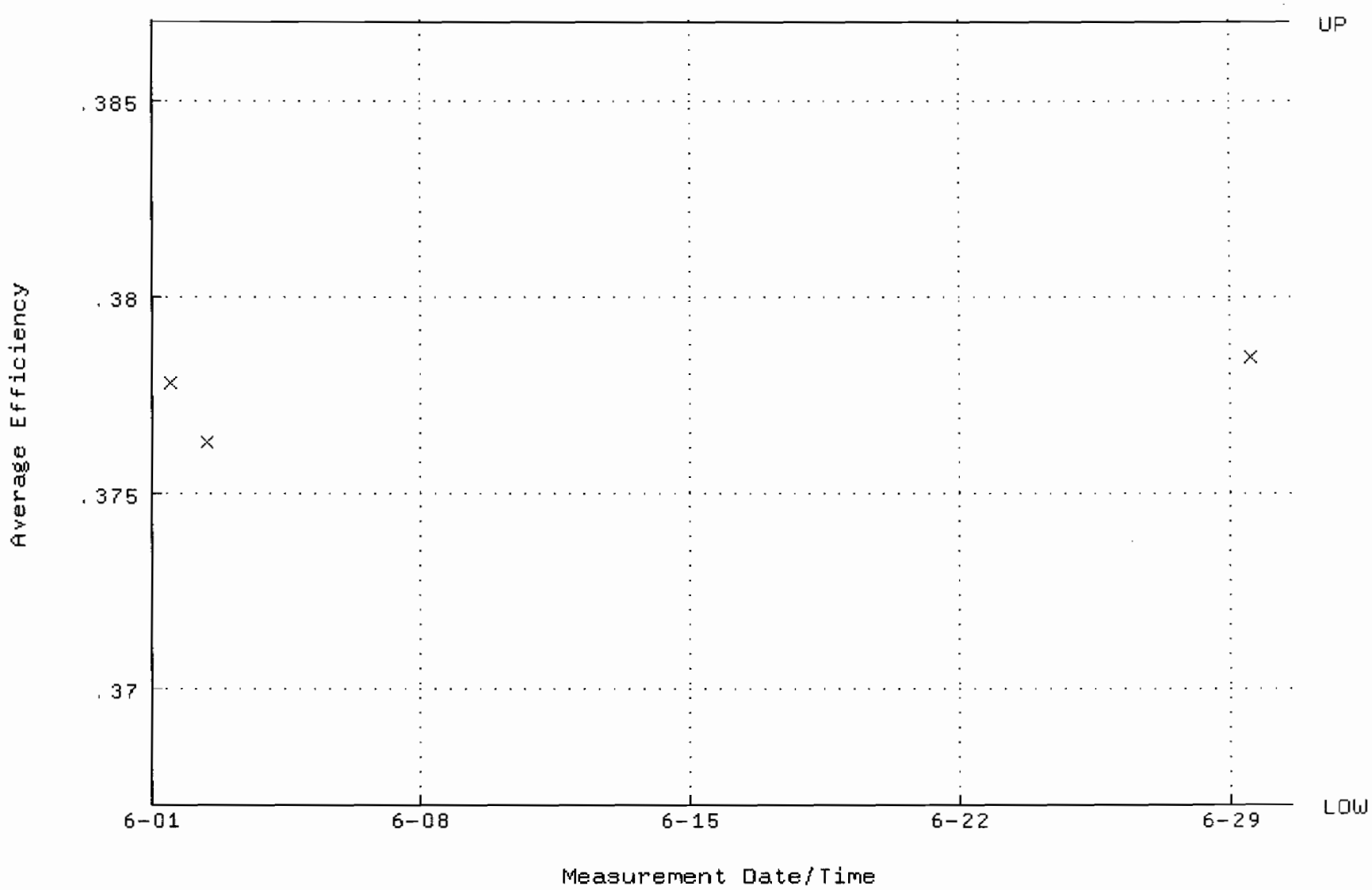

QA filename : DKA100:[ENV_ALPHA.QA.W]W225.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:31:59 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 88.2592 through 97.5496

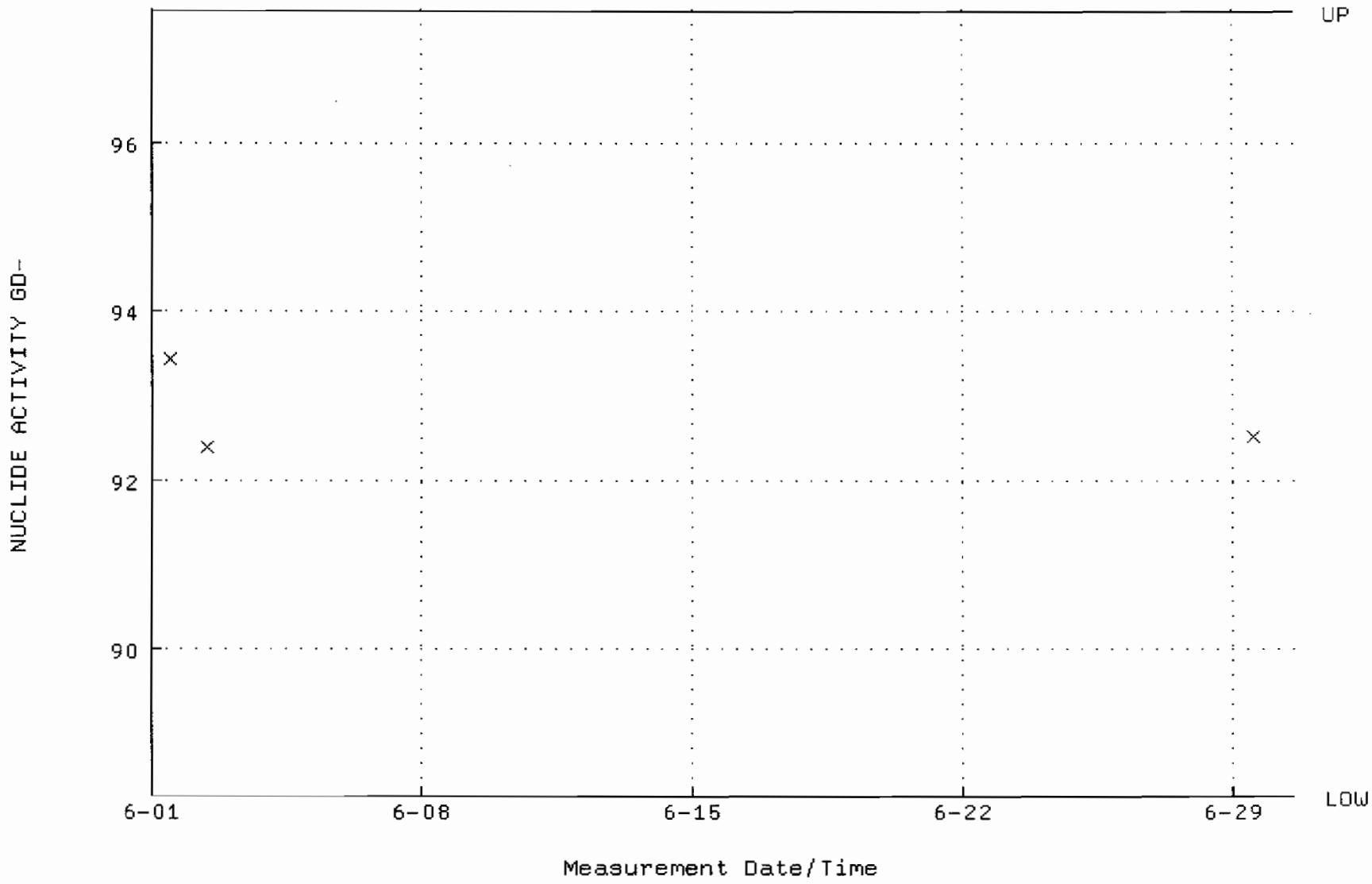

QA filename : DKA100:[ENV_ALPHA.QA.B]B225.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:43 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

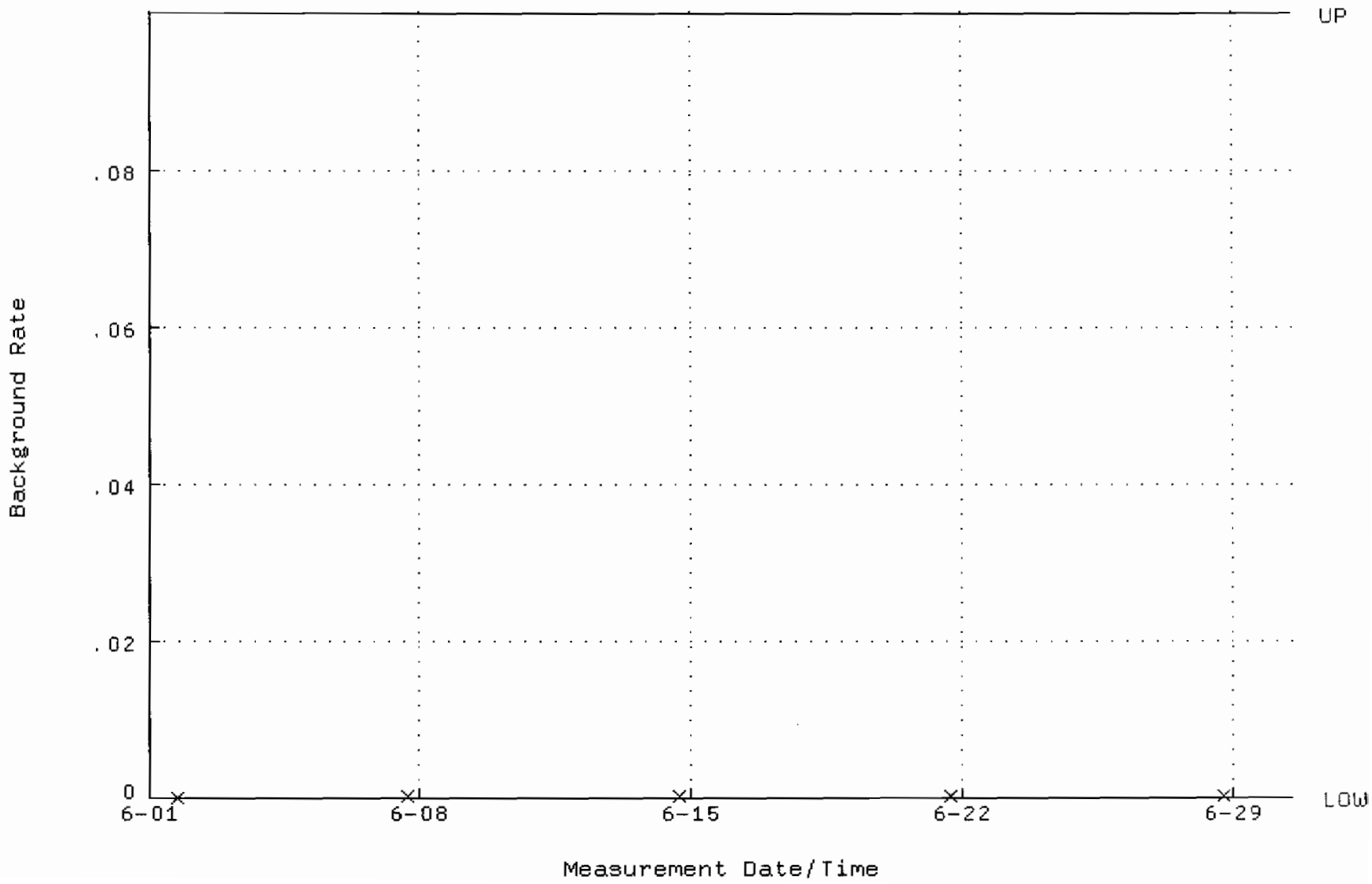

QA filename : DKA100:[ENV_ALPHA.QA.W]W226.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:03 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.371237 through 0.391237

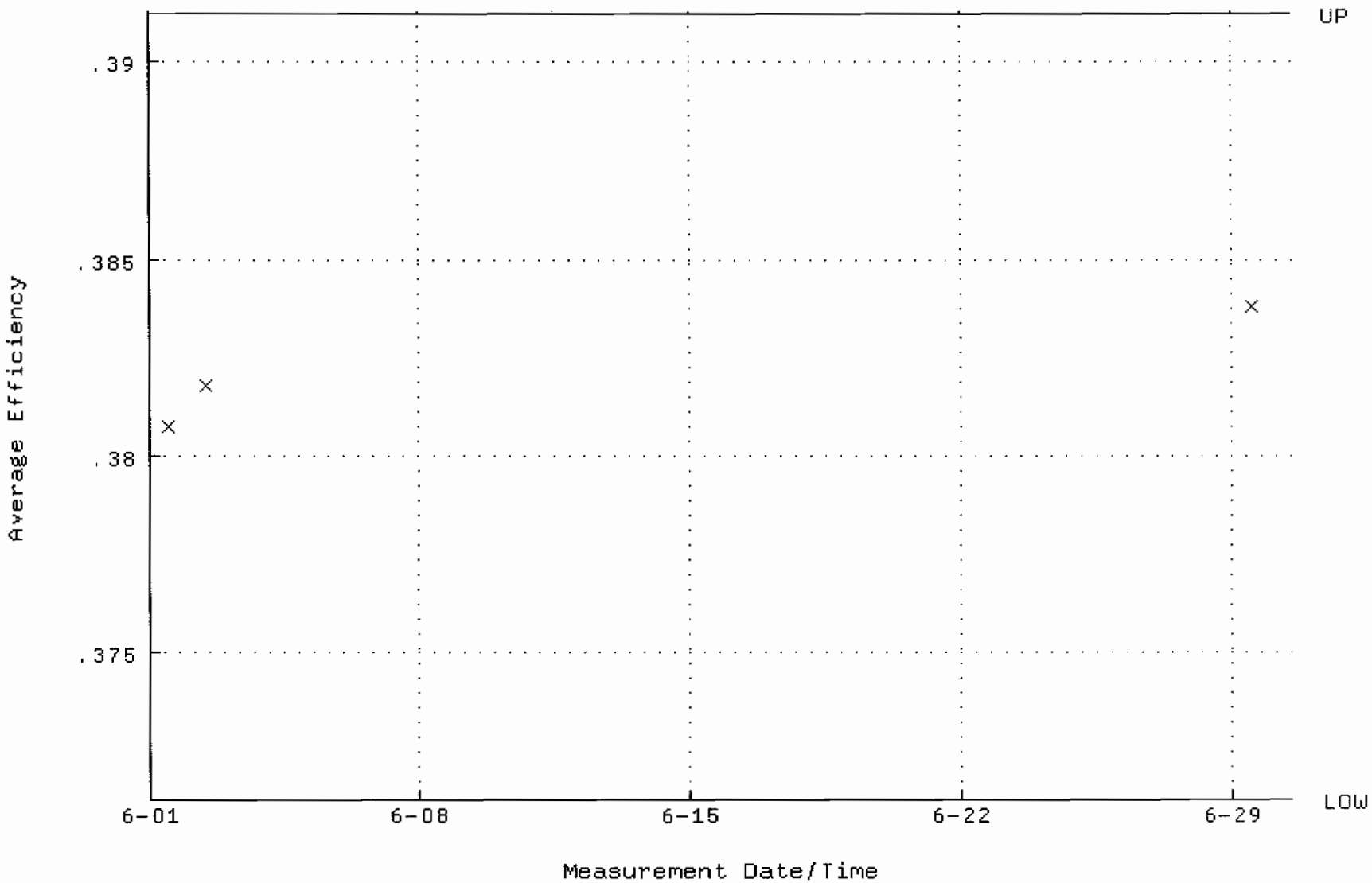

QA filename : DKA100:[ENV_ALPHA.QA.W]W226.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:03 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 85.0422 through 93.9940

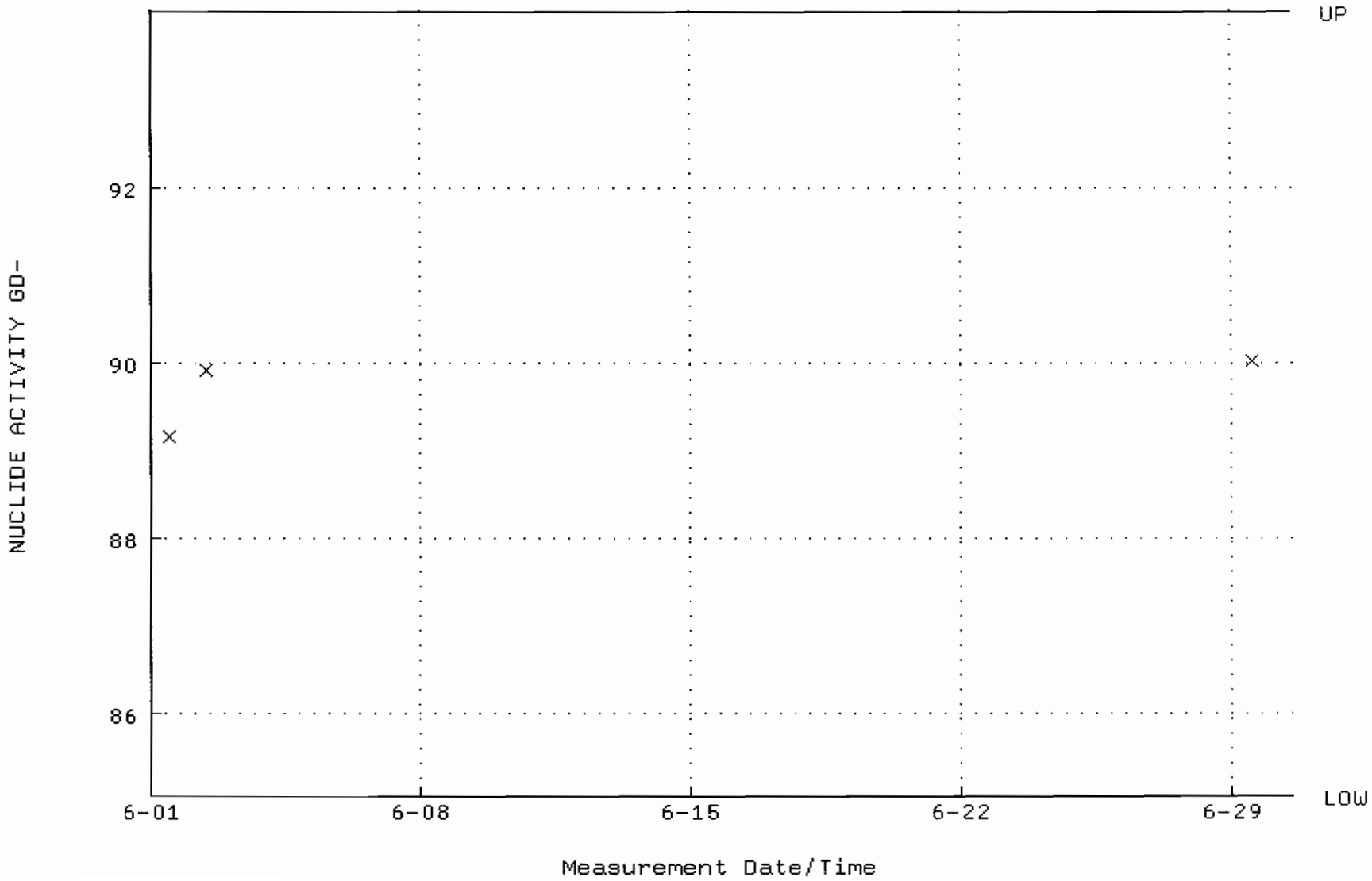

QA filename : DKA100:[ENV_ALPHA.QA.B]B226.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:47 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

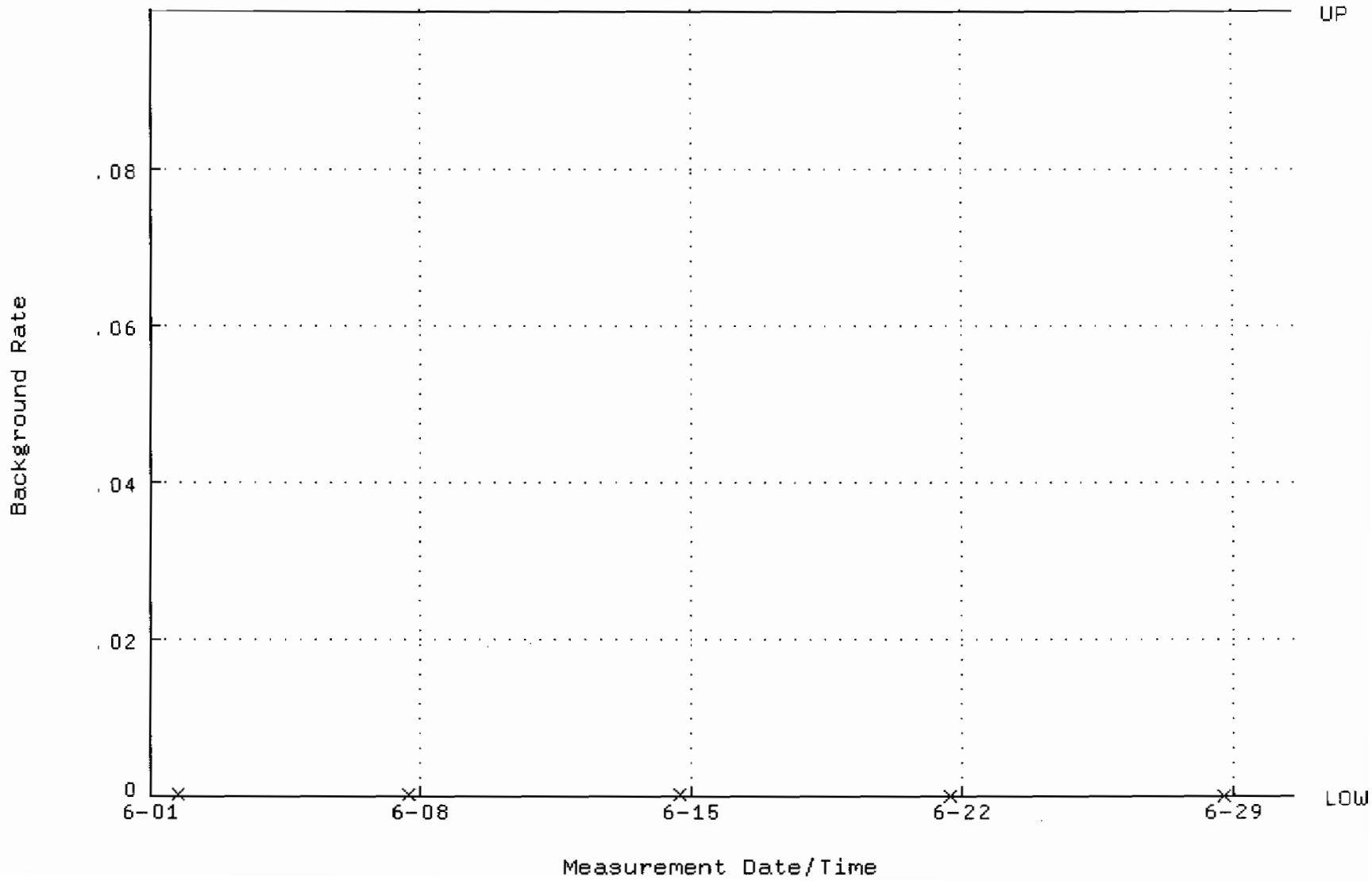

QA filename : DKA100:[ENV_ALPHA.QA.W]W228.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:12 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.372265 through 0.392265

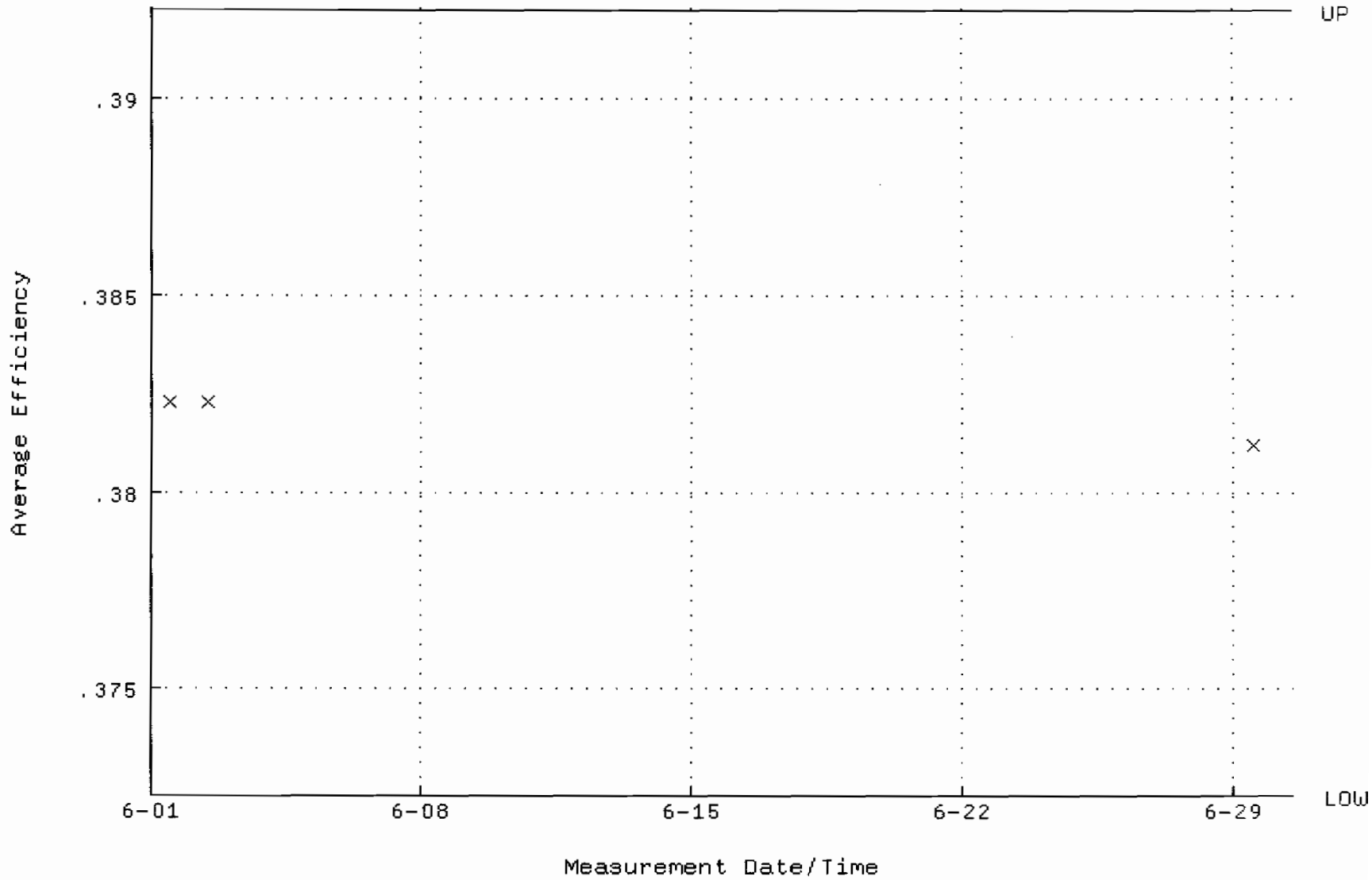

QA filename : DKA100:[ENV_ALPHA.QA.W]W228.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:12 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 85.4480 through 94.4426

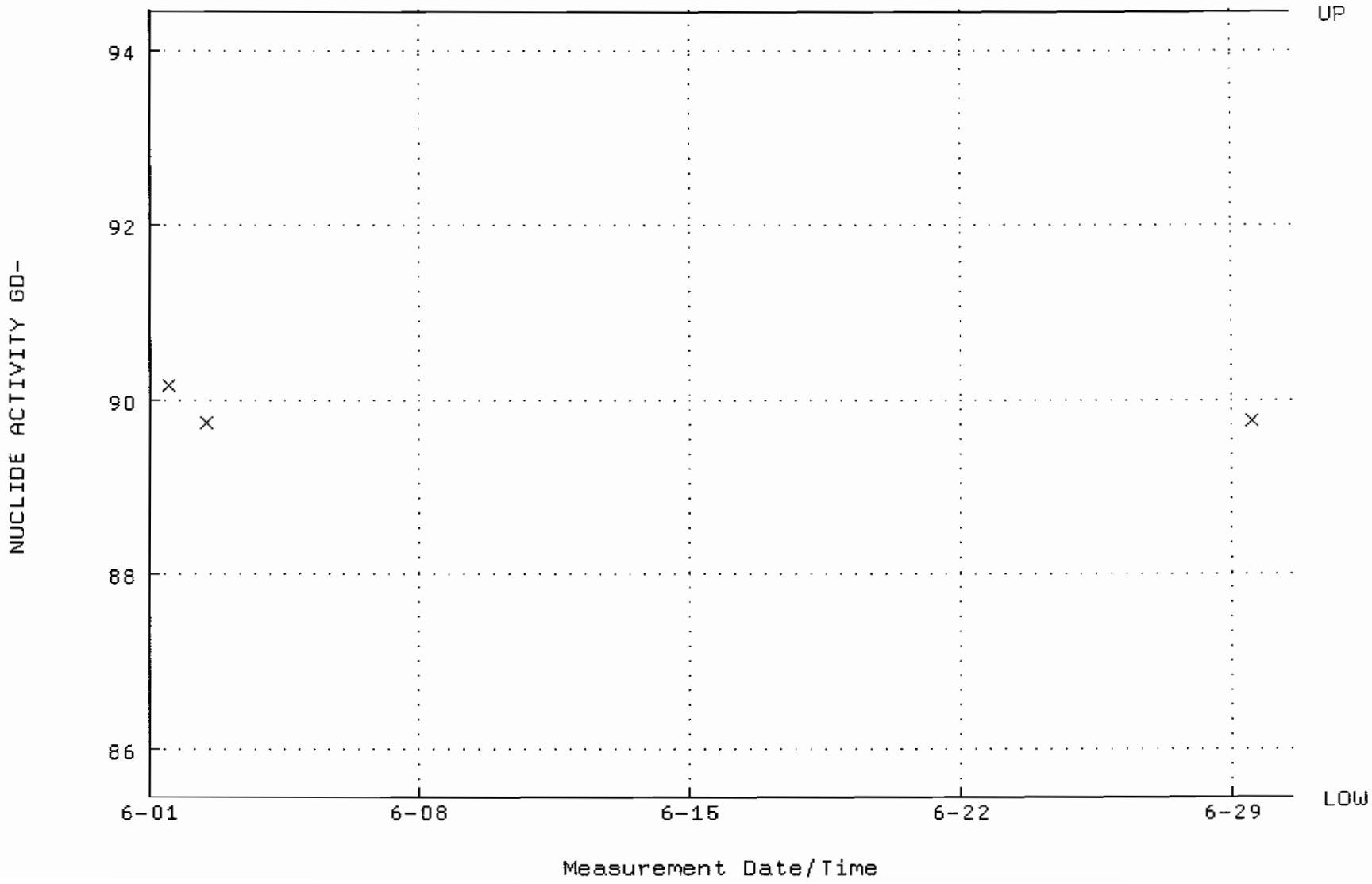

QA filename : DKA100:[ENV_ALPHA.QA.B]B228.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:57 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

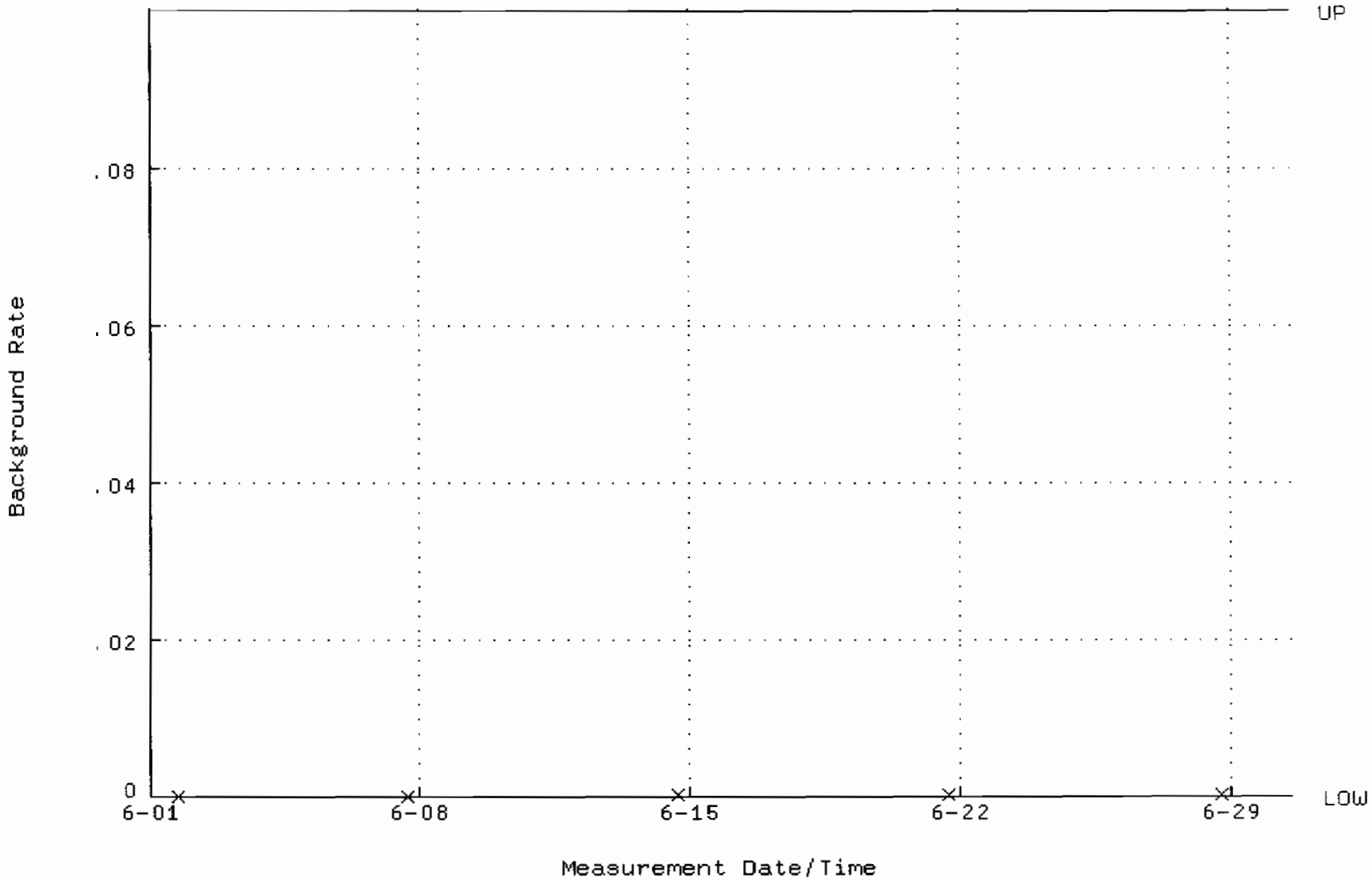

QA filename : DKA100:[ENV_ALPHA.QA.W]W229.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:17 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.371063 through 0.391063

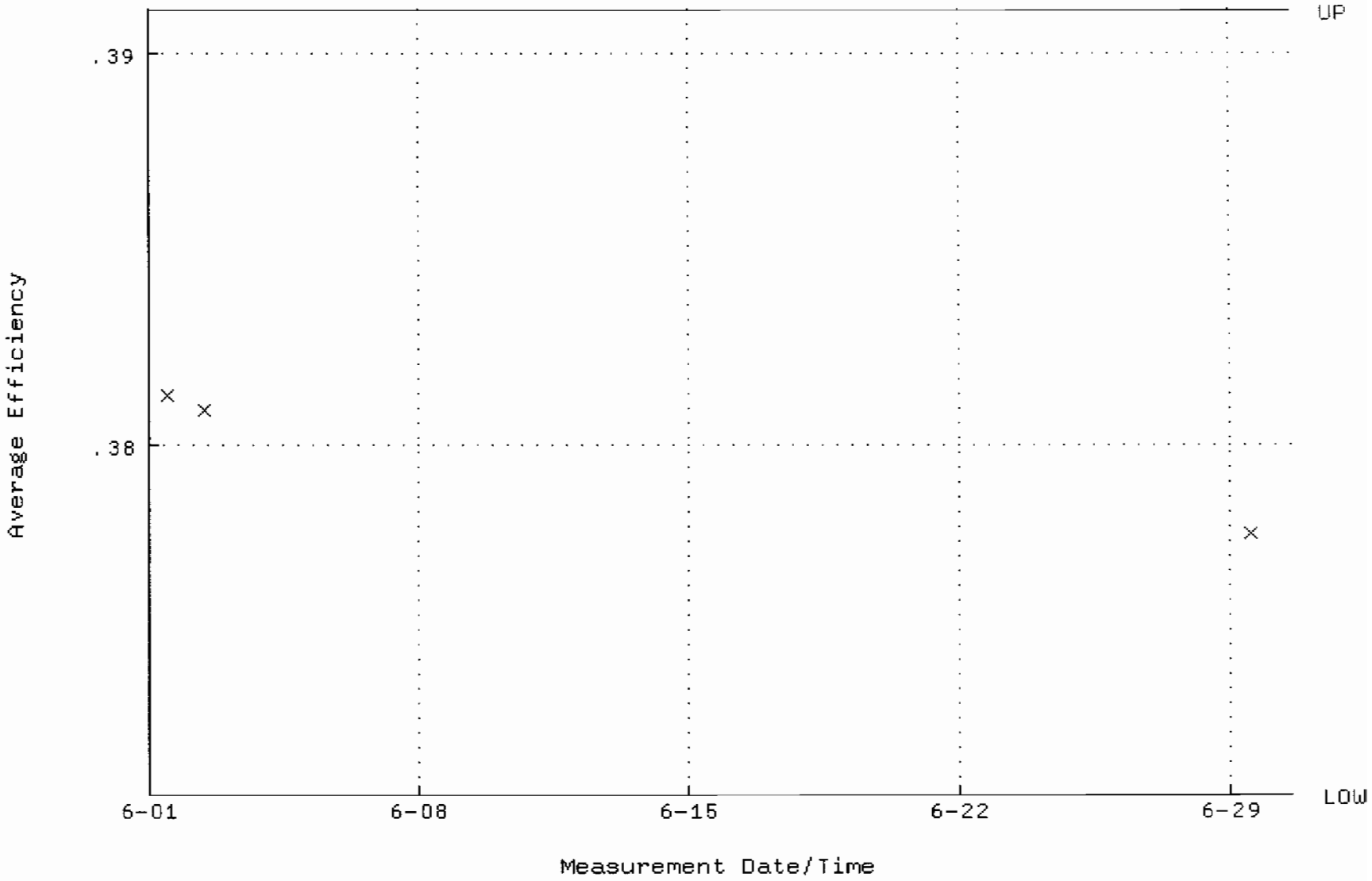

QA filename : DKA100:[ENV_ALPHA.QA.W]W229.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:17 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 87.6635 through 96.8913

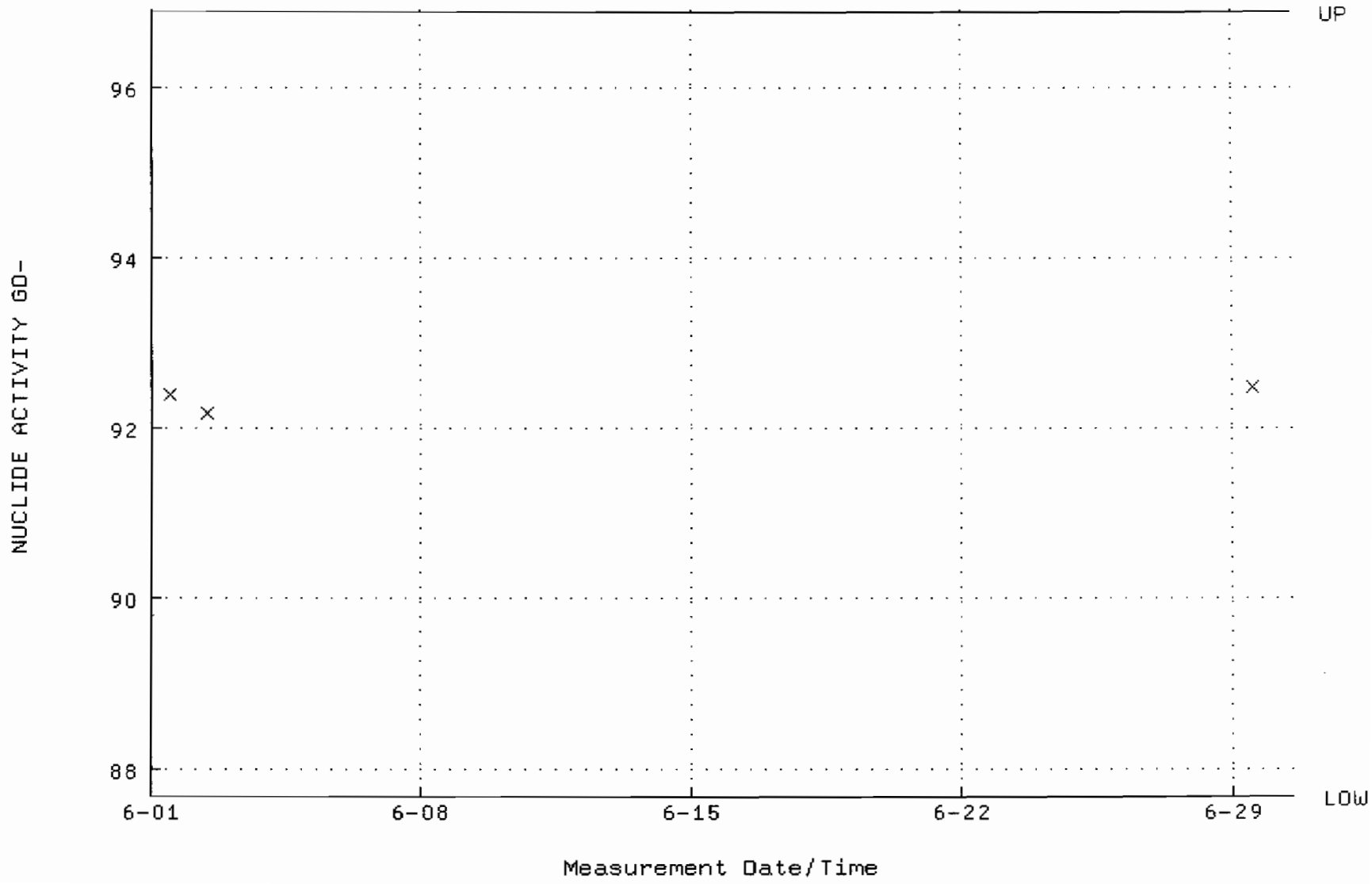

QA filename : DKA100:[ENV_ALPHA.QA.B]B229.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:45:01 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

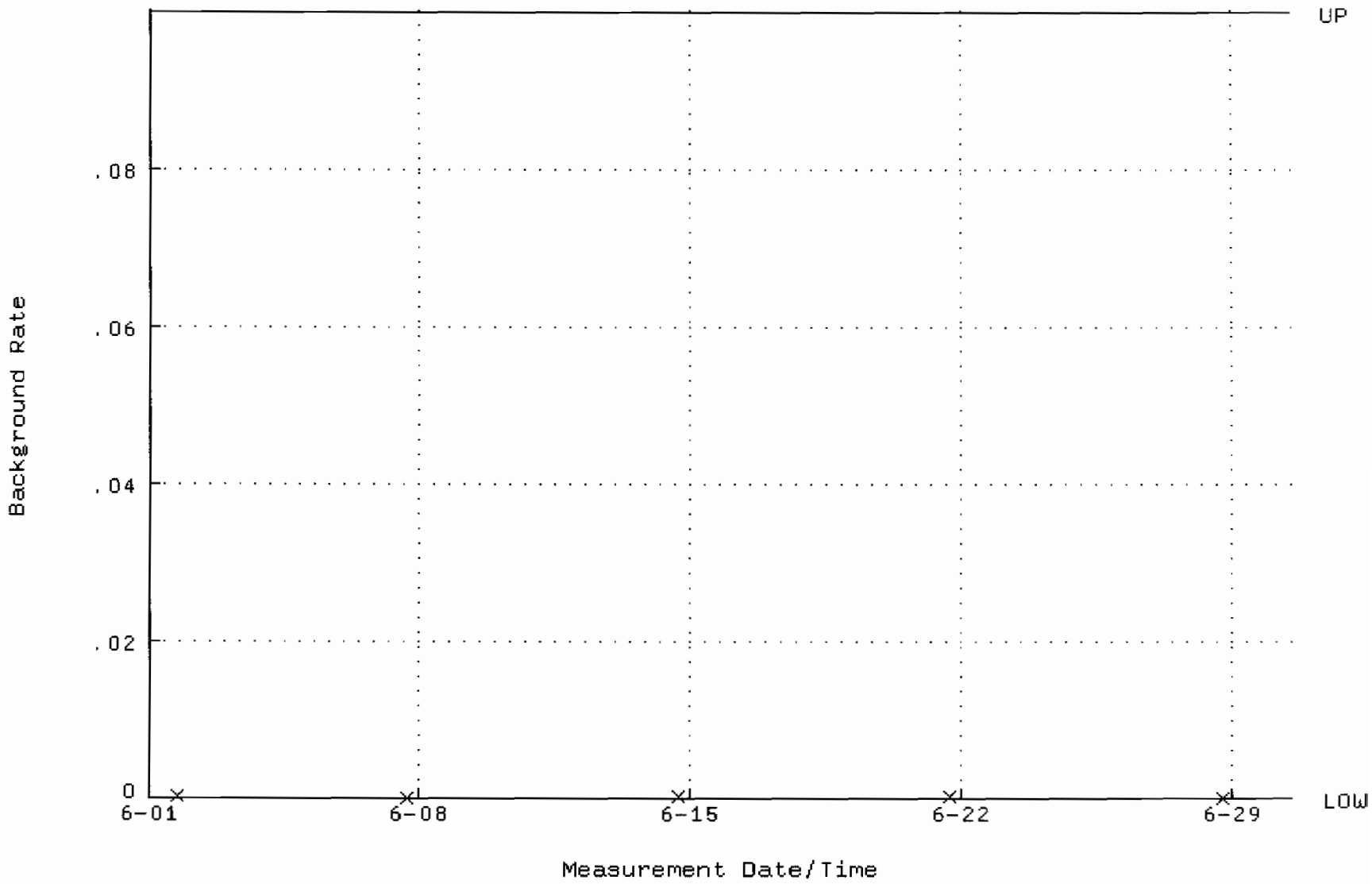

QA filename : DKA100:[ENV_ALPHA.QA.W]W230.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 1-JUN-2009 11:32:22 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.363845 through 0.383845

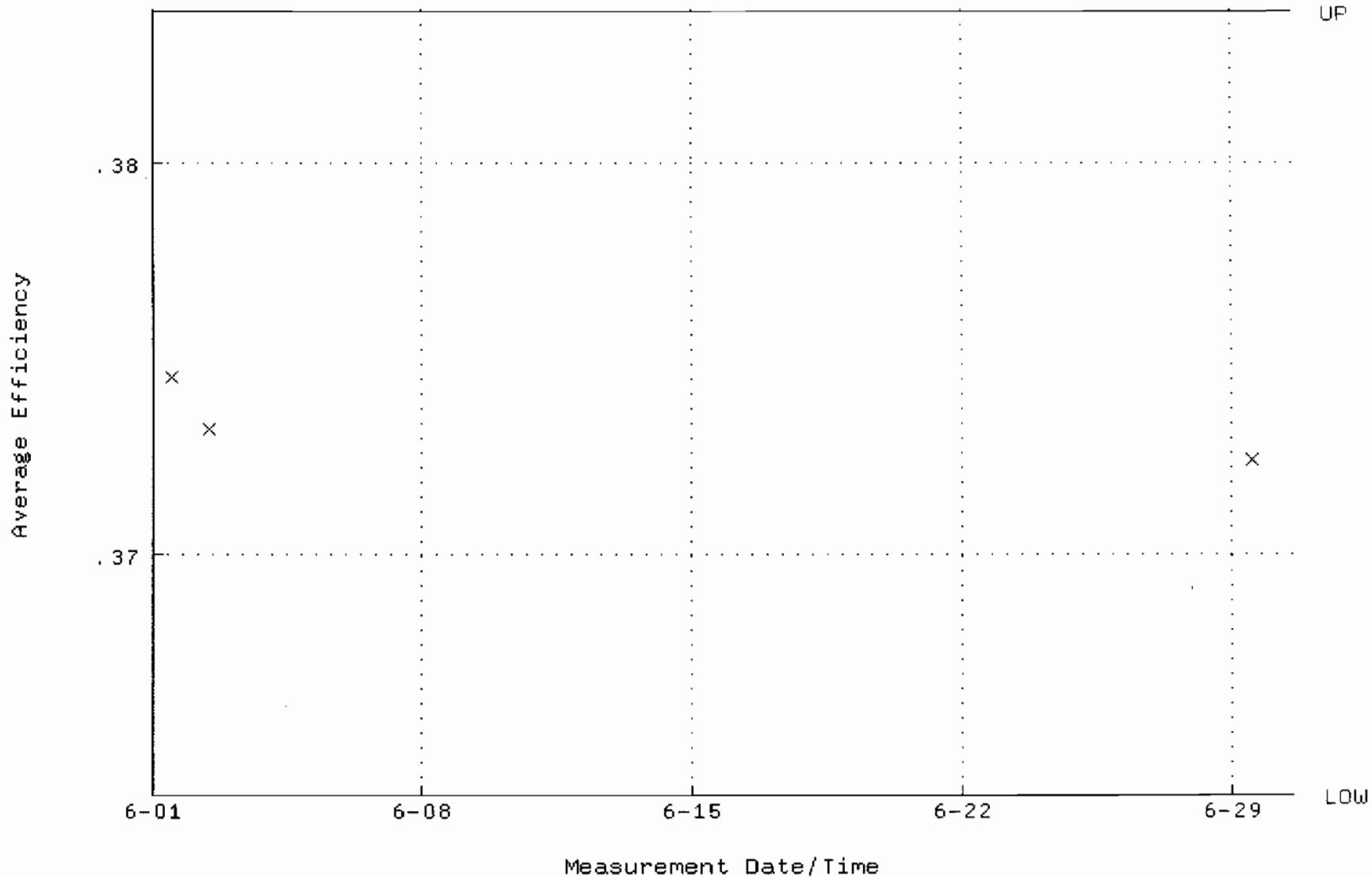

QA filename : DKA100:[ENV_ALPHA.QA.W]W230.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 1-JUN-2009 11:32:22 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 86.9924 through 96.1494

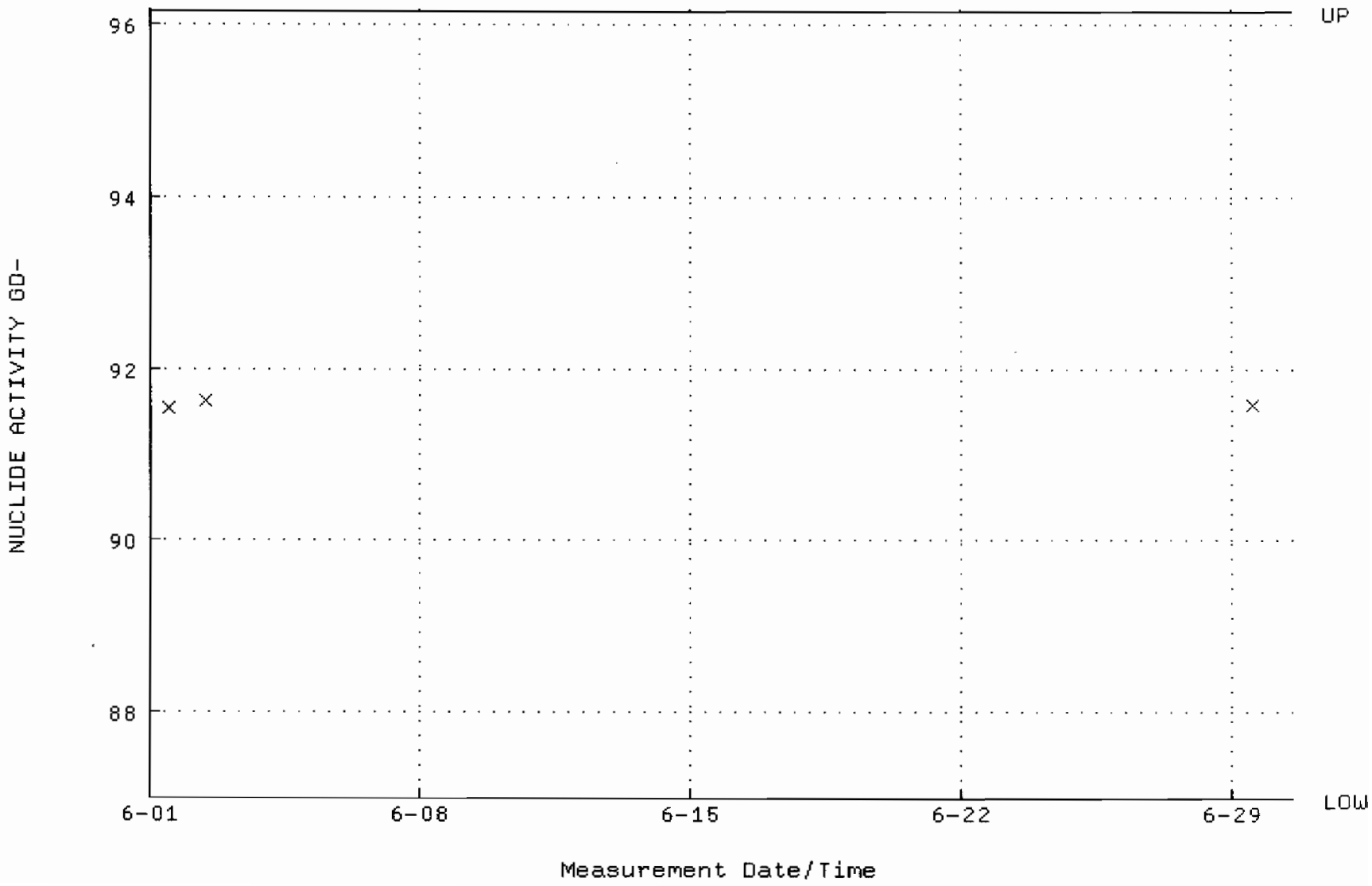

QA filename : DKA100:[ENV_ALPHA.QA.B]B230.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:45:05 through 30-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

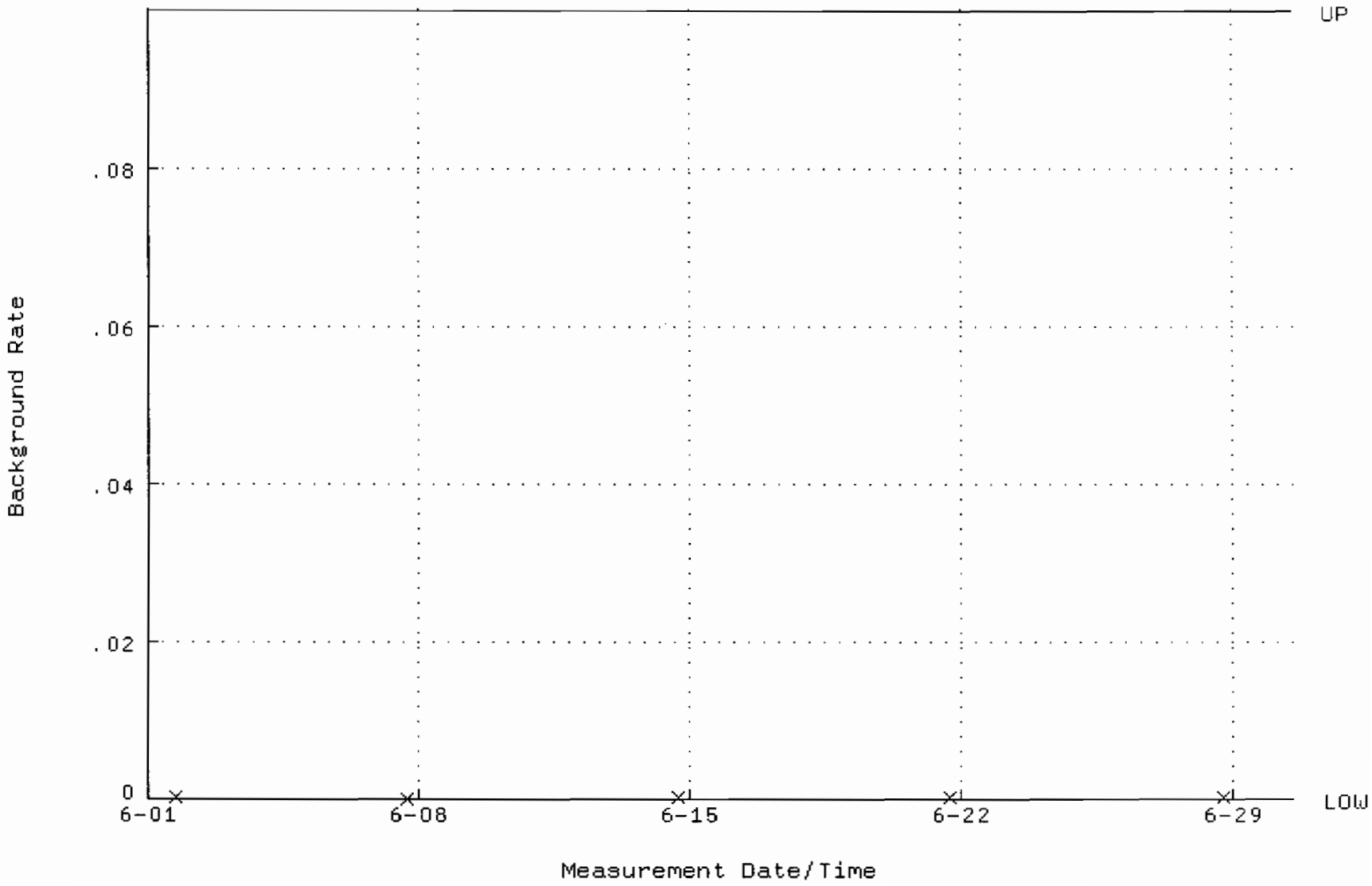

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

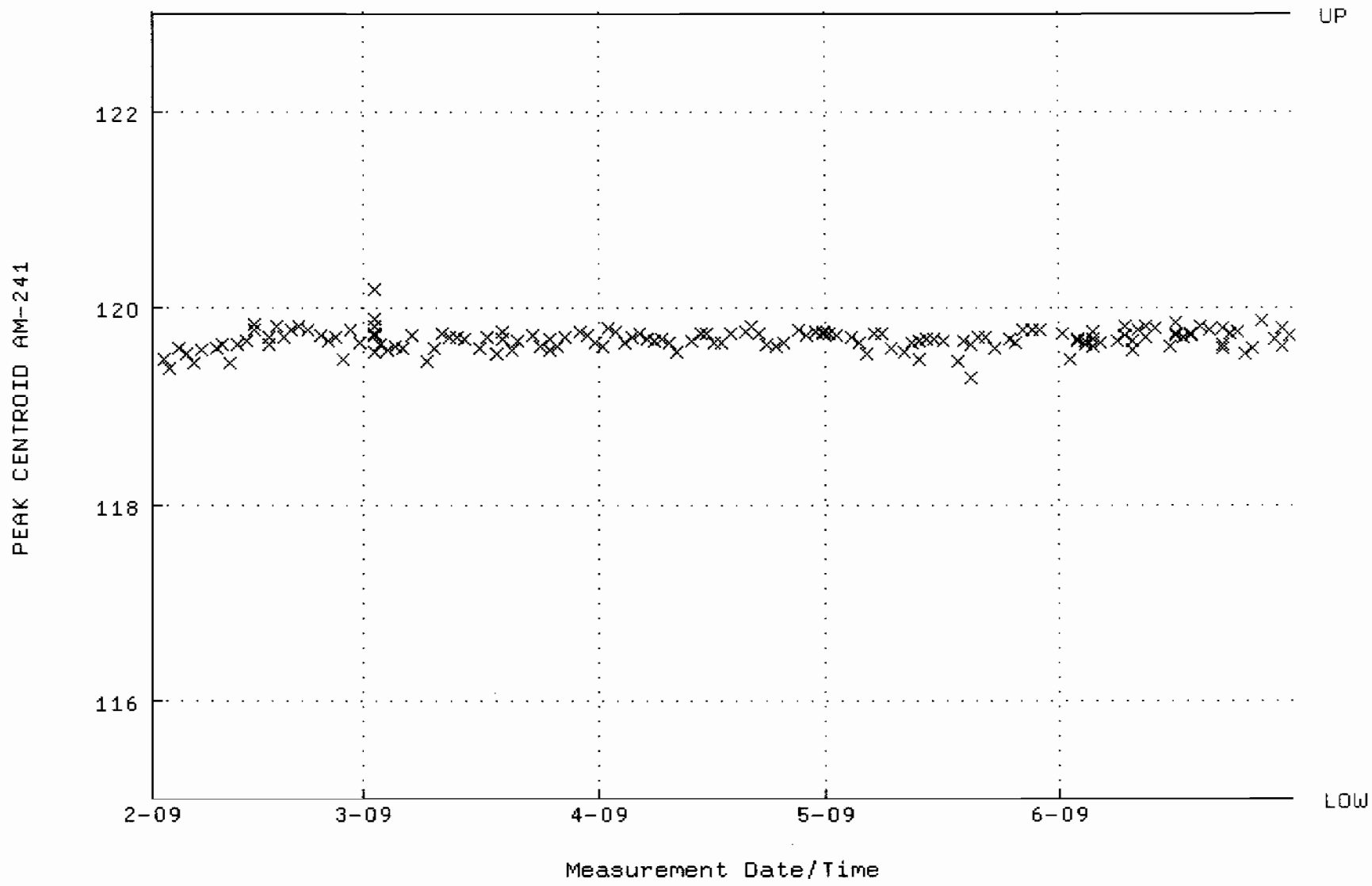

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM01.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:08:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.59940 through 1.87060

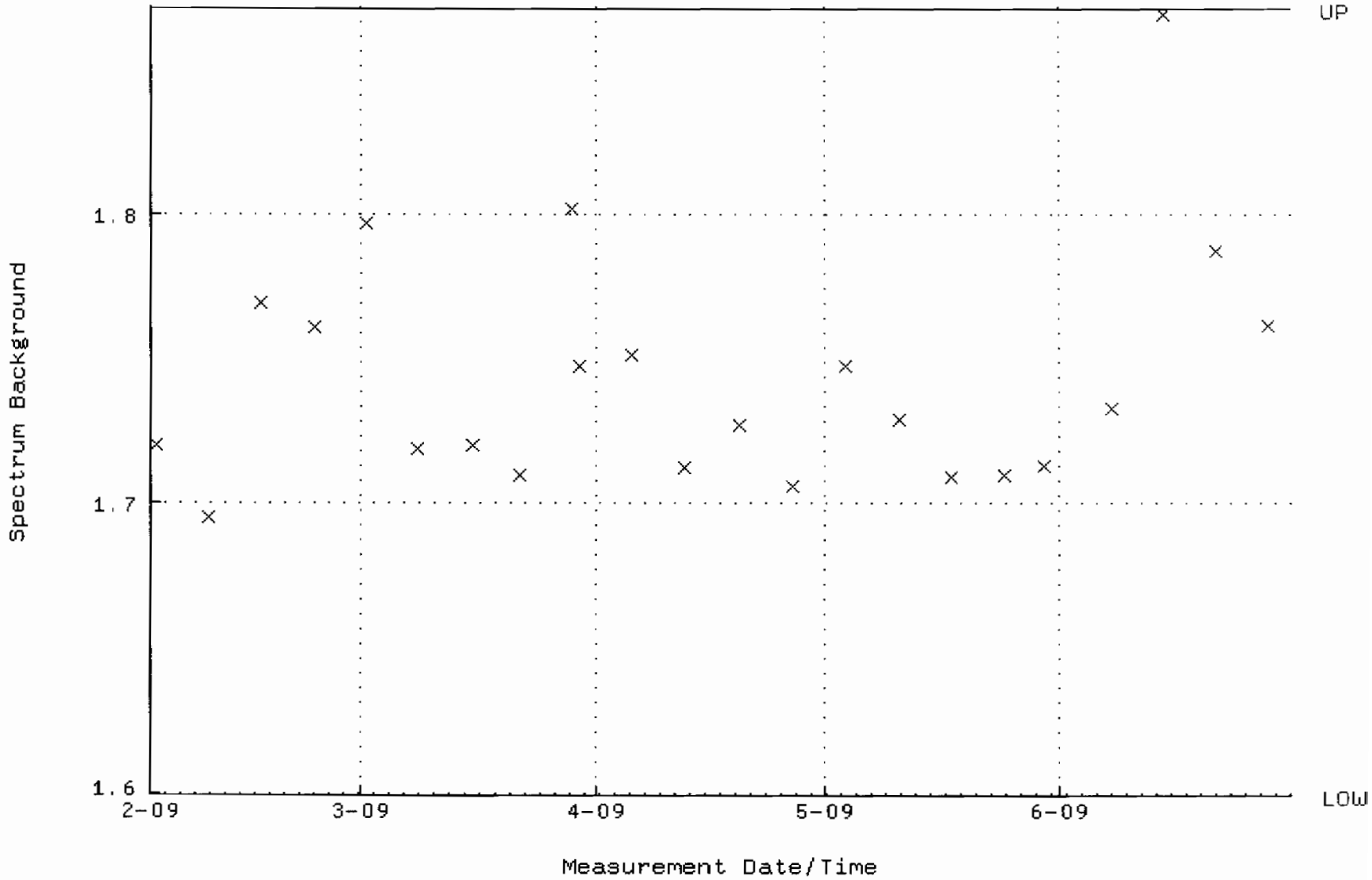

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:01 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

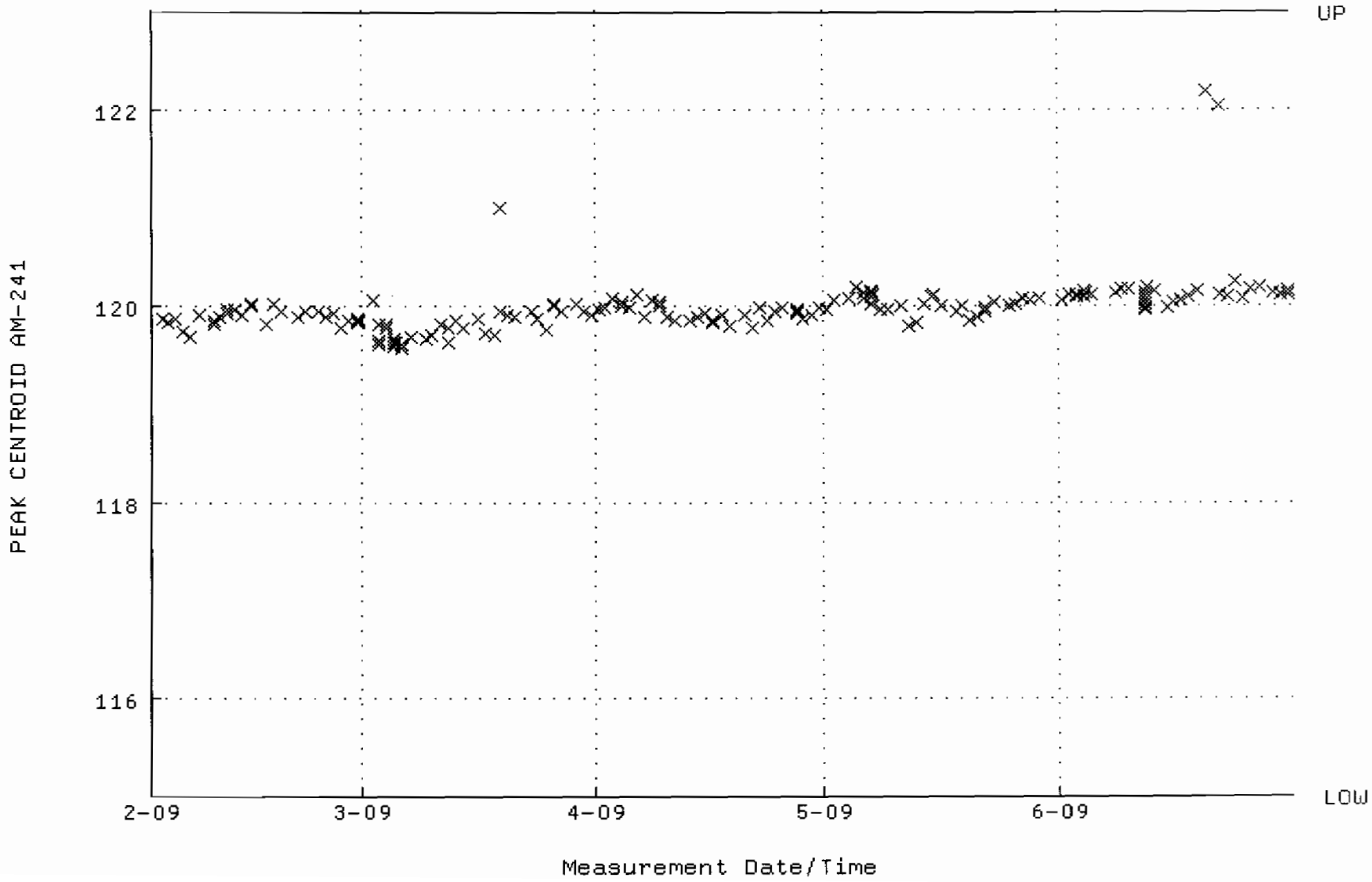

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM05.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.60580 through 1.72440

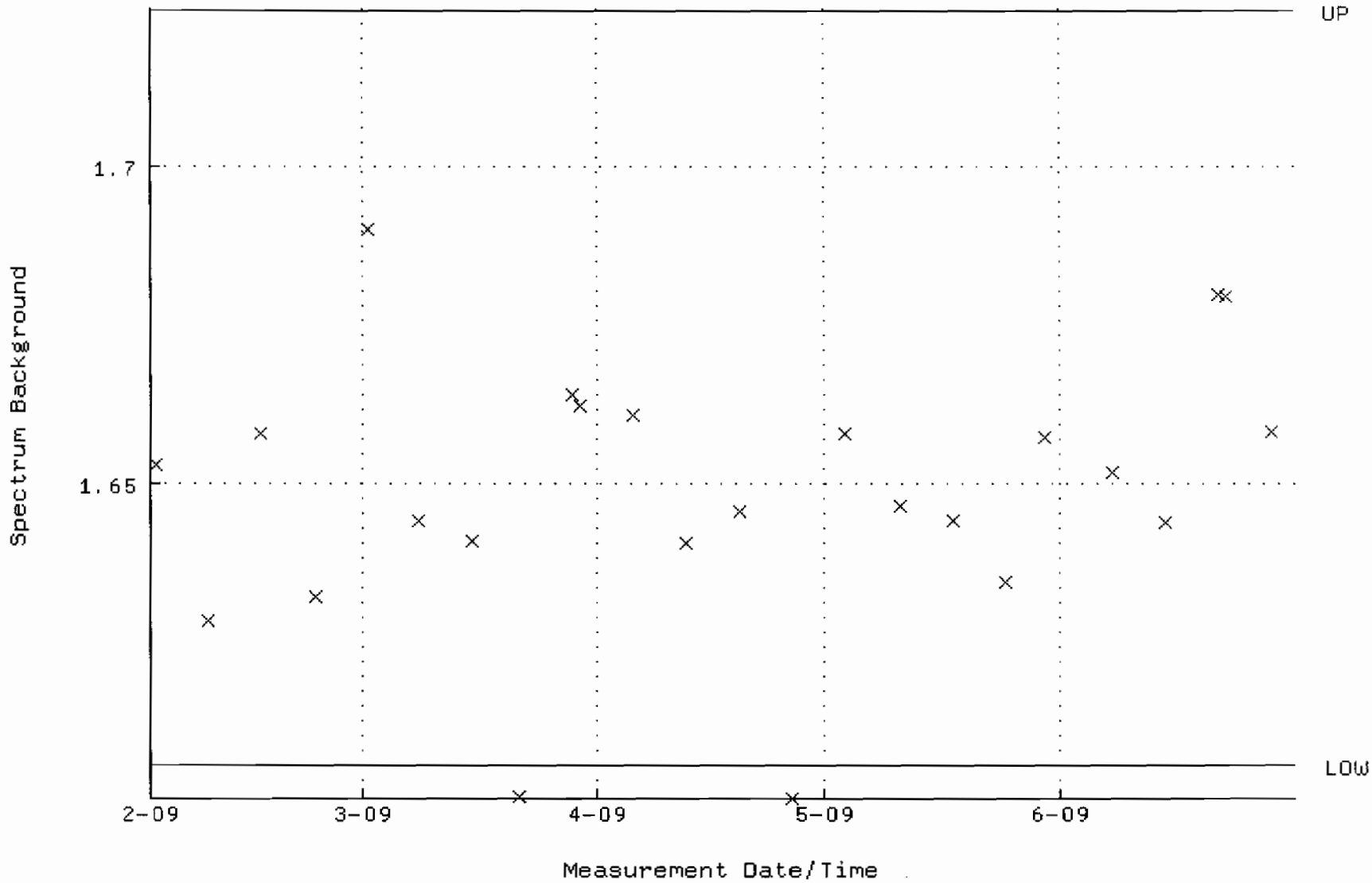

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM07_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:09 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

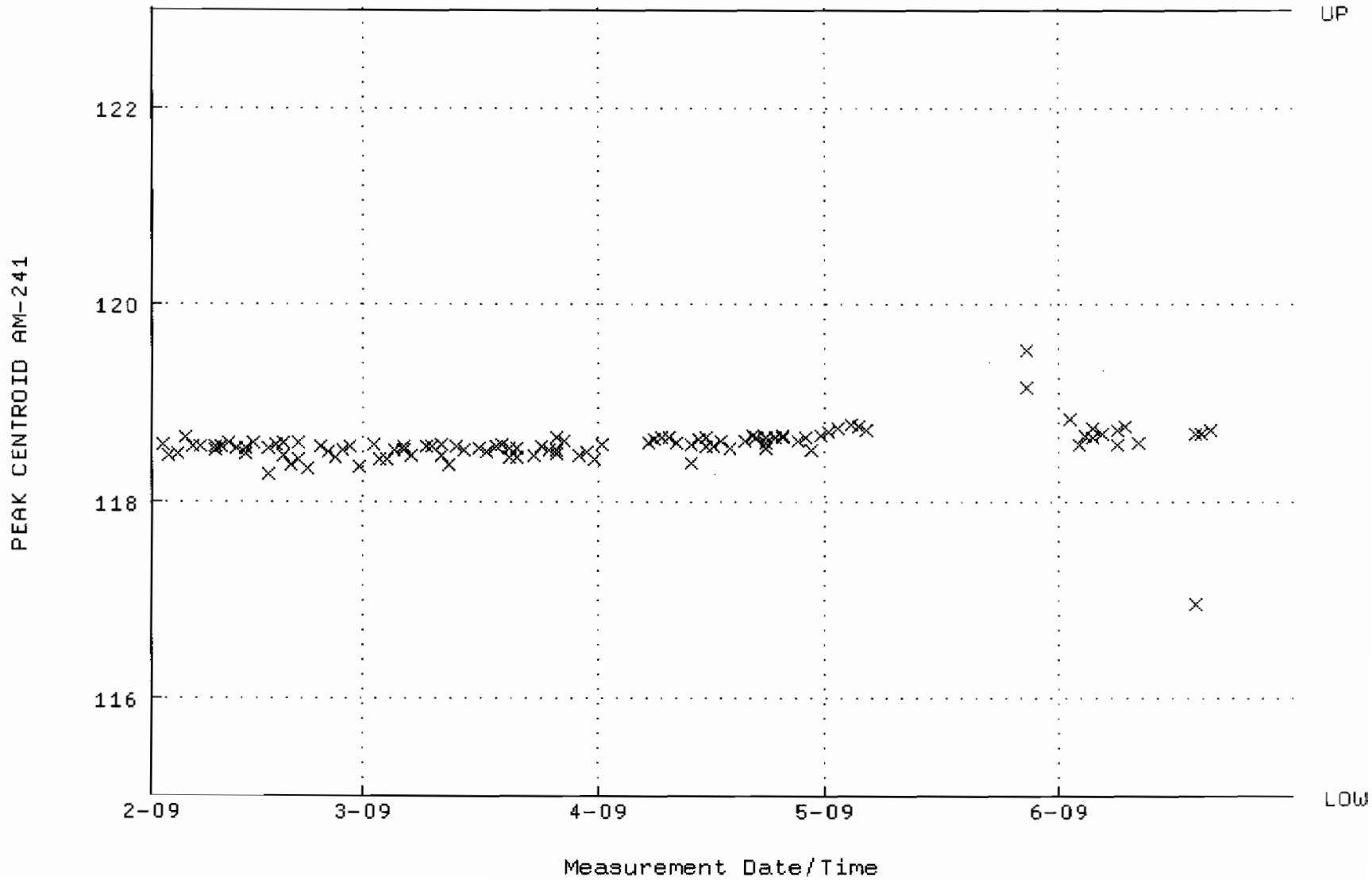

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM07.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:02 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.44400 through 1.56330

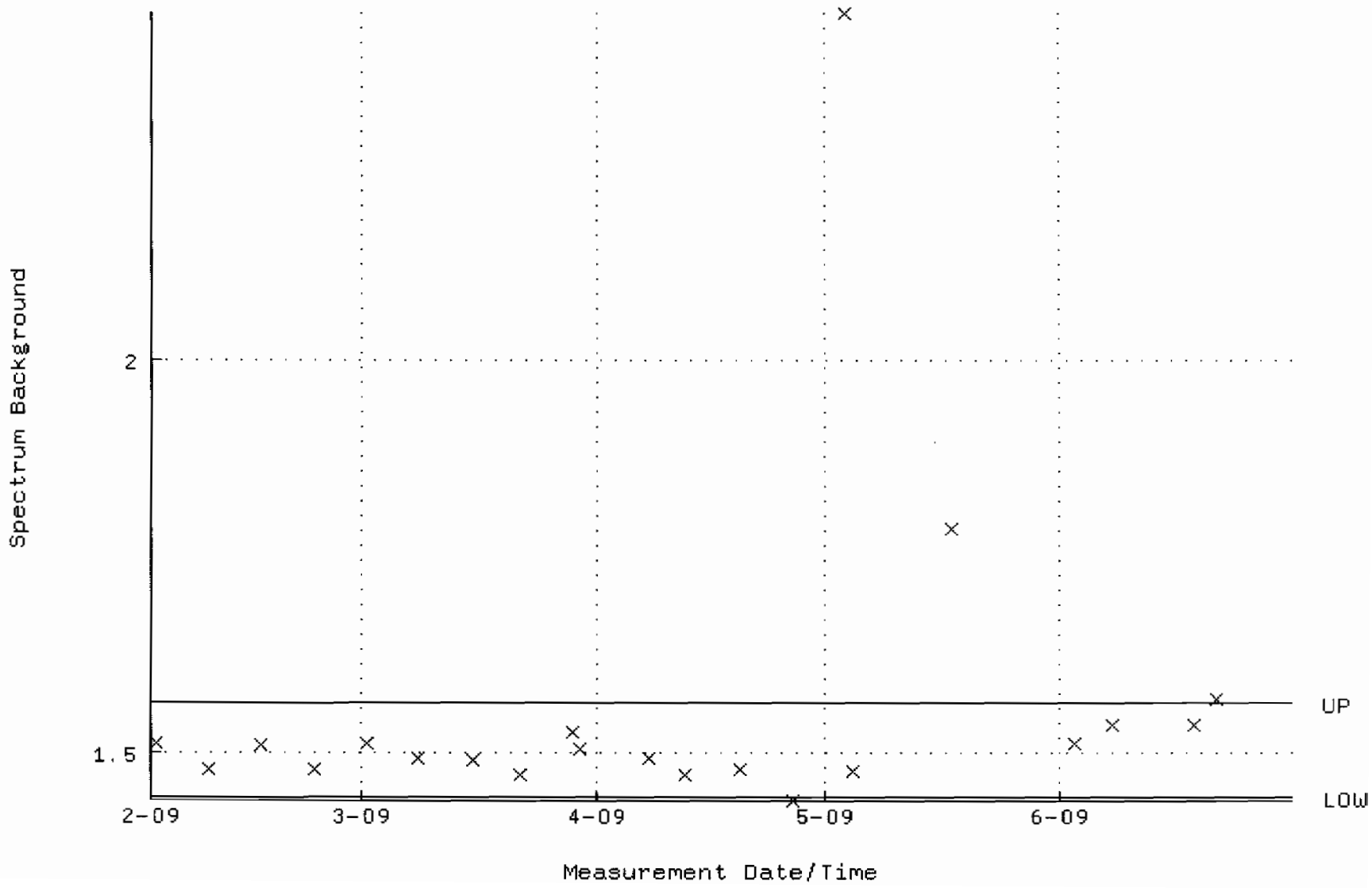

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM10_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:33 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

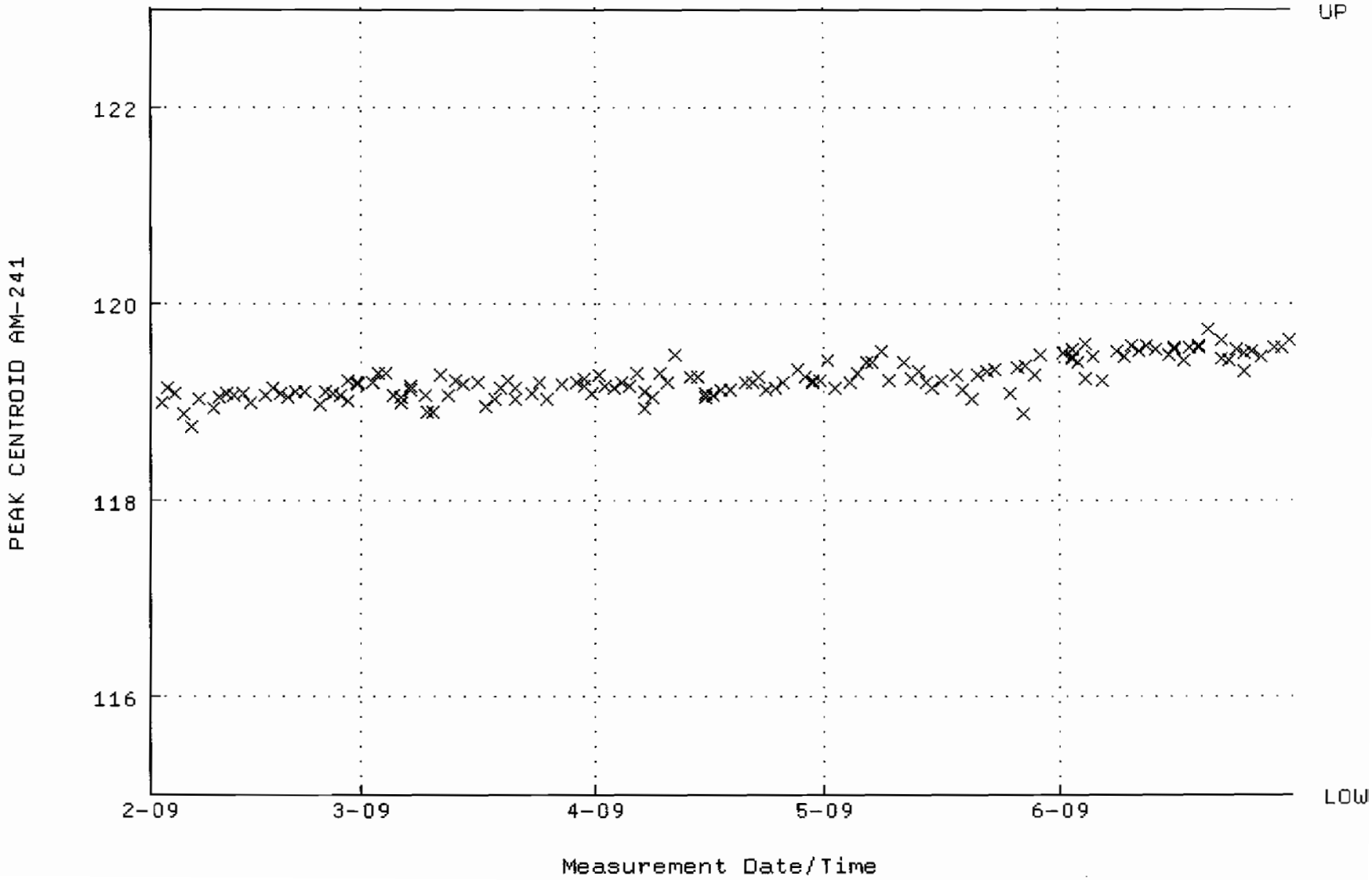

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM10.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.36818 through 1.67222

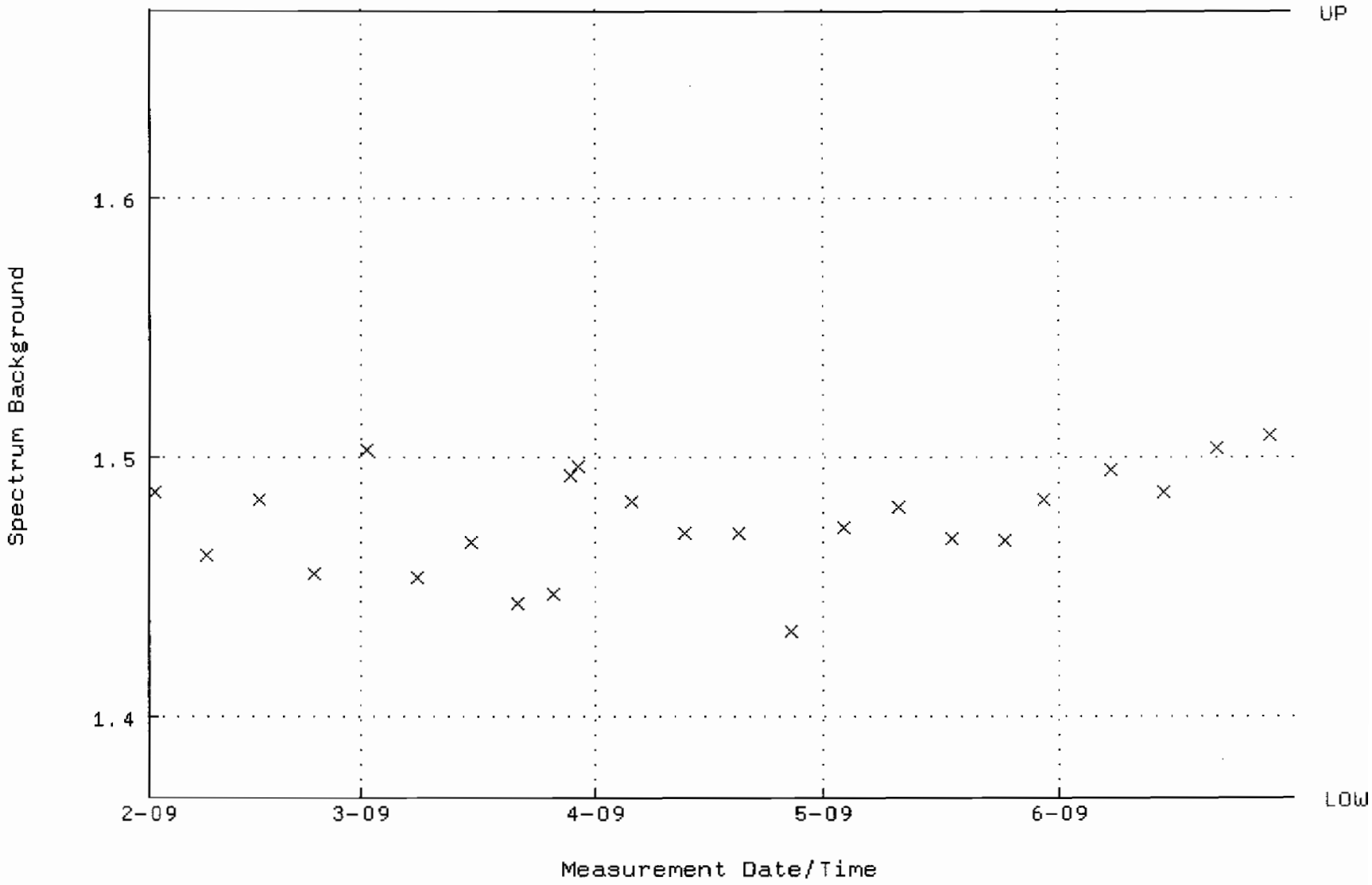

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:41 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

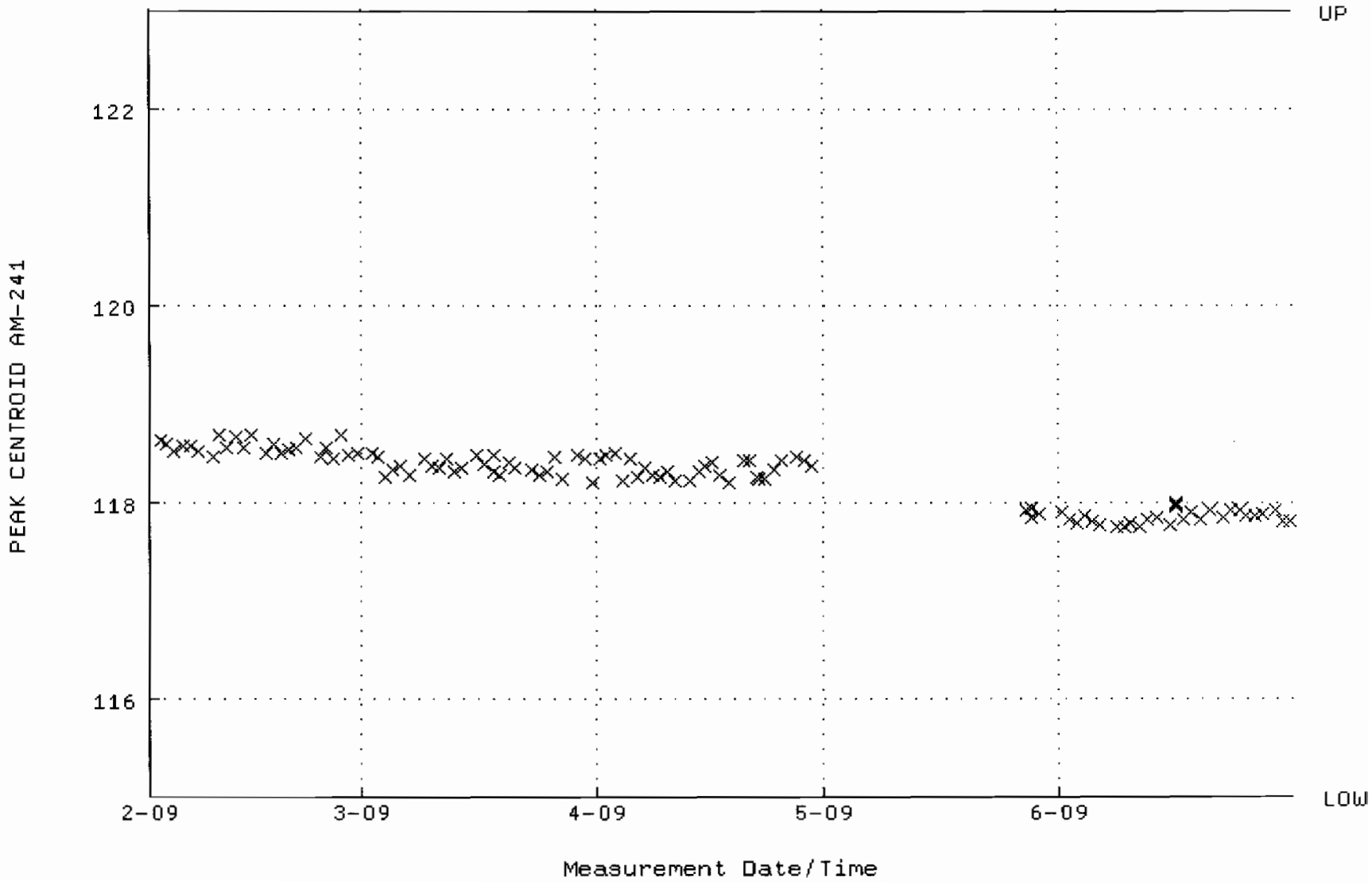

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM11.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:39 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.47699 through 1.80520

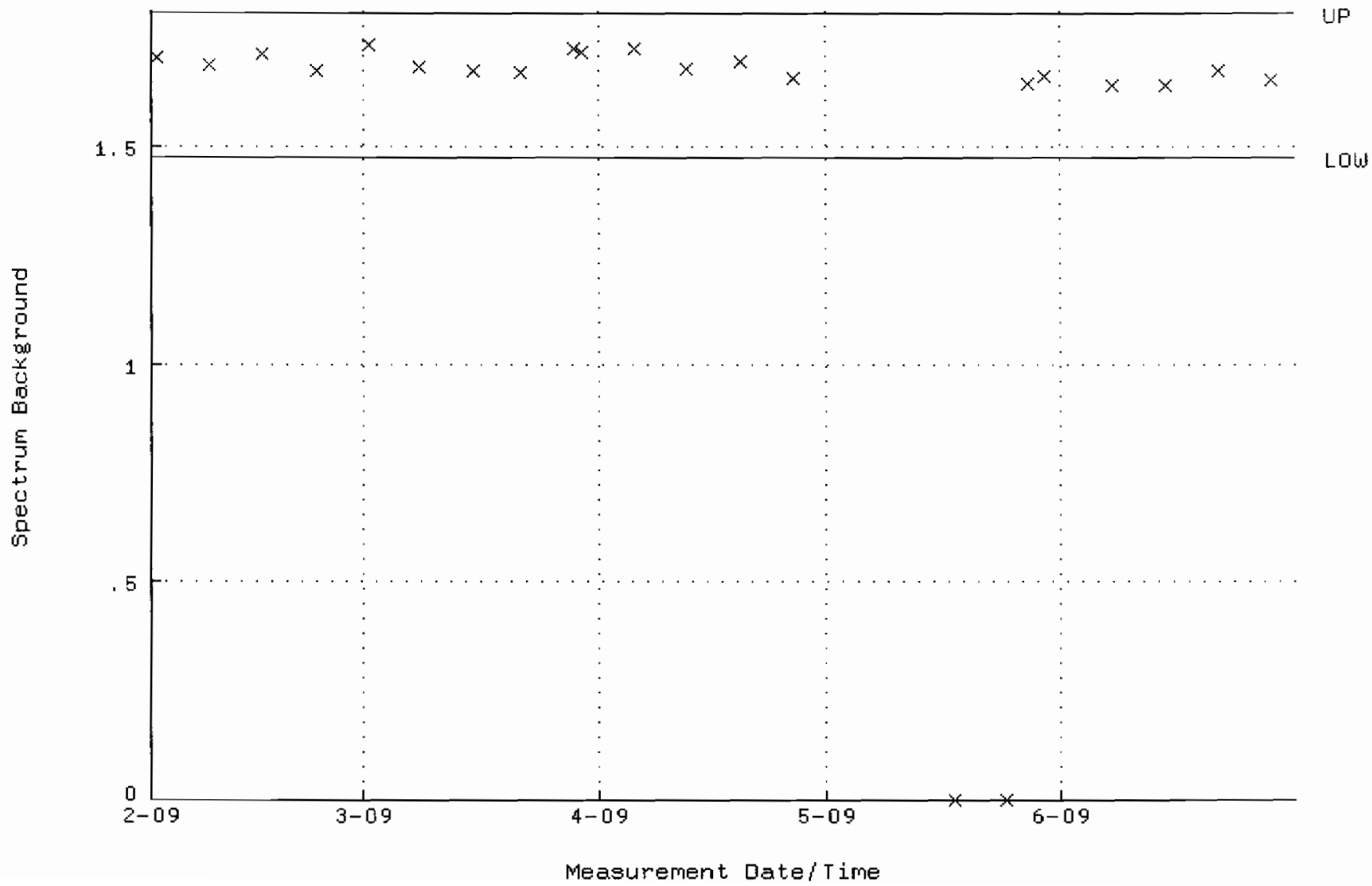

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:33:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

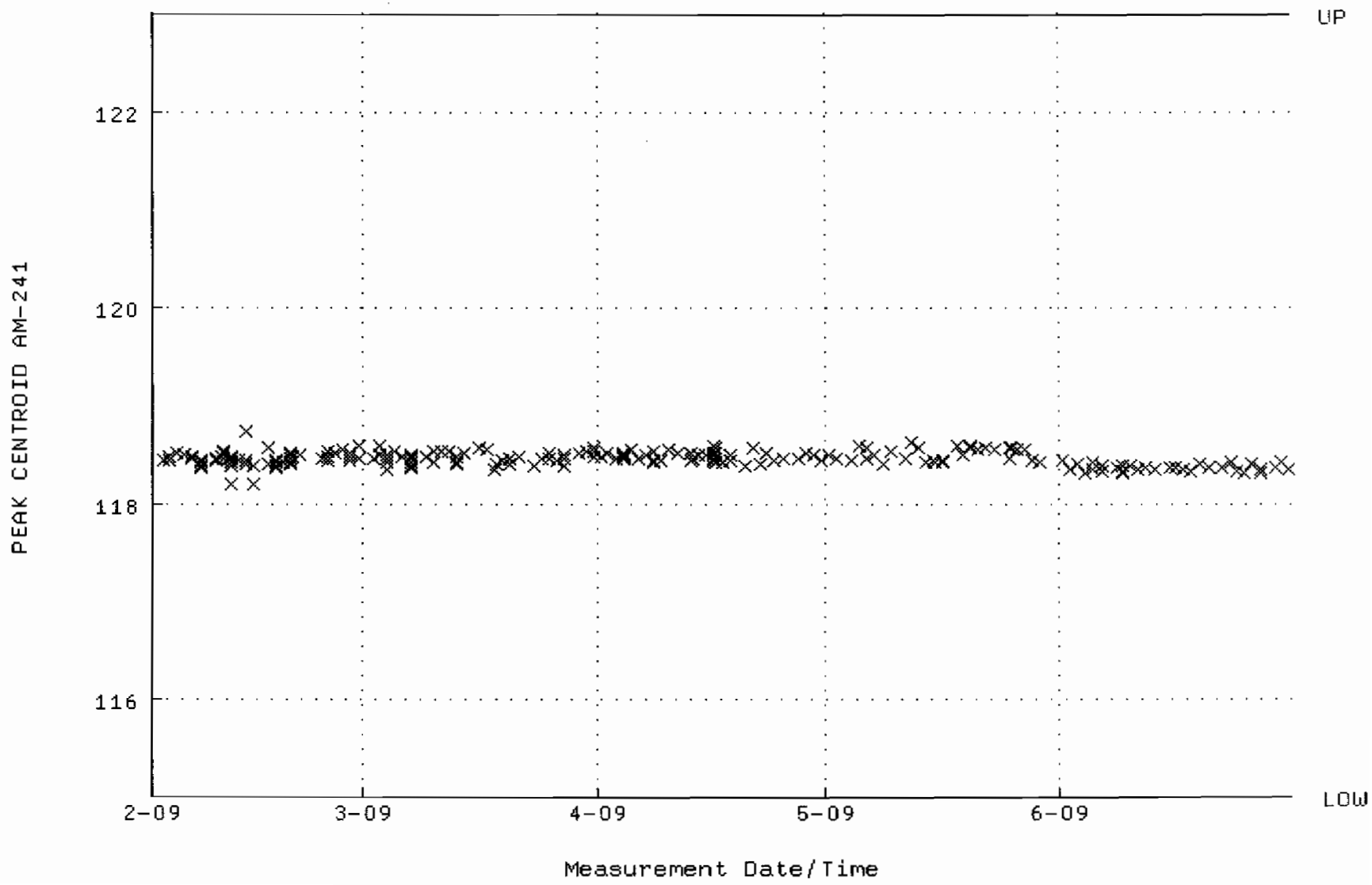

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM21.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:00 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.71450 through 2.09550

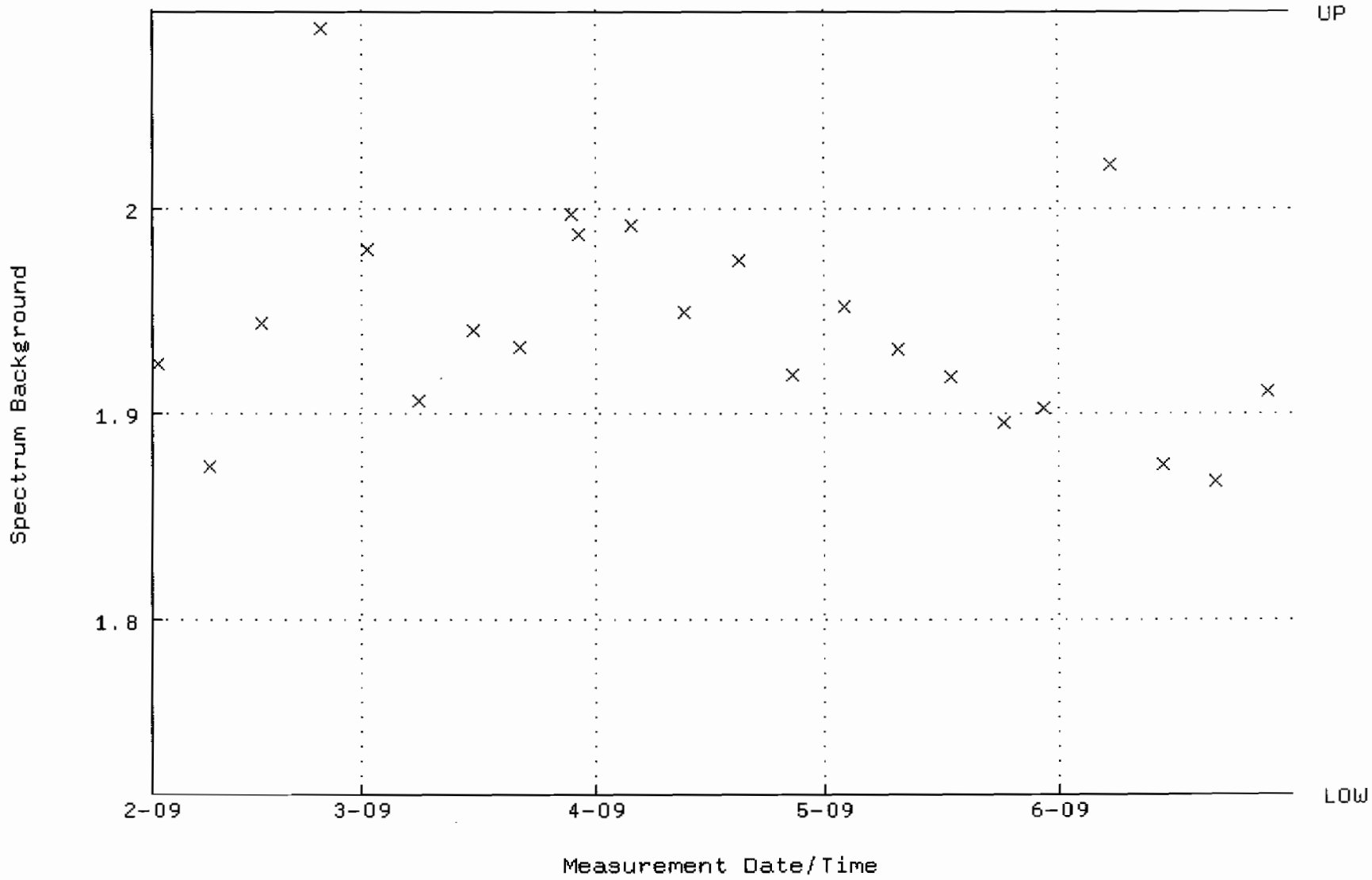

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

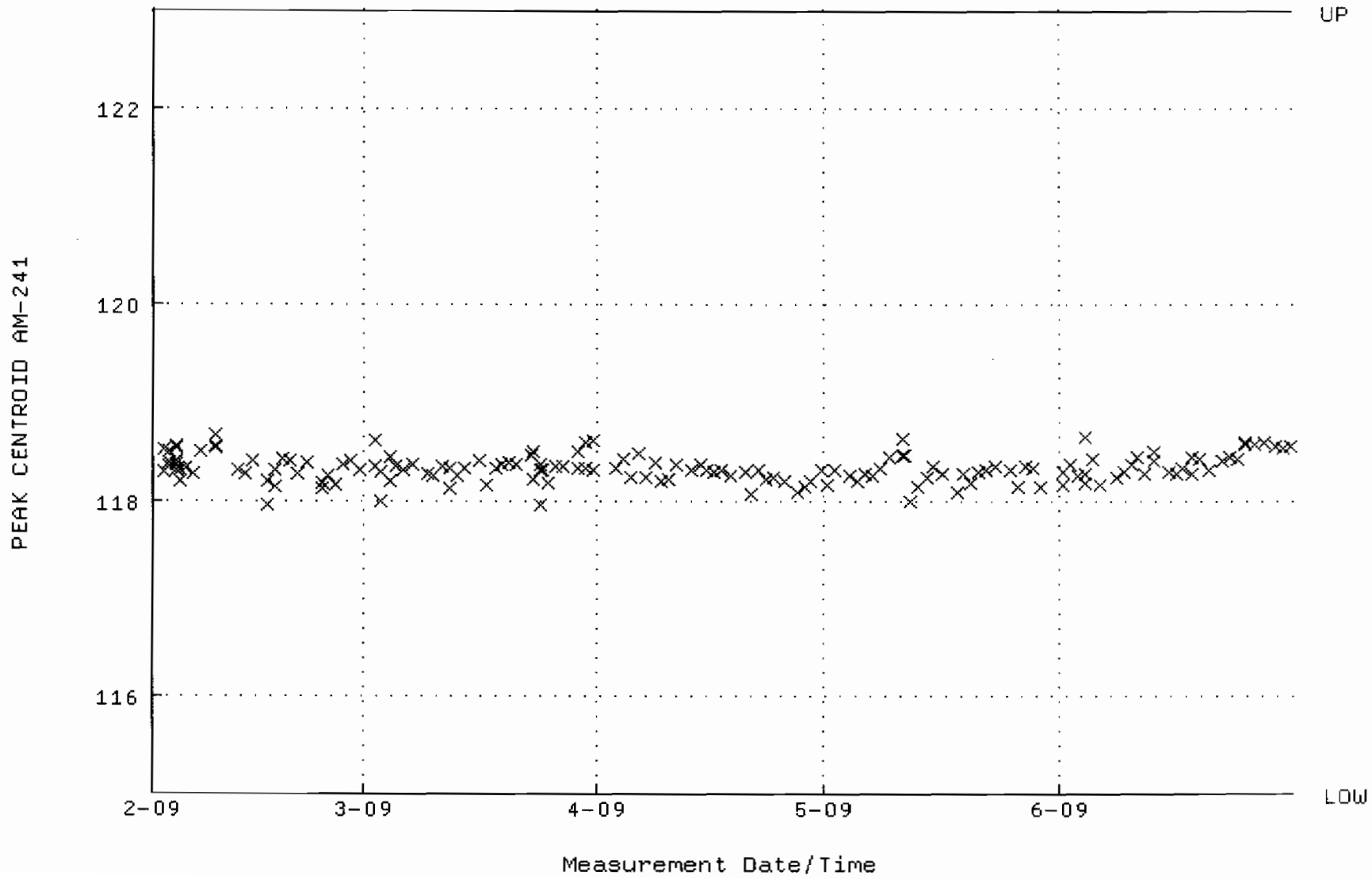

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

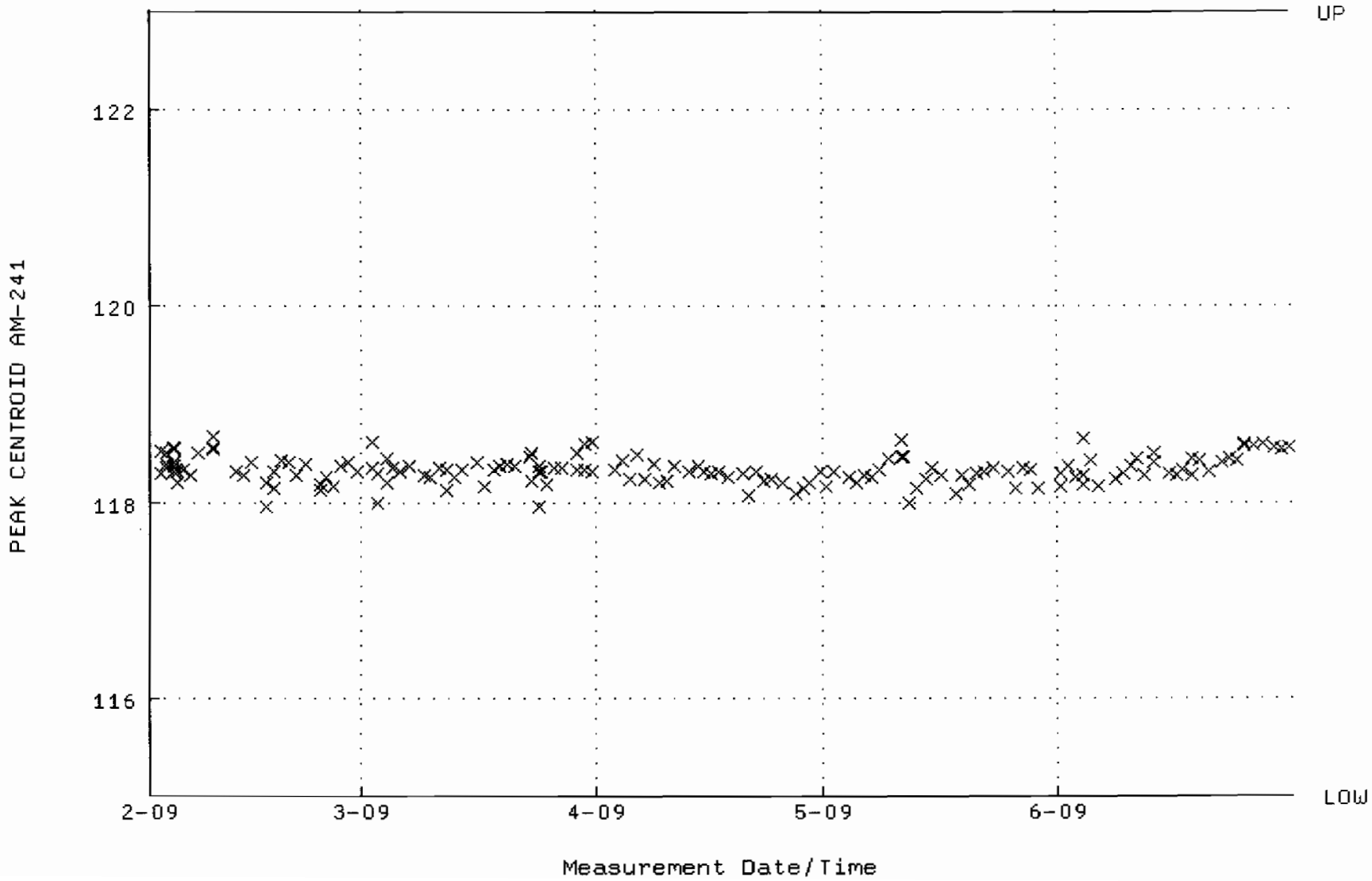

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM22.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.23300 through 2.45570

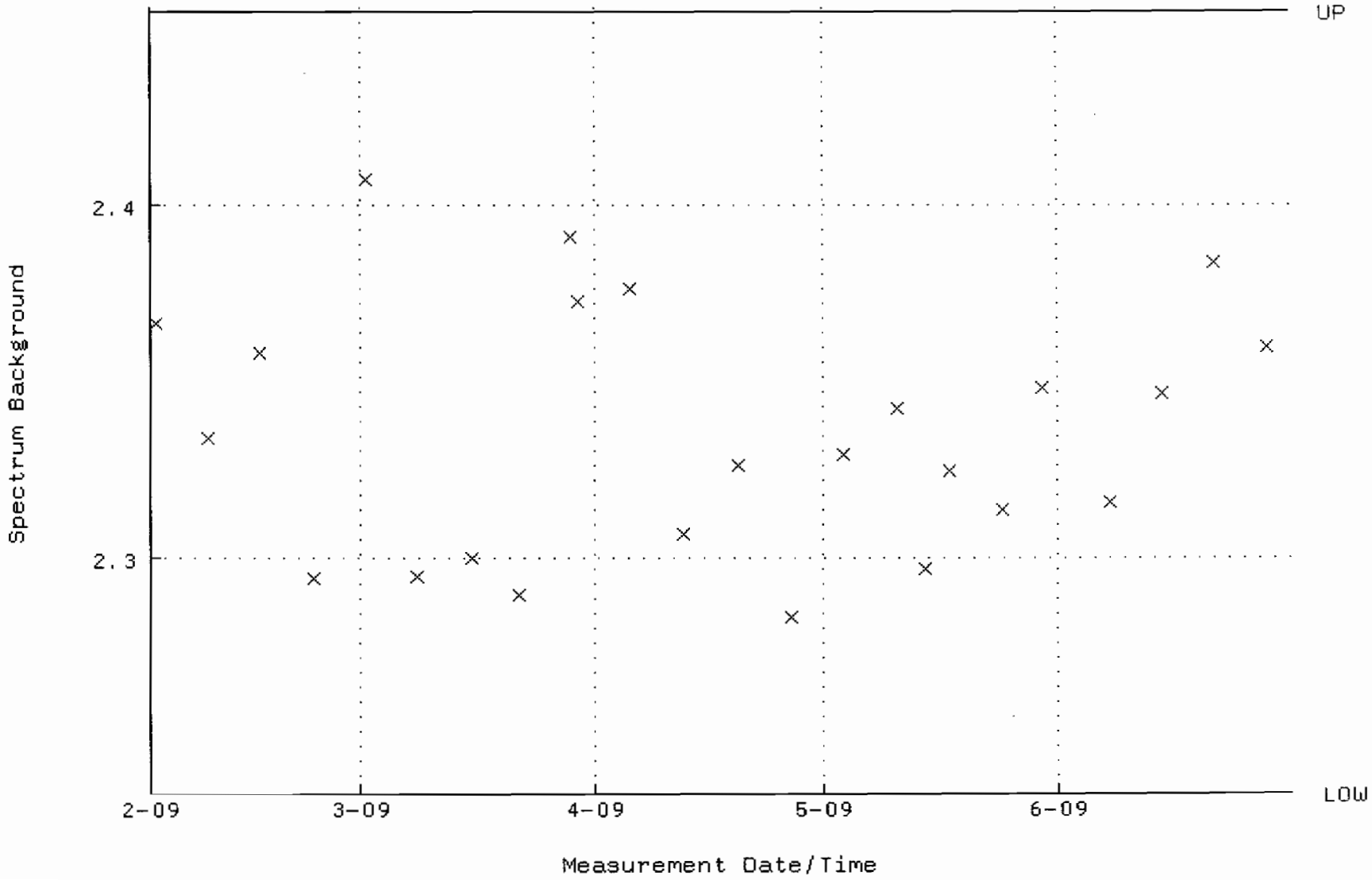

STANDARDS DATA

Amersham International plc
Amersham Laboratories

0134

NAMAS
CALIBRATION
No. 0146

[redacted]

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

W. F. Case

W.F. Case

RC-5-024-061

1596

Amersham
The Health Science Group

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

Mary L. Adams 4/9/09
Amanda L. Fehr 4/9/09

ANALYTICS
Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404·352·8677
Fax 404·352·2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-0

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318

Tel 404·352·8677
Fax 404·352·2837

www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info

Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info

Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David Dry 12/4/08
Amanda Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

	Isotope	Result	
	Mixed Gamma N1	440.7	pCi/L
	Mixed Gamma N2	461.1	pCi/L
	Mixed Gamma N3	467.4	pCi/L
Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**
Certificate Value =	444.3738739	pCi/L	
Lower Limit =	428.4865624	pCi/L	
Upper Limit =	484.3134376	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	27.91343762		
10 % of Mean =	45.64000000		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David [illegible] 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr	**Isotope**	**Result**		
12/4/2008		**pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L		**Rule 3 (Pass/Fail)**
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David [illegible] 12/4/08
Amanda L. Fehr 12/4/08

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATA 4/14/2000 Jeff C Neill 12/1/04

Angela L. Johnson 12/8/04

TRM

Invoice:

5 bottles of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	425 ± 24	22.1 ± [illegible]	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: [illegible]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 13
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location — Tech Area VI
Building N/A — Room N/A

Reference LOV (available at SMO)

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in FL	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

1607

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab

Sample Tracking SMO USE
Date Entered (mm/dd/yy)
Entered by

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well decontaminated rad materials being sent to GEL on behalf of Hank Mintzer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Turnaround Time ☒Normal ☐Rush Required Report Date
QC Criteria

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DEP	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original — To Accompany Samples, Laboratory Copy (White)
1st Copy — To Accompany Samples, Return to SMO (Blue)
2nd Copy — SMO Suspense Copy (Yellow)
3rd Copy — Field Copy (Pink)

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATA 4/14/2000

Amanda L. Fehr 4/30/04
Matt L. Kelly 5/1/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped 11-16-99 SMO USE
Carrier/Waybill No. [illegible]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Reference LOV (available at SMO)

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special Instructions Below	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
-												
-												
-												
-												
-												
-												
-												

1610

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab

Sample Tracking SMO USE
Date Entered (mm/dd/yy)
Entered By

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized rad materials being sent to GEL on behalf of Hank Mistaer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Turnaround Time ☒Normal ☐Rush Required Report Date
QC Initials

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DEP	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org.	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

1380 Seaboard Industrial Blvd.

1262

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

aithersburg, Maryland 20899
nuary 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

RECEIVED 11/5/08

a, 30318

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*Notes and references

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994** [b]*
Massic activity of the solution [c]	**26.31 Bq·g^{-1}**
Relative expanded uncertainty (k=2)	**0.72%** [d] [e]
Solution density	**(1.105 ± 0.002) g·mL^{-1} at 20 °C** [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L^{-1})	Mass Fraction (g·g^{-1})
	H_2O HNO_3 $^{242}Pu^{+6}$	50 3.2 8×10^{-7}	0.81 0.19 2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) Bq·g^{-1} [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three 4πα liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	^{239}Pu + ^{240}Pu <0.000 001 [u]	^{239}Pu + ^{240}Pu 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	^{238}Pu + ^{241}Am <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One µSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (µSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 $s^{-1} \cdot g^{-1}$ for energies less than 3.1 MeV,
0.03 $s^{-1} \cdot g^{-1}$ for energies between 3.1 and 4.4 MeV, and
0.003 $s^{-1} \cdot g^{-1}$ for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 19 and 39 keV,
7×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 49 and 92 keV,
2×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 106 and 507 keV,
1×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 515 and 1456 keV, and
5×10^{-6} $s^{-1} \cdot g^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i| \cdot (x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i| \cdot (x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i| \cdot u(x_i)/y = |\partial y/\partial x_i| \cdot (x_i/y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i| \cdot (x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}•{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1262
Prepared By:	Daniel Roy
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-048-143

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Mary Aders
Prep Date:	05/08/2009
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	1262-A
Dilution(mL):	200 mL
Mass of Parent(g):	5.3306 g
Density(g/mL):	1.0000
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (200 mL) = 42.0744 dpm/mL
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0000 g/mL) / (200 mL) = 42.0744 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1262-*A*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	1262-A	1.830	0.2560
	1262-A	1.890	0.2630
	1262-A	1.810	0.2520
Mean Value (Counting) =	1.843	97.26	**Pass**
Stdev =	0.04163332		**Rule 3 (Pass/Fail)**

Target =	1.90
Lower Limit =	1.760066693
Upper Limit =	1.926599973
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.08326664
10 % of Mean =	0.184333333
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1262-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-Y and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Five drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 48% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

5/15/09

051509

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404·352·8677
Fax 404·352·2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

1620
End of Certificate

RECEIVED 12/15/08
RC-S-08

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

	Serial #	Value		Uncertainty	
Analyst: D. Roy					
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L
Mean Value (Counting) =	2.407	pCi/L		**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L			**Rule 3 (Pass/Fail)**
Target =	2.397	pCi/L			
Lower Limit =	2.259244371	pCi/L			
Upper Limit =	2.554088963	pCi/L			
Rule 1 Pass/Fail	**Pass**				
Two sigma =	0.147422296				
10 % of Mean =	0.240666667				
Rule 2 (Pass/Fail)	**Pass**				

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09
1/5/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 881931**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232582001	SAMPLE	MXR1	GAM02	09-JUL-09 08:14	DONE	CAN	01-NOV-08 00:00
232582002	SAMPLE	MXR1	GAM17	09-JUL-09 08:15	DONE	CAN	27-JAN-09 00:00
232585001	SAMPLE	MXR1	GAM22	09-JUL-09 08:16	DONE	CAN	18-FEB-09 00:00
1201873069	MB	MXR1	GAM21	09-JUL-09 08:22	DONE	CAN	25-JUL-08 00:00
232585002	SAMPLE	MXR1	GAM01	09-JUL-09 08:34	DONE	CAN	30-JAN-09 00:00
232585003	SAMPLE	MXR1	GAM05	09-JUL-09 08:34	DONE	CAN	11-JUN-09 00:00
232591001	SAMPLE	MXR1	GAM10	09-JUL-09 08:35	DONE	CAN	16-MAR-09 00:00
1201873070	DUP	MXR1	GAM11	09-JUL-09 08:36	DONE	CAN	01-NOV-08 00:00
1201873071	LCS	MXR1	GAM07	09-JUL-09 08:51	DONE	CAN	01-NOV-08 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882671**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232211001	SAMPLE	KXM4	1209	09-JUL-09 20:51	DUSE		
232211002	SAMPLE	KXM4	1210	09-JUL-09 20:51	DONE		
232211003	SAMPLE	KXM4	1211	09-JUL-09 20:51	DONE		
232211004	SAMPLE	KXM4	1212	09-JUL-09 20:51	DONE		
232211005	SAMPLE	KXM4	1213	09-JUL-09 20:51	DUSE		
232211006	SAMPLE	KXM4	1214	09-JUL-09 20:51	DONE		
232211007	SAMPLE	KXM4	1215	09-JUL-09 20:51	DUSE		
232211008	SAMPLE	KXM4	1216	09-JUL-09 20:51	DONE		
232212001	SAMPLE	KXM4	1217	09-JUL-09 20:51	DONE		
232212003	SAMPLE	KXM4	1219	09-JUL-09 20:51	DUSE		
232278001	SAMPLE	KXM4	1220	09-JUL-09 20:51	DONE		
232278002	SAMPLE	KXM4	1221	09-JUL-09 20:51	DONE		
232582001	SAMPLE	KXM4	1222	09-JUL-09 20:51	DUSE		
232582002	SAMPLE	KXM4	1223	09-JUL-09 20:51	DONE		
232585001	SAMPLE	KXM4	1224	09-JUL-09 20:51	DONE		
232585002	SAMPLE	KXM4	1225	09-JUL-09 20:52	DONE		
232585003	SAMPLE	KXM4	1226	09-JUL-09 20:52	DONE		
232591001	SAMPLE	KXM4	1227	09-JUL-09 20:52	DONE		
1201874683	MB	KXM4	1228	09-JUL-09 20:52	DONE		
1201874684	DUP	KXM4	1229	09-JUL-09 20:52	DONE		
1201874685	LCS	KXM4	1230	09-JUL-09 20:52	DONE		
232212002	SAMPLE	KXM4	1114	10-JUL-09 13:36	DONE		
232211001	SAMPLE	KXM4	1213	10-JUL-09 21:22	DUSE		
232211005	SAMPLE	KXM4	1214	10-JUL-09 21:22	DUSE		
232211007	SAMPLE	KXM4	1215	10-JUL-09 21:23	DUSE		
232212003	SAMPLE	KXM4	1216	10-JUL-09 21:23	DUSE		
232582001	SAMPLE	KXM4	1217	10-JUL-09 21:23	DUSE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882673**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232211001	SAMPLE	KXM4	1113	09-JUL-09 20:53	DONE		
232211004	SAMPLE	KXM4	1116	09-JUL-09 20:53	DONE		
232211005	SAMPLE	KXM4	1117	09-JUL-09 20:53	DONE		
232211006	SAMPLE	KXM4	1118	09-JUL-09 20:53	DONE		
232211007	SAMPLE	KXM4	1121	09-JUL-09 20:53	DONE		
232211008	SAMPLE	KXM4	1122	09-JUL-09 20:53	DONE		
232212001	SAMPLE	KXM4	1123	09-JUL-09 20:53	DONE		
232212002	SAMPLE	KXM4	1124	09-JUL-09 20:53	DONE		
232212003	SAMPLE	KXM4	1125	09-JUL-09 20:53	DONE		
232278001	SAMPLE	KXM4	1126	09-JUL-09 20:53	DONE		
232278002	SAMPLE	KXM4	1127	09-JUL-09 20:53	DONE		
232582001	SAMPLE	KXM4	1129	09-JUL-09 20:53	DONE		
232582002	SAMPLE	KXM4	1130	09-JUL-09 20:53	DONE		
232585001	SAMPLE	KXM4	1131	09-JUL-09 20:53	DONE		
232585003	SAMPLE	KXM4	1133	09-JUL-09 20:53	DONE		
232591001	SAMPLE	KXM4	1134	09-JUL-09 20:53	DONE		
1201874686	MB	KXM4	1135	09-JUL-09 20:53	DONE		
1201874688	LCS	KXM4	1144	09-JUL-09 20:53	DONE		
232211003	SAMPLE	KXM4	1170	09-JUL-09 21:21	DONE		
232211002	SAMPLE	KXM4	1113	10-JUL-09 13:36	DONE		
232585002	SAMPLE	KXM4	1155	10-JUL-09 21:23	DONE		
1201874687	DUP	KXM4	1156	10-JUL-09 21:23	DONE		

Instrument Run Log

Instrument Type: LSC **Batch ID: 883020**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	KXK2	LSCSILVER	14-JUL-09 18:04	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347002	SAMPLE	KXK2	LSCSILVER	14-JUL-09 19:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347003	SAMPLE	KXK2	LSCSILVER	14-JUL-09 21:21	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347004	SAMPLE	KXK2	LSCSILVER	14-JUL-09 22:59	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232582001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 00:38	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232582002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 02:16	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 05:08	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 07:41	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585003	SAMPLE	KXK2	LSCSILVER	15-JUL-09 08:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232591001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 09:46	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 10:48	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 11:51	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664003	SAMPLE	KXK2	LSCSILVER	15-JUL-09 12:53	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664004	SAMPLE	KXK2	LSCSILVER	15-JUL-09 13:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664005	SAMPLE	KXK2	LSCSILVER	15-JUL-09 14:58	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875586	MB	KXK2	LSCSILVER	15-JUL-09 16:01	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875587	DUP	KXK2	LSCSILVER	15-JUL-09 17:03	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875588	LCS	KXK2	LSCSILVER	15-JUL-09 18:05	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Monday, June 29, 2009

REQUEST NUMBER: 09-2505

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2505
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/29/2009
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-6603	R	6/25/2009	
		2	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		2	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
		2	CAMO-09-6605	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2505

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2505

REQUEST NUMBER: 09-2505

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/29/2009

TURNAROUND REQ'D: 30

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6605	1	GLASS	8290	Ice	R
CAMO-09-6605	2	GLASS	8290	Ice	R
CAMO-09-6603	1	GLASS	8290	Ice	R
CAMO-09-6603	2	GLASS	8290	Ice	R
CAMO-09-6604	1	GLASS	8290	Ice	R
CAMO-09-6604	2	GLASS	8290	Ice	R

Relinquished By:		**Date**	**Time**	**Received By:**		**Date**	**Time**
		6/29/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		**Date**	**Time**	**Remarks:**
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6603

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	OBT4	Fill
TIME COLLECTED (HH:MM)		1200	SUB-MEDIA:	UA	ok
PRS ID:	50-004(a)-00	ok	SAMPLE TECH CODE:	CBS	SS
LOCATION ID:	MO-605106		FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	Ice	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	Full Outer Package
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Crushed tuff Fill w/ root material & some cobbles

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a)-05,

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 13 dpm

β/γ ≤ 787 dpm

PID Ambient Reading = 0.0 / 12.5 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.25.09 1550	(Printed Name) Sherri Sherwood	6/25/09 4:00
(Signature) [signature]		(Signature) Sherri Sherwood	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6604

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	OBT4	obt3
TIME COLLECTED (HH:MM)		12.20	SUB-MEDIA:	UA	ok
PRS ID:	50-004(a)-00	ok	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605106	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	1.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	2.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown / Purple, indurated, moist tuff.

FTB: CAMO-09-6641

SAMPLE COMMENTS: Interface @ 1.0' bgs

LOCATION DESC: 50-004(a) - 05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 8 dpm

β/γ ≤ 576 dpm

PID Ambient Reading = 0.0 / 82.8 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.25.09	(Printed Name) Sherri Sherwood	6/25/09
(Signature) [signature]	1550	(Signature) Sherri Sherwood	4:00

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6605

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	OBT4	QBT3
TIME COLLECTED (HH:MM)		1305	SUB-MEDIA:	UA	ok
PRS ID:	50-004(a)-00	ok	SAMPLE TECH CODE:	CBS	H.A.
LOCATION ID:	MO-605106	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	6.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	7.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Purple/Grey, indurated, moist tuff

SAMPLE COMMENTS: Power auger to 6.0', clean hole, de-con H.A. and collect sample @ 5.0' below S/T interface.

LOCATION DESC: 50-004(a)-00-05

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 31$ dpm

$\beta/\gamma \leq 555$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/25/09 1550	(Printed Name) Sherri Sherwood	6/25/09 4:00
(Signature) [signature]		(Signature) [signature]	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6641

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1220	SUB-MEDIA:	OTHER	
PRS ID:	50-004(a)-00	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605106	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:		
FIELD MATRIX:	S		EXCAVATED: YES / ~~NO~~ / NA	NA As 6.25.09	

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
No 6.25.09 1	~~32~~ 15-Day Reg	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package

SAMPLE DESC: QC Sample of LAMO-09-6604

SAMPLE COMMENTS: none

LOCATION DESC: 50-004(a)-05

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.25.09 1550	(Printed Name) Sherri Sherwood (Signature) [signature]	6/25/09 4:00
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-9946

-6603 → 6605

-10464 → 10465

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-6641

Reason: QC of Samples

Print Last Name Branch Signature John Branch Date 06/25/09

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00076

Client Sample ID: CAMO-09-6603

Sample Collection Date: 06/25/09 12:00

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-09-00076-002

Date Received: 06/26/09 00:00

Report Date: 06/26/09 10:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-30.68	12.76	127.53	13.30	U	pCi/g	EPA 900.0M	6/26/2009	LR	N/A
GROSS BETA	32.10	15.01	20.61	15.52		pCi/g	EPA 900.0M	6/26/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
K-40	29.96	9.63	1.78	9.67		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CO-60	0.00	11.66	0.13	11.66	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-134	0.33	0.27	0.09	0.27	SI	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-137	0.04	0.15	0.08	0.15	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
EU-152	0.45	0.35	0.14	0.35	SI	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
PB-212	1.51	0.57	0.19	0.58		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
RA 226	3.64	1.69	0.21	1.69		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-235	1.21	0.78	0.18	0.78		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-238	0.35	3.23	1.70	3.23	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
AM-241	0.80	0.35	0.11	0.35		pCi/g	EPA 901.1M	6/26/2009	ME	

NOTES: % Moisture: 0.86

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00076

Client Sample ID: CAMO-09-6604

Sample Collection Date: 06/25/09 12:20

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-09-00076-003

Date Received: 06/26/09 00:00

Report Date: 06/26/09 16:42

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	14.17	55.49	128.32	55.52	U	pCi/g	EPA 900.0M	6/26/2009	LR	N/A
GROSS BETA	41.92	17.12	21.30	17.87		pCi/g	EPA 900.0M	6/26/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
K-40	-0.58	-12.75	3.16	-12.75	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CO-60	0.00	10.77	0.11	10.77	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-134	0.03	0.07	0.08	0.07	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-137	-0.01	33.46	0.07	33.46	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
EU-152	0.26	0.24	0.13	0.24	SI	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
PB-212	1.03	0.49	0.19	0.49		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
RA-228	0.82	0.70	0.44	0.70		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-235	-0.07	96.05	0.22	96.05	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-238	0.47	2.19	1.27	2.19	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
AM-241	0.07	0.14	0.07	0.14		pCi/g	EPA 901.1M	6/26/2009	ME	

NOTES: % Moisture: 1.06

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00076
Client Sample ID: CANO-09-5605
Sample Collection Date: 06/25/09 13:05
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00076-004
Date Received: 06/26/09 00:00
Report Date: 06/26/09 16:42

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	-5.80	48.48	133.72	48.49	U	pCi/g	EPA 900.0M	6/26/2009	LR	N/A
GROSS BETA	48.07	16.94	20.15	17.93		pCi/g	EPA 900.0M	6/26/2009	LR	N/A
NA-22	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
K-40	33.86	9.60	1.59	9.66		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CO-60	0.00	10.30	0.11	10.30	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-134	0.11	0.13	0.08	0.13	SI	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
CS-137	-0.01	13.58	0.07	13.58	U	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
EU-152	0.29	0.31	0.12	0.31	SI	pCi/g	EPA 901.1M	6/26/2009	ME	N/A
PB-212	1.69	0.60	0.21	0.60		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
RA-228	2.15	0.88	0.28	0.88		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-235	1.49	0.80	0.16	0.80		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
U-238	4.93	3.28	1.28	3.44		pCi/g	EPA 901.1M	6/26/2009	ME	N/A
AM-241	0.20	0.26	0.11	0.26		pCi/g	EPA 901.1M	6/26/2009	ME	

NOTES: % Moisture: 0.78

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5123-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2505 VALIDATION DATE: 08/04/2009 LAB CODE: ALTC

CONTRACT LABORATORY NAME: Vista Analytical Laboratory

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☒ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the samples were not analyzed within 30 days of the ICAL. No sample data were qualified, based on professional judgment.
2. The ICV %D was >20% with positive bias for 1,2,3,4,7,8-HxCDD. The associated result for sample CAMO-09-6603 was a detect and, thus, was qualified J,DF7c. The other associated sample results were NDs and, thus, were not qualified.
3. It should be noted that ICV standards are not available for 13C-OCDF and 13C-1,2,3,4-TCDF which are used in the quantitation of OCDF; 13C-2,3,7,8-TCDF; 13C-1,2,3,7,8-PeCDF and 13C-2,3,4,7,8-PeCDF. Thus, ICV %Ds could not be evaluated for these compounds. No sample data were qualified as a result.
4. It should be noted that laboratory ion abundance limits were used for evaluation of the PeCDD compounds since the laboratory uses an alternate ion for these masses due to interferences.

DATA VALIDATION COVER SHEET

5123-1

Records Use only

Data Validation Cover Sheet

5. It should be noted that MS/MSD analyses were not performed with the samples. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 8/4/09

VALIDATOR'S SIGNATURE: Mary R. Donnelan DATE: 08/04/2009

Form 5123-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time and qualitative criteria for target compound identification were not met.	R, DF0	R, DF0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF0b	R, DF0b
☐	☒	☐	3. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF1d	R, DF1d
☐	☒	☐	4. The sample result is ≤5 times the concentration of the related analyte in the method blank.	N/A	U, DF4
☐	☒	☐	5. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, DF4a
☐	☐	☒	6. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	N/A	U, DF4d
☐	☒	☐	7. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF4e	R, DF4e
☐	☒	☐	8. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, DF7	J, DF7
☐	☒	☐	9. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria.	UJ, R, DF7a	J, DF7a
☐	☒	☐	10. The affected analytes were analyzed with an out of range ion abundance in the initial calibration and/or CCV.	R, DF7b	R, DF7b
☒	☐	☐	11. The ICV and/or CCV were recovered outside the method specific limits.	UJ, R, DF7c	J, R, DF7c
☐	☒	☐	12. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DF7d	J, DF7d

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DF7f	R, DF7f
☐	☒	☐	14. The affected analyte is considered rejected because the ion abundances did not meet specifications.	N/A	R, DF8
☐	☒	☐	15. The ion abundance documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF8a	R, DF8a
☐	☒	☐	16. If GC column performance was not evaluated at the required frequency or if method criteria were not met, qualify all associated detects as J and all associated non-detects as UJ.	UJ, DF8b	J, DF8b
☐	☐	☒	17. If 2, 3, 7, 8-TCDF was detected in a sample and the result was not confirmed on a second column with successful analysis of the GC column performance mix, qualify all associated detects as U.	N/A	U, DF8c
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, DF9	J-, DF9
☐	☒	☐	19. The holding time was >2 times the applicable holding time requirement.	R, DF9a	J-, DF9a
☐	☒	☐	20. The LCS percent recovery was <10%.	R, DF12	J-, DF12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, DF12a	J-, DF12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DF12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12c	R, DF12c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	24. The MS/MSD percent recovery was <10%.	R, DF12d	R, DF12d
☐	☐	☒	25. The MS/MSD percent recovery was >10% but <70%.	UJ, DF12e	J, DF12e
☐	☐	☒	26. The MS/MSD percent recovery was >70%	N/A	J+, DF12f
☐	☐	☒	27. The MS/MSD relative percent difference was >30%.	UJ, DF12g	J, DF12g
☐	☒	☐	28. The fortification sample percent recovery was <10%.	R, DF12h	J-, DF12h
☐	☒	☐	29. The fortification sample percent recovery was <40% but >10%	UJ, DF12i	J-, DF12i
☐	☒	☐	30. The fortification sample percent recovery was >135%.	N/A	J+, DF12j
☐	☒	☐	31. The fortification sample documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12k	R, DF12k
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference.	R, DF15	UJ, DF15
☐	☒	☐	33. Sample clean-up was not performed. If run log notations, spectral data and/or internal standard or labeled compound recoveries indicate interferences and extract cleanup was not performed, qualify all associated detects as J and all non-detects as UJ.	RJ, DF15a	J, DF15a
☐	☒	☐	34. The instrument performance sample did not pass method acceptance criteria.	R, DF16	R, DF16
☐	☒	☐	35. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, DF16c	R, DF16c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 **Dioxin/Furan Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, DF19	J, R, DR19
☐	☒	☐	37. Duplicate, dilution, or reanalysis.	UJ, DF88	J, DF88

Sample ID: CAMO-09-6603 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31848-001	Date Received:	30-Jun-09
Project:	09-2505	Sample Size:	10.8 g	QC Batch No.:	2222	Date Extracted:	7-Jul-09
Date Collected:	25-Jun-09	%Solids:	92.2	Date Analyzed DB-5:	9-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1200						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.148		
1,2,3,7,8-PeCDD	ND	0.176		
1,2,3,4,7,8-HxCDD	0.305 J,DF7c			J
1,2,3,6,7,8-HxCDD	ND		0.477	
1,2,3,7,8,9-HxCDD	ND		0.719	
1,2,3,4,6,7,8-HpCDD	17.6			
OCDD	244			
2,3,7,8-TCDF	ND	0.183		
1,2,3,7,8-PeCDF	ND	0.132		
2,3,4,7,8-PeCDF	ND	0.124		
1,2,3,4,7,8-HxCDF	ND	0.137		
1,2,3,6,7,8-HxCDF	ND	0.143		
2,3,4,6,7,8-HxCDF	ND	0.162		
1,2,3,7,8,9-HxCDF	ND	0.191		
1,2,3,4,6,7,8-HpCDF	1.61			J
1,2,3,4,7,8,9-HpCDF	ND	0.319		
OCDF	5.65			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	109	40 - 135	
	13C-1,2,3,7,8-PeCDD	103	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	101	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	90.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	105	40 - 135	
	13C-OCDD	89.5	40 - 135	
	13C-2,3,7,8-TCDF	105	40 - 135	
	13C-1,2,3,7,8-PeCDF	95.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	99.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	91.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	96.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	91.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	102	40 - 135	
	13C-OCDF	86.0	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	101	40 - 135	

Totals			
Total TCDD	ND	0.148	
Total PeCDD	ND	0.176	
Total HxCDD	2.70		3.89
Total HpCDD	34.4		
Total TCDF	ND	0.183	
Total PeCDF	ND	0.128	
Total HxCDF	0.419		1.34
Total HpCDF	3.76		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.472

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 13-Jul-2009 10:19

MAD
08/04/09

Sample ID: CAMO-09-6604 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31848-002	Date Received:	30-Jun-09
Project:	09-2505	Sample Size:	11.2 g	QC Batch No.:	2222	Date Extracted:	7-Jul-09
Date Collected:	25-Jun-09	%Solids:	90.3	Date Analyzed DB-5:	9-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1220						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.233		
1,2,3,7,8-PeCDD	ND	0.296		
1,2,3,4,7,8-HxCDD	ND	0.313		
1,2,3,6,7,8-HxCDD	ND	0.294		
1,2,3,7,8,9-HxCDD	ND	0.292		
1,2,3,4,6,7,8-HpCDD	ND		0.502	
OCDD	5.04			
2,3,7,8-TCDF	ND	0.232		
1,2,3,7,8-PeCDF	ND	0.193		
2,3,4,7,8-PeCDF	ND	0.196		
1,2,3,4,7,8-HxCDF	ND	0.116		
1,2,3,6,7,8-HxCDF	ND	0.124		
2,3,4,6,7,8-HxCDF	ND	0.140		
1,2,3,7,8,9-HxCDF	ND	0.183		
1,2,3,4,6,7,8-HpCDF	ND	0.212		
1,2,3,4,7,8,9-HpCDF	ND	0.260		
OCDF	ND	0.418		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	106	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	102	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	97.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	106	40 - 135	
	13C-OCDD	102	40 - 135	
	13C-2,3,7,8-TCDF	107	40 - 135	
	13C-1,2,3,7,8-PeCDF	99.3	40 - 135	
	13C-2,3,4,7,8-PeCDF	97.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	104	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	88.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	93.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	99.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	97.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	100	40 - 135	
	13C-OCDF	91.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	100	40 - 135	

Totals			
Total TCDD	ND	0.233	
Total PeCDD	ND	0.296	
Total HxCDD	ND	0.300	
Total HpCDD	ND		0.502
Total TCDF	ND	0.232	
Total PeCDF	ND	0.194	
Total HxCDF	ND	0.141	
Total HpCDF	ND	0.236	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.00504

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 13-Jul-2009 10:19

MAD
08/04/09

Sample ID: CAMO-09-6605 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31848-003	Date Received:	30-Jun-09
Project:	09-2505	Sample Size:	10.9 g	QC Batch No.:	2222	Date Extracted:	7-Jul-09
Date Collected:	25-Jun-09	%Solids:	92.9	Date Analyzed DB-5:	9-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1305						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.134		
1,2,3,7,8-PeCDD	ND	0.193		
1,2,3,4,7,8-HxCDD	ND	0.163		
1,2,3,6,7,8-HxCDD	ND	0.167		
1,2,3,7,8,9-HxCDD	ND	0.159		
1,2,3,4,6,7,8-HpCDD	ND	0.188		
OCDD	ND		0.591	
2,3,7,8-TCDF	ND	0.121		
1,2,3,7,8-PeCDF	ND	0.109		
2,3,4,7,8-PeCDF	ND	0.102		
1,2,3,4,7,8-HxCDF	ND	0.0625		
1,2,3,6,7,8-HxCDF	ND	0.0644		
2,3,4,6,7,8-HxCDF	ND	0.0780		
1,2,3,7,8,9-HxCDF	ND	0.104		
1,2,3,4,6,7,8-HpCDF	ND	0.128		
1,2,3,4,7,8,9-HpCDF	ND	0.127		
OCDF	ND	0.286		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	105	40 - 135	
	13C-1,2,3,7,8-PeCDD	100	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	101	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	91.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	91.4	40 - 135	
	13C-2,3,7,8-TCDF	105	40 - 135	
	13C-1,2,3,7,8-PeCDF	96.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	99.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	93.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	94.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	90.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	100	40 - 135	
	13C-OCDF	85.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	104	40 - 135	

Totals		
Total TCDD	ND	0.134
Total PeCDD	ND	0.193
Total HxCDD	ND	0.163
Total HpCDD	ND	0.188
Total TCDF	ND	0.121
Total PeCDF	ND	0.106
Total HxCDF	ND	0.0772
Total HpCDF	ND	0.128

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 13-Jul-2009 10:19

MAD
08/04/09

Monday, June 29, 2009

REQUEST NUMBER: 09-2505

31848

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on: 2.1°C
LANL Request Number:09-2505
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/29/2009
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-6603	R	6/25/2009	
		2	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		2	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
		2	CAMO-09-6605	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2505

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2505

REQUEST NUMBER: 09-2505

31848

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/29/2009

TURNAROUND REQ'D: 30

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6605	1	GLASS	8290	Ice	R
CAMO-09-6605	2	GLASS	8290	Ice	R
CAMO-09-6603	1	GLASS	8290	Ice	R
CAMO-09-6603	2	GLASS	8290	Ice	R
CAMO-09-6604	1	GLASS	8290	Ice	R
CAMO-09-6604	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/29/09	1400	B. Benedict	[illegible]	6/30/09	1247
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Vista
Analytical Laboratory

July 13, 2009

Vista Project I.D.: 31848

Mr. Keith Greene
Los Alamos National Laboratory
ER Sample Management Office
TA-3, Building 271, DP O1-U
Los Alamos, NM 87545

Dear Mr. Greene,

Enclosed are the results for the three soil samples received at Vista Analytical Laboratory on June 30, 2009 under your Project Name "09-2505". These samples were extracted and analyzed using EPA Method 8290 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier

Martha M. Maier
Laboratory Director

ACCREDITED IN ACCORDANCE WITH nelac

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Vista

Section I: Sample Inventory Report

Date Received: **6/30/2009**

Vista Lab. ID	Client Sample ID
31848-001	CAMO-09-6603
31848-002	CAMO-09-6604
31848-003	CAMO-09-6605

SECTION II

Vista

Method Blank — **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2222	Lab Sample:	0-MB001
Sample Size:	10.0 g	Date Extracted:	7-Jul-09	Date Analyzed DB-5:	8-Jul-09
				Date Analyzed DB-225:	NA

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.317		
1,2,3,7,8-PeCDD	ND	0.376		
1,2,3,4,7,8-HxCDD	ND	0.346		
1,2,3,6,7,8-HxCDD	ND	0.339		
1,2,3,7,8,9-HxCDD	ND	0.329		
1,2,3,4,6,7,8-HpCDD	ND	0.370		
OCDD	ND	0.578		
2,3,7,8-TCDF	ND	0.315		
1,2,3,7,8-PeCDF	ND	0.274		
2,3,4,7,8-PeCDF	ND	0.263		
1,2,3,4,7,8-HxCDF	ND	0.145		
1,2,3,6,7,8-HxCDF	ND	0.150		
2,3,4,6,7,8-HxCDF	ND	0.178		
1,2,3,7,8,9-HxCDF	ND	0.197		
1,2,3,4,6,7,8-HpCDF	ND	0.265		
1,2,3,4,7,8,9-HpCDF	ND	0.287		
OCDF	ND	0.661		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	99.8	40 - 135	
	13C-1,2,3,7,8-PeCDD	95.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	99.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	87.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	99.9	40 - 135	
	13C-OCDD	90.4	40 - 135	
	13C-2,3,7,8-TCDF	101	40 - 135	
	13C-1,2,3,7,8-PeCDF	96.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	93.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	98.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	85.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	90.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	93.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	92.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	98.2	40 - 135	
	13C-OCDF	89.0	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	91.4	40 - 135	

Totals		
Total TCDD	ND	0.317
Total PeCDD	ND	0.376
Total HxCDD	ND	0.338
Total HpCDD	ND	0.370
Total TCDF	ND	0.315
Total PeCDF	ND	0.268
Total HxCDF	ND	0.168
Total HpCDF	ND	0.276

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 13-Jul-2009 10:19

Vista

OPR Results **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2222	Lab Sample:	0-OPR001		
Sample Size:	10.0 g	Date Extracted:	7-Jul-09	Date Analyzed DB-5:	8-Jul-09	Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	9.24	7 - 13	IS	13C-2,3,7,8-TCDD	99.9	40 - 135	
1,2,3,7,8-PeCDD	50.0	44.4	35 - 65		13C-1,2,3,7,8-PeCDD	101	40 - 135	
1,2,3,4,7,8-HxCDD	50.0	42.9	35 - 65		13C-1,2,3,4,7,8-HxCDD	98.7	40 - 135	
1,2,3,6,7,8-HxCDD	50.0	43.4	35 - 65		13C-1,2,3,6,7,8-HxCDD	89.2	40 - 135	
1,2,3,7,8,9-HxCDD	50.0	45.0	35 - 65		13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
1,2,3,4,6,7,8-HpCDD	50.0	43.4	35 - 65		13C-OCDD	91.0	40 - 135	
OCDD	100	85.2	70 - 130		13C-2,3,7,8-TCDF	101	40 - 135	
2,3,7,8-TCDF	10.0	8.32	7 - 13		13C-1,2,3,7,8-PeCDF	98.2	40 - 135	
1,2,3,7,8-PeCDF	50.0	40.5	35 - 65		13C-2,3,4,7,8-PeCDF	96.8	40 - 135	
2,3,4,7,8-PeCDF	50.0	41.5	35 - 65		13C-1,2,3,4,7,8-HxCDF	98.2	40 - 135	
1,2,3,4,7,8-HxCDF	50.0	42.3	35 - 65		13C-1,2,3,6,7,8-HxCDF	84.2	40 - 135	
1,2,3,6,7,8-HxCDF	50.0	44.2	35 - 65		13C-2,3,4,6,7,8-HxCDF	89.2	40 - 135	
2,3,4,6,7,8-HxCDF	50.0	44.3	35 - 65		13C-1,2,3,7,8,9-HxCDF	94.9	40 - 135	
1,2,3,7,8,9-HxCDF	50.0	43.9	35 - 65		13C-1,2,3,4,6,7,8-HpCDF	89.8	40 - 135	
1,2,3,4,6,7,8-HpCDF	50.0	44.1	35 - 65		13C-1,2,3,4,7,8,9-HpCDF	101	40 - 135	
1,2,3,4,7,8,9-HpCDF	50.0	44.1	35 - 65		13C-OCDF	88.0	40 - 135	
OCDF	100	87.2	70 - 130	CRS	37Cl-2,3,7,8-TCDD	97.9	40 - 135	

Analyst: JMH

Approved By: William J. Luksemburg 13-Jul-2009 10:19

Vista

Sample ID: CAMO-09-6603 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31848-001	Date Received:	30-Jun-09
Project:	09-2505	Sample Size:	10.8 g	QC Batch No.:	2222	Date Extracted:	7-Jul-09
Date Collected:	25-Jun-09	%Solids:	92.2	Date Analyzed DB-5:	9-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1200						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.148		
1,2,3,7,8-PeCDD	ND	0.176		
1,2,3,4,7,8-HxCDD	0.305			J
1,2,3,6,7,8-HxCDD	ND		0.477	
1,2,3,7,8,9-HxCDD	ND		0.719	
1,2,3,4,6,7,8-HpCDD	17.6			
OCDD	244			
2,3,7,8-TCDF	ND	0.183		
1,2,3,7,8-PeCDF	ND	0.132		
2,3,4,7,8-PeCDF	ND	0.124		
1,2,3,4,7,8-HxCDF	ND	0.137		
1,2,3,6,7,8-HxCDF	ND	0.143		
2,3,4,6,7,8-HxCDF	ND	0.162		
1,2,3,7,8,9-HxCDF	ND	0.191		
1,2,3,4,6,7,8-HpCDF	1.61			J
1,2,3,4,7,8,9-HpCDF	ND	0.319		
OCDF	5.65			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	109	40 - 135	
	13C-1,2,3,7,8-PeCDD	103	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	101	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	90.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	105	40 - 135	
	13C-OCDD	89.5	40 - 135	
	13C-2,3,7,8-TCDF	105	40 - 135	
	13C-1,2,3,7,8-PeCDF	95.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	99.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	91.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	96.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	91.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	102	40 - 135	
	13C-OCDF	86.0	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	101	40 - 135	

Totals			
Total TCDD	ND	0.148	
Total PeCDD	ND	0.176	
Total HxCDD	2.70		3.89
Total HpCDD	34.4		
Total TCDF	ND	0.183	
Total PeCDF	ND	0.128	
Total HxCDF	0.419		1.34
Total HpCDF	3.76		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.472

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 13-Jul-2009 10:19

Vista

Sample ID: CAMO-09-6604 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31848-002	Date Received:	30-Jun-09
Project:	09-2505	Sample Size:	11.2 g	QC Batch No.:	2222	Date Extracted:	7-Jul-09
Date Collected:	25-Jun-09	%Solids:	90.3	Date Analyzed DB-5:	9-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1220						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.233		
1,2,3,7,8-PeCDD	ND	0.296		
1,2,3,4,7,8-HxCDD	ND	0.313		
1,2,3,6,7,8-HxCDD	ND	0.294		
1,2,3,7,8,9-HxCDD	ND	0.292		
1,2,3,4,6,7,8-HpCDD	ND		0.502	
OCDD	5.04			
2,3,7,8-TCDF	ND	0.232		
1,2,3,7,8-PeCDF	ND	0.193		
2,3,4,7,8-PeCDF	ND	0.196		
1,2,3,4,7,8-HxCDF	ND	0.116		
1,2,3,6,7,8-HxCDF	ND	0.124		
2,3,4,6,7,8-HxCDF	ND	0.140		
1,2,3,7,8,9-HxCDF	ND	0.183		
1,2,3,4,6,7,8-HpCDF	ND	0.212		
1,2,3,4,7,8,9-HpCDF	ND	0.260		
OCDF	ND	0.418		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	106	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	102	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	97.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	106	40 - 135	
	13C-OCDD	102	40 - 135	
	13C-2,3,7,8-TCDF	107	40 - 135	
	13C-1,2,3,7,8-PeCDF	99.3	40 - 135	
	13C-2,3,4,7,8-PeCDF	97.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	104	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	88.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	93.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	99.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	97.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	100	40 - 135	
	13C-OCDF	91.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	100	40 - 135	

Totals			
Total TCDD	ND	0.233	
Total PeCDD	ND	0.296	
Total HxCDD	ND	0.300	
Total HpCDD	ND		0.502
Total TCDF	ND	0.232	
Total PeCDF	ND	0.194	
Total HxCDF	ND	0.141	
Total HpCDF	ND	0.236	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.00504

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 13-Jul-2009 10:19

Vista

Sample ID: CAMO-09-6605 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31848-003	Date Received:	30-Jun-09
Project:	09-2505	Sample Size:	10.9 g	QC Batch No.:	2222	Date Extracted:	7-Jul-09
Date Collected:	25-Jun-09	%Solids:	92.9	Date Analyzed DB-5:	9-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1305						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.134		
1,2,3,7,8-PeCDD	ND	0.193		
1,2,3,4,7,8-HxCDD	ND	0.163		
1,2,3,6,7,8-HxCDD	ND	0.167		
1,2,3,7,8,9-HxCDD	ND	0.159		
1,2,3,4,6,7,8-HpCDD	ND	0.188		
OCDD	ND		0.591	
2,3,7,8-TCDF	ND	0.121		
1,2,3,7,8-PeCDF	ND	0.109		
2,3,4,7,8-PeCDF	ND	0.102		
1,2,3,4,7,8-HxCDF	ND	0.0625		
1,2,3,6,7,8-HxCDF	ND	0.0644		
2,3,4,6,7,8-HxCDF	ND	0.0780		
1,2,3,7,8,9-HxCDF	ND	0.104		
1,2,3,4,6,7,8-HpCDF	ND	0.128		
1,2,3,4,7,8,9-HpCDF	ND	0.127		
OCDF	ND	0.286		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	105	40 - 135	
	13C-1,2,3,7,8-PeCDD	100	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	101	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	91.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	91.4	40 - 135	
	13C-2,3,7,8-TCDF	105	40 - 135	
	13C-1,2,3,7,8-PeCDF	96.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	99.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	93.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	94.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	90.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	100	40 - 135	
	13C-OCDF	85.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	104	40 - 135	

Totals		
Total TCDD	ND	0.134
Total PeCDD	ND	0.193
Total HxCDD	ND	0.163
Total HpCDD	ND	0.188
Total TCDF	ND	0.121
Total PeCDF	ND	0.106
Total HxCDF	ND	0.0772
Total HpCDF	ND	0.128

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 13-Jul-2009 10:19

APPENDIX

Vista

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

Monday, June 29, 2009

REQUEST NUMBER: 09-2505

31848

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on: 2.1°C
LANL Request Number:09-2505
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/29/2009
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-6603	R	6/25/2009	
		2	CAMO-09-6603	R	6/25/2009	
		1	CAMO-09-6604	R	6/25/2009	
		2	CAMO-09-6604	R	6/25/2009	
		1	CAMO-09-6605	R	6/25/2009	
		2	CAMO-09-6605	R	6/25/2009	

Final Page of REQUEST NUMBER 09-2505

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2505

REQUEST NUMBER: 09-2505

31848

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/29/2009

TURNAROUND REQ'D: 30

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6605	1	GLASS	8290	Ice	R
CAMO-09-6605	2	GLASS	8290	Ice	R
CAMO-09-6603	1	GLASS	8290	Ice	R
CAMO-09-6603	2	GLASS	8290	Ice	R
CAMO-09-6604	1	GLASS	8290	Ice	R
CAMO-09-6604	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		6/29/09	1400	B. Benedict		6/30/09	1247
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31848 TAT 30

Samples Arrival:	Date/Time 6/30/09 0859	Initials: VBLB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 6/30/09 1241	Initials: VBLB	Location: WR-2 Shelf/Rack: F 6

Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C 2.1	Time: 0925	Thermometer ID: IR-1				

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7209 7847 5767	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?	✓		
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	None		
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

	date	time	
CAMO-09-6603	6/25/09	1200	A&B jars
-6604		1220	
-6605		1305	

Sample Login 3/2007 rmh

EXTRACTION INFORMATION

PROCESS SHEET

Project No.-AR: 31848-1 of 1

RUSH!

Prep Due: 7/10/2009

Hold Due: 7/25/2009

Client: Los Alamos National Laboratory(LOANM01F

Client Manager: Rose Harrelson

Method: EPA Method 8290 | PCDD/F (Tetra - Octa)

Project Due: 7/28/2009

TAT: ~~28~~ 14 RAH 7-6-09

Split Type: 222

Matrix: Soil

LabID	Recon	Client-ID	Description	Date Received	SLoc	Shelf
001	☑	CAMO-09-6603 "A"		6/30/2009	WR-2	F-6
002	☑	CAMO-09-6604 ↓		6/30/2009	WR-2	F-6
003	☑	CAMO-09-6605 ↓		6/30/2009	WR-2	F-6

%Solids 6/30/09 BSB

Instructions:

Report Options

Report Level:

EDD Type:

Report Group: Dioxins NoMDL with %Solid

TEQ Type: EPA(Default) : Min

Samples Reconciled By: BSB 6/30/09

Vial Box ID: Jarhead

Date Requested 7/14/2009

Percent Solids

Vista Analytical Laboratory

Project: 31848 - 1 of 1

Sample ID	Chemist/Date BAB 6/30/09		Chemist/Date BAB 7/1/09	Comments
	Boat Wt.	Sample + Boat Wt.	Residue + Boat Wt.	
001	1.33	4.29	4.06	
002	1.33	5.15	4.78	
003	1.32	4.58	4.35	

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

%Solids 3/2007 rmh

Project: 31848

Extraction Set: 2222

Chemist: M. Galiso 7/7/09

Method(s): EPA Method 8290 | PCDD/F (Tetra - Octa)

C	ALTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/ WIT DATE	CRS CHEM/WIT DATE	AP CHEM/Date	ABSG CHEM/Date	AA CHEM/Date	Florisil CHEM/Date	RS CHEM/WIT DATE
☐	0_2222_MB001	10.00	10.00	MC FEB 7/7/09	MC FEB 7/8/09	N/A	MC 7/8/09	MC 7/8/09	MC 7/8/09	MC FEB 7/8/09
☐	0_2222_OPR001	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	31848_2222_001	10.84	10.82	↓	↓	↓	↓	↓	↓	↓
☐	31848_2222_002	11.07	11.15	↓	↓	↓	↓	↓	↓	↓
☐	31848_2222_003	10.76	10.87	↓	↓	↓	↓	↓	↓	↓

IS Name (Vd)	NS Name (Vd)	CRS Name (Vd)	RS Name (Vd)
PCDD/F 080910A 10µl	PCDD/F 080916B 10µl	PCDD/F 080910C 10µl	PCDD/F 080910D 10µl
PCB	PCB	PCB	PCB
PAH	PAH	PAH	PAH

Cycle Time 7/7 Start: 1550 7/8 Stop: 0800

APP.: SEFUN SOX SDS

SOLV: Toluene

Other: N/A

Final Volume(s): 20µl Cid

Check Out: Chemist: MC 7/7/09

Check-In: Chemist: / /

Comments:

hrmsgenprepL.rpt

SAMPLE DATA

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Printed: Thursday, July 09, 2009 08:01:43 Pacific Daylight Time

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1	2,3,7,8-TCDD			NO	1.08	10.000					0.317
2	1,2,3,7,8-PeCDD			NO	1.03	10.000					0.376
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.346
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.339
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.329
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.370
7	OCDD			NO	1.18	10.000					0.578
8	2,3,7,8-TCDF			NO	1.09	10.000					0.315
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.274
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.263
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.145
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.150
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.178
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.197
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.265
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.287
17	OCDF			NO	1.10	10.000					0.661
18	13C-2,3,7,8-TCDD	9.05e4	0.79	NO	1.01	10.000	26.01	1.023	199.57	99.8	1.74
19	13C-1,2,3,7,8-PeCDD	7.04e4	0.61	NO	0.827	10.000	30.68	1.207	190.38	95.2	0.829
20	13C-1,2,3,4,7,8-HxCDD	6.47e4	1.23	NO	0.916	10.000	34.13	0.988	199.83	99.9	1.43
21	13C-1,2,3,6,7,8-HxCDD	5.70e4	1.18	NO	0.921	10.000	34.24	0.991	175.16	87.6	1.43
22	13C-1,2,3,4,6,7,8-HpCDD	5.00e4	1.03	NO	0.708	10.000	38.18	1.105	199.76	99.9	1.80
23	13C-OCDD	6.42e4	0.87	NO	0.503	10.000	41.62	1.205	361.42	90.4	2.33
24	13C-2,3,7,8-TCDF	1.29e5	0.78	NO	0.977	10.000	25.24	0.993	202.15	101	1.01
25	13C-1,2,3,7,8-PeCDF	1.13e5	1.49	NO	0.896	10.000	29.46	1.159	193.12	96.6	1.15
26	13C-2,3,4,7,8-PeCDF	1.10e5	1.49	NO	0.900	10.000	30.40	1.196	187.14	93.6	1.15
27	13C-1,2,3,4,7,8-HxCDF	8.16e4	0.51	NO	1.17	10.000	33.21	0.962	197.53	98.8	1.69
28	13C-1,2,3,6,7,8-HxCDF	9.16e4	0.52	NO	1.52	10.000	33.34	0.965	170.61	85.3	1.30
29	13C-2,3,4,6,7,8-HxCDF	8.00e4	0.51	NO	1.25	10.000	33.95	0.983	181.25	90.6	1.58
30	13C-1,2,3,7,8,9-HxCDF	6.98e4	0.51	NO	1.05	10.000	34.93	1.011	187.53	93.8	1.88

7/9/09
MS 7/9/09

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-4.qld

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Printed: Thursday, July 09, 2009 08:01:43 Pacific Daylight Time

Name: 090708H1_4, Date: 08-Jul-2009, Time: 15:49:49, ID: 0_2222_MB001, Description: 0_2222_MB001

31	13C-1,2,3,4,6,7,8-HpCDF	5.65e4	0.45	NO	0.868	10.000	36.81	1.066	183.92	92.0	2.10
32	13C-1,2,3,4,7,8,9-HpCDF	5.04e4	0.46	NO	0.727	10.000	38.75	1.122	196.39	98.2	2.51
33	13C-OCDF	9.56e4	0.92	NO	0.760	10.000	41.85	1.212	356.04	89.0	1.66
34	37Cl-2,3,7,8-TCDD	2.18e4			0.668	10.000	26.03	1.024	73.127	91.4	0.451
35	13C-1,2,3,4-TCDD	8.94e4	0.81	NO	1.00	10.000	25.42	0.000	200.00	100	1.77
36	13C-1,2,3,4-TCDF	1.30e5	0.80	NO	1.00	10.000	23.98	0.000	200.00	100	0.991
37	13C-1,2,3,7,8,9-HxCDD	7.07e4	1.33	NO	1.00	10.000	34.53	0.000	200.00	100	1.31
38	Total Tetra-Dioxins				1.08	10.000					0.123
39	Total Penta-Dioxins				1.03	10.000					0.134
40	Total Hexa-Dioxins				1.13	10.000					0.113
41	Total Hepta-Dioxins				1.06	10.000					0.225
42	Total Tetra-Furans				1.09	10.000					0.0850
43	1st Func. Penta-Furans				1.16	10.000					0.0677
44	Total Penta-Furans				1.16	10.000					0.0656
45	Total Hexa-Furans				1.28	10.000					0.0966
46	Total Hepta-Furans				1.69	10.000					0.139

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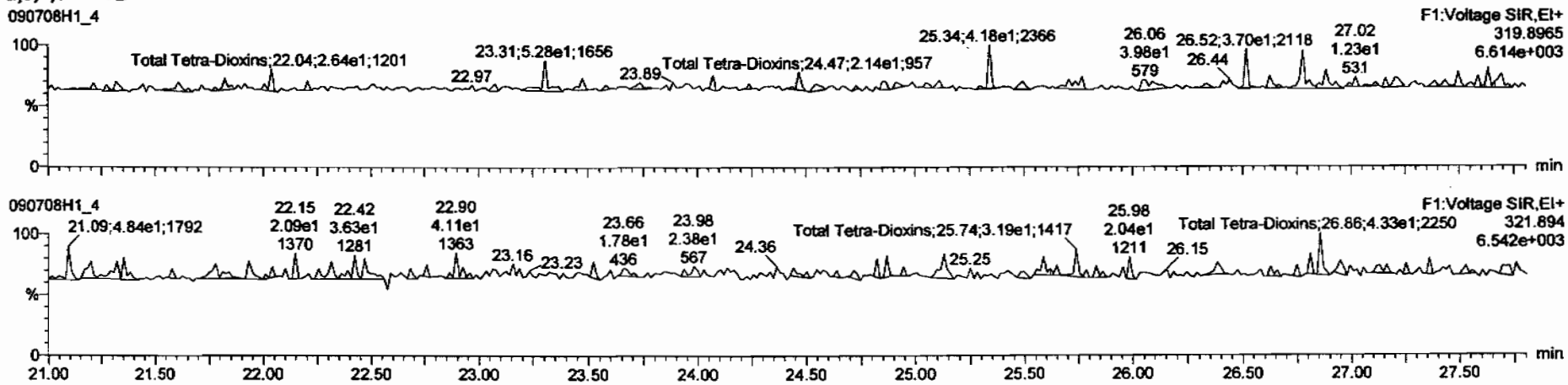

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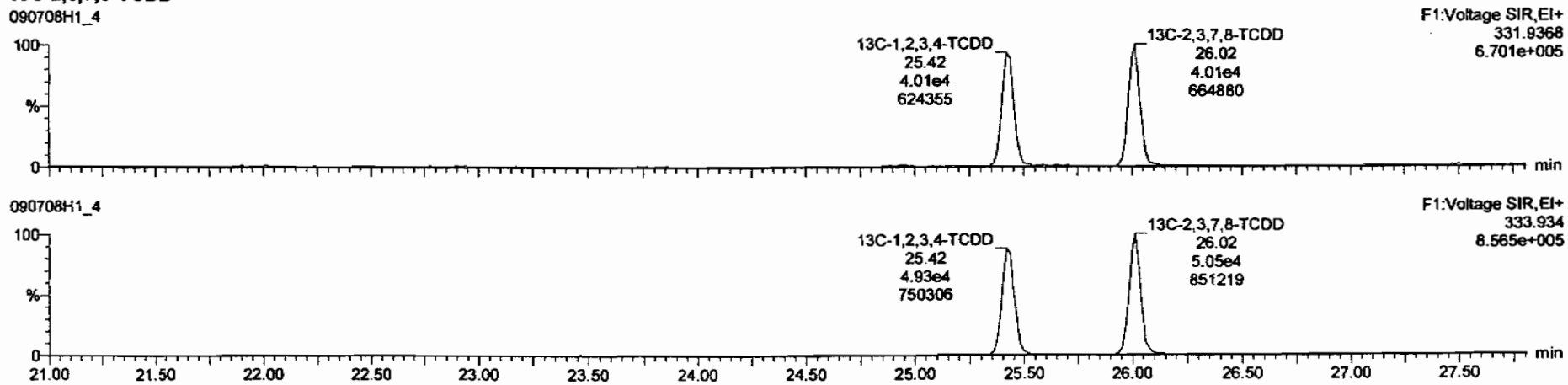

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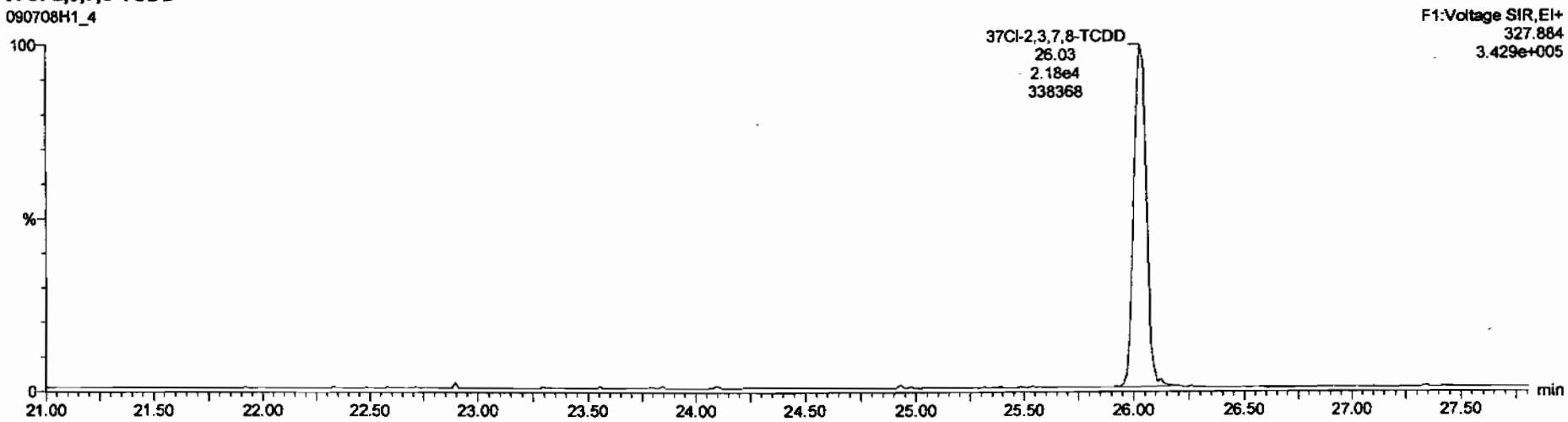

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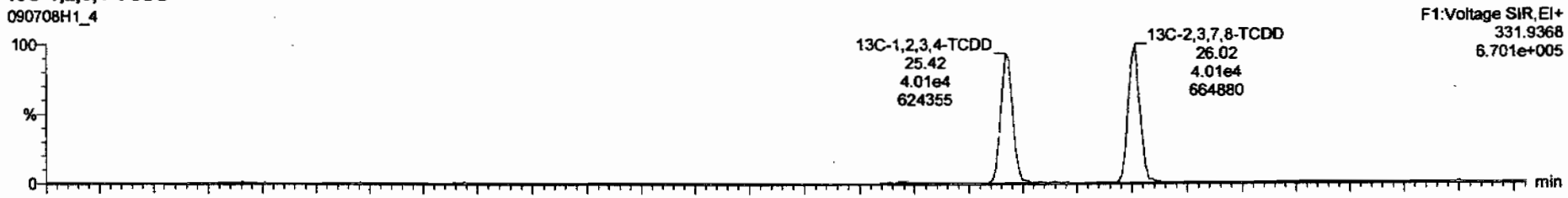

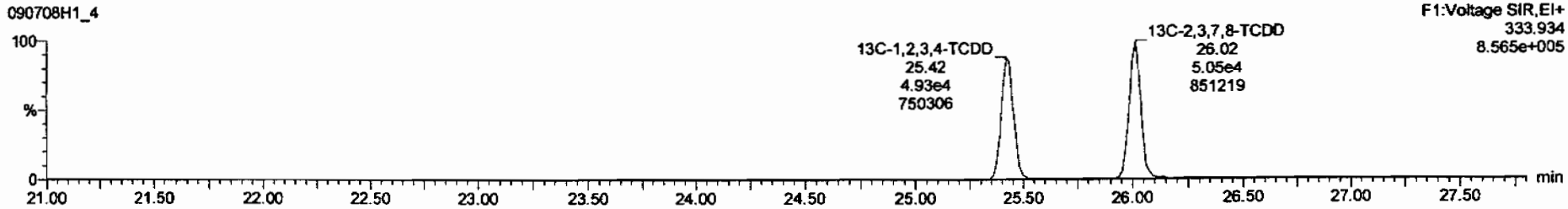

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1,2,3,7,8-PeCDD

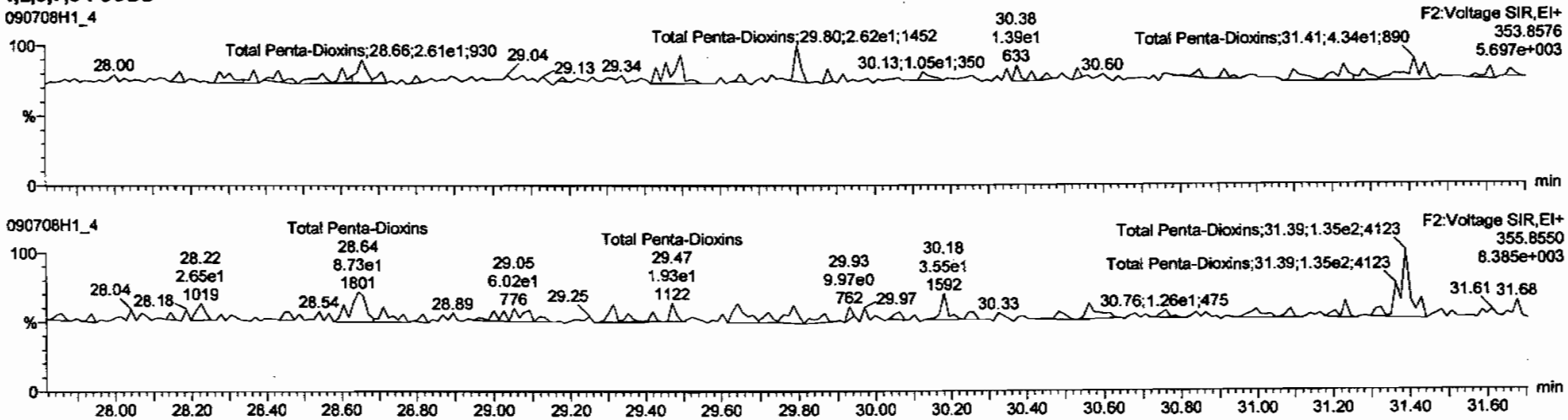

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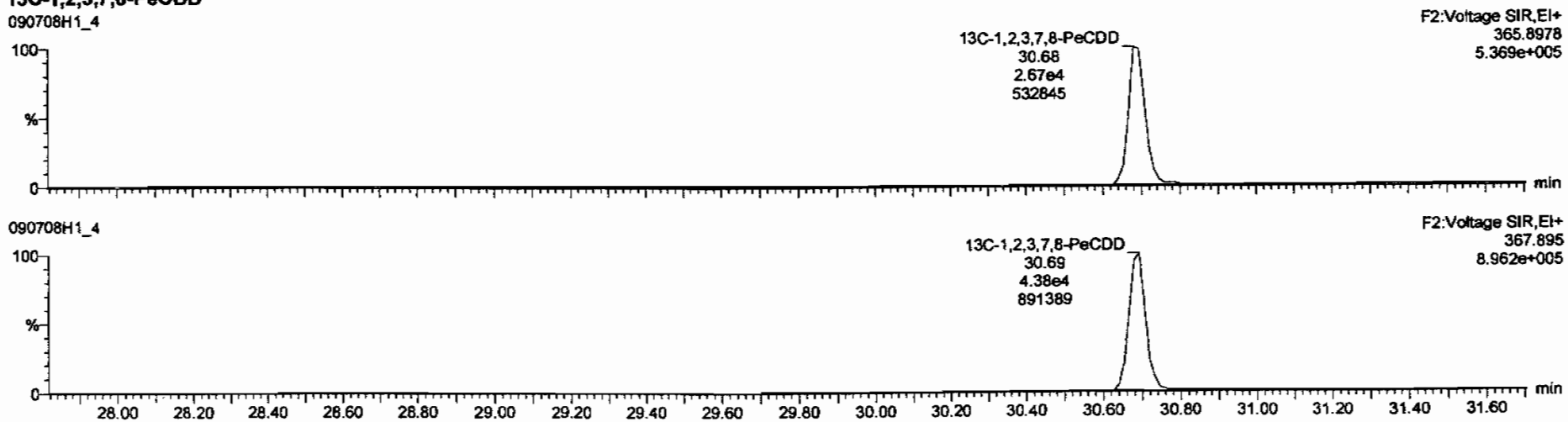

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1,2,3,4,7,8-HxCDD

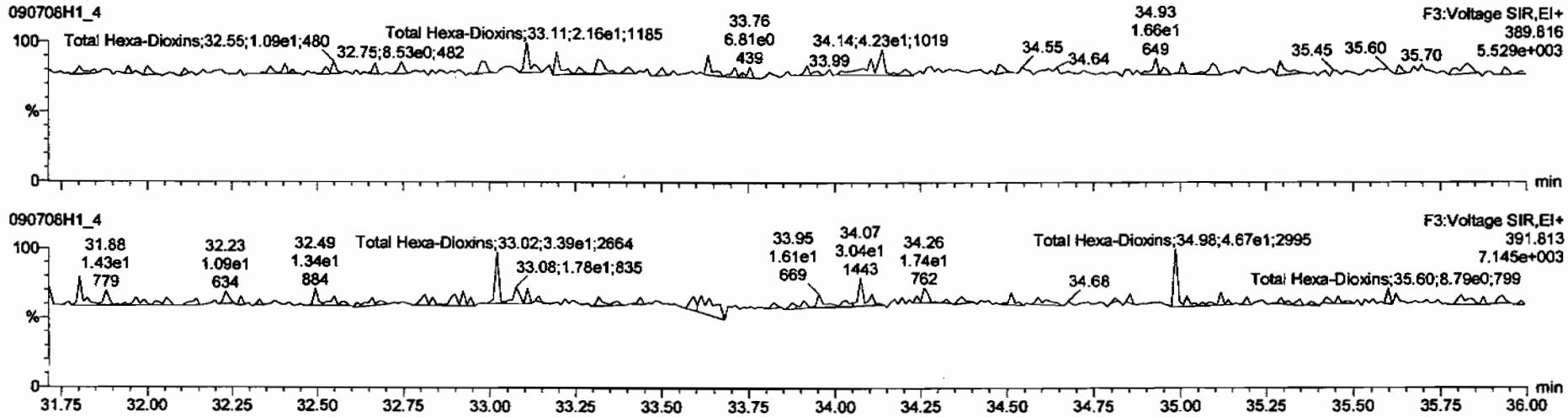

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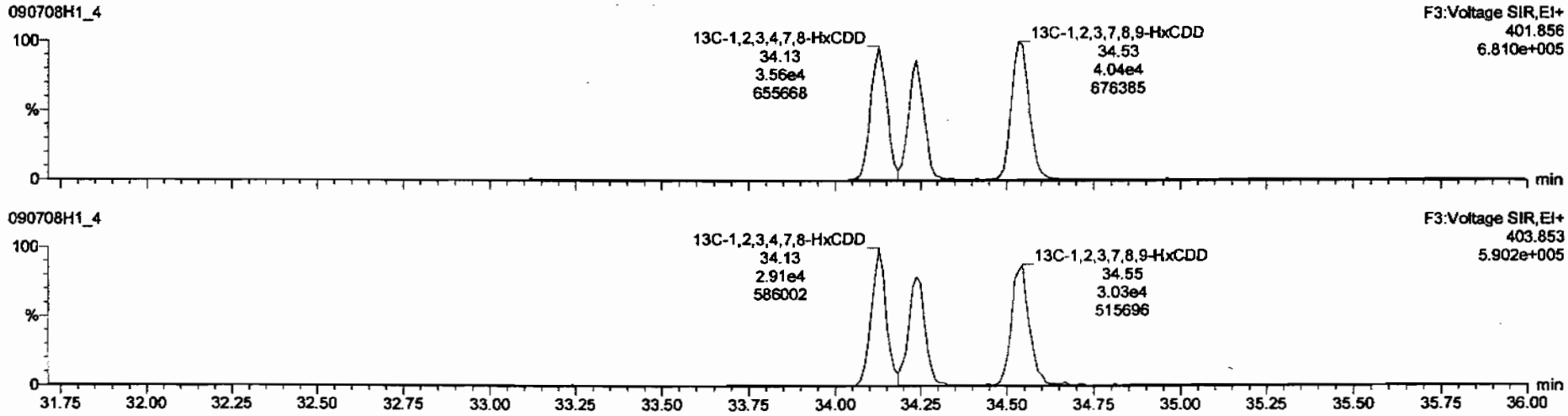

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1,2,3,4,6,7,8-HpCDD

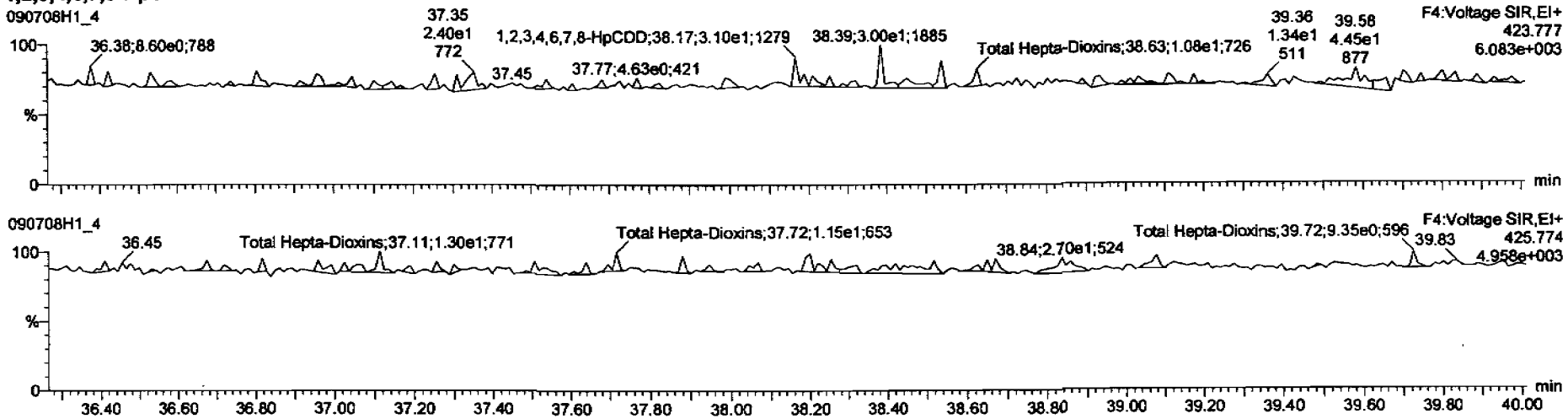

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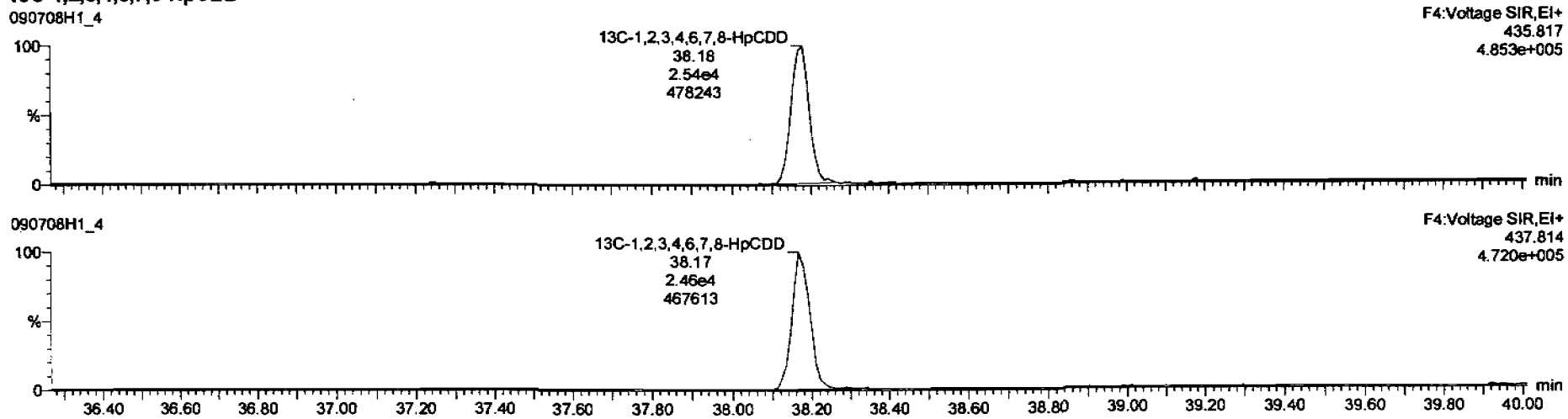

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OCDD

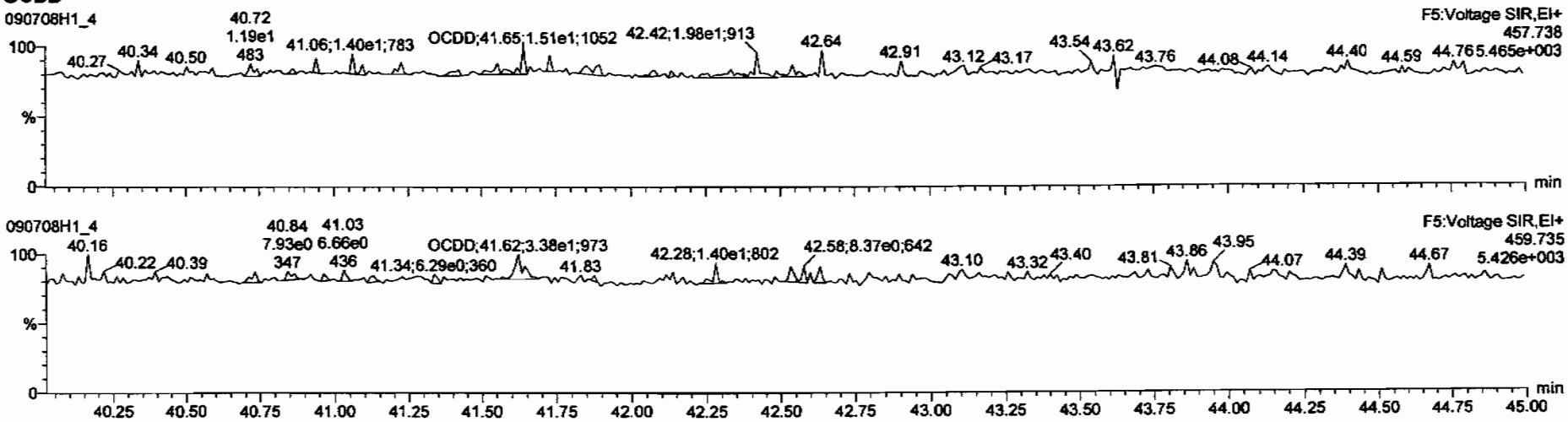

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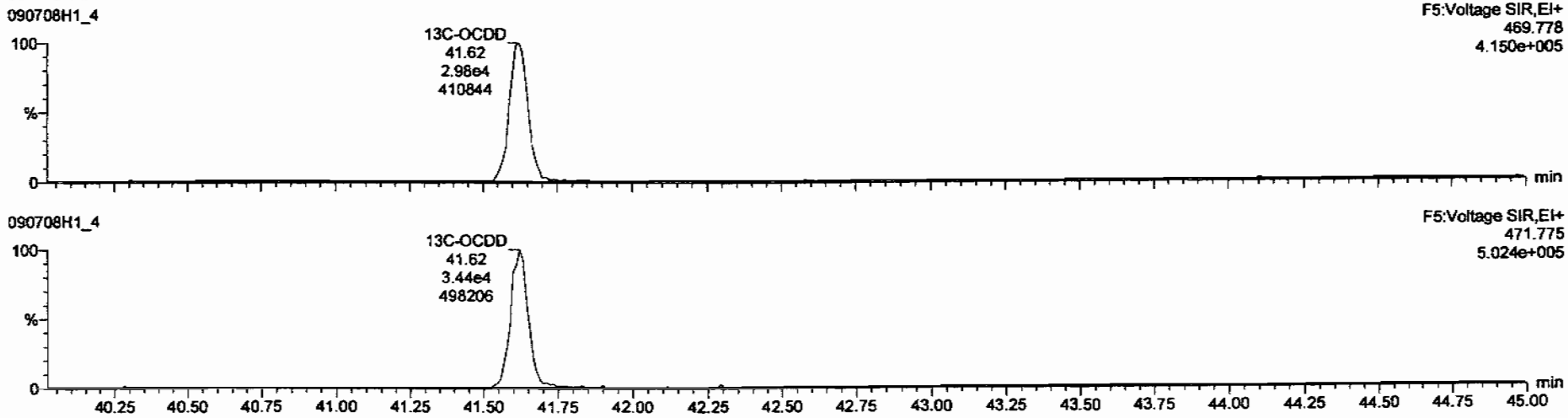

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2,3,7,8-TCDF

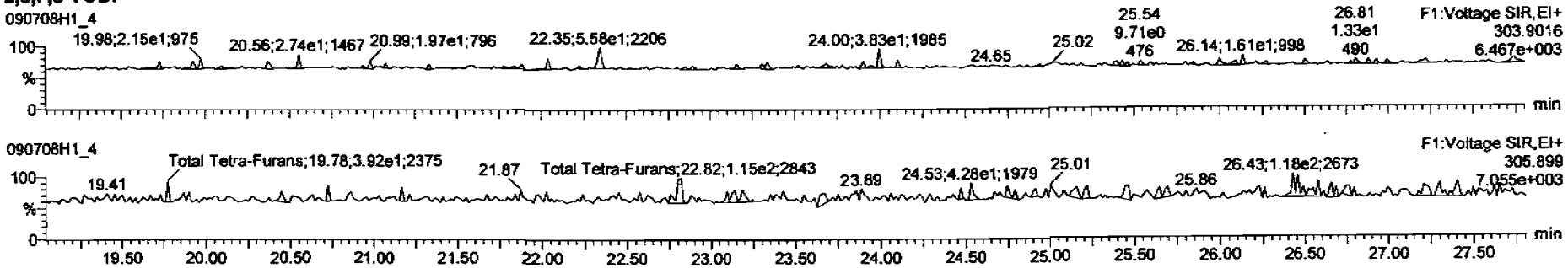

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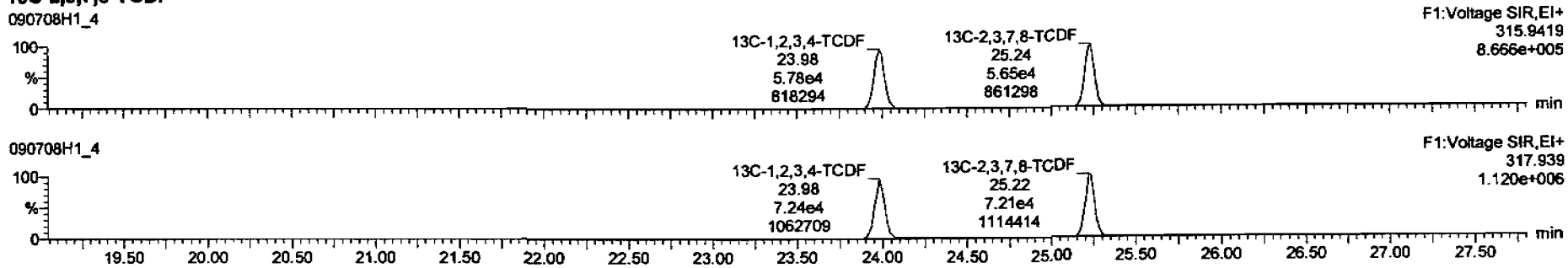

DPE1

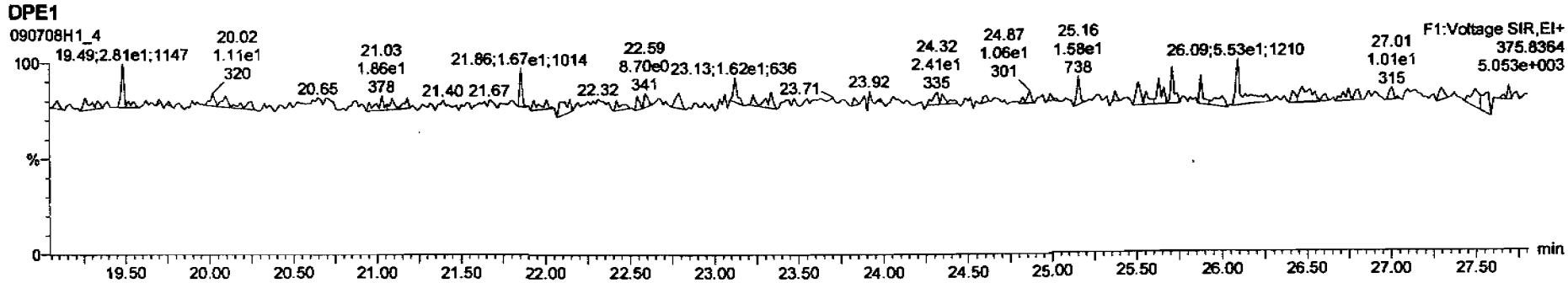

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Printed: Thursday, July 09, 2009 07:27:13 Pacific Daylight Time

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1st Func. Penta-Furans

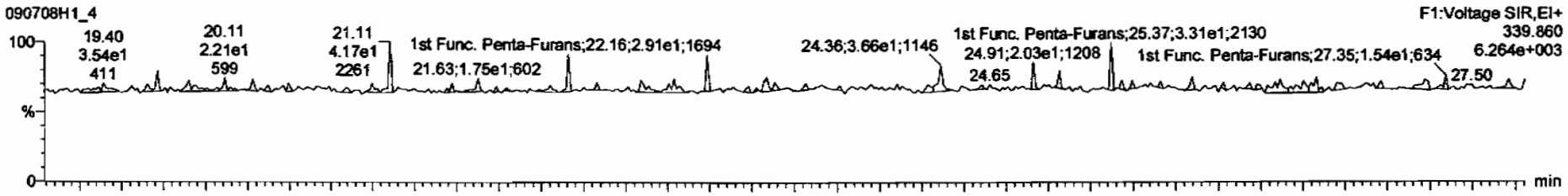

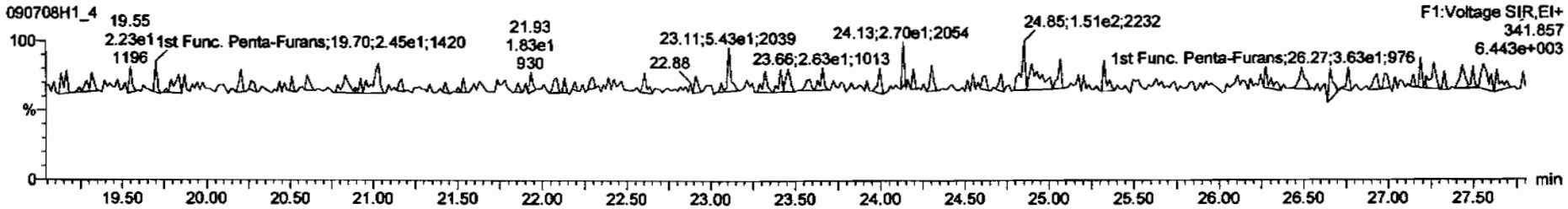

DPE6

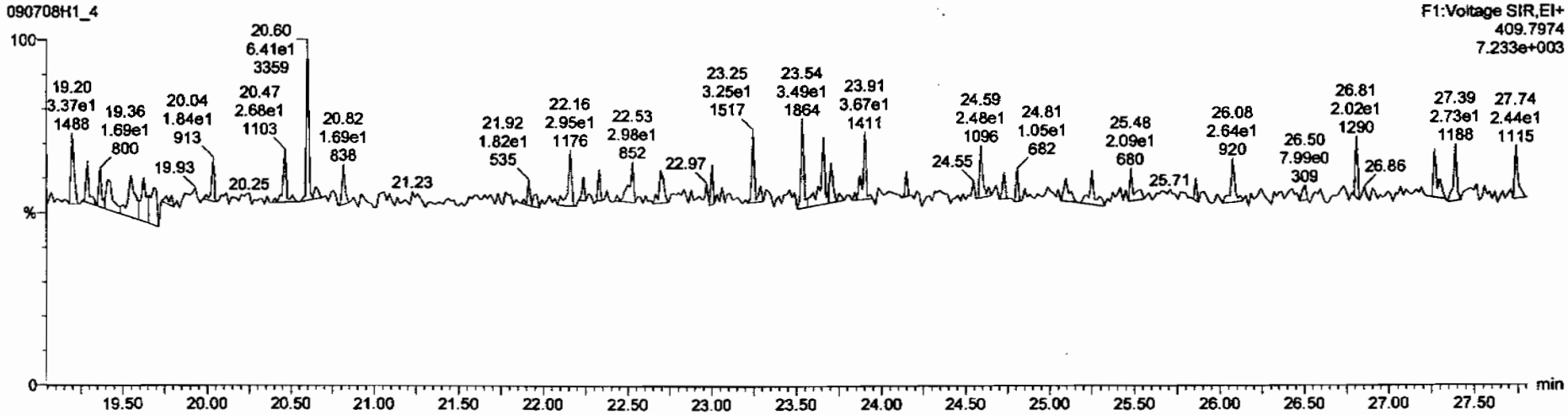

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Last Altered: Thursday, July 09, 2009 07:27:04 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:27:13 Pacific Daylight Time

Name: 090708H1_4, Date: 08-Jul-2009, Time: 15:49:49, ID: 0_2222_MB001, Description: 0_2222_MB001

1,2,3,7,8-PeCDF

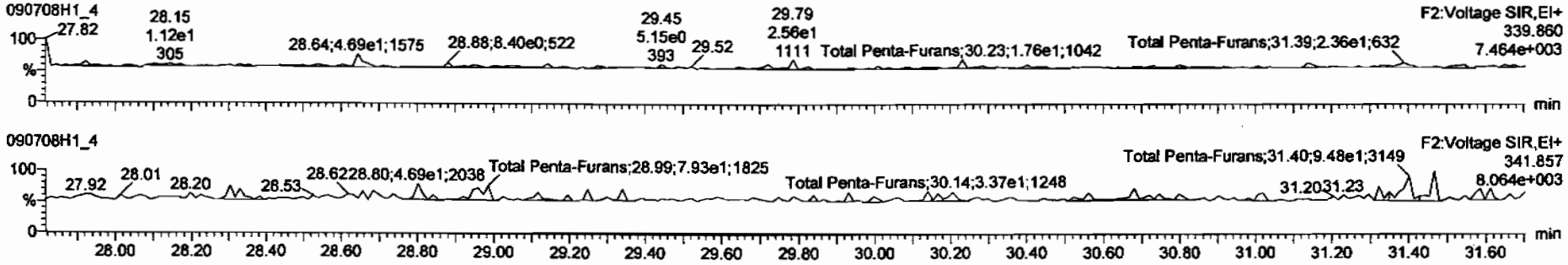

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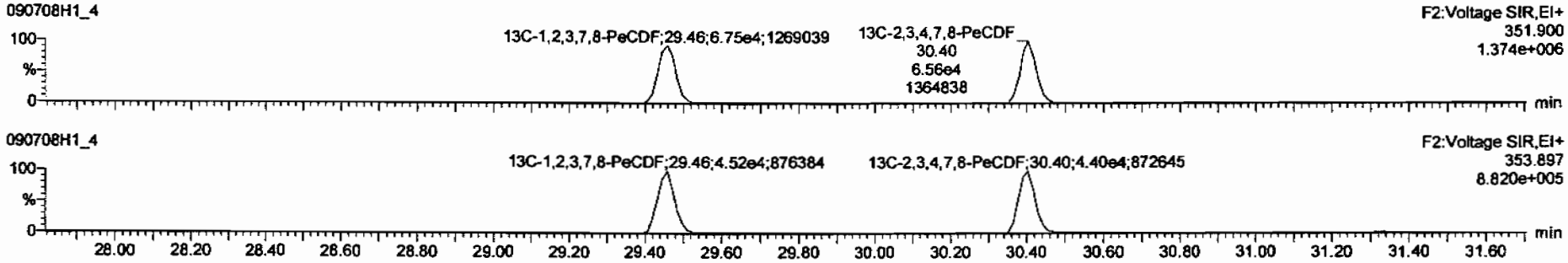

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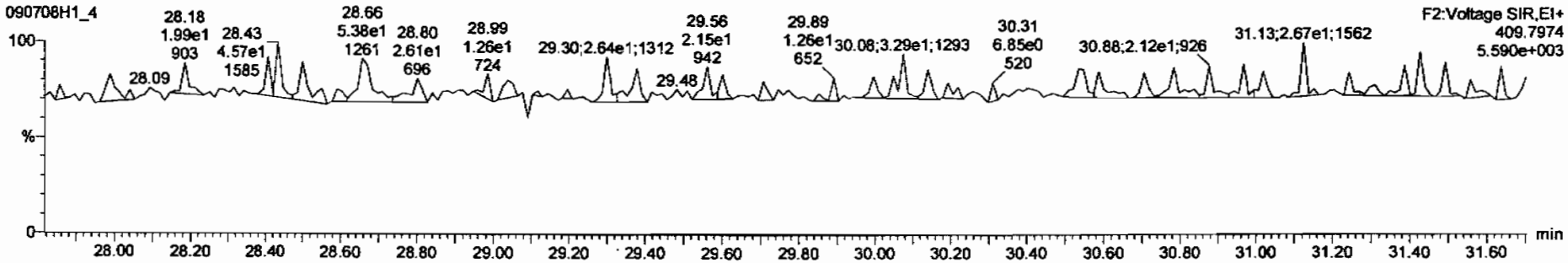

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1,2,3,4,7,8-HxCDF

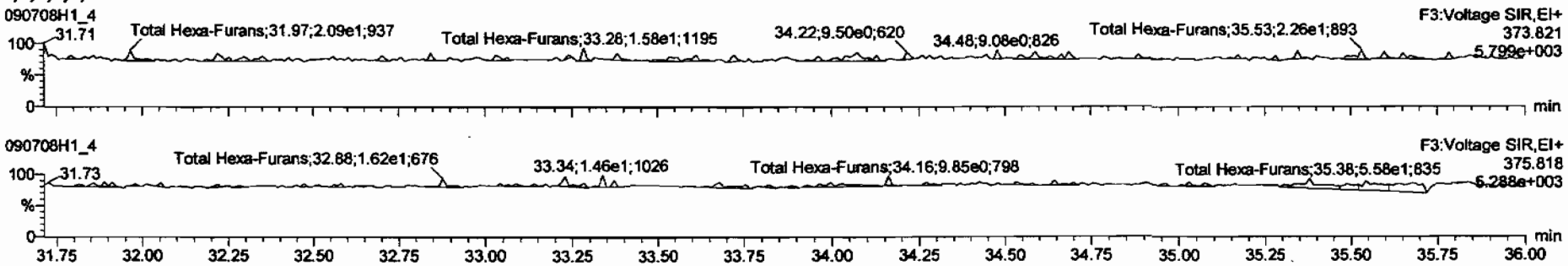

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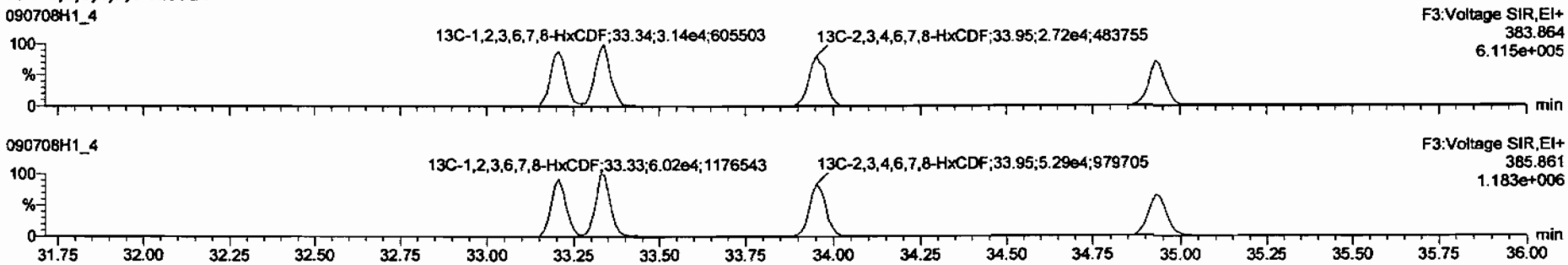

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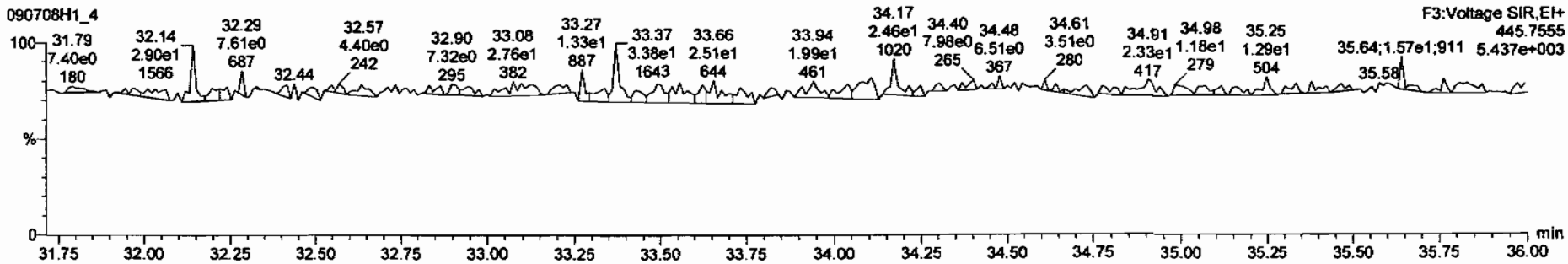

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Printed: Thursday, July 09, 2009 07:27:13 Pacific Daylight Time

Name: 090708H1_4, Date: 08-Jul-2009, Time: 15:49:49, ID: 0_2222_MB001, Description: 0_2222_MB001

1,2,3,4,6,7,8-HpCDF

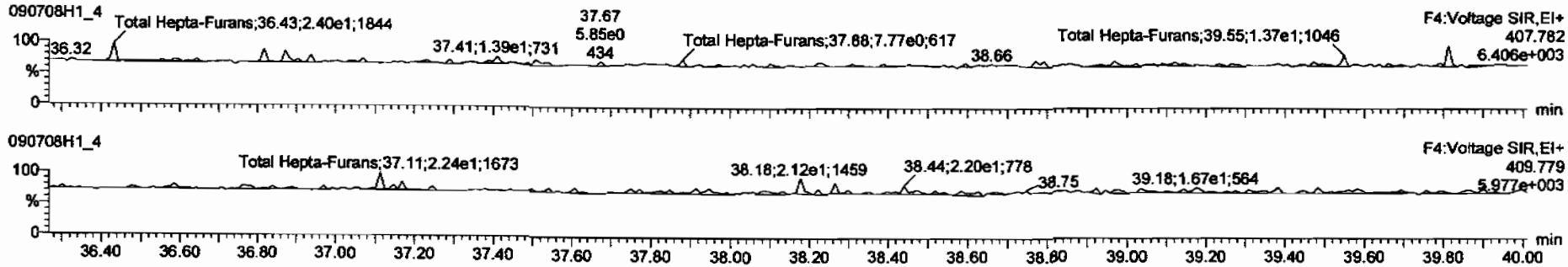

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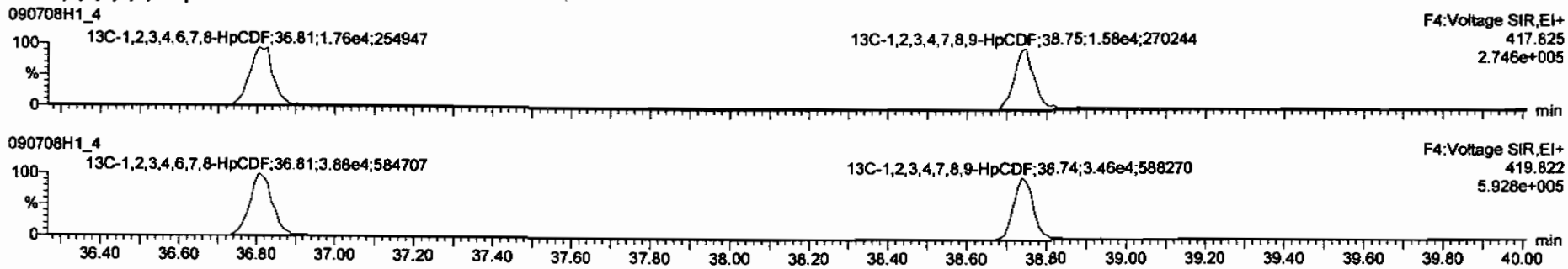

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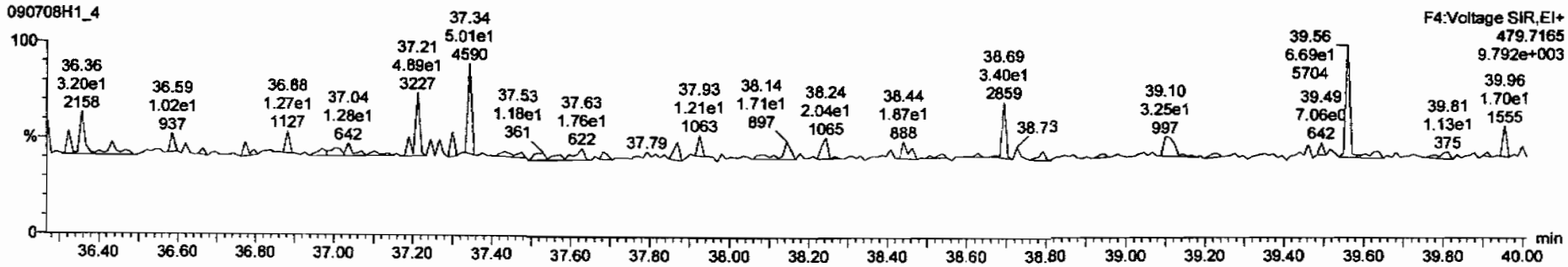

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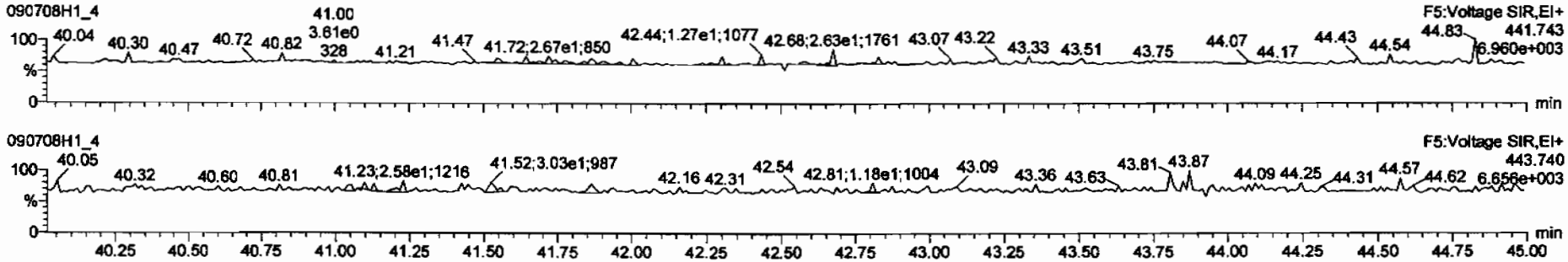

13C-OCDF

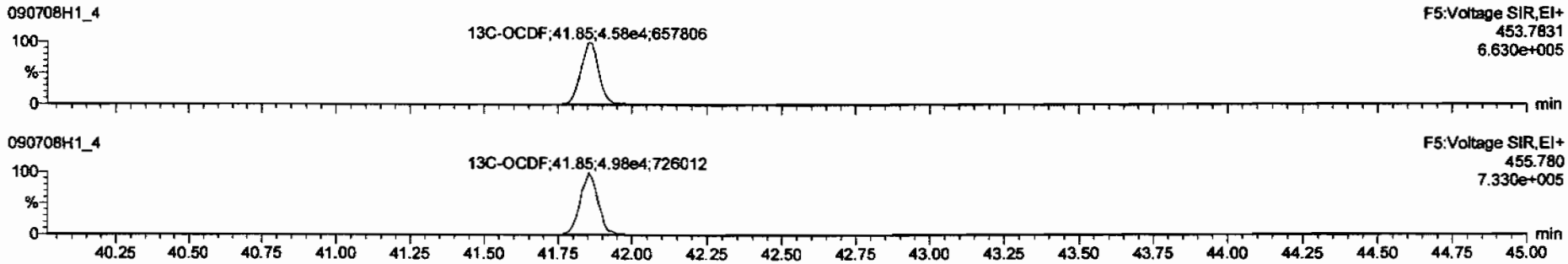

DPE5

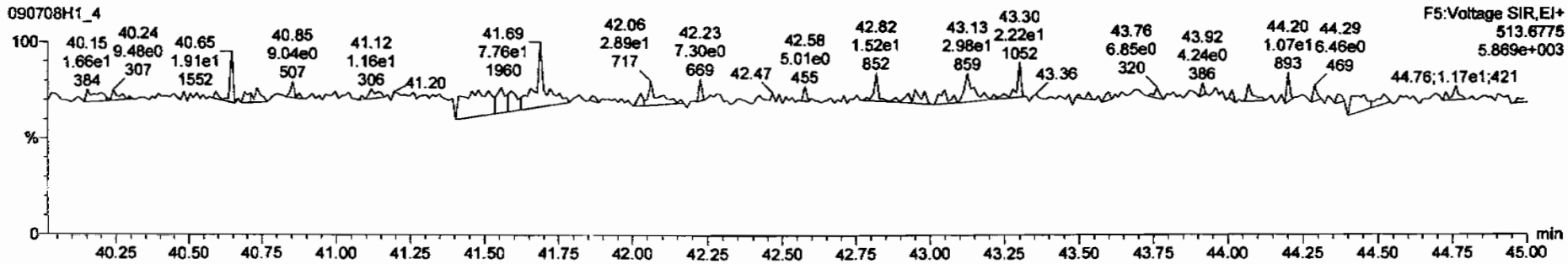

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Last Altered: Thursday, July 09, 2009 07:27:04 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:27:13 Pacific Daylight Time

Name: 090708H1_4, Date: 08-Jul-2009, Time: 15:49:49, ID: 0_2222_MB001, Description: 0_2222_MB001

PFK1

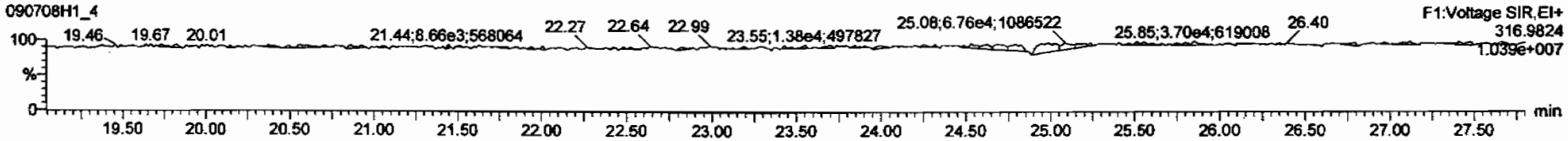

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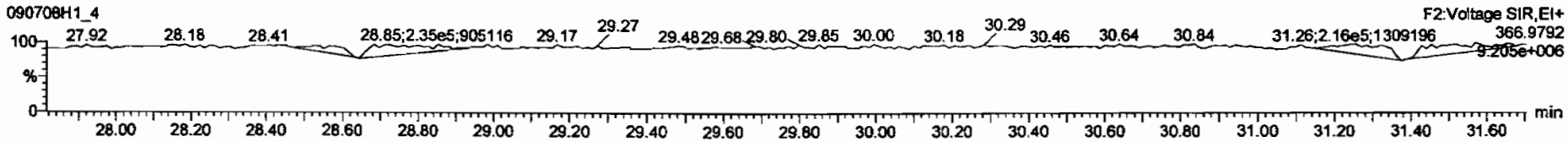

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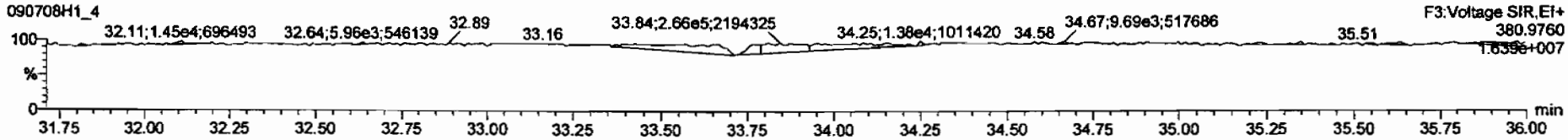

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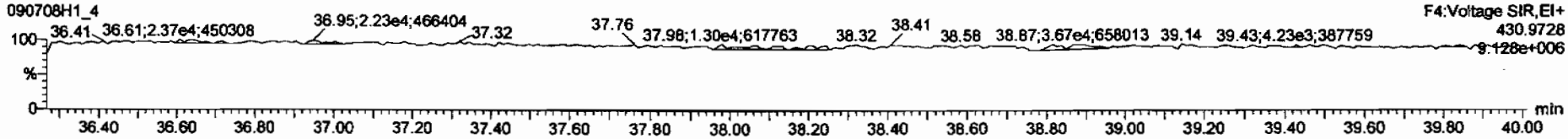

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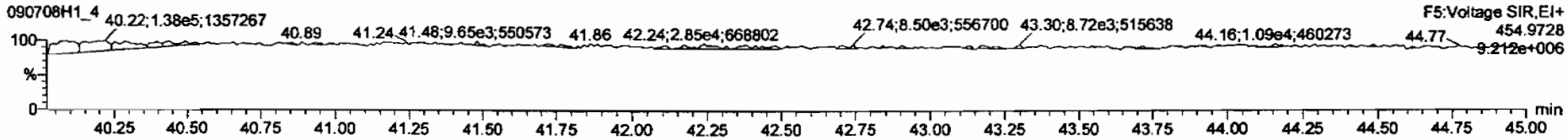

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-2.qld

Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:39:38 PM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

1	2,3,7,8-TCDD	1.77e4	0.82	NO	1.08	1.000	26.02	1.001	9.2358	92.4	0.0784	9.2358
2	1,2,3,7,8-PeCDD	6.73e4	0.62	NO	1.03	1.000	30.68	1.000	44.354	88.7	0.126	44.354
3	1,2,3,4,7,8-HxCDD	5.61e4	1.26	NO	1.00	1.000	34.12	1.000	42.935	85.9	0.208	42.935
4	1,2,3,6,7,8-HxCDD	5.79e4	1.27	NO	1.13	1.000	34.23	1.000	43.394	86.8	0.213	43.394
5	1,2,3,7,8,9-HxCDD	6.18e4	1.26	NO	1.10	1.000	34.53	1.009	45.042	90.1	0.202	45.042
6	1,2,3,4,6,7,8-HpCDD	4.80e4	1.02	NO	1.06	1.000	38.17	1.001	43.356	86.7	0.386	43.356
7	OCDD	6.63e4	0.91	NO	1.18	1.000	41.61	1.000	85.227	85.2	0.275	85.227
8	2,3,7,8-TCDF	2.27e4	0.78	NO	1.09	1.000	25.24	1.001	8.3208	83.2	0.0835	8.3208
9	1,2,3,7,8-PeCDF	1.05e5	1.56	NO	1.16	1.000	29.45	1.000	40.524	81.0	0.154	40.524
10	2,3,4,7,8-PeCDF	1.03e5	1.59	NO	1.12	1.000	30.39	1.000	41.477	83.0	0.150	41.477
11	1,2,3,4,7,8-HxCDF	9.89e4	1.26	NO	1.41	1.000	33.20	1.000	42.313	84.6	0.208	42.313
12	1,2,3,6,7,8-HxCDF	9.97e4	1.29	NO	1.22	1.000	33.33	1.001	44.229	88.5	0.220	44.229
13	2,3,4,6,7,8-HxCDF	9.12e4	1.26	NO	1.28	1.000	33.94	1.000	44.283	88.6	0.228	44.283
14	1,2,3,7,8,9-HxCDF	7.96e4	1.31	NO	1.26	1.000	34.93	1.000	43.882	87.8	0.313	43.882
15	1,2,3,4,6,7,8-HpCDF	8.39e4	1.05	NO	1.69	1.000	36.81	1.001	44.134	88.3	0.364	44.134
16	1,2,3,4,7,8,9-HpCDF	6.89e4	1.06	NO	1.48	1.000	38.74	1.001	44.134	88.3	0.381	44.134
17	OCDF	9.22e4	0.92	NO	1.10	1.000	41.85	1.001	87.216	87.2	0.344	87.216
18	13C-2,3,7,8-TCDD	1.78e5	0.79	NO	1.01	1.000	26.00	1.023	99.881	99.9	0.402	
19	13C-1,2,3,7,8-PeCDD	1.47e5	0.63	NO	0.827	1.000	30.67	1.207	101.03	101	0.240	
20	13C-1,2,3,4,7,8-HxCDD	1.30e5	1.25	NO	0.916	1.000	34.11	0.988	98.694	98.7	0.522	
21	13C-1,2,3,6,7,8-HxCDD	1.19e5	1.21	NO	0.921	1.000	34.22	0.991	89.209	89.2	0.519	
22	13C-1,2,3,4,6,7,8-HpCDD	1.04e5	1.03	NO	0.708	1.000	38.15	1.105	101.81	102	0.985	
23	13C-OCDD	1.32e5	0.92	NO	0.503	1.000	41.60	1.205	182.00	91.0	0.672	
24	13C-2,3,7,8-TCDF	2.51e5	0.78	NO	0.977	1.000	25.22	0.993	100.94	101	0.271	
25	13C-1,2,3,7,8-PeCDF	2.24e5	1.53	NO	0.896	1.000	29.43	1.159	98.202	98.2	0.524	
26	13C-2,3,4,7,8-PeCDF	2.22e5	1.62	NO	0.900	1.000	30.38	1.196	96.771	96.8	0.522	
27	13C-1,2,3,4,7,8-HxCDF	1.66e5	0.51	NO	1.17	1.000	33.19	0.962	98.162	98.2	0.657	
28	13C-1,2,3,6,7,8-HxCDF	1.85e5	0.49	NO	1.52	1.000	33.31	0.965	84.172	84.2	0.506	
29	13C-2,3,4,6,7,8-HxCDF	1.61e5	0.53	NO	1.25	1.000	33.93	0.983	89.208	89.2	0.615	
30	13C-1,2,3,7,8,9-HxCDF	1.44e5	0.51	NO	1.05	1.000	34.92	1.012	94.915	94.9	0.730	

7/9/09
MO 7/9/09

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-2.qld

Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:39:38 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

31	13C-1,2,3,4,6,7,8-HpCDF	1.13e5	0.47	NO	0.868	1.000	36.77	1.065	89.800	89.8	0.827
32	13C-1,2,3,4,7,8,9-HpCDF	1.05e5	0.45	NO	0.727	1.000	38.70	1.121	100.56	101	0.988
33	13C-OCDF	1.93e5	0.89	NO	0.760	1.000	41.83	1.212	176.03	88.0	0.422
34	37Cl-2,3,7,8-TCDD	4.60e4			0.668	1.000	26.02	1.024	39.165	97.9	0.133
35	13C-1,2,3,4-TCDD	1.76e5	0.80	NO	1.00	1.000	25.40	0.000	100.00	100	0.408
36	13C-1,2,3,4-TCDF	2.55e5	0.77	NO	1.00	1.000	23.98	0.000	100.00	100	0.265
37	13C-1,2,3,7,8,9-HxCDD	1.44e5	1.28	NO	1.00	1.000	34.51	0.000	100.00	100	0.478

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-2.qld

Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

2,3,7,8-TCDD

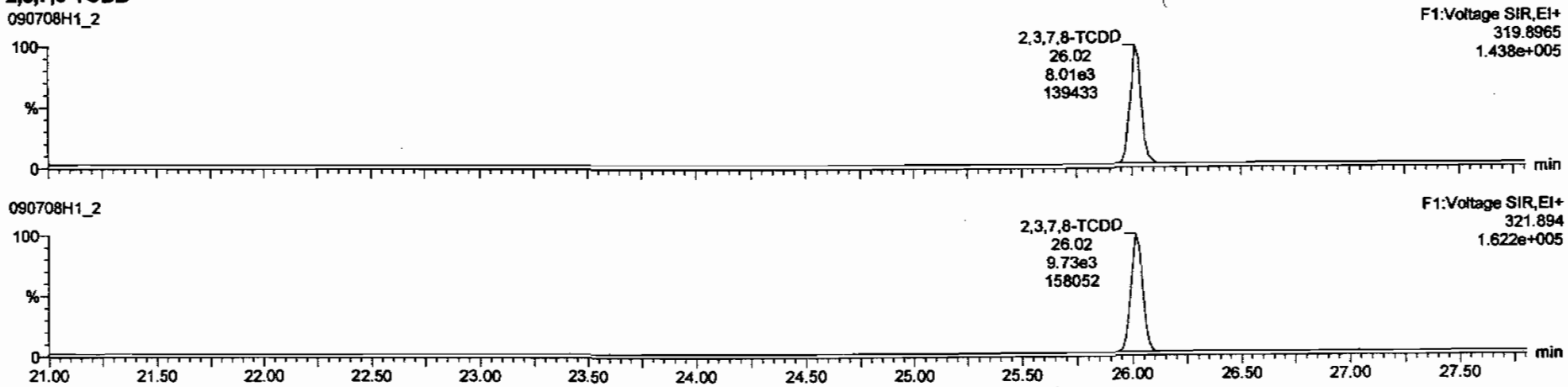

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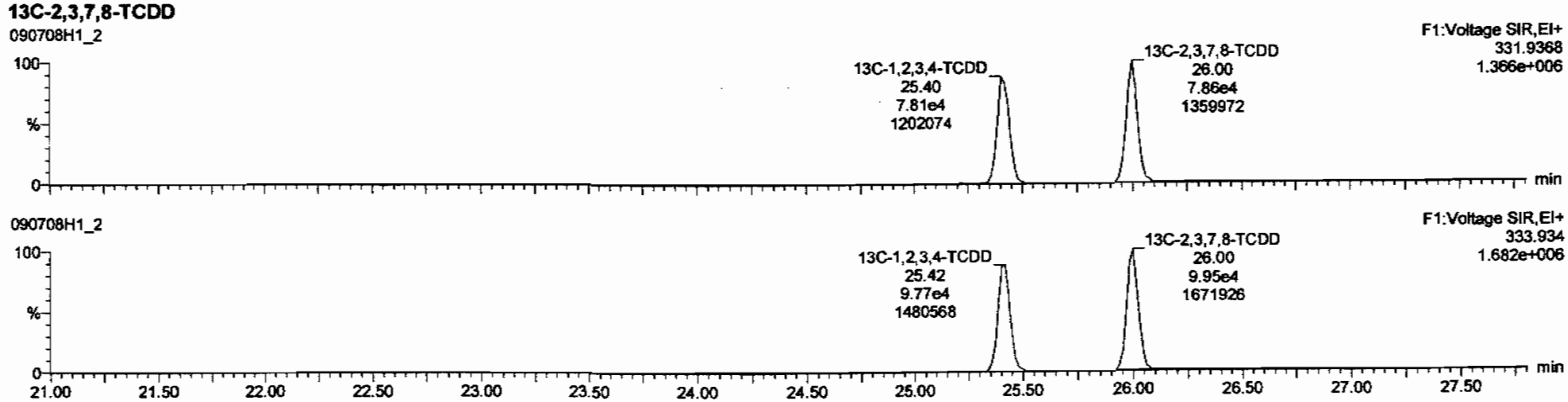

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Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

37Cl-2,3,7,8-TCDD

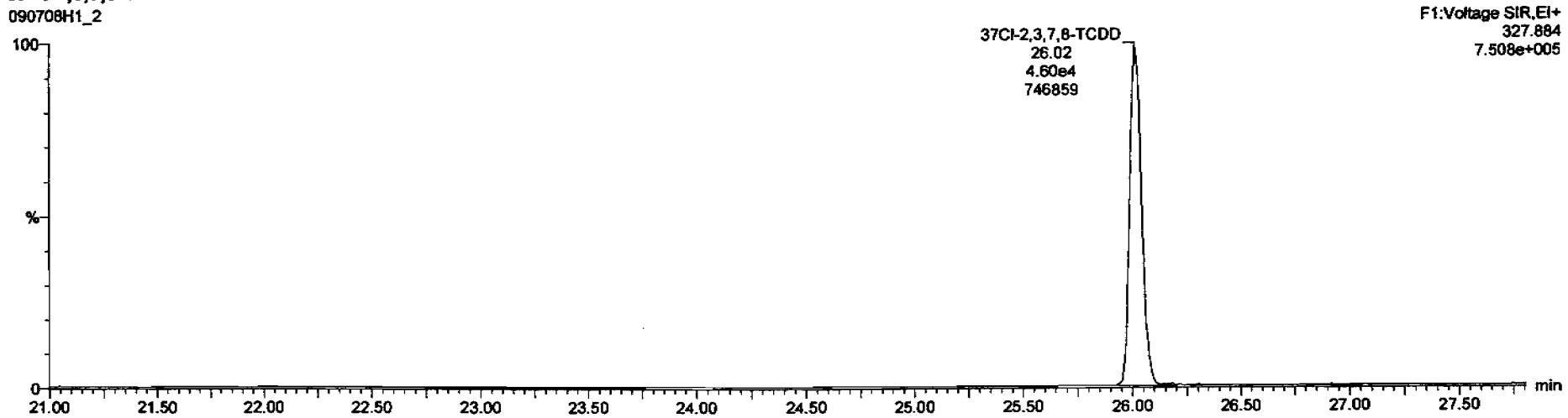

13C-1,2,3,4-TCDD

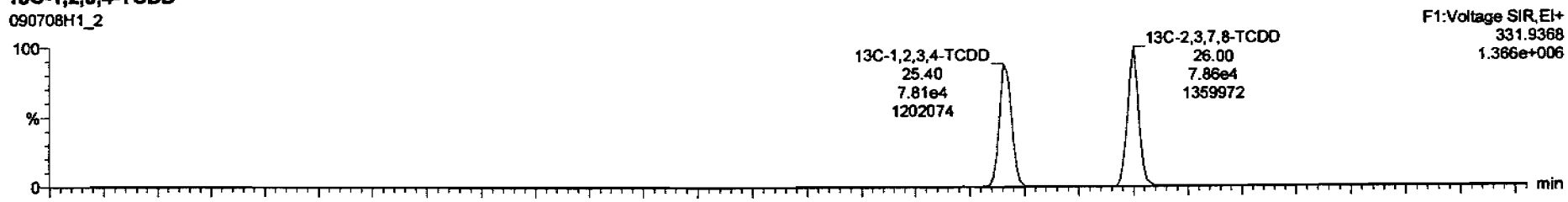

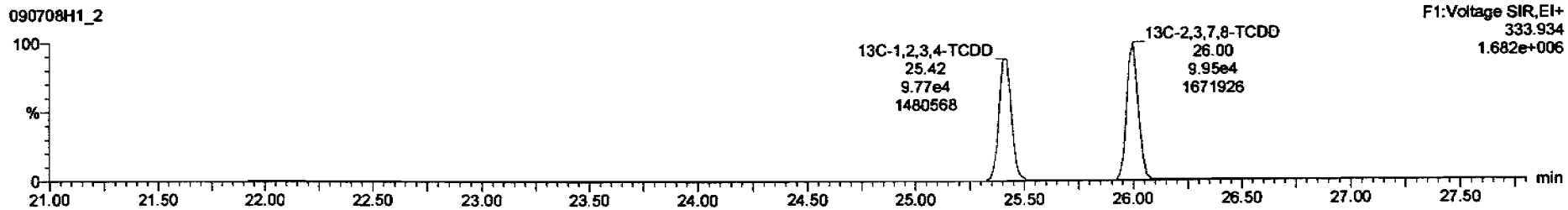

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Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

1,2,3,7,8-PeCDD

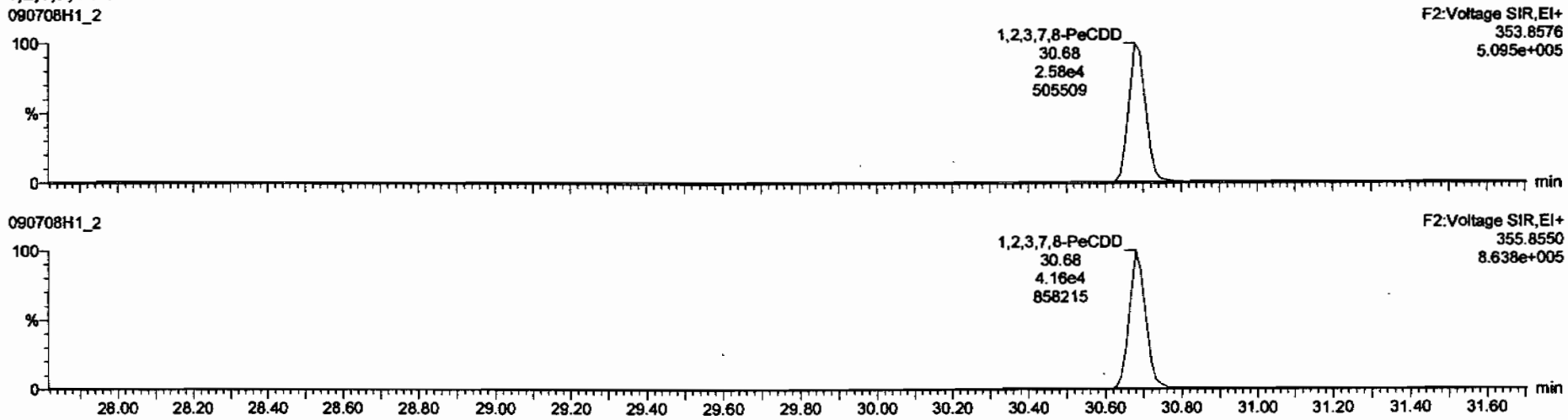

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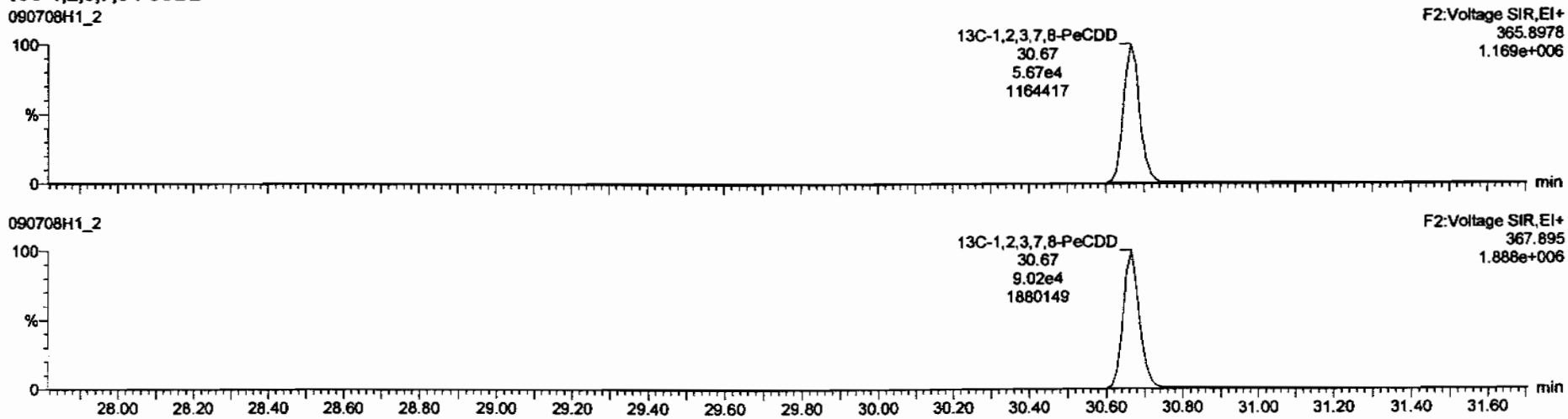

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Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

1,2,3,4,7,8-HxCDD

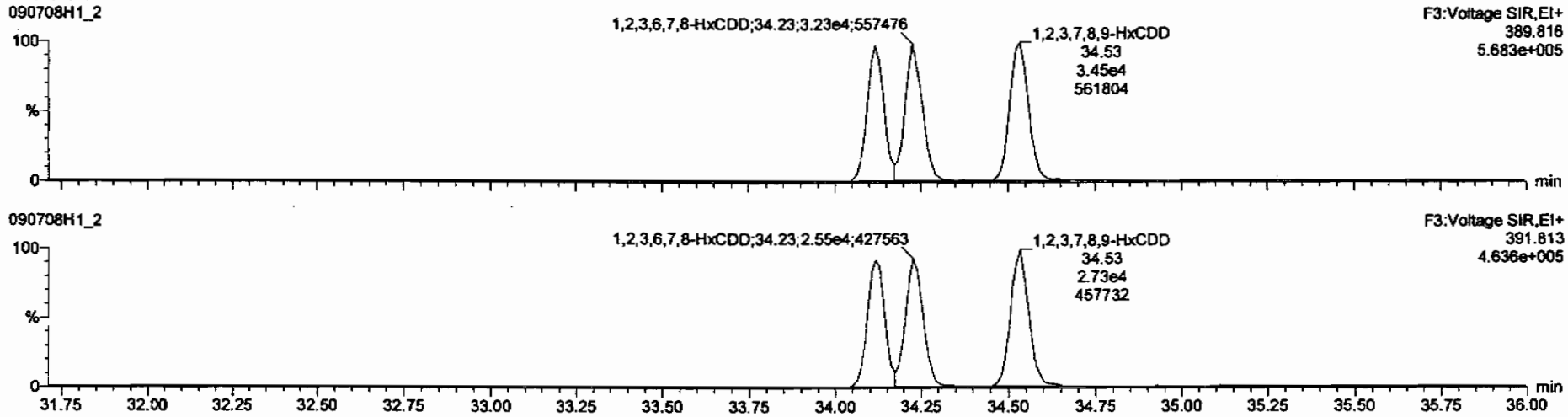

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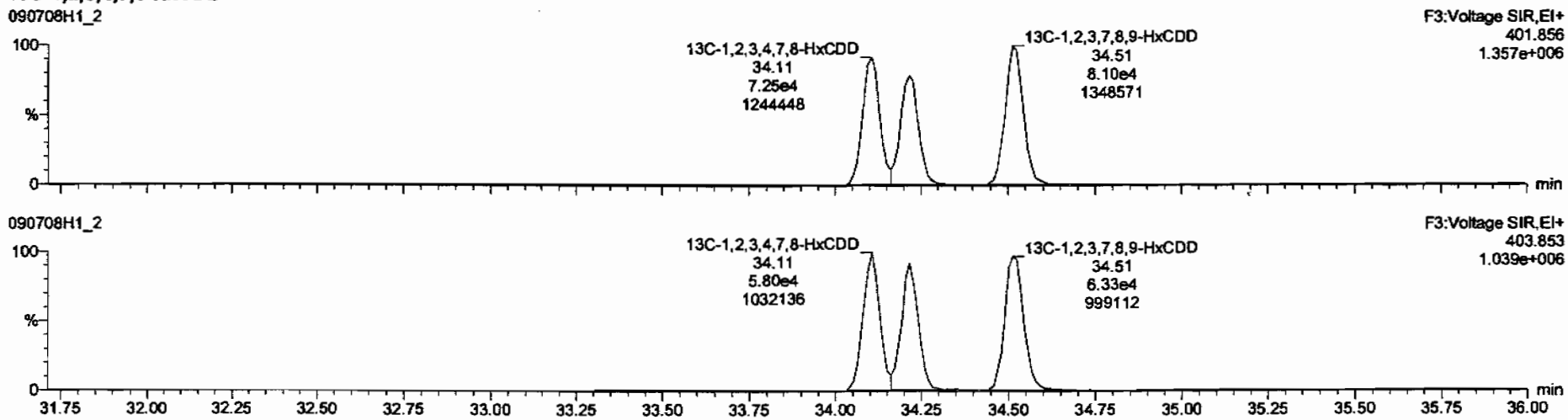

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-2.qld

Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

1,2,3,4,6,7,8-HpCDD

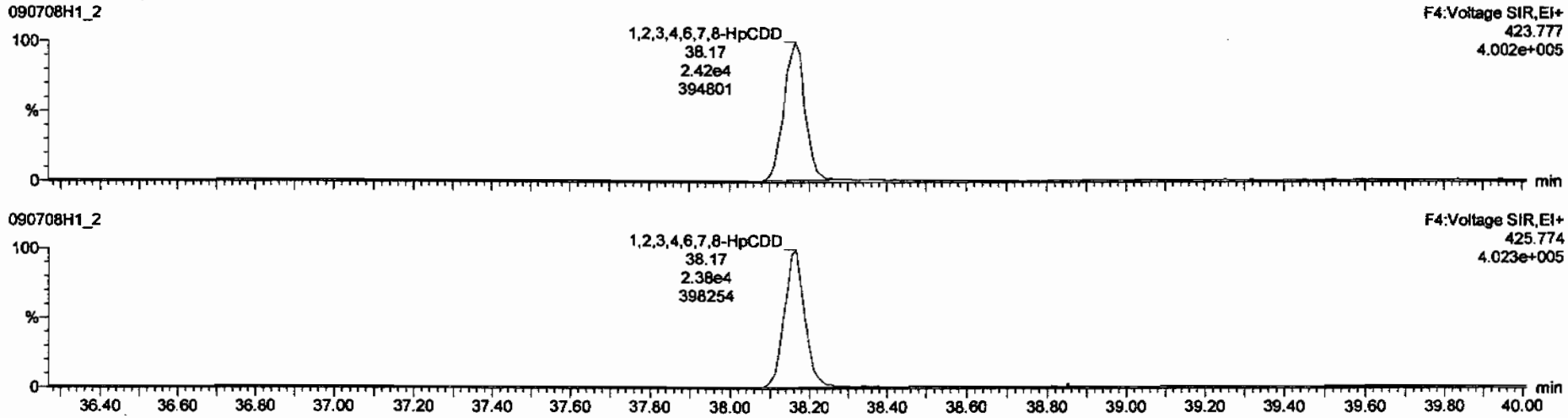

13C-1,2,3,4,6,7,8-HpCDD

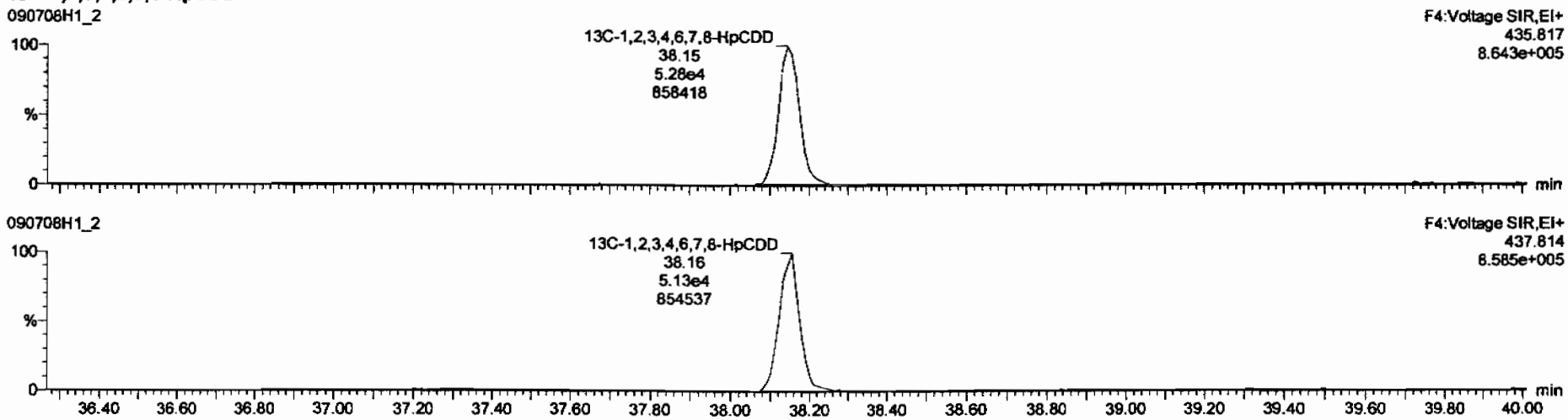

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Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

OCDD

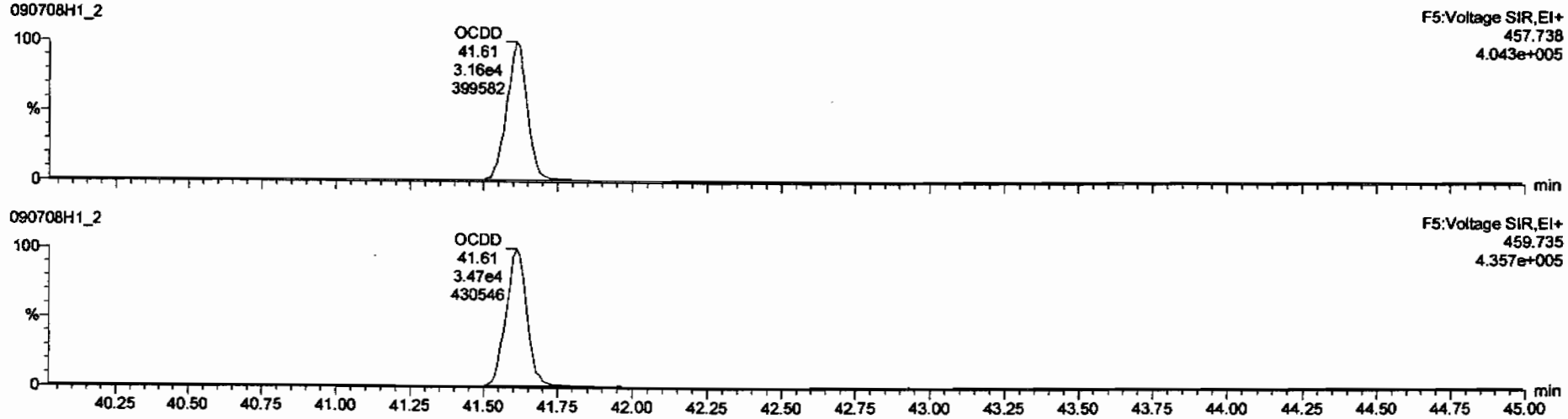

13C-OCDD

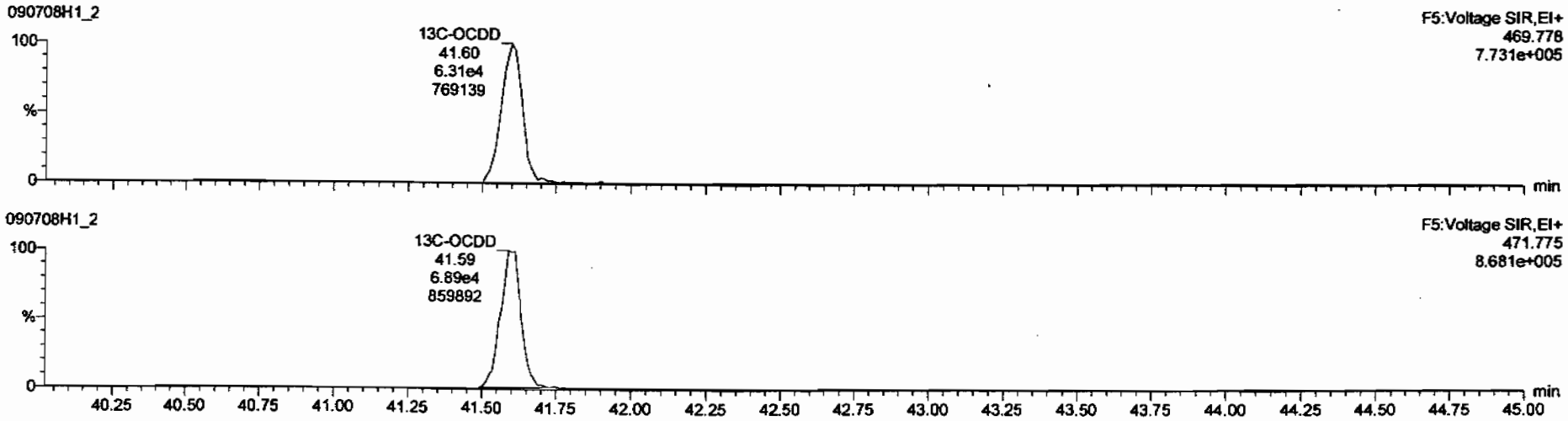

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Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

2,3,7,8-TCDF

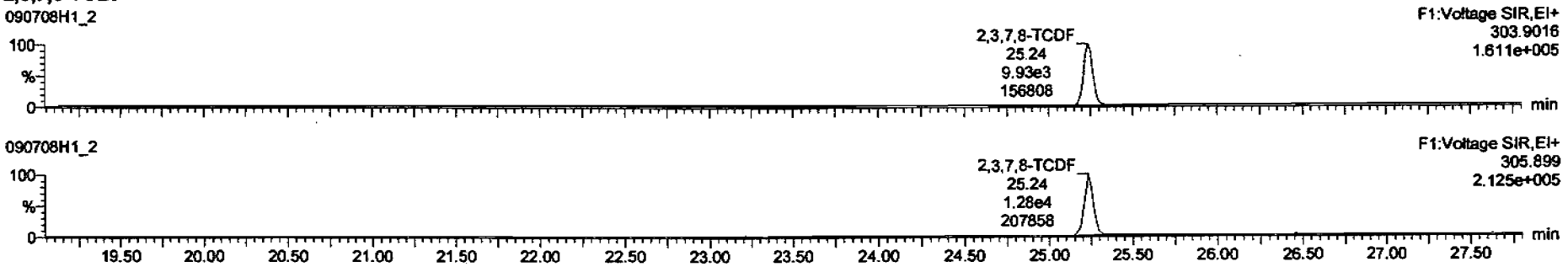

13C-2,3,7,8-TCDF

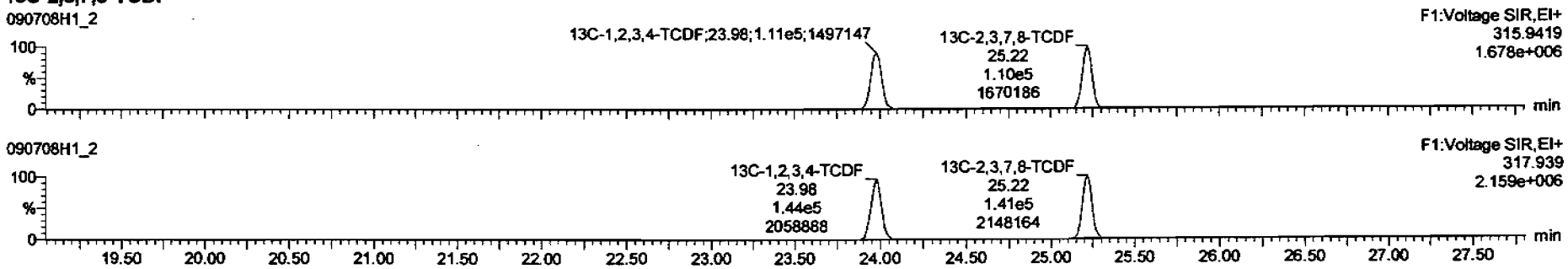

DPE1

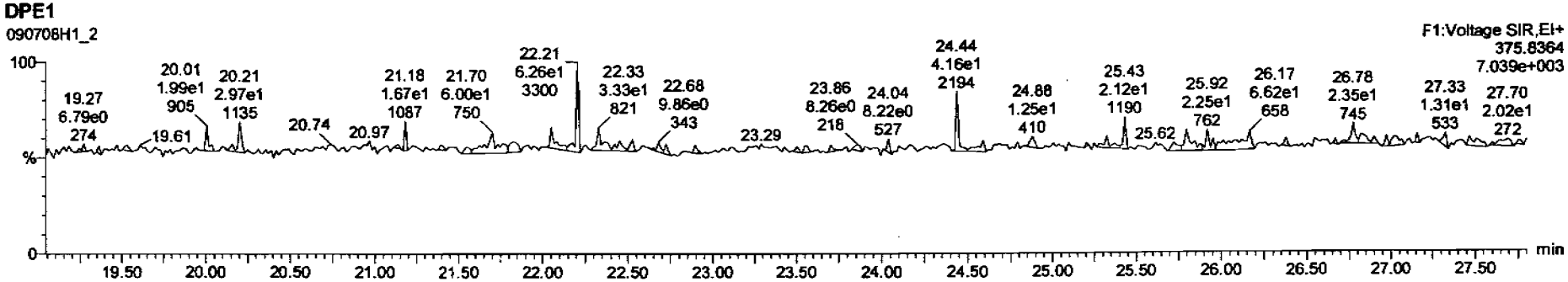

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Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

1st Func. Penta-Furans

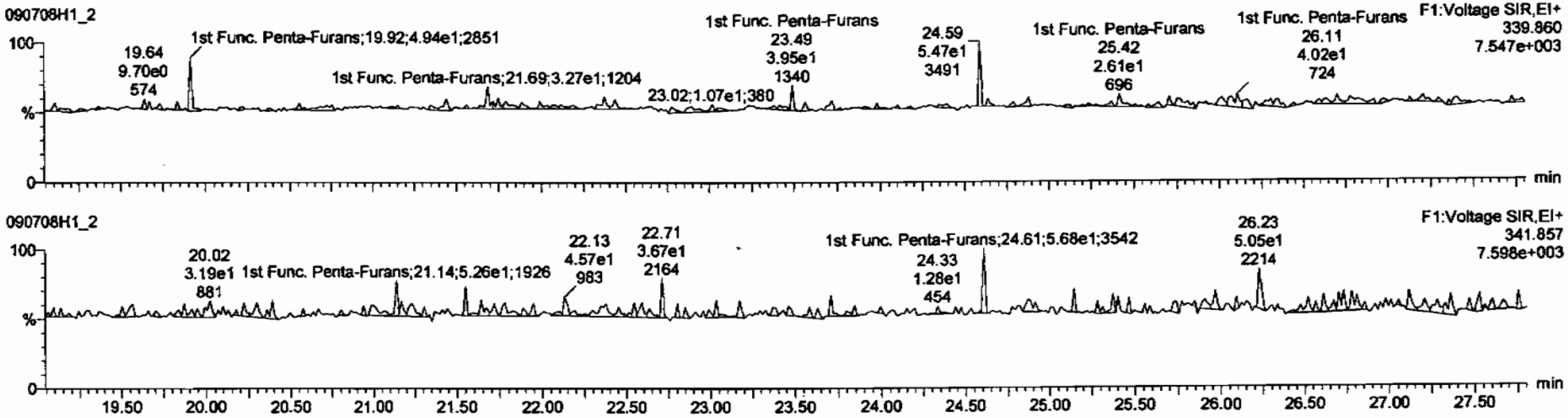

DPE6

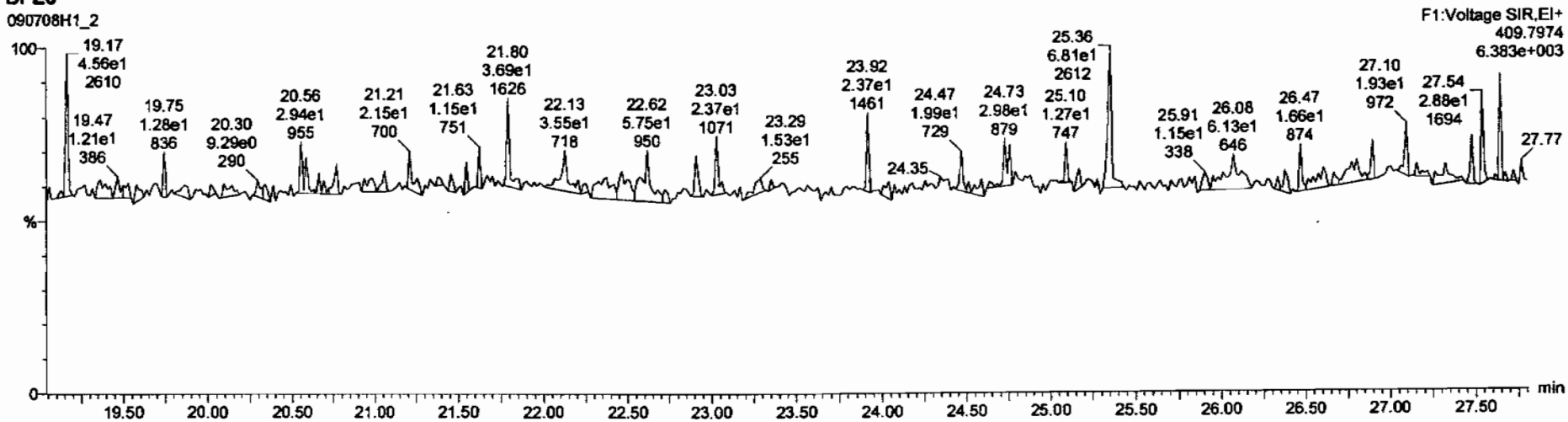

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-2.qld

Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

1,2,3,7,8-PeCDF

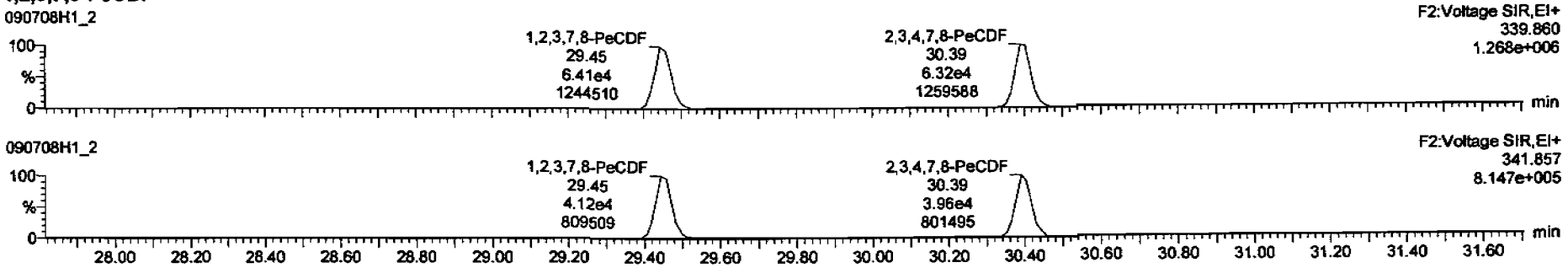

13C-1,2,3,7,8-PeCDF

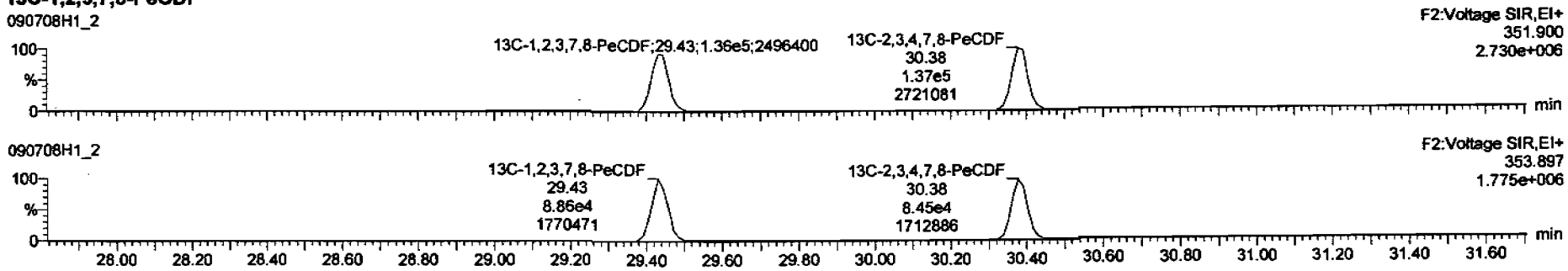

DPE2

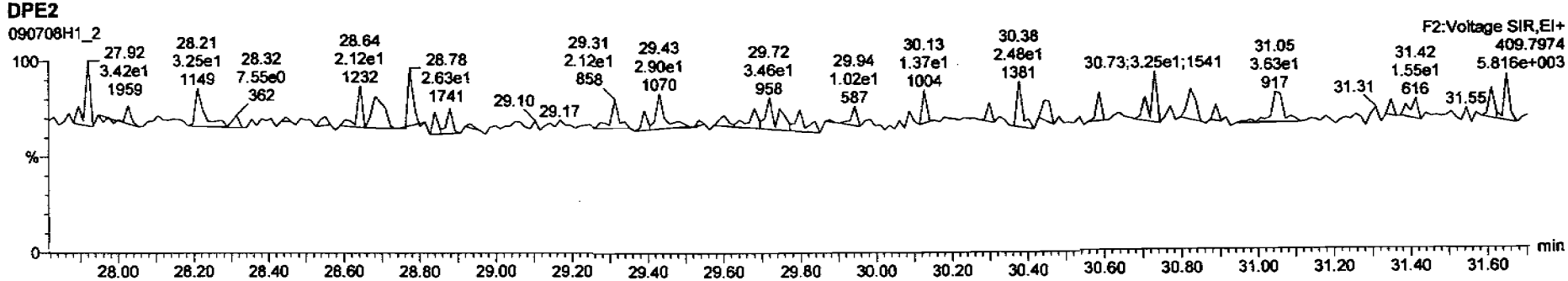

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-2.qld

Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

1,2,3,4,7,8-HxCDF

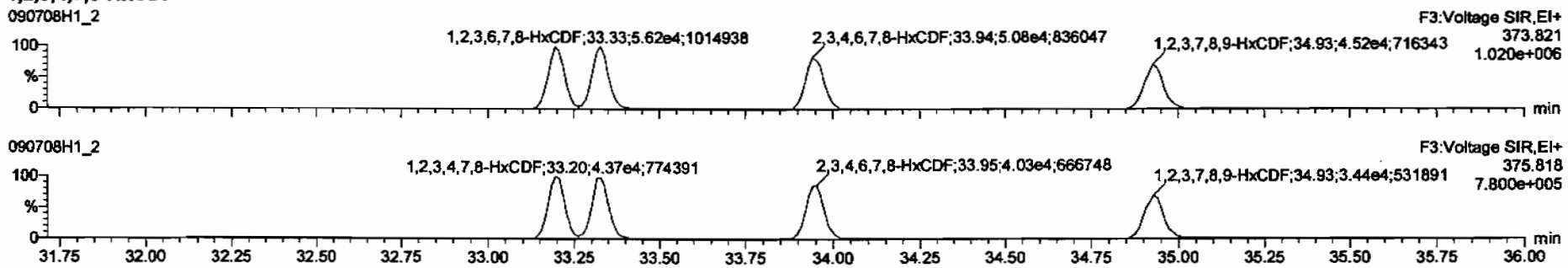

13C-1,2,3,4,7,8-HxCDF

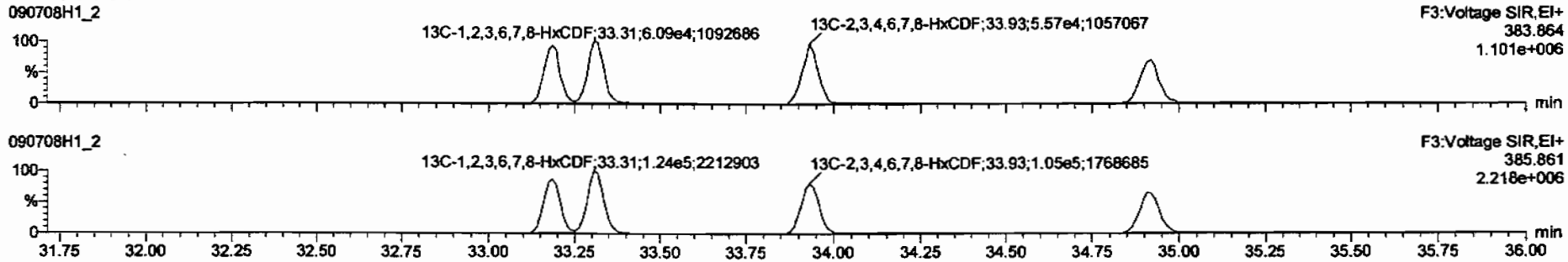

DPE3

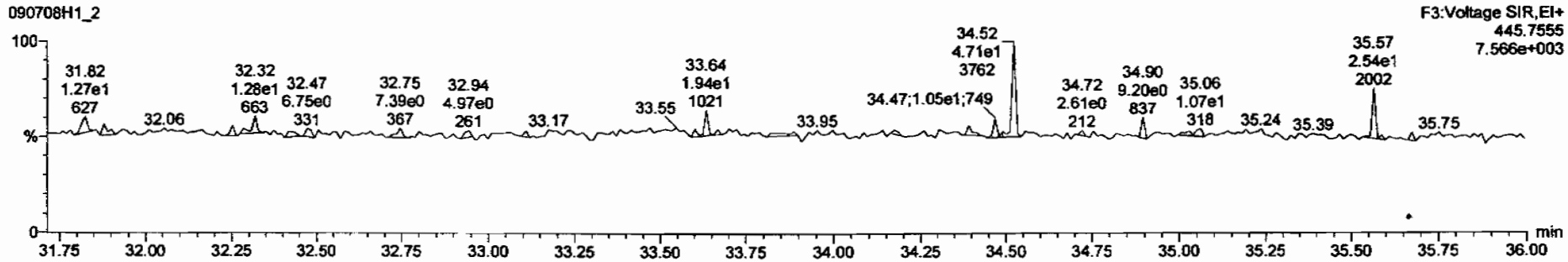

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-2.qld

Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

1,2,3,4,6,7,8-HpCDF

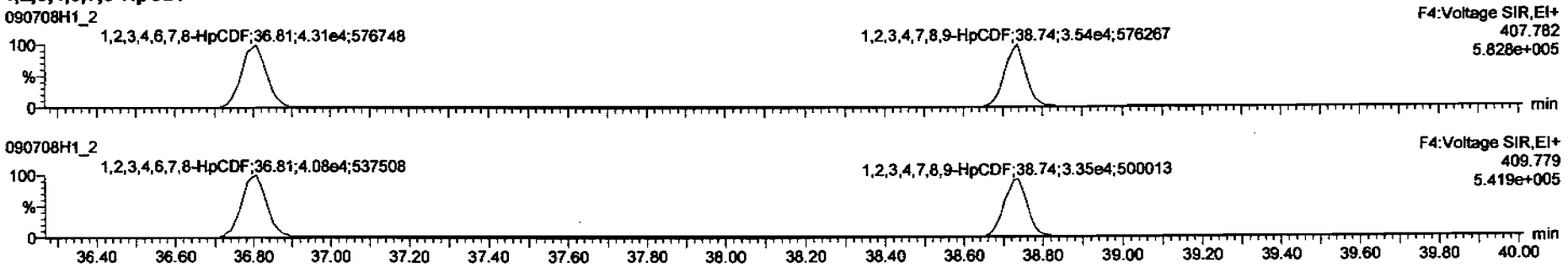

13C-1,2,3,4,6,7,8-HpCDF

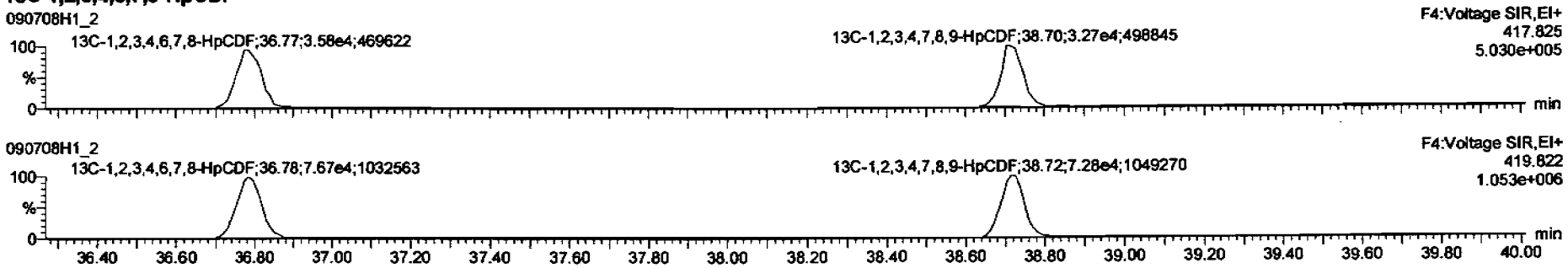

DPE4

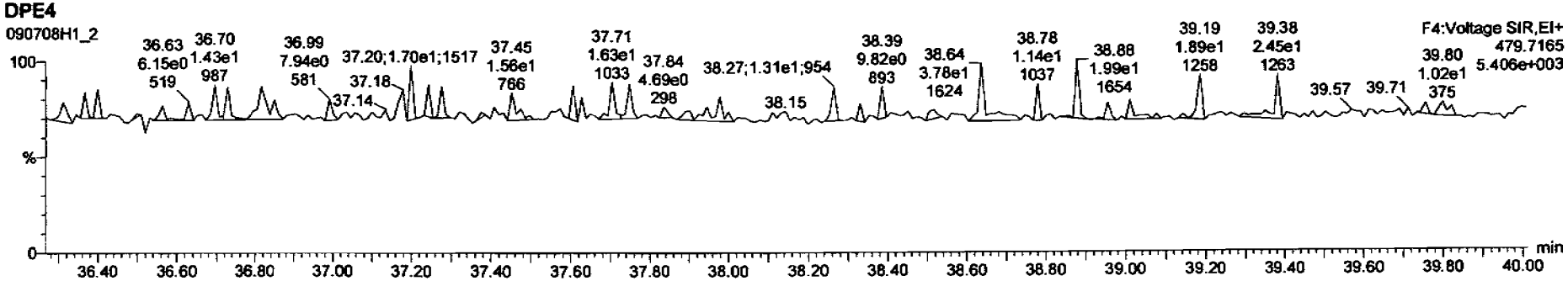

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-2.qld

Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

OCDF

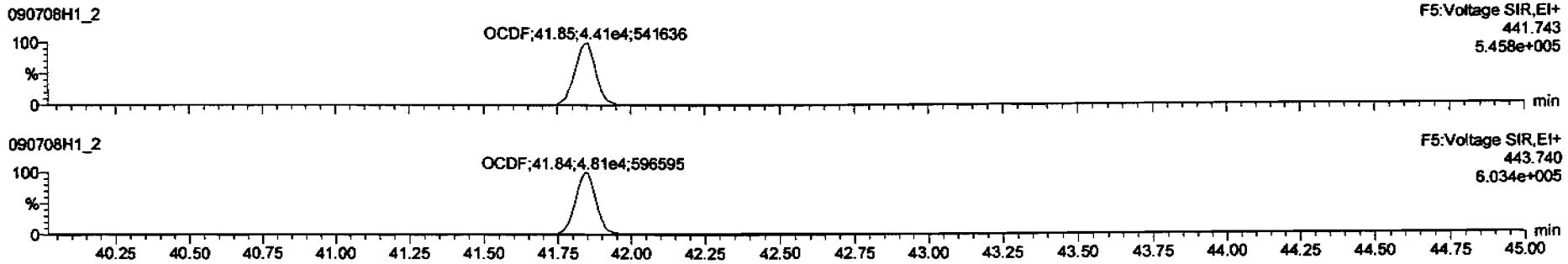

13C-OCDF

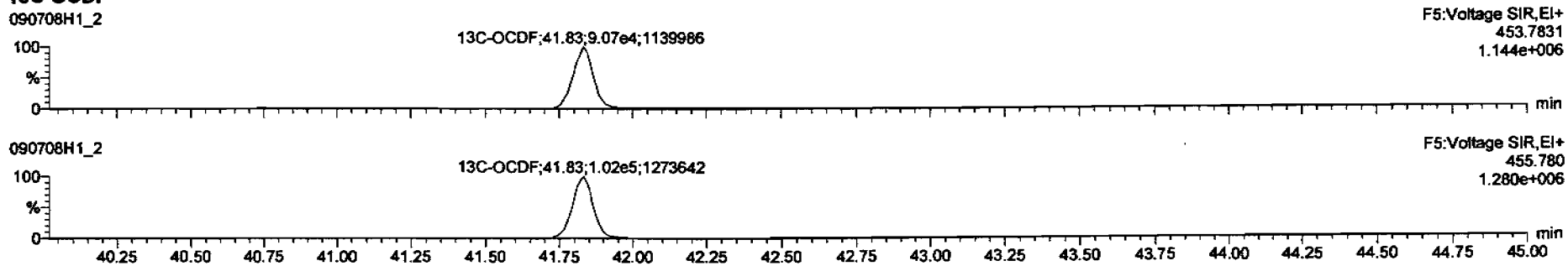

DPE5

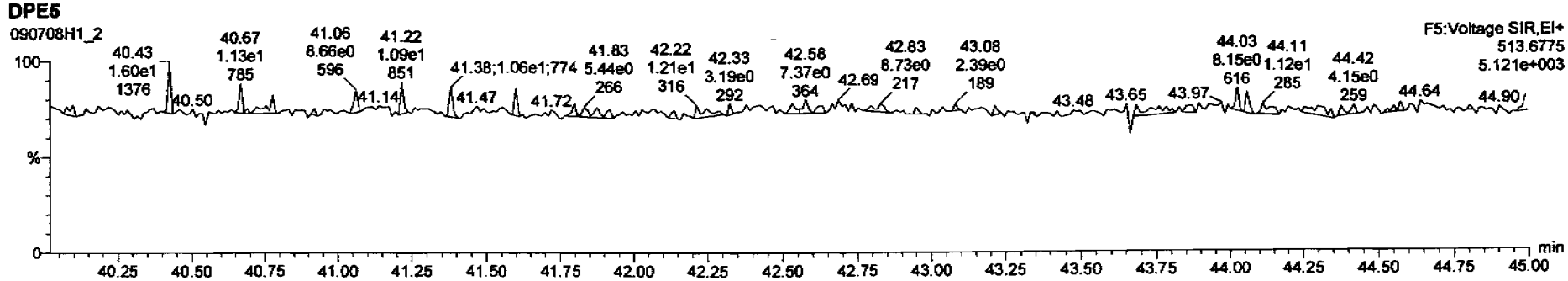

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-2.qld

Last Altered: Wednesday, July 08, 2009 3:38:09 PM Pacific Daylight Time
Printed: Wednesday, July 08, 2009 3:38:35 PM Pacific Daylight Time

Name: 090708H1_2, Date: 08-Jul-2009, Time: 14:10:45, ID: 0_2222_OPR001, Description: 0_2222_OPR001

PFK1

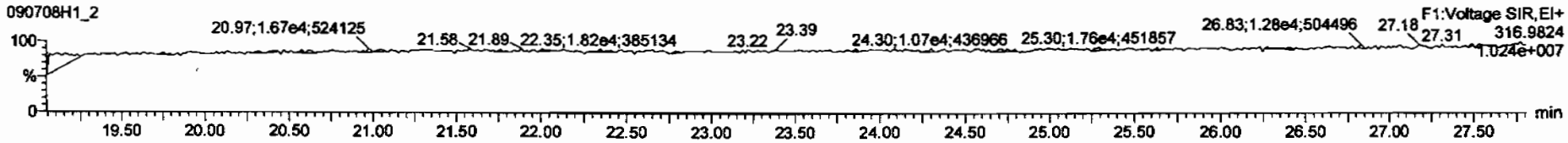

PFK2

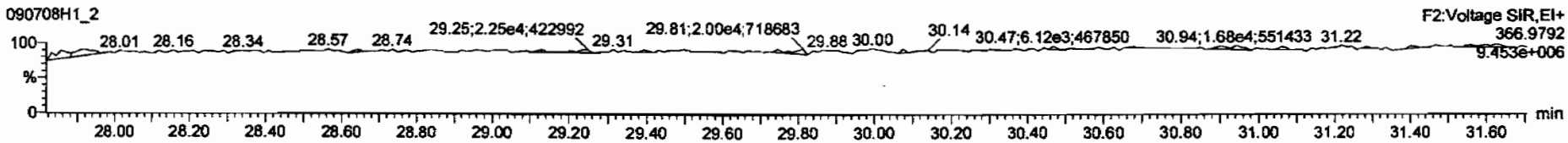

PFK3

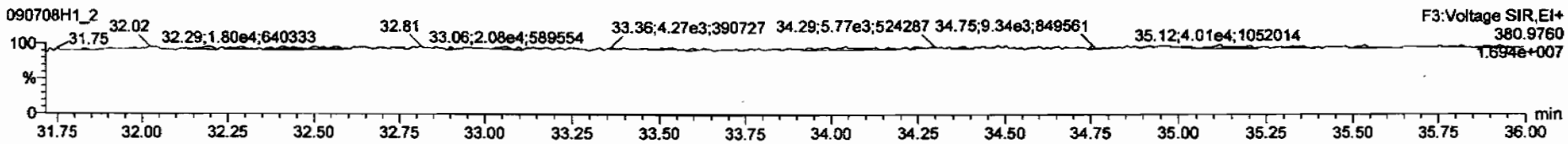

PFK4

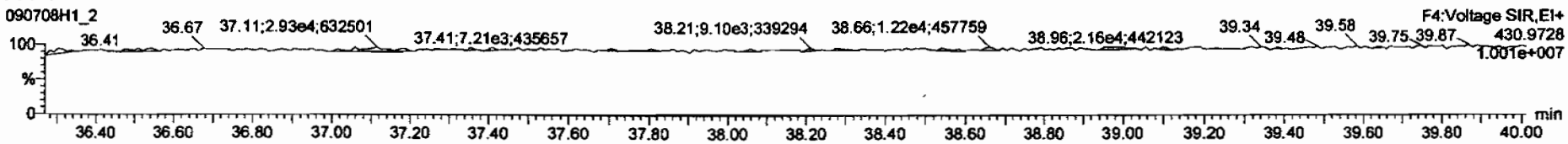

PFK5

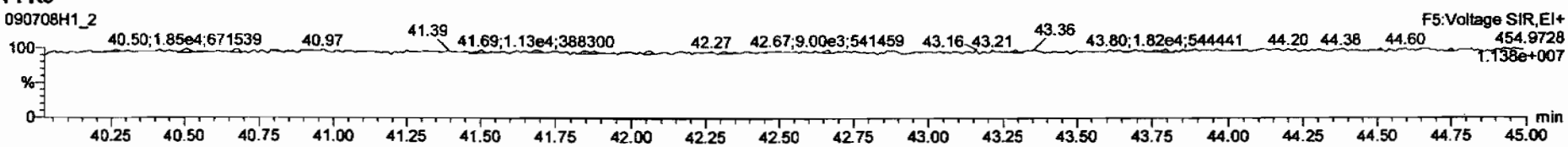

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 10:24:23 Pacific Daylight Time
Printed: Thursday, July 09, 2009 10:24:37 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

Name											
1 2,3,7,8-TCDD			NO	1.08	9.979					0.148	
2 1,2,3,7,8-PeCDD			NO	1.03	9.979					0.176	
3 1,2,3,4,7,8-HxCDD	1.84e2	1.31	NO	1.00	9.979	34.12	1.000	0.30469		0.338	~~0.30469~~
4 1,2,3,6,7,8-HxCDD	3.37e2	0.91	YES	1.13	9.979	34.24	1.001	~~0.53410~~	ND	0.383	0.47688 ✓
5 1,2,3,7,8,9-HxCDD	5.27e2	1.61	YES	1.10	9.979	34.55	1.010	~~0.83633~~	ND	0.347	0.71864 ✓
6 1,2,3,4,6,7,8-HpCDD	9.10e3	0.91	NO	1.06	9.979	38.17	1.000	17.592		0.652	~~17.592~~
7 OCDD	8.45e4	0.88	NO	1.18	9.979	41.62	1.000	244.26		0.577	~~244.26~~
8 2,3,7,8-TCDF			NO	1.09	9.979					0.183	
9 1,2,3,7,8-PeCDF			NO	1.16	9.979					0.132	
10 2,3,4,7,8-PeCDF			NO	1.12	9.979					0.124	
11 1,2,3,4,7,8-HxCDF			NO	1.41	9.979					0.137	
12 1,2,3,6,7,8-HxCDF			NO	1.22	9.979					0.143	
13 2,3,4,6,7,8-HxCDF			NO	1.28	9.979					0.162	
14 1,2,3,7,8,9-HxCDF			NO	1.26	9.979					0.191	
15 1,2,3,4,6,7,8-HpCDF	1.41e3	1.16	NO	1.69	9.979	36.82	1.001	1.6134		0.329	~~1.6134~~
16 1,2,3,4,7,8,9-HpCDF			NO	1.48	9.979					0.319	
17 OCDF	2.64e3	0.90	NO	1.10	9.979	41.86	1.000	5.6466		0.287	~~5.6466~~
18 13C-2,3,7,8-TCDD	1.76e5	0.82	NO	1.01	9.979	25.99	1.023	218.31	109	0.805	
19 13C-1,2,3,7,8-PeCDD	1.35e5	0.65	NO	0.827	9.979	30.67	1.207	205.71	103	0.534	
20 13C-1,2,3,4,7,8-HxCDD	1.21e5	1.22	NO	0.916	9.979	34.11	0.988	202.22	101	0.958	
21 13C-1,2,3,6,7,8-HxCDD	1.08e5	1.34	NO	0.921	9.979	34.22	0.991	180.47	90.0	0.953	
22 13C-1,2,3,4,6,7,8-HpCDD	9.74e4	1.04	NO	0.708	9.979	38.15	1.106	210.64	105	1.69	
23 13C-OCDD	1.18e5	0.93	NO	0.503	9.979	41.62	1.206	358.90	89.5	0.930	
24 13C-2,3,7,8-TCDF	2.41e5	0.79	NO	0.977	9.979	25.20	0.992	210.27	105	0.470	
25 13C-1,2,3,7,8-PeCDF	2.02e5	1.53	NO	0.896	9.979	29.43	1.159	192.29	95.9	0.854	
26 13C-2,3,4,7,8-PeCDF	2.07e5	1.64	NO	0.900	9.979	30.38	1.196	196.63	98.1	0.851	
27 13C-1,2,3,4,7,8-HxCDF	1.53e5	0.51	NO	1.17	9.979	33.19	0.962	200.01	99.8	1.13	
28 13C-1,2,3,6,7,8-HxCDF	1.71e5	0.52	NO	1.52	9.979	33.31	0.965	172.97	86.3	0.867	
29 13C-2,3,4,6,7,8-HxCDF	1.50e5	0.51	NO	1.25	9.979	33.93	0.983	183.54	91.6	1.05	
30 13C-1,2,3,7,8,9-HxCDF	1.32e5	0.52	NO	1.05	9.979	34.91	1.011	192.57	96.1	1.25	

7/9/09

7/13/09

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 10:24:23 Pacific Daylight Time
Printed: Thursday, July 09, 2009 10:24:37 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

31 13C-1,2,3,4,6,7,8-HpCDF	1.03e5	0.43	NO	0.868	9.979	36.79	1.066	182.57	91.1	1.22	
32 13C-1,2,3,4,7,8,9-HpCDF	9.73e4	0.44	NO	0.727	9.979	38.74	1.122	205.32	102	1.46	
33 13C-OCDF	1.71e5	0.89	NO	0.760	9.979	41.85	1.213	344.66	86.0	0.672	
34 37Cl-2,3,7,8-TCDD	4.31e4			0.668	9.979	26.01	1.024	81.261	101	0.257	
35 13C-1,2,3,4-TCDD	1.59e5	0.79	NO	1.00	9.979	25.40	0.000	200.42	100	0.817	
36 13C-1,2,3,4-TCDF	2.35e5	0.79	NO	1.00	9.979	23.97	0.000	200.42	100	0.459	
37 13C-1,2,3,7,8,9-HxCDD	1.31e5	1.28	NO	1.00	9.979	34.51	0.000	200.42	100	0.877	
38 Total Tetra-Dioxins				1.08	9.979					0.0705	
39 Total Penta-Dioxins				1.03	9.979					0.0849	
40 Total Hexa-Dioxins				1.13	9.979			2.6955		0.340	3.8910
41 Total Hepta-Dioxins				1.06	9.979			34.432		0.652	~~34.432~~
42 Total Tetra-Furans				1.09	9.979					0.0885	
43 1st Func. Penta-Furans				1.16	9.979					0.0280	
44 Total Penta-Furans				1.16	9.979					0.0665	
45 Total Hexa-Furans				1.28	9.979			0.41859		0.158	1.3362
46 Total Hepta-Furans				1.69	9.979			3.7560		0.305	~~3.7560~~

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 10:24:23 Pacific Daylight Time
Printed: Thursday, July 09, 2009 10:24:37 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

Tetra-Dioxins

Name	RT	m/z	Height	m/z	Height	m1 Resp	m2 Resp	RA	Qty	Resp	Conc	MDL	RT

Penta-Dioxins

Name	RT	m/z	Height	m/z	Height	m1 Resp	m2 Resp	RA	Qty	Resp	Conc	MDL	RT

Hexa-Dioxins

Name	RT	m/z	Height	m/z	Height	m1 Resp	m2 Resp	RA	Qty	Resp	Conc	MDL	RT
Total Hexa-Dioxins	32.55	7.566e3	5.608e3			3.812e2	2.776e2	1.37	NO	6.588e2	1.0230	1.0230	0.340
Total Hexa-Dioxins	33.37	7.630e3	5.855e3			4.633e2	4.175e2	1.11	NO	8.809e2	1.3678	1.3678	0.340
1,2,3,4,7,8-HxCDD	34.12	2.770e3	1.476e3			1.044e2	7.967e1	1.31	NO	1.841e2	0.30469	0.30469	0.338
1,2,3,6,7,8-HxCDD	34.24	3.806e3	3.475e3			1.608e2	1.767e2	0.91	YES	3.375e2	0.00000	0.47688	0.383
1,2,3,7,8,9-HxCDD	34.55	6.057e3	4.785e3			3.251e2	2.023e2	1.61	YES	5.274e2	0.00000	0.71864	0.347

Hepta-Dioxins

Name	RT	m/z	Height	m/z	Height	m1 Resp	m2 Resp	RA	Qty	Resp	Conc	MDL	RT
Total Hepta-Dioxins	37.23	7.614e4	6.577e4			4.481e3	4.226e3	1.06	NO	8.706e3	16.840	16.840	0.652
1,2,3,4,6,7,8-HpCDD	38.17	7.789e4	9.652e4			4.326e3	4.769e3	0.91	NO	9.095e3	17.592	17.592	0.652

Tetra-Furans

Name	RT	m/z	Height	m/z	Height	m1 Resp	m2 Resp	RA	Qty	Resp	Conc	MDL	RT

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 10:24:23 Pacific Daylight Time
Printed: Thursday, July 09, 2009 10:24:37 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

Penta-Furans function 1

[illegible]																

Penta-Furans

[illegible]																

Hexa-Furans

[illegible]																
	Total Hexa-Furans	31.98	2.610e3	5.131e3	1.252e2	1.531e2	0.82	YES	0.000e0	0.00000	0.23368	0.158
	Total Hexa-Furans	32.14	8.510e3	6.853e3	3.664e2	3.642e2	1.01	YES	0.000e0	0.00000	0.68394	0.158
	Total Hexa-Furans	32.72	4.762e3	5.494e3	2.100e2	1.950e2	1.08	NO	4.051e2	0.41859	0.41859	0.158

Hepta-Furans

[illegible]																
	1,2,3,4,6,7,8-HpCDF	36.82	1.344e4	1.199e4	7.560e2	6.505e2	1.16	NO	1.407e3	1.6134	1.6134	0.329
	Total Hepta-Furans	37.46	1.498e4	1.608e4	8.812e2	9.315e2	0.95	NO	1.813e3	2.1425	2.1425	0.305

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

2,3,7,8-TCDD

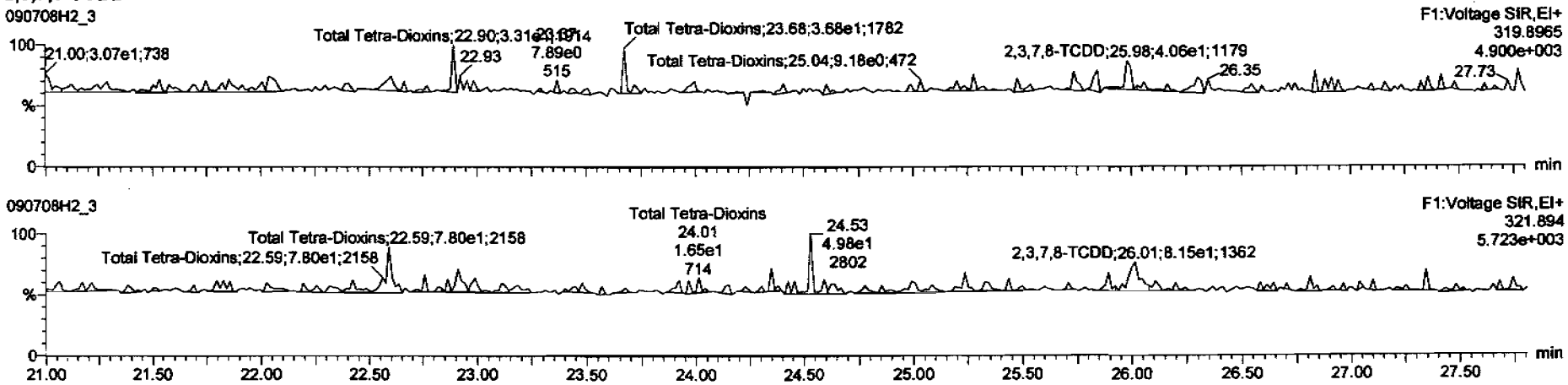

13C-2,3,7,8-TCDD

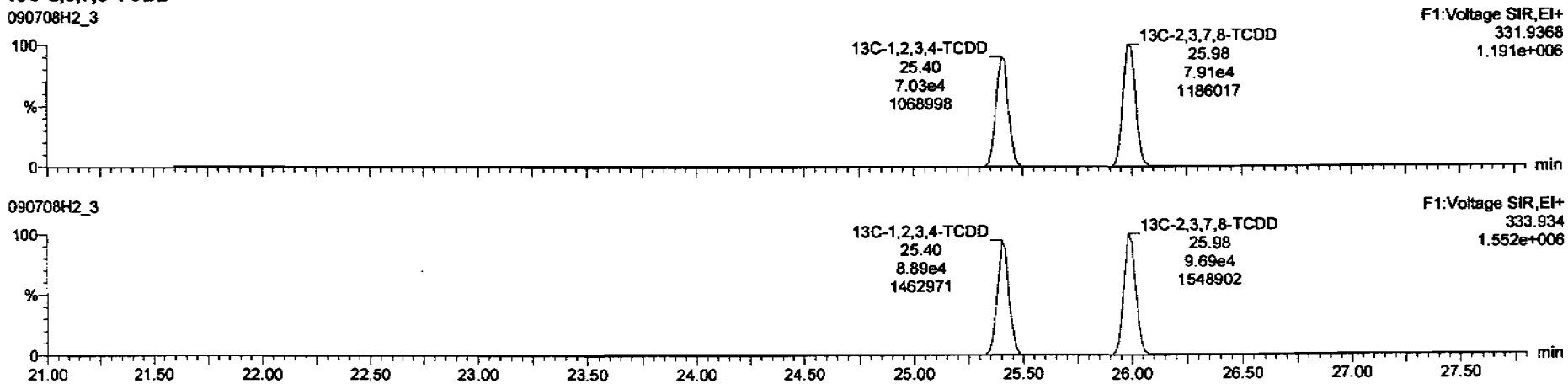

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

37Cl-2,3,7,8-TCDD

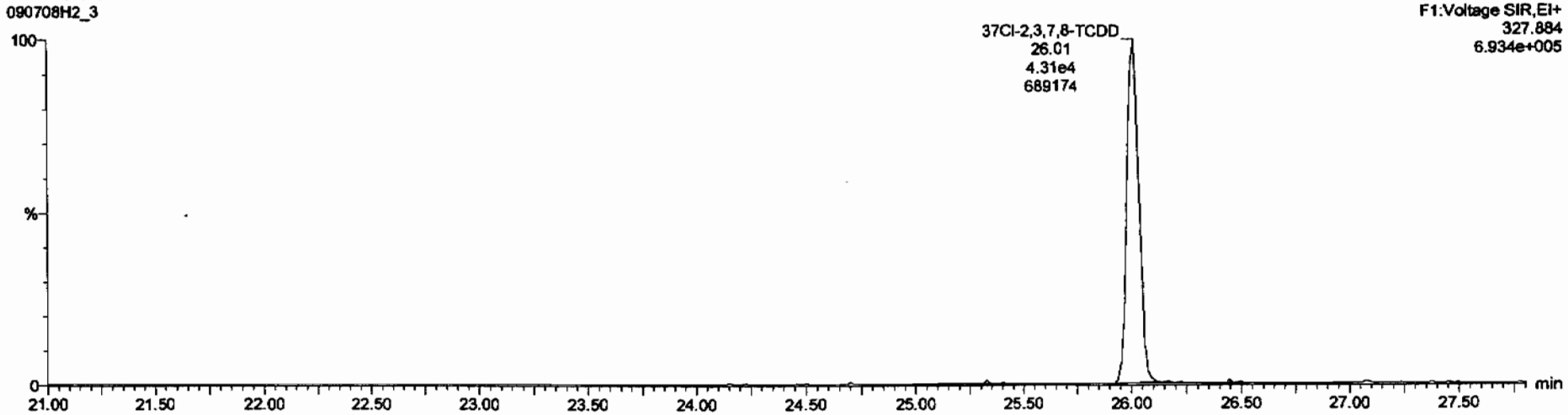

13C-1,2,3,4-TCDD

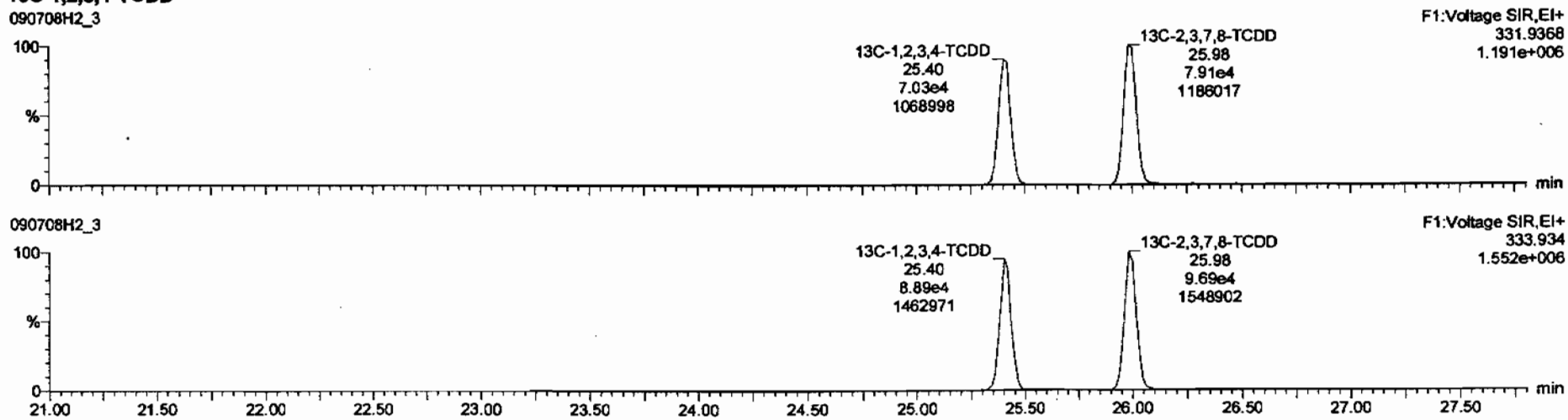

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

1,2,3,7,8-PeCDD

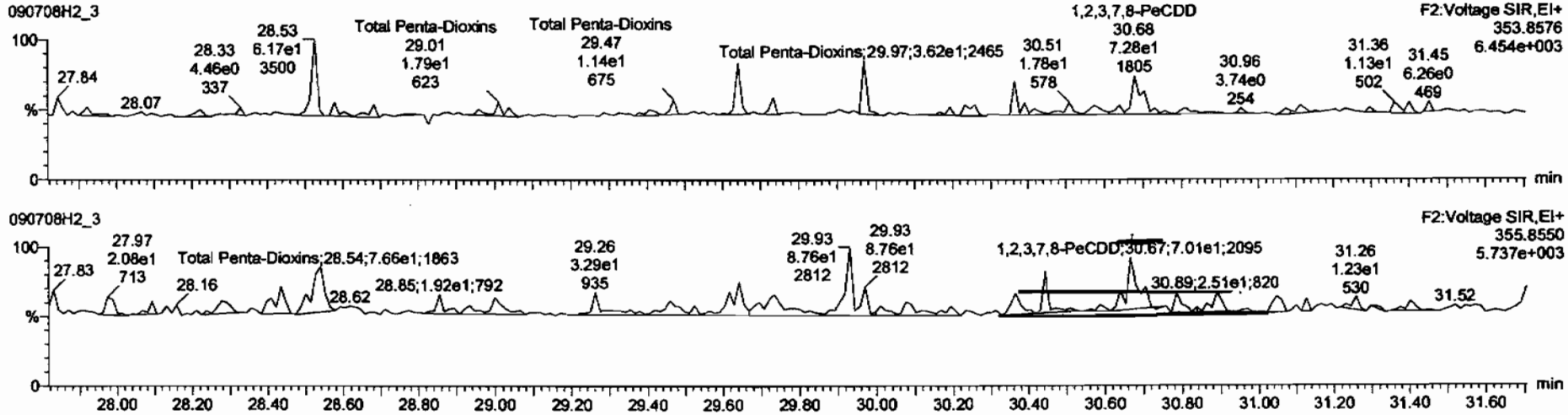

13C-1,2,3,7,8-PeCDD

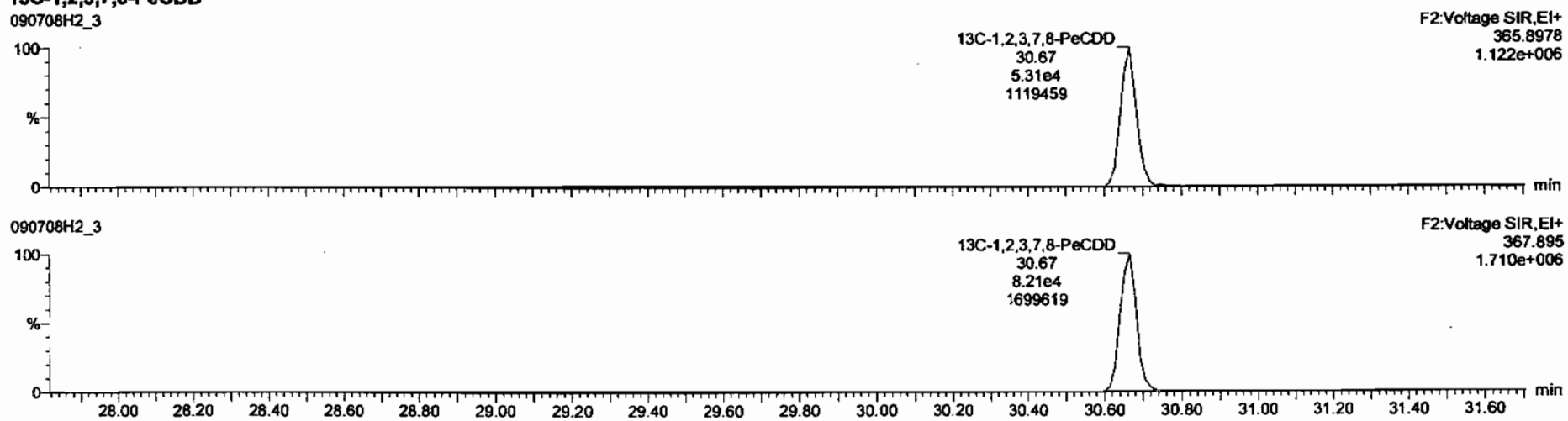

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

1,2,3,4,7,8-HxCDD

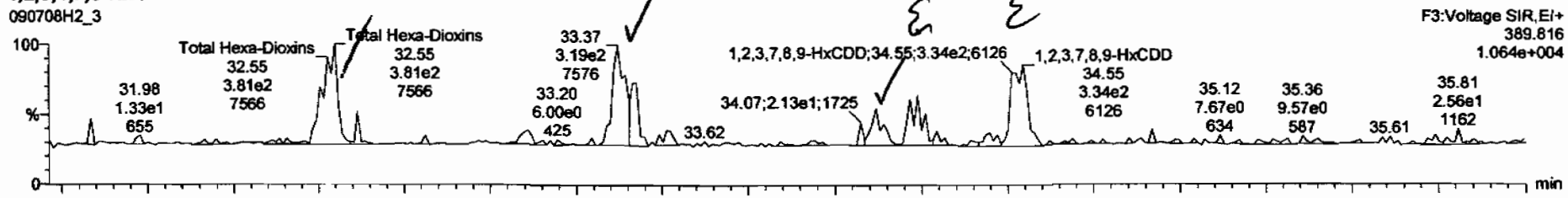

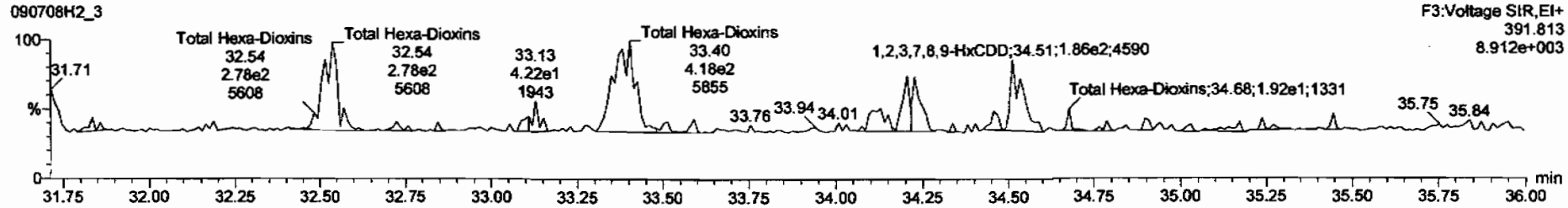

13C-1,2,3,4,7,8-HxCDD

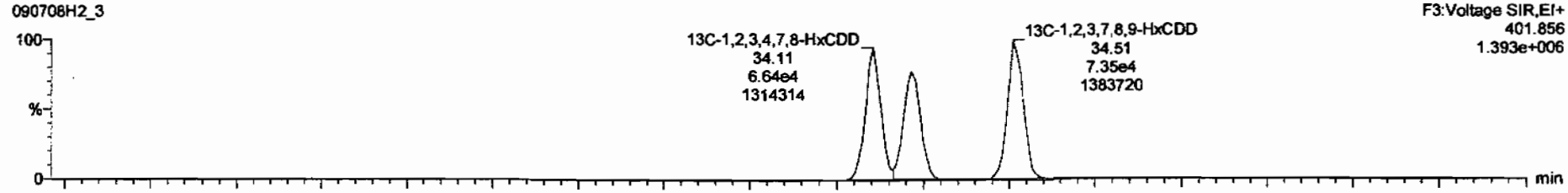

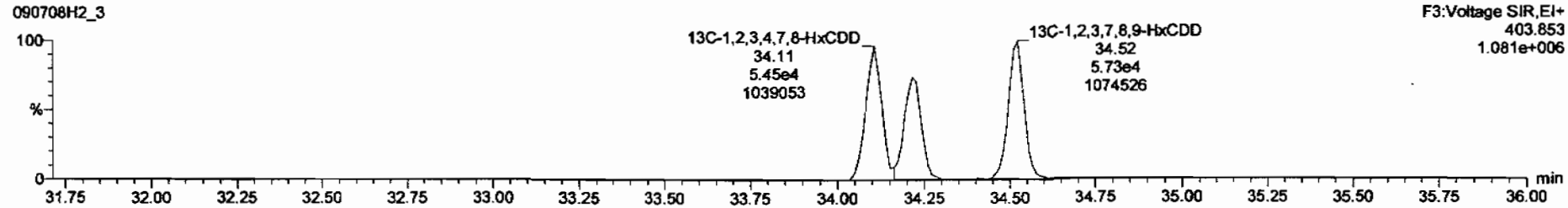

TargetLynx - 090708h2-3.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090708H2_3 - 31848_2222_001 CAMO-09-6603 10.82 - CAMO-09-6603

	Name	RT	m/z Resp	m/z2 Resp	RR	Flag	Conc	Criteria
1	Total Hexa-Dioxins	32.55	3.812e2	2.776e2	1.37	NO	1.0230	1.0230
2	Total Hexa-Dioxins	33.37	4.633e2	4.175e2	1.11	NO	1.3678	1.3678
3	1,2,3,4,7,8-HxCDD	34.12	1.044e2	7.967e1	1.31	NO	0.30469	0.30469
4	1,2,3,6,7,8-HxCDD	34.24	1.608e2	1.767e2	0.91	YES	0.47688	0.00000
5	1,2,3,7,8,9-HxCDD	34.55	3.251e2	2.023e2	1.61	YES	0.71864	0.00000

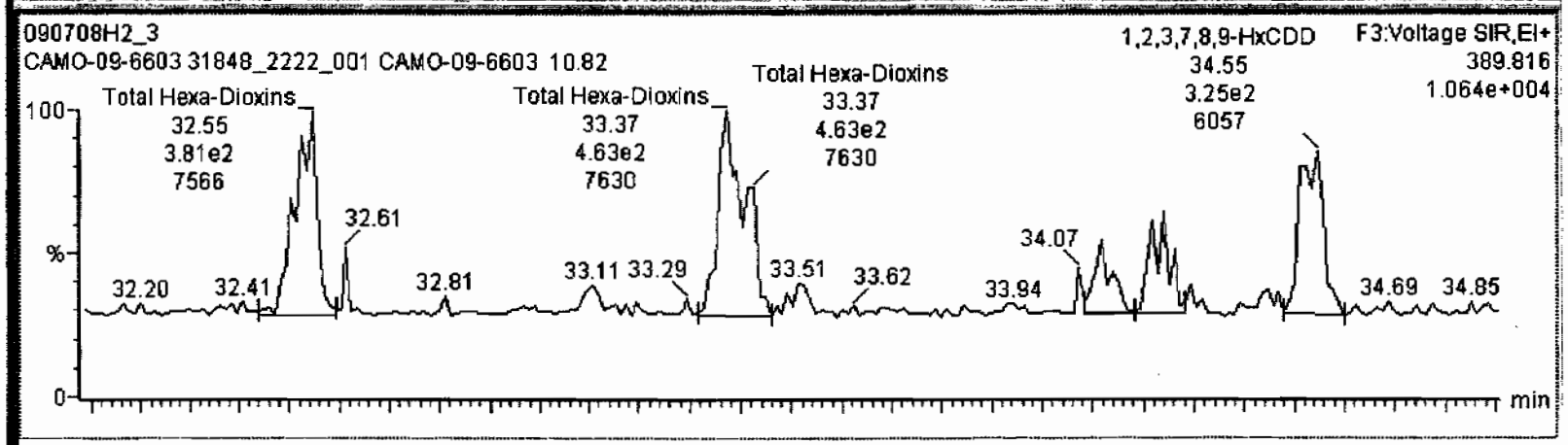

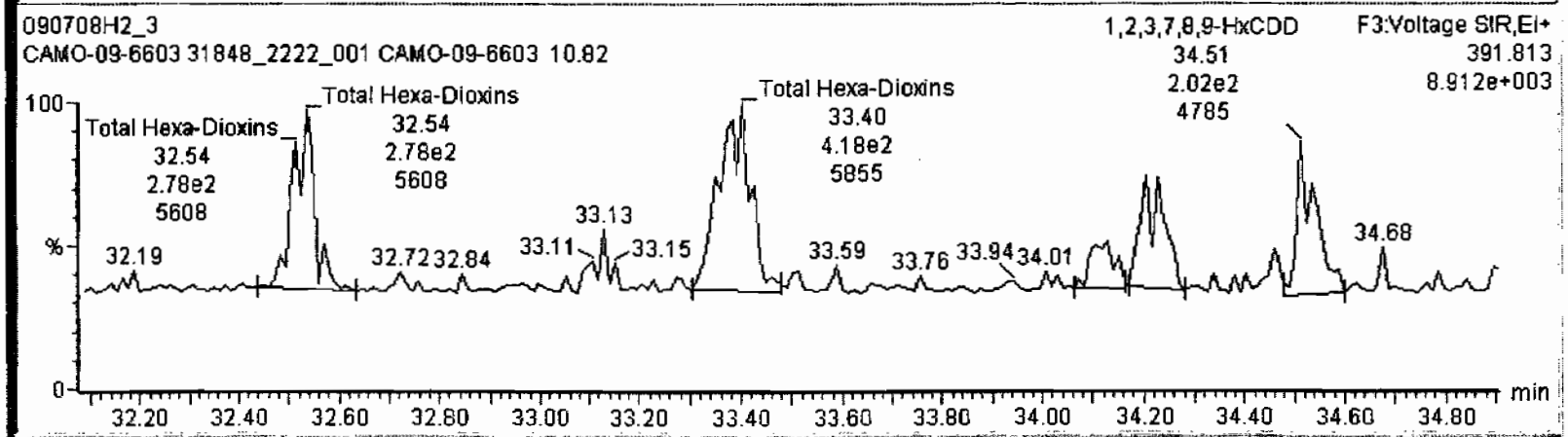

Ready 1 090708H2_3 NUM

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

1,2,3,4,6,7,8-HpCDD

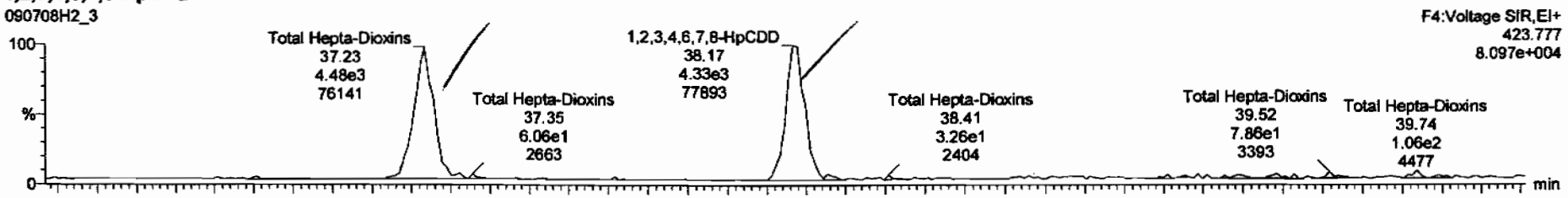

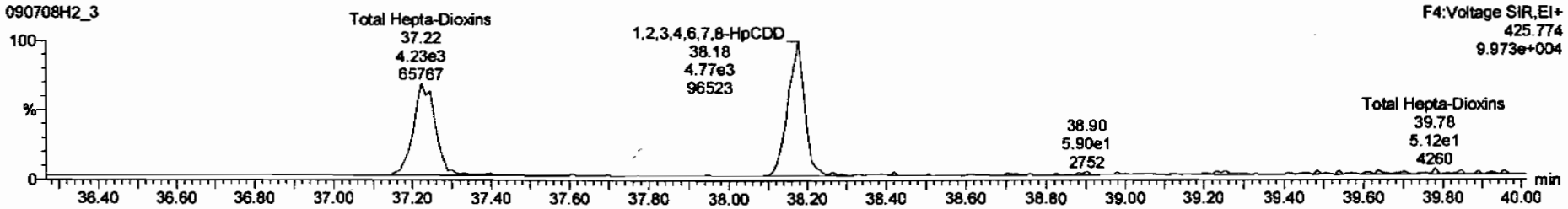

13C-1,2,3,4,6,7,8-HpCDD

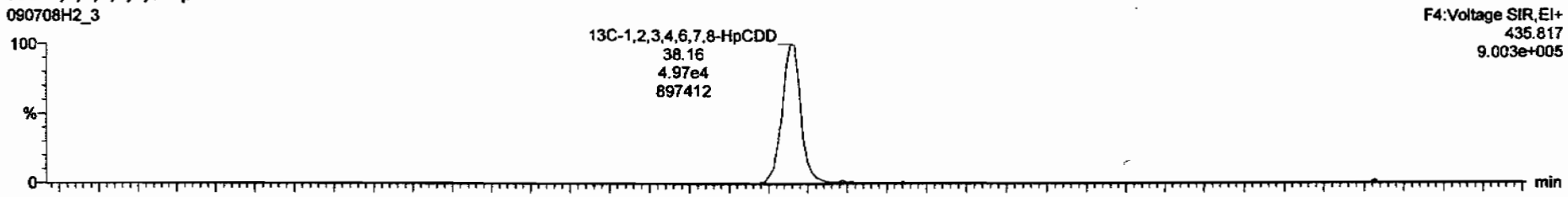

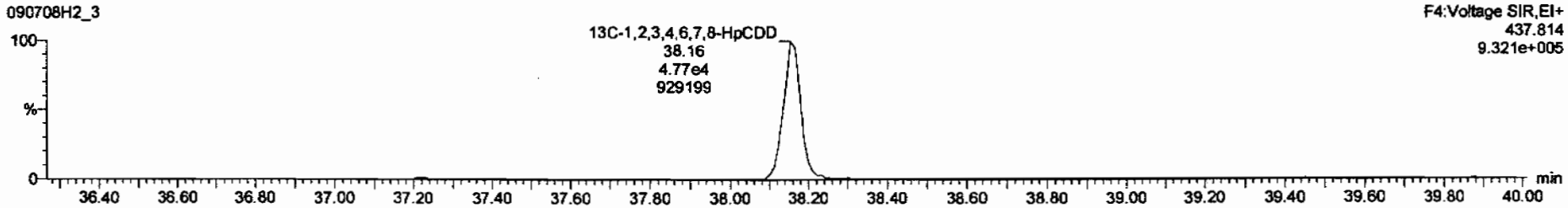

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

OCDD

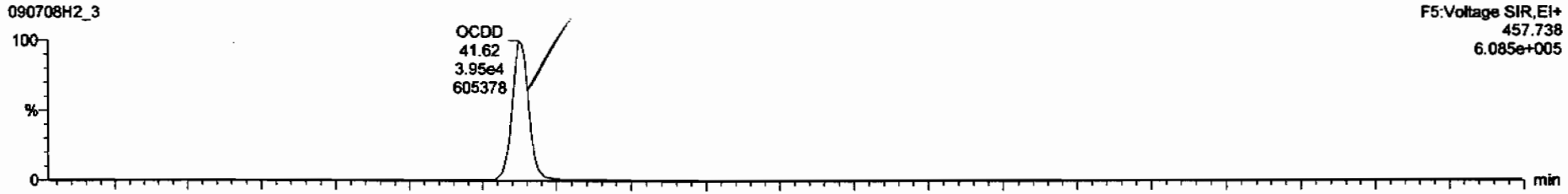

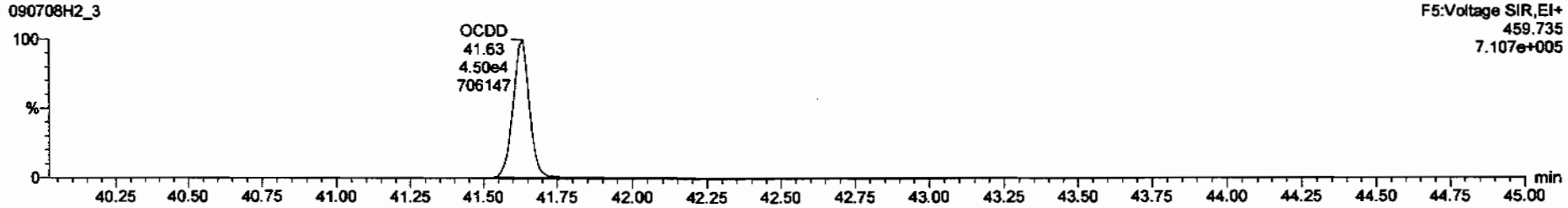

13C-OCDD

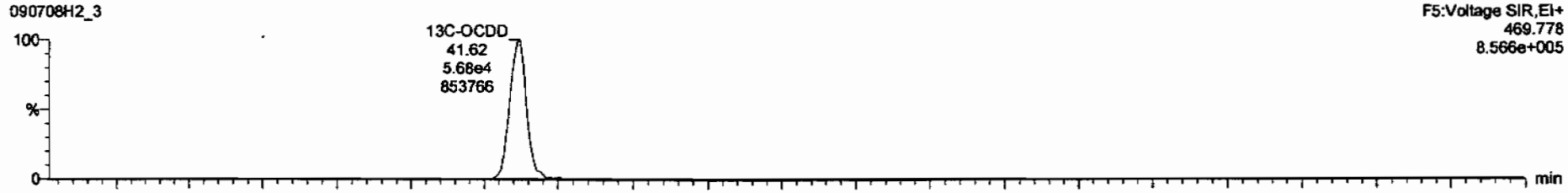

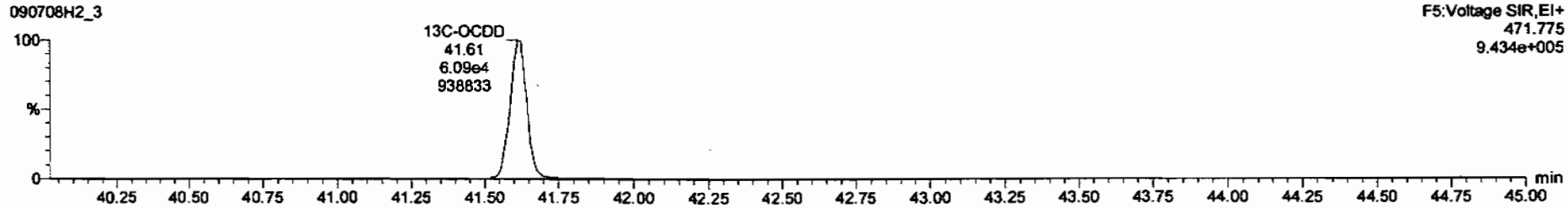

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

2,3,7,8-TCDF

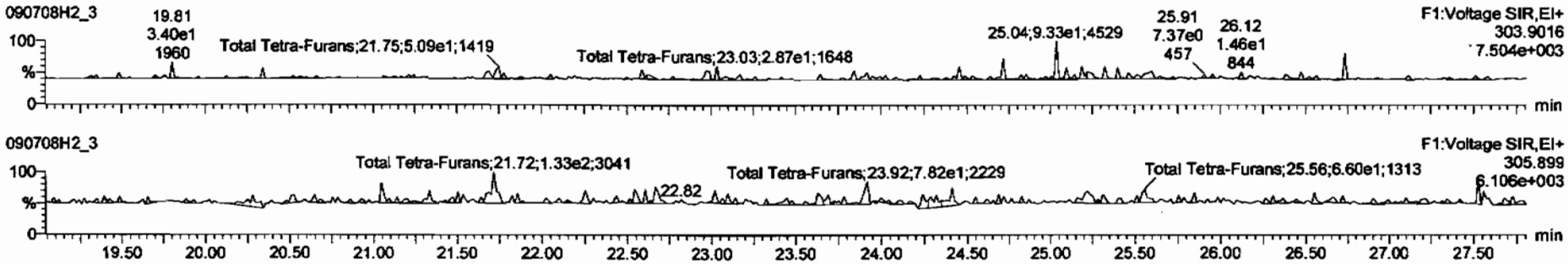

13C-2,3,7,8-TCDF

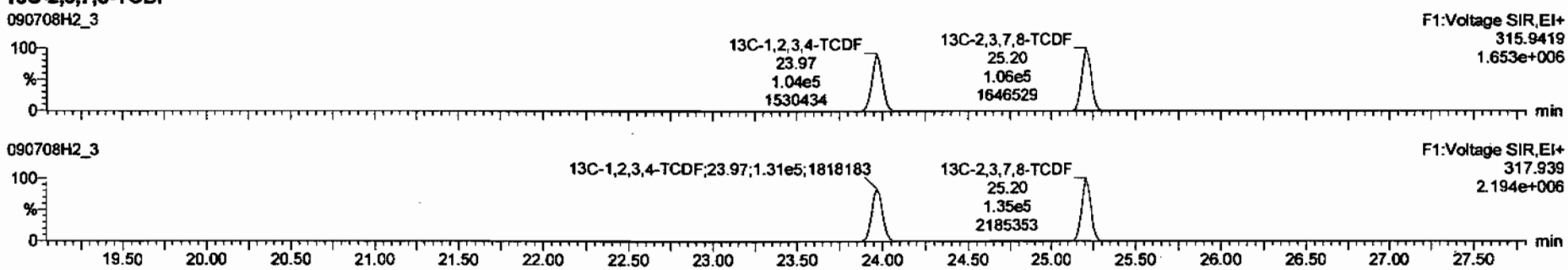

DPE1

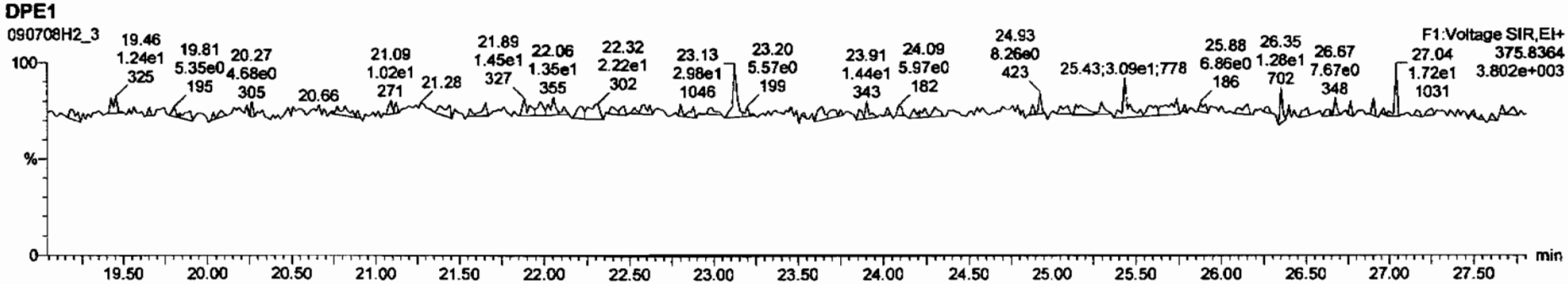

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

1st Func. Penta-Furans

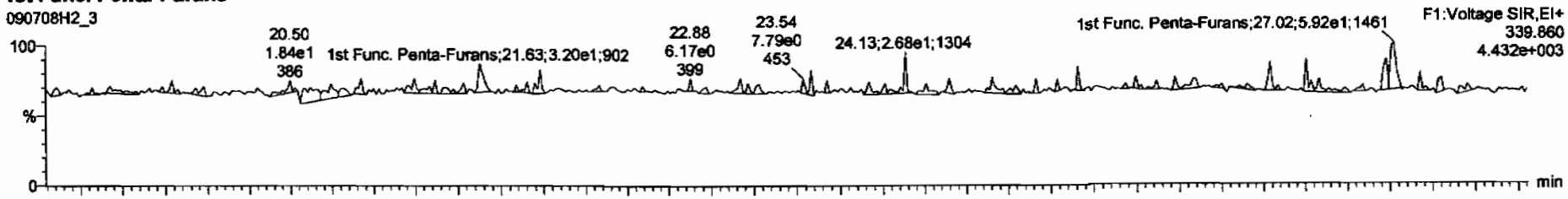

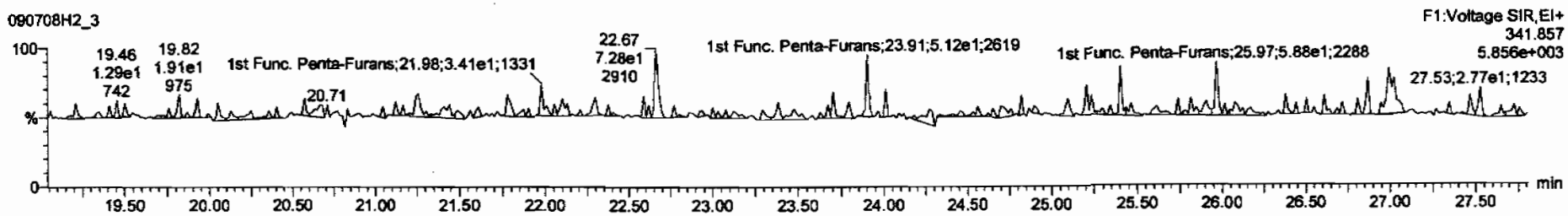

DPE6

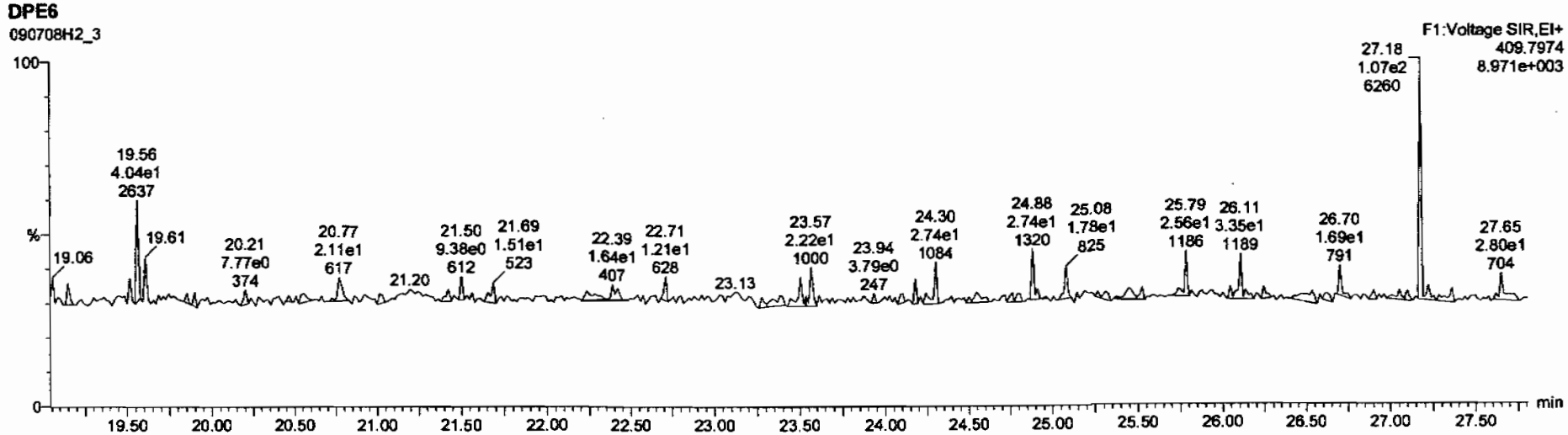

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

1,2,3,7,8-PeCDF

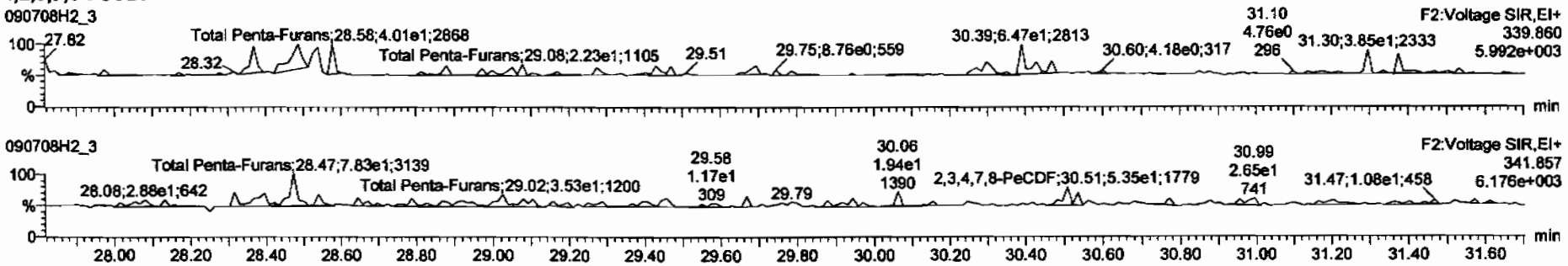

13C-1,2,3,7,8-PeCDF

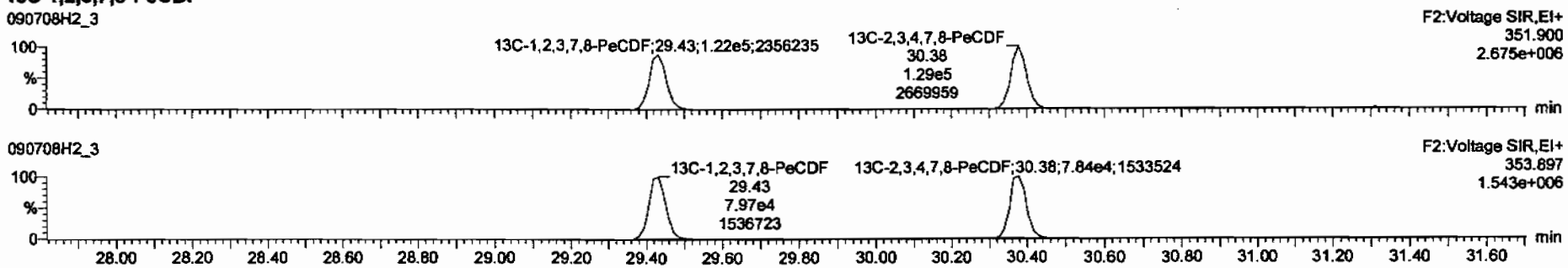

DPE2

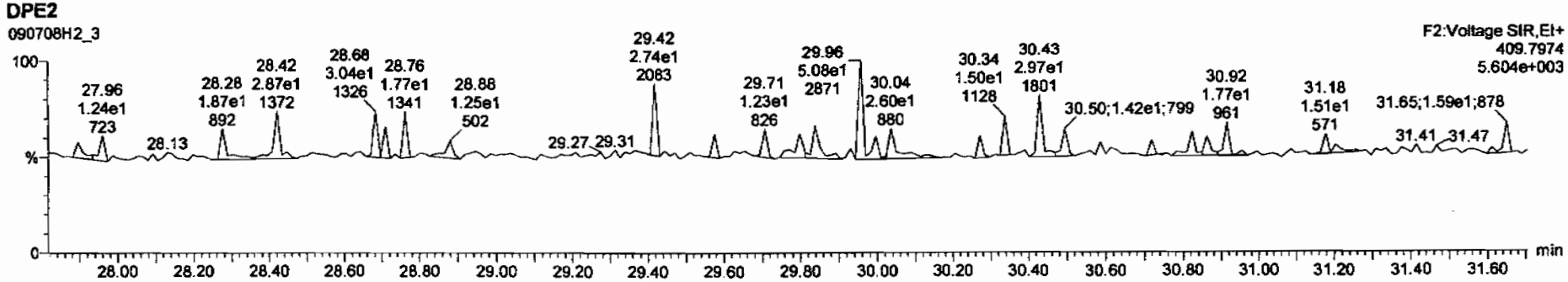

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

1,2,3,4,7,8-HxCDF

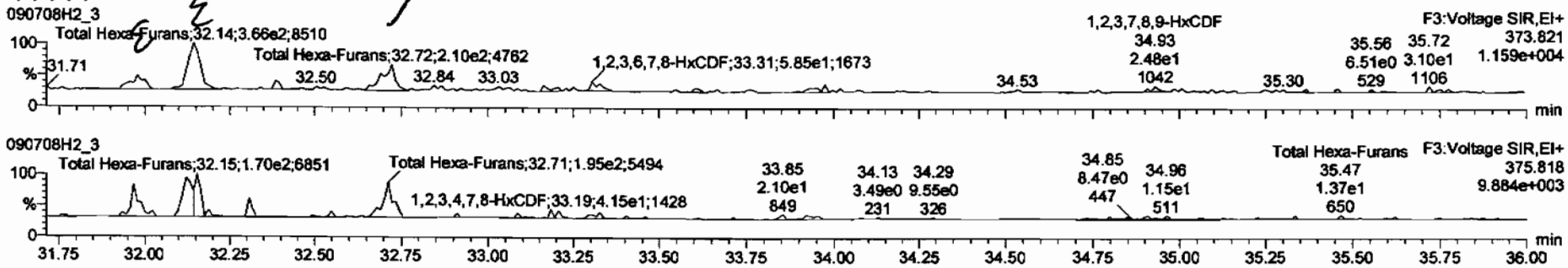

13C-1,2,3,4,7,8-HxCDF

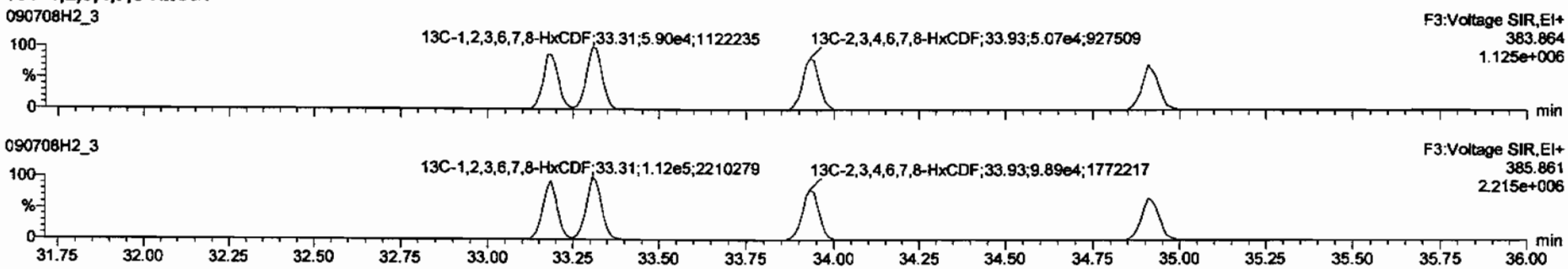

DPE3

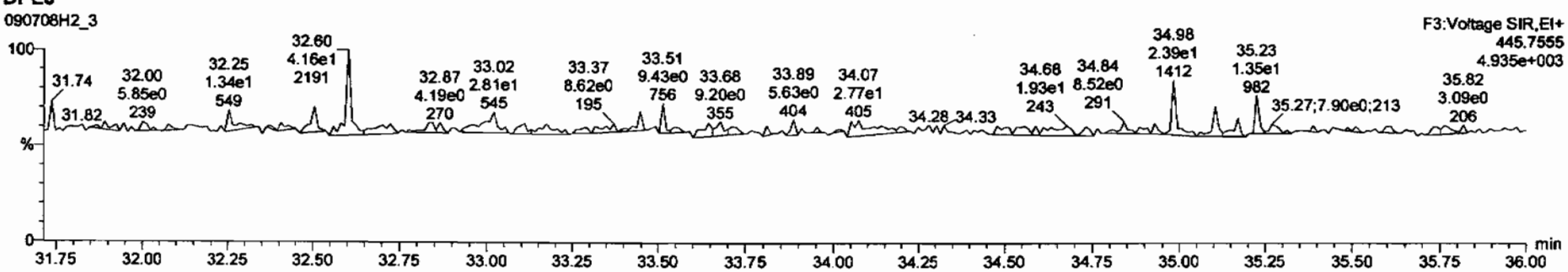

TargetLynx - 090708h2-3.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090708H2_3 - 31848_2222_001 CAMO-09-6603 10.82 - CAMO-09-6603

	Name	RT	[illegible]	[illegible]	RA	[illegible]	[illegible]	[illegible]
	Total Hexa-Furans	31.98	1.252e2	1.531e2	0.82	YES	0.23368	0.00000
	Total Hexa-Furans	32.14	3.664e2	3.642e2	1.01	YES	0.68394	0.00000
	Total Hexa-Furans	32.72	2.100e2	1.950e2	1.08	NO	0.41859	0.41859

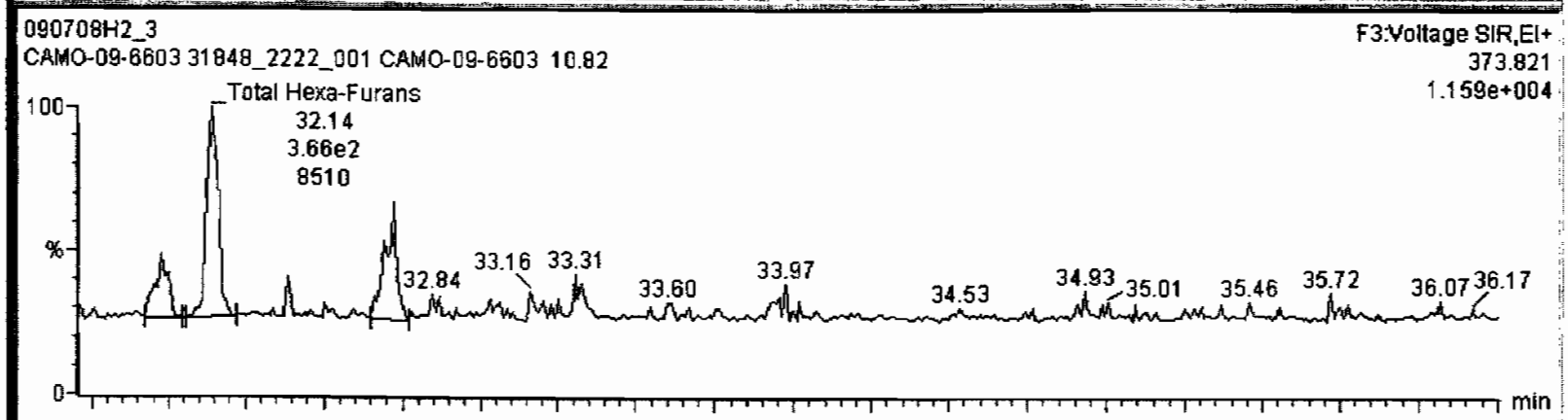

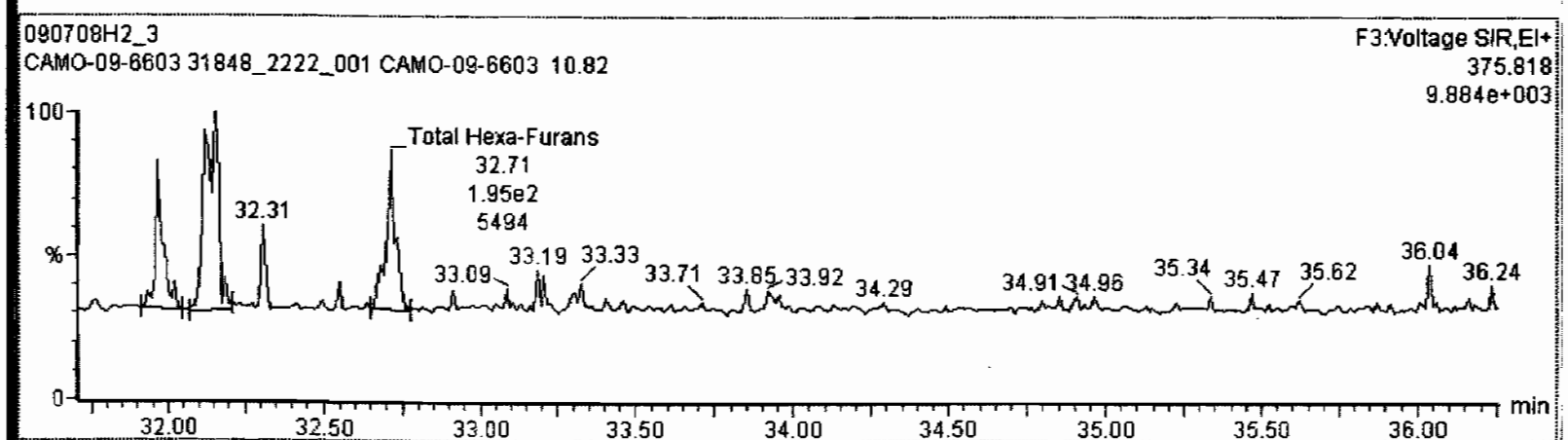

Ready 090708H2_3 NUM

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-3.qld

Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

1,2,3,4,6,7,8-HpCDF

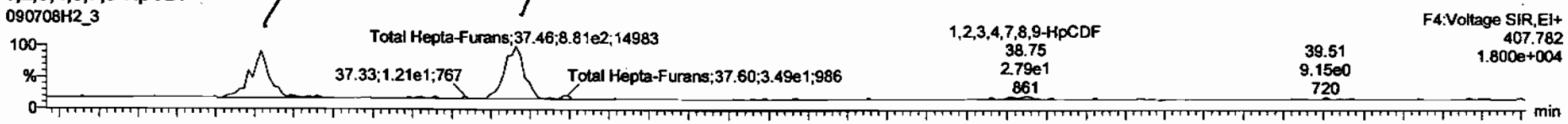

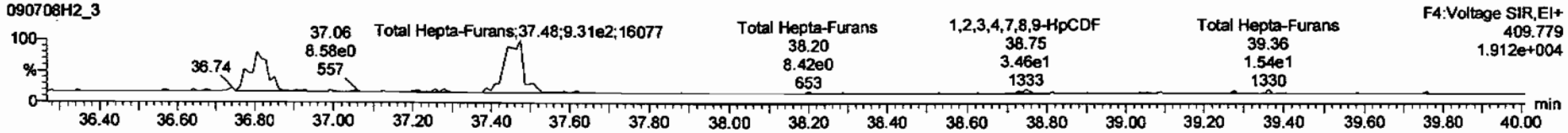

13C-1,2,3,4,6,7,8-HpCDF

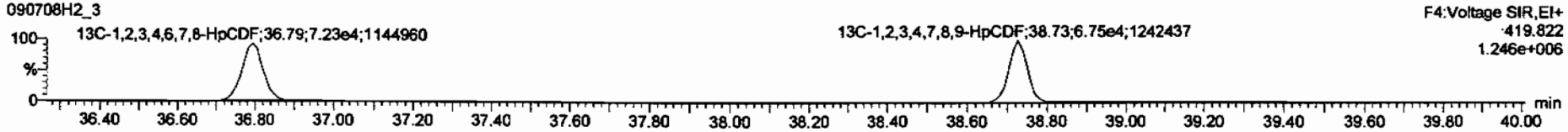

DPE4

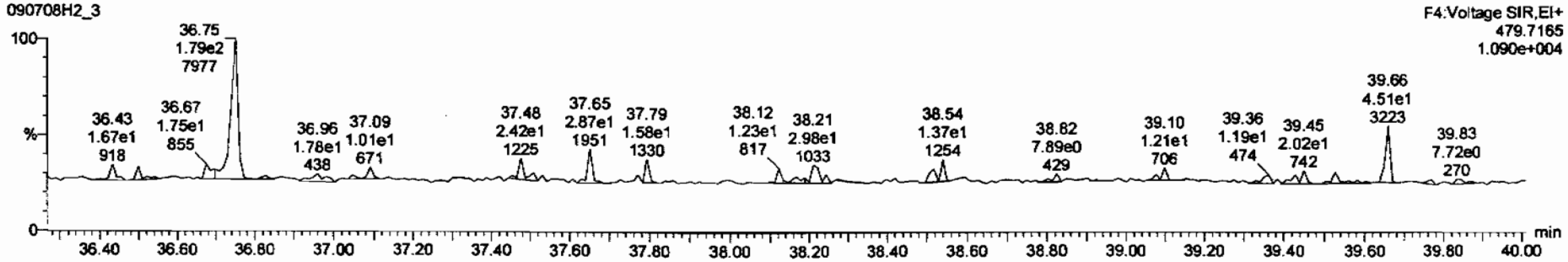

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Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

OCDF

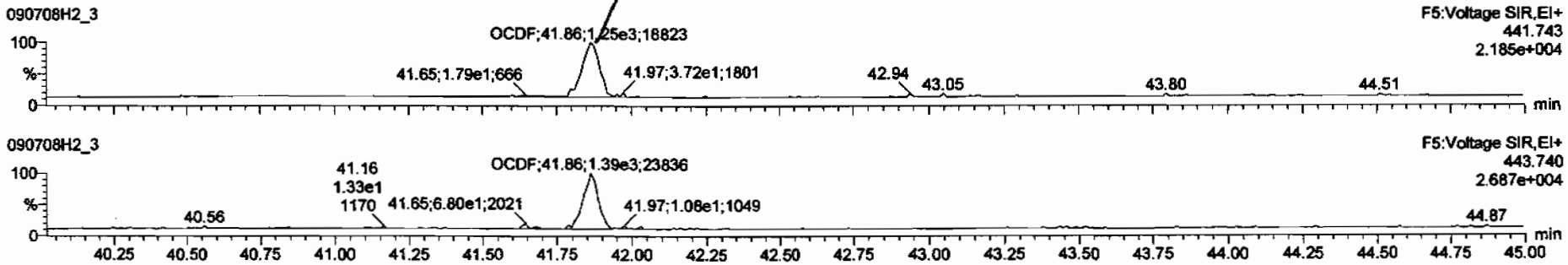

13C-OCDF

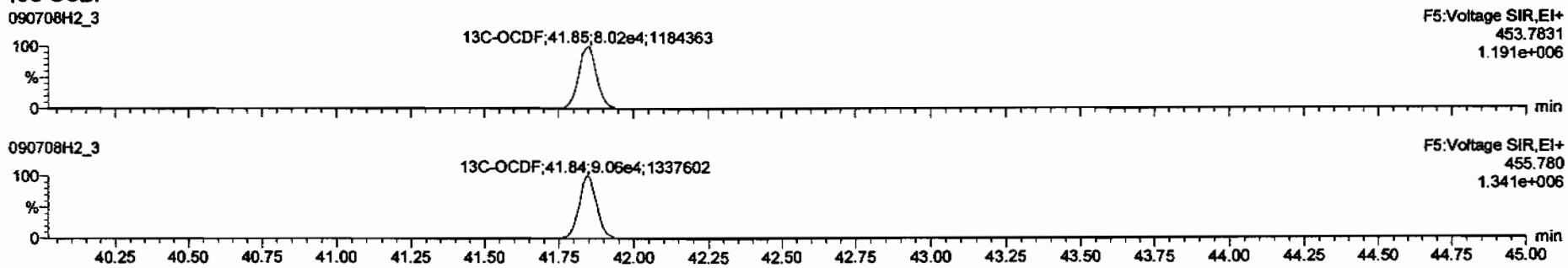

DPE5

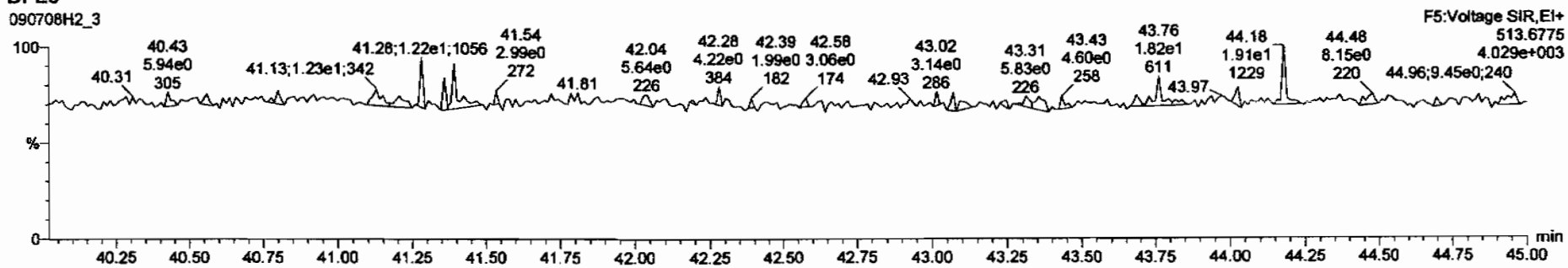

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Last Altered: Thursday, July 09, 2009 07:35:32 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:35:45 Pacific Daylight Time

Name: 090708H2_3, Date: 09-Jul-2009, Time: 04:21:30, ID: 31848_2222_001 CAMO-09-6603 10.82, Description: CAMO-09-6603

PFK1

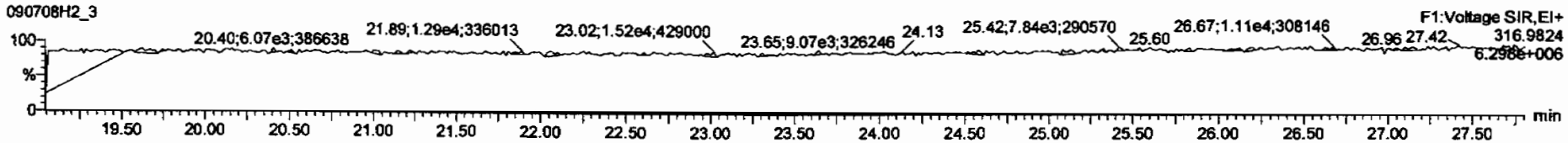

PFK2

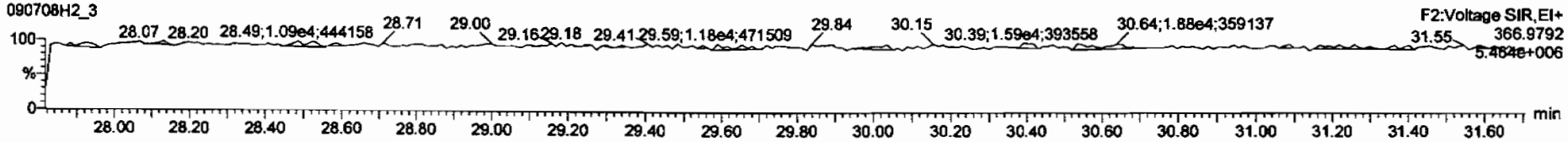

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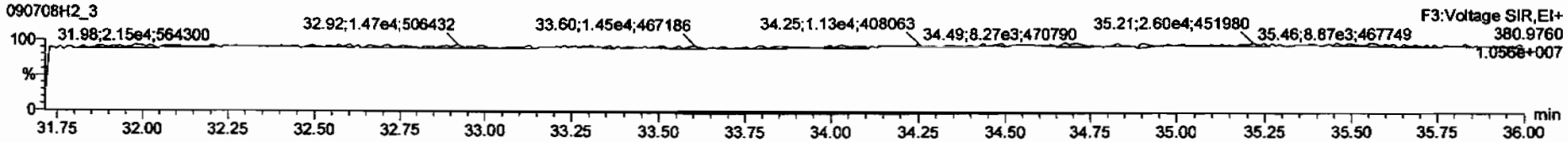

PFK4

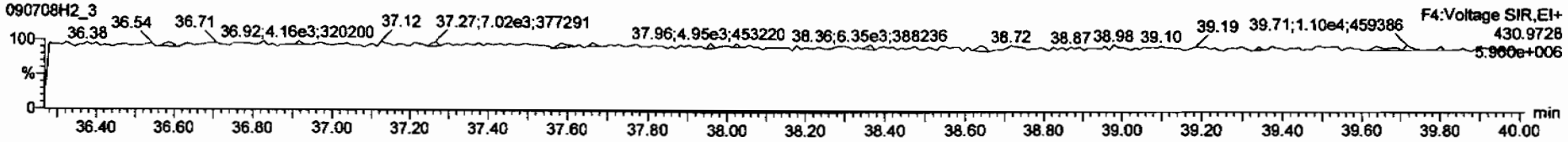

PFK5

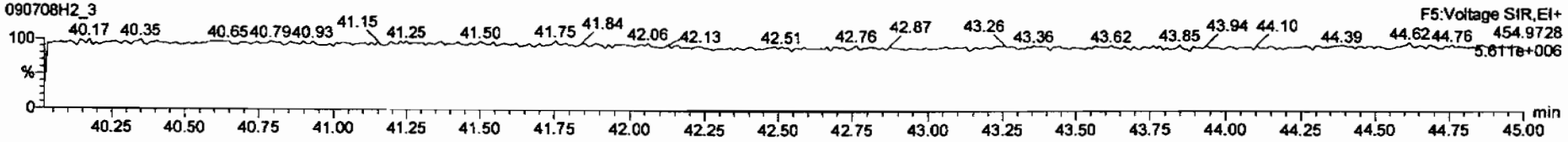

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 10:35:28 Pacific Daylight Time
Printed: Thursday, July 09, 2009 10:35:49 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

1	2,3,7,8-TCDD			NO	1.08	10.070					0.233	
2	1,2,3,7,8-PeCDD			NO	1.03	10.070					0.296	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.070					0.313	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.070					0.294	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.070					0.292	
6	1,2,3,4,6,7,8-HpCDD	1.43e2	0.82	YES	1.06	10.070	38.17	1.000	~~0.50768~~ ND		0.388	0.50247
7	OCDD	9.66e2	0.90	NO	1.18	10.070	41.65	1.001	5.0353		0.850	~~5.0353~~
8	2,3,7,8-TCDF			NO	1.09	10.070					0.232	
9	1,2,3,7,8-PeCDF			NO	1.16	10.070					0.193	
10	2,3,4,7,8-PeCDF			NO	1.12	10.070					0.196	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.070					0.116	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.070					0.124	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.070					0.140	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.070					0.183	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.070					0.212	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.070					0.260	
17	OCDF			NO	1.10	10.070					0.418	
18	13C-2,3,7,8-TCDD	8.86e4	0.77	NO	1.01	10.070	25.99	1.023	209.66	106	1.32	
19	13C-1,2,3,7,8-PeCDD	6.59e4	0.64	NO	0.827	10.070	30.67	1.207	191.31	96.3	1.23	
20	13C-1,2,3,4,7,8-HxCDD	5.90e4	1.24	NO	0.916	10.070	34.11	0.988	203.42	102	1.28	
21	13C-1,2,3,6,7,8-HxCDD	5.62e4	1.25	NO	0.921	10.070	34.22	0.991	192.60	97.0	1.27	
22	13C-1,2,3,4,6,7,8-HpCDD	4.71e4	1.08	NO	0.708	10.070	38.16	1.105	210.04	106	2.21	
23	13C-OCDD	6.46e4	0.92	NO	0.503	10.070	41.62	1.206	406.23	102	1.06	
24	13C-2,3,7,8-TCDF	1.25e5	0.76	NO	0.977	10.070	25.20	0.992	212.43	107	0.865	
25	13C-1,2,3,7,8-PeCDF	1.06e5	1.68	NO	0.896	10.070	29.43	1.159	197.23	99.3	1.65	
26	13C-2,3,4,7,8-PeCDF	1.04e5	1.63	NO	0.900	10.070	30.38	1.196	192.78	97.1	1.65	
27	13C-1,2,3,4,7,8-HxCDF	7.66e4	0.50	NO	1.17	10.070	33.19	0.961	206.92	104	1.71	
28	13C-1,2,3,6,7,8-HxCDF	8.44e4	0.50	NO	1.52	10.070	33.32	0.965	175.48	88.4	1.32	
29	13C-2,3,4,6,7,8-HxCDF	7.36e4	0.50	NO	1.25	10.070	33.93	0.983	186.21	93.8	1.60	
30	13C-1,2,3,7,8,9-HxCDF	6.57e4	0.51	NO	1.05	10.070	34.92	1.011	197.14	99.3	1.90	

7/9/09

7/13/09

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 10:35:28 Pacific Daylight Time
Printed: Thursday, July 09, 2009 10:35:49 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

31	13C-1,2,3,4,6,7,8-HpCDF	5.30e4	0.46	NO	0.868	10.070	36.79	1.066	192.71	97.0	1.68	
32	13C-1,2,3,4,7,8,9-HpCDF	4.57e4	0.47	NO	0.727	10.070	38.73	1.122	198.82	100	2.01	
33	13C-OCDF	8.72e4	0.89	NO	0.760	10.070	41.84	1.212	362.49	91.3	0.995	
34	37Cl-2,3,7,8-TCDD	2.22e4			0.668	10.070	26.00	1.023	79.703	100	0.357	
35	13C-1,2,3,4-TCDD	8.27e4	0.78	NO	1.00	10.070	25.40	0.000	198.61	100	1.34	
36	13C-1,2,3,4-TCDF	1.20e5	0.80	NO	1.00	10.070	23.97	0.000	198.61	100	0.845	
37	13C-1,2,3,7,8,9-HxCDD	6.29e4	1.22	NO	1.00	10.070	34.52	0.000	198.61	100	1.17	
38	Total Tetra-Dioxins				1.08	10.070					0.107	
39	Total Penta-Dioxins				1.03	10.070					0.0896	
40	Total Hexa-Dioxins				1.13	10.070					0.122	
41	Total Hepta-Dioxins				1.06	10.070			~~0.00000~~ ND		0.186	0.50247
42	Total Tetra-Furans				1.09	10.070					0.0671	
43	1st Func. Penta-Furans				1.16	10.070					0.0411	
44	Total Penta-Furans				1.16	10.070					0.0586	
45	Total Hexa-Furans				1.28	10.070					0.0864	
46	Total Hepta-Furans				1.69	10.070					0.108	

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 10:35:28 Pacific Daylight Time
Printed: Thursday, July 09, 2009 10:35:49 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Hepta-Dioxins

	1,2,3,4,6,7,8-HpCDD	38.17	1.945e3	2.130e3		6.465e1	7.862e1	0.82	YES	1.433e2	0.00000	0.50247	0.388					

Tetra-Furans

Penta-Furans function 1

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 10:35:28 Pacific Daylight Time
Printed: Thursday, July 09, 2009 10:35:49 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

Penta-Furans

Hexa-Furans

Hepta-Furans

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

2,3,7,8-TCDD

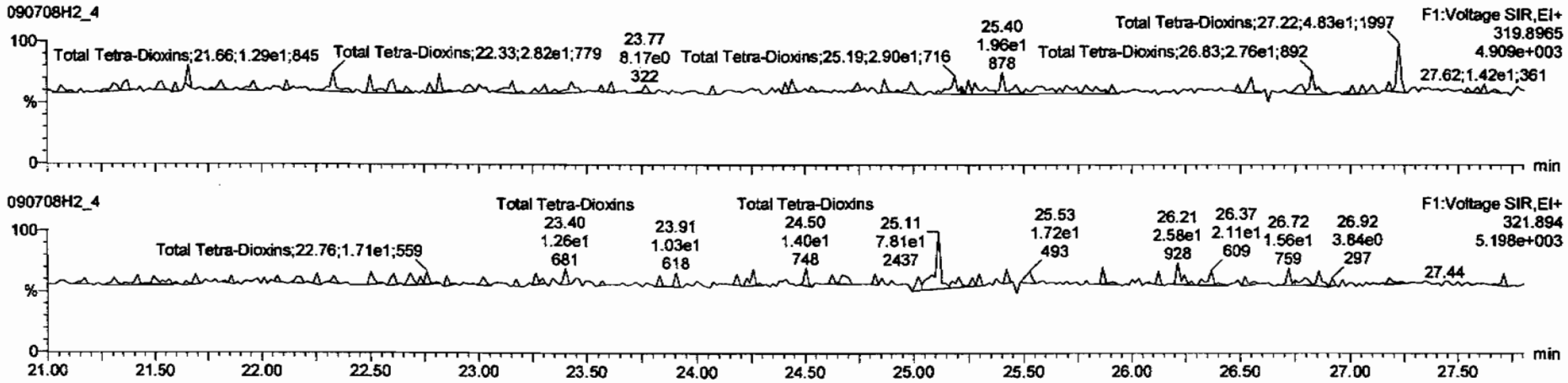

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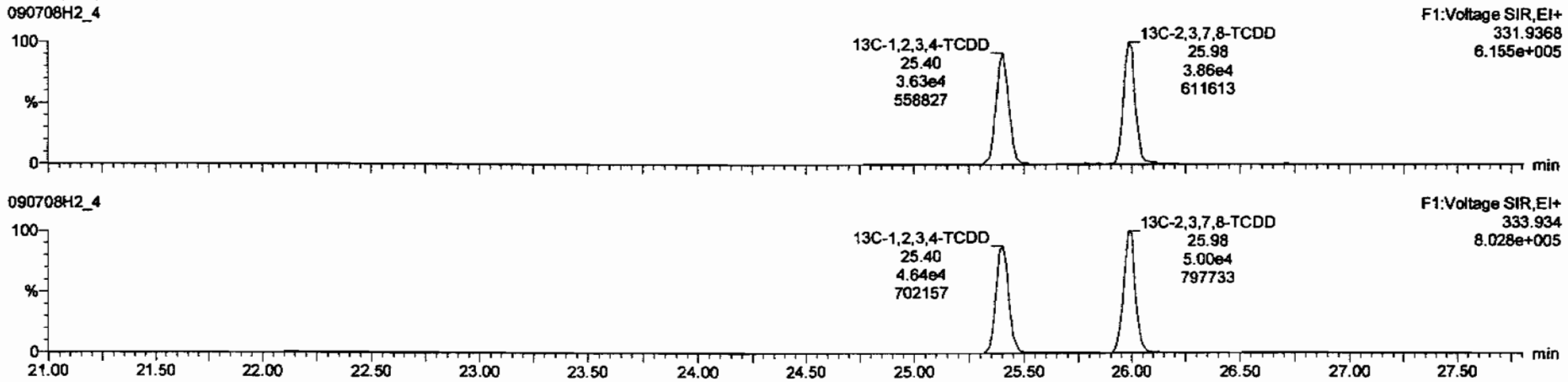

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Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

37Cl-2,3,7,8-TCDD

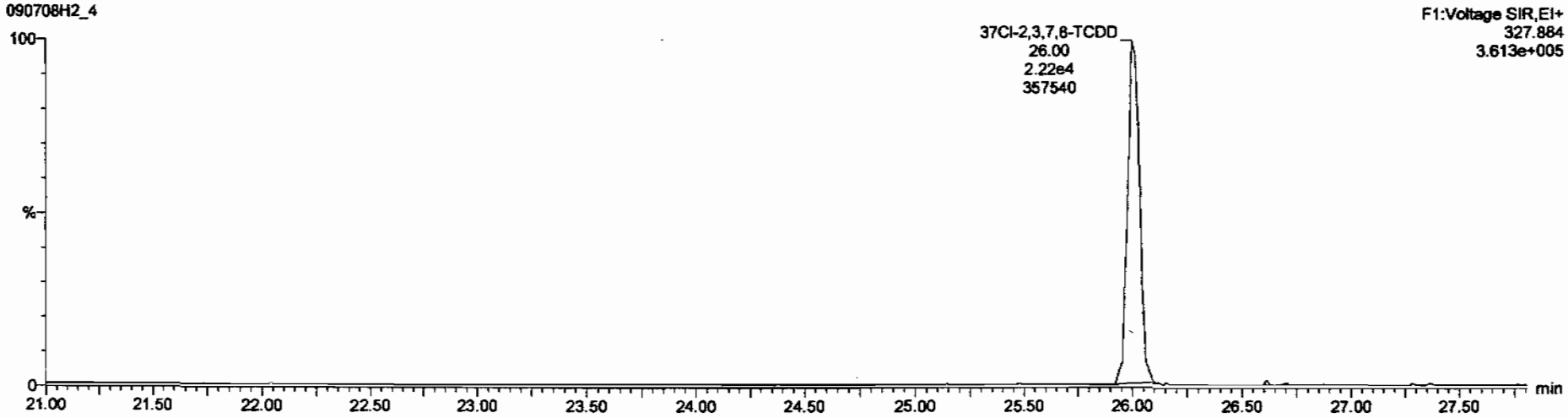

13C-1,2,3,4-TCDD

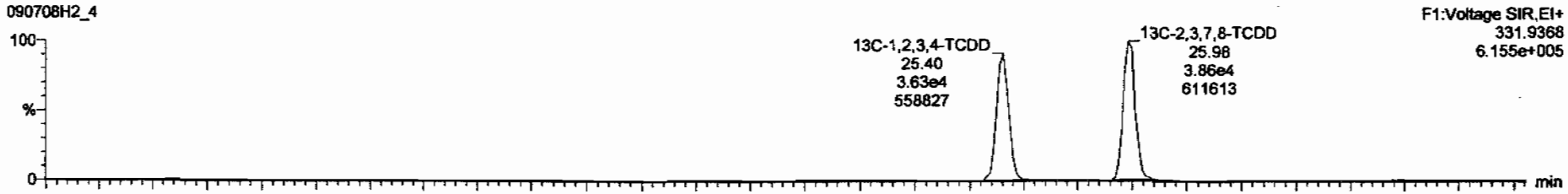

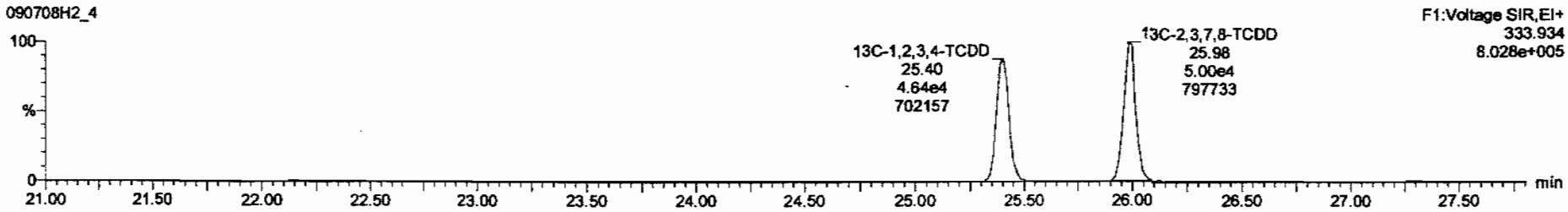

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

1,2,3,7,8-PeCDD

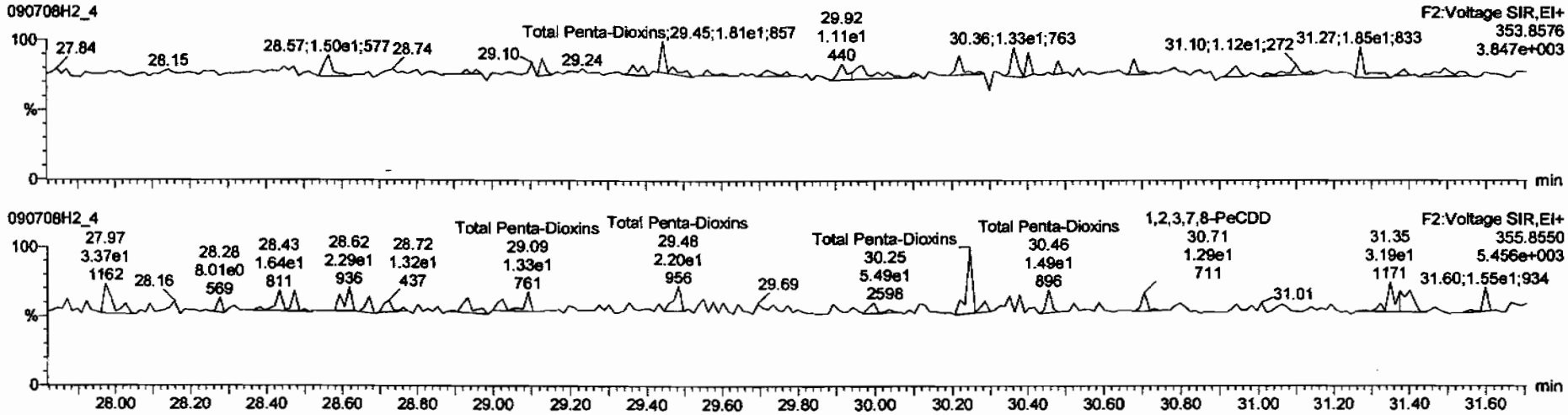

13C-1,2,3,7,8-PeCDD

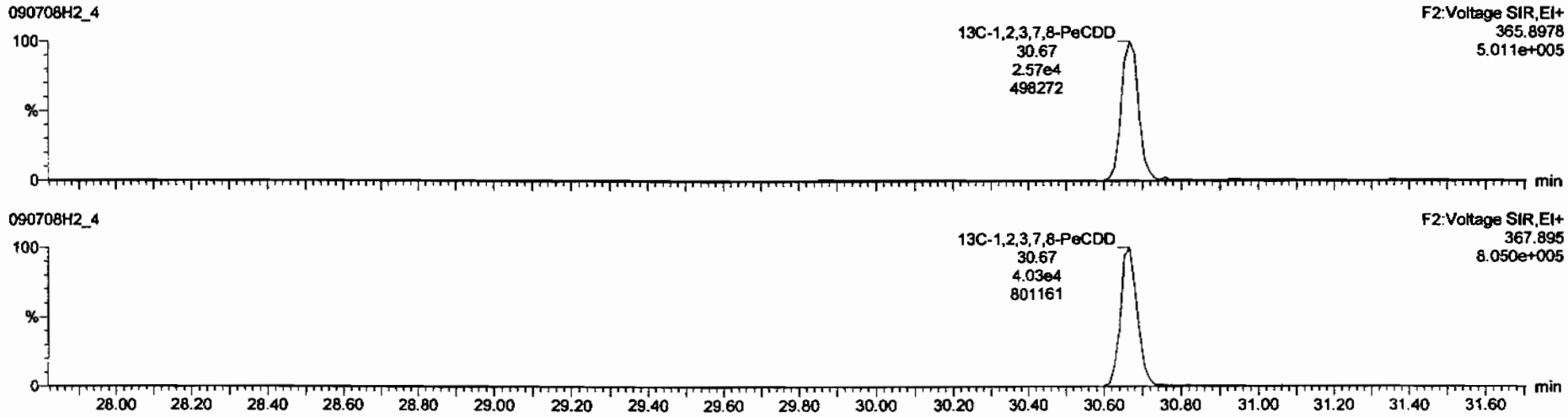

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Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

1,2,3,4,7,8-HxCDD

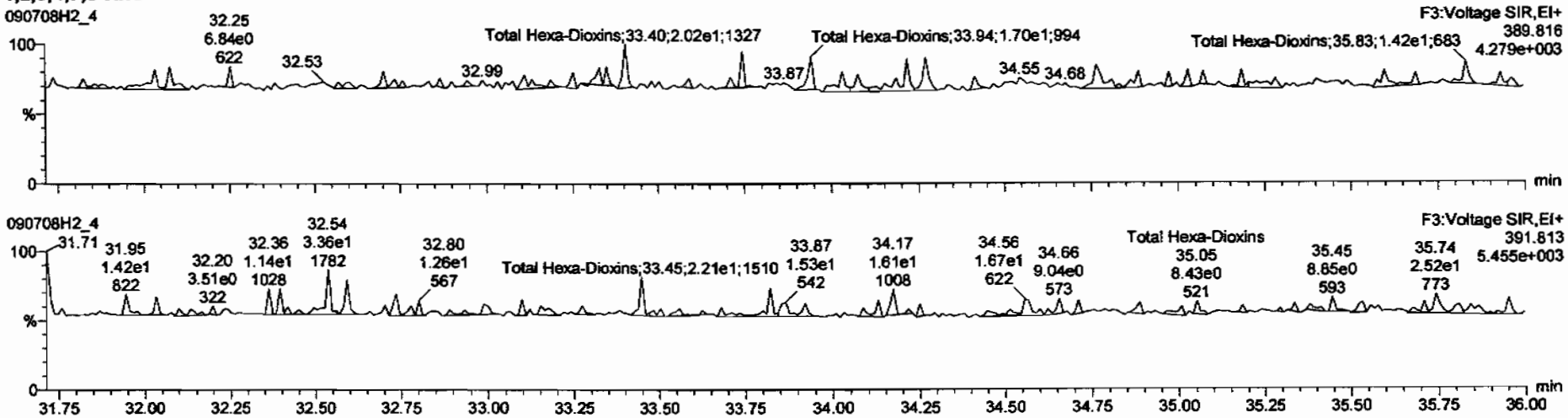

13C-1,2,3,4,7,8-HxCDD

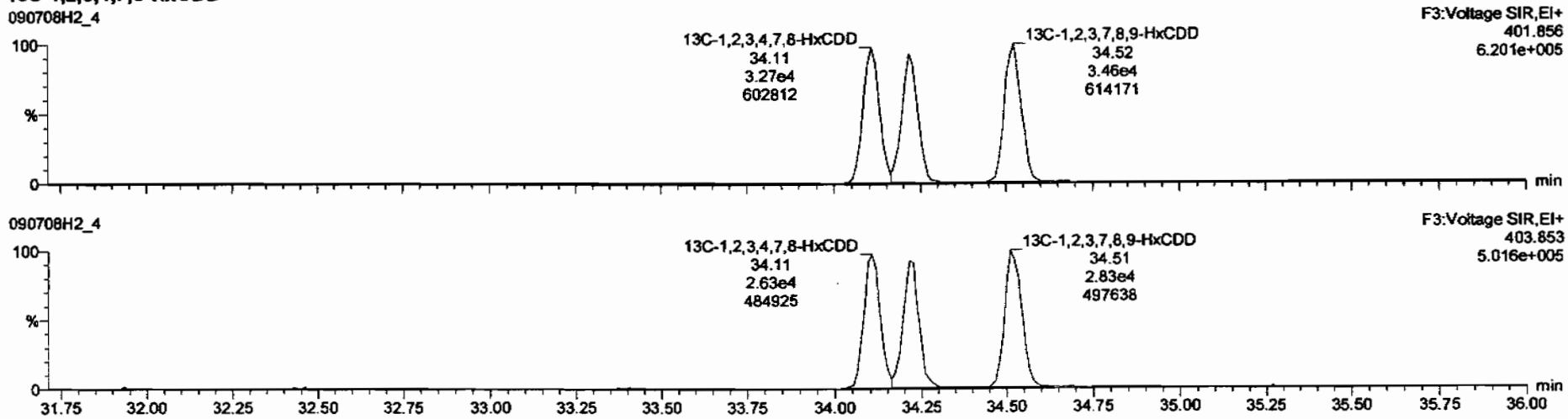

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

1,2,3,4,6,7,8-HpCDD

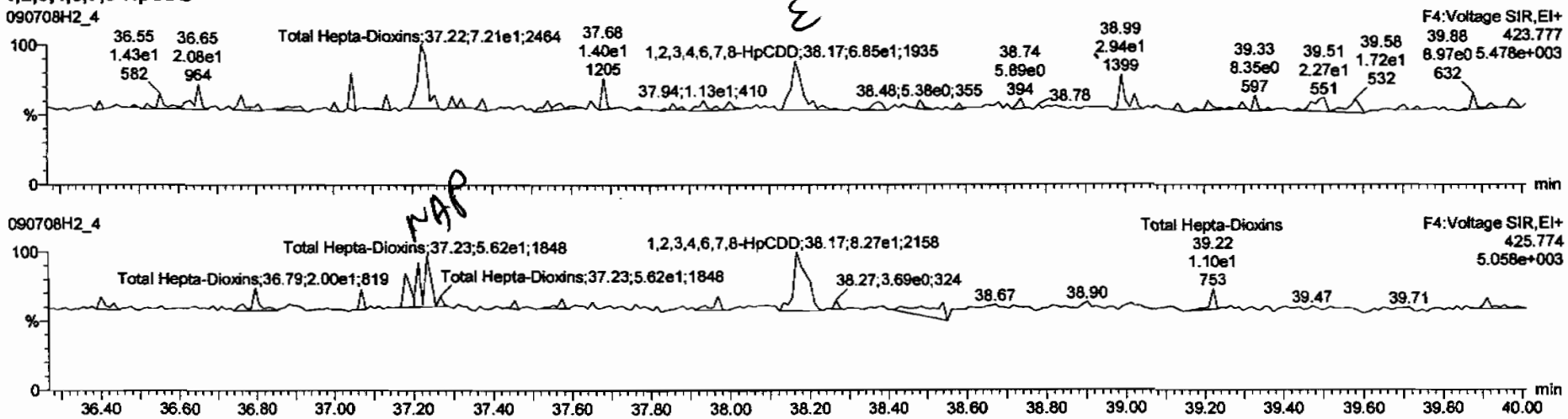

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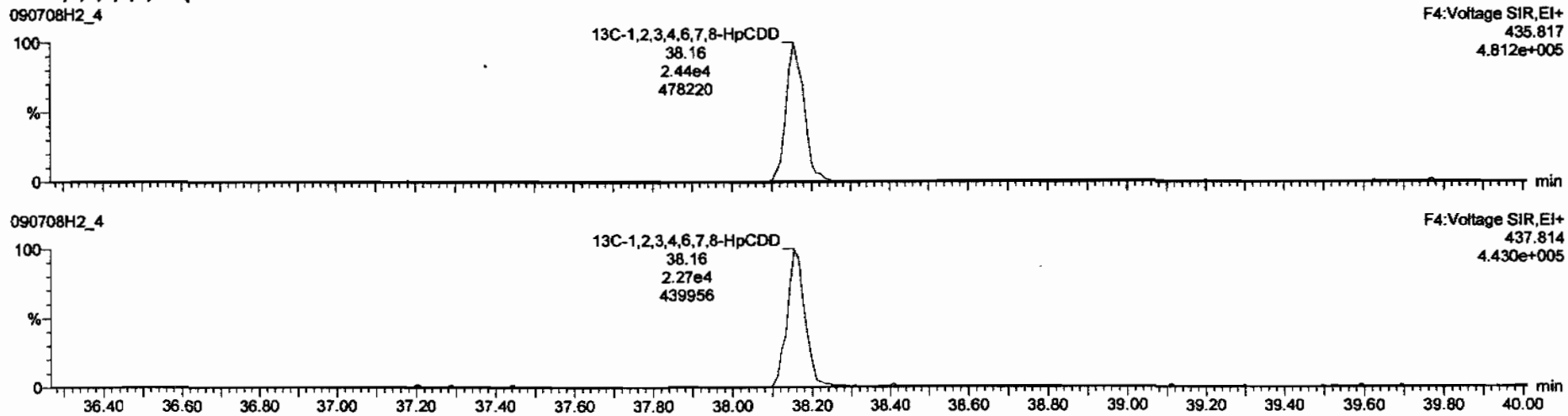

TargetLynx - 090708h2-4.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090708H2_4 - 31848_2222_002 CAMO-09-6604 11.15 - CAMO-09-6604

	Name	RT	Int(Resp)	Int(Conc)	RA	QVL	EMPC	CONC
1	1,2,3,4,6,7,8-HpCDD	38.17	6.465e1	7.862e1	0.82	YES	0.50247	0.00000

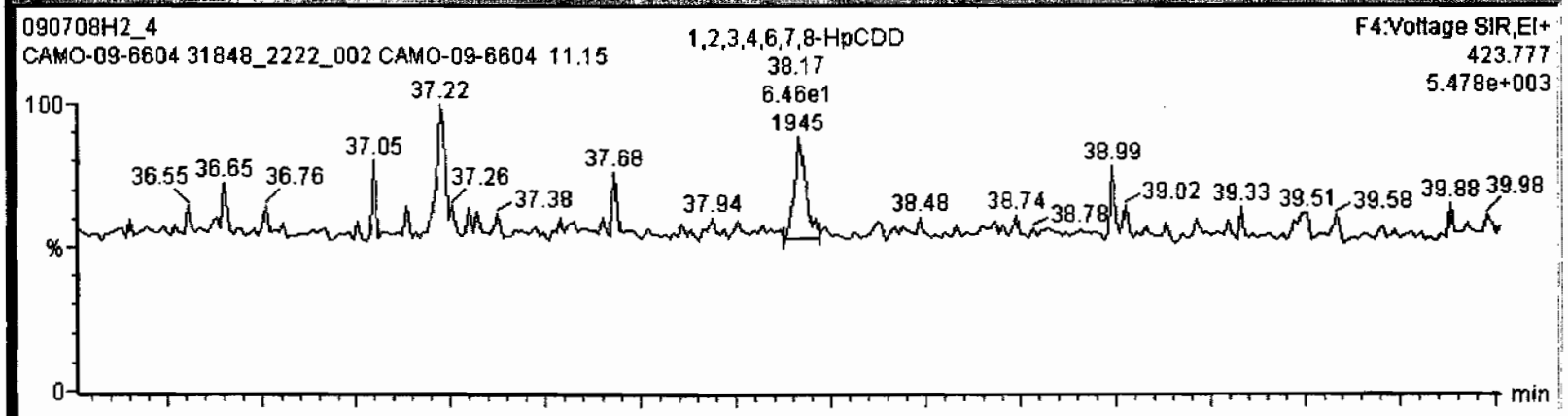

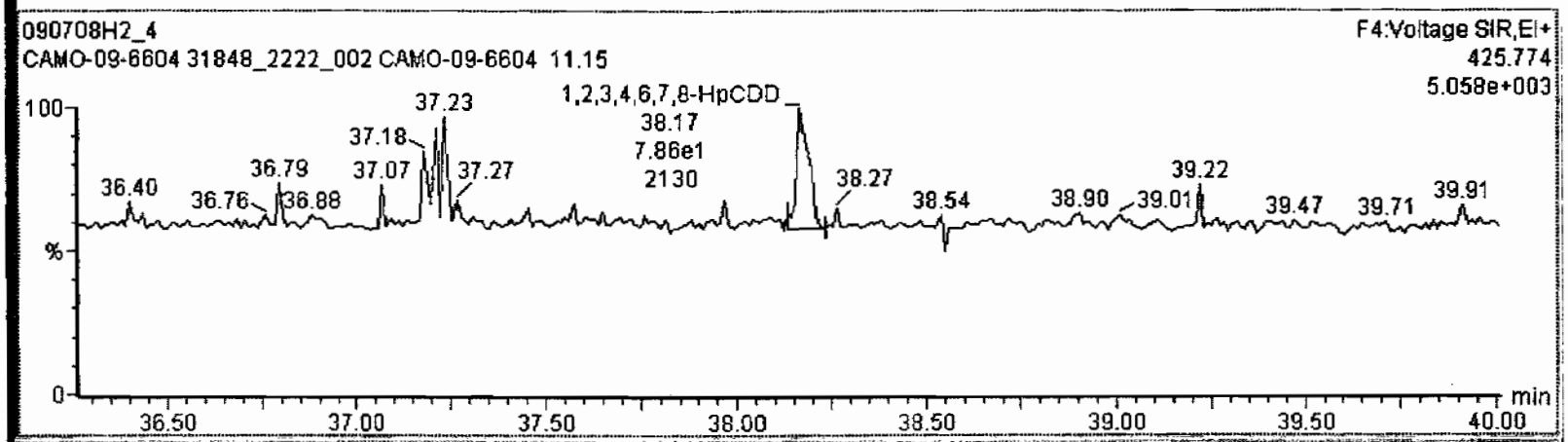

Ready

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

OCDD

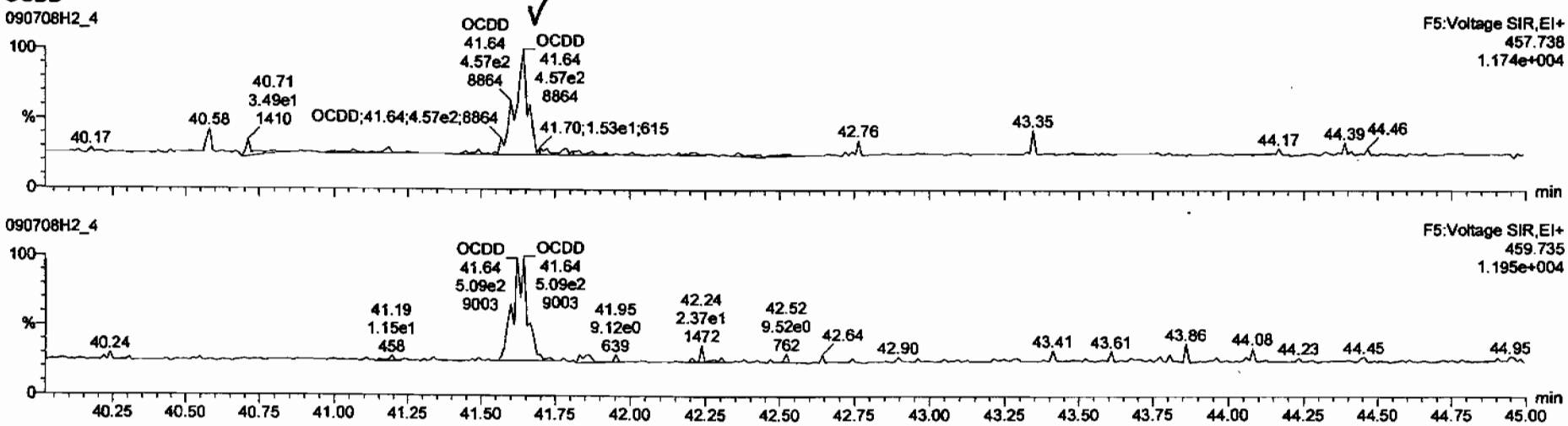

13C-OCDD

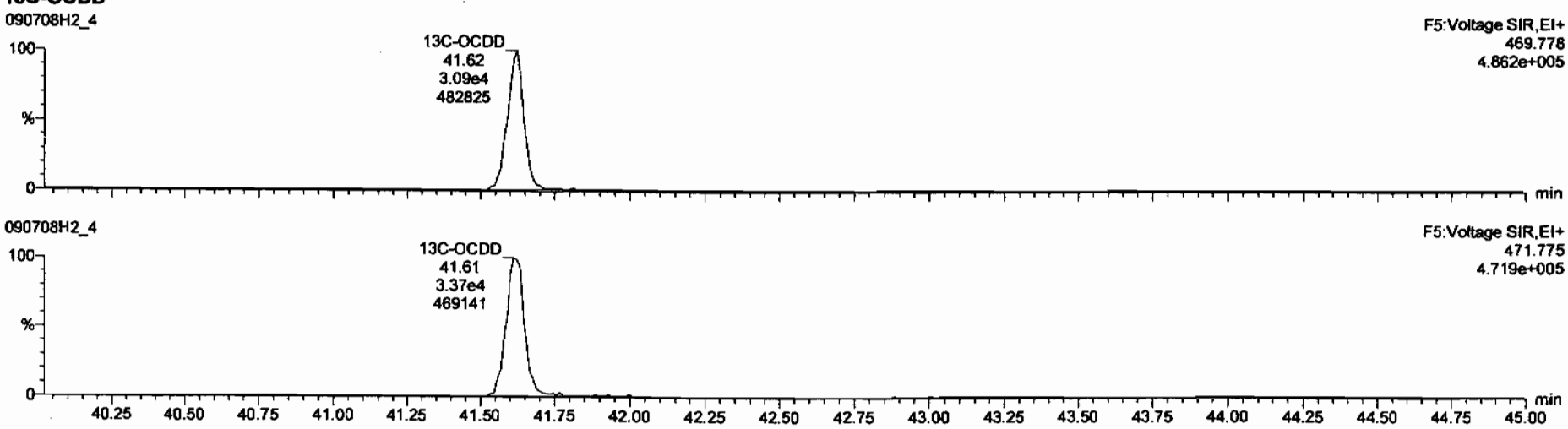

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

2,3,7,8-TCDF

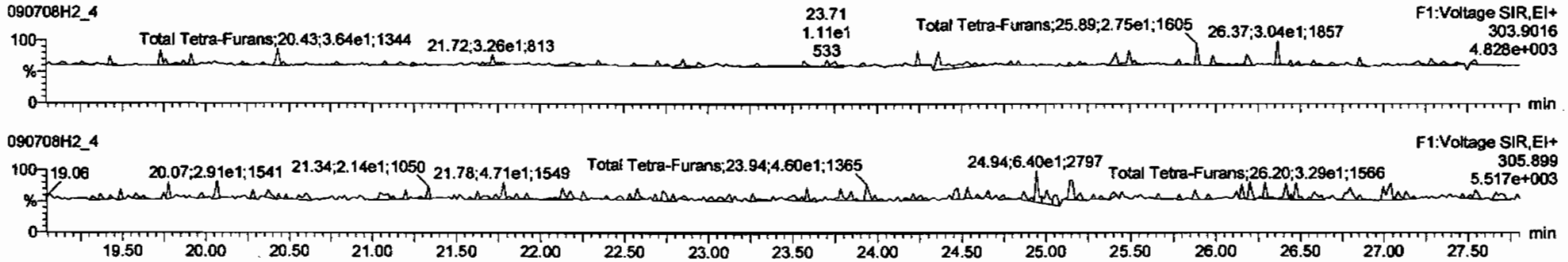

13C-2,3,7,8-TCDF

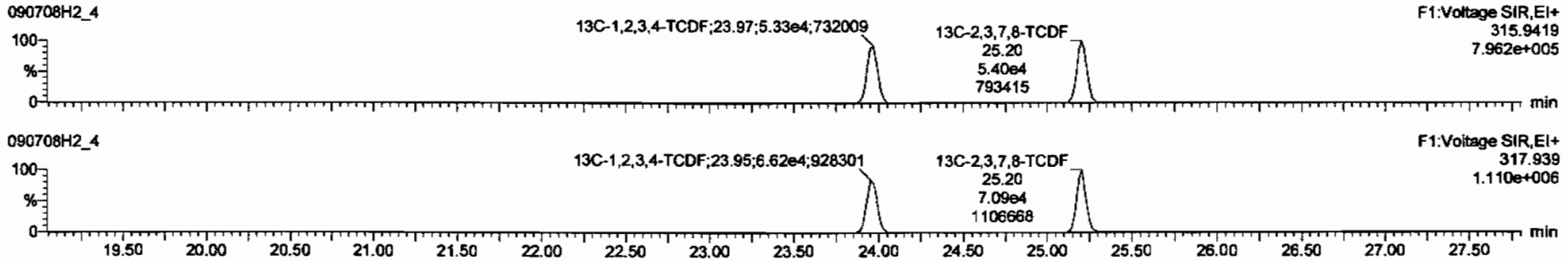

DPE1

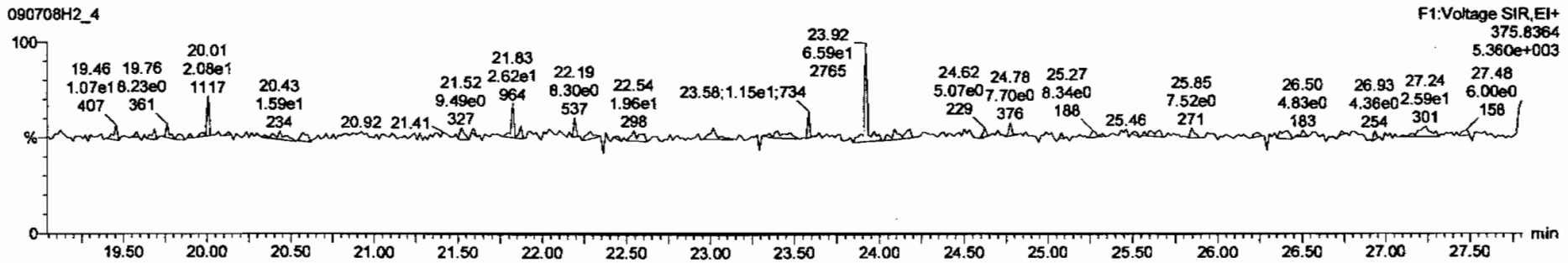

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Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

1st Func. Penta-Furans

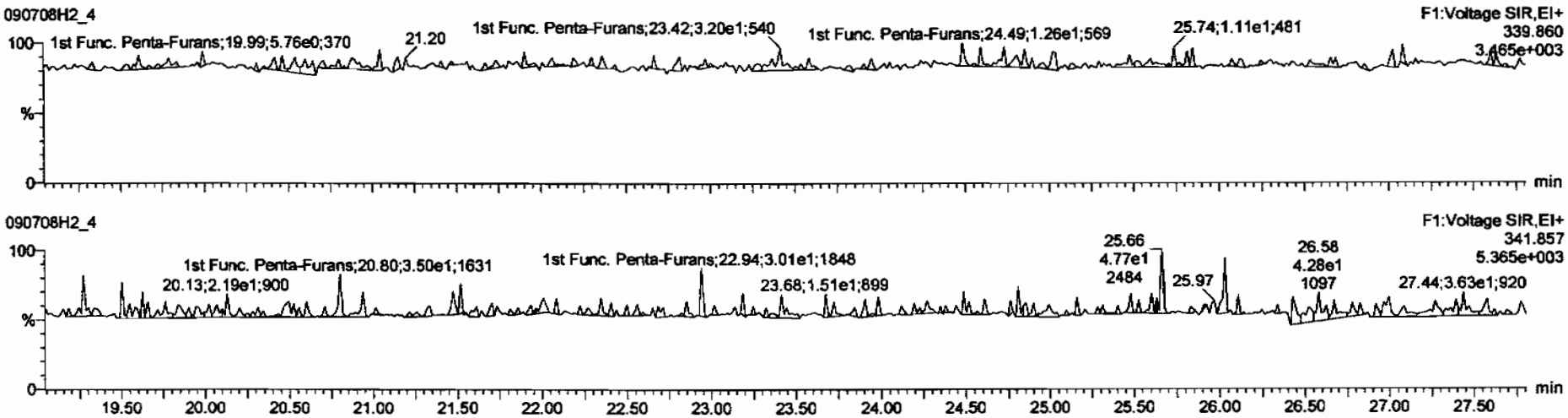

DPE6

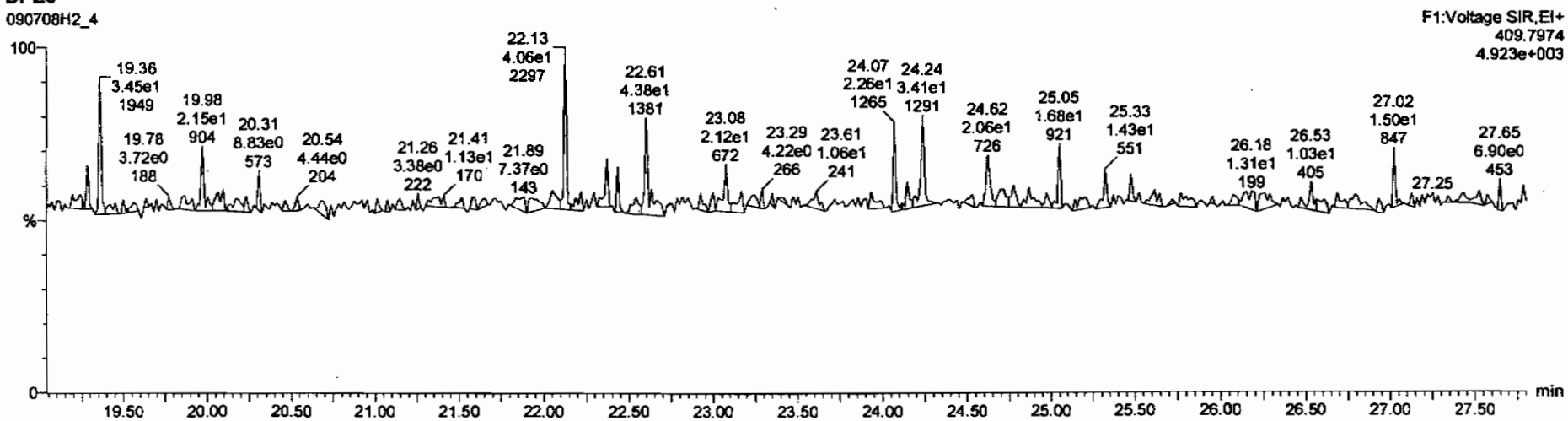

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Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

1,2,3,7,8-PeCDF

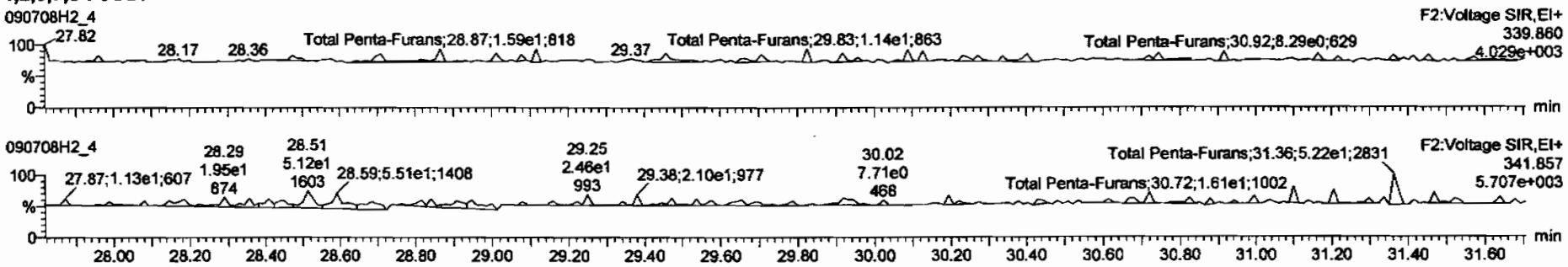

13C-1,2,3,7,8-PeCDF

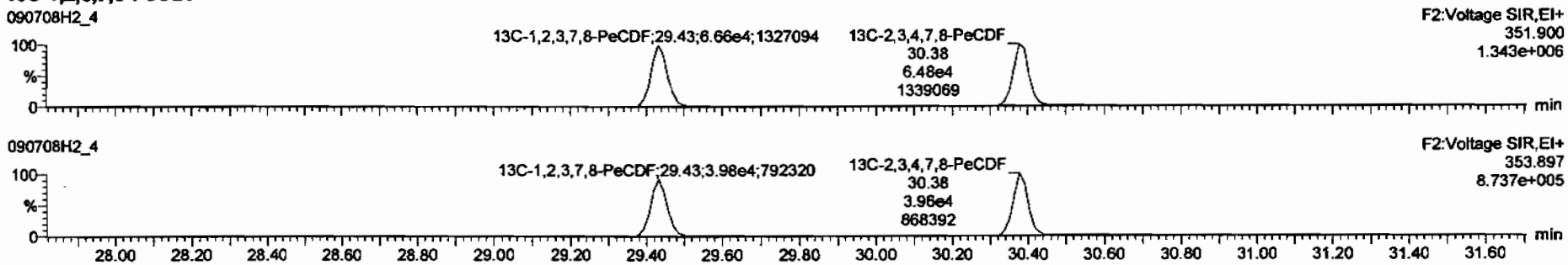

DPE2

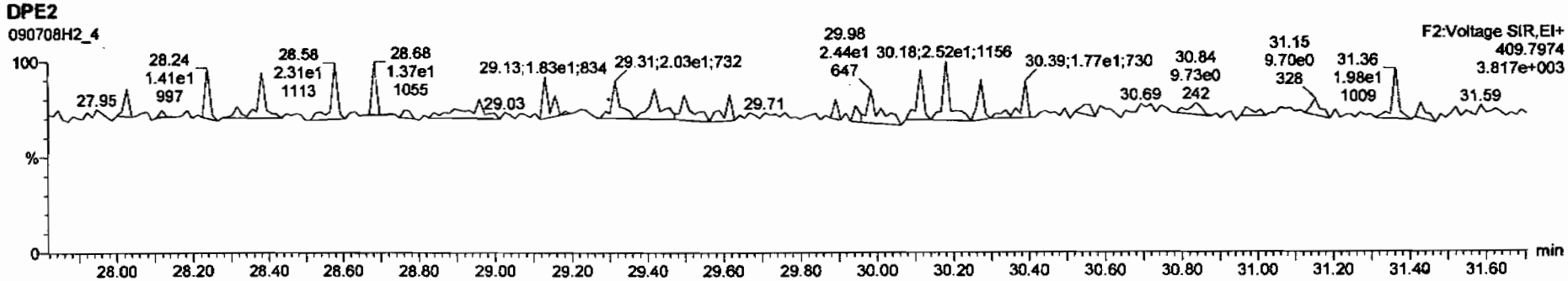

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Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

1,2,3,4,7,8-HxCDF

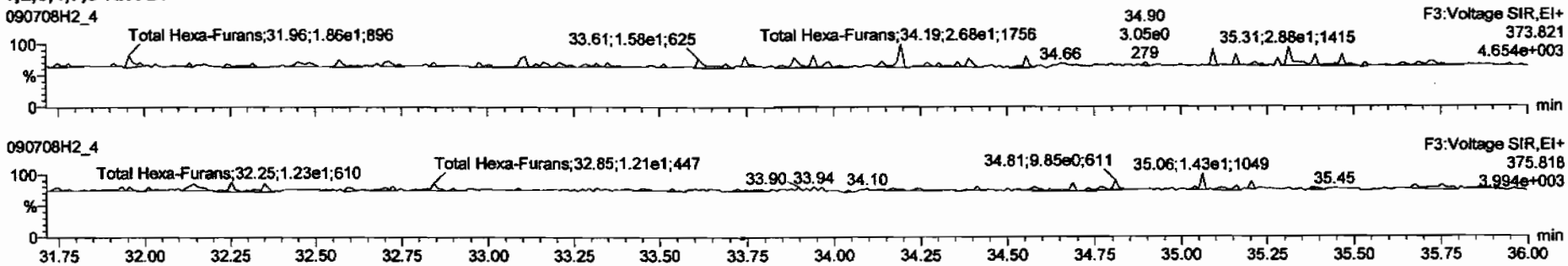

13C-1,2,3,4,7,8-HxCDF

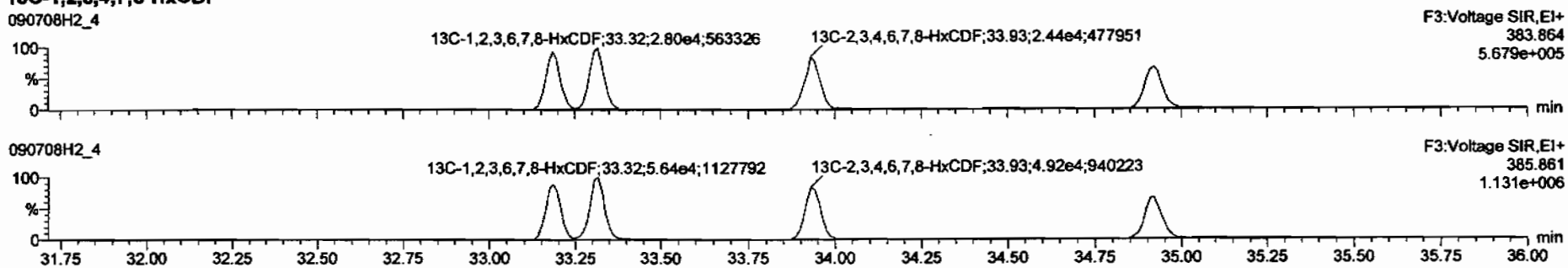

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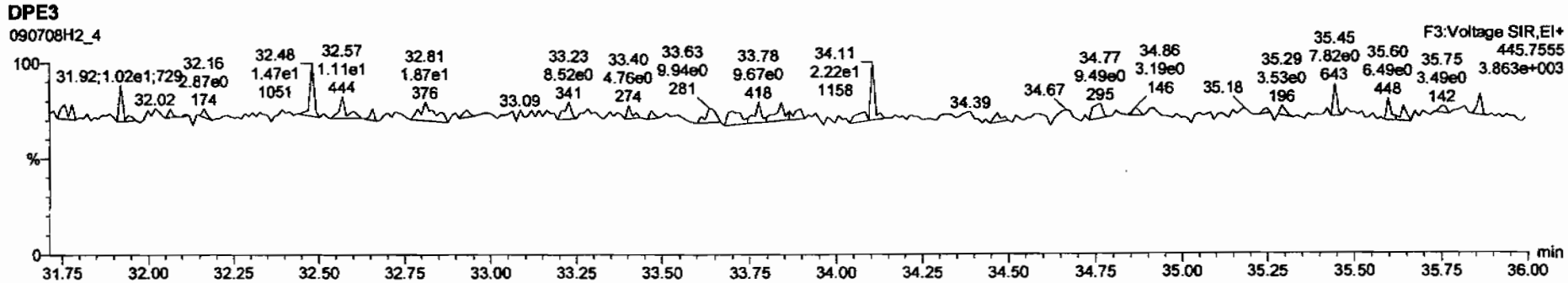

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Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

1,2,3,4,6,7,8-HpCDF

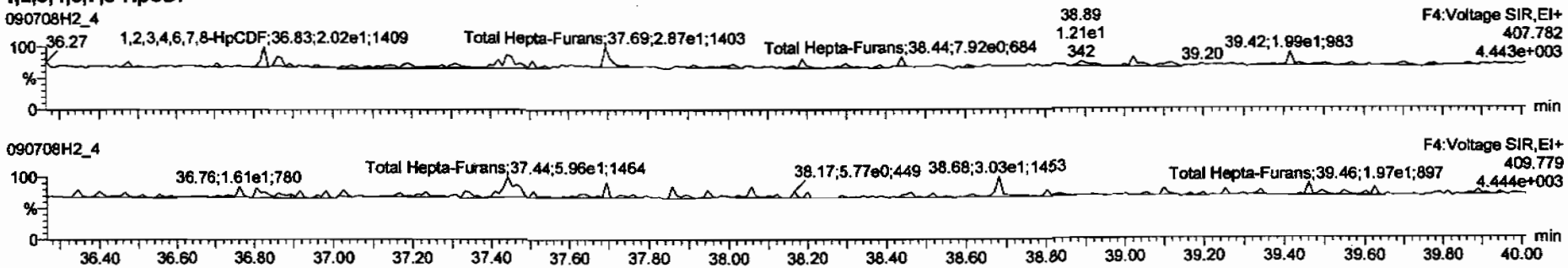

13C-1,2,3,4,6,7,8-HpCDF

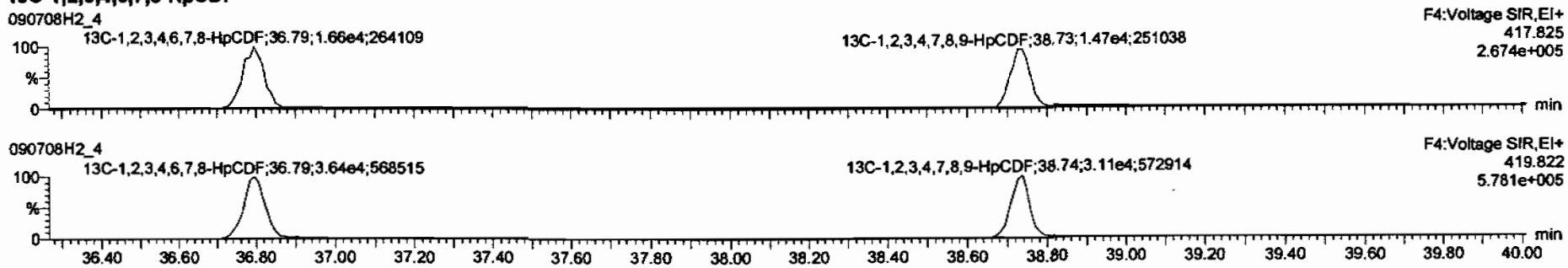

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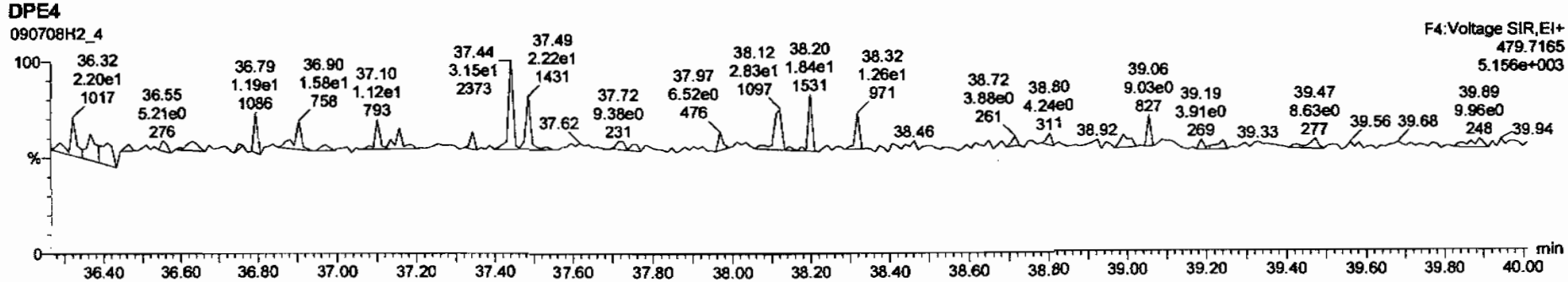

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

OCDF

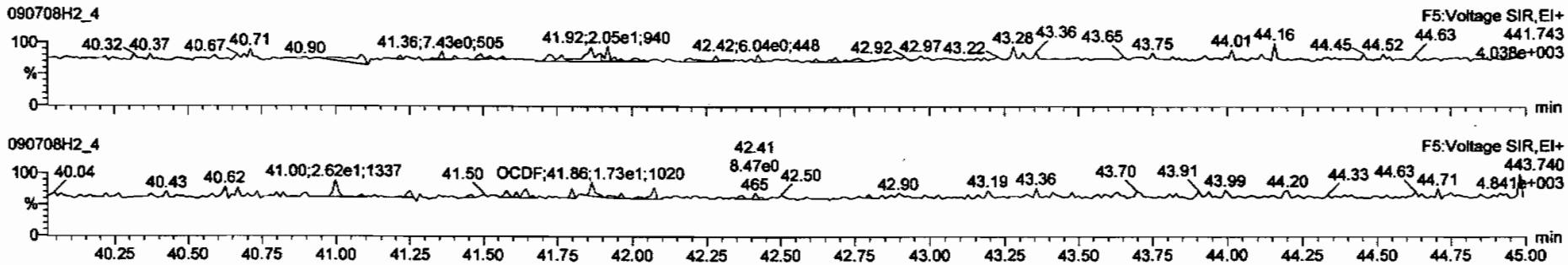

13C-OCDF

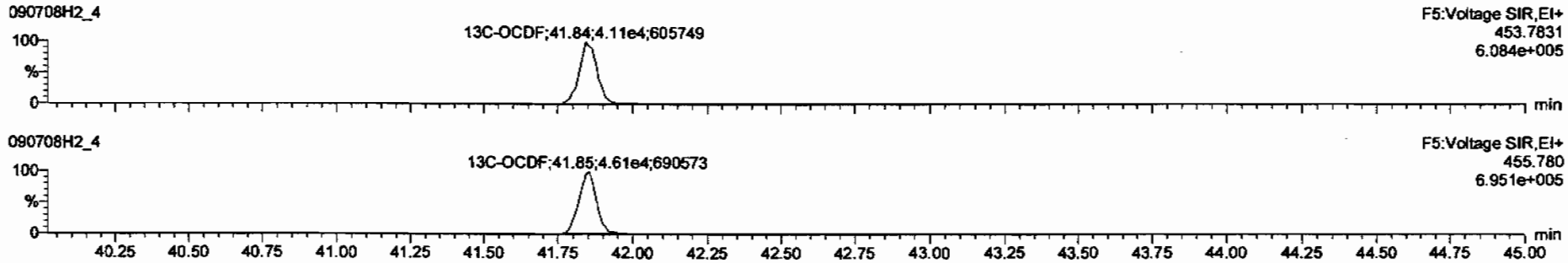

DPE5

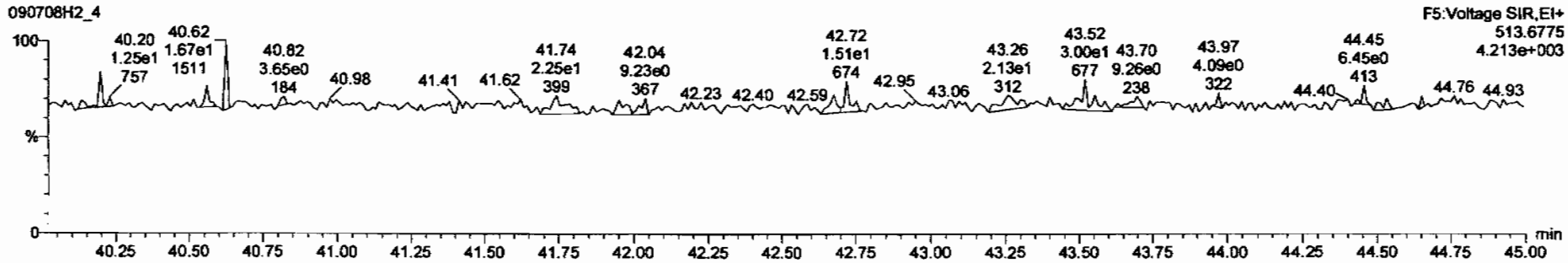

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-4.qld

Last Altered: Thursday, July 09, 2009 07:35:54 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:09 Pacific Daylight Time

Name: 090708H2_4, Date: 09-Jul-2009, Time: 05:11:04, ID: 31848_2222_002 CAMO-09-6604 11.15, Description: CAMO-09-6604

PFK1

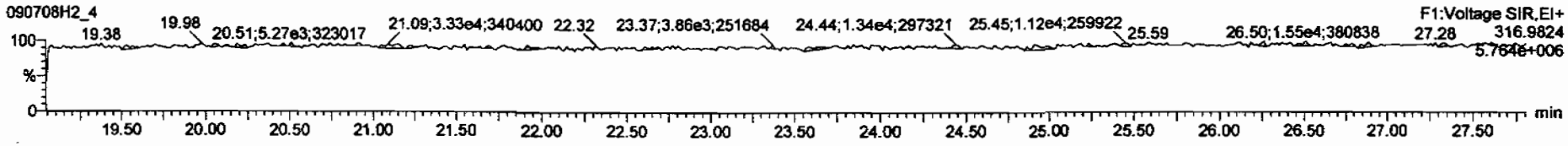

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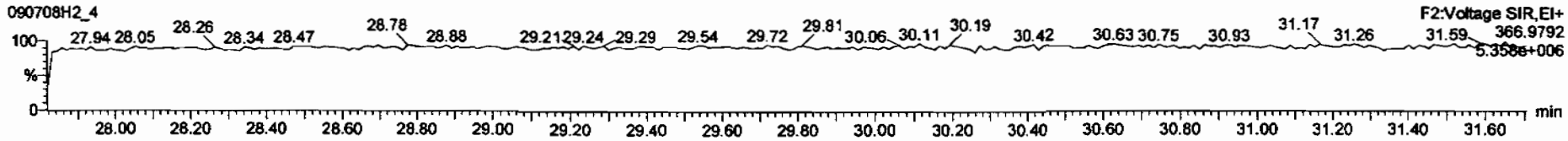

PFK3

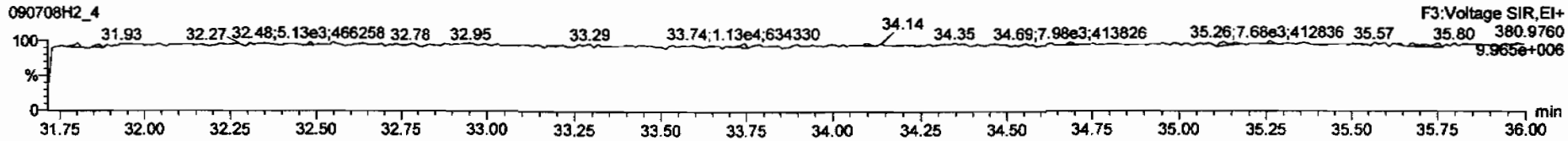

PFK4

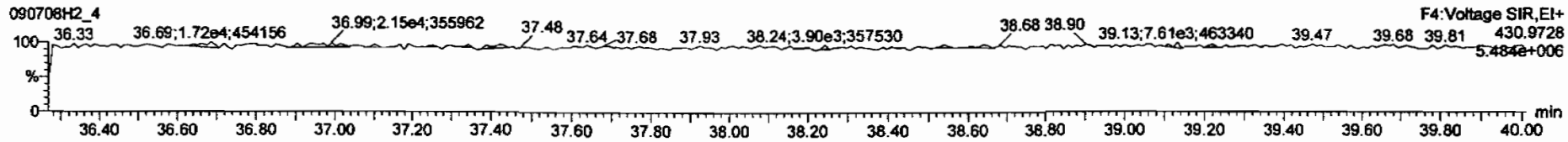

PFK5

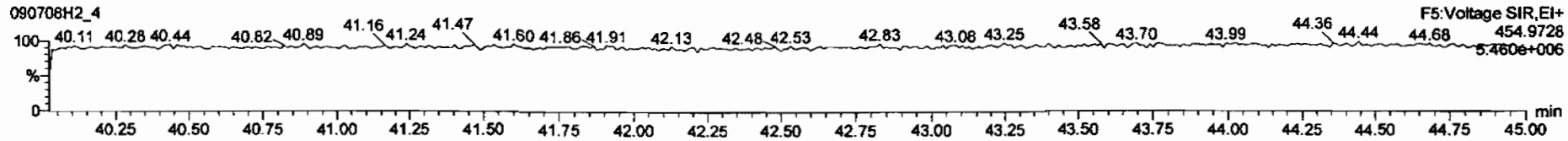

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-5.qld

Last Altered: Thursday, July 09, 2009 10:41:00 Pacific Daylight Time
Printed: Thursday, July 09, 2009 10:41:12 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

1	2,3,7,8-TCDD			NO	1.08	10.100					0.134	
2	1,2,3,7,8-PeCDD			NO	1.03	10.100					0.193	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.100					0.163	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.100					0.167	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.100					0.159	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.100					0.188	
7	OCDD	1.82e2	1.02	YES	1.18	10.100	41.65	1.000	~~0.63284~~ ND		0.324	0.59070
8	2,3,7,8-TCDF			NO	1.09	10.100					0.121	
9	1,2,3,7,8-PeCDF			NO	1.16	10.100					0.109	
10	2,3,4,7,8-PeCDF			NO	1.12	10.100					0.102	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.100					0.0625	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.100					0.0644	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.100					0.0780	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.100					0.104	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.100					0.128	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.100					0.127	
17	OCDF			NO	1.10	10.100					0.286	
18	13C-2,3,7,8-TCDD	1.41e5	0.84	NO	1.01	10.100	25.99	1.023	208.16	105	0.930	
19	13C-1,2,3,7,8-PeCDD	1.09e5	0.61	NO	0.827	10.100	30.67	1.207	198.23	100	0.813	
20	13C-1,2,3,4,7,8-HxCDD	9.70e4	1.29	NO	0.916	10.100	34.11	0.988	199.26	101	1.25	
21	13C-1,2,3,6,7,8-HxCDD	8.84e4	1.22	NO	0.921	10.100	34.22	0.991	180.60	91.3	1.24	
22	13C-1,2,3,4,6,7,8-HpCDD	7.57e4	1.09	NO	0.708	10.100	38.17	1.106	201.28	102	1.70	
23	13C-OCDD	9.66e4	0.92	NO	0.503	10.100	41.63	1.206	361.90	91.4	1.03	
24	13C-2,3,7,8-TCDF	1.99e5	0.77	NO	0.977	10.100	25.20	0.992	207.85	105	0.501	
25	13C-1,2,3,7,8-PeCDF	1.67e5	1.58	NO	0.896	10.100	29.43	1.159	190.84	96.4	1.01	
26	13C-2,3,4,7,8-PeCDF	1.68e5	1.61	NO	0.900	10.100	30.38	1.196	191.34	96.6	1.01	
27	13C-1,2,3,4,7,8-HxCDF	1.22e5	0.52	NO	1.17	10.100	33.19	0.962	196.39	99.2	1.22	
28	13C-1,2,3,6,7,8-HxCDF	1.38e5	0.52	NO	1.52	10.100	33.32	0.965	170.44	86.1	0.935	
29	13C-2,3,4,6,7,8-HxCDF	1.23e5	0.51	NO	1.25	10.100	33.93	0.983	185.26	93.6	1.14	
30	13C-1,2,3,7,8,9-HxCDF	1.05e5	0.52	NO	1.05	10.100	34.92	1.012	187.07	94.5	1.35	

7/9/09

7/13/09

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-5.qld

Last Altered: Thursday, July 09, 2009 10:41:00 Pacific Daylight Time
Printed: Thursday, July 09, 2009 10:41:12 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

31	13C-1,2,3,4,6,7,8-HpCDF	8.25e4	0.44	NO	0.868	10.100	36.80	1.066	178.80	90.3	1.52
32	13C-1,2,3,4,7,8,9-HpCDF	7.64e4	0.44	NO	0.727	10.100	38.74	1.122	197.95	100	1.82
33	13C-OCDF	1.36e5	0.89	NO	0.760	10.100	41.87	1.213	337.81	85.3	0.763
34	37Cl-2,3,7,8-TCDD	3.66e4			0.668	10.100	26.01	1.024	82.338	104	0.186
35	13C-1,2,3,4-TCDD	1.32e5	0.80	NO	1.00	10.100	25.40	0.000	198.02	100	0.944
36	13C-1,2,3,4-TCDF	1.94e5	0.80	NO	1.00	10.100	23.97	0.000	198.02	100	0.489
37	13C-1,2,3,7,8,9-HxCDD	1.05e5	1.30	NO	1.00	10.100	34.51	0.000	198.02	100	1.14
38	Total Tetra-Dioxins				1.08	10.100					0.0655
39	Total Penta-Dioxins				1.03	10.100					0.0546
40	Total Hexa-Dioxins				1.13	10.100					0.0684
41	Total Hepta-Dioxins				1.06	10.100					0.106
42	Total Tetra-Furans				1.09	10.100					0.0427
43	1st Func. Penta-Furans				1.16	10.100					0.0344
44	Total Penta-Furans				1.16	10.100					0.0386
45	Total Hexa-Furans				1.28	10.100					0.0480
46	Total Hepta-Furans				1.69	10.100					0.0469

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-5.qld

Last Altered: Thursday, July 09, 2009 07:36:17 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

2,3,7,8-TCDD

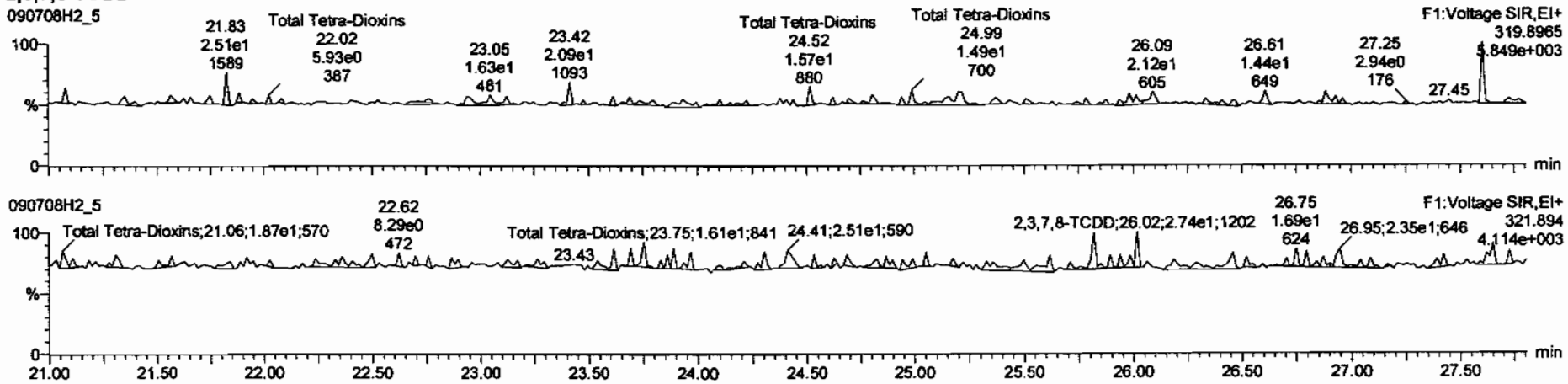

13C-2,3,7,8-TCDD

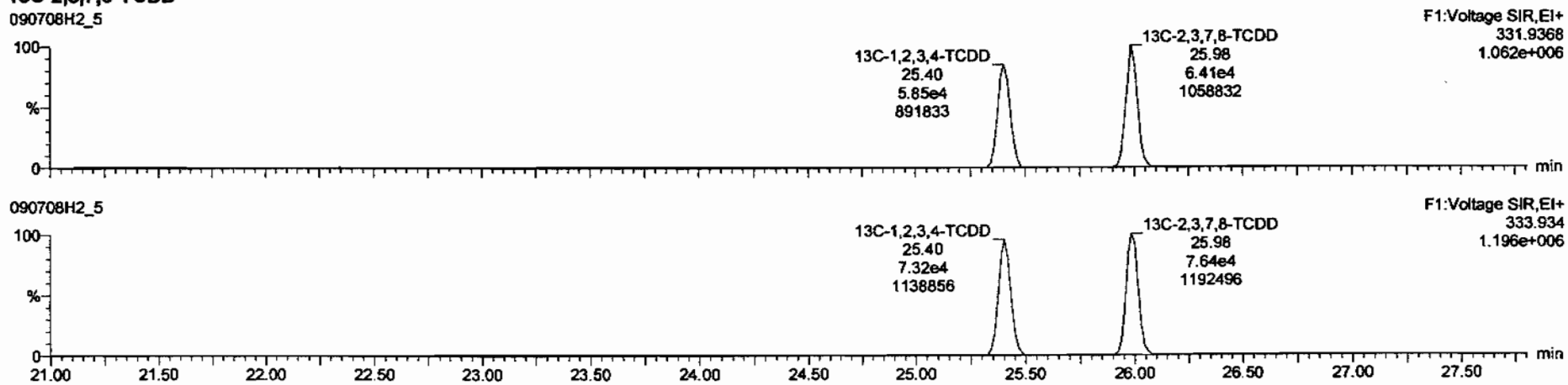

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-5.qld

Last Altered: Thursday, July 09, 2009 07:36:17 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

37Cl-2,3,7,8-TCDD

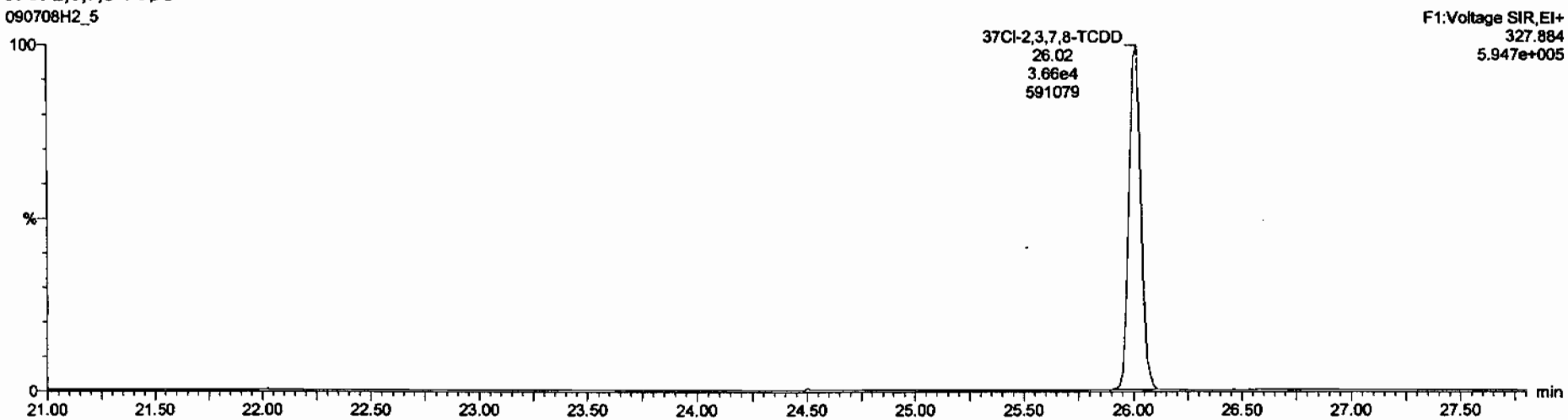

13C-1,2,3,4-TCDD

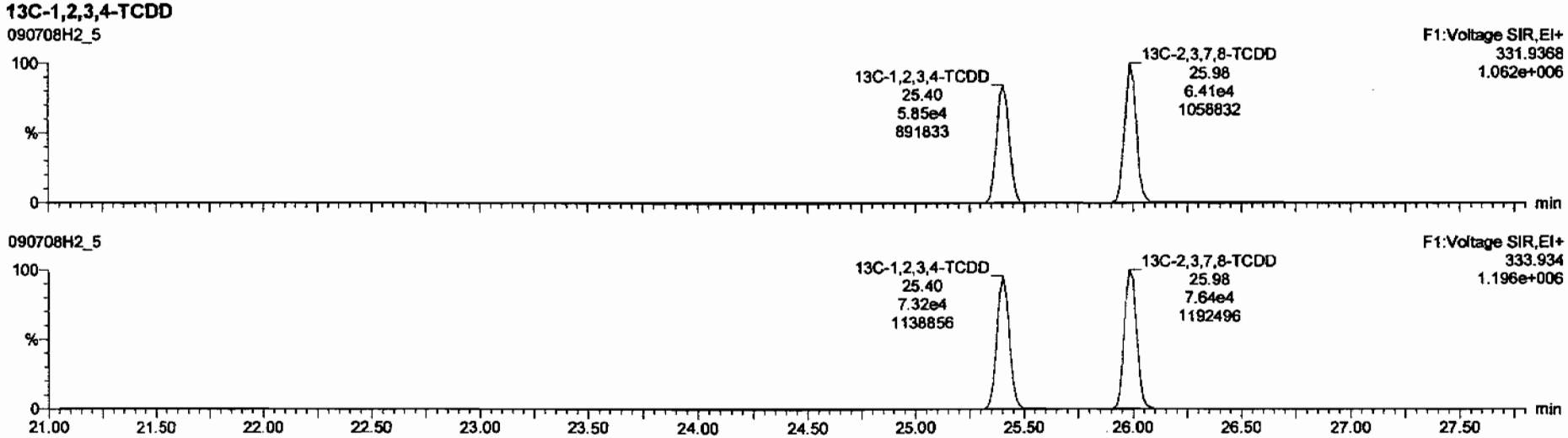

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-5.qld

Last Altered: Thursday, July 09, 2009 07:36:17 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

1,2,3,7,8-PeCDD

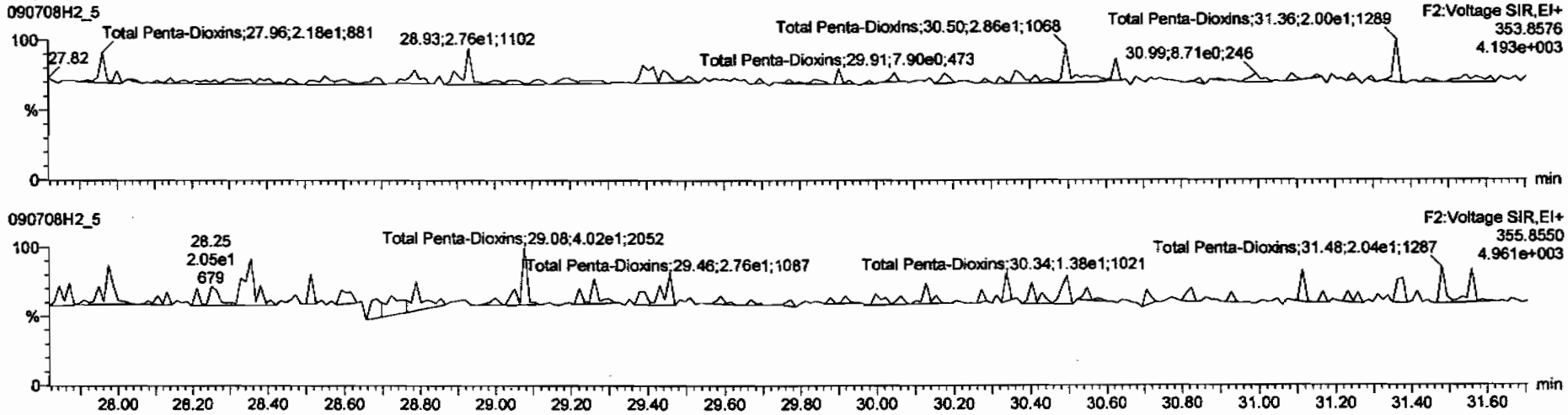

13C-1,2,3,7,8-PeCDD

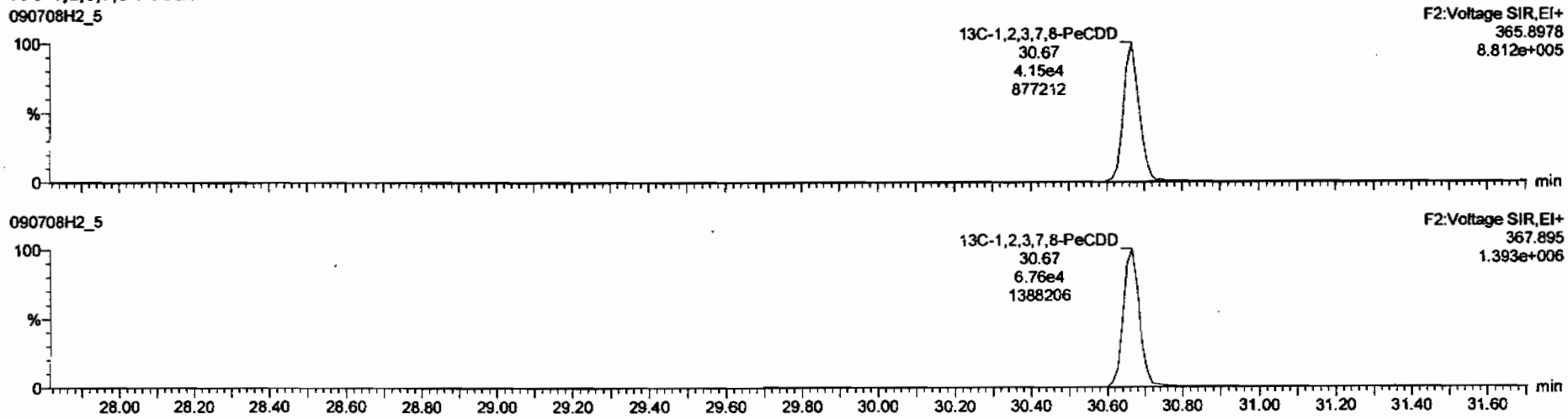

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Last Altered: Thursday, July 09, 2009 07:36:17 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

1,2,3,4,7,8-HxCDD

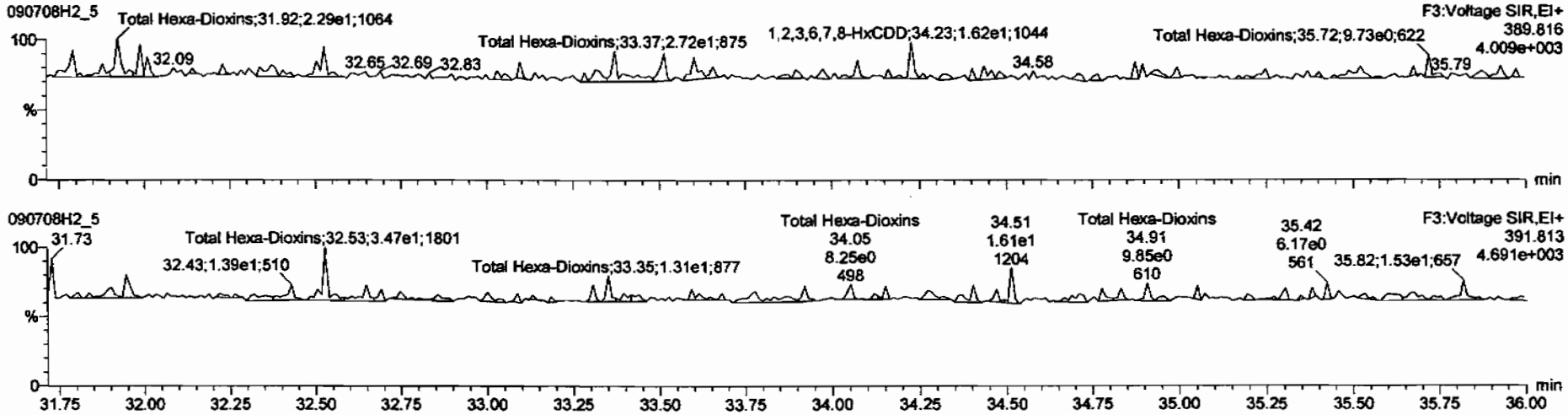

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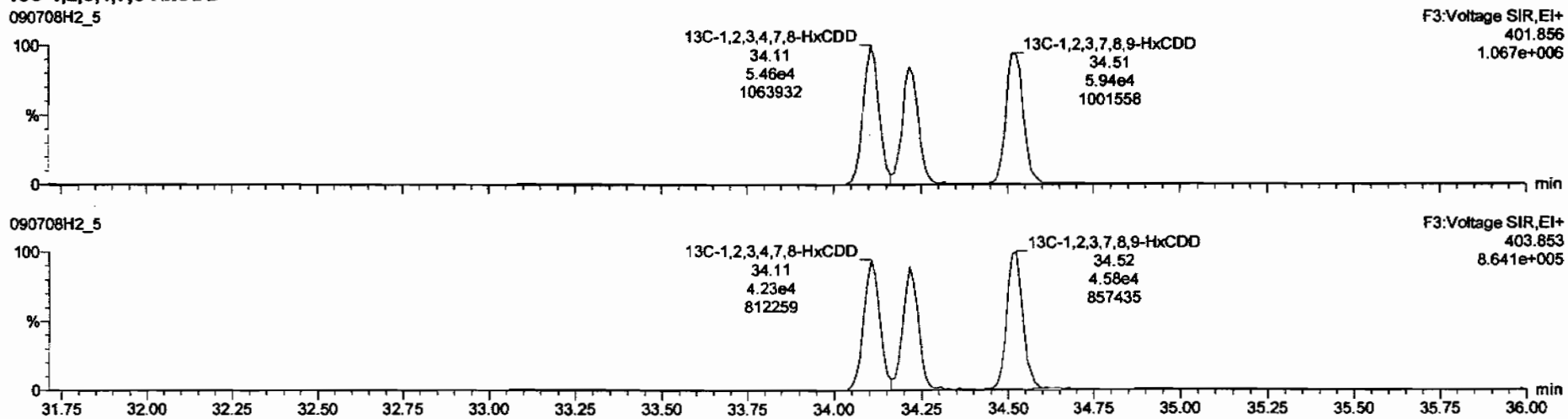

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Last Altered: Thursday, July 09, 2009 07:36:17 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

1,2,3,4,6,7,8-HpCDD

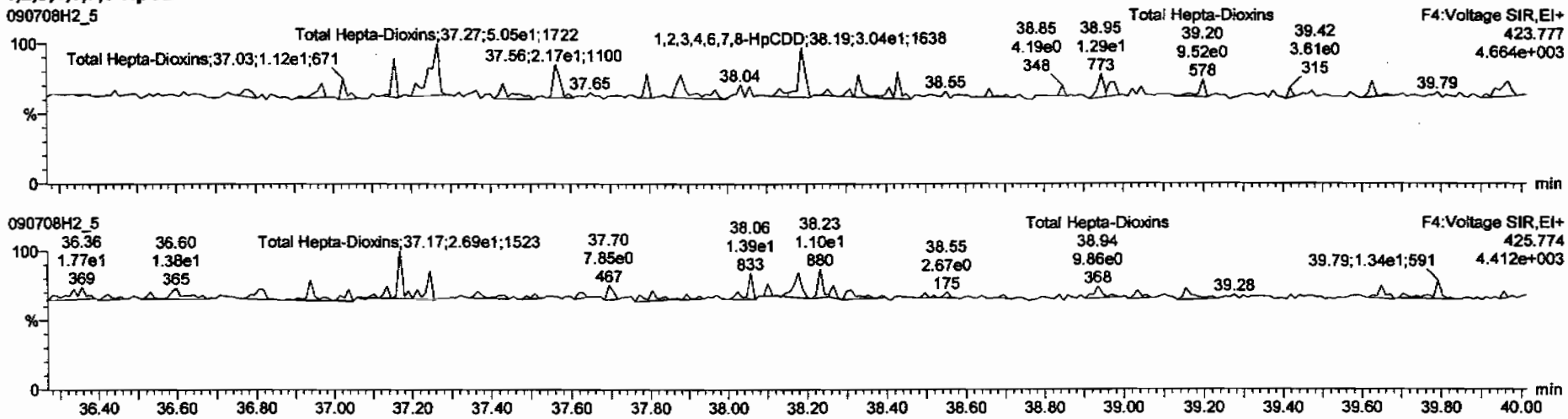

13C-1,2,3,4,6,7,8-HpCDD

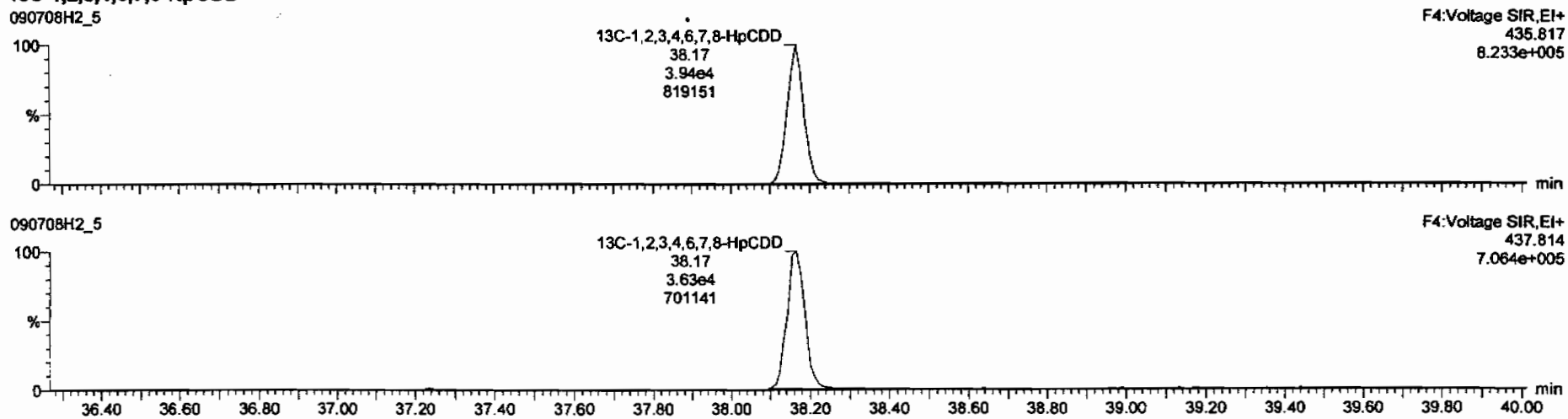

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Last Altered: Thursday, July 09, 2009 07:36:17 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

OCDD

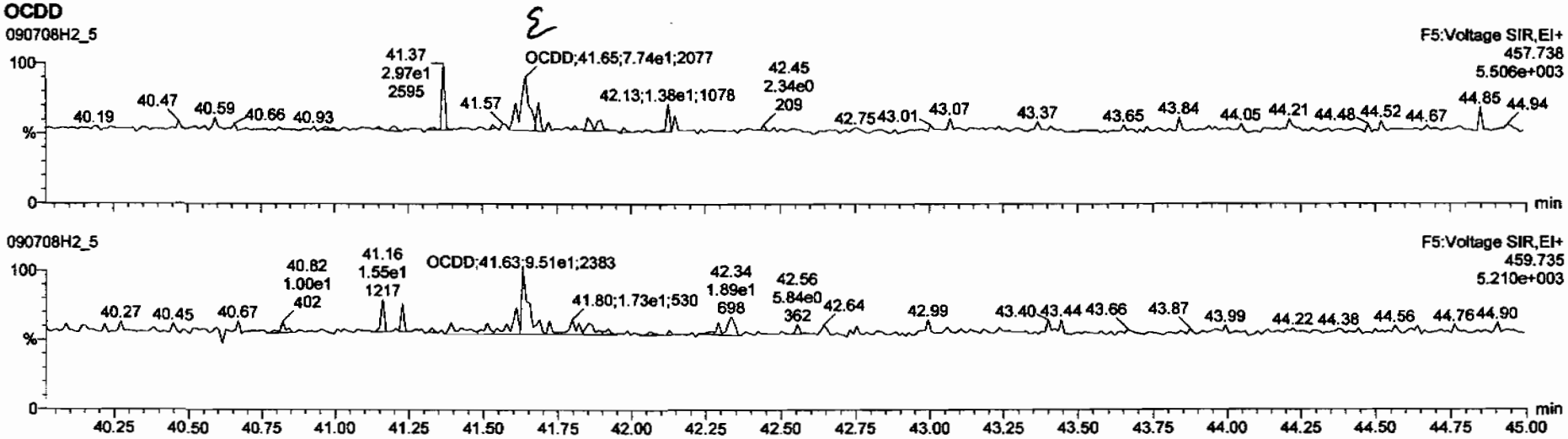

13C-OCDD

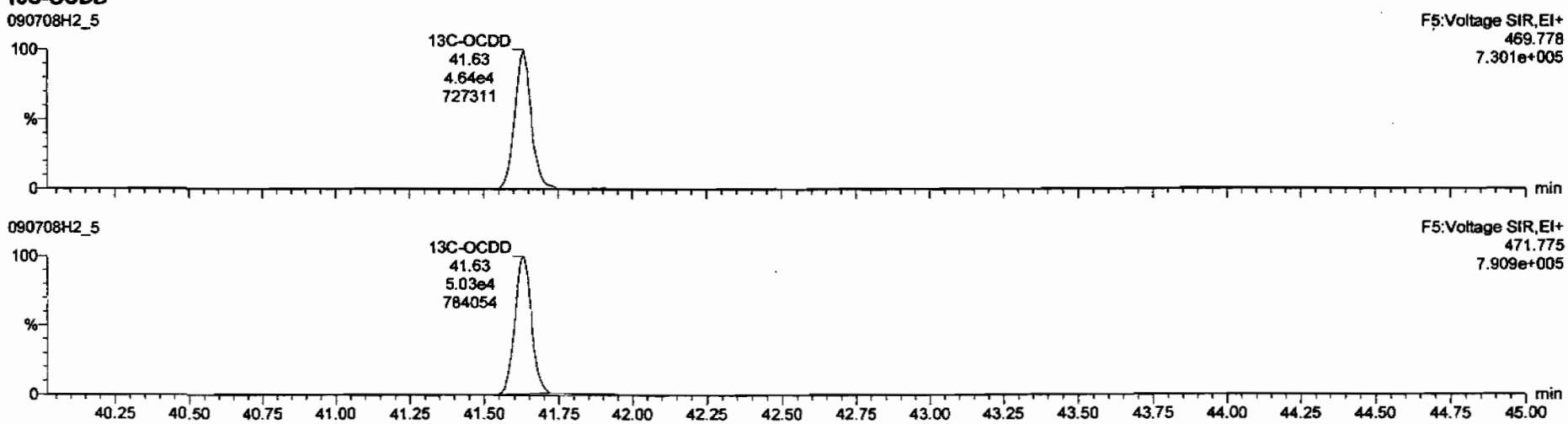

TargetLynx - 090708h2-5.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090708H2_5 - 31848_2222_003 CAMO-09-6605 10.87 - CAMO-09-6605

	Name	Resp	S/N	IDA	RT	Std Amt	Calc Amt	Dev	Area	Conc	Units	Flags
8	2,3,7,8-TCDF			NO	1.09	10.100					0.121	
9	1,2,3,7,8-PeCDF			NO	1.16	10.100					0.109	
10	2,3,4,7,8-PeCDF			NO	1.12	10.100					0.102	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.100					0.0625	

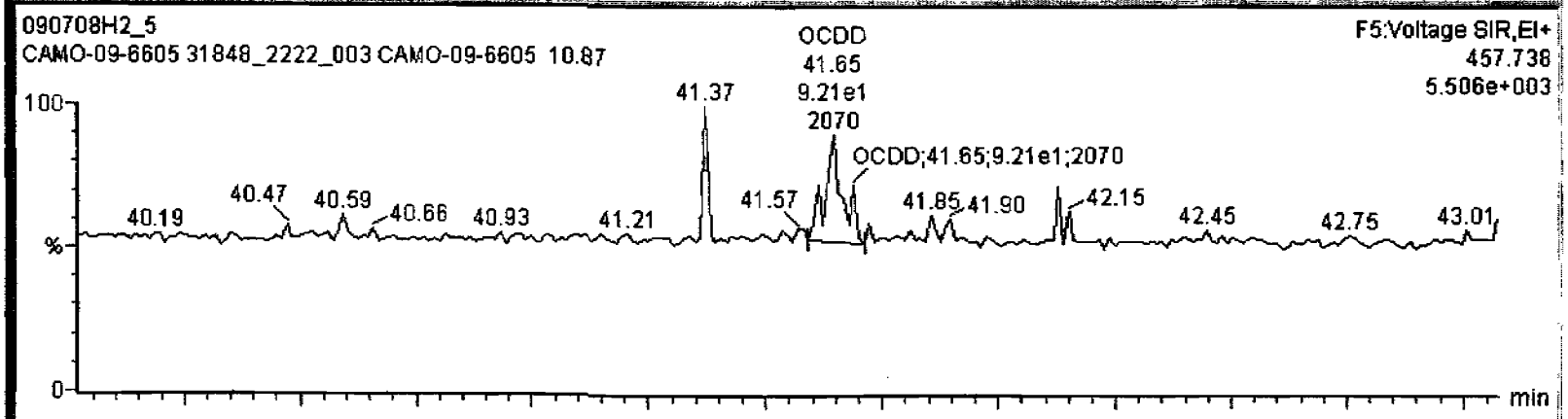

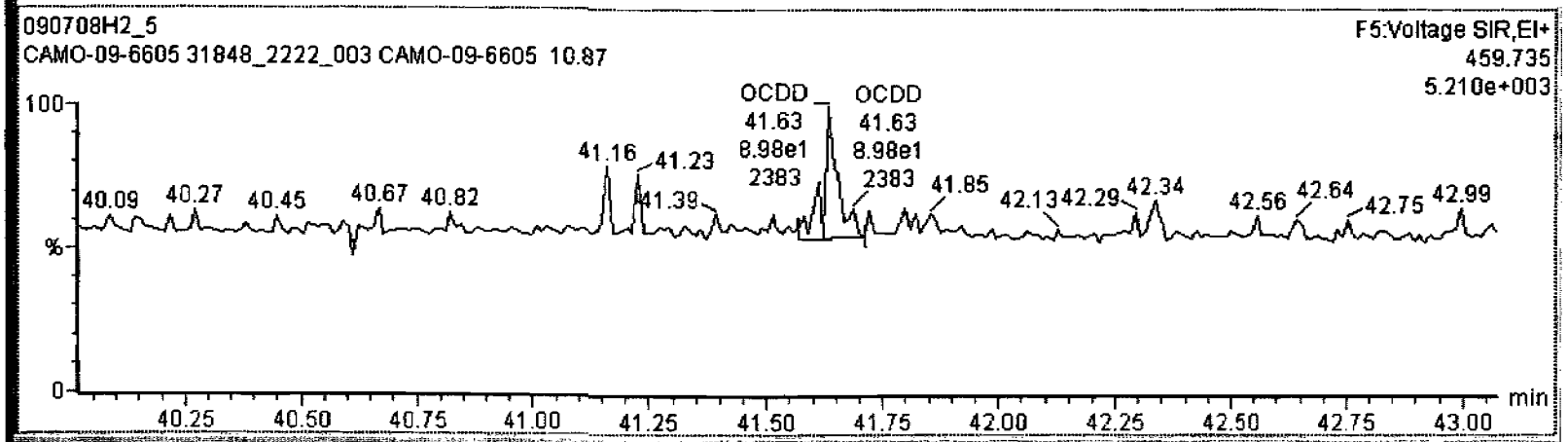

Ready 090708H2_5 NUM

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-5.qld

Last Altered: Thursday, July 09, 2009 07:36:17 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

2,3,7,8-TCDF

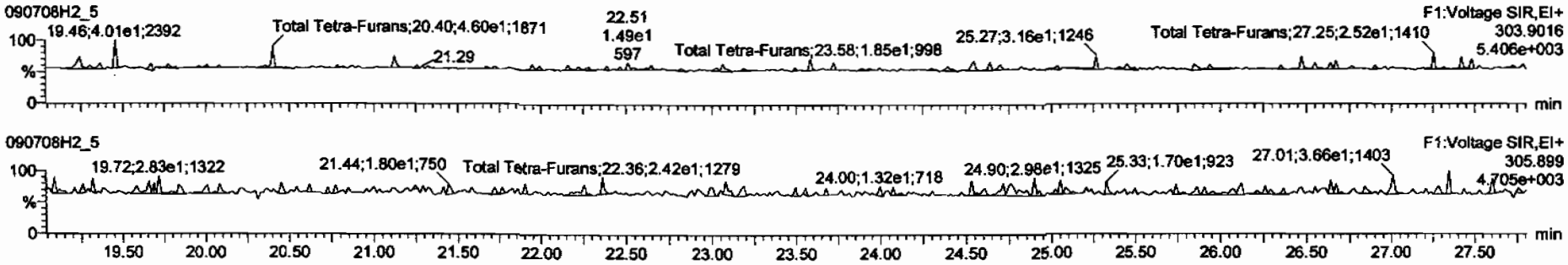

13C-2,3,7,8-TCDF

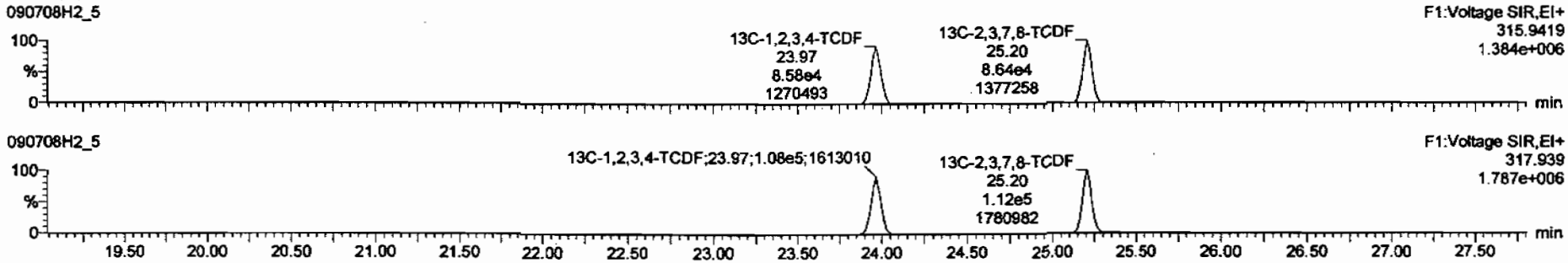

DPE1

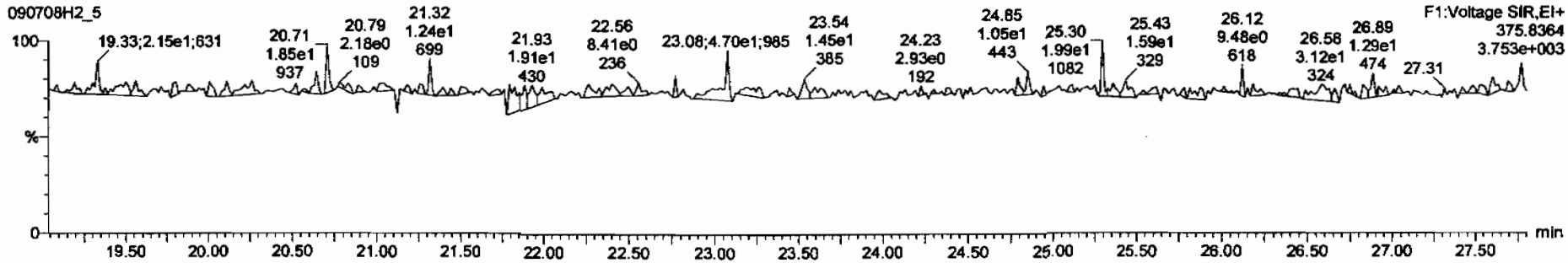

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Last Altered: Thursday, July 09, 2009 07:36:17 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

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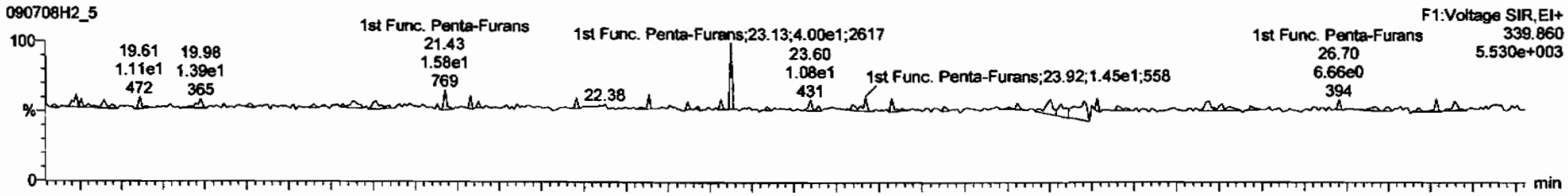

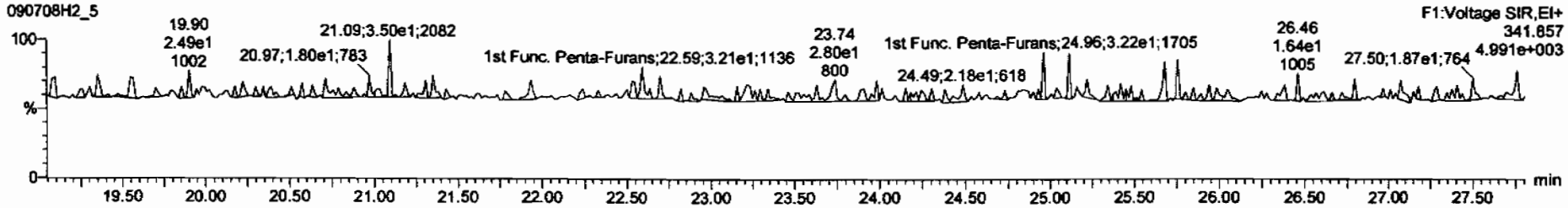

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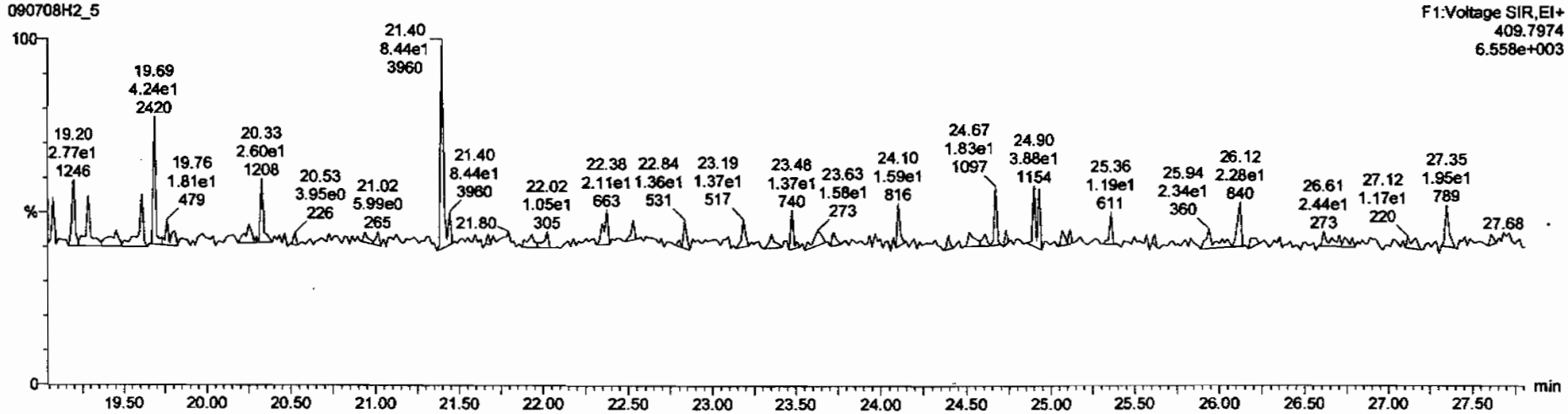

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Last Altered: Thursday, July 09, 2009 07:36:17 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

1,2,3,7,8-PeCDF

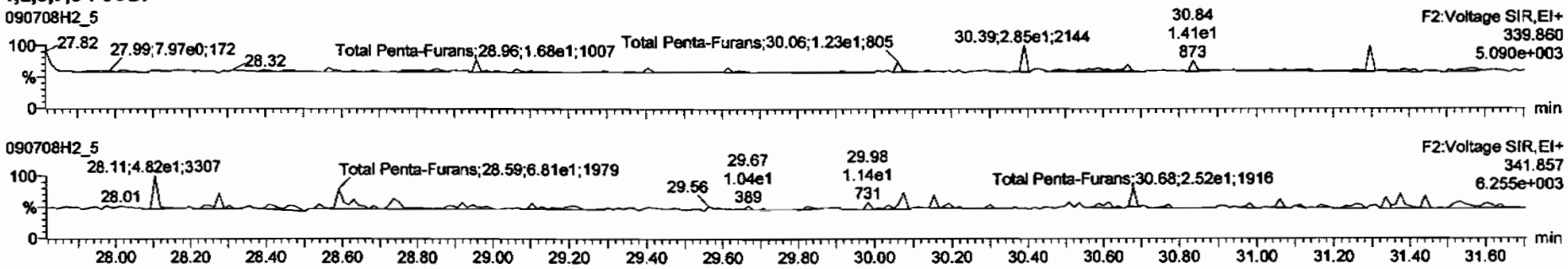

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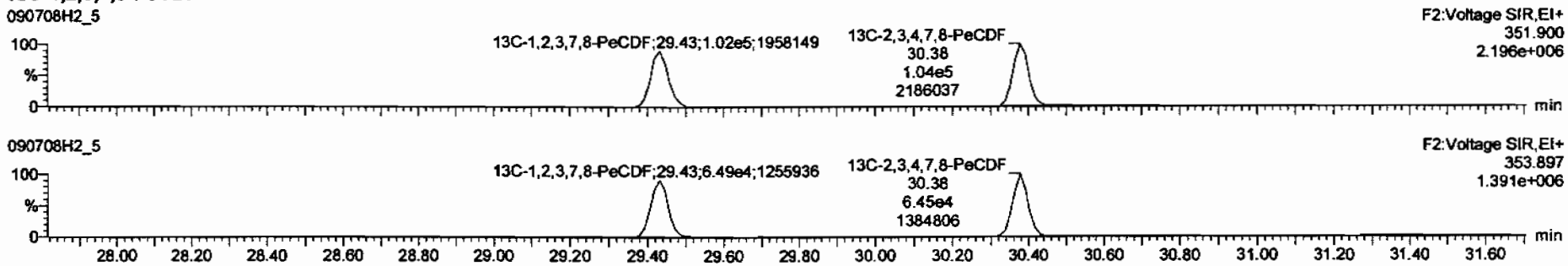

DPE2

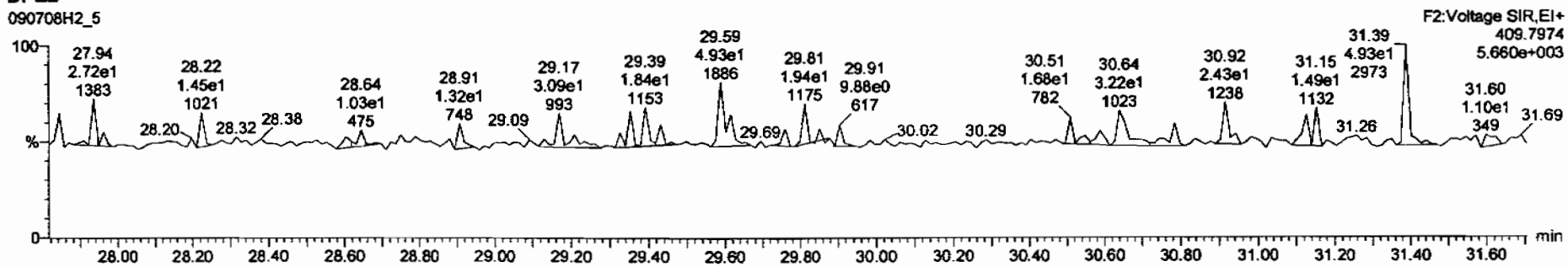

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Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

1,2,3,4,7,8-HxCDF

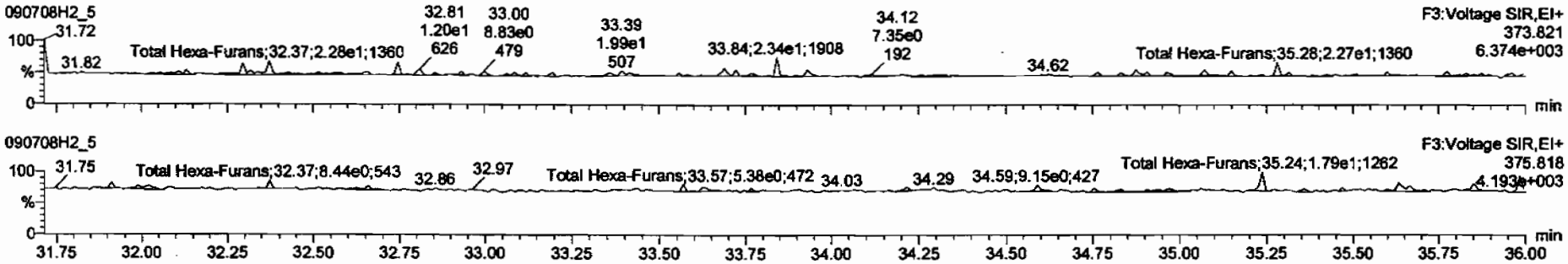

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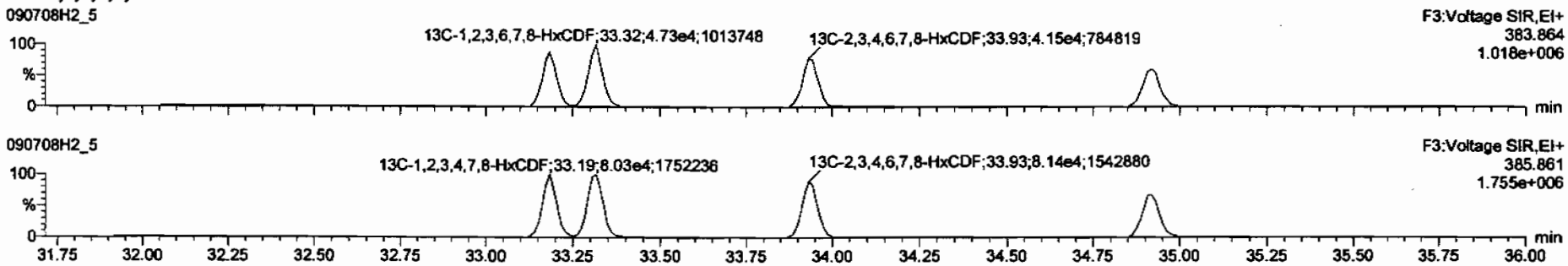

DPE3

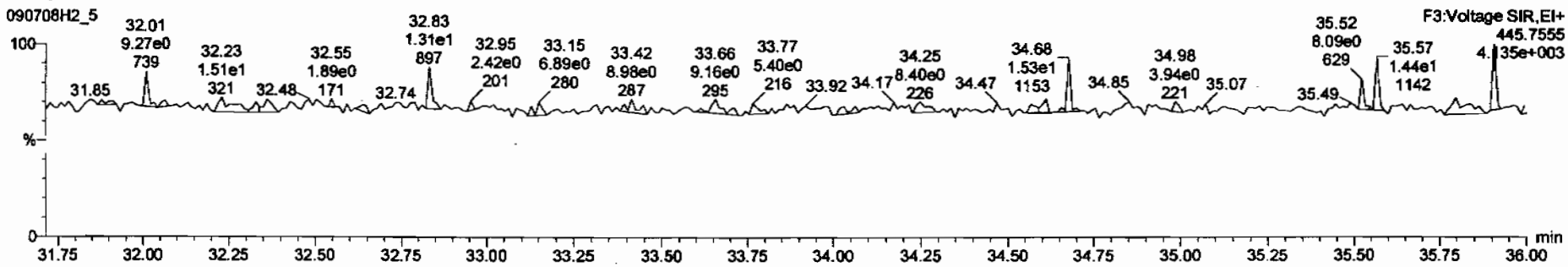

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Last Altered: Thursday, July 09, 2009 07:36:17 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

1,2,3,4,6,7,8-HpCDF

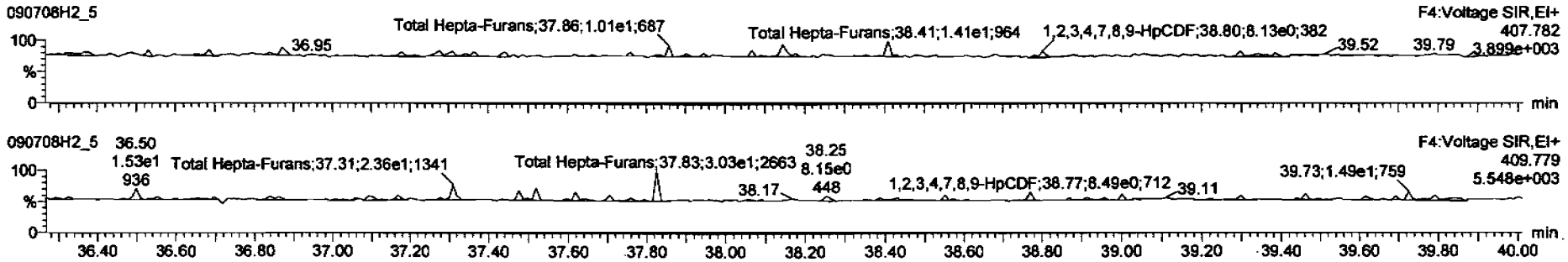

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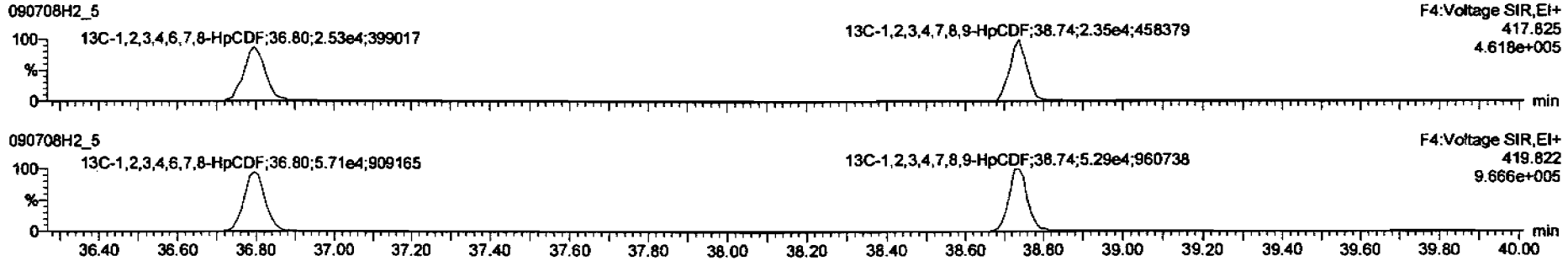

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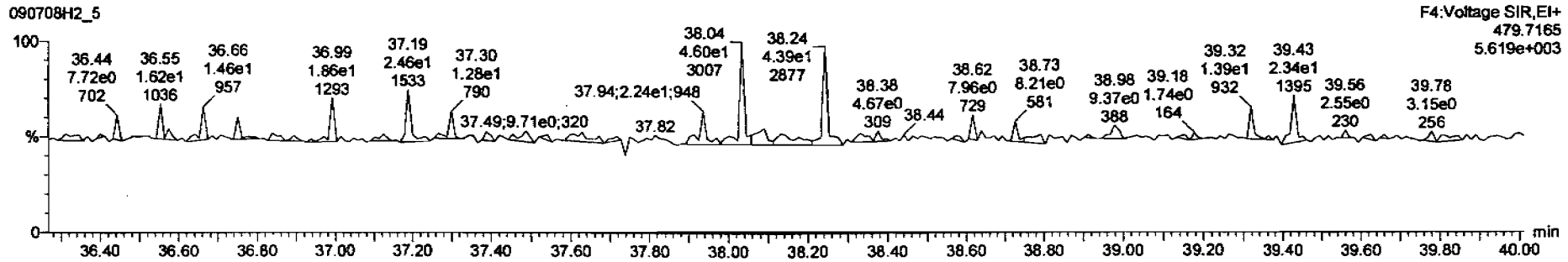

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Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

OCDF

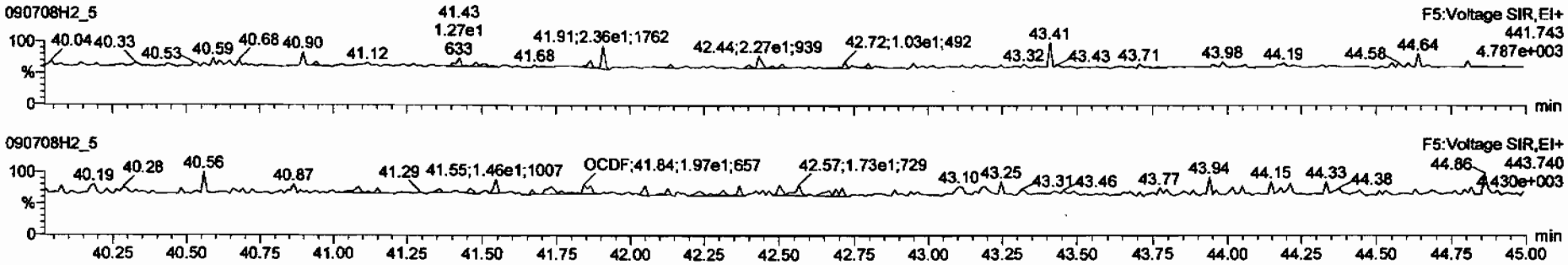

13C-OCDF

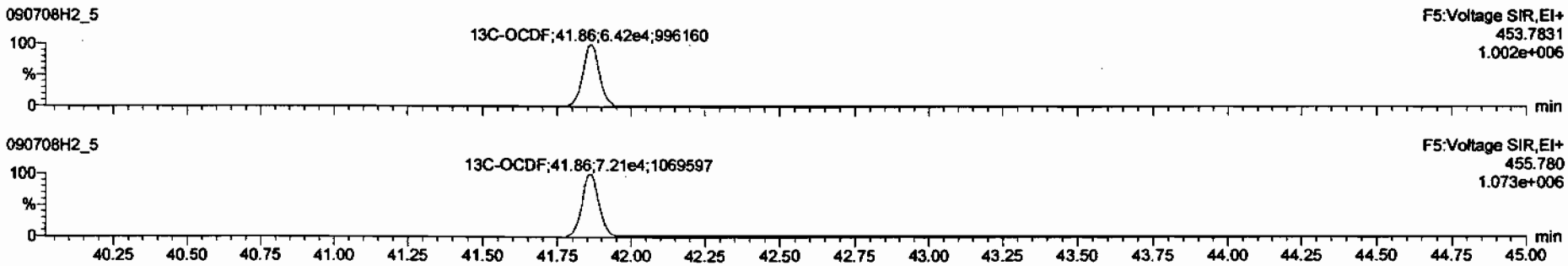

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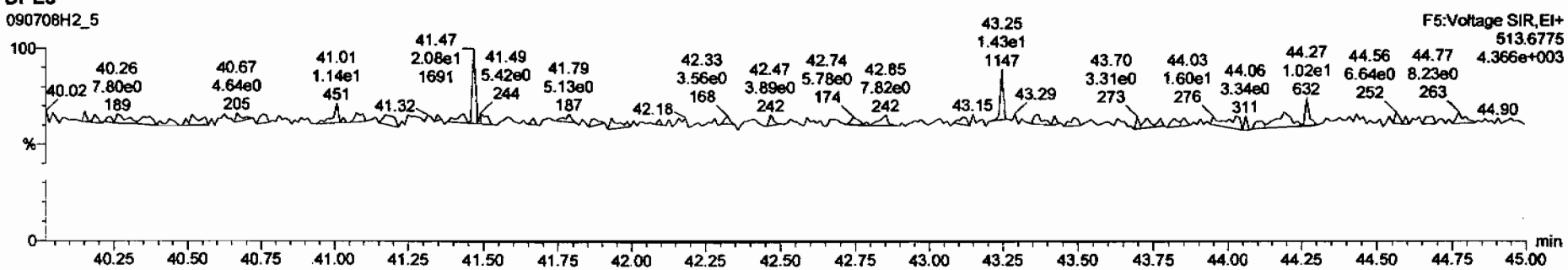

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Printed: Thursday, July 09, 2009 07:36:32 Pacific Daylight Time

Name: 090708H2_5, Date: 09-Jul-2009, Time: 06:00:40, ID: 31848_2222_003 CAMO-09-6605 10.87, Description: CAMO-09-6605

PFK1

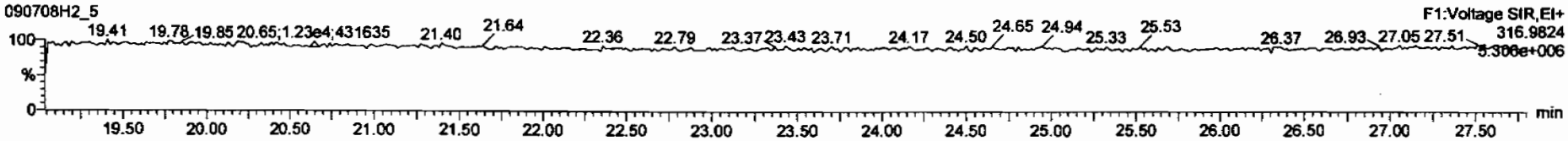

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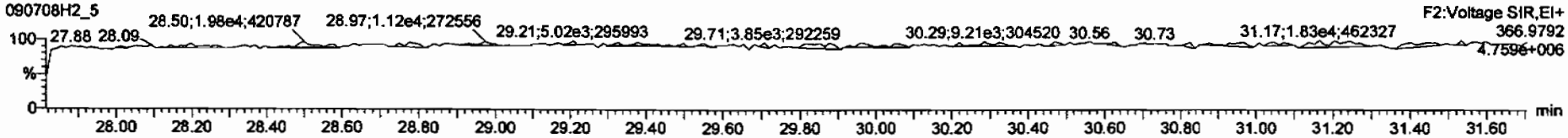

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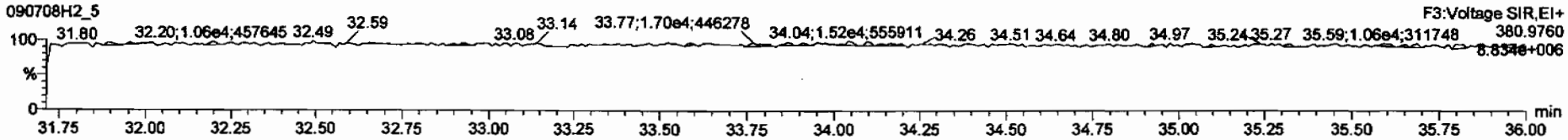

PFK4

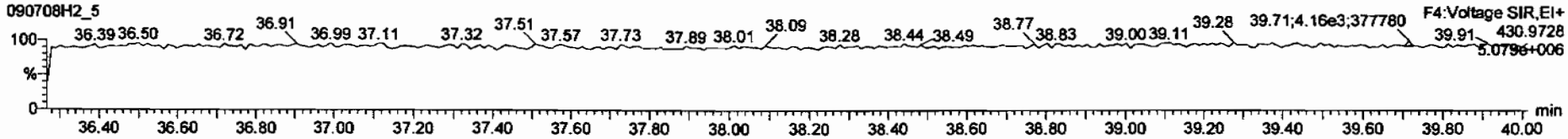

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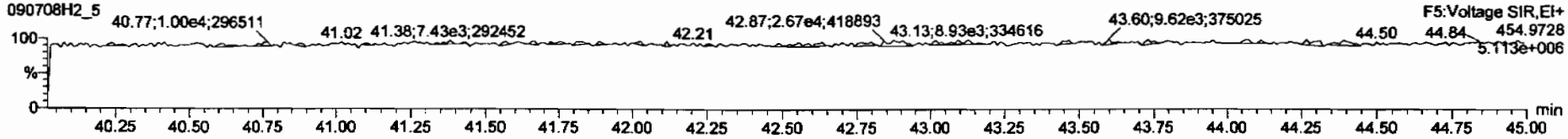

CALIBRATION DATA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090708H1-1

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H1_1

GC Column ID: DB-5
Analysis Date: 08-Jul-09 Analysis Time: 13:20:23

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	NO	9.83	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	46.2	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.4	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	45.2	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.22	1.05-1.43	NO	47.3	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	46.4	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.88	0.76-1.02	NO	90.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	8.51	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	43.5	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	42.2	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.6	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	NO	44.0	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.34	1.05-1.43	NO	46.2	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	NO	46.5	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	48.6	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.87	0.76-1.02	NO	90.3	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290 only
Date: 7/8/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H1_1

CCAL ID: ST090708H1-1

GC Column ID: DB-5
Analysis Date: 08-Jul-09 Analysis Time: 13:20:23

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	102	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	105	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	NO	105	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	97.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	111	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.86	0.76-1.02	NO	244	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	NO	111	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	108	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	NO	107	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	104	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.49	0.43-0.59	NO	93.4	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	98.1	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	NO	99.8	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	102	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	NO	104	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	224	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.66	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290 Only
Date: 7/8/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 08, 2009 14:07:42 Pacific Daylight Time
Printed: Wednesday, July 08, 2009 14:07:55 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.62
2	1,2,8,9-TCDD (Last)	26.89
3	1,2,4,7,9-PeCDD (First)	28.54
4	1,2,3,8,9-PeCDD (Last)	31.05
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.20
8	1,2,3,4,6,7,8-HpCDD (Last)	38.16
9	1,3,6,8-TCDF (First)	20.54
10	1,2,8,9-TCDF (Last)	27.05
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.31
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.92
15	1,2,3,4,6,7,8-HpCDF (First)	36.78
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

7/8/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H1_1

CCAL ID: ST090708H1-1
GC Column ID: DB-5
Analysis Date: 08-Jul-09
Analysis Time: 13:20:23

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.000	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.993	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____
Date: 7/8/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H1_1

CCAL ID: ST090708H1-1

GC Column ID: DB-5
Analysis Date: 08-Jul-09

Analysis Time: 13:20:23

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.962	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/8/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090708h1-1.qld

Last Altered: Wednesday, July 08, 2009 14:09:53 Pacific Daylight Time
Printed: Wednesday, July 08, 2009 14:10:26 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917i, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	1.24e4	0.80	NO	1.08	1.000	26.01	1.001	9.8287	98.3	0.148	9.8287
2	1,2,3,7,8-PeCDD	4.67e4	0.64	NO	1.03	1.000	30.67	1.000	46.197	92.4	0.213	46.197
3	1,2,3,4,7,8-HxCDD	4.21e4	1.27	NO	1.00	1.000	34.10	1.000	47.400	94.8	0.487	47.400
4	1,2,3,6,7,8-HxCDD	4.23e4	1.26	NO	1.13	1.000	34.22	1.001	45.176	90.4	0.507	45.176
5	1,2,3,7,8,9-HxCDD	4.48e4	1.22	NO	1.10	1.000	34.51	1.009	47.319	94.6	0.479	47.319
6	1,2,3,4,6,7,8-HpCDD	3.57e4	1.06	NO	1.06	1.000	38.16	1.000	46.360	92.7	0.528	46.360
7	OCDD	6.02e4	0.88	NO	1.18	1.000	41.62	1.000	90.315	90.3	0.493	90.315
8	2,3,7,8-TCDF	1.63e4	0.77	NO	1.09	1.000	25.22	1.000	8.5093	85.1	0.122	8.5093
9	1,2,3,7,8-PeCDF	7.95e4	1.58	NO	1.16	1.000	29.43	1.000	43.452	86.9	0.187	43.452
10	2,3,4,7,8-PeCDF	7.36e4	1.57	NO	1.12	1.000	30.38	1.000	42.209	84.4	0.188	42.209
11	1,2,3,4,7,8-HxCDF	7.09e4	1.28	NO	1.41	1.000	33.19	1.000	44.850	89.7	0.262	44.850
12	1,2,3,6,7,8-HxCDF	7.15e4	1.26	NO	1.22	1.000	33.32	1.001	44.626	89.3	0.253	44.626
13	2,3,4,6,7,8-HxCDF	6.37e4	1.30	NO	1.28	1.000	33.93	1.000	43.960	87.9	0.298	43.960
14	1,2,3,7,8,9-HxCDF	5.63e4	1.34	NO	1.26	1.000	34.92	1.001	46.154	92.3	0.394	46.154
15	1,2,3,4,6,7,8-HpCDF	6.43e4	1.07	NO	1.69	1.000	36.78	1.000	46.488	93.0	0.530	46.488
16	1,2,3,4,7,8,9-HpCDF	5.03e4	1.06	NO	1.48	1.000	38.73	1.000	48.592	97.2	0.561	48.592
17	OCDF	7.76e4	0.87	NO	1.10	1.000	41.85	1.000	90.294	90.3	0.615	90.294
18	13C-2,3,7,8-TCDD	1.17e5	0.77	NO	1.01	1.000	26.00	1.023	102.45	102	0.487	
19	13C-1,2,3,7,8-PeCDD	9.78e4	0.62	NO	0.827	1.000	30.65	1.207	105.28	105	0.421	
20	13C-1,2,3,4,7,8-HxCDD	8.87e4	1.29	NO	0.916	1.000	34.10	0.988	104.92	105	0.689	
21	13C-1,2,3,6,7,8-HxCDD	8.31e4	1.23	NO	0.921	1.000	34.19	0.991	97.791	97.8	0.686	
22	13C-1,2,3,4,6,7,8-HpCDD	7.23e4	1.05	NO	0.708	1.000	38.16	1.106	110.58	111	1.33	
23	13C-OCDD	1.13e5	0.86	NO	0.503	1.000	41.62	1.206	243.82	122	1.04	
24	13C-2,3,7,8-TCDF	1.76e5	0.75	NO	0.977	1.000	25.22	0.993	110.71	111	0.274	
25	13C-1,2,3,7,8-PeCDF	1.58e5	1.61	NO	0.896	1.000	29.42	1.158	108.47	108	0.616	
26	13C-2,3,4,7,8-PeCDF	1.56e5	1.55	NO	0.900	1.000	30.36	1.195	106.72	107	0.613	
27	13C-1,2,3,4,7,8-HxCDF	1.12e5	0.52	NO	1.17	1.000	33.17	0.962	103.86	104	1.17	
28	13C-1,2,3,6,7,8-HxCDF	1.31e5	0.49	NO	1.52	1.000	33.29	0.965	93.440	93.4	0.902	
29	13C-2,3,4,6,7,8-HxCDF	1.13e5	0.52	NO	1.25	1.000	33.92	0.983	98.103	98.1	1.10	
30	13C-1,2,3,7,8,9-HxCDF	9.70e4	0.52	NO	1.05	1.000	34.90	1.011	99.823	99.8	1.30	

7/8/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090708h1-1.qld

Last Altered: Wednesday, July 08, 2009 14:09:53 Pacific Daylight Time
Printed: Wednesday, July 08, 2009 14:10:26 Pacific Daylight Time

Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	8.19e4	0.44	NO	0.868	1.000	36.78	1.066	102.23	102	1.07
32	13C-1,2,3,4,7,8,9-HpCDF	6.99e4	0.44	NO	0.727	1.000	38.73	1.122	104.15	104	1.28
33	13C-OCDF	1.57e5	0.91	NO	0.760	1.000	41.85	1.213	223.77	112	0.690
34	37Cl-2,3,7,8-TCDD	7.24e3			0.668	1.000	26.00	1.023	9.6555	96.6	0.145
35	13C-1,2,3,4-TCDD	1.12e5	0.80	NO	1.00	1.000	25.40	0.000	100.00	100	0.494
36	13C-1,2,3,4-TCDF	1.62e5	0.78	NO	1.00	1.000	23.98	0.000	100.00	100	0.267
37	13C-1,2,3,7,8,9-HxCDD	9.23e4	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	0.632

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 7:13:39 AM Pacific Daylight Time
Printed: Thursday, July 09, 2009 7:15:29 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 2,3,7,8-TCDD

090708H1_1	ST090708H1-1 1613 CS3 080917I		08-Jul-09	13:20:23
090708H1_2	0_2222_OPR001		08-Jul-09	14:10:45
090708H1_3	solvent blank		08-Jul-09	15:00:17
090708H1_4	0_2222_MB001		08-Jul-09	15:49:49
090708H1_5	31819_2222_001 CAMO-09-6513	11.53	08-Jul-09	16:39:20
090708H1_6	31819_2222_002 CAMO-09-6514	10.75	08-Jul-09	17:28:54
090708H1_7	31819_2222_003 CAMO-09-6530	10.74	08-Jul-09	18:18:25
090708H1_8	31821_2222_001 CAMO-09-10141	10.54	08-Jul-09	19:07:55
090708H1_9	31821_2222_002 CAMO-09-10142	10.62	08-Jul-09	19:57:26
090708H1_10	31829_2222_001 CAMO-09-10458	10.54	08-Jul-09	20:46:58
090708H1_11	31829_2222_002 CAMO-09-10459	10.79	08-Jul-09	21:36:29
090708H1_12	31830_2222_001 CAMO-09-10474	11.88	08-Jul-09	22:26:02
090708H1_13	31830_2222_002 CAMO-09-10475	11.91	08-Jul-09	23:15:34
090708H1_14	31830_2222_003 CAMO-09-10476	11.21	09-Jul-09	00:05:05
090708H1_15	solvent blank		09-Jul-09	00:54:39
090708H1_16	ST090708H1-2 1613 CS3 080917I		09-Jul-09	01:44:11

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090708H1-1 End Calibration ID: ST090708H1-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range? (A)	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits	NA	
-S/N > 2.5:1		
-CS1 within 12-hour clock	✓	

Comments: (A) 8290 only for 7/9/09

Reviewed by: DMS 7/9/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 mh

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, July 08, 2009 13:18:22 Pacific Daylight Time

M 292.9824 R 13156

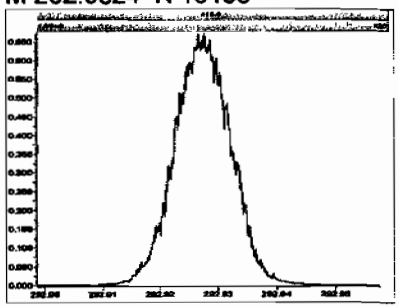

M 304.9824 R 12888

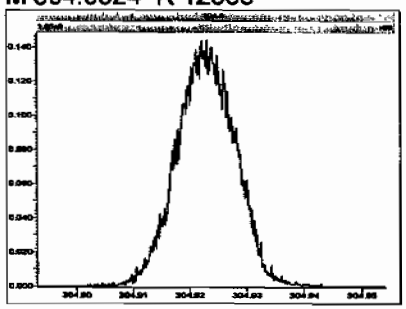

M 318.9792 R 13812

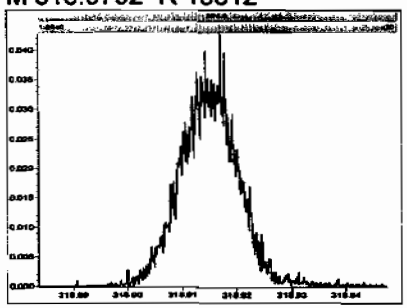

M 330.9792 R 13225

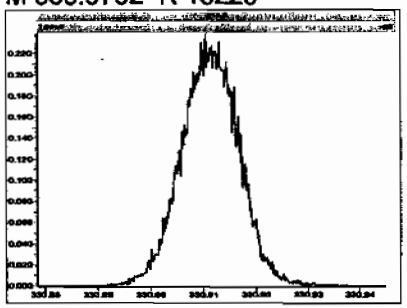

M 342.9792 R 13016

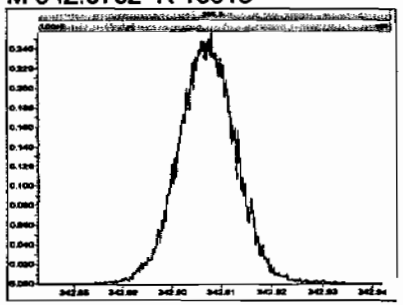

M 354.9792 R 12819

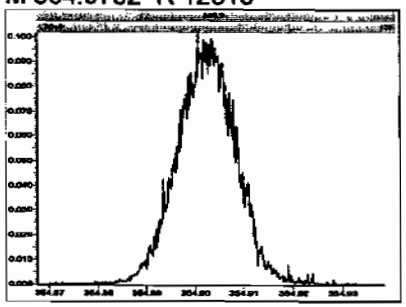

M 366.9792 R 13658

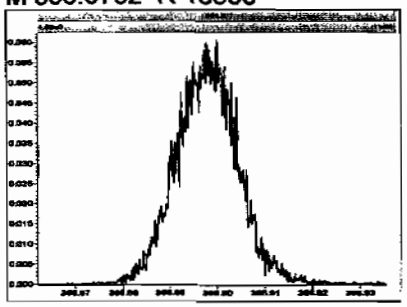

M 380.9760 R 12563

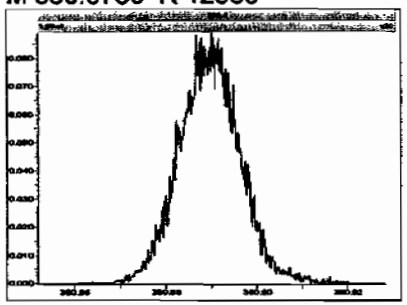

M 392.9760 R 11903

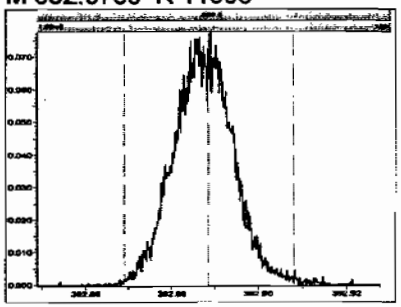

M 404.9760 R 12955

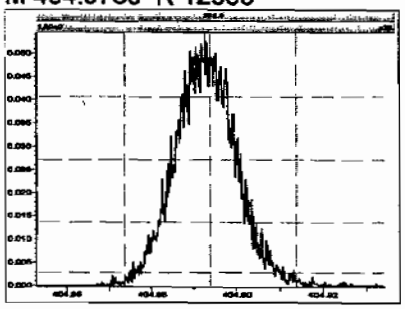

M 416.9760 R 12755

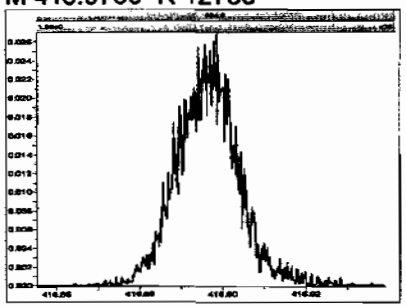

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, July 08, 2009 13:18:48 Pacific Daylight Time

M 330.9792 R 12952

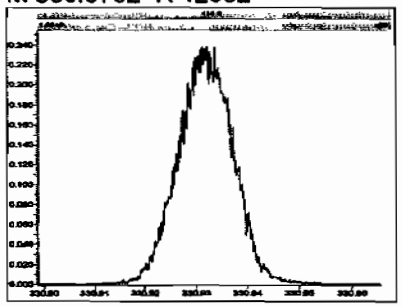

M 342.9792 R 13969

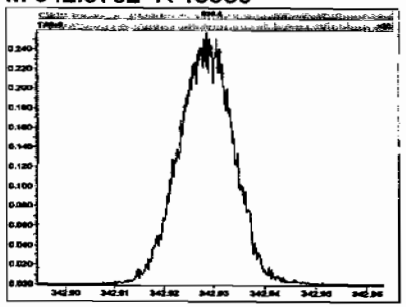

M 354.9792 R 13513

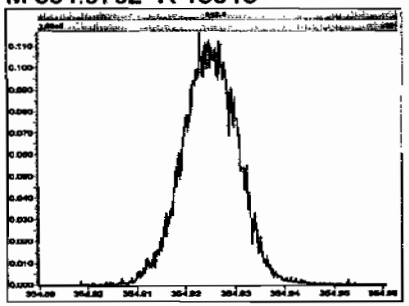

M 366.9792 R 13367

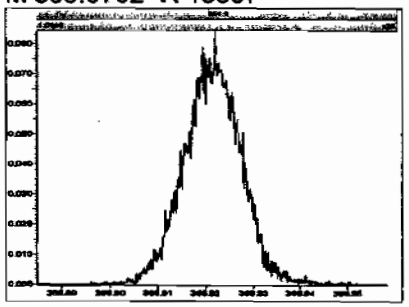

M 380.9760 R 13159

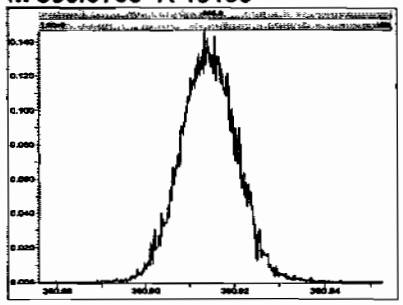

M 392.9760 R 13088

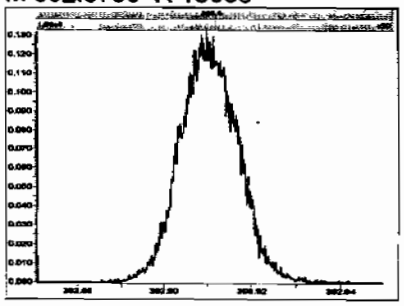

M 404.9760 R 13091

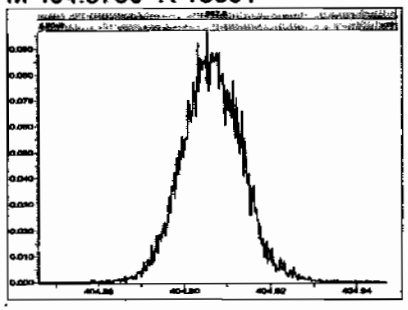

M 416.9760 R 12627

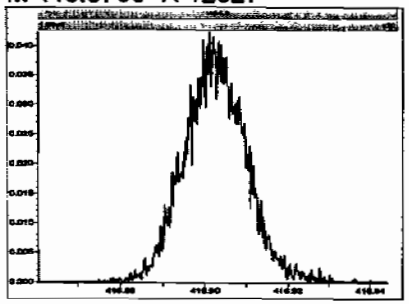

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Wednesday, July 08, 2009 13:19:09 Pacific Daylight Time

M 366.9792 R 14043

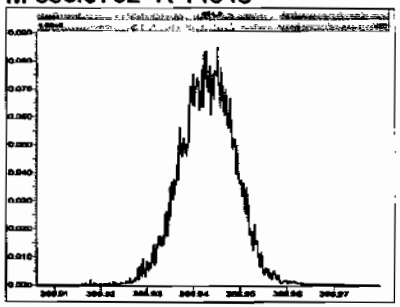

M 380.9760 R 14121

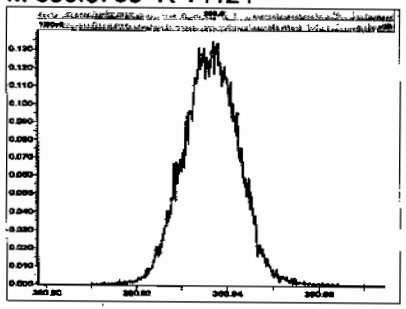

M 392.9760 R 14125

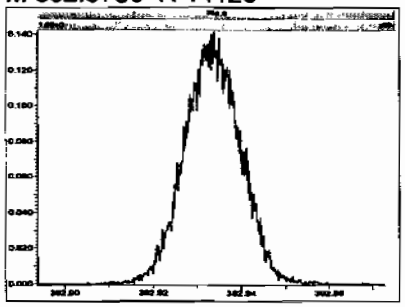

M 404.9760 R 13517

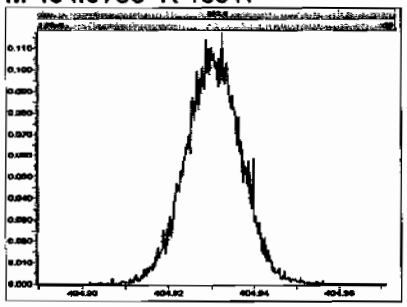

M 416.9760 R 13510

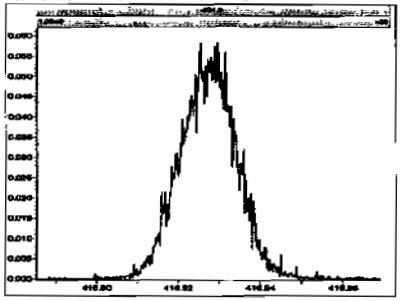

M 430.9728 R 13227

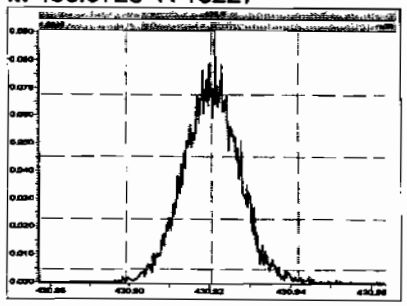

M 442.9728 R 13444

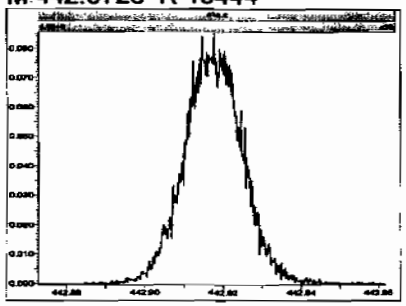

M 454.9728 R 13813

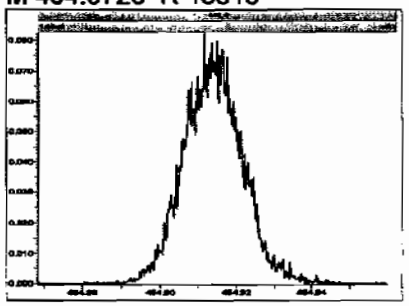

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Wednesday, July 08, 2009 13:19:28 Pacific Daylight Time

M 404.9760 R 13737

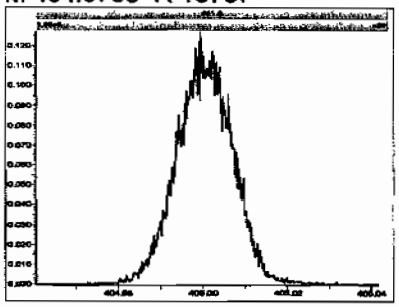

M 416.9760 R 13811

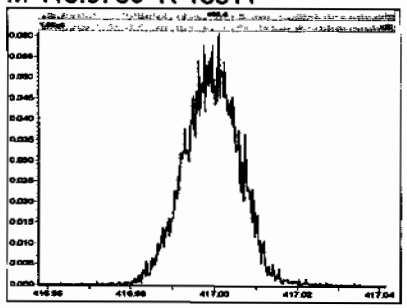

M 430.9728 R 13663

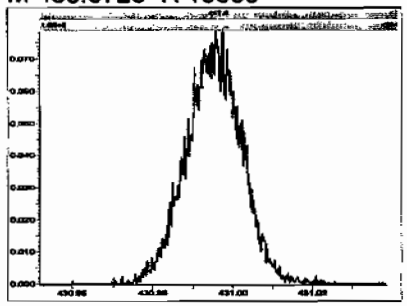

M 442.9728 R 13298

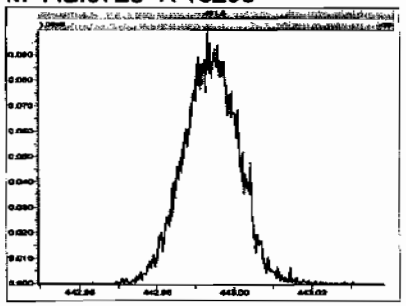

M 454.9728 R 14128

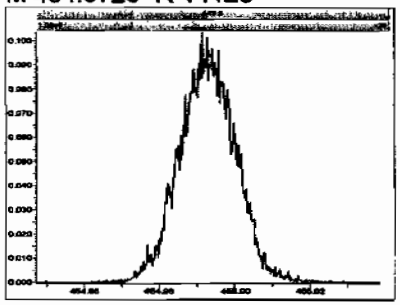

M 466.9728 R 14967

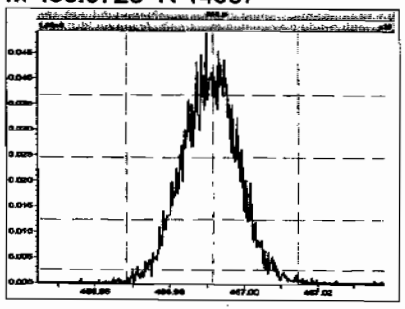

M 480.9696 R 13441

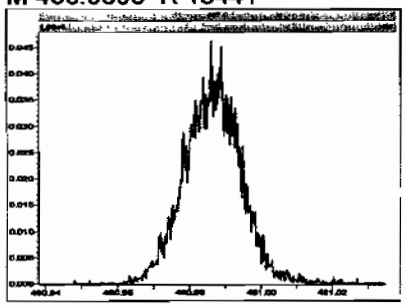

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Wednesday, July 08, 2009 13:19:53 Pacific Daylight Time

M 430.9728 R 13157

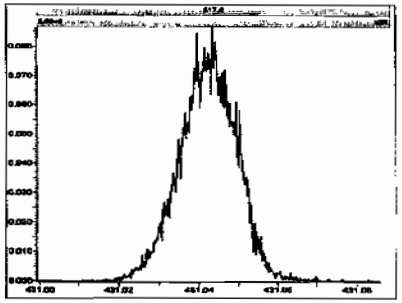

M 442.9728 R 13658

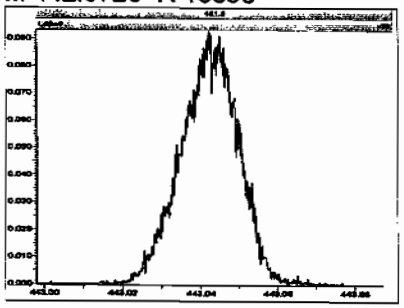

M 454.9728 R 12626

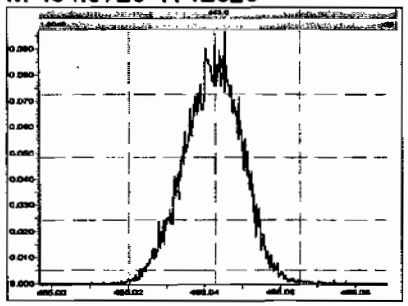

M 466.9728 R 14366

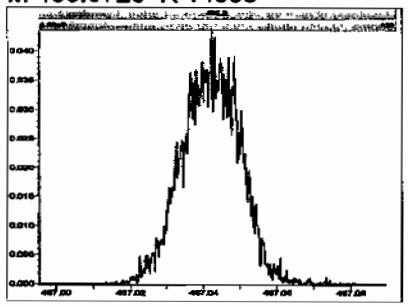

M 480.9696 R 13891

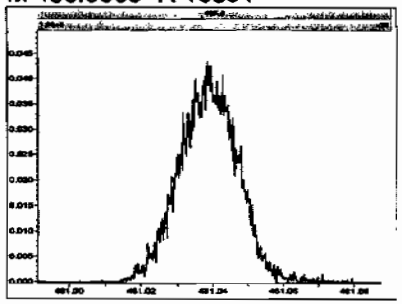

M 492.9696 R 13298

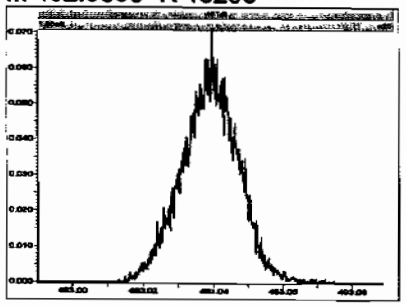

M 504.9696 R 13297

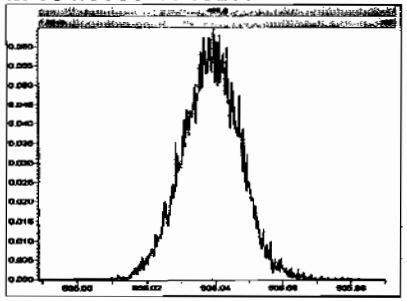

M 516.9697 R 12501

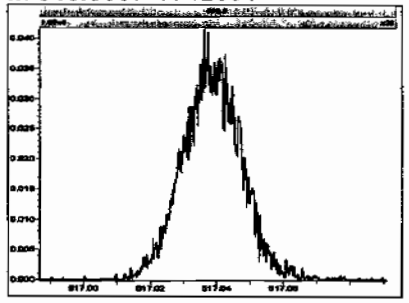

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Wednesday, July 08, 2009 14:07:42 Pacific Daylight Time
Printed: Wednesday, July 08, 2009 14:07:55 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

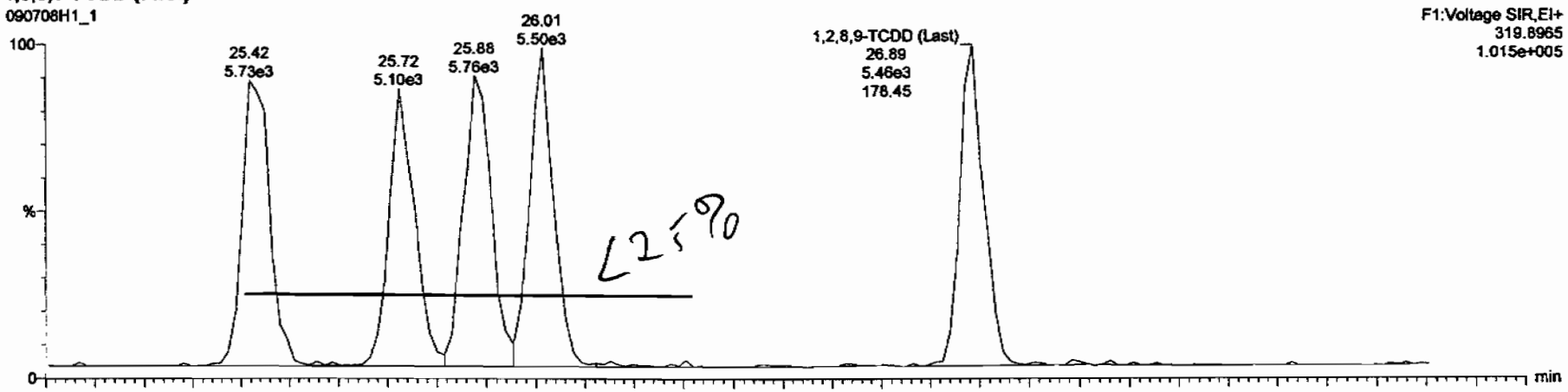

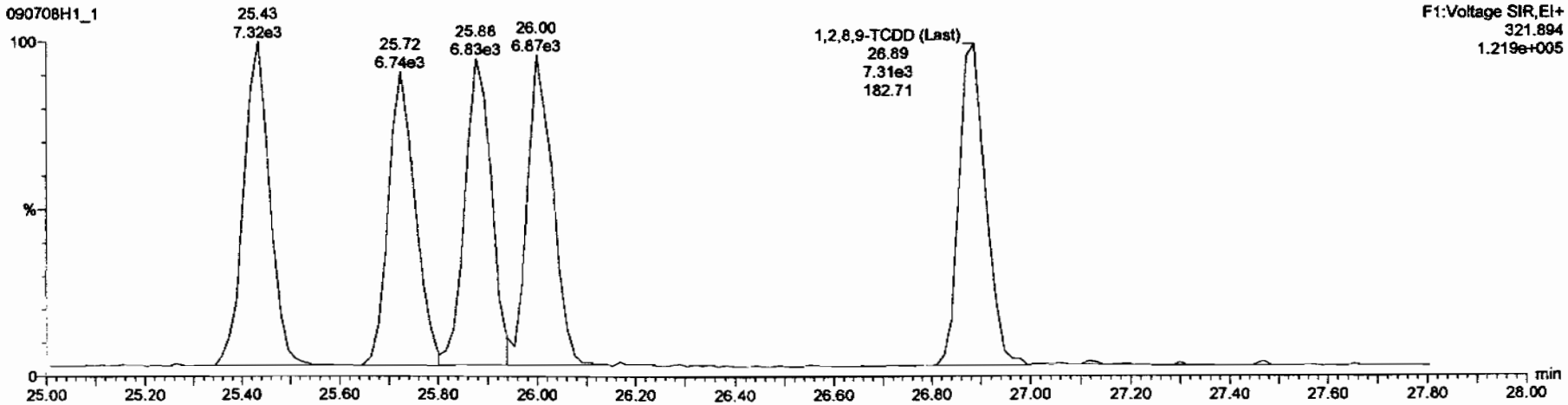

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090708h1-1.qld

Last Altered: Wednesday, July 08, 2009 14:09:53 Pacific Daylight Time
Printed: Wednesday, July 08, 2009 14:10:34 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

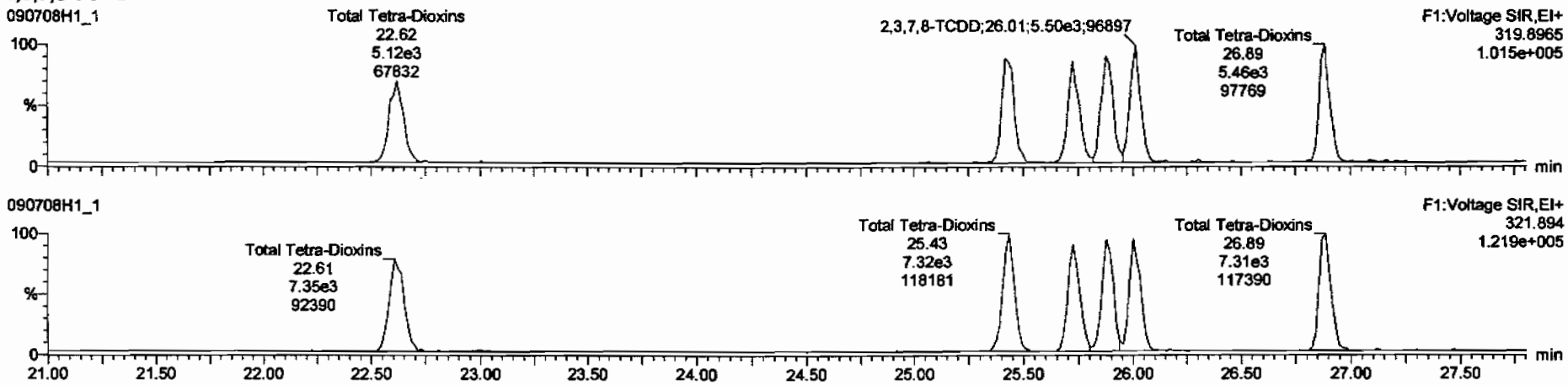

13C-2,3,7,8-TCDD

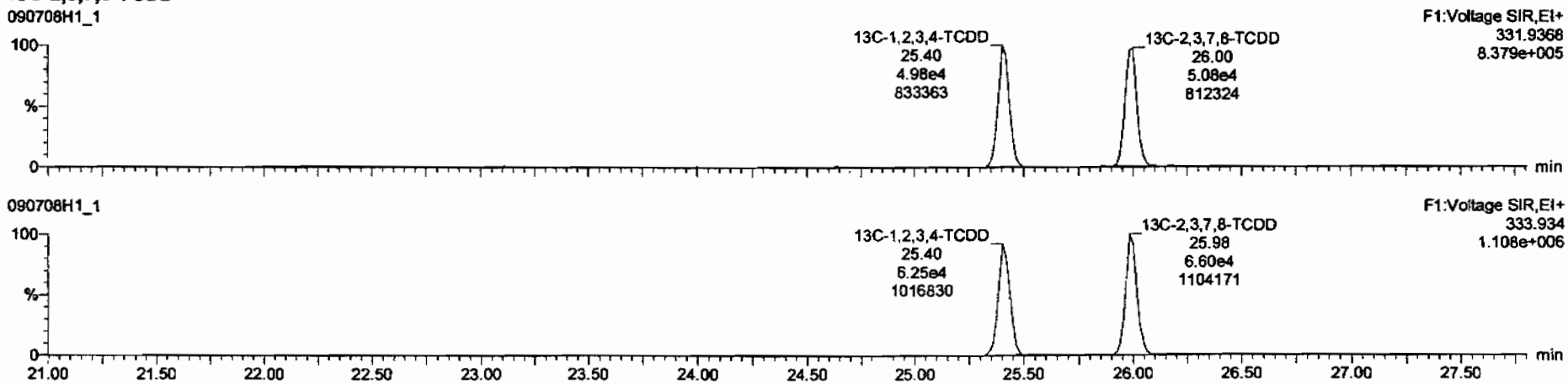

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090708h1-1.qld

Last Altered: Wednesday, July 08, 2009 14:09:53 Pacific Daylight Time
Printed: Wednesday, July 08, 2009 14:10:34 Pacific Daylight Time

Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

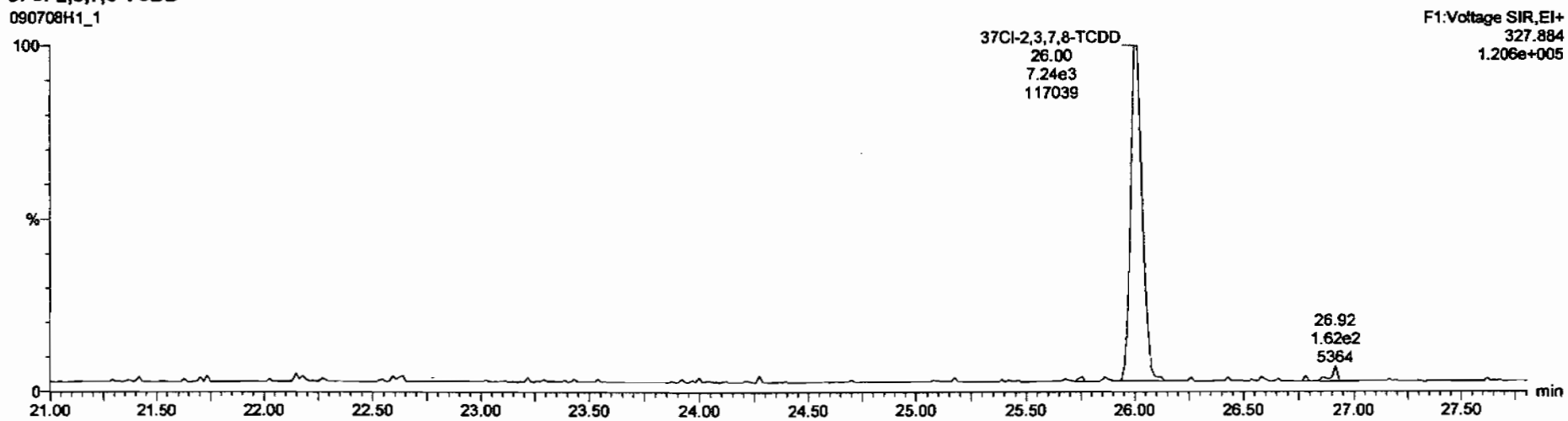

13C-1,2,3,4-TCDD

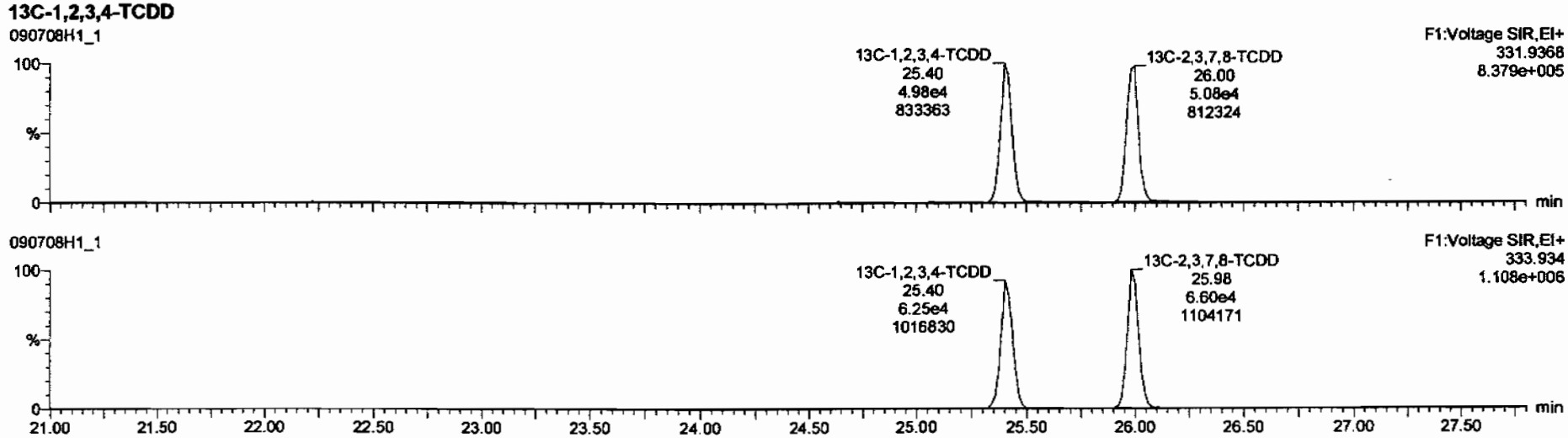

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Last Altered: Wednesday, July 08, 2009 14:09:53 Pacific Daylight Time
Printed: Wednesday, July 08, 2009 14:10:34 Pacific Daylight Time

Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

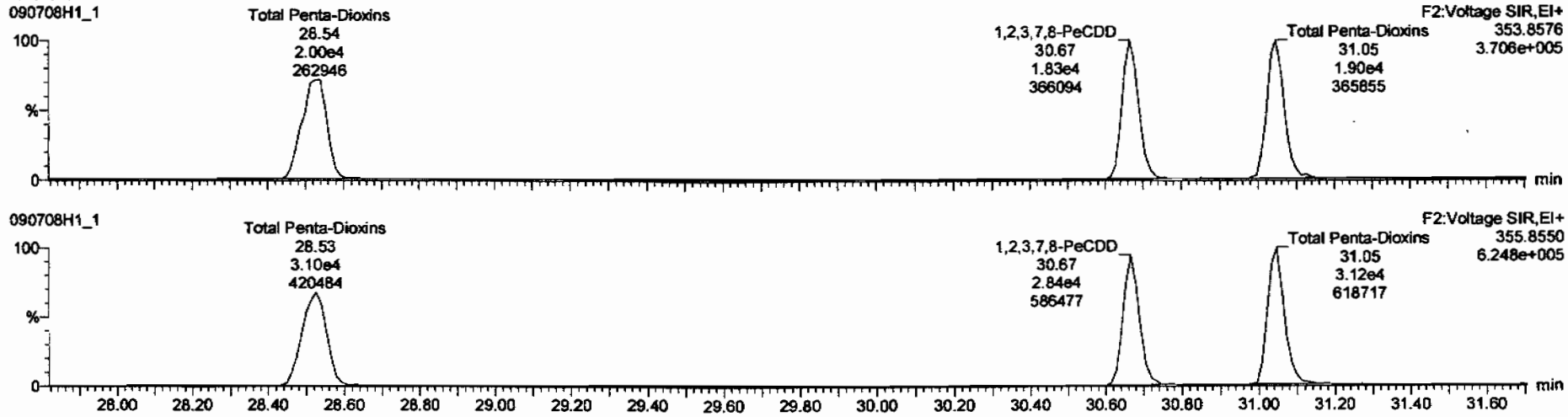

13C-1,2,3,7,8-PeCDD

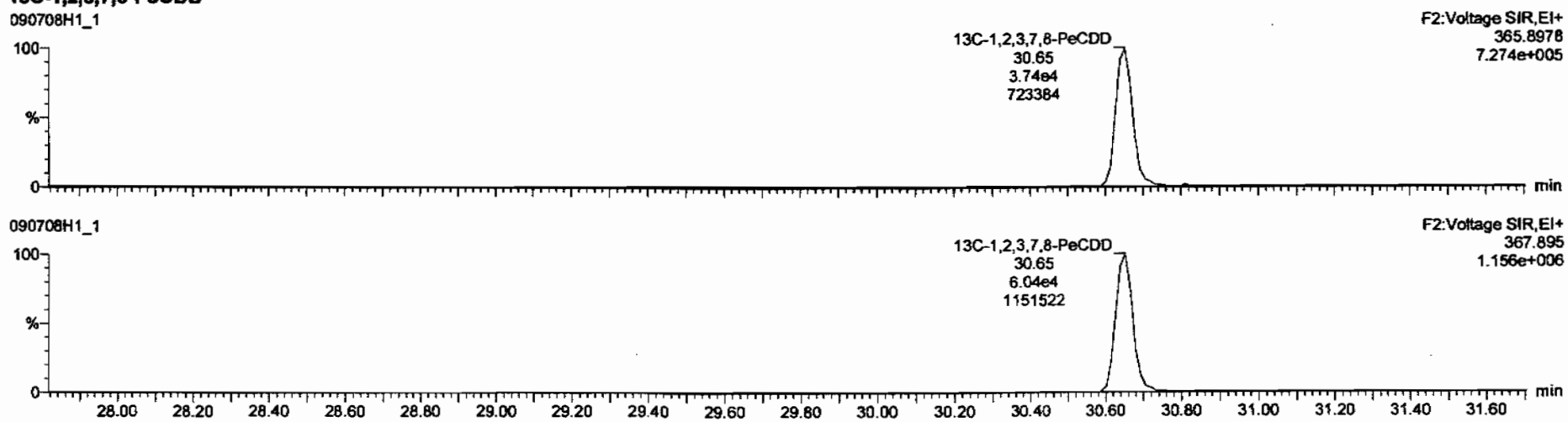

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Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

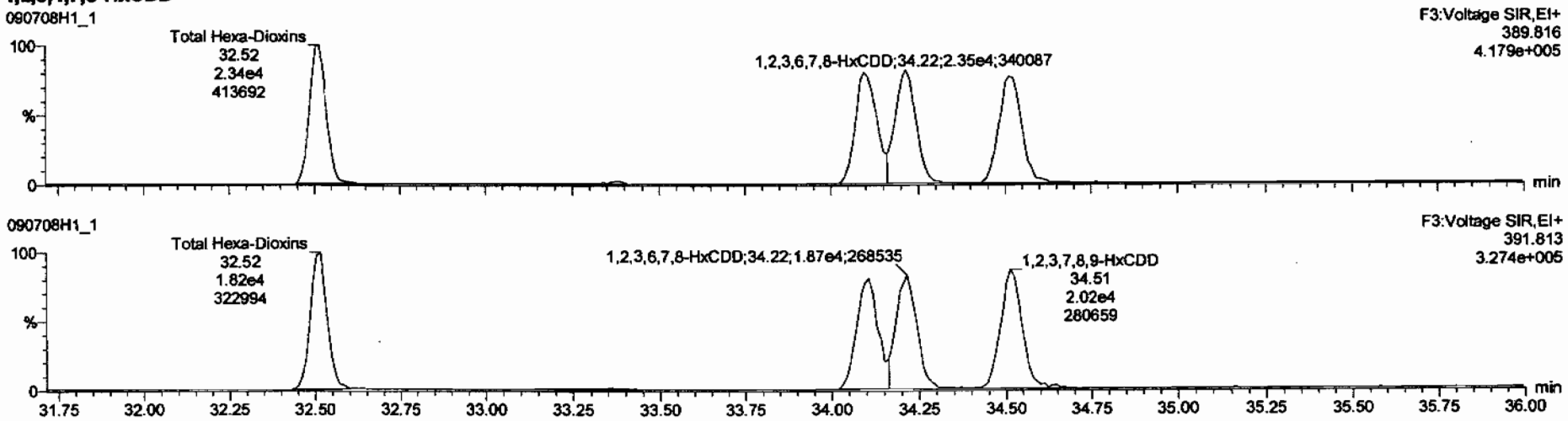

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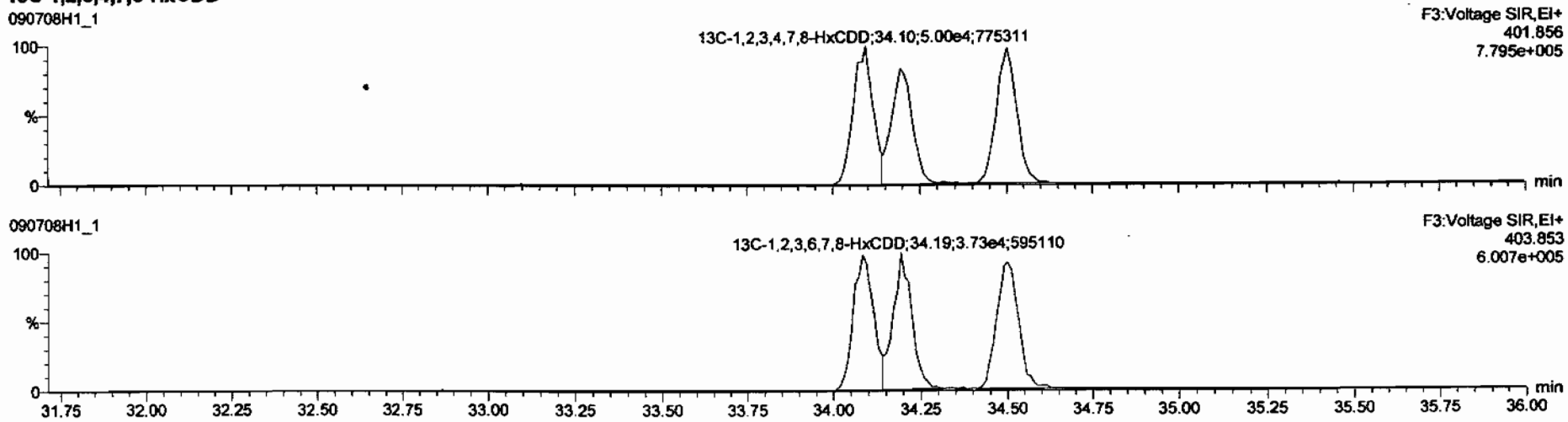

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Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

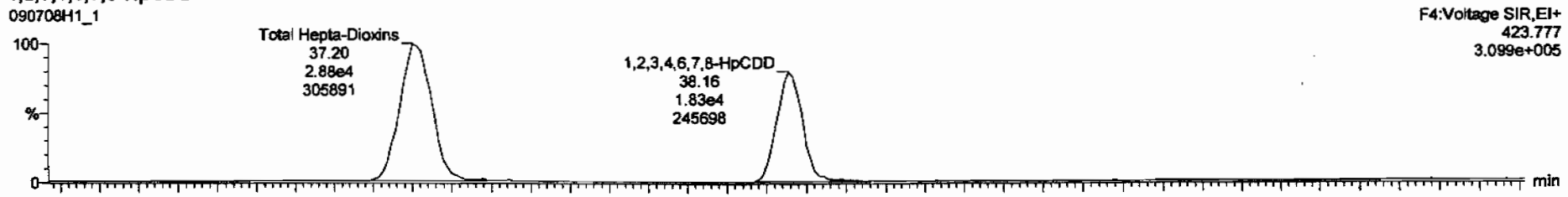

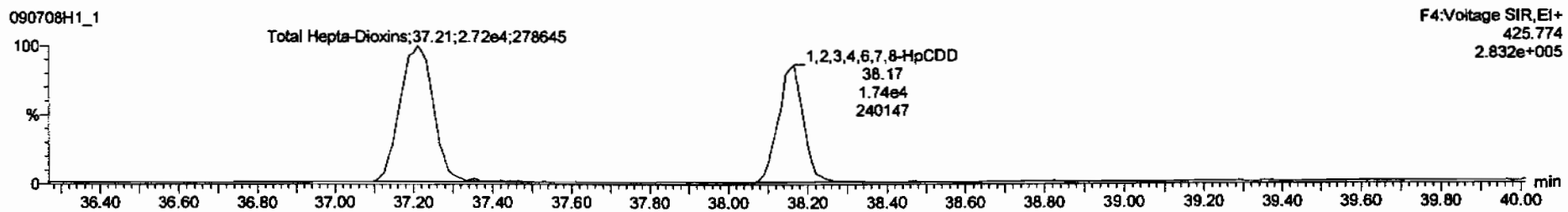

13C-1,2,3,4,6,7,8-HpCDD

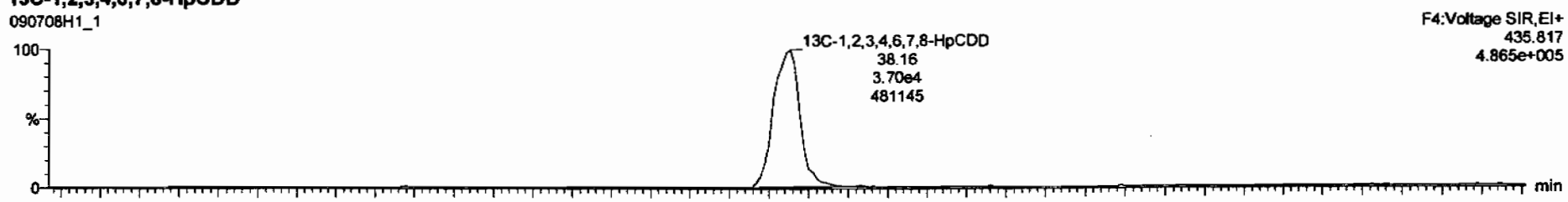

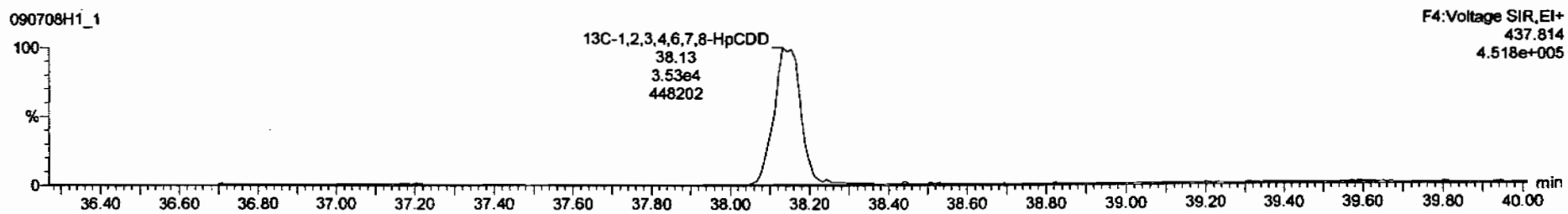

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Last Altered: Wednesday, July 08, 2009 14:09:53 Pacific Daylight Time
Printed: Wednesday, July 08, 2009 14:10:34 Pacific Daylight Time

Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

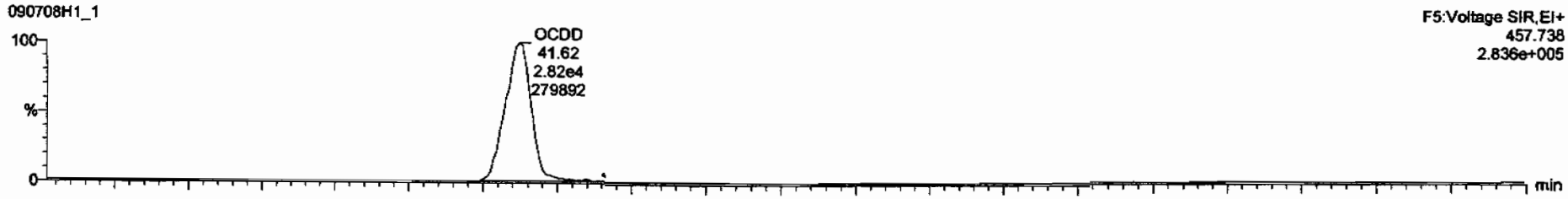

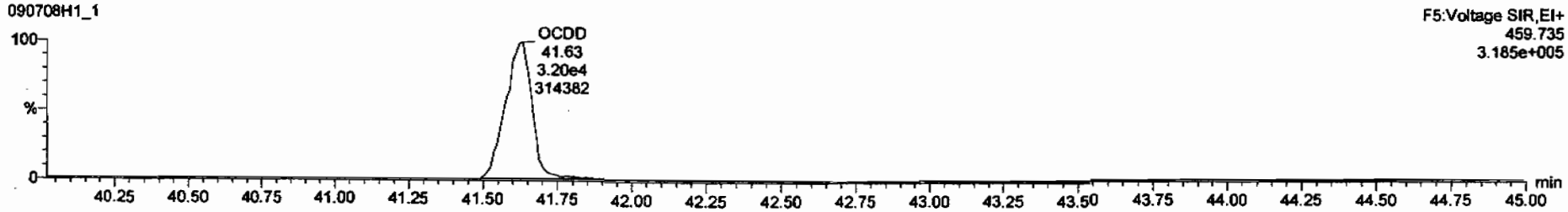

13C-OCDD

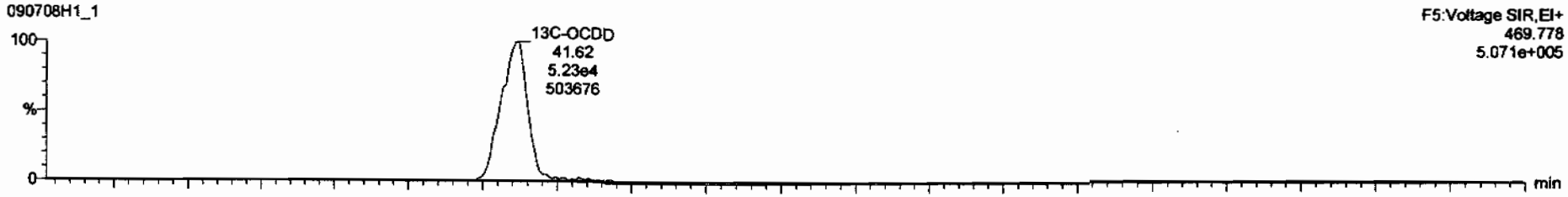

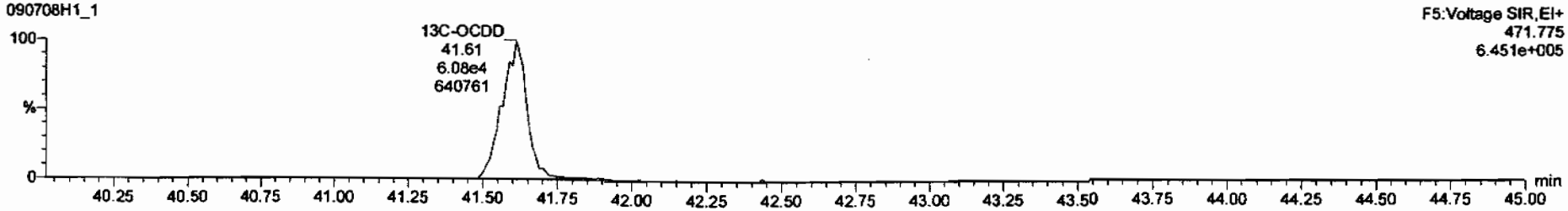

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Printed: Wednesday, July 08, 2009 14:10:34 Pacific Daylight Time

Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

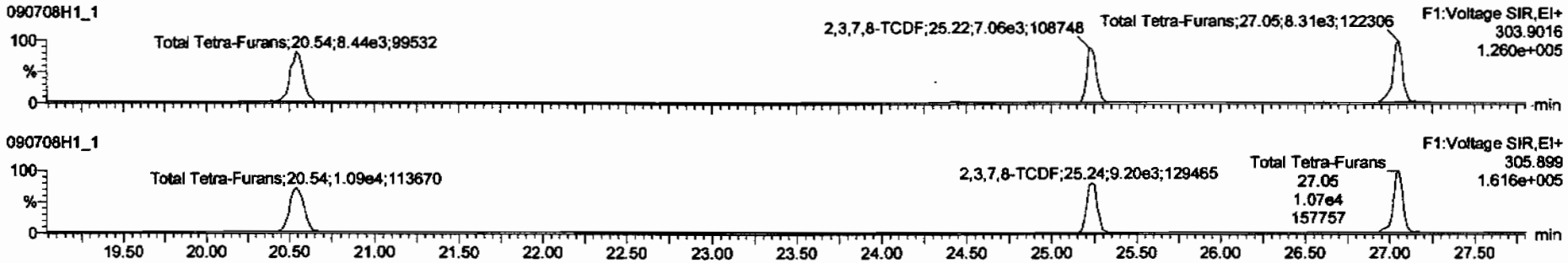

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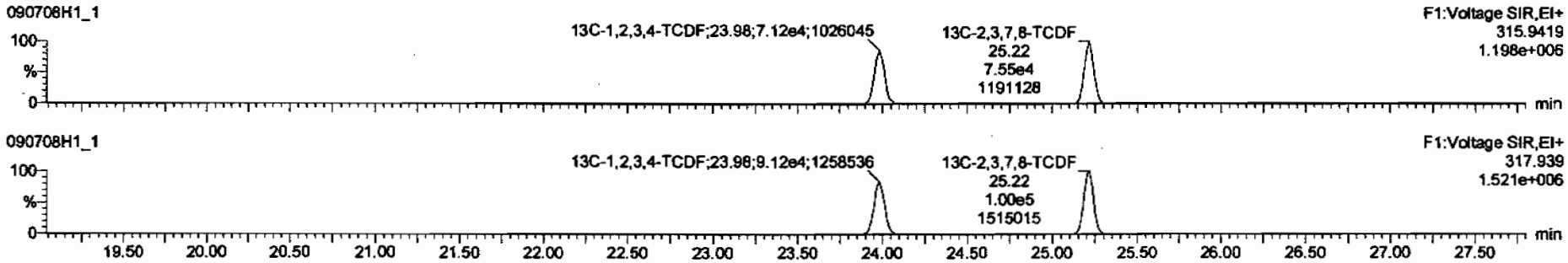

DPE1

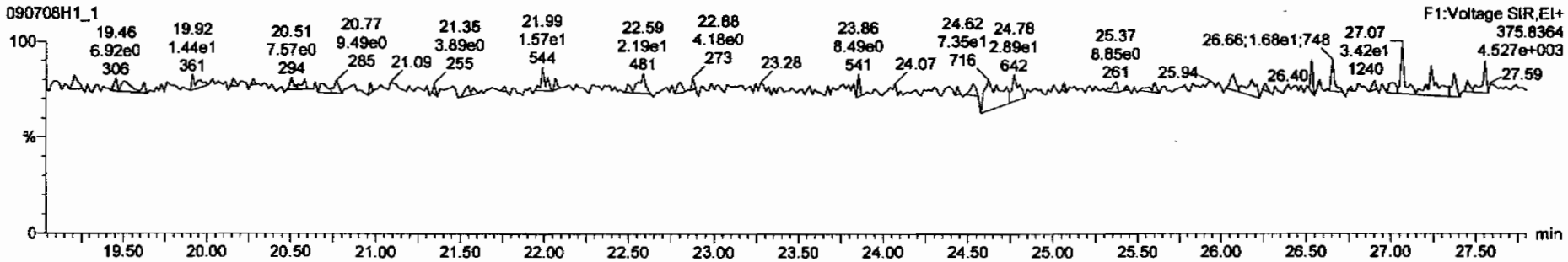

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Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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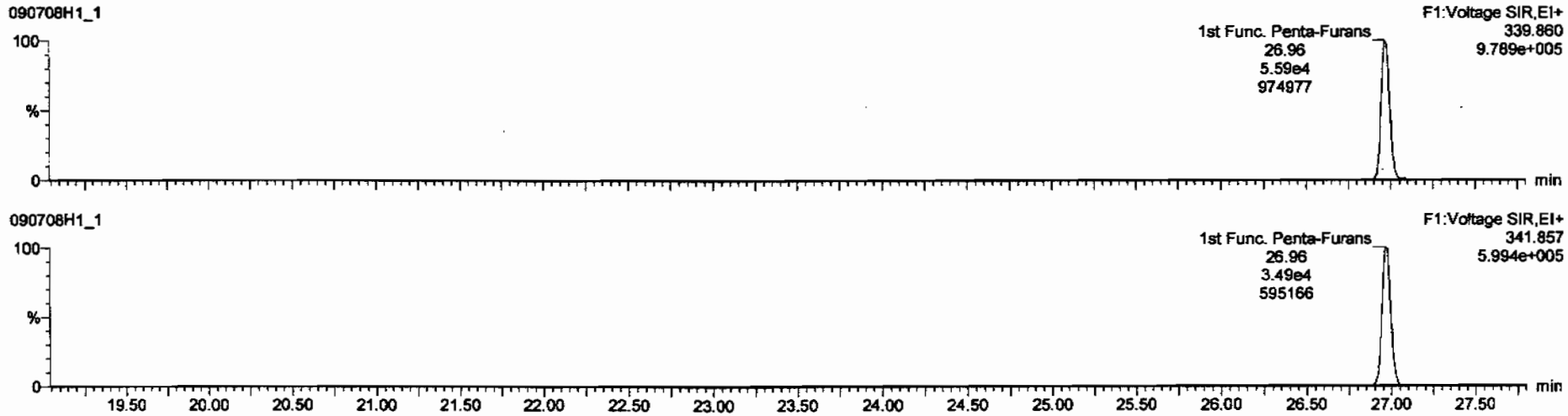

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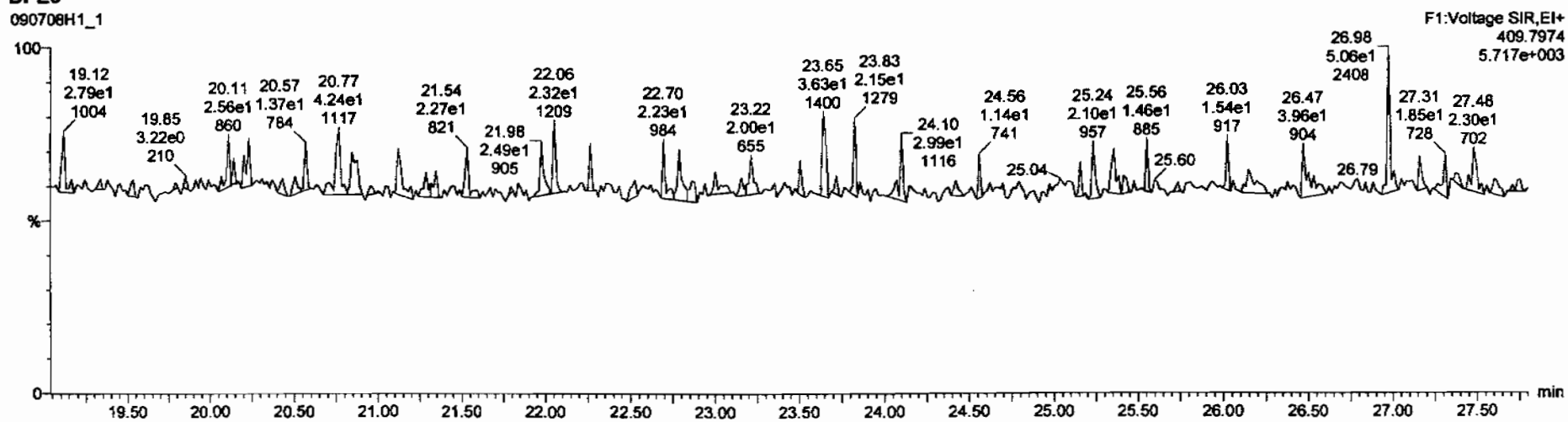

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Last Altered: Wednesday, July 08, 2009 14:09:53 Pacific Daylight Time
Printed: Wednesday, July 08, 2009 14:10:34 Pacific Daylight Time

Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

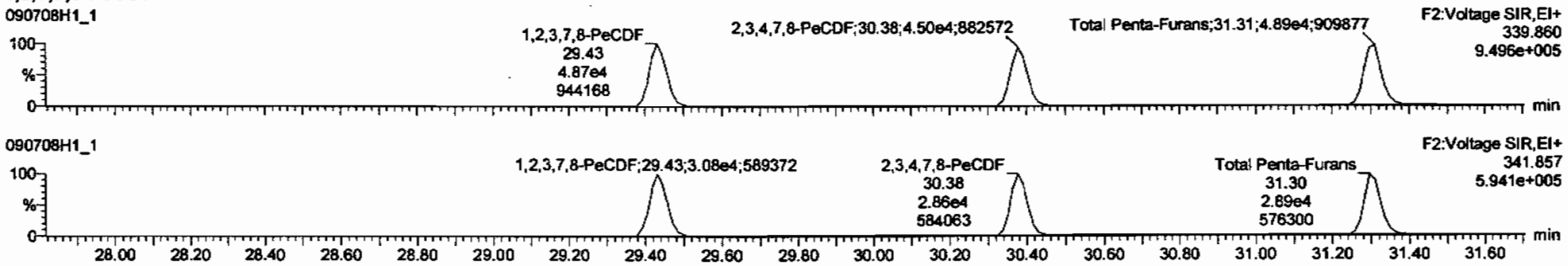

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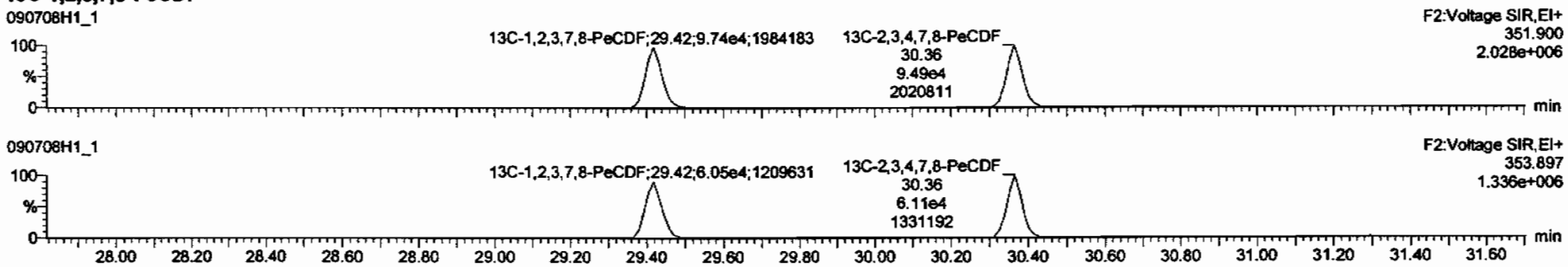

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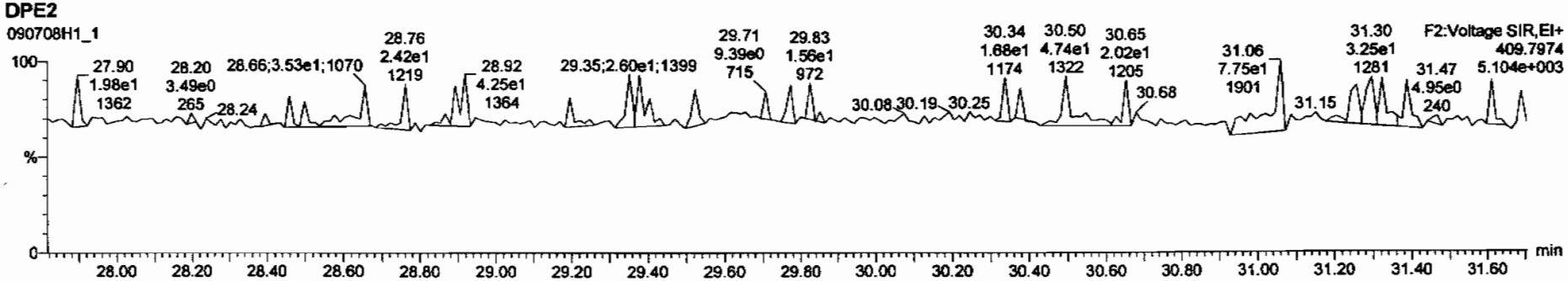

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Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDF

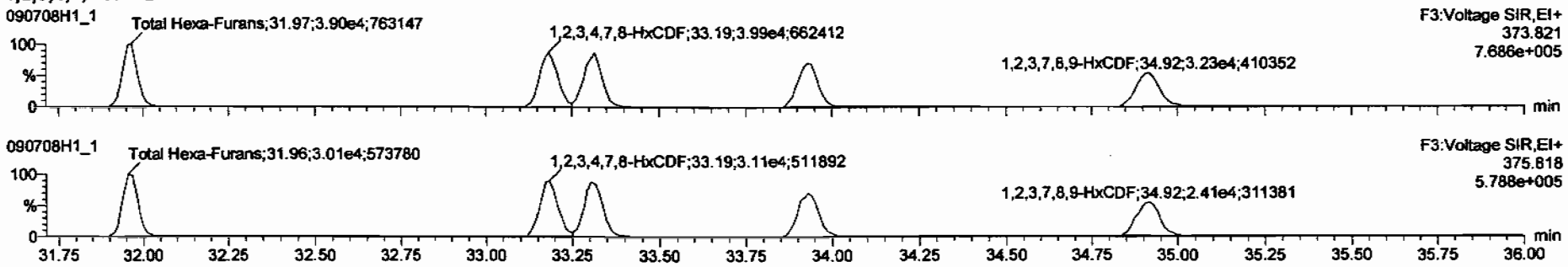

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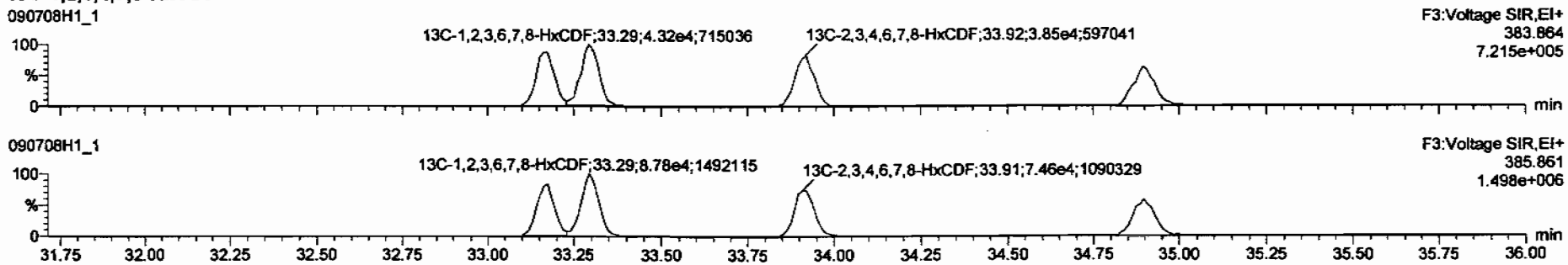

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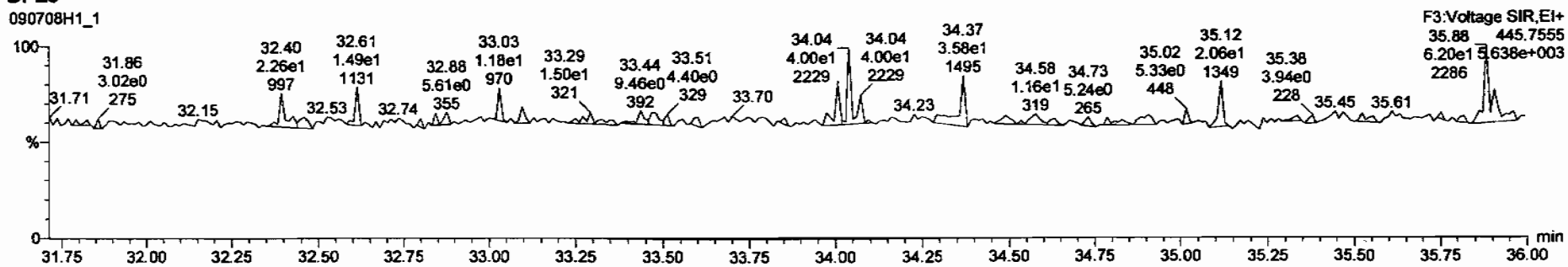

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Name: 090708H1_1, Date: 08-Jul-2009, Time: 13:20:23, ID: ST090708H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDF

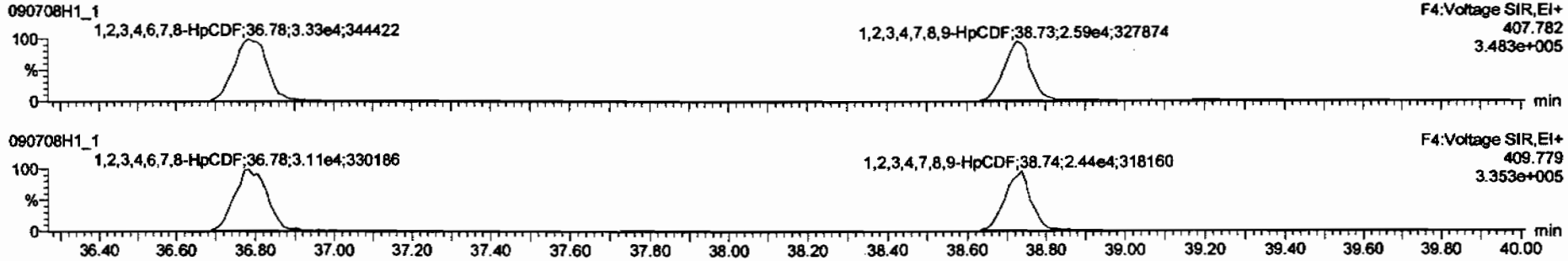

13C-1,2,3,4,6,7,8-HpCDF

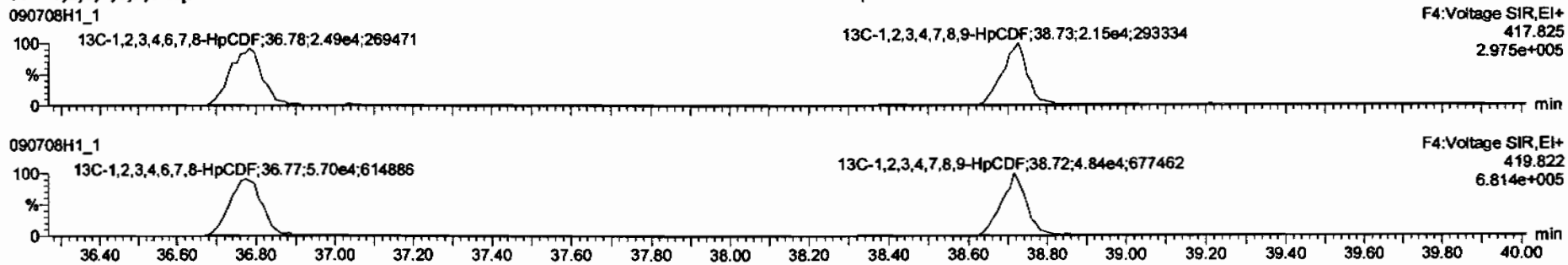

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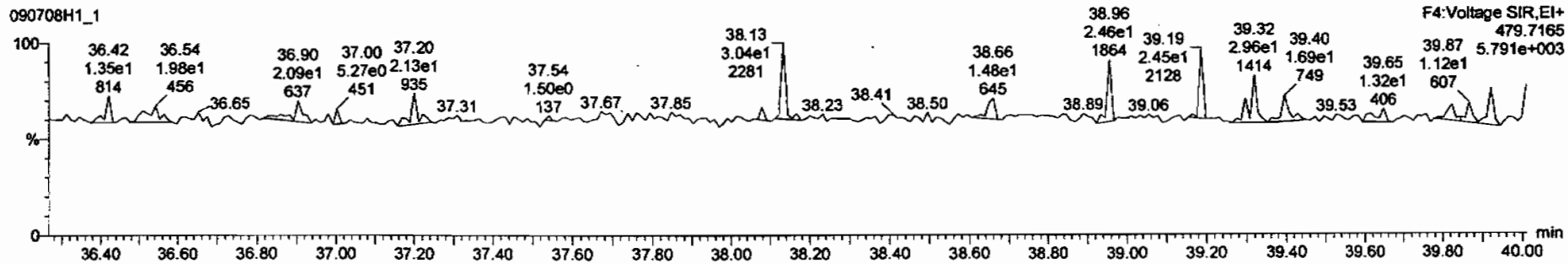

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OCDF

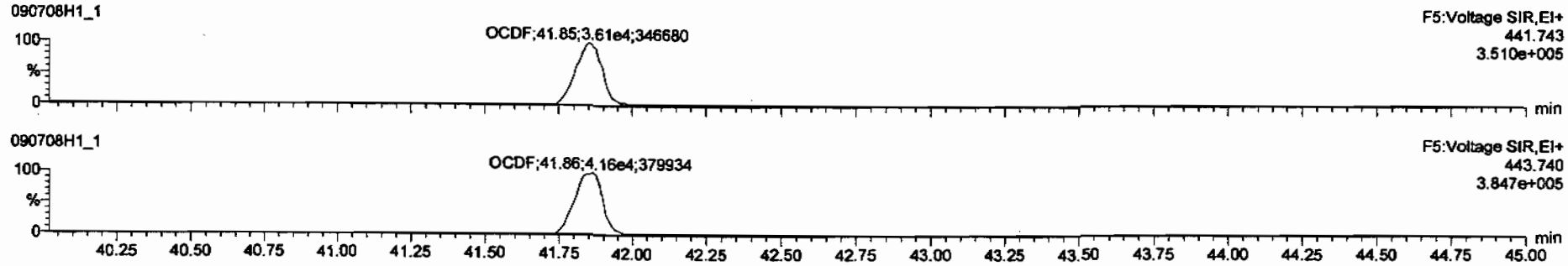

13C-OCDF

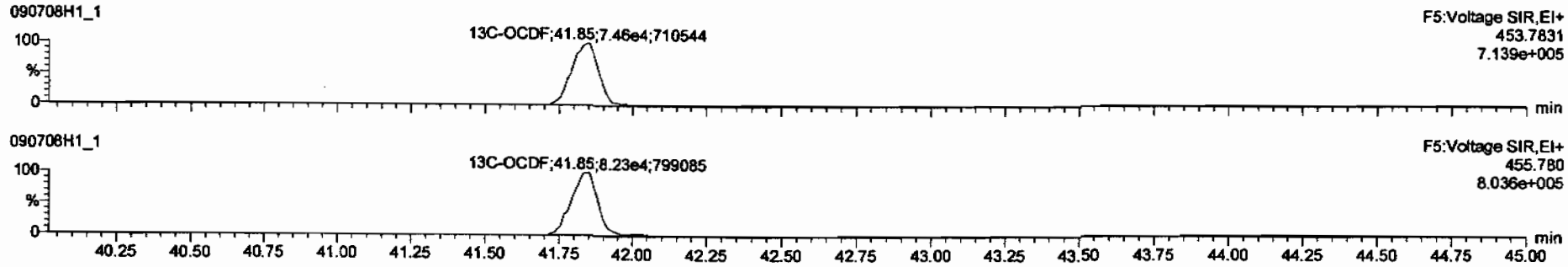

DPE5

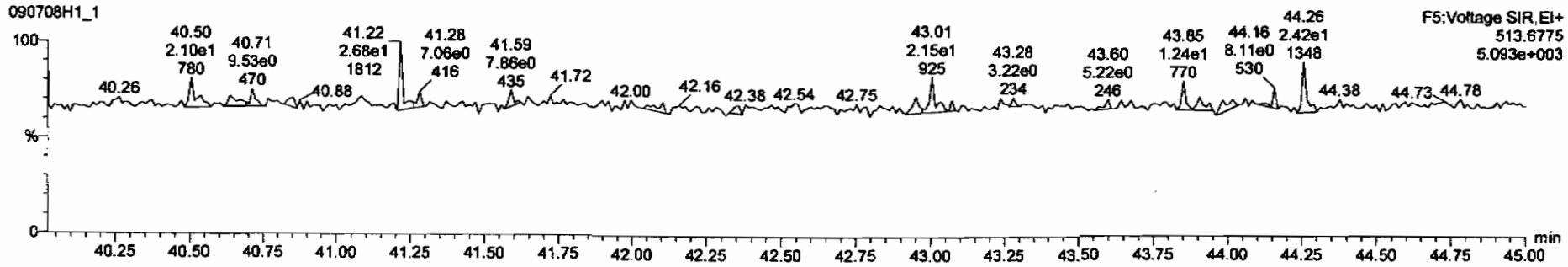

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PFK1

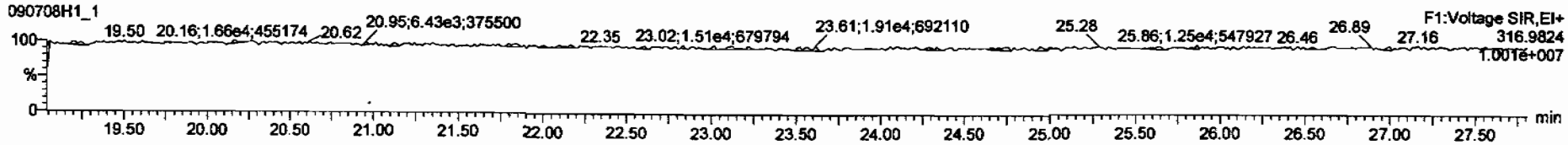

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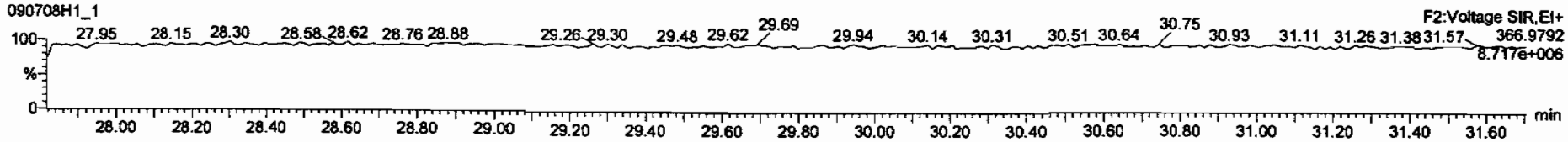

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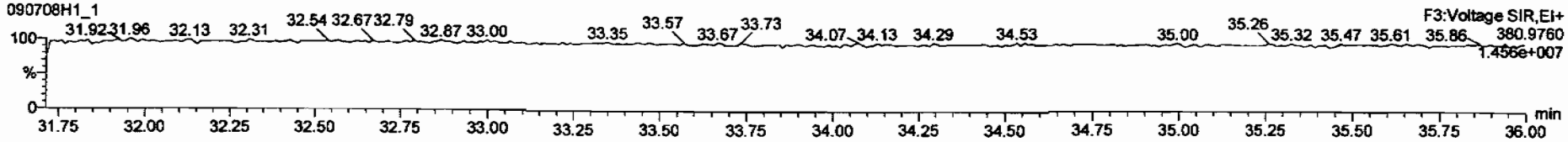

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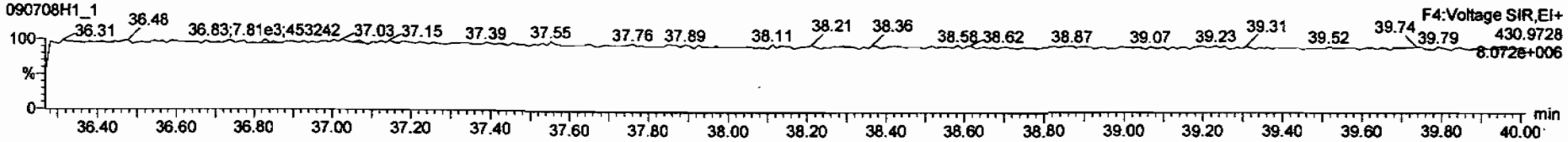

PFK5

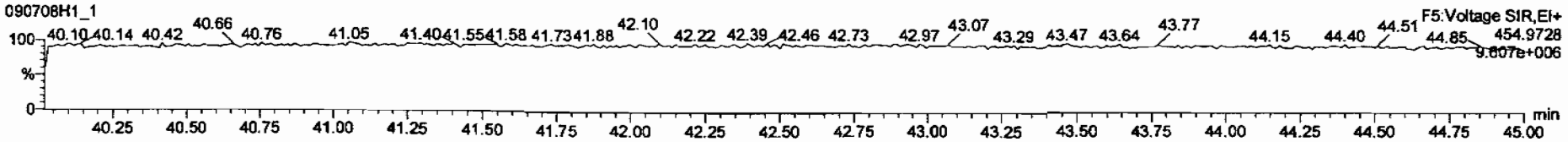

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090708H1-2

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H1_16

GC Column ID: DB-5
Analysis Date: 09-Jul-09 Analysis Time: 01:44:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	NO	9.32	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	46.2	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	46.2	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	46.8	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.98	0.88-1.20	NO	46.4	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.88	0.76-1.02	NO	88.6	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	NO	8.81	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	43.2	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	43.1	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.7	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	45.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.09	0.88-1.20	NO	47.5	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	NO	47.9	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	90.5	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290 only
Date: 7/9/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H1_16

CCAL ID: ST090708H1-2

GC Column ID: DB-5
Analysis Date: 09-Jul-09 Analysis Time: 01:44:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	98.3	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	102	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	91.2	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.09	0.88-1.20	NO	108	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	229	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	NO	106	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	102	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	101	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	102	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	NO	89.1	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	97.1	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.49	0.43-0.59	NO	97.1	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	97.4	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	103	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	204	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.25	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290 only
Date: 7/9/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 7:17:59 AM Pacific Daylight Time
Printed: Thursday, July 09, 2009 7:18:19 AM Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H1_16, Date: 09-Jul-2009, Time: 01:44:11, ID: ST090708H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.61
2	1,2,8,9-TCDD (Last)	26.89
3	1,2,4,7,9-PeCDD (First)	28.55
4	1,2,3,8,9-PeCDD (Last)	31.06
5	12,4,6,7,9-HxCDD (First)	32.53
6	1,2,3,7,8,9-HxCDD (Last)	34.53
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.18
9	1,3,6,8-TCDF (First)	20.51
10	1,2,8,9-TCDF (Last)	27.05
11	1,3,4,6,8-PeCDF (First)	26.98
12	1,2,3,8,9-PeCDF (Last)	31.32
13	1,2,3,4,6,8-HxCDF (First)	31.98
14	1,2,3,4,8,9-HxCDF (Last)	34.93
15	1,2,3,4,6,7,8-HpCDF (First)	36.82
16	1,2,3,4,7,8,9-HpCDF (Last)	38.75

7/9/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090708H1-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090708H1_16

Analysis Date: 09-Jul-09

Analysis Time: 01:44:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.206	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/9/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H1_16

CCAL ID: ST090708H1-2

GC Column ID: DB-5
Analysis Date: 09-Jul-09

Analysis Time: 01:44:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/9/09

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 7:15:39 AM Pacific Daylight Time
Printed: Thursday, July 09, 2009 7:16:43 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H1_16, Date: 09-Jul-2009, Time: 01:44:11, ID: ST090708H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	1.34e4	0.76	NO	1.08	1.000	26.02	1.001	9.3213	93.2	0.111	9.3213
2	1,2,3,7,8-PeCDD	5.39e4	0.63	NO	1.03	1.000	30.68	1.000	46.213	92.4	0.230	46.213
3	1,2,3,4,7,8-HxCDD	4.72e4	1.27	NO	1.00	1.000	34.12	1.000	46.238	92.5	0.311	46.238
4	1,2,3,6,7,8-HxCDD	4.80e4	1.25	NO	1.13	1.000	34.24	1.001	46.775	93.5	0.344	46.775
5	1,2,3,7,8,9-HxCDD	5.06e4	1.27	NO	1.10	1.000	34.53	1.009	47.596	95.2	0.315	47.596
6	1,2,3,4,6,7,8-HpCDD	4.09e4	0.98	NO	1.06	1.000	38.18	1.001	46.356	92.7	0.302	46.356
7	OCDD	6.50e4	0.88	NO	1.18	1.000	41.62	1.000	88.583	88.6	0.218	88.583
8	2,3,7,8-TCDF	1.88e4	0.79	NO	1.09	1.000	25.24	1.001	8.8134	88.1	0.116	8.8134
9	1,2,3,7,8-PeCDF	8.68e4	1.56	NO	1.16	1.000	29.45	1.000	43.173	86.3	0.187	43.173
10	2,3,4,7,8-PeCDF	8.30e4	1.58	NO	1.12	1.000	30.39	1.000	43.053	86.1	0.185	43.053
11	1,2,3,4,7,8-HxCDF	8.20e4	1.30	NO	1.41	1.000	33.20	1.000	44.932	89.9	0.237	44.932
12	1,2,3,6,7,8-HxCDF	8.04e4	1.26	NO	1.22	1.000	33.33	1.000	44.794	89.6	0.252	44.794
13	2,3,4,6,7,8-HxCDF	7.53e4	1.26	NO	1.28	1.000	33.95	1.001	44.675	89.3	0.268	44.675
14	1,2,3,7,8,9-HxCDF	6.35e4	1.27	NO	1.26	1.000	34.93	1.001	45.542	91.1	0.369	45.542
15	1,2,3,4,6,7,8-HpCDF	7.35e4	1.09	NO	1.69	1.000	36.82	1.001	47.485	95.0	0.353	47.485
16	1,2,3,4,7,8,9-HpCDF	5.75e4	1.10	NO	1.48	1.000	38.75	1.000	47.936	95.9	0.404	47.936
17	OCDF	8.34e4	0.91	NO	1.10	1.000	41.86	1.001	90.548	90.5	0.221	90.548
18	13C-2,3,7,8-TCDD	1.34e5	0.78	NO	1.01	1.000	26.00	1.023	98.278	98.3	0.435	
19	13C-1,2,3,7,8-PeCDD	1.13e5	0.63	NO	0.827	1.000	30.67	1.206	101.76	102	0.449	
20	13C-1,2,3,4,7,8-HxCDD	1.02e5	1.27	NO	0.916	1.000	34.11	0.988	102.51	103	0.701	
21	13C-1,2,3,6,7,8-HxCDD	9.11e4	1.24	NO	0.921	1.000	34.22	0.991	91.212	91.2	0.698	
22	13C-1,2,3,4,6,7,8-HpCDD	8.30e4	1.09	NO	0.708	1.000	38.16	1.105	108.01	108	0.855	
23	13C-OCDD	1.25e5	0.89	NO	0.503	1.000	41.61	1.205	228.61	114	0.639	
24	13C-2,3,7,8-TCDF	1.96e5	0.75	NO	0.977	1.000	25.22	0.992	106.35	106	0.300	
25	13C-1,2,3,7,8-PeCDF	1.74e5	1.58	NO	0.896	1.000	29.43	1.158	102.46	102	0.450	
26	13C-2,3,4,7,8-PeCDF	1.72e5	1.56	NO	0.900	1.000	30.38	1.195	101.42	101	0.448	
27	13C-1,2,3,4,7,8-HxCDF	1.29e5	0.54	NO	1.17	1.000	33.19	0.961	102.03	102	0.671	
28	13C-1,2,3,6,7,8-HxCDF	1.47e5	0.50	NO	1.52	1.000	33.32	0.965	89.116	89.1	0.517	
29	13C-2,3,4,6,7,8-HxCDF	1.32e5	0.53	NO	1.25	1.000	33.93	0.983	97.105	97.1	0.628	
30	13C-1,2,3,7,8,9-HxCDF	1.11e5	0.49	NO	1.05	1.000	34.91	1.011	97.052	97.1	0.746	

JK 7/9/09

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 7:15:39 AM Pacific Daylight Time
Printed: Thursday, July 09, 2009 7:16:43 AM Pacific Daylight Time

Name: 090708H1_16, Date: 09-Jul-2009, Time: 01:44:11, ID: ST090708H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	9.17e4	0.46	NO	0.868	1.000	36.80	1.066	97.374	97.4	0.989
32	13C-1,2,3,4,7,8,9-HpCDF	8.10e4	0.46	NO	0.727	1.000	38.74	1.122	102.80	103	1.18
33	13C-OCDF	1.68e5	0.88	NO	0.760	1.000	41.84	1.212	203.92	102	0.393
34	37Cl-2,3,7,8-TCDD	8.28e3			0.668	1.000	26.00	1.023	9.2466	92.5	0.153
35	13C-1,2,3,4-TCDD	1.34e5	0.82	NO	1.00	1.000	25.42	0.000	100.00	100	0.441
36	13C-1,2,3,4-TCDF	1.89e5	0.76	NO	1.00	1.000	23.98	0.000	100.00	100	0.293
37	13C-1,2,3,7,8,9-HxCDD	1.08e5	1.23	NO	1.00	1.000	34.52	0.000	100.00	100	0.643

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 7:13:39 AM Pacific Daylight Time
Printed: Thursday, July 09, 2009 7:15:29 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 2,3,7,8-TCDD

090708H1_1	ST090708H1-1 1613 CS3 080917I		08-Jul-09	13:20:23
090708H1_2	0_2222_OPR001		08-Jul-09	14:10:45
090708H1_3	solvent blank		08-Jul-09	15:00:17
090708H1_4	0_2222_MB001		08-Jul-09	15:49:49
090708H1_5	31819_2222_001 CAMO-09-6513	11.53	08-Jul-09	16:39:20
090708H1_6	31819_2222_002 CAMO-09-6514	10.75	08-Jul-09	17:28:54
090708H1_7	31819_2222_003 CAMO-09-6530	10.74	08-Jul-09	18:18:25
090708H1_8	31821_2222_001 CAMO-09-10141	10.54	08-Jul-09	19:07:55
090708H1_9	31821_2222_002 CAMO-09-10142	10.62	08-Jul-09	19:57:26
090708H1_10	31829_2222_001 CAMO-09-10458	10.54	08-Jul-09	20:46:58
090708H1_11	31829_2222_002 CAMO-09-10459	10.79	08-Jul-09	21:36:29
090708H1_12	31830_2222_001 CAMO-09-10474	11.88	08-Jul-09	22:26:02
090708H1_13	31830_2222_002 CAMO-09-10475	11.91	08-Jul-09	23:15:34
090708H1_14	31830_2222_003 CAMO-09-10476	11.21	09-Jul-09	00:05:05
090708H1_15	solvent blank		09-Jul-09	00:54:39
090708H1_16	ST090708H1-2 1613 CS3 080917I		09-Jul-09	01:44:11

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 7:17:59 AM Pacific Daylight Time
Printed: Thursday, July 09, 2009 7:18:19 AM Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H1_16, Date: 09-Jul-2009, Time: 01:44:11, ID: ST090708H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

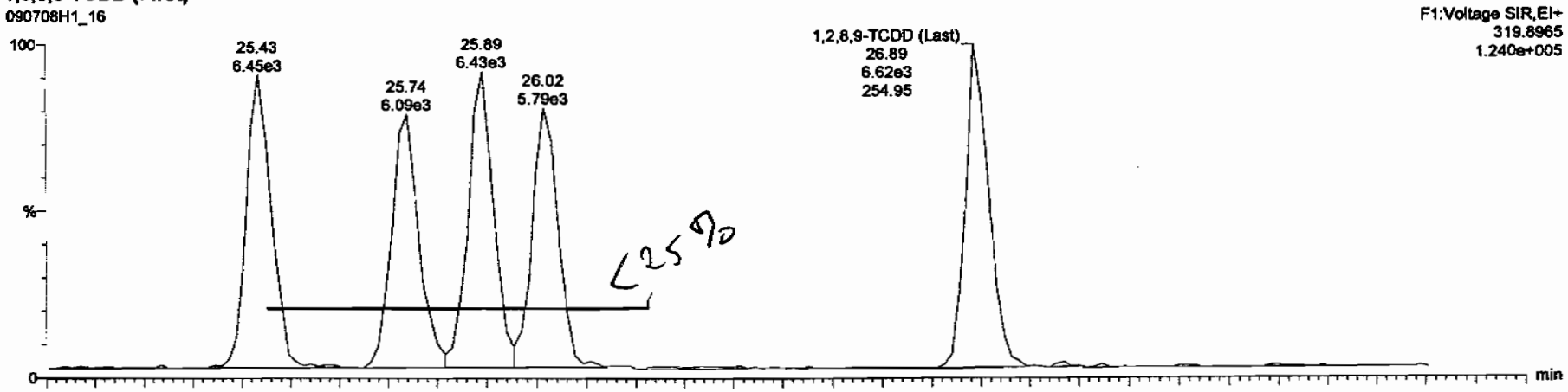

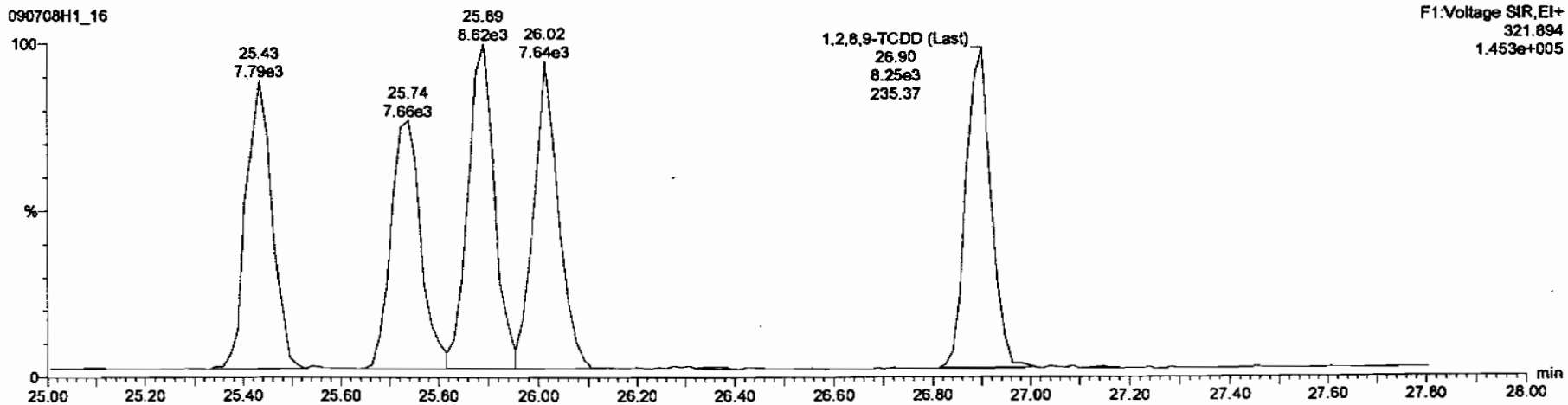

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-16.qld

Last Altered: Thursday, July 09, 2009 7:15:39 AM Pacific Daylight Time
Printed: Thursday, July 09, 2009 7:17:06 AM Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H1_16, Date: 09-Jul-2009, Time: 01:44:11, ID: ST090708H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

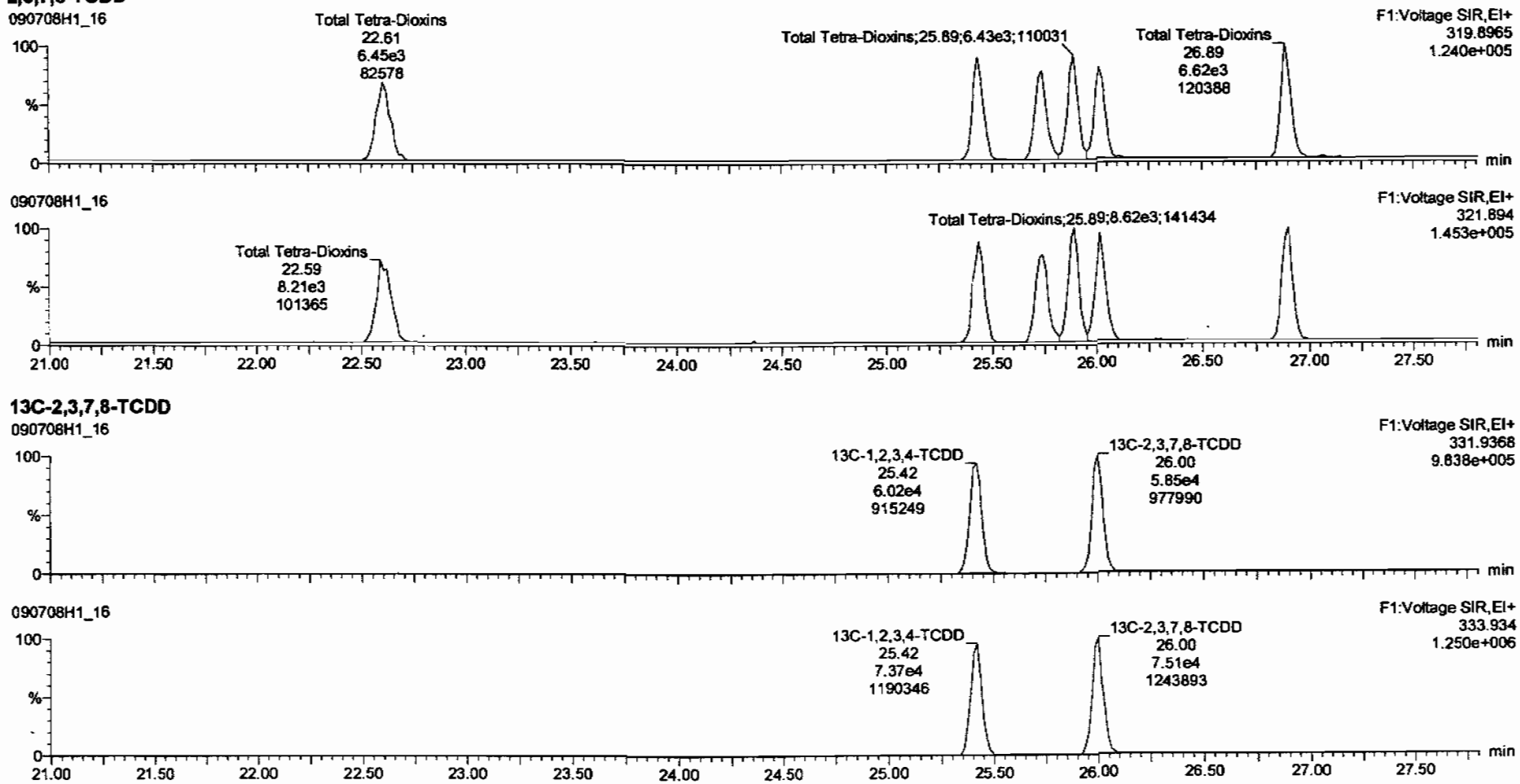

13C-2,3,7,8-TCDD

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090708h1\090708h1-16.qld

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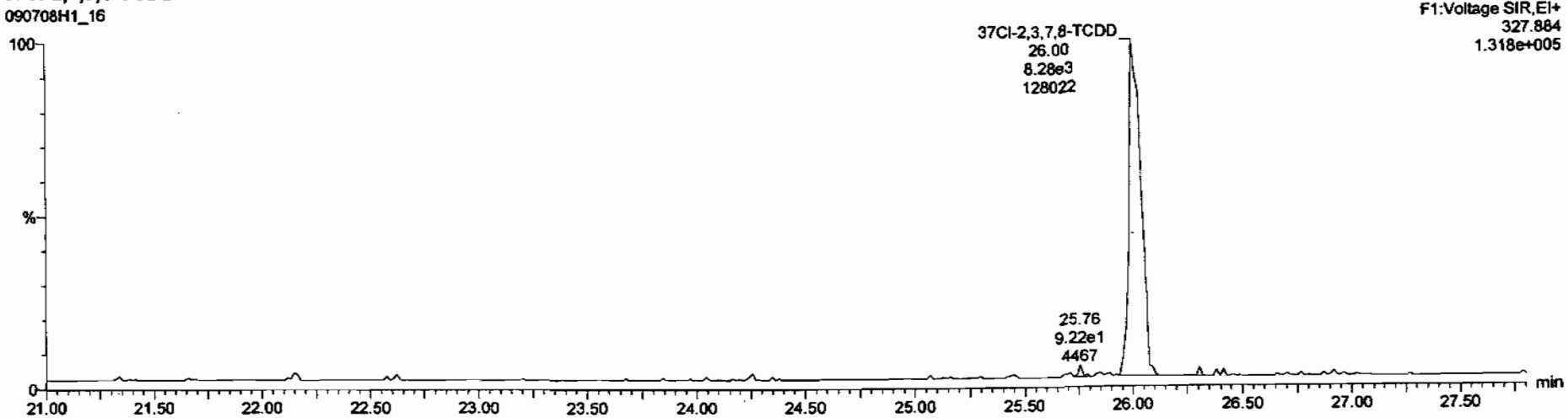

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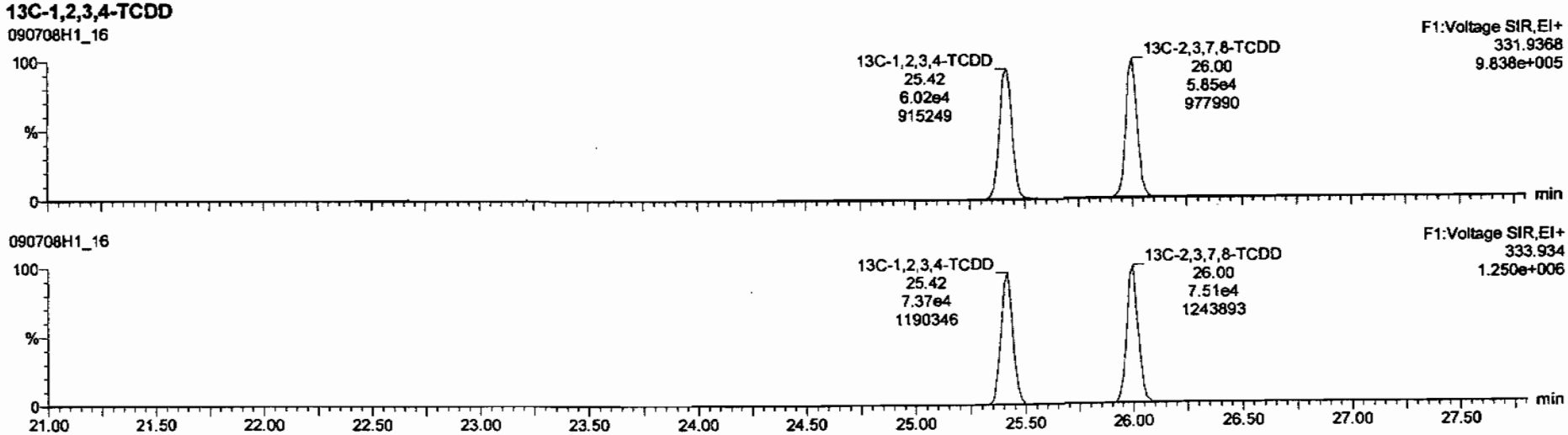

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1,2,3,7,8-PeCDD

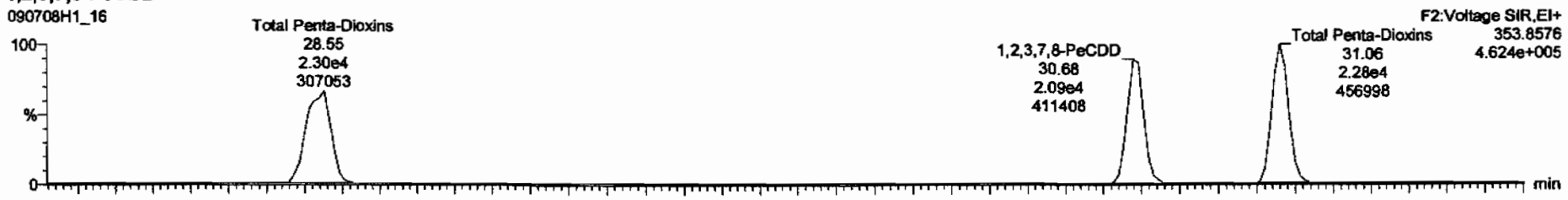

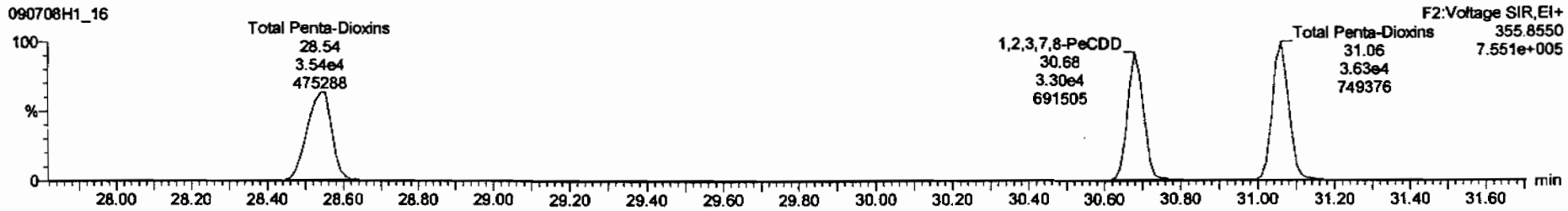

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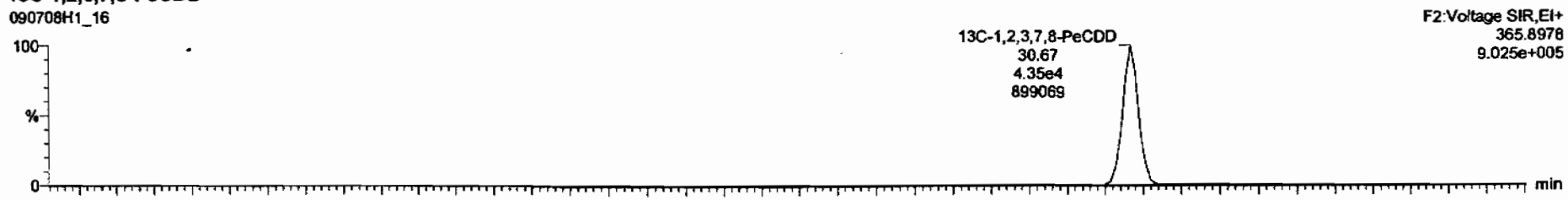

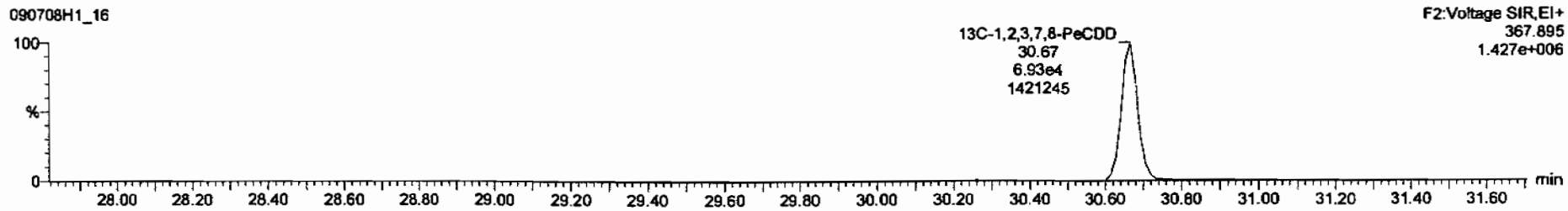

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Name: 090708H1_16, Date: 09-Jul-2009, Time: 01:44:11, ID: ST090708H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

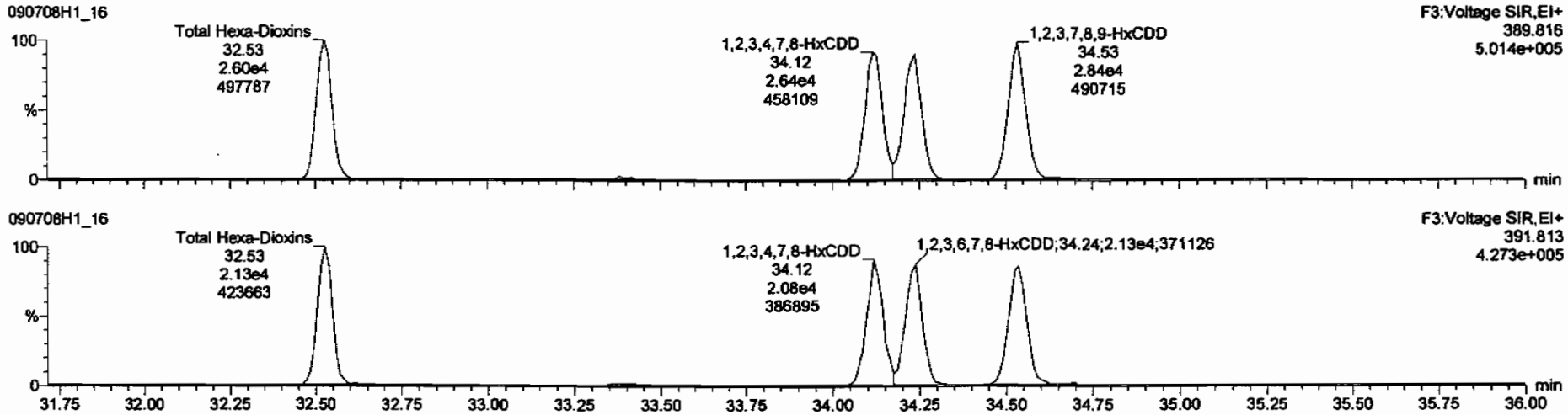

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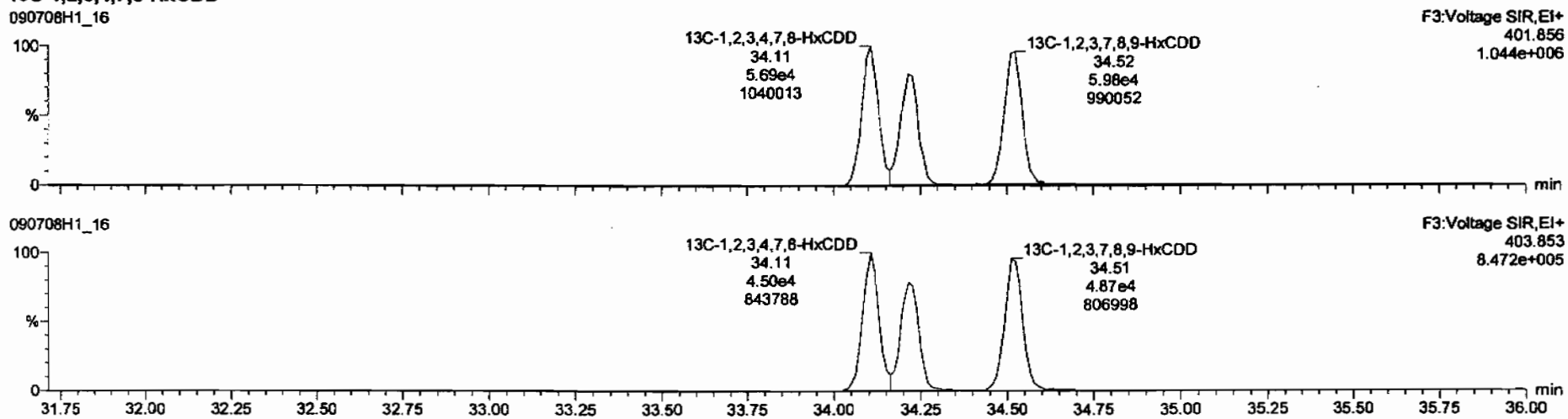

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1,2,3,4,6,7,8-HpCDD

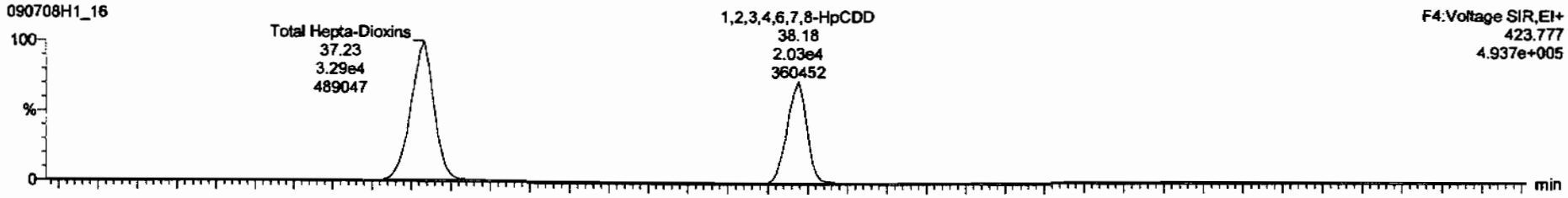

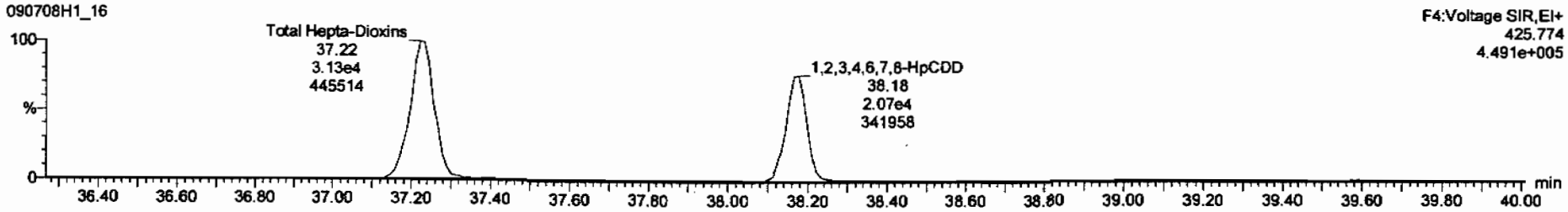

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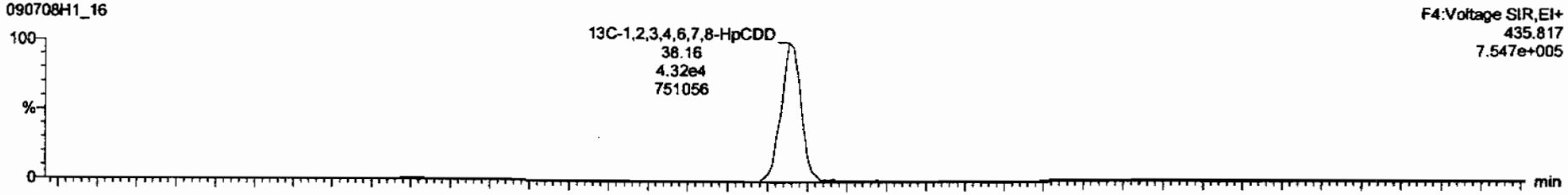

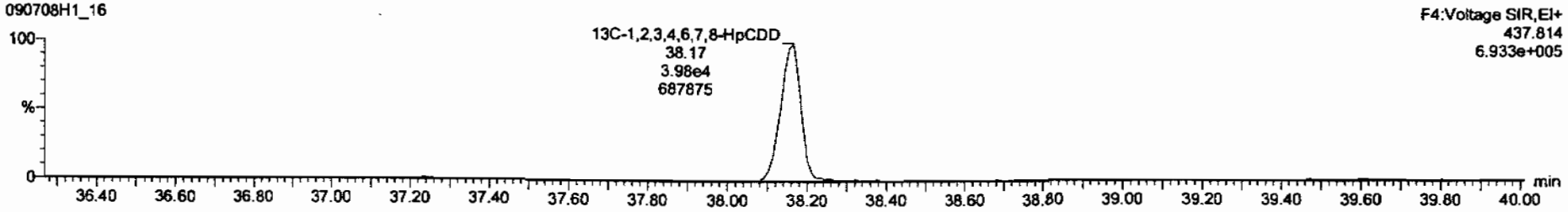

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Name: 090708H1_16, Date: 09-Jul-2009, Time: 01:44:11, ID: ST090708H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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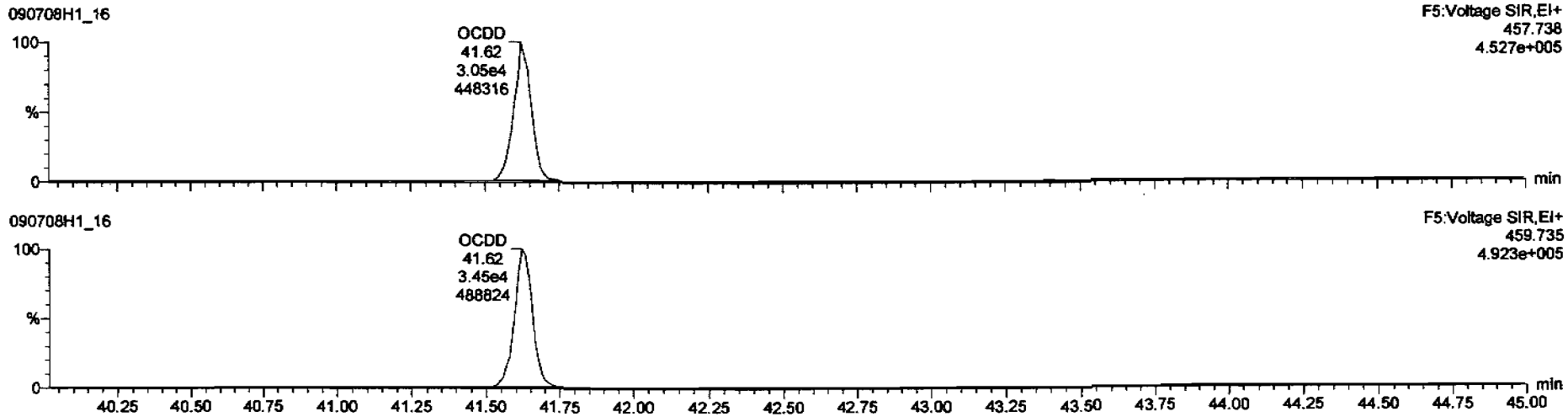

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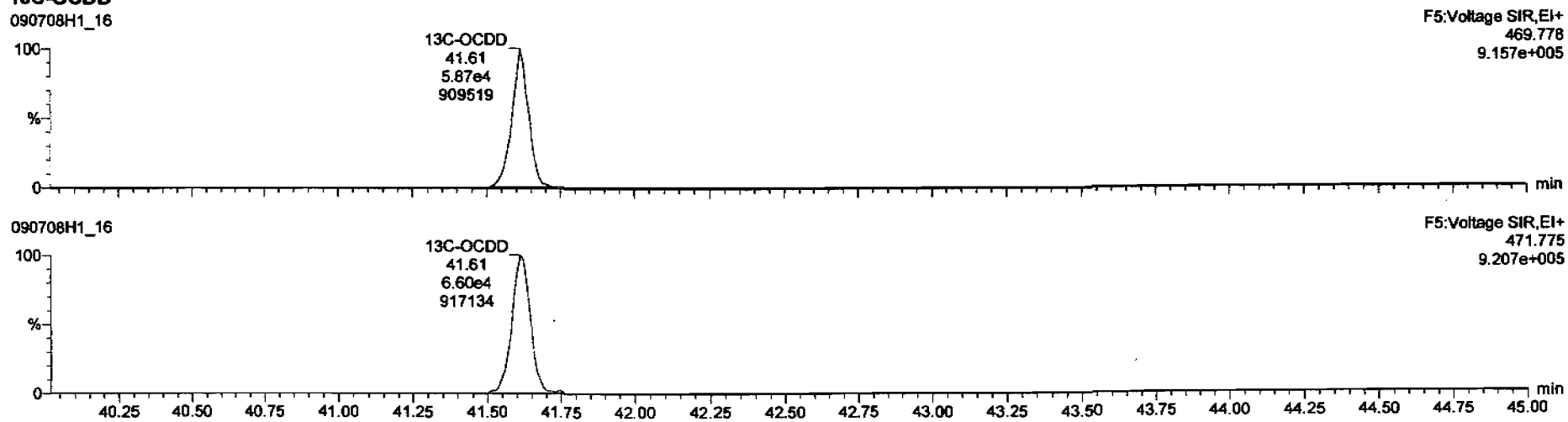

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2,3,7,8-TCDF

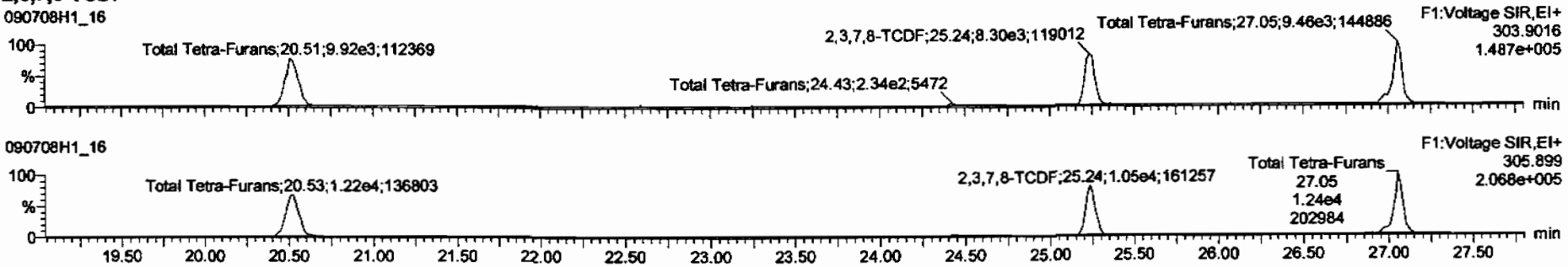

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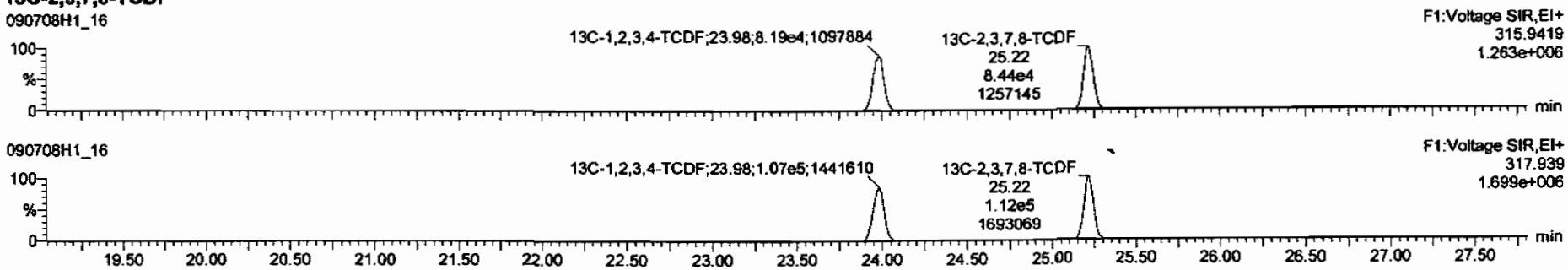

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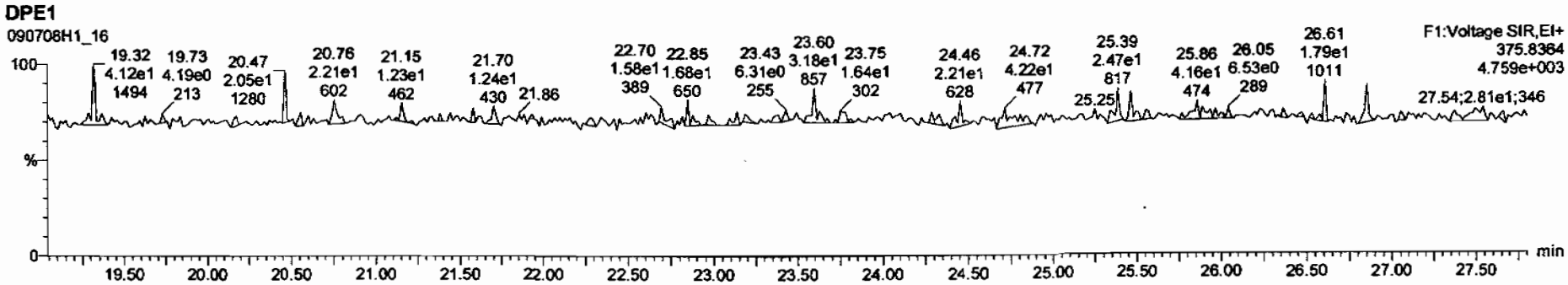

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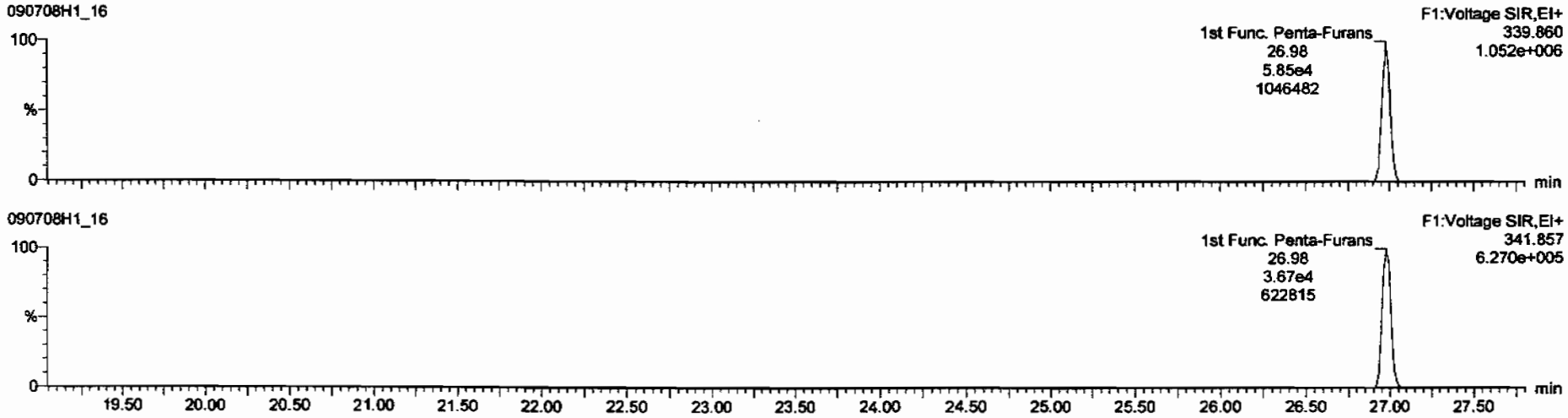

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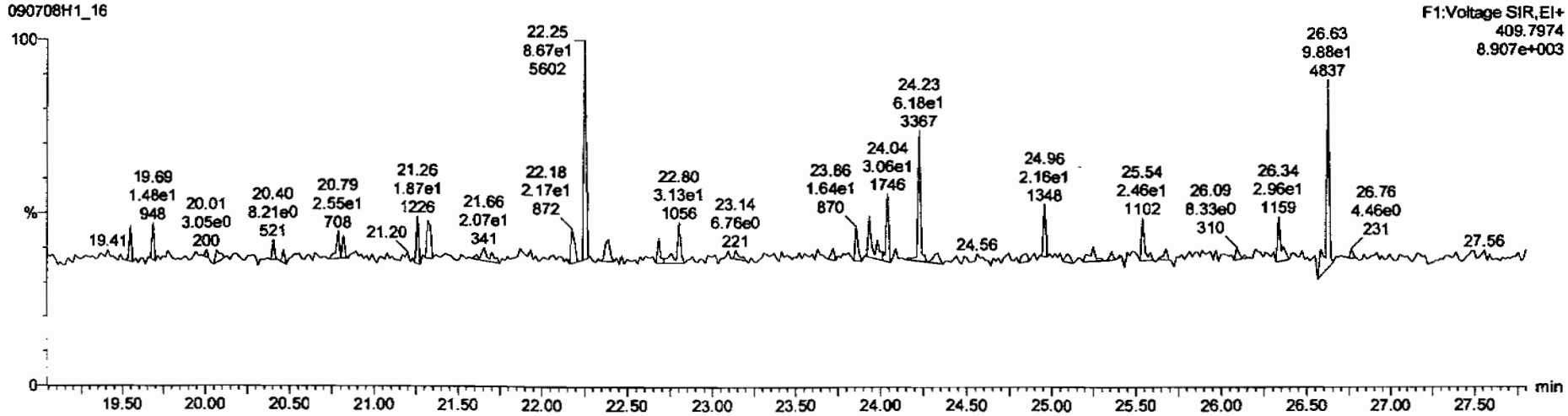

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1,2,3,7,8-PeCDF

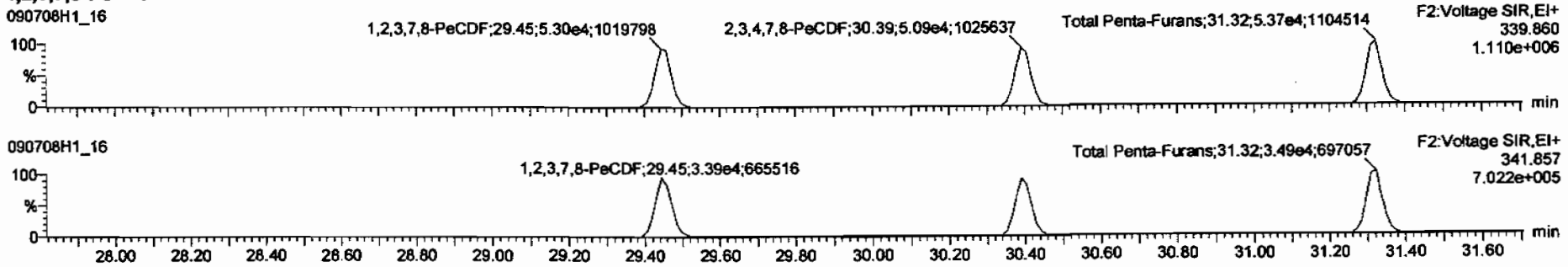

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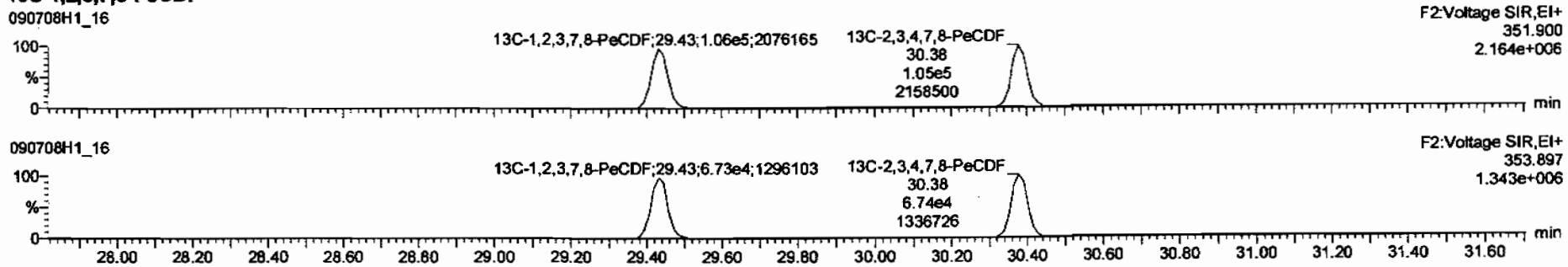

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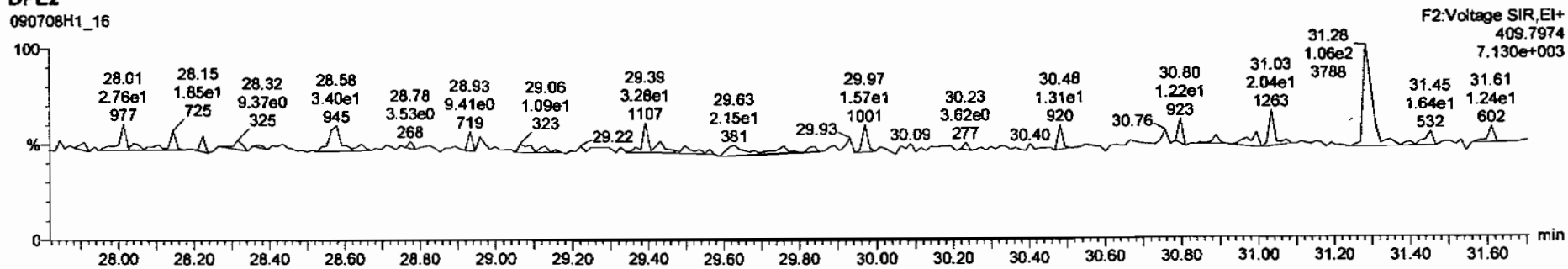

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1,2,3,4,7,8-HxCDF

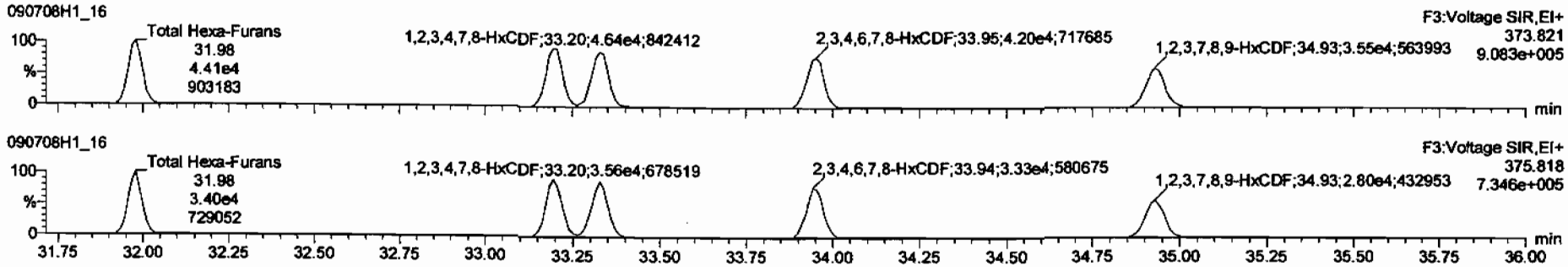

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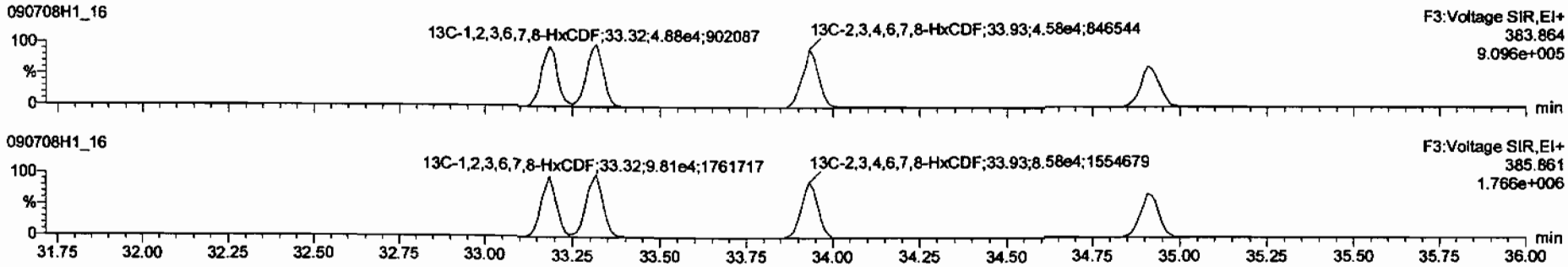

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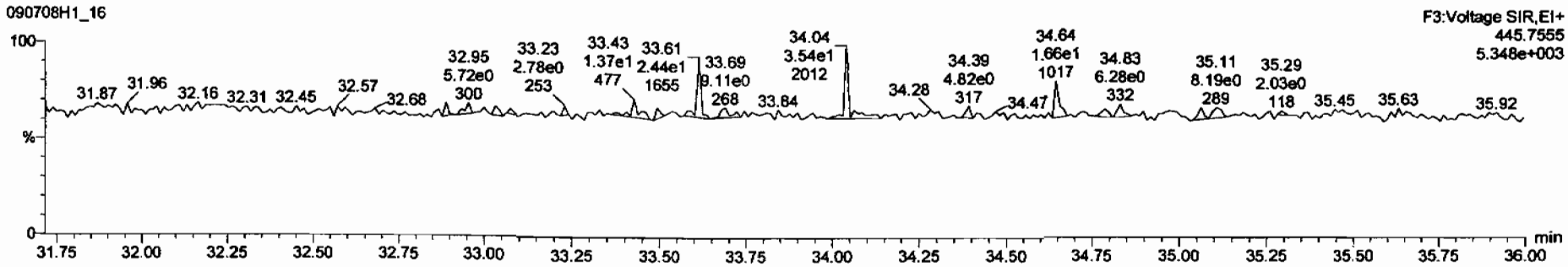

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1,2,3,4,6,7,8-HpCDF

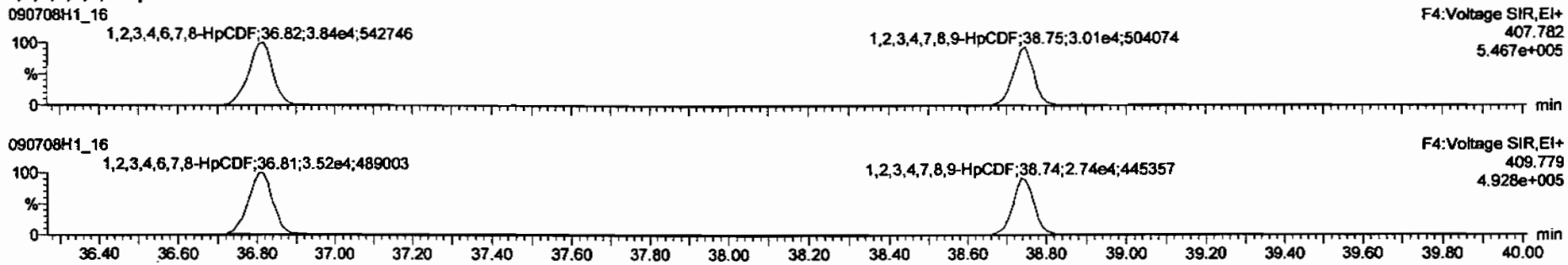

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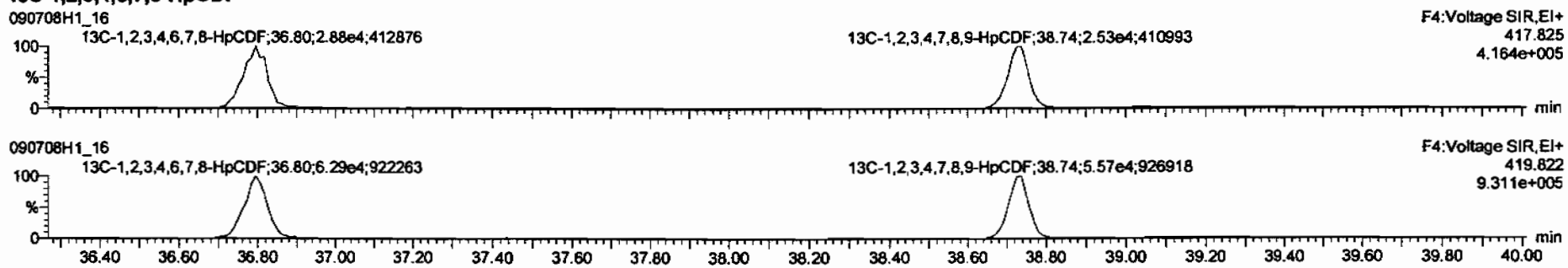

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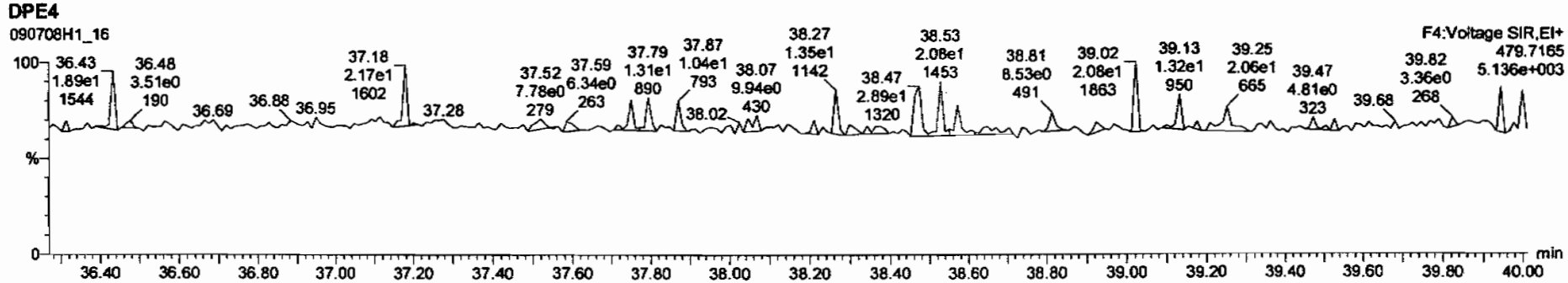

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OCDF

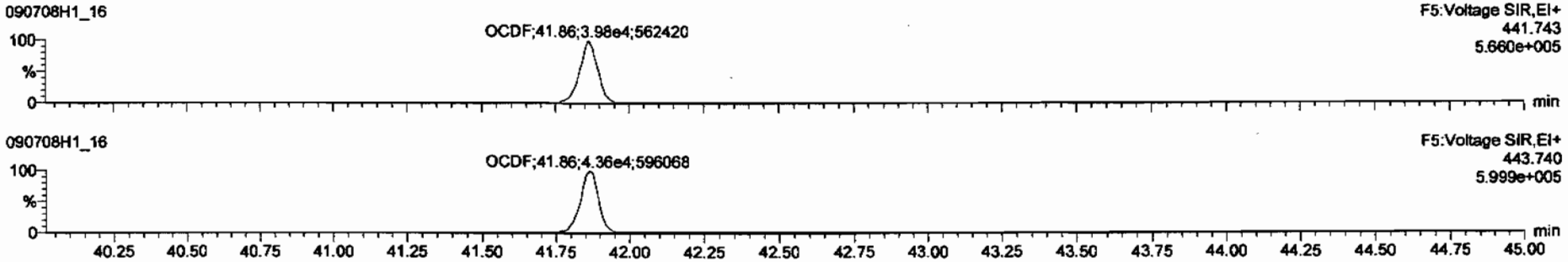

13C-OCDF

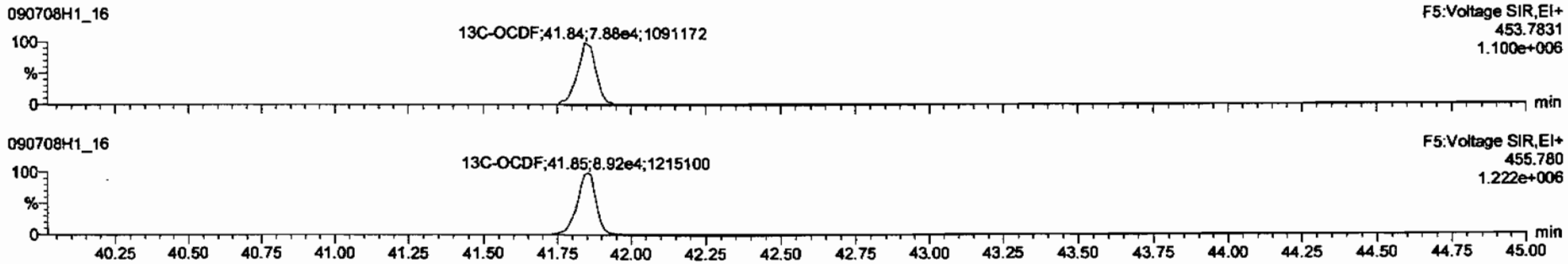

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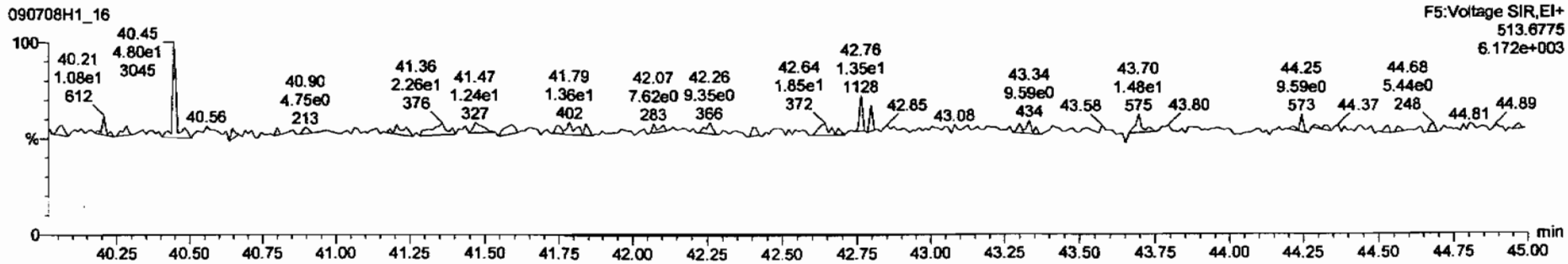

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Name: 090708H1_16, Date: 09-Jul-2009, Time: 01:44:11, ID: ST090708H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

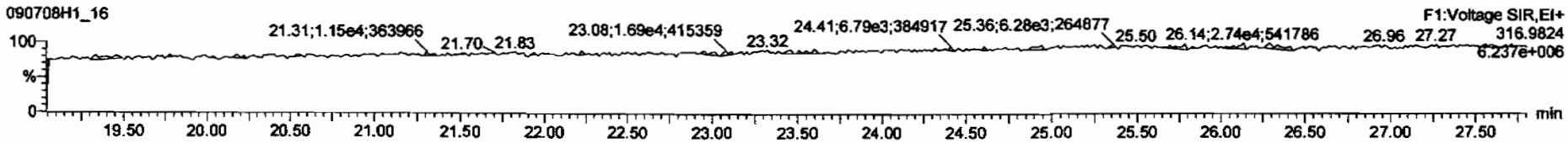

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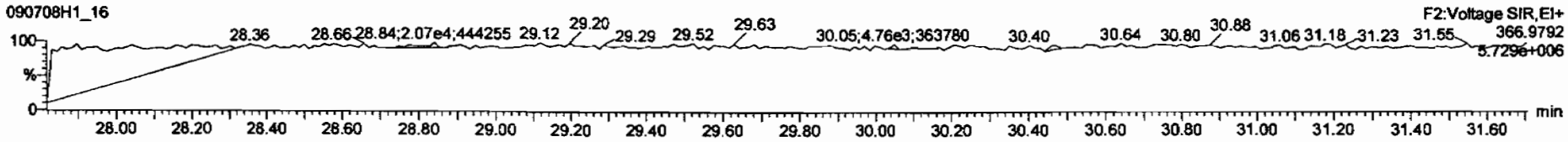

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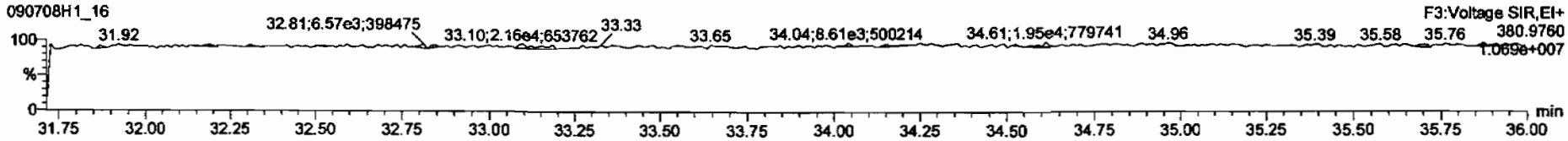

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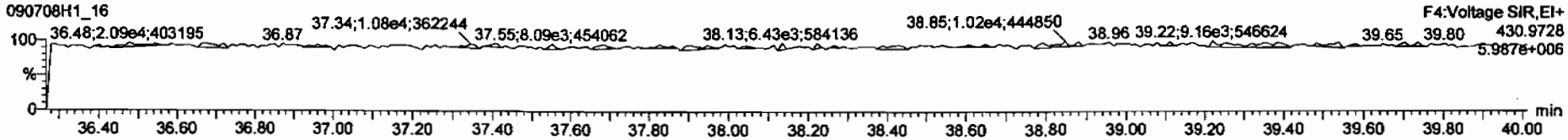

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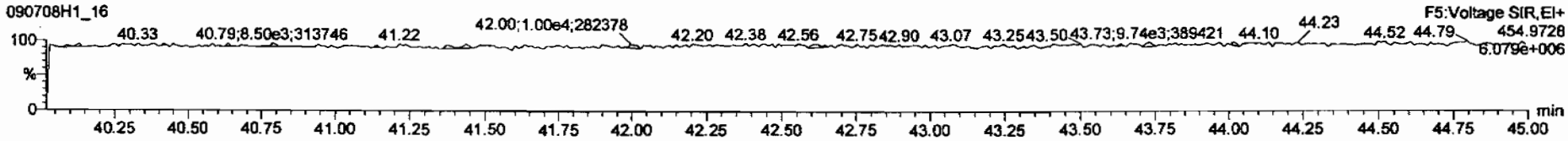

Printed: Thursday, July 09, 2009 02:42:19 Pacific Daylight Time

M 292.9824 R 13476

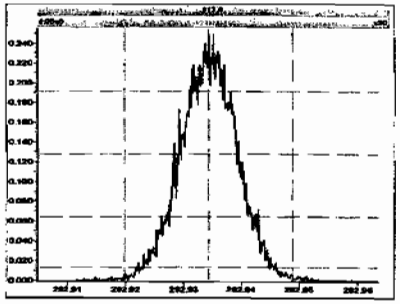

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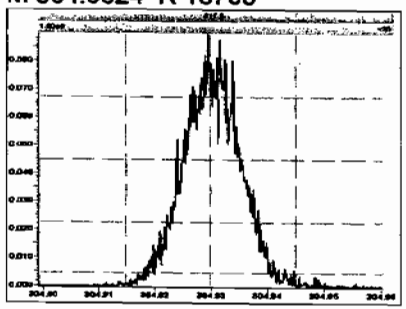

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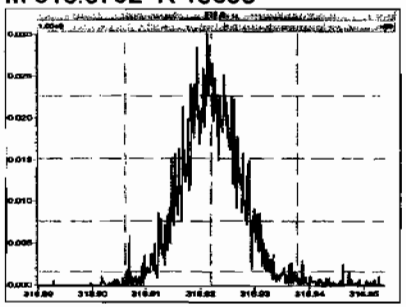

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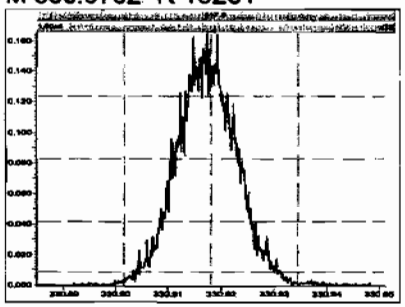

M 342.9792 R 12468

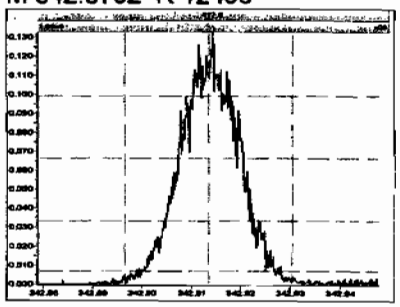

M 354.9792 R 13839

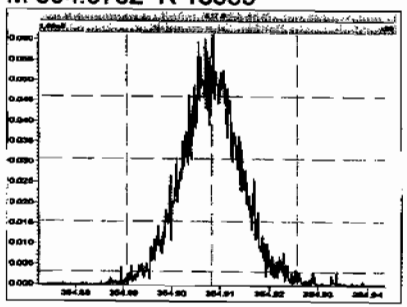

M 366.9792 R 14579

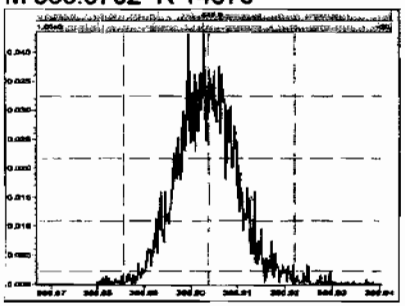

M 380.9760 R 12194

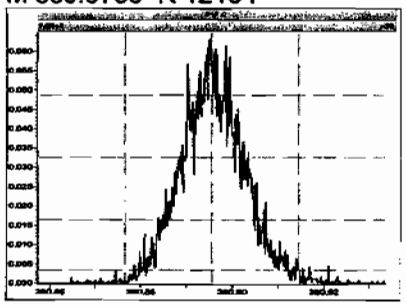

M 392.9760 R 13344

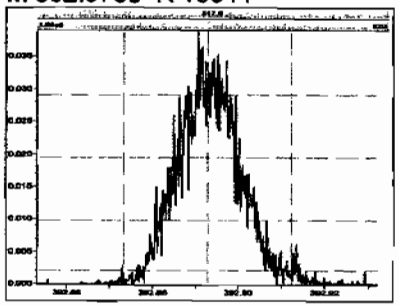

M 404.9760 R 12920

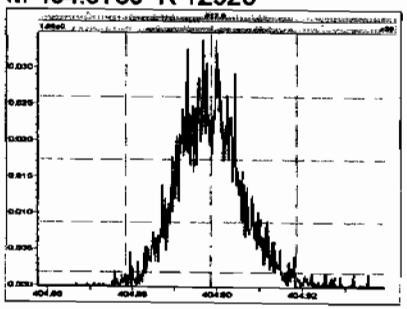

M 416.9760 R 15745

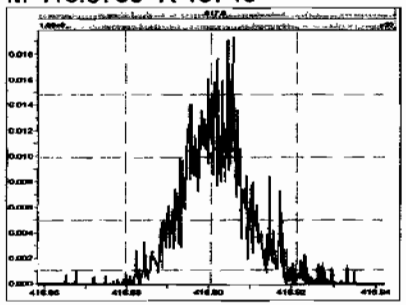

M 330.9792 R 13337

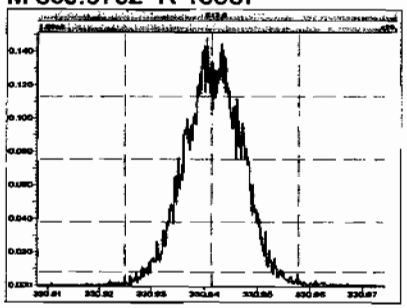

M 342.9792 R 13662

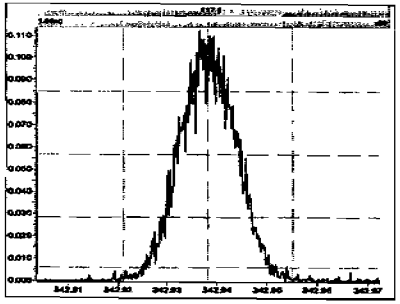

M 354.9792 R 13661

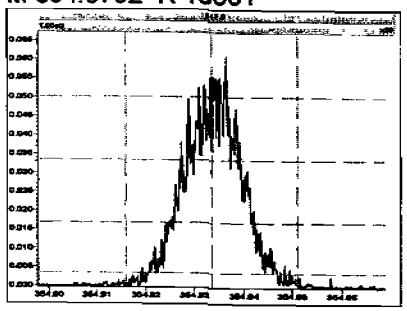

M 366.9792 R 14452

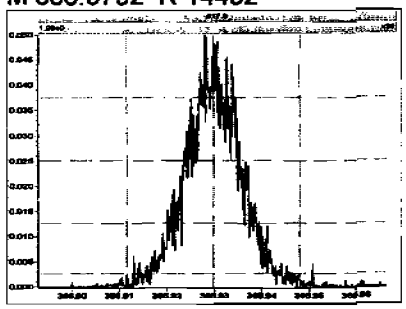

M 380.9760 R 13812

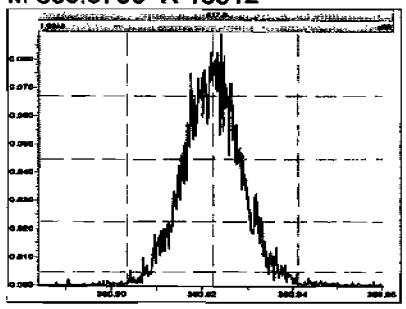

M 392.9760 R 13493

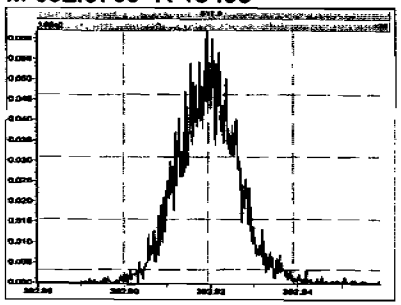

M 404.9760 R 13450

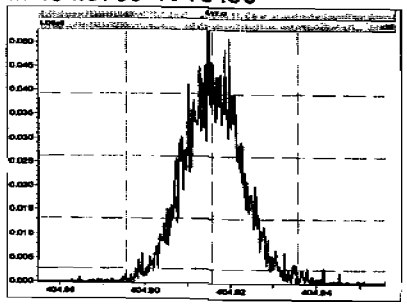

M 416.9760 R 14836

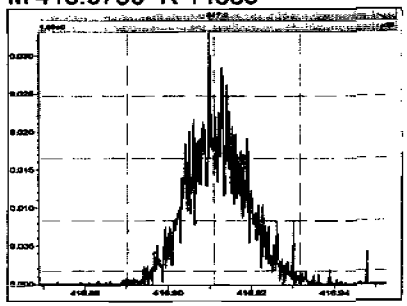

M 366.9792 R 14492

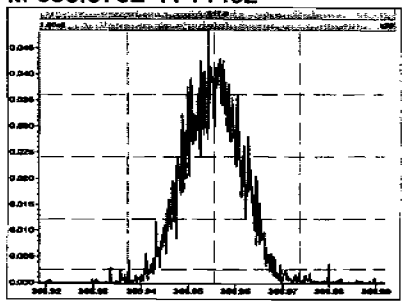

M 380.9760 R 13703

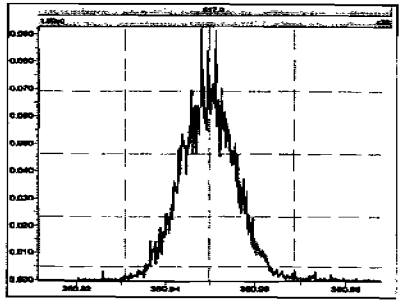

M 392.9760 R 14797

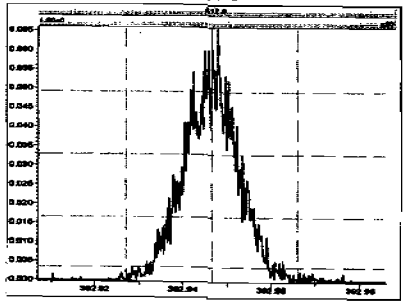

M 404.9760 R 13932

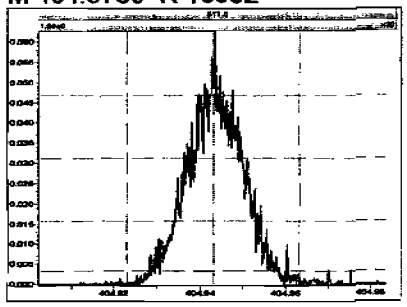

M 416.9760 R 14662

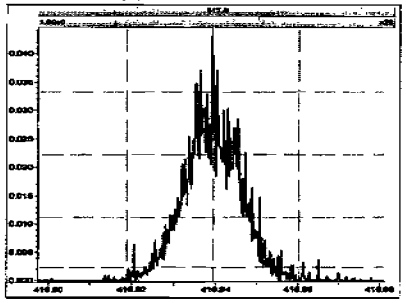

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M 430.9728 R 13854

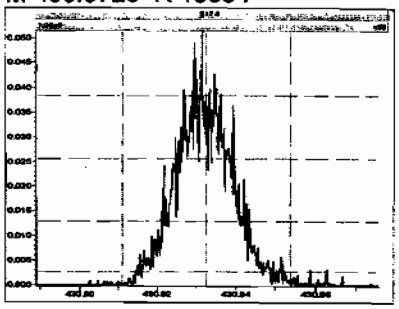

M 442.9728 R 14177

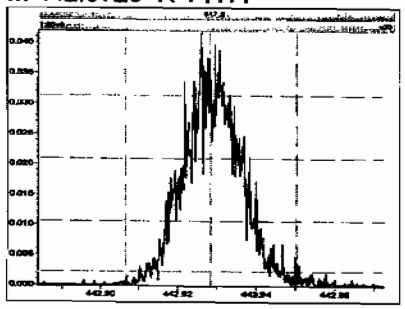

M 454.9728 R 13890

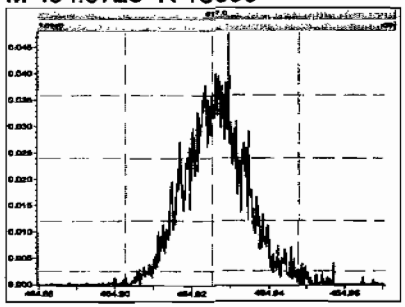

M 404.9760 R 14882

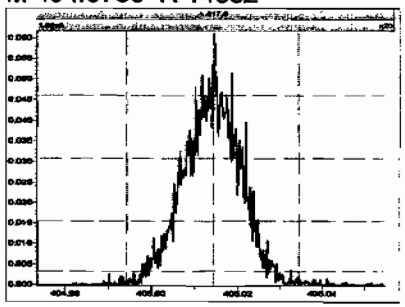

M 416.9760 R 15291

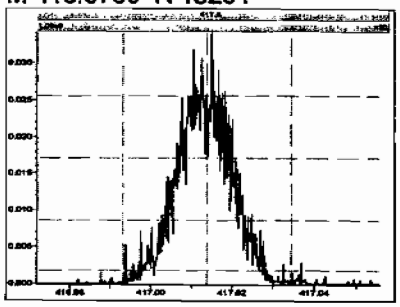

M 430.9728 R 14454

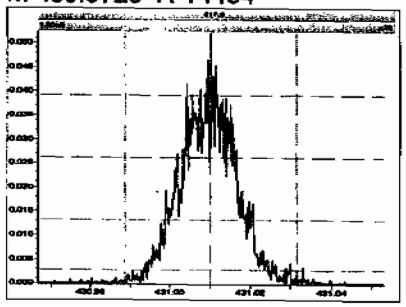

M 442.9728 R 14764

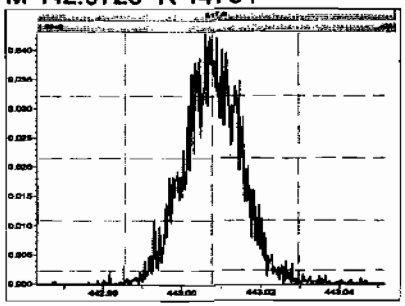

M 454.9728 R 15261

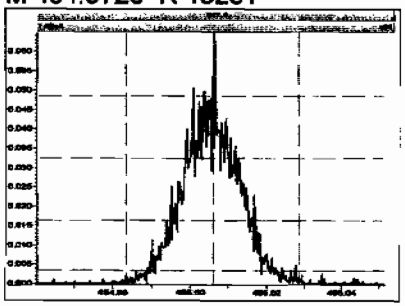

M 466.9728 R 14885

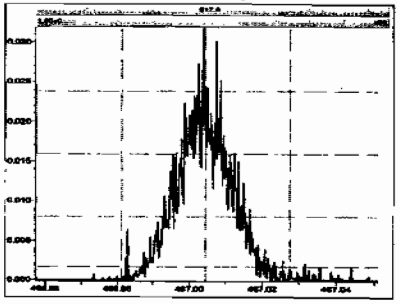

M 480.9696 R 16458

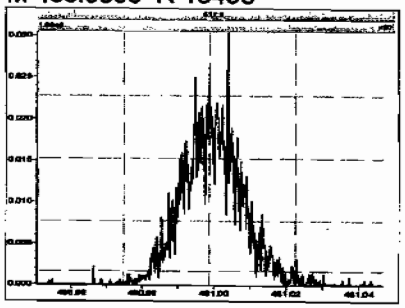

M 430.9728 R 14060

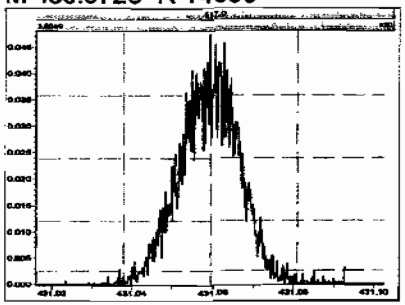

M 442.9728 R 13662

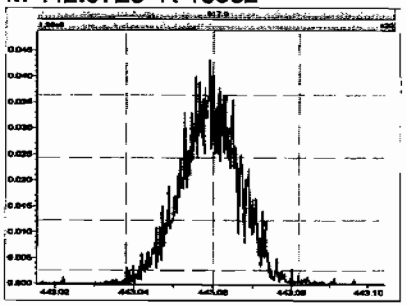

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M 454.9728 R 13987

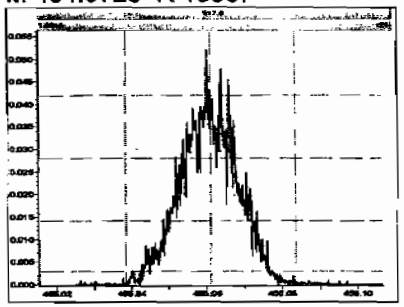

M 466.9728 R 14844

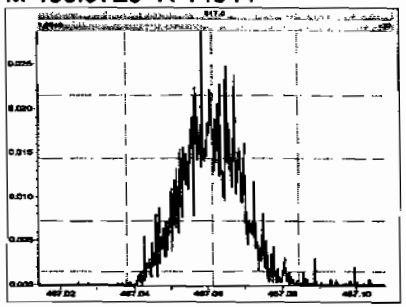

M 480.9696 R 13698

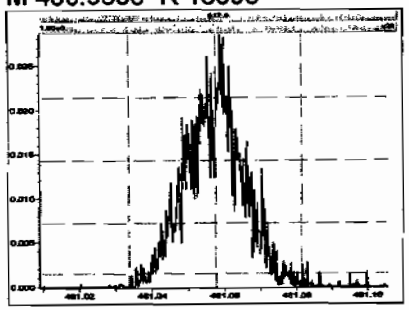

M 492.9696 R 14665

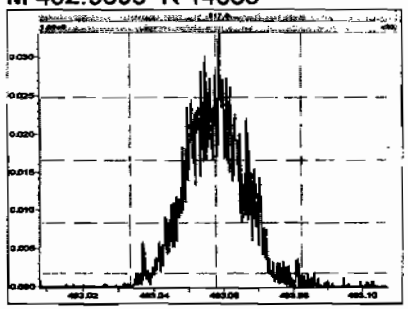

M 504.9696 R 14046

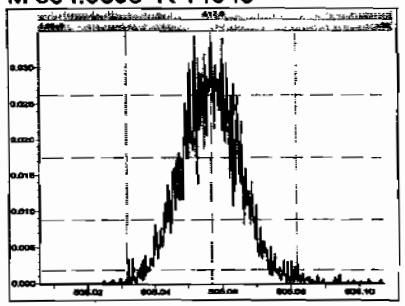

M 516.9697 R 13566

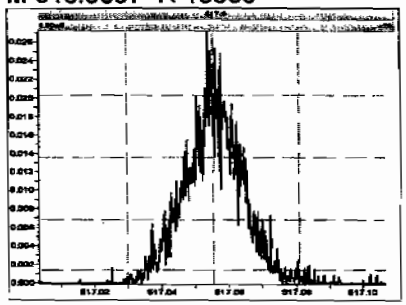

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H2_1

CCAL ID: ST090708H2-1

GC Column ID: DB-5
Analysis Date: 09-Jul-09
Analysis Time: 02:42:21

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.87	0.65-0.89	NO	9.83	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	47.2	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	46.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	44.8	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	47.6	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	NO	45.9	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.93	0.76-1.02	NO	88.5	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.81	0.65-0.89	NO	8.95	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	41.3	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	42.9	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	NO	44.6	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	NO	45.6	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	NO	47.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.22	1.05-1.43	NO	46.4	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	47.2	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	46.2	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.92	0.76-1.02	NO	88.2	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/9/09

8290 only

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H2_1

CCAL ID: ST090708H2-1

GC Column ID: DB-5
Analysis Date: 09-Jul-09
Analysis Time: 02:42:21

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	NO	104	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	103	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.33	1.05-1.43	NO	104	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	93.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	107	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.91	0.76-1.02	NO	222	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	108	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	NO	106	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	105	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	102	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	89.5	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	92.9	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.55	0.43-0.59	NO	98.6	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	95.6	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.47	0.37-0.51	NO	102	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.90	0.76-1.02	NO	198	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					10.7	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290a 4
Date: 7/9/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 7:21:20 AM Pacific Daylight Time
Printed: Thursday, July 09, 2009 7:21:25 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.61
2	1,2,8,9-TCDD (Last)	26.90
3	1,2,4,7,9-PeCDD (First)	28.55
4	1,2,3,8,9-PeCDD (Last)	31.06
5	12,4,6,7,9-HxCDD (First)	32.54
6	1,2,3,7,8,9-HxCDD (Last)	34.55
7	1,2,3,4,6,7,9-HpCDD (First)	37.25
8	1,2,3,4,6,7,8-HpCDD (Last)	38.19
9	1,3,6,8-TCDF (First)	20.51
10	1,2,8,9-TCDF (Last)	27.07
11	1,3,4,6,8-PeCDF (First)	26.98
12	1,2,3,8,9-PeCDF (Last)	31.34
13	1,2,3,4,6,8-HxCDF (First)	31.99
14	1,2,3,4,8,9-HxCDF (Last)	34.94
15	1,2,3,4,6,7,8-HpCDF (First)	36.82
16	1,2,3,4,7,8,9-HpCDF (Last)	38.75

7/9/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H2_1

CCAL ID: ST090708H2-1

GC Column ID: DB-5
Analysis Date: 09-Jul-09

Analysis Time: 02:42:21

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.208	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.993	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.159	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.196	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.024	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/9/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H2_1

CCAL ID: ST090708H2-1

GC Column ID: DB-5
Analysis Date: 09-Jul-09

Analysis Time: 02:42:21

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/9/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090708h2-1.qld

Last Altered: Thursday, July 09, 2009 07:21:40 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:22:38 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	1.02e4	0.87	NO	1.08	1.000	26.02	1.001	9.8262	98.3	0.141	9.8262
2	1,2,3,7,8-PeCDD	3.78e4	0.64	NO	1.03	1.000	30.69	1.000	47.177	94.4	0.215	47.177
3	1,2,3,4,7,8-HxCDD	3.26e4	1.26	NO	1.00	1.000	34.13	1.000	45.957	91.9	0.409	45.957
4	1,2,3,6,7,8-HxCDD	3.24e4	1.26	NO	1.13	1.000	34.25	1.001	44.825	89.7	0.431	44.825
5	1,2,3,7,8,9-HxCDD	3.54e4	1.25	NO	1.10	1.000	34.55	1.009	47.562	95.1	0.404	47.562
6	1,2,3,4,6,7,8-HpCDD	2.75e4	1.02	NO	1.06	1.000	38.19	1.001	45.856	91.7	0.383	45.856
7	OCDD	4.32e4	0.93	NO	1.18	1.000	41.63	1.000	88.461	88.5	0.264	88.461
8	2,3,7,8-TCDF	1.31e4	0.81	NO	1.09	1.000	25.24	1.001	8.9482	89.5	0.151	8.9482
9	1,2,3,7,8-PeCDF	5.85e4	1.61	NO	1.16	1.000	29.46	1.000	41.311	82.6	0.277	41.311
10	2,3,4,7,8-PeCDF	5.81e4	1.59	NO	1.12	1.000	30.40	1.000	42.855	85.7	0.270	42.855
11	1,2,3,4,7,8-HxCDF	5.60e4	1.24	NO	1.41	1.000	33.21	1.000	44.626	89.3	0.278	44.626
12	1,2,3,6,7,8-HxCDF	5.63e4	1.24	NO	1.22	1.000	33.34	1.000	45.613	91.2	0.280	45.613
13	2,3,4,6,7,8-HxCDF	5.21e4	1.28	NO	1.28	1.000	33.96	1.001	47.225	94.4	0.318	47.225
14	1,2,3,7,8,9-HxCDF	4.50e4	1.22	NO	1.26	1.000	34.94	1.000	46.390	92.8	0.403	46.390
15	1,2,3,4,6,7,8-HpCDF	4.91e4	1.04	NO	1.69	1.000	36.82	1.000	47.192	94.4	0.360	47.192
16	1,2,3,4,7,8,9-HpCDF	3.77e4	1.04	NO	1.48	1.000	38.75	1.000	46.227	92.5	0.410	46.227
17	OCDF	5.41e4	0.92	NO	1.10	1.000	41.88	1.000	88.224	88.2	0.273	88.224
18	13C-2,3,7,8-TCDD	9.58e4	0.80	NO	1.01	1.000	26.00	1.023	104.23	104	0.656	
19	13C-1,2,3,7,8-PeCDD	7.75e4	0.61	NO	0.827	1.000	30.68	1.208	103.45	103	0.522	
20	13C-1,2,3,4,7,8-HxCDD	7.08e4	1.33	NO	0.916	1.000	34.12	0.988	104.00	104	0.673	
21	13C-1,2,3,6,7,8-HxCDD	6.42e4	1.23	NO	0.921	1.000	34.23	0.991	93.806	93.8	0.670	
22	13C-1,2,3,4,6,7,8-HpCDD	5.64e4	1.05	NO	0.708	1.000	38.17	1.105	107.23	107	1.00	
23	13C-OCDD	8.29e4	0.91	NO	0.503	1.000	41.62	1.205	222.14	111	0.659	
24	13C-2,3,7,8-TCDF	1.35e5	0.78	NO	0.977	1.000	25.22	0.993	107.60	108	0.391	
25	13C-1,2,3,7,8-PeCDF	1.22e5	1.62	NO	0.896	1.000	29.45	1.159	106.39	106	0.791	
26	13C-2,3,4,7,8-PeCDF	1.21e5	1.61	NO	0.900	1.000	30.39	1.196	105.21	105	0.788	
27	13C-1,2,3,4,7,8-HxCDF	8.89e4	0.54	NO	1.17	1.000	33.20	0.961	102.41	102	0.713	
28	13C-1,2,3,6,7,8-HxCDF	1.01e5	0.51	NO	1.52	1.000	33.33	0.965	89.481	89.5	0.548	
29	13C-2,3,4,6,7,8-HxCDF	8.62e4	0.52	NO	1.25	1.000	33.94	0.983	92.893	92.9	0.667	
30	13C-1,2,3,7,8,9-HxCDF	7.71e4	0.55	NO	1.05	1.000	34.93	1.011	98.551	98.6	0.791	

7/9/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090708h2-1.qld

Last Altered: Thursday, July 09, 2009 07:21:40 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:22:38 Pacific Daylight Time

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	6.17e4	0.44	NO	0.868	1.000	36.82	1.066	95.605	95.6	0.783
32	13C-1,2,3,4,7,8,9-HpCDF	5.51e4	0.47	NO	0.727	1.000	38.74	1.122	102.05	102	0.935
33	13C-OCDF	1.12e5	0.90	NO	0.760	1.000	41.86	1.212	198.15	99.1	0.706
34	37Cl-2,3,7,8-TCDD	6.49e3			0.668	1.000	26.02	1.024	10.722	107	0.237
35	13C-1,2,3,4-TCDD	9.06e4	0.77	NO	1.00	1.000	25.40	0.000	100.00	100	0.665
36	13C-1,2,3,4-TCDF	1.28e5	0.79	NO	1.00	1.000	23.98	0.000	100.00	100	0.382
37	13C-1,2,3,7,8,9-HxCDD	7.43e4	1.31	NO	1.00	1.000	34.53	0.000	100.00	100	0.617

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 9:13:37 AM Pacific Daylight Time
Printed: Thursday, July 09, 2009 9:13:53 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

	090708H2_1	ST090708H2-1 1613 CS3 080917I	09-Jul-09	02:42:21
	090708H2_2	solvent blank	09-Jul-09	03:31:55
	090708H2_3	31848_2222_001 CAMO-09-6603 10.82	09-Jul-09	04:21:30
	090708H2_4	31848_2222_002 CAMO-09-6604 11.15	09-Jul-09	05:11:04
	090708H2_5	31848_2222_003 CAMO-09-6605 10.87	09-Jul-09	06:00:40
	090708H2_6	31804_2217_004 CAMO-09-6101 11.49	09-Jul-09	06:50:12
	090708H2_7	solvent blank	09-Jul-09	07:39:46
	090708H2_8	ST090708H2-2 1613 CS3 080917I	09-Jul-09	08:29:20

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090708H2-1

End Calibration ID: ST090708H2-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range? (A)	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	(y)	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits	NA	
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments: (A) 8290 only 7/9/09

Reviewed by: MJ 7/9/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 rmh

Printed: Thursday, July 09, 2009 02:42:19 Pacific Daylight Time

M 292.9824 R 13476

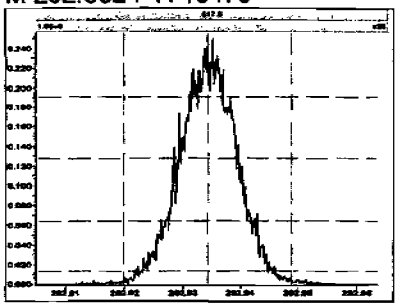

M 304.9824 R 13703

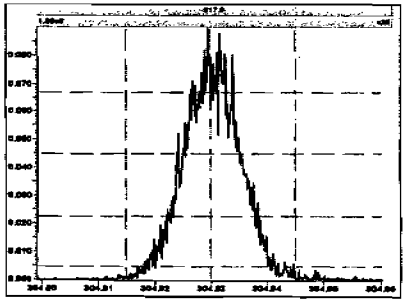

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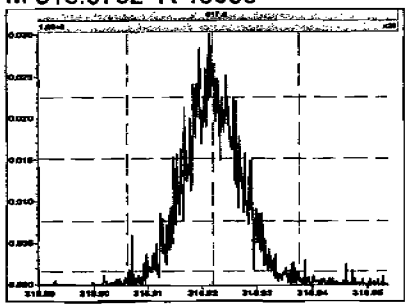

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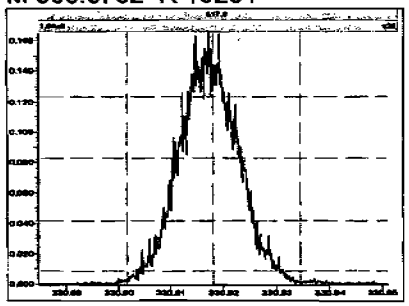

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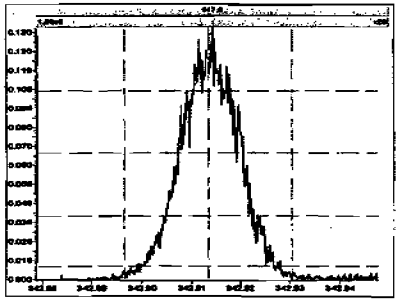

M 354.9792 R 13839

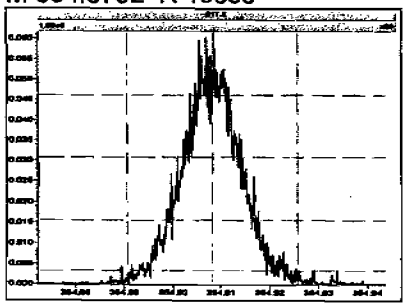

M 366.9792 R 14579

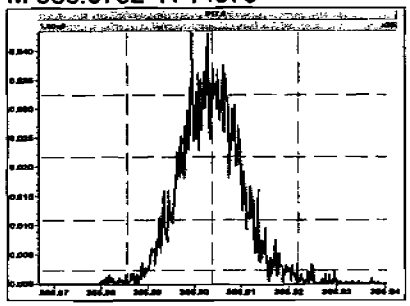

M 380.9760 R 12194

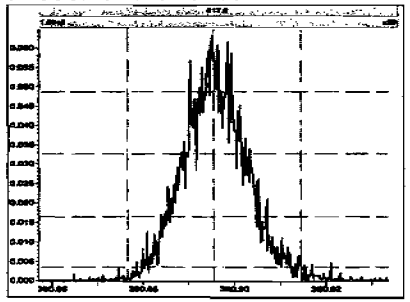

M 392.9760 R 13344

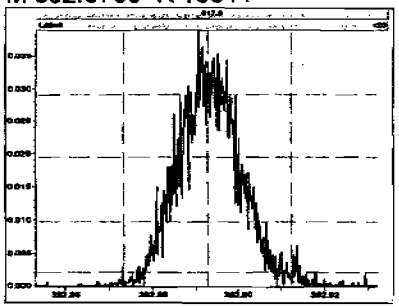

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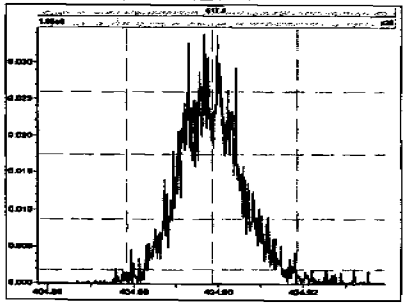

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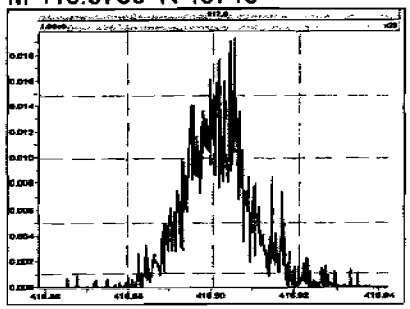

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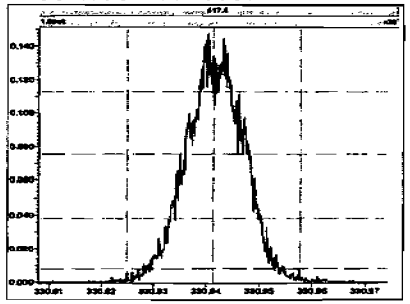

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M 342.9792 R 13662

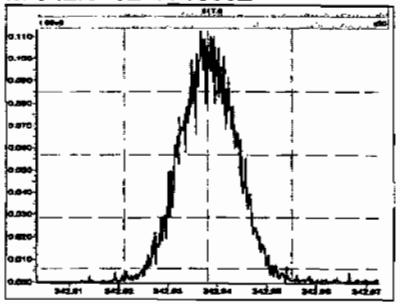

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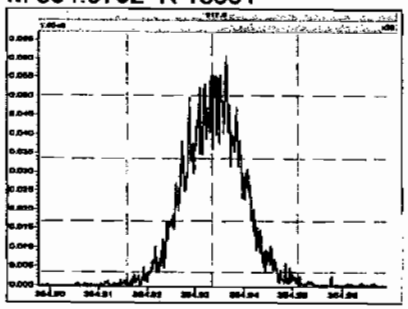

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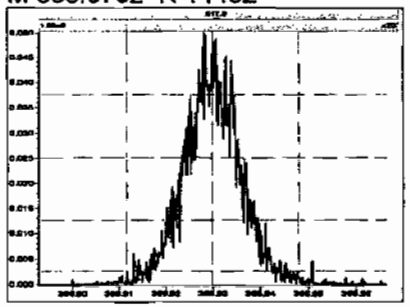

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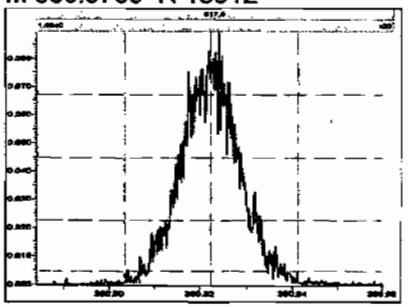

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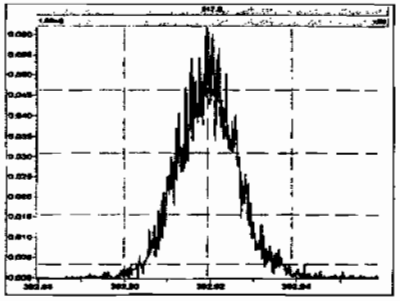

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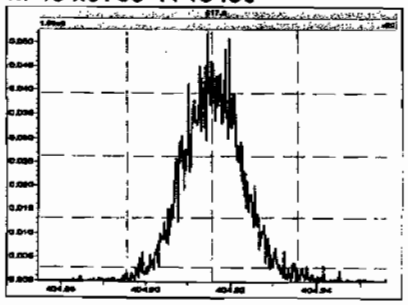

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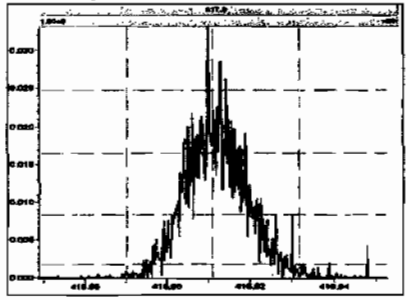

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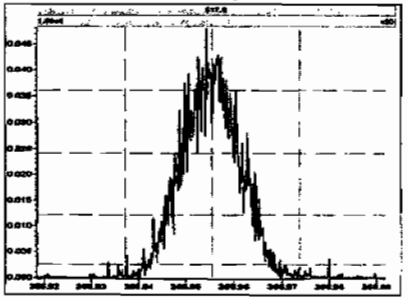

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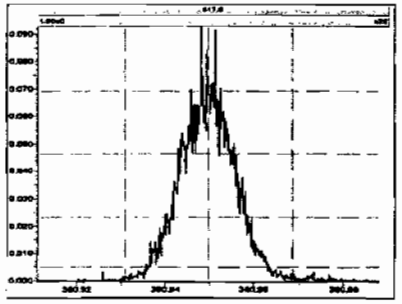

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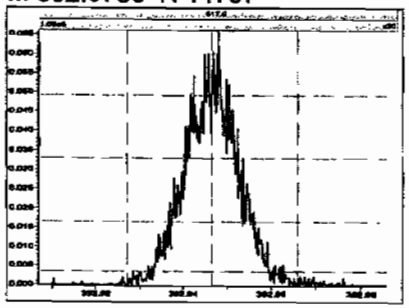

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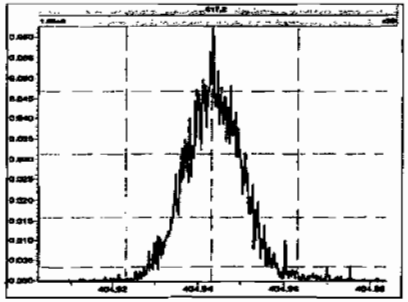

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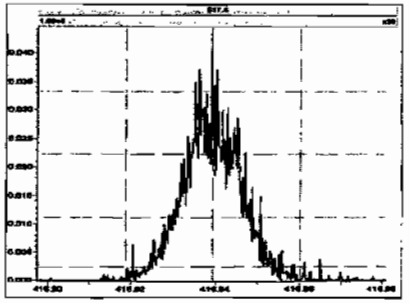

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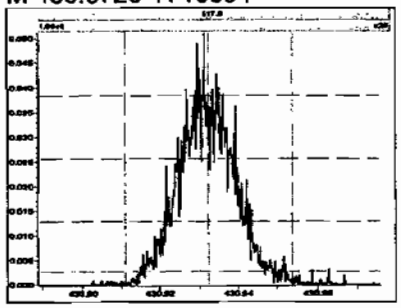

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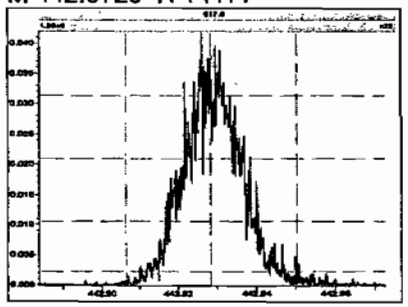

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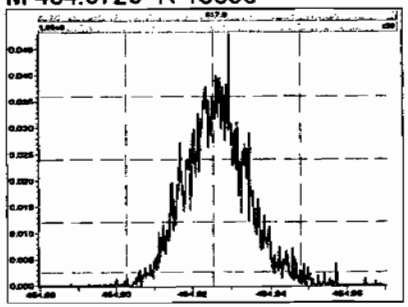

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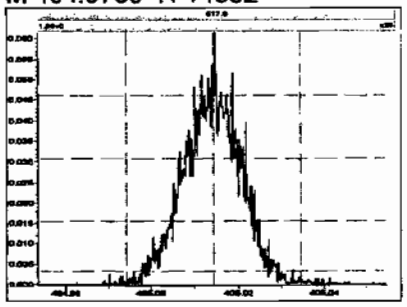

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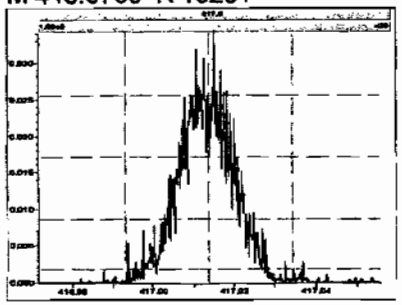

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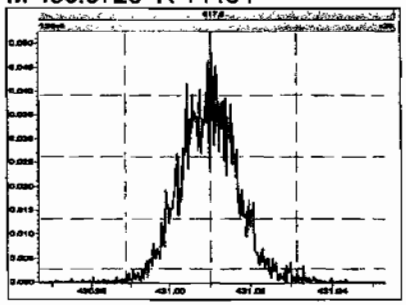

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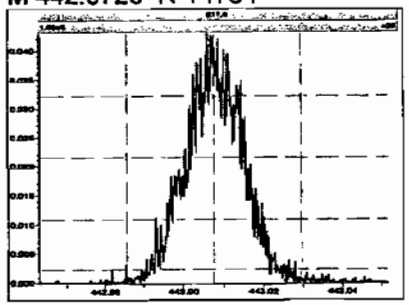

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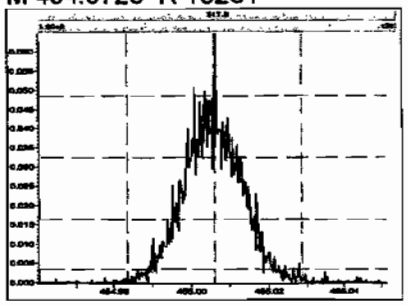

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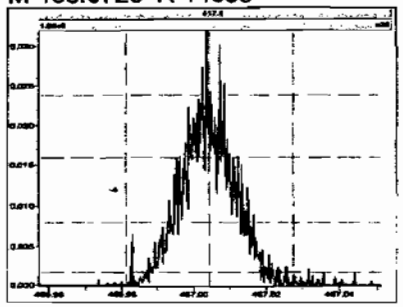

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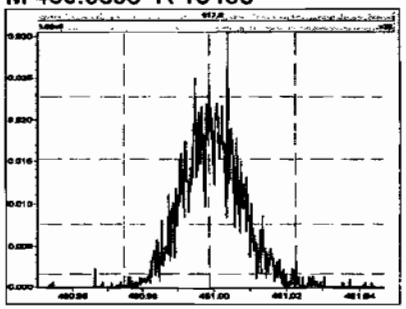

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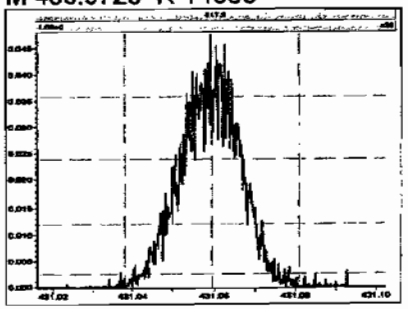

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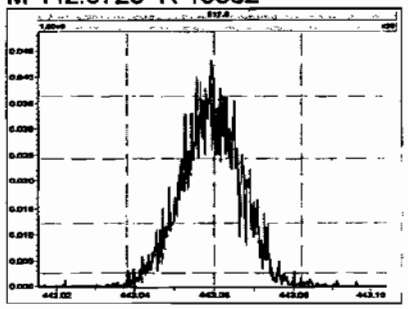

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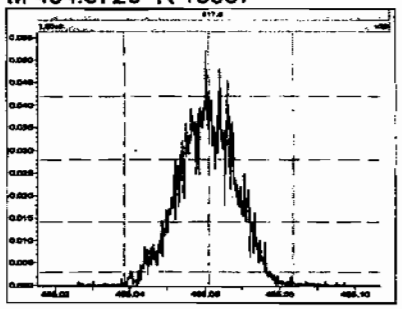

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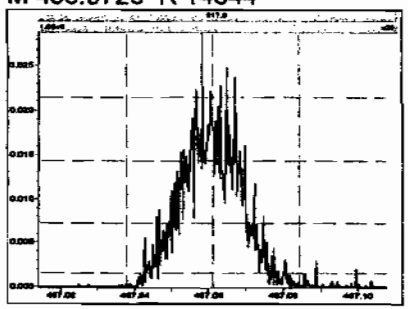

M 480.9696 R 13698

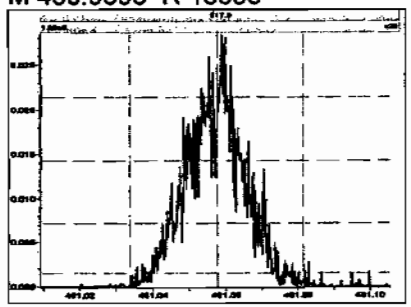

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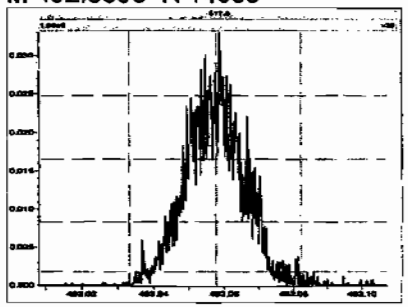

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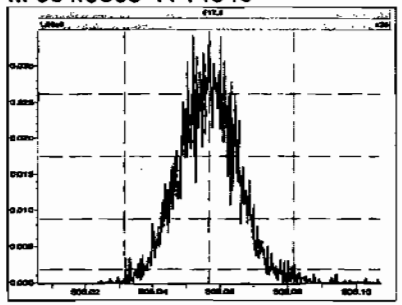

M 516.9697 R 13566

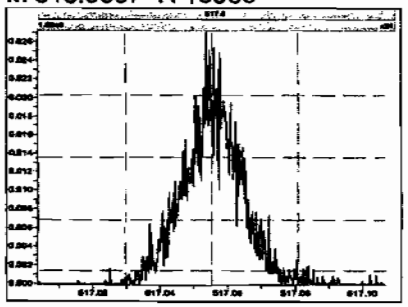

Vista Analytical Laboratory

Dataset: Untitled

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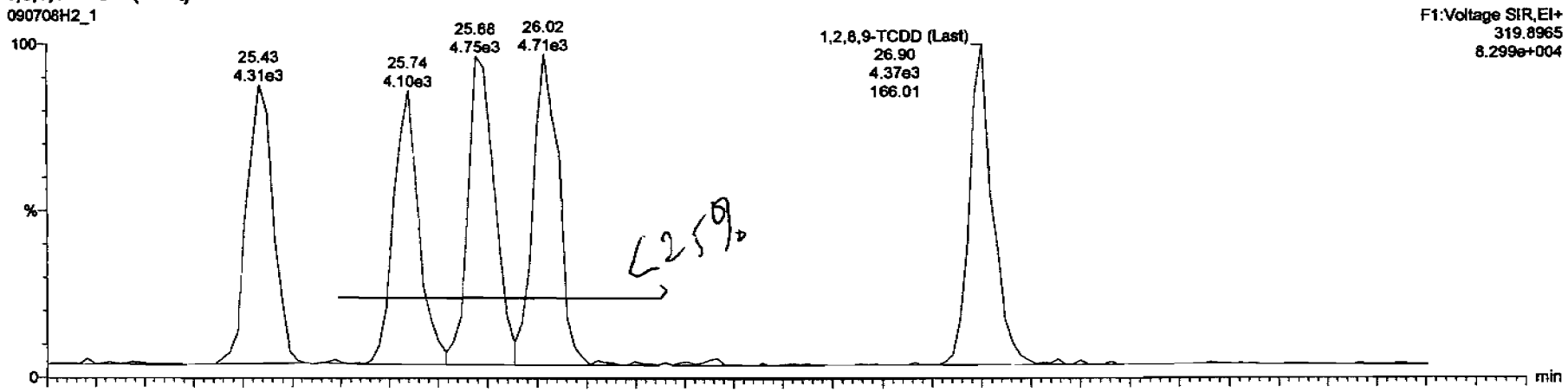

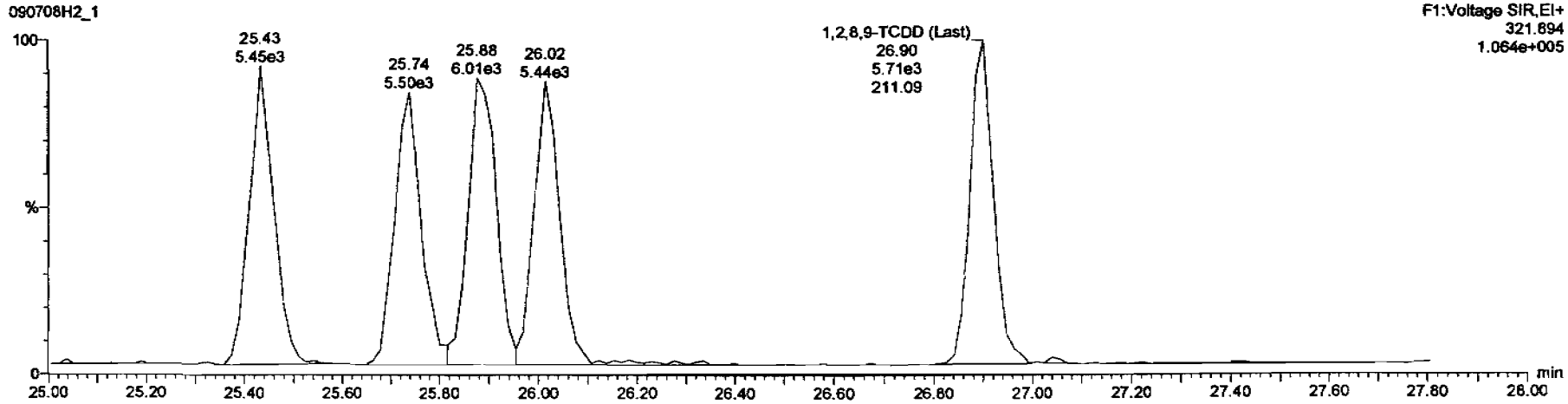

Vista Analytical Laboratory VG-10

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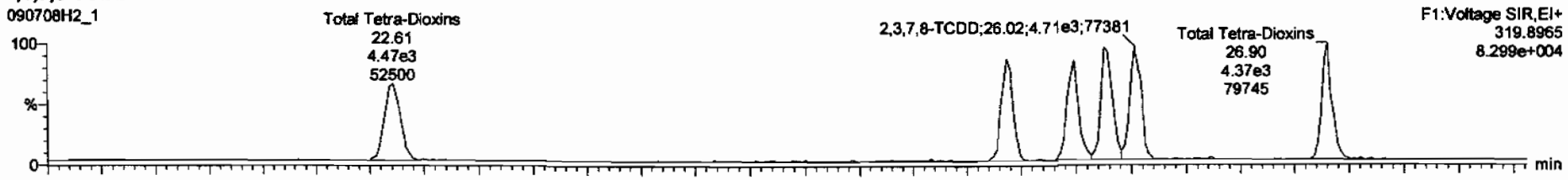

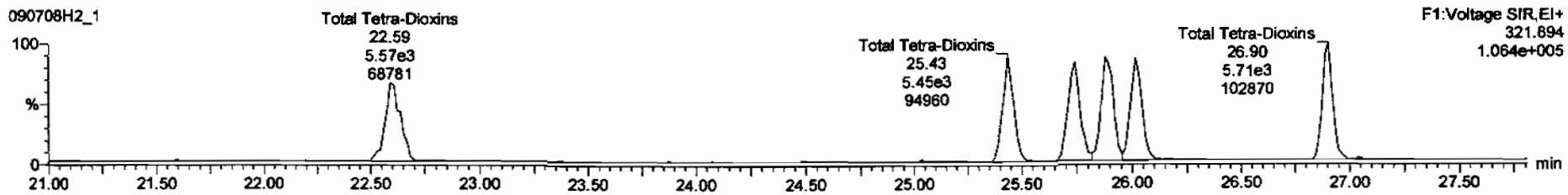

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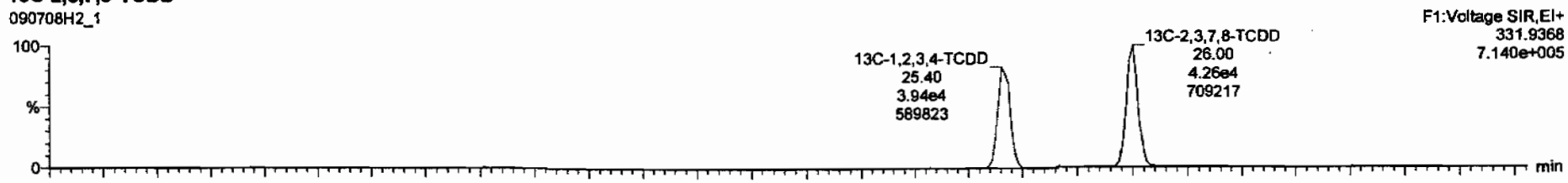

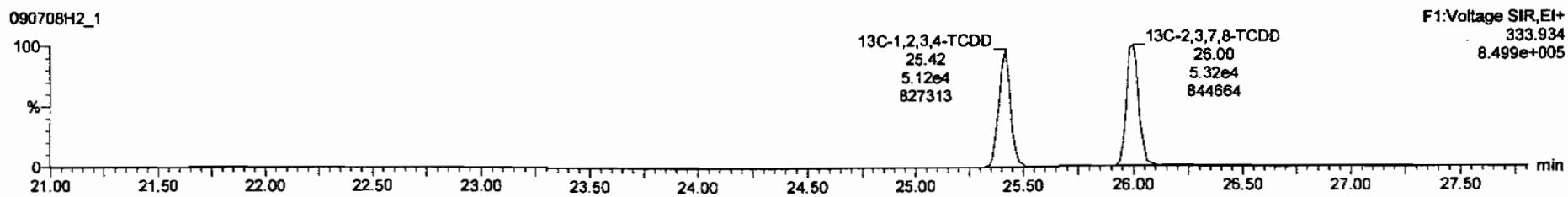

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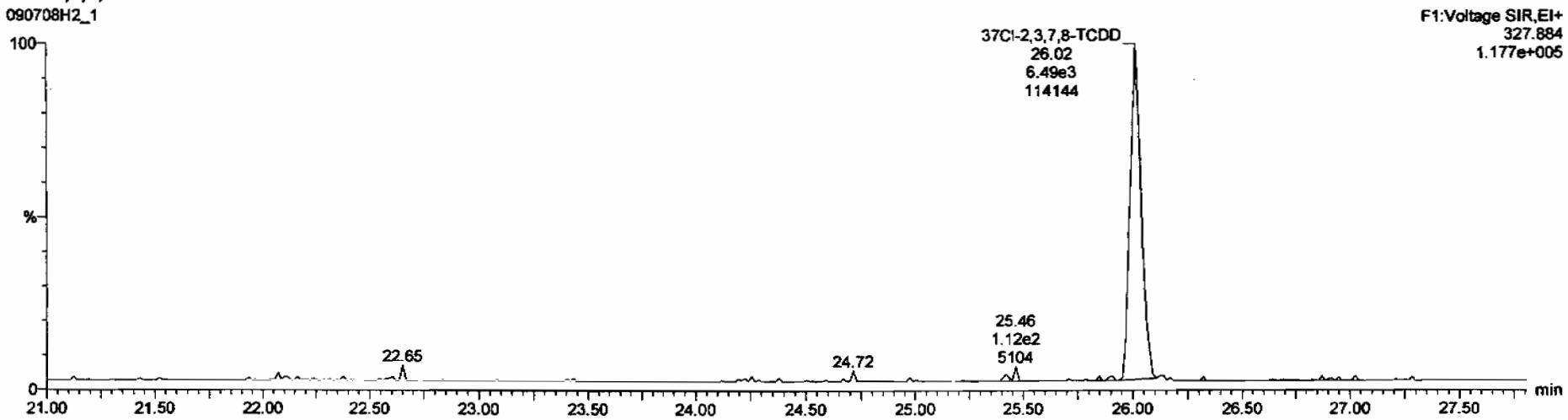

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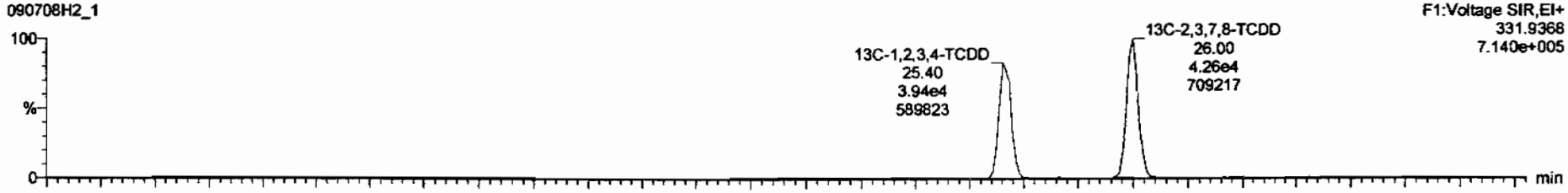

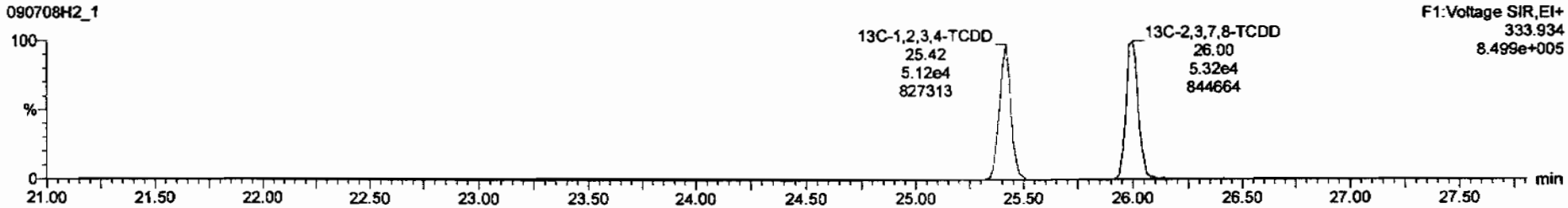

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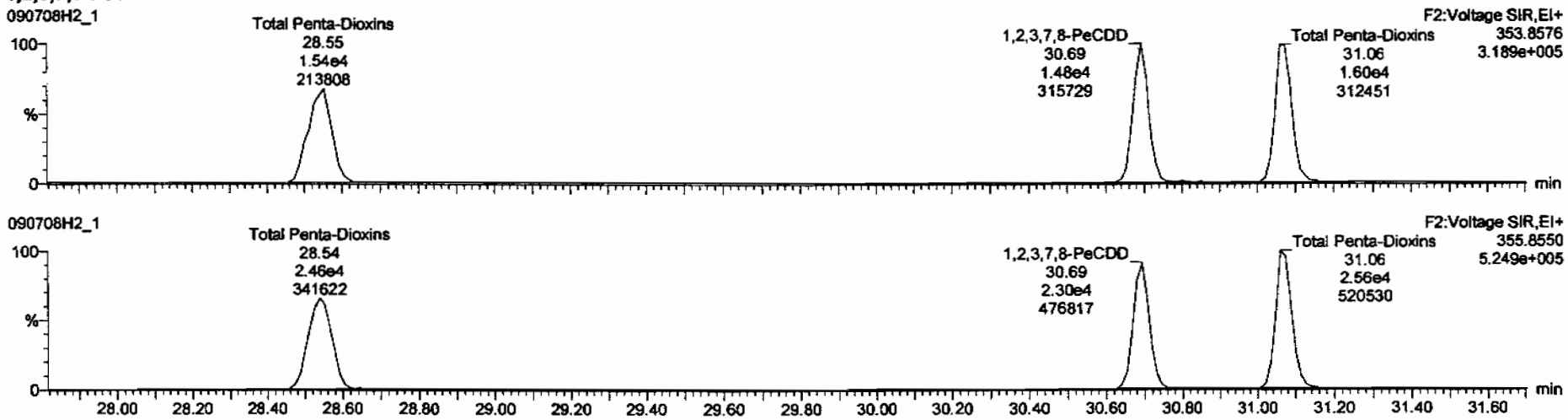

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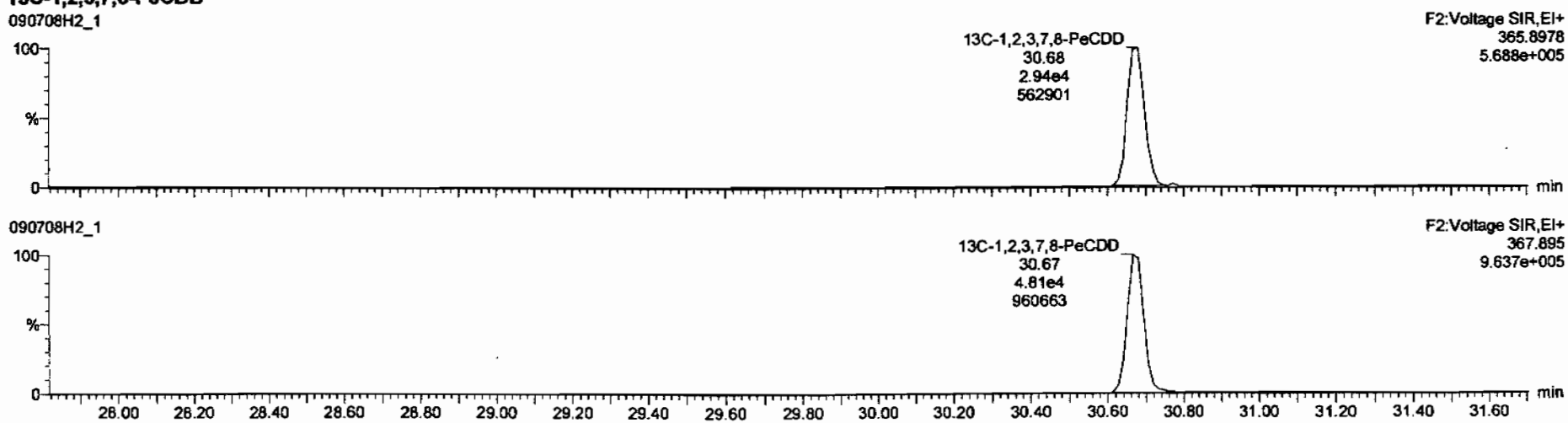

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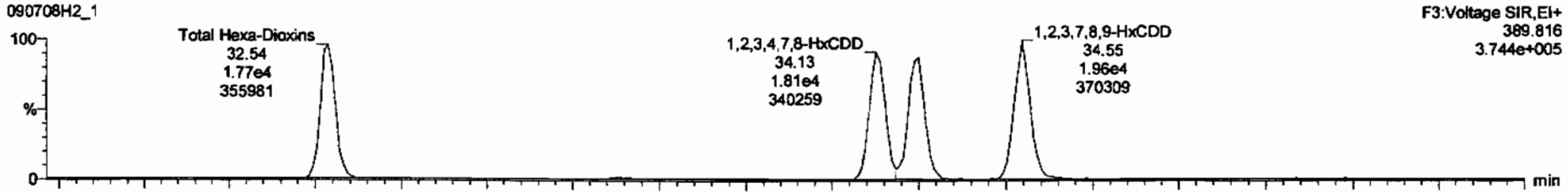

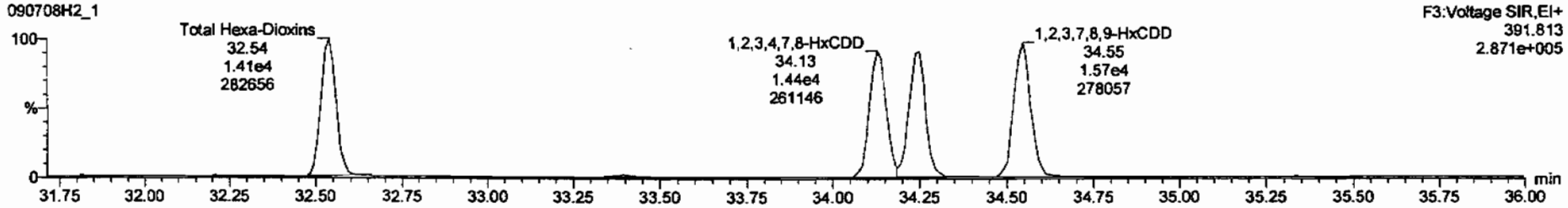

13C-1,2,3,4,7,8-HxCDD

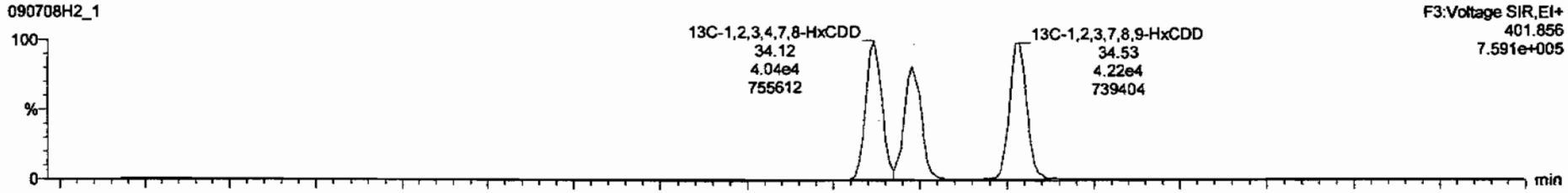

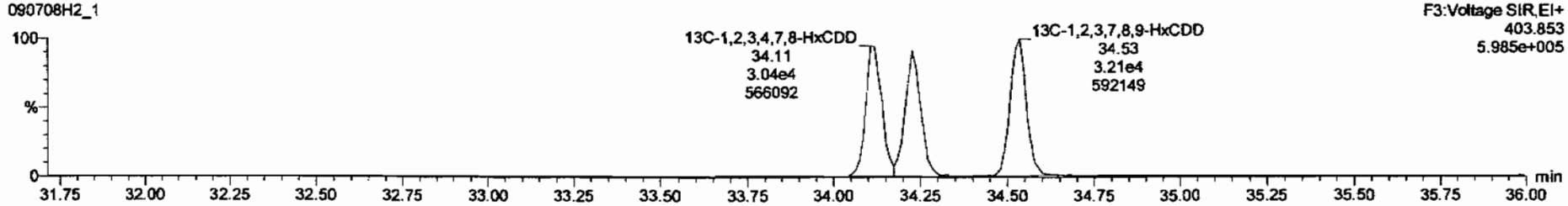

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Printed: Thursday, July 09, 2009 07:22:26 Pacific Daylight Time

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

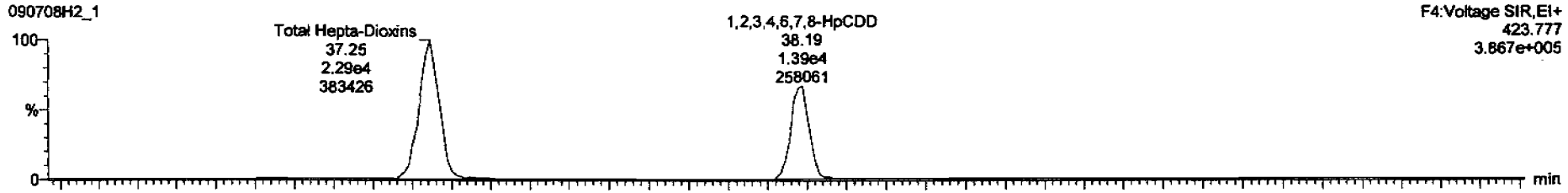

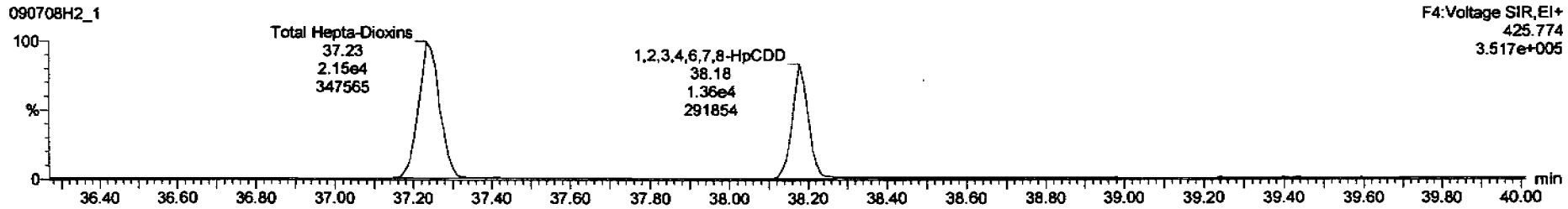

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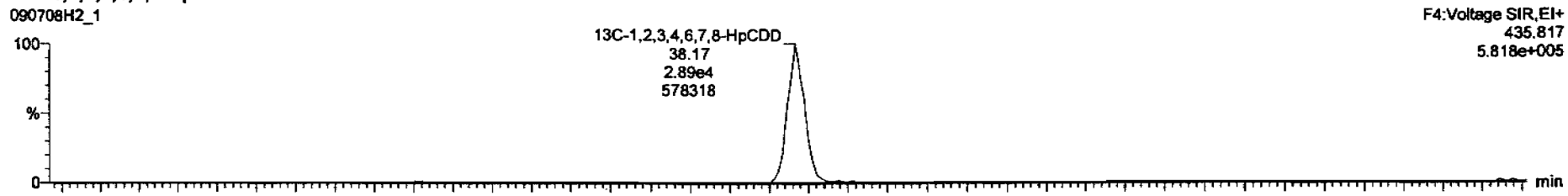

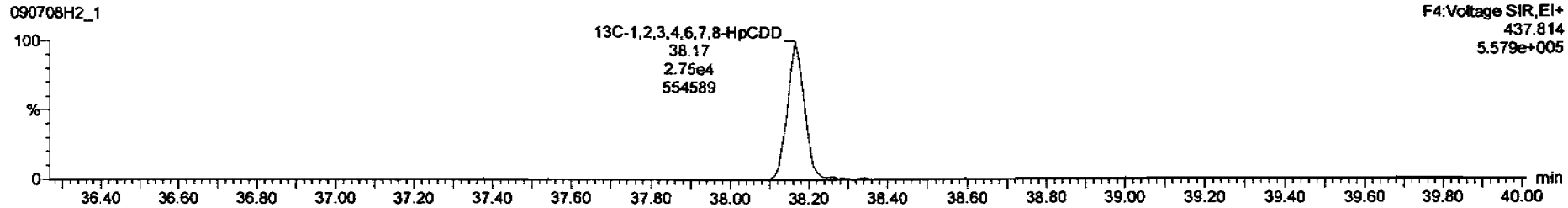

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Printed: Thursday, July 09, 2009 07:22:26 Pacific Daylight Time

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

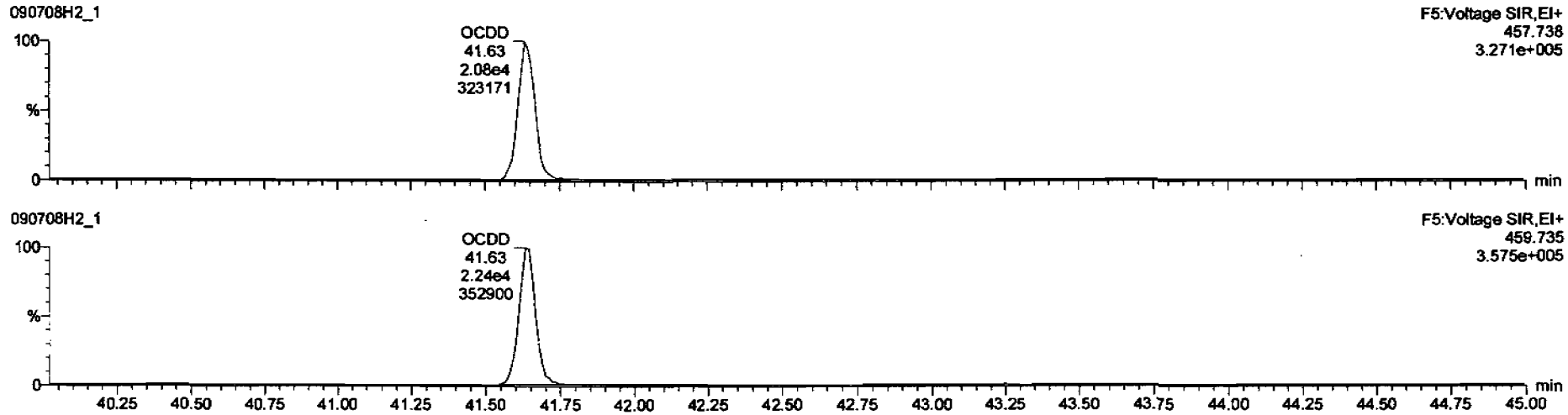

13C-OCDD

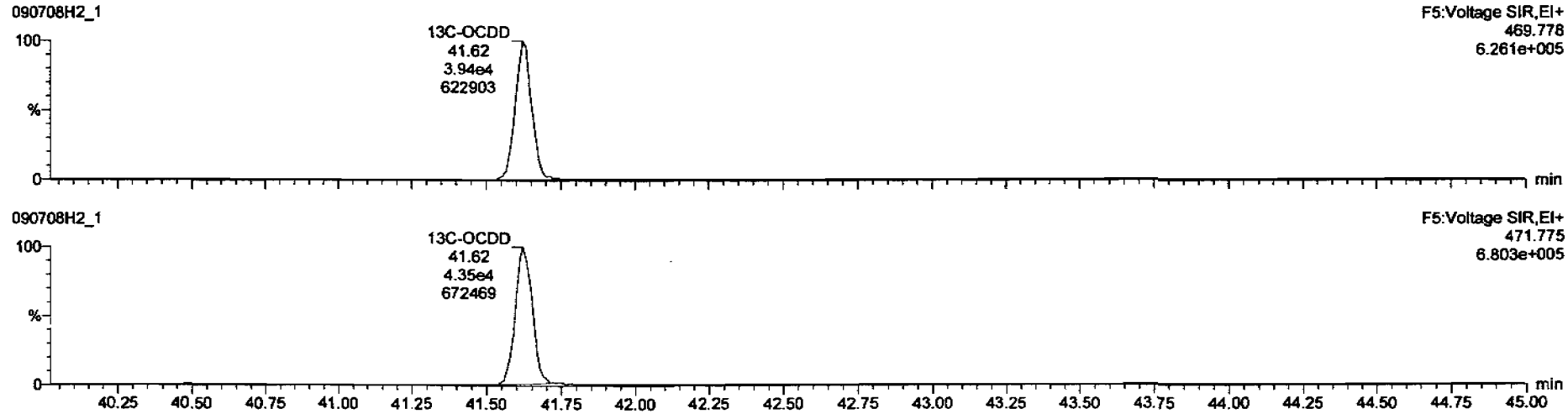

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Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

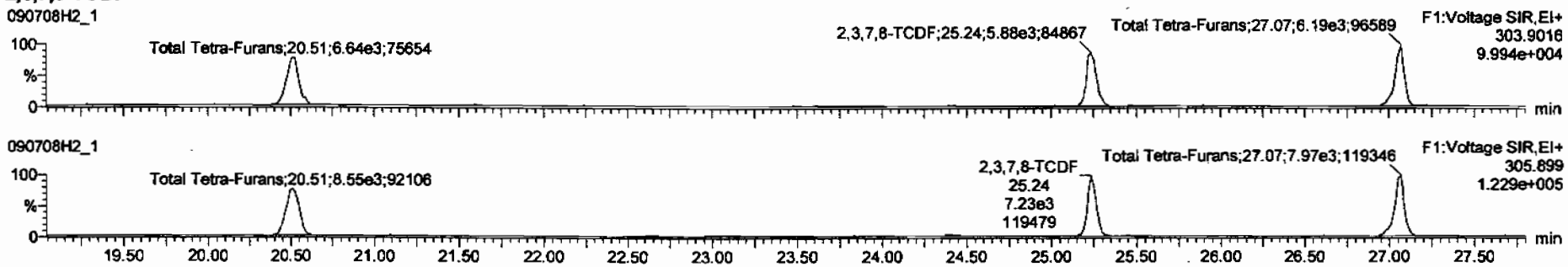

13C-2,3,7,8-TCDF

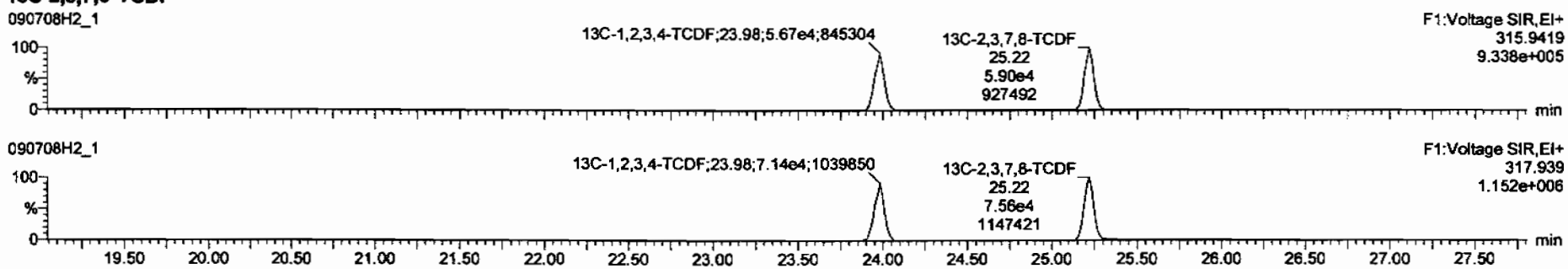

DPE1

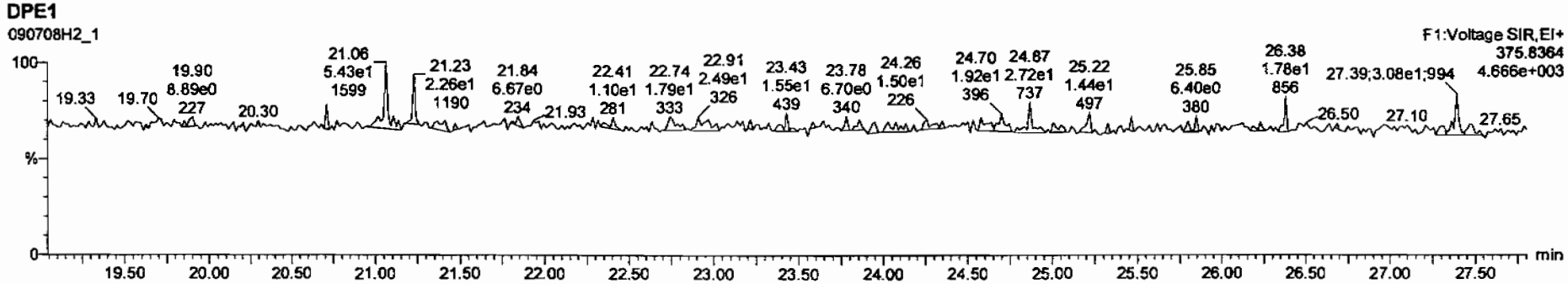

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Printed: Thursday, July 09, 2009 07:22:26 Pacific Daylight Time

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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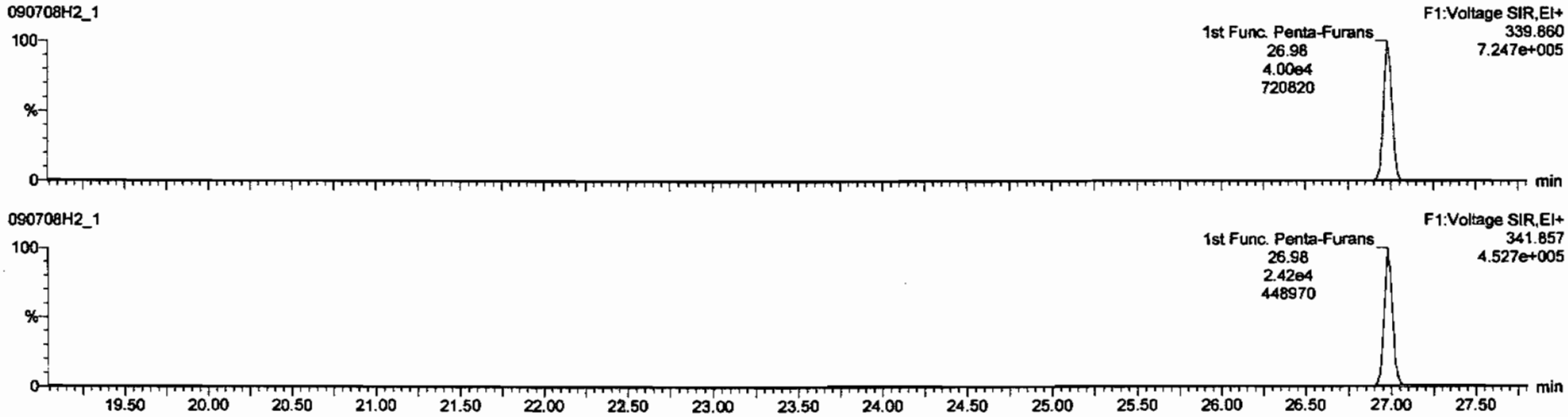

DPE6

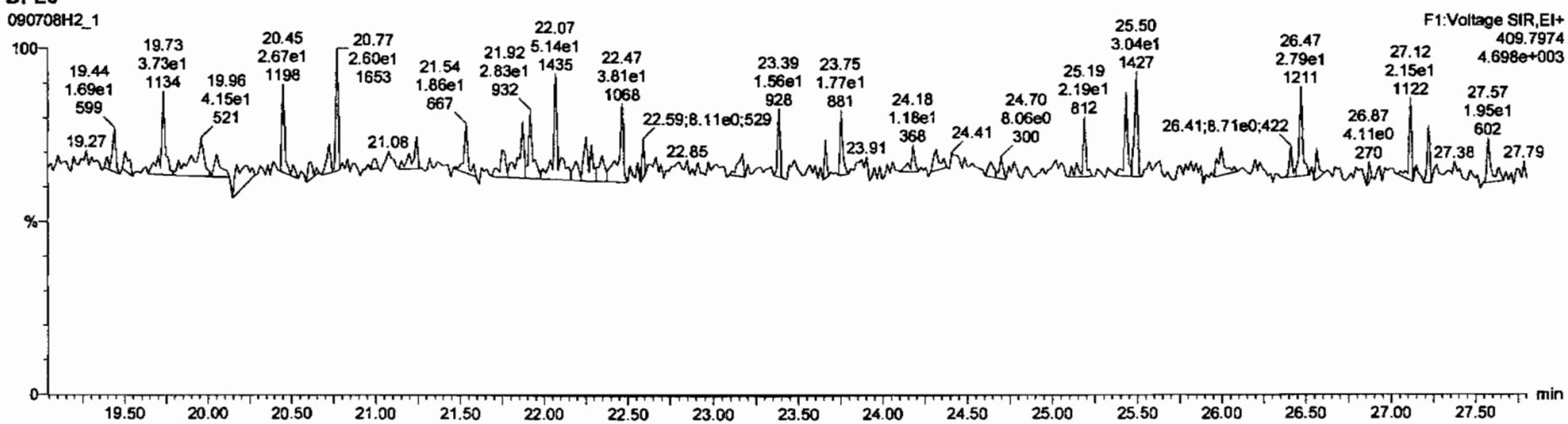

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Last Altered: Thursday, July 09, 2009 07:21:40 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:22:26 Pacific Daylight Time

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

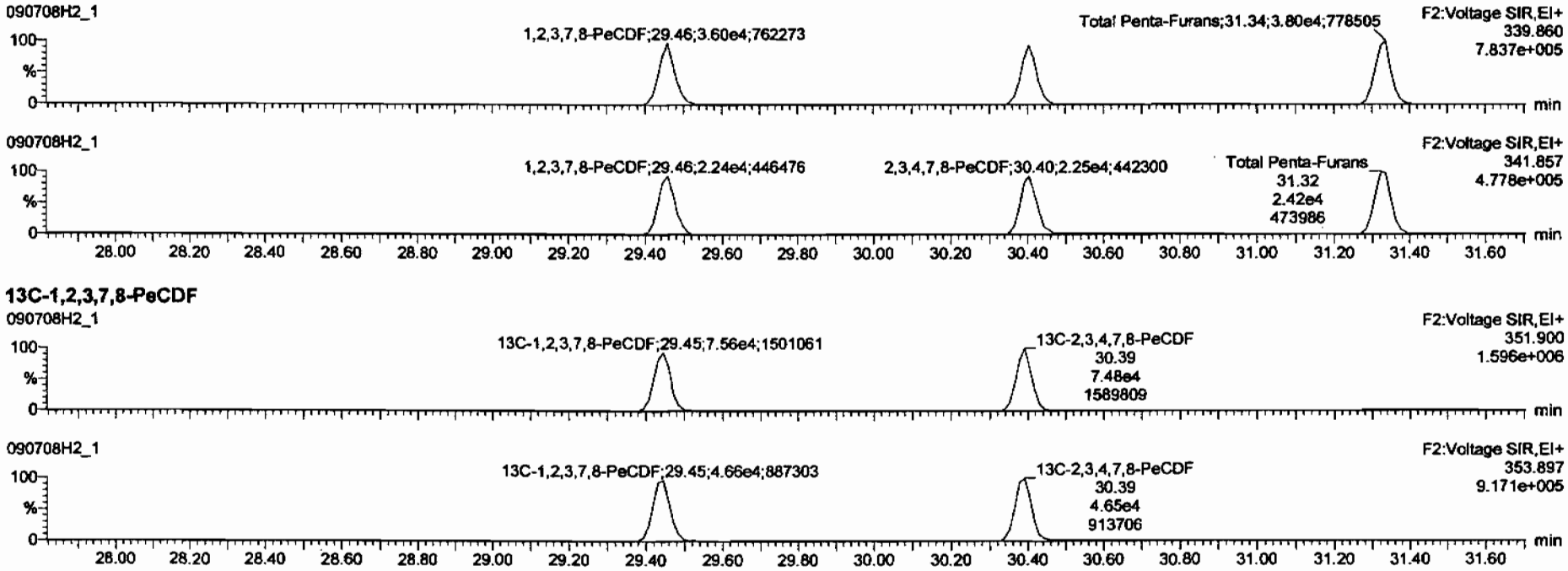

13C-1,2,3,7,8-PeCDF

DPE2

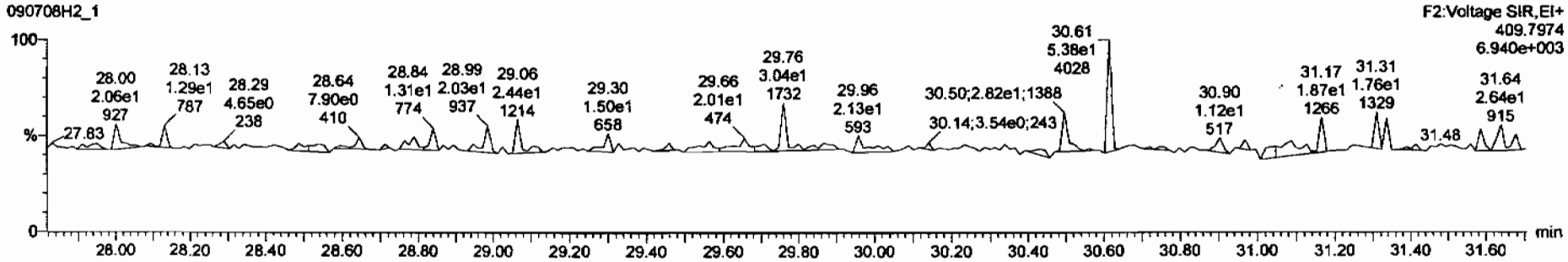

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Printed: Thursday, July 09, 2009 07:22:26 Pacific Daylight Time

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDF

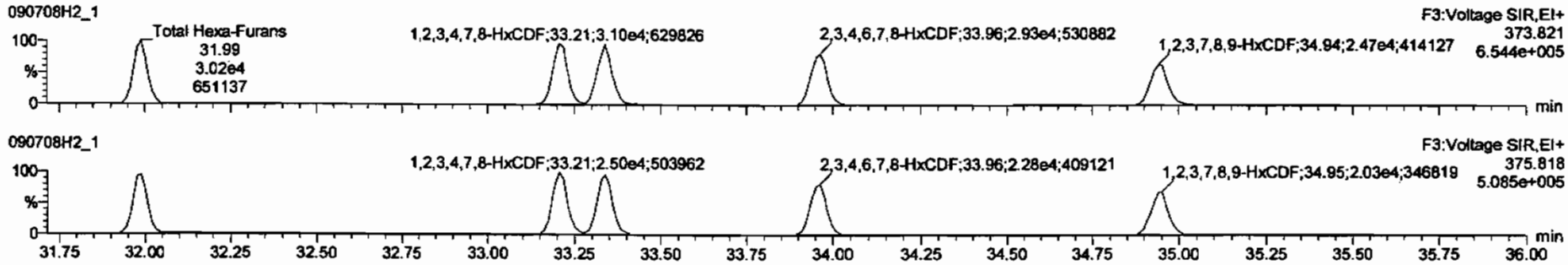

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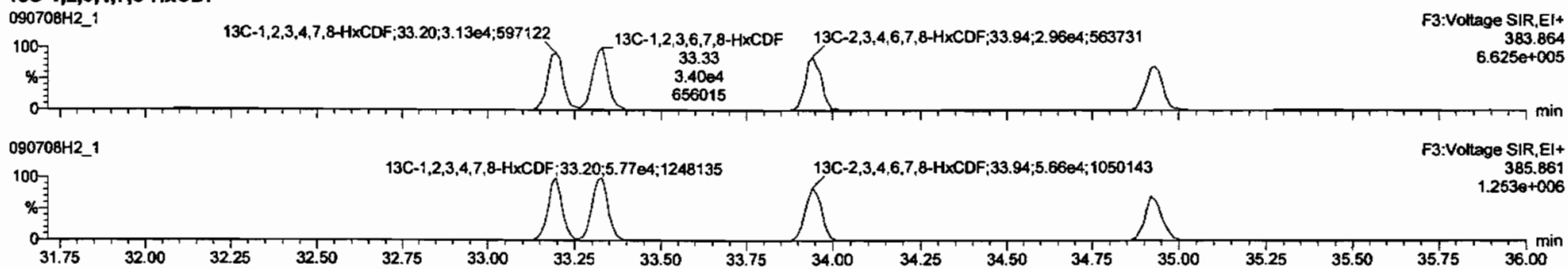

DPE3

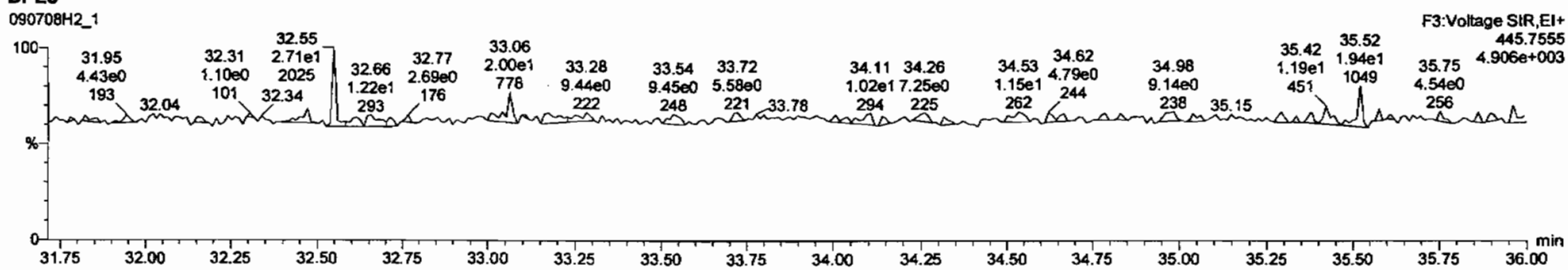

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090708h2-1.qld

Last Altered: Thursday, July 09, 2009 07:21:40 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:22:26 Pacific Daylight Time

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDF

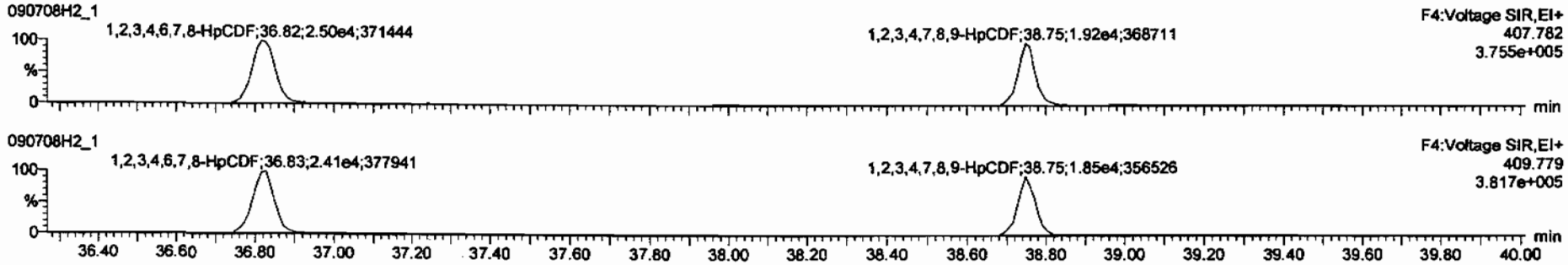

13C-1,2,3,4,6,7,8-HpCDF

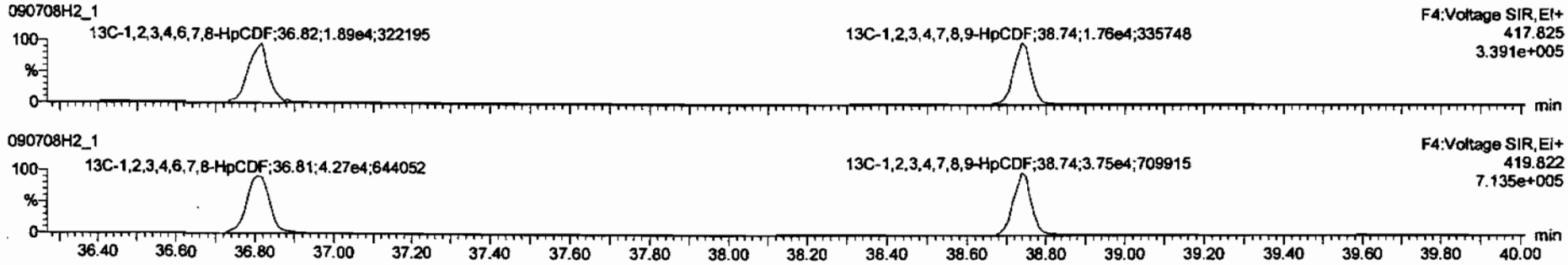

DPE4

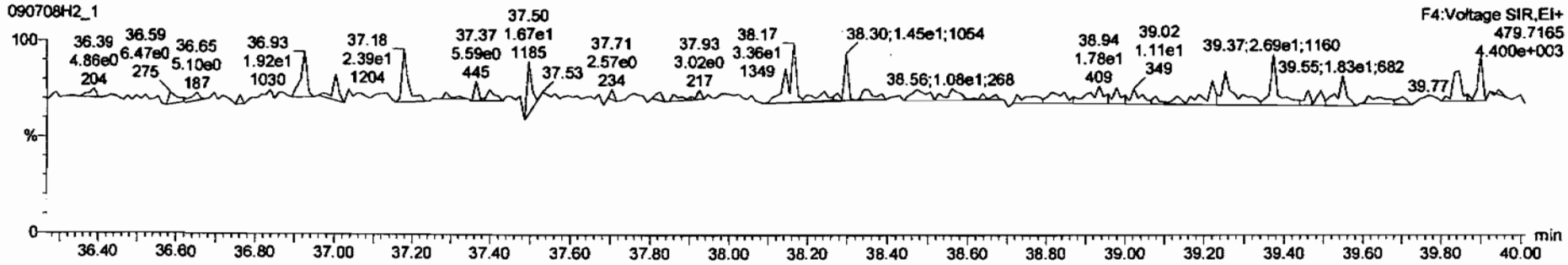

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Last Altered: Thursday, July 09, 2009 07:21:40 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:22:26 Pacific Daylight Time

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDF

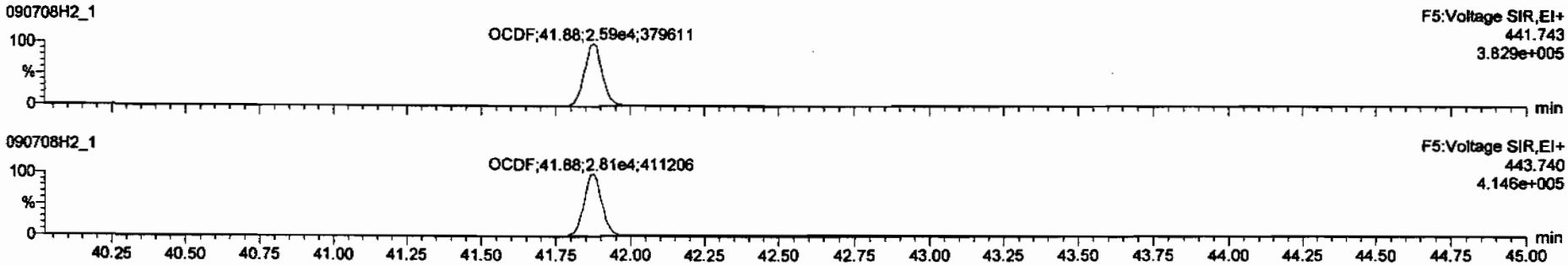

13C-OCDF

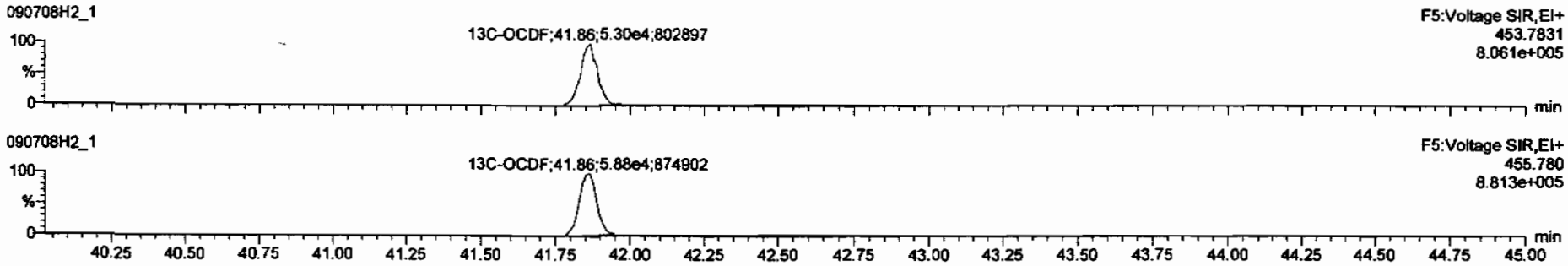

DPE5

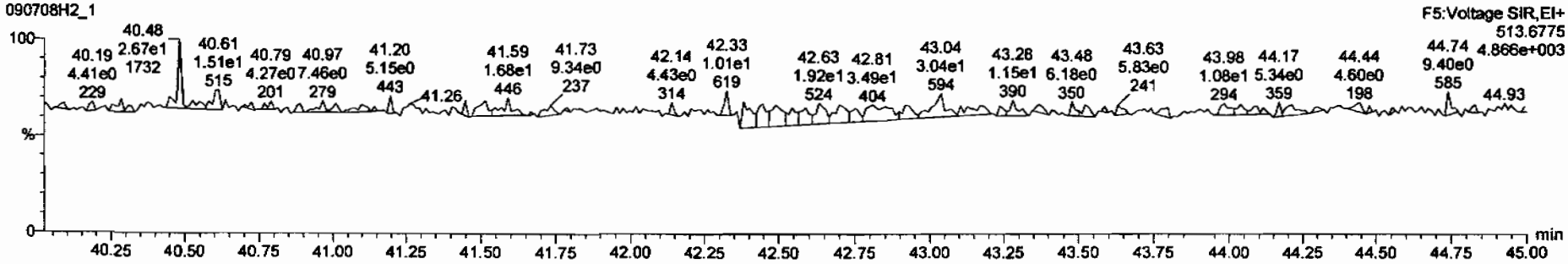

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Last Altered: Thursday, July 09, 2009 07:21:40 Pacific Daylight Time
Printed: Thursday, July 09, 2009 07:22:26 Pacific Daylight Time

Name: 090708H2_1, Date: 09-Jul-2009, Time: 02:42:21, ID: ST090708H2-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

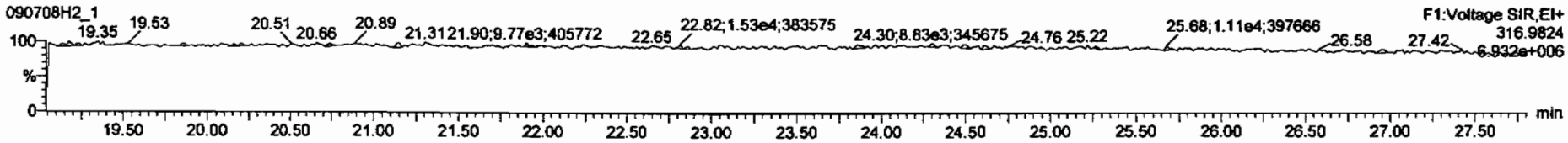

PFK2

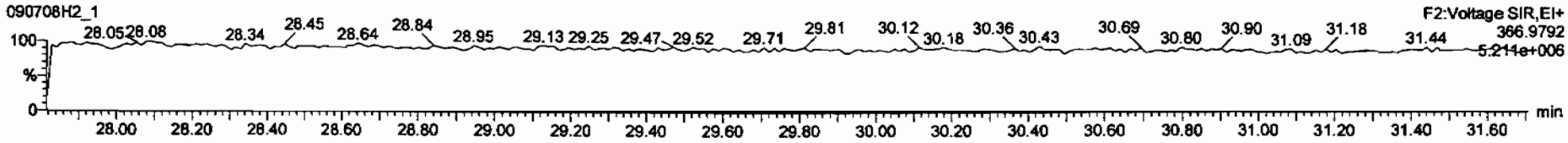

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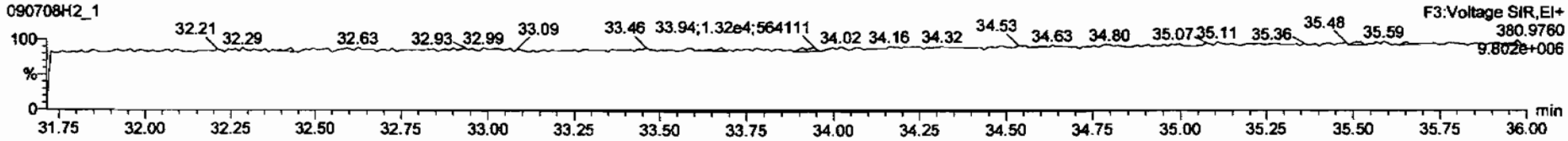

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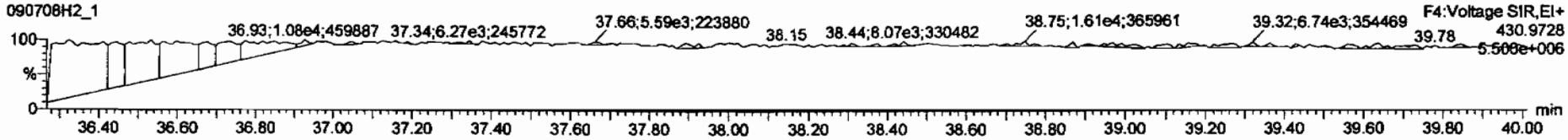

PFK5

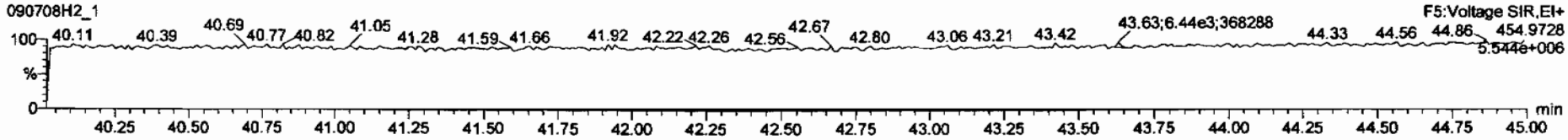

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H2_8

CCAL ID: ST090708H2-2

GC Column ID: DB-5
Analysis Date: 09-Jul-09 Analysis Time: 08:29:20

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	9.97	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.60	0.54-0.72	NO	47.1	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	NO	45.8	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	NO	46.4	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.08	0.88-1.20	NO	46.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	86.8	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	NO	8.45	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	43.5	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	44.1	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	46.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	NO	45.2	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	NO	46.8	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.28	1.05-1.43	NO	48.4	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	NO	46.5	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	48.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	89.4	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8, Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290 only
Date: 7/9/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H2_8

CCAL ID: ST090708H2-2

GC Column ID: DB-5
Analysis Date: 09-Jul-09 Analysis Time: 08:29:20

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	NO	101	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	101	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.20	1.05-1.43	NO	104	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	96.1	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	107	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.88	0.76-1.02	NO	225	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	NO	106	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	94.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	NO	93.5	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	102	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	NO	91.9	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	96.8	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.50	0.43-0.59	NO	98.3	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.48	0.37-0.51	NO	100	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	104	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.85	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290 only
Date: 7/9/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 09:13:18 Pacific Daylight Time
Printed: Thursday, July 09, 2009 09:13:26 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_8, Date: 09-Jul-2009, Time: 08:29:20, ID: ST090708H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.59
2	1,2,8,9-TCDD (Last)	26.89
3	1,2,4,7,9-PeCDD (First)	28.54
4	1,2,3,8,9-PeCDD (Last)	31.06
5	12,4,6,7,9-HxCDD (First)	32.53
6	1,2,3,7,8,9-HxCDD (Last)	34.53
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.18
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.05
11	1,3,4,6,8-PeCDF (First)	26.98
12	1,2,3,8,9-PeCDF (Last)	31.32
13	1,2,3,4,6,8-HxCDF (First)	31.98
14	1,2,3,4,8,9-HxCDF (Last)	34.93
15	1,2,3,4,6,7,8-HpCDF (First)	36.82
16	1,2,3,4,7,8,9-HpCDF (Last)	38.75

7/9/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H2_8

CCAL ID: ST090708H2-2

GC Column ID: DB-5
Analysis Date: 09-Jul-09

Analysis Time: 08:29:20

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.159	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.196	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.024	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/9/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090708H2_8

CCAL ID: ST090708H2-2

GC Column ID: DB-5
Analysis Date: 09-Jul-09

Analysis Time: 08:29:20

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.962	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: J

Date: 7/9/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-8.qld

Last Altered: Thursday, July 09, 2009 09:20:50 Pacific Daylight Time
Printed: Thursday, July 09, 2009 09:21:30 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_8, Date: 09-Jul-2009, Time: 08:29:20, ID: ST090708H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	1.11e4	0.77	NO	1.08	1.000	26.00	1.001	9.9700	99.7	0.118	9.9700
2	1,2,3,7,8-PeCDD	4.10e4	0.60	NO	1.03	1.000	30.69	1.001	47.116	94.2	0.176	47.116
3	1,2,3,4,7,8-HxCDD	3.43e4	1.29	NO	1.00	1.000	34.13	1.001	45.785	91.6	0.324	45.785
4	1,2,3,6,7,8-HxCDD	3.62e4	1.21	NO	1.13	1.000	34.24	1.000	46.382	92.8	0.306	46.382
5	1,2,3,7,8,9-HxCDD	3.73e4	1.25	NO	1.10	1.000	34.53	1.009	47.021	94.0	0.303	47.021
6	1,2,3,4,6,7,8-HpCDD	2.96e4	1.08	NO	1.06	1.000	38.18	1.000	46.664	93.3	0.344	46.664
7	OCDD	4.52e4	0.90	NO	1.18	1.000	41.63	1.000	86.849	86.8	0.327	86.849
8	2,3,7,8-TCDF	1.45e4	0.79	NO	1.09	1.000	25.24	1.001	8.4507	84.5	0.112	8.4507
9	1,2,3,7,8-PeCDF	6.50e4	1.59	NO	1.16	1.000	29.45	1.000	43.451	86.9	0.219	43.451
10	2,3,4,7,8-PeCDF	6.32e4	1.57	NO	1.12	1.000	30.40	1.001	44.077	88.2	0.228	44.077
11	1,2,3,4,7,8-HxCDF	6.10e4	1.27	NO	1.41	1.000	33.20	1.000	46.331	92.7	0.259	46.331
12	1,2,3,6,7,8-HxCDF	6.04e4	1.22	NO	1.22	1.000	33.33	1.000	45.211	90.4	0.246	45.211
13	2,3,4,6,7,8-HxCDF	5.68e4	1.31	NO	1.28	1.000	33.95	1.000	46.821	93.6	0.272	46.821
14	1,2,3,7,8,9-HxCDF	4.93e4	1.28	NO	1.26	1.000	34.93	1.000	48.371	96.7	0.362	48.371
15	1,2,3,4,6,7,8-HpCDF	5.34e4	1.07	NO	1.69	1.000	36.82	1.000	46.536	93.1	0.374	46.536
16	1,2,3,4,7,8,9-HpCDF	4.25e4	1.04	NO	1.48	1.000	38.75	1.000	48.496	97.0	0.418	48.496
17	OCDF	5.87e4	0.91	NO	1.10	1.000	41.86	1.000	89.368	89.4	0.284	89.368
18	13C-2,3,7,8-TCDD	1.03e5	0.81	NO	1.01	1.000	25.98	1.023	100.75	101	0.466	
19	13C-1,2,3,7,8-PeCDD	8.42e4	0.64	NO	0.827	1.000	30.67	1.207	100.58	101	0.281	
20	13C-1,2,3,4,7,8-HxCDD	7.48e4	1.20	NO	0.916	1.000	34.11	0.988	104.35	104	0.681	
21	13C-1,2,3,6,7,8-HxCDD	6.93e4	1.26	NO	0.921	1.000	34.23	0.991	96.128	96.1	0.678	
22	13C-1,2,3,4,6,7,8-HpCDD	5.95e4	1.06	NO	0.708	1.000	38.17	1.106	107.38	107	1.24	
23	13C-OCDD	8.83e4	0.88	NO	0.503	1.000	41.62	1.206	224.51	112	0.659	
24	13C-2,3,7,8-TCDF	1.58e5	0.76	NO	0.977	1.000	25.20	0.992	106.05	106	0.328	
25	13C-1,2,3,7,8-PeCDF	1.29e5	1.57	NO	0.896	1.000	29.43	1.159	94.392	94.4	0.627	
26	13C-2,3,4,7,8-PeCDF	1.28e5	1.62	NO	0.900	1.000	30.36	1.196	93.458	93.5	0.625	
27	13C-1,2,3,4,7,8-HxCDF	9.34e4	0.53	NO	1.17	1.000	33.20	0.962	102.01	102	0.711	
28	13C-1,2,3,6,7,8-HxCDF	1.09e5	0.53	NO	1.52	1.000	33.32	0.965	91.893	91.9	0.547	
29	13C-2,3,4,6,7,8-HxCDF	9.47e4	0.51	NO	1.25	1.000	33.94	0.983	96.829	96.8	0.665	
30	13C-1,2,3,7,8,9-HxCDF	8.10e4	0.50	NO	1.05	1.000	34.92	1.011	98.257	98.3	0.789	

7/9/09

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-8.qld

Last Altered: Thursday, July 09, 2009 09:20:50 Pacific Daylight Time
Printed: Thursday, July 09, 2009 09:21:30 Pacific Daylight Time

Name: 090708H2_8, Date: 09-Jul-2009, Time: 08:29:20, ID: ST090708H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	6.80e4	0.48	NO	0.868	1.000	36.81	1.066	100.06	100	0.889
32	13C-1,2,3,4,7,8,9-HpCDF	5.91e4	0.45	NO	0.727	1.000	38.74	1.122	104.01	104	1.06
33	13C-OCDF	1.20e5	0.88	NO	0.760	1.000	41.85	1.212	201.51	101	0.417
34	37Cl-2,3,7,8-TCDD	6.66e3			0.668	1.000	26.01	1.024	9.8538	98.5	0.131
35	13C-1,2,3,4-TCDD	1.01e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.473
36	13C-1,2,3,4-TCDF	1.53e5	0.80	NO	1.00	1.000	23.97	0.000	100.00	100	0.321
37	13C-1,2,3,7,8,9-HxCDD	7.83e4	1.32	NO	1.00	1.000	34.52	0.000	100.00	100	0.624

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 9:13:37 AM Pacific Daylight Time
Printed: Thursday, July 09, 2009 9:13:53 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

	090708H2_1	ST090708H2-1 1613 CS3 080917I	09-Jul-09	02:42:21
	090708H2_2	solvent blank	09-Jul-09	03:31:55
	090708H2_3	31848_2222_001 CAMO-09-6603 10.82	09-Jul-09	04:21:30
	090708H2_4	31848_2222_002 CAMO-09-6604 11.15	09-Jul-09	05:11:04
	090708H2_5	31848_2222_003 CAMO-09-6605 10.87	09-Jul-09	06:00:40
	090708H2_6	31804_2217_004 CAMO-09-6101 11.49	09-Jul-09	06:50:12
	090708H2_7	solvent blank	09-Jul-09	07:39:46
	090708H2_8	ST090708H2-2 1613 CS3 080917I	09-Jul-09	08:29:20

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 09, 2009 09:13:18 Pacific Daylight Time
Printed: Thursday, July 09, 2009 09:13:26 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_8, Date: 09-Jul-2009, Time: 08:29:20, ID: ST090708H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

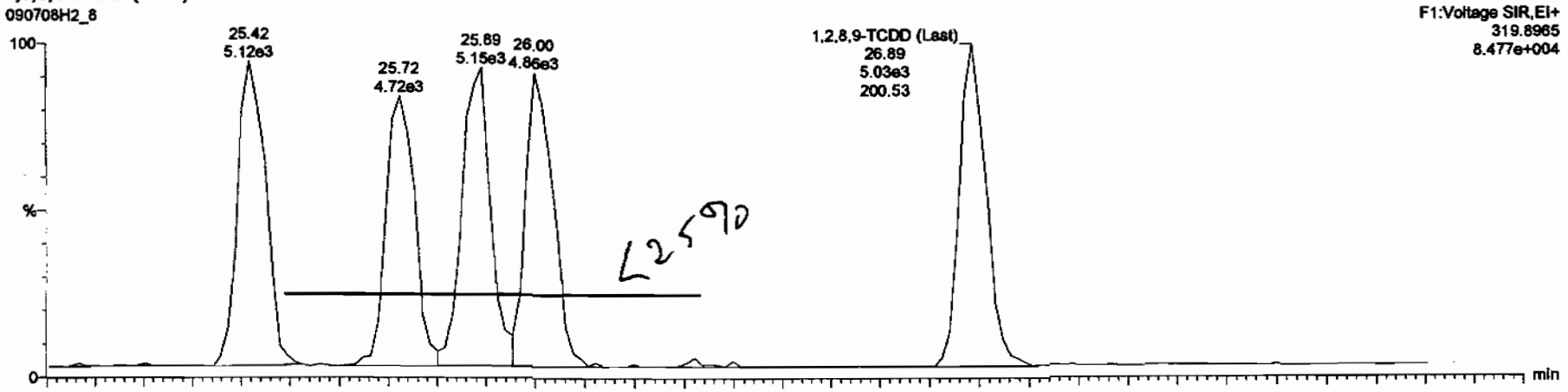

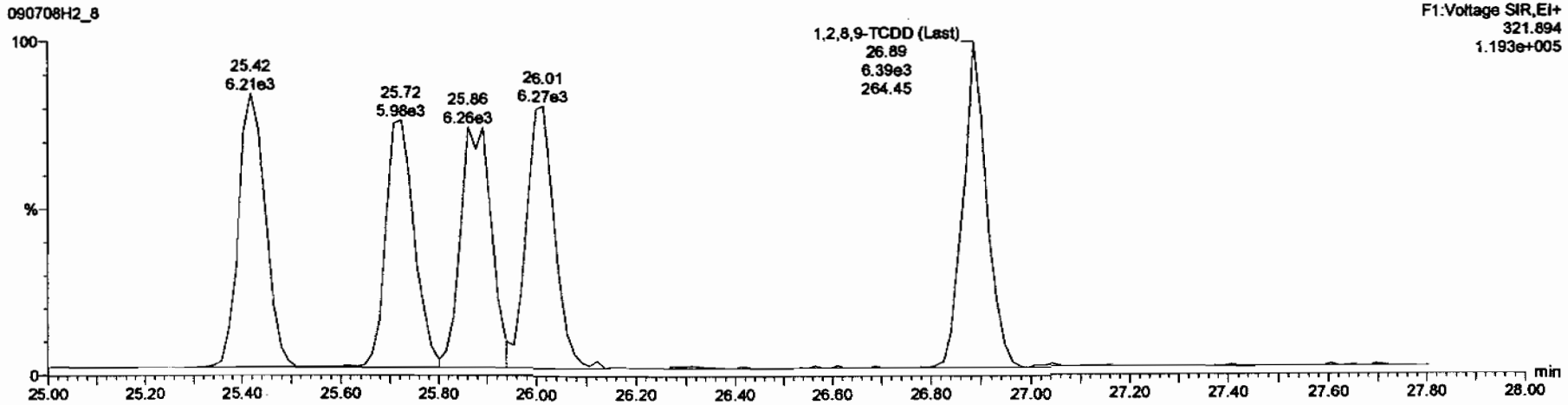

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-8.qld

Last Altered: Thursday, July 09, 2009 09:20:50 Pacific Daylight Time
Printed: Thursday, July 09, 2009 09:21:15 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090708H2_8, Date: 09-Jul-2009, Time: 08:29:20, ID: ST090708H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

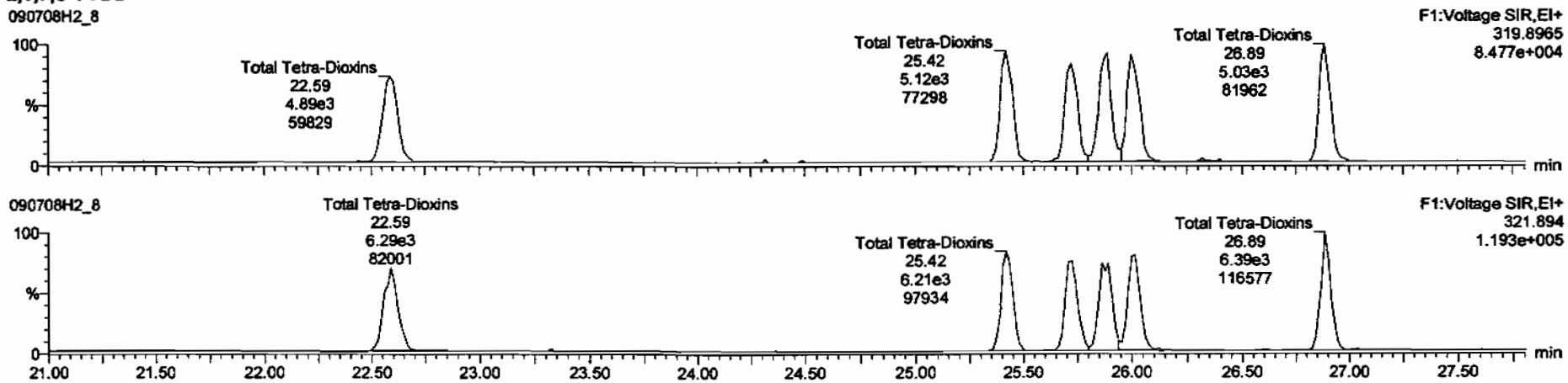

13C-2,3,7,8-TCDD

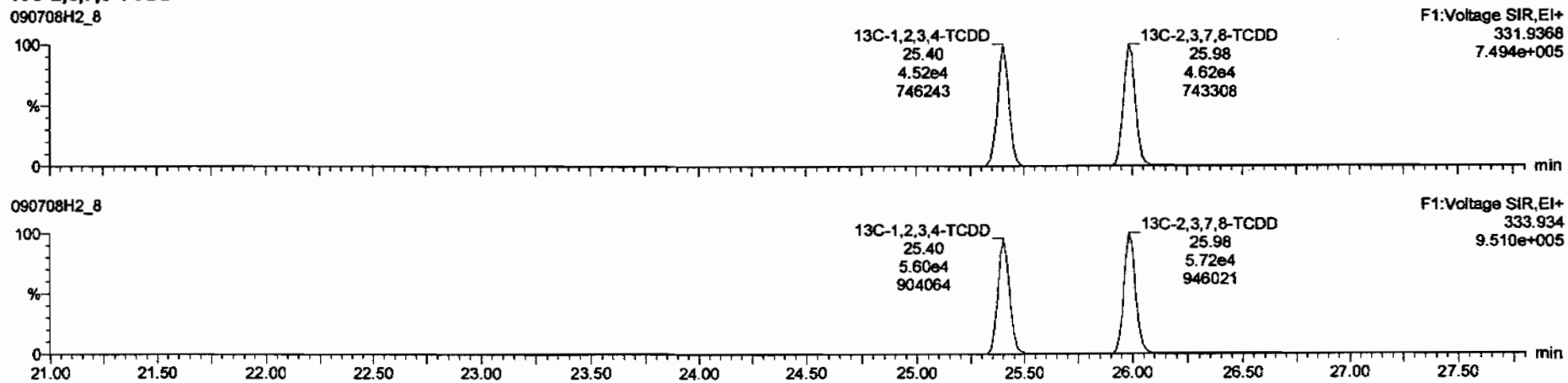

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-8.qld

Last Altered: Thursday, July 09, 2009 09:20:50 Pacific Daylight Time
Printed: Thursday, July 09, 2009 09:21:15 Pacific Daylight Time

Name: 090708H2_8, Date: 09-Jul-2009, Time: 08:29:20, ID: ST090708H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

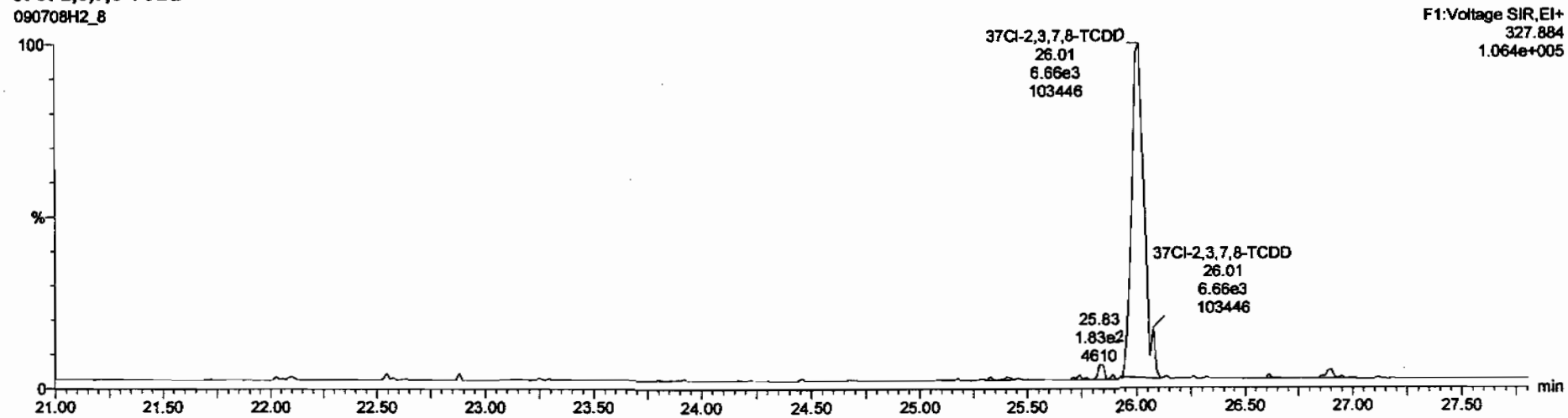

13C-1,2,3,4-TCDD

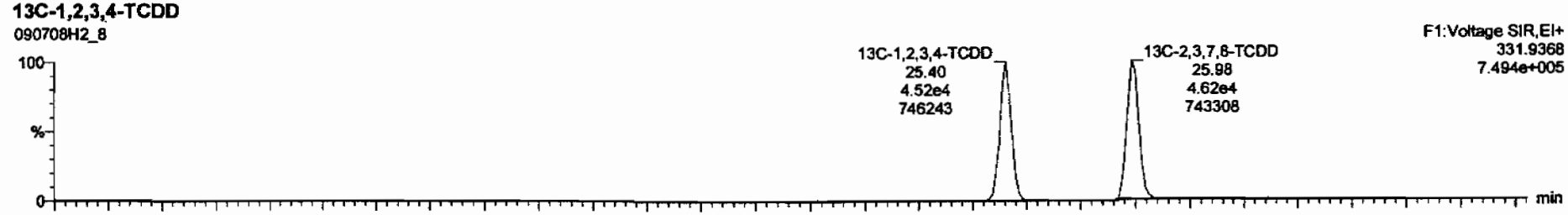

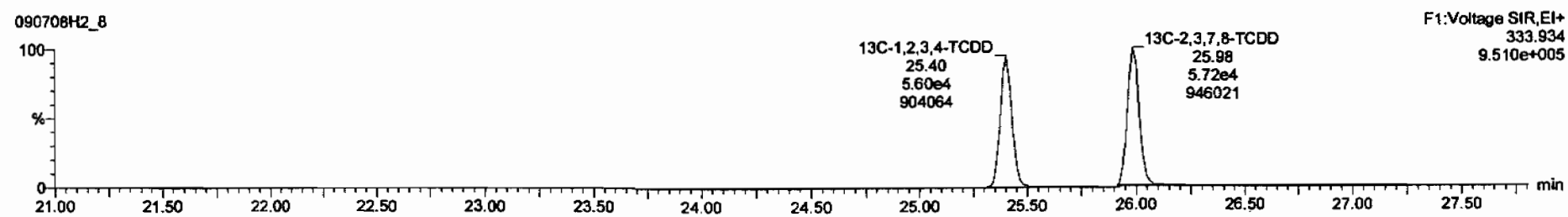

Dataset: C:\MassLynx\Default.pro\Results\090708h2\090708h2-8.qld

Last Altered: Thursday, July 09, 2009 09:20:50 Pacific Daylight Time
Printed: Thursday, July 09, 2009 09:21:15 Pacific Daylight Time

Name: 090708H2_8, Date: 09-Jul-2009, Time: 08:29:20, ID: ST090708H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

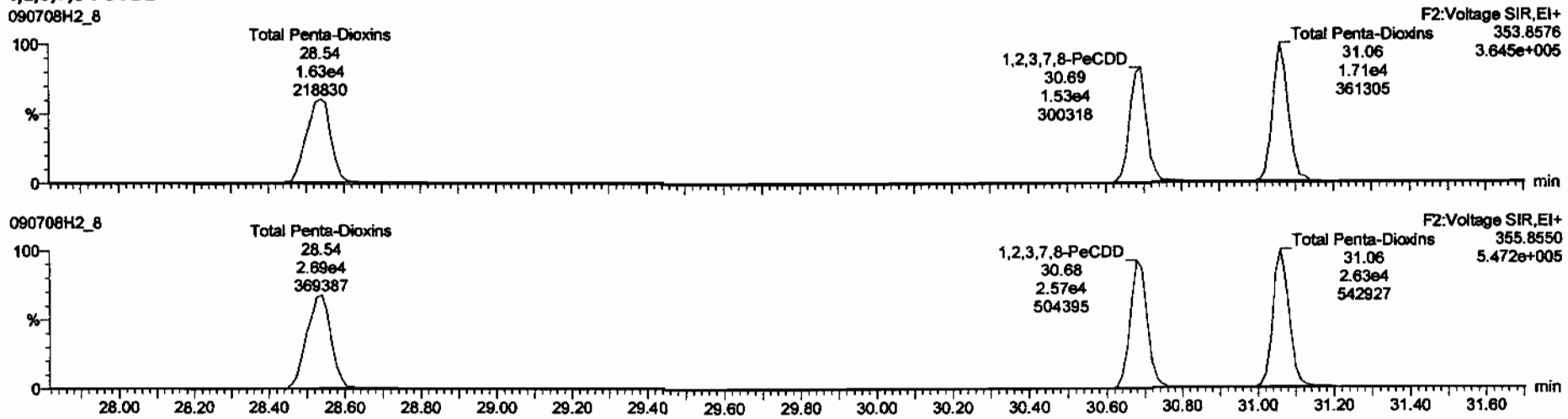

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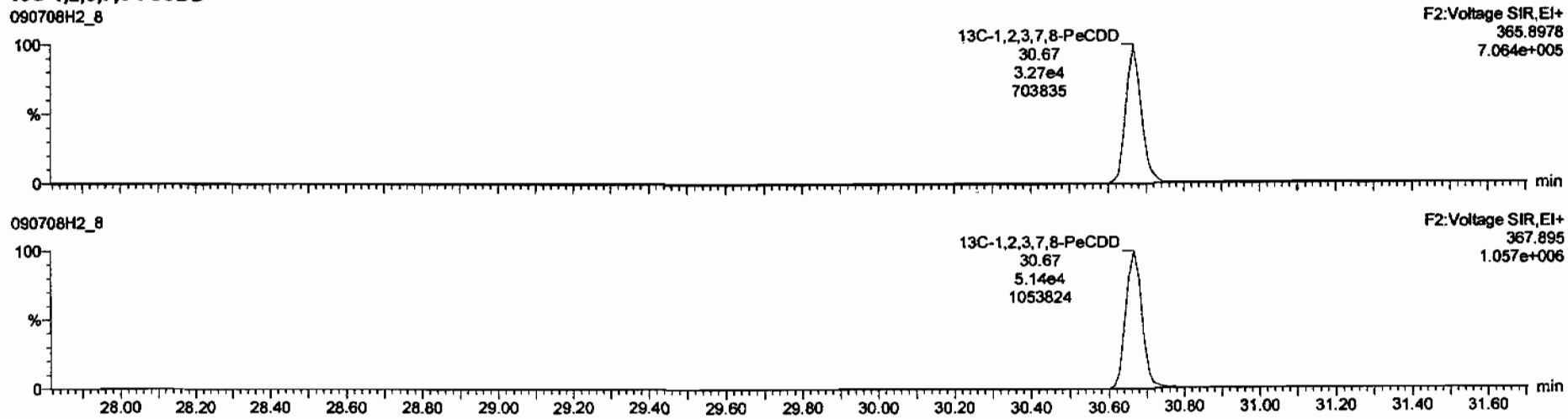

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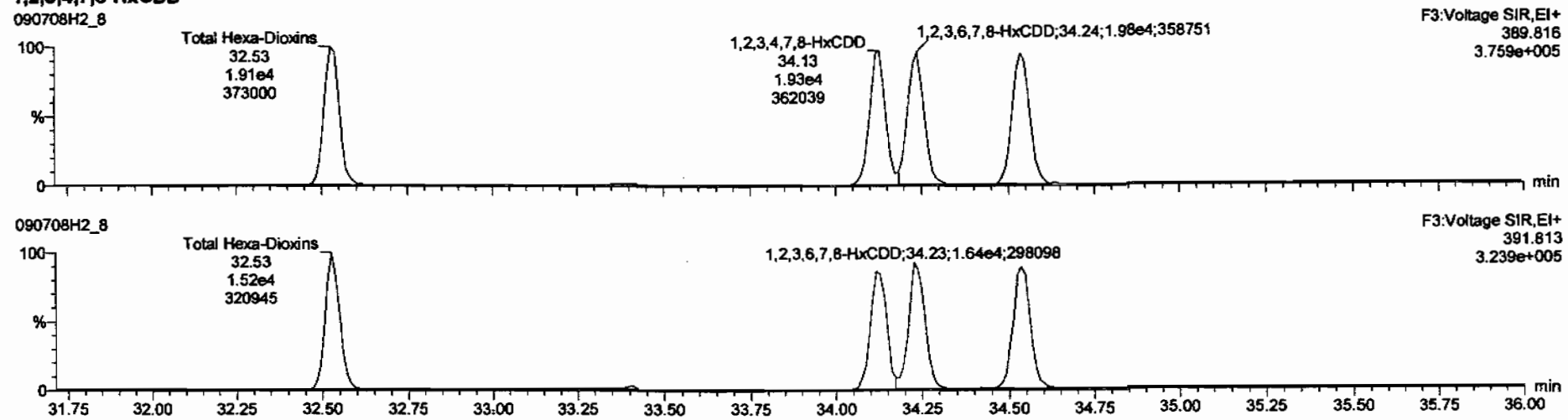

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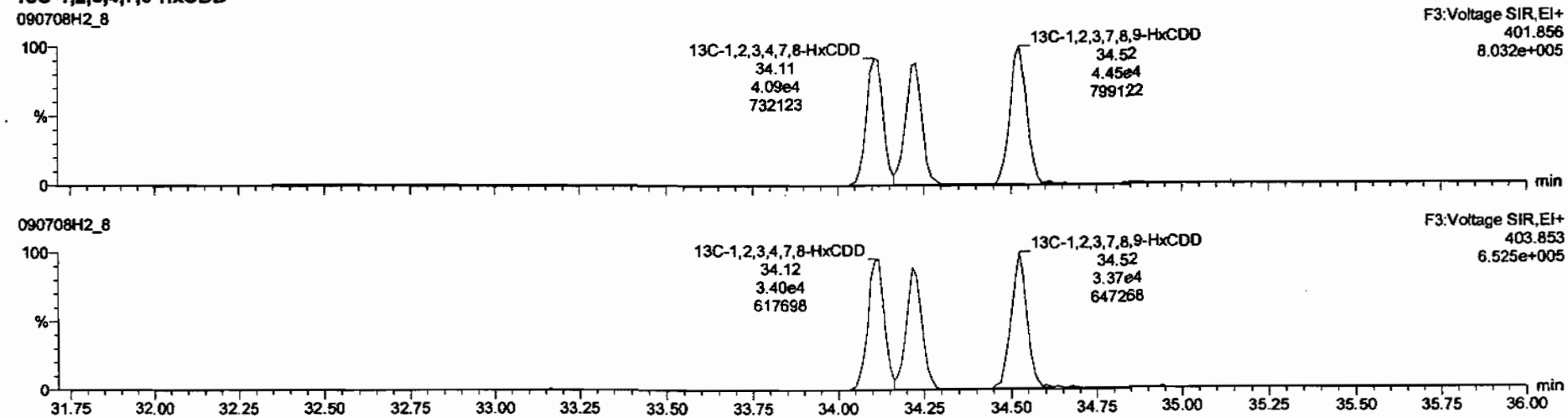

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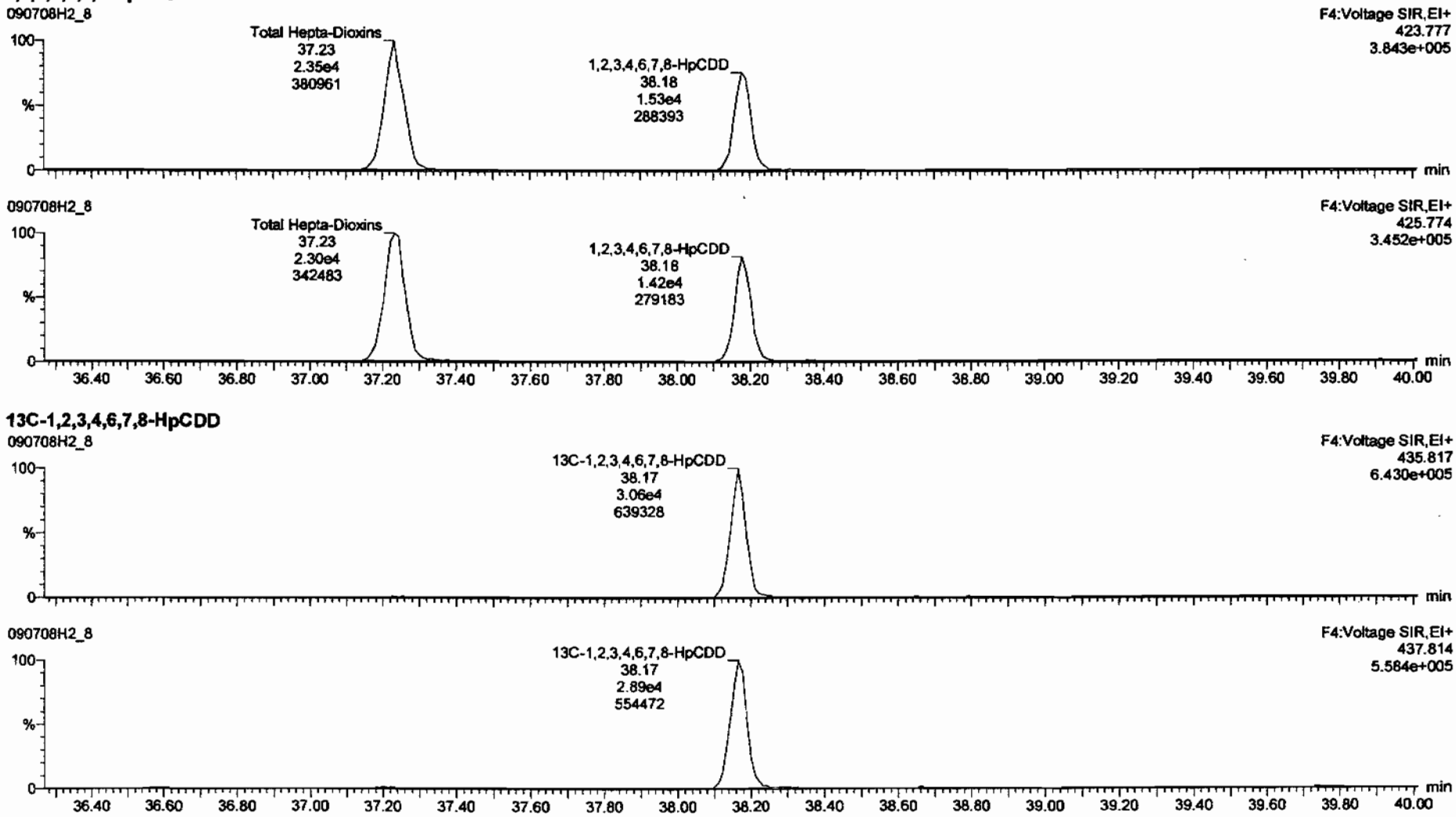

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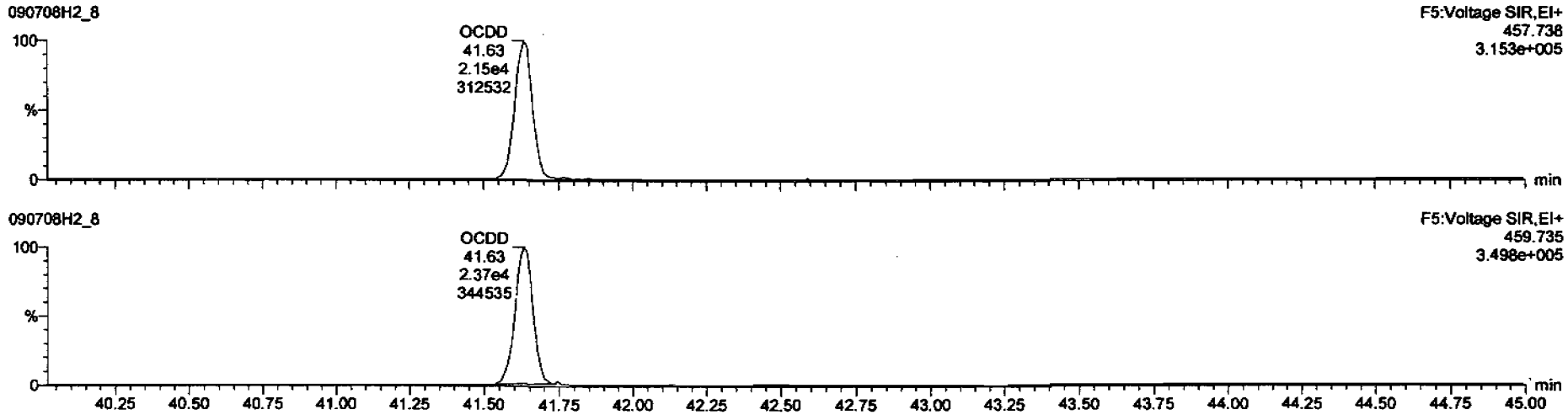

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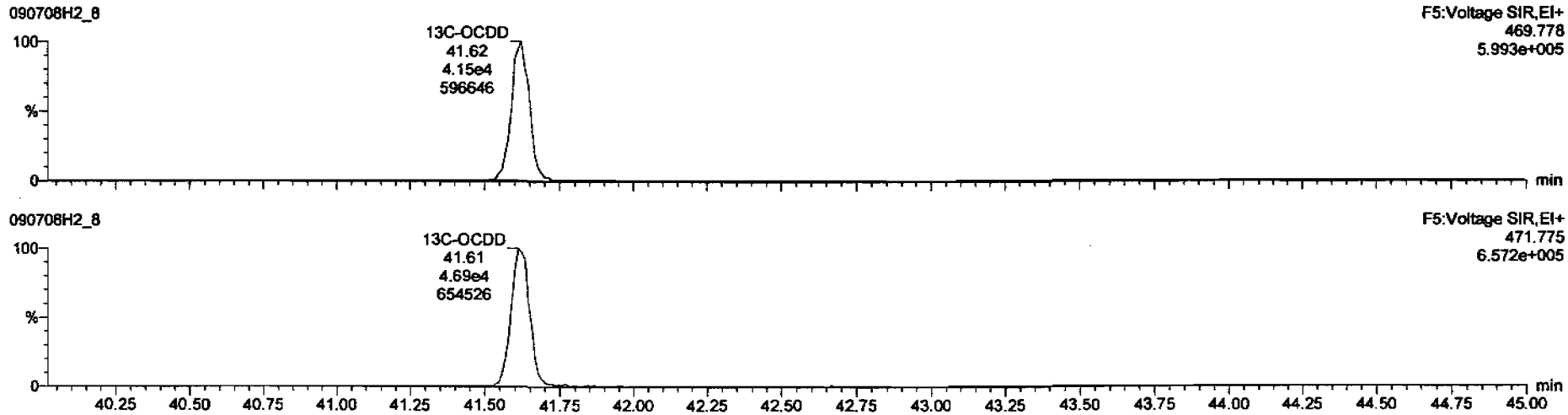

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2,3,7,8-TCDF

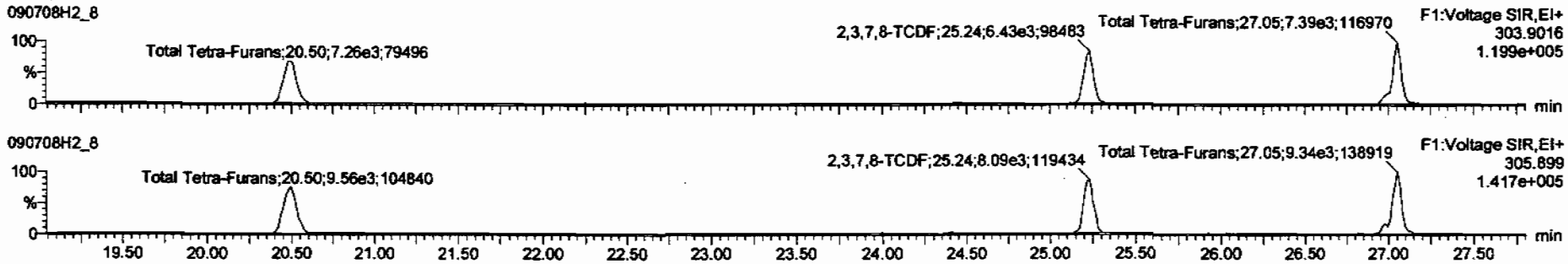

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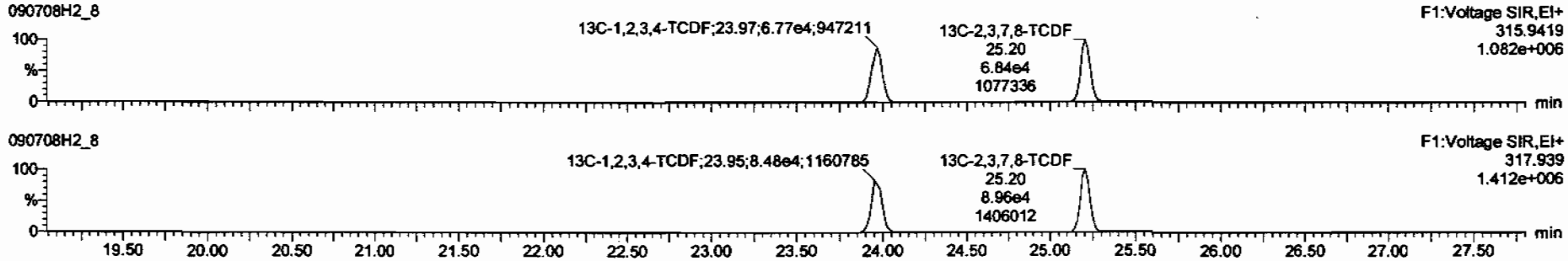

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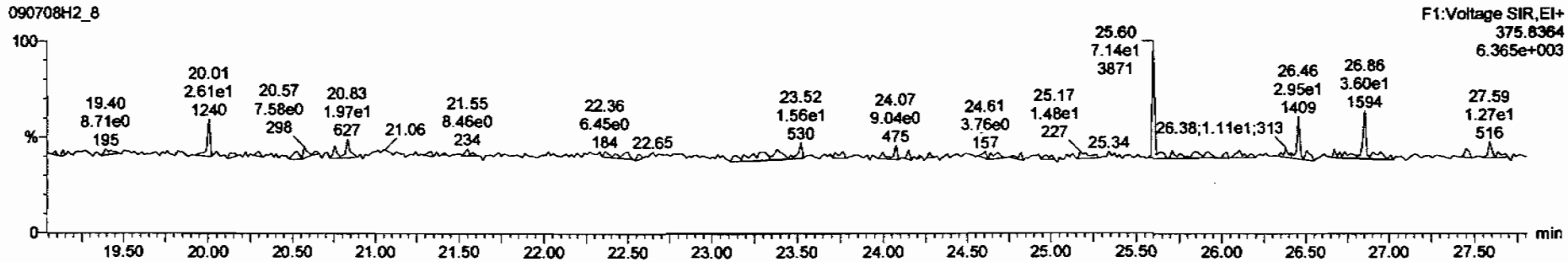

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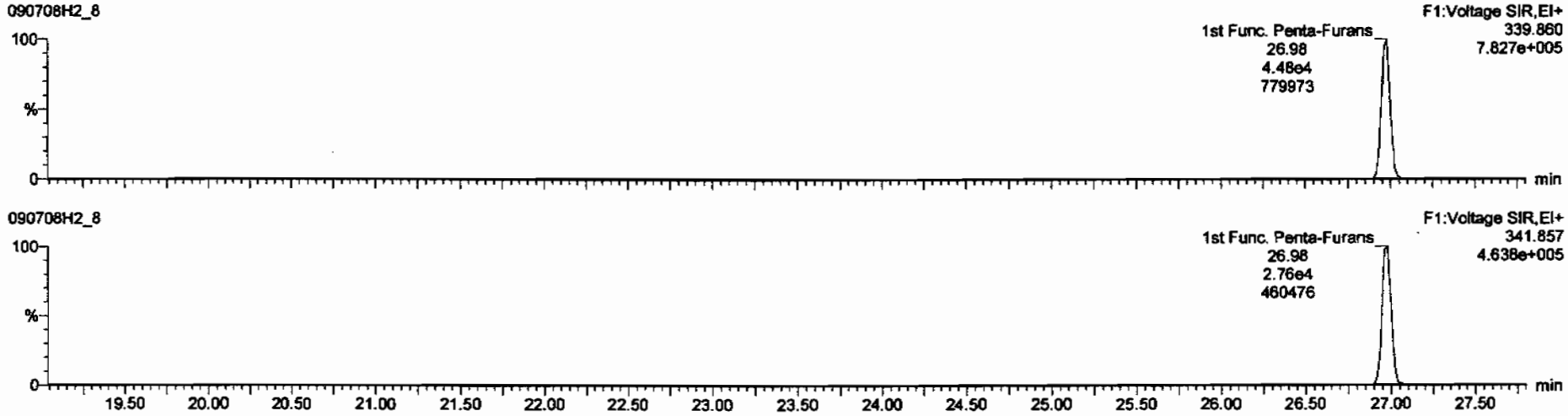

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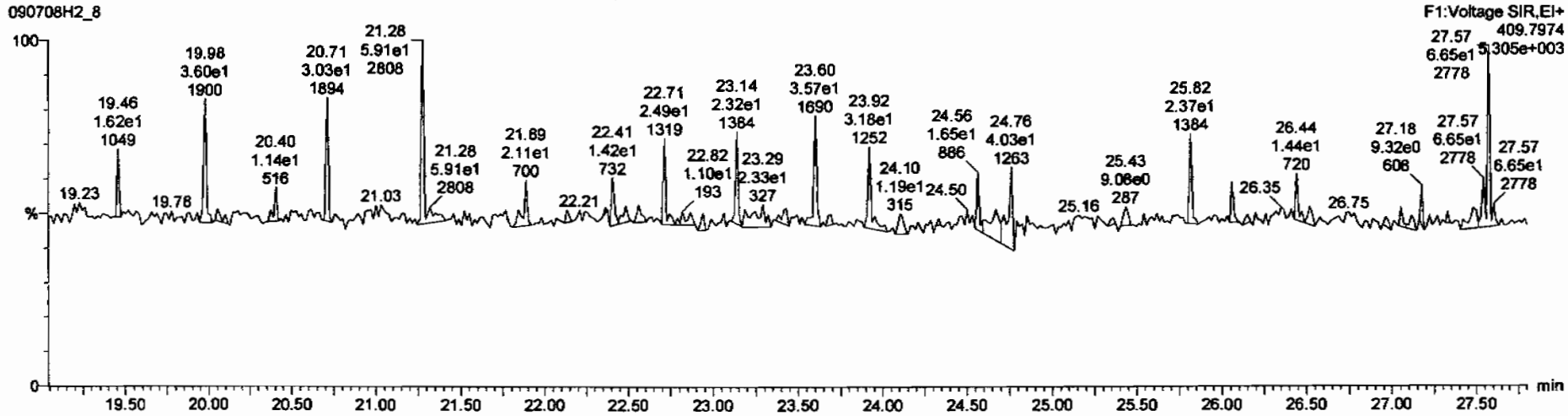

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1,2,3,7,8-PeCDF

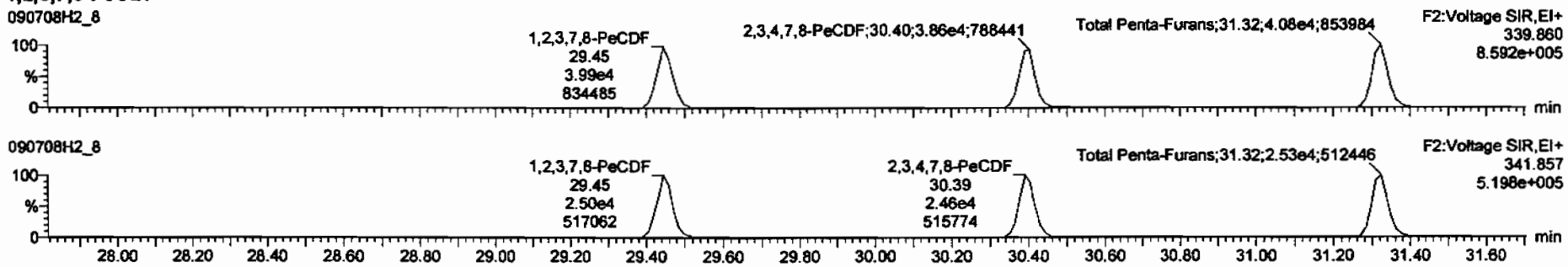

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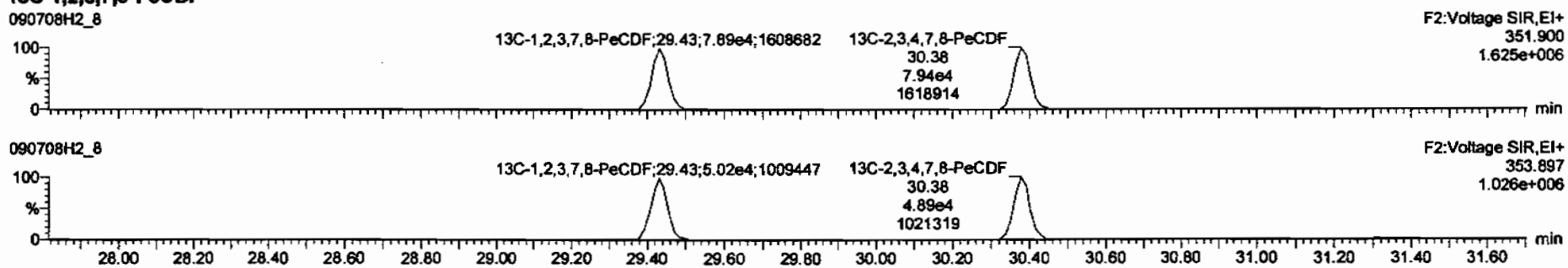

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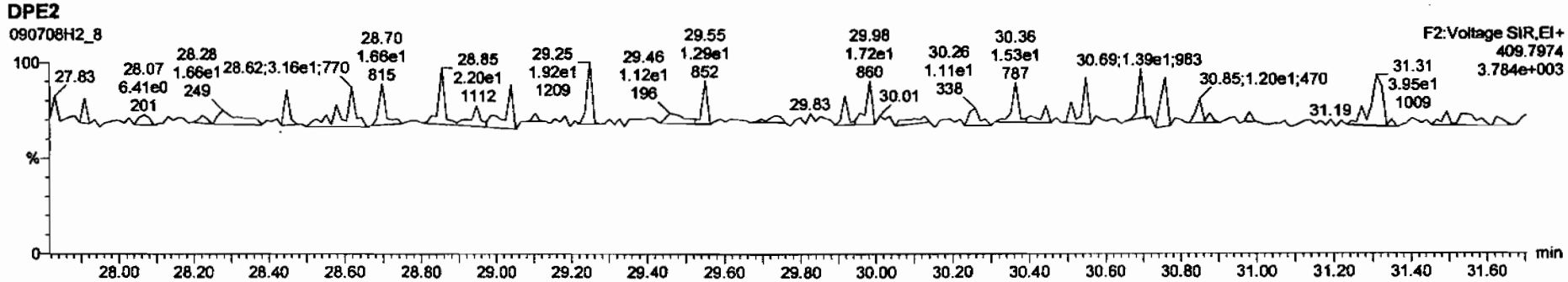

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1,2,3,4,7,8-HxCDF

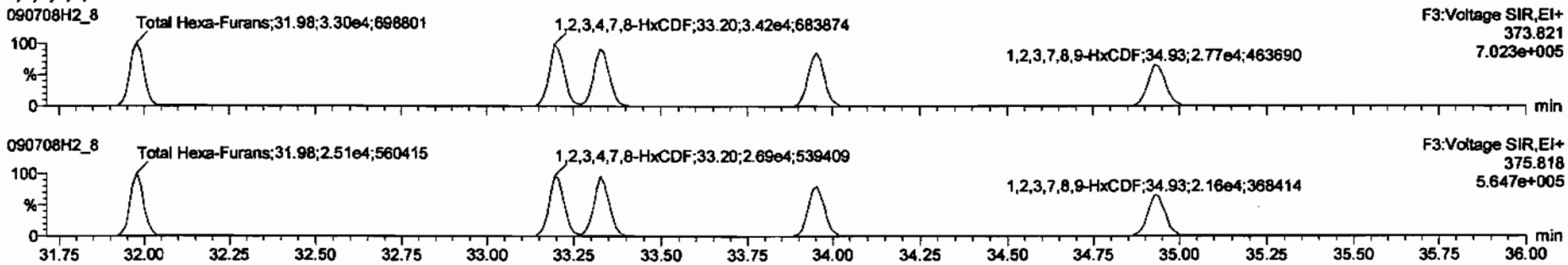

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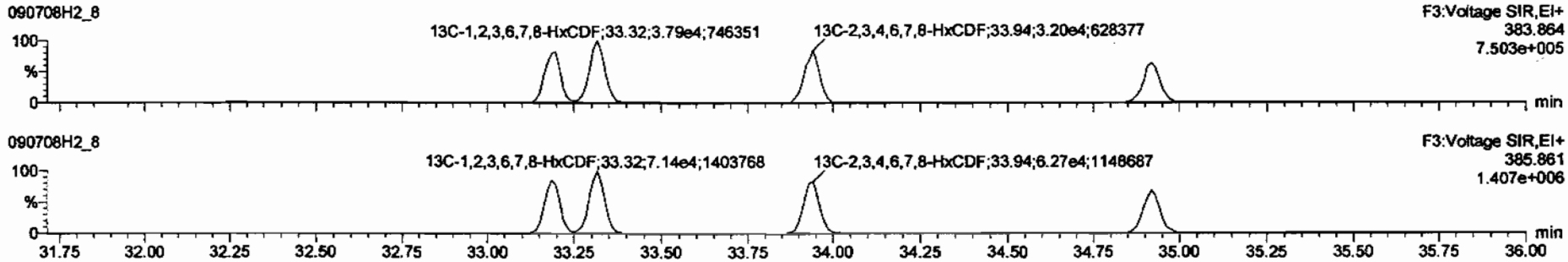

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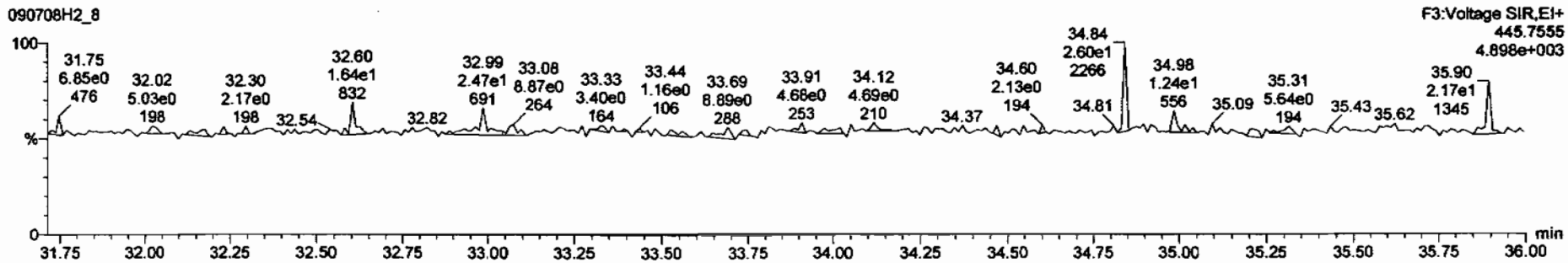

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1,2,3,4,6,7,8-HpCDF

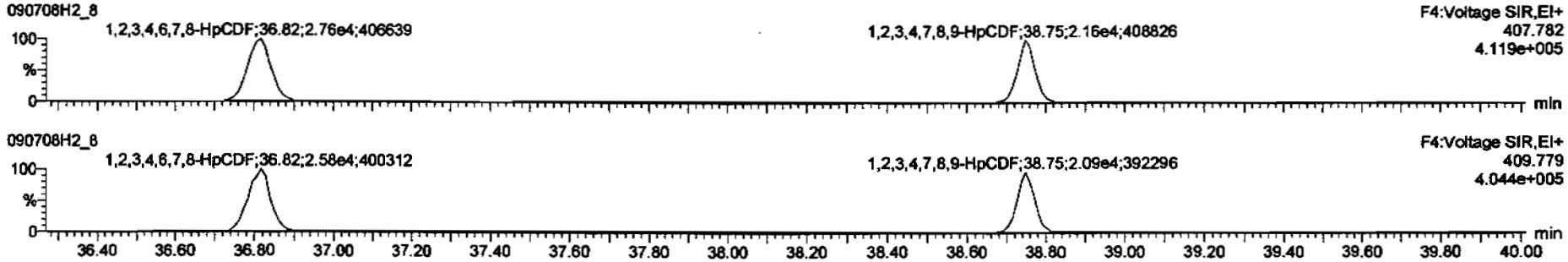

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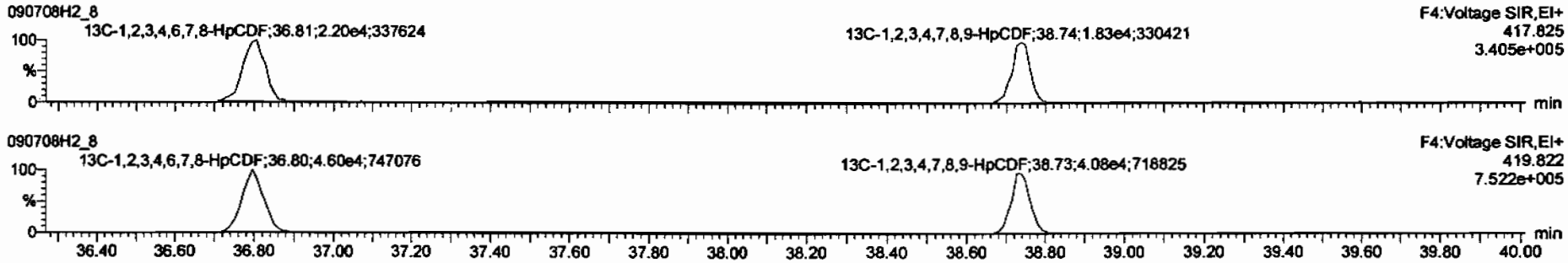

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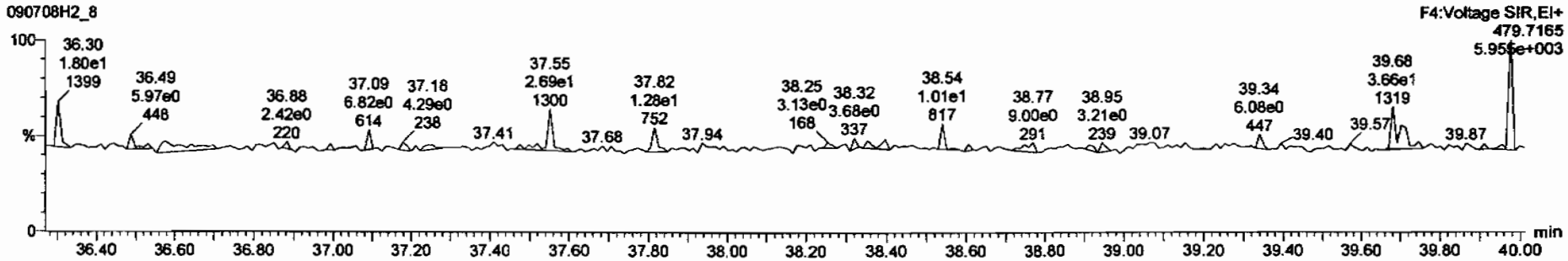

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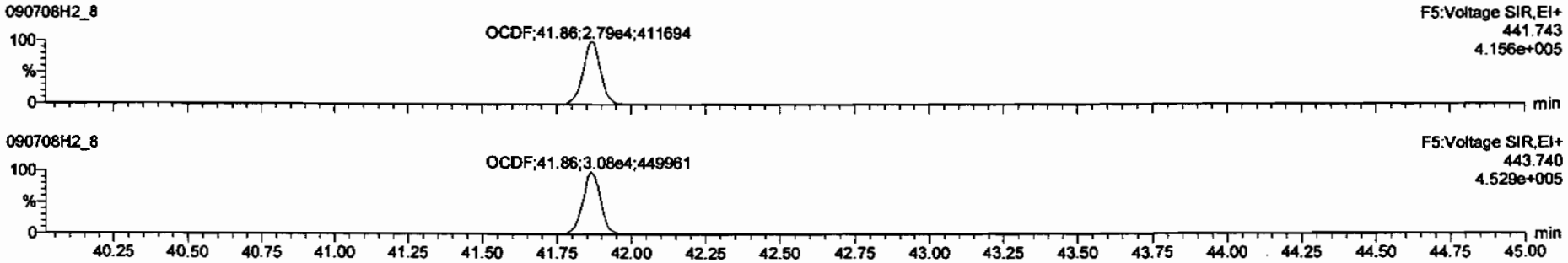

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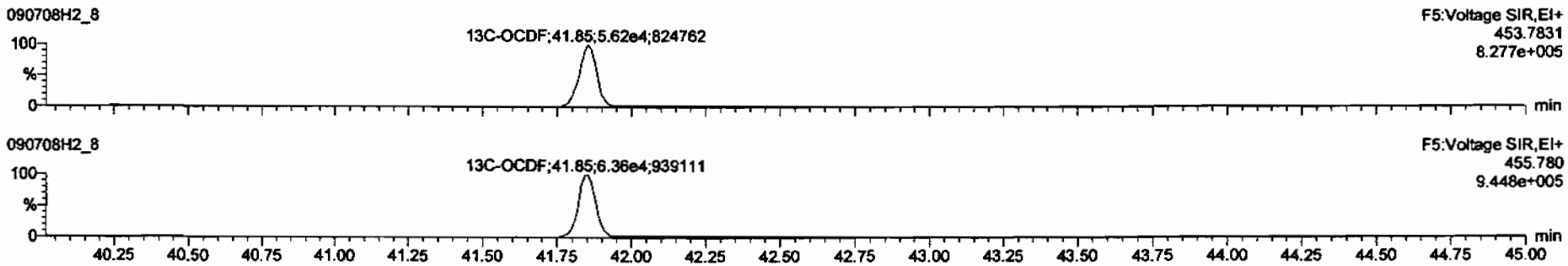

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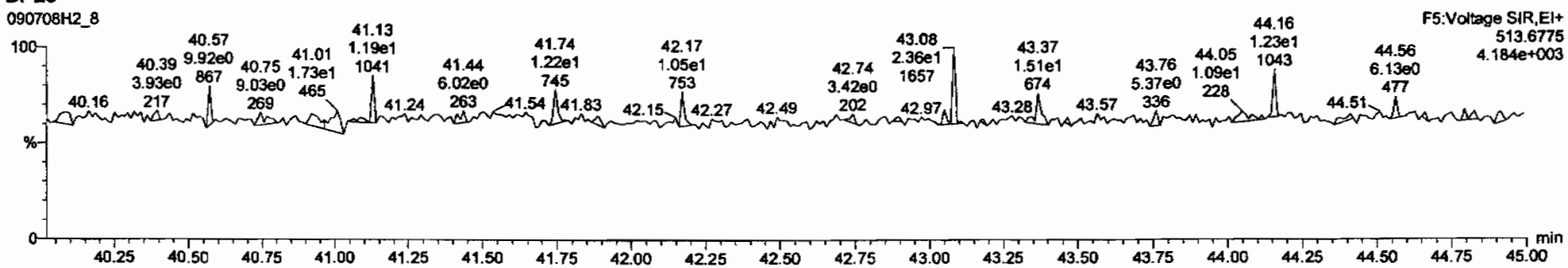

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Name: 090708H2_8, Date: 09-Jul-2009, Time: 08:29:20, ID: ST090708H2-2 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

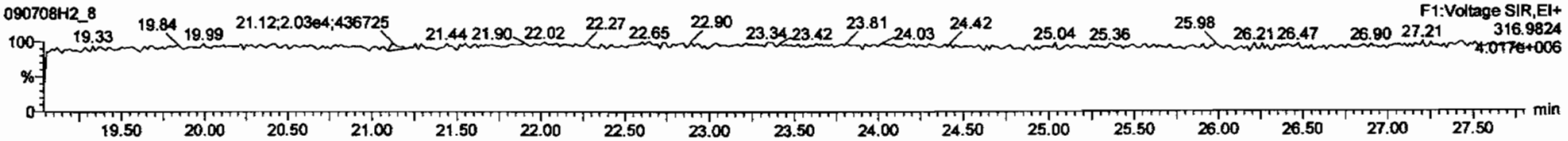

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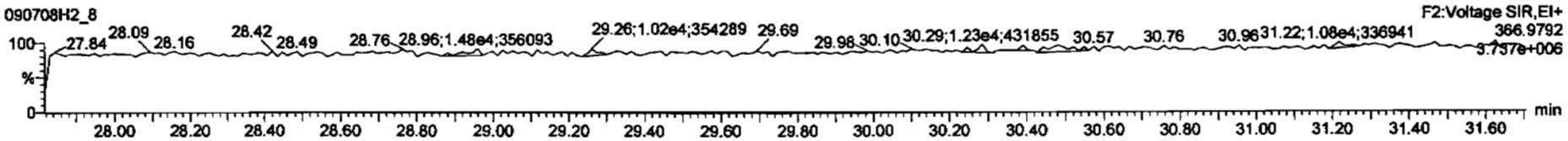

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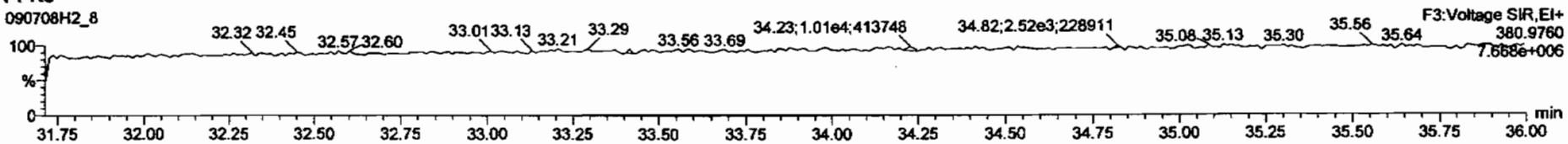

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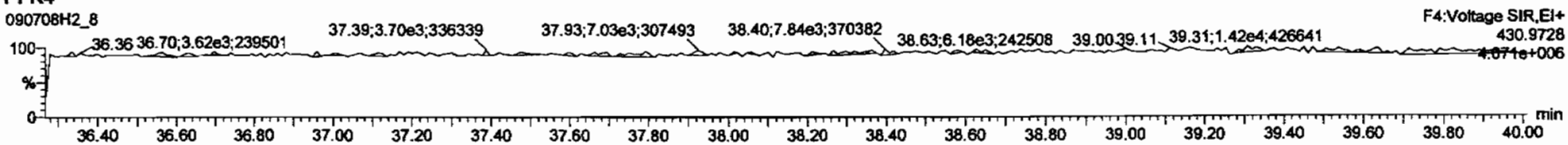

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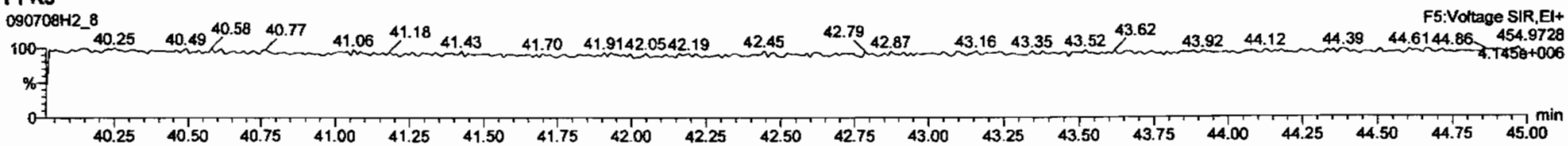

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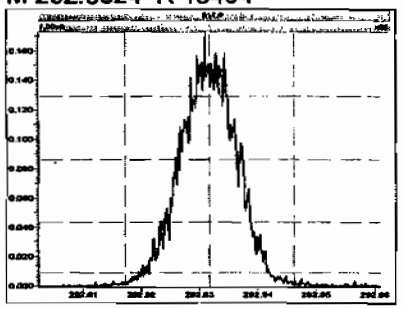

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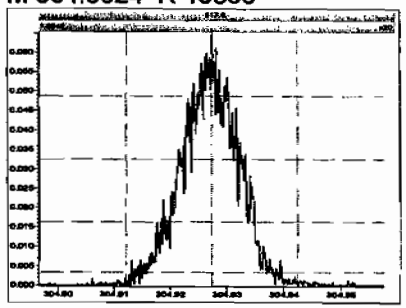

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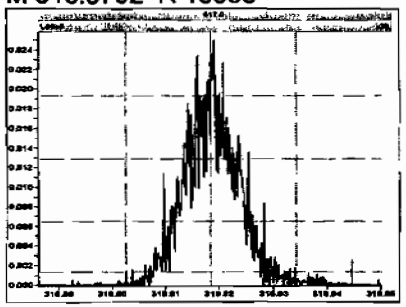

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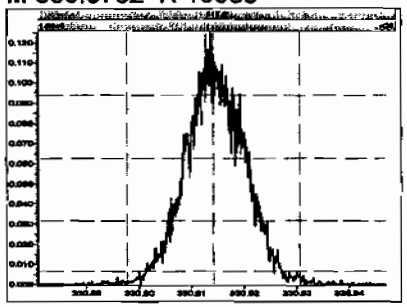

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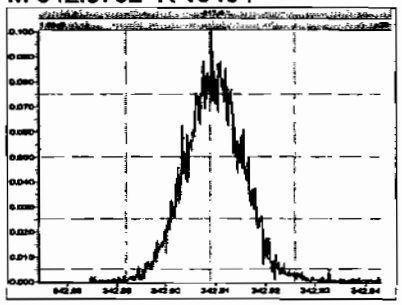

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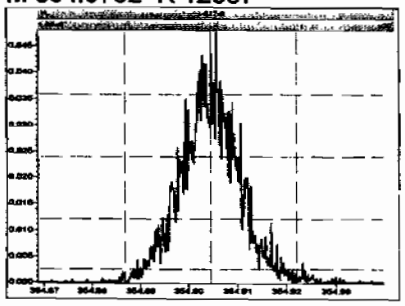

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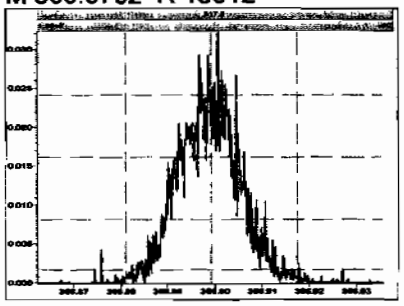

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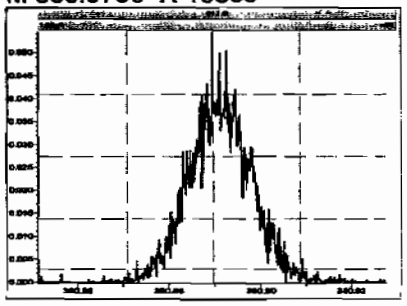

M 392.9760 R 14455

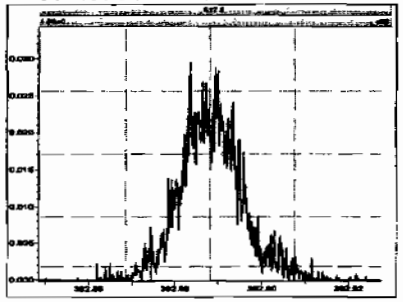

M 404.9760 R 14048

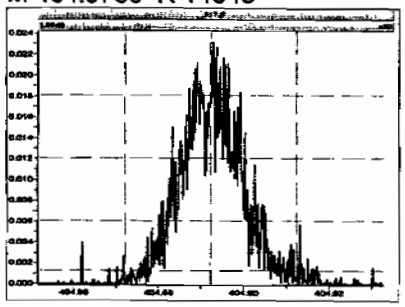

M 416.9760 R 15237

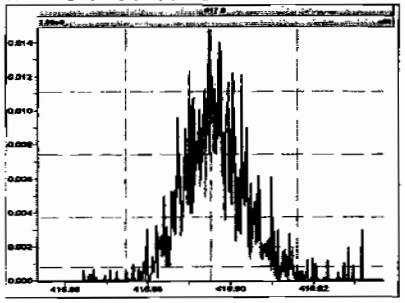

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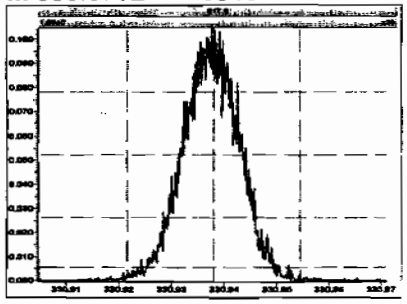

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M 342.9792 R 14131

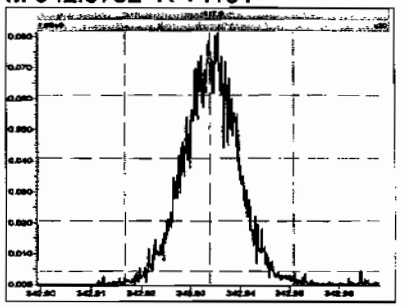

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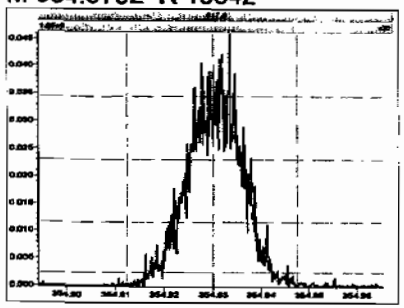

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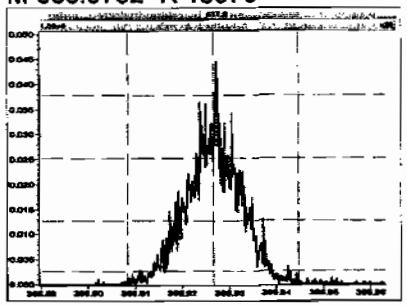

M 380.9760 R 13194

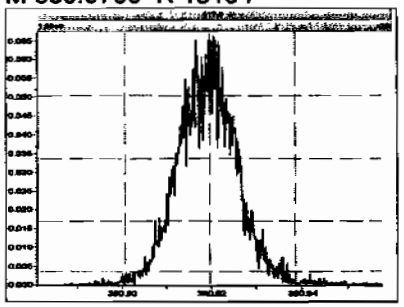

M 392.9760 R 13505

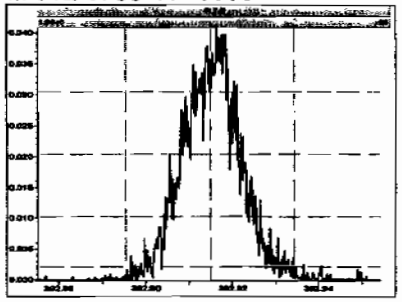

M 404.9760 R 14367

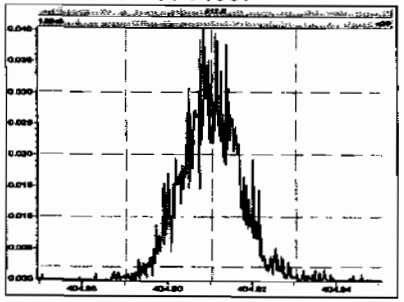

M 416.9760 R 14668

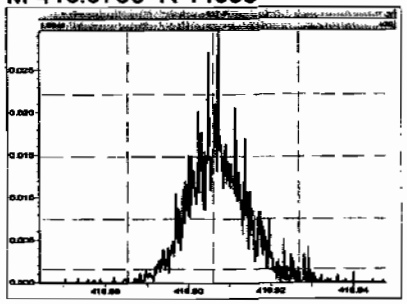

M 366.9792 R 14852

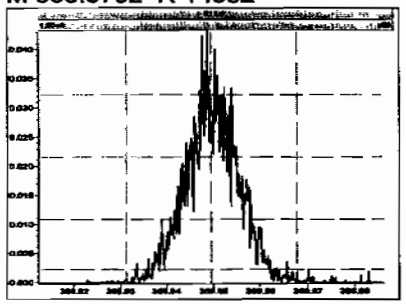

M 380.9760 R 14705

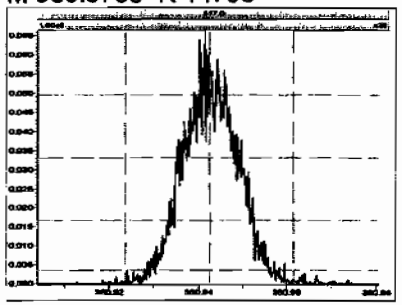

M 392.9760 R 14495

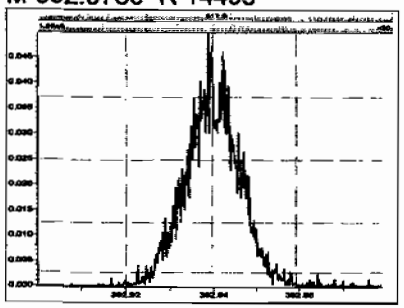

M 404.9760 R 13123

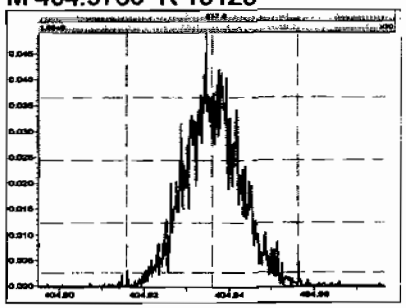

M 416.9760 R 14662

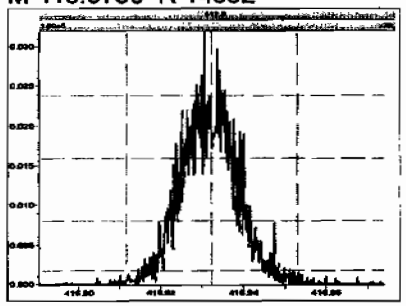

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M 430.9728 R 13736

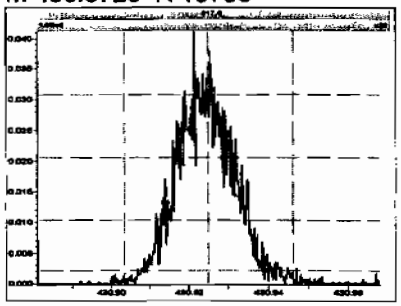

M 442.9728 R 14285

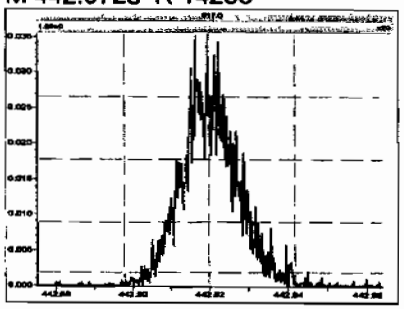

M 454.9728 R 15673

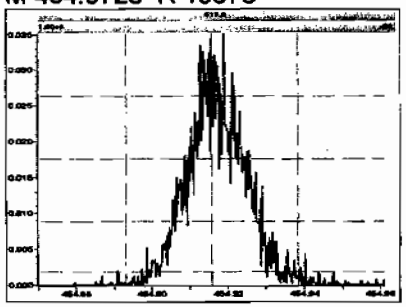

M 404.9760 R 14935

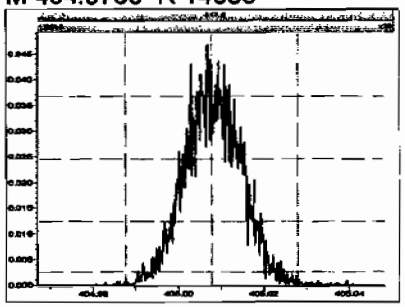

M 416.9760 R 14669

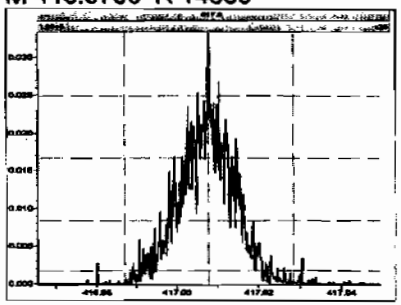

M 430.9728 R 15339

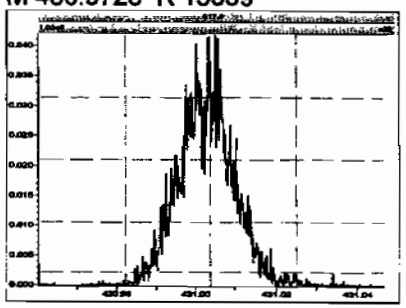

M 442.9728 R 14368

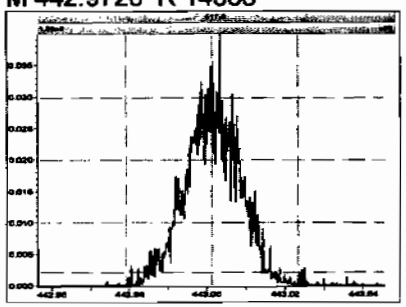

M 454.9728 R 14577

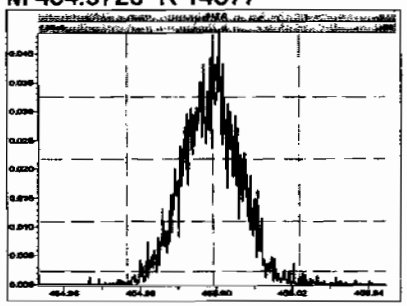

M 466.9728 R 17013

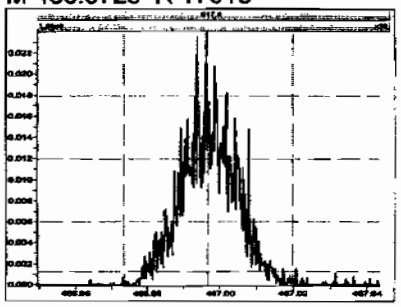

M 480.9696 R 15346

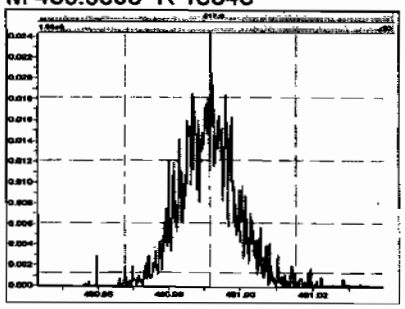

M 430.9728 R 15271

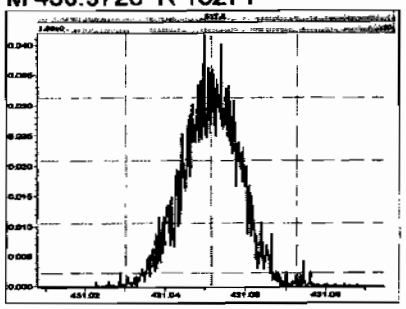

M 442.9728 R 14360

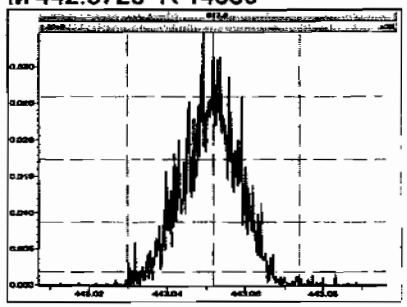

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M 454.9728 R 14450

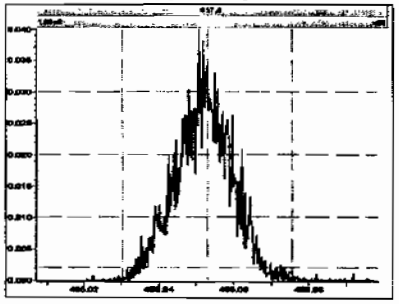

M 466.9728 R 15289

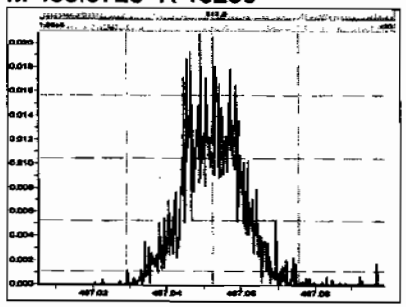

M 480.9696 R 15061

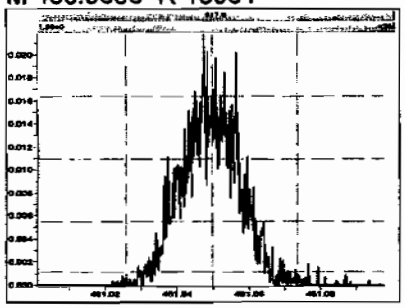

M 492.9696 R 15533

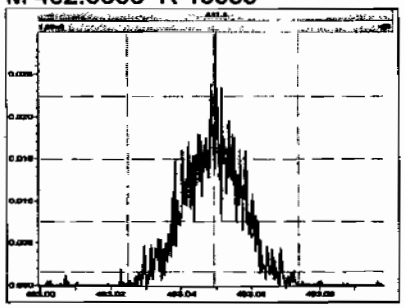

M 504.9696 R 13441

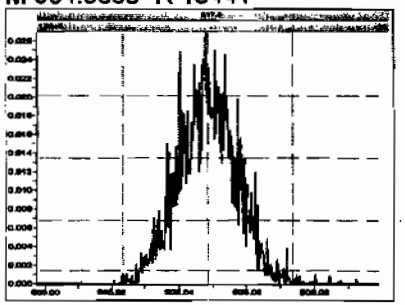

M 516.9697 R 16785

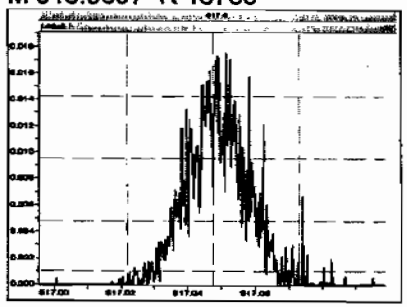

ICAL

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Compound name: 2,3,7,8-TCDD
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	% Dev	RRF
1	090212H1_1	10.0	0.82	NO	25.98	1.001	7.90e4	7.49e5	9.78	-2.2	1.05
2	090212H1_3	0.250	0.85	NO	26.00	1.001	1.54e3	5.94e5	0.240	-4.1	1.03
3	090212H1_4	0.500	0.71	NO	25.98	1.001	3.65e3	6.33e5	0.536	7.1	1.16
4	090212H1_5	2.00	0.72	NO	26.00	1.001	1.40e4	6.64e5	1.95	-2.5	1.05
5	090212H1_6	40.0	0.77	NO	25.98	1.001	3.33e5	7.81e5	39.5	-1.3	1.06
6	090212H1_7	200	0.78	NO	26.00	1.001	1.92e6	8.66e5	206	3.0	1.11

2/13/09

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Compound name: 1,2,3,7,8-PeCDD
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	% Dev	RRF
1	090212H1_1	50.0	0.63	NO	30.65	1.000	3.03e5	6.02e5	48.6	-2.7	1.01
2	090212H1_3	1.25	0.69	NO	30.67	1.000	6.36e3	4.83e5	1.27	1.9	1.05
3	090212H1_4	2.50	0.60	NO	30.67	1.000	1.30e4	4.97e5	2.53	1.1	1.04
4	090212H1_5	10.0	0.61	NO	30.67	1.000	5.28e4	5.23e5	9.77	-2.3	1.01
5	090212H1_6	200	0.63	NO	30.67	1.000	1.31e6	6.35e5	200	-0.1	1.03
6	090212H1_7	1000	0.63	NO	30.67	1.000	8.09e6	7.66e5	1020	2.2	1.06

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.00153
RRF SD: 0.0317187, Relative SD: 3.16702
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	Qv	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0	1.26	NO	34.10	1.000	2.54e5	5.27e5	48.0	-3.9	0.962
090212H1_3	1.25	1.42	NO	34.11	1.000	5.16e3	4.08e5	1.26	1.0	1.01
090212H1_4	2.50	1.28	NO	34.11	1.001	1.10e4	4.22e5	2.61	4.2	1.04
090212H1_5	10.0	1.32	NO	34.12	1.000	4.31e4	4.47e5	9.64	-3.6	0.965
090212H1_6	200	1.27	NO	34.11	1.000	1.12e6	5.53e5	203	1.4	1.02
090212H1_7	1000	1.25	NO	34.12	1.000	7.63e6	7.54e5	1010	1.0	1.01

Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	Qv	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0	1.27	NO	34.21	1.000	2.90e5	5.42e5	47.6	-4.8	1.07
090212H1_3	1.25	1.20	NO	34.23	1.001	6.02e3	4.14e5	1.29	3.4	1.16
090212H1_4	2.50	1.24	NO	34.23	1.001	1.23e4	4.20e5	2.60	3.9	1.17
090212H1_5	10.0	1.26	NO	34.24	1.001	4.91e4	4.60e5	9.48	-5.2	1.07
090212H1_6	200	1.30	NO	34.22	1.000	1.29e6	5.59e5	205	2.7	1.16
090212H1_7	1000	1.26	NO	34.23	1.000	8.08e6	7.18e5	1000	0.0	1.13

Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.10201
RRF SD: 0.0447729, Relative SD: 4.06282
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	Qv	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0	1.28	NO	34.51	1.009	2.83e5	0.00e0	48.1	-3.9	1.06
090212H1_3	1.25	1.27	NO	34.53	1.010	5.79e3	0.00e0	1.28	2.4	1.13

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1,2,3,7,8,9-HxCDD

	Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_4	2.50	1.28	NO	34.52	1.009	1.21e4	0.00e0	2.60	4.0	1.15
2	090212H1_5	10.0	1.22	NO	34.53	1.009	4.70e4	0.00e0	9.41	-5.9	1.04
3	090212H1_6	200	1.32	NO	34.52	1.009	1.26e6	0.00e0	207	3.3	1.14
4	090212H1_7	1000	1.25	NO	34.53	1.009	8.13e6	0.00e0	1000	0.2	1.10

Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0	1.03	NO	38.17	1.000	2.11e5	4.13e5	48.0	-4.0	1.02
2	090212H1_3	1.25	1.15	NO	38.18	1.000	4.52e3	3.21e5	1.32	5.7	1.12
3	090212H1_4	2.50	1.07	NO	38.18	1.000	8.68e3	3.21e5	2.54	1.7	1.08
4	090212H1_5	10.0	1.07	NO	38.19	1.001	3.41e4	3.36e5	9.55	-4.5	1.02
5	090212H1_6	200	1.07	NO	38.19	1.000	9.19e5	4.29e5	201	0.7	1.07
6	090212H1_7	1000	1.05	NO	38.19	1.001	6.29e6	5.88e5	1000	0.5	1.07

Compound name: OCDD
Response Factor: 1.17831
RRF SD: 0.0736447, Relative SD: 6.25001
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	100	0.91	NO	41.63	1.000	3.30e5	5.87e5	95.3	-4.7	1.12
2	090212H1_3	2.50	0.89	NO	41.67	1.001	7.09e3	4.40e5	2.74	9.5	1.29
3	090212H1_4	5.00	0.87	NO	41.65	1.000	1.25e4	4.37e5	4.85	-3.0	1.14
4	090212H1_5	20.0	0.85	NO	41.66	1.000	5.10e4	4.67e5	18.5	-7.3	1.09
5	090212H1_6	400	0.92	NO	41.68	1.000	1.48e6	6.21e5	404	1.1	1.19
6	090212H1_7	2000	0.89	NO	41.67	1.001	1.10e7	8.92e5	2090	4.4	1.23

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
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Compound name: 2,3,7,8-TCDF
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Qly	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	10.0	0.78	NO	25.19	1.001	1.14e5	1.07e6	9.75	-2.5	1.06
2	090212H1_3	0.250	0.83	NO	25.19	1.001	2.44e3	8.63e5	0.260	4.1	1.13
3	090212H1_4	0.500	0.84	NO	25.20	1.001	4.98e3	9.06e5	0.506	1.2	1.10
4	090212H1_5	2.00	0.81	NO	25.20	1.001	1.97e4	9.70e5	1.87	-6.4	1.02
5	090212H1_6	40.0	0.79	NO	25.20	1.001	4.71e5	1.08e6	40.1	0.3	1.09
6	090212H1_7	200	0.79	NO	25.20	1.001	2.66e6	1.18e6	207	3.4	1.12

Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Qly	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0	1.61	NO	29.42	1.000	5.65e5	9.82e5	49.6	-0.7	1.15
2	090212H1_3	1.25	1.63	NO	29.43	1.000	1.11e4	7.63e5	1.25	0.1	1.16
3	090212H1_4	2.50	1.74	NO	29.43	1.000	2.29e4	7.80e5	2.53	1.3	1.17
4	090212H1_5	10.0	1.61	NO	29.43	1.000	9.64e4	8.78e5	9.48	-5.2	1.10
5	090212H1_6	200	1.62	NO	29.43	1.000	2.36e6	9.96e5	204	2.0	1.18
6	090212H1_7	1000	1.60	NO	29.45	1.000	1.42e7	1.20e6	1030	2.5	1.19

Compound name: 2,3,4,7,8-PeCDF
Response Factor: 1.11789
RRF SD: 0.0264655, Relative SD: 2.36745
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Qly	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0	1.56	NO	30.35	1.000	5.35e5	9.65e5	49.6	-0.8	1.11
2	090212H1_3	1.25	1.51	NO	30.36	1.000	1.08e4	7.68e5	1.25	0.4	1.12

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Compound name: 2,3,4,7,8-PeCDF

	Name	Std Conc	RA	m/z	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_4	2.50	1.61	NO	30.36	1.000	2.28e4	7.94e5	2.57	2.6	1.15
	090212H1_5	10.0	1.64	NO	30.38	1.000	9.28e4	8.67e5	9.58	-4.2	1.07
	090212H1_6	200	1.60	NO	30.36	1.000	2.28e6	1.01e6	203	1.5	1.13
	090212H1_7	1000	1.59	NO	30.38	1.000	1.37e7	1.22e6	1010	0.5	1.12

Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.41088
RRF SD: 0.0512913, Relative SD: 3.6354
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	m/z	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0	1.27	NO	33.19	1.001	4.59e5	6.74e5	48.3	-3.3	1.36
2	090212H1_3	1.25	1.35	NO	33.19	1.000	9.88e3	5.28e5	1.33	6.0	1.50
3	090212H1_4	2.50	1.32	NO	33.19	1.000	1.96e4	5.45e5	2.54	1.8	1.44
4	090212H1_5	10.0	1.31	NO	33.20	1.000	7.94e4	5.86e5	9.61	-3.9	1.36
5	090212H1_6	200	1.27	NO	33.20	1.001	1.99e6	7.08e5	199	-0.5	1.40
6	090212H1_7	1000	1.27	NO	33.20	1.000	1.28e7	9.05e5	1000	-0.0	1.41

Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.22218
RRF SD: 0.0229408, Relative SD: 1.87703
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	m/z	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0	1.25	NO	33.31	1.000	5.49e5	9.02e5	49.8	-0.4	1.22
2	090212H1_3	1.25	1.21	NO	33.32	1.000	1.07e4	6.79e5	1.29	3.1	1.26
3	090212H1_4	2.50	1.37	NO	33.31	1.000	2.16e4	6.99e5	2.52	1.0	1.23
4	090212H1_5	10.0	1.34	NO	33.33	1.000	8.96e4	7.51e5	9.76	-2.4	1.19
5	090212H1_6	200	1.27	NO	33.32	1.000	2.27e6	9.34e5	199	-0.5	1.22
6	090212H1_7	1000	1.27	NO	33.33	1.001	1.41e7	1.17e6	992	-0.8	1.21

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Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
	090212H1_1	50.0	1.29	NO	33.92	1.000	4.53e5	7.19e5	49.2	-1.6	1.26
	090212H1_3	1.25	1.38	NO	33.93	1.000	9.11e3	5.78e5	1.23	-1.5	1.26
	090212H1_4	2.50	1.28	NO	33.93	1.001	1.91e4	5.74e5	2.60	3.9	1.33
	090212H1_5	10.0	1.25	NO	33.94	1.000	7.70e4	6.20e5	9.71	-2.9	1.24
	090212H1_6	200	1.26	NO	33.93	1.000	1.95e6	7.64e5	200	-0.2	1.28
	090212H1_7	1000	1.30	NO	33.94	1.000	1.26e7	9.59e5	1020	2.3	1.31

Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.25756
RRF SD: 0.0204635, Relative SD: 1.62723
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
	090212H1_1	50.0	1.25	NO	34.91	1.000	3.76e5	6.05e5	49.5	-1.0	1.24
	090212H1_3	1.25	1.37	NO	34.91	1.000	7.41e3	4.73e5	1.24	-0.4	1.25
	090212H1_4	2.50	1.24	NO	34.92	1.001	1.51e4	4.79e5	2.50	0.2	1.26
	090212H1_5	10.0	1.28	NO	34.93	1.000	6.29e4	5.10e5	9.81	-1.9	1.23
	090212H1_6	200	1.25	NO	34.92	1.001	1.68e6	6.50e5	206	2.9	1.29
	090212H1_7	1000	1.28	NO	34.92	1.000	1.08e7	8.57e5	1000	0.3	1.26

Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
	090212H1_1	50.0	1.05	NO	36.81	1.000	4.18e5	5.07e5	48.8	-2.3	1.65
	090212H1_3	1.25	1.05	NO	36.84	1.001	8.84e3	3.97e5	1.32	5.5	1.78

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Compound name: 1,2,3,4,6,7,8-HpCDF

Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_4	2.50	1.04	NO	36.82	1.000	1.73e4	3.94e5	2.60	4.0	1.76
090212H1_5	10.0	1.05	NO	36.84	1.001	6.64e4	4.25e5	9.25	-7.5	1.56
090212H1_6	200	1.06	NO	36.83	1.000	1.78e6	5.26e5	200	-0.1	1.69
090212H1_7	1000	1.06	NO	36.83	1.000	1.17e7	6.89e5	1010	0.5	1.70

Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.48054
RRF SD: 0.0286004, Relative SD: 1.93175
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	50.0	1.05	NO	38.73	1.000	3.09e5	4.20e5	49.7	-0.5	1.47
090212H1_3	1.25	0.89	NO	38.75	1.001	6.11e3	3.26e5	1.27	1.3	1.50
090212H1_4	2.50	0.99	NO	38.73	1.000	1.20e4	3.25e5	2.49	-0.4	1.47
090212H1_5	10.0	1.07	NO	38.74	1.000	4.97e4	3.47e5	9.66	-3.4	1.43
090212H1_6	200	1.04	NO	38.75	1.000	1.34e6	4.47e5	202	0.9	1.49
090212H1_7	1000	1.03	NO	38.75	1.000	9.18e6	6.08e5	1020	2.1	1.51

Compound name: OCDF
Response Factor: 1.09622
RRF SD: 0.0644136, Relative SD: 5.87597
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.93	NO	41.88	1.001	4.66e5	8.78e5	96.7	-3.3	1.06
090212H1_3	2.50	0.90	NO	41.89	1.001	1.01e4	6.65e5	2.76	10.6	1.21
090212H1_4	5.00	0.84	NO	41.88	1.001	1.79e4	6.44e5	5.08	1.6	1.11
090212H1_5	20.0	0.95	NO	41.88	1.000	7.14e4	6.95e5	18.8	-6.2	1.03
090212H1_6	400	0.94	NO	41.90	1.000	2.10e6	9.52e5	402	0.4	1.10
090212H1_7	2000	0.92	NO	41.89	1.000	1.48e7	1.39e6	1940	-3.1	1.06

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Compound name: 13C-2,3,7,8-TCDD
Response Factor: 1.01489
RRF SD: 0.0275825, Relative SD: 2.71777
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	IW	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	100	0.77	NO	25.95	1.022	7.49e5	7.37e5	100	0.1	1.02
	090212H1_3	100	0.80	NO	25.97	1.022	5.94e5	6.03e5	97.2	-2.8	0.986
	090212H1_4	100	0.78	NO	25.97	1.022	6.33e5	6.33e5	98.5	-1.5	1.00
	090212H1_5	100	0.78	NO	25.97	1.022	6.64e5	6.68e5	97.9	-2.1	0.994
	090212H1_6	100	0.79	NO	25.97	1.022	7.81e5	7.54e5	102	2.0	1.04
	090212H1_7	100	0.79	NO	25.97	1.022	8.66e5	8.18e5	104	4.3	1.06

Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.827461
RRF SD: 0.0577323, Relative SD: 6.97704
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	IW	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	100	0.64	NO	30.64	1.207	6.02e5	7.37e5	98.7	-1.3	0.817
	090212H1_3	100	0.63	NO	30.65	1.207	4.83e5	6.03e5	96.8	-3.2	0.801
	090212H1_4	100	0.61	NO	30.65	1.207	4.97e5	6.33e5	94.9	-5.1	0.786
	090212H1_5	100	0.64	NO	30.65	1.207	5.23e5	6.68e5	94.6	-5.4	0.783
	090212H1_6	100	0.65	NO	30.65	1.207	6.35e5	7.54e5	102	1.7	0.842
	090212H1_7	100	0.64	NO	30.65	1.207	7.66e5	8.18e5	113	13.2	0.937

Compound name: 13C-1,2,3,4,7,8-HxCDD
Response Factor: 0.916247
RRF SD: 0.0122736, Relative SD: 1.33955
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	IW	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	100	1.26	NO	34.08	0.988	5.27e5	5.79e5	99.4	-0.6	0.911
	090212H1_3	100	1.26	NO	34.10	0.988	4.08e5	4.37e5	102	2.0	0.934

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Compound name: 13C-1,2,3,4,7,8-HxCDD

	Name	Std Conc	RA	Inv	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_4	100	1.26	NO	34.08	0.988	4.22e5	4.66e5	98.7	-1.3	0.904
	090212H1_5	100	1.24	NO	34.11	0.988	4.47e5	4.90e5	99.6	-0.4	0.913
	090212H1_6	100	1.25	NO	34.10	0.988	5.53e5	6.10e5	98.9	-1.1	0.907
	090212H1_7	100	1.25	NO	34.11	0.988	7.54e5	8.12e5	101	1.4	0.929

Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.920893
RRF SD: 0.0250009, Relative SD: 2.71486
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Inv	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	100	1.26	NO	34.19	0.991	5.42e5	5.79e5	102	1.7	0.936
	090212H1_3	100	1.23	NO	34.21	0.991	4.14e5	4.37e5	103	2.9	0.948
	090212H1_4	100	1.29	NO	34.21	0.991	4.20e5	4.66e5	97.7	-2.3	0.900
	090212H1_5	100	1.25	NO	34.22	0.991	4.60e5	4.90e5	102	2.1	0.940
	090212H1_6	100	1.27	NO	34.21	0.991	5.59e5	6.10e5	99.5	-0.5	0.916
	090212H1_7	100	1.23	NO	34.22	0.991	7.18e5	8.12e5	96.0	-4.0	0.884

Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.708388
RRF SD: 0.019948, Relative SD: 2.81596
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Inv	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	100	1.07	NO	38.16	1.106	4.13e5	5.79e5	101	0.7	0.713
	090212H1_3	100	1.09	NO	38.17	1.106	3.21e5	4.37e5	104	3.9	0.736
	090212H1_4	100	1.05	NO	38.17	1.106	3.21e5	4.66e5	97.1	-2.9	0.688
	090212H1_5	100	1.06	NO	38.17	1.106	3.36e5	4.90e5	96.8	-3.2	0.686
	090212H1_6	100	1.06	NO	38.18	1.106	4.29e5	6.10e5	99.3	-0.7	0.703
	090212H1_7	100	1.04	NO	38.17	1.106	5.88e5	8.12e5	102	2.2	0.724

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Compound name: 13C-OCDD
Response Factor: 0.502588
RRF SD: 0.0283515, Relative SD: 5.6411
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	IW	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_1	200	0.89	NO	41.62	1.206	5.87e5	5.79e5	202	0.9	0.507
2	090212H1_3	200	0.92	NO	41.65	1.207	4.40e5	4.37e5	200	0.2	0.504
3	090212H1_4	200	0.90	NO	41.63	1.206	4.37e5	4.66e5	187	-6.7	0.469
4	090212H1_5	200	0.89	NO	41.65	1.206	4.67e5	4.90e5	190	-5.0	0.477
5	090212H1_6	200	0.91	NO	41.67	1.207	6.21e5	6.10e5	203	1.4	0.510
6	090212H1_7	200	0.93	NO	41.65	1.206	8.92e5	8.12e5	219	9.3	0.549

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.976814
RRF SD: 0.0185774, Relative SD: 1.90184
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	IW	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_1	100	0.77	NO	25.16	0.991	1.07e6	1.11e6	98.8	-1.2	0.965
2	090212H1_3	100	0.79	NO	25.17	0.991	8.63e5	9.05e5	97.5	-2.5	0.953
3	090212H1_4	100	0.78	NO	25.17	0.991	9.06e5	9.34e5	99.3	-0.7	0.970
4	090212H1_5	100	0.79	NO	25.17	0.991	9.70e5	9.83e5	101	1.1	0.987
5	090212H1_6	100	0.77	NO	25.17	0.991	1.08e6	1.10e6	100	0.4	0.980
6	090212H1_7	100	0.76	NO	25.17	0.991	1.18e6	1.18e6	103	2.9	1.01

Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 0.896189
RRF SD: 0.0663113, Relative SD: 7.39926
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	IW	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_1	100	1.58	NO	29.41	1.158	9.82e5	1.11e6	98.4	-1.6	0.882
2	090212H1_3	100	1.57	NO	29.42	1.158	7.63e5	9.05e5	94.0	-6.0	0.842

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Compound name: 13C-1,2,3,7,8-PeCDF

Name	Std Conc	RA	IN	RT	RRT	Resp	S Resp	Conc	%Dev	RRF
090212H1_4	100	1.57	NO	29.42	1.158	7.80e5	9.34e5	93.1	-6.9	0.835
090212H1_5	100	1.58	NO	29.42	1.158	8.78e5	9.83e5	99.7	-0.3	0.894
090212H1_6	100	1.56	NO	29.42	1.158	9.96e5	1.10e6	101	1.0	0.905
090212H1_7	100	1.52	NO	29.43	1.159	1.20e6	1.18e6	114	13.7	1.02

Compound name: 13C-2,3,4,7,8-PeCDF
Response Factor: 0.899625
RRF SD: 0.0716088, Relative SD: 7.95986
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	S Resp	Conc	%Dev	RRF
090212H1_1	100	1.57	NO	30.34	1.195	9.65e5	1.11e6	96.3	-3.7	0.866
090212H1_3	100	1.54	NO	30.35	1.195	7.68e5	9.05e5	94.2	-5.8	0.848
090212H1_4	100	1.52	NO	30.35	1.195	7.94e5	9.34e5	94.5	-5.5	0.850
090212H1_5	100	1.59	NO	30.36	1.195	8.67e5	9.83e5	98.1	-1.9	0.882
090212H1_6	100	1.55	NO	30.35	1.195	1.01e6	1.10e6	102	1.6	0.914
090212H1_7	100	1.54	NO	30.36	1.195	1.22e6	1.18e6	115	15.3	1.04

Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.16919
RRF SD: 0.0331609, Relative SD: 2.83622
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	S Resp	Conc	%Dev	RRF
090212H1_1	100	0.54	NO	33.16	0.961	6.74e5	5.79e5	99.5	-0.5	1.16
090212H1_3	100	0.54	NO	33.17	0.961	5.28e5	4.37e5	104	3.5	1.21
090212H1_4	100	0.52	NO	33.17	0.961	5.45e5	4.66e5	99.9	-0.1	1.17
090212H1_5	100	0.54	NO	33.19	0.961	5.86e5	4.90e5	102	2.3	1.20
090212H1_6	100	0.53	NO	33.17	0.961	7.08e5	6.10e5	99.4	-0.6	1.16
090212H1_7	100	0.53	NO	33.19	0.961	9.05e5	8.12e5	95.3	-4.7	1.11

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Compound name: 13C-1,2,3,6,7,8-HxCDF
Response Factor: 1.51914
RRF SD: 0.0457416, Relative SD: 3.01103
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	100	0.55	NO	33.29	0.965	9.02e5	5.79e5	103	2.5	1.56
2	090212H1_3	100	0.52	NO	33.31	0.965	6.79e5	4.37e5	102	2.4	1.56
3	090212H1_4	100	0.53	NO	33.29	0.965	6.99e5	4.66e5	98.7	-1.3	1.50
4	090212H1_5	100	0.53	NO	33.32	0.965	7.51e5	4.90e5	101	1.0	1.53
5	090212H1_6	100	0.52	NO	33.31	0.965	9.34e5	6.10e5	101	0.8	1.53
6	090212H1_7	100	0.54	NO	33.31	0.965	1.17e6	8.12e5	94.6	-5.4	1.44

Compound name: 13C-2,3,4,6,7,8-HxCDF
Response Factor: 1.24921
RRF SD: 0.0473005, Relative SD: 3.78643
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	100	0.54	NO	33.91	0.983	7.19e5	5.79e5	99.3	-0.7	1.24
2	090212H1_3	100	0.53	NO	33.92	0.983	5.78e5	4.37e5	106	6.0	1.32
3	090212H1_4	100	0.55	NO	33.91	0.983	5.74e5	4.66e5	98.4	-1.6	1.23
4	090212H1_5	100	0.55	NO	33.93	0.983	6.20e5	4.90e5	101	1.3	1.27
5	090212H1_6	100	0.53	NO	33.92	0.983	7.64e5	6.10e5	100	0.4	1.25
6	090212H1_7	100	0.53	NO	33.93	0.983	9.59e5	8.12e5	94.5	-5.5	1.18

Compound name: 13C-1,2,3,7,8,9-HxCDF
Response Factor: 1.05297
RRF SD: 0.0198461, Relative SD: 1.88477
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	100	0.53	NO	34.90	1.011	6.05e5	5.79e5	99.2	-0.8	1.04
2	090212H1_3	100	0.52	NO	34.90	1.011	4.73e5	4.37e5	103	2.9	1.08

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Compound name: 13C-1,2,3,7,8,9-HxCDF

	Name	Std. Conc.	RA	IW	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_4	100	0.53	NO	34.90	1.011	4.79e5	4.66e5	97.6	-2.4	1.03
2	090212H1_5	100	0.54	NO	34.92	1.011	5.10e5	4.90e5	98.9	-1.1	1.04
3	090212H1_6	100	0.52	NO	34.90	1.011	6.50e5	6.10e5	101	1.2	1.07
4	090212H1_7	100	0.53	NO	34.91	1.011	8.57e5	8.12e5	100	0.2	1.05

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 0.868264
RRF SD: 0.0231201, Relative SD: 2.6628
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	IW	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_1	100	0.46	NO	36.80	1.066	5.07e5	5.79e5	101	0.8	0.875
2	090212H1_3	100	0.44	NO	36.81	1.066	3.97e5	4.37e5	105	4.7	0.909
3	090212H1_4	100	0.44	NO	36.81	1.066	3.94e5	4.66e5	97.3	-2.7	0.845
4	090212H1_5	100	0.44	NO	36.82	1.066	4.25e5	4.90e5	99.9	-0.1	0.868
5	090212H1_6	100	0.46	NO	36.82	1.066	5.26e5	6.10e5	99.5	-0.5	0.864
6	090212H1_7	100	0.45	NO	36.82	1.066	6.89e5	8.12e5	97.7	-2.3	0.849

Compound name: 13C-1,2,3,4,7,8,9-HpCDF
Response Factor: 0.726514
RRF SD: 0.0207066, Relative SD: 2.85014
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	IW	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_1	100	0.46	NO	38.72	1.122	4.20e5	5.79e5	99.8	-0.2	0.725
2	090212H1_3	100	0.45	NO	38.73	1.122	3.26e5	4.37e5	103	2.8	0.747
3	090212H1_4	100	0.45	NO	38.72	1.122	3.25e5	4.66e5	95.9	-4.1	0.696
4	090212H1_5	100	0.44	NO	38.73	1.122	3.47e5	4.90e5	97.6	-2.4	0.709
5	090212H1_6	100	0.45	NO	38.74	1.122	4.47e5	6.10e5	101	1.0	0.734
6	090212H1_7	100	0.44	NO	38.74	1.122	6.08e5	8.12e5	103	3.0	0.748

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Compound name: 13C-OCDF
Response Factor: 0.759527
RRF SD: 0.058777, Relative SD: 7.73863
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	IQ	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	200	0.91	NO	41.85	1.213	8.78e5	5.79e5	200	-0.2	0.758
	090212H1_3	200	0.88	NO	41.86	1.213	6.65e5	4.37e5	200	0.2	0.761
	090212H1_4	200	0.90	NO	41.85	1.213	6.44e5	4.66e5	182	-9.1	0.690
	090212H1_5	200	0.90	NO	41.86	1.213	6.95e5	4.90e5	187	-6.6	0.710
	090212H1_6	200	0.90	NO	41.89	1.213	9.52e5	6.10e5	206	2.8	0.781
	090212H1_7	200	0.90	NO	41.88	1.213	1.39e6	8.12e5	226	12.8	0.857

Compound name: 37Cl-2,3,7,8-TCDD
Response Factor: 0.668396
RRF SD: 0.0327668, Relative SD: 4.90231
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	IQ	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	10.0			25.98	1.023	4.66e4	7.37e5	9.46	-5.4	0.632
	090212H1_3	0.250			25.97	1.022	1.08e3	6.03e5	0.269	7.5	0.718
	090212H1_4	0.500			25.98	1.023	2.17e3	6.33e5	0.512	2.4	0.685
	090212H1_5	2.00			25.98	1.023	8.69e3	6.68e5	1.95	-2.7	0.650
	090212H1_6	40.0			25.98	1.023	1.93e5	7.54e5	38.4	-4.1	0.641
	090212H1_7	200			25.98	1.023	1.12e6	8.18e5	205	2.3	0.684

Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	IQ	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	100	0.81	NO	25.39	0.000	7.37e5	7.37e5	100	0.0	1.00
	090212H1_3	100	0.79	NO	25.40	0.000	6.03e5	6.03e5	100	0.0	1.00

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Compound name: 13C-1,2,3,4-TCDD

	Name	Std. Conc.	RA	QV	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_4	100	0.79	NO	25.40	0.000	6.33e5	6.33e5	100	0.0	1.00
2	090212H1_5	100	0.78	NO	25.40	0.000	6.68e5	6.68e5	100	0.0	1.00
3	090212H1_6	100	0.78	NO	25.40	0.000	7.54e5	7.54e5	100	0.0	1.00
4	090212H1_7	100	0.79	NO	25.40	0.000	8.18e5	8.18e5	100	0.0	1.00

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 4.96507e-017, Relative SD: 4.96507e-015
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	QV	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_1	100	0.78	NO	23.95	0.000	1.11e6	1.11e6	100	0.0	1.00
2	090212H1_3	100	0.77	NO	23.95	0.000	9.05e5	9.05e5	100	0.0	1.00
3	090212H1_4	100	0.77	NO	23.95	0.000	9.34e5	9.34e5	100	0.0	1.00
4	090212H1_5	100	0.76	NO	23.97	0.000	9.83e5	9.83e5	100	0.0	1.00
5	090212H1_6	100	0.77	NO	23.97	0.000	1.10e6	1.10e6	100	-0.0	1.00
6	090212H1_7	100	0.78	NO	23.97	0.000	1.18e6	1.18e6	100	0.0	1.00

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std. Conc.	RA	QV	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
1	090212H1_1	100	1.22	NO	34.50	0.000	5.79e5	5.79e5	100	0.0	1.00
2	090212H1_3	100	1.23	NO	34.51	0.000	4.37e5	4.37e5	100	0.0	1.00
3	090212H1_4	100	1.25	NO	34.51	0.000	4.66e5	4.66e5	100	0.0	1.00
4	090212H1_5	100	1.18	NO	34.52	0.000	4.90e5	4.90e5	100	0.0	1.00
5	090212H1_6	100	1.26	NO	34.52	0.000	6.10e5	6.10e5	100	0.0	1.00
6	090212H1_7	100	1.22	NO	34.52	0.000	8.12e5	8.12e5	100	0.0	1.00

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Compound name: Total Tetra-Dioxins
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	10.0						7.49e5	60.1		
2	090212H1_3	0.250						5.94e5	0.240		
3	090212H1_4	0.500						6.33e5	0.536		
4	090212H1_5	2.00						6.64e5	1.95		
5	090212H1_6	40.0						7.81e5	39.5		
6	090212H1_7	200						8.66e5	206		

Compound name: Total Penta-Dioxins
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0						6.02e5	159		
2	090212H1_3	1.25						4.83e5	1.30		
3	090212H1_4	2.50						4.97e5	2.53		
4	090212H1_5	10.0						5.23e5	9.77		
5	090212H1_6	200						6.35e5	200		
6	090212H1_7	1000						7.66e5	1020		

Compound name: Total Hexa-Dioxins
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0						0.00e0	191		
2	090212H1_3	1.25						0.00e0	3.85		

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Compound name: Total Hexa-Dioxins

	Name	Std Conc	RA	Dev	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_4	2.50						0.00e0	7.81		
	090212H1_5	10.0						0.00e0	28.5		
	090212H1_6	200						0.00e0	615		
	090212H1_7	1000						0.00e0	3010		

Compound name: Total Hepta-Dioxins
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Dev	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	50.0						4.13e5	127		
2	090212H1_3	1.25						3.21e5	1.38		
3	090212H1_4	2.50						3.21e5	2.60		
4	090212H1_5	10.0						3.36e5	9.55		
5	090212H1_6	200						4.29e5	203		
6	090212H1_7	1000						5.88e5	1010		

Compound name: Total Tetra-Furans
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Dev	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	10.0						1.07e6	35.3		
2	090212H1_3	0.250						8.63e5	0.269		
3	090212H1_4	0.500						9.06e5	0.506		
4	090212H1_5	2.00						9.70e5	1.88		
5	090212H1_6	40.0						1.08e6	40.6		
6	090212H1_7	200						1.18e6	209		

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Compound name: 1st Func. Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0					0.00e0	46.2		
2	090212H1_3	1.25					0.00e0	0.00241		
3	090212H1_4	2.50					0.00e0	0.0270		
4	090212H1_5	10.0					0.00e0	0.0198		
5	090212H1_6	200					0.00e0	0.00694		
6	090212H1_7	1000					0.00e0	0.00731		

Compound name: Total Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0					0.00e0	147		
2	090212H1_3	1.25					0.00e0	2.51		
3	090212H1_4	2.50					0.00e0	5.10		
4	090212H1_5	10.0					0.00e0	19.1		
5	090212H1_6	200					0.00e0	412		
6	090212H1_7	1000					0.00e0	2040		

Compound name: Total Hexa-Furans
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	50.0					0.00e0	250		
2	090212H1_3	1.25					0.00e0	5.09		

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Compound name: Total Hexa-Furans

Name	Std Conc	RA	DV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50						0.00e0	10.2		
090212H1_5	10.0						0.00e0	38.9		
090212H1_6	200						0.00e0	804		
090212H1_7	1000						0.00e0	4020		

Compound name: Total Hepta-Furans
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	DV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0						0.00e0	98.6		
090212H1_3	1.25						0.00e0	2.59		
090212H1_4	2.50						0.00e0	5.09		
090212H1_5	10.0						0.00e0	18.9		
090212H1_6	200						0.00e0	403		
090212H1_7	1000						0.00e0	2030		

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	DV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

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Compound name: PFK2
No Calibration
Response type: External Std, Area
Curve type: RF

	Name	Std Conc	RA	%Dev	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	1.00									
2	090212H1_3	1.00									
3	090212H1_4	1.00									
4	090212H1_5	1.00									
5	090212H1_6	1.00									
6	090212H1_7	1.00									

Compound name: PFK3
No Calibration
Response type: External Std, Area
Curve type: RF

	Name	Std Conc	RA	%Dev	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	1.00									
2	090212H1_3	1.00									
3	090212H1_4	1.00									
4	090212H1_5	1.00									
5	090212H1_6	1.00									
6	090212H1_7	1.00									

Compound name: PFK4
No Calibration
Response type: External Std, Area
Curve type: RF

	Name	Std Conc	RA	%Dev	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	1.00									
2	090212H1_3	1.00									
3	090212H1_4	1.00									
4	090212H1_5	1.00									

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Compound name: PFK4

Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: PFK5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RA	IV	RT	RRT	Resp.	IS Resp.	Conc.	% Dev.	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE2
No Calibration
Response type: External Std, Area
Curve type: RF

	Name	Std Conc	RA	Area	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	1.00									
	090212H1_3	1.00									
	090212H1_4	1.00									
	090212H1_5	1.00									
	090212H1_6	1.00									
	090212H1_7	1.00									

Compound name: DPE3
No Calibration
Response type: External Std, Area
Curve type: RF

	Name	Std Conc	RA	Area	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	1.00									
2	090212H1_3	1.00									
3	090212H1_4	1.00									
4	090212H1_5	1.00									
5	090212H1_6	1.00									
6	090212H1_7	1.00									

Compound name: DPE4
No Calibration
Response type: External Std, Area
Curve type: RF

	Name	Std Conc	RA	Area	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
1	090212H1_1	1.00									
2	090212H1_3	1.00									
3	090212H1_4	1.00									
4	090212H1_5	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE4

Name	Std Conc	RA	RV	RT	RRT	Resp	S Resp	Conc	Dev	RRF
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RV	RT	RRT	Resp	S Resp	Conc	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE6
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RV	RT	RRT	Resp	S Resp	Conc	Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	NO	9.78	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	48.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	48.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	48.1	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	48.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.91	0.76-1.02	NO	95.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	9.75	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	48.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	49.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	48.8	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	49.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.93	0.76-1.02	NO	96.7	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	100	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	98.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	99.4	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	102	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	98.8	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.5	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	NO	103	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	99.2	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	101	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	99.8	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	200	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.46	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

		RT
1	1,3,6,8-TCDD (First)	22.58
2	1,2,8,9-TCDD (Last)	26.86
3	1,2,4,7,9-PeCDD (First)	28.51
4	1,2,3,8,9-PeCDD (Last)	31.03
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.01
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.28
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.91
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

2/13/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090212H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090212H1_1

Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	Name	Resp	RA	QY	RF	WO	RT	RRT	Conc	%Rec	SD	EMPC
1	2,3,7,8-TCDD	7.90e4	0.82	NO	1.08	1.000	25.98	1.001	9.7764	97.8	0.0390	9.7764
2	1,2,3,7,8-PeCDD	3.03e5	0.63	NO	1.03	1.000	30.65	1.000	48.635	97.3	0.124	48.635
3	1,2,3,4,7,8-HxCDD	2.54e5	1.26	NO	1.00	1.000	34.10	1.000	48.035	96.1	0.187	48.035
4	1,2,3,6,7,8-HxCDD	2.90e5	1.27	NO	1.13	1.000	34.21	1.000	47.595	95.2	0.184	47.595
5	1,2,3,7,8,9-HxCDD	2.83e5	1.28	NO	1.10	1.000	34.51	1.009	48.051	96.1	0.180	48.051
6	1,2,3,4,6,7,8-HpCDD	2.11e5	1.03	NO	1.06	1.000	38.17	1.000	47.989	96.0	0.341	47.989
7	OCDD	3.30e5	0.91	NO	1.18	1.000	41.63	1.000	95.331	95.3	0.179	95.331
8	2,3,7,8-TCDF	1.14e5	0.78	NO	1.09	1.000	25.19	1.001	9.7515	97.5	0.0409	9.7515
9	1,2,3,7,8-PeCDF	5.65e5	1.61	NO	1.16	1.000	29.42	1.000	49.643	99.3	0.123	49.643
10	2,3,4,7,8-PeCDF	5.35e5	1.56	NO	1.12	1.000	30.35	1.000	49.591	99.2	0.120	49.591
11	1,2,3,4,7,8-HxCDF	4.59e5	1.27	NO	1.41	1.000	33.19	1.001	48.331	96.7	0.150	48.331
12	1,2,3,6,7,8-HxCDF	5.49e5	1.25	NO	1.22	1.000	33.31	1.000	49.809	99.6	0.137	49.809
13	2,3,4,6,7,8-HxCDF	4.53e5	1.29	NO	1.28	1.000	33.92	1.000	49.224	98.4	0.172	49.224
14	1,2,3,7,8,9-HxCDF	3.76e5	1.25	NO	1.26	1.000	34.91	1.000	49.483	99.0	0.252	49.483
15	1,2,3,4,6,7,8-HpCDF	4.18e5	1.05	NO	1.69	1.000	36.81	1.000	48.842	97.7	0.180	48.842
16	1,2,3,4,7,8,9-HpCDF	3.09e5	1.05	NO	1.48	1.000	38.73	1.000	49.738	99.5	0.251	49.738
17	OCDF	4.66e5	0.93	NO	1.10	1.000	41.88	1.001	96.743	96.7	0.177	96.743
18	13C-2,3,7,8-TCDD	7.49e5	0.77	NO	1.01	1.000	25.95	1.022	100.15	100	0.141	
19	13C-1,2,3,7,8-PeCDD	6.02e5	0.64	NO	0.827	1.000	30.64	1.207	98.735	98.7	0.269	
20	13C-1,2,3,4,7,8-HxCDD	5.27e5	1.26	NO	0.916	1.000	34.08	0.988	99.432	99.4	0.335	
21	13C-1,2,3,6,7,8-HxCDD	5.42e5	1.26	NO	0.921	1.000	34.19	0.991	101.67	102	0.334	
22	13C-1,2,3,4,6,7,8-HpCDD	4.13e5	1.07	NO	0.708	1.000	38.16	1.106	100.67	101	0.425	
23	13C-OCDD	5.87e5	0.89	NO	0.503	1.000	41.62	1.206	201.71	101	0.424	
24	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	0.977	1.000	25.16	0.991	98.780	98.8	0.129	
25	13C-1,2,3,7,8-PeCDF	9.62e5	1.58	NO	0.896	1.000	29.41	1.158	98.441	98.4	0.304	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.57	NO	0.900	1.000	30.34	1.195	96.306	96.3	0.303	
27	13C-1,2,3,4,7,8-HxCDF	6.74e5	0.54	NO	1.17	1.000	33.16	0.961	99.512	99.5	0.469	
28	13C-1,2,3,6,7,8-HxCDF	9.02e5	0.55	NO	1.52	1.000	33.29	0.965	102.54	103	0.361	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.54	NO	1.25	1.000	33.91	0.983	99.345	99.3	0.439	
30	13C-1,2,3,7,8,9-HxCDF	6.05e5	0.53	NO	1.05	1.000	34.90	1.011	99.208	99.2	0.521	

2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	Name	Resp	RA	Int	RRF	Conc	RT	RRT	Conc	Rec	IC	MSC
31	13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.46	NO	0.868	1.000	36.80	1.066	100.83	101	0.602	
32	13C-1,2,3,4,7,8,9-HpCDF	4.20e5	0.46	NO	0.727	1.000	38.72	1.122	99.796	99.8	0.719	
33	13C-OCDF	8.78e5	0.91	NO	0.760	1.000	41.85	1.213	199.65	99.8	0.296	
34	37Cl-2,3,7,8-TCDD	4.66e4			0.668	1.000	25.98	1.023	9.4592	94.6	0.0533	
35	13C-1,2,3,4-TCDD	7.37e5	0.81	NO	1.00	1.000	25.39	0.000	100.00	100	0.144	
36	13C-1,2,3,4-TCDF	1.11e6	0.78	NO	1.00	1.000	23.95	0.000	100.00	100	0.126	
37	13C-1,2,3,7,8,9-HxCDD	5.79e5	1.22	NO	1.00	1.000	34.50	0.000	100.00	100	0.307	

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 7:21:09 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:21:55 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Compound name: 1,3,6,8-TCDD (First)

	Name	ID	Acq Date	Acq Time
	090212H1_1	ST090212H1-1 1613 CS3 080917I	12-Feb-09	11:10:11
	090212H1_2	solvent blank	12-Feb-09	11:59:18
	090212H1_3	ST090212H1-2 1613 CS0 080917F	12-Feb-09	12:49:08
	090212H1_4	ST090212H1-3 1613 CS1 080917CG	12-Feb-09	13:38:34
	090212H1_5	ST090212H1-4 1613 CS2 080917H	12-Feb-09	14:28:11
	090212H1_6	ST090212H1-5 1613 CS4 080917J	12-Feb-09	15:17:39
	090212H1_7	ST090212H1-6 1613 CS5 080917K	12-Feb-09	16:07:03
	090212H1_8	solvent blank	12-Feb-09	16:56:26
	090212H1_9	SSS090212H1-1 Sec Src Std L070913A	12-Feb-09	17:45:49

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:13 Pacific Standard Time

M 292.9824 R 13157

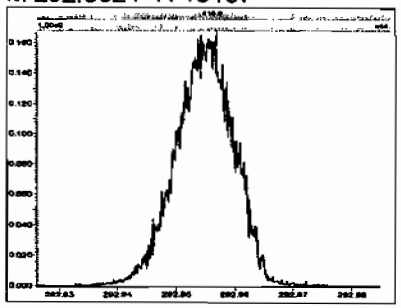

M 304.9824 R 14289

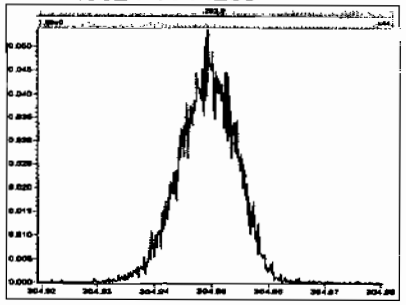

M 318.9792 R 13655

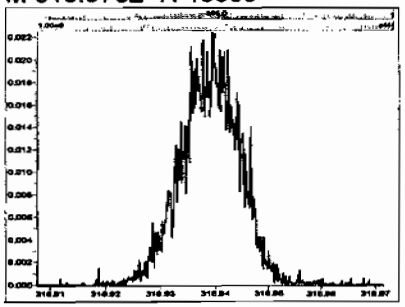

M 330.9792 R 12819

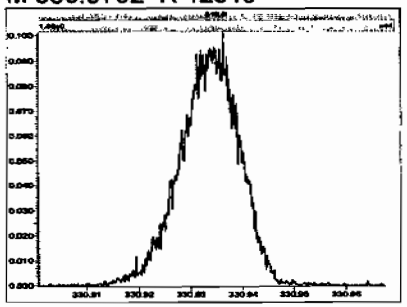

M 342.9792 R 13085

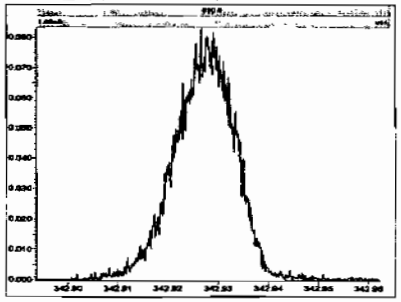

M 354.9792 R 13440

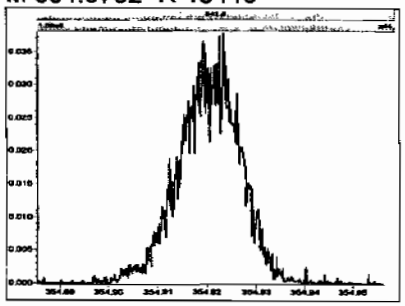

M 366.9792 R 11572

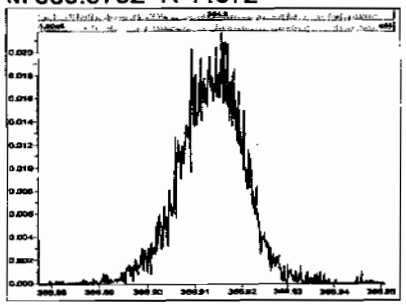

M 380.9760 R 13365

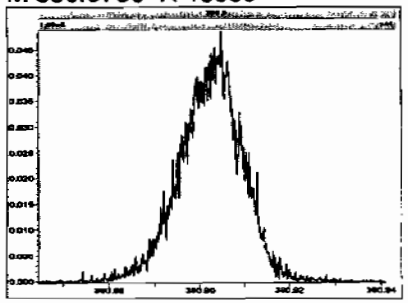

M 392.9760 R 13660

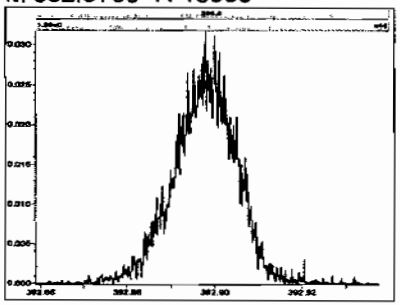

M 404.9760 R 13160

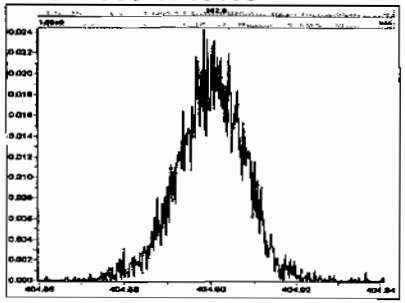

M 416.9760 R 15061

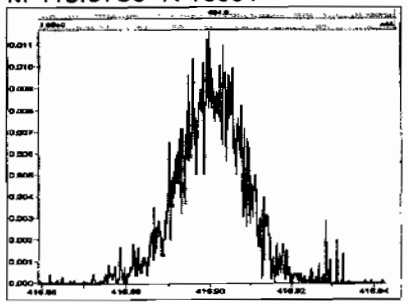

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:36 Pacific Standard Time

M 330.9792 R 13661

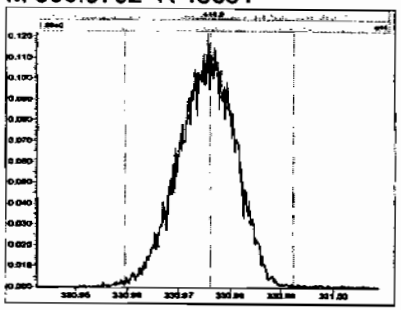

M 342.9792 R 12688

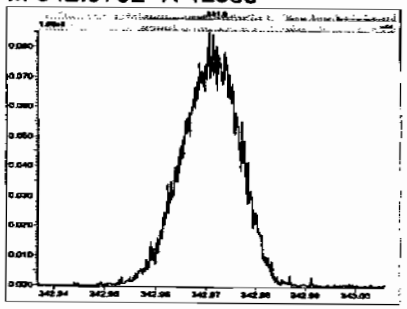

M 354.9792 R 13813

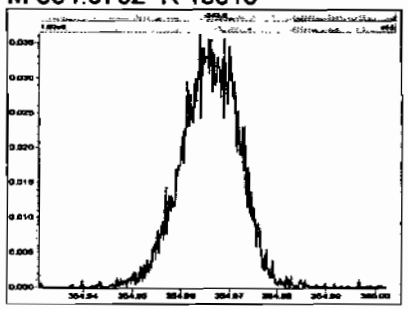

M 366.9792 R 13735

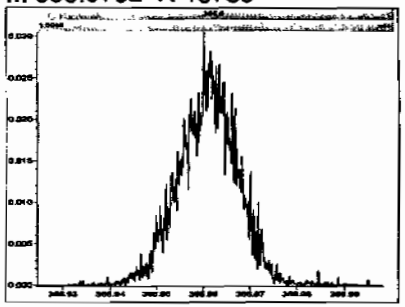

M 380.9760 R 13225

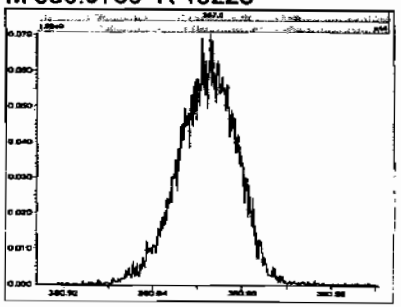

M 392.9760 R 13090

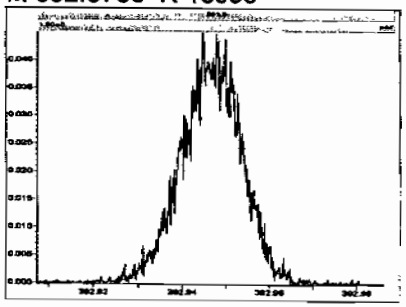

M 404.9760 R 13368

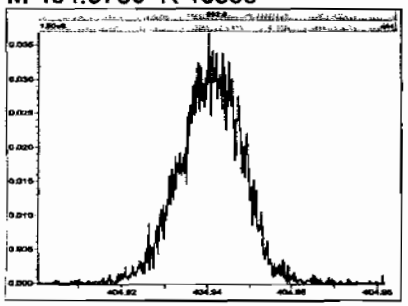

M 416.9760 R 13510

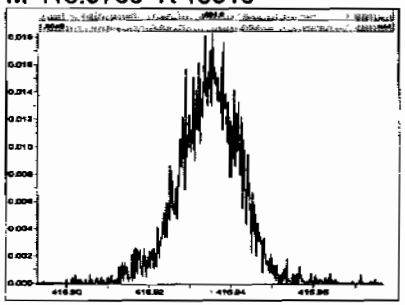

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:57 Pacific Standard Time

M 366.9792 R 13441

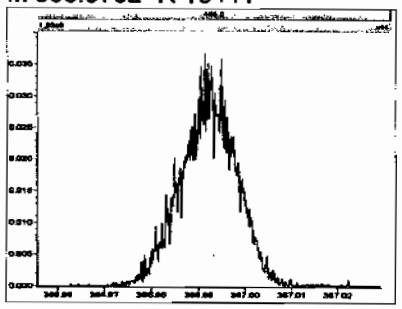

M 380.9760 R 13367

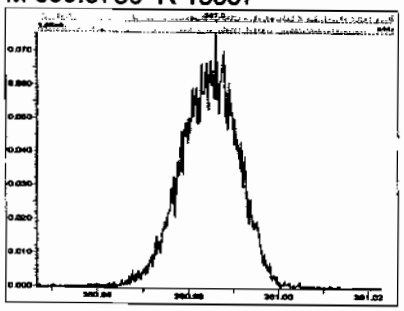

M 392.9760 R 13733

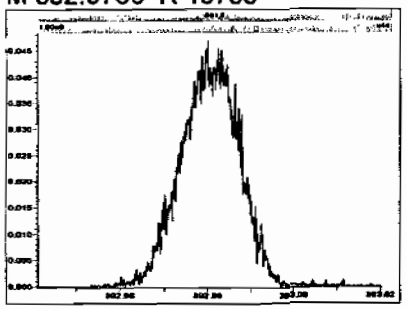

M 404.9760 R 12136

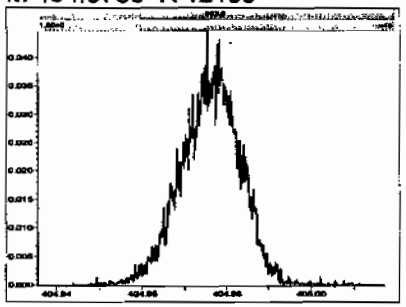

M 416.9760 R 13887

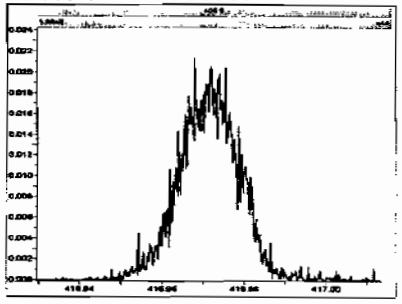

M 430.9728 R 13515

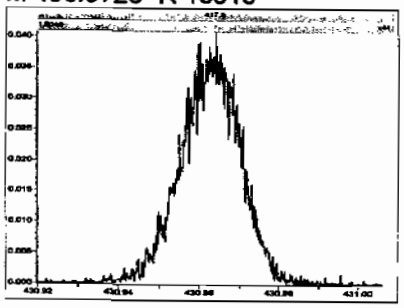

M 442.9728 R 14124

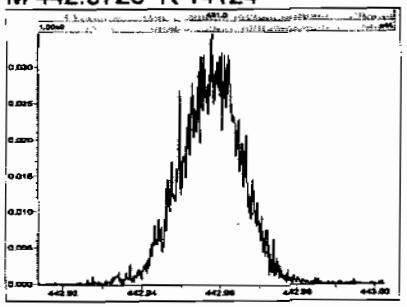

M 454.9728 R 13225

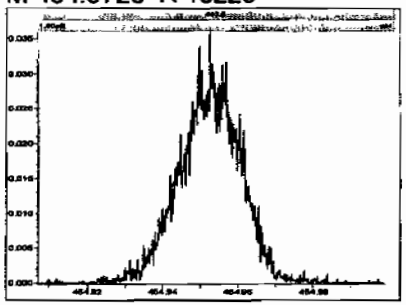

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:16 Pacific Standard Time

M 404.9760 R 13299

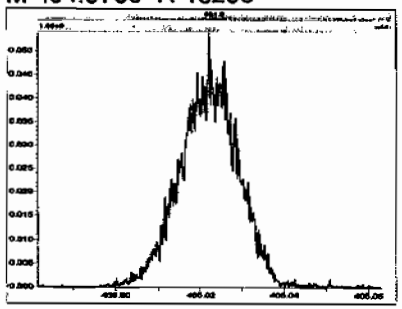

M 416.9760 R 14124

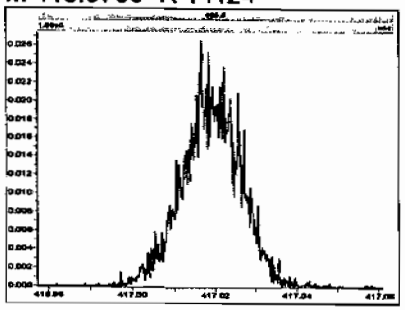

M 430.9728 R 13019

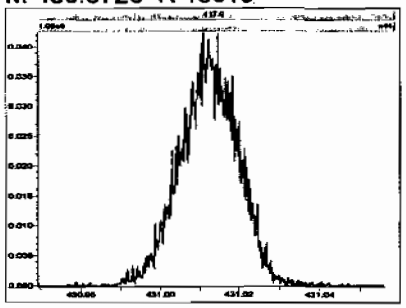

M 442.9728 R 13022

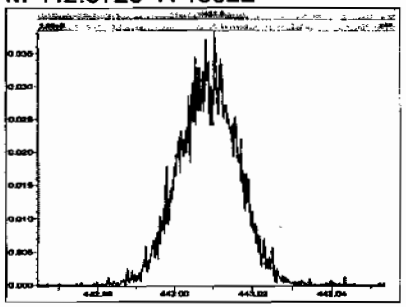

M 454.9728 R 12953

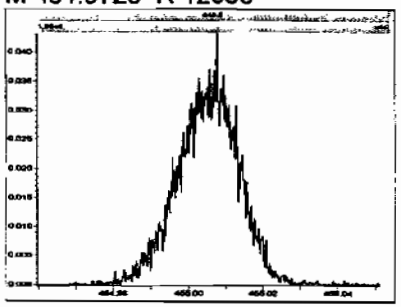

M 466.9728 R 12692

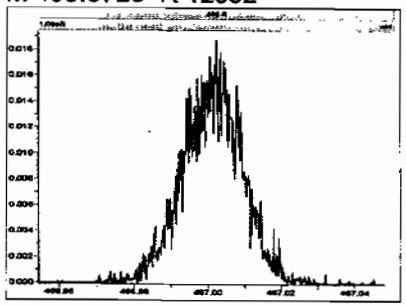

M 480.9696 R 14882

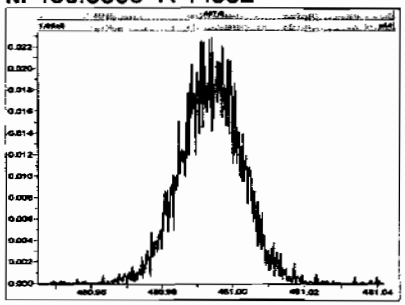

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:41 Pacific Standard Time

M 430.9728 R 12434

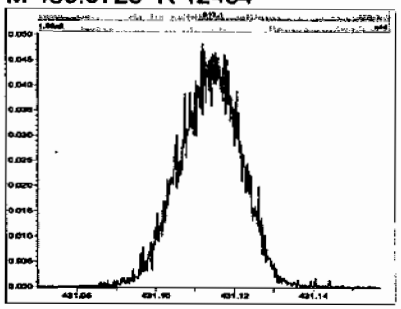

M 442.9728 R 12886

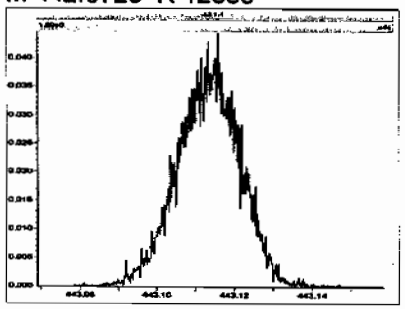

M 454.9728 R 12021

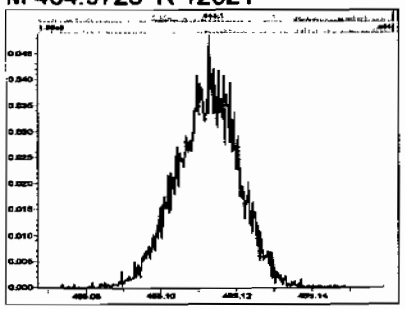

M 466.9728 R 12954

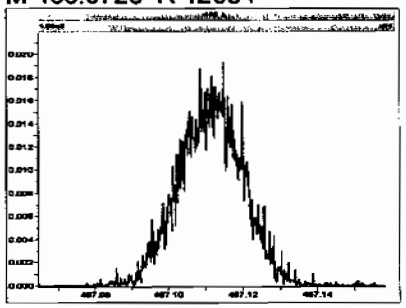

M 480.9696 R 11520

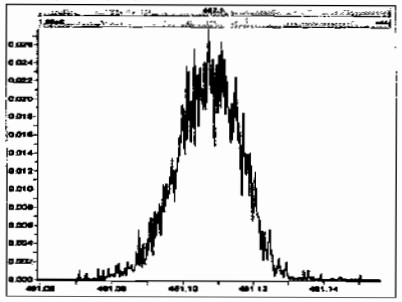

M 492.9696 R 12757

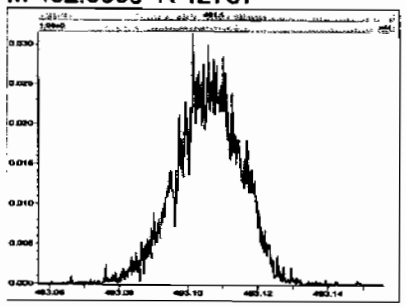

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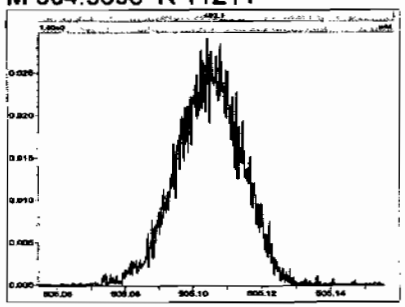

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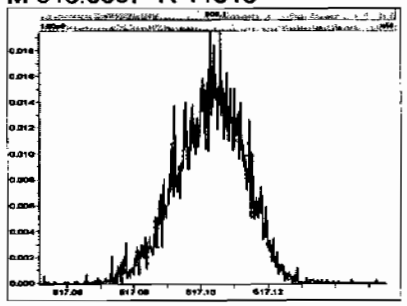

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

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Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

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Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

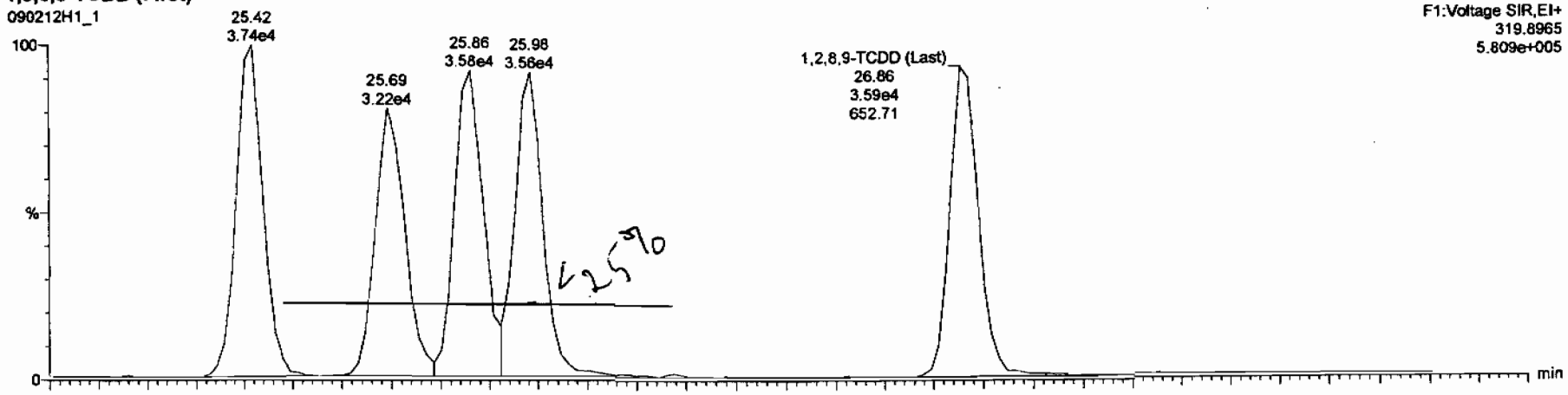

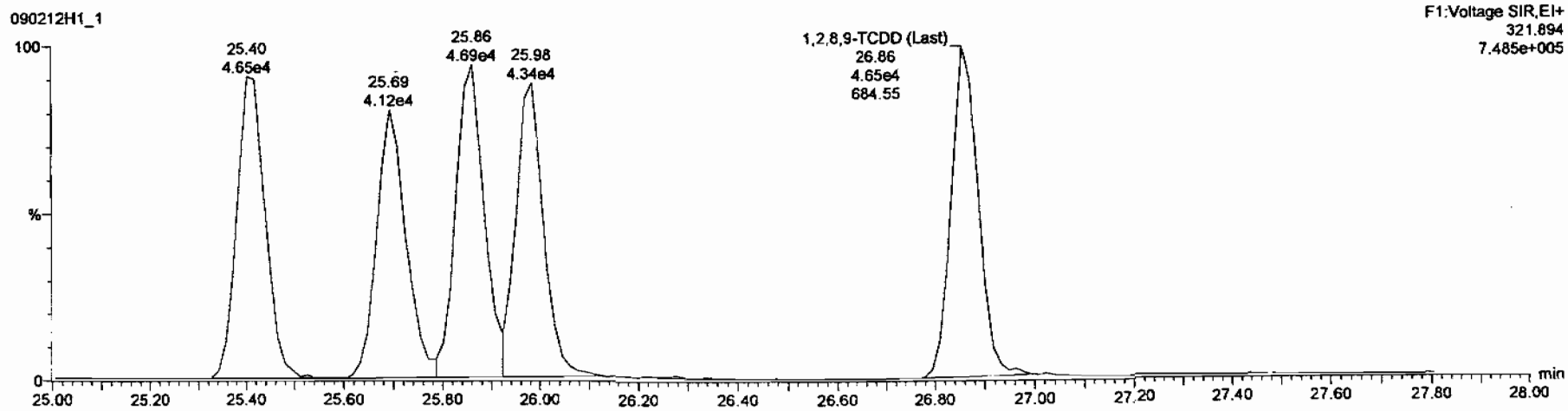

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

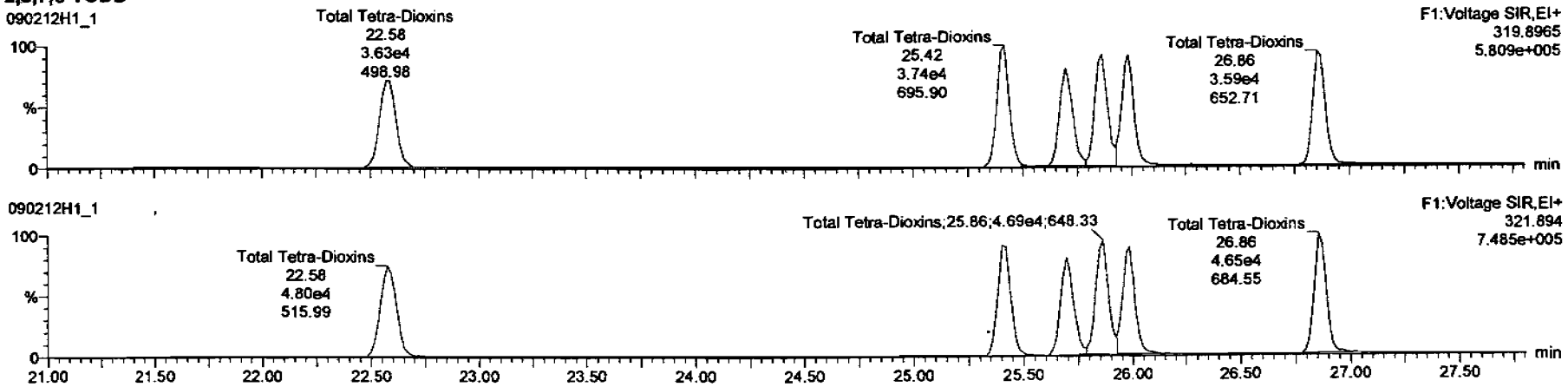

13C-2,3,7,8-TCDD

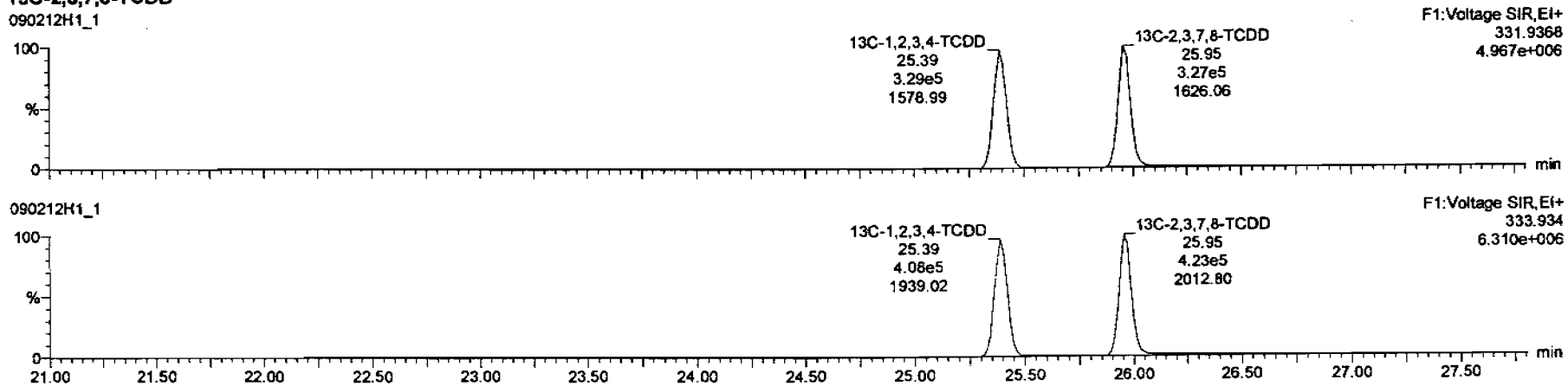

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37Cl-2,3,7,8-TCDD

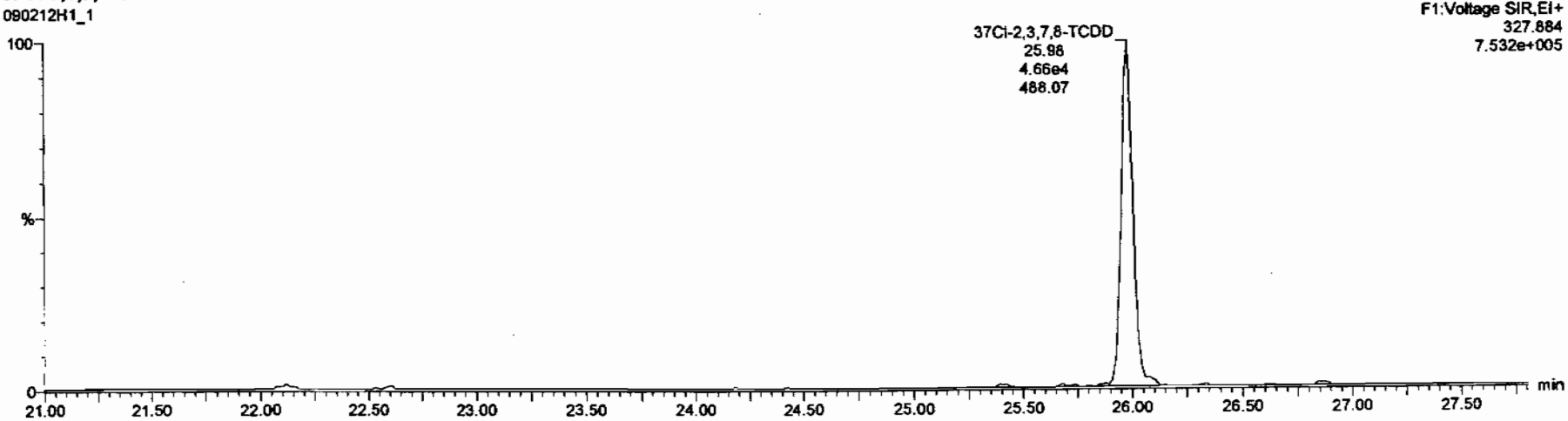

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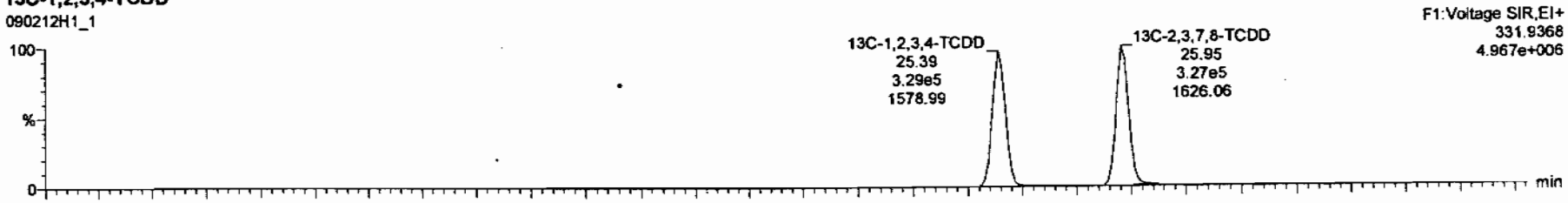

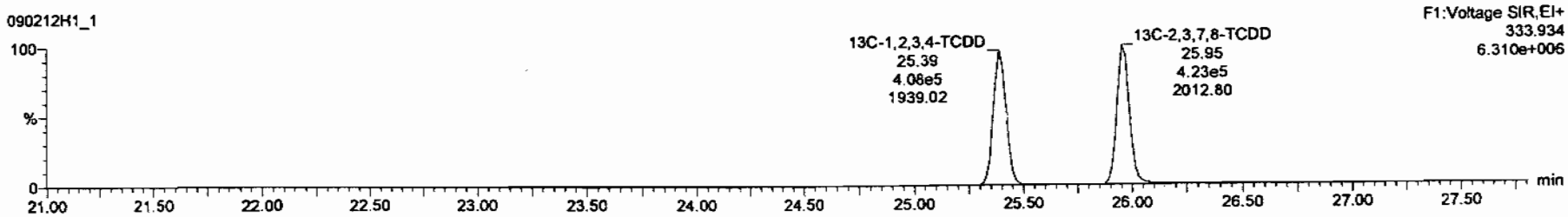

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1,2,3,7,8-PeCDD

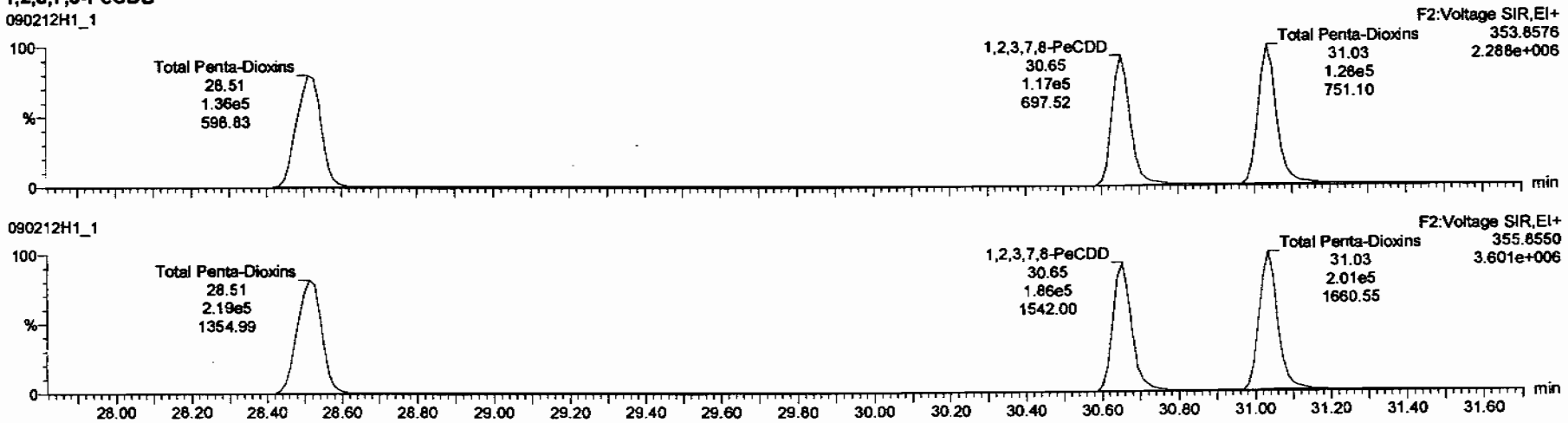

13C-1,2,3,7,8-PeCDD

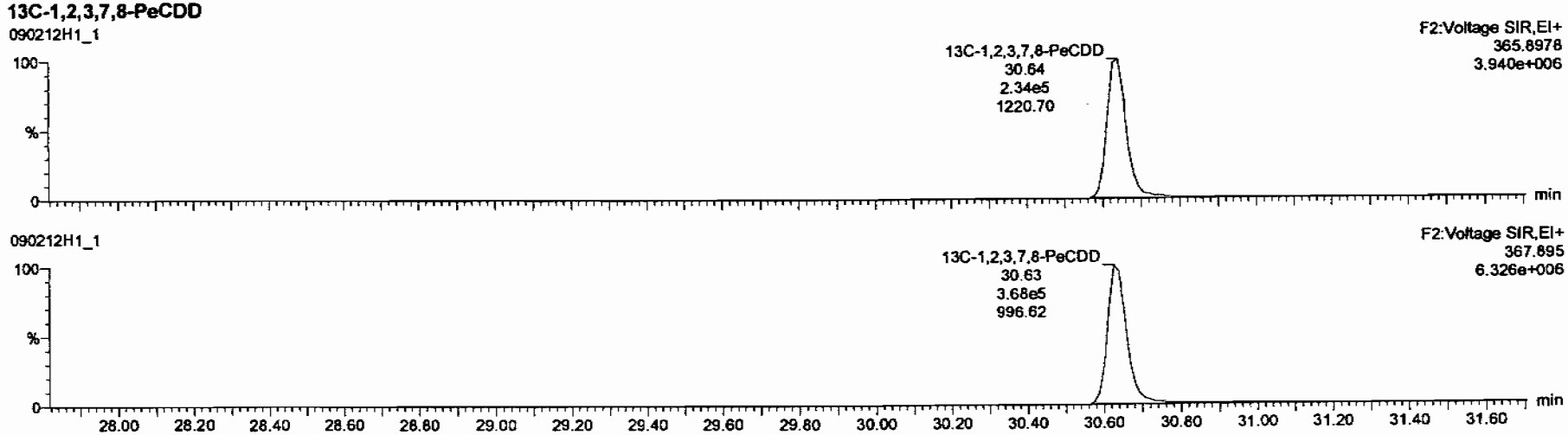

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1,2,3,4,7,8-HxCDD

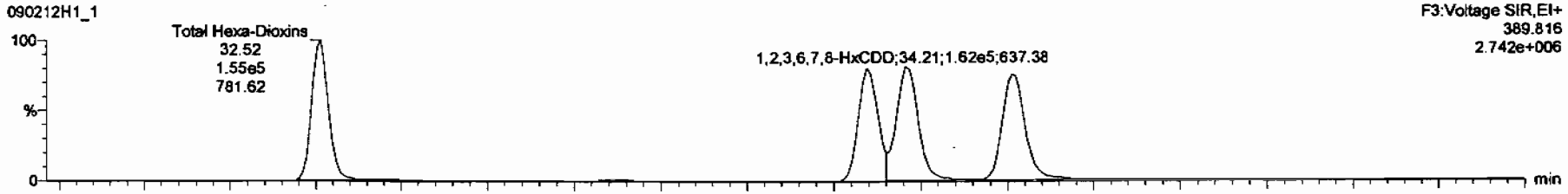

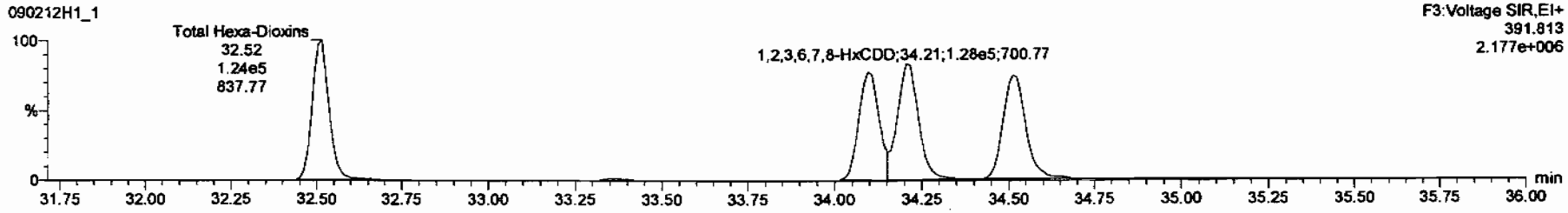

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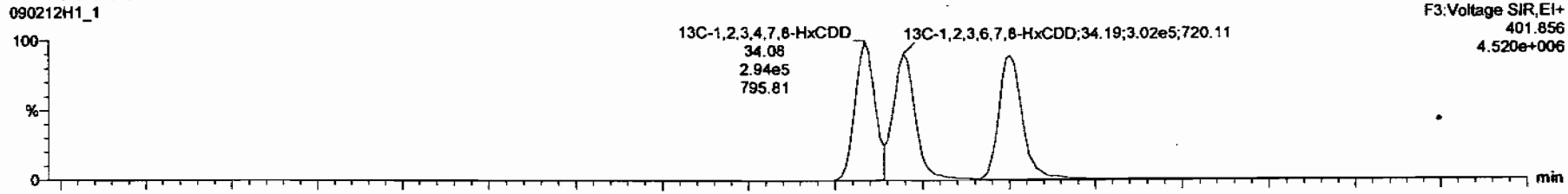

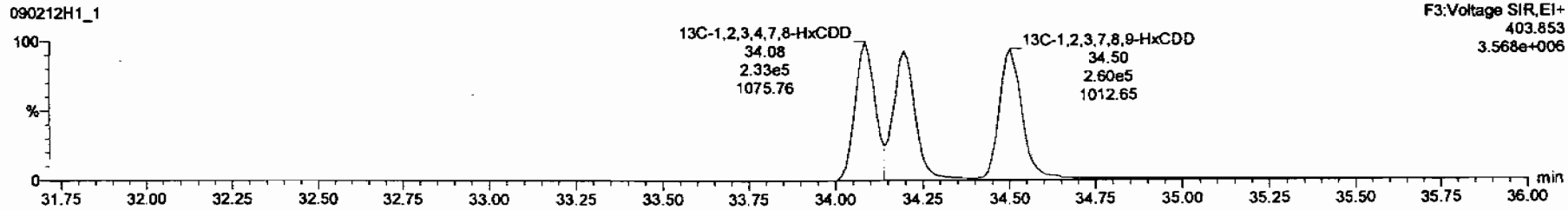

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1,2,3,4,6,7,8-HpCDD

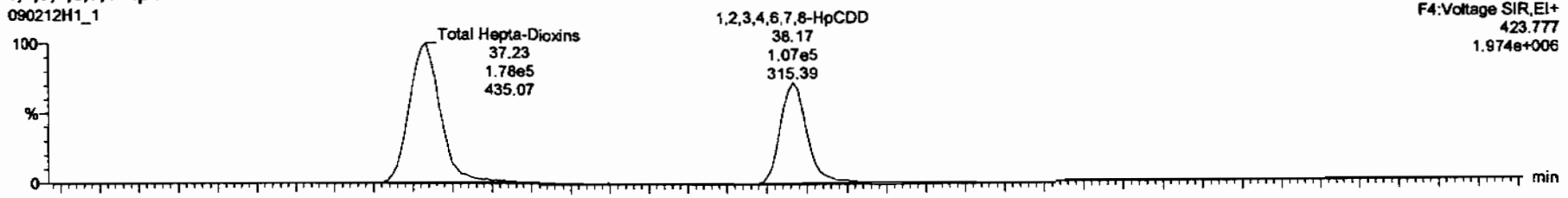

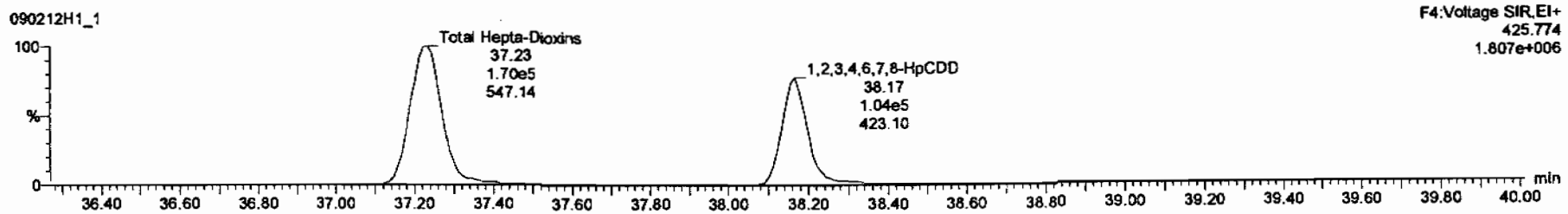

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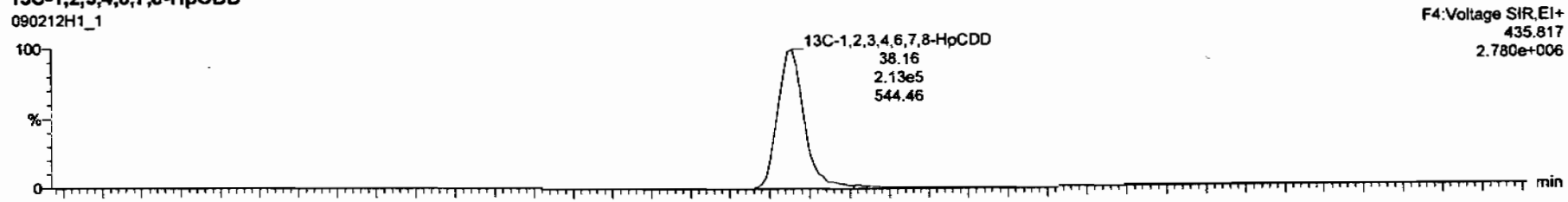

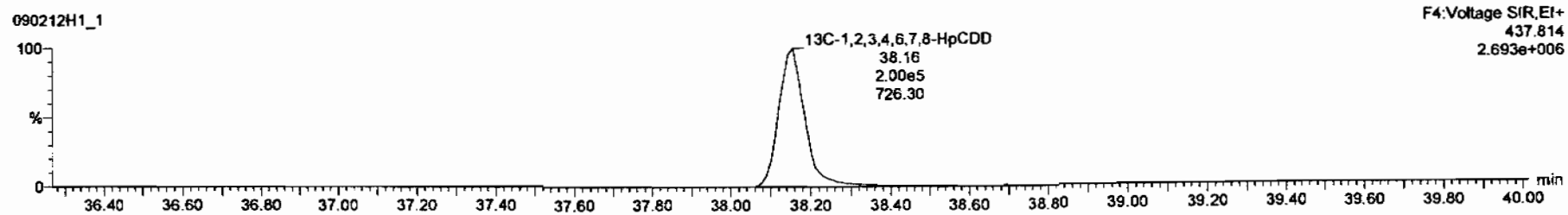

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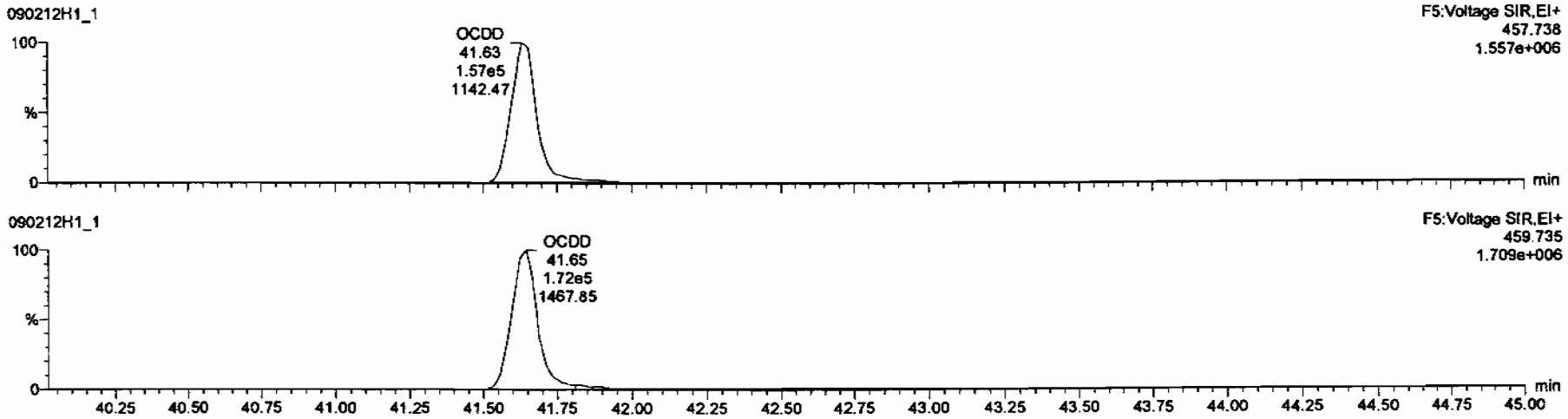

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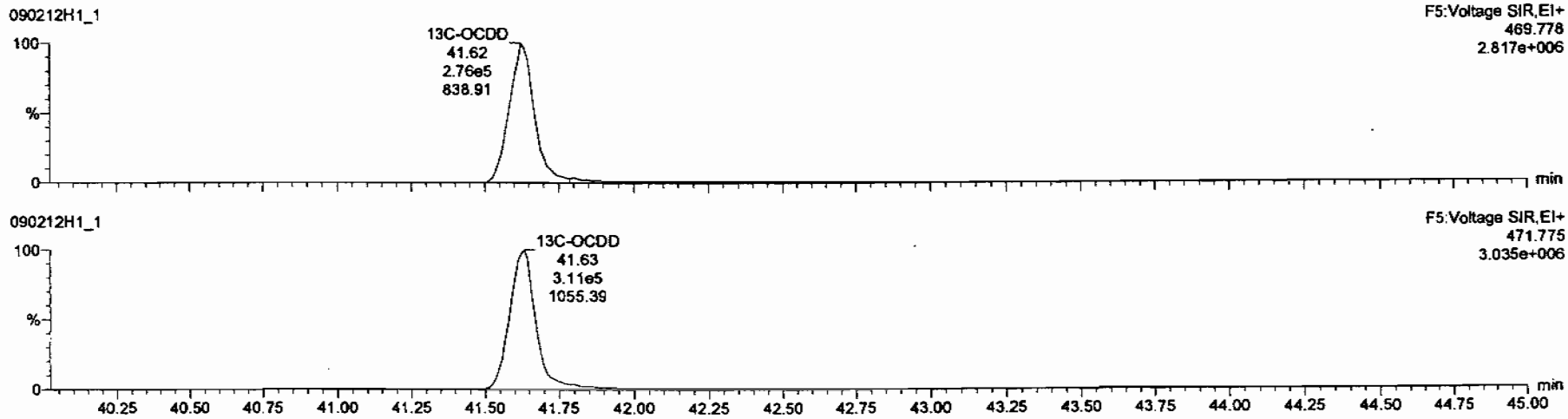

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2,3,7,8-TCDF

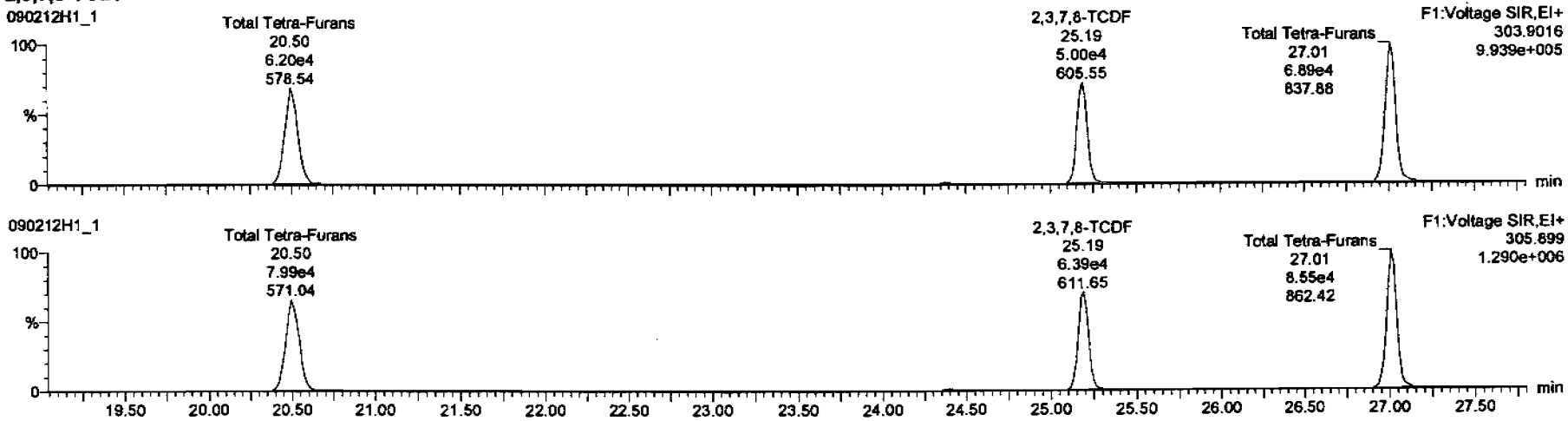

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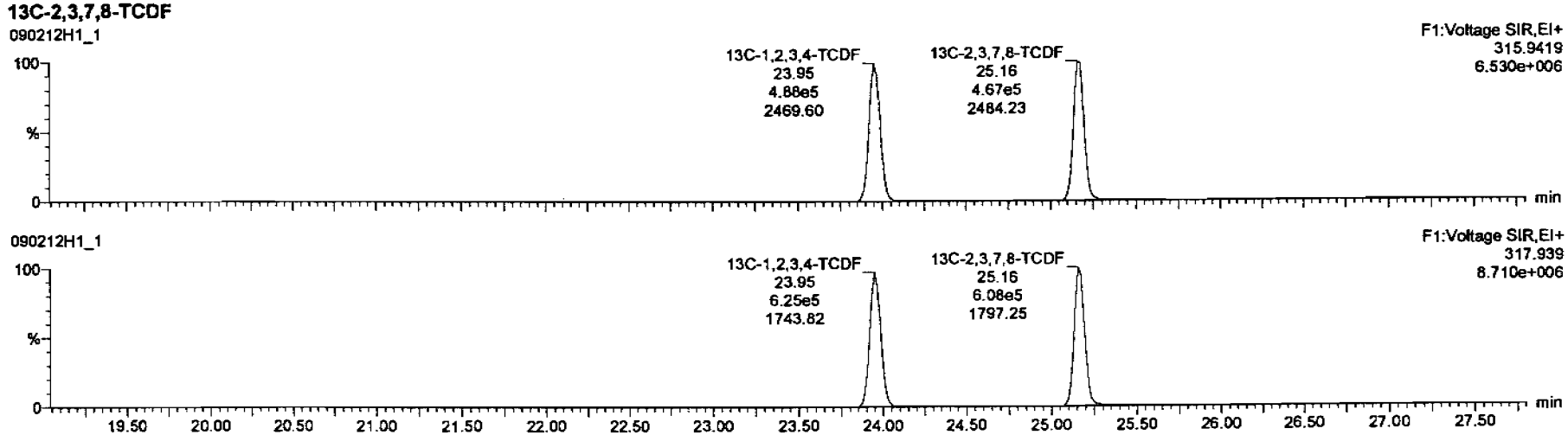

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

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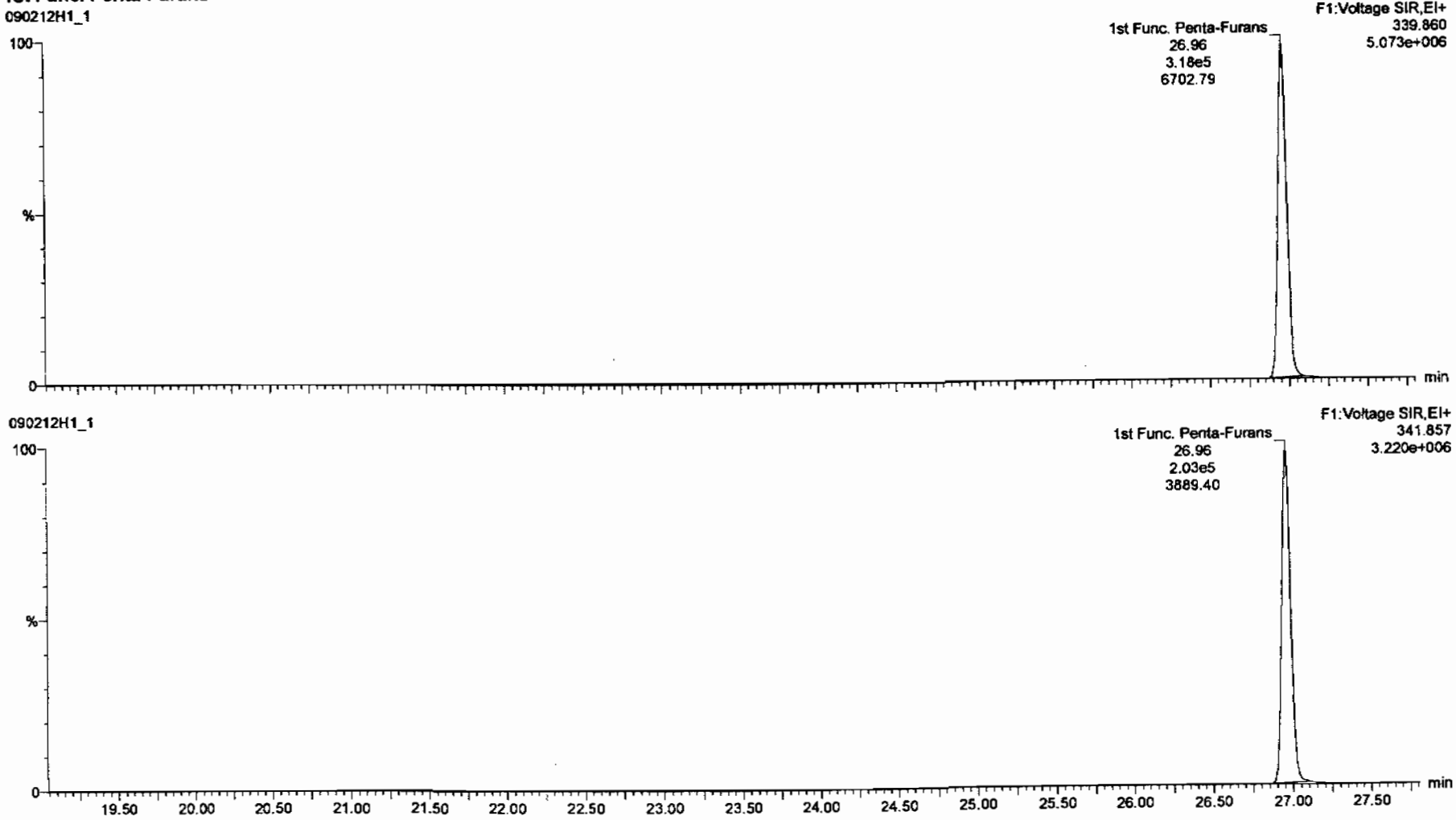

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1,2,3,7,8-PeCDF

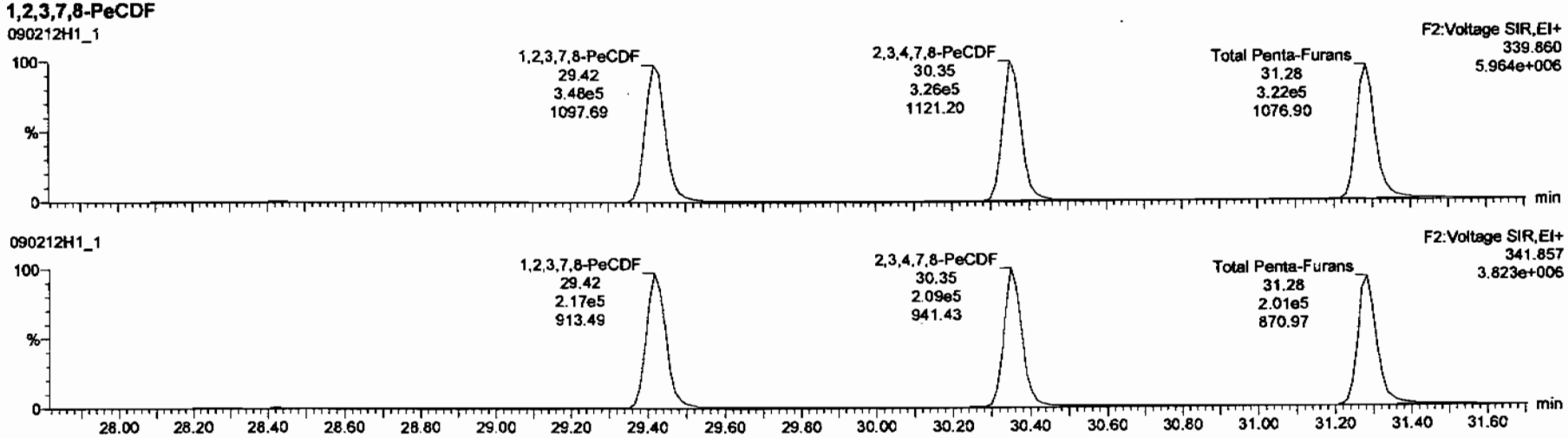

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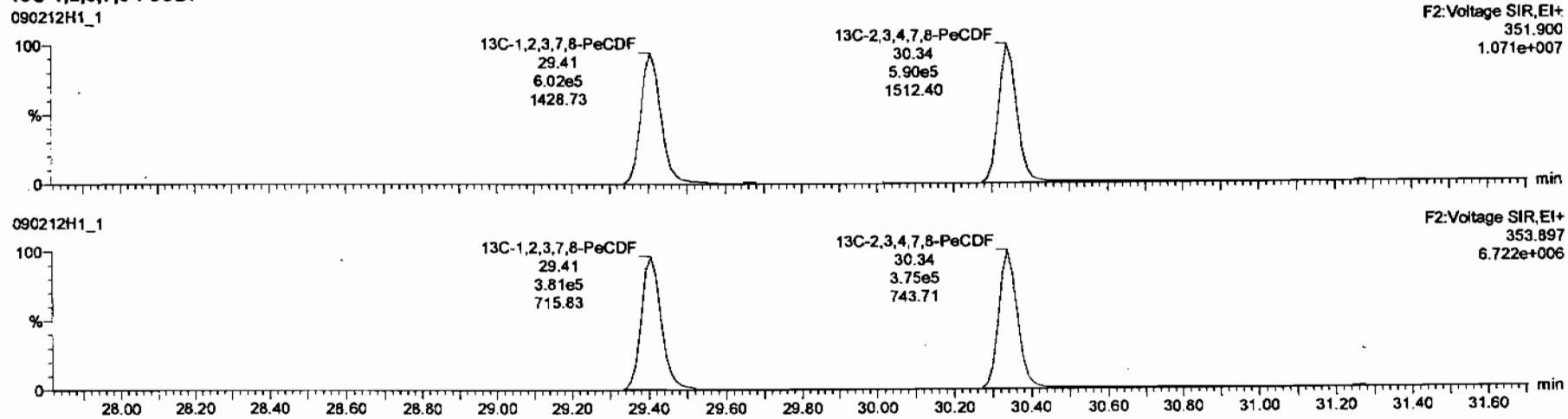

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1,2,3,4,7,8-HxCDF

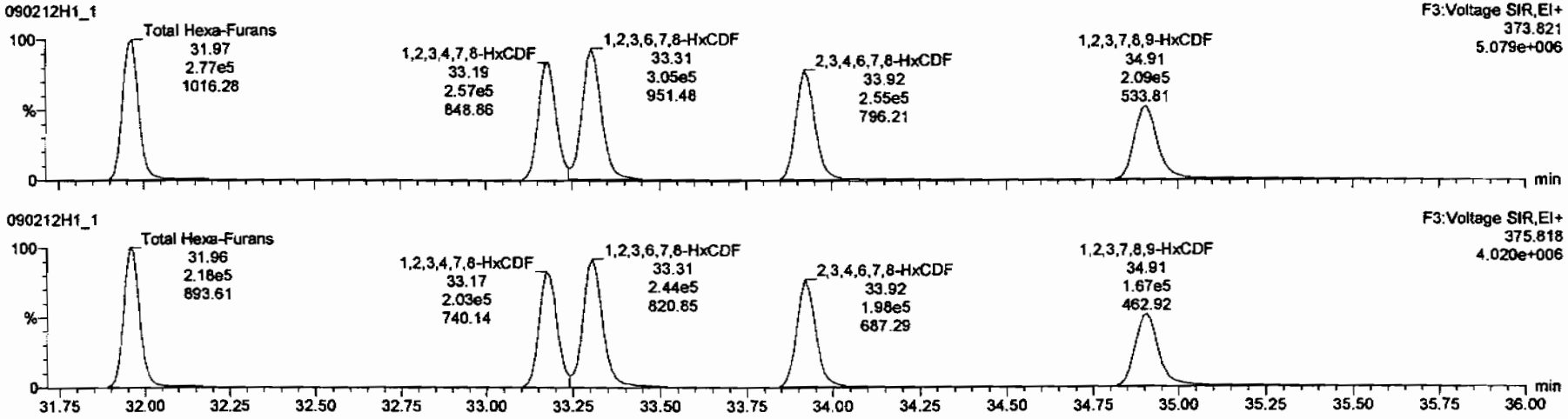

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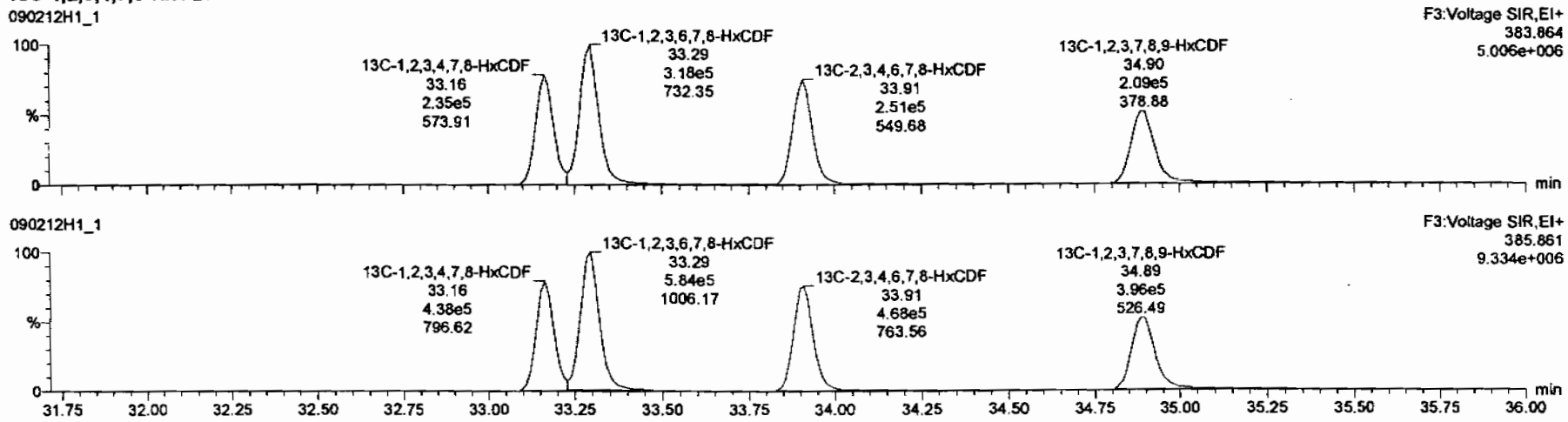

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1,2,3,4,6,7,8-HpCDF

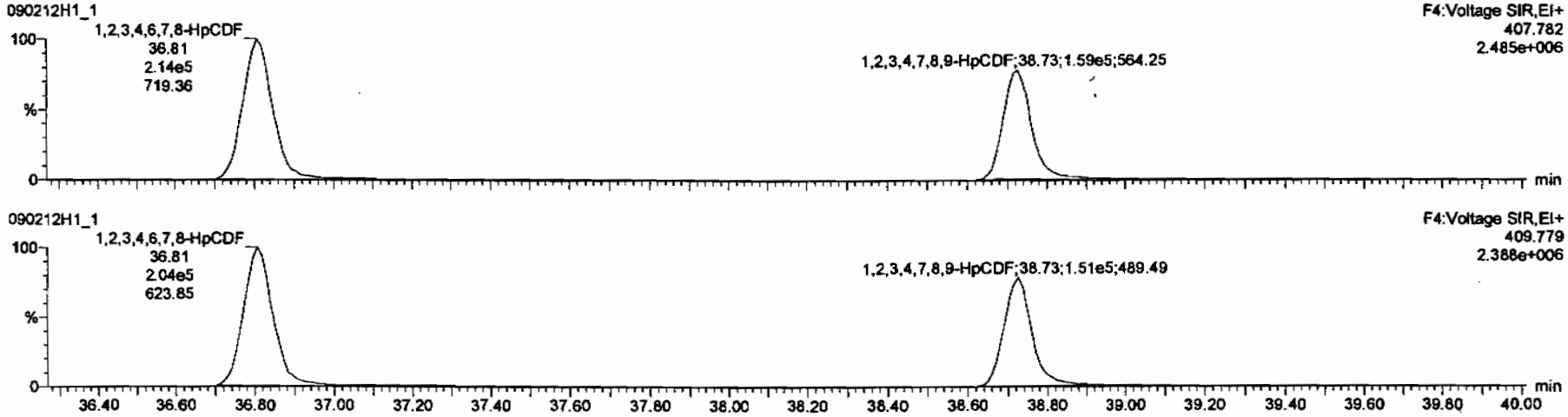

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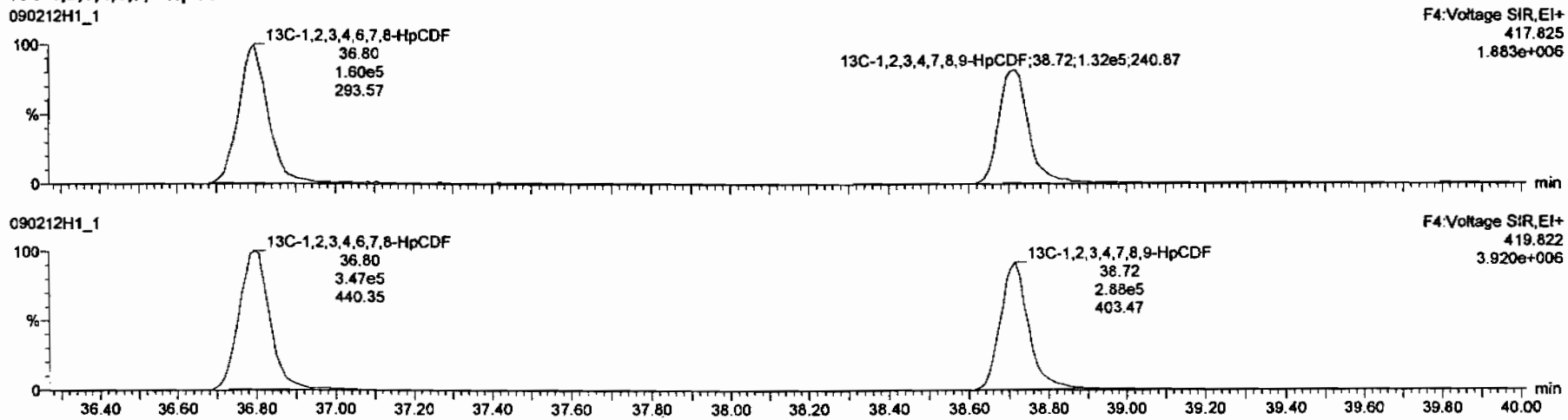

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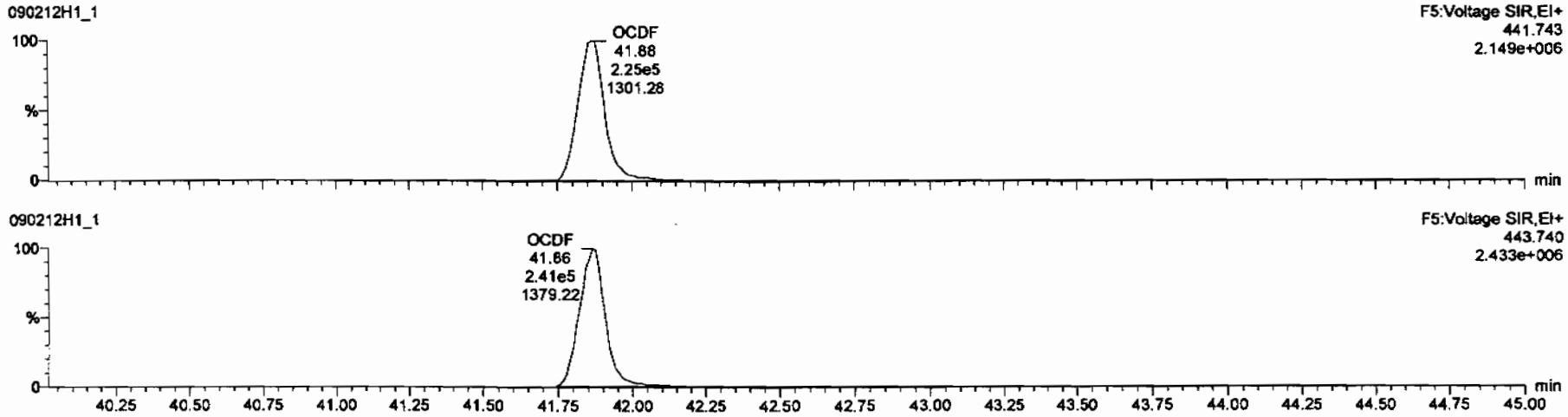

13C-OCDF

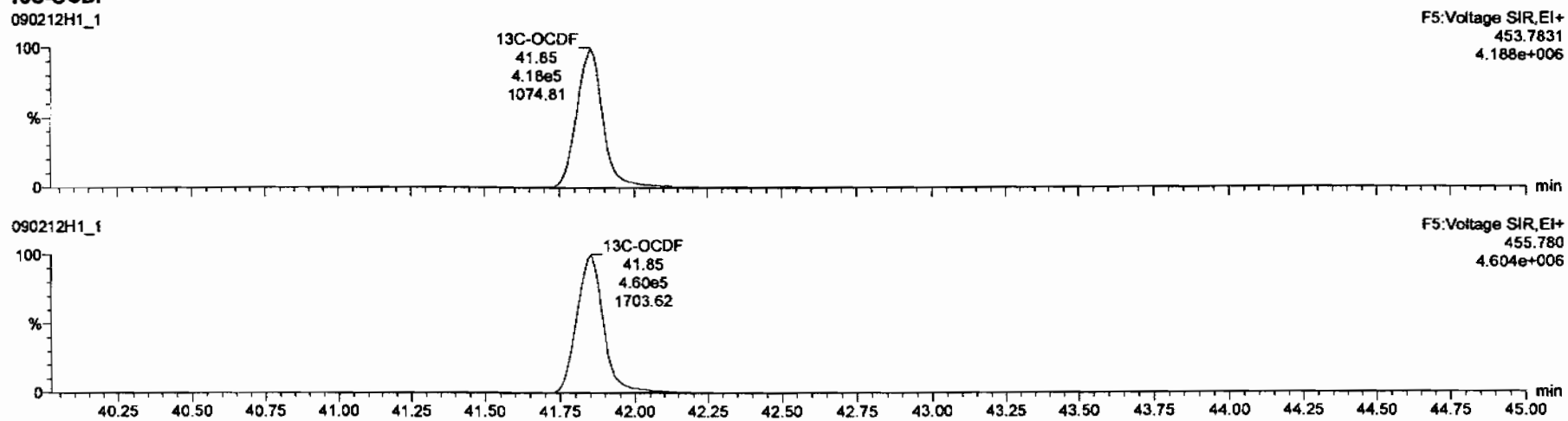

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PFK1

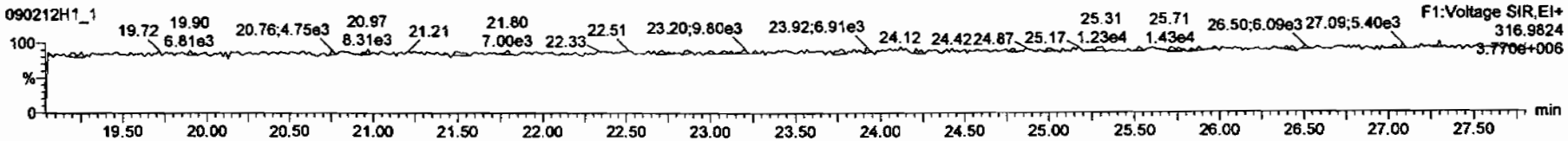

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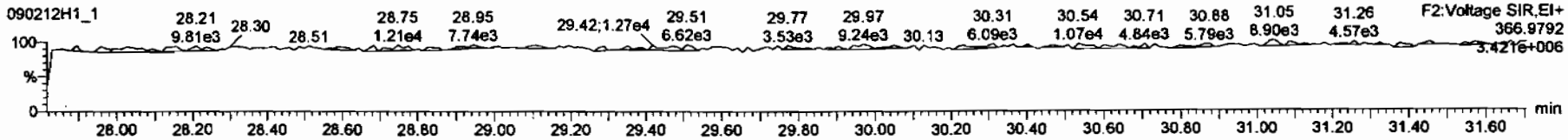

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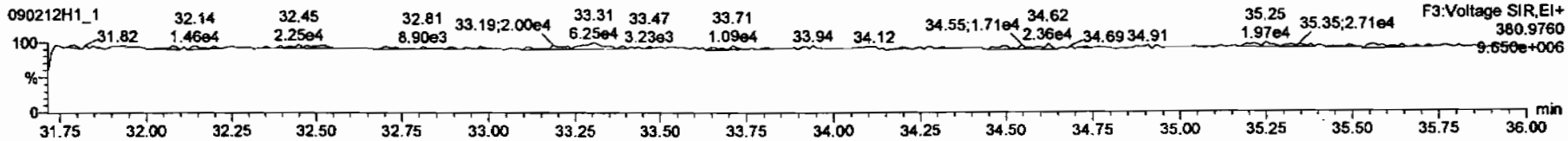

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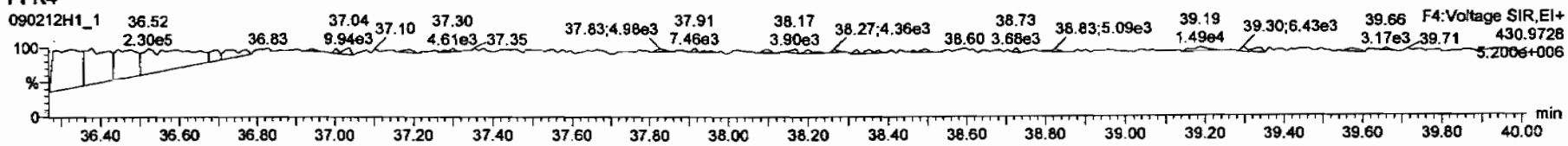

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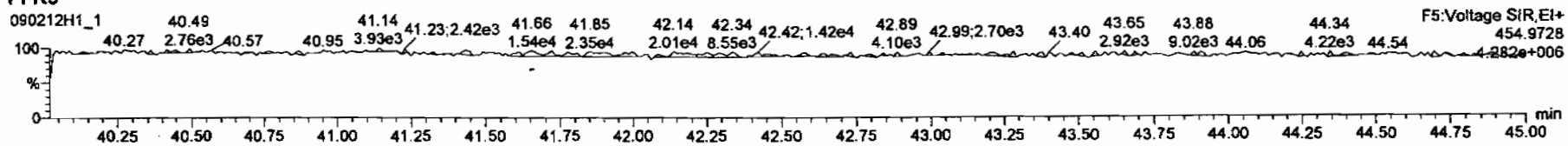

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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DPE1

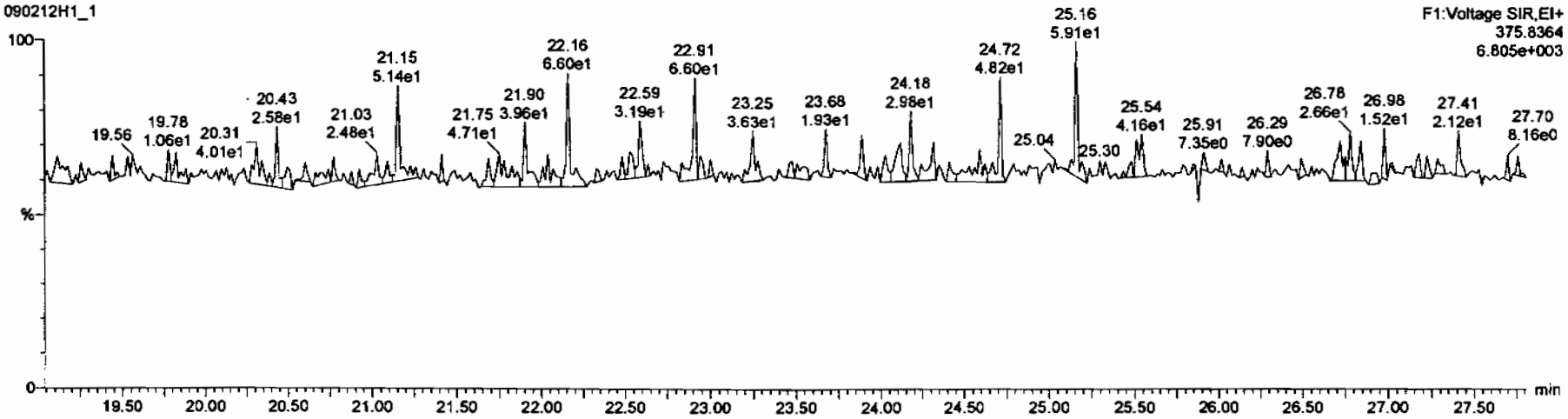

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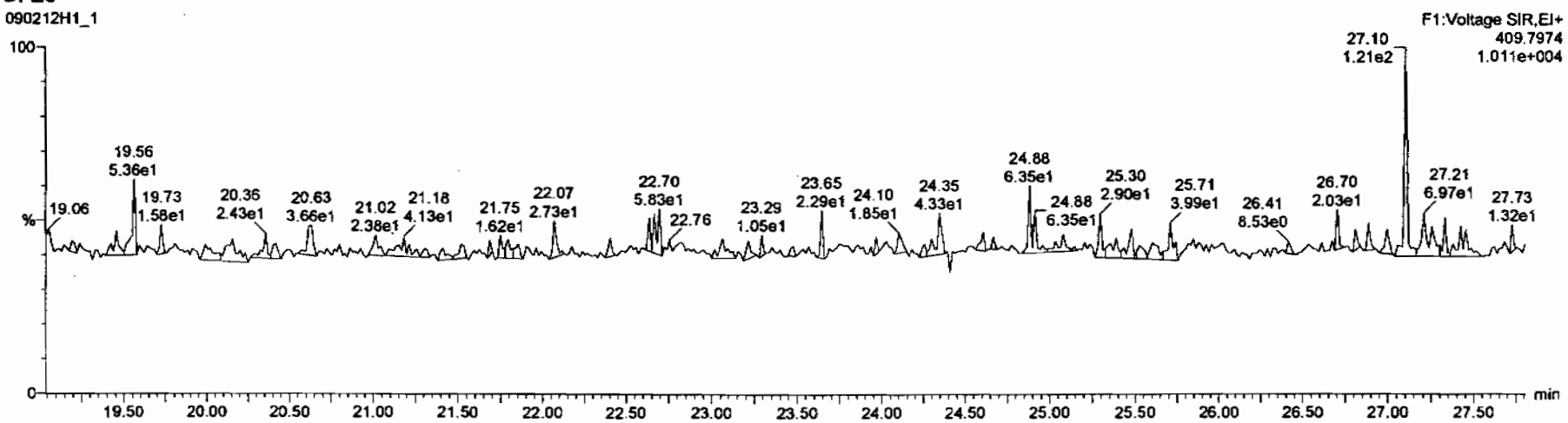

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DPE2

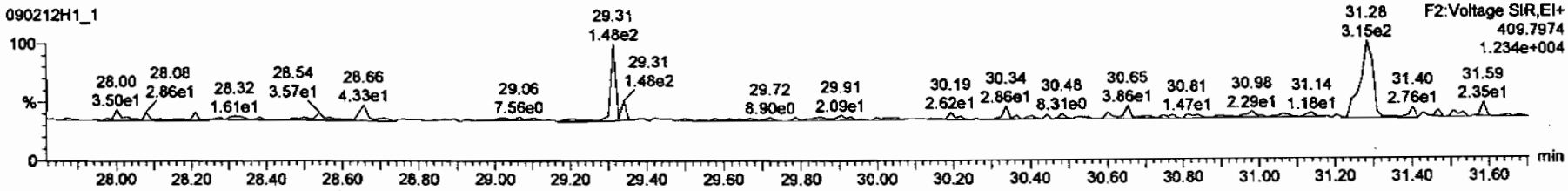

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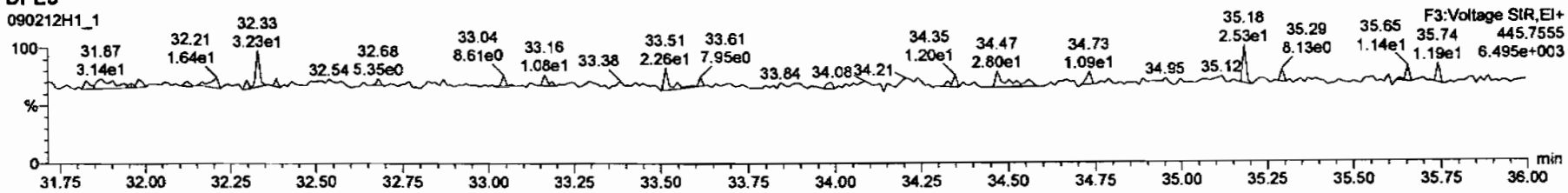

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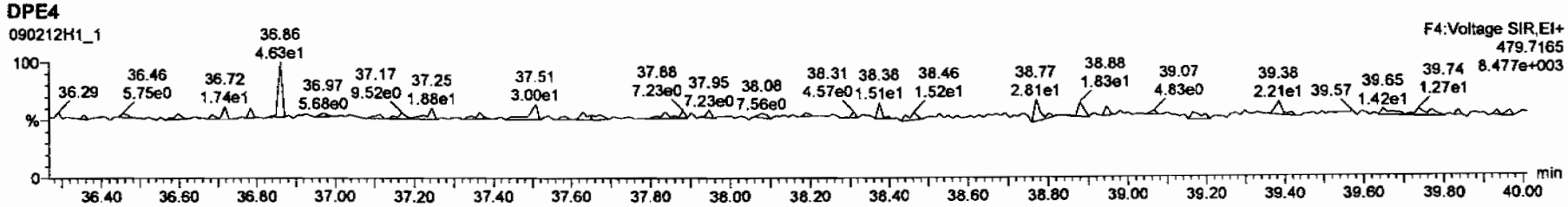

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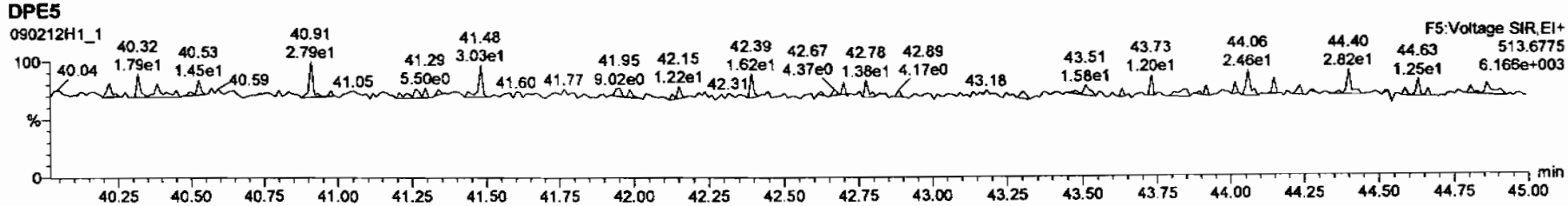

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2,3,7,8-TCDD

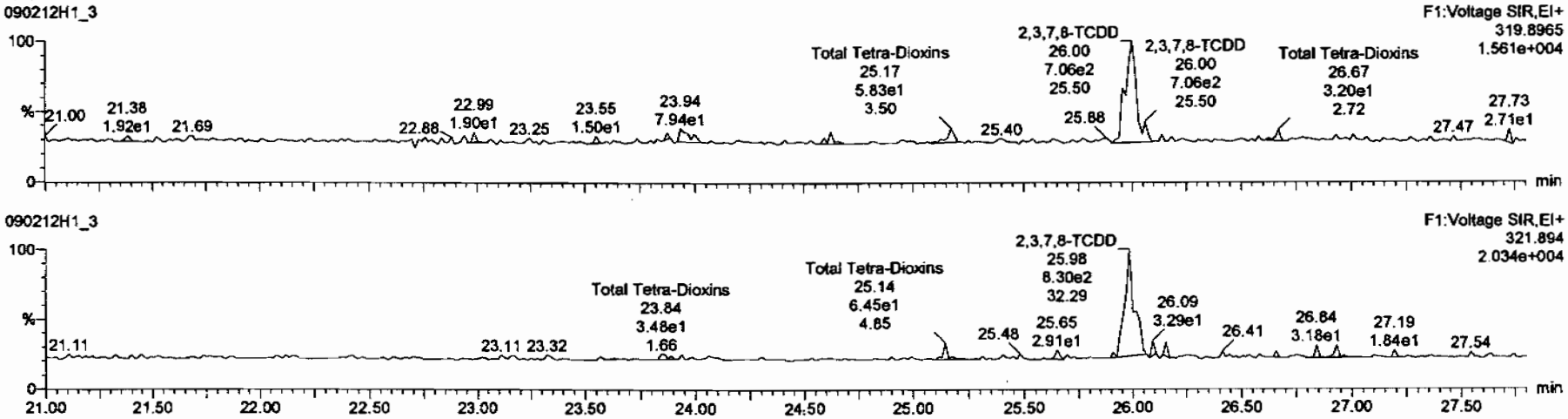

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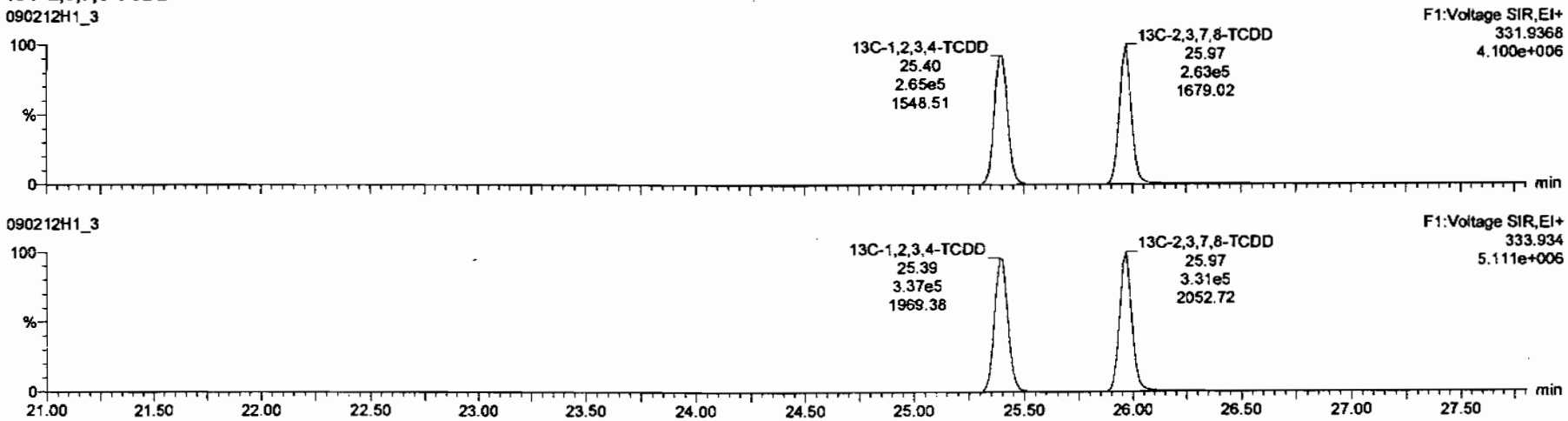

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37Cl-2,3,7,8-TCDD

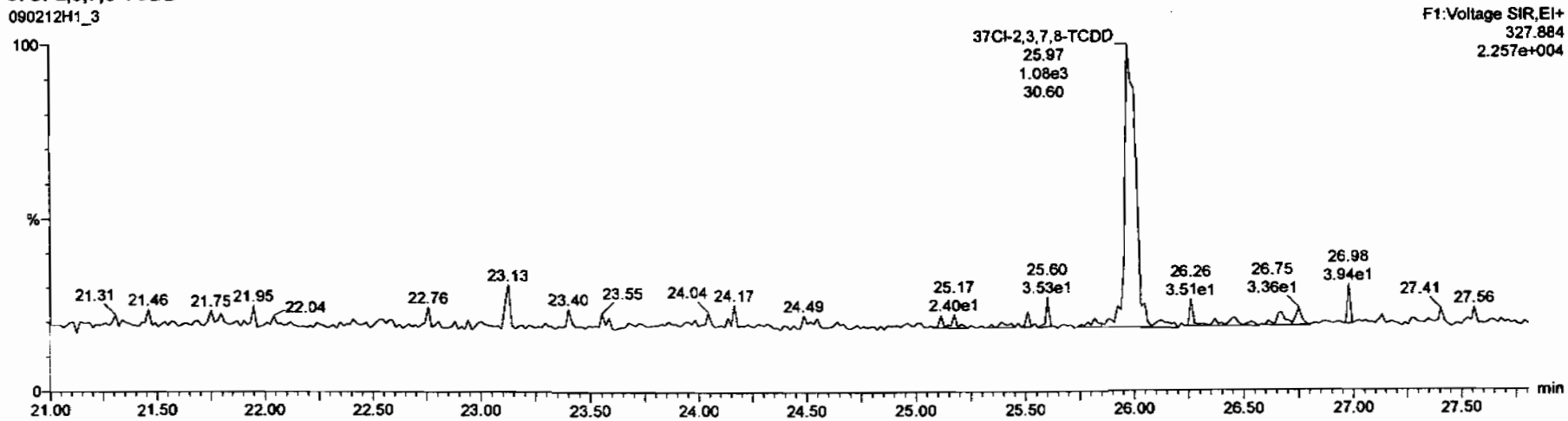

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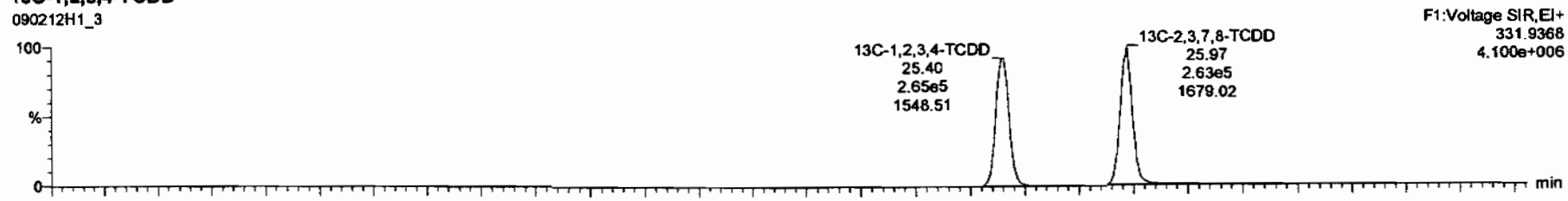

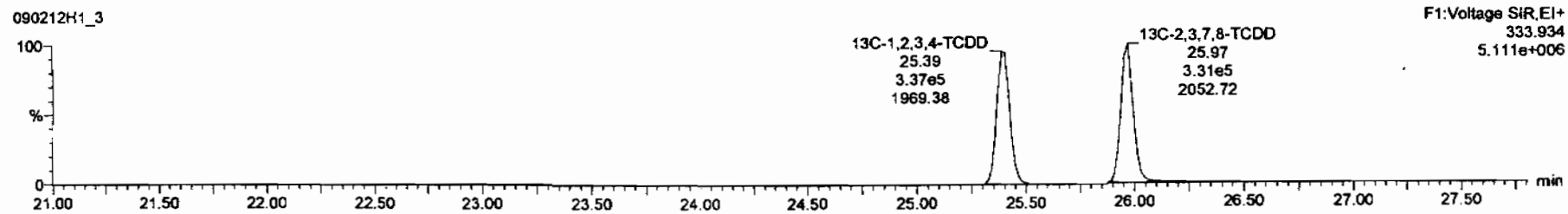

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1,2,3,7,8-PeCDD

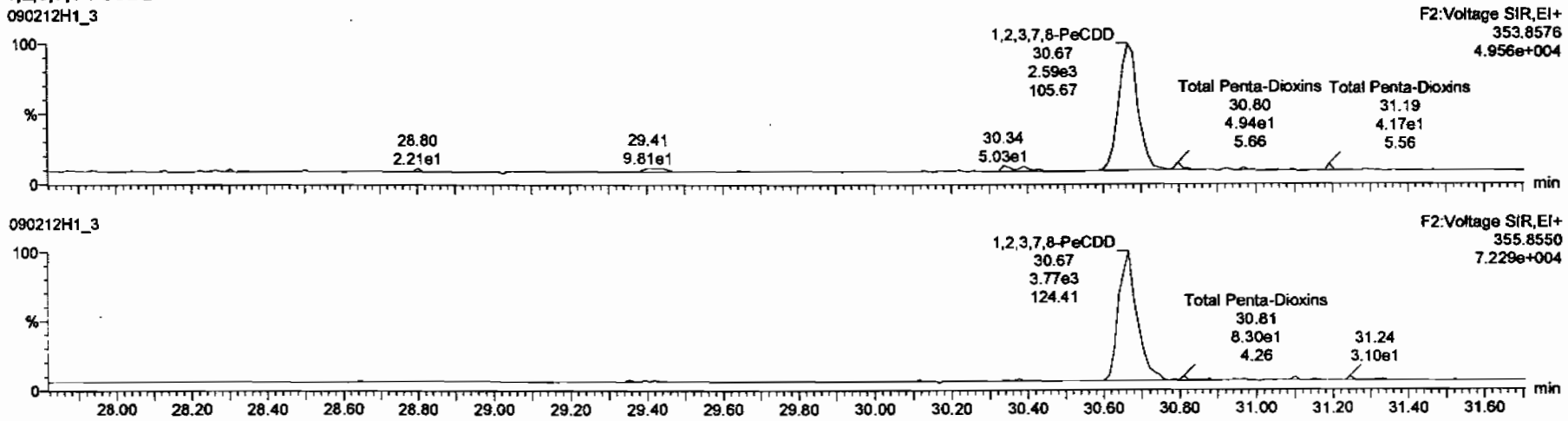

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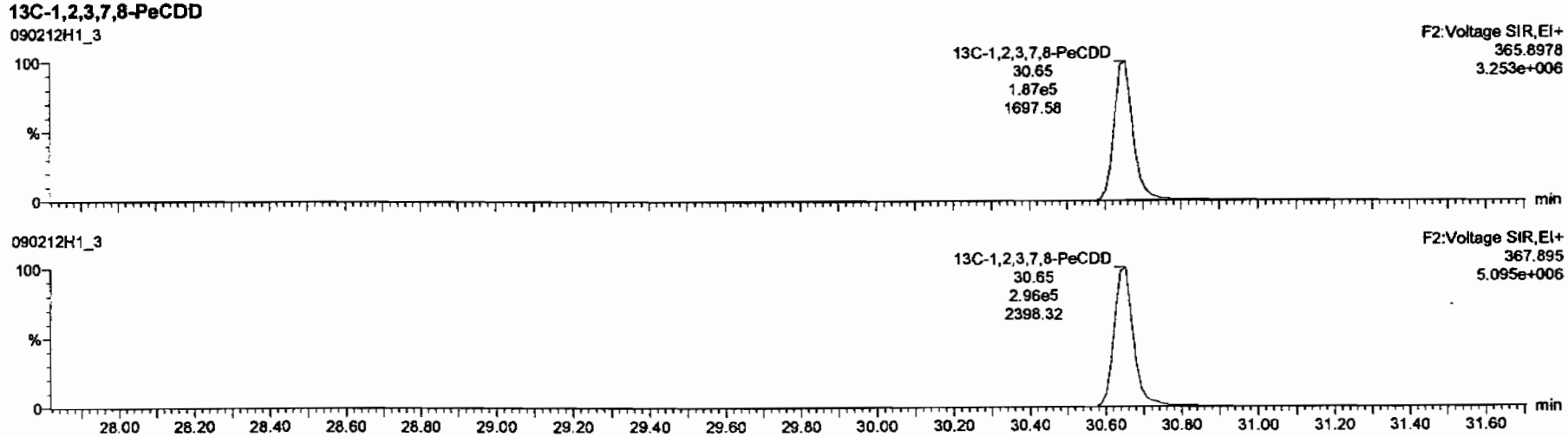

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1,2,3,4,7,8-HxCDD

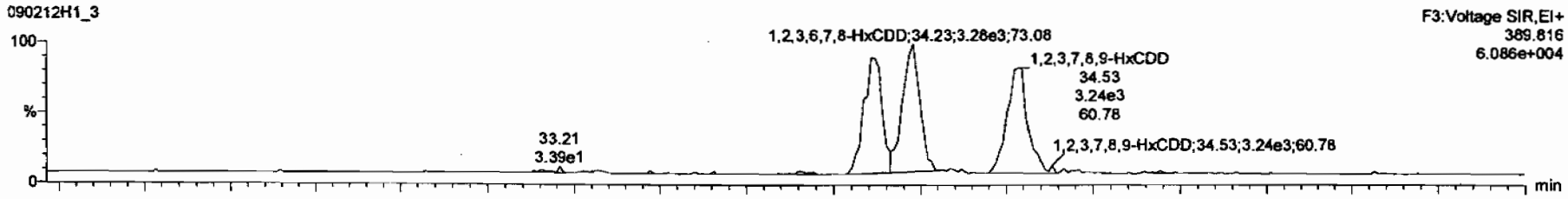

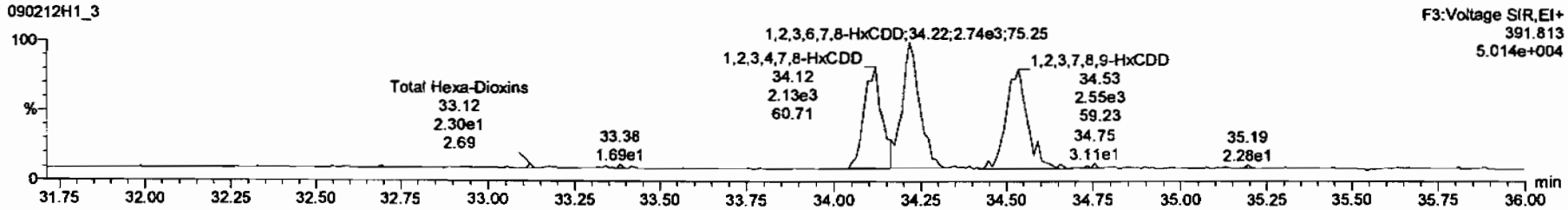

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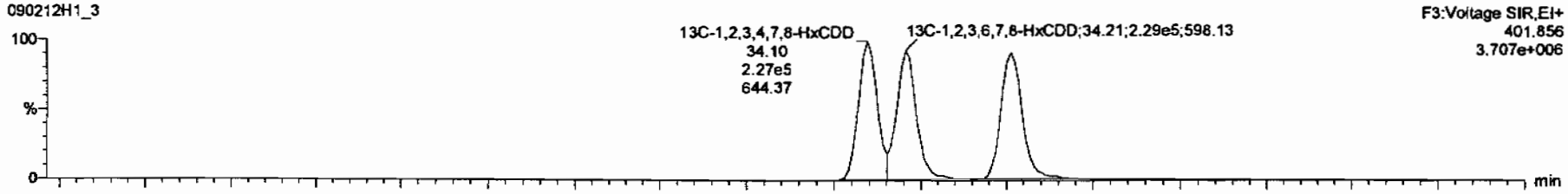

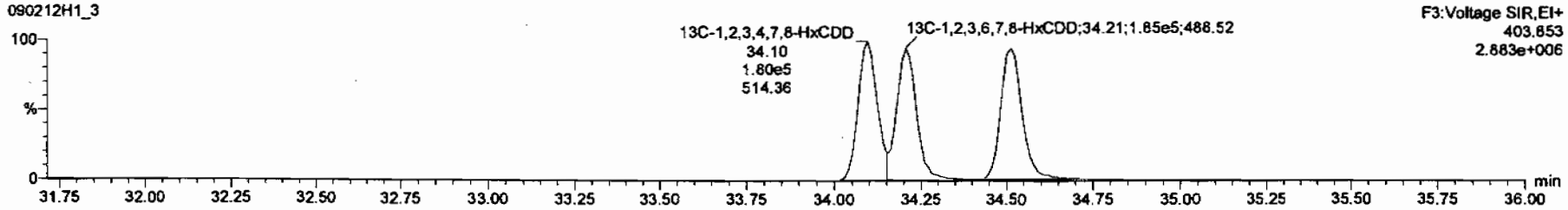

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1,2,3,4,6,7,8-HpCDD

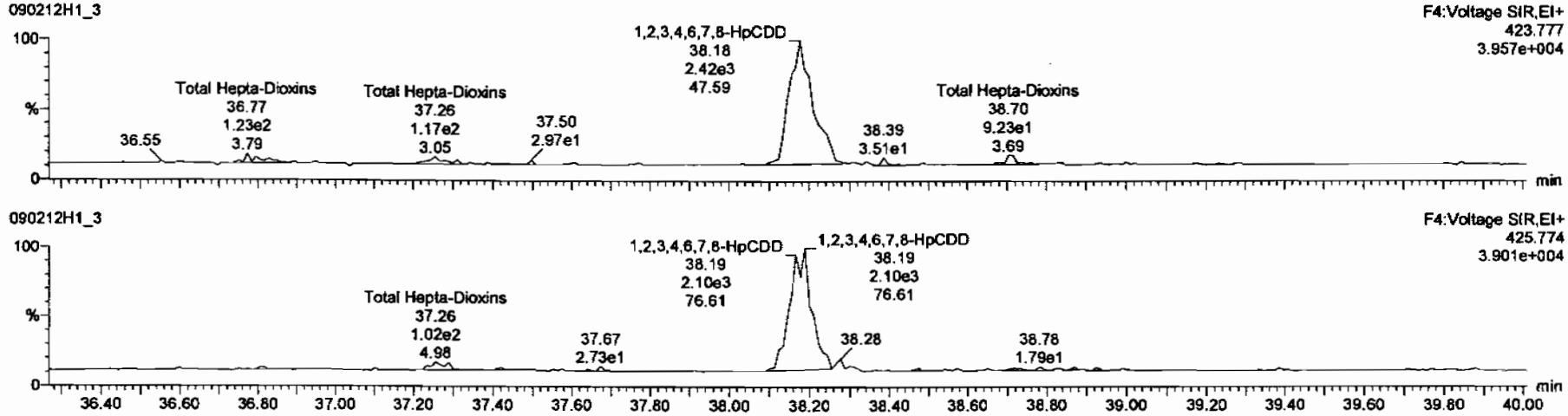

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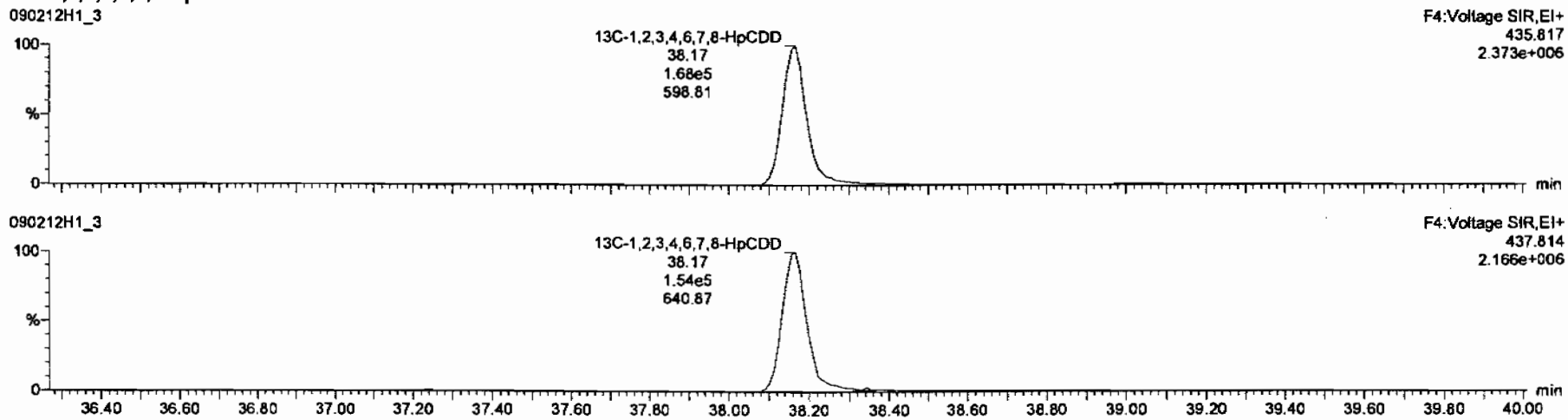

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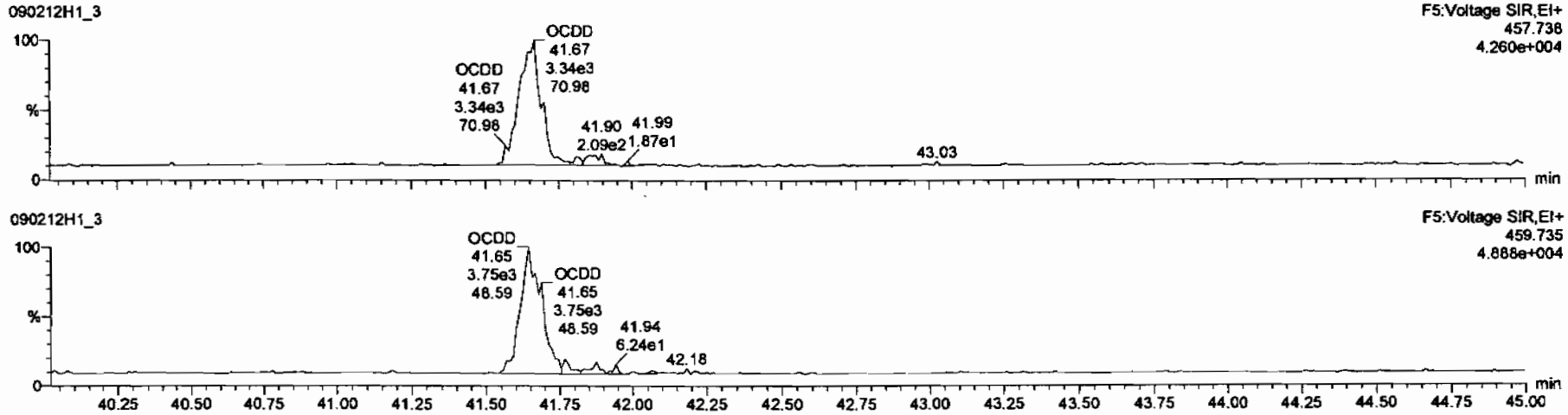

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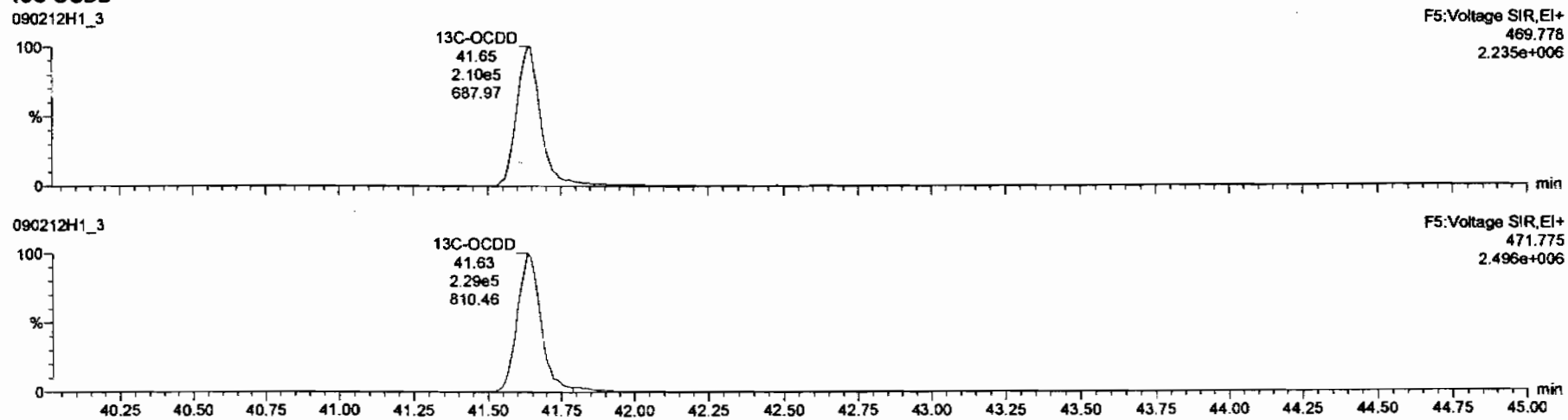

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2,3,7,8-TCDF

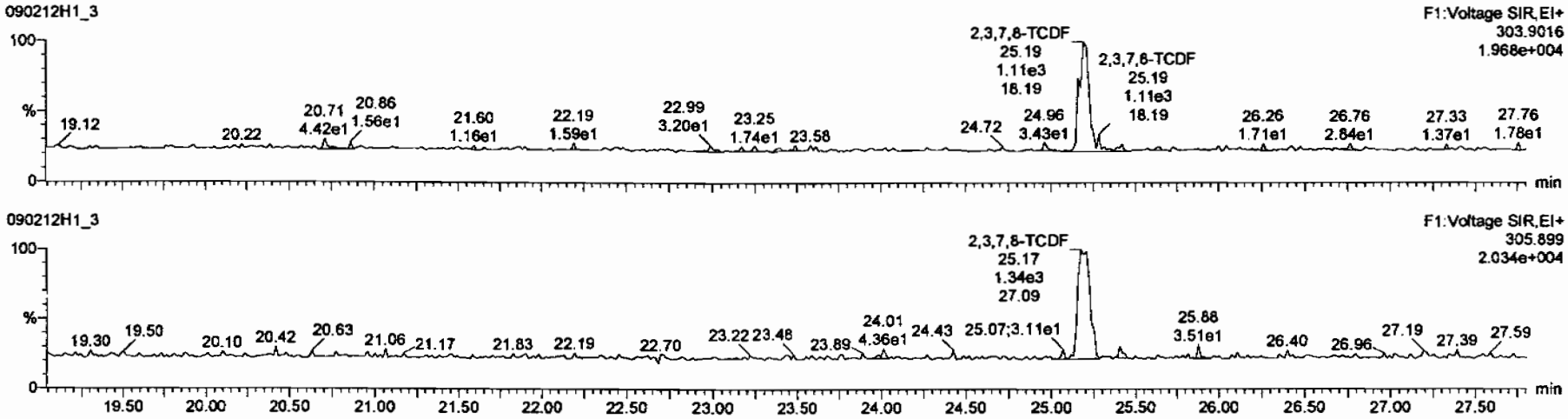

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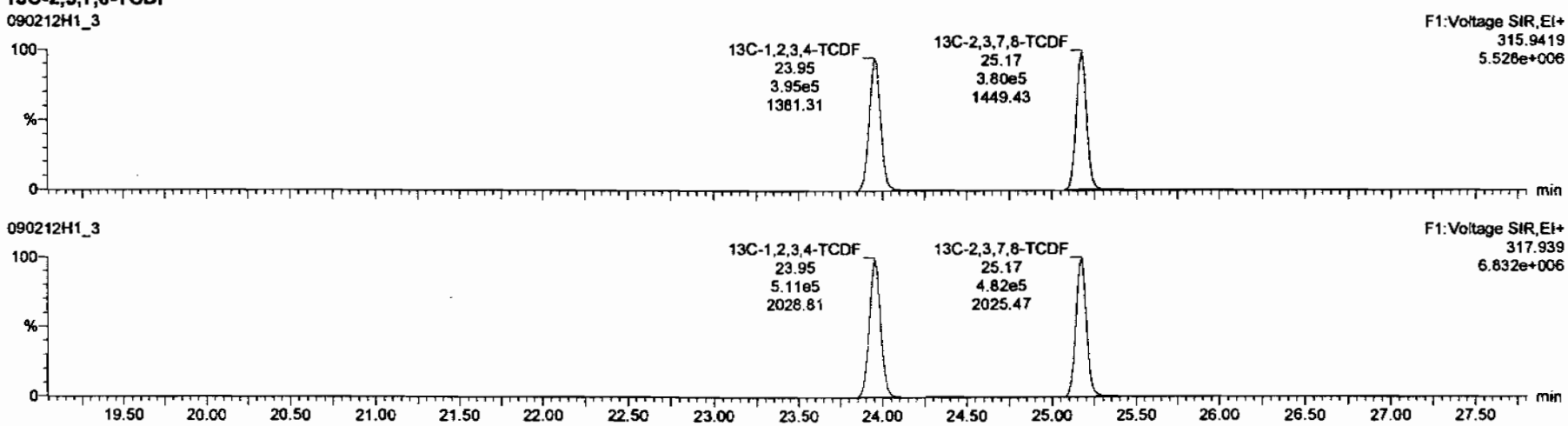

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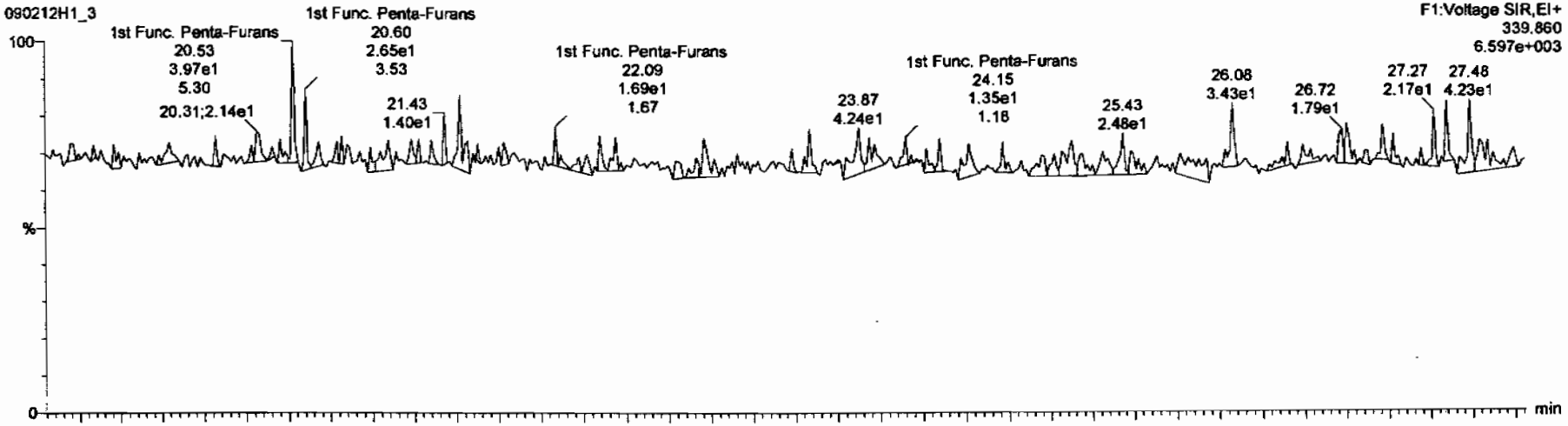

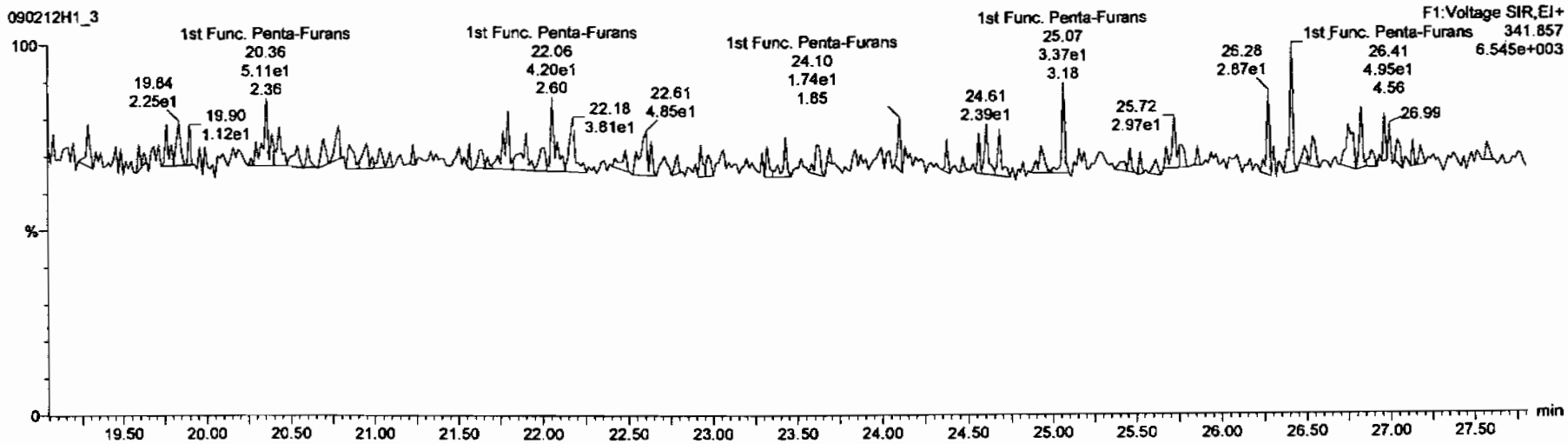

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1,2,3,7,8-PeCDF

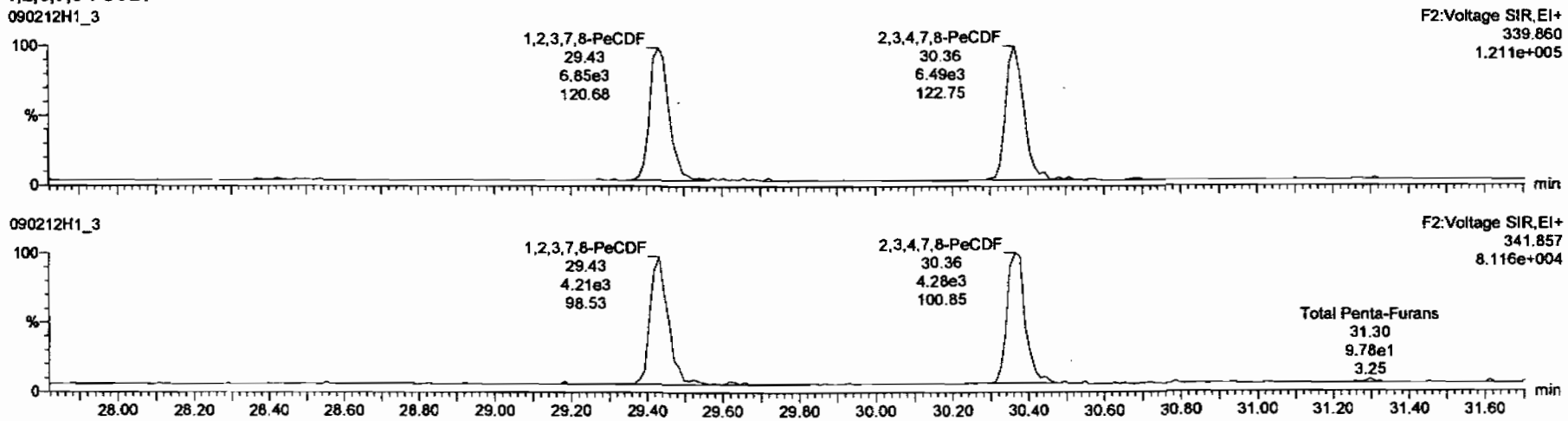

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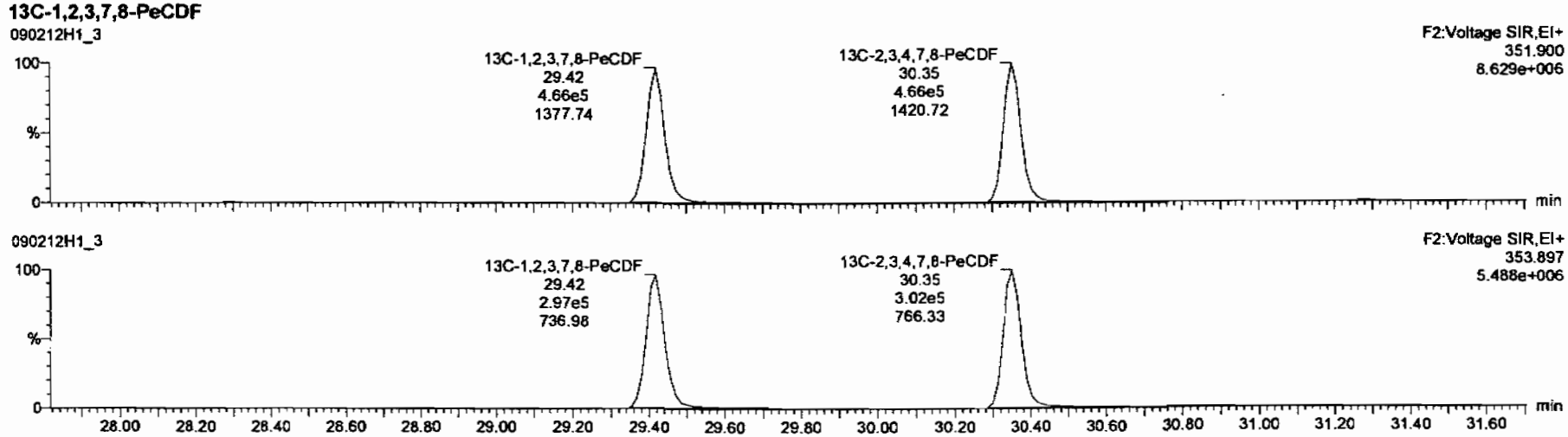

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1,2,3,4,7,8-HxCDF

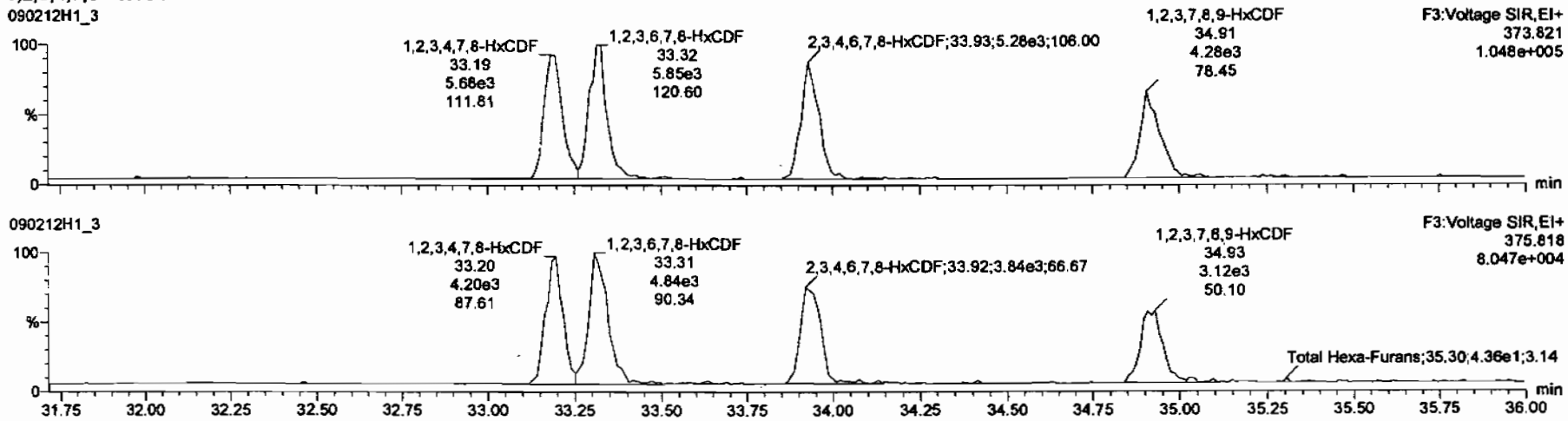

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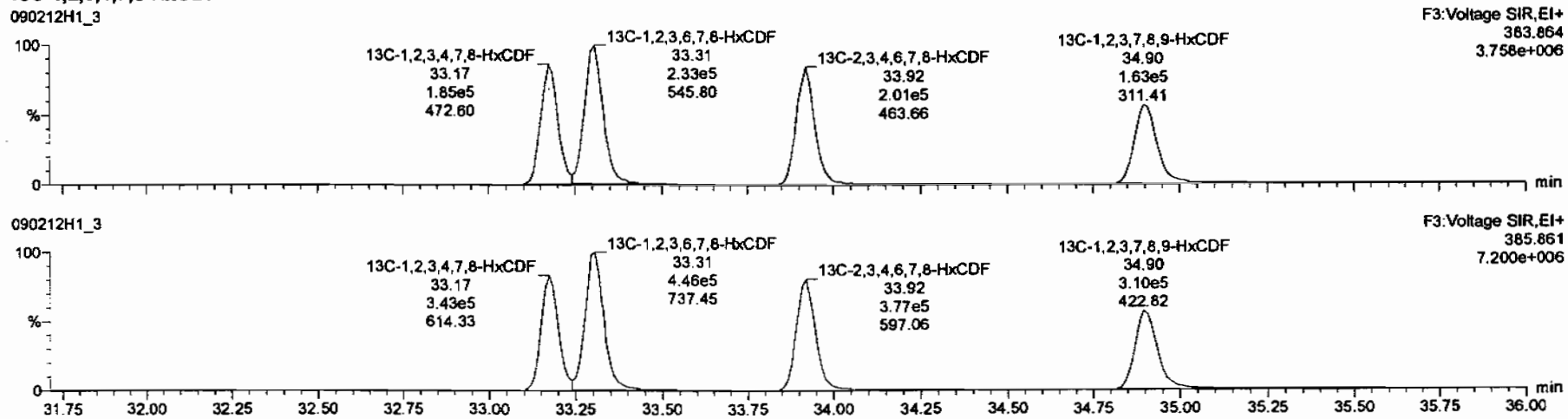

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1,2,3,4,6,7,8-HpCDF

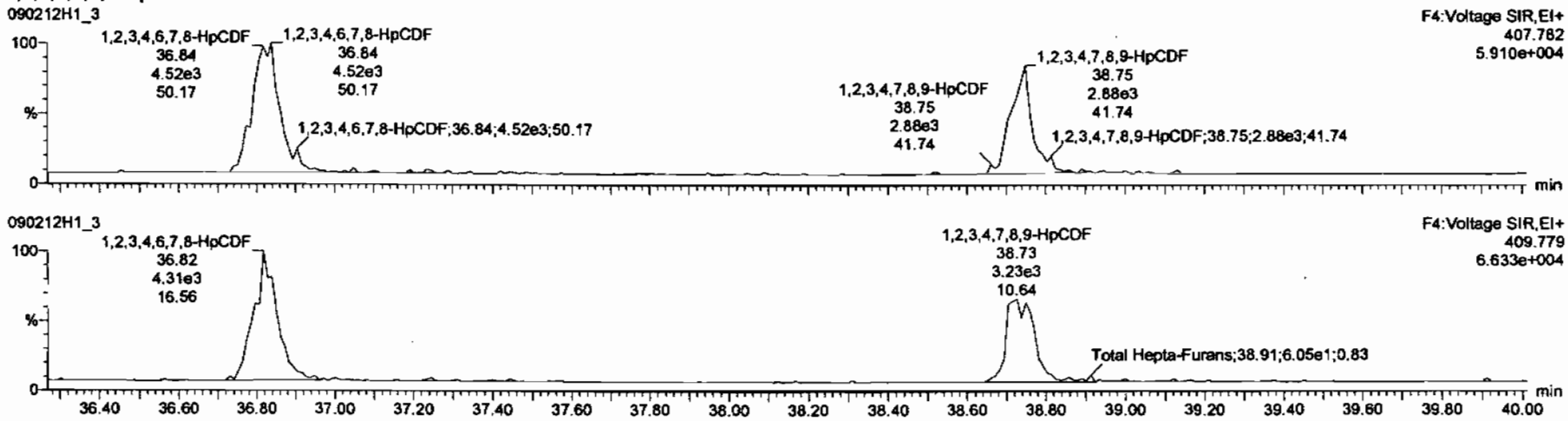

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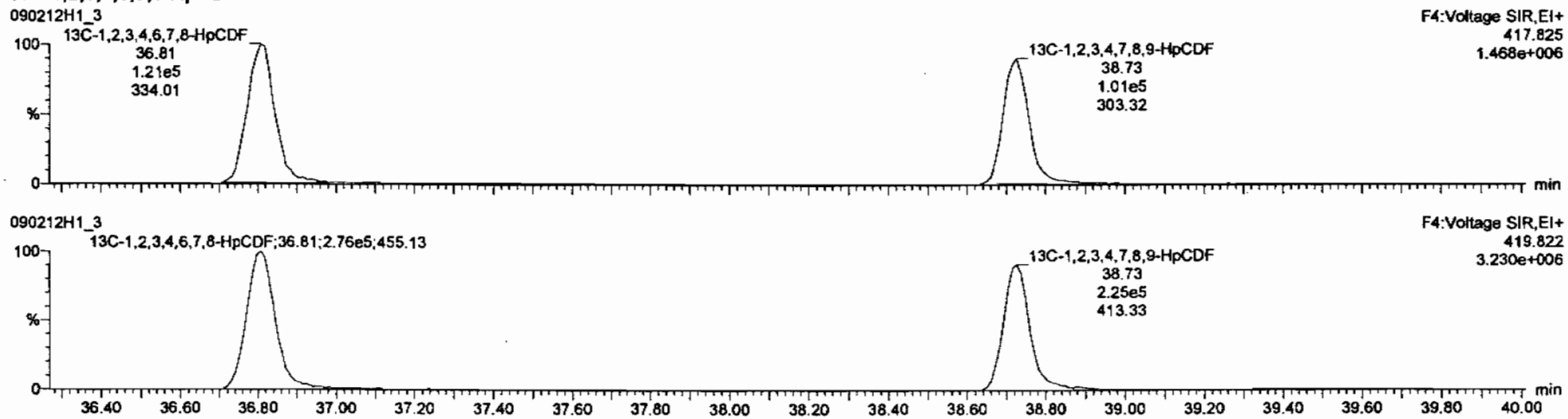

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OCDF

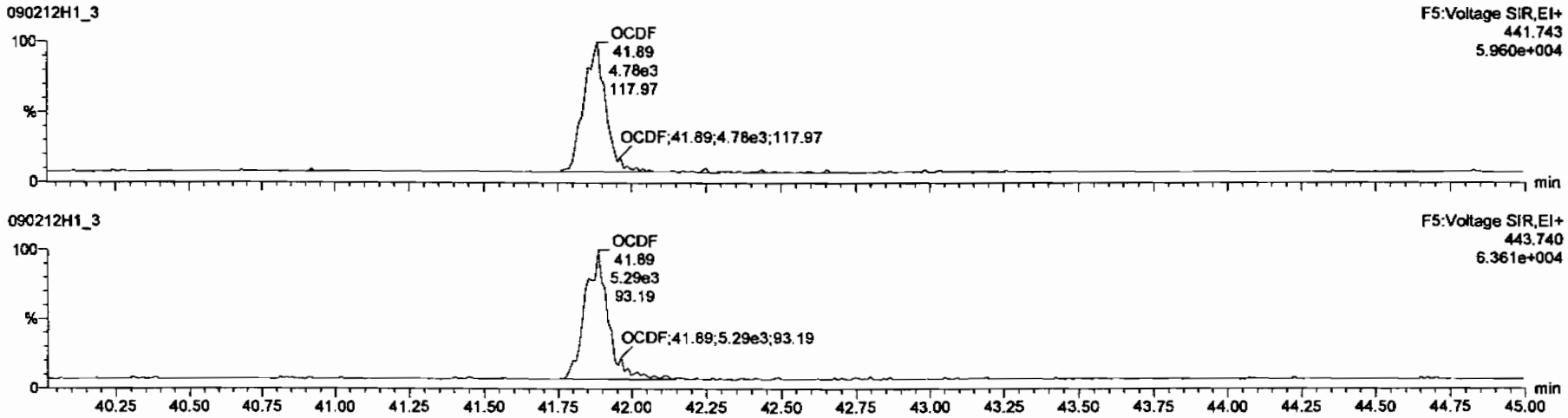

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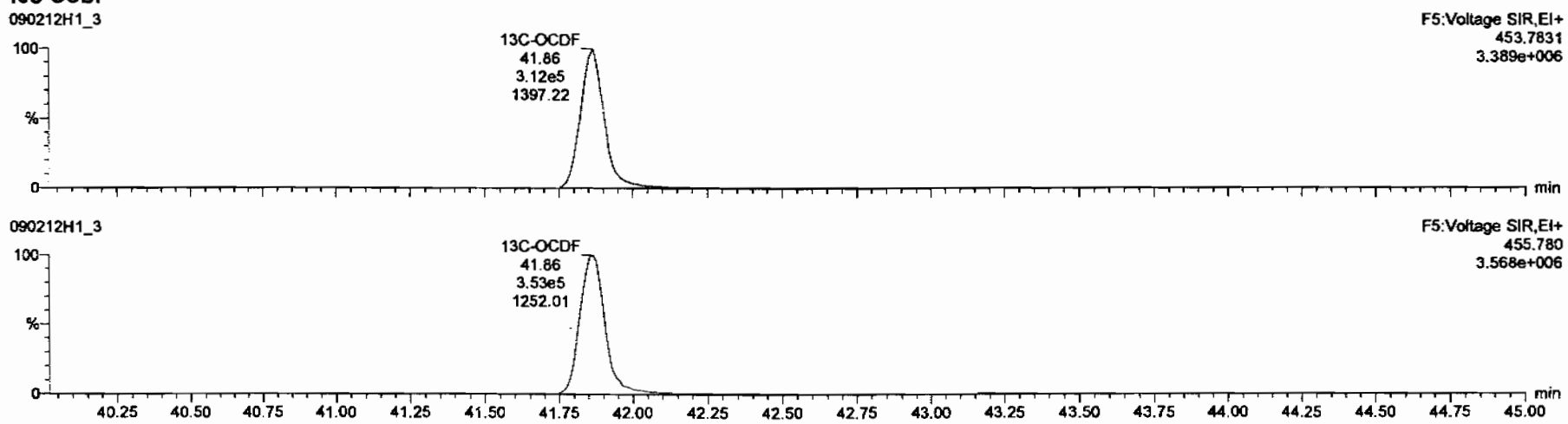

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PFK1

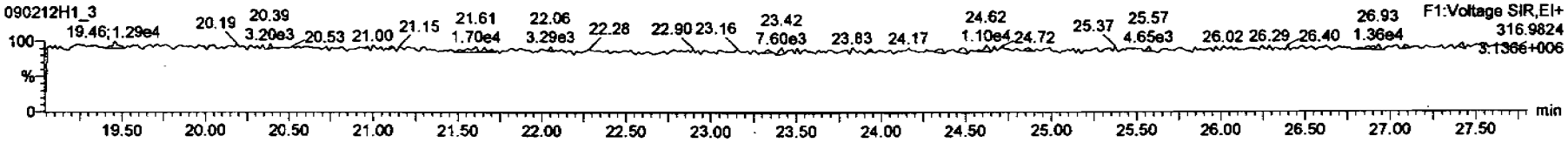

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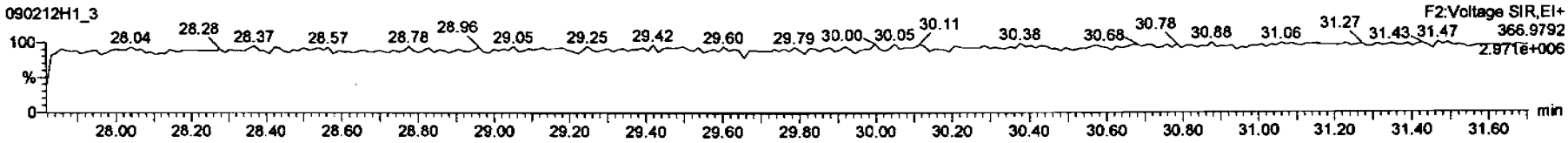

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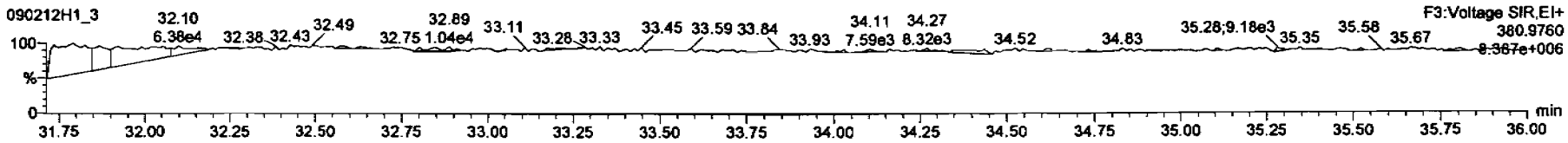

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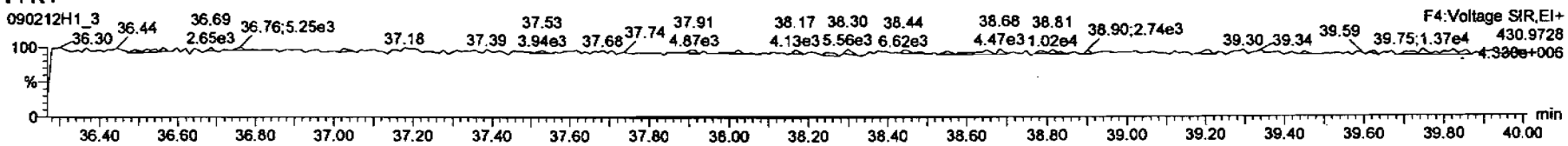

PFK5

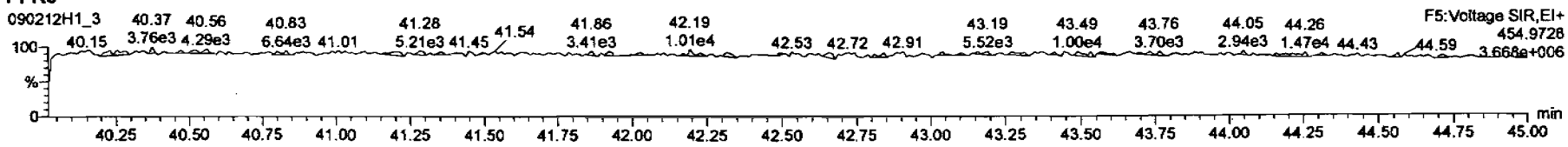

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DPE1

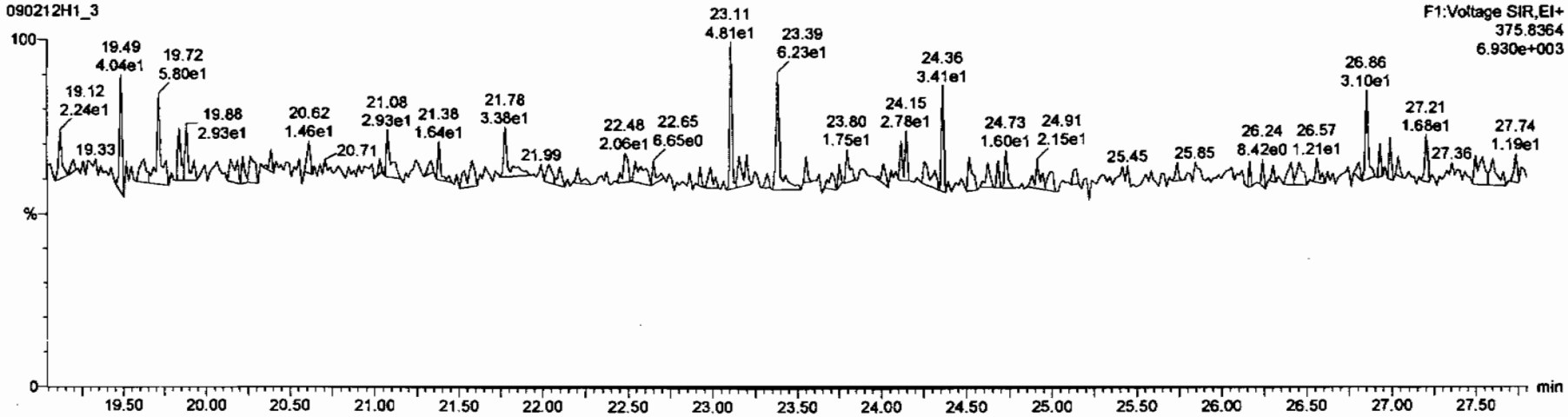

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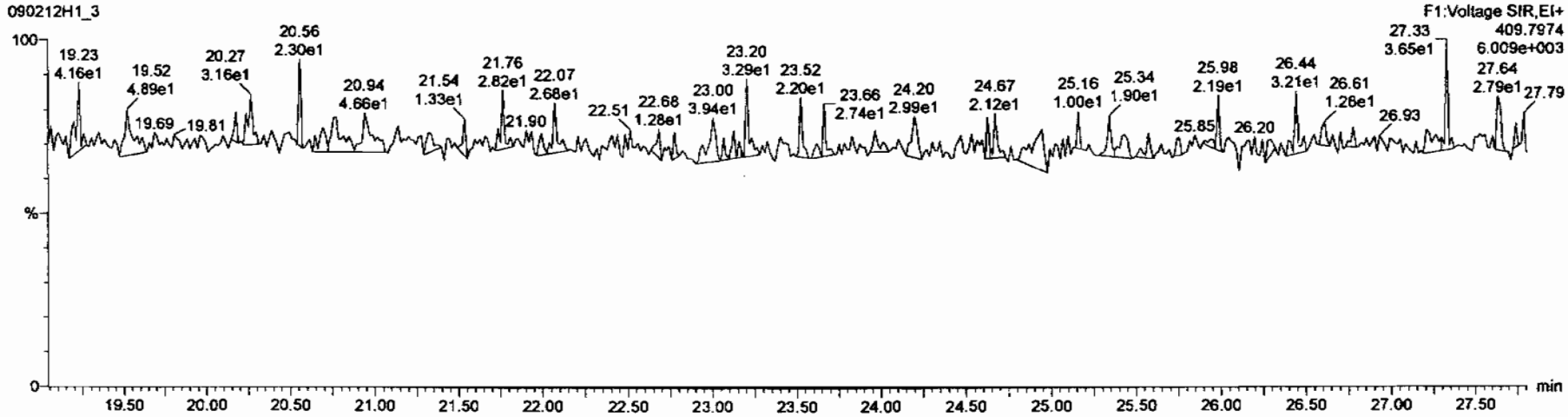

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Name: 090212H1_3, Date: 12-Feb-2009, Time: 12:49:08, ID: ST090212H1-2 1613 CS0 080917F, Description: 1613 CS0 080917F

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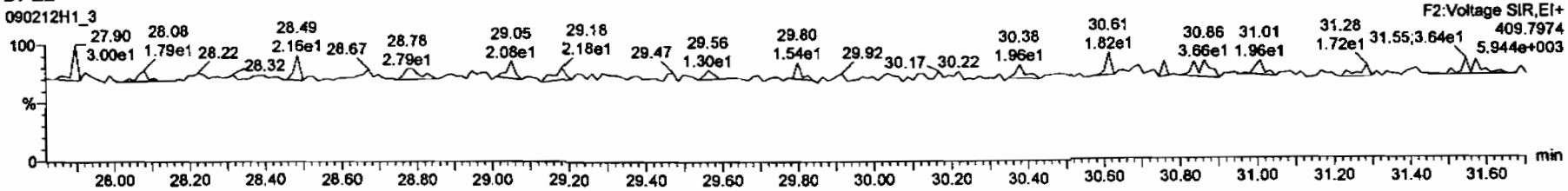

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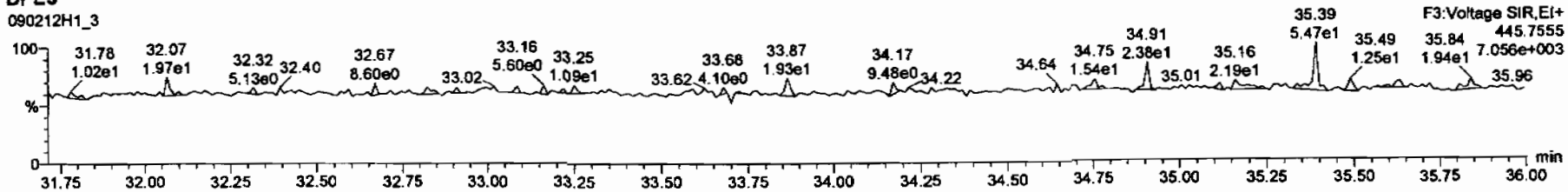

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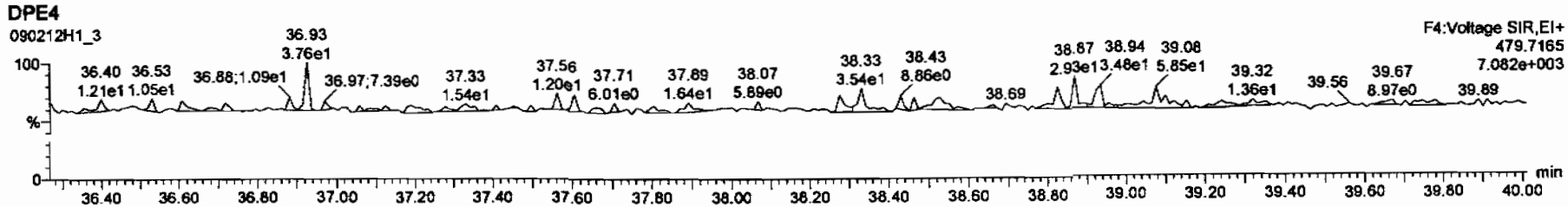

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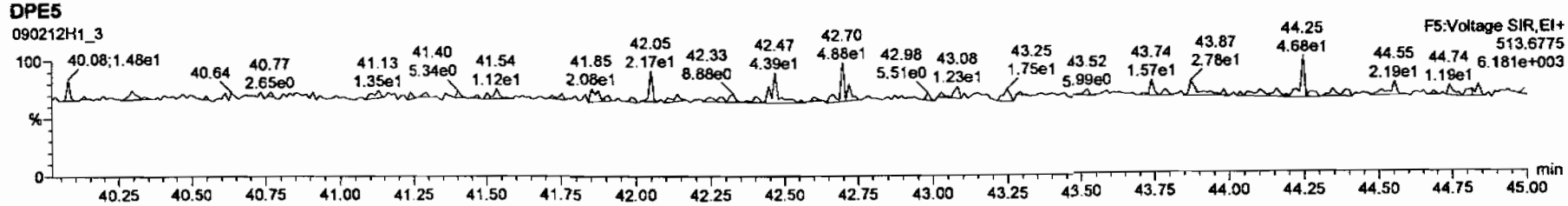

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Name: 090212H1_4, Date: 12-Feb-2009, Time: 13:38:34, ID: ST090212H1-3 1613 CS1 080917CG, Description: 1613 CS1 080917G

2,3,7,8-TCDD

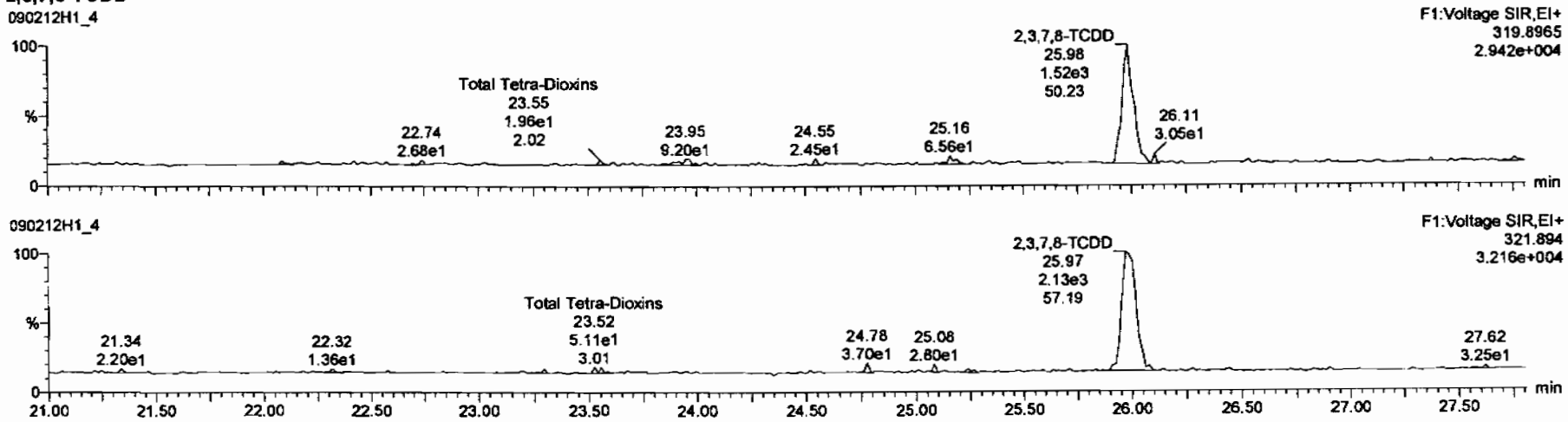

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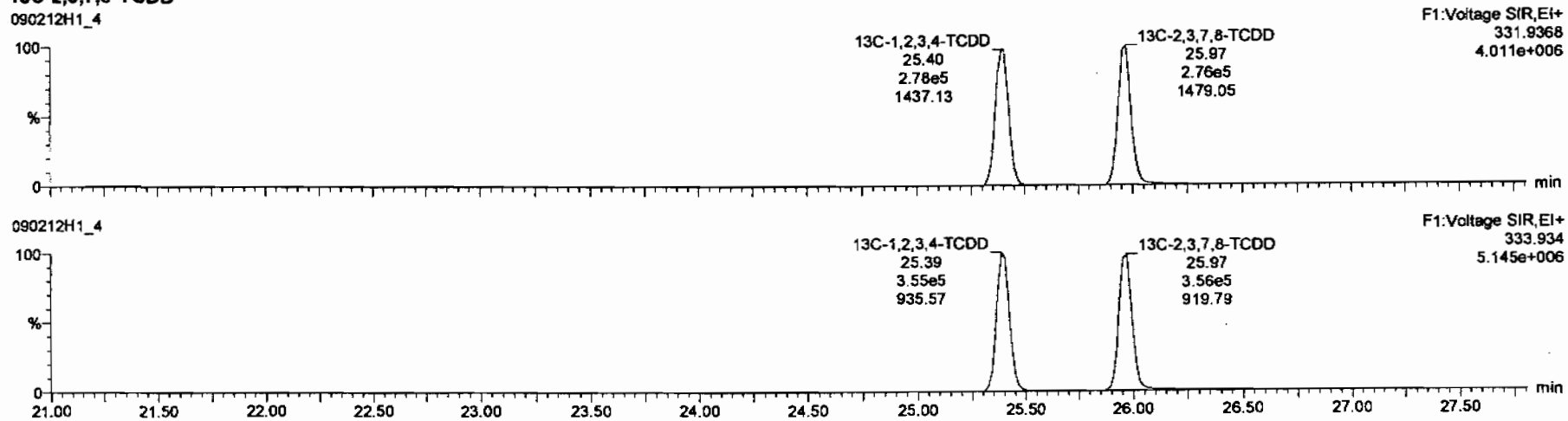

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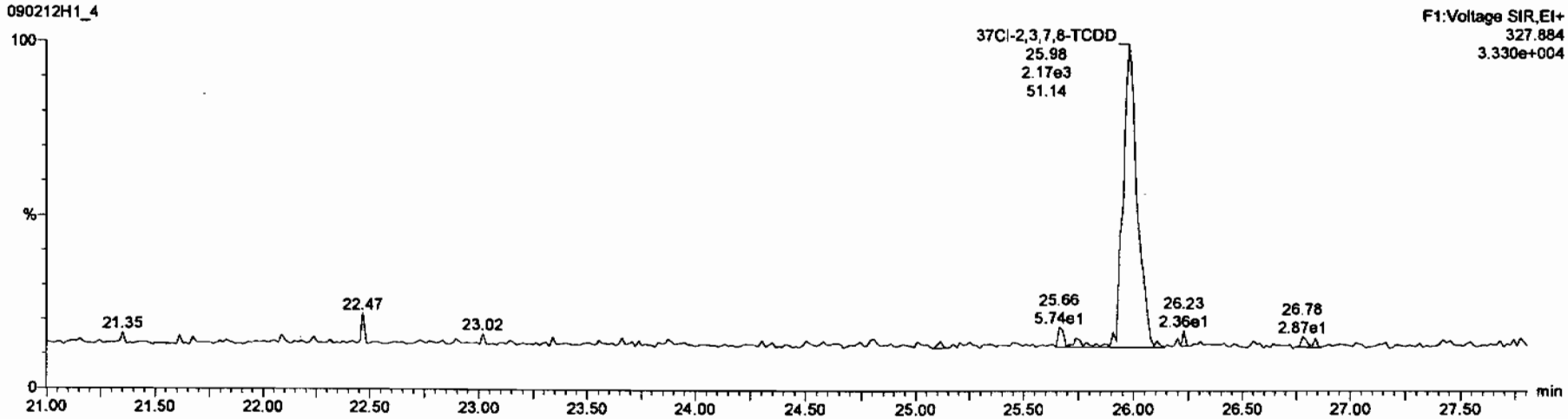

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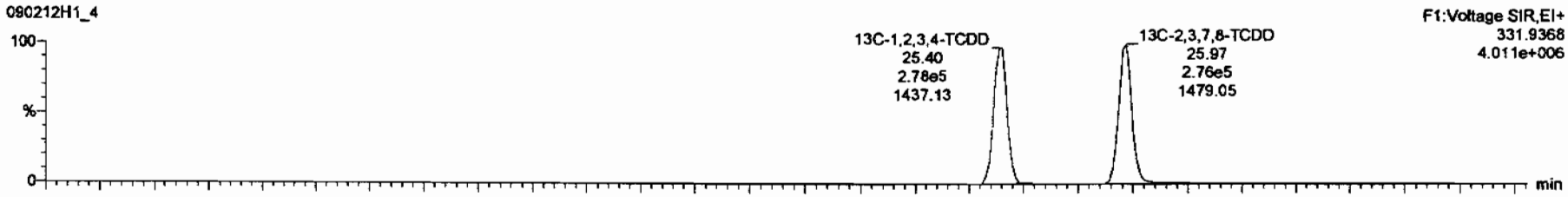

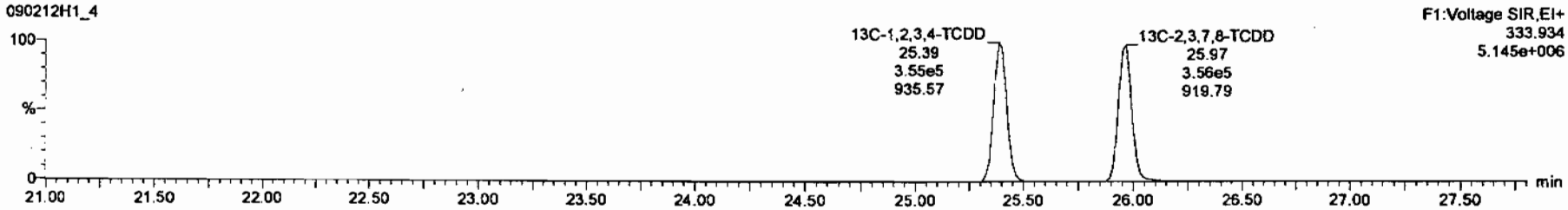

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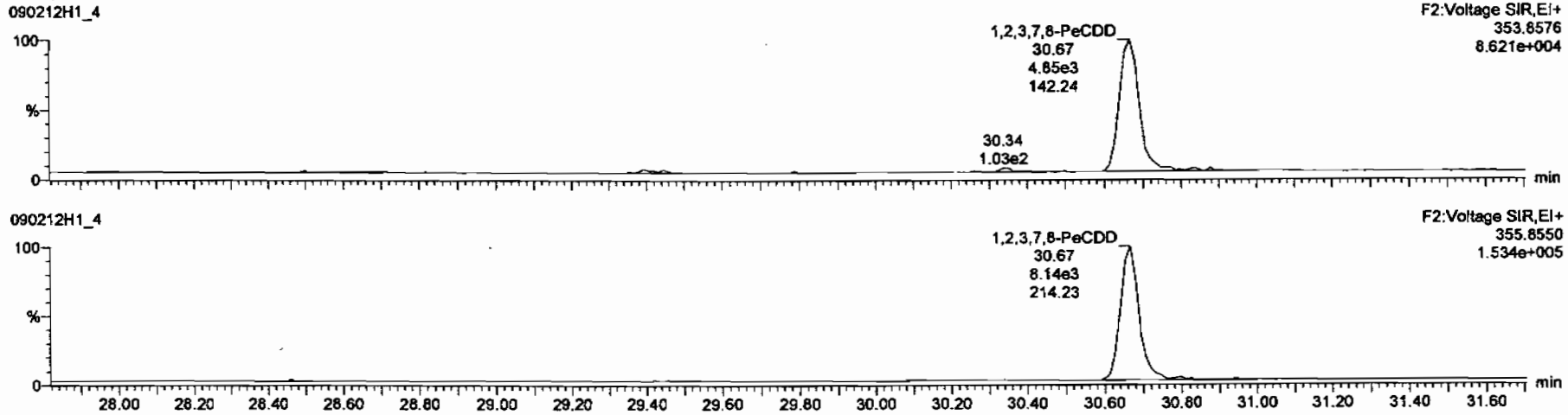

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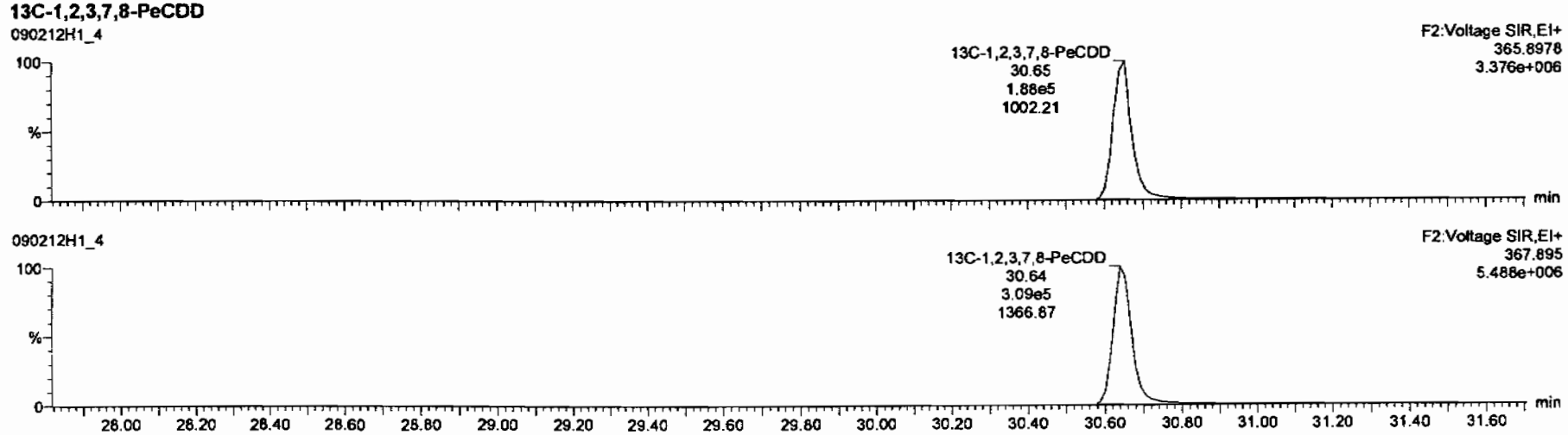

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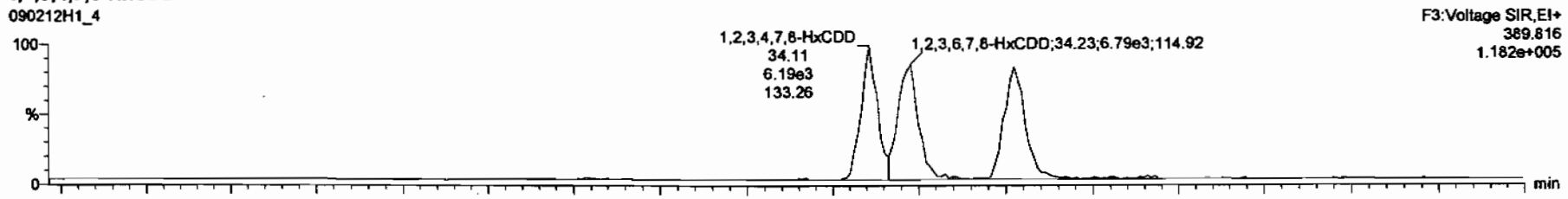

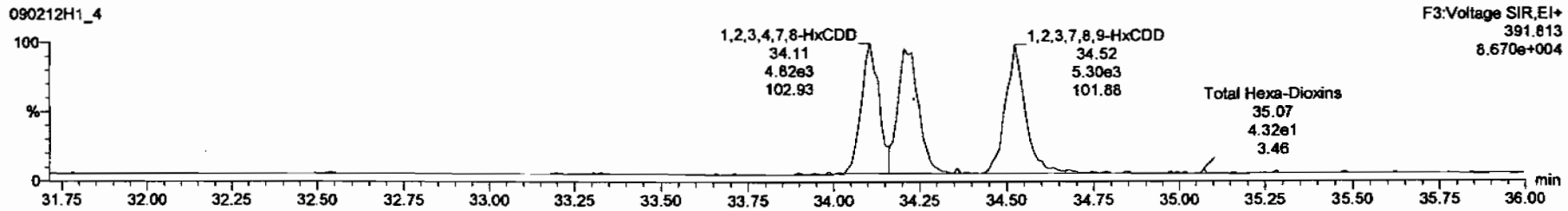

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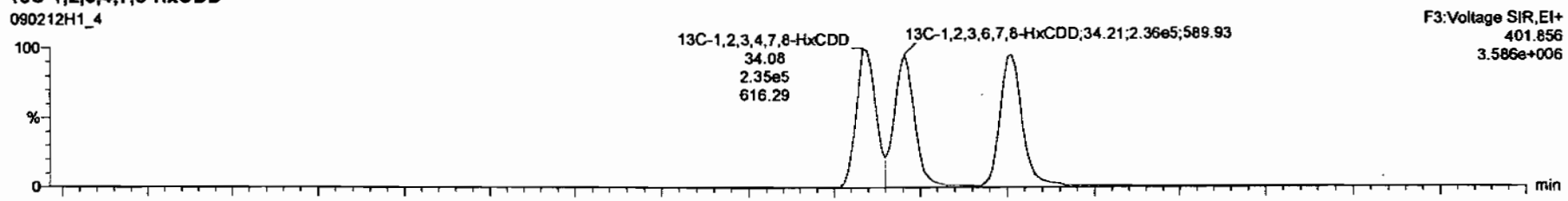

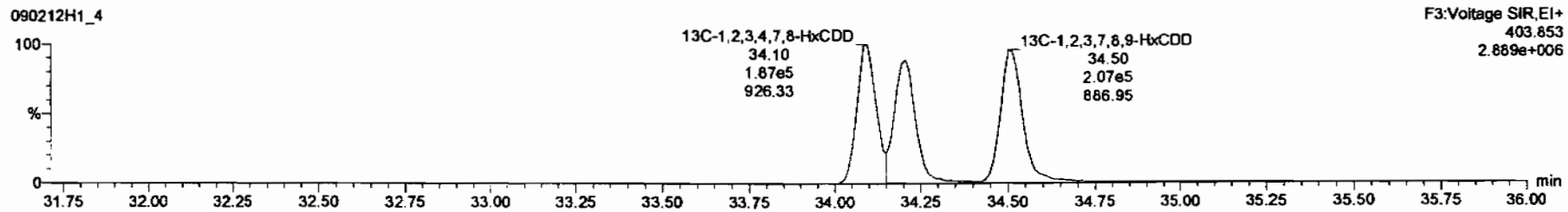

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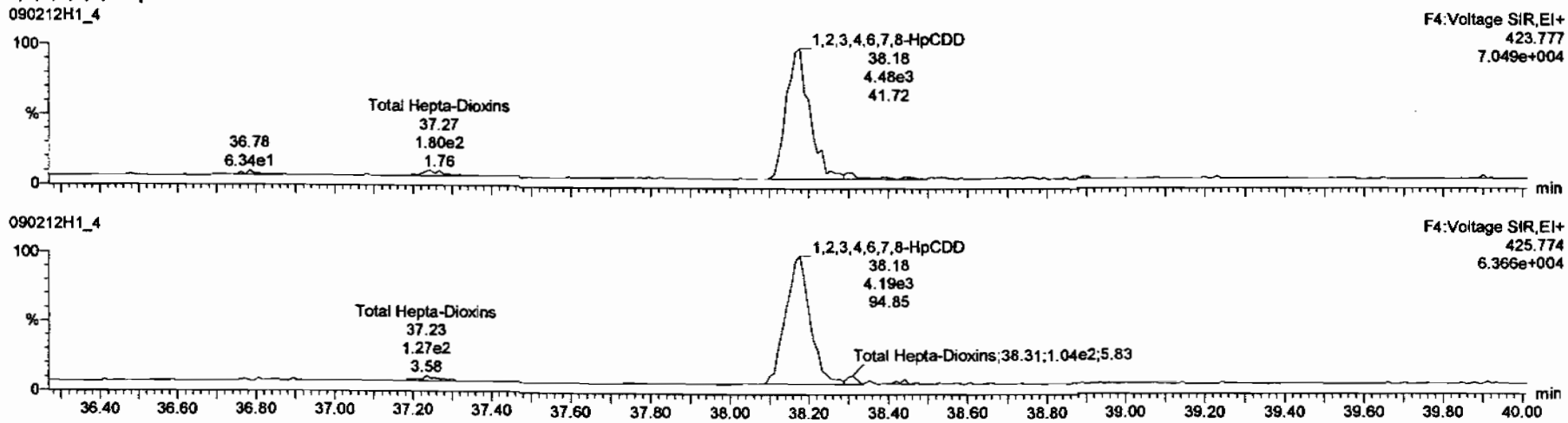

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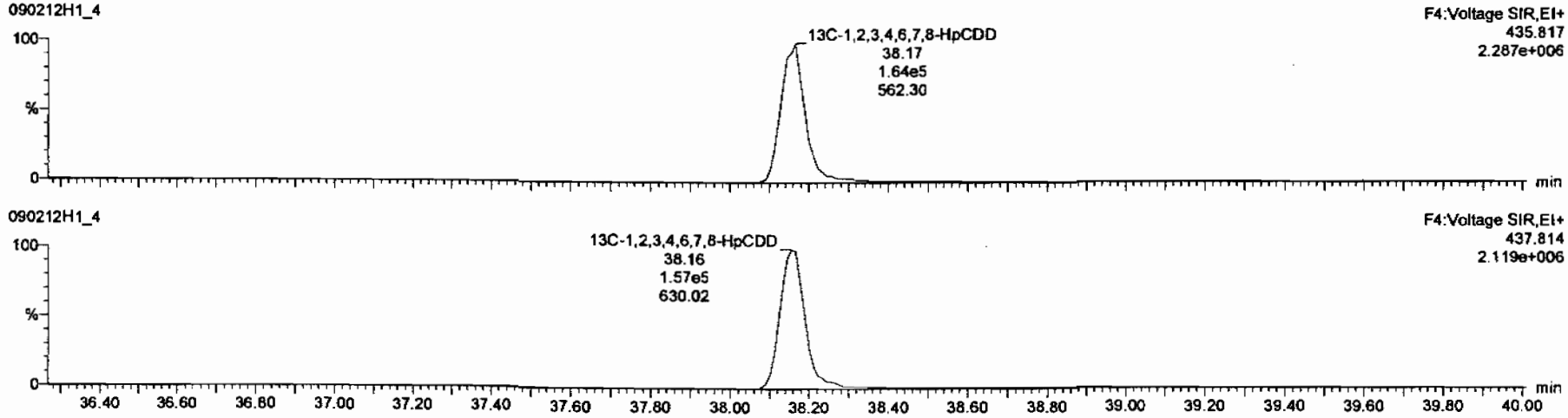

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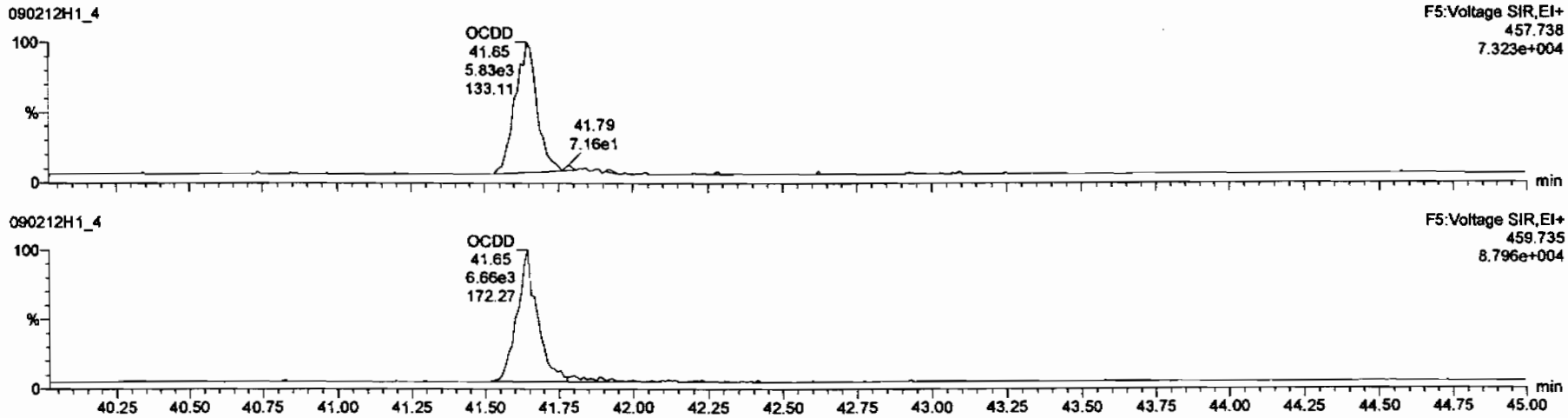

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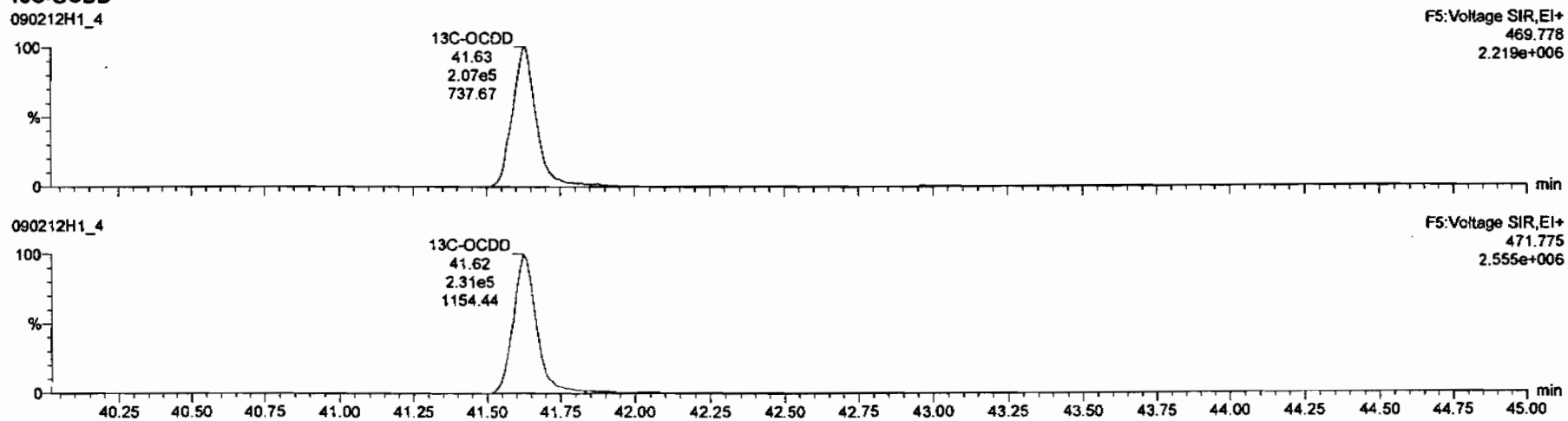

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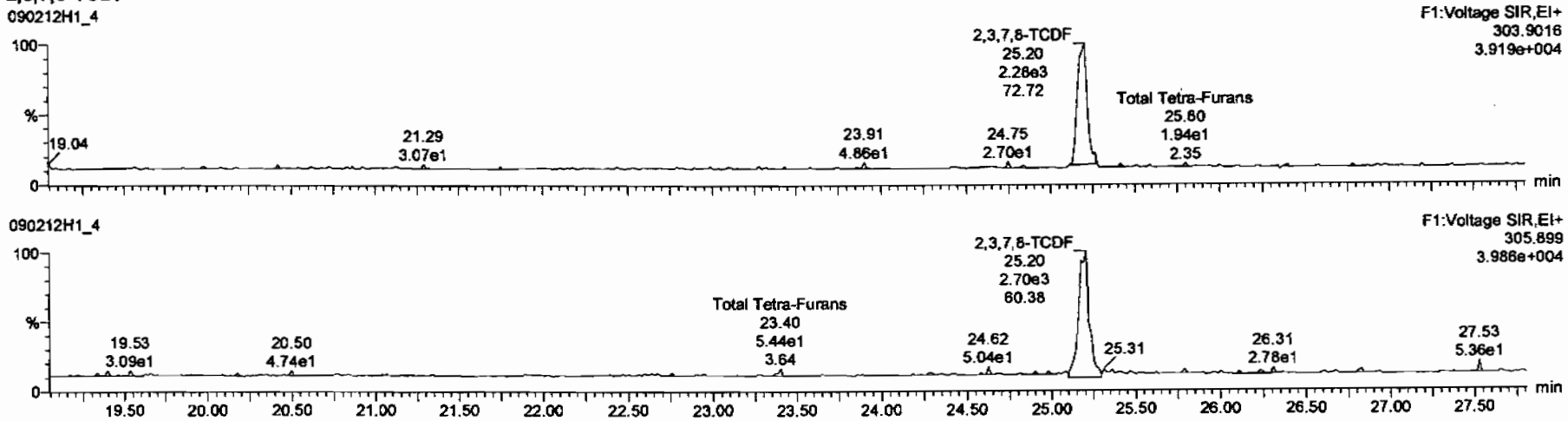

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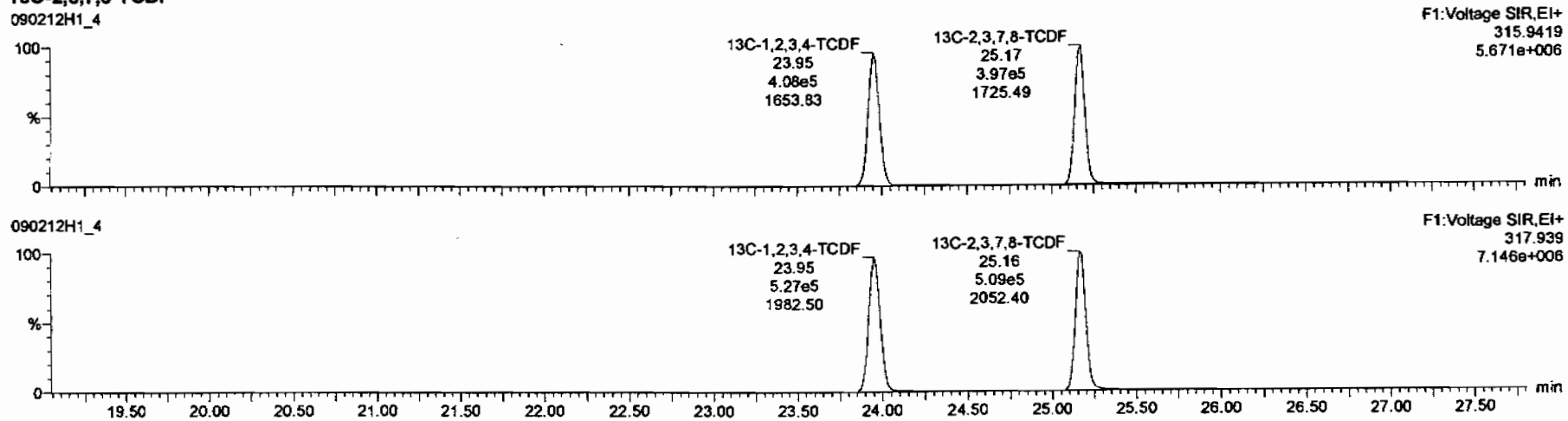

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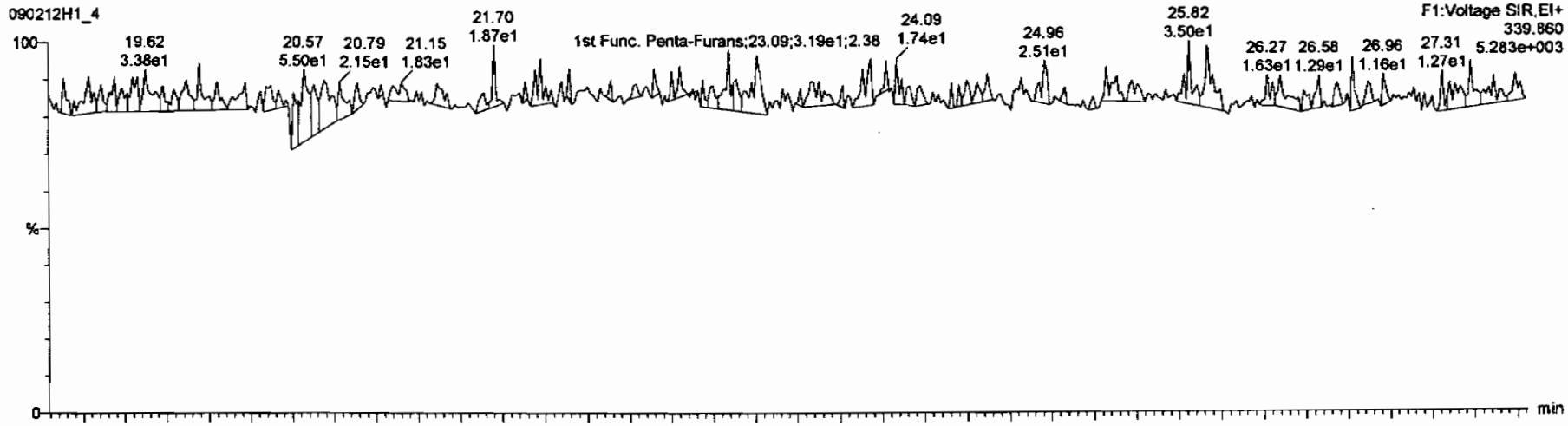

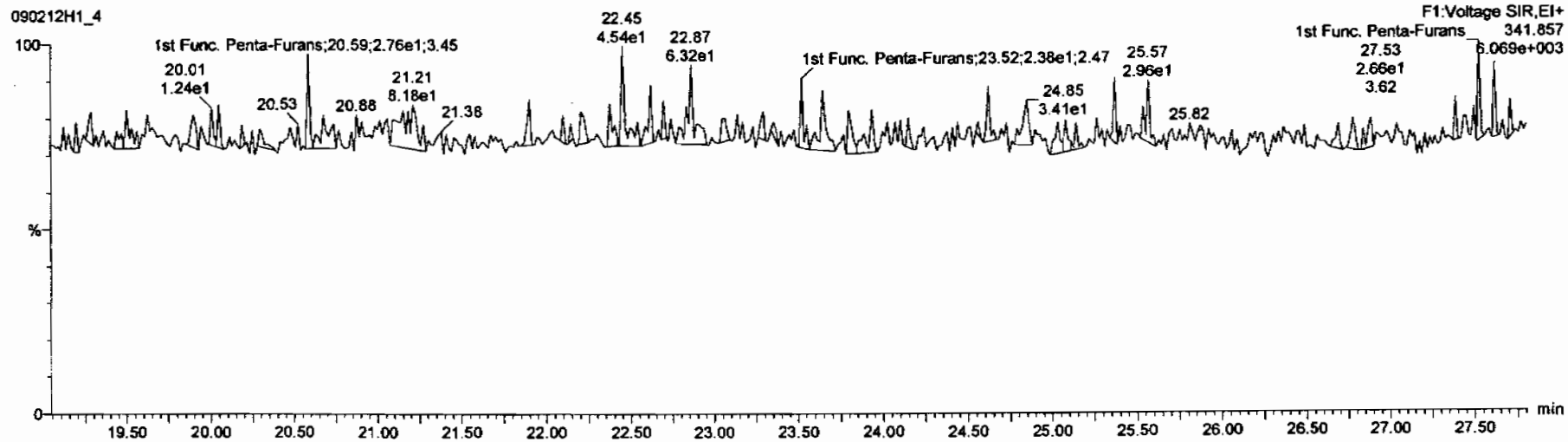

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1,2,3,7,8-PeCDF

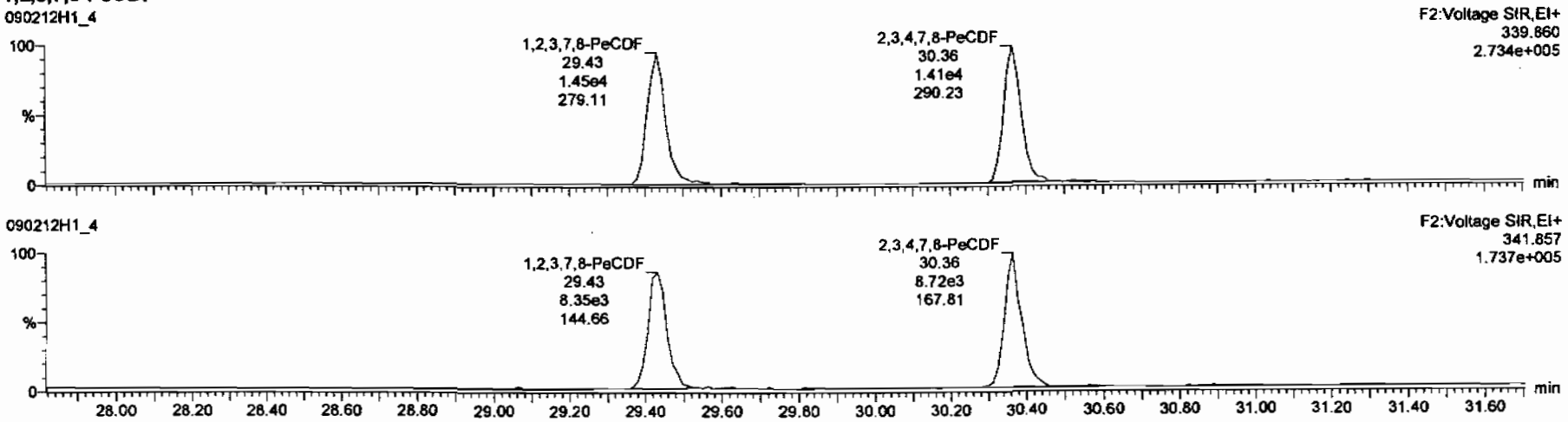

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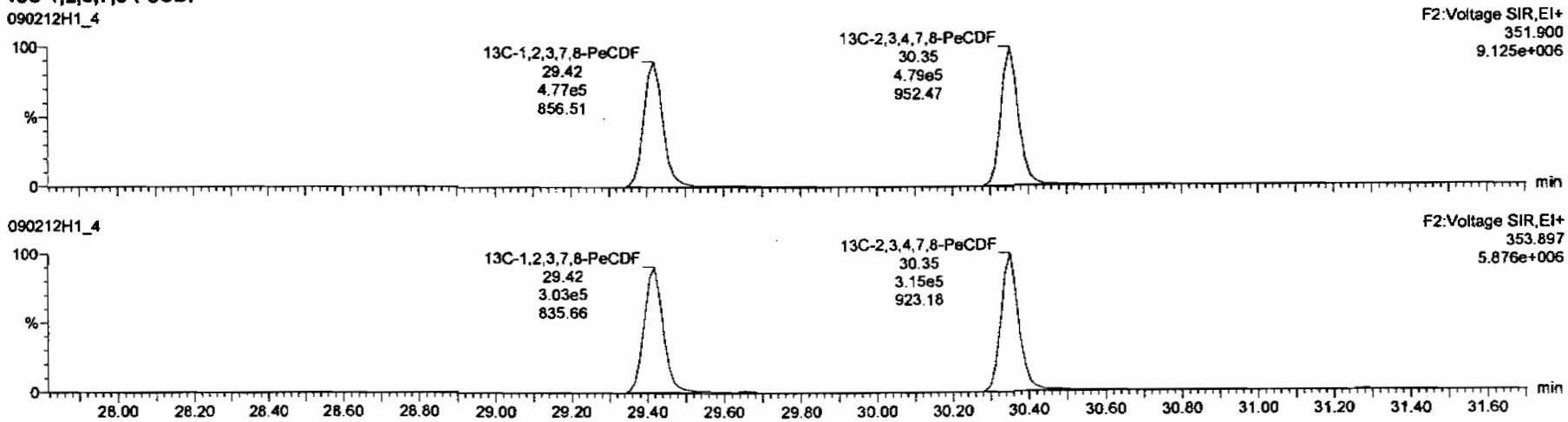

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1,2,3,4,7,8-HxCDF

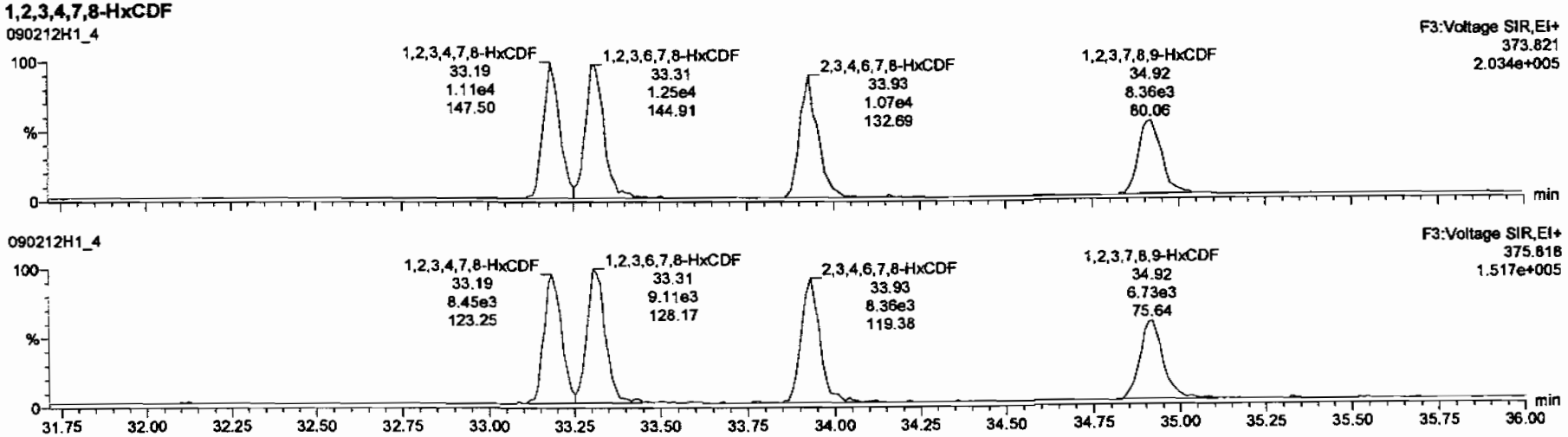

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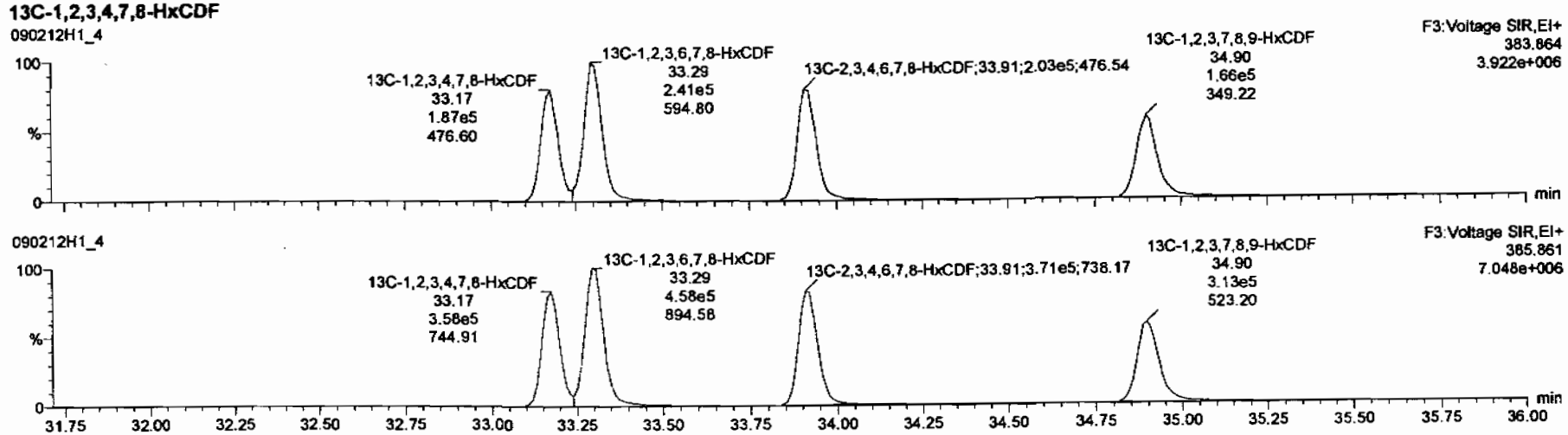

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1,2,3,4,6,7,8-HpCDF

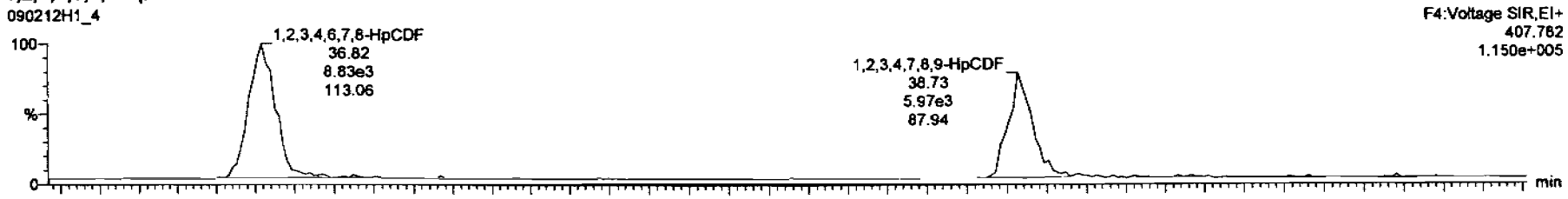

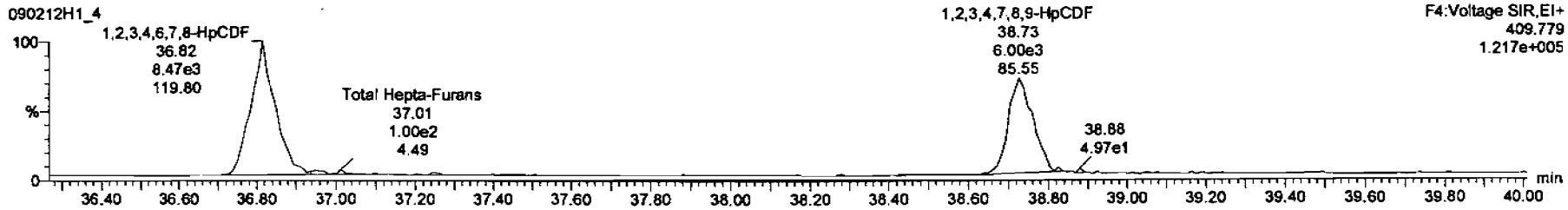

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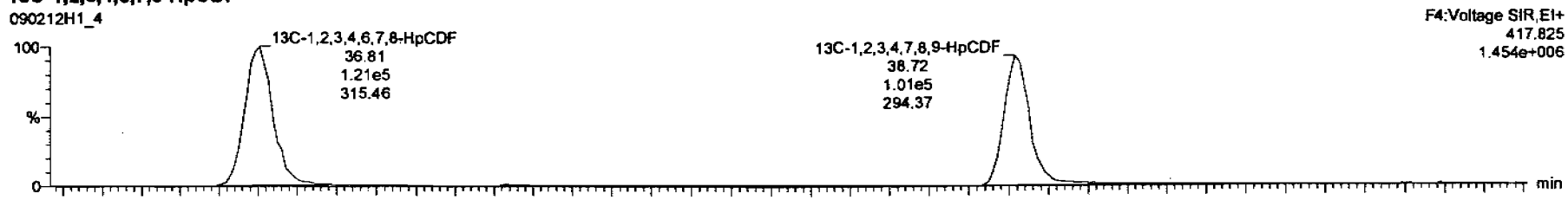

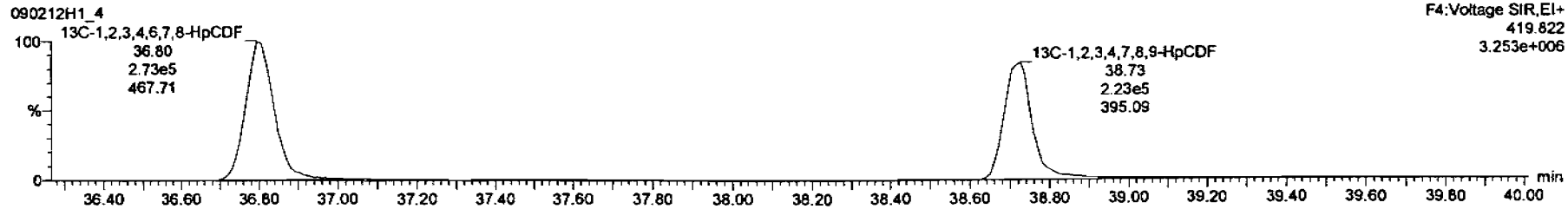

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OCDF

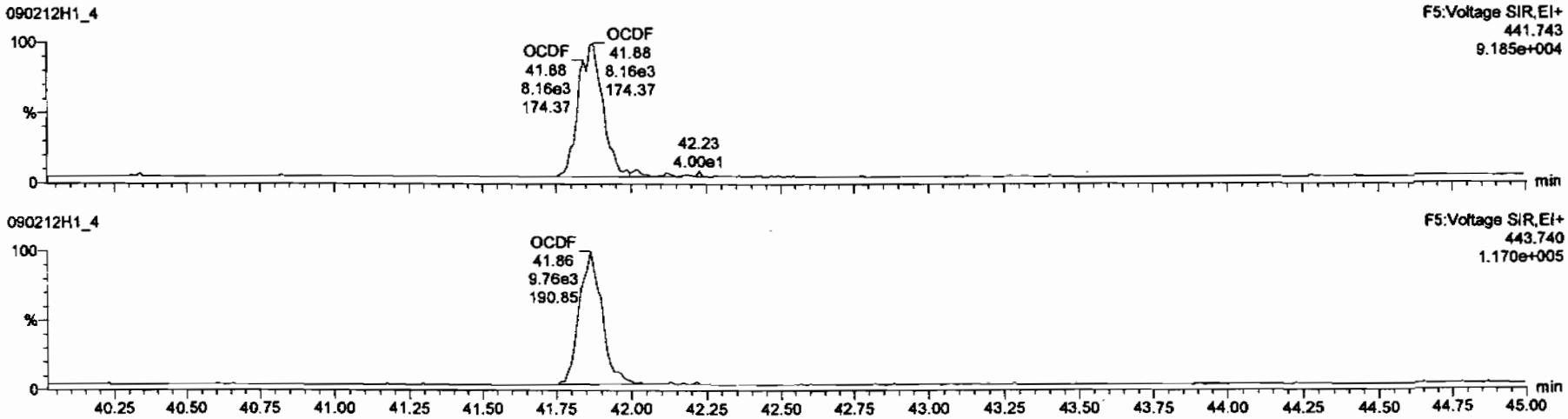

13C-OCDF

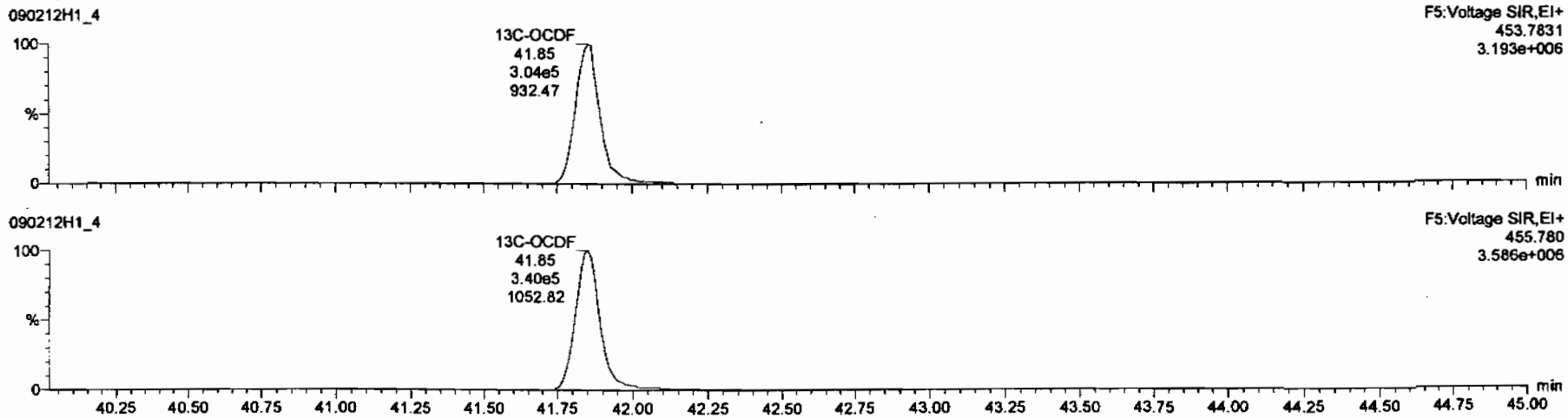

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PFK1

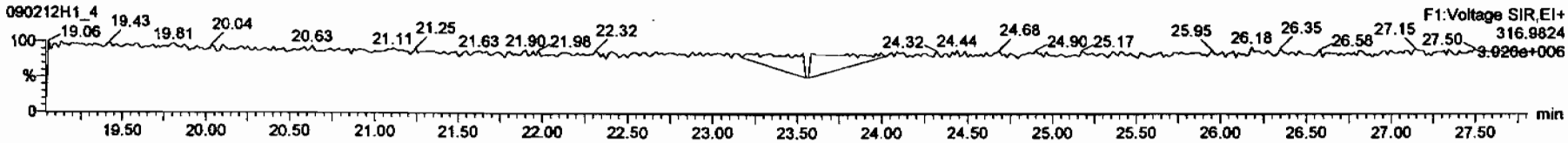

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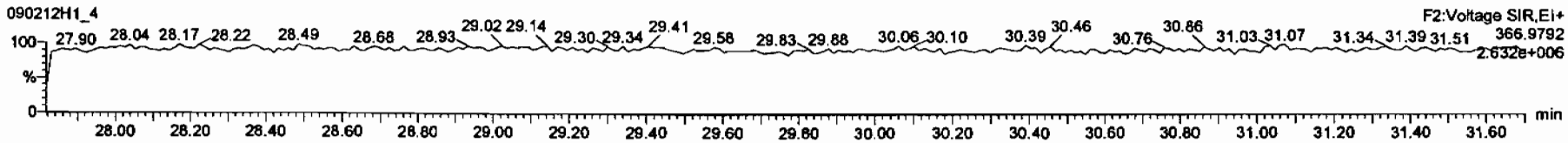

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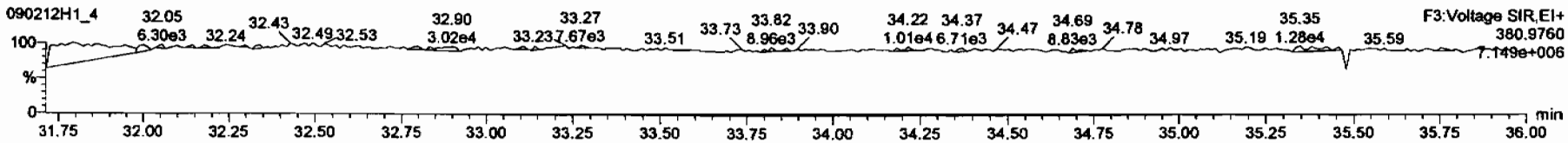

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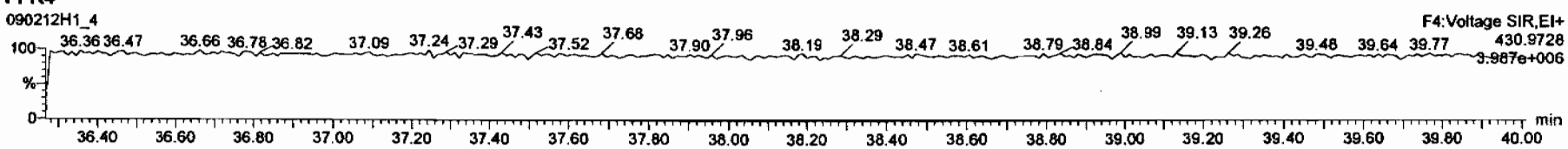

PFK5

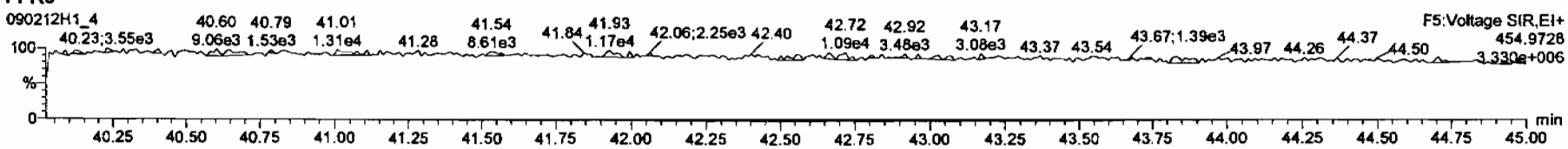

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DPE1

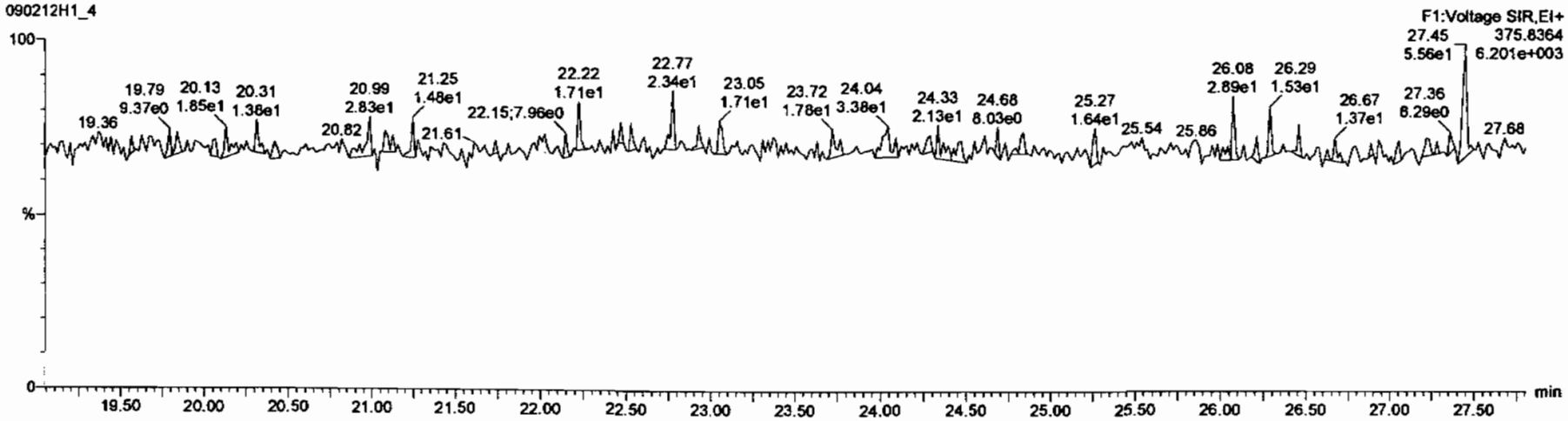

DPE6

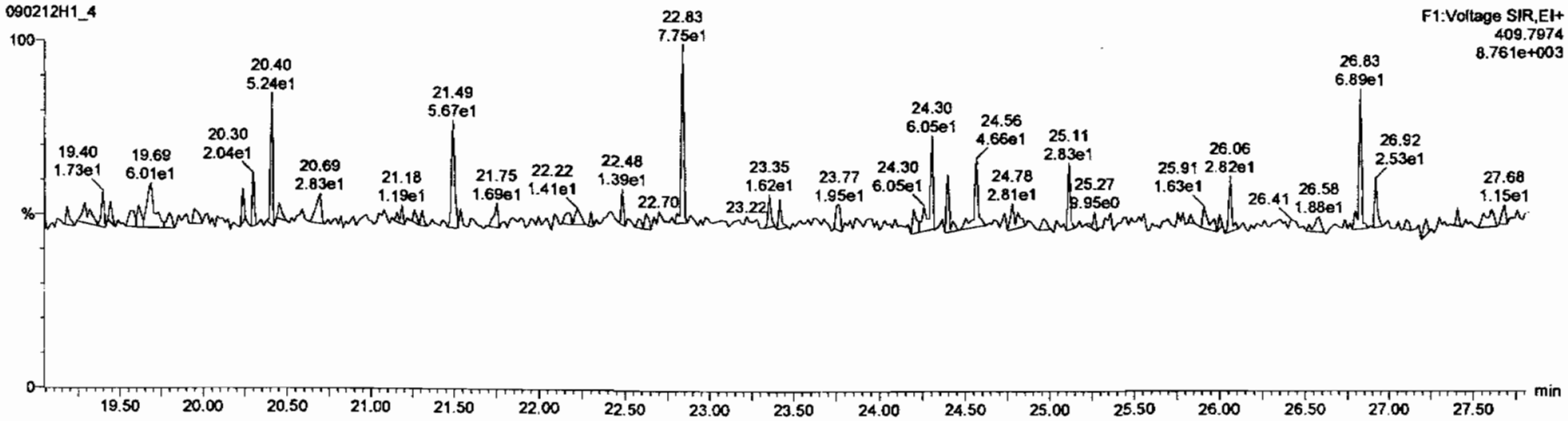

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DPE2

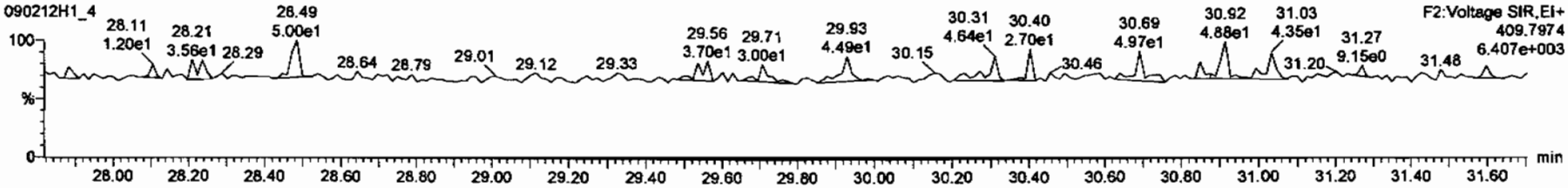

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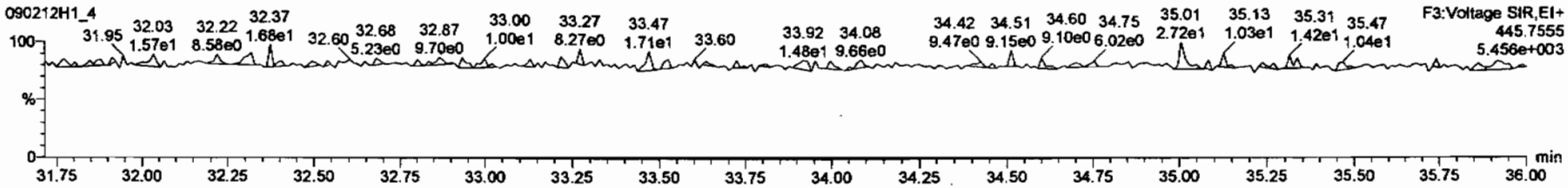

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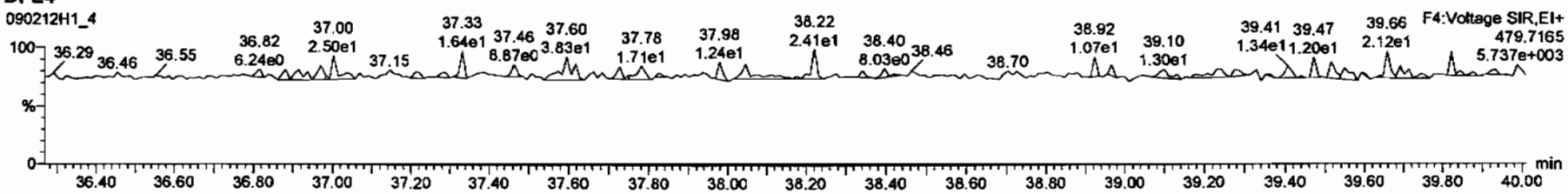

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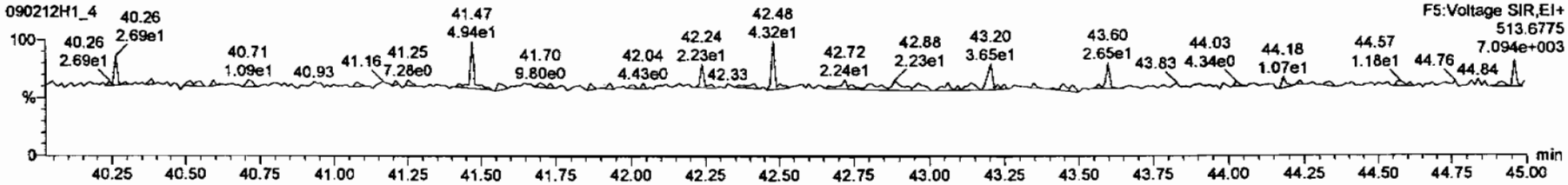

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_5, Date: 12-Feb-2009, Time: 14:28:11, ID: ST090212H1-4 1613 CS2 080917H, Description: 1613 CS2 080917H

2,3,7,8-TCDD

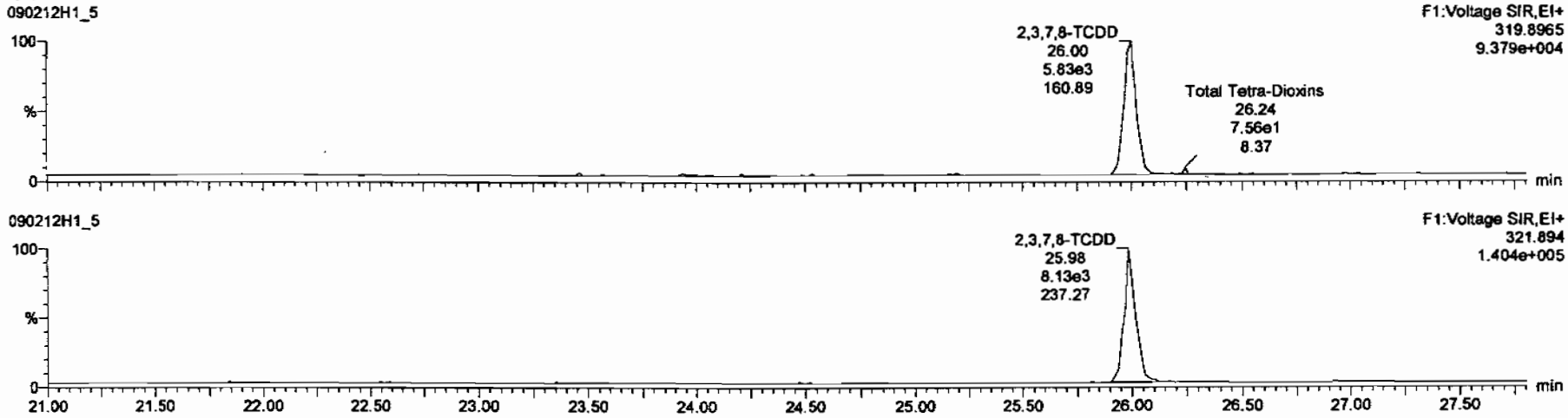

13C-2,3,7,8-TCDD

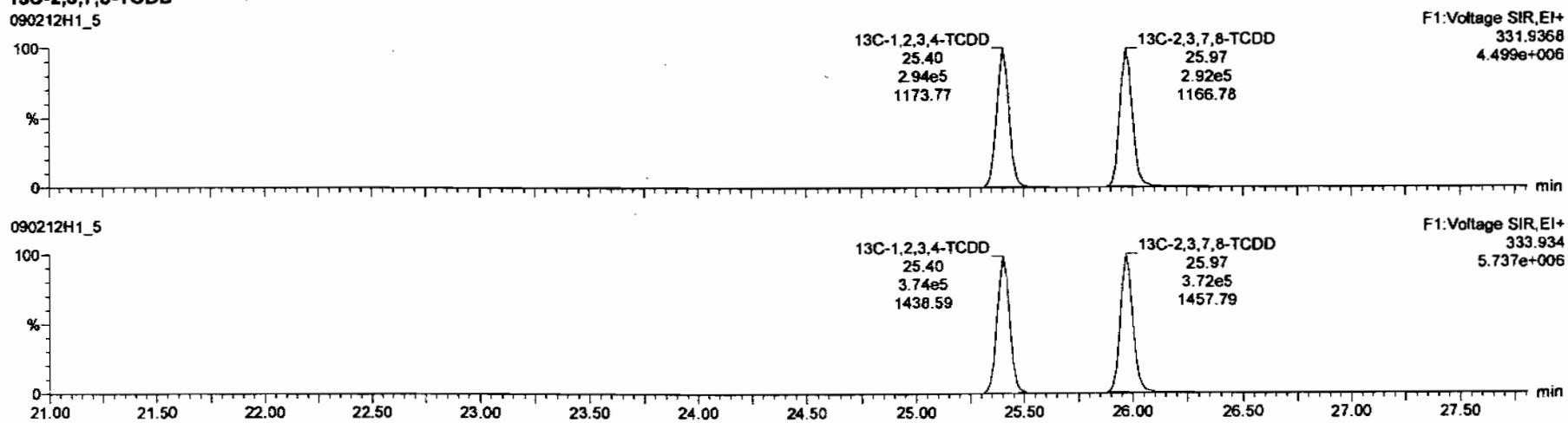

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37Cl-2,3,7,8-TCDD

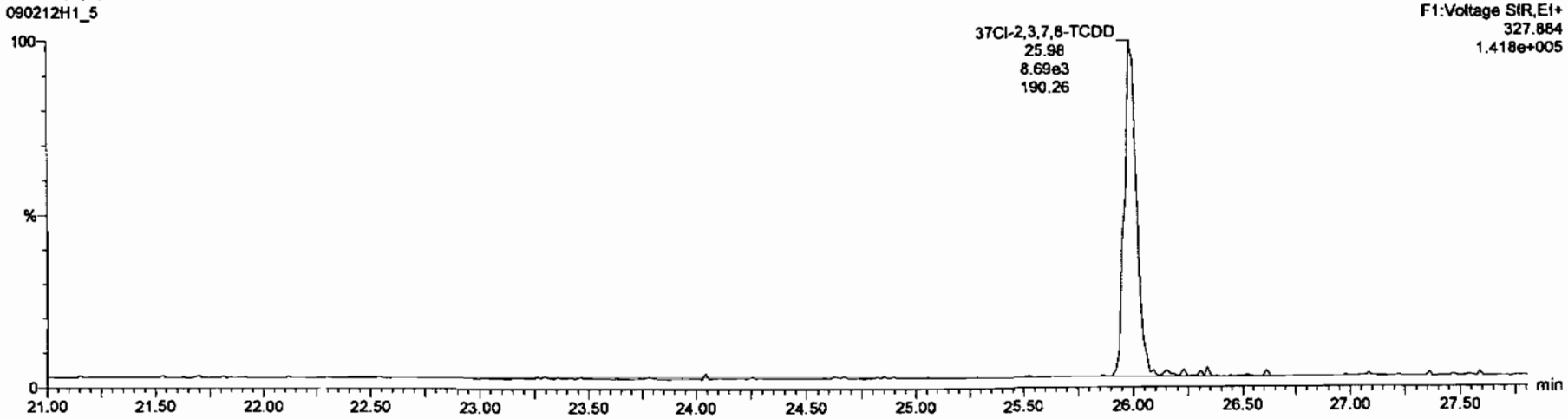

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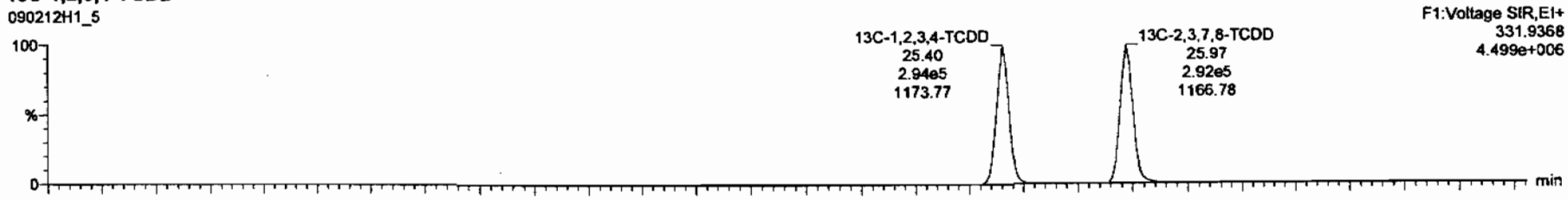

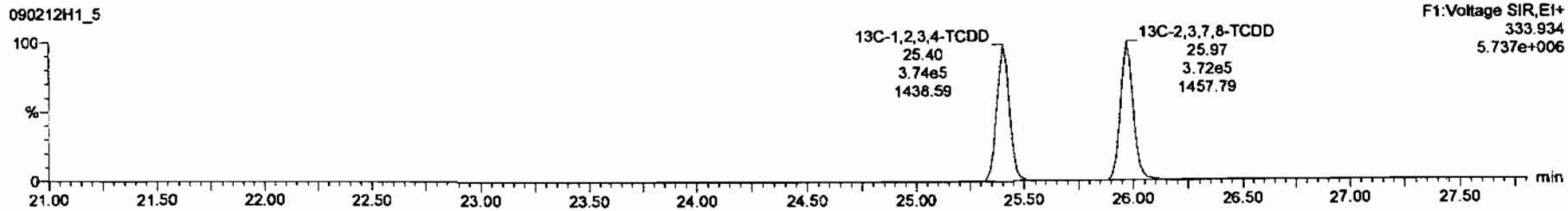

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

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1,2,3,7,8-PeCDD

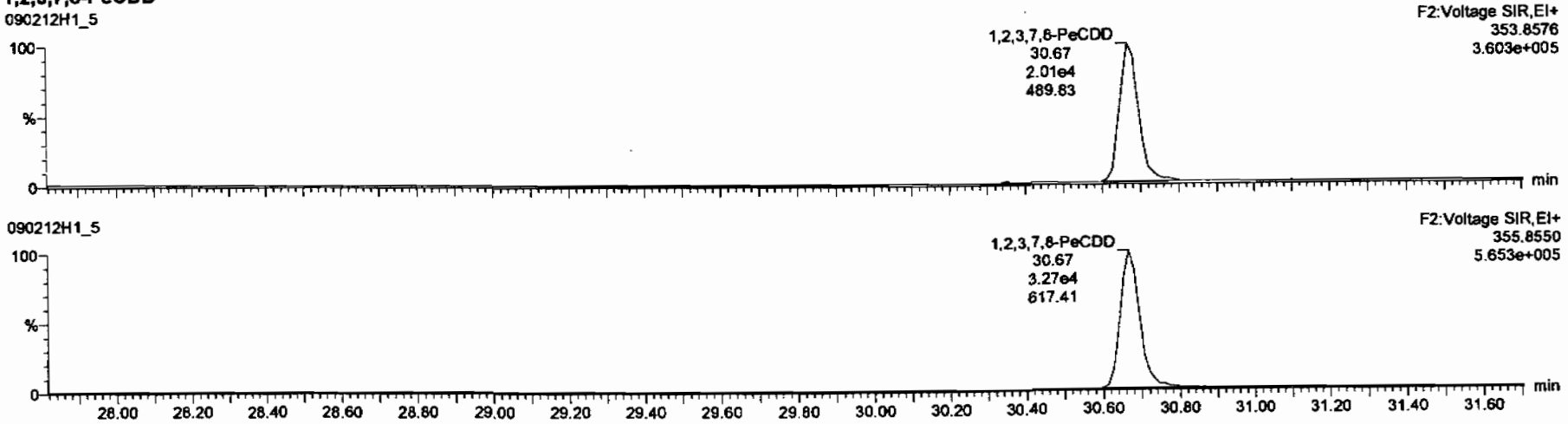

13C-1,2,3,7,8-PeCDD

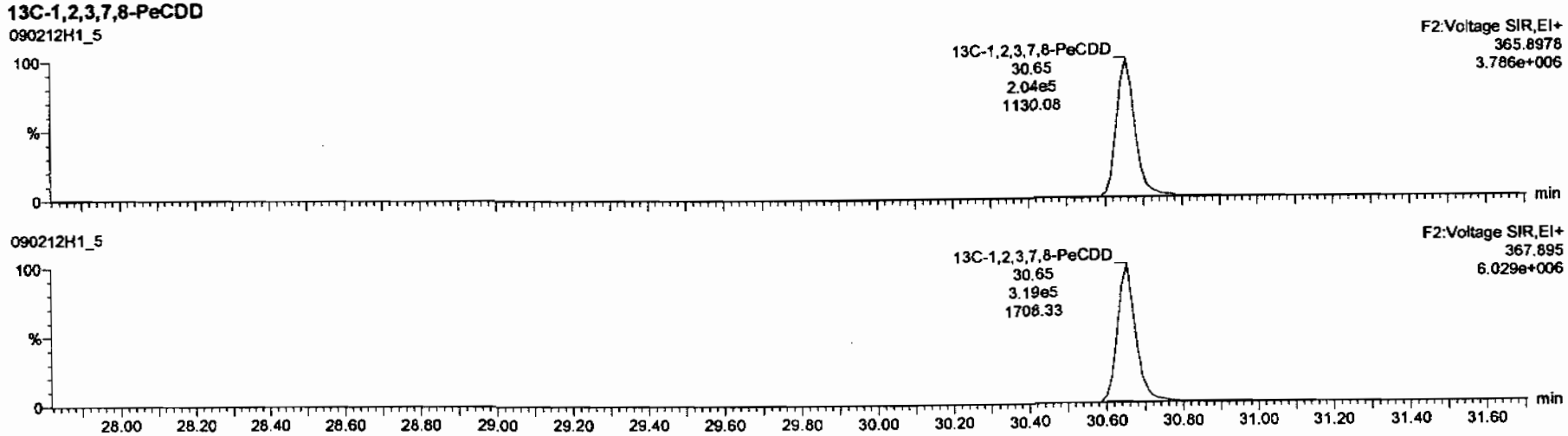

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1,2,3,4,7,8-HxCDD

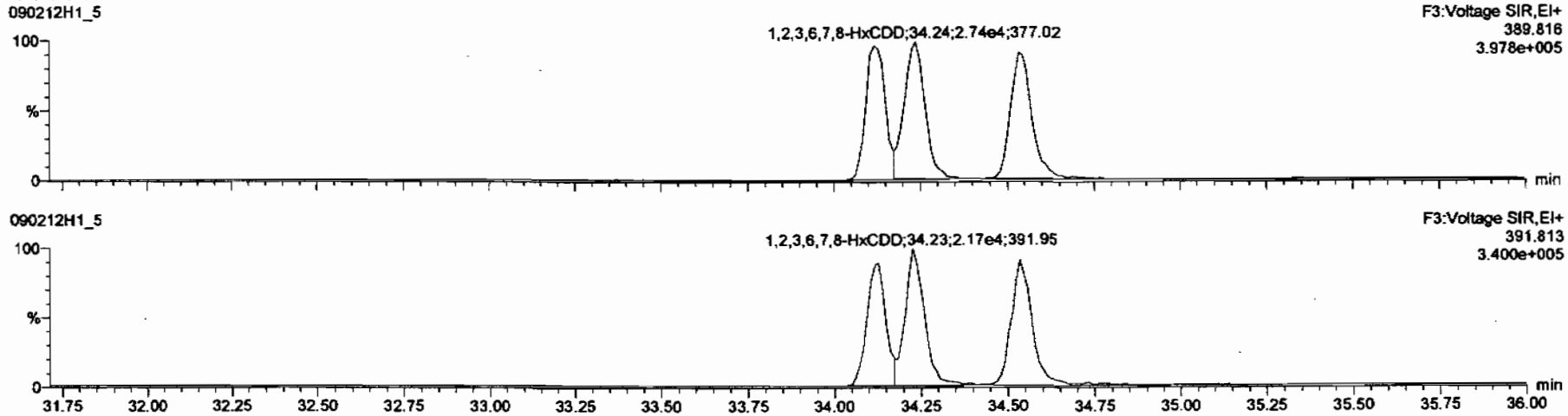

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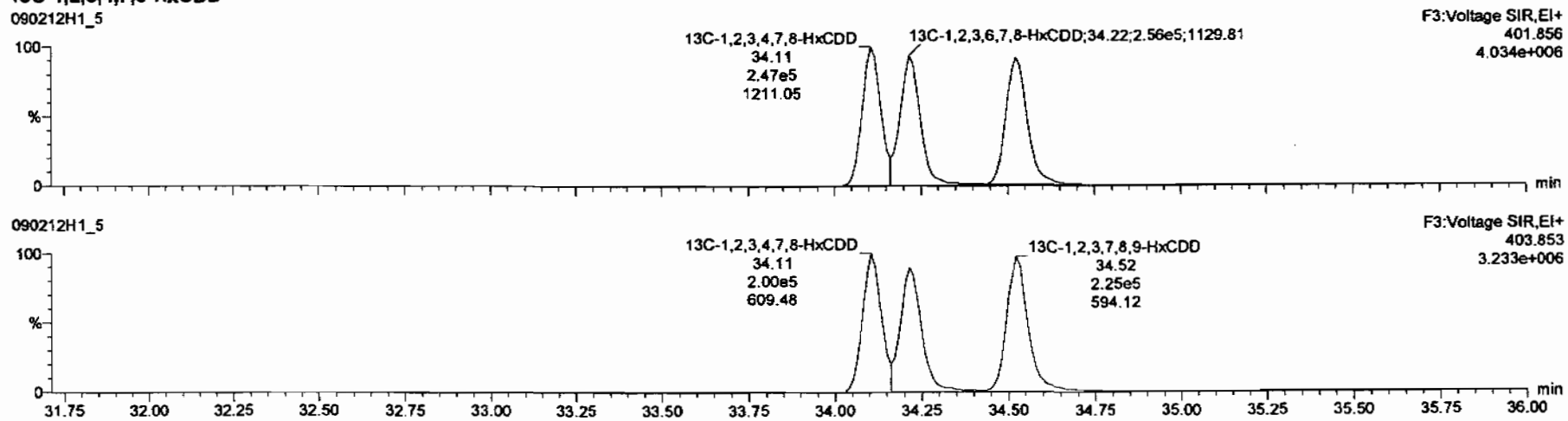

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1,2,3,4,6,7,8-HpCDD

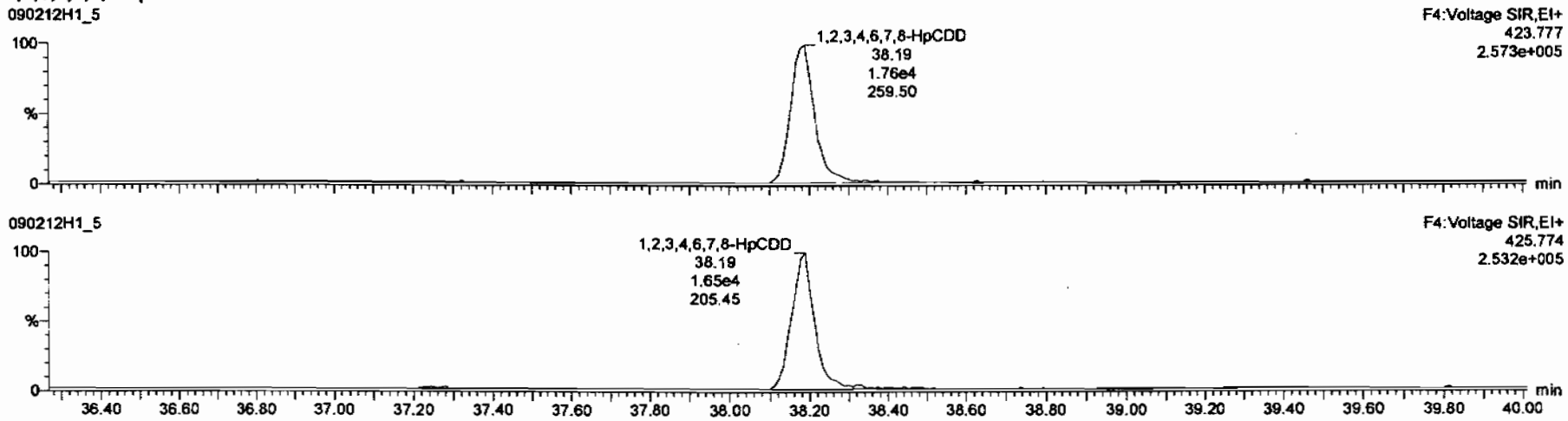

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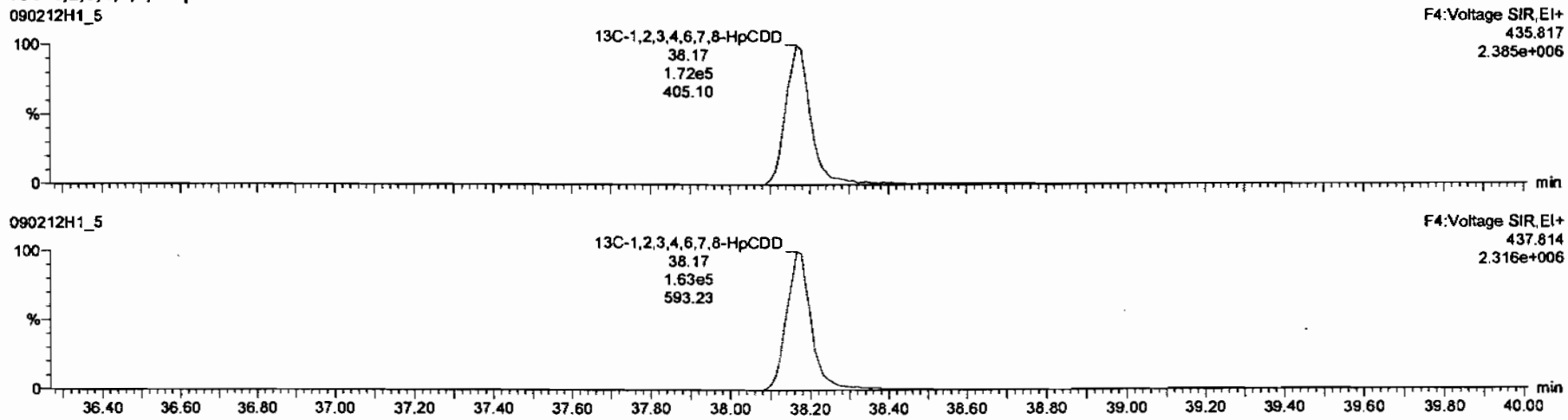

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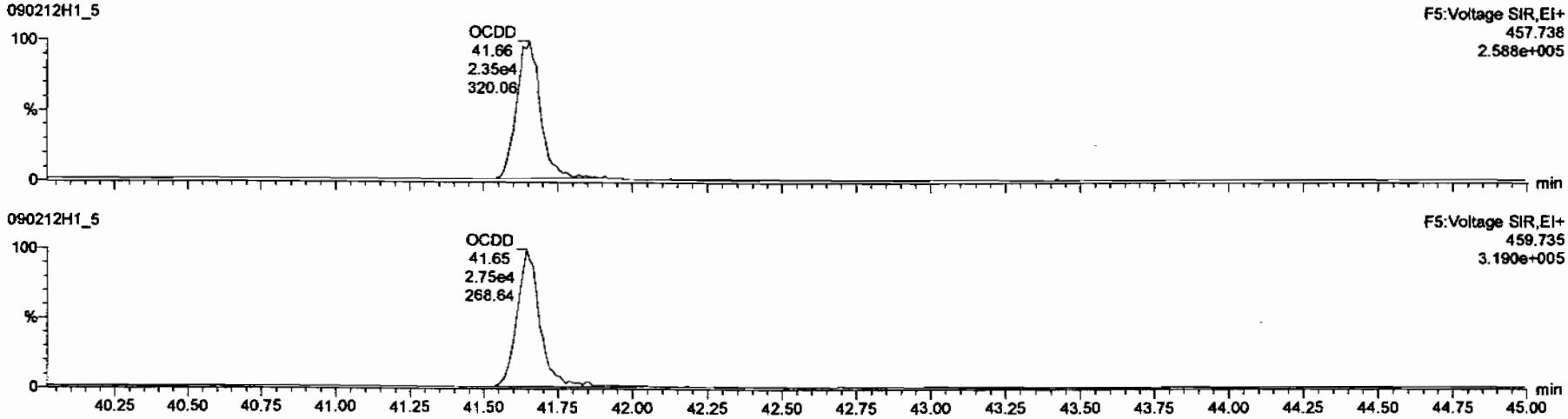

13C-OCDD

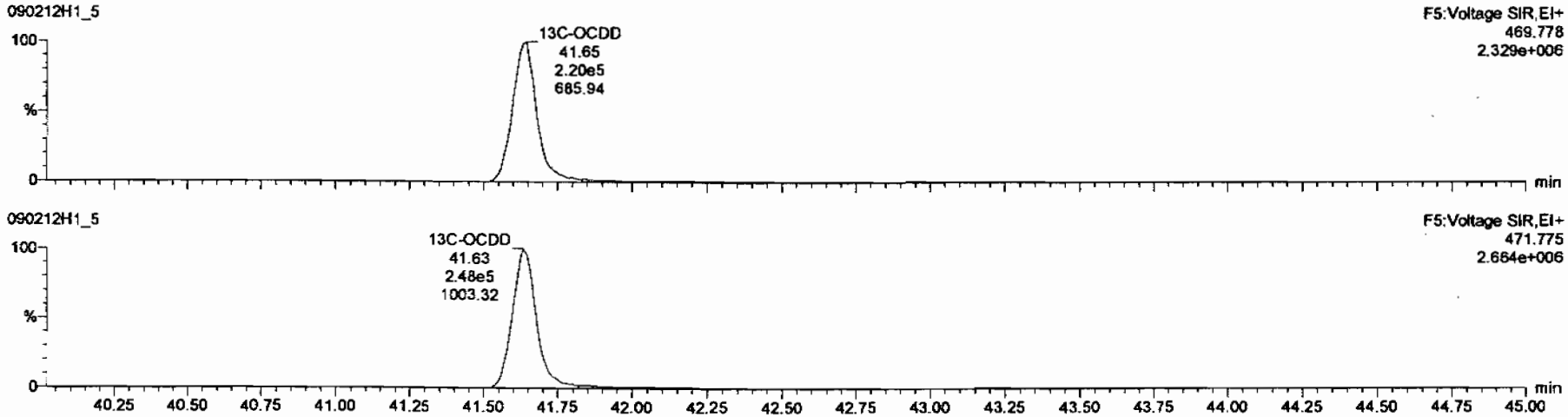

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2,3,7,8-TCDF

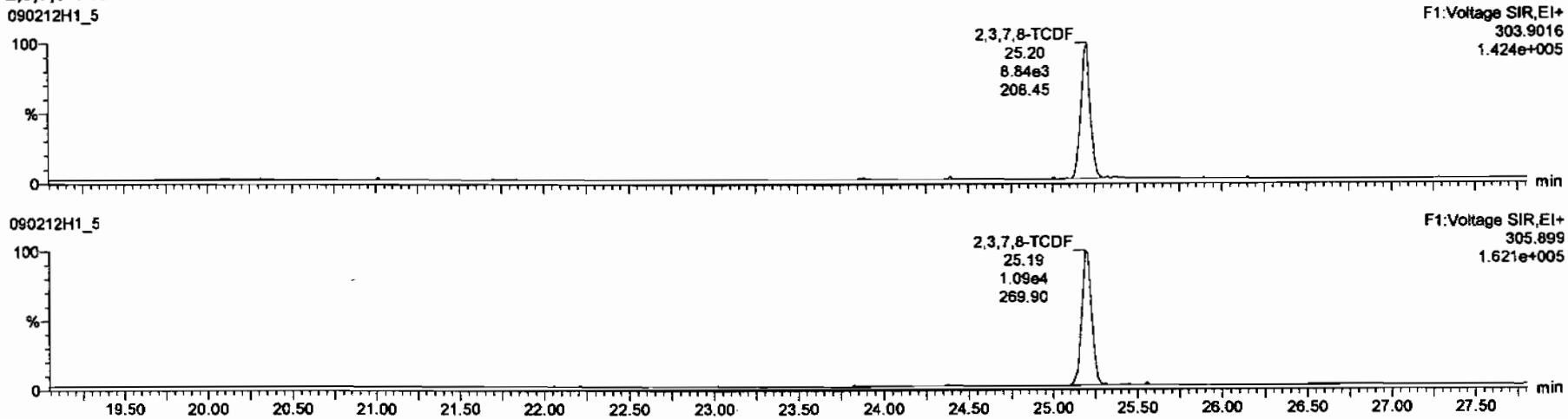

13C-2,3,7,8-TCDF

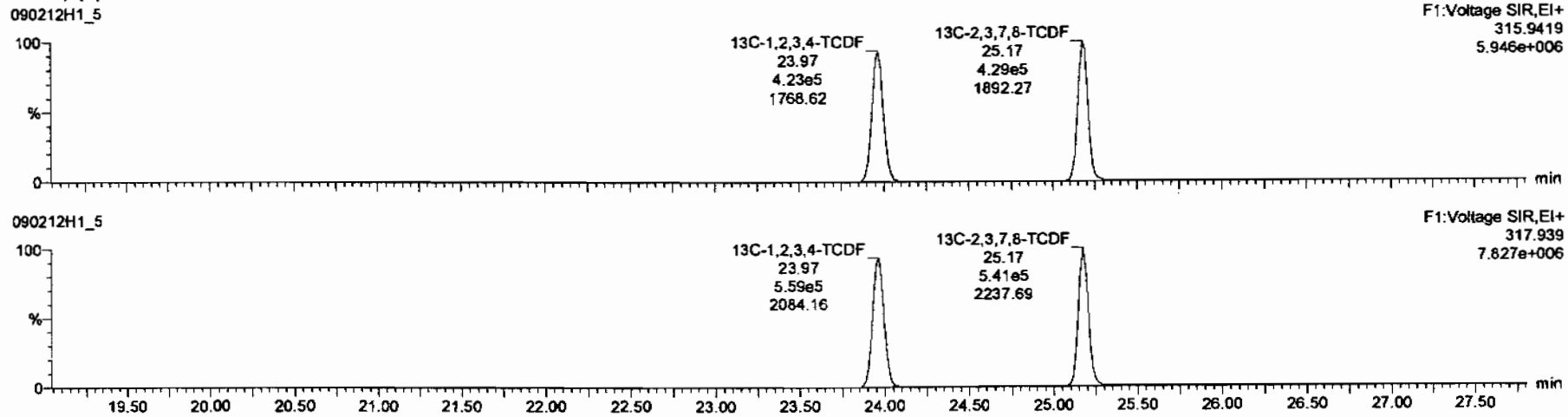

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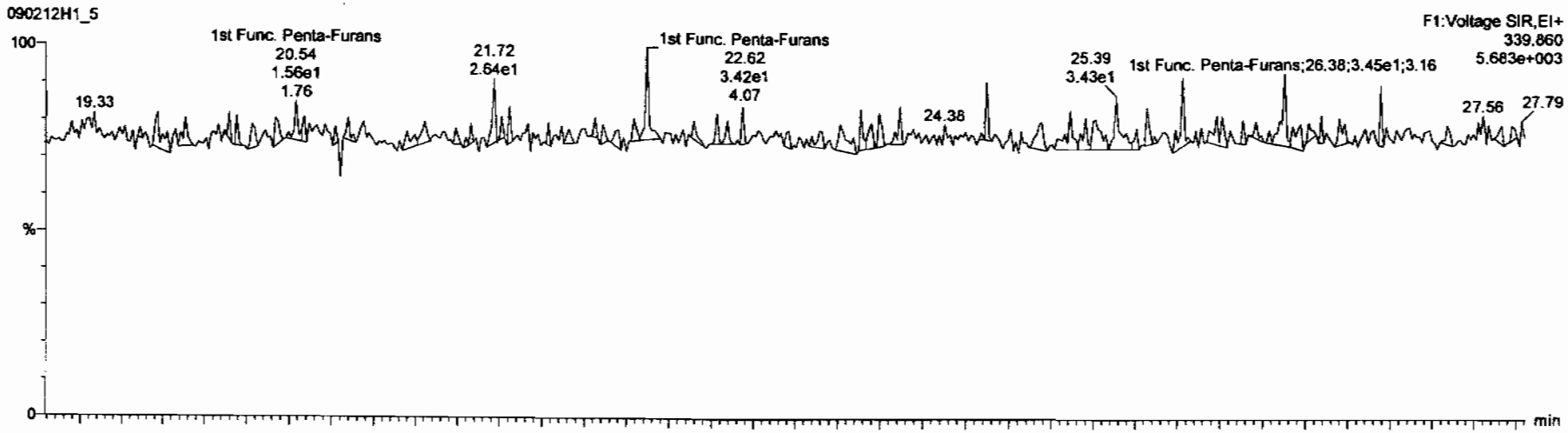

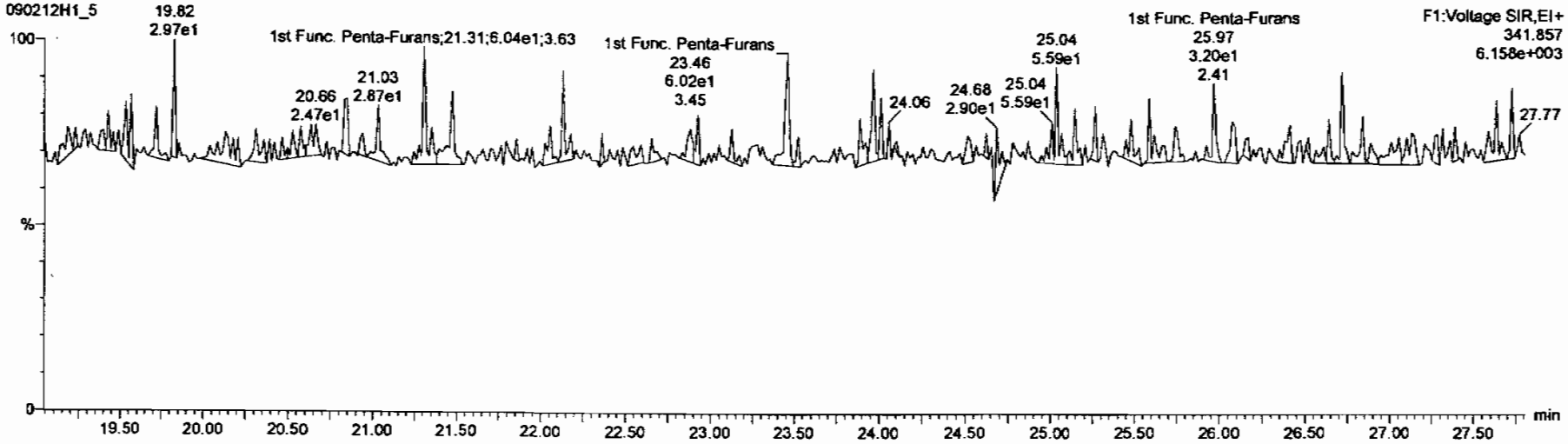

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1,2,3,7,8-PeCDF

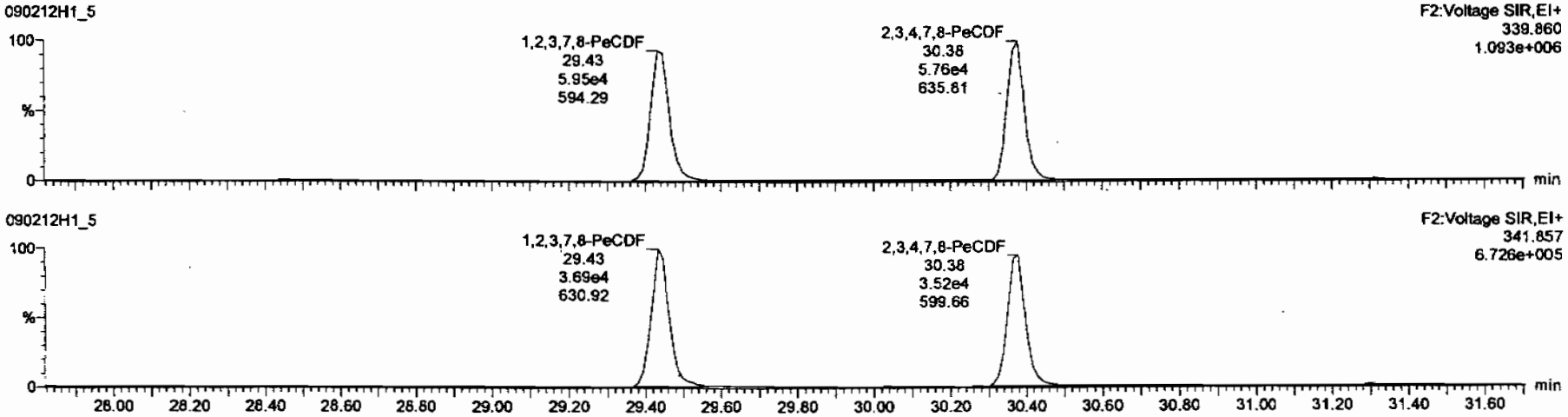

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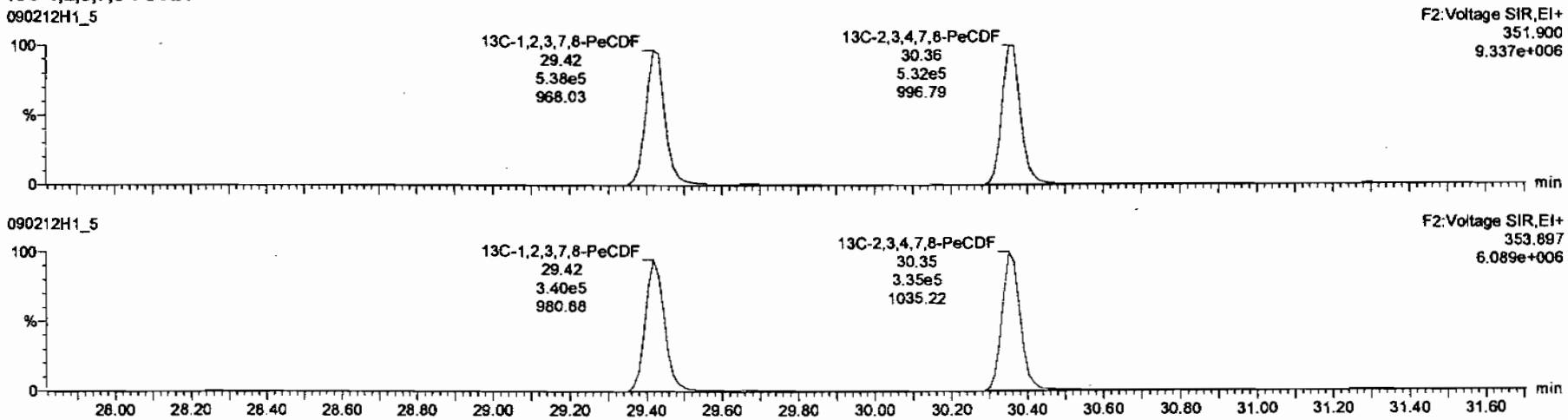

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1,2,3,4,7,8-HxCDF

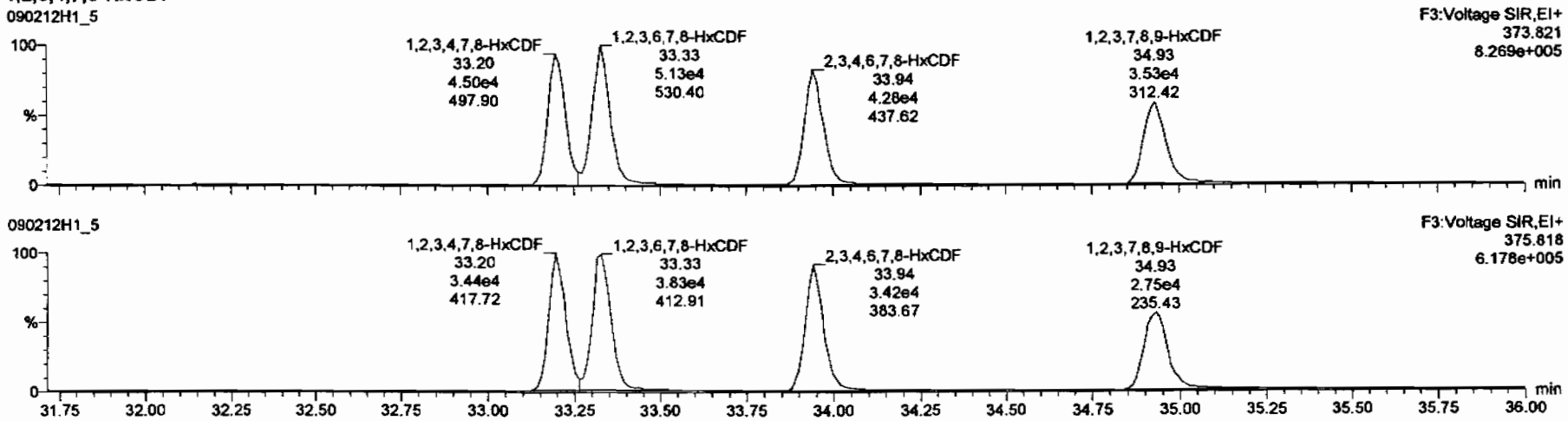

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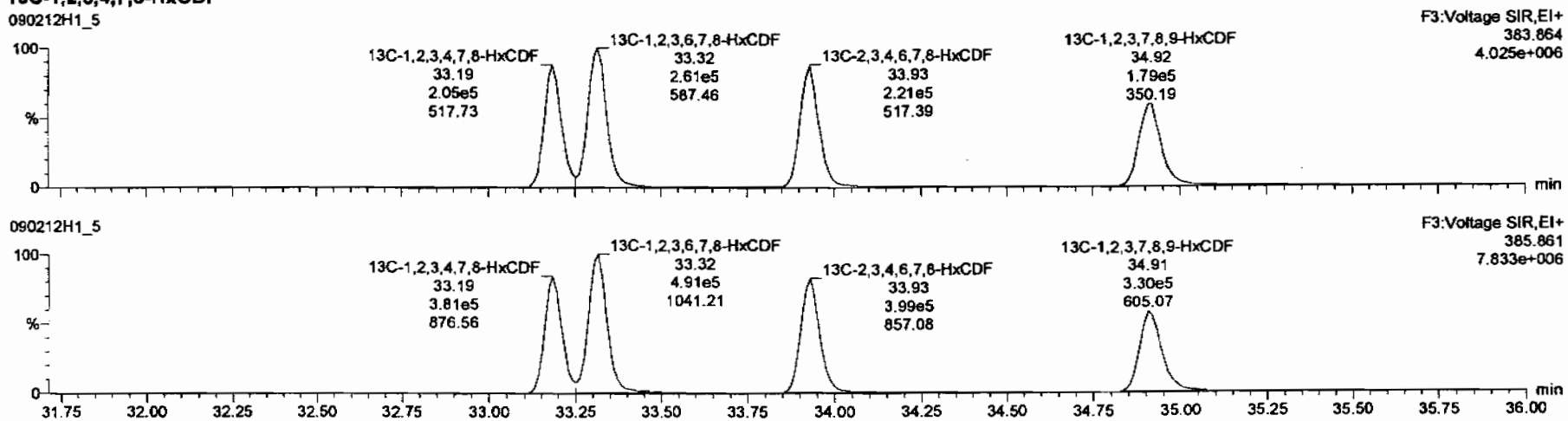

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1,2,3,4,6,7,8-HpCDF

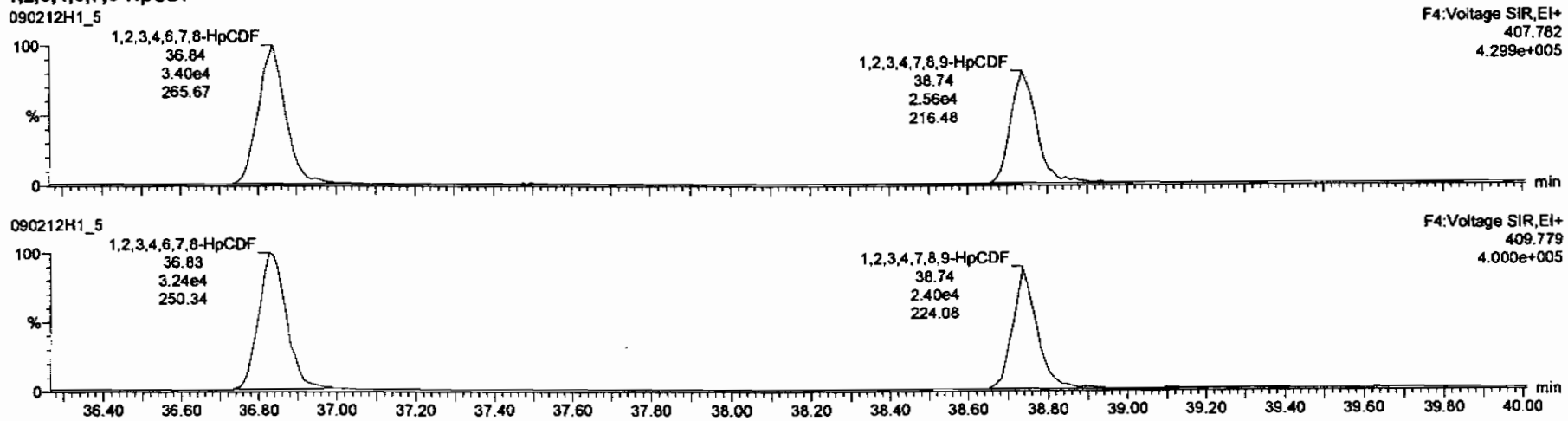

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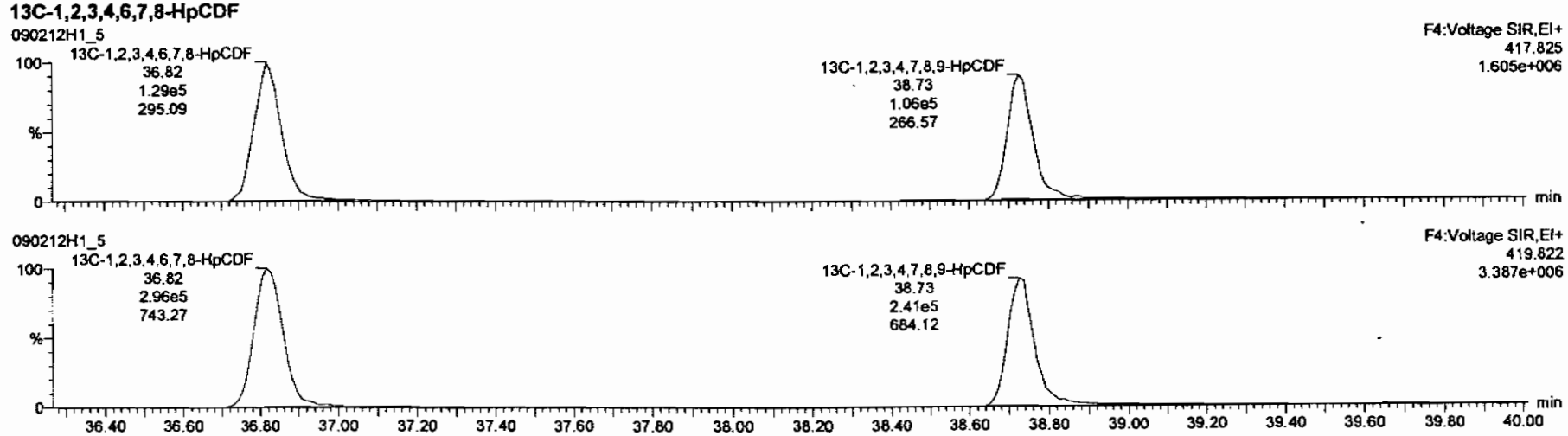

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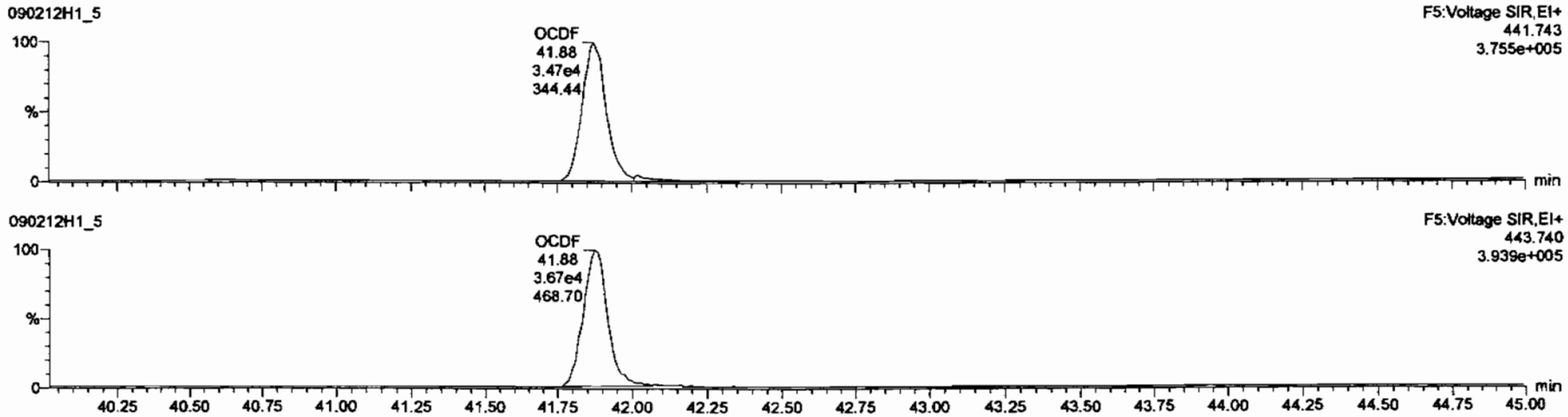

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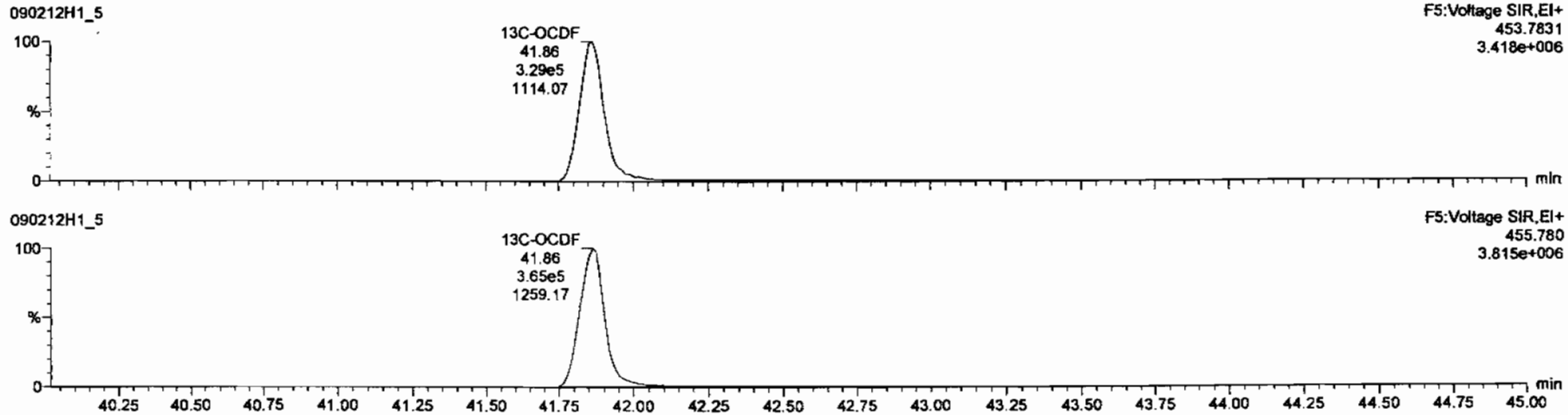

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PFK1

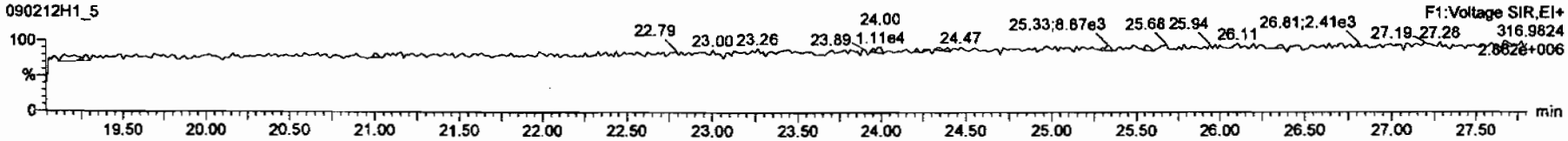

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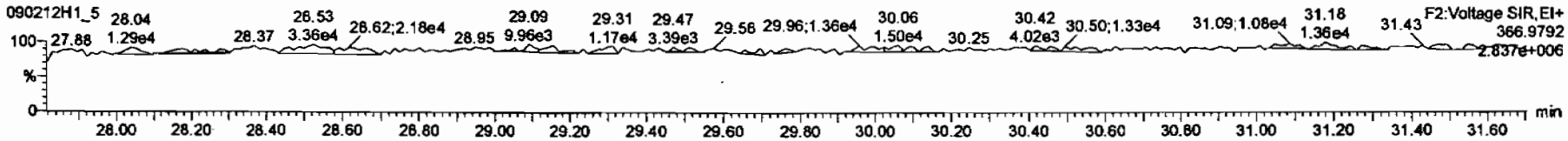

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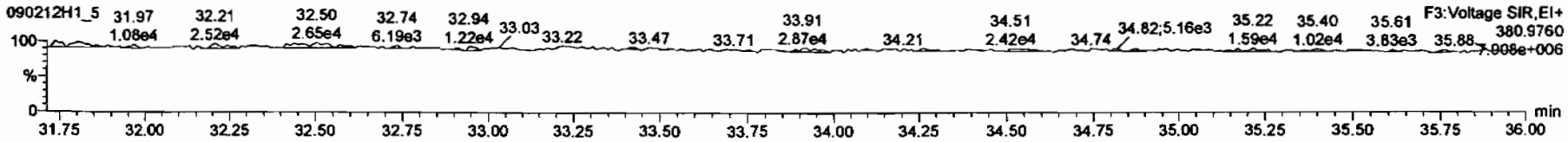

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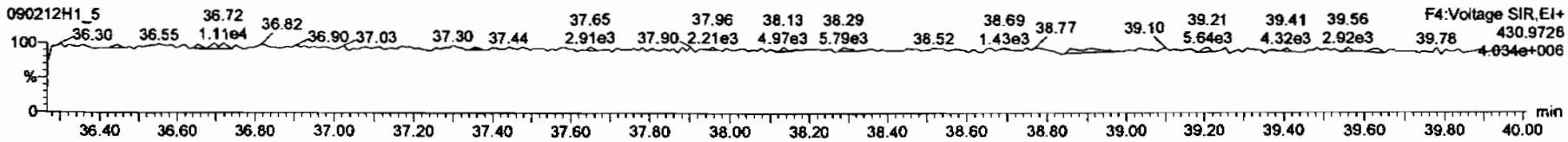

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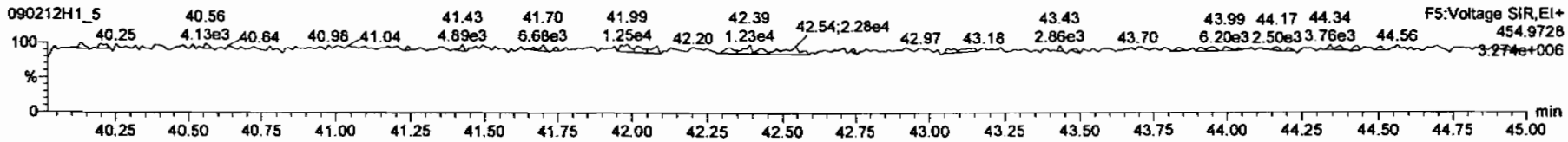

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DPE1

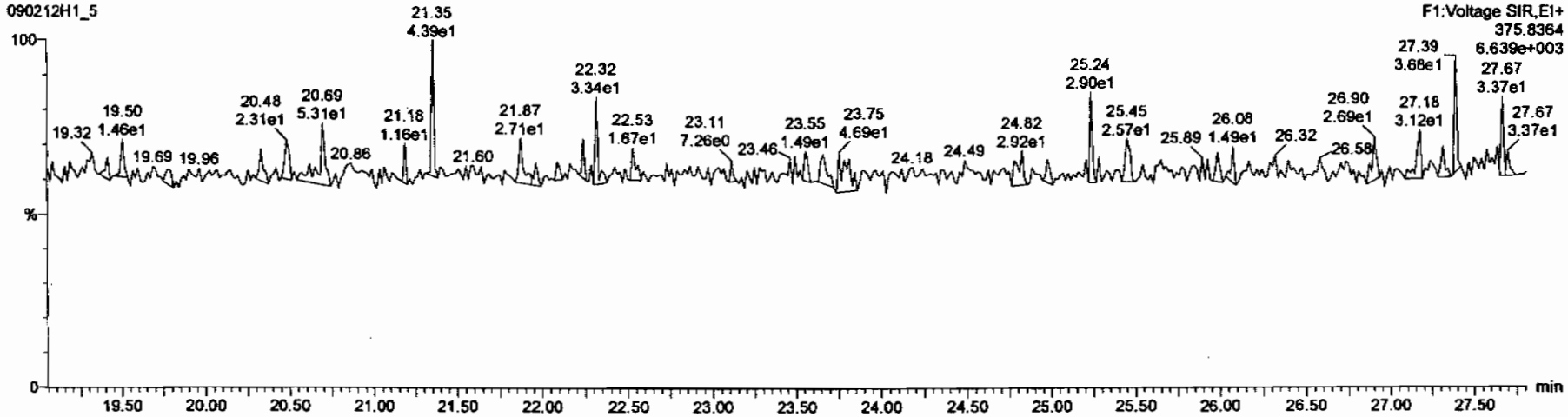

DPE6

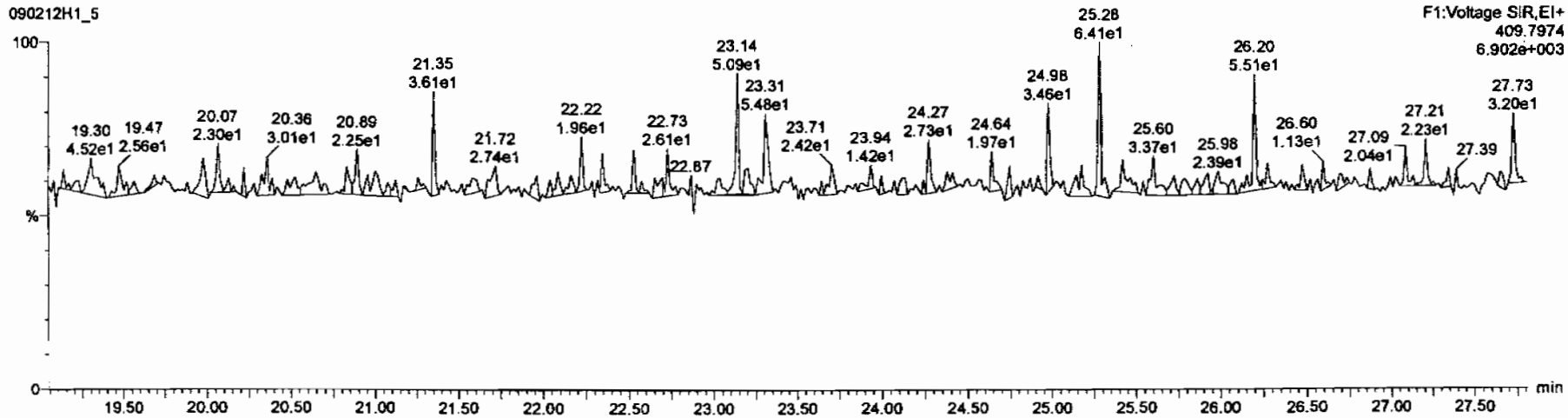

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DPE2

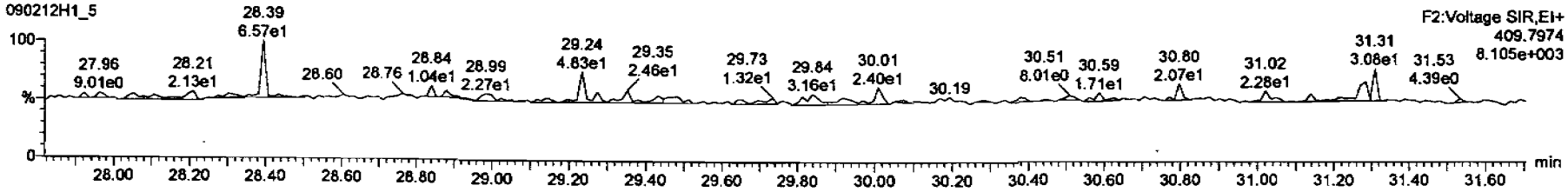

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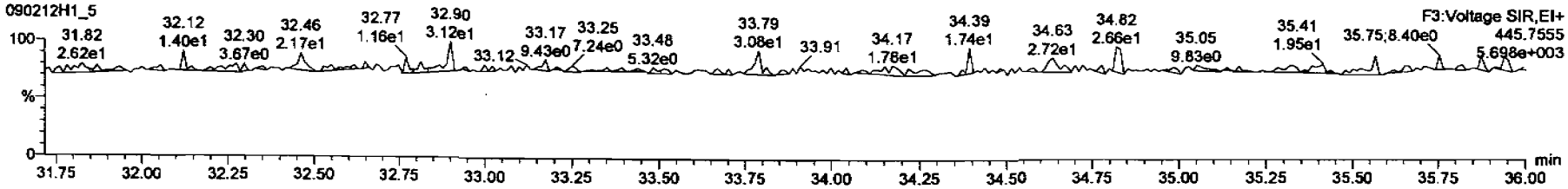

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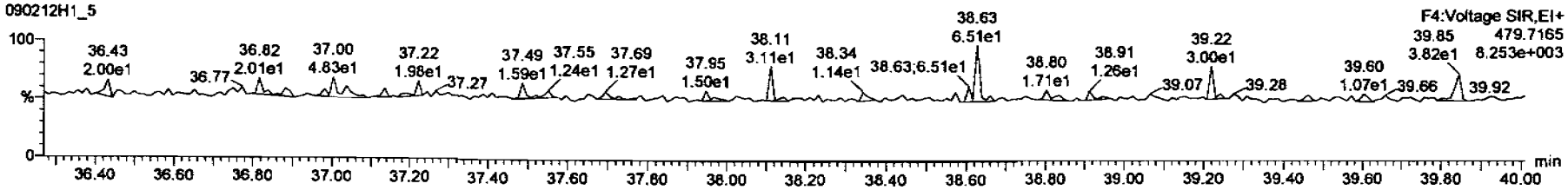

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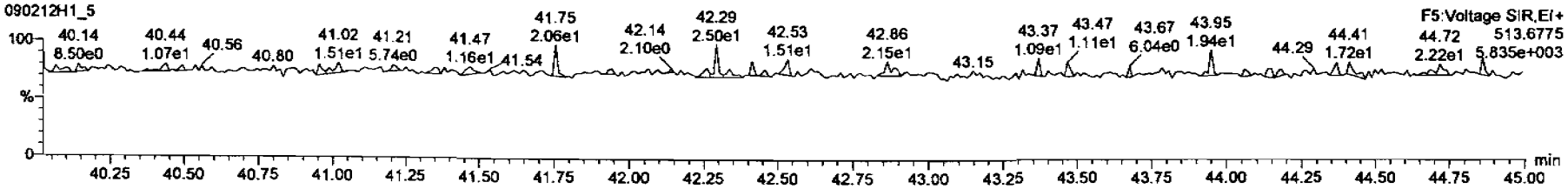

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2,3,7,8-TCDD

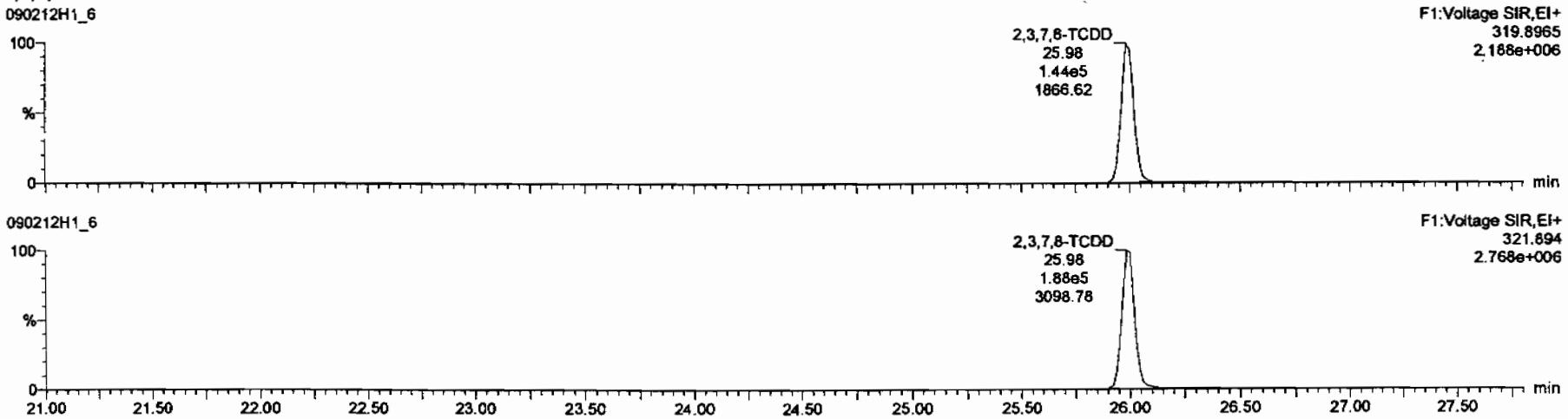

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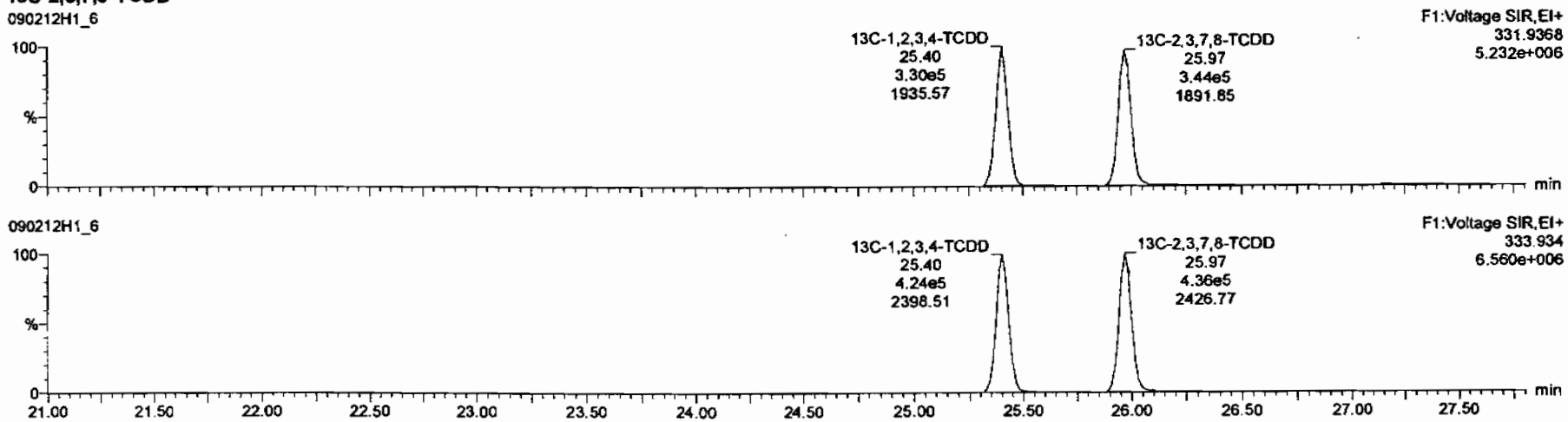

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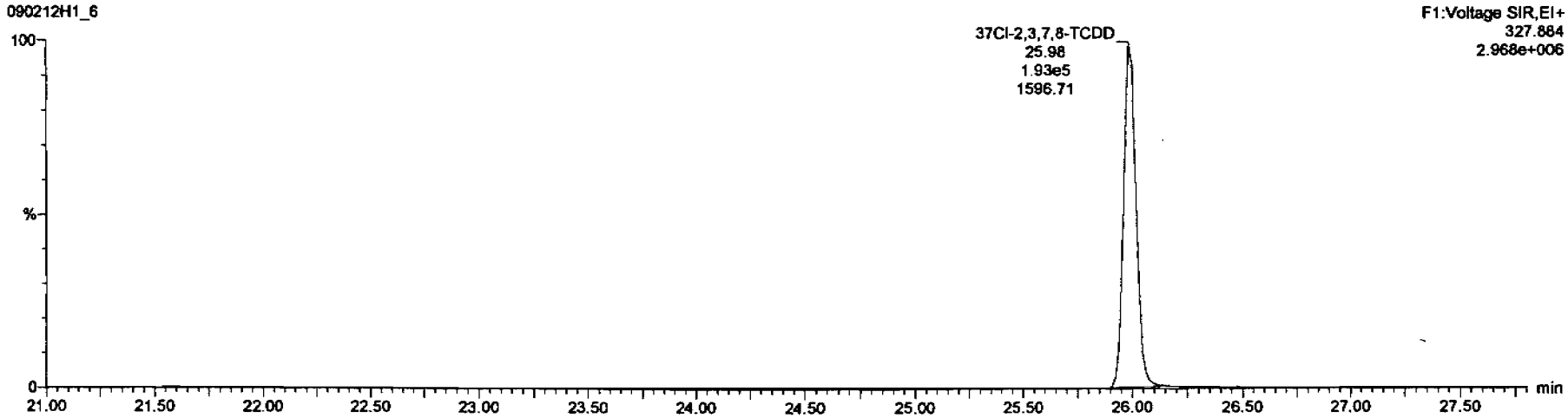

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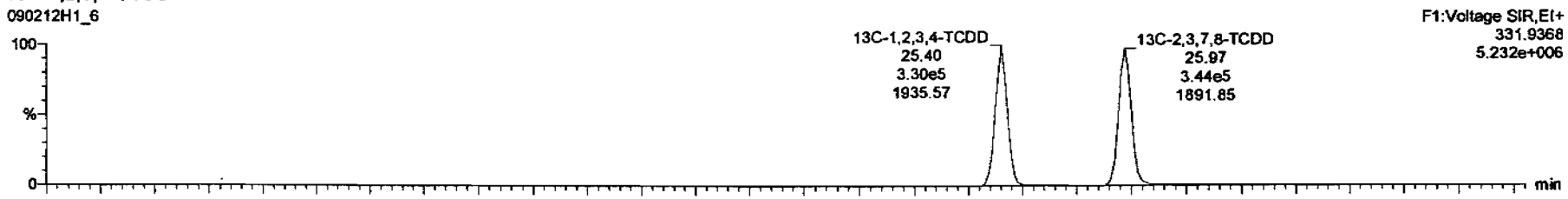

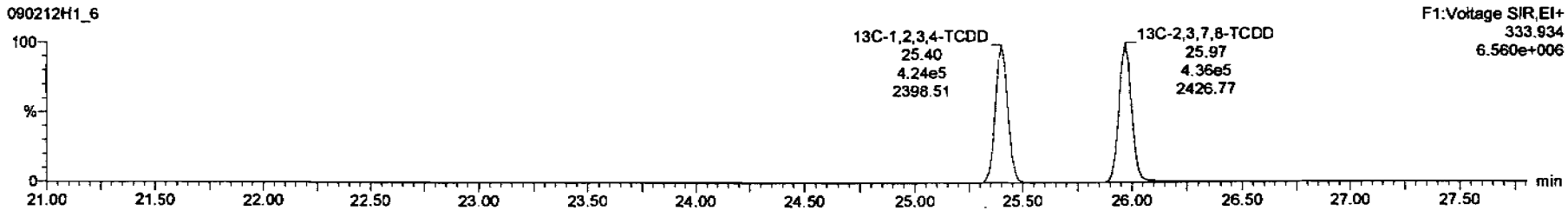

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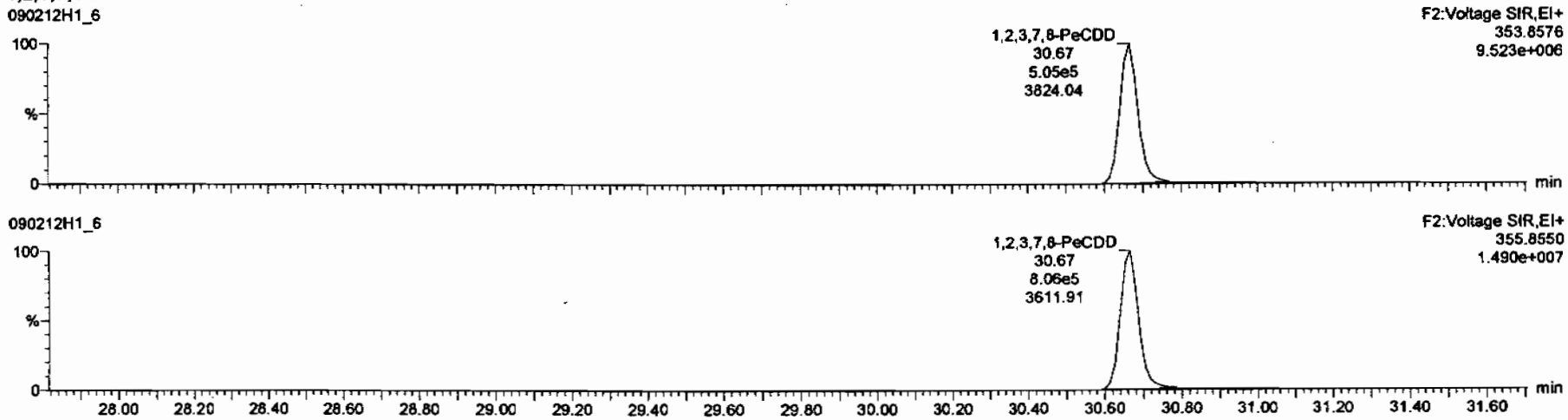

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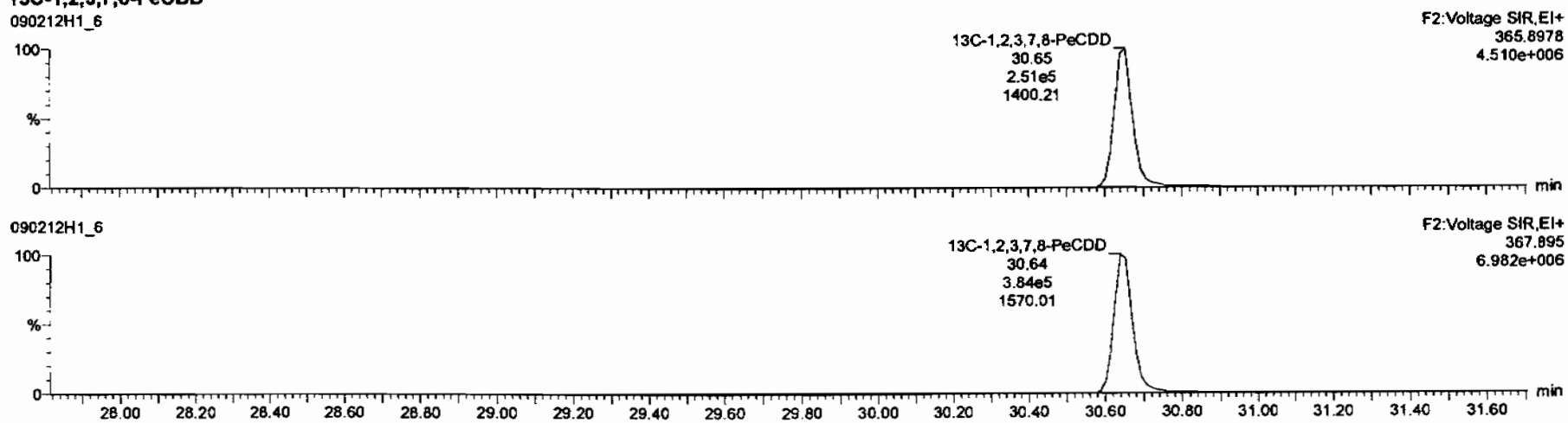

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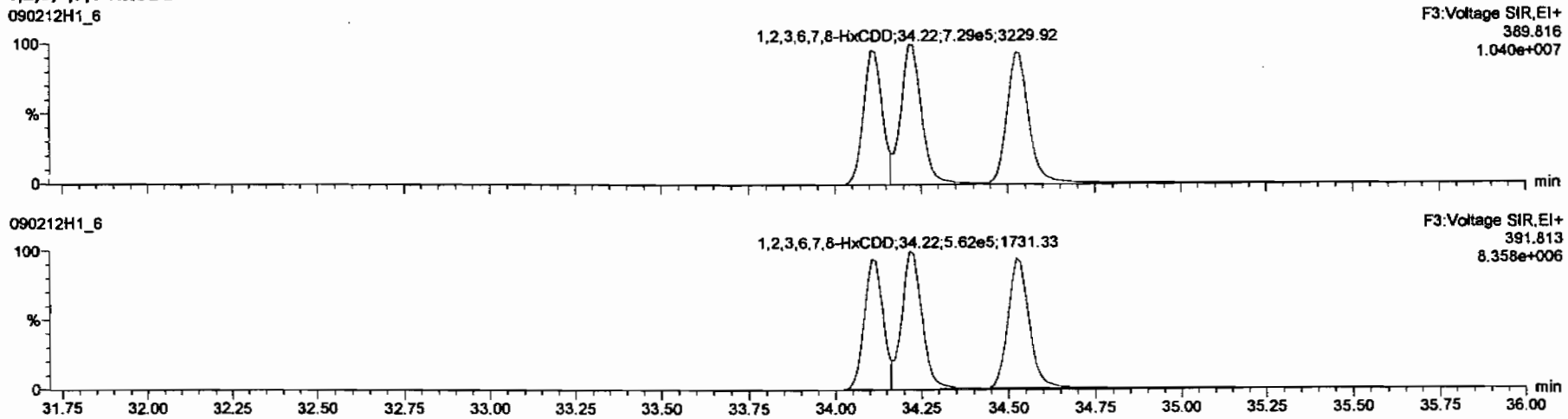

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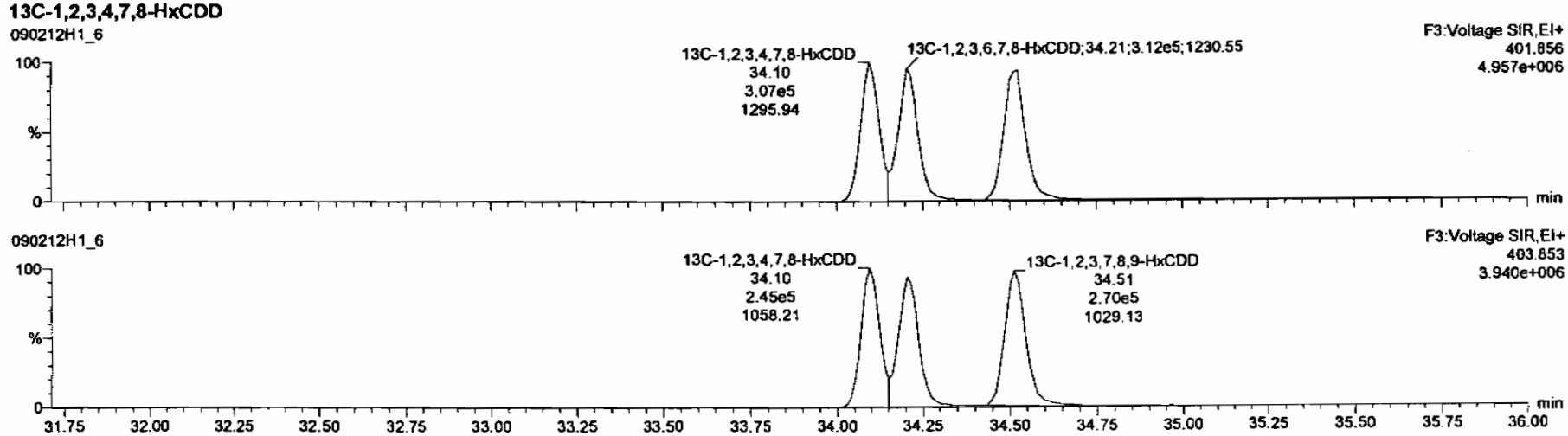

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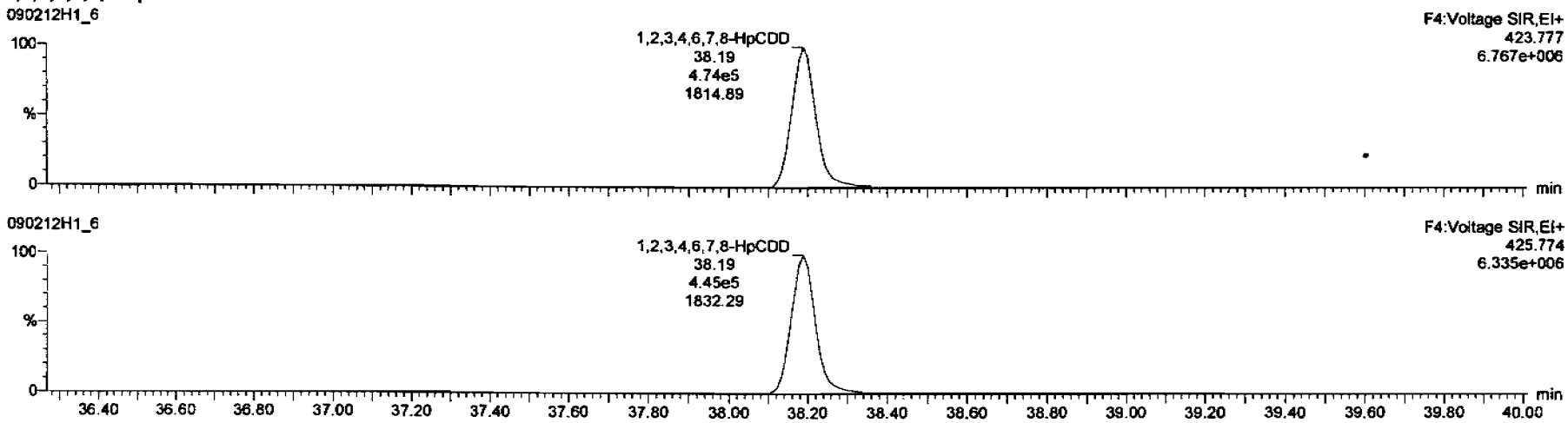

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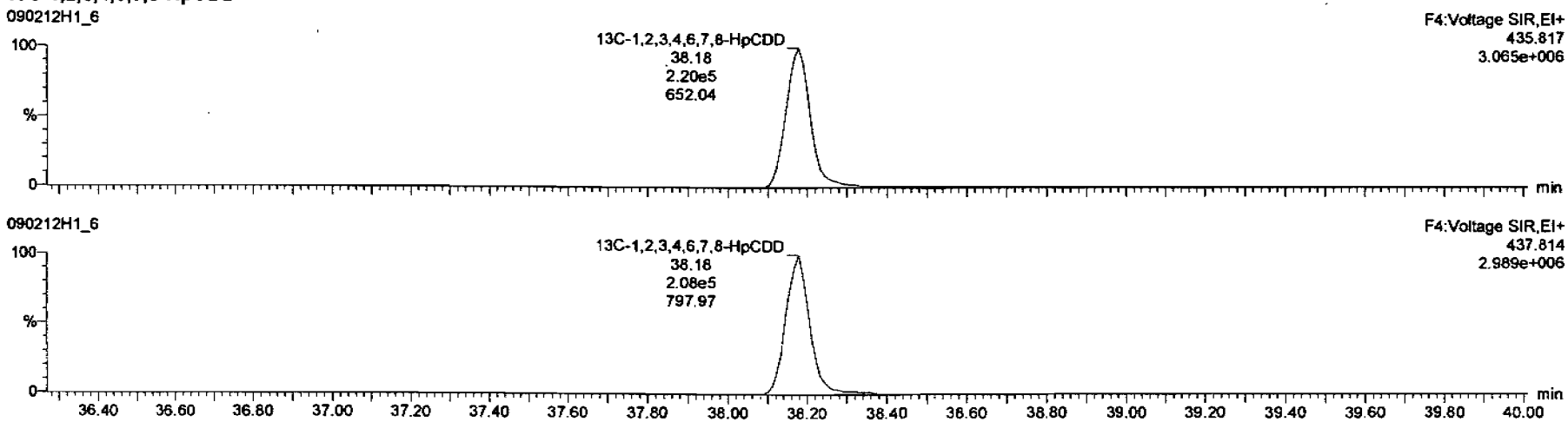

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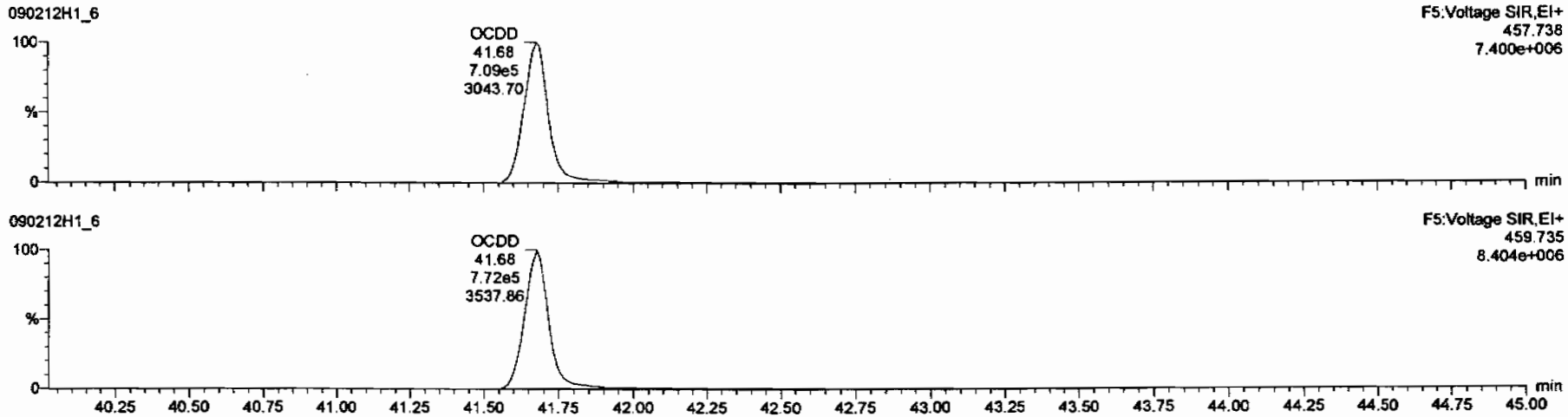

13C-OCDD

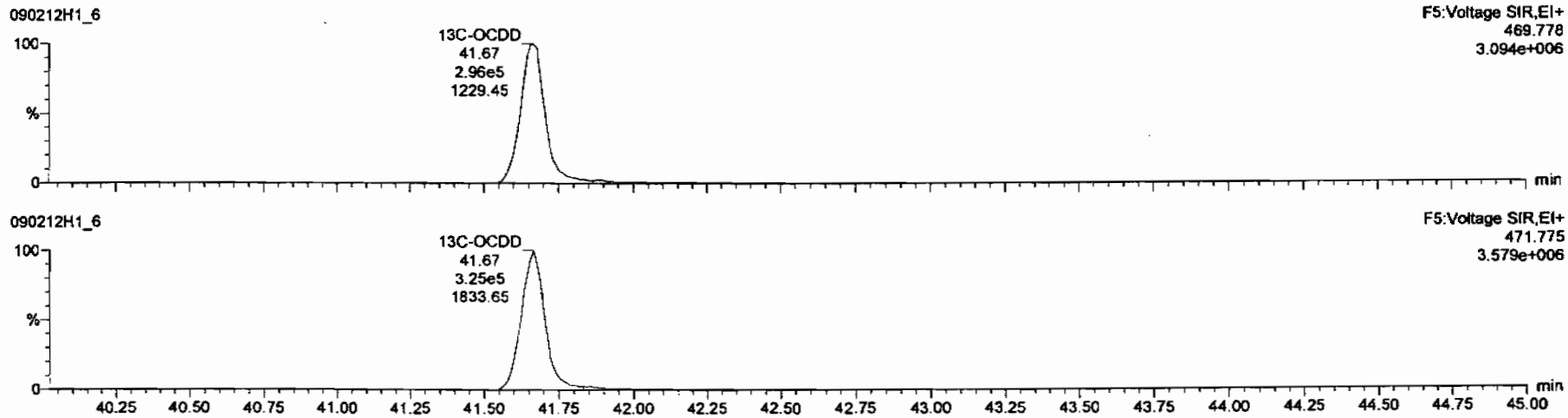

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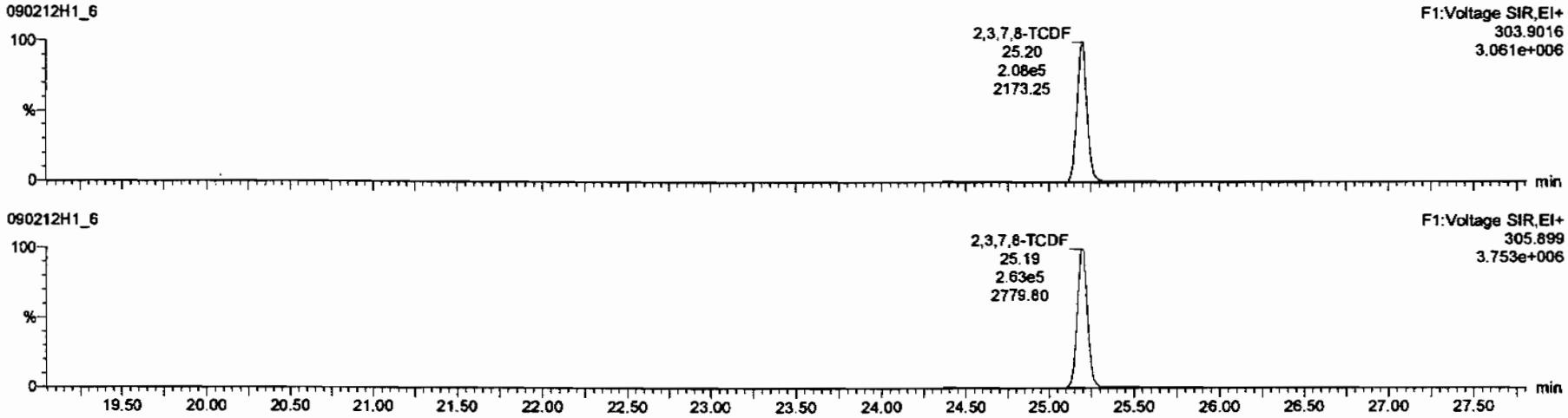

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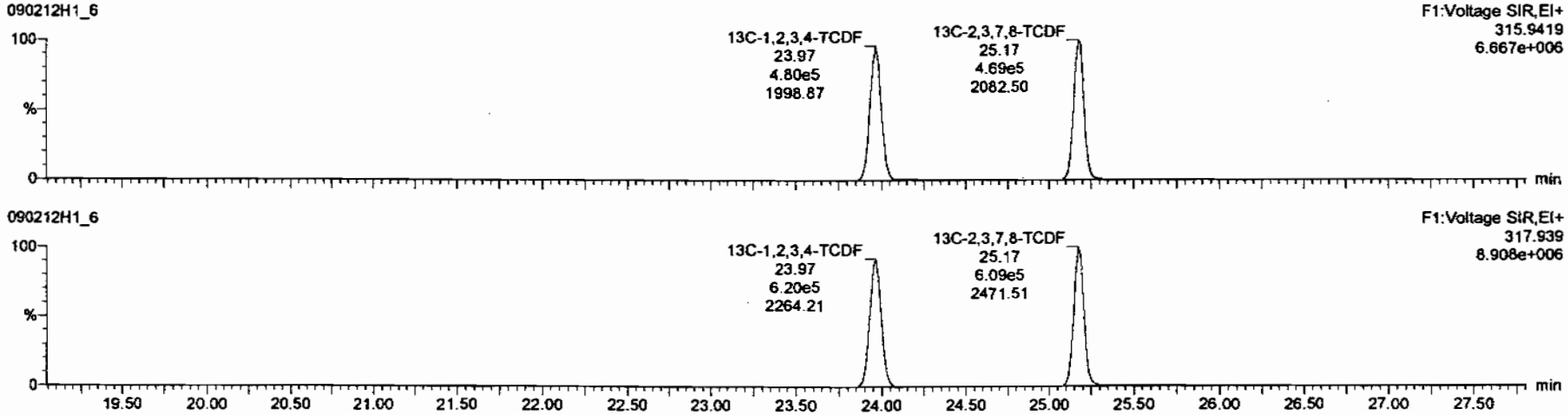

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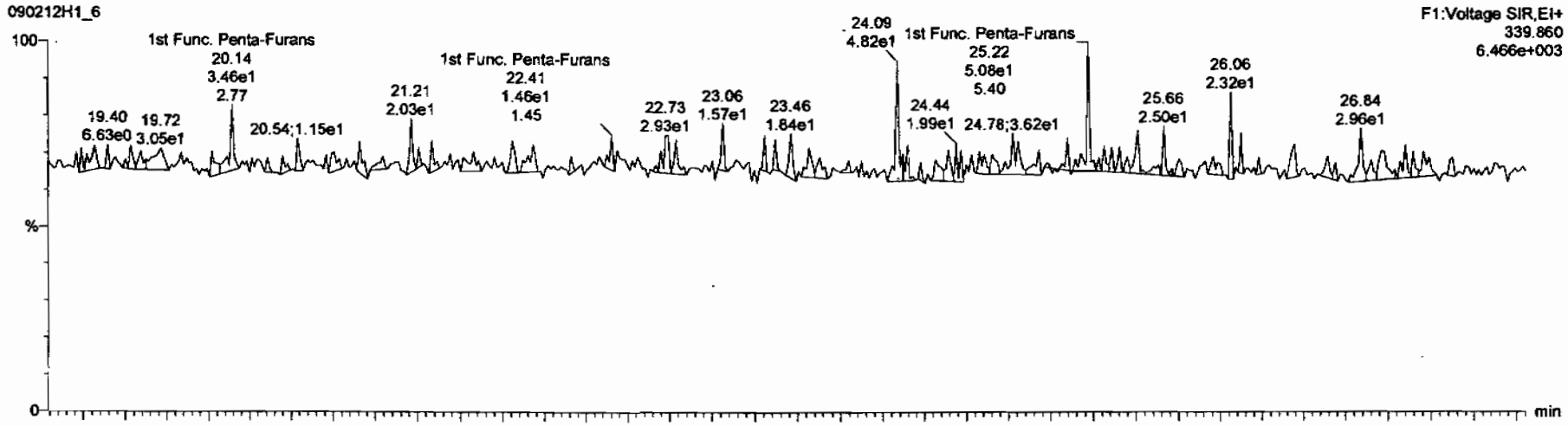

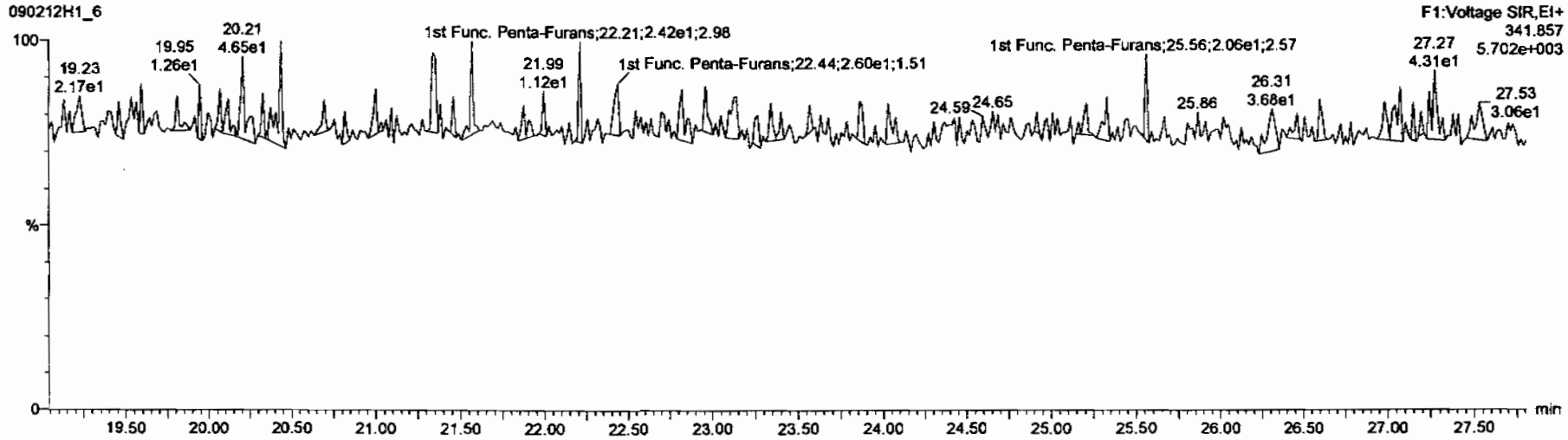

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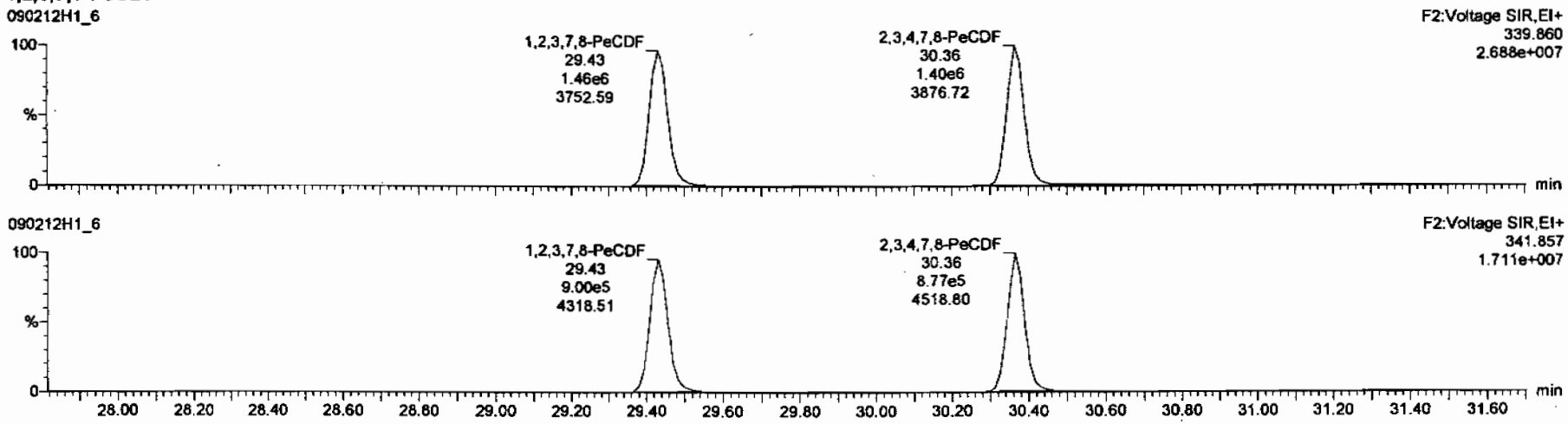

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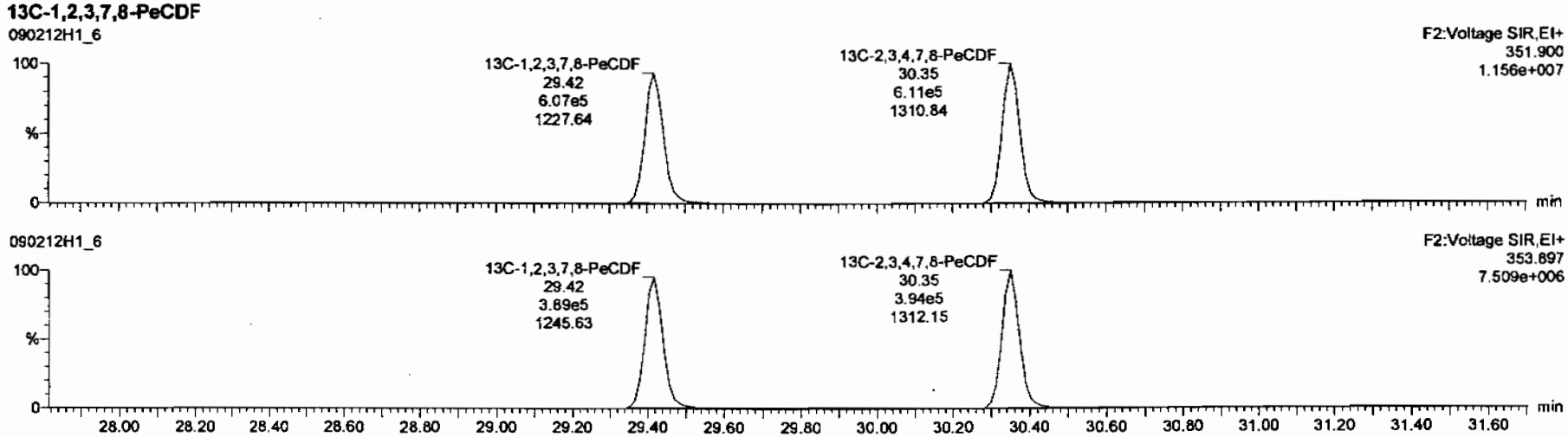

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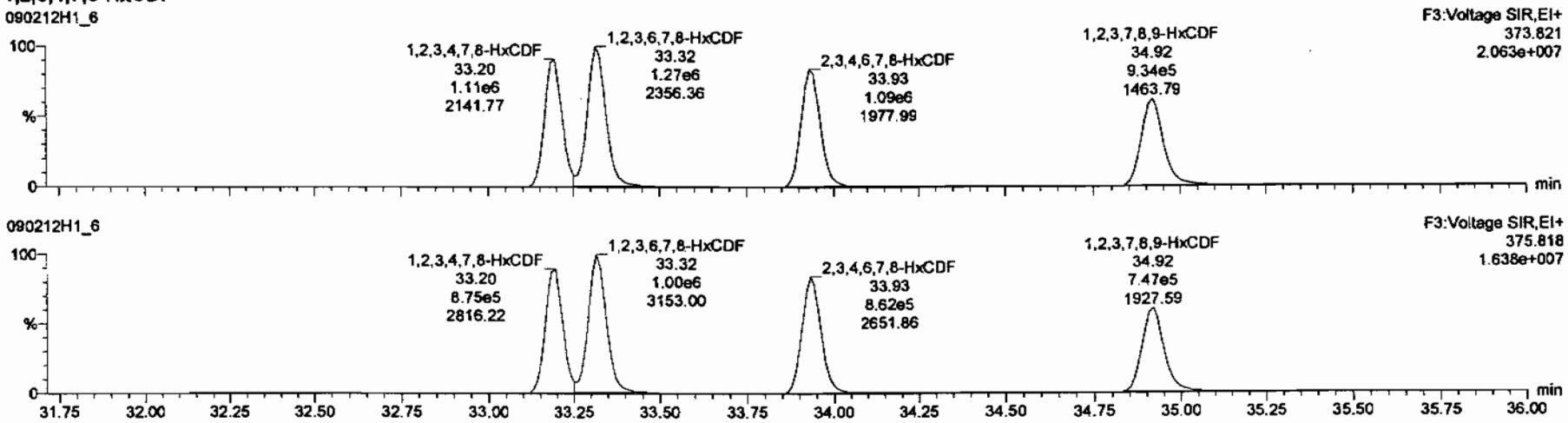

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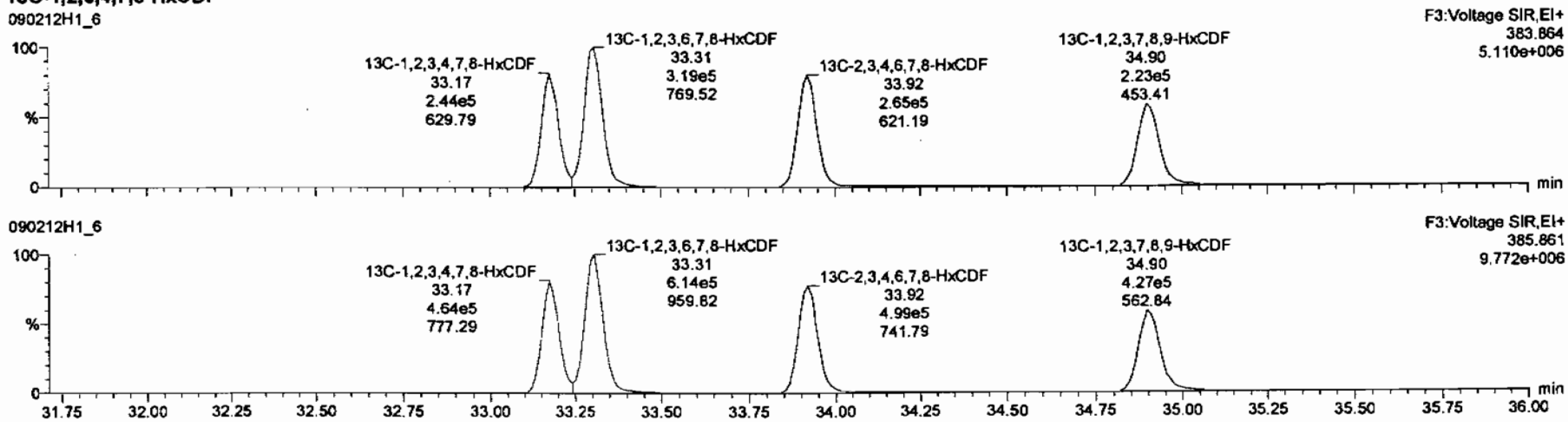

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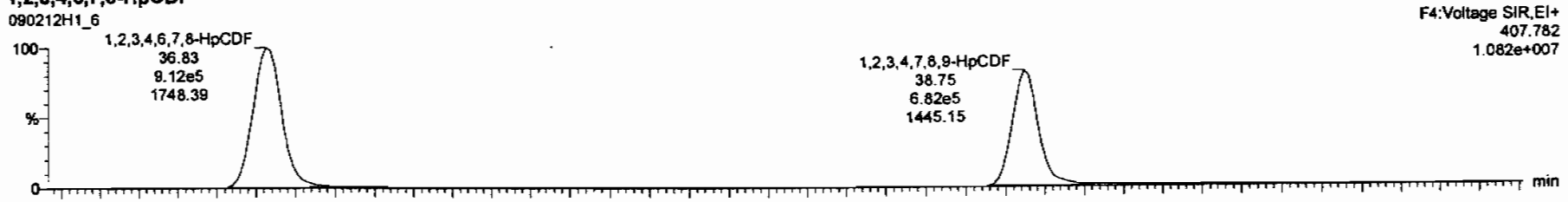

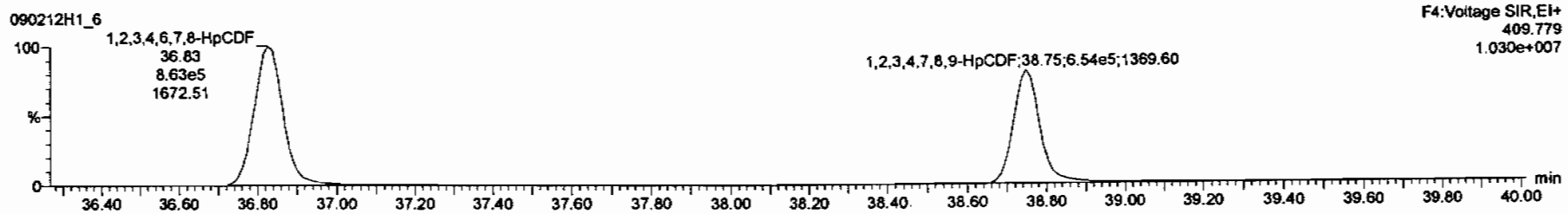

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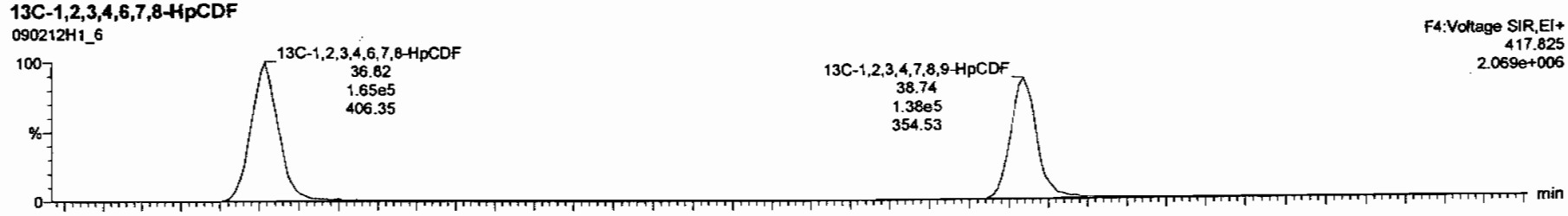

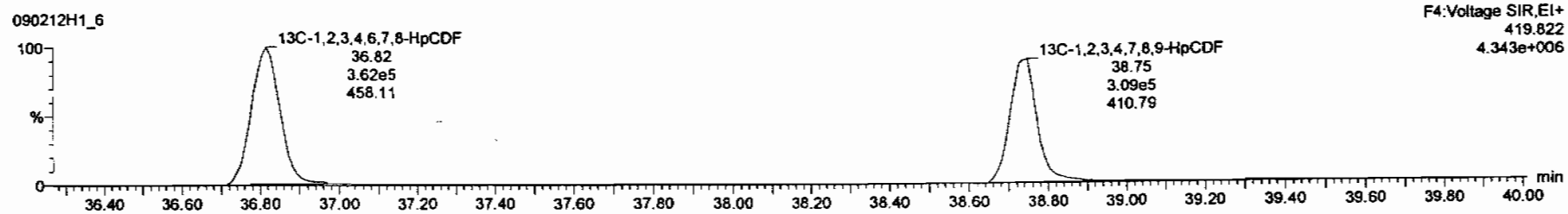

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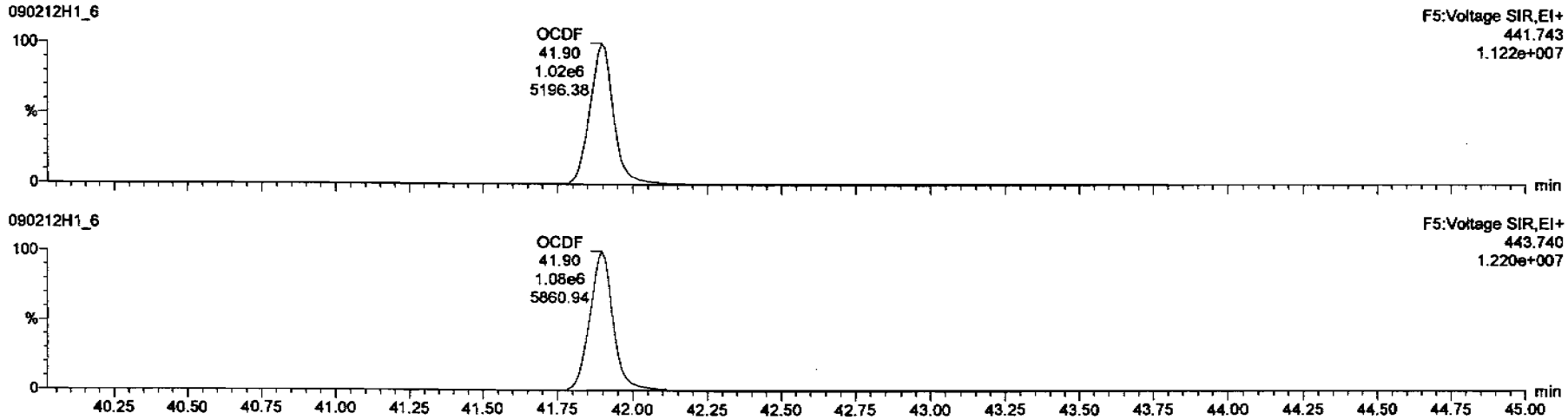

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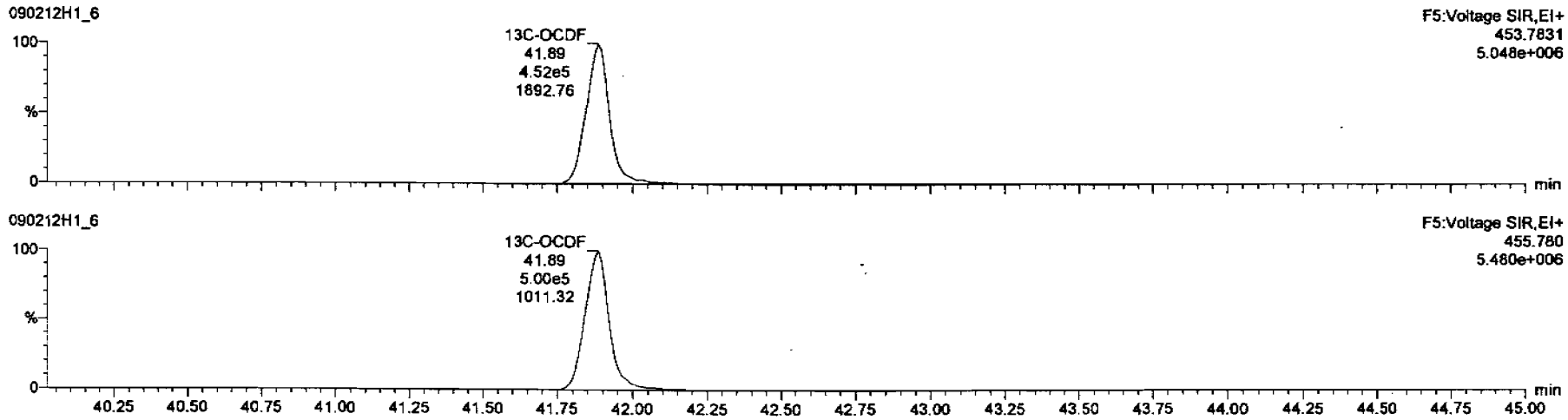

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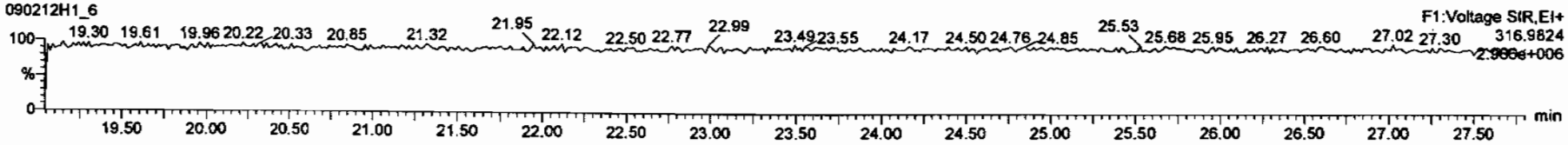

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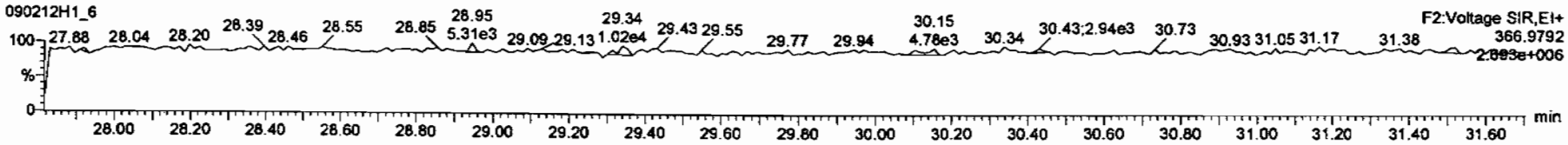

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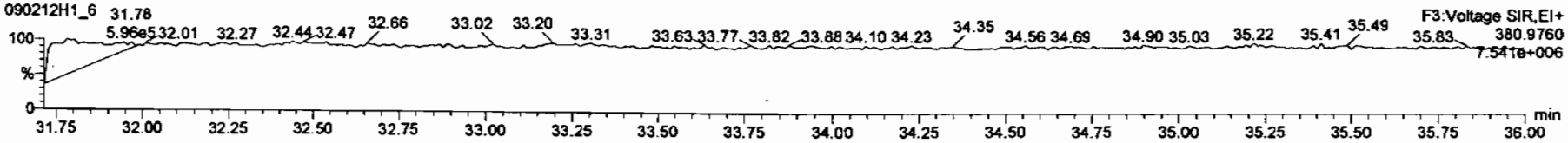

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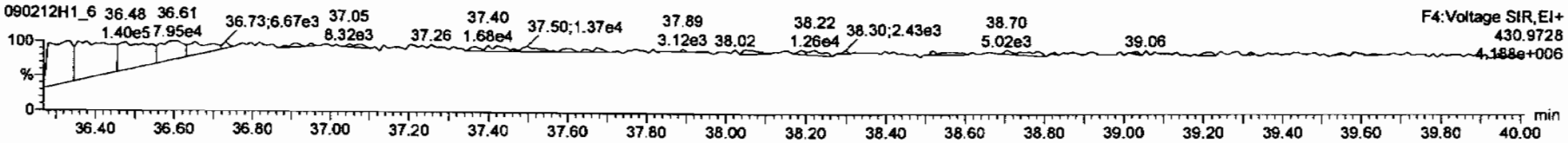

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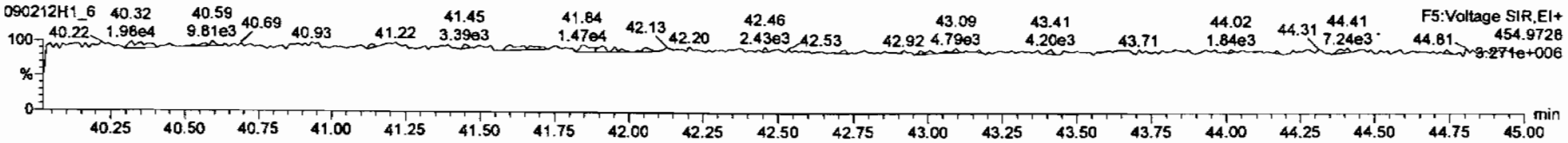

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Name: 090212H1_6, Date: 12-Feb-2009, Time: 15:17:39, ID: ST090212H1-5 1613 CS4 080917J, Description: 1613 CS4 080917J

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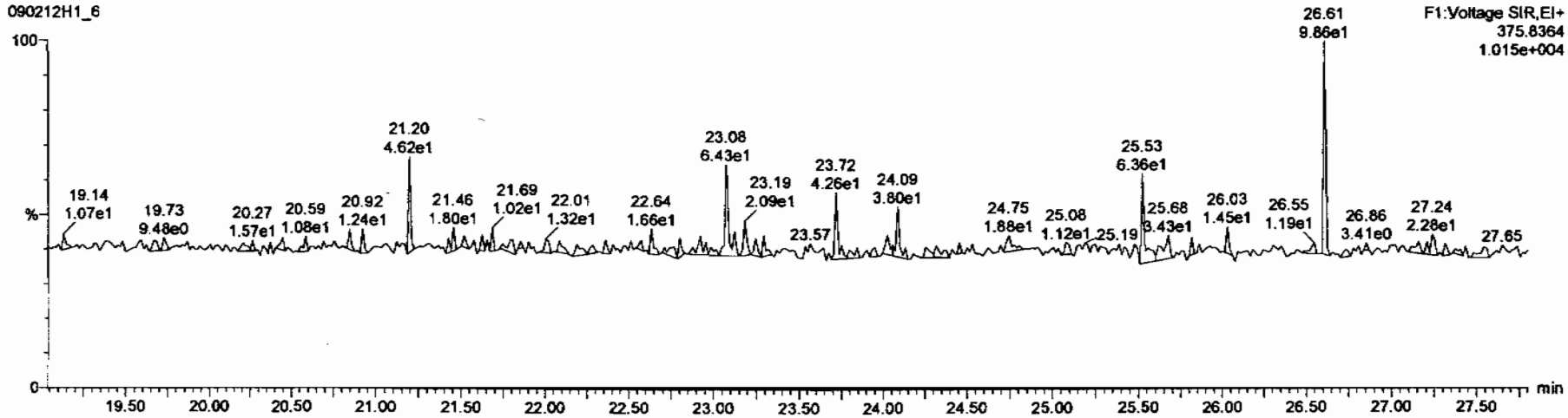

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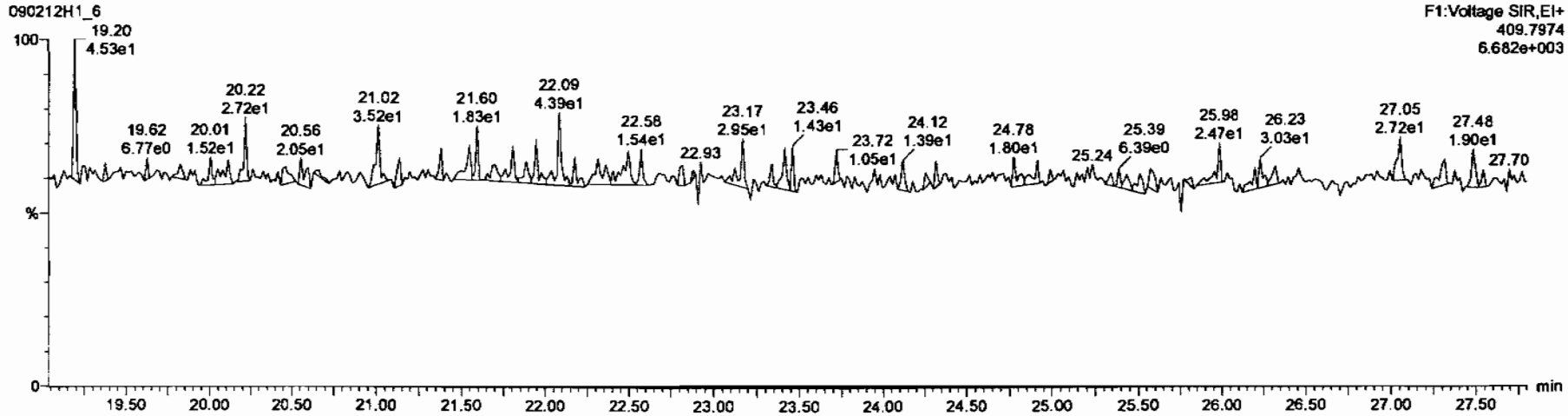

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DPE2

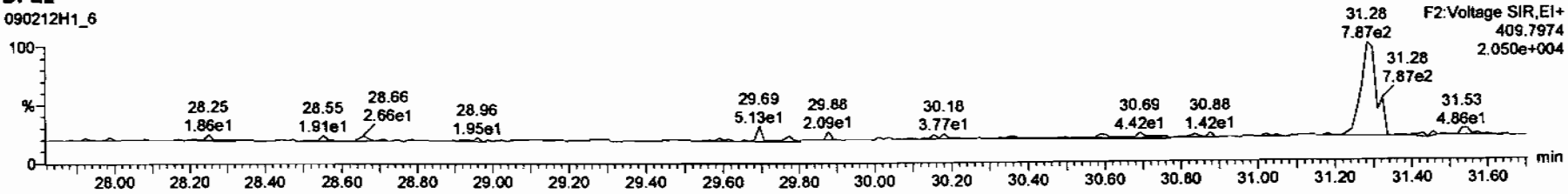

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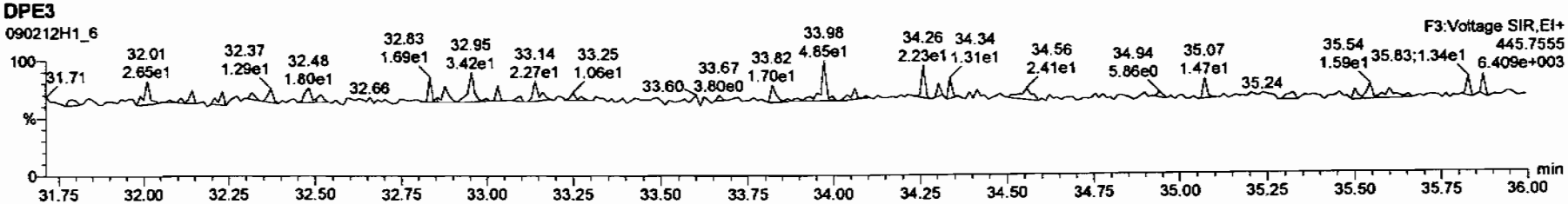

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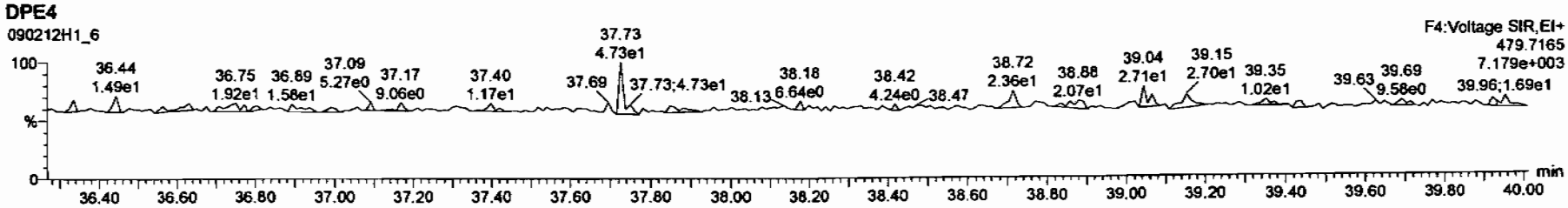

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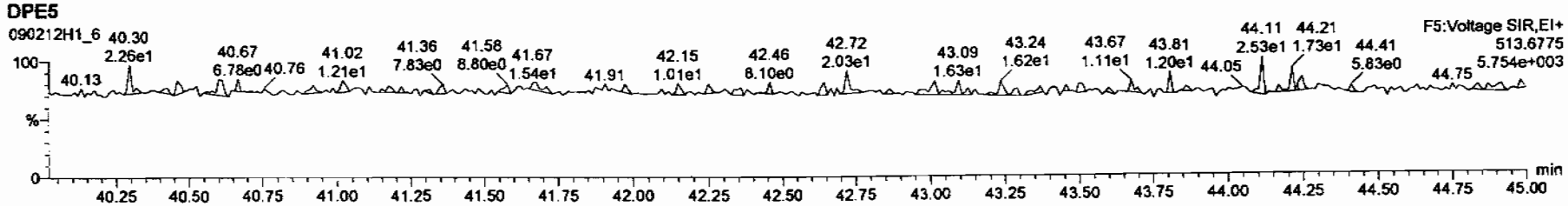

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2,3,7,8-TCDD

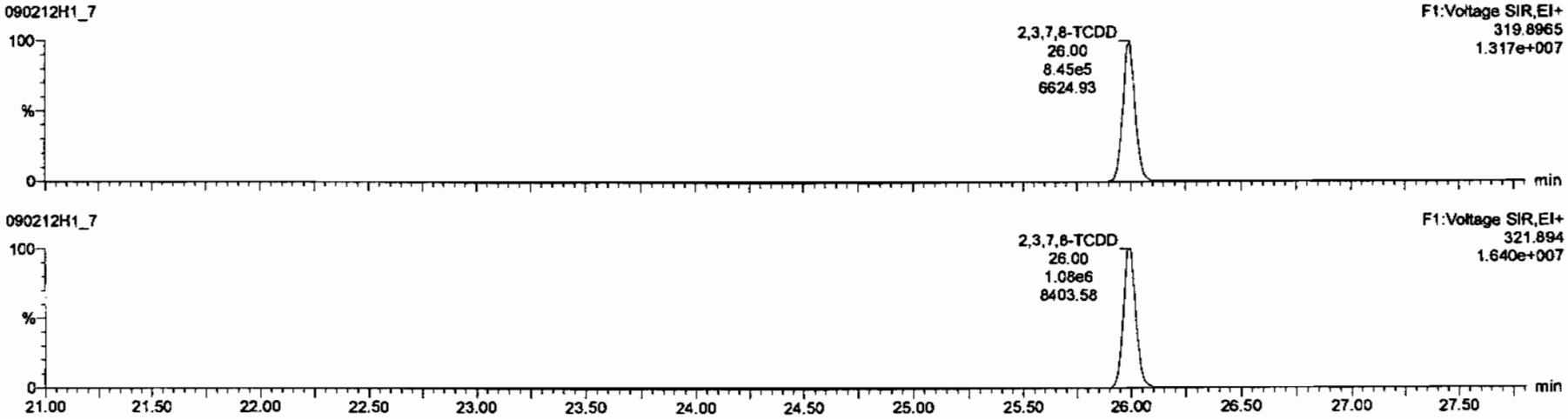

13C-2,3,7,8-TCDD

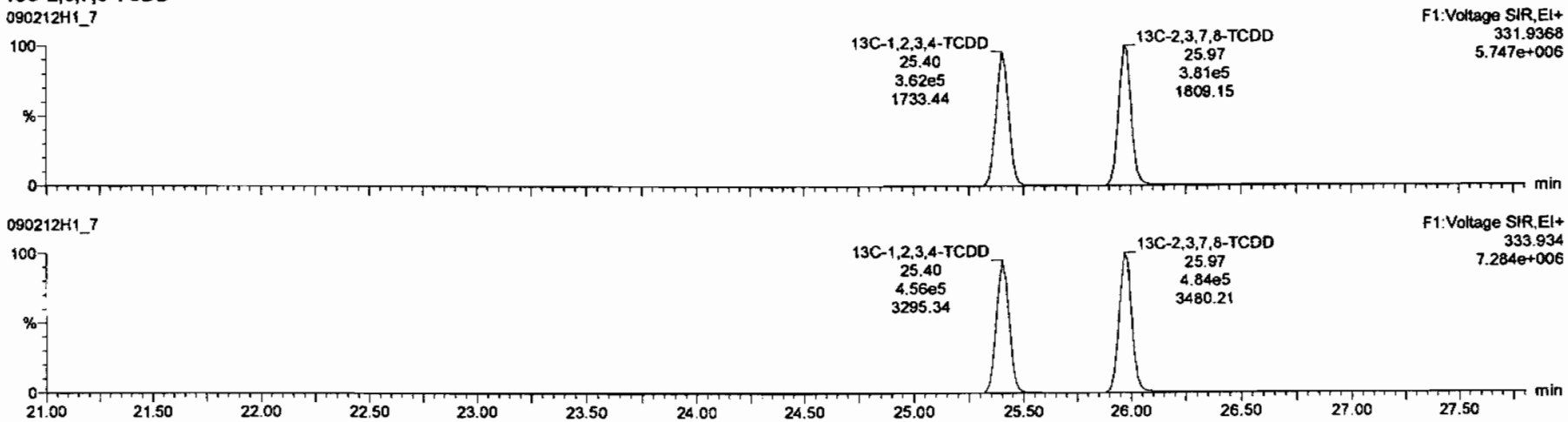

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Name: 090212H1_7, Date: 12-Feb-2009, Time: 16:07:03, ID: ST090212H1-6 1613 CS5 080917K, Description: 1613 CS5 080917K

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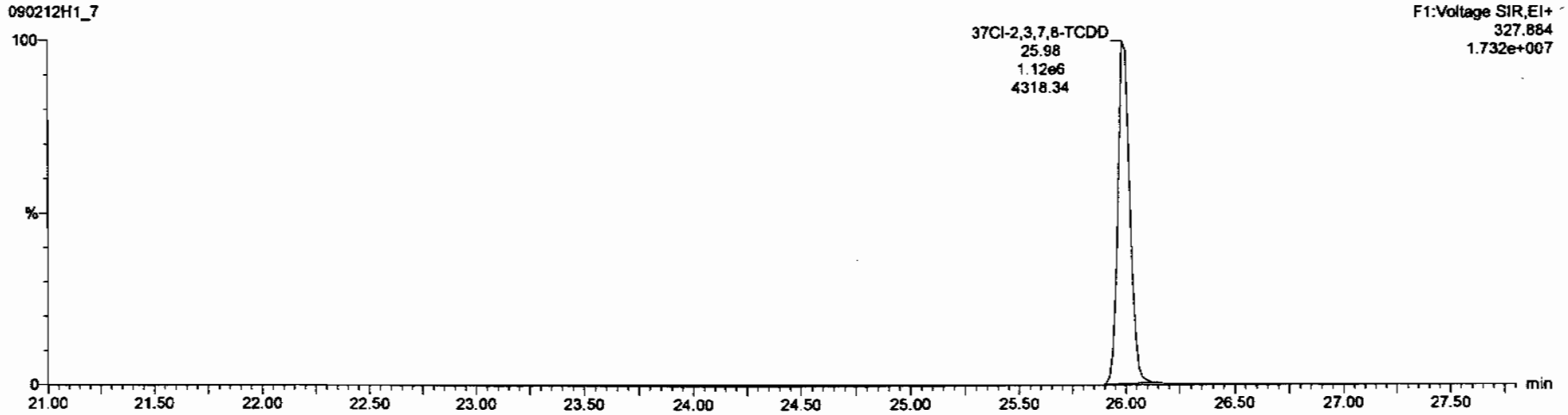

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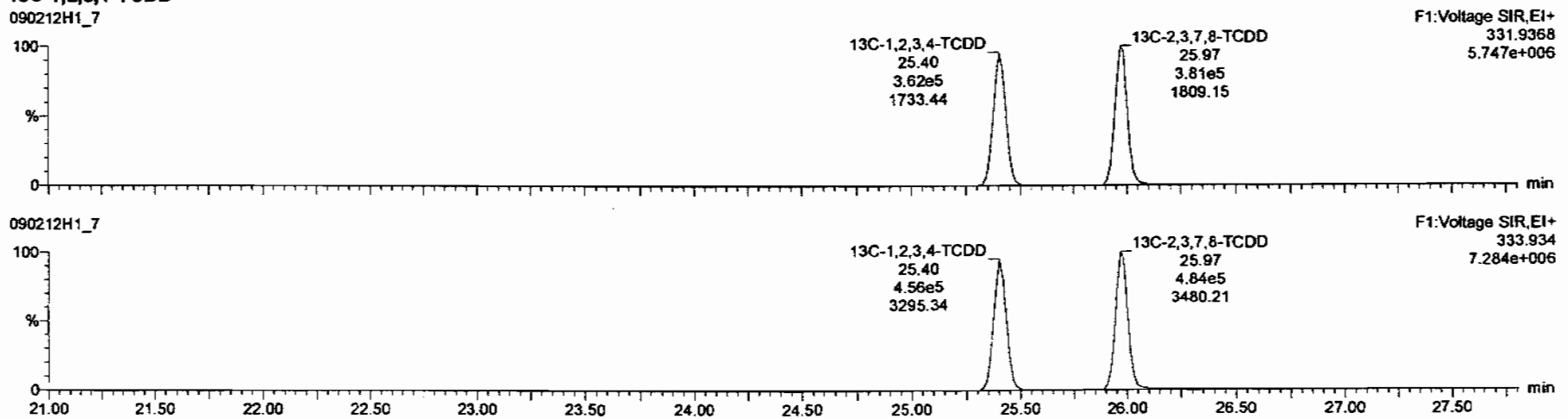

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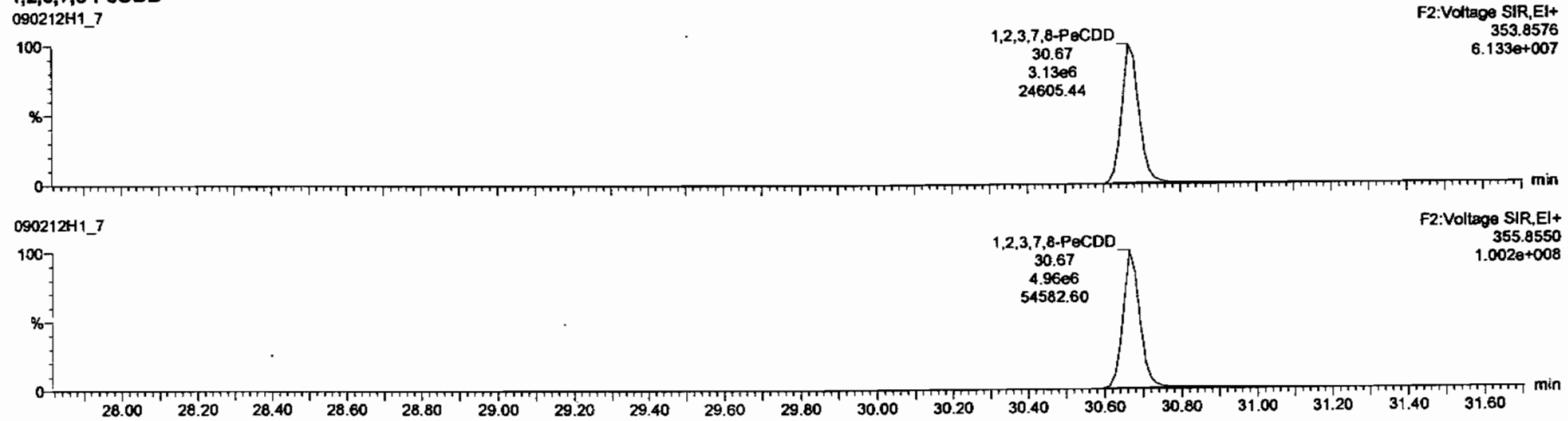

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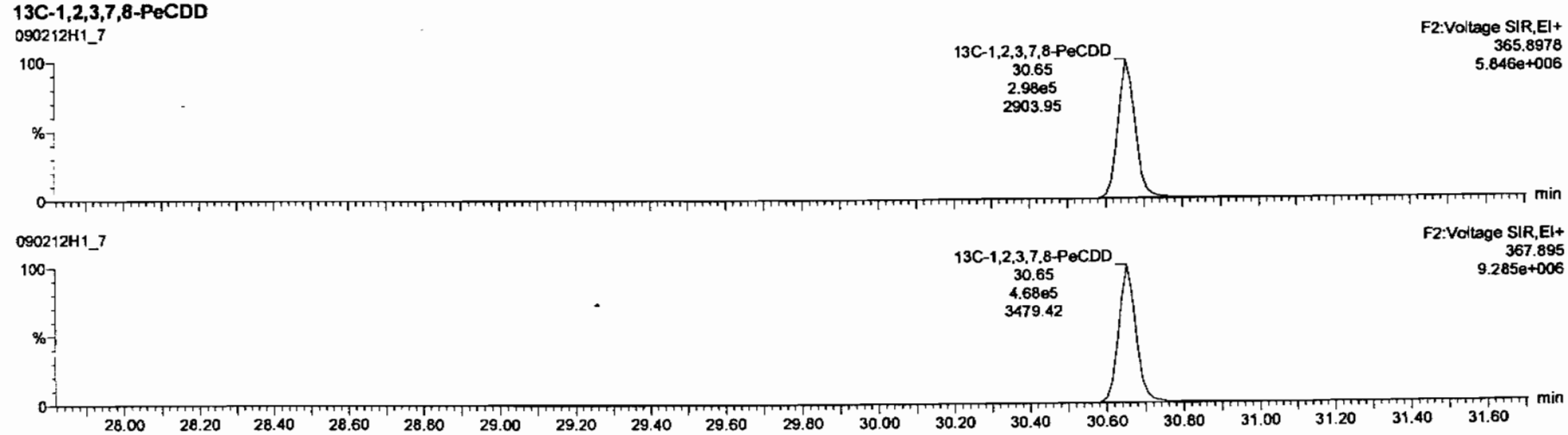

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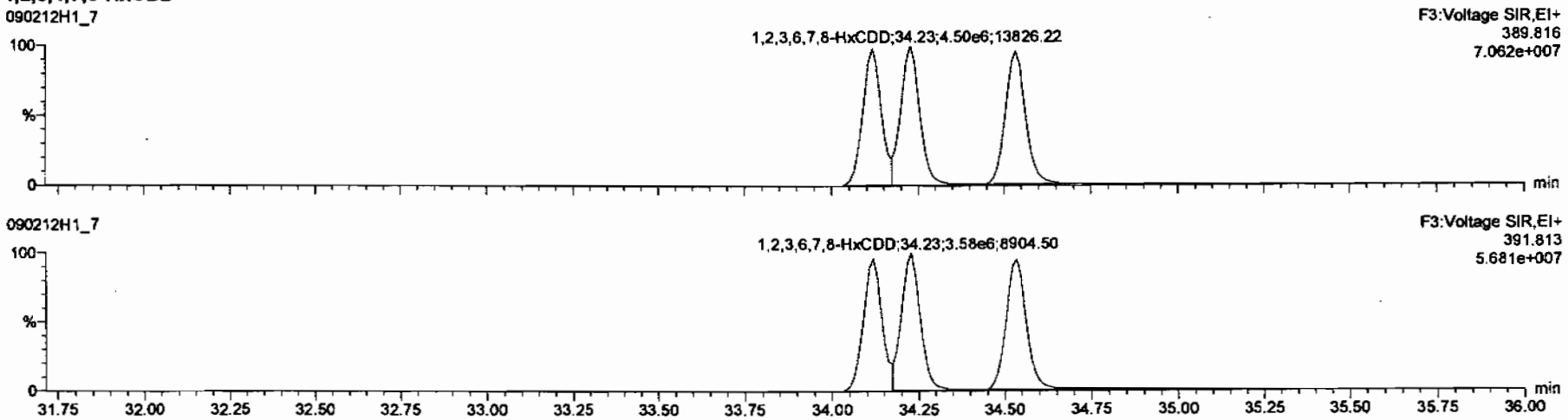

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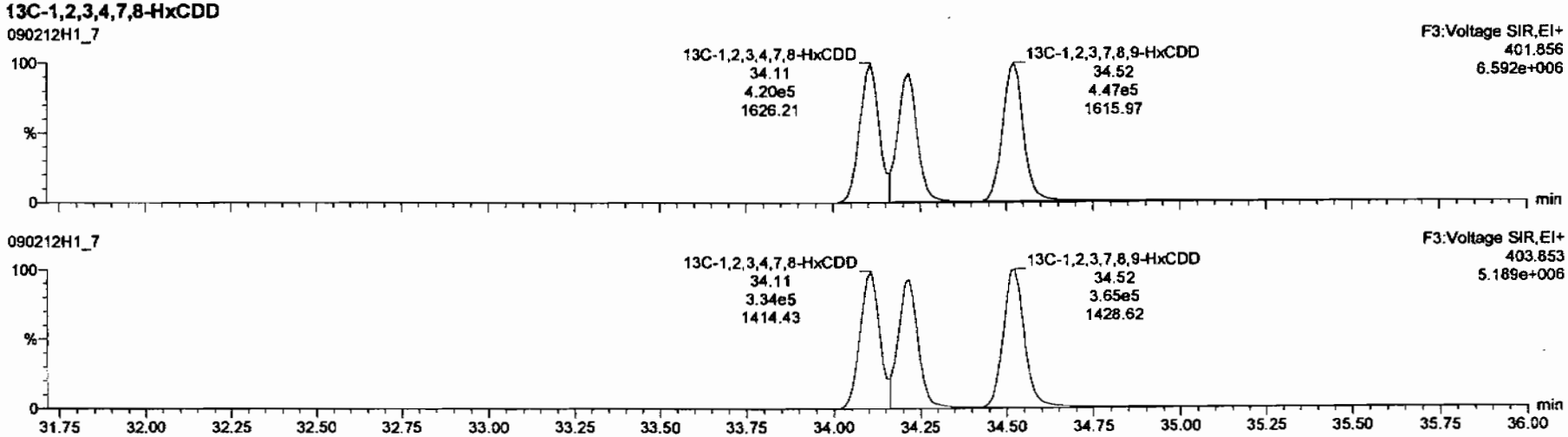

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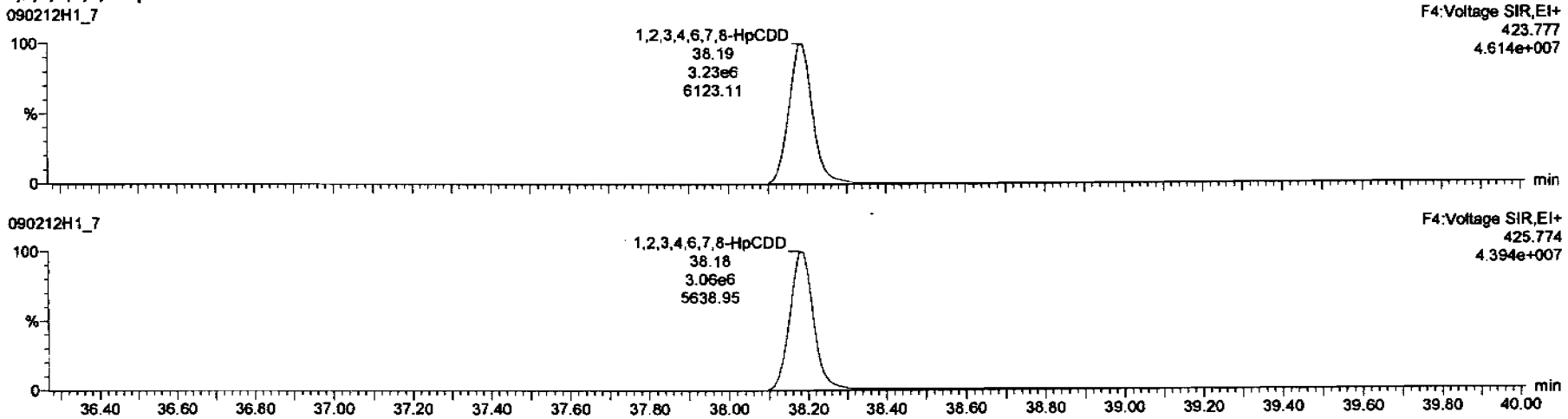

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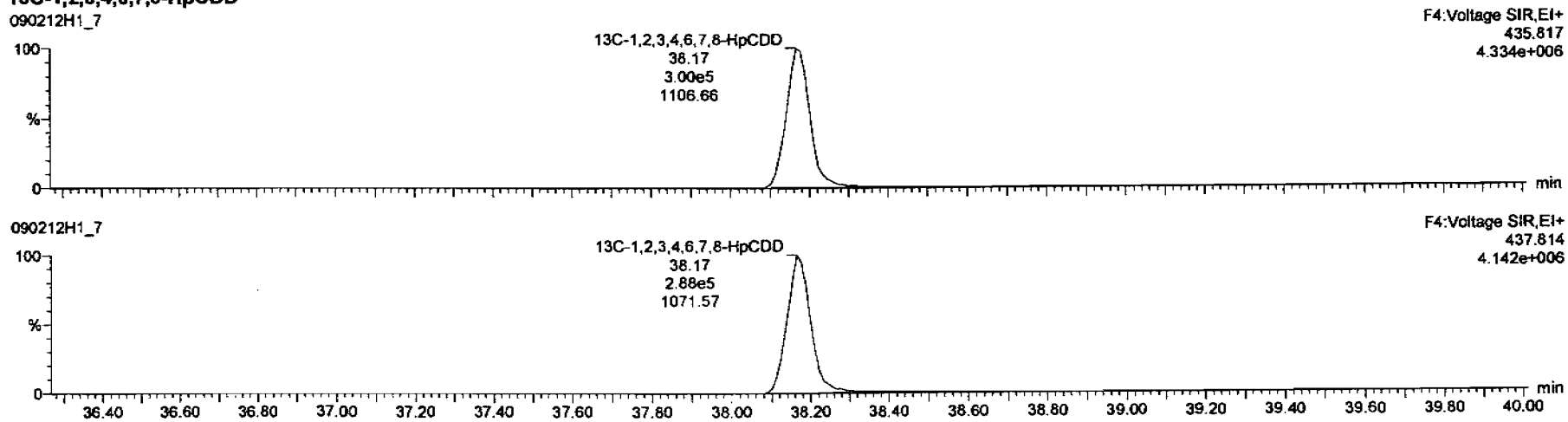

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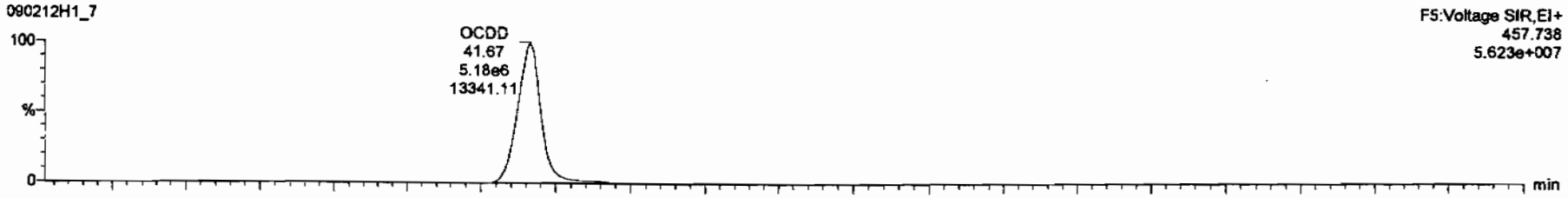

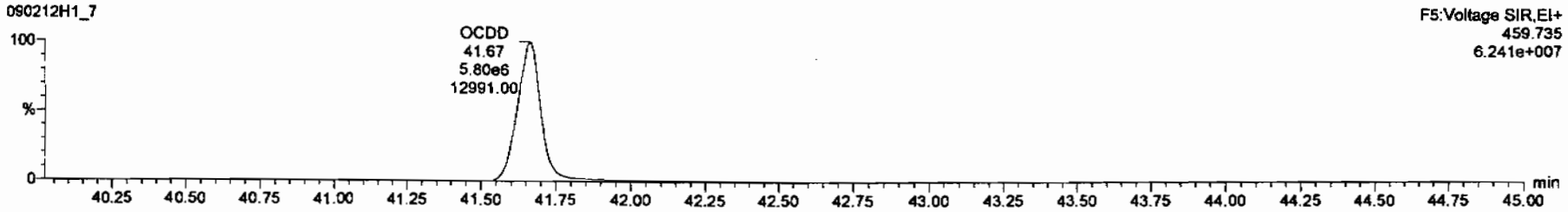

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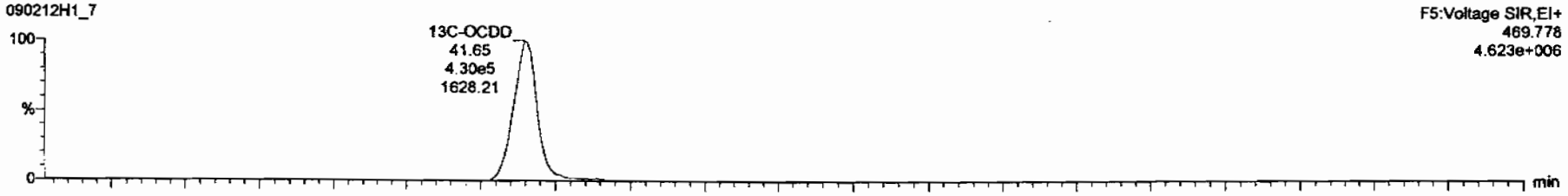

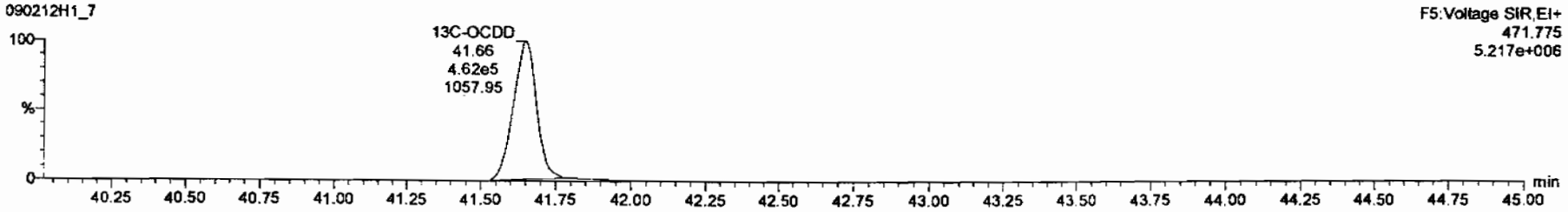

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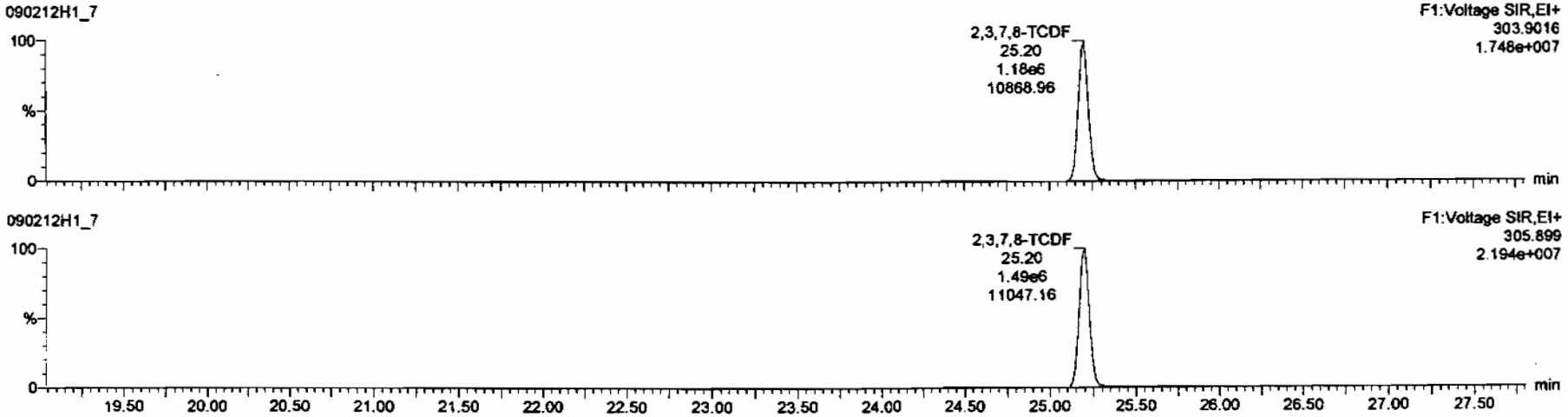

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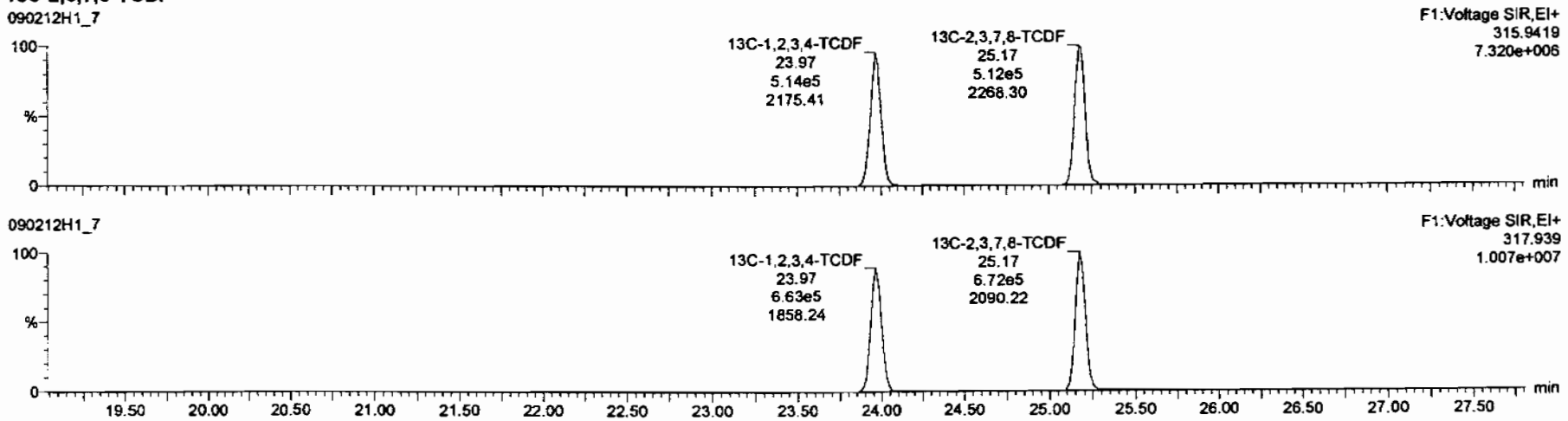

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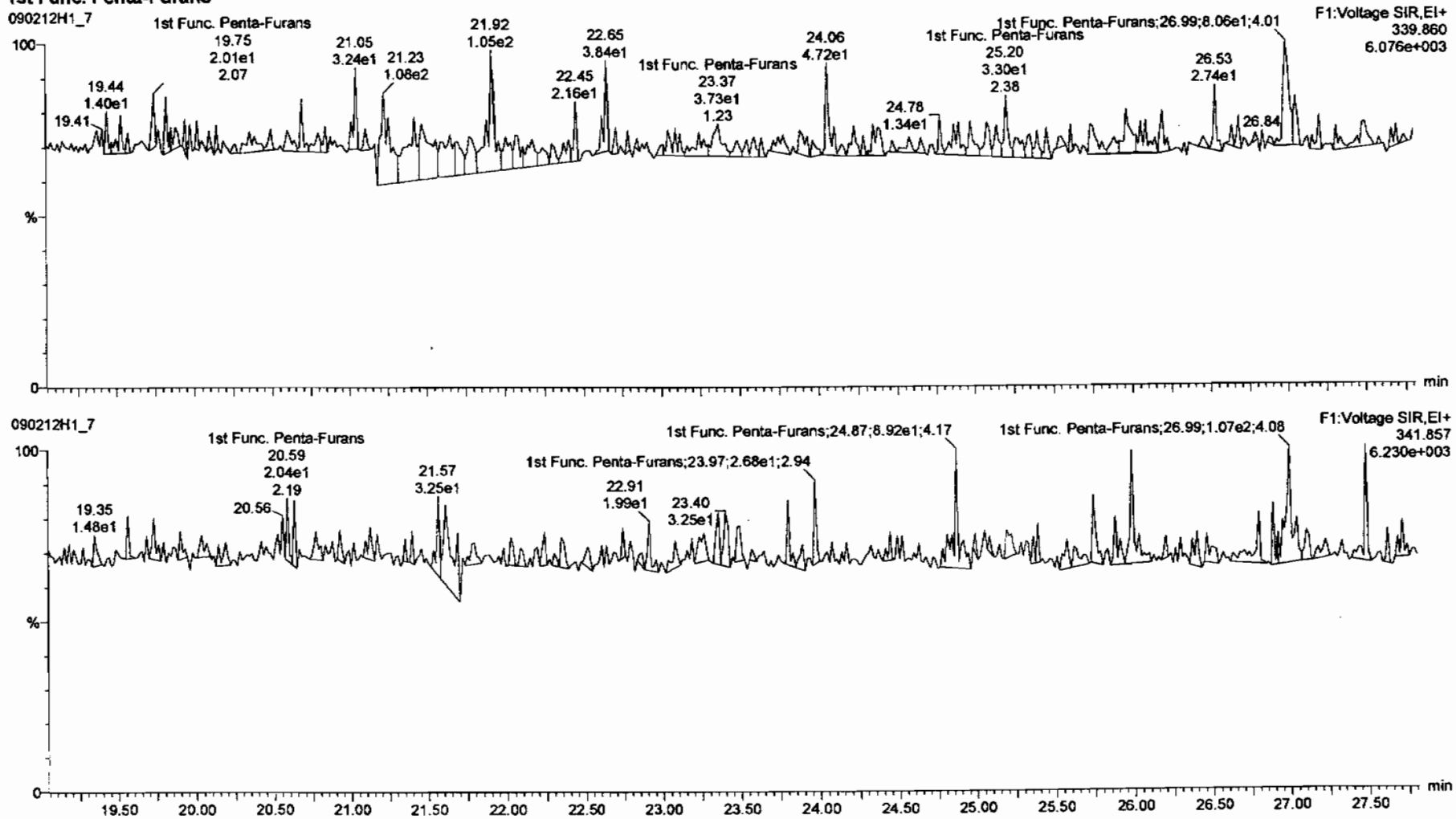

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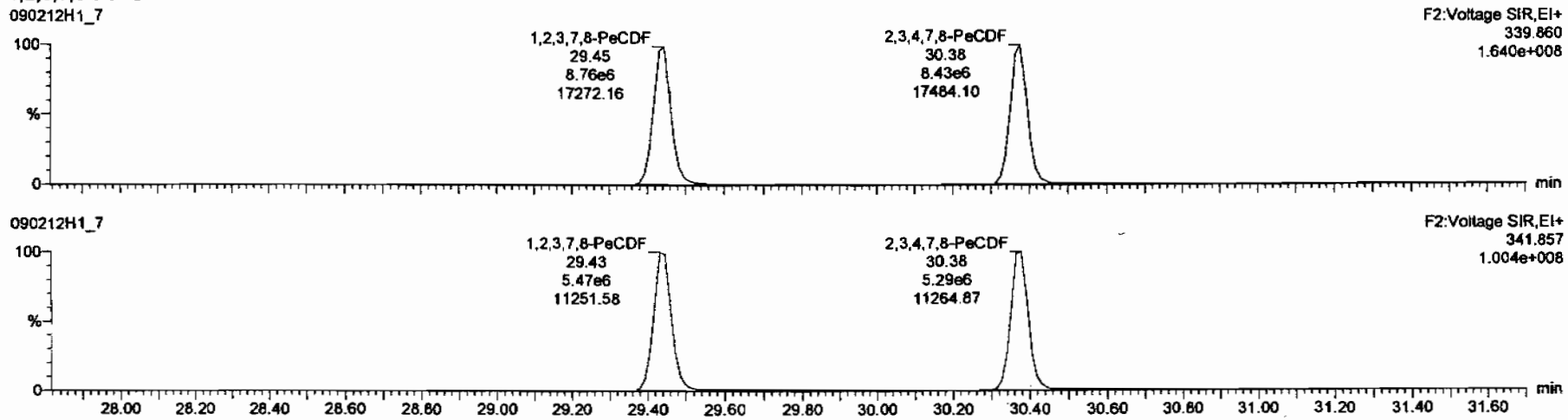

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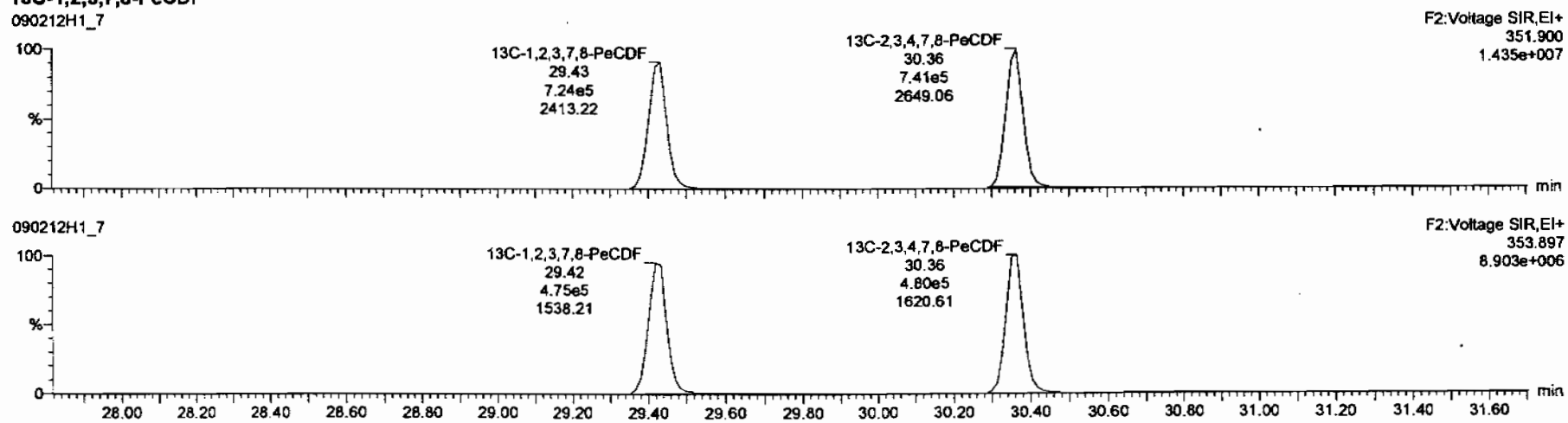

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

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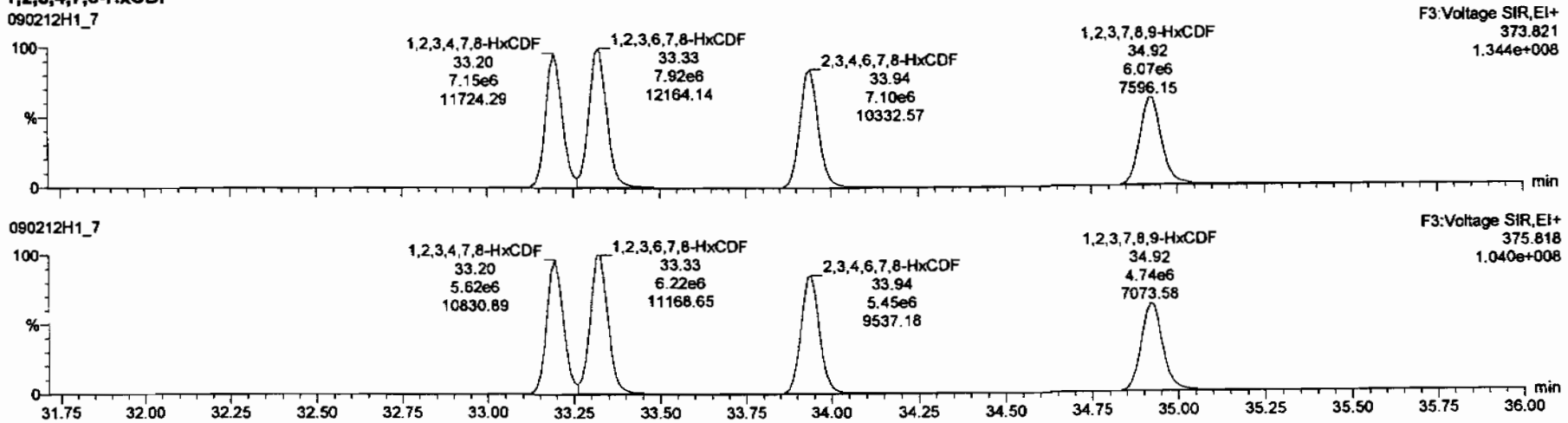

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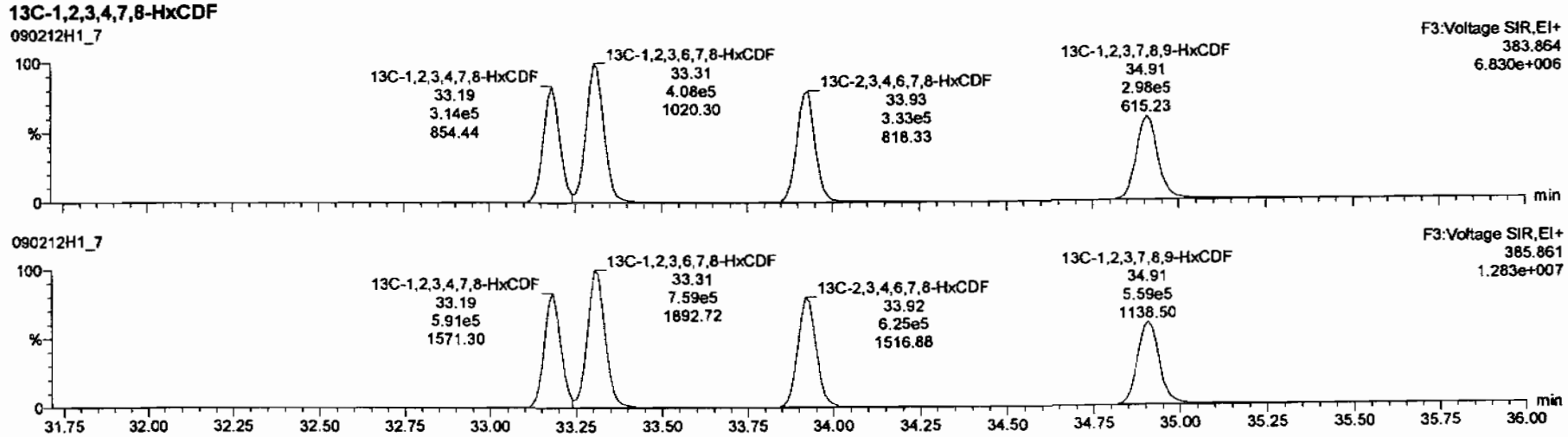

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1,2,3,4,6,7,8-HpCDF

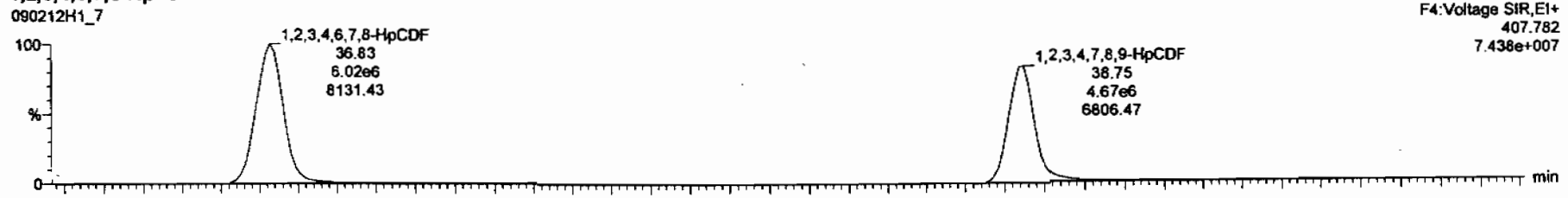

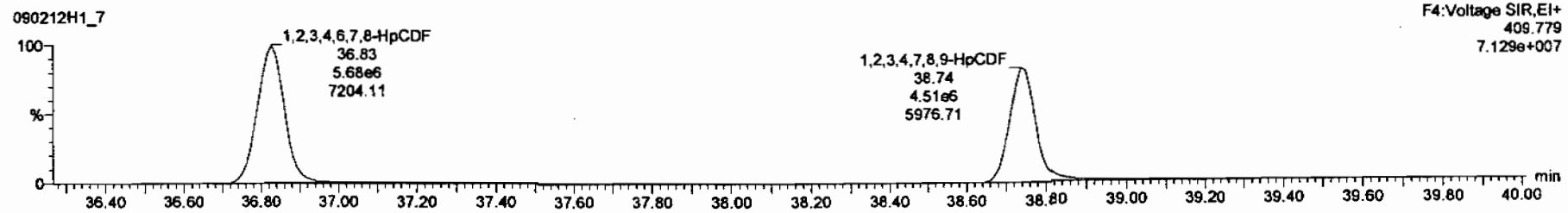

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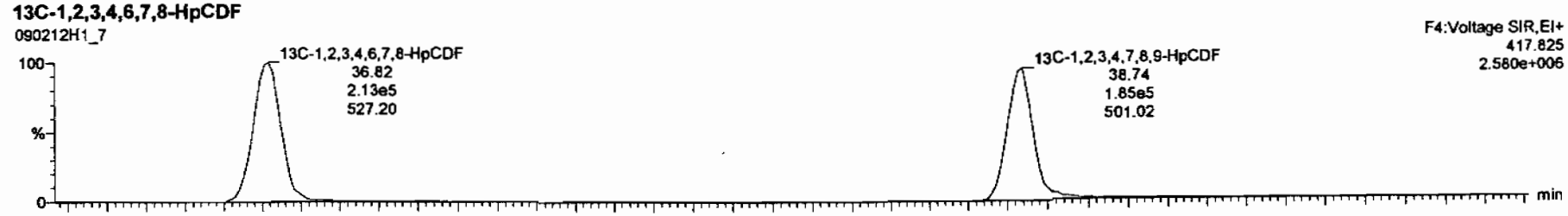

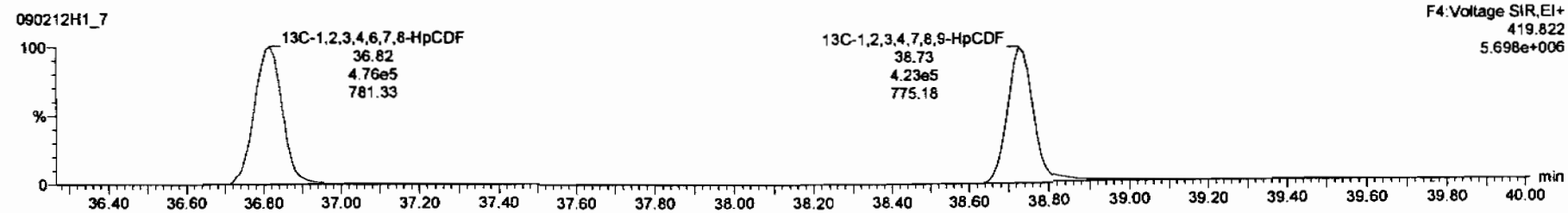

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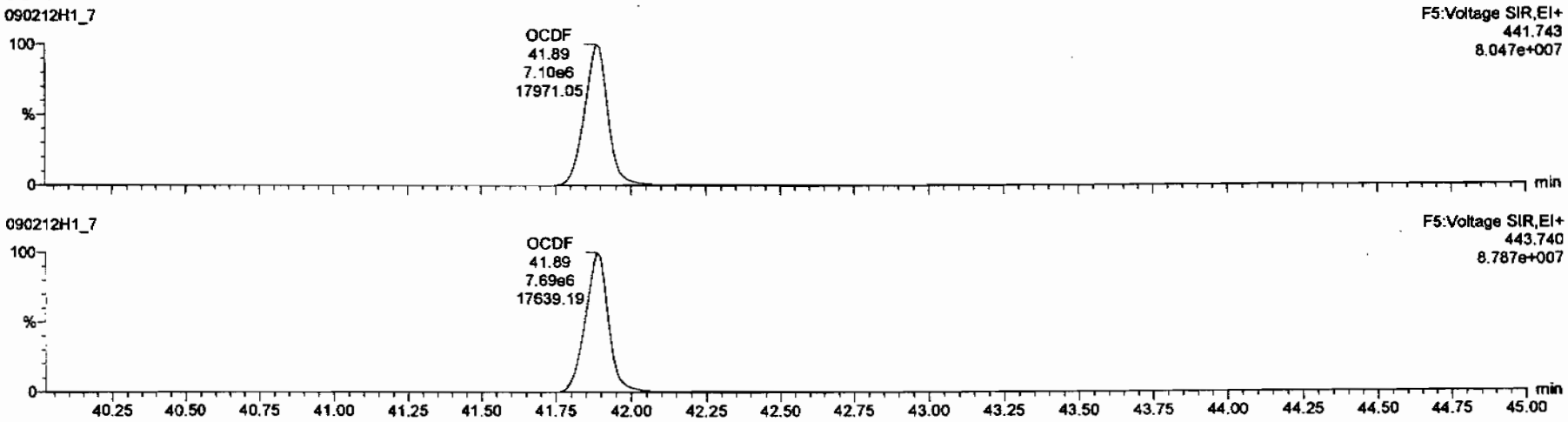

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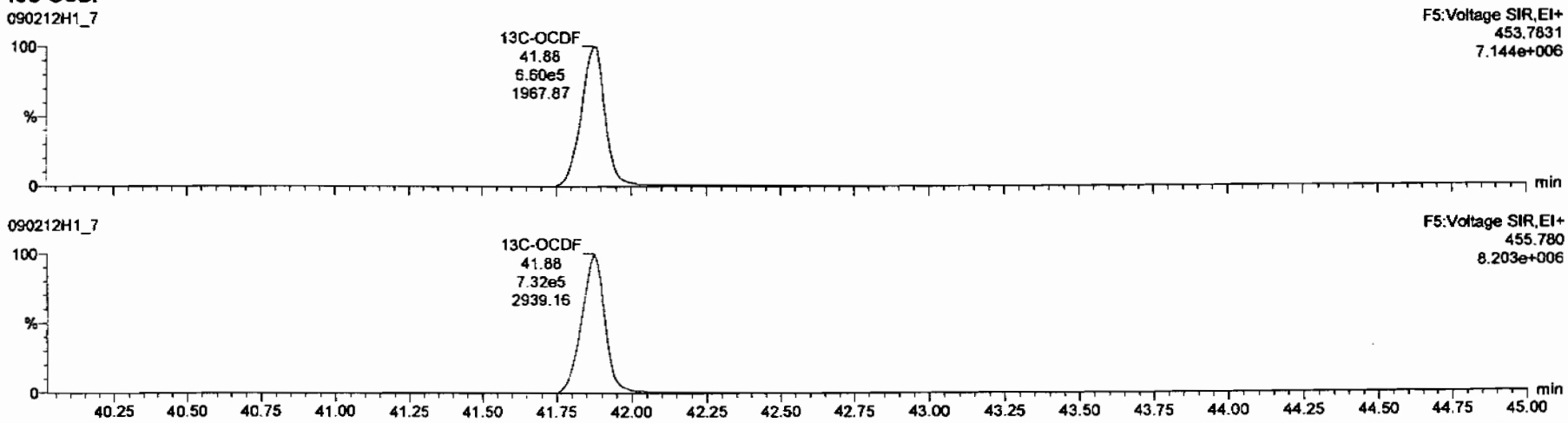

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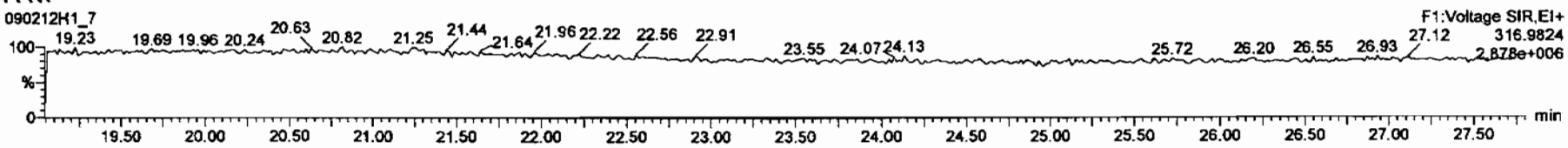

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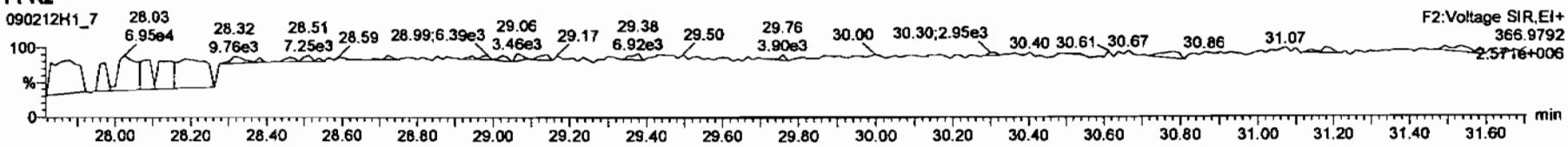

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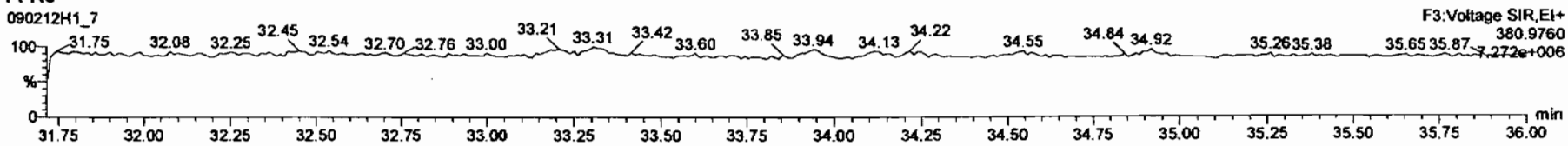

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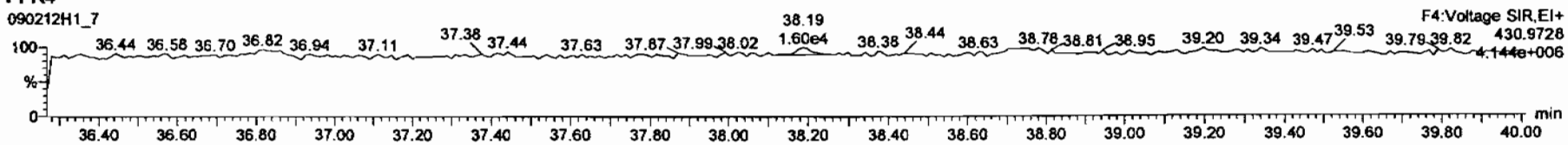

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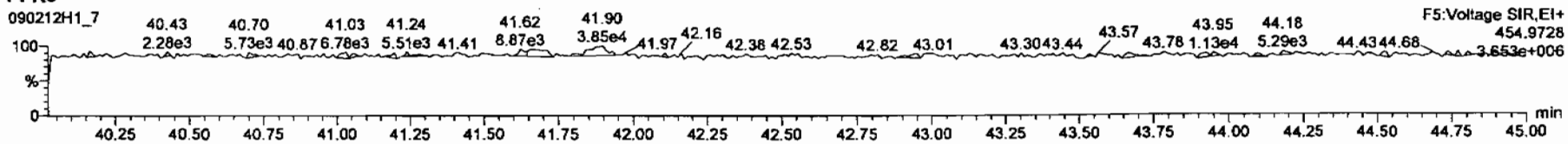

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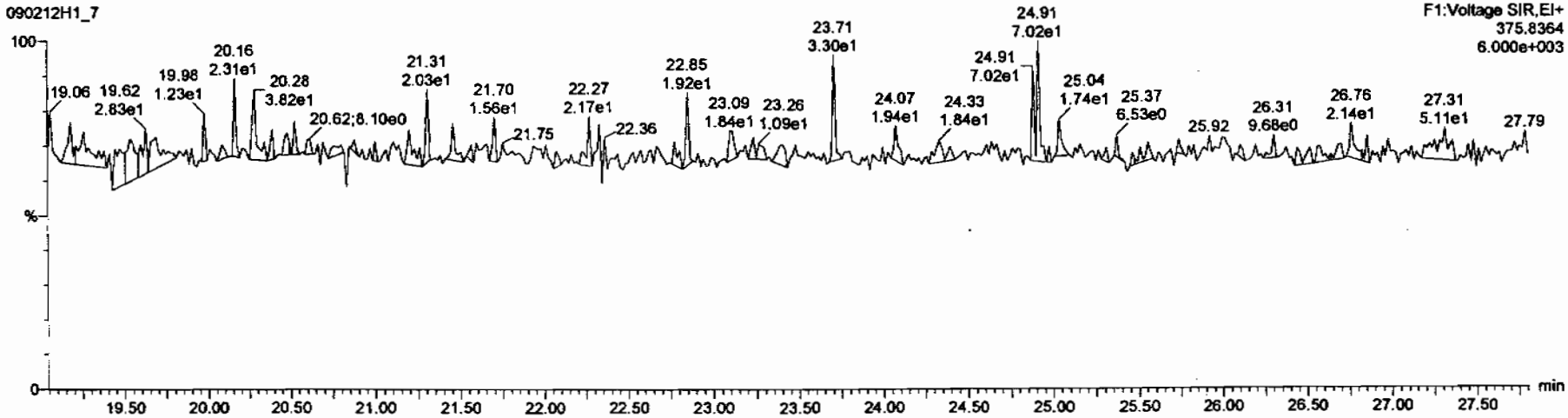

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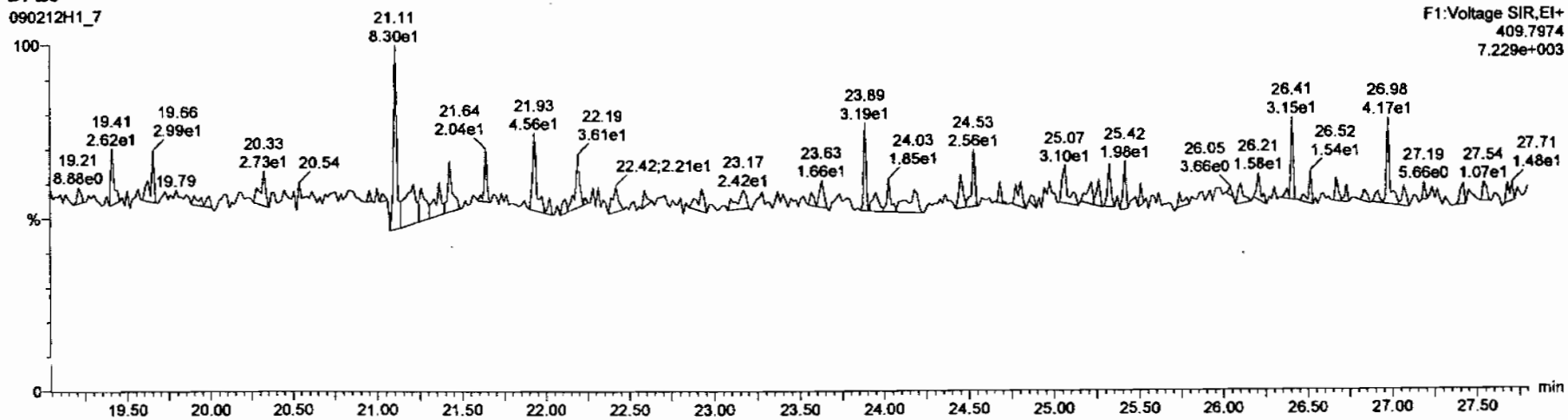

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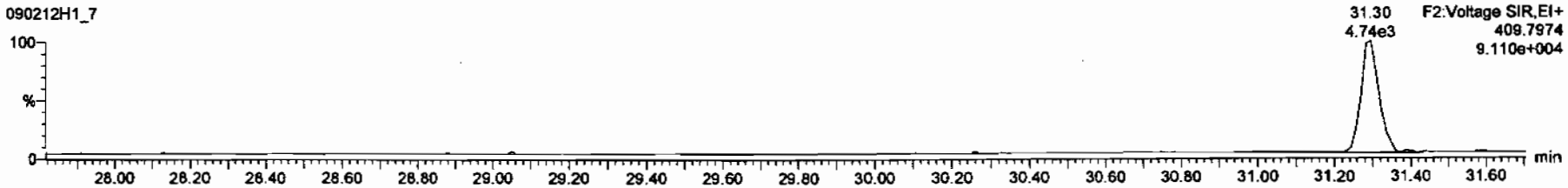

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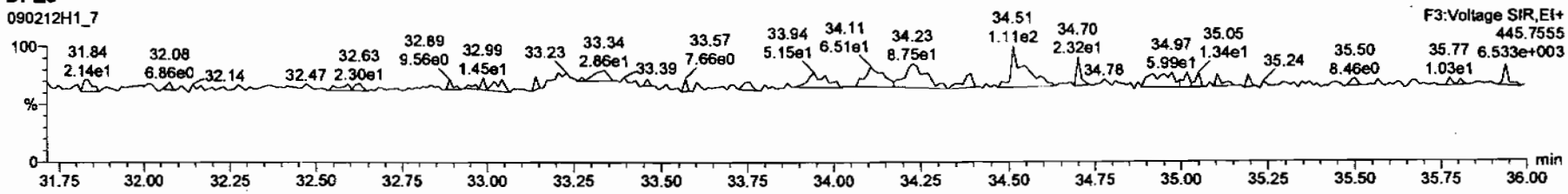

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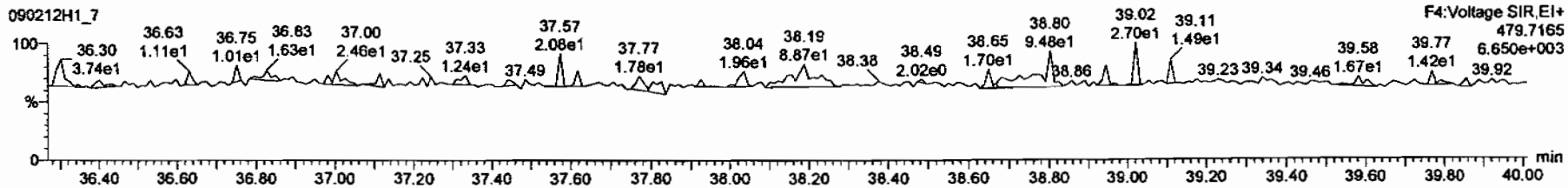

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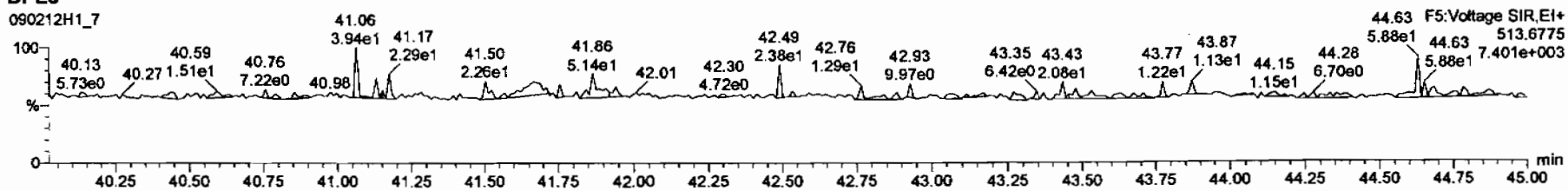

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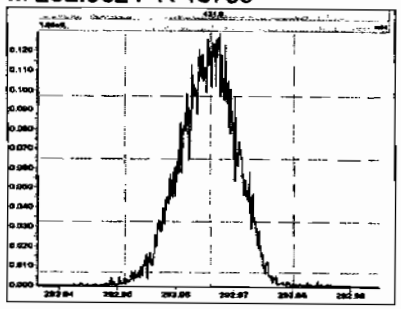

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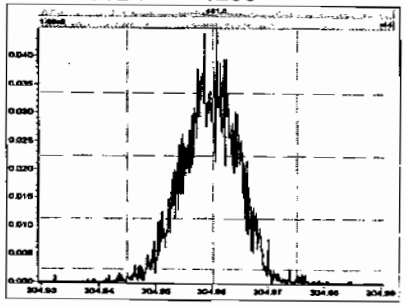

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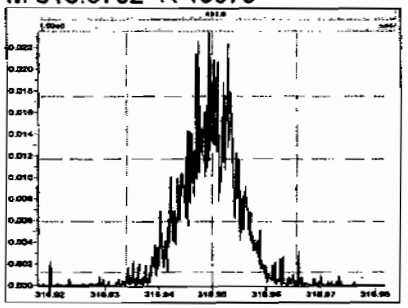

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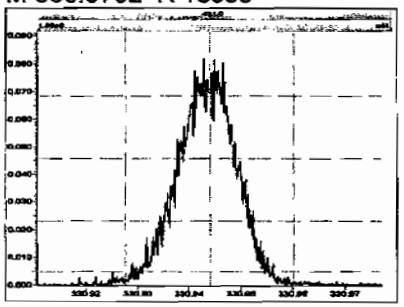

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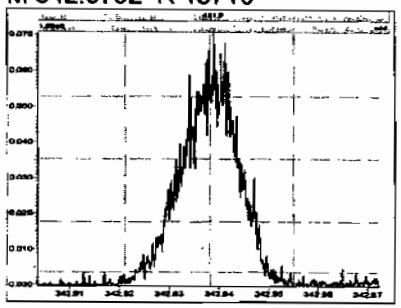

M 354.9792 R 14492

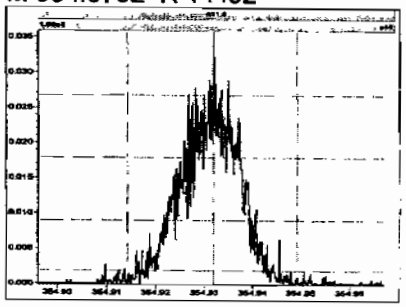

M 366.9792 R 14631

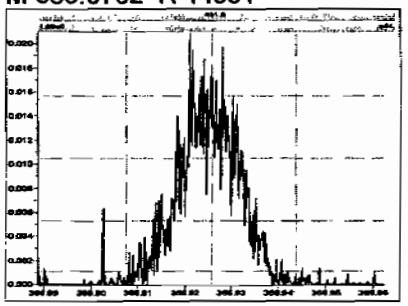

M 380.9760 R 13026

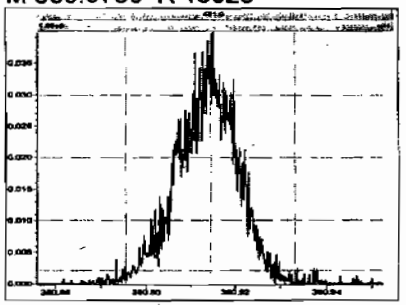

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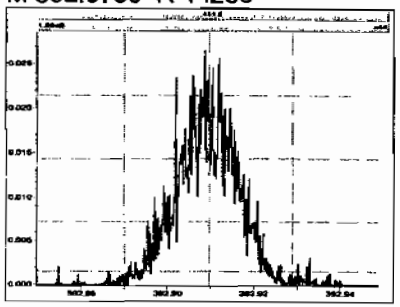

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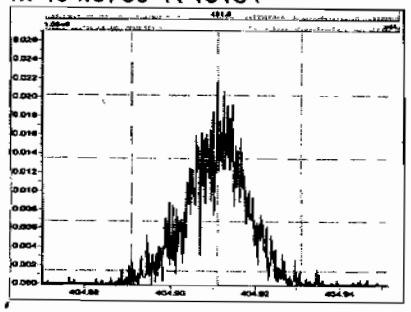

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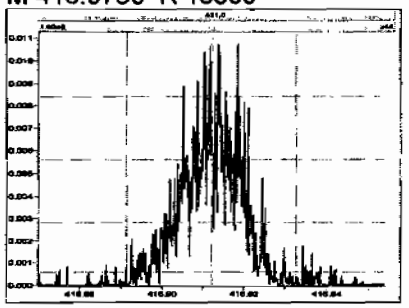

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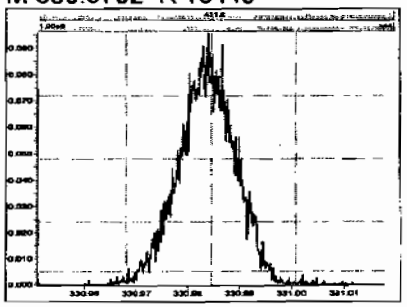

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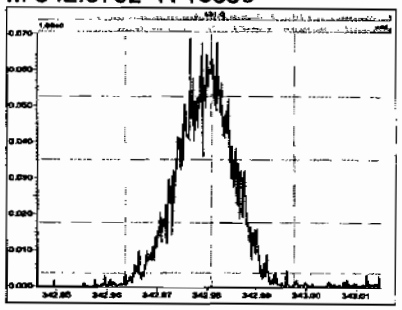

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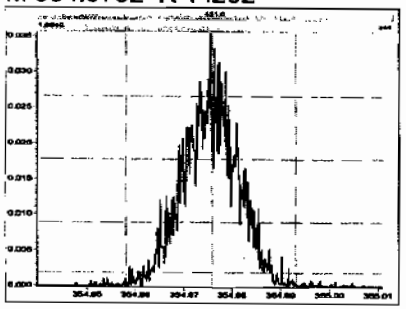

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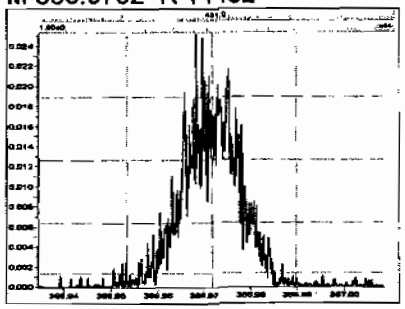

M 380.9760 R 13928

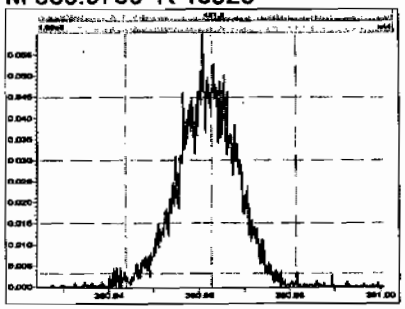

M 392.9760 R 14536

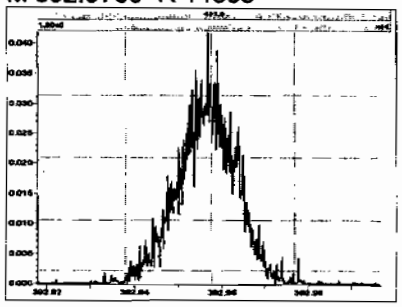

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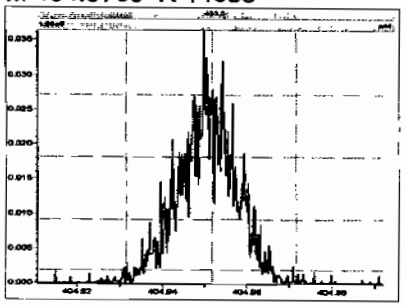

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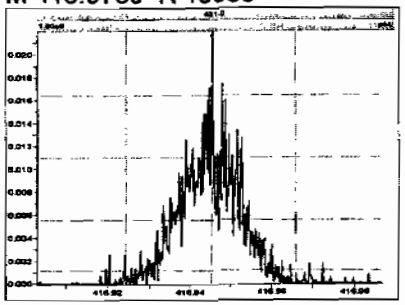

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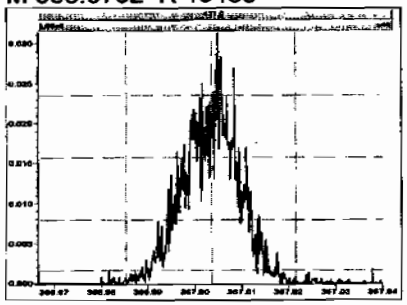

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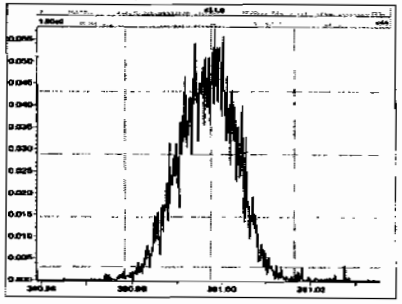

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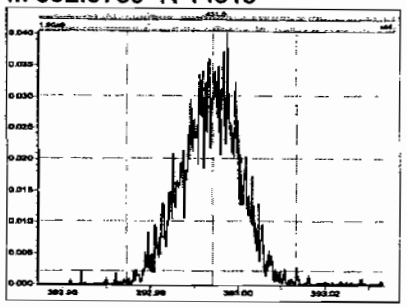

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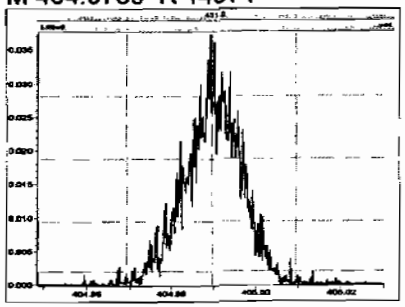

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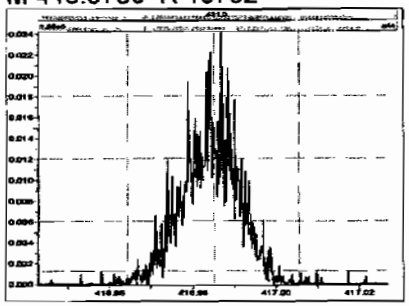

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M 430.9728 R 14874

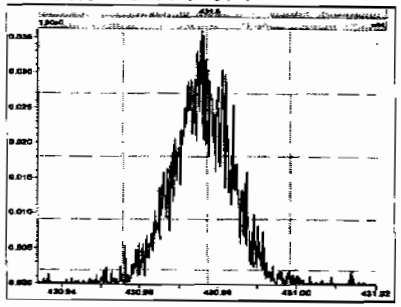

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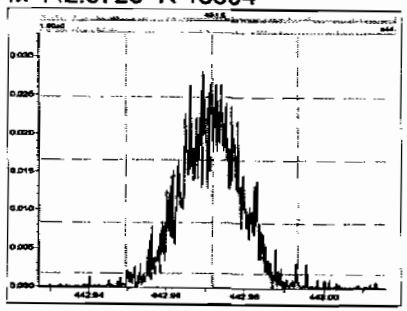

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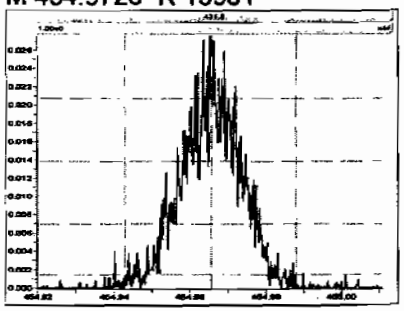

M 404.9760 R 14384

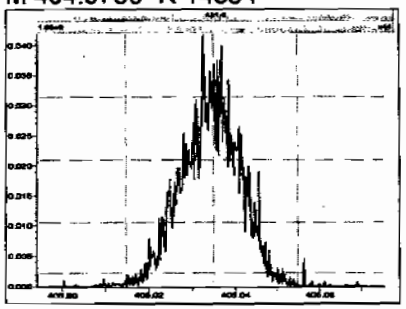

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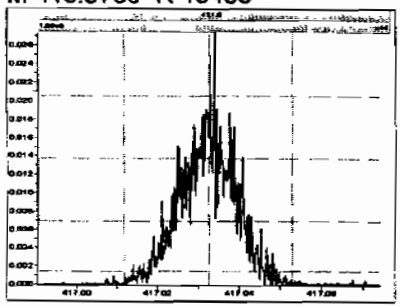

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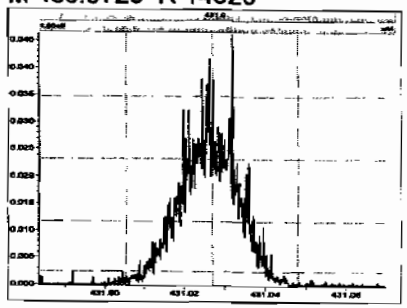

M 442.9728 R 14332

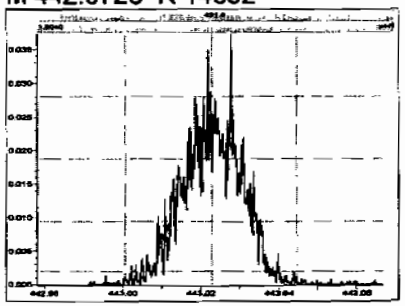

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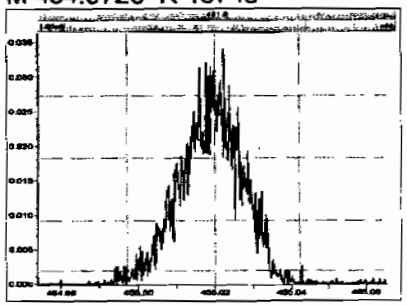

M 466.9728 R 16090

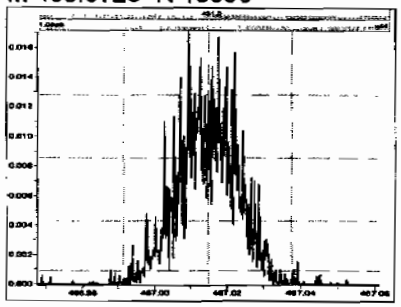

M 480.9696 R 13927

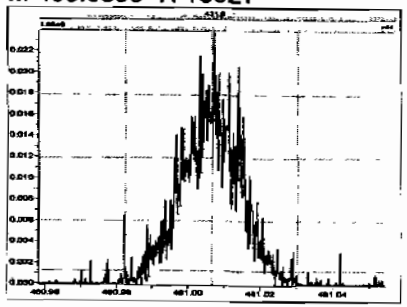

M 430.9728 R 12991

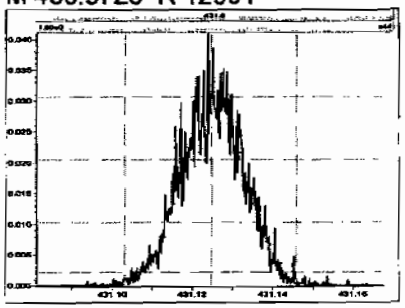

M 442.9728 R 13058

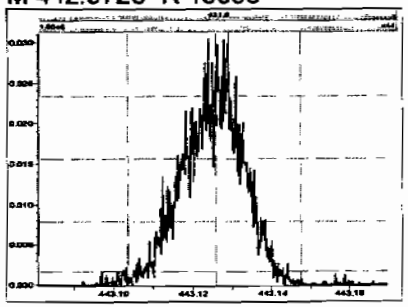

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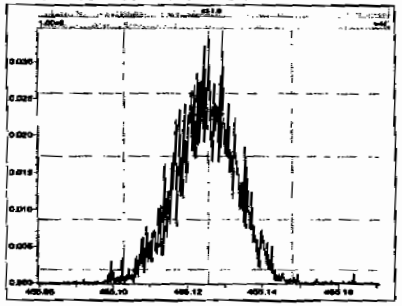

M 466.9728 R 14943

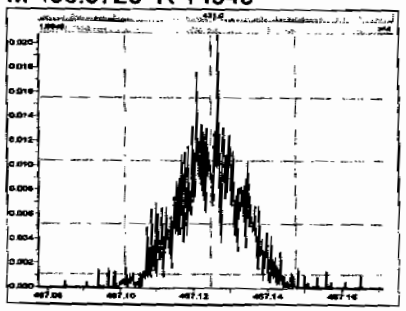

M 480.9696 R 12740

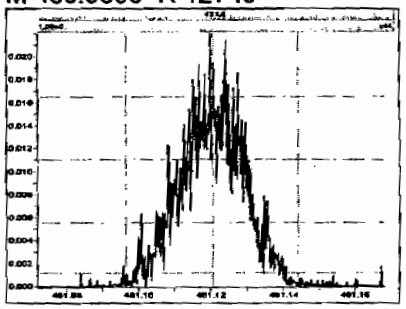

M 492.9696 R 15128

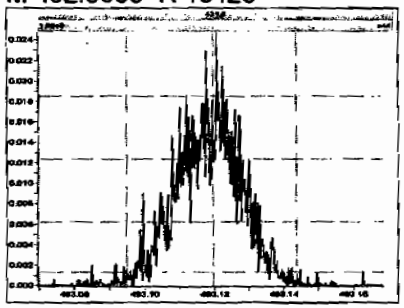

M 504.9696 R 13236

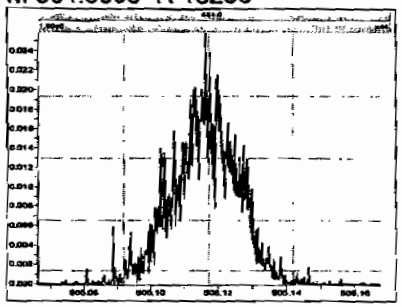

M 516.9697 R 17182

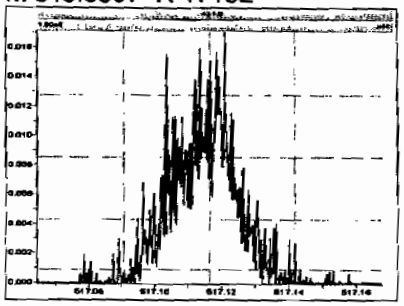

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	Name	Resp	RAT		RRF	WAT	RT	RRT	Conc	%Rec		
1	2,3,7,8-TCDD	2.66e4	0.81	NO	1.08	1.000	25.98	1.001	9.5090		0.0723	9.5090
2	1,2,3,7,8-PeCDD	1.01e5	0.61	NO	1.03	1.000	30.65	1.000	47.444		0.172	47.444
3	1,2,3,4,7,8-HxCDD	9.43e4	1.26	NO	1.00	1.000	34.11	1.001	60.533		0.392	60.533
4	1,2,3,6,7,8-HxCDD	8.97e4	1.28	NO	1.13	1.000	34.22	1.000	41.292		0.312	41.292
5	1,2,3,7,8,9-HxCDD	9.40e4	1.29	NO	1.10	1.000	34.52	1.009	48.966		0.335	48.966
6	1,2,3,4,6,7,8-HpCDD	7.06e4	1.02	NO	1.06	1.000	38.18	1.001	47.757		0.360	47.757
7	OCDD	1.05e5	0.91	NO	1.18	1.000	41.66	1.000	87.851		0.375	87.851
8	2,3,7,8-TCDF	3.59e4	0.80	NO	1.09	1.000	25.20	1.001	9.2692		0.0713	9.2692
9	1,2,3,7,8-PeCDF	1.90e5	1.60	NO	1.16	1.000	29.43	1.001	47.569		0.197	47.569
10	2,3,4,7,8-PeCDF	1.76e5	1.60	NO	1.12	1.000	30.36	1.001	49.959		0.207	49.959
11	1,2,3,4,7,8-HxCDF	1.51e5	1.22	NO	1.41	1.000	33.19	1.000	47.242		0.234	47.242
12	1,2,3,6,7,8-HxCDF	1.99e5	1.24	NO	1.22	1.000	33.31	1.000	52.247		0.205	52.247
13	2,3,4,6,7,8-HxCDF	1.49e5	1.26	NO	1.28	1.000	33.93	1.001	48.194		0.285	48.194
14	1,2,3,7,8,9-HxCDF	1.18e5	1.28	NO	1.26	1.000	34.91	1.000	50.089		0.402	50.089
15	1,2,3,4,6,7,8-HpCDF	1.26e5	1.05	NO	1.69	1.000	36.81	1.000	45.609		0.324	45.609
16	1,2,3,4,7,8,9-HpCDF	9.92e4	1.09	NO	1.48	1.000	38.74	1.000	53.044		0.451	53.044
17	OCDF	1.36e5	0.92	NO	1.10	1.000	41.88	1.001	~~77825~~		102	77825
18	13C-2,3,7,8-TCDD	2.60e5	0.79	NO	1.01	1.000	25.97	1.022	100.68	101	0.251	
19	13C-1,2,3,7,8-PeCDD	2.07e5	0.62	NO	0.827	1.000	30.64	1.206	98.194	98.2	0.366	
20	13C-1,2,3,4,7,8-HxCDD	1.56e5	1.23	NO	0.916	1.000	34.08	0.988	96.272	96.3	1.12	
21	13C-1,2,3,6,7,8-HxCDD	1.93e5	1.30	NO	0.921	1.000	34.21	0.991	118.79	119	1.12	
22	13C-1,2,3,4,6,7,8-HpCDD	1.39e5	1.04	NO	0.708	1.000	38.16	1.106	111.12	111	0.936	
23	13C-OCDD	2.03e5	0.90	NO	0.503	1.000	41.65	1.207	229.27	115	1.10	
24	13C-2,3,7,8-TCDF	3.56e5	0.77	NO	0.977	1.000	25.17	0.991	47241	~~47200~~	47.8	
25	13C-1,2,3,7,8-PeCDF	3.45e5	1.53	NO	0.896	1.000	29.41	1.158	49875	~~49900~~	135	
26	13C-2,3,4,7,8-PeCDF	3.15e5	1.57	NO	0.900	1.000	30.34	1.194	45355	~~45400~~	135	
27	13C-1,2,3,4,7,8-HxCDF	2.27e5	0.52	NO	1.17	1.000	33.17	0.962	110.01	110	1.09	
28	13C-1,2,3,6,7,8-HxCDF	3.11e5	0.53	NO	1.52	1.000	33.29	0.965	116.12	116	0.841	
29	13C-2,3,4,6,7,8-HxCDF	2.41e5	0.53	NO	1.25	1.000	33.91	0.983	109.27	109	1.02	
30	13C-1,2,3,7,8,9-HxCDF	1.87e5	0.53	NO	1.05	1.000	34.90	1.011	100.48	100	1.21	

2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	Name	Resp	Ba	Int	RRF	Width	Rt	RRT	Conc	Rec	DL	EMPC
31	13C-1,2,3,4,6,7,8-HpCDF	1.64e5	0.42	NO	0.868	1.000	36.80	1.066	107.17	107	0.875	
32	13C-1,2,3,4,7,8,9-HpCDF	1.26e5	0.43	NO	0.727	1.000	38.73	1.122	98.571	98.6	1.05	
33	13C-OCDF	3.18e2	0.17	YES	0.760	1.000	41.82	1.212	0.23753	~~9.119~~	0.197	
34	37Cl-2,3,7,8-TCDD	2.82e4			0.668	1.000	25.98	1.023	16.616	166	0.0976	
35	13C-1,2,3,4-TCDD	2.54e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.254	
36	13C-1,2,3,4-TCDF	7.72e2	0.44	YES	1.00	1.000	23.92	0.000	100.00	100	46.7	
37	13C-1,2,3,7,8,9-HxCDD	1.76e5	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	1.03	

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDD

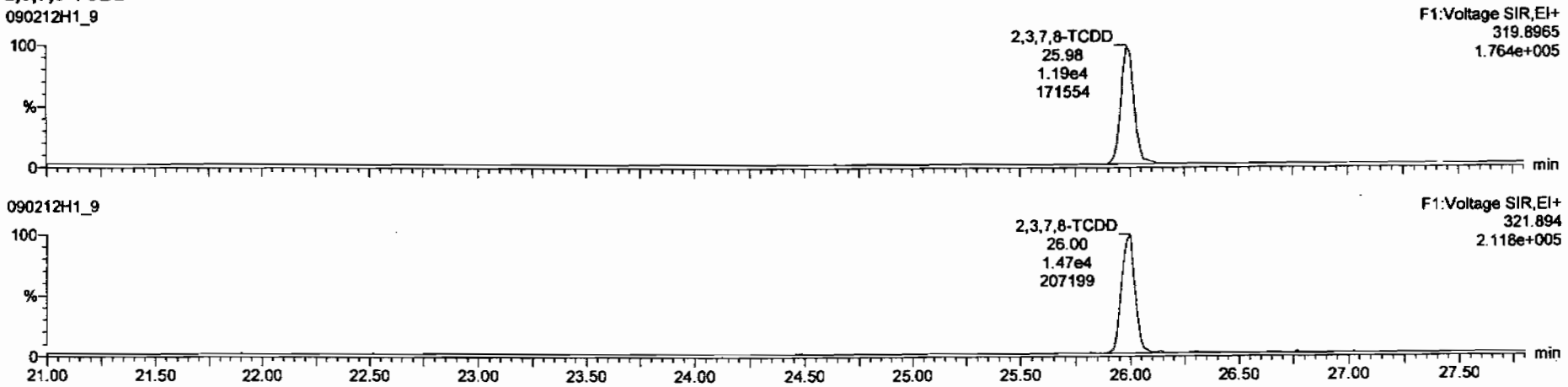

13C-2,3,7,8-TCDD

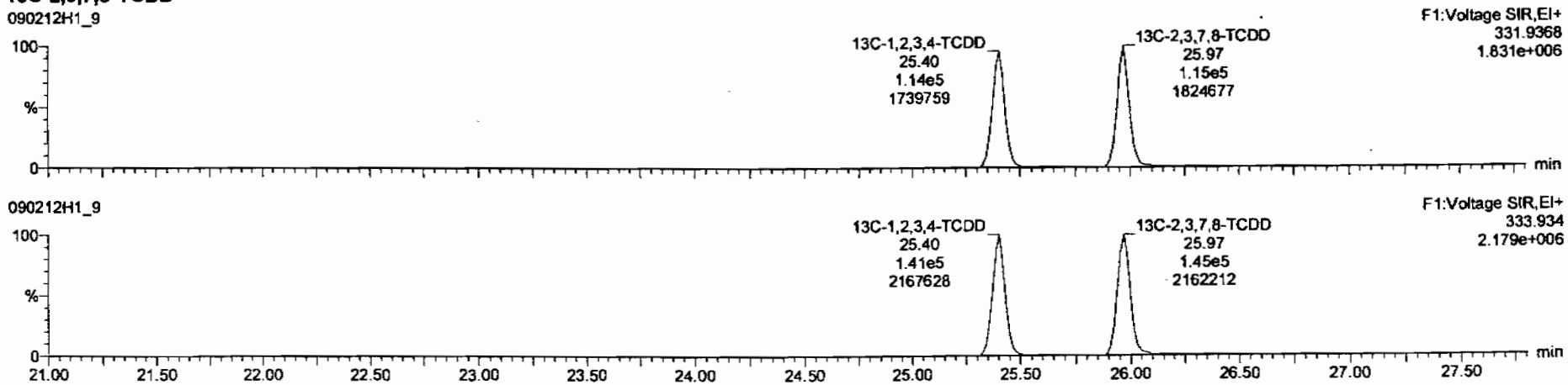

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

37Cl-2,3,7,8-TCDD

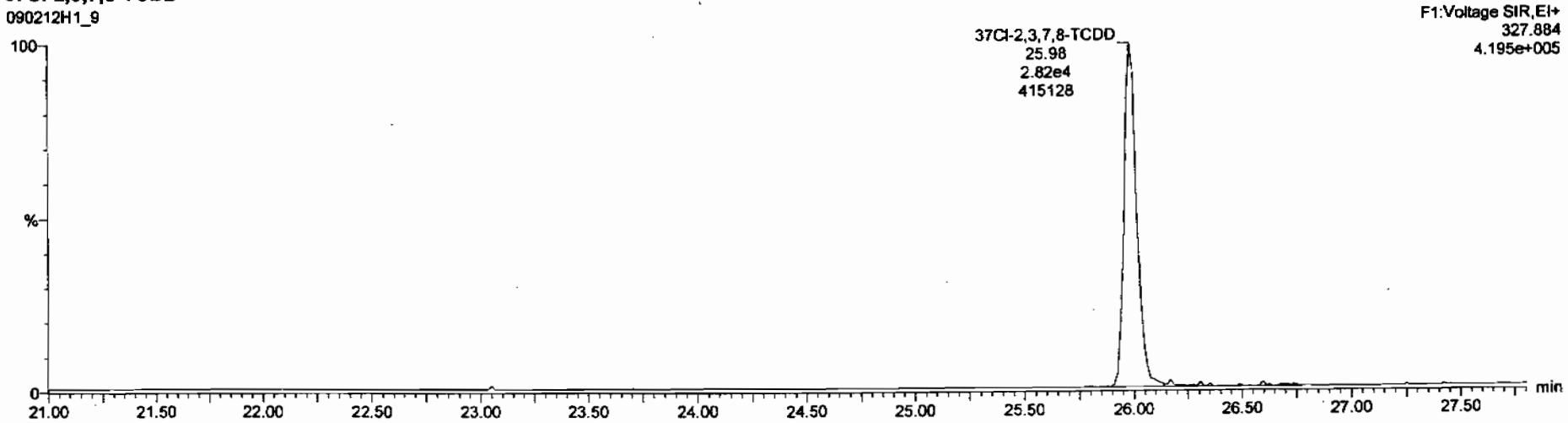

13C-1,2,3,4-TCDD

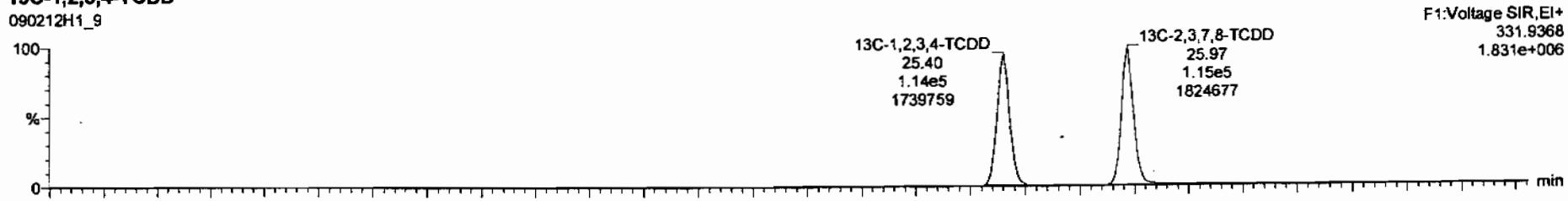

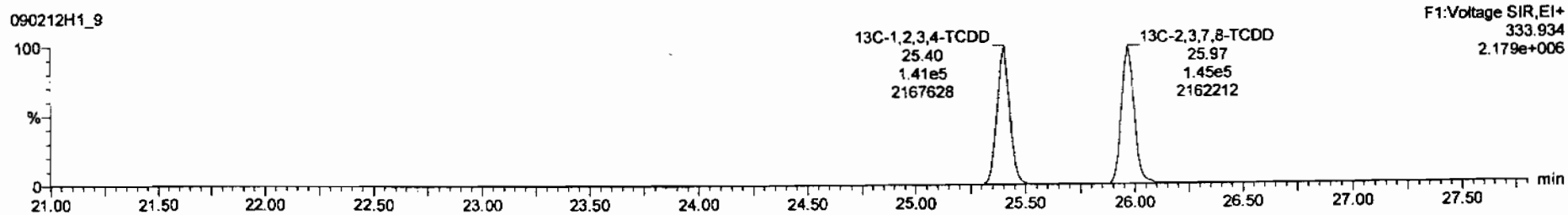

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,7,8-PeCDD

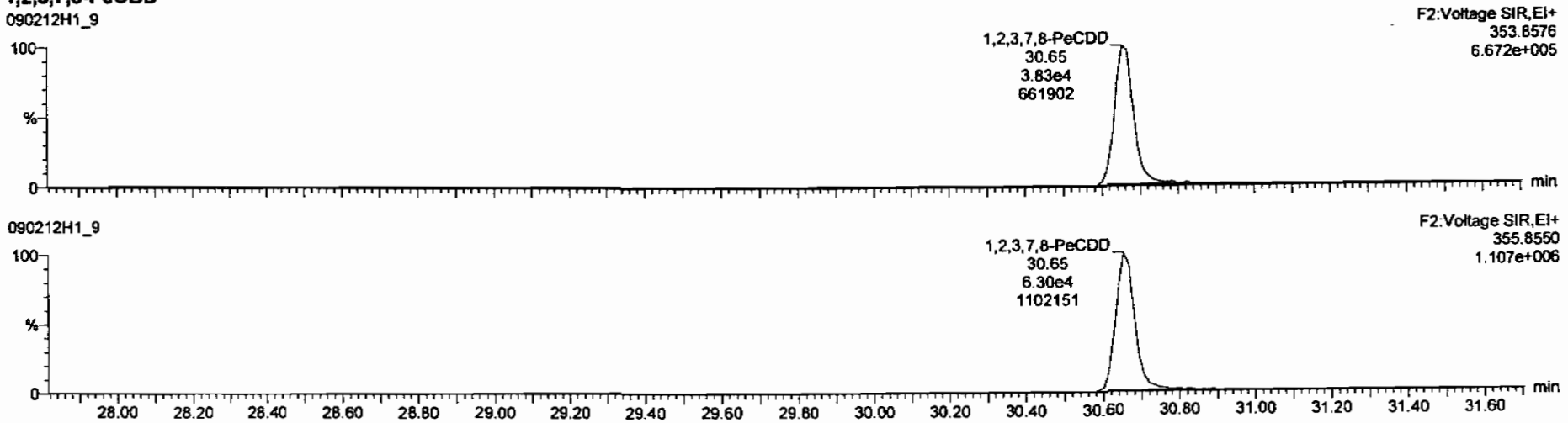

13C-1,2,3,7,8-PeCDD

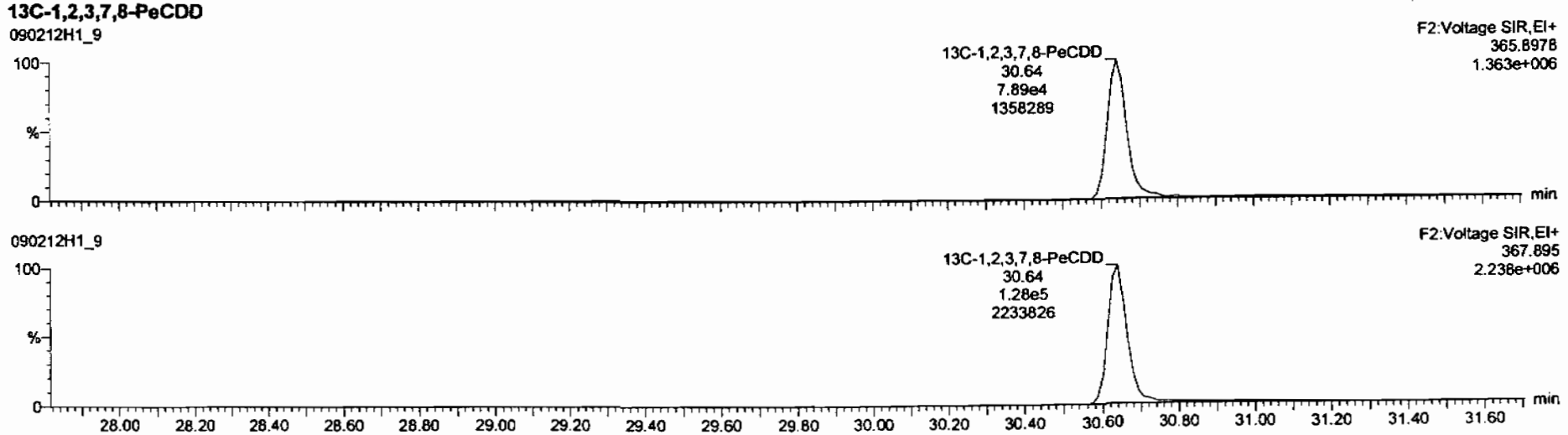

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,7,8-HxCDD

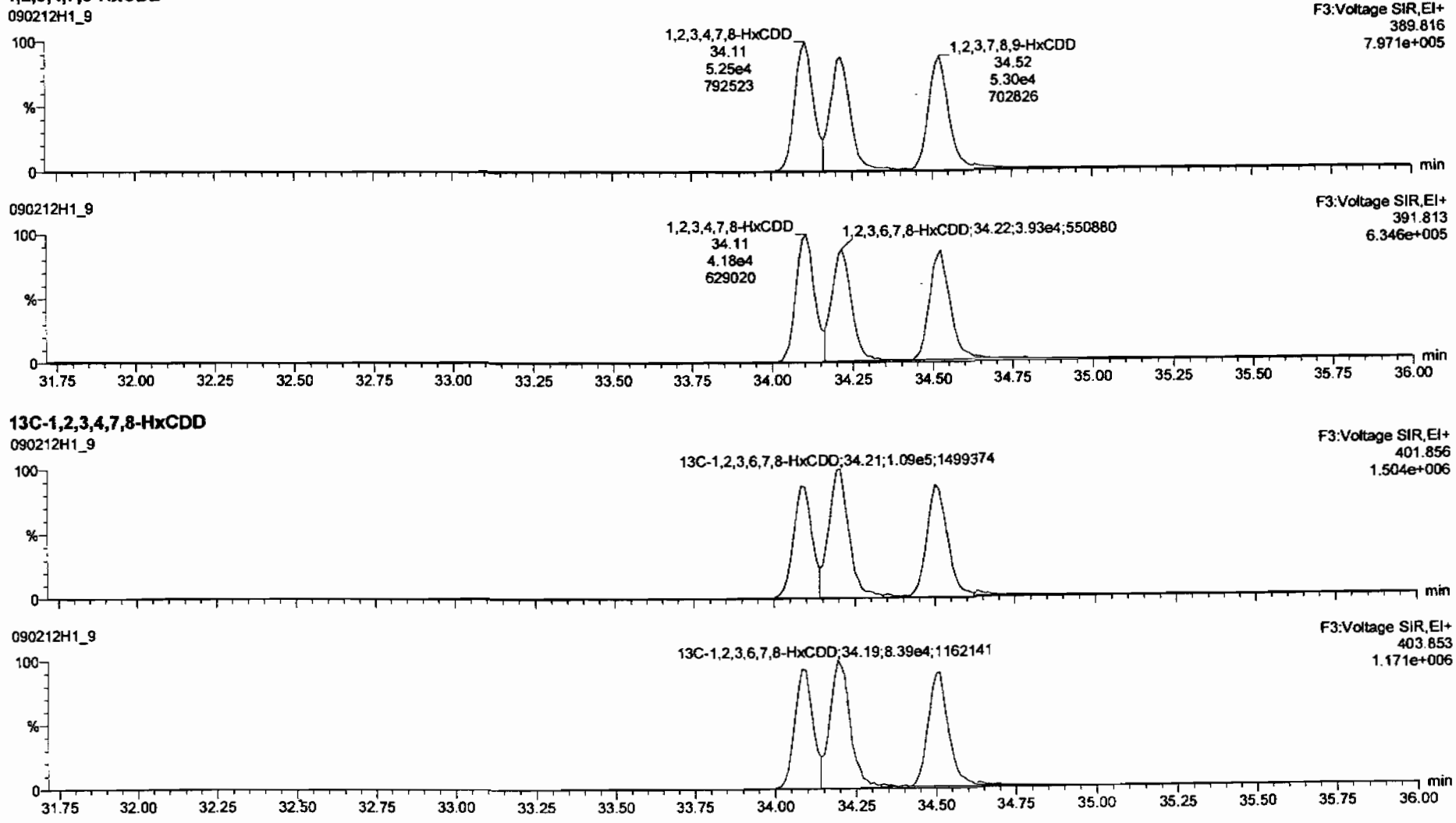

13C-1,2,3,4,7,8-HxCDD

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,6,7,8-HpCDD

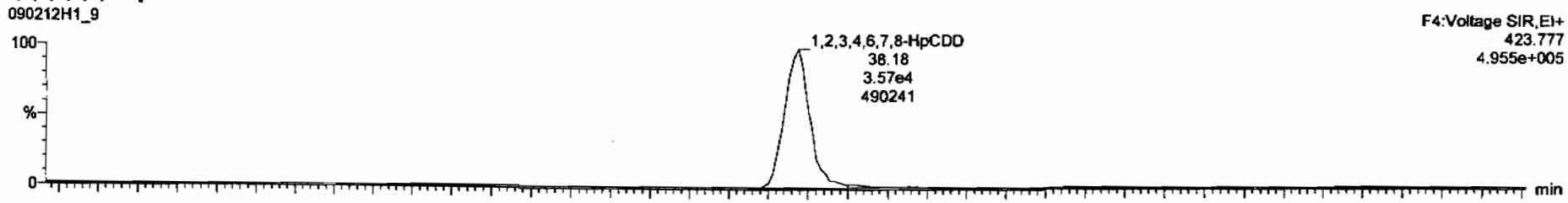

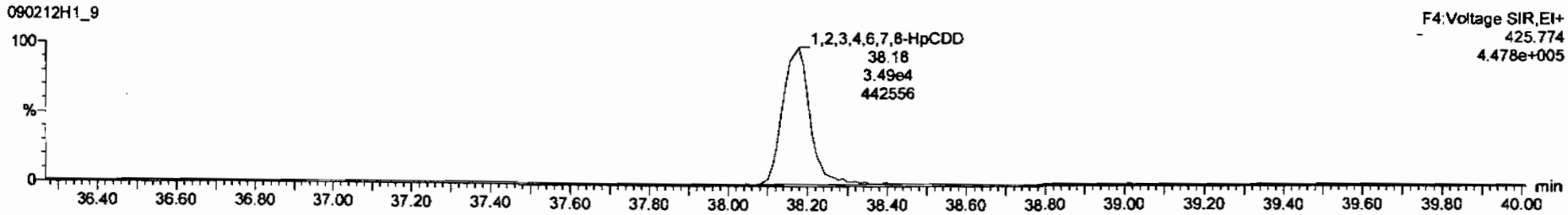

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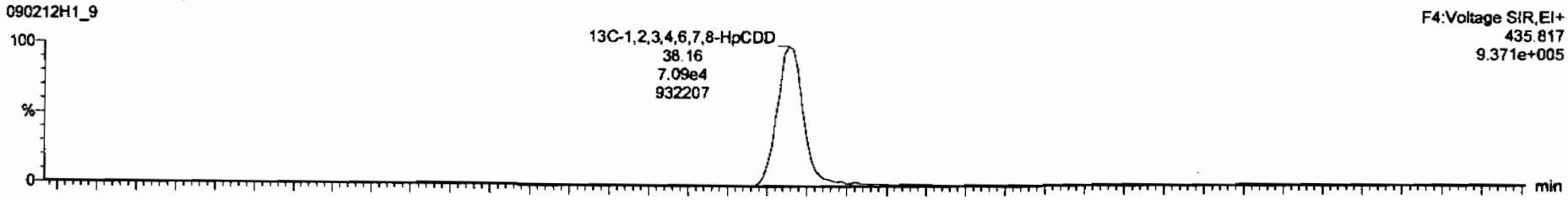

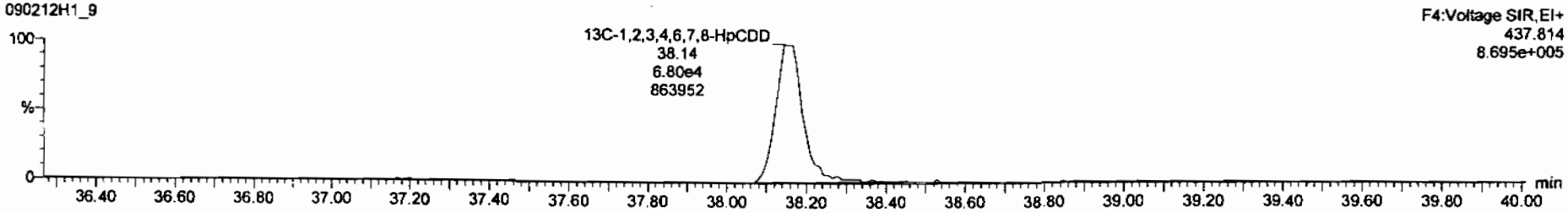

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

OCDD

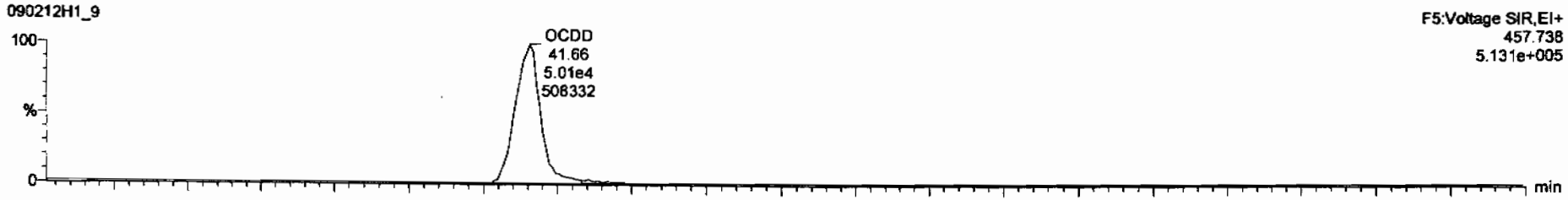

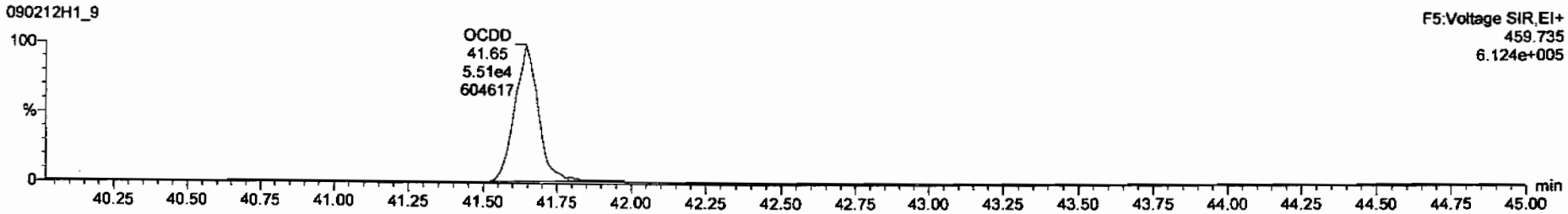

13C-OCDD

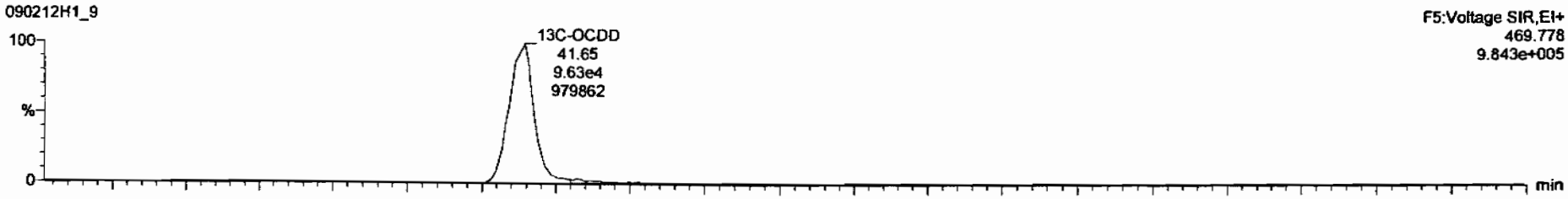

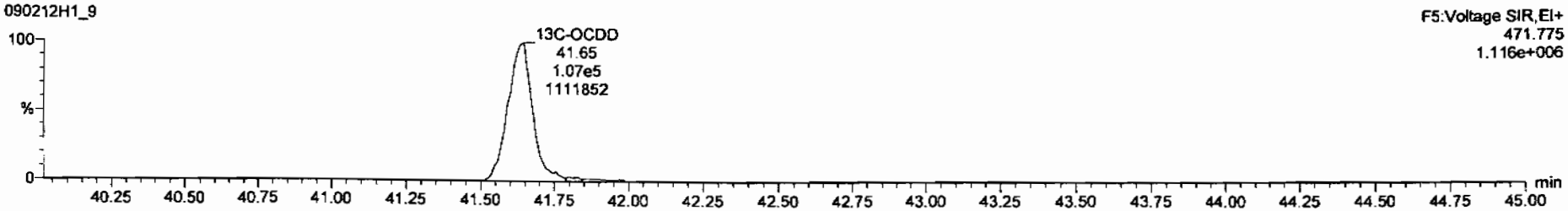

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDF

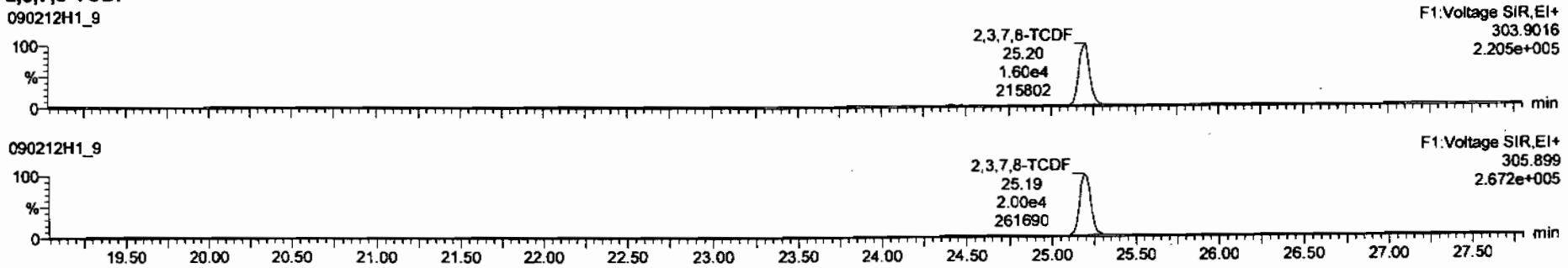

13C-2,3,7,8-TCDF

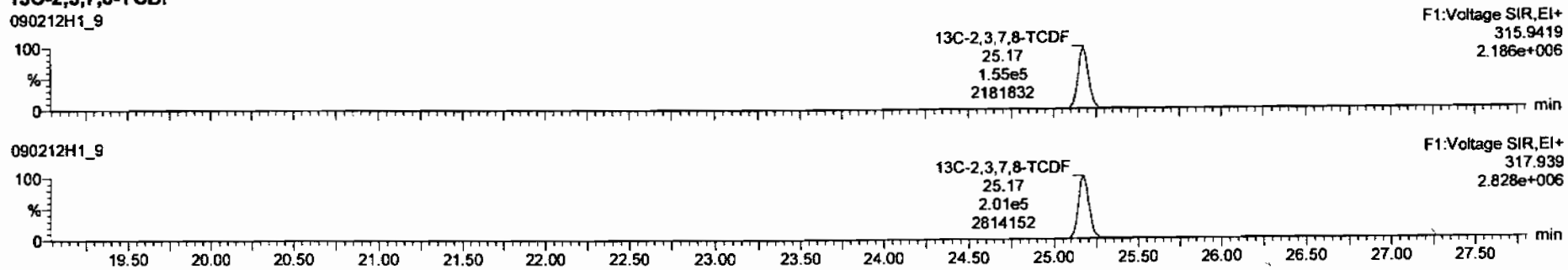

DPE1

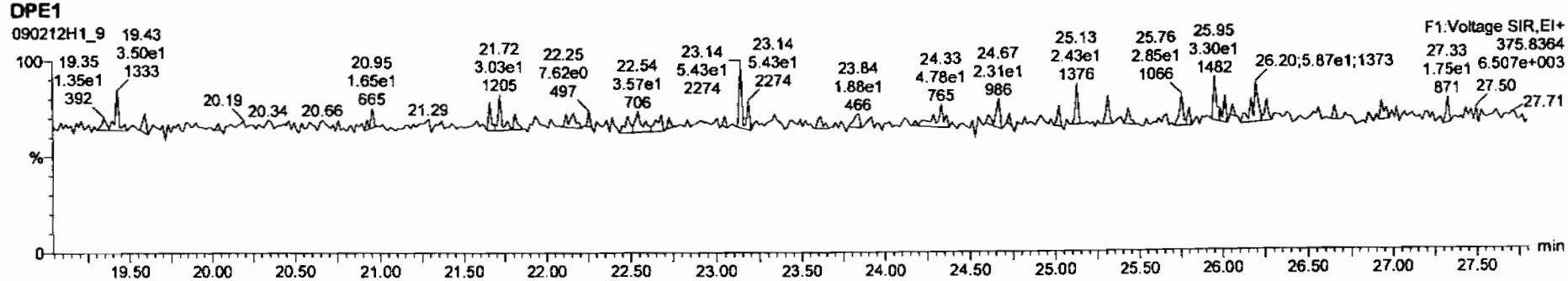

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1st Func. Penta-Furans

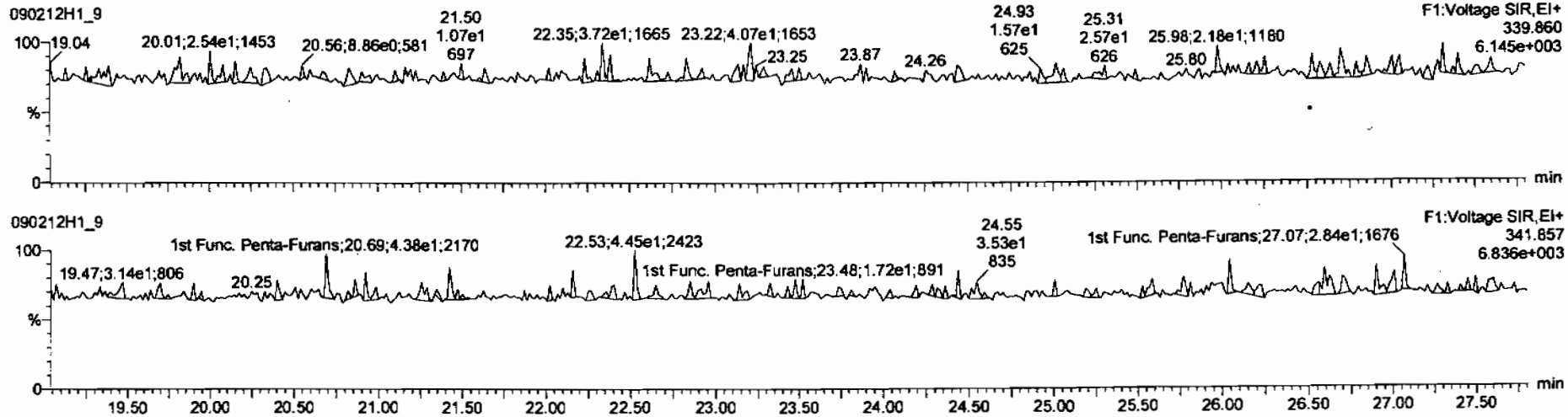

DPE6

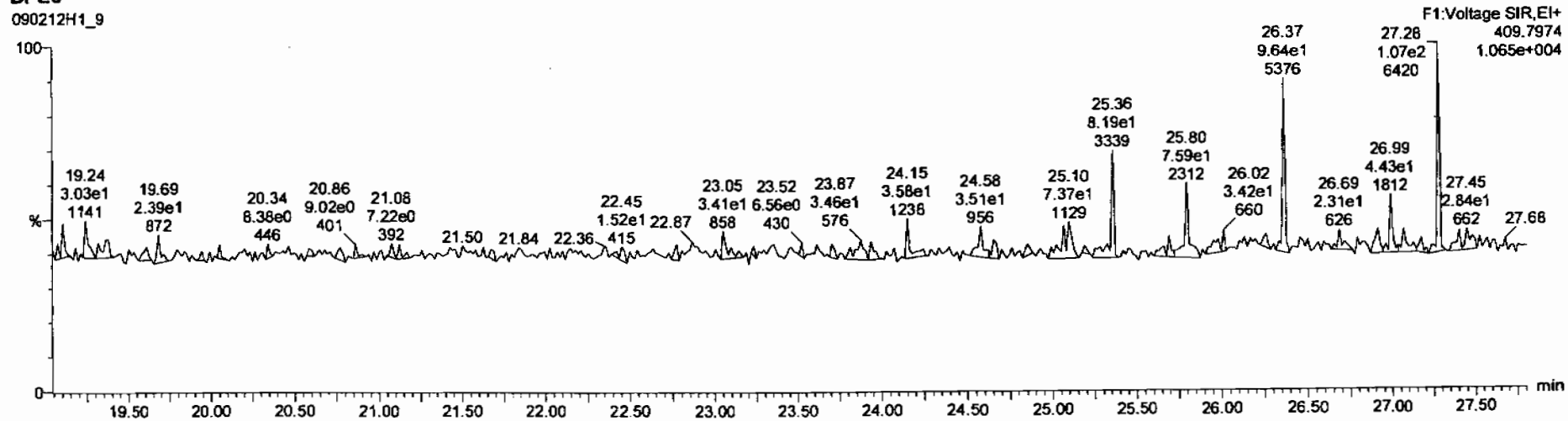

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,7,8-PeCDF

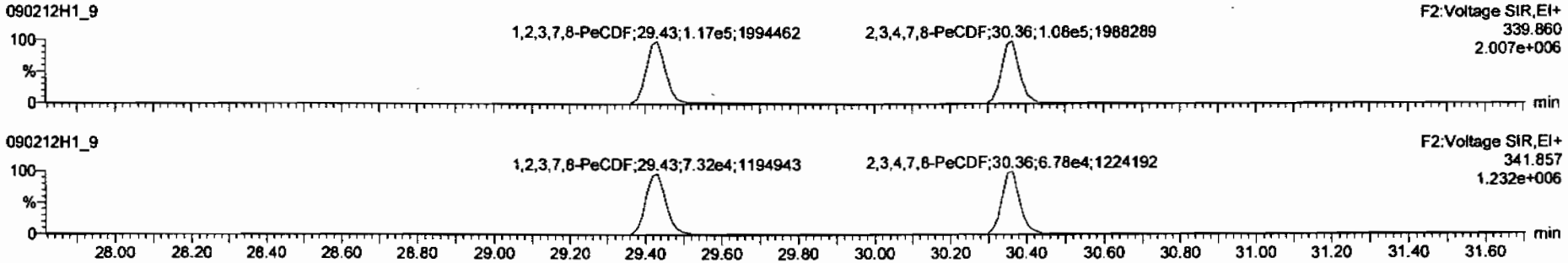

13C-1,2,3,7,8-PeCDF

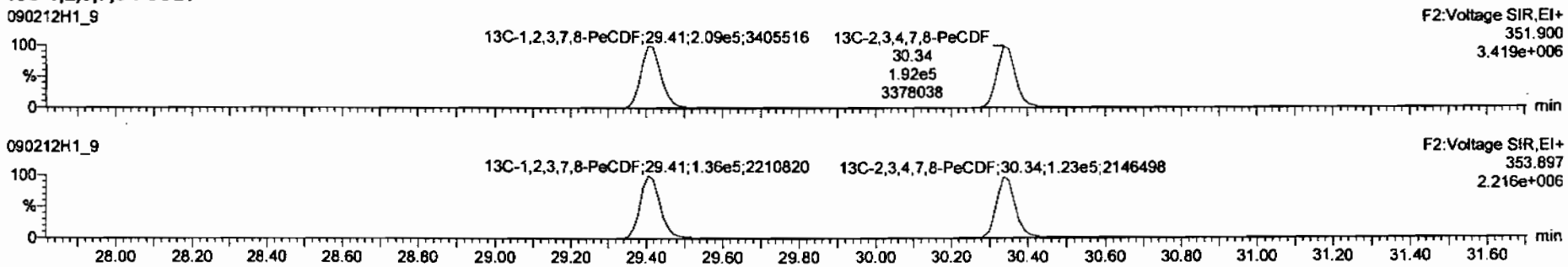

DPE2

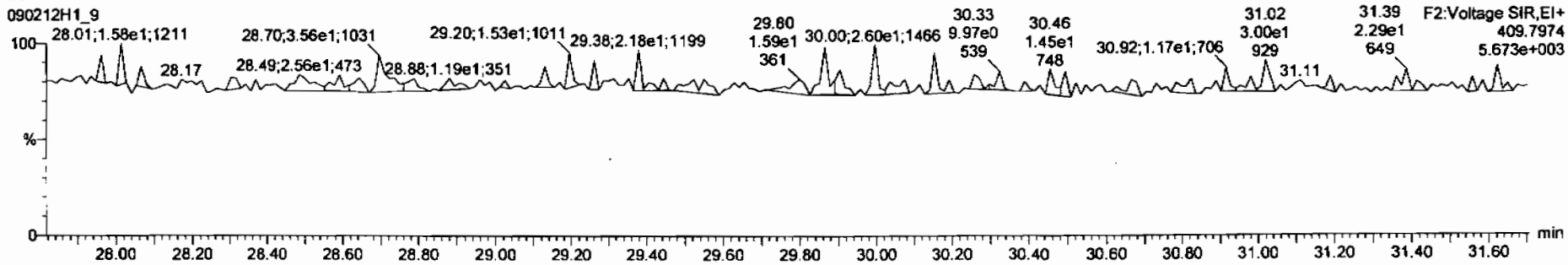

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,7,8-HxCDF

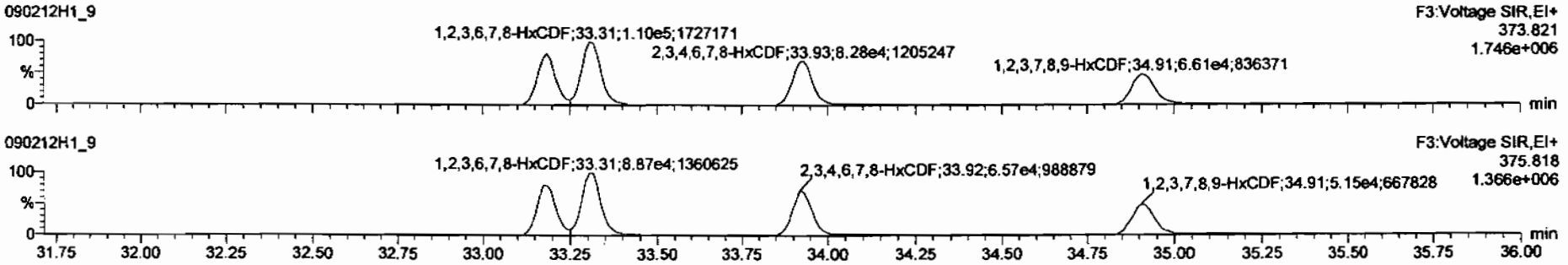

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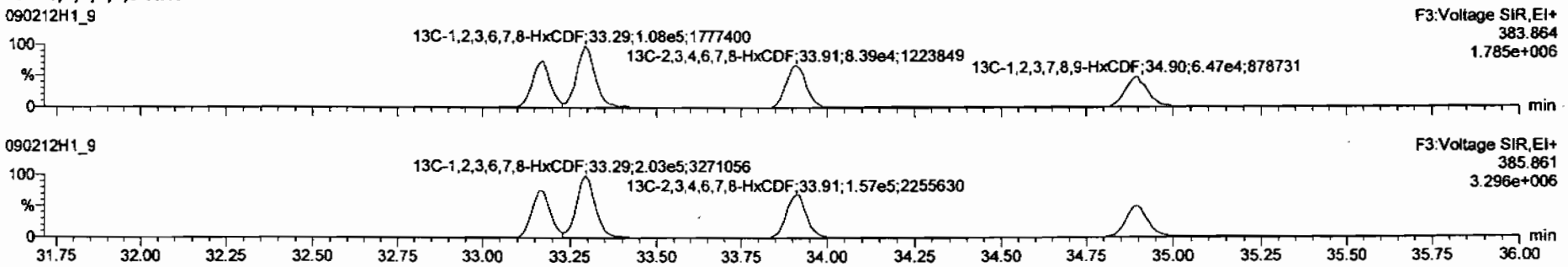

DPE3

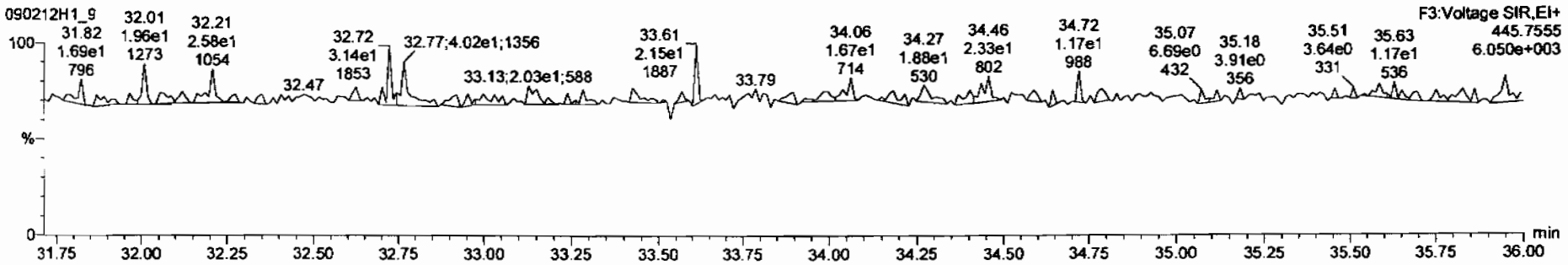

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,6,7,8-HpCDF

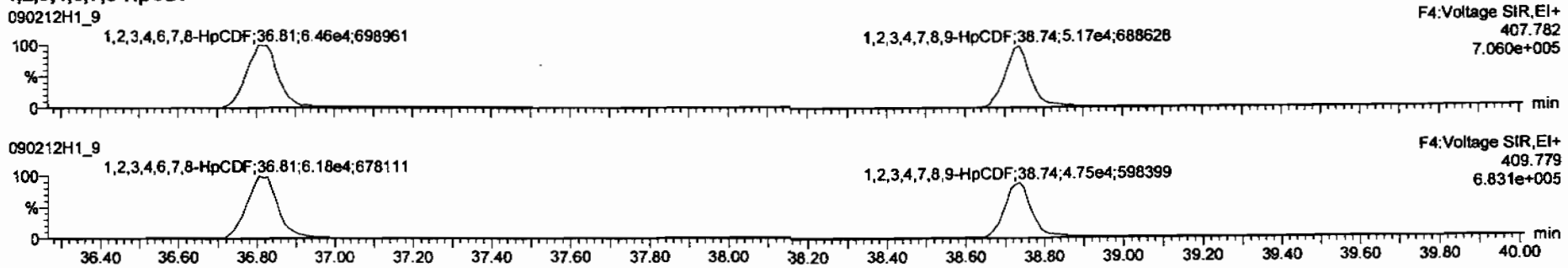

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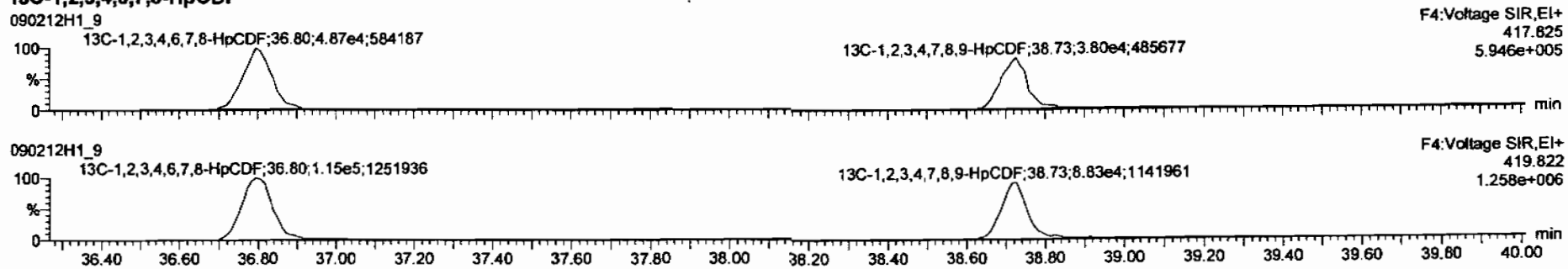

DPE4

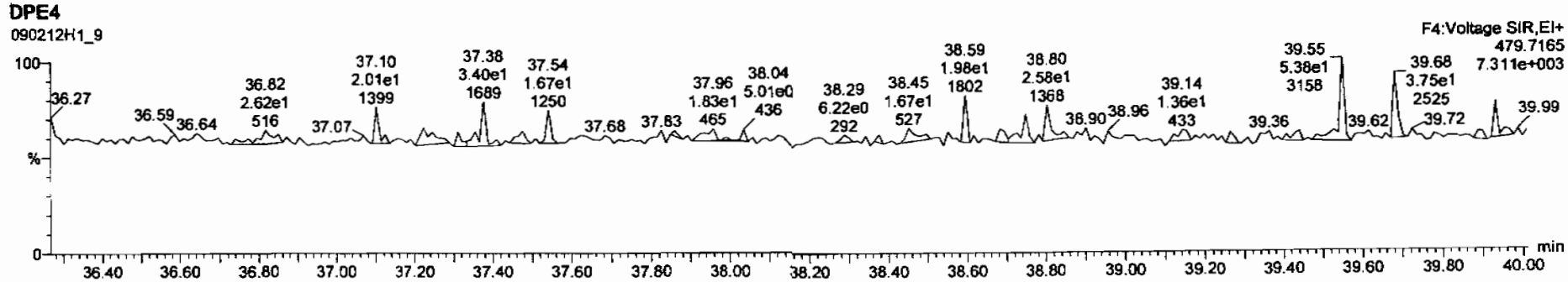

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

OCDF

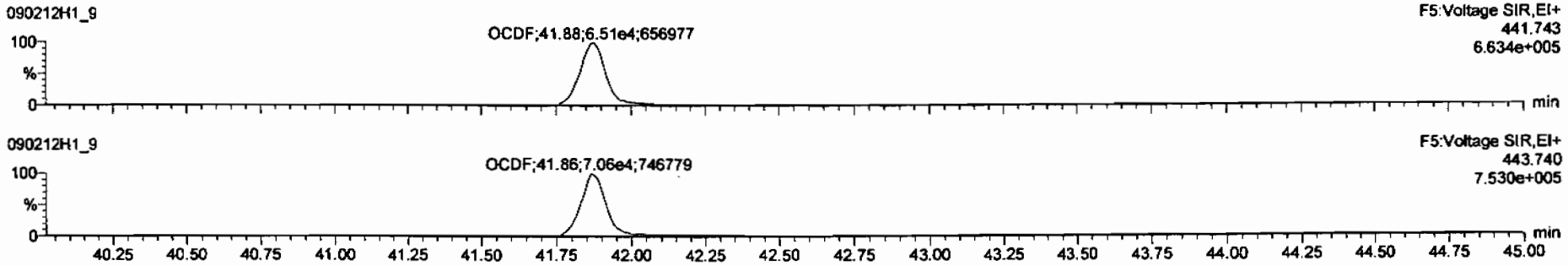

13C-OCDF

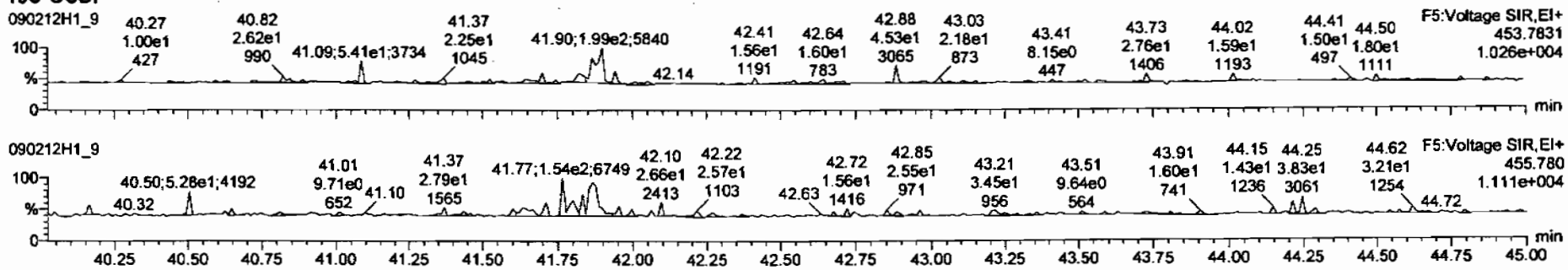

DPE5

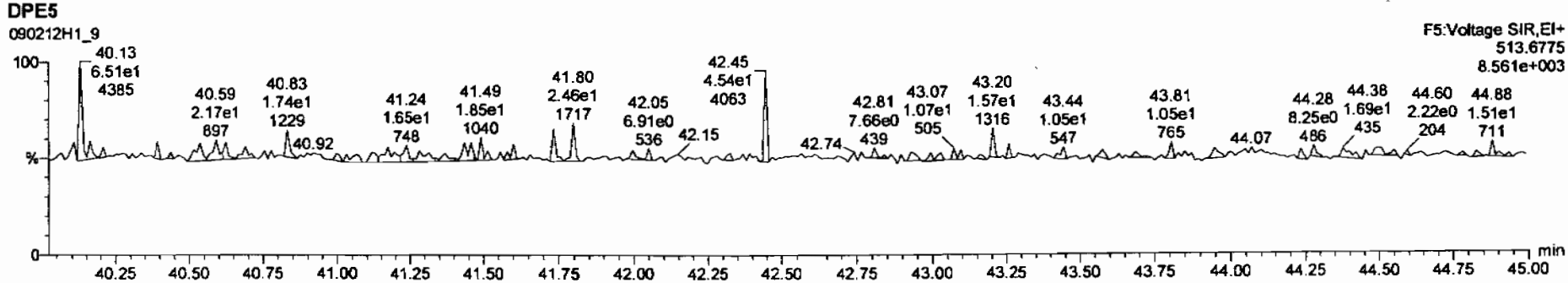

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

PFK1

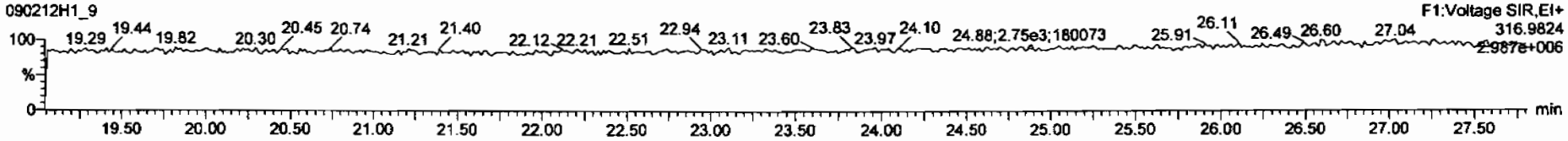

PFK2

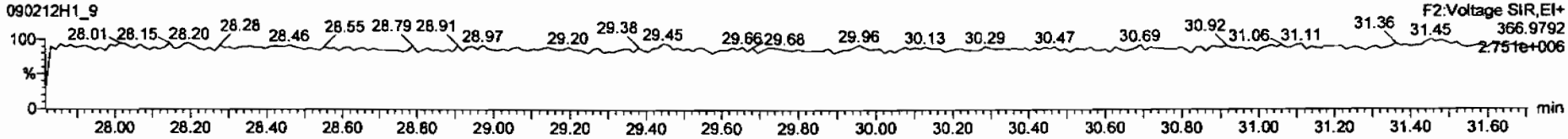

PFK3

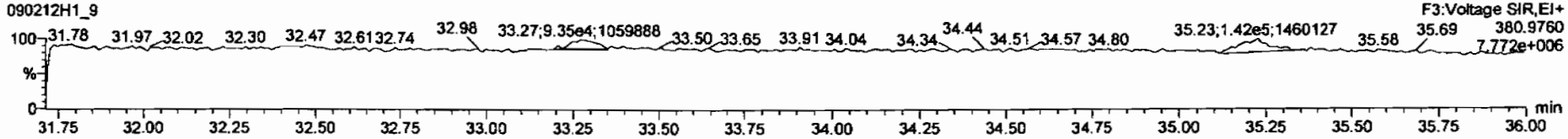

PFK4

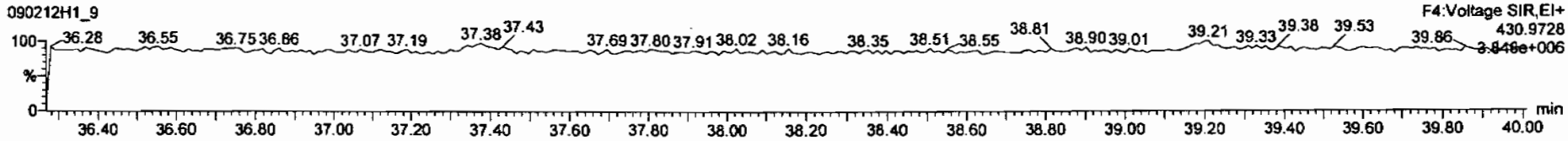

PFK5

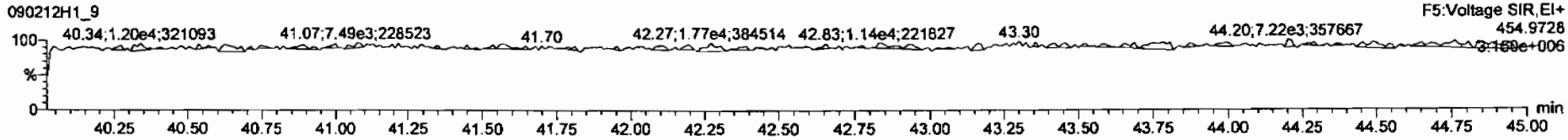

Monday, June 29, 2009

REQUEST NUMBER: 09-2503

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2503
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-6518	R	6/24/2009	
		2	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		2	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		2	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2503

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2503

REQUEST NUMBER: 09-2503

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	GLASS	8290	Ice	R
CAMO-09-6519	2	GLASS	8290	Ice	R
CAMO-09-6518	1	GLASS	8290	Ice	R
CAMO-09-6518	2	GLASS	8290	Ice	R
CAMO-09-6531	1	GLASS	8290	Ice	R
CAMO-09-6531	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		6/29/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6518

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	ok
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605085	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AN 6.24.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown sediment sand → silt slightly moist

FD: CAMO-09-6531 FR: CAMO-09-6533

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d) - 06, below RLW outfall in main canyon drainage

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 75 dpm

β/γ ≤ 705 dpm

PID ambient / Reading : 0.0 / 0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6/24/09	(Printed Name) S. MARCZAK	6/24/09
(Signature) [signature]	1640	(Signature) [signature]	1640

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6519

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	QBT2
TIME COLLECTED (HH:MM)		1600	SUB-MEDIA:	UA	OK
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605085	OK	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	J.B 6/24/09 ~~2.0~~ 2.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day ~~Regular~~ J.B. 6/24/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown / Grey, highly indurated, wet tuff

~~FR: CAMO-09-6533~~ J.B. 6/24/09

SAMPLE COMMENTS: Tuff interface @ 1.5' bgs. Power auger attempt did not advance in tuff. Cutrite auger and Breaker Bar used to collect adequate sample material.

LOCATION DESC: 50-006(d)-06

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 17$ dpm

$\beta/\gamma \leq 1624$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch **REVIEWED BY (PRINT)** A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/24/09	(Printed Name) S. MARCIAN	6/24/09
(Signature)	1640	(Signature)	1640

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6527

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1305	SUB-MEDIA:	UA	ok
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605088	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.24.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown Sand → silt sediment over weathered tuff with some root material

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d) - 05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 975 dpm

PID Ambient Reading = 0.0 / 1.3 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6528

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	QBT2
TIME COLLECTED (HH:MM)		1220	SUB-MEDIA:	UA	ok
PRS ID:		AG 6.24.09 ~~50-100~~ 50-006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605088	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	2.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA **COMPOSITE TIME INTERVAL:** NA **WATER FLOWING:** YES / (NO) / NA

BOREHOLE: YES / (NO) / NA **BOREHOLE DECLINATION:** NA **BOREHOLE DIRECTION:** NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Extremely weathered tan/white tuff, roots breaking thru tuff

SAMPLE COMMENTS: Interface @ ~~1.5~~ 1.5' bgs AG 6.24.09

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 23 dpm

β/γ ≤ 657 dpm

PID ambient / Reading = 0.0 / 2.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:57
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6529

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	obt2
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	UA	ok
PRS ID:		50 - 006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605088	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	3.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	~~4.0 3.75~~ 4.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Extremely indurated tan tuff

FTB: camo-09-6535

SAMPLE COMMENTS: Power auger refusal @ 3.5' bgs, used breaker bar & cutrite bucket to scrape enough sample TD @ 4.0, hand auger refusal @ 4.0' bgs

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 167 dpm → Allowed to decay for one hour

β/γ ≤ 3820 dpm

PID Ambient / Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6/24/09 1640	(Printed Name) S. MALCZAK (Signature) [signature]	6/24/09 1640
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6531

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	OK
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	UNK	mo-605085	FIELD QC TYPE:	FD	OK
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	OC	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.24.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-6518

Brown sediment sand → silt slightly moist

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d), below RLW outfall in main drainage of canyon

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 75 dpm

β/γ ≤ 905 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) ~~A. Goumas~~ J.B 6/24/09 J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.24.09	(Printed Name) Sherri Sherwood	6/24/09
(Signature) A. Goumas	1640	(Signature) Sherri Sherwood	4:57

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6533

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1420	SUB-MEDIA:	OTHER	
PRS ID:		50-006(d)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605085	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	W		EXCAVATED: YES / NO / (NA)		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / (NA)

BOREHOLE: YES / NO / (NA) BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~2~~		~~8290~~	~~1 LITER AMBER GLASS~~	~~Ice~~ AG 3/31/09	N	
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-6518

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d)-06

FIELD SCREENING/MEASUREMENT RESULTS: None

COLLECTED BY (PRINT) J. Branch REVIEWED BY (PRINT) A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch (Signature) [signature]	6/24/09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:57
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6535

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	OTHER	
PRS ID:		50-006(d)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605088	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / (NA)		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / (NA)

BOREHOLE: YES / NO / (NA) BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~2~~ 1	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6529

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gallegos

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gallegos (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARCZAK (Signature) [signature]	6/24/09 1640
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

DATA VALIDATION COVER SHEET

5123-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2503 VALIDATION DATE: 08/03/2009 LAB CODE: ALTC

CONTRACT LABORATORY NAME: Vista Analytical Laboratory

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☒ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The 2,3,7,8-TCDF results for all samples were detects; however, the results were not confirmed on a second column nor were TCDF GC resolution data provided. Thus, the associated sample result were qualified U,DF8c.
2. It should be noted that the samples were not analyzed within 30 days of the ICAL. No sample data were qualified, based on professional judgment.
3. The ICV %D was >20% with positive bias for 1,2,3,4,7,8-HxCDD. The associated sample results were NDs and, thus, were not qualified.
4. It should be noted that ICV standards are not available for 13C-OCDF and 13C-1,2,3,4-TCDF which are used in the quantitation of OCDF; 13C-2,3,7,8-TCDF; 13C-1,2,3,7,8-PeCDF and 13C-2,3,4,7,8-PeCDF. Thus, ICV %Ds could not be evaluated for these compounds. No sample data were qualified as a result.
5. It should be noted that laboratory ion abundance limits were used for evaluation of the PeCDD compounds since the

DATA VALIDATION COVER SHEET

5123-1

Records Use only

Data Validation Cover Sheet

laboratory uses an alternate ion for these masses due to interferences.

6. It should be noted that MS/MSD analyses were not performed with the samples. No sample data were qualified as a result.

Reviewed by: ETM Level: I Date: 08/04/09

VALIDATOR'S SIGNATURE: Mary A. Dominguez DATE: 08/03/2009

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time and qualitative criteria for target compound identification were not met.	R, DF0	R, DF0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF0b	R, DF0b
☐	☒	☐	3. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF1d	R, DF1d
☐	☒	☐	4. The sample result is ≤5 times the concentration of the related analyte in the method blank.	N/A	U, DF4
☐	☒	☐	5. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, DF4a
☐	☐	☒	6. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	N/A	U, DF4d
☐	☒	☐	7. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF4e	R, DF4e
☐	☒	☐	8. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, DF7	J, DF7
☐	☒	☐	9. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria.	UJ, R, DF7a	J, DF7a
☐	☒	☐	10. The affected analytes were analyzed with an out of range ion abundance in the initial calibration and/or CCV.	R, DF7b	R, DF7b
☒	☐	☐	11. The ICV and/or CCV were recovered outside the method specific limits.	UJ, R, DF7c	J, R, DF7c
☐	☒	☐	12. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DF7d	J, DF7d

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DF7f	R, DF7f
☐	☒	☐	14. The affected analyte is considered rejected because the ion abundances did not meet specifications.	N/A	R, DF8
☐	☒	☐	15. The ion abundance documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF8a	R, DF8a
☐	☒	☐	16. If GC column performance was not evaluated at the required frequency or if method criteria were not met, qualify all associated detects as J and all associated non-detects as UJ.	UJ, DF8b	J, DF8b
☒	☐	☐	17. If 2, 3, 7, 8-TCDF was detected in a sample and the result was not confirmed on a second column with successful analysis of the GC column performance mix, qualify all associated detects as U.	N/A	U, DF8c
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, DF9	J-, DF9
☐	☒	☐	19. The holding time was >2 times the applicable holding time requirement.	R, DF9a	J-, DF9a
☐	☒	☐	20. The LCS percent recovery was <10%.	R, DF12	J-, DF12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, DF12a	J-, DF12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DF12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12c	R, DF12c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	24. The MS/MSD percent recovery was <10%.	R, DF12d	R, DF12d
☐	☐	☒	25. The MS/MSD percent recovery was >10% but <70%.	UJ, DF12e	J, DF12e
☐	☐	☒	26. The MS/MSD percent recovery was >70%	N/A	J+, DF12f
☐	☐	☒	27. The MS/MSD relative percent difference was >30%.	UJ, DF12g	J, DF12g
☐	☒	☐	28. The fortification sample percent recovery was <10%.	R, DF12h	J-, DF12h
☐	☒	☐	29. The fortification sample percent recovery was <40% but >10%	UJ, DF12i	J-, DF12i
☐	☒	☐	30. The fortification sample percent recovery was >135%.	N/A	J+, DF12j
☐	☒	☐	31. The fortification sample documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12k	R, DF12k
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference.	R, DF15	UJ, DF15
☐	☒	☐	33. Sample clean-up was not performed. If run log notations, spectral data and/or internal standard or labeled compound recoveries indicate interferences and extract cleanup was not performed, qualify all associated detects as J and all non-detects as UJ.	RJ, DF15a	J, DF15a
☐	☒	☐	34. The instrument performance sample did not pass method acceptance criteria.	R, DF16	R, DF16
☐	☒	☐	35. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, DF16c	R, DF16c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 **Dioxin/Furan Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	**36. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.**	**UJ, R, DF19**	**J, R, DR19**
☐	☒	☐	**37. Duplicate, dilution, or reanalysis.**	**UJ, DF88**	**J, DF88**

Sample ID: CAMO-09-6518 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31847-001	Date Received:	30-Jun-09
Project:	09-2503	Sample Size:	11.7 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	24-Jun-09	%Solids:	86.7	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1410						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0468		
1,2,3,7,8-PeCDD	ND	0.102		
1,2,3,4,7,8-HxCDD	ND	0.275		
1,2,3,6,7,8-HxCDD	0.400			J
1,2,3,7,8,9-HxCDD	ND	0.271		
1,2,3,4,6,7,8-HpCDD	9.37			
OCDD	65.2			
2,3,7,8-TCDF	0.0837 U,DF8c			J
1,2,3,7,8-PeCDF	ND	0.0841		
2,3,4,7,8-PeCDF	ND	0.0754		
1,2,3,4,7,8-HxCDF	ND	0.0837		
1,2,3,6,7,8-HxCDF	ND	0.102		
2,3,4,6,7,8-HxCDF	ND	0.113		
1,2,3,7,8,9-HxCDF	ND	0.145		
1,2,3,4,6,7,8-HpCDF	1.31			J
1,2,3,4,7,8,9-HpCDF	ND	0.144		
OCDF	3.51			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	102	40 - 135	
	13C-1,2,3,7,8-PeCDD	97.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	99.2	40 - 135	
	13C-OCDD	103	40 - 135	
	13C-2,3,7,8-TCDF	99.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	90.0	40 - 135	
	13C-2,3,4,7,8-PeCDF	95.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	100	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	80.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	84.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	105	40 - 135	
	13C-OCDF	88.1	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	98.8	40 - 135	

Totals			
Total TCDD	ND	0.0468	
Total PeCDD	ND	0.102	
Total HxCDD	2.59		
Total HpCDD	22.2		
Total TCDF	0.185		0.261
Total PeCDF	0.504		
Total HxCDF	1.48		
Total HpCDF	3.41		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.224**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:56

MAD
08/03/09

Sample ID: CAMO-09-6519 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31847-002	Date Received:	30-Jun-09
Project:	09-2503	Sample Size:	13.1 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	24-Jun-09	%Solids:	77.5	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1600						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0474		
1,2,3,7,8-PeCDD	ND	0.0829		
1,2,3,4,7,8-HxCDD	ND	0.253		
1,2,3,6,7,8-HxCDD	0.470			J
1,2,3,7,8,9-HxCDD	ND	0.251		
1,2,3,4,6,7,8-HpCDD	5.69			
OCDD	40.9			
2,3,7,8-TCDF	0.261	U,DF8c		J
1,2,3,7,8-PeCDF	ND	0.0717		
2,3,4,7,8-PeCDF	ND		0.153	
1,2,3,4,7,8-HxCDF	ND	0.0869		
1,2,3,6,7,8-HxCDF	ND	0.0932		
2,3,4,6,7,8-HxCDF	ND	0.113		
1,2,3,7,8,9-HxCDF	ND	0.145		
1,2,3,4,6,7,8-HpCDF	0.849			J
1,2,3,4,7,8,9-HpCDF	ND	0.162		
OCDF	1.98			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	102	40 - 135	
	13C-1,2,3,7,8-PeCDD	95.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	96.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	87.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
	13C-OCDD	132	40 - 135	
	13C-2,3,7,8-TCDF	104	40 - 135	
	13C-1,2,3,7,8-PeCDF	102	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	100	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	85.7	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	92.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.3	40 - 135	
	13C-OCDF	102	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	96.0	40 - 135	

Totals			
Total TCDD	ND		0.0477
Total PeCDD	ND	0.0829	
Total HxCDD	1.26		1.64
Total HpCDD	11.0		
Total TCDF	1.18		1.34
Total PeCDF	0.518		1.02
Total HxCDF	1.15		
Total HpCDF	2.58		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.181

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:56

MAD
08/03/09

Sample ID: CAMO-09-6531 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31847-003	Date Received:	30-Jun-09
Project:	09-2503	Sample Size:	11.6 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	24-Jun-09	%Solids:	87.2	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1410						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0456		
1,2,3,7,8-PeCDD	ND	0.103		
1,2,3,4,7,8-HxCDD	ND	0.236		
1,2,3,6,7,8-HxCDD	ND	0.241		
1,2,3,7,8,9-HxCDD	ND	0.229		
1,2,3,4,6,7,8-HpCDD	9.35			
OCDD	64.3			
2,3,7,8-TCDF	0.0904	U,DF8c		J
1,2,3,7,8-PeCDF	ND	0.0598		
2,3,4,7,8-PeCDF	ND	0.0601		
1,2,3,4,7,8-HxCDF	ND	0.104		
1,2,3,6,7,8-HxCDF	ND	0.107		
2,3,4,6,7,8-HxCDF	ND	0.131		
1,2,3,7,8,9-HxCDF	ND	0.175		
1,2,3,4,6,7,8-HpCDF	1.29			J
1,2,3,4,7,8,9-HpCDF	ND	0.164		
OCDF	3.21			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	98.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	95.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	82.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	108	40 - 135	
	13C-OCDD	122	40 - 135	
	13C-2,3,7,8-TCDF	100	40 - 135	
	13C-1,2,3,7,8-PeCDF	98.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	82.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.6	40 - 135	
	13C-OCDF	103	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	93.3	40 - 135	

Totals		
Total TCDD	ND	0.0456
Total PeCDD	ND	0.103
Total HxCDD	2.27	
Total HpCDD	22.6	
Total TCDF	0.197	
Total PeCDF	0.553	
Total HxCDF	1.35	
Total HpCDF	3.63	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.183

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:56

MAD
08/03/09

Monday, June 29, 2009

REQUEST NUMBER: 09-2503

31847

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on: 2.1°C
LANL Request Number:09-2503
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-6518	R	6/24/2009	
		2	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		2	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		2	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2503

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2503

REQUEST NUMBER: 09-2503

31847

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	GLASS	8290	Ice	R
CAMO-09-6519	2	GLASS	8290	Ice	R
CAMO-09-6518	1	GLASS	8290	Ice	R
CAMO-09-6518	2	GLASS	8290	Ice	R
CAMO-09-6531	1	GLASS	8290	Ice	R
CAMO-09-6531	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/29/09	1400	B. Benedict	Bethina L Benedict	6/30/09	1239
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

Vista
Analytical Laboratory

July 07, 2009

Vista Project I.D.: 31847

Mr. Keith Greene
Los Alamos National Laboratory
ER Sample Management Office
TA-3, Building 271, DP O1-U
Los Alamos, NM 87545

Dear Mr. Greene,

Enclosed are the results for the three soil samples received at Vista Analytical Laboratory on June 30, 2009 under your Project Name "09-2503". These samples were extracted and analyzed using EPA Method 8290 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha M. Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Vista

Section I: Sample Inventory Report

Date Received: **6/30/2009**

Vista Lab. ID	Client Sample ID
31847-001	CAMO-09-6518
31847-002	CAMO-09-6519
31847-003	CAMO-09-6531

SECTION II

Vista

Method Blank | **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2214	Lab Sample:	0-MB001
Sample Size:	10.0 g	Date Extracted:	1-Jul-09	Date Analyzed DB-5:	2-Jul-09
				Date Analyzed DB-225:	NA

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0500		
1,2,3,7,8-PeCDD	ND	0.0717		
1,2,3,4,7,8-HxCDD	ND	0.133		
1,2,3,6,7,8-HxCDD	ND	0.133		
1,2,3,7,8,9-HxCDD	ND	0.128		
1,2,3,4,6,7,8-HpCDD	ND	0.247		
OCDD	ND	0.188		
2,3,7,8-TCDF	ND	0.0365		
1,2,3,7,8-PeCDF	ND	0.0403		
2,3,4,7,8-PeCDF	ND	0.0429		
1,2,3,4,7,8-HxCDF	ND	0.0470		
1,2,3,6,7,8-HxCDF	ND	0.0479		
2,3,4,6,7,8-HxCDF	ND	0.0614		
1,2,3,7,8,9-HxCDF	ND	0.0813		
1,2,3,4,6,7,8-HpCDF	ND	0.131		
1,2,3,4,7,8,9-HpCDF	ND	0.122		
OCDF	ND	0.109		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	97.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	96.3	40 - 135	
	13C-OCDD	91.5	40 - 135	
	13C-2,3,7,8-TCDF	99.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	96.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	91.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	96.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	87.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	83.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	90.6	40 - 135	
	13C-OCDF	86.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.0	40 - 135	

Totals		
Total TCDD	ND	0.0500
Total PeCDD	ND	0.0717
Total HxCDD	ND	0.131
Total HpCDD	ND	0.247
Total TCDF	ND	0.0365
Total PeCDF	ND	0.0416
Total HxCDF	ND	0.0594
Total HpCDF	ND	0.126

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration
c. Method detection limit.
d. Lower control limit - upper control limit
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:56

Vista

OPR Results **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2214	Lab Sample:	0-OPR001
Sample Size:	10.0 g	Date Extracted:	1-Jul-09	Date Analyzed DB-5: 2-Jul-09	Date Analyzed DB-225: NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	9.32	7 - 13	IS	13C-2,3,7,8-TCDD	99.6	40 - 135	
1,2,3,7,8-PeCDD	50.0	45.6	35 - 65		13C-1,2,3,7,8-PeCDD	94.0	40 - 135	
1,2,3,4,7,8-HxCDD	50.0	45.9	35 - 65		13C-1,2,3,4,7,8-HxCDD	96.1	40 - 135	
1,2,3,6,7,8-HxCDD	50.0	44.8	35 - 65		13C-1,2,3,6,7,8-HxCDD	87.4	40 - 135	
1,2,3,7,8,9-HxCDD	50.0	46.6	35 - 65		13C-1,2,3,4,6,7,8-HpCDD	99.9	40 - 135	
1,2,3,4,6,7,8-HpCDD	50.0	44.2	35 - 65		13C-OCDD	94.2	40 - 135	
OCDD	100	88.9	70 - 130		13C-2,3,7,8-TCDF	102	40 - 135	
2,3,7,8-TCDF	10.0	8.40	7 - 13		13C-1,2,3,7,8-PeCDF	95.4	40 - 135	
1,2,3,7,8-PeCDF	50.0	41.6	35 - 65		13C-2,3,4,7,8-PeCDF	91.4	40 - 135	
2,3,4,7,8-PeCDF	50.0	41.3	35 - 65		13C-1,2,3,4,7,8-HxCDF	95.4	40 - 135	
1,2,3,4,7,8-HxCDF	50.0	44.3	35 - 65		13C-1,2,3,6,7,8-HxCDF	85.3	40 - 135	
1,2,3,6,7,8-HxCDF	50.0	43.7	35 - 65		13C-2,3,4,6,7,8-HxCDF	86.5	40 - 135	
2,3,4,6,7,8-HxCDF	50.0	44.7	35 - 65		13C-1,2,3,7,8,9-HxCDF	90.9	40 - 135	
1,2,3,7,8,9-HxCDF	50.0	44.9	35 - 65		13C-1,2,3,4,6,7,8-HpCDF	84.9	40 - 135	
1,2,3,4,6,7,8-HpCDF	50.0	44.9	35 - 65		13C-1,2,3,4,7,8,9-HpCDF	93.4	40 - 135	
1,2,3,4,7,8,9-HpCDF	50.0	45.9	35 - 65		13C-OCDF	89.3	40 - 135	
OCDF	100	88.0	70 - 130	CRS	37Cl-2,3,7,8-TCDD	92.8	40 - 135	

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:56

Vista

Sample ID: CAMO-09-6518 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31847-001	Date Received:	30-Jun-09
Project:	09-2503	Sample Size:	11.7 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	24-Jun-09	%Solids:	86.7	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1410						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0468		
1,2,3,7,8-PeCDD	ND	0.102		
1,2,3,4,7,8-HxCDD	ND	0.275		
1,2,3,6,7,8-HxCDD	0.400			J
1,2,3,7,8,9-HxCDD	ND	0.271		
1,2,3,4,6,7,8-HpCDD	9.37			
OCDD	65.2			
2,3,7,8-TCDF	0.0837			J
1,2,3,7,8-PeCDF	ND	0.0841		
2,3,4,7,8-PeCDF	ND	0.0754		
1,2,3,4,7,8-HxCDF	ND	0.0837		
1,2,3,6,7,8-HxCDF	ND	0.102		
2,3,4,6,7,8-HxCDF	ND	0.113		
1,2,3,7,8,9-HxCDF	ND	0.145		
1,2,3,4,6,7,8-HpCDF	1.31			J
1,2,3,4,7,8,9-HpCDF	ND	0.144		
OCDF	3.51			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	102	40 - 135	
	13C-1,2,3,7,8-PeCDD	97.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	99.2	40 - 135	
	13C-OCDD	103	40 - 135	
	13C-2,3,7,8-TCDF	99.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	90.0	40 - 135	
	13C-2,3,4,7,8-PeCDF	95.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	100	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	80.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	84.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	105	40 - 135	
	13C-OCDF	88.1	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	98.8	40 - 135	

Totals			
Total TCDD	ND	0.0468	
Total PeCDD	ND	0.102	
Total HxCDD	2.59		
Total HpCDD	22.2		
Total TCDF	0.185		0.261
Total PeCDF	0.504		
Total HxCDF	1.48		
Total HpCDF	3.41		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.224

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:56

Vista

Sample ID: CAMO-09-6519 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31847-002	Date Received:	30-Jun-09
Project:	09-2503	Sample Size:	13.1 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	24-Jun-09	%Solids:	77.5	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1600						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0474		
1,2,3,7,8-PeCDD	ND	0.0829		
1,2,3,4,7,8-HxCDD	ND	0.253		
1,2,3,6,7,8-HxCDD	0.470			J
1,2,3,7,8,9-HxCDD	ND	0.251		
1,2,3,4,6,7,8-HpCDD	5.69			
OCDD	40.9			
2,3,7,8-TCDF	0.261			J
1,2,3,7,8-PeCDF	ND	0.0717		
2,3,4,7,8-PeCDF	ND		0.153	
1,2,3,4,7,8-HxCDF	ND	0.0869		
1,2,3,6,7,8-HxCDF	ND	0.0932		
2,3,4,6,7,8-HxCDF	ND	0.113		
1,2,3,7,8,9-HxCDF	ND	0.145		
1,2,3,4,6,7,8-HpCDF	0.849			J
1,2,3,4,7,8,9-HpCDF	ND	0.162		
OCDF	1.98			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	102	40 - 135	
	13C-1,2,3,7,8-PeCDD	95.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	96.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	87.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	103	40 - 135	
	13C-OCDD	132	40 - 135	
	13C-2,3,7,8-TCDF	104	40 - 135	
	13C-1,2,3,7,8-PeCDF	102	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	100	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	85.7	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	92.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.3	40 - 135	
	13C-OCDF	102	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	96.0	40 - 135	

Totals

Total TCDD	ND		0.0477
Total PeCDD	ND	0.0829	
Total HxCDD	1.26		1.64
Total HpCDD	11.0		
Total TCDF	1.18		1.34
Total PeCDF	0.518		1.02
Total HxCDF	1.15		
Total HpCDF	2.58		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.181

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:56

Vista

Sample ID: CAMO-09-6531 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31847-003	Date Received:	30-Jun-09
Project:	09-2503	Sample Size:	11.6 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	24-Jun-09	%Solids:	87.2	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1410						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0456		
1,2,3,7,8-PeCDD	ND	0.103		
1,2,3,4,7,8-HxCDD	ND	0.236		
1,2,3,6,7,8-HxCDD	ND	0.241		
1,2,3,7,8,9-HxCDD	ND	0.229		
1,2,3,4,6,7,8-HpCDD	9.35			
OCDD	64.3			
2,3,7,8-TCDF	0.0904			J
1,2,3,7,8-PeCDF	ND	0.0598		
2,3,4,7,8-PeCDF	ND	0.0601		
1,2,3,4,7,8-HxCDF	ND	0.104		
1,2,3,6,7,8-HxCDF	ND	0.107		
2,3,4,6,7,8-HxCDF	ND	0.131		
1,2,3,7,8,9-HxCDF	ND	0.175		
1,2,3,4,6,7,8-HpCDF	1.29			J
1,2,3,4,7,8,9-HpCDF	ND	0.164		
OCDF	3.21			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	98.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	95.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	82.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	108	40 - 135	
	13C-OCDD	122	40 - 135	
	13C-2,3,7,8-TCDF	100	40 - 135	
	13C-1,2,3,7,8-PeCDF	98.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	81.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	82.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.6	40 - 135	
	13C-OCDF	103	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	93.3	40 - 135	

Totals		
Total TCDD	ND	0.0456
Total PeCDD	ND	0.103
Total HxCDD	2.27	
Total HpCDD	22.6	
Total TCDF	0.197	
Total PeCDF	0.553	
Total HxCDF	1.35	
Total HpCDF	3.63	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.183

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 10:56

APPENDIX

Vista

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

Monday, June 29, 2009

REQUEST NUMBER: 09-2503

31847

2.1°C

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2503
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/29/2009
TURNAROUND/REPORT DUE: 7/14/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-6518	R	6/24/2009	
		2	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		2	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		2	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2503

Monday, June 29, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2503

REQUEST NUMBER: 09-2503

31847

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/14/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	GLASS	8290	Ice	R
CAMO-09-6519	2	GLASS	8290	Ice	R
CAMO-09-6518	1	GLASS	8290	Ice	R
CAMO-09-6518	2	GLASS	8290	Ice	R
CAMO-09-6531	1	GLASS	8290	Ice	R
CAMO-09-6531	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		6/29/09	1400	B. Benedict	Bettina L Benedict	6/30/09	1239
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31847 TAT 15

Samples Arrival:	Date/Time 6/30/09 0859	Initials: VBLB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 6/30/09 1208	Initials: VBLB	Location: WR-2 Shelf/Rack: F 6

Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C 2.1	Time: 0925	Thermometer ID: IR-1				

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7201 7847 5767	✓		
Sample Container Intact?	✓		
* Sample Custody Seals Intact?	✓		
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	None		
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

	date	time	
CAMO-09-6518	6/24/09	1410	A & B jars
* -6519 *		1600	
-6531		1410	

* Both A & B jars of this one sample was received without sample custody seal.

Sample Login 3/2007 rmh

EXTRACTION INFORMATION

PROCESS SHEET

Project No.-AR: 31847-1 of 1

RUSH!

Prep Due: 7/8/2009

Hold Due: 7/24/2009

Client: Los Alamos National Laboratory(LOANM01F

Client Manager: Rose Harrelson

Method: EPA Method 8290 | PCDD/F (Tetra - Octa)

Project Due: 7/14/2009

TAT: 14

2214

Split Type:

Matrix: Soil

LabID	Recon	Client-ID	Description	Date Received	SLoc	Shelf
001	☑	CAMO-09-6518 "A"		6/30/2009	WR-2	F-6
002	☑	CAMO-09-6519 ↓		6/30/2009	WR-2	F-6
003	☑	CAMO-09-6531 ↓		6/30/2009	WR-2	F-6

%Solids 6/30/09 BLB

Instructions:

Report Options

Report Level:

EDD Type:

Report Group: Dioxins NoMDL with %Solid

TEQ Type: EPA(Default) : Min

Samples Reconciled By: BLB 6/30/09

Vial Box ID: ice Cone

Date Requested 7/7/2009

Percent Solids

Vista Analytical Laboratory

Project: 31847-1 of 1

Sample ID	Chemist/Date CBB 6/30/09 Boat Wt.	Sample + Boat Wt.	Chemist/Date CBB 7/1/09 Residue + Boat Wt.	Comments
001	1.33	6.13	5.49	
002	1.33	7.37	6.01	
003	1.32	5.61	5.06	

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

%Solids 3/2007 rmh

Project: 31847

Extraction Set: 2214

Chemist: M. Calisso 7/1/09

Method(s): EPA Method 8290 | PCDD/F (Tetra - Octa)

C	ALTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/ WIT DATE	CRS CHEM/WIT DATE	AP CHEM/Date	ABSG CHEM/Date	AA CHEM/Date	Florisil CHEM/Date	RS CHEM/WIT DATE
☐	0_2214_MB001	10.00	10.00	MC TEH 7/1/09	MC FEB 7/2/09	N/A	MC 7/2/09	MC 7/2/09	MC 7/2/09	MC FEB 7/2/09
☐	0_2214_OPR001	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	31847_2214_001	11.54	11.68	↓	↓	↓	↓	↓	↓	↓
☐	31847_2214_002	12.91	13.07	↓	↓	↓	↓	↓	↓	↓
☐	31847_2214_003	11.47	11.58	↓	↓	↓	↓	↓	↓	↓

IS Name (V2)	NS Name (V1)	CRS Name (V6)	RS Name (V4)	Cycle Time	APP.: SEFUN SOX (SDS)	Check Out:
PCDD/F 080910A 10µl	PCDD/F 080916B 10µl	PCDD/F 080910C 10µl	PCDD/F 080910D 10µl	7/1 Start: 1505	SOLV: Toluene	Chemist: MC 7/1/09
PCB	PCB	PCB	PCB	7/2 0705 Stop:	Other: N/A	Check-In:
PAH	PAH	PAH	PAH		Final Volume(s): 20µl C14	Chemist: ↓ / /

Comments:

hrmsgenprepL.rpt

SAMPLE DATA

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Tuesday, July 07, 2009 09:13:21 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:13:43 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1	2,3,7,8-TCDD			NO	1.08	10.000					0.0500
2	1,2,3,7,8-PeCDD			NO	1.03	10.000					0.0717
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.133
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.133
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.128
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.247
7	OCDD			NO	1.18	10.000					0.188
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0365
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.0403
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0429
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.0470
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.0479
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.0614
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.0813
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.131
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.122
17	OCDF			NO	1.10	10.000					0.109
18	13C-2,3,7,8-TCDD	8.70e5	0.79	NO	1.01	10.000	26.05	1.023	194.77	97.4	0.279
19	13C-1,2,3,7,8-PeCDD	6.60e5	0.62	NO	0.827	10.000	30.69	1.205	181.17	90.6	0.232
20	13C-1,2,3,4,7,8-HxCDD	5.57e5	1.27	NO	0.916	10.000	34.14	0.988	188.94	94.5	0.468
21	13C-1,2,3,6,7,8-HxCDD	5.03e5	1.22	NO	0.921	10.000	34.25	0.991	169.85	84.9	0.466
22	13C-1,2,3,4,6,7,8-HpCDD	4.39e5	1.05	NO	0.708	10.000	38.18	1.105	192.67	96.3	0.850
23	13C-OCDD	5.92e5	0.89	NO	0.503	10.000	41.63	1.205	365.82	91.5	0.545
24	13C-2,3,7,8-TCDF	1.18e6	0.78	NO	0.977	10.000	25.28	0.993	198.95	99.5	0.209
25	13C-1,2,3,7,8-PeCDF	1.05e6	1.55	NO	0.896	10.000	29.47	1.157	193.06	96.5	0.352
26	13C-2,3,4,7,8-PeCDF	9.93e5	1.59	NO	0.900	10.000	30.42	1.194	182.51	91.3	0.350
27	13C-1,2,3,4,7,8-HxCDF	7.24e5	0.52	NO	1.17	10.000	33.21	0.961	192.47	96.2	0.586
28	13C-1,2,3,6,7,8-HxCDF	8.07e5	0.52	NO	1.52	10.000	33.34	0.965	165.10	82.6	0.451
29	13C-2,3,4,6,7,8-HxCDF	6.84e5	0.52	NO	1.25	10.000	33.96	0.983	170.14	85.1	0.548
30	13C-1,2,3,7,8,9-HxCDF	5.95e5	0.52	NO	1.05	10.000	34.95	1.012	175.67	87.8	0.651

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Tuesday, July 07, 2009 09:13:21 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:13:43 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

31	13C-1,2,3,4,6,7,8-HpCDF	4.67e5	0.44	NO	0.868	10.000	36.83	1.066	166.99	83.5	0.836
32	13C-1,2,3,4,7,8,9-HpCDF	4.24e5	0.43	NO	0.727	10.000	38.76	1.122	181.28	90.6	0.999
33	13C-OCDF	8.44e5	0.88	NO	0.760	10.000	41.86	1.212	345.35	86.3	0.289
34	37Cl-2,3,7,8-TCDD	2.21e5			0.668	10.000	26.06	1.023	75.231	94.0	0.0751
35	13C-1,2,3,4-TCDD	8.81e5	0.78	NO	1.00	10.000	25.47	0.000	200.00	100	0.283
36	13C-1,2,3,4-TCDF	1.21e6	0.77	NO	1.00	10.000	24.04	0.000	200.00	100	0.204
37	13C-1,2,3,7,8,9-HxCDD	6.44e5	1.25	NO	1.00	10.000	34.55	0.000	200.00	100	0.429
38	Total Tetra-Dioxins				1.08	10.000					0.0223
39	Total Penta-Dioxins				1.03	10.000					0.0296
40	Total Hexa-Dioxins				1.13	10.000					0.0693
41	Total Hepta-Dioxins				1.06	10.000					0.151
42	Total Tetra-Furans				1.09	10.000					0.0155
43	1st Func. Penta-Furans				1.16	10.000					0.0141
44	Total Penta-Furans				1.16	10.000					0.0139
45	Total Hexa-Furans				1.28	10.000					0.0344
46	Total Hepta-Furans				1.69	10.000					0.0735

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

2,3,7,8-TCDD

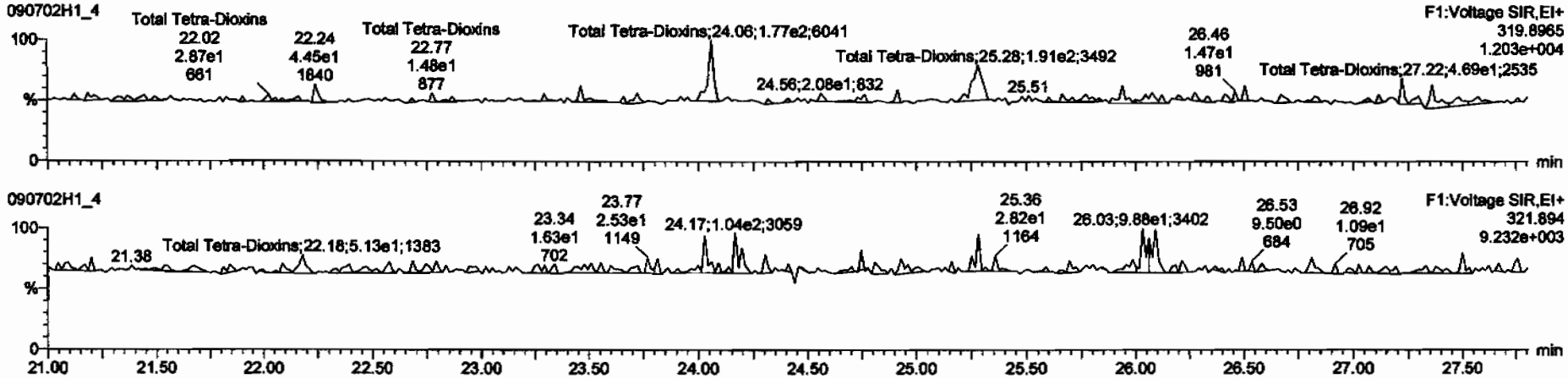

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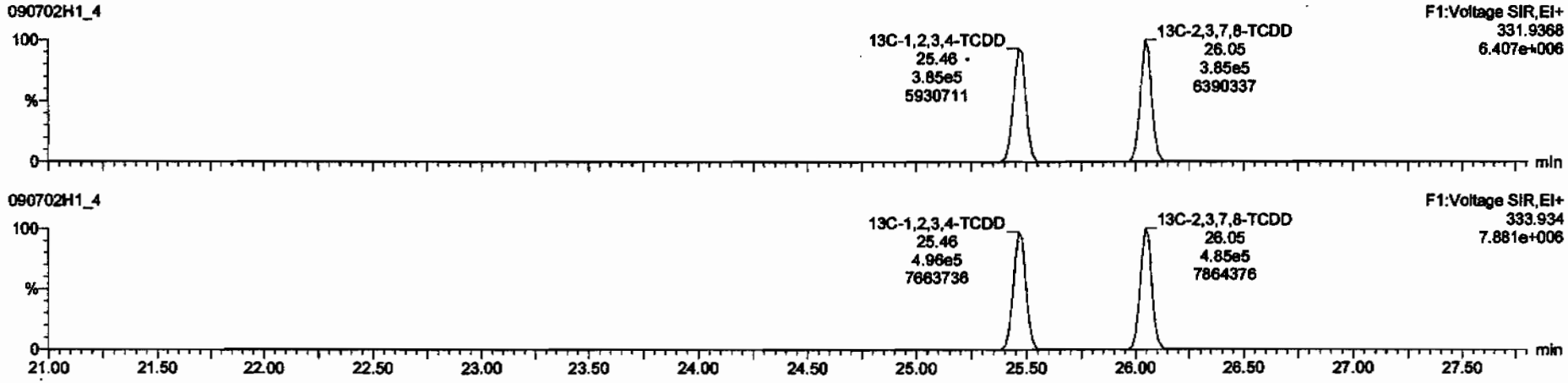

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Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

37Cl-2,3,7,8-TCDD

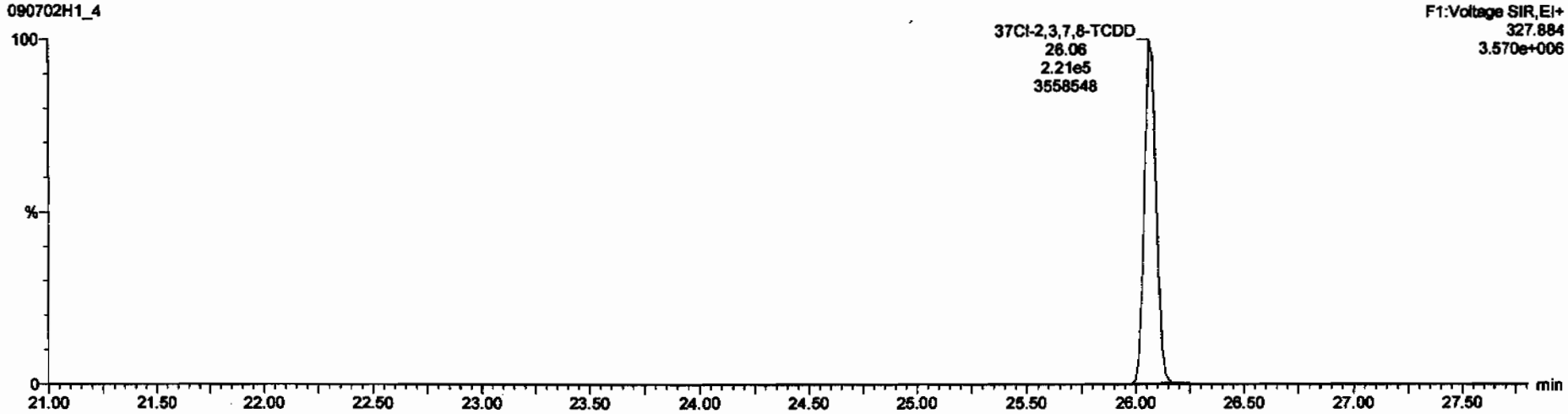

13C-1,2,3,4-TCDD

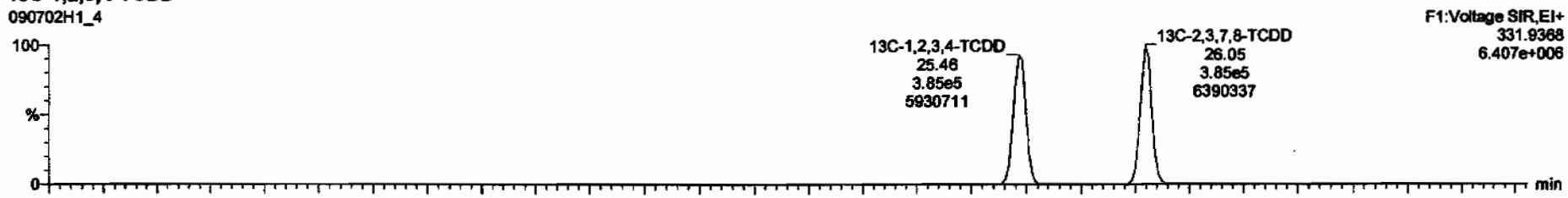

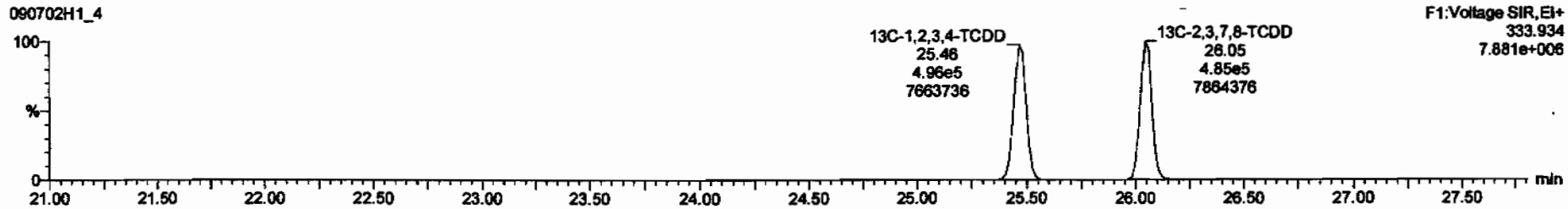

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,7,8-PeCDD

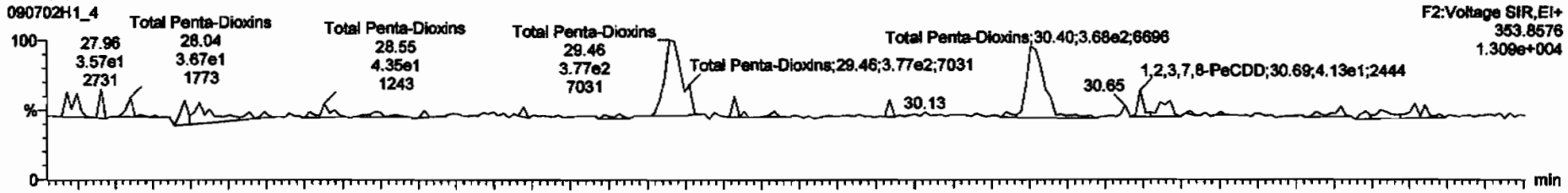

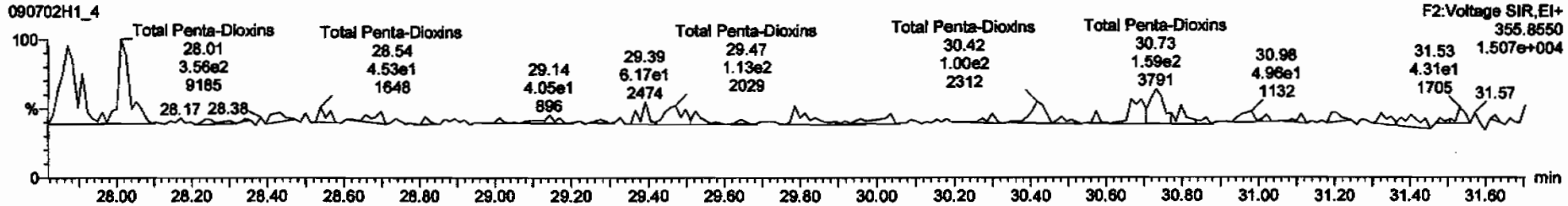

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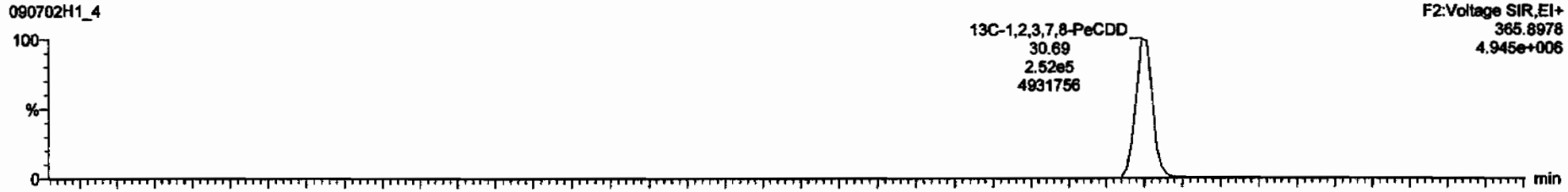

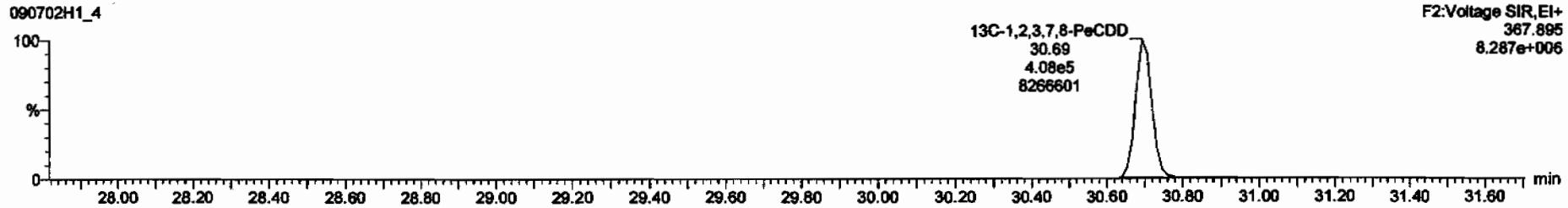

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Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,4,7,8-HxCDD

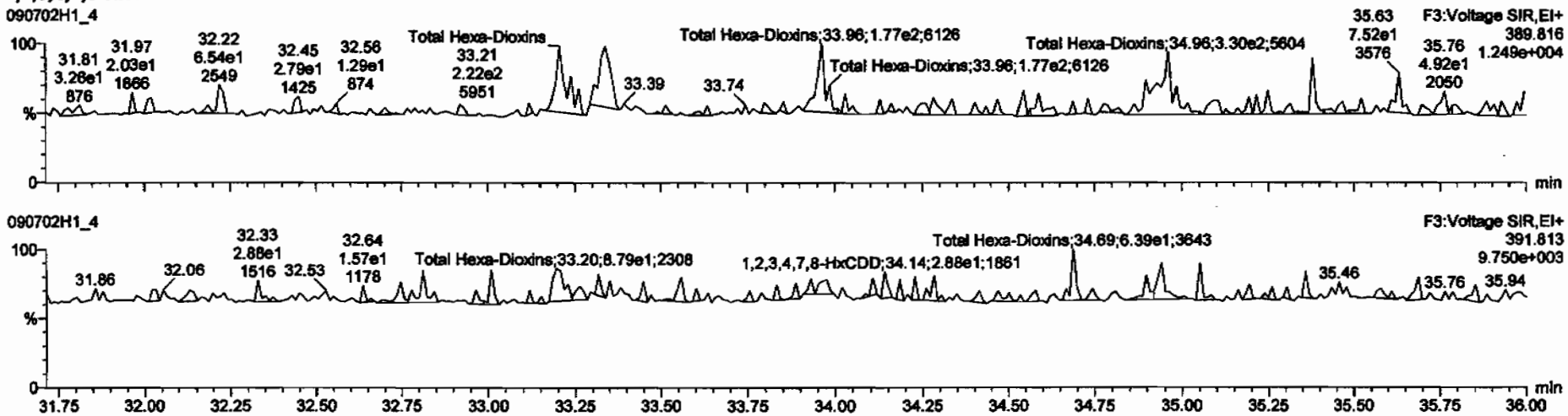

13C-1,2,3,4,7,8-HxCDD

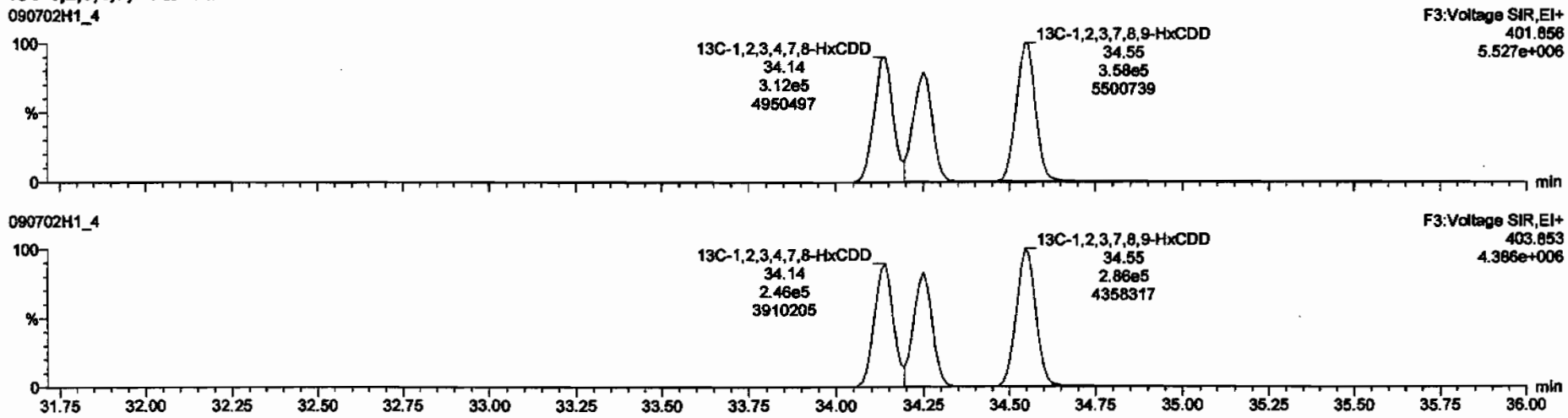

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1,2,3,4,6,7,8-HpCDD

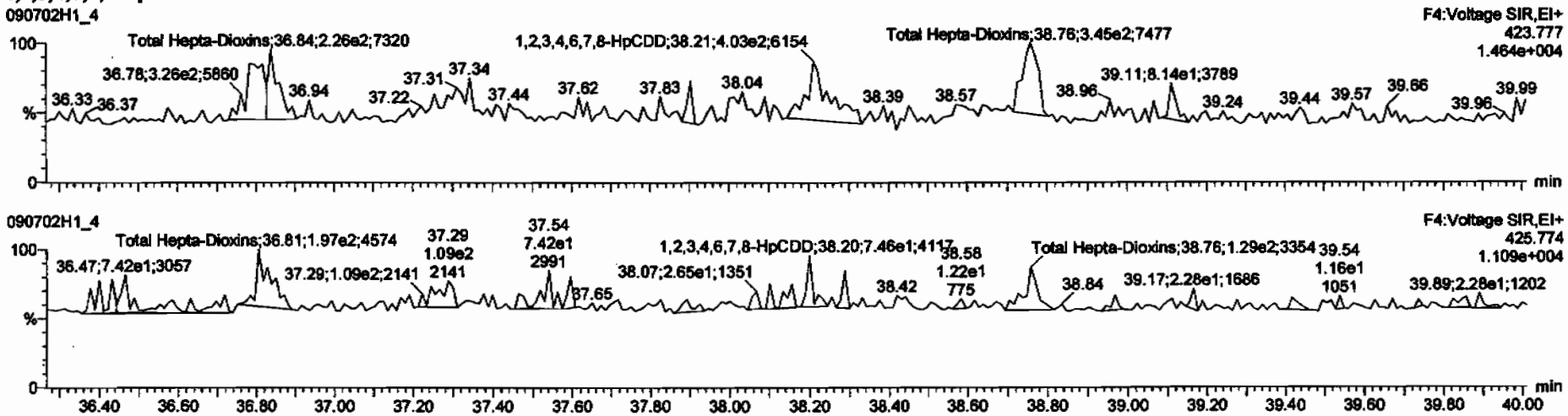

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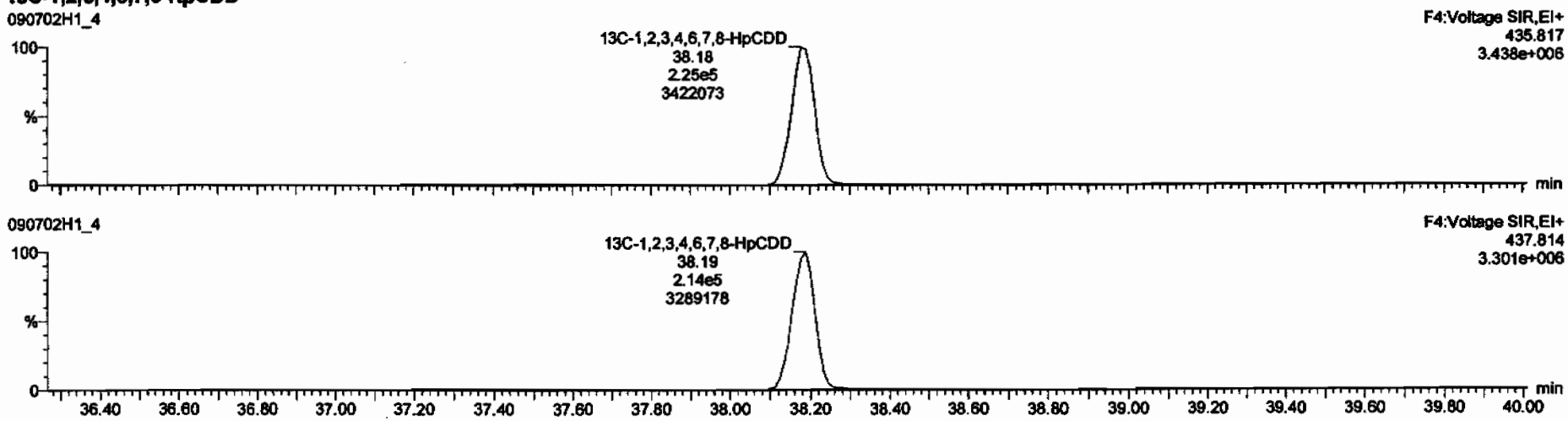

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Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

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OCDD

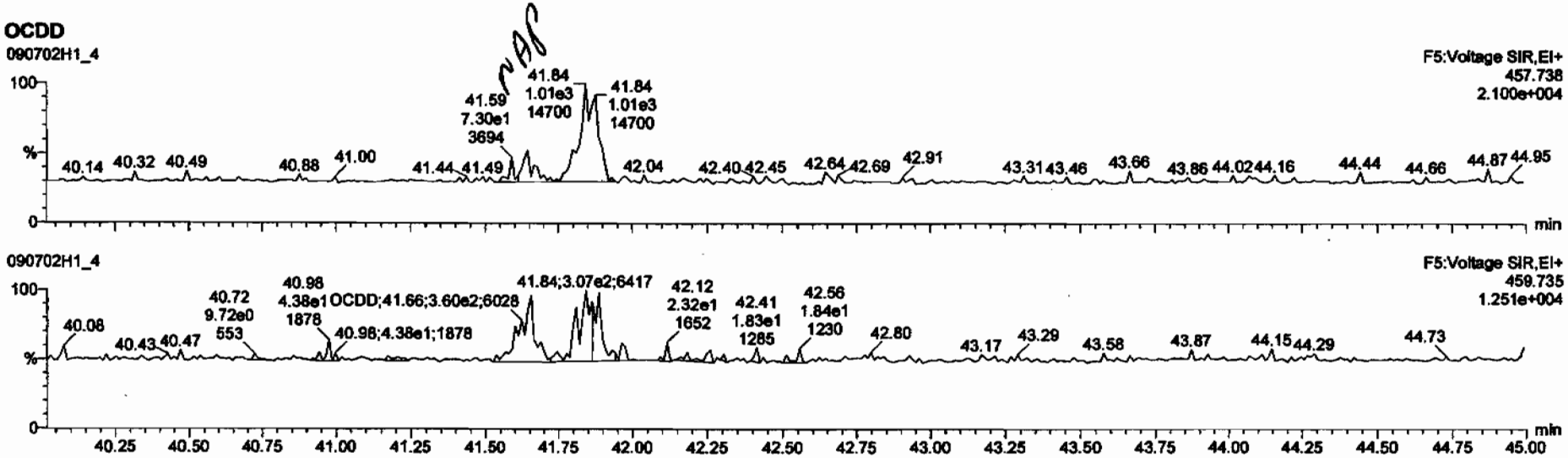

13C-OCDD

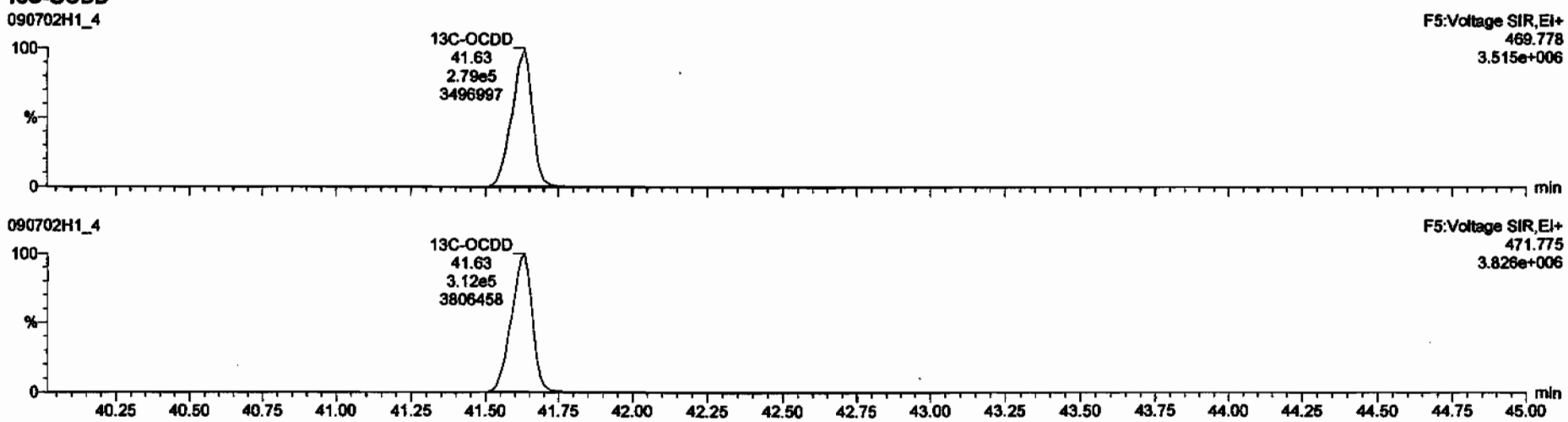

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Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

2,3,7,8-TCDF

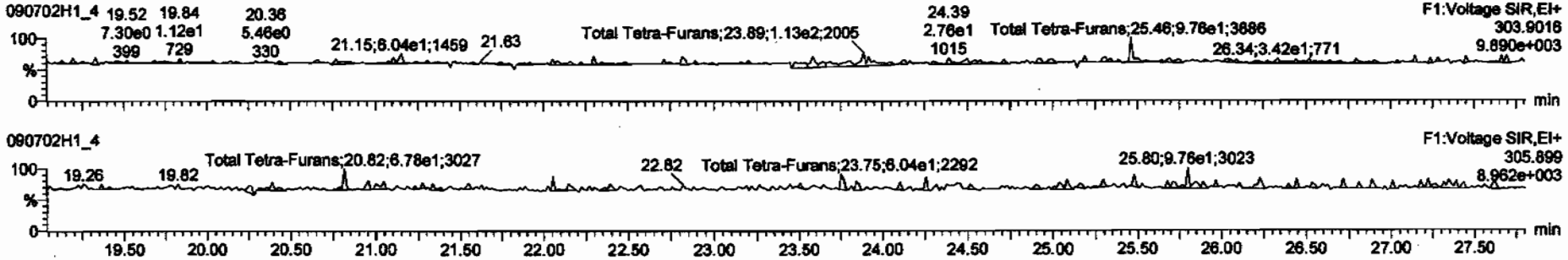

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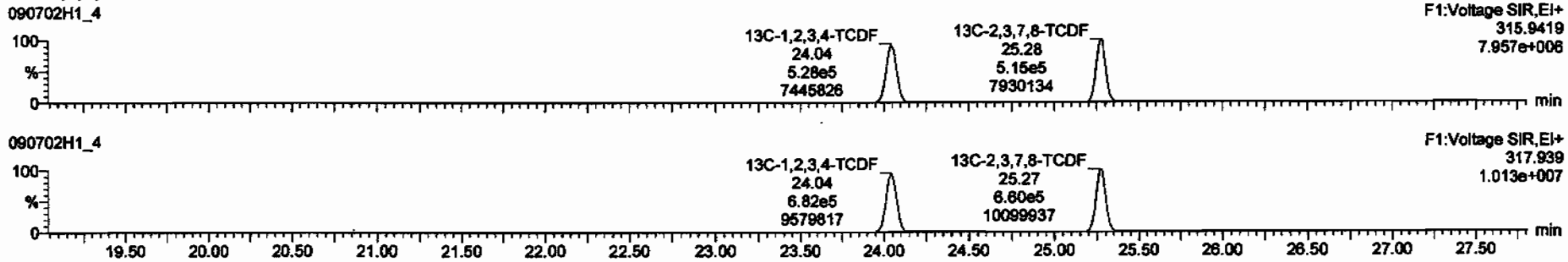

DPE1

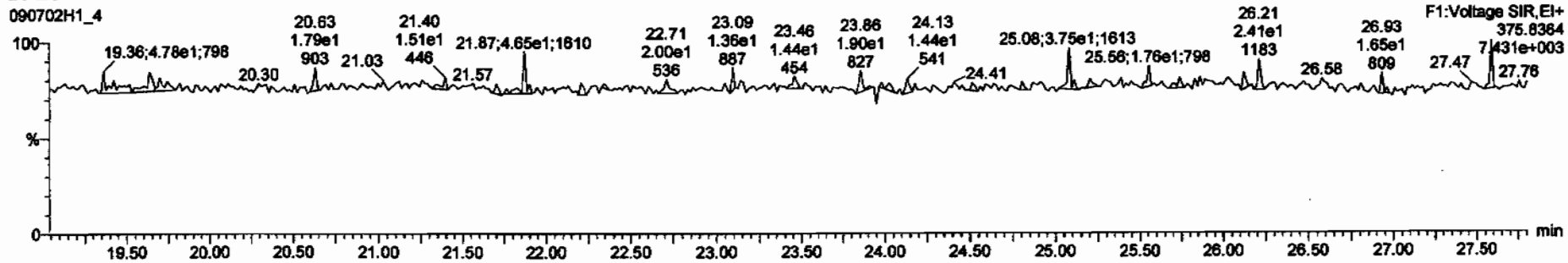

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Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1st Func. Penta-Furans

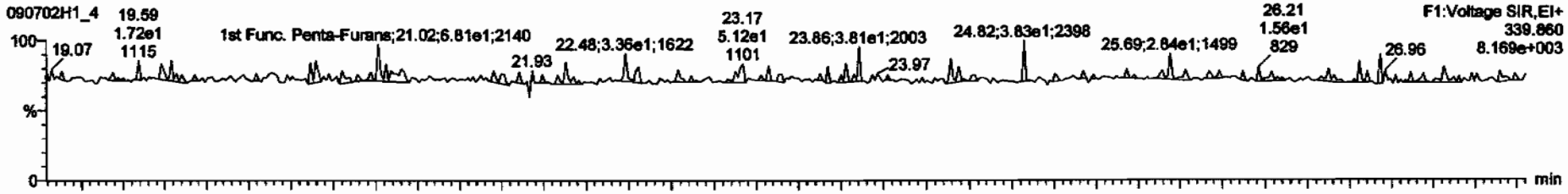

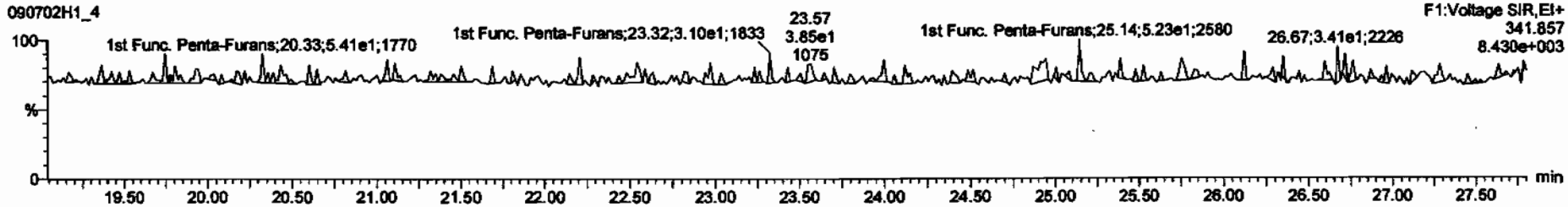

DPE6

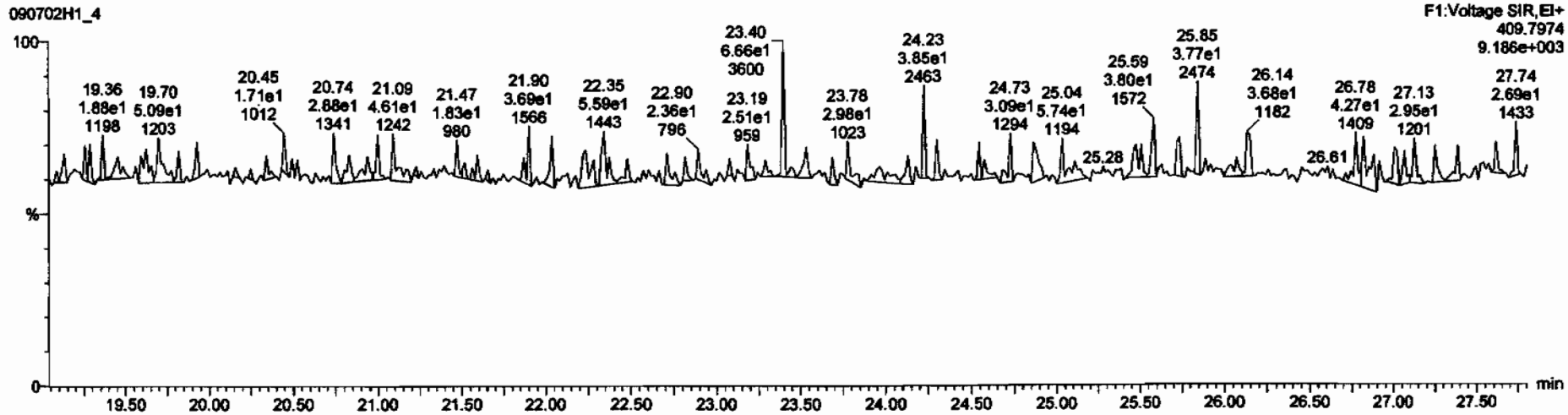

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Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,7,8-PeCDF

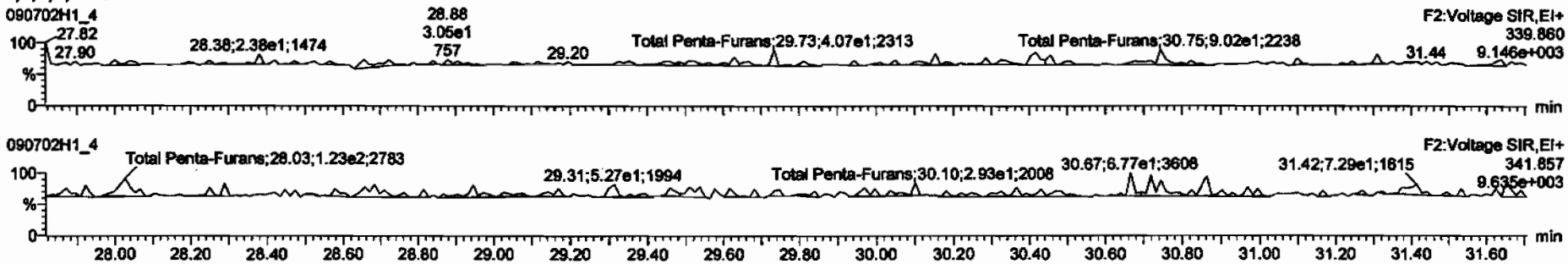

13C-1,2,3,7,8-PeCDF

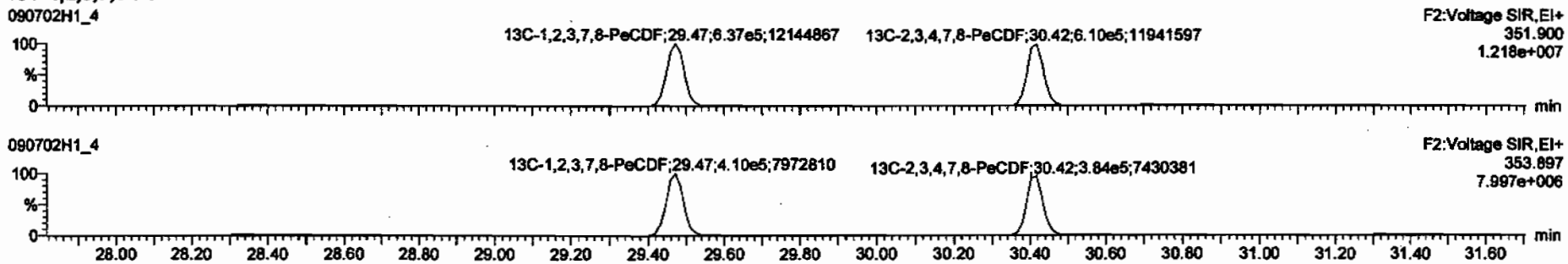

DPE2

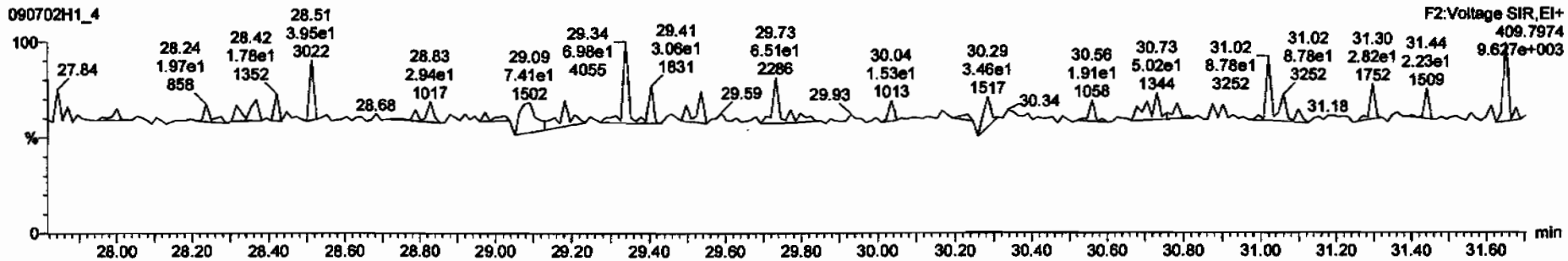

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Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

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1,2,3,4,7,8-HxCDF

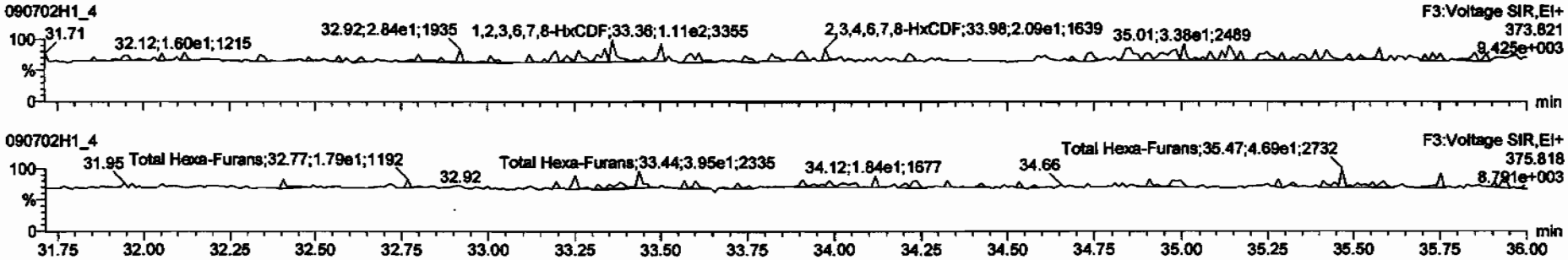

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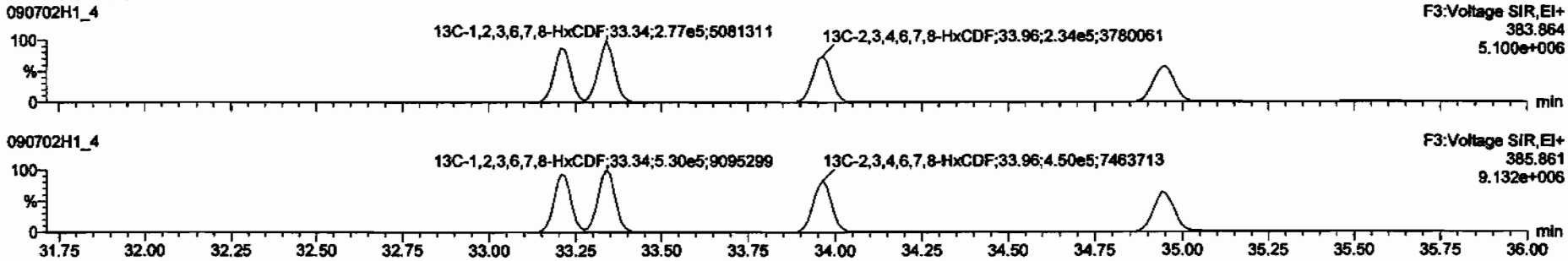

DPE3

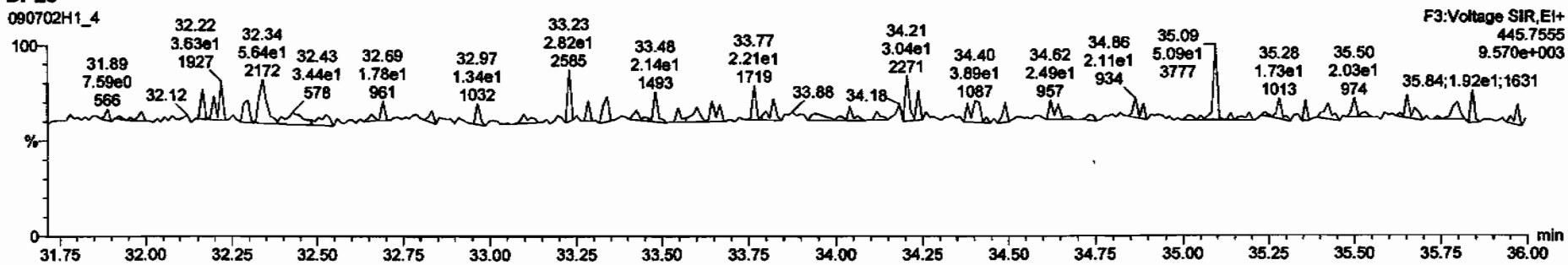

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,4,6,7,8-HpCDF

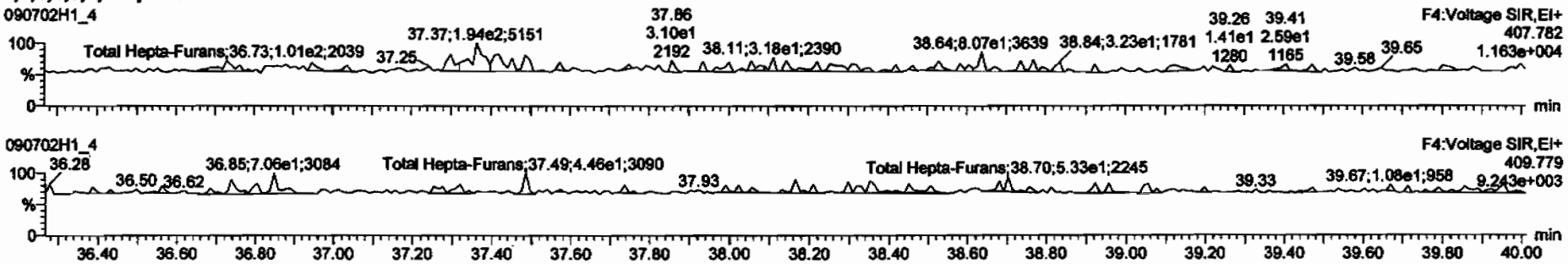

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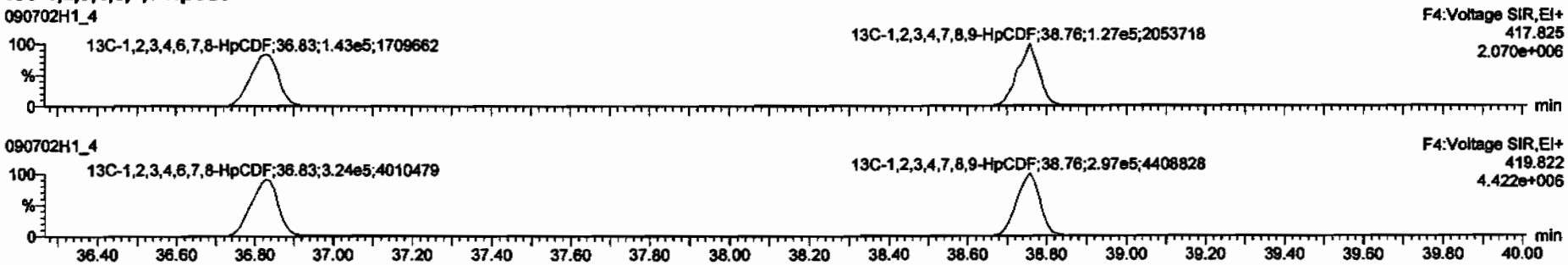

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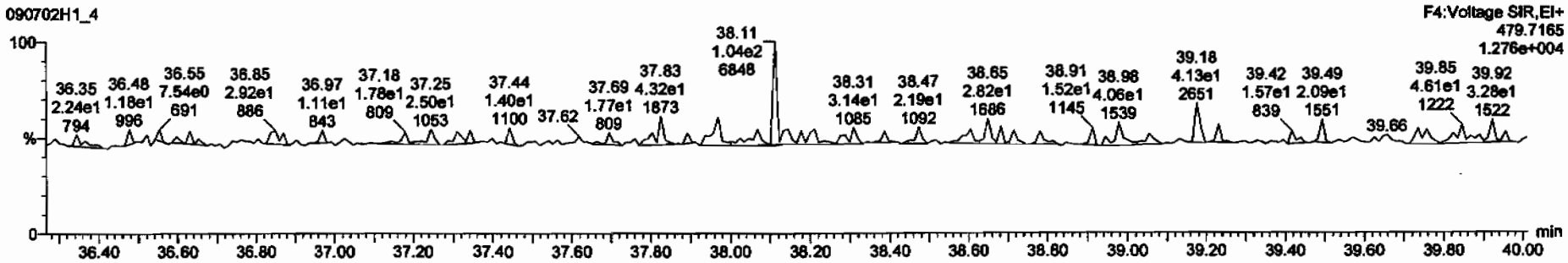

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Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

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OCDF

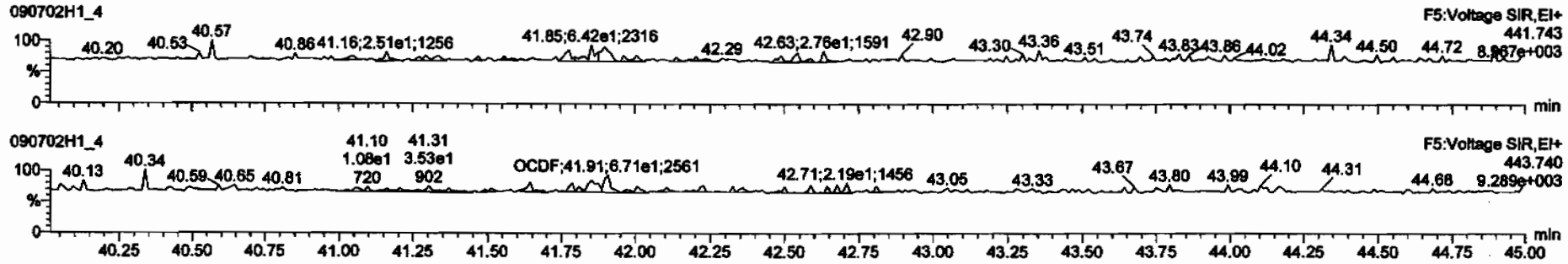

13C-OCDF

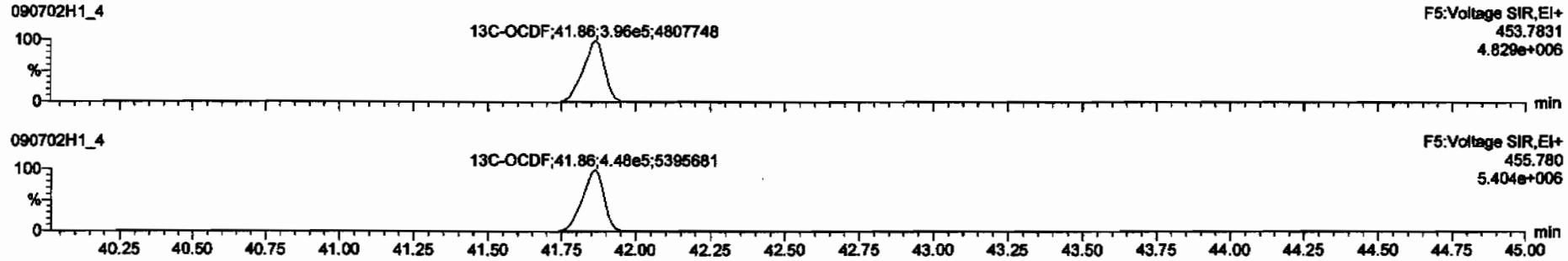

DPE5

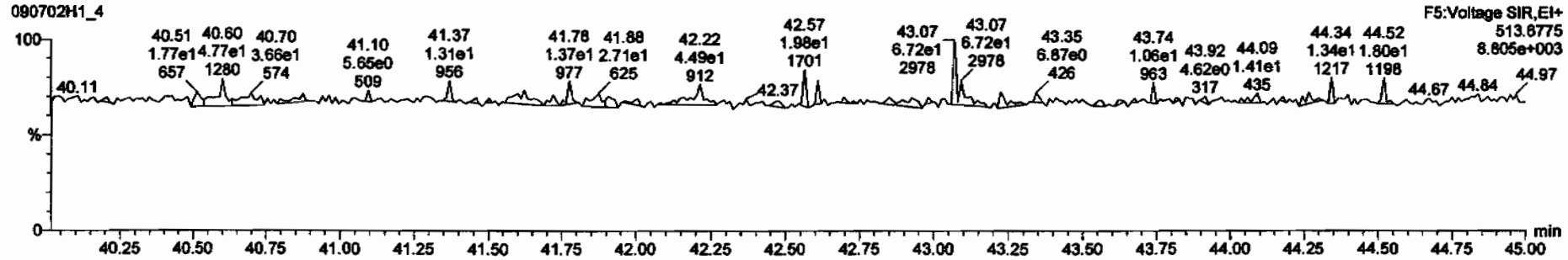

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Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

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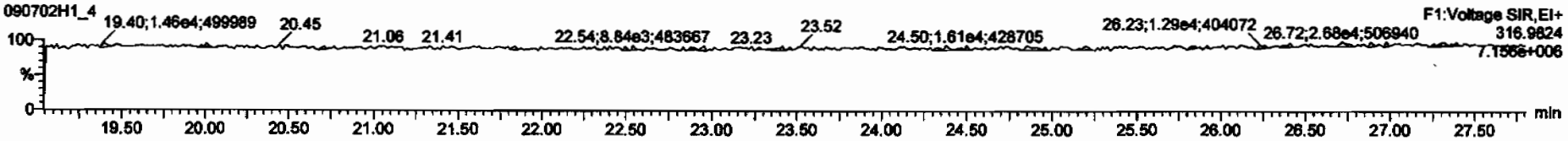

PFK2

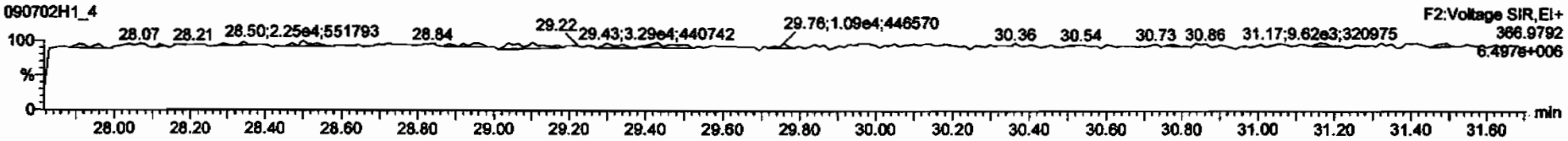

PFK3

PFK4

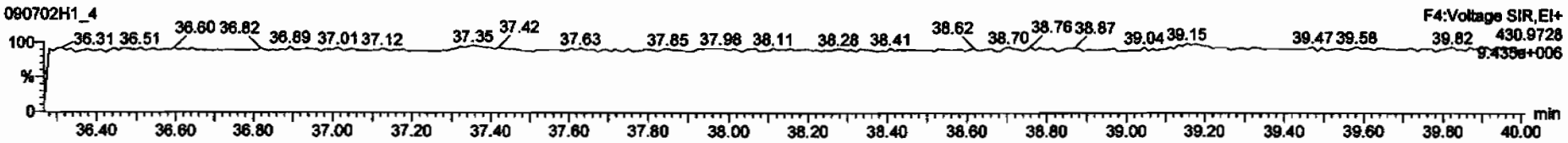

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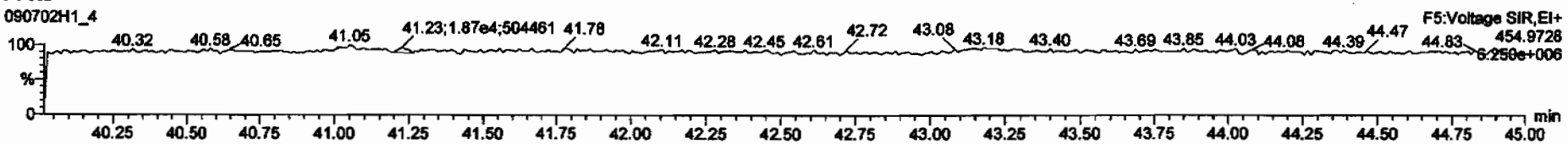

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:07:14 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1	2,3,7,8-TCDD	8.41e4	0.78	NO	1.08	1.000	26.08	1.001	9.3160	93.2	0.0208	9.3160
2	1,2,3,7,8-PeCDD	3.04e5	0.62	NO	1.03	1.000	30.72	1.000	45.641	91.3	0.0578	45.641
3	1,2,3,4,7,8-HxCDD	2.50e5	1.26	NO	1.00	1.000	34.15	1.001	45.851	91.7	0.121	45.851
4	1,2,3,6,7,8-HxCDD	2.50e5	1.26	NO	1.13	1.000	34.26	1.000	44.751	89.5	0.123	44.751
5	1,2,3,7,8,9-HxCDD	2.67e5	1.23	NO	1.10	1.000	34.56	1.009	46.597	93.2	0.117	46.597
6	1,2,3,4,6,7,8-HpCDD	2.06e5	1.04	NO	1.06	1.000	38.19	1.000	44.249	88.5	0.226	44.249
7	OCDD	3.06e5	0.87	NO	1.18	1.000	41.65	1.000	88.869	88.9	0.142	88.869
8	2,3,7,8-TCDF	1.08e5	0.74	NO	1.09	1.000	25.31	1.001	8.4016	84.0	0.0196	8.4020
9	1,2,3,7,8-PeCDF	4.85e5	1.61	NO	1.16	1.000	29.49	1.000	41.587	83.2	0.0590	41.587
10	2,3,4,7,8-PeCDF	4.47e5	1.59	NO	1.12	1.000	30.43	1.000	41.315	82.6	0.0623	41.315
11	1,2,3,4,7,8-HxCDF	4.30e5	1.25	NO	1.41	1.000	33.23	1.000	44.258	88.5	0.0866	44.258
12	1,2,3,6,7,8-HxCDF	4.27e5	1.28	NO	1.22	1.000	33.36	1.001	43.689	87.4	0.0913	43.689
13	2,3,4,6,7,8-HxCDF	3.81e5	1.26	NO	1.28	1.000	33.97	1.000	44.683	89.4	0.108	44.683
14	1,2,3,7,8,9-HxCDF	3.33e5	1.28	NO	1.26	1.000	34.96	1.000	44.873	89.7	0.139	44.873
15	1,2,3,4,6,7,8-HpCDF	3.45e5	1.05	NO	1.69	1.000	36.85	1.001	44.914	89.8	0.198	44.914
16	1,2,3,4,7,8,9-HpCDF	2.85e5	1.05	NO	1.48	1.000	38.77	1.000	45.881	91.8	0.215	45.881
17	OCDF	4.04e5	0.91	NO	1.10	1.000	41.89	1.000	88.020	88.0	0.122	88.020
18	13C-2,3,7,8-TCDD	8.37e5	0.78	NO	1.01	1.000	26.06	1.023	99.620	99.6	0.121	
19	13C-1,2,3,7,8-PeCDD	6.44e5	0.62	NO	0.827	1.000	30.71	1.205	94.026	94.0	0.122	
20	13C-1,2,3,4,7,8-HxCDD	5.43e5	1.20	NO	0.916	1.000	34.13	0.988	96.107	96.1	0.239	
21	13C-1,2,3,6,7,8-HxCDD	4.97e5	1.33	NO	0.921	1.000	34.25	0.991	87.429	87.4	0.238	
22	13C-1,2,3,4,6,7,8-HpCDD	4.37e5	1.05	NO	0.708	1.000	38.18	1.105	99.866	99.9	0.463	
23	13C-OCDD	5.84e5	0.89	NO	0.503	1.000	41.62	1.205	188.32	94.2	0.275	
24	13C-2,3,7,8-TCDF	1.18e6	0.79	NO	0.977	1.000	25.28	0.992	102.41	102	0.0965	
25	13C-1,2,3,7,8-PeCDF	1.01e6	1.55	NO	0.896	1.000	29.47	1.157	95.404	95.4	0.205	
26	13C-2,3,4,7,8-PeCDF	9.68e5	1.55	NO	0.900	1.000	30.42	1.194	91.426	91.4	0.204	
27	13C-1,2,3,4,7,8-HxCDF	6.88e5	0.52	NO	1.17	1.000	33.22	0.962	95.390	95.4	0.321	
28	13C-1,2,3,6,7,8-HxCDF	8.00e5	0.52	NO	1.52	1.000	33.34	0.965	85.317	85.3	0.247	
29	13C-2,3,4,6,7,8-HxCDF	6.67e5	0.52	NO	1.25	1.000	33.97	0.983	86.459	86.5	0.301	
30	13C-1,2,3,7,8,9-HxCDF	5.91e5	0.51	NO	1.05	1.000	34.95	1.012	90.906	90.9	0.357	

7/7/09
7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:07:14 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

31	13C-1,2,3,4,6,7,8-HpCDF	4.55e5	0.44	NO	0.868	1.000	36.83	1.066	84.855	84.9	0.521
32	13C-1,2,3,4,7,8,9-HpCDF	4.19e5	0.44	NO	0.727	1.000	38.76	1.122	93.449	93.4	0.623
33	13C-OCDF	8.37e5	0.88	NO	0.760	1.000	41.88	1.212	178.53	89.3	0.154
34	37Cl-2,3,7,8-TCDD	2.05e5			0.668	1.000	26.08	1.023	37.129	92.8	0.0420
35	13C-1,2,3,4-TCDD	8.28e5	0.79	NO	1.00	1.000	25.48	0.000	100.00	100	0.123
36	13C-1,2,3,4-TCDF	1.18e6	0.76	NO	1.00	1.000	24.06	0.000	100.00	100	0.0943
37	13C-1,2,3,7,8,9-HxCDD	6.17e5	1.25	NO	1.00	1.000	34.55	0.000	100.00	100	0.219

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

2,3,7,8-TCDD

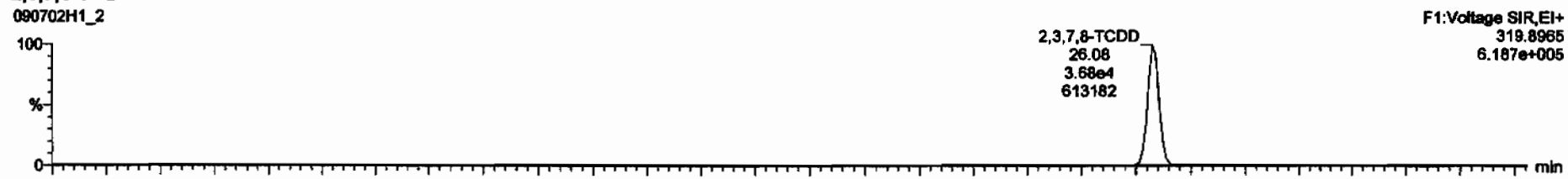

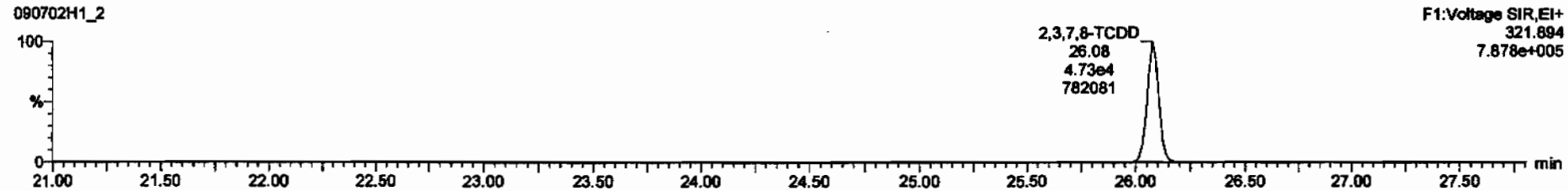

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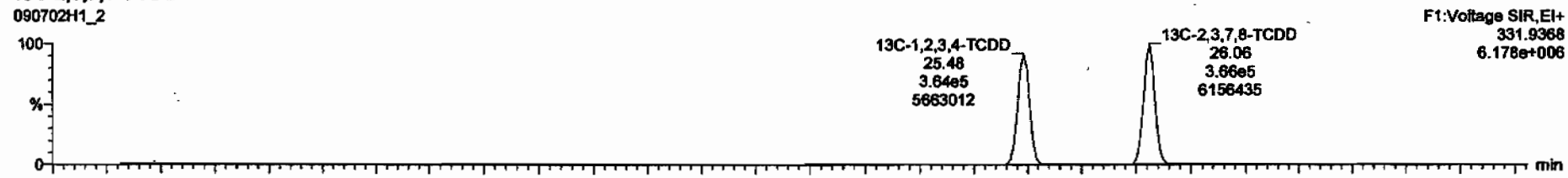

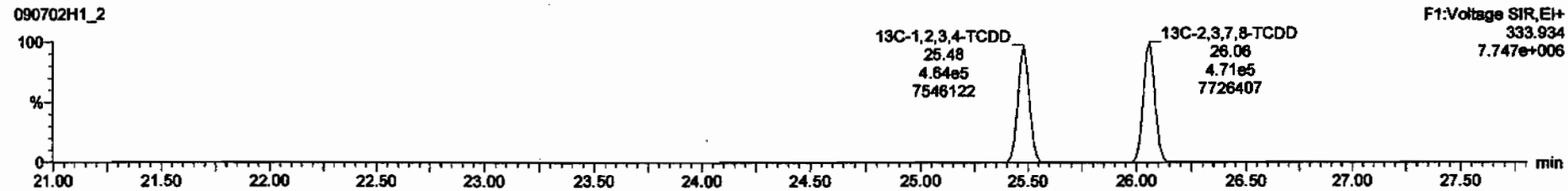

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Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

37Cl-2,3,7,8-TCDD

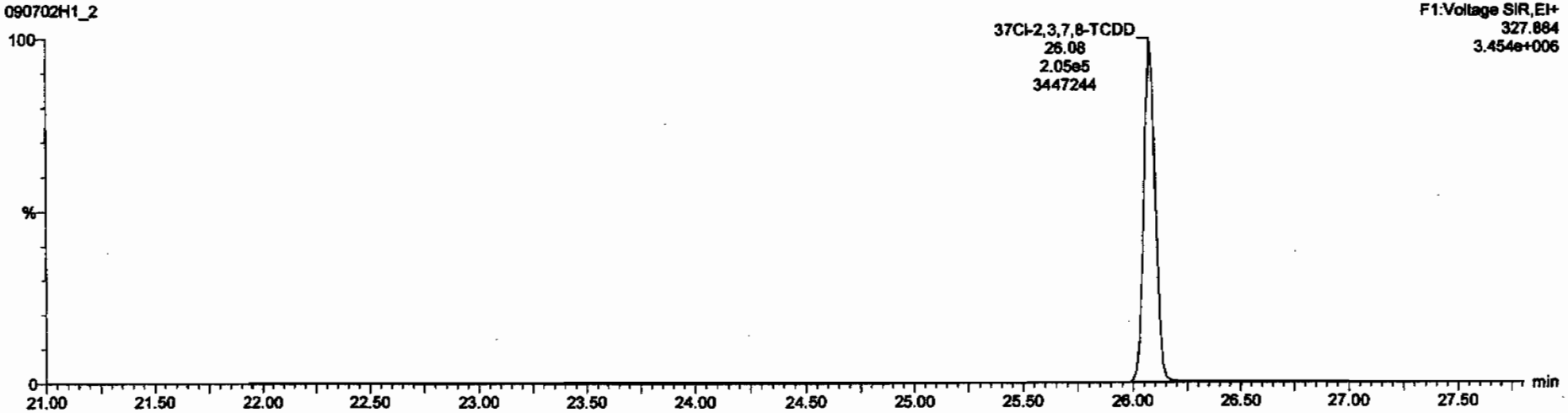

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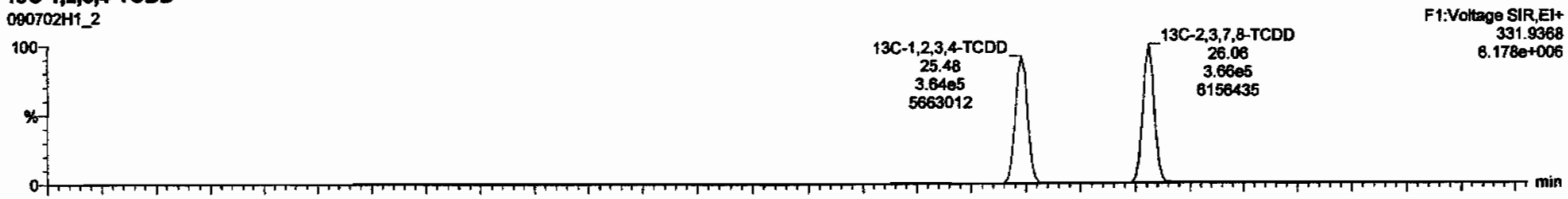

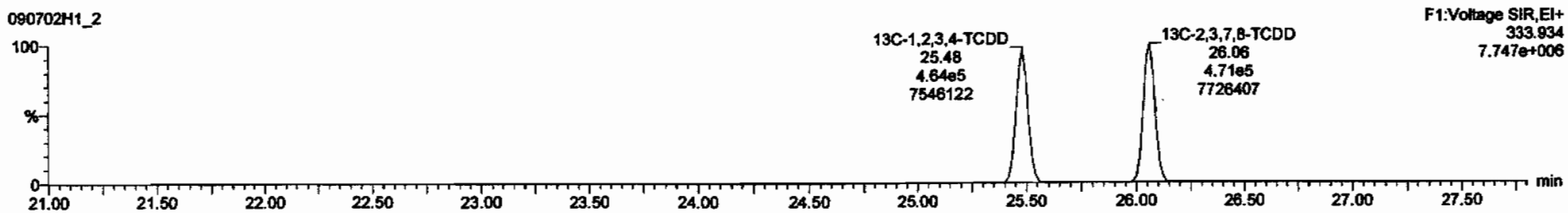

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,7,8-PeCDD

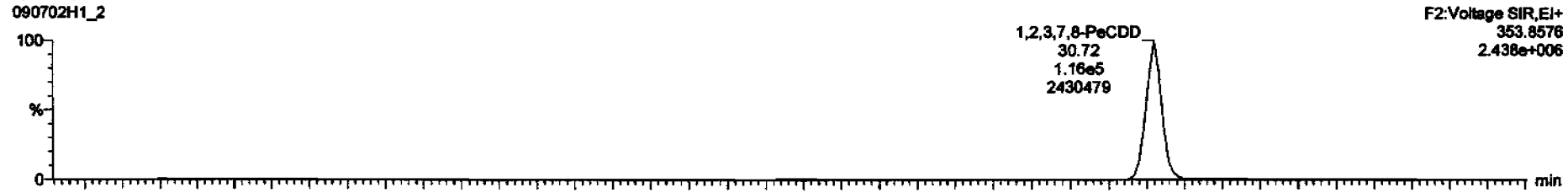

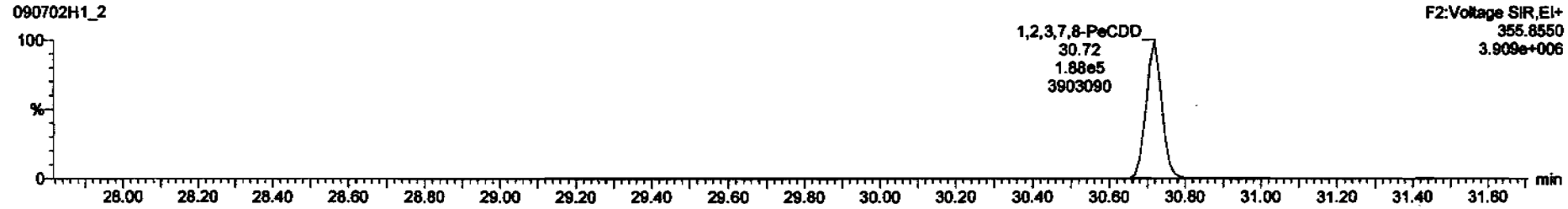

13C-1,2,3,7,8-PeCDD

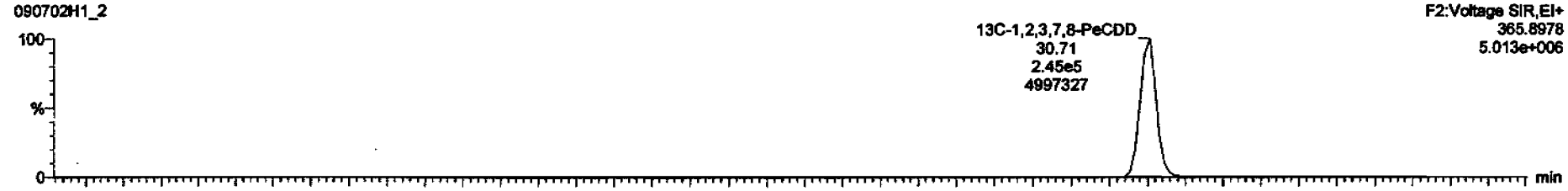

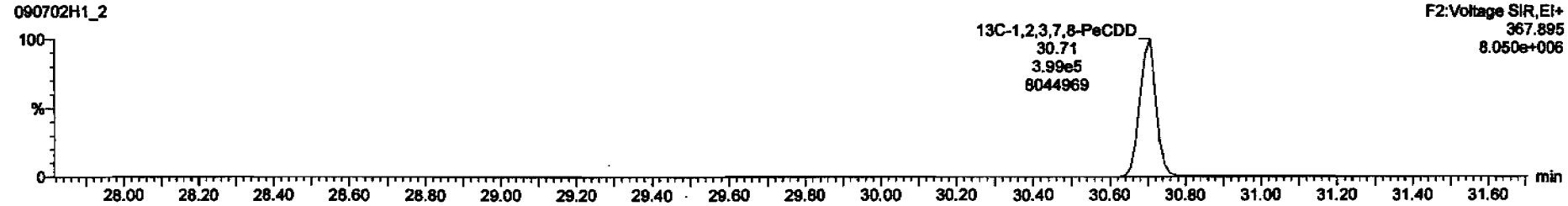

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,7,8-HxCDD

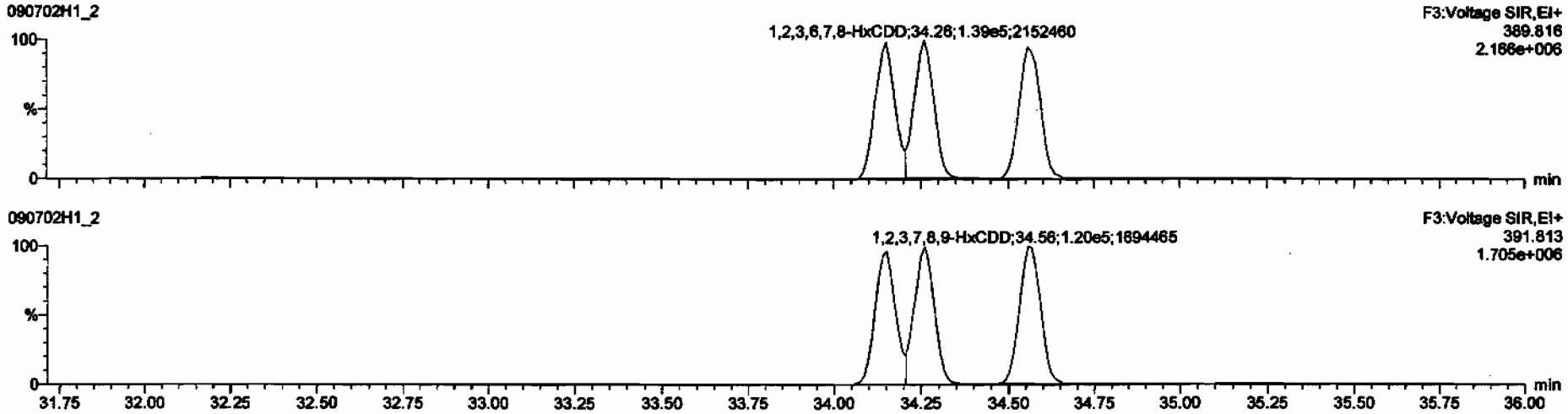

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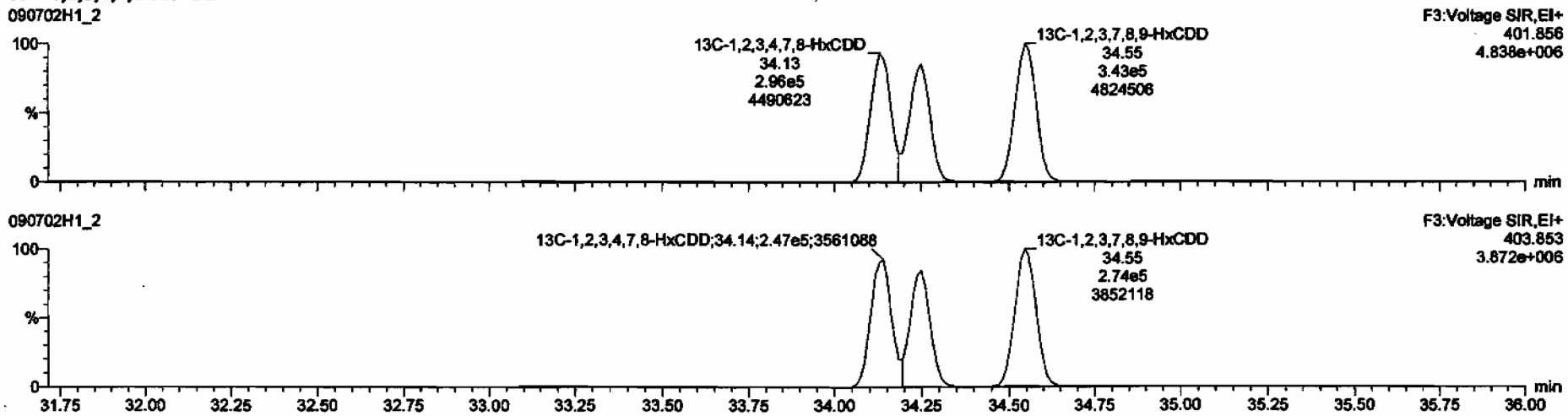

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,6,7,8-HpCDD

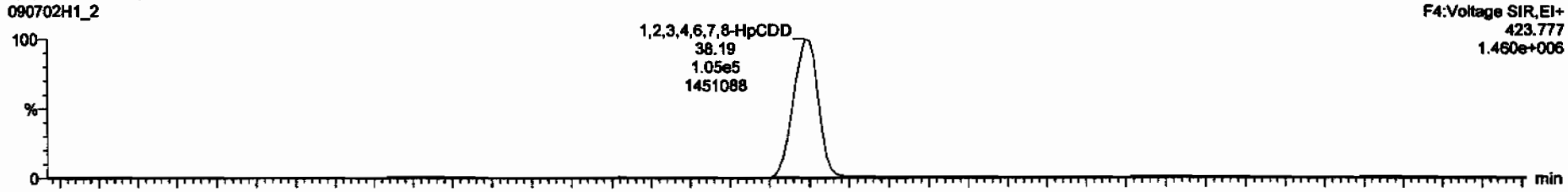

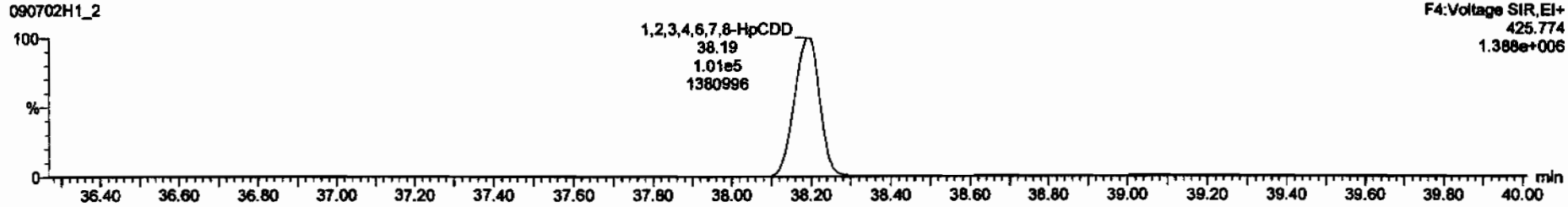

13C-1,2,3,4,6,7,8-HpCDD

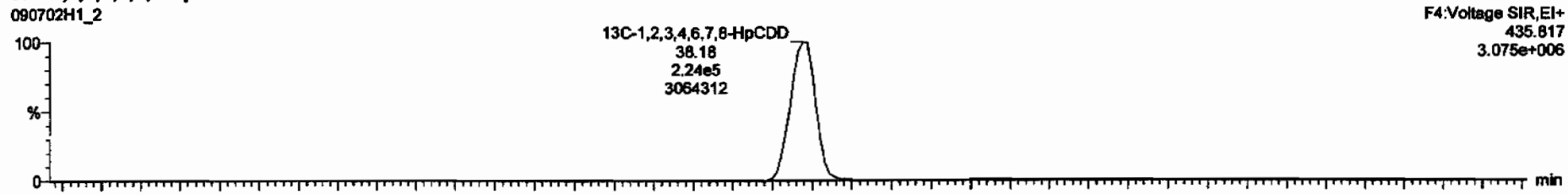

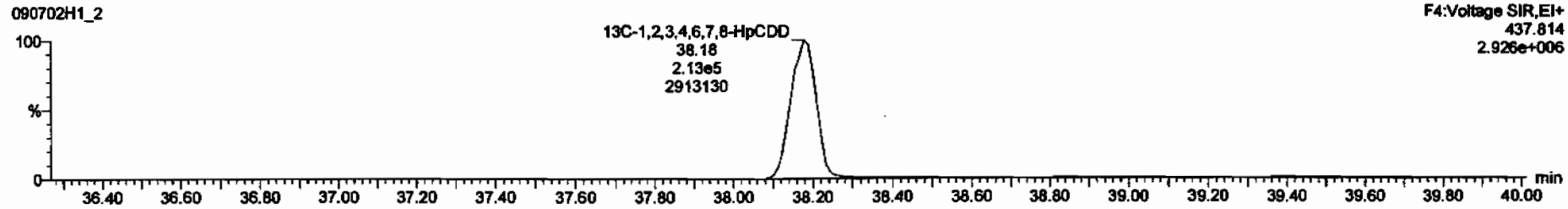

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

OCDD

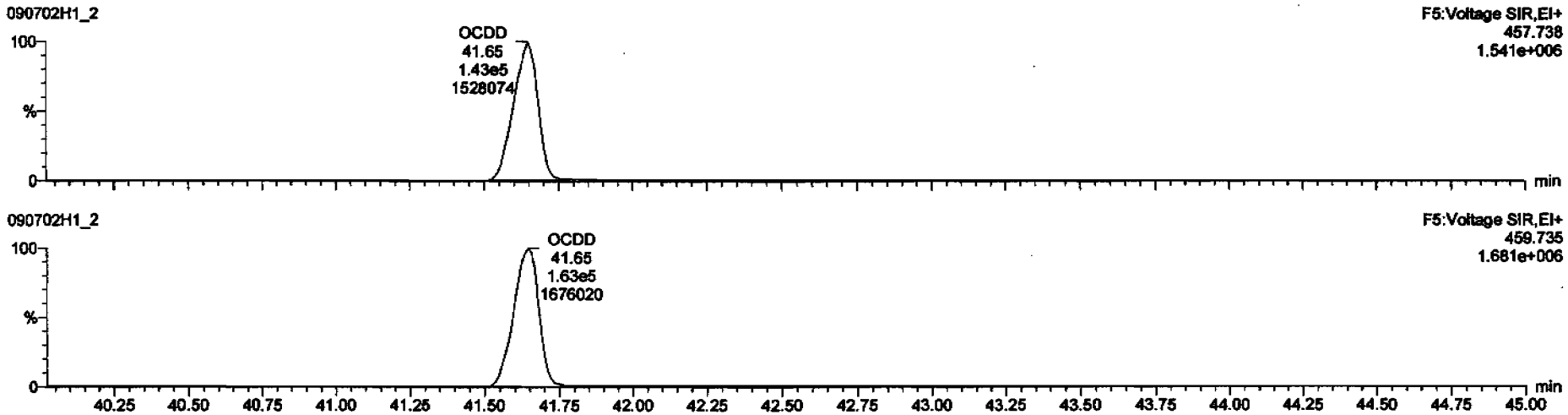

13C-OCDD

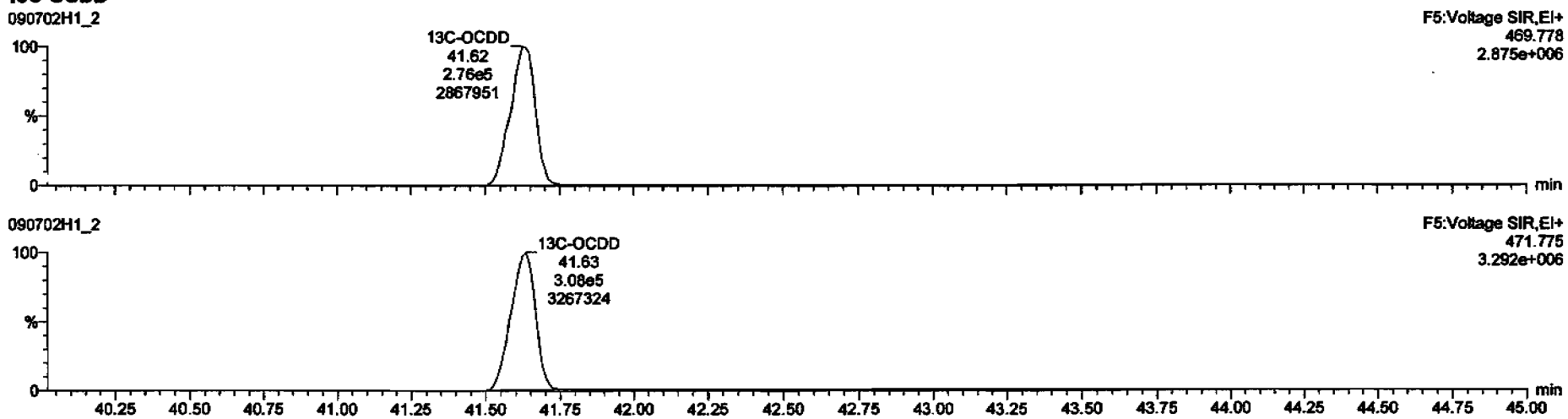

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

2,3,7,8-TCDF

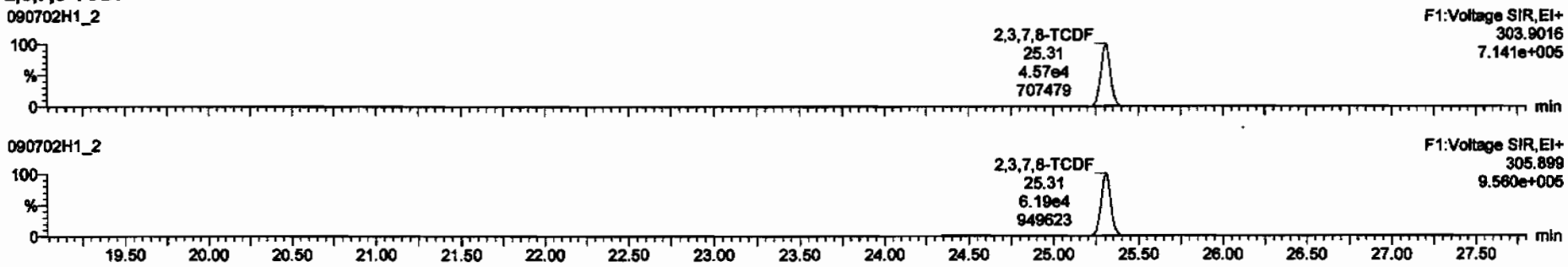

13C-2,3,7,8-TCDF

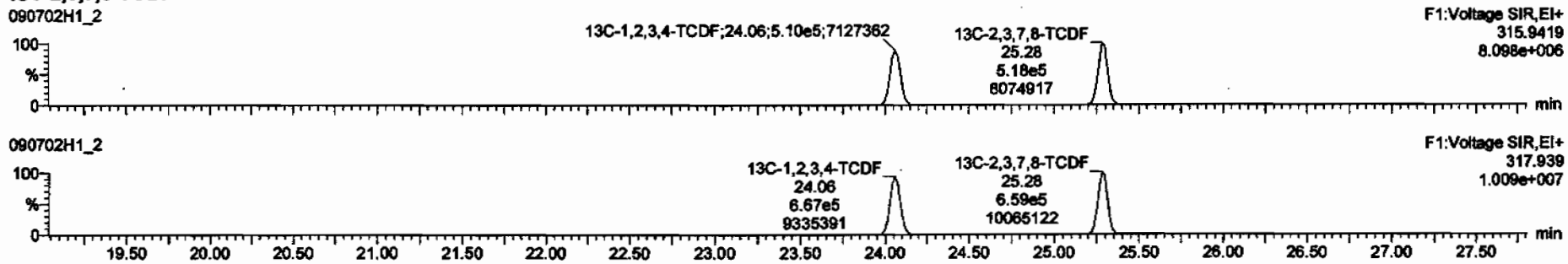

DPE1

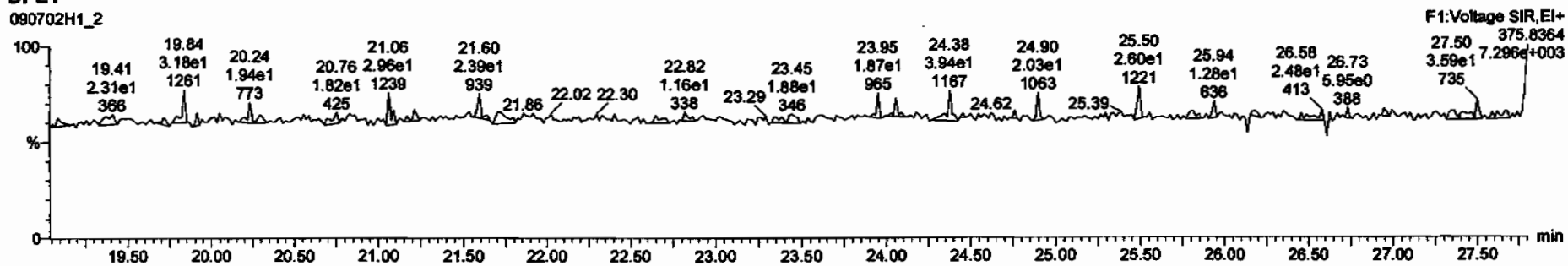

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1st Func. Penta-Furans

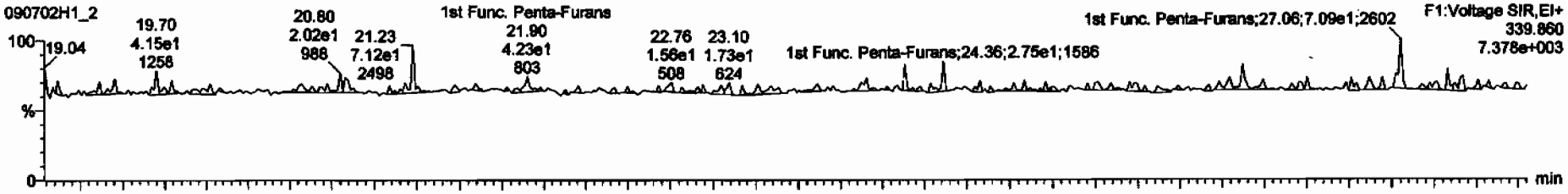

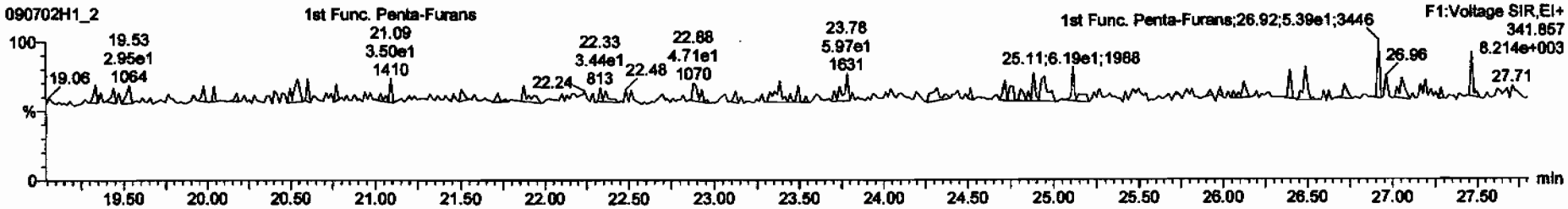

DPE6

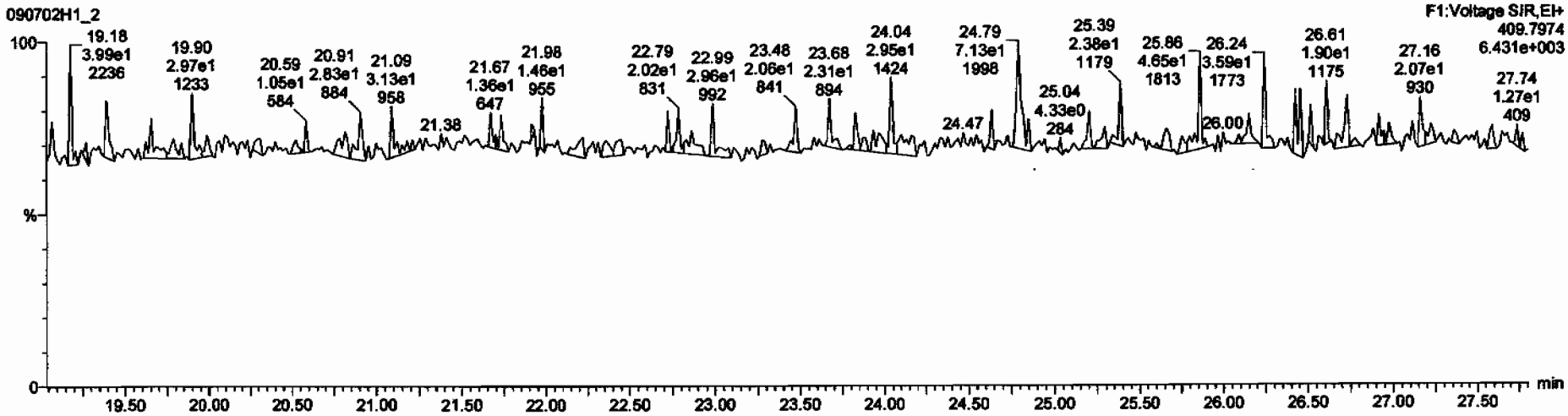

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,7,8-PeCDF

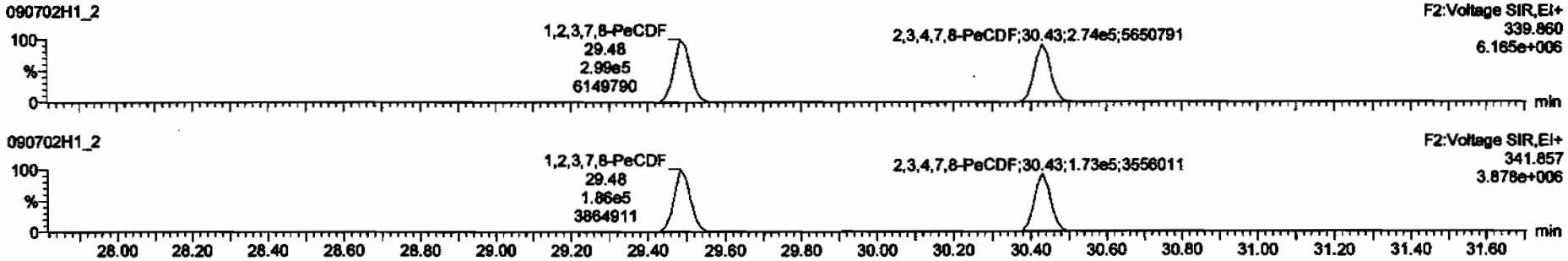

13C-1,2,3,7,8-PeCDF

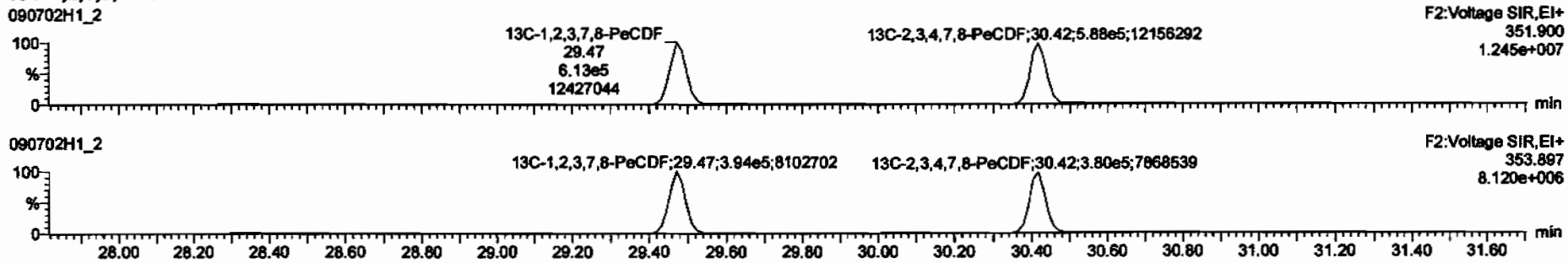

DPE2

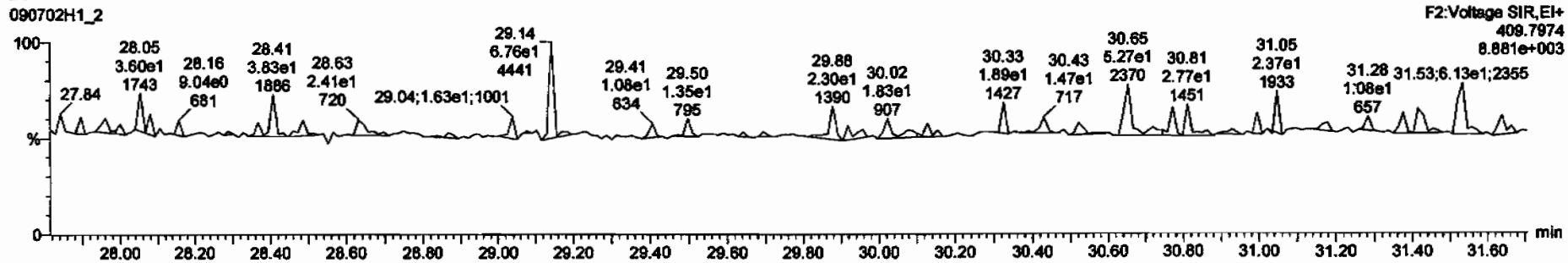

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,7,8-HxCDF

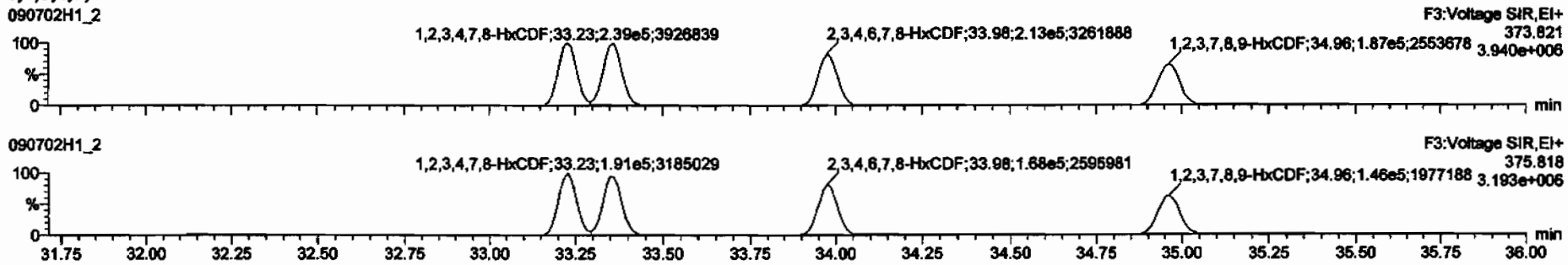

13C-1,2,3,4,7,8-HxCDF

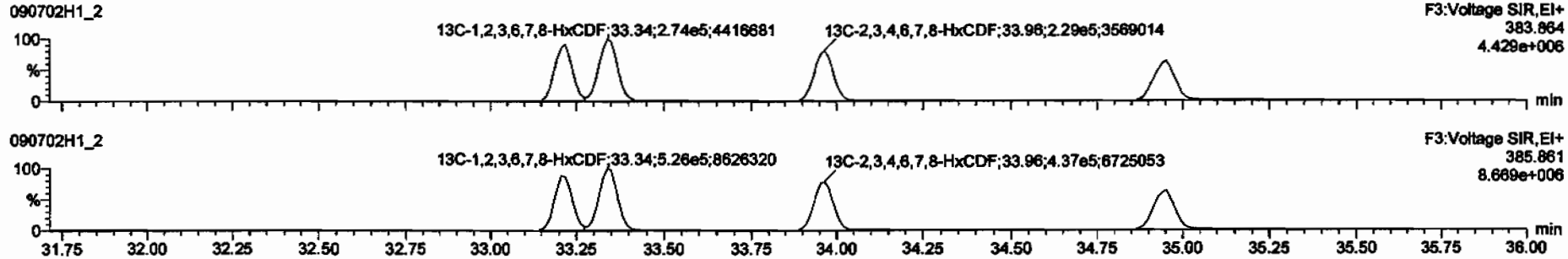

DPE3

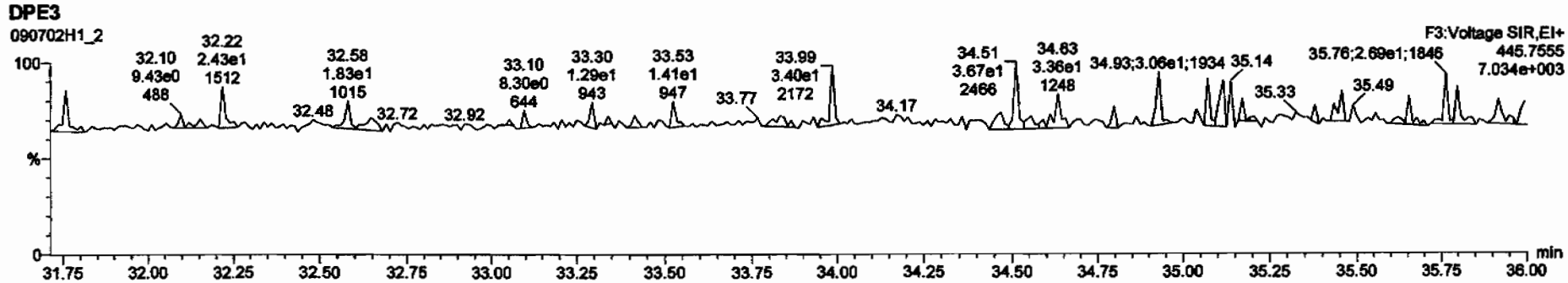

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,6,7,8-HpCDF

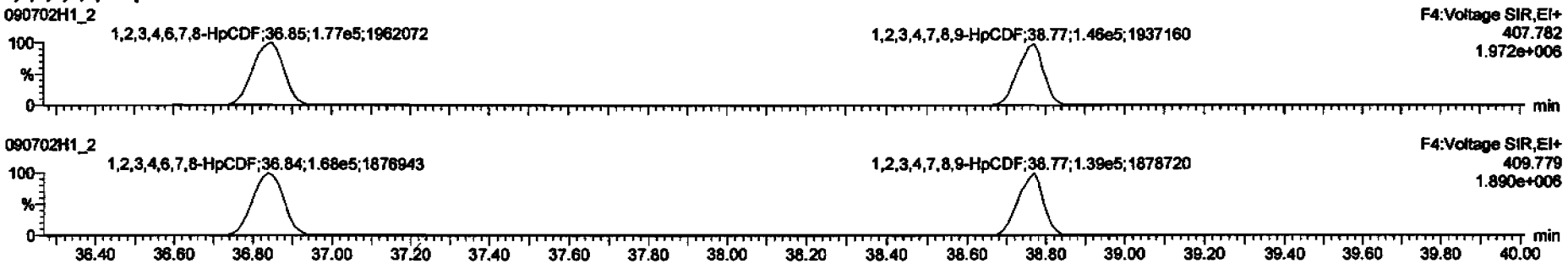

13C-1,2,3,4,6,7,8-HpCDF

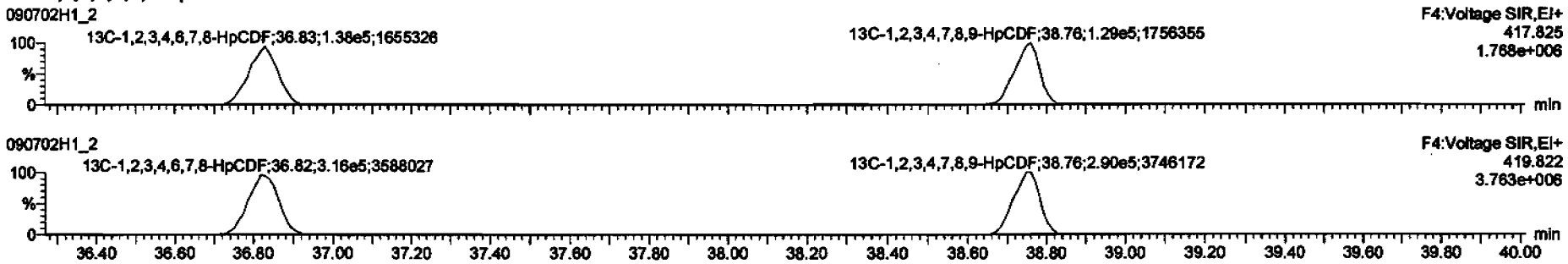

DPE4

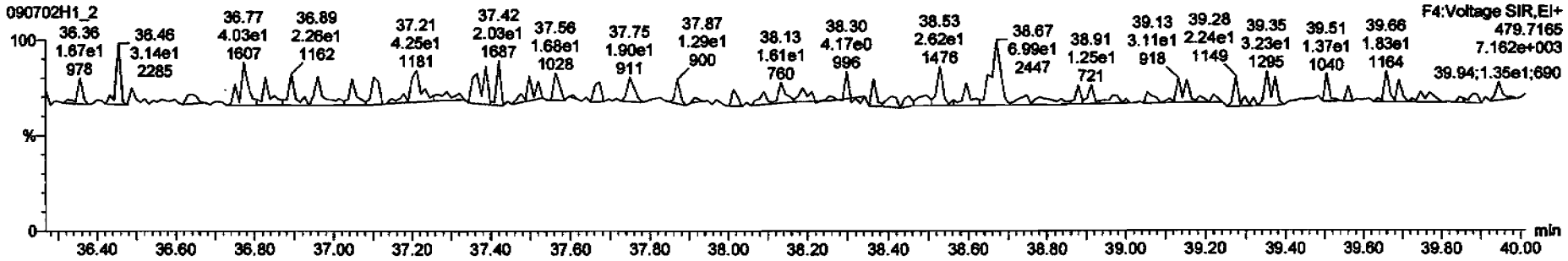

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

OCDF

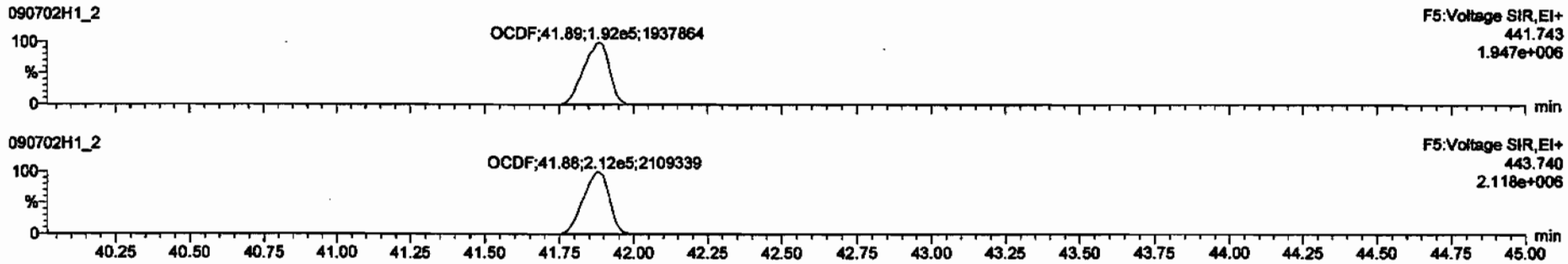

13C-OCDF

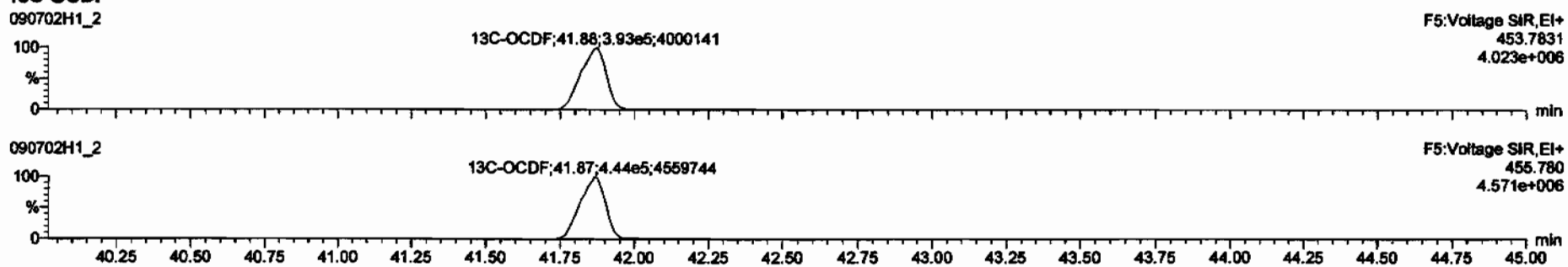

DPE5

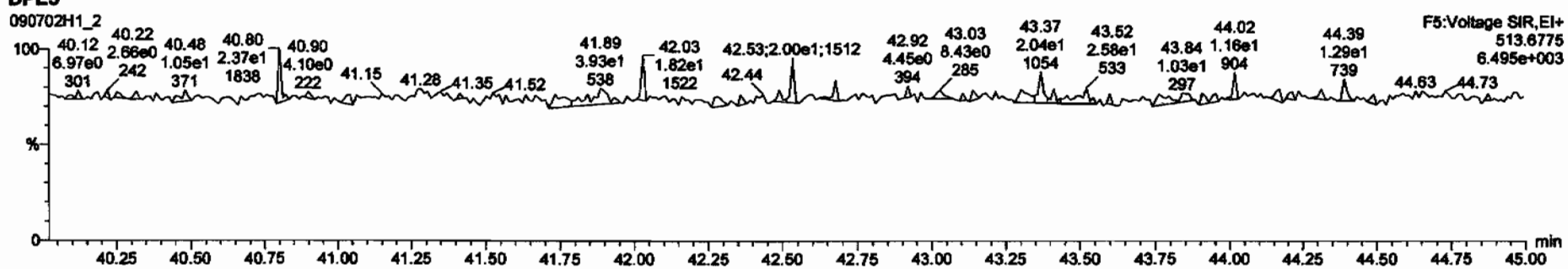

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

PFK1

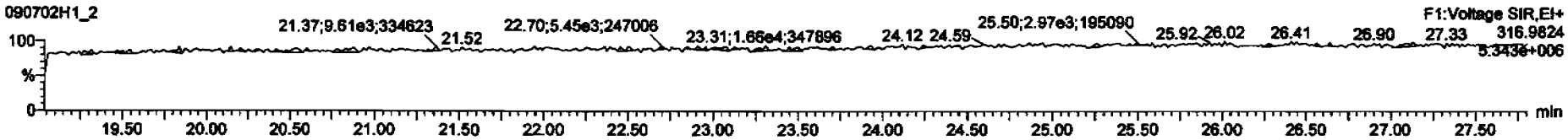

PFK2

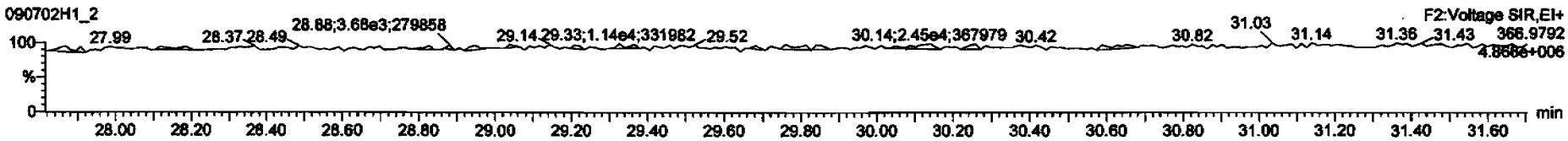

PFK3

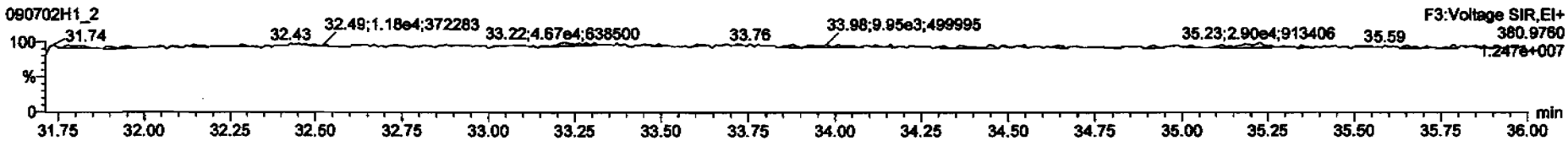

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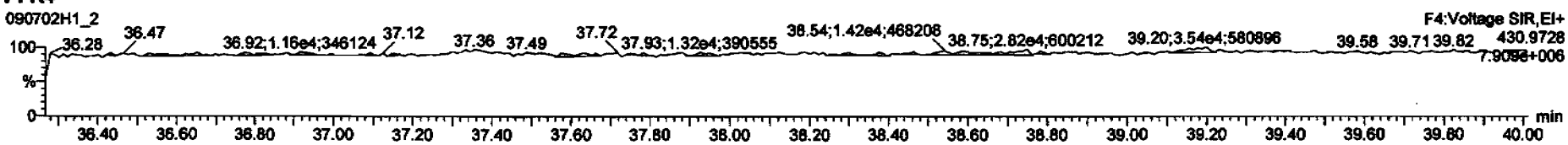

PFK5

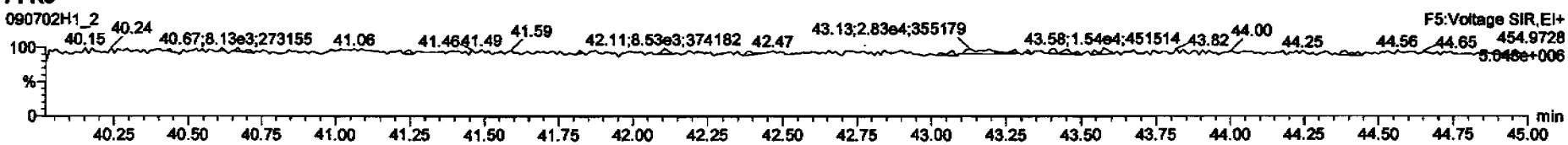

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-8.qld

Last Altered: Tuesday, July 07, 2009 09:51:14 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:51:45 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

1	2,3,7,8-TCDD			NO	1.08	10.120					0.0468	
2	1,2,3,7,8-PeCDD			NO	1.03	10.120					0.102	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.120					0.275	
4	1,2,3,6,7,8-HxCDD	1.20e3	1.13	NO	1.13	10.120	34.27	1.000	0.40026		0.290	~~0.40026~~
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.120					0.271	
6	1,2,3,4,6,7,8-HpCDD	2.38e4	1.00	NO	1.06	10.120	38.21	1.001	9.3686		0.279	~~9.3686~~
7	OCDD	1.35e5	0.88	NO	1.18	10.120	41.66	1.000	65.227		0.182	65.227
8	2,3,7,8-TCDF	5.66e2	0.77	NO	1.09	10.120	25.31	1.001	0.083665		0.0492	~~0.083665~~
9	1,2,3,7,8-PeCDF			NO	1.16	10.120					0.0841	
10	2,3,4,7,8-PeCDF			NO	1.12	10.120					0.0754	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.120					0.0837	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.120					0.102	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.120					0.113	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.120					0.145	
15	1,2,3,4,6,7,8-HpCDF	5.49e3	1.05	NO	1.69	10.120	36.84	1.000	1.3095		0.145	~~1.3095~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.120					0.144	
17	OCDF	8.74e3	0.92	NO	1.10	10.120	41.90	1.000	3.5055		0.201	~~3.5055~~
18	13C-2,3,7,8-TCDD	9.21e5	0.77	NO	1.01	10.120	26.06	1.023	202.46	102	0.293	
19	13C-1,2,3,7,8-PeCDD	7.10e5	0.63	NO	0.827	10.120	30.71	1.205	191.63	97.0	0.266	
20	13C-1,2,3,4,7,8-HxCDD	5.83e5	1.26	NO	0.916	10.120	34.15	0.988	187.24	94.7	0.524	
21	13C-1,2,3,6,7,8-HxCDD	5.28e5	1.24	NO	0.921	10.120	34.26	0.991	168.56	85.3	0.522	
22	13C-1,2,3,4,6,7,8-HpCDD	4.72e5	1.06	NO	0.708	10.120	38.19	1.105	196.03	99.2	0.823	
23	13C-OCDD	6.94e5	0.89	NO	0.503	10.120	41.65	1.205	406.44	103	0.638	
24	13C-2,3,7,8-TCDF	1.23e6	0.77	NO	0.977	10.120	25.28	0.992	196.42	99.4	0.211	
25	13C-1,2,3,7,8-PeCDF	1.02e6	1.53	NO	0.896	10.120	29.49	1.157	177.90	90.0	0.359	
26	13C-2,3,4,7,8-PeCDF	1.09e6	1.56	NO	0.900	10.120	30.43	1.194	188.27	95.3	0.358	
27	13C-1,2,3,4,7,8-HxCDF	7.86e5	0.52	NO	1.17	10.120	33.23	0.961	197.69	100	0.562	
28	13C-1,2,3,6,7,8-HxCDF	8.19e5	0.52	NO	1.52	10.120	33.35	0.965	158.60	80.2	0.433	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.52	NO	1.25	10.120	33.97	0.983	169.42	85.7	0.526	
30	13C-1,2,3,7,8,9-HxCDF	6.41e5	0.51	NO	1.05	10.120	34.96	1.011	179.04	90.6	0.624	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-8.qld

Last Altered: Tuesday, July 07, 2009 09:51:14 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:51:45 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

31	13C-1,2,3,4,6,7,8-HpCDF	4.91e5	0.43	NO	0.868	10.120	36.84	1.066	166.23	84.1	0.957	
32	13C-1,2,3,4,7,8,9-HpCDF	5.11e5	0.43	NO	0.727	10.120	38.76	1.121	206.73	105	1.14	
33	13C-OCDF	8.99e5	0.90	NO	0.760	10.120	41.89	1.212	348.28	88.1	0.288	
34	37Cl-2,3,7,8-TCDD	2.34e5			0.668	10.120	26.08	1.023	78.098	98.8	0.122	
35	13C-1,2,3,4-TCDD	8.85e5	0.79	NO	1.00	10.120	25.48	0.000	197.63	100	0.297	
36	13C-1,2,3,4-TCDF	1.27e6	0.77	NO	1.00	10.120	24.06	0.000	197.63	100	0.206	
37	13C-1,2,3,7,8,9-HxCDD	6.72e5	1.25	NO	1.00	10.120	34.57	0.000	197.63	100	0.480	
38	Total Tetra-Dioxins				1.08	10.120					0.0186	
39	Total Penta-Dioxins				1.03	10.120					0.0382	
40	Total Hexa-Dioxins				1.13	10.120			2.5941		0.266	~~2.5941~~
41	Total Hepta-Dioxins				1.06	10.120			22.173		0.279	~~22.173~~
42	Total Tetra-Furans				1.09	10.120			0.18522		0.0492	0.26085
43	1st Func. Penta-Furans				1.16	10.120			~~0.25682~~		0.0339	~~0.25682~~
44	Total Penta-Furans				1.16	10.120			~~0.24750~~ 0.504		0.0783	~~0.24750~~
45	Total Hexa-Furans				1.28	10.120			1.4775		0.110	~~1.4775~~
46	Total Hepta-Furans				1.69	10.120			3.4055		0.135	~~3.4055~~

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-8.qld

Last Altered: Tuesday, July 07, 2009 09:51:14 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:51:45 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Total Hexa-Dioxins	32.57	4.005e4	2.812e4	1.846e3	1.419e3	1.30	NO	3.266e3	1.0325	1.0325	0.266
Total Hexa-Dioxins	33.42	3.024e4	1.968e4	2.097e3	1.577e3	1.33	NO	3.673e3	1.1613	1.1613	0.266
1,2,3,6,7,8-HxCDD	34.27	1.108e4	1.027e4	6.371e2	5.657e2	1.13	NO	1.203e3	0.40026	0.40026	0.290

Hepta-Dioxins

Total Hepta-Dioxins	37.28	2.333e5	2.261e5	1.668e4	1.586e4	1.05	NO	3.254e4	12.805	12.805	0.279
1,2,3,4,6,7,8-HpCDD	38.21	2.216e5	2.202e5	1.191e4	1.190e4	1.00	NO	2.381e4	9.3686	9.3686	0.279

Tetra-Furans

Total Tetra-Furans	21.84	3.696e3	5.271e3	3.064e2	3.811e2	0.80	NO	6.875e2	0.10155	0.10155	0.0492
2,3,7,8-TCDF	25.31	4.785e3	5.269e3	2.466e2	3.198e2	0.77	NO	5.664e2	0.083665	0.083665	0.0492
Total Tetra-Furans	25.83	3.865e3	6.151e3	2.228e2	4.233e2	0.53	YES	0.000e0	0.00000	0.075636	0.0492

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-8.qld

Last Altered: Tuesday, July 07, 2009 09:51:14 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:51:45 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

Penta-Furans function 1

	1st Func. Penta-Furans	27.07	1.872e4	9.665e3	1.016e3	5.706e2	1.78	NO	1.587e3	0.25682	0.25682	0.0339

Penta-Furans

	Total Penta-Furans	28.55	1.106e4	1.063e4	9.183e2	6.112e2	1.50	NO	1.529e3	0.24750	0.24750	0.0783

Hexa-Furans

	Total Hexa-Furans	32.02	9.808e3	8.789e3	5.416e2	4.507e2	1.20	NO	9.923e2	0.20667	0.20667	0.110
	Total Hexa-Furans	32.19	4.562e4	4.109e4	1.808e3	1.669e3	1.08	NO	3.477e3	0.72414	0.72414	0.110
	Total Hexa-Furans	32.76	2.499e4	2.272e4	1.400e3	1.225e3	1.14	NO	2.625e3	0.54669	0.54669	0.110

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.84	3.904e4	3.568e4	2.811e3	2.680e3	1.05	NO	5.490e3	1.3095	1.3095	0.145
	Total Hepta-Furans	37.51	6.828e4	7.154e4	4.675e3	4.291e3	1.09	NO	8.967e3	2.0961	2.0961	0.135

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-8.qld

Last Altered: Monday, July 06, 2009 13:16:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

2,3,7,8-TCDD

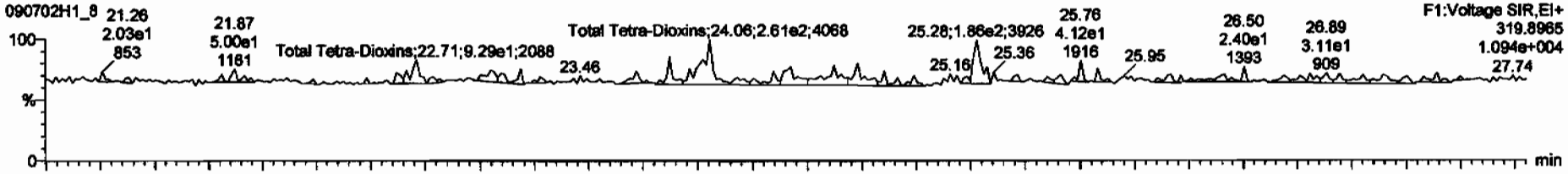

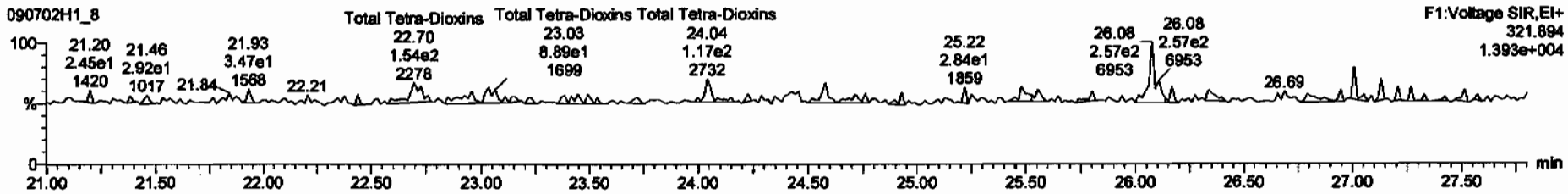

13C-2,3,7,8-TCDD

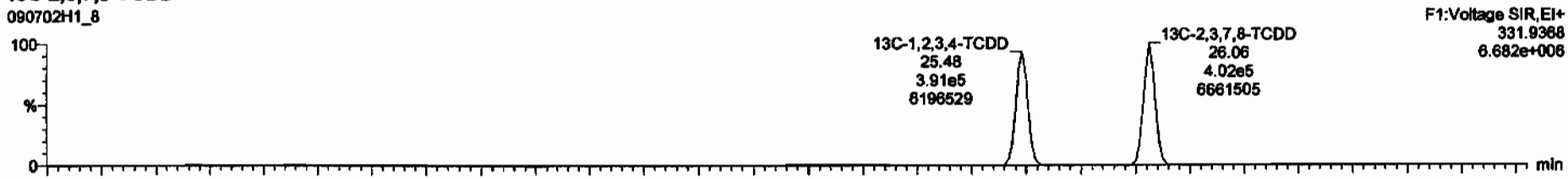

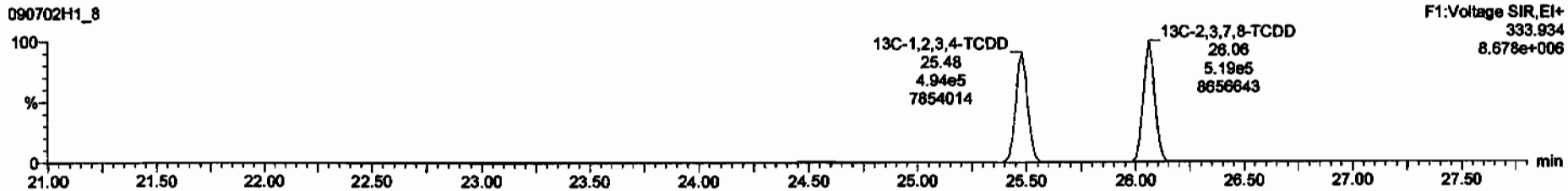

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Last Altered: Monday, July 06, 2009 13:16:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

37Cl-2,3,7,8-TCDD

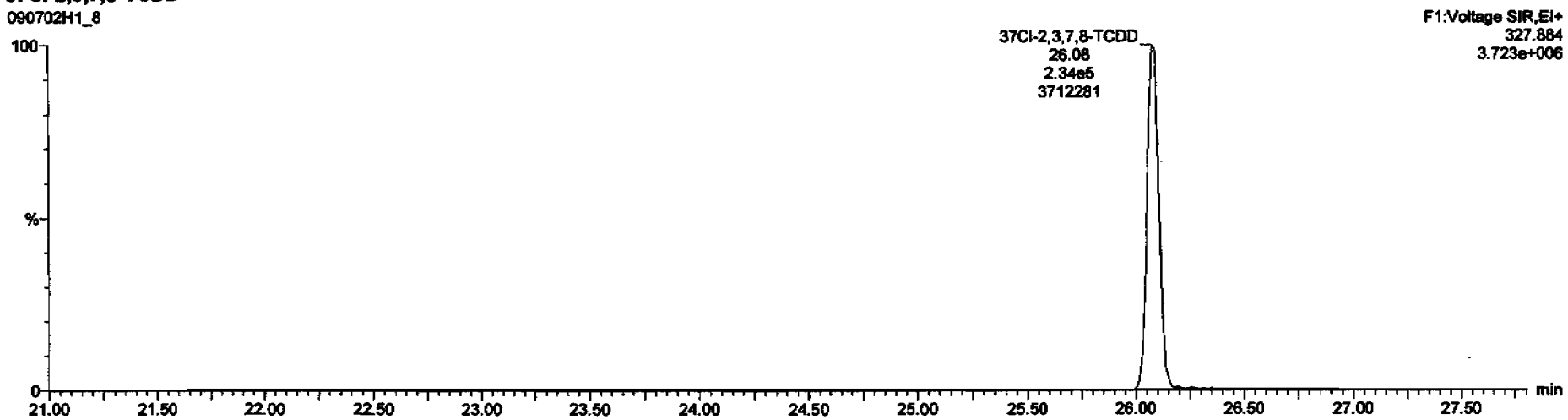

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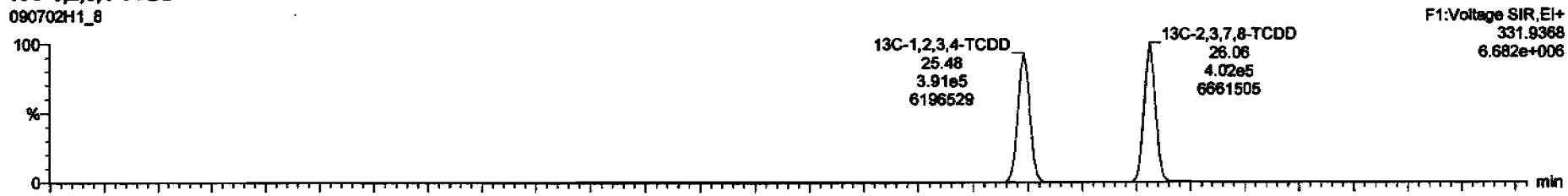

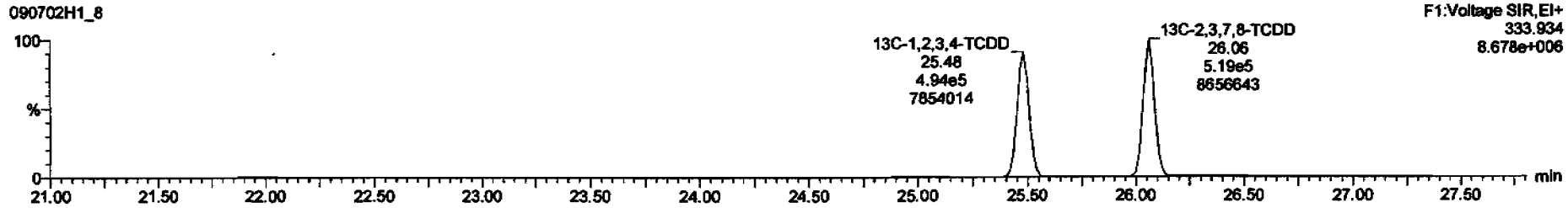

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Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

1,2,3,7,8-PeCDD

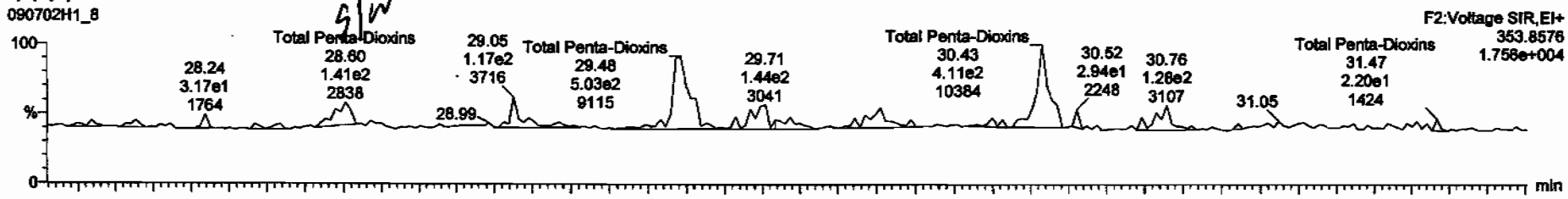

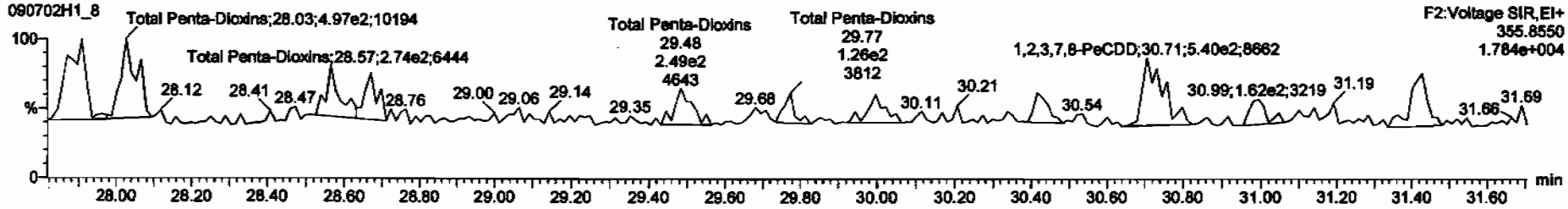

13C-1,2,3,7,8-PeCDD

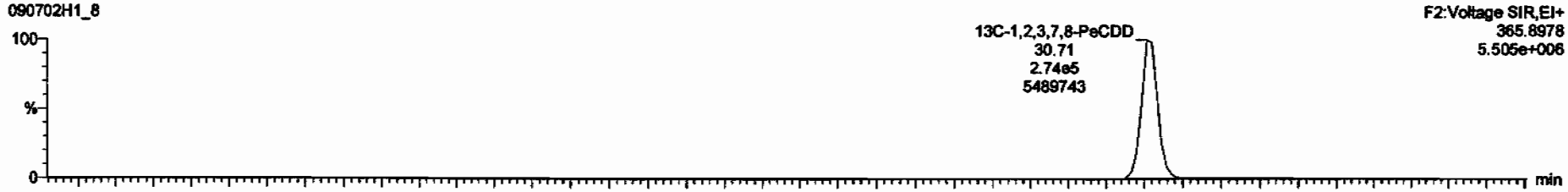

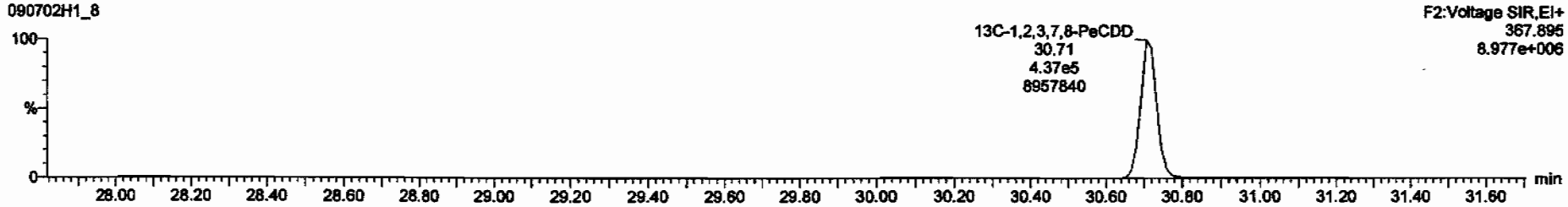

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Last Altered: Monday, July 06, 2009 13:16:09 Pacific Daylight Time
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Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

1,2,3,4,7,8-HxCDD

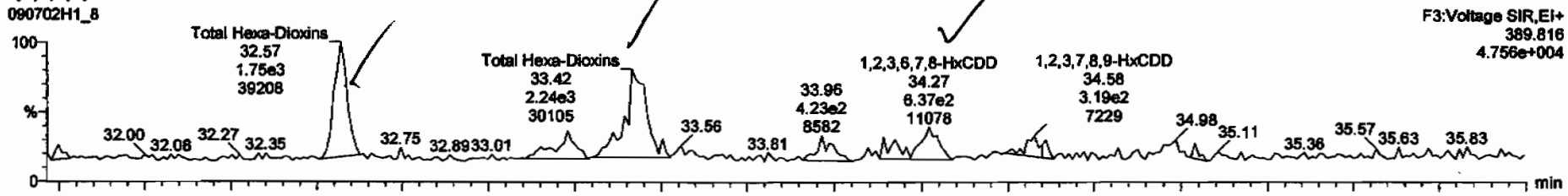

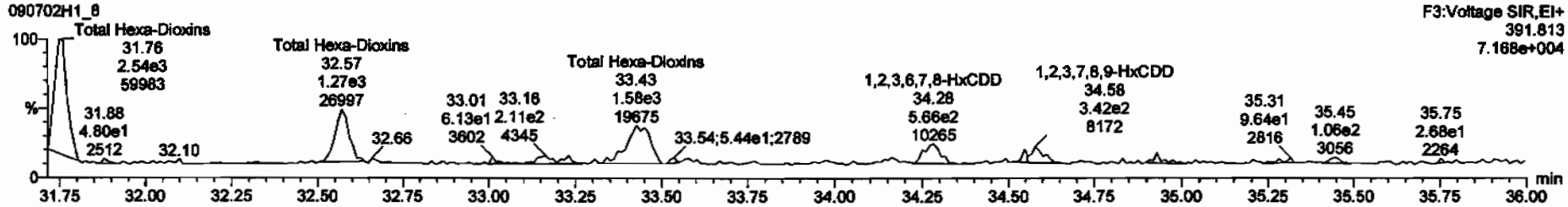

13C-1,2,3,4,7,8-HxCDD

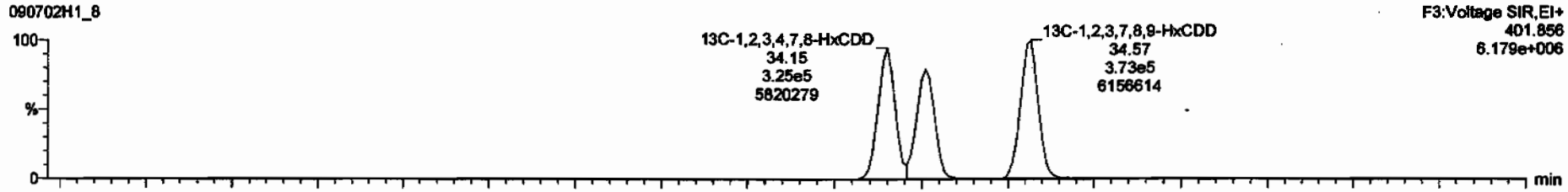

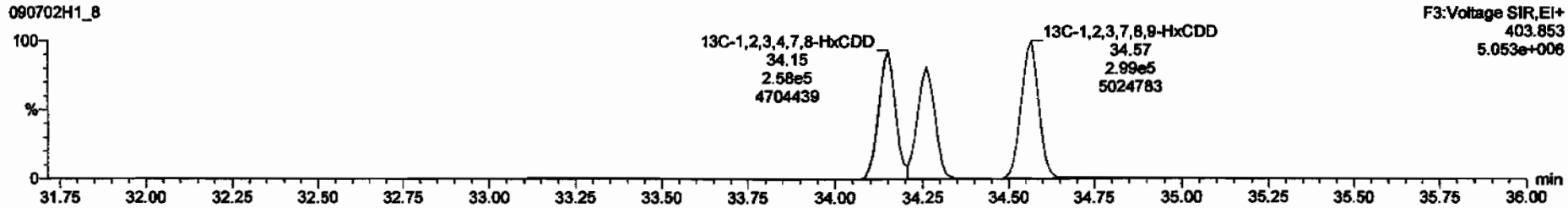

Target.lynx - 090702h1-8.qld * - [Chromatogram]

Total Hexa-Dioxins	32.57	1.846e3	1.419e3	1.30	NO	1.0325	1.0325
Total Hexa-Dioxins	33.42	2.097e3	1.577e3	1.33	NO	1.1613	1.1613
1,2,3,6,7,8-HxCDD	34.27	6.371e2	5.657e2	1.13	NO	0.40026	0.40026

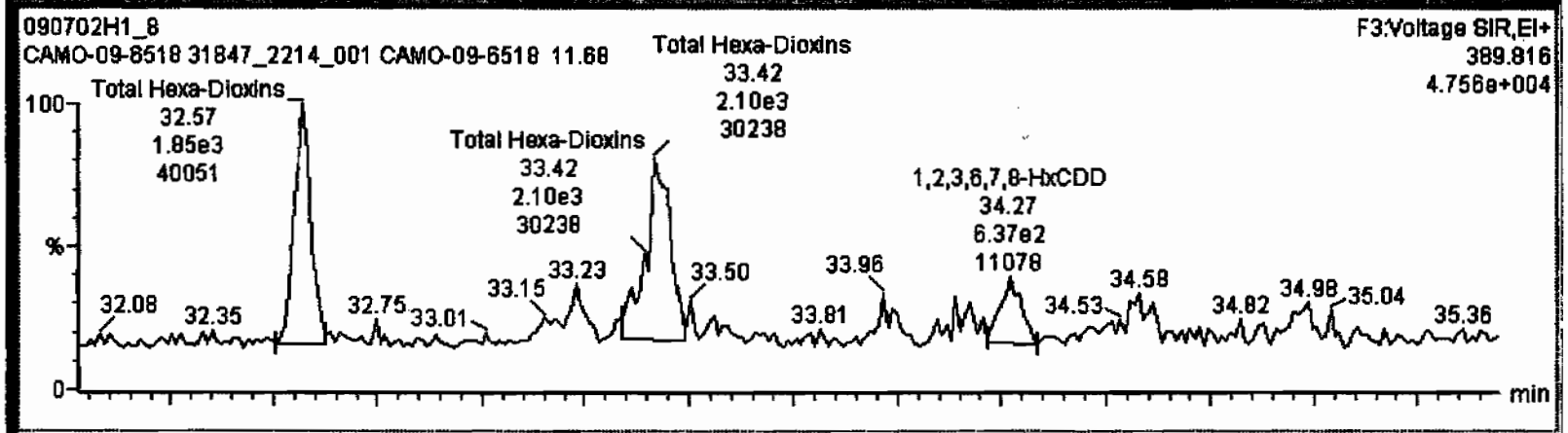

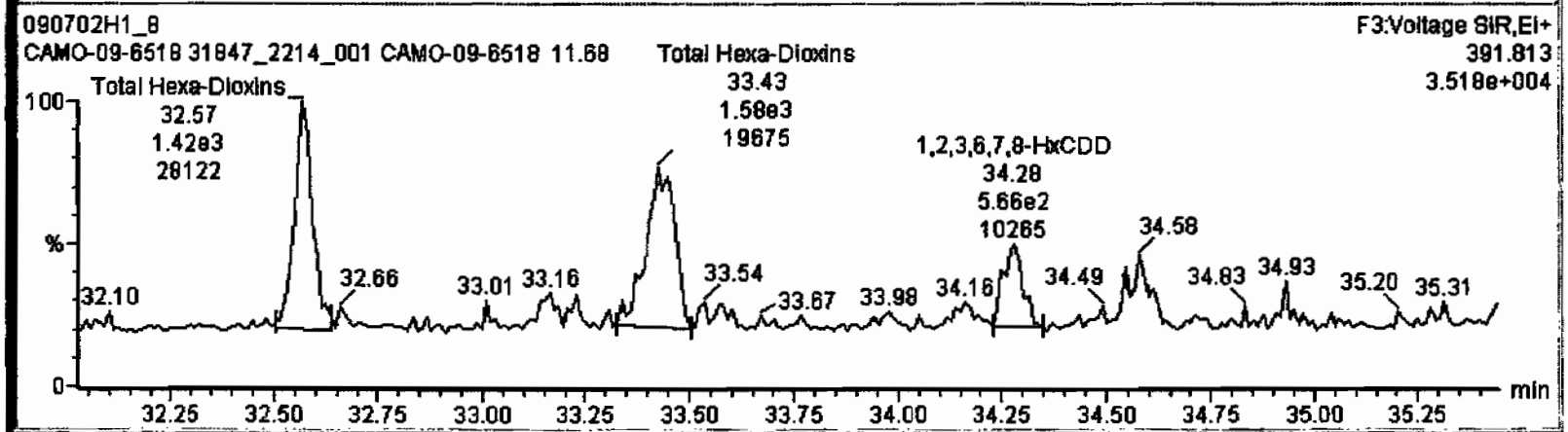

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Last Altered: Monday, July 06, 2009 13:16:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

1,2,3,4,6,7,8-HpCDD

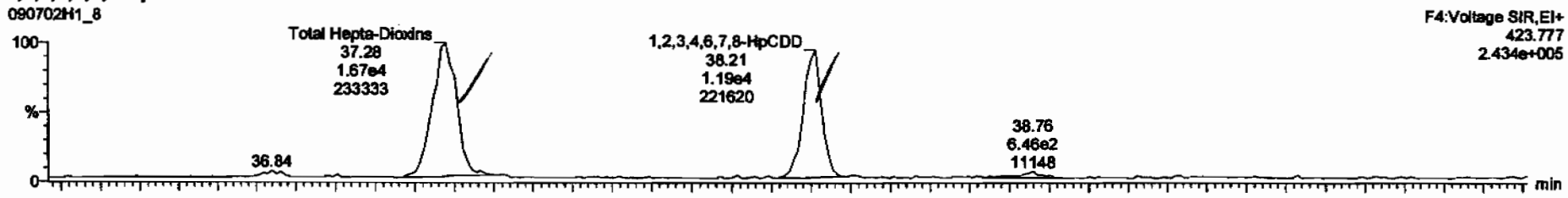

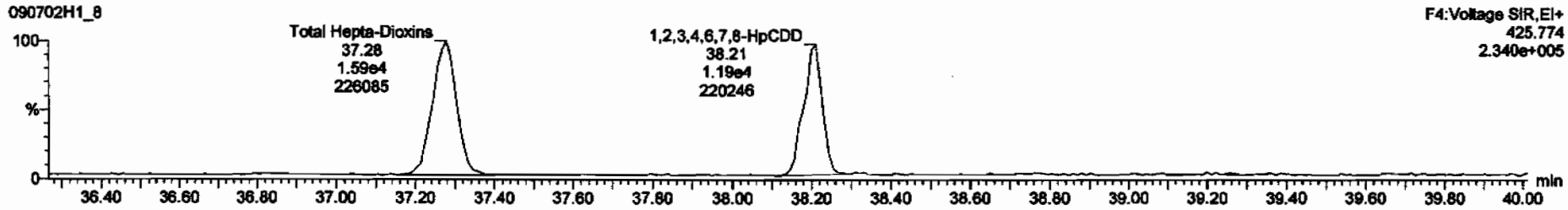

13C-1,2,3,4,6,7,8-HpCDD

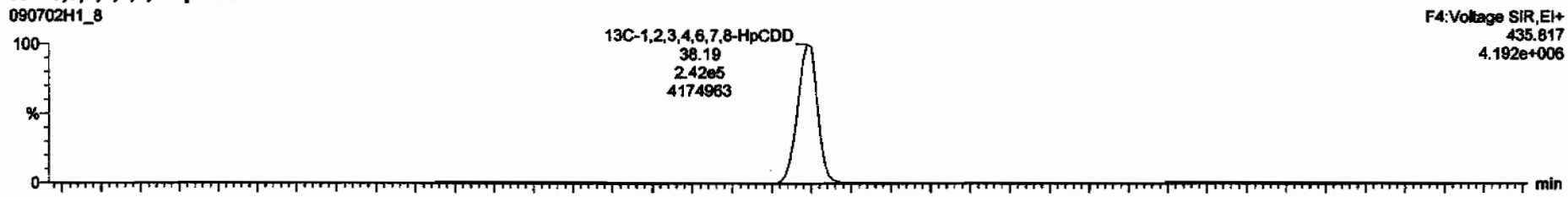

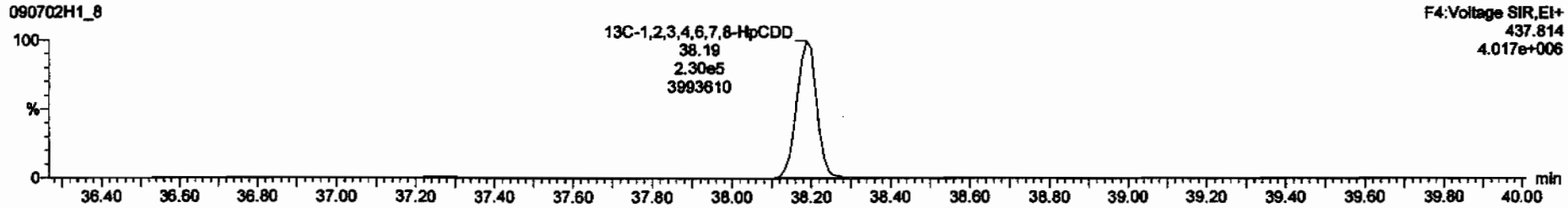

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Last Altered: Monday, July 06, 2009 13:16:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

OCDD

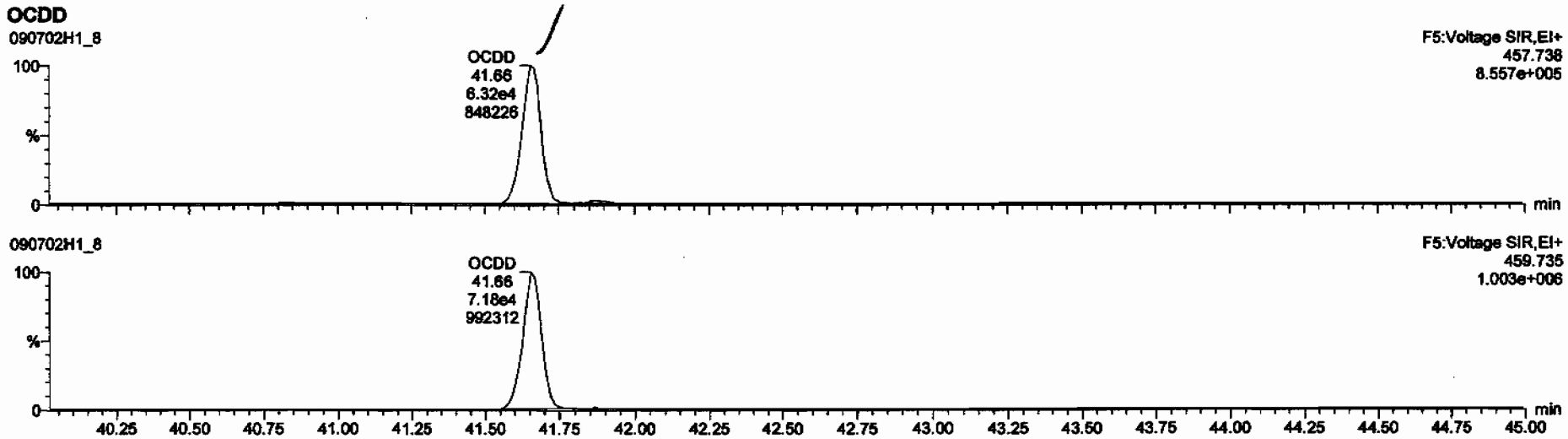

13C-OCDD

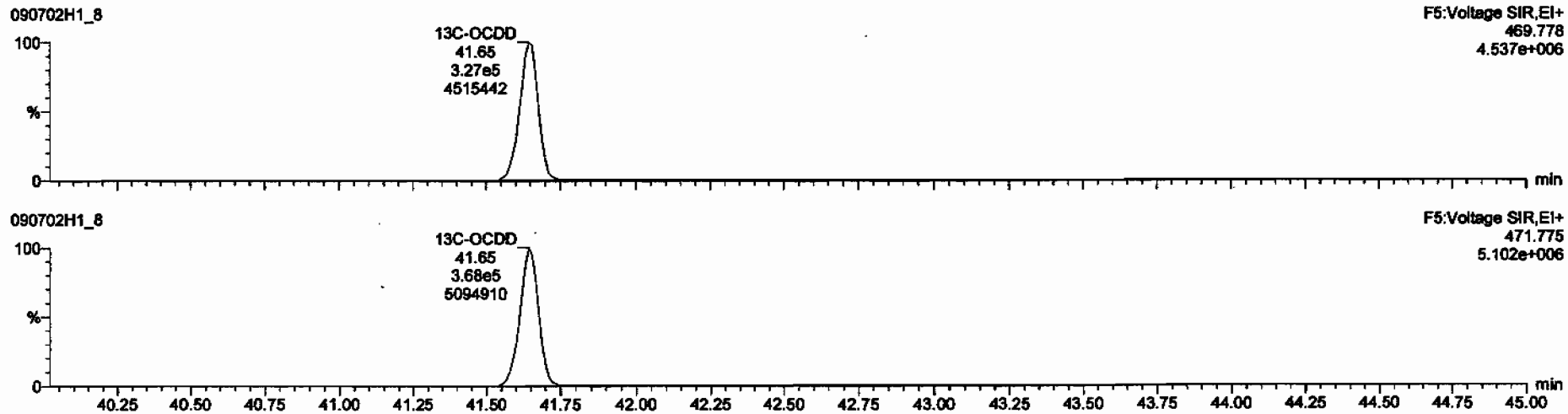

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Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

2,3,7,8-TCDF

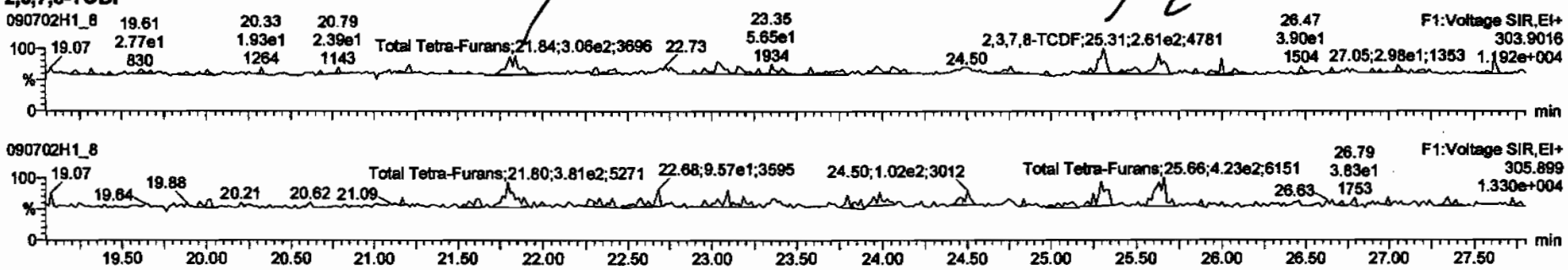

13C-2,3,7,8-TCDF

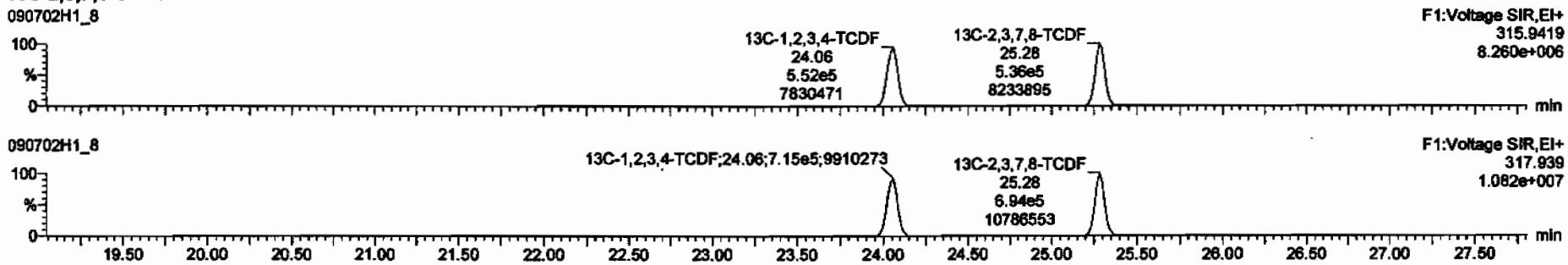

DPE1

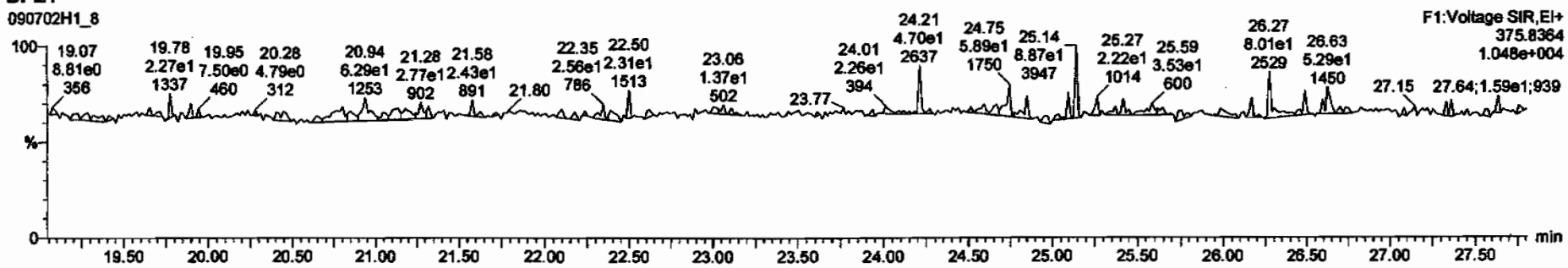

TargetLynx - 090702h1-8.qld * - [Chromatogram]

Total Tetra-Furans	21.84	3.064e2	3.811e2	0.80	NO	0.10155	0.10155
2,3,7,8-TCDF	25.31	2.466e2	3.198e2	0.77	NO	0.083665	0.083665
Total Tetra-Furans	25.63	2.226e2	4.233e2	0.53	YES	0.075636	0.00000

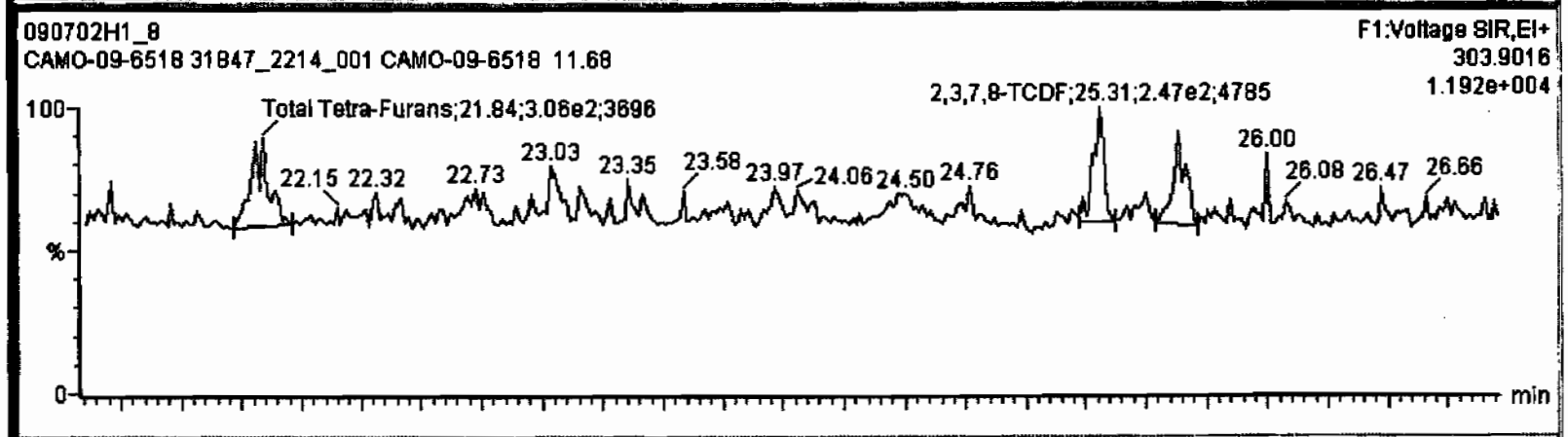

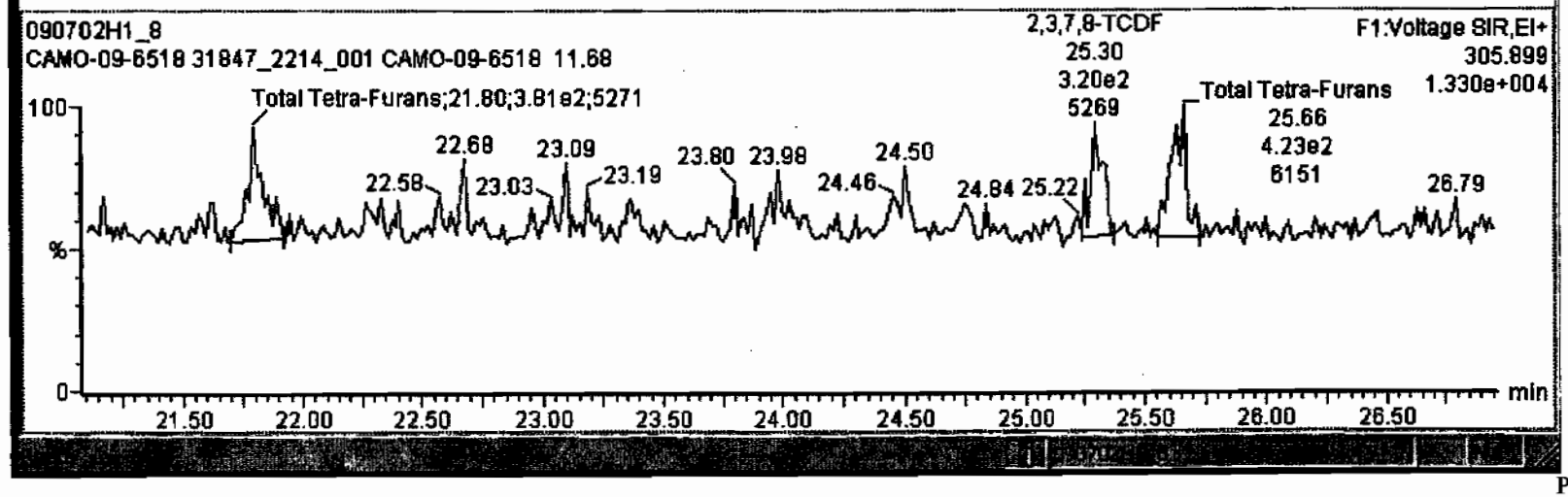

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Last Altered: Monday, July 06, 2009 13:16:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

1st Func. Penta-Furans

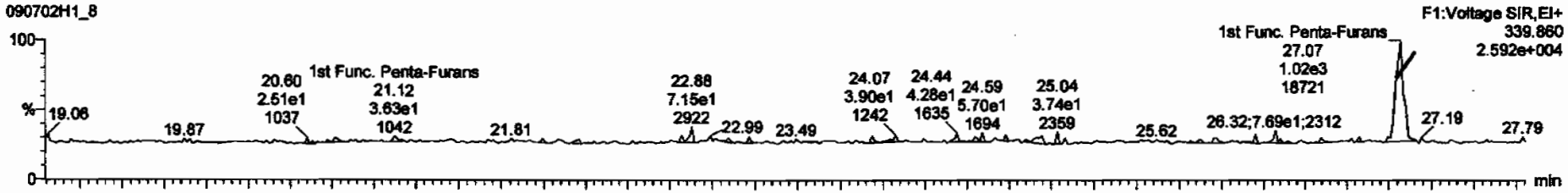

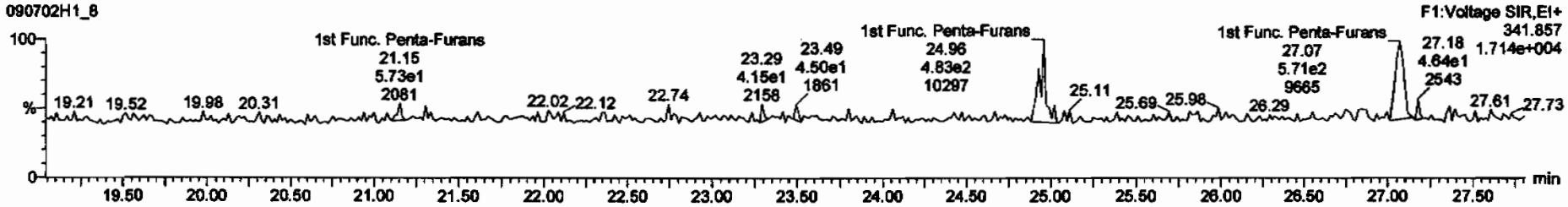

DPE6

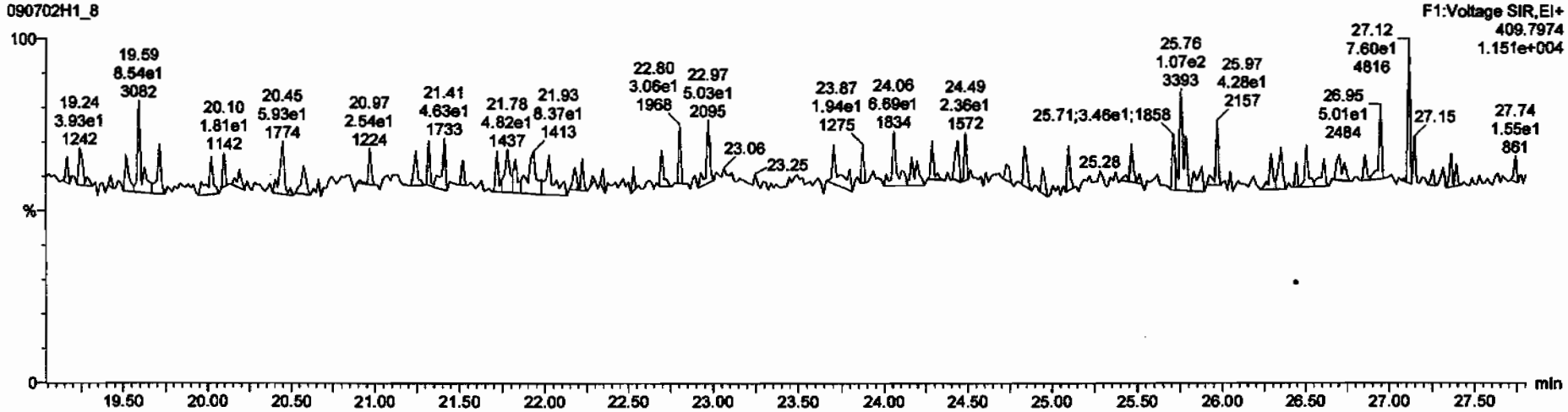

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Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

1,2,3,7,8-PeCDF

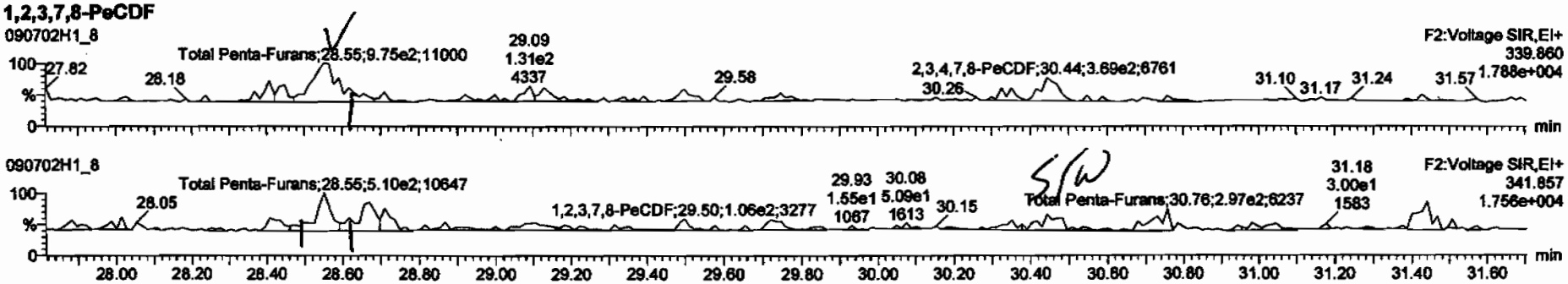

13C-1,2,3,7,8-PeCDF

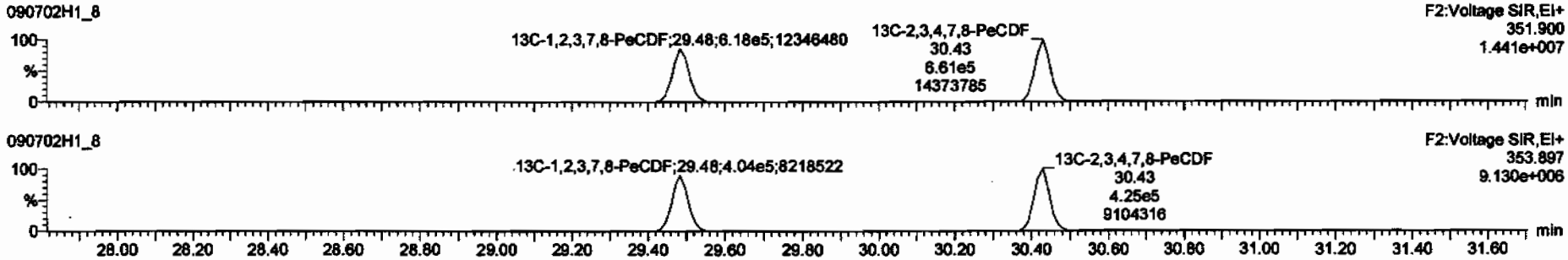

DPE2

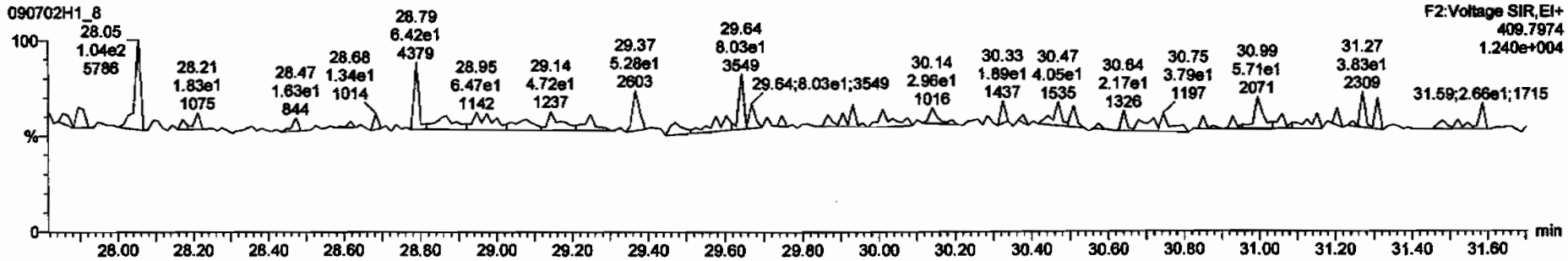

Target1.ynx - 090702h1-8.qld * - [Chromatogram]

Total Penta-Furans	28.55	9.183e2	6.112e2	1.50	NO	0.24750	0.24750

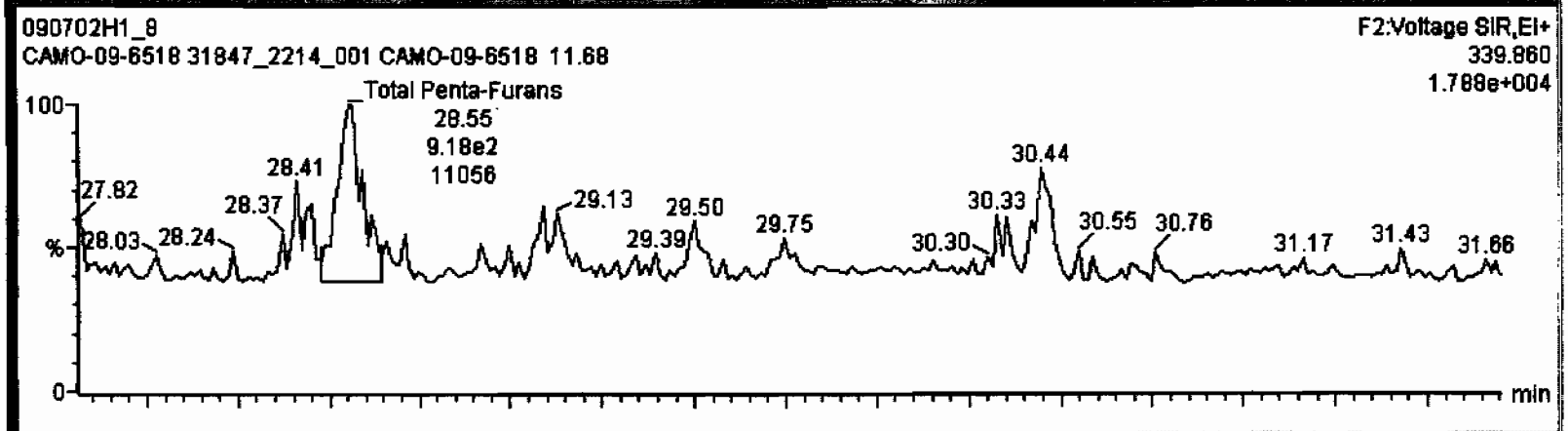

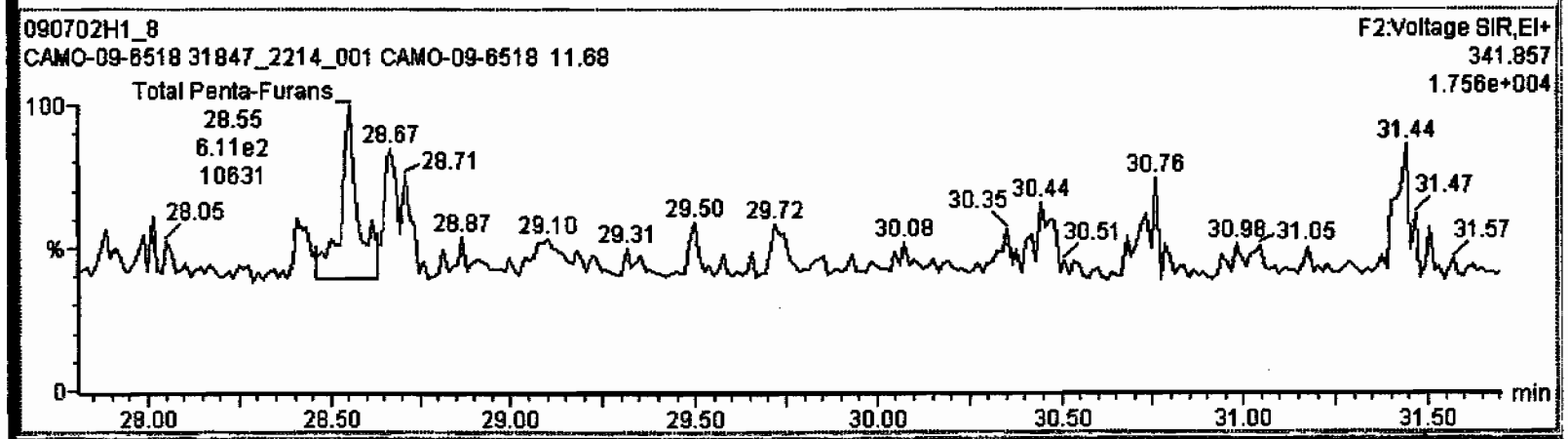

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Last Altered: Monday, July 06, 2009 13:16:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

1,2,3,4,7,8-HxCDF

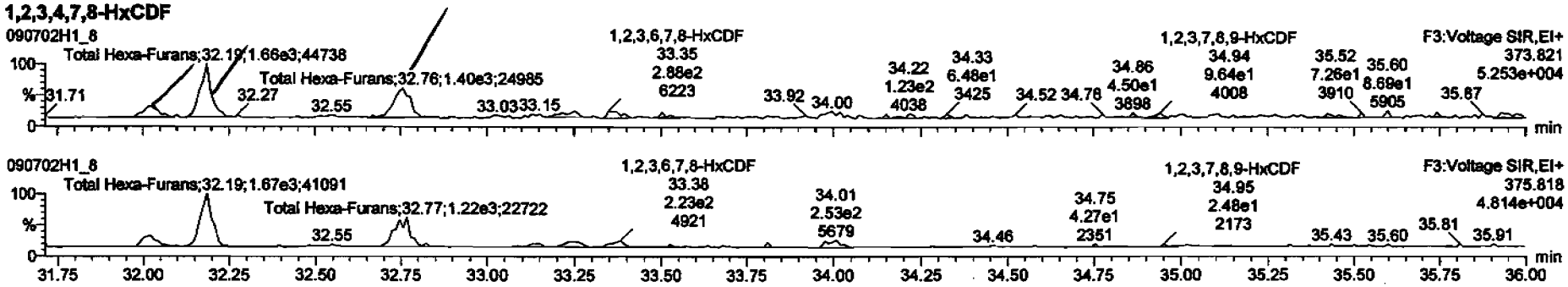

13C-1,2,3,4,7,8-HxCDF

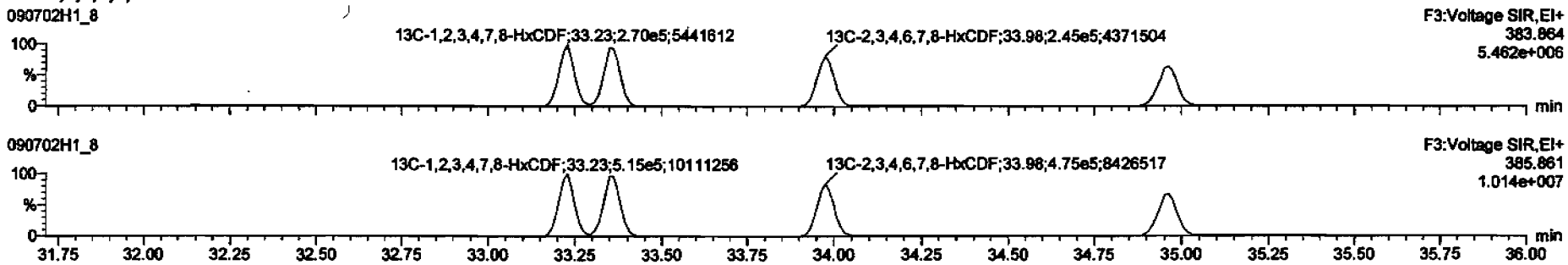

DPE3

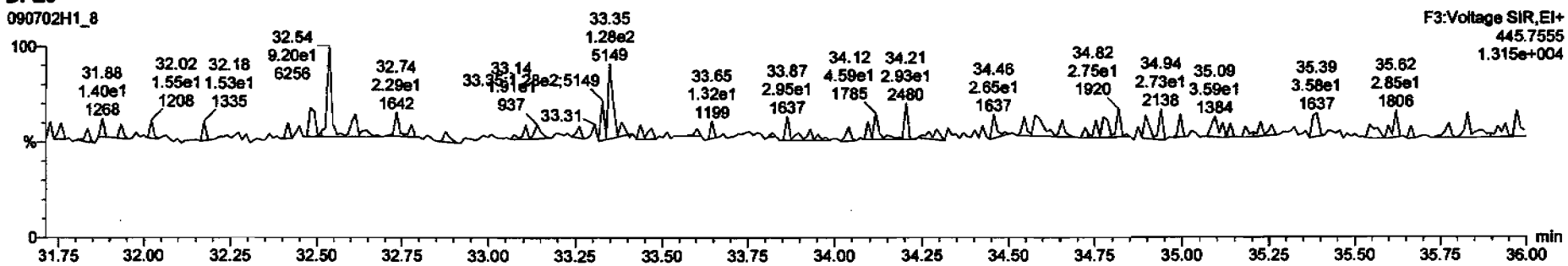

TargetLynx - 090702h1-8.qld * - [Chromatogram]

Total Hexa-Furans	32.02	5.416e2	4.507e2	1.20	NO	0.20667	0.20667
Total Hexa-Furans	32.19	1.808e3	1.669e3	1.08	NO	0.72414	0.72414
Total Hexa-Furans	32.76	1.400e3	1.225e3	1.14	NO	0.54669	0.54669

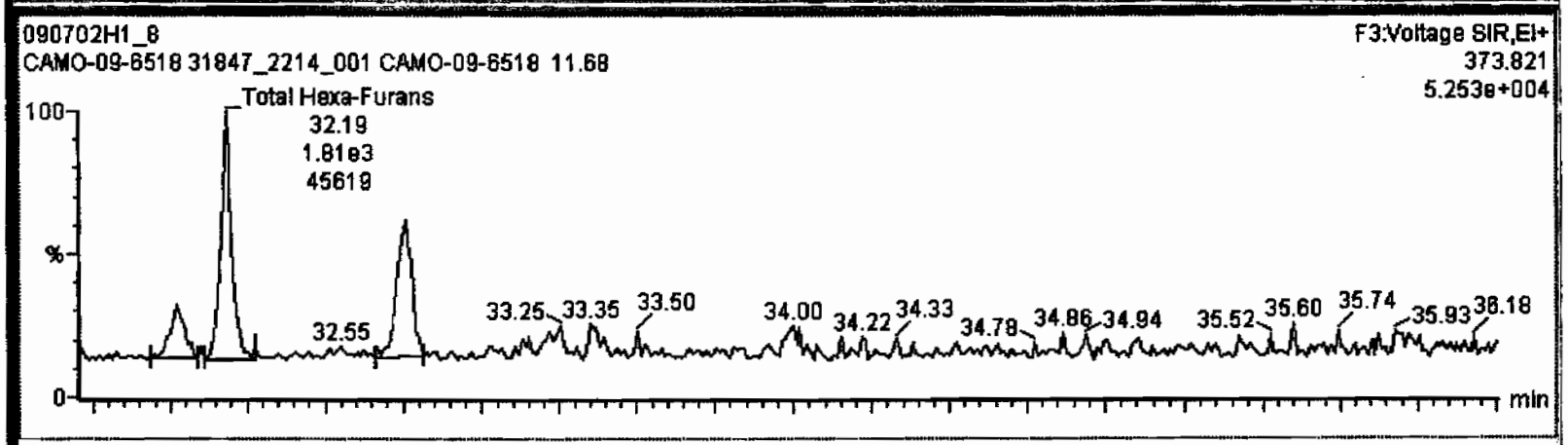

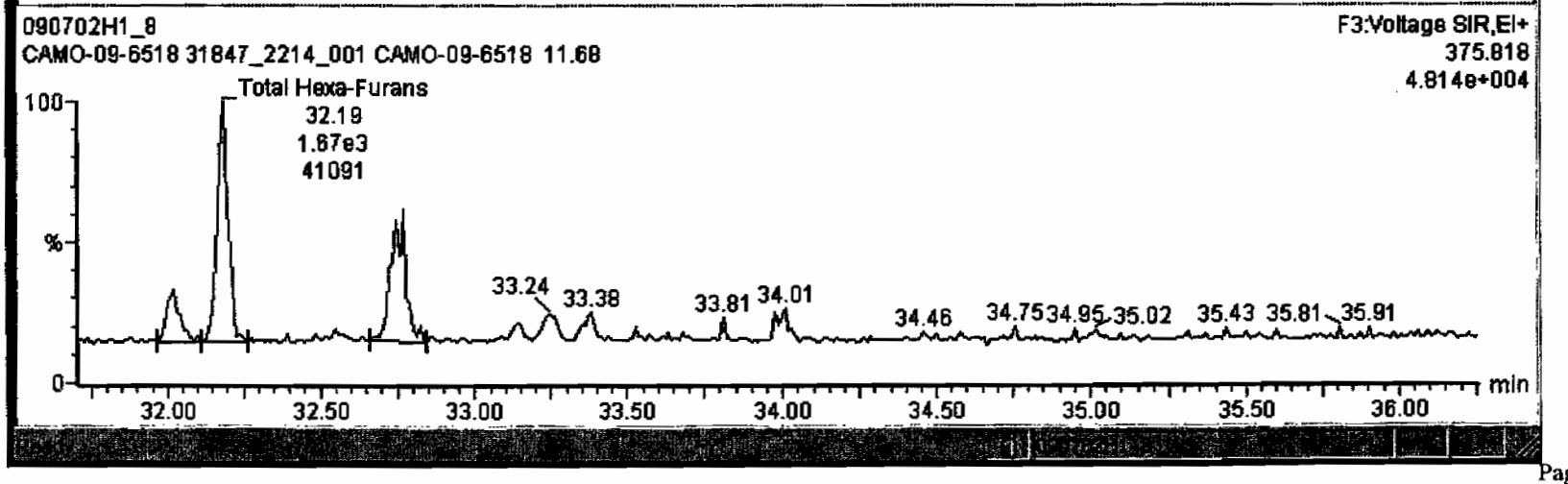

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-8.qld

Last Altered: Monday, July 06, 2009 13:16:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

1,2,3,4,6,7,8-HpCDF

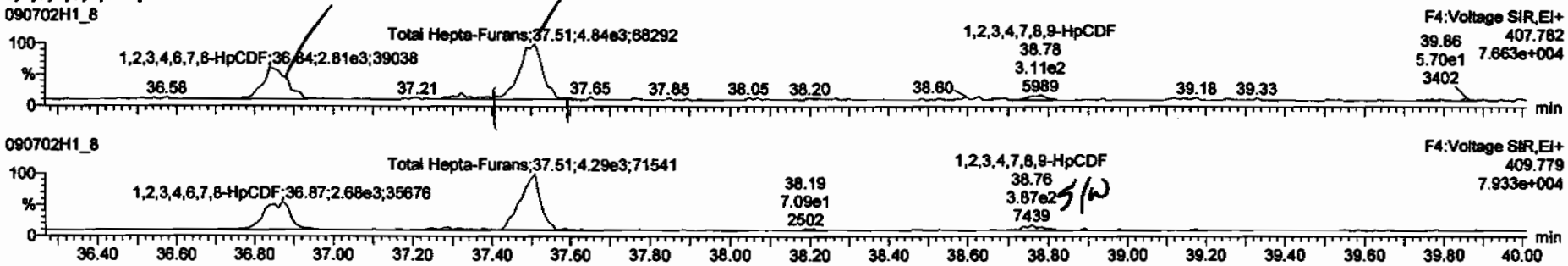

13C-1,2,3,4,6,7,8-HpCDF

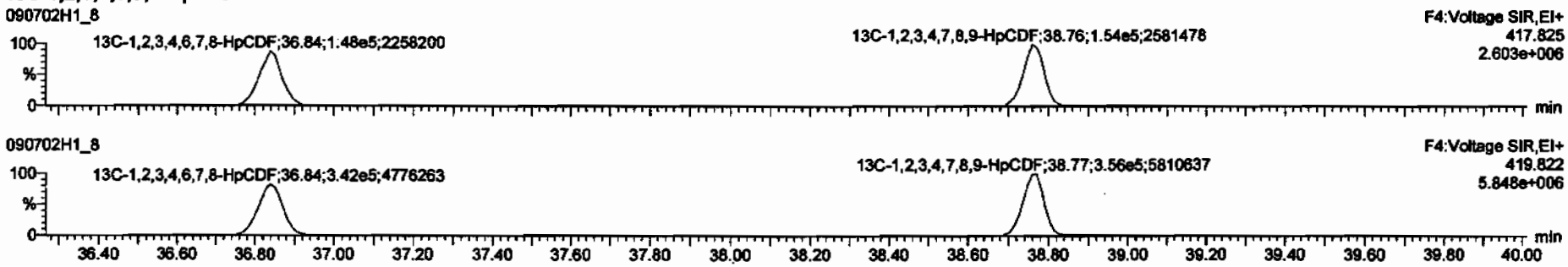

DPE4

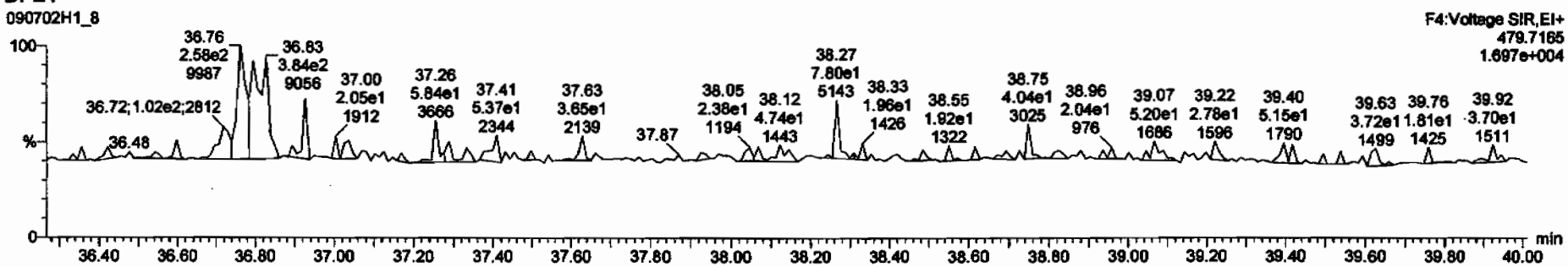

TargetLynx - 090702h1 8.qld * - [Chromatogram]

1,2,3,4,6,7,8-HpCDF	36.84	2.811e3	2.680e3	1.05	NO	1.3095	1.3095
Total Hepta-Furans	37.51	4.675e3	4.291e3	1.09	NO	2.0961	2.0961

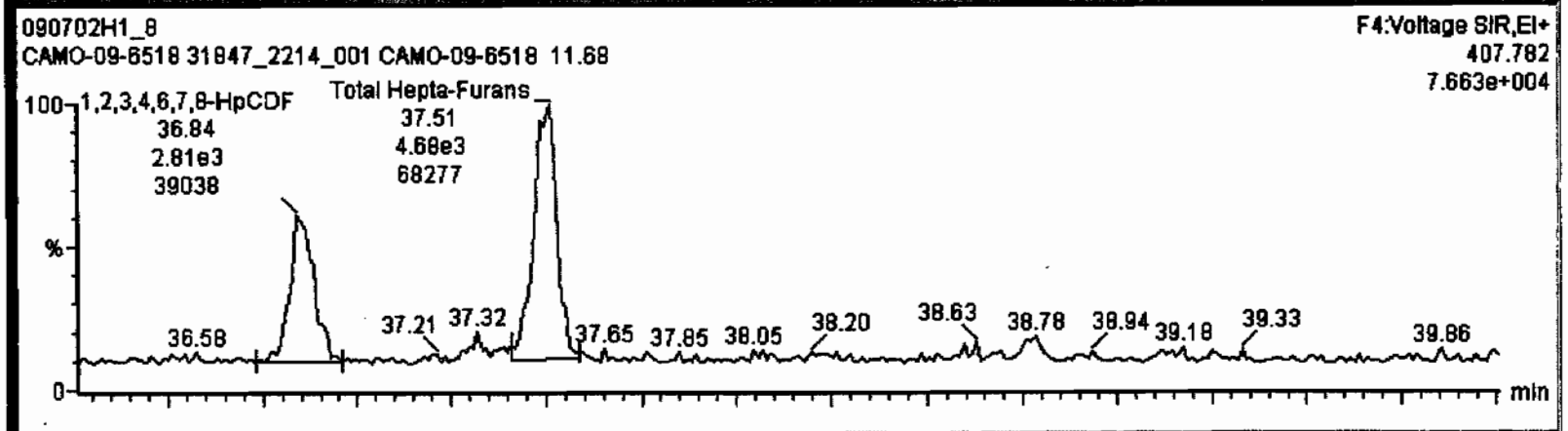

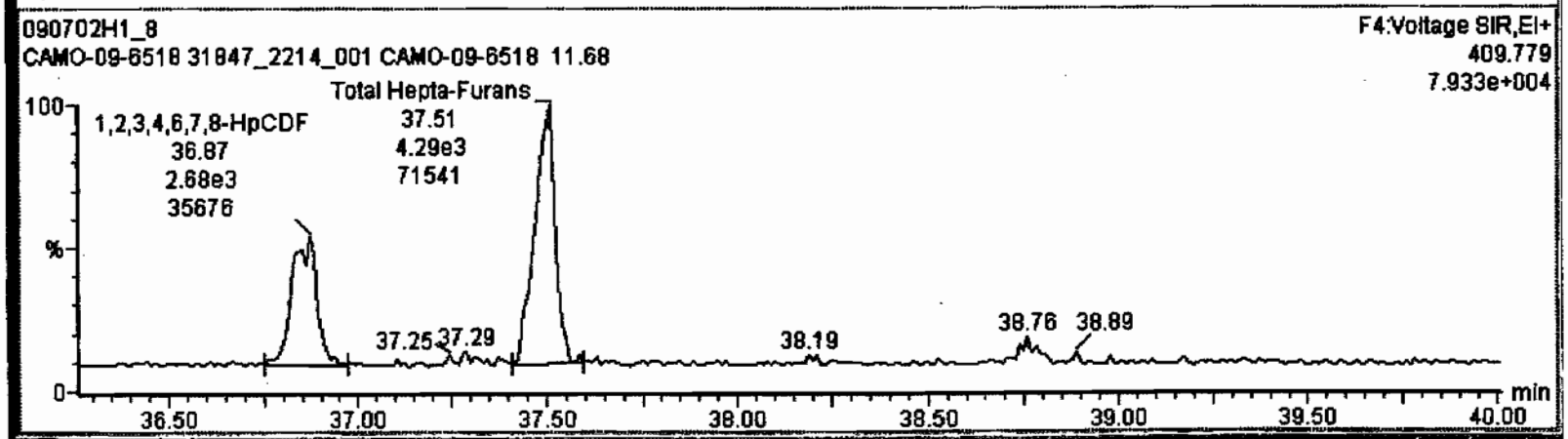

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-8.qld

Last Altered: Monday, July 06, 2009 13:16:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

OCDF

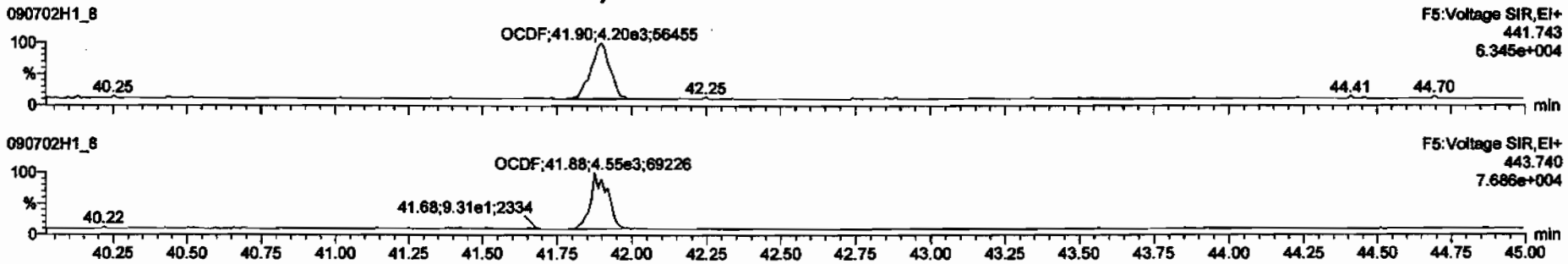

13C-OCDF

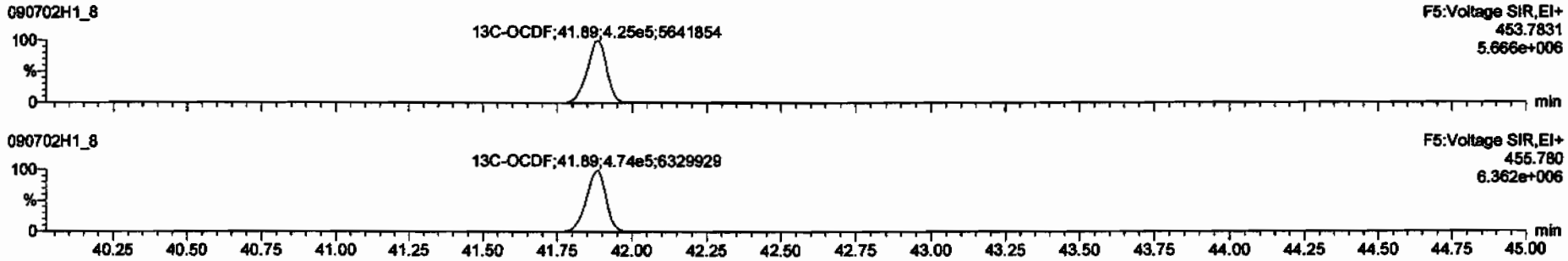

DPE5

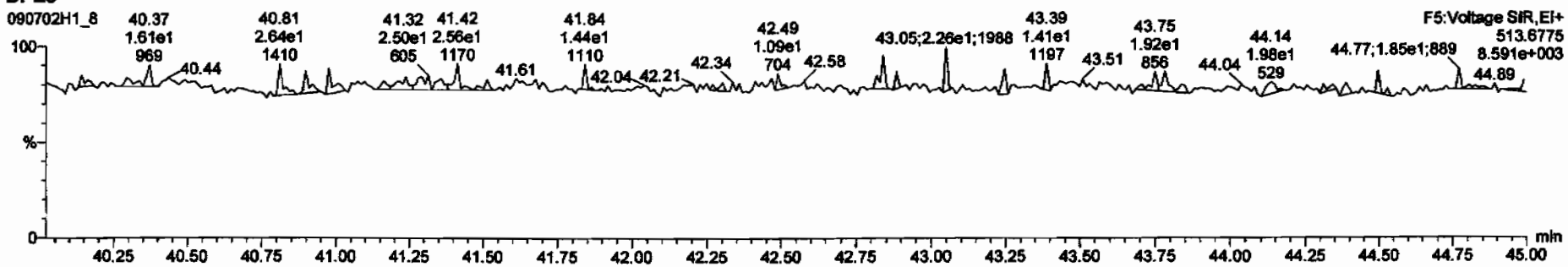

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-8.qld

Last Altered: Monday, July 06, 2009 13:16:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:27 Pacific Daylight Time

Name: 090702H1_8, Date: 02-Jul-2009, Time: 20:10:06, ID: 31847_2214_001 CAMO-09-6518 11.68, Description: CAMO-09-6518

PFK1

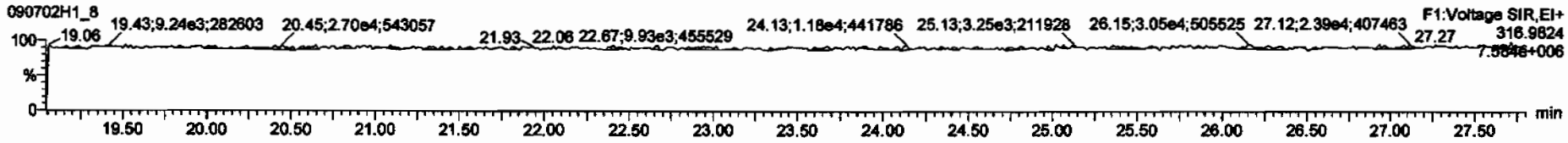

PFK2

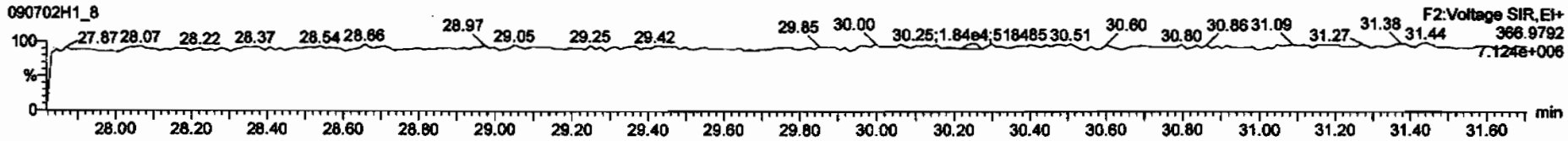

PFK3

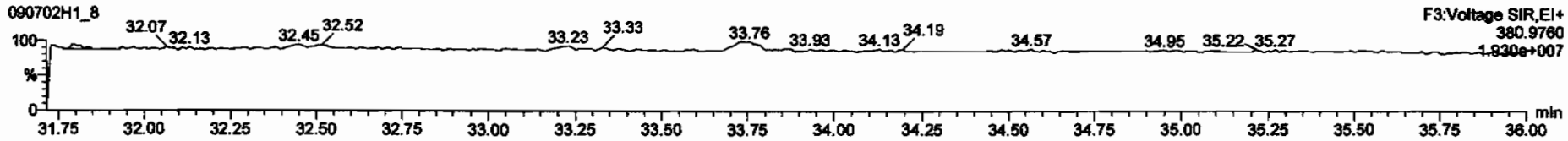

PFK4

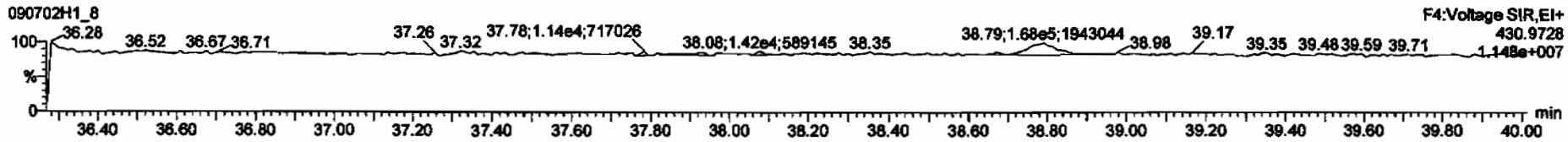

PFK5

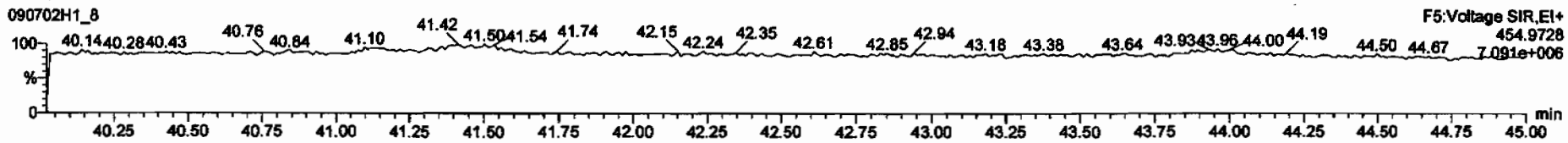

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qld

Last Altered: Tuesday, July 07, 2009 10:01:40 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:03:13 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

1	2,3,7,8-TCDD			NO	1.08	10.130					0.0474	
2	1,2,3,7,8-PeCDD			NO	1.03	10.130					0.0829	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.130					0.253	
4	1,2,3,6,7,8-HxCDD	1.49e3	1.20	NO	1.13	10.130	34.28	1.001	0.47038		0.267	~~0.47038~~
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.130					0.251	
6	1,2,3,4,6,7,8-HpCDD	1.54e4	1.07	NO	1.06	10.130	38.21	1.000	5.6884		0.270	~~5.6884~~
7	OCDD	1.11e5	0.88	NO	1.18	10.130	41.68	1.000	40.896		0.159	~~40.896~~
8	2,3,7,8-TCDF	1.85e3	0.75	NO	1.09	10.130	25.30	1.001	0.26057		0.0608	~~0.26057~~
9	1,2,3,7,8-PeCDF			NO	1.16	10.130					0.0717	
10	2,3,4,7,8-PeCDF	1.11e3	1.09	YES	1.12	10.130	30.43	1.000	~~0.47794~~		0.0762	0.15297
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.130					0.0869	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.130					0.0932	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.130					0.113	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.130					0.145	
15	1,2,3,4,6,7,8-HpCDF	3.82e3	1.12	NO	1.69	10.130	36.85	1.000	0.84934		0.154	~~0.84934~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.130					0.162	
17	OCDF	5.87e3	0.86	NO	1.10	10.130	41.91	1.000	1.9833		0.144	~~1.9833~~
18	13C-2,3,7,8-TCDD	9.35e5	0.79	NO	1.01	10.130	26.05	1.023	200.62	102	0.301	
19	13C-1,2,3,7,8-PeCDD	7.17e5	0.63	NO	0.827	10.130	30.71	1.206	188.58	95.5	0.270	
20	13C-1,2,3,4,7,8-HxCDD	6.07e5	1.26	NO	0.916	10.130	34.15	0.988	190.62	96.6	0.558	
21	13C-1,2,3,6,7,8-HxCDD	5.55e5	1.23	NO	0.921	10.130	34.26	0.991	173.32	87.8	0.555	
22	13C-1,2,3,4,6,7,8-HpCDD	5.02e5	1.04	NO	0.708	10.130	38.20	1.105	203.86	103	0.947	
23	13C-OCDD	9.09e5	0.91	NO	0.503	10.130	41.67	1.206	520.52	132	0.833	
24	13C-2,3,7,8-TCDF	1.29e6	0.78	NO	0.977	10.130	25.28	0.993	206.08	104	0.210	
25	13C-1,2,3,7,8-PeCDF	1.16e6	1.56	NO	0.896	10.130	29.47	1.157	201.43	102	0.358	
26	13C-2,3,4,7,8-PeCDF	1.10e6	1.56	NO	0.900	10.130	30.42	1.194	191.10	96.8	0.356	
27	13C-1,2,3,4,7,8-HxCDF	8.06e5	0.52	NO	1.17	10.130	33.22	0.961	198.45	101	0.558	
28	13C-1,2,3,6,7,8-HxCDF	8.93e5	0.51	NO	1.52	10.130	33.35	0.965	169.22	85.7	0.429	
29	13C-2,3,4,6,7,8-HxCDF	7.45e5	0.52	NO	1.25	10.130	33.97	0.983	171.60	86.9	0.522	
30	13C-1,2,3,7,8,9-HxCDF	6.67e5	0.52	NO	1.05	10.130	34.96	1.012	182.28	92.3	0.619	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qld

Last Altered: Tuesday, July 07, 2009 10:01:40 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:03:13 Pacific Daylight Time

Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

31	13C-1,2,3,4,6,7,8-HpCDF	5.26e5	0.45	NO	0.868	10.130	36.84	1.066	174.25	88.3	1.06	
32	13C-1,2,3,4,7,8,9-HpCDF	4.75e5	0.44	NO	0.727	10.130	38.77	1.122	188.20	95.3	1.27	
33	13C-OCDF	1.07e6	0.88	NO	0.760	10.130	41.90	1.212	403.92	102	0.381	
34	37Cl-2,3,7,8-TCDD	2.33e5			0.668	10.130	26.08	1.024	75.775	96.0	0.104	
35	13C-1,2,3,4-TCDD	9.07e5	0.79	NO	1.00	10.130	25.47	0.000	197.43	100	0.306	
36	13C-1,2,3,4-TCDF	1.27e6	0.78	NO	1.00	10.130	24.06	0.000	197.43	100	0.205	
37	13C-1,2,3,7,8,9-HxCDD	6.86e5	1.26	NO	1.00	10.130	34.56	0.000	197.43	100	0.511	
38	Total Tetra-Dioxins				1.08	10.130			~~0.00000~~	ND	0.0219	0.046697
39	Total Penta-Dioxins				1.03	10.130					0.0264	
40	Total Hexa-Dioxins				1.13	10.130			1.2587		0.245	1.6425
41	Total Hepta-Dioxins				1.06	10.130			11.001		0.270	~~11.001~~
42	Total Tetra-Furans				1.09	10.130			1.1845		0.0608	1.3396
43	1st Func. Penta-Furans				1.16	10.130			~~0.30297~~	0.518	0.0346	~~0.39267~~
44	Total Penta-Furans				1.16	10.130			~~0.12519~~		0.0726	~~0.09042~~
45	Total Hexa-Furans				1.28	10.130			1.1513		0.108	~~1.1513~~
46	Total Hepta-Furans				1.69	10.130			2.5769		0.148	~~2.5769~~

1.02

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qld

Last Altered: Tuesday, July 07, 2009 10:01:40 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:03:13 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

Tetra-Dioxins

	Total Tetra-Dioxins	22.70	4.438e3	4.482e3	1.659e2	1.348e2	1.23	YES	0.000e0	0.00000	0.046697	0.0474

Penta-Dioxins

Hexa-Dioxins

	Total Hexa-Dioxins	32.56	1.670e4	1.179e4	8.722e2	5.671e2	1.54	YES	0.000e0	0.00000	0.38378	0.245
	Total Hexa-Dioxins	33.44	2.499e4	1.600e4	1.527e3	1.082e3	1.41	NO	2.609e3	0.78829	0.78829	0.245
	1,2,3,6,7,8-HxCDD	34.28	1.297e4	1.291e4	8.100e2	6.767e2	1.20	NO	1.487e3	0.47038	0.47038	0.267

Hepta-Dioxins

	Total Hepta-Dioxins	37.28	9.851e4	9.127e4	7.503e3	6.861e3	1.09	NO	1.436e4	5.3123	5.3123	0.270
	1,2,3,4,6,7,8-HpCDD	38.21	1.294e5	1.090e5	7.935e3	7.446e3	1.07	NO	1.538e4	5.6884	5.6884	0.270

Tetra-Furans

	Total Tetra-Furans	21.22	2.755e3	4.958e3	1.671e2	3.416e2	0.49	YES	0.000e0	0.00000	0.054056	0.0608
	Total Tetra-Furans	21.81	6.660e3	4.353e3	4.050e2	4.057e2	1.00	YES	0.000e0	0.00000	0.10105	0.0608
	Total Tetra-Furans	23.35	1.040e4	1.322e4	6.162e2	8.303e2	0.74	NO	1.446e3	0.20355	0.20355	0.0608
	Total Tetra-Furans	23.97	8.152e3	6.550e3	3.881e2	4.680e2	0.83	NO	8.560e2	0.12046	0.12046	0.0608
	2,3,7,8-TCDF	25.30	1.413e4	1.623e4	7.950e2	1.057e3	0.75	NO	1.852e3	0.26057	0.26057	0.0608
	Total Tetra-Furans	25.63	2.597e4	3.512e4	1.877e3	2.386e3	0.79	NO	4.263e3	0.59997	0.59997	0.0608

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qid

Last Altered: Tuesday, July 07, 2009 10:01:40 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:03:13 Pacific Daylight Time

Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

Penta-Furans function 1

	1st Func. Penta-Furans	27.06	2.969e4	1.757e4	1.577e3	1.026e3	1.54	NO	2.603e3	0.39287	0.39287	0.0346

Penta-Furans

	Total Penta-Furans	28.41	8.758e3	5.442e3	4.764e2	3.532e2	1.35	NO	8.296e2	0.12519	0.12519	0.0726
	Total Penta-Furans	28.54	1.796e4	1.278e4	1.153e3	9.228e2	1.25	YES	0.000e0	0.00000	0.28633	0.0726
	Total Penta-Furans	30.35	6.390e3	6.857e3	2.643e2	3.357e2	0.79	YES	0.000e0	0.00000	0.065622	0.0726
	2,3,4,7,8-PeCDF	30.43	1.127e4	7.973e3	5.800e2	5.299e2	1.09	YES	1.110e3	0.00000	0.15297	0.0762

Hexa-Furans

	Total Hexa-Furans	32.02	8.569e3	7.105e3	4.541e2	3.357e2	1.35	NO	7.897e2	0.15663	0.15663	0.108
	Total Hexa-Furans	32.17	2.724e4	2.380e4	1.384e3	1.251e3	1.11	NO	2.635e3	0.52251	0.52251	0.108
	Total Hexa-Furans	32.74	2.225e4	1.843e4	1.364e3	1.017e3	1.34	NO	2.381e3	0.47214	0.47214	0.108

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.85	2.612e4	2.151e4	2.020e3	1.799e3	1.12	NO	3.819e3	0.84934	0.84934	0.154
	Total Hepta-Furans	37.51	5.191e4	4.846e4	3.977e3	3.416e3	1.16	NO	7.393e3	1.7275	1.7275	0.148

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qld

Last Altered: Monday, July 06, 2009 13:16:35 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:54 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

2,3,7,8-TCDD

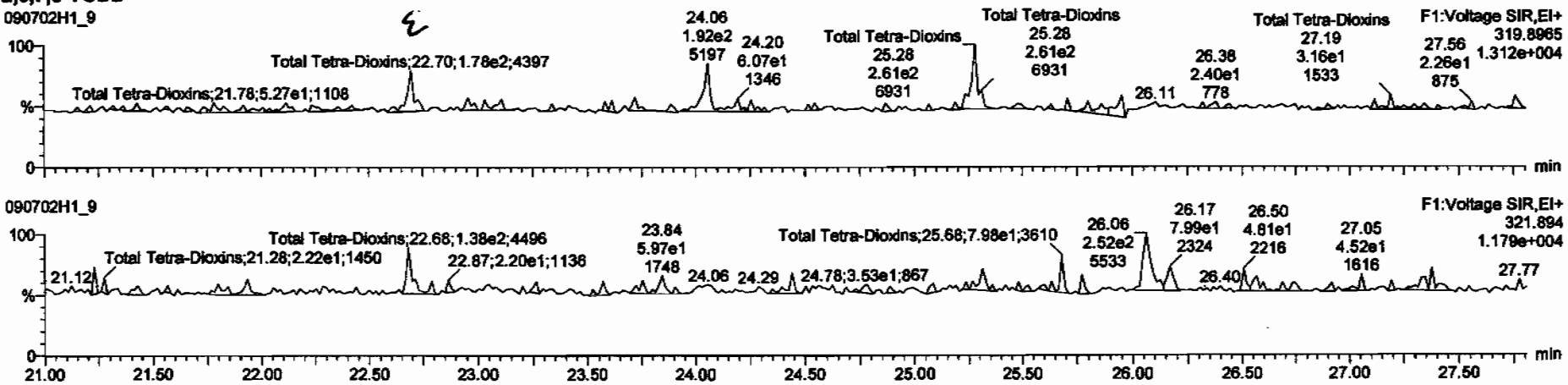

13C-2,3,7,8-TCDD

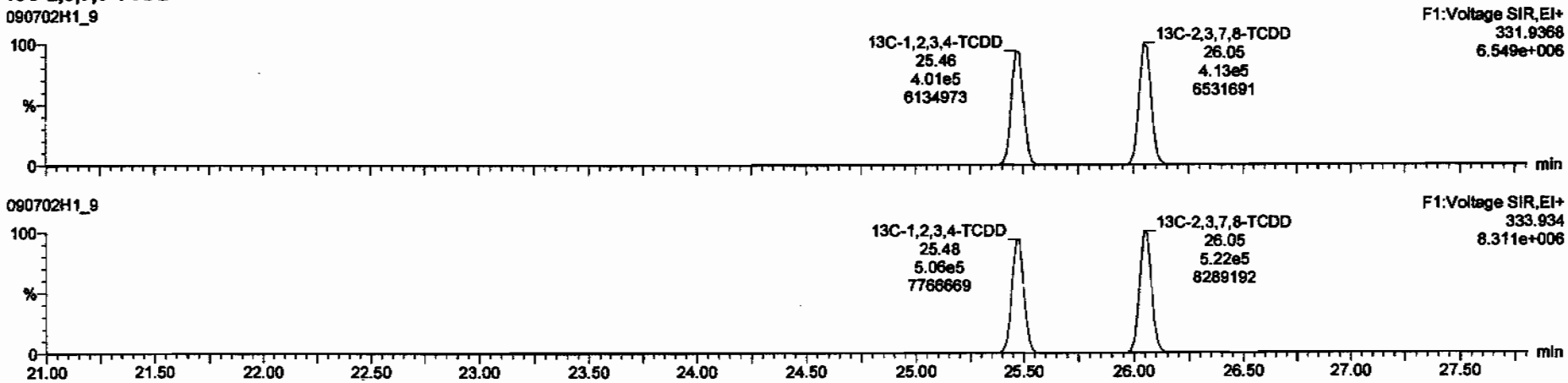

TargetLynx - 090702h1-9.qld * - [Chromatogram]

Total Tetra-Dioxins	22.70	1.859e2	1.348e2	1.23	YES	0.046697	0.00000

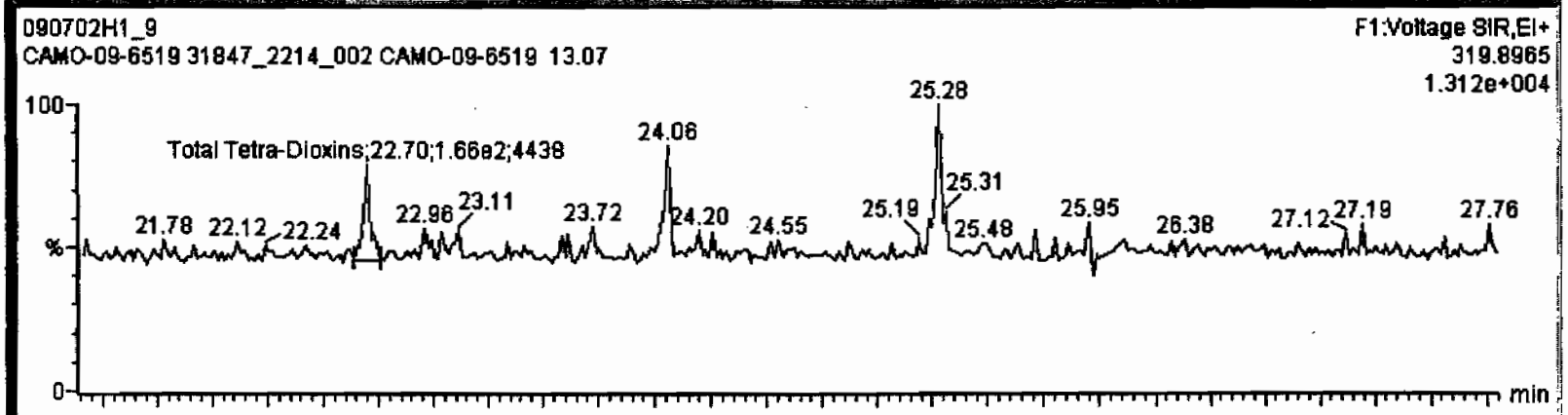

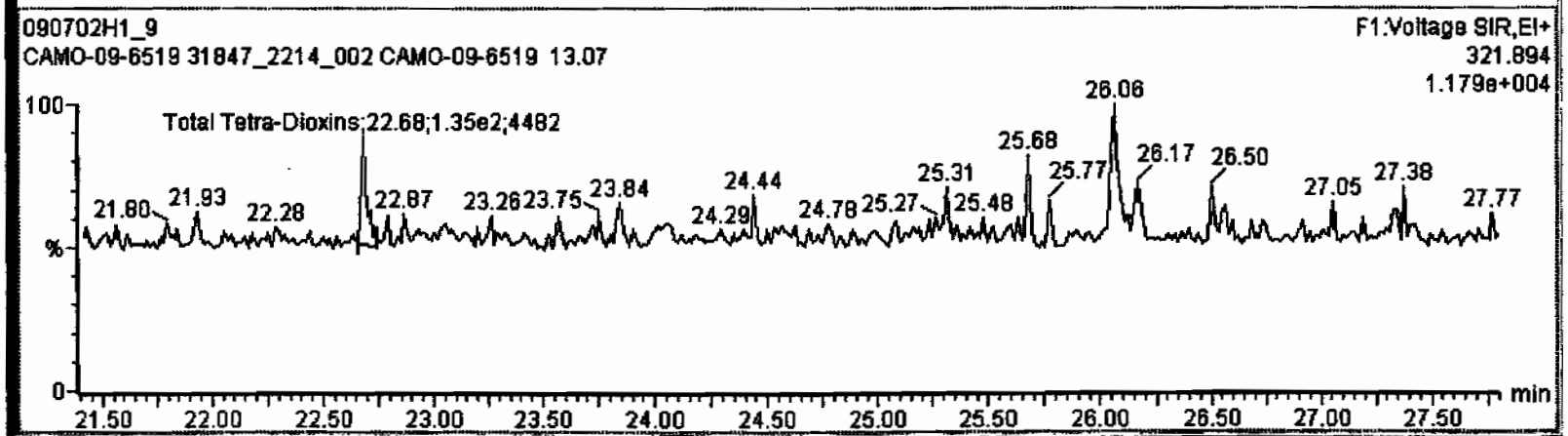

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qld

Last Altered: Monday, July 06, 2009 13:16:35 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:54 Pacific Daylight Time

Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

37Cl-2,3,7,8-TCDD

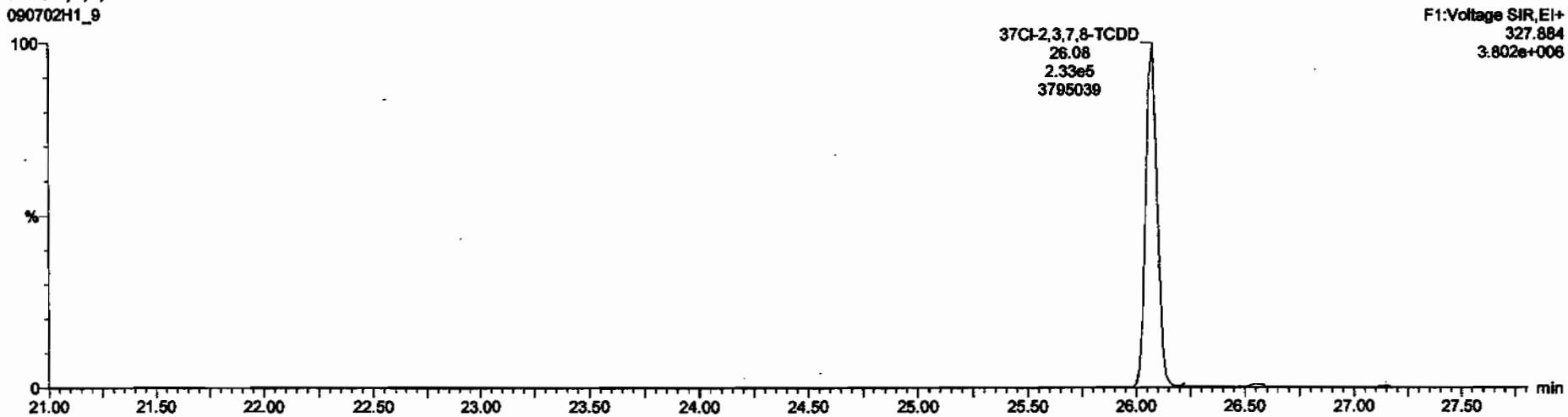

13C-1,2,3,4-TCDD

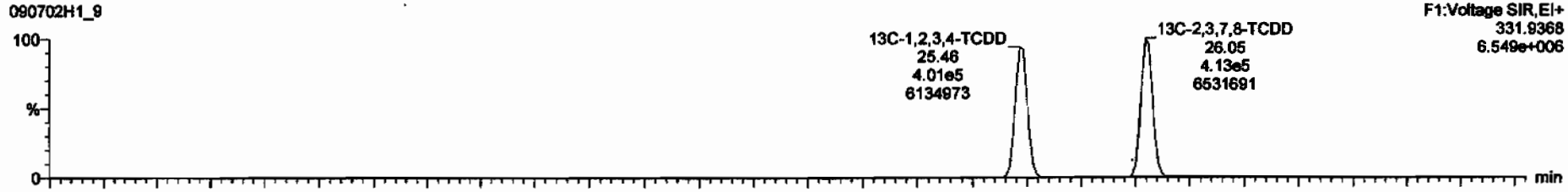

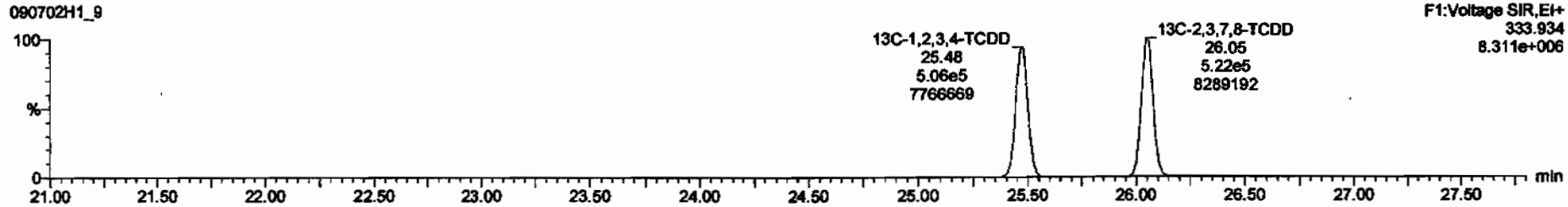

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Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

1,2,3,7,8-PeCDD

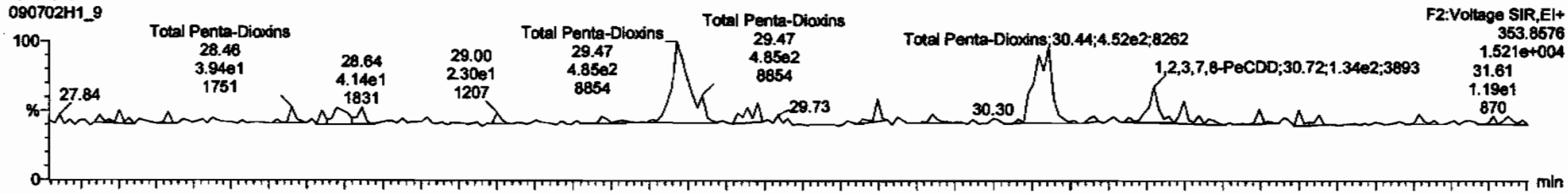

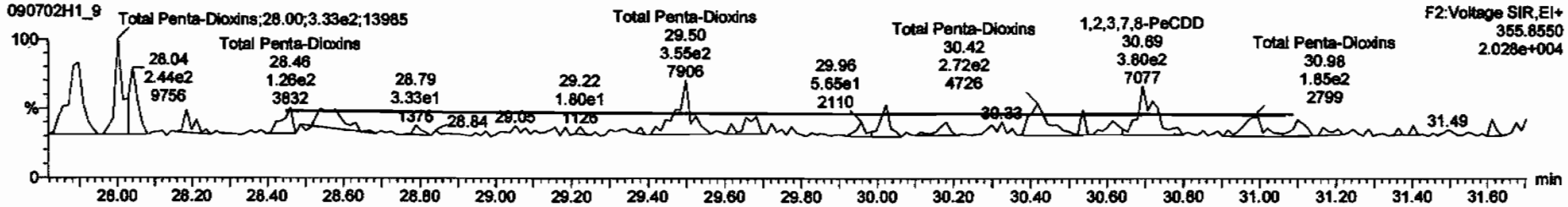

13C-1,2,3,7,8-PeCDD

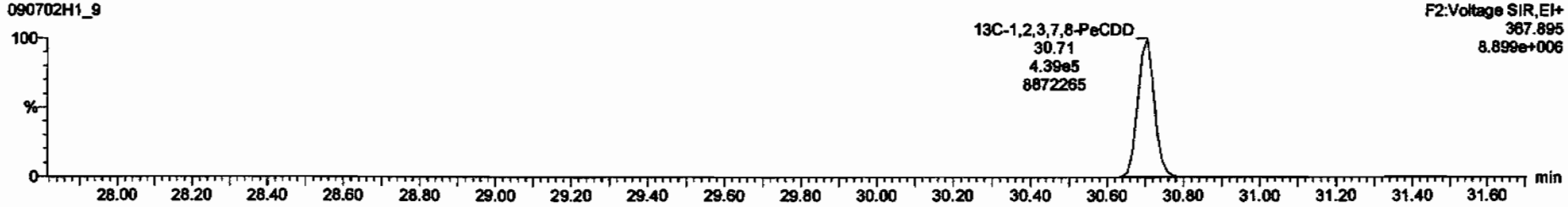

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qld

Last Altered: Monday, July 06, 2009 13:16:35 Pacific Daylight Time
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Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

1,2,3,4,7,8-HxCDD

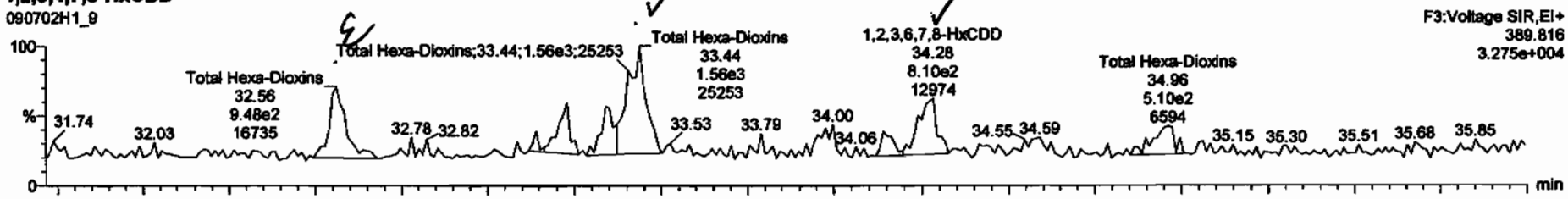

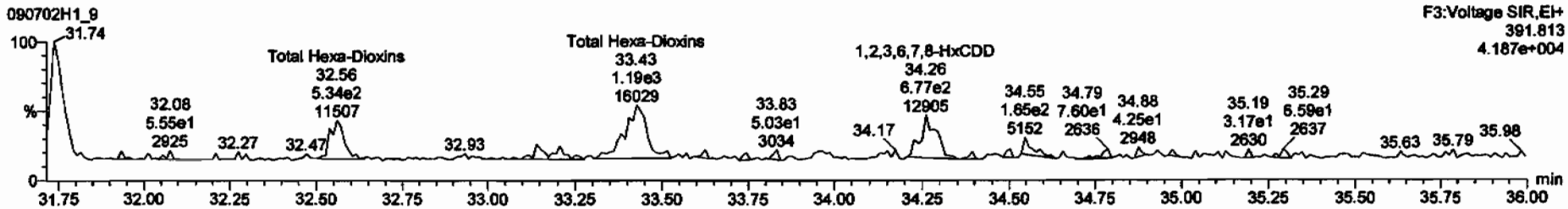

13C-1,2,3,4,7,8-HxCDD

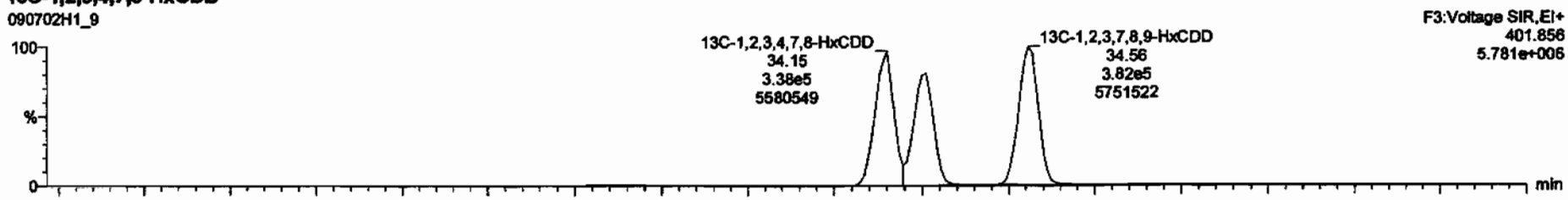

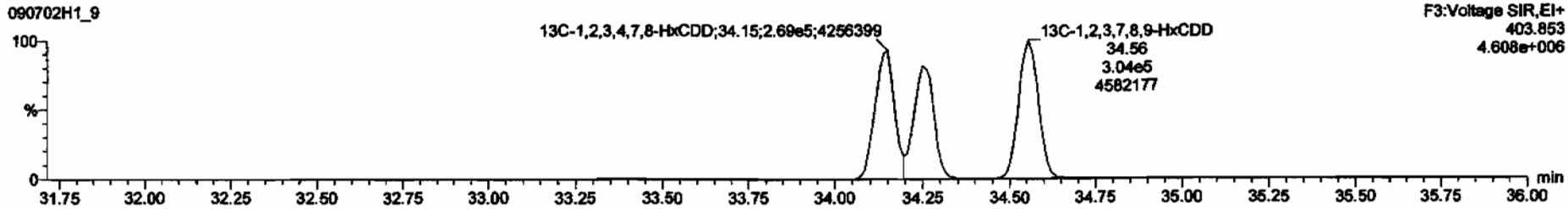

TargetLynx - 090702h1_9.qld * - [Chromatogram]

Total Hexa-Dioxins	32.56	8.722e2	5.671e2	1.54	YES	0.38378	0.00000
Total Hexa-Dioxins	33.44	1.527e3	1.082e3	1.41	NO	0.78829	0.78829
1,2,3,6,7,8-HxCDD	34.28	8.100e2	6.787e2	1.20	NO	0.47038	0.47038

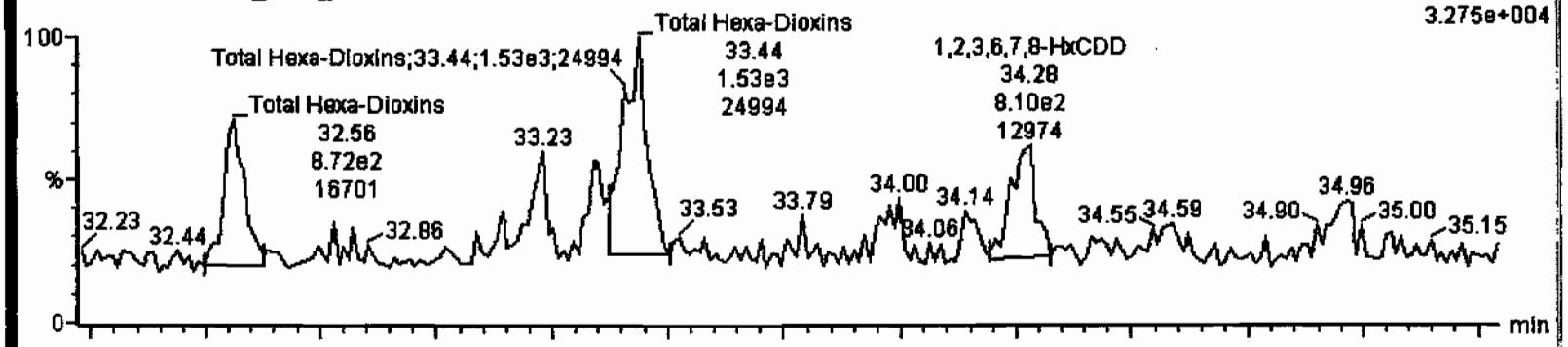

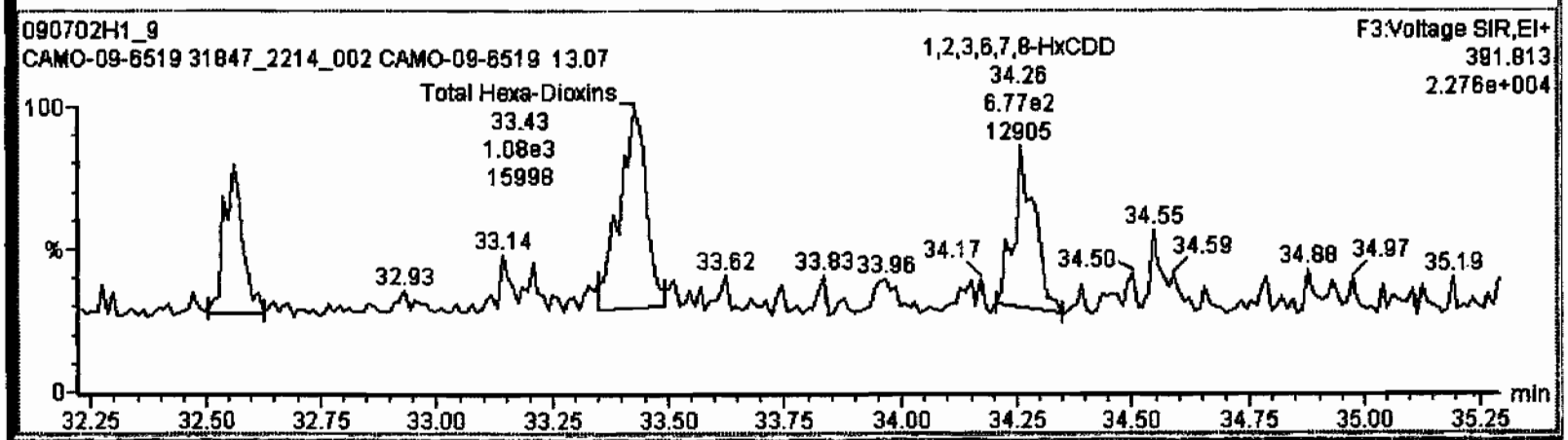

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qld

Last Altered: Monday, July 06, 2009 13:16:35 Pacific Daylight Time
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Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

1,2,3,4,6,7,8-HpCDD

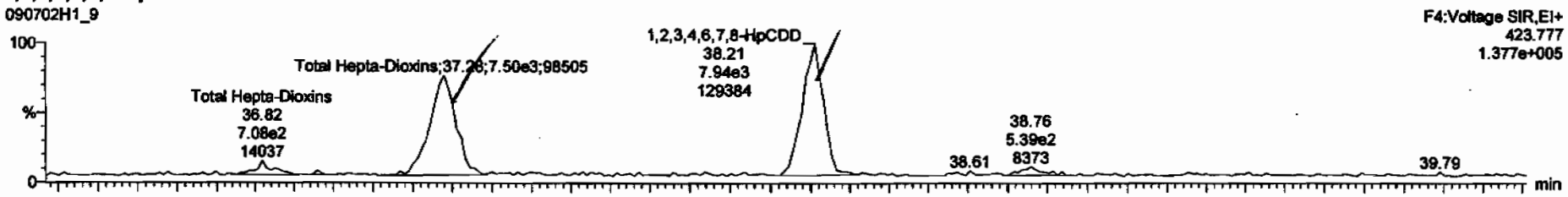

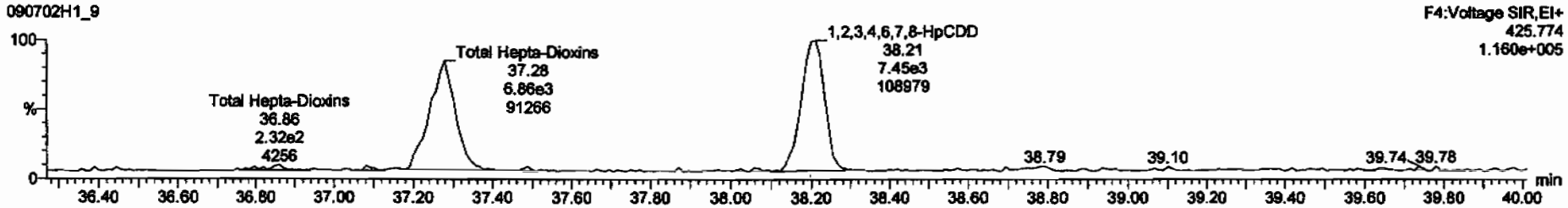

13C-1,2,3,4,6,7,8-HpCDD

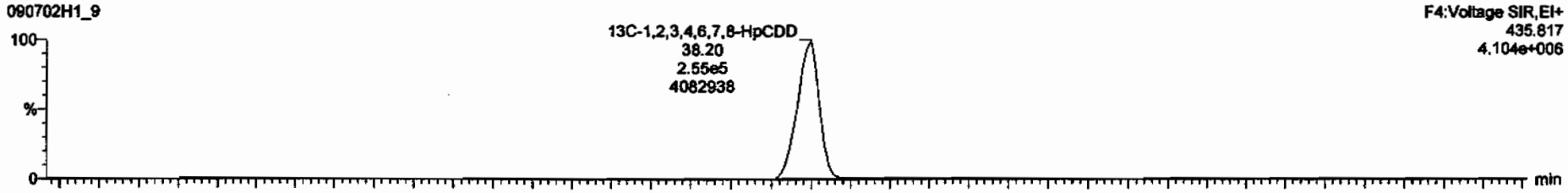

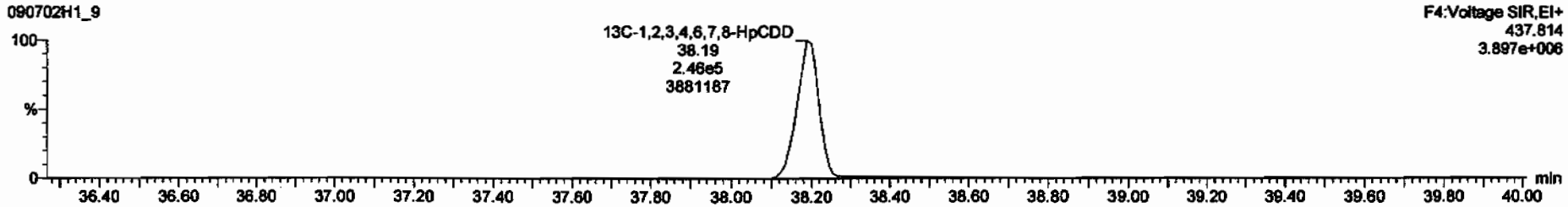

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Last Altered: Monday, July 06, 2009 13:16:35 Pacific Daylight Time
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Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

OCDD

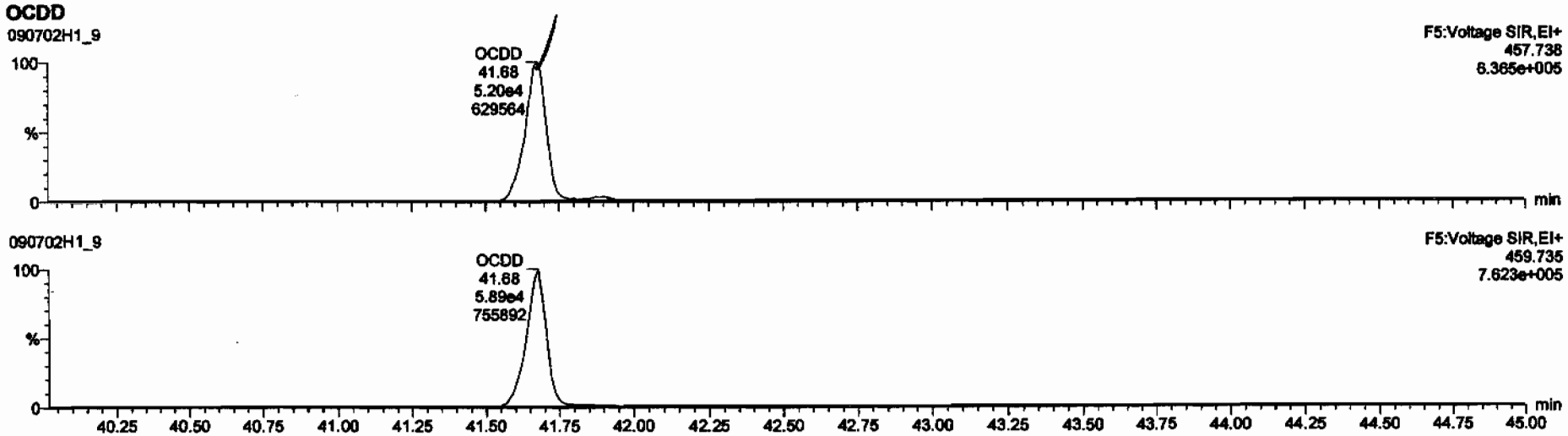

13C-OCDD

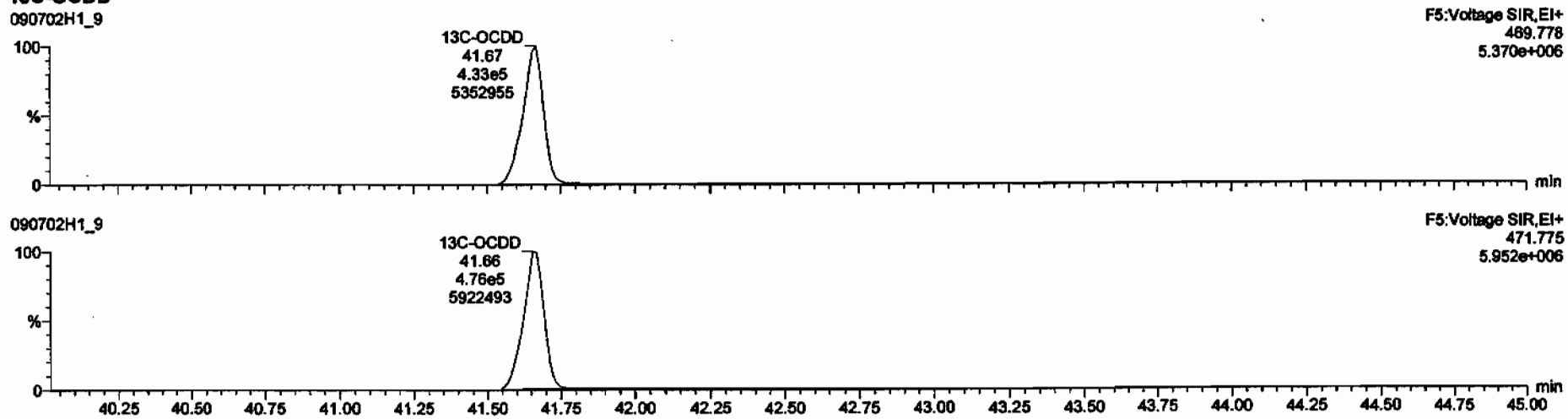

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qld

Last Altered: Monday, July 06, 2009 13:16:35 Pacific Daylight Time
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Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

2,3,7,8-TCDF

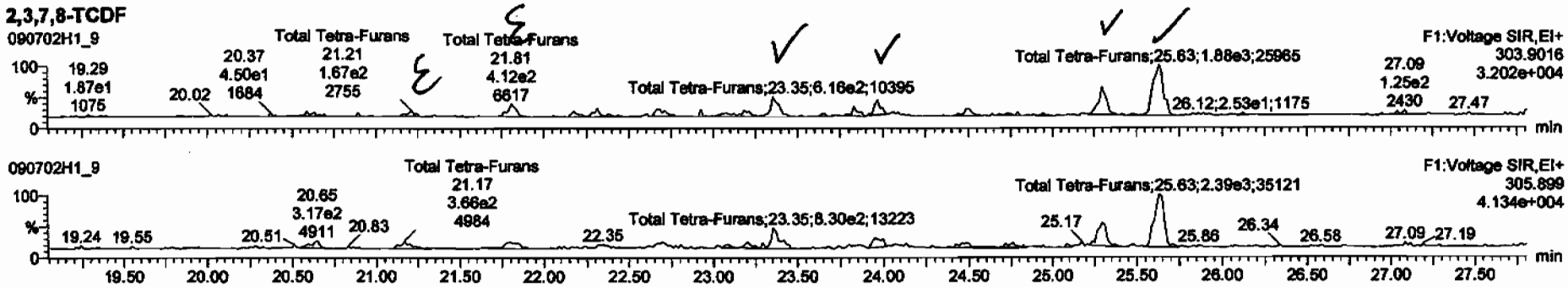

13C-2,3,7,8-TCDF

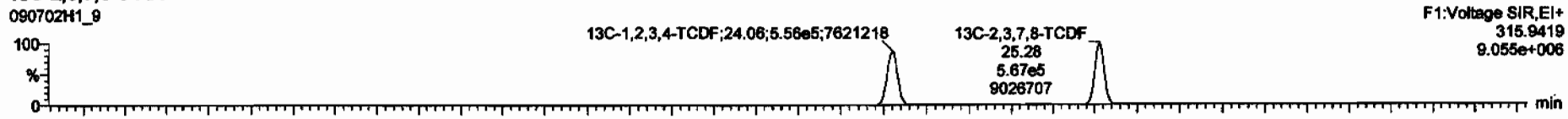

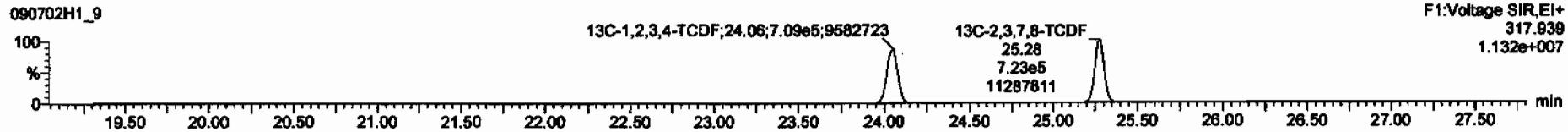

DPE1

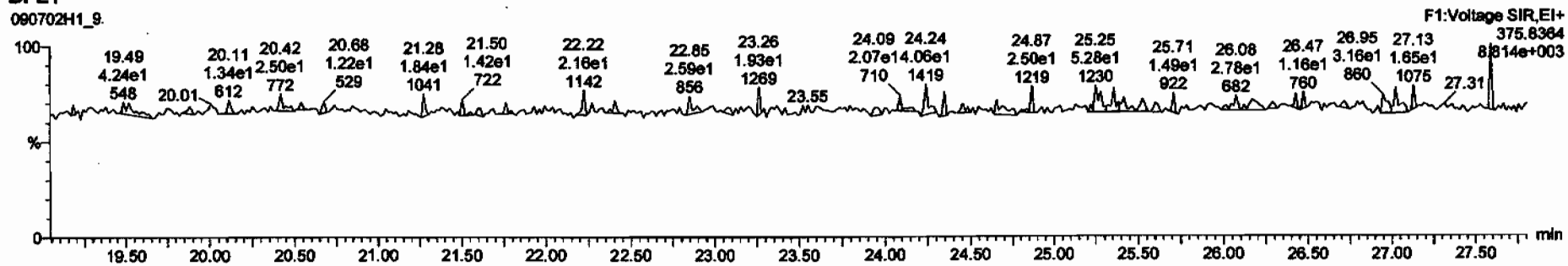

TargetLynx - 090702h1_9.qld * - [Chromatogram]

Total Tetra-Furans	21.22	1.671e2	3.416e2	0.49	YES	0.054056	0.00000
Total Tetra-Furans	21.81	4.050e2	4.057e2	1.00	YES	0.10105	0.00000
Total Tetra-Furans	23.35	6.162e2	8.303e2	0.74	NO	0.20355	0.20355
Total Tetra-Furans	23.97	3.861e2	4.680e2	0.83	NO	0.12046	0.12046
2,3,7,8-TCDF	25.30	7.950e2	1.008e3	0.79	NO	0.25379	0.25379

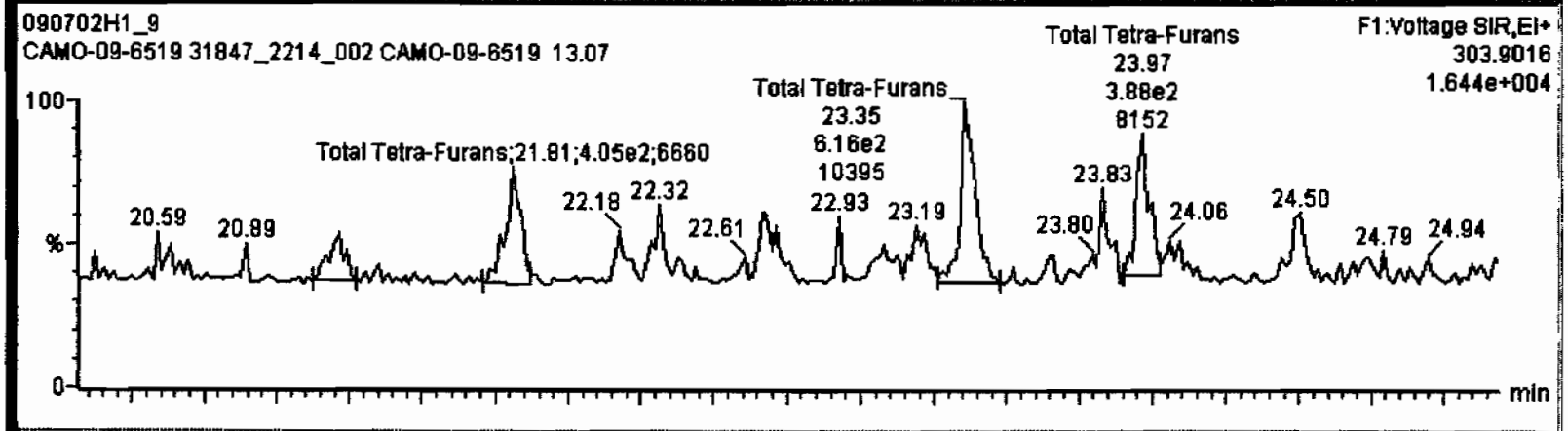

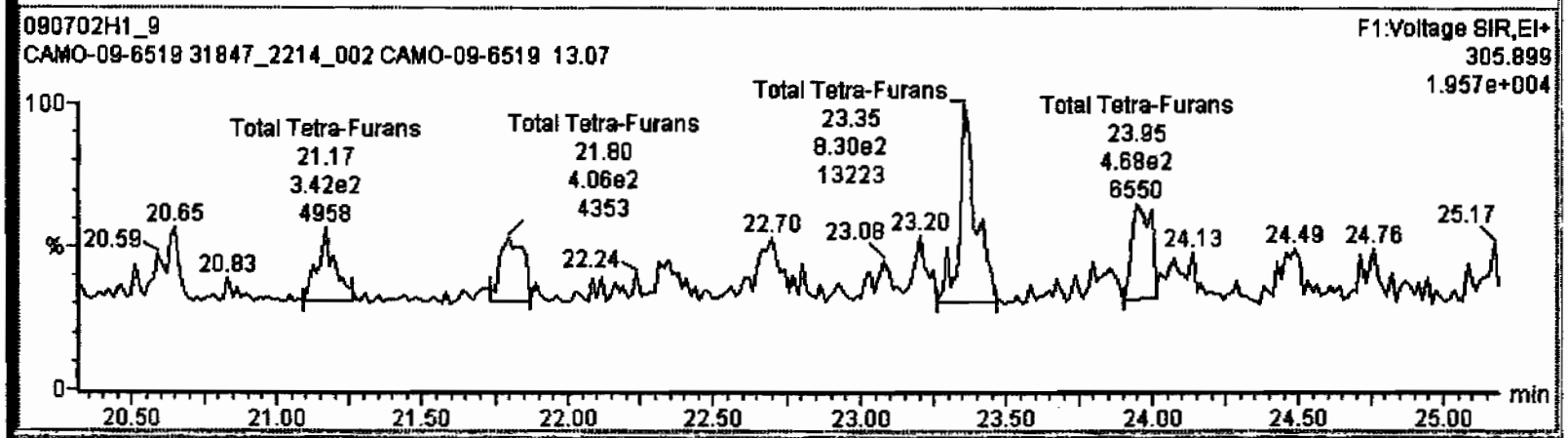

TargetLynx - 090702h1-9.qld * - [Chromatogram]

Total Tetra-Furans	23.35	6.162e2	8.303e2	0.74	NO	0.20355	0.20355
Total Tetra-Furans	23.97	3.881e2	4.680e2	0.83	NO	0.12046	0.12046
2,3,7,8-TCDF	25.30	7.950e2	1.057e3	0.75	NO	0.26057	0.26057
Total Tetra-Furans	25.63	1.877e3	2.386e3	0.79	NO	0.59997	0.59997

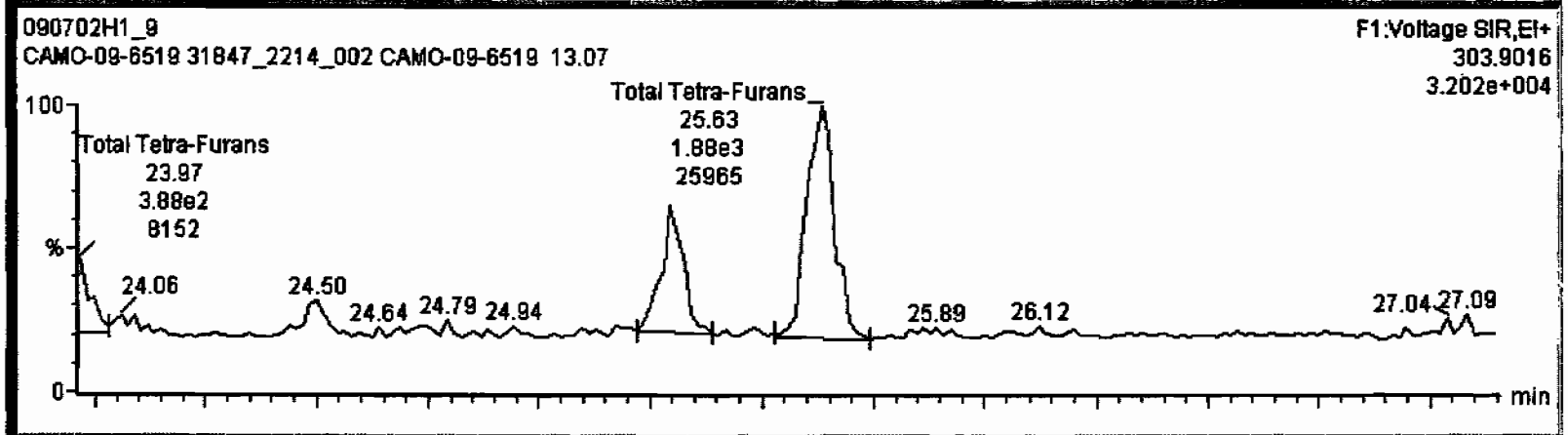

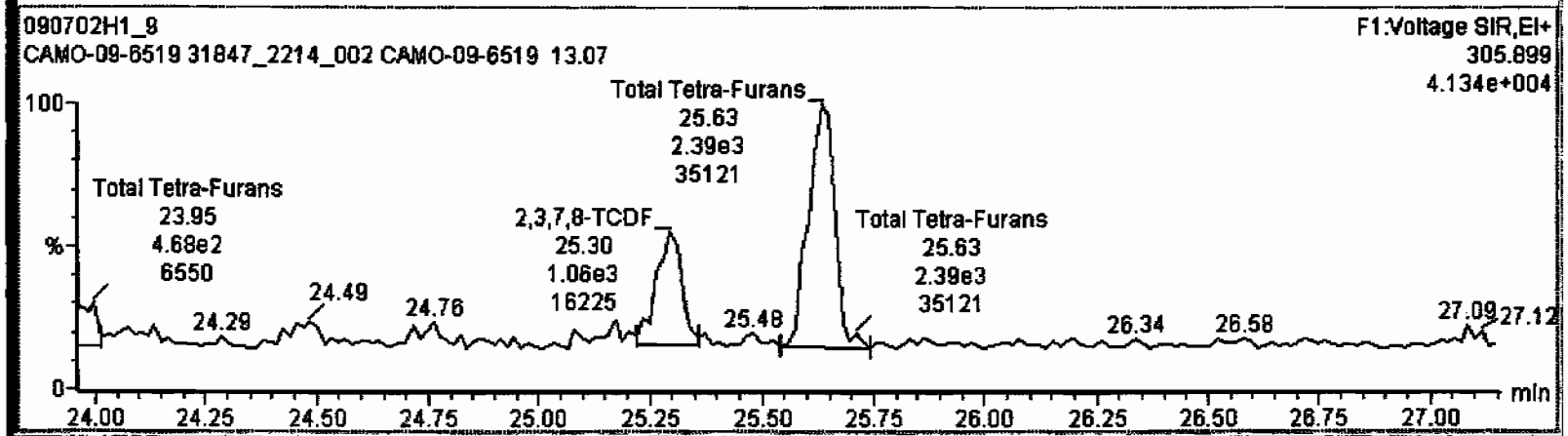

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Last Altered: Monday, July 06, 2009 13:16:35 Pacific Daylight Time
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Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

1st Func. Penta-Furans

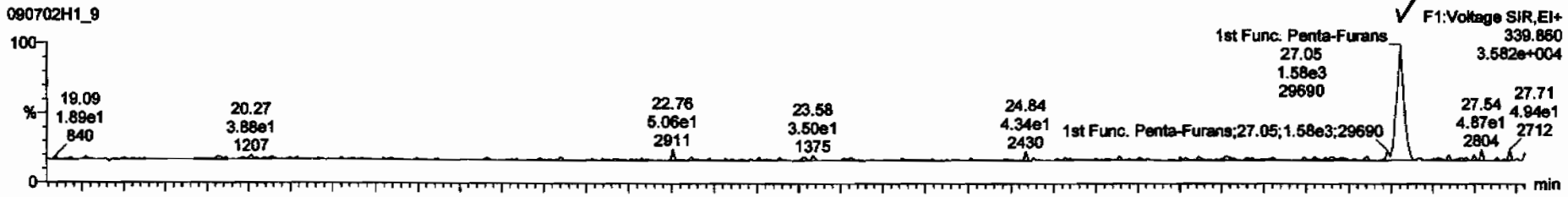

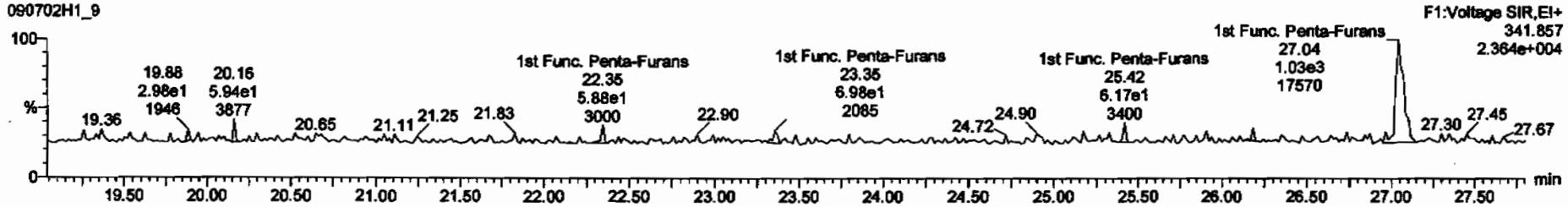

DPE6

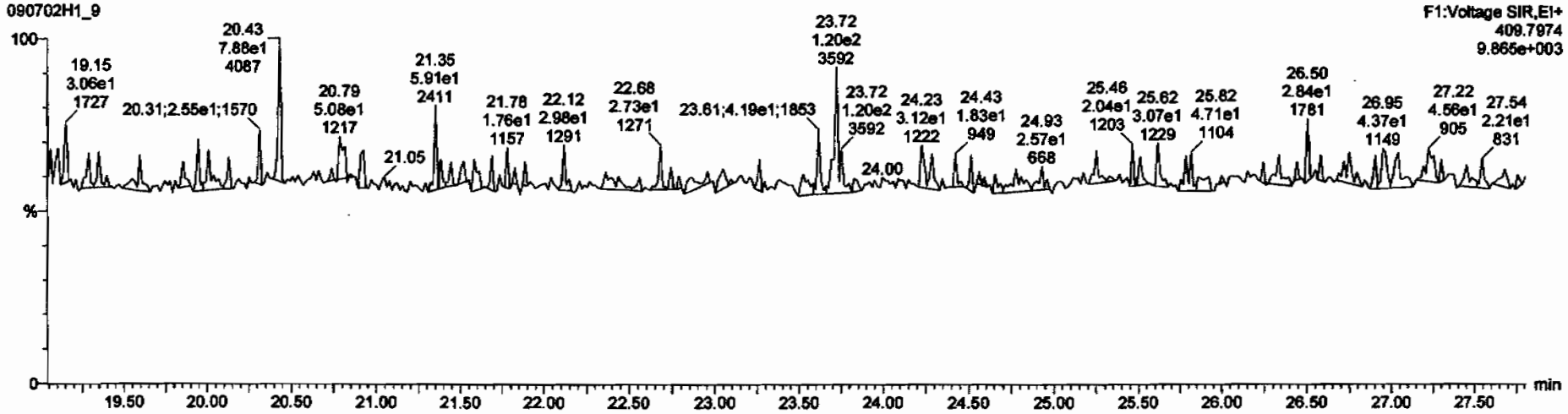

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Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

1,2,3,7,8-PeCDF

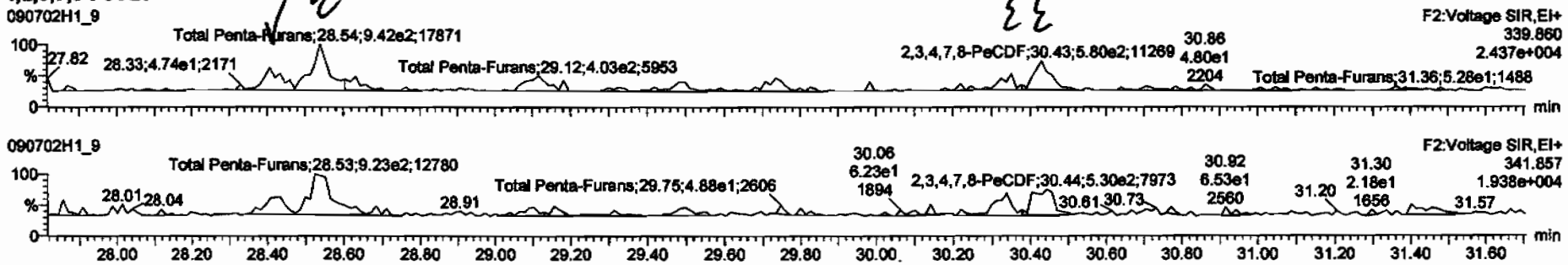

13C-1,2,3,7,8-PeCDF

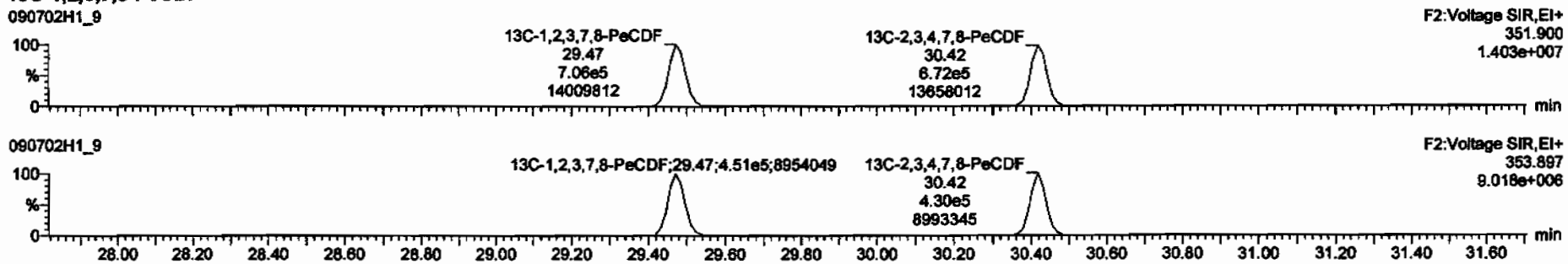

DPE2

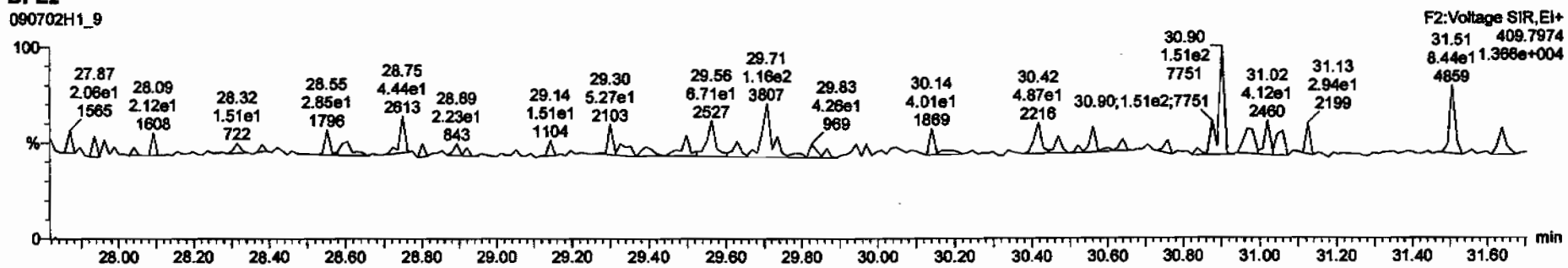

TargetLynx - 090702h1_9.qld * - [Chromatogram]

Total Penta-Furans	28.41	4.764e2	3.532e2	1.35	NO	0.12519	0.12519
Total Penta-Furans	28.54	1.153e3	9.228e2	1.25	YES	0.28633	0.00000
Total Penta-Furans	30.35	2.643e2	3.357e2	0.79	YES	0.065622	0.00000
2,3,4,7,8-PeCDF	30.43	5.800e2	5.299e2	1.09	YES	0.15297	0.00000

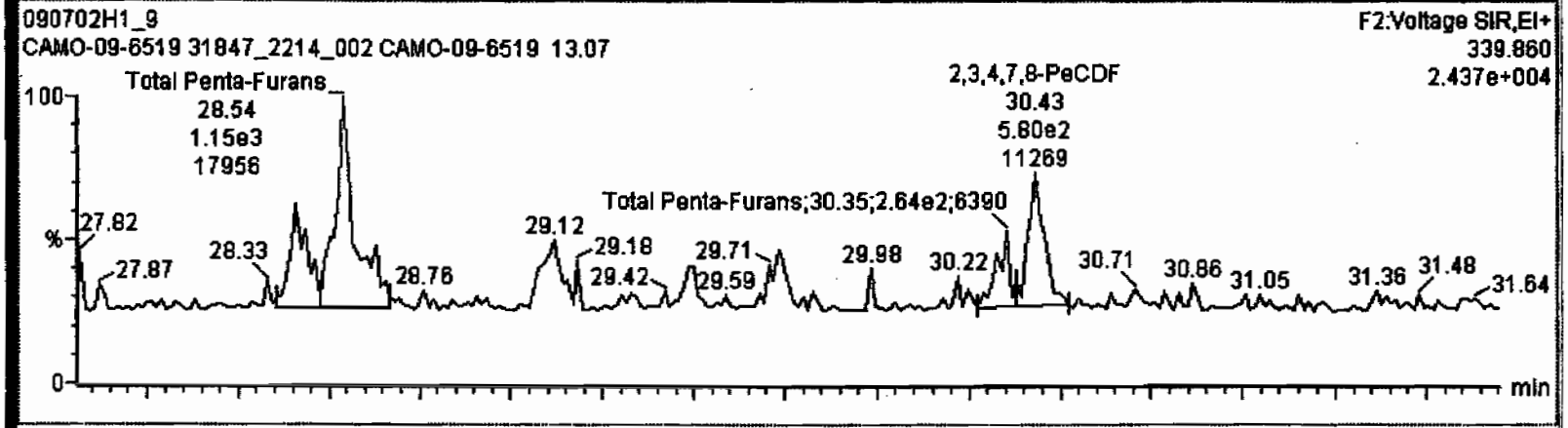

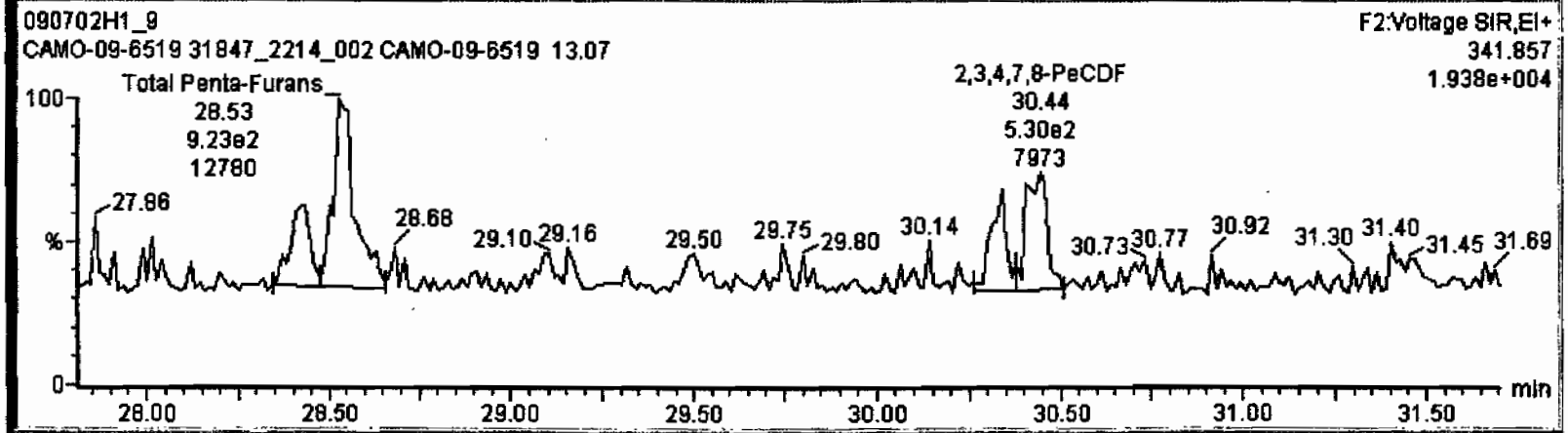

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qld

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Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

1,2,3,4,7,8-HxCDF

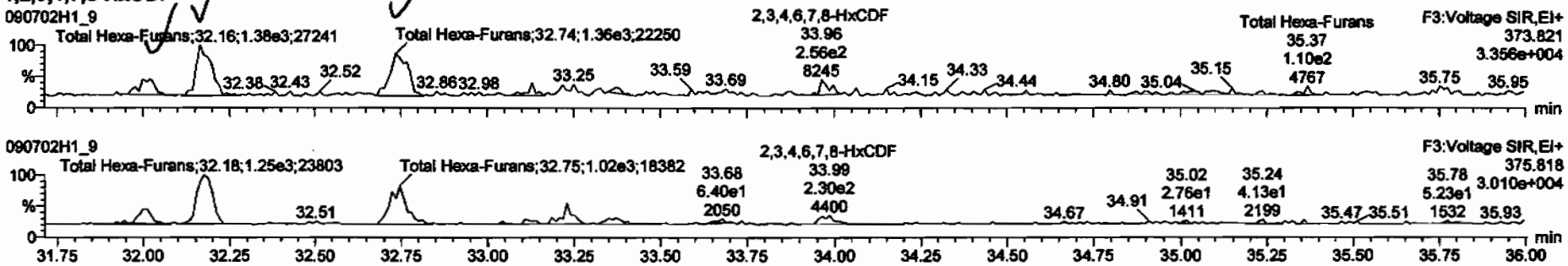

13C-1,2,3,4,7,8-HxCDF

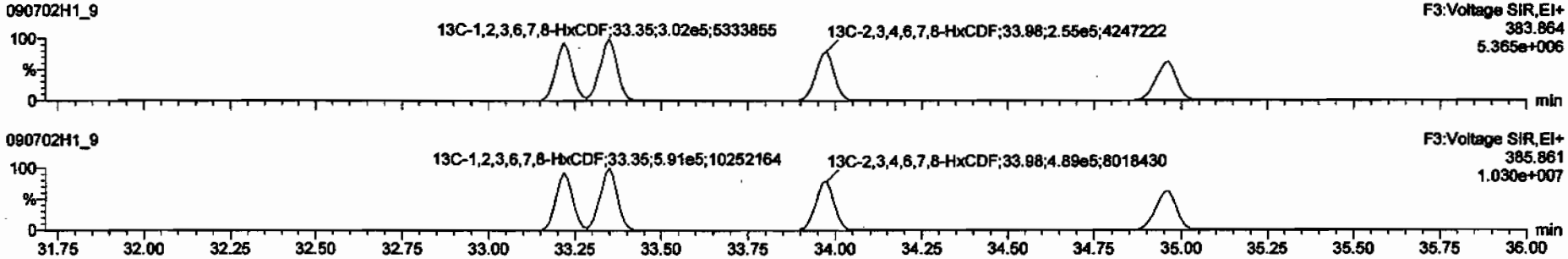

DPE3

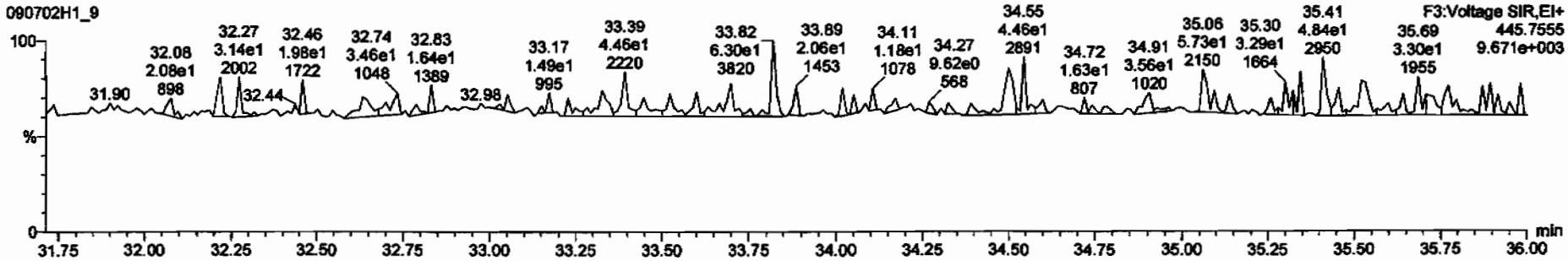

TargetLynx 090702h1-9.qld * - [Chromatogram]

Total Hexa-Furans	32.02	4.541e2	3.357e2	1.35	NO	0.15863	0.15863
Total Hexa-Furans	32.17	1.364e3	1.251e3	1.11	NO	0.52251	0.52251
Total Hexa-Furans	32.74	1.364e3	1.017e3	1.34	NO	0.47214	0.47214

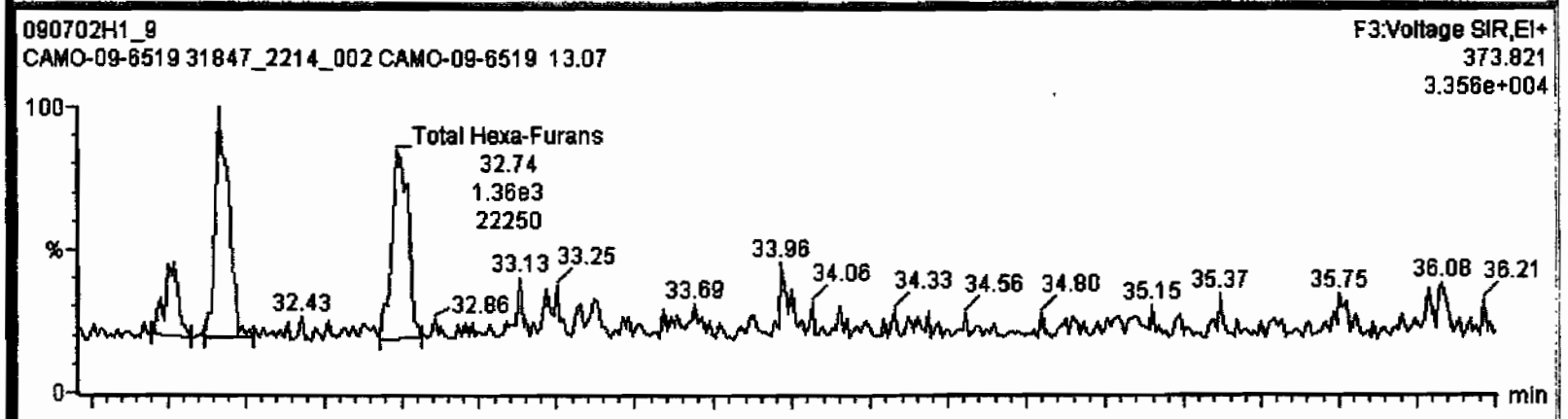

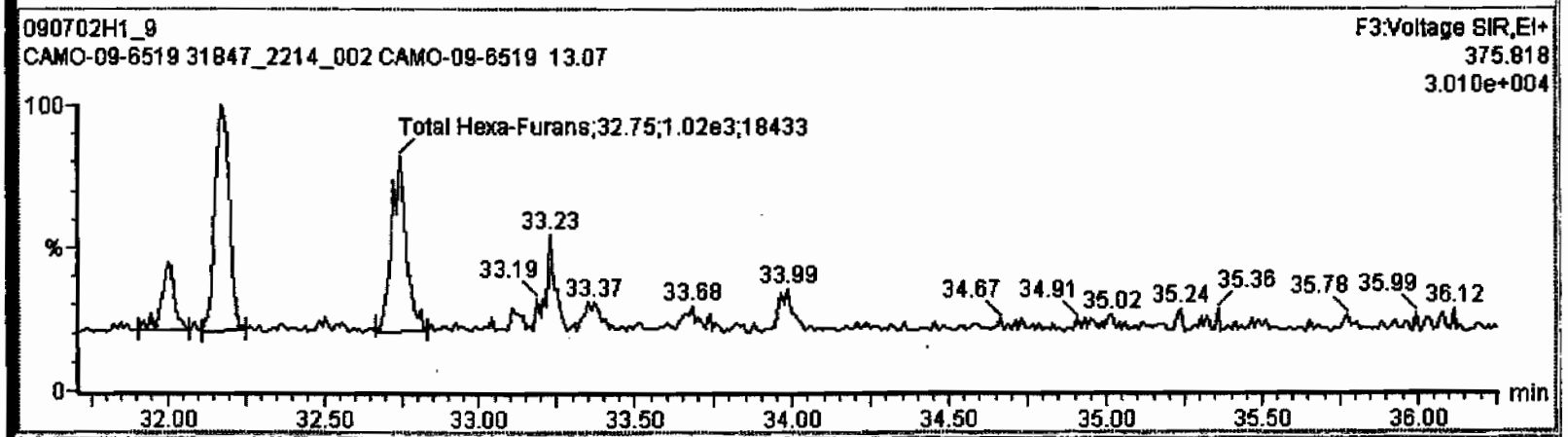

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Last Altered: Monday, July 06, 2009 13:16:35 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:54 Pacific Daylight Time

Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

1,2,3,4,6,7,8-HpCDF

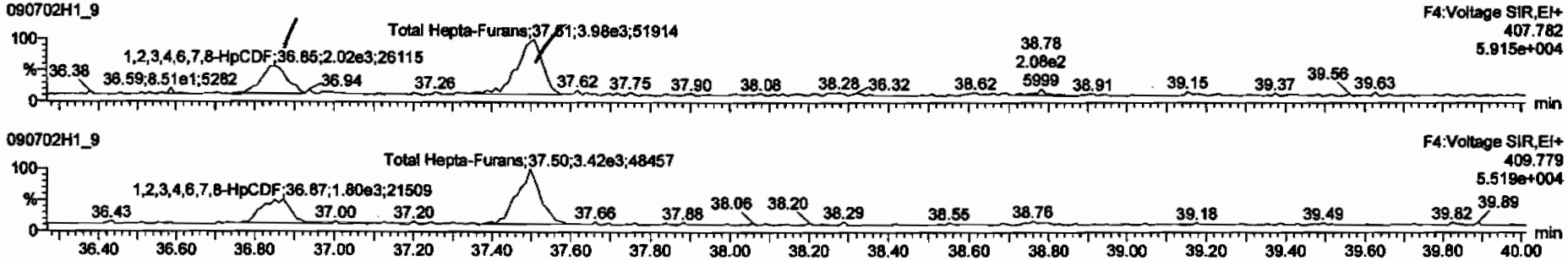

13C-1,2,3,4,6,7,8-HpCDF

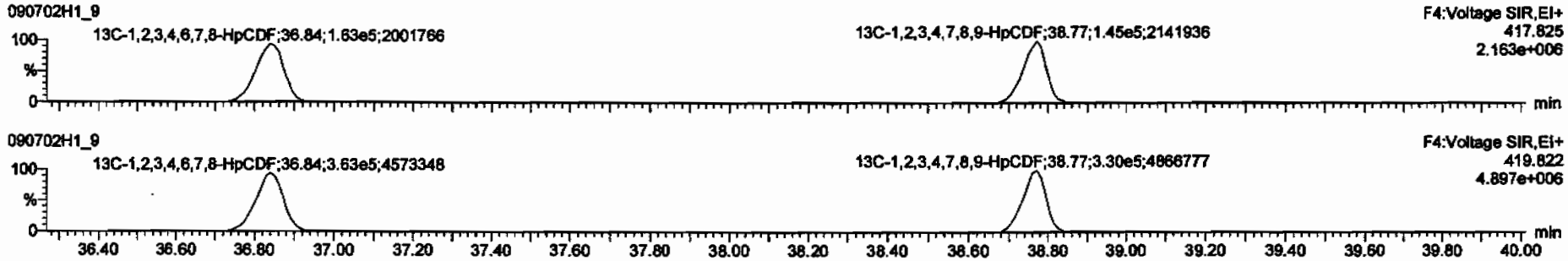

DPE4

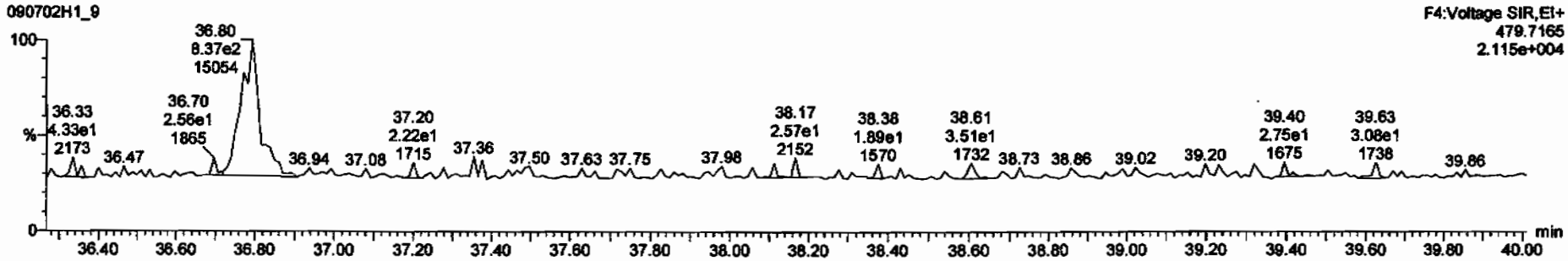

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Last Altered: Monday, July 06, 2009 13:16:35 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:54 Pacific Daylight Time

Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

OCDF

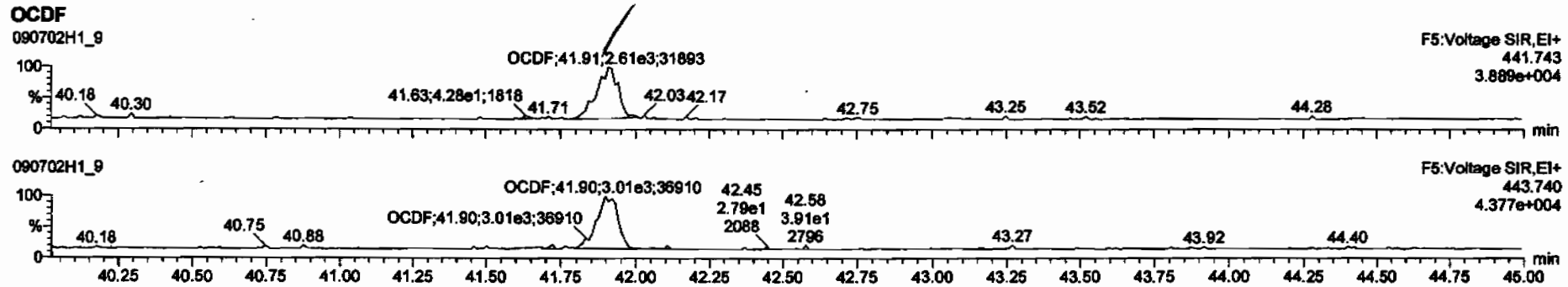

13C-OCDF

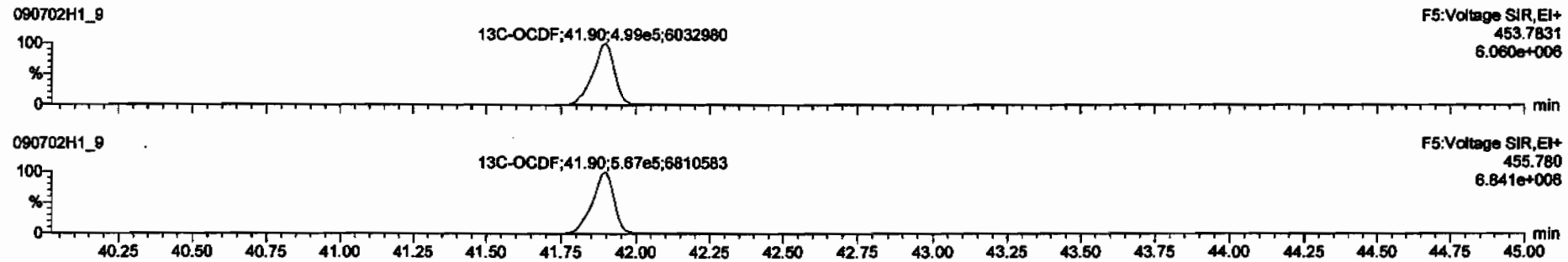

DPE5

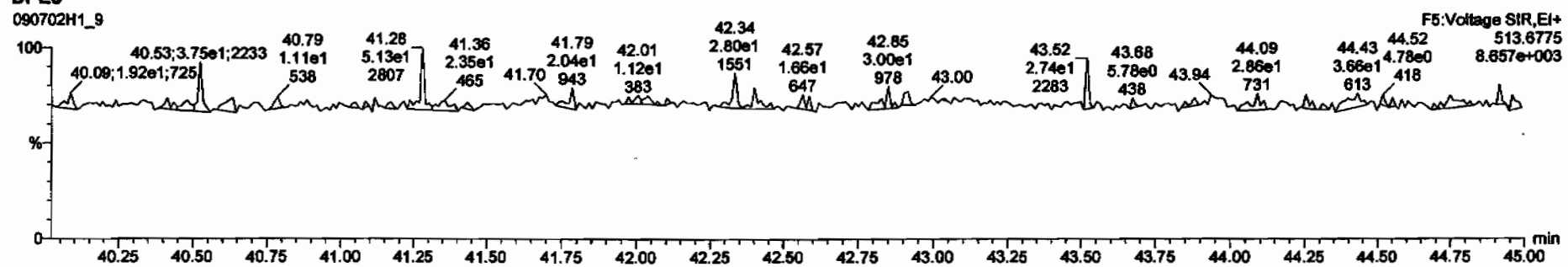

Target1.ynx - 090702h1-9.qld * - [Chromatogram]

13C-2,3,7,8-TCDD	9.35e5	0.79	NO	1.01	10.130	26.05	1.023	201	102	0.301	
13C-1,2,3,7,8-PeCDD	7.17e5	0.63	NO	0.83	10.130	30.71	1.206	189	95.5	0.270	
13C-1,2,3,4,7,8-HxCDD	6.07e5	1.26	NO	0.92	10.130	34.15	0.868	191	96.6	0.558	
13C-1,2,3,6,7,8-HxCDD	5.55e5	1.23	NO	0.92	10.130	34.26	0.891	173	87.8	0.555	

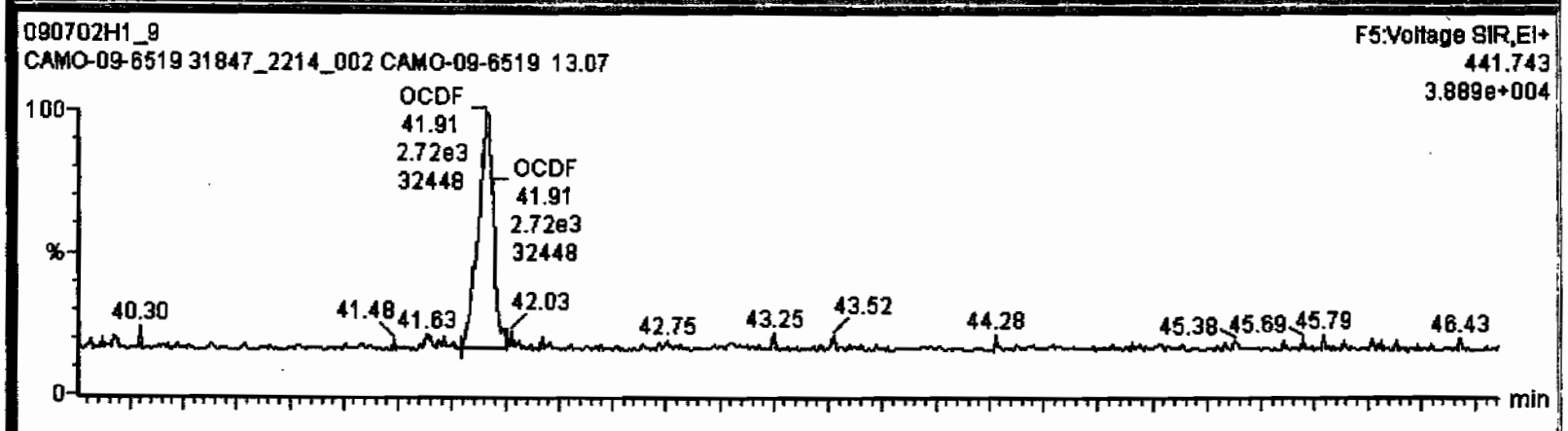

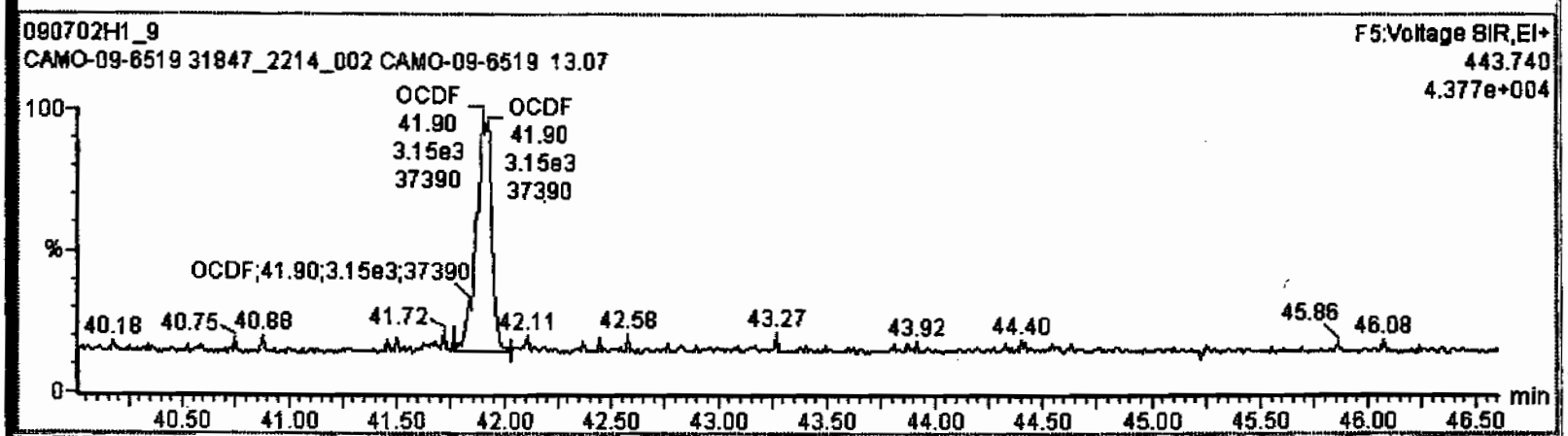

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-9.qld

Last Altered: Monday, July 06, 2009 13:16:35 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:16:54 Pacific Daylight Time

Name: 090702H1_9, Date: 02-Jul-2009, Time: 20:59:34, ID: 31847_2214_002 CAMO-09-6519 13.07, Description: CAMO-09-6519

PFK1

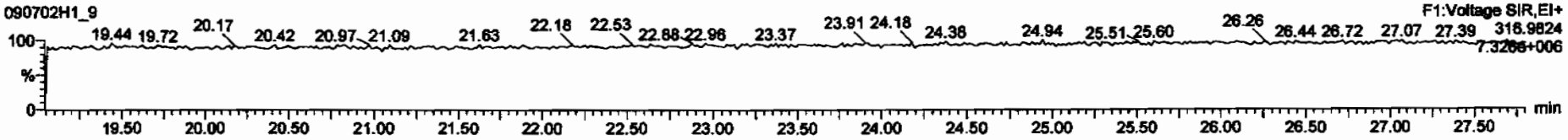

PFK2

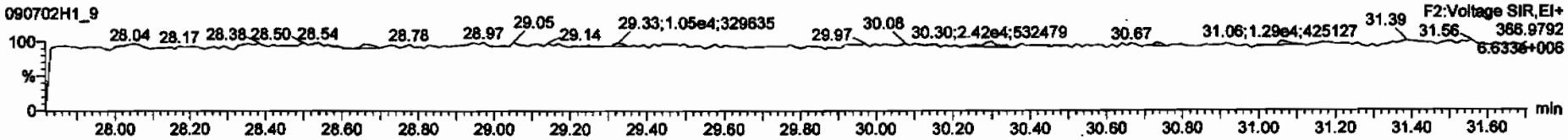

PFK3

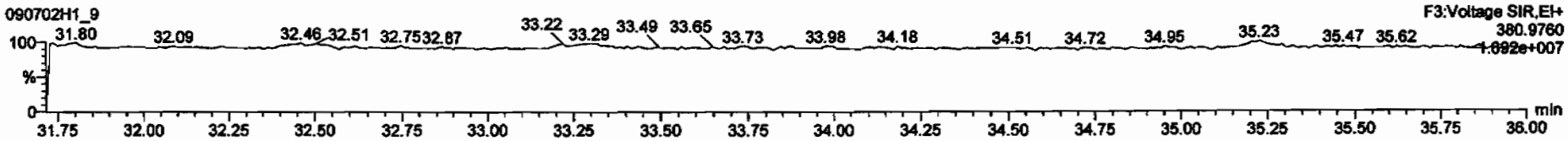

PFK4

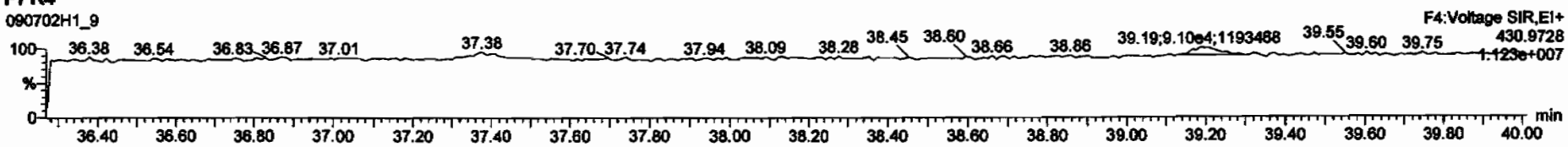

PFK5

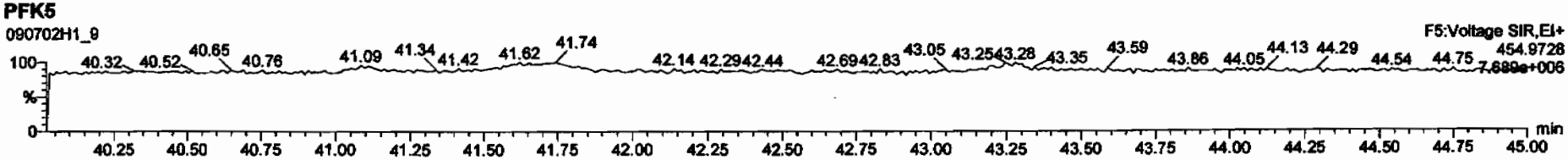

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-10.qld

Last Altered: Tuesday, July 07, 2009 10:22:04 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:23:57 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

1	2,3,7,8-TCDD			NO	1.08	10.100					0.0456	
2	1,2,3,7,8-PeCDD			NO	1.03	10.100					0.103	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.100					0.236	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.100					0.241	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.100					0.229	
6	1,2,3,4,6,7,8-HpCDD	3.13e4	1.04	NO	1.06	10.100	38.21	1.001	9.3490		0.278	~~9.3490~~
7	OCDD	1.92e5	0.90	NO	1.18	10.100	41.68	1.000	64.292		0.216	~~64.292~~
8	2,3,7,8-TCDF	7.15e2	0.76	NO	1.09	10.100	25.30	1.001	0.090367		0.0542	~~0.090367~~
9	1,2,3,7,8-PeCDF			NO	1.16	10.100					0.0598	
10	2,3,4,7,8-PeCDF			NO	1.12	10.100					0.0601	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.100					0.104	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.100					0.107	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.100					0.131	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.100					0.175	
15	1,2,3,4,6,7,8-HpCDF	6.45e3	1.13	NO	1.69	10.100	36.85	1.001	1.2904		0.155	~~1.2990~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.100					0.164	
17	OCDF	1.13e4	0.85	NO	1.10	10.100	41.91	1.000	3.2135		0.108	~~3.2140~~
18	13C-2,3,7,8-TCDD	1.07e6	0.78	NO	1.01	10.100	26.05	1.023	194.64	98.3	0.259	
19	13C-1,2,3,7,8-PeCDD	8.42e5	0.63	NO	0.827	10.100	30.69	1.205	187.63	94.8	0.217	
20	13C-1,2,3,4,7,8-HxCDD	7.17e5	1.23	NO	0.916	10.100	34.13	0.988	189.80	95.8	0.461	
21	13C-1,2,3,6,7,8-HxCDD	6.18e5	1.25	NO	0.921	10.100	34.25	0.991	162.78	82.2	0.459	
22	13C-1,2,3,4,6,7,8-HpCDD	6.24e5	1.05	NO	0.708	10.100	38.19	1.105	213.72	108	0.937	
23	13C-OCDD	1.00e6	0.90	NO	0.503	10.100	41.66	1.205	484.91	122	0.633	
24	13C-2,3,7,8-TCDF	1.44e6	0.78	NO	0.977	10.100	25.28	0.993	198.62	100	0.170	
25	13C-1,2,3,7,8-PeCDF	1.30e6	1.53	NO	0.896	10.100	29.47	1.157	194.88	98.4	0.306	
26	13C-2,3,4,7,8-PeCDF	1.30e6	1.55	NO	0.900	10.100	30.40	1.194	194.95	98.5	0.305	
27	13C-1,2,3,4,7,8-HxCDF	8.95e5	0.52	NO	1.17	10.100	33.21	0.961	185.86	93.9	0.552	
28	13C-1,2,3,6,7,8-HxCDF	1.01e6	0.52	NO	1.52	10.100	33.34	0.965	162.15	81.9	0.425	
29	13C-2,3,4,6,7,8-HxCDF	8.51e5	0.53	NO	1.25	10.100	33.96	0.983	165.40	83.5	0.517	
30	13C-1,2,3,7,8,9-HxCDF	7.63e5	0.53	NO	1.05	10.100	34.94	1.011	175.98	88.9	0.613	

7/7/09
7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-10.qld

Last Altered: Tuesday, July 07, 2009 10:22:04 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:23:57 Pacific Daylight Time

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

31 13C-1,2,3,4,6,7,8-HpCDF	5.86e5	0.43	NO	0.868	10.100	36.83	1.066	163.89	82.8	0.840	
32 13C-1,2,3,4,7,8,9-HpCDF	5.60e5	0.45	NO	0.727	10.100	38.77	1.122	187.24	94.6	1.00	
33 13C-OCDF	1.27e6	0.89	NO	0.760	10.100	41.90	1.212	406.63	103	0.351	
34 37Cl-2,3,7,8-TCDD	2.68e5			0.668	10.100	26.06	1.023	73.863	93.3	0.0731	
35 13C-1,2,3,4-TCDD	1.07e6	0.79	NO	1.00	10.100	25.47	0.000	198.02	100	0.263	
36 13C-1,2,3,4-TCDF	1.47e6	0.78	NO	1.00	10.100	24.04	0.000	198.02	100	0.166	
37 13C-1,2,3,7,8,9-HxCDD	8.16e5	1.26	NO	1.00	10.100	34.56	0.000	198.02	100	0.423	
38 Total Tetra-Dioxins				1.08	10.100					0.0219	
39 Total Penta-Dioxins				1.03	10.100					0.0370	
40 Total Hexa-Dioxins				1.13	10.100			2.2667		0.225	~~2.2670~~
41 Total Hepta-Dioxins				1.06	10.100			22.558		0.278	~~22.558~~
42 Total Tetra-Furans				1.09	10.100			0.19732		0.0542	~~0.19700~~
43 1st Func. Penta-Furans				1.16	10.100			~~0.53396~~ 0.553		0.0275	~~0.53400~~
44 Total Penta-Furans				1.16	10.100			0.~~21887~~		0.0589	~~0.21900~~
45 Total Hexa-Furans				1.28	10.100			1.3544		0.127	~~1.3540~~
46 Total Hepta-Furans				1.69	10.100			3.6299		0.149	~~3.6300~~

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-10.qld

Last Altered: Tuesday, July 07, 2009 10:22:04 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:23:57 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Total Hexa-Dioxins	32.55	3.279e4	2.727e4	1.988e3	1.646e3	1.21	NO	3.635e3	0.95873	0.95900	0.225
Total Hexa-Dioxins	33.43	3.263e4	2.317e4	2.746e3	2.213e3	1.24	NO	4.959e3	1.3080	1.3080	0.225

Hepta-Dioxins

Total Hepta-Dioxins	37.28	2.339e5	2.401e5	2.237e4	2.190e4	1.02	NO	4.427e4	13.209	13.209	0.278
1,2,3,4,6,7,8-HpCDD	38.21	2.178e5	2.068e5	1.597e4	1.536e4	1.04	NO	3.134e4	9.3490	9.3490	0.278

Tetra-Furans

Total Tetra-Furans	21.81	7.085e3	5.968e3	3.664e2	4.798e2	0.76	NO	8.462e2	0.10696	0.10700	0.0542
2,3,7,8-TCDF	25.30	5.572e3	7.539e3	3.088e2	4.062e2	0.76	NO	7.149e2	0.090367	0.090000	0.0542

Penta-Furans function 1

1st Func. Penta-Furans	27.04	2.416e4	2.033e4	1.445e3	1.094e3	1.32	NO	2.539e3	0.33398	0.33400	0.0275

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-10.qld

Last Altered: Tuesday, July 07, 2009 10:22:04 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:23:57 Pacific Daylight Time

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

Penta-Furans

	Total Penta-Furans	28.54	1.438e4	1.318e4	1.049e3	6.152e2	1.71	NO	1.664e3	0.21887	0.21900	0.0589

Hexa-Furans

	Total Hexa-Furans	32.00	1.471e4	9.856e3	7.022e2	5.360e2	1.31	NO	1.238e3	0.21734	0.21700	0.127
	Total Hexa-Furans	32.15	3.931e4	2.740e4	2.143e3	1.616e3	1.33	NO	3.759e3	0.65981	0.66000	0.127
	Total Hexa-Furans	32.75	2.548e4	2.978e4	1.405e3	1.314e3	1.07	NO	2.719e3	0.47730	0.47700	0.127

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.85	4.272e4	3.892e4	3.428e3	3.024e3	1.13	NO	6.452e3	1.2904	1.2900	0.155
	Total Hepta-Furans	37.50	6.959e4	6.726e4	5.970e3	5.470e3	1.09	NO	1.144e4	2.3396	2.3400	0.149

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-10.qld

Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:18 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

2,3,7,8-TCDD

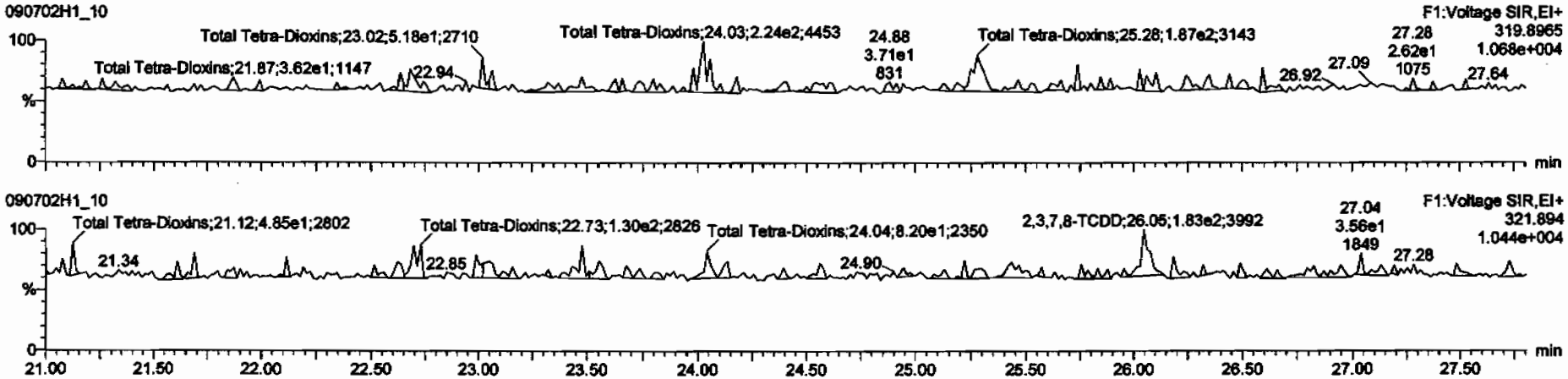

13C-2,3,7,8-TCDD

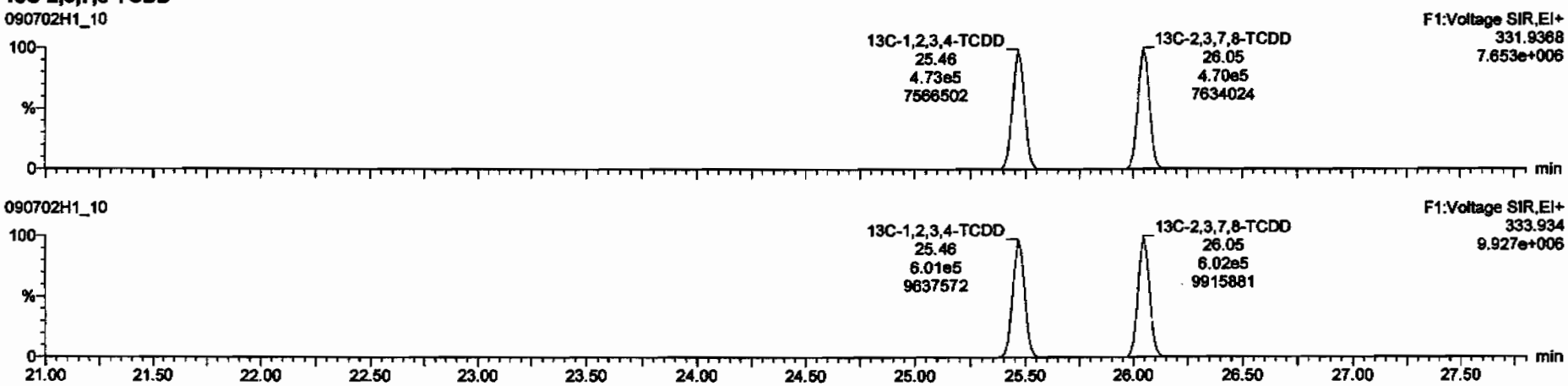

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-10.qld

Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:18 Pacific Daylight Time

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

37Cl-2,3,7,8-TCDD

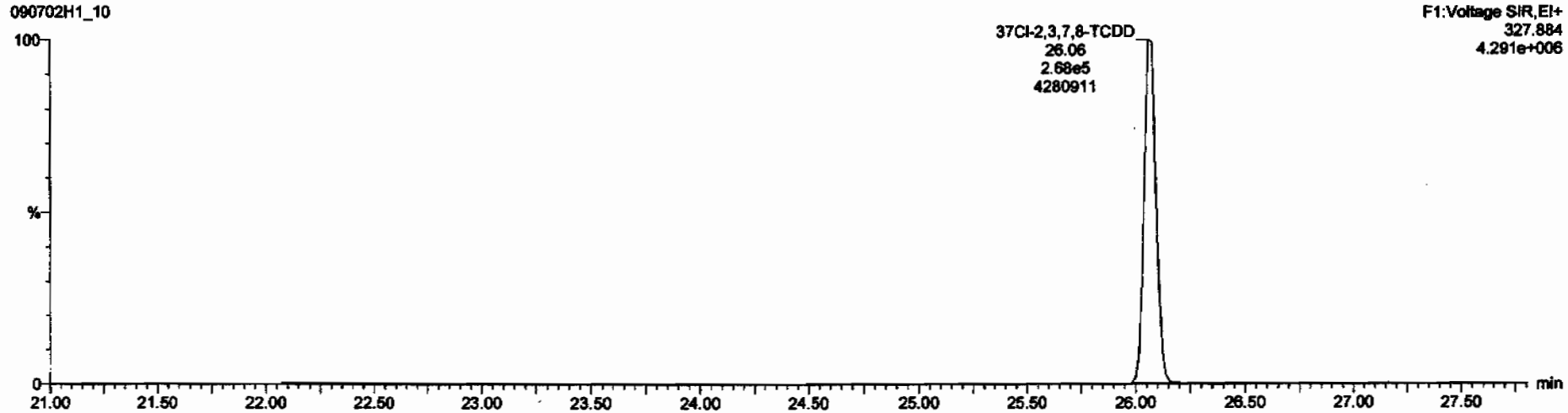

13C-1,2,3,4-TCDD

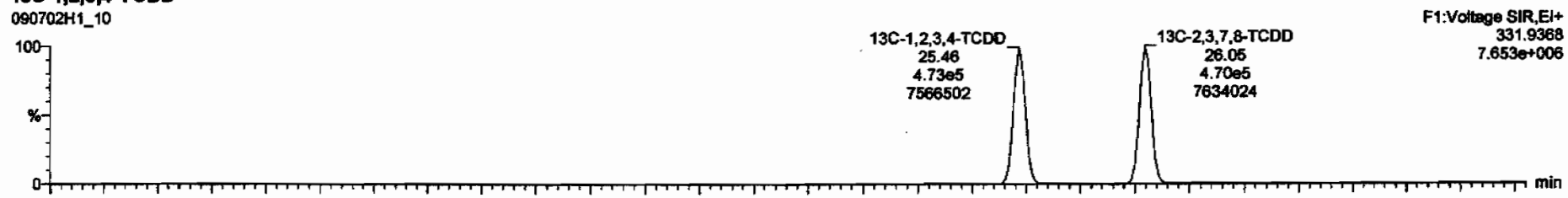

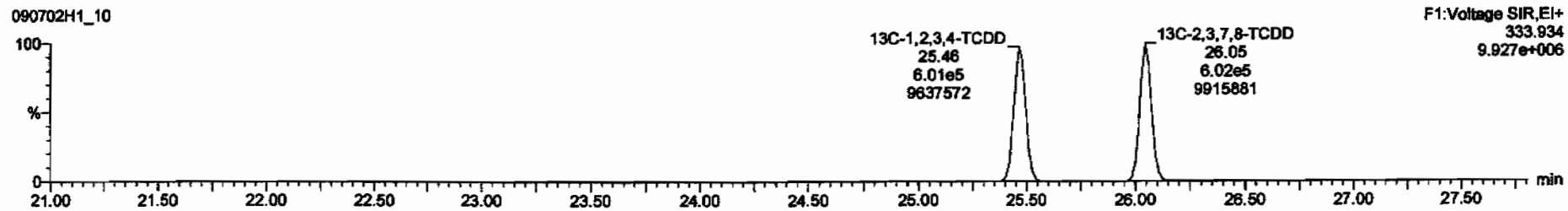

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-10.qld

Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:18 Pacific Daylight Time

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

1,2,3,7,8-PeCDD

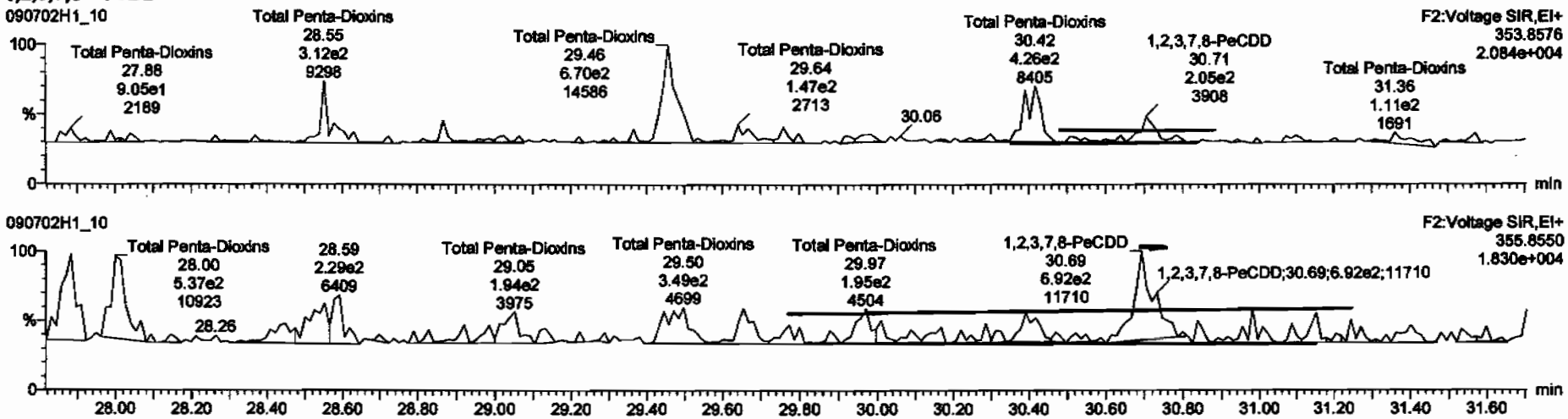

13C-1,2,3,7,8-PeCDD

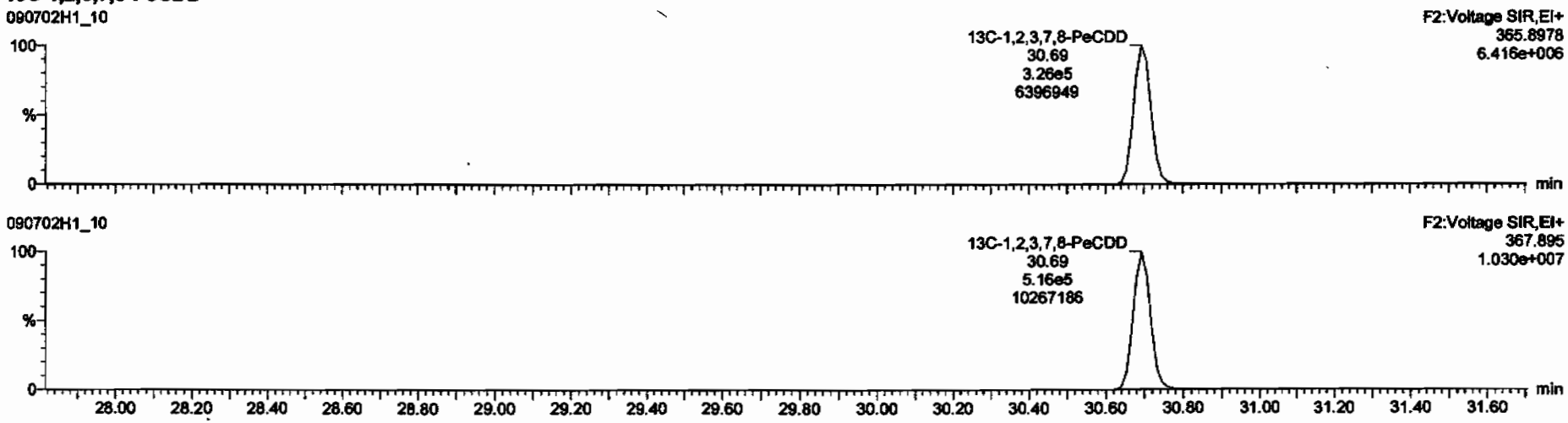

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Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:18 Pacific Daylight Time

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

1,2,3,4,7,8-HxCDD

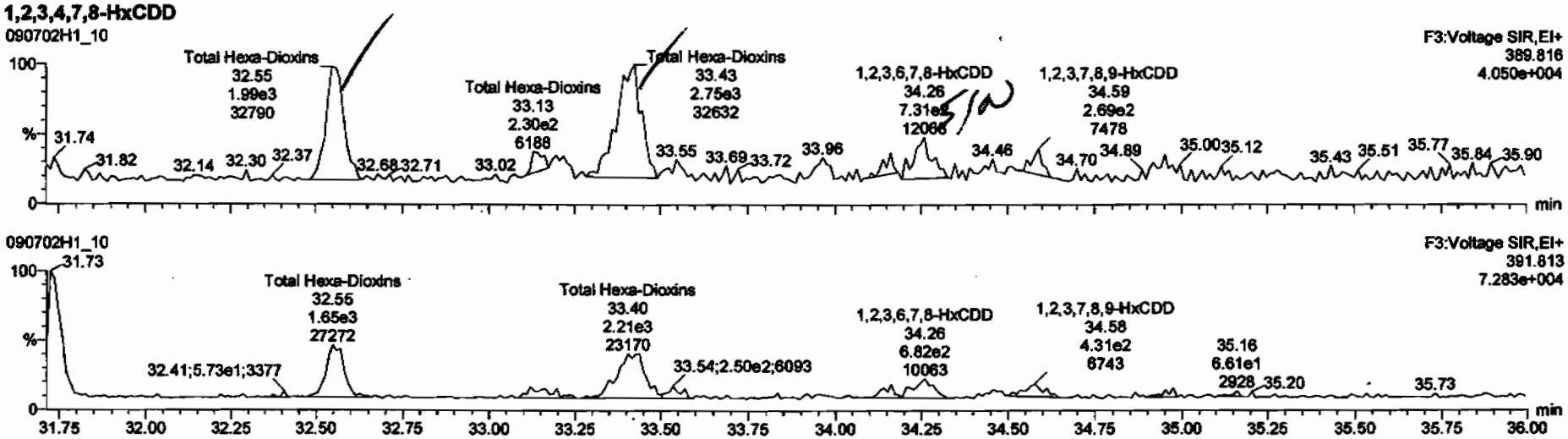

13C-1,2,3,4,7,8-HxCDD

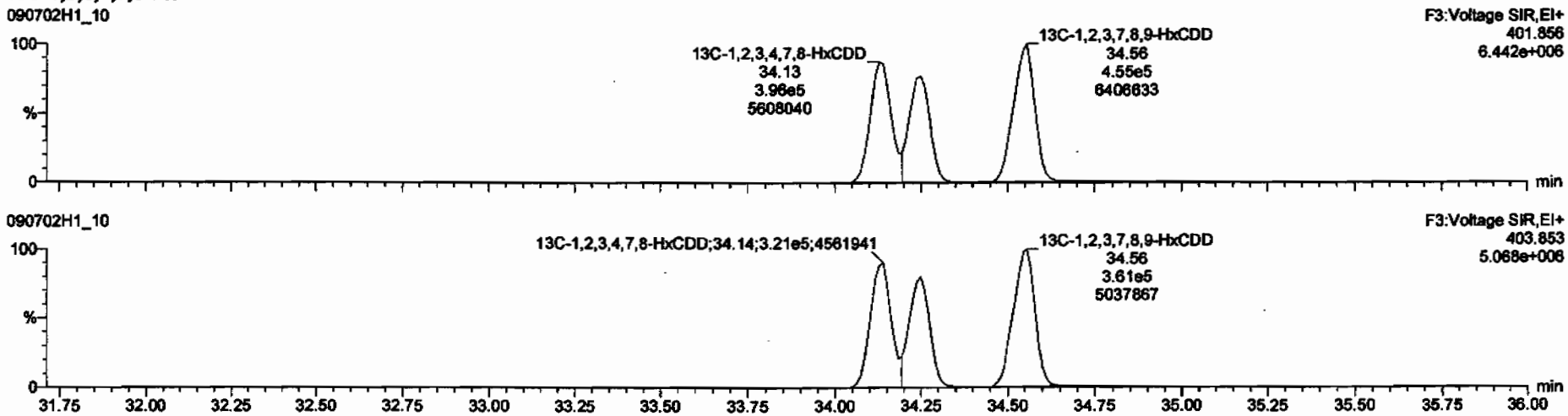

Targetlynx 090702h1-10.qld * - [Chromatogram]

Total Hexa-Dioxins	32.55	1.988e3	1.848e3	1.21	NO	0.95873	0.95873
Total Hexa-Dioxins	33.43	2.746e3	2.213e3	1.24	NO	1.3080	1.3080

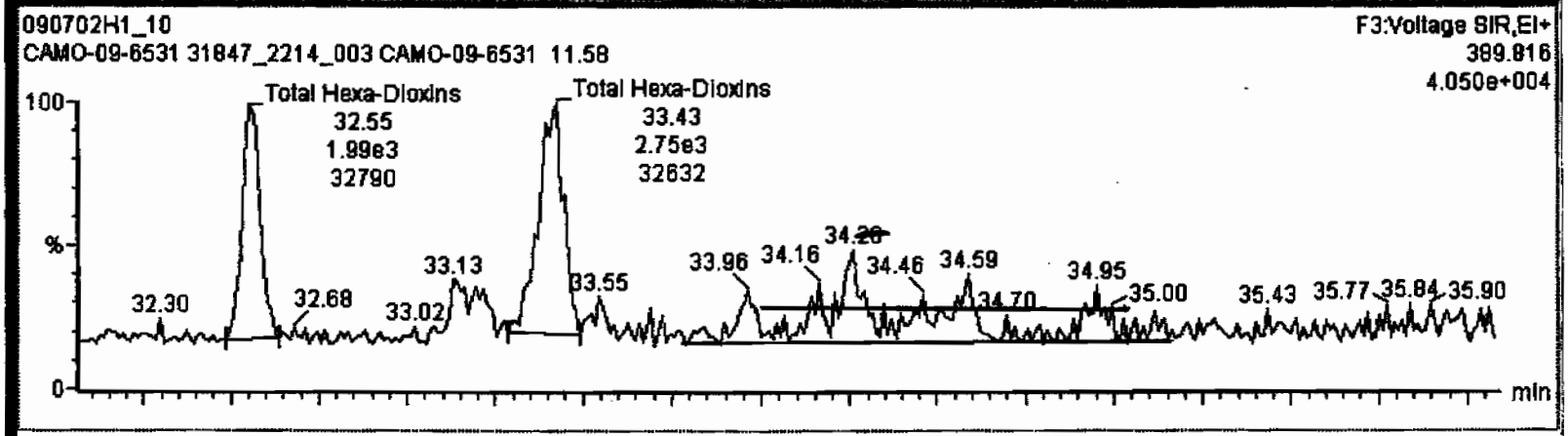

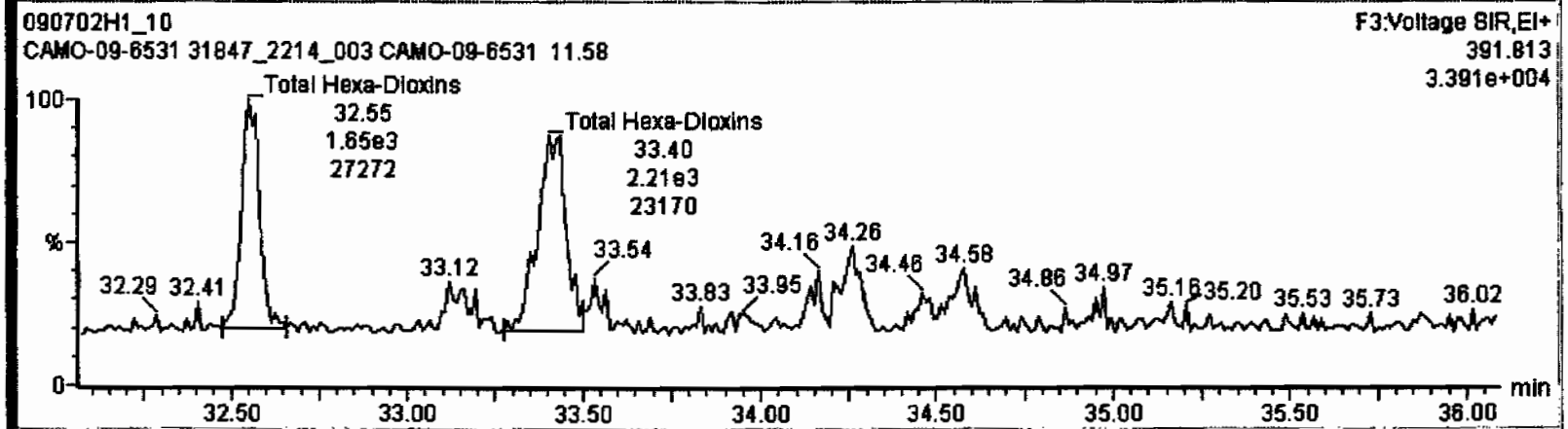

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Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
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Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

1,2,3,4,6,7,8-HpCDD

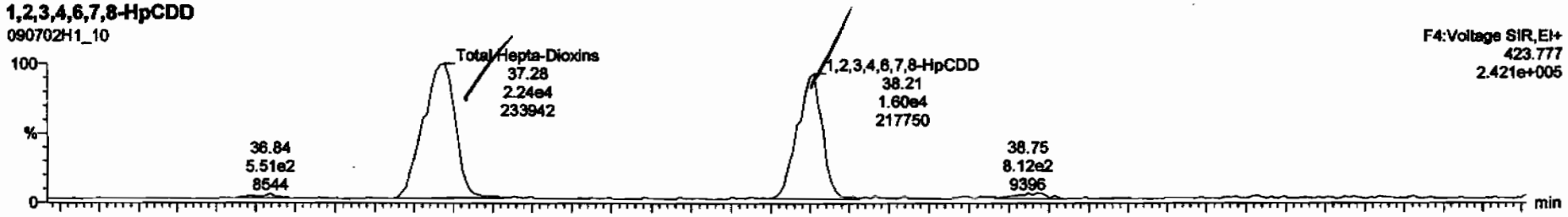

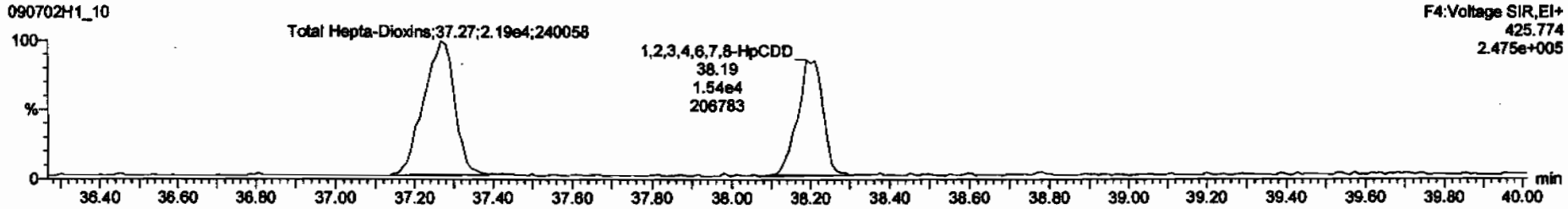

13C-1,2,3,4,6,7,8-HpCDD

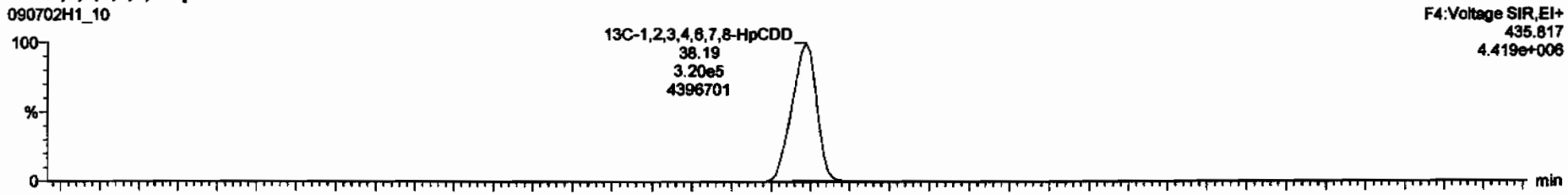

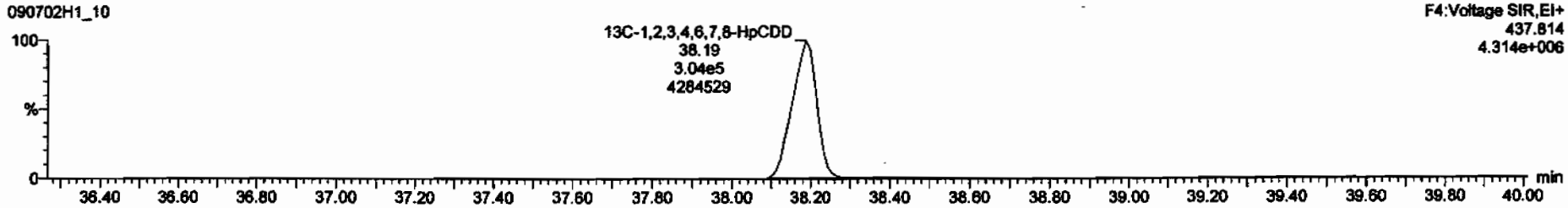

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Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
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Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

OCDD

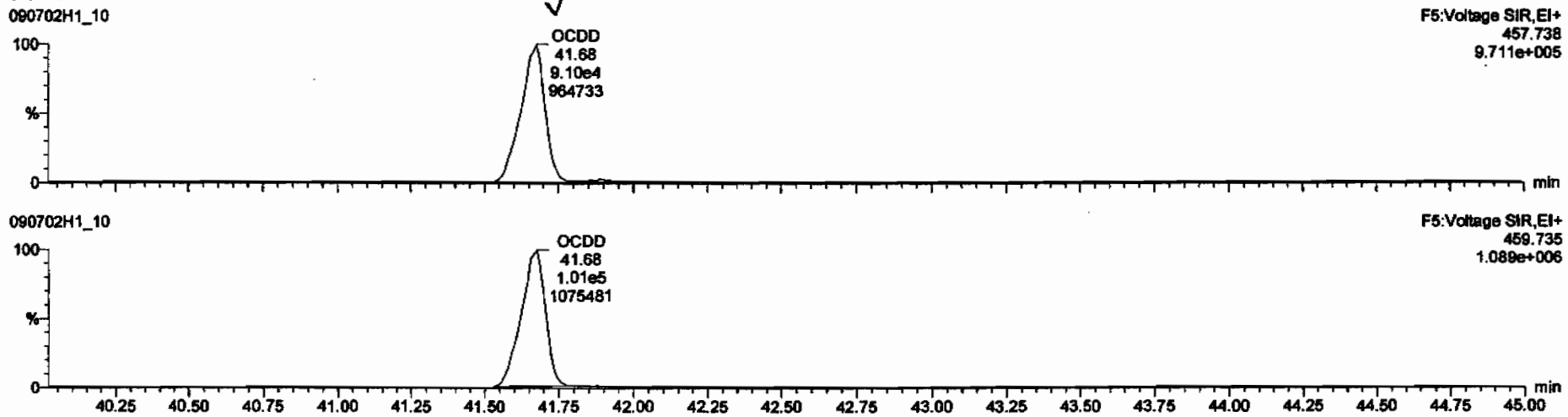

13C-OCDD

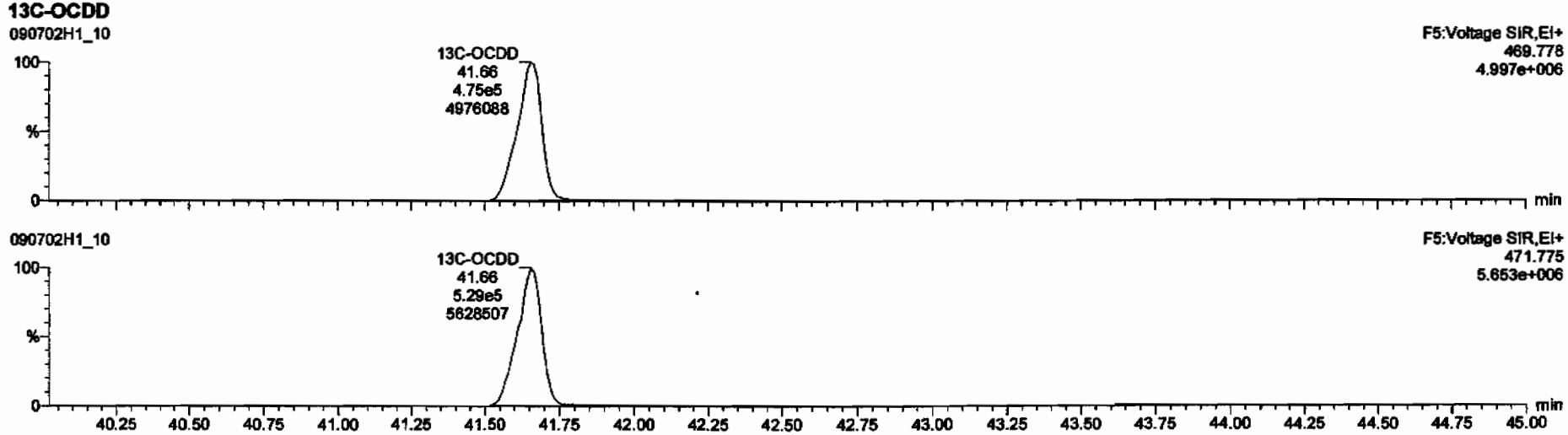

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Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:18 Pacific Daylight Time

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

2,3,7,8-TCDF

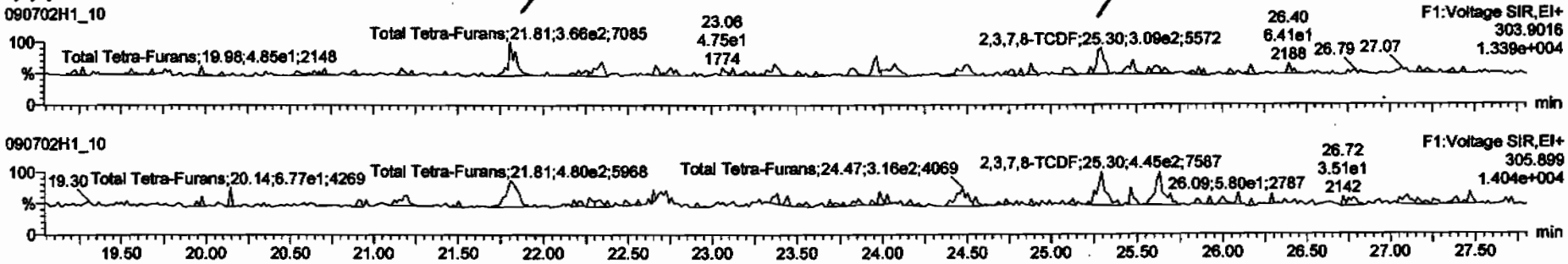

13C-2,3,7,8-TCDF

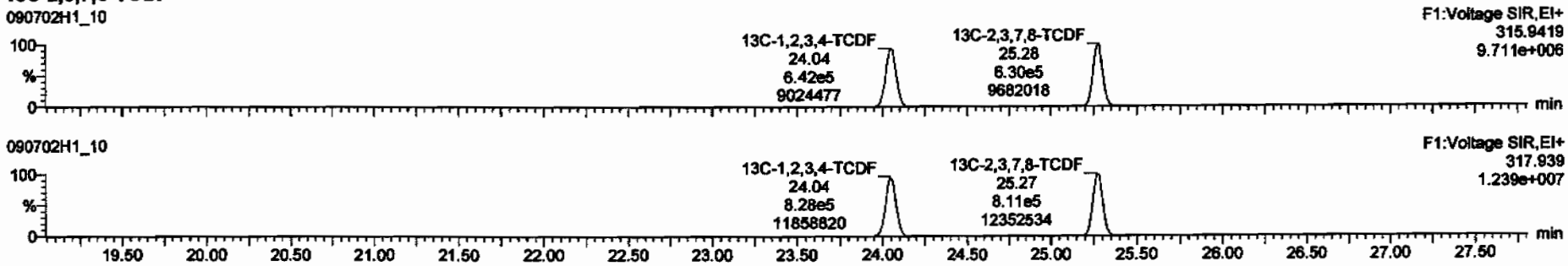

DPE1

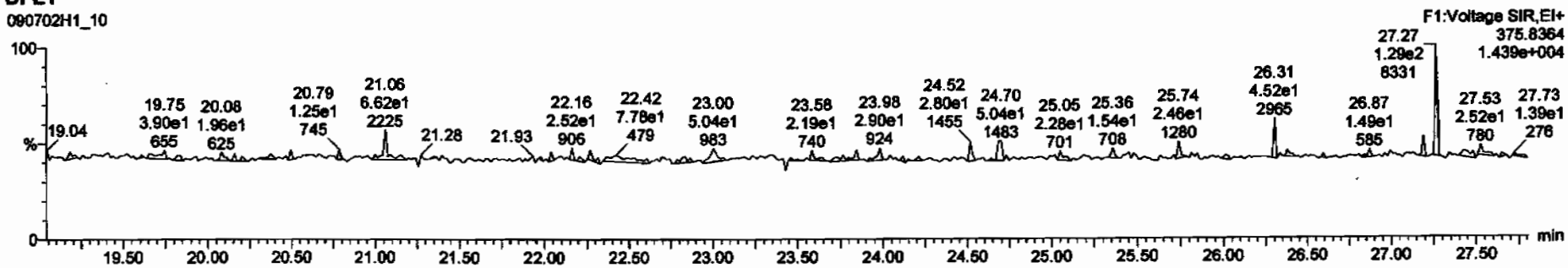

TargetLynx - 090702h1-10.qld * - [Chromatogram]

Total Tetra-Furans	21.81	3.664e2	4.798e2	0.76	NO	0.10696	0.10696
2,3,7,8-TCDF	25.30	3.088e2	4.062e2	0.76	NO	0.090367	0.090367

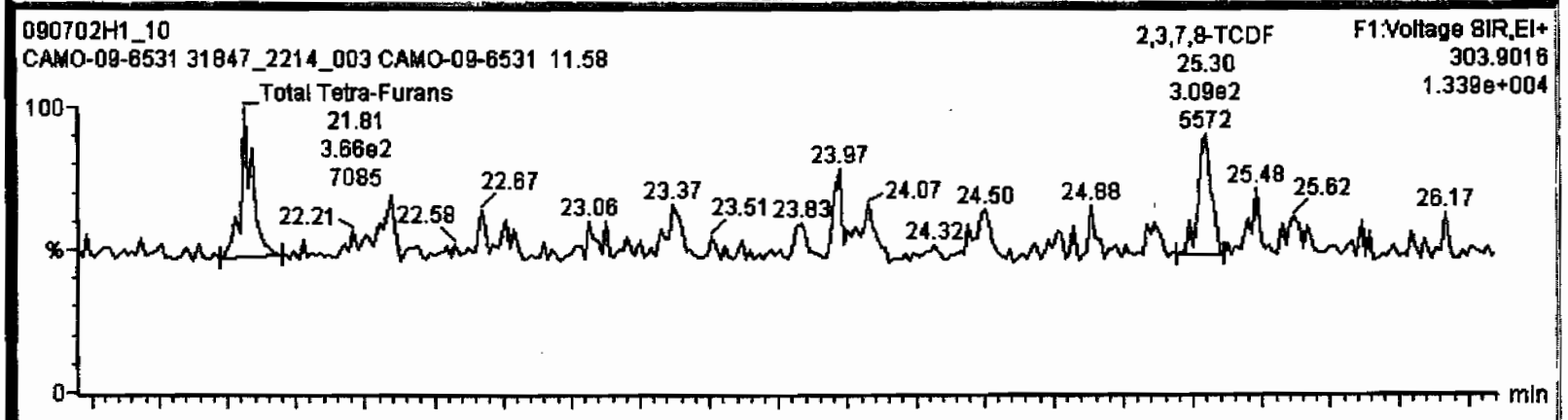

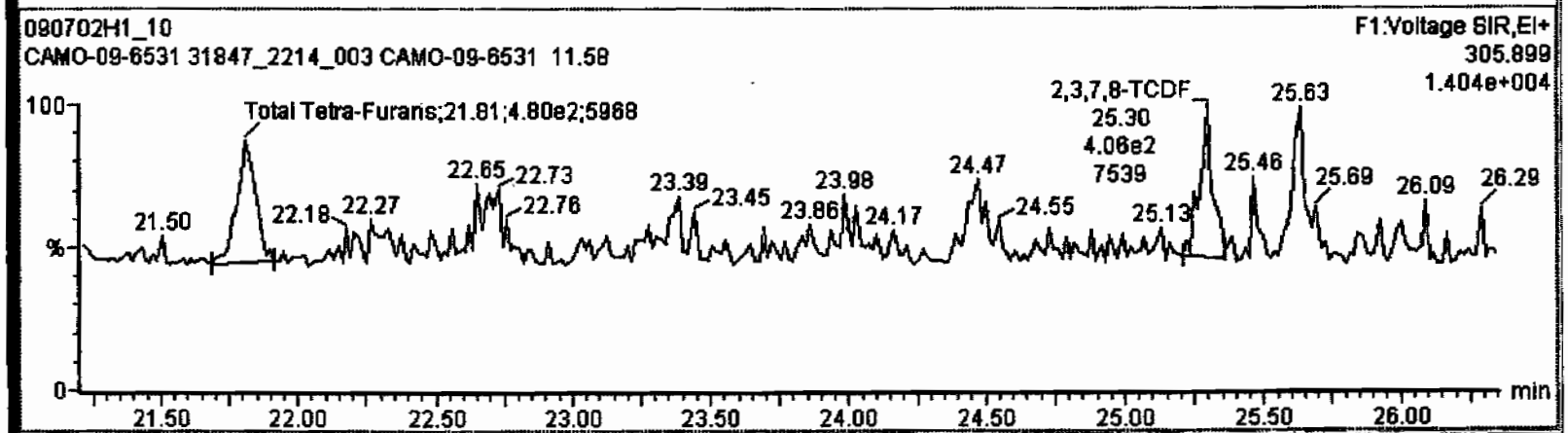

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Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
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Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

1st Func. Penta-Furans

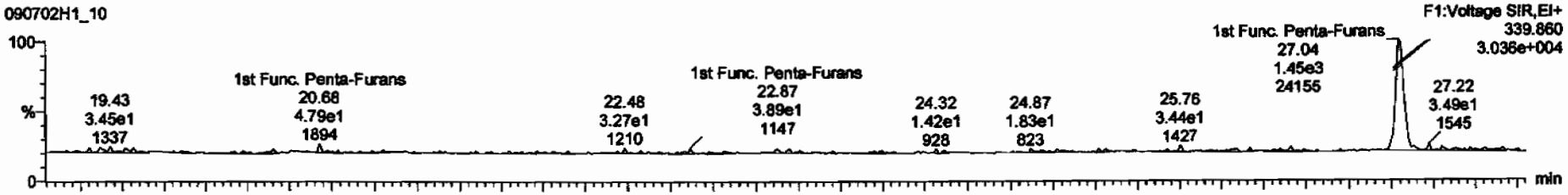

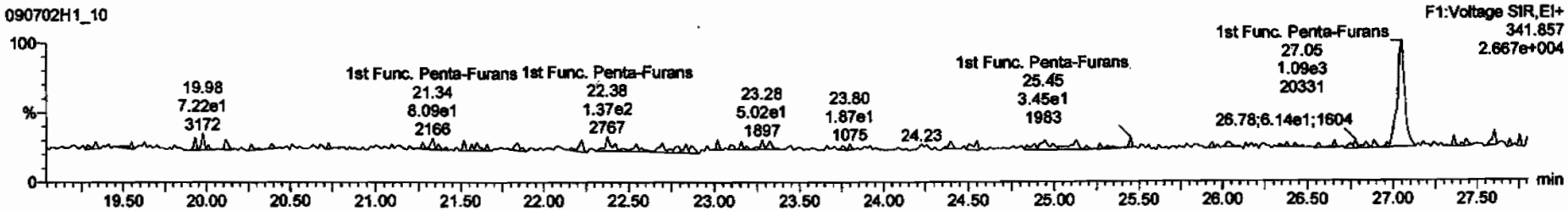

DPE6

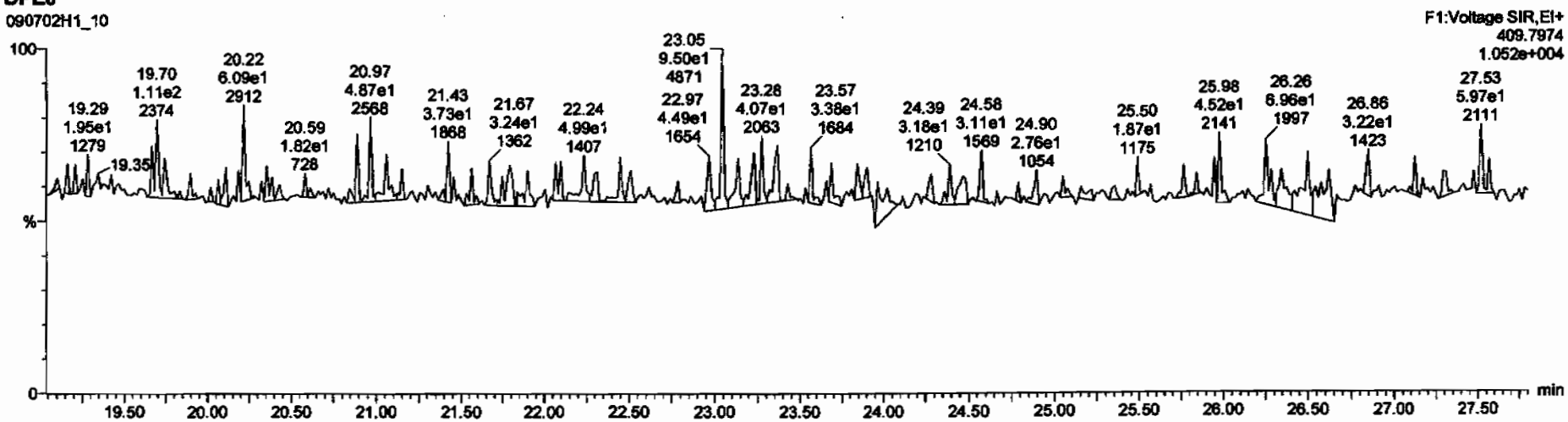

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Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
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Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

1,2,3,7,8-PeCDF

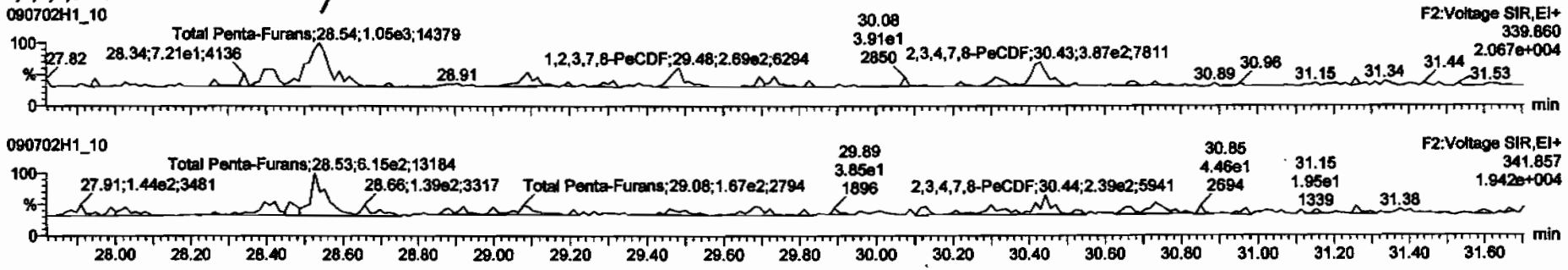

13C-1,2,3,7,8-PeCDF

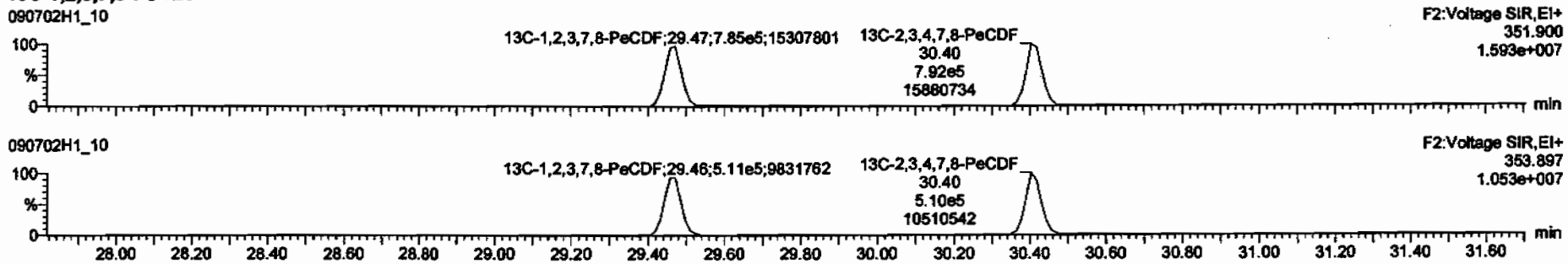

DPE2

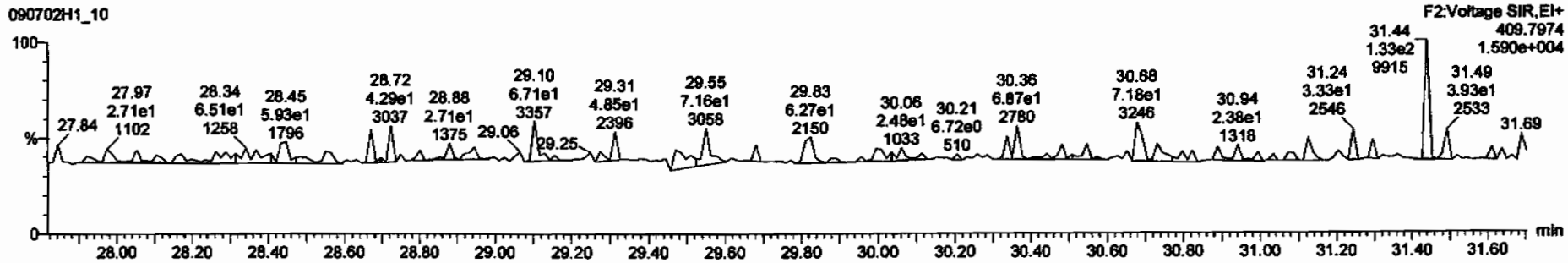

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Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:18 Pacific Daylight Time

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

1,2,3,4,7,8-HxCDF

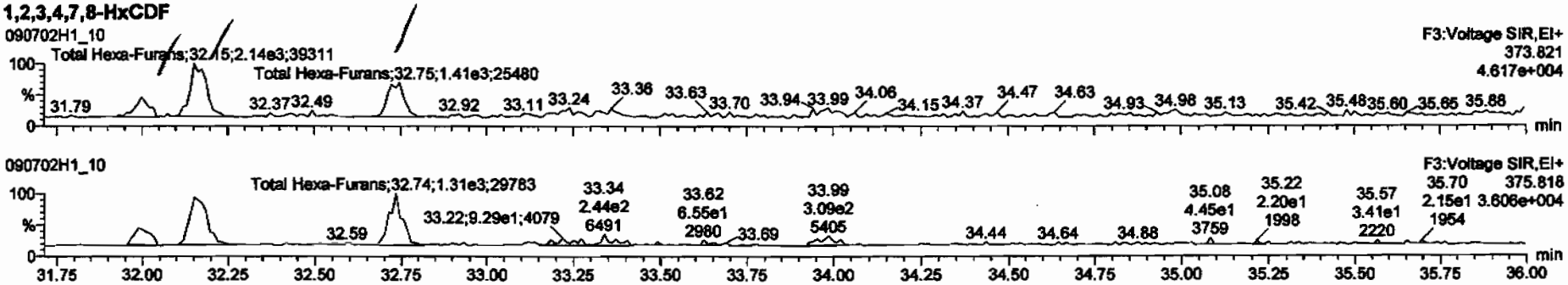

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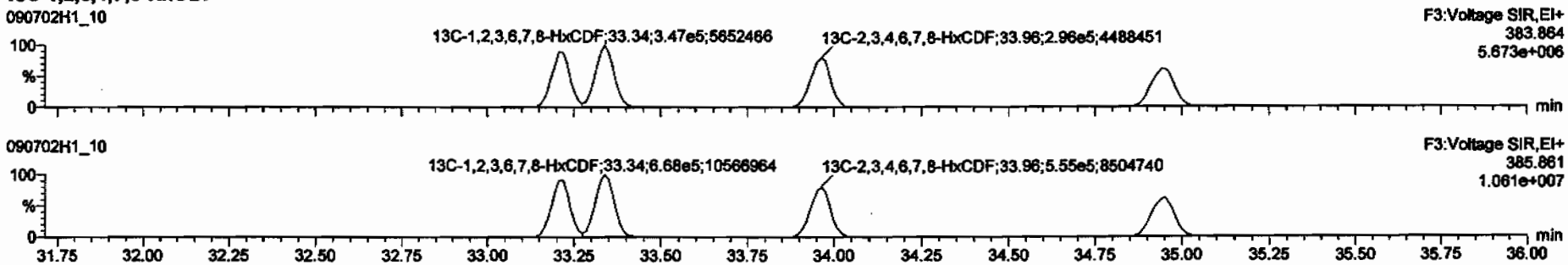

DPE3

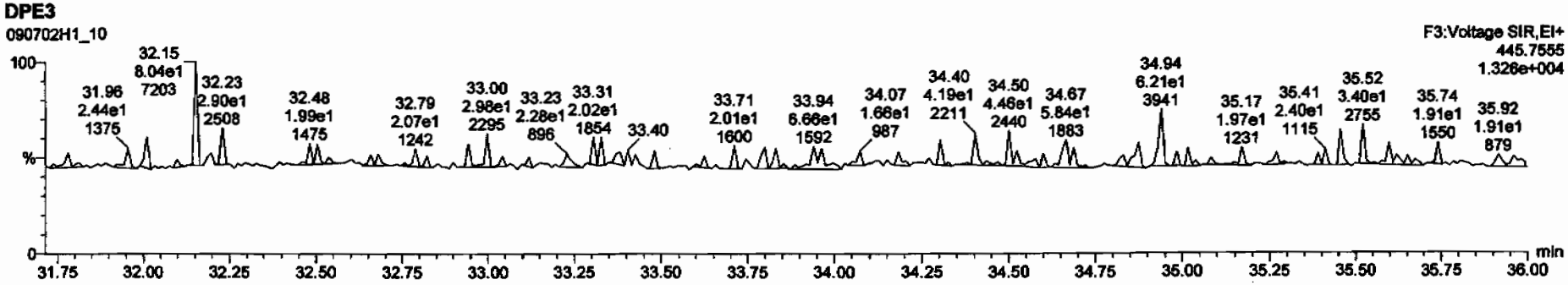

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Printed: Monday, July 06, 2009 13:17:18 Pacific Daylight Time

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

1,2,3,4,6,7,8-HpCDF

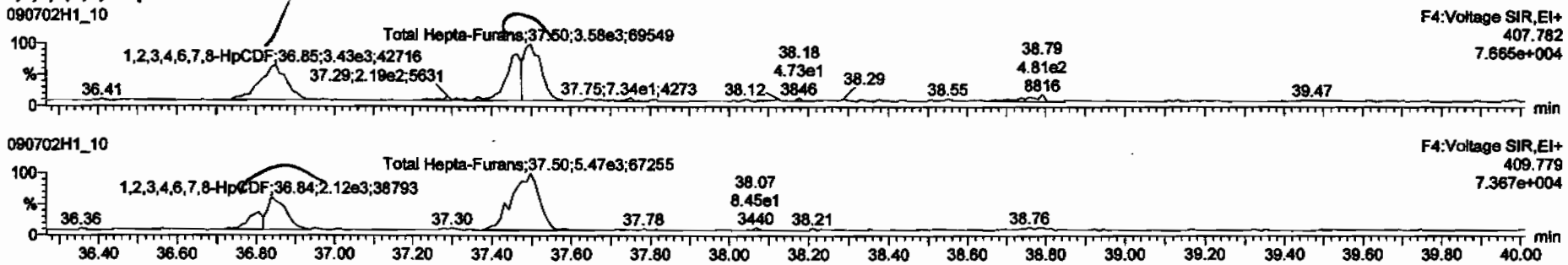

13C-1,2,3,4,6,7,8-HpCDF

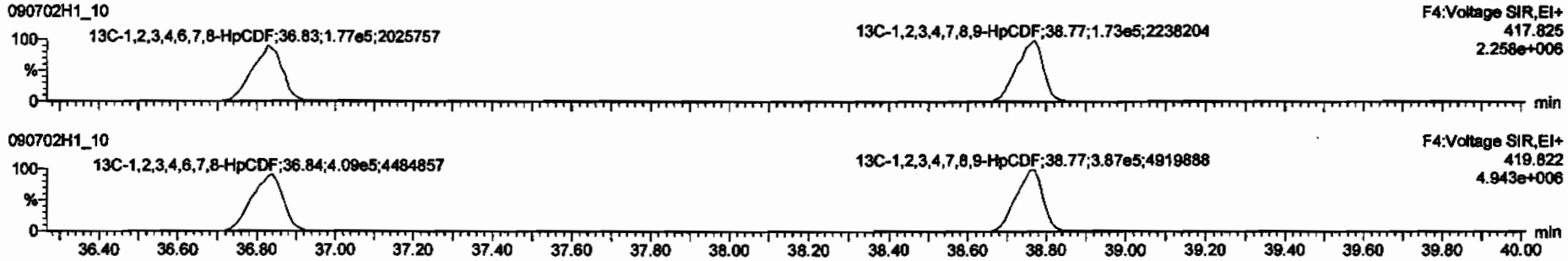

DPE4

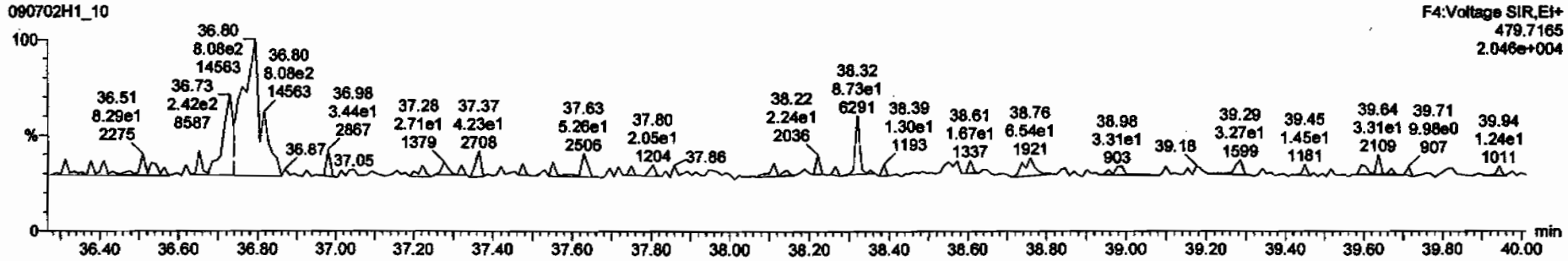

TargetLynx - 090702h1-10.qtd - [Chromatogram]

1,2,3,4,6,7,8-HpCDF	36.85	4.272e4	3.892e4	3.428e3	3.024e3	1.13	NO	6.452e3	1.29	1.29
Total Hepta-Furans	37.50	6.959e4	6.726e4	5.970e3	5.470e3	1.09	NO	1.144e4	2.34	2.34

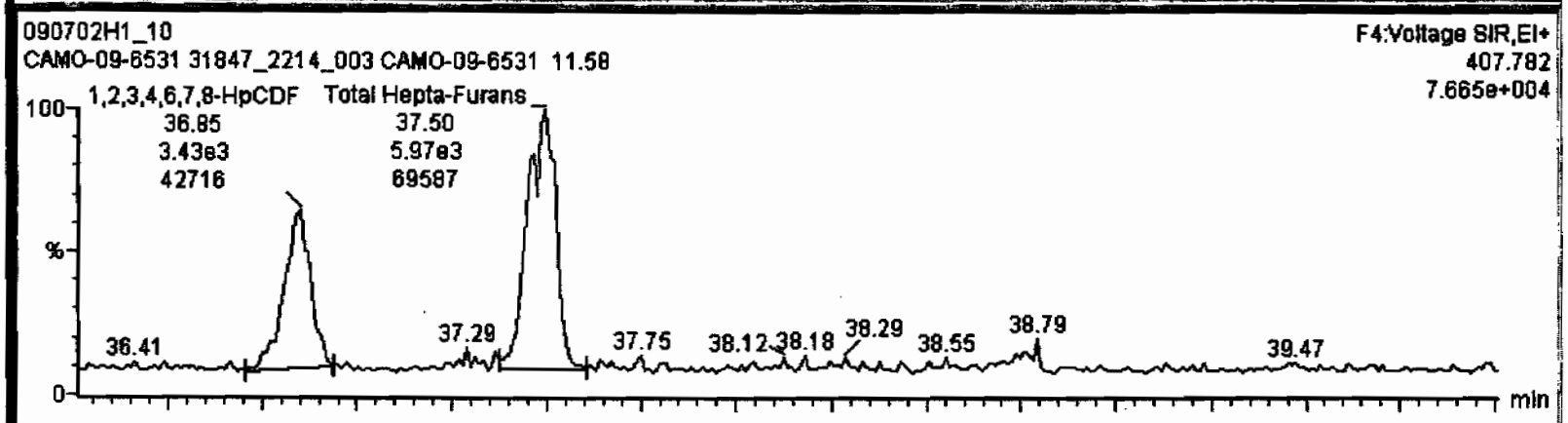

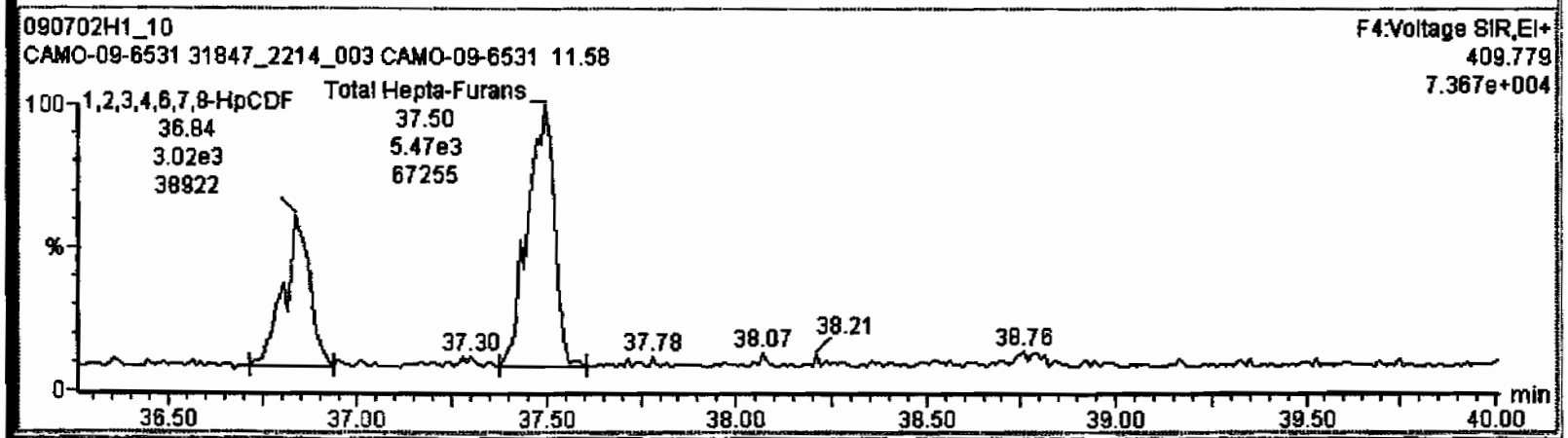

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Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:18 Pacific Daylight Time

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

OCDF

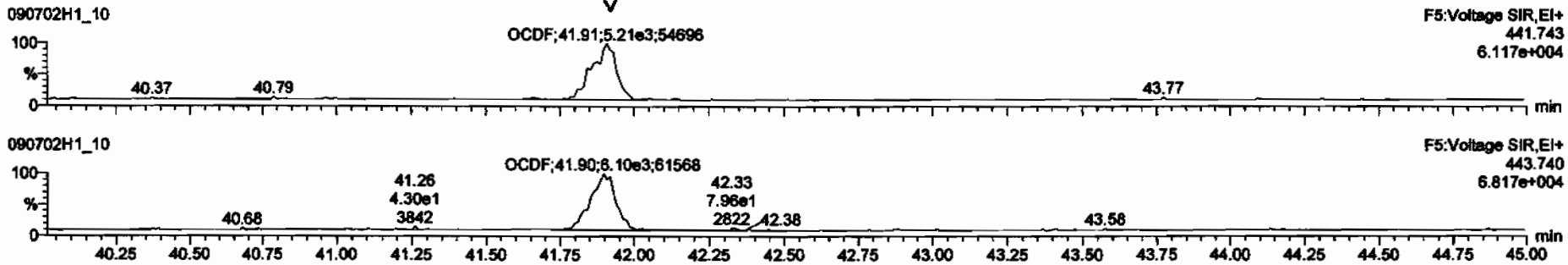

13C-OCDF

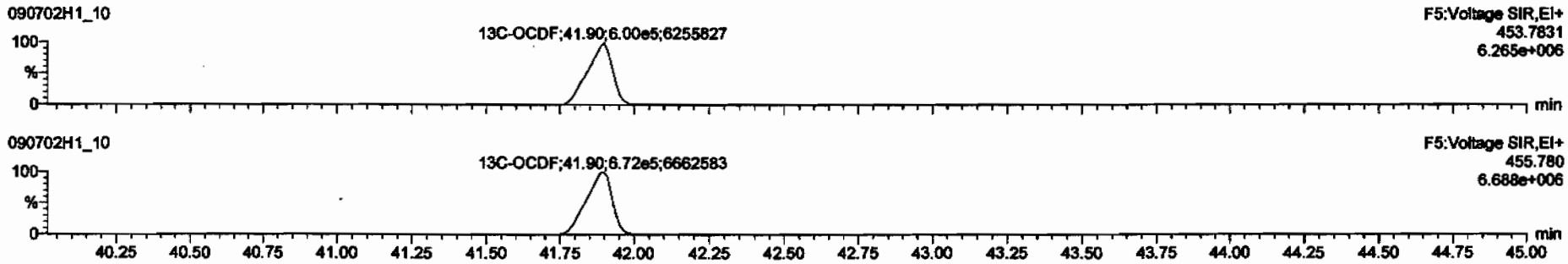

DPE5

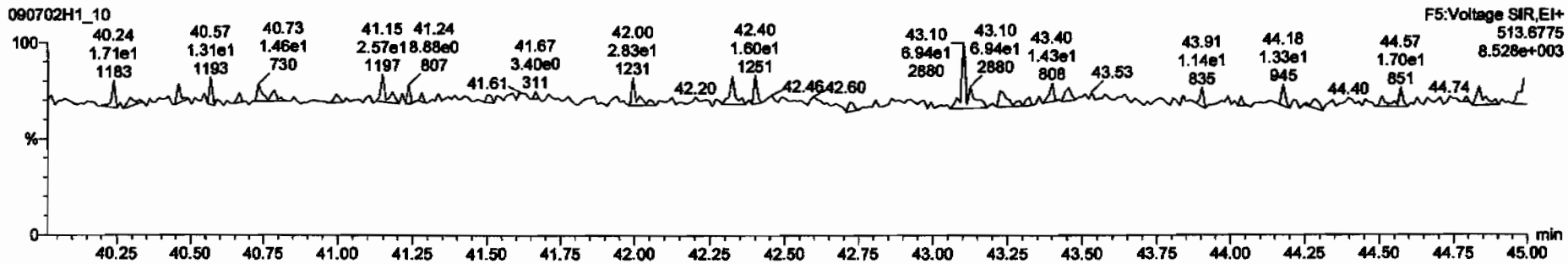

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Last Altered: Monday, July 06, 2009 13:17:02 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:18 Pacific Daylight Time

Name: 090702H1_10, Date: 02-Jul-2009, Time: 21:49:03, ID: 31847_2214_003 CAMO-09-6531 11.58, Description: CAMO-09-6531

PFK1

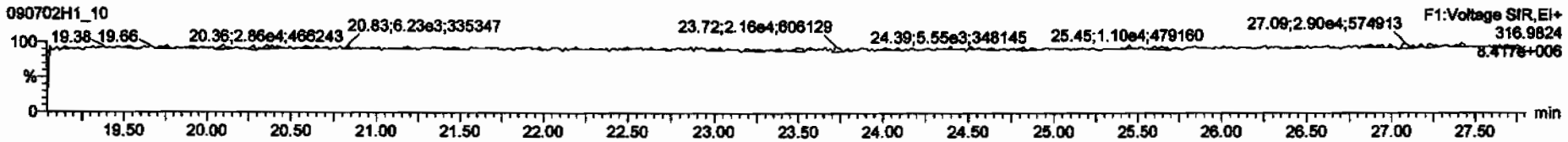

PFK2

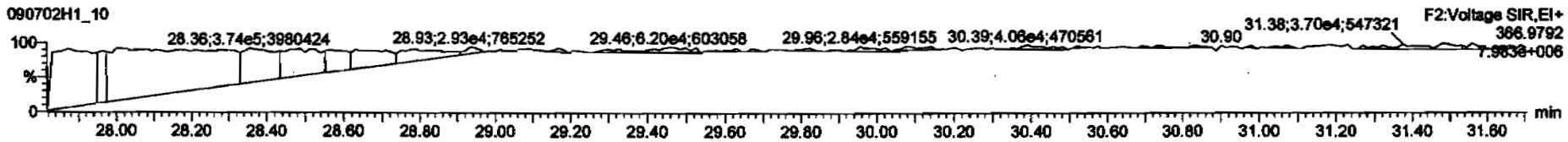

PFK3

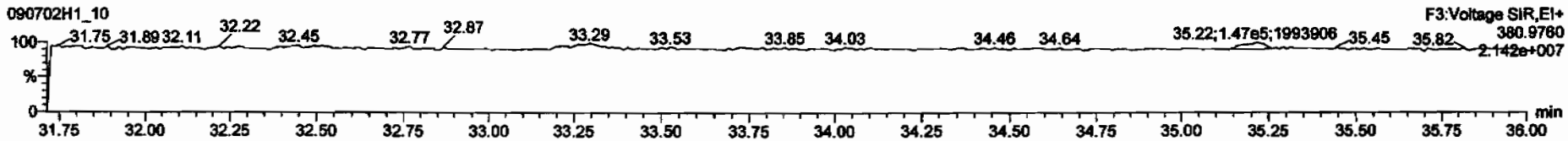

PFK4

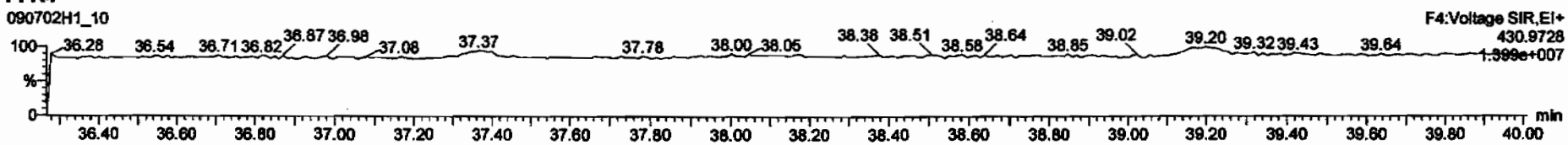

PFK5

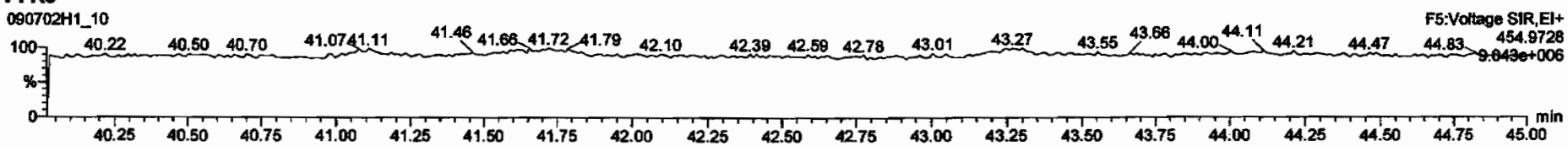

CALIBRATION DATA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION
CCAL ID: ST090702H1-1

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

GC Column ID: DB-5
Analysis Date: 02-Jul-09 Analysis Time: 14:22:39

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	9.09	7.8 8.2	12.9 12.3 (4)	Yes	8.00	12.0	Yes
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	45.5	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	45.5	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	45.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	NO	43.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	90.1	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	NO	8.34	8.4 8.6	12.0 11.6 (4)	No	8.00	12.0	Yes
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	41.5	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	41.7	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	44.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.7	44.0	57.0	No	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.8	44.0	57.0	No	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.8	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.4	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	45.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.90	0.76-1.02	NO	87.8	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/2/09

8290 only

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

CCAL ID: ST090702H1-1

GC Column ID: DB-5
Analysis Date: 02-Jul-09 Analysis Time: 14:22:39

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	107	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	99.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	93.1	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	105	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.90	0.76-1.02	NO	226	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	NO	103	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	NO	97.5	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	104	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	93.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	94.8	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	96.5	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	NO	93.4	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	98.9	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.89	0.76-1.02	NO	206	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.96	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/2/09

8290 only

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:05:37 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:05:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.70
2	1,2,8,9-TCDD (Last)	26.95
3	1,2,4,7,9-PeCDD (First)	28.58
4	1,2,3,8,9-PeCDD (Last)	31.09
5	12,4,6,7,9-HxCDD (First)	32.56
6	1,2,3,7,8,9-HxCDD (Last)	34.57
7	1,2,3,4,6,7,9-HpCDD (First)	37.27
8	1,2,3,4,6,7,8-HpCDD (Last)	38.20
9	1,3,6,8-TCDF (First)	20.60
10	1,2,8,9-TCDF (Last)	27.12
11	1,3,4,6,8-PeCDF (First)	27.02
12	1,2,3,8,9-PeCDF (Last)	31.35
13	1,2,3,4,6,8-HxCDF (First)	32.01
14	1,2,3,4,8,9-HxCDF (Last)	34.96
15	1,2,3,4,6,7,8-HpCDF (First)	36.84
16	1,2,3,4,7,8,9-HpCDF (Last)	38.77

7/2/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

CCAL ID: ST090702H1-1
GC Column ID: DB-5
Analysis Date: 02-Jul-09
Analysis Time: 14:22:39

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]
Date: 7/2/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090702H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090702H1_1

Analysis Date: 02-Jul-09

Analysis Time: 14:22:39

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.962	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.012	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/2/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:16:13 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	6.17e4	0.79	NO	1.08	1.000	26.08	1.001	9.0888	90.9	0.0376	9.0888
2	1,2,3,7,8-PeCDD	2.25e5	0.61	NO	1.03	1.000	30.72	1.000	45.521	91.0	0.0790	45.521
3	1,2,3,4,7,8-HxCDD	1.91e5	1.23	NO	1.00	1.000	34.15	1.001	45.479	91.0	0.198	45.479
4	1,2,3,6,7,8-HxCDD	1.96e5	1.26	NO	1.13	1.000	34.26	1.000	45.639	91.3	0.208	45.639
5	1,2,3,7,8,9-HxCDD	2.08e5	1.23	NO	1.10	1.000	34.57	1.009	47.045	94.1	0.196	47.045
6	1,2,3,4,6,7,8-HpCDD	1.54e5	1.02	NO	1.06	1.000	38.20	1.000	43.741	87.5	0.248	43.741
7	OCDD	2.69e5	0.90	NO	1.18	1.000	41.66	1.001	90.062	90.1	0.200	90.062
8	2,3,7,8-TCDF	8.19e4	0.75	NO	1.09	1.000	25.30	1.001	8.3365	83.4	0.0318	8.3365
9	1,2,3,7,8-PeCDF	3.82e5	1.58	NO	1.16	1.000	29.48	1.000	41.481	83.0	0.0940	41.481
10	2,3,4,7,8-PeCDF	3.53e5	1.57	NO	1.12	1.000	30.43	1.000	41.664	83.3	0.0968	41.664
11	1,2,3,4,7,8-HxCDF	3.37e5	1.25	NO	1.41	1.000	33.23	1.000	44.011	88.0	0.103	44.011
12	1,2,3,6,7,8-HxCDF	3.36e5	1.26	NO	1.22	1.000	33.36	1.001	43.657	87.3	0.108	43.657
13	2,3,4,6,7,8-HxCDF	2.96e5	1.27	NO	1.28	1.000	33.98	1.000	43.754	87.5	0.132	43.754
14	1,2,3,7,8,9-HxCDF	2.56e5	1.26	NO	1.26	1.000	34.96	1.000	44.823	89.6	0.172	44.823
15	1,2,3,4,6,7,8-HpCDF	2.71e5	1.05	NO	1.69	1.000	36.84	1.000	44.449	88.9	0.201	44.449
16	1,2,3,4,7,8,9-HpCDF	2.16e5	1.05	NO	1.48	1.000	38.77	1.000	45.539	91.1	0.218	45.539
17	OCDF	3.35e5	0.90	NO	1.10	1.000	41.89	1.001	87.818	87.8	0.124	87.818
18	13C-2,3,7,8-TCDD	6.30e5	0.79	NO	1.01	1.000	26.05	1.022	106.82	107	0.144	
19	13C-1,2,3,7,8-PeCDD	4.79e5	0.63	NO	0.827	1.000	30.71	1.205	99.713	99.7	0.123	
20	13C-1,2,3,4,7,8-HxCDD	4.20e5	1.27	NO	0.916	1.000	34.13	0.988	102.85	103	0.305	
21	13C-1,2,3,6,7,8-HxCDD	3.82e5	1.25	NO	0.921	1.000	34.25	0.991	93.129	93.1	0.303	
22	13C-1,2,3,4,6,7,8-HpCDD	3.31e5	1.05	NO	0.708	1.000	38.19	1.105	104.78	105	0.497	
23	13C-OCDD	5.07e5	0.90	NO	0.503	1.000	41.63	1.205	226.08	113	0.384	
24	13C-2,3,7,8-TCDF	9.03e5	0.78	NO	0.977	1.000	25.28	0.992	106.98	107	0.123	
25	13C-1,2,3,7,8-PeCDF	7.95e5	1.55	NO	0.896	1.000	29.47	1.157	102.56	103	0.208	
26	13C-2,3,4,7,8-PeCDF	7.58e5	1.54	NO	0.900	1.000	30.42	1.194	97.527	97.5	0.208	
27	13C-1,2,3,4,7,8-HxCDF	5.42e5	0.52	NO	1.17	1.000	33.22	0.962	104.03	104	0.386	
28	13C-1,2,3,6,7,8-HxCDF	6.30e5	0.51	NO	1.52	1.000	33.34	0.965	93.007	93.0	0.297	
29	13C-2,3,4,6,7,8-HxCDF	5.28e5	0.52	NO	1.25	1.000	33.96	0.983	94.807	94.8	0.361	
30	13C-1,2,3,7,8,9-HxCDF	4.53e5	0.51	NO	1.05	1.000	34.95	1.012	96.548	96.5	0.428	

7/2/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:16:13 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	3.62e5	0.45	NO	0.868	1.000	38.83	1.066	93.417	93.4	0.449
32	13C-1,2,3,4,7,8,9-HpCDF	3.20e5	0.45	NO	0.727	1.000	38.76	1.122	98.909	98.9	0.536
33	13C-OCDF	6.97e5	0.89	NO	0.760	1.000	41.86	1.212	205.67	103	0.232
34	37Cl-2,3,7,8-TCDD	3.86e4			0.668	1.000	26.08	1.023	9.9558	99.6	0.0608
35	13C-1,2,3,4-TCDD	5.81e5	0.78	NO	1.00	1.000	25.48	0.000	100.00	100	0.146
36	13C-1,2,3,4-TCDF	8.64e5	0.79	NO	1.00	1.000	24.06	0.000	100.00	100	0.120
37	13C-1,2,3,7,8,9-HxCDD	4.46e5	1.25	NO	1.00	1.000	34.55	0.000	100.00	100	0.279

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 06:54:46 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:05:01 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 2,3,7,8-TCDD

090702H1_1	ST090702H1-1 1613 CS3 080917I	02-Jul-09	14:22:39
090702H1_2	0_2214_OPR001	02-Jul-09	15:13:01
090702H1_3	solvent blank	02-Jul-09	16:02:37
090702H1_4	0_2214_MB001	02-Jul-09	16:52:06
090702H1_5	31845_2214_001 CAMO-09-10464 10.61	02-Jul-09	17:41:36
090702H1_6	31845_2214_002 CAMO-09-10465 10.5	02-Jul-09	18:31:05
090702H1_7	31846_2214_001 CAMO-09-9946 12.7	02-Jul-09	19:20:36
090702H1_8	31847_2214_001 CAMO-09-6518 11.68	02-Jul-09	20:10:06
090702H1_9	31847_2214_002 CAMO-09-6519 13.07	02-Jul-09	20:59:34
090702H1_10	31847_2214_003 CAMO-09-6531 11.58	02-Jul-09	21:49:03
090702H1_11	31850_2214_001 CAMO-09-9941 11.19	02-Jul-09	22:38:41
090702H1_12	31850_2214_002 CAMO-09-9942 11.32	02-Jul-09	23:28:16
090702H1_13	31850_2214_003 CAMO-09-9943 11.85	03-Jul-09	00:17:49
090702H1_14	31850_2214_004 CAMO-09-9989 12.48	03-Jul-09	01:07:22
090702H1_15	31850_2214_005 CAMO-09-10030 11.22	03-Jul-09	01:56:54
090702H1_16	solvent blank	03-Jul-09	02:46:25
090702H1_17	ST090702H1-2 1613 CS3 080917I	03-Jul-09	03:35:57

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090702HI-1

End Calibration ID: ST090702HI-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range?	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits	NA	
-S/N > 2.5:1		
-CS1 within 12-hour clock	✓	

Comments: 8290 only

Reviewed by: DMS 7/3/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 mh

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:20:01 Pacific Daylight Time

M 292.9824 R 14449

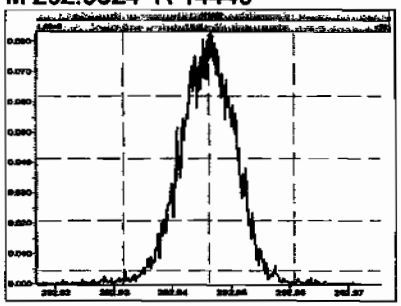

M 304.9824 R 14701

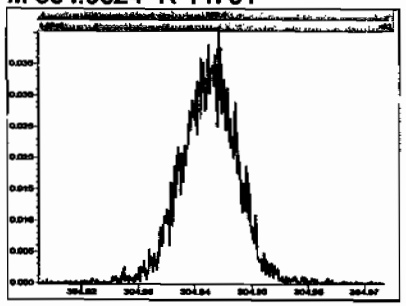

M 318.9792 R 14971

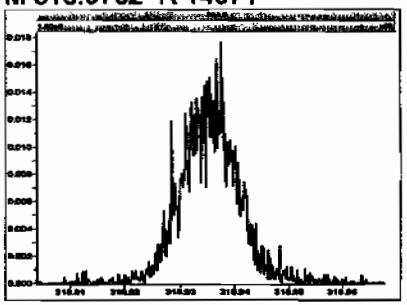

M 330.9792 R 13659

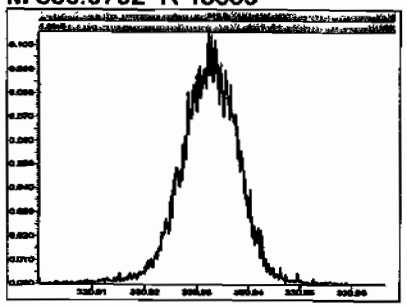

M 342.9792 R 12955

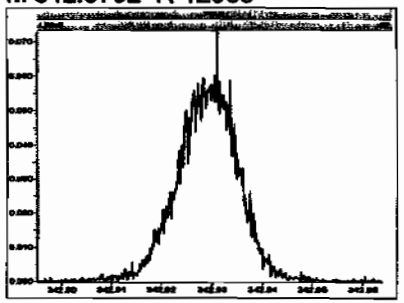

M 354.9792 R 13227

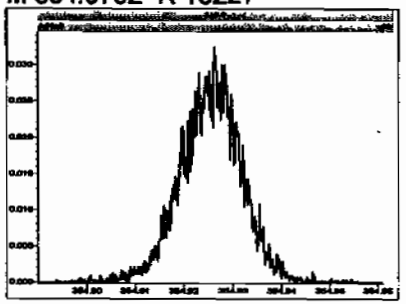

M 366.9792 R 13295

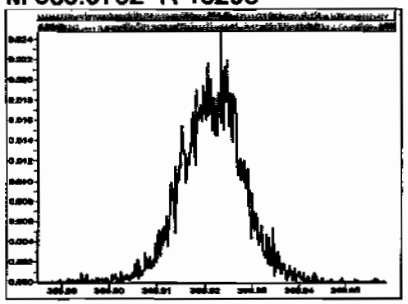

M 380.9760 R 13022

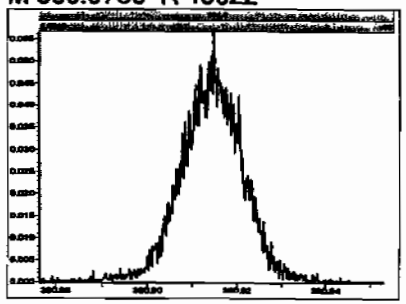

M 392.9760 R 12376

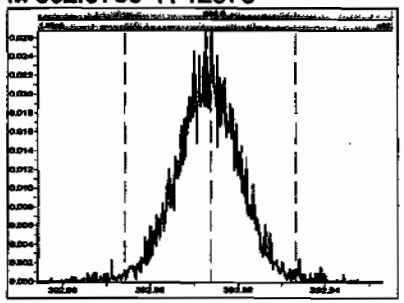

M 404.9760 R 13511

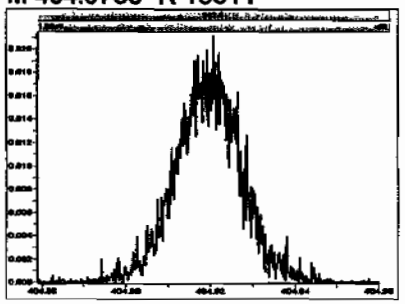

M 416.9760 R 12687

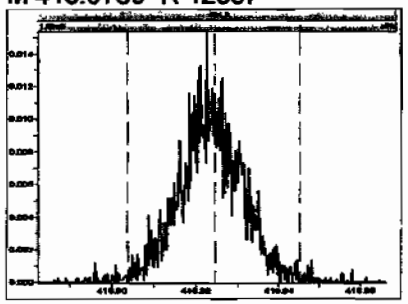

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:20:44 Pacific Daylight Time

M 330.9792 R 14285

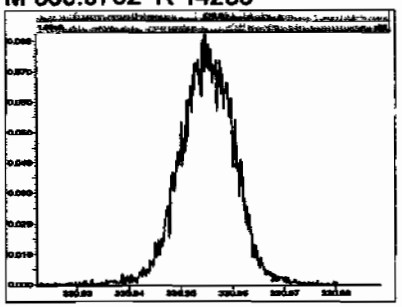

M 342.9792 R 14790

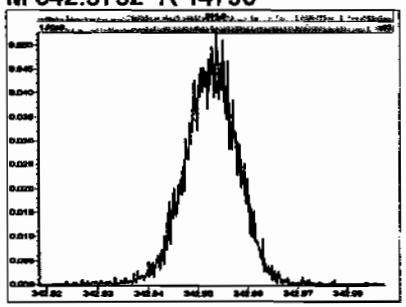

M 354.9792 R 14286

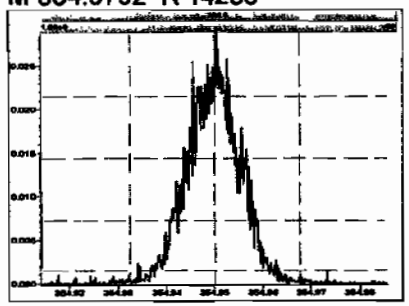

M 366.9792 R 14533

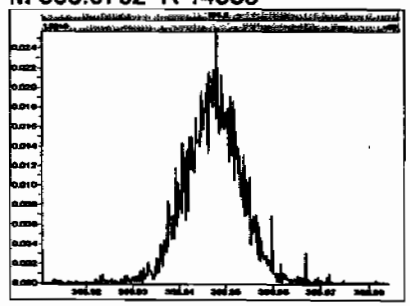

M 380.9760 R 14796

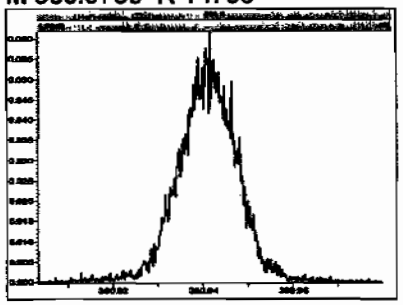

M 392.9760 R 13514

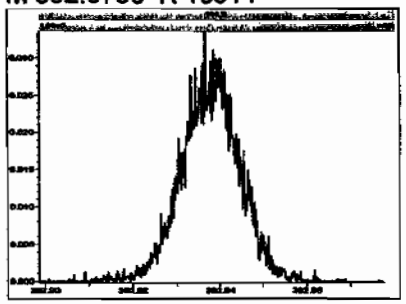

M 404.9760 R 13965

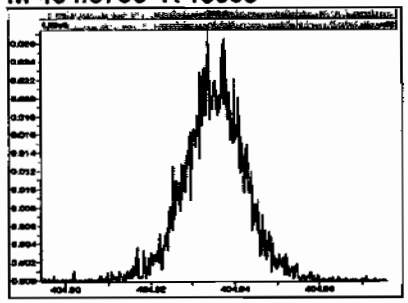

M 416.9760 R 14702

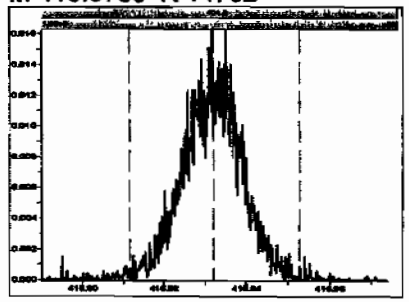

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:21:14 Pacific Daylight Time

M 366.9792 R 15527

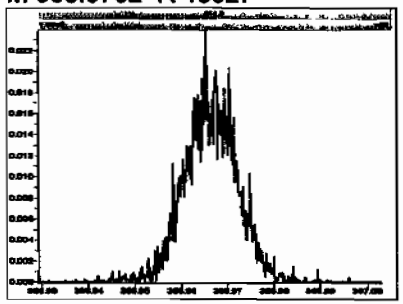

M 380.9760 R 14208

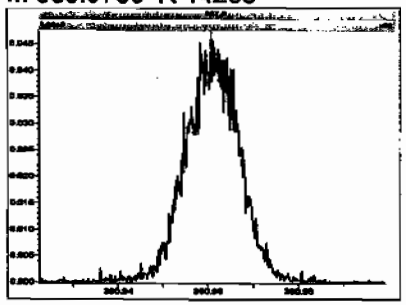

M 392.9760 R 14281

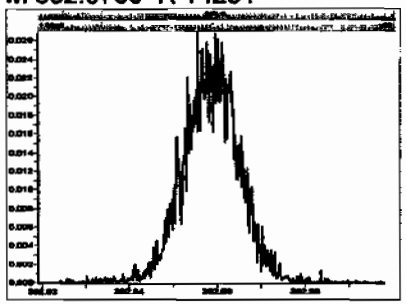

M 404.9760 R 16666

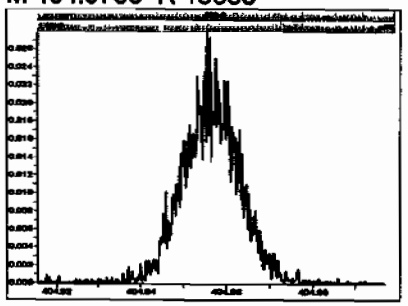

M 416.9760 R 13891

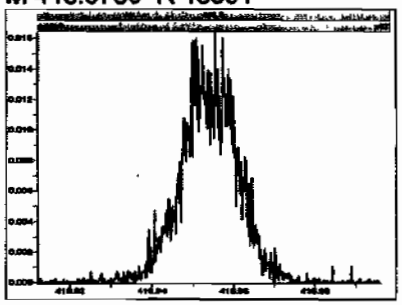

M 430.9728 R 13967

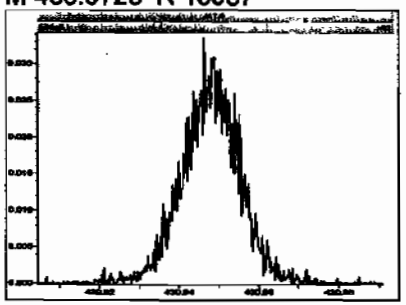

M 442.9728 R 14044

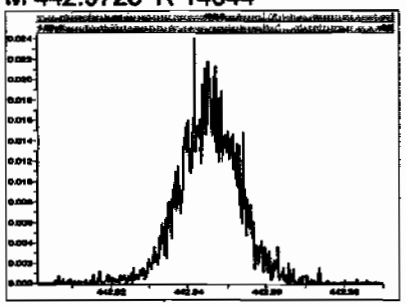

M 454.9728 R 15246

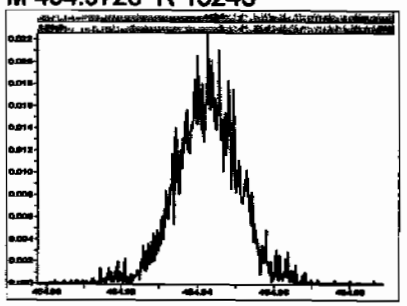

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:21:36 Pacific Daylight Time

M 404.9760 R 16887

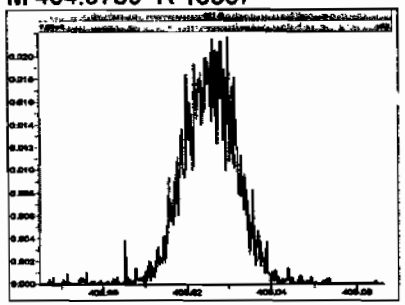

M 416.9760 R 16025

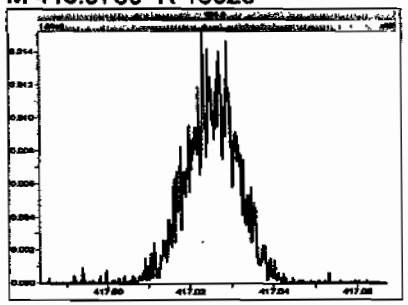

M 430.9728 R 15242

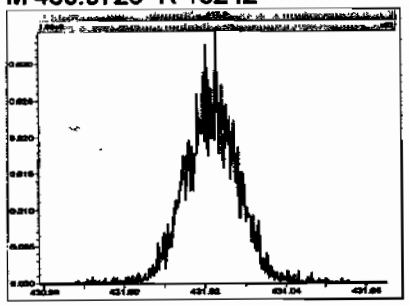

M 442.9728 R 15434

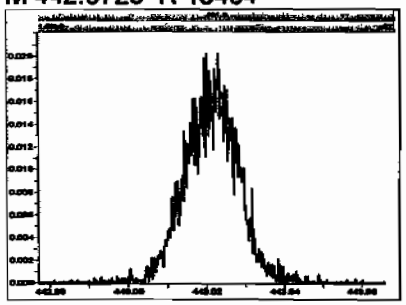

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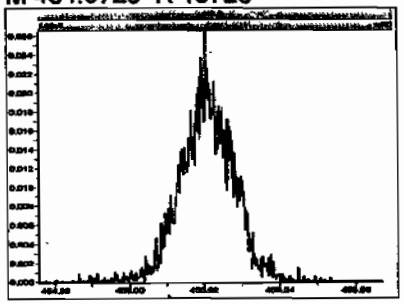

M 466.9728 R 16132

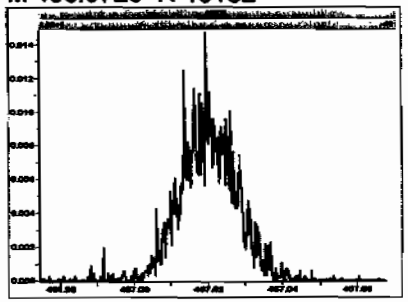

M 480.9696 R 16027

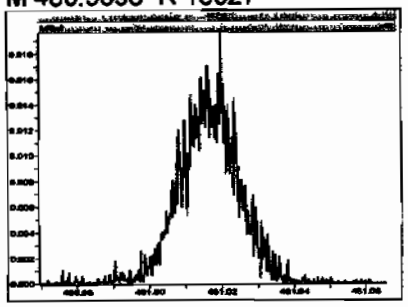

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:22:01 Pacific Daylight Time

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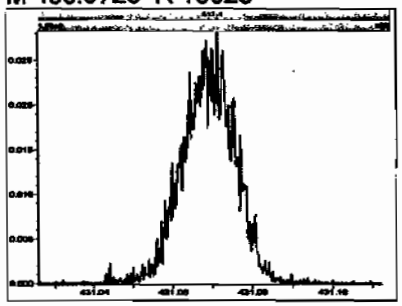

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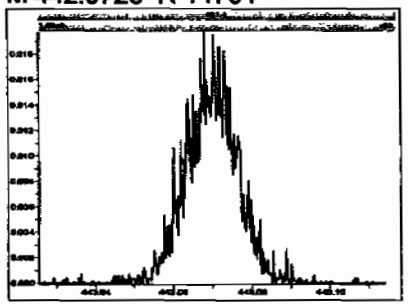

M 454.9728 R 16780

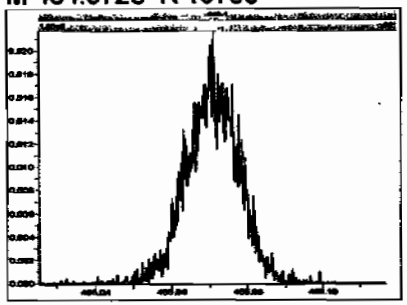

M 466.9728 R 17006

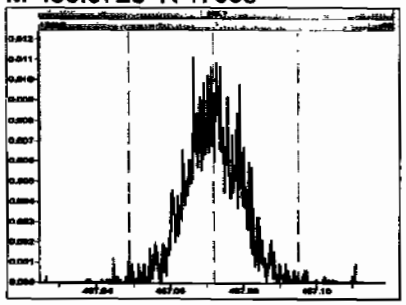

M 480.9696 R 14449

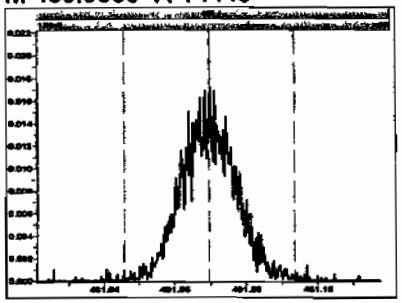

M 492.9696 R 14365

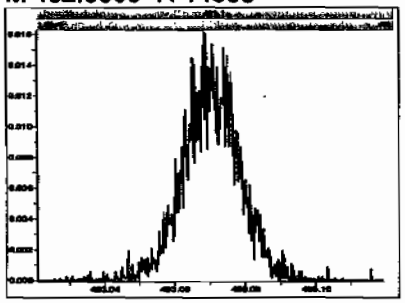

M 504.9696 R 16025

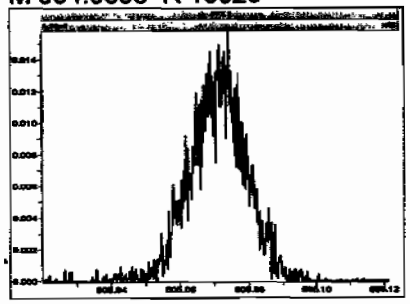

M 516.9697 R 15618

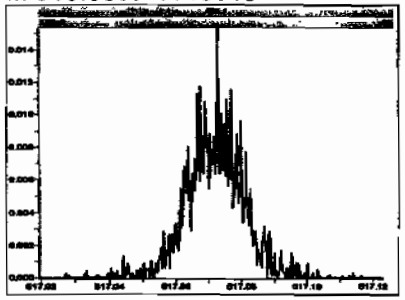

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:05:37 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:05:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

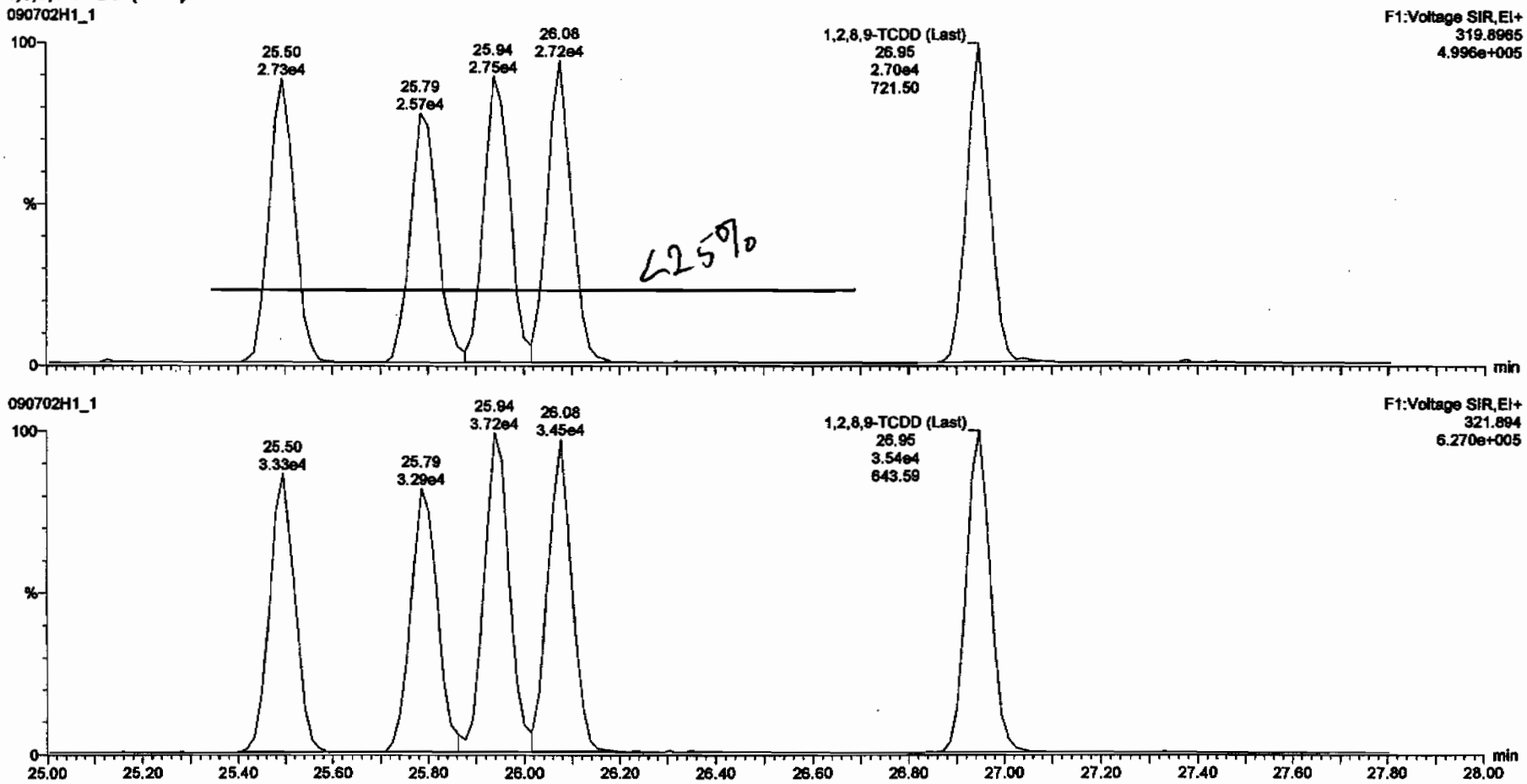

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

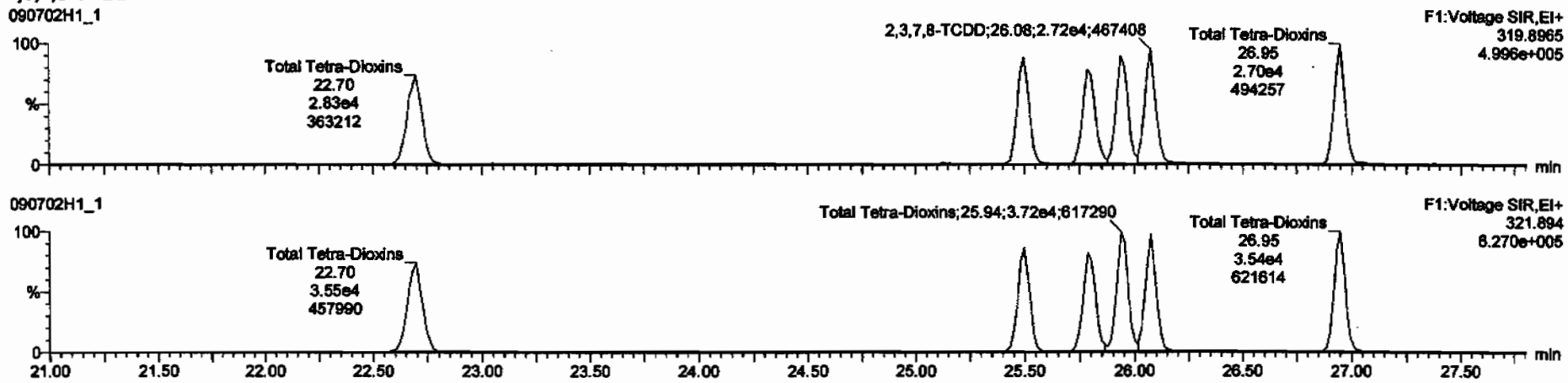

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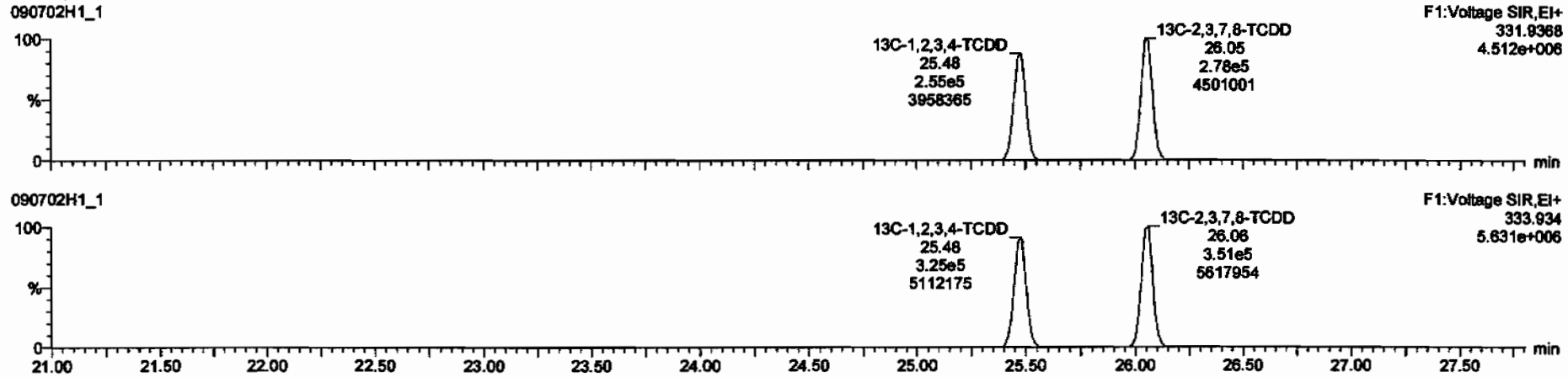

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Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

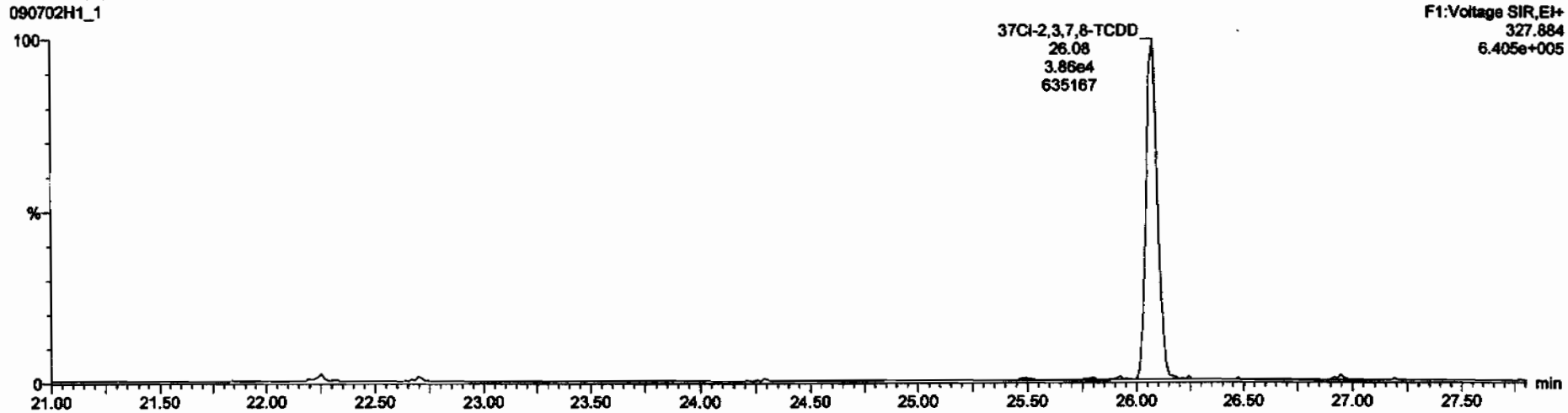

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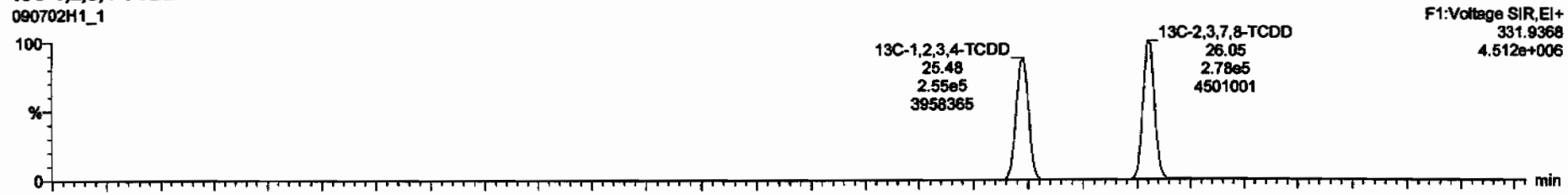

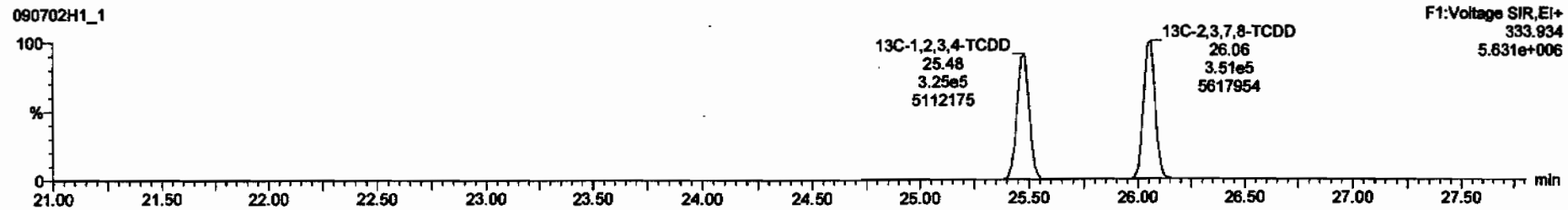

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1,2,3,7,8-PeCDD

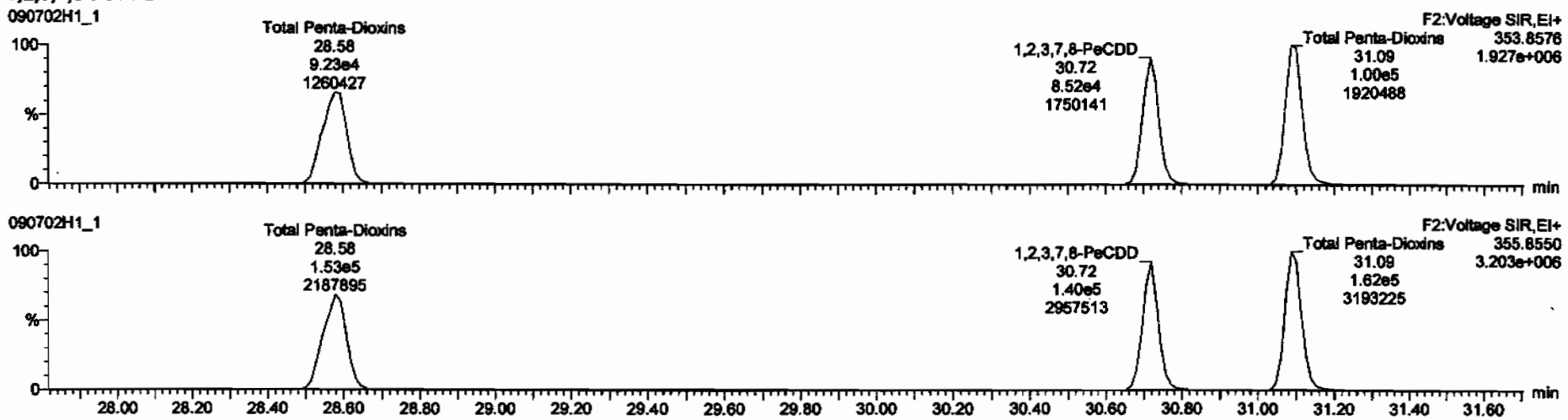

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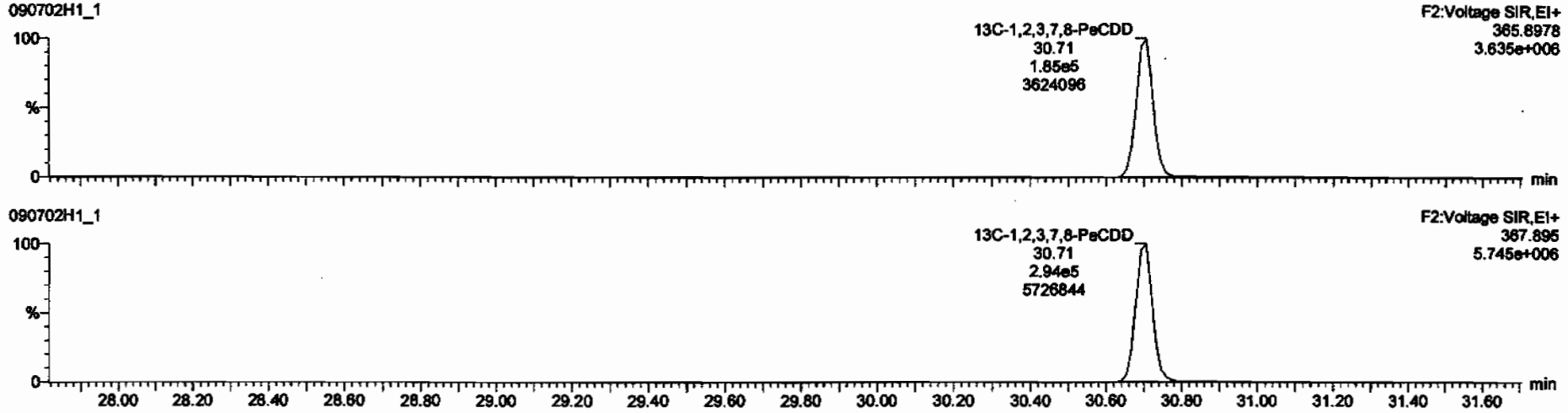

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1,2,3,4,7,8-HxCDD

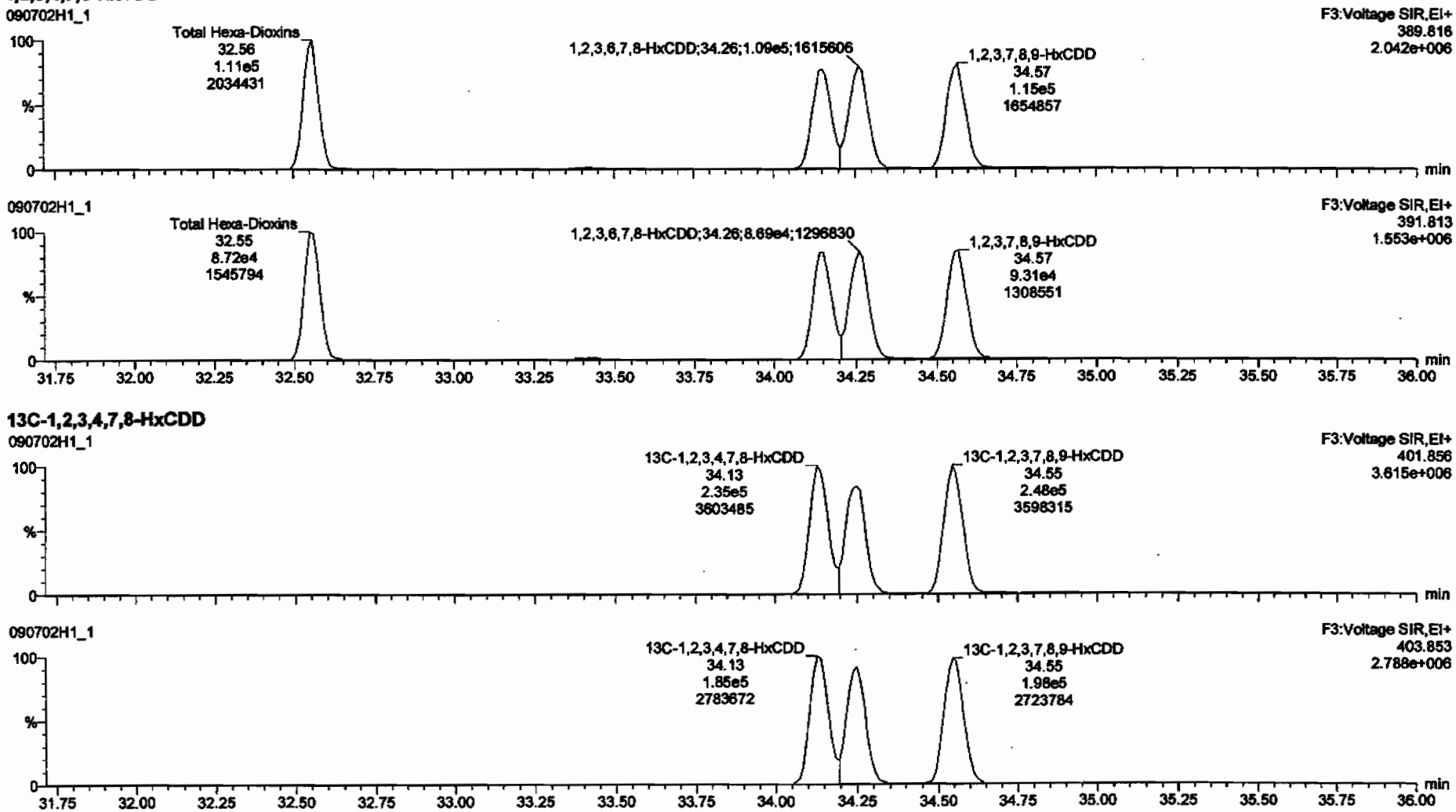

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1,2,3,4,6,7,8-HpCDD

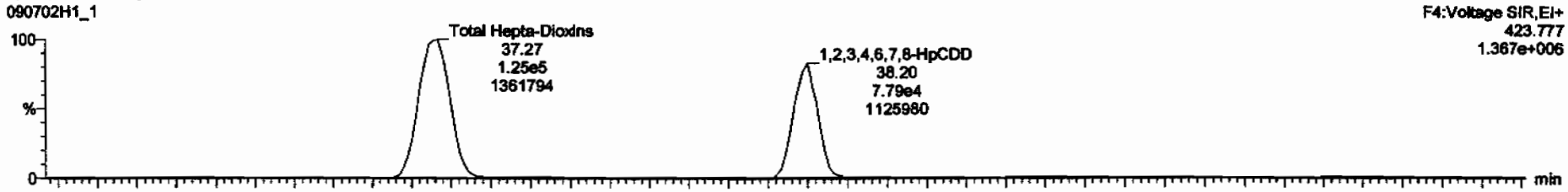

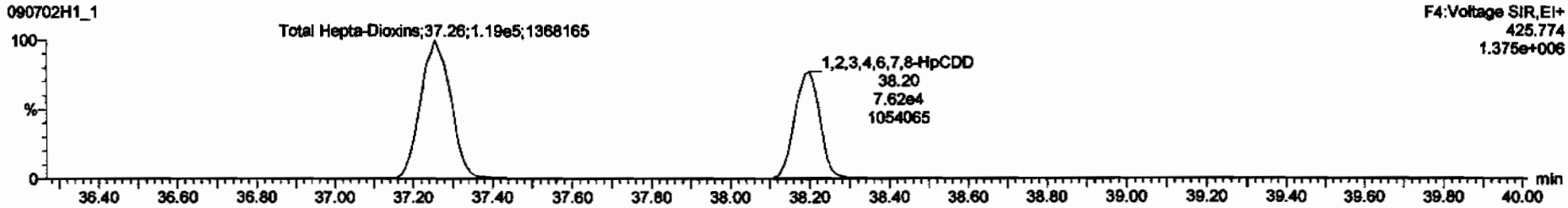

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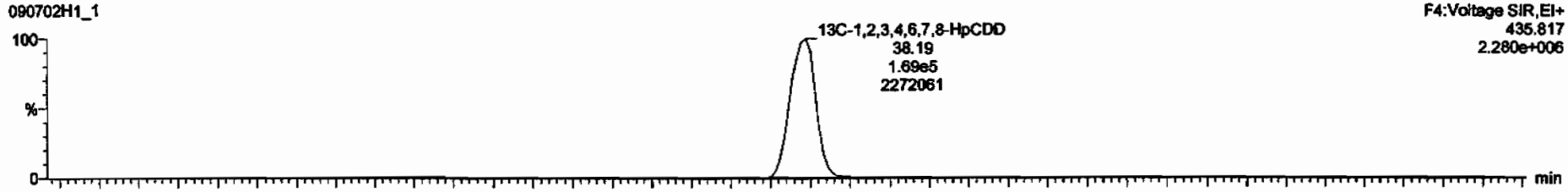

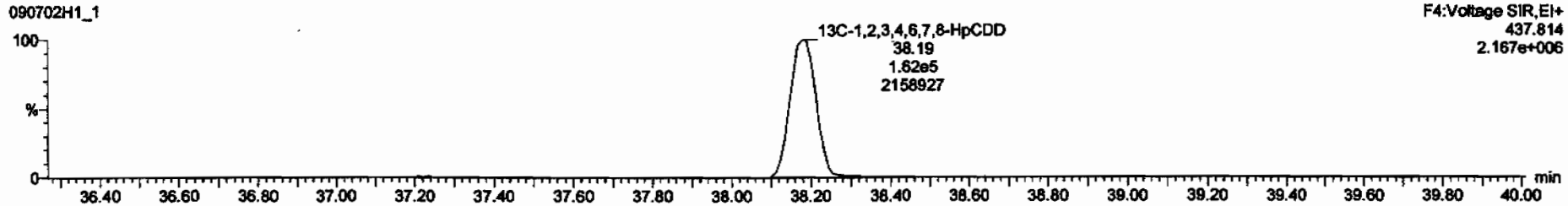

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Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

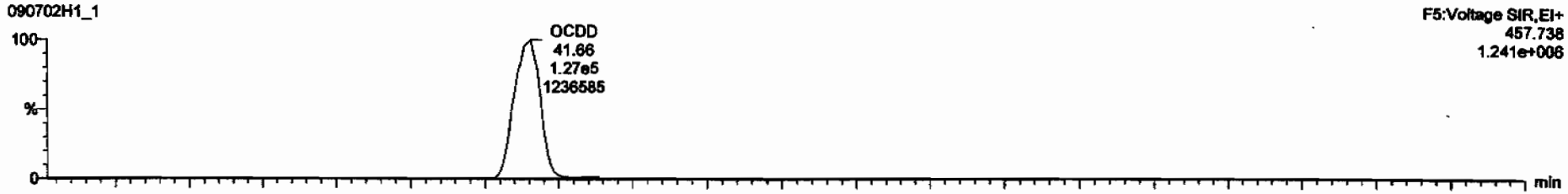

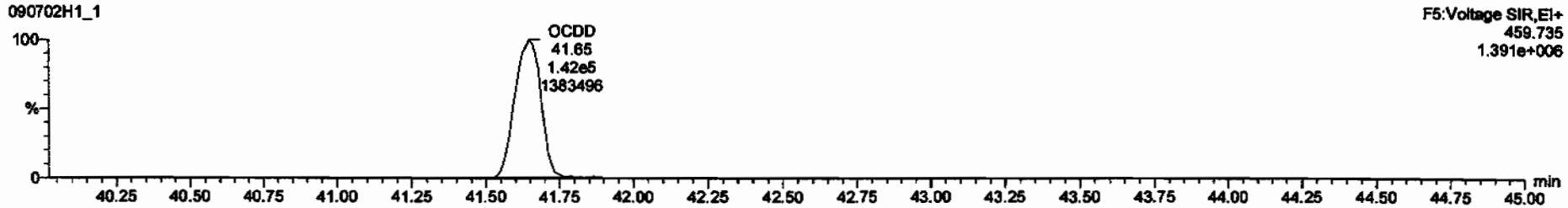

13C-OCDD

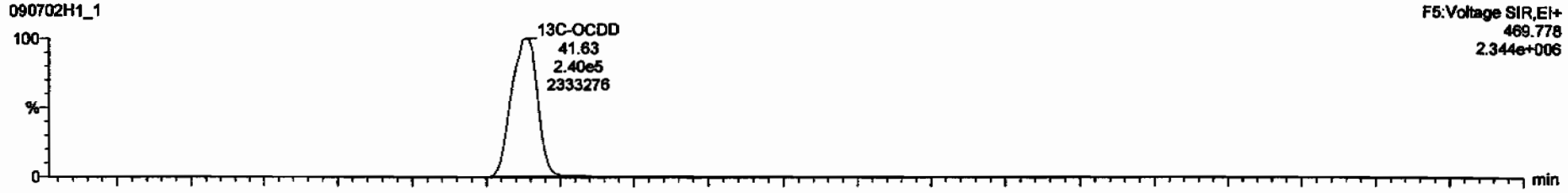

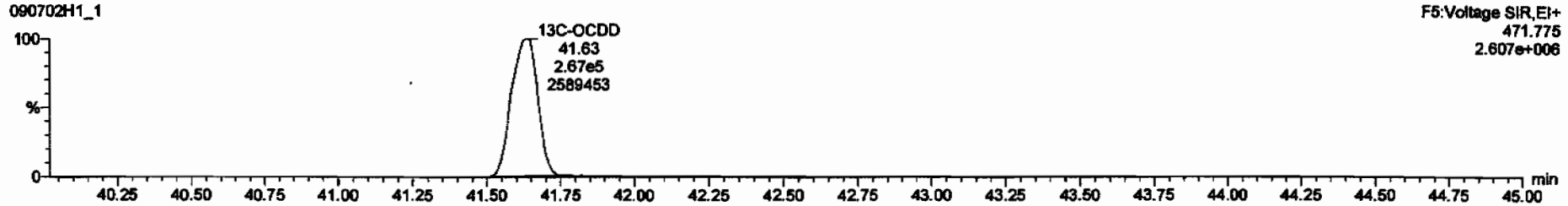

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2,3,7,8-TCDF

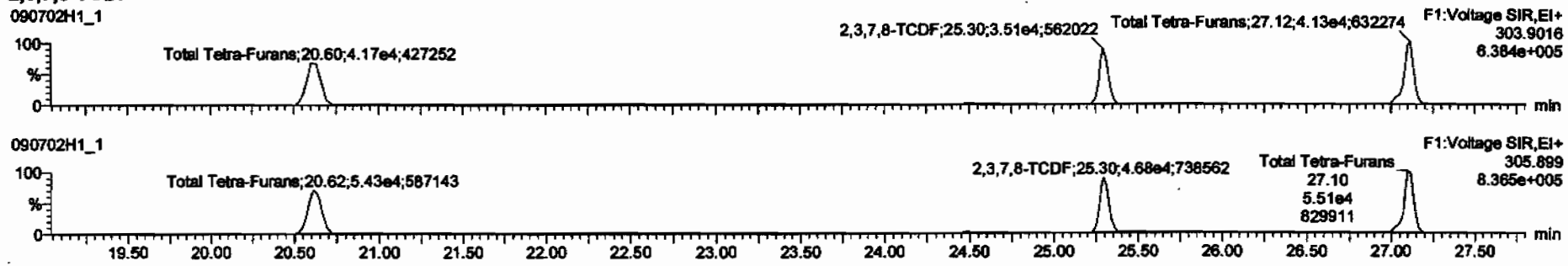

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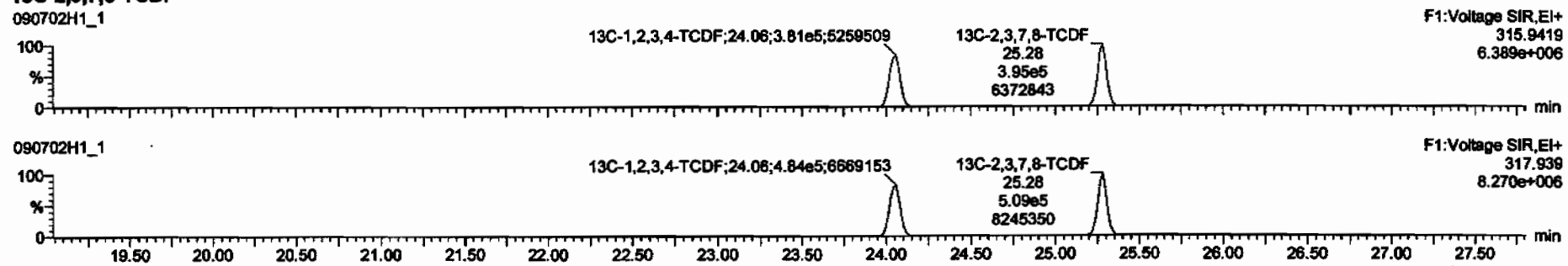

DPE1

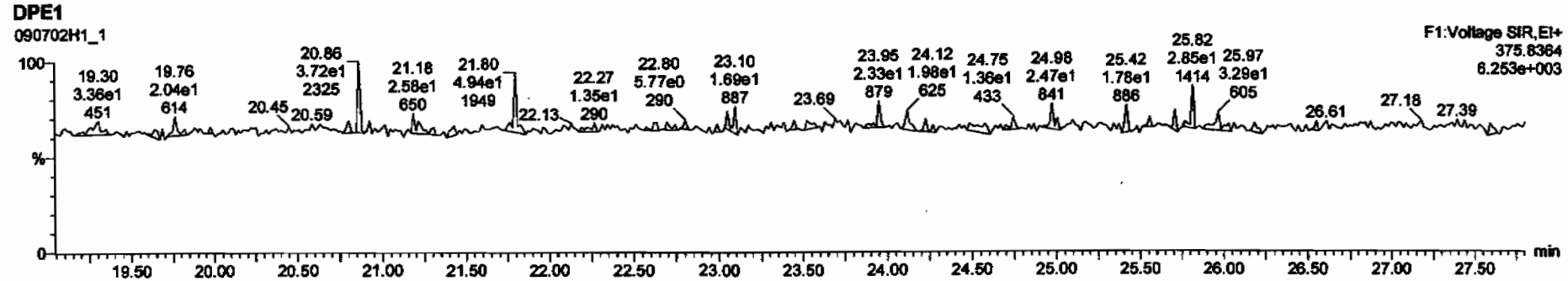

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Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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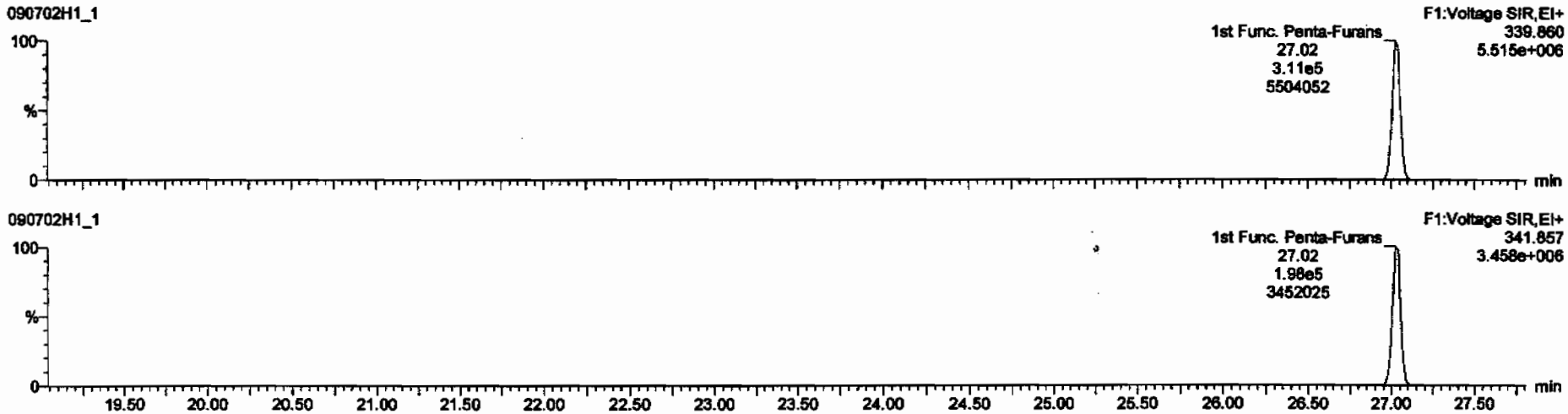

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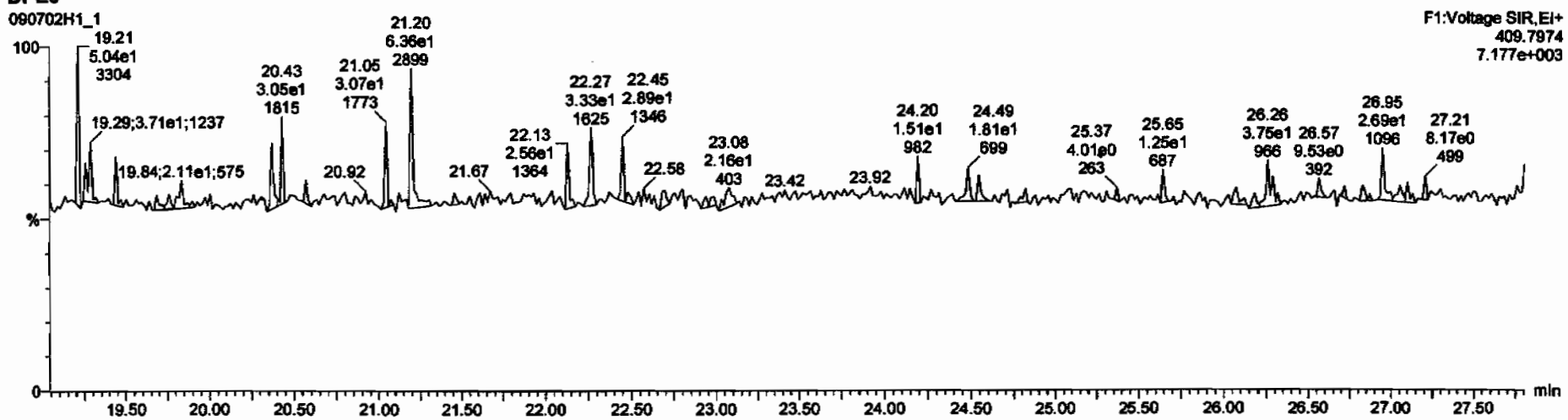

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Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

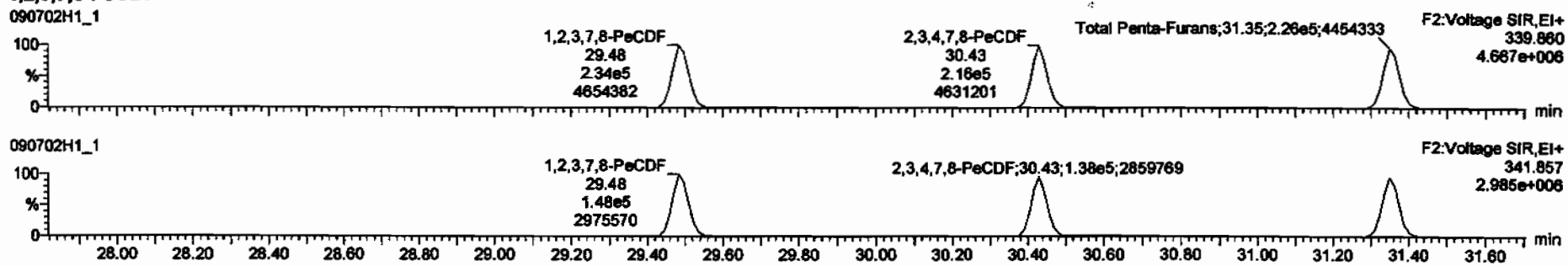

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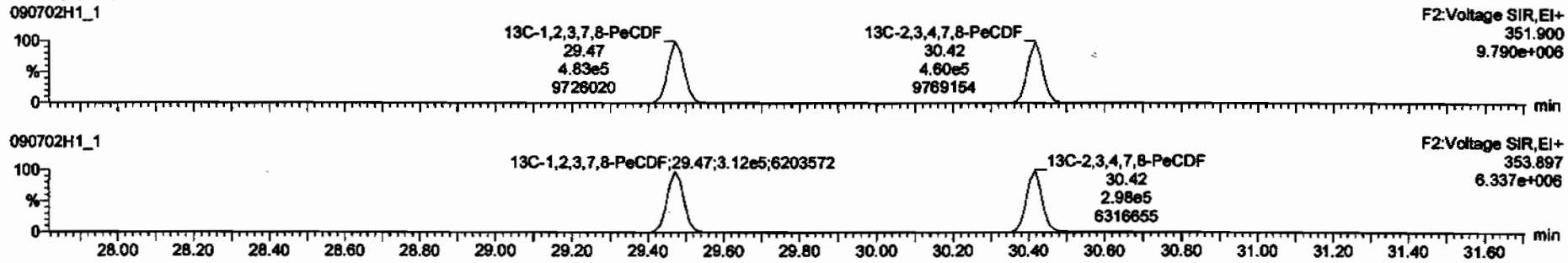

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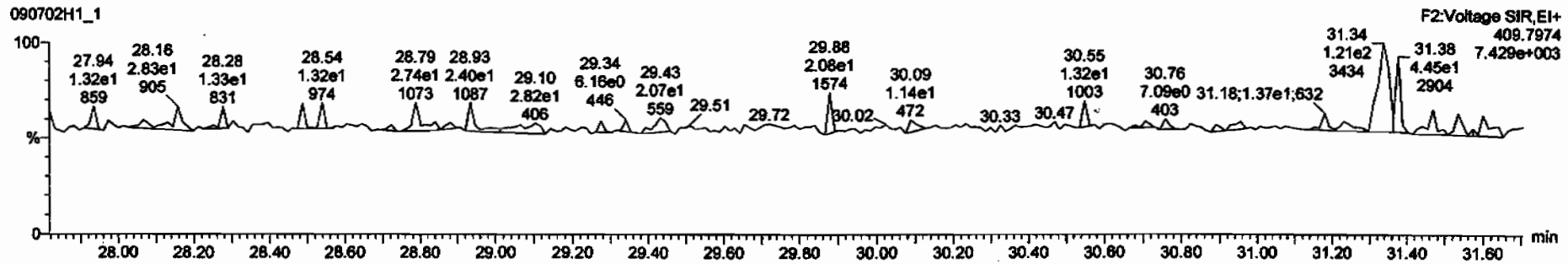

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1,2,3,4,7,8-HxCDF

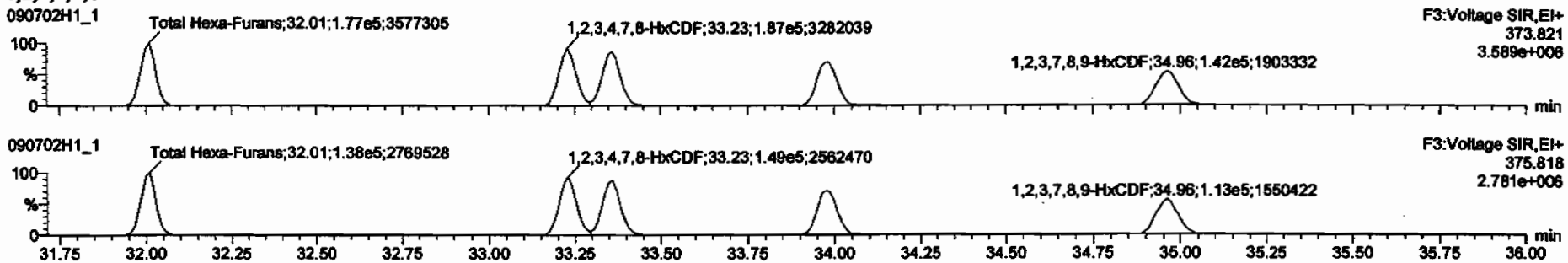

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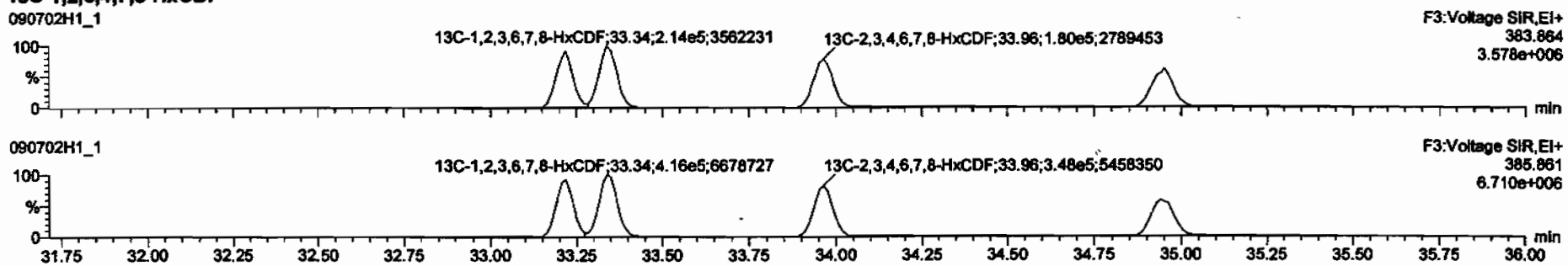

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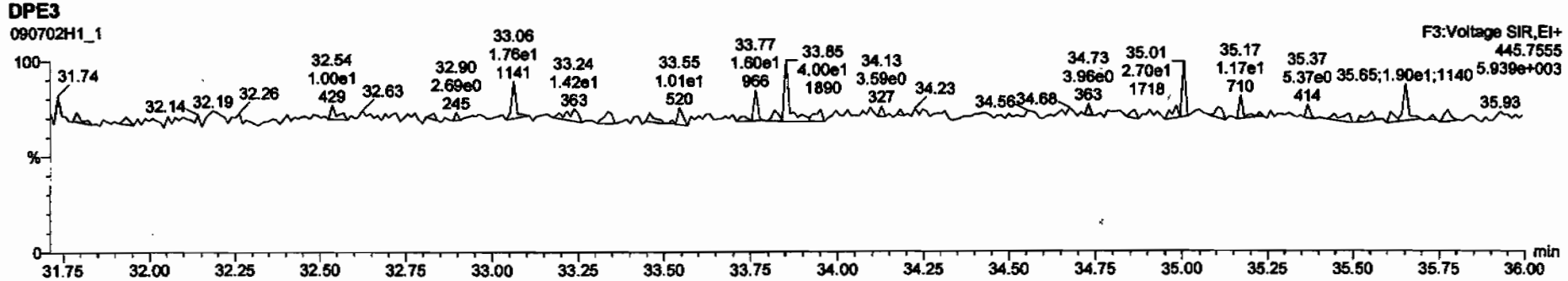

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1,2,3,4,6,7,8-HpCDF

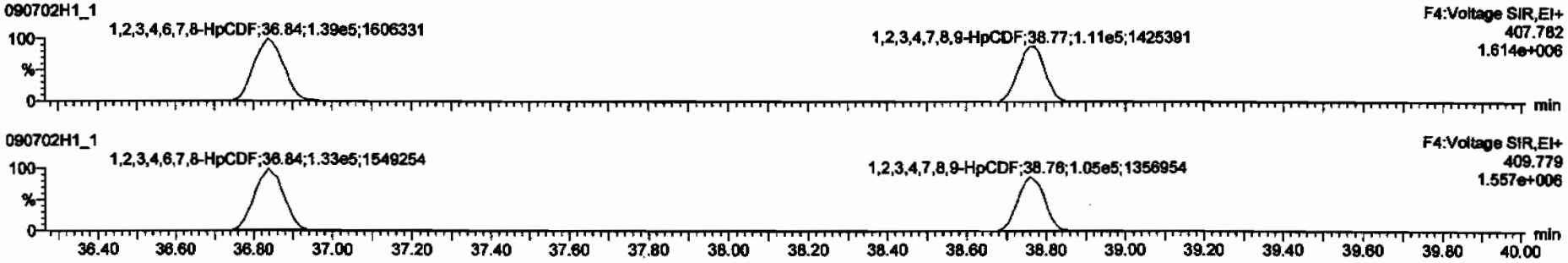

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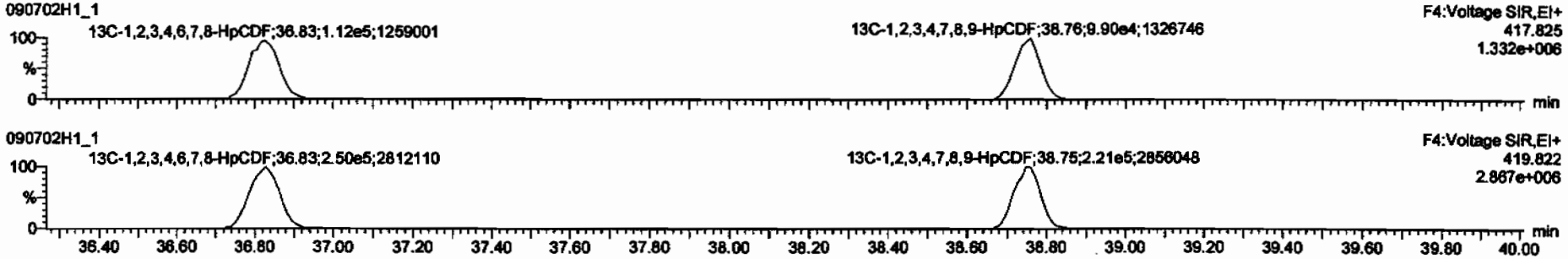

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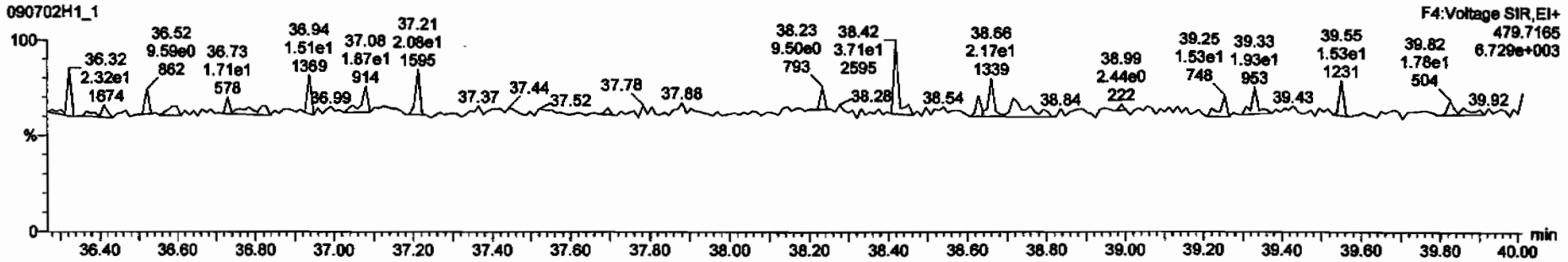

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OCDF

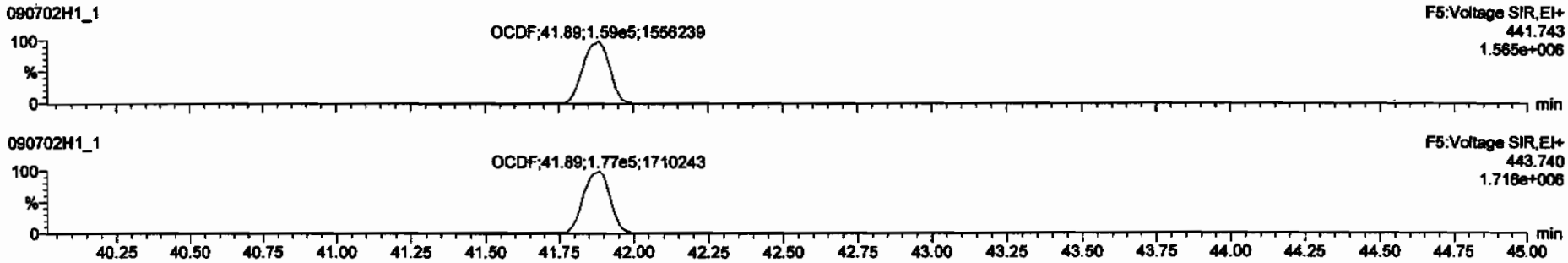

13C-OCDF

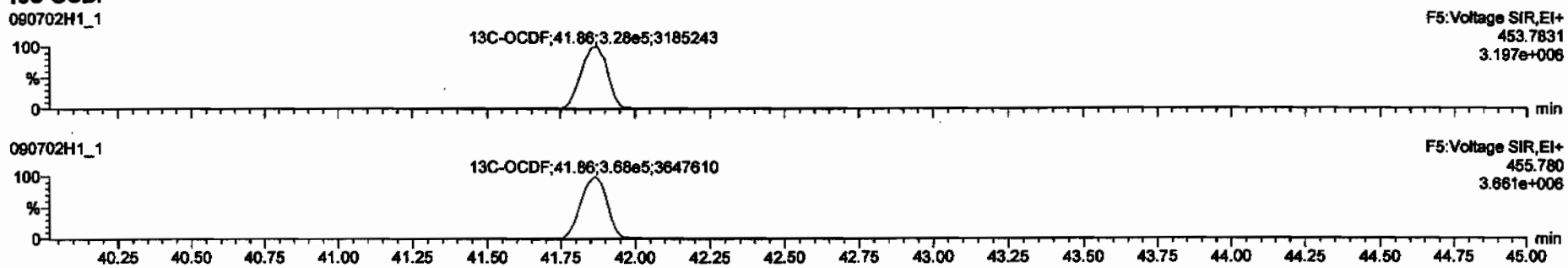

DPE5

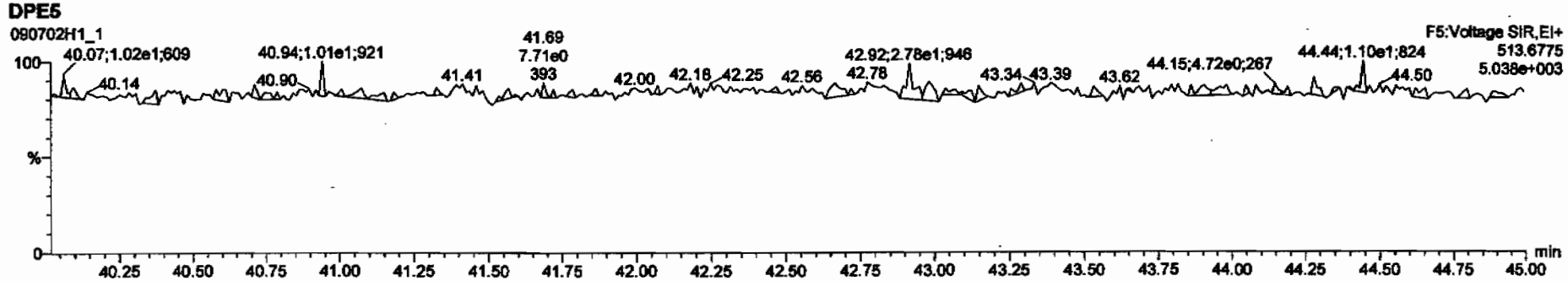

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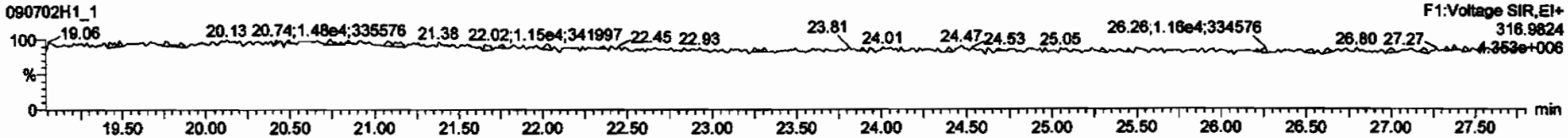

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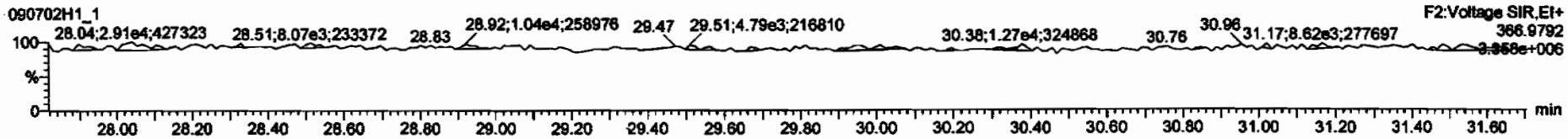

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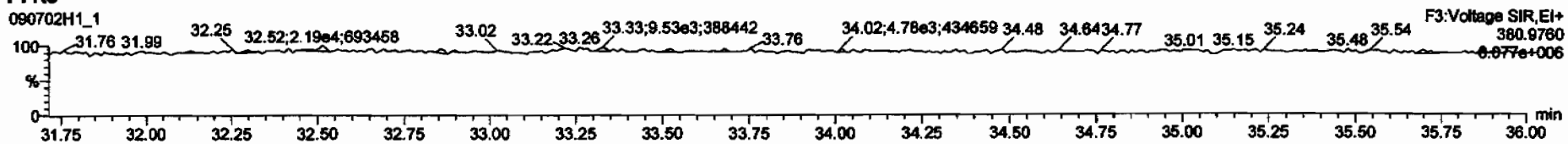

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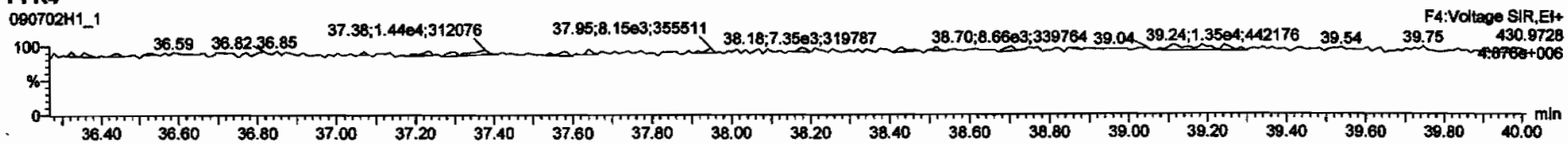

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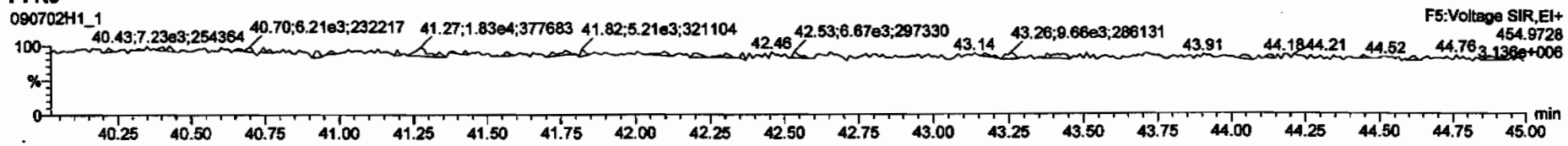

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_17

CCAL ID: ST090702H1-2

GC Column ID: DB-5
Analysis Date: 03-Jul-09 Analysis Time: 03:35:57

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	9.05	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	45.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	45.7	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	47.9	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	43.9	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	88.2	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	NO	8.40	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	41.5	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	40.7	41.0	60.0	No	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.2	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.4	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.9	44.0	57.0	No	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.7	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	43.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	45.3	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	86.1	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [illegible]
Date: 7/3/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_17

CCAL ID: ST090702H1-2

GC Column ID: DB-5
Analysis Date: 03-Jul-09 Analysis Time: 03:35:57

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	97.1	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	101	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	93.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	109	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.88	0.76-1.02	NO	238	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	99.2	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	102	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	87.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	93.1	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	NO	97.5	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	97.0	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.42	0.37-0.51	NO	98.5	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.33	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [illegible]

Date: 7/3/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 07:06:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:06:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.67
2	1,2,8,9-TCDD (Last)	26.93
3	1,2,4,7,9-PeCDD (First)	28.57
4	1,2,3,8,9-PeCDD (Last)	31.09
5	12,4,6,7,9-HxCDD (First)	32.55
6	1,2,3,7,8,9-HxCDD (Last)	34.56
7	1,2,3,4,6,7,9-HpCDD (First)	37.26
8	1,2,3,4,6,7,8-HpCDD (Last)	38.20
9	1,3,6,8-TCDF (First)	20.57
10	1,2,8,9-TCDF (Last)	27.10
11	1,3,4,6,8-PeCDF (First)	27.01
12	1,2,3,8,9-PeCDF (Last)	31.35
13	1,2,3,4,6,8-HxCDF (First)	32.00
14	1,2,3,4,8,9-HxCDF (Last)	34.95
15	1,2,3,4,6,7,8-HpCDF (First)	36.84
16	1,2,3,4,7,8,9-HpCDF (Last)	38.76

7/3/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090702H1-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090702H1_17

Analysis Date: 03-Jul-09

Analysis Time: 03:35:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.206	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.993	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [illegible]

Date: 7/3/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_17

CCAL ID: ST090702H1-2
GC Column ID: DB-5
Analysis Date: 03-Jul-09
Analysis Time: 03:35:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/3/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qid

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:48:20 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	6.08e4	0.76	NO	1.08	1.000	26.06	1.001	9.0452	90.5	0.0442	9.0452
2	1,2,3,7,8-PeCDD	2.25e5	0.62	NO	1.03	1.000	30.71	1.000	45.583	91.2	0.0902	45.583
3	1,2,3,4,7,8-HxCDD	1.92e5	1.27	NO	1.00	1.000	34.14	1.000	45.738	91.5	0.174	45.738
4	1,2,3,6,7,8-HxCDD	1.99e5	1.23	NO	1.13	1.000	34.26	1.001	45.298	90.6	0.168	45.298
5	1,2,3,7,8,9-HxCDD	2.14e5	1.25	NO	1.10	1.000	34.56	1.009	47.933	95.9	0.165	47.933
6	1,2,3,4,6,7,8-HpCDD	1.63e5	1.06	NO	1.06	1.000	38.20	1.001	43.917	87.8	0.199	43.917
7	OCDD	2.80e5	0.90	NO	1.18	1.000	41.66	1.000	88.239	88.2	0.0848	88.239
8	2,3,7,8-TCDF	8.10e4	0.76	NO	1.09	1.000	25.28	1.001	8.3960	84.0	0.0417	8.3960
9	1,2,3,7,8-PeCDF	3.61e5	1.57	NO	1.16	1.000	29.47	1.000	41.481	83.0	0.0753	41.481
10	2,3,4,7,8-PeCDF	3.33e5	1.58	NO	1.12	1.000	30.42	1.000	40.676	81.4	0.0736	40.676
11	1,2,3,4,7,8-HxCDF	3.29e5	1.27	NO	1.41	1.000	33.23	1.001	43.246	86.5	0.113	43.246
12	1,2,3,6,7,8-HxCDF	3.24e5	1.26	NO	1.22	1.000	33.35	1.000	44.448	88.9	0.116	44.446
13	2,3,4,6,7,8-HxCDF	2.95e5	1.27	NO	1.28	1.000	33.98	1.001	43.942	87.9	0.137	43.942
14	1,2,3,7,8,9-HxCDF	2.60e5	1.27	NO	1.26	1.000	34.95	1.000	44.729	89.5	0.172	44.729
15	1,2,3,4,6,7,8-HpCDF	2.81e5	1.06	NO	1.69	1.000	36.84	1.001	43.814	87.6	0.148	43.814
16	1,2,3,4,7,8,9-HpCDF	2.16e5	1.05	NO	1.48	1.000	38.76	1.000	45.270	90.5	0.166	45.270
17	OCDF	3.27e5	0.91	NO	1.10	1.000	41.89	1.000	86.142	86.1	0.107	86.142
18	13C-2,3,7,8-TCDD	6.24e5	0.78	NO	1.01	1.000	26.03	1.023	103.21	103	0.218	
19	13C-1,2,3,7,8-PeCDD	4.78e5	0.63	NO	0.827	1.000	30.69	1.206	97.071	97.1	0.178	
20	13C-1,2,3,4,7,8-HxCDD	4.19e5	1.25	NO	0.916	1.000	34.13	0.988	101.40	101	0.303	
21	13C-1,2,3,6,7,8-HxCDD	3.90e5	1.24	NO	0.921	1.000	34.24	0.991	93.814	93.8	0.302	
22	13C-1,2,3,4,6,7,8-HpCDD	3.48e5	1.06	NO	0.708	1.000	38.18	1.105	108.99	109	0.409	
23	13C-OCDD	5.39e5	0.88	NO	0.503	1.000	41.65	1.206	237.82	119	0.343	
24	13C-2,3,7,8-TCDF	8.87e5	0.78	NO	0.977	1.000	25.27	0.993	107.45	107	0.134	
25	13C-1,2,3,7,8-PeCDF	7.51e5	1.59	NO	0.896	1.000	29.47	1.158	99.231	99.2	0.217	
26	13C-2,3,4,7,8-PeCDF	7.31e5	1.57	NO	0.900	1.000	30.40	1.195	96.255	96.3	0.216	
27	13C-1,2,3,4,7,8-HxCDF	5.39e5	0.52	NO	1.17	1.000	33.21	0.961	102.08	102	0.347	
28	13C-1,2,3,6,7,8-HxCDF	5.97e5	0.52	NO	1.52	1.000	33.34	0.965	87.045	87.0	0.267	
29	13C-2,3,4,6,7,8-HxCDF	5.25e5	0.52	NO	1.25	1.000	33.95	0.983	93.072	93.1	0.325	
30	13C-1,2,3,7,8,9-HxCDF	4.63e5	0.52	NO	1.05	1.000	34.94	1.011	97.471	97.5	0.385	

7/3/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:48:20 Pacific Daylight Time

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

	31 13C-1,2,3,4,6,7,8-HpCDF	3.80e5	0.44	NO	0.868	1.000	36.82	1.066	96.972	97.0	0.382
	32 13C-1,2,3,4,7,8,9-HpCDF	3.23e5	0.42	NO	0.727	1.000	38.75	1.122	98.492	98.5	0.457
	33 13C-OCDF	6.92e5	0.88	NO	0.760	1.000	41.88	1.212	202.05	101	0.195

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 06:54:46 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:05:08 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 2,3,7,8-TCDD

090702H1_1	ST090702H1-1 1613 CS3 080917I	02-Jul-09	14:22:39
090702H1_2	0_2214_OPR001	02-Jul-09	15:13:01
090702H1_3	solvent blank	02-Jul-09	16:02:37
090702H1_4	0_2214_MB001	02-Jul-09	16:52:06
090702H1_5	31845_2214_001 CAMO-09-10464 10.61	02-Jul-09	17:41:36
090702H1_6	31845_2214_002 CAMO-09-10465 10.5	02-Jul-09	18:31:05
090702H1_7	31846_2214_001 CAMO-09-9946 12.7	02-Jul-09	19:20:36
090702H1_8	31847_2214_001 CAMO-09-6518 11.68	02-Jul-09	20:10:06
090702H1_9	31847_2214_002 CAMO-09-6519 13.07	02-Jul-09	20:59:34
090702H1_10	31847_2214_003 CAMO-09-6531 11.58	02-Jul-09	21:49:03
090702H1_11	31850_2214_001 CAMO-09-9941 11.19	02-Jul-09	22:38:41
090702H1_12	31850_2214_002 CAMO-09-9942 11.32	02-Jul-09	23:28:16
090702H1_13	31850_2214_003 CAMO-09-9943 11.85	03-Jul-09	00:17:49
090702H1_14	31850_2214_004 CAMO-09-9989 12.48	03-Jul-09	01:07:22
090702H1_15	31850_2214_005 CAMO-09-10030 11.22	03-Jul-09	01:56:54
090702H1_16	solvent blank	03-Jul-09	02:46:25
090702H1_17	ST090702H1-2 1613 CS3 080917I	03-Jul-09	03:35:57

Dataset: Untitled

Last Altered: Friday, July 03, 2009 07:06:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:06:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

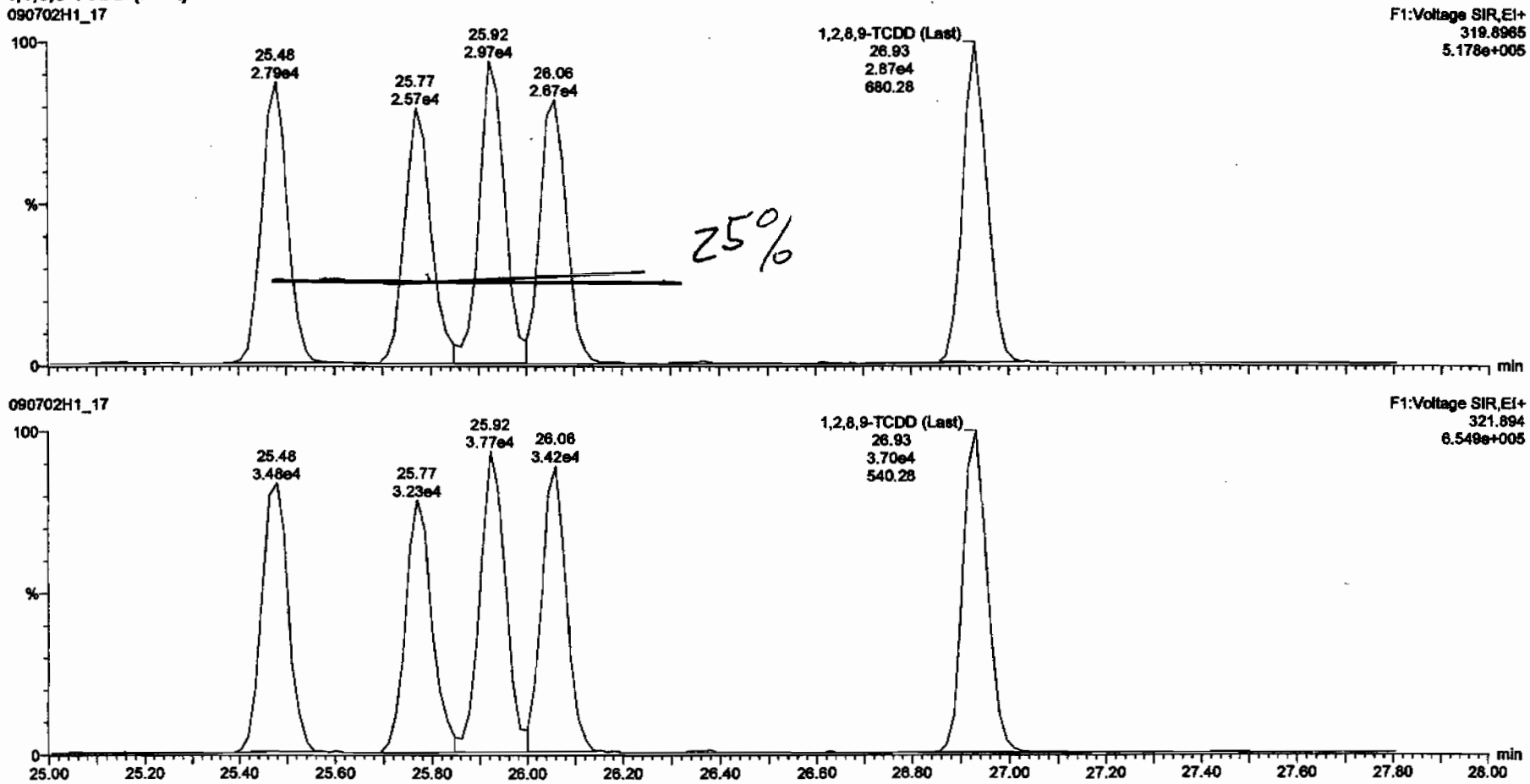

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

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Printed: Friday, July 03, 2009 06:49:25 Pacific Daylight Time

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2,3,7,8-TCDD

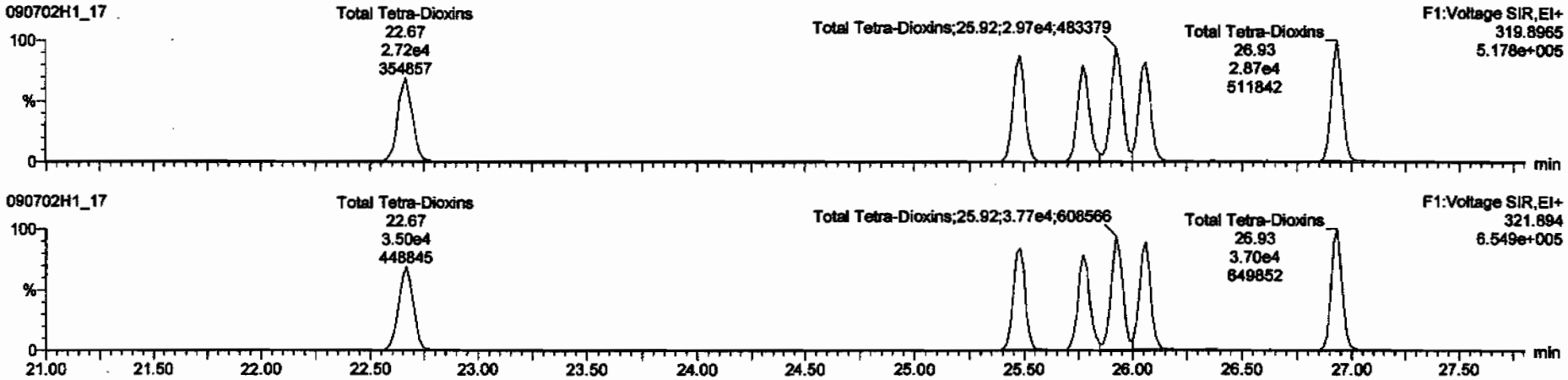

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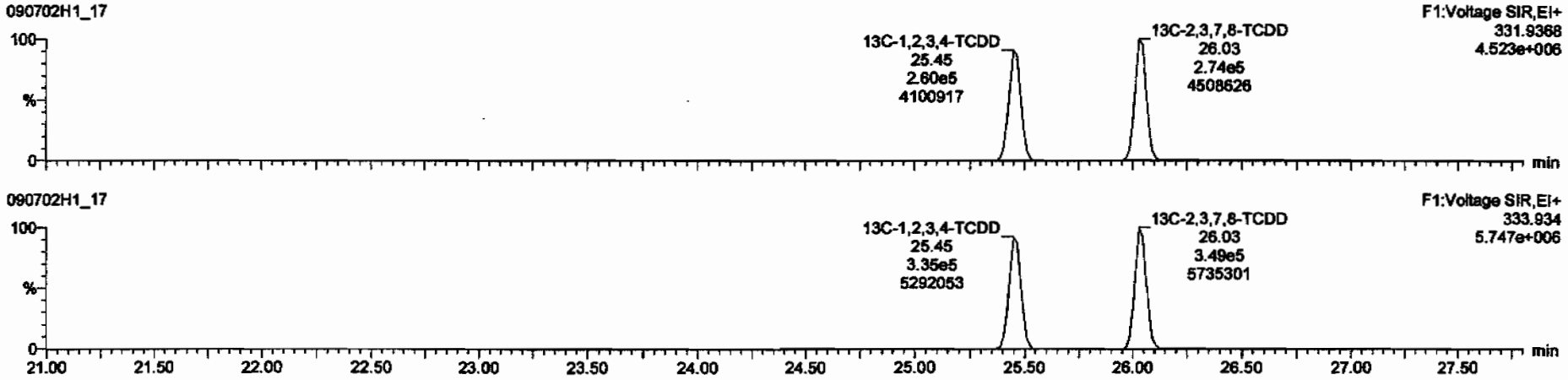

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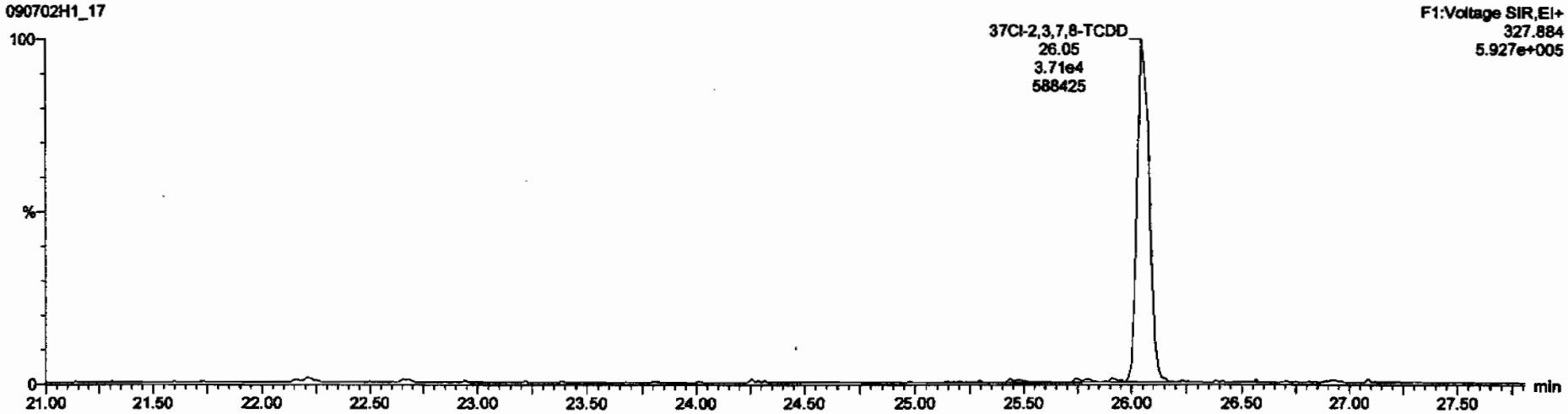

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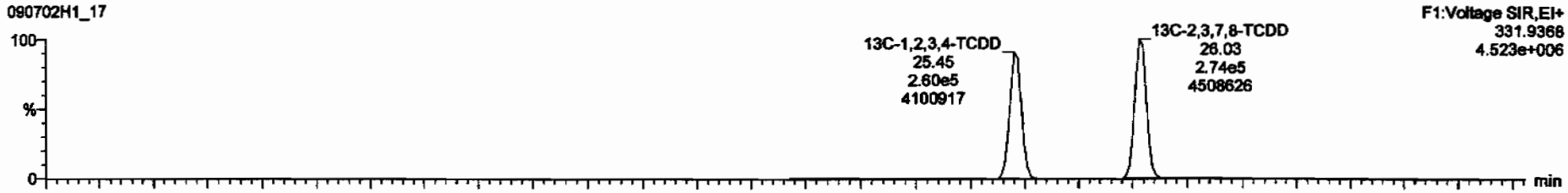

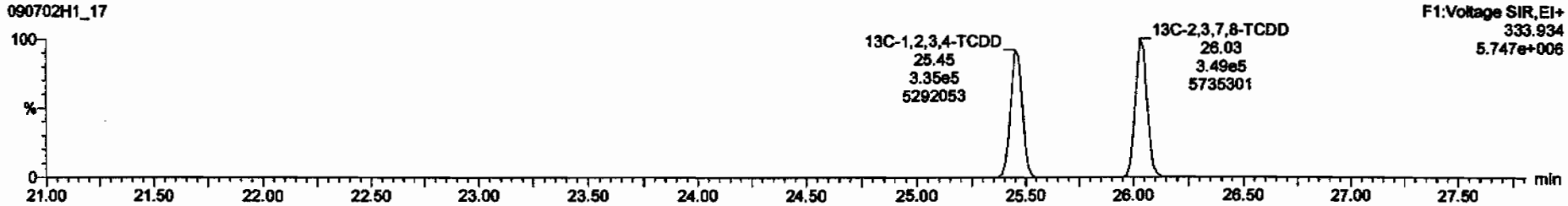

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

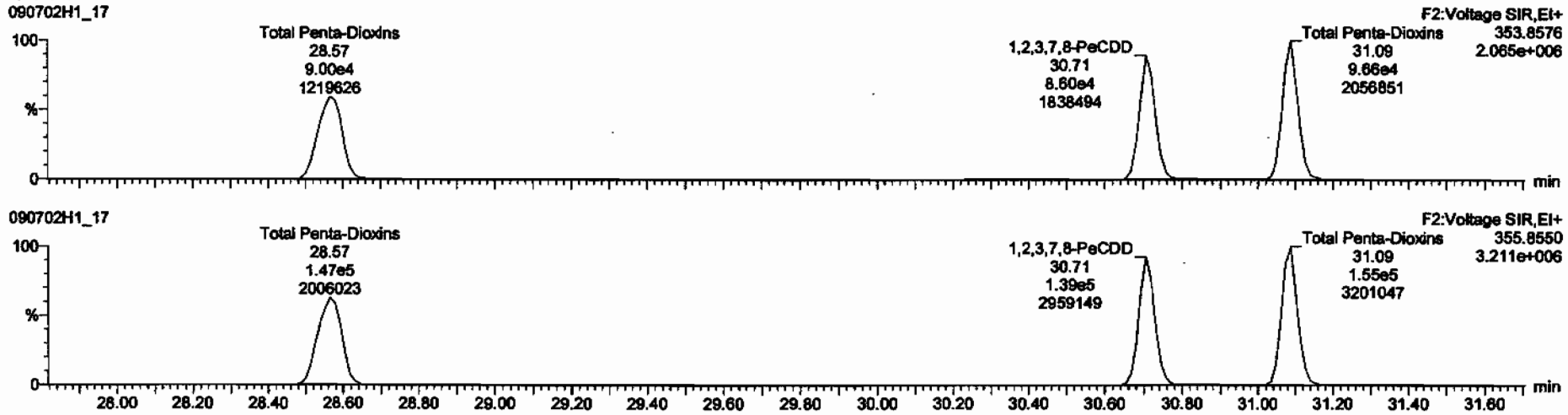

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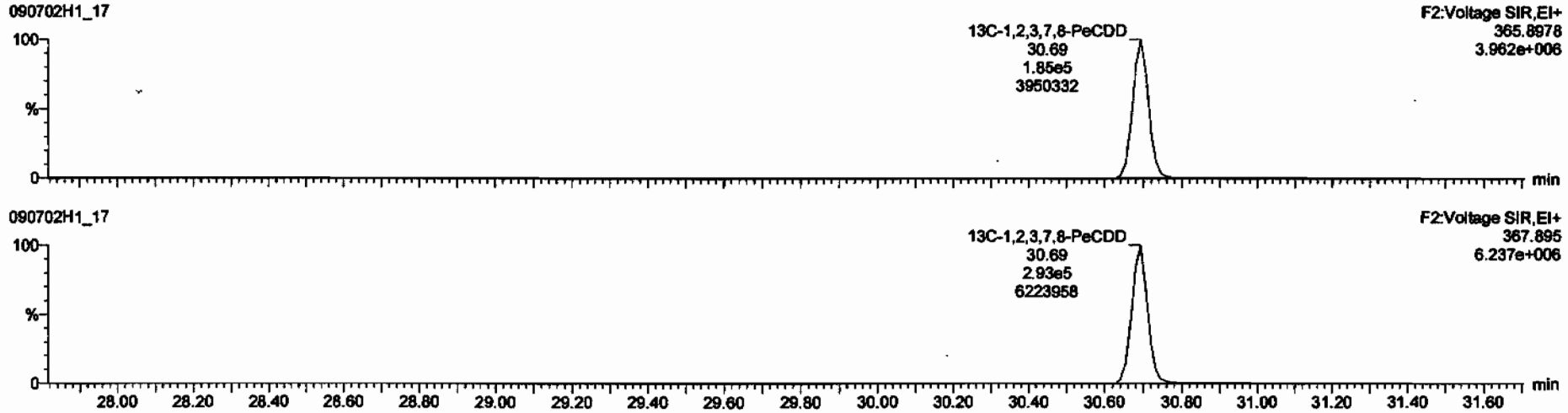

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1,2,3,4,7,8-HxCDD

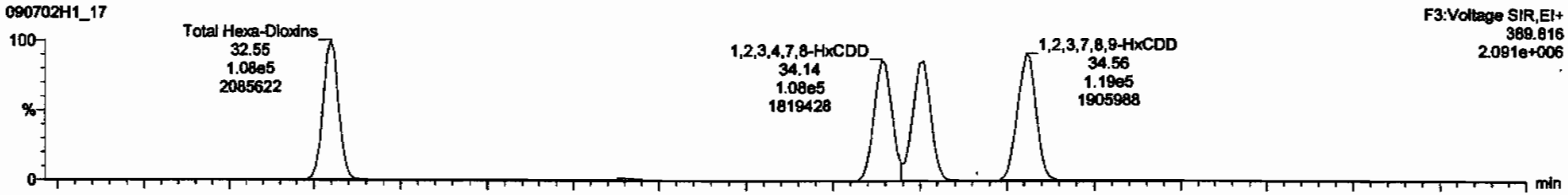

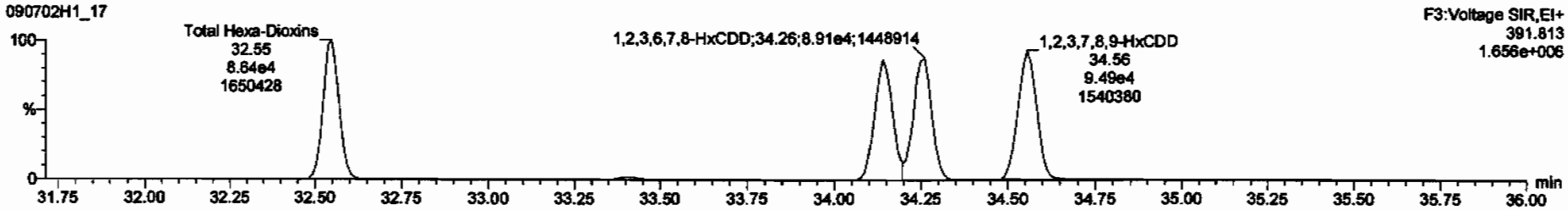

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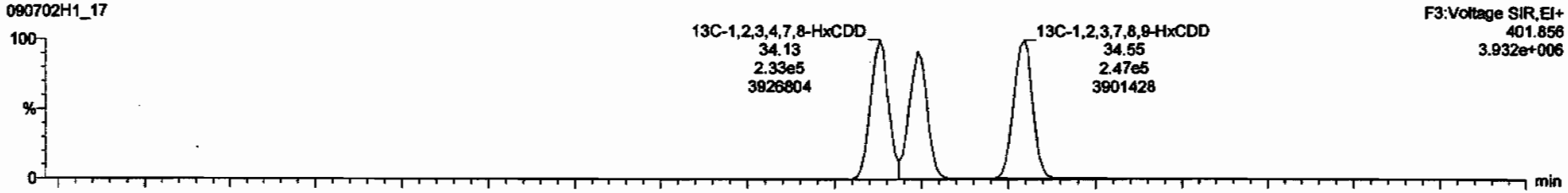

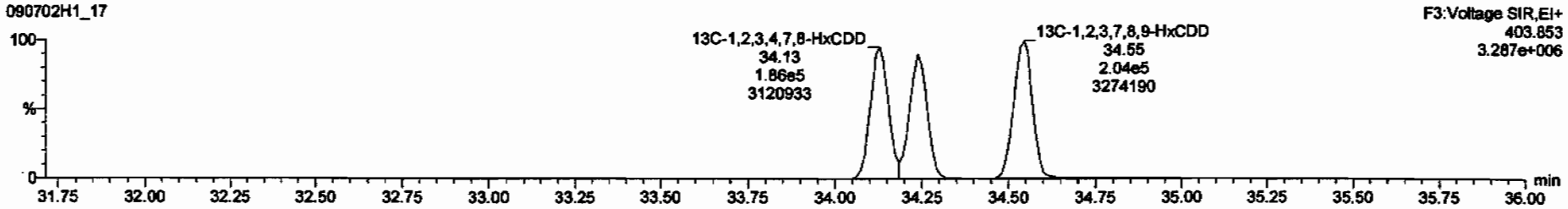

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1,2,3,4,6,7,8-HpCDD

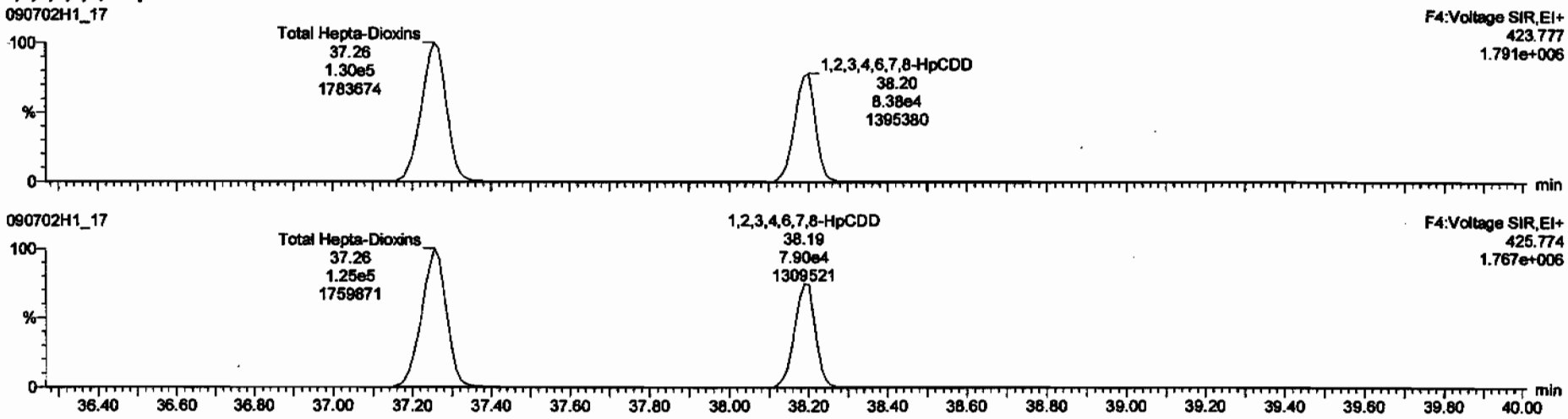

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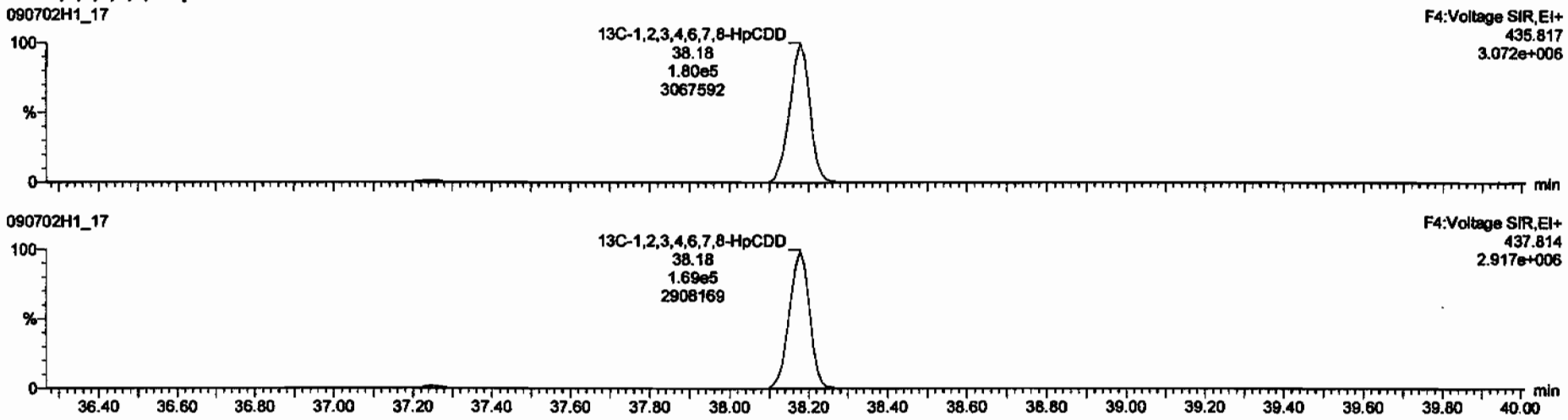

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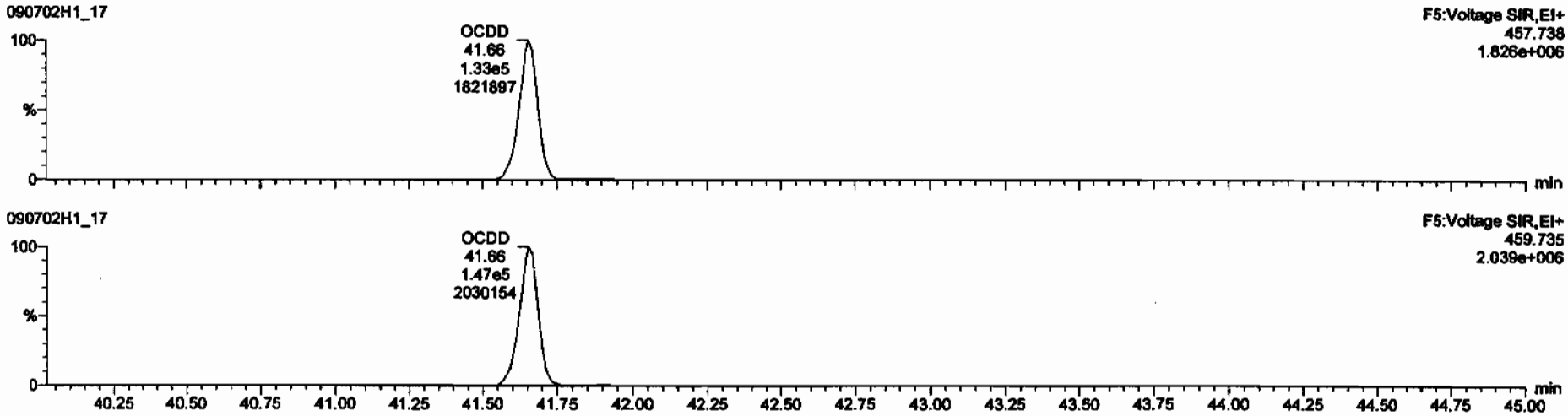

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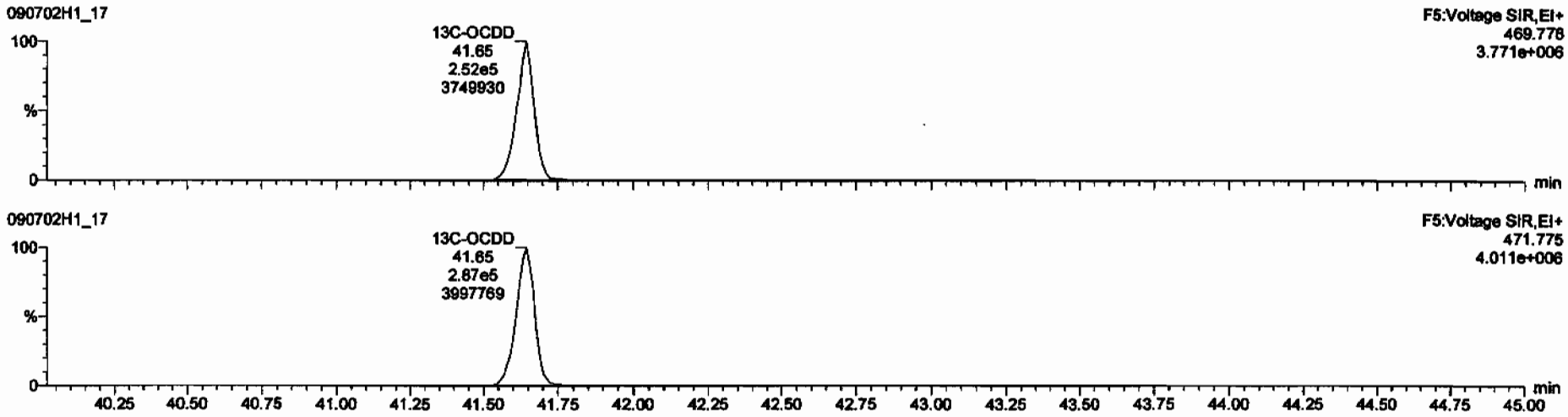

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

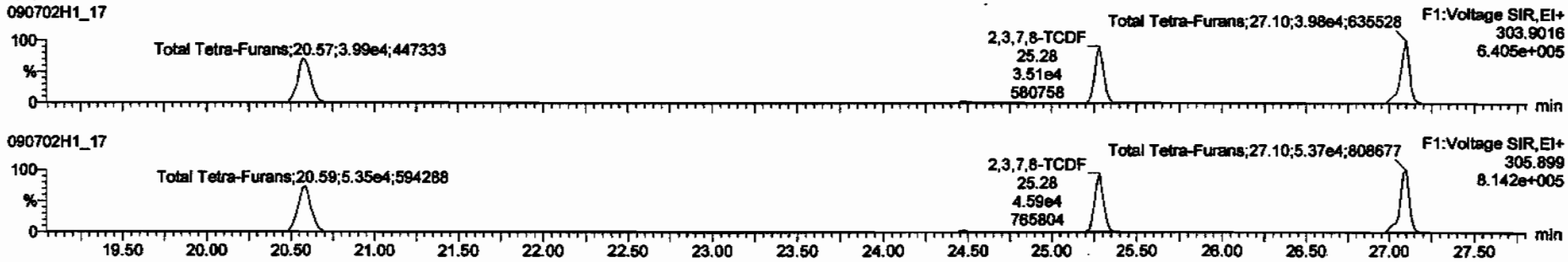

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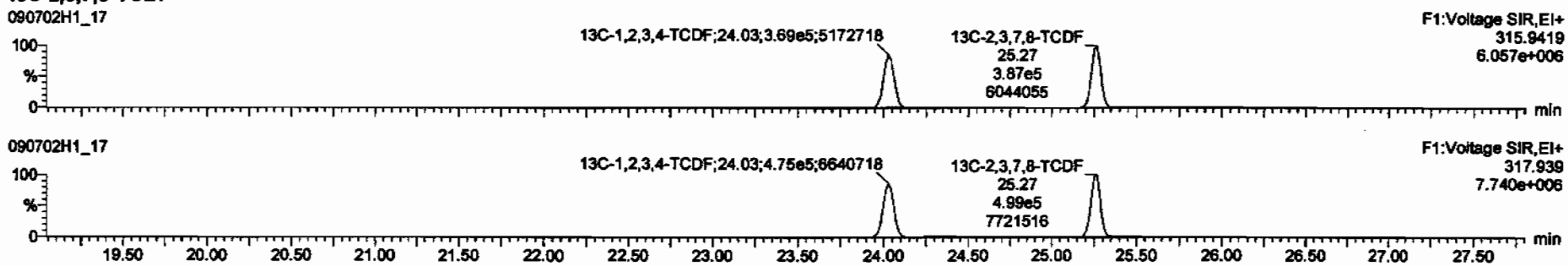

DPE1

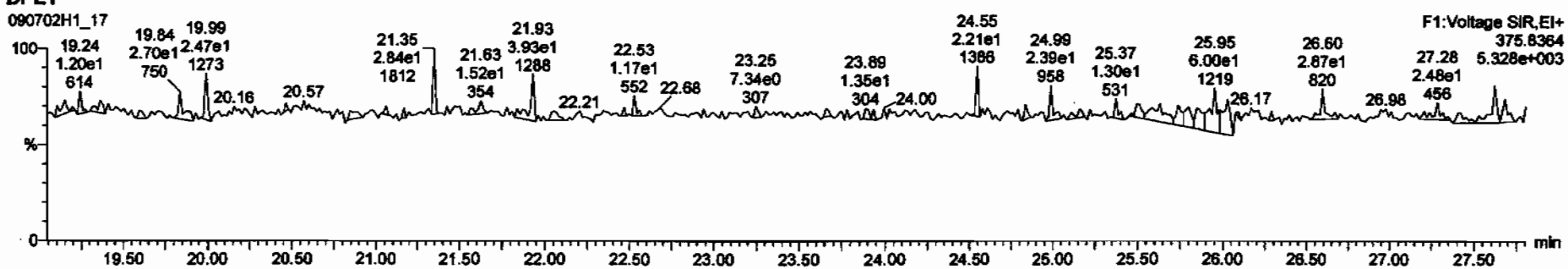

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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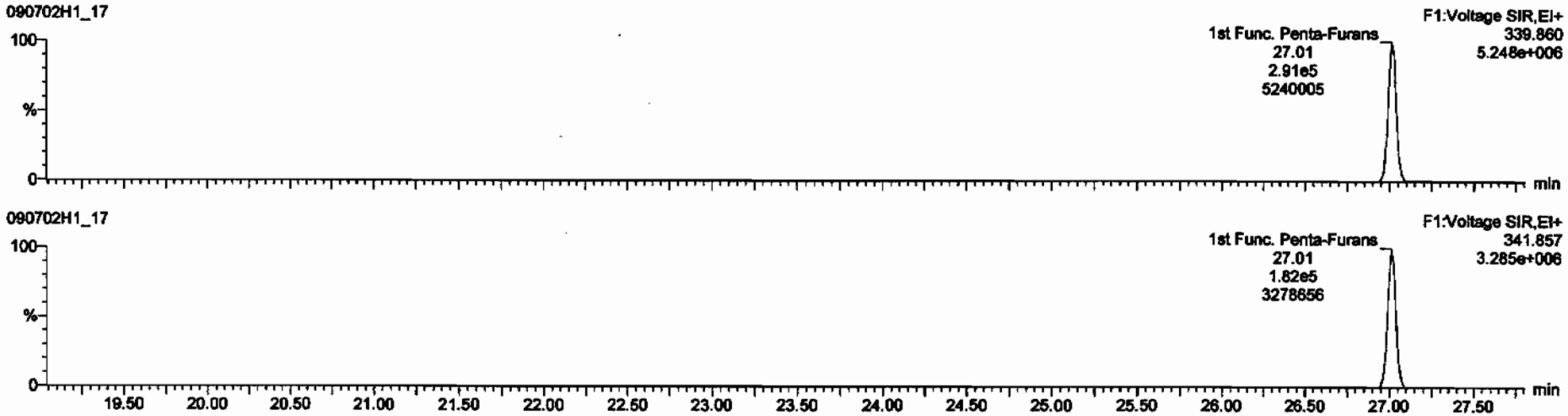

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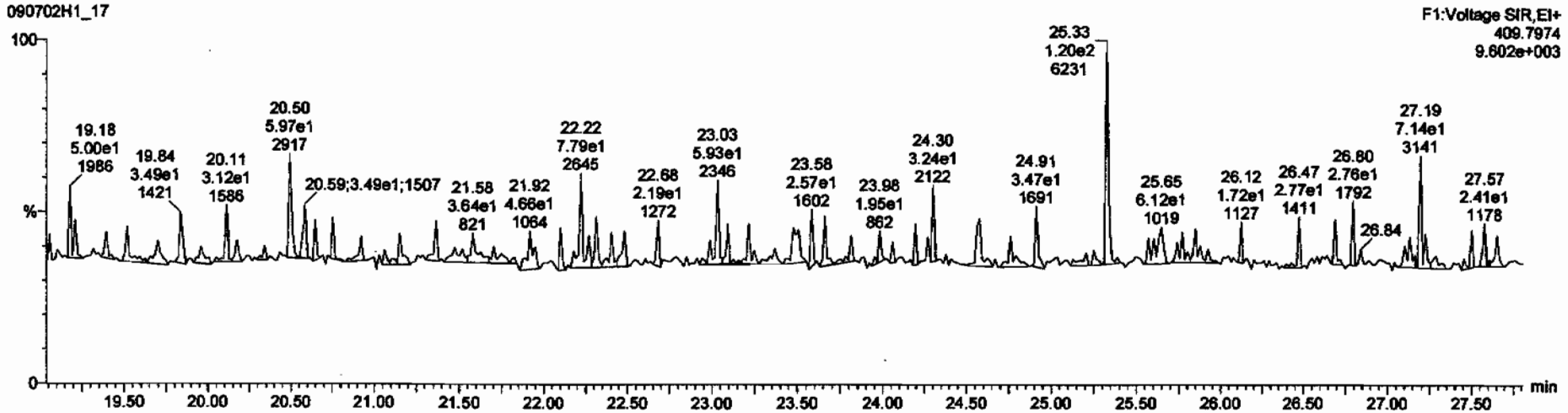

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1,2,3,7,8-PeCDF

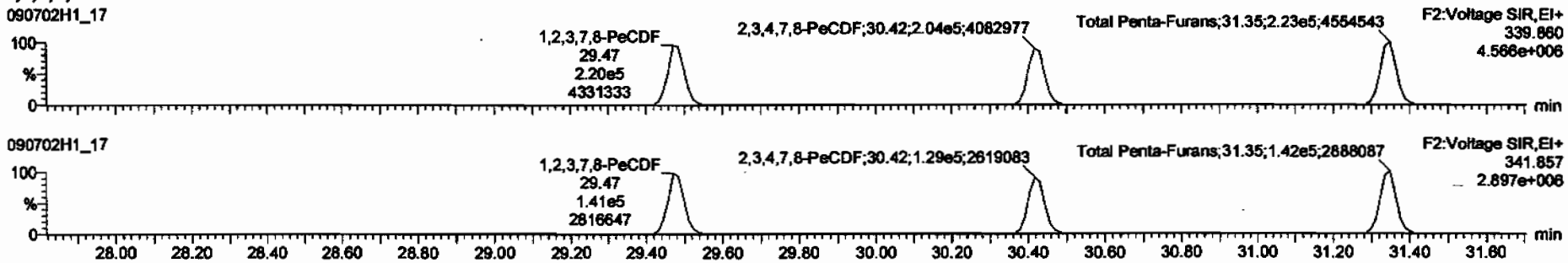

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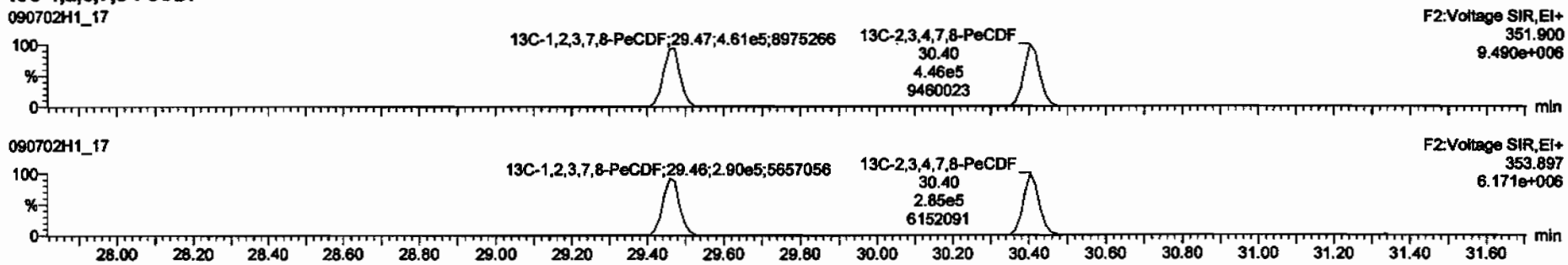

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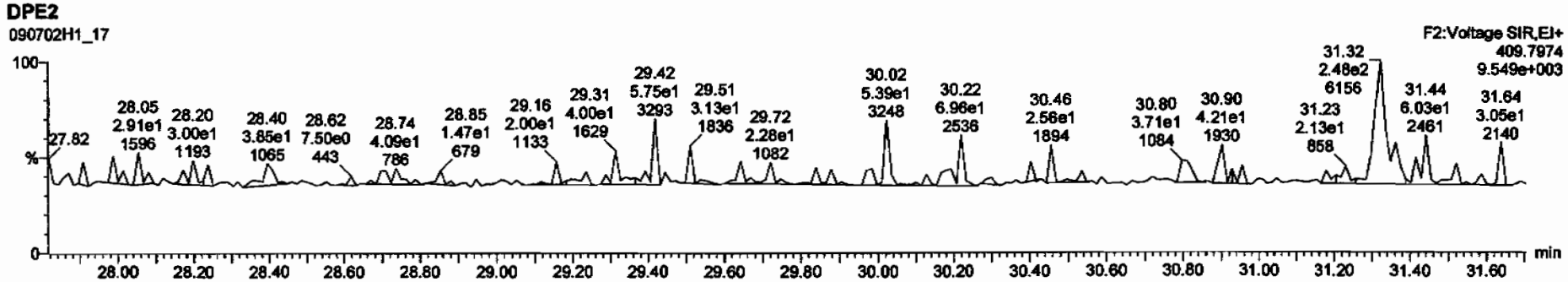

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1,2,3,4,7,8-HxCDF

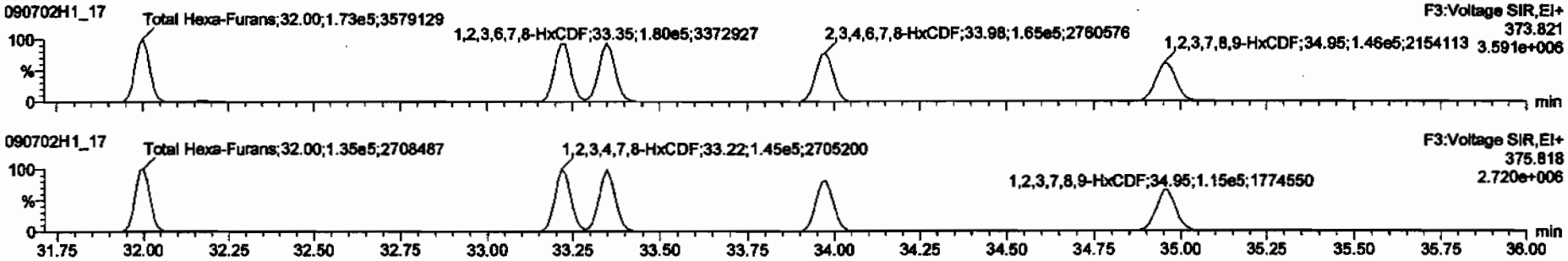

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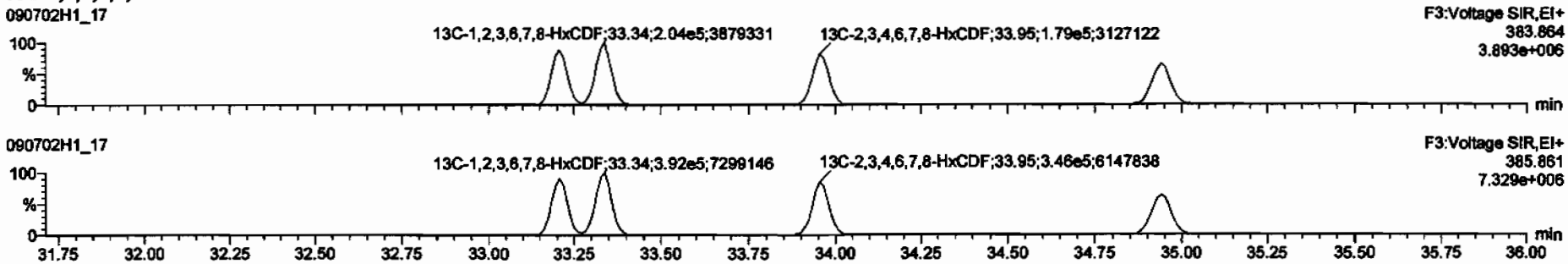

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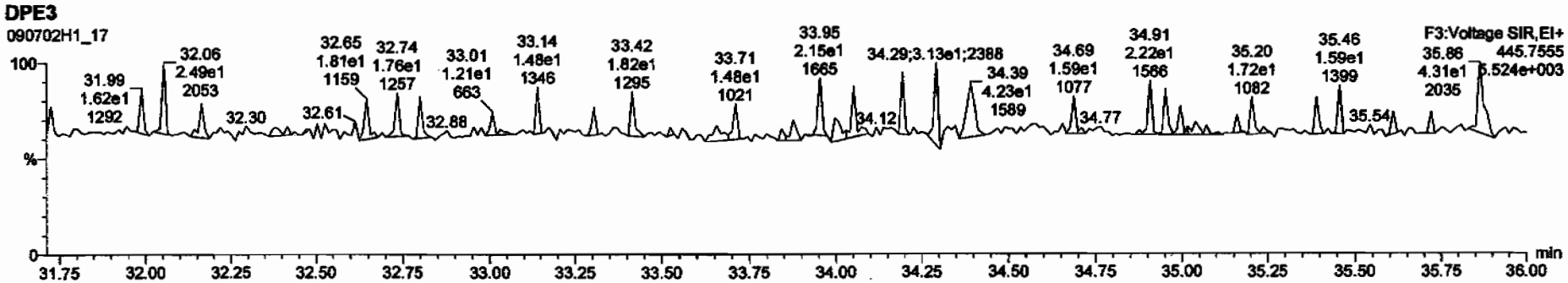

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1,2,3,4,6,7,8-HpCDF

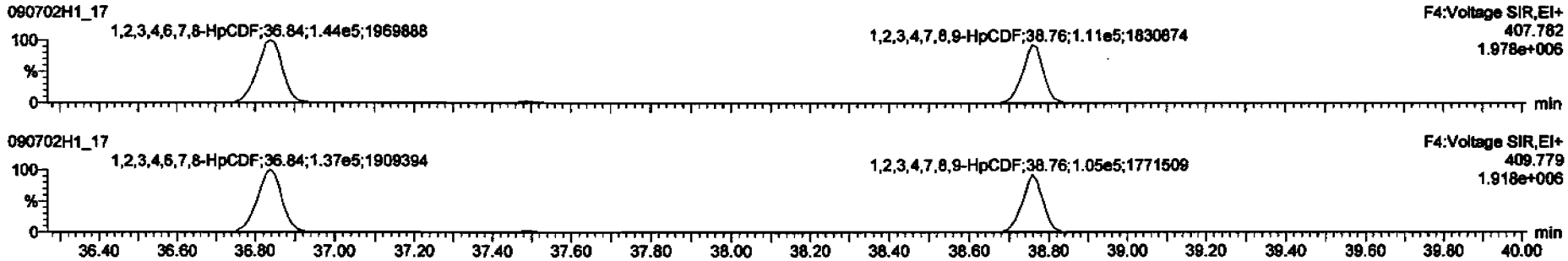

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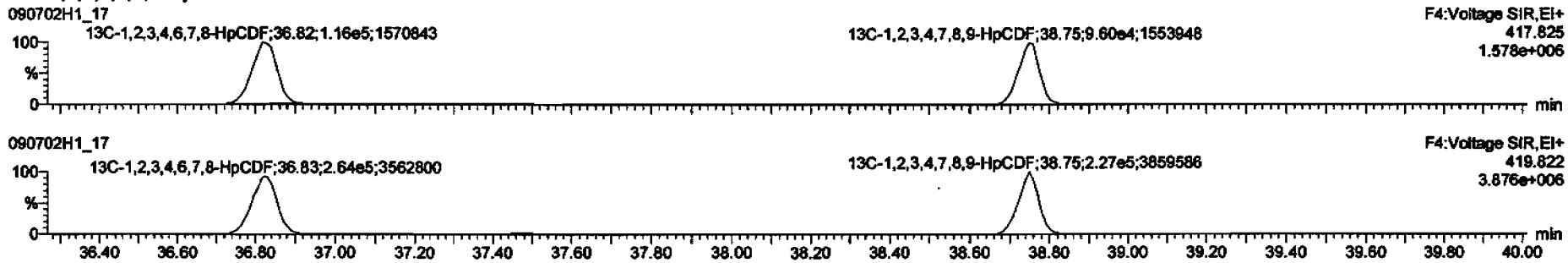

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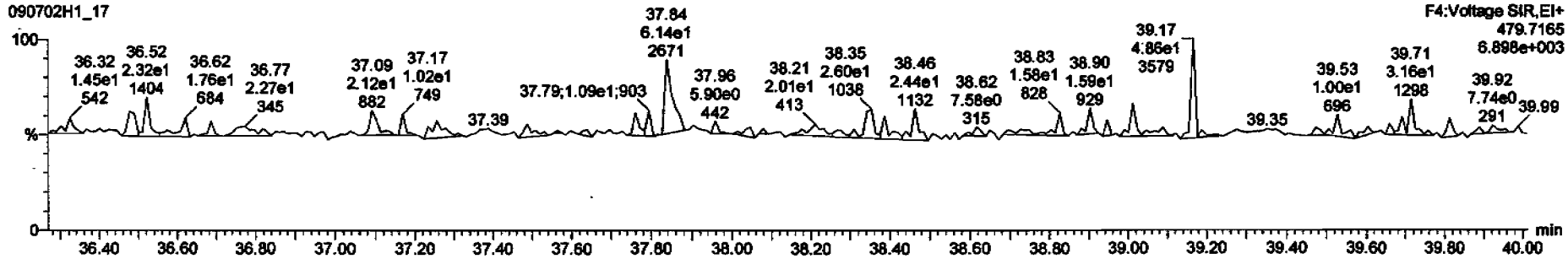

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OCDF

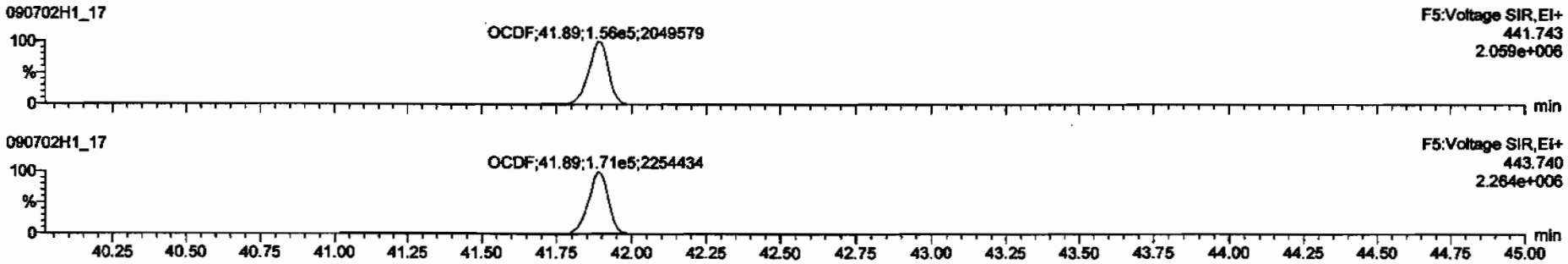

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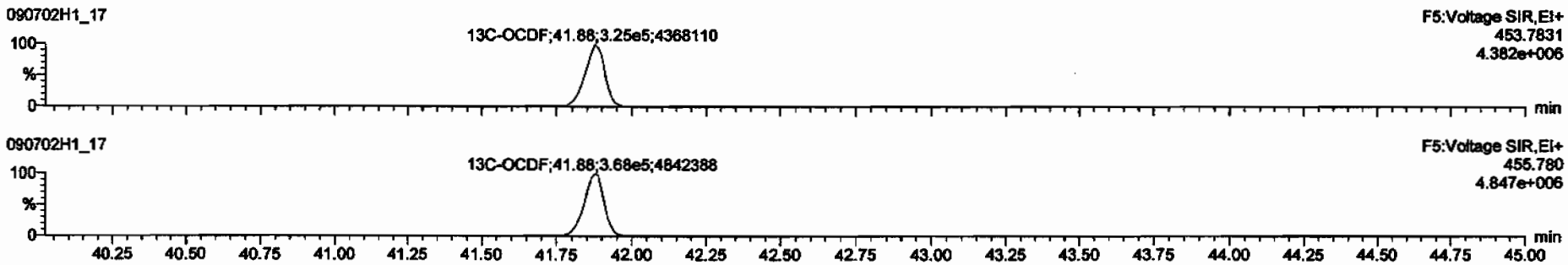

DPE5

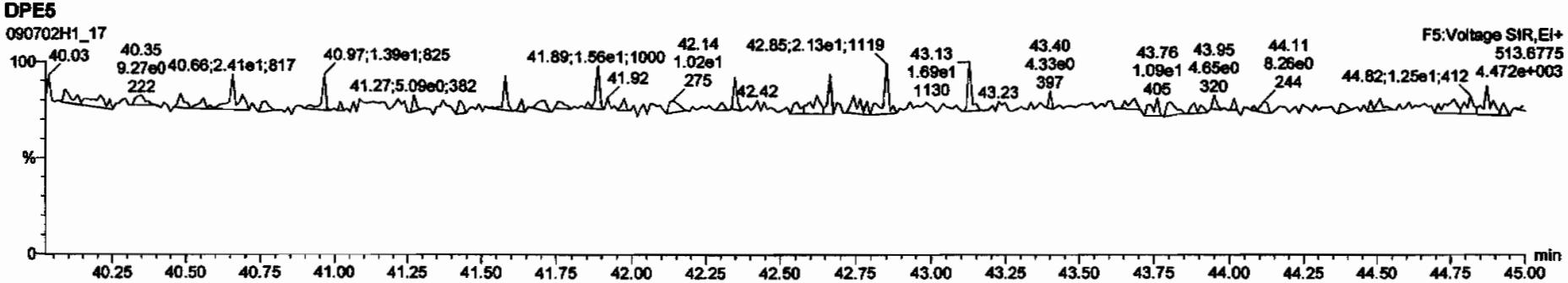

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

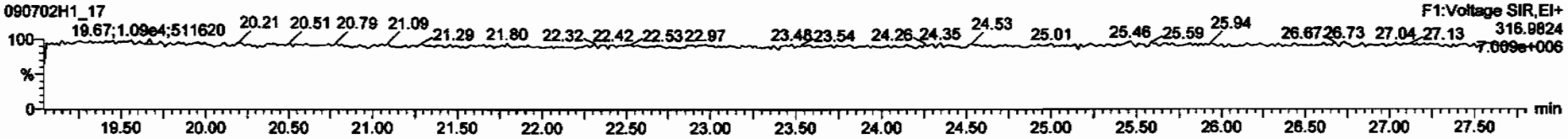

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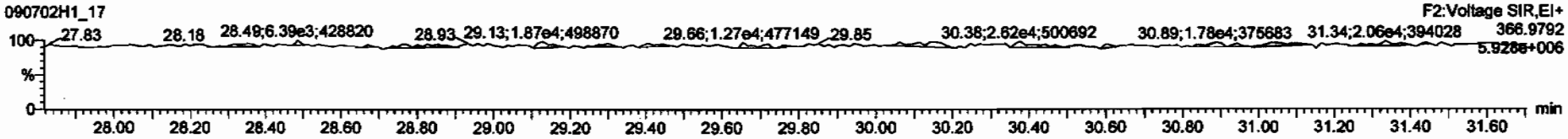

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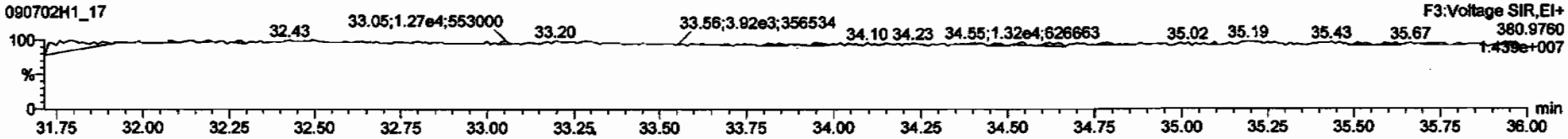

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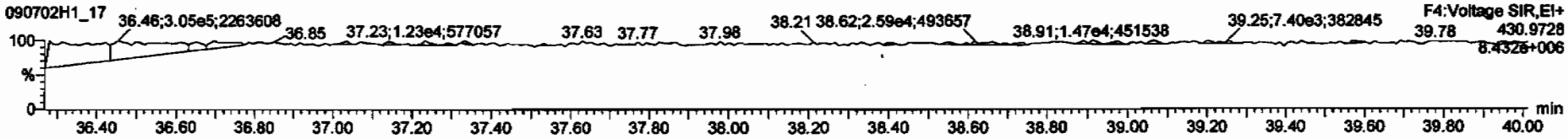

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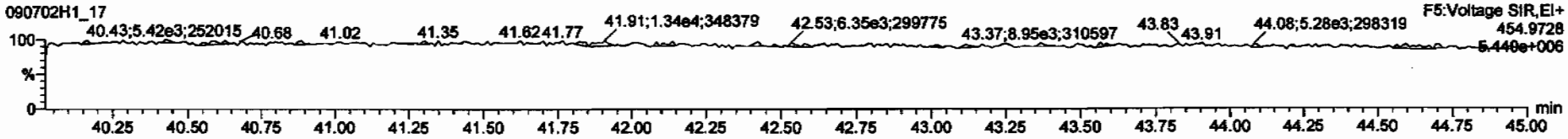

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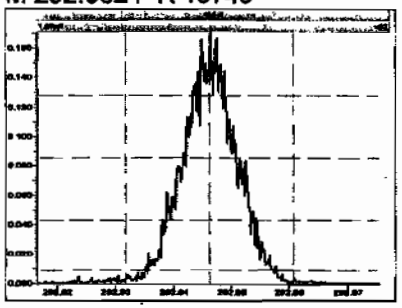

M 304.9824 R 14519

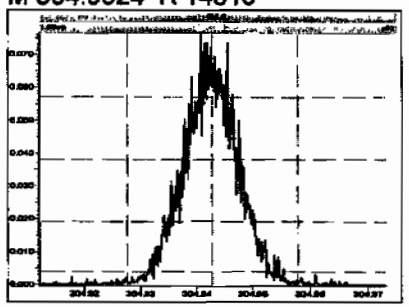

M 318.9792 R 15155

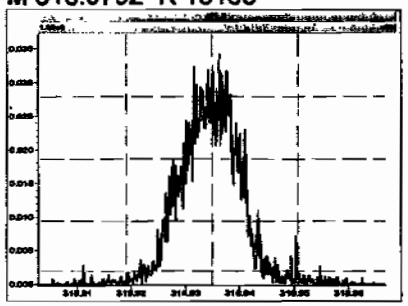

M 330.9792 R 13516

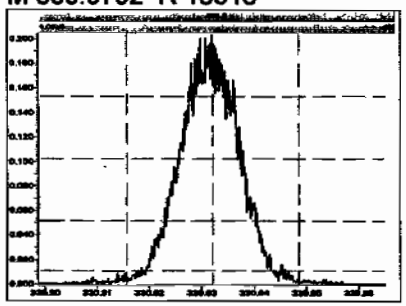

M 342.9792 R 13042

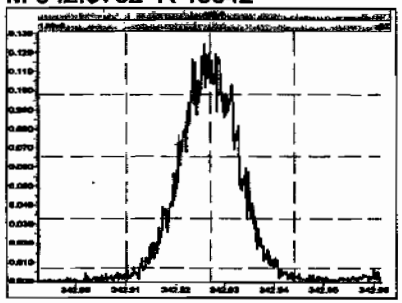

M 354.9792 R 13349

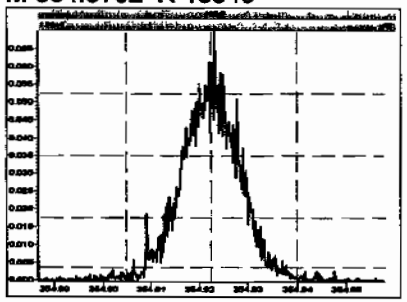

M 366.9792 R 13371

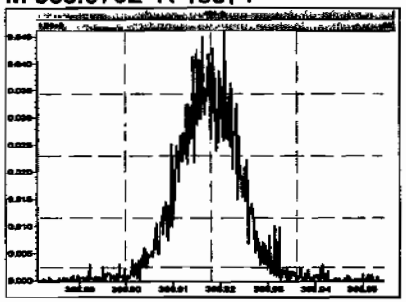

M 380.9760 R 12533

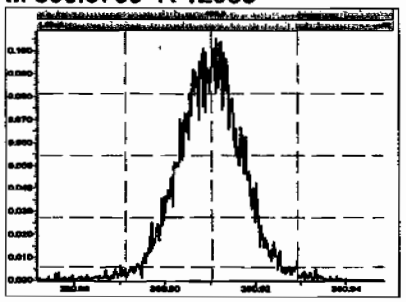

M 392.9760 R 13065

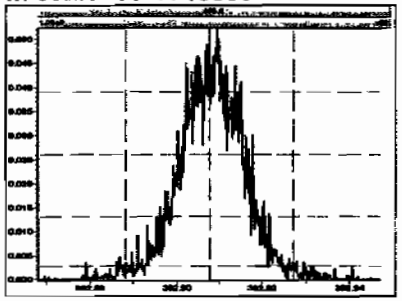

M 404.9760 R 13262

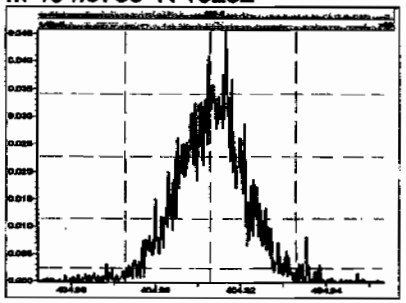

M 416.9760 R 13290

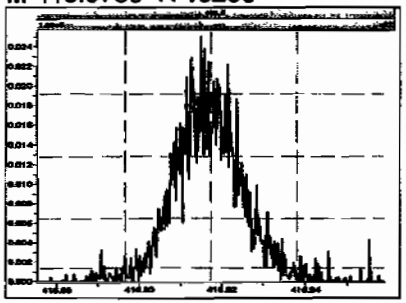

M 330.9792 R 14285

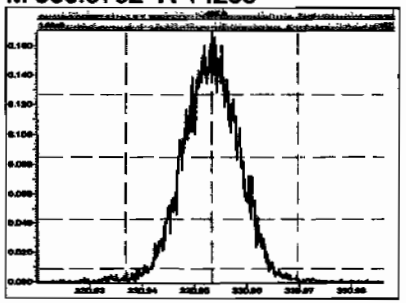

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M 342.9792 R 13624

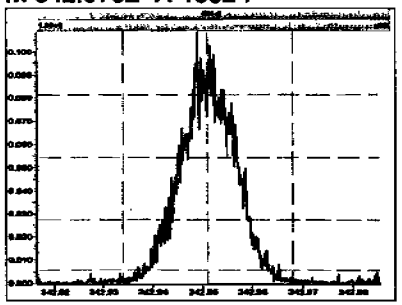

M 354.9792 R 14454

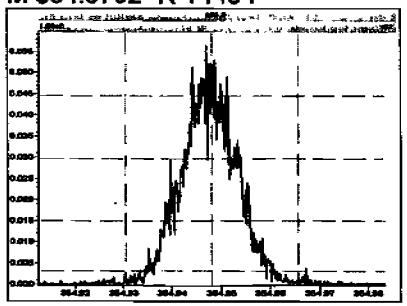

M 366.9792 R 14751

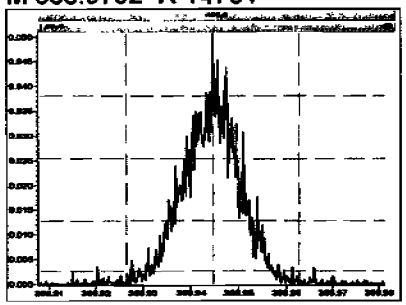

M 380.9760 R 13552

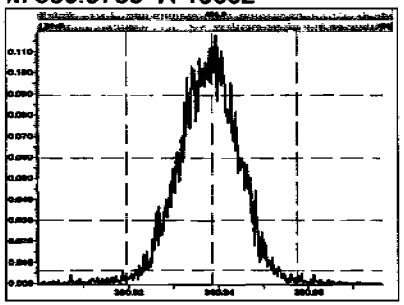

M 392.9760 R 13138

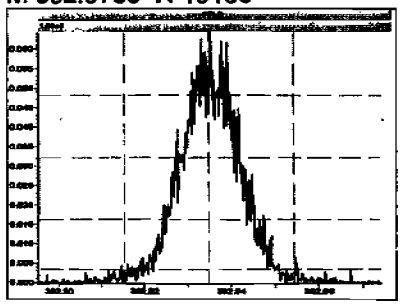

M 404.9760 R 13545

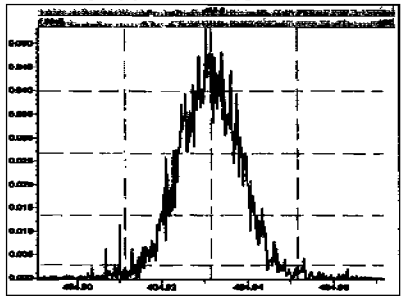

M 416.9760 R 14014

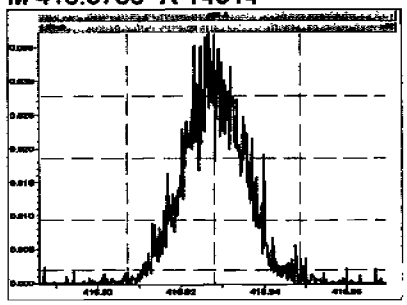

M 366.9792 R 15339

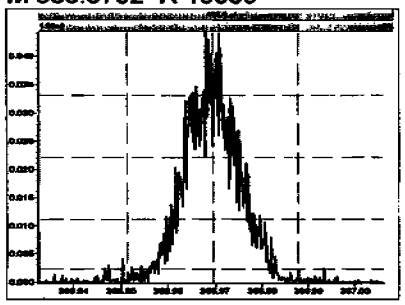

M 380.9760 R 14296

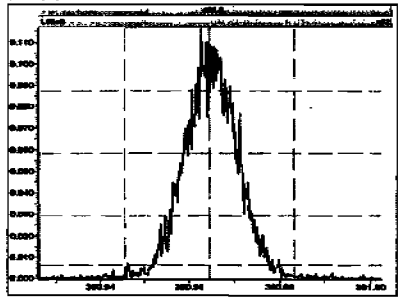

M 392.9760 R 15577

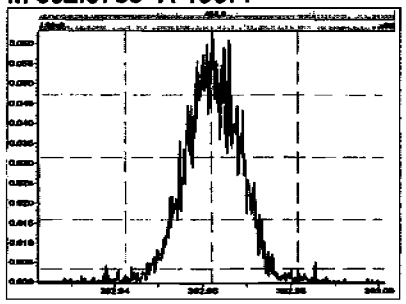

M 404.9760 R 14124

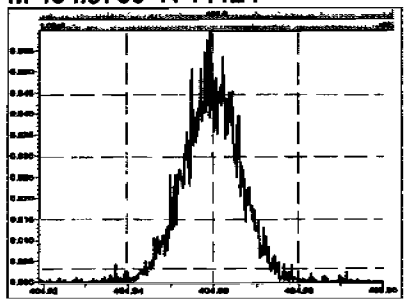

M 416.9760 R 14846

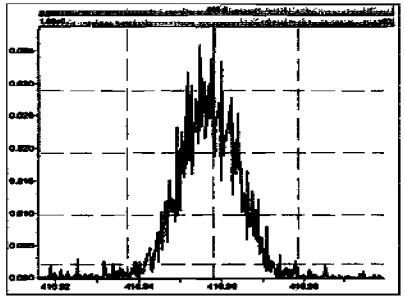

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M 430.9728 R 13320

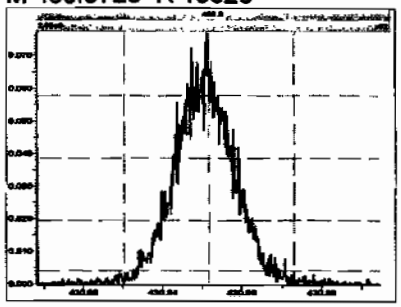

M 442.9728 R 14253

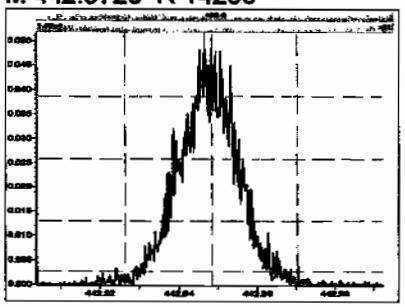

M 454.9728 R 13858

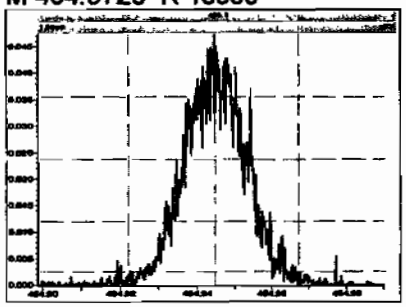

M 404.9760 R 15774

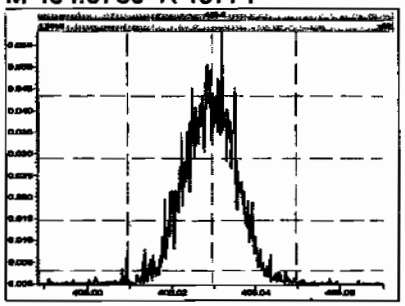

M 416.9760 R 16340

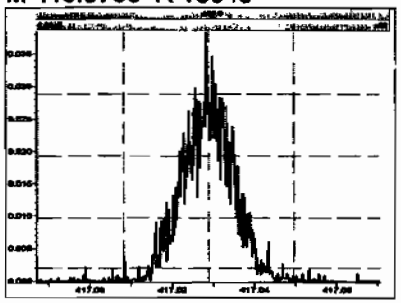

M 430.9728 R 15159

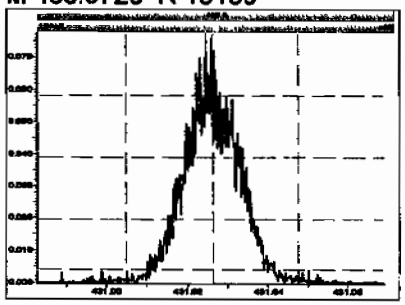

M 442.9728 R 15073

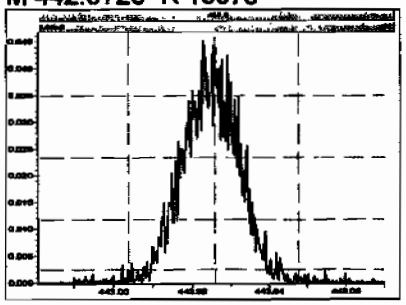

M 454.9728 R 14287

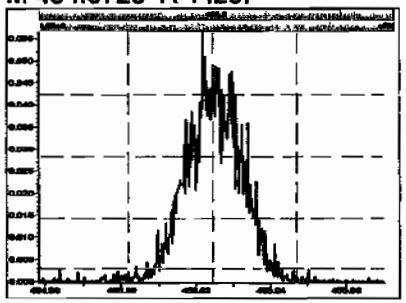

M 466.9728 R 15433

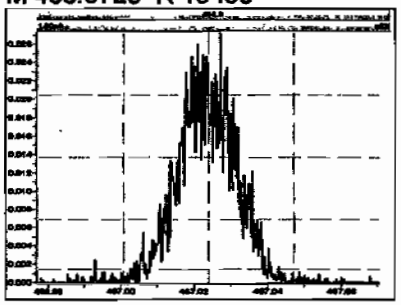

M 480.9696 R 14098

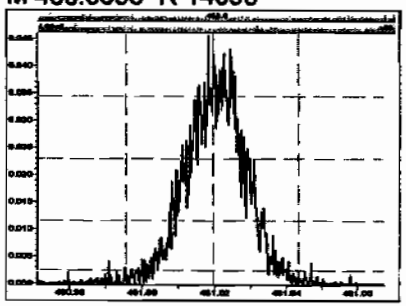

M 430.9728 R 14292

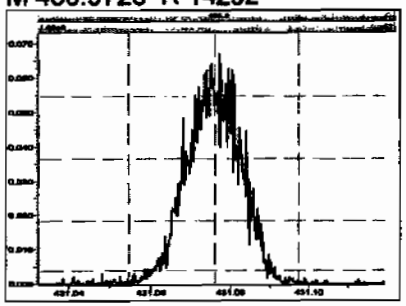

M 442.9728 R 15248

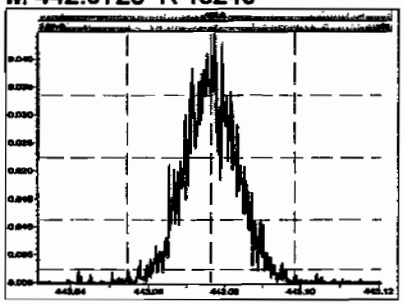

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M 454.9728 R 15214

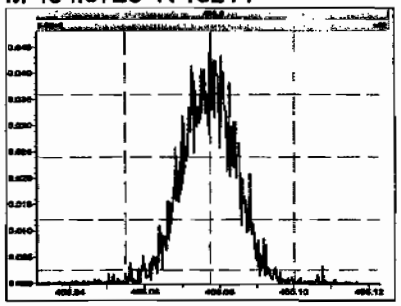

M 466.9728 R 16342

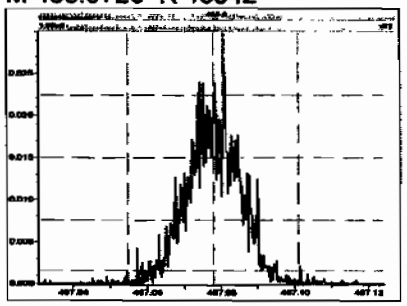

M 480.9696 R 14621

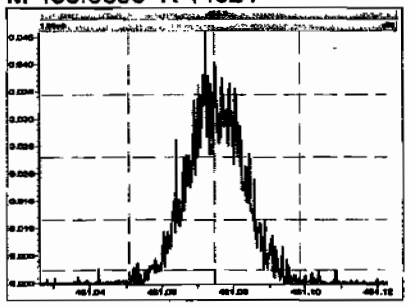

M 492.9696 R 16201

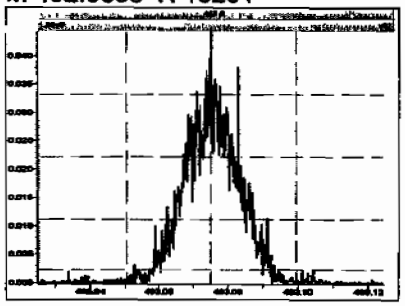

M 504.9696 R 15271

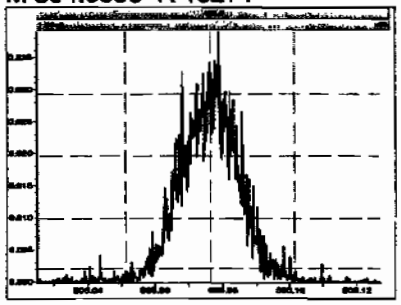

M 516.9697 R 16350

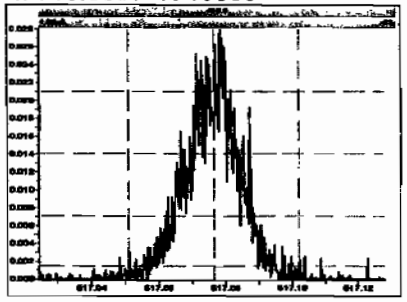

ICAL

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Compound name: 2,3,7,8-TCDD
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	Int	RT	RRF	Area	IS Area	Conc	Dev	RRF
090212H1_1	10.0	0.82	NO	25.98	1.001	7.90e4	7.49e5	9.78	-2.2	1.05
090212H1_3	0.250	0.85	NO	26.00	1.001	1.54e3	5.94e5	0.240	-4.1	1.03
090212H1_4	0.500	0.71	NO	25.98	1.001	3.65e3	6.33e5	0.536	7.1	1.16
090212H1_5	2.00	0.72	NO	26.00	1.001	1.40e4	6.64e5	1.95	-2.5	1.05
090212H1_6	40.0	0.77	NO	25.98	1.001	3.33e5	7.81e5	39.5	-1.3	1.06
090212H1_7	200	0.78	NO	26.00	1.001	1.92e6	8.66e5	206	3.0	1.11

2/13/09

MS 2/13/09

Compound name: 1,2,3,7,8-PeCDD
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RT	Int	RT	RRF	Area	IS Area	Conc	Dev	RRF
090212H1_1	50.0	0.63	NO	30.65	1.000	3.03e5	6.02e5	48.6	-2.7	1.01
090212H1_3	1.25	0.69	NO	30.67	1.000	6.36e3	4.83e5	1.27	1.9	1.05
090212H1_4	2.50	0.60	NO	30.67	1.000	1.30e4	4.97e5	2.53	1.1	1.04
090212H1_5	10.0	0.61	NO	30.67	1.000	5.28e4	5.23e5	9.77	-2.3	1.01
090212H1_6	200	0.63	NO	30.67	1.000	1.31e6	6.35e5	200	-0.1	1.03
090212H1_7	1000	0.63	NO	30.67	1.000	8.09e6	7.66e5	1020	2.2	1.06

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.00153
RRF SD: 0.0317187, Relative SD: 3.16702
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IS	RT	RRT	Response	IS Response	Conc.	%Dev	RRF
090212H1_1	50.0	1.26	NO	34.10	1.000	2.54e5	5.27e5	48.0	-3.9	0.962
090212H1_3	1.25	1.42	NO	34.11	1.000	5.16e3	4.08e5	1.26	1.0	1.01
090212H1_4	2.50	1.28	NO	34.11	1.001	1.10e4	4.22e5	2.61	4.2	1.04
090212H1_5	10.0	1.32	NO	34.12	1.000	4.31e4	4.47e5	9.64	-3.6	0.965
090212H1_6	200	1.27	NO	34.11	1.000	1.12e6	5.53e5	203	1.4	1.02
090212H1_7	1000	1.25	NO	34.12	1.000	7.63e6	7.54e5	1010	1.0	1.01

Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IS	RT	RRT	Response	IS Response	Conc.	%Dev	RRF
090212H1_1	50.0	1.27	NO	34.21	1.000	2.90e5	5.42e5	47.6	-4.8	1.07
090212H1_3	1.25	1.20	NO	34.23	1.001	6.02e3	4.14e5	1.29	3.4	1.16
090212H1_4	2.50	1.24	NO	34.23	1.001	1.23e4	4.20e5	2.60	3.9	1.17
090212H1_5	10.0	1.26	NO	34.24	1.001	4.91e4	4.60e5	9.48	-5.2	1.07
090212H1_6	200	1.30	NO	34.22	1.000	1.29e6	5.59e5	205	2.7	1.16
090212H1_7	1000	1.26	NO	34.23	1.000	8.08e6	7.18e5	1000	0.0	1.13

Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.10201
RRF SD: 0.0447729, Relative SD: 4.06282
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IS	RT	RRT	Response	IS Response	Conc.	%Dev	RRF
090212H1_1	50.0	1.28	NO	34.51	1.009	2.83e5	0.00e0	48.1	-3.9	1.06
090212H1_3	1.25	1.27	NO	34.53	1.010	5.79e3	0.00e0	1.28	2.4	1.13

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Compound name: 1,2,3,7,8,9-HxCDD

Name	Std Conc.	RA	[illegible]	RT	RRT	Area	IS Area	Conc.	Dev.	RRF
090212H1_4	2.50	1.28	NO	34.52	1.009	1.21e4	0.00e0	2.60	4.0	1.15
090212H1_5	10.0	1.22	NO	34.53	1.009	4.70e4	0.00e0	9.41	-5.9	1.04
090212H1_6	200	1.32	NO	34.52	1.009	1.26e6	0.00e0	207	3.3	1.14
090212H1_7	1000	1.25	NO	34.53	1.009	8.13e6	0.00e0	1000	0.2	1.10

Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	[illegible]	RT	RRT	Area	IS Area	Conc.	Dev.	RRF
090212H1_1	50.0	1.03	NO	38.17	1.000	2.11e5	4.13e5	48.0	-4.0	1.02
090212H1_3	1.25	1.15	NO	38.18	1.000	4.52e3	3.21e5	1.32	5.7	1.12
090212H1_4	2.50	1.07	NO	38.18	1.000	8.68e3	3.21e5	2.54	1.7	1.08
090212H1_5	10.0	1.07	NO	38.19	1.001	3.41e4	3.36e5	9.55	-4.5	1.02
090212H1_6	200	1.07	NO	38.19	1.000	9.19e5	4.29e5	201	0.7	1.07
090212H1_7	1000	1.05	NO	38.19	1.001	6.29e6	5.88e5	1000	0.5	1.07

Compound name: OCDD
Response Factor: 1.17831
RRF SD: 0.0736447, Relative SD: 6.25001
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	[illegible]	RT	RRT	Area	IS Area	Conc.	Dev.	RRF
090212H1_1	100	0.91	NO	41.63	1.000	3.30e5	5.87e5	95.3	-4.7	1.12
090212H1_3	2.50	0.89	NO	41.67	1.001	7.09e3	4.40e5	2.74	9.5	1.29
090212H1_4	5.00	0.87	NO	41.65	1.000	1.25e4	4.37e5	4.85	-3.0	1.14
090212H1_5	20.0	0.85	NO	41.66	1.000	5.10e4	4.67e5	18.5	-7.3	1.09
090212H1_6	400	0.92	NO	41.68	1.000	1.48e6	6.21e5	404	1.1	1.19
090212H1_7	2000	0.89	NO	41.67	1.001	1.10e7	8.92e5	2090	4.4	1.23

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Compound name: 2,3,7,8-TCDF
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc.	RA	IS	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
	090212H1_1	10.0	0.78	NO	25.19	1.001	1.14e5	1.07e6	9.75	-2.5	1.06
	090212H1_3	0.250	0.83	NO	25.19	1.001	2.44e3	8.63e5	0.260	4.1	1.13
	090212H1_4	0.500	0.84	NO	25.20	1.001	4.98e3	9.06e5	0.506	1.2	1.10
	090212H1_5	2.00	0.81	NO	25.20	1.001	1.97e4	9.70e5	1.87	-6.4	1.02
	090212H1_6	40.0	0.79	NO	25.20	1.001	4.71e5	1.08e6	40.1	0.3	1.09
	090212H1_7	200	0.79	NO	25.20	1.001	2.66e6	1.18e6	207	3.4	1.12

Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc.	RA	IS	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
	090212H1_1	50.0	1.61	NO	29.42	1.000	5.65e5	9.82e5	49.6	-0.7	1.15
	090212H1_3	1.25	1.63	NO	29.43	1.000	1.11e4	7.63e5	1.25	0.1	1.16
	090212H1_4	2.50	1.74	NO	29.43	1.000	2.29e4	7.80e5	2.53	1.3	1.17
	090212H1_5	10.0	1.61	NO	29.43	1.000	9.64e4	8.78e5	9.48	-5.2	1.10
	090212H1_6	200	1.62	NO	29.43	1.000	2.36e6	9.96e5	204	2.0	1.18
	090212H1_7	1000	1.60	NO	29.45	1.000	1.42e7	1.20e6	1030	2.5	1.19

Compound name: 2,3,4,7,8-PeCDF
Response Factor: 1.11789
RRF SD: 0.0264655, Relative SD: 2.36745
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc.	RA	IS	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
	090212H1_1	50.0	1.56	NO	30.35	1.000	5.35e5	9.65e5	49.6	-0.8	1.11
	090212H1_3	1.25	1.51	NO	30.36	1.000	1.08e4	7.68e5	1.25	0.4	1.12

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Compound name: 2,3,4,7,8-PeCDF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50	1.61	NO	30.36	1.000	2.28e4	7.94e5	2.57	2.6	1.15
090212H1_5	10.0	1.64	NO	30.38	1.000	9.28e4	8.67e5	9.58	-4.2	1.07
090212H1_6	200	1.60	NO	30.36	1.000	2.28e6	1.01e6	203	1.5	1.13
090212H1_7	1000	1.59	NO	30.38	1.000	1.37e7	1.22e6	1010	0.5	1.12

Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.41088
RRF SD: 0.0512913, Relative SD: 3.6354
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.27	NO	33.19	1.001	4.59e5	6.74e5	48.3	-3.3	1.36
090212H1_3	1.25	1.35	NO	33.19	1.000	9.88e3	5.28e5	1.33	6.0	1.50
090212H1_4	2.50	1.32	NO	33.19	1.000	1.96e4	5.45e5	2.54	1.8	1.44
090212H1_5	10.0	1.31	NO	33.20	1.000	7.94e4	5.86e5	9.61	-3.9	1.36
090212H1_6	200	1.27	NO	33.20	1.001	1.99e6	7.08e5	199	-0.5	1.40
090212H1_7	1000	1.27	NO	33.20	1.000	1.28e7	9.05e5	1000	-0.0	1.41

Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.22218
RRF SD: 0.0229408, Relative SD: 1.87703
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.25	NO	33.31	1.000	5.49e5	9.02e5	49.8	-0.4	1.22
090212H1_3	1.25	1.21	NO	33.32	1.000	1.07e4	6.79e5	1.29	3.1	1.26
090212H1_4	2.50	1.37	NO	33.31	1.000	2.16e4	6.99e5	2.52	1.0	1.23
090212H1_5	10.0	1.34	NO	33.33	1.000	8.96e4	7.51e5	9.76	-2.4	1.19
090212H1_6	200	1.27	NO	33.32	1.000	2.27e6	9.34e5	199	-0.5	1.22
090212H1_7	1000	1.27	NO	33.33	1.001	1.41e7	1.17e6	992	-0.8	1.21

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Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	Rf	Int	RT	RRT	Resp	IS Resp	Conc.	Dev	RRF
090212H1_1	50.0	1.29	NO	33.92	1.000	4.53e5	7.19e5	49.2	-1.6	1.26
090212H1_3	1.25	1.38	NO	33.93	1.000	9.11e3	5.78e5	1.23	-1.5	1.26
090212H1_4	2.50	1.28	NO	33.93	1.001	1.91e4	5.74e5	2.60	3.9	1.33
090212H1_5	10.0	1.25	NO	33.94	1.000	7.70e4	6.20e5	9.71	-2.9	1.24
090212H1_6	200	1.26	NO	33.93	1.000	1.95e6	7.64e5	200	-0.2	1.28
090212H1_7	1000	1.30	NO	33.94	1.000	1.26e7	9.59e5	1020	2.3	1.31

Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.25756
RRF SD: 0.0204635, Relative SD: 1.62723
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	Rf	Int	RT	RRT	Resp	IS Resp	Conc.	Dev	RRF
090212H1_1	50.0	1.25	NO	34.91	1.000	3.76e5	6.05e5	49.5	-1.0	1.24
090212H1_3	1.25	1.37	NO	34.91	1.000	7.41e3	4.73e5	1.24	-0.4	1.25
090212H1_4	2.50	1.24	NO	34.92	1.001	1.51e4	4.79e5	2.50	0.2	1.26
090212H1_5	10.0	1.28	NO	34.93	1.000	6.29e4	5.10e5	9.81	-1.9	1.23
090212H1_6	200	1.25	NO	34.92	1.001	1.68e6	6.50e5	206	2.9	1.29
090212H1_7	1000	1.28	NO	34.92	1.000	1.08e7	8.57e5	1000	0.3	1.26

Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	Rf	Int	RT	RRT	Resp	IS Resp	Conc.	Dev	RRF
090212H1_1	50.0	1.05	NO	36.81	1.000	4.18e5	5.07e5	48.8	-2.3	1.65
090212H1_3	1.25	1.05	NO	36.84	1.001	8.84e3	3.97e5	1.32	5.5	1.78

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Compound name: 1,2,3,4,6,7,8-HpCDF

Name	Std Conc	RF	[illegible]	RT	RRT	Resp	IS Resp	Conc	[illegible]	RRF
090212H1_4	2.50	1.04	NO	36.82	1.000	1.73e4	3.94e5	2.60	4.0	1.76
090212H1_5	10.0	1.05	NO	36.84	1.001	6.64e4	4.25e5	9.25	-7.5	1.56
090212H1_6	200	1.06	NO	36.83	1.000	1.78e6	5.26e5	200	-0.1	1.69
090212H1_7	1000	1.06	NO	36.83	1.000	1.17e7	6.89e5	1010	0.5	1.70

Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.48054
RRF SD: 0.0286004, Relative SD: 1.93175
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	[illegible]	RT	RRT	Resp	IS Resp	Conc	[illegible]	RRF
090212H1_1	50.0	1.05	NO	38.73	1.000	3.09e5	4.20e5	49.7	-0.5	1.47
090212H1_3	1.25	0.89	NO	38.75	1.001	6.11e3	3.26e5	1.27	1.3	1.50
090212H1_4	2.50	0.99	NO	38.73	1.000	1.20e4	3.25e5	2.49	-0.4	1.47
090212H1_5	10.0	1.07	NO	38.74	1.000	4.97e4	3.47e5	9.66	-3.4	1.43
090212H1_6	200	1.04	NO	38.75	1.000	1.34e6	4.47e5	202	0.9	1.49
090212H1_7	1000	1.03	NO	38.75	1.000	9.18e6	6.08e5	1020	2.1	1.51

Compound name: OCDF
Response Factor: 1.09622
RRF SD: 0.0644136, Relative SD: 5.87597
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	[illegible]	RT	RRT	Resp	IS Resp	Conc	[illegible]	RRF
090212H1_1	100	0.93	NO	41.88	1.001	4.66e5	8.78e5	96.7	-3.3	1.06
090212H1_3	2.50	0.90	NO	41.89	1.001	1.01e4	6.65e5	2.76	10.6	1.21
090212H1_4	5.00	0.84	NO	41.88	1.001	1.79e4	6.44e5	5.08	1.6	1.11
090212H1_5	20.0	0.95	NO	41.88	1.000	7.14e4	6.95e5	18.8	-6.2	1.03
090212H1_6	400	0.94	NO	41.90	1.000	2.10e6	9.52e5	402	0.4	1.10
090212H1_7	2000	0.92	NO	41.89	1.000	1.48e7	1.39e6	1940	-3.1	1.06

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Compound name: 13C-2,3,7,8-TCDD
Response Factor: 1.01489
RRF SD: 0.0275825, Relative SD: 2.71777
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.77	NO	25.95	1.022	7.49e5	7.37e5	100	0.1	1.02
090212H1_3	100	0.80	NO	25.97	1.022	5.94e5	6.03e5	97.2	-2.8	0.986
090212H1_4	100	0.78	NO	25.97	1.022	6.33e5	6.33e5	98.5	-1.5	1.00
090212H1_5	100	0.78	NO	25.97	1.022	6.64e5	6.68e5	97.9	-2.1	0.994
090212H1_6	100	0.79	NO	25.97	1.022	7.81e5	7.54e5	102	2.0	1.04
090212H1_7	100	0.79	NO	25.97	1.022	8.66e5	8.18e5	104	4.3	1.06

Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.827461
RRF SD: 0.0577323, Relative SD: 6.97704
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.64	NO	30.64	1.207	6.02e5	7.37e5	98.7	-1.3	0.817
090212H1_3	100	0.63	NO	30.65	1.207	4.83e5	6.03e5	96.8	-3.2	0.801
090212H1_4	100	0.61	NO	30.65	1.207	4.97e5	6.33e5	94.9	-5.1	0.786
090212H1_5	100	0.64	NO	30.65	1.207	5.23e5	6.68e5	94.6	-5.4	0.783
090212H1_6	100	0.65	NO	30.65	1.207	6.35e5	7.54e5	102	1.7	0.842
090212H1_7	100	0.64	NO	30.65	1.207	7.66e5	8.18e5	113	13.2	0.937

Compound name: 13C-1,2,3,4,7,8-HxCDD
Response Factor: 0.916247
RRF SD: 0.0122736, Relative SD: 1.33955
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Int	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	1.26	NO	34.08	0.988	5.27e5	5.79e5	99.4	-0.6	0.911
090212H1_3	100	1.26	NO	34.10	0.988	4.08e5	4.37e5	102	2.0	0.934

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Compound name: 13C-1,2,3,4,7,8-HxCDD

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
090212H1_4	100	1.26	NO	34.08	0.988	4.22e5	4.66e5	98.7	-1.3	0.904
090212H1_5	100	1.24	NO	34.11	0.988	4.47e5	4.90e5	99.6	-0.4	0.913
090212H1_6	100	1.25	NO	34.10	0.988	5.53e5	6.10e5	98.9	-1.1	0.907
090212H1_7	100	1.25	NO	34.11	0.988	7.54e5	8.12e5	101	1.4	0.929

Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.920893
RRF SD: 0.0250009, Relative SD: 2.71486
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
090212H1_1	100	1.26	NO	34.19	0.991	5.42e5	5.79e5	102	1.7	0.936
090212H1_3	100	1.23	NO	34.21	0.991	4.14e5	4.37e5	103	2.9	0.948
090212H1_4	100	1.29	NO	34.21	0.991	4.20e5	4.66e5	97.7	-2.3	0.900
090212H1_5	100	1.25	NO	34.22	0.991	4.60e5	4.90e5	102	2.1	0.940
090212H1_6	100	1.27	NO	34.21	0.991	5.59e5	6.10e5	99.5	-0.5	0.916
090212H1_7	100	1.23	NO	34.22	0.991	7.18e5	8.12e5	96.0	-4.0	0.884

Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.708388
RRF SD: 0.019948, Relative SD: 2.81596
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
090212H1_1	100	1.07	NO	38.16	1.106	4.13e5	5.79e5	101	0.7	0.713
090212H1_3	100	1.09	NO	38.17	1.106	3.21e5	4.37e5	104	3.9	0.736
090212H1_4	100	1.05	NO	38.17	1.106	3.21e5	4.66e5	97.1	-2.9	0.688
090212H1_5	100	1.06	NO	38.17	1.106	3.36e5	4.90e5	96.8	-3.2	0.686
090212H1_6	100	1.06	NO	38.18	1.106	4.29e5	6.10e5	99.3	-0.7	0.703
090212H1_7	100	1.04	NO	38.17	1.106	5.88e5	8.12e5	102	2.2	0.724

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Compound name: 13C-OCDD
Response Factor: 0.502588
RRF SD: 0.0283515, Relative SD: 5.6411
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RT	Int.	RT	RRT	Area	IS Area	Conc.	Dev.	RRF
090212H1_1	200	0.89	NO	41.62	1.206	5.87e5	5.79e5	202	0.9	0.507
090212H1_3	200	0.92	NO	41.65	1.207	4.40e5	4.37e5	200	0.2	0.504
090212H1_4	200	0.90	NO	41.63	1.206	4.37e5	4.66e5	187	-6.7	0.469
090212H1_5	200	0.89	NO	41.65	1.206	4.67e5	4.90e5	190	-5.0	0.477
090212H1_6	200	0.91	NO	41.67	1.207	6.21e5	6.10e5	203	1.4	0.510
090212H1_7	200	0.93	NO	41.65	1.206	8.92e5	8.12e5	219	9.3	0.549

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.976814
RRF SD: 0.0185774, Relative SD: 1.90184
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RT	Int.	RT	RRT	Area	IS Area	Conc.	Dev.	RRF
090212H1_1	100	0.77	NO	25.16	0.991	1.07e6	1.11e6	98.8	-1.2	0.965
090212H1_3	100	0.79	NO	25.17	0.991	8.63e5	9.05e5	97.5	-2.5	0.953
090212H1_4	100	0.78	NO	25.17	0.991	9.06e5	9.34e5	99.3	-0.7	0.970
090212H1_5	100	0.79	NO	25.17	0.991	9.70e5	9.83e5	101	1.1	0.987
090212H1_6	100	0.77	NO	25.17	0.991	1.08e6	1.10e6	100	0.4	0.980
090212H1_7	100	0.76	NO	25.17	0.991	1.18e6	1.18e6	103	2.9	1.01

Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 0.896189
RRF SD: 0.0663113, Relative SD: 7.39926
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RT	Int.	RT	RRT	Area	IS Area	Conc.	Dev.	RRF
090212H1_1	100	1.58	NO	29.41	1.158	9.82e5	1.11e6	98.4	-1.6	0.882
090212H1_3	100	1.57	NO	29.42	1.158	7.63e5	9.05e5	94.0	-6.0	0.842

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Compound name: 13C-1,2,3,7,8-PeCDF

090212H1_4	100	1.57	NO	29.42	1.158	7.80e5	9.34e5	93.1	-6.9	0.835
090212H1_5	100	1.58	NO	29.42	1.158	8.78e5	9.83e5	99.7	-0.3	0.894
090212H1_6	100	1.56	NO	29.42	1.158	9.96e5	1.10e6	101	1.0	0.905
090212H1_7	100	1.52	NO	29.43	1.159	1.20e6	1.18e6	114	13.7	1.02

Compound name: 13C-2,3,4,7,8-PeCDF
Response Factor: 0.899625
RRF SD: 0.0716088, Relative SD: 7.95986
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

090212H1_1	100	1.57	NO	30.34	1.195	9.65e5	1.11e6	96.3	-3.7	0.866
090212H1_3	100	1.54	NO	30.35	1.195	7.68e5	9.05e5	94.2	-5.8	0.848
090212H1_4	100	1.52	NO	30.35	1.195	7.94e5	9.34e5	94.5	-5.5	0.850
090212H1_5	100	1.59	NO	30.36	1.195	8.67e5	9.83e5	98.1	-1.9	0.882
090212H1_6	100	1.55	NO	30.35	1.195	1.01e6	1.10e6	102	1.6	0.914
090212H1_7	100	1.54	NO	30.36	1.195	1.22e6	1.18e6	115	15.3	1.04

Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.16919
RRF SD: 0.0331609, Relative SD: 2.83622
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

090212H1_1	100	0.54	NO	33.16	0.961	6.74e5	5.79e5	99.5	-0.5	1.16
090212H1_3	100	0.54	NO	33.17	0.961	5.28e5	4.37e5	104	3.5	1.21
090212H1_4	100	0.52	NO	33.17	0.961	5.45e5	4.66e5	99.9	-0.1	1.17
090212H1_5	100	0.54	NO	33.19	0.961	5.86e5	4.90e5	102	2.3	1.20
090212H1_6	100	0.53	NO	33.17	0.961	7.08e5	6.10e5	99.4	-0.6	1.16
090212H1_7	100	0.53	NO	33.19	0.961	9.05e5	8.12e5	95.3	-4.7	1.11

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Compound name: 13C-1,2,3,6,7,8-HxCDF
Response Factor: 1.51914
RRF SD: 0.0457416, Relative SD: 3.01103
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.55	NO	33.29	0.965	9.02e5	5.79e5	103	2.5	1.56
090212H1_3	100	0.52	NO	33.31	0.965	6.79e5	4.37e5	102	2.4	1.56
090212H1_4	100	0.53	NO	33.29	0.965	6.99e5	4.66e5	98.7	-1.3	1.50
090212H1_5	100	0.53	NO	33.32	0.965	7.51e5	4.90e5	101	1.0	1.53
090212H1_6	100	0.52	NO	33.31	0.965	9.34e5	6.10e5	101	0.8	1.53
090212H1_7	100	0.54	NO	33.31	0.965	1.17e6	8.12e5	94.6	-5.4	1.44

Compound name: 13C-2,3,4,6,7,8-HxCDF
Response Factor: 1.24921
RRF SD: 0.0473005, Relative SD: 3.78643
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.54	NO	33.91	0.983	7.19e5	5.79e5	99.3	-0.7	1.24
090212H1_3	100	0.53	NO	33.92	0.983	5.78e5	4.37e5	106	6.0	1.32
090212H1_4	100	0.55	NO	33.91	0.983	5.74e5	4.66e5	98.4	-1.6	1.23
090212H1_5	100	0.55	NO	33.93	0.983	6.20e5	4.90e5	101	1.3	1.27
090212H1_6	100	0.53	NO	33.92	0.983	7.64e5	6.10e5	100	0.4	1.25
090212H1_7	100	0.53	NO	33.93	0.983	9.59e5	8.12e5	94.5	-5.5	1.18

Compound name: 13C-1,2,3,7,8,9-HxCDF
Response Factor: 1.05297
RRF SD: 0.0198461, Relative SD: 1.88477
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.53	NO	34.90	1.011	6.05e5	5.79e5	99.2	-0.8	1.04
090212H1_3	100	0.52	NO	34.90	1.011	4.73e5	4.37e5	103	2.9	1.08

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Compound name: 13C-1,2,3,7,8,9-HxCDF

Name	Sample	Response	Flag	RT	RRT	Response	IS Response	Conc.	Dev.	RRF
090212H1_4	100	0.53	NO	34.90	1.011	4.79e5	4.66e5	97.6	-2.4	1.03
090212H1_5	100	0.54	NO	34.92	1.011	5.10e5	4.90e5	98.9	-1.1	1.04
090212H1_6	100	0.52	NO	34.90	1.011	6.50e5	6.10e5	101	1.2	1.07
090212H1_7	100	0.53	NO	34.91	1.011	8.57e5	8.12e5	100	0.2	1.05

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 0.868264
RRF SD: 0.0231201, Relative SD: 2.6628
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Sample	Response	Flag	RT	RRT	Response	IS Response	Conc.	Dev.	RRF
090212H1_1	100	0.46	NO	36.80	1.066	5.07e5	5.79e5	101	0.8	0.875
090212H1_3	100	0.44	NO	36.81	1.066	3.97e5	4.37e5	105	4.7	0.909
090212H1_4	100	0.44	NO	36.81	1.066	3.94e5	4.66e5	97.3	-2.7	0.845
090212H1_5	100	0.44	NO	36.82	1.066	4.25e5	4.90e5	99.9	-0.1	0.868
090212H1_6	100	0.46	NO	36.82	1.066	5.26e5	6.10e5	99.5	-0.5	0.864
090212H1_7	100	0.45	NO	36.82	1.066	6.89e5	8.12e5	97.7	-2.3	0.849

Compound name: 13C-1,2,3,4,7,8,9-HpCDF
Response Factor: 0.726514
RRF SD: 0.0207066, Relative SD: 2.85014
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Sample	Response	Flag	RT	RRT	Response	IS Response	Conc.	Dev.	RRF
090212H1_1	100	0.46	NO	38.72	1.122	4.20e5	5.79e5	99.8	-0.2	0.725
090212H1_3	100	0.45	NO	38.73	1.122	3.26e5	4.37e5	103	2.8	0.747
090212H1_4	100	0.45	NO	38.72	1.122	3.25e5	4.66e5	95.9	-4.1	0.696
090212H1_5	100	0.44	NO	38.73	1.122	3.47e5	4.90e5	97.6	-2.4	0.709
090212H1_6	100	0.45	NO	38.74	1.122	4.47e5	6.10e5	101	1.0	0.734
090212H1_7	100	0.44	NO	38.74	1.122	6.08e5	8.12e5	103	3.0	0.748

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Compound name: 13C-OCDF
Response Factor: 0.759527
RRF SD: 0.058777, Relative SD: 7.73863
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	[illegible]	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	200	0.91	NO	41.85	1.213	8.78e5	5.79e5	200	-0.2	0.758
090212H1_3	200	0.88	NO	41.86	1.213	6.65e5	4.37e5	200	0.2	0.761
090212H1_4	200	0.90	NO	41.85	1.213	6.44e5	4.66e5	182	-9.1	0.690
090212H1_5	200	0.90	NO	41.86	1.213	6.95e5	4.90e5	187	-6.6	0.710
090212H1_6	200	0.90	NO	41.89	1.213	9.52e5	6.10e5	206	2.8	0.781
090212H1_7	200	0.90	NO	41.88	1.213	1.39e6	8.12e5	226	12.8	0.857

Compound name: 37Cl-2,3,7,8-TCDD
Response Factor: 0.668396
RRF SD: 0.0327668, Relative SD: 4.90231
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	[illegible]	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	10.0			25.98	1.023	4.66e4	7.37e5	9.46	-5.4	0.632
090212H1_3	0.250			25.97	1.022	1.08e3	6.03e5	0.269	7.5	0.718
090212H1_4	0.500			25.98	1.023	2.17e3	6.33e5	0.512	2.4	0.685
090212H1_5	2.00			25.98	1.023	8.69e3	6.68e5	1.95	-2.7	0.650
090212H1_6	40.0			25.98	1.023	1.93e5	7.54e5	38.4	-4.1	0.641
090212H1_7	200			25.98	1.023	1.12e6	8.18e5	205	2.3	0.684

Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	[illegible]	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
090212H1_1	100	0.81	NO	25.39	0.000	7.37e5	7.37e5	100	0.0	1.00
090212H1_3	100	0.79	NO	25.40	0.000	6.03e5	6.03e5	100	0.0	1.00

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Compound name: 13C-1,2,3,4-TCDD

090212H1_4	100	0.79	NO	25.40	0.000	6.33e5	6.33e5	100	0.0	1.00
090212H1_5	100	0.78	NO	25.40	0.000	6.68e5	6.68e5	100	0.0	1.00
090212H1_6	100	0.78	NO	25.40	0.000	7.54e5	7.54e5	100	0.0	1.00
090212H1_7	100	0.79	NO	25.40	0.000	8.18e5	8.18e5	100	0.0	1.00

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 4.96507e-017, Relative SD: 4.96507e-015
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

090212H1_1	100	0.78	NO	23.95	0.000	1.11e6	1.11e6	100	0.0	1.00
090212H1_3	100	0.77	NO	23.95	0.000	9.05e5	9.05e5	100	0.0	1.00
090212H1_4	100	0.77	NO	23.95	0.000	9.34e5	9.34e5	100	0.0	1.00
090212H1_5	100	0.76	NO	23.97	0.000	9.83e5	9.83e5	100	0.0	1.00
090212H1_6	100	0.77	NO	23.97	0.000	1.10e6	1.10e6	100	-0.0	1.00
090212H1_7	100	0.78	NO	23.97	0.000	1.18e6	1.18e6	100	0.0	1.00

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

090212H1_1	100	1.22	NO	34.50	0.000	5.79e5	5.79e5	100	0.0	1.00
090212H1_3	100	1.23	NO	34.51	0.000	4.37e5	4.37e5	100	0.0	1.00
090212H1_4	100	1.25	NO	34.51	0.000	4.66e5	4.66e5	100	0.0	1.00
090212H1_5	100	1.18	NO	34.52	0.000	4.90e5	4.90e5	100	0.0	1.00
090212H1_6	100	1.26	NO	34.52	0.000	6.10e5	6.10e5	100	0.0	1.00
090212H1_7	100	1.22	NO	34.52	0.000	8.12e5	8.12e5	100	0.0	1.00

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Compound name: Total Tetra-Dioxins
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RF	RRF	Resp	IS Area	Conc	Dev	RT
090212H1_1	10.0					7.49e5	60.1		
090212H1_3	0.250					5.94e5	0.240		
090212H1_4	0.500					6.33e5	0.536		
090212H1_5	2.00					6.64e5	1.95		
090212H1_6	40.0					7.81e5	39.5		
090212H1_7	200					8.66e5	206		

Compound name: Total Penta-Dioxins
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RF	RRF	Resp	IS Area	Conc	Dev	RT
090212H1_1	50.0					6.02e5	159		
090212H1_3	1.25					4.83e5	1.30		
090212H1_4	2.50					4.97e5	2.53		
090212H1_5	10.0					5.23e5	9.77		
090212H1_6	200					6.35e5	200		
090212H1_7	1000					7.66e5	1020		

Compound name: Total Hexa-Dioxins
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RF	RRF	Resp	IS Area	Conc	Dev	RT
090212H1_1	50.0					0.00e0	191		
090212H1_3	1.25					0.00e0	3.85		

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Compound name: Total Hexa-Dioxins

	090212H1_4	2.50		0.00e0	7.81	
	090212H1_5	10.0		0.00e0	28.5	
	090212H1_6	200		0.00e0	615	
	090212H1_7	1000		0.00e0	3010	

Compound name: Total Hepta-Dioxins
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

	090212H1_1	50.0		4.13e5	127	
	090212H1_3	1.25		3.21e5	1.38	
	090212H1_4	2.50		3.21e5	2.60	
	090212H1_5	10.0		3.36e5	9.55	
	090212H1_6	200		4.29e5	203	
	090212H1_7	1000		5.88e5	1010	

Compound name: Total Tetra-Furans
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

	090212H1_1	10.0		1.07e6	35.3	
	090212H1_3	0.250		8.63e5	0.269	
	090212H1_4	0.500		9.06e5	0.506	
	090212H1_5	2.00		9.70e5	1.88	
	090212H1_6	40.0		1.08e6	40.6	
	090212H1_7	200		1.18e6	209	

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Compound name: 1st Func. Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	RT	RF	RRF	Resp.	IS Resp.	Conc.	Flag	RRF
090212H1_1	50.0						0.00e0	46.2		
090212H1_3	1.25						0.00e0	0.00241		
090212H1_4	2.50						0.00e0	0.0270		
090212H1_5	10.0						0.00e0	0.0198		
090212H1_6	200						0.00e0	0.00694		
090212H1_7	1000						0.00e0	0.00731		

Compound name: Total Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	RT	RF	RRF	Resp.	IS Resp.	Conc.	Flag	RRF
090212H1_1	50.0						0.00e0	147		
090212H1_3	1.25						0.00e0	2.51		
090212H1_4	2.50						0.00e0	5.10		
090212H1_5	10.0						0.00e0	19.1		
090212H1_6	200						0.00e0	412		
090212H1_7	1000						0.00e0	2040		

Compound name: Total Hexa-Furans
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	RT	RF	RRF	Resp.	IS Resp.	Conc.	Flag	RRF
090212H1_1	50.0						0.00e0	250		
090212H1_3	1.25						0.00e0	5.09		

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: Total Hexa-Furans

	090212H1_4	2.50	0.00e0	10.2
	090212H1_5	10.0	0.00e0	38.9
	090212H1_6	200	0.00e0	804
	090212H1_7	1000	0.00e0	4020

Compound name: Total Hepta-Furans
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

	090212H1_1	50.0	0.00e0	98.6
	090212H1_3	1.25	0.00e0	2.59
	090212H1_4	2.50	0.00e0	5.09
	090212H1_5	10.0	0.00e0	18.9
	090212H1_6	200	0.00e0	403
	090212H1_7	1000	0.00e0	2030

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

	090212H1_1	1.00
	090212H1_3	1.00
	090212H1_4	1.00
	090212H1_5	1.00
	090212H1_6	1.00
	090212H1_7	1.00

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: PFK2
No Calibration
Response type: External Std, Area
Curve type: RF

	090212H1_1	1.00									
	090212H1_3	1.00									
	090212H1_4	1.00									
	090212H1_5	1.00									
	090212H1_6	1.00									
	090212H1_7	1.00									

Compound name: PFK3
No Calibration
Response type: External Std, Area
Curve type: RF

	090212H1_1	1.00									
	090212H1_3	1.00									
	090212H1_4	1.00									
	090212H1_5	1.00									
	090212H1_6	1.00									
	090212H1_7	1.00									

Compound name: PFK4
No Calibration
Response type: External Std, Area
Curve type: RF

	090212H1_1	1.00									
	090212H1_3	1.00									
	090212H1_4	1.00									
	090212H1_5	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: PFK4

Name	Std. Conc.	RA	RT	RRT	RRA	Std. Dev.	Conc.	Dev.	RRF
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RA	RT	RRT	RRA	Std. Dev.	Conc.	Dev.	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std. Conc.	RA	RT	RRT	RRA	Std. Dev.	Conc.	Dev.	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

Compound name: DPE3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

Compound name: DPE4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE4

	090212H1_6	1.00											
	090212H1_7	1.00											

Compound name: DPE5
No Calibration
Response type: External Std, Area
Curve type: RF

	090212H1_1	1.00											
	090212H1_3	1.00											
	090212H1_4	1.00											
	090212H1_5	1.00											
	090212H1_6	1.00											
	090212H1_7	1.00											

Compound name: DPE6
No Calibration
Response type: External Std, Area
Curve type: RF

	090212H1_1	1.00											
	090212H1_3	1.00											
	090212H1_4	1.00											
	090212H1_5	1.00											
	090212H1_6	1.00											
	090212H1_7	1.00											

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	NO	9.78	7.8 8.2	12.9 12.3 (4)	Yes	8.00	12.0	Yes
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	48.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	48.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	48.1	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	48.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.91	0.76-1.02	NO	95.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	9.75	8.4 8.6	12.0 11.6 (4)	Yes	8.00	12.0	Yes
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	48.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	49.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	48.8	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	49.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.93	0.76-1.02	NO	96.7	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	100	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	98.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	99.4	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	102	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	98.8	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.5	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	NO	103	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	99.2	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	101	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	99.8	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	200	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.46	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: _____
Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.58
2	1,2,8,9-TCDD (Last)	26.86
3	1,2,4,7,9-PeCDD (First)	28.51
4	1,2,3,8,9-PeCDD (Last)	31.03
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.01
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.28
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.91
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

2/13/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090212H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090212H1_1

Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [illegible]

Date: 2/13/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.90e4	0.82	NO	1.08	1.000	25.98	1.001	9.7764	97.8	0.0390	9.7764
2	1,2,3,7,8-PeCDD	3.03e5	0.63	NO	1.03	1.000	30.65	1.000	48.635	97.3	0.124	48.635
3	1,2,3,4,7,8-HxCDD	2.54e5	1.26	NO	1.00	1.000	34.10	1.000	48.035	96.1	0.187	48.035
4	1,2,3,6,7,8-HxCDD	2.90e5	1.27	NO	1.13	1.000	34.21	1.000	47.595	95.2	0.184	47.595
5	1,2,3,7,8,9-HxCDD	2.83e5	1.28	NO	1.10	1.000	34.51	1.009	48.051	96.1	0.180	48.051
6	1,2,3,4,6,7,8-HpCDD	2.11e5	1.03	NO	1.06	1.000	38.17	1.000	47.989	96.0	0.341	47.989
7	OCDD	3.30e5	0.91	NO	1.18	1.000	41.63	1.000	95.331	95.3	0.179	95.331
8	2,3,7,8-TCDF	1.14e5	0.78	NO	1.09	1.000	25.19	1.001	9.7515	97.5	0.0409	9.7515
9	1,2,3,7,8-PeCDF	5.65e5	1.61	NO	1.16	1.000	29.42	1.000	49.643	99.3	0.123	49.643
10	2,3,4,7,8-PeCDF	5.35e5	1.56	NO	1.12	1.000	30.35	1.000	49.591	99.2	0.120	49.591
11	1,2,3,4,7,8-HxCDF	4.59e5	1.27	NO	1.41	1.000	33.19	1.001	48.331	96.7	0.150	48.331
12	1,2,3,6,7,8-HxCDF	5.49e5	1.25	NO	1.22	1.000	33.31	1.000	49.809	99.6	0.137	49.809
13	2,3,4,6,7,8-HxCDF	4.53e5	1.29	NO	1.28	1.000	33.92	1.000	49.224	98.4	0.172	49.224
14	1,2,3,7,8,9-HxCDF	3.76e5	1.25	NO	1.26	1.000	34.91	1.000	49.483	99.0	0.252	49.483
15	1,2,3,4,6,7,8-HpCDF	4.18e5	1.05	NO	1.69	1.000	36.81	1.000	48.842	97.7	0.180	48.842
16	1,2,3,4,7,8,9-HpCDF	3.09e5	1.05	NO	1.48	1.000	38.73	1.000	49.738	99.5	0.251	49.738
17	OCDF	4.66e5	0.93	NO	1.10	1.000	41.88	1.001	96.743	96.7	0.177	96.743
18	13C-2,3,7,8-TCDD	7.49e5	0.77	NO	1.01	1.000	25.95	1.022	100.15	100	0.141	
19	13C-1,2,3,7,8-PeCDD	6.02e5	0.64	NO	0.827	1.000	30.64	1.207	98.735	98.7	0.269	
20	13C-1,2,3,4,7,8-HxCDD	5.27e5	1.26	NO	0.916	1.000	34.08	0.988	99.432	99.4	0.335	
21	13C-1,2,3,6,7,8-HxCDD	5.42e5	1.26	NO	0.921	1.000	34.19	0.991	101.67	102	0.334	
22	13C-1,2,3,4,6,7,8-HpCDD	4.13e5	1.07	NO	0.708	1.000	38.16	1.106	100.67	101	0.425	
23	13C-OCDD	5.87e5	0.89	NO	0.503	1.000	41.62	1.206	201.71	101	0.424	
24	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	0.977	1.000	25.16	0.991	98.780	98.8	0.129	
25	13C-1,2,3,7,8-PeCDF	9.82e5	1.58	NO	0.896	1.000	29.41	1.158	98.441	98.4	0.304	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.57	NO	0.900	1.000	30.34	1.195	96.306	96.3	0.303	
27	13C-1,2,3,4,7,8-HxCDF	6.74e5	0.54	NO	1.17	1.000	33.16	0.961	99.512	99.5	0.469	
28	13C-1,2,3,6,7,8-HxCDF	9.02e5	0.55	NO	1.52	1.000	33.29	0.965	102.54	103	0.361	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.54	NO	1.25	1.000	33.91	0.983	99.345	99.3	0.439	
30	13C-1,2,3,7,8,9-HxCDF	6.05e5	0.53	NO	1.05	1.000	34.90	1.011	99.208	99.2	0.521	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.46	NO	0.868	1.000	36.80	1.066	100.83	101	0.602
32	13C-1,2,3,4,7,8,9-HpCDF	4.20e5	0.46	NO	0.727	1.000	38.72	1.122	99.796	99.8	0.719
33	13C-OCDF	8.78e5	0.91	NO	0.760	1.000	41.85	1.213	199.65	99.8	0.296
34	37Cl-2,3,7,8-TCDD	4.66e4			0.668	1.000	25.98	1.023	9.4592	94.6	0.0533
35	13C-1,2,3,4-TCDD	7.37e5	0.81	NO	1.00	1.000	25.39	0.000	100.00	100	0.144
36	13C-1,2,3,4-TCDF	1.11e6	0.78	NO	1.00	1.000	23.95	0.000	100.00	100	0.126
37	13C-1,2,3,7,8,9-HxCDD	5.79e5	1.22	NO	1.00	1.000	34.50	0.000	100.00	100	0.307

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 7:21:09 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:21:55 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Compound name: 1,3,6,8-TCDD (First)

090212H1_1	ST090212H1-1 1613 CS3 080917I	12-Feb-09	11:10:11
090212H1_2	solvent blank	12-Feb-09	11:59:18
090212H1_3	ST090212H1-2 1613 CS0 080917F	12-Feb-09	12:49:08
090212H1_4	ST090212H1-3 1613 CS1 080917CG	12-Feb-09	13:38:34
090212H1_5	ST090212H1-4 1613 CS2 080917H	12-Feb-09	14:28:11
090212H1_6	ST090212H1-5 1613 CS4 080917J	12-Feb-09	15:17:39
090212H1_7	ST090212H1-6 1613 CS5 080917K	12-Feb-09	16:07:03
090212H1_8	solvent blank	12-Feb-09	16:56:26
090212H1_9	SSS090212H1-1 Sec Src Std L070913A	12-Feb-09	17:45:49

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:13 Pacific Standard Time

M 292.9824 R 13157

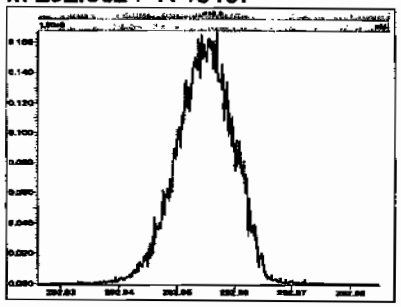

M 304.9824 R 14289

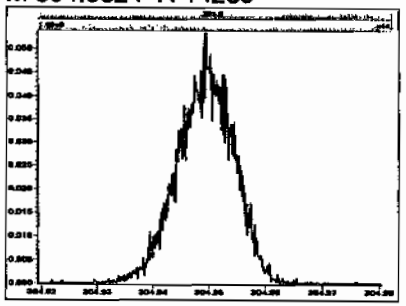

M 318.9792 R 13655

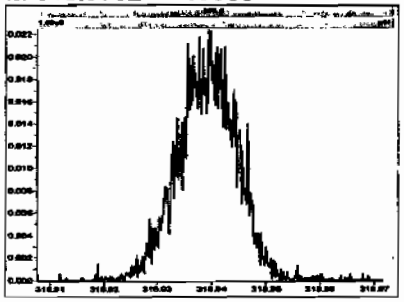

M 330.9792 R 12819

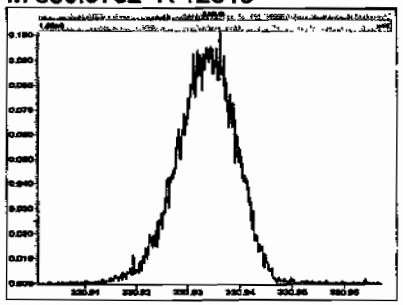

M 342.9792 R 13085

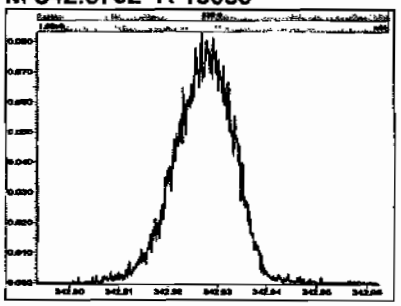

M 354.9792 R 13440

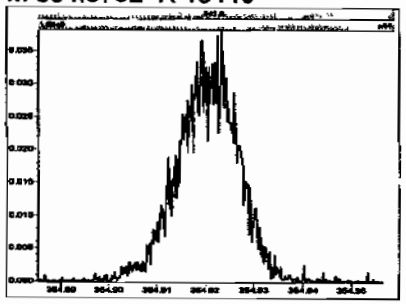

M 366.9792 R 11572

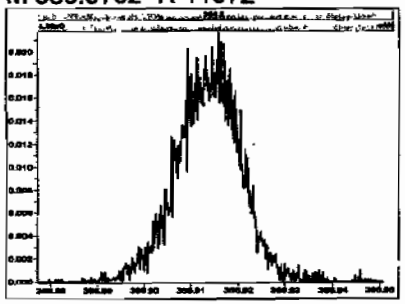

M 380.9760 R 13365

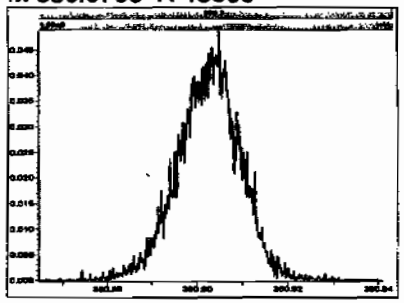

M 392.9760 R 13660

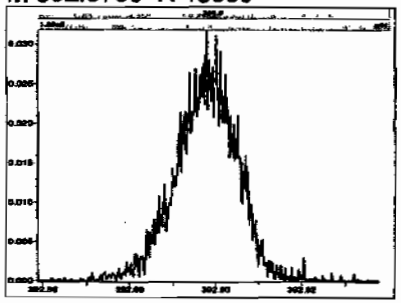

M 404.9760 R 13160

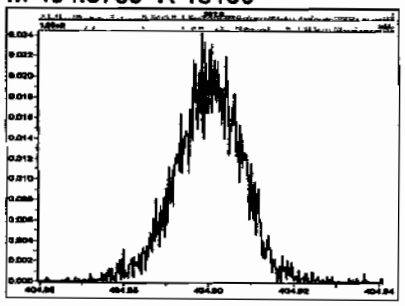

M 416.9760 R 15061

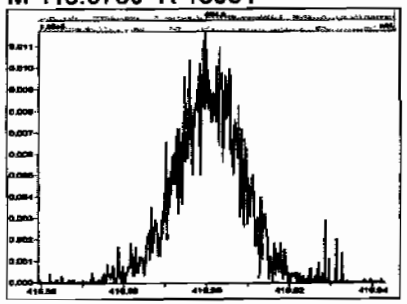

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:36 Pacific Standard Time

M 330.9792 R 13661

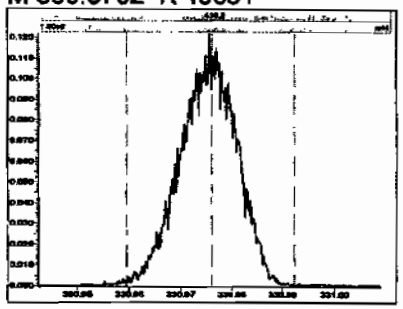

M 342.9792 R 12688

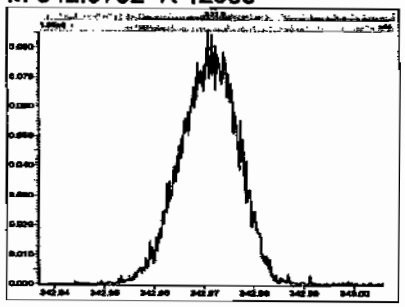

M 354.9792 R 13813

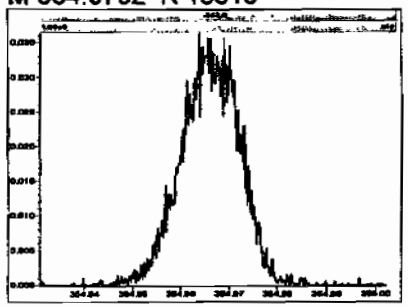

M 366.9792 R 13735

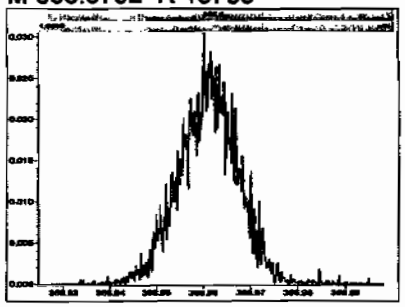

M 380.9760 R 13225

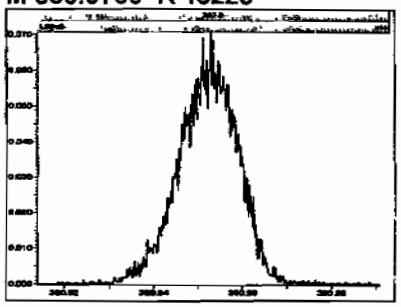

M 392.9760 R 13090

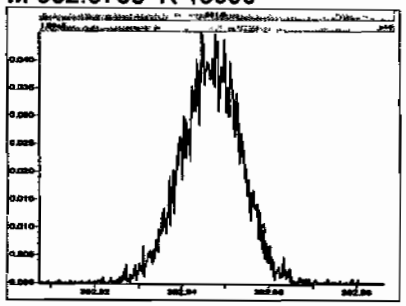

M 404.9760 R 13368

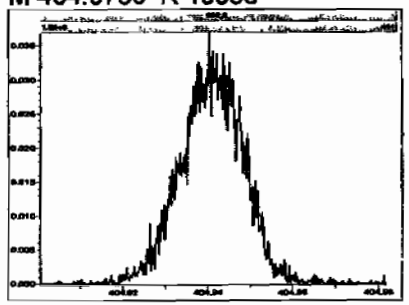

M 416.9760 R 13510

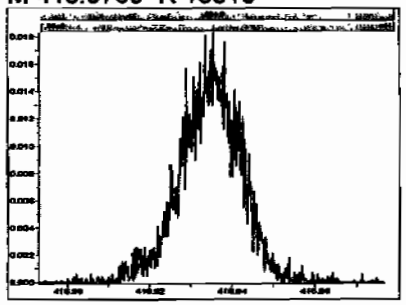

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:57 Pacific Standard Time

M 366.9792 R 13441

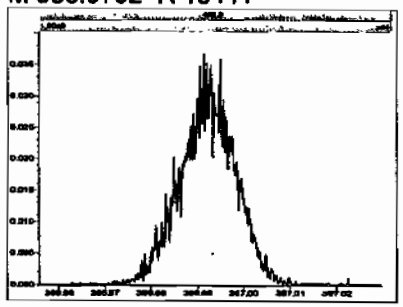

M 380.9760 R 13367

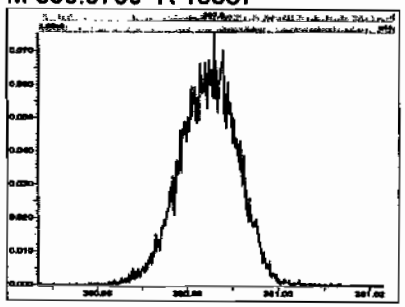

M 392.9760 R 13733

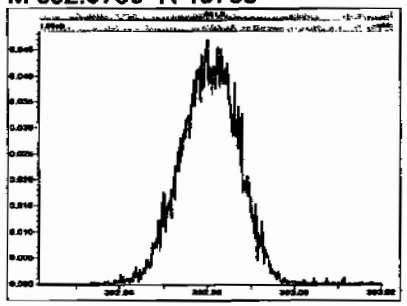

M 404.9760 R 12136

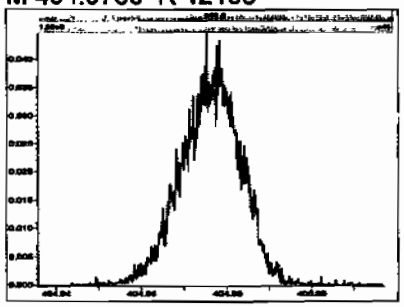

M 416.9760 R 13887

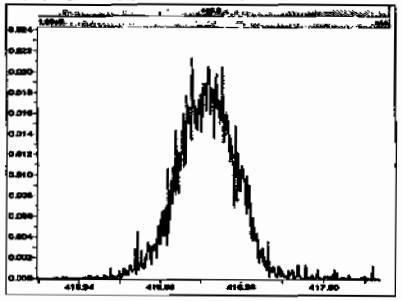

M 430.9728 R 13515

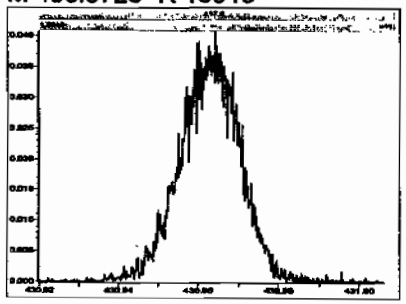

M 442.9728 R 14124

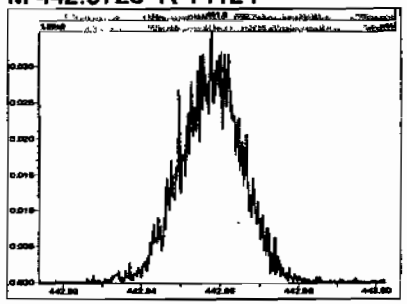

M 454.9728 R 13225

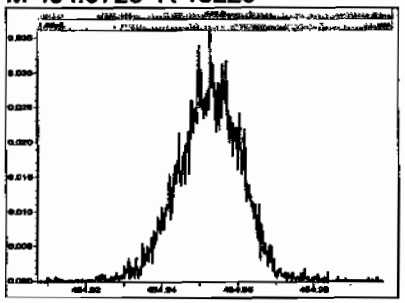

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:16 Pacific Standard Time

M 404.9760 R 13299

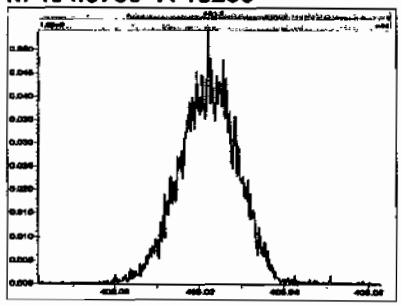

M 416.9760 R 14124

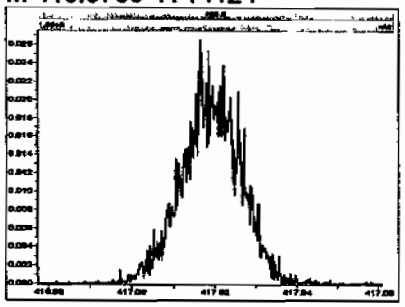

M 430.9728 R 13019

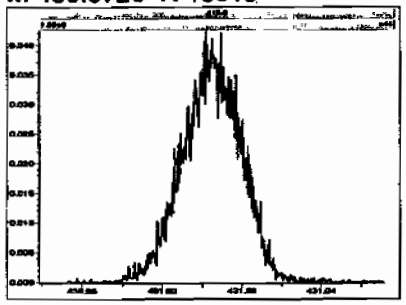

M 442.9728 R 13022

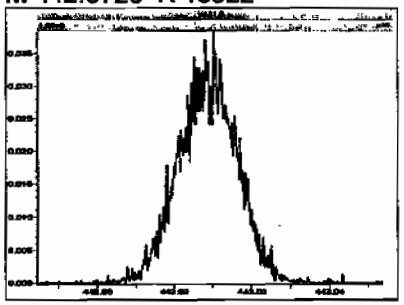

M 454.9728 R 12953

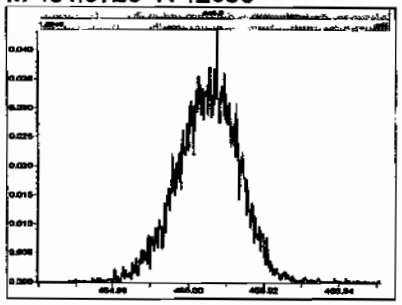

M 466.9728 R 12692

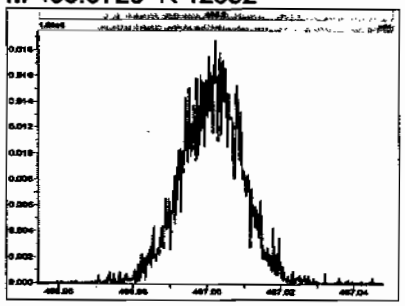

M 480.9696 R 14882

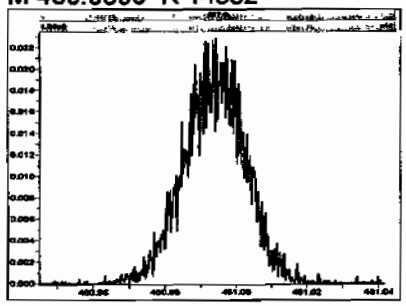

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Printed: Thursday, February 12, 2009 11:09:41 Pacific Standard Time

M 430.9728 R 12434

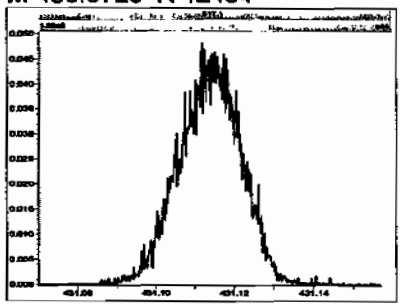

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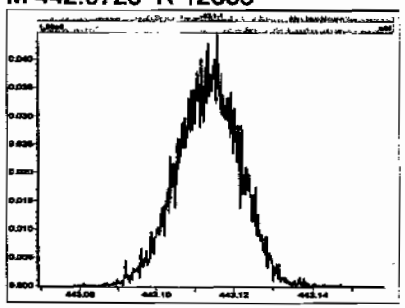

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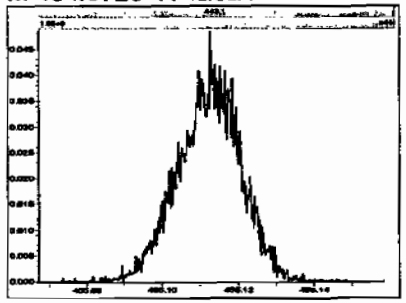

M 466.9728 R 12954

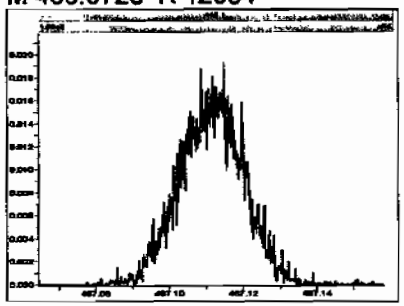

M 480.9696 R 11520

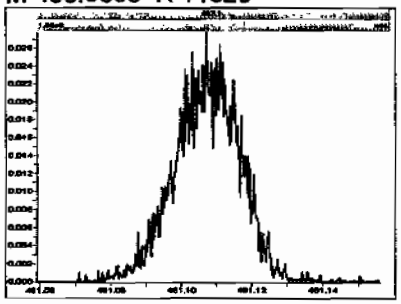

M 492.9696 R 12757

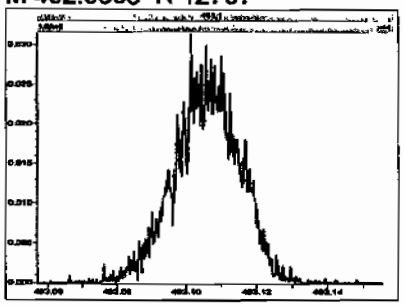

M 504.9696 R 11211

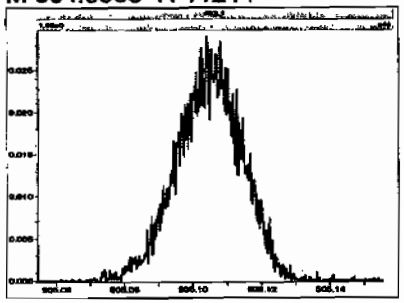

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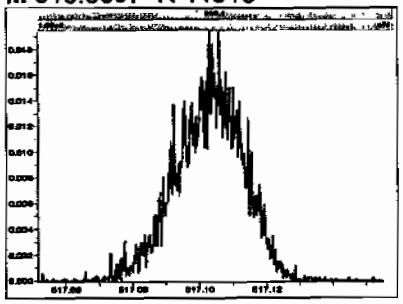

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

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Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

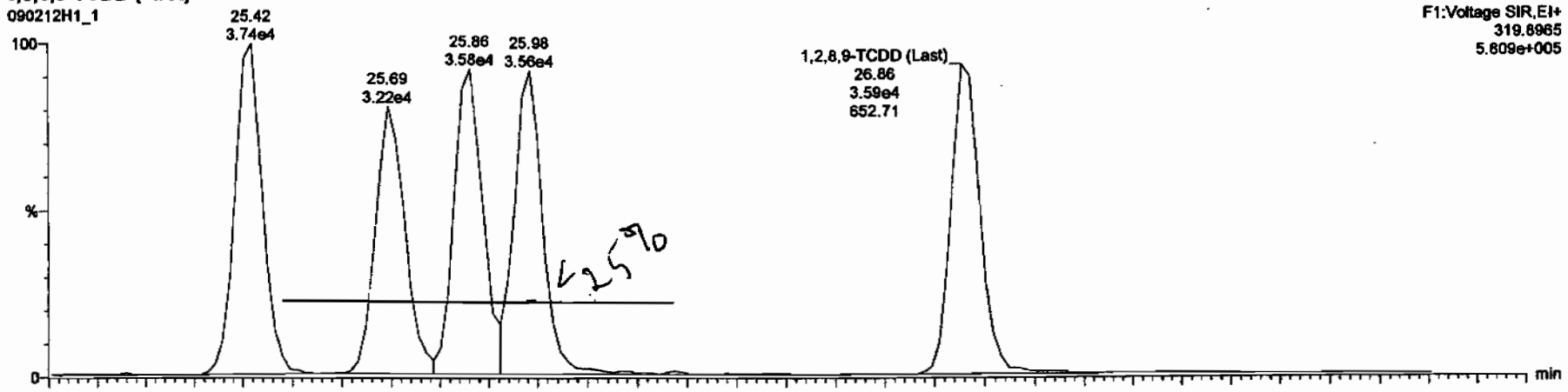

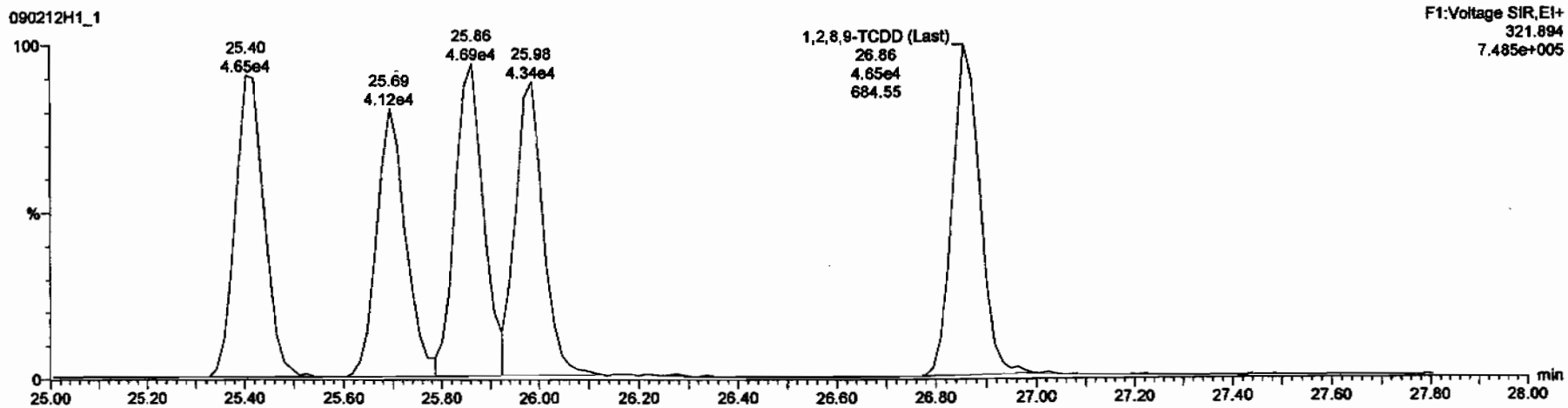

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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2,3,7,8-TCDD

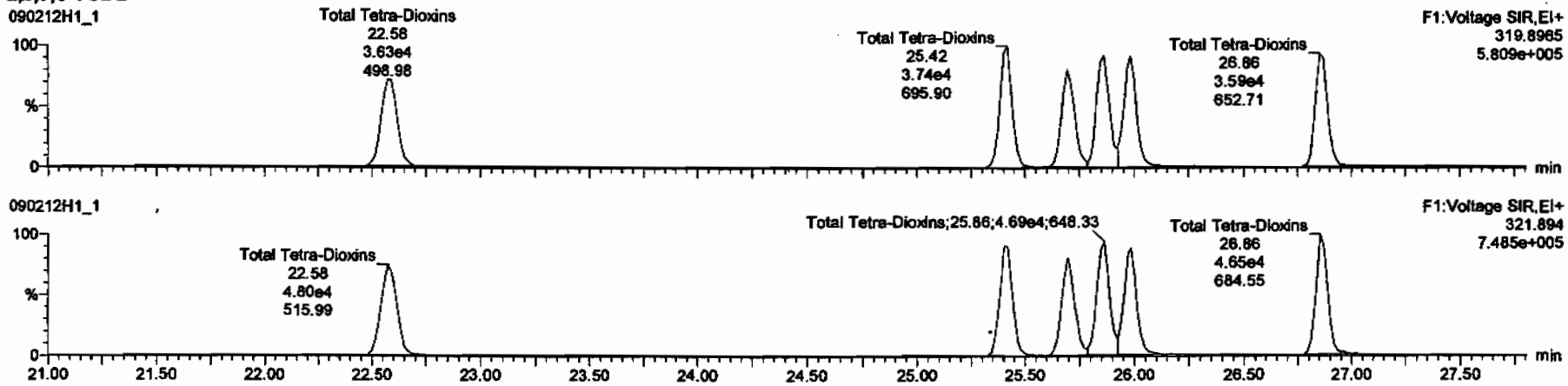

13C-2,3,7,8-TCDD

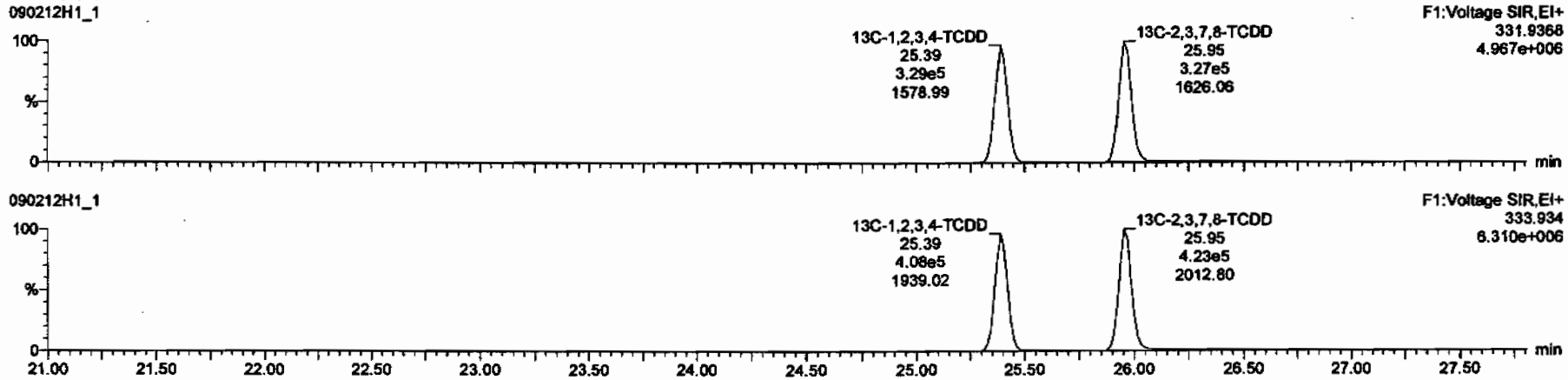

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37Cl-2,3,7,8-TCDD

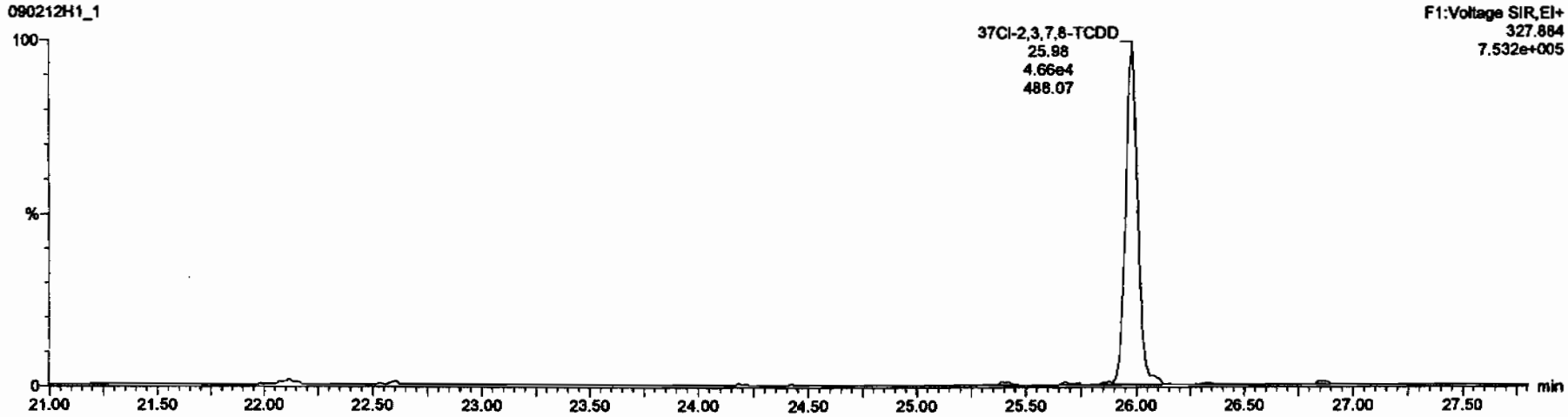

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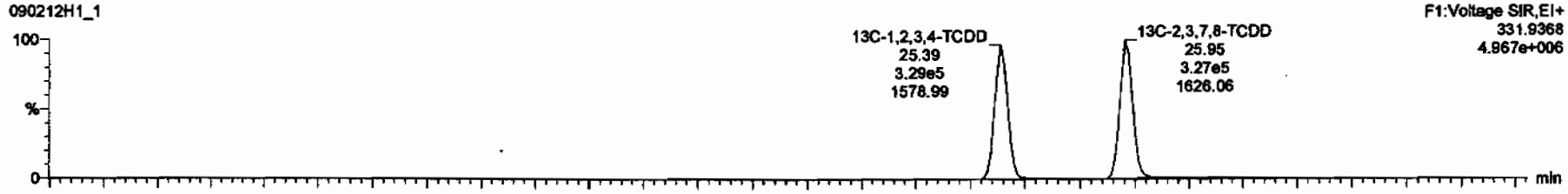

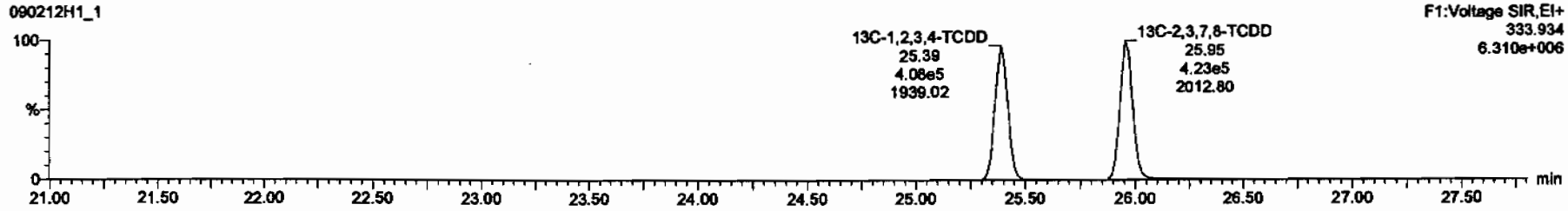

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1,2,3,7,8-PeCDD

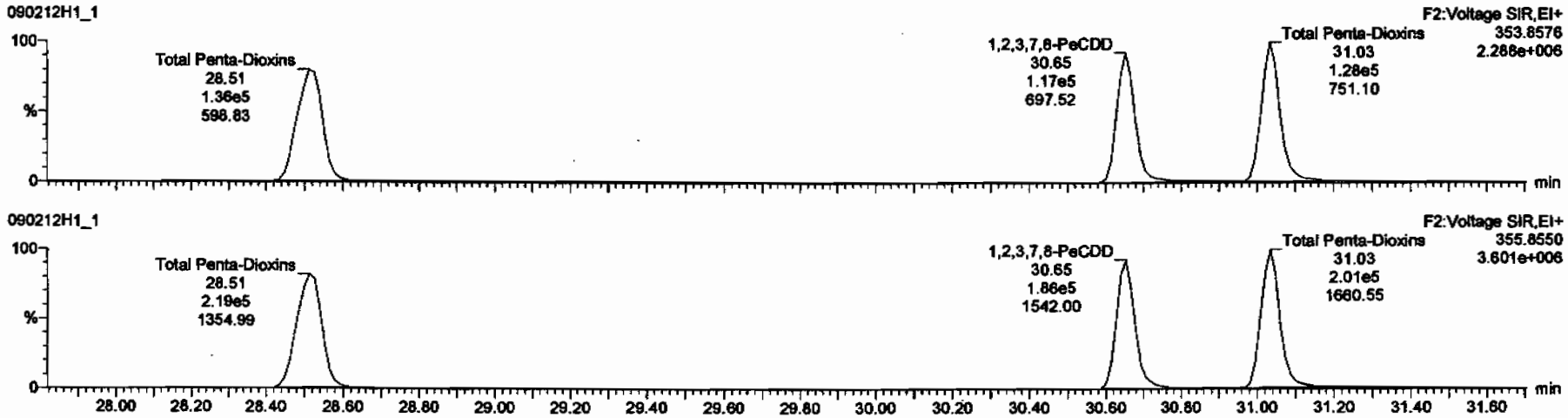

13C-1,2,3,7,8-PeCDD

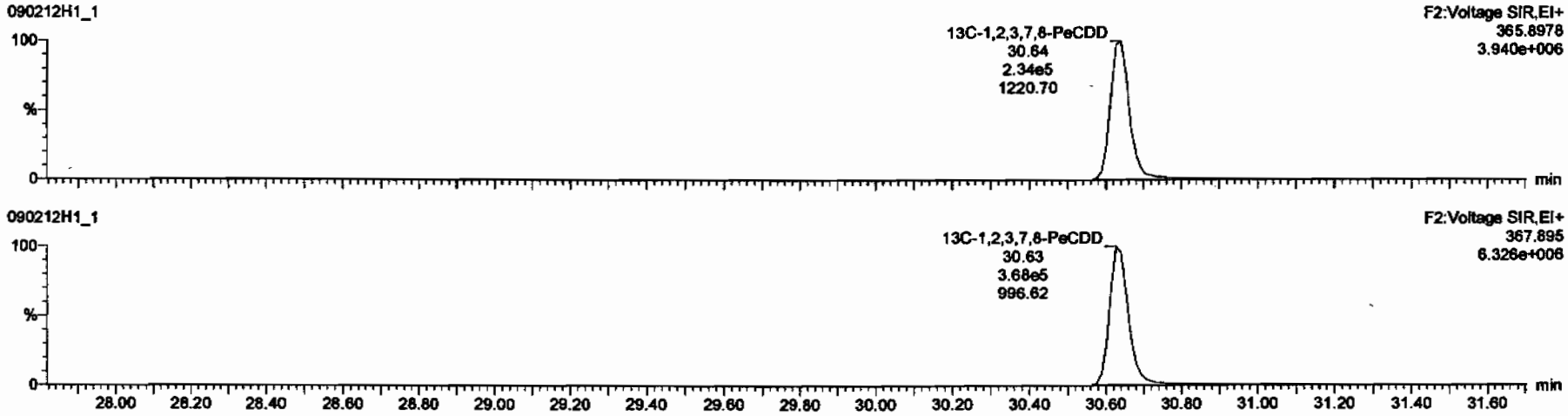

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1,2,3,4,7,8-HxCDD

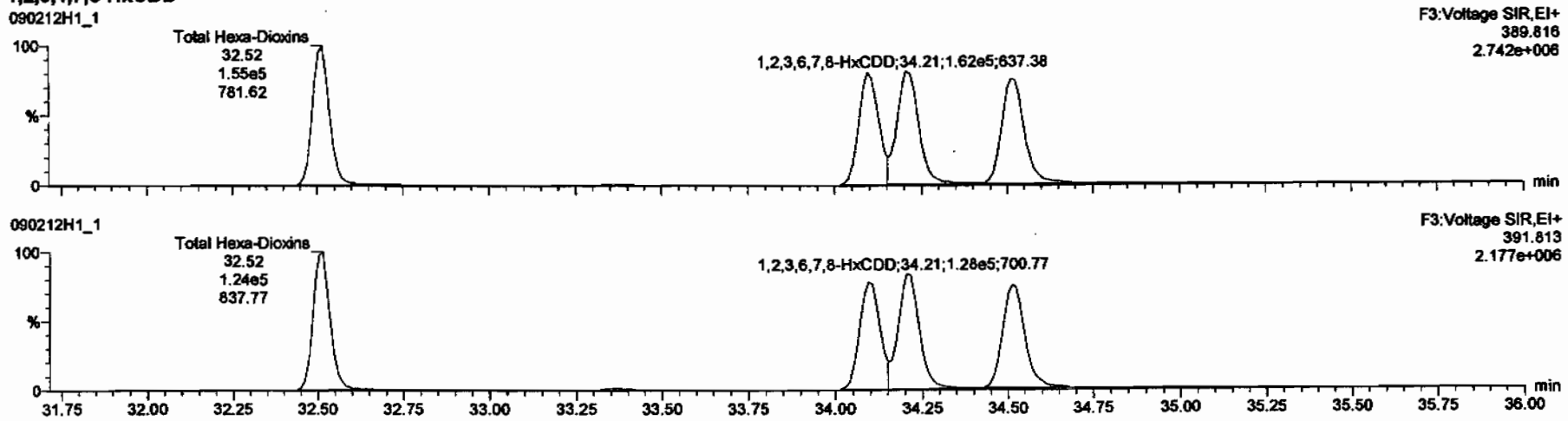

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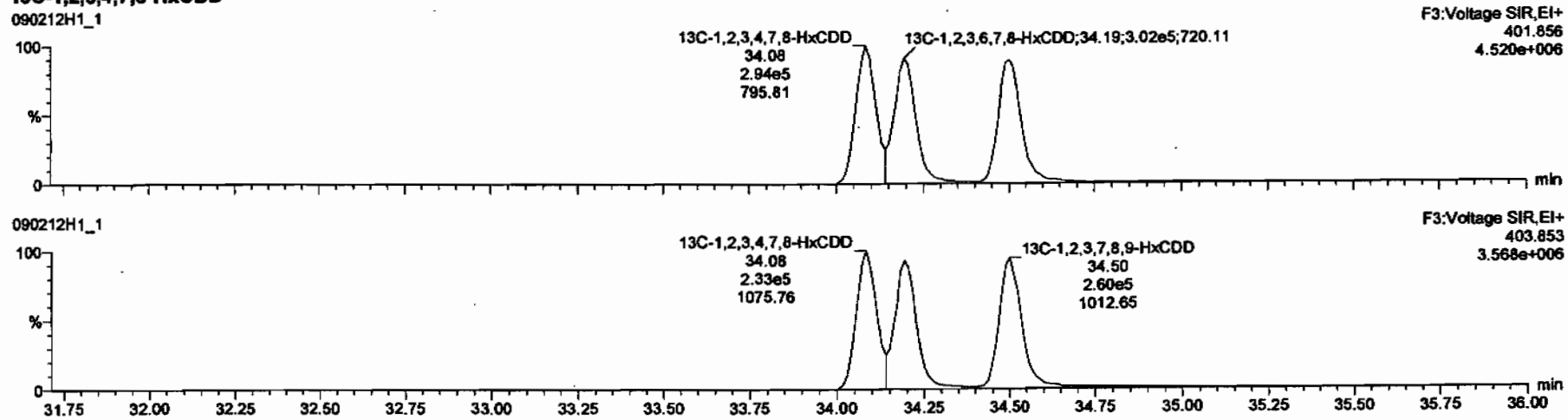

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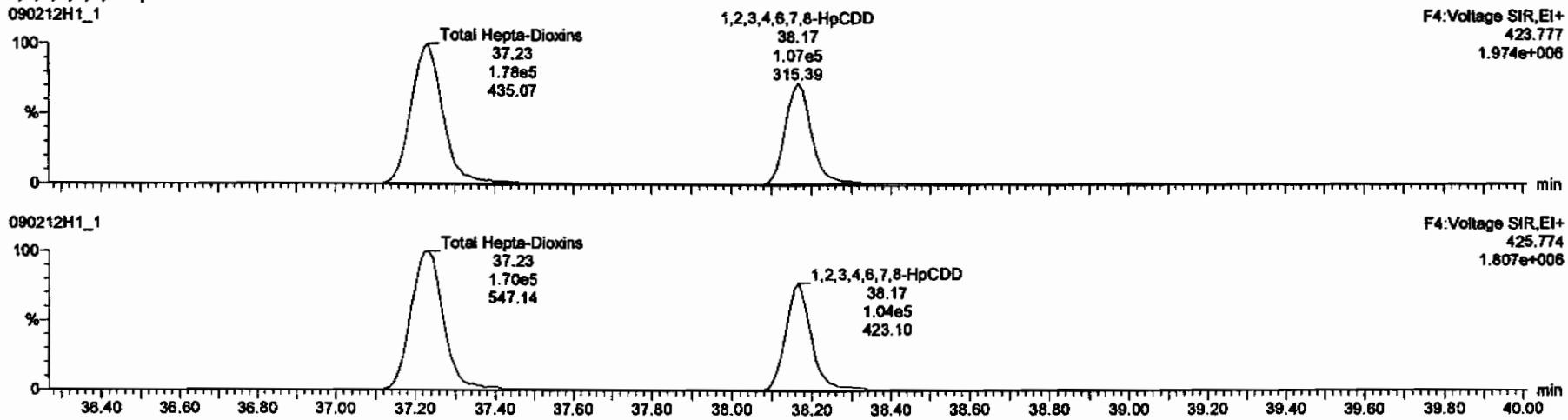

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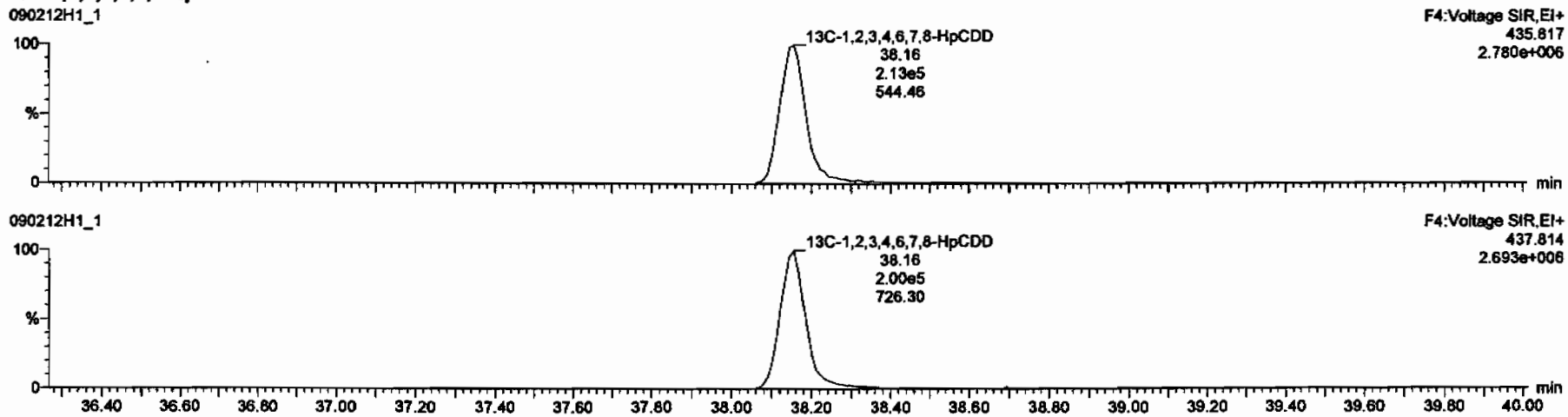

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OCDD

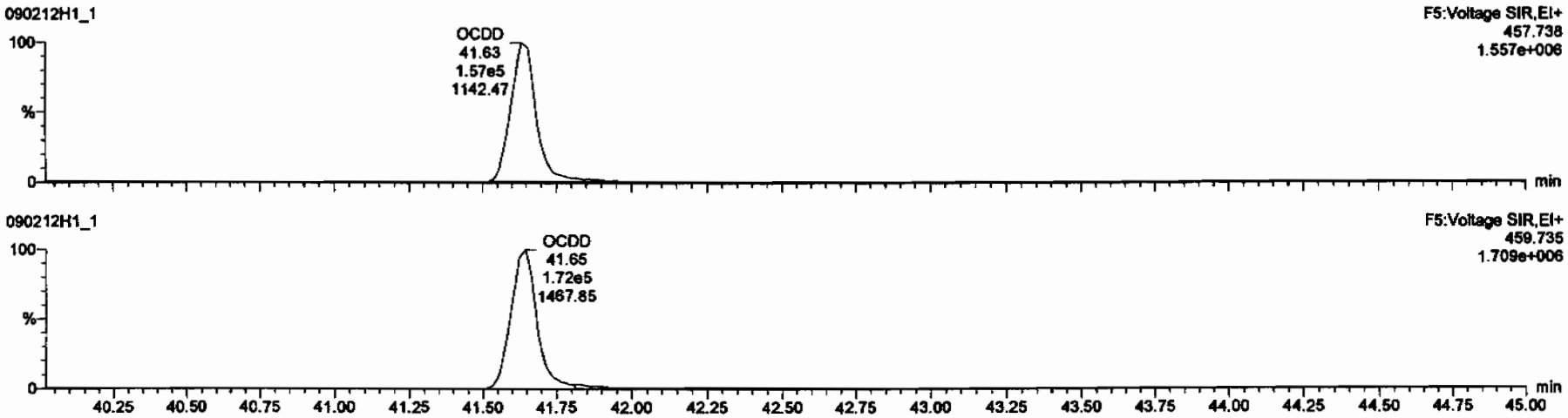

13C-OCDD

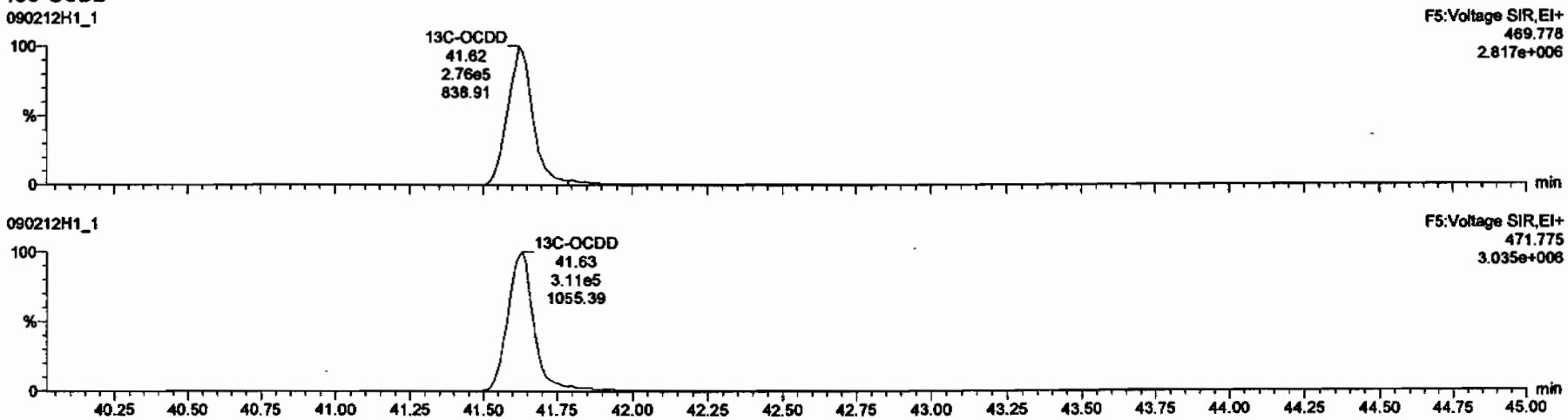

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2,3,7,8-TCDF

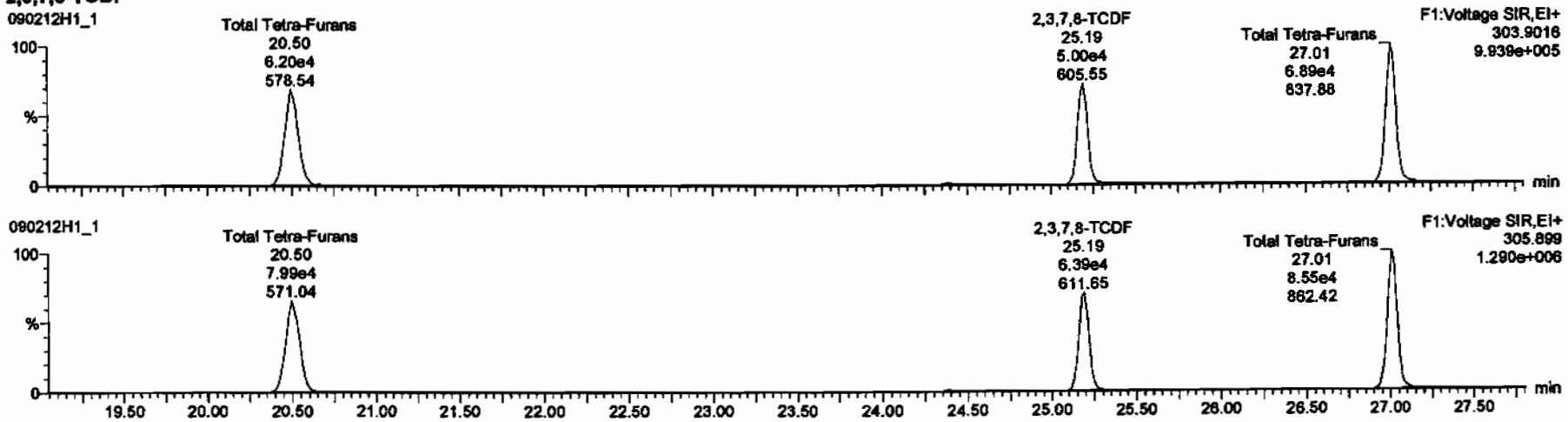

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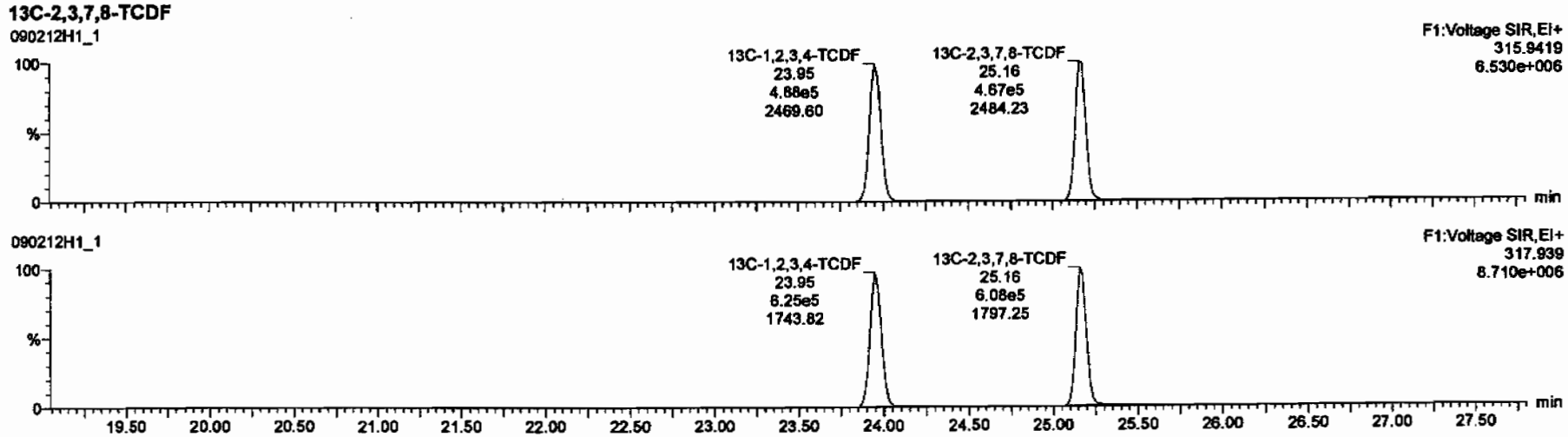

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1st Func. Penta-Furans

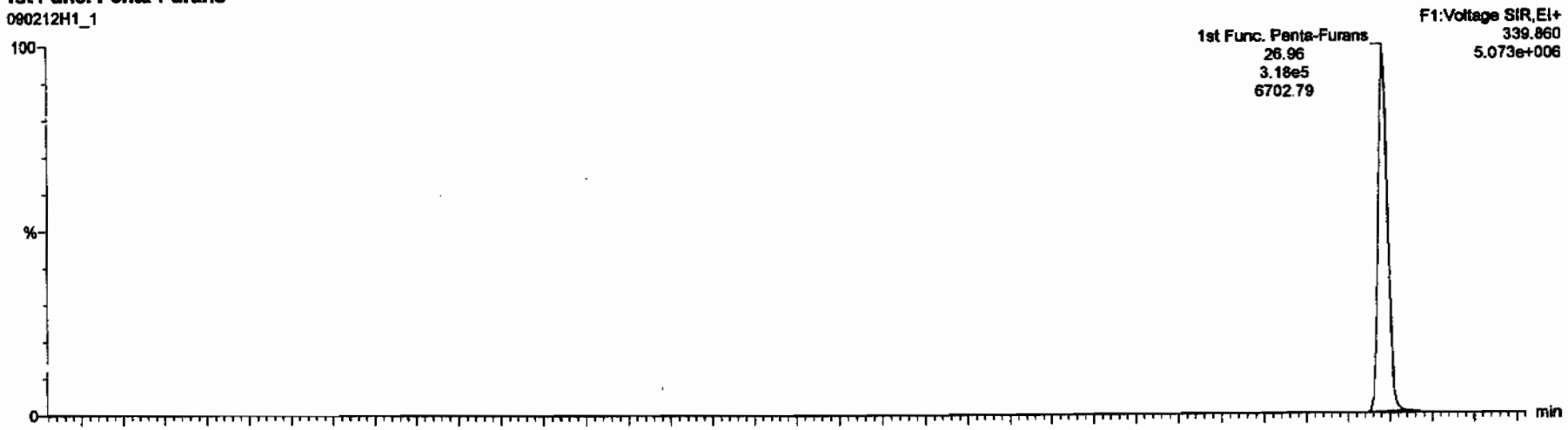

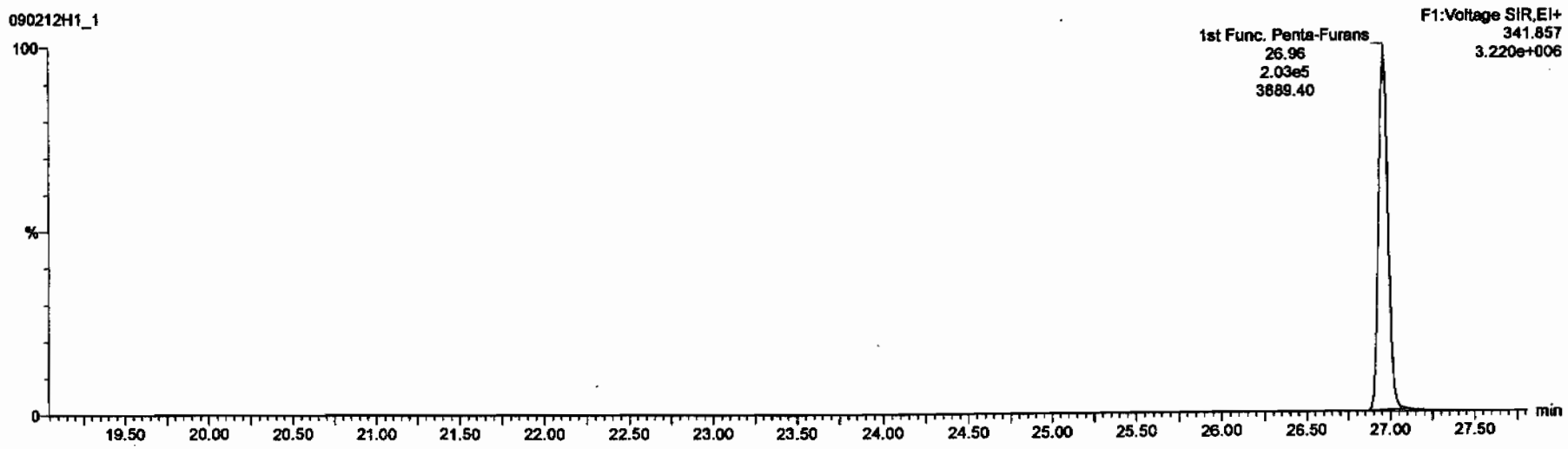

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1,2,3,7,8-PeCDF

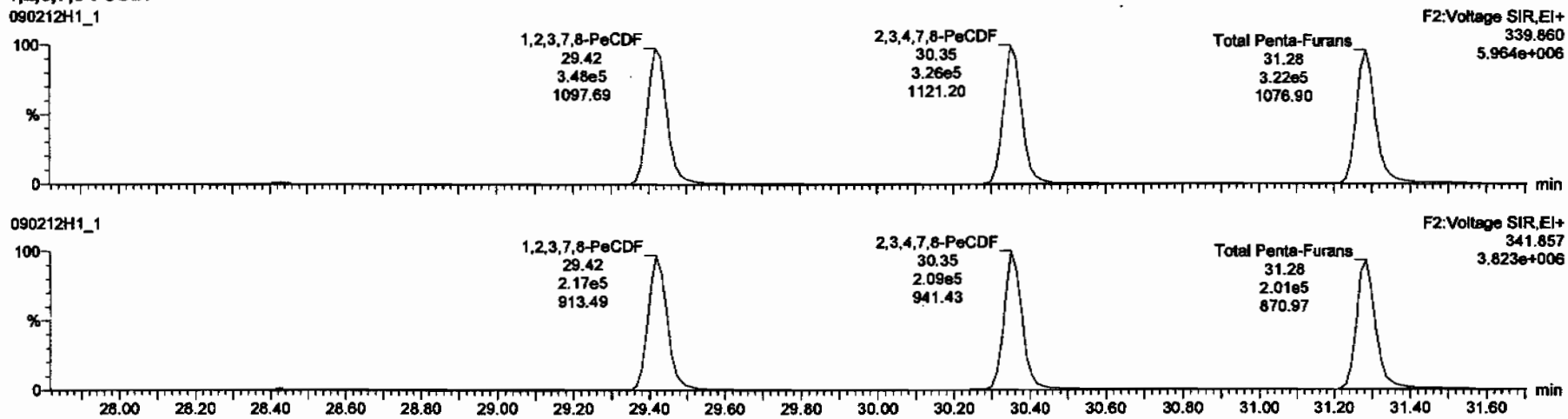

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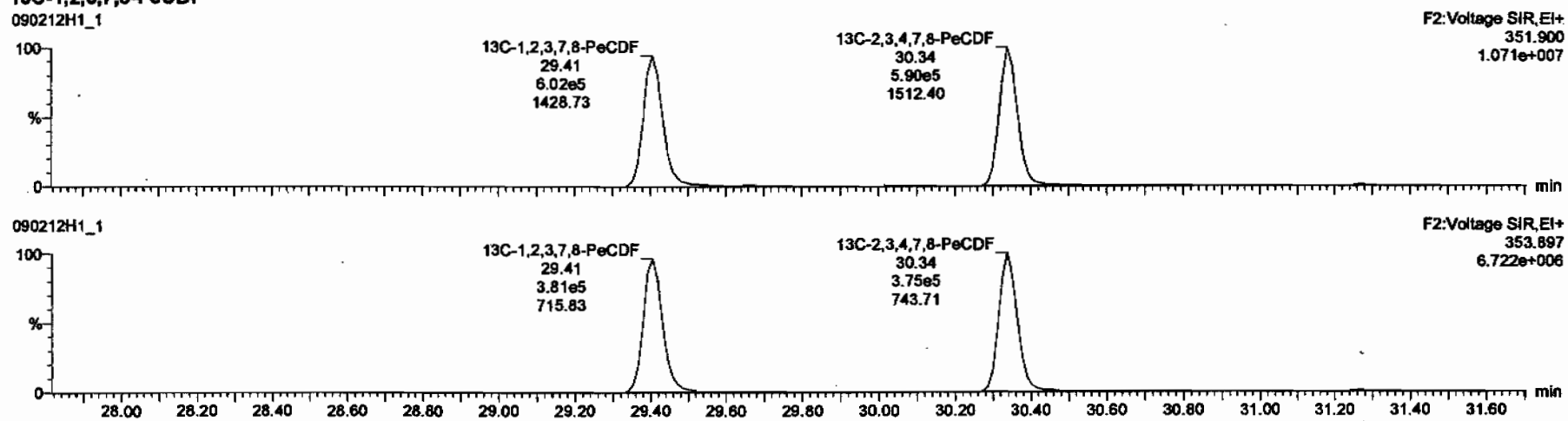

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1,2,3,4,7,8-HxCDF

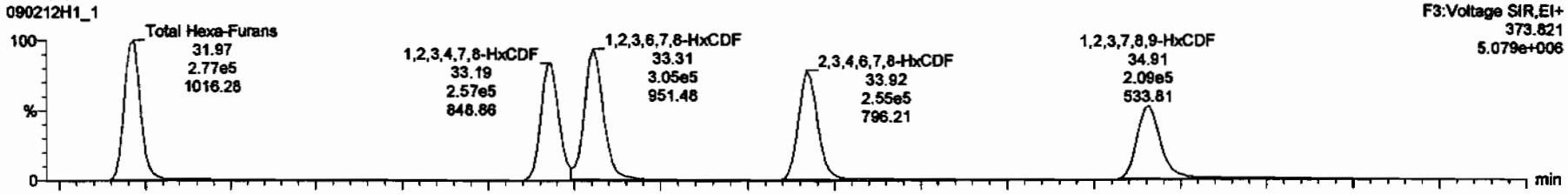

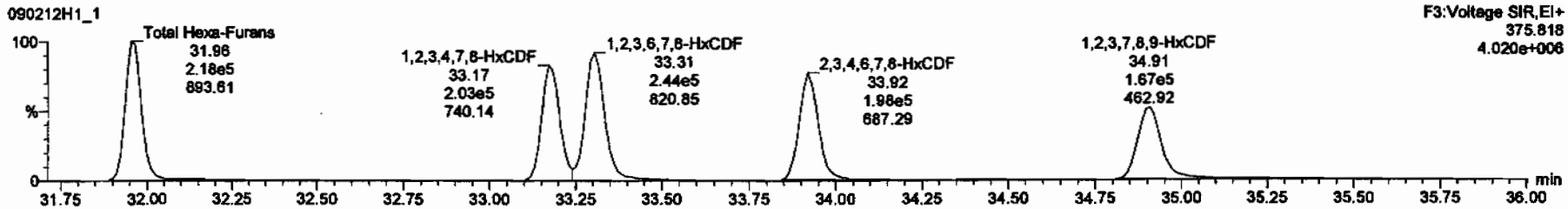

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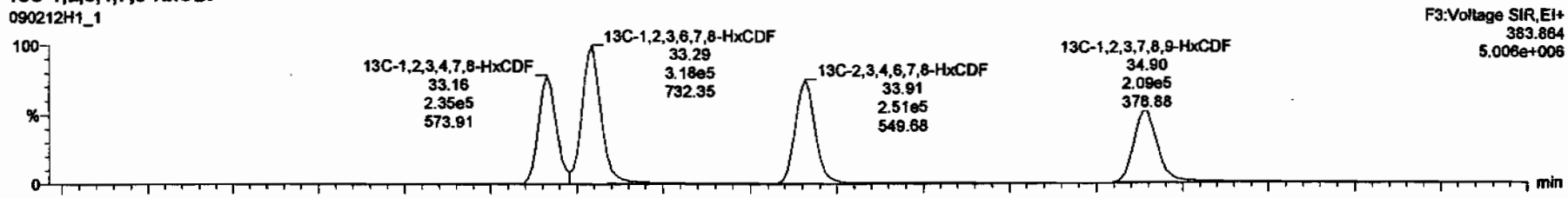

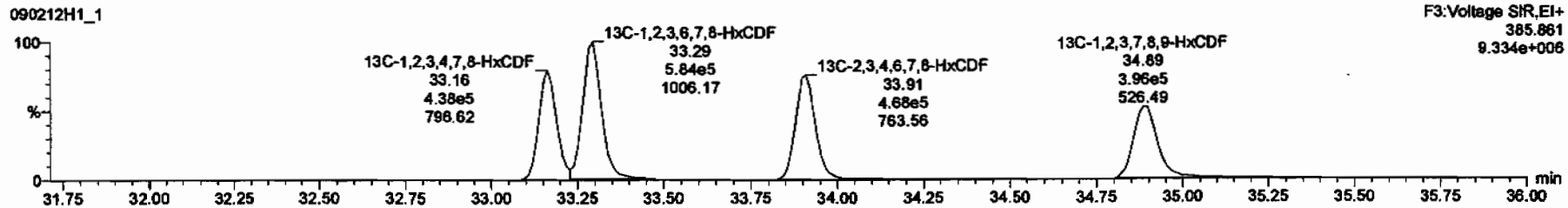

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1,2,3,4,6,7,8-HpCDF

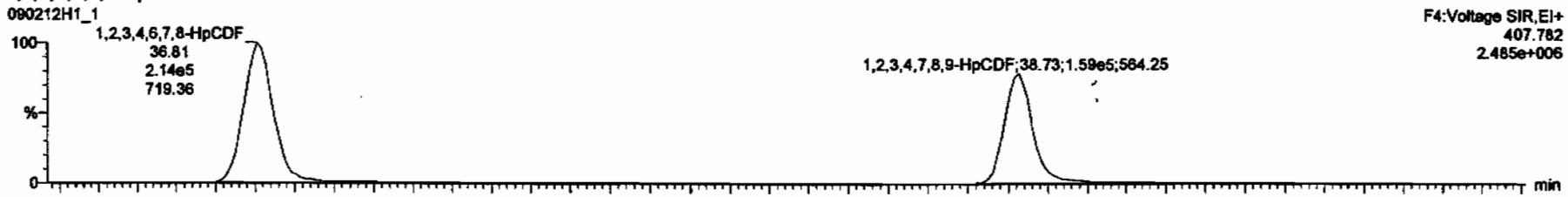

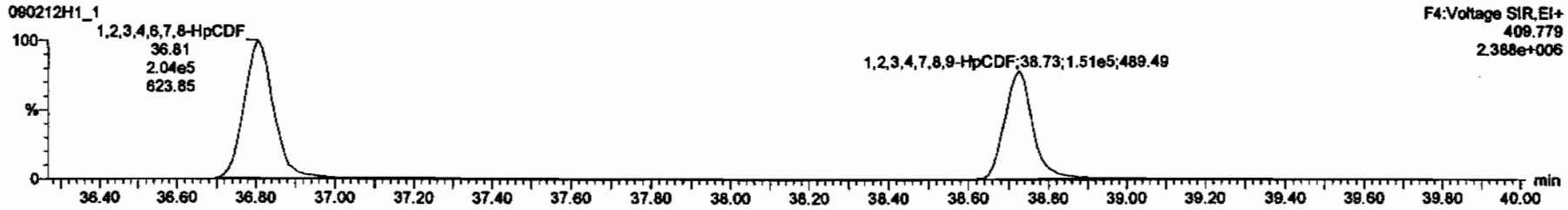

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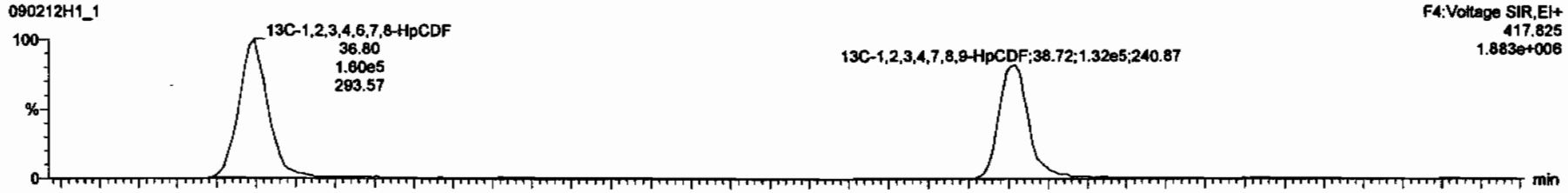

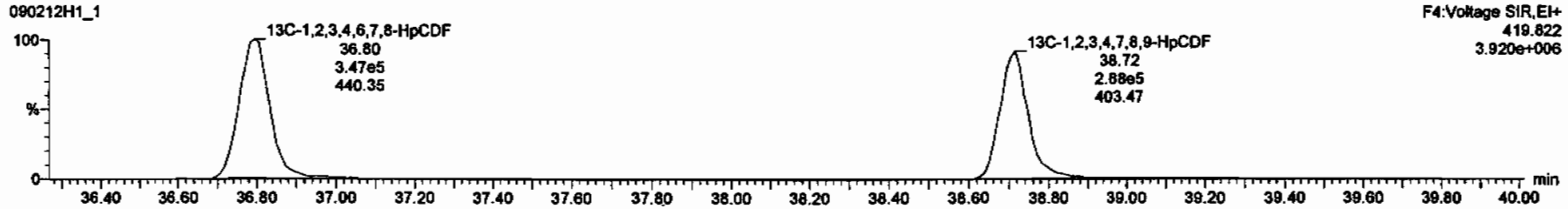

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OCDF

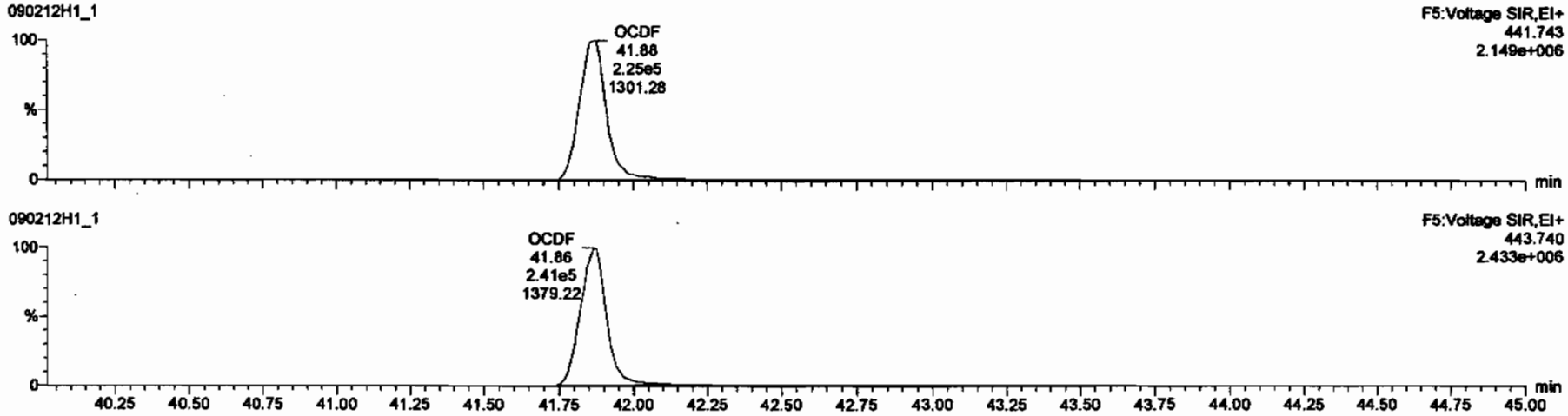

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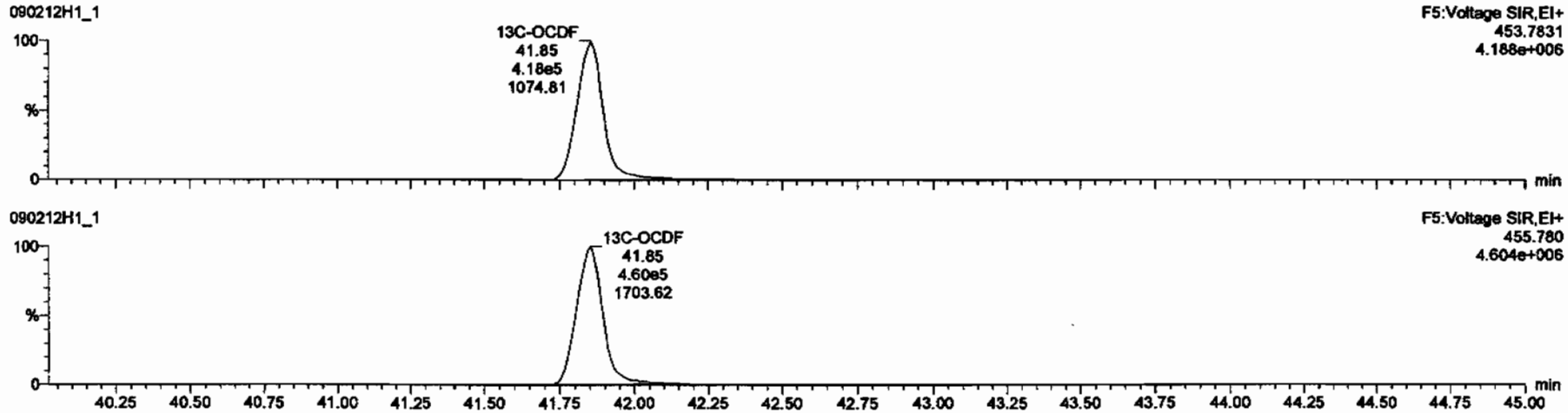

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Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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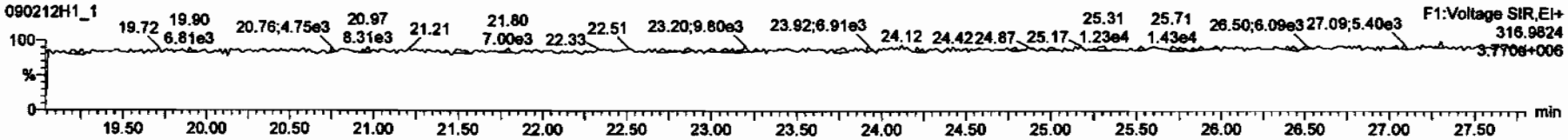

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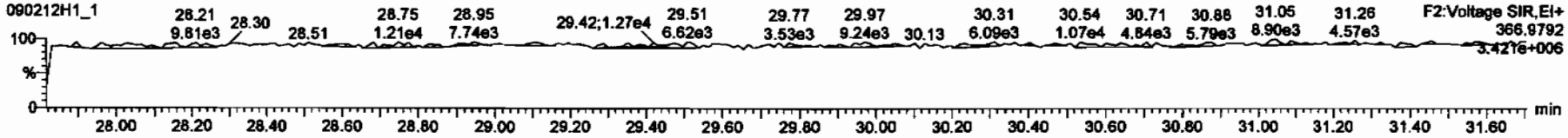

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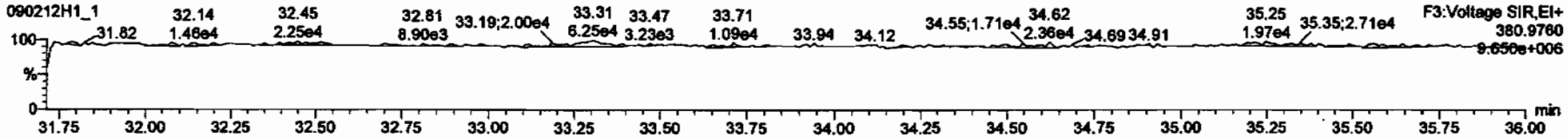

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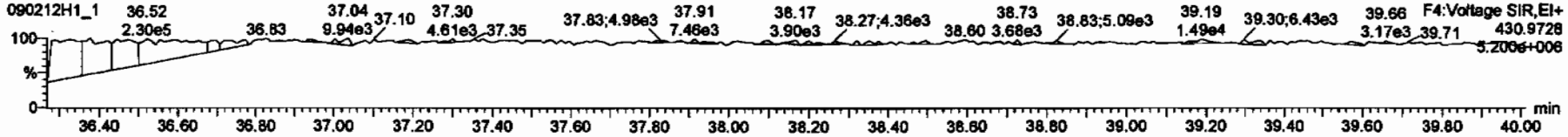

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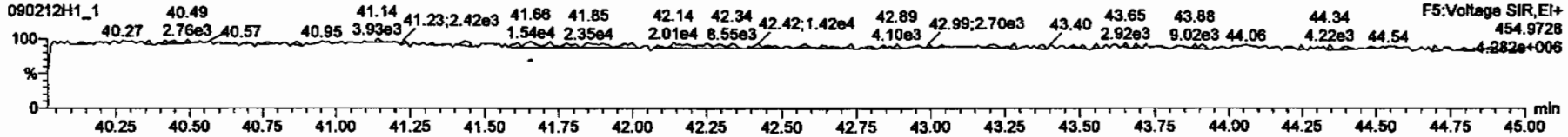

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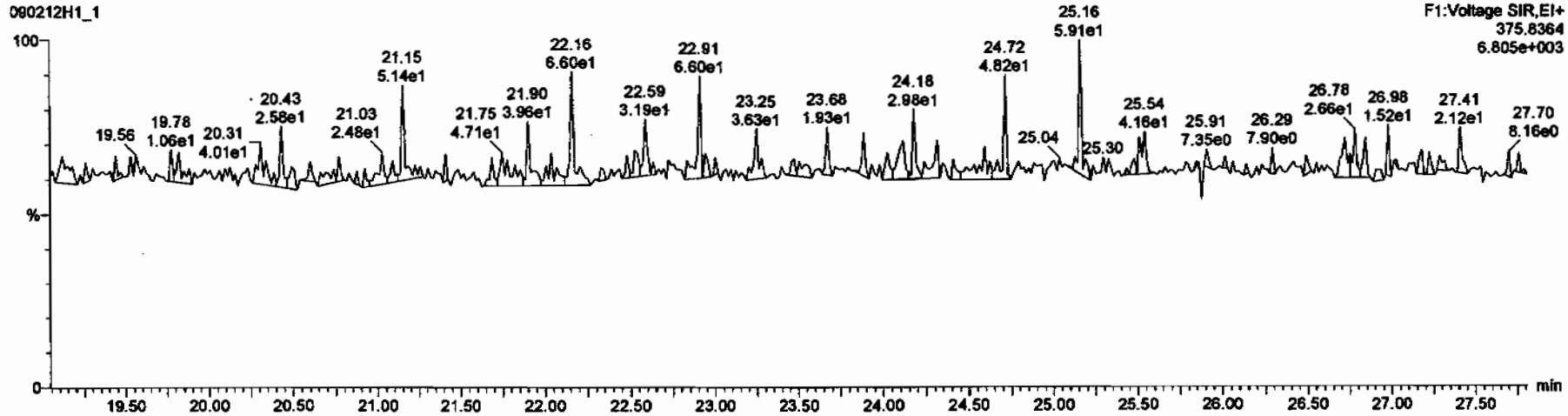

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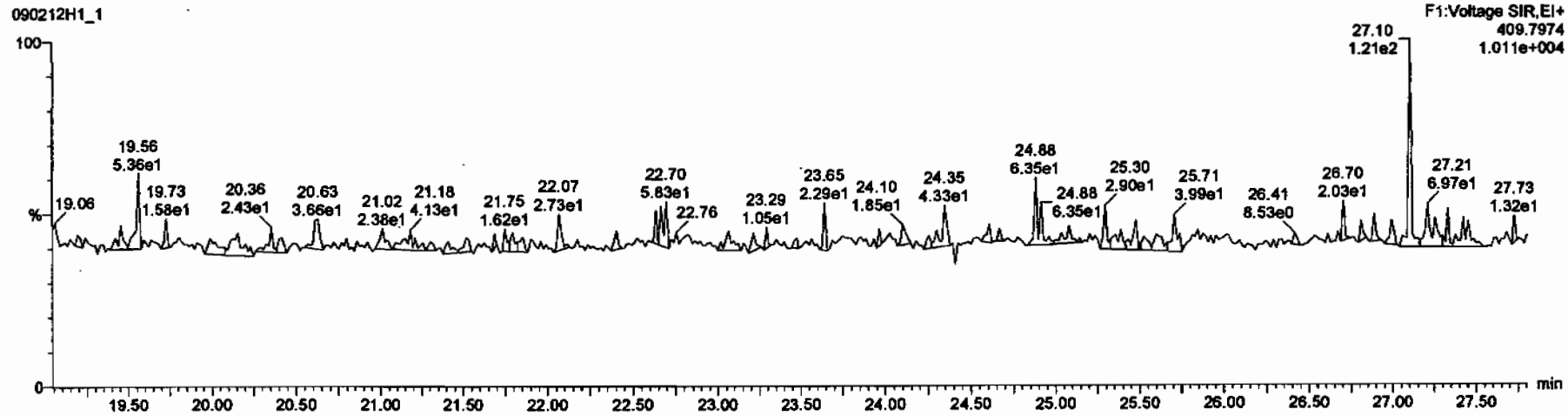

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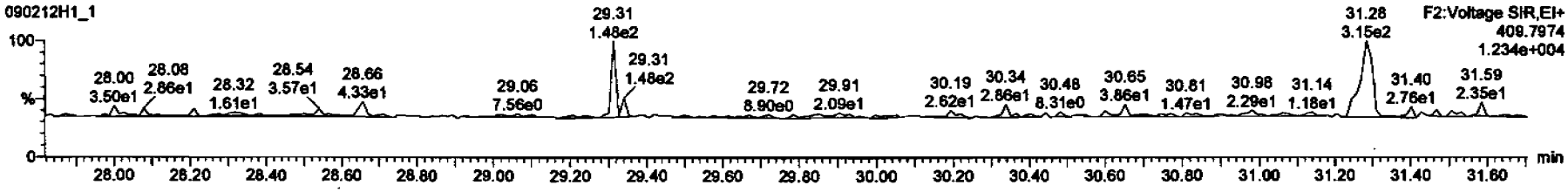

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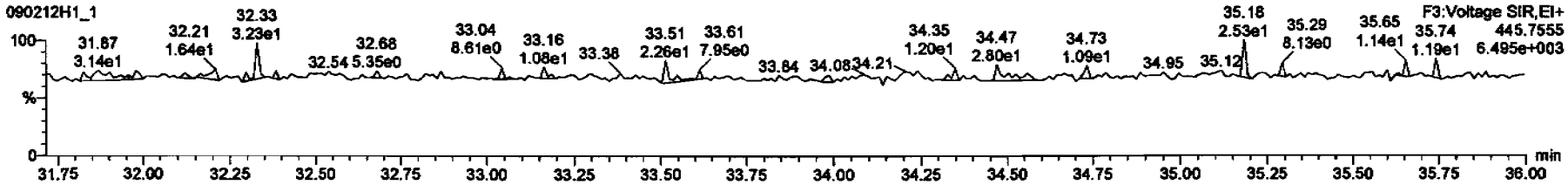

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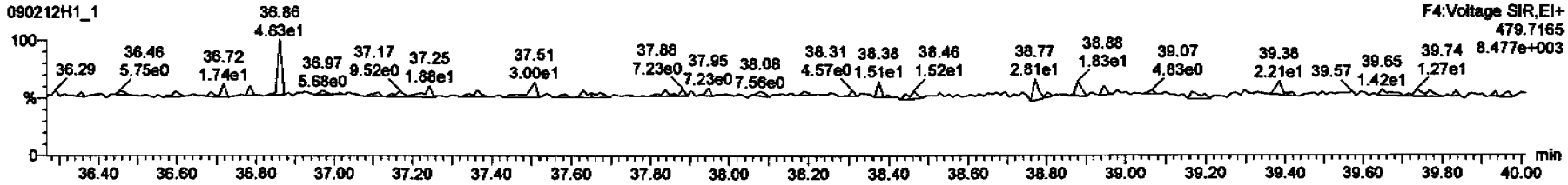

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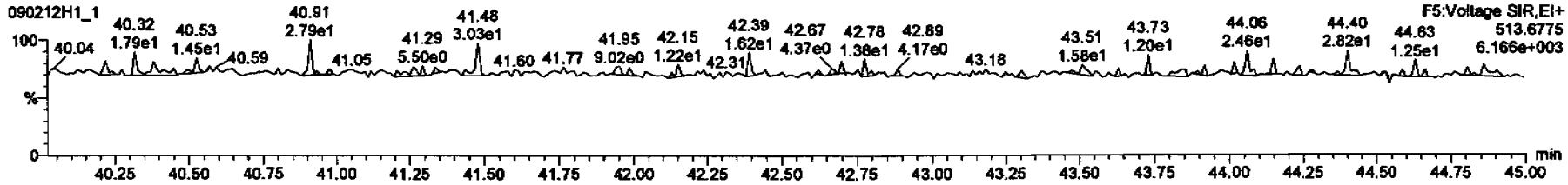

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2,3,7,8-TCDD

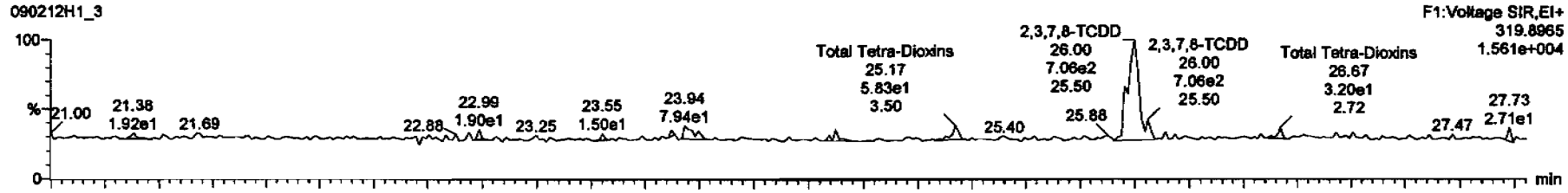

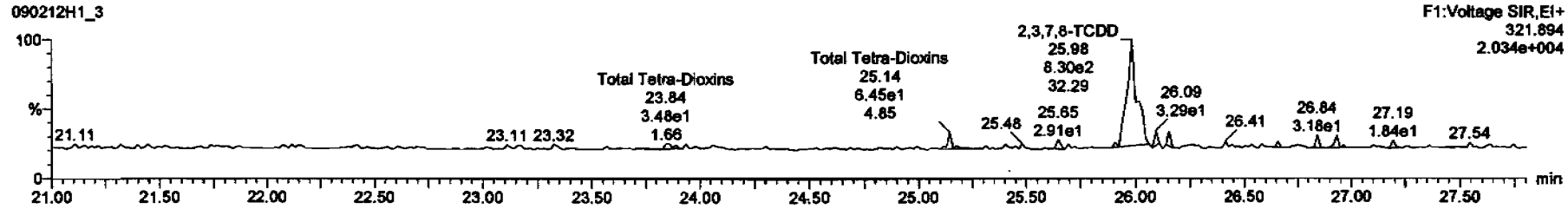

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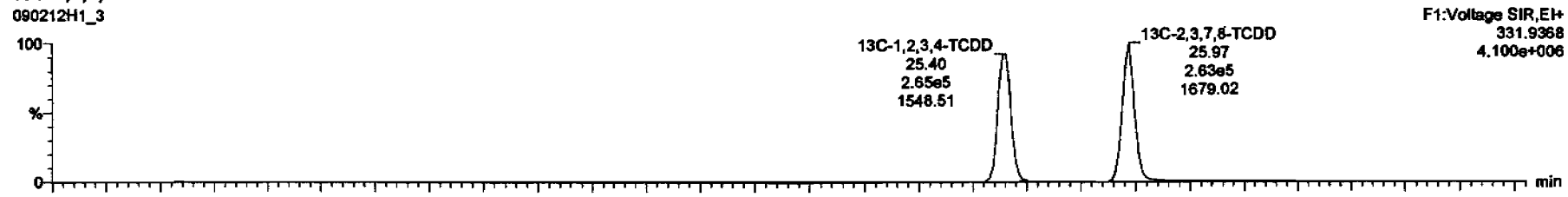

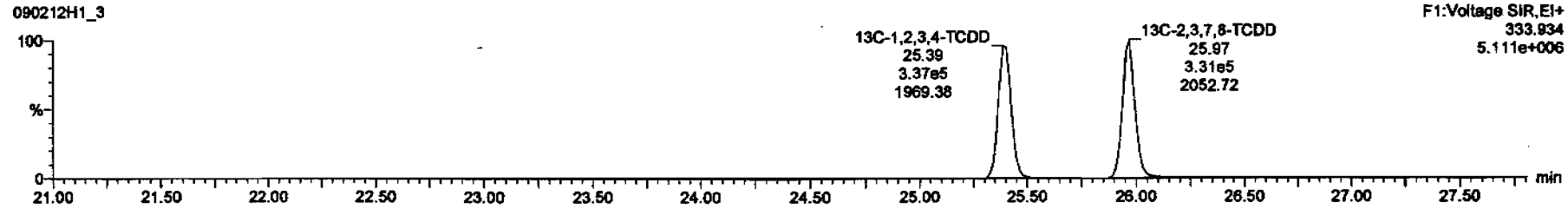

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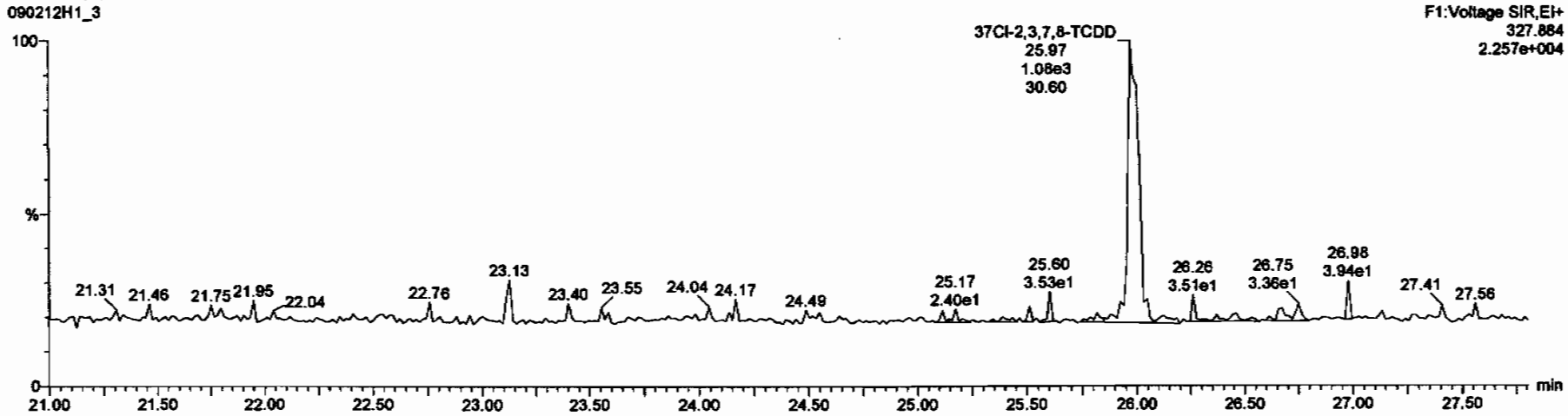

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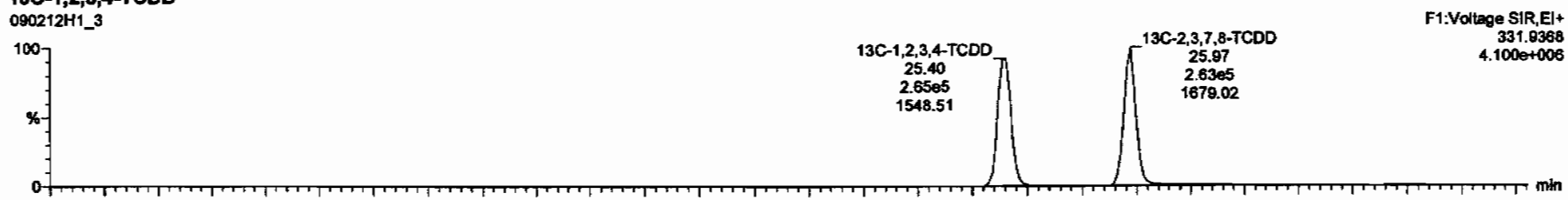

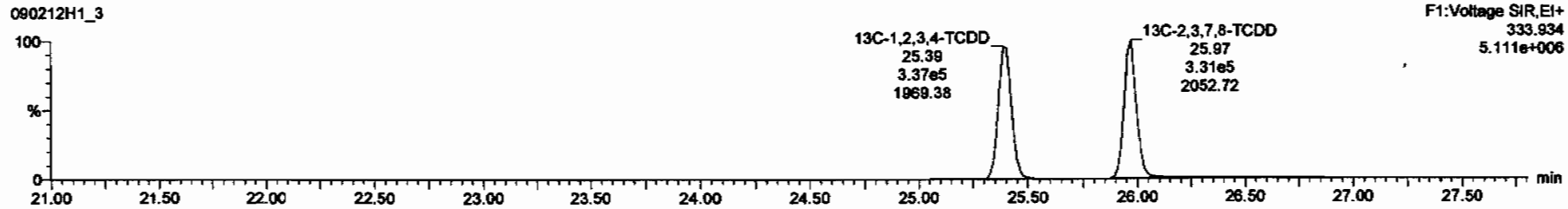

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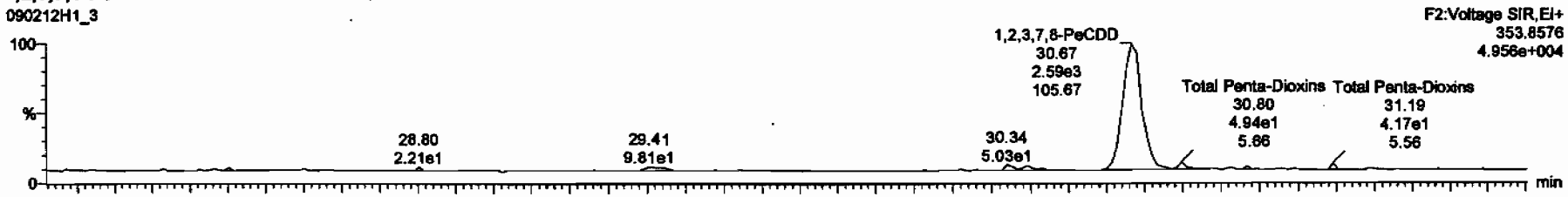

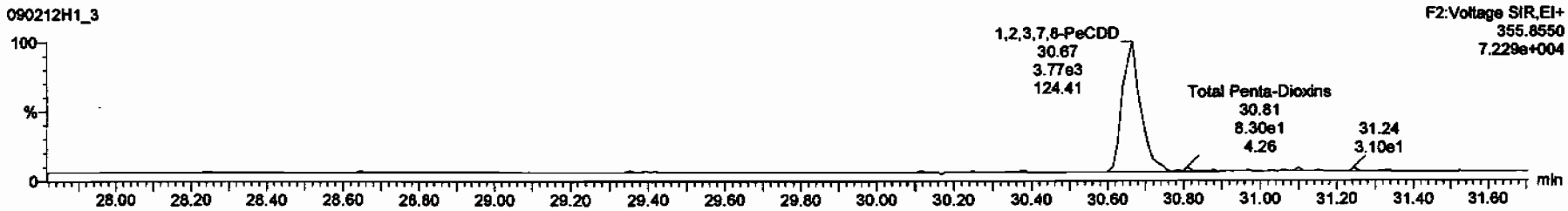

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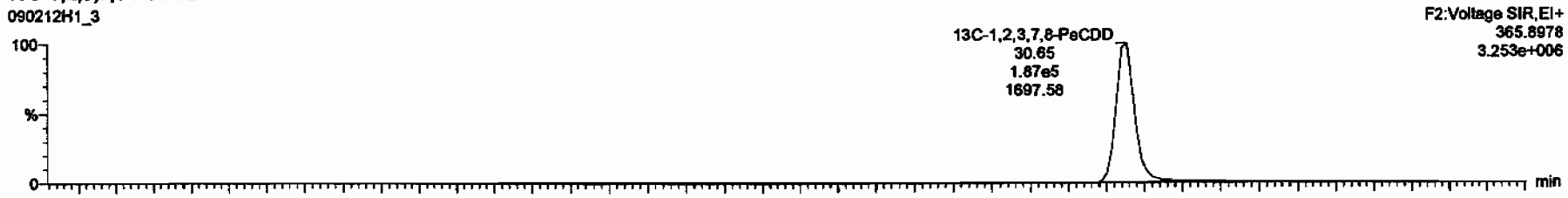

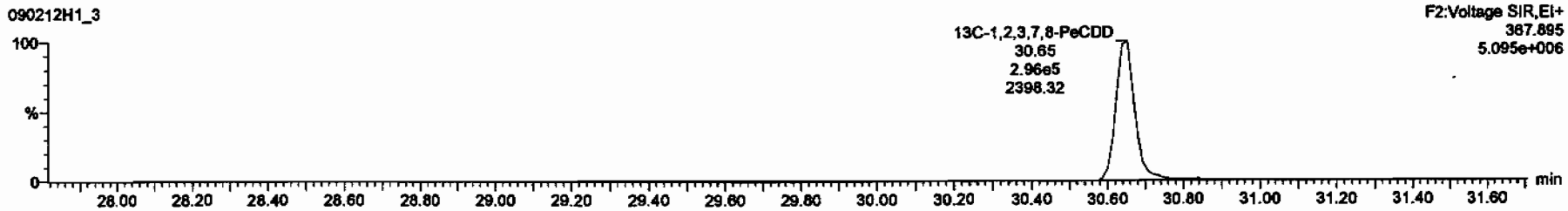

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1,2,3,4,7,8-HxCDD

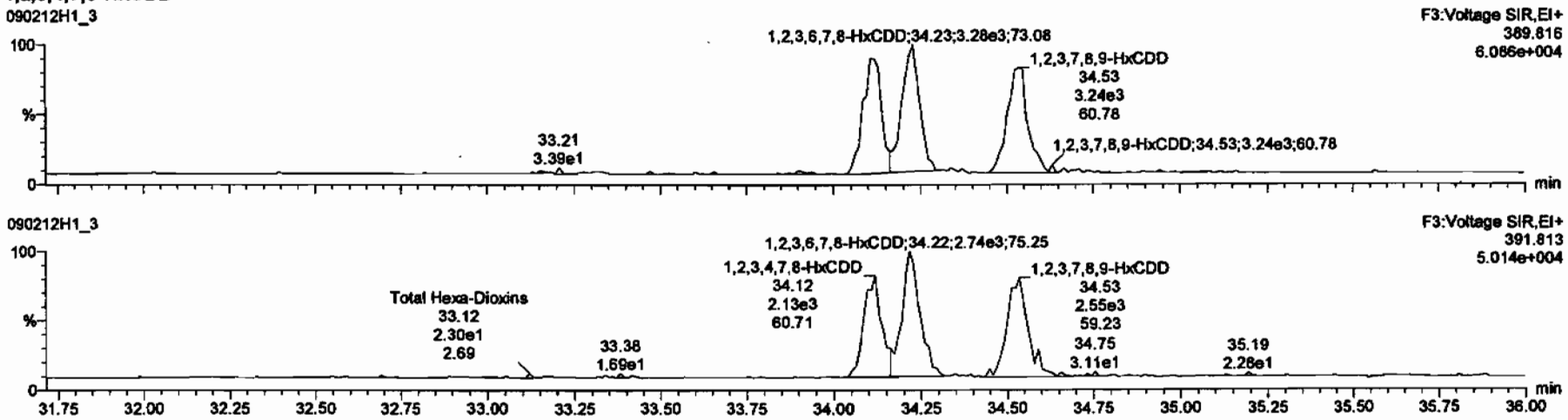

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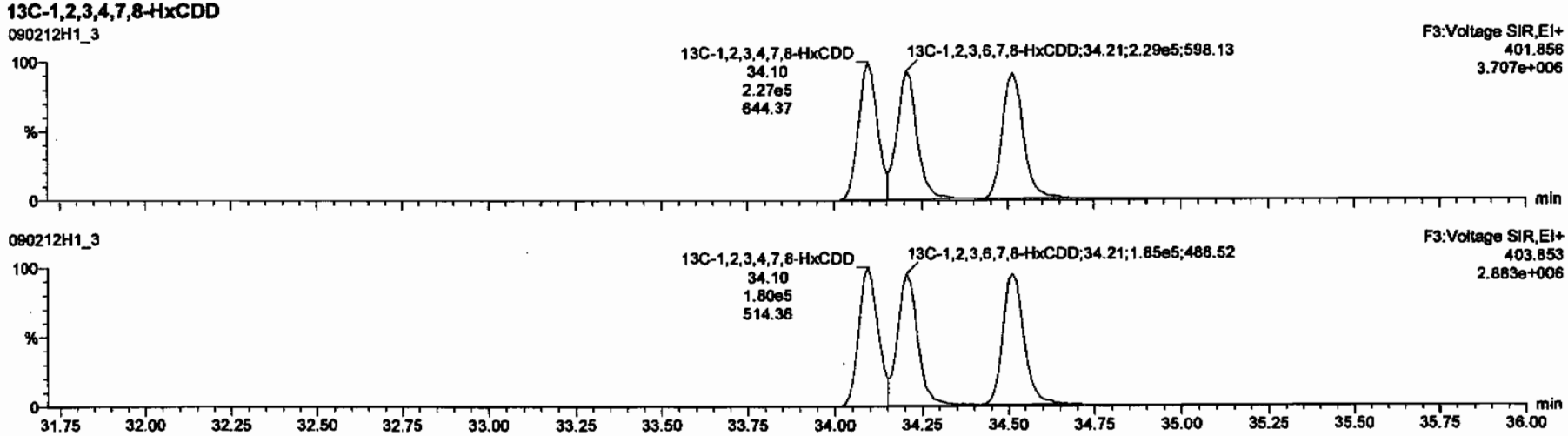

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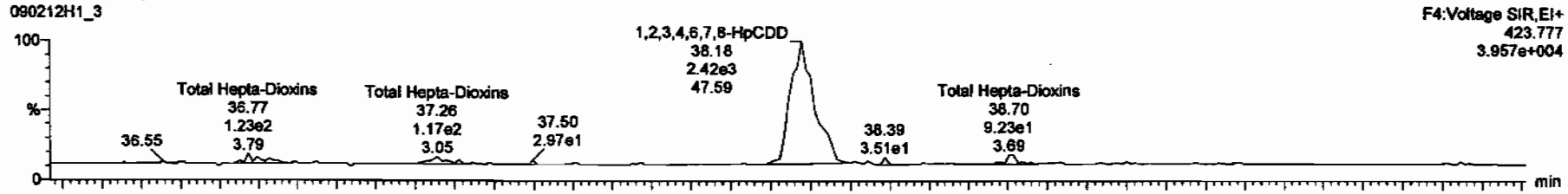

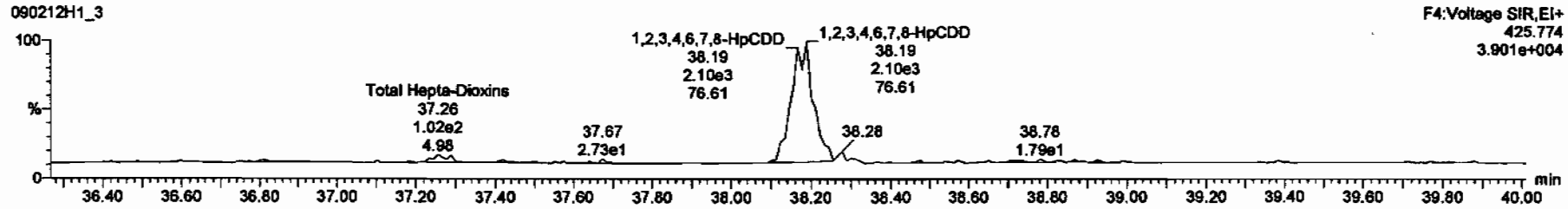

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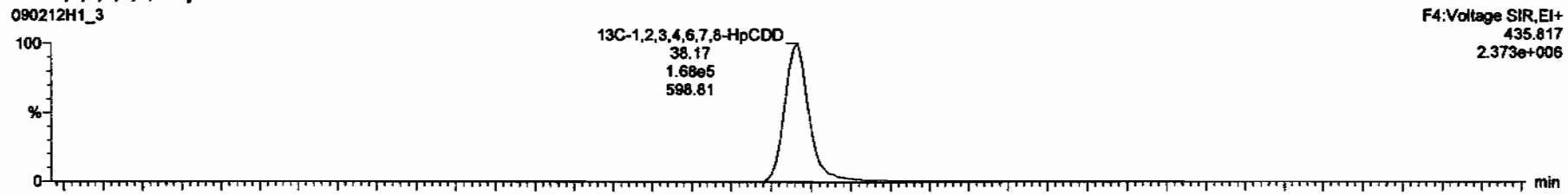

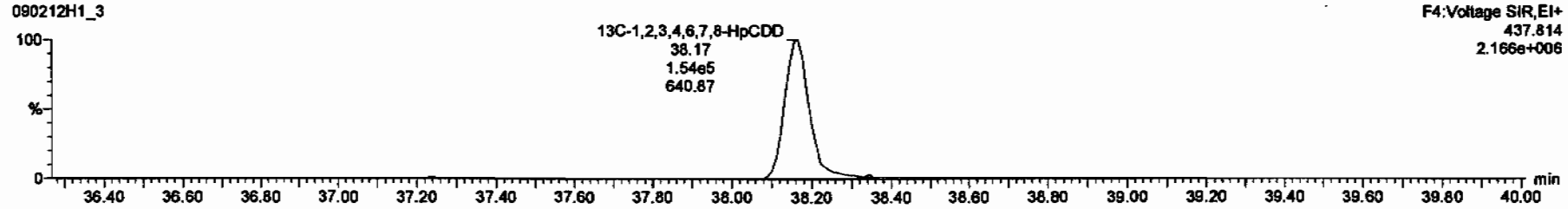

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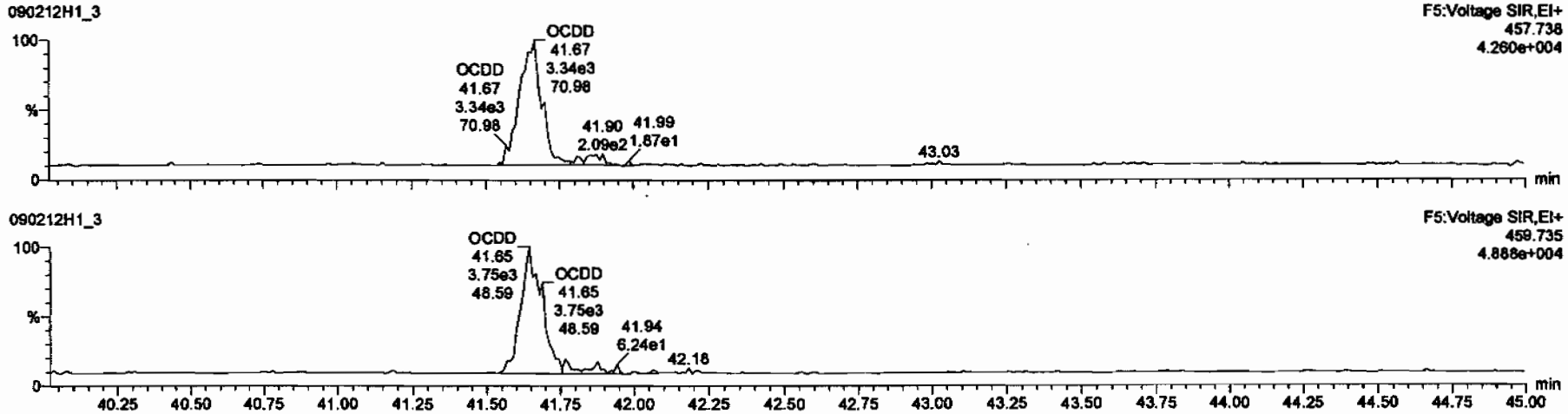

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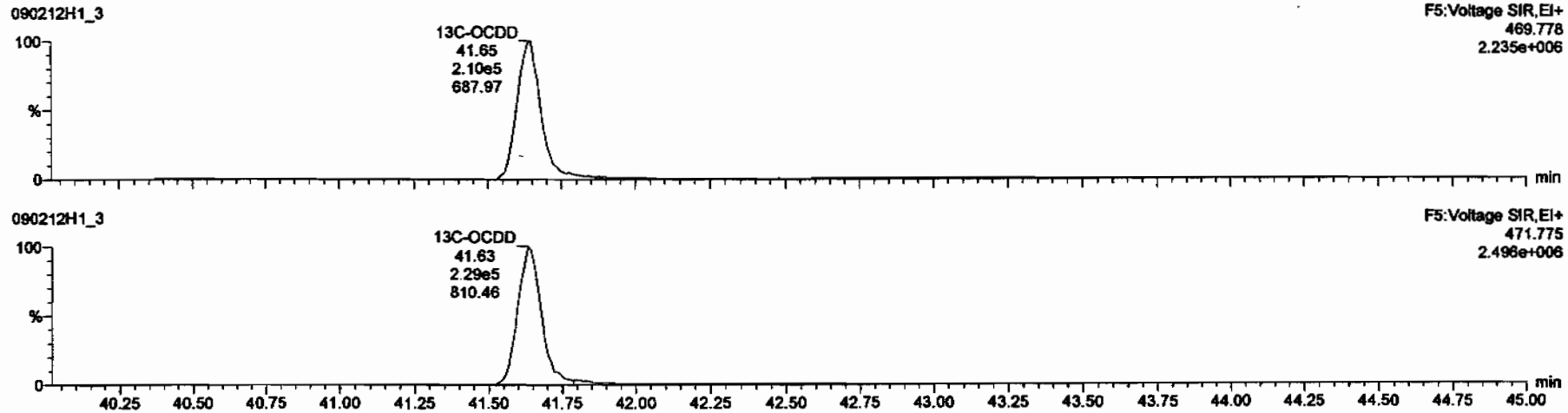

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2,3,7,8-TCDF

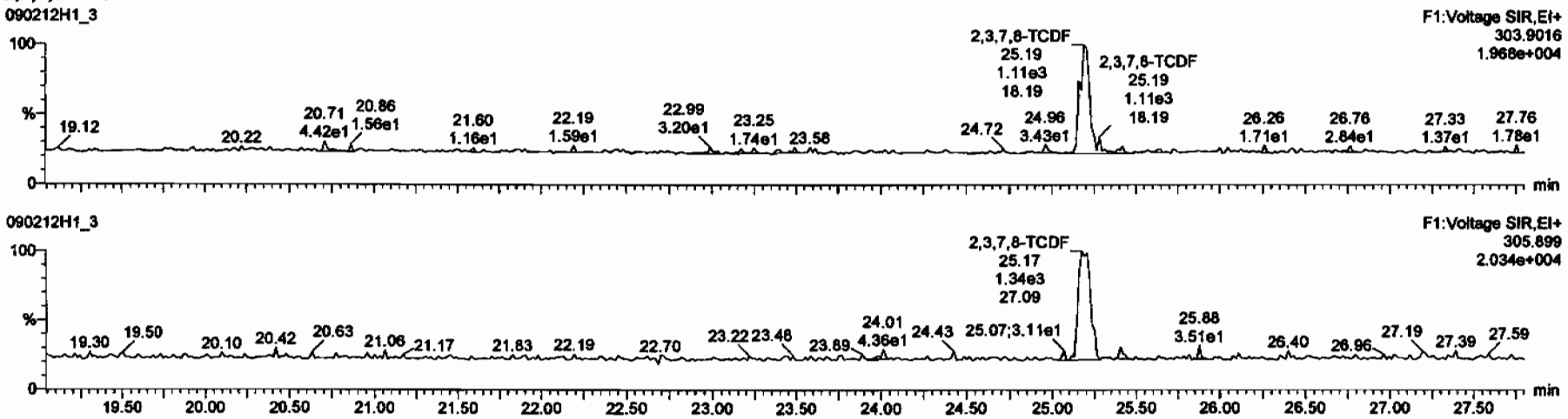

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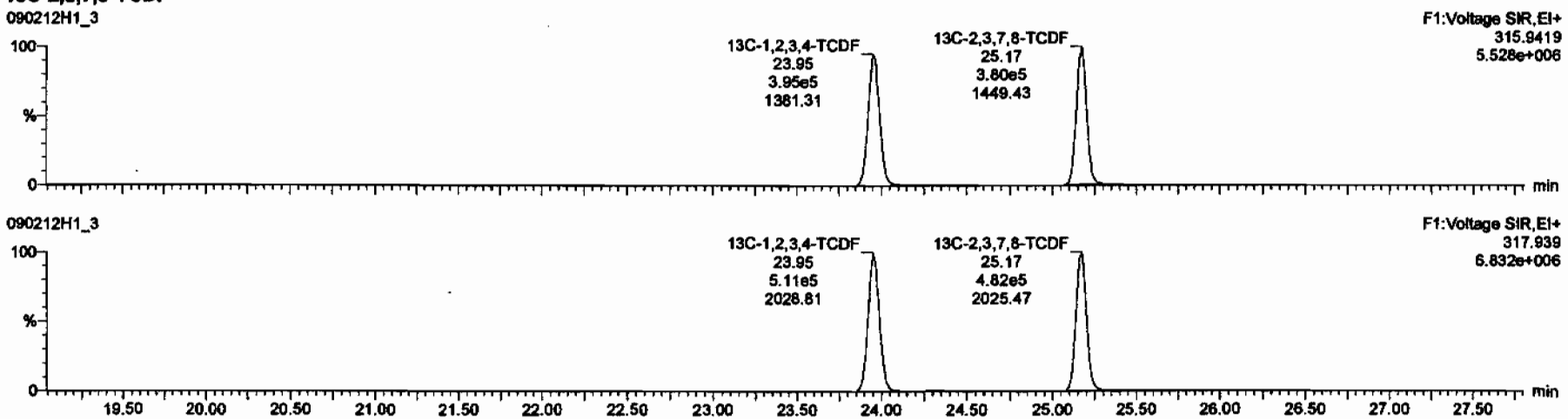

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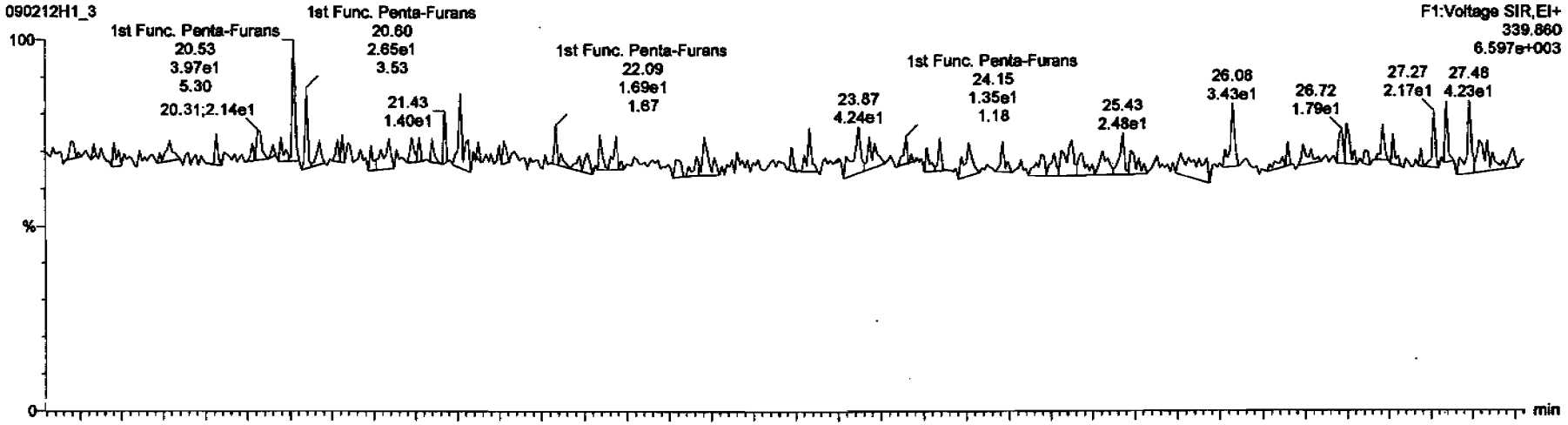

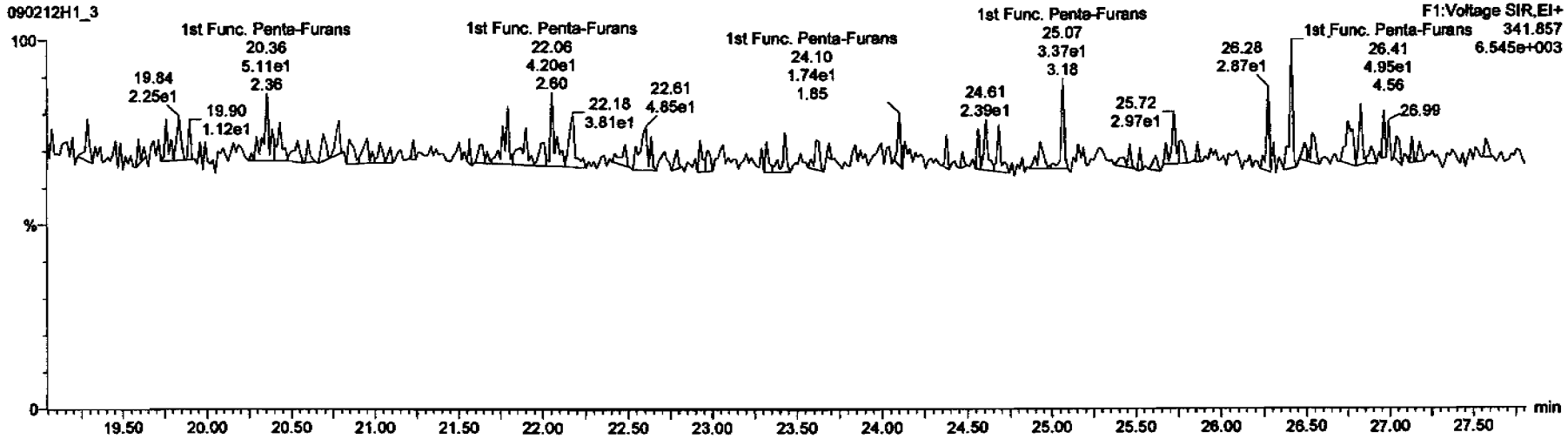

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1,2,3,7,8-PeCDF

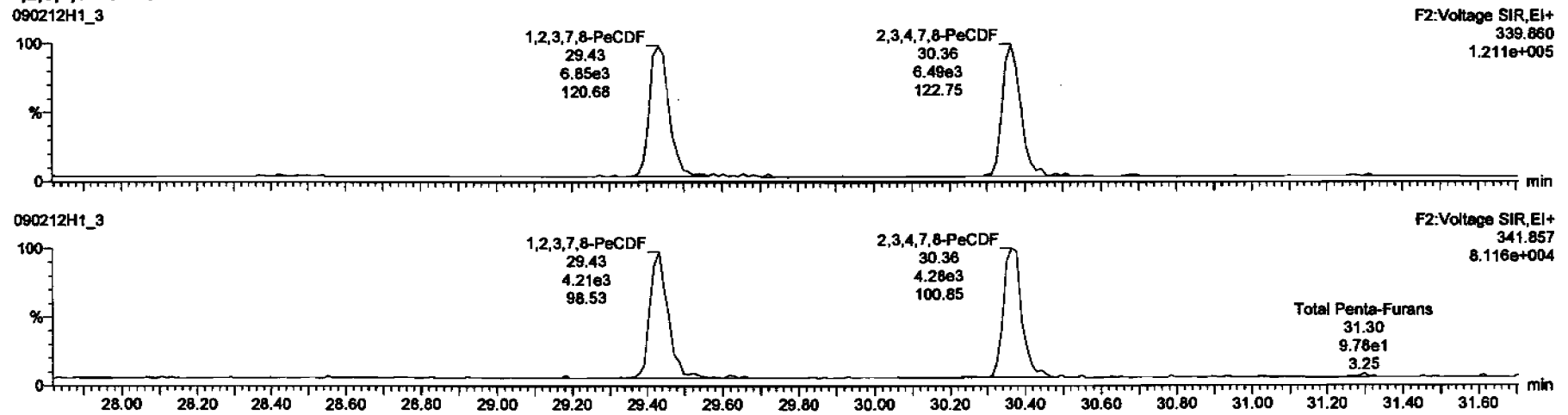

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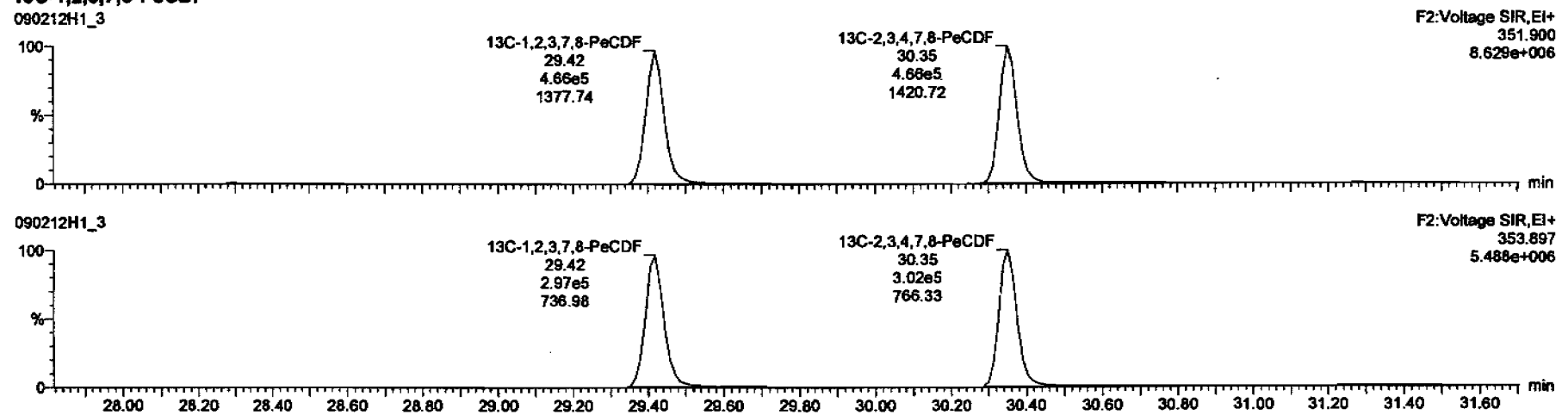

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1,2,3,4,7,8-HxCDF

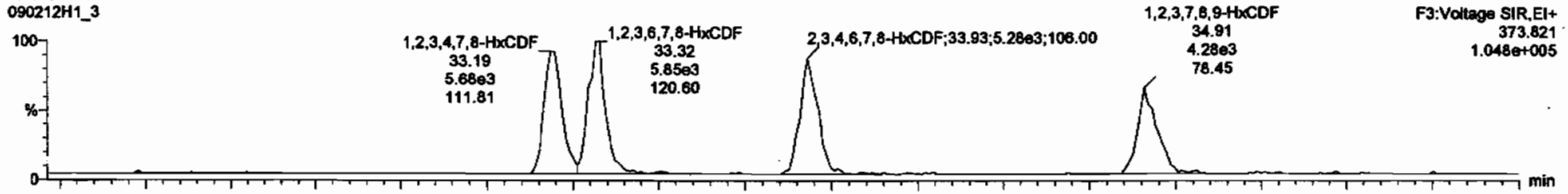

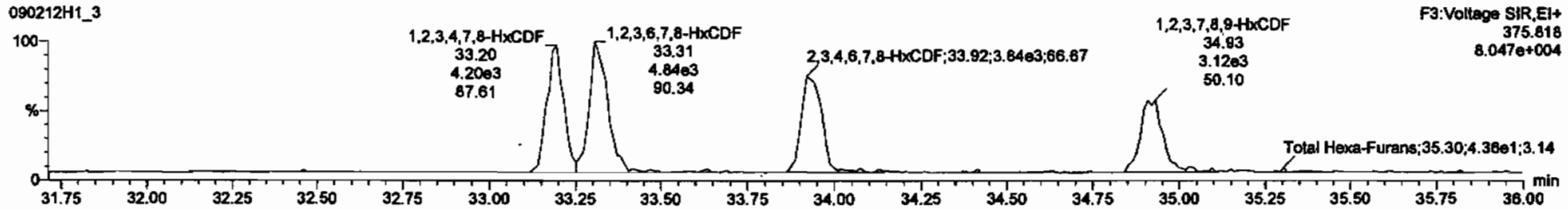

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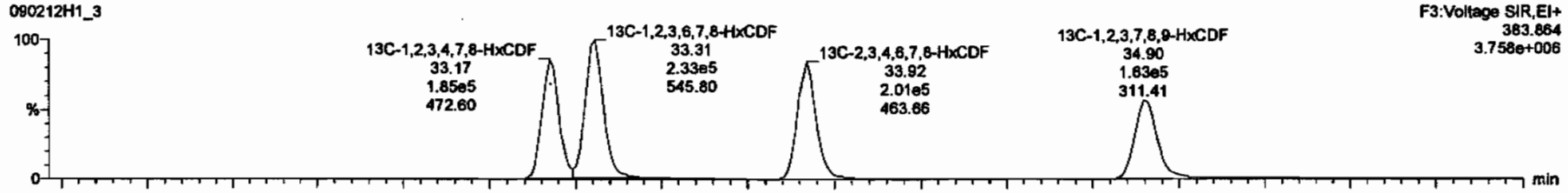

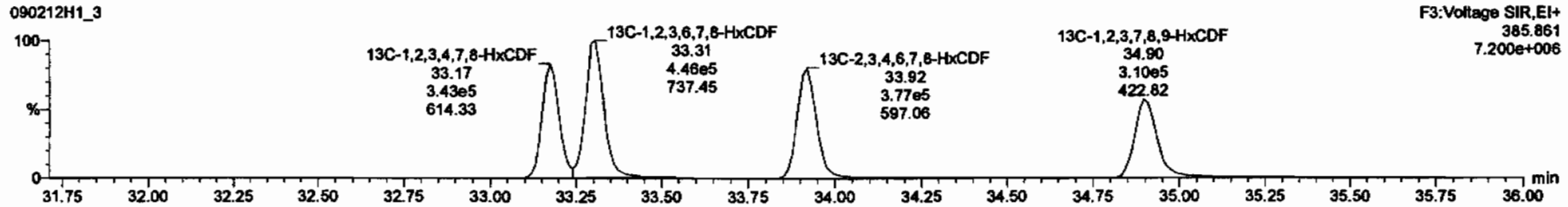

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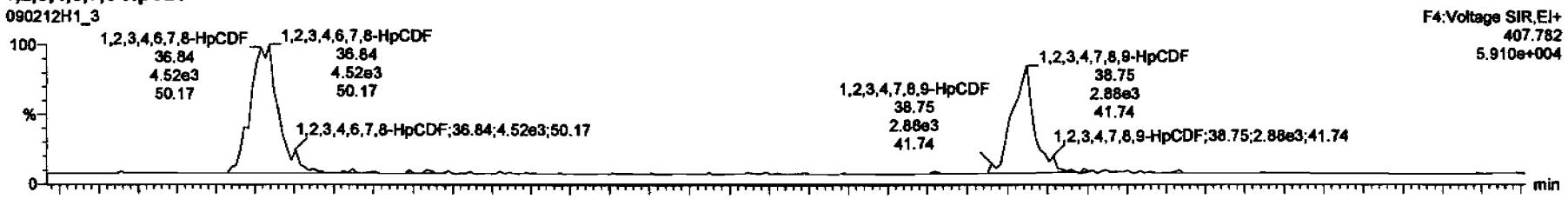

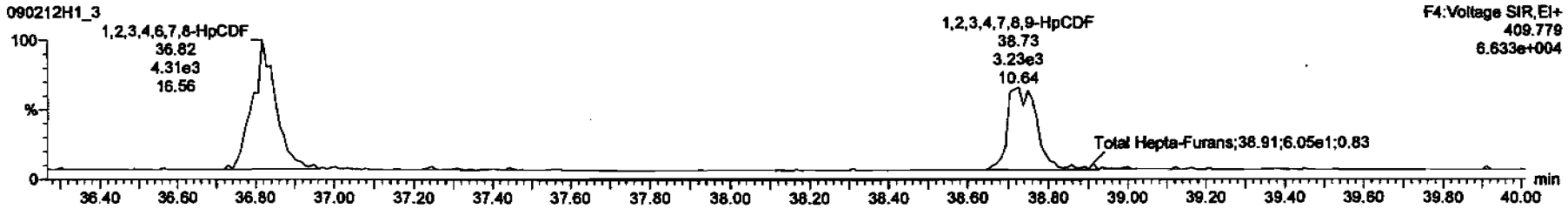

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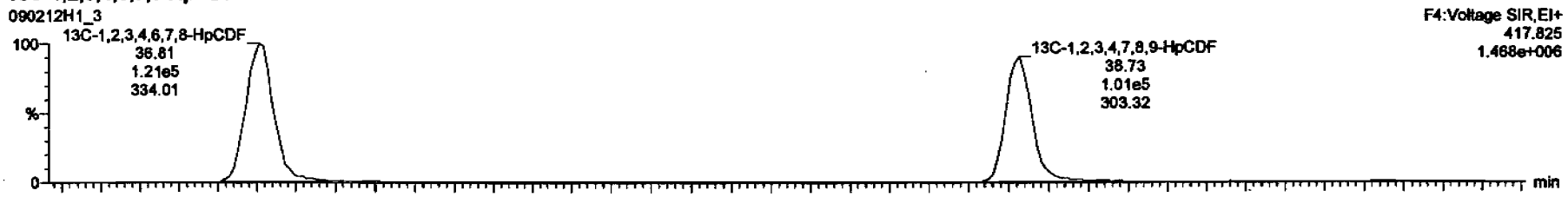

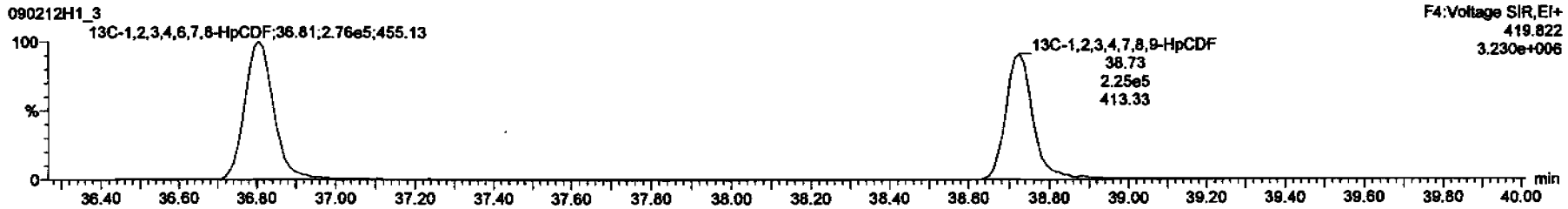

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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OCDF

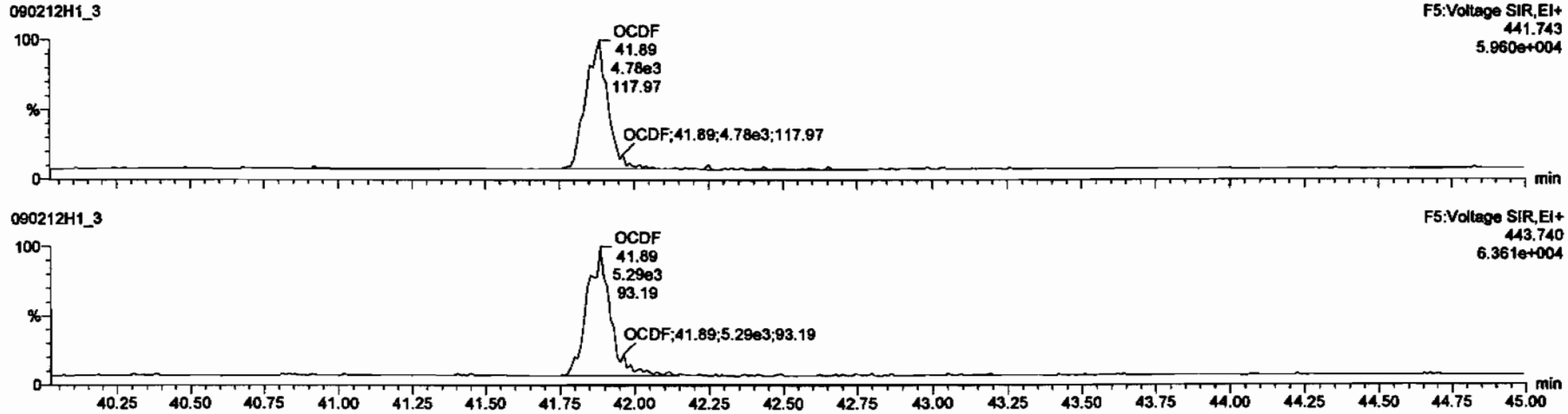

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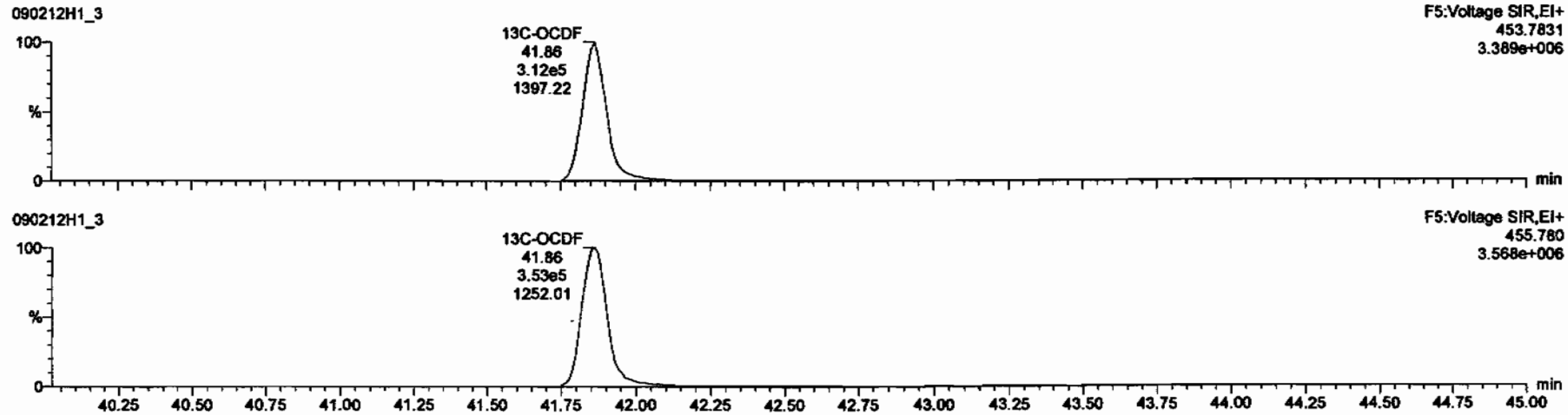

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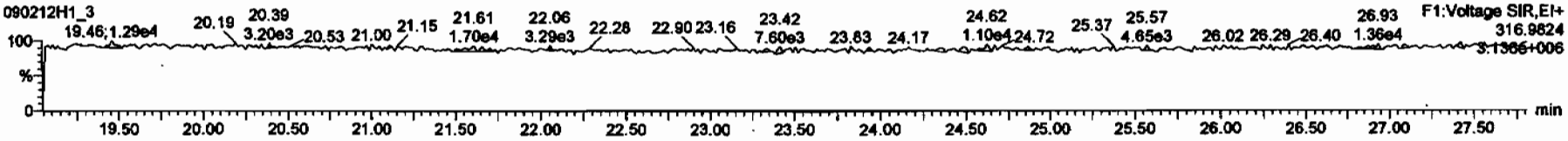

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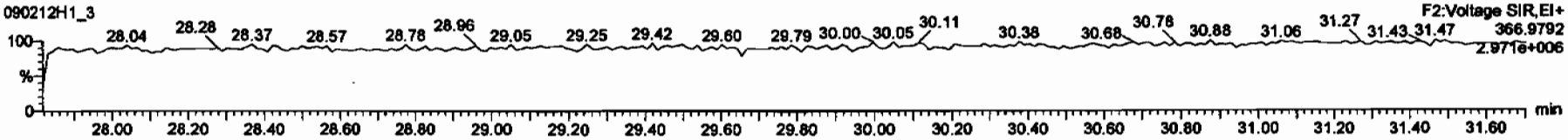

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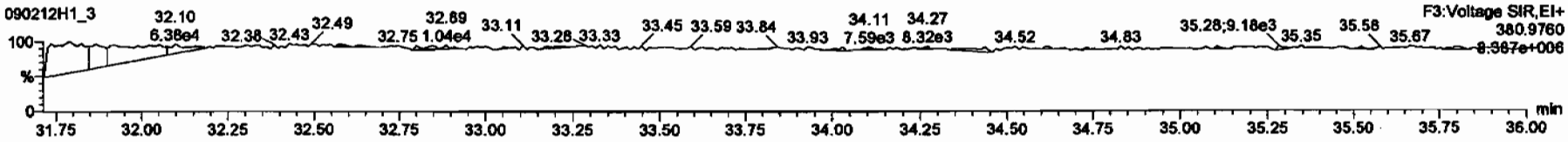

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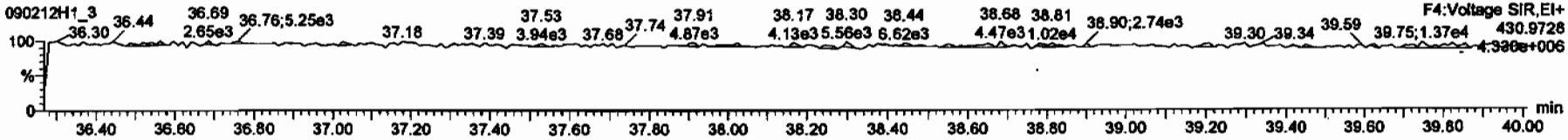

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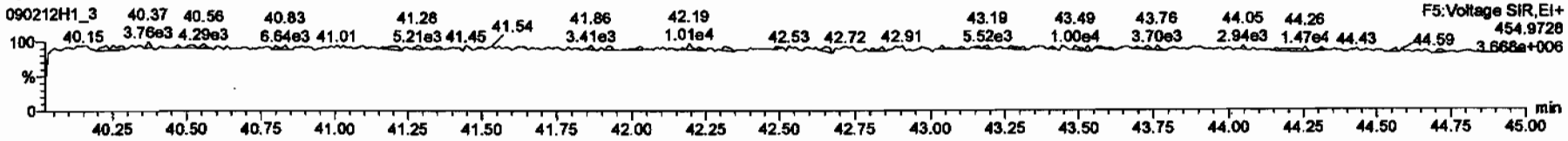

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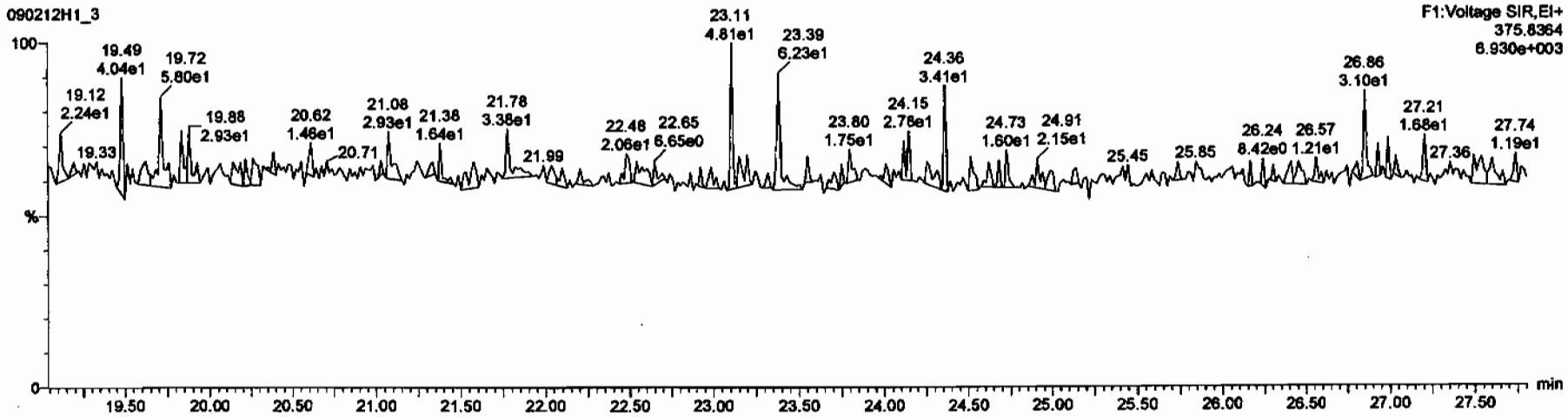

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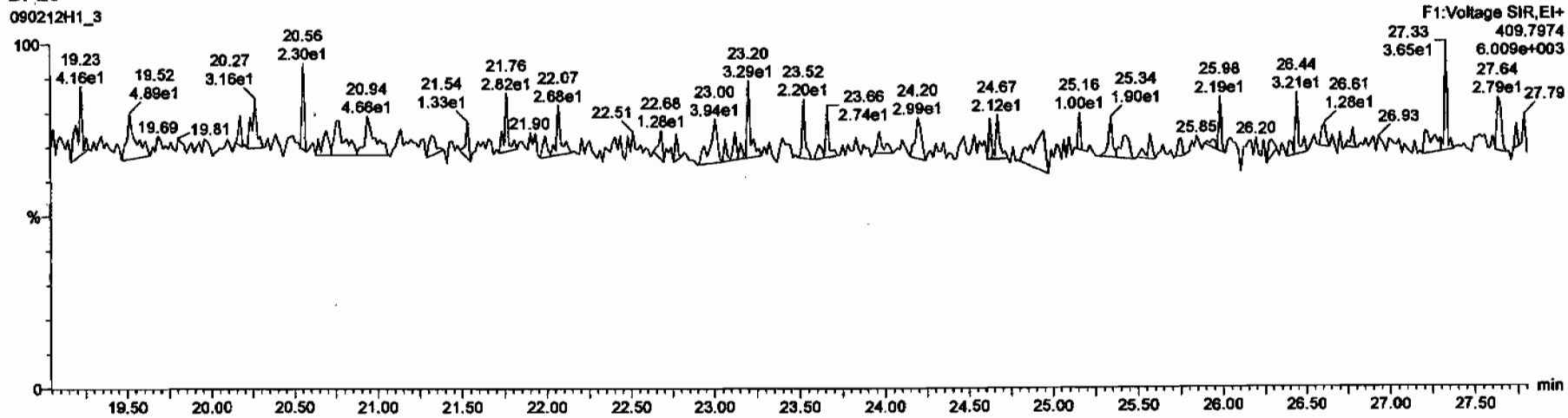

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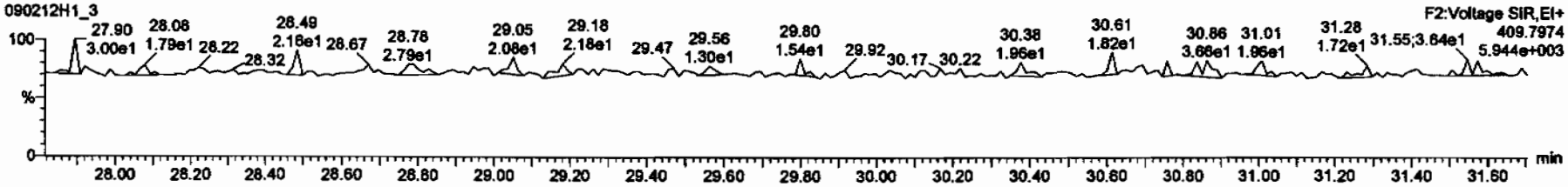

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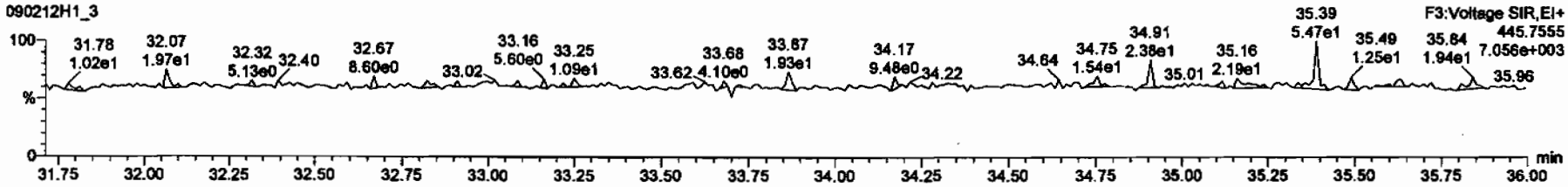

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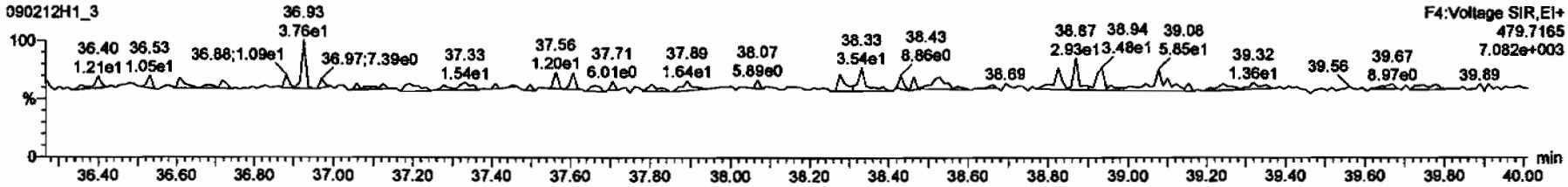

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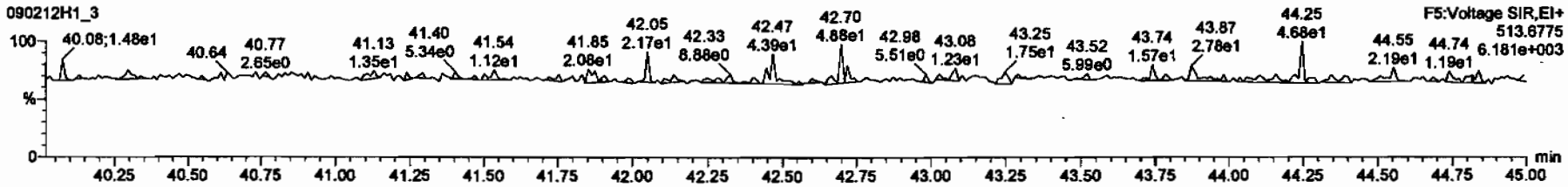

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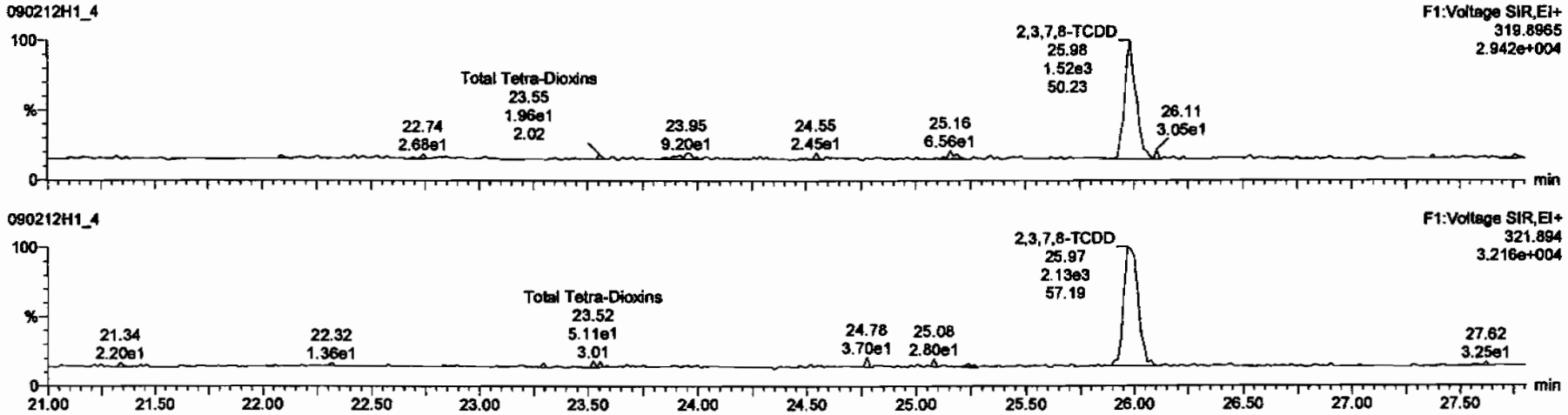

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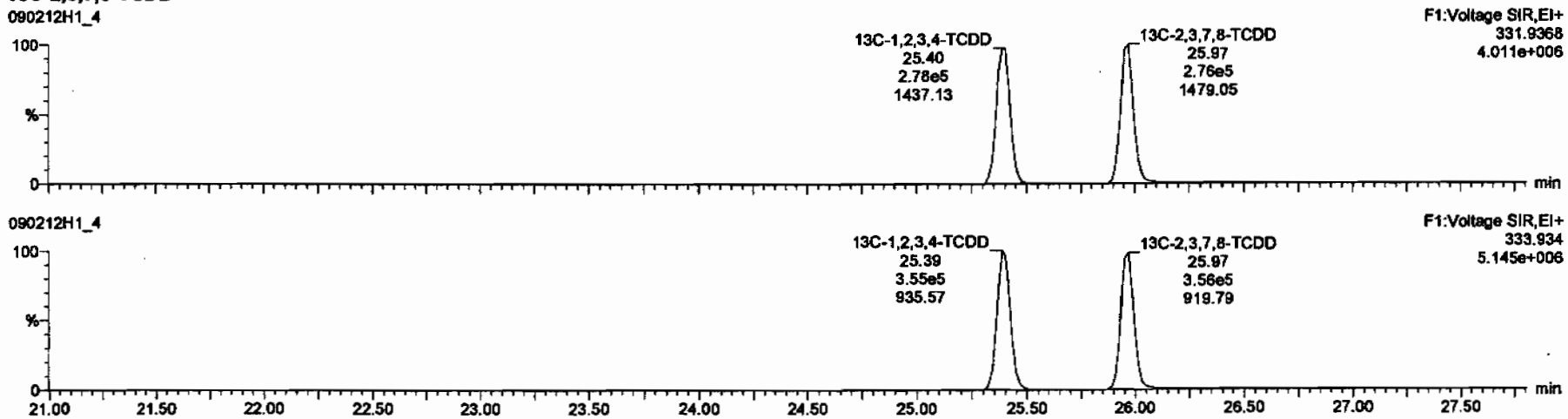

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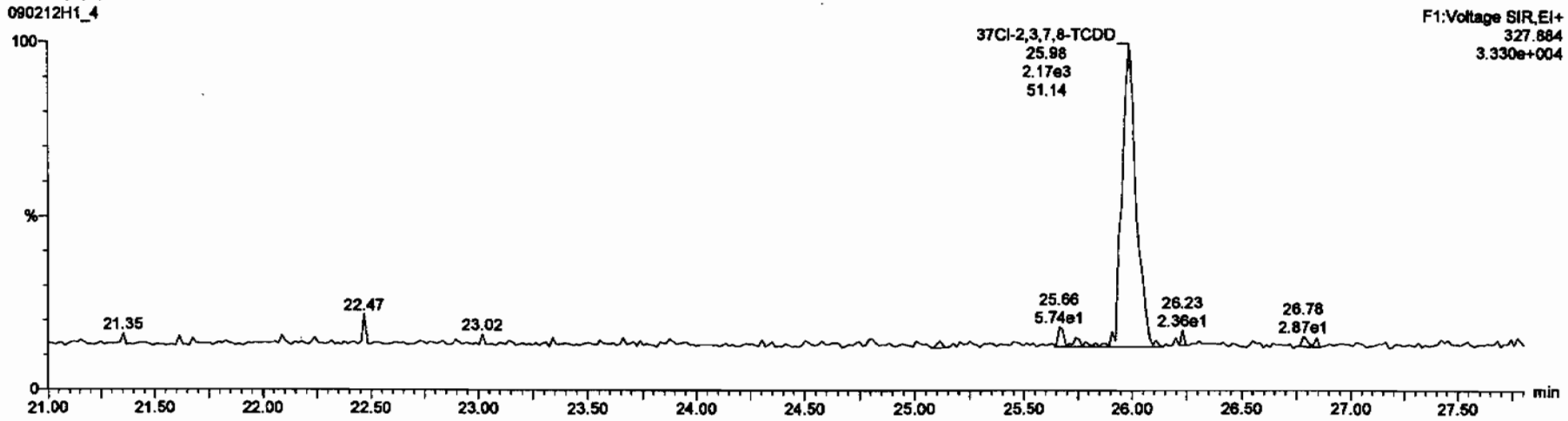

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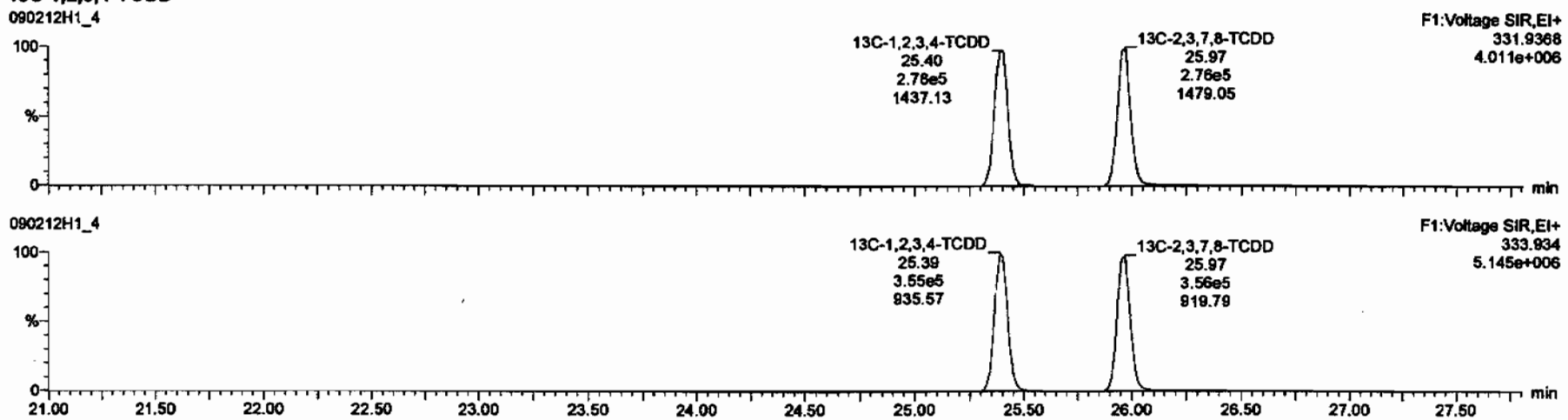

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1,2,3,7,8-PeCDD

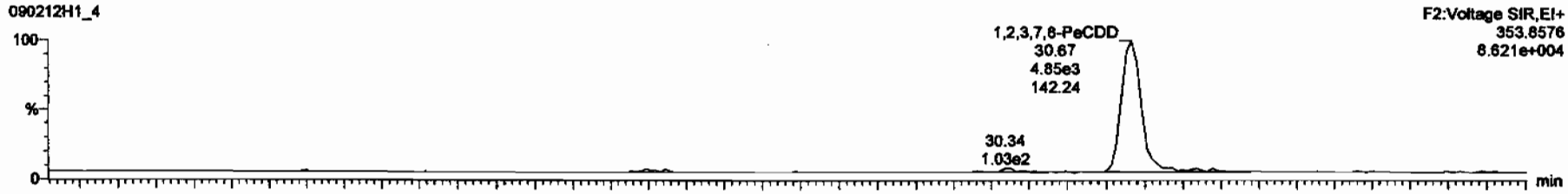

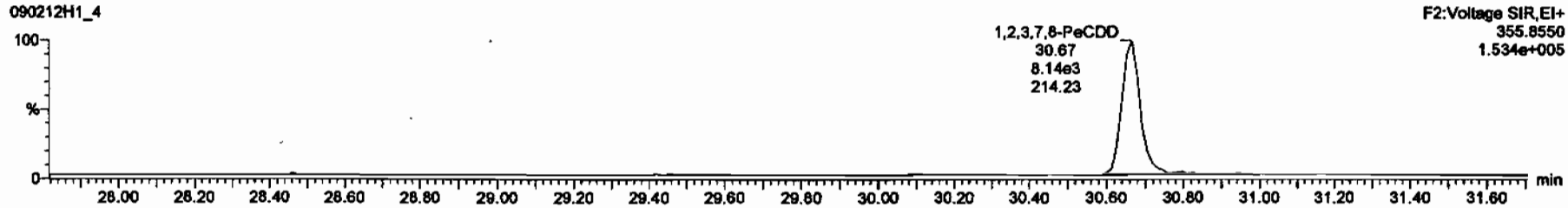

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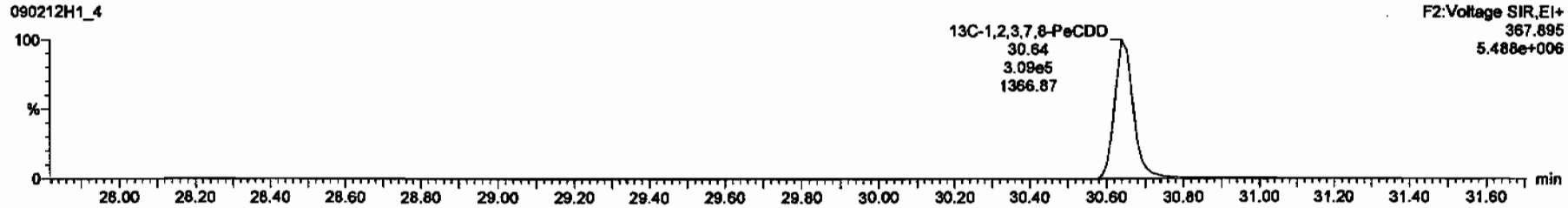

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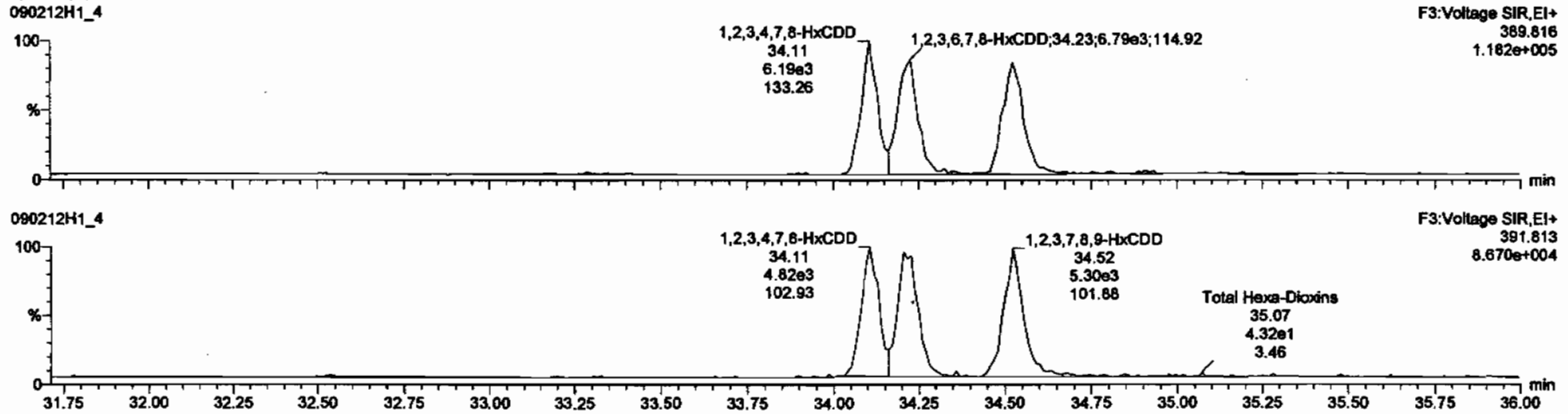

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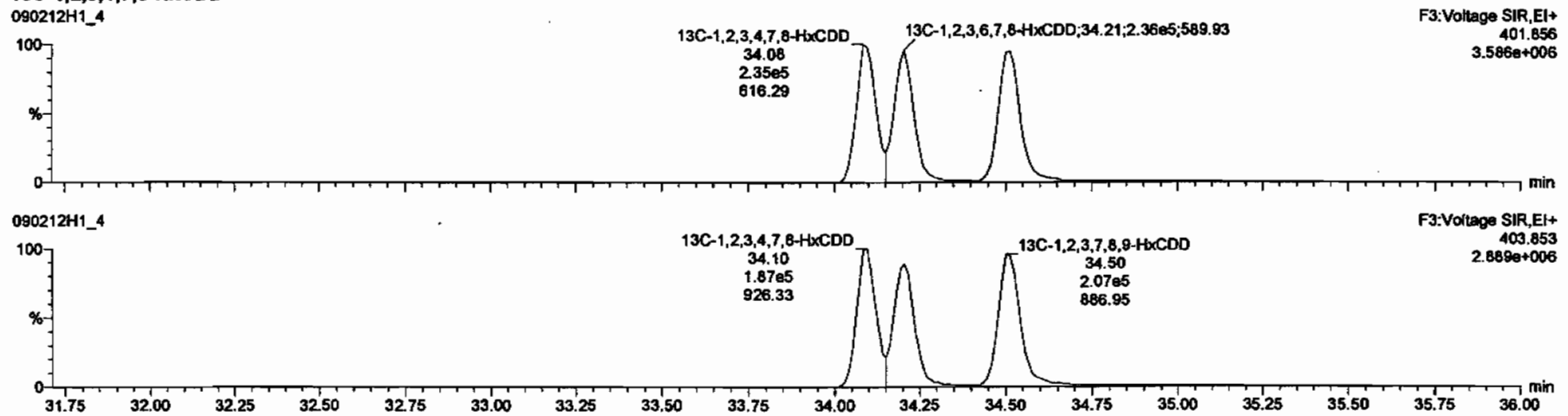

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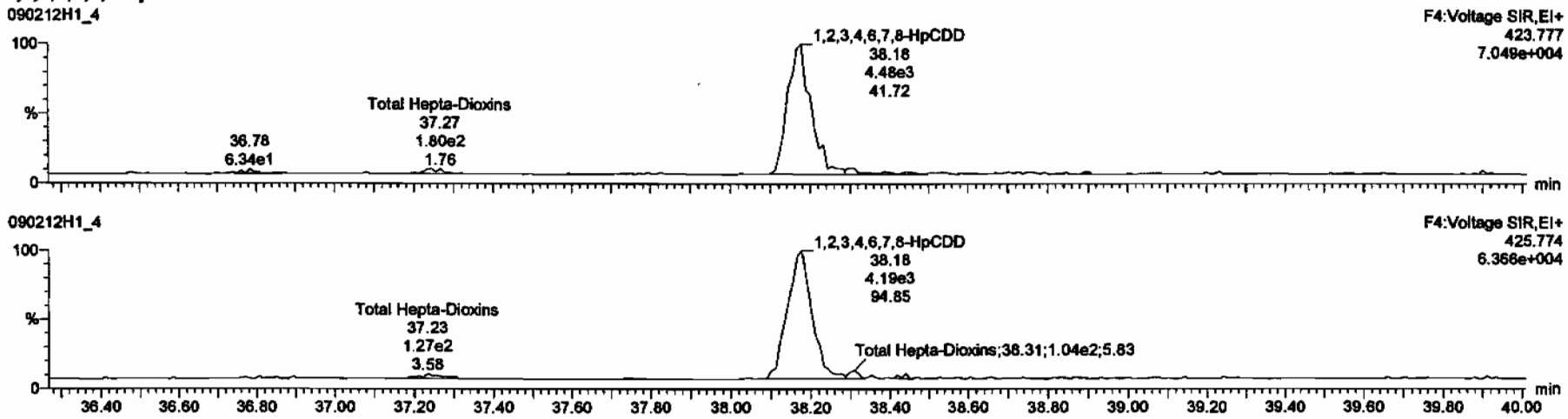

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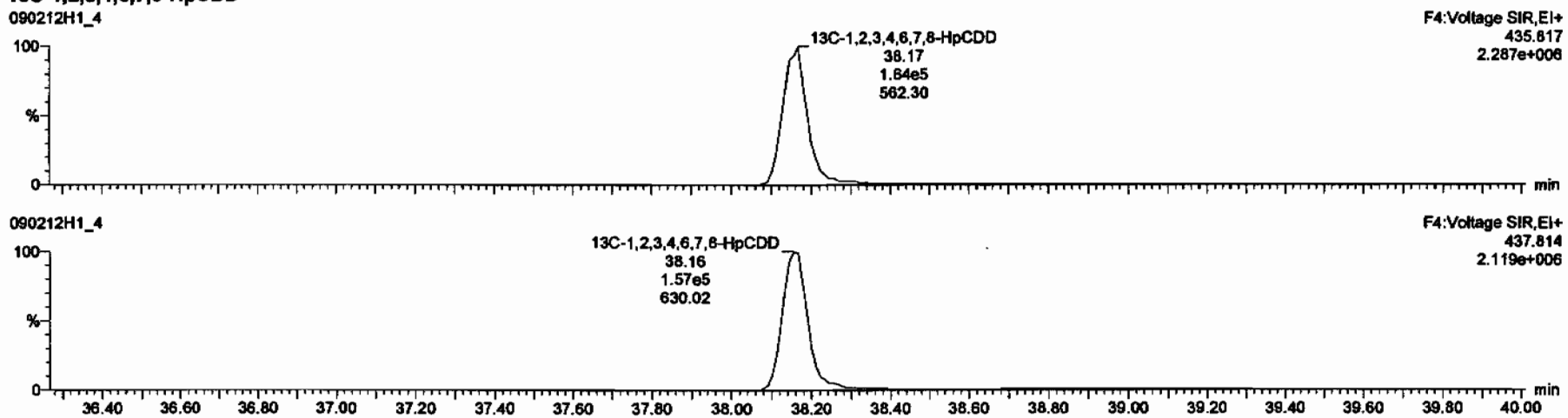

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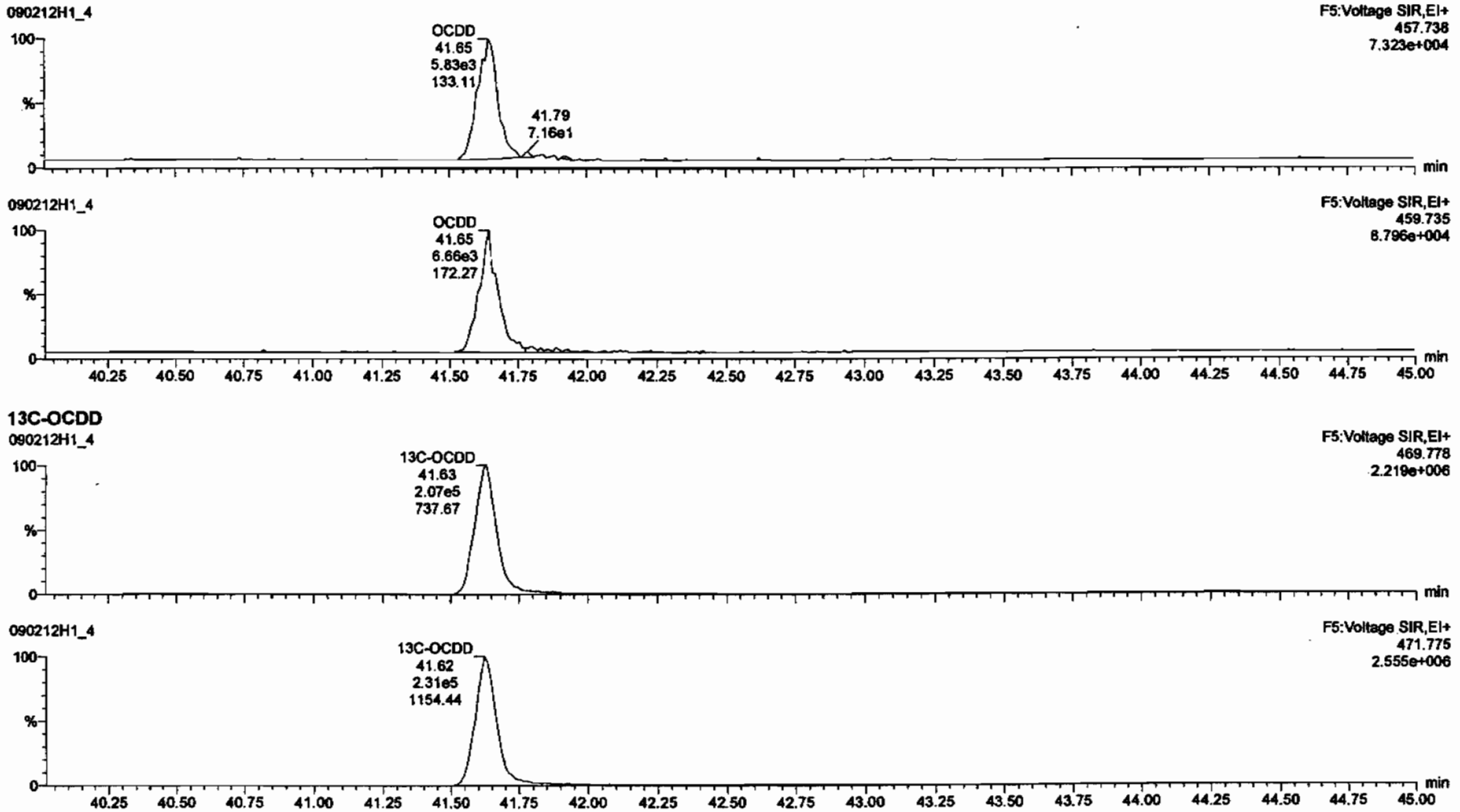

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2,3,7,8-TCDF

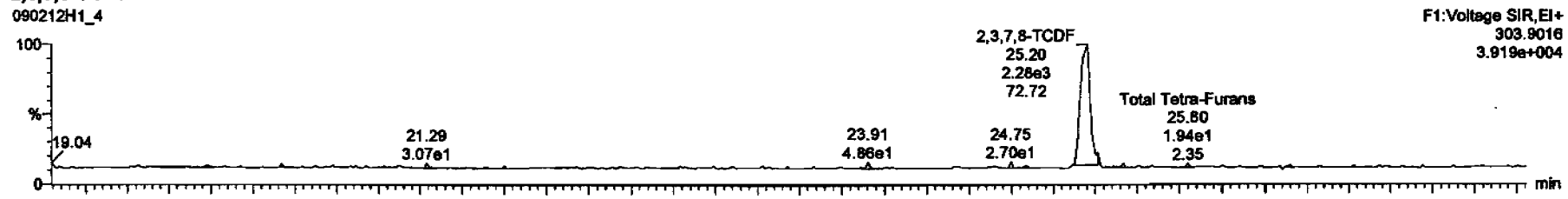

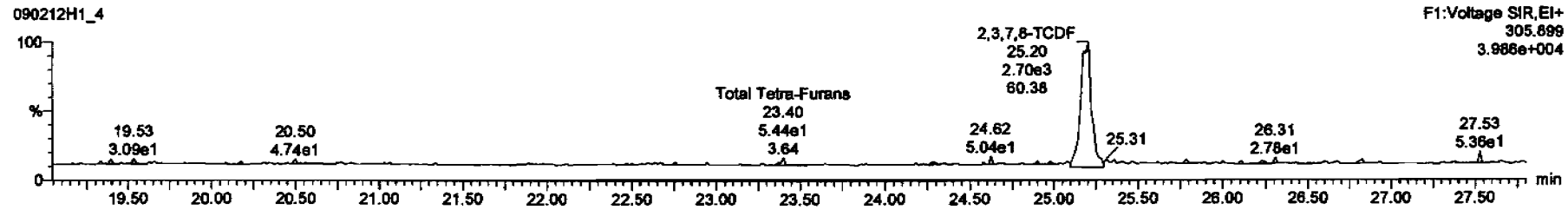

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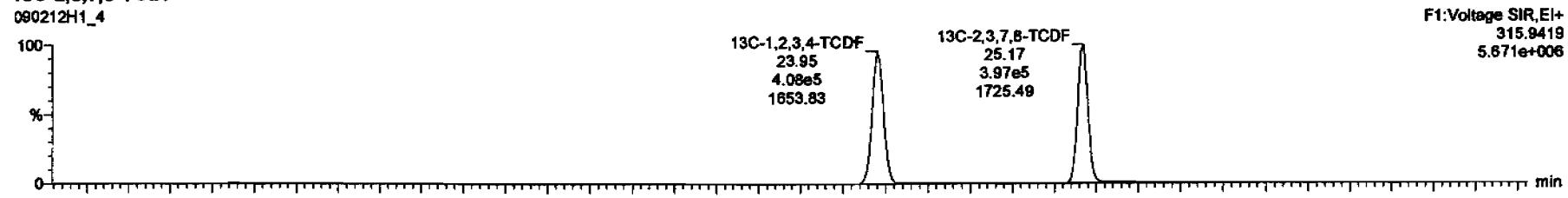

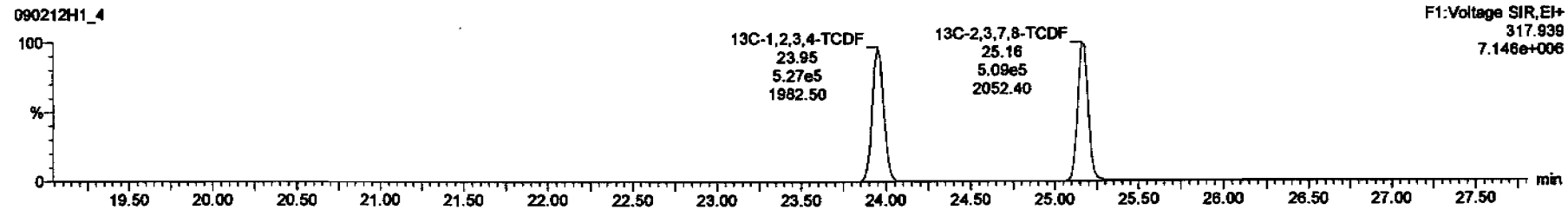

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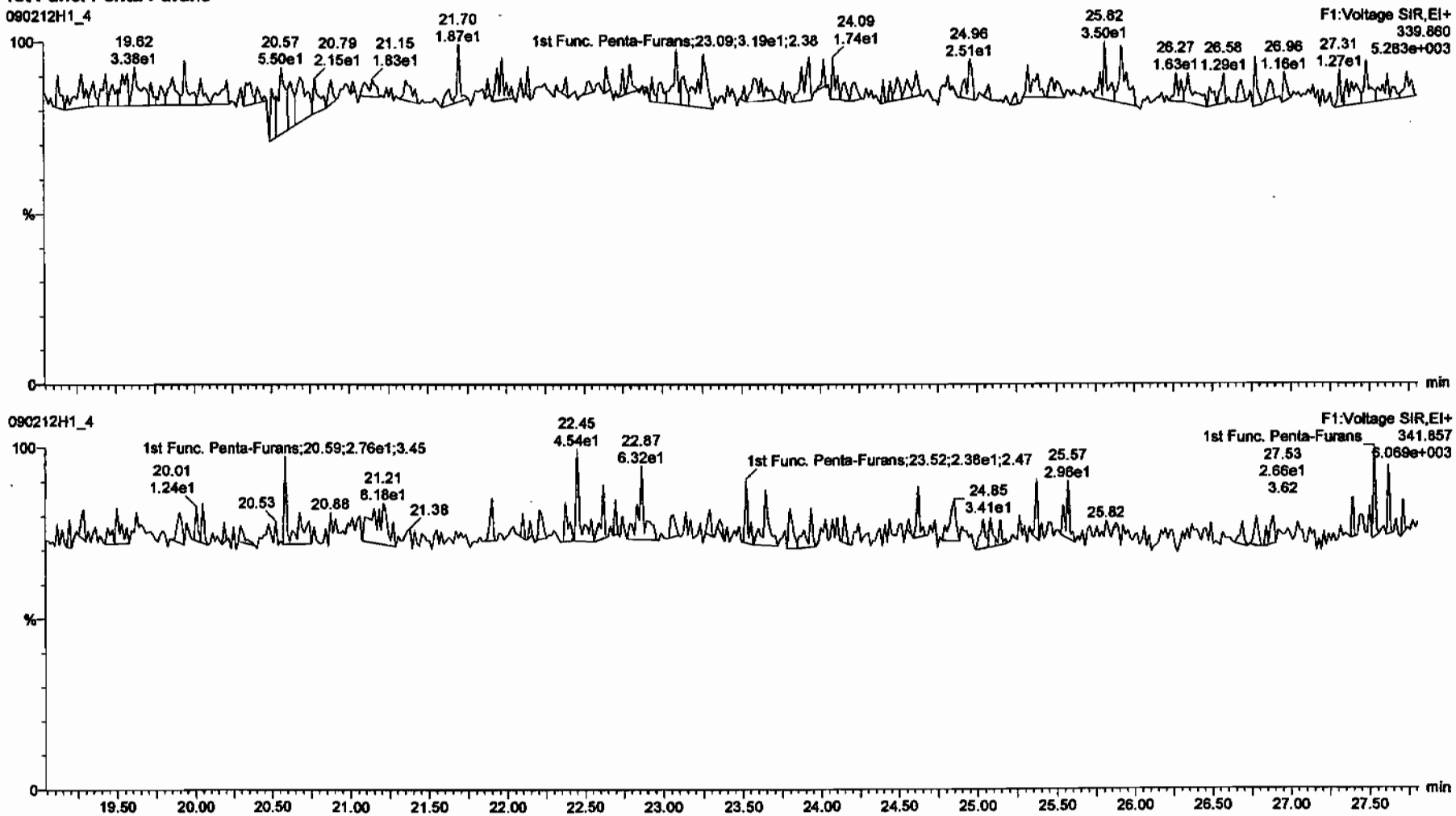

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1,2,3,7,8-PeCDF

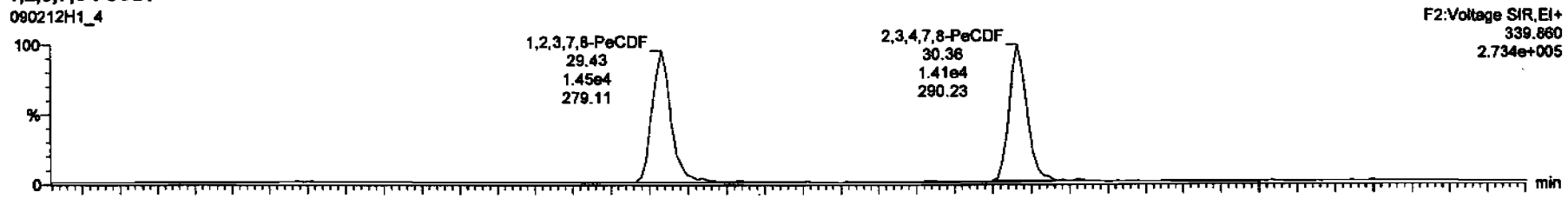

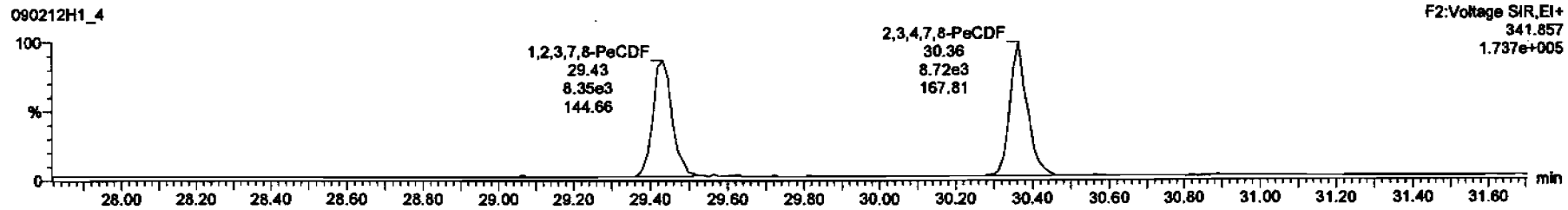

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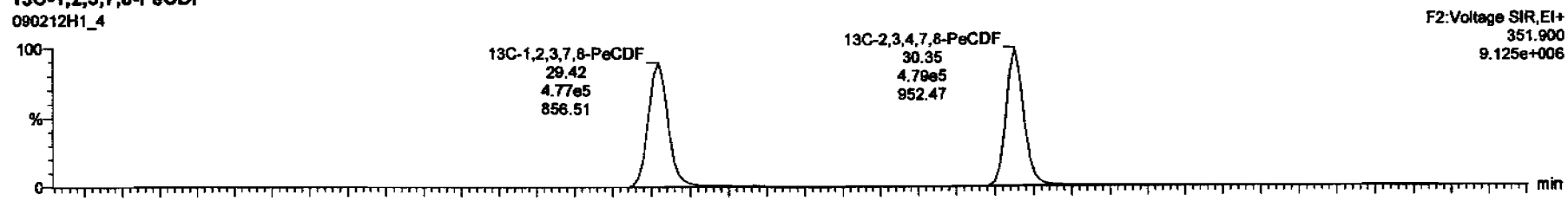

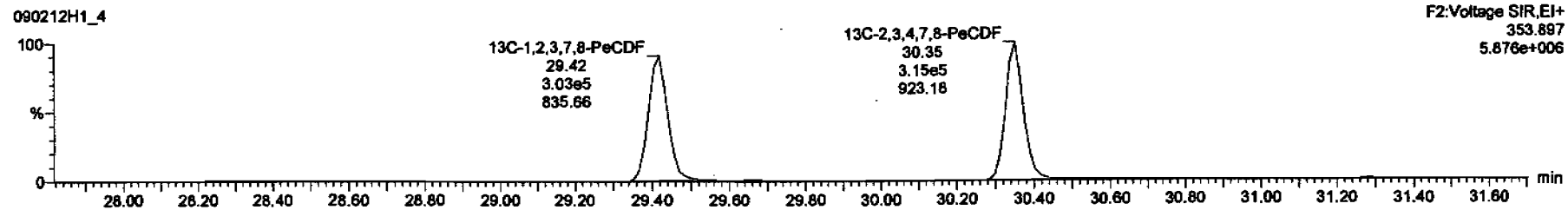

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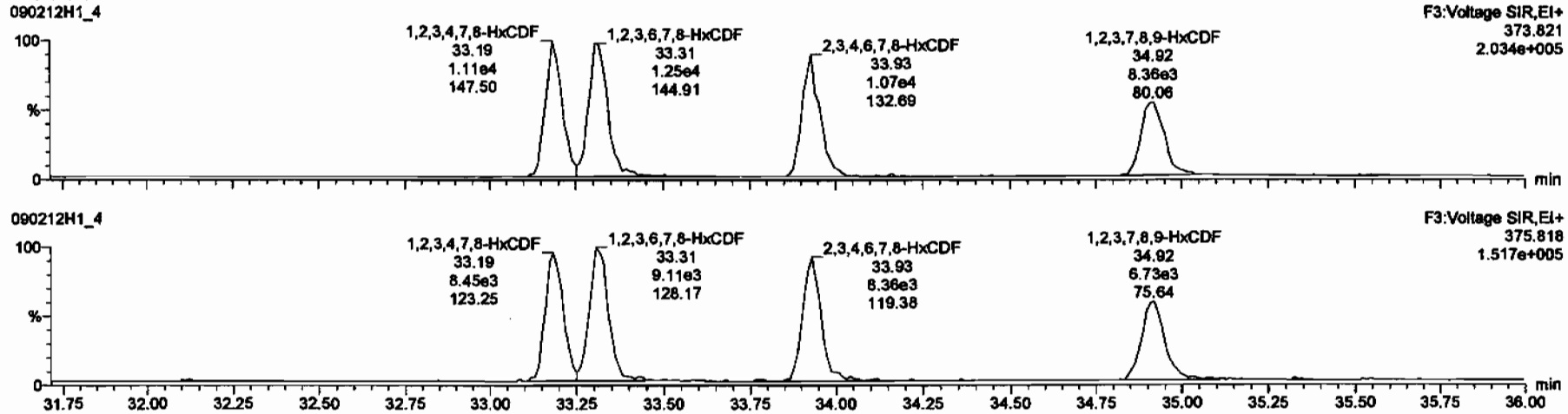

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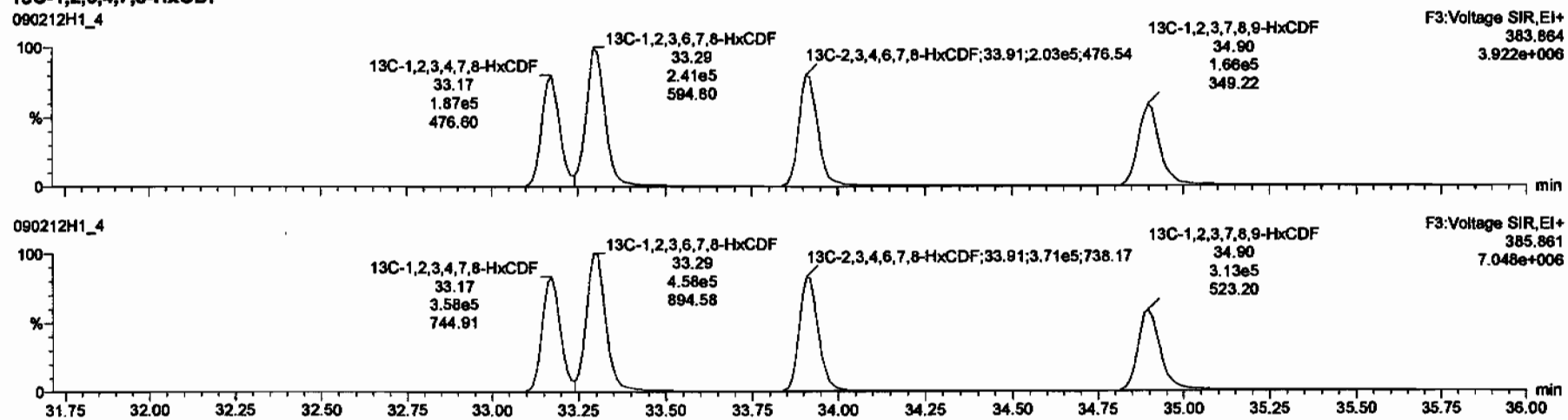

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1,2,3,4,6,7,8-HpCDF

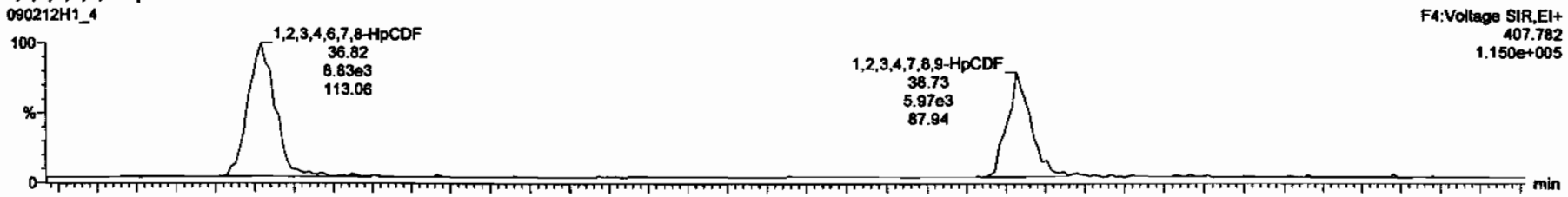

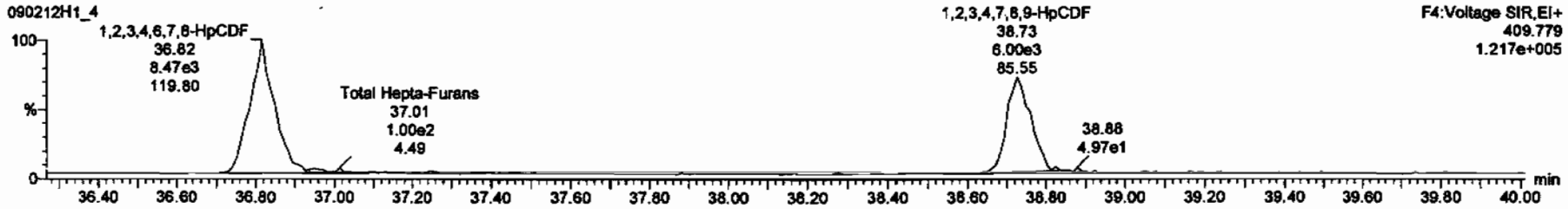

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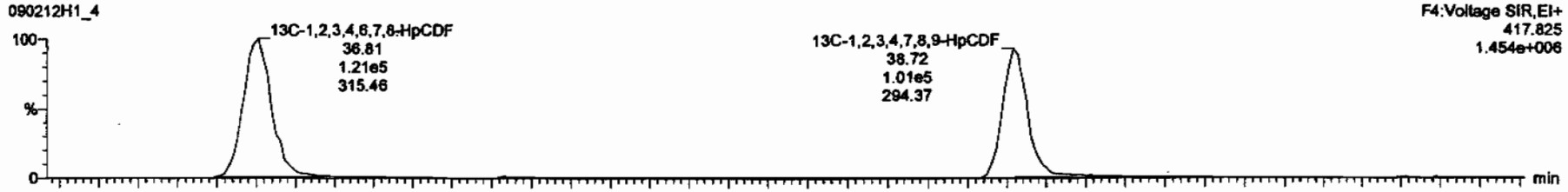

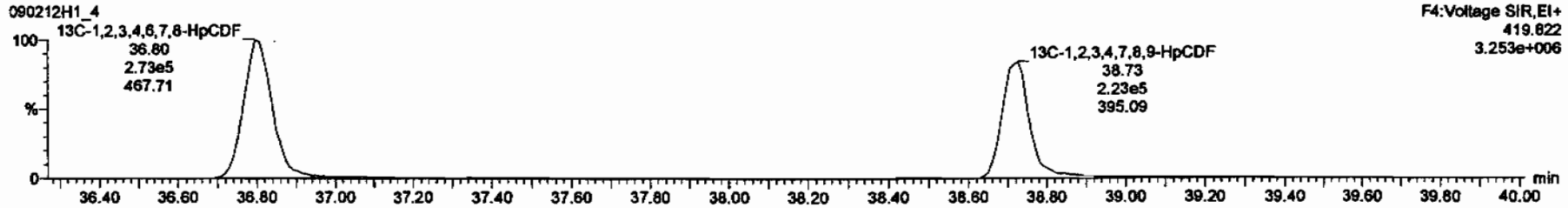

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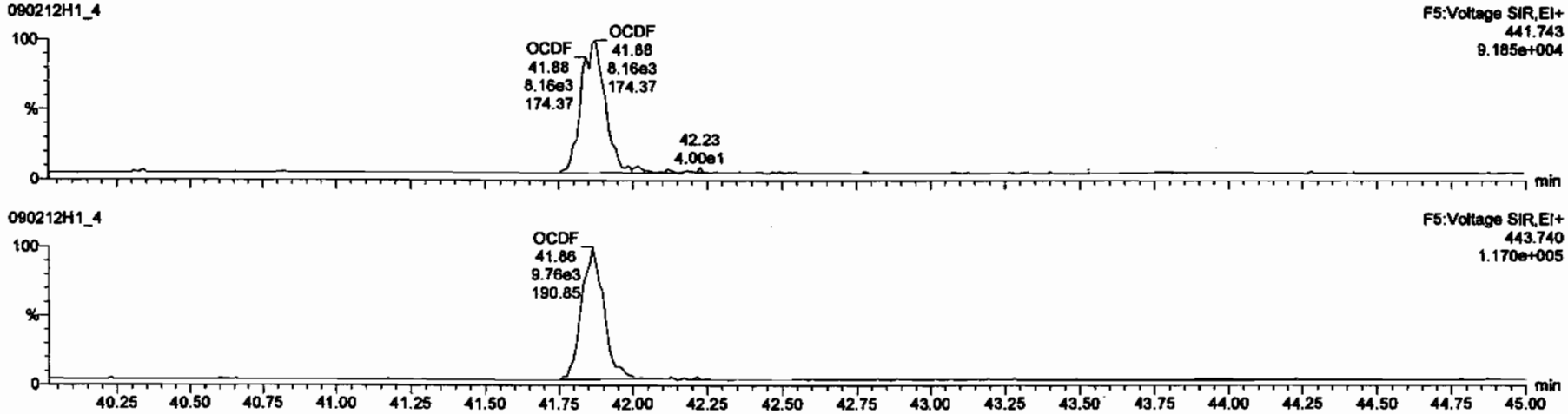

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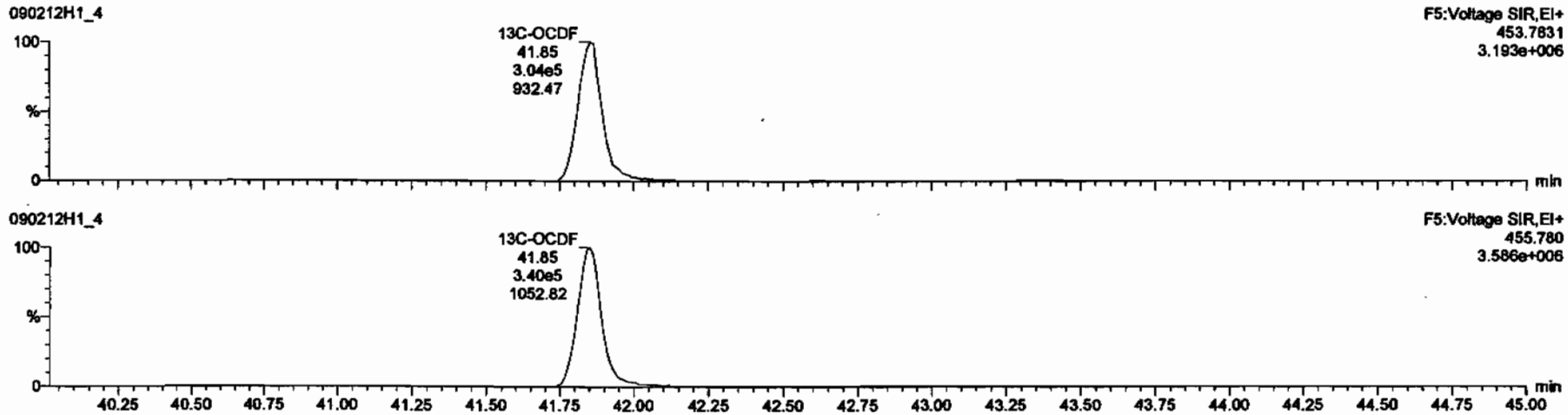

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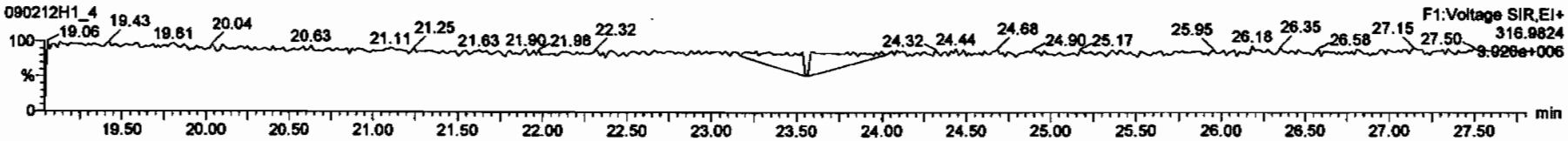

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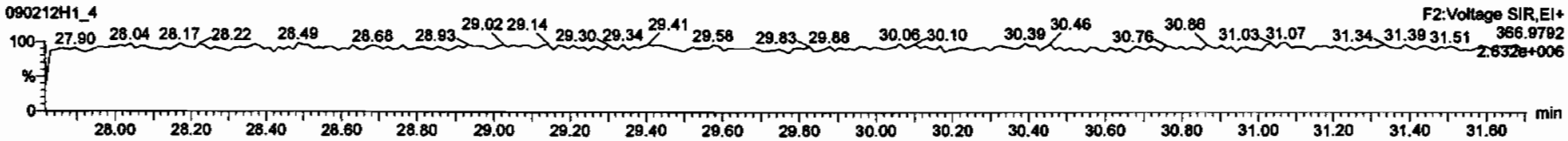

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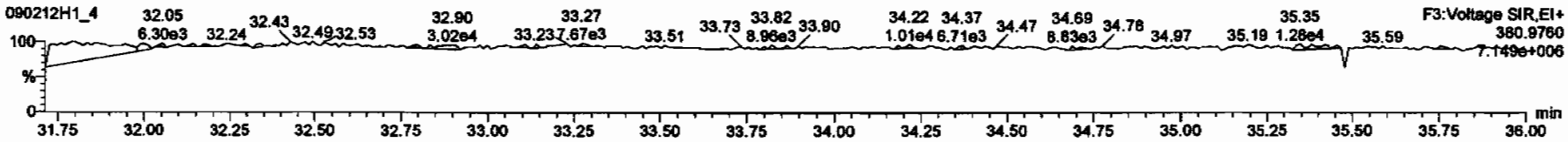

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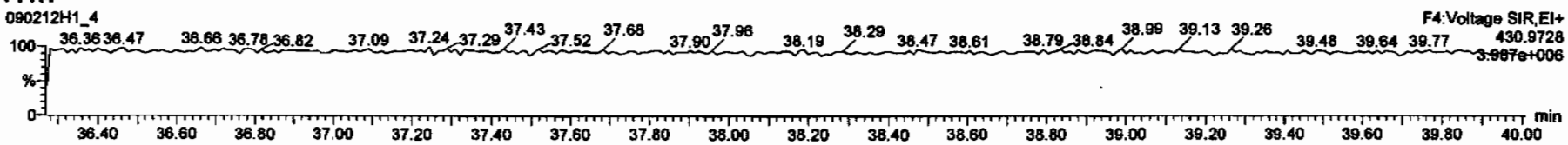

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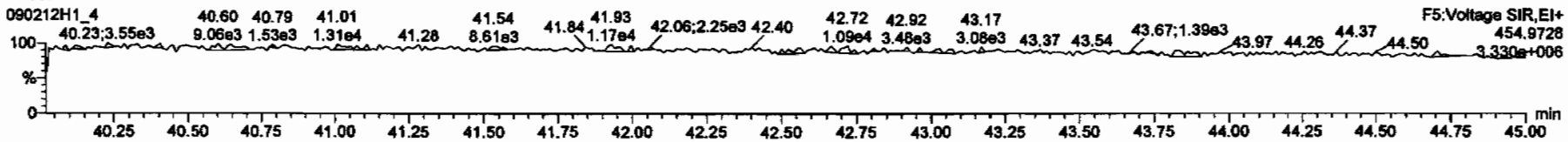

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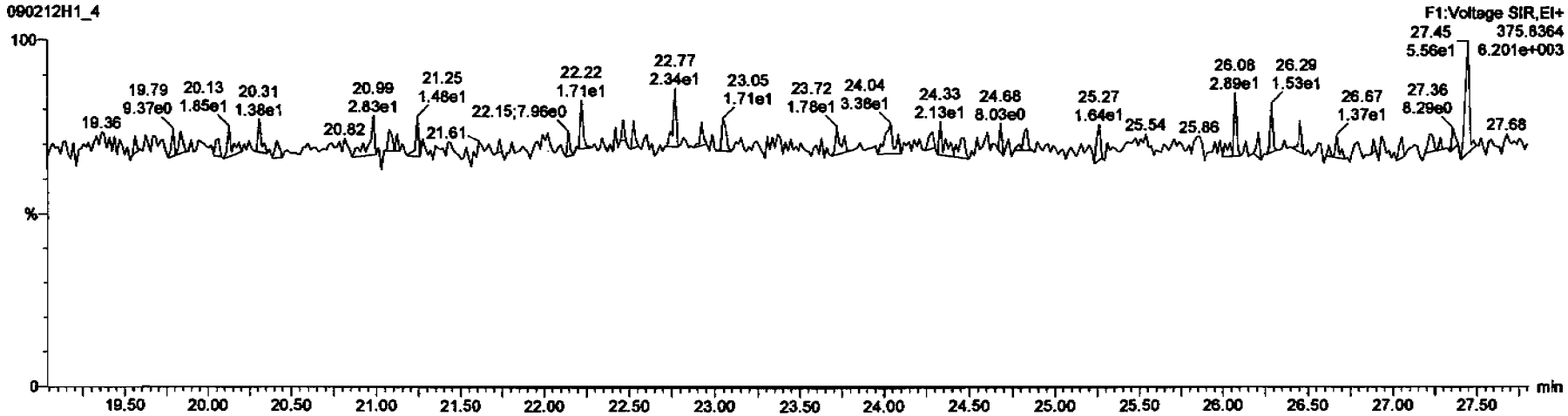

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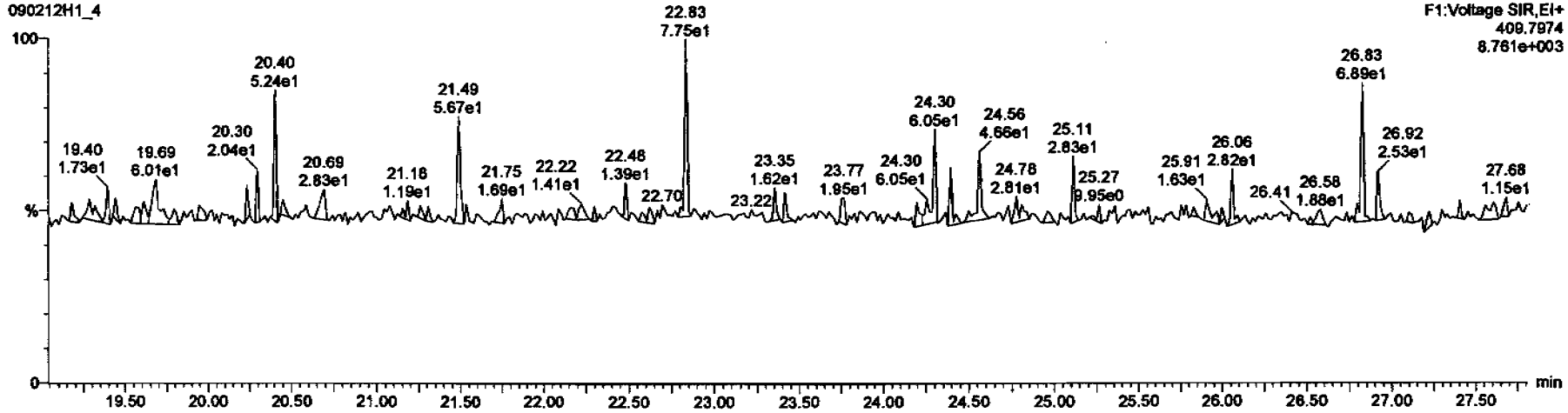

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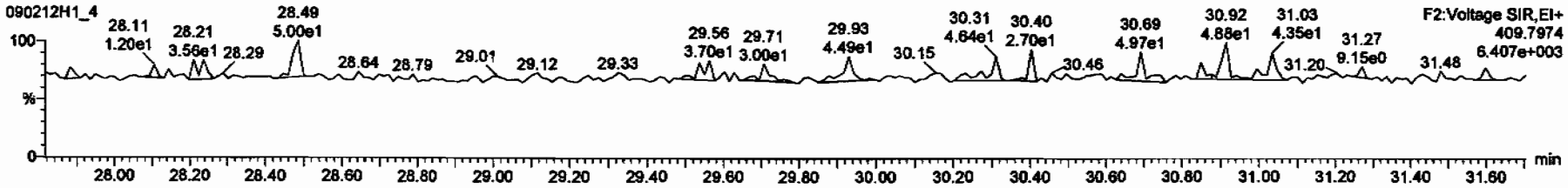

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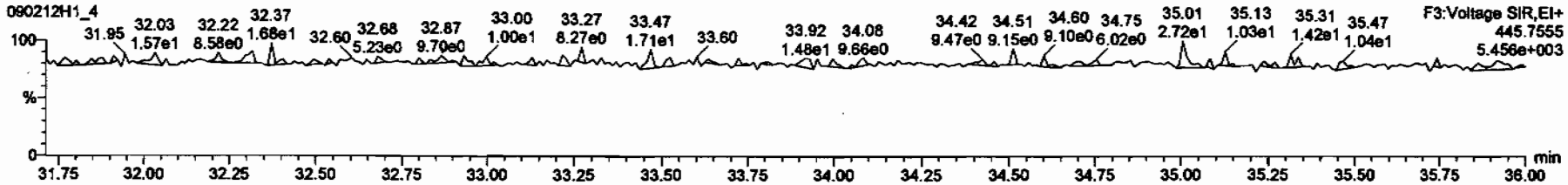

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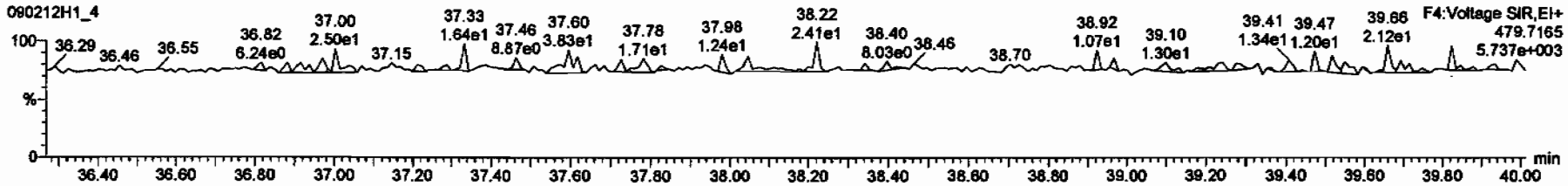

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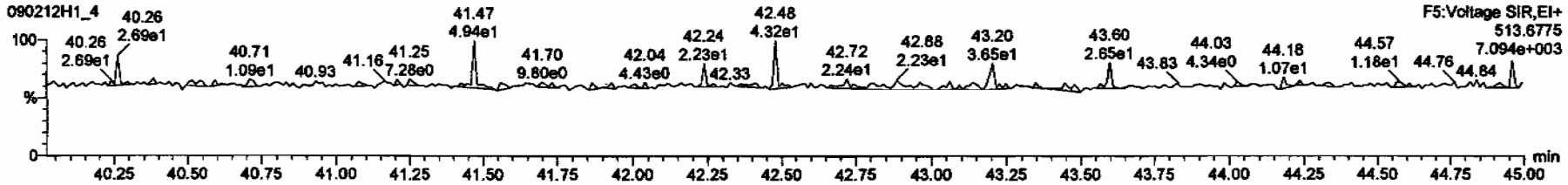

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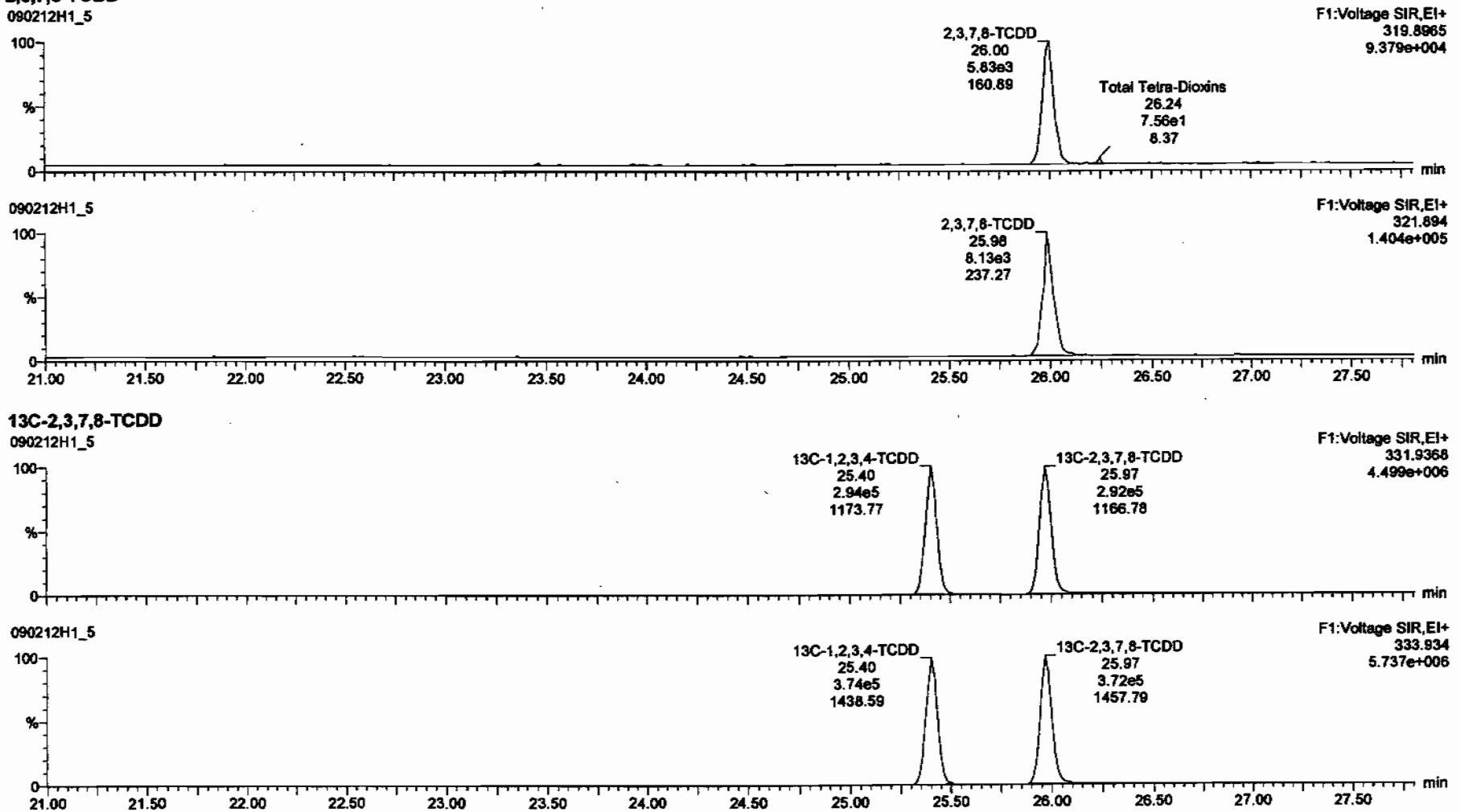

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37Cl-2,3,7,8-TCDD

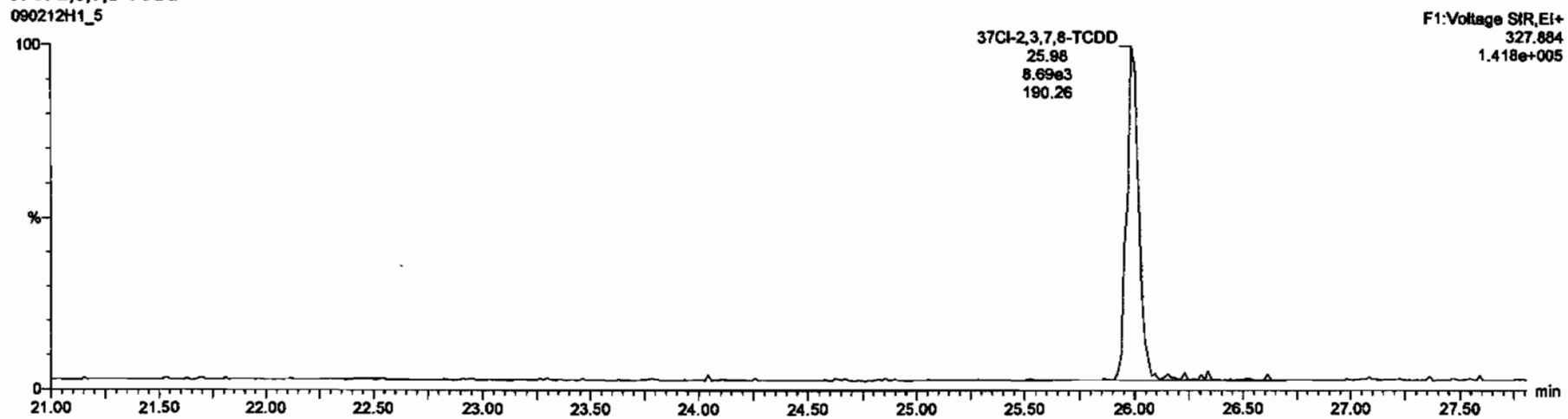

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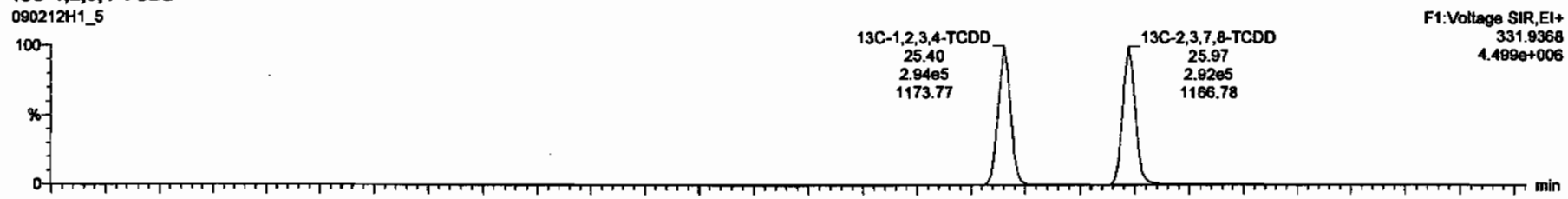

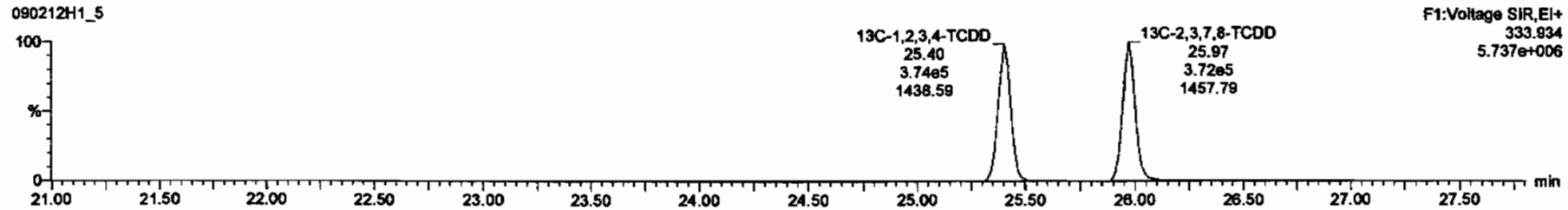

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1,2,3,7,8-PeCDD

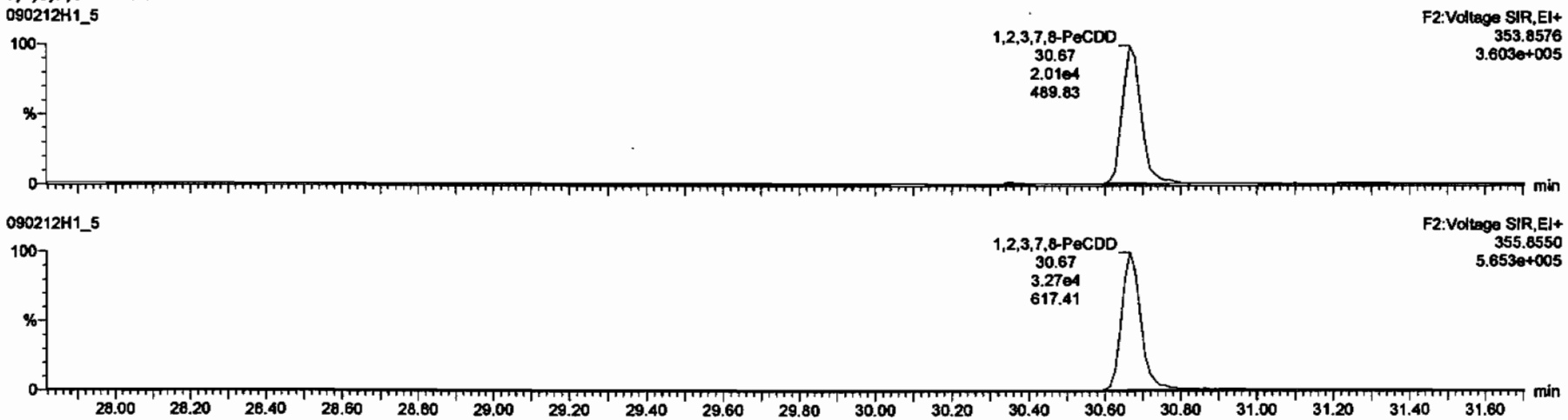

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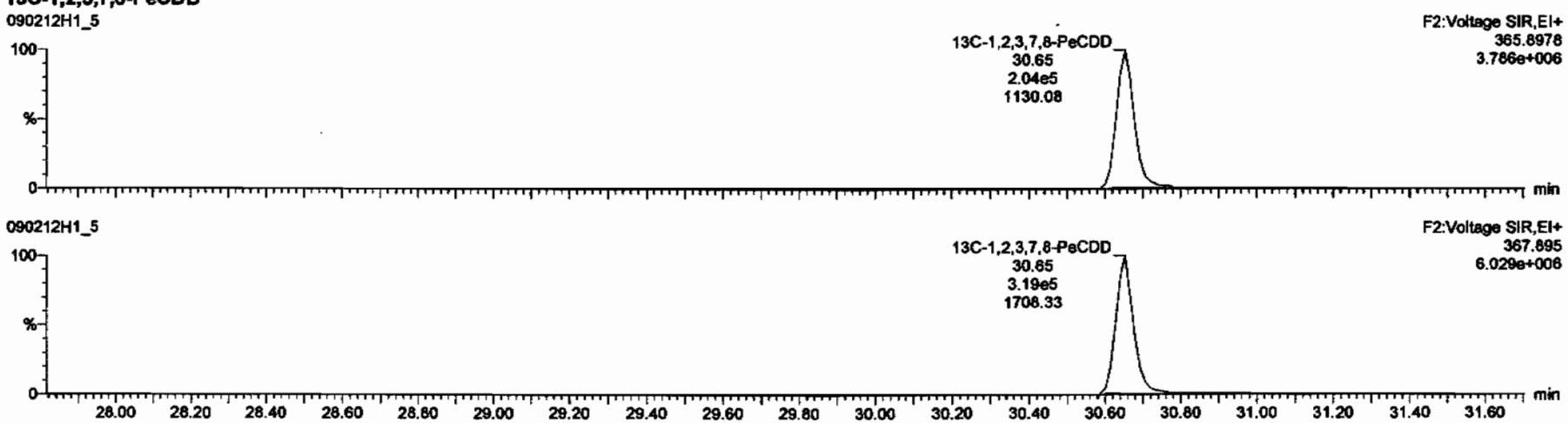

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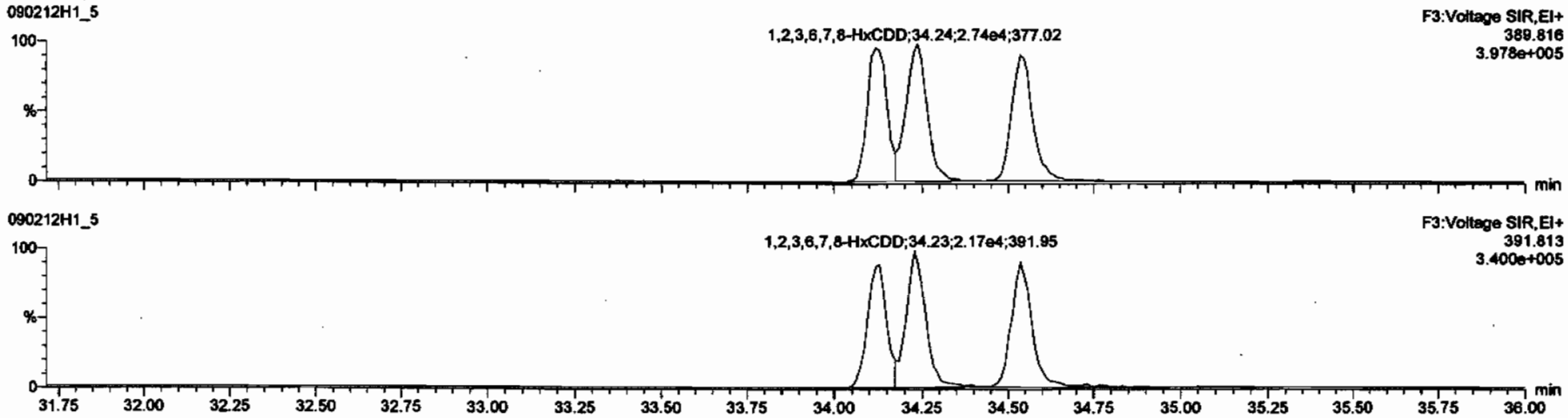

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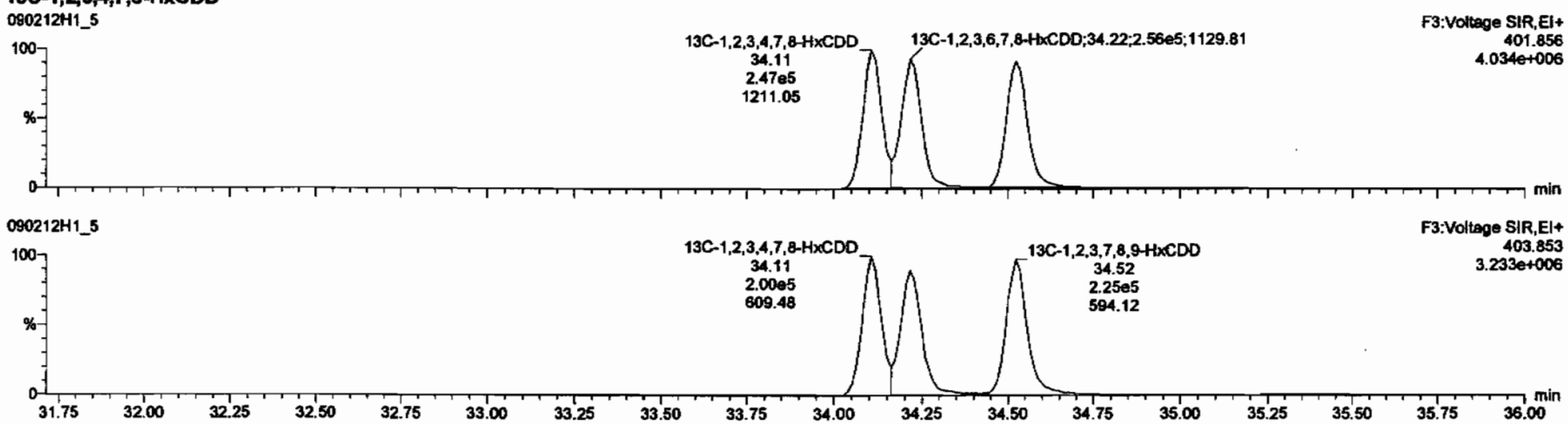

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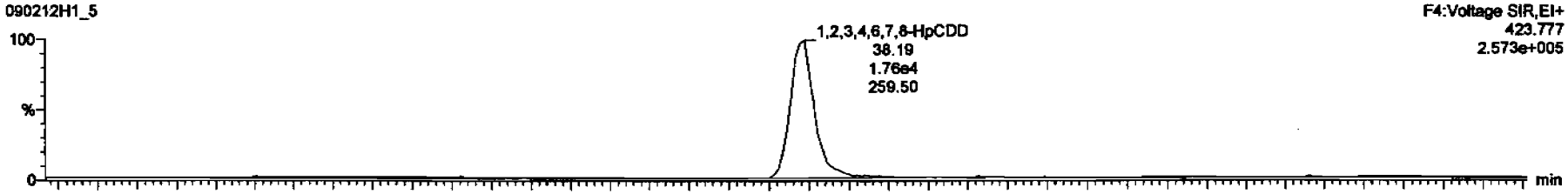

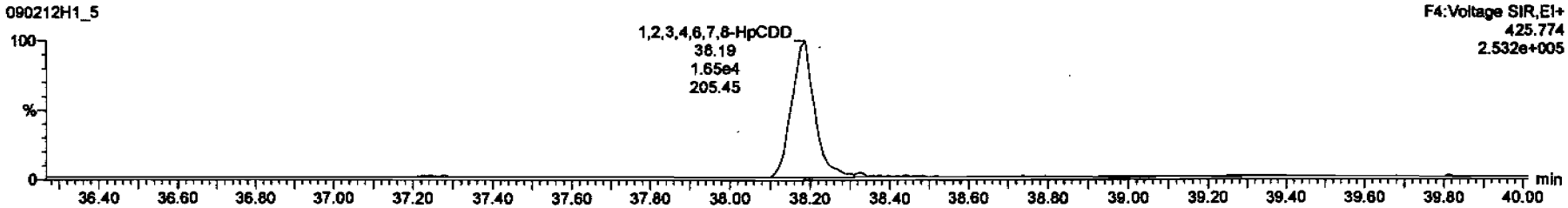

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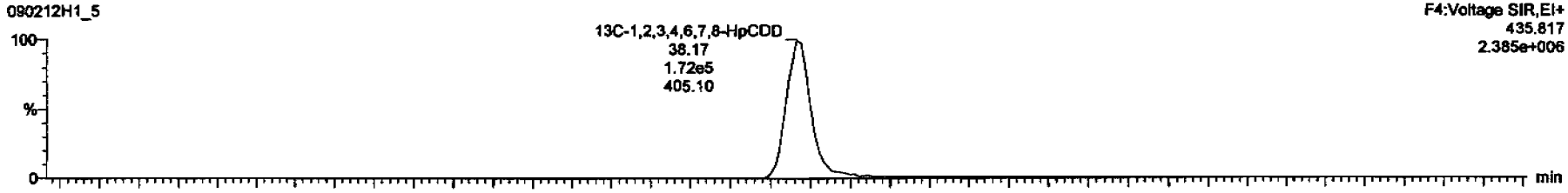

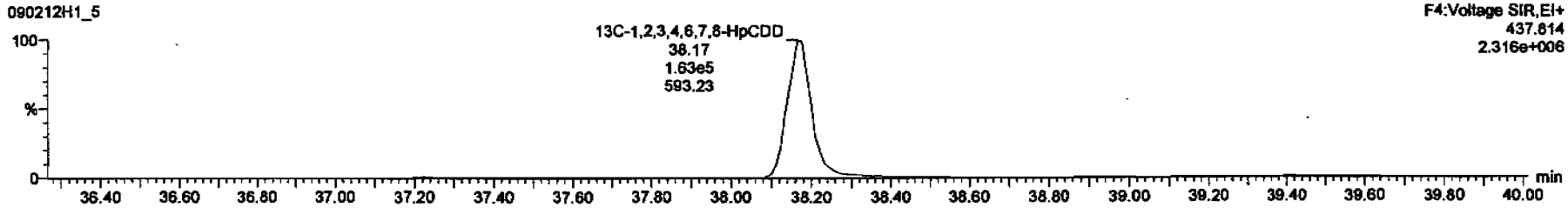

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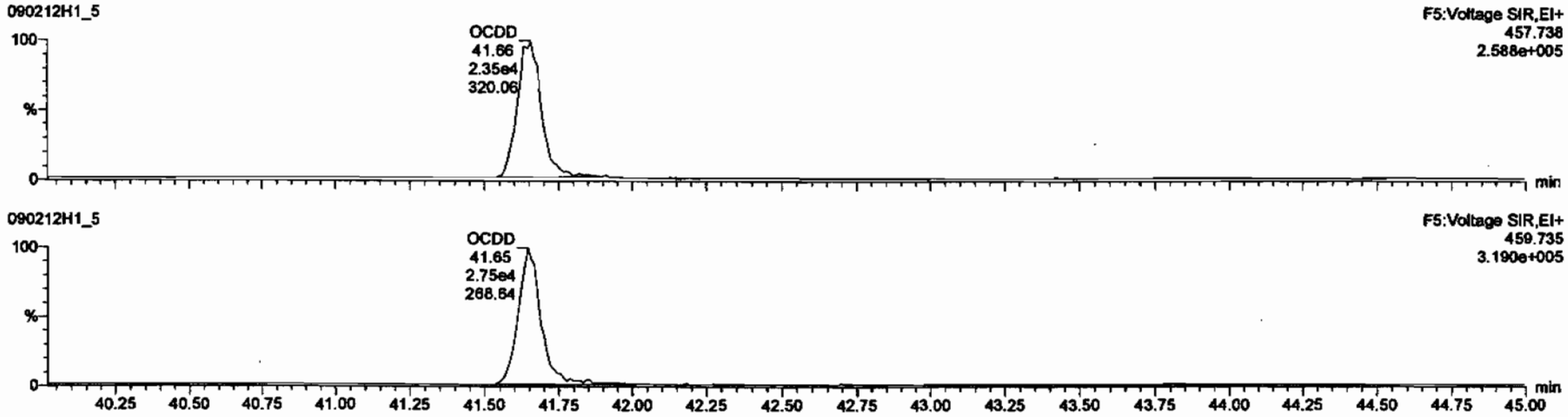

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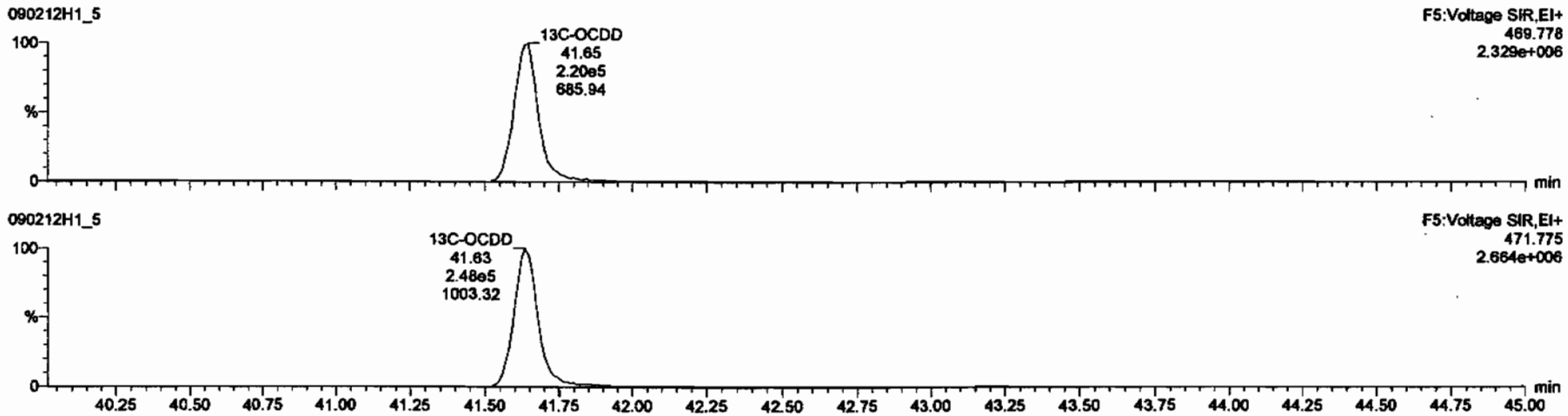

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2,3,7,8-TCDF

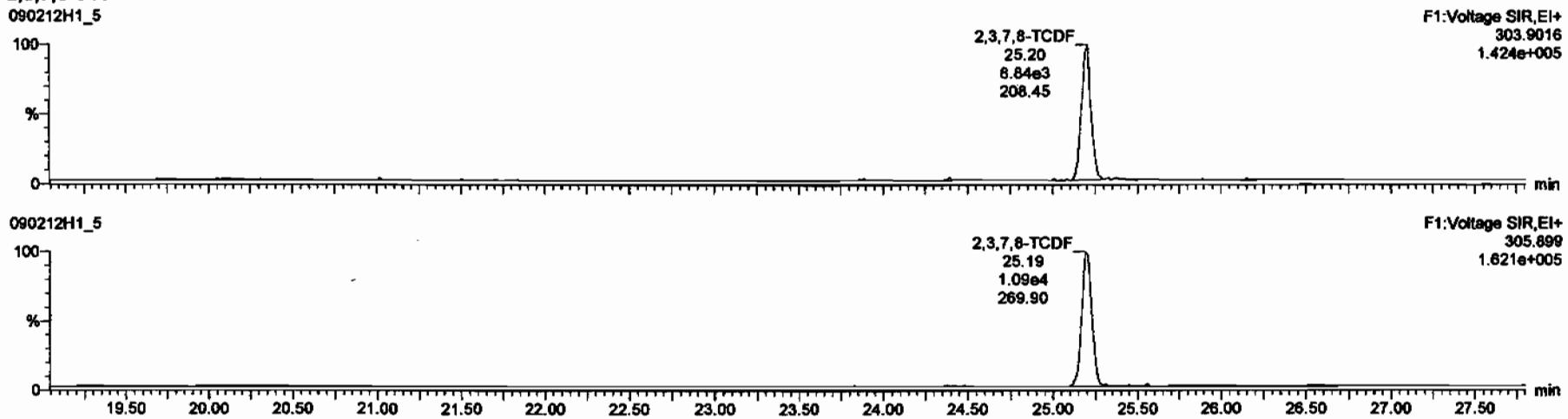

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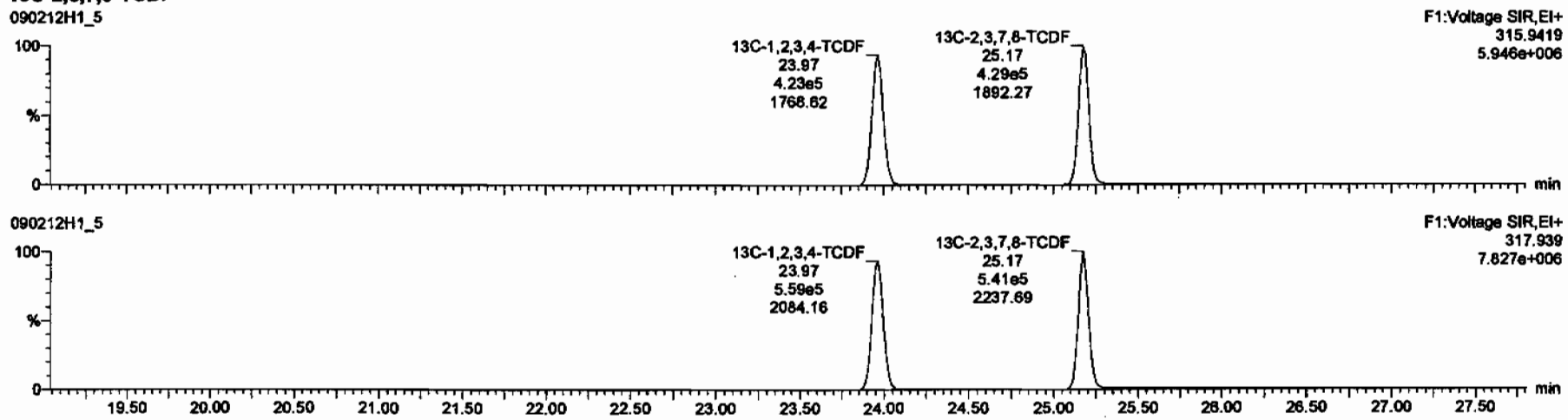

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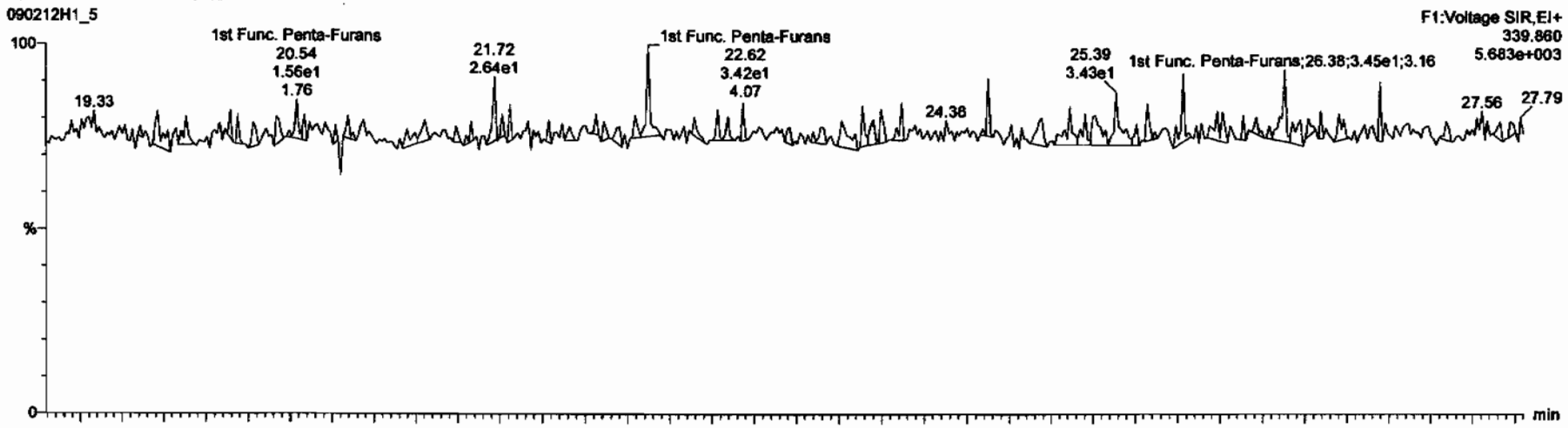

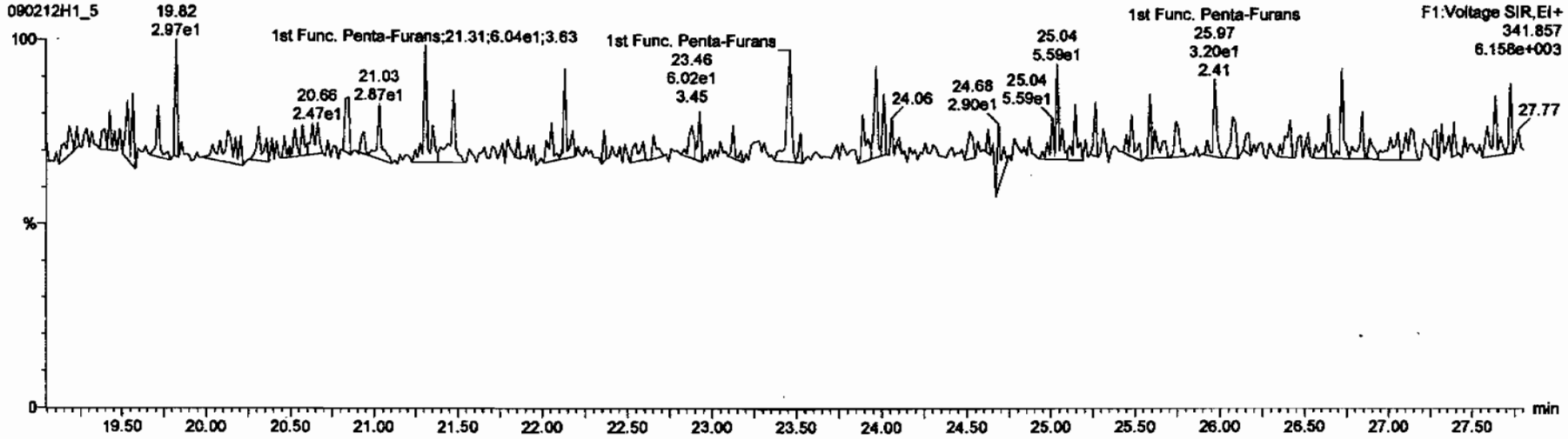

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1,2,3,7,8-PeCDF

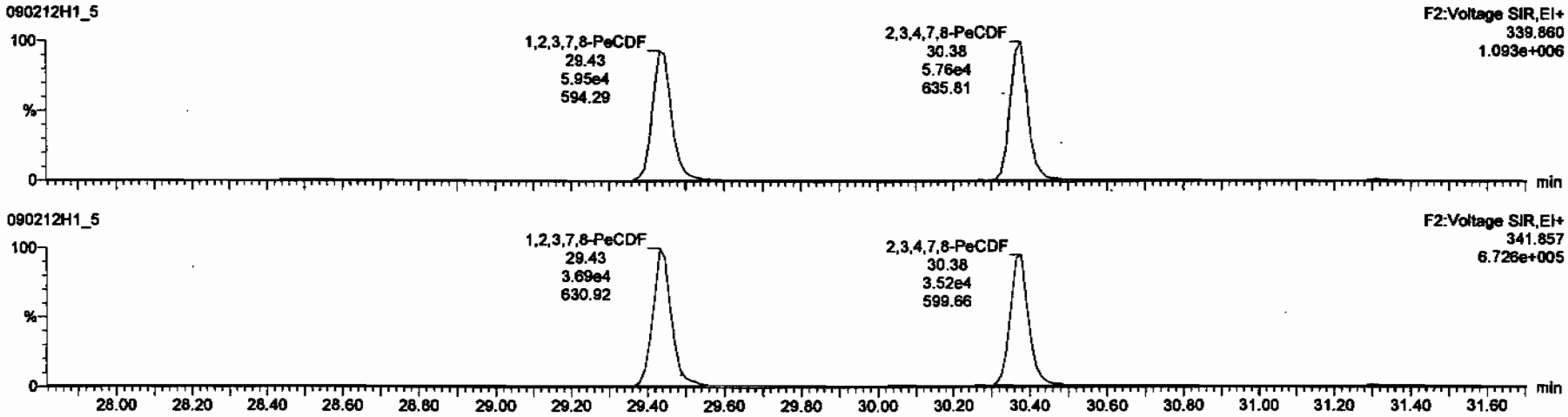

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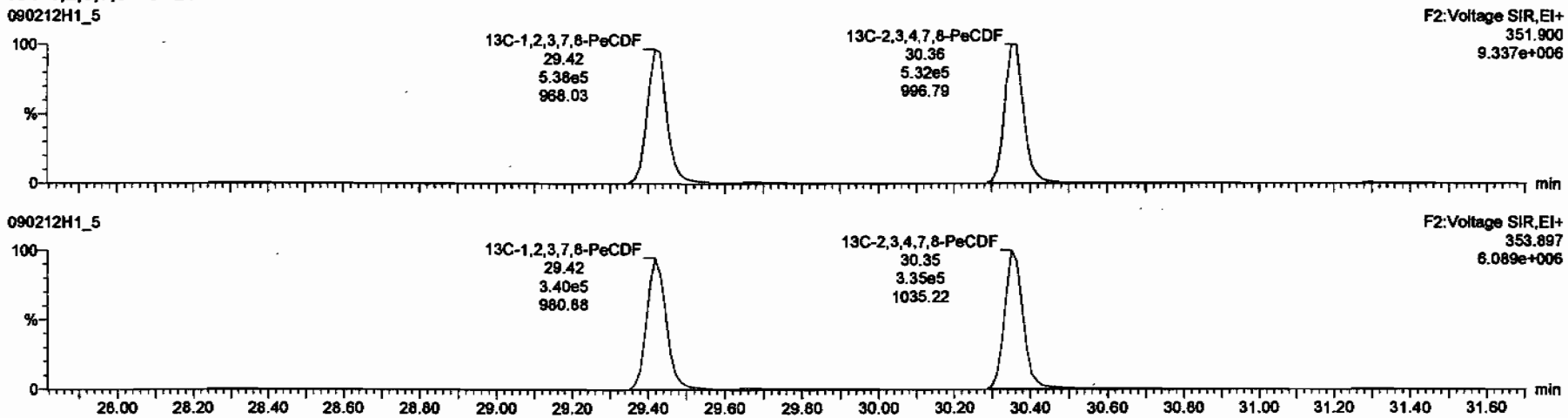

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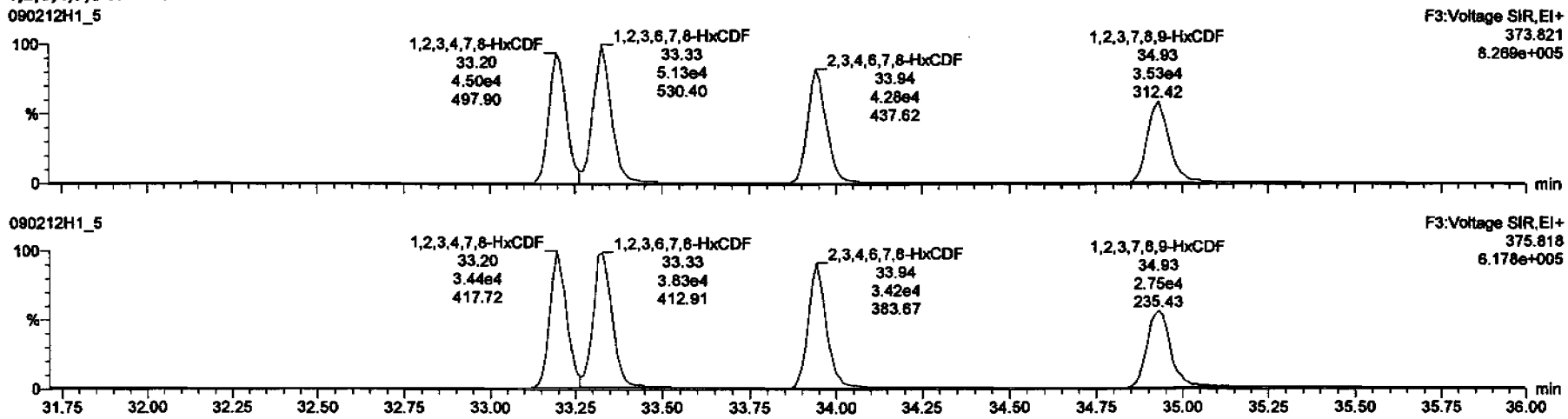

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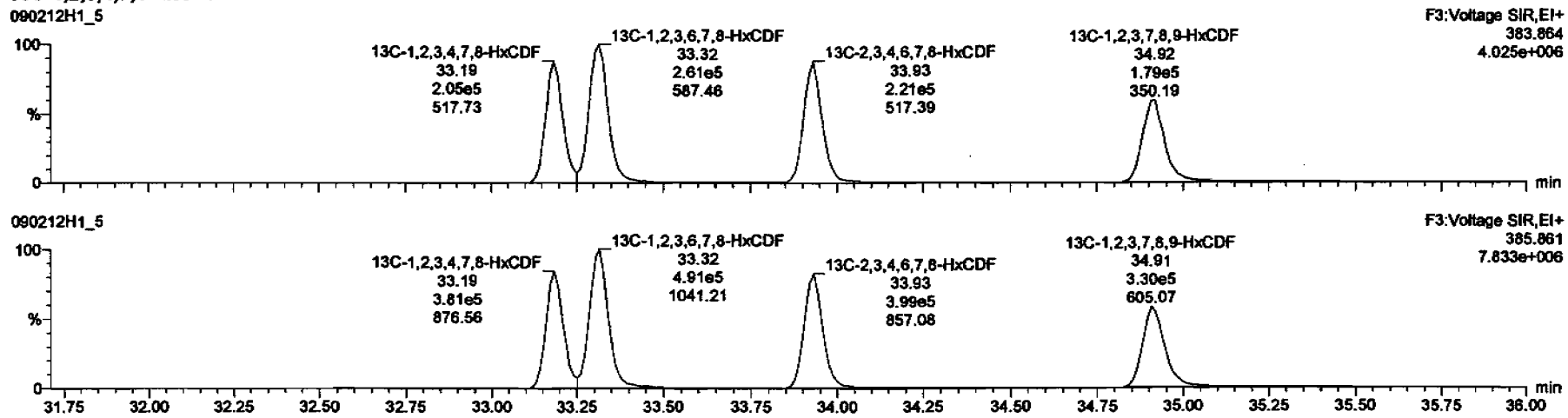

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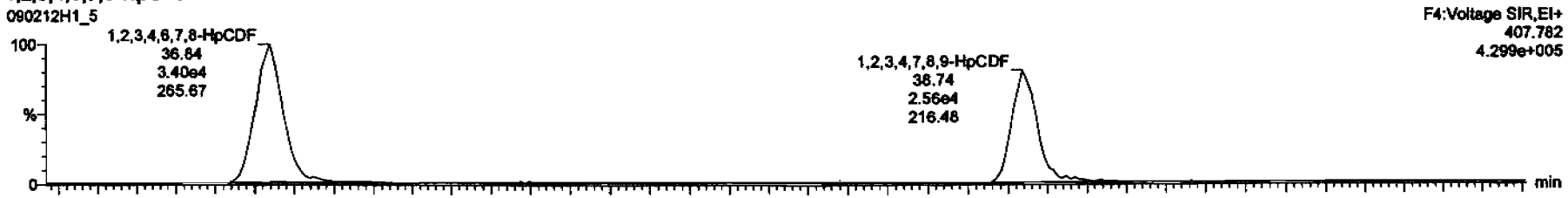

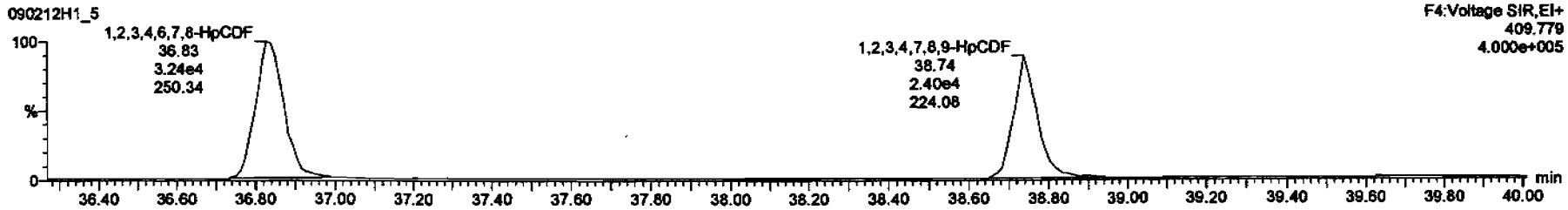

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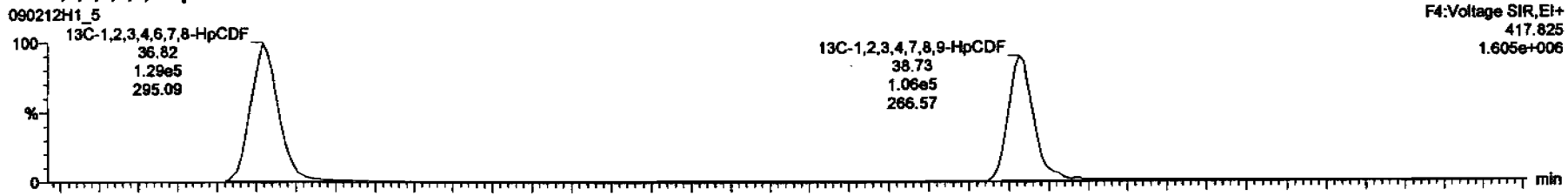

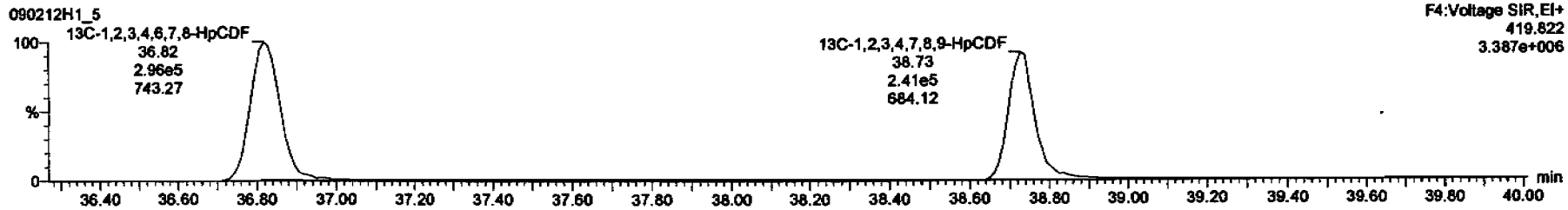

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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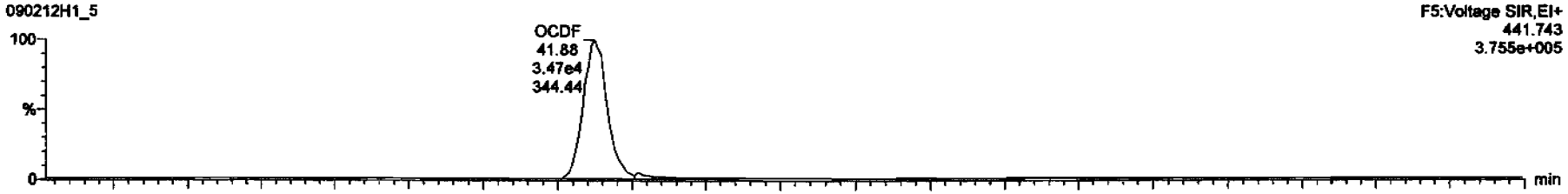

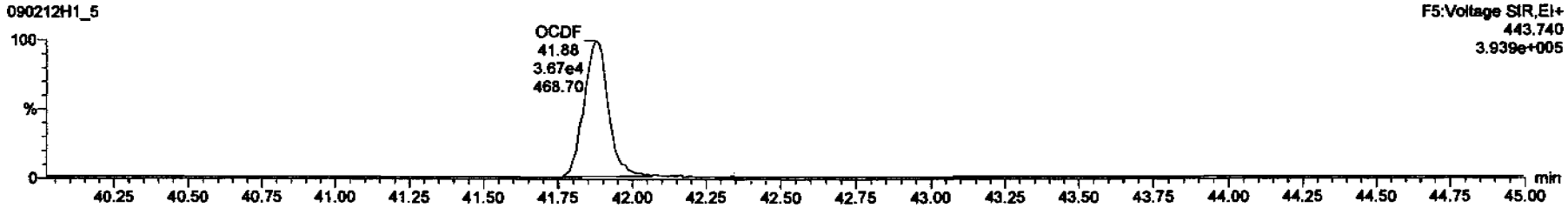

13C-OCDF

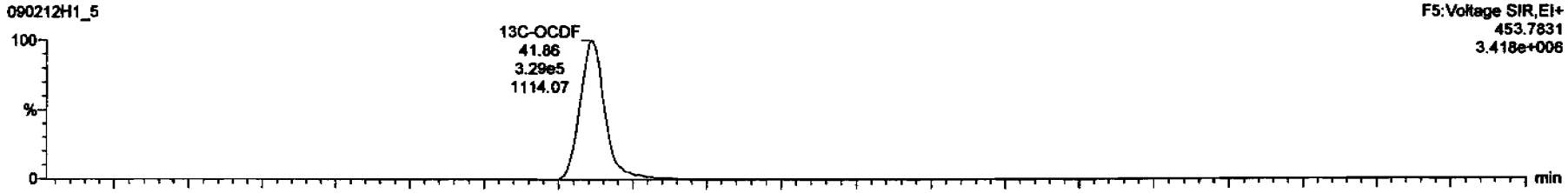

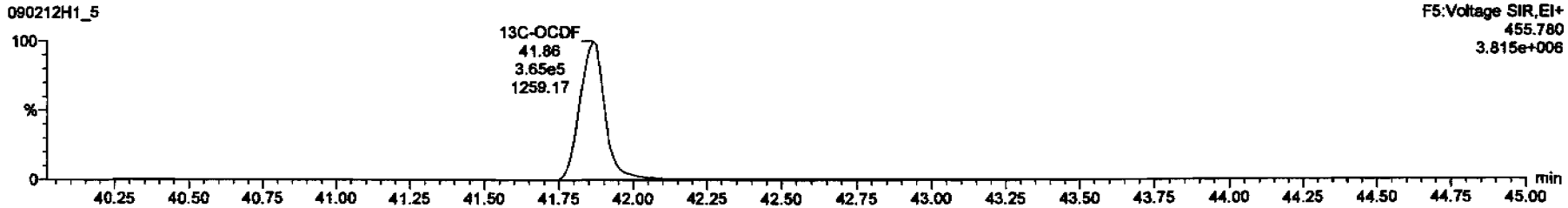

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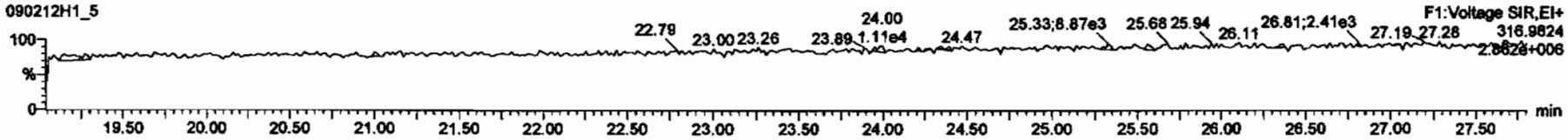

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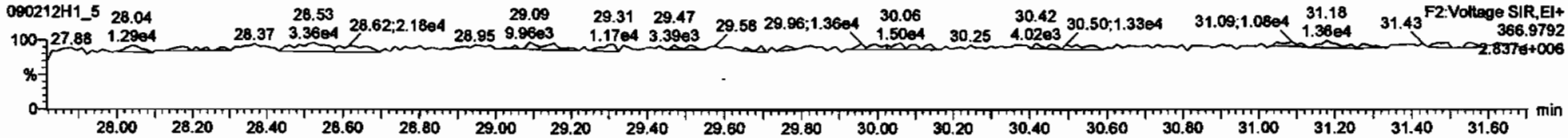

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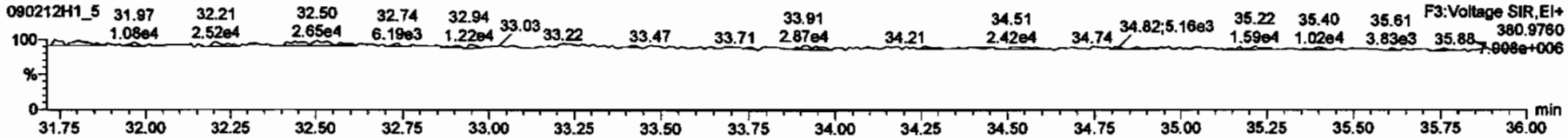

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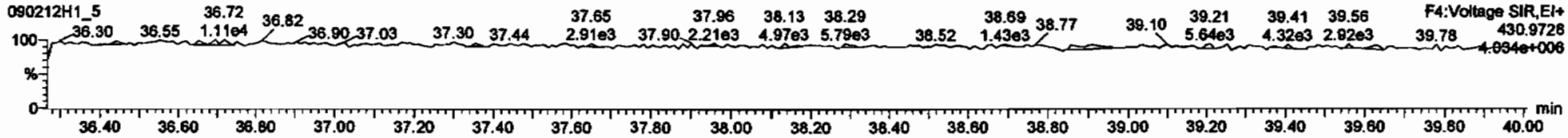

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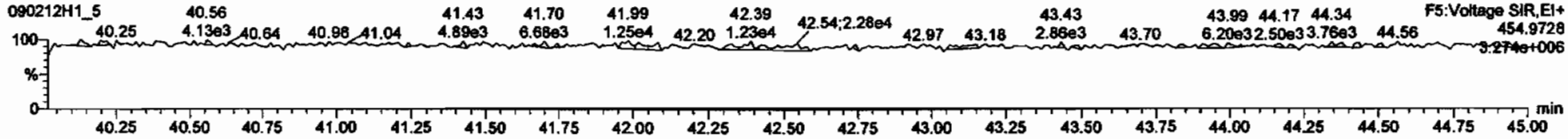

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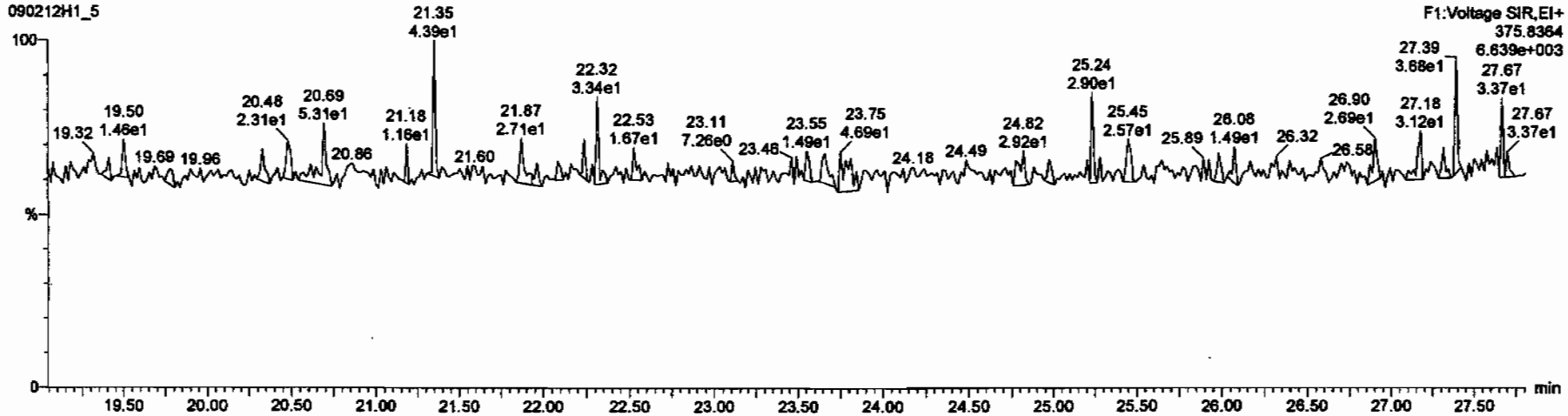

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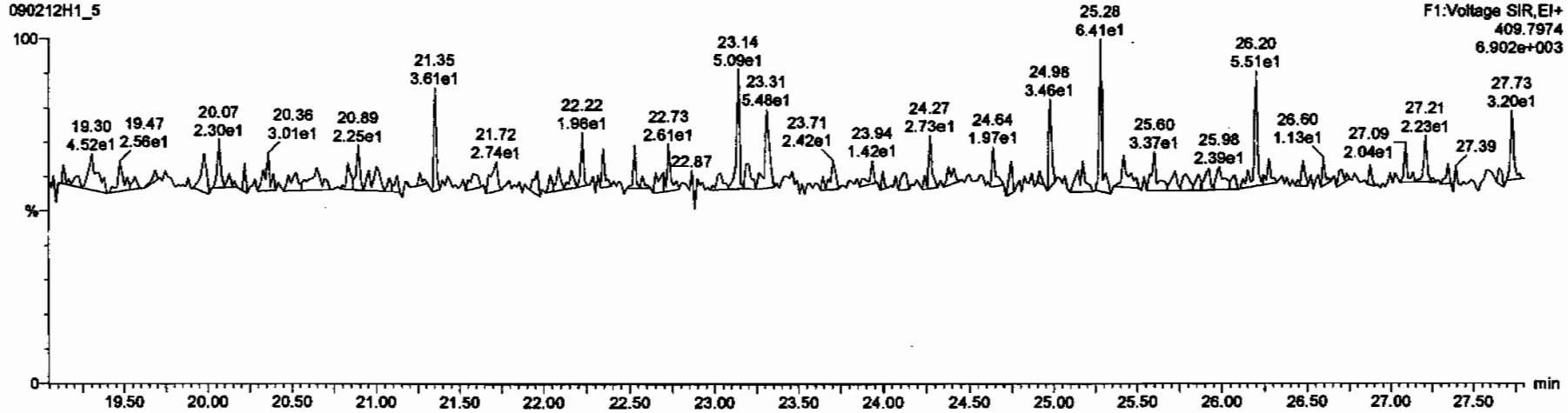

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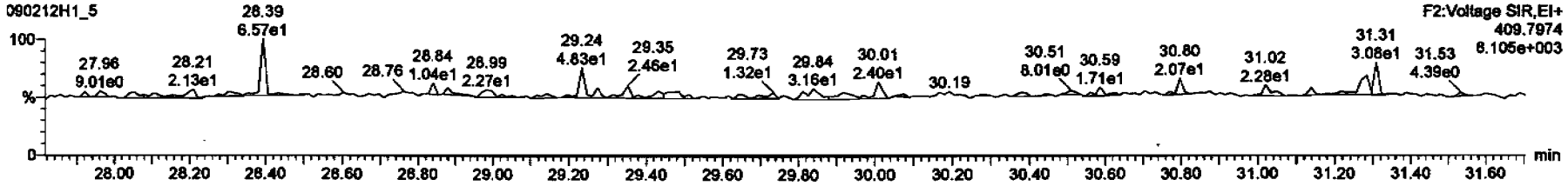

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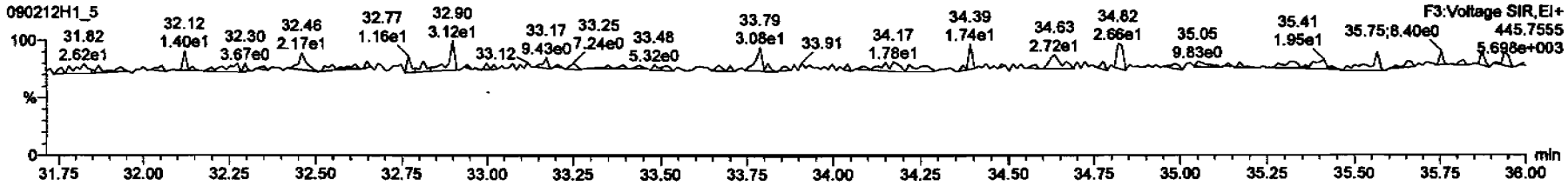

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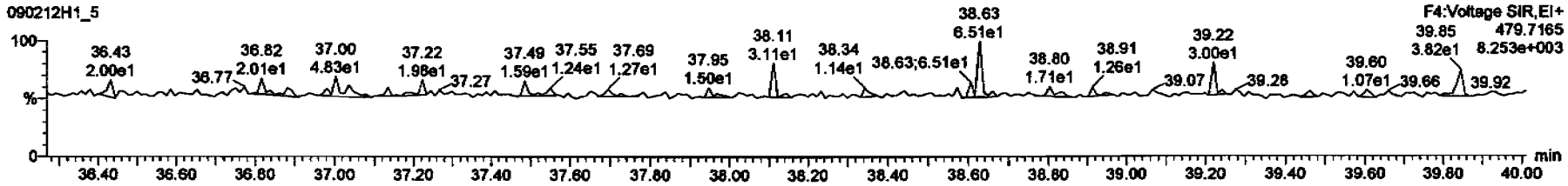

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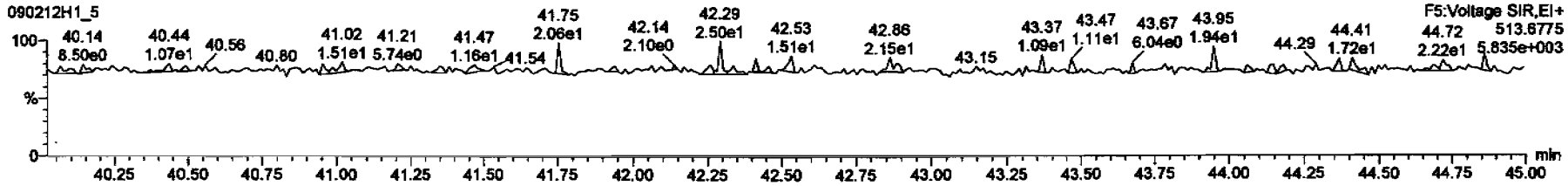

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2,3,7,8-TCDD

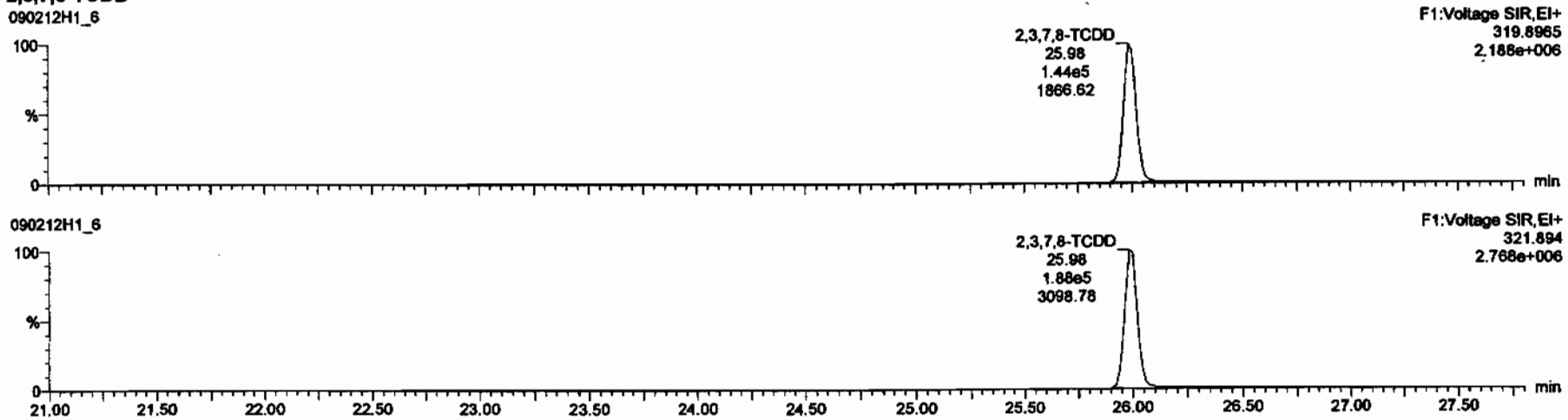

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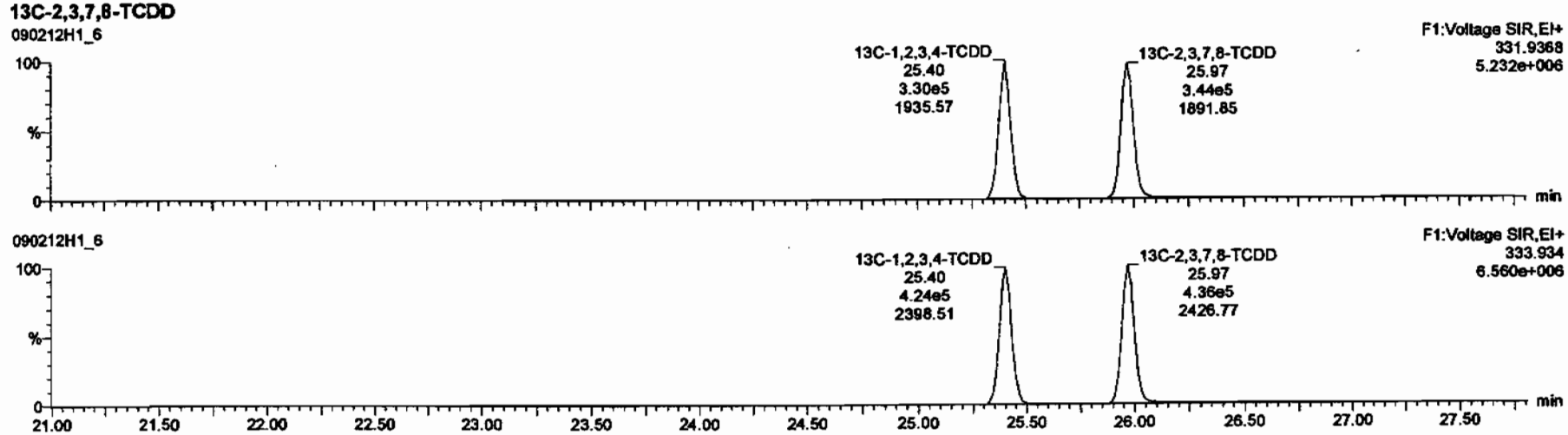

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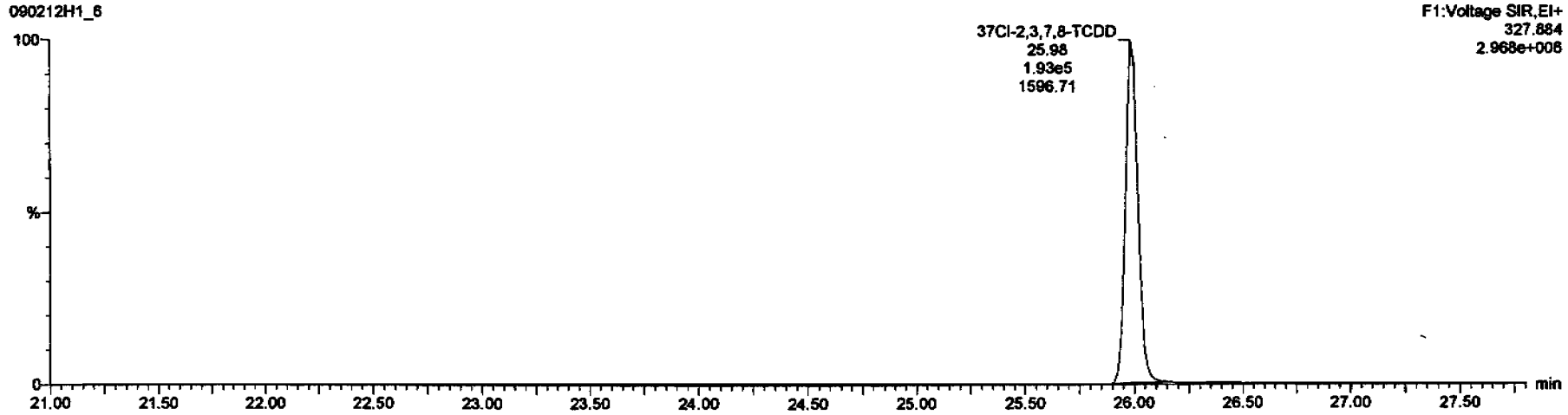

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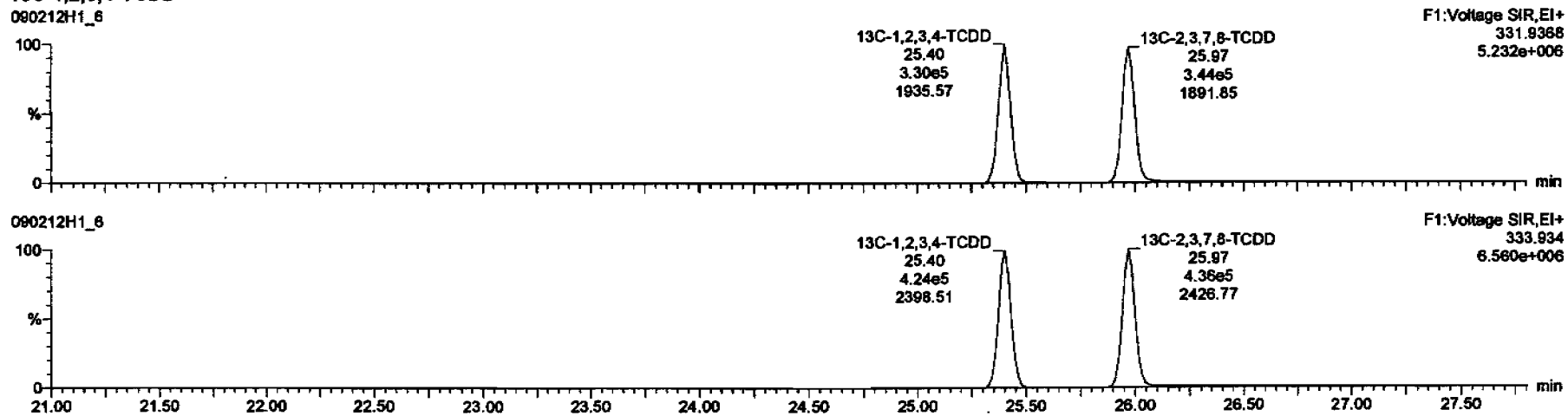

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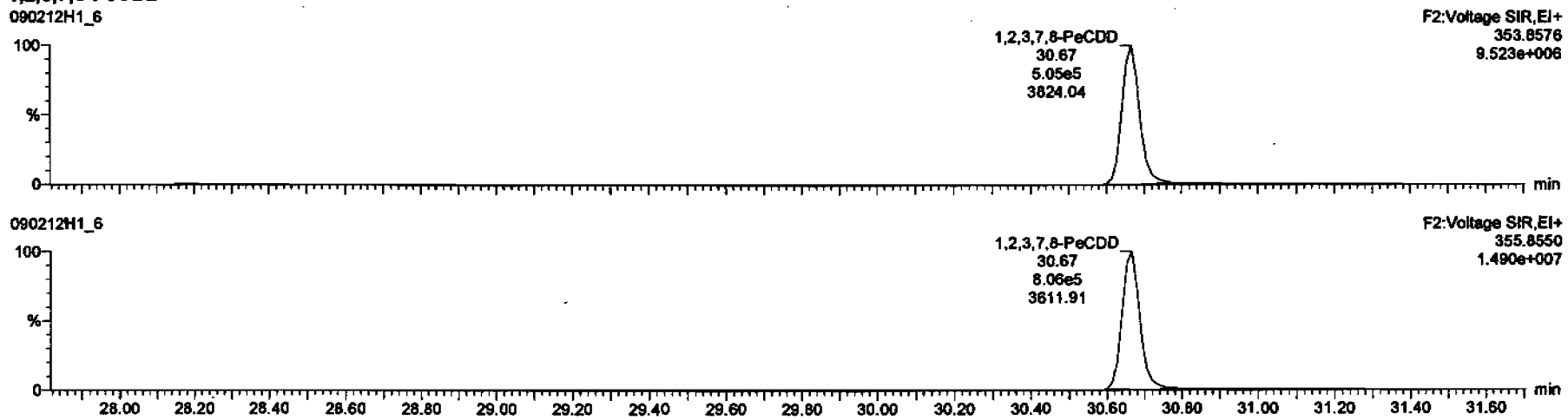

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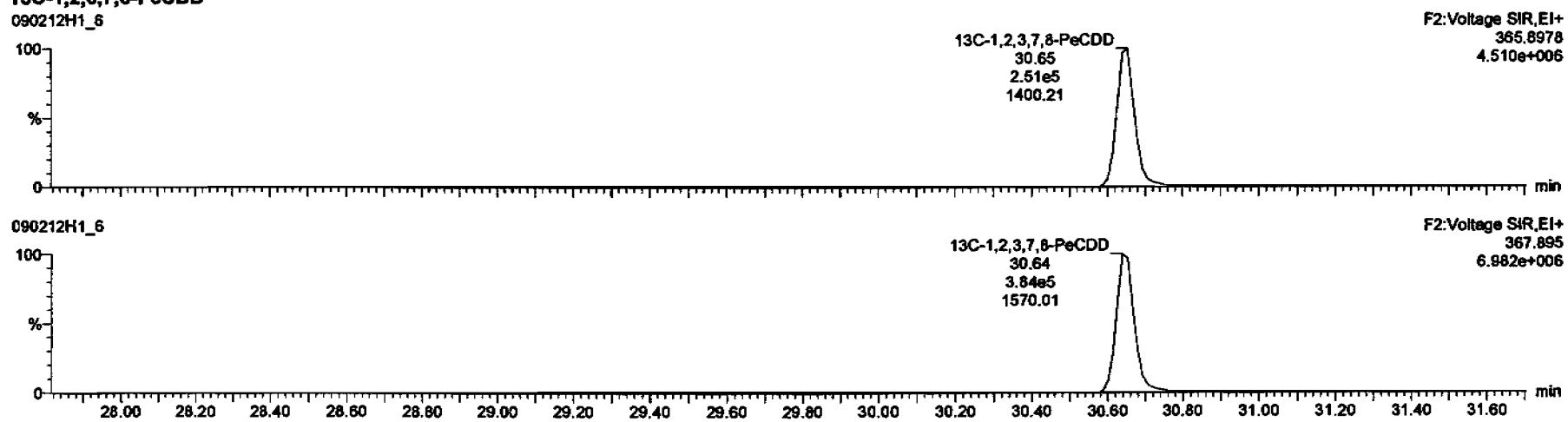

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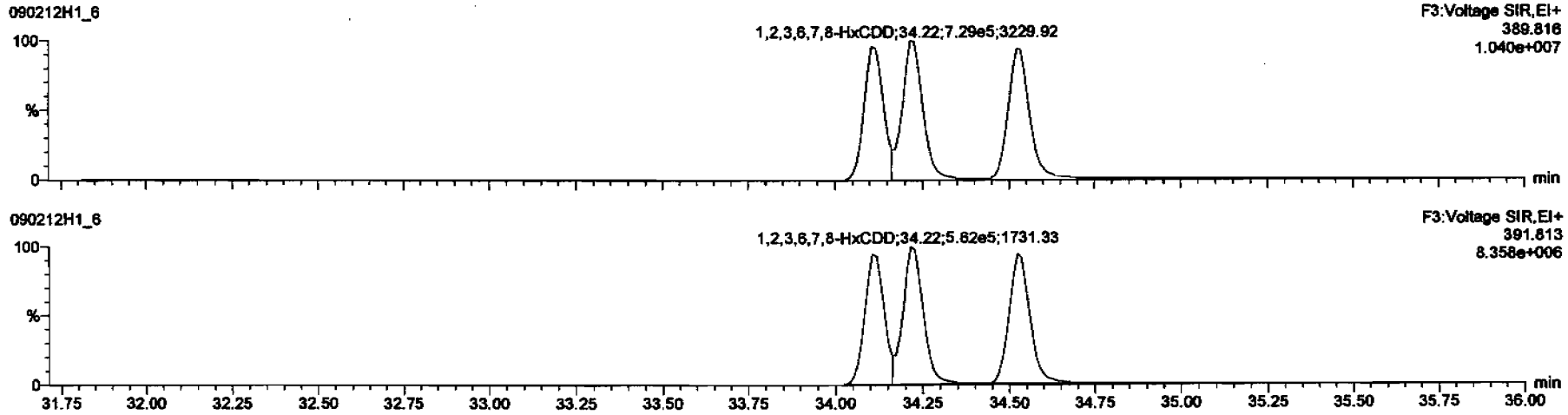

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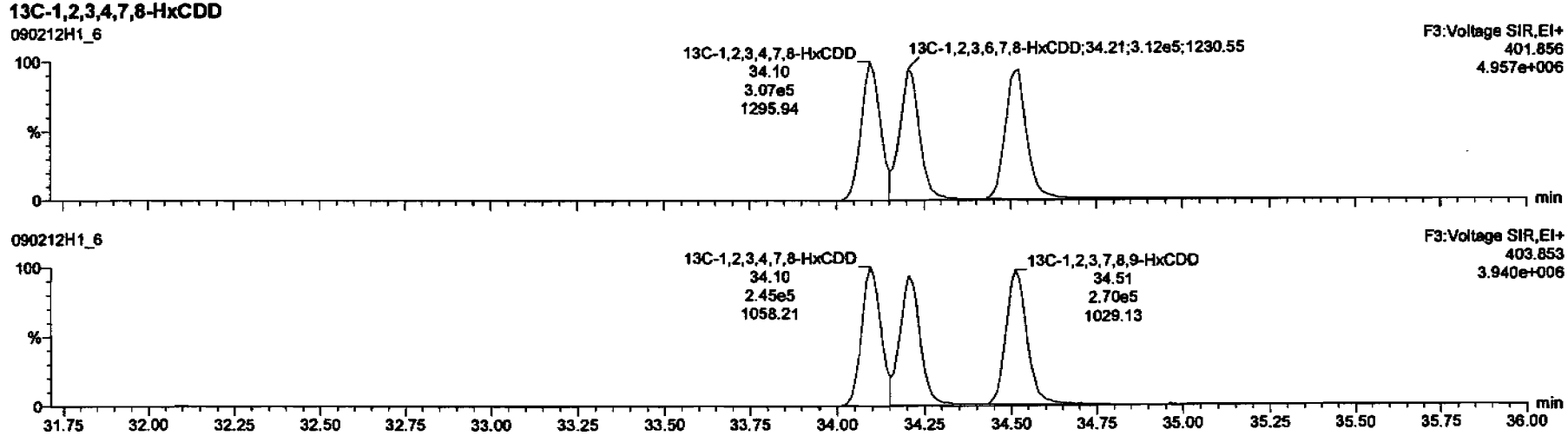

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1,2,3,4,6,7,8-HpCDD

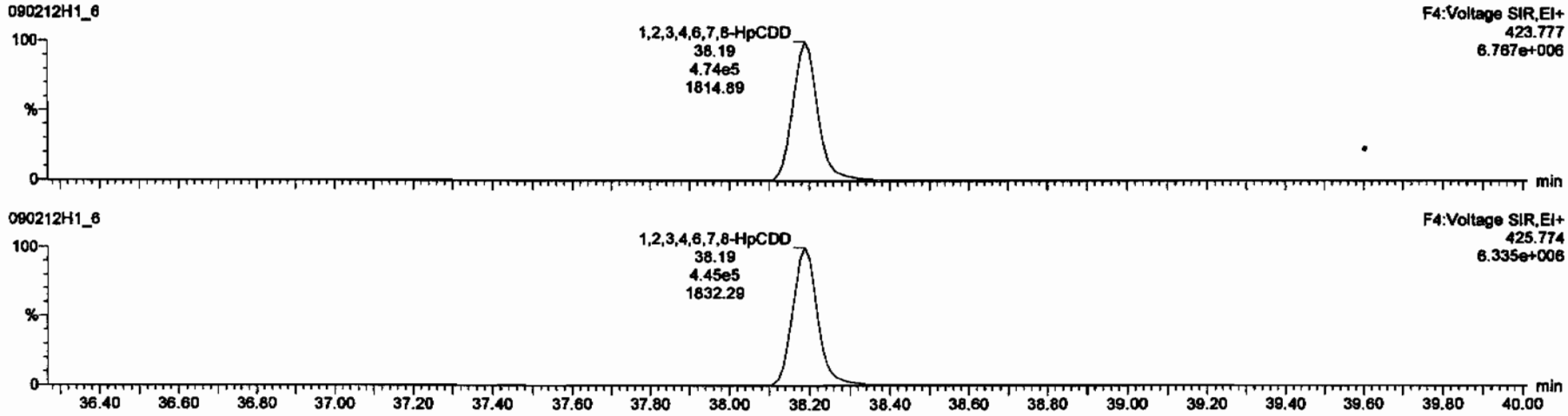

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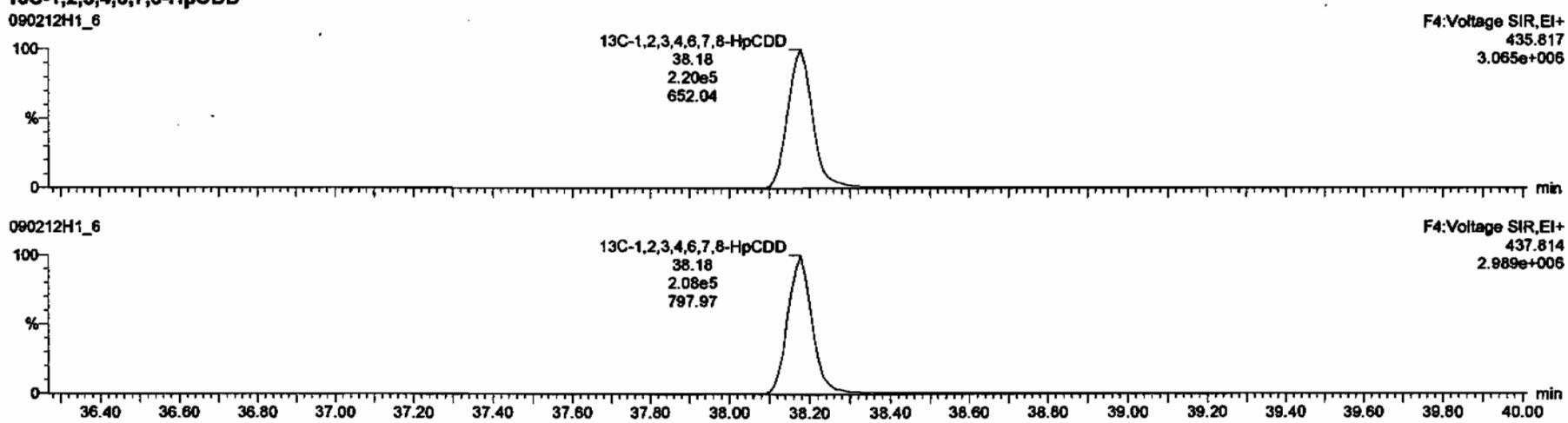

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OCDD

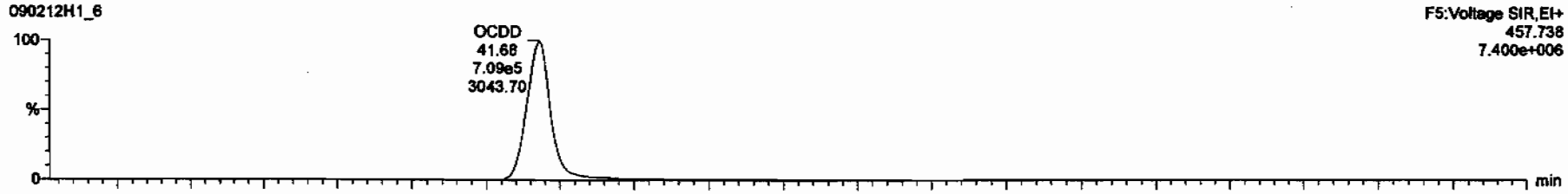

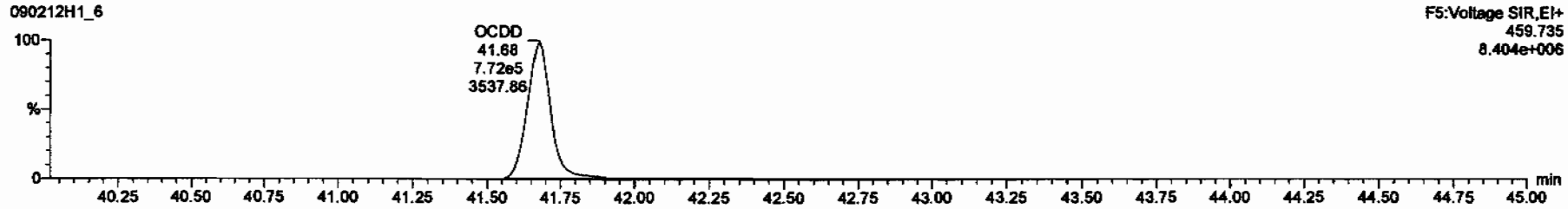

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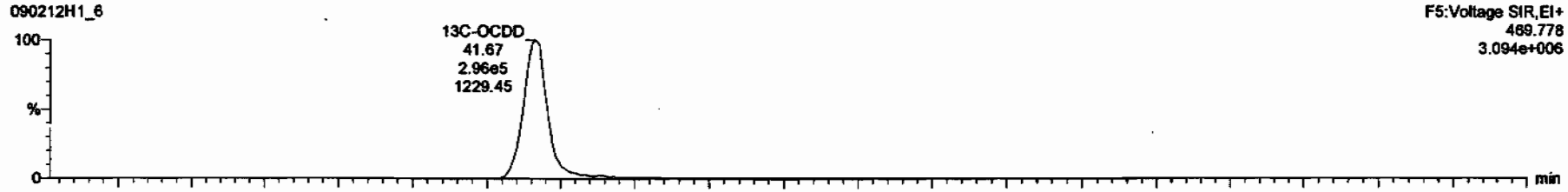

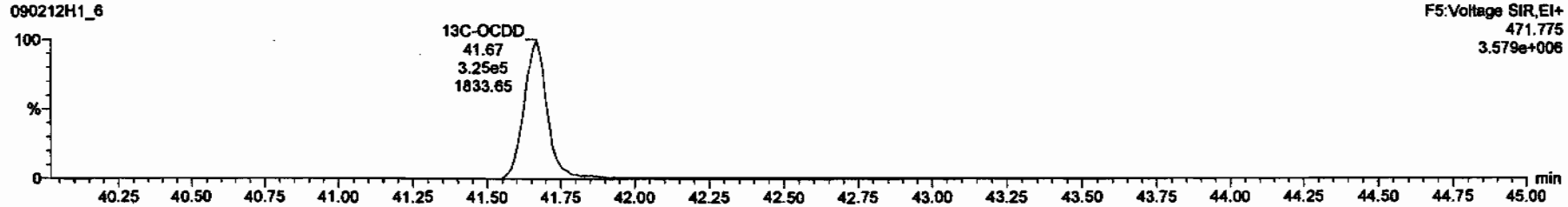

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2,3,7,8-TCDF

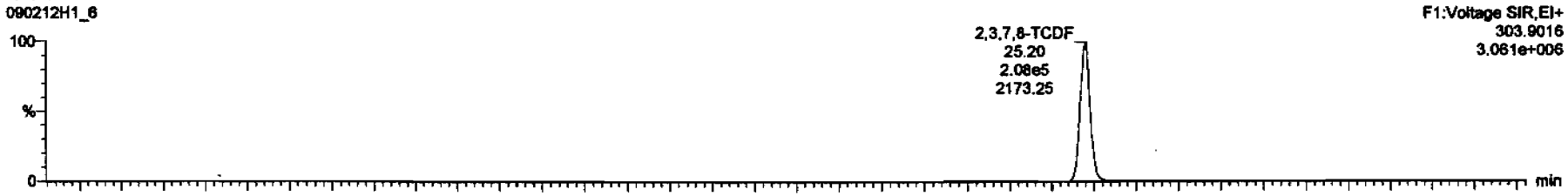

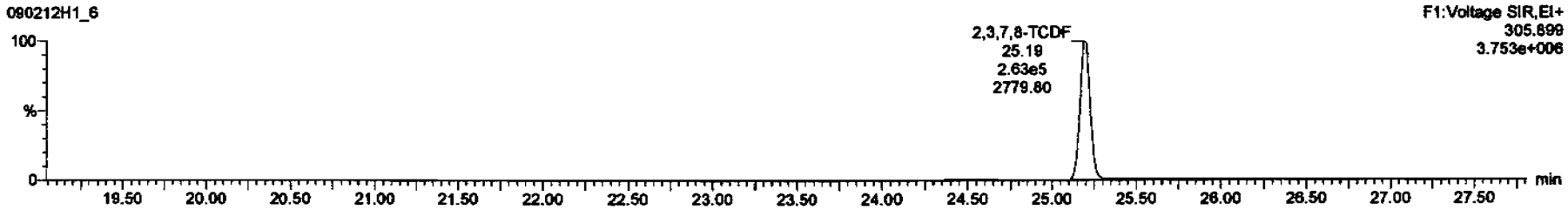

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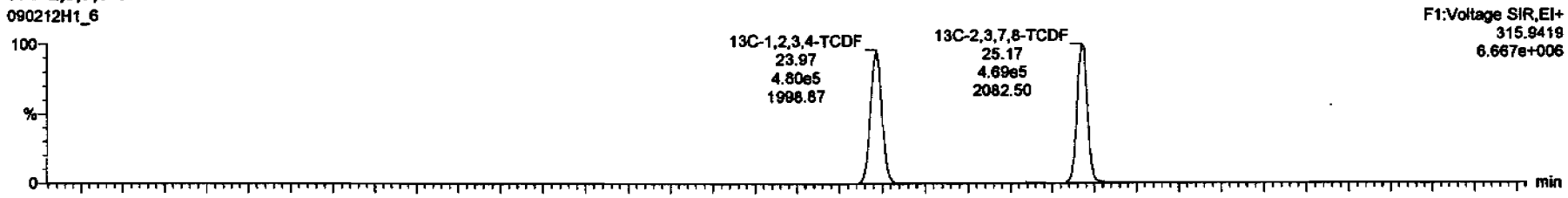

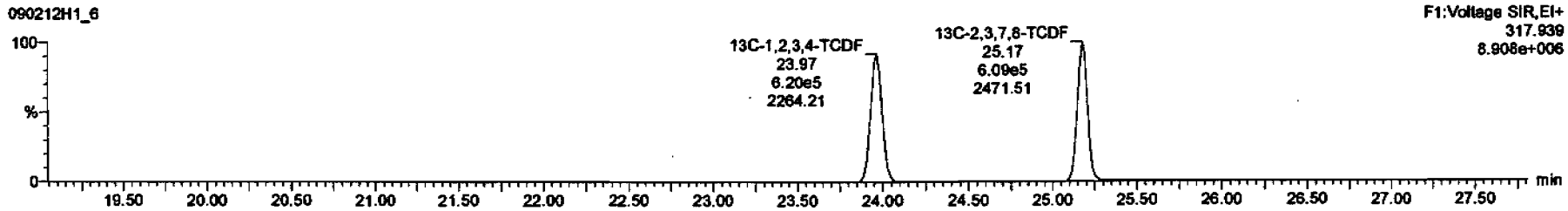

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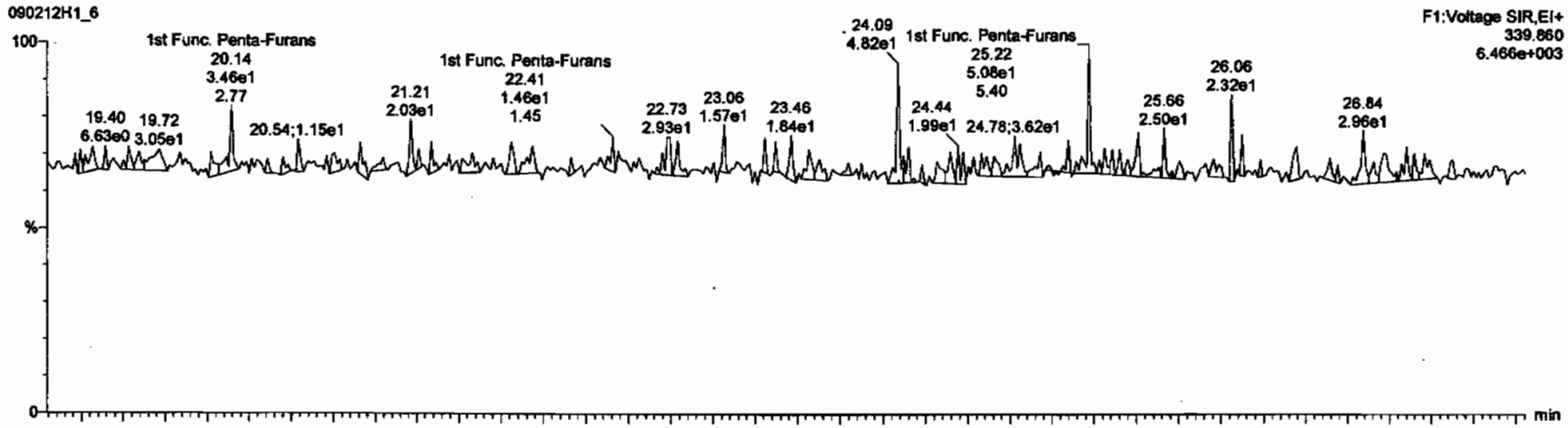

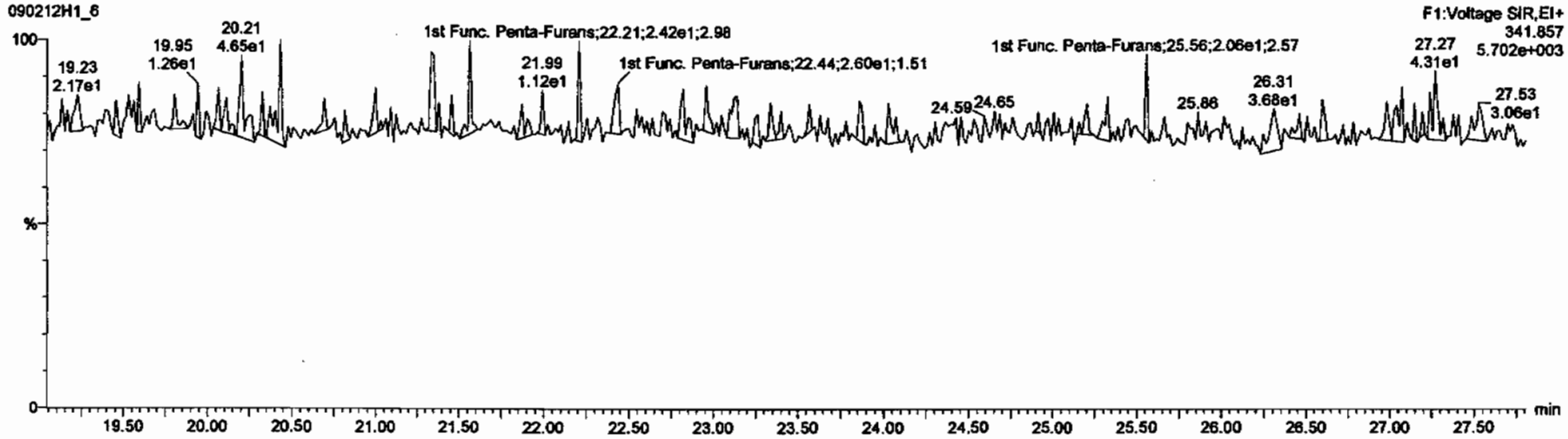

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1,2,3,7,8-PeCDF

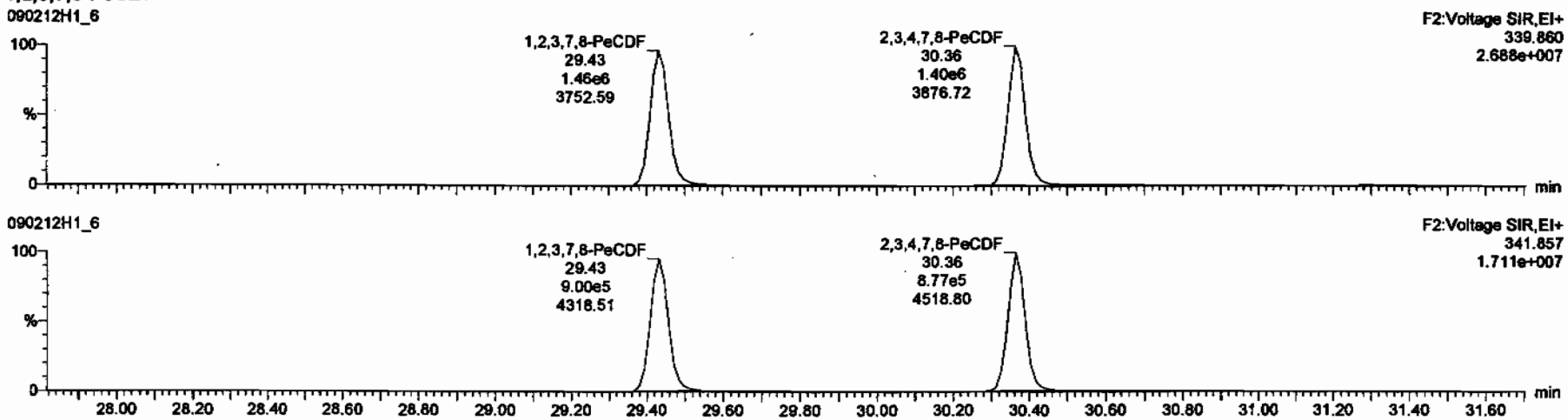

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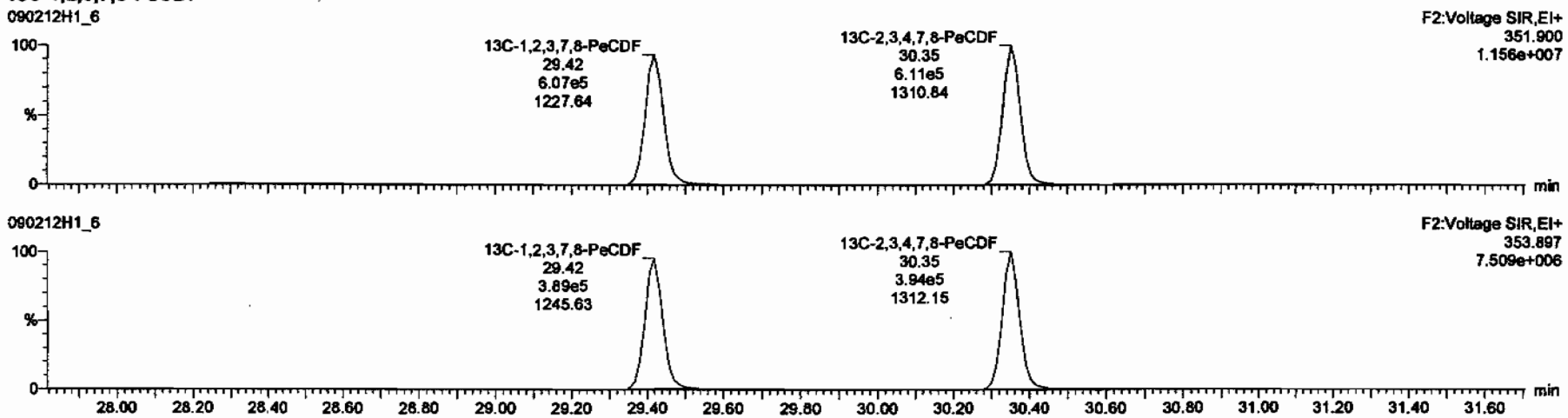

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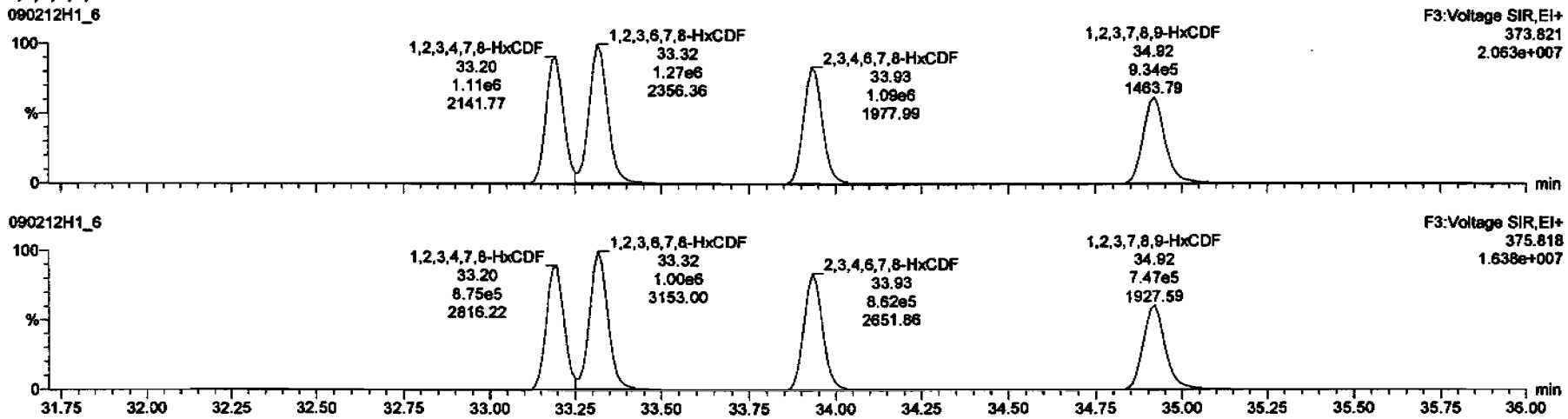

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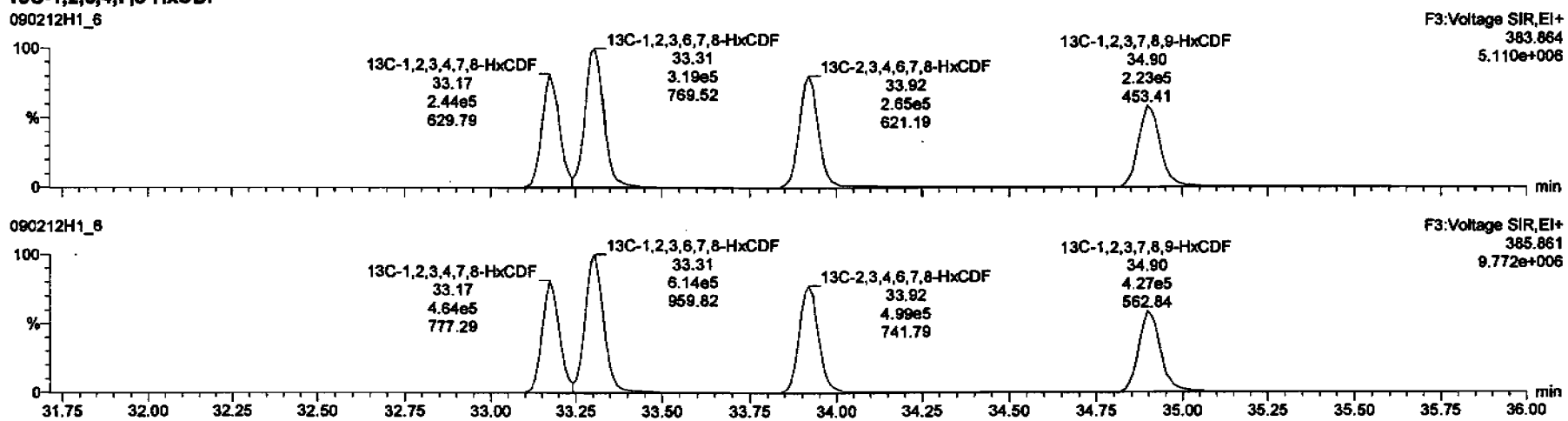

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1,2,3,4,6,7,8-HpCDF

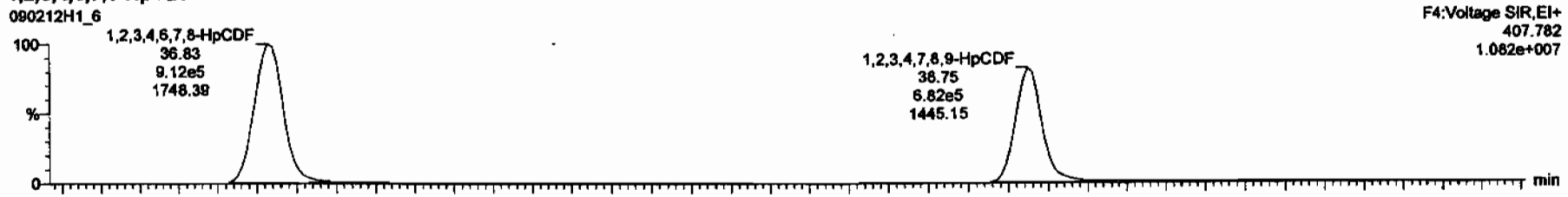

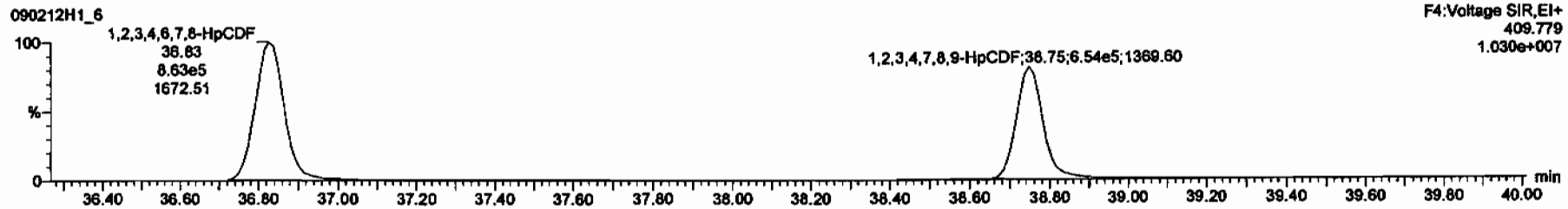

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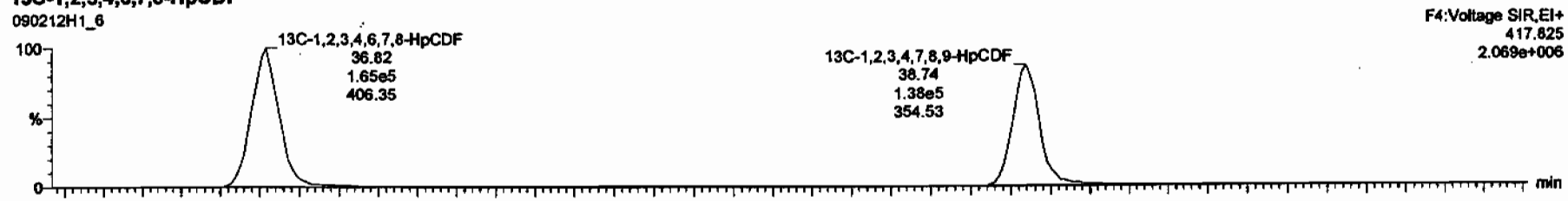

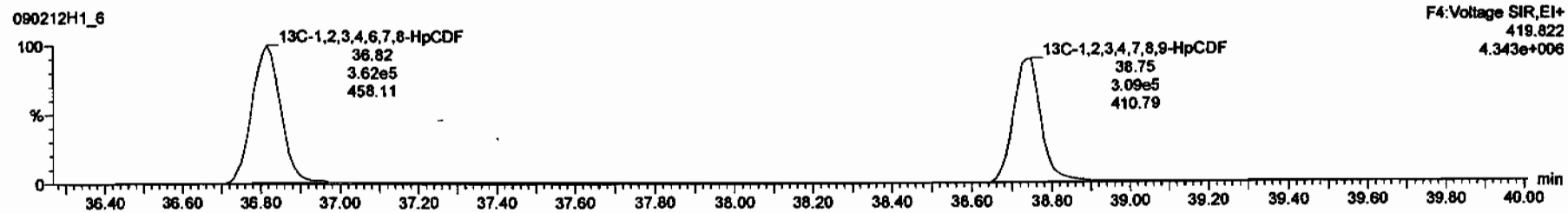

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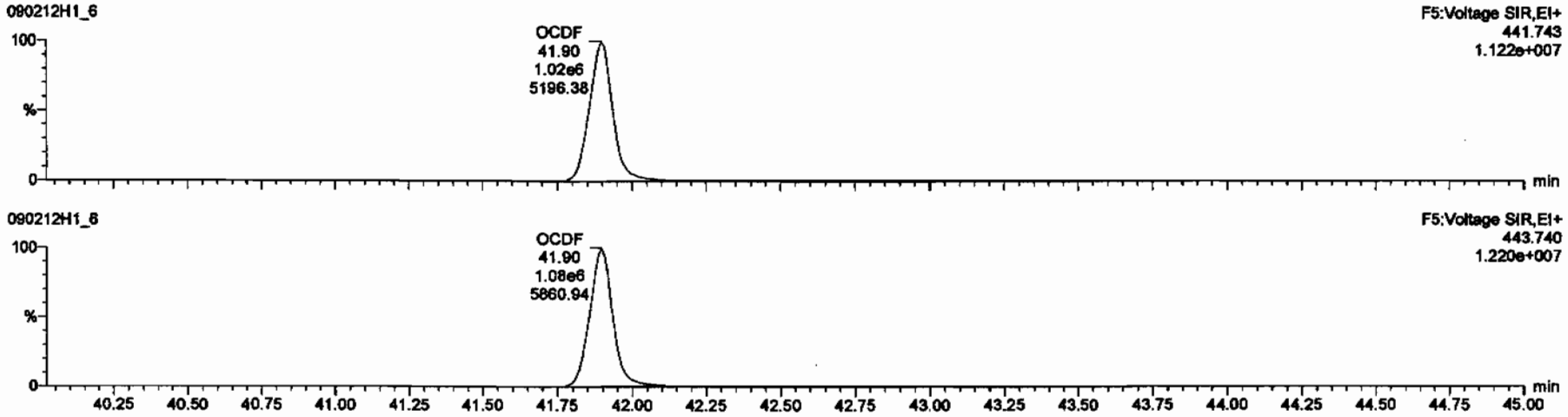

13C-OCDF

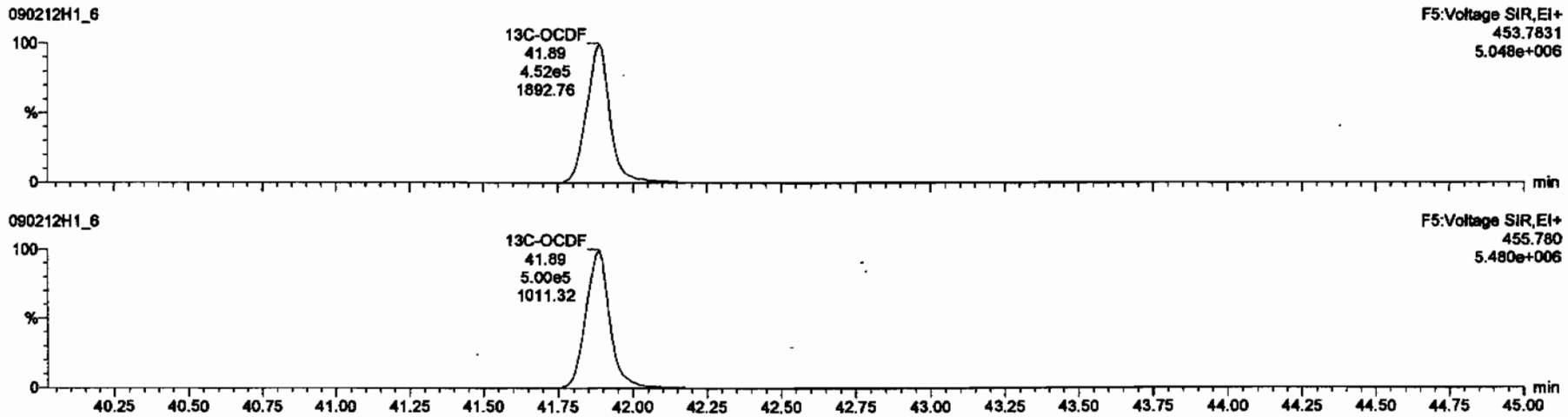

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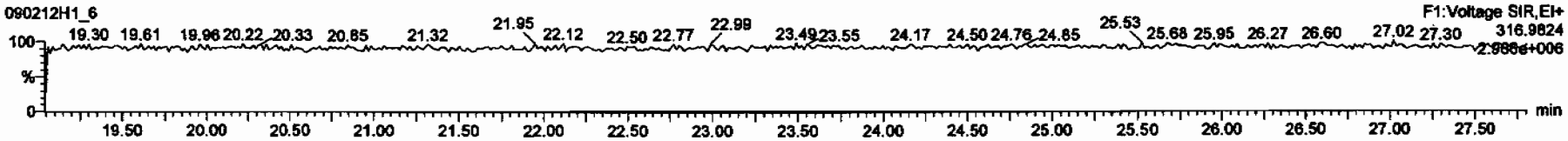

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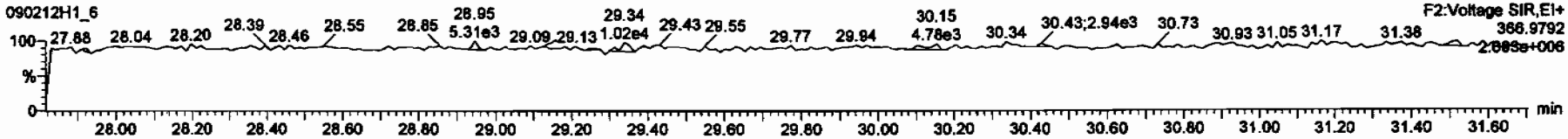

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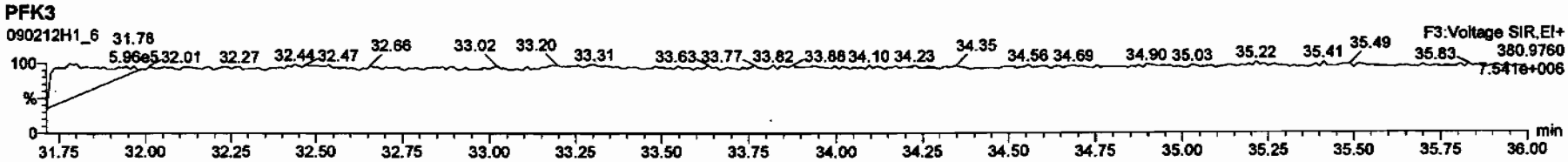

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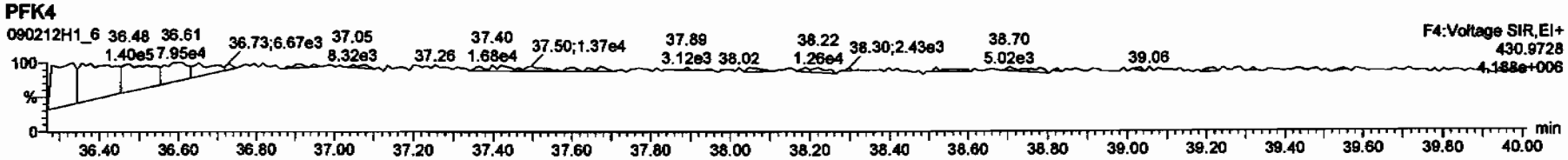

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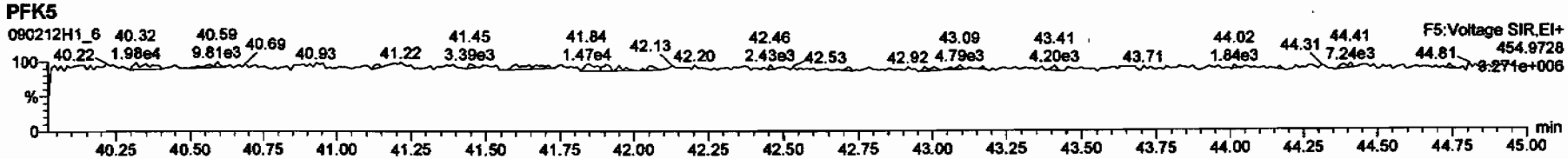

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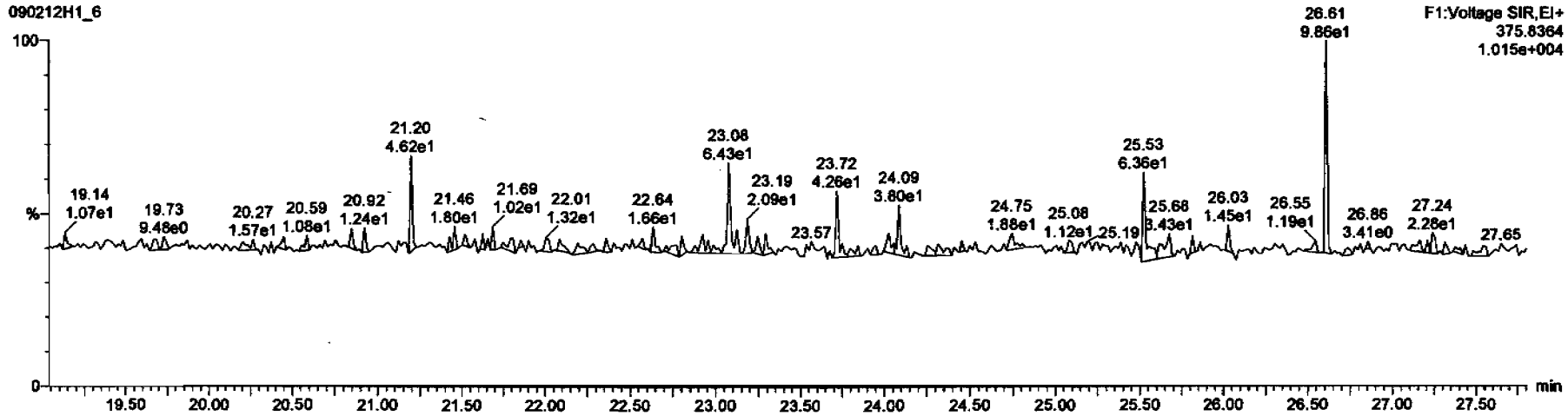

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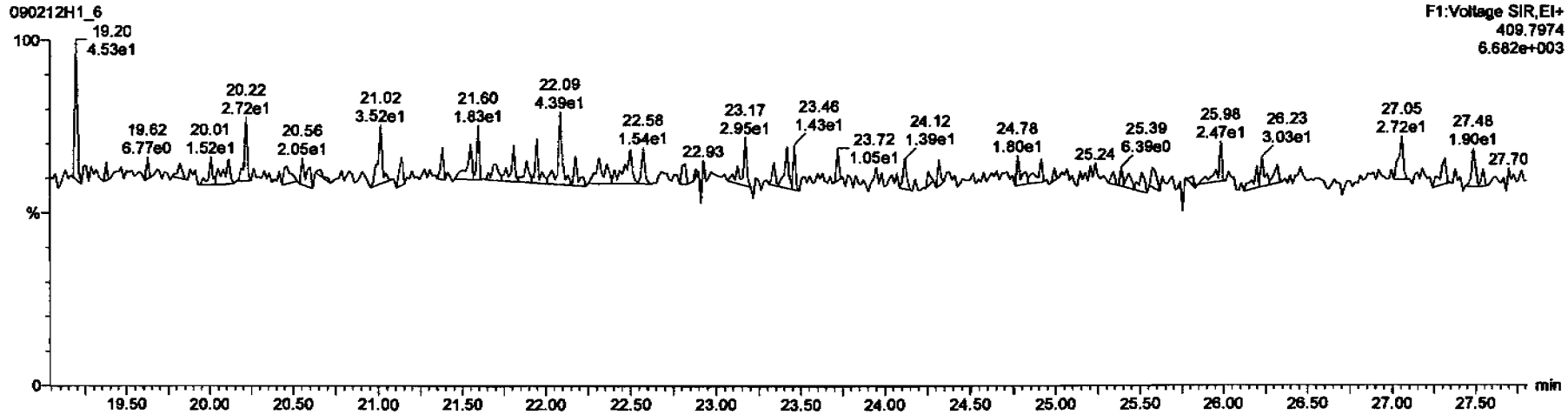

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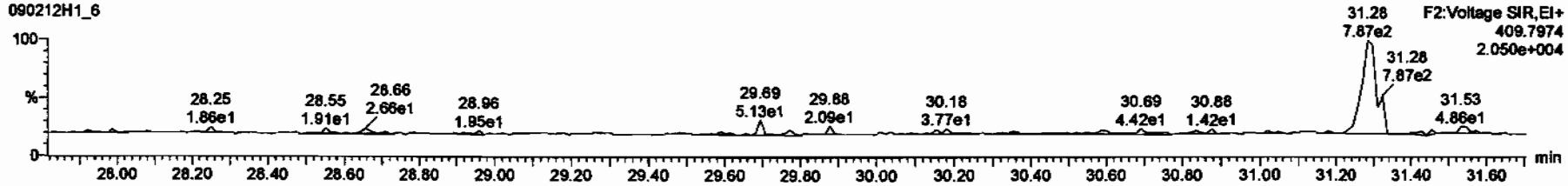

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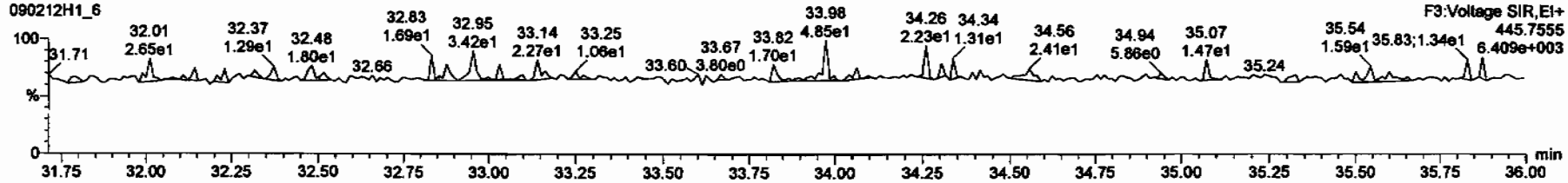

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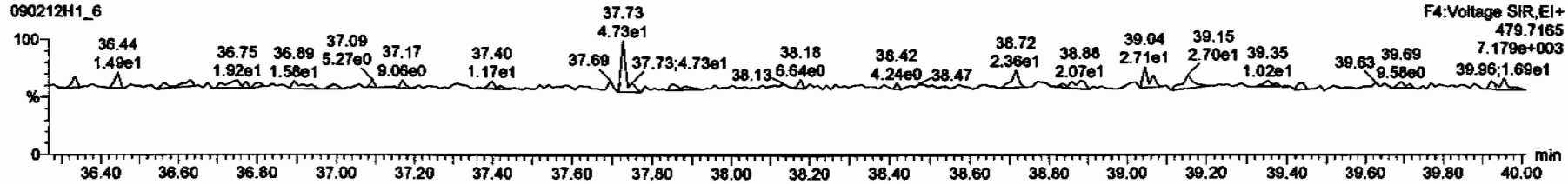

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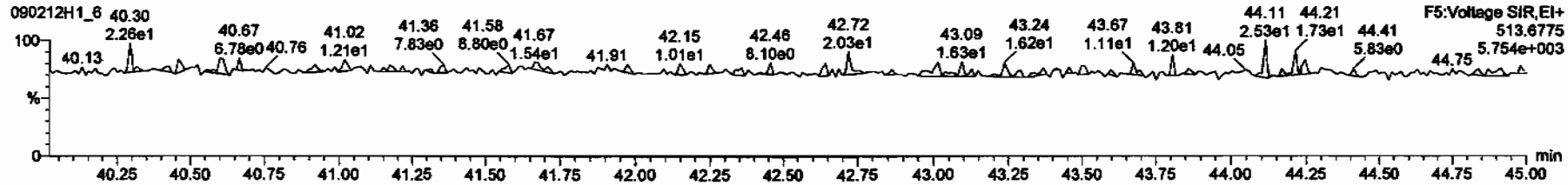

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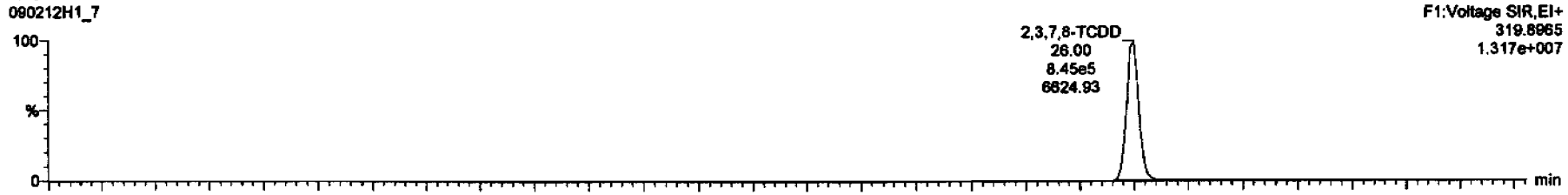

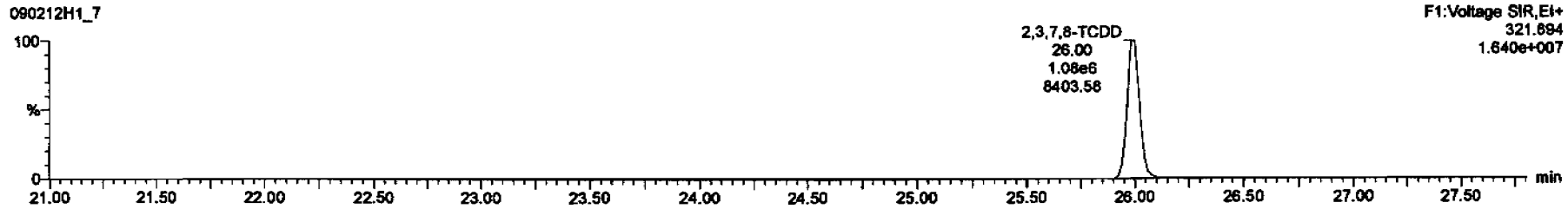

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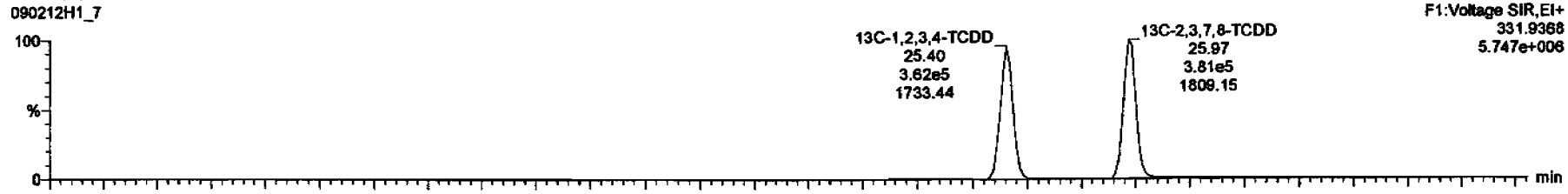

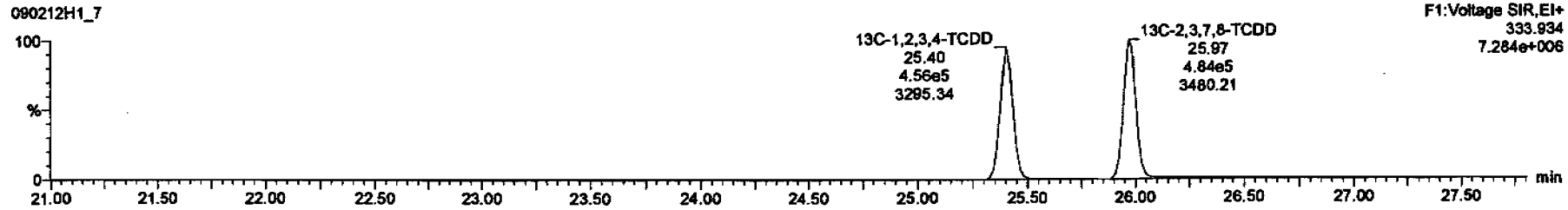

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37Cl-2,3,7,8-TCDD

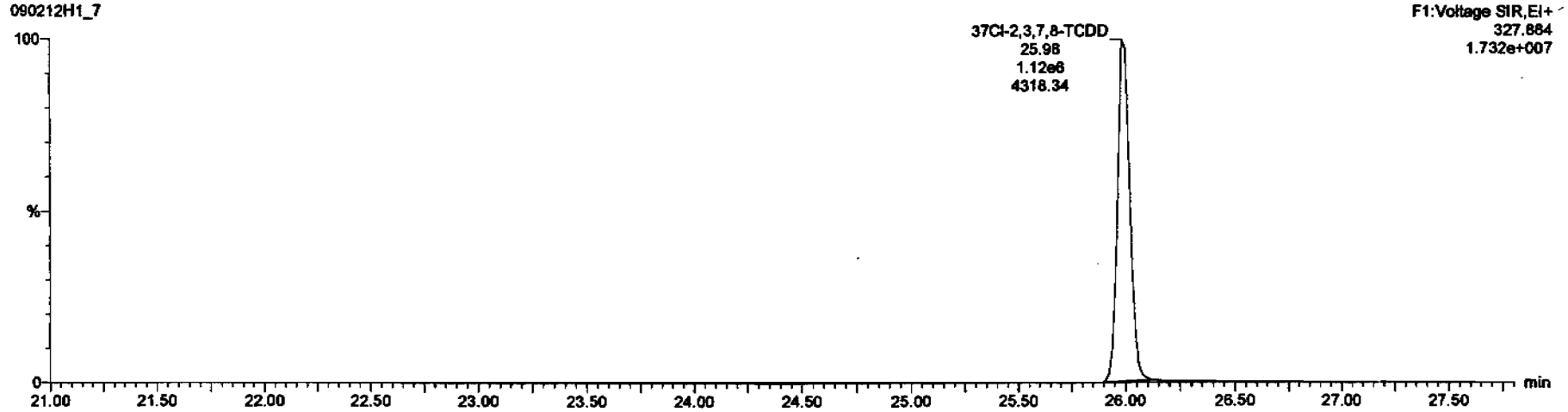

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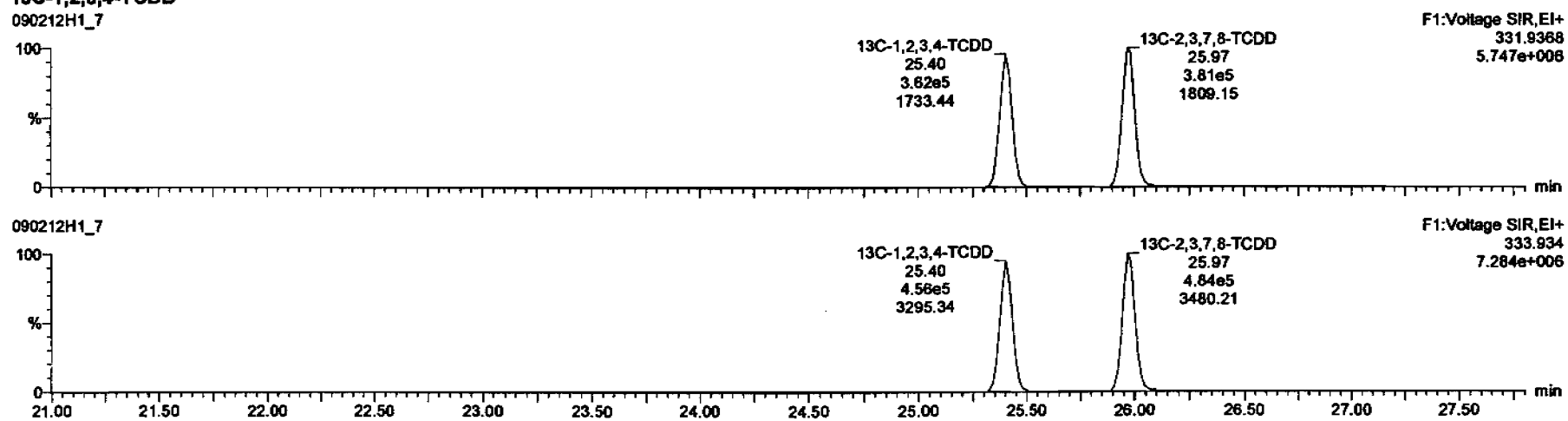

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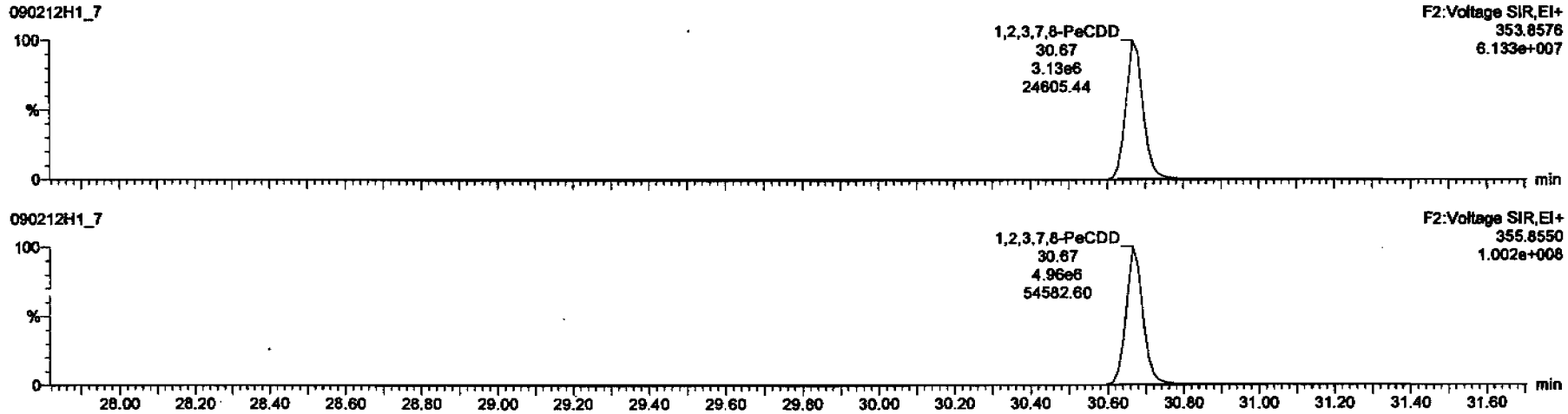

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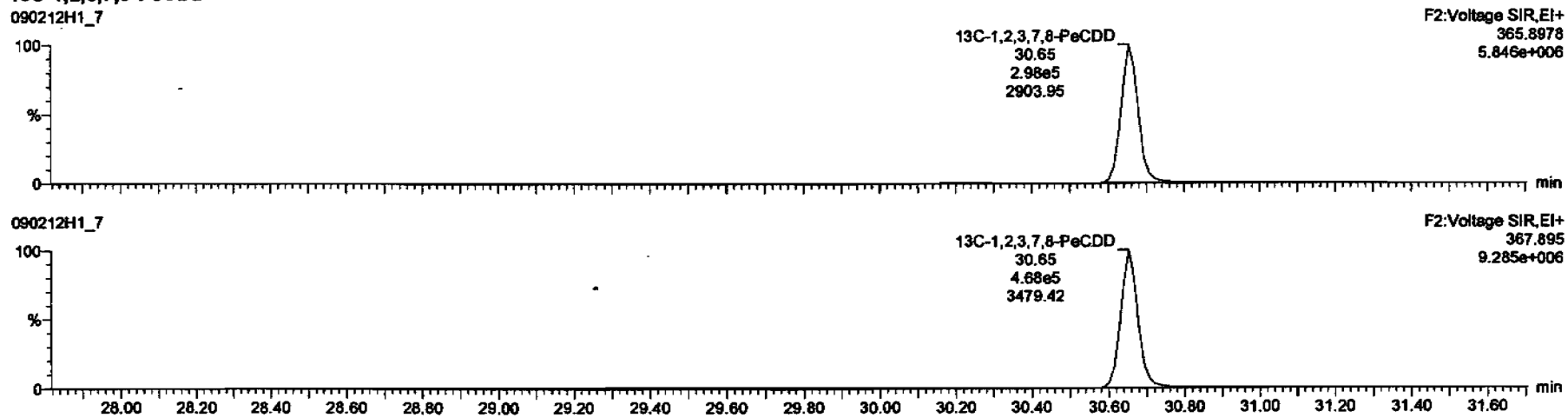

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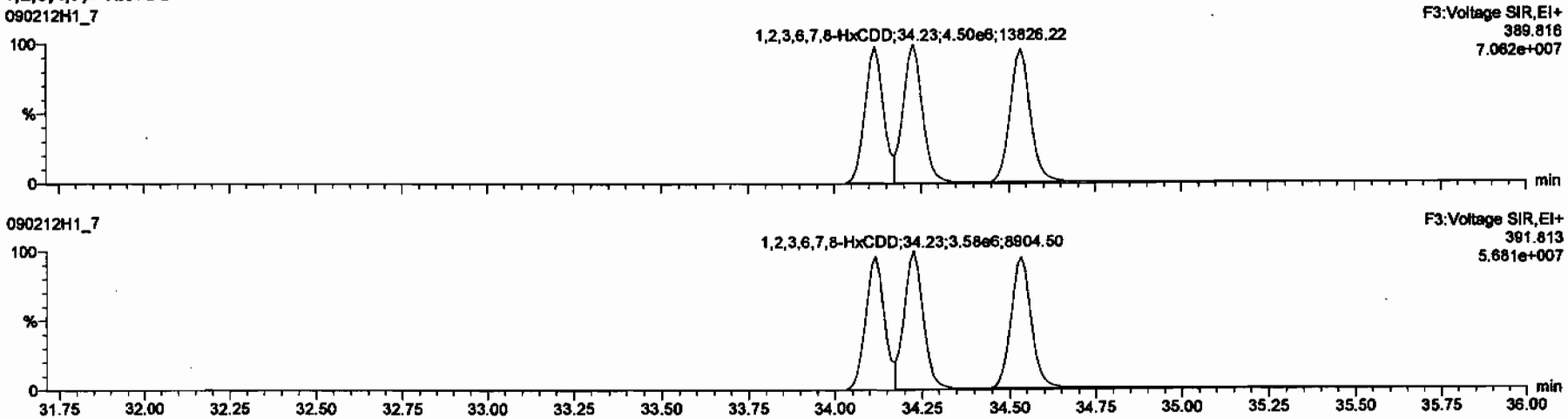

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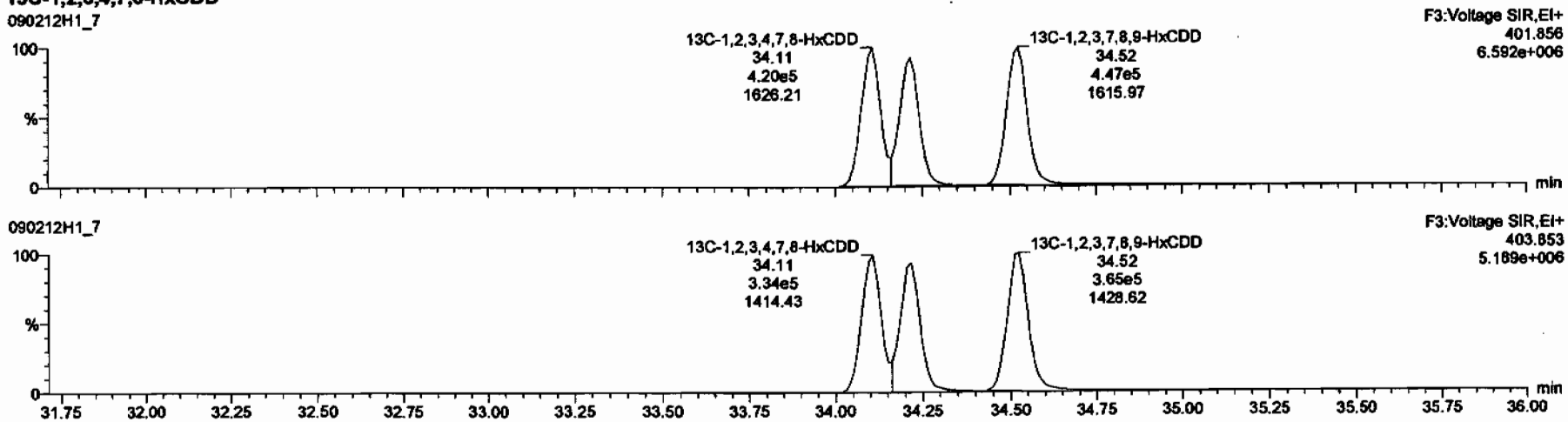

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1,2,3,4,6,7,8-HpCDD

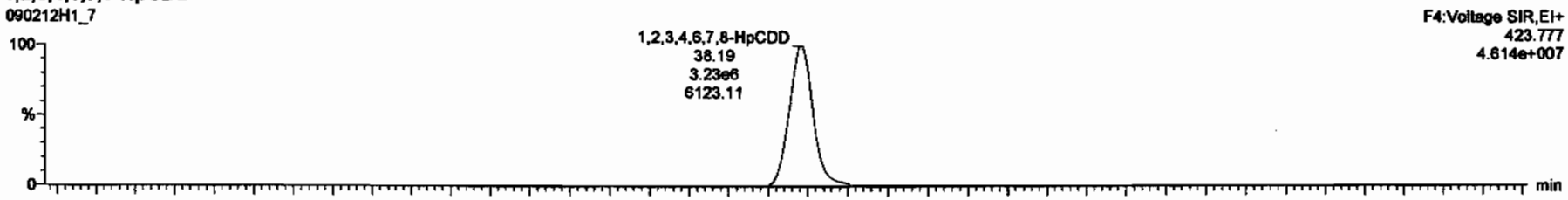

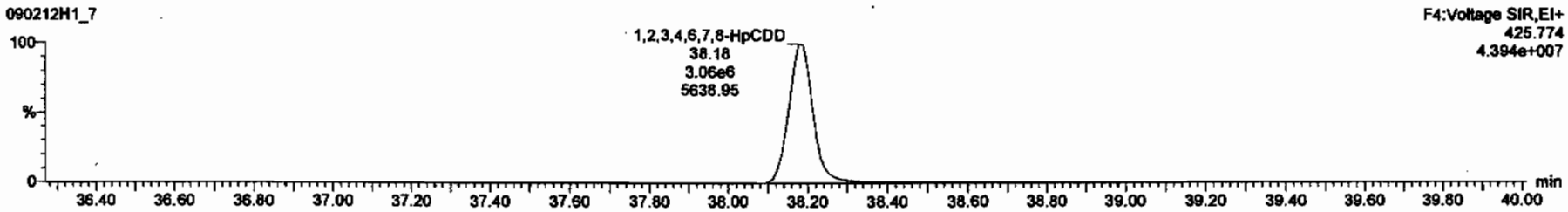

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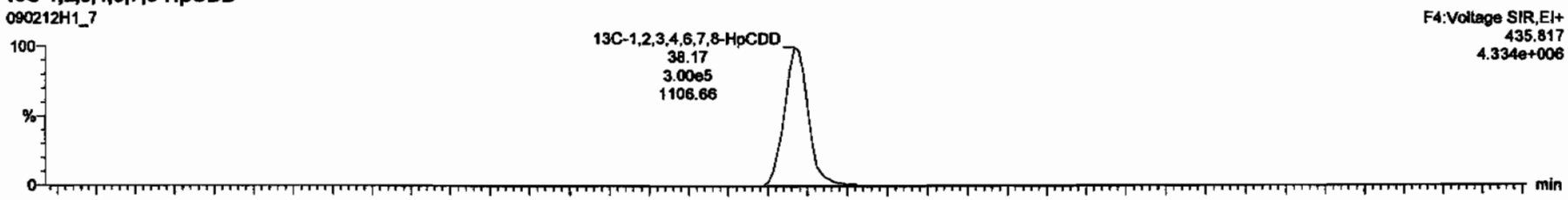

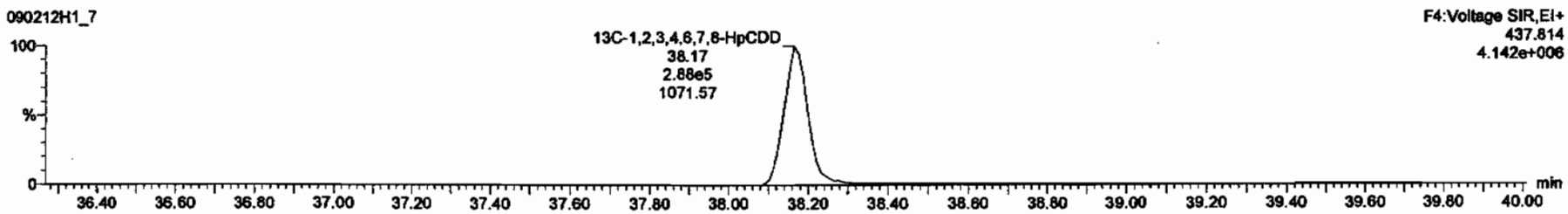

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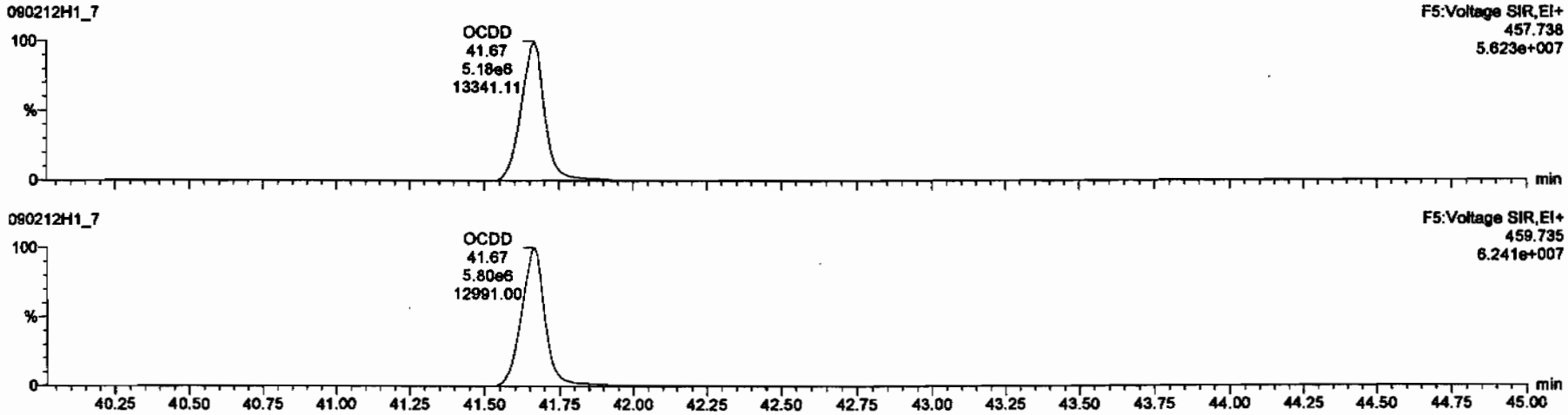

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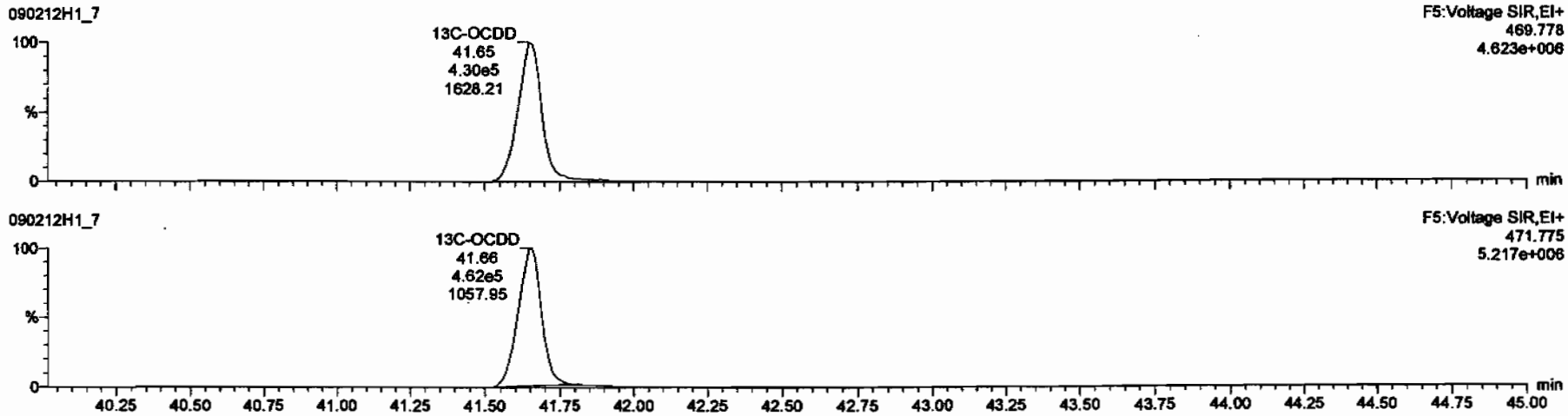

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2,3,7,8-TCDF

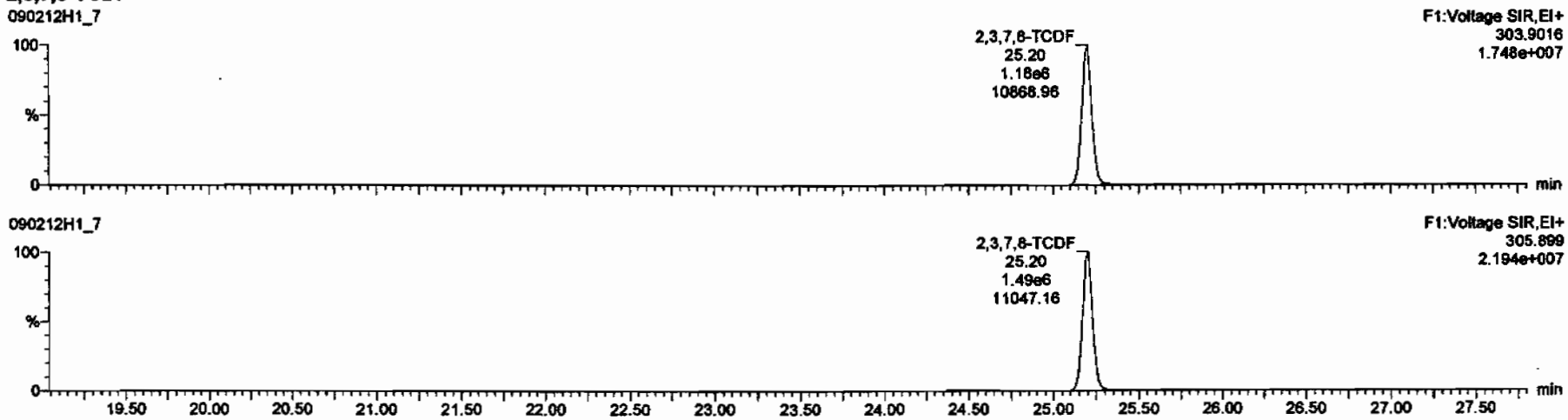

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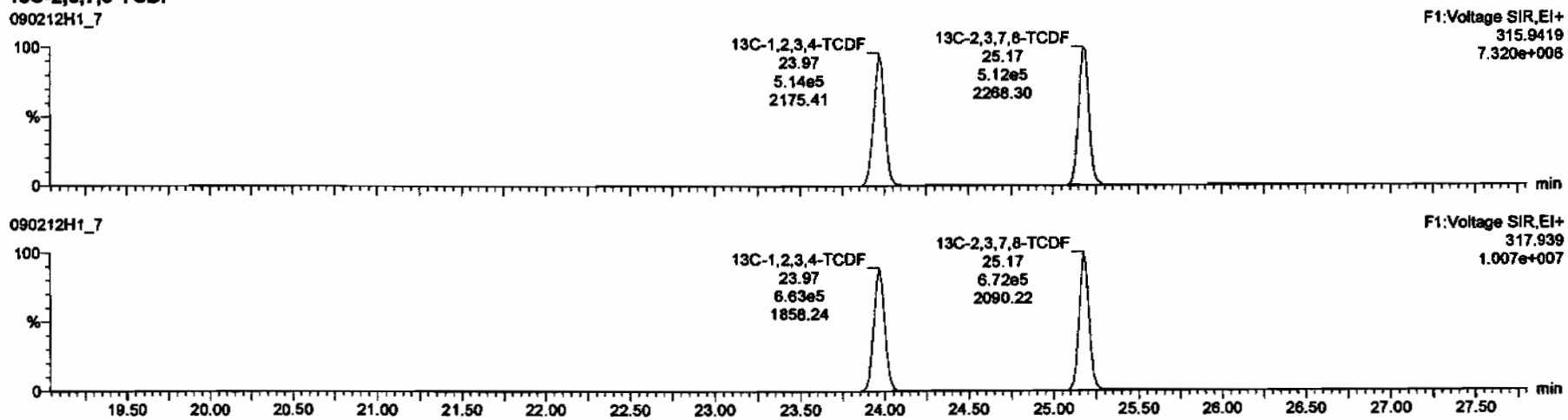

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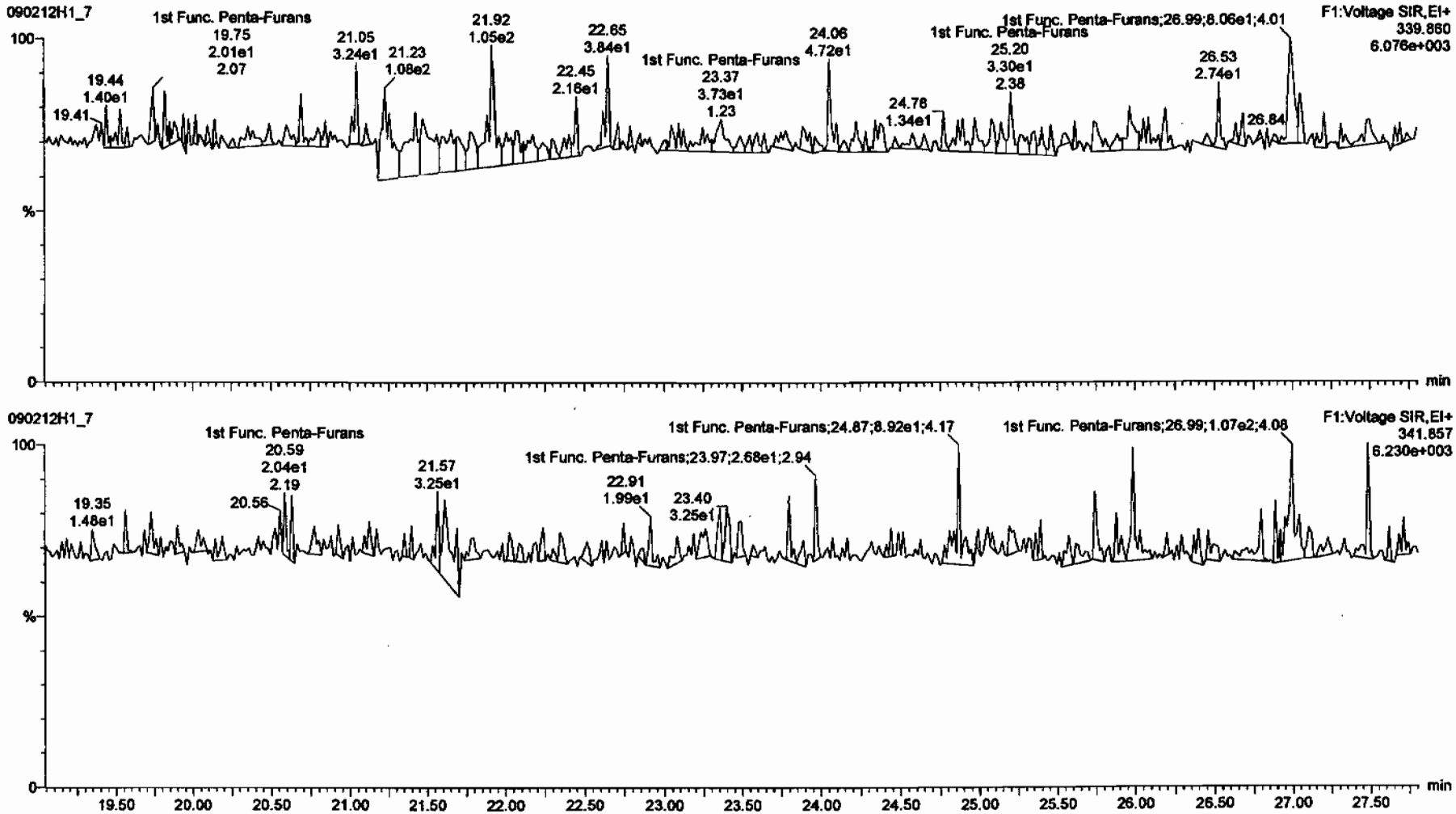

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1,2,3,7,8-PeCDF

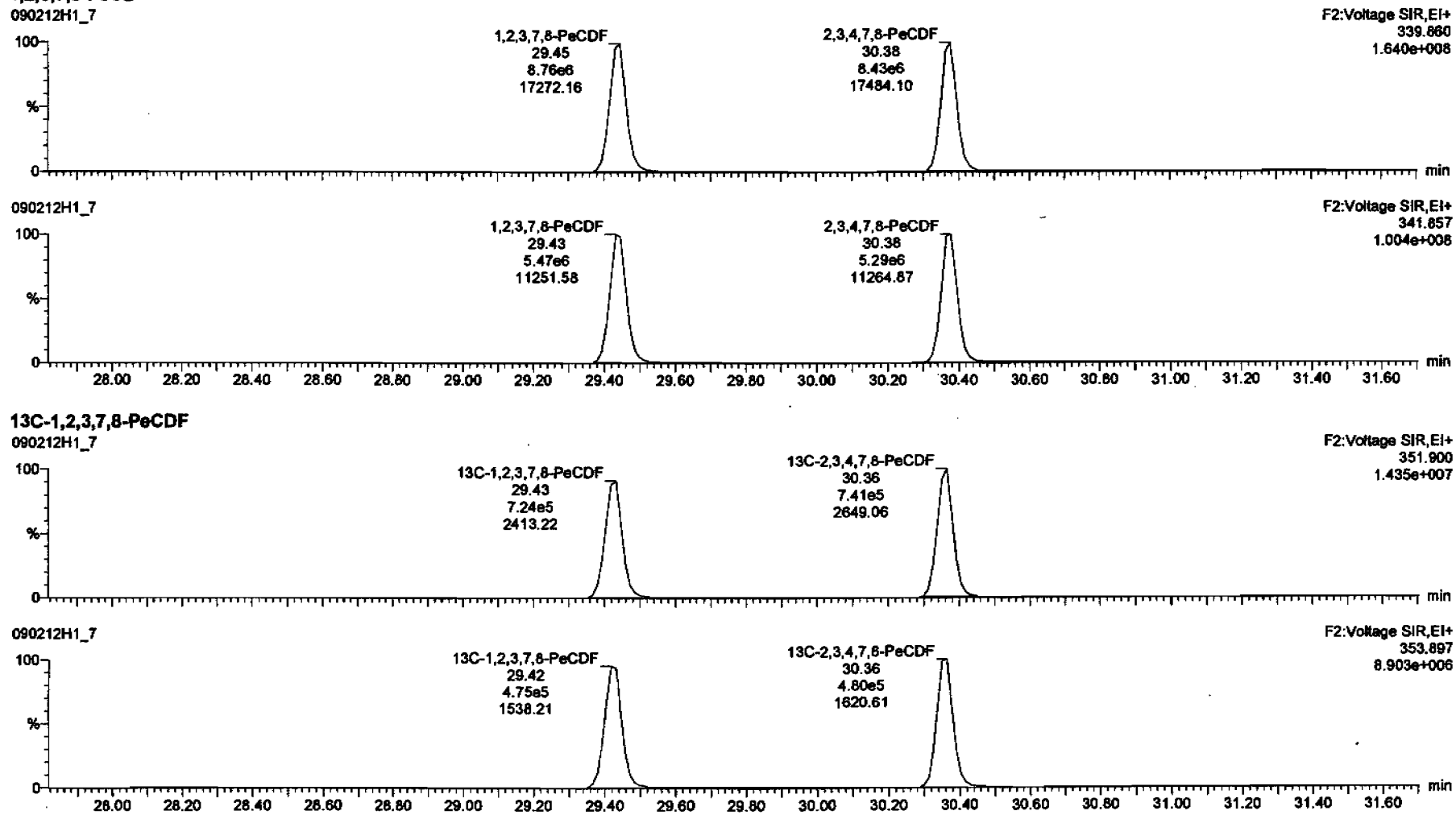

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1,2,3,4,7,8-HxCDF

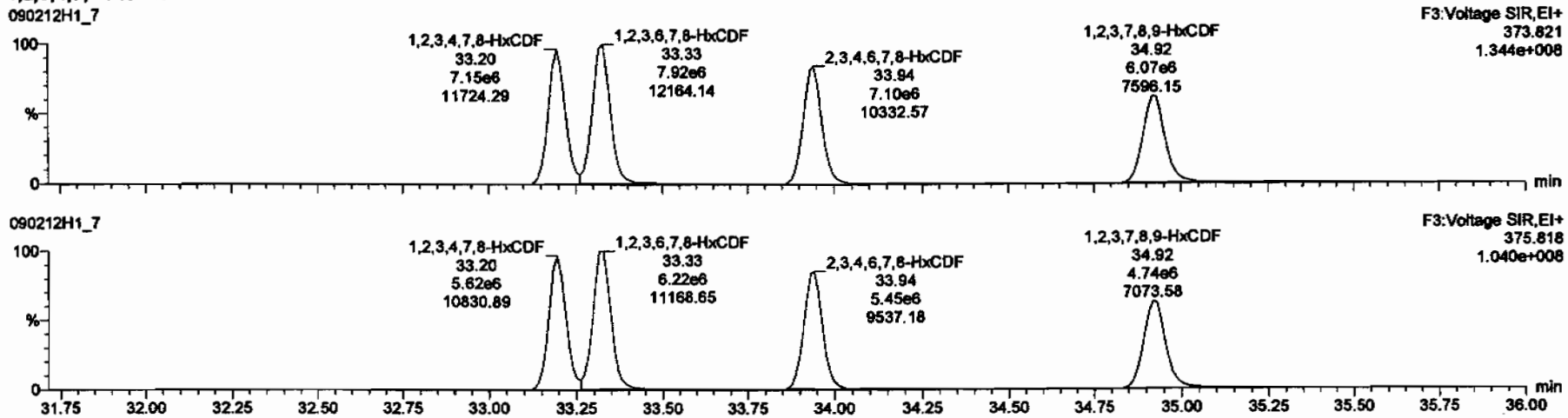

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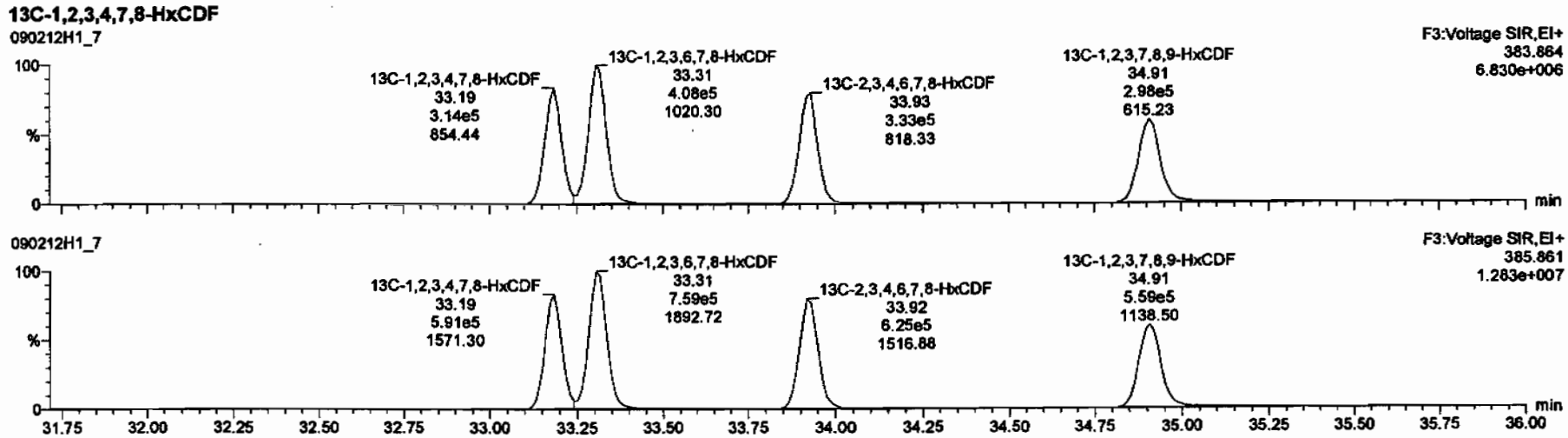

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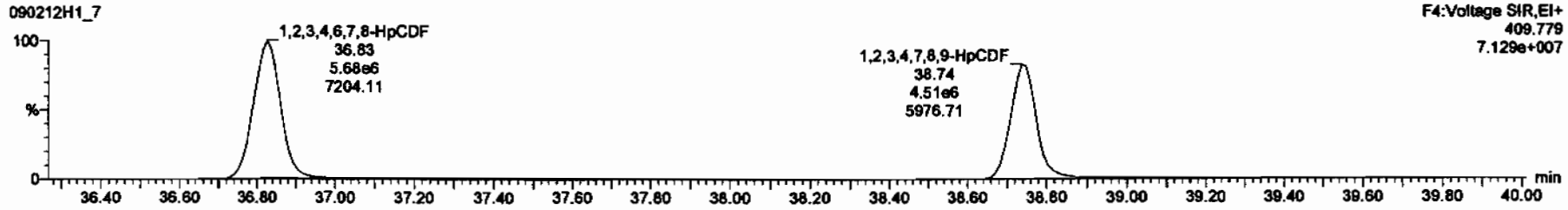

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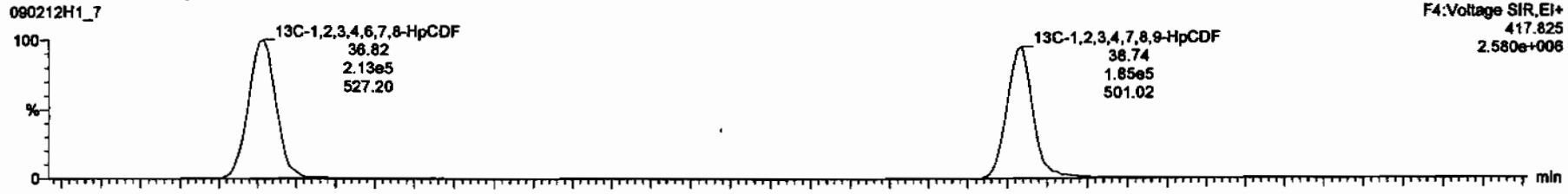

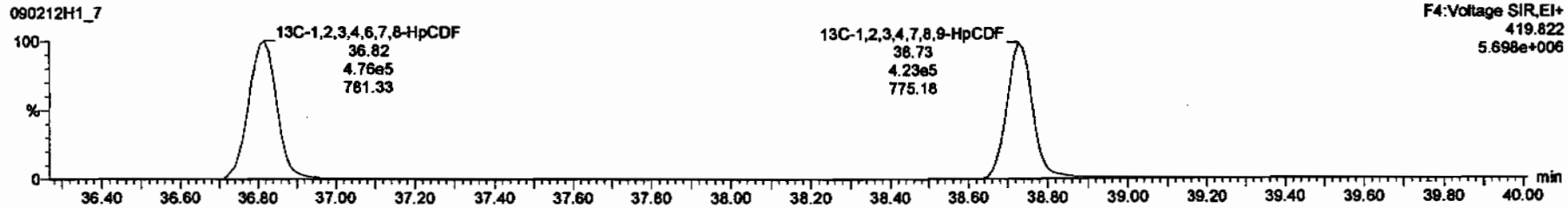

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OCDF

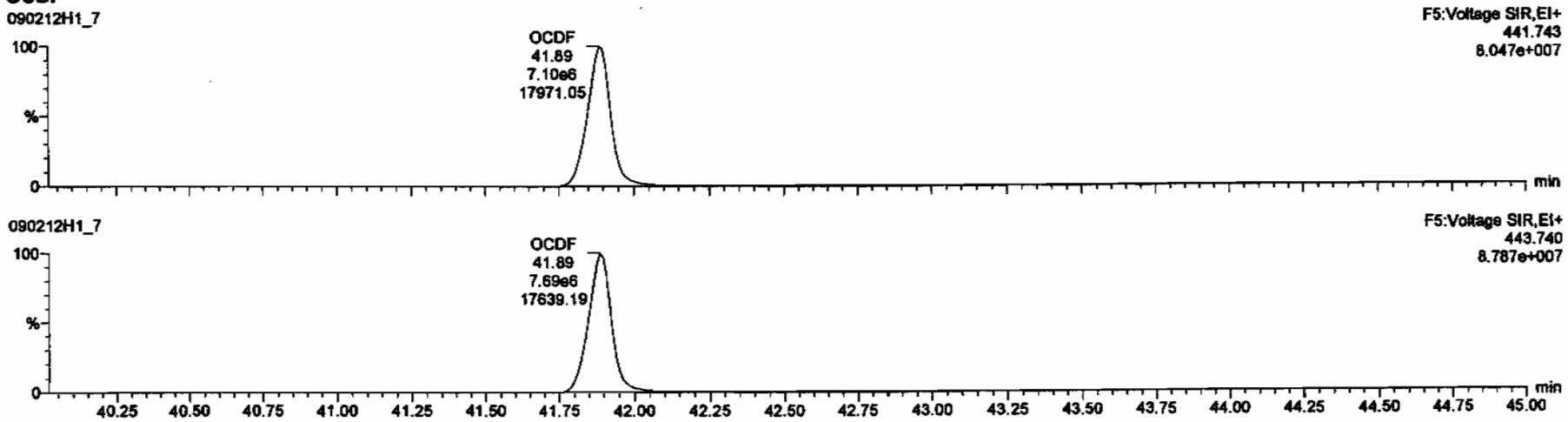

13C-OCDF

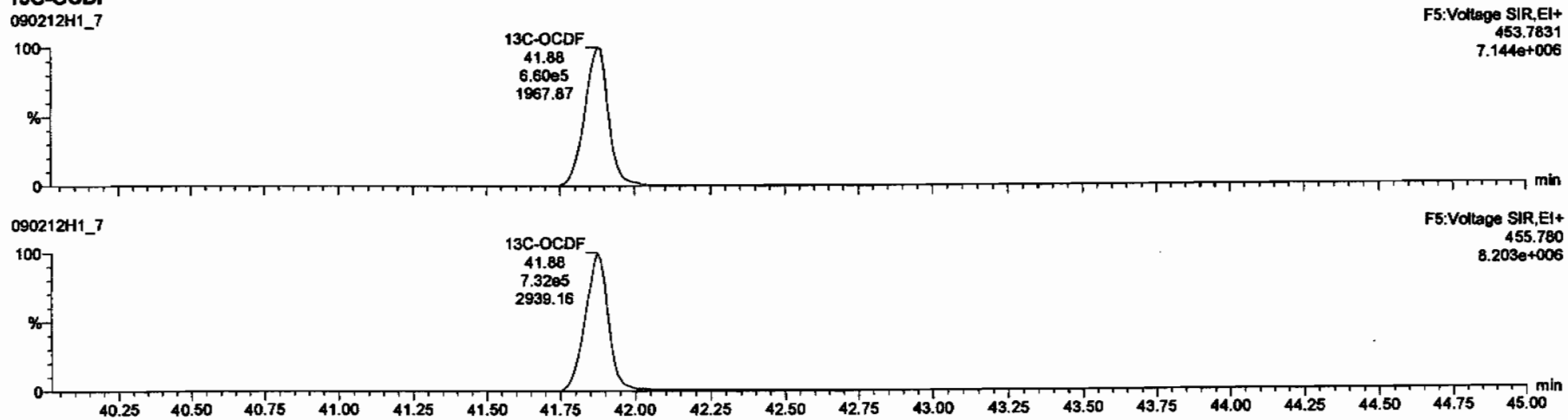

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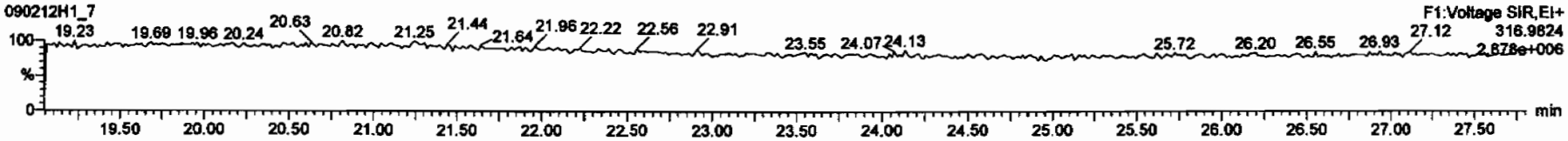

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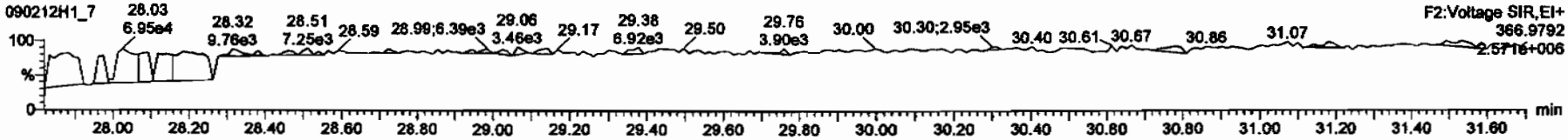

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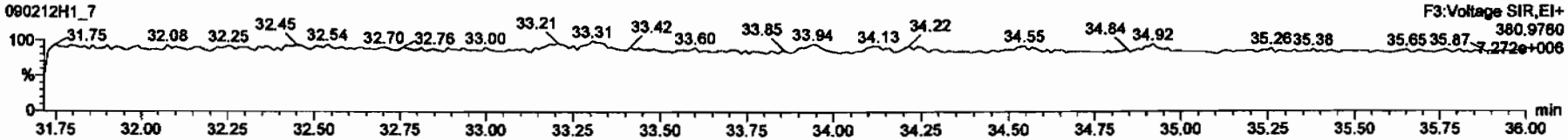

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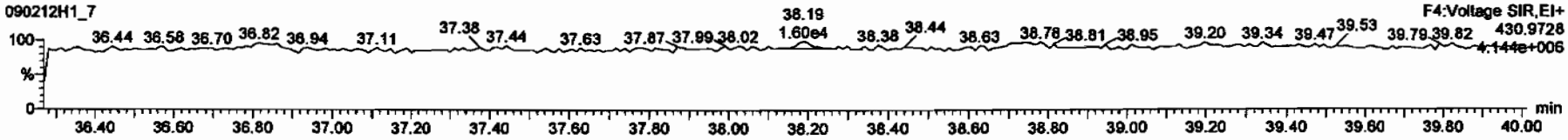

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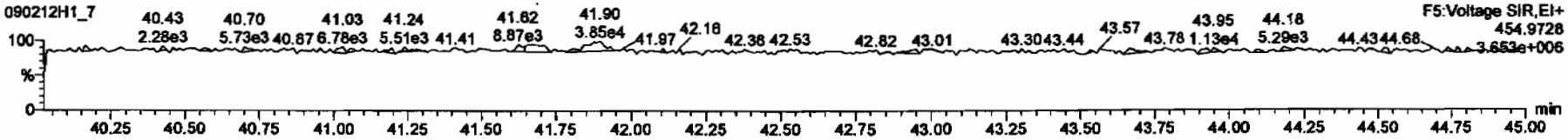

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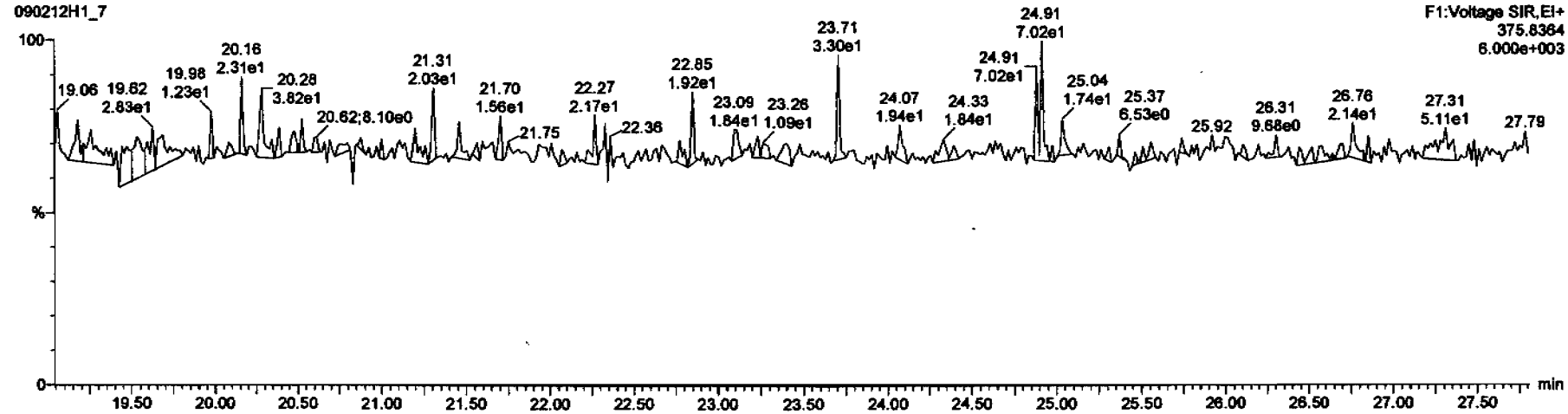

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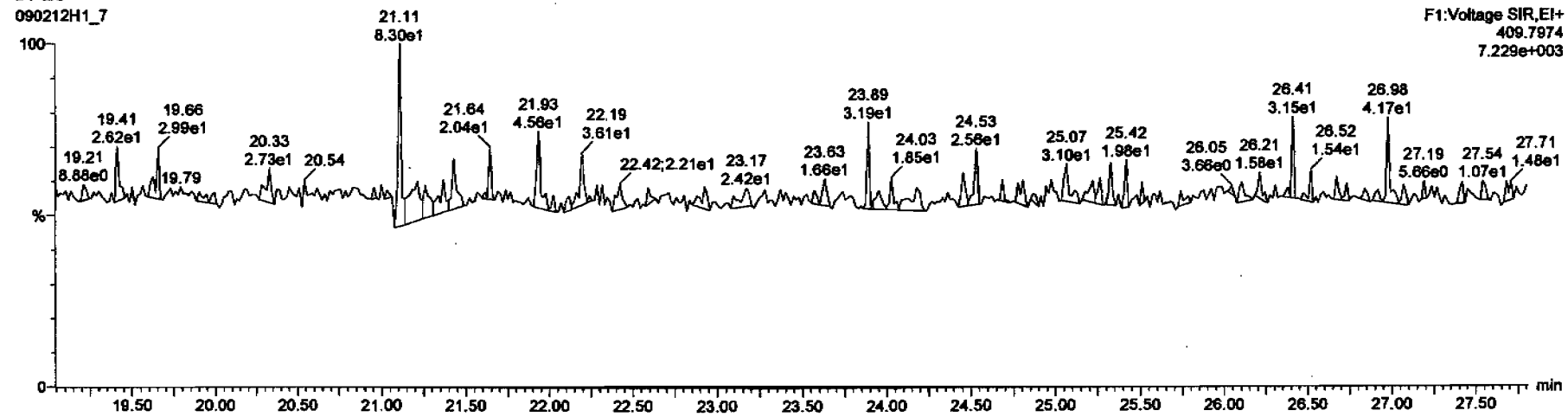

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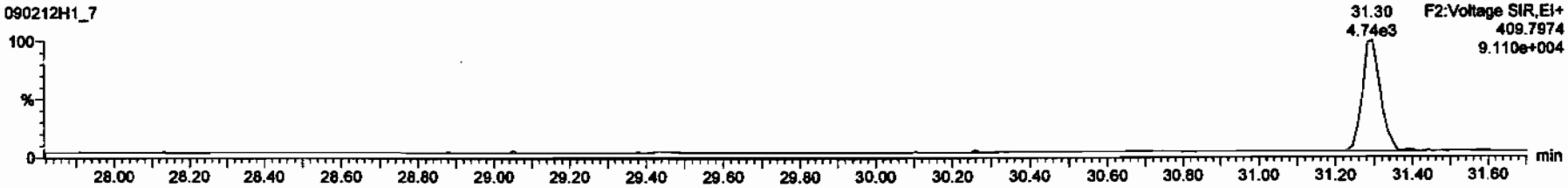

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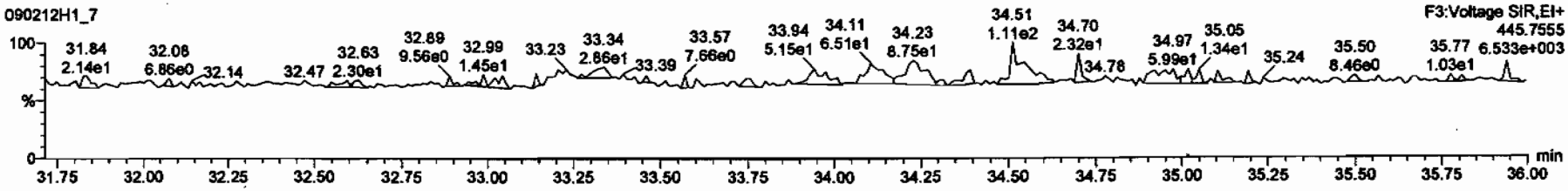

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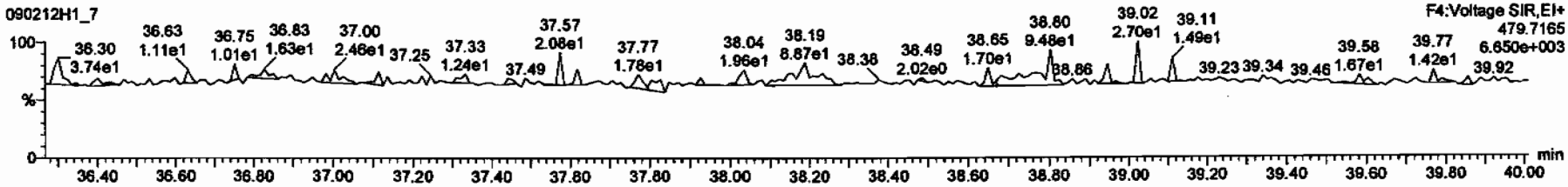

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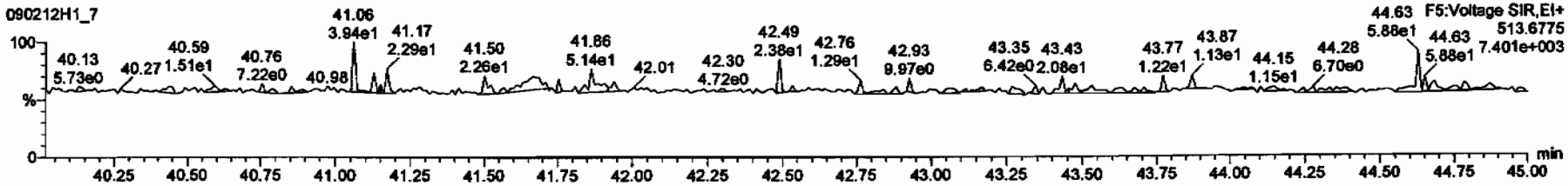

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M 292.9824 R 13769

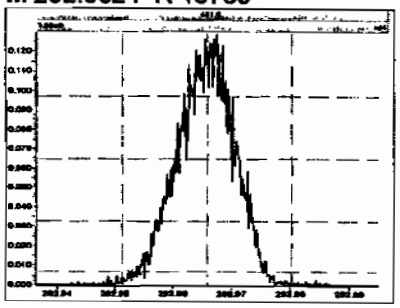

M 304.9824 R 14205

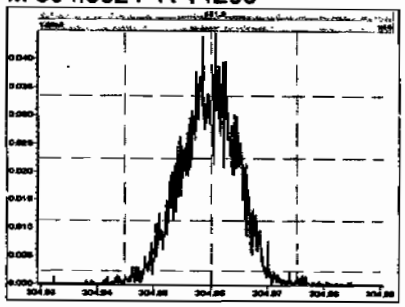

M 318.9792 R 15079

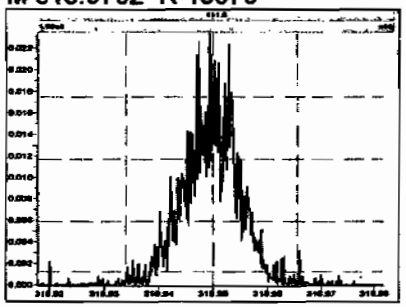

M 330.9792 R 13699

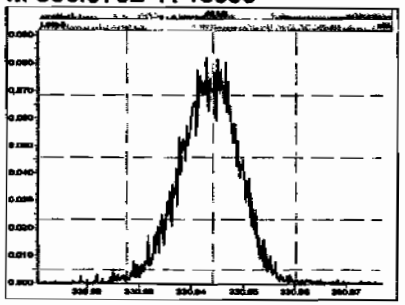

M 342.9792 R 13710

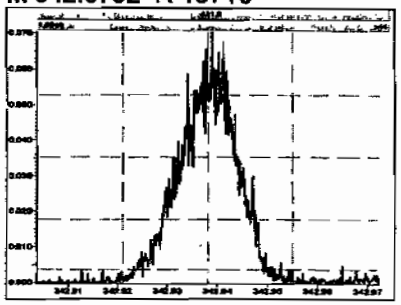

M 354.9792 R 14492

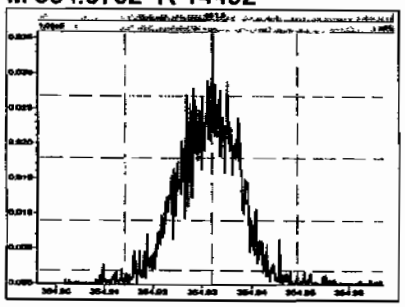

M 366.9792 R 14631

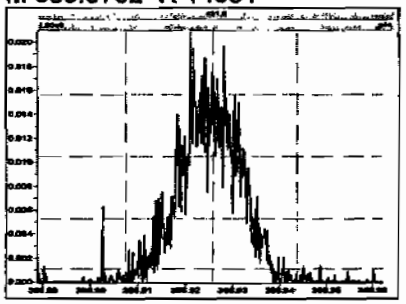

M 380.9760 R 13026

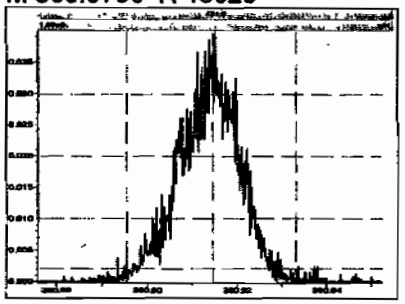

M 392.9760 R 14233

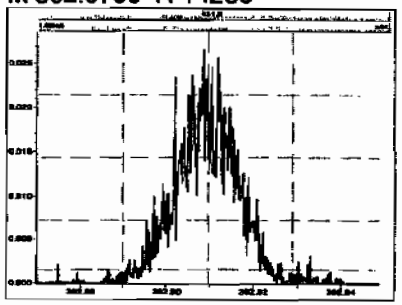

M 404.9760 R 15184

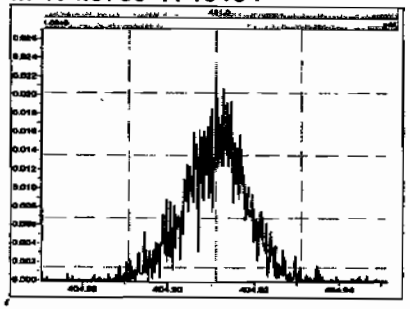

M 416.9760 R 15880

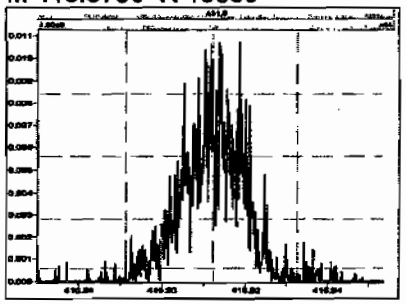

M 330.9792 R 13440

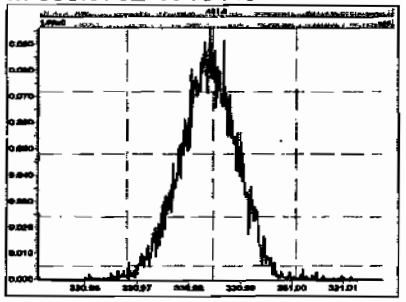

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M 342.9792 R 13880

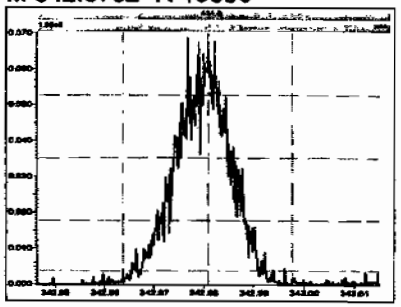

M 354.9792 R 14292

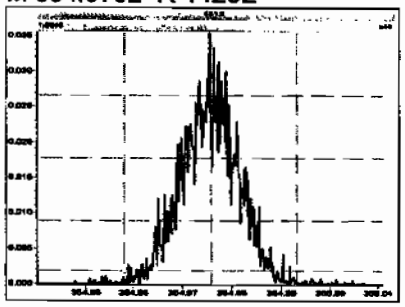

M 366.9792 R 14452

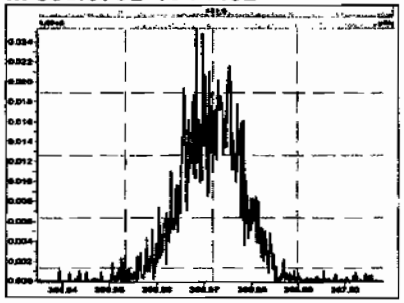

M 380.9760 R 13928

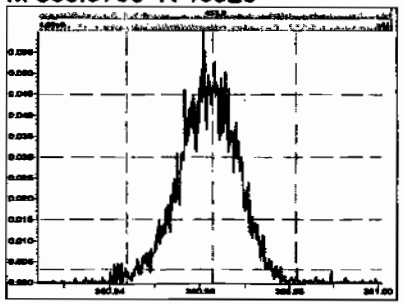

M 392.9760 R 14536

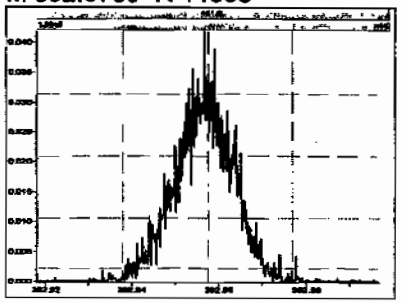

M 404.9760 R 14536

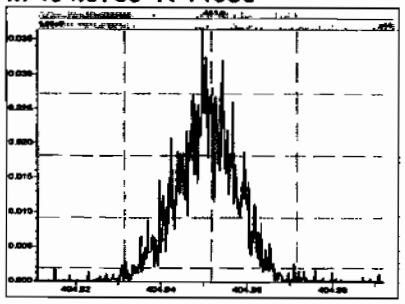

M 416.9760 R 15053

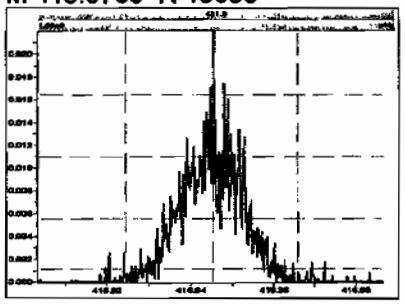

M 366.9792 R 15433

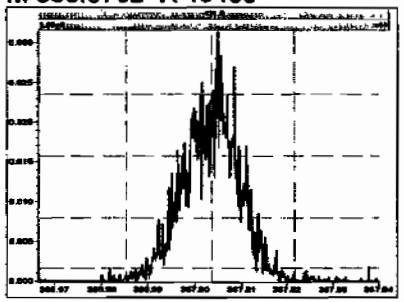

M 380.9760 R 14220

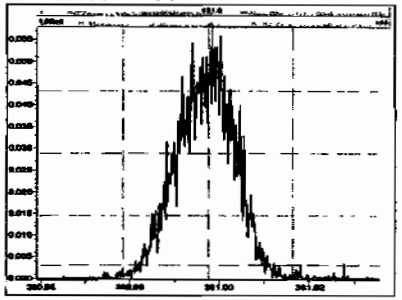

M 392.9760 R 14519

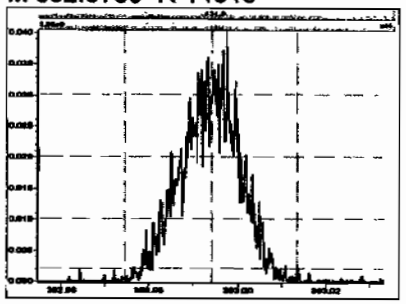

M 404.9760 R 14971

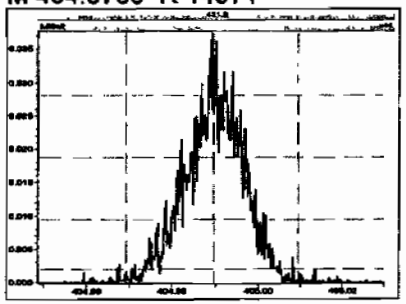

M 416.9760 R 15702

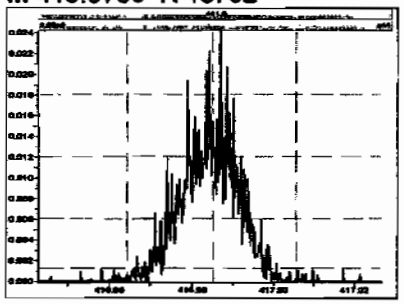

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M 430.9728 R 14874

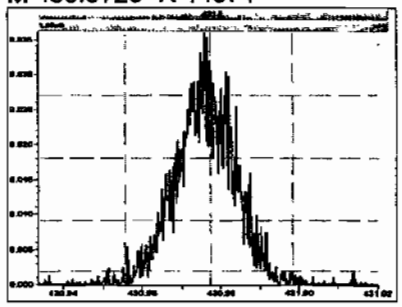

M 442.9728 R 15394

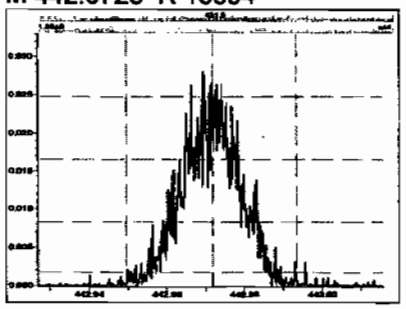

M 454.9728 R 13981

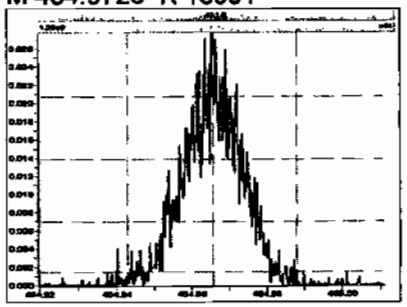

M 404.9760 R 14384

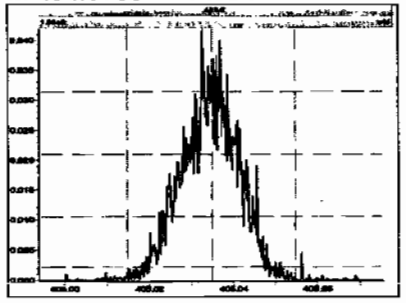

M 416.9760 R 16486

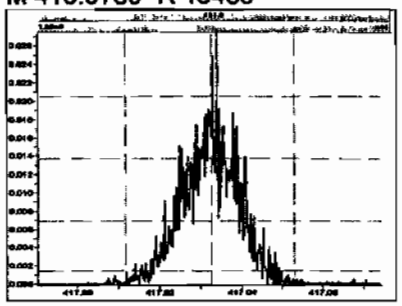

M 430.9728 R 14520

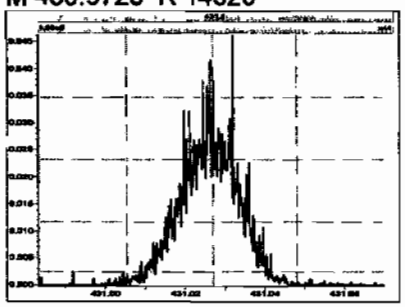

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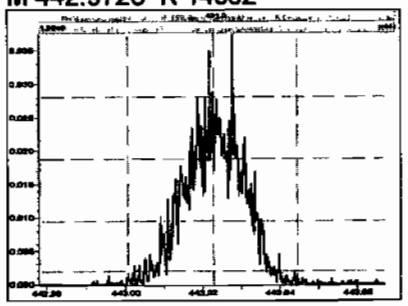

M 454.9728 R 13746

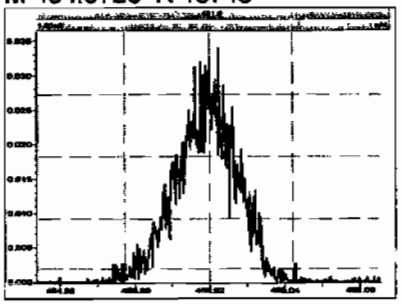

M 466.9728 R 16090

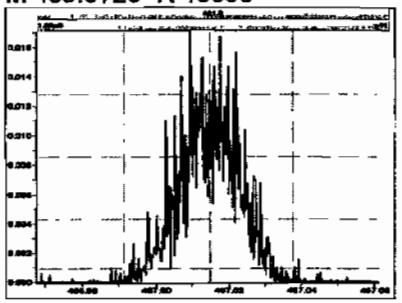

M 480.9696 R 13927

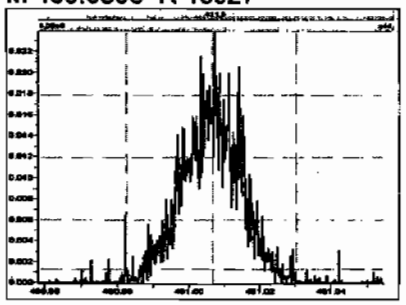

M 430.9728 R 12991

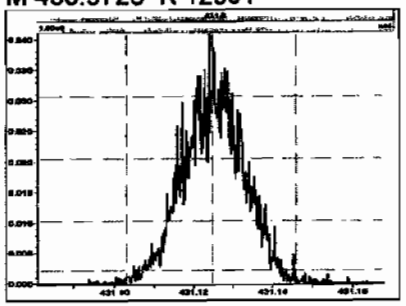

M 442.9728 R 13058

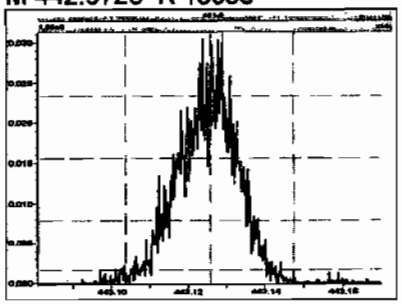

Printed: Thursday, February 12, 2009 18:43:49 Pacific Standard Time

M 454.9728 R 12791

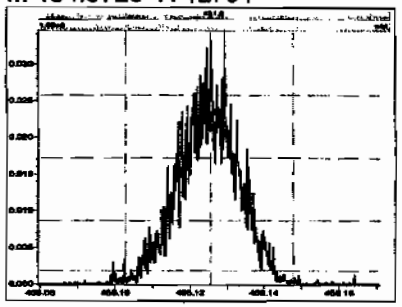

M 466.9728 R 14943

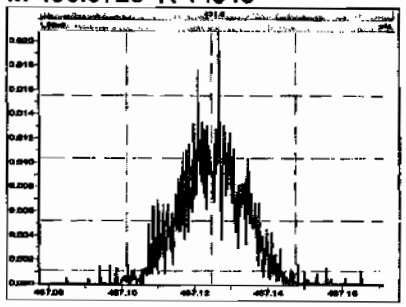

M 480.9696 R 12740

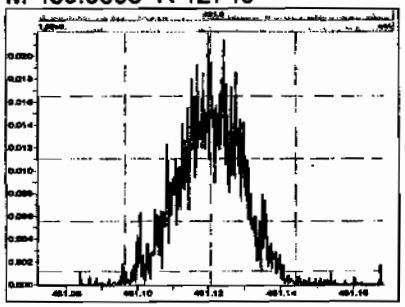

M 492.9696 R 15128

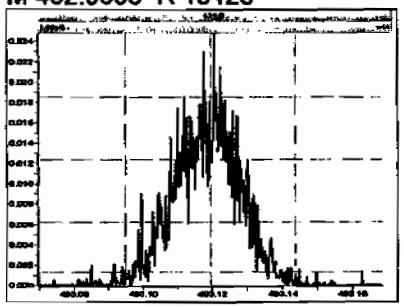

M 504.9696 R 13236

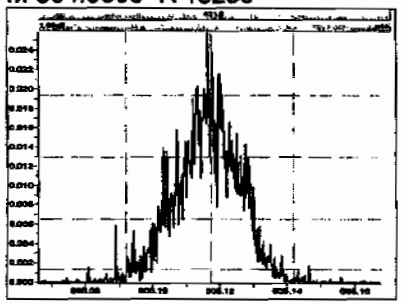

M 516.9697 R 17182

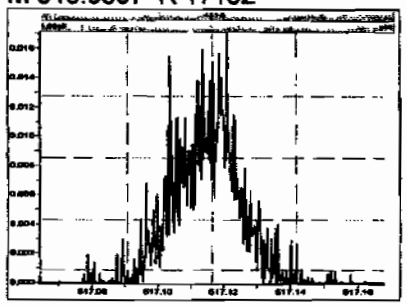

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	1 2,3,7,8-TCDD	2.66e4	0.81	NO	1.08	1.000	25.98	1.001	9.5090		0.0723	9.5090
	2 1,2,3,7,8-PeCDD	1.01e5	0.61	NO	1.03	1.000	30.65	1.000	47.444		0.172	47.444
	3 1,2,3,4,7,8-HxCDD	9.43e4	1.26	NO	1.00	1.000	34.11	1.001	60.533		0.392	60.533
	4 1,2,3,6,7,8-HxCDD	8.97e4	1.28	NO	1.13	1.000	34.22	1.000	41.292		0.312	41.292
	5 1,2,3,7,8,9-HxCDD	9.40e4	1.29	NO	1.10	1.000	34.52	1.009	48.966		0.335	48.966
	6 1,2,3,4,6,7,8-HpCDD	7.06e4	1.02	NO	1.06	1.000	38.18	1.001	47.757		0.360	47.757
	7 OCDD	1.05e5	0.91	NO	1.18	1.000	41.66	1.000	87.851		0.375	87.851
	8 2,3,7,8-TCDF	3.59e4	0.80	NO	1.09	1.000	25.20	1.001	9.2692		0.0713	9.2692
	9 1,2,3,7,8-PeCDF	1.90e5	1.60	NO	1.16	1.000	29.43	1.001	47.569		0.197	47.569
	10 2,3,4,7,8-PeCDF	1.76e5	1.60	NO	1.12	1.000	30.36	1.001	49.959		0.207	49.959
	11 1,2,3,4,7,8-HxCDF	1.51e5	1.22	NO	1.41	1.000	33.19	1.000	47.242		0.234	47.242
	12 1,2,3,6,7,8-HxCDF	1.99e5	1.24	NO	1.22	1.000	33.31	1.000	52.247		0.205	52.247
	13 2,3,4,6,7,8-HxCDF	1.49e5	1.26	NO	1.26	1.000	33.93	1.001	48.194		0.285	48.194
	14 1,2,3,7,8,9-HxCDF	1.18e5	1.28	NO	1.26	1.000	34.91	1.000	50.089		0.402	50.089
	15 1,2,3,4,6,7,8-HpCDF	1.26e5	1.05	NO	1.69	1.000	36.81	1.000	45.609		0.324	45.609
	16 1,2,3,4,7,8,9-HpCDF	9.92e4	1.09	NO	1.48	1.000	38.74	1.000	53.044		0.451	53.044
	17 OCDF	1.36e5	0.92	NO	1.10	1.000	41.88	1.001	~~77825~~		102	77825
	18 13C-2,3,7,8-TCDD	2.60e5	0.79	NO	1.01	1.000	25.97	1.022	100.68	101	0.251	
	19 13C-1,2,3,7,8-PeCDD	2.07e5	0.62	NO	0.827	1.000	30.64	1.206	98.194	98.2	0.366	
	20 13C-1,2,3,4,7,8-HxCDD	1.56e5	1.23	NO	0.916	1.000	34.08	0.988	96.272	96.3	1.12	
	21 13C-1,2,3,6,7,8-HxCDD	1.93e5	1.30	NO	0.921	1.000	34.21	0.991	118.79	119	1.12	
	22 13C-1,2,3,4,6,7,8-HpCDD	1.39e5	1.04	NO	0.708	1.000	38.16	1.106	111.12	111	0.936	
	23 13C-OCDD	2.03e5	0.90	NO	0.503	1.000	41.65	1.207	229.27	115	1.10	
	24 13C-2,3,7,8-TCDF	3.56e5	0.77	NO	0.977	1.000	25.17	0.991	47241	~~47200~~	47.8	
	25 13C-1,2,3,7,8-PeCDF	3.45e5	1.53	NO	0.896	1.000	29.41	1.158	49875	~~49900~~	135	
	26 13C-2,3,4,7,8-PeCDF	3.15e5	1.57	NO	0.900	1.000	30.34	1.194	45355	~~45400~~	135	
	27 13C-1,2,3,4,7,8-HxCDF	2.27e5	0.52	NO	1.17	1.000	33.17	0.962	110.01	110	1.09	
	28 13C-1,2,3,6,7,8-HxCDF	3.11e5	0.53	NO	1.52	1.000	33.29	0.965	116.12	116	0.841	
	29 13C-2,3,4,6,7,8-HxCDF	2.41e5	0.53	NO	1.25	1.000	33.91	0.983	109.27	109	1.02	
	30 13C-1,2,3,7,8,9-HxCDF	1.87e5	0.53	NO	1.05	1.000	34.90	1.011	100.48	100	1.21	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

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	31 13C-1,2,3,4,6,7,8-HpCDF	1.64e5	0.42	NO	0.868	1.000	36.80	1.066	107.17	107	0.875
	32 13C-1,2,3,4,7,8,9-HpCDF	1.26e5	0.43	NO	0.727	1.000	38.73	1.122	98.571	98.6	1.05
	33 13C-OCDF	3.18e2	0.17	YES	0.760	1.000	41.82	1.212	0.23753	~~0.110~~	0.197
	34 37Cl-2,3,7,8-TCDD	2.82e4			0.668	1.000	25.98	1.023	16.616	166	0.0976
	35 13C-1,2,3,4-TCDD	2.54e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.254
	36 13C-1,2,3,4-TCDF	7.72e2	0.44	YES	1.00	1.000	23.92	0.000	100.00	100	46.7
	37 13C-1,2,3,7,8,9-HxCDD	1.76e5	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	1.03

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

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2,3,7,8-TCDD

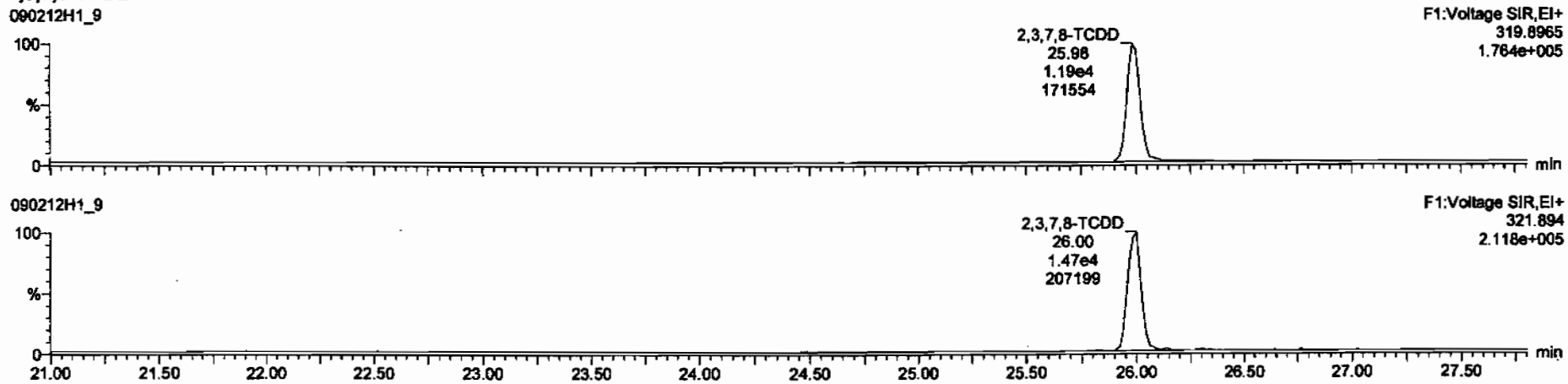

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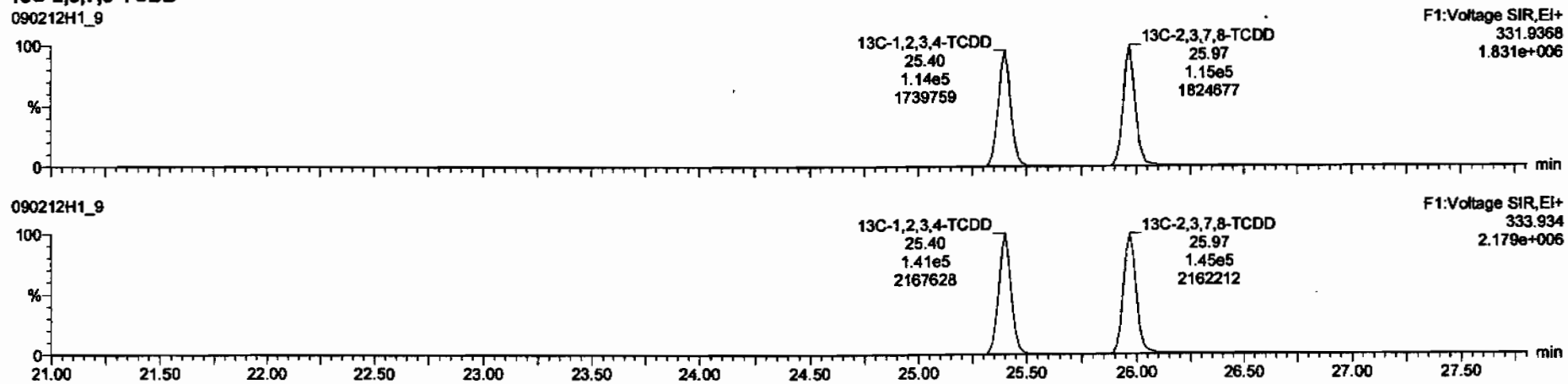

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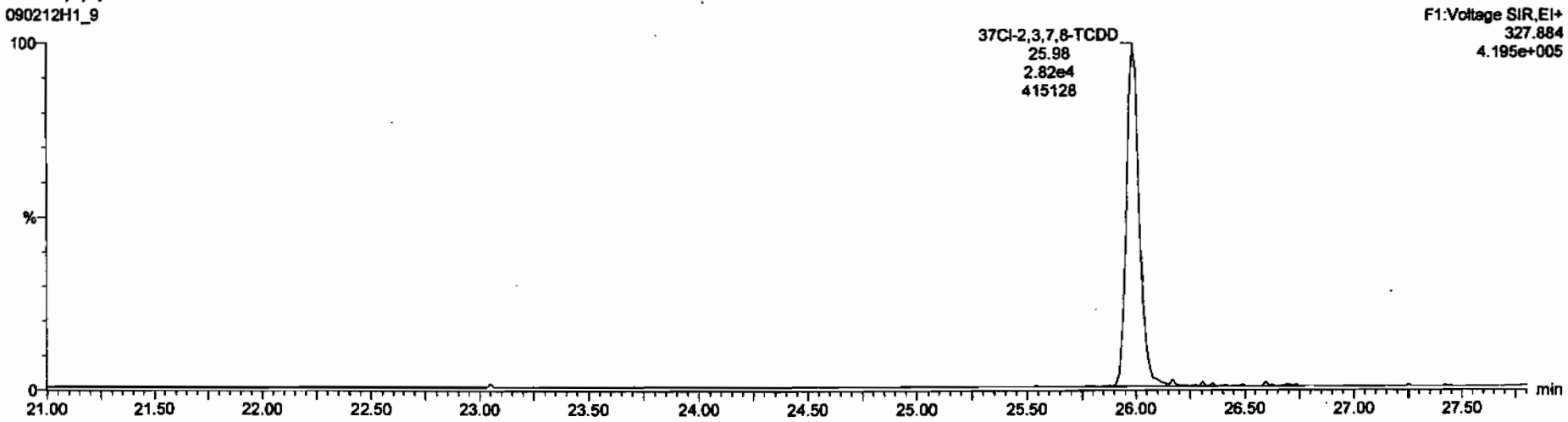

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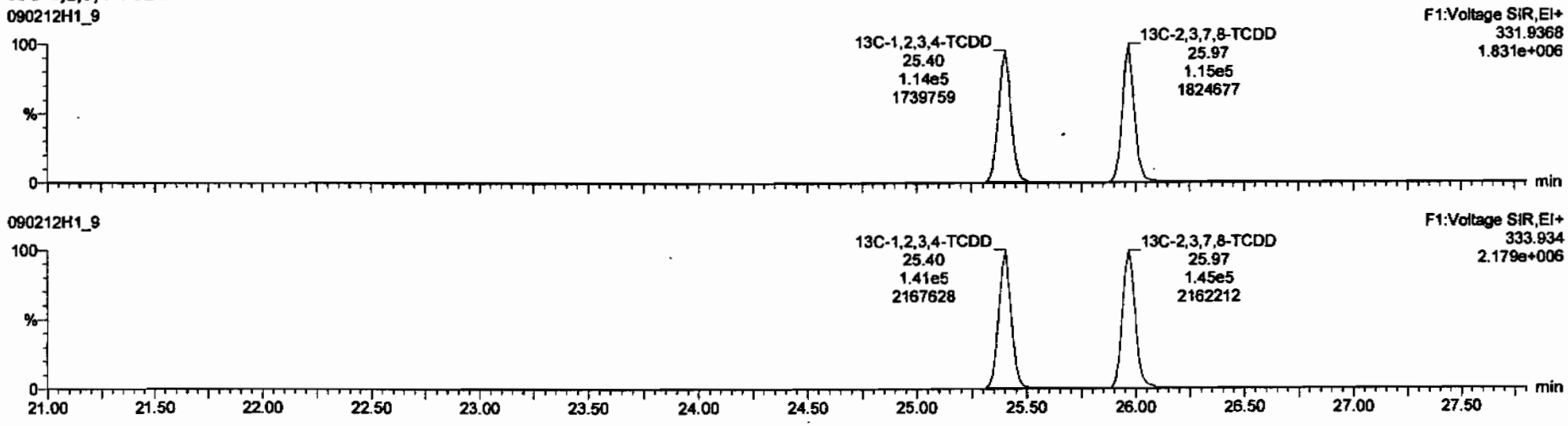

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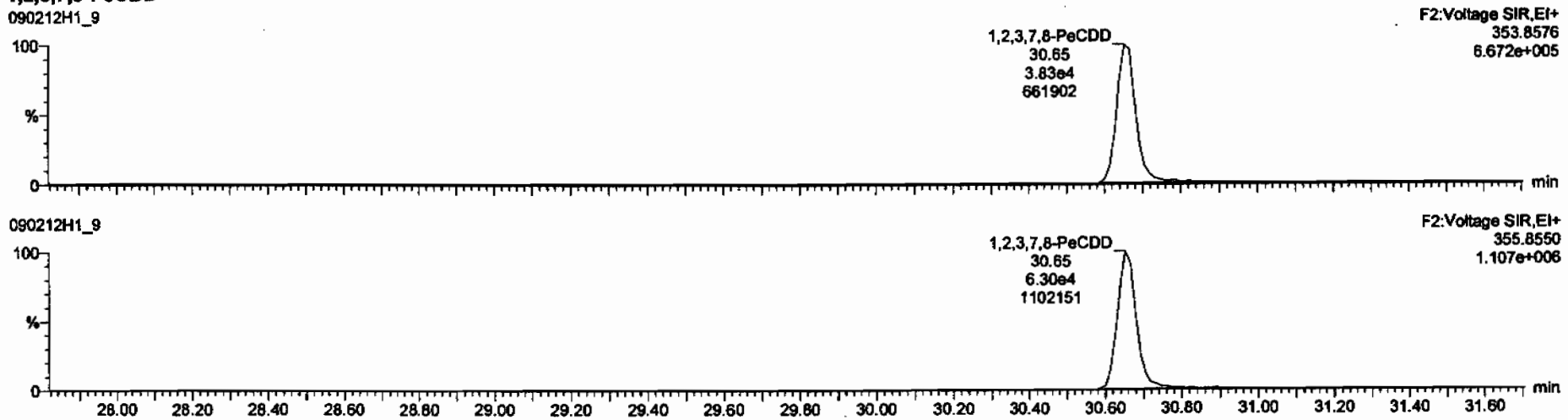

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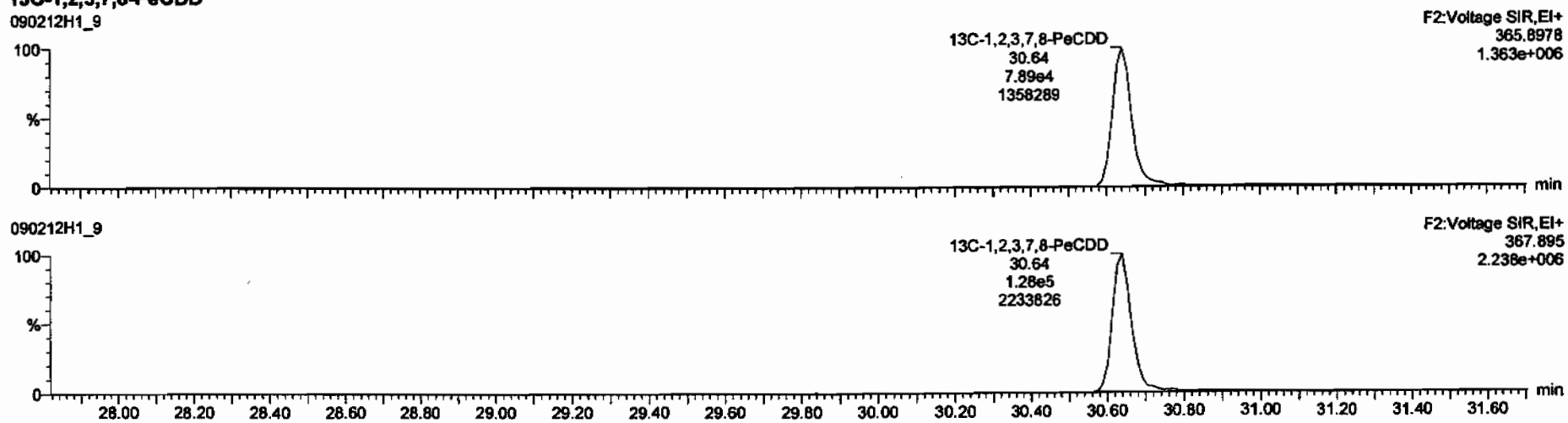

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1,2,3,4,7,8-HxCDD

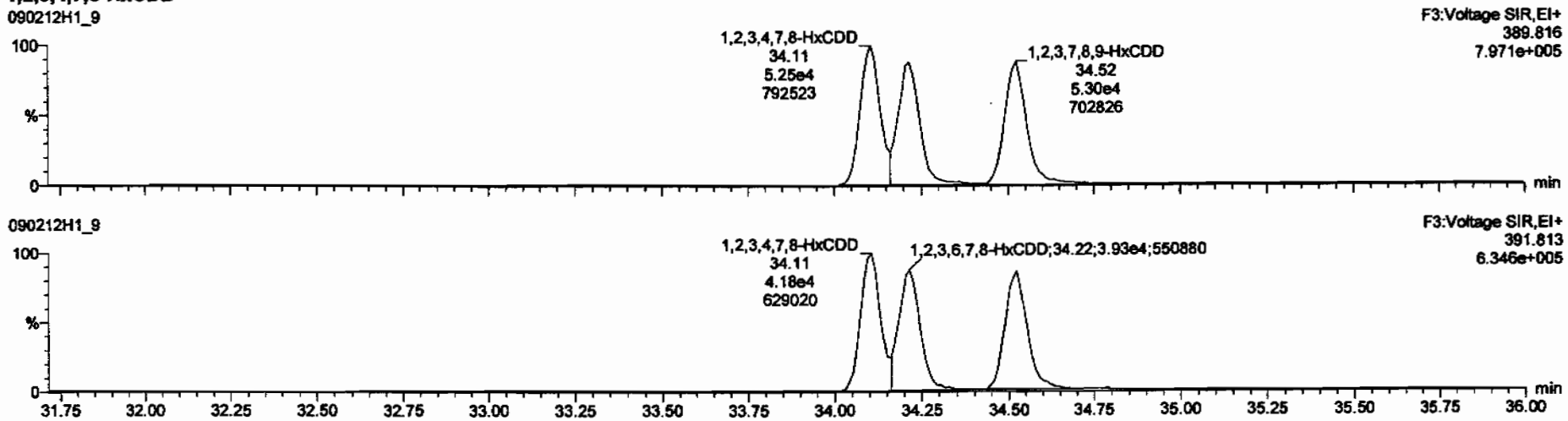

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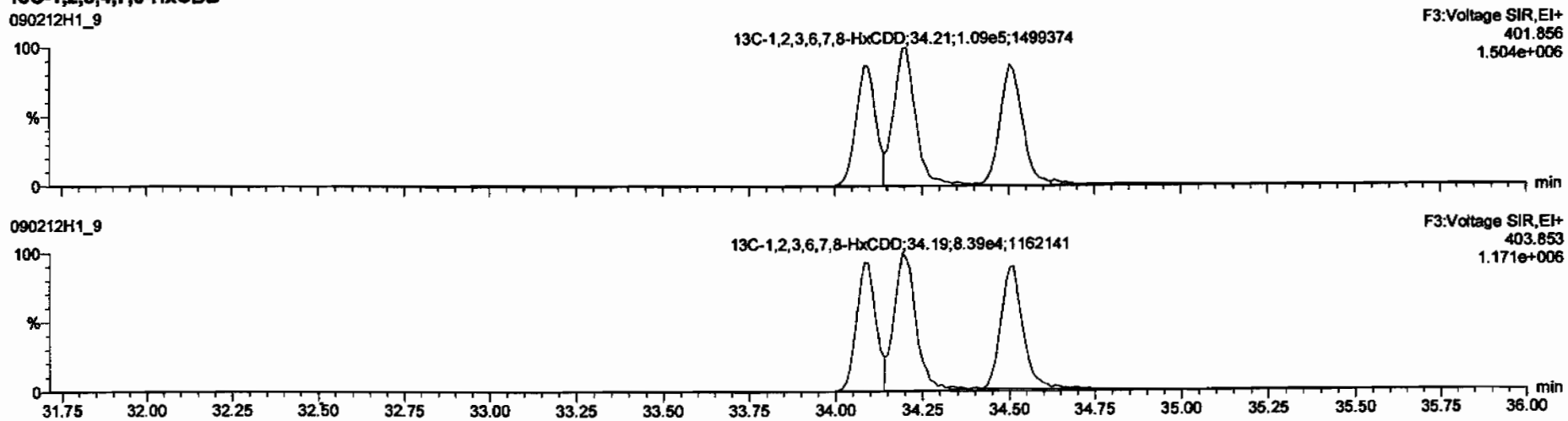

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1,2,3,4,6,7,8-HpCDD

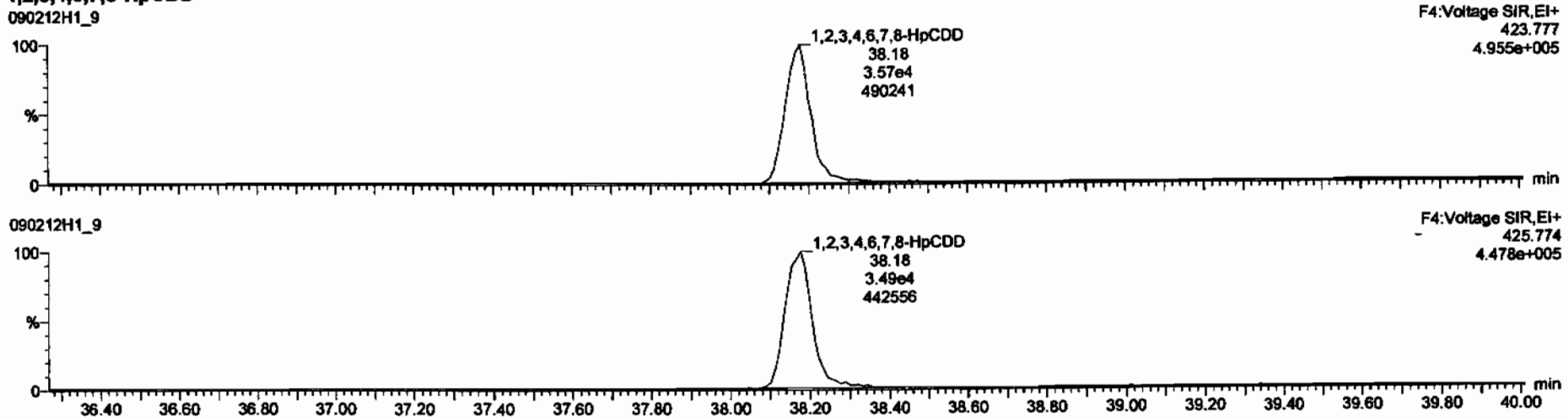

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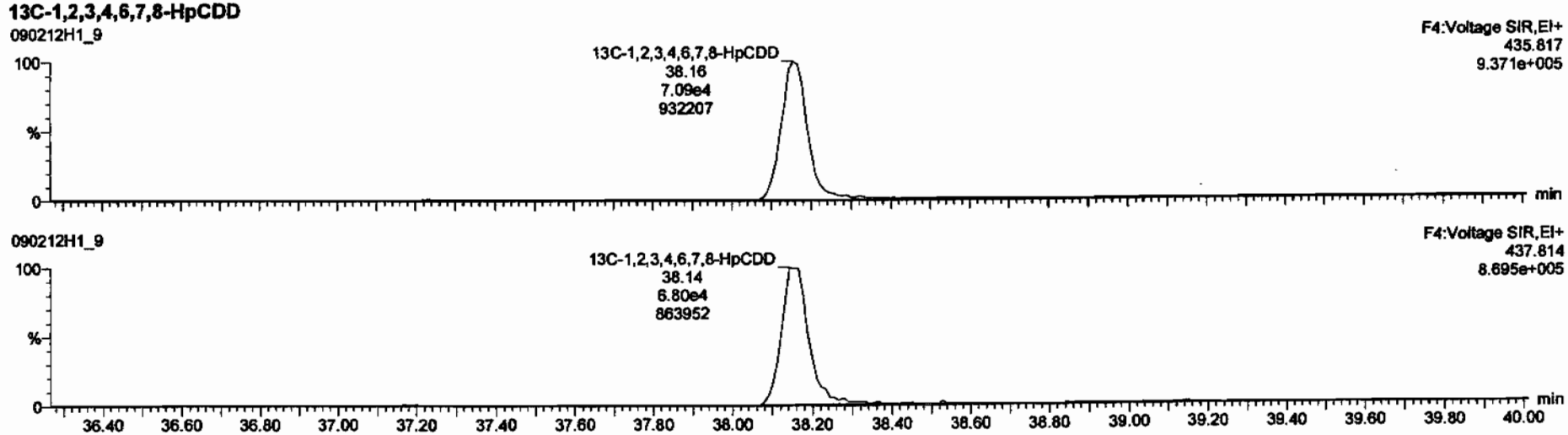

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OCDD

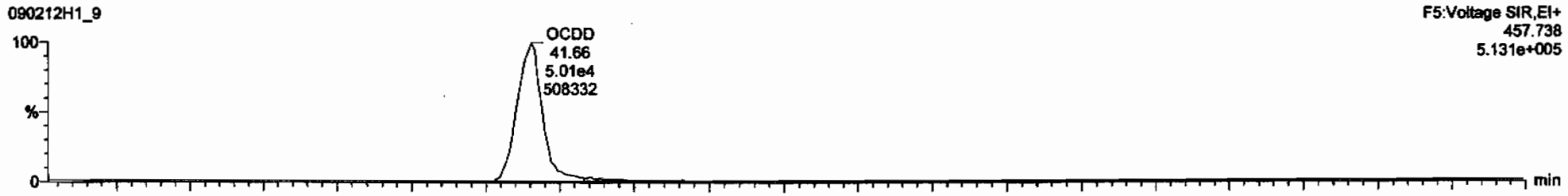

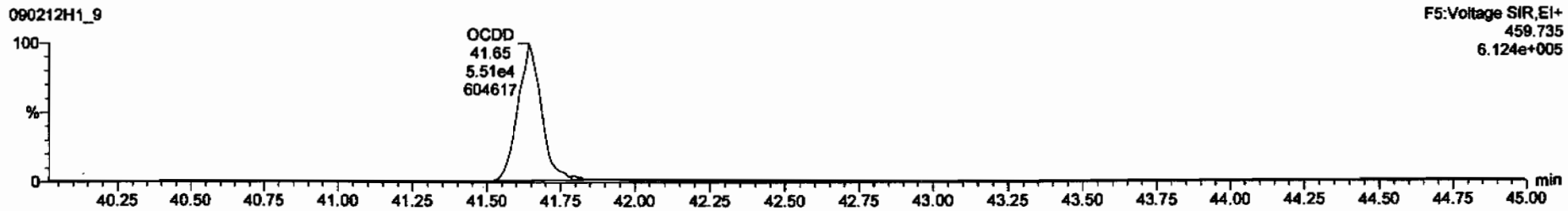

13C-OCDD

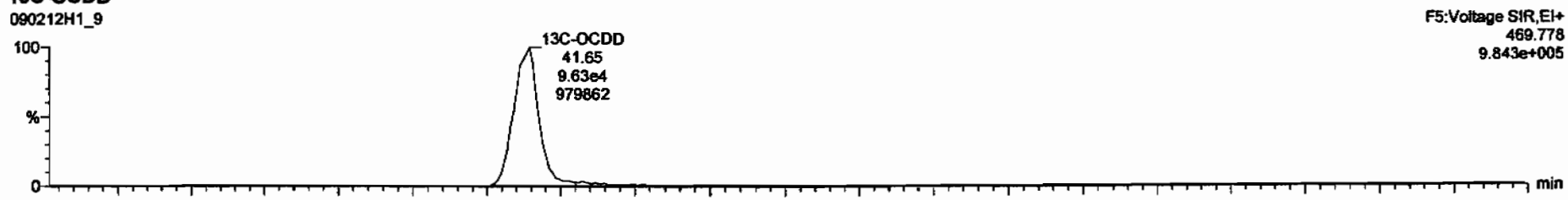

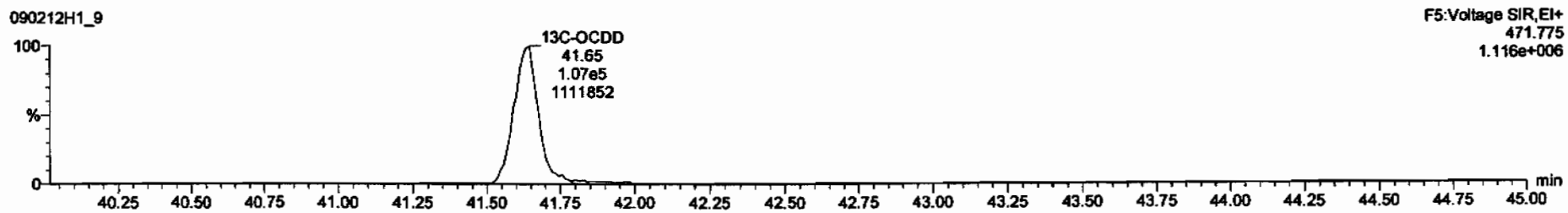

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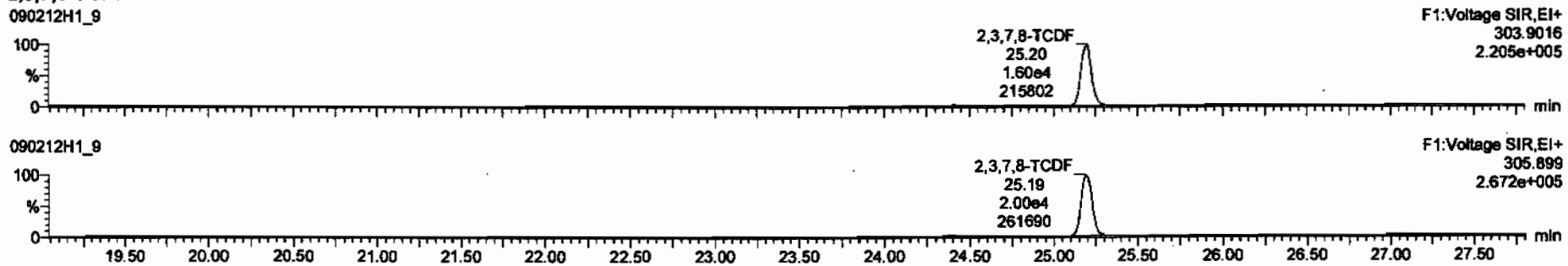

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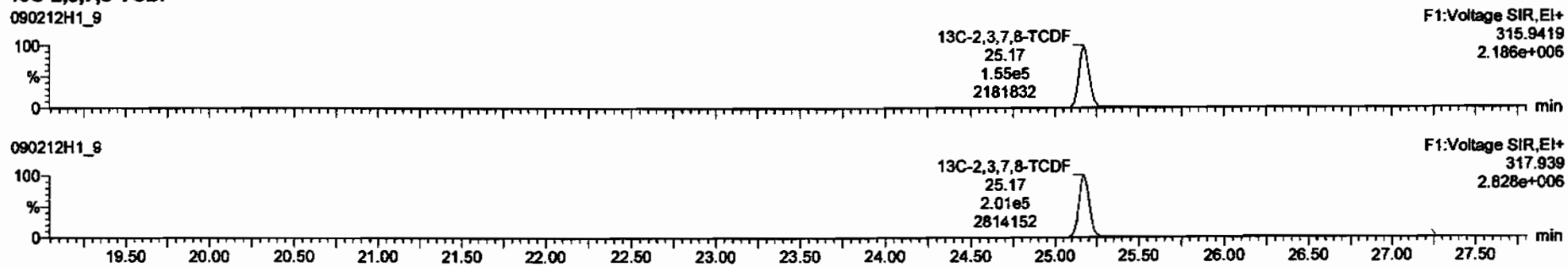

DPE1

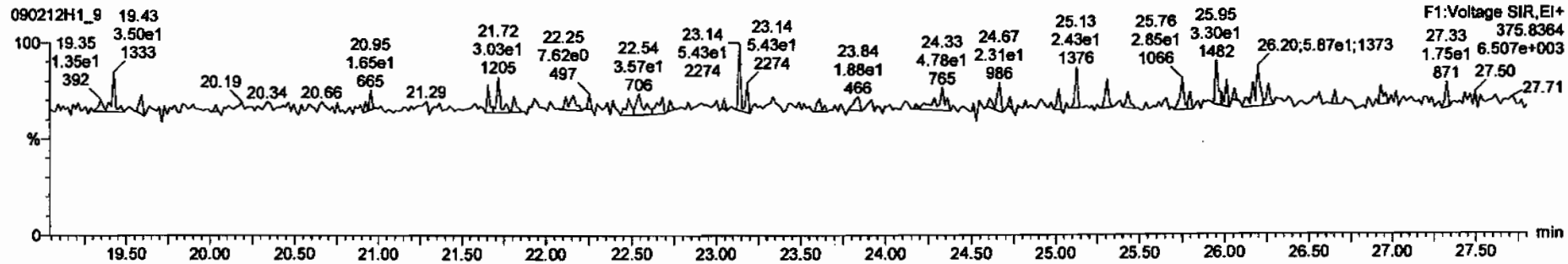

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1st Func. Penta-Furans

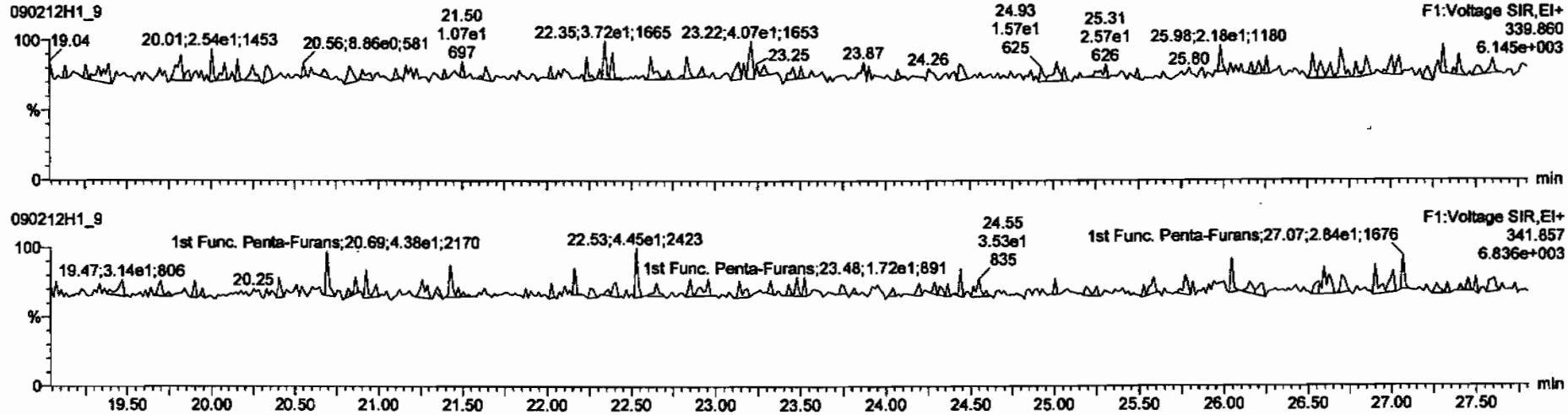

DPE6

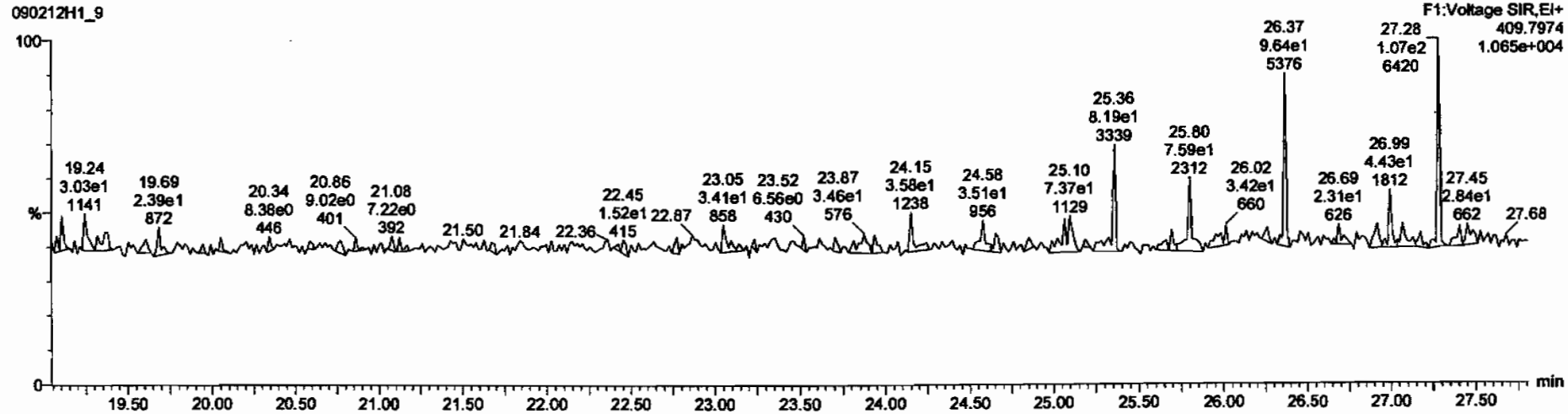

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

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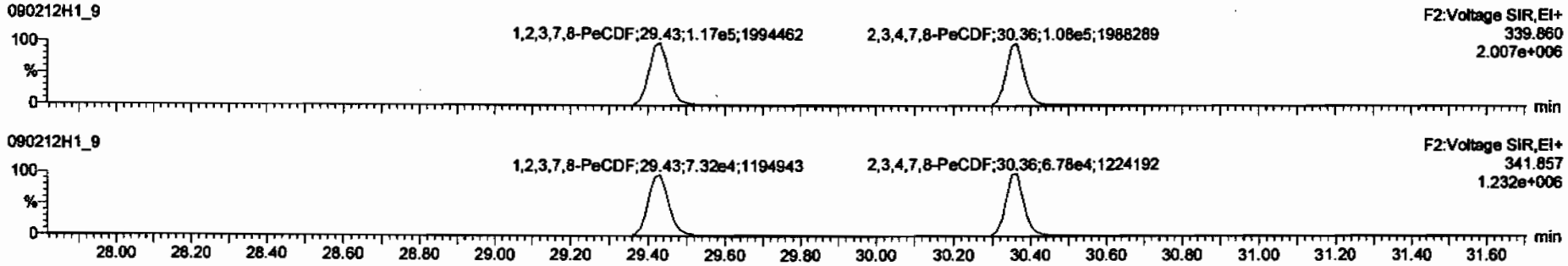

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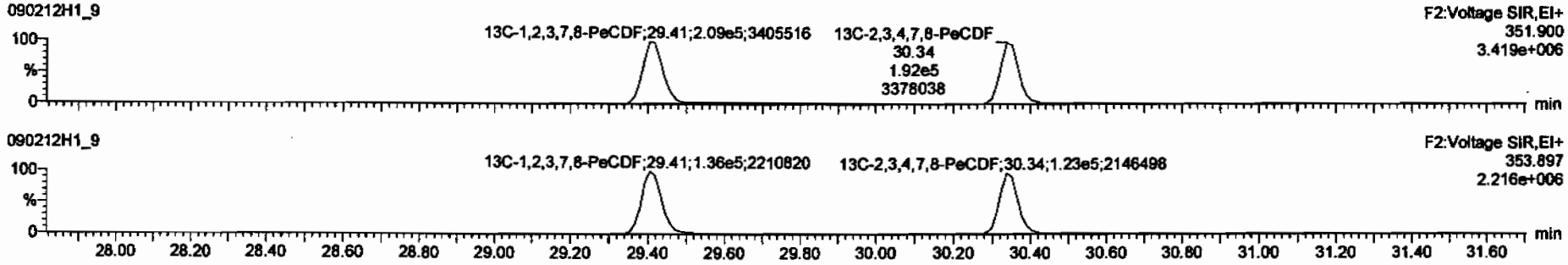

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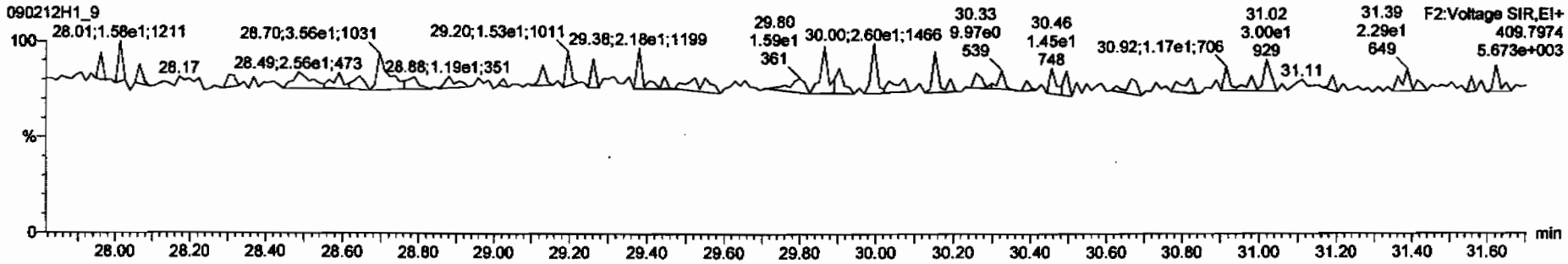

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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1,2,3,4,7,8-HxCDF

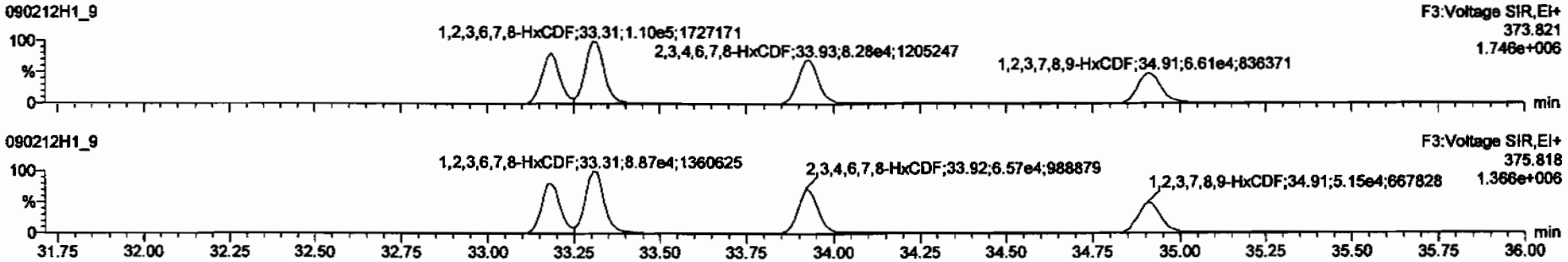

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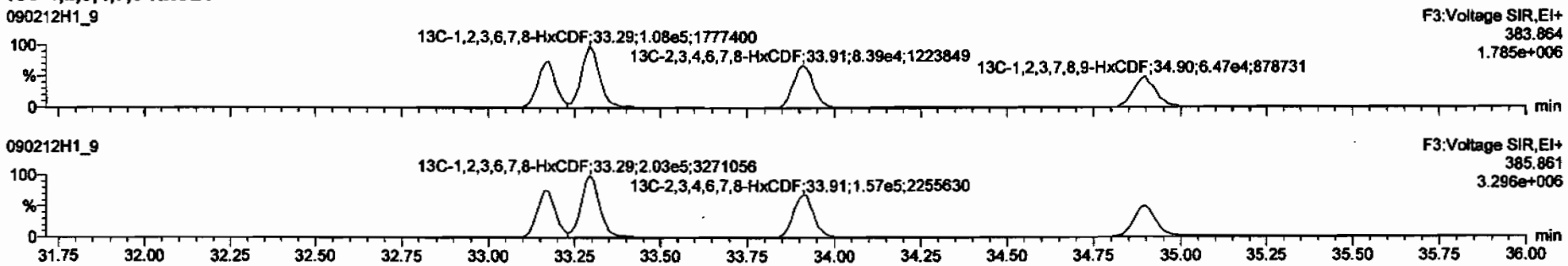

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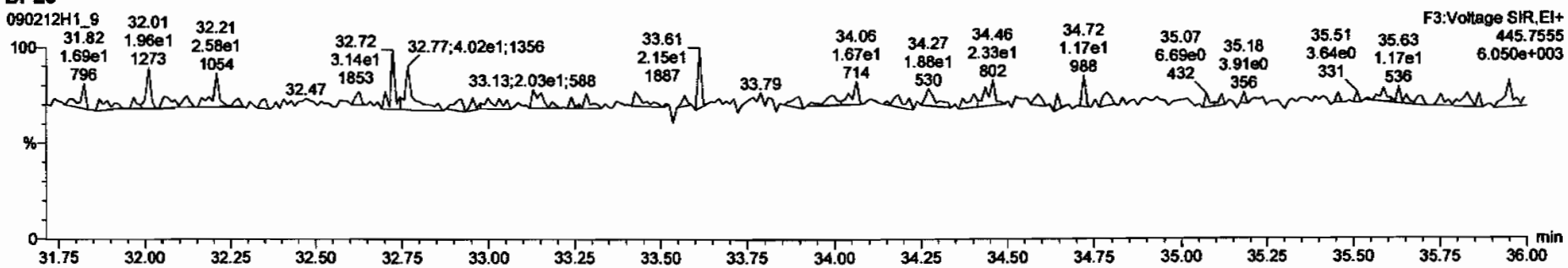

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,6,7,8-HpCDF

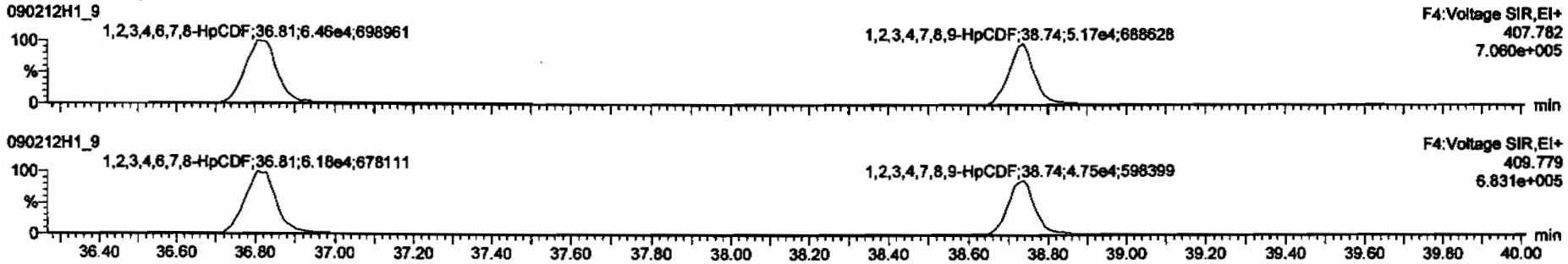

13C-1,2,3,4,6,7,8-HpCDF

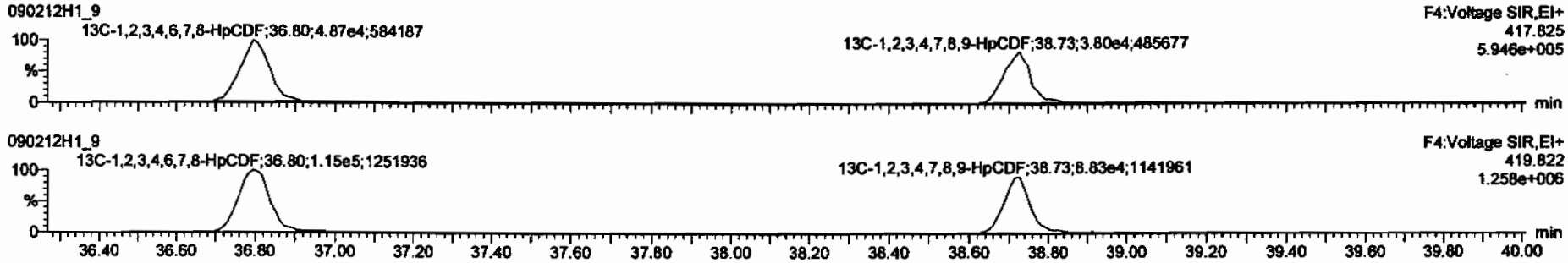

DPE4

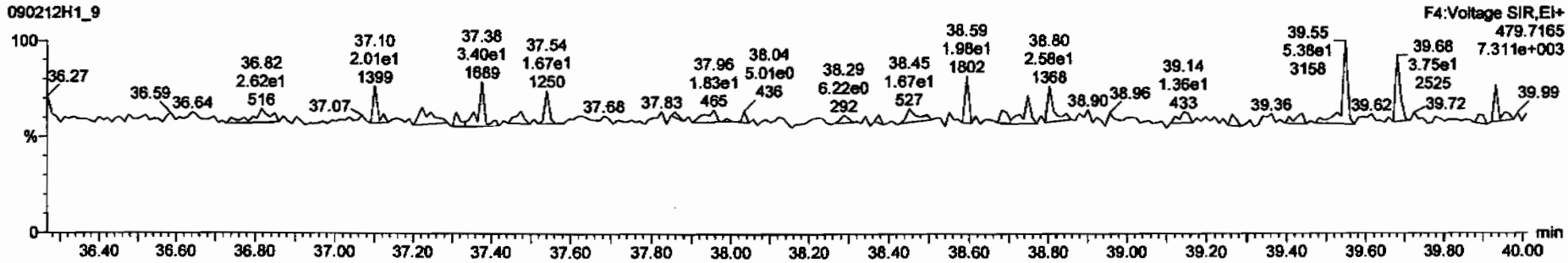

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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OCDF

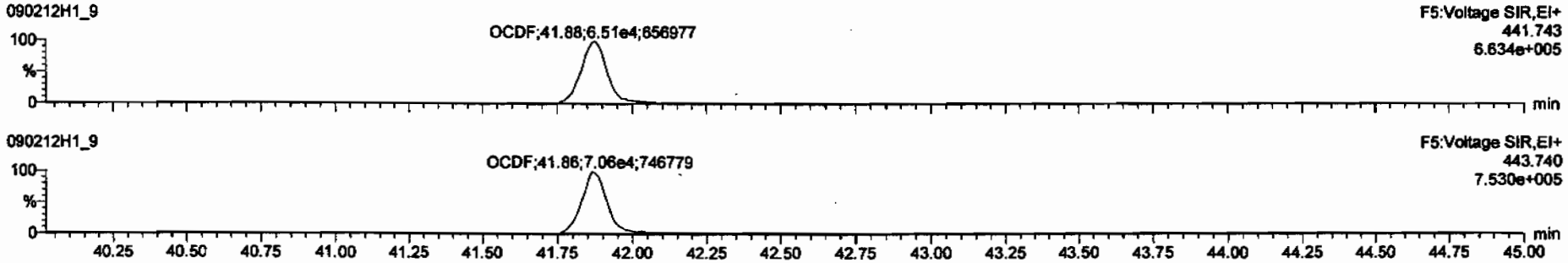

13C-OCDF

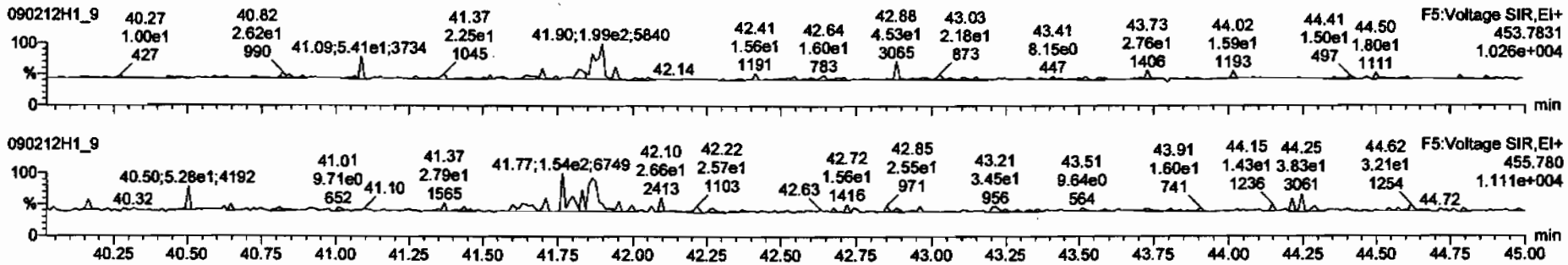

DPE5

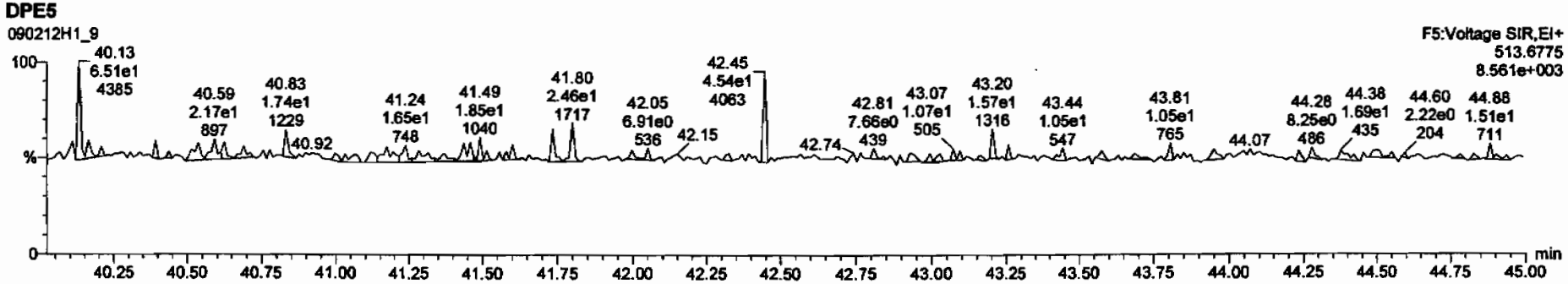

Vista Analytical Laboratory VG-10

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

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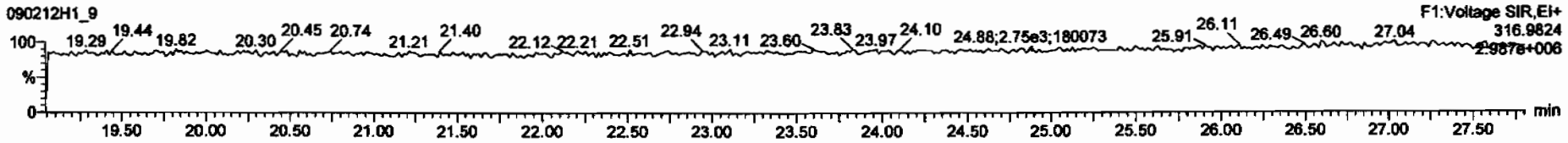

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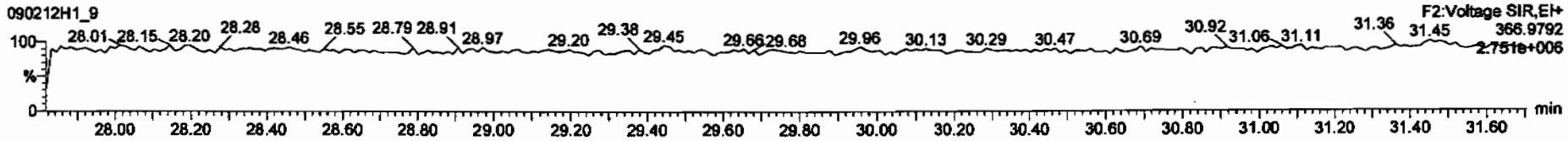

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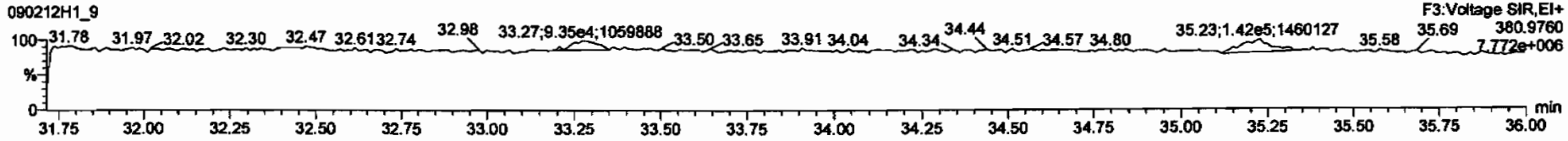

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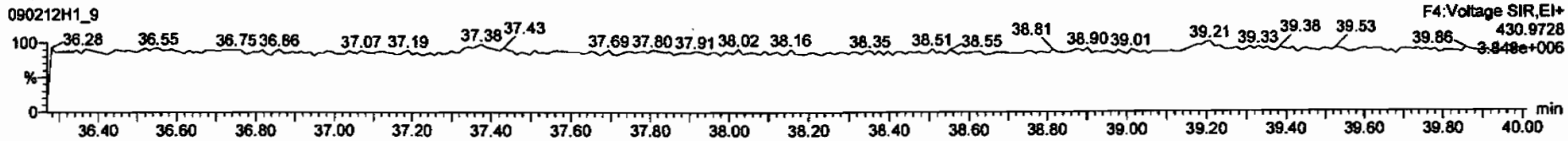

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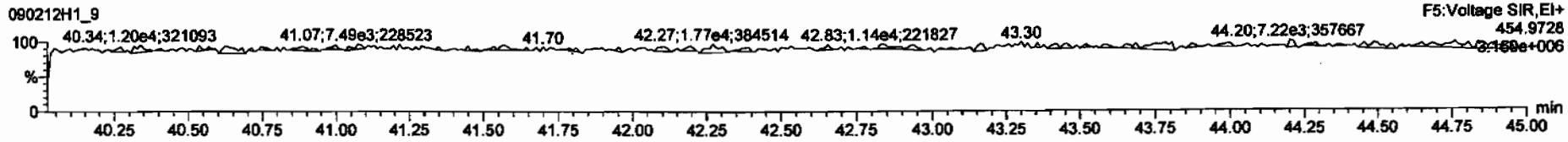

Friday, June 26, 2009

REQUEST NUMBER: 09-2501

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2501

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	EPA:906.0	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2501

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	HASL-300:ISOPU	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	HASL-300:ISOU	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2501

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2501C

REQUEST NUMBER: 09-2501

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6519	1	POLY	H3	Ice	R
CAMO-09-6518	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6518	1	POLY	H3	Ice	R
CAMO-09-6527	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6527	1	POLY	H3	Ice	R
CAMO-09-6529	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6529	1	POLY	H3	Ice	R
CAMO-09-6528	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6528	1	POLY	H3	Ice	R
CAMO-09-6531	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6531	1	POLY	H3	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
	6/26/09	3:00			

Printed Name Signature Printed Name Signature

Printed Name Signature Printed Name Signature

Printed Name Signature Printed Name Signature

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6528

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	QbT2
TIME COLLECTED (HH:MM)		1220	SUB-MEDIA:	UA	ok
PRS ID:		AG 6.24.09 ~~50100~~ 50-006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605088	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	2.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Extremely weathered tan/white tuff, roots breaking thru tuff

SAMPLE COMMENTS: Interface @ ~~1.5~~ AG 6.24.09 1.5' bgs

LOCATION DESC: 50-006(d) - 05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 23 dpm

β/γ ≤ 657 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{2.0}$ ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.24.09	(Printed Name) Sherri Sherwood	6/24/09
(Signature) [signature]	1640	(Signature) Sherri Sherwood	4:57
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6531

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	OK
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	UNK	mo-605085	FIELD QC TYPE:	FD	OK
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER~~ GLASS	~~Ice~~ AG 6.24.09	N	
1	15 - Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-6518

Brown sediment sand → silt slightly moist

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d), below RLW outfall in main drainage of canyon

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 75 dpm

β/γ ≤ 905 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) ~~A. Goumas~~ J.B 6/24/09 J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.24.09	(Printed Name) Sherri Sherwood	6/24/09
(Signature) A. Goumas	1640	(Signature) Sherri Sherwood	4:57

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6527

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1305	SUB-MEDIA:	UA	ok
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605088	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.24.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
1	↓	GS+ISOPU+ISO U+SR90	1 LITER POLY	None	↓	
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown Sand → silt sediment over weathered tuff with some root material

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d) - 05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 975 dpm

PID Ambient Reading = 0.0 / 1.3 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) [signature]	6/24/09 4:51
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6533

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1420	SUB-MEDIA:	OTHER	
PRS ID:		50-006(d)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605085	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	W		EXCAVATED: YES / NO / (NA)		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / (NA)

BOREHOLE: YES / NO / (NA) BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~2~~		~~8290~~	~~1 LITER AMBER GLASS~~	~~Ice~~ AG 3/31/09	N	
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-6518

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d)-06

FIELD SCREENING/MEASUREMENT RESULTS: None

COLLECTED BY (PRINT) J. Branch **REVIEWED BY (PRINT)** A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch (Signature) [signature]	6/24/09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6519

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	QBT2
TIME COLLECTED (HH:MM)		1600	SUB-MEDIA:	UA	OK
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605085	OK	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	J.B. 6/24/09 ~~1.0~~ 2.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Regular~~ 15-Day J.B. 6/24/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown/Grey, highly indurated, wet tuff

~~FR: CAMO-09-6533~~ J.B. 6/24/09

SAMPLE COMMENTS: Tuff interface @ 1.5' bgs. Power auger attempt did not advance in tuff. Cutrite auger and Breaker Bar used to collect adequate sample material.

LOCATION DESC: 50-006(d)-06

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 17$ dpm

$\beta/\gamma \leq 1624$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/24/09	(Printed Name) S. MARCIAN	6/24/09
(Signature)	1640	(Signature)	1640

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6518

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	ok
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605085	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.24.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1	↓	GS+ISOPU+ISOU+SR90	1 LITER POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS-GEL	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Brown sediment sand → silt slightly moist

FD: CAMO-09-6531 FR: CAMO-09-6533

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d) - 06, below RLW outfall in main canyon drainage

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 75 dpm

β/γ ≤ 705 dpm

PID ambient / Reading : 0.0 / 0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6/24/09	(Printed Name) S. MARCZAK	6/24/09
(Signature) [signature]	1640	(Signature) [signature]	1640

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6529

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	qbt2
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	UA	ok
PRS ID:		50 - 006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605088	OK	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	3.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	~~4.0 3.75~~ 4.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Extremely indurated tan tuff

FTB: camo-09-6535

SAMPLE COMMENTS: Power auger refusal @ 3.5' bgs, used breaker bar & nutrite bucket to scrape enough sample TD @ 4.0, hand auger refusal @ 4.0' bgs

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 167 dpm → Allowed to decay for one hour

β/γ ≤ 3820 dpm

PID Ambient / Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas **REVIEWED BY (PRINT)** J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6/24/09	(Printed Name) S. MADZAK	6/26/09
(Signature) [signature]	1640	(Signature) [signature]	1640
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6535

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	OTHER	
PRS ID:		50-006(d)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605088	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / (NA)		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / (NA)

BOREHOLE: YES / NO / (NA) BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~ 2	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6529

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARZAN (Signature) [signature]	6/24/09 1640
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2501 VALIDATION DATE: 8/3/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☒ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. All gamma spec sample results that were rejected by the laboratory due to interference or low abundance were qualified R,R5a. In the QC samples, the laboratory also rejected several results. No sample data were qualified as a result.
2. All reported sample results that were ≤ the MDCs were qualified U,R5.
3. It should be noted that an MS was not analyzed for tritium. However, an LCS was analyzed and, thus, no sample data were qualified.
4. As noted by the laboratory, samples CAMO-09-6518, -6528, -6529, and -6531 did not meet the detection limits for alpha spec U-235 due to the high standard deviation. As also noted by the laboratory, sample -6527 did not meet the resolution requirement of having a full -width half-maximum of 100 keV or less. However, the tracer yield requirements and detection limits were met. No sample data were qualified as a result.

DATA VALIDATION COVER SHEET

5119-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

Reviewed by: Mary Donivan Level: I Date: 08/03/09

VALIDATOR'S SIGNATURE: DATE: 8/3/09

Form 5119-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☐	☒	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6519	Project:	LANL01004
Sample ID:	232511001	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	20.8%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		6.50		0.0224	+/-0.330	0.050	pCi/g		AXD2	07/09/09	1737	882525	1
Plutonium-239/240		5.81		0.0269	+/-0.296	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.50		0.269	+/-0.141	0.100	pCi/g		AXD2	07/15/09	2113	885014	2
Uranium-235/236	U	0.0876	U,R5	0.123	+/-0.028	0.100	pCi/g						
Uranium-238		1.17		0.105	+/-0.118	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241		8.90		0.267	+/-0.456	0.200	pCi/g		MXR1	07/07/09	1010	881220	5
Bismuth-211	UI	4.46	R,R5a	1.17	+/-0.518		pCi/g						
Bismuth-214		1.59		0.289	+/-0.162	0.200	pCi/g						
Cadmium-109	UI	3.05	R,R5a	2.24	+/-0.810		pCi/g						
Cerium-139	U	0.00716	U,R5	0.125	+/-0.0363	0.050	pCi/g						
Cesium-134	U	0.113	U,R5	0.118	+/-0.0308	0.100	pCi/g						
Cesium-137		73.3		0.140	+/-2.79	0.100	pCi/g						
Cobalt-60	U	0.0408	U,R5	0.102	+/-0.0291	0.100	pCi/g						
Europium-152	U	-0.0333		0.572	+/-0.175	0.200	pCi/g						
Lanthanum-140	U	-0.109		0.118	+/-0.0474		pCi/g						
Lead-212		1.90		0.286	+/-0.129	0.100	pCi/g						
Lead-214		1.55		0.411	+/-0.185	0.100	pCi/g						
Mercury-203	U	-0.0157	U,R5	0.199	+/-0.0566	0.100	pCi/g						
Potassium-40		32.2		0.578	+/-1.41	1.00	pCi/g						
Radium-223	U	0.647	U,R5	3.68	+/-1.05		pCi/g						
Radium-224	UI	16.1	R,R5a	3.91	+/-1.30		pCi/g						
Radium-226		1.59		0.289	+/-0.162		pCi/g						
Radium-228		1.99		0.304	+/-0.198	0.500	pCi/g						
Ruthenium-106	U	-0.158	U,R5	1.34	+/-0.404	0.800	pCi/g						
Sodium-22	U	0.0131		0.0987	+/-0.0294	0.080	pCi/g						
Strontium-85	U	0.113		0.203	+/-0.0675		pCi/g						
Thallium-208		0.670		0.151	+/-0.0768	0.080	pCi/g						
Thorium-227	U	0.478	U,R5	1.97	+/-0.585		pCi/g						
Thorium-231	U	0.647	U,R5	3.68	+/-1.05		pCi/g						
Thorium-234	UI	2.47	R,R5a	2.22	+/-0.788	2.00	pCi/g						
Tin-113	U	0.00348	U,R5	0.292	+/-0.0847	0.100	pCi/g						
Uranium-235	U	0.0725		0.853	+/-0.246	0.500	pCi/g						
Yttrium-88	U	-0.0276		0.0684	+/-0.0261	0.100	pCi/g						

LMF
8/3/09

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6519
Sample ID: 232511001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting													
SR90 "Dry Weight Corrected"													
Strontium-90	U	0.344	U,R5	0.416	+/-0.136	0.500	pCi/g		JXR1	07/04/09	1459	881413	6
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		982		231	+/-117	250	pCi/L		KXK2	07/14/09	1631	883018	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, U-02-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	EPA 905.0 Modified
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	102	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	60.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD

LMF
8/3/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6518
Sample ID: 232511002
Matrix: R
Collect Date: 24-JUN-09
Receive Date: 27-JUN-09
Collector: Client
Moisture: 15.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		2.70		0.0215	+/-0.142	0.050	pCi/g		AXD2	07/09/09	1737	882525	1
Plutonium-239/240		14.8		0.0258	+/-0.731	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.09		0.290	+/-0.115	0.100	pCi/g		AXD2	07/15/09	2113	885014	2
Uranium-235/236	U	0.0789	U,R5	0.133	+/-0.030	0.100	pCi/g						
Uranium-238		1.37		0.113	+/-0.134	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241		10.0		0.409	+/-0.535	0.200	pCi/g		MXR1	07/07/09	1019	881220	5
Bismuth-211	UI	3.57	R,R5a	0.374	+/-0.278		pCi/g						
Bismuth-214		1.13		0.118	+/-0.0892	0.200	pCi/g						
Cadmium-109	UI	3.31	R,R5a	1.59	+/-0.547		pCi/g						
Cerium-139	U	-0.00796	U,R5	0.0532	+/-0.0156	0.050	pCi/g						
Cesium-134	UI	0.0919	R,R5a	0.0888	+/-0.026	0.100	pCi/g						
Cesium-137		4.16		0.0678	+/-0.156	0.100	pCi/g						
Cobalt-60	U	-0.0246	U,R5	0.061	+/-0.0198	0.100	pCi/g						
Europium-152	U	0.0484		0.189	+/-0.0605	0.200	pCi/g						
Lanthanum-140	U	-0.00054		0.112	+/-0.0389		pCi/g						
Lead-212		1.55		0.101	+/-0.0908	0.100	pCi/g						
Lead-214		1.24		0.131	+/-0.102	0.100	pCi/g						
Mercury-203	U	0.00969	U,R5	0.0818	+/-0.0233	0.100	pCi/g						
Potassium-40		29.8		0.541	+/-1.40	1.00	pCi/g						
Radium-223	U	0.189	U,R5	1.17	+/-0.376		pCi/g						
Radium-224	UI	3.34	R,R5a	1.14	+/-0.624		pCi/g						
Radium-226		1.13		0.118	+/-0.0892		pCi/g						
Radium-228		1.49		0.202	+/-0.166	0.500	pCi/g						
Ruthenium-106	U	-0.0232	U,R5	0.532	+/-0.155	0.800	pCi/g						
Sodium-22	U	-0.03		0.071	+/-0.0228	0.080	pCi/g						
Strontium-85	U	0.0379		0.0676	+/-0.0217		pCi/g						
Thallium-208		0.478		0.0612	+/-0.0421	0.080	pCi/g						
Thorium-227	U	-0.353	U,R5	0.675	+/-0.199		pCi/g						
Thorium-231	U	0.189		1.17	+/-0.376		pCi/g						
Thorium-234	U	2.41		2.50	+/-1.04	2.00	pCi/g						
Tin-113	U	0.00551		0.0893	+/-0.0259	0.100	pCi/g						
Uranium-235	U	-0.145		0.370	+/-0.111	0.500	pCi/g						
Yttrium-88	U	-0.000653		0.0572	+/-0.0173	0.100	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6518
Sample ID: 232511002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting													
SR90 "Dry Weight Corrected"													
Strontium-90		0.711		0.187	+/-0.112	0.500	pCi/g		JXR1	07/10/09	1725	881413	6
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	192	U,R5	233	+/-74.2	250	pCi/L		KXK2	07/14/09	1718	883018	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, U-02-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	EPA 905.0 Modified
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	93.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	91.4	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	62.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6527	Project:	LANL01004
Sample ID:	232511003	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	5.87%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	-0.0115	U,R5	0.0236	+/-0.00615	0.050	pCi/g		AXD2	07/09/09	1737	882525	1
Plutonium-239/240	U	0.0128	U,R5	0.0283	+/-0.00484	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.06		0.305	+/-0.114	0.100	pCi/g		AXD2	07/15/09	2113	885014	2
Uranium-235/236	U	0.0663	U,R5	0.140	+/-0.0314	0.100	pCi/g						
Uranium-238		1.13		0.119	+/-0.119	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.175	U,R5	0.318	+/-0.093	0.200	pCi/g		MXR1	07/07/09	1050	881220	5
Bismuth-211	UI	4.29	R,R5a	0.369	+/-0.256		pCi/g						
Bismuth-214		1.32		0.106	+/-0.0891	0.200	pCi/g						
Cadmium-109	UI	3.49	R,R5a	1.25	+/-0.539		pCi/g						
Cerium-139	U	-0.00597	U,R5	0.0484	+/-0.0136	0.050	pCi/g						
Cesium-134	UI	0.135	R,R5a	0.0924	+/-0.0267	0.100	pCi/g						
Cesium-137	U	0.033	U,R5	0.0724	+/-0.0201	0.100	pCi/g						
Cobalt-60	U	-0.0215		0.0693	+/-0.0216	0.100	pCi/g						
Europium-152	U	-0.0647		0.165	+/-0.0502	0.200	pCi/g						
Lanthanum-140	U	-0.113		0.0845	+/-0.036		pCi/g						
Lead-212		1.88		0.0917	+/-0.0895	0.100	pCi/g						
Lead-214		1.49		0.129	+/-0.0973	0.100	pCi/g						
Mercury-203	U	0.0145	U,R5	0.0688	+/-0.0195	0.100	pCi/g						
Potassium-40		34.2		0.486	+/-1.72	1.00	pCi/g						
Radium-223	U	-0.139	U,R5	1.06	+/-0.358		pCi/g						
Radium-224	UI	4.47	R,R5a	1.04	+/-0.557		pCi/g						
Radium-226		1.32		0.106	+/-0.0891		pCi/g						
Radium-228		1.75		0.195	+/-0.205	0.500	pCi/g						
Ruthenium-106	U	-0.0804	U,R5	0.519	+/-0.154	0.800	pCi/g						
Sodium-22	U	0.0175		0.0786	+/-0.0226	0.080	pCi/g						
Strontium-85	U	0.0244		0.058	+/-0.019		pCi/g						
Thallium-208		0.555		0.0609	+/-0.0421	0.080	pCi/g						
Thorium-227	U	0.284	U,R5	0.646	+/-0.180		pCi/g						
Thorium-231	U	-0.139		1.06	+/-0.358		pCi/g						
Thorium-234	U	1.88		2.82	+/-0.797	2.00	pCi/g						
Tin-113	U	0.0254		0.0756	+/-0.0216	0.100	pCi/g						
Uranium-235	U	0.0729		0.357	+/-0.104	0.500	pCi/g						
Yttrium-88	U	0.040		0.062	+/-0.0155	0.100	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6527
Sample ID: 232511003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting													
SR90 "Dry Weight Corrected"													
Strontium-90	U	0.109	U,R5	0.190	+/-0.0599	0.500	pCi/g		JXR1	07/04/09	1459	881413	6
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium		243		232	+/-76.3	250	pCi/L		KXK2	07/14/09	1805	883018	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, U-02-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	EPA 905.0 Modified
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	89.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	86.9	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	65.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
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- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6529
Sample ID: 232511004
Matrix: R
Collect Date: 24-JUN-09
Receive Date: 27-JUN-09
Collector: Client
Moisture: 4.85%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		31.8		0.527	+/-2.34	0.050	pCi/g		AXD2	07/16/09	1435	884188	1
Plutonium-239/240		114		0.641	+/-7.79	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.36		0.276	+/-0.133	0.100	pCi/g		AXD2	07/15/09	2113	885014	4
Uranium-235/236	U	0.0675	U,R5	0.127	+/-0.023	0.100	pCi/g						
Uranium-238		1.00		0.107	+/-0.106	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241		235		1.13	+/-8.42	0.200	pCi/g		MXR1	07/07/09	1053	881220	7
Bismuth-211	UI	3.65	R,R5a	0.984	+/-0.458		pCi/g						
Bismuth-214		1.36		0.239	+/-0.131	0.200	pCi/g						
Cadmium-109	U	2.08	U,R5	2.51	+/-1.03		pCi/g						
Cerium-139	U	0.0108		0.111	+/-0.032	0.050	pCi/g						
Cesium-134	U	0.0491		0.0795	+/-0.0219	0.100	pCi/g						
Cesium-137		89.0		0.128	+/-2.92	0.100	pCi/g						
Cobalt-60	UI	0.0839	R,R5a	0.081	+/-0.0245	0.100	pCi/g						
Europium-152	U	0.166	U,R5	0.483	+/-0.149	0.200	pCi/g						
Lanthanum-140	U	-0.0167	U,R5	0.121	+/-0.037		pCi/g						
Lead-212		1.58		0.242	+/-0.113	0.100	pCi/g						
Lead-214		1.27		0.347	+/-0.163	0.100	pCi/g						
Mercury-203	U	0.00665	U,R5	0.174	+/-0.0492	0.100	pCi/g						
Potassium-40		30.8		0.556	+/-1.36	1.00	pCi/g						
Radium-223	U	-1.59	U,R5	3.06	+/-0.900		pCi/g						
Radium-224	U	2.70	U,R5	2.74	+/-0.821		pCi/g						
Radium-226		1.36		0.239	+/-0.131		pCi/g						
Radium-228		1.68		0.215	+/-0.169	0.500	pCi/g						
Ruthenium-106	U	-0.0585	U,R5	1.14	+/-0.330	0.800	pCi/g						
Sodium-22	U	-0.0435	U,R5	0.0614	+/-0.0206	0.080	pCi/g						
Strontium-85	UI	0.187	R,R5a	0.165	+/-0.0541		pCi/g						
Thallium-208		0.543		0.132	+/-0.0649	0.080	pCi/g						
Thorium-227	U	0.499	U,R5	1.68	+/-0.470		pCi/g						
Thorium-231	U	-1.59		3.06	+/-0.900		pCi/g						
Thorium-234	U	1.80		4.24	+/-1.26	2.00	pCi/g						
Tin-113	U	0.000199		0.239	+/-0.0698	0.100	pCi/g						
Uranium-235	U	-0.113		0.734	+/-0.212	0.500	pCi/g						
Yttrium-88	U	-0.00301		0.0409	+/-0.0127	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6529
Sample ID: 232511004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting												
SR90 "Dry Weight Corrected"												
Strontium-90		10.0	0.111	+/-1.06	0.500	pCi/g		JXR1	07/16/09	1733	885121	8
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		14100	338	+/-1040	250	pCi/L		KXK2	07/14/09	1852	883018	10

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	EML HASL 300, 4.5.2.3
8	EPA 905.0 Modified
9	EPA 905.0 Modified
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	105	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.2	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	84.1	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6528
Sample ID: 232511005
Matrix: R
Collect Date: 24-JUN-09
Receive Date: 27-JUN-09
Collector: Client
Moisture: 5.76%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		19.4		0.595	+/-1.57	0.050	pCi/g		AXD2	07/16/09	1435	884188	1
Plutonium-239/240		136		0.724	+/-9.51	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		2.54		0.282	+/-0.220	0.100	pCi/g		AXD2	07/15/09	2113	885014	4
Uranium-235/236	U	0.107	U,R5	0.129	+/-0.0334	0.100	pCi/g						
Uranium-238		1.05		0.110	+/-0.110	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241		111		0.438	+/-5.62	0.200	pCi/g		MXR1	07/07/09	1054	881220	7
Bismuth-211	UI	3.71	R,R5a	0.571	+/-0.290		pCi/g						
Bismuth-214		1.16		0.173	+/-0.115	0.200	pCi/g						
Cadmium-109	UI	3.51	R,R5a	1.17	+/-0.491		pCi/g						
Cerium-139	U	-0.0172	U,R5	0.0687	+/-0.0204	0.050	pCi/g						
Cesium-134	U	0.0594	U,R5	0.102	+/-0.028	0.100	pCi/g						
Cesium-137		18.6		0.0855	+/-0.778	0.100	pCi/g						
Cobalt-60	U	0.0564	U,R5	0.0903	+/-0.0253	0.100	pCi/g						
Europium-152	U	0.0774		0.276	+/-0.0907	0.200	pCi/g						
Lanthanum-140	U	-0.0315		0.146	+/-0.0465		pCi/g						
Lead-212		1.59		0.141	+/-0.0961	0.100	pCi/g						
Lead-214		1.29		0.199	+/-0.106	0.100	pCi/g						
Mercury-203	U	0.0328	U,R5	0.106	+/-0.0298	0.100	pCi/g						
Potassium-40		26.2		0.665	+/-1.17	1.00	pCi/g						
Radium-223	U	-0.353	U,R5	1.83	+/-0.540		pCi/g						
Radium-224	U	1.53	U,R5	1.61	+/-0.551		pCi/g						
Radium-226		1.16		0.173	+/-0.115		pCi/g						
Radium-228		1.83		0.251	+/-0.180	0.500	pCi/g						
Ruthenium-106	U	0.0972	U,R5	0.791	+/-0.232	0.800	pCi/g						
Sodium-22	U	-0.00804	U,R5	0.0779	+/-0.0235	0.080	pCi/g						
Strontium-85	UI	0.191	R,R5a	0.117	+/-0.0351		pCi/g						
Thallium-208		0.515		0.0866	+/-0.0597	0.080	pCi/g						
Thorium-227	U	-0.0286	U,R5	1.02	+/-0.290		pCi/g						
Thorium-231	U	-0.353		1.83	+/-0.540		pCi/g						
Thorium-234	U	1.14		1.20	+/-0.461	2.00	pCi/g						
Tin-113	U	0.0133		0.139	+/-0.0412	0.100	pCi/g						
Uranium-235	U	0.0388		0.489	+/-0.142	0.500	pCi/g						
Yttrium-88	U	-0.00543		0.0602	+/-0.0185	0.100	pCi/g						

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Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6528
Sample ID: 232511005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting												
SR90 "Dry Weight Corrected"												
Strontium-90		3.69	0.106	+/-0.388	0.500	pCi/g		JXR1	07/16/09	1733	885121	8
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		311	232	+/-79.6	250	pCi/L		KXK2	07/14/09	1939	883018	10

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	EML HASL 300, 4.5.2.3
8	EPA 905.0 Modified
9	EPA 905.0 Modified
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	92.2	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	97.5	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	86.3	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample

LMF
8/3/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6531
Sample ID: 232511006
Matrix: R
Collect Date: 24-JUN-09
Receive Date: 27-JUN-09
Collector: Client
Moisture: 15%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		2.98		0.0215	+/-0.156	0.050	pCi/g		AXD2	07/09/09	1737	882525	1
Plutonium-239/240		8.56		0.0258	+/-0.427	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.906		0.278	+/-0.0998	0.100	pCi/g		AXD2	07/15/09	2113	885014	2
Uranium-235/236	U	0.0454	U,R5	0.128	+/-0.0216	0.100	pCi/g						
Uranium-238		1.17		0.108	+/-0.119	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241		8.93		0.403	+/-0.421	0.200	pCi/g		MXR1	07/07/09	1058	881220	5
Bismuth-211	UI	4.04	R,R5a	0.371	+/-0.256		pCi/g						
Bismuth-214		1.09		0.109	+/-0.0832	0.200	pCi/g						
Cadmium-109	UI	3.81	R,R5a	1.37	+/-0.502		pCi/g						
Cerium-139	U	0.0018	U,R5	0.055	+/-0.0159	0.050	pCi/g						
Cesium-134	UI	0.110	R,R5a	0.0836	+/-0.0352	0.100	pCi/g						
Cesium-137		4.73		0.0692	+/-0.166	0.100	pCi/g						
Cobalt-60	U	-0.023	U,R5	0.0487	+/-0.0164	0.100	pCi/g						
Europium-152	U	0.121		0.187	+/-0.0657	0.200	pCi/g						
Lanthanum-140	U	-0.0131		0.0971	+/-0.0306		pCi/g						
Lead-212		1.56		0.102	+/-0.0732	0.100	pCi/g						
Lead-214		1.40		0.136	+/-0.0962	0.100	pCi/g						
Mercury-203	U	8.39E-05	U,R5	0.0764	+/-0.0219	0.100	pCi/g						
Potassium-40		31.8		0.499	+/-1.57	1.00	pCi/g						
Radium-223	U	0.100	U,R5	1.25	+/-0.409		pCi/g						
Radium-224	UI	4.93	R,R5a	1.16	+/-0.658		pCi/g						
Radium-226		1.09		0.109	+/-0.0832		pCi/g						
Radium-228		1.61		0.189	+/-0.154	0.500	pCi/g						
Ruthenium-106	U	0.331	U,R5	0.547	+/-0.153	0.800	pCi/g						
Sodium-22	U	-0.0379	U,R5	0.0566	+/-0.0193	0.080	pCi/g						
Strontium-85	UI	0.0964	R,R5a	0.0737	+/-0.0221		pCi/g						
Thallium-208		0.477		0.0625	+/-0.0374	0.080	pCi/g						
Thorium-227	U	-0.283	U,R5	0.688	+/-0.212		pCi/g						
Thorium-231	U	0.100		1.25	+/-0.409		pCi/g						
Thorium-234	U	1.60		2.40	+/-0.817	2.00	pCi/g						
Tin-113	U	-0.0681		0.0828	+/-0.0255	0.100	pCi/g						
Uranium-235	U	0.228		0.407	+/-0.116	0.500	pCi/g						
Yttrium-88	U	0.0192		0.0464	+/-0.0121	0.100	pCi/g						

LMF
8/3/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6531
Sample ID: 232511006

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting												
SR90 "Dry Weight Corrected"												
Strontium-90		0.619	0.190	+/-0.102	0.500	pCi/g		JXR1	07/10/09	1724	881413	6
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		10400	230	+/-757	250	pCi/L		KXK2	07/14/09	2026	883018	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, U-02-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	EPA 905.0 Modified
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	95.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	98.5	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	67.9	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD

LMF
8/3/09

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2501C

REQUEST NUMBER: 09-2501

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232511

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6519	1	POLY	H3	Ice	R
CAMO-09-6518	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6518	1	POLY	H3	Ice	R
CAMO-09-6527	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6527	1	POLY	H3	Ice	R
CAMO-09-6529	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6529	1	POLY	H3	Ice	R
CAMO-09-6528	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6528	1	POLY	H3	Ice	R
CAMO-09-6531	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6531	1	POLY	H3	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		6/26/09	3:00	Patricia Dent	P. Dent	6/27/09	09:05
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Friday, June 26, 2009

REQUEST NUMBER: 09-2501

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2501
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009
TURNAROUND/REPORT DUE: 7/11/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	EPA:906.0	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2501

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	HASL-300:ISOPU	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	HASL-300:ISOU	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2501

GEL LABORATORIES LLC
a member of The GEL Group Inc

PO Box 30712 Charleston SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178
www.gel.com

June 29, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232511
SDG: 09-2501

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 27, 2009, and analyzed for Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for
Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2501
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232511
SDG: 09-2501

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232511
SDG # : 09-2501

June 29, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 27, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. The containers for radiochemistry were received at 24C temperature.

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232511001	CAMO-09-6519
232511002	CAMO-09-6518
232511003	CAMO-09-6527
232511004	CAMO-09-6529
232511005	CAMO-09-6528
232511006	CAMO-09-6531

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for

Valerie Davis

Project Manager

List of current GEL Certifications as of 29 June 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2501C

REQUEST NUMBER: 09-2501

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232511

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6519	1	POLY	H3	Ice	R
CAMO-09-6518	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6518	1	POLY	H3	Ice	R
CAMO-09-6527	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6527	1	POLY	H3	Ice	R
CAMO-09-6529	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6529	1	POLY	H3	Ice	R
CAMO-09-6528	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6528	1	POLY	H3	Ice	R
CAMO-09-6531	1	POLY	GS+ISOPU+ISOU+SR90	None	R
CAMO-09-6531	1	POLY	H3	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	6/26/09	3:00	Patricia Dent P. Dent	6/27/09	09:05
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By:	Date	Time	Remarks:
Printed Name / Signature			

Friday, June 26, 2009

REQUEST NUMBER: 09-2501

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2501
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009
TURNAROUND/REPORT DUE: 7/11/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	EPA:906.0	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2501

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	HASL-300:ISOPU	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	HASL-300:ISOU	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2501

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2501**
Received By: Patricia Dent	**Date Received: JUNE 27, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **20 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,6,24C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5723 6C
7209 7847 5701 2C
7209 7847 5712 24C
7209 7847 5734 2C

PM (or PMA) review: Initials JCC Date 27JUN09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA03 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 50.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: SB010AWR2A0512BGD0

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7209 7847 5723 Form 0201

Deliver By: 27JUN09

.29407 -SC-US

CHS A1

X0 CHSA

Part # 156148-434 NRT V3 04/09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA03 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 56.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: SB010AWR2A0512BGD0

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7209 7847 5701 Form 0201

Deliver By: 27JUN09

.29407 -SC-US

CHS A1

X0 CHSA

Part # 156148-434 NRT V3 04/09

ORIGIN ID: SAFA (505) 665-8960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA60 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 56.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 68018ANR2A8512BGD8

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7289 7847 5712 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

1561:48-434 NRIT V3 04-09

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1561:48-434 NRIT V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

RADIOLOGICAL ANALYSIS

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882525
Prep Batch Number:	881119

Sample ID	Client ID
232511001	CAMO-09-6519
232511002	CAMO-09-6518
232511003	CAMO-09-6527
232511006	CAMO-09-6531
1201874395	Method Blank (MB)
1201874396	232511006(CAMO-09-6531) Sample Duplicate (DUP)
1201874397	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874395 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232511006 (CAMO-09-6531). The QC was from LANL work order 232511.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	884188
Prep Batch Number:	881119

Sample ID	Client ID
232511004	CAMO-09-6529
232511005	CAMO-09-6528
1201878410	Method Blank (MB)
1201878411	232511005(CAMO-09-6528) Sample Duplicate (DUP)
1201878412	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201878410 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232511005 (CAMO-09-6528). The QC was from LANL work order 232511.

QC Information
All of the QC samples met the required acceptance limits.

CSU

The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples 232511004 (CAMO-09-6529) and 232511005 (CAMO-09-6528) were reprepped due to high activity. Samples 1201878411 (CAMO-09-6528), 232511004 (CAMO-09-6529) and 232511005 (CAMO-09-6528) were recounted for a shorter length of time in order to reduce tailing from the high levels of Pu-239/240 present in the samples.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
Manual integrations of alpha spectroscopy spectra 1201878411 (CAMO-09-6528) and 232511004 (CAMO-09-6529) were performed to fully separate counts in Regions of Interest which would have been biased.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	885014
Prep Batch Number:	881119

Sample ID	Client ID
232511001	CAMO-09-6519
232511002	CAMO-09-6518
232511003	CAMO-09-6527
232511004	CAMO-09-6529
232511005	CAMO-09-6528
232511006	CAMO-09-6531
1201880401	Method Blank (MB)
1201880402	232511006(CAMO-09-6531) Sample Duplicate (DUP)
1201880403	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201880401 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232511006 (CAMO-09-6531). The QC was from LANL work order 232511.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Batch was reprepped to verify results.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 712253 was generated due to RDL less than MDA, Failed Recovery for Surrogate or Tracer and Other. 1. Samples 232069002, 232076001, 232076002, 232076003, 232424001, 232511002, 232511004, 232511005, and 232511006 do not meet the detection limits for U-235 due to the high standard deviation. 2. Sample 232069002 does not meet the client tracer yield requirements, however it does meet the GEL standard tracer yield requirements and has over 400 tracer counts. The sample was analyzed twice with similar results. 3. Sample 232511003 does not meet the resolution requirements of having a full width half maximum of 100 keV or less, however the tracer yield requirements and detection limits were met. 1. When a blank population is performed, the MDA is greater than the detection limit due to high standard deviation. Reporting results. 2. Project Manager notified. Reporting results. 3. Reporting results.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881220
Prep Batch Number:	881119

Sample ID	Client ID
232511001	CAMO-09-6519
232511002	CAMO-09-6518
232511003	CAMO-09-6527
232511004	CAMO-09-6529
232511005	CAMO-09-6528
232511006	CAMO-09-6531
1201871426	Method Blank (MB)
1201871427	232511001(CAMO-09-6519) Sample Duplicate (DUP)
1201871428	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, November 2008, January 2009, February 2009 and April 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232511001 (CAMO-09-6519). The QC was from LANL work order 232511.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank, 1201871426 (MB), result for Ra-224 is greater than 1.65 times the CSU but less than the MDC.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232511001	CAMO-09-6519
			232511002	CAMO-09-6518
			232511003	CAMO-09-6527
			232511004	CAMO-09-6529
			232511005	CAMO-09-6528
			232511006	CAMO-09-6531
			1201871427	CAMO-09-6519(232511001DUP)
		Cadmium-109	232511001	CAMO-09-6519
			232511003	CAMO-09-6527
			232511005	CAMO-09-6528
			232511006	CAMO-09-6531
			1201871427	CAMO-09-6519(232511001DUP)
		Radium-224	232511002	CAMO-09-6518
			232511003	CAMO-09-6527
			232511006	CAMO-09-6531
			1201871427	CAMO-09-6519(232511001DUP)

UI	Data rejected due to low abundance.	Cadmium-109	232511002	CAMO-09-6518
		Cesium-134	232511002	CAMO-09-6518
			232511003	CAMO-09-6527
			232511006	CAMO-09-6531
			1201871427	CAMO-09-6519(232511001DUP)
		Cobalt-60	232511004	CAMO-09-6529
		Radium-224	232511001	CAMO-09-6519
		Strontium-85	232511004	CAMO-09-6529
			232511005	CAMO-09-6528
			232511006	CAMO-09-6531
			1201871427	CAMO-09-6519(232511001DUP)
		Thorium-234	232511001	CAMO-09-6519

Method/Analysis Information

Product:	**SR90**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881413
Prep Batch Number:	881119

Sample ID	**Client ID**
232511001	CAMO-09-6519
232511002	CAMO-09-6518
232511003	CAMO-09-6527
232511006	CAMO-09-6531
1201871820	Method Blank (MB)
1201871821	232511001(CAMO-09-6519) Sample Duplicate (DUP)
1201871822	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in January 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1201871820 (MB) and 1201871822 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232511001 (CAMO-09-6519). The QC was from LANL work order 232511.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples 1201871820 (MB) and 1201871821 (CAMO-09-6519) were recounted due to high MDAs. Samples 1201871821 (CAMO-09-6519), 232511002 (CAMO-09-6518), 232511004 (CAMO-09-6529), 232511005 (CAMO-09-6528) and 232511006 (CAMO-09-6531) were recounted to verify sample results. Second counts being reported.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation

Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**SR90**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	885121
Prep Batch Number:	881119

Sample ID	Client ID
232511004	CAMO-09-6529
232511005	CAMO-09-6528
1201880683	Method Blank (MB)
1201880684	232511004(CAMO-09-6529) Sample Duplicate (DUP)
1201880685	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in January 2009.

Standards Information

Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1201880683 (MB) and 1201880685 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232511004 (CAMO-09-6529). The QC was from LANL work order 232511.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples 232511004 (CAMO-09-6529) and 232511005 (CAMO-09-6528) were reprepped to verify sample activity. Samples 1201880684 (CAMO-09-6529), 232511004 (CAMO-09-6529) and 232511005 (CAMO-09-6528) were recounted to verify sample activity. First count is being reported

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Samples 232511004 (CAMO-09-6529) and 232511005 (CAMO-09-6528) recounted to verify activity 1 day after separation. Samples were previously prepared and verified 5 days after separation. Results verify with previous preparation. Reporting first results.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883018

Sample ID	Client ID
232511001	CAMO-09-6519
232511002	CAMO-09-6518
232511003	CAMO-09-6527
232511004	CAMO-09-6529
232511005	CAMO-09-6528
232511006	CAMO-09-6531
1201875580	Method Blank (MB)
1201875581	232511002(CAMO-09-6518) Sample Duplicate (DUP)
1201875582	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232511002 (CAMO-09-6518). The QC was from LANL work order 232511.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 7/17/09

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
16-JUL-09	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ALPHA SPECTROMETER	DOE EML HASL-300, U-02-RC Modified	Solid	LANL
Batch ID:	**Sample Numbers:**		
885014	See Below		

Potentially affected work order(s)(SDG): 232045(09-2370),232069(09-2405),232076(09-2394),232424(09-2473),232426(09-2475),232511(09-2501)

Application Issues:

RDL less than MDA

Failed Recovery for Surrogate or Tracer

Other

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Samples 232069002, 232076001, 232076002, 232076003, 232424001, 232511002, 232511004, 232511005, and 232511006 do not meet the detection limits for U-235 due to the high standard deviation.	1. When a blank population is performed, the MDA is greater than the detection limit due to high standard deviation. Reporting results.
2. Sample 232069002 does not meet the client tracer yield requirements, however it does meet the GEL standard tracer yield requirements and has over 400 tracer counts. The sample was analyzed twice with similar results.	2. Project Manager notified. Reporting results.
3. Sample 232511003 does not meet the resolution requirements of having a full width half maximum of 100 keV or less, however the tracer yield requirements and detection limits were met.	3. Reporting results.

Originator's Name:

Jessica Downey 16-JUL-09

Data Validator/Group Leader:

Eric Brimstin 16-JUL-09

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2501 GEL Work Order: 232511

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/17/09

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6519	Project:	LANL01004
Sample ID:	232511001	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	20.8%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOPU "Dry Weight Corrected"											
Plutonium-238		6.50	0.0224	+/-0.330	0.050	pCi/g	AXD2	07/09/09	1737	882525	1
Plutonium-239/240		5.81	0.0269	+/-0.296	0.050	pCi/g					
ISOU "Dry Weight Corrected"											
Uranium-233/234		1.50	0.269	+/-0.141	0.100	pCi/g	AXD2	07/15/09	2113	885014	2
Uranium-235/236	U	0.0876	0.123	+/-0.028	0.100	pCi/g					
Uranium-238		1.17	0.105	+/-0.118	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241		8.90	0.267	+/-0.456	0.200	pCi/g	MXR1	07/07/09	1010	881220	5
Bismuth-211	UI	4.46	1.17	+/-0.518		pCi/g					
Bismuth-214		1.59	0.289	+/-0.162	0.200	pCi/g					
Cadmium-109	UI	3.05	2.24	+/-0.810		pCi/g					
Cerium-139	U	0.00716	0.125	+/-0.0363	0.050	pCi/g					
Cesium-134	U	0.113	0.118	+/-0.0308	0.100	pCi/g					
Cesium-137		73.3	0.140	+/-2.79	0.100	pCi/g					
Cobalt-60	U	0.0408	0.102	+/-0.0291	0.100	pCi/g					
Europium-152	U	-0.0333	0.572	+/-0.175	0.200	pCi/g					
Lanthanum-140	U	-0.109	0.118	+/-0.0474		pCi/g					
Lead-212		1.90	0.286	+/-0.129	0.100	pCi/g					
Lead-214		1.55	0.411	+/-0.185	0.100	pCi/g					
Mercury-203	U	-0.0157	0.199	+/-0.0566	0.100	pCi/g					
Potassium-40		32.2	0.578	+/-1.41	1.00	pCi/g					
Radium-223	U	0.647	3.68	+/-1.05		pCi/g					
Radium-224	UI	16.1	3.91	+/-1.30		pCi/g					
Radium-226		1.59	0.289	+/-0.162		pCi/g					
Radium-228		1.99	0.304	+/-0.198	0.500	pCi/g					
Ruthenium-106	U	-0.158	1.34	+/-0.404	0.800	pCi/g					
Sodium-22	U	0.0131	0.0987	+/-0.0294	0.080	pCi/g					
Strontium-85	U	0.113	0.203	+/-0.0675		pCi/g					
Thallium-208		0.670	0.151	+/-0.0768	0.080	pCi/g					
Thorium-227	U	0.478	1.97	+/-0.585		pCi/g					
Thorium-231	U	0.647	3.68	+/-1.05		pCi/g					
Thorium-234	UI	2.47	2.22	+/-0.788	2.00	pCi/g					
Tin-113	U	0.00348	0.292	+/-0.0847	0.100	pCi/g					
Uranium-235	U	0.0725	0.853	+/-0.246	0.500	pCi/g					
Yttrium-88	U	-0.0276	0.0684	+/-0.0261	0.100	pCi/g					

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6519
Sample ID: 232511001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting											
SR90 "Dry Weight Corrected"											
Strontium-90	U	0.344	0.416	+/-0.136	0.500	pCi/g	JXR1	07/04/09	1459	881413	6
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		982	231	+/-117	250	pCi/L	KXK2	07/14/09	1631	883018	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, U-02-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	EPA 905.0 Modified
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	102	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	60.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD

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Report Date: July 17, 2009

Client Sample ID: CAMO-09-6519
Sample ID: 232511001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6518	Project:	LANL01004
Sample ID:	232511002	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	15.2%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOPU "Dry Weight Corrected"											
Plutonium-238		2.70	0.0215	+/-0.142	0.050	pCi/g	AXD2	07/09/09	1737	882525	1
Plutonium-239/240		14.8	0.0258	+/-0.731	0.050	pCi/g					
ISOU "Dry Weight Corrected"											
Uranium-233/234		1.09	0.290	+/-0.115	0.100	pCi/g	AXD2	07/15/09	2113	885014	2
Uranium-235/236	U	0.0789	0.133	+/-0.030	0.100	pCi/g					
Uranium-238		1.37	0.113	+/-0.134	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241		10.0	0.409	+/-0.535	0.200	pCi/g	MXR1	07/07/09	1019	881220	5
Bismuth-211	UI	3.57	0.374	+/-0.278		pCi/g					
Bismuth-214		1.13	0.118	+/-0.0892	0.200	pCi/g					
Cadmium-109	UI	3.31	1.59	+/-0.547		pCi/g					
Cerium-139	U	-0.00796	0.0532	+/-0.0156	0.050	pCi/g					
Cesium-134	UI	0.0919	0.0888	+/-0.026	0.100	pCi/g					
Cesium-137		4.16	0.0678	+/-0.156	0.100	pCi/g					
Cobalt-60	U	-0.0246	0.061	+/-0.0198	0.100	pCi/g					
Europium-152	U	0.0484	0.189	+/-0.0605	0.200	pCi/g					
Lanthanum-140	U	-0.00054	0.112	+/-0.0389		pCi/g					
Lead-212		1.55	0.101	+/-0.0908	0.100	pCi/g					
Lead-214		1.24	0.131	+/-0.102	0.100	pCi/g					
Mercury-203	U	0.00969	0.0818	+/-0.0233	0.100	pCi/g					
Potassium-40		29.8	0.541	+/-1.40	1.00	pCi/g					
Radium-223	U	0.189	1.17	+/-0.376		pCi/g					
Radium-224	UI	3.34	1.14	+/-0.624		pCi/g					
Radium-226		1.13	0.118	+/-0.0892		pCi/g					
Radium-228		1.49	0.202	+/-0.166	0.500	pCi/g					
Ruthenium-106	U	-0.0232	0.532	+/-0.155	0.800	pCi/g					
Sodium-22	U	-0.03	0.071	+/-0.0228	0.080	pCi/g					
Strontium-85	U	0.0379	0.0676	+/-0.0217		pCi/g					
Thallium-208		0.478	0.0612	+/-0.0421	0.080	pCi/g					
Thorium-227	U	-0.353	0.675	+/-0.199		pCi/g					
Thorium-231	U	0.189	1.17	+/-0.376		pCi/g					
Thorium-234	U	2.41	2.50	+/-1.04	2.00	pCi/g					
Tin-113	U	0.00551	0.0893	+/-0.0259	0.100	pCi/g					
Uranium-235	U	-0.145	0.370	+/-0.111	0.500	pCi/g					
Yttrium-88	U	-0.000653	0.0572	+/-0.0173	0.100	pCi/g					

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6518
Sample ID: 232511002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting												
SR90 "Dry Weight Corrected"												
Strontium-90		0.711	0.187	+/-0.112	0.500	pCi/g		JXR1	07/10/09	1725	881413	6
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	192	233	+/-74.2	250	pCi/L		KXK2	07/14/09	1718	883018	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, U-02-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	EPA 905.0 Modified
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	93.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	91.4	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	62.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD

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Report Date: July 17, 2009

Client Sample ID: CAMO-09-6518
Sample ID: 232511002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-6527	Project:	LANL01004
Sample ID:	232511003	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	5.87%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOPU "Dry Weight Corrected"											
Plutonium-238	U	-0.0115	0.0236	+/-0.00615	0.050	pCi/g	AXD2	07/09/09	1737	882525	1
Plutonium-239/240	U	0.0128	0.0283	+/-0.00484	0.050	pCi/g					
ISOU "Dry Weight Corrected"											
Uranium-233/234		1.06	0.305	+/-0.114	0.100	pCi/g	AXD2	07/15/09	2113	885014	2
Uranium-235/236	U	0.0663	0.140	+/-0.0314	0.100	pCi/g					
Uranium-238		1.13	0.119	+/-0.119	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.175	0.318	+/-0.093	0.200	pCi/g	MXR1	07/07/09	1050	881220	5
Bismuth-211	UI	4.29	0.369	+/-0.256		pCi/g					
Bismuth-214		1.32	0.106	+/-0.0891	0.200	pCi/g					
Cadmium-109	UI	3.49	1.25	+/-0.539		pCi/g					
Cerium-139	U	-0.00597	0.0484	+/-0.0136	0.050	pCi/g					
Cesium-134	UI	0.135	0.0924	+/-0.0267	0.100	pCi/g					
Cesium-137	U	0.033	0.0724	+/-0.0201	0.100	pCi/g					
Cobalt-60	U	-0.0215	0.0693	+/-0.0216	0.100	pCi/g					
Europium-152	U	-0.0647	0.165	+/-0.0502	0.200	pCi/g					
Lanthanum-140	U	-0.113	0.0845	+/-0.036		pCi/g					
Lead-212		1.88	0.0917	+/-0.0895	0.100	pCi/g					
Lead-214		1.49	0.129	+/-0.0973	0.100	pCi/g					
Mercury-203	U	0.0145	0.0688	+/-0.0195	0.100	pCi/g					
Potassium-40		34.2	0.486	+/-1.72	1.00	pCi/g					
Radium-223	U	-0.139	1.06	+/-0.358		pCi/g					
Radium-224	UI	4.47	1.04	+/-0.557		pCi/g					
Radium-226		1.32	0.106	+/-0.0891		pCi/g					
Radium-228		1.75	0.195	+/-0.205	0.500	pCi/g					
Ruthenium-106	U	-0.0804	0.519	+/-0.154	0.800	pCi/g					
Sodium-22	U	0.0175	0.0786	+/-0.0226	0.080	pCi/g					
Strontium-85	U	0.0244	0.058	+/-0.019		pCi/g					
Thallium-208		0.555	0.0609	+/-0.0421	0.080	pCi/g					
Thorium-227	U	0.284	0.646	+/-0.180		pCi/g					
Thorium-231	U	-0.139	1.06	+/-0.358		pCi/g					
Thorium-234	U	1.88	2.82	+/-0.797	2.00	pCi/g					
Tin-113	U	0.0254	0.0756	+/-0.0216	0.100	pCi/g					
Uranium-235	U	0.0729	0.357	+/-0.104	0.500	pCi/g					
Yttrium-88	U	0.040	0.062	+/-0.0155	0.100	pCi/g					

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6527
Sample ID: 232511003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting												
SR90 "Dry Weight Corrected"												
Strontium-90	U	0.109	0.190	+/-0.0599	0.500	pCi/g		JXR1	07/04/09	1459	881413	6
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		243	232	+/-76.3	250	pCi/L		KXK2	07/14/09	1805	883018	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, U-02-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	EPA 905.0 Modified
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	89.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	86.9	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	65.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD

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Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6527
Sample ID: 232511003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6529
Sample ID: 232511004
Matrix: R
Collect Date: 24-JUN-09
Receive Date: 27-JUN-09
Collector: Client
Moisture: 4.85%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238		31.8	0.527	+/-2.34	0.050	pCi/g		AXD2	07/16/09	1435	884188	1
Plutonium-239/240		114	0.641	+/-7.79	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.36	0.276	+/-0.133	0.100	pCi/g		AXD2	07/15/09	2113	885014	4
Uranium-235/236	U	0.0675	0.127	+/-0.023	0.100	pCi/g						
Uranium-238		1.00	0.107	+/-0.106	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241		235	1.13	+/-8.42	0.200	pCi/g		MXR1	07/07/09	1053	881220	7
Bismuth-211	UI	3.65	0.984	+/-0.458		pCi/g						
Bismuth-214		1.36	0.239	+/-0.131	0.200	pCi/g						
Cadmium-109	U	2.08	2.51	+/-1.03		pCi/g						
Cerium-139	U	0.0108	0.111	+/-0.032	0.050	pCi/g						
Cesium-134	U	0.0491	0.0795	+/-0.0219	0.100	pCi/g						
Cesium-137		89.0	0.128	+/-2.92	0.100	pCi/g						
Cobalt-60	UI	0.0839	0.081	+/-0.0245	0.100	pCi/g						
Europium-152	U	0.166	0.483	+/-0.149	0.200	pCi/g						
Lanthanum-140	U	-0.0167	0.121	+/-0.037		pCi/g						
Lead-212		1.58	0.242	+/-0.113	0.100	pCi/g						
Lead-214		1.27	0.347	+/-0.163	0.100	pCi/g						
Mercury-203	U	0.00665	0.174	+/-0.0492	0.100	pCi/g						
Potassium-40		30.8	0.556	+/-1.36	1.00	pCi/g						
Radium-223	U	-1.59	3.06	+/-0.900		pCi/g						
Radium-224	U	2.70	2.74	+/-0.821		pCi/g						
Radium-226		1.36	0.239	+/-0.131		pCi/g						
Radium-228		1.68	0.215	+/-0.169	0.500	pCi/g						
Ruthenium-106	U	-0.0585	1.14	+/-0.330	0.800	pCi/g						
Sodium-22	U	-0.0435	0.0614	+/-0.0206	0.080	pCi/g						
Strontium-85	UI	0.187	0.165	+/-0.0541		pCi/g						
Thallium-208		0.543	0.132	+/-0.0649	0.080	pCi/g						
Thorium-227	U	0.499	1.68	+/-0.470		pCi/g						
Thorium-231	U	-1.59	3.06	+/-0.900		pCi/g						
Thorium-234	U	1.80	4.24	+/-1.26	2.00	pCi/g						
Tin-113	U	0.000199	0.239	+/-0.0698	0.100	pCi/g						
Uranium-235	U	-0.113	0.734	+/-0.212	0.500	pCi/g						
Yttrium-88	U	-0.00301	0.0409	+/-0.0127	0.100	pCi/g						

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6529
Sample ID: 232511004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting											
SR90 "Dry Weight Corrected"											
Strontium-90		10.0	0.111	+/-1.06	0.500	pCi/g	JXR1	07/16/09	1733	885121	8
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		14100	338	+/-1040	250	pCi/L	KXK2	07/14/09	1852	883018	10

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	EML HASL 300, 4.5.2.3
8	EPA 905.0 Modified
9	EPA 905.0 Modified
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	105	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.2	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	84.1	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample

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Client Sample ID: CAMO-09-6529
Sample ID: 232511004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6528
Sample ID: 232511005
Matrix: R
Collect Date: 24-JUN-09
Receive Date: 27-JUN-09
Collector: Client
Moisture: 5.76%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis											
ISOPU "Dry Weight Corrected"											
Plutonium-238		19.4	0.595	+/-1.57	0.050	pCi/g	AXD2	07/16/09	1435	884188	1
Plutonium-239/240		136	0.724	+/-9.51	0.050	pCi/g					
ISOU "Dry Weight Corrected"											
Uranium-233/234		2.54	0.282	+/-0.220	0.100	pCi/g	AXD2	07/15/09	2113	885014	4
Uranium-235/236	U	0.107	0.129	+/-0.0334	0.100	pCi/g					
Uranium-238		1.05	0.110	+/-0.110	0.100	pCi/g					
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241		111	0.438	+/-5.62	0.200	pCi/g	MXR1	07/07/09	1054	881220	7
Bismuth-211	UI	3.71	0.571	+/-0.290		pCi/g					
Bismuth-214		1.16	0.173	+/-0.115	0.200	pCi/g					
Cadmium-109	UI	3.51	1.17	+/-0.491		pCi/g					
Cerium-139	U	-0.0172	0.0687	+/-0.0204	0.050	pCi/g					
Cesium-134	U	0.0594	0.102	+/-0.028	0.100	pCi/g					
Cesium-137		18.6	0.0855	+/-0.778	0.100	pCi/g					
Cobalt-60	U	0.0564	0.0903	+/-0.0253	0.100	pCi/g					
Europium-152	U	0.0774	0.276	+/-0.0907	0.200	pCi/g					
Lanthanum-140	U	-0.0315	0.146	+/-0.0465		pCi/g					
Lead-212		1.59	0.141	+/-0.0961	0.100	pCi/g					
Lead-214		1.29	0.199	+/-0.106	0.100	pCi/g					
Mercury-203	U	0.0328	0.106	+/-0.0298	0.100	pCi/g					
Potassium-40		26.2	0.665	+/-1.17	1.00	pCi/g					
Radium-223	U	-0.353	1.83	+/-0.540		pCi/g					
Radium-224	U	1.53	1.61	+/-0.551		pCi/g					
Radium-226		1.16	0.173	+/-0.115		pCi/g					
Radium-228		1.83	0.251	+/-0.180	0.500	pCi/g					
Ruthenium-106	U	0.0972	0.791	+/-0.232	0.800	pCi/g					
Sodium-22	U	-0.00804	0.0779	+/-0.0235	0.080	pCi/g					
Strontium-85	UI	0.191	0.117	+/-0.0351		pCi/g					
Thallium-208		0.515	0.0866	+/-0.0597	0.080	pCi/g					
Thorium-227	U	-0.0286	1.02	+/-0.290		pCi/g					
Thorium-231	U	-0.353	1.83	+/-0.540		pCi/g					
Thorium-234	U	1.14	1.20	+/-0.461	2.00	pCi/g					
Tin-113	U	0.0133	0.139	+/-0.0412	0.100	pCi/g					
Uranium-235	U	0.0388	0.489	+/-0.142	0.500	pCi/g					
Yttrium-88	U	-0.00543	0.0602	+/-0.0185	0.100	pCi/g					

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Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6528
Sample ID: 232511005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting												
SR90 "Dry Weight Corrected"												
Strontium-90		3.69	0.106	+/-0.388	0.500	pCi/g		JXR1	07/16/09	1733	885121	8
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		311	232	+/-79.6	250	pCi/L		KXK2	07/14/09	1939	883018	10

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	EML HASL 300, 4.5.2.3
8	EPA 905.0 Modified
9	EPA 905.0 Modified
10	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	92.2	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	97.5	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	86.3	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
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- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

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Report Date: July 17, 2009

Client Sample ID: CAMO-09-6528
Sample ID: 232511005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6531
Sample ID: 232511006
Matrix: R
Collect Date: 24-JUN-09
Receive Date: 27-JUN-09
Collector: Client
Moisture: 15%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238		2.98	0.0215	+/-0.156	0.050	pCi/g		AXD2	07/09/09	1737	882525	1
Plutonium-239/240		8.56	0.0258	+/-0.427	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.906	0.278	+/-0.0998	0.100	pCi/g		AXD2	07/15/09	2113	885014	2
Uranium-235/236	U	0.0454	0.128	+/-0.0216	0.100	pCi/g						
Uranium-238		1.17	0.108	+/-0.119	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241		8.93	0.403	+/-0.421	0.200	pCi/g		MXR1	07/07/09	1058	881220	5
Bismuth-211	UI	4.04	0.371	+/-0.256		pCi/g						
Bismuth-214		1.09	0.109	+/-0.0832	0.200	pCi/g						
Cadmium-109	UI	3.81	1.37	+/-0.502		pCi/g						
Cerium-139	U	0.0018	0.055	+/-0.0159	0.050	pCi/g						
Cesium-134	UI	0.110	0.0836	+/-0.0352	0.100	pCi/g						
Cesium-137		4.73	0.0692	+/-0.166	0.100	pCi/g						
Cobalt-60	U	-0.023	0.0487	+/-0.0164	0.100	pCi/g						
Europium-152	U	0.121	0.187	+/-0.0657	0.200	pCi/g						
Lanthanum-140	U	-0.0131	0.0971	+/-0.0306		pCi/g						
Lead-212		1.56	0.102	+/-0.0732	0.100	pCi/g						
Lead-214		1.40	0.136	+/-0.0962	0.100	pCi/g						
Mercury-203	U	8.39E-05	0.0764	+/-0.0219	0.100	pCi/g						
Potassium-40		31.8	0.499	+/-1.57	1.00	pCi/g						
Radium-223	U	0.100	1.25	+/-0.409		pCi/g						
Radium-224	UI	4.93	1.16	+/-0.658		pCi/g						
Radium-226		1.09	0.109	+/-0.0832		pCi/g						
Radium-228		1.61	0.189	+/-0.154	0.500	pCi/g						
Ruthenium-106	U	0.331	0.547	+/-0.153	0.800	pCi/g						
Sodium-22	U	-0.0379	0.0566	+/-0.0193	0.080	pCi/g						
Strontium-85	UI	0.0964	0.0737	+/-0.0221		pCi/g						
Thallium-208		0.477	0.0625	+/-0.0374	0.080	pCi/g						
Thorium-227	U	-0.283	0.688	+/-0.212		pCi/g						
Thorium-231	U	0.100	1.25	+/-0.409		pCi/g						
Thorium-234	U	1.60	2.40	+/-0.817	2.00	pCi/g						
Tin-113	U	-0.0681	0.0828	+/-0.0255	0.100	pCi/g						
Uranium-235	U	0.228	0.407	+/-0.116	0.500	pCi/g						
Yttrium-88	U	0.0192	0.0464	+/-0.0121	0.100	pCi/g						

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Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-6531
Sample ID: 232511006

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting												
SR90 "Dry Weight Corrected"												
Strontium-90		0.619	0.190	+/-0.102	0.500	pCi/g		JXR1	07/10/09	1724	881413	6
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		10400	230	+/-757	250	pCi/L		KXK2	07/14/09	2026	883018	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, U-02-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	EPA 905.0 Modified
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	95.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	98.5	(50%-105%)
Strontium Carrier	SR90 "Dry Weight Corrected"	67.9	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
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- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD

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Sample ID: 232511006

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

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QC Summary

Report Date: July 17, 2009

Client : Los Alamos National Laboratory
PO Box 1663
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Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232511

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882525										
QC1201874396 232511006 DUP										
Plutonium-238		2.98		2.92	pCi/g	0.0957		(0-1)	AXD2	07/09/0917:37
	TPU:	+/-0.156		+/-0.154						
	Yield:	95.5		93.1						
Plutonium-239/240		8.56		8.62	pCi/g	0.0339		(0-1)		
	TPU:	+/-0.427		+/-0.431						
	Yield:	95.5		93.1						
QC1201874397 LCS										
Plutonium-238				7.39	pCi/g			(75%-125%)		
	TPU:			+/-0.521						
	Yield:			88.5						
Plutonium-239/240	41.8			40.8	pCi/g		97.6	(75%-125%)		
	TPU:			+/-2.41						
	Yield:			88.5						
QC1201874395 MB										
Plutonium-238			U	0.00802	pCi/g					
	TPU:			+/-0.00622						
	Yield:			86.0						
Plutonium-239/240			U	-0.0016	pCi/g					
	TPU:			+/-0.00278						
	Yield:			86.0						
Batch 884188										
QC1201878411 232511005 DUP										
Plutonium-238		19.4		24.6	pCi/g	0.744		(0-1)	AXD2	07/16/0914:35
	TPU:	+/-1.57		+/-1.93						
	Yield:	92.2		87.1						
Plutonium-239/240		136		105	pCi/g	0.913		(0-1)		
	TPU:	+/-9.51		+/-7.41						
	Yield:	92.2		87.1						
QC1201878412 LCS										
Plutonium-238				7.67	pCi/g			(75%-125%)		07/15/0921:16
	TPU:			+/-0.613						
	Yield:			98.4						
Plutonium-239/240	41.8			39.4	pCi/g		94.3	(75%-125%)		
	TPU:			+/-2.56						
	Yield:			98.4						
QC1201878410 MB										
Plutonium-238			U	-0.00312	pCi/g					
	TPU:			+/-0.00312						
	Yield:			81.2						
Plutonium-239/240			U	0.00128	pCi/g					
	TPU:			+/-0.00382						
	Yield:			81.2						
Batch 885014										

QC Summary

Workorder: 232511

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 885014										
QC1201880402 232511006 DUP										
Uranium-233/234		0.906		1.01	pCi/g	0.262		(0-1)	AXD2	07/15/0921:13
	TPU:	+/-0.0998		+/-0.0951						
	Yield:	98.5		93.9						
Uranium-235/236	U	0.0454		0.101	pCi/g	0.614		(0-1)		
	TPU:	+/-0.0216		+/-0.0236						
	Yield:	98.5		93.9						
Uranium-238		1.17		1.13	pCi/g	0.0911		(0-1)		
	TPU:	+/-0.119		+/-0.105						
	Yield:	98.5		93.9						
QC1201880403 LCS										
Uranium-233/234				6.06	pCi/g			(75%-125%)		07/15/0921:13
	TPU:			+/-0.492						
	Yield:			96.2						
Uranium-235/236				0.272	pCi/g			(75%-125%)		
	TPU:			+/-0.0733						
	Yield:			96.2						
Uranium-238	5.75			5.54	pCi/g		96.3	(75%-125%)		
	TPU:			+/-0.456						
	Yield:			96.2						
QC1201880401 MB										
Uranium-233/234			U	-0.00719	pCi/g					07/15/0921:13
	TPU:			+/-0.00538						
	Yield:			96.4						
Uranium-235/236			U	-0.0093	pCi/g					
	TPU:			+/-0.0057						
	Yield:			96.4						
Uranium-238			U	0.00	pCi/g					
	TPU:			+/-0.00188						
	Yield:			96.4						
Rad Gamma Spec										
Batch 881220										
QC1201871427 232511001 DUP										
Americium-241		8.90		8.10	pCi/g	0.459		(0-1)	MXR1	07/07/0911:20
	TPU:	+/-0.456		+/-0.414						
Bismuth-211	UI	4.46	UI	4.40	pCi/g	0.0324		(0-1)		
	TPU:	+/-0.518		+/-0.407						
Bismuth-214		1.59		1.30	pCi/g	0.516		(0-1)		
	TPU:	+/-0.162		+/-0.118						
Cadmium-109	UI	3.05	UI	3.57	pCi/g	0.160		(0-1)		
	TPU:	+/-0.810		+/-0.815						
Cerium-139	U	0.00716	U	0.00471	pCi/g	0.0201		(0-1)		
	TPU:	+/-0.0363		+/-0.0248						
Cesium-134	U	0.113	UI	0.137	pCi/g	0.207		(0-1)		
	TPU:	+/-0.0308		+/-0.0282						
Cesium-137		73.3		69.7	pCi/g	0.326		(0-1)		
	TPU:	+/-2.79		+/-2.68						
Cobalt-60	U	0.0408	U	0.043	pCi/g	0.0235		(0-1)		
	TPU:	+/-0.0291		+/-0.0168						
Europium-152	U	-0.0333	U	-0.0854	pCi/g	0.0909		(0-1)		

QC Summary

Workorder: 232511

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881220										
	TPU:	+/-0.175		+/-0.112						
Lanthanum-140	U	-0.109	U	0.0166	pCi/g	0.811		(0-1)		
	TPU:	+/-0.0474		+/-0.030						
Lead-212		1.90		1.81	pCi/g	0.180		(0-1)		
	TPU:	+/-0.129		+/-0.0969						
Lead-214		1.55		1.53	pCi/g	0.0317		(0-1)		
	TPU:	+/-0.185		+/-0.147						
Mercury-203	U	-0.0157	U	0.0611	pCi/g	0.397		(0-1)		
	TPU:	+/-0.0566		+/-0.0401						
Potassium-40		32.2		34.3	pCi/g	0.347		(0-1)		
	TPU:	+/-1.41		+/-1.48						
Radium-223	U	0.647	U	-0.81	pCi/g	0.412		(0-1)		
	TPU:	+/-1.05		+/-0.718						
Radium-224	UI	16.1	UI	4.76	pCi/g	2.58		(0-1)		
	TPU:	+/-1.30		+/-0.885						
Radium-226		1.59		1.30	pCi/g	0.516		(0-1)		
	TPU:	+/-0.162		+/-0.118						
Radium-228		1.99		1.80	pCi/g	0.257		(0-1)		
	TPU:	+/-0.198		+/-0.173						
Ruthenium-106	U	-0.158	U	0.435	pCi/g	0.442		(0-1)		
	TPU:	+/-0.404		+/-0.266						
Sodium-22	U	0.0131	U	-0.0327	pCi/g	0.484		(0-1)		
	TPU:	+/-0.0294		+/-0.0179						
Strontium-85	U	0.113	UI	0.161	pCi/g	0.215		(0-1)		
	TPU:	+/-0.0675		+/-0.0421						
Thallium-208		0.670		0.584	pCi/g	0.313		(0-1)		
	TPU:	+/-0.0768		+/-0.0593						
Thorium-227	U	0.478	U	-0.472	pCi/g	0.485		(0-1)		
	TPU:	+/-0.585		+/-0.395						
Thorium-231	U	0.647	U	-0.81	pCi/g	0.412		(0-1)		
	TPU:	+/-1.05		+/-0.718						
Thorium-234	UI	2.47	U	-0.313	pCi/g	0.669		(0-1)		
	TPU:	+/-0.788		+/-1.29						
Tin-113	U	0.00348	U	0.0517	pCi/g	0.177		(0-1)		
	TPU:	+/-0.0847		+/-0.0519						
Uranium-235	U	0.0725	U	-0.108	pCi/g	0.210		(0-1)		
	TPU:	+/-0.246		+/-0.184						
Yttrium-88	U	-0.0276	U	0.0205	pCi/g	0.614		(0-1)		
	TPU:	+/-0.0261		+/-0.0131						
QC1201871428 LCS										
Americium-241	15.9			14.4	pCi/g		90.5	(75%-125%)		07/07/0910:00
	TPU:			+/-0.754						
Bismuth-211				2.63	pCi/g					
	TPU:			+/-0.364						
Bismuth-214				0.604	pCi/g					
	TPU:			+/-0.113						
Cadmium-109				42.4	pCi/g					
	TPU:			+/-2.37						
Cerium-139			U	0.0193	pCi/g					
	TPU:			+/-0.020						
Cesium-134			U	0.0635	pCi/g					

QC Summary

Workorder: 232511

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881220										
	TPU:			+/-0.0631						
Cesium-137	5.64			5.71	pCi/g		101	(75%-125%)		
	TPU:			+/-0.185						
Cobalt-60	6.93			7.14	pCi/g		103	(75%-125%)		
	TPU:			+/-0.293						
Europium-152			U	0.131	pCi/g					
	TPU:			+/-0.0936						
Lanthanum-140			U	-0.0291	pCi/g					
	TPU:			+/-0.0342						
Lead-212				0.946	pCi/g					
	TPU:			+/-0.0714						
Lead-214				0.915	pCi/g					
	TPU:			+/-0.129						
Mercury-203			U	0.0442	pCi/g					
	TPU:			+/-0.0278						
Potassium-40			U	0.359	pCi/g					
	TPU:			+/-0.254						
Radium-223			U	-0.846	pCi/g					
	TPU:			+/-0.541						
Radium-224				2.44	pCi/g					
	TPU:			+/-0.739						
Radium-226				0.604	pCi/g					
	TPU:			+/-0.113						
Radium-228				1.24	pCi/g					
	TPU:			+/-0.258						
Ruthenium-106			U	0.585	pCi/g					
	TPU:			+/-0.263						
Sodium-22			U	-0.00817	pCi/g					
	TPU:			+/-0.0223						
Strontium-85			U	0.0291	pCi/g					
	TPU:			+/-0.0324						
Thallium-208				0.356	pCi/g					
	TPU:			+/-0.0571						
Thorium-227			U	-0.119	pCi/g					
	TPU:			+/-0.296						
Thorium-231			U	-0.846	pCi/g					
	TPU:			+/-0.541						
Thorium-234			U	-1.68	pCi/g					
	TPU:			+/-1.12						
Tin-113			U	0.0298	pCi/g					
	TPU:			+/-0.0376						
Uranium-235			U	0.0477	pCi/g					
	TPU:			+/-0.138						
Yttrium-88			U	0.0593	pCi/g					
	TPU:			+/-0.0226						
QC1201871426 MB										
Americium-241			U	-0.0148	pCi/g					07/07/0910:59
	TPU:			+/-0.00827						
Bismuth-211			U	0.00477	pCi/g					
	TPU:			+/-0.0585						
Bismuth-214			U	0.0315	pCi/g					

QC Summary

Workorder: 232511

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881220										
	TPU:			+/-0.0237						
Cadmium-109			U	-0.0277	pCi/g					
	TPU:			+/-0.0861						
Cerium-139			U	0.0072	pCi/g					
	TPU:			+/-0.0054						
Cesium-134			U	-0.0139	pCi/g					
	TPU:			+/-0.0125						
Cesium-137			U	-0.00372	pCi/g					
	TPU:			+/-0.0098						
Cobalt-60			U	0.0102	pCi/g					
	TPU:			+/-0.0123						
Europium-152			U	-0.000264	pCi/g					
	TPU:			+/-0.0248						
Lanthanum-140			U	0.0147	pCi/g					
	TPU:			+/-0.0244						
Lead-212			U	0.000506	pCi/g					
	TPU:			+/-0.0141						
Lead-214			U	-0.0132	pCi/g					
	TPU:			+/-0.0206						
Mercury-203			U	0.00199	pCi/g					
	TPU:			+/-0.00765						
Potassium-40			U	-0.00394	pCi/g					
	TPU:			+/-0.150						
Radium-223			U	-0.10	pCi/g					
	TPU:			+/-0.155						
Radium-224			U	0.239	pCi/g					
	TPU:			+/-0.139						
Radium-226			U	0.0315	pCi/g					
	TPU:			+/-0.0237						
Radium-228			U	0.0272	pCi/g					
	TPU:			+/-0.0326						
Ruthenium-106			U	-0.218	pCi/g					
	TPU:			+/-0.112						
Sodium-22			U	-0.00585	pCi/g					
	TPU:			+/-0.0113						
Strontium-85			U	-0.028	pCi/g					
	TPU:			+/-0.0143						
Thallium-208			U	0.00392	pCi/g					
	TPU:			+/-0.0123						
Thorium-227			U	-0.0473	pCi/g					
	TPU:			+/-0.0908						
Thorium-231			U	-0.10	pCi/g					
	TPU:			+/-0.155						
Thorium-234			U	0.116	pCi/g					
	TPU:			+/-0.0766						
Tin-113			U	0.0122	pCi/g					
	TPU:			+/-0.0102						
Uranium-235			U	0.00884	pCi/g					
	TPU:			+/-0.0365						
Yttrium-88			U	0.00855	pCi/g					
	TPU:			+/-0.0139						

QC Summary

Workorder: 232511

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 881413										
QC1201871821 232511001 DUP										
Strontium-90	U	0.344		0.302	pCi/g	0.0982		(0-1)	JXR1	07/10/0917:24
	TPU:	+/-0.136		+/-0.0789						
	Yield:	60.4		58.2						
QC1201871822 LCS										
Strontium-90	19.5			21.4	pCi/g		109	(75%-125%)		07/04/0914:59
	TPU:			+/-2.26						
	Yield:			72.2						
QC1201871820 MB										
Strontium-90			U	-0.149	pCi/g					07/09/0911:53
	TPU:			+/-0.0825						
	Yield:			61.5						
Batch 885121										
QC1201880684 232511004 DUP										
Strontium-90		10.0		9.91	pCi/g	0.0216		(0-1)	JXR1	07/16/0917:33
	TPU:	+/-1.06		+/-1.04						
	Yield:	84.1		84.1						
QC1201880685 LCS										
Strontium-90	19.5			19.4	pCi/g		99.4	(75%-125%)		07/16/0917:34
	TPU:			+/-2.13						
	Yield:			90.6						
QC1201880683 MB										
Strontium-90			U	0.0387	pCi/g					07/16/0917:33
	TPU:			+/-0.0638						
	Yield:			85.2						
Rad Liquid Scintillation										
Batch 883018										
QC1201875581 232511002 DUP										
Tritium	U	192	U	149	pCi/L	0.147		(0-1)	KXK2	07/14/0922:00
	TPU:	+/-74.2		+/-72.2						
QC1201875582 LCS										
Tritium	5730			5450	pCi/L		95	(75%-125%)		07/14/0922:47
	TPU:			+/-417						
QC1201875580 MB										
Tritium			U	-62.2	pCi/L					07/14/0921:13
	TPU:			+/-63.8						

Notes:
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis

QC Summary

Workorder: 232511

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time

D	Results are reported from a diluted aliquot of the sample
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

R□□ D□T□

Radiochemistry Batch Checklist, Rev 9

Batch# 882528 Product: PU Date: 7/10/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		~~NA~~ 7/10/09
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/10/09

Secondary Review Performed By: [signature] 7/15/09

7/16 7/17

LAM

P ✓

Plutonium Que Sheet

06-JUL-09

Batch #: 882525 Analyst: AXD2 First Client Due Date:17-JUL-09 Internal Due Date:06-JUL-09

Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 12021A Expiration Date: 7/11/10 Vol: 0.1

LCS Isotope(s): Pu-239/Pu-238 LCS Code: / Expiration Date: / Vol: /

Spike Isotope(s): Pu-239/Pu-238 Spike Code: / Expiration Date: / Vol: /

Prep Date: 7/6/09 Initials: AXP Pipet ID: 25710558 Balance ID: 50410272 Witness: MC 7/06/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot* (g/l/f)	Pu Det #
232069001-1	CAMO-09-10142	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	1	1	1.248	47
232069002-1	CAMO-09-10141	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	2	2	1.258	48
232069003-1	CAMO-09-10143	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	3	3	1.250	~~64~~ 65 DM 7/9/10
232069004-1	CAMO-09-10153	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	4	4	1.253	66
232069005-1	CAMO-09-10144	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	5	5	1.251	67
232069006-1	CAMO-09-10154	SAMPLE		.05 pCi/g	SOIL	LANL010	17-JUN-09	6	6	1.250	68
232424001-1	CAMO-09-10463	SAMPLE		.05 pCi/g	SOIL	LANL010	23-JUN-09	7	7	1.249	69
232426001-1	CAMO-09-7143	SAMPLE		.05 pCi/g	SOIL	LANL010	23-JUN-09	8	8	1.253	70
232426002-1	CAMO-09-7144	SAMPLE		.05 pCi/g	SOIL	LANL010	23-JUN-09	9	9	1.251	71
232511001-1	CAMO-09-6519	SAMPLE		.05 pCi/g	SOIL	LANL010	24-JUN-09	10	10	1.251	72
232511002-1	CAMO-09-6518	SAMPLE		.05 pCi/g	SOIL	LANL010	24-JUN-09	11	11	1.252	73
232511003-1	CAMO-09-6527	SAMPLE		.05 pCi/g	SOIL	LANL010	24-JUN-09	12	12	1.259	74
~~232511004-1~~	~~CAMO-09-6529~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~24-JUN-09~~	~~13~~	~~13~~	~~1.258~~ AD 7/6/09 ~~1.252~~	~~75~~
~~232511005-1~~	~~CAMO-09-6528~~	~~SAMPLE~~		~~.05 pCi/g~~	~~SOIL~~	~~LANL010~~	~~24-JUN-09~~	~~14~~	~~14~~	~~1.251~~	~~76~~
232511006-1	CAMO-09-6531	SAMPLE		.05 pCi/g	SOIL	LANL010	24-JUN-09	15	15	1.258	77 DM 7/9/10
1201874395-1	MB for batch 882525	MB		.05 pCi/g	SOIL	QC ACCOUNT		16	16 AD 7/10/09	~~1.259~~ 1.0	78
1201874396-1	CAMO-09-6531(232511006DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	24-JUN-09	17	17	1.256	79
1201874397-1	LCS for batch 882525	LCS		.05 pCi/g	SOIL	QC ACCOUNT		18	18	0.115	80

AD 7/10/09
AD 7/10/09

* SRM 0244-B exp. 4/30/20

Choose SOP Used: GL-RAD-A-011 GL-RAD-A-045 GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION Circle One

Data Reviewed By: 7/10/09

Blank Correction Report

Batch ID 882525

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874396	DUP	Plutonium-238	1.26 g	2.92	0.154	0.0217	.006365079	pCi/g	NO
		Plutonium-239/240	1.26 g	8.62	0.431	0.0261	-.00126984	pCi/g	NO
1201874397	LCS	Plutonium-238	0.115 g	7.39	0.521	0.244	.069739130	pCi/g	NO
		Plutonium-239/240	0.115 g	40.8	2.41	0.293	-.01391304	pCi/g	NO
1201874395	MB	Plutonium-238	1.00 g	0.00802	0.00622	0.0295	.00802	pCi/g	YES
		Plutonium-239/240	1.00 g	-0.0016	0.00278	0.0354	-.0016	pCi/g	NO
232069001	CAMO-09-10142	Plutonium-238	1.25 g	-0.00272	0.00578	0.025	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.0068	0.00451	0.0301	-.00128	pCi/g	YES
232069002	CAMO-09-10141	Plutonium-238	1.26 g	0.00925	0.00783	0.0243	.006365079	pCi/g	YES
		Plutonium-239/240	1.26 g	0.00528	0.00374	0.0292	-.00126984	pCi/g	NO
232069003	CAMO-09-10143	Plutonium-238	1.25 g	0.00652	0.00703	0.024	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0182	0.0059	0.0288	-.00128	pCi/g	NO
232069004	CAMO-09-10153	Plutonium-238	1.25 g	-0.0233	0.00797	0.0238	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00258	0.00409	0.0286	-.00128	pCi/g	NO
232069005	CAMO-09-10144	Plutonium-238	1.25 g	-0.00368	0.00506	0.0226	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00368	0.00245	0.0271	-.00128	pCi/g	NO
232069006	CAMO-09-10154	Plutonium-238	1.25 g	-0.00138	0.00239	0.0254	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00276	0.0039	0.0305	-.00128	pCi/g	NO
232424001	CAMO-09-10463	Plutonium-238	1.25 g	-1.47E-10	0.00174	0.0226	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00369	0.00275	0.0272	-.00128	pCi/g	NO
232426001	CAMO-09-7143	Plutonium-238	1.25 g	0.00695	0.00569	0.0213	.006416	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00116	0.00505	0.0256	-.00128	pCi/g	NO
232426002	CAMO-09-7144	Plutonium-238	1.25 g	0.477	0.033	0.020	.006416	pCi/g	NO
		Plutonium-239/240	1.25 g	14.0	0.682	0.024	-.00128	pCi/g	NO
232511001	CAMO-09-6519	Plutonium-238	1.25 g	6.50	0.330	0.0224	.006416	pCi/g	NO
		Plutonium-239/240	1.25 g	5.81	0.296	0.0269	-.00128	pCi/g	NO
232511002	CAMO-09-6518	Plutonium-238	1.25 g	2.70	0.142	0.0215	.006416	pCi/g	NO
		Plutonium-239/240	1.25 g	14.8	0.731	0.0258	-.00128	pCi/g	NO
232511003	CAMO-09-6527	Plutonium-238	1.26 g	-0.0115	0.00615	0.0236	.006365079	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0128	0.00484	0.0283	-.00126984	pCi/g	NO
232511006	CAMO-09-6531	Plutonium-238	1.26 g	2.98	0.156	0.0215	.006365079	pCi/g	NO
		Plutonium-239/240	1.26 g	8.56	0.427	0.0258	-.00126984	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511001_PU
SAMPLE QTY: 1.251 G

DETECTOR NUMBER :45-149AA3
AVERAGE %EFFICIENCY :32.3406
% YIELD : 91.499

COUNT DATE: 9-JUL-2009 17:37:10
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B072.CNF;1032
PCI/G : 1.476E+00	PCI/G : 1.476E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.84964 dpm	EFF FILE : W072.CNF;263
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	4773.000	4770.000	3.000	4.1684	99.90000	5.81E+00	2.96E-01	1.18E-02	2.69E-02	8.42E-02
PU-236	5749.000	15.000	1.000	14.000	3.3854	100.0000	1.23E-03	6.62E-03	9.58E-03	2.25E-02	6.62E-03
PU-238	5499.000	5348.000	5333.000	15.000	3.3734	99.90000	6.50E+00	3.30E-01	9.56E-03	2.24E-02	8.92E-02
PU242	4890.000	1250.000	1245.000	5.000	2.2361	100.0000	1.51E+00	8.56E-02	6.33E-03	1.60E-02	4.31E-02
PU-244	4589.000	19.000	19.000	0.000	4.1569	99.90000	2.31E-02	5.43E-03	1.18E-02	2.69E-02	5.31E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

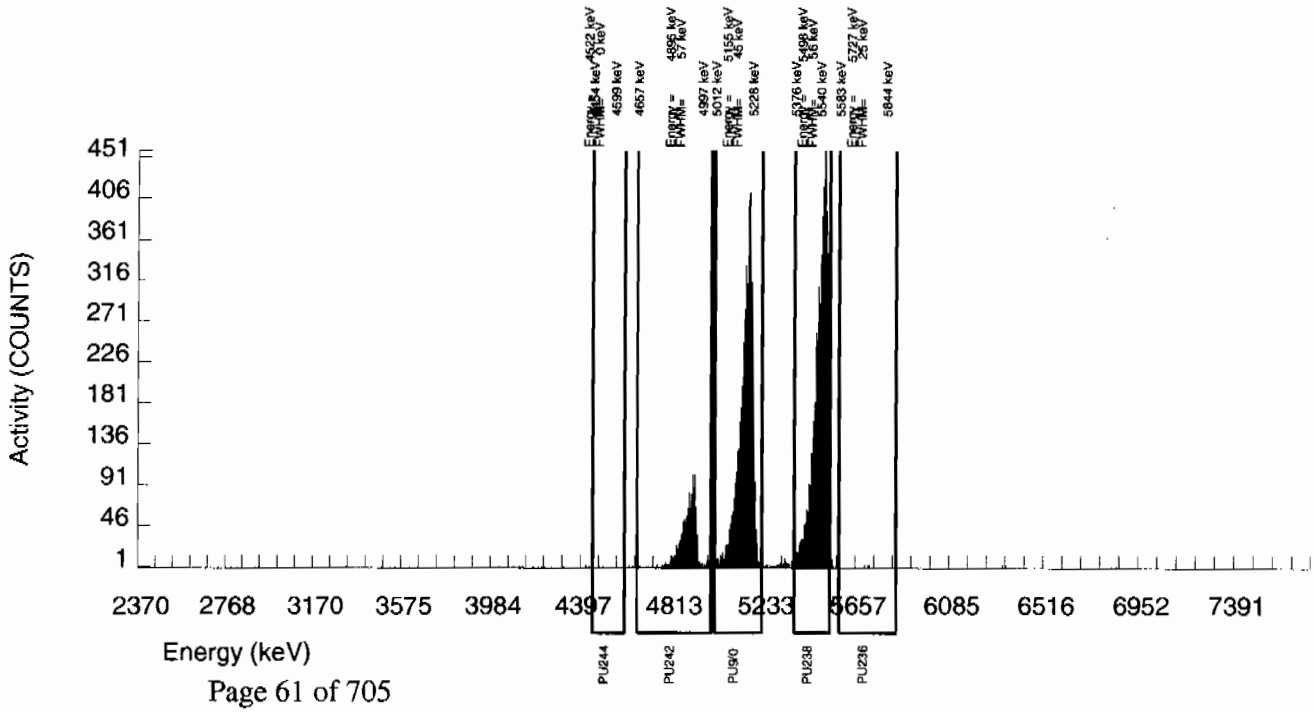

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511002_PU
SAMPLE QTY: 1.252 G

DETECTOR NUMBER :78775
AVERAGE %EFFICIENCY :33.2074
% YIELD : 92.975

COUNT DATE: 9-JUL-2009 17:37:10
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B073.CNF;1032
PCI/G : 1.475E+00	PCI/G : 1.475E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.91178 dpm	EFF FILE : W073.CNF;271
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	12703.000	12698.000	5.000	4.1684	99.90000	1.48E+01	7.31E-01	1.13E-02	2.58E-02	1.31E-01
PU-236	5749.000	1.000	0.000	1.000	3.3854	100.0000	-1.40E-10	1.67E-03	9.18E-03	2.15E-02	1.67E-03
PU-238	5499.000	2314.000	2313.000	1.000	3.3734	99.90000	2.70E+00	1.42E-01	9.15E-03	2.15E-02	5.61E-02
PU242	4890.000	1306.000	1299.000	7.000	2.6458	100.0000	1.51E+00	8.47E-02	7.17E-03	1.75E-02	4.22E-02
PU-244	4589.000	18.000	18.000	0.000	4.1569	99.90000	2.10E-02	5.05E-03	1.13E-02	2.57E-02	4.95E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

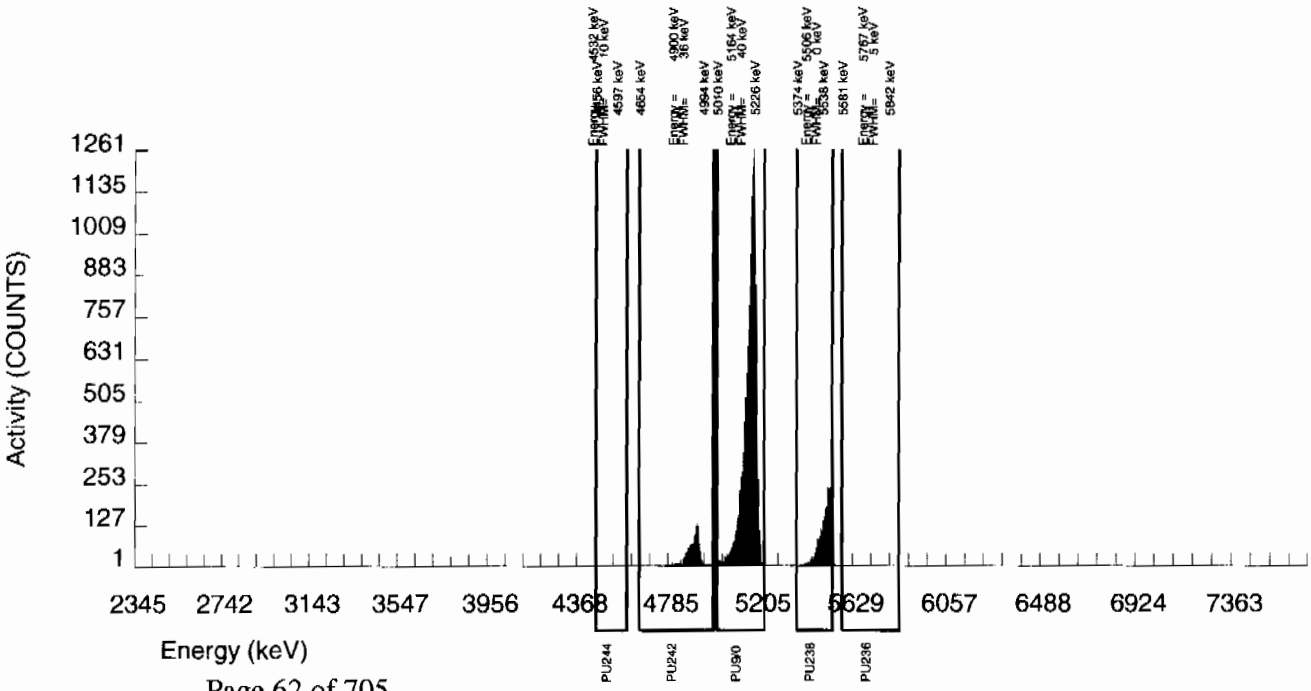

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511003_PU
SAMPLE QTY: 1.259 G

DETECTOR NUMBER :78266
AVERAGE %EFFICIENCY :31.2480
% YIELD : 89.450

COUNT DATE: 9-JUL-2009 17:37:10
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B074.CNF;1056
PCI/G : 1.466E+00	PCI/G : 1.466E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.76343 dpm	EFF FILE : W074.CNF;318
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	12.000	10.000	2.000	4.1684	99.90000	1.28E-02	4.84E-03	1.24E-02	2.83E-02	4.79E-03
PU-236	5749.000	6.000	2.000	4.000	3.3854	100.0000	2.59E-03	4.09E-03	1.01E-02	2.36E-02	4.09E-03
PU-238	5499.000	7.000	-9.000	16.000	3.3734	99.90000	-1.15E-02	6.15E-03	1.01E-02	2.36E-02	6.15E-03
PU242	4890.000	1184.000	1176.000	8.000	2.8284	100.0000	1.51E+00	8.65E-02	8.42E-03	2.03E-02	4.42E-02
PU-244	4589.000	2.000	-1.000	3.000	4.1569	99.90000	-1.28E-03	2.87E-03	1.24E-02	2.83E-02	2.87E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

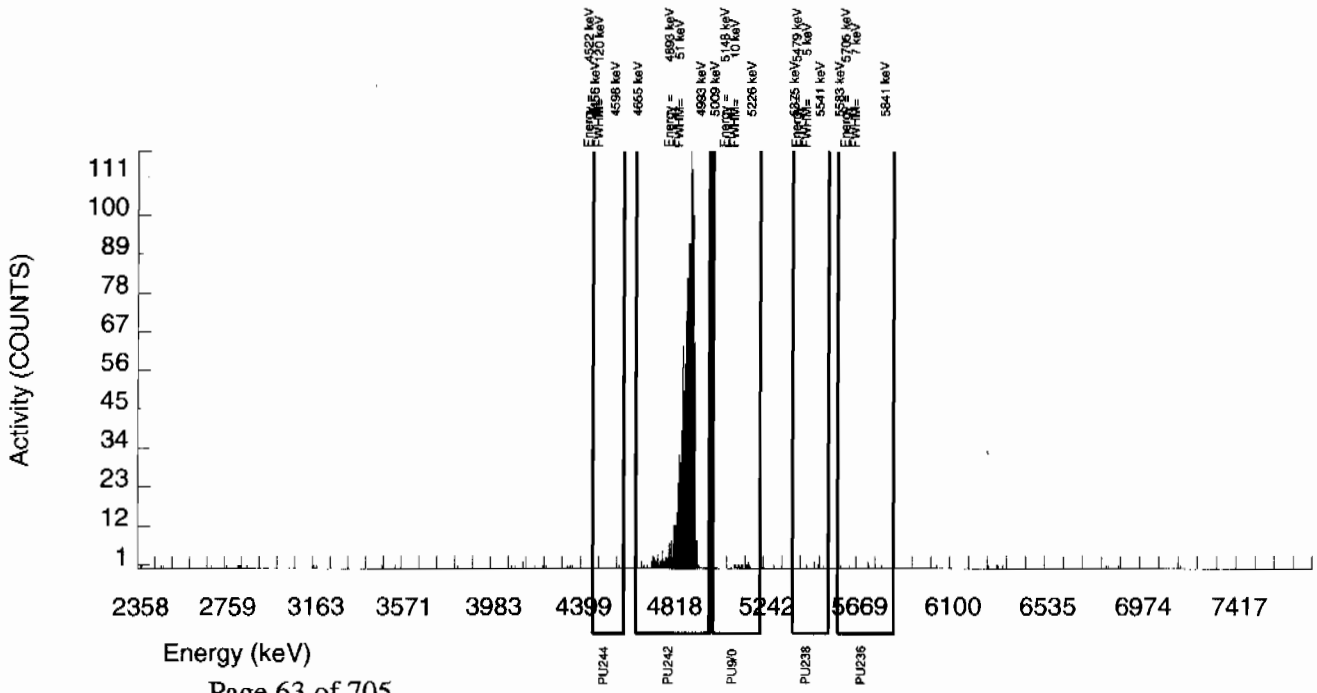

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511006_PU
SAMPLE QTY: 1.258 G

DETECTOR NUMBER :67576
AVERAGE %EFFICIENCY :32.2019
% YIELD : 95.509

COUNT DATE: 9-JUL-2009 17:37:11
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B077.CNF;949
PCI/G : 1.467E+00	PCI/G : 1.467E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 4.01839 dpm	EFF FILE : W077.CNF;249
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	7351.000	7349.000	2.000	4.1684	99.90000	8.56E+00	4.27E-01	1.13E-02	2.58E-02	9.99E-02
PU-236	5749.000	2.000	-6.000	8.000	3.3854	100.0000	-7.06E-03	3.72E-03	9.17E-03	2.15E-02	3.72E-03
PU-238	5499.000	2563.000	2557.000	6.000	3.3734	99.90000	2.98E+00	1.56E-01	9.15E-03	2.14E-02	5.91E-02
PU242	4890.000	1297.000	1294.000	3.000	1.7321	100.0000	1.51E+00	8.43E-02	4.69E-03	1.25E-02	4.20E-02
PU-244	4589.000	14.000	14.000	0.000	4.1569	99.90000	1.63E-02	4.43E-03	1.13E-02	2.57E-02	4.36E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

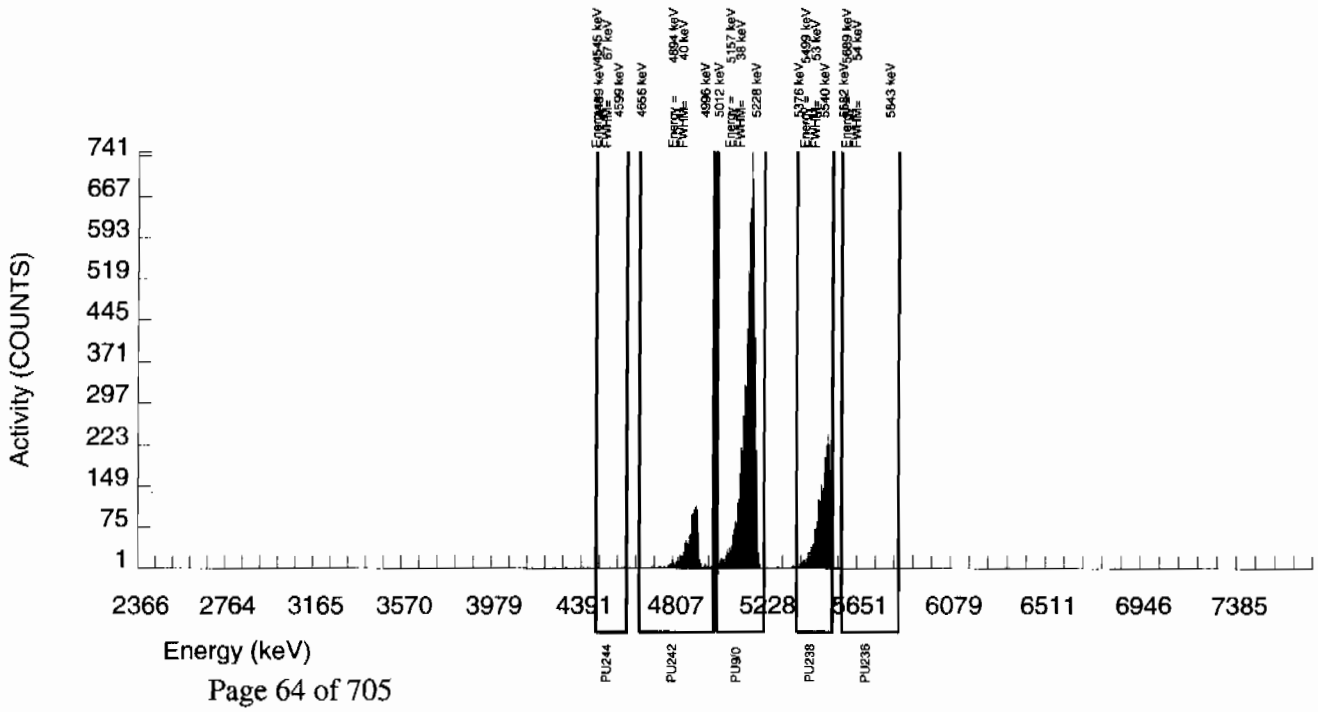

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 6-JUL-2009 00:00:00.

SAMPLE ID : S1201874395_PU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :67577
AVERAGE %EFFICIENCY :32.6940
% YIELD : 86.002

COUNT DATE: 9-JUL-2009 17:37:11
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B078.CNF;949
PCI/G : 1.846E+00	PCI/G : 1.846E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.61839 dpm	EFF FILE : W078.CNF;239
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	1.000	-1.000	2.000	4.1684	99.90000	-1.60E-03	2.78E-03	1.56E-02	3.54E-02	2.78E-03
PU-236	5749.000	7.000	0.000	7.000	3.3854	100.0000	7.66E-10	6.01E-03	1.26E-02	2.96E-02	6.01E-03
PU-238	5499.000	10.000	5.000	5.000	3.3734	99.90000	8.02E-03	6.22E-03	1.26E-02	2.95E-02	6.21E-03
PU242	4890.000	1186.000	1183.000	3.000	1.7321	100.0000	1.90E+00	1.09E-01	6.46E-03	1.73E-02	5.52E-02
PU-244	4589.000	3.000	-1.000	4.000	4.1569	99.90000	-1.60E-03	4.24E-03	1.55E-02	3.54E-02	4.24E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

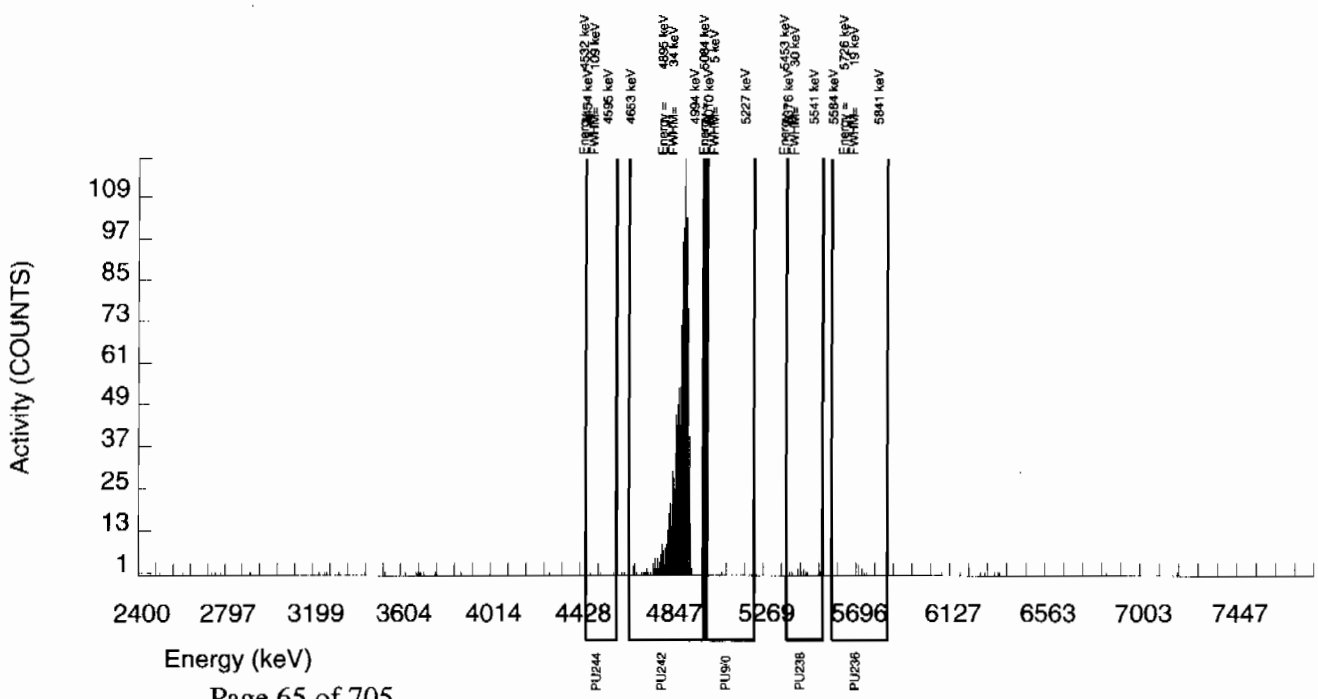

Alpha Spectroscopy Software Version 2 0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S1201874396_PU
SAMPLE QTY: 1.256 G

DETECTOR NUMBER :67598
AVERAGE %EFFICIENCY :32.6964
% YIELD : 93.120

COUNT DATE: 9-JUL-2009 17:37:11
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B079.CNF;949
PCI/G : 1.470E+00	PCI/G : 1.470E+00	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.91786 dpm	EFF FILE : W079.CNF;250
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	7315.000	7313.000	2.000	4.1684	99.90000	8.62E+00	4.31E-01	1.14E-02	2.61E-02	1.01E-01
PU-236	5749.000	5.000	1.000	4.000	3.3854	100.0000	1.19E-03	3.57E-03	9.28E-03	2.17E-02	3.57E-03
PU-238	5499.000	2489.000	2477.000	12.000	3.3734	99.90000	2.92E+00	1.54E-01	9.25E-03	2.17E-02	5.90E-02
PU242	4890.000	1282.000	1281.000	1.000	1.0000	100.0000	1.51E+00	8.46E-02	2.74E-03	8.67E-03	4.22E-02
PU-244	4589.000	18.000	16.000	2.000	4.1569	99.90000	1.89E-02	5.35E-03	1.14E-02	2.60E-02	5.27E-03

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

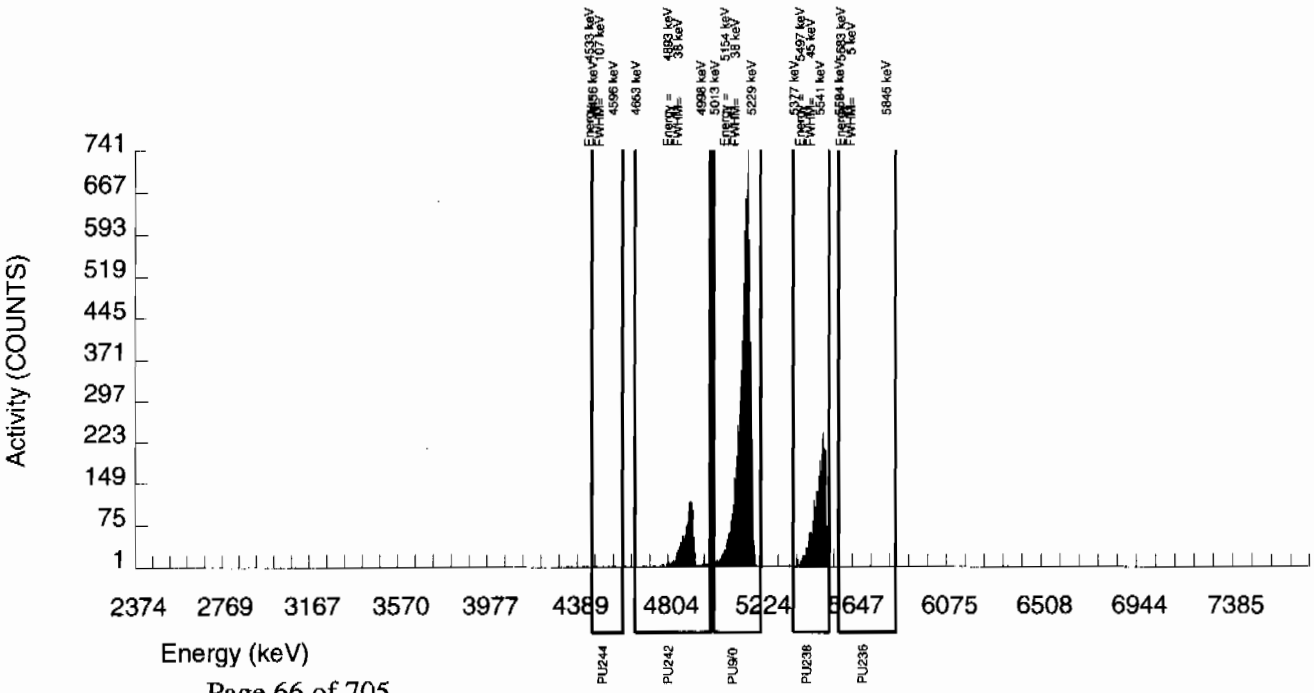

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882525
SAMPLE DATE : 6-JUL-2009 00:00:00.

SAMPLE ID : S1201874397_PU
SAMPLE QTY: 0.115 G

DETECTOR NUMBER :78197
AVERAGE %EFFICIENCY :33.4265
% YIELD : 88.526

COUNT DATE: 9-JUL-2009 17:37:11
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B080.CNF;952
PCI/G : 1.605E+01	PCI/G : 1.605E+01	NOMINAL : 4.20732 dpm	BKG DATE : 5-JUL-2009
		RESULTS : 3.72459 dpm	EFF FILE : W080.CNF;260
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	3083.000	3078.000	5.000	4.1684	99.90000	4.08E+01	2.41E+00	1.28E-01	2.93E-01	7.36E-01
PU-236	5749.000	0.000	0.000	0.000	3.3854	100.0000	0.00E+00	1.33E-02	1.04E-01	2.44E-01	1.33E-02
PU-238	5499.000	558.000	558.000	0.000	3.3734	99.90000	7.39E+00	5.21E-01	1.04E-01	2.44E-01	3.13E-01
PU242	4890.000	1258.000	1245.000	13.000	3.6056	100.0000	1.65E+01	1.04E+00	1.11E-01	2.58E-01	4.72E-01
PU-244	4589.000	9.000	7.000	2.000	4.1569	99.90000	9.28E-02	4.43E-02	1.28E-01	2.92E-01	4.39E-02

NOTE: Sg calculated via blank population (updated 11-JUN-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

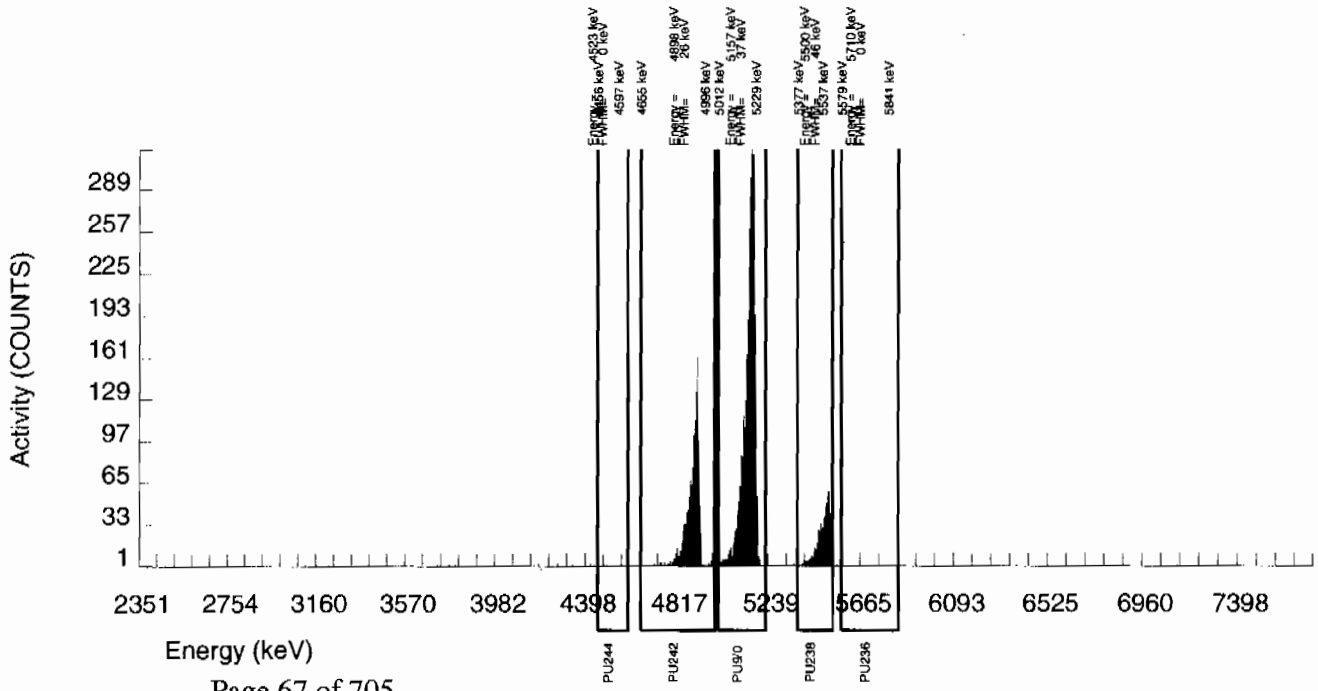

Radiochemistry Batch Checklist, Rev 9

Batch# 885014 Product: U Date: 7/16/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.		✓	NCM# 712253
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.		✓	NCM# 712253
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		NCM# 712253
Batch non-conformances second reviewed and disposition verified to be completed.	✓		NCM# 712253
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/16/09

Secondary Review Performed By: [signature] 7/16/09

7/16/11 - 7/17 07/17/09

P ✓

Uranium Que Sheet

14-JUL-09

Batch #: 885014 **Analyst:** AXD2 **First Client Due Date:** 17-JUL-09 **Internal Due Date:** 11-JUL-09

Tracer Isotope: U-232 U-236 **Tracer Code:** 1283-B **Expiration Date:** 12/16/09 **Vol:** 0.1ml

LCS Isotope: U-238 **LCS Code:** SRM 0244-A **Expiration Date:** 10/31/20 **Vol:** 0.1g

Spike Isotope: U-238 **Spike Code:** N/A **Expiration Date:** N/A **Vol:** N/A

Prep Date: 7/14/09 **Initials:** MDA **Pipet ID:** 2971058 **Balance ID:** 50410272 **Witness:** KM 7-14-09

Page 69 of 705

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g) (1/f)	U Det #
232045001-3	CAMO-09-10150	SAMPLE		.1 pCi/g	SOIL	LANL010	16-JUN-09	1	101	0.313	138
232069001-3	CAMO-09-10142	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	2	102	0.299	139
232069002-3	CAMO-09-10141	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	3	103	0.293	140
232069003-3	CAMO-09-10143	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	4	104	0.306	141
232069004-3	CAMO-09-10153	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	5	105	0.303	142
232069005-3	CAMO-09-10144	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	6	106	0.313	144
232069006-3	CAMO-09-10154	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	7	107	0.313	145
232076001-3	CAMO-09-6611	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	8	108	0.302	146
232076002-3	CAMO-09-6612	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	9	109	0.299	147
232076003-3	CAMO-09-6610	SAMPLE		.1 pCi/g	SOIL	LANL010	17-JUN-09	10	110	0.299	148
232424001-3	CAMO-09-10463	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	11	111	0.299	149
232426001-3	CAMO-09-7143	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	12	112	0.304	~~150~~ 161
232426002-3	CAMO-09-7144	SAMPLE		.1 pCi/g	SOIL	LANL010	23-JUN-09	13	113	0.300	151
232511001-3	CAMO-09-6519	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	14	114	0.304	152
232511002-3	CAMO-09-6518	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	15	115	0.308	153
232511003-3	CAMO-09-6527	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	16	116	0.298	154
232511004-3	CAMO-09-6529	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	17	117	0.304	155
232511005-3	CAMO-09-6528	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	18	118	0.299	156
232511006-3	CAMO-09-6531	SAMPLE		.1 pCi/g	SOIL	LANL010	24-JUN-09	19	119	0.303	157
1201880401-1	MB for batch 885014	MB		UCF pCi/g to pCi/	SOIL	QC ACCOUNT		20	120	~~0.313~~ 0	158
1201880402-3	CAMO-09-6531(232511006DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	24-JUN-09	21	121	0.306	171
1201880403-1	LCS for batch 885014	LCS		UCF pCi/g to pCi/	SOIL	QC ACCOUNT		SRM 22	122	0.100	172

Choose SOP used: GL-RAD-A-011
GL-RAD-A-038
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: 7/16/09

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 885014

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201880402	DUP	Uranium-233/234	0.306 g	1.01	0.0951	0.186	-.02349673	pCi/g	NO
		Uranium-235/236	0.306 g	0.101	0.0236	0.085	-.03039216	pCi/g	NO
		Uranium-238	0.306 g	1.13	0.105	0.0722	0	pCi/g	NO
1201880403	LCS	Uranium-233/234	0.100 g	6.06	0.492	0.557	-.0719	pCi/g	NO
		Uranium-235/236	0.100 g	0.272	0.0733	0.255	-.093	pCi/g	NO
		Uranium-238	0.100 g	5.54	0.456	0.217	0	pCi/g	NO
1201880401	MB	Uranium-233/234	1.00 g	-0.00719	0.00538	0.0855	-.00719	pCi/g	NO
		Uranium-235/236	1.00 g	-0.0093	0.0057	0.0392	-.0093	pCi/g	NO
		Uranium-238	1.00 g	0.00	0.00188	0.0333	0	pCi/g	NO
232045001	CAMO-09-10150	Uranium-233/234	0.313 g	0.920	0.105	0.261	-.02297125	pCi/g	NO
		Uranium-235/236	0.313 g	0.064	0.026	0.120	-.02971246	pCi/g	NO
		Uranium-238	0.313 g	0.963	0.104	0.102	0	pCi/g	NO
232069001	CAMO-09-10142	Uranium-233/234	0.299 g	0.709	0.0854	0.282	-.02404682	pCi/g	NO
		Uranium-235/236	0.299 g	0.0384	0.0232	0.129	-.03110368	pCi/g	NO
		Uranium-238	0.299 g	0.683	0.0852	0.110	0	pCi/g	NO
232069002	CAMO-09-10141	Uranium-233/234	0.293 g	0.726	0.129	0.656	-.02453925	pCi/g	NO
		Uranium-235/236	0.293 g	0.0178	0.0309	0.301	-.03174061	pCi/g	NO
		Uranium-238	0.293 g	0.794	0.130	0.255	0	pCi/g	NO
232069003	CAMO-09-10143	Uranium-233/234	0.306 g	1.13	0.121	0.294	-.02349673	pCi/g	NO
		Uranium-235/236	0.306 g	0.0798	0.0282	0.135	-.03039216	pCi/g	NO
		Uranium-238	0.306 g	1.07	0.114	0.114	0	pCi/g	NO
232069004	CAMO-09-10153	Uranium-233/234	0.303 g	0.725	0.0879	0.264	-.02372937	pCi/g	NO
		Uranium-235/236	0.303 g	0.0502	0.0218	0.121	-.03069307	pCi/g	NO
		Uranium-238	0.303 g	0.883	0.0952	0.103	0	pCi/g	NO
232069005	CAMO-09-10144	Uranium-233/234	0.313 g	1.12	0.113	0.259	-.02297125	pCi/g	NO
		Uranium-235/236	0.313 g	0.0351	0.0188	0.118	-.02971246	pCi/g	NO
		Uranium-238	0.313 g	1.04	0.108	0.101	0	pCi/g	NO
232069006	CAMO-09-10154	Uranium-233/234	0.313 g	0.728	0.0852	0.261	-.02297125	pCi/g	NO
		Uranium-235/236	0.313 g	0.120	0.0321	0.119	-.02971246	pCi/g	NO
		Uranium-238	0.313 g	0.900	0.0963	0.101	0	pCi/g	NO
232076001	CAMO-09-6611	Uranium-233/234	0.302 g	0.823	0.0927	0.275	-.02380795	pCi/g	NO
		Uranium-235/236	0.302 g	0.0299	0.0184	0.126	-.03079470	pCi/g	NO
		Uranium-238	0.302 g	0.853	0.0939	0.107	0	pCi/g	NO
232076002	CAMO-09-6612	Uranium-233/234	0.299 g	0.888	0.0985	0.269	-.02404682	pCi/g	NO
		Uranium-235/236	0.299 g	0.0293	0.0208	0.123	-.03110368	pCi/g	NO
		Uranium-238	0.299 g	0.900	0.098	0.105	0	pCi/g	NO
232076003	CAMO-09-6610	Uranium-233/234	0.299 g	0.915	0.100	0.274	-.02404682	pCi/g	NO
		Uranium-235/236	0.299 g	0.0372	0.0199	0.125	-.03110368	pCi/g	NO
		Uranium-238	0.299 g	0.885	0.0961	0.107	0	pCi/g	NO
232424001	CAMO-09-10463	Uranium-233/234	0.299 g	0.511	0.0686	0.290	-.02404682	pCi/g	NO
		Uranium-235/236	0.299 g	0.0394	0.0178	0.133	-.03110368	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232424001	CAMO-09-10463	Uranium-238	0.299 g	0.350	0.0555	0.113	0	pCi/g	NO
232511001	CAMO-09-6519	Uranium-233/234	0.304 g	1.50	0.141	0.269	-.02365132	pCi/g	NO
		Uranium-235/236	0.304 g	0.0876	0.028	0.123	-.03059211	pCi/g	NO
		Uranium-238	0.304 g	1.17	0.118	0.105	0	pCi/g	NO
232511002	CAMO-09-6518	Uranium-233/234	0.308 g	1.09	0.115	0.290	-.02334416	pCi/g	NO
		Uranium-235/236	0.308 g	0.0789	0.030	0.133	-.03019481	pCi/g	NO
		Uranium-238	0.308 g	1.37	0.134	0.113	0	pCi/g	NO
232511003	CAMO-09-6527	Uranium-233/234	0.298 g	1.06	0.114	0.305	-.02412752	pCi/g	NO
		Uranium-235/236	0.298 g	0.0663	0.0314	0.140	-.03120805	pCi/g	NO
		Uranium-238	0.298 g	1.13	0.119	0.119	0	pCi/g	NO
232511004	CAMO-09-6529	Uranium-233/234	0.304 g	1.36	0.133	0.276	-.02365132	pCi/g	NO
		Uranium-235/236	0.304 g	0.0675	0.023	0.127	-.03059211	pCi/g	NO
		Uranium-238	0.304 g	1.00	0.106	0.107	0	pCi/g	NO
232511005	CAMO-09-6528	Uranium-233/234	0.299 g	2.54	0.220	0.282	-.02404682	pCi/g	NO
		Uranium-235/236	0.299 g	0.107	0.0334	0.129	-.03110368	pCi/g	NO
		Uranium-238	0.299 g	1.05	0.110	0.110	0	pCi/g	NO
232511006	CAMO-09-6531	Uranium-233/234	0.303 g	0.906	0.0998	0.278	-.02372937	pCi/g	NO
		Uranium-235/236	0.303 g	0.0454	0.0216	0.128	-.03069307	pCi/g	NO
		Uranium-238	0.303 g	1.17	0.119	0.108	0	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511001_UU
SAMPLE QTY: 0.304 G

DETECTOR NUMBER :76222
AVERAGE %EFFICIENCY :24.6763
% YIELD : 101.675

COUNT DATE:15-JUL-2009 21:13:14
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B152.CNF;328
PCI/G : 3.868E+01	PCI/G : 3.868E+01	NOMINAL : 5.29615 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.38484 dpm	EFF FILE : W152.CNF;91
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	259.000	253.993	1.000	9.1924	100.0000	1.50E+00	1.41E-01	1.26E-01	2.69E-01	9.45E-02
U232	5302.100	1329.000	1328.000	1.000	1.0000	100.0000	7.85E+00	5.90E-01	1.37E-02	4.35E-02	2.16E-01
U-235	4391.000	13.000	12.000	1.000	3.0409	80.90000	8.76E-02	2.80E-02	5.16E-02	1.23E-01	2.73E-02
U-238	4184.730	201.000	198.000	3.000	3.2215	100.0000	1.17E+00	1.18E-01	4.43E-02	1.05E-01	8.44E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

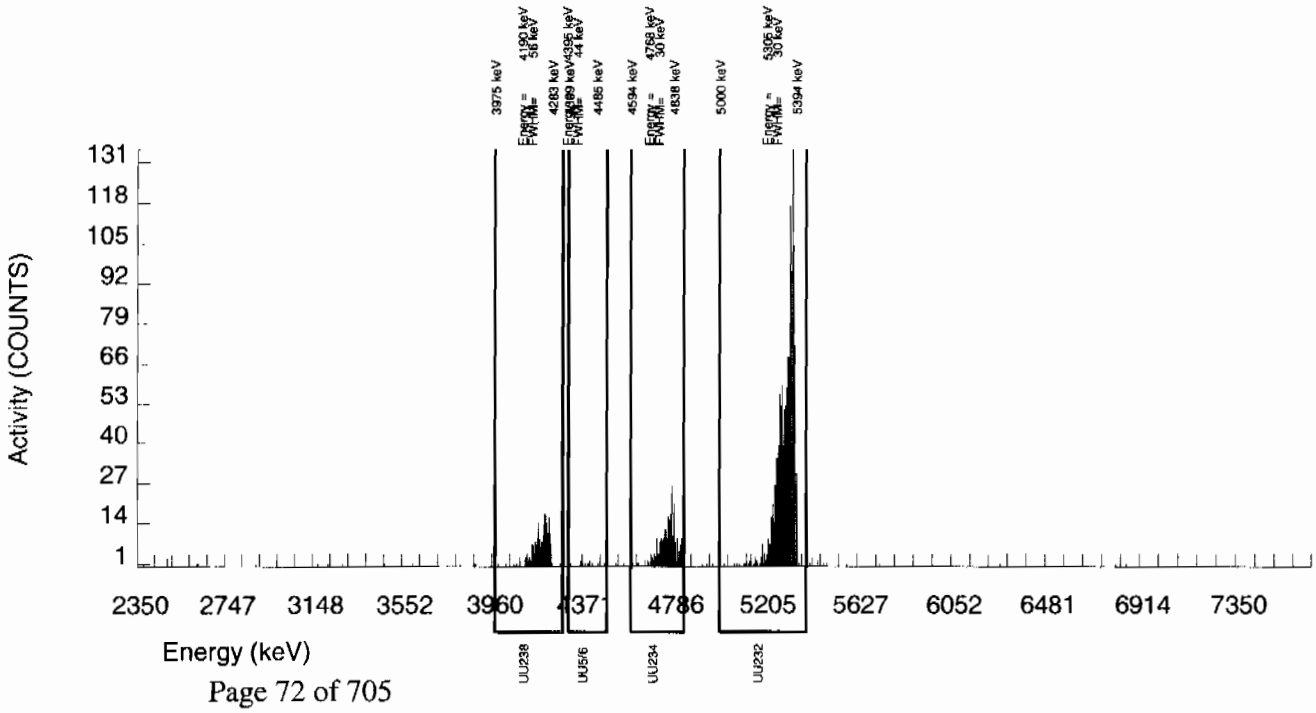

Alpha Spectroscopy Software Version 2 0
effective date 09-Mar 1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511002_UU
SAMPLE QTY: 0.308 G

DETECTOR NUMBER :76223
AVERAGE %EFFICIENCY :25.0846
% YIELD : 91.358

COUNT DATE:15-JUL-2009 21:13:18
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B153.CNF;323
PCI/G : 3.818E+01	PCI/G : 3.818E+01	NOMINAL : 5.29616 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.83848 dpm	EFF FILE : W153.CNF;94
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	179.000	170.340	5.000	9.1924	100.0000	1.09E+00	1.15E-01	1.36E-01	2.90E-01	8.57E-02
U232	5302.100	1215.000	1213.000	2.000	1.4142	100.0000	7.75E+00	5.90E-01	2.10E-02	5.93E-02	2.23E-01
U-235	4391.000	12.000	10.000	2.000	3.0409	80.90000	7.89E-02	3.00E-02	5.58E-02	1.33E-01	2.95E-02
U-238	4184.730	215.000	214.000	1.000	3.2215	100.0000	1.37E+00	1.34E-01	4.78E-02	1.13E-01	9.38E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

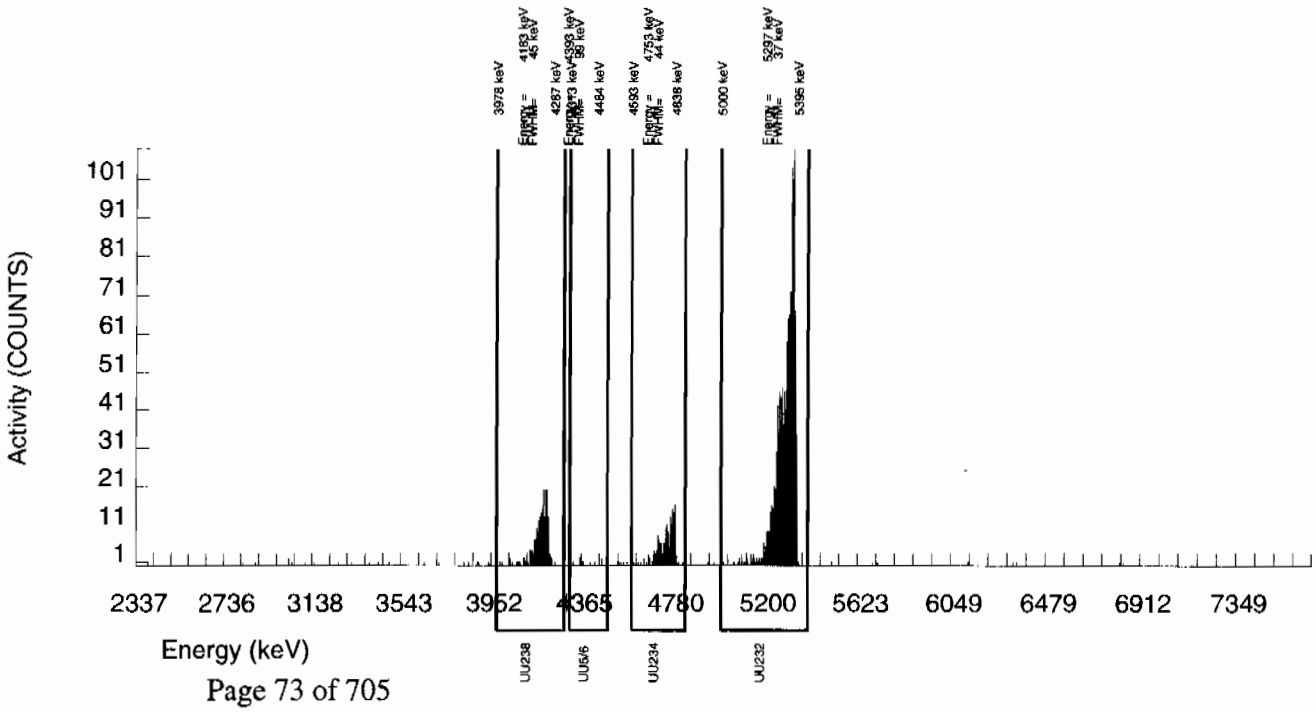

Alpha Spectroscopy Software Version 2.0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511003_UU
SAMPLE QTY: 0.298 G

DETECTOR NUMBER :76224
AVERAGE %EFFICIENCY :25.9356
% YIELD : 86.904

COUNT DATE:15-JUL-2009 21:13:20
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B154.CNF;325
PCI/G : 3.946E+01	PCI/G : 3.946E+01	NOMINAL : 5.29616 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.60255 dpm	EFF FILE : W154.CNF;92
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	164.000	158.400	2.000	9.1924	100.0000	1.06E+00	1.14E-01	1.43E-01	3.05E-01	8.55E-02
U232	5302.100	1199.000	1193.000	6.000	2.4495	100.0000	8.01E+00	6.12E-01	3.82E-02	9.46E-02	2.33E-01
U-235	4391.000	11.000	8.000	3.000	3.0409	80.90000	6.63E-02	3.14E-02	5.86E-02	1.40E-01	3.10E-02
U-238	4184.730	170.000	169.000	1.000	3.2215	100.0000	1.13E+00	1.19E-01	5.03E-02	1.19E-01	8.77E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

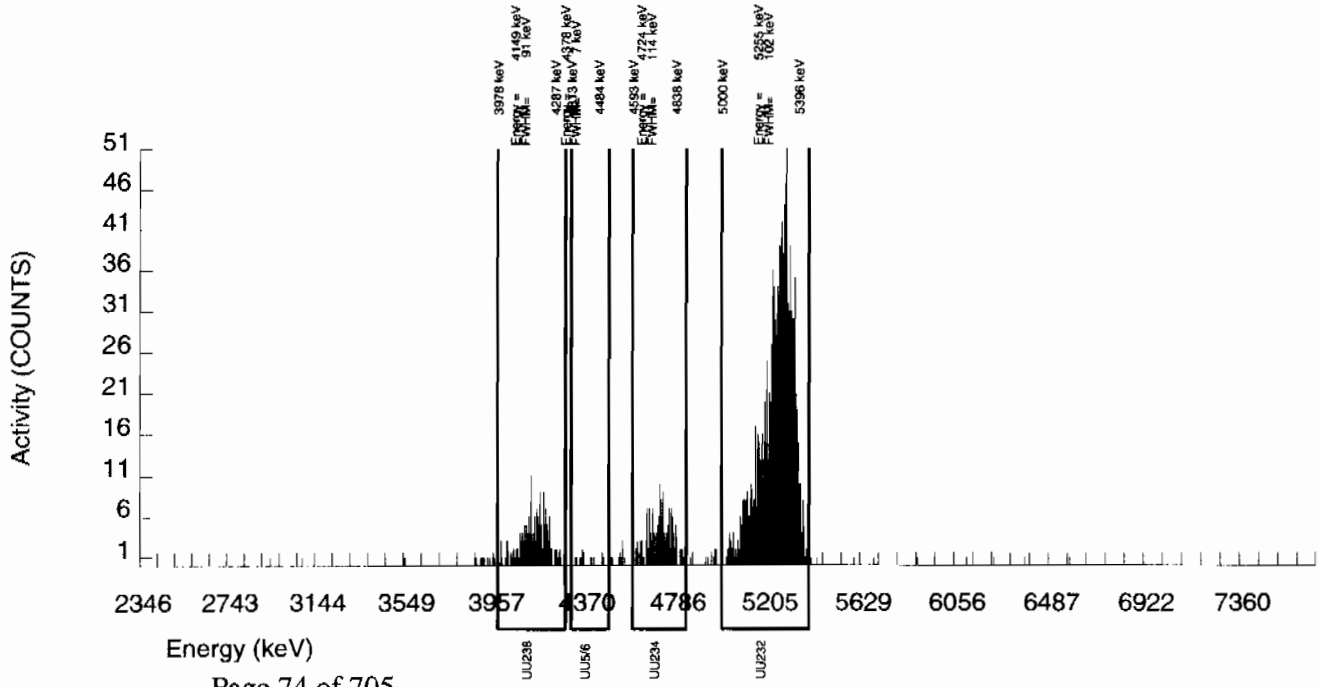

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511004_UU
SAMPLE QTY: 0.304 G

DETECTOR NUMBER :75553
AVERAGE %EFFICIENCY :25.6275
% YIELD : 95.247

COUNT DATE:15-JUL-2009 21:13:22
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B155.CNF;332
PCI/G : 3.868E+01	PCI/G : 3.868E+01	NOMINAL : 5.29615 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.04441 dpm	EFF FILE : W155.CNF;101
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	231.000	224.102	3.000	9.1924	100.0000	1.36E+00	1.33E-01	1.30E-01	2.76E-01	9.21E-02
U232	5302.100	1296.000	1292.000	4.000	2.0000	100.0000	7.85E+00	5.92E-01	2.82E-02	7.29E-02	2.19E-01
U-235	4391.000	9.000	9.000	0.000	3.0409	80.90000	6.75E-02	2.30E-02	5.31E-02	1.26E-01	2.25E-02
U-238	4184.730	167.000	165.000	2.000	3.2215	100.0000	1.00E+00	1.06E-01	4.55E-02	1.07E-01	7.89E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

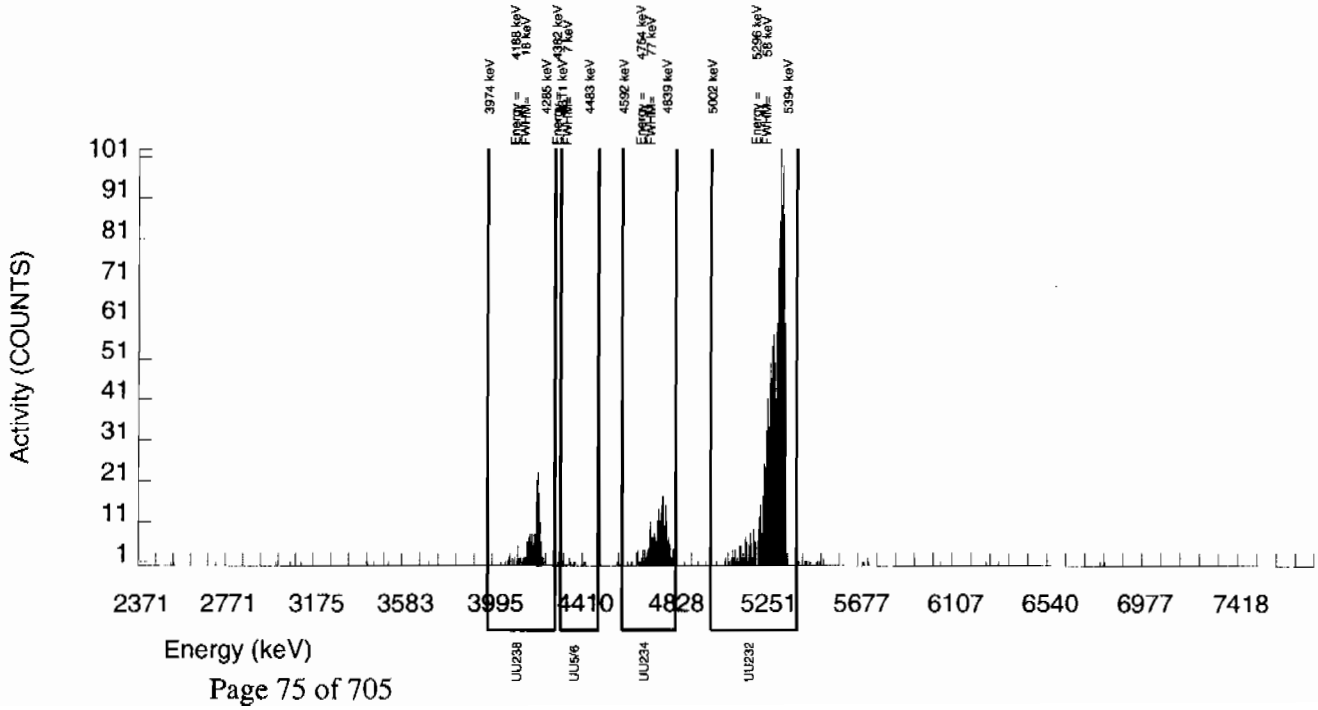

Alpha Spectroscopy Software Version 2 0
effective date. 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511005_UU
SAMPLE QTY: 0.299 G

DETECTOR NUMBER :75554
AVERAGE %EFFICIENCY :24.9092
% YIELD : 97.538

COUNT DATE:15-JUL-2009 21:13:25
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B156.CNF;333
PCI/G : 3.933E+01	PCI/G : 3.933E+01	NOMINAL : 5.29615 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.16576 dpm	EFF FILE : W156.CNF;105
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	425.000	410.120	11.000	9.1924	100.0000	2.54E+00	2.20E-01	1.33E-01	2.82E-01	1.29E-01
U232	5302.100	1293.000	1286.000	7.000	2.6458	100.0000	7.98E+00	6.03E-01	3.82E-02	9.31E-02	2.24E-01
U-235	4391.000	16.000	14.000	2.000	3.0409	80.90000	1.07E-01	3.34E-02	5.42E-02	1.29E-01	3.25E-02
U-238	4184.730	172.000	170.000	2.000	3.2215	100.0000	1.05E+00	1.10E-01	4.65E-02	1.10E-01	8.18E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

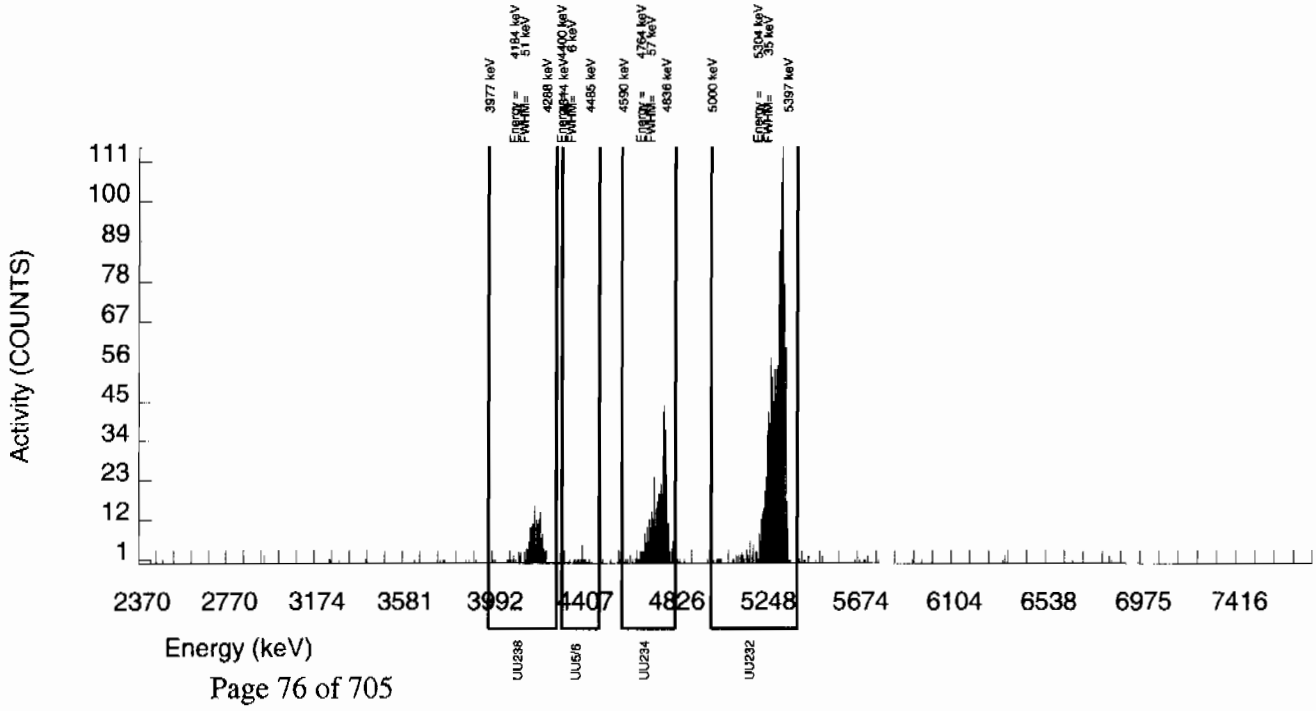

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511006_UU
SAMPLE QTY: 0.303 G

DETECTOR NUMBER :75555
AVERAGE %EFFICIENCY :24.6763
% YIELD : 98.459

COUNT DATE:15-JUL-2009 21:13:27
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B157.CNF;333
PCI/G : 3.881E+01	PCI/G : 3.881E+01	NOMINAL : 5.29615 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.21452 dpm	EFF FILE : W157.CNF;95
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	157.000	148.120	5.000	9.1924	100.0000	9.06E-01	9.98E-02	1.31E-01	2.78E-01	7.69E-02
U232	5302.100	1291.000	1286.000	5.000	2.2361	100.0000	7.87E+00	5.95E-01	3.18E-02	8.02E-02	2.20E-01
U-235	4391.000	7.000	6.000	1.000	3.0409	80.90000	4.54E-02	2.16E-02	5.35E-02	1.28E-01	2.14E-02
U-238	4184.730	193.000	192.000	1.000	3.2215	100.0000	1.17E+00	1.19E-01	4.59E-02	1.08E-01	8.52E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

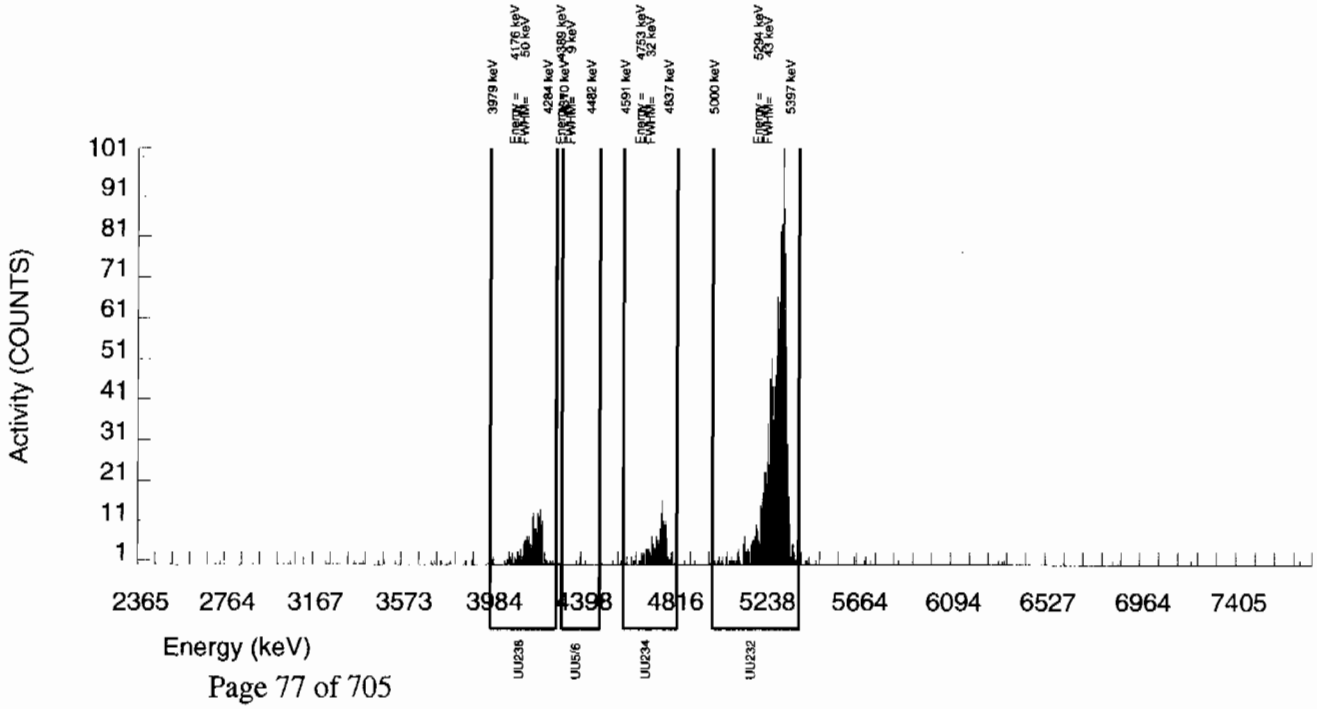

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 14-JUL-2009 00:00:00

SAMPLE ID : S1201880401_UU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :33451
AVERAGE %EFFICIENCY :24.8480
% YIELD : 96.410

COUNT DATE:15-JUL-2009 21:13:30
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B158.CNF;334
PCI/G : 1.176E+01	PCI/G : 1.176E+01	NOMINAL : 5.29335 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.10332 dpm	EFF FILE : W158.CNF;98
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	6.000	-3.826	6.000	9.1924	100.0000	-7.19E-03	5.38E-03	4.02E-02	8.55E-02	5.38E-03
U232	5302.100	1279.000	1268.000	11.000	3.3166	100.0000	2.38E+00	1.79E-01	1.45E-02	3.41E-02	6.75E-02
U-235	4391.000	1.000	-4.000	5.000	3.0409	80.90000	-9.30E-03	5.70E-03	1.64E-02	3.92E-02	5.69E-03
U-238	4184.730	0.000	0.000	0.000	3.2215	100.0000	0.00E+00	1.88E-03	1.41E-02	3.33E-02	1.88E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

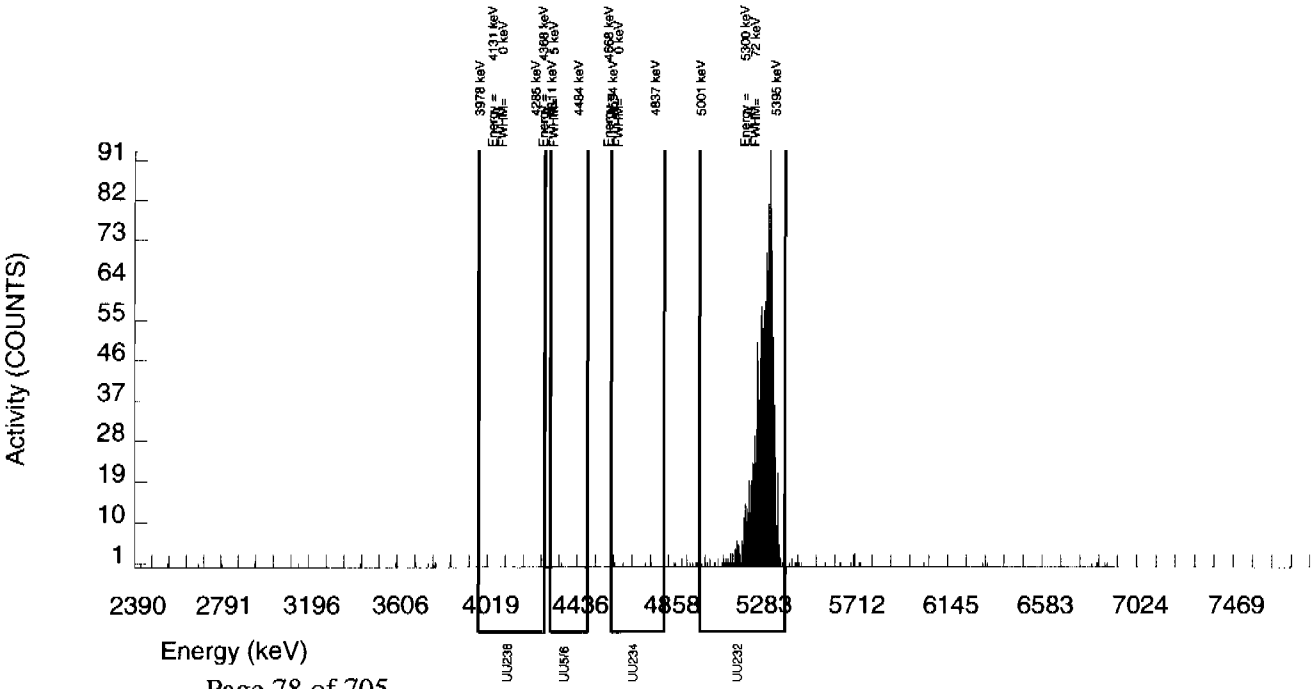

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S1201880402_UU
SAMPLE QTY: 0.306 G

DETECTOR NUMBER :78260
AVERAGE %EFFICIENCY :38.4334
% YIELD : 93.890

COUNT DATE:15-JUL-2009 21:13:33
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B171.CNF;112
PCI/G : 3.843E+01	PCI/G : 3.843E+01	NOMINAL : 5.29615 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.97255 dpm	EFF FILE : W171.CNF;51
			CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	259.000	247.237	6.000	9.1924	100.0000	1.01E+00	9.51E-02	8.72E-02	1.86E-01	6.57E-02
U232	5302.100	1925.000	1910.000	15.000	3.8730	100.0000	7.80E+00	5.61E-01	3.68E-02	8.46E-02	1.80E-01
U-235	4391.000	20.000	20.000	0.000	3.0409	80.90000	1.01E-01	2.36E-02	3.57E-02	8.50E-02	2.26E-02
U-238	4184.730	290.000	278.000	12.000	3.2215	100.0000	1.13E+00	1.05E-01	3.06E-02	7.22E-02	7.09E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

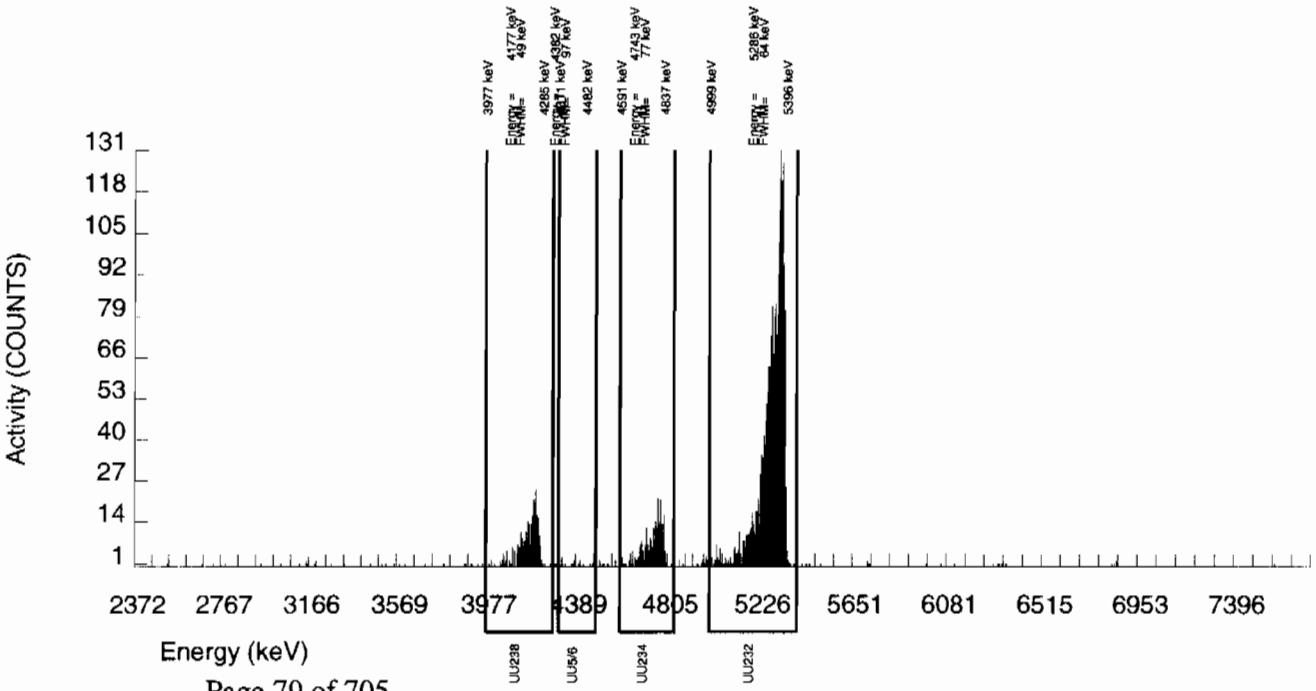

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885014 SAMPLE DATE : 14-JUL-2009 00:00:00	SAMPLE ID : S1201880403_UU SAMPLE QTY: 0.100 G
DETECTOR NUMBER :78772 AVERAGE %EFFICIENCY :38.2609 % YIELD : 96.190	COUNT DATE:15-JUL-2009 21:13:35 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+02	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+02	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29335 dpm RESULTS : 5.09166 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B172.CNF;110 BKG DATE : 12-JUL-2009 EFF FILE : W172.CNF;44 CAL DATE : 22-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	506.000	495.122	5.000	9.1924	100.0000	6.06E+00	4.92E-01	2.62E-01	5.57E-01	2.75E-01
U232	5302.100	1953.000	1948.000	5.000	2.2361	100.0000	2.38E+01	1.70E+00	6.37E-02	1.61E-01	5.42E-01
U-235	4391.000	20.000	18.000	2.000	3.0409	80.90000	2.72E-01	7.33E-02	1.07E-01	2.55E-01	7.10E-02
U-238	4184.730	455.000	453.000	2.000	3.2215	100.0000	5.54E+00	4.56E-01	9.17E-02	2.17E-01	2.62E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

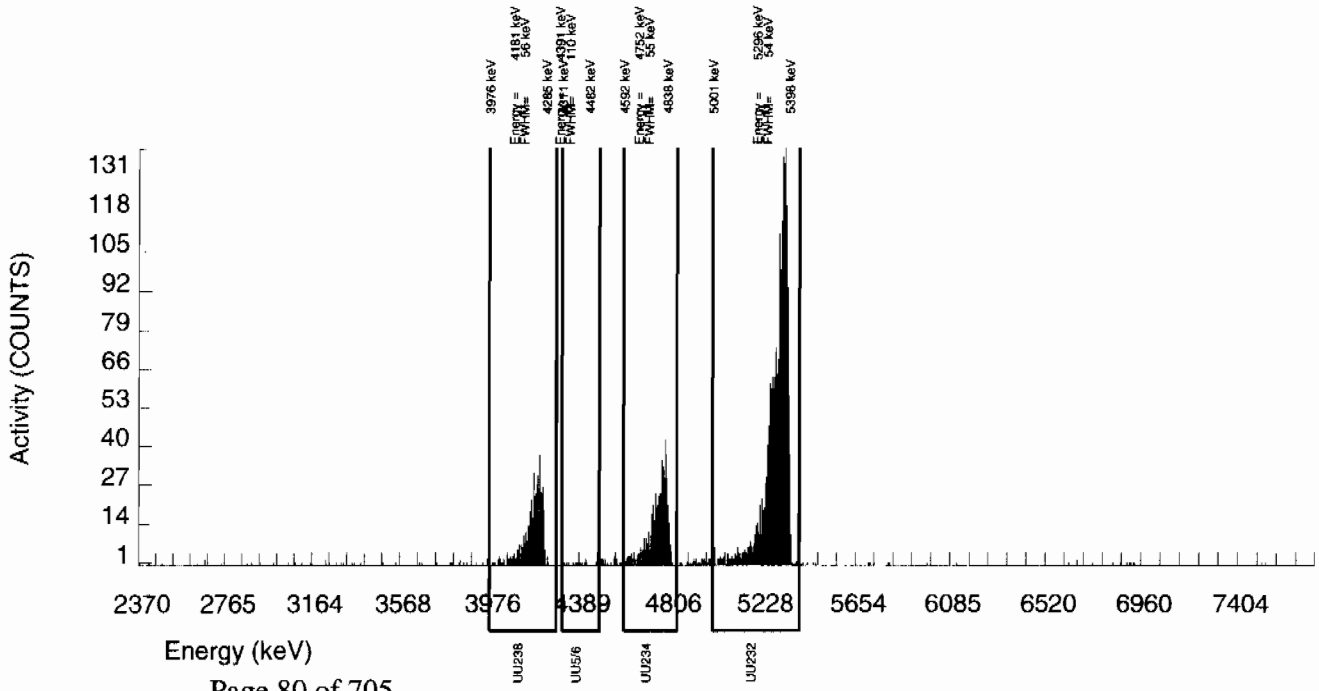

Radiochemistry Batch Checklist, Rev 9

Batch# 881413 Product: SR Date: 7/11/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			N/A
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)	✓		
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: 7/11/09

Secondary Review Performed By:

Strontium 90 Que Sheet

07/02/09

Batch #: 881413 Analyst: JXR1 First Client Due Date: 07/20/2009 Internal Due Date 07/09/2009 Comments

Sr-90 Spike Code: ~~Expiration Date:~~ Vol: Sr Sep. Date/time: 7-3-09/0629

Sr-90 LCS Code: 1067-C Expiration Date: 7-17-10 Vol: 0.1

Sr Carrier Code: 1096463 Exp Date: 3-23-10 Vol: 0.5 Sdt Wt: 9.28

Prep Date: 7-2-09 Initials: Pipet ID: 2766953 Balance #: 17955160 Analytical Scale #: 38110047 Witness: JC 7-2-09

Sample ID	Client Description	Type	RDL	Collection Date	Matrix	Client	Rad	Pos. #	Wet/Dry Aliquot (mL) or (g)	Det # 1 & 2		Initial Sr wt (g)	Final Sr wt (g)	Net Sr wt (mg)
232426001-1	CAMO-09-7143	SAMPLE	.5 pCi/g	JUN-23-09 12:00 PM	SOIL	LANL010		1	2.005	6D		0.0250	0.0311	6.1
232426002-1	CAMO-09-7144	SAMPLE	.5 pCi/g	JUN-23-09 12:00 PM	SOIL	LANL010		2	2.015	6E		0.0252	0.0306	5.4
232511001-1	CAMO-09-6519	SAMPLE	.5 pCi/g	JUN-24-09 12:00 PM	SOIL	LANL010		3	2.022	6C		0.0255	0.0311	5.6
232511002-1	CAMO-09-6518	SAMPLE	.5 pCi/g	JUN-24-09 12:00 PM	SOIL	LANL010		4	2.007	7A	A1	0.0254	0.0312	5.8
232511003-1	CAMO-09-6527	SAMPLE	.5 pCi/g	JUN-24-09 12:00 PM	SOIL	LANL010		5	2.010	7B		0.0250	0.0311	6.1
~~232511004-1~~	~~CAMO-09-6529~~	~~SAMPLE~~	~~.5 pCi/g~~	~~JUN-24-09 12:00 PM~~	~~SOIL~~	~~LANL010~~		~~6~~	~~2.00[illegible]~~	~~7C~~	~~A2~~	~~0.0252~~	~~0.0309~~	~~5.7~~
~~232511005-1~~	~~CAMO-09-6528~~	~~SAMPLE~~	~~.5 pCi/g~~	~~JUN-24-09 12:00 PM~~	~~SOIL~~	~~LANL010~~		~~7~~	~~2.002~~	~~7D~~	~~B1~~	~~0.0249~~	~~0.0301~~	~~5.8~~
232511006-1	CAMO-09-6531	SAMPLE	.5 pCi/g	JUN-24-09 12:00 PM	SOIL	LANL010 VC 07/06/09		8	2.015	7E	B3	0.0254	0.0317	6.3
1201871820-1	MB for batch 881413	MB	.5 pCi/g		SOIL	QC ACCOUNT		9 1.0	~~2.022~~	9B	8A	0.0256	0.0313	5.7
1201871821-1	CAMO-09-6519(232511001DUP)	DUP	.5 pCi/g	JUN-24-09 12:00 PM	SOIL	QC ACCOUNT		10	2.005	9D	B4	0.0256	0.0310	5.4
1201871822-1	LCS for batch 881413	LCS	.5 pCi/g		SOIL	QC ACCOUNT VC 07/06/09		11 1.0	~~2.022~~	10C		0.0253	0.0320	6.7

✓NTS.
✓DAILIES

Instruments used: LB4110 S/N 8219, PIC S/N 10751-4, Solid Sample Dissolution By: LEACH or DIGESTION Data Reviewed By: 7/9/09

Circle One

Pro-Auto 4 (S/n 924233)

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 881413

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201871821	DUP	Strontium-90	2.01E+00 g	3.02E-01	7.89E-02	2.05E-01	-.07412935	pCi/g	NO
1201871822	LCS	Strontium-90	1.00E+00 g	2.14E+01	2.26E+00	3.31E-01	-.149	pCi/g	NO
1201871820	MB	Strontium-90	1.00E+00 g	-1.49E-01	8.25E-02	3.52E-01	-.149	pCi/g	NO
232426001	CAMO-09-7143	Strontium-90	2.01E+00 g	3.58E-02	9.06E-02	3.21E-01	-.07412935	pCi/g	NO
232426002	CAMO-09-7144	Strontium-90	2.02E+00 g	-8.15E-02	7.26E-02	2.91E-01	-.07376238	pCi/g	NO
232511001	CAMO-09-6519	Strontium-90	2.02E+00 g	3.44E-01	1.36E-01	4.16E-01	-.07376238	pCi/g	NO
232511002	CAMO-09-6518	Strontium-90	2.01E+00 g	7.11E-01	1.12E-01	1.87E-01	-.07412935	pCi/g	NO
232511003	CAMO-09-6527	Strontium-90	2.01E+00 g	1.09E-01	5.99E-02	1.90E-01	-.07412935	pCi/g	NO
232511006	CAMO-09-6531	Strontium-90	2.02E+00 g	6.19E-01	1.02E-01	1.90E-01	-.07376238	pCi/g	NO

S881413v

Strontium-90 Solid

Filename : SR90.XLS
File type : Excel
Version # : 1.2.6

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

Batch : 881413
Analyst : JXR1
Prep Date : 7/2/2009

Sr-90 Abundance : 1
Method Uncertainty : 0.1005

Calibration Date : 1/12/2009
Calibration Due Date : 1/31/2010

LCS S/N : 1067-C
LCS Exp Date : 6/17/2010
LCS Activity (dpm/ml): 433.44
LCS Volume Added: 0.10

Carrier S/N : 1096463
Carrier Exp Date : 3/23/2010
Carrier Volume Added: 0.50
Carrier Weight (mg/ml): 18.55
Carrier Weight StDev.: 0.06

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1 ml Stdev : +/- 0.005480 ml

Procedure Code : GFC90SRS
Parmname : Strontium-90
Required MDC : 0.5 pCi/G
Halflife of Sr-90 : 28.6 years
Halflife of Y-90 : 64.1 hours
Batch counted on : LB4100
BKG Count time : 500 min

Sample Characteristics					Carrier Calculations				
Pos.	Sample ID	Sample Aliquot G	Sample Aliquot StDev. G	Sample Date/Time	Carrier Weight (mg) (Standard)	Net Weight (mg) (Sample)	Net Weight StDev. (mg)	Carrier Aliquot (mL)	Carrier Aliquot StDev. (mL)
1	232426001.1	2.0050	3.4277E-03	6/23/2009 12:00	18.55	6.10	0.033548	0.5	0.002564
2	232426002.1	2.0150	3.4287E-03	6/23/2009 12:00	18.55	5.40	0.030539	0.5	0.002564
3	232511001.1	2.0220	3.4294E-03	6/24/2009 12:00	18.55	5.60	0.031399	0.5	0.002564
4	232511002.1	2.0070	3.4279E-03	6/24/2009 12:00	18.55	5.80	0.032258	0.5	0.002564
5	232511003.1	2.0100	3.4282E-03	6/24/2009 12:00	18.55	6.10	0.033548	0.5	0.002564
~~6~~	~~232511004.1~~	~~2.0030~~	~~3.4275E-03~~	~~6/24/2009 12:00~~	~~18.55~~	~~5.70~~	~~0.031829~~	~~0.5~~	~~0.002564~~
~~7~~	~~232511005.1~~	~~2.0020~~	~~3.4274E-03~~	~~6/24/2009 12:00~~	~~18.55~~	~~5.80~~	~~0.032258~~	~~0.5~~	~~0.002564~~
8	232511006.1	2.0150	3.4287E-03	6/24/2009 12:00	18.55	6.30	0.034407	0.5	0.002564
9	1201871820.1	1.0000	3.3233E-03	7/2/2009 0:00	18.55	5.70	0.031829	0.5	0.002564
10	1201871821.1	2.0050	3.4277E-03	6/24/2009 12:00	18.55	5.40	0.030539	0.5	0.002564
11	1201871822.1	1.0000	3.3233E-03	7/2/2009 0:00	18.55	6.70	0.036127	0.5	0.002564

Count Raw Data

Pos.	Detector ID	Counting Time (min.)	Gross Counts Alpha	Gross Counts Beta	Gross Beta CPM	Weekly Bkg CPM	Weekly Bkg Count Time (min.)	Detector Efficiency (cpm/dpm) Sr-90	Detector Efficiency (cpm/dpm) Y-90	Detector Efficiency Error (cpm/dpm)	Alpha X-Talk	Count Start Date/Time	Strontium Separation Date/Time	Yttrium Ingrowth	Sr-90 Decay	Calculated Sample Recovery %	Sample Recovery Error %
1	5D	60	8	79	1.310	1.248	500	0.4201	0.5621	0.00816	0.05211	7/4/2009 14:59	7/3/2009 6:29	0.300	0.999	65.77%	0.98%
2	6B	60	36	40	0.640	0.764	500	0.4183	0.5529	0.00816	0.04420	7/4/2009 14:59	7/3/2009 6:29	0.300	0.999	58.22%	1.00%
3	6C	60	26	144	2.381	1.836	500	0.4197	0.5507	0.00816	0.04365	7/4/2009 14:59	7/3/2009 6:29	0.300	0.999	60.38%	0.99%
4	A1	60	14	182	3.027	1.070	500	0.4809	0.5937	0.01870	0.02589	7/10/2009 17:25	7/3/2009 6:29	0.856	0.999	62.53%	0.99%
5	7B	60	3	34	0.564	0.378	500	0.4172	0.5564	0.00816	0.05084	7/4/2009 14:59	7/3/2009 6:29	0.300	0.999	65.77%	0.98%
~~6~~	~~A2~~	~~60~~	~~199~~	~~1726~~	~~28.680~~	~~1.010~~	~~500~~	~~0.4708~~	~~0.5900~~	~~0.01949~~	~~0.02610~~	~~7/10/2009 17:25~~	~~7/3/2009 6:29~~	~~0.856~~	~~0.999~~	~~61.46%~~	~~0.99%~~
~~7~~	~~B1~~	~~60~~	~~88~~	~~643~~	~~10.684~~	~~1.356~~	~~500~~	~~0.4605~~	~~0.6107~~	~~0.01908~~	~~0.02216~~	~~7/10/2009 17:24~~	~~7/3/2009 6:29~~	~~0.856~~	~~0.999~~	~~62.53%~~	~~0.99%~~
8	B3	60	23	183	3.044	1.244	500	0.4305	0.6158	0.01849	0.01550	7/10/2009 17:24	7/3/2009 6:29	0.856	0.999	67.92%	0.98%
9	8A	60	3	30	0.497	0.675	500	0.4230	0.5601	0.00816	0.05403	7/9/2009 11:53	7/3/2009 6:29	0.802	1.000	61.46%	0.99%
10	B4	60	20	106	1.757	1.017	500	0.4492	0.5812	0.02075	0.02931	7/10/2009 17:24	7/3/2009 6:29	0.856	0.999	58.22%	1.00%
11	10C	60	0	1204	20.067	0.324	500	0.4124	0.5468	0.00816	0.14178	7/4/2009 14:59	7/3/2009 6:29	0.300	1.000	72.24%	0.97%

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

Results

Pos.	Decision Level pCi/G	Critical Level pCi/G	Required MDC pCi/G	MDC pCi/G	Sample Act. Conc. pCi/G	Sample Act. Error pCi/G	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/G	1 SIGMA Total Prop. Uncertainty pCi/G	Sample QC	Sample Type	RPD	RER	Nominal pCi/G	Recovery
1	0.2065	0.1458	0.5	0.3205	**0.0358**	2.5270	0.0617	0.1560	0.0905	0.0906		SAMPLE				
2	0.1830	0.1292	0.5	0.2913	**-0.0815**	0.8918	-0.1239	0.1104	0.0726	0.0726		SAMPLE				
3	0.2722	0.1922	0.5	0.4160	**0.3440**	0.3822	0.5451	0.2082	0.1314	0.1360		SAMPLE				
4	0.1196	0.0844	0.5	0.1870	**0.7108**	0.1191	1.9573	0.2293	0.0833	0.1116		SAMPLE				
5	0.1142	0.0807	0.5	0.1905	**0.1086**	0.5417	0.1861	0.1008	0.0588	0.0599		SAMPLE				
~~6~~	~~0.1201~~	~~0.0848~~	~~0.5~~	~~0.1883~~	~~**10.3849**~~	~~0.0333~~	~~27.6701~~	~~0.6928~~	~~0.2690~~	~~1.1179~~		~~SAMPLE~~				
~~7~~	~~0.1358~~	~~0.0959~~	~~0.5~~	~~0.2100~~	~~**3.4164**~~	~~0.0501~~	~~9.3282~~	~~0.4252~~	~~0.1557~~	~~0.3885~~		~~SAMPLE~~				
8	0.1221	0.0862	0.5	0.1897	**0.6192**	0.1299	1.8001	0.2307	0.0794	0.1023		SAMPLE				
9	0.2199	0.1552	0.5	0.3525	**-0.1494**	0.5526	-0.1777	0.0982	0.0825	0.0825		MB				
10	0.1310	0.0925	0.5	0.2053	**0.3018**	0.2403	0.7399	0.1770	0.0722	0.0789	232511001.1	DUP	13.1%	0.0982		
11	0.1960	0.1384	0.5	0.3309	**21.3580**	0.0321	19.7427	0.5789	0.6262	2.2601		LCS			19.5244	109.4%

SampleID	Instr	Time (min.)	Alpha Counts	Beta Counts	Count Start Time	Count End Time	Machine
232426001	5D	60	8	79	7/4/2009 14:59	7/4/2009 15:59	Protean
232426002	6B	60	36	40	7/4/2009 14:59	7/4/2009 15:59	Protean
232511001	6C	60	26	144	7/4/2009 14:59	7/4/2009 15:59	Protean
232511002	A1	60	14	182	7/10/2009 17:25	7/10/2009 18:25	LB4100
232511003	7B	60	3	34	7/4/2009 14:59	7/4/2009 15:59	Protean
~~232511004~~	~~A2~~	~~60~~	~~199~~	~~1726~~	~~7/10/2009 17:25~~	~~7/10/2009 18:25~~	~~LB4100~~
~~232511005~~	~~B1~~	~~60~~	~~88~~	~~643~~	~~7/10/2009 17:24~~	~~7/10/2009 18:24~~	~~LB4100~~
232511006	B3	60	23	183	7/10/2009 17:24	7/10/2009 18:24	LB4100
1201871820	8A	60	3	30	7/9/2009 11:53	7/9/2009 12:53	Protean
1201871821	B4	60	20	106	7/10/2009 17:24	7/10/2009 18:24	LB4100
1201871822	10C	60	0	1204	7/4/2009 14:59	7/4/2009 15:59	Protean

Radiochemistry Batch Checklist, Rev 9

Batch# 883018 Product: H3 Date: 7-15-09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			
Batch non-conformances second reviewed and disposition verified to be completed.			
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature]

Secondary Review Performed By: [signature] 7/15/09

~~LAL~~ [signature] 7/15/09

LANL 7-15-09

Tritium Que Sheet

08-JUL-09

Batch #: 883018 **Analyst:** KXK2 **First Client Due Date** 20-JUL-09 **Internal Due Date:** 09-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** ——— **Expiration Date:** ——— **Vol:** ———

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 8/27/10 **Vol:** 0.2

Prep Date: 7/10/09 **Initials:** KXK2 **Pipet ID:** 2970968 **Witness:** MS 7-10-09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Total Moisture Dist Vol (mL) KKG 7/10/09
232504001-1	CAMO-09-10375	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-2	1		630.83	610.01	20.82
232504002-1	CAMO-09-10376	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-3	2		429.44	410.12	19.32
232504003-1	CAMO-09-10373	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-4	3		593.78	526.68	67.10
232504004-1	CAMO-09-10367	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-5	4		624.68	533.48	91.20
232504005-1	CAMO-09-10377	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-6	5		634.81	593.55	41.26
232504006-1	CAMO-09-10370	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-7	6		718.49	689.75	28.74
232504007-1	CAMO-09-10374	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-8	7		696.46	671.39	25.07
232504008-1	CAMO-09-10371	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-9	8		561.17	482.05	~~79.02~~ 79.12
232504009-1	CAMO-09-10368	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-10	9		708.73	670.46	38.27
232504010-1	CAMO-09-10369	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-11	10		561.73	497.13	64.60
232504011-1	CAMO-09-10366	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-12	11		671.15	614.77	56.38
232504012-1	CAMO-09-10372	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-1	12		517.76	467.02	50.74
232504013-1	CAMO-09-10378	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-2	13		574.73	556.34	18.39
232504014-1	CAMO-09-10379	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-3	14		765.91	732.98	32.93
232511001-1	CAMO-09-6519	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-4	15		671.40	532.42	138.98
232511002-1	CAMO-09-6518	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-5	16		553.17	469.64	83.53
232511003-1	CAMO-09-6527	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-6	17		576.61	543.17	33.44
232511004-1	CAMO-09-6529	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-7	18		580.85	552.97	27.88
232511005-1	CAMO-09-6528	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-8	19		554.23	522.64	31.59
232511006-1	CAMO-09-6531	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-9	20		567.54	482.98	84.56
1201875580-1	MB for batch 883018	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	34-10	21		40.00	0	40.00
1201875581-1	~~CAMO-09-9944~~ CAMO-09-6518	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	24-JUN-09	10	34-11	16		553.17	469.64	83.53
1201875582-1	LCS for batch 883018	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	34-12	22		40.00	0	40.00

KKG 7/13/09

Bkg Rack #: 58 Y

daities

Comments:

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656*

Bkg prepared with dead water? Yes No

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Econscint Ultra)*

Data Reviewed By: 7-15-09

GEL Laboratories LLC, Radiochemistry Division

DATE	7/10/2009	INITIALS	KXK2		BATCH NUMBER	883018

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232504001	630.83	0.033	20.82	610.01	10	102
232504002	429.44	0.045	19.32	410.12	10	209
232504003	593.78	0.113	67.10	526.68	10	73
232504004	624.68	0.146	91.20	533.48	10	98
232504005	634.81	0.065	41.26	593.55	10	201
232504006	718.49	0.040	28.74	689.75	10	210
232504007	696.46	0.036	25.07	671.39	10	136
232504008	561.17	0.141	79.12	482.05	10	48
232504009	708.73	0.054	38.27	670.46	10	413
232504010	561.73	0.115	64.60	497.13	10	402
232504011	671.15	0.084	56.38	614.77	10	49
232504012	517.76	0.098	50.74	467.02	10	75
232504013	574.73	0.032	18.39	556.34	10	914
232504014	765.91	0.043	32.93	732.98	10	408
232511001	671.40	0.207	138.98	532.42	10	706
232511002	553.17	0.151	83.53	469.64	10	111
232511003	576.61	0.058	33.44	543.17	10	206
232511004	580.85	0.048	27.88	552.97	10	203
232511005	554.23	0.057	31.59	522.64	10	74
232511006	567.54	0.149	84.56	482.98	10	6101
MB	40	1	40	0	10	912
LSC	40	1	40	0	10	151

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.5

Batch : 883018
Analyst : KXK2
Prep Date : 7/10/2009

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL Ecoscint Ultra

Spike S/N :	N/A	
Spike Exp Date :	N/A	
Spike Activity (dpm/ml):	N/A	
Spike Volume Added:	N/A	
Pipet, 0.1 ml Stdev : +/-	0.000701	ml
Pipet, 0.5 ml Stdev : +/-	0.002564	ml
Pipet, 1.0 ml Stdev : +/-	0.005480	ml
Pipet, 5.0 ml Stdev : +/-	0.025729	ml

LCS S/N :	0134-K	
LCS Exp Date :	3/27/2010	
LCS Activity (dpm/ml):	2545.47	
LCS Volume Added:	0.20	
Procedure Code :	LSC_VH3S	
Parmname :	Tritium	
Required MDC :	250	pCi/L
Halflife of Tritium :	12.28	years

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232504001.1	630.83	0.0208	0.0100	2.5729E-05	610.01	3.30%	1	6/24/2009 12:00
2	232504002.1	429.44	0.0193	0.0100	2.5729E-05	410.12	4.50%	2	6/24/2009 12:00
3	232504003.1	593.78	0.0671	0.0100	2.5729E-05	526.68	11.30%	3	6/24/2009 12:00
4	232504004.1	624.68	0.0912	0.0100	2.5729E-05	533.48	14.60%	4	6/24/2009 12:00
5	232504005.1	634.81	0.0413	0.0100	2.5729E-05	593.55	6.50%	5	6/24/2009 12:00
6	232504006.1	718.49	0.0287	0.0100	2.5729E-05	689.75	4.00%	6	6/24/2009 12:00
7	232504007.1	696.46	0.0251	0.0100	2.5729E-05	671.39	3.60%	7	6/24/2009 12:00
8	232504008.1	561.17	0.0791	0.0100	2.5729E-05	482.05	14.10%	8	6/24/2009 12:00
9	232504009.1	708.73	0.0383	0.0100	2.5729E-05	670.48	5.40%	9	6/24/2009 12:00
10	232504010.1	561.73	0.0646	0.0100	2.5729E-05	497.13	11.50%	10	6/24/2009 12:00
11	232504011.1	671.15	0.0564	0.0100	2.5729E-05	614.77	8.40%	11	6/24/2009 12:00
12	232504012.1	517.76	0.0507	0.0100	2.5729E-05	467.02	9.80%	12	6/24/2009 12:00
13	232504013.1	574.73	0.0184	0.0100	2.5729E-05	556.34	3.20%	13	6/24/2009 12:00
14	232504014.1	765.91	0.0329	0.0100	2.5729E-05	732.98	4.30%	14	6/24/2009 12:00
15	232511001.1	671.40	0.1390	0.0100	2.5729E-05	532.42	20.70%	15	6/24/2009 12:00
16	232511002.1	553.17	0.0835	0.0100	2.5729E-05	469.64	15.10%	16	6/24/2009 12:00
17	232511003.1	576.61	0.0334	0.0100	2.5729E-05	543.17	5.80%	17	6/24/2009 12:00
18	232511004.1	580.85	0.0279	0.0100	2.5729E-05	552.97	4.80%	18	6/24/2009 12:00
19	232511005.1	554.23	0.0316	0.0100	2.5729E-05	522.64	5.70%	19	6/24/2009 12:00
20	232511006.1	567.54	0.0846	0.0100	2.5729E-05	482.98	14.90%	20	6/24/2009 12:00
21	1201875580.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	21	7/10/2009 0:00
22	1201875581.1	553.17	0.0835	0.0100	2.5729E-05	469.64	15.10%	16	6/24/2009 12:00
23	1201875582.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	22	7/10/2009 0:00

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	58-2	120	145	3.42	3.11	120	7/13/2009 23:10	0.997	LSCGREEN	8/6/2008	8/31/2009	0.1870	0.00792	58-1	7/13/2009 21:06
2	58-3	120	120.6	3.55	3.11	120	7/14/2009 1:14	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2102	0.00792	58-1	7/13/2009 21:06
3	58-4	89.4	118.8	3.12	3.11	120	7/14/2009 5:46	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2115	0.00792	58-1	7/13/2009 21:06
4	58-5	45	121.4	3.62	3.11	120	7/14/2009 7:54	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2096	0.00792	58-1	7/13/2009 21:06
5	58-6	45	129.8	3.31	3.11	120	7/14/2009 6:41	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2027	0.00792	58-1	7/13/2009 21:06
6	58-7	45	121.7	2.93	3.11	120	7/14/2009 9:28	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2094	0.00792	58-1	7/13/2009 21:06
7	58-8	45	123.1	3.47	3.11	120	7/14/2009 10:15	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2084	0.00792	58-1	7/13/2009 21:06
8	58-9	45	121.5	3.36	3.11	120	7/14/2009 11:02	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2096	0.00792	58-1	7/13/2009 21:06
9	58-10	45	120.6	3.56	3.11	120	7/14/2009 11:49	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2102	0.00792	58-1	7/13/2009 21:06
10	58-11	45	122.7	4.8	3.11	120	7/14/2009 12:36	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2087	0.00792	58-1	7/13/2009 21:06
11	58-12	45	120.5	3.58	3.11	120	7/14/2009 13:23	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2103	0.00792	58-1	7/13/2009 21:06
12	34-1	45	120.4	3.36	3.11	120	7/14/2009 14:10	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2104	0.00792	58-1	7/13/2009 21:06
13	34-2	45	122.1	3.58	3.11	120	7/14/2009 14:57	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2091	0.00792	58-1	7/13/2009 21:06
14	34-3	45	121.2	4.11	3.11	120	7/14/2009 15:44	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2098	0.00792	58-1	7/13/2009 21:06
15	34-4	45	118.6	7.71	3.11	120	7/14/2009 16:31	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2116	0.00792	58-1	7/13/2009 21:06
16	34-5	45	121.1	4	3.11	120	7/14/2009 17:18	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2099	0.00792	58-1	7/13/2009 21:06
17	34-6	45	120.4	4.24	3.11	120	7/14/2009 18:05	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2104	0.00792	58-1	7/13/2009 21:06
18	34-7	45	178.7	48.22	3.11	120	7/14/2009 18:52	0.997	LSCGREEN	8/6/2008	8/31/2009	0.1444	0.00792	58-1	7/13/2009 21:06
19	34-8	45	120.2	4.56	3.11	120	7/14/2009 19:39	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2105	0.00792	58-1	7/13/2009 21:06
20	34-9	45	117.8	51.71	3.11	120	7/14/2009 20:26	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2122	0.00792	58-1	7/13/2009 21:06
21	34-10	45	120.5	2.82	3.11	120	7/14/2009 21:13	0.999	LSCGREEN	8/6/2008	8/31/2009	0.2103	0.00792	58-1	7/13/2009 21:06
22	34-11	45	121	3.8	3.11	120	7/14/2009 22:00	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2099	0.00792	58-1	7/13/2009 21:06
23	34-12	45	120.3	28.53	3.11	120	7/14/2009 22:47	0.999	LSCGREEN	8/6/2008	8/31/2009	0.2104	0.00792	58-1	7/13/2009 21:06

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

* - RPD changed to 0% due to activity below MDC for 1201875581.1

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	128.1602	90.4822	250	187.0044	**74.8953**	0.753	0.310	0.233	56.3584	56.5993		SAMPLE				
2	114.0061	80.4893	250	166.3514	**94.5628**	0.535	0.440	0.236	50.6307	51.0573		SAMPLE				
3	122.6426	86.5867	250	180.3424	**2.1364**	24.661	0.010	0.247	52.6848	52.6850		SAMPLE				
4	154.8020	109.2916	250	232.9514	**109.9172**	0.640	0.510	0.326	70.2889	70.7046		SAMPLE				
5	160.1168	113.0438	250	240.9492	**44.5847**	1.577	0.200	0.315	70.3083	70.3768		SAMPLE				
6	154.9686	109.4092	250	233.2020	**-38.8360**	1.676	-0.180	0.302	65.0953	65.0961		SAMPLE				
7	155.7635	109.9704	250	234.3983	**78.0706**	0.892	0.360	0.321	69.6084	69.8205		SAMPLE				
8	154.8599	109.3324	250	233.0385	**53.9011**	1.269	0.250	0.317	68.3787	68.4817		SAMPLE				
9	154.3748	108.9900	250	232.3085	**96.7181**	0.720	0.450	0.324	69.6542	69.9792		SAMPLE				
10	155.5349	109.8090	250	234.0543	**365.9698**	0.216	1.690	0.364	78.8481	82.8654		SAMPLE				
11	154.3234	108.9536	250	232.2311	**100.9830**	0.691	0.470	0.325	69.7782	70.1317		SAMPLE				
12	154.2714	108.9169	250	232.1529	**53.8983**	1.269	0.250	0.317	68.1188	68.2214		SAMPLE				
13	155.1969	109.5704	250	233.5456	**101.5546**	0.691	0.470	0.325	70.1731	70.5267		SAMPLE				
14	154.7008	109.2201	250	232.7991	**215.3830**	0.343	1.000	0.342	73.7510	75.2611		SAMPLE				
15	153.3584	108.2724	250	230.7790	**982.1646**	0.097	4.600	0.444	94.8276	116.9255		SAMPLE				
16	154.6482	109.1830	250	232.7199	**191.6257**	0.381	0.890	0.339	72.9533	74.1641		SAMPLE				
17	154.2753	108.9197	250	232.1588	**242.7134**	0.307	1.130	0.347	74.4487	76.3437		SAMPLE				
18	224.7655	158.6864	250	338.2348	**14116.3143**	0.025	45.110	1.048	327.8274	1036.3815		SAMPLE				
19	154.1719	108.8467	250	232.0032	**311.2376**	0.246	1.450	0.357	76.5690	79.5783		SAMPLE				
20	152.9765	108.0028	250	230.2043	**10350.9430**	0.024	48.600	1.084	230.8701	756.9628		SAMPLE				
21	153.9620	108.6985	250	231.6872	**-62.1627**	1.026	-0.290	0.298	63.7982	63.7990		MB				
22	154.5989	109.1482	250	232.6457	**148.5164**	0.482	0.690	0.332	71.5045	72.2488	232511002.1	DUP	0.0%	0.1472		
23	153.8584	108.6254	250	231.5314	**5445.2219**	0.033	25.420	0.812	174.0142	417.2632		LCS			5733.0311	95.0%

ID: TRITIUM 13 JUL 2009 21:13

USER: 2 COMMENT: GREEN

PRESET TIME :	120.00						
DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STD
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0	RWM LIST	: OFF
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 10.0 - 230.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	58-1	120.00	120.3	3.11	11.41	35.67	3.09	1.54	123.50
2	58-2	120.00	145.0	3.42	11.93	35.47	3.13	3.55	247.89
3	58-3	120.00	120.6	3.55	10.18	35.85	3.06	0.88	371.64
~~4~~	~~58-4~~	~~73.47~~	~~118.7~~	~~3.33~~	~~13.26~~	~~34.52~~	~~3.99~~	~~0.66~~	~~447.75~~
5	58-5	SAMPLE TERMINATED:							
6	58-6	SAMPLE TERMINATED:							
7	58-7	SAMPLE TERMINATED:							
8	58-8	SAMPLE TERMINATED:							
9	58-9	SAMPLE TERMINATED:							
10	58-10	SAMPLE TERMINATED:							
11	58-11	SAMPLE TERMINATED:							
12	58-12	SAMPLE TERMINATED:							

INSTRUMENT CALIBRATION: Mini 14 JUL 2009 04:45
Calibration successful

ID: TRITIUM 14 JUL 2009 05:54

USER: 2 COMMENT: GREEN

PRESET TIME :	120.00						
DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STD
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0	RWM LIST	: OFF
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 10.0 - 230.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
4	58-4	89.40	118.8	3.12	12.37	35.66	3.55	0.55	91.92
~~5~~	~~58-5~~	~~0.05~~	~~121.3~~	~~0.00~~	~~0.00~~	~~80.00~~	~~100.00~~	~~3.78~~	~~92.72~~
6	58-6	0.05	130.0	0.00	0.00	80.00	100.00	5.44	93.57
7	58-7	0.05	121.1	0.00	0.00	20.00	200.00	20.57	94.42
8	58-8	0.05	124.0	0.00	0.00	40.00	141.42	12.43	95.28
9	58-9	0.05	132.0	0.00	0.00	40.00	141.42	5.59	96.17
10	58-10	0.05	121.2	0.00	0.00	0.00	0.00	0.00	97.03
11	58-11	0.05	123.1	20.00	200.00	60.00	115.47	10.04	97.88
12	58-12	0.05	121.4	80.00	100.00	120.00	81.65	3.50	98.75
13	34-1	0.05	120.9	0.00	0.00	40.00	141.42	9.34	99.73
14	34-2	0.05	123.5	0.00	0.00	60.00	115.47	10.60	100.60
15	34-3	0.05	121.7	0.00	0.00	0.00	0.00	0.00	101.49
16	34-4	0.05	120.4	20.00	200.00	60.00	115.47	6.06	102.33
17	34-5	0.05	122.7	0.00	0.00	100.00	89.44	8.80	103.30
18	34-6	0.05	122.0	0.00	0.00	20.00	200.00	29.91	104.15
19	34-7	0.05	179.3	20.00	200.00	60.00	115.47	5.46	105.43
20	34-8	0.05	121.0	0.00	0.00	80.00	100.00	8.21	106.28
21	34-9	0.05	118.5	20.00	200.00	40.00	141.42	8.17	107.60
22	34-10	0.05	121.4	20.00	200.00	20.00	200.00	12.00	108.47
23	34-11	0.05	122.3	20.00	200.00	100.00	89.44	3.77	109.73
~~24~~	~~34-12~~	~~0.05~~	~~121.8~~	~~40.00~~	~~141.42~~	~~60.00~~	~~115.47~~	~~5.61~~	~~110.60~~

577 7-15-09

ID: TRITIUM 14 JUL 2009 08:02

USER: 2 COMMENT: GREEN

PRESET TIME : 45.00

DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STD
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0	RWM LIST	: OFF
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 10.0 - 230.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
5	58-5	45.00	121.4	3.62	16.32	35.31	5.04	0.83	46.56
6	58-6	45.00	129.8	3.31	17.96	36.33	4.99	1.56	93.65
7	58-7	45.00	121.7	2.93	18.31	35.62	5.02	0.81	140.63
8	58-8	45.00	123.1	3.47	16.52	35.38	5.03	0.66	187.61
9	58-9	45.00	121.5	3.36	16.70	34.36	5.10	0.52	234.57
10	58-10	45.00	120.6	3.56	16.54	34.51	5.10	0.91	281.59
11	58-11	45.00	122.7	4.80	14.13	37.62	4.89	0.93	328.61
12	58-12	45.00	120.5	3.58	16.39	37.24	4.90	0.73	375.59
13	34-1	45.00	120.4	3.36	17.17	36.91	4.93	0.88	422.71
14	34-2	45.00	122.1	3.58	17.57	35.09	5.09	1.98	469.84
15	34-3	45.00	121.2	4.11	16.25	36.89	4.97	2.09	517.00
16	34-4	45.00	118.6	7.71	11.09	41.29	4.67	1.13	564.09
17	34-5	45.00	121.1	4.00	15.48	37.38	4.90	0.81	611.10
18	34-6	45.00	120.4	4.24	15.28	36.53	4.97	1.20	658.16
19	34-7	45.00	178.7	48.22	4.31	103.00	2.94	0.31	705.18
20	34-8	45.00	120.2	4.56	14.37	36.69	4.94	0.74	752.17
21	34-9	45.00	117.8	51.71	4.16	101.82	2.96	0.46	799.22
22	34-10	45.00	120.5	2.82	18.23	33.42	5.17	0.50	846.17
23	34-11	45.00	121.0	3.80	15.82	37.02	4.92	0.71	893.16
24	34-12	45.00	120.3	28.53	5.59	68.53	3.60	0.25	940.10

INSTRUMENT CALIBRATION: Mini 14 JUL 2009 23:46
Calibration successful

Sample Count Start Time:	13 Jul 2009 21:06:21		
Data Capture Date	13 Jul 2009 23:06:45		
User Filename	S02071358-1A.XLS		
	U02071358-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	58-1	120.00
H#, Total Counts:	120.3	4334	
Start, End, X-Axis:	0	990	Channel Number

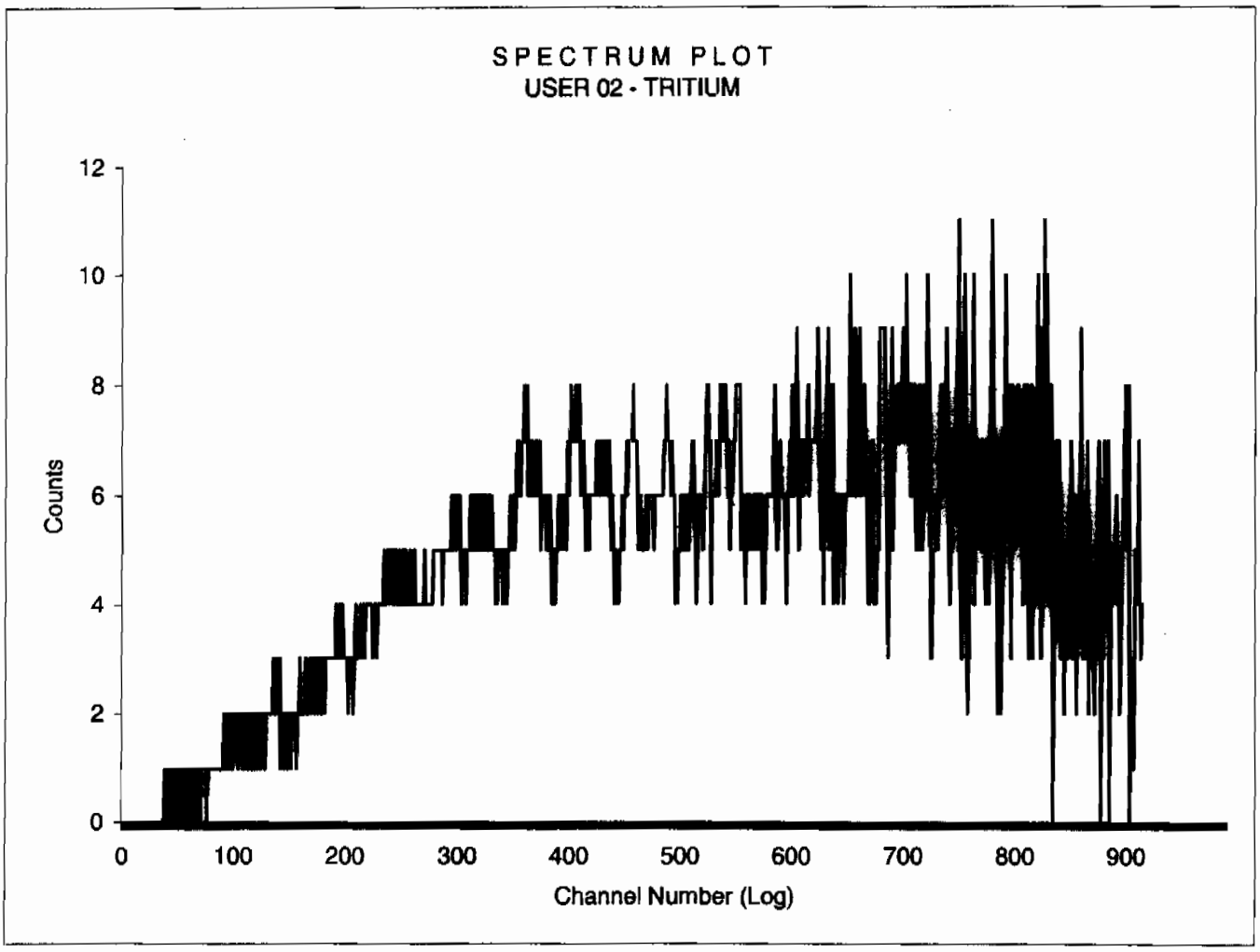

Sample Count Start Time:	13 Jul 2009 23:10:44		
Data Capture Date	14 Jul 2009 01:11:09		
User Filename	S02071458-2A.XLS		
	U02071358-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	58-2	120.00
H#, Total Counts:	145.0	4315	
Start, End, X-Axis:	0	990	Channel Number

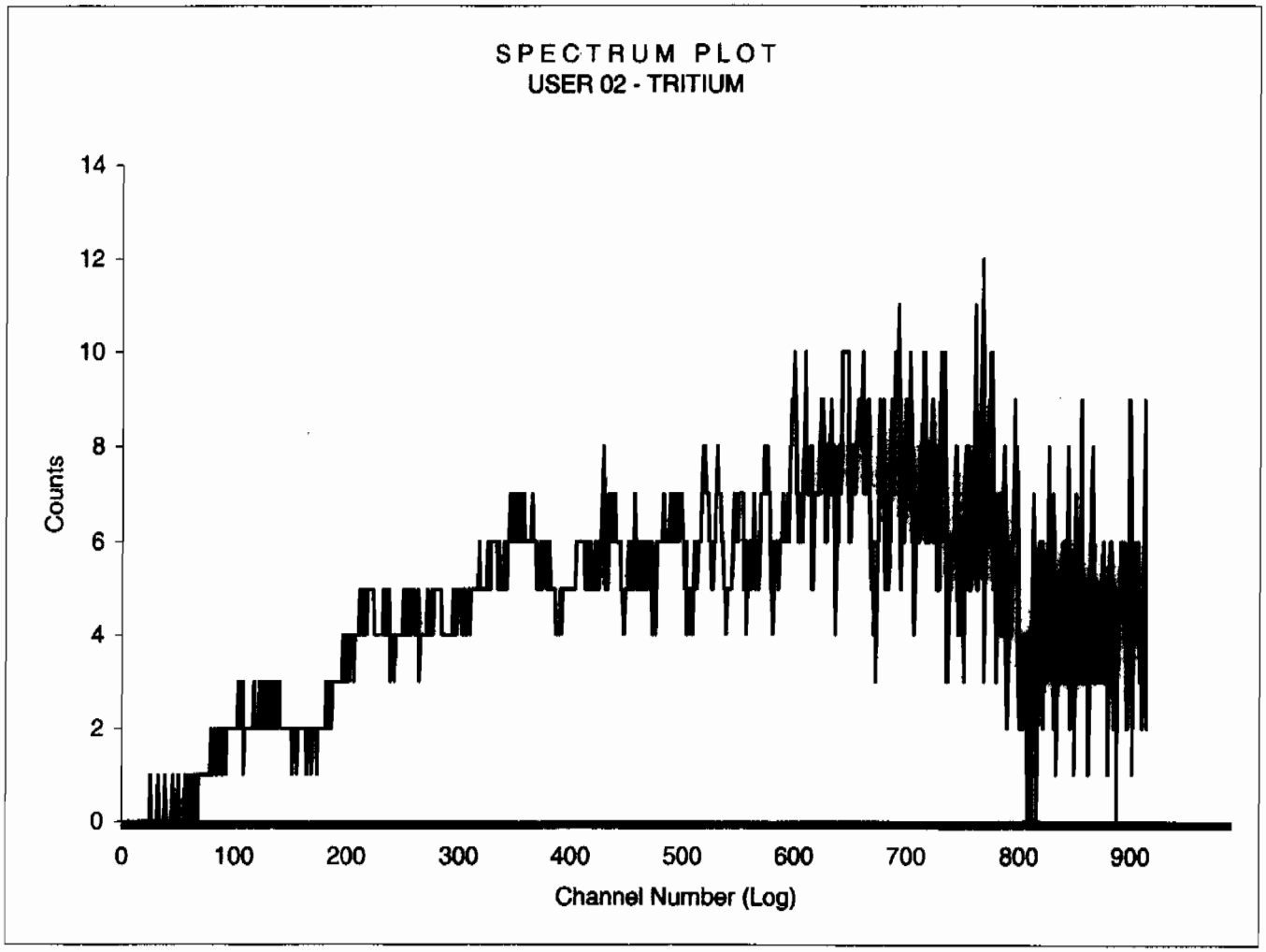

Sample Count Start Time:	14 Jul 2009 01:14:29		
Data Capture Date	14 Jul 2009 03:14:55		
User Filename	S02071458-3A.XLS		
	U02071358-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	58-3	120.00
H#, Total Counts:	120.6	4361	
Start, End, X-Axis:	0	990	Channel Number

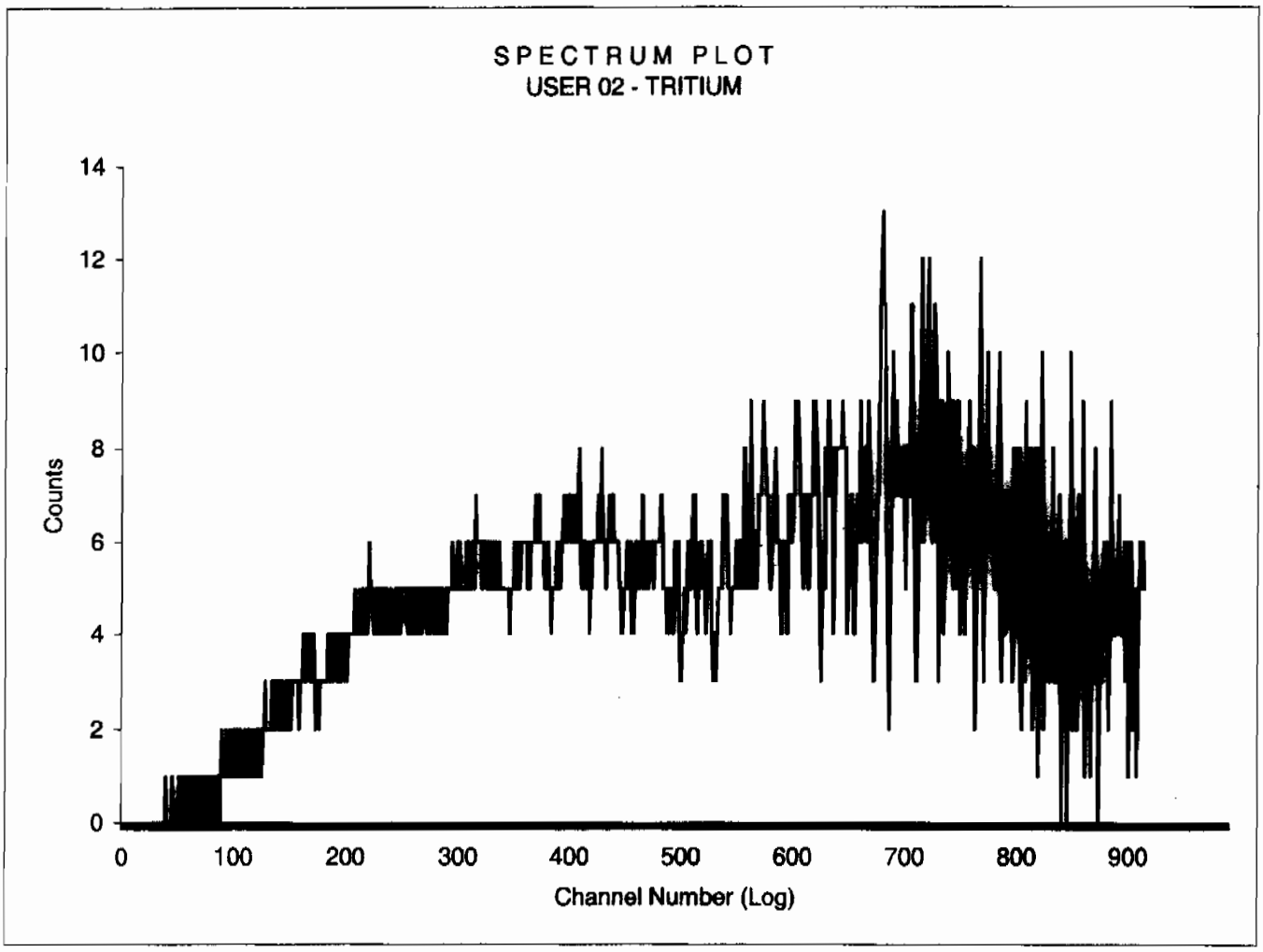

Sample Count Start Time:	14 Jul 2009 05:46:28		
Data Capture Date	14 Jul 2009 07:16:15		
User Filename	S02071458-4B.XLS		
	U02071458-4A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, .Time:	4	58-4	89.40
H#, Total Counts:	118.8	3239	
Start, End, X-Axis:	0	990	Channel Number

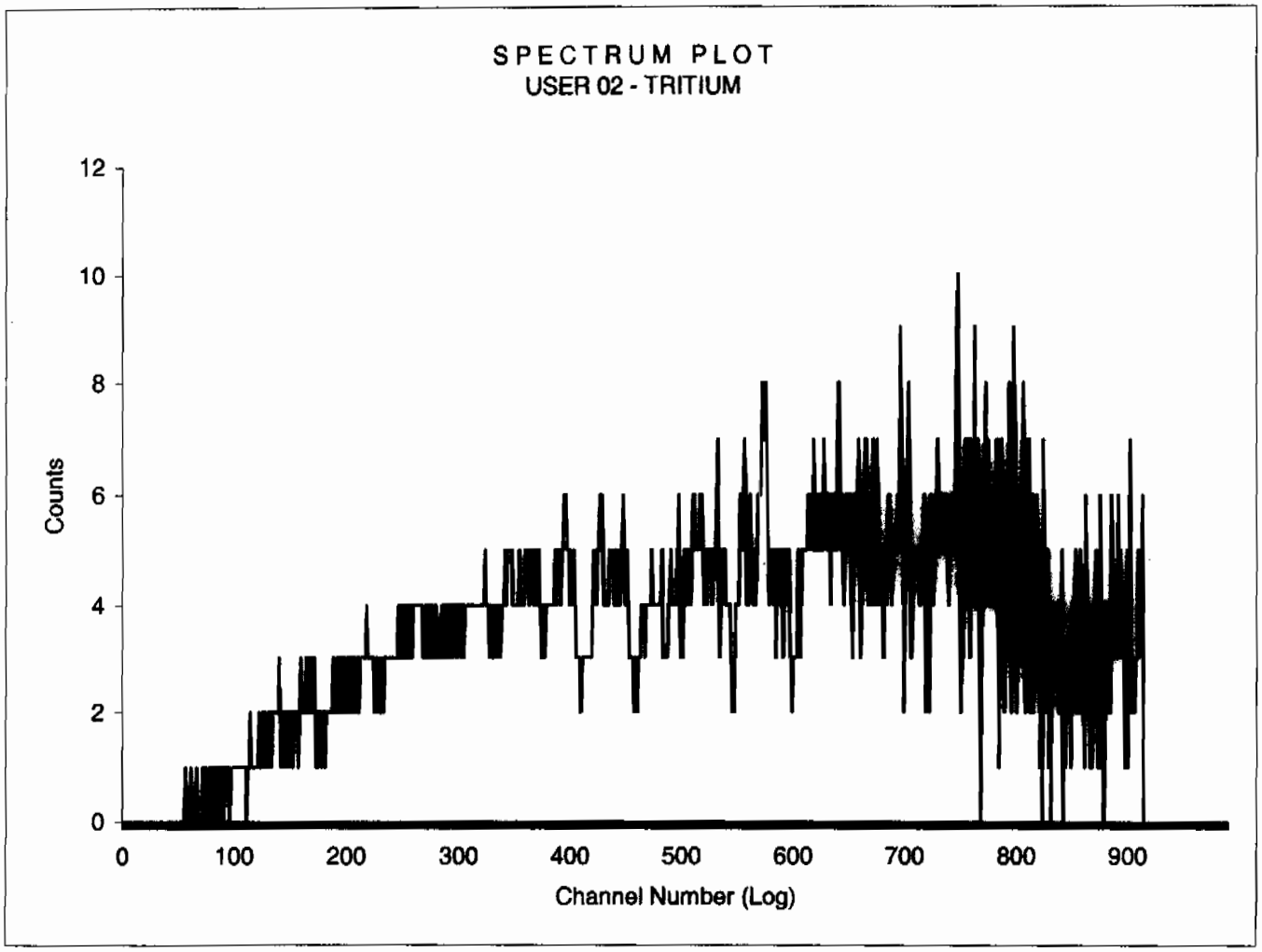

Sample Count Start Time:	14 Jul 2009 07:54:04		
Data Capture Date	14 Jul 2009 08:39:27		
User Filename	S02071458-5B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	58-5	45.00
H#, Total Counts:	121.4	1611	
Start, End, X-Axis:	0	990	Channel Number

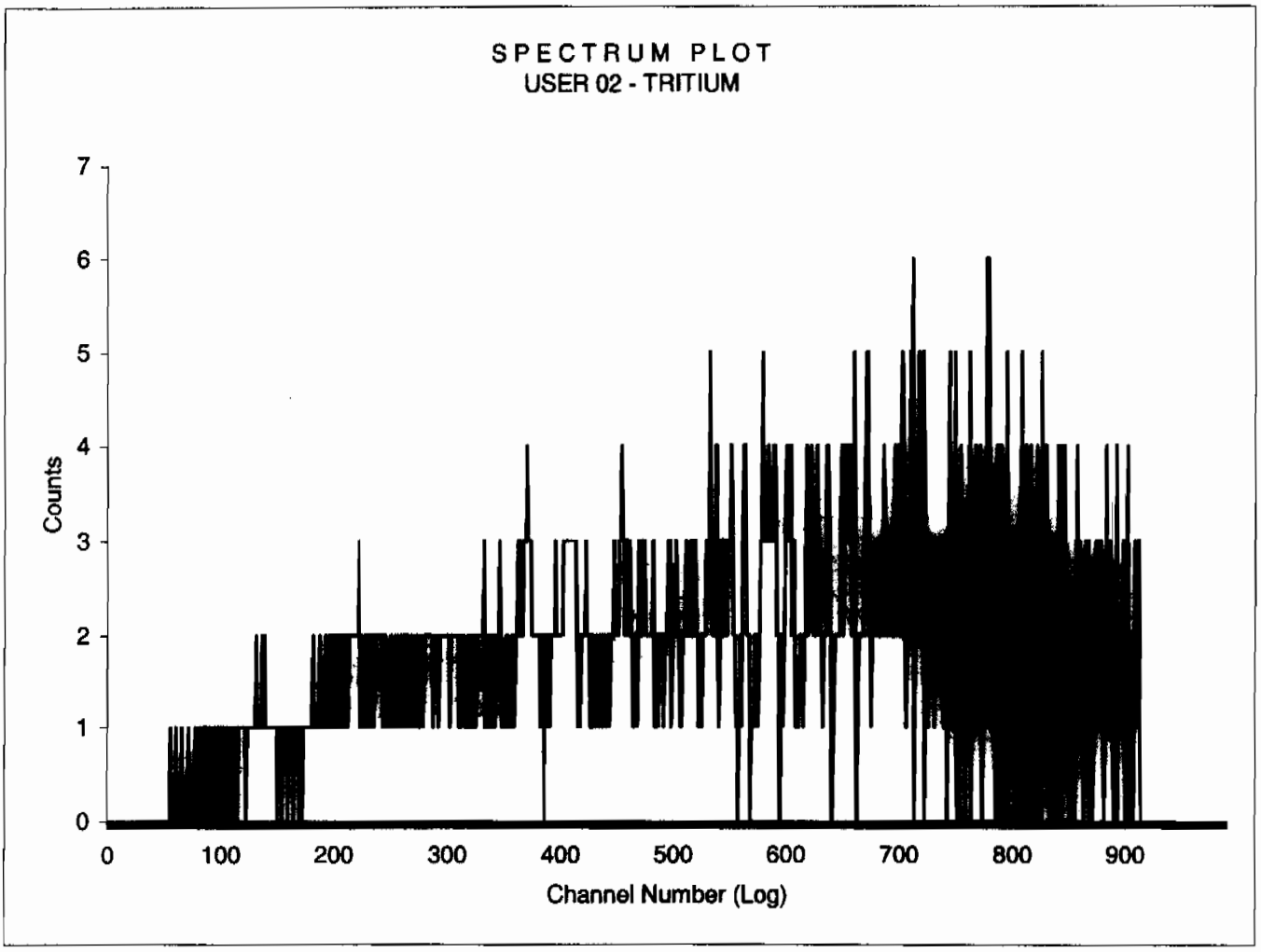

Sample Count Start Time:	14 Jul 2009 08:41:09		
Data Capture Date	14 Jul 2009 09:26:33		
User Filename	S02071458-6B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	58-6	45.00
H#, Total Counts:	129.8	1656	
Start, End, X-Axis:	0	990	Channel Number

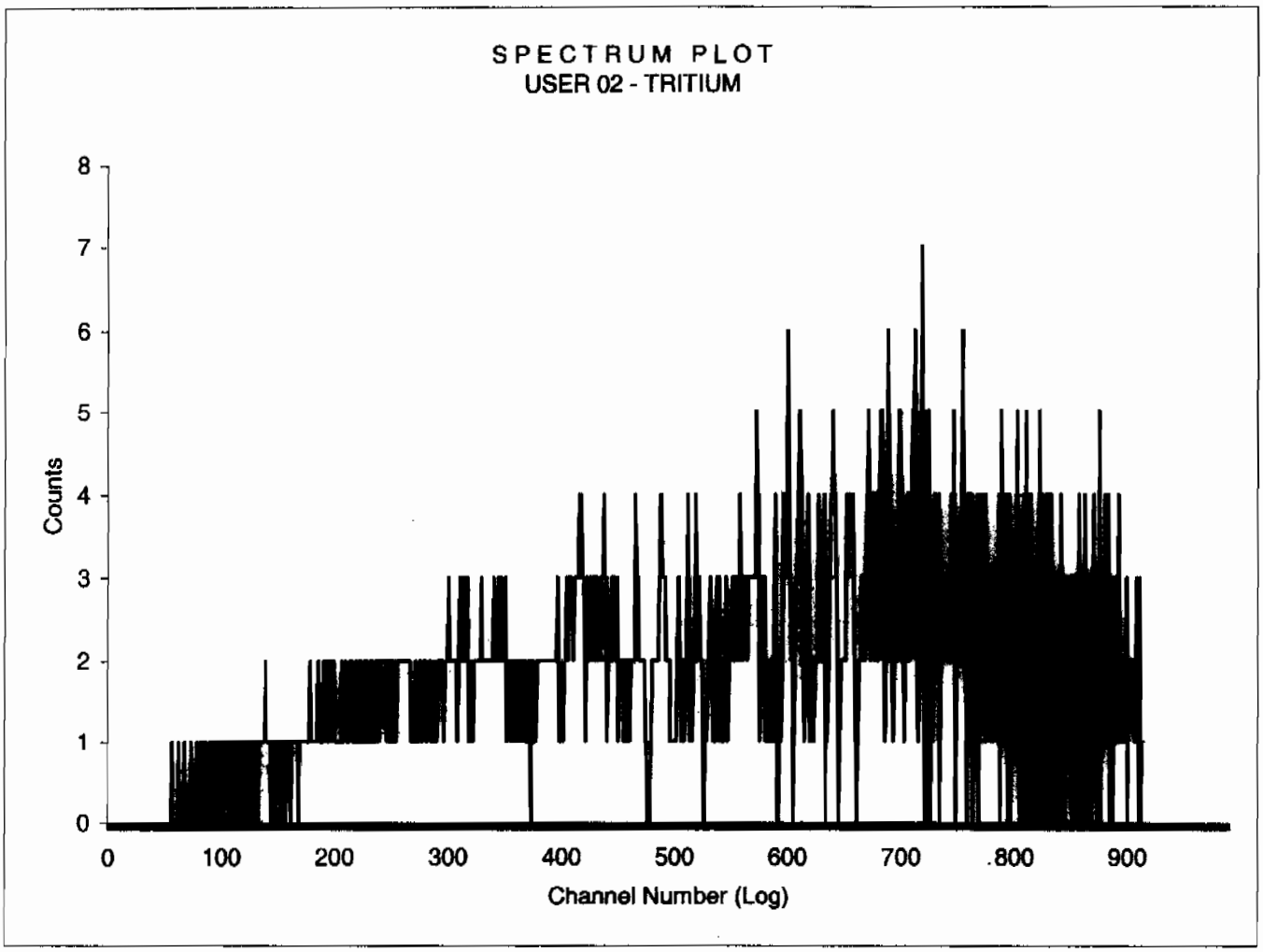

Sample Count Start Time:	14 Jul 2009 09:28:08		
Data Capture Date	14 Jul 2009 10:13:32		
User Filename	S02071458-7B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	58-7	45.00
H#, Total Counts:	121.7	1624	
Start, End, X-Axis:	0	990	Channel Number

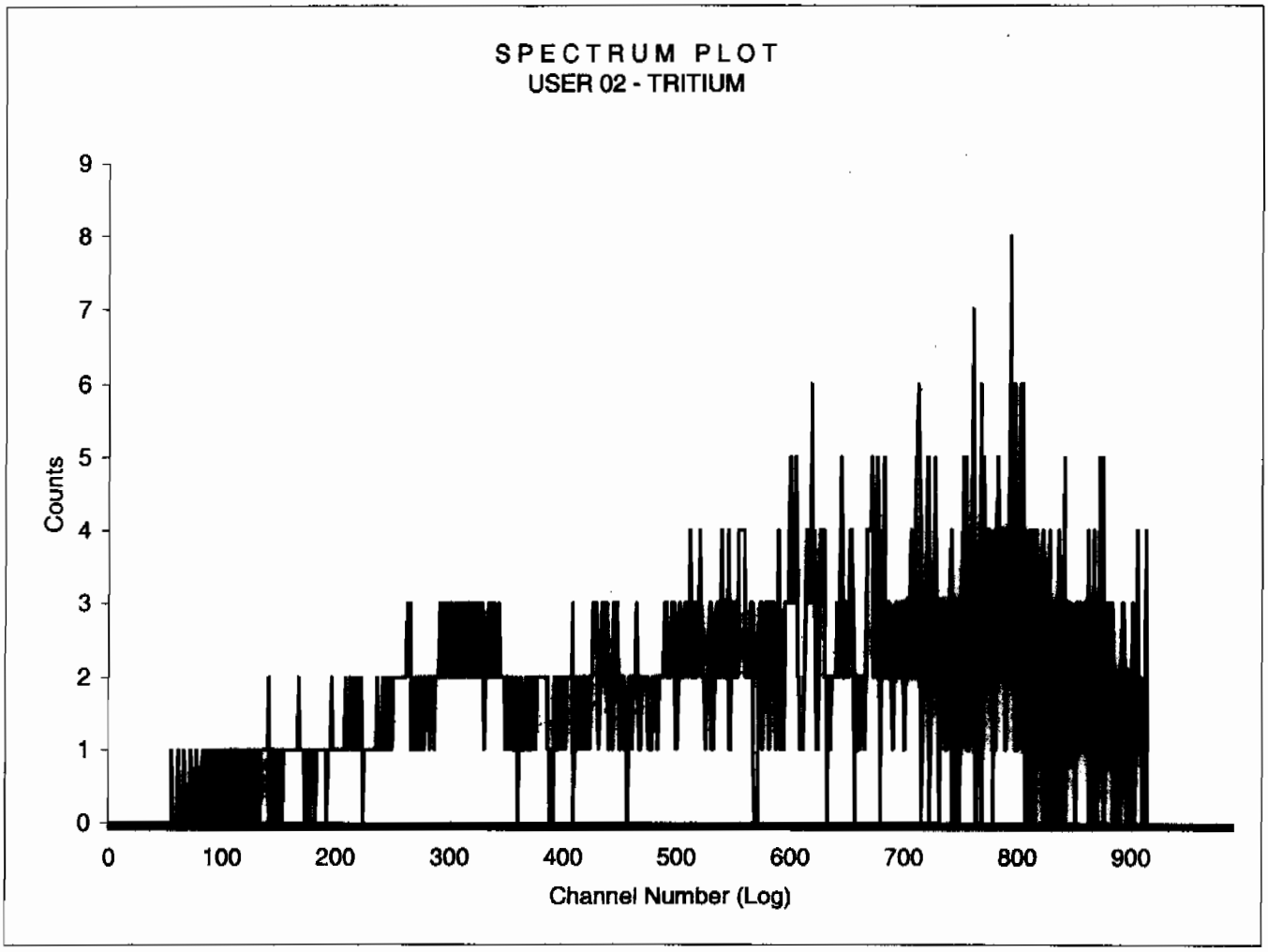

Sample Count Start Time:	14 Jul 2009 10:15:07		
Data Capture Date	14 Jul 2009 11:00:31		
User Filename	S02071458-8B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	58-8	45.00
H#, Total Counts:	123.1	1622	
Start, End, X-Axis:	0	990	Channel Number

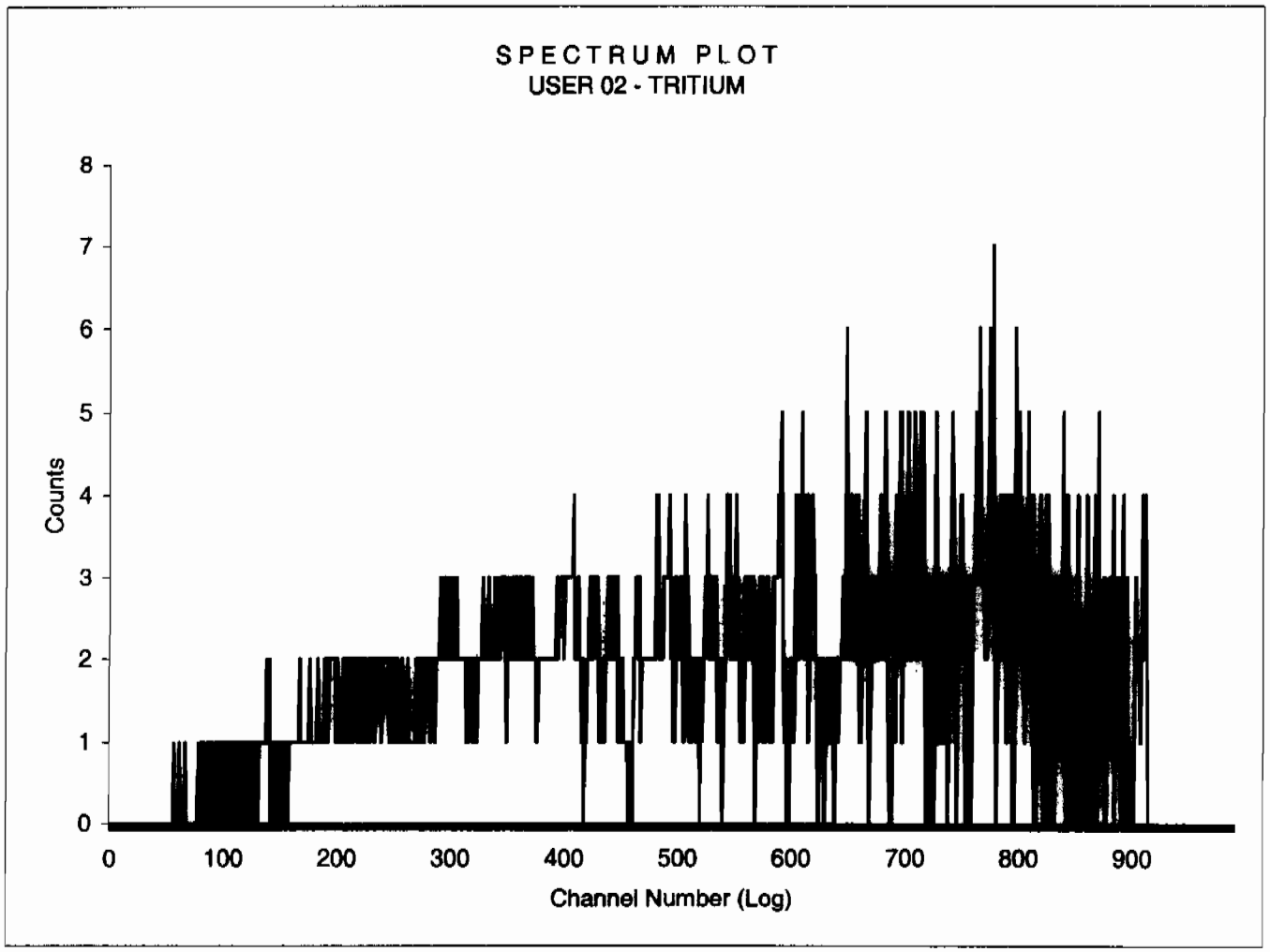

Sample Count Start Time:	14 Jul 2009 11:02:04		
Data Capture Date	14 Jul 2009 11:47:29		
User Filename	S02071458-9B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	58-9	45.00
H#, Total Counts:	121.5	1570	
Start, End, X-Axis:	0	990	Channel Number

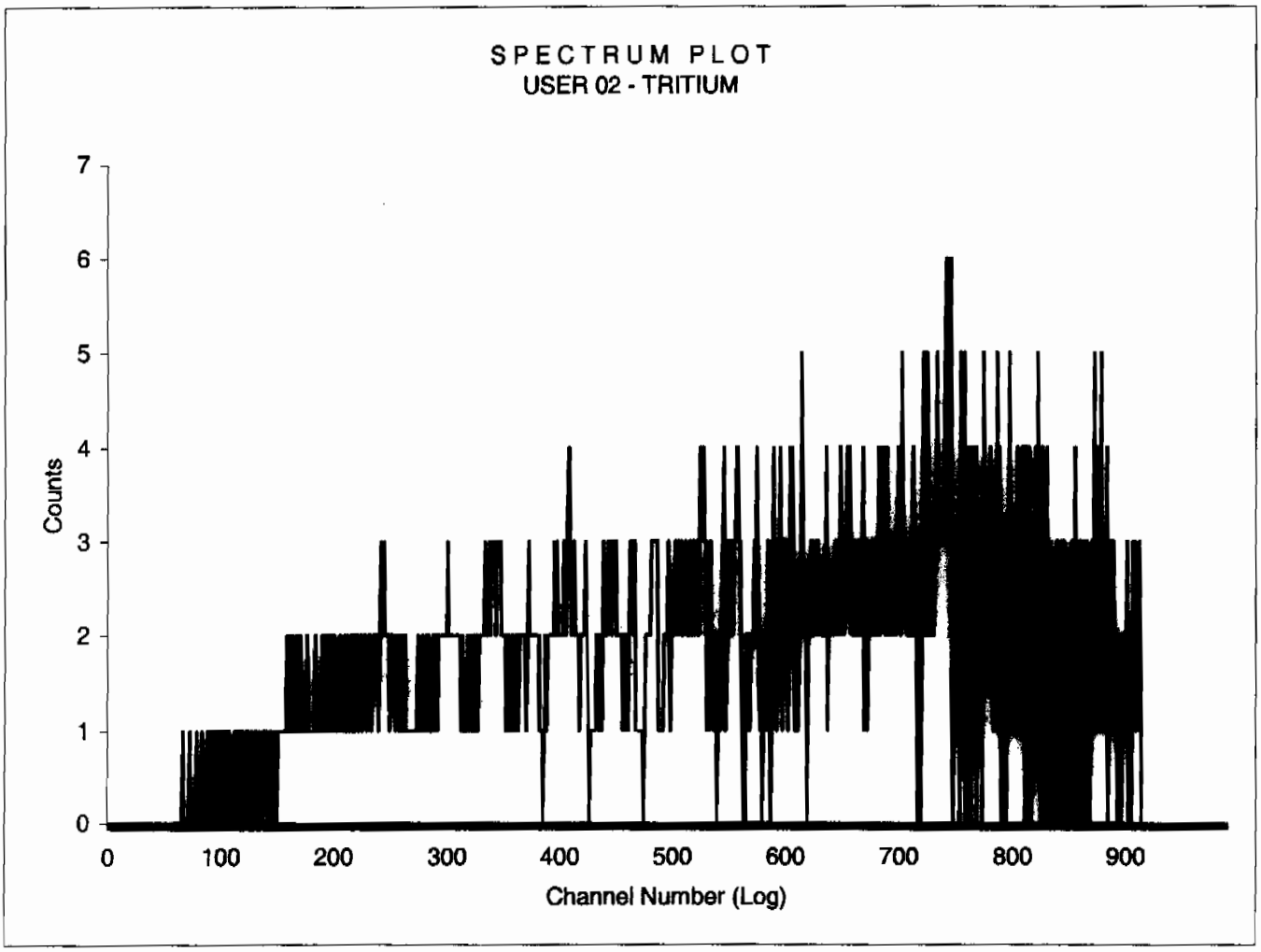

Sample Count Start Time:	14 Jul 2009 11:49:05		
Data Capture Date	14 Jul 2009 12:34:29		
User Filename	S02071458-10B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	58-10	45.00
H#, Total Counts:	120.6	1581	
Start, End, X-Axis:	0	990	Channel Number

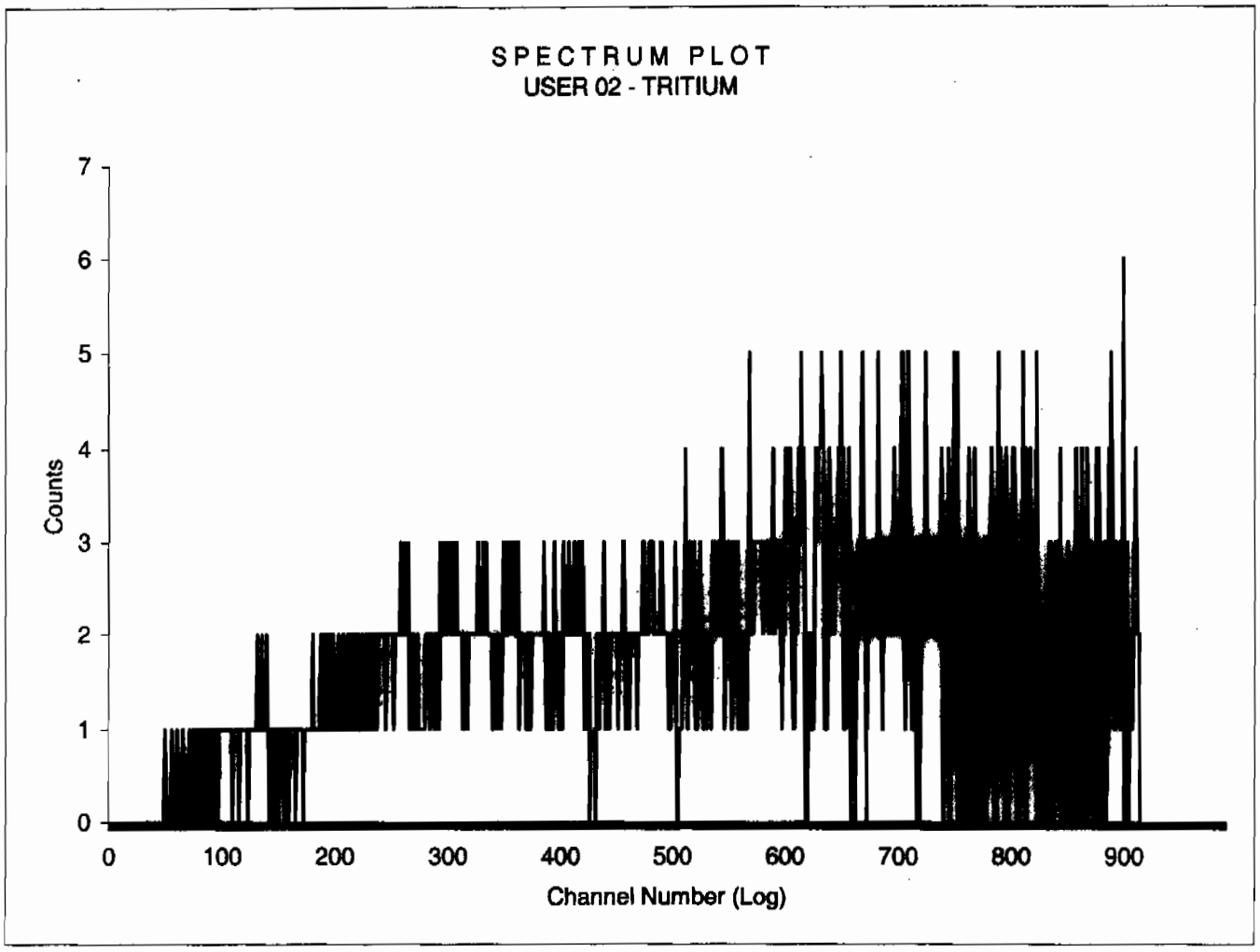

Sample Count Start Time:	14 Jul 2009 12:36:07		
Data Capture Date	14 Jul 2009 13:21:31		
User Filename	S02071458-11B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	58-11	45.00
H#, Total Counts:	122.7	1724	
Start, End, X-Axis:	0	990	Channel Number

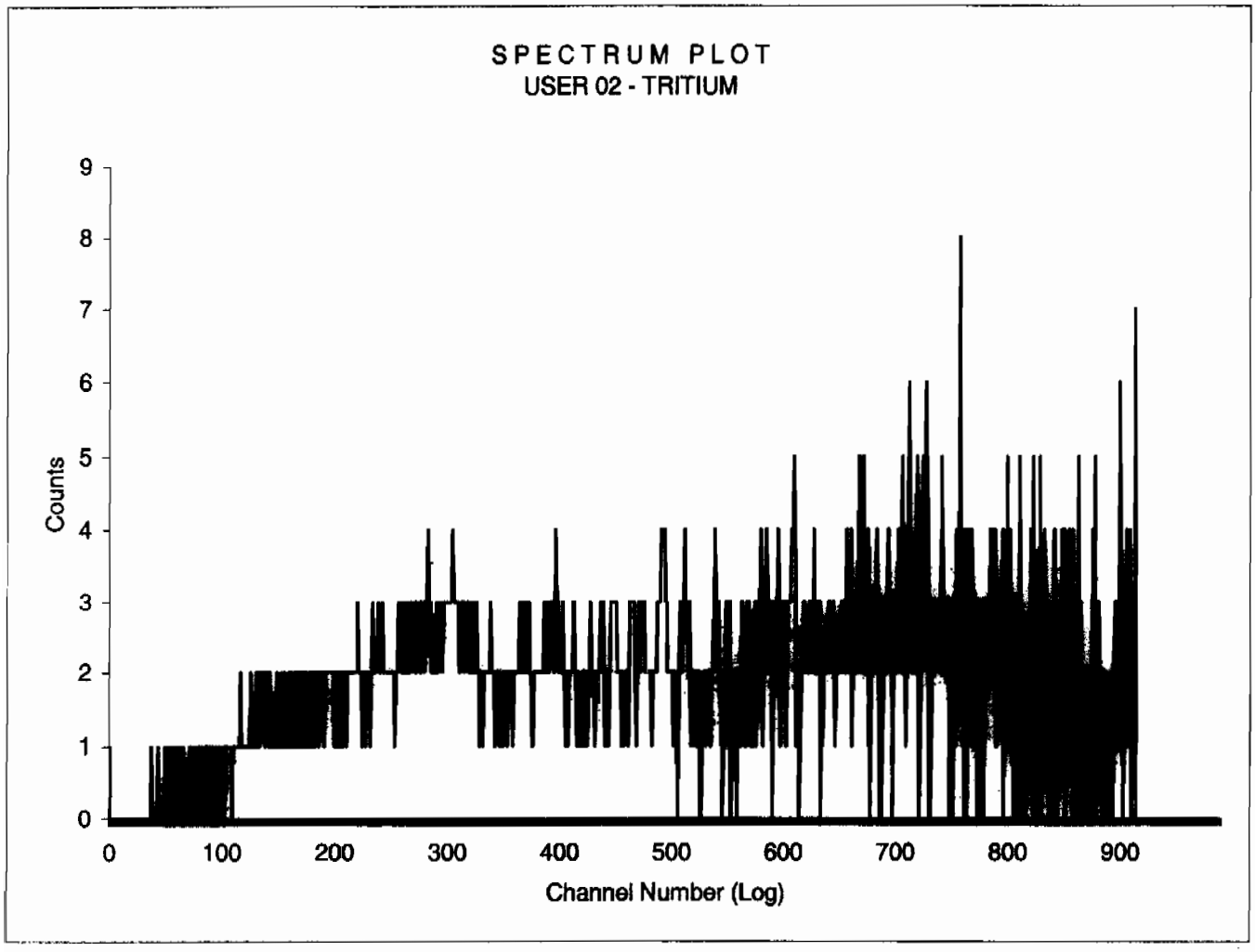

Sample Count Start Time:	14 Jul 2009 13:23:05		
Data Capture Date	14 Jul 2009 14:08:30		
User Filename	S02071458-12B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	12	58-12	45.00
H#, Total Counts:	120.5	1716	
Start, End, X-Axis:	0	990	Channel Number

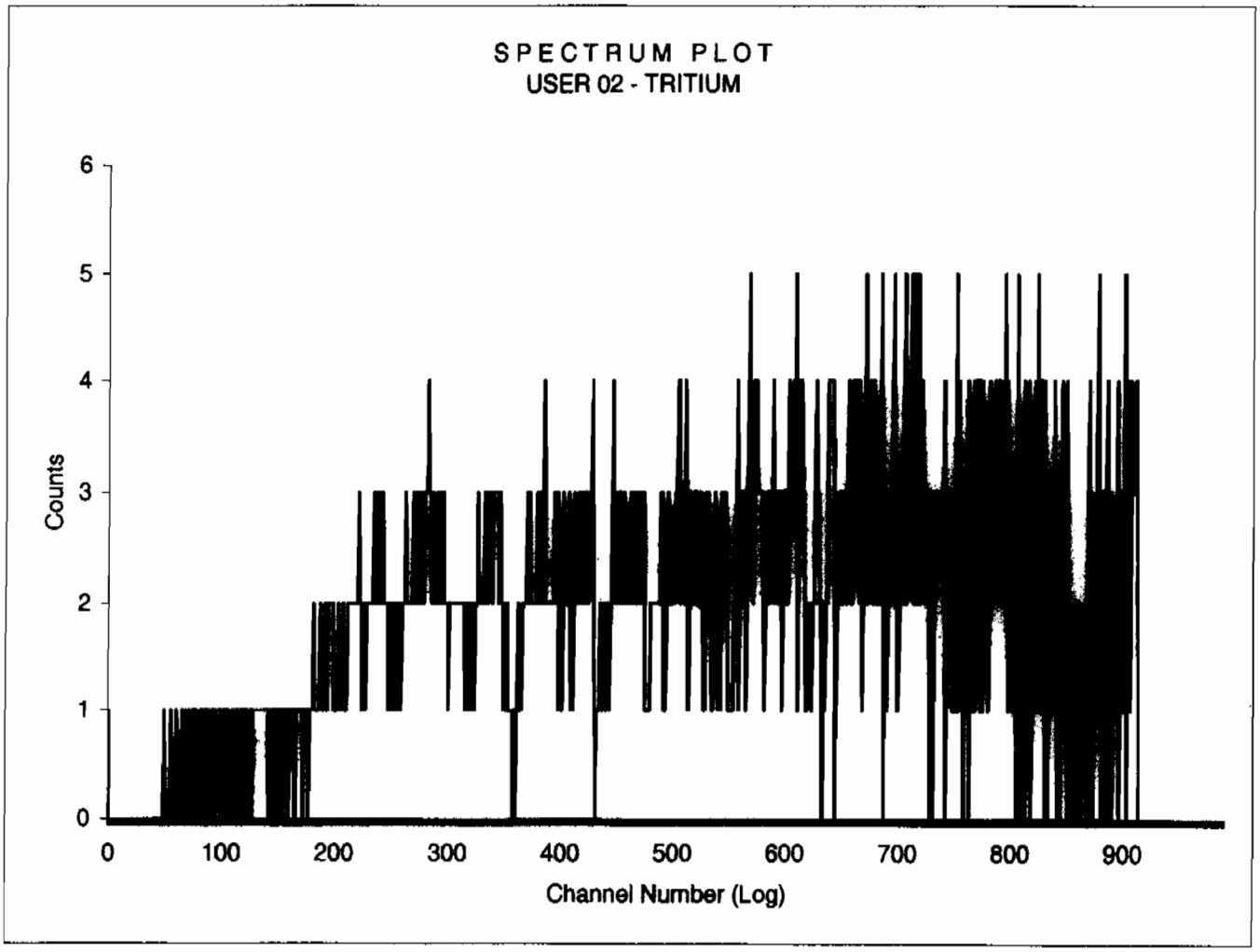

Sample Count Start Time:	14 Jul 2009 14:10:13		
Data Capture Date	14 Jul 2009 14:55:38		
User Filename	S02071434-1B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	13	34-1	45.00
H#, Total Counts:	120.4	1689	
Start, End, X-Axis:	0	990	Channel Number

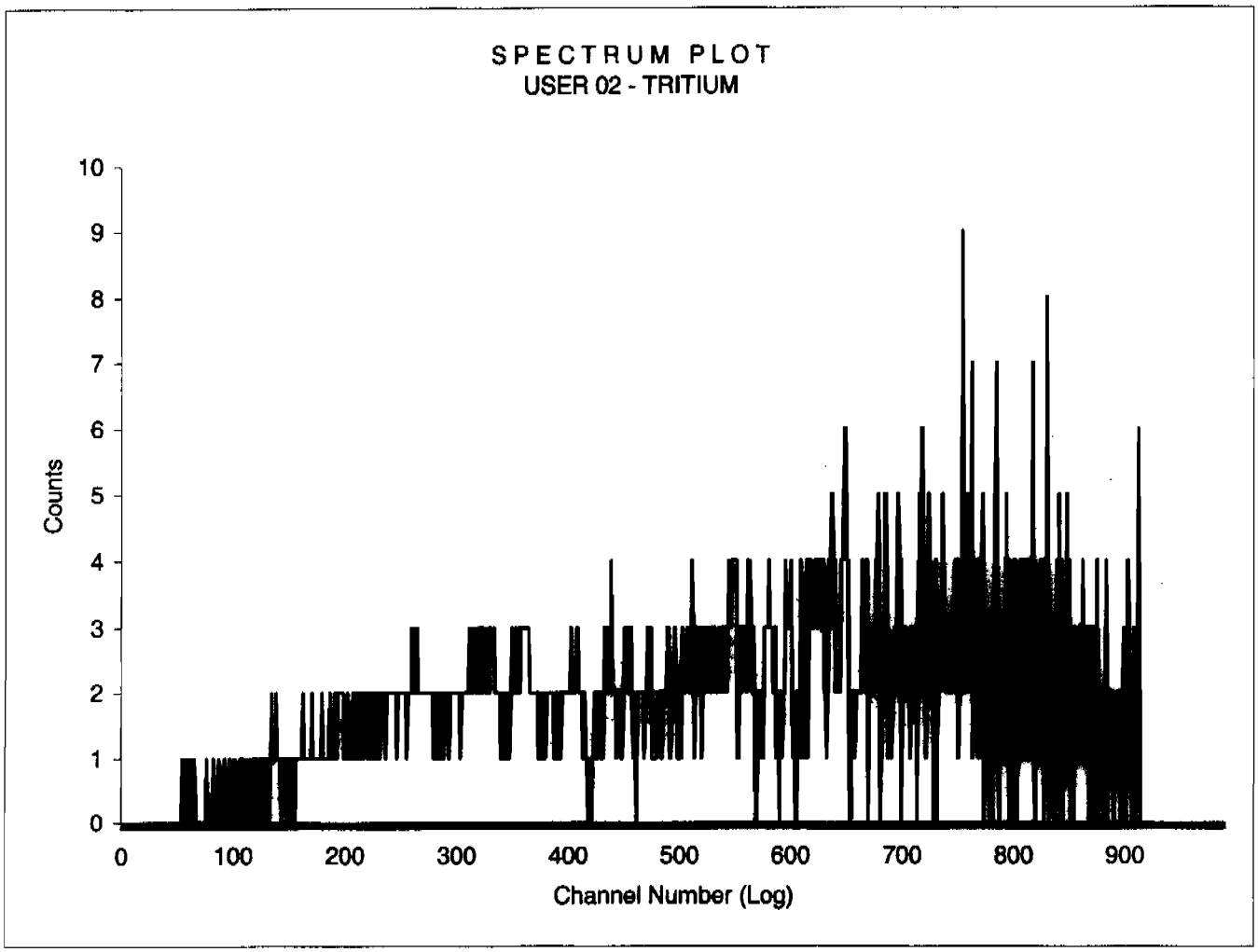

Sample Count Start Time:	14 Jul 2009 14:57:20		
Data Capture Date	14 Jul 2009 15:42:46		
User Filename	S02071434-2B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	14	34-2	45.00
H#, Total Counts:	122.1	1607	
Start, End, X-Axis:	0	990	Channel Number

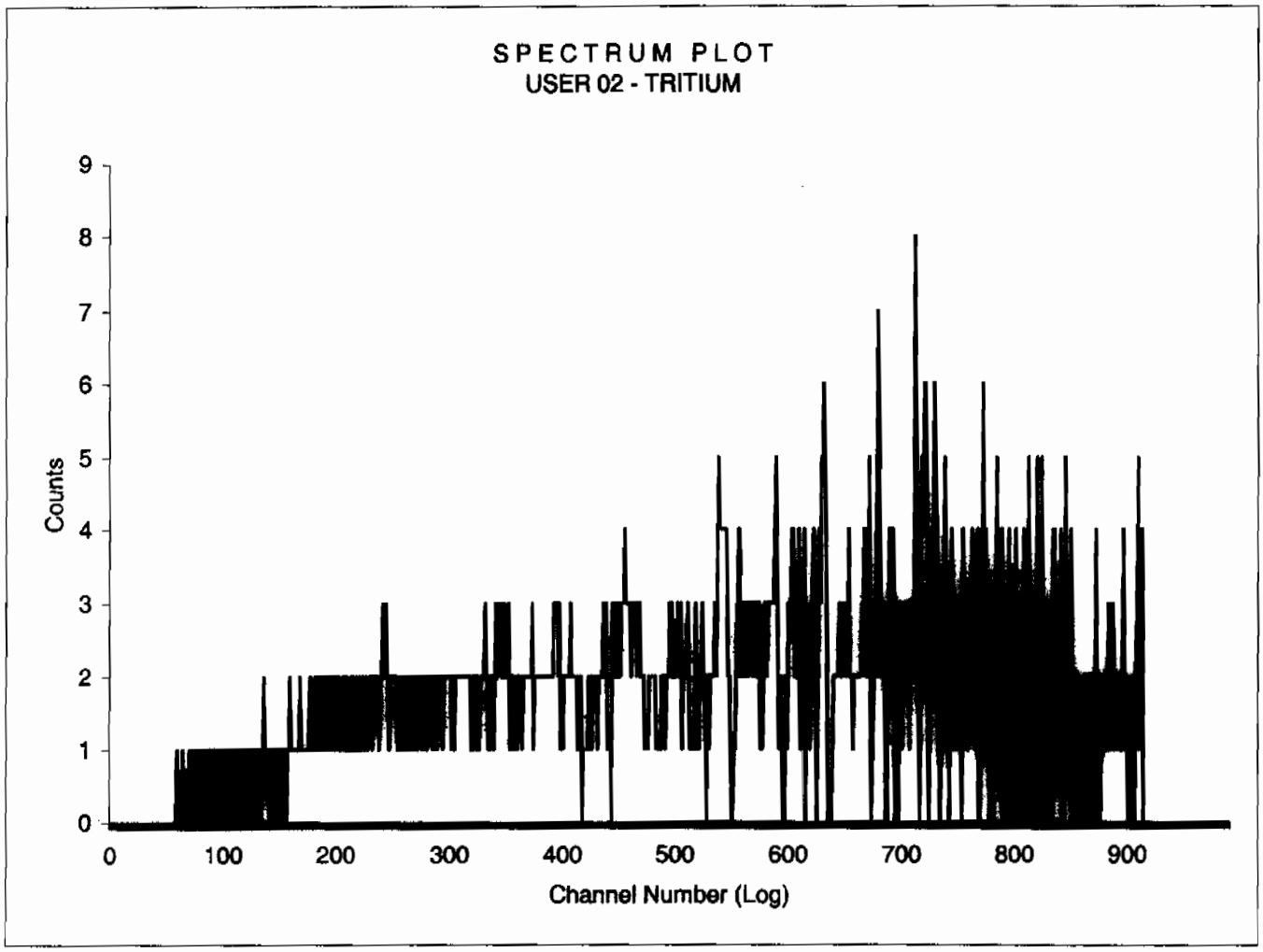

Sample Count Start Time:	14 Jul 2009 15:44:30		
Data Capture Date	14 Jul 2009 16:29:55		
User Filename	S02071434-3B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	15	34-3	45.00
H#, Total Counts:	121.2	1684	
Start, End, X-Axis:	0	990	Channel Number

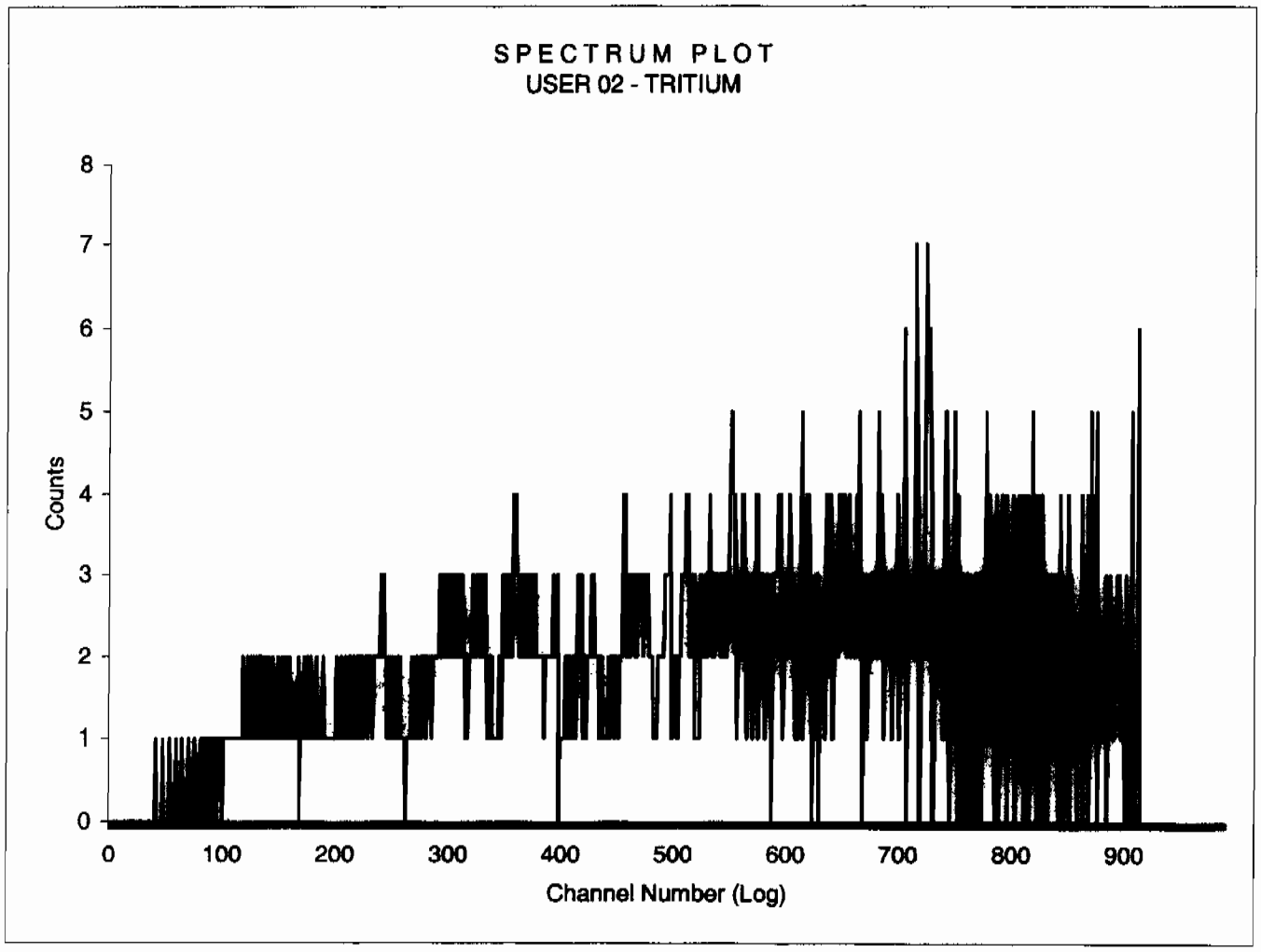

Sample Count Start Time:	14 Jul 2009 16:31:35		
Data Capture Date	14 Jul 2009 17:17:00		
User Filename	S02071434-4B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	16	34-4	45.00
H#, Total Counts:	118.6	1881	
Start, End, X-Axis:	0	990	Channel Number

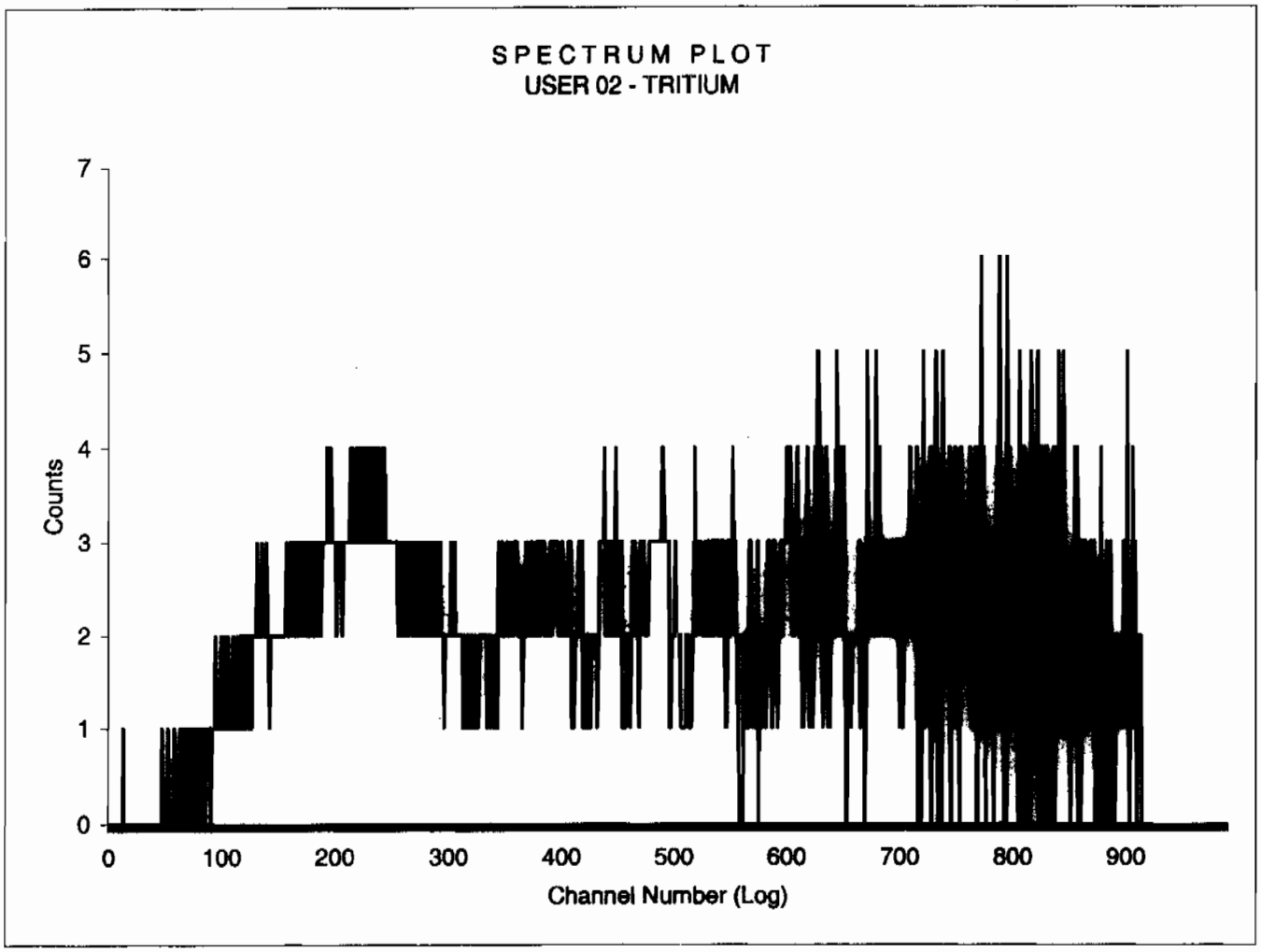

Sample Count Start Time:	14 Jul 2009 17:18:36		
Data Capture Date	14 Jul 2009 18:04:01		
User Filename	S02071434-5B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	17	34-5	45.00
H#, Total Counts:	121.1	1702	
Start, End, X-Axis:	0	990	Channel Number

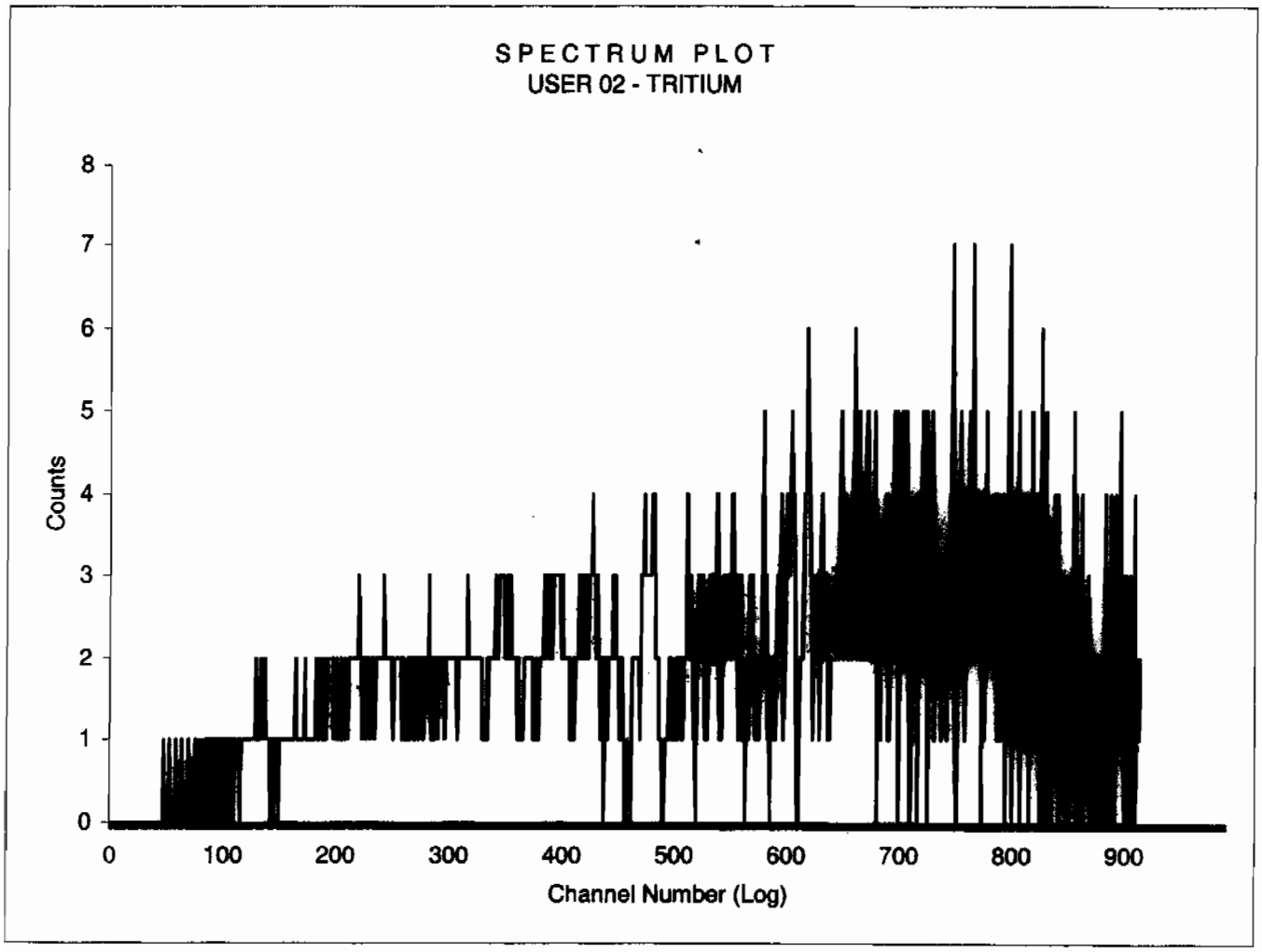

Sample Count Start Time:	14 Jul 2009 18:05:40		
Data Capture Date	14 Jul 2009 18:51:05		
User Filename	S02071434-6B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	18	34-6	45.00
H#, Total Counts:	120.4	1671	
Start, End, X-Axis:	0	990	Channel Number

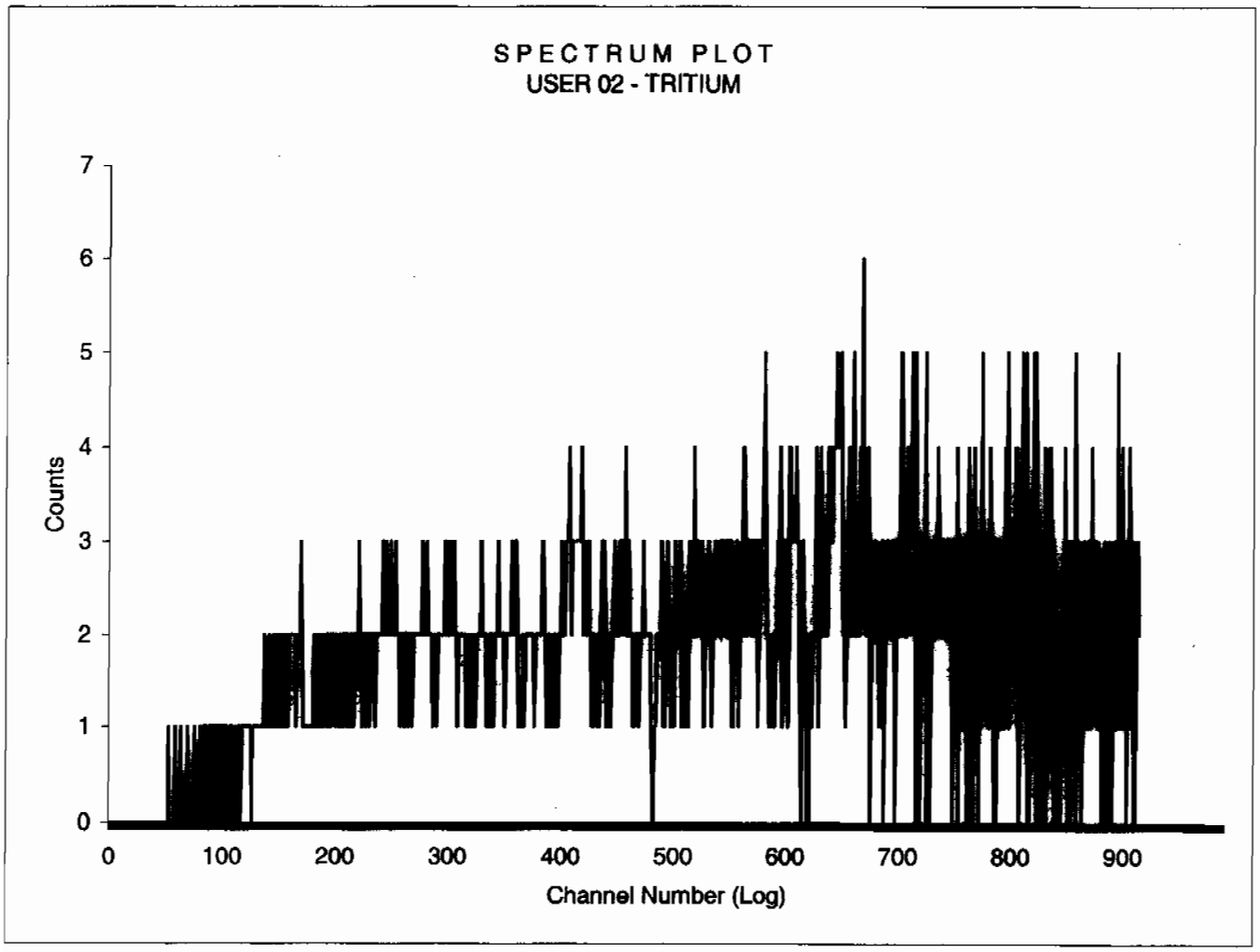

Sample Count Start Time:	14 Jul 2009 18:52:41		
Data Capture Date	14 Jul 2009 19:38:06		
User Filename	S02071434-7B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	19	34-7	45.00
H#, Total Counts:	178.7	4643	
Start, End, X-Axis:	0	990	Channel Number

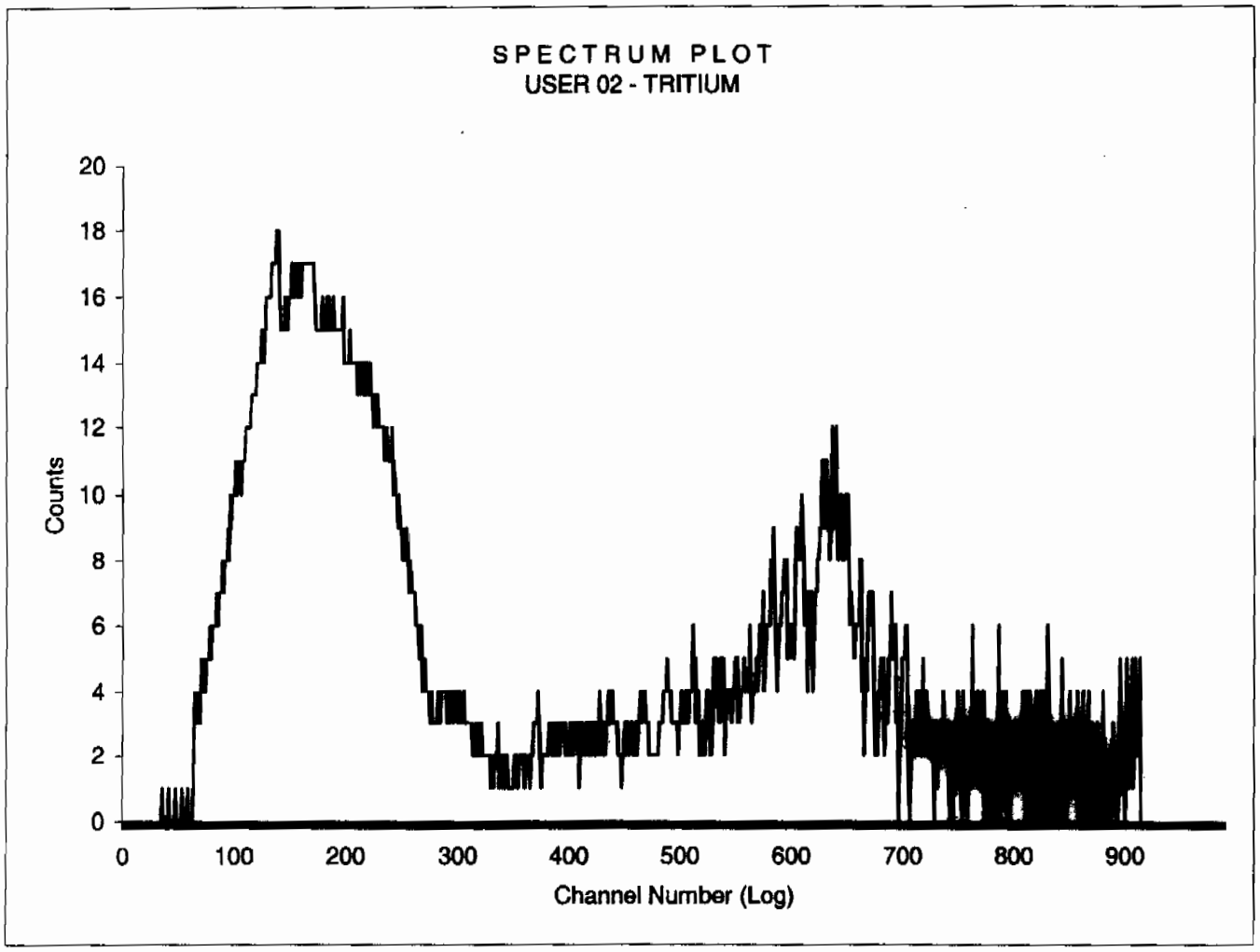

Sample Count Start Time:	14 Jul 2009 19:39:40		
Data Capture Date	14 Jul 2009 20:25:06		
User Filename	S02071434-8B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	20	34-8	45.00
H#, Total Counts:	120.2	1680	
Start, End, X-Axis:	0	990	Channel Number

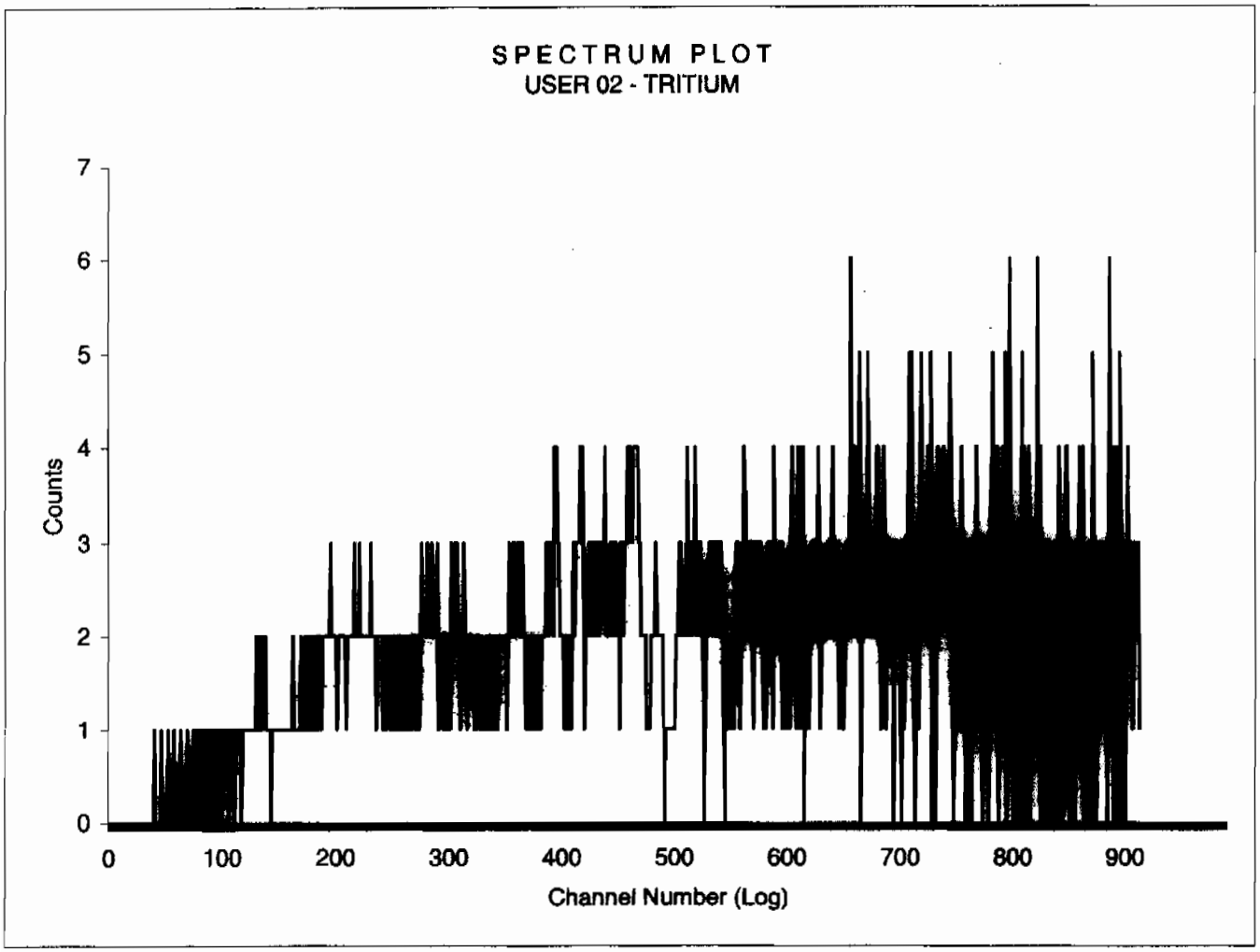

Sample Count Start Time:	14 Jul 2009 20:26:43		
Data Capture Date	14 Jul 2009 21:12:09		
User Filename	S02071434-9B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	21	34-9	45.00
H#, Total Counts:	117.8	4607	
Start, End, X-Axis:	0	990	Channel Number

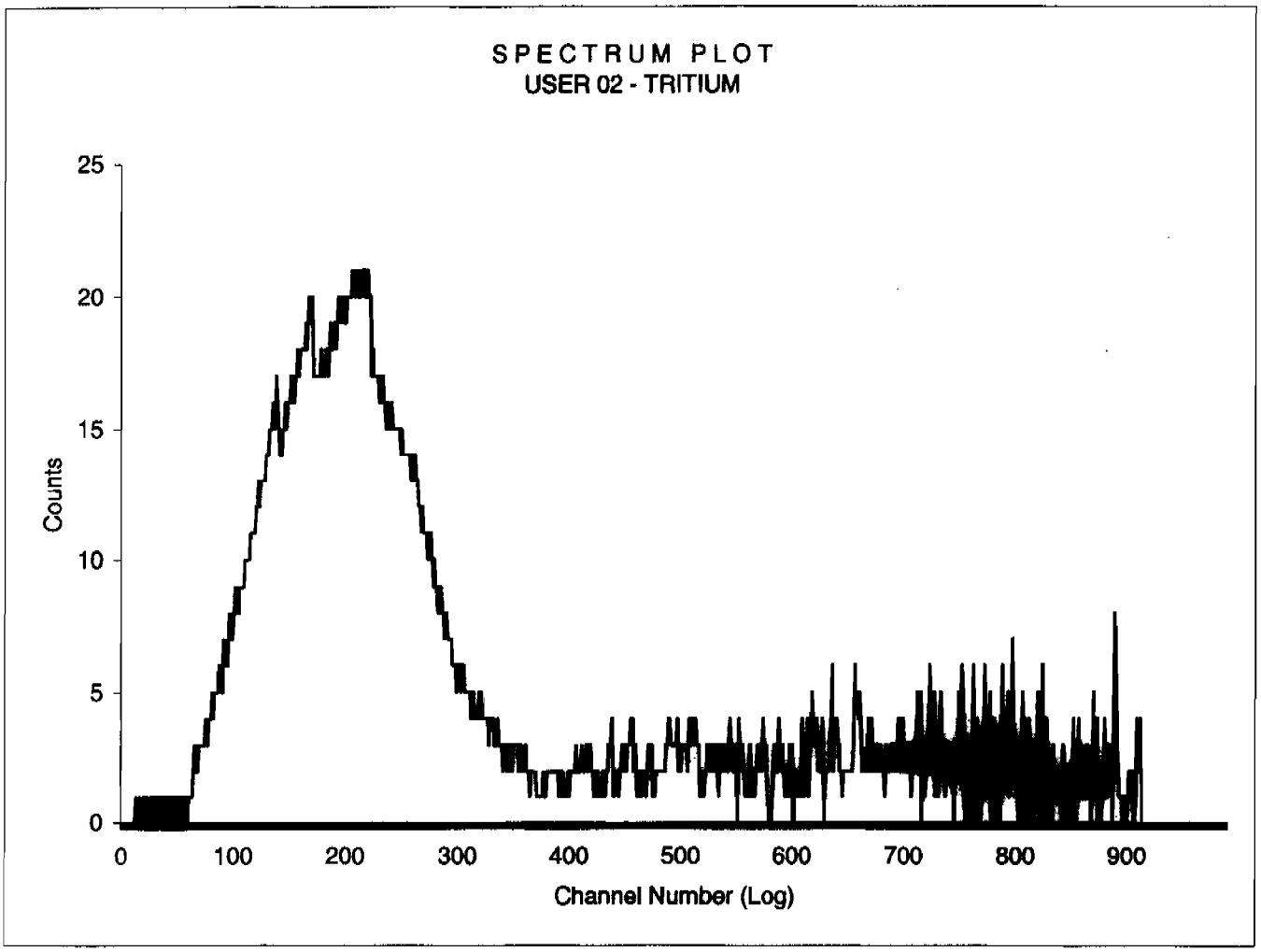

Sample Count Start Time:	14 Jul 2009 21:13:40		
Data Capture Date	14 Jul 2009 21:59:06		
User Filename	S02071434-10B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	22	34-10	45.00
H#, Total Counts:	120.5	1536	
Start, End, X-Axis:	0	990	Channel Number

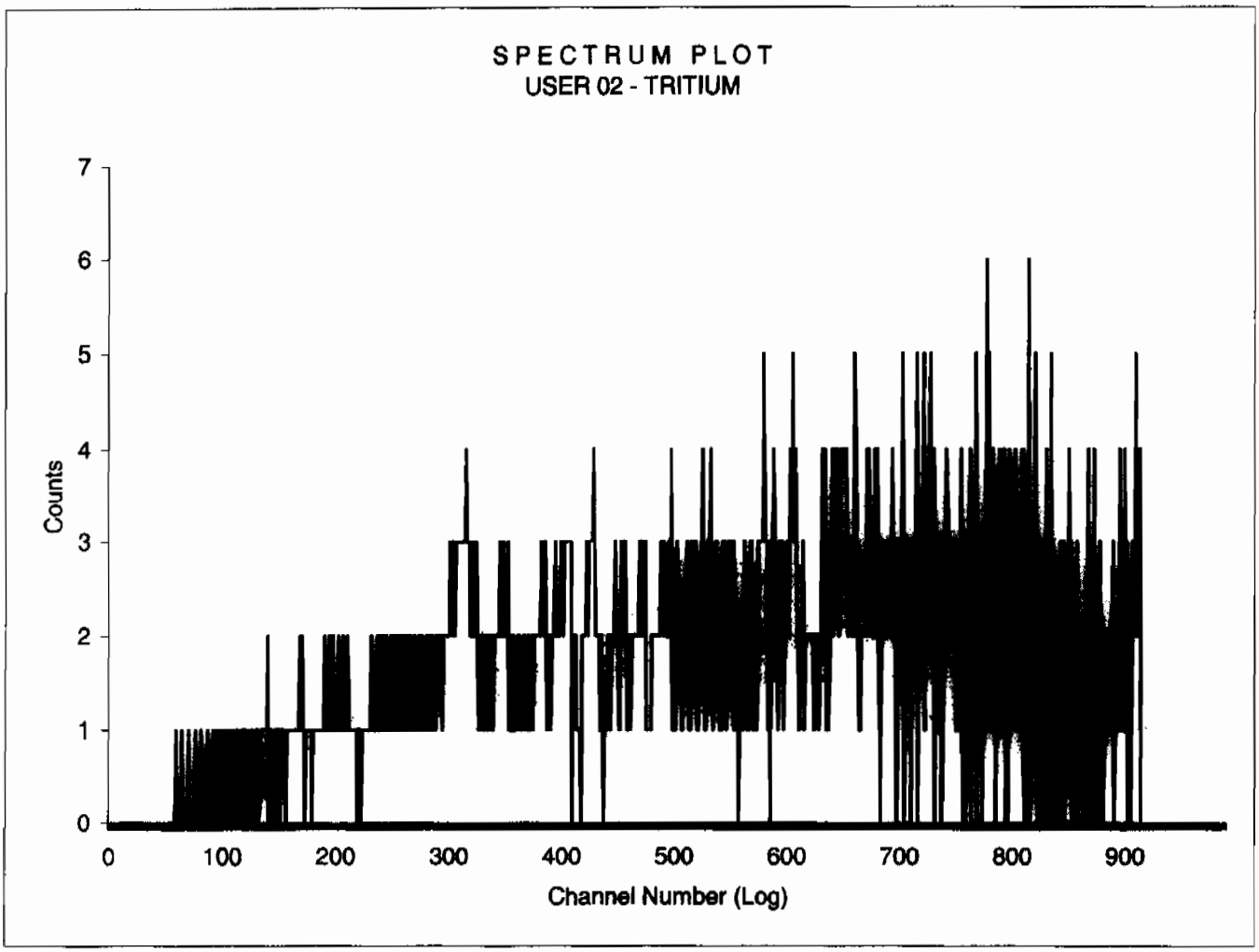

Sample Count Start Time:	14 Jul 2009 22:00:40		
Data Capture Date	14 Jul 2009 22:46:05		
User Filename	S02071434-11B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	23	34-11	45.00
H#, Total Counts:	121.0	1690	
Start, End, X-Axis:	0	990	Channel Number

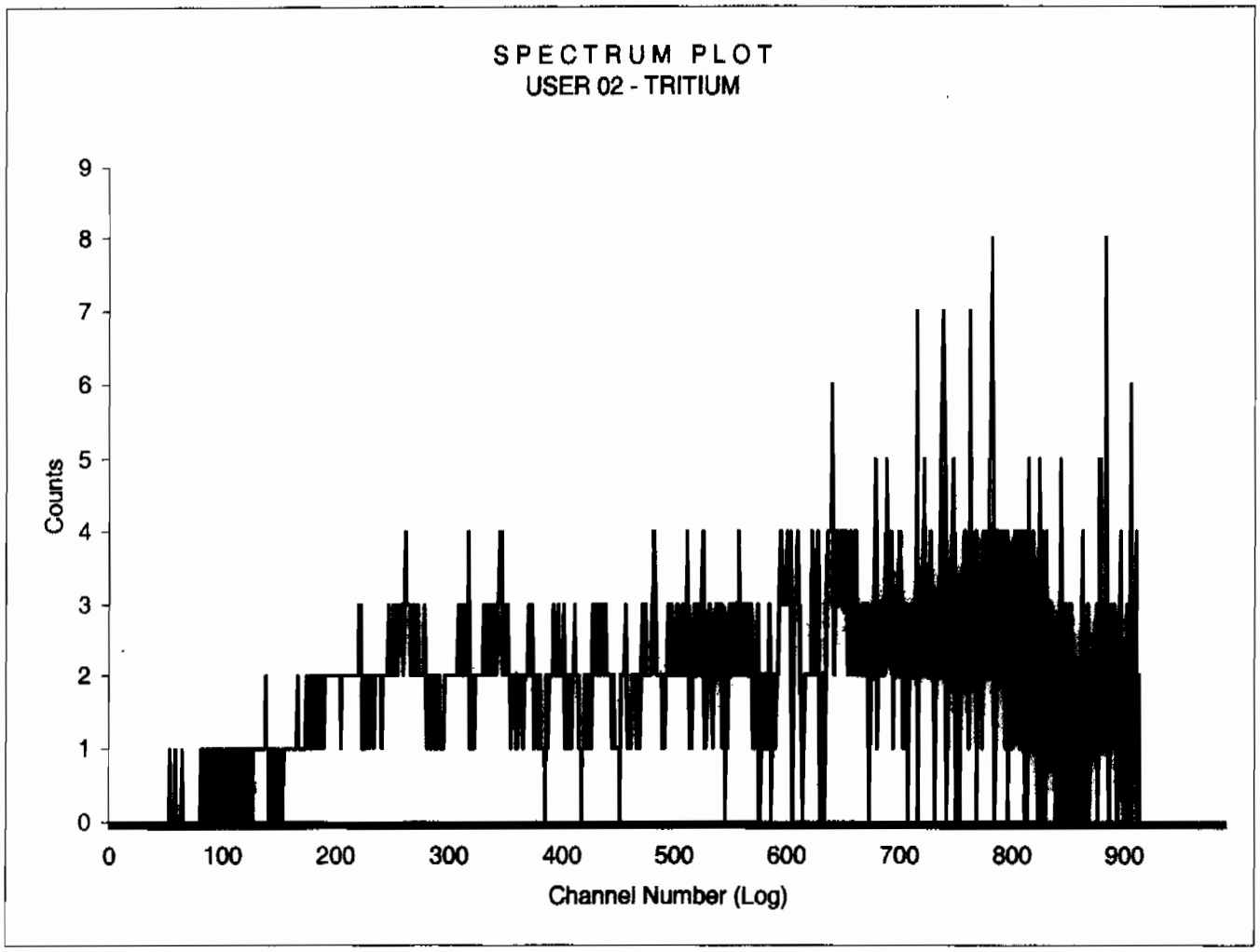

Sample Count Start Time:	14 Jul 2009 22:47:36		
Data Capture Date	14 Jul 2009 23:33:02		
User Filename	S02071434-12B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	24	34-12	45.00
H#, Total Counts:	120.3	3113	
Start, End, X-Axis:	0	990	Channel Number

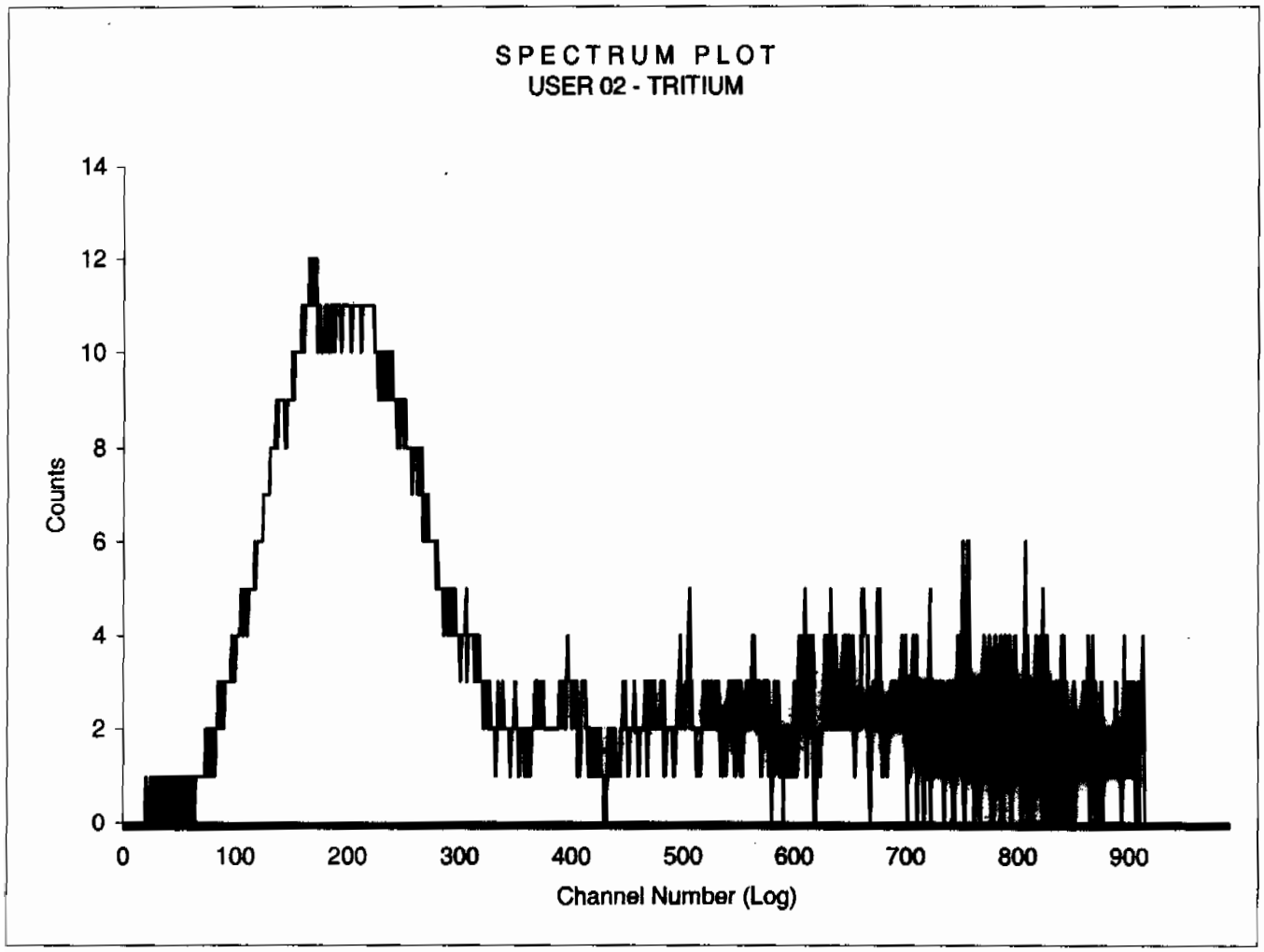

Radiochemistry Batch Checklist, Rev 9

Batch# 881220 Product: Gamma Solid Date: 07/16/09

LANL

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			N/A
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.	✓		
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/06

Primary Review Performed By: [signature] 7/16/09

Secondary Review Performed By: [signature] 7/17/09

7/20/09

Gamma Spec Que Sheet

I.G. - 7/7/09

06/29/2009

Batch #: 881220 **Analyst:** MXR1 **First Client DueDate** 07/20/2009 **Internal Due Date:** 07/09/2009

Gamma Spike Isotope: Mixed Gamma **Spike Code:** na **Expiration Date:** na **Vol:** na **Nominal Concentration:** na

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1.0mL **Nominal Concentration:** Cs137-5.638 Co60-6.932 ✓

Initials: MS **Prep Date:** 6/30/09 **Witness:** Am241-15.92

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1 g F)	Detector	Sealing Date/Time (If Applicable)
232504001-1	CAMO-09-10375	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	145.75	6	6/30/09
232504002-1	CAMO-09-10376	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	153.35	8	
232504003-1	CAMO-09-10373	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	138.62	11	
232504004-1	CAMO-09-10367	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	127.09	12	
232504005-1	CAMO-09-10377	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	138.04	13	
232504006-1	CAMO-09-10370	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	162.74	15	
232504007-1	CAMO-09-10374	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	155.35	16	
232504008-1	CAMO-09-10371	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	128.90	21	
232504009-1	CAMO-09-10368	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	146.07	18	
232504010-1	CAMO-09-10369	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	128.72	22	
232504011-1	CAMO-09-10366	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	146.41	23	
232504012-1	CAMO-09-10372	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	138.23	9	
232504013-1	CAMO-09-10378	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	145.06	14	
232504014-1	CAMO-09-10379	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	166.76	10	
232511001-1	CAMO-09-6519	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	144.92	17	
232511002-1	CAMO-09-6518	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	155.08	2	
232511003-1	CAMO-09-6527	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	151.38	8	
232511004-1	CAMO-09-6529	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	158.27	12	
232511005-1	CAMO-09-6528	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	156.96	13	
232511006-1	CAMO-09-6531	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	147.27	16	
1201871426-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	6/30/09	166.76	21	
1201871427-1	DUP CAMO-09-6519(232511001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	24-JUN-09 12:00:00	144.91	18	
1201871428-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	6/30/09	155.44	1	

GEL Laboratories LLC, Radiochemistry Division

history ✓
details ✓

Data Reviewed By: 7/16/09 7/17/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881220	232504001	SAMPLE	07-JUL-09	Americium-241	-0.04374	0.3598	0.200
				Cerium-139	0.01265	0.05986	0.050
				Thorium-234	0.6829	3.096	2.00
881220	232504002	SAMPLE	07-JUL-09	Americium-241	0.00349	0.3102	0.200
				Thorium-234	0.1405	2.557	2.00
881220	232504003	SAMPLE	07-JUL-09	Americium-241	0.02066	0.219	0.200
				Cerium-139	-0.01423	0.05015	0.050
881220	232504004	SAMPLE	07-JUL-09	Americium-241	0.2105	0.2869	0.200
				Cerium-139	0.02452	0.05061	0.050
				Sodium-22	-0.00962	0.08801	0.080
				Thorium-234	0.7879	2.276	2.00
881220	232504005	SAMPLE	07-JUL-09	Cerium-139	-0.0083	0.05671	0.050
				Cesium-134	0.1106	0.1187	0.100
				Sodium-22	0.00864	0.1021	0.080
881220	232504006	SAMPLE	07-JUL-09	Americium-241	-0.06538	0.3917	0.200
				Thorium-234	0.69	3.065	2.00
881220	232504007	SAMPLE	07-JUL-09	Americium-241	-0.0248	0.2521	0.200
				Thorium-234	0.429	2.135	2.00
881220	232504008	SAMPLE	07-JUL-09	Cerium-139	0.00798	0.05464	0.050
				Cesium-134	0.1188	0.1324	0.100
				Sodium-22	-0.06158	0.1029	0.080
881220	232504009	SAMPLE	07-JUL-09	Americium-241	-0.02267	0.2687	0.200
881220	232504010	SAMPLE	07-JUL-09	Americium-241	0.02928	0.2207	0.200
881220	232504011	SAMPLE	07-JUL-09	Americium-241	-0.04747	0.2374	0.200
				Sodium-22	-0.0309	0.0826	0.080
				Thorium-234	1.478	2.008	2.00
881220	232504012	SAMPLE	07-JUL-09	Americium-241	-0.03357	0.277	0.200
				Thorium-234	0.9639	2.149	2.00
881220	232504013	SAMPLE	07-JUL-09	Americium-241	0.1321	0.2287	0.200
				Cerium-139	-0.00595	0.05101	0.050
881220	232504014	SAMPLE	07-JUL-09	Americium-241	-0.00368	0.2861	0.200
				Thorium-234	1.992	2.237	2.00
881220	232511001	SAMPLE	07-JUL-09	Cerium-139	0.00716	0.1251	0.050
				Cesium-134	0.1128	0.1179	0.100
				Cobalt-60	0.04083	0.1021	0.100
				Europium-152	-0.03327	0.5722	0.200
				Mercury-203	-0.0157	0.1988	0.100
				Ruthenium-106	-0.158	1.336	0.800
				Sodium-22	0.01308	0.09868	0.080
				Tin-113	0.00348	0.2918	0.100
				Uranium-235	0.07247	0.8525	0.500
881220	232511002	SAMPLE	07-JUL-09	Cerium-139	-0.00796	0.0532	0.050
				Thorium-234	2.409	2.504	2.00
881220	232511003	SAMPLE	07-JUL-09	Americium-241	-0.1747	0.3175	0.200

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881220	232511003	SAMPLE	07-JUL-09	Thorium-234	1.877	2.822	2.00
881220	232511004	SAMPLE	07-JUL-09	Cerium-139	0.01081	0.1107	0.050
				Europium-152	0.1661	0.4832	0.200
				Mercury-203	0.00665	0.1741	0.100
				Ruthenium-106	-0.05854	1.137	0.800
				Thorium-234	1.803	4.235	2.00
				Tin-113	0.0002	0.2391	0.100
				Uranium-235	-0.1134	0.7339	0.500
881220	232511005	SAMPLE	07-JUL-09	Cerium-139	-0.01715	0.0687	0.050
				Cesium-134	0.05939	0.1017	0.100
				Europium-152	0.07737	0.2759	0.200
				Mercury-203	0.03284	0.1055	0.100
				Tin-113	0.0133	0.1394	0.100
881220	232511006	SAMPLE	07-JUL-09	Cerium-139	0.0018	0.05501	0.050
				Thorium-234	1.598	2.398	2.00
881220	1201871426	MB	07-JUL-09				
881220	1201871427	DUP	07-JUL-09	Cerium-139	0.00471	0.08862	0.050
				Europium-152	-0.08539	0.356	0.200
				Mercury-203	0.06106	0.1378	0.100
				Ruthenium-106	0.4348	0.8977	0.800
				Thorium-234	-0.3133	4.149	2.00
				Tin-113	0.05172	0.1816	0.100
				Uranium-235	-0.1078	0.6114	0.500
881220	1201871428	LCS	07-JUL-09	Cerium-139	0.01927	0.07316	0.050
				Cesium-134	0.06354	0.1505	0.100
				Europium-152	0.1313	0.2751	0.200
				Ruthenium-106	0.585	0.9619	0.800
				Thorium-234	-1.68	3.462	2.00
				Tin-113	0.02981	0.1298	0.100

GEL QUALS

Batch ID: 881220

Report run on: July 16, 2009 8:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232504001-1 07-JUL-2009 08:39	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.833			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.916			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1507		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.392			
232504002-1 07-JUL-2009 08:43	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.504			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.508			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.785			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.06581			
232504003-1 07-JUL-2009 08:48	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.081			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.909			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1229		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.722			
232504004-1 07-JUL-2009 08:49	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.4			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.096			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1142		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.947			
232504005-1 07-JUL-2009 08:50	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.831			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.933			
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.09747		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		6.065			

GEL QUALS

Batch ID: 881220

Report run on: July 16, 2009 8:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232504005-1 07-JUL-2009 08:50	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1479			
232504006-1 07-JUL-2009 08:50	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.332			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1211		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.953			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07694			
232504007-1 07-JUL-2009 08:51	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.636			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.939			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.582			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07385			
232504008-1 07-JUL-2009 08:51	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.127			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.31			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.856			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1418			
232504009-1 07-JUL-2009 09:12	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.324			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.296			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1296		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.06151		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		1.952			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1198			
	Thorium-234	UI			Data rejected due to no valid peak.		0.168			

GEL QUALS

Batch ID: 881220

Report run on: July 16, 2009 8:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232504010-1 07-JUL-2009 09:12	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.554			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.417			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.131		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.445			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1816			
232504011-1 07-JUL-2009 09:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.477			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.116			
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.07963		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.837			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0683			
232504012-1 07-JUL-2009 09:43	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.611			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.865			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.991			
232504013-1 07-JUL-2009 09:44	Bismuth-211	UI	UI	UI	Data rejected due to interference.		5.012			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.694			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1295		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.729			
232504014-1 07-JUL-2009 09:47	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.176			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.347			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.436			

GEL QUALS

Batch ID: 881220

Report run on: July 16, 2009 8:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232511001-1 07-JUL-2009 10:10	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.459			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.048			
	Radium-224	UI	UI	UI	Data rejected due to low abundance.		16.06			
	Thorium-234	UI	UI	UI	Data rejected due to low abundance.		2.468		2	2
232511002-1 07-JUL-2009 10:19	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.571			
	Cadmium-109	UI	UI	UI	Data rejected due to low abundance.		3.312			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09187		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.34			
232511003-1 07-JUL-2009 10:50	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.289			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.492			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1346		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.466			
232511004-1 07-JUL-2009 10:53	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.647			
	Cobalt-60	UI	UI	UI	Data rejected due to low abundance.		.08393		.1	.1
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1872			
232511005-1 07-JUL-2009 10:54	Bismuth-211		UI		Data rejected due to interference.		3.711			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.506			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1914			
232511006-1 07-JUL-2009 10:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.037			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.81			

GEL QUALS

Batch ID: 881220

Report run on: July 16, 2009 8:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232511006-1 07-JUL-2009 10:58	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1099		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.931			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09636			
1201871427-1 DUP 07-JUL-2009 11:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.399			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.567			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1372		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.764			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1605			

Gamma Review Report based on Result > MDA for Batch:881220

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504001	24-JUN-09 12:00	07-JUL-09 08:39	12.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	2.251	0.1897	pCi/g	0.2293	N	911	3	1.648	IDENTIFIED	6.703		
Americium-243	int nr	0.4813	0.04835	pCi/g	0.1141	N	74.94	1	1.14	IDENTIFIED	8.971		
Annihilation Rad.	HE	0.1221	0.03856	pCi/g	0.05325	N	510.6	1	1.321	IDENTIFIED	31.47		
Bismuth-211	int	4.833	0.3024	pCi/g	0.3728	Y	352	4	1.255	IDENTIFIED	5.361	ui	
Bismuth-212	nr	1.233	0.2822	pCi/g	0.5343	N	727.4	1	1.539	IDENTIFIED	22.57		
Bismuth-214	✓	1.417	0.1058	pCi/g	0.1362	0.200	609.2	4	1.423	IDENTIFIED	6.497		
Cadmium-109	int	3.916	0.5926	pCi/g	1.593	Y	87.3	5	1.271	IDENTIFIED	14.32	ui	
Cerium-143		296.7	45.53	pCi/g	0	N	87.3	5	1.271	FAIL_DECAY	14.32		
Cesium-134	la	0.1507	0.04641	pCi/g	0.1073	0.100	796.3	1	1.1	FAIL_ABUND	30.63	UI	Data rejected due to low abundance.
Gross Gamma		11.23	1.467	pCi/g	4.596	N		0					
Iodine-123	HE	2.46E+05	1.96E+05	pCi/g	0	N	87.3	5	1.271	NOT_IDENTI	14.32		
Lead-212	✓	2.076	0.09863	pCi/g	0.1092	0.100	238.7	5	1.151	IDENTIFIED	2.996		
Lead-214	✓	1.681	0.114	pCi/g	0.13	0.100	352	4	1.255	IDENTIFIED	5.361		
Lutetium-177	HE	2.83	0.7697	pCi/g	1.891	N	209.3	1	1.036	FAIL_ABUND	27.05		
Neptunium-237	int nr	1.134	0.2077	pCi/g	0.5004	N	87.3	5	1.271	IDENTIFIED	14.32		
Polonium-212	nr	2.076	0.09863	pCi/g	0.1092	N	238.7	5	1.151	IDENTIFIED	2.996		
Polonium-214	nr	1.681	0.114	pCi/g	0.13	N	352	4	1.255	IDENTIFIED	5.361		
Polonium-216	nr	2.076	0.09863	pCi/g	0.1092	N	238.7	5	1.151	IDENTIFIED	2.996		
Polonium-218	nr	1.681	0.114	pCi/g	0.13	N	352	4	1.255	IDENTIFIED	5.361		
Potassium-40	✓	31.67	1.417	pCi/g	0.6765	1.00	1460	1	2.259	IDENTIFIED	3.013		
Radium-224	int	5.392	0.8291	pCi/g	1.242	Y	241.8	1	1.952	IDENTIFIED	15.09	ui	
Radium-226	✓	1.417	0.1058	pCi/g	0.1362	Y	609.2	4	1.423	IDENTIFIED	6.497		
Radium-228	✓	2.251	0.1897	pCi/g	0.2293	0.500	911	3	1.648	IDENTIFIED	6.703		
Thallium-208	✓	0.6698	0.0511	pCi/g	0.06751	0.080	583.2	1	1.344	IDENTIFIED	6.944		
Thorium-228	nr	2.076	0.09863	pCi/g	0.1092	N	238.7	5	1.151	IDENTIFIED	2.996		
Thorium-230	nr	1.417	0.1058	pCi/g	0.1362	N	609.2	4	1.423	IDENTIFIED	6.497		
Thorium-232	nr	2.251	0.1897	pCi/g	0.2293	N	911	3	1.648	IDENTIFIED	6.703		
Tin-126	int nr	0.3862	0.05844	pCi/g	0.1752	N	87.3	5	1.271	IDENTIFIED	14.32		
Titanium-44	la nr	0.4493	0.03544	pCi/g	0.1037	N	77.23	1	1.115	FAIL_ABUND	6.43		
Uranium-234	nr	1.417	0.1058	pCi/g	0.1362	N	609.2	4	1.423	IDENTIFIED	6.497		
Zirconium-97		4.74E+05	1.28E+05	pCi/g	0	N	238.7	5	1.151	NOT_IDENTI	2.996		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504002	24-JUN-09 12:00	07-JUL-09 08:43	12.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual		Qual Comment
Actinium-228	nr	1.856	0.1951	pCi/g	0.1835	N	910.6	3	1.514	IDENTIFIED	8.251			
Americium-243	int nr	0.4231	0.04732	pCi/g	0.09323	N	74.84	1	1.414	IDENTIFIED	9.827			
Annihilation Rad.		0.1622	0.03133	pCi/g	0.04481	N	510.8	2	2.073	IDENTIFIED	19.09			
Barium-137m		0.1237	0.03328	pCi/g	0.05141	N	661.3	2	0.8052	IDENTIFIED	26.78			
Beryllium-7	HE	0.837	0.2676	pCi/g	0.5144	N	478.3	2	1.516	IDENTIFIED	31.79			
Bismuth-211	int	3.504	0.2604	pCi/g	0.342	Y	351.7	4	1.159	IDENTIFIED	6.651		ui	
Bismuth-212	la nr	1.272	0.2348	pCi/g	0.694	N	727	1	1.243	FAIL_ABUND	17.99			
Bismuth-214	✓	1.063	0.08624	pCi/g	0.1075	0.200	608.8	4	1.47	IDENTIFIED	7.182			
Cadmium-109	int	2.508	0.4616	pCi/g	1.354	Y	87.15	4	1.119	IDENTIFIED	17.49		ui	
Cerium-143		280.2	40.74	pCi/g	0	N	327.4	1	1.351	FAIL_DECAY	26.8			
Cesium-135	int nr	0.5503	0.1186	pCi/g	0.2443	N	269.6	1	1.309	IDENTIFIED	21.2			
Cesium-137	✓	0.1307	0.03518	pCi/g	0.05434	0.100	661.3	2	0.8052	IDENTIFIED	26.78			
Gross Gamma		9.337	1.261	pCi/g	3.12	N		0						
Iodine-123	HE	24710	1.54E+05	pCi/g	0	N	87.15	4	1.119	NOT_IDENTI	17.49			
Iodine-133	HE	113.5	448.1	pCi/g	0	N	510.8	2	2.073	FAIL_DECAY	19.09			
Krypton-85	HE	13.14	3.685	pCi/g	12.38	N	238.4	8	1.184	NOT_IDENTI	3.042			
Lead-212	✓	1.82	0.08703	pCi/g	0.08529	0.100	238.4	8	1.184	IDENTIFIED	3.042			
Lead-214	✓	1.219	0.09599	pCi/g	0.1192	0.100	351.7	4	1.159	IDENTIFIED	6.651			
Lutetium-177	HE	2.734	0.6323	pCi/g	1.687	N	208.8	1	0.8819	FAIL_ABUND	22.96			
Neptunium-237	HE	0.7263	0.1532	pCi/g	0.4279	N	87.15	4	1.119	IDENTIFIED	17.49			
Niobium-97	HE	9844	4994	pCi/g	0	N	238.4	8	1.184	NOT_IDENTI	3.042			
Polonium-212	nr	1.82	0.08703	pCi/g	0.08529	N	238.4	8	1.184	IDENTIFIED	3.042			
Polonium-214	nr	1.219	0.09599	pCi/g	0.1192	N	351.7	4	1.159	IDENTIFIED	6.651			
Polonium-216	nr	1.82	0.08703	pCi/g	0.08529	N	238.4	8	1.184	IDENTIFIED	3.042			
Polonium-218	nr	1.219	0.09599	pCi/g	0.1192	N	351.7	4	1.159	IDENTIFIED	6.651			
Potassium-40	✓	26.44	1.387	pCi/g	0.464	1.00	1460	1	1.898	IDENTIFIED	3.091			
Radium-224	int	4.785	0.5741	pCi/g	0.9703	Y	241.5	1	1.698	IDENTIFIED	11.63		ui	
Radium-226	✓	1.063	0.08624	pCi/g	0.1075	Y	608.8	4	1.47	IDENTIFIED	7.182			
Radium-228	✓	1.856	0.1951	pCi/g	0.1835	0.500	910.6	3	1.514	IDENTIFIED	8.251			
Sodium-24	HE	20110	27120	pCi/g	0	N	478.3	2	1.516	NOT_IDENTI	31.79			
Strontium-85	la	0.06581	0.01845	pCi/g	0.062	Y	238.4	8	1.184	NOT_IDENTI	3.042		UI	Data rejected due to low abundance.
Thallium-208	✓	0.5538	0.04341	pCi/g	0.05477	0.080	582.9	1	1.566	IDENTIFIED	7.128			
Thorium-228	nr	1.82	0.08703	pCi/g	0.08528	N	238.4	8	1.184	IDENTIFIED	3.042			
Thorium-230	nr	1.063	0.08624	pCi/g	0.1075	N	608.8	4	1.47	IDENTIFIED	7.182			
Thorium-232	nr	1.856	0.1951	pCi/g	0.1835	N	910.6	3	1.514	IDENTIFIED	8.251			
Tin-126	int nr	0.2473	0.04552	pCi/g	0.1373	N	87.15	4	1.119	IDENTIFIED	17.49			
Titanium-44	la nr	0.3933	0.03309	pCi/g	0.08414	N	77.09	1	1.113	FAIL_ABUND	6.474			
Uranium-234	nr	1.063	0.08624	pCi/g	0.1075	N	608.8	4	1.47	IDENTIFIED	7.182			
Zirconium-97		2.95E+05	1.08E+05	pCi/g	0	N	238.4	8	1.184	NOT_IDENTI	3.042			

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504003	24-JUN-09 12:00	07-JUL-09 08:48	12.9	SAMPLE	LOAD	1	LANL	LANL01004:GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.506	0.1628	pCi/g	0.2089	N	911	3	1.321	IDENTIFIED	9.376		
Americium-243	int nr	0.3839	0.03303	pCi/g	0.08521	N	74.25	1	0.9406	IDENTIFIED	7.705		
Annihilatiou Rad.		0.1373	0.03207	pCi/g	0.0427	N	510.2	1	1.452	IDENTIFIED	23.16		
Bismuth-211	int	4.081	0.2559	pCi/g	0.3205	Y	351.5	4	1.093	IDENTIFIED	5.204	ui	
Bismuth-212	nr	1.24	0.2021	pCi/g	0.4852	N	727	1	1.465	IDENTIFIED	15.66		
Bismuth-214	✓	1.423	0.0935	pCi/g	0.1049	0.200	609	4	1.309	IDENTIFIED	5		
Cadmium-109	int	3.909	0.4684	pCi/g	1.193	Y	86.68	4	1.147	IDENTIFIED	11.11	ui	
Cerium-143		451.9	60.77	pCi/g	0	N	294.7	1	1.13	FAIL_DECAY	7.767		
Cesium-134	la	0.1229	0.03573	pCi/g	0.08816	0.100	795.1	2	1.002	FAIL_ABUND	28.81	UI	Data rejected due to low abundance.
Cesium-135	HE	0.4085	0.09286	pCi/g	0.2994	N	795.1	2	1.002	NOT_IDENTI	28.81		
Gross Gamma		10.69	1.544	pCi/g	3.799	N		0					
Iodine-123	HE	2.02E+05	1.67E+05	pCi/g	0	N	86.68	4	1.147	NOT_IDENTI	11.11		
Lead-212	✓	1.816	0.08981	pCi/g	0.09157	0.100	238.1	7	0.9655	IDENTIFIED	2.81		
Lead-214	✓	1.419	0.09642	pCi/g	0.105	0.100	351.5	4	1.093	IDENTIFIED	5.204		
Lutetium-177	HE	2.81	0.647	pCi/g	1.655	N	208.6	1	0.9459	FAIL_ABUND	22.82		
Neptunium-237	int nr	1.132	0.179	pCi/g	0.3495	N	86.68	4	1.147	IDENTIFIED	11.11		
Niobium-95m	la nr	1.201	0.09728	pCi/g	0.316	N	238.1	7	0.9655	NOT_IDENTI	2.81		
Niobium-97	HE	6204	5224	pCi/g	0	N	238.1	7	0.9655	NOT_IDENTI	2.81		
Polonium-212	nr	1.816	0.08981	pCi/g	0.09157	N	238.1	7	0.9655	IDENTIFIED	2.81		
Polonium-214	nr	1.419	0.09642	pCi/g	0.105	N	351.5	4	1.093	IDENTIFIED	5.204		
Polonium-216	nr	1.816	0.08981	pCi/g	0.09157	N	238.1	7	0.9655	IDENTIFIED	2.81		
Polonium-218	nr	1.419	0.09642	pCi/g	0.105	N	351.5	4	1.093	IDENTIFIED	5.204		
Potassium-40	✓	36.02	1.501	pCi/g	0.478	1.00	1461	2	1.619	IDENTIFIED	2.478		
Radium-224	int	4.722	0.7197	pCi/g	1.042	Y	241.1	1	1.949	IDENTIFIED	14.85	ui	
Radium-226	✓	1.423	0.0935	pCi/g	0.1049	Y	609	4	1.309	IDENTIFIED	5		
Radium-228	✓	1.506	0.1628	pCi/g	0.2089	0.500	911	3	1.321	IDENTIFIED	9.376		
Thallium-208	✓	0.5904	0.04639	pCi/g	0.05597	0.080	582.8	1	1.378	IDENTIFIED	6.929		
Thorium-228	nr	1.816	0.08981	pCi/g	0.09156	N	238.1	7	0.9655	IDENTIFIED	2.81		
Thorium-230	nr	1.423	0.0935	pCi/g	0.1049	N	609	4	1.309	IDENTIFIED	5		
Thorium-232	nr	1.506	0.1628	pCi/g	0.2089	N	911	3	1.321	IDENTIFIED	9.376		
Tin-126	int nr	0.3855	0.0462	pCi/g	0.118	N	86.68	4	1.147	IDENTIFIED	11.11		
Titanium-44	la nr	0.2047	0.02618	pCi/g	0.06988	N	1461	2	1.619	NOT_IDENTI	2.478		
Total Uranium		3.0998	2.35E-06	ug/g	2.9395	N		0					
Uranium-234	nr	1.423	0.0935	pCi/g	0.1049	N	609	4	1.309	IDENTIFIED	5		
Zirconium-97		6.36E+05	1.13E+05	pCi/g	0	N	238.1	7	0.9655	NOT_IDENTI	2.81		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504004	24-JUN-09 12:00	07-JUL-09 08:49	12.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.594	0.1961	pCi/g	0.2073	N	911.7	3	1.762	IDENTIFIED	11.01		
Americium-243	int nr	0.4515	0.04144	pCi/g	0.09491	N	74.82	2	1.046	IDENTIFIED	8.525		
Annihilation Rad.		0.1282	0.03598	pCi/g	0.04674	N	510.8	1	1.317	IDENTIFIED	27.89		
Bismuth-211	int	4.4	0.2869	pCi/g	0.3318	Y	352	4	1.139	IDENTIFIED	5.713	ui	
Bismuth-212	HE	1.252	0.2984	pCi/g	0.7713	N	728.1	1	1.476	FAIL_ABUND	23.43		
Bismuth-214	✓	1.262	0.1002	pCi/g	0.1111	0.200	609.5	4	1.255	IDENTIFIED	6.792		
Cadmium-109	int	2.096	0.6651	pCi/g	1.606	Y	86.82	3	1.297	IDENTIFIED	31.51	ui	
Cerium-143		190	33.2	pCi/g	0	N	328.1	1	1.137	FAIL_DECAY	33.05		
Cesium-134	la	0.1142	0.03384	pCi/g	0.1074	0.100	795.3	1	0.8133	FAIL_ABUND	29.39	UI	Data rejected due to low abundance.
Gross Gamma		10.57	1.809	pCi/g	3.311	N		0					
Lead-212	✓	1.77	0.08447	pCi/g	0.09065	0.100	238.7	5	1.061	IDENTIFIED	3.19		
Lead-214	✓	1.53	0.1075	pCi/g	0.1157	0.100	352	4	1.139	IDENTIFIED	5.713		
Lutetium-177	HE	2.153	0.7002	pCi/g	1.702	N	209.2	1	0.9427	FAIL_ABUND	32.41		
Neptunium-237	HE	0.607	0.2025	pCi/g	0.4127	N	86.82	3	1.297	IDENTIFIED	31.51		
Polonium-212	nr	1.77	0.08447	pCi/g	0.09065	N	238.7	5	1.061	IDENTIFIED	3.19		
Polonium-214	nr	1.53	0.1075	pCi/g	0.1157	N	352	4	1.139	IDENTIFIED	5.713		
Polonium-216	nr	1.77	0.08447	pCi/g	0.09065	N	238.7	5	1.061	IDENTIFIED	3.19		
Polonium-218	nr	1.53	0.1075	pCi/g	0.1157	N	352	4	1.139	IDENTIFIED	5.713		
Potassium-40	✓	38.23	1.683	pCi/g	0.4493	1.00	1461	1	2.014	IDENTIFIED	2.583		
Radium-224	int	4.947	0.7626	pCi/g	1.032	Y	241.6	1	1.796	IDENTIFIED	15.17	ui	
Radium-226	✓	1.262	0.1002	pCi/g	0.1111	Y	609.5	4	1.255	IDENTIFIED	6.792		
Radium-228	✓	1.594	0.1961	pCi/g	0.2073	0.500	911.7	3	1.762	IDENTIFIED	11.01		
Thallium-200	HE	12.04	57.7	pCi/g	0	N	74.82	2	1.046	NOT_IDENTI	8.525		
Thallium-208	✓	0.5418	0.04785	pCi/g	0.06471	0.080	583.4	1	1.438	IDENTIFIED	8.075		
Thorium-228	nr	1.77	0.08447	pCi/g	0.09064	N	238.7	5	1.061	IDENTIFIED	3.19		
Thorium-230	nr	1.262	0.1002	pCi/g	0.1111	N	609.5	4	1.255	IDENTIFIED	6.792		
Thorium-232	nr	1.594	0.1961	pCi/g	0.2073	N	911.7	3	1.762	IDENTIFIED	11.01		
Tin-126	HE	0.2067	0.0656	pCi/g	0.1591	N	86.82	3	1.297	IDENTIFIED	31.51		
Titanium-44	la nr	0.417	0.02938	pCi/g	0.08205	N	77.12	1	0.9578	FAIL_ABUND	6.137		
Uranium-234	nr	1.262	0.1002	pCi/g	0.1111	N	609.5	4	1.255	IDENTIFIED	6.792		
Zirconium-97	HE	2.02E+05	1.09E+05	pCi/g	0	N	238.7	5	1.061	NOT_IDENTI	3.19		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504005	24-JUN-09 12:00	07-JUL-09 08:50	12.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	2.067	0.2371	pCi/g	0.3155	N	911.9	3	1.544	IDENTIFIED	10.23		

	Americium-243	int nr	**0.4666**	0.03567	pCi/g	**0.07003**	N	75.24	1	1.001	IDENTIFIED	6.319		
	Annihilation Rad.		**0.2268**	0.03939	pCi/g	**0.05826**	N	511.3	2	1.349	IDENTIFIED	17.01		
	Bismuth-210	HE	**1.355**	0.3531	pCi/g	**0.9502**	N	47	3	1.032	IDENTIFIED	25.74		
	Bismuth-211	int	**4.831**	0.3403	pCi/g	**0.4354**	Y	352.5	4	1.289	IDENTIFIED	6.035		ui
	Bismuth-212	HE	**1.472**	0.3012	pCi/g	**0.8717**	N	727.8	1	1.916	FAIL_ABUND	19.89		
	Bismuth-214 ✓		**1.427**	0.1317	pCi/g	**0.1549**	**0.200**	609.7	4	1.496	IDENTIFIED	7.956		
	Cadmium-109	int	**3.933**	0.4673	pCi/g	**1.13**	Y	87.58	4	0.9729	IDENTIFIED	11.2		ui
	Cerium-143		**82.56**	28.91	pCi/g	**0**	N	328.3	1	1.771	NOT_IDENTI	30.29		
	Europium-155	HE	**0.2252**	0.05717	pCi/g	**0.2073**	N	87.58	4	0.9729	FAIL_ABUND	11.2		
	Gross Gamma		**11.93**	1.701	pCi/g	**4.309**	N		0					
	Iodine-135	HE	**2.18E+12**	1.35E+13	pCi/g	**0**	N	511.3	2	1.349	NOT_IDENTI	17.01		
	Krypton-85	HE	**29.54**	5.455	pCi/g	**18.79**	N	239.1	7	1.185	NOT_IDENTI	2.966		
	Lead-210	HE	**1.355**	0.3531	pCi/g	**0.9502**	N	47	3	1.032	IDENTIFIED	25.74		
	Lead-212 ✓		**2.149**	0.1166	pCi/g	**0.1058**	**0.100**	239.1	7	1.185	IDENTIFIED	2.966		
	Lead-214 ✓		**1.68**	0.1262	pCi/g	**0.1518**	**0.100**	352.5	4	1.289	IDENTIFIED	6.035		
	Lutetium-177	HE	**2.605**	0.677	pCi/g	**1.788**	N	209.8	2	1.103	FAIL_ABUND	25.69		
	Mercury-203	int	**0.09747**	0.0301	pCi/g	**0.07816**	**0.100**	277.9	1	1.491	IDENTIFIED	30.62		ui
	Neptunium-237	int nr	**1.139**	0.1792	pCi/g	**0.3543**	N	87.58	4	0.9729	IDENTIFIED	11.2		
	Polonium-210	HE	**1.355**	0.3521	pCi/g	**0.9502**	N	47	3	1.032	IDENTIFIED	25.74		
	Polonium-212	nr	**2.149**	0.1166	pCi/g	**0.1058**	N	239.1	7	1.185	IDENTIFIED	2.966		
	Polonium-214	nr	**1.68**	0.1262	pCi/g	**0.1518**	N	352.5	4	1.289	IDENTIFIED	6.035		
	Polonium-216	nr	**2.149**	0.1166	pCi/g	**0.1058**	N	239.1	7	1.185	IDENTIFIED	2.966		
	Polonium-218	nr	**1.68**	0.1262	pCi/g	**0.1518**	N	352.5	4	1.289	IDENTIFIED	6.035		
	Potassium-40 ✓		**33.37**	1.418	pCi/g	**0.6783**	**1.00**	1462	1	2.031	IDENTIFIED	2.952		
	Radium-224	int	**6.065**	0.7443	pCi/g	**1.204**	Y	242.1	1	1.833	IDENTIFIED	11.62		ui
	Radium-226 ✓		**1.427**	0.1317	pCi/g	**0.1549**	Y	609.7	4	1.496	IDENTIFIED	7.956		
	Radium-228 ✓		**2.067**	0.2371	pCi/g	**0.3155**	**0.500**	911.9	3	1.544	IDENTIFIED	10.23		
	Strontium-85	la	**0.1479**	0.02731	pCi/g	**0.0941**	Y	239.1	7	1.185	NOT_IDENTI	2.966	UI	Data rejected due to low abundance.
	Thallium-208 ✓		**0.669**	0.05337	pCi/g	**0.08335**	**0.080**	583.7	1	1.508	IDENTIFIED	6.818		
	Thorium-228	nr	**2.149**	0.1166	pCi/g	**0.1058**	N	239.1	7	1.185	IDENTIFIED	2.966		
	Thorium-230	nr	**1.427**	0.1317	pCi/g	**0.1549**	N	609.7	4	1.496	IDENTIFIED	7.956		
	Thorium-232	nr	**2.067**	0.2371	pCi/g	**0.3155**	N	911.9	3	1.544	IDENTIFIED	10.23		
	Thorium-234 ✓		**1.98**	0.5748	pCi/g	**1.145**	**2.00**	63.67	2	1.053	IDENTIFIED	27.55		
	Tin-126	int nr	**0.3879**	0.04608	pCi/g	**0.121**	N	87.58	4	0.9729	IDENTIFIED	11.2		
	Titanium-44	la nr	**0.4484**	0.02842	pCi/g	**0.0768**	N	77.54	1	1.027	FAIL_ABUND	4.715		
	Total Uranium		**5.9298**	1.71E-06	ug/g	**1.7077**	N		0					
	Tungsten-181	HE	**0.4163**	0.1161	pCi/g	**0.3909**	N	209.8	2	1.103	NOT_IDENTI	25.69		
	Uranium-234	nr	**1.427**	0.1317	pCi/g	**0.1549**	N	609.7	4	1.496	IDENTIFIED	7.956		
	Uranium-238	HE	**1.98**	0.5748	pCi/g	**1.145**	N	63.67	2	1.053	IDENTIFIED	27.55		
	Zirconium-97	HE	**1.55E+05**	1.31E+05	pCi/g	**0**	N	239.1	7	1.185	NOT_IDENTI	2.966		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504006	24-JUN-09 12:00	07-JUL-09 08:50	12.9	SAMPLE	LOAD	1	LANL	LANL01004:GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.047	0.1517	pCi/g	0.1759	N	911.8	3	2.196	IDENTIFIED	13.38		
Americium-243	int nr	0.3263	0.04559	pCi/g	0.09834	N	75.03	1	1.584	IDENTIFIED	12.82		
Annihilation Rad.	HE	0.05366	0.03386	pCi/g	0.04589	N	511.2	1	1.965	IDENTIFIED	63.03		
Bismuth-211	int	2.332	0.2121	pCi/g	0.3303	Y	352.1	4	1.427	IDENTIFIED	8.424	ui	
Bismuth-212	HE	0.8965	0.2225	pCi/g	0.4523	N	727.6	1	1.464	IDENTIFIED	24.51		
Bismuth-214		0.9164	0.0791	pCi/g	0.09114	0.200	609.3	4	1.535	IDENTIFIED	7.792		
Cerium-143		119	27.84	pCi/g	0	N	327.6	1	1.572	NOT_IDENTI	54.63		
Cesium-134	la	0.1211	0.02723	pCi/g	0.08443	0.100	795.2	2	1.835	FAIL_ABUND	22.21	UI	Data rejected due to low abundance.
Gross Gamma		6.069	1.458	pCi/g	2.161	N		0					
Iodine-123	HE	1.89E+05	1.59E+05	pCi/g	0	N	88.35	1	2.949	NOT_IDENTI	189.5		
Iodine-135	HE	2.25E+12	9.00E+12	pCi/g	0	N	795.2	2	1.835	NOT_IDENTI	22.21		
Krypton-85	HE	15.37	3.894	pCi/g	13.38	N	238.8	8	1.299	NOT_IDENTI	5.441		
Lead-212		0.8977	0.06137	pCi/g	0.0971	0.100	238.8	8	1.299	IDENTIFIED	5.441		
Lead-214		0.8113	0.07677	pCi/g	0.1066	0.100	352.1	4	1.427	IDENTIFIED	8.424		
Niobium-97	HE	4149	4516	pCi/g	0	N	238.8	8	1.299	NOT_IDENTI	5.441		
Polonium-212	nr	0.8977	0.06137	pCi/g	0.0971	N	238.8	8	1.299	IDENTIFIED	5.441		
Polonium-214	nr	0.8113	0.07677	pCi/g	0.1066	N	352.1	4	1.427	IDENTIFIED	8.424		
Polonium-216	nr	0.8977	0.06137	pCi/g	0.0971	N	238.8	8	1.299	IDENTIFIED	5.441		
Polonium-218	nr	0.8113	0.07677	pCi/g	0.1066	N	352.1	4	1.427	IDENTIFIED	8.424		
Potassium-40		24.02	1.181	pCi/g	0.4738	1.00	1461	1	2.064	IDENTIFIED	3.091		
Radium-224	int	2.953	0.6941	pCi/g	1.104	Y	241.5	1	2.09	IDENTIFIED	23.24	ui	
Radium-226		0.9164	0.0791	pCi/g	0.09114	Y	609.3	4	1.535	IDENTIFIED	7.792		
Radium-228		1.047	0.1517	pCi/g	0.1759	0.500	911.8	3	2.196	IDENTIFIED	13.38		
Sodium-24	HE	15990	27660	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Strontium-85	la	0.07694	0.0195	pCi/g	0.06699	Y	238.8	8	1.299	NOT_IDENTI	5.441	UI	Data rejected due to low abundance.
Thallium-208		0.3253	0.03704	pCi/g	0.05312	0.080	583.1	1	1.506	IDENTIFIED	10.93		
Thorium-228	nr	0.8977	0.06137	pCi/g	0.09709	N	238.8	8	1.299	IDENTIFIED	5.441		
Thorium-230	nr	0.9164	0.0791	pCi/g	0.09114	N	609.3	4	1.535	IDENTIFIED	7.792		
Thorium-232	nr	1.047	0.1517	pCi/g	0.1759	N	911.8	3	2.196	IDENTIFIED	13.38		
Titanium-44	la nr	0.2164	0.02959	pCi/g	0.08364	N	77.29	1	1.444	FAIL_ABUND	12.49		
Uranium-234	nr	0.9164	0.0791	pCi/g	0.09114	N	609.3	4	1.535	IDENTIFIED	7.792		
Zirconium-97		3.82E+05	1.05E+05	pCi/g	0	N	238.8	8	1.299	NOT_IDENTI	5.441		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504007	24-JUN-09 12:00	07-JUL-09 08:51	12.9	SAMPLE	LOAD	1	LANL	LANL01004:GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.093	0.1293	pCi/g	0.1675	N	911.2	3	1.324	IDENTIFIED	10.24		
Americium-243	int nr	0.2203	0.02551	pCi/g	0.08419	N	75.04	1	0.7763	IDENTIFIED	10.92		
Annihilation Rad.		0.09033	0.02322	pCi/g	0.03994	N	510.8	2	1.491	IDENTIFIED	25.54		
Barium-137m	HE	0.07067	0.02135	pCi/g	0.05526	N	662.4	2	1.333	IDENTIFIED	30.05		
Bismuth-211	int	2.636	0.1801	pCi/g	0.2571	Y	352	4	1.105	IDENTIFIED	6.084	ui	
Bismuth-212	HE	0.7209	0.1657	pCi/g	0.5198	N	727.2	1	1.594	FAIL_ABUND	22.58		
Bismuth-214	✓	0.7757	0.06315	pCi/g	0.09034	0.200	609.4	4	1.149	IDENTIFIED	7.097		
Cadmium-109	int	1.939	0.3075	pCi/g	1.05	Y	87.41	4	1.147	IDENTIFIED	15.27	ui	
Cerium-143		195.4	29.95	pCi/g	0	N	328.4	1	0.7705	FAIL_DECAY	34.95		
Cesium-137	✓	0.07471	0.02256	pCi/g	0.05841	0.100	662.4	2	1.333	IDENTIFIED	30.05		
Gross Gamma		7.267	1.087	pCi/g	3.013	N		0					
Iodine-123	HE	39000	1.37E+05	pCi/g	0	N	87.41	4	1.147	NOT_IDENTI	15.27		
Iodine-135	HE	1.69E+12	8.25E+12	pCi/g	0	N	510.8	2	1.491	NOT_IDENTI	25.54		
Krypton-85	HE	14.75	2.984	pCi/g	10.69	N	238.7	7	1.16	NOT_IDENTI	3.261		
Lead-212	✓	1.252	0.06014	pCi/g	0.07508	0.100	238.7	7	1.16	IDENTIFIED	3.261		
Lead-214	✓	0.9171	0.06705	pCi/g	0.08442	0.100	352	4	1.105	IDENTIFIED	6.084		
Neptunium-237	int nr	0.5615	0.1062	pCi/g	0.3271	N	87.41	4	1.147	IDENTIFIED	15.27		
Polonium-212	nr	1.252	0.06014	pCi/g	0.07508	N	238.7	7	1.16	IDENTIFIED	3.261		
Polonium-214	nr	0.9171	0.06705	pCi/g	0.08442	N	352	4	1.105	IDENTIFIED	6.084		
Polonium-216	nr	1.252	0.06014	pCi/g	0.07508	N	238.7	7	1.16	IDENTIFIED	3.261		
Polonium-218	nr	0.9171	0.06705	pCi/g	0.08442	N	352	4	1.105	IDENTIFIED	6.084		
Potassium-40	✓	25.52	1.298	pCi/g	0.5113	1.00	1460	1	1.862	IDENTIFIED	2.856		
Radium-224	int	3.582	0.5022	pCi/g	0.8537	Y	241.8	1	1.952	IDENTIFIED	13.75	ui	
Radium-226	✓	0.7757	0.06315	pCi/g	0.09034	Y	609.4	4	1.149	IDENTIFIED	7.097		
Radium-228	✓	1.093	0.1293	pCi/g	0.1675	0.500	911.2	3	1.324	IDENTIFIED	10.24		
Strontium-85	la	0.07385	0.01494	pCi/g	0.05354	Y	238.7	7	1.16	NOT_IDENTI	3.261	UI	Data rejected due to low abundance.
Thallium-208	✓	0.3336	0.03337	pCi/g	0.04744	0.080	583.1	1	1.212	IDENTIFIED	9.391		
Thorium-228	nr	1.252	0.06014	pCi/g	0.07507	N	238.7	7	1.16	IDENTIFIED	3.261		
Thorium-230	nr	0.7757	0.06315	pCi/g	0.09033	N	609.4	4	1.149	IDENTIFIED	7.097		
Thorium-232	nr	1.093	0.1293	pCi/g	0.1675	N	911.2	3	1.324	IDENTIFIED	10.24		
Tin-126	int nr	0.1912	0.03032	pCi/g	0.1166	N	87.41	4	1.147	IDENTIFIED	15.27		
Titanium-44	la nr	0.234	0.01923	pCi/g	0.07213	N	77.31	1	0.874	FAIL_ABUND	7.226		
Uranium-234	nr	0.7757	0.06315	pCi/g	0.09033	N	609.4	4	1.149	IDENTIFIED	7.097		
Zirconium-97		3.19E+05	88830	pCi/g	0	N	238.7	7	1.16	NOT_IDENTI	3.261		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504008	24-JUN-09 12:00	07-JUL-09 08:51	12.9	SAMPLE	LOAD	1	LANL	LANL01004/GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	2.031	0.2239	pCi/g	0.3039	N	911.5	3	1.327	IDENTIFIED	9.788		

Americium-243	int nr	**0.5406**	0.04066	pCi/g	**0.06483**	N	74.92	1	1.86	IDENTIFIED	6.5		
Annihilation Rad.		**0.1641**	0.04949	pCi/g	**0.05776**	N	511.3	1	2.055	IDENTIFIED	29.99		
Bismuth-210	HE	**1.603**	0.3865	pCi/g	**1.001**	N	46.37	3	1.399	IDENTIFIED	23.81		
Bismuth-211	int	**4.127**	0.2828	pCi/g	**0.4225**	Y	352	4	1.577	IDENTIFIED	6.071		ui
Bismuth-212	HE	**1.862**	0.5097	pCi/g	**0.9966**	N	728.2	1	1.926	FAIL_ABUND	27.01		
Bismuth-214	✓	**1.249**	0.1177	pCi/g	**0.153**	**0.200**	609.5	4	1.501	IDENTIFIED	8.368		
Cadmium-109	int	**2.31**	0.4571	pCi/g	**1.312**	Y	86.97	3	1.664	IDENTIFIED	19.36		ui
Cerium-143		**280**	44.34	pCi/g	**0**	N	327.7	1	0.8934	FAIL_DECAY	56.09		
Gross Gamma		**9.957**	1.653	pCi/g	**4.99**	N		0					
Iodine-135	HE	**9.68E+12**	1.60E+13	pCi/g	**0**	N	569.3	1	1.953	NOT_IDENTI	21.26		
Krypton-85	HE	**28.31**	5.16	pCi/g	**19.65**	N	238.6	8	1.492	NOT_IDENTI	3.408		
Lead-210	HE	**1.603**	0.3865	pCi/g	**1.001**	N	46.37	3	1.399	IDENTIFIED	23.81		
Lead-212	✓	**1.869**	0.09554	pCi/g	**0.1035**	**0.100**	238.6	8	1.492	IDENTIFIED	3.408		
Lead-214	✓	**1.435**	0.1053	pCi/g	**0.1467**	**0.100**	352	4	1.577	IDENTIFIED	6.071		
Lutetium-177	HE	**2.814**	0.8527	pCi/g	**1.96**	N	209.4	1	1.768	FAIL_ABUND	30.15		
Neptunium-237	int nr	**0.6688**	0.1493	pCi/g	**0.3181**	N	86.97	3	1.664	IDENTIFIED	19.36		
Niobium-95m	la nr	**0.6552**	0.09209	pCi/g	**0.3109**	N	238.6	8	1.492	NOT_IDENTI	3.408		
Polonium-210	HE	**1.603**	0.3852	pCi/g	**1.001**	N	46.37	3	1.399	IDENTIFIED	23.81		
Polonium-212	nr	**1.869**	0.09554	pCi/g	**0.1035**	N	238.6	8	1.492	IDENTIFIED	3.408		
Polonium-214	nr	**1.435**	0.1053	pCi/g	**0.1467**	N	352	4	1.577	IDENTIFIED	6.071		
Polonium-216	nr	**1.869**	0.09554	pCi/g	**0.1035**	N	238.6	8	1.492	IDENTIFIED	3.408		
Polonium-218	nr	**1.435**	0.1053	pCi/g	**0.1467**	N	352	4	1.577	IDENTIFIED	6.071		
Potassium-40	✓	**30.55**	1.501	pCi/g	**0.8928**	**1.00**	1461	1	2.26	IDENTIFIED	3.746		
Radium-224	int	**5.856**	0.7372	pCi/g	**1.18**	Y	241.4	1	2.1	IDENTIFIED	12.21		ui
Radium-226	✓	**1.249**	0.1177	pCi/g	**0.153**	Y	609.5	4	1.501	IDENTIFIED	8.368		
Radium-228	✓	**2.031**	0.2239	pCi/g	**0.3039**	**0.500**	911.5	3	1.327	IDENTIFIED	9.788		
Strontium-85	la	**0.1418**	0.02584	pCi/g	**0.09842**	Y	238.6	8	1.492	NOT_IDENTI	3.408	UI	Data rejected due to low abundance.
Thallium-208	✓	**0.6139**	0.05413	pCi/g	**0.07361**	**0.080**	583.3	1	1.832	IDENTIFIED	7.96		
Thorium-228	nr	**1.869**	0.09554	pCi/g	**0.1035**	N	238.6	8	1.492	IDENTIFIED	3.408		
Thorium-230	nr	**1.249**	0.1177	pCi/g	**0.153**	N	609.5	4	1.501	IDENTIFIED	8.368		
Thorium-232	nr	**2.031**	0.2239	pCi/g	**0.3039**	N	911.5	3	1.327	IDENTIFIED	9.788		
Tin-126	int nr	**0.2278**	0.04508	pCi/g	**0.133**	N	86.97	3	1.664	IDENTIFIED	19.36		
Titanium-44	la nr	**0.4283**	0.0274	pCi/g	**0.07172**	N	77.18	1	1.436	FAIL_ABUND	5.119		
Total Uranium		**2.6298**	1.39E-06	ug/g	**1.6748**	N		0					
Uranium-234	nr	**1.249**	0.1177	pCi/g	**0.153**	N	609.5	4	1.501	IDENTIFIED	8.368		
Zirconium-97		**4.56E+05**	1.50E+05	pCi/g	**0**	N	238.6	8	1.492	NOT_IDENTI	3.408		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504009	24-JUN-09 12:00	07-JUL-09 09:12	12.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual		Qual Comment
Actinium-228	nr	1.419	0.1542	pCi/g	0.1724	N	911.5	3	2.208	IDENTIFIED	8.609			
Americium-243	int nr	0.3121	0.03695	pCi/g	0.07978	N	74.85	1	1.172	IDENTIFIED	11.08			
Annihilation Rad.		0.169	0.02517	pCi/g	0.03179	N	511	2	2.206	IDENTIFIED	14.52			
Beryllium-7	nr	1.412	0.1999	pCi/g	0.3661	N	477.8	2	1.187	IDENTIFIED	13.68			
Bismuth-211	int	3.324	0.1856	pCi/g	0.2568	Y	352	4	1.546	IDENTIFIED	4.568		ui	
Bismuth-212	HE	0.6913	0.1912	pCi/g	0.4603	N	727.6	1	1.542	FAIL_ABUND	27.21			
Bismuth-214 ✓		0.9715	0.07042	pCi/g	0.08386	0.200	609.5	4	1.564	IDENTIFIED	5.709			
Cadmium-109	int	2.296	0.4622	pCi/g	1.11	Y	87.3	4	1.411	IDENTIFIED	19.6		ui	
Cerium-143		185.6	28.77	pCi/g	0	N	327.9	1	1.297	FAIL_DECAY	28.61			
Cesium-134	la	0.1296	0.02375	pCi/g	0.07119	0.100	795.1	2	1.819	FAIL_ABUND	17.68		UI	Data rejected due to low abundance.
Gross Gamma		8.643	1.307	pCi/g	2.208	N		0						
Iodine-123	HE	26360	1.32E+05	pCi/g	0	N	87.3	4	1.411	NOT_IDENTI	19.6			
Iodine-133	HE	76.4	349.1	pCi/g	0	N	511	2	2.206	FAIL_DECAY	14.52			
Iodine-135	HE	1.86E+12	7.91E+12	pCi/g	0	N	795.1	2	1.819	NOT_IDENTI	17.68			
Krypton-85	la nr	23.92	3.234	pCi/g	11.48	N	238.7	7	1.21	NOT_IDENTI	3.785			
Lead-212 ✓		1.233	0.06419	pCi/g	0.08875	0.100	238.7	7	1.21	IDENTIFIED	3.785			
Lead-214 ✓		1.156	0.07127	pCi/g	0.08929	0.100	352	4	1.546	IDENTIFIED	4.568			
Lutetium-177	int nr	2.149	0.4695	pCi/g	1.125	N	209.5	1	1.296	IDENTIFIED	21.68			
Mercury-203	int	0.06151	0.02907	pCi/g	0.05021	0.100	278.1	1	1.846	IDENTIFIED	47.17		ui	
Neptunium-237	HE	0.665	0.1504	pCi/g	0.3726	N	87.3	4	1.411	IDENTIFIED	19.6			
Polonium-212	nr	1.233	0.06419	pCi/g	0.08875	N	238.7	7	1.21	IDENTIFIED	3.785			
Polonium-214	nr	1.156	0.07127	pCi/g	0.08929	N	352	4	1.546	IDENTIFIED	4.568			
Polonium-216	nr	1.233	0.06419	pCi/g	0.08875	N	238.7	7	1.21	IDENTIFIED	3.785			
Polonium-218	nr	1.156	0.07127	pCi/g	0.08929	N	352	4	1.546	IDENTIFIED	4.568			
Potassium-40 ✓		29.36	1.294	pCi/g	0.3541	1.00	1461	1	2.073	IDENTIFIED	2.246			
Radium-224	int	1.952	0.3288	pCi/g	1.153	Y	241.9	1	1.118	IDENTIFIED	16.61		ui	
Radium-226 ✓		0.9715	0.07042	pCi/g	0.08386	Y	609.5	4	1.564	IDENTIFIED	5.709			
Radium-228 ✓		1.419	0.1542	pCi/g	0.1724	0.500	911.5	3	2.208	IDENTIFIED	8.609			
Sodium-24	HE	12540	22820	pCi/g	0	N	477.8	2	1.187	NOT_IDENTI	13.68			
Strontium-85	la	0.1198	0.0162	pCi/g	0.05751	Y	238.7	7	1.21	NOT_IDENTI	3.785		UI	Data rejected due to low abundance.
Thallium-208 ✓		0.4506	0.03545	pCi/g	0.04022	0.080	583.2	1	1.593	IDENTIFIED	6.822			
Thorium-228	nr	1.233	0.06419	pCi/g	0.08874	N	238.7	7	1.21	IDENTIFIED	3.785			
Thorium-230	nr	0.9714	0.07042	pCi/g	0.08386	N	609.5	4	1.564	IDENTIFIED	5.709			
Thorium-232	nr	1.419	0.1542	pCi/g	0.1724	N	911.5	3	2.208	IDENTIFIED	8.609			
Thorium-234 NUP KE 7/17/09		2.168	0.9646	pCi/g	2.119	2.00	63.27	2	1.992	IDENTIFIED	43.61	V	VI	
Tin-126	int nr	0.2265	0.04558	pCi/g	0.1256	N	87.3	4	1.411	IDENTIFIED	19.6			
Titanium-44	la nr	0.3526	0.02755	pCi/g	0.07353	N	77.15	1	1.101	FAIL_ABUND	6.564			
Total Uranium		6.4913	2.87E-06	ug/g	3.1541	N		0						
Uranium-234	nr	0.9714	0.07042	pCi/g	0.08386	N	609.5	4	1.564	IDENTIFIED	5.709			

Uranium-238	HE	2.168	0.9646	pCi/g	2.119	N	63.27	2	1.992	IDENTIFIED	43.61		
Zirconium-97		3.85E+05	77830	pCi/g	0	N	238.7	7	1.21	NOT_IDENTI	3.785		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504010	24-JUN-09 12:00	07-JUL-09 09:12	12.9	SAMPLE	LOAD	1	LANL	LANL01004,GFL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	2.013	0.1762	pCi/g	0.1936	N	911.8	3	2.276	IDENTIFIED	6.125		
Americium-243	int nr	0.4905	0.04127	pCi/g	0.08218	N	74.87	2	1.305	IDENTIFIED	7.458		
Annihilation Rad.		0.09453	0.02569	pCi/g	0.04117	N	511.2	2	2.421	IDENTIFIED	26.98		
Bismuth-211	int	4.554	0.2361	pCi/g	0.3066	Y	352.1	4	1.549	IDENTIFIED	4.102	ui	
Bismuth-212	nr	1.06	0.2079	pCi/g	0.4187	N	727.7	1	1.47	IDENTIFIED	19.01		
Bismuth-214	✓	1.328	0.09075	pCi/g	0.09742	0.200	609.5	4	1.906	IDENTIFIED	5.234		
Cadmium-109	int	4.417	0.4774	pCi/g	1.231	Y	87.39	3	1.579	IDENTIFIED	9.854	ui	
Cerium-143		298.3	40.24	pCi/g	0	N	328.7	1	1.98	NOT_IDENTI	28.92		
Cesium-134	la	0.131	0.03385	pCi/g	0.07568	0.100	795	1	1.275	FAIL_ABUND	25.43	UI	Data rejected due to low abundance.
Gross Gamma		10.84	1.247	pCi/g	2.081	N		0					
Iodine-133	HE	176.2	397.4	pCi/g	0	N	511.2	2	2.421	FAIL_DECAY	26.98		
Krypton-85	la nr	36.26	4.07	pCi/g	14.31	N	238.8	8	1.329	NOT_IDENTI	2.684		
Lead-212	✓	1.933	0.08579	pCi/g	0.08397	0.100	238.8	8	1.329	IDENTIFIED	2.684		
Lead-214	✓	1.584	0.09196	pCi/g	0.1018	0.100	352.1	4	1.549	IDENTIFIED	4.102		
Lutetium-177	la nr	3.435	0.6217	pCi/g	1.542	N	209.1	1	1.253	FAIL_ABUND	17.9		
Neptunium-237	int nr	1.279	0.1911	pCi/g	0.4007	N	87.39	3	1.579	IDENTIFIED	9.854		
Niobium-95m	HE	0.2895	0.06815	pCi/g	0.2122	N	238.8	8	1.329	NOT_IDENTI	2.684		
Polonium-212	nr	1.933	0.08579	pCi/g	0.08397	N	238.8	8	1.329	IDENTIFIED	2.684		
Polonium-214	nr	1.584	0.09196	pCi/g	0.1018	N	352.1	4	1.549	IDENTIFIED	4.102		
Polonium-216	nr	1.933	0.08579	pCi/g	0.08397	N	238.8	8	1.329	IDENTIFIED	2.684		
Polonium-218	nr	1.584	0.09196	pCi/g	0.1018	N	352.1	4	1.549	IDENTIFIED	4.102		
Potassium-40	✓	37.98	1.543	pCi/g	0.4446	1.00	1461	1	3.005	IDENTIFIED	2.098	~~UI~~	~~Data rejected due to high peak-width~~
Radium-224	int	5.445	0.5293	pCi/g	0.9541	Y	241.8	1	1.721	IDENTIFIED	9.327	ui	
Radium-226	✓	1.328	0.09075	pCi/g	0.09742	Y	609.5	4	1.906	IDENTIFIED	5.234		
Radium-228	✓	2.013	0.1762	pCi/g	0.1936	0.500	911.8	3	2.276	IDENTIFIED	6.125		
Strontium-85	la	0.1816	0.02038	pCi/g	0.07168	Y	238.8	8	1.329	NOT_IDENTI	2.684	UI	Data rejected due to low abundance.
Thallium-200	HE	14.34	48.25	pCi/g	0	N	74.87	2	1.305	NOT_IDENTI	7.458		
Thallium-208	✓	0.5673	0.04538	pCi/g	0.04953	0.080	583.3	1	1.905	IDENTIFIED	7.012		
Thorium-228	nr	1.933	0.08579	pCi/g	0.08397	N	238.8	8	1.329	IDENTIFIED	2.684		
Thorium-230	nr	1.328	0.09075	pCi/g	0.09742	N	609.5	4	1.906	IDENTIFIED	5.234		
Thorium-232	nr	2.013	0.1762	pCi/g	0.1936	N	911.8	3	2.276	IDENTIFIED	6.125		
Tin-126	int nr	0.4356	0.04708	pCi/g	0.1219	N	87.39	3	1.579	IDENTIFIED	9.854		
Titanium-44	la nr	0.4576	0.02984	pCi/g	0.07905	N	77.2	1	1.22	FAIL_ABUND	5.167		
Total Uranium		5.1922	2.39E-06	ug/g	2.745	N		0					

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Uranium-234	nr	1.328	0.09075	pCi/g	0.09742	N	609.5	4	1.906	IDENTIFIED	5.234		
Zirconium-97		4.49E+05	94410	pCi/g	0	N	238.8	8	1.329	NOT_IDENTI	2.684		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504011	24-JUN-09 12:00	07-JUL-09 09:13	12.9	SAMPLE	LOAD	1	LANL	LANL01004:GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.697	0.1701	pCi/g	0.2322	N	911.2	3	1.713	IDENTIFIED	8.2		
Americium-243	int nr	0.4194	0.0394	pCi/g	0.08003	N	74.88	1	0.9766	IDENTIFIED	8.274		
Annihilation Rad.		0.1237	0.03214	pCi/g	0.0469	N	511	2	1.358	IDENTIFIED	25.82		
Bismuth-211	int	3.477	0.2452	pCi/g	0.2981	Y	351.9	4	1.27	IDENTIFIED	6.255	ui	
Bismuth-212	la nr	1.133	0.1983	pCi/g	0.6448	N	727.2	1	1.21	FAIL_ABUND	17.04		
Bismuth-214	✓	1.058	0.08855	pCi/g	0.1228	0.200	609.6	4	1.397	IDENTIFIED	7.479		
Cadmium-109	int	3.116	0.4613	pCi/g	1.144	Y	87.3	4	1.077	IDENTIFIED	13.99	ui	
Cerium-143		84.99	23.97	pCi/g	0	N	327.8	1	1.633	FAIL_DECAY	37.93		
Gross Gamma		8.72	1.435	pCi/g	2.187	N		0					
Iodine-123	HE	1.10E+05	1.41E+05	pCi/g	0	N	87.3	4	1.077	NOT_IDENTI	13.99		
Iodine-135	HE	5.60E+12	1.20E+13	pCi/g	0	N	511	2	1.358	NOT_IDENTI	25.82		
Krypton-85	HE	13.64	3.937	pCi/g	13.19	N	238.8	7	0.9701	NOT_IDENTI	3.344		
Lead-212	✓	1.541	0.07564	pCi/g	0.0805	0.100	238.8	7	0.9701	IDENTIFIED	3.344		
Lead-214	✓	1.21	0.09096	pCi/g	0.104	0.100	351.9	4	1.27	IDENTIFIED	6.255		
Lutetium-177	HE	1.813	0.5855	pCi/g	1.499	N	209.4	1	1.283	FAIL_ABUND	32.19		
Mercury-203	int	0.07963	0.02619	pCi/g	0.05927	0.100	278	1	1.274	IDENTIFIED	32.74	ui	
Neptunium-237	int nr	0.9024	0.1628	pCi/g	0.3378	N	87.3	4	1.077	IDENTIFIED	13.99		
Polonium-212	nr	1.541	0.07564	pCi/g	0.0805	N	238.8	7	0.9701	IDENTIFIED	3.344		
Polonium-214	nr	1.21	0.09096	pCi/g	0.104	N	351.9	4	1.27	IDENTIFIED	6.255		
Polonium-216	nr	1.541	0.07564	pCi/g	0.0805	N	238.8	7	0.9701	IDENTIFIED	3.344		
Polonium-218	nr	1.21	0.09096	pCi/g	0.104	N	351.9	4	1.27	IDENTIFIED	6.255		
Potassium-40	✓	29.05	1.448	pCi/g	0.6215	1.00	1461	1	2.012	IDENTIFIED	3.294		
Radium-224	int	4.837	0.5501	pCi/g	0.9169	Y	241.6	1	1.954	IDENTIFIED	11.02	ui	
Radium-226	✓	1.058	0.08855	pCi/g	0.1228	Y	609.6	4	1.397	IDENTIFIED	7.479		
Radium-228	✓	1.697	0.1701	pCi/g	0.2322	0.500	911.2	3	1.713	IDENTIFIED	8.2		
Strontium-85	la	0.0683	0.01972	pCi/g	0.06604	Y	238.8	7	0.9701	NOT_IDENTI	3.344	UI	Data rejected due to low abundance.
Thallium-208	✓	0.4702	0.04474	pCi/g	0.06274	0.080	583.6	1	1.54	IDENTIFIED	8.943		
Thorium-228	nr	1.541	0.07564	pCi/g	0.08049	N	238.8	7	0.9701	IDENTIFIED	3.344		
Thorium-230	nr	1.058	0.08855	pCi/g	0.1228	N	609.6	4	1.397	IDENTIFIED	7.479		
Thorium-232	nr	1.697	0.1701	pCi/g	0.2322	N	911.2	3	1.713	IDENTIFIED	8.2		
Tin-126	int nr	0.3073	0.04549	pCi/g	0.1135	N	87.3	4	1.077	IDENTIFIED	13.99		
Titanium-44	la nr	0.3608	0.02688	pCi/g	0.06624	N	77.17	1	0.8804	FAIL_ABUND	5.937		
Total Uranium		4.4626	3.15E-06	ug/g	2.9903	N		0					
Uranium-234	nr	1.058	0.08855	pCi/g	0.1228	N	609.6	4	1.397	IDENTIFIED	7.479		

Zirconium-97		2.92E+05	1.08E+05	pCi/g	0	N	238.8	7	0.9701	NOT_IDENTI	3.344	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504012	24-JUN-09 12:00	07-JUL-09 09:43	12.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.76	0.1626	pCi/g	0.1831	N	911.4	3	1.489	IDENTIFIED	7.152		
Americium-243	int nr	0.357	0.04165	pCi/g	0.0868	N	74.99	2	1.121	IDENTIFIED	11.05		
Annihilation Rad.		0.1077	0.02985	pCi/g	0.04012	N	510.7	1	1.643	IDENTIFIED	27.55		
Barium-137m		0.4289	0.03366	pCi/g	0.05514	N	661.8	2	1.559	IDENTIFIED	7.177		
Bismuth-211	int	3.611	0.2476	pCi/g	0.2855	Y	352.1	4	1.132	IDENTIFIED	6.08	ui	
Bismuth-212	HE	0.9465	0.2024	pCi/g	0.6335	N	727.7	1	1.801	FAIL_ABUND	20.93		
Bismuth-214	✓	1.042	0.08568	pCi/g	0.09888	0.200	609.5	4	1.478	IDENTIFIED	7.139		
Cadmium-109	int	1.865	0.5364	pCi/g	1.48	Y	87.15	4	1.129	IDENTIFIED	28.46	ui	
Cerium-143		97.02	24.39	pCi/g	0	N	328	1	1.08	FAIL_DECAY	39.18		
Cesium-137	✓	0.4534	0.0356	pCi/g	0.05829	0.100	661.8	2	1.559	IDENTIFIED	7.177		
Gross Gamma		8.82	1.461	pCi/g	2.925	N		0					
Iodine-123	HE	89700	1.45E+05	pCi/g	0	N	87.15	4	1.129	NOT_IDENTI	28.46		
Lead-212	✓	1.48	0.07504	pCi/g	0.08587	0.100	238.8	6	1.121	IDENTIFIED	3.566		
Lead-214	✓	1.256	0.09217	pCi/g	0.09952	0.100	352.1	4	1.132	IDENTIFIED	6.08		
Lutetium-177	HE	1.773	0.5674	pCi/g	1.475	N	209.2	1	1.479	FAIL_ABUND	31.89		
Neptunium-237	HE	0.5402	0.165	pCi/g	0.4025	N	87.15	4	1.129	IDENTIFIED	28.46		
Polonium-212	nr	1.48	0.07504	pCi/g	0.08587	N	238.8	6	1.121	IDENTIFIED	3.566		
Polonium-214	nr	1.256	0.09217	pCi/g	0.09952	N	352.1	4	1.132	IDENTIFIED	6.08		
Polonium-216	nr	1.48	0.07504	pCi/g	0.08587	N	238.8	6	1.121	IDENTIFIED	3.566		
Polonium-218	nr	1.256	0.09217	pCi/g	0.09952	N	352.1	4	1.132	IDENTIFIED	6.08		
Potassium-40	✓	27.33	1.311	pCi/g	0.556	1.00	1461	1	2.008	IDENTIFIED	2.986		
Radium-224	int	3.991	0.6216	pCi/g	0.9771	Y	241.7	1	1.733	IDENTIFIED	15.31	ui	
Radium-226	✓	1.042	0.08568	pCi/g	0.09888	Y	609.5	4	1.478	IDENTIFIED	7.139		
Radium-228	✓	1.76	0.1626	pCi/g	0.1831	0.500	911.4	3	1.489	IDENTIFIED	7.152		
Sodium-24	HE	31980	32820	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Technetium-99m	HE	2.11E+13	3.71E+13	pCi/g	0	N	238.8	6	1.121	NOT_IDENTI	3.566		
Thallium-200	HE	63.07	50.17	pCi/g	0	N	74.99	2	1.121	NOT_IDENTI	11.05		
Thallium-208	✓	0.4397	0.04601	pCi/g	0.05459	0.080	583.4	1	1.636	IDENTIFIED	9.849		
Thorium-228	nr	1.48	0.07504	pCi/g	0.08586	N	238.8	6	1.121	IDENTIFIED	3.566		
Thorium-230	nr	1.042	0.08568	pCi/g	0.09887	N	609.5	4	1.478	IDENTIFIED	7.139		
Thorium-232	nr	1.76	0.1626	pCi/g	0.1831	N	911.4	3	1.489	IDENTIFIED	7.152		
Tin-126	HE	0.184	0.05289	pCi/g	0.1422	N	87.15	4	1.129	IDENTIFIED	28.46		
Titanium-44	la nr	0.3663	0.0277	pCi/g	0.07614	N	77.27	1	0.9516	FAIL_ABUND	6.545		
Uranium-234	nr	1.042	0.08568	pCi/g	0.09887	N	609.5	4	1.478	IDENTIFIED	7.139		
Zirconium-97	HE	59590	95040	pCi/g	0	N	238.8	6	1.121	NOT_IDENTI	3.566		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504013	24-JUN-09 12:00	07-JUL-09 09:44	12.9	SAMPLE	LOAD	1	LANL	LANL01004:GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	2.31	0.2183	pCi/g	0.2174	N	911.2	3	1.802	IDENTIFIED	7.405		
Americium-243	int nr	0.5266	0.04524	pCi/g	0.08939	N	74.79	1	1.583	IDENTIFIED	7.727		
Annihilation Rad.		0.1254	0.03426	pCi/g	0.04827	N	510.6	1	1.783	IDENTIFIED	27.15		
Bismuth-211	int	5.012	0.2751	pCi/g	0.3233	Y	351.5	4	1.574	IDENTIFIED	4.483	ui	
Bismuth-212	la nr	1.336	0.2656	pCi/g	0.7123	N	727.2	1	1.483	FAIL_ABUND	19.42		
Bismuth-214	✓	1.613	0.108	pCi/g	0.1101	0.200	608.9	4	1.643	IDENTIFIED	5.401		
Cadmium-109	int	3.694	0.4775	pCi/g	1.356	Y	87.28	3	1.162	IDENTIFIED	12.18	ui	
Cerium-143		544.5	65.8	pCi/g	0	N	327.7	1	1.277	FAIL_DECAY	23.42		
Cesium-134	la	0.1295	0.02922	pCi/g	0.09324	0.100	795.1	2	1.049	FAIL_ABUND	22.22	UI	Data rejected due to low abundance.
Cesium-135	HE	0.3758	0.0905	pCi/g	0.3032	N	795.1	2	1.049	NOT_IDENTI	22.22		
Gross Gamma		12	1.549	pCi/g	4.529	N		0					
Lead-212	✓	2.152	0.09762	pCi/g	0.09173	0.100	238.4	6	1.323	IDENTIFIED	2.705		
Lead-214	✓	1.743	0.1059	pCi/g	0.1127	0.100	351.5	4	1.574	IDENTIFIED	4.483		
Lutetium-177	HE	2.662	0.6567	pCi/g	1.693	N	208.8	1	1.147	FAIL_ABUND	24.51		
Neptunium-237	int nr	1.07	0.1769	pCi/g	0.4352	N	87.28	3	1.162	IDENTIFIED	12.18		
Niobium-95m	la nr	1.051	0.08982	pCi/g	0.2993	N	238.4	6	1.323	NOT_IDENTI	2.705		
Polonium-212	nr	2.152	0.09762	pCi/g	0.09173	N	238.4	6	1.323	IDENTIFIED	2.705		
Polonium-214	nr	1.743	0.1059	pCi/g	0.1127	N	351.5	4	1.574	IDENTIFIED	4.483		
Polonium-216	nr	2.152	0.09762	pCi/g	0.09173	N	238.4	6	1.323	IDENTIFIED	2.705		
Polonium-218	nr	1.743	0.1059	pCi/g	0.1127	N	351.5	4	1.574	IDENTIFIED	4.483		
Potassium-40	✓	33.69	1.494	pCi/g	0.5489	1.00	1460	1	2.096	IDENTIFIED	2.543		
Radium-224	int	5.729	0.6252	pCi/g	1.043	Y	241.3	1	1.696	IDENTIFIED	10.53	ui	
Radium-226	✓	1.613	0.108	pCi/g	0.1101	Y	608.9	4	1.643	IDENTIFIED	5.401		
Radium-228	✓	2.31	0.2183	pCi/g	0.2174	0.500	911.2	3	1.802	IDENTIFIED	7.405		
Thallium-208	✓	0.6466	0.04821	pCi/g	0.05836	0.080	582.7	1	1.589	IDENTIFIED	6.626		
Thorium-228	nr	2.152	0.09762	pCi/g	0.09172	N	238.4	6	1.323	IDENTIFIED	2.705		
Thorium-230	nr	1.613	0.108	pCi/g	0.1101	N	608.9	4	1.643	IDENTIFIED	5.401		
Thorium-232	nr	2.31	0.2183	pCi/g	0.2174	N	911.2	3	1.802	IDENTIFIED	7.405		
Thorium-234	✓	2.37	0.773	pCi/g	1.902	2.00	63.26	2	2.19	IDENTIFIED	31.46		
Tin-126	int nr	0.3643	0.04709	pCi/g	0.1342	N	87.28	3	1.162	IDENTIFIED	12.18		
Titanium-44	la nr	0.4702	0.03014	pCi/g	0.08726	N	77.13	1	1.19	FAIL_ABUND	5.124		
Total Uranium		7.1103	2.30E-06	ug/g	2.8316	N		0					
Uranium-234	nr	1.613	0.108	pCi/g	0.1101	N	608.9	4	1.643	IDENTIFIED	5.401		
Uranium-238	HE	2.37	0.773	pCi/g	1.902	N	63.26	2	2.19	IDENTIFIED	31.46		
Zirconium-97		6.58E+05	1.22E+05	pCi/g	0	N	238.4	6	1.323	NOT_IDENTI	2.705		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504014	24-JUN-09 12:00	07-JUL-09 09:47	12.9	SAMPLE	LOAD	1	LANL	LANL01004:GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	0.8853	0.1175	pCi/g	0.1503	N	911.5	3	1.685	IDENTIFIED	11.75		
Americium-243	int nr	0.2299	0.03042	pCi/g	0.0808	N	75.02	1	1.075	IDENTIFIED	12.05		
Annihilation Rad.	HE	0.06445	0.02063	pCi/g	0.03431	N	511.5	1	1.883	IDENTIFIED	31.86		
Bismuth-211	int	2.176	0.1853	pCi/g	0.246	Y	352.1	4	0.9888	IDENTIFIED	7.696	ui	
Bismuth-212	HE	0.7016	0.1937	pCi/g	0.4728	N	727.1	1	2.16	FAIL_ABUND	27.31		
Bismuth-214	✓	0.8075	0.0633	pCi/g	0.0771	0.200	609.5	4	1.586	IDENTIFIED	6.854		
Cadmium-109	int	1.347	0.4116	pCi/g	1.192	Y	87.44	3	1.103	IDENTIFIED	30.04	ui	
Cerium-143		84.85	19.7	pCi/g	0	N	328.2	1	1.662	FAIL_DECAY	113		
Gross Gamma		5.869	1.01	pCi/g	1.662	N		0					
Lead-212	✓	0.77	0.04719	pCi/g	0.06723	0.100	238.9	6	1.1	IDENTIFIED	4.812		
Lead-214	✓	0.757	0.06743	pCi/g	0.08574	0.100	352.1	4	0.9888	IDENTIFIED	7.696		
Lutetium-177	HE	1.567	0.4706	pCi/g	1.214	N	209.5	1	1.431	FAIL_ABUND	29.88		
Neptunium-237	HE	0.39	0.1258	pCi/g	0.3316	N	87.44	3	1.103	IDENTIFIED	30.04		
Polonium-212	nr	0.77	0.04719	pCi/g	0.06723	N	238.9	6	1.1	IDENTIFIED	4.812		
Polonium-214	nr	0.757	0.06743	pCi/g	0.08574	N	352.1	4	0.9888	IDENTIFIED	7.696		
Polonium-216	nr	0.77	0.04719	pCi/g	0.06723	N	238.9	6	1.1	IDENTIFIED	4.812		
Polonium-218	nr	0.757	0.06743	pCi/g	0.08574	N	352.1	4	0.9888	IDENTIFIED	7.696		
Potassium-40	✓	24.51	1.268	pCi/g	0.4198	1.00	1461	1	2.039	IDENTIFIED	2.867		
Radium-224	int	3.436	0.4098	pCi/g	0.7647	Y	241.9	1	1.667	IDENTIFIED	11.52	ui	
Radium-226	✓	0.8075	0.0633	pCi/g	0.0771	Y	609.5	4	1.586	IDENTIFIED	6.854		
Radium-228	✓	0.8853	0.1175	pCi/g	0.1503	0.500	911.5	3	1.685	IDENTIFIED	11.75		
Technetium-99m	HE	4.43E+12	2.98E+13	pCi/g	0	N	238.9	6	1.1	NOT_IDENTI	4.812		
Thallium-208	✓	0.2812	0.02526	pCi/g	0.04276	0.080	583.5	1	1.59	IDENTIFIED	8.332		
Thorium-228	nr	0.77	0.04719	pCi/g	0.06722	N	238.9	6	1.1	IDENTIFIED	4.812		
Thorium-230	nr	0.8075	0.06329	pCi/g	0.0771	N	609.5	4	1.586	IDENTIFIED	6.854		
Thorium-232	nr	0.8853	0.1175	pCi/g	0.1503	N	911.5	3	1.685	IDENTIFIED	11.75		
Tin-126	HE	0.1328	0.04059	pCi/g	0.1183	N	87.44	3	1.103	IDENTIFIED	30.04		
Titanium-44	la nr	0.2109	0.02128	pCi/g	0.06666	N	77.33	1	1.025	FAIL_ABUND	8.482		
Total Uranium		5.9234	2.64E-06	ug/g	3.3302	N		0					
Uranium-234	nr	0.8075	0.06329	pCi/g	0.0771	N	609.5	4	1.586	IDENTIFIED	6.854		
Zirconium-97	HE	7370	76910	pCi/g	0	N	238.9	6	1.1	NOT_IDENTI	4.812		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232511001	24-JUN-09 12:00	07-JUL-09 10:10	12.9	SAMPLE	LOAD	1	LANL	LANL01004:GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.993	0.1977	pCi/g	0.304	N	910.9	3	1.581	IDENTIFIED	8.501		
Americium-241	✓	8.899	0.4557	pCi/g	0.2667	0.200	59.8	1	0.8742	IDENTIFIED	1.654		

Americium-243	int nr	0.3999	0.0388	pCi/g	0.124	N	75.06	2	0.819	IDENTIFIED	8.729		
Barium-137m		69.33	2.635	pCi/g	0.132	N	661.5	3	1.411	IDENTIFIED	0.5191		
Bismuth-211	int	4.459	0.5176	pCi/g	1.173	Y	352	5	1.191	IDENTIFIED	11.04	ui	
Bismuth-212	HE	1.616	0.3637	pCi/g	0.8911	N	727.3	1	1.821	FAIL_ABUND	22.04		
Bismuth-214	✓	1.589	0.1623	pCi/g	0.2887	0.200	609.1	4	1.44	IDENTIFIED	9.178		
Cadmium-109	int	3.048	0.8099	pCi/g	2.244	Y	87.67	4	1.088	IDENTIFIED	26.27	ui	
Cerium-143		194.7	76.65	pCi/g	0	N	661.5	3	1.411	FAIL_DECAY	0.5191		
Cesium-137	✓	73.29	2.792	pCi/g	0.1395	0.100	661.5	3	1.411	IDENTIFIED	0.5191		
Gross Gamma		75.53	7.932	pCi/g	9.281	N		0					
Lead-212	✓	1.895	0.1286	pCi/g	0.2859	0.100	238.8	6	1.084	IDENTIFIED	5.178		
Lead-214	✓	1.551	0.1845	pCi/g	0.4114	0.100	352	5	1.191	IDENTIFIED	11.04		
Neptunium-237	HE	0.8826	0.2516	pCi/g	0.6323	N	87.67	4	1.088	IDENTIFIED	26.27		
Niobium-97		1.14E+06	52960	pCi/g	0	N	238.8	6	1.084	NOT_IDENTI	5.178		
Polonium-212	nr	1.895	0.1286	pCi/g	0.2859	N	238.8	6	1.084	IDENTIFIED	5.178		
Polonium-214	nr	1.551	0.1845	pCi/g	0.4114	N	352	5	1.191	IDENTIFIED	11.04		
Polonium-216	nr	1.895	0.1286	pCi/g	0.2859	N	238.8	6	1.084	IDENTIFIED	5.178		
Polonium-218	nr	1.551	0.1845	pCi/g	0.4114	N	352	5	1.191	IDENTIFIED	11.04		
Potassium-40	✓	32.24	1.414	pCi/g	0.5784	1.00	1460	1	2.03	IDENTIFIED	3.128		
Radium-224	la	16.06	1.301	pCi/g	3.908	Y	352	5	1.191	NOT_IDENTI	11.04	UI	Data rejected due to low abundance.
Radium-226	✓	1.589	0.1623	pCi/g	0.2887	Y	609.1	4	1.44	IDENTIFIED	9.178		
Radium-228	✓	1.993	0.1977	pCi/g	0.304	0.500	910.9	3	1.581	IDENTIFIED	8.501		
Silver-110m	la nr	2.415	0.1273	pCi/g	0.3479	N	87.67	4	1.088	NOT_IDENTI	26.27		
Sodium-24	HE	42510	41000	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Thallium-200	HE	23.12	206.6	pCi/g	0	N	75.06	2	0.819	NOT_IDENTI	8.729		
Thallium-208	✓	0.6695	0.07682	pCi/g	0.151	0.080	583.2	1	1.107	IDENTIFIED	10.77		
Thorium-228	nr	1.895	0.1286	pCi/g	0.2859	N	238.8	6	1.084	IDENTIFIED	5.178		
Thorium-230	nr	1.589	0.1623	pCi/g	0.2887	N	609.1	4	1.44	IDENTIFIED	9.178		
Thorium-232	nr	1.993	0.1977	pCi/g	0.304	N	910.9	3	1.581	IDENTIFIED	8.501		
Thorium-234	la	2.468	0.7875	pCi/g	2.218	2.00	63.83	3	0.9068	FAIL_ABUND	30.59	UI	Data rejected due to low abundance.
Tin-126	HE	0.3005	0.07987	pCi/g	0.2267	N	87.67	4	1.088	IDENTIFIED	26.27		
Titanium-44	la nr	0.4162	0.03033	pCi/g	0.1057	N	77.37	1	0.8022	FAIL_ABUND	5.96		
Total Uranium		7.3756	2.35E-06	ug/g	3.3075	N		0					
Tungsten-181	HE	0.732	0.2263	pCi/g	0.6533	N	63.83	3	0.9068	FAIL_ABUND	30.59		
Uranium-234	nr	1.589	0.1623	pCi/g	0.2887	N	609.1	4	1.44	IDENTIFIED	9.178		
Uranium-238	HE	2.468	0.7875	pCi/g	2.218	N	63.83	3	0.9068	FAIL_ABUND	30.59		
Zirconium-97	HE	42970	3.92E+05	pCi/g	0	N	238.8	6	1.084	NOT_IDENTI	5.178		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232511002	24-JUN-09 12:00	07-JUL-09 10:19	12.9	SAMPLE	LOAD	1	LANL	LANL01004;GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 nr	1.491	0.1659	pCi/g	0.2024	N	911.3	3	1.906	IDENTIFIED	9.463		
Americium-241 ✓	10.01	0.5346	pCi/g	0.4092	0.200	59.52	1	0.9868	IDENTIFIED	2.665		
Americium-243 int nr	0.3907	0.04493	pCi/g	0.09465	N	74.8	1	1.085	IDENTIFIED	10.28		
Annihilation Rad.	0.1691	0.03935	pCi/g	0.05689	N	510.8	3	1.525	IDENTIFIED	23.04		
Barium-137m	3.936	0.1471	pCi/g	0.06414	N	661.7	2	1.438	IDENTIFIED	1.929		
Bismuth-211 int	3.571	0.2783	pCi/g	0.3744	Y	352	4	1.219	IDENTIFIED	6.666	ui	
Bismuth-212 la nr	1.23	0.2532	pCi/g	0.6619	N	727.7	1	1.735	FAIL_ABUND	20.11		
Bismuth-214 ✓	1.125	0.08916	pCi/g	0.1175	0.200	609.4	4	1.438	IDENTIFIED	6.745		
Cadmium-109 la	3.312	0.547	pCi/g	1.591	Y	510.8	3	1.525	NOT_IDENTI	23.04	UI	Data rejected due to low abundance.
Cerium-143	164.5	32.55	pCi/g	0	N	327.4	1	1.383	FAIL_DECAY	37.44		
Cesium-134 la	0.09187	0.02595	pCi/g	0.08883	0.100	510.8	3	1.525	NOT_IDENTI	23.04	UI	Data rejected due to low abundance.
Cesium-135 HE	0.4909	0.1368	pCi/g	0.2725	N	269.7	2	1.551	IDENTIFIED	27.38		
Cesium-137 ✓	4.161	0.1559	pCi/g	0.0678	0.100	661.7	2	1.438	IDENTIFIED	1.929		
Gross Gamma	16.03	1.819	pCi/g	3.475	N		0					
Iodine-135 HE	9.61E+12	1.12E+13	pCi/g	0	N	269.7	2	1.551	NOT_IDENTI	27.38		
Lead-212 ✓	1.552	0.09075	pCi/g	0.1005	0.100	238.7	7	1.081	IDENTIFIED	3.425		
Lead-214 ✓	1.242	0.1021	pCi/g	0.1305	0.100	352	4	1.219	IDENTIFIED	6.666		
Lutetium-177 la nr	3.169	0.6326	pCi/g	1.711	N	209.3	1	1.736	FAIL_ABUND	19.59		
Niobium-97	23230	6743	pCi/g	0	N	238.7	7	1.081	NOT_IDENTI	3.425		
Polonium-212 nr	1.552	0.09075	pCi/g	0.1005	N	238.7	7	1.081	IDENTIFIED	3.425		
Polonium-214 nr	1.242	0.1021	pCi/g	0.1305	N	352	4	1.219	IDENTIFIED	6.666		
Polonium-216 nr	1.552	0.09075	pCi/g	0.1005	N	238.7	7	1.081	IDENTIFIED	3.425		
Polonium-218 nr	1.242	0.1021	pCi/g	0.1305	N	352	4	1.219	IDENTIFIED	6.666		
Potassium-40 ✓	29.82	1.397	pCi/g	0.5411	1.00	1461	1	2.115	IDENTIFIED	2.867		
Radium-224 int	3.34	0.6236	pCi/g	1.144	Y	241.5	1	1.609	IDENTIFIED	18.19	ui	
Radium-226 ✓	1.125	0.08916	pCi/g	0.1175	Y	609.4	4	1.438	IDENTIFIED	6.745		
Radium-228 ✓	1.491	0.1659	pCi/g	0.2024	0.500	911.3	3	1.906	IDENTIFIED	9.463		
Sodium-24 HE	28890	28850	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Technetium-99m HE	4.07E+13	4.58E+13	pCi/g	0	N	238.7	7	1.081	NOT_IDENTI	3.425		
Thallium-208 ✓	0.4777	0.04214	pCi/g	0.06119	0.080	583.2	1	1.168	IDENTIFIED	8.022		
Thorium-228 nr	1.552	0.09075	pCi/g	0.1005	N	238.7	7	1.081	IDENTIFIED	3.425		
Thorium-230 nr	1.125	0.08915	pCi/g	0.1175	N	609.4	4	1.438	IDENTIFIED	6.745		
Thorium-232 nr	1.491	0.1659	pCi/g	0.2024	N	911.3	3	1.906	IDENTIFIED	9.463		
Titanium-44 la nr	0.3351	0.03005	pCi/g	0.07473	N	77.08	1	1.03	FAIL_ABUND	7.258		
Total Uranium	7.0985	3.10E-06	ug/g	3.7279	N		0					
Uranium-234 nr	1.125	0.08915	pCi/g	0.1175	N	609.4	4	1.438	IDENTIFIED	6.745		
Zirconium-97	2.82E+05	1.39E+05	pCi/g	0	N	238.7	7	1.081	NOT_IDENTI	3.425		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue

232511003	24-JUN-09 12:00	07-JUL-09 10:50	13	SAMPLE	LOAD	1	LANL	LANL01004:GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 nr	1.752	0.2048	pCi/g	0.1952	N	910.8	3	1.731	IDENTIFIED	9.707		
Americium-243 int nr	0.3807	0.04471	pCi/g	0.1018	N	74.84	1	1.19	IDENTIFIED	10.46		
Annihilation Rad.	0.1283	0.03471	pCi/g	0.04433	N	510.2	1	2.104	IDENTIFIED	26.9		
Bismuth-211 int	4.289	0.2564	pCi/g	0.3686	Y	351.7	4	1.326	IDENTIFIED	4.977	ui	
Bismuth-212 HE	0.9618	0.2335	pCi/g	0.6866	N	727	1	1.415	FAIL_ABUND	23.92		
Bismuth-214	1.315	0.08907	pCi/g	0.106	0.200	609	4	1.627	IDENTIFIED	5.624		
Cadmium-109 int	3.492	0.5391	pCi/g	1.252	Y	87.37	3	1.132	IDENTIFIED	14.33	ui	
Cerium-143	344.9	47.64	pCi/g	0	N	328	1	1.468	FAIL_DECAY	33.64		
Cesium-134 la	0.1346	0.02671	pCi/g	0.09239	0.100	794.8	1	2.044	FAIL_ABUND	19.41	UI	Data rejected due to low abundance.
Gross Gamma	10.39	1.385	pCi/g	3.335	N		0					
Lead-212	1.878	0.08945	pCi/g	0.09165	0.100	238.5	5	1.19	IDENTIFIED	3.011		
Lead-214	1.492	0.09732	pCi/g	0.1285	0.100	351.7	4	1.326	IDENTIFIED	4.977		
Lutetium-177 HE	2.155	0.7092	pCi/g	1.709	N	209.1	1	1.176	FAIL_ABUND	32.79		
Neptunium-237 int nr	1.011	0.1877	pCi/g	0.3696	N	87.37	3	1.132	IDENTIFIED	14.33		
Polonium-212 nr	1.878	0.08945	pCi/g	0.09165	N	238.5	5	1.19	IDENTIFIED	3.011		
Polonium-214 nr	1.492	0.09732	pCi/g	0.1285	N	351.7	4	1.326	IDENTIFIED	4.977		
Polonium-216 nr	1.878	0.08945	pCi/g	0.09165	N	238.5	5	1.19	IDENTIFIED	3.011		
Polonium-218 nr	1.492	0.09732	pCi/g	0.1285	N	351.7	4	1.326	IDENTIFIED	4.977		
Potassium-40	34.16	1.721	pCi/g	0.4858	1.00	1460	1	1.9	IDENTIFIED	2.723		
Radium-224 int	4.466	0.5566	pCi/g	1.043	Y	241.4	1	1.544	IDENTIFIED	12.11	ui	
Radium-226	1.315	0.08907	pCi/g	0.106	Y	609	4	1.627	IDENTIFIED	5.624		
Radium-228	1.752	0.2048	pCi/g	0.1952	0.500	910.8	3	1.731	IDENTIFIED	9.707		
Sodium-24 HE	12250	33090	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Thallium-208	0.5548	0.04211	pCi/g	0.0609	0.080	582.8	1	1.324	IDENTIFIED	6.854		
Thorium-228 nr	1.878	0.08945	pCi/g	0.09164	N	238.5	5	1.19	IDENTIFIED	3.011		
Thorium-230 nr	1.315	0.08907	pCi/g	0.106	N	609	4	1.627	IDENTIFIED	5.624		
Thorium-232 nr	1.752	0.2048	pCi/g	0.1952	N	910.8	3	1.731	IDENTIFIED	9.707		
Tin-126 int nr	0.3443	0.05316	pCi/g	0.1241	N	87.37	3	1.132	IDENTIFIED	14.33		
Titanium-44 la nr	0.398	0.03297	pCi/g	0.09002	N	77.13	1	1.046	FAIL_ABUND	6.302		
Total Uranium	5.6182	2.37E-06	ug/g	4.2015	N		0					
Uranium-234 nr	1.315	0.08907	pCi/g	0.106	N	609	4	1.627	IDENTIFIED	5.624		
Zirconium-97	6.14E+05	1.15E+05	pCi/g	0	N	238.5	5	1.19	NOT_IDENTI	3.011		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232511004	24-JUN-09 12:00	07-JUL-09 10:53	13	SAMPLE	LOAD	1	LANL	LANL01004:GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 nr	1.679	0.1687	pCi/g	0.2151	N	911.7	3	1.723	IDENTIFIED	8.412		
Americium-241	235.2	8.418	pCi/g	1.125	0.200	59.51	1	1.018	IDENTIFIED	0.4352		

Americium-243 int nr	**0.4504**	0.05855	pCi/g	**0.1655**	N	74.85	1	1.011	IDENTIFIED	12.55			
Barium-137m	**84.18**	2.749	pCi/g	**0.1215**	N	662	3	1.485	IDENTIFIED	0.3833			
Bismuth-211 int	**3.647**	0.4584	pCi/g	**0.984**	Y	352.1	4	1.522	IDENTIFIED	12.17	ui		
Bismuth-212 nr	**1.264**	0.2465	pCi/g	**0.4101**	N	727.8	1	1.631	IDENTIFIED	19.02			
Bismuth-214 ✓	**1.364**	0.1308	pCi/g	**0.2387**	**0.200**	609.6	4	1.426	IDENTIFIED	8.657			
Cerium-143 HE	**84.2**	62.61	pCi/g	**0**	N	662	3	1.485	FAIL_DECAY	0.3833			
Cesium-137 ✓	**88.99**	2.915	pCi/g	**0.1284**	**0.100**	662	3	1.485	IDENTIFIED	0.3833			
Cobalt-60 la	**0.08393**	0.02448	pCi/g	**0.08095**	**0.100**	1333	1	1.919	FAIL_ABUND	28.96	☑	UI	Data rejected due to low abundance.
Gadolinium-153 HE	**0.3857**	0.1076	pCi/g	**0.2787**	N	98.87	2	2.041	FAIL_ABUND	27.7			
Gold-195 HE	**1.121**	0.3128	pCi/g	**0.8234**	N	98.87	2	2.041	FAIL_ABUND	27.7			
Gross Gamma	**169.4**	8.161	pCi/g	**11.41**	N		0						
Iodine-126 HE	**0.5342**	0.1199	pCi/g	**0.4057**	N	969.5	1	1.955	NOT_IDENTI	10.4			
Iodine-133 HE	**1972**	1467	pCi/g	**0**	N	511.4	2	1.527	FAIL_DECAY	89.91			
Iodine-135 HE	**5.90E+12**	1.22E+13	pCi/g	**0**	N	511.4	2	1.527	NOT_IDENTI	89.91			
Krypton-85 HE	**37.35**	10.79	pCi/g	**32.87**	N	238.7	9	1.127	NOT_IDENTI	6.194			
Lead-212 ✓	**1.584**	0.1131	pCi/g	**0.2419**	**0.100**	238.7	9	1.127	IDENTIFIED	6.194			
Lead-214 ✓	**1.269**	0.1629	pCi/g	**0.3472**	**0.100**	352.1	4	1.522	IDENTIFIED	12.17			
Niobium-97	**1.91E+05**	18840	pCi/g	**0**	N	238.7	9	1.127	NOT_IDENTI	6.194			
Polonium-212 nr	**1.584**	0.1131	pCi/g	**0.2419**	N	238.7	9	1.127	IDENTIFIED	6.194			
Polonium-214 nr	**1.269**	0.1629	pCi/g	**0.3472**	N	352.1	4	1.522	IDENTIFIED	12.17			
Polonium-216 nr	**1.584**	0.1131	pCi/g	**0.2419**	N	238.7	9	1.127	IDENTIFIED	6.194			
Polonium-218 nr	**1.269**	0.1629	pCi/g	**0.3472**	N	352.1	4	1.522	IDENTIFIED	12.17			
Potassium-40 ✓	**30.79**	1.362	pCi/g	**0.5564**	**1.00**	1461	1	1.993	IDENTIFIED	2.623			
Radium-226 ✓	**1.364**	0.1308	pCi/g	**0.2387**	Y	609.6	4	1.426	IDENTIFIED	8.657			
Radium-228 ✓	**1.679**	0.1687	pCi/g	**0.2151**	**0.500**	911.7	3	1.723	IDENTIFIED	8.412			
Silver-110m la nr	**0.4027**	0.05327	pCi/g	**0.1735**	N	86.64	1	1.089	NOT_IDENTI	49.4			
Strontium-85 la	**0.1872**	0.05409	pCi/g	**0.1648**	Y	238.7	9	1.127	NOT_IDENTI	6.194	☑	UI	Data rejected due to low abundance.
Technetium-99m HE	**9.89E+11**	9.79E+13	pCi/g	**0**	N	238.7	9	1.127	NOT_IDENTI	6.194			
Thallium-208 ✓	**0.5431**	0.0649	pCi/g	**0.1319**	**0.080**	583.5	1	1.252	IDENTIFIED	11.4			
Thorium-228 nr	**1.584**	0.1131	pCi/g	**0.2418**	N	238.7	9	1.127	IDENTIFIED	6.194			
Thorium-230 nr	**1.364**	0.1308	pCi/g	**0.2387**	N	609.6	4	1.426	IDENTIFIED	8.657			
Thorium-232 nr	**1.679**	0.1687	pCi/g	**0.2151**	N	911.7	3	1.723	IDENTIFIED	8.412			
Titanium-44 la nr	**0.41**	0.03949	pCi/g	**0.1173**	N	77.16	1	0.9753	FAIL_ABUND	8.99			
Uranium-234 nr	**1.364**	0.1308	pCi/g	**0.2387**	N	609.6	4	1.426	IDENTIFIED	8.657			
Zirconium-97 HE	**78770**	3.41E+05	pCi/g	**0**	N	238.7	9	1.127	NOT_IDENTI	6.194			

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232511005	24-JUN-09 12:00	07-JUL-09 10:54	13	SAMPLE	LOAD	1	LANL	LANL01004iGEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 nr	**1.828**	0.18	pCi/g	**0.2509**	N	911.6	3	1.884	IDENTIFIED	8.371		

Americium-241 ✓		**110.5**	5.617	pCi/g	**0.4384**	**0.200**	59.91	1	1.076	IDENTIFIED	0.3399		
Americium-243	int nr	**0.3945**	0.03528	pCi/g	**0.07336**	N	75.25	1	1.093	IDENTIFIED	7.842		
Annihilation Rad.	HE	**0.1595**	0.05546	pCi/g	**0.08779**	N	511	1	2.037	IDENTIFIED	34.59		
Barium-137m		**17.58**	0.7348	pCi/g	**0.08084**	N	662.2	3	1.52	IDENTIFIED	0.9193		
Bismuth-211	int	**3.711**	0.2896	pCi/g	**0.5706**	Y	352.4	4	1.314	IDENTIFIED	6.905	ui	
Bismuth-212	HE	**0.9527**	0.3146	pCi/g	**0.7856**	N	727.9	1	1.354	FAIL_ABUND	32.67		
Bismuth-214 ✓		**1.156**	0.115	pCi/g	**0.1731**	**0.200**	609.9	4	1.641	IDENTIFIED	8.777		
Cadmium-109	int	**3.506**	0.4912	pCi/g	**1.168**	Y	87.68	6	1.179	IDENTIFIED	13.44	ui	
Cerium-143	HE	**56.12**	38.73	pCi/g	**0**	N	662.2	3	1.52	NOT_IDENTI	0.9193		
Cesium-137 ✓		**18.58**	0.7784	pCi/g	**0.08545**	**0.100**	662.2	3	1.52	IDENTIFIED	0.9193		
Gold-195	HE	**0.8506**	0.2069	pCi/g	**0.4728**	N	99.59	1	1.545	FAIL_ABUND	23.87		
Gross Gamma		**64.38**	3.094	pCi/g	**7.946**	N		0					
Iodine-123	HE	**1.35E+05**	2.54E+05	pCi/g	**0**	N	87.68	6	1.179	NOT_IDENTI	13.44		
Iodine-126	HE	**0.447**	0.1296	pCi/g	**0.4206**	N	87.68	6	1.179	NOT_IDENTI	13.44		
Krypton-85	la nr	**38.19**	7.008	pCi/g	**23.35**	N	239.1	8	1.116	NOT_IDENTI	3.988		
Lead-212 ✓		**1.59**	0.09611	pCi/g	**0.1413**	**0.100**	239.1	8	1.116	IDENTIFIED	3.988		
Lead-214 ✓		**1.291**	0.1062	pCi/g	**0.199**	**0.100**	352.4	4	1.314	IDENTIFIED	6.905		
Neptunium-237	int nr	**1.015**	0.1766	pCi/g	**0.3517**	N	87.68	6	1.179	IDENTIFIED	13.44		
Niobium-97		**62660**	11280	pCi/g	**0**	N	239.1	8	1.116	NOT_IDENTI	3.988		
Polonium-212	nr	**1.59**	0.09611	pCi/g	**0.1413**	N	239.1	8	1.116	IDENTIFIED	3.988		
Polonium-214	nr	**1.291**	0.1062	pCi/g	**0.199**	N	352.4	4	1.314	IDENTIFIED	6.905		
Polonium-216	nr	**1.59**	0.09611	pCi/g	**0.1413**	N	239.1	8	1.116	IDENTIFIED	3.988		
Polonium-218	nr	**1.291**	0.1062	pCi/g	**0.199**	N	352.4	4	1.314	IDENTIFIED	6.905		
Potassium-40 ✓		**26.18**	1.168	pCi/g	**0.6651**	**1.00**	1462	1	2.061	IDENTIFIED	3.249		
Radium-226 ✓		**1.156**	0.115	pCi/g	**0.1731**	Y	609.9	4	1.641	IDENTIFIED	8.777		
Radium-228 ✓		**1.828**	0.18	pCi/g	**0.2509**	**0.500**	911.6	3	1.884	IDENTIFIED	8.371		
Silver-110m	HE	**0.1148**	0.03281	pCi/g	**0.105**	N	87.68	6	1.179	NOT_IDENTI	13.44		
Strontium-85	la	**0.1914**	0.03512	pCi/g	**0.117**	Y	239.1	8	1.116	NOT_IDENTI	3.988	UI	Data rejected due to low abundance.
Thallium-208 ✓		**0.5148**	0.05967	pCi/g	**0.08663**	**0.080**	583.5	1	1.431	IDENTIFIED	10.83		
Thorium-228	nr	**1.59**	0.09611	pCi/g	**0.1412**	N	239.1	8	1.116	IDENTIFIED	3.988		
Thorium-230	nr	**1.156**	0.115	pCi/g	**0.1731**	N	609.9	4	1.641	IDENTIFIED	8.777		
Thorium-232	nr	**1.828**	0.18	pCi/g	**0.2509**	N	911.6	3	1.884	IDENTIFIED	8.371		
Tin-126	int nr	**0.3457**	0.04843	pCi/g	**0.1191**	N	87.68	6	1.179	IDENTIFIED	13.44		
Titanium-44	la nr	**0.345**	0.02453	pCi/g	**0.07049**	N	77.48	1	1.038	FAIL_ABUND	5.711		
Total Uranium		**3.4225**	1.37E-06	ug/g	**1.7887**	N		0					
Uranium-234	nr	**1.156**	0.115	pCi/g	**0.1731**	N	609.9	4	1.641	IDENTIFIED	8.777		
Zirconium-97		**3.91E+05**	1.95E+05	pCi/g	**0**	N	239.1	8	1.116	NOT_IDENTI	3.988		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232511006	24-JUN-09 12:00	07-JUL-09 10:58	13	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual		Qual Comment
Actinium-228	nr	1.605	0.1536	pCi/g	0.1889	N	911.1	3	1.611	IDENTIFIED	7.512			
Americium-241	✓	8.931	0.4212	pCi/g	0.4031	0.200	59.74	1	0.9898	IDENTIFIED	2.524			
Americium-243	int nr	0.4922	0.0399	pCi/g	0.09712	N	74.96	1	1.232	IDENTIFIED	7.137			
Annihilation Rad.		0.155	0.03106	pCi/g	0.05463	N	510.8	2	2.225	IDENTIFIED	19.83			
Barium-137m		4.472	0.1563	pCi/g	0.06542	N	661.6	2	1.392	IDENTIFIED	1.71			
Bismuth-211	int	4.037	0.2556	pCi/g	0.3705	Y	351.7	4	1.12	IDENTIFIED	5.518		ui	
Bismuth-212	la nr	1.033	0.2097	pCi/g	0.6033	N	727.3	1	1.247	FAIL_ABUND	19.84			
Bismuth-214	✓	1.092	0.08324	pCi/g	0.1088	0.200	609.4	4	1.34	IDENTIFIED	6.493			
Cadmium-109	int	3.81	0.502	pCi/g	1.374	Y	87.34	5	1.124	IDENTIFIED	12.46		ui	
Cerium-143		231.2	38.84	pCi/g	0	N	327.9	1	1.283	FAIL_DECAY	35.02			
Cesium-134	la	0.1099	0.03516	pCi/g	0.08355	0.100	794.8	2	1.035	FAIL_ABUND	31.73		UI	Data rejected due to low abundance.
Cesium-137	✓	4.727	0.1657	pCi/g	0.06915	0.100	661.6	2	1.392	IDENTIFIED	1.71			
Gross Gamma		16.9	1.781	pCi/g	5.042	N		0						
Iodine-123	HE	1.45E+05	2.02E+05	pCi/g	0	N	87.34	5	1.124	NOT_IDENTI	12.46			
Iodine-133	HE	371.3	575.2	pCi/g	0	N	510.8	2	2.225	FAIL_DECAY	19.83			
Iodine-135	HE	1.97E+13	1.18E+13	pCi/g	0	N	794.8	2	1.035	NOT_IDENTI	31.73			
Krypton-85	HE	19.23	4.405	pCi/g	14.71	N	238.7	8	0.9852	NOT_IDENTI	3.115			
Lead-212	✓	1.556	0.07322	pCi/g	0.1024	0.100	238.7	8	0.9852	IDENTIFIED	3.115			
Lead-214	✓	1.404	0.09616	pCi/g	0.1364	0.100	351.7	4	1.12	IDENTIFIED	5.518			
Lutetium-177	HE	2.334	0.7309	pCi/g	1.798	N	209.3	1	0.8052	FAIL_ABUND	31.21			
Neptunium-237	int nr	1.103	0.1846	pCi/g	0.4051	N	87.34	5	1.124	IDENTIFIED	12.46			
Niobium-97		80220	8591	pCi/g	0	N	238.7	8	0.9852	NOT_IDENTI	3.115			
Polonium-212	nr	1.556	0.07322	pCi/g	0.1024	N	238.7	8	0.9852	IDENTIFIED	3.115			
Polonium-214	nr	1.404	0.09616	pCi/g	0.1364	N	351.7	4	1.12	IDENTIFIED	5.518			
Polonium-216	nr	1.556	0.07322	pCi/g	0.1024	N	238.7	8	0.9852	IDENTIFIED	3.115			
Polonium-218	nr	1.404	0.09616	pCi/g	0.1364	N	351.7	4	1.12	IDENTIFIED	5.518			
Potassium-40	✓	31.75	1.565	pCi/g	0.4989	1.00	1460	1	1.966	IDENTIFIED	2.565			
Radium-224	int	4.931	0.6582	pCi/g	1.164	Y	241.8	1	1.943	IDENTIFIED	13.07		ui	
Radium-226	✓	1.092	0.08324	pCi/g	0.1088	Y	609.4	4	1.34	IDENTIFIED	6.493			
Radium-228	✓	1.605	0.1536	pCi/g	0.1889	0.500	911.1	3	1.611	IDENTIFIED	7.512			
Silver-110m	la nr	0.1608	0.02335	pCi/g	0.08269	N	87.34	5	1.124	NOT_IDENTI	12.46			
Sodium-24	HE	33270	29560	pCi/g	0	N	0	1	0	NOT_IDENTI	0			
Strontium-85	la	0.09636	0.02208	pCi/g	0.07371	Y	238.7	8	0.9852	NOT_IDENTI	3.115		UI	Data rejected due to low abundance.
Thallium-208	✓	0.477	0.03738	pCi/g	0.06251	0.080	583.1	1	1.336	IDENTIFIED	7.039			
Thorium-228	nr	1.556	0.07322	pCi/g	0.1024	N	238.7	8	0.9852	IDENTIFIED	3.115			
Thorium-230	nr	1.092	0.08324	pCi/g	0.1088	N	609.4	4	1.34	IDENTIFIED	6.493			
Thorium-232	nr	1.605	0.1536	pCi/g	0.1889	N	911.1	3	1.611	IDENTIFIED	7.512			
Tin-126	int nr	0.3757	0.0495	pCi/g	0.1362	N	87.34	5	1.124	IDENTIFIED	12.46			
Titanium-44	la nr	0.371	0.02483	pCi/g	0.08756	N	77.31	1	0.8643	FAIL_ABUND	5.43			

Total Uranium		4.8596	2.43E-06	ug/g	3.5709	N		0				
Uranium-234	nr	1.092	0.08324	pCi/g	0.1088	N	609.4	4	1.34	IDENTIFIED	6.493	
Zirconium-97		5.20E+05	1.35E+05	pCi/g	0	N	238.7	8	0.9852	NOT_IDENTI	3.115	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871426		07-JUL-09 10:59	0	MB	LOAD	1		GEL	N	RGSP

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871427	24-JUN-09 12:00	07-JUL-09 11:20	13	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.802	0.1732	pCi/g	0.1763	N	911.6	3	2.105	IDENTIFIED	6.968		
Americium-241	✓	8.1	0.4142	pCi/g	0.5786	0.200	59.62	1	1.024	IDENTIFIED	2.988		
Americium-243	int nr	0.3895	0.06843	pCi/g	0.1545	N	74.88	2	1.317	IDENTIFIED	17.06		
Barium-137m		65.96	2.526	pCi/g	0.07816	N	661.9	2	1.672	IDENTIFIED	0.3577		
Bismuth-211	int	4.399	0.407	pCi/g	0.7494	Y	352.2	4	1.61	IDENTIFIED	8.677	ui	
Bismuth-212	nr	1.376	0.2078	pCi/g	0.3395	N	727.2	1	2.199	IDENTIFIED	14.25		
Bismuth-214	✓	1.3	0.1178	pCi/g	0.1797	0.200	609.5	4	1.575	IDENTIFIED	7.885		
Cadmium-109	int	3.567	0.8149	pCi/g	2.353	Y	87.23	5	1.3	IDENTIFIED	22.38	ui	
Cerium-143		254.2	58.1	pCi/g	0	N	57.84	1	0.9996	FAIL_DECAY	50.07		
Cesium-134	la	0.1372	0.0282	pCi/g	0.0746	0.100	795.5	2	1.031	FAIL_ABUND	19.98	UI	Data rejected due to low abundance.
Cesium-137	✓	69.72	2.677	pCi/g	0.08263	0.100	661.9	2	1.672	IDENTIFIED	0.3577		
Gross Gamma		72.38	4.267	pCi/g	4.54	N		0					
Iodine-123	HE	2.90E+05	3.18E+05	pCi/g	0	N	87.23	5	1.3	NOT_IDENTI	22.38		
Iodine-126	la nr	2.378	0.1501	pCi/g	0.4941	N	969.4	1	2.024	NOT_IDENTI	8.117		
Iodine-135	HE	1.60E+12	1.11E+13	pCi/g	0	N	795.5	2	1.031	NOT_IDENTI	19.98		
Krypton-85	HE	32.01	8.399	pCi/g	25.63	N	238.8	10	1.128	NOT_IDENTI	3.968		
Lead-212	✓	1.814	0.09686	pCi/g	0.184	0.100	238.8	10	1.128	IDENTIFIED	3.968		
Lead-214	✓	1.53	0.1471	pCi/g	0.2604	0.100	352.2	4	1.61	IDENTIFIED	8.677		
Neptunium-237	HE	1.033	0.2589	pCi/g	0.6571	N	87.23	5	1.3	IDENTIFIED	22.38		
Niobium-95	HE	0.07065	0.0189	pCi/g	0.06213	N	238.8	10	1.128	NOT_IDENTI	3.968		
Niobium-97		1.37E+06	56640	pCi/g	0	N	238.8	10	1.128	NOT_IDENTI	3.968		
Polonium-212	nr	1.814	0.09686	pCi/g	0.184	N	238.8	10	1.128	IDENTIFIED	3.968		
Polonium-214	nr	1.53	0.1471	pCi/g	0.2604	N	352.2	4	1.61	IDENTIFIED	8.677		
Polonium-216	nr	1.814	0.09686	pCi/g	0.184	N	238.8	10	1.128	IDENTIFIED	3.968		
Polonium-218	nr	1.53	0.1471	pCi/g	0.2604	N	352.2	4	1.61	IDENTIFIED	8.677		
Potassium-40	✓	34.25	1.484	pCi/g	0.4231	1.00	1461	1	2.564	IDENTIFIED	2.094		
Radium-224	int	4.764	0.8845	pCi/g	2.091	Y	241.8	1	1.798	IDENTIFIED	18.36	ui	
Radium-226	✓	1.3	0.1178	pCi/g	0.1797	Y	609.5	4	1.575	IDENTIFIED	7.885		
Radium-228	✓	1.802	0.1732	pCi/g	0.1763	0.500	911.6	3	2.105	IDENTIFIED	6.968		
Silver-110m	la nr	2.899	0.128	pCi/g	0.2466	N	87.23	5	1.3	NOT_IDENTI	22.38		

Sodium-24	HE	6152	25230	pCi/g	0	N	0	1	0	NOT_IDENTI	0			
Strontium-85	la	0.1605	0.04211	pCi/g	0.1285	Y	238.8	10	1.128	NOT_IDENTI	3.968		UI	Data rejected due to low abundance.
Technetium-99m	HE	7.48E+13	8.95E+13	pCi/g	0	N	238.8	10	1.128	NOT_IDENTI	3.968			
Thallium-200	HE	15.2	133	pCi/g	0	N	74.88	2	1.317	NOT_IDENTI	17.06			
Thallium-208		0.5844	0.05934	pCi/g	0.1009	0.080	583.2	1	1.532	IDENTIFIED	9.367			
Thorium-228	nr	1.814	0.09686	pCi/g	0.184	N	238.8	10	1.128	IDENTIFIED	3.968			
Thorium-230	nr	1.3	0.1178	pCi/g	0.1797	N	609.5	4	1.575	IDENTIFIED	7.885			
Thorium-232	nr	1.802	0.1732	pCi/g	0.1763	N	911.6	3	2.105	IDENTIFIED	6.968			
Tin-126	HE	0.3517	0.08035	pCi/g	0.2275	N	87.23	5	1.3	IDENTIFIED	22.38			
Titanium-44	la nr	0.389	0.03875	pCi/g	0.1111	N	77.14	1	1.028	FAIL_ABUND	9.012			
Uranium-234	nr	1.3	0.1178	pCi/g	0.1797	N	609.5	4	1.575	IDENTIFIED	7.885			
Zirconium-97	HE	2.15E+05	2.54E+05	pCi/g	0	N	238.8	10	1.128	NOT_IDENTI	3.968			

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871428		07-JUL-09 10:00	0	LCS	LOAD	I		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228		1.236	0.258	pCi/g	0.4764	N	911.9	3	1.788	IDENTIFIED	20.25		
Americium-241		14.4	0.7538	pCi/g	0.5388	0.200	59.52	1	1.064	IDENTIFIED	2.55		
Barium-137m		5.402	0.1746	pCi/g	0.09627	N	662	2	1.519	IDENTIFIED	2.018		
Bismuth-211		2.629	0.3635	pCi/g	0.555	Y	352.1	4	1.502	IDENTIFIED	13.46		
Bismuth-214		0.6038	0.1125	pCi/g	0.292	0.200	609.6	4	1.675	FAIL_ABUND	18.27		
Cadmium-109		42.43	2.37	pCi/g	2.025	Y	88.06	2	1.148	IDENTIFIED	3.172		
Cesium-137		5.71	0.1852	pCi/g	0.1018	0.100	662	2	1.519	IDENTIFIED	2.018		
Cobalt-57		0.4139	0.03787	pCi/g	0.05826	N	122.1	1	1.109	IDENTIFIED	8.621		
Cobalt-60		7.138	0.2927	pCi/g	0.0765	0.100	1333	1	1.825	IDENTIFIED	2.193		
Gross Gamma		28.63	3.612	pCi/g	4.257	N		0					
Lead-212		0.946	0.07141	pCi/g	0.1579	0.100	239	6	1.144	IDENTIFIED	6.61		
Lead-214		0.9145	0.1287	pCi/g	0.1935	0.100	352.1	4	1.502	IDENTIFIED	13.46		
Neptunium-237		7.171	0.8558	pCi/g	1.155	N	92.94	1	1.306	NOT_IDENTI	40.01		
Niobium-97	HE	4.221	47.6	pCi/g	0	N	239	6	1.144	NOT_IDENTI	6.61		
Polonium-212		0.946	0.07141	pCi/g	0.1579	N	239	6	1.144	IDENTIFIED	6.61		
Polonium-214		0.9145	0.1287	pCi/g	0.1935	N	352.1	4	1.502	IDENTIFIED	13.46		
Polonium-216		0.946	0.07141	pCi/g	0.1579	N	239	6	1.144	IDENTIFIED	6.61		
Polonium-218		0.9145	0.1287	pCi/g	0.1935	N	352.1	4	1.502	IDENTIFIED	13.46		
Radium-224		2.441	0.7386	pCi/g	1.698	Y	242	1	1.457	IDENTIFIED	30.12		
Radium-226		0.6038	0.1125	pCi/g	0.292	Y	609.6	4	1.675	FAIL_ABUND	18.27		
Radium-228		1.236	0.258	pCi/g	0.4764	0.500	911.9	3	1.788	IDENTIFIED	20.25		
Sodium-24	HE	11.71	75.88	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Thallium-208		0.3558	0.05713	pCi/g	0.1014	0.080	583.5	1	1.337	IDENTIFIED	15.74		
Thorium-228		0.946	0.07141	pCi/g	0.1579	N	239	6	1.144	IDENTIFIED	6.61		

Thorium-230		**0.6038**	0.1125	pCi/g	**0.292**	N	609.6	4	1.675	FAIL_ABUND	18.27	☐
Thorium-232		**1.236**	0.258	pCi/g	**0.4764**	N	911.9	3	1.788	IDENTIFIED	20.25	☐
Tin-126		**4.218**	0.2357	pCi/g	**0.2024**	N	88.06	2	1.148	IDENTIFIED	3.172	☐
Titanium-44	HE	**0.1538**	0.04047	pCi/g	**0.104**	N	77.28	1	1.1	FAIL_ABUND	25.96	☐
Uranium-234		**0.6038**	0.1125	pCi/g	**0.292**	N	609.6	4	1.675	FAIL_ABUND	18.27	☐
Zirconium-97	HE	**1194**	851.9	pCi/g	**0**	N	239	6	1.144	NOT IDENTI	6.61	☐

*** = Number of isotopes identified with a keyline at this energy.

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertanty	Units	DL	RDL
881220	232511006	SAMPLE	07-JUL-09	Iodine-133	371.3	575.2	pCi/g	0	N
				Iodine-135	1.97E+13	1.18E+13	pCi/g	0	N
				Krypton-85	19.23	4.405	pCi/g	7.357	N
				Lead-212	1.556	0.07322	pCi/g	0.05123	0.100
				Lead-214	1.404	0.09616	pCi/g	0.06823	0.100
				Niobium-97	80220	8591	pCi/g	0	N
				Potassium-40	31.75	1.565	pCi/g	0.2496	1.00
				Radium-224	4.931	0.6582	pCi/g	0.5826	Y
				Radium-226	1.092	0.08324	pCi/g	0.05445	Y
				Radium-228	1.605	0.1536	pCi/g	0.09449	0.500
				Ruthenium-106	0.331	0.1533	pCi/g	0.2736	0.800
				Sodium-24	33270	29560	pCi/g	0	N
				Strontium-85	0.09636	0.02208	pCi/g	0.03688	Y
				Thallium-208	0.477	0.03738	pCi/g	0.03127	0.080
				Thorium-234	1.598	0.8165	pCi/g	1.2	2.00
				Uranium-235	0.2282	0.1161	pCi/g	0.2038	0.500
				Zirconium-97	5.20E+05	1.35E+05	pCi/g	0	N
881220	1201871426	MB	07-JUL-09						
881220	1201871427	DUP	07-JUL-09	Americium-241	8.1	0.4142	pCi/g	0.2895	0.200
				Barium-137m	65.96	2.526	pCi/g	0.03911	N
				Bismuth-211	4.399	0.407	pCi/g	0.3749	Y
				Bismuth-214	1.3	0.1178	pCi/g	0.0899	0.200
				Cadmium-109	3.567	0.8149	pCi/g	1.177	Y
				Cerium-143	254.2	58.1	pCi/g	0	N
				Cesium-134	0.1372	0.0282	pCi/g	0.03732	0.100
				Cesium-137	69.72	2.677	pCi/g	0.04134	0.100
				Cobalt-60	0.04299	0.01682	pCi/g	0.03024	0.100
				Gross Gamma	72.38	4.267	pCi/g	2.236	N
				Iodine-123	2.90E+05	3.18E+05	pCi/g	0	N
				Iodine-135	1.60E+12	1.11E+13	pCi/g	0	N
				Krypton-85	32.01	8.399	pCi/g	12.82	N
				Lead-212	1.814	0.09686	pCi/g	0.09205	0.100
				Lead-214	1.53	0.1471	pCi/g	0.1303	0.100
				Niobium-97	1.37E+06	56640	pCi/g	0	N
				Potassium-40	34.25	1.484	pCi/g	0.2117	1.00
				Radium-224	4.764	0.8845	pCi/g	1.046	Y
				Radium-226	1.3	0.1178	pCi/g	0.0899	Y

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:11:20.59

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511001.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:10:39.
Sample ID         : G232511001           Sample quantity  : 1.44920E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:15.65  0.2%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.45*	11	1292	0.82	94.11	93	5	1.56E-03	491.4	
2	0	50.16	284	3110	1.14	101.51	98	10	3.95E-02	37.1	
3	0	59.80*	8185	2841	0.87	120.79	116	10	1.14E+00	1.7	
4	0	63.83*	241	1695	0.91	128.83	126	8	3.34E-02	30.6	
5	5	75.06*	678	1235	0.82	151.29	147	14	9.41E-02	8.7	5.19E-01
6	5	77.37*	1041	1175	0.80	155.90	147	14	1.45E-01	6.0	
7	0	87.67*	282	1727	1.09	176.48	172	8	3.92E-02	26.3	
8	0	185.65*	452	2594	1.19	372.29	366	13	6.27E-02	23.8	
9	0	238.80*	1348	1252	1.08	478.54	475	7	1.87E-01	5.2	
10	0	295.28*	405	1254	1.12	591.41	587	9	5.63E-02	16.6	
11	0	338.24*	262	1430	1.04	677.29	672	10	3.63E-02	27.8	
12	0	352.02*	658	1308	1.19	704.81	700	10	9.14E-02	11.0	
13	0	510.80*	34	1067	1.53	1022.19	1015	12	4.79E-03	194.1	
14	0	583.17*	397	367	1.11	1166.86	1161	11	5.51E-02	10.8	
15	0	609.12*	497	366	1.44	1218.72	1213	13	6.90E-02	9.2	
16	0	661.50	38921	387	1.41	1323.43	1315	16	5.41E+00	0.5	
17	0	727.34*	109	86	1.82	1455.05	1448	17	1.51E-02	22.0	
18	0	860.10	64	63	1.32	1720.46	1713	14	8.89E-03	29.1	
19	0	910.89*	257	51	1.58	1821.98	1816	12	3.56E-02	8.5	
20	1	964.22	67	55	2.10	1928.61	1921	26	9.31E-03	25.7	2.45E+00
21	1	968.61*	150	46	1.99	1937.39	1921	26	2.08E-02	12.1	
22	0	1119.81	89	70	1.43	2239.70	2233	14	1.24E-02	22.6	
23	0	1456.11	11	21	1.05	2912.14	2900	14	1.53E-03	93.4	
24	0	1460.04*	1060	7	2.03	2920.01	2913	13	1.47E-01	3.1	
25	0	1587.53	21	15	1.94	3174.95	3169	12	2.97E-03	42.1	
26	0	1763.64	68	8	1.86	3527.14	3521	15	9.37E-03	15.0	
27	0	1846.00	21	7	0.59	3691.87	3683	15	2.85E-03	36.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 12:11:23

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:10:39
Sample ID : G232511001 Sample quantity : 144.92 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:15.65 0.2%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.224E+01	2.828E+00	5.753E-01	3.537E-02	56.034
CD-109	+	88.03	*	3.048E+00	1.620E+00	2.097E+00	1.689E-01	1.453
SN-126	+	64.28		9.769E-01	6.163E-01	7.555E-01	1.159E-01	1.293
	+	86.94		1.249E+00	8.345E-01	8.843E-01	3.648E-01	1.413
	+	87.57	*	3.005E-01	1.597E-01	2.119E-01	1.709E-02	1.418
BA-137M	+	661.65	*	6.933E+01	5.270E+00	1.289E-01	9.709E-03	537.743
CS-137	+	661.65	*	7.329E+01	5.585E+00	1.363E-01	1.029E-02	537.743
TL-208		277.35		1.073E-01	1.129E+00	1.805E+00	2.083E-01	0.059
	+	510.84		1.995E-01	7.748E-01	7.737E-01	8.300E-02	0.258
	+	583.14	*	6.695E-01	1.536E-01	1.470E-01	1.166E-02	4.554
	+	860.37		1.050E+00	6.174E-01	6.044E-01	4.932E-02	1.737
BI-210	+	46.50	*	1.094E-01	1.075E+00	1.808E+00	1.447E-01	0.060
PB-210	+	46.50	*	1.094E-01	1.075E+00	1.808E+00	1.447E-01	0.060
PO-210	+	46.50	*	1.094E-01	1.075E+00	1.808E+00	1.258E-01	0.060
BI-211		72.87		8.545E+00	4.228E+00	6.388E+00	5.462E-01	1.338
	+	351.07	*	4.459E+00	1.035E+00	1.129E+00	8.114E-02	3.948
PB-212	+	74.81		2.467E+00	5.312E-01	7.125E-01	8.990E-02	3.462
	+	77.11		2.256E+00	3.288E-01	4.247E-01	3.567E-02	5.311
	+	87.30		1.390E+00	7.517E-01	9.796E-01	1.259E-01	1.419
	+	238.63	*	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
		300.09		4.076E+00	2.614E+00	3.941E+00	3.685E-01	1.034
PO-212	+	74.81		2.467E+00	5.312E-01	7.125E-01	8.990E-02	3.462
	+	77.11		2.256E+00	3.288E-01	4.247E-01	3.567E-02	5.311
	+	87.30		1.390E+00	7.517E-01	9.796E-01	1.259E-01	1.419
		115.19		2.880E+00	7.593E+00	1.259E+01	1.310E+00	0.229
	+	238.63	*	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
		300.09		4.076E+00	2.614E+00	3.941E+00	3.685E-01	1.034
BI-214	+	609.31	*	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
		768.36		1.047E+00	1.043E+00	1.791E+00	1.730E-01	0.584
		934.06		1.014E+00	1.595E+00	2.781E+00	2.639E-01	0.365
	+	1120.29		1.522E+00	7.006E-01	7.143E-01	6.378E-02	2.130
		1238.11		8.703E-01	1.193E+00	2.069E+00	1.658E-01	0.421
		1377.67		1.084E+00	1.379E+00	2.425E+00	2.072E-01	0.447
	+	1764.49		1.636E+00	5.011E-01	3.594E-01	2.066E-02	4.552

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-214	+	74.81		4.250E+00	8.827E-01	1.228E+00	1.382E-01	3.462
	+	77.11		3.867E+00	6.360E-01	7.281E-01	8.256E-02	5.311
	+	87.30		2.381E+00	1.279E+00	1.678E+00	1.873E-01	1.419
		241.98		2.679E+00	1.149E+00	1.666E+00	1.566E-01	1.608
	+	295.21		1.578E+00	5.444E-01	6.839E-01	6.584E-02	2.308
	+	351.92	*	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
PO-214	+	74.81		4.250E+00	8.827E-01	1.228E+00	1.382E-01	3.462
	+	77.11		3.867E+00	6.360E-01	7.281E-01	8.256E-02	5.311
	+	87.30		2.381E+00	1.279E+00	1.678E+00	1.873E-01	1.419
		241.98		2.679E+00	1.149E+00	1.666E+00	1.566E-01	1.608
	+	295.21		1.578E+00	5.444E-01	6.839E-01	6.584E-02	2.308
	+	351.92	*	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
PO-216	+	74.81		2.467E+00	5.312E-01	7.125E-01	8.990E-02	3.462
	+	77.11		2.256E+00	3.288E-01	4.247E-01	3.567E-02	5.311
	+	87.30		1.390E+00	7.517E-01	9.796E-01	1.259E-01	1.419
	+	238.63	*	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
		300.09		4.076E+00	2.614E+00	3.941E+00	3.685E-01	1.034
PO-218	+	74.81		4.250E+00	8.827E-01	1.228E+00	1.382E-01	3.462
	+	77.11		3.867E+00	6.360E-01	7.281E-01	8.256E-02	5.311
	+	87.30		2.381E+00	1.279E+00	1.678E+00	1.873E-01	1.419
		241.98		2.679E+00	1.149E+00	1.666E+00	1.566E-01	1.608
	+	295.21		1.578E+00	5.444E-01	6.839E-01	6.584E-02	2.308
	+	351.92	*	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
RA-226	+	609.31	*	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
		768.36		1.047E+00	1.043E+00	1.791E+00	1.730E-01	0.584
		934.06		1.014E+00	1.595E+00	2.781E+00	2.639E-01	0.365
	+	1120.29		1.522E+00	7.006E-01	7.143E-01	6.378E-02	2.130
		1238.11		8.703E-01	1.193E+00	2.069E+00	1.658E-01	0.421
		1377.67		1.084E+00	1.379E+00	2.425E+00	2.072E-01	0.447
	+	1764.49		1.636E+00	5.011E-01	3.594E-01	2.066E-02	4.552
AC-228	+	338.32		1.939E+00	1.338E+00	1.289E+00	5.275E-01	1.504
	+	911.07	*	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
	+	969.11		2.054E+00	6.840E-01	5.276E-01	1.202E-01	3.892
RA-228	+	338.32		1.939E+00	1.338E+00	1.289E+00	5.275E-01	1.504
	+	911.07	*	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
	+	969.11		2.054E+00	6.840E-01	5.276E-01	1.202E-01	3.892
TH-228		84.40		-9.882E-01	4.254E+00	6.173E+00	7.928E-01	-0.160
	+	238.60	*	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.941
		300.10		4.064E+00	3.529E+00	3.941E+00	2.329E+00	1.031
TH-230	+	609.31	*	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
		768.36		1.047E+00	1.043E+00	1.791E+00	1.730E-01	0.584
		934.06		1.014E+00	1.595E+00	2.781E+00	2.639E-01	0.365
	+	1120.29		1.522E+00	7.006E-01	7.143E-01	6.378E-02	2.130
		1238.11		8.703E-01	1.193E+00	2.068E+00	1.658E-01	0.421
		1377.67		1.084E+00	1.379E+00	2.424E+00	2.072E-01	0.447
	+	1764.49		1.636E+00	5.011E-01	3.594E-01	2.066E-02	4.552
TH-232	+	338.32		1.939E+00	1.086E+00	1.289E+00	8.802E-02	1.504
	+	911.07	*	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
	+	969.11		2.054E+00	6.840E-01	5.276E-01	1.202E-01	3.892

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
		768.36		1.047E+00	1.043E+00	1.791E+00	1.730E-01	0.584
		934.06		1.014E+00	1.595E+00	2.781E+00	2.639E-01	0.365
	+	1120.29		1.522E+00	7.006E-01	7.143E-01	6.378E-02	2.130
		1238.11		8.703E-01	1.193E+00	2.068E+00	1.658E-01	0.421
		1377.67		1.084E+00	1.379E+00	2.424E+00	2.072E-01	0.447
	+	1764.49		1.636E+00	5.011E-01	3.594E-01	2.066E-02	4.552
NP-237	+	86.50	*	8.826E-01	5.032E-01	5.909E-01	1.310E-01	1.494
		95.87		-5.738E+00	2.293E+00	2.829E+00	6.974E-01	-2.029
AM-241	+	59.54	*	8.899E+00	9.113E-01	2.473E-01	2.400E-02	35.982
AM-243	+	74.67	*	3.999E-01	7.759E-02	1.155E-01	9.798E-03	3.463
	+	86.72		3.310E+01	1.759E+01	2.274E+01	1.839E+00	1.456
		117.66		-9.927E+00	8.366E+00	1.337E+01	1.423E+00	-0.743
		142.18		3.227E+01	4.063E+01	6.727E+01	6.378E+00	0.480
ANH-511	+	511.00	*	4.310E-02	1.673E-01	1.625E-01	1.098E-02	0.265

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.095E+00	1.472E+00	2.389E+00	1.761E-01	-0.458
NA-22		1274.54	*	1.308E-02	5.871E-02	9.784E-02	5.545E-03	0.134
NA-24		1368.53	*	4.251E-02	5.871E-02	Half-Life too short		
AL-26		1129.67		-1.547E+00	2.479E+00	3.825E+00	2.260E-01	-0.404
		1808.65	*	1.595E-03	4.387E-02	7.304E-02	4.176E-03	0.022
TI-44		67.85		9.847E-03	5.466E-02	8.078E-02	7.064E-03	0.122
	+	78.38	*	4.162E-01	6.067E-02	9.858E-02	8.236E-03	4.222
SC-46		889.25	*	1.729E-02	4.891E-02	8.405E-02	6.160E-03	0.206
	+	1120.51		2.558E-01	1.165E-01	1.624E-01	9.723E-03	1.575
V-48		944.10		-1.792E-01	1.078E+00	1.763E+00	1.255E-01	-0.102
		983.50	*	6.582E-02	9.265E-02	1.623E-01	1.124E-02	0.406
		1312.09		-2.406E-02	9.445E-02	1.490E-01	8.478E-03	-0.162
CR-51		320.08	*	4.360E-01	1.116E+00	1.886E+00	1.438E-01	0.231
MN-52		744.21		9.682E-03	2.495E-01	4.026E-01	3.067E-02	0.024
		848.13		1.580E+00	6.923E+00	1.178E+01	8.796E-01	0.134
		935.52		1.747E-01	2.612E-01	4.577E-01	3.274E-02	0.382
		1246.25		4.584E+00	7.231E+00	1.249E+01	7.020E-01	0.367
		1333.61		8.865E+00	5.694E+00	1.067E+01	6.095E-01	0.831
		1434.06	*	-3.070E-02	2.326E-01	3.688E-01	2.131E-02	-0.083
MN-54		834.83	*	1.296E-02	5.457E-02	9.275E-02	6.959E-03	0.140
CO-56		846.75	*	2.176E-02	5.138E-02	8.875E-02	6.631E-03	0.245
		977.42		-1.929E+00	4.732E+00	6.697E+00	4.658E-01	-0.288
		1037.82		-1.096E-01	4.107E-01	6.611E-01	4.753E-02	-0.166
		1175.09		2.772E+00	3.261E+00	5.699E+00	3.147E-01	0.486
		1238.25		8.783E-02	1.186E-01	2.048E-01	1.226E-02	0.429
		1360.21		-9.958E-01	1.247E+00	1.790E+00	1.026E-01	-0.556
		1771.40		2.328E-01	2.615E-01	4.741E-01	2.723E-02	0.491
CO-57		122.06	*	6.475E-02	5.776E-02	9.616E-02	1.067E-02	0.673
		136.48		-1.189E-01	4.867E-01	7.937E-01	8.348E-02	-0.150

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-58		810.76	*	-2.680E-02	5.521E-02	8.903E-02	6.747E-03	-0.301
FE-59		142.65		3.863E-01	6.080E+00	9.940E+00	9.384E-01	0.039
		192.34		1.495E-01	2.864E+00	4.290E+00	5.446E-01	0.035
		1099.22	*	-9.336E-02	1.285E-01	1.977E-01	1.404E-02	-0.472
		1291.56		-2.603E-02	1.473E-01	2.349E-01	1.720E-02	-0.111
CO-60		1173.22		7.010E-02	6.589E-02	1.169E-01	6.454E-03	0.599
		1332.49	*	4.083E-02	5.810E-02	1.013E-01	5.785E-03	0.403
ZN-65		1115.52	*	9.126E-02	1.453E-01	2.234E-01	1.350E-02	0.408
GE-68		1077.35	*	2.627E-01	1.627E+00	2.722E+00	1.722E-01	0.097
AS-73		53.44	*	-4.795E-01	7.224E-01	9.830E-01	7.976E-02	-0.488
AS-74		595.88	*	1.753E-02	2.188E-01	3.574E-01	2.595E-02	0.049
		634.78		1.199E-01	8.821E-01	1.439E+00	1.070E-01	0.083
SE-75		66.05		-2.861E+00	5.356E+00	7.775E+00	8.243E-01	-0.368
		96.73		-4.906E+00	1.606E+00	2.275E+00	3.119E-01	-2.157
		121.11		1.560E-01	3.067E-01	5.080E-01	6.671E-02	0.307
		136.00		-1.210E-02	9.039E-02	1.478E-01	1.484E-02	-0.082
		198.60		-2.897E-01	5.025E+00	8.119E+00	6.928E-01	-0.036
		264.65	*	-8.491E-02	1.326E-01	2.089E-01	1.576E-02	-0.406
		279.53		-5.485E-02	3.087E-01	5.190E-01	4.049E-02	-0.106
		303.91		-8.296E+00	6.392E+00	1.039E+01	1.089E+00	-0.799
		400.65		6.111E-01	1.012E+00	1.696E+00	1.551E-01	0.360
BR-77	+	87.88		3.485E+02	1.852E+02	2.561E+02	2.063E+01	1.361
		200.40		-1.188E+02	2.459E+02	3.940E+02	2.943E+01	-0.301
	+	239.00		1.605E+02	2.057E+01	3.049E+01	2.300E+00	5.265
		249.79		-8.298E+01	1.064E+02	1.676E+02	1.263E+01	-0.495
		281.68		-3.592E+01	1.393E+02	2.338E+02	1.734E+01	-0.154
		297.23		1.394E+02	9.917E+01	1.493E+02	1.091E+01	0.934
		303.76		-3.793E+02	2.895E+02	4.728E+02	3.427E+01	-0.802
		439.47		-3.090E+01	3.518E+02	5.810E+02	3.605E+01	-0.053
		484.57		-6.969E+02	5.096E+02	8.116E+02	5.330E+01	-0.859
		520.65	*	1.336E+01	1.938E+01	3.232E+01	2.205E+00	0.413
		574.64		-5.567E+01	2.991E+02	4.847E+02	3.466E+01	-0.115
		578.91		-4.248E+00	1.400E+02	1.970E+02	1.414E+01	-0.022
		585.48		1.130E+03	2.878E+02	4.612E+02	3.325E+01	2.449
		755.35		1.417E+02	1.150E+02	2.036E+02	1.551E+01	0.696
		817.79		3.641E+01	9.347E+01	1.613E+02	1.217E+01	0.226
SR-82		698.33		1.641E+01	4.577E+01	7.583E+01	5.758E+00	0.216
		776.49	*	-1.965E-01	4.364E-01	7.043E-01	5.354E-02	-0.279
		1395.20		-3.168E+00	1.196E+01	1.856E+01	1.069E+00	-0.171
RB-83		520.41	*	3.743E-03	2.405E-01	3.945E-01	2.692E-02	0.009
		529.64		-9.845E-02	3.522E-01	5.726E-01	3.941E-02	-0.172
		552.65		6.784E-02	5.596E-01	9.185E-01	6.454E-02	0.074
RB-84		881.50	*	-4.688E-02	8.212E-02	1.293E-01	9.514E-03	-0.363
KR-85		513.99	*	2.261E+01	2.695E+01	3.937E+01	2.669E+00	0.574
SR-85		513.99	*	1.133E-01	1.350E-01	1.973E-01	1.337E-02	0.574
RB-86		1076.63	*	-1.472E-01	9.791E-01	1.590E+00	1.007E-01	-0.093
Y-88		898.02		2.111E-02	5.776E-02	9.899E-02	7.270E-03	0.213
		1836.01	*	-2.761E-02	5.210E-02	6.845E-02	3.908E-03	-0.403
ZR-88		392.90	*	-8.963E-02	1.169E-01	1.911E-01	1.106E-02	-0.469

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91		1204.90	*	1.932E+01	2.656E+01	4.593E+01	2.557E+00	0.421
NB-94		702.63	*	-4.375E-03	4.557E-02	7.297E-02	5.544E-03	-0.060
		871.10		-3.212E-02	4.634E-02	7.256E-02	5.366E-03	-0.443
NB-95		765.79	*	7.228E-03	5.990E-02	9.715E-02	7.394E-03	0.074
NB-95M		235.69	*	1.056E-02	3.791E-01	5.318E-01	4.755E-02	0.020
ZR-95		724.18		1.468E-01	1.427E-01	2.199E-01	1.858E-02	0.668
		756.15	*	1.108E-01	9.113E-02	1.610E-01	1.384E-02	0.688
NB-97		657.90	*	1.139E+00	9.113E-02	Half-Life too short		
		1024.50		8.231E-02	9.113E-02	Half-Life too short		
ZR-97		254.15		-3.473E-01	9.113E-02	Half-Life too short		
		355.39		5.703E-01	9.113E-02	Half-Life too short		
		507.63	*	4.297E-02	9.113E-02	Half-Life too short		
		602.52		1.374E-01	9.113E-02	Half-Life too short		
		1021.30		3.576E-01	9.113E-02	Half-Life too short		
		1147.95		-1.050E-01	9.113E-02	Half-Life too short		
		1362.66		-7.336E-01	9.113E-02	Half-Life too short		
		1750.46		1.305E+00	9.113E-02	Half-Life too short		
MO-99		140.51		-2.562E+01	3.572E+01	5.643E+01	1.581E+01	-0.454
		181.06		2.603E+01	2.825E+01	4.053E+01	7.189E+00	0.642
		366.43		1.231E+01	1.763E+02	2.944E+02	1.866E+01	0.042
		739.58	*	3.126E+00	9.325E+00	1.541E+01	2.255E+00	0.203
		778.00		5.275E+00	2.391E+01	4.087E+01	3.107E+00	0.129
TC-99M		140.51	*	-1.511E+08	2.391E+01	Half-Life too short		
RH-101		127.23		2.132E-02	7.286E-02	1.202E-01	1.286E-02	0.177
		198.01	*	-1.539E-02	9.304E-02	1.501E-01	1.120E-02	-0.103
		325.23		-3.740E-01	7.008E-01	1.162E+00	8.149E-02	-0.322
RH-102		418.52		-6.497E-01	1.216E+00	1.996E+00	1.202E-01	-0.326
		475.06	*	7.740E-02	1.421E-01	2.361E-01	1.533E-02	0.328
		631.29		-1.837E-01	1.499E-01	2.304E-01	1.709E-02	-0.797
		697.49		6.129E-02	1.107E-01	1.858E-01	1.411E-02	0.330
		766.84		5.754E-02	1.568E-01	2.585E-01	1.967E-02	0.223
		1046.59		8.929E-02	1.669E-01	2.876E-01	1.882E-02	0.310
		1112.84		1.591E-01	3.504E-01	5.234E-01	3.167E-02	0.304
RU-103		497.08	*	1.194E-02	1.520E-01	2.503E-01	3.269E-02	0.048
	+	610.33		1.651E+01	4.025E+00	4.324E+00	6.942E-01	3.818
RH-106	+	511.85		2.144E-01	8.322E-01	9.585E-01	6.484E-02	0.224
		621.84	*	-1.580E-01	8.087E-01	1.303E+00	1.641E-01	-0.121
		1050.47		-1.590E+00	3.171E+00	4.988E+00	3.251E-01	-0.319
RU-106	+	511.85		2.144E-01	8.322E-01	9.585E-01	6.484E-02	0.224
		621.84	*	-1.580E-01	8.085E-01	1.303E+00	9.616E-02	-0.121
		1050.47		-1.590E+00	3.171E+00	4.988E+00	3.251E-01	-0.319
AG-108M		433.93	*	-5.453E-02	1.485E-01	2.441E-01	1.618E-02	-0.223
		614.37		2.132E-02	1.104E-01	1.568E-01	1.214E-02	0.136
		722.95		2.139E-03	6.129E-02	8.545E-02	6.831E-03	0.025
AG-110M		657.75	*	2.415E+00	2.546E-01	3.397E-01	2.654E-02	7.108
		677.61		5.821E-01	4.187E-01	7.458E-01	5.846E-02	0.780
		706.67		-2.363E-01	2.770E-01	4.132E-01	3.252E-02	-0.572
		763.93		-3.109E-01	2.405E-01	3.433E-01	2.707E-02	-0.906
		884.67		4.306E-03	6.171E-02	1.035E-01	7.940E-03	0.042

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		937.48		-7.708E-02	1.512E-01	2.399E-01	1.803E-02	-0.321
		1384.27		-3.043E-02	2.065E-01	3.279E-01	2.003E-02	-0.093
IN-111		171.28		-5.846E-01	1.465E+00	2.364E+00	1.734E-01	-0.247
		245.39	*	-3.758E+00	1.929E+00	2.944E+00	2.220E-01	-1.277
IN-113M		391.69	*	3.476E-03	1.693E-01	2.816E-01	1.737E-02	0.012
SN-113		391.69	*	3.476E-03	1.693E-01	2.816E-01	1.737E-02	0.012
IN-114M		190.27	*	5.155E-01	5.774E-01	8.330E-01	6.188E-02	0.619
CD-115		260.90		-1.564E+02	2.021E+02	3.177E+02	2.385E+01	-0.492
		492.35		7.622E+00	7.340E+01	1.210E+02	8.015E+00	0.063
		527.90	*	-6.717E+00	1.873E+01	3.039E+01	2.088E+00	-0.221
SN-117M		156.02		-2.577E+00	4.801E+00	7.748E+00	6.396E-01	-0.333
		158.56	*	-2.162E-02	1.178E-01	1.915E-01	1.535E-02	-0.113
SB-122		563.90	*	8.890E-01	3.174E+00	5.233E+00	3.711E-01	0.170
		692.80		-1.864E+01	3.579E+01	5.543E+01	4.205E+00	-0.336
I-123		159.00	*	-1.291E-03	3.579E+01	Half-Life too short		
		528.96		-3.495E+01	3.579E+01	Half-Life too short		
TE-123M		159.00	*	-1.013E-04	6.725E-02	1.097E-01	8.808E-03	-0.001
I-124		602.71	*	-1.404E-01	1.313E+00	1.834E+00	1.338E-01	-0.077
		722.78		1.217E-01	4.448E+00	6.196E+00	4.717E-01	0.020
		1325.50		6.123E+00	3.534E+01	5.851E+01	3.338E+00	0.105
		1376.25		1.598E+01	2.788E+01	4.829E+01	2.774E+00	0.331
		1509.49		8.999E+00	1.222E+01	2.206E+01	1.281E+00	0.408
		1691.02		-1.349E+00	3.176E+00	4.835E+00	2.798E-01	-0.279
SB-124		602.71		-1.145E-02	1.070E-01	1.496E-01	1.091E-02	-0.077
		645.85		1.077E-02	1.349E+00	2.188E+00	1.765E-01	0.005
		709.31		1.976E+00	3.489E+00	5.891E+00	4.480E-01	0.335
		713.82		7.124E-01	2.163E+00	3.579E+00	4.057E-01	0.199
		722.78		1.438E-02	5.257E-01	7.323E-01	5.729E-02	0.020
	+	968.20		2.061E+01	5.211E+00	8.530E+00	5.973E-01	2.417
		1045.16		2.952E+00	3.423E+00	6.052E+00	3.966E-01	0.488
		1325.50		7.728E-01	4.460E+00	7.385E+00	4.213E-01	0.105
		1368.21		1.392E+00	2.116E+00	3.729E+00	4.416E-01	0.373
		1436.60		3.116E+00	4.475E+00	7.976E+00	4.611E-01	0.391
		1691.02	*	-3.761E-02	8.852E-02	1.348E-01	8.469E-03	-0.279
SB-125		427.89	*	-2.056E-01	4.041E-01	6.628E-01	4.202E-02	-0.310
		463.38		1.455E+00	1.370E+00	2.292E+00	1.670E-01	0.635
		600.56		-9.130E-02	4.395E-01	7.094E-01	5.694E-02	-0.129
		635.90		3.851E-01	7.284E-01	1.205E+00	9.926E-02	0.319
TE-125M		109.28	*	-1.789E+00	1.855E+01	3.056E+01	3.474E+00	-0.059
I-126		388.63		6.143E-01	6.977E-01	1.177E+00	6.887E-02	0.522
		666.33	*	1.384E-01	2.705E-01	3.972E-01	2.996E-02	0.348
		753.82		7.643E-01	1.732E+00	2.890E+00	2.201E-01	0.264
SB-126		223.80		3.250E+00	1.024E+01	1.658E+01	1.249E+00	0.196
		278.60		1.122E+00	6.583E+00	1.054E+01	7.834E-01	0.106
	+	296.50		1.390E+01	4.715E+00	6.559E+00	4.796E-01	2.119
		414.70		3.367E-01	2.769E-01	4.678E-01	2.801E-02	0.720
		415.30		1.778E+01	2.309E+01	3.877E+01	2.324E+00	0.459
		555.20		-1.213E+01	9.997E+00	1.559E+01	1.098E+00	-0.778
		573.80		1.625E-01	2.467E+00	4.034E+00	2.883E-01	0.040

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		593.00		2.050E-01	2.134E+00	3.489E+00	2.528E-01	0.059
		656.30		1.104E+00	9.885E+00	1.390E+01	1.044E+00	0.079
		666.33		5.753E-02	1.125E-01	1.652E-01	1.246E-02	0.348
		675.00		5.799E-01	2.492E+00	4.103E+00	3.101E-01	0.141
		695.00		-3.074E-04	9.952E-02	1.606E-01	1.219E-02	-0.002
		697.00		1.791E-01	3.427E-01	5.741E-01	4.358E-02	0.312
		720.50	*	1.522E-02	1.997E-01	2.798E-01	2.130E-02	0.054
		856.80		-1.231E-01	5.934E-01	8.308E-01	6.183E-02	-0.148
		989.30		-1.036E+00	1.562E+00	2.429E+00	1.674E-01	-0.427
		1034.80		-4.009E+00	1.065E+01	1.696E+01	1.123E+00	-0.236
		1213.00		3.088E+00	6.268E+00	1.063E+01	5.930E-01	0.290
SB-127	+	61.10		2.322E+03	2.652E+02	1.267E+02	1.379E+01	18.332
		252.40		-3.417E+00	9.007E+00	1.414E+01	5.890E+00	-0.242
		290.80		2.603E+01	4.872E+01	7.238E+01	6.900E+00	0.360
		411.60		-1.994E+01	3.353E+01	5.484E+01	7.659E+00	-0.364
		444.90		1.061E+01	3.168E+01	5.262E+01	5.477E+00	0.202
		473.00		3.149E+00	5.730E+00	9.511E+00	1.041E+00	0.331
		543.00		-8.118E+00	3.565E+01	5.791E+01	7.506E+00	-0.140
		603.60		-6.846E+00	2.176E+01	3.002E+01	3.315E+00	-0.228
		685.20	*	2.999E-01	1.225E+00	2.019E+00	2.011E-01	0.149
		698.50		6.951E+00	1.451E+01	2.420E+01	3.590E+00	0.287
		722.20		-6.721E+00	3.018E+01	4.073E+01	3.964E+00	-0.165
		783.80		1.152E+00	3.094E+00	5.337E+00	5.945E-01	0.216
XE-127		57.60		6.237E+01	8.746E+00	1.149E+01	1.011E+00	5.426
		145.22		-6.512E-02	1.565E+00	2.552E+00	2.353E-01	-0.026
		172.10		-1.319E-01	2.873E-01	4.629E-01	3.397E-02	-0.285
		202.84	*	1.274E-02	1.280E-01	2.073E-01	1.550E-02	0.061
		374.96		1.210E-01	7.002E-01	1.170E+00	7.209E-02	0.103
I-131		80.18		2.125E+00	5.916E+00	8.732E+00	7.279E-01	0.243
		284.30		-4.152E-01	3.708E+00	6.237E+00	4.930E-01	-0.067
		364.48	*	-1.786E-01	3.476E-01	5.739E-01	4.004E-02	-0.311
		636.97		3.099E+00	3.428E+00	5.746E+00	4.585E-01	0.539
		722.89		2.272E-01	8.540E+00	1.189E+01	9.110E-01	0.019
TE-132	+	49.72		1.347E+01	1.007E+01	1.087E+01	1.020E+00	1.239
		111.76		-3.419E+00	3.898E+01	6.419E+01	7.414E+00	-0.053
		116.30		1.665E+00	3.722E+01	6.136E+01	7.321E+00	0.027
		228.16	*	-2.454E-01	1.246E+00	1.997E+00	2.947E-01	-0.123
BA-133		53.15		-1.665E+00	2.907E+00	4.258E+00	3.434E-01	-0.391
		79.62		4.299E+00	2.113E+00	3.089E+00	4.650E-01	1.392
		81.00		-1.233E-01	1.573E-01	2.244E-01	3.520E-02	-0.549
		276.40		-3.176E-02	1.115E+00	1.777E+00	2.449E-01	-0.018
		302.84		-2.823E-01	4.375E-01	7.245E-01	9.018E-02	-0.390
		356.01	*	-2.272E-02	1.727E-01	2.498E-01	2.984E-02	-0.091
		383.85		1.527E-01	1.135E+00	1.893E+00	2.074E-01	0.081
I-133	+	510.53		7.591E-02	1.135E+00	Half-Life too short		
		529.87	*	-1.015E-03	1.135E+00	Half-Life too short		
		706.58		-7.937E-02	1.135E+00	Half-Life too short		
		856.28		-1.095E-02	1.135E+00	Half-Life too short		
		875.33		1.109E-02	1.135E+00	Half-Life too short		

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		1236.41		1.788E-01	1.135E+00	Half-Life too short		
		1298.22		-2.968E-02	1.135E+00	Half-Life too short		
CS-134		475.35		3.981E+00	9.262E+00	1.537E+01	9.983E-01	0.259
		563.23		5.628E-04	9.722E-01	1.588E+00	1.141E-01	0.000
		569.32		-1.069E-01	5.269E-01	8.537E-01	6.201E-02	-0.125
		604.70		3.633E-02	9.213E-02	1.323E-01	9.700E-03	0.274
		795.84	*	1.128E-01	6.156E-02	1.157E-01	8.848E-03	0.975
		801.93		-4.568E-01	5.326E-01	8.361E-01	6.375E-02	-0.546
		1038.57		-2.795E+00	5.430E+00	8.541E+00	5.634E-01	-0.327
		1167.94		-3.232E+00	3.558E+00	5.352E+00	2.980E-01	-0.604
		1365.15		2.420E-01	1.532E+00	2.540E+00	1.603E-01	0.095
CS-135		268.24	*	5.563E-01	4.711E-01	7.664E-01	6.898E-02	0.726
I-135		288.45		1.623E+08	4.711E-01	Half-Life too short		
		417.63		-4.137E+08	4.711E-01	Half-Life too short		
		546.56		6.188E+07	4.711E-01	Half-Life too short		
		836.80		5.977E+07	4.711E-01	Half-Life too short		
		1038.76		-2.010E+07	4.711E-01	Half-Life too short		
		1124.00		1.520E+08	4.711E-01	Half-Life too short		
		1131.51		-4.181E+06	4.711E-01	Half-Life too short		
		1260.41	*	-1.537E+07	4.711E-01	Half-Life too short		
	+	1457.56		6.135E+07	4.711E-01	Half-Life too short		
		1678.03		4.933E+06	4.711E-01	Half-Life too short		
		1706.46		1.443E+08	4.711E-01	Half-Life too short		
		1791.20		5.085E+07	4.711E-01	Half-Life too short		
CS-136		66.91		-3.906E-03	7.941E-01	1.168E+00	1.814E-01	-0.003
	+	86.29		3.494E+00	1.887E+00	2.552E+00	3.192E-01	1.369
		153.22		7.001E-01	1.369E+00	2.254E+00	2.150E-01	0.311
		163.89		2.146E-01	2.334E+00	3.809E+00	3.304E-01	0.056
		176.55		-4.133E-01	8.286E-01	1.332E+00	1.058E-01	-0.310
		273.65		-1.052E+00	1.218E+00	1.905E+00	1.545E-01	-0.552
		340.57		7.340E-01	4.187E-01	6.317E-01	4.490E-02	1.162
		818.51		6.897E-02	8.507E-02	1.516E-01	1.144E-02	0.455
		1048.07	*	2.445E-02	1.346E-01	2.256E-01	1.581E-02	0.108
		1235.34		3.012E-01	7.252E-01	1.229E+00	1.213E-01	0.245
CE-139		165.85	*	7.161E-03	7.265E-02	1.185E-01	8.667E-03	0.060
BA-140		162.64		4.550E-02	1.634E+00	2.663E+00	2.181E-01	0.017
		304.84		-4.387E+00	3.681E+00	5.707E+00	1.577E+00	-0.769
		423.70		3.795E+00	7.356E+00	1.213E+01	3.862E+00	0.313
		537.32	*	-2.618E-01	7.666E-01	1.235E+00	4.044E-01	-0.212
LA-140		328.77		5.533E-01	8.165E-01	1.383E+00	1.045E-01	0.400
		432.53		3.082E+00	8.260E+00	1.375E+01	9.244E-01	0.224
		487.03		2.966E-02	4.962E-01	8.176E-01	5.943E-02	0.036
		751.79		-1.661E+00	2.060E+00	3.058E+00	2.644E-01	-0.543
		815.85		1.883E-01	3.782E-01	6.581E-01	5.701E-02	0.286
		867.82		6.011E-01	1.756E+00	2.814E+00	2.233E-01	0.214
		919.63		-1.307E+00	3.337E+00	5.353E+00	5.111E-01	-0.244
		925.24		2.749E-01	1.309E+00	2.218E+00	1.738E-01	0.124
		1596.49	*	-1.089E-01	9.472E-02	1.178E-01	6.847E-03	-0.924
CE-141		145.44	*	-3.980E-02	1.417E-01	2.301E-01	2.151E-02	-0.173

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CE-143		57.37		1.178E-03	1.417E-01	Half-Life too short		
		231.56		-6.023E-04	1.417E-01	Half-Life too short		
		293.26	*	1.947E-04	1.417E-01	Half-Life too short		
	+	350.59		1.170E-02	1.417E-01	Half-Life too short		
		490.36		6.997E-04	1.417E-01	Half-Life too short		
		664.57		2.074E-01	1.417E-01	Half-Life too short		
		721.93		-9.055E-05	1.417E-01	Half-Life too short		
CE-144		80.11		1.235E+00	3.270E+00	4.829E+00	4.006E-01	0.256
		133.54	*	-3.680E-01	4.786E-01	7.678E-01	1.266E-01	-0.479
PM-144		476.78		-2.852E-01	3.230E-01	5.225E-01	3.942E-02	-0.546
		618.01		-3.587E-02	8.206E-02	1.309E-01	1.000E-02	-0.274
		696.49	*	2.320E-02	4.937E-02	8.242E-02	6.258E-03	0.281
		778.57		9.660E-01	2.696E+00	4.662E+00	3.544E-01	0.207
PR-144		696.49	*	1.570E+00	3.342E+00	5.579E+00	4.235E-01	0.281
		1489.15		-5.853E+00	1.163E+01	1.664E+01	9.653E-01	-0.352
PM-146		453.90	*	1.285E-01	2.156E-01	3.590E-01	3.225E-02	0.358
		633.02		-1.915E-02	3.726E+00	6.046E+00	2.244E+00	-0.003
		735.90		2.564E-02	2.227E-01	3.280E-01	9.289E-02	0.078
		747.13		9.837E-02	1.183E-01	2.031E-01	2.731E-02	0.484
ND-147		91.11		5.076E-01	4.455E-01	6.613E-01	5.973E-02	0.768
		319.41		-2.016E+00	9.141E+00	1.527E+01	1.082E+00	-0.132
		439.89		-3.135E+00	2.369E+01	3.909E+01	2.428E+00	-0.080
		531.02	*	-5.381E-01	1.653E+00	2.682E+00	3.761E-01	-0.201
PM-149		285.90	*	-4.394E+01	1.389E+02	2.325E+02	3.462E+01	-0.189
EU-152		121.78		1.954E-01	1.689E-01	2.807E-01	3.399E-02	0.696
		244.69		-1.205E+00	1.002E+00	1.564E+00	1.179E-01	-0.770
		344.27	*	-3.327E-02	3.494E-01	5.508E-01	4.065E-02	-0.060
		443.98		1.808E+00	4.612E+00	7.671E+00	4.789E-01	0.236
		778.89		-2.440E-02	3.189E-01	5.318E-01	4.042E-02	-0.046
		867.32		2.378E-01	1.219E+00	1.866E+00	1.382E-01	0.127
	+	964.01		1.056E+00	5.488E-01	7.881E-01	5.535E-02	1.340
		1085.78		-1.429E-01	5.215E-01	8.357E-01	5.234E-02	-0.171
		1112.02		2.230E-01	4.856E-01	7.520E-01	4.554E-02	0.297
		1407.95		8.920E-02	2.327E-01	3.962E-01	2.284E-02	0.225
GD-153		69.67		-1.257E+00	2.073E+00	3.002E+00	2.604E-01	-0.419
		83.37		-3.483E+00	2.599E+01	3.527E+01	2.889E+00	-0.099
		97.43	*	-1.847E-01	1.485E-01	2.391E-01	2.105E-02	-0.772
		103.18		4.349E-02	2.081E-01	3.452E-01	3.210E-02	0.126
EU-154		123.07		7.974E-02	1.197E-01	1.983E-01	2.633E-02	0.402
		247.94		1.596E-01	1.086E+00	1.746E+00	1.866E-01	0.091
		591.81		4.158E-01	1.617E+00	2.658E+00	2.842E-01	0.156
		723.30		-1.064E-02	2.610E-01	3.605E-01	3.111E-02	-0.030
		756.87		3.681E-01	1.065E+00	1.761E+00	1.985E-01	0.209
		873.19		5.979E-02	3.844E-01	6.499E-01	7.415E-02	0.092
		996.32		-6.768E-02	4.807E-01	7.852E-01	1.333E-01	-0.086
		1004.76		-2.448E-01	3.006E-01	4.595E-01	4.764E-02	-0.533
		1274.45	*	3.657E-02	1.642E-01	2.736E-01	2.531E-02	0.134
EU-155	+	48.70		2.444E+00	1.822E+00	1.913E+00	1.402E-01	1.278
	+	60.01		2.892E+02	2.800E+01	1.656E+01	1.505E+00	17.461

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.54		3.617E-01	1.923E-01	2.636E-01	2.159E-02	1.372
		105.31	*	-1.574E-01	2.172E-01	3.533E-01	3.386E-02	-0.446
TB-160	+	86.79		9.468E-01	5.032E-01	6.901E-01	5.581E-02	1.372
		197.04		2.503E-01	1.554E+00	2.522E+00	1.880E-01	0.099
		215.65		2.136E+00	2.088E+00	3.420E+00	2.571E-01	0.625
		298.57		6.497E-01	3.677E-01	5.588E-01	4.077E-02	1.163
		879.36	*	-5.707E-02	1.638E-01	2.638E-01	1.943E-02	-0.216
		962.29		1.354E+00	8.873E-01	1.451E+00	1.020E-01	0.933
		966.15		1.361E+00	3.571E-01	6.922E-01	4.854E-02	1.966
		1177.93		-1.852E-01	5.241E-01	8.332E-01	4.605E-02	-0.222
		1271.85		-6.238E-02	9.305E-01	1.506E+00	8.511E-02	-0.041
HO-166M		80.57		-2.067E-01	4.292E-01	6.208E-01	5.141E-02	-0.333
	+	184.41		3.287E-01	1.583E-01	1.509E-01	1.117E-02	2.178
		280.46		-3.732E-02	2.471E-01	4.156E-01	3.085E-02	-0.090
		410.95		-3.151E-01	9.860E-01	1.626E+00	9.683E-02	-0.194
		711.68	*	-1.007E-03	8.167E-02	1.315E-01	1.000E-02	-0.008
		752.31		-1.380E-01	3.698E-01	5.741E-01	4.373E-02	-0.240
		810.29		-2.323E-02	8.436E-02	1.383E-01	1.045E-02	-0.168
TM-171	+	51.35		3.907E+01	2.913E+01	3.241E+01	2.518E+00	1.205
		52.39		5.673E+00	1.197E+01	1.788E+01	1.420E+00	0.317
	+	59.40		1.519E+03	1.470E+02	8.777E+01	7.982E+00	17.308
		66.72	*	4.263E+00	3.199E+01	4.723E+01	4.152E+00	0.090
LU-176	+	88.36		7.128E-01	3.789E-01	5.358E-01	4.329E-02	1.330
		201.83		-1.180E-02	8.180E-02	1.319E-01	9.859E-03	-0.089
		306.84	*	-7.069E-03	7.676E-02	1.287E-01	9.295E-03	-0.055
		401.10		1.150E+01	2.684E+01	4.490E+01	2.633E+00	0.256
LU-177		112.95		1.299E+00	2.718E+00	4.515E+00	4.601E-01	0.288
		208.36	*	1.043E+00	2.403E+00	3.907E+00	2.929E-01	0.267
LU-177M		52.97		-5.866E-01	1.289E+00	1.892E+00	1.521E-01	-0.310
		54.07		-4.612E-01	8.649E-01	1.068E+00	8.777E-02	-0.432
	+	61.30		8.892E+01	8.607E+00	4.574E+00	4.130E-01	19.440
		121.62		7.831E-01	8.566E-01	1.425E+00	1.573E-01	0.550
		147.16		3.639E-01	1.511E+00	2.481E+00	2.246E-01	0.147
		171.86		-5.541E-01	1.196E+00	1.926E+00	1.413E-01	-0.288
		218.09		-9.134E-01	2.423E+00	3.877E+00	2.916E-01	-0.236
		268.79		3.797E+00	2.360E+00	3.865E+00	2.892E-01	0.982
		319.02		-4.298E-01	8.113E-01	1.346E+00	9.543E-02	-0.319
		367.43		-3.283E-01	3.272E+00	5.445E+00	3.440E-01	-0.060
		413.65	*	3.115E-01	7.189E-01	1.201E+00	7.181E-02	0.259
HF-181		56.28		-7.007E-01	1.078E+00	1.325E+00	1.137E-01	-0.529
		57.53		4.196E+00	6.724E-01	9.304E-01	8.175E-02	4.510
	+	65.20		1.840E+00	1.138E+00	1.526E+00	1.351E-01	1.206
		133.02		-1.193E-01	1.485E-01	2.393E-01	2.450E-02	-0.498
		136.25		-3.076E-01	1.033E+00	1.683E+00	1.679E-01	-0.183
		345.85		-3.231E-01	6.960E-01	1.047E+00	7.025E-02	-0.309
		482.03	*	-2.001E-02	1.782E-01	2.928E-01	1.917E-02	-0.068
W-181		56.28		-2.800E-01	4.319E-01	5.309E-01	4.555E-02	-0.528
		57.53		1.670E+00	2.689E-01	3.726E-01	3.273E-02	4.482
	+	65.20	*	7.320E-01	4.526E-01	6.069E-01	5.375E-02	1.206

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		67.75		4.295E-02	1.279E-01	1.895E-01	1.658E-02	0.227
		100.10		-8.613E-02	3.397E-01	5.595E-01	5.053E-02	-0.154
		152.43		1.335E-01	7.768E-01	1.272E+00	1.092E-01	0.105
		222.10		3.442E-01	9.776E-01	1.584E+00	1.193E-01	0.217
		1001.68		1.326E+00	2.619E+00	4.526E+00	3.088E-01	0.293
	+	1121.28		7.099E-01	3.235E-01	4.541E-01	2.715E-02	1.564
		1189.05		-1.569E-01	4.346E-01	6.894E-01	3.821E-02	-0.228
		1221.42	*	3.004E-03	2.789E-01	4.562E-01	2.550E-02	0.007
		1230.97		1.106E-01	6.534E-01	1.082E+00	6.061E-02	0.102
RE-183		57.98		5.341E+00	5.425E-01	4.933E-01	4.371E-02	10.826
	+	59.32		6.105E+00	5.909E-01	3.530E-01	3.206E-02	17.293
		67.20		-4.446E-03	2.254E-01	3.314E-01	2.907E-02	-0.013
		162.32	*	-1.215E-02	2.627E-01	4.277E-01	3.275E-02	-0.028
		208.81		1.539E+00	2.648E+00	4.315E+00	3.236E-01	0.357
		291.72		-2.158E-01	3.098E+00	4.537E+00	3.334E-01	-0.048
RE-184		57.98		1.993E+01	2.025E+00	1.841E+00	1.631E-01	10.826
	+	59.32		2.276E+01	2.203E+00	1.316E+00	1.195E-01	17.293
		67.20		-1.659E-02	8.408E-01	1.237E+00	1.085E-01	-0.013
		161.27		-1.230E-01	8.533E-01	1.387E+00	1.076E-01	-0.089
		216.55		7.336E-01	7.512E-01	1.229E+00	9.243E-02	0.597
		252.85	*	-2.381E-01	7.022E-01	1.117E+00	8.408E-02	-0.213
		318.01		-6.677E-01	1.399E+00	2.325E+00	1.651E-01	-0.287
		792.07		-2.632E-02	1.260E+00	2.109E+00	1.600E-01	-0.012
		903.28		3.174E-01	1.546E+00	2.435E+00	1.772E-01	0.130
		920.93		6.318E-02	5.902E-01	9.909E-01	7.146E-02	0.064
OS-185	+	59.72		1.675E+01	1.621E+00	9.636E-01	8.769E-02	17.379
	+	61.14		9.661E+00	9.351E-01	5.211E-01	4.709E-02	18.538
		69.30		-3.533E-01	3.946E-01	5.268E-01	4.576E-02	-0.671
		592.07		3.120E+00	6.438E+00	1.068E+01	7.732E-01	0.292
		646.12	*	-7.296E-03	1.166E-01	1.886E-01	1.410E-02	-0.039
		717.42		5.158E-02	1.208E+00	1.953E+00	1.487E-01	0.026
		874.81		7.164E-01	6.980E-01	1.269E+00	9.368E-02	0.565
		880.27		-7.477E-01	9.445E-01	1.452E+00	1.069E-01	-0.515
RE-188		155.03	*	1.499E-01	3.933E-01	6.461E-01	5.393E-02	0.232
		477.96		-5.080E-01	1.401E+01	2.305E+01	1.502E+00	-0.022
		633.10		4.058E-01	7.390E+00	1.202E+01	8.927E-01	0.034
W-188	+	63.58		9.704E+01	6.001E+01	8.084E+01	7.216E+00	1.200
		227.08		-1.273E+01	3.599E+01	5.750E+01	4.334E+00	-0.221
		290.67	*	1.358E+01	2.449E+01	3.642E+01	2.680E+00	0.373
IR-192	+	295.96		1.179E+00	4.001E-01	5.556E-01	4.106E-02	2.122
		308.46		-8.938E-02	2.956E-01	4.937E-01	3.583E-02	-0.181
		316.51	*	-1.045E-01	1.068E-01	1.754E-01	1.253E-02	-0.596
		468.07		-1.245E-01	3.329E-01	5.454E-01	3.953E-02	-0.228
		604.41		2.154E-01	1.230E+00	1.745E+00	2.127E-01	0.123
		612.46		2.966E+00	1.980E+00	2.980E+00	2.624E-01	0.996
AU-195	+	65.12		3.397E-01	2.100E-01	2.831E-01	2.508E-02	1.200
		66.83		-7.825E-04	1.060E-01	1.559E-01	1.370E-02	-0.005
	+	75.70		1.283E+00	2.490E-01	5.113E-01	4.319E-02	2.510
		98.88	*	-1.183E-01	4.261E-01	7.016E-01	6.264E-02	-0.169

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		129.76		5.829E+00	6.482E+00	1.076E+01	1.129E+00	0.542
TL-200		367.94	*	2.312E-05	6.482E+00	Half-Life too short		
		579.30		7.976E-04	6.482E+00	Half-Life too short		
		828.27		1.332E-03	6.482E+00	Half-Life too short		
		1205.75		1.469E-04	6.482E+00	Half-Life too short		
TL-201		68.90		-2.933E+00	3.853E+00	5.167E+00	4.497E-01	-0.568
		70.82		-4.941E-02	2.125E+00	3.123E+00	2.694E-01	-0.016
		80.30		-1.600E+00	4.805E+00	6.979E+00	5.785E-01	-0.229
		135.34		-7.872E+00	3.569E+01	5.827E+01	5.854E+00	-0.135
		167.43	*	-1.094E+00	1.052E+01	1.709E+01	1.250E+00	-0.064
TL-202		68.90		-3.839E-01	5.042E-01	6.761E-01	5.884E-02	-0.568
		70.82		-6.449E-03	2.774E-01	4.075E-01	3.516E-02	-0.016
		80.30		-2.088E-01	6.273E-01	9.110E-01	7.552E-02	-0.229
		439.56	*	-8.373E-02	2.862E-01	4.709E-01	2.922E-02	-0.178
HG-203		70.83		-2.428E-02	1.318E+00	1.936E+00	2.635E-01	-0.013
		72.87		1.645E+00	8.304E-01	1.230E+00	1.618E-01	1.338
		82.60		5.733E-01	2.056E+00	2.561E+00	3.456E-01	0.224
		279.20	*	-1.570E-02	1.132E-01	1.904E-01	1.469E-02	-0.082
BI-207		72.80		3.979E-01	2.437E-01	3.672E-01	3.140E-02	1.084
	+	74.97		7.177E-01	1.393E-01	2.560E-01	2.169E-02	2.803
		84.90		2.831E-03	3.161E-01	4.614E-01	3.758E-02	0.006
		569.67		-2.576E-02	8.243E-02	1.330E-01	9.477E-03	-0.194
		1063.62	*	1.031E-02	7.933E-02	1.322E-01	8.493E-03	0.078
		1770.23		2.196E-02	5.928E-01	8.495E-01	4.881E-02	0.026
TL-207		81.07		-2.783E-01	3.458E-01	4.955E-01	4.095E-02	-0.562
		83.78		-9.528E-02	2.091E-01	3.019E-01	2.469E-02	-0.316
		94.90		6.111E-01	4.137E-01	6.968E-01	5.991E-02	0.877
		122.32		2.612E+00	4.038E+00	6.699E+00	7.752E-01	0.390
		144.24		2.925E-01	1.590E+00	2.604E+00	2.672E-01	0.112
		154.21		9.399E-01	9.256E-01	1.533E+00	1.425E-01	0.613
		269.46		5.144E-01	5.584E-01	9.064E-01	6.965E-02	0.568
		323.87	*	6.468E-01	2.098E+00	3.532E+00	6.000E-01	0.183
	+	338.28		8.096E+00	4.590E+00	5.740E+00	6.390E-01	1.410
		445.03		2.018E+00	1.096E+01	1.817E+01	1.914E+00	0.111
PO-209		260.50		-1.284E+01	2.938E+01	4.656E+01	3.497E+00	-0.276
		262.80		-5.727E+00	8.122E+01	1.297E+02	9.732E+00	-0.044
		896.60	*	-3.628E+00	1.010E+01	1.630E+01	1.190E+00	-0.223
PB-211		404.84	*	-1.227E+00	3.811E+00	6.161E+00	3.841E+00	-0.199
		427.08		-2.792E+00	9.179E+00	1.485E+01	9.182E+00	-0.188
		831.96		-3.441E-01	1.717E+00	2.806E+00	1.754E+00	-0.123
BI-212	+	727.18	*	1.616E+00	7.273E-01	8.721E-01	7.986E-02	1.853
		785.46		1.354E+00	2.170E+00	3.818E+00	2.898E-01	0.355
		1620.62		1.763E+00	1.547E+00	3.003E+00	1.744E-01	0.587
PO-215		81.07		-2.783E-01	3.458E-01	4.955E-01	4.095E-02	-0.562
		83.78		-9.528E-02	2.091E-01	3.019E-01	2.469E-02	-0.316
		94.90		6.111E-01	4.137E-01	6.968E-01	5.991E-02	0.877
		122.32		2.612E+00	4.038E+00	6.699E+00	7.752E-01	0.390
		144.24		2.925E-01	1.590E+00	2.604E+00	2.672E-01	0.112
		154.21		9.399E-01	9.256E-01	1.533E+00	1.425E-01	0.613

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		5.144E-01	5.584E-01	9.064E-01	6.965E-02	0.568
		323.87	*	6.468E-01	2.098E+00	3.532E+00	6.000E-01	0.183
	+	338.28		8.096E+00	4.590E+00	5.740E+00	6.390E-01	1.410
		445.03		2.018E+00	1.096E+01	1.817E+01	1.914E+00	0.111
RN-219		271.23		-9.926E-03	7.267E-01	1.160E+00	1.088E-01	-0.009
		401.81	*	7.009E-01	1.653E+00	2.761E+00	3.764E-01	0.254
RN-220		549.76	*	1.546E+01	7.862E+01	1.294E+02	9.068E+00	0.119
RA-223		81.07		-2.783E-01	3.458E-01	4.955E-01	4.095E-02	-0.562
		83.78		-9.528E-02	2.091E-01	3.019E-01	2.469E-02	-0.316
		94.90		6.111E-01	4.137E-01	6.968E-01	5.991E-02	0.877
		122.32		2.612E+00	4.038E+00	6.699E+00	7.752E-01	0.390
		144.24		2.925E-01	1.590E+00	2.604E+00	2.672E-01	0.112
		154.21		9.399E-01	9.256E-01	1.533E+00	1.425E-01	0.613
		269.46		5.144E-01	5.584E-01	9.064E-01	6.965E-02	0.568
		323.87	*	6.468E-01	2.098E+00	3.532E+00	6.000E-01	0.183
	+	338.28		8.096E+00	4.590E+00	5.740E+00	6.390E-01	1.410
		445.03		2.018E+00	1.096E+01	1.817E+01	1.914E+00	0.111
RA-224		240.98	*	1.606E+01	2.602E+00	3.732E+00	2.815E-01	4.303
AC-227		79.80		3.154E+00	2.653E+00	3.863E+00	8.259E-01	0.816
		236.00		5.552E-01	7.237E-01	1.031E+00	1.186E-01	0.539
		256.20	*	4.778E-01	1.168E+00	1.882E+00	2.778E-01	0.254
		286.10		-2.441E+00	4.642E+00	7.732E+00	9.614E-01	-0.316
		299.80		7.998E+00	4.961E+00	7.294E+00	1.231E+00	1.096
		304.40		-6.759E+00	5.861E+00	9.433E+00	1.682E+00	-0.717
		334.20		-7.873E-01	8.394E+00	1.220E+01	2.281E+00	-0.065
TH-227		79.80		3.154E+00	2.655E+00	3.863E+00	8.366E-01	0.816
		94.00		6.173E+00	3.676E+00	5.885E+00	1.279E+00	1.049
		236.00		5.552E-01	7.231E-01	1.031E+00	1.058E-01	0.539
		256.20	*	4.778E-01	1.169E+00	1.882E+00	3.306E-01	0.254
		286.10		-2.441E+00	5.239E+00	7.732E+00	7.753E+00	-0.316
		299.80		7.998E+00	4.961E+00	7.294E+00	1.231E+00	1.096
		304.40		-6.759E+00	5.861E+00	9.433E+00	1.682E+00	-0.717
		334.20		-7.873E-01	8.394E+00	1.220E+01	2.281E+00	-0.065
TH-229		85.43		3.339E-01	3.155E-01	4.699E-01	3.820E-02	0.710
	+	88.47		4.103E-01	2.181E-01	3.100E-01	2.508E-02	1.324
		100.00		-1.128E-01	3.567E-01	5.868E-01	5.294E-02	-0.192
		193.63	*	-5.486E-01	1.473E+00	2.369E+00	1.764E-01	-0.232
		210.97		2.589E+00	2.111E+00	3.467E+00	2.602E-01	0.747
PA-231		283.67	*	7.391E-01	4.553E+00	7.695E+00	1.118E+00	0.096
		301.29		9.144E-01	1.787E+00	2.867E+00	3.250E-01	0.319
TH-231		81.07		-2.783E-01	3.458E-01	4.955E-01	4.095E-02	-0.562
		83.78		-9.528E-02	2.091E-01	3.019E-01	2.469E-02	-0.316
		94.90		6.111E-01	4.137E-01	6.968E-01	5.991E-02	0.877
		122.32		2.612E+00	4.038E+00	6.699E+00	7.752E-01	0.390
		144.24		2.925E-01	1.590E+00	2.604E+00	2.672E-01	0.112
		154.21		9.399E-01	9.256E-01	1.533E+00	1.425E-01	0.613
		269.46		5.144E-01	5.584E-01	9.064E-01	6.965E-02	0.568
		323.87	*	6.468E-01	2.098E+00	3.532E+00	6.000E-01	0.183
	+	338.28		8.096E+00	4.590E+00	5.740E+00	6.390E-01	1.410

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		2.018E+00	1.096E+01	1.817E+01	1.914E+00	0.111
U-231		84.21		-1.614E+00	6.243E+00	9.055E+00	7.394E-01	-0.178
		92.29		4.590E+00	2.556E+00	4.066E+00	3.410E-01	1.129
		95.87	*	-4.528E+00	1.477E+00	2.232E+00	1.937E-01	-2.029
		108.00		-1.398E-01	2.897E+00	4.778E+00	4.649E-01	-0.029
PA-233	+	75.28		2.095E+01	4.857E+00	7.687E+00	1.173E+00	2.725
	+	86.59		5.884E+00	3.466E+00	4.287E+00	1.143E+00	1.372
		300.12		1.806E+00	1.367E+00	2.035E+00	2.878E-01	0.887
		311.98	*	1.309E-01	2.017E-01	3.424E-01	2.554E-02	0.382
		340.50		4.145E+00	2.461E+00	3.449E+00	8.015E-01	1.202
		398.62		8.337E+00	8.594E+00	1.407E+01	3.638E+00	0.593
		415.76		3.943E+00	6.938E+00	1.154E+01	2.382E+00	0.342
PA-234	+	63.00		2.877E+00	1.817E+00	2.411E+00	3.782E-01	1.193
		94.67		6.439E-01	3.067E-01	5.082E-01	6.289E-02	1.267
		98.44		-4.249E-02	1.762E-01	2.879E-01	1.607E-01	-0.148
		99.86		-3.610E-01	9.013E-01	1.480E+00	1.333E-01	-0.244
		111.00		-3.097E-02	3.837E-01	6.321E-01	8.288E-02	-0.049
		131.20		2.368E-01	2.420E-01	4.020E-01	4.173E-02	0.589
		152.70		1.154E-01	7.604E-01	1.245E+00	2.118E-01	0.093
	+	186.00		1.183E+01	6.714E+00	5.701E+00	1.762E+00	2.076
		226.40		-7.360E-02	1.154E+00	1.855E+00	2.322E-01	-0.040
		227.20		-1.932E-01	1.238E+00	1.985E+00	1.497E-01	-0.097
		248.90		-3.908E-01	2.454E+00	3.919E+00	8.629E-01	-0.100
		293.70		4.603E+00	2.402E+00	3.501E+00	5.846E-01	1.315
		369.80		-9.449E-01	3.137E+00	5.190E+00	1.088E+00	-0.182
		568.70		-4.762E-01	2.673E+00	4.336E+00	3.087E-01	-0.110
		569.50		-3.025E-01	7.363E-01	1.184E+00	8.433E-02	-0.256
		574.00		-6.452E-01	4.034E+00	6.544E+00	4.678E-01	-0.099
		699.00		5.421E-01	1.010E+00	1.687E+00	3.145E-01	0.321
		706.10		-7.744E-01	1.417E+00	2.111E+00	9.372E-01	-0.367
		733.00		-2.670E-01	5.865E-01	7.599E-01	1.659E-01	-0.351
		742.81		2.907E-01	1.912E+00	3.098E+00	2.079E+00	0.094
		796.30		1.833E+00	1.283E+00	2.210E+00	5.909E-01	0.829
		805.60		9.327E-01	1.432E+00	2.465E+00	7.487E-01	0.378
		819.60		3.317E-01	1.598E+00	2.714E+00	1.026E+00	0.122
		826.30		-2.405E-01	1.107E+00	1.811E+00	8.067E-01	-0.133
		831.60		-5.632E-01	9.266E-01	1.455E+00	4.299E-01	-0.387
		876.40		-4.310E-02	1.033E+00	1.715E+00	1.761E+00	-0.025
		880.51		-2.881E-01	3.459E-01	5.289E-01	3.894E-02	-0.545
		883.24		7.919E-02	3.562E-01	5.994E-01	4.020E-01	0.132
		899.00		1.729E-01	1.194E+00	2.007E+00	8.727E-01	0.086
		925.00		-4.113E-01	1.565E+00	2.541E+00	1.828E-01	-0.162
		926.50		5.722E-02	2.330E-01	3.950E-01	9.807E-02	0.145
		946.00	*	1.003E-01	4.073E-01	6.900E-01	1.250E-01	0.145
		949.00		2.414E-01	6.044E-01	1.037E+00	7.358E-02	0.233
		980.50		6.092E-01	1.078E+00	1.866E+00	1.295E-01	0.327
		1394.10		1.037E+00	1.450E+00	2.345E+00	1.519E+00	0.442
PA-234M		766.41		4.640E+00	2.527E+01	4.077E+01	3.122E+01	0.114
		1001.03	*	-1.083E+00	8.561E+00	1.400E+01	1.381E+00	-0.077

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-234	+	63.29	*	2.468E+00	1.575E+00	2.060E+00	3.737E-01	1.198
		92.38		1.634E+00	9.939E-01	1.525E+00	2.742E-01	1.071
U-235		89.95		-5.205E+00	2.650E+00	2.909E+00	8.943E-01	-1.790
		93.35		1.448E+00	1.144E+00	1.826E+00	5.110E-01	0.793
		105.00		-4.215E-01	2.123E+00	3.489E+00	1.050E+00	-0.121
		143.76	*	7.247E-02	4.921E-01	8.052E-01	1.439E-01	0.090
		163.35		5.778E-01	1.158E+00	1.895E+00	3.530E-01	0.305
	+	185.71		4.383E-01	2.111E-01	2.107E-01	1.561E-02	2.080
		205.31		-5.318E-02	1.470E+00	2.367E+00	4.401E-01	-0.022
NP-236		94.67		4.922E-01	2.286E-01	3.857E-01	3.308E-02	1.276
		98.44		-3.210E-02	1.320E-01	2.176E-01	1.935E-02	-0.147
		111.00		-2.343E-02	2.902E-01	4.781E-01	4.784E-02	-0.049
		160.31	*	1.690E-02	1.927E-01	3.147E-01	2.471E-02	0.054
U-238	+	63.29	*	2.468E+00	1.575E+00	2.060E+00	3.737E-01	1.198
		92.38		1.634E+00	9.594E-01	1.525E+00	1.281E-01	1.071
NP-239		99.55		-2.579E-01	3.028E-01	4.921E-01	4.421E-02	-0.524
		117.00	*	-2.557E-01	4.148E-01	6.740E-01	7.132E-02	-0.379
		209.75		2.418E+00	2.137E+00	3.506E+00	2.630E-01	0.690
		228.18		-1.330E-01	6.498E-01	1.041E+00	7.848E-02	-0.128
		277.60		1.656E-02	5.455E-01	8.707E-01	6.479E-02	0.019
		334.30		-4.132E-01	4.757E+00	6.913E+00	4.761E-01	-0.060
CM-243		99.55		-2.653E-01	3.116E-01	5.063E-01	4.549E-02	-0.524
		103.76	*	2.061E-01	1.931E-01	3.237E-01	3.027E-02	0.637
		117.00		-2.631E-01	4.267E-01	6.934E-01	7.336E-02	-0.379
		209.75		2.383E+00	2.107E+00	3.455E+00	2.592E-01	0.690
		228.18		-1.343E-01	6.565E-01	1.052E+00	7.929E-02	-0.128
		277.60		1.669E-02	5.498E-01	8.777E-01	6.531E-02	0.019
CM-247		278.00		-1.484E-01	2.261E+00	3.602E+00	2.679E-01	-0.041
		287.40		6.536E-01	3.726E+00	6.296E+00	4.647E-01	0.104
		402.60	*	-1.913E-02	1.479E-01	2.450E-01	1.440E-02	-0.078
CF-249		252.85		-9.014E-01	2.659E+00	4.228E+00	3.183E-01	-0.213
		333.44		-3.702E-01	6.255E-01	8.961E-01	6.183E-02	-0.413
		387.95	*	9.651E-02	1.536E-01	2.583E-01	1.515E-02	0.374
CF-251		176.60	*	-1.643E-01	3.206E-01	5.155E-01	3.796E-02	-0.319
		227.00		-3.983E-01	1.104E+00	1.763E+00	1.329E-01	-0.226
		285.00		-4.132E+00	5.253E+00	8.712E+00	6.444E-01	-0.474

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511001      *
* Acquisition date :  7-JUL-2009 10:10:39 Detector SN#    :                 *
* Detector ID        : GAM17               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:15.65      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232511001           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.4492E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.224E+01	2.771E+00	5.784E-01	0.000E+00
CD-109	3.048E+00	1.587E+00	2.244E+00	0.000E+00
SN-126	3.005E-01	1.565E-01	2.267E-01	0.000E+00
BA-137M	6.933E+01	5.165E+00	1.320E-01	0.000E+00
CS-137	7.329E+01	5.473E+00	1.395E-01	0.000E+00
TL-208	6.695E-01	1.506E-01	1.510E-01	0.000E+00
BI-210	1.094E-01	1.053E+00	1.959E+00	0.000E+00
PB-210	1.094E-01	1.053E+00	1.959E+00	0.000E+00
PO-210	1.094E-01	1.053E+00	1.959E+00	0.000E+00
BI-211	4.459E+00	1.015E+00	1.173E+00	0.000E+00
PB-212	1.895E+00	2.521E-01	2.859E-01	0.000E+00
PO-212	1.895E+00	2.521E-01	2.859E-01	0.000E+00
BI-214	1.589E+00	3.181E-01	2.887E-01	0.000E+00
PB-214	1.551E+00	3.617E-01	4.114E-01	0.000E+00
PO-214	1.551E+00	3.617E-01	4.114E-01	0.000E+00
PO-216	1.895E+00	2.521E-01	2.859E-01	0.000E+00
PO-218	1.551E+00	3.617E-01	4.114E-01	0.000E+00
RA-226	1.589E+00	3.181E-01	2.887E-01	0.000E+00
AC-228	1.993E+00	3.876E-01	3.040E-01	0.000E+00
RA-228	1.993E+00	3.876E-01	3.040E-01	0.000E+00
TH-228	1.895E+00	2.521E-01	2.859E-01	0.000E+00
TH-230	1.589E+00	3.181E-01	2.887E-01	0.000E+00
TH-232	1.993E+00	3.876E-01	3.040E-01	0.000E+00
U-234	1.589E+00	3.181E-01	2.887E-01	0.000E+00
NP-237	8.826E-01	4.931E-01	6.323E-01	0.000E+00
AM-241	8.899E+00	8.931E-01	2.667E-01	0.000E+00
AM-243	3.999E-01	7.604E-02	1.240E-01	0.000E+00
ANH-511	4.310E-02	1.640E-01	1.674E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-1.095E+00	1.443E+00	2.464E+00	0.000E+00	NOT IDENT.
NA-22	1.308E-02	5.753E-02	9.868E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.036E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.595E-03	4.299E-02	7.306E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.946E-02	1.057E-01	0.000E+00	FAIL ABUN
SC-46	1.729E-02	4.793E-02	8.548E-02	0.000E+00	FAIL ABUN
V-48	6.582E-02	9.080E-02	1.647E-01	0.000E+00	NOT IDENT.
CR-51	4.360E-01	1.094E+00	1.962E+00	0.000E+00	NOT IDENT.
MN-52	-3.070E-02	2.279E-01	3.709E-01	0.000E+00	NOT IDENT.
MN-54	1.296E-02	5.348E-02	9.447E-02	0.000E+00	NOT IDENT.
CO-56	2.176E-02	5.035E-02	9.036E-02	0.000E+00	NOT IDENT.
CO-57	6.475E-02	5.661E-02	1.022E-01	0.000E+00	NOT IDENT.
CO-58	-2.680E-02	5.411E-02	9.074E-02	0.000E+00	NOT IDENT.
FE-59	-9.336E-02	1.260E-01	2.000E-01	0.000E+00	NOT IDENT.
CO-60	4.083E-02	5.694E-02	1.021E-01	0.000E+00	NOT IDENT.
ZN-65	9.126E-02	1.424E-01	2.260E-01	0.000E+00	NOT IDENT.
GE-68	2.627E-01	1.595E+00	2.756E+00	0.000E+00	NOT IDENT.
AS-73	-4.795E-01	7.080E-01	1.062E+00	0.000E+00	NOT IDENT.
AS-74	1.753E-02	2.145E-01	3.668E-01	0.000E+00	NOT IDENT.
SE-75	-8.491E-02	1.299E-01	2.183E-01	0.000E+00	NOT IDENT.
BR-77	1.336E+01	1.900E+01	3.327E+01	0.000E+00	FAIL ABUN
SR-82	-1.965E-01	4.276E-01	7.185E-01	0.000E+00	NOT IDENT.
RB-83	3.743E-03	2.357E-01	4.062E-01	0.000E+00	NOT IDENT.
RB-84	-4.688E-02	8.048E-02	1.315E-01	0.000E+00	NOT IDENT.
KR-85	2.261E+01	2.641E+01	4.054E+01	0.000E+00	NOT IDENT.
SR-85	1.133E-01	1.323E-01	2.031E-01	0.000E+00	NOT IDENT.
RB-86	-1.472E-01	9.595E-01	1.610E+00	0.000E+00	NOT IDENT.
Y-88	-2.761E-02	5.106E-02	6.844E-02	0.000E+00	NOT IDENT.
ZR-88	-8.963E-02	1.145E-01	1.980E-01	0.000E+00	NOT IDENT.
Y-91	1.932E+01	2.602E+01	4.638E+01	0.000E+00	NOT IDENT.
NB-94	-4.375E-03	4.466E-02	7.460E-02	0.000E+00	NOT IDENT.
NB-95	7.228E-03	5.870E-02	9.914E-02	0.000E+00	NOT IDENT.
NB-95M	1.056E-02	3.716E-01	5.571E-01	0.000E+00	NOT IDENT.
ZR-95	1.108E-01	8.931E-02	1.644E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.038E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.686E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.126E+00	9.138E+00	1.573E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.058E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.539E-02	9.118E-02	1.578E-01	0.000E+00	NOT IDENT.
RH-102	7.740E-02	1.392E-01	2.436E-01	0.000E+00	NOT IDENT.
RU-103	1.194E-02	1.489E-01	2.579E-01	0.000E+00	FAIL ABUN
RH-106	-1.580E-01	7.925E-01	1.336E+00	0.000E+00	FAIL ABUN
RU-106	-1.580E-01	7.924E-01	1.336E+00	0.000E+00	FAIL ABUN
AG-108M	-5.453E-02	1.455E-01	2.523E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	2.495E-01	3.479E-01	0.000E+00	NOT IDENT.
IN-111	-3.758E+00	1.890E+00	3.081E+00	0.000E+00	NOT IDENT.
IN-113M	3.476E-03	1.659E-01	2.918E-01	0.000E+00	NOT IDENT.
SN-113	3.476E-03	1.659E-01	2.918E-01	0.000E+00	NOT IDENT.
IN-114M	5.155E-01	5.659E-01	8.767E-01	0.000E+00	NOT IDENT.
CD-115	-6.717E+00	1.836E+01	3.128E+01	0.000E+00	NOT IDENT.
SN-117M	-2.162E-02	1.155E-01	2.023E-01	0.000E+00	NOT IDENT.
SB-122	8.890E-01	3.110E+00	5.378E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.397E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.013E-04	6.590E-02	1.159E-01	0.000E+00	NOT IDENT.
I-124	-1.404E-01	1.287E+00	1.882E+00	0.000E+00	NOT IDENT.
SB-124	-3.761E-02	8.675E-02	1.350E-01	0.000E+00	FAIL ABUN
SB-125	-2.056E-01	3.960E-01	6.854E-01	0.000E+00	NOT IDENT.
TE-125M	-1.789E+00	1.818E+01	3.255E+01	0.000E+00	NOT IDENT.
I-126	1.384E-01	2.651E-01	4.067E-01	0.000E+00	NOT IDENT.
SB-126	1.522E-02	1.957E-01	2.860E-01	0.000E+00	FAIL ABUN
SB-127	2.999E-01	1.201E+00	2.066E+00	0.000E+00	FAIL ABUN
XE-127	1.274E-02	1.255E-01	2.178E-01	0.000E+00	NOT IDENT.
I-131	-1.786E-01	3.406E-01	5.955E-01	0.000E+00	NOT IDENT.
TE-132	-2.454E-01	1.222E+00	2.093E+00	0.000E+00	FAIL ABUN
BA-133	-2.272E-02	1.692E-01	2.593E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.483E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.128E-01	6.033E-02	1.179E-01	0.000E+00	NOT IDENT.
CS-135	5.563E-01	4.616E-01	8.006E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.889E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.445E-02	1.319E-01	2.286E-01	0.000E+00	FAIL ABUN
CE-139	7.161E-03	7.120E-02	1.251E-01	0.000E+00	NOT IDENT.
BA-140	-2.618E-01	7.512E-01	1.270E+00	0.000E+00	NOT IDENT.
LA-140	-1.089E-01	9.282E-02	1.182E-01	0.000E+00	NOT IDENT.
CE-141	-3.980E-02	1.389E-01	2.435E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.502E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.680E-01	4.690E-01	8.142E-01	0.000E+00	NOT IDENT.
PM-144	2.320E-02	4.838E-02	8.429E-02	0.000E+00	NOT IDENT.

PR-144	1.570E+00	3.275E+00	5.705E+00	0.000E+00	NOT IDENT.
PM-146	1.285E-01	2.113E-01	3.707E-01	0.000E+00	NOT IDENT.
ND-147	-5.381E-01	1.620E+00	2.759E+00	0.000E+00	NOT IDENT.
PM-149	-4.394E+01	1.361E+02	2.425E+02	0.000E+00	NOT IDENT.
EU-152	-3.327E-02	3.424E-01	5.722E-01	0.000E+00	FAIL ABUN
GD-153	-1.847E-01	1.456E-01	2.552E-01	0.000E+00	NOT IDENT.
EU-154	3.657E-02	1.609E-01	2.759E-01	0.000E+00	NOT IDENT.
EU-155	-1.574E-01	2.129E-01	3.766E-01	0.000E+00	FAIL ABUN
TB-160	-5.707E-02	1.605E-01	2.684E-01	0.000E+00	FAIL ABUN
HO-166M	-1.007E-03	8.003E-02	1.345E-01	0.000E+00	FAIL ABUN
TM-171	4.263E+00	3.135E+01	5.081E+01	0.000E+00	FAIL ABUN
LU-176	-7.069E-03	7.522E-02	1.341E-01	0.000E+00	FAIL ABUN
LU-177	1.043E+00	2.355E+00	4.104E+00	0.000E+00	NOT IDENT.
LU-177M	3.115E-01	7.046E-01	1.243E+00	0.000E+00	FAIL ABUN
HF-181	-2.001E-02	1.747E-01	3.019E-01	0.000E+00	FAIL ABUN
W-181	0.000E+00	4.436E-01	6.533E-01	0.000E+00	FAIL ABUN
TA-182	3.004E-03	2.733E-01	4.606E-01	0.000E+00	FAIL ABUN
RE-183	-1.215E-02	2.575E-01	4.517E-01	0.000E+00	FAIL ABUN
RE-184	-2.381E-01	6.881E-01	1.168E+00	0.000E+00	FAIL ABUN
OS-185	-7.296E-03	1.143E-01	1.932E-01	0.000E+00	FAIL ABUN
RE-188	1.499E-01	3.854E-01	6.830E-01	0.000E+00	NOT IDENT.
W-188	1.358E+01	2.400E+01	3.798E+01	0.000E+00	FAIL ABUN
IR-192	-1.045E-01	1.046E-01	1.826E-01	0.000E+00	FAIL ABUN
AU-195	-1.183E-01	4.176E-01	7.487E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.049E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.094E+00	1.031E+01	1.803E+01	0.000E+00	NOT IDENT.
TL-202	-8.373E-02	2.805E-01	4.866E-01	0.000E+00	NOT IDENT.
HG-203	-1.570E-02	1.109E-01	1.988E-01	0.000E+00	NOT IDENT.
BI-207	1.031E-02	7.774E-02	1.339E-01	0.000E+00	FAIL ABUN
TL-207	6.468E-01	2.056E+00	3.675E+00	0.000E+00	FAIL ABUN
PO-209	-3.628E+00	9.898E+00	1.657E+01	0.000E+00	NOT IDENT.
PB-211	-1.227E+00	3.734E+00	6.378E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	7.128E-01	8.911E-01	0.000E+00	FAIL ABUN
PO-215	6.468E-01	2.056E+00	3.675E+00	0.000E+00	FAIL ABUN
RN-219	7.009E-01	1.620E+00	2.858E+00	0.000E+00	NOT IDENT.
RN-220	1.546E+01	7.705E+01	1.330E+02	0.000E+00	NOT IDENT.
RA-223	6.468E-01	2.056E+00	3.675E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	2.550E+00	3.908E+00	0.000E+00	NOT IDENT.
AC-227	4.778E-01	1.145E+00	1.968E+00	0.000E+00	NOT IDENT.
TH-227	4.778E-01	1.146E+00	1.968E+00	0.000E+00	NOT IDENT.
TH-229	-5.486E-01	1.444E+00	2.493E+00	0.000E+00	FAIL ABUN
PA-231	7.391E-01	4.462E+00	8.029E+00	0.000E+00	NOT IDENT.
TH-231	6.468E-01	2.056E+00	3.675E+00	0.000E+00	FAIL ABUN
U-231	-4.528E+00	1.448E+00	2.384E+00	0.000E+00	NOT IDENT.
PA-233	1.309E-01	1.977E-01	3.565E-01	0.000E+00	FAIL ABUN
PA-234	1.003E-01	3.991E-01	7.007E-01	0.000E+00	FAIL ABUN
PA-234M	-1.083E+00	8.390E+00	1.420E+01	0.000E+00	NOT IDENT.
TH-234	0.000E+00	1.543E+00	2.218E+00	0.000E+00	FAIL ABUN
U-235	7.247E-02	4.822E-01	8.525E-01	0.000E+00	FAIL ABUN
NP-236	1.690E-02	1.889E-01	3.324E-01	0.000E+00	NOT IDENT.
U-238	0.000E+00	1.543E+00	2.218E+00	0.000E+00	FAIL ABUN
NP-239	-2.557E-01	4.065E-01	7.168E-01	0.000E+00	NOT IDENT.
CM-243	2.061E-01	1.893E-01	3.451E-01	0.000E+00	NOT IDENT.
CM-247	-1.913E-02	1.449E-01	2.537E-01	0.000E+00	NOT IDENT.
CF-249	9.651E-02	1.506E-01	2.676E-01	0.000E+00	NOT IDENT.
CF-251	-1.643E-01	3.142E-01	5.434E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:11:21.51

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511001.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:10:39.
Sample ID         : G232511001           Sample quantity  : 1.44920E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:15.65  0.2%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1060	10.67*	7.985E-01	3.224E+01	3.224E+01	8.77
CD-109	88.03	282	3.72*	6.571E+00	2.989E+00	3.048E+00	53.15
SN-126	64.28	241	9.60	6.651E+00	9.769E-01	9.769E-01	63.08
	86.94	282	8.90	6.571E+00	1.249E+00	1.249E+00	66.79
	87.57	282	37.00*	6.571E+00	3.005E-01	3.005E-01	53.15
BA-137M	661.65	38921	89.98*	1.617E+00	6.927E+01	6.933E+01	7.60
CS-137	661.65	38921	85.12*	1.617E+00	7.323E+01	7.329E+01	7.62
TL-208	277.35	------	6.80	3.655E+00	------	Line Not Found	------
	510.84	34	21.60	2.072E+00	1.995E-01	1.995E-01	388.29
	583.14	397	84.20*	1.824E+00	6.695E-01	6.695E-01	22.95
	860.37	64	12.46	1.268E+00	1.050E+00	1.050E+00	58.79
BI-210	46.50	11	4.05*	6.558E+00	1.092E-01	1.094E-01	982.74
PB-210	46.50	11	4.05*	6.558E+00	1.092E-01	1.094E-01	982.74
PO-210	46.50	11	4.05*	6.558E+00	1.092E-01	1.094E-01	982.73
BI-211	72.87	------	1.27	6.655E+00	------	Line Not Found	------
	351.07	658	12.94*	2.955E+00	4.459E+00	4.459E+00	23.22
PB-212	74.81	678	10.70	6.649E+00	2.467E+00	2.467E+00	21.54
	77.11	1041	18.00	6.641E+00	2.256E+00	2.256E+00	14.58
	87.30	282	8.00	6.571E+00	1.390E+00	1.390E+00	54.08
	238.63	1348	44.60*	4.131E+00	1.895E+00	1.895E+00	13.57
	300.09	------	3.41	3.414E+00	------	Line Not Found	------
PO-212	74.81	678	10.70	6.649E+00	2.467E+00	2.467E+00	21.54
	77.11	1041	18.00	6.641E+00	2.256E+00	2.256E+00	14.58
	87.30	282	8.00	6.571E+00	1.390E+00	1.390E+00	54.08
	115.19	------	0.60	6.204E+00	------	Line Not Found	------
	238.63	1348	44.60*	4.131E+00	1.895E+00	1.895E+00	13.57
	300.09	------	3.41	3.414E+00	------	Line Not Found	------
BI-214	609.31	497	46.30*	1.749E+00	1.589E+00	1.589E+00	20.43
	768.36	------	5.04	1.406E+00	------	Line Not Found	------
	934.06	------	3.21	1.177E+00	------	Line Not Found	------
	1120.29	89	15.10	1.003E+00	1.522E+00	1.522E+00	46.04
	1238.11	------	5.94	9.200E-01	------	Line Not Found	------

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	68	15.80	6.764E-01	1.636E+00	1.636E+00	30.63
PB-214	74.81	678	6.21	6.649E+00	4.250E+00	4.250E+00	20.77
	77.11	1041	10.50	6.641E+00	3.867E+00	3.867E+00	16.45
	87.30	282	4.67	6.571E+00	2.381E+00	2.381E+00	53.70
	241.98	------	7.49	4.088E+00	------ Line Not Found		------
	295.21	405	19.20	3.463E+00	1.578E+00	1.578E+00	34.50
	351.92	658	37.20*	2.955E+00	1.551E+00	1.551E+00	23.80
PO-214	74.81	678	6.21	6.649E+00	4.250E+00	4.250E+00	20.77
	77.11	1041	10.50	6.641E+00	3.867E+00	3.867E+00	16.45
	87.30	282	4.67	6.571E+00	2.381E+00	2.381E+00	53.70
	241.98	------	7.49	4.088E+00	------ Line Not Found		------
	295.21	405	19.20	3.463E+00	1.578E+00	1.578E+00	34.50
	351.92	658	37.20*	2.955E+00	1.551E+00	1.551E+00	23.80
PO-216	74.81	678	10.70	6.649E+00	2.467E+00	2.467E+00	21.54
	77.11	1041	18.00	6.641E+00	2.256E+00	2.256E+00	14.58
	87.30	282	8.00	6.571E+00	1.390E+00	1.390E+00	54.08
	238.63	1348	44.60*	4.131E+00	1.895E+00	1.895E+00	13.57
	300.09	------	3.41	3.414E+00	------ Line Not Found		------
PO-218	74.81	678	6.21	6.649E+00	4.250E+00	4.250E+00	20.77
	77.11	1041	10.50	6.641E+00	3.867E+00	3.867E+00	16.45
	87.30	282	4.67	6.571E+00	2.381E+00	2.381E+00	53.70
	241.98	------	7.49	4.088E+00	------ Line Not Found		------
	295.21	405	19.20	3.463E+00	1.578E+00	1.578E+00	34.50
	351.92	658	37.20*	2.955E+00	1.551E+00	1.551E+00	23.80
RA-226	609.31	497	46.30*	1.749E+00	1.589E+00	1.589E+00	20.43
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	89	15.10	1.003E+00	1.522E+00	1.522E+00	46.04
	1238.11	------	5.94	9.200E-01	------ Line Not Found		------
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	68	15.80	6.764E-01	1.636E+00	1.636E+00	30.63
AC-228	338.32	262	11.40	3.066E+00	1.939E+00	1.939E+00	69.03
	911.07	257	27.70*	1.204E+00	1.993E+00	1.993E+00	19.84
	969.11	150	16.60	1.139E+00	2.054E+00	2.054E+00	33.31
RA-228	338.32	262	11.40	3.066E+00	1.939E+00	1.939E+00	69.03
	911.07	257	27.70*	1.204E+00	1.993E+00	1.993E+00	19.84
	969.11	150	16.60	1.139E+00	2.054E+00	2.054E+00	33.31
TH-228	84.40	------	1.21	6.598E+00	------ Line Not Found		------
	238.60	1348	44.60*	4.131E+00	1.895E+00	1.895E+00	13.57
	300.10	------	3.41	3.414E+00	------ Line Not Found		------
TH-230	609.31	497	46.30*	1.749E+00	1.589E+00	1.589E+00	20.43
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	89	15.10	1.003E+00	1.522E+00	1.522E+00	46.04
	1238.11	------	5.94	9.200E-01	------ Line Not Found		------
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	68	15.80	6.764E-01	1.636E+00	1.636E+00	30.63
TH-232	338.32	262	11.40	3.066E+00	1.939E+00	1.939E+00	56.01

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	911.07	257	27.70*	1.204E+00	1.993E+00	1.993E+00	19.84
	969.11	150	16.60	1.139E+00	2.054E+00	2.054E+00	33.31
U-234	609.31	497	46.30*	1.749E+00	1.589E+00	1.589E+00	20.43
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	89	15.10	1.003E+00	1.522E+00	1.522E+00	46.04
	1238.11	------	5.94	9.200E-01	------ Line Not Found		------
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	68	15.80	6.764E-01	1.636E+00	1.636E+00	30.63
NP-237	86.50	282	12.60*	6.571E+00	8.826E-01	8.826E-01	57.01
	95.87	------	2.60	6.484E+00	------ Line Not Found		------
AM-241	59.54	8185	35.90*	6.636E+00	8.899E+00	8.899E+00	10.24
AM-243	74.67	678	66.00*	6.649E+00	3.999E-01	3.999E-01	19.40
	86.72	282	0.34	6.571E+00	3.310E+01	3.310E+01	53.15
	117.66	------	0.55	6.163E+00	------ Line Not Found		------
	142.18	------	0.13	5.726E+00	------ Line Not Found		------
ANH-511	511.00	34	100.00*	2.072E+00	4.310E-02	4.310E-02	388.20

Flag: "*" = Keyline

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

Total number of lines in spectrum 27
Number of unidentified lines 2
Number of lines tentatively identified by NID 25 92.59%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.224E+01	3.224E+01	0.283E+01	8.77	
CD-109	464.00D	1.02	2.989E+00	3.048E+00	1.620E+00	53.15	
SN-126	1.00E+05Y	1.00	3.005E-01	3.005E-01	1.597E-01	53.15	
BA-137M	30.17Y	1.00	6.927E+01	6.933E+01	0.527E+01	7.60	
CS-137	30.17Y	1.00	7.323E+01	7.329E+01	0.558E+01	7.62	
TL-208	1.41E+10Y	1.00	6.695E-01	6.695E-01	1.536E-01	22.95	
BI-210	22.26Y	1.00	1.092E-01	1.094E-01	10.75E-01	982.74	
PB-210	22.26Y	1.00	1.092E-01	1.094E-01	10.75E-01	982.74	
PO-210	22.26Y	1.00	1.092E-01	1.094E-01	10.75E-01	982.73	
BI-211	7.04E+08Y	1.00	4.459E+00	4.459E+00	1.035E+00	23.22	
PB-212	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.257E+00	13.57	
PO-212	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.257E+00	13.57	
BI-214	1600.00Y	1.00	1.589E+00	1.589E+00	0.325E+00	20.43	
PB-214	1600.00Y	1.00	1.551E+00	1.551E+00	0.369E+00	23.80	
PO-214	1600.00Y	1.00	1.551E+00	1.551E+00	0.369E+00	23.80	
PO-216	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.257E+00	13.57	
PO-218	1600.00Y	1.00	1.551E+00	1.551E+00	0.369E+00	23.80	
RA-226	1600.00Y	1.00	1.589E+00	1.589E+00	0.325E+00	20.43	
AC-228	1.41E+10Y	1.00	1.993E+00	1.993E+00	0.395E+00	19.84	
RA-228	1.41E+10Y	1.00	1.993E+00	1.993E+00	0.395E+00	19.84	
TH-228	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.257E+00	13.57	
TH-230	4.47E+09Y	1.00	1.589E+00	1.589E+00	0.325E+00	20.43	
TH-232	1.41E+10Y	1.00	1.993E+00	1.993E+00	0.395E+00	19.84	
U-234	4.47E+09Y	1.00	1.589E+00	1.589E+00	0.325E+00	20.43	
NP-237	2.14E+06Y	1.00	8.826E-01	8.826E-01	5.032E-01	57.01	
AM-241	432.20Y	1.00	8.899E+00	8.899E+00	0.911E+00	10.24	
AM-243	7380.00Y	1.00	3.999E-01	3.999E-01	0.776E-01	19.40	
ANH-511	1.00E+09Y	1.00	4.310E-02	4.310E-02	16.73E-02	388.20	
			---	---			
	Total Activity :		2.183E+02	2.185E+02			

Grand Total Activity : 2.183E+02 2.185E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	50.16	284	3110	1.14	101.51	98	10	3.95E-02	74.2	6.58E+00	T
0	185.65	452	2594	1.19	372.29	366	13	6.27E-02	47.6	4.94E+00	T
0	727.34	109	86	1.82	1455.05	1448	17	1.51E-02	44.1	1.48E+00	T
1	964.22	67	55	2.10	1928.61	1921	26	9.31E-03	51.5	1.14E+00	T
0	1456.11	11	21	1.05	2912.14	2900	14	1.53E-03	****	8.00E-01	T
0	1587.53	21	15	1.94	3174.95	3169	12	2.97E-03	84.3	7.43E-01	
0	1846.00	21	7	0.59	3691.87	3683	15	2.85E-03	73.0	6.49E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:11:26.53

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511001.CNF;1 *
* Acquisition date  : 7-JUL-2009 10:10:39.  Detector SN#     :             *
* Detector ID       : GAM17                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:15.65          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232511001            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.44920E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14.8MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.224E+01	2.828E+00	5.753E-01	3.537E-02	56.034
CD-109	3.048E+00	1.620E+00	2.097E+00	1.689E-01	1.453
SN-126	3.005E-01	1.597E-01	2.119E-01	1.709E-02	1.418
BA-137M	6.933E+01	5.270E+00	1.289E-01	9.709E-03	537.743
CS-137	7.329E+01	5.585E+00	1.363E-01	1.029E-02	537.743
TL-208	6.695E-01	1.536E-01	1.470E-01	1.166E-02	4.554
BI-210	1.094E-01	1.075E+00	1.808E+00	1.447E-01	0.060
PB-210	1.094E-01	1.075E+00	1.808E+00	1.447E-01	0.060
PO-210	1.094E-01	1.075E+00	1.808E+00	1.258E-01	0.060
BI-211	4.459E+00	1.035E+00	1.129E+00	8.114E-02	3.948
PB-212	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
PO-212	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
BI-214	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
PB-214	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
PO-214	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
PO-216	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
PO-218	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
RA-226	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
RA-228	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
TH-228	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.941
TH-230	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
TH-232	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
U-234	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
NP-237	8.826E-01	5.032E-01	5.909E-01	1.310E-01	1.494
AM-241	8.899E+00	9.113E-01	2.473E-01	2.400E-02	35.982
AM-243	3.999E-01	7.759E-02	1.155E-01	9.798E-03	3.463
ANH-511	4.310E-02	1.673E-01	1.625E-01	1.098E-02	0.265

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.095E+00		1.472E+00	2.389E+00	1.761E-01	-0.458
NA-22	1.308E-02		5.871E-02	9.784E-02	5.545E-03	0.134
NA-24	4.251E-02		4.100E-02	Half-Life too short		
AL-26	1.595E-03		4.387E-02	7.304E-02	4.176E-03	0.022
TI-44	4.162E-01	+	6.067E-02	9.858E-02	8.236E-03	4.222
SC-46	1.729E-02		4.891E-02	8.405E-02	6.160E-03	0.206
V-48	6.582E-02		9.265E-02	1.623E-01	1.124E-02	0.406
CR-51	4.360E-01		1.116E+00	1.886E+00	1.438E-01	0.231
MN-52	-3.070E-02		2.326E-01	3.688E-01	2.131E-02	-0.083
MN-54	1.296E-02		5.457E-02	9.275E-02	6.959E-03	0.140
CO-56	2.176E-02		5.138E-02	8.875E-02	6.631E-03	0.245
CO-57	6.475E-02		5.776E-02	9.616E-02	1.067E-02	0.673
CO-58	-2.680E-02		5.521E-02	8.903E-02	6.747E-03	-0.301
FE-59	-9.336E-02		1.285E-01	1.977E-01	1.404E-02	-0.472
CO-60	4.083E-02		5.810E-02	1.013E-01	5.785E-03	0.403
ZN-65	9.126E-02		1.453E-01	2.234E-01	1.350E-02	0.408
GE-68	2.627E-01		1.627E+00	2.722E+00	1.722E-01	0.097
AS-73	-4.795E-01		7.224E-01	9.830E-01	7.976E-02	-0.488
AS-74	1.753E-02		2.188E-01	3.574E-01	2.595E-02	0.049
SE-75	-8.491E-02		1.326E-01	2.089E-01	1.576E-02	-0.406
BR-77	1.336E+01		1.938E+01	3.232E+01	2.205E+00	0.413
SR-82	-1.965E-01		4.364E-01	7.043E-01	5.354E-02	-0.279
RB-83	3.743E-03		2.405E-01	3.945E-01	2.692E-02	0.009
RB-84	-4.688E-02		8.212E-02	1.293E-01	9.514E-03	-0.363
KR-85	2.261E+01		2.695E+01	3.937E+01	2.669E+00	0.574
SR-85	1.133E-01		1.350E-01	1.973E-01	1.337E-02	0.574
RB-86	-1.472E-01		9.791E-01	1.590E+00	1.007E-01	-0.093
Y-88	-2.761E-02		5.210E-02	6.845E-02	3.908E-03	-0.403
ZR-88	-8.963E-02		1.169E-01	1.911E-01	1.106E-02	-0.469
Y-91	1.932E+01		2.656E+01	4.593E+01	2.557E+00	0.421
NB-94	-4.375E-03		4.557E-02	7.297E-02	5.544E-03	-0.060
NB-95	7.228E-03		5.990E-02	9.715E-02	7.394E-03	0.074
NB-95M	1.056E-02		3.791E-01	5.318E-01	4.755E-02	0.020

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	1.108E-01		9.113E-02	1.610E-01	1.384E-02	0.688
NB-97	1.139E+00		5.296E-02	Half-Life too short		
ZR-97	4.297E-02		3.921E-01	Half-Life too short		
MO-99	3.126E+00		9.325E+00	1.541E+01	2.255E+00	0.203
TC-99M	-1.511E+08		1.050E+08	Half-Life too short		
RH-101	-1.539E-02		9.304E-02	1.501E-01	1.120E-02	-0.103
RH-102	7.740E-02		1.421E-01	2.361E-01	1.533E-02	0.328
RU-103	1.194E-02		1.520E-01	2.503E-01	3.269E-02	0.048
RH-106	-1.580E-01		8.087E-01	1.303E+00	1.641E-01	-0.121
RU-106	-1.580E-01		8.085E-01	1.303E+00	9.616E-02	-0.121
AG-108M	-5.453E-02		1.485E-01	2.441E-01	1.618E-02	-0.223
AG-110M	2.415E+00		2.546E-01	3.397E-01	2.654E-02	7.108
IN-111	-3.758E+00		1.929E+00	2.944E+00	2.220E-01	-1.277
IN-113M	3.476E-03		1.693E-01	2.816E-01	1.737E-02	0.012
SN-113	3.476E-03		1.693E-01	2.816E-01	1.737E-02	0.012
IN-114M	5.155E-01		5.774E-01	8.330E-01	6.188E-02	0.619
CD-115	-6.717E+00		1.873E+01	3.039E+01	2.088E+00	-0.221
SN-117M	-2.162E-02		1.178E-01	1.915E-01	1.535E-02	-0.113
SB-122	8.890E-01		3.174E+00	5.233E+00	3.711E-01	0.170
I-123	-1.291E-03		4.284E-01	Half-Life too short		
TE-123M	-1.013E-04		6.725E-02	1.097E-01	8.808E-03	-0.001
I-124	-1.404E-01		1.313E+00	1.834E+00	1.338E-01	-0.077
SB-124	-3.761E-02		8.852E-02	1.348E-01	8.469E-03	-0.279
SB-125	-2.056E-01		4.041E-01	6.628E-01	4.202E-02	-0.310
TE-125M	-1.789E+00		1.855E+01	3.056E+01	3.474E+00	-0.059
I-126	1.384E-01		2.705E-01	3.972E-01	2.996E-02	0.348
SB-126	1.522E-02		1.997E-01	2.798E-01	2.130E-02	0.054
SB-127	2.999E-01		1.225E+00	2.019E+00	2.011E-01	0.149
XE-127	1.274E-02		1.280E-01	2.073E-01	1.550E-02	0.061
I-131	-1.786E-01		3.476E-01	5.739E-01	4.004E-02	-0.311
TE-132	-2.454E-01		1.246E+00	1.997E+00	2.947E-01	-0.123
BA-133	-2.272E-02		1.727E-01	2.498E-01	2.984E-02	-0.091
I-133	-1.015E-03		1.777E-03	Half-Life too short		
CS-134	1.128E-01		6.156E-02	1.157E-01	8.848E-03	0.975
CS-135	5.563E-01		4.711E-01	7.664E-01	6.898E-02	0.726
I-135	-1.537E+07		1.474E+07	Half-Life too short		
CS-136	2.445E-02		1.346E-01	2.256E-01	1.581E-02	0.108
CE-139	7.161E-03		7.265E-02	1.185E-01	8.667E-03	0.060
BA-140	-2.618E-01		7.666E-01	1.235E+00	4.044E-01	-0.212
LA-140	-1.089E-01		9.472E-02	1.178E-01	6.847E-03	-0.924
CE-141	-3.980E-02		1.417E-01	2.301E-01	2.151E-02	-0.173
CE-143	1.947E-04		7.665E-05	Half-Life too short		
CE-144	-3.680E-01		4.786E-01	7.678E-01	1.266E-01	-0.479
PM-144	2.320E-02		4.937E-02	8.242E-02	6.258E-03	0.281
PR-144	1.570E+00		3.342E+00	5.579E+00	4.235E-01	0.281
PM-146	1.285E-01		2.156E-01	3.590E-01	3.225E-02	0.358
ND-147	-5.381E-01		1.653E+00	2.682E+00	3.761E-01	-0.201
PM-149	-4.394E+01		1.389E+02	2.325E+02	3.462E+01	-0.189

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-3.327E-02		3.494E-01	5.508E-01	4.065E-02	-0.060
GD-153	-1.847E-01		1.485E-01	2.391E-01	2.105E-02	-0.772
EU-154	3.657E-02		1.642E-01	2.736E-01	2.531E-02	0.134
EU-155	-1.574E-01		2.172E-01	3.533E-01	3.386E-02	-0.446
TB-160	-5.707E-02		1.638E-01	2.638E-01	1.943E-02	-0.216
HO-166M	-1.007E-03		8.167E-02	1.315E-01	1.000E-02	-0.008
TM-171	4.263E+00		3.199E+01	4.723E+01	4.152E+00	0.090
LU-176	-7.069E-03		7.676E-02	1.287E-01	9.295E-03	-0.055
LU-177	1.043E+00		2.403E+00	3.907E+00	2.929E-01	0.267
LU-177M	3.115E-01		7.189E-01	1.201E+00	7.181E-02	0.259
HF-181	-2.001E-02		1.782E-01	2.928E-01	1.917E-02	-0.068
W-181	7.320E-01	+	4.526E-01	6.069E-01	5.375E-02	1.206
TA-182	3.004E-03		2.789E-01	4.562E-01	2.550E-02	0.007
RE-183	-1.215E-02		2.627E-01	4.277E-01	3.275E-02	-0.028
RE-184	-2.381E-01		7.022E-01	1.117E+00	8.408E-02	-0.213
OS-185	-7.296E-03		1.166E-01	1.886E-01	1.410E-02	-0.039
RE-188	1.499E-01		3.933E-01	6.461E-01	5.393E-02	0.232
W-188	1.358E+01		2.449E+01	3.642E+01	2.680E+00	0.373
IR-192	-1.045E-01		1.068E-01	1.754E-01	1.253E-02	-0.596
AU-195	-1.183E-01		4.261E-01	7.016E-01	6.264E-02	-0.169
TL-200	2.312E-05		2.066E-04	Half-Life too short		
TL-201	-1.094E+00		1.052E+01	1.709E+01	1.250E+00	-0.064
TL-202	-8.373E-02		2.862E-01	4.709E-01	2.922E-02	-0.178
HG-203	-1.570E-02		1.132E-01	1.904E-01	1.469E-02	-0.082
BI-207	1.031E-02		7.933E-02	1.322E-01	8.493E-03	0.078
TL-207	6.468E-01		2.098E+00	3.532E+00	6.000E-01	0.183
PO-209	-3.628E+00		1.010E+01	1.630E+01	1.190E+00	-0.223
PB-211	-1.227E+00		3.811E+00	6.161E+00	3.841E+00	-0.199
BI-212	1.616E+00	+	7.273E-01	8.721E-01	7.986E-02	1.853
PO-215	6.468E-01		2.098E+00	3.532E+00	6.000E-01	0.183
RN-219	7.009E-01		1.653E+00	2.761E+00	3.764E-01	0.254
RN-220	1.546E+01		7.862E+01	1.294E+02	9.068E+00	0.119
RA-223	6.468E-01		2.098E+00	3.532E+00	6.000E-01	0.183
RA-224	1.606E+01		2.602E+00	3.732E+00	2.815E-01	4.303
AC-227	4.778E-01		1.168E+00	1.882E+00	2.778E-01	0.254
TH-227	4.778E-01		1.169E+00	1.882E+00	3.306E-01	0.254
TH-229	-5.486E-01		1.473E+00	2.369E+00	1.764E-01	-0.232
PA-231	7.391E-01		4.553E+00	7.695E+00	1.118E+00	0.096
TH-231	6.468E-01		2.098E+00	3.532E+00	6.000E-01	0.183
U-231	-4.528E+00		1.477E+00	2.232E+00	1.937E-01	-2.029
PA-233	1.309E-01		2.017E-01	3.424E-01	2.554E-02	0.382
PA-234	1.003E-01		4.073E-01	6.900E-01	1.250E-01	0.145
PA-234M	-1.083E+00		8.561E+00	1.400E+01	1.381E+00	-0.077
TH-234	2.468E+00	+	1.575E+00	2.060E+00	3.737E-01	1.198
U-235	7.247E-02		4.921E-01	8.052E-01	1.439E-01	0.090
NP-236	1.690E-02		1.927E-01	3.147E-01	2.471E-02	0.054
U-238	2.468E+00	+	1.575E+00	2.060E+00	3.737E-01	1.198
NP-239	-2.557E-01		4.148E-01	6.740E-01	7.132E-02	-0.379

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.061E-01		1.931E-01	3.237E-01	3.027E-02	0.637
CM-247	-1.913E-02		1.479E-01	2.450E-01	1.440E-02	-0.078
CF-249	9.651E-02		1.536E-01	2.583E-01	1.515E-02	0.374
CF-251	-1.643E-01		3.206E-01	5.155E-01	3.796E-02	-0.319

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232511001           *
* Acquisition date  :  7-JUL-2009 10:10:39 Detector SN#    :                *
* Detector ID       : GAM17                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:15.65      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232511001           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.4492E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.224E+01	2.771E+00	2.894E-01	1.414E+00
CD-109	3.048E+00	1.587E+00	1.122E+00	8.099E-01
SN-126	3.005E-01	1.565E-01	1.134E-01	7.987E-02
BA-137M	6.933E+01	5.165E+00	6.604E-02	2.635E+00
CS-137	7.329E+01	5.473E+00	6.981E-02	2.792E+00
TL-208	6.695E-01	1.506E-01	7.553E-02	7.682E-02
BI-210	1.094E-01	1.053E+00	9.803E-01	5.373E-01
PB-210	1.094E-01	1.053E+00	9.803E-01	5.373E-01
PO-210	1.094E-01	1.053E+00	9.803E-01	5.373E-01
BI-211	4.459E+00	1.015E+00	5.868E-01	5.176E-01
PB-212	1.895E+00	2.521E-01	1.431E-01	1.286E-01
PO-212	1.895E+00	2.521E-01	1.431E-01	1.286E-01
BI-214	1.589E+00	3.181E-01	1.444E-01	1.623E-01
PB-214	1.551E+00	3.617E-01	2.058E-01	1.845E-01
PO-214	1.551E+00	3.617E-01	2.058E-01	1.845E-01
PO-216	1.895E+00	2.521E-01	1.431E-01	1.286E-01
PO-218	1.551E+00	3.617E-01	2.058E-01	1.845E-01
RA-226	1.589E+00	3.181E-01	1.444E-01	1.623E-01
AC-228	1.993E+00	3.876E-01	1.521E-01	1.977E-01
RA-228	1.993E+00	3.876E-01	1.521E-01	1.977E-01
TH-228	1.895E+00	2.521E-01	1.430E-01	1.286E-01
TH-230	1.589E+00	3.181E-01	1.444E-01	1.623E-01
TH-232	1.993E+00	3.876E-01	1.521E-01	1.977E-01
U-234	1.589E+00	3.181E-01	1.444E-01	1.623E-01
NP-237	8.826E-01	4.931E-01	3.163E-01	2.516E-01
AM-241	8.899E+00	8.931E-01	1.334E-01	4.557E-01
AM-243	3.999E-01	7.604E-02	6.202E-02	3.880E-02
ANH-511	4.310E-02	1.640E-01	8.374E-02	8.365E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-1.095E+00	1.443E+00	1.233E+00	7.361E-01	NOT IDENT.
NA-22	1.308E-02	5.753E-02	4.937E-02	2.935E-02	NOT IDENT.
NA-24	4.251E+04	8.036E+04	0.000E+00	4.100E+04	SHORT HLIF
AL-26	1.595E-03	4.299E-02	3.655E-02	2.193E-02	NOT IDENT.
TI-44	4.162E-01	5.946E-02	5.289E-02	3.033E-02	FAIL ABUN
SC-46	1.729E-02	4.793E-02	4.276E-02	2.445E-02	FAIL ABUN
V-48	6.582E-02	9.080E-02	8.238E-02	4.633E-02	NOT IDENT.
CR-51	4.360E-01	1.094E+00	9.816E-01	5.582E-01	NOT IDENT.
MN-52	-3.070E-02	2.279E-01	1.855E-01	1.163E-01	NOT IDENT.
MN-54	1.296E-02	5.348E-02	4.726E-02	2.728E-02	NOT IDENT.
CO-56	2.176E-02	5.035E-02	4.521E-02	2.569E-02	NOT IDENT.
CO-57	6.475E-02	5.661E-02	5.111E-02	2.888E-02	NOT IDENT.
CO-58	-2.680E-02	5.411E-02	4.540E-02	2.761E-02	NOT IDENT.
FE-59	-9.336E-02	1.260E-01	1.001E-01	6.427E-02	NOT IDENT.
CO-60	4.083E-02	5.694E-02	5.106E-02	2.905E-02	NOT IDENT.
ZN-65	9.126E-02	1.424E-01	1.131E-01	7.265E-02	NOT IDENT.
GE-68	2.627E-01	1.595E+00	1.379E+00	8.136E-01	NOT IDENT.
AS-73	-4.795E-01	7.080E-01	5.315E-01	3.612E-01	NOT IDENT.
AS-74	1.753E-02	2.145E-01	1.835E-01	1.094E-01	NOT IDENT.
SE-75	-8.491E-02	1.299E-01	1.092E-01	6.630E-02	NOT IDENT.
BR-77	1.336E+01	1.900E+01	1.664E+01	9.692E+00	FAIL ABUN
SR-82	-1.965E-01	4.276E-01	3.595E-01	2.182E-01	NOT IDENT.
RB-83	3.743E-03	2.357E-01	2.032E-01	1.202E-01	NOT IDENT.
RB-84	-4.688E-02	8.048E-02	6.580E-02	4.106E-02	NOT IDENT.
KR-85	2.261E+01	2.641E+01	2.028E+01	1.348E+01	NOT IDENT.
SR-85	1.133E-01	1.323E-01	1.016E-01	6.752E-02	NOT IDENT.
RB-86	-1.472E-01	9.595E-01	8.056E-01	4.896E-01	NOT IDENT.
Y-88	-2.761E-02	5.106E-02	3.424E-02	2.605E-02	NOT IDENT.
ZR-88	-8.963E-02	1.145E-01	9.905E-02	5.844E-02	NOT IDENT.
Y-91	1.932E+01	2.602E+01	2.321E+01	1.328E+01	NOT IDENT.
NB-94	-4.375E-03	4.466E-02	3.732E-02	2.279E-02	NOT IDENT.
NB-95	7.228E-03	5.870E-02	4.960E-02	2.995E-02	NOT IDENT.
NB-95M	1.056E-02	3.716E-01	2.787E-01	1.896E-01	NOT IDENT.
ZR-95	1.108E-01	8.931E-02	8.224E-02	4.557E-02	NOT IDENT.
NB-97	1.139E+06	1.038E+05	0.000E+00	5.296E+04	SHORT HLIF
ZR-97	4.297E+04	7.686E+05	0.000E+00	3.921E+05	SHORT HLIF
MO-99	3.126E+00	9.138E+00	7.871E+00	4.662E+00	NOT IDENT.
TC-99M	-1.511E+14	2.058E+14	0.000E+00	1.050E+14	SHORT HLIF
RH-101	-1.539E-02	9.118E-02	7.895E-02	4.652E-02	NOT IDENT.
RH-102	7.740E-02	1.392E-01	1.219E-01	7.104E-02	NOT IDENT.
RU-103	1.194E-02	1.489E-01	1.290E-01	7.599E-02	FAIL ABUN
RH-106	-1.580E-01	7.925E-01	6.683E-01	4.043E-01	FAIL ABUN
RU-106	-1.580E-01	7.924E-01	6.683E-01	4.043E-01	FAIL ABUN
AG-108M	-5.453E-02	1.455E-01	1.262E-01	7.426E-02	NOT IDENT.
AG-110M	2.415E+00	2.495E-01	1.741E-01	1.273E-01	NOT IDENT.
IN-111	-3.758E+00	1.890E+00	1.541E+00	9.643E-01	NOT IDENT.
IN-113M	3.476E-03	1.659E-01	1.460E-01	8.467E-02	NOT IDENT.
SN-113	3.476E-03	1.659E-01	1.460E-01	8.467E-02	NOT IDENT.
IN-114M	5.155E-01	5.659E-01	4.386E-01	2.887E-01	NOT IDENT.
CD-115	-6.717E+00	1.836E+01	1.565E+01	9.367E+00	NOT IDENT.
SN-117M	-2.162E-02	1.155E-01	1.012E-01	5.891E-02	NOT IDENT.
SB-122	8.890E-01	3.110E+00	2.690E+00	1.587E+00	NOT IDENT.
I-123	-1.291E+03	8.397E+05	0.000E+00	4.284E+05	SHORT HLIF
TE-123M	-1.013E-04	6.590E-02	5.796E-02	3.362E-02	NOT IDENT.
I-124	-1.404E-01	1.287E+00	9.417E-01	6.564E-01	NOT IDENT.
SB-124	-3.761E-02	8.675E-02	6.754E-02	4.426E-02	FAIL ABUN
SB-125	-2.056E-01	3.960E-01	3.429E-01	2.021E-01	NOT IDENT.
TE-125M	-1.789E+00	1.818E+01	1.628E+01	9.276E+00	NOT IDENT.
I-126	1.384E-01	2.651E-01	2.035E-01	1.353E-01	NOT IDENT.
SB-126	1.522E-02	1.957E-01	1.431E-01	9.986E-02	FAIL ABUN
SB-127	2.999E-01	1.201E+00	1.033E+00	6.125E-01	FAIL ABUN
XE-127	1.274E-02	1.255E-01	1.090E-01	6.402E-02	NOT IDENT.
I-131	-1.786E-01	3.406E-01	2.979E-01	1.738E-01	NOT IDENT.
TE-132	-2.454E-01	1.222E+00	1.047E+00	6.232E-01	FAIL ABUN
BA-133	-2.272E-02	1.692E-01	1.297E-01	8.634E-02	NOT IDENT.
I-133	-1.015E+03	3.483E+03	0.000E+00	1.777E+03	SHORT HLIF
CS-134	1.128E-01	6.033E-02	5.900E-02	3.078E-02	NOT IDENT.
CS-135	5.563E-01	4.616E-01	4.005E-01	2.355E-01	NOT IDENT.
I-135	-1.537E+13	2.889E+13	0.000E+00	1.474E+13	SHORT HLIF
CS-136	2.445E-02	1.319E-01	1.144E-01	6.729E-02	FAIL ABUN
CE-139	7.161E-03	7.120E-02	6.259E-02	3.633E-02	NOT IDENT.
BA-140	-2.618E-01	7.512E-01	6.356E-01	3.833E-01	NOT IDENT.
LA-140	-1.089E-01	9.282E-02	5.912E-02	4.736E-02	NOT IDENT.
CE-141	-3.980E-02	1.389E-01	1.218E-01	7.087E-02	NOT IDENT.
CE-143	1.947E+02	1.502E+02	0.000E+00	7.665E+01	SHORT HLIF
CE-144	-3.680E-01	4.690E-01	4.073E-01	2.393E-01	NOT IDENT.
PM-144	2.320E-02	4.838E-02	4.217E-02	2.468E-02	NOT IDENT.

PR-144	1.570E+00	3.275E+00	2.854E+00	1.671E+00	NOT IDENT.
PM-146	1.285E-01	2.113E-01	1.855E-01	1.078E-01	NOT IDENT.
ND-147	-5.381E-01	1.620E+00	1.380E+00	8.267E-01	NOT IDENT.
PM-149	-4.394E+01	1.361E+02	1.213E+02	6.945E+01	NOT IDENT.
EU-152	-3.327E-02	3.424E-01	2.863E-01	1.747E-01	FAIL ABUN
GD-153	-1.847E-01	1.456E-01	1.277E-01	7.427E-02	NOT IDENT.
EU-154	3.657E-02	1.609E-01	1.380E-01	8.209E-02	NOT IDENT.
EU-155	-1.574E-01	2.129E-01	1.884E-01	1.086E-01	FAIL ABUN
TB-160	-5.707E-02	1.605E-01	1.343E-01	8.191E-02	FAIL ABUN
HO-166M	-1.007E-03	8.003E-02	6.727E-02	4.083E-02	FAIL ABUN
TM-171	4.263E+00	3.135E+01	2.542E+01	1.600E+01	FAIL ABUN
LU-176	-7.069E-03	7.522E-02	6.709E-02	3.838E-02	FAIL ABUN
LU-177	1.043E+00	2.355E+00	2.053E+00	1.202E+00	NOT IDENT.
LU-177M	3.115E-01	7.046E-01	6.217E-01	3.595E-01	FAIL ABUN
HF-181	-2.001E-02	1.747E-01	1.510E-01	8.912E-02	FAIL ABUN
W-181	7.320E-01	4.436E-01	3.268E-01	2.263E-01	FAIL ABUN
TA-182	3.004E-03	2.733E-01	2.304E-01	1.394E-01	FAIL ABUN
RE-183	-1.215E-02	2.575E-01	2.260E-01	1.314E-01	FAIL ABUN
RE-184	-2.381E-01	6.881E-01	5.844E-01	3.511E-01	FAIL ABUN
OS-185	-7.296E-03	1.143E-01	9.665E-02	5.830E-02	FAIL ABUN
RE-188	1.499E-01	3.854E-01	3.417E-01	1.966E-01	NOT IDENT.
W-188	1.358E+01	2.400E+01	1.900E+01	1.224E+01	FAIL ABUN
IR-192	-1.045E-01	1.046E-01	9.136E-02	5.339E-02	FAIL ABUN
AU-195	-1.183E-01	4.176E-01	3.746E-01	2.130E-01	FAIL ABUN
TL-200	2.312E+01	4.049E+02	0.000E+00	2.066E+02	SHORT HLIF
TL-201	-1.094E+00	1.031E+01	9.022E+00	5.260E+00	NOT IDENT.
TL-202	-8.373E-02	2.805E-01	2.434E-01	1.431E-01	NOT IDENT.
HG-203	-1.570E-02	1.109E-01	9.944E-02	5.659E-02	NOT IDENT.
BI-207	1.031E-02	7.774E-02	6.697E-02	3.966E-02	FAIL ABUN
TL-207	6.468E-01	2.056E+00	1.838E+00	1.049E+00	FAIL ABUN
PO-209	-3.628E+00	9.898E+00	8.290E+00	5.050E+00	NOT IDENT.
PB-211	-1.227E+00	3.734E+00	3.191E+00	1.905E+00	NOT IDENT.
BI-212	1.616E+00	7.128E-01	4.458E-01	3.637E-01	FAIL ABUN
PO-215	6.468E-01	2.056E+00	1.838E+00	1.049E+00	FAIL ABUN
RN-219	7.009E-01	1.620E+00	1.430E+00	8.263E-01	NOT IDENT.
RN-220	1.546E+01	7.705E+01	6.654E+01	3.931E+01	NOT IDENT.
RA-223	6.468E-01	2.056E+00	1.838E+00	1.049E+00	FAIL ABUN
RA-224	1.606E+01	2.550E+00	1.955E+00	1.301E+00	NOT IDENT.
AC-227	4.778E-01	1.145E+00	9.846E-01	5.841E-01	NOT IDENT.
TH-227	4.778E-01	1.146E+00	9.846E-01	5.845E-01	NOT IDENT.
TH-229	-5.486E-01	1.444E+00	1.247E+00	7.367E-01	FAIL ABUN
PA-231	7.391E-01	4.462E+00	4.017E+00	2.276E+00	NOT IDENT.
TH-231	6.468E-01	2.056E+00	1.838E+00	1.049E+00	FAIL ABUN
U-231	-4.528E+00	1.448E+00	1.192E+00	7.387E-01	NOT IDENT.
PA-233	1.309E-01	1.977E-01	1.784E-01	1.009E-01	FAIL ABUN
PA-234	1.003E-01	3.991E-01	3.506E-01	2.036E-01	FAIL ABUN
PA-234M	-1.083E+00	8.390E+00	7.106E+00	4.281E+00	NOT IDENT.
TH-234	2.468E+00	1.543E+00	1.110E+00	7.875E-01	FAIL ABUN
U-235	7.247E-02	4.822E-01	4.265E-01	2.460E-01	FAIL ABUN
NP-236	1.690E-02	1.889E-01	1.663E-01	9.637E-02	NOT IDENT.
U-238	2.468E+00	1.543E+00	1.110E+00	7.875E-01	FAIL ABUN
NP-239	-2.557E-01	4.065E-01	3.586E-01	2.074E-01	NOT IDENT.
CM-243	2.061E-01	1.893E-01	1.727E-01	9.657E-02	NOT IDENT.
CM-247	-1.913E-02	1.449E-01	1.269E-01	7.395E-02	NOT IDENT.
CF-249	9.651E-02	1.506E-01	1.339E-01	7.682E-02	NOT IDENT.
CF-251	-1.643E-01	3.142E-01	2.719E-01	1.603E-01	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	1585.8960
46.50	1585.8960
46.50	1585.8960
48.70	1997.4927
49.72	2001.0953
51.35	2473.6868
52.39	2451.8269
52.97	2569.6494
53.15	2570.4331
53.44	2573.1514
54.07	2583.1924
56.28	2688.1030
56.28	2688.1140
57.37	0.0000
57.53	2553.7402
57.53	2553.7456
57.60	2554.0261
57.98	2555.5881
57.98	2555.5881
59.32	2391.2947
59.32	2391.2947
59.40	2391.5962
59.54	2392.1252
59.72	2392.8074
60.01	2393.8950
61.10	1557.9460
61.14	1558.0424
61.30	1558.4310
63.00	1562.5103
63.29	1563.2024
63.29	1563.2024
63.58	1563.8914
64.28	1604.9664
65.12	1633.8029
65.20	1633.9969
65.20	1633.9969
66.05	1712.1274
66.72	1630.2218
66.83	1652.8853
66.91	1653.0812
67.20	1653.7839
67.20	1653.7839
67.75	1625.2123
67.85	1659.8477
68.90	1778.4523
68.90	1778.4523
69.30	1809.4443
69.67	1769.1862
70.82	1760.0815
70.82	1760.0815
70.83	1760.1030
72.80	1730.3657
72.87	1730.5341
72.87	1730.5341
74.67	1771.2942
74.81	1771.6378
74.81	1771.6378
74.81	1771.6378
74.81	1771.6378
74.81	1771.6378
74.81	1771.6378
74.97	1772.0245
75.28	1772.7834
75.70	1773.8002
77.11	1777.2013
77.11	1777.2013
77.11	1777.2013

77.11	1777.2013
77.11	1777.2013
77.11	1777.2013
78.38	1667.7581
79.62	1591.4731
79.80	1646.5845
79.80	1646.5845
80.11	1647.2587
80.18	1647.4139
80.30	1732.8734
80.30	1732.8734
80.57	1733.4921
81.00	1752.7460
81.07	1752.9075
81.07	1752.9075
81.07	1752.9075
81.07	1752.9075
82.60	1650.6045
83.37	1684.0647
83.78	1714.7616
83.78	1714.7616
83.78	1714.7616
83.78	1714.7616
84.21	1688.1820
84.40	1688.5931
84.90	1675.9034
85.43	1643.3391
86.29	1654.3262
86.50	1654.7675
86.54	1654.8530
86.59	1654.9518
86.72	1741.1346
86.79	1846.7542
86.94	1847.1068
87.30	1829.7144
87.30	1829.7144
87.30	1829.7144
87.30	1829.7144
87.30	1829.7144
87.30	1829.7144
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88.03	1740.9226
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88.47	1715.7410
89.95	2171.7046
91.11	1799.9963
92.29	1672.0608
92.38	1672.2391
92.38	1672.2391
93.35	1708.0334
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94.90	1599.8394
94.90	1599.8394
94.90	1599.8394
94.90	1599.8394
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103.18	1510.6692
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108.00	1498.1702
109.28	1511.1035
111.00	1516.8905
111.00	1516.8905

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115.19	1482.0925
116.30	1497.7135
117.00	1538.5173
117.00	1538.5173
117.66	1566.4001
121.11	1534.1155
121.62	1514.9728
121.78	1490.2784
122.06	1490.7059
122.32	1547.9884
122.32	1547.9884
122.32	1547.9884
122.32	1547.9884
123.07	1554.1659
127.23	1599.7854
129.76	1578.6482
131.20	1517.4397
133.02	1652.2590
133.54	1627.8660
135.34	1558.8939
136.00	1552.8009
136.25	1569.3593
136.48	1569.7083
140.51	1594.9745
140.51	0.0000
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142.65	1552.3418
143.76	1563.1066
144.24	1547.4863
144.24	1547.4863
144.24	1547.4863
144.24	1547.4863
145.22	1569.2828
145.44	1591.0311
147.16	1533.2108
152.43	1485.0205
152.70	1494.6187
153.22	1460.3650
154.21	1416.3752
154.21	1416.3752
154.21	1416.3752
154.21	1416.3752
155.03	1463.7252
156.02	1529.8938
158.56	1500.2354
159.00	0.0000
159.00	1480.1428
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161.27	1516.1575
162.32	1537.1909
162.64	1537.6097
163.35	1502.2520
163.89	1528.8679
165.85	1525.1646
167.43	1532.3933
171.28	1519.5511
171.86	1526.5381
172.10	1526.8392
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176.60	1550.2577
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184.41	1793.0077
185.71	1794.8364
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190.27	1863.0680
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193.63	1933.3057
197.04	1834.9861
198.01	1850.1820
198.60	1845.6587
200.40	1856.6829
201.83	1837.2836
202.84	1808.7115
205.31	1822.7040
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209.75	1704.9694
209.75	1704.9694
210.97	1665.5834
215.65	1602.0660
216.55	1593.3740
218.09	1676.2142
222.10	1587.6569
223.80	1583.0188
226.40	1588.0308
227.00	1610.4508
227.08	1610.5411
227.20	1587.8113
228.16	1588.8575
228.18	1588.8799
228.18	1588.8799
231.56	0.0000
235.69	1598.9314
236.00	1579.9974
236.00	1579.9974
238.60	1745.9263
238.63	1745.9626
238.63	1745.9626
238.63	1745.9626
239.00	1747.4847
240.98	1507.8994
241.98	1468.4462
241.98	1468.4462
241.98	1468.4462
244.69	1687.9702
245.39	1735.0090
247.94	1447.6824
248.90	1439.7505
249.79	1505.7556
252.40	1464.0189
252.85	1467.7535
252.85	1467.7535
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256.20	1432.0652
260.50	1432.6091
260.90	1451.8762
262.80	1380.0928
264.65	1407.3295
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269.46	1367.8879
269.46	1367.8879
269.46	1367.8879
269.46	1367.8879
271.23	1447.7394
273.65	1494.7230
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277.60	1382.5114
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279.20	1355.4919
279.53	1355.7494
280.46	1360.1060
281.68	1361.1013
283.67	1326.6068
284.30	1355.0959
285.00	1387.2563
285.90	1373.5293
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286.10	1389.9637
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290.80	1320.0864
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293.26	0.0000
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295.21	1425.5261
295.21	1425.5261
295.96	1492.1893

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298.57	1244.0972
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299.80	1255.5923
300.09	1267.9423
300.09	1267.9423
300.09	1267.9423
300.10	1267.9592
300.12	1292.2554
301.29	1332.2490
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303.91	1404.3074
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304.84	1391.3364
306.84	1289.5682
308.46	1319.1167
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316.51	1307.5387
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323.87	1286.0254
323.87	1286.0254
323.87	1286.0254
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328.77	1277.3928
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334.20	1313.5906
334.20	1313.5906
334.30	1313.6597
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338.28	1398.6028
338.28	1398.6028
338.28	1398.6028
338.32	1398.6211
338.32	1398.6211
338.32	1398.6211
340.50	1322.6003
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351.92	1307.9662
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366.43	1313.8019
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369.80	1362.3185
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387.95	1391.5710
388.63	1369.1357
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391.69	1406.4860
392.90	1442.6681
398.62	1413.9618
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401.10	1473.2028
401.81	1466.0094
402.60	1494.4021
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411.60	1554.6591
413.65	1493.3687
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415.76	1475.4786
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427.89	1603.0902
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439.89	1706.3959
443.98	1749.5641
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445.03	1754.2875
445.03	1754.2875
445.03	1754.2875
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473.00	1756.5081
475.06	1622.1604
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476.78	1650.1094
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477.96	1497.0471
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484.57	1255.2584
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511.85	773.2855
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513.99	772.2585
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569.32	418.6754
569.50	431.0401
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593.00	351.7125
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602.71	348.7648
603.60	347.1354
604.41	333.3438
604.70	324.7010
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609.31	357.9225
609.31	357.9225

609.31	357.9225
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621.84	324.8945
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666.33	95.7415
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696.49	91.3065
697.00	91.3210
697.49	91.3356
698.33	92.4353
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722.78	74.0105
722.89	74.0122
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747.13	56.7392
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768.36	82.3553
768.36	82.3553
768.36	82.3553
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778.89	62.4177
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884.67	53.8886
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911.07	68.5444
911.07	68.5444
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934.06	61.2917
934.06	61.2917
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969.11	68.6007
969.11	68.6007
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1076.63	58.4934
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1099.22	76.7337
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1112.84	56.5484
1115.52	60.0122
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1120.29	80.6731
1120.29	80.6731
1120.29	80.6731
1120.51	80.6763
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1238.11	65.7266
1238.11	65.7266
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1325.50	43.9021
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1368.53	0.0000
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1377.67	33.7891
1377.67	33.7891
1377.67	33.7891
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1489.15	15.0920
1509.49	14.0653
1596.49	26.3633
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1691.02	15.3047
1691.02	15.3047

1706.46	0.0000
1750.46	0.0000
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1764.49	10.1627
1764.49	10.1627
1764.49	10.1627
1770.23	10.1719
1771.40	5.0869
1791.20	0.0000
1808.65	15.5938
1836.01	17.8128

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232511001

Total Uranium Activity	7.3756E+00	ug/g
Total Uranium Counting Unc.	4.5973E+00	ug/g
Total Uranium Tpu	2.3456E-06	ug/g
Total Uranium Mda	3.3075E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232511001      *
*   ANALYST       : MXR1                      DETECTOR    : GAM17           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME  :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 10:10:39.77    SAMPLE ALQT:  144.920 GRAM    *
*                                                                           *
*****************************************************************************
```

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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.553E+01
GROSS GAMMA ERROR  (pCi/GRAM  )   : 7.932E+00
GROSS GAMMA MDA    (pCi/GRAM  )   : 9.281E+00
GROSS GAMMA DLC    (pCi/GRAM  )   : 4.585E+00
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VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:20:13.65

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511002.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:19:39.
Sample ID         : G232511002           Sample quantity  : 1.55080E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.09  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.52	3015	978	0.99	118.23	113	10	4.19E-01	2.7	
2	0	63.41*	97	540	1.20	126.03	123	7	1.35E-02	42.3	
3	2	74.80	432	526	1.08	148.81	142	15	6.00E-02	10.3	1.35E+00
4	2	77.08	583	429	1.03	153.38	142	15	8.10E-02	7.3	
5	0	86.23	92	659	0.98	171.67	171	7	1.28E-02	47.2	
6	6	89.95	215	349	1.20	179.13	177	16	2.98E-02	14.5	1.59E+00
7	6	92.77*	292	535	1.34	184.76	177	16	4.06E-02	16.3	
8	0	186.02*	176	608	1.09	371.35	366	11	2.45E-02	29.3	
9	0	209.34*	190	353	1.74	418.02	414	9	2.64E-02	19.6	
10	5	238.66*	1317	266	1.08	476.70	471	17	1.83E-01	3.4	1.89E+00
11	5	241.52	249	457	1.61	482.41	471	17	3.46E-02	18.2	
12	0	269.68	137	335	1.55	538.77	534	11	1.90E-02	27.4	
13	0	295.21	408	333	1.14	589.86	585	11	5.66E-02	10.0	
14	0	327.39	89	277	1.38	654.26	649	11	1.24E-02	37.4	
15	0	338.93	341	350	1.30	677.34	671	13	4.74E-02	12.7	
16	0	351.98*	661	312	1.22	703.46	697	12	9.18E-02	6.7	
17	0	462.78	78	196	1.84	925.19	921	9	1.09E-02	34.3	
18	0	510.83*	182	256	1.53	1021.33	1013	17	2.53E-02	23.0	
19	0	583.21*	390	140	1.17	1166.19	1161	12	5.42E-02	8.0	
20	0	609.38*	488	130	1.44	1218.55	1213	13	6.77E-02	6.7	
21	0	661.67	3095	111	1.44	1323.21	1316	13	4.30E-01	1.9	
22	0	727.67	117	94	1.73	1455.28	1451	14	1.63E-02	20.1	
23	0	793.96	84	56	4.96	1587.95	1580	14	1.17E-02	21.7	
24	0	860.49	51	76	1.62	1721.10	1716	11	7.14E-03	35.4	
25	0	911.33*	272	74	1.91	1822.84	1816	18	3.78E-02	9.5	
26	0	969.16*	186	60	1.60	1938.59	1934	13	2.58E-02	11.8	
27	0	1120.36*	87	78	1.75	2241.21	2236	13	1.21E-02	23.9	
28	0	1460.90*	1376	28	2.11	2922.81	2915	17	1.91E-01	2.9	
29	0	1588.15	30	15	1.83	3177.51	3170	13	4.11E-03	33.4	
30	0	1594.26	10	19	0.98	3189.74	3184	9	1.38E-03	89.5	
31	0	1764.78*	91	0	1.19	3531.08	3523	17	1.27E-02	11.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 12:20:18

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:19:39
Sample ID : G232511002 Sample quantity : 155.08 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA2 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:03.09 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.982E+01	2.795E+00	5.366E-01	3.978E-02	55.577
SN-126	+	64.28		9.534E-01	8.194E-01	8.725E-01	1.361E-01	1.093
	+	86.94		4.836E-01	5.001E-01	5.735E-01	2.414E-01	0.843
	+	87.57	*	1.163E-01	1.107E-01	1.400E-01	1.646E-02	0.831
CS-135	+	268.24	*	4.909E-01	2.735E-01	2.582E-01	2.659E-02	1.901
BA-137M	+	661.65	*	3.936E+00	2.941E-01	6.223E-02	3.983E-03	63.247
CS-137	+	661.65	*	4.161E+00	3.117E-01	6.579E-02	4.225E-03	63.247
TL-208		277.35		3.821E-01	4.237E-01	7.305E-01	9.313E-02	0.523
	+	510.84		7.829E-01	3.702E-01	2.537E-01	2.688E-02	3.086
	+	583.14	*	4.777E-01	8.428E-02	5.917E-02	4.345E-03	8.072
	+	860.37		5.933E-01	4.240E-01	4.554E-01	4.303E-02	1.303
BI-211		72.87		3.743E+00	2.969E+00	5.164E+00	5.229E-01	0.725
	+	351.07	*	3.571E+00	5.567E-01	3.573E-01	2.895E-02	9.996
PB-212	+	74.81		2.410E+00	5.983E-01	5.338E-01	7.426E-02	4.515
	+	77.11		1.816E+00	3.257E-01	2.991E-01	3.149E-02	6.072
	+	87.30		5.380E-01	5.149E-01	6.497E-01	1.001E-01	0.828
	+	238.63	*	1.552E+00	1.815E-01	9.492E-02	8.993E-03	16.356
		300.09		1.221E+00	9.444E-01	1.477E+00	1.572E-01	0.827
PO-212	+	74.81		2.410E+00	5.983E-01	5.338E-01	7.426E-02	4.515
	+	77.11		1.816E+00	3.257E-01	2.991E-01	3.149E-02	6.072
	+	87.30		5.380E-01	5.149E-01	6.497E-01	1.001E-01	0.828
		115.19		1.547E+00	3.503E+00	5.874E+00	3.954E-01	0.263
	+	238.63	*	1.552E+00	1.815E-01	9.492E-02	8.993E-03	16.356
		300.09		1.221E+00	9.444E-01	1.477E+00	1.572E-01	0.827
BI-214	+	609.31	*	1.125E+00	1.783E-01	1.137E-01	9.469E-03	9.890
		768.36		1.047E+00	7.246E-01	1.297E+00	1.257E-01	0.807
		934.06		3.752E-01	1.112E+00	1.827E+00	1.999E-01	0.205
	+	1120.29		1.060E+00	5.150E-01	5.355E-01	4.963E-02	1.979
		1238.11		1.389E+00	9.455E-01	1.704E+00	1.445E-01	0.815
		1377.67		1.231E+00	9.495E-01	1.758E+00	1.697E-01	0.700
	+	1764.49		1.522E+00	3.667E-01	2.525E-01	1.485E-02	6.027
PB-214	+	74.81		4.153E+00	1.003E+00	9.198E-01	1.167E-01	4.515
	+	77.11		3.113E+00	6.066E-01	5.127E-01	6.664E-02	6.072
	+	87.30		9.217E-01	8.801E-01	1.113E+00	1.562E-01	0.828

Sample ID : G232511002 Acquisition date : 7-JUL-2009 10:19:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		1.761E+00	6.651E-01	5.719E-01	5.786E-02	3.079
	+	295.21		1.304E+00	2.961E-01	2.306E-01	2.522E-02	5.653
	+	351.92	*	1.242E+00	2.042E-01	1.245E-01	1.198E-02	9.975
PO-214	+	74.81		4.153E+00	1.003E+00	9.198E-01	1.167E-01	4.515
	+	77.11		3.113E+00	6.066E-01	5.127E-01	6.664E-02	6.072
	+	87.30		9.217E-01	8.801E-01	1.113E+00	1.562E-01	0.828
	+	241.98		1.761E+00	6.651E-01	5.719E-01	5.786E-02	3.079
	+	295.21		1.304E+00	2.961E-01	2.306E-01	2.522E-02	5.653
	+	351.92	*	1.242E+00	2.042E-01	1.245E-01	1.198E-02	9.975
PO-216	+	74.81		2.410E+00	5.983E-01	5.338E-01	7.426E-02	4.515
	+	77.11		1.816E+00	3.257E-01	2.991E-01	3.149E-02	6.072
	+	87.30		5.380E-01	5.149E-01	6.497E-01	1.001E-01	0.828
	+	238.63	*	1.552E+00	1.815E-01	9.492E-02	8.993E-03	16.356
		300.09		1.221E+00	9.444E-01	1.477E+00	1.572E-01	0.827
PO-218	+	74.81		4.153E+00	1.003E+00	9.198E-01	1.167E-01	4.515
	+	77.11		3.113E+00	6.066E-01	5.127E-01	6.664E-02	6.072
	+	87.30		9.217E-01	8.801E-01	1.113E+00	1.562E-01	0.828
	+	241.98		1.761E+00	6.651E-01	5.719E-01	5.786E-02	3.079
	+	295.21		1.304E+00	2.961E-01	2.306E-01	2.522E-02	5.653
	+	351.92	*	1.242E+00	2.042E-01	1.245E-01	1.198E-02	9.975
RA-224	+	240.98	*	3.340E+00	1.247E+00	1.081E+00	9.076E-02	3.090
RA-226	+	609.31	*	1.125E+00	1.783E-01	1.137E-01	9.469E-03	9.890
		768.36		1.047E+00	7.246E-01	1.297E+00	1.257E-01	0.807
		934.06		3.752E-01	1.112E+00	1.827E+00	1.999E-01	0.205
	+	1120.29		1.060E+00	5.150E-01	5.355E-01	4.963E-02	1.979
		1238.11		1.389E+00	9.455E-01	1.704E+00	1.445E-01	0.815
		1377.67		1.231E+00	9.495E-01	1.758E+00	1.697E-01	0.700
	+	1764.49		1.522E+00	3.667E-01	2.525E-01	1.485E-02	6.027
AC-228	+	338.32		2.035E+00	9.826E-01	4.234E-01	1.742E-01	4.805
	+	911.07	*	1.491E+00	3.319E-01	1.981E-01	2.319E-02	7.528
	+	969.11		1.795E+00	5.950E-01	5.442E-01	1.270E-01	3.299
RA-228	+	338.32		2.035E+00	9.826E-01	4.234E-01	1.742E-01	4.805
	+	911.07	*	1.491E+00	3.319E-01	1.981E-01	2.319E-02	7.528
	+	969.11		1.795E+00	5.950E-01	5.442E-01	1.270E-01	3.299
TH-228		84.40		2.550E+00	2.782E+00	4.274E+00	6.441E-01	0.597
	+	238.60	*	1.552E+00	1.815E-01	9.491E-02	8.991E-03	16.358
		300.10		1.220E+00	1.182E+00	1.477E+00	8.759E-01	0.826
TH-230	+	609.31	*	1.125E+00	1.783E-01	1.137E-01	9.469E-03	9.890
		768.36		1.047E+00	7.246E-01	1.297E+00	1.257E-01	0.807
		934.06		3.752E-01	1.112E+00	1.827E+00	1.999E-01	0.205
	+	1120.29		1.060E+00	5.150E-01	5.354E-01	4.963E-02	1.979
		1238.11		1.389E+00	9.455E-01	1.704E+00	1.445E-01	0.815
		1377.67		1.231E+00	9.494E-01	1.758E+00	1.697E-01	0.700
	+	1764.49		1.522E+00	3.667E-01	2.525E-01	1.485E-02	6.027
TH-232	+	338.32		2.035E+00	5.398E-01	4.234E-01	3.379E-02	4.805
	+	911.07	*	1.491E+00	3.319E-01	1.981E-01	2.319E-02	7.528
	+	969.11		1.795E+00	5.950E-01	5.442E-01	1.270E-01	3.299
TH-234	+	63.29	*	2.409E+00	2.083E+00	2.289E+00	4.185E-01	1.052
	+	92.38		2.326E+00	8.784E-01	7.433E-01	1.421E-01	3.129

Sample ID : G232511002 Acquisition date : 7-JUL-2009 10:19:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.125E+00	1.783E-01	1.137E-01	9.469E-03	9.890
		768.36		1.047E+00	7.246E-01	1.297E+00	1.257E-01	0.807
		934.06		3.752E-01	1.112E+00	1.827E+00	1.999E-01	0.205
	+	1120.29		1.060E+00	5.150E-01	5.354E-01	4.963E-02	1.979
		1238.11		1.389E+00	9.455E-01	1.704E+00	1.445E-01	0.815
		1377.67		1.231E+00	9.494E-01	1.758E+00	1.697E-01	0.700
	+	1764.49		1.522E+00	3.667E-01	2.525E-01	1.485E-02	6.027
NP-237	+	86.50	*	3.416E-01	3.327E-01	4.065E-01	9.627E-02	0.840
		95.87		-9.850E-01	1.038E+00	1.440E+00	3.611E-01	-0.684
U-238	+	63.29	*	2.409E+00	2.083E+00	2.289E+00	4.185E-01	1.052
	+	92.38		2.326E+00	7.968E-01	7.433E-01	7.899E-02	3.129
AM-241	+	59.54	*	1.001E+01	1.069E+00	3.736E-01	3.460E-02	26.790
AM-243	+	74.67	*	3.907E-01	8.985E-02	8.688E-02	8.942E-03	4.497
	+	86.72		1.281E+01	1.219E+01	1.524E+01	1.775E+00	0.841
		117.66		-3.341E+00	3.729E+00	5.936E+00	3.810E-01	-0.563
		142.18		6.681E-01	1.839E+01	2.946E+01	1.818E+00	0.023
ANH-511	+	511.00	*	1.691E-01	7.871E-02	5.482E-02	3.585E-03	3.085

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.751E-02	4.130E-01	6.652E-01	4.890E-02	-0.026
NA-22		1274.54	*	-3.004E-02	4.552E-02	7.014E-02	4.689E-03	-0.428
NA-24		1368.53	*	2.889E-02	4.552E-02	Half-Life too short		
AL-26		1129.67		7.694E-01	1.818E+00	3.060E+00	1.935E-01	0.251
		1808.65	*	-4.022E-03	2.371E-02	3.773E-02	2.125E-03	-0.107
TI-44		67.85		-3.997E-02	4.787E-02	7.495E-02	7.253E-03	-0.533
	+	78.38	*	3.351E-01	6.010E-02	6.867E-02	7.321E-03	4.880
SC-46		889.25	*	-2.364E-03	3.711E-02	5.984E-02	5.513E-03	-0.040
	+	1120.51		1.781E-01	8.578E-02	1.225E-01	7.940E-03	1.454
V-48		944.10		-5.778E-01	8.670E-01	1.312E+00	1.166E-01	-0.441
		983.50	*	-4.769E-02	6.396E-02	9.483E-02	8.018E-03	-0.503
		1312.09		-6.708E-02	6.902E-02	9.991E-02	7.110E-03	-0.671
CR-51		320.08	*	-1.653E-01	3.662E-01	5.952E-01	5.307E-02	-0.278
MN-52		744.21		-4.295E-02	1.662E-01	2.677E-01	1.971E-02	-0.160
		848.13		2.604E+00	4.685E+00	8.014E+00	6.946E-01	0.325
		935.52		3.245E-02	1.956E-01	3.165E-01	2.842E-02	0.103
		1246.25		5.079E+00	6.131E+00	1.072E+01	6.803E-01	0.474
		1333.61		1.076E+00	3.749E+00	6.338E+00	4.665E-01	0.170
		1434.06	*	1.816E-02	1.438E-01	2.388E-01	1.716E-02	0.076
MN-54		834.83	*	2.535E-02	3.458E-02	5.976E-02	5.076E-03	0.424
CO-56		846.75	*	1.158E-02	3.535E-02	5.930E-02	5.129E-03	0.195
		977.42		-8.144E-02	2.852E+00	4.300E+00	3.666E-01	-0.019
		1037.82		1.244E-01	2.612E-01	4.569E-01	3.776E-02	0.272
		1175.09		6.422E-01	2.366E+00	4.001E+00	2.222E-01	0.160
		1238.25		1.399E-01	9.383E-02	1.698E-01	1.120E-02	0.824
		1360.21		-4.615E-01	8.845E-01	1.342E+00	9.828E-02	-0.344
		1771.40		3.409E-02	2.058E-01	3.063E-01	1.790E-02	0.111

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-9.768E-04	2.437E-02	4.006E-02	2.364E-03	-0.024
		136.48		-9.144E-02	2.092E-01	3.364E-01	2.338E-02	-0.272
CO-58		810.76	*	-2.358E-02	3.900E-02	6.046E-02	4.962E-03	-0.390
FE-59		142.65		-3.156E-01	2.737E+00	4.360E+00	2.695E-01	-0.072
		192.34		4.675E-01	9.807E-01	1.597E+00	2.016E-01	0.293
		1099.22	*	-4.718E-02	8.898E-02	1.415E-01	1.089E-02	-0.333
		1291.56		-6.767E-02	1.128E-01	1.730E-01	1.434E-02	-0.391
CO-60		1173.22		2.512E-02	4.777E-02	8.231E-02	4.554E-03	0.305
		1332.49	*	-2.455E-02	3.967E-02	6.031E-02	4.440E-03	-0.407
ZN-65		1115.52	*	-4.455E-02	1.119E-01	1.532E-01	1.008E-02	-0.291
GE-68		1077.35	*	8.949E-01	1.263E+00	2.225E+00	1.598E-01	0.402
AS-73		53.44	*	-1.010E+00	1.392E+00	2.335E+00	2.090E-01	-0.433
AS-74		595.88	*	-1.406E-02	8.794E-02	1.460E-01	9.541E-03	-0.096
		634.78		-2.028E-01	3.294E-01	5.257E-01	3.400E-02	-0.386
SE-75		66.05		2.359E+00	5.268E+00	8.198E+00	9.166E-01	0.288
		96.73		-9.327E-01	8.346E-01	1.167E+00	1.670E-01	-0.799
		121.11		8.110E-02	1.298E-01	2.183E-01	2.044E-02	0.371
		136.00		-4.713E-03	3.937E-02	6.413E-02	3.937E-03	-0.073
		198.60		9.667E-01	1.910E+00	3.077E+00	2.621E-01	0.314
		264.65	*	1.826E-02	5.074E-02	7.693E-02	6.895E-03	0.237
		279.53		-3.982E-02	1.277E-01	2.088E-01	1.991E-02	-0.191
		303.91		-3.055E+00	2.302E+00	3.574E+00	4.152E-01	-0.855
		400.65		1.235E-01	2.975E-01	4.964E-01	4.664E-02	0.249
BR-77		87.88		3.664E+02	1.246E+02	1.670E+02	1.972E+01	2.194
		200.40		-1.851E+01	9.304E+01	1.473E+02	1.103E+01	-0.126
	+	239.00		1.318E+02	1.423E+01	1.923E+01	1.606E+00	6.852
		249.79		1.810E+01	3.583E+01	6.174E+01	5.307E+00	0.293
		281.68		1.421E+01	5.288E+01	8.962E+01	8.248E+00	0.159
		297.23		2.829E+01	3.962E+01	6.022E+01	5.382E+00	0.470
		303.76		-2.058E+02	1.078E+02	1.625E+02	1.432E+01	-1.266
		439.47		5.991E+01	9.846E+01	1.646E+02	1.052E+01	0.364
		484.57		-7.182E+01	1.516E+02	2.378E+02	1.546E+01	-0.302
		520.65	*	3.008E-01	6.515E+00	1.047E+01	6.858E-01	0.029
		574.64		1.059E+01	1.182E+02	1.998E+02	1.309E+01	0.053
		578.91		-4.806E+00	5.506E+01	7.999E+01	5.239E+00	-0.060
		585.48		5.536E+02	1.335E+02	2.372E+02	1.552E+01	2.334
		755.35		7.534E+01	8.220E+01	1.447E+02	1.085E+01	0.521
		817.79		-2.526E+01	6.790E+01	1.072E+02	8.873E+00	-0.236
SR-82		698.33		-1.127E+01	3.164E+01	5.104E+01	3.480E+00	-0.221
		776.49	*	9.824E-02	3.532E-01	5.922E-01	4.592E-02	0.166
		1395.20		9.795E+00	8.810E+00	1.651E+01	1.199E+00	0.593
RB-83		520.41	*	-1.109E-02	8.043E-02	1.278E-01	8.369E-03	-0.087
		529.64		1.771E-02	1.212E-01	1.957E-01	1.283E-02	0.090
		552.65		7.572E-02	2.006E-01	3.458E-01	2.268E-02	0.219
RB-84		881.50	*	6.774E-03	6.447E-02	1.057E-01	9.626E-03	0.064
KR-85		513.99	*	7.553E+00	8.671E+00	1.301E+01	8.511E-01	0.581
SR-85		513.99	*	3.785E-02	4.345E-02	6.518E-02	4.265E-03	0.581
RB-86		1076.63	*	5.613E-03	7.475E-01	1.249E+00	8.978E-02	0.004
Y-88		898.02		-4.554E-04	3.946E-02	6.388E-02	5.987E-03	-0.007

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	-6.525E-04	3.465E-02	5.708E-02	3.130E-03	-0.011
ZR-88		392.90	*	-2.126E-02	3.608E-02	5.736E-02	3.565E-03	-0.371
Y-91		1204.90	*	3.403E+00	1.912E+01	3.204E+01	1.884E+00	0.106
NB-94		702.63	*	2.651E-03	3.202E-02	5.332E-02	3.662E-03	0.050
		871.10		2.314E-02	3.555E-02	6.082E-02	5.456E-03	0.381
NB-95		765.79	*	2.394E-02	4.143E-02	6.953E-02	5.301E-03	0.344
NB-95M		235.69	*	3.000E-02	1.347E-01	2.042E-01	1.954E-02	0.147
ZR-95		724.18		8.261E-02	8.985E-02	1.416E-01	1.134E-02	0.583
		756.15	*	4.713E-02	6.575E-02	1.141E-01	9.690E-03	0.413
NB-97		657.90	*	2.323E-02	6.575E-02	Half-Life too short		
		1024.50		2.703E-01	6.575E-02	Half-Life too short		
ZR-97		254.15		9.798E-03	6.575E-02	Half-Life too short		
		355.39		-4.250E-02	6.575E-02	Half-Life too short		
		507.63	*	2.822E-01	6.575E-02	Half-Life too short		
		602.52		-1.233E-02	6.575E-02	Half-Life too short		
		1021.30		-8.222E-02	6.575E-02	Half-Life too short		
		1147.95		-5.725E-01	6.575E-02	Half-Life too short		
		1362.66		-3.331E-01	6.575E-02	Half-Life too short		
		1750.46		-1.507E-01	6.575E-02	Half-Life too short		
MO-99		140.51		6.799E+00	1.532E+01	2.524E+01	6.820E+00	0.269
		181.06		-6.283E+00	1.163E+01	1.609E+01	2.833E+00	-0.391
		366.43		-1.904E+01	5.662E+01	9.170E+01	6.530E+00	-0.208
		739.58	*	3.093E+00	6.042E+00	1.035E+01	1.499E+00	0.299
		778.00		-2.356E-02	1.941E+01	3.184E+01	2.475E+00	-0.001
TC-99M		140.51	*	4.073E+07	1.941E+01	Half-Life too short		
RH-101		127.23		-8.463E-03	3.150E-02	5.122E-02	3.036E-03	-0.165
		198.01	*	1.734E-02	3.562E-02	5.735E-02	4.264E-03	0.302
		325.23		1.675E-02	2.577E-01	3.780E-01	3.147E-02	0.044
RH-102		418.52		-1.828E-01	3.466E-01	5.494E-01	3.473E-02	-0.333
		475.06	*	2.015E-02	3.736E-02	6.201E-02	4.021E-03	0.325
		631.29		-4.491E-02	5.529E-02	8.696E-02	5.631E-03	-0.516
		697.49		1.099E-02	7.436E-02	1.244E-01	8.471E-03	0.088
		766.84		1.244E-01	1.093E-01	1.898E-01	1.449E-02	0.655
		1046.59		2.962E-03	1.148E-01	1.926E-01	1.470E-02	0.015
		1112.84		1.767E-01	2.488E-01	4.097E-01	2.708E-02	0.431
RU-103		497.08	*	3.008E-02	4.710E-02	7.834E-02	1.018E-02	0.384
	+	610.33		1.169E+01	2.419E+00	2.687E+00	4.218E-01	4.350
RH-106	+	511.85		8.412E-01	3.915E-01	4.355E-01	2.848E-02	1.932
		621.84	*	-2.318E-02	3.099E-01	5.153E-01	6.233E-02	-0.045
		1050.47		-4.453E-01	2.372E+00	3.908E+00	2.961E-01	-0.114
RU-106	+	511.85		8.412E-01	3.915E-01	4.355E-01	2.848E-02	1.932
		621.84	*	-2.318E-02	3.099E-01	5.153E-01	3.346E-02	-0.045
		1050.47		-4.453E-01	2.372E+00	3.908E+00	2.961E-01	-0.114
AG-108M		433.93	*	-2.855E-02	4.241E-02	6.655E-02	4.546E-03	-0.429
		614.37		2.153E-02	4.120E-02	6.294E-02	4.374E-03	0.342
		722.95		-1.009E-02	3.974E-02	5.506E-02	4.136E-03	-0.183
CD-109		88.03	*	3.312E+00	1.094E+00	1.466E+00	1.732E-01	2.259
AG-110M		657.75	*	5.624E-02	4.037E-02	6.563E-02	4.431E-03	0.857
		677.61		5.145E-02	2.773E-01	4.669E-01	3.219E-02	0.110

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		706.67		1.603E-02	1.959E-01	3.260E-01	2.350E-02	0.049
		763.93		-1.302E-01	1.622E-01	2.496E-01	1.966E-02	-0.522
		884.67		3.447E-02	4.670E-02	8.075E-02	7.602E-03	0.427
		937.48		-4.187E-02	1.091E-01	1.697E-01	1.571E-02	-0.247
		1384.27		-6.411E-02	1.635E-01	2.540E-01	1.923E-02	-0.252
IN-111		171.28		-2.313E-01	6.110E-01	9.703E-01	6.666E-02	-0.238
		245.39	*	-3.445E-01	7.111E-01	1.034E+00	8.785E-02	-0.333
IN-113M		391.69	*	5.511E-03	5.185E-02	8.542E-02	5.616E-03	0.065
SN-113		391.69	*	5.511E-03	5.185E-02	8.542E-02	5.616E-03	0.065
IN-114M		190.27	*	2.048E-01	2.044E-01	3.065E-01	2.226E-02	0.668
CD-115		260.90		1.867E+01	6.921E+01	1.179E+02	1.043E+01	0.158
		492.35		1.354E+01	2.109E+01	3.525E+01	2.297E+00	0.384
		527.90	*	6.893E-02	6.213E+00	9.953E+00	6.523E-01	0.007
SN-117M		156.02		1.061E+00	2.050E+00	3.390E+00	2.202E-01	0.313
		158.56	*	-1.304E-02	4.883E-02	7.830E-02	5.139E-03	-0.166
SB-122		563.90	*	1.040E+00	1.211E+00	2.137E+00	1.402E-01	0.486
		692.80		-3.045E-01	2.403E+01	3.978E+01	2.686E+00	-0.008
I-123		159.00	*	-8.927E-02	2.403E+01	Half-Life too short		
		528.96		-1.057E+01	2.403E+01	Half-Life too short		
TE-123M		159.00	*	-6.953E-03	2.837E-02	4.553E-02	3.025E-03	-0.153
I-124		602.71	*	-1.716E-01	5.112E-01	7.571E-01	4.940E-02	-0.227
		722.78		-2.010E+00	3.007E+00	3.942E+00	2.801E-01	-0.510
		1325.50		2.279E+01	2.416E+01	4.342E+01	3.159E+00	0.525
		1376.25		2.666E+01	2.031E+01	3.784E+01	2.762E+00	0.705
		1509.49		9.724E+00	9.379E+00	1.747E+01	1.220E+00	0.557
		1691.02		1.322E+00	2.543E+00	4.578E+00	2.866E-01	0.289
SB-124		602.71		-1.397E-02	4.164E-02	6.167E-02	4.025E-03	-0.227
		645.85		-2.495E-01	5.164E-01	8.322E-01	5.925E-02	-0.300
		709.31		-7.349E-01	2.499E+00	4.037E+00	2.804E-01	-0.182
		713.82		-8.362E-01	1.435E+00	2.251E+00	2.462E-01	-0.371
		722.78		-2.373E-01	3.550E-01	4.654E-01	3.411E-02	-0.510
	+	968.20		1.802E+01	4.516E+00	7.135E+00	6.159E-01	2.526
		1045.16		8.854E-01	2.295E+00	3.967E+00	3.036E-01	0.223
		1325.50		2.874E+00	3.046E+00	5.475E+00	3.984E-01	0.525
		1368.21		4.109E-01	1.517E+00	2.568E+00	3.256E-01	0.160
		1436.60		-4.092E-01	3.123E+00	4.975E+00	3.572E-01	-0.082
		1691.02	*	3.681E-02	7.083E-02	1.275E-01	8.571E-03	0.289
SB-125		427.89	*	-1.038E-01	1.107E-01	1.707E-01	1.123E-02	-0.608
	+	463.38		6.553E-01	4.520E-01	6.353E-01	4.660E-02	1.032
		600.56		-3.886E-02	1.809E-01	2.991E-01	2.197E-02	-0.130
		635.90		-1.072E-01	2.774E-01	4.505E-01	3.319E-02	-0.238
TE-125M		109.28	*	5.428E+00	8.852E+00	1.495E+01	1.410E+00	0.363
I-126		388.63		1.155E-01	2.138E-01	3.596E-01	2.275E-02	0.321
		666.33	*	1.166E-01	1.777E-01	2.731E-01	1.762E-02	0.427
		753.82		4.658E-01	1.234E+00	2.091E+00	1.563E-01	0.223
SB-126		223.80		9.608E-01	4.014E+00	6.424E+00	5.147E-01	0.150
		278.60		2.663E+00	2.563E+00	4.386E+00	4.047E-01	0.607
	+	296.50		1.149E+01	2.509E+00	3.203E+00	2.867E-01	3.585
		414.70		4.486E-04	7.917E-02	1.292E-01	8.151E-03	0.003

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.30		3.527E-01	6.586E+00	1.078E+01	6.799E-01	0.033
		555.20		-2.232E+00	3.537E+00	5.721E+00	3.753E-01	-0.390
		573.80		1.045E-01	1.003E+00	1.697E+00	1.112E-01	0.062
		593.00		-2.982E-01	8.915E-01	1.454E+00	9.506E-02	-0.205
		656.30		8.929E-01	3.248E+00	4.828E+00	3.097E-01	0.185
		666.33		4.849E-02	7.390E-02	1.136E-01	7.326E-03	0.427
		675.00		9.466E-01	1.680E+00	2.901E+00	1.900E-01	0.326
		695.00		1.339E-02	6.726E-02	1.130E-01	7.658E-03	0.119
		697.00		1.283E-01	2.271E-01	3.909E-01	2.659E-02	0.328
		720.50	*	5.848E-03	1.109E-01	1.792E-01	1.268E-02	0.033
		856.80		-2.084E-01	4.885E-01	6.503E-01	5.710E-02	-0.321
		989.30		1.218E+00	1.117E+00	1.968E+00	1.651E-01	0.619
		1034.80		-3.832E+00	7.038E+00	1.117E+01	8.709E-01	-0.343
		1213.00		2.915E+00	4.578E+00	7.779E+00	4.645E-01	0.375
SB-127		61.10		6.480E+02	1.004E+02	1.258E+02	1.356E+01	5.153
		252.40		9.311E-02	3.036E+00	5.135E+00	2.151E+00	0.018
		290.80		-2.451E+01	1.801E+01	2.410E+01	2.626E+00	-1.017
		411.60		2.555E+00	1.001E+01	1.654E+01	2.335E+00	0.154
		444.90		-1.756E+00	8.467E+00	1.359E+01	1.428E+00	-0.129
		473.00		-1.093E+00	1.510E+00	2.339E+00	2.559E-01	-0.467
		543.00		5.050E+00	1.208E+01	1.982E+01	2.527E+00	0.255
		603.60		-4.507E+00	9.036E+00	1.258E+01	1.327E+00	-0.358
		685.20	*	8.166E-02	8.572E-01	1.432E+00	1.330E-01	0.057
		698.50		-2.395E+00	1.004E+01	1.633E+01	2.360E+00	-0.147
		722.20		-4.439E+00	1.927E+01	2.678E+01	2.501E+00	-0.166
		783.80		3.541E+00	2.487E+00	4.449E+00	5.032E-01	0.796
XE-127		57.60		3.217E+01	1.150E+01	1.862E+01	1.629E+00	1.728
		145.22		-1.605E-02	6.635E-01	1.080E+00	6.738E-02	-0.015
		172.10		-1.213E-01	1.235E-01	1.910E-01	1.315E-02	-0.635
		202.84	*	1.139E-02	4.872E-02	7.844E-02	5.916E-03	0.145
		374.96		-4.799E-02	2.265E-01	3.686E-01	2.516E-02	-0.130
I-131		80.18		2.085E+00	3.794E+00	5.864E+00	6.384E-01	0.355
		284.30		-2.001E+00	1.389E+00	2.167E+00	2.074E-01	-0.923
		364.48	*	4.498E-02	1.095E-01	1.839E-01	1.421E-02	0.245
		636.97		1.930E-01	1.327E+00	2.235E+00	1.581E-01	0.086
		722.89		-1.584E+00	5.530E+00	7.628E+00	5.457E-01	-0.208
TE-132		49.72		1.063E+00	2.347E+01	3.646E+01	3.767E+00	0.029
		111.76		-1.626E+00	1.905E+01	3.102E+01	2.834E+00	-0.052
		116.30		-1.968E+00	1.697E+01	2.789E+01	2.420E+00	-0.071
		228.16	*	3.619E-01	4.763E-01	7.739E-01	1.165E-01	0.468
BA-133		53.15		-3.121E+00	6.150E+00	1.039E+01	9.297E-01	-0.301
		79.62		-3.199E-01	1.308E+00	1.957E+00	3.239E-01	-0.163
		81.00		-7.866E-02	1.026E-01	1.486E-01	2.564E-02	-0.529
		276.40		-4.289E-02	4.150E-01	6.943E-01	1.027E-01	-0.062
		302.84		-1.442E-01	1.573E-01	2.502E-01	3.358E-02	-0.576
		356.01	*	-2.281E-03	5.544E-02	8.011E-02	9.993E-03	-0.028
		383.85		-4.544E-02	3.585E-01	5.848E-01	6.588E-02	-0.078
I-133	+	510.53		2.993E-01	3.585E-01	Half-Life too short		
		529.87	*	-7.020E-05	3.585E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		706.58		8.353E-03	3.585E-01	Half-Life too short		
		856.28		1.088E-01	3.585E-01	Half-Life too short		
		875.33		4.839E-03	3.585E-01	Half-Life too short		
		1236.41		1.178E-01	3.585E-01	Half-Life too short		
		1298.22		2.790E-02	3.585E-01	Half-Life too short		
CS-134		475.35		1.283E+00	2.466E+00	4.088E+00	2.651E-01	0.314
		563.23		3.838E-01	3.709E-01	6.604E-01	4.402E-02	0.581
		569.32		-1.993E-02	2.105E-01	3.523E-01	2.364E-02	-0.057
		604.70		-1.093E-02	3.817E-02	5.419E-02	3.550E-03	-0.202
		795.84	*	9.187E-02	5.190E-02	8.662E-02	6.985E-03	1.061
		801.93		-7.439E-02	3.852E-01	6.203E-01	5.040E-02	-0.120
		1038.57		1.783E+00	3.397E+00	5.960E+00	4.617E-01	0.299
		1167.94		9.381E-01	2.621E+00	4.466E+00	2.515E-01	0.210
		1365.15		-2.032E-01	1.083E+00	1.723E+00	1.340E-01	-0.118
I-135		288.45		2.252E+08	1.083E+00	Half-Life too short		
		417.63		-8.024E+07	1.083E+00	Half-Life too short		
		546.56		-1.473E+07	1.083E+00	Half-Life too short		
		836.80		6.731E+07	1.083E+00	Half-Life too short		
		1038.76		3.233E+07	1.083E+00	Half-Life too short		
		1124.00		-2.171E+07	1.083E+00	Half-Life too short		
		1131.51		2.720E+07	1.083E+00	Half-Life too short		
		1260.41	*	9.607E+06	1.083E+00	Half-Life too short		
		1457.56		2.335E+09	1.083E+00	Half-Life too short		
		1678.03		1.359E+07	1.083E+00	Half-Life too short		
		1706.46		9.264E+06	1.083E+00	Half-Life too short		
		1791.20		-7.698E+07	1.083E+00	Half-Life too short		
CS-136		66.91		7.236E-02	7.510E-01	1.152E+00	1.843E-01	0.063
	+	86.29		1.353E+00	1.294E+00	1.727E+00	2.591E-01	0.784
		153.22		6.213E-01	6.060E-01	1.018E+00	7.871E-02	0.610
		163.89		5.690E-01	1.023E+00	1.668E+00	1.334E-01	0.341
		176.55		4.529E-01	3.500E-01	5.887E-01	4.463E-02	0.769
		273.65		-4.152E-01	4.853E-01	6.822E-01	6.588E-02	-0.609
		340.57		3.363E-01	1.475E-01	2.383E-01	1.951E-02	1.411
		818.51		-4.896E-03	6.304E-02	1.023E-01	8.479E-03	-0.048
		1048.07	*	3.227E-02	9.709E-02	1.668E-01	1.338E-02	0.194
		1235.34		-2.875E-02	5.681E-01	9.337E-01	9.558E-02	-0.031
CE-139		165.85	*	-7.961E-03	3.111E-02	4.979E-02	3.370E-03	-0.160
BA-140		162.64		-1.238E-01	7.234E-01	1.149E+00	8.402E-02	-0.108
		304.84		-5.639E-01	1.247E+00	2.023E+00	5.681E-01	-0.279
		423.70		1.233E+00	2.051E+00	3.383E+00	1.079E+00	0.364
		537.32	*	-1.961E-02	2.490E-01	3.957E-01	1.293E-01	-0.050
LA-140	+	328.77		5.842E-01	4.404E-01	5.133E-01	4.486E-02	1.138
		432.53		1.379E+00	2.332E+00	3.901E+00	2.703E-01	0.353
		487.03		-8.380E-04	1.414E-01	2.277E-01	1.639E-02	-0.004
		751.79		-1.498E+00	1.446E+00	2.163E+00	1.838E-01	-0.693
		815.85		1.345E-01	2.686E-01	4.578E-01	4.250E-02	0.294
		867.82		-8.459E-01	1.316E+00	1.951E+00	1.828E-01	-0.434
		919.63		-7.773E-01	2.921E+00	3.928E+00	4.348E-01	-0.198
		925.24		2.972E-01	9.844E-01	1.636E+00	1.570E-01	0.182

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1596.49	*	-5.400E-04	7.789E-02	1.116E-01	7.452E-03	-0.005
CE-141		145.44	*	-8.060E-03	5.969E-02	9.678E-02	6.248E-03	-0.083
CE-143		57.37		8.992E-04	5.969E-02	Half-Life too short		
		231.56		-7.362E-05	5.969E-02	Half-Life too short		
		293.26	*	1.645E-04	5.969E-02	Half-Life too short		
	+	350.59		9.402E-03	5.969E-02	Half-Life too short		
		490.36		-9.901E-04	5.969E-02	Half-Life too short		
		664.57		1.048E-02	5.969E-02	Half-Life too short		
		721.93		-5.678E-05	5.969E-02	Half-Life too short		
CE-144		80.11		1.110E+00	2.097E+00	3.239E+00	3.513E-01	0.343
		133.54	*	3.665E-02	2.096E-01	3.453E-01	4.934E-02	0.106
PM-144		476.78		-4.118E-03	8.838E-02	1.423E-01	1.071E-02	-0.029
		618.01		8.526E-03	3.140E-02	5.344E-02	3.641E-03	0.160
		696.49	*	2.790E-02	3.286E-02	5.759E-02	3.916E-03	0.484
		778.57		-5.118E-01	2.289E+00	3.689E+00	2.871E-01	-0.139
PR-144		696.49	*	1.889E+00	2.224E+00	3.898E+00	2.649E-01	0.484
		1489.15		-5.351E+00	1.142E+01	1.716E+01	1.208E+00	-0.312
PM-146		453.90	*	-1.231E-02	5.816E-02	9.324E-02	8.449E-03	-0.132
		633.02		-4.245E-01	1.378E+00	2.236E+00	8.257E-01	-0.190
		735.90		-6.853E-02	1.527E-01	2.155E-01	6.082E-02	-0.318
		747.13		2.085E-02	8.140E-02	1.369E-01	1.823E-02	0.152
ND-147	+	91.11		7.732E-01	2.423E-01	4.349E-01	5.009E-02	1.778
		319.41		-1.269E+00	2.994E+00	4.875E+00	4.127E-01	-0.260
		439.89		5.147E+00	6.587E+00	1.110E+01	7.097E-01	0.464
		531.02	*	2.914E-01	5.675E-01	9.355E-01	1.297E-01	0.312
PM-149		285.90	*	-6.084E+01	5.181E+01	8.104E+01	1.283E+01	-0.751
EU-152		121.78		8.477E-03	7.151E-02	1.183E-01	9.109E-03	0.072
		244.69		2.564E-02	3.672E-01	5.512E-01	4.675E-02	0.047
		344.27	*	4.839E-02	1.211E-01	1.805E-01	1.512E-02	0.268
		443.98		-3.575E-01	1.256E+00	2.009E+00	1.287E-01	-0.178
		778.89		2.957E-02	2.591E-01	4.290E-01	3.339E-02	0.069
		867.32		-6.139E-01	9.179E-01	1.306E+00	1.165E-01	-0.470
		964.01		4.884E-01	3.516E-01	5.569E-01	4.833E-02	0.877
		1085.78		-3.372E-01	3.982E-01	6.136E-01	4.325E-02	-0.550
		1112.02		1.624E-01	3.400E-01	5.754E-01	3.811E-02	0.282
		1407.95		3.126E-03	1.843E-01	3.010E-01	2.179E-02	0.010
GD-153		69.67		2.053E-01	1.734E+00	2.657E+00	2.615E-01	0.077
		83.37		1.009E+01	1.602E+01	2.453E+01	2.752E+00	0.411
		97.43	*	-6.807E-02	8.901E-02	1.269E-01	1.207E-02	-0.536
		103.18		3.759E-03	1.037E-01	1.725E-01	1.460E-02	0.022
EU-154		123.07		-3.829E-02	5.044E-02	8.040E-02	7.608E-03	-0.476
		247.94		-1.223E-01	3.651E-01	6.088E-01	6.957E-02	-0.201
		591.81		5.715E-01	6.488E-01	1.142E+00	1.168E-01	0.501
		723.30		1.638E-02	1.643E-01	2.382E-01	1.950E-02	0.069
		756.87		5.183E-01	7.329E-01	1.269E+00	1.422E-01	0.408
		873.19		4.156E-01	3.143E-01	5.586E-01	6.990E-02	0.744
		996.32		-4.419E-01	3.996E-01	5.620E-01	9.898E-02	-0.786
		1004.76		-2.216E-01	2.169E-01	3.310E-01	3.749E-02	-0.670
		1274.45	*	-8.611E-02	1.273E-01	1.954E-01	1.936E-02	-0.441

---- Non-Identified Nuclides ----

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EU-155		48.70		-5.642E+00	4.901E+00	7.242E+00	6.051E-01	-0.779
	+	60.01		3.253E+02	3.301E+01	2.788E+01	2.433E+00	11.669
	+	86.54		1.400E-01	1.332E-01	1.792E-01	2.095E-02	0.781
		105.31	*	-2.810E-02	1.072E-01	1.762E-01	1.451E-02	-0.159
TB-160	+	86.79		3.665E-01	3.488E-01	4.700E-01	5.479E-02	0.780
		197.04		-8.551E-02	5.973E-01	9.387E-01	6.958E-02	-0.091
		215.65		-2.817E-01	8.145E-01	1.275E+00	9.977E-02	-0.221
		298.57		6.347E-02	1.338E-01	2.020E-01	1.800E-02	0.314
		879.36	*	-7.712E-02	1.337E-01	2.050E-01	1.861E-02	-0.376
		962.29		4.130E-01	5.807E-01	9.349E-01	8.132E-02	0.442
		966.15		8.142E-01	2.778E-01	4.731E-01	4.095E-02	1.721
		1177.93		1.103E-01	3.637E-01	6.170E-01	3.445E-02	0.179
		1271.85		-7.176E-02	7.152E-01	1.166E+00	7.742E-02	-0.062
HO-166M		80.57		-1.224E-01	2.783E-01	4.124E-01	4.494E-02	-0.297
		184.41		3.486E-02	4.326E-02	6.764E-02	4.829E-03	0.515
		280.46		-4.554E-02	1.009E-01	1.639E-01	1.512E-02	-0.278
		410.95		2.993E-01	3.004E-01	5.125E-01	3.225E-02	0.584
		711.68	*	7.682E-03	5.445E-02	9.103E-02	6.348E-03	0.084
		752.31		-1.658E-01	2.581E-01	4.014E-01	2.994E-02	-0.413
		810.29		-4.014E-02	5.927E-02	9.118E-02	7.458E-03	-0.440
TM-171		51.35		1.940E+01	5.302E+01	9.180E+01	8.160E+00	0.211
		52.39		-2.215E+00	2.688E+01	4.598E+01	4.112E+00	-0.048
	+	59.40		1.709E+03	1.734E+02	1.558E+02	1.346E+01	10.963
		66.72	*	4.441E+00	3.074E+01	4.726E+01	4.524E+00	0.094
LU-176		88.36		7.224E-01	2.515E-01	3.370E-01	3.947E-02	2.144
		201.83		-1.766E-02	3.117E-02	4.854E-02	3.649E-03	-0.364
		306.84	*	6.875E-03	2.704E-02	4.559E-02	3.987E-03	0.151
		401.10		4.371E+00	7.829E+00	1.316E+01	8.224E-01	0.332
LU-177		112.95		-9.846E-01	1.333E+00	2.117E+00	1.487E-01	-0.465
	+	208.36	*	3.169E+00	1.265E+00	1.611E+00	1.235E-01	1.968
LU-177M		52.97		-1.238E+00	2.775E+00	4.697E+00	4.204E-01	-0.264
		54.07		-3.135E-02	1.492E+00	2.444E+00	2.184E-01	-0.013
		61.30		1.310E+01	2.732E+00	3.911E+00	3.498E-01	3.349
		121.62		1.570E-01	3.616E-01	6.049E-01	3.592E-02	0.259
		147.16		1.763E-01	6.350E-01	1.045E+00	6.561E-02	0.169
		171.86		-1.465E-01	5.003E-01	7.974E-01	5.487E-02	-0.184
		218.09		5.834E-01	9.485E-01	1.542E+00	1.216E-01	0.378
	+	268.79		2.443E+00	1.356E+00	1.533E+00	1.382E-01	1.594
		319.02		-1.071E-01	2.663E-01	4.341E-01	3.679E-02	-0.247
		367.43		-1.646E-01	1.023E+00	1.671E+00	1.184E-01	-0.099
		413.65	*	-6.094E-02	2.113E-01	3.399E-01	2.142E-02	-0.179
HF-181		56.28		8.974E-01	1.650E+00	2.587E+00	2.285E-01	0.347
		57.53		2.146E+00	9.496E-01	1.533E+00	1.342E-01	1.400
		65.20		9.934E-01	1.051E+00	1.664E+00	1.568E-01	0.597
		133.02		-5.203E-03	6.457E-02	1.055E-01	6.334E-03	-0.049
		136.25		-1.096E-01	4.475E-01	7.254E-01	4.395E-02	-0.151
		345.85		-8.777E-02	2.498E-01	3.286E-01	2.552E-02	-0.267
		482.03	*	5.033E-02	5.178E-02	8.772E-02	5.700E-03	0.574
W-181		56.28		3.595E-01	6.612E-01	1.036E+00	9.155E-02	0.347

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		57.53		8.536E-01	3.805E-01	6.139E-01	5.376E-02	1.390
		65.20	*	3.951E-01	4.179E-01	6.617E-01	6.236E-02	0.597
TA-182		67.75		-5.934E-02	1.115E-01	1.770E-01	1.711E-02	-0.335
		100.10		1.752E-03	1.759E-01	2.928E-01	2.635E-02	0.006
		152.43		1.818E-01	3.419E-01	5.661E-01	3.626E-02	0.321
		222.10		-1.093E-02	3.910E-01	6.192E-01	4.937E-02	-0.018
		1001.68		2.529E+00	2.150E+00	3.796E+00	3.125E-01	0.666
	+	1121.28		4.944E-01	2.381E-01	3.399E-01	2.198E-02	1.455
		1189.05		-1.222E-01	3.025E-01	4.835E-01	2.759E-02	-0.253
		1221.42	*	6.833E-02	1.996E-01	3.382E-01	2.051E-02	0.202
		1230.97		2.876E-01	4.613E-01	7.979E-01	4.925E-02	0.360
RE-183		57.98		3.609E+00	5.168E-01	7.689E-01	6.710E-02	4.694
	+	59.32		6.866E+00	6.967E-01	6.296E-01	5.441E-02	10.905
		67.20		2.758E-02	2.089E-01	3.209E-01	3.086E-02	0.086
		162.32	*	-3.373E-02	1.157E-01	1.829E-01	1.219E-02	-0.184
	+	208.81		3.495E+00	1.395E+00	1.826E+00	1.401E-01	1.914
		291.72		-2.221E+00	1.149E+00	1.467E+00	1.326E-01	-1.513
RE-184		57.98		1.347E+01	1.929E+00	2.869E+00	2.504E-01	4.694
	+	59.32		2.560E+01	2.598E+00	2.348E+00	2.029E-01	10.905
		67.20		1.029E-01	7.794E-01	1.197E+00	1.151E-01	0.086
		161.27		-2.004E-01	3.692E-01	5.850E-01	3.883E-02	-0.343
		216.55		-2.236E-01	2.994E-01	4.597E-01	3.608E-02	-0.487
		252.85	*	-5.094E-02	2.359E-01	3.950E-01	3.422E-02	-0.129
		318.01		7.691E-02	4.643E-01	7.785E-01	6.615E-02	0.099
		792.07		8.081E-01	1.056E+00	1.625E+00	1.292E-01	0.497
		903.28		2.943E-01	9.705E-01	1.529E+00	1.420E-01	0.192
		920.93		4.717E-02	4.843E-01	7.447E-01	6.794E-02	0.063
OS-185	+	59.72		1.883E+01	1.911E+00	1.669E+00	1.448E-01	11.282
		61.14		2.436E+00	3.654E-01	5.042E-01	4.498E-02	4.832
		69.30		-6.613E-02	3.100E-01	4.681E-01	4.591E-02	-0.141
		592.07		1.484E+00	2.672E+00	4.595E+00	3.004E-01	0.323
		646.12	*	-1.370E-02	4.367E-02	7.121E-02	4.587E-03	-0.192
		717.42		3.346E-01	7.611E-01	1.303E+00	9.175E-02	0.257
		874.81		-2.421E-02	6.009E-01	9.728E-01	8.775E-02	-0.025
		880.27		1.847E-01	7.090E-01	1.179E+00	1.072E-01	0.157
RE-188		155.03	*	1.462E-01	1.740E-01	2.906E-01	1.881E-02	0.503
		477.96		1.027E+00	3.907E+00	6.391E+00	4.148E-01	0.161
		633.10		-7.922E-01	2.714E+00	4.436E+00	2.871E-01	-0.179
W-188	+	63.58		9.471E+01	8.054E+01	1.085E+02	1.003E+01	0.873
		227.08		-3.503E+00	1.383E+01	2.165E+01	1.750E+00	-0.162
		290.67	*	-8.888E+00	8.892E+00	1.227E+01	1.111E+00	-0.724
IR-192	+	295.96		9.738E-01	2.129E-01	2.808E-01	2.533E-02	3.468
		308.46		7.816E-03	1.021E-01	1.708E-01	1.495E-02	0.046
		316.51	*	1.118E-02	3.560E-02	6.010E-02	5.140E-03	0.186
		468.07		6.946E-02	9.585E-02	1.421E-01	1.034E-02	0.489
		604.41		1.315E-01	4.859E-01	7.255E-01	8.514E-02	0.181
		612.46		8.288E-01	8.160E-01	1.284E+00	1.044E-01	0.646
AU-195		65.12		2.040E-01	1.955E-01	3.104E-01	2.923E-02	0.657
		66.83		1.043E-02	1.007E-01	1.545E-01	1.481E-02	0.067

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	+	75.70		1.254E+00	2.884E-01	4.268E-01	4.435E-02	2.938
		98.88	*	2.626E-01	2.493E-01	3.845E-01	3.547E-02	0.683
		129.76		8.450E-01	2.864E+00	4.746E+00	2.828E-01	0.178
TL-200		367.94	*	-6.397E-05	2.864E+00	Half-Life too short		
		579.30		3.975E-04	2.864E+00	Half-Life too short		
		828.27		7.036E-04	2.864E+00	Half-Life too short		
		1205.75		-4.384E-05	2.864E+00	Half-Life too short		
TL-201		68.90		-1.933E+00	3.084E+00	4.564E+00	4.460E-01	-0.424
		70.82		1.088E+00	1.723E+00	2.689E+00	2.673E-01	0.405
		80.30		-7.299E-02	3.106E+00	4.692E+00	5.099E-01	-0.016
		135.34		5.635E+00	1.562E+01	2.589E+01	1.565E+00	0.218
		167.43	*	-2.679E+00	4.450E+00	7.014E+00	4.766E-01	-0.382
TL-202		68.90		-2.527E-01	4.032E-01	5.966E-01	5.830E-02	-0.424
		70.82		1.418E-01	2.246E-01	3.505E-01	3.485E-02	0.405
		80.30		-9.518E-03	4.050E-01	6.118E-01	6.649E-02	-0.016
		439.56	*	4.437E-02	7.985E-02	1.332E-01	8.513E-03	0.333
HG-203		70.83		6.830E-01	1.069E+00	1.665E+00	2.411E-01	0.410
		72.87		7.206E-01	5.761E-01	9.943E-01	1.415E-01	0.725
		82.60		-8.424E-01	1.053E+00	1.686E+00	2.604E-01	-0.500
		279.20	*	9.685E-03	4.651E-02	7.755E-02	7.344E-03	0.125
BI-207		72.80		1.724E-01	1.714E-01	2.969E-01	3.004E-02	0.581
	+	74.97		7.013E-01	1.613E-01	2.230E-01	2.301E-02	3.145
	+	84.90		2.643E-01	2.515E-01	3.173E-01	3.622E-02	0.833
		569.67		1.027E-03	3.236E-02	5.455E-02	3.576E-03	0.019
		1063.62	*	7.615E-03	5.253E-02	8.884E-02	6.562E-03	0.086
		1770.23		9.305E-02	4.208E-01	6.358E-01	3.720E-02	0.146
TL-207		81.07		-1.327E-01	2.101E-01	3.291E-01	3.605E-02	-0.403
		83.78		1.663E-01	1.350E-01	2.100E-01	2.368E-02	0.792
		94.90		6.842E-02	2.370E-01	3.592E-01	3.606E-02	0.190
		122.32		-8.355E-01	1.712E+00	2.765E+00	1.873E-01	-0.302
		144.24		-9.122E-02	7.044E-01	1.120E+00	8.477E-02	-0.081
		154.21		4.637E-02	4.148E-01	6.763E-01	5.112E-02	0.069
	+	269.46		5.775E-01	3.207E-01	3.706E-01	3.410E-02	1.558
		323.87	*	1.887E-01	7.525E-01	1.117E+00	1.964E-01	0.169
	+	338.28		8.496E+00	2.375E+00	2.631E+00	3.124E-01	3.229
		445.03		-5.324E-01	2.927E+00	4.706E+00	5.001E-01	-0.113
PO-209		260.50		5.858E+00	1.011E+01	1.741E+01	1.538E+00	0.337
		262.80		-2.083E+01	2.825E+01	4.607E+01	4.093E+00	-0.452
		896.60	*	1.717E+00	6.986E+00	1.159E+01	1.079E+00	0.148
BI-210		46.50	*	5.512E+00	7.081E+00	1.116E+01	8.994E-01	0.494
PB-210		46.50	*	5.512E+00	7.081E+00	1.116E+01	8.994E-01	0.494
PO-210		46.50	*	5.512E+00	7.078E+00	1.116E+01	7.838E-01	0.494
PB-211		404.84	*	-3.135E-01	1.139E+00	1.809E+00	1.129E+00	-0.173
		427.08		-1.593E+00	2.664E+00	3.892E+00	2.408E+00	-0.409
		831.96		-1.274E+00	1.442E+00	1.779E+00	1.114E+00	-0.716
BI-212	+	727.18	*	1.230E+00	5.064E-01	6.438E-01	5.652E-02	1.910
		785.46		2.658E+00	1.872E+00	3.229E+00	2.540E-01	0.823
		1620.62		2.622E-01	1.284E+00	2.203E+00	1.449E-01	0.119
PO-215		81.07		-1.327E-01	2.101E-01	3.291E-01	3.605E-02	-0.403

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		83.78		1.663E-01	1.350E-01	2.100E-01	2.368E-02	0.792
		94.90		6.842E-02	2.370E-01	3.592E-01	3.606E-02	0.190
		122.32		-8.355E-01	1.712E+00	2.765E+00	1.873E-01	-0.302
		144.24		-9.122E-02	7.044E-01	1.120E+00	8.477E-02	-0.081
		154.21		4.637E-02	4.148E-01	6.763E-01	5.112E-02	0.069
	+	269.46		5.775E-01	3.207E-01	3.706E-01	3.410E-02	1.558
		323.87	*	1.887E-01	7.525E-01	1.117E+00	1.964E-01	0.169
	+	338.28		8.496E+00	2.375E+00	2.631E+00	3.124E-01	3.229
		445.03		-5.324E-01	2.927E+00	4.706E+00	5.001E-01	-0.113
RN-219		271.23		2.454E-01	2.914E-01	4.498E-01	4.809E-02	0.546
		401.81	*	8.949E-03	4.887E-01	8.002E-01	1.105E-01	0.011
RN-220		549.76	*	3.771E+00	2.866E+01	4.615E+01	3.028E+00	0.082
RA-223		81.07		-1.327E-01	2.101E-01	3.291E-01	3.605E-02	-0.403
		83.78		1.663E-01	1.350E-01	2.100E-01	2.368E-02	0.792
		94.90		6.842E-02	2.370E-01	3.592E-01	3.606E-02	0.190
		122.32		-8.355E-01	1.712E+00	2.765E+00	1.873E-01	-0.302
		144.24		-9.122E-02	7.044E-01	1.120E+00	8.477E-02	-0.081
		154.21		4.637E-02	4.148E-01	6.763E-01	5.112E-02	0.069
	+	269.46		5.775E-01	3.207E-01	3.706E-01	3.410E-02	1.558
		323.87	*	1.887E-01	7.525E-01	1.117E+00	1.964E-01	0.169
	+	338.28		8.496E+00	2.375E+00	2.631E+00	3.124E-01	3.229
		445.03		-5.324E-01	2.927E+00	4.706E+00	5.001E-01	-0.113
AC-227		79.80		1.120E-01	1.644E+00	2.494E+00	5.604E-01	0.045
		236.00		3.063E-01	2.612E-01	4.098E-01	4.922E-02	0.747
		256.20	*	-3.529E-01	3.967E-01	6.391E-01	9.851E-02	-0.552
		286.10		-1.768E+00	1.721E+00	2.733E+00	3.701E-01	-0.647
		299.80		2.397E+00	1.783E+00	2.746E+00	4.839E-01	0.873
		304.40		-2.231E+00	2.120E+00	3.310E+00	6.129E-01	-0.674
		334.20		-4.427E-03	2.946E+00	4.292E+00	8.232E-01	-0.001
TH-227		79.80		1.120E-01	1.644E+00	2.494E+00	5.670E-01	0.045
	+	94.00		8.988E+00	3.566E+00	3.720E+00	8.359E-01	2.416
		236.00		3.063E-01	2.607E-01	4.098E-01	4.434E-02	0.747
		256.20	*	-3.529E-01	3.982E-01	6.391E-01	1.158E-01	-0.552
		286.10		-1.768E+00	2.461E+00	2.733E+00	2.745E+00	-0.647
		299.80		2.397E+00	1.783E+00	2.746E+00	4.839E-01	0.873
		304.40		-2.231E+00	2.120E+00	3.310E+00	6.129E-01	-0.674
		334.20		-4.427E-03	2.946E+00	4.292E+00	8.232E-01	-0.001
TH-229	+	85.43		2.609E-01	2.483E-01	3.149E-01	3.615E-02	0.828
	+	88.47		3.522E-01	1.097E-01	1.933E-01	2.258E-02	1.822
		100.00		1.453E-02	1.882E-01	3.094E-01	2.790E-02	0.047
		193.63	*	-1.968E-01	5.432E-01	8.561E-01	6.282E-02	-0.230
		210.97		6.666E-01	9.239E-01	1.346E+00	1.039E-01	0.495
PA-231		283.67	*	-1.338E+00	1.663E+00	2.672E+00	4.143E-01	-0.501
		301.29		9.361E-01	6.651E-01	1.087E+00	1.350E-01	0.861
TH-231		81.07		-1.327E-01	2.101E-01	3.291E-01	3.605E-02	-0.403
		83.78		1.663E-01	1.350E-01	2.100E-01	2.368E-02	0.792
		94.90		6.842E-02	2.370E-01	3.592E-01	3.606E-02	0.190
		122.32		-8.355E-01	1.712E+00	2.765E+00	1.873E-01	-0.302
		144.24		-9.122E-02	7.044E-01	1.120E+00	8.477E-02	-0.081

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		154.21		4.637E-02	4.148E-01	6.763E-01	5.112E-02	0.069
	+	269.46		5.775E-01	3.207E-01	3.706E-01	3.410E-02	1.558
		323.87	*	1.887E-01	7.525E-01	1.117E+00	1.964E-01	0.169
	+	338.28		8.496E+00	2.375E+00	2.631E+00	3.124E-01	3.229
		445.03		-5.324E-01	2.927E+00	4.706E+00	5.001E-01	-0.113
U-231		84.21		3.352E+00	4.074E+00	6.270E+00	7.101E-01	0.535
	+	92.29		6.187E+00	2.120E+00	2.945E+00	3.136E-01	2.101
		95.87	*	-7.780E-01	7.997E-01	1.137E+00	1.118E-01	-0.684
		108.00		-1.467E+00	1.428E+00	2.273E+00	1.754E-01	-0.645
PA-233	+	75.28		2.047E+01	5.376E+00	6.565E+00	1.076E+00	3.117
	+	86.59		2.277E+00	2.243E+00	2.917E+00	8.149E-01	0.781
		300.12		6.286E-01	4.924E-01	7.628E-01	1.146E-01	0.824
		311.98	*	-2.813E-02	6.781E-02	1.107E-01	9.831E-03	-0.254
		340.50		2.073E+00	9.320E-01	1.321E+00	3.117E-01	1.569
		398.62		-2.783E-01	2.473E+00	4.024E+00	1.045E+00	-0.069
		415.76		-5.887E-02	1.963E+00	3.197E+00	6.630E-01	-0.018
PA-234	+	63.00		2.807E+00	2.414E+00	3.249E+00	5.140E-01	0.864
		94.67		1.942E-01	1.758E-01	2.727E-01	3.672E-02	0.712
		98.44		1.121E-01	1.188E-01	1.567E-01	8.761E-02	0.715
		99.86		9.013E-02	4.786E-01	7.897E-01	7.141E-02	0.114
		111.00		3.893E-03	1.908E-01	3.121E-01	3.488E-02	0.012
		131.20		-2.301E-02	1.075E-01	1.749E-01	1.046E-02	-0.132
		152.70		3.283E-01	3.363E-01	5.591E-01	8.970E-02	0.587
	+	186.00		3.924E+00	2.600E+00	2.682E+00	8.274E-01	1.463
		226.40		-4.188E-01	4.542E-01	6.847E-01	8.799E-02	-0.612
		227.20		-1.017E-01	4.784E-01	7.499E-01	6.066E-02	-0.136
		248.90		2.723E-01	8.269E-01	1.413E+00	3.165E-01	0.193
		293.70		4.514E+00	1.199E+00	1.631E+00	2.853E-01	2.768
		369.80		9.227E-02	9.924E-01	1.641E+00	3.477E-01	0.056
		568.70		-1.817E-02	1.070E+00	1.799E+00	1.180E-01	-0.010
		569.50		-4.089E-02	2.911E-01	4.858E-01	3.185E-02	-0.084
		574.00		2.306E-01	1.632E+00	2.766E+00	1.813E-01	0.083
		699.00		-1.164E-01	7.047E-01	1.153E+00	2.114E-01	-0.101
		706.10		2.911E-01	1.014E+00	1.698E+00	7.522E-01	0.171
		733.00		-8.971E-02	3.911E-01	5.427E-01	1.177E-01	-0.165
		742.81		-8.857E-01	1.384E+00	1.934E+00	1.297E+00	-0.458
		796.30		1.482E+00	1.097E+00	1.671E+00	4.489E-01	0.887
		805.60		7.013E-01	1.030E+00	1.739E+00	5.306E-01	0.403
		819.60		-1.285E-01	1.166E+00	1.884E+00	7.151E-01	-0.068
		826.30		3.441E-01	8.369E-01	1.390E+00	6.212E-01	0.248
		831.60		-6.602E-01	6.518E-01	9.206E-01	2.743E-01	-0.717
		876.40		-2.528E-01	8.747E-01	1.319E+00	1.357E+00	-0.192
		880.51		5.091E-02	2.637E-01	4.359E-01	3.965E-02	0.117
		883.24		7.983E-02	2.846E-01	4.654E-01	3.132E-01	0.172
		899.00		1.146E-01	7.854E-01	1.288E+00	5.649E-01	0.089
		925.00		2.984E-01	1.147E+00	1.899E+00	1.725E-01	0.157
		926.50		2.181E-02	1.717E-01	2.807E-01	7.139E-02	0.078
		946.00	*	2.731E-01	3.204E-01	5.479E-01	1.034E-01	0.498
		949.00		1.006E-01	4.739E-01	7.782E-01	6.880E-02	0.129

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		980.50		-1.875E-01	6.680E-01	1.041E+00	8.841E-02	-0.180
		1394.10		8.472E-01	1.151E+00	1.841E+00	1.195E+00	0.460
PA-234M		766.41		2.384E+01	2.497E+01	3.022E+01	2.314E+01	0.789
		1001.03	*	9.285E+00	7.105E+00	1.259E+01	1.371E+00	0.737
U-235	+	89.95		3.535E+00	1.519E+00	1.868E+00	5.920E-01	1.893
	+	93.35		2.796E+00	1.214E+00	1.289E+00	3.688E-01	2.170
		105.00		4.008E-01	1.041E+00	1.739E+00	5.169E-01	0.230
		143.76	*	-1.445E-01	2.226E-01	3.455E-01	5.684E-02	-0.418
		163.35		1.830E-01	5.111E-01	8.261E-01	1.511E-01	0.221
	+	185.71		1.454E-01	8.584E-02	9.870E-02	7.074E-03	1.473
		205.31		2.784E-01	6.372E-01	9.116E-01	1.699E-01	0.305
NP-236		94.67		1.497E-01	1.328E-01	2.071E-01	2.090E-02	0.723
		98.44		8.477E-02	7.667E-02	1.185E-01	1.103E-02	0.715
		111.00		2.945E-03	1.444E-01	2.360E-01	1.720E-02	0.012
		160.31	*	-3.830E-02	8.139E-02	1.294E-01	8.551E-03	-0.296
NP-239		99.55		1.433E-01	1.661E-01	2.684E-01	2.443E-02	0.534
		117.00	*	-1.163E-01	1.852E-01	2.983E-01	1.939E-02	-0.390
	+	209.75		2.817E+00	1.125E+00	1.455E+00	1.120E-01	1.936
		228.18		1.896E-01	2.469E-01	4.032E-01	3.270E-02	0.470
		277.60		1.108E-01	2.108E-01	3.555E-01	3.272E-02	0.312
		334.30		8.349E-02	1.673E+00	2.445E+00	1.977E-01	0.034
CM-243		99.55		1.474E-01	1.709E-01	2.762E-01	2.513E-02	0.534
		103.76	*	1.167E-01	9.471E-02	1.632E-01	1.365E-02	0.715
		117.00		-1.196E-01	1.906E-01	3.069E-01	1.995E-02	-0.390
	+	209.75		2.777E+00	1.109E+00	1.434E+00	1.104E-01	1.936
		228.18		1.916E-01	2.495E-01	4.073E-01	3.304E-02	0.470
		277.60		1.117E-01	2.125E-01	3.583E-01	3.299E-02	0.312
CM-247		278.00		5.572E-01	8.774E-01	1.484E+00	1.368E-01	0.375
		287.40		2.567E+00	1.367E+00	2.427E+00	2.212E-01	1.058
		402.60	*	-6.333E-03	4.424E-02	7.185E-02	4.496E-03	-0.088
CF-249		252.85		-1.929E-01	8.930E-01	1.495E+00	1.296E-01	-0.129
		333.44		-1.542E-01	2.635E-01	3.071E-01	2.491E-02	-0.502
		387.95	*	8.547E-04	4.775E-02	7.838E-02	4.979E-03	0.011
CF-251		176.60	*	1.726E-01	1.352E-01	2.275E-01	1.587E-02	0.759
		227.00		-1.193E-01	4.238E-01	6.623E-01	5.354E-02	-0.180
		285.00		-3.405E+00	1.974E+00	3.028E+00	2.771E-01	-1.125

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511002       *
* Acquisition date :  7-JUL-2009 10:19:39 Detector SN#    :                 *
* Detector ID       : GAM02               Sensitivity     : 5.000           *
* Geometry          : CAN                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:03.09     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232511002           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.5508E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.982E+01	2.739E+00	5.411E-01	0.000E+00
SN-126	1.163E-01	1.085E-01	1.519E-01	0.000E+00
CS-135	4.909E-01	2.680E-01	2.725E-01	0.000E+00
BA-137M	3.936E+00	2.883E-01	6.414E-02	0.000E+00
CS-137	4.161E+00	3.055E-01	6.780E-02	0.000E+00
TL-208	4.777E-01	8.260E-02	6.119E-02	0.000E+00
BI-211	3.571E+00	5.455E-01	3.744E-01	0.000E+00
PB-212	1.552E+00	1.779E-01	1.005E-01	0.000E+00
PO-212	1.552E+00	1.779E-01	1.005E-01	0.000E+00
BI-214	1.125E+00	1.747E-01	1.175E-01	0.000E+00
PB-214	1.242E+00	2.001E-01	1.305E-01	0.000E+00
PO-214	1.242E+00	2.001E-01	1.305E-01	0.000E+00
PO-216	1.552E+00	1.779E-01	1.005E-01	0.000E+00
PO-218	1.242E+00	2.001E-01	1.305E-01	0.000E+00
RA-224	3.340E+00	1.222E+00	1.144E+00	0.000E+00
RA-226	1.125E+00	1.747E-01	1.175E-01	0.000E+00
AC-228	1.491E+00	3.252E-01	2.024E-01	0.000E+00
RA-228	1.491E+00	3.252E-01	2.024E-01	0.000E+00
TH-228	1.552E+00	1.779E-01	1.005E-01	0.000E+00
TH-230	1.125E+00	1.747E-01	1.175E-01	0.000E+00
TH-232	1.491E+00	3.252E-01	2.024E-01	0.000E+00
TH-234	2.409E+00	2.041E+00	2.504E+00	0.000E+00
U-234	1.125E+00	1.747E-01	1.175E-01	0.000E+00
NP-237	3.416E-01	3.260E-01	4.413E-01	0.000E+00
U-238	2.409E+00	2.041E+00	2.504E+00	0.000E+00
AM-241	1.001E+01	1.048E+00	4.092E-01	0.000E+00
AM-243	3.907E-01	8.806E-02	9.465E-02	0.000E+00
ANH-511	1.691E-01	7.713E-02	5.689E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-1.751E-02	4.048E-01	6.915E-01	0.000E+00	NOT IDENT.
NA-22	-3.004E-02	4.461E-02	7.100E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.655E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-4.022E-03	2.323E-02	3.782E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.889E-02	7.473E-02	0.000E+00	FAIL ABUN
SC-46	-2.364E-03	3.637E-02	6.118E-02	0.000E+00	FAIL ABUN
V-48	-4.769E-02	6.269E-02	9.669E-02	0.000E+00	NOT IDENT.
CR-51	-1.653E-01	3.588E-01	6.253E-01	0.000E+00	NOT IDENT.
MN-52	1.816E-02	1.409E-01	2.409E-01	0.000E+00	NOT IDENT.
MN-54	2.535E-02	3.389E-02	6.120E-02	0.000E+00	NOT IDENT.
CO-56	1.158E-02	3.464E-02	6.071E-02	0.000E+00	NOT IDENT.
CO-57	-9.768E-04	2.388E-02	4.312E-02	0.000E+00	NOT IDENT.
CO-58	-2.358E-02	3.822E-02	6.197E-02	0.000E+00	NOT IDENT.
FE-59	-4.718E-02	8.720E-02	1.438E-01	0.000E+00	NOT IDENT.
CO-60	-2.455E-02	3.887E-02	6.098E-02	0.000E+00	NOT IDENT.
ZN-65	-4.455E-02	1.096E-01	1.556E-01	0.000E+00	NOT IDENT.
GE-68	8.949E-01	1.238E+00	2.263E+00	0.000E+00	NOT IDENT.
AS-73	-1.010E+00	1.365E+00	2.565E+00	0.000E+00	NOT IDENT.
AS-74	-1.406E-02	8.619E-02	1.509E-01	0.000E+00	NOT IDENT.
SE-75	1.826E-02	4.972E-02	8.122E-02	0.000E+00	NOT IDENT.
BR-77	3.008E-01	6.385E+00	1.086E+01	0.000E+00	FAIL ABUN
SR-82	9.824E-02	3.461E-01	6.077E-01	0.000E+00	NOT IDENT.
RB-83	-1.109E-02	7.882E-02	1.326E-01	0.000E+00	NOT IDENT.
RB-84	6.774E-03	6.318E-02	1.081E-01	0.000E+00	NOT IDENT.
KR-85	7.553E+00	8.498E+00	1.350E+01	0.000E+00	NOT IDENT.
SR-85	3.785E-02	4.258E-02	6.763E-02	0.000E+00	NOT IDENT.
RB-86	5.613E-03	7.325E-01	1.270E+00	0.000E+00	NOT IDENT.
Y-88	-6.525E-04	3.396E-02	5.719E-02	0.000E+00	NOT IDENT.
ZR-88	-2.126E-02	3.536E-02	5.994E-02	0.000E+00	NOT IDENT.
Y-91	3.403E+00	1.874E+01	3.248E+01	0.000E+00	NOT IDENT.
NB-94	2.651E-03	3.138E-02	5.486E-02	0.000E+00	NOT IDENT.
NB-95	2.394E-02	4.060E-02	7.138E-02	0.000E+00	NOT IDENT.
NB-95M	3.000E-02	1.320E-01	2.162E-01	0.000E+00	NOT IDENT.
ZR-95	4.713E-02	6.443E-02	1.171E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.322E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.724E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.093E+00	5.921E+00	1.064E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	8.983E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.734E-02	3.490E-02	6.100E-02	0.000E+00	NOT IDENT.
RH-102	2.015E-02	3.662E-02	6.448E-02	0.000E+00	NOT IDENT.
RU-103	3.008E-02	4.616E-02	8.136E-02	0.000E+00	FAIL ABUN
RH-106	-2.318E-02	3.037E-01	5.320E-01	0.000E+00	FAIL ABUN
RU-106	-2.318E-02	3.037E-01	5.320E-01	0.000E+00	FAIL ABUN
AG-108M	-2.855E-02	4.156E-02	6.937E-02	0.000E+00	NOT IDENT.
CD-109	0.000E+00	1.072E+00	1.591E+00	0.000E+00	NOT IDENT.
AG-110M	5.624E-02	3.956E-02	6.765E-02	0.000E+00	NOT IDENT.
IN-111	-3.445E-01	6.969E-01	1.094E+00	0.000E+00	NOT IDENT.
IN-113M	5.511E-03	5.081E-02	8.927E-02	0.000E+00	NOT IDENT.
SN-113	5.511E-03	5.081E-02	8.927E-02	0.000E+00	NOT IDENT.
IN-114M	2.048E-01	2.003E-01	3.263E-01	0.000E+00	NOT IDENT.
CD-115	6.893E-02	6.088E+00	1.032E+01	0.000E+00	NOT IDENT.
SN-117M	-1.304E-02	4.785E-02	8.374E-02	0.000E+00	NOT IDENT.
SB-122	1.040E+00	1.187E+00	2.212E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.570E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-6.953E-03	2.780E-02	4.869E-02	0.000E+00	NOT IDENT.
I-124	-1.716E-01	5.010E-01	7.823E-01	0.000E+00	NOT IDENT.
SB-124	3.681E-02	6.942E-02	1.280E-01	0.000E+00	FAIL ABUN
SB-125	-1.038E-01	1.084E-01	1.780E-01	0.000E+00	FAIL ABUN
TE-125M	5.428E+00	8.675E+00	1.614E+01	0.000E+00	NOT IDENT.
I-126	1.166E-01	1.742E-01	2.814E-01	0.000E+00	NOT IDENT.
SB-126	5.848E-03	1.087E-01	1.843E-01	0.000E+00	FAIL ABUN
SB-127	8.166E-02	8.401E-01	1.474E+00	0.000E+00	NOT IDENT.
XE-127	1.139E-02	4.774E-02	8.338E-02	0.000E+00	NOT IDENT.
I-131	4.498E-02	1.073E-01	1.926E-01	0.000E+00	NOT IDENT.
TE-132	3.619E-01	4.668E-01	8.201E-01	0.000E+00	NOT IDENT.
BA-133	-2.281E-03	5.433E-02	8.393E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.218E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.086E-02	8.883E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.192E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.227E-02	9.515E-02	1.698E-01	0.000E+00	FAIL ABUN
CE-139	-7.961E-03	3.049E-02	5.320E-02	0.000E+00	NOT IDENT.
BA-140	-1.961E-02	2.440E-01	4.101E-01	0.000E+00	NOT IDENT.
LA-140	-5.400E-04	7.633E-02	1.122E-01	0.000E+00	FAIL ABUN
CE-141	-8.060E-03	5.849E-02	1.037E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	6.381E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.665E-02	2.054E-01	3.709E-01	0.000E+00	NOT IDENT.
PM-144	2.790E-02	3.220E-02	5.928E-02	0.000E+00	NOT IDENT.

PR-144	1.889E+00	2.179E+00	4.012E+00	0.000E+00	NOT IDENT.
PM-146	-1.231E-02	5.700E-02	9.707E-02	0.000E+00	NOT IDENT.
ND-147	2.914E-01	5.561E-01	9.698E-01	0.000E+00	FAIL ABUN
PM-149	-6.084E+01	5.077E+01	8.538E+01	0.000E+00	NOT IDENT.
EU-152	4.839E-02	1.187E-01	1.893E-01	0.000E+00	NOT IDENT.
GD-153	-6.807E-02	8.723E-02	1.374E-01	0.000E+00	NOT IDENT.
EU-154	-8.611E-02	1.247E-01	1.978E-01	0.000E+00	NOT IDENT.
EU-155	-2.810E-02	1.050E-01	1.904E-01	0.000E+00	FAIL ABUN
TB-160	-7.712E-02	1.310E-01	2.096E-01	0.000E+00	FAIL ABUN
HO-166M	7.682E-03	5.336E-02	9.363E-02	0.000E+00	NOT IDENT.
TM-171	4.441E+00	3.012E+01	5.162E+01	0.000E+00	FAIL ABUN
LU-176	6.875E-03	2.649E-02	4.795E-02	0.000E+00	NOT IDENT.
LU-177	0.000E+00	1.240E+00	1.711E+00	0.000E+00	FAIL ABUN
LU-177M	-6.094E-02	2.071E-01	3.547E-01	0.000E+00	FAIL ABUN
HF-181	5.033E-02	5.075E-02	9.118E-02	0.000E+00	NOT IDENT.
W-181	3.951E-01	4.095E-01	7.233E-01	0.000E+00	NOT IDENT.
TA-182	6.833E-02	1.956E-01	3.428E-01	0.000E+00	FAIL ABUN
RE-183	-3.373E-02	1.134E-01	1.955E-01	0.000E+00	FAIL ABUN
RE-184	-5.094E-02	2.312E-01	4.175E-01	0.000E+00	FAIL ABUN
OS-185	-1.370E-02	4.280E-02	7.344E-02	0.000E+00	FAIL ABUN
RE-188	1.462E-01	1.705E-01	3.110E-01	0.000E+00	NOT IDENT.
W-188	-8.888E+00	8.714E+00	1.293E+01	0.000E+00	FAIL ABUN
IR-192	1.118E-02	3.488E-02	6.316E-02	0.000E+00	FAIL ABUN
AU-195	2.626E-01	2.443E-01	4.161E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.285E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.679E+00	4.361E+00	7.491E+00	0.000E+00	NOT IDENT.
TL-202	4.437E-02	7.825E-02	1.387E-01	0.000E+00	NOT IDENT.
HG-203	9.685E-03	4.557E-02	8.176E-02	0.000E+00	NOT IDENT.
BI-207	7.615E-03	5.148E-02	9.038E-02	0.000E+00	FAIL ABUN
TL-207	1.887E-01	7.374E-01	1.173E+00	0.000E+00	FAIL ABUN
PO-209	1.717E+00	6.847E+00	1.184E+01	0.000E+00	NOT IDENT.
BI-210	5.512E+00	6.940E+00	1.230E+01	0.000E+00	NOT IDENT.
PB-210	5.512E+00	6.940E+00	1.230E+01	0.000E+00	NOT IDENT.
PO-210	5.512E+00	6.936E+00	1.230E+01	0.000E+00	NOT IDENT.
PB-211	-3.135E-01	1.116E+00	1.889E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.963E-01	6.619E-01	0.000E+00	FAIL ABUN
PO-215	1.887E-01	7.374E-01	1.173E+00	0.000E+00	FAIL ABUN
RN-219	8.949E-03	4.790E-01	8.357E-01	0.000E+00	NOT IDENT.
RN-220	3.771E+00	2.809E+01	4.780E+01	0.000E+00	NOT IDENT.
RA-223	1.887E-01	7.374E-01	1.173E+00	0.000E+00	FAIL ABUN
AC-227	-3.529E-01	3.888E-01	6.753E-01	0.000E+00	NOT IDENT.
TH-227	-3.529E-01	3.902E-01	6.753E-01	0.000E+00	FAIL ABUN
TH-229	-1.968E-01	5.324E-01	9.111E-01	0.000E+00	FAIL ABUN
PA-231	-1.338E+00	1.630E+00	2.816E+00	0.000E+00	NOT IDENT.
TH-231	1.887E-01	7.374E-01	1.173E+00	0.000E+00	FAIL ABUN
U-231	-7.780E-01	7.837E-01	1.231E+00	0.000E+00	FAIL ABUN
PA-233	-2.813E-02	6.645E-02	1.164E-01	0.000E+00	FAIL ABUN
PA-234	2.731E-01	3.139E-01	5.592E-01	0.000E+00	FAIL ABUN
PA-234M	9.285E+00	6.963E+00	1.283E+01	0.000E+00	NOT IDENT.
U-235	-1.445E-01	2.182E-01	3.704E-01	0.000E+00	FAIL ABUN
NP-236	-3.830E-02	7.976E-02	1.383E-01	0.000E+00	NOT IDENT.
NP-239	-1.163E-01	1.815E-01	3.215E-01	0.000E+00	FAIL ABUN
CM-243	1.167E-01	9.281E-02	1.763E-01	0.000E+00	FAIL ABUN
CM-247	-6.333E-03	4.336E-02	7.503E-02	0.000E+00	NOT IDENT.
CF-249	8.547E-04	4.679E-02	8.193E-02	0.000E+00	NOT IDENT.
CF-251	1.726E-01	1.325E-01	2.427E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:20:14.81

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511002.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:19:39.
Sample ID         : G232511002           Sample quantity  : 1.55080E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.09  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1376	10.67*	1.046E+00	2.982E+01	2.982E+01	9.37
SN-126	64.28	97	9.60	2.571E+00	9.534E-01	9.534E-01	85.95
	86.94	92	8.90	5.177E+00	4.836E-01	4.836E-01	103.41
	87.57	92	37.00*	5.177E+00	1.163E-01	1.163E-01	95.17
CS-135	268.24	137	16.00*	4.215E+00	4.909E-01	4.909E-01	55.72
BA-137M	661.65	3095	89.98*	2.117E+00	3.933E+00	3.936E+00	7.47
CS-137	661.65	3095	85.12*	2.117E+00	4.157E+00	4.161E+00	7.49
TL-208	277.35	------	6.80	4.129E+00	------ Line Not Found		------
	510.84	182	21.60	2.609E+00	7.829E-01	7.829E-01	47.28
	583.14	390	84.20*	2.349E+00	4.777E-01	4.777E-01	17.65
	860.37	51	12.46	1.682E+00	5.933E-01	5.933E-01	71.46
BI-211	72.87	------	1.27	3.827E+00	------ Line Not Found		------
	351.07	661	12.94*	3.461E+00	3.571E+00	3.571E+00	15.59
PB-212	74.81	432	10.70	4.058E+00	2.410E+00	2.410E+00	24.82
	77.11	583	18.00	4.316E+00	1.816E+00	1.816E+00	17.93
	87.30	92	8.00	5.177E+00	5.380E-01	5.380E-01	95.69
	238.63	1317	44.60*	4.605E+00	1.552E+00	1.552E+00	11.69
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PO-212	74.81	432	10.70	4.058E+00	2.410E+00	2.410E+00	24.82
	77.11	583	18.00	4.316E+00	1.816E+00	1.816E+00	17.93
	87.30	92	8.00	5.177E+00	5.380E-01	5.380E-01	95.69
	115.19	------	0.60	6.304E+00	------ Line Not Found		------
	238.63	1317	44.60*	4.605E+00	1.552E+00	1.552E+00	11.69
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
BI-214	609.31	488	46.30*	2.266E+00	1.125E+00	1.125E+00	15.85
	768.36	------	5.04	1.861E+00	------ Line Not Found		------
	934.06	------	3.21	1.561E+00	------ Line Not Found		------
	1120.29	87	15.10	1.319E+00	1.060E+00	1.060E+00	48.61
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.098E+00	------ Line Not Found		------
	1764.49	91	15.80	9.194E-01	1.522E+00	1.522E+00	24.10
PB-214	74.81	432	6.21	4.058E+00	4.152E+00	4.153E+00	24.16

Sample ID : G232511002 Acquisition date : 7-JUL-2009 10:19:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	583	10.50	4.316E+00	3.113E+00	3.113E+00	19.48
	87.30	92	4.67	5.177E+00	9.217E-01	9.217E-01	95.48
	241.98	249	7.49	4.566E+00	1.761E+00	1.761E+00	37.77
	295.21	408	19.20	3.944E+00	1.304E+00	1.304E+00	22.72
	351.92	661	37.20*	3.461E+00	1.242E+00	1.242E+00	16.44
PO-214	74.81	432	6.21	4.058E+00	4.152E+00	4.153E+00	24.16
	77.11	583	10.50	4.316E+00	3.113E+00	3.113E+00	19.48
	87.30	92	4.67	5.177E+00	9.217E-01	9.217E-01	95.48
	241.98	249	7.49	4.566E+00	1.761E+00	1.761E+00	37.77
	295.21	408	19.20	3.944E+00	1.304E+00	1.304E+00	22.72
	351.92	661	37.20*	3.461E+00	1.242E+00	1.242E+00	16.44
PO-216	74.81	432	10.70	4.058E+00	2.410E+00	2.410E+00	24.82
	77.11	583	18.00	4.316E+00	1.816E+00	1.816E+00	17.93
	87.30	92	8.00	5.177E+00	5.380E-01	5.380E-01	95.69
	238.63	1317	44.60*	4.605E+00	1.552E+00	1.552E+00	11.69
	300.09	------	3.41	3.896E+00	------ Line Not Found		------
PO-218	74.81	432	6.21	4.058E+00	4.152E+00	4.153E+00	24.16
	77.11	583	10.50	4.316E+00	3.113E+00	3.113E+00	19.48
	87.30	92	4.67	5.177E+00	9.217E-01	9.217E-01	95.48
	241.98	249	7.49	4.566E+00	1.761E+00	1.761E+00	37.77
	295.21	408	19.20	3.944E+00	1.304E+00	1.304E+00	22.72
	351.92	661	37.20*	3.461E+00	1.242E+00	1.242E+00	16.44
RA-224	240.98	249	3.95*	4.566E+00	3.340E+00	3.340E+00	37.35
RA-226	609.31	488	46.30*	2.266E+00	1.125E+00	1.125E+00	15.85
	768.36	------	5.04	1.861E+00	------ Line Not Found		------
	934.06	------	3.21	1.561E+00	------ Line Not Found		------
	1120.29	87	15.10	1.319E+00	1.060E+00	1.060E+00	48.61
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.098E+00	------ Line Not Found		------
	1764.49	91	15.80	9.194E-01	1.522E+00	1.522E+00	24.10
AC-228	338.32	341	11.40	3.560E+00	2.035E+00	2.035E+00	48.29
	911.07	272	27.70*	1.597E+00	1.491E+00	1.491E+00	22.25
	969.11	186	16.60	1.509E+00	1.795E+00	1.795E+00	33.14
RA-228	338.32	341	11.40	3.560E+00	2.035E+00	2.035E+00	48.29
	911.07	272	27.70*	1.597E+00	1.491E+00	1.491E+00	22.25
	969.11	186	16.60	1.509E+00	1.795E+00	1.795E+00	33.14
TH-228	84.40	------	1.21	5.028E+00	------ Line Not Found		------
	238.60	1317	44.60*	4.605E+00	1.552E+00	1.552E+00	11.69
	300.10	------	3.41	3.896E+00	------ Line Not Found		------
TH-230	609.31	488	46.30*	2.266E+00	1.125E+00	1.125E+00	15.85
	768.36	------	5.04	1.861E+00	------ Line Not Found		------
	934.06	------	3.21	1.561E+00	------ Line Not Found		------
	1120.29	87	15.10	1.319E+00	1.060E+00	1.060E+00	48.61
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	------	4.11	1.098E+00	------ Line Not Found		------
	1764.49	91	15.80	9.194E-01	1.522E+00	1.522E+00	24.10
TH-232	338.32	341	11.40	3.560E+00	2.035E+00	2.035E+00	26.53
	911.07	272	27.70*	1.597E+00	1.491E+00	1.491E+00	22.25
	969.11	186	16.60	1.509E+00	1.795E+00	1.795E+00	33.14

Sample ID : G232511002 Acquisition date : 7-JUL-2009 10:19:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	97	3.80*	2.571E+00	2.409E+00	2.409E+00	86.49
	92.38	292	5.41	5.621E+00	2.326E+00	2.326E+00	37.77
U-234	609.31	488	46.30*	2.266E+00	1.125E+00	1.125E+00	15.85
	768.36	------	5.04	1.861E+00	------	Line Not Found	------
	934.06	------	3.21	1.561E+00	------	Line Not Found	------
	1120.29	87	15.10	1.319E+00	1.060E+00	1.060E+00	48.61
	1238.11	------	5.94	1.205E+00	------	Line Not Found	------
	1377.67	------	4.11	1.098E+00	------	Line Not Found	------
	1764.49	91	15.80	9.194E-01	1.522E+00	1.522E+00	24.10
NP-237	86.50	92	12.60*	5.177E+00	3.416E-01	3.416E-01	97.38
	95.87	------	2.60	5.787E+00	------	Line Not Found	------
U-238	63.29	97	3.80*	2.571E+00	2.409E+00	2.409E+00	86.49
	92.38	292	5.41	5.621E+00	2.326E+00	2.326E+00	34.26
AM-241	59.54	3015	35.90*	2.031E+00	1.001E+01	1.001E+01	10.68
AM-243	74.67	432	66.00*	4.058E+00	3.907E-01	3.907E-01	23.00
	86.72	92	0.34	5.177E+00	1.281E+01	1.281E+01	95.17
	117.66	------	0.55	6.322E+00	------	Line Not Found	------
	142.18	------	0.13	6.186E+00	------	Line Not Found	------
ANH-511	511.00	182	100.00*	2.609E+00	1.691E-01	1.691E-01	46.54

Flag: "*" = Keyline

Sample ID : G232511002 Acquisition date : 7-JUL-2009 10:19:39

Total number of lines in spectrum 31
Number of unidentified lines 3
Number of lines tentatively identified by NID 28 90.32%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.982E+01	2.982E+01	0.279E+01	9.37	
SN-126	1.00E+05Y	1.00	1.163E-01	1.163E-01	1.107E-01	95.17	
CS-135	2.30E+06Y	1.00	4.909E-01	4.909E-01	2.735E-01	55.72	
BA-137M	30.17Y	1.00	3.933E+00	3.936E+00	0.294E+00	7.47	
CS-137	30.17Y	1.00	4.157E+00	4.161E+00	0.312E+00	7.49	
TL-208	1.41E+10Y	1.00	4.777E-01	4.777E-01	0.843E-01	17.65	
BI-211	7.04E+08Y	1.00	3.571E+00	3.571E+00	0.557E+00	15.59	
PB-212	1.41E+10Y	1.00	1.552E+00	1.552E+00	0.182E+00	11.69	
PO-212	1.41E+10Y	1.00	1.552E+00	1.552E+00	0.182E+00	11.69	
BI-214	1600.00Y	1.00	1.125E+00	1.125E+00	0.178E+00	15.85	
PB-214	1600.00Y	1.00	1.242E+00	1.242E+00	0.204E+00	16.44	
PO-214	1600.00Y	1.00	1.242E+00	1.242E+00	0.204E+00	16.44	
PO-216	1.41E+10Y	1.00	1.552E+00	1.552E+00	0.182E+00	11.69	
PO-218	1600.00Y	1.00	1.242E+00	1.242E+00	0.204E+00	16.44	
RA-224	1.41E+10Y	1.00	3.340E+00	3.340E+00	1.247E+00	37.35	
RA-226	1600.00Y	1.00	1.125E+00	1.125E+00	0.178E+00	15.85	
AC-228	1.41E+10Y	1.00	1.491E+00	1.491E+00	0.332E+00	22.25	
RA-228	1.41E+10Y	1.00	1.491E+00	1.491E+00	0.332E+00	22.25	
TH-228	1.41E+10Y	1.00	1.552E+00	1.552E+00	0.182E+00	11.69	
TH-230	4.47E+09Y	1.00	1.125E+00	1.125E+00	0.178E+00	15.85	
TH-232	1.41E+10Y	1.00	1.491E+00	1.491E+00	0.332E+00	22.25	
TH-234	4.47E+09Y	1.00	2.409E+00	2.409E+00	2.083E+00	86.49	
U-234	4.47E+09Y	1.00	1.125E+00	1.125E+00	0.178E+00	15.85	
NP-237	2.14E+06Y	1.00	3.416E-01	3.416E-01	3.327E-01	97.38	
U-238	4.47E+09Y	1.00	2.409E+00	2.409E+00	2.083E+00	86.49	
AM-241	432.20Y	1.00	1.001E+01	1.001E+01	0.107E+01	10.68	
AM-243	7380.00Y	1.00	3.907E-01	3.907E-01	0.899E-01	23.00	
ANH-511	1.00E+09Y	1.00	1.691E-01	1.691E-01	0.787E-01	46.54	
	Total Activity :		8.055E+01	8.055E+01			

Grand Total Activity : 8.055E+01 8.055E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232511002 Acquisition date : 7-JUL-2009 10:19:39

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
6	89.95	215	349	1.20	179.13	177	16	2.98E-02	29.0	5.45E+00	T
0	186.02	176	608	1.09	371.35	366	11	2.45E-02	58.6	5.44E+00	T
0	209.34	190	353	1.74	418.02	414	9	2.64E-02	39.2	5.04E+00	T
0	327.39	89	277	1.38	654.26	649	11	1.24E-02	74.9	3.65E+00	T
0	462.78	78	196	1.84	925.19	921	9	1.09E-02	68.6	2.82E+00	T
0	727.67	117	94	1.73	1455.28	1451	14	1.63E-02	40.2	1.95E+00	T
0	793.96	84	56	4.96	1587.95	1580	14	1.17E-02	43.4	1.81E+00	
0	1588.15	30	15	1.83	3177.51	3170	13	4.11E-03	66.8	9.83E-01	
0	1594.26	10	19	0.98	3189.74	3184	9	1.38E-03	****	9.80E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:20:21.57

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                DETECTOR DATA                                *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511002.CNF;1   *
* Acquisition date  : 7-JUL-2009 10:19:39.  Detector SN#     :                *
* Detector ID       : GAM02                 Sensitivity      : 5.00000       *
* Geometry          : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:03.09          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                                 SAMPLE DATA                                 *
*                                                                             *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID           *
* Sample ID         : G232511002            Analyst initials: MXR1            *
* Batch Number      : 881220                Sample Quantity : 1.55080E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                   QC DATA                                   *
*                                                                             *
* CALIB. DATE/TIME : 1-NOV-2008 14:03:38.86MS Isotope      :                  *
* MSD ID           :                       MSD Isotope     :                 *
* LCS ID           : 1032-A                LCS Isotope     :                 *
*******************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.982E+01	2.795E+00	5.366E-01	3.978E-02	55.577
SN-126	1.163E-01	1.107E-01	1.400E-01	1.646E-02	0.831
CS-135	4.909E-01	2.735E-01	2.582E-01	2.659E-02	1.901
BA-137M	3.936E+00	2.941E-01	6.223E-02	3.983E-03	63.247
CS-137	4.161E+00	3.117E-01	6.579E-02	4.225E-03	63.247
TL-208	4.777E-01	8.428E-02	5.917E-02	4.345E-03	8.072
BI-211	3.571E+00	5.567E-01	3.573E-01	2.895E-02	9.996
PB-212	1.552E+00	1.815E-01	9.492E-02	8.993E-03	16.356
PO-212	1.552E+00	1.815E-01	9.492E-02	8.993E-03	16.356
BI-214	1.125E+00	1.783E-01	1.137E-01	9.469E-03	9.890
PB-214	1.242E+00	2.042E-01	1.245E-01	1.198E-02	9.975
PO-214	1.242E+00	2.042E-01	1.245E-01	1.198E-02	9.975
PO-216	1.552E+00	1.815E-01	9.492E-02	8.993E-03	16.356
PO-218	1.242E+00	2.042E-01	1.245E-01	1.198E-02	9.975
RA-224	3.340E+00	1.247E+00	1.081E+00	9.076E-02	3.090
RA-226	1.125E+00	1.783E-01	1.137E-01	9.469E-03	9.890
AC-228	1.491E+00	3.319E-01	1.981E-01	2.319E-02	7.528
RA-228	1.491E+00	3.319E-01	1.981E-01	2.319E-02	7.528

Sample ID : G232511002 Acquisition date : 7-JUL-2009 10:19:39

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.552E+00	1.815E-01	9.491E-02	8.991E-03	16.358
TH-230	1.125E+00	1.783E-01	1.137E-01	9.469E-03	9.890
TH-232	1.491E+00	3.319E-01	1.981E-01	2.319E-02	7.528
TH-234	2.409E+00	2.083E+00	2.289E+00	4.185E-01	1.052
U-234	1.125E+00	1.783E-01	1.137E-01	9.469E-03	9.890
NP-237	3.416E-01	3.327E-01	4.065E-01	9.627E-02	0.840
U-238	2.409E+00	2.083E+00	2.289E+00	4.185E-01	1.052
AM-241	1.001E+01	1.069E+00	3.736E-01	3.460E-02	26.790
AM-243	3.907E-01	8.985E-02	8.688E-02	8.942E-03	4.497
ANH-511	1.691E-01	7.871E-02	5.482E-02	3.585E-03	3.085

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.751E-02		4.130E-01	6.652E-01	4.890E-02	-0.026
NA-22	-3.004E-02		4.552E-02	7.014E-02	4.689E-03	-0.428
NA-24	2.889E-02		2.885E-02	Half-Life too short		
AL-26	-4.022E-03		2.371E-02	3.773E-02	2.125E-03	-0.107
TI-44	3.351E-01	+	6.010E-02	6.867E-02	7.321E-03	4.880
SC-46	-2.364E-03		3.711E-02	5.984E-02	5.513E-03	-0.040
V-48	-4.769E-02		6.396E-02	9.483E-02	8.018E-03	-0.503
CR-51	-1.653E-01		3.662E-01	5.952E-01	5.307E-02	-0.278
MN-52	1.816E-02		1.438E-01	2.388E-01	1.716E-02	0.076
MN-54	2.535E-02		3.458E-02	5.976E-02	5.076E-03	0.424
CO-56	1.158E-02		3.535E-02	5.930E-02	5.129E-03	0.195
CO-57	-9.768E-04		2.437E-02	4.006E-02	2.364E-03	-0.024
CO-58	-2.358E-02		3.900E-02	6.046E-02	4.962E-03	-0.390
FE-59	-4.718E-02		8.898E-02	1.415E-01	1.089E-02	-0.333
CO-60	-2.455E-02		3.967E-02	6.031E-02	4.440E-03	-0.407
ZN-65	-4.455E-02		1.119E-01	1.532E-01	1.008E-02	-0.291
GE-68	8.949E-01		1.263E+00	2.225E+00	1.598E-01	0.402
AS-73	-1.010E+00		1.392E+00	2.335E+00	2.090E-01	-0.433
AS-74	-1.406E-02		8.794E-02	1.460E-01	9.541E-03	-0.096
SE-75	1.826E-02		5.074E-02	7.693E-02	6.895E-03	0.237
BR-77	3.008E-01		6.515E+00	1.047E+01	6.858E-01	0.029
SR-82	9.824E-02		3.532E-01	5.922E-01	4.592E-02	0.166
RB-83	-1.109E-02		8.043E-02	1.278E-01	8.369E-03	-0.087
RB-84	6.774E-03		6.447E-02	1.057E-01	9.626E-03	0.064
KR-85	7.553E+00		8.671E+00	1.301E+01	8.511E-01	0.581
SR-85	3.785E-02		4.345E-02	6.518E-02	4.265E-03	0.581
RB-86	5.613E-03		7.475E-01	1.249E+00	8.978E-02	0.004
Y-88	-6.525E-04		3.465E-02	5.708E-02	3.130E-03	-0.011
ZR-88	-2.126E-02		3.608E-02	5.736E-02	3.565E-03	-0.371
Y-91	3.403E+00		1.912E+01	3.204E+01	1.884E+00	0.106
NB-94	2.651E-03		3.202E-02	5.332E-02	3.662E-03	0.050
NB-95	2.394E-02		4.143E-02	6.953E-02	5.301E-03	0.344
NB-95M	3.000E-02		1.347E-01	2.042E-01	1.954E-02	0.147

Sample ID : G232511002 Acquisition date : 7-JUL-2009 10:19:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	4.713E-02		6.575E-02	1.141E-01	9.690E-03	0.413
NB-97	2.323E-02		6.743E-03	Half-Life too short		
ZR-97	2.822E-01		1.390E-01	Half-Life too short		
MO-99	3.093E+00		6.042E+00	1.035E+01	1.499E+00	0.299
TC-99M	4.073E+07		4.583E+07	Half-Life too short		
RH-101	1.734E-02		3.562E-02	5.735E-02	4.264E-03	0.302
RH-102	2.015E-02		3.736E-02	6.201E-02	4.021E-03	0.325
RU-103	3.008E-02		4.710E-02	7.834E-02	1.018E-02	0.384
RH-106	-2.318E-02		3.099E-01	5.153E-01	6.233E-02	-0.045
RU-106	-2.318E-02		3.099E-01	5.153E-01	3.346E-02	-0.045
AG-108M	-2.855E-02		4.241E-02	6.655E-02	4.546E-03	-0.429
CD-109	3.312E+00		1.094E+00	1.466E+00	1.732E-01	2.259
AG-110M	5.624E-02		4.037E-02	6.563E-02	4.431E-03	0.857
IN-111	-3.445E-01		7.111E-01	1.034E+00	8.785E-02	-0.333
IN-113M	5.511E-03		5.185E-02	8.542E-02	5.616E-03	0.065
SN-113	5.511E-03		5.185E-02	8.542E-02	5.616E-03	0.065
IN-114M	2.048E-01		2.044E-01	3.065E-01	2.226E-02	0.668
CD-115	6.893E-02		6.213E+00	9.953E+00	6.523E-01	0.007
SN-117M	-1.304E-02		4.883E-02	7.830E-02	5.139E-03	-0.166
SB-122	1.040E+00		1.211E+00	2.137E+00	1.402E-01	0.486
I-123	-8.927E-02		1.821E-01	Half-Life too short		
TE-123M	-6.953E-03		2.837E-02	4.553E-02	3.025E-03	-0.153
I-124	-1.716E-01		5.112E-01	7.571E-01	4.940E-02	-0.227
SB-124	3.681E-02		7.083E-02	1.275E-01	8.571E-03	0.289
SB-125	-1.038E-01		1.107E-01	1.707E-01	1.123E-02	-0.608
TE-125M	5.428E+00		8.852E+00	1.495E+01	1.410E+00	0.363
I-126	1.166E-01		1.777E-01	2.731E-01	1.762E-02	0.427
SB-126	5.848E-03		1.109E-01	1.792E-01	1.268E-02	0.033
SB-127	8.166E-02		8.572E-01	1.432E+00	1.330E-01	0.057
XE-127	1.139E-02		4.872E-02	7.844E-02	5.916E-03	0.145
I-131	4.498E-02		1.095E-01	1.839E-01	1.421E-02	0.245
TE-132	3.619E-01		4.763E-01	7.739E-01	1.165E-01	0.468
BA-133	-2.281E-03		5.544E-02	8.011E-02	9.993E-03	-0.028
I-133	-7.020E-05		6.215E-04	Half-Life too short		
CS-134	9.187E-02		5.190E-02	8.662E-02	6.985E-03	1.061
I-135	9.607E+06		1.118E+07	Half-Life too short		
CS-136	3.227E-02		9.709E-02	1.668E-01	1.338E-02	0.194
CE-139	-7.961E-03		3.111E-02	4.979E-02	3.370E-03	-0.160
BA-140	-1.961E-02		2.490E-01	3.957E-01	1.293E-01	-0.050
LA-140	-5.400E-04		7.789E-02	1.116E-01	7.452E-03	-0.005
CE-141	-8.060E-03		5.969E-02	9.678E-02	6.248E-03	-0.083
CE-143	1.645E-04		3.255E-05	Half-Life too short		
CE-144	3.665E-02		2.096E-01	3.453E-01	4.934E-02	0.106
PM-144	2.790E-02		3.286E-02	5.759E-02	3.916E-03	0.484
PR-144	1.889E+00		2.224E+00	3.898E+00	2.649E-01	0.484
PM-146	-1.231E-02		5.816E-02	9.324E-02	8.449E-03	-0.132
ND-147	2.914E-01		5.675E-01	9.355E-01	1.297E-01	0.312
PM-149	-6.084E+01		5.181E+01	8.104E+01	1.283E+01	-0.751

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	4.839E-02		1.211E-01	1.805E-01	1.512E-02	0.268
GD-153	-6.807E-02		8.901E-02	1.269E-01	1.207E-02	-0.536
EU-154	-8.611E-02		1.273E-01	1.954E-01	1.936E-02	-0.441
EU-155	-2.810E-02		1.072E-01	1.762E-01	1.451E-02	-0.159
TB-160	-7.712E-02		1.337E-01	2.050E-01	1.861E-02	-0.376
HO-166M	7.682E-03		5.445E-02	9.103E-02	6.348E-03	0.084
TM-171	4.441E+00		3.074E+01	4.726E+01	4.524E+00	0.094
LU-176	6.875E-03		2.704E-02	4.559E-02	3.987E-03	0.151
LU-177	3.169E+00	+	1.265E+00	1.611E+00	1.235E-01	1.968
LU-177M	-6.094E-02		2.113E-01	3.399E-01	2.142E-02	-0.179
HF-181	5.033E-02		5.178E-02	8.772E-02	5.700E-03	0.574
W-181	3.951E-01		4.179E-01	6.617E-01	6.236E-02	0.597
TA-182	6.833E-02		1.996E-01	3.382E-01	2.051E-02	0.202
RE-183	-3.373E-02		1.157E-01	1.829E-01	1.219E-02	-0.184
RE-184	-5.094E-02		2.359E-01	3.950E-01	3.422E-02	-0.129
OS-185	-1.370E-02		4.367E-02	7.121E-02	4.587E-03	-0.192
RE-188	1.462E-01		1.740E-01	2.906E-01	1.881E-02	0.503
W-188	-8.888E+00		8.892E+00	1.227E+01	1.111E+00	-0.724
IR-192	1.118E-02		3.560E-02	6.010E-02	5.140E-03	0.186
AU-195	2.626E-01		2.493E-01	3.845E-01	3.547E-02	0.683
TL-200	-6.397E-05		6.554E-05	Half-Life too short		
TL-201	-2.679E+00		4.450E+00	7.014E+00	4.766E-01	-0.382
TL-202	4.437E-02		7.985E-02	1.332E-01	8.513E-03	0.333
HG-203	9.685E-03		4.651E-02	7.755E-02	7.344E-03	0.125
BI-207	7.615E-03		5.253E-02	8.884E-02	6.562E-03	0.086
TL-207	1.887E-01		7.525E-01	1.117E+00	1.964E-01	0.169
PO-209	1.717E+00		6.986E+00	1.159E+01	1.079E+00	0.148
BI-210	5.512E+00		7.081E+00	1.116E+01	8.994E-01	0.494
PB-210	5.512E+00		7.081E+00	1.116E+01	8.994E-01	0.494
PO-210	5.512E+00		7.078E+00	1.116E+01	7.838E-01	0.494
PB-211	-3.135E-01		1.139E+00	1.809E+00	1.129E+00	-0.173
BI-212	1.230E+00	+	5.064E-01	6.438E-01	5.652E-02	1.910
PO-215	1.887E-01		7.525E-01	1.117E+00	1.964E-01	0.169
RN-219	8.949E-03		4.887E-01	8.002E-01	1.105E-01	0.011
RN-220	3.771E+00		2.866E+01	4.615E+01	3.028E+00	0.082
RA-223	1.887E-01		7.525E-01	1.117E+00	1.964E-01	0.169
AC-227	-3.529E-01		3.967E-01	6.391E-01	9.851E-02	-0.552
TH-227	-3.529E-01		3.982E-01	6.391E-01	1.158E-01	-0.552
TH-229	-1.968E-01		5.432E-01	8.561E-01	6.282E-02	-0.230
PA-231	-1.338E+00		1.663E+00	2.672E+00	4.143E-01	-0.501
TH-231	1.887E-01		7.525E-01	1.117E+00	1.964E-01	0.169
U-231	-7.780E-01		7.997E-01	1.137E+00	1.118E-01	-0.684
PA-233	-2.813E-02		6.781E-02	1.107E-01	9.831E-03	-0.254
PA-234	2.731E-01		3.204E-01	5.479E-01	1.034E-01	0.498
PA-234M	9.285E+00		7.105E+00	1.259E+01	1.371E+00	0.737
U-235	-1.445E-01		2.226E-01	3.455E-01	5.684E-02	-0.418
NP-236	-3.830E-02		8.139E-02	1.294E-01	8.551E-03	-0.296
NP-239	-1.163E-01		1.852E-01	2.983E-01	1.939E-02	-0.390

Sample ID : G232511002 Acquisition date : 7-JUL-2009 10:19:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.167E-01		9.471E-02	1.632E-01	1.365E-02	0.715
CM-247	-6.333E-03		4.424E-02	7.185E-02	4.496E-03	-0.088
CF-249	8.547E-04		4.775E-02	7.838E-02	4.979E-03	0.011
CF-251	1.726E-01		1.352E-01	2.275E-01	1.587E-02	0.759

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232511002            *
* Acquisition date :  7-JUL-2009 10:19:39 Detector SN#    :                 *
* Detector ID      : GAM02                Sensitivity     : 5.000           *
* Geometry         : CAN                  Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:03.09     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 24-JUN-2009 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G232511002           Analyst initials: MXR1            *
* Batch Number     : 881220               Sample Quantity : 1.5508E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.982E+01	2.739E+00	2.707E-01	1.397E+00
SN-126	1.163E-01	1.085E-01	7.600E-02	5.536E-02
CS-135	4.909E-01	2.680E-01	1.363E-01	1.368E-01
BA-137M	3.936E+00	2.883E-01	3.209E-02	1.471E-01
CS-137	4.161E+00	3.055E-01	3.392E-02	1.559E-01
TL-208	4.777E-01	8.260E-02	3.061E-02	4.214E-02
BI-211	3.571E+00	5.455E-01	1.873E-01	2.783E-01
PB-212	1.552E+00	1.779E-01	5.027E-02	9.075E-02
PO-212	1.552E+00	1.779E-01	5.027E-02	9.075E-02
BI-214	1.125E+00	1.747E-01	5.877E-02	8.916E-02
PB-214	1.242E+00	2.001E-01	6.530E-02	1.021E-01
PO-214	1.242E+00	2.001E-01	6.530E-02	1.021E-01
PO-216	1.552E+00	1.779E-01	5.027E-02	9.075E-02
PO-218	1.242E+00	2.001E-01	6.530E-02	1.021E-01
RA-224	3.340E+00	1.222E+00	5.722E-01	6.236E-01
RA-226	1.125E+00	1.747E-01	5.877E-02	8.916E-02
AC-228	1.491E+00	3.252E-01	1.013E-01	1.659E-01
RA-228	1.491E+00	3.252E-01	1.013E-01	1.659E-01
TH-228	1.552E+00	1.779E-01	5.026E-02	9.075E-02
TH-230	1.125E+00	1.747E-01	5.877E-02	8.915E-02
TH-232	1.491E+00	3.252E-01	1.013E-01	1.659E-01
TH-234	2.409E+00	2.041E+00	1.253E+00	1.042E+00
U-234	1.125E+00	1.747E-01	5.877E-02	8.915E-02
NP-237	3.416E-01	3.260E-01	2.208E-01	1.663E-01
U-238	2.409E+00	2.041E+00	1.253E+00	1.042E+00
AM-241	1.001E+01	1.048E+00	2.047E-01	5.346E-01
AM-243	3.907E-01	8.806E-02	4.735E-02	4.493E-02
ANH-511	1.691E-01	7.713E-02	2.846E-02	3.935E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-1.751E-02	4.048E-01	3.460E-01	2.065E-01	NOT IDENT.
NA-22	-3.004E-02	4.461E-02	3.552E-02	2.276E-02	NOT IDENT.
NA-24	2.889E+04	5.655E+04	0.000E+00	2.885E+04	SHORT HLIF
AL-26	-4.022E-03	2.323E-02	1.892E-02	1.185E-02	NOT IDENT.
TI-44	3.351E-01	5.889E-02	3.739E-02	3.005E-02	FAIL ABUN
SC-46	-2.364E-03	3.637E-02	3.061E-02	1.856E-02	FAIL ABUN
V-48	-4.769E-02	6.269E-02	4.837E-02	3.198E-02	NOT IDENT.
CR-51	-1.653E-01	3.588E-01	3.128E-01	1.831E-01	NOT IDENT.
MN-52	1.816E-02	1.409E-01	1.205E-01	7.191E-02	NOT IDENT.
MN-54	2.535E-02	3.389E-02	3.062E-02	1.729E-02	NOT IDENT.
CO-56	1.158E-02	3.464E-02	3.037E-02	1.767E-02	NOT IDENT.
CO-57	-9.768E-04	2.388E-02	2.157E-02	1.218E-02	NOT IDENT.
CO-58	-2.358E-02	3.822E-02	3.100E-02	1.950E-02	NOT IDENT.
FE-59	-4.718E-02	8.720E-02	7.195E-02	4.449E-02	NOT IDENT.
CO-60	-2.455E-02	3.887E-02	3.051E-02	1.983E-02	NOT IDENT.
ZN-65	-4.455E-02	1.096E-01	7.787E-02	5.594E-02	NOT IDENT.
GE-68	8.949E-01	1.238E+00	1.132E+00	6.314E-01	NOT IDENT.
AS-73	-1.010E+00	1.365E+00	1.283E+00	6.962E-01	NOT IDENT.
AS-74	-1.406E-02	8.619E-02	7.550E-02	4.397E-02	NOT IDENT.
SE-75	1.826E-02	4.972E-02	4.063E-02	2.537E-02	NOT IDENT.
BR-77	3.008E-01	6.385E+00	5.434E+00	3.258E+00	FAIL ABUN
SR-82	9.824E-02	3.461E-01	3.040E-01	1.766E-01	NOT IDENT.
RB-83	-1.109E-02	7.882E-02	6.632E-02	4.022E-02	NOT IDENT.
RB-84	6.774E-03	6.318E-02	5.406E-02	3.223E-02	NOT IDENT.
KR-85	7.553E+00	8.498E+00	6.753E+00	4.336E+00	NOT IDENT.
SR-85	3.785E-02	4.258E-02	3.384E-02	2.172E-02	NOT IDENT.
RB-86	5.613E-03	7.325E-01	6.354E-01	3.737E-01	NOT IDENT.
Y-88	-6.525E-04	3.396E-02	2.861E-02	1.733E-02	NOT IDENT.
ZR-88	-2.126E-02	3.536E-02	2.999E-02	1.804E-02	NOT IDENT.
Y-91	3.403E+00	1.874E+01	1.625E+01	9.559E+00	NOT IDENT.
NB-94	2.651E-03	3.138E-02	2.745E-02	1.601E-02	NOT IDENT.
NB-95	2.394E-02	4.060E-02	3.571E-02	2.071E-02	NOT IDENT.
NB-95M	3.000E-02	1.320E-01	1.082E-01	6.733E-02	NOT IDENT.
ZR-95	4.713E-02	6.443E-02	5.861E-02	3.287E-02	NOT IDENT.
NB-97	2.323E+04	1.322E+04	0.000E+00	6.743E+03	SHORT HLIF
ZR-97	2.822E+05	2.724E+05	0.000E+00	1.390E+05	SHORT HLIF
MO-99	3.093E+00	5.921E+00	5.323E+00	3.021E+00	NOT IDENT.
TC-99M	4.073E+13	8.983E+13	0.000E+00	4.583E+13	SHORT HLIF
RH-101	1.734E-02	3.490E-02	3.052E-02	1.781E-02	NOT IDENT.
RH-102	2.015E-02	3.662E-02	3.226E-02	1.868E-02	NOT IDENT.
RU-103	3.008E-02	4.616E-02	4.070E-02	2.355E-02	FAIL ABUN
RH-106	-2.318E-02	3.037E-01	2.661E-01	1.550E-01	FAIL ABUN
RU-106	-2.318E-02	3.037E-01	2.661E-01	1.550E-01	FAIL ABUN
AG-108M	-2.855E-02	4.156E-02	3.470E-02	2.120E-02	NOT IDENT.
CD-109	3.312E+00	1.072E+00	7.961E-01	5.470E-01	NOT IDENT.
AG-110M	5.624E-02	3.956E-02	3.384E-02	2.019E-02	NOT IDENT.
IN-111	-3.445E-01	6.969E-01	5.471E-01	3.556E-01	NOT IDENT.
IN-113M	5.511E-03	5.081E-02	4.466E-02	2.592E-02	NOT IDENT.
SN-113	5.511E-03	5.081E-02	4.466E-02	2.592E-02	NOT IDENT.
IN-114M	2.048E-01	2.003E-01	1.632E-01	1.022E-01	NOT IDENT.
CD-115	6.893E-02	6.088E+00	5.163E+00	3.106E+00	NOT IDENT.
SN-117M	-1.304E-02	4.785E-02	4.190E-02	2.441E-02	NOT IDENT.
SB-122	1.040E+00	1.187E+00	1.107E+00	6.054E-01	NOT IDENT.
I-123	-8.927E+04	3.570E+05	0.000E+00	1.821E+05	SHORT HLIF
TE-123M	-6.953E-03	2.780E-02	2.436E-02	1.418E-02	NOT IDENT.
I-124	-1.716E-01	5.010E-01	3.914E-01	2.556E-01	NOT IDENT.
SB-124	3.681E-02	6.942E-02	6.405E-02	3.542E-02	FAIL ABUN
SB-125	-1.038E-01	1.084E-01	8.906E-02	5.533E-02	FAIL ABUN
TE-125M	5.428E+00	8.675E+00	8.075E+00	4.426E+00	NOT IDENT.
I-126	1.166E-01	1.742E-01	1.408E-01	8.887E-02	NOT IDENT.
SB-126	5.848E-03	1.087E-01	9.220E-02	5.546E-02	FAIL ABUN
SB-127	8.166E-02	8.401E-01	7.376E-01	4.286E-01	NOT IDENT.
XE-127	1.139E-02	4.774E-02	4.172E-02	2.436E-02	NOT IDENT.
I-131	4.498E-02	1.073E-01	9.634E-02	5.474E-02	NOT IDENT.
TE-132	3.619E-01	4.668E-01	4.103E-01	2.381E-01	NOT IDENT.
BA-133	-2.281E-03	5.433E-02	4.199E-02	2.772E-02	NOT IDENT.
I-133	-7.020E+01	1.218E+03	0.000E+00	6.215E+02	SHORT HLIF
CS-134	9.187E-02	5.086E-02	4.444E-02	2.595E-02	NOT IDENT.
I-135	9.607E+12	2.192E+13	0.000E+00	1.118E+13	SHORT HLIF
CS-136	3.227E-02	9.515E-02	8.493E-02	4.855E-02	FAIL ABUN
CE-139	-7.961E-03	3.049E-02	2.661E-02	1.556E-02	NOT IDENT.
BA-140	-1.961E-02	2.440E-01	2.052E-01	1.245E-01	NOT IDENT.
LA-140	-5.400E-04	7.633E-02	5.614E-02	3.894E-02	FAIL ABUN
CE-141	-8.060E-03	5.849E-02	5.190E-02	2.984E-02	NOT IDENT.
CE-143	1.645E+02	6.381E+01	0.000E+00	3.255E+01	SHORT HLIF
CE-144	3.665E-02	2.054E-01	1.856E-01	1.048E-01	NOT IDENT.
PM-144	2.790E-02	3.220E-02	2.966E-02	1.643E-02	NOT IDENT.

PR-144	1.889E+00	2.179E+00	2.007E+00	1.112E+00	NOT IDENT.
PM-146	-1.231E-02	5.700E-02	4.856E-02	2.908E-02	NOT IDENT.
ND-147	2.914E-01	5.561E-01	4.852E-01	2.837E-01	FAIL ABUN
PM-149	-6.084E+01	5.077E+01	4.272E+01	2.590E+01	NOT IDENT.
EU-152	4.839E-02	1.187E-01	9.471E-02	6.054E-02	NOT IDENT.
GD-153	-6.807E-02	8.723E-02	6.873E-02	4.450E-02	NOT IDENT.
EU-154	-8.611E-02	1.247E-01	9.898E-02	6.363E-02	NOT IDENT.
EU-155	-2.810E-02	1.050E-01	9.525E-02	5.358E-02	FAIL ABUN
TB-160	-7.712E-02	1.310E-01	1.049E-01	6.684E-02	FAIL ABUN
HO-166M	7.682E-03	5.336E-02	4.684E-02	2.722E-02	NOT IDENT.
TM-171	4.441E+00	3.012E+01	2.583E+01	1.537E+01	FAIL ABUN
LU-176	6.875E-03	2.649E-02	2.399E-02	1.352E-02	NOT IDENT.
LU-177	3.169E+00	1.240E+00	8.560E-01	6.326E-01	FAIL ABUN
LU-177M	-6.094E-02	2.071E-01	1.774E-01	1.056E-01	FAIL ABUN
HF-181	5.033E-02	5.075E-02	4.562E-02	2.589E-02	NOT IDENT.
W-181	3.951E-01	4.095E-01	3.619E-01	2.090E-01	NOT IDENT.
TA-182	6.833E-02	1.956E-01	1.715E-01	9.981E-02	FAIL ABUN
RE-183	-3.373E-02	1.134E-01	9.780E-02	5.784E-02	FAIL ABUN
RE-184	-5.094E-02	2.312E-01	2.089E-01	1.179E-01	FAIL ABUN
OS-185	-1.370E-02	4.280E-02	3.674E-02	2.184E-02	FAIL ABUN
RE-188	1.462E-01	1.705E-01	1.556E-01	8.698E-02	NOT IDENT.
W-188	-8.888E+00	8.714E+00	6.467E+00	4.446E+00	FAIL ABUN
IR-192	1.118E-02	3.488E-02	3.160E-02	1.780E-02	FAIL ABUN
AU-195	2.626E-01	2.443E-01	2.082E-01	1.247E-01	FAIL ABUN
TL-200	-6.397E+01	1.285E+02	0.000E+00	6.554E+01	SHORT HLIF
TL-201	-2.679E+00	4.361E+00	3.748E+00	2.225E+00	NOT IDENT.
TL-202	4.437E-02	7.825E-02	6.941E-02	3.992E-02	NOT IDENT.
HG-203	9.685E-03	4.557E-02	4.091E-02	2.325E-02	NOT IDENT.
BI-207	7.615E-03	5.148E-02	4.522E-02	2.626E-02	FAIL ABUN
TL-207	1.887E-01	7.374E-01	5.871E-01	3.762E-01	FAIL ABUN
PO-209	1.717E+00	6.847E+00	5.925E+00	3.493E+00	NOT IDENT.
BI-210	5.512E+00	6.940E+00	6.153E+00	3.541E+00	NOT IDENT.
PB-210	5.512E+00	6.940E+00	6.153E+00	3.541E+00	NOT IDENT.
PO-210	5.512E+00	6.936E+00	6.153E+00	3.539E+00	NOT IDENT.
PB-211	-3.135E-01	1.116E+00	9.452E-01	5.695E-01	NOT IDENT.
BI-212	1.230E+00	4.963E-01	3.311E-01	2.532E-01	FAIL ABUN
PO-215	1.887E-01	7.374E-01	5.871E-01	3.762E-01	FAIL ABUN
RN-219	8.949E-03	4.790E-01	4.181E-01	2.444E-01	NOT IDENT.
RN-220	3.771E+00	2.809E+01	2.391E+01	1.433E+01	NOT IDENT.
RA-223	1.887E-01	7.374E-01	5.871E-01	3.762E-01	FAIL ABUN
AC-227	-3.529E-01	3.888E-01	3.379E-01	1.984E-01	NOT IDENT.
TH-227	-3.529E-01	3.902E-01	3.379E-01	1.991E-01	FAIL ABUN
TH-229	-1.968E-01	5.324E-01	4.558E-01	2.716E-01	FAIL ABUN
PA-231	-1.338E+00	1.630E+00	1.409E+00	8.316E-01	NOT IDENT.
TH-231	1.887E-01	7.374E-01	5.871E-01	3.762E-01	FAIL ABUN
U-231	-7.780E-01	7.837E-01	6.161E-01	3.998E-01	FAIL ABUN
PA-233	-2.813E-02	6.645E-02	5.823E-02	3.390E-02	FAIL ABUN
PA-234	2.731E-01	3.139E-01	2.798E-01	1.602E-01	FAIL ABUN
PA-234M	9.285E+00	6.963E+00	6.421E+00	3.552E+00	NOT IDENT.
U-235	-1.445E-01	2.182E-01	1.853E-01	1.113E-01	FAIL ABUN
NP-236	-3.830E-02	7.976E-02	6.920E-02	4.070E-02	NOT IDENT.
NP-239	-1.163E-01	1.815E-01	1.608E-01	9.262E-02	FAIL ABUN
CM-243	1.167E-01	9.281E-02	8.822E-02	4.735E-02	FAIL ABUN
CM-247	-6.333E-03	4.336E-02	3.754E-02	2.212E-02	NOT IDENT.
CF-249	8.547E-04	4.679E-02	4.099E-02	2.387E-02	NOT IDENT.
CF-251	1.726E-01	1.325E-01	1.214E-01	6.761E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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```

ENERGY	MDA COUNTS
46.50	412.0583
46.50	412.0583
46.50	412.0583
48.70	542.1343
49.72	495.4004
51.35	524.5267
52.39	555.7493
52.97	598.8813
53.15	599.2380
53.44	610.7656
54.07	594.6403
56.28	610.8829
56.28	610.8884
57.37	0.0000
57.53	658.1213
57.53	658.1252
57.60	658.2664
57.98	584.6814
57.98	584.6814
59.32	587.1150
59.32	587.1150
59.40	587.2593
59.54	587.5116
59.72	587.8351
60.01	588.3552
61.10	357.2889
61.14	357.3321
61.30	357.5037
63.00	389.2610
63.29	389.5934
63.29	389.5934
63.58	522.5087
64.28	401.1779
65.12	391.6756
65.20	391.7663
65.20	391.7663
66.05	382.2150
66.72	384.2570
66.83	384.3795
66.91	383.1497
67.20	376.8762
67.20	376.8762
67.75	409.6616
67.85	426.6757
68.90	407.8006
68.90	407.8006
69.30	402.9498
69.67	392.7501
70.82	388.6613
70.82	388.6613
70.83	388.6724
72.80	421.9657
72.87	422.0427
72.87	422.0427
74.67	424.0588
74.81	424.2127
74.81	424.2127
74.81	424.2127
74.81	424.2127
74.81	424.2127
74.81	424.2127
74.97	424.3908
75.28	424.7348
75.70	425.1991
77.11	426.7509
77.11	426.7509
77.11	426.7509

77.11	426.7509
77.11	426.7509
77.11	426.7509
78.38	433.1125
79.62	426.2987
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79.80	411.5013
80.11	394.0941
80.18	394.1625
80.30	431.1175
80.30	431.1175
80.57	449.1546
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81.07	462.5607
81.07	462.5607
81.07	462.5607
81.07	462.5607
82.60	483.8808
83.37	455.0013
83.78	419.6822
83.78	419.6822
83.78	419.6822
83.78	419.6822
84.21	449.0434
84.40	447.8718
84.90	433.2329
85.43	471.0838
86.29	559.2573
86.50	559.5378
86.54	562.3604
86.59	562.4255
86.72	562.5989
86.79	562.6888
86.94	562.8901
87.30	589.7349
87.30	589.7349
87.30	589.7349
87.30	589.7349
87.30	589.7349
87.30	589.7349
87.57	590.1077
87.88	372.3849
88.03	372.5157
88.36	372.8020
88.47	372.8981
89.95	374.1781
91.11	398.9722
92.29	400.0441
92.38	400.1246
92.38	400.1246
93.35	400.9987
94.00	401.5836
94.67	402.1772
94.67	402.1815
94.90	402.3881
94.90	402.3881
94.90	402.3881
94.90	402.3881
95.87	431.5497
95.87	431.5497
96.73	436.6192
97.43	434.4436
98.44	354.2919
98.44	354.2919
98.88	361.7492
99.55	370.8281
99.55	370.8281
99.86	396.7638
100.00	396.8826
100.10	409.3473
103.18	394.7642
103.76	344.3995
105.00	374.1371
105.31	406.1360
108.00	429.6598
109.28	367.7057
111.00	408.8809
111.00	408.8809

111.76	405.5962
112.95	426.0917
115.19	368.0763
116.30	375.7476
117.00	379.2056
117.00	379.2056
117.66	389.5434
121.11	329.5447
121.62	337.8055
121.78	349.8319
122.06	350.0127
122.32	369.0828
122.32	369.0828
122.32	369.0828
122.32	369.0828
123.07	374.5753
127.23	392.4736
129.76	404.3286
131.20	411.4218
133.02	399.5470
133.54	396.8628
135.34	376.7147
136.00	390.3947
136.25	391.5801
136.48	391.7344
140.51	380.0269
140.51	0.0000
142.18	374.9048
142.65	380.3473
143.76	400.6657
144.24	368.9407
144.24	368.9407
144.24	368.9407
144.24	368.9407
145.22	382.9890
145.44	383.1283
147.16	358.2379
152.43	374.8687
152.70	359.3154
153.22	362.7538
154.21	399.0147
154.21	399.0147
154.21	399.0147
154.21	399.0147
155.03	367.9835
156.02	355.9136
158.56	353.0743
159.00	0.0000
159.00	362.8325
160.31	376.2739
161.27	396.9869
162.32	381.6676
162.64	383.9775
163.35	366.2838
163.89	353.7936
165.85	387.9548
167.43	385.6421
171.28	363.0299
171.86	365.4913
172.10	402.2848
176.55	332.1226
176.60	332.1443
181.06	381.7288
184.41	365.3874
185.71	357.2375
186.00	357.3797
190.27	315.1978
192.34	343.7896
193.63	363.2579
197.04	361.5337
198.01	340.7608
198.60	335.4279
200.40	360.8612
201.83	376.1151
202.84	351.8671
205.31	341.6918
208.36	373.5596
208.81	353.3835

209.75	353.7930
209.75	353.7930
210.97	327.0703
215.65	355.2184
216.55	377.3294
218.09	329.9180
222.10	352.2188
223.80	329.8583
226.40	354.0024
227.00	327.6247
227.08	327.6563
227.20	327.6995
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228.18	292.1364
228.18	292.1364
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236.00	310.2066
236.00	310.2066
238.60	300.0296
238.63	300.0400
238.63	300.0400
238.63	300.0400
239.00	300.1623
240.98	300.8283
241.98	301.1613
241.98	301.1613
241.98	301.1613
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245.39	289.3553
247.94	269.3600
248.90	250.0641
249.79	252.0857
252.40	267.0884
252.85	266.3248
252.85	266.3248
254.15	0.0000
256.20	285.2179
256.20	285.2179
260.50	253.1770
260.90	258.6924
262.80	283.5899
264.65	244.6828
268.24	241.2309
268.79	260.2667
269.46	276.4509
269.46	276.4509
269.46	276.4509
269.46	276.4509
271.23	271.1168
273.65	306.8533
276.40	314.1096
277.35	287.8253
277.60	281.4791
277.60	281.4791
278.00	279.7571
278.60	265.2401
279.20	285.6022
279.53	303.1512
280.46	299.7503
281.68	274.3368
283.67	273.9510
284.30	304.5813
285.00	312.1765
285.90	293.0373
286.10	293.0954
286.10	293.0954
287.40	215.7035
288.45	0.0000
290.67	283.8094
290.80	297.2217
291.72	310.8671
293.26	0.0000
293.70	230.9863
295.21	240.6467
295.21	240.6467
295.21	240.6467
295.96	240.8199

296.50	309.3023
297.23	351.3812
298.57	257.5087
299.80	235.3237
299.80	235.3237
300.09	236.8881
300.09	236.8881
300.09	236.8881
300.10	236.8881
300.12	236.8920
301.29	228.8989
302.84	274.3248
303.76	312.1720
303.91	284.9409
304.40	282.2479
304.40	282.2479
304.84	257.8910
306.84	230.0829
308.46	228.5367
311.98	223.5871
316.51	202.6289
318.01	201.9493
319.02	211.6649
319.41	210.7856
320.08	212.8191
323.87	189.9840
323.87	189.9840
323.87	189.9840
323.87	189.9840
325.23	205.5506
328.77	230.8118
333.44	267.7992
334.20	248.9054
334.20	248.9054
334.30	248.9290
338.28	233.6857
338.28	233.6857
338.28	233.6857
338.28	233.6857
338.32	233.6931
338.32	233.6931
338.32	233.6931
340.50	214.5031
340.57	217.6255
344.27	204.2749
345.85	220.5514
350.59	0.0000
351.07	202.8907
351.92	203.0328
351.92	203.0328
351.92	203.0328
355.39	0.0000
356.01	215.7248
364.48	197.1994
366.43	217.3592
367.43	205.6134
367.94	0.0000
369.80	208.9874
374.96	224.8318
383.85	219.3539
387.95	218.0303
388.63	199.9653
391.69	207.5181
391.69	207.5181
392.90	225.9467
398.62	209.6242
400.65	197.7151
401.10	192.6828
401.81	209.1071
402.60	216.3735
404.84	222.8665
410.95	204.3609
411.60	214.7340
413.65	218.1398
414.70	200.8022
415.30	198.8280
415.76	198.8958
417.63	0.0000

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423.70	181.3793
427.08	206.7522
427.89	211.0288
432.53	199.2041
433.93	231.7626
439.47	205.4118
439.56	207.5214
439.89	200.2300
443.98	223.9269
444.90	212.4951
445.03	212.5136
445.03	212.5136
445.03	212.5136
445.03	212.5136
453.90	227.5616
463.38	235.1896
468.07	191.4719
473.00	224.0381
475.06	183.5505
475.35	187.8788
476.78	205.2486
477.59	206.4316
477.96	192.5009
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484.57	189.0030
487.03	152.5212
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492.35	136.7570
497.08	149.1414
507.63	0.0000
510.53	0.0000
510.84	161.4015
511.00	161.4160
511.85	161.5013
511.85	161.5013
513.99	133.7691
513.99	133.7691
520.41	151.2987
520.65	146.9056
527.90	133.1250
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529.64	139.9274
529.87	0.0000
531.02	130.0397
537.32	121.6005
543.00	111.9324
546.56	0.0000
549.76	119.1141
552.65	112.5610
555.20	121.7439
563.23	105.9941
563.90	107.8496
568.70	132.6761
569.32	133.6315
569.50	133.6458
569.67	127.2954
573.80	132.1461
574.00	132.1603
574.64	127.6475
578.91	130.9981
579.30	0.0000
583.14	108.0985
585.48	119.2439
591.81	102.1682
592.07	108.6286
593.00	125.2621
595.88	121.7681
600.56	122.0742
602.52	0.0000
602.71	113.7508
602.71	113.7508
603.60	118.8775
604.41	105.0298
604.70	122.0392
609.31	112.4272
609.31	112.4272
609.31	112.4272

609.31	112.4272
610.33	112.4892
612.46	111.6855
614.37	90.0586
618.01	97.0772
621.84	97.2715
621.84	97.2715
631.29	111.8501
633.02	99.7192
633.10	99.7244
634.78	107.3426
635.90	107.4038
636.97	101.8090
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646.12	107.9660
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657.75	82.5597
657.90	0.0000
661.65	110.7183
661.65	110.7183
664.57	0.0000
666.33	84.5076
666.33	84.5076
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677.61	74.0730
685.20	79.1752
692.80	91.0923
695.00	91.1887
696.49	78.6329
696.49	78.6329
697.00	82.5367
697.49	91.2966
698.33	102.0212
698.50	99.1138
699.00	99.1387
702.63	88.5984
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706.58	0.0000
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713.82	80.2563
717.42	61.7634
720.50	65.4525
721.93	0.0000
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722.78	78.6250
722.78	78.6250
722.89	68.8003
722.95	68.8020
723.30	63.8987
724.18	62.2850
727.18	67.2957
733.00	74.0570
735.90	77.6871
739.58	62.3940
742.81	79.3477
744.21	73.4417
747.13	63.6016
751.79	88.6306
752.31	82.6738
753.82	70.7695
755.35	62.8370
756.15	66.8511
756.87	66.8724
763.93	101.1233
765.79	82.1662
766.41	70.1624
766.84	78.1942
768.36	76.2412
768.36	76.2412
768.36	76.2412
768.36	76.2412
776.49	76.5121
778.00	79.5844
778.57	84.6419
778.89	76.5919
783.80	67.6657

785.46	66.9552
792.07	65.8792
795.84	59.2177
796.30	65.9982
801.93	77.3508
805.60	70.3359
810.29	83.7517
810.76	84.7893
815.85	58.3540
817.79	71.7209
818.51	66.6171
819.60	65.6219
826.30	67.8611
828.27	0.0000
831.60	89.6487
831.96	89.6614
834.83	61.9087
836.80	0.0000
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848.13	52.9075
856.28	0.0000
856.80	81.5462
860.37	71.9328
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867.82	81.3230
871.10	64.9108
873.19	56.5813
874.81	73.3940
875.33	0.0000
876.40	70.2911
879.36	70.3729
880.27	54.6381
880.51	56.7448
881.50	60.9708
883.24	59.9613
884.67	51.5744
889.25	62.2093
896.60	56.0421
898.02	62.4210
899.00	57.1522
903.28	55.6556
911.07	60.6070
911.07	60.6070
911.07	60.6070
919.63	69.3370
920.93	65.3682
925.00	57.7191
925.24	57.7244
926.50	59.8910
934.06	52.5530
934.06	52.5530
934.06	52.5530
934.06	52.5530
935.52	59.0203
937.48	68.7281
944.10	79.6602
946.00	60.3258
949.00	70.0988
962.29	79.9222
964.01	72.2900
966.15	75.9644
968.20	130.3213
969.11	146.6576
969.11	146.6576
969.11	146.6576
977.42	53.1180
980.50	53.4490
983.50	67.7020
989.30	48.1454
996.32	84.4650
1001.03	49.4440
1001.68	50.5540
1004.76	82.5146
1021.30	0.0000
1024.50	0.0000
1034.80	57.4363
1037.82	42.6571
1038.57	44.5234

1038.76	0.0000
1045.16	54.8492
1046.59	65.1066
1048.07	62.3490
1050.47	71.7113
1050.47	71.7113
1063.62	63.6089
1076.63	67.6406
1077.35	58.2612
1085.78	73.4995
1099.22	72.8737
1112.02	69.4625
1112.84	64.6409
1115.52	89.7049
1120.29	89.8392
1120.29	89.8392
1120.29	89.8392
1120.29	89.8392
1120.51	78.1396
1121.28	68.6279
1124.00	0.0000
1129.67	68.8096
1131.51	0.0000
1147.95	0.0000
1167.94	71.5701
1173.22	71.6875
1175.09	76.5730
1177.93	69.8496
1189.05	74.9541
1204.90	77.2674
1205.75	0.0000
1213.00	76.4734
1221.42	75.6841
1230.97	68.0117
1235.34	100.6677
1236.41	0.0000
1238.11	70.1275
1238.11	70.1275
1238.11	70.1275
1238.11	70.1275
1238.25	70.1304
1246.25	71.2852
1260.41	0.0000
1271.85	58.8464
1274.45	66.8746
1274.54	66.8773
1291.56	51.1536
1298.22	0.0000
1312.09	49.4307
1325.50	33.4136
1325.50	33.4136
1332.49	47.6808
1333.61	36.5332
1360.21	33.7318
1362.66	0.0000
1365.15	28.6585
1368.21	25.6093
1368.53	0.0000
1376.25	25.6643
1377.67	26.7004
1377.67	26.7004
1377.67	26.7004
1377.67	26.7004
1384.27	40.1219
1394.10	18.5662
1395.20	16.5078
1407.95	35.1967
1434.06	18.7603
1436.60	22.9444
1457.56	0.0000
1460.81	28.3337
1489.15	27.4790
1509.49	14.8710
1596.49	21.1504
1620.62	24.3088
1678.03	0.0000
1691.02	14.2503
1691.02	14.2503

1706.46	0.0000
1750.46	0.0000
1764.49	10.6194
1764.49	10.6194
1764.49	10.6194
1764.49	10.6194
1770.23	10.1492
1771.40	10.1517
1791.20	0.0000
1808.65	10.7196
1836.01	17.6415

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232511002

Total Uranium Activity	7.0985E+00	ug/g
Total Uranium Counting Unc.	6.0738E+00	ug/g
Total Uranium Tpu	3.0989E-06	ug/g
Total Uranium Mda	3.7279E+00	ug/g

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*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232511002      *
*   ANALYST       : MXR1                      DETECTOR    : GAM02           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 10:19:39.40    SAMPLE ALQT:  155.080 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.603E+01
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.819E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 3.475E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 1.693E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:51:12.64

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511003.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:50:39.
Sample ID         : G232511003           Sample quantity  : 1.51380E+02 GRAM
Detector name     : GAM08                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.81  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	2	74.84*	441	591	1.19	149.80	143	17	6.12E-02	10.5	2.10E+00
2	2	77.13	721	502	1.05	154.37	143	17	1.00E-01	6.3	
3	3	84.23	119	655	1.40	168.54	164	28	1.65E-02	35.8	2.54E+00
4	3	87.37	284	516	1.13	174.81	164	28	3.95E-02	14.3	
5	3	90.08	167	461	1.18	180.23	164	28	2.32E-02	23.1	
6	3	92.88*	297	533	1.45	185.83	164	28	4.12E-02	16.6	
7	0	129.49	102	526	1.09	258.96	254	10	1.42E-02	43.3	
8	0	185.88*	261	364	1.33	371.61	367	9	3.63E-02	15.1	
9	0	209.08*	128	429	1.18	417.95	412	11	1.78E-02	32.8	
10	2	238.48*	1586	228	1.19	476.68	469	21	2.20E-01	3.0	1.28E+00
11	2	241.39	331	299	1.54	482.49	469	21	4.60E-02	12.1	
12	0	270.23	177	294	1.22	540.12	534	13	2.46E-02	21.3	
13	0	295.02*	465	233	1.29	589.66	585	10	6.46E-02	7.9	
14	0	299.82	92	216	1.13	599.25	596	9	1.28E-02	30.3	
15	0	327.99	107	280	1.47	655.54	651	13	1.48E-02	33.6	
16	0	338.12*	300	184	1.12	675.78	671	9	4.17E-02	10.2	
17	0	351.74*	794	205	1.33	702.99	698	10	1.10E-01	5.0	
18	0	462.54	100	91	1.56	924.43	920	10	1.39E-02	20.4	
19	0	510.15*	138	190	2.10	1019.58	1011	18	1.92E-02	26.9	
20	0	582.78*	453	120	1.32	1164.75	1159	12	6.29E-02	6.9	
21	0	609.02*	569	105	1.63	1217.22	1212	12	7.90E-02	5.6	
22	0	727.02	91	102	1.41	1453.12	1448	11	1.26E-02	23.9	
23	0	769.24	117	80	5.94	1537.54	1529	18	1.62E-02	20.3	
24	0	794.79	76	39	2.04	1588.62	1584	10	1.05E-02	19.4	
25	0	860.47	59	62	1.81	1719.97	1714	11	8.19E-03	29.1	
26	0	910.85*	316	105	1.73	1820.72	1812	19	4.38E-02	9.7	
27	0	968.83*	198	96	1.66	1936.67	1930	14	2.74E-02	13.2	
28	0	1120.25*	109	97	1.81	2239.57	2234	16	1.51E-02	22.8	
29	0	1377.53*	51	19	1.87	2754.39	2747	17	7.07E-03	25.8	
30	0	1460.30*	1536	33	1.90	2920.06	2910	19	2.13E-01	2.7	
31	0	1728.78	35	3	0.93	3457.55	3450	14	4.83E-03	20.4	
32	0	1763.88*	94	10	2.35	3527.83	3520	13	1.31E-02	13.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 12:51:15

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:50:39
Sample ID : G232511003 Sample quantity : 151.38 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA8 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:03.81 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.416E+01	3.442E+00	4.823E-01	4.087E-02	70.826
CD-109	+	88.03	*	3.492E+00	1.078E+00	1.160E+00	1.336E-01	3.011
SN-126		64.28		-1.538E-01	5.990E-01	9.560E-01	1.585E-01	-0.161
	+	86.94		1.431E+00	7.284E-01	4.817E-01	2.025E-01	2.972
	+	87.57	*	3.443E-01	1.063E-01	1.150E-01	1.320E-02	2.995
TL-208		277.35		5.132E-01	3.878E-01	6.528E-01	6.974E-02	0.786
	+	510.84		5.939E-01	3.251E-01	1.982E-01	2.018E-02	2.996
	+	583.14	*	5.548E-01	8.423E-02	5.904E-02	3.852E-03	9.396
	+	860.37		6.899E-01	4.082E-01	4.314E-01	4.512E-02	1.599
BI-211		72.87		6.980E+00	3.451E+00	5.791E+00	6.162E-01	1.205
	+	351.07	*	4.289E+00	5.129E-01	3.528E-01	2.338E-02	12.156
PB-212	+	74.81		2.348E+00	5.937E-01	5.775E-01	8.194E-02	4.066
	+	77.11		2.157E+00	3.574E-01	3.245E-01	3.488E-02	6.648
	+	87.30		1.593E+00	5.168E-01	5.335E-01	8.114E-02	2.985
	+	238.63	*	1.878E+00	1.789E-01	8.691E-02	6.413E-03	21.611
	+	300.09		1.684E+00	1.032E+00	1.251E+00	1.055E-01	1.347
PO-212	+	74.81		2.348E+00	5.937E-01	5.775E-01	8.194E-02	4.066
	+	77.11		2.157E+00	3.574E-01	3.245E-01	3.488E-02	6.648
	+	87.30		1.593E+00	5.168E-01	5.335E-01	8.114E-02	2.985
		115.19		2.862E+00	3.578E+00	5.878E+00	4.051E-01	0.487
	+	238.63	*	1.878E+00	1.789E-01	8.691E-02	6.413E-03	21.611
	+	300.09		1.684E+00	1.032E+00	1.251E+00	1.055E-01	1.347
BI-214	+	609.31	*	1.315E+00	1.781E-01	1.029E-01	7.768E-03	12.777
	+	768.36		3.042E+00	1.269E+00	1.085E+00	1.040E-01	2.805
		934.06		2.885E-01	1.224E+00	2.019E+00	2.473E-01	0.143
	+	1120.29		1.354E+00	6.313E-01	4.987E-01	4.934E-02	2.715
		1238.11		1.860E+00	9.720E-01	1.796E+00	1.638E-01	1.036
	+	1377.67		2.803E+00	1.477E+00	1.335E+00	1.412E-01	2.100
	+	1764.49		1.602E+00	4.332E-01	1.836E-01	1.194E-02	8.728
PB-214	+	74.81		4.046E+00	9.966E-01	9.951E-01	1.293E-01	4.066
	+	77.11		3.698E+00	6.743E-01	5.563E-01	7.329E-02	6.648
	+	87.30		2.728E+00	8.682E-01	9.139E-01	1.262E-01	2.985
	+	241.98		2.355E+00	6.017E-01	5.233E-01	4.251E-02	4.501
	+	295.21		1.489E+00	2.691E-01	2.270E-01	1.976E-02	6.560

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.492E+00	1.946E-01	1.230E-01	1.037E-02	12.132
PO-214	+	74.81		4.046E+00	9.966E-01	9.951E-01	1.293E-01	4.066
	+	77.11		3.698E+00	6.743E-01	5.563E-01	7.329E-02	6.648
	+	87.30		2.728E+00	8.682E-01	9.139E-01	1.262E-01	2.985
	+	241.98		2.355E+00	6.017E-01	5.233E-01	4.251E-02	4.501
	+	295.21		1.489E+00	2.691E-01	2.270E-01	1.976E-02	6.560
	+	351.92	*	1.492E+00	1.946E-01	1.230E-01	1.037E-02	12.132
PO-216	+	74.81		2.348E+00	5.937E-01	5.775E-01	8.194E-02	4.066
	+	77.11		2.157E+00	3.574E-01	3.245E-01	3.488E-02	6.648
	+	87.30		1.593E+00	5.168E-01	5.335E-01	8.114E-02	2.985
	+	238.63	*	1.878E+00	1.789E-01	8.691E-02	6.413E-03	21.611
	+	300.09		1.684E+00	1.032E+00	1.251E+00	1.055E-01	1.347
PO-218	+	74.81		4.046E+00	9.966E-01	9.951E-01	1.293E-01	4.066
	+	77.11		3.698E+00	6.743E-01	5.563E-01	7.329E-02	6.648
	+	87.30		2.728E+00	8.682E-01	9.139E-01	1.262E-01	2.985
	+	241.98		2.355E+00	6.017E-01	5.233E-01	4.251E-02	4.501
	+	295.21		1.489E+00	2.691E-01	2.270E-01	1.976E-02	6.560
	+	351.92	*	1.492E+00	1.946E-01	1.230E-01	1.037E-02	12.132
RA-224	+	240.98	*	4.466E+00	1.113E+00	9.890E-01	5.809E-02	4.516
RA-226	+	609.31	*	1.315E+00	1.781E-01	1.029E-01	7.768E-03	12.777
	+	768.36		3.042E+00	1.269E+00	1.085E+00	1.040E-01	2.805
		934.06		2.885E-01	1.224E+00	2.019E+00	2.473E-01	0.143
	+	1120.29		1.354E+00	6.313E-01	4.987E-01	4.934E-02	2.715
		1238.11		1.860E+00	9.720E-01	1.796E+00	1.638E-01	1.036
	+	1377.67		2.803E+00	1.477E+00	1.335E+00	1.412E-01	2.100
	+	1764.49		1.602E+00	4.332E-01	1.836E-01	1.194E-02	8.728
AC-228	+	338.32		1.787E+00	8.147E-01	3.768E-01	1.537E-01	4.743
	+	911.07	*	1.752E+00	4.095E-01	1.914E-01	2.490E-02	9.155
	+	969.11		1.942E+00	6.912E-01	4.763E-01	1.139E-01	4.077
RA-228	+	338.32		1.787E+00	8.147E-01	3.768E-01	1.537E-01	4.743
	+	911.07	*	1.752E+00	4.095E-01	1.914E-01	2.490E-02	9.155
	+	969.11		1.942E+00	6.912E-01	4.763E-01	1.139E-01	4.077
TH-228	+	84.40		4.616E+00	3.378E+00	3.668E+00	5.488E-01	1.258
	+	238.60	*	1.878E+00	1.789E-01	8.690E-02	6.413E-03	21.613
	+	300.10		1.684E+00	1.425E+00	1.251E+00	7.374E-01	1.347
TH-230	+	609.31	*	1.315E+00	1.781E-01	1.029E-01	7.768E-03	12.777
	+	768.36		3.042E+00	1.269E+00	1.084E+00	1.040E-01	2.805
		934.06		2.884E-01	1.224E+00	2.019E+00	2.473E-01	0.143
	+	1120.29		1.354E+00	6.313E-01	4.987E-01	4.934E-02	2.715
		1238.11		1.860E+00	9.720E-01	1.796E+00	1.638E-01	1.036
	+	1377.67		2.803E+00	1.477E+00	1.335E+00	1.412E-01	2.100
	+	1764.49		1.602E+00	4.332E-01	1.836E-01	1.194E-02	8.728
TH-232	+	338.32		1.787E+00	3.792E-01	3.768E-01	2.278E-02	4.743
	+	911.07	*	1.752E+00	4.095E-01	1.914E-01	2.490E-02	9.155
	+	969.11		1.942E+00	6.912E-01	4.763E-01	1.139E-01	4.077
U-234	+	609.31	*	1.315E+00	1.781E-01	1.029E-01	7.768E-03	12.777
	+	768.36		3.042E+00	1.269E+00	1.084E+00	1.040E-01	2.805
		934.06		2.884E-01	1.224E+00	2.019E+00	2.473E-01	0.143
	+	1120.29		1.354E+00	6.313E-01	4.987E-01	4.934E-02	2.715

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.860E+00	9.720E-01	1.796E+00	1.638E-01	1.036
	+	1377.67		2.803E+00	1.477E+00	1.335E+00	1.412E-01	2.100
	+	1764.49		1.602E+00	4.332E-01	1.836E-01	1.194E-02	8.728
NP-237	+	86.50	*	1.011E+00	3.755E-01	3.422E-01	8.064E-02	2.955
		95.87		-5.317E-01	1.035E+00	1.429E+00	3.578E-01	-0.372
AM-243	+	74.67	*	3.807E-01	8.943E-02	9.397E-02	1.003E-02	4.051
	+	86.72		3.792E+01	1.171E+01	1.280E+01	1.459E+00	2.963
		117.66		-3.227E+00	3.847E+00	5.909E+00	3.904E-01	-0.546
		142.18		-7.701E-01	1.743E+01	2.751E+01	1.566E+00	-0.028
ANH-511	+	511.00	*	1.283E-01	6.941E-02	4.283E-02	2.503E-03	2.995

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.478E-01	3.036E-01	5.034E-01	3.439E-02	0.294
NA-22		1274.54	*	1.748E-02	4.516E-02	7.774E-02	5.961E-03	0.225
NA-24		1368.53	*	1.225E-02	4.516E-02	Half-Life too short		
AL-26		1129.67		1.068E+00	1.869E+00	3.073E+00	2.196E-01	0.348
		1808.65	*	-1.695E-02	2.911E-02	4.139E-02	2.553E-03	-0.410
TI-44		67.85		1.976E-02	5.168E-02	8.492E-02	9.084E-03	0.233
	+	78.38	*	3.980E-01	6.594E-02	8.316E-02	8.986E-03	4.786
SC-46		889.25	*	-2.110E-04	4.134E-02	6.744E-02	7.226E-03	-0.003
	+	1120.51		2.277E-01	1.051E-01	1.308E-01	9.610E-03	1.740
V-48		944.10		-8.266E-01	8.237E-01	1.201E+00	1.251E-01	-0.688
		983.50	*	5.528E-02	6.822E-02	1.180E-01	1.164E-02	0.468
		1312.09		-1.701E-02	7.235E-02	1.173E-01	9.675E-03	-0.145
CR-51		320.08	*	1.805E-01	3.383E-01	5.705E-01	3.823E-02	0.316
MN-52		744.21		8.302E-02	1.761E-01	3.012E-01	2.093E-02	0.276
		848.13		-1.335E+00	4.969E+00	7.937E+00	7.592E-01	-0.168
		935.52		9.437E-02	2.123E-01	3.557E-01	3.744E-02	0.265
		1246.25		1.448E+00	5.467E+00	9.320E+00	6.729E-01	0.155
		1333.61		7.317E-01	4.039E+00	6.829E+00	5.859E-01	0.107
		1434.06	*	-7.906E-02	1.808E-01	2.812E-01	2.337E-02	-0.281
MN-54		834.83	*	4.384E-02	3.987E-02	7.015E-02	6.459E-03	0.625
CO-56		846.75	*	1.599E-02	3.628E-02	6.167E-02	5.876E-03	0.259
		977.42		-1.324E+00	2.970E+00	4.623E+00	4.599E-01	-0.286
		1037.82		-1.677E-01	2.990E-01	4.541E-01	4.275E-02	-0.369
		1175.09		1.767E+00	2.194E+00	3.904E+00	2.406E-01	0.453
		1238.25		1.801E-01	9.573E-02	1.776E-01	1.314E-02	1.014
		1360.21		-6.341E-01	9.466E-01	1.435E+00	1.223E-01	-0.442
		1771.40		-2.523E-01	2.138E-01	2.561E-01	1.653E-02	-0.985
CO-57		122.06	*	1.663E-02	2.526E-02	4.124E-02	2.529E-03	0.403
		136.48		-1.240E-01	2.083E-01	3.213E-01	2.158E-02	-0.386
CO-58		810.76	*	6.906E-03	3.877E-02	6.457E-02	5.551E-03	0.107
FE-59		142.65		2.446E-02	2.631E+00	4.161E+00	2.366E-01	0.006
		192.34		-5.446E-01	8.829E-01	1.444E+00	1.688E-01	-0.377
		1099.22	*	5.796E-02	9.529E-02	1.613E-01	1.381E-02	0.359
		1291.56		6.250E-02	1.244E-01	2.162E-01	1.984E-02	0.289

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60		1173.22		2.964E-02	4.509E-02	7.939E-02	4.871E-03	0.373
		1332.49	*	-2.153E-02	4.322E-02	6.860E-02	5.887E-03	-0.314
ZN-65		1115.52	*	-4.135E-02	1.137E-01	1.500E-01	1.119E-02	-0.276
GE-68		1077.35	*	-8.437E-01	1.401E+00	2.130E+00	1.755E-01	-0.396
AS-73		53.44	*	1.217E-01	1.071E+00	1.760E+00	1.984E-01	0.069
AS-74		595.88	*	-3.667E-02	7.880E-02	1.276E-01	7.085E-03	-0.287
		634.78		1.183E-01	3.228E-01	5.519E-01	2.948E-02	0.214
SE-75		66.05		-5.879E+00	5.526E+00	8.605E+00	1.056E+00	-0.683
		96.73		-1.122E+00	8.675E-01	1.136E+00	1.618E-01	-0.988
		121.11		-3.284E-02	1.350E-01	2.126E-01	2.021E-02	-0.154
		136.00		-1.620E-02	3.914E-02	6.091E-02	3.588E-03	-0.266
		198.60		3.534E-01	1.723E+00	2.911E+00	2.024E-01	0.121
		264.65	*	-1.739E-02	4.641E-02	6.571E-02	3.968E-03	-0.265
		279.53		-5.325E-02	1.082E-01	1.744E-01	1.130E-02	-0.305
		303.91		9.241E-02	2.325E+00	3.362E+00	3.263E-01	0.027
		400.65		2.956E-02	2.442E-01	3.987E-01	3.646E-02	0.074
BR-77	+	87.88		4.025E+02	1.243E+02	1.818E+02	2.093E+01	2.214
		200.40		7.623E+01	8.358E+01	1.447E+02	8.106E+00	0.527
	+	239.00		1.604E+02	1.348E+01	2.077E+01	1.217E+00	7.725
		249.79		-1.806E-01	3.285E+01	5.451E+01	3.226E+00	-0.003
		281.68		-3.393E+01	4.723E+01	7.515E+01	4.533E+00	-0.452
		297.23		1.091E+02	4.207E+01	5.580E+01	3.381E+00	1.955
		303.76		7.091E-01	1.065E+02	1.537E+02	9.322E+00	0.005
		439.47		1.575E+01	7.501E+01	1.226E+02	7.237E+00	0.128
		484.57		-3.372E+01	1.142E+02	1.788E+02	1.052E+01	-0.189
		520.65	*	2.797E+00	5.218E+00	8.671E+00	5.048E-01	0.323
		574.64		-8.601E+01	1.055E+02	1.670E+02	9.431E+00	-0.515
		578.91		2.464E+01	4.778E+01	7.317E+01	4.120E+00	0.337
		585.48		3.921E+02	1.143E+02	2.044E+02	1.145E+01	1.918
		755.35		2.000E+01	8.635E+01	1.438E+02	1.037E+01	0.139
		817.79		-3.007E+01	6.403E+01	1.003E+02	8.784E+00	-0.300
SR-82		698.33		-2.709E+00	3.249E+01	5.356E+01	3.174E+00	-0.051
		776.49	*	-1.654E-02	3.902E-01	5.539E-01	4.274E-02	-0.030
		1395.20		-1.543E+00	9.226E+00	1.491E+01	1.257E+00	-0.104
RB-83		520.41	*	3.307E-02	6.367E-02	1.057E-01	6.152E-03	0.313
		529.64		-5.584E-02	9.916E-02	1.609E-01	9.332E-03	-0.347
		552.65		-1.571E-01	1.926E-01	3.063E-01	1.755E-02	-0.513
RB-84		881.50	*	-2.769E-02	6.713E-02	1.054E-01	1.106E-02	-0.263
KR-85		513.99	*	4.868E+00	7.566E+00	1.119E+01	6.530E-01	0.435
SR-85		513.99	*	2.440E-02	3.792E-02	5.607E-02	3.273E-03	0.435
RB-86		1076.63	*	-3.304E-02	8.115E-01	1.302E+00	1.074E-01	-0.025
Y-88		898.02		-2.812E-02	4.517E-02	6.968E-02	7.666E-03	-0.404
		1836.01	*	4.004E-02	3.092E-02	6.188E-02	3.692E-03	0.647
ZR-88		392.90	*	7.339E-03	2.972E-02	4.892E-02	2.861E-03	0.150
Y-91		1204.90	*	1.386E+00	1.922E+01	3.232E+01	2.132E+00	0.043
NB-94		702.63	*	6.685E-03	3.375E-02	5.669E-02	3.412E-03	0.118
		871.10		1.366E-02	3.411E-02	5.765E-02	5.880E-03	0.237
NB-95		765.79	*	6.056E-02	4.750E-02	7.610E-02	5.676E-03	0.796
NB-95M		235.69	*	1.798E-01	1.345E-01	2.098E-01	1.587E-02	0.857

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95		724.18		1.340E-01	1.032E-01	1.662E-01	1.239E-02	0.806
		756.15	*	-2.089E-02	6.839E-02	1.091E-01	9.004E-03	-0.191
NB-97		657.90	*	-8.838E-03	6.839E-02	Half-Life too short		
		1024.50		-1.949E-01	6.839E-02	Half-Life too short		
ZR-97		254.15		-2.471E-01	6.839E-02	Half-Life too short		
		355.39		1.910E-01	6.839E-02	Half-Life too short		
		507.63	*	6.136E-01	6.839E-02	Half-Life too short		
		602.52		-8.757E-01	6.839E-02	Half-Life too short		
		1021.30		3.310E-01	6.839E-02	Half-Life too short		
		1147.95		-3.389E-01	6.839E-02	Half-Life too short		
		1362.66		-1.805E-01	6.839E-02	Half-Life too short		
		1750.46		2.368E-01	6.839E-02	Half-Life too short		
MO-99		140.51		-4.353E+00	1.548E+01	2.387E+01	6.428E+00	-0.182
		181.06		-6.136E+00	1.065E+01	1.527E+01	2.599E+00	-0.402
		366.43		-9.457E+00	4.574E+01	7.349E+01	4.384E+00	-0.129
		739.58	*	-8.617E-01	6.932E+00	1.134E+01	1.617E+00	-0.076
		778.00		-1.091E+01	2.082E+01	3.068E+01	2.379E+00	-0.355
TC-99M		140.51	*	-2.753E+07	2.082E+01	Half-Life too short		
RH-101		127.23		2.872E-02	3.672E-02	5.388E-02	3.224E-03	0.533
		198.01	*	8.233E-03	3.188E-02	5.399E-02	3.014E-03	0.153
		325.23		2.907E-02	2.418E-01	3.504E-01	2.124E-02	0.083
RH-102		418.52		2.521E-02	3.084E-01	5.008E-01	2.949E-02	0.050
		475.06	*	-6.400E-03	2.900E-02	4.579E-02	2.700E-03	-0.140
		631.29		3.173E-02	5.636E-02	9.743E-02	5.226E-03	0.326
		697.49		2.643E-02	7.904E-02	1.339E-01	7.914E-03	0.197
		766.84		1.510E-01	1.263E-01	2.004E-01	1.500E-02	0.753
		1046.59		2.912E-02	1.172E-01	1.934E-01	1.705E-02	0.151
		1112.84		-1.995E-01	2.735E-01	3.815E-01	2.865E-02	-0.523
RU-103		497.08	*	1.433E-02	3.709E-02	6.100E-02	7.733E-03	0.235
	+	610.33		1.367E+01	2.596E+00	2.776E+00	4.247E-01	4.924
RH-106		511.85		3.474E-01	2.059E-01	3.890E-01	2.273E-02	0.893
		621.84	*	-8.040E-02	3.078E-01	5.042E-01	5.826E-02	-0.159
		1050.47		-1.730E+00	2.536E+00	3.827E+00	3.347E-01	-0.452
RU-106		511.85		3.474E-01	2.059E-01	3.890E-01	2.273E-02	0.893
		621.84	*	-8.040E-02	3.077E-01	5.042E-01	2.732E-02	-0.159
		1050.47		-1.730E+00	2.536E+00	3.827E+00	3.347E-01	-0.452
AG-108M		433.93	*	-8.515E-03	3.280E-02	5.197E-02	3.321E-03	-0.164
		614.37		2.836E-02	3.774E-02	5.910E-02	3.534E-03	0.480
		722.95		-1.057E-02	4.568E-02	6.389E-02	4.414E-03	-0.166
AG-110M		657.75	*	-2.019E-02	3.532E-02	5.642E-02	3.165E-03	-0.358
		677.61		9.443E-02	3.018E-01	5.124E-01	3.005E-02	0.184
		706.67		-9.534E-02	2.054E-01	3.286E-01	2.115E-02	-0.290
		763.93		1.255E-02	1.749E-01	2.519E-01	1.938E-02	0.050
		884.67		-3.393E-02	4.729E-02	7.162E-02	7.743E-03	-0.474
		937.48		-1.495E-02	1.209E-01	1.946E-01	2.093E-02	-0.077
		1384.27		4.007E-02	1.634E-01	2.436E-01	2.122E-02	0.164
IN-111		171.28		5.588E-01	5.455E-01	9.540E-01	5.122E-02	0.586
		245.39	*	4.257E-01	6.518E-01	9.911E-01	5.844E-02	0.430
IN-113M		391.69	*	2.541E-02	4.322E-02	7.256E-02	4.522E-03	0.350

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113		391.69	*	2.541E-02	4.322E-02	7.256E-02	4.522E-03	0.350
IN-114M		190.27	*	9.713E-02	1.855E-01	2.823E-01	1.559E-02	0.344
CD-115		260.90		-2.464E+01	6.282E+01	1.021E+02	6.090E+00	-0.241
		492.35		-1.662E+00	1.821E+01	2.894E+01	1.701E+00	-0.057
		527.90	*	-2.078E-01	5.136E+00	8.635E+00	5.012E-01	-0.024
SN-117M		156.02		7.536E-01	1.891E+00	3.246E+00	1.778E-01	0.232
		158.56	*	-1.909E-02	4.529E-02	7.546E-02	4.105E-03	-0.253
SB-122		563.90	*	-3.792E-01	1.058E+00	1.732E+00	9.853E-02	-0.219
		692.80		-1.232E+01	2.581E+01	4.137E+01	2.403E+00	-0.298
I-123		159.00	*	-2.806E-01	2.581E+01	Half-Life too short		
		528.96		-1.851E+01	2.581E+01	Half-Life too short		
TE-123M		159.00	*	-2.127E-02	2.609E-02	4.279E-02	2.360E-03	-0.497
I-124		602.71	*	-5.023E-01	4.883E-01	6.745E-01	3.723E-02	-0.745
		722.78		-9.965E-01	3.318E+00	4.602E+00	2.974E-01	-0.217
		1325.50		2.642E+00	2.564E+01	4.301E+01	3.642E+00	0.061
	+	1376.25		6.133E+01	3.209E+01	4.568E+01	3.876E+00	1.342
		1509.49		1.374E+01	1.132E+01	2.122E+01	1.702E+00	0.648
		1691.02		3.673E-01	2.232E+00	3.761E+00	2.641E-01	0.098
SB-124		602.71		-4.077E-02	3.964E-02	5.475E-02	3.024E-03	-0.745
		645.85		-3.422E-01	4.790E-01	7.554E-01	4.595E-02	-0.453
		709.31		6.926E-01	2.586E+00	4.368E+00	2.692E-01	0.159
		713.82		6.668E-01	1.556E+00	2.656E+00	2.783E-01	0.251
		722.78		-1.173E-01	3.904E-01	5.416E-01	3.633E-02	-0.217
	+	968.20		1.949E+01	5.504E+00	7.600E+00	7.663E-01	2.565
		1045.16		6.224E-01	2.397E+00	3.964E+00	3.505E-01	0.157
		1325.50		3.321E-01	3.222E+00	5.406E+00	4.578E-01	0.061
		1368.21		6.339E-01	1.666E+00	2.773E+00	3.716E-01	0.229
		1436.60		-1.178E+00	3.430E+00	5.387E+00	4.474E-01	-0.219
		1691.02	*	1.019E-02	6.195E-02	1.044E-01	7.763E-03	0.098
SB-125		427.89	*	2.471E-03	9.347E-02	1.511E-01	9.277E-03	0.016
	+	463.38		8.358E-01	3.462E-01	5.176E-01	3.546E-02	1.615
		600.56		1.356E-01	1.647E-01	2.902E-01	1.879E-02	0.467
		635.90		-3.360E-02	2.657E-01	4.391E-01	2.810E-02	-0.077
TE-125M		109.28	*	2.849E+00	9.489E+00	1.518E+01	1.443E+00	0.188
I-126		388.63		-1.366E-01	1.863E-01	2.888E-01	1.693E-02	-0.473
		666.33	*	2.912E-02	1.637E-01	2.754E-01	1.449E-02	0.106
		753.82		6.613E-01	1.228E+00	2.111E+00	1.515E-01	0.313
SB-126		223.80		-1.267E+00	3.534E+00	5.809E+00	3.352E-01	-0.218
		278.60		2.288E+00	2.180E+00	3.762E+00	2.266E-01	0.608
	+	296.50		1.314E+01	2.227E+00	3.132E+00	1.898E-01	4.195
		414.70		-4.676E-02	7.027E-02	1.089E-01	6.411E-03	-0.429
		415.30		8.070E-01	5.818E+00	9.484E+00	5.581E-01	0.085
		555.20		1.726E+00	3.414E+00	5.921E+00	3.388E-01	0.291
		573.80		-6.509E-01	8.749E-01	1.392E+00	7.869E-02	-0.467
		593.00		-1.612E-01	7.561E-01	1.247E+00	6.941E-02	-0.129
		656.30		-3.387E+00	3.028E+00	4.634E+00	2.412E-01	-0.731
		666.33		1.211E-02	6.807E-02	1.145E-01	6.024E-03	0.106
		675.00		6.240E-01	1.764E+00	3.003E+00	1.633E-01	0.208
		695.00		-6.450E-03	7.234E-02	1.192E-01	6.980E-03	-0.054

---- Non-Identified Nuclides ----

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		697.00		5.167E-02	2.458E-01	4.132E-01	2.437E-02	0.125
		720.50	*	-6.580E-02	1.366E-01	1.955E-01	1.253E-02	-0.337
		856.80		1.668E-01	4.453E-01	6.598E-01	6.467E-02	0.253
		989.30		-7.233E-01	1.116E+00	1.687E+00	1.649E-01	-0.429
		1034.80		4.336E+00	7.844E+00	1.332E+01	1.202E+00	0.325
		1213.00		1.464E+00	4.624E+00	7.897E+00	5.305E-01	0.185
SB-127		61.10		-3.825E+01	4.647E+01	7.327E+01	9.320E+00	-0.522
		252.40		-1.241E+00	2.748E+00	4.378E+00	1.813E+00	-0.283
		290.80		5.707E+00	1.602E+01	2.372E+01	2.034E+00	0.241
		411.60		-1.083E+01	8.720E+00	1.282E+01	1.786E+00	-0.845
		444.90		-1.627E+00	6.405E+00	1.013E+01	1.034E+00	-0.161
		473.00		-3.444E-01	1.145E+00	1.797E+00	1.907E-01	-0.192
		543.00		2.003E+00	1.014E+01	1.728E+01	2.136E+00	0.116
		603.60		-5.144E+00	8.409E+00	1.147E+01	1.143E+00	-0.448
		685.20	*	-6.668E-02	8.820E-01	1.456E+00	1.251E-01	-0.046
		698.50		-1.618E+00	1.035E+01	1.698E+01	2.387E+00	-0.095
		722.20		-6.121E+00	2.150E+01	2.985E+01	2.645E+00	-0.205
		783.80		2.237E+00	2.478E+00	4.328E+00	4.913E-01	0.517
XE-127		57.60		-2.704E-01	7.236E+00	1.180E+01	1.345E+00	-0.023
		145.22		-9.519E-02	6.826E-01	1.072E+00	6.052E-02	-0.089
		172.10		8.296E-02	1.091E-01	1.890E-01	1.016E-02	0.439
		202.84	*	-7.111E-02	4.735E-02	6.805E-02	3.825E-03	-1.045
		374.96		5.494E-02	1.955E-01	3.230E-01	1.915E-02	0.170
I-131		80.18		-8.652E-02	5.596E+00	6.339E+00	6.931E-01	-0.014
		284.30		2.395E-01	1.204E+00	2.006E+00	1.333E-01	0.119
		364.48	*	-5.195E-02	9.298E-02	1.461E-01	9.660E-03	-0.356
		636.97		-1.525E-01	1.248E+00	2.063E+00	1.250E-01	-0.074
		722.89		-1.630E+00	6.374E+00	8.889E+00	5.793E-01	-0.183
TE-132		49.72		4.731E+00	1.712E+01	2.833E+01	3.340E+00	0.167
		111.76		-2.702E+01	1.922E+01	2.871E+01	2.653E+00	-0.941
		116.30		1.042E+01	1.721E+01	2.808E+01	2.475E+00	0.371
		228.16	*	-4.613E-02	4.179E-01	6.932E-01	9.674E-02	-0.067
BA-133		53.15		-1.852E+00	4.758E+00	7.667E+00	8.620E-01	-0.242
		79.62		-3.480E-01	1.967E+00	2.204E+00	3.660E-01	-0.158
		81.00		-4.089E-02	1.425E-01	1.581E-01	2.729E-02	-0.259
		276.40		4.868E-01	3.968E-01	6.404E-01	8.366E-02	0.760
		302.84		5.879E-02	1.641E-01	2.423E-01	2.858E-02	0.243
		356.01	*	2.443E-02	5.055E-02	7.448E-02	8.686E-03	0.328
		383.85		5.349E-02	2.885E-01	4.738E-01	5.173E-02	0.113
I-133	+	510.53		2.310E-01	2.885E-01	Half-Life too short		
		529.87	*	-1.653E-04	2.885E-01	Half-Life too short		
		706.58		-1.989E-02	2.885E-01	Half-Life too short		
		856.28		-1.248E-02	2.885E-01	Half-Life too short		
		875.33		-1.702E-02	2.885E-01	Half-Life too short		
		1236.41		2.453E-01	2.885E-01	Half-Life too short		
		1298.22		-1.908E-02	2.885E-01	Half-Life too short		
CS-134		475.35		-4.738E-01	1.900E+00	2.994E+00	1.765E-01	-0.158
		563.23		-1.445E-01	3.265E-01	5.313E-01	3.090E-02	-0.272
		569.32		6.766E-02	1.876E-01	3.112E-01	1.819E-02	0.217

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		604.70		-1.406E-02	3.485E-02	4.864E-02	2.696E-03	-0.289
	+	795.84	*	1.346E-01	5.343E-02	9.028E-02	7.459E-03	1.491
		801.93		-1.891E-01	3.976E-01	6.013E-01	5.051E-02	-0.314
		1038.57		-2.197E+00	3.709E+00	5.604E+00	5.021E-01	-0.392
		1167.94		-5.582E-01	2.416E+00	3.969E+00	2.486E-01	-0.141
		1365.15		5.491E-01	1.166E+00	2.040E+00	1.817E-01	0.269
CS-135		268.24	*	2.452E-01	1.684E-01	2.659E-01	2.076E-02	0.922
I-135		288.45		-1.747E+08	1.684E-01	Half-Life too short		
		417.63		1.664E+08	1.684E-01	Half-Life too short		
		546.56		1.377E+06	1.684E-01	Half-Life too short		
		836.80		1.275E+08	1.684E-01	Half-Life too short		
		1038.76		-3.968E+07	1.684E-01	Half-Life too short		
		1124.00		9.289E+07	1.684E-01	Half-Life too short		
		1131.51		1.021E+06	1.684E-01	Half-Life too short		
		1260.41	*	-2.548E+06	1.684E-01	Half-Life too short		
		1457.56		3.985E+09	1.684E-01	Half-Life too short		
		1678.03		7.382E+05	1.684E-01	Half-Life too short		
		1706.46		7.732E+07	1.684E-01	Half-Life too short		
		1791.20		-1.471E+06	1.684E-01	Half-Life too short		
CS-136		66.91		-3.530E-01	7.782E-01	1.243E+00	2.077E-01	-0.284
	+	86.29		4.009E+00	1.295E+00	1.844E+00	2.735E-01	2.174
		153.22		1.961E-01	5.607E-01	9.612E-01	6.726E-02	0.204
		163.89		7.725E-01	8.880E-01	1.545E+00	1.066E-01	0.500
		176.55		2.802E-02	3.248E-01	5.410E-01	3.338E-02	0.052
		273.65		-3.401E-01	4.511E-01	6.218E-01	4.227E-02	-0.547
		340.57		1.337E-01	1.285E-01	1.967E-01	1.257E-02	0.680
		818.51		-3.605E-02	6.026E-02	9.312E-02	8.178E-03	-0.387
		1048.07	*	2.456E-02	1.003E-01	1.654E-01	1.513E-02	0.148
		1235.34		3.792E-01	6.005E-01	1.040E+00	1.119E-01	0.365
BA-137M		661.65	*	3.123E-02	3.811E-02	6.657E-02	3.440E-03	0.469
CS-137		661.65	*	3.301E-02	4.028E-02	7.037E-02	3.656E-03	0.469
CE-139		165.85	*	-5.968E-03	2.714E-02	4.548E-02	2.426E-03	-0.131
BA-140		162.64		3.416E-01	6.235E-01	1.074E+00	6.608E-02	0.318
		304.84		1.339E+00	1.246E+00	1.858E+00	5.082E-01	0.721
		423.70		-3.416E-01	1.729E+00	2.751E+00	8.750E-01	-0.124
		537.32	*	-1.904E-01	2.259E-01	3.443E-01	1.120E-01	-0.553
LA-140	+	328.77		6.983E-01	4.722E-01	5.125E-01	3.449E-02	1.363
		432.53		1.222E-01	1.793E+00	2.905E+00	1.887E-01	0.042
		487.03		-5.980E-02	1.136E-01	1.742E-01	1.157E-02	-0.343
		751.79		1.441E-02	1.471E+00	2.429E+00	1.996E-01	0.006
		815.85		-1.032E-03	2.604E-01	4.272E-01	4.140E-02	-0.002
		867.82		-2.769E-01	1.210E+00	1.936E+00	2.033E-01	-0.143
		919.63		-3.076E+00	2.905E+00	3.704E+00	4.596E-01	-0.830
		925.24		7.279E-01	1.039E+00	1.789E+00	1.985E-01	0.407
		1596.49	*	-1.133E-01	7.196E-02	8.409E-02	6.387E-03	-1.348
CE-141		145.44	*	-1.571E-02	6.141E-02	9.597E-02	5.642E-03	-0.164
CE-143		57.37		-3.049E-05	6.141E-02	Half-Life too short		
		231.56		-2.026E-04	6.141E-02	Half-Life too short		
		293.26	*	3.449E-04	6.141E-02	Half-Life too short		

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	350.59		1.141E-02	6.141E-02	Half-Life too short		
		490.36		8.863E-04	6.141E-02	Half-Life too short		
		664.57		-1.690E-04	6.141E-02	Half-Life too short		
		721.93		-1.286E-04	6.141E-02	Half-Life too short		
CE-144		80.11		-6.619E-02	3.089E+00	3.498E+00	3.812E-01	-0.019
		133.54	*	2.092E-01	2.267E-01	3.327E-01	4.732E-02	0.629
PM-144		476.78		-7.195E-03	6.644E-02	1.057E-01	7.422E-03	-0.068
		618.01		-1.763E-02	2.968E-02	4.741E-02	2.754E-03	-0.372
		696.49	*	7.553E-03	3.517E-02	5.916E-02	3.485E-03	0.128
		778.57		-4.812E-01	2.296E+00	3.611E+00	2.806E-01	-0.133
PR-144		696.49	*	5.113E-01	2.380E+00	4.004E+00	2.357E-01	0.128
		1489.15		3.209E-01	1.074E+01	1.777E+01	1.441E+00	0.018
PM-146		453.90	*	4.996E-02	4.238E-02	7.322E-02	6.365E-03	0.682
		633.02		6.269E-01	1.438E+00	2.437E+00	8.956E-01	0.257
		735.90		2.319E-01	1.607E-01	2.705E-01	7.602E-02	0.857
		747.13		-3.238E-02	8.977E-02	1.438E-01	1.886E-02	-0.225
ND-147	+	91.11		5.881E-01	2.804E-01	4.322E-01	4.891E-02	1.361
		319.41		-2.194E+00	2.902E+00	4.562E+00	2.769E-01	-0.481
		439.89		7.628E-01	4.904E+00	7.986E+00	4.717E-01	0.096
		531.02	*	3.233E-01	4.550E-01	7.985E-01	1.080E-01	0.405
PM-149		285.90	*	2.641E+01	4.500E+01	7.611E+01	1.086E+01	0.347
EU-152		121.78		2.657E-02	7.415E-02	1.197E-01	9.431E-03	0.222
		244.69		1.284E-02	3.534E-01	5.175E-01	3.050E-02	0.025
		344.27	*	-6.466E-02	1.005E-01	1.582E-01	1.067E-02	-0.409
		443.98		-7.132E-01	9.419E-01	1.435E+00	8.473E-02	-0.497
		778.89		-7.583E-02	2.621E-01	4.215E-01	3.277E-02	-0.180
		867.32		-4.675E-01	8.517E-01	1.280E+00	1.292E-01	-0.365
		964.01		6.625E-01	3.580E-01	5.879E-01	5.963E-02	1.127
		1085.78		-8.525E-02	4.360E-01	6.888E-01	5.558E-02	-0.124
		1112.02		-3.466E-02	3.570E-01	5.523E-01	4.158E-02	-0.063
		1407.95		3.549E-01	1.896E-01	3.716E-01	3.120E-02	0.955
GD-153		69.67		-2.961E-01	2.070E+00	2.980E+00	3.174E-01	-0.099
	+	83.37		2.635E+01	1.911E+01	2.503E+01	2.783E+00	1.053
		97.43	*	-2.328E-02	8.620E-02	1.214E-01	1.145E-02	-0.192
		103.18		-3.327E-02	1.017E-01	1.607E-01	1.362E-02	-0.207
EU-154		123.07		1.421E-02	5.296E-02	8.513E-02	8.161E-03	0.167
		247.94		-9.125E-02	3.700E-01	5.615E-01	5.395E-02	-0.163
		591.81		-1.157E-01	5.805E-01	9.585E-01	9.241E-02	-0.121
		723.30		2.123E-02	1.862E-01	2.706E-01	2.068E-02	0.078
		756.87		-2.500E-01	7.652E-01	1.219E+00	1.344E-01	-0.205
		873.19		-7.239E-02	3.046E-01	4.872E-01	6.551E-02	-0.149
		996.32		-2.286E-01	3.592E-01	5.406E-01	9.889E-02	-0.423
		1004.76		-1.167E-01	2.149E-01	3.287E-01	4.052E-02	-0.355
		1274.45	*	7.637E-02	1.249E-01	2.188E-01	2.318E-02	0.349
EU-155		48.70		-2.404E+00	3.715E+00	5.770E+00	5.628E-01	-0.417
		60.01		-8.783E+00	6.053E+00	9.247E+00	1.045E+00	-0.950
	+	86.54		4.144E-01	1.280E-01	1.919E-01	2.198E-02	2.159
		105.31	*	3.360E-02	1.094E-01	1.771E-01	1.465E-02	0.190
TB-160	+	86.79		1.085E+00	3.350E-01	4.981E-01	5.684E-02	2.178

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		197.04		1.895E-01	5.273E-01	8.962E-01	4.996E-02	0.211
		215.65		9.714E-02	6.832E-01	1.148E+00	6.562E-02	0.085
	+	298.57		2.400E-01	1.464E-01	1.926E-01	1.167E-02	1.247
		879.36	*	1.199E-01	1.378E-01	2.408E-01	2.512E-02	0.498
		962.29		1.077E+00	6.237E-01	1.021E+00	1.038E-01	1.054
		966.15		1.142E+00	3.263E-01	5.500E-01	5.562E-02	2.077
		1177.93		-2.216E-01	3.701E-01	5.898E-01	3.659E-02	-0.376
		1271.85		1.654E-01	7.167E-01	1.218E+00	9.277E-02	0.136
HO-166M		80.57		-1.035E-02	3.967E-01	4.489E-01	4.904E-02	-0.023
	+	184.41		1.625E-01	4.974E-02	6.694E-02	3.664E-03	2.428
		280.46		-7.269E-02	8.502E-02	1.344E-01	8.106E-03	-0.541
		410.95		5.598E-02	2.474E-01	4.057E-01	2.385E-02	0.138
		711.68	*	-7.914E-03	6.080E-02	9.973E-02	6.199E-03	-0.079
		752.31		6.930E-02	2.583E-01	4.354E-01	3.108E-02	0.159
		810.29		2.363E-02	5.949E-02	1.008E-01	8.629E-03	0.235
TM-171		51.35		-3.541E+01	4.151E+01	6.550E+01	7.155E+00	-0.541
		52.39		-2.016E+01	2.116E+01	3.322E+01	3.700E+00	-0.607
		59.40		-2.713E+01	3.207E+01	5.054E+01	5.746E+00	-0.537
		66.72	*	-2.570E+01	3.198E+01	5.046E+01	5.421E+00	-0.509
LU-176	+	88.36		8.167E-01	2.522E-01	3.697E-01	4.225E-02	2.209
		201.83		-1.233E-02	2.723E-02	4.482E-02	2.515E-03	-0.275
		306.84	*	-1.612E-02	2.408E-02	3.812E-02	2.313E-03	-0.423
		401.10		-1.353E+00	6.536E+00	1.045E+01	6.128E-01	-0.129
LU-177		112.95		-5.479E-01	1.292E+00	2.025E+00	1.450E-01	-0.271
	+	208.36	*	2.155E+00	1.418E+00	1.616E+00	9.147E-02	1.334
LU-177M		52.97		-8.612E-01	2.125E+00	3.422E+00	3.840E-01	-0.252
		54.07		6.723E-01	1.108E+00	1.847E+00	2.092E-01	0.364
		61.30		-4.141E-02	1.719E+00	2.800E+00	3.123E-01	-0.015
		121.62		1.088E-01	3.758E-01	6.050E-01	3.730E-02	0.180
		147.16		3.610E-01	6.173E-01	1.067E+00	5.992E-02	0.338
		171.86		4.733E-01	4.478E-01	7.835E-01	4.210E-02	0.604
		218.09		1.053E-02	7.945E-01	1.328E+00	7.611E-02	0.008
	+	268.79		3.183E+00	1.368E+00	1.432E+00	8.584E-02	2.223
		319.02		-2.307E-01	2.552E-01	3.973E-01	2.411E-02	-0.581
		367.43		-5.320E-01	8.723E-01	1.365E+00	8.140E-02	-0.390
		413.65	*	-1.212E-01	1.810E-01	2.804E-01	1.650E-02	-0.432
HF-181		56.28		7.086E-02	1.157E+00	1.895E+00	2.161E-01	0.037
		57.53		-2.854E-02	6.130E-01	9.994E-01	1.139E-01	-0.029
		65.20		-5.861E-01	1.047E+00	1.670E+00	1.808E-01	-0.351
		133.02		2.601E-02	7.084E-02	1.018E-01	5.964E-03	0.256
		136.25		-2.193E-01	4.443E-01	6.889E-01	3.994E-02	-0.318
		345.85		1.109E-02	2.083E-01	3.158E-01	1.904E-02	0.035
		482.03	*	2.127E-02	3.956E-02	6.584E-02	3.877E-03	0.323
W-181		56.28		2.867E-02	4.636E-01	7.591E-01	8.654E-02	0.038
		57.53		-1.151E-02	2.457E-01	4.006E-01	4.566E-02	-0.029
		65.20	*	-2.331E-01	4.165E-01	6.642E-01	7.190E-02	-0.351
TA-182		67.75		1.957E-02	1.231E-01	2.011E-01	2.152E-02	0.097
		100.10		1.479E-01	1.739E-01	2.846E-01	2.551E-02	0.520
		152.43		1.498E-01	3.174E-01	5.463E-01	3.022E-02	0.274

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		1.258E-01	3.309E-01	5.606E-01	3.228E-02	0.224
		1001.68		1.199E+00	1.924E+00	3.290E+00	3.151E-01	0.364
	+	1121.28		6.319E-01	2.916E-01	3.586E-01	2.628E-02	1.762
		1189.05		-7.943E-02	3.264E-01	5.361E-01	3.412E-02	-0.148
		1221.42	*	-1.693E-02	2.163E-01	3.594E-01	2.460E-02	-0.047
		1230.97		-1.987E-01	5.338E-01	8.681E-01	6.066E-02	-0.229
RE-183		57.98		7.173E-02	2.362E-01	3.895E-01	4.438E-02	0.184
		59.32		-1.028E-01	1.297E-01	2.049E-01	2.330E-02	-0.502
		67.20		-5.188E-02	2.178E-01	3.511E-01	3.765E-02	-0.148
		162.32	*	5.096E-02	9.982E-02	1.718E-01	9.249E-03	0.297
	+	208.81		2.371E+00	1.561E+00	1.788E+00	1.013E-01	1.326
		291.72		6.200E-01	1.019E+00	1.532E+00	9.271E-02	0.405
RE-184		57.98		2.677E-01	8.814E-01	1.453E+00	1.656E-01	0.184
		59.32		-3.833E-01	4.836E-01	7.641E-01	8.689E-02	-0.502
		67.20		-1.935E-01	8.124E-01	1.310E+00	1.404E-01	-0.148
		161.27		2.031E-04	3.255E-01	5.505E-01	2.972E-02	0.000
		216.55		1.014E-01	2.471E-01	4.196E-01	2.400E-02	0.242
		252.85	*	-1.517E-01	2.136E-01	3.417E-01	2.027E-02	-0.444
		318.01		-3.433E-01	4.457E-01	7.001E-01	4.248E-02	-0.490
		792.07		1.163E+00	1.046E+00	1.672E+00	1.354E-01	0.696
		903.28		5.804E-01	1.096E+00	1.647E+00	1.797E-01	0.352
		920.93		1.633E-01	4.417E-01	7.429E-01	7.953E-02	0.220
OS-185		59.72		-5.692E-01	3.563E-01	5.394E-01	6.116E-02	-1.055
		61.14		-6.509E-02	1.884E-01	3.032E-01	3.387E-02	-0.215
		69.30		6.977E-02	3.607E-01	5.266E-01	5.613E-02	0.132
		592.07		3.288E-01	2.287E+00	3.868E+00	2.155E-01	0.085
		646.12	*	-2.707E-02	4.128E-02	6.545E-02	3.450E-03	-0.414
		717.42		2.298E-01	8.537E-01	1.441E+00	9.141E-02	0.159
		874.81		-6.933E-01	6.118E-01	8.925E-01	9.196E-02	-0.777
		880.27		6.285E-01	7.620E-01	1.329E+00	1.390E-01	0.473
RE-188		155.03	*	1.348E-01	1.590E-01	2.768E-01	1.520E-02	0.487
		477.96		-7.928E-01	3.071E+00	4.836E+00	2.849E-01	-0.164
		633.10		1.193E+00	2.807E+00	4.812E+00	2.576E-01	0.248
W-188		63.58		7.121E+01	6.064E+01	1.004E+02	1.098E+01	0.709
		227.08		6.099E+00	1.211E+01	2.059E+01	1.193E+00	0.296
		290.67	*	2.493E+00	7.999E+00	1.181E+01	7.147E-01	0.211
IR-192	+	295.96		1.113E+00	1.890E-01	2.828E-01	1.738E-02	3.935
		308.46		-8.248E-02	9.101E-02	1.419E-01	8.700E-03	-0.581
		316.51	*	-2.284E-03	3.374E-02	5.517E-02	3.364E-03	-0.041
		468.07		6.038E-03	7.193E-02	1.016E-01	6.881E-03	0.059
		604.41		-2.188E-01	4.685E-01	6.490E-01	7.272E-02	-0.337
		612.46		3.643E-01	7.276E-01	1.107E+00	8.108E-02	0.329
AU-195		65.12		-7.761E-02	1.936E-01	3.106E-01	3.364E-02	-0.250
		66.83		-5.022E-02	1.038E-01	1.659E-01	1.781E-02	-0.303
	+	75.70		1.222E+00	2.870E-01	4.694E-01	5.022E-02	2.603
		98.88	*	2.559E-01	2.241E-01	3.697E-01	3.391E-02	0.692
	+	129.76		5.088E+00	4.417E+00	4.986E+00	2.955E-01	1.021
TL-200		367.94	*	-7.219E-05	4.417E+00	Half-Life too short		
		579.30		6.906E-04	4.417E+00	Half-Life too short		

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		828.27		3.900E-05	4.417E+00	Half-Life too short		
		1205.75		1.054E-04	4.417E+00	Half-Life too short		
TL-201		68.90		-1.626E-01	3.625E+00	5.243E+00	5.593E-01	-0.031
		70.82		1.452E-01	2.038E+00	2.958E+00	3.147E-01	0.049
		80.30		-2.349E-02	4.487E+00	5.086E+00	5.549E-01	-0.005
		135.34		-5.394E+00	1.556E+01	2.429E+01	1.413E+00	-0.222
		167.43	*	-2.254E+00	3.888E+00	6.419E+00	3.428E-01	-0.351
TL-202		68.90		-2.118E-02	4.721E-01	6.828E-01	7.284E-02	-0.031
		70.82		1.886E-02	2.647E-01	3.842E-01	4.088E-02	0.049
		80.30		-3.052E-03	5.830E-01	6.608E-01	7.209E-02	-0.005
		439.56	*	1.098E-02	6.028E-02	9.833E-02	5.805E-03	0.112
HG-203		70.83		9.471E-02	1.256E+00	1.823E+00	2.729E-01	0.052
		72.87		1.344E+00	6.781E-01	1.115E+00	1.629E-01	1.205
		82.60		1.110E+00	1.329E+00	1.803E+00	2.775E-01	0.615
		279.20	*	1.452E-02	3.903E-02	6.553E-02	4.176E-03	0.222
BI-207		72.80		3.619E-01	1.993E-01	3.342E-01	3.556E-02	1.083
	+	74.97		6.832E-01	1.605E-01	2.322E-01	2.480E-02	2.942
	+	84.90		3.429E-01	2.486E-01	3.310E-01	3.721E-02	1.036
		569.67		7.226E-03	2.959E-02	4.872E-02	2.761E-03	0.148
		1063.62	*	9.436E-03	6.060E-02	9.893E-02	8.410E-03	0.095
		1770.23		-2.754E+00	7.549E-01	4.696E-01	3.035E-02	-5.864
TL-207		81.07		-1.009E-01	3.141E-01	3.479E-01	3.812E-02	-0.290
	+	83.78		2.261E-01	1.640E-01	2.130E-01	2.375E-02	1.061
		94.90		4.840E-01	2.460E-01	3.784E-01	3.751E-02	1.279
		122.32		1.107E+00	1.755E+00	2.861E+00	1.994E-01	0.387
		144.24		1.929E-01	6.806E-01	1.088E+00	7.748E-02	0.177
		154.21		2.050E-01	3.773E-01	6.506E-01	4.405E-02	0.315
	+	269.46		7.522E-01	3.235E-01	3.540E-01	2.213E-02	2.125
		323.87	*	-1.393E-01	7.169E-01	1.014E+00	1.684E-01	-0.137
	+	338.28		7.463E+00	1.714E+00	2.509E+00	2.677E-01	2.974
		445.03		-5.781E-01	2.202E+00	3.480E+00	3.594E-01	-0.166
PO-209		260.50		-9.553E-01	9.069E+00	1.495E+01	8.917E-01	-0.064
		262.80		9.320E+00	2.472E+01	4.169E+01	2.490E+00	0.224
		896.60	*	2.784E+00	8.099E+00	1.357E+01	1.483E+00	0.205
BI-210		46.50	*	2.152E-01	5.763E+00	9.229E+00	7.794E-01	0.023
PB-210		46.50	*	2.152E-01	5.763E+00	9.229E+00	7.794E-01	0.023
PO-210		46.50	*	2.152E-01	5.763E+00	9.229E+00	6.889E-01	0.023
PB-211		404.84	*	-3.818E-01	9.876E-01	1.515E+00	9.445E-01	-0.252
		427.08		6.768E-02	2.145E+00	3.468E+00	2.144E+00	0.020
		831.96		-1.297E+00	1.510E+00	1.914E+00	1.201E+00	-0.678
BI-212	+	727.18	*	9.618E-01	4.669E-01	6.693E-01	5.556E-02	1.437
		785.46		4.467E-02	1.750E+00	2.885E+00	2.290E-01	0.015
		1620.62		4.127E-01	1.280E+00	2.185E+00	1.630E-01	0.189
PO-215		81.07		-1.009E-01	3.141E-01	3.479E-01	3.812E-02	-0.290
	+	83.78		2.261E-01	1.640E-01	2.130E-01	2.375E-02	1.061
		94.90		4.840E-01	2.460E-01	3.784E-01	3.751E-02	1.279
		122.32		1.107E+00	1.755E+00	2.861E+00	1.994E-01	0.387
		144.24		1.929E-01	6.806E-01	1.088E+00	7.748E-02	0.177
		154.21		2.050E-01	3.773E-01	6.506E-01	4.405E-02	0.315

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		7.522E-01	3.235E-01	3.540E-01	2.213E-02	2.125
		323.87	*	-1.393E-01	7.169E-01	1.014E+00	1.684E-01	-0.137
	+	338.28		7.463E+00	1.714E+00	2.509E+00	2.677E-01	2.974
		445.03		-5.781E-01	2.202E+00	3.480E+00	3.594E-01	-0.166
RN-219	+	271.23		9.651E-01	4.183E-01	4.618E-01	3.810E-02	2.090
		401.81	*	-3.005E-01	4.104E-01	6.308E-01	8.600E-02	-0.476
RN-220		549.76	*	-3.544E+00	2.518E+01	4.195E+01	2.408E+00	-0.084
RA-223		81.07		-1.009E-01	3.141E-01	3.479E-01	3.812E-02	-0.290
	+	83.78		2.261E-01	1.640E-01	2.130E-01	2.375E-02	1.061
		94.90		4.840E-01	2.460E-01	3.784E-01	3.751E-02	1.279
		122.32		1.107E+00	1.755E+00	2.861E+00	1.994E-01	0.387
		144.24		1.929E-01	6.806E-01	1.088E+00	7.748E-02	0.177
		154.21		2.050E-01	3.773E-01	6.506E-01	4.405E-02	0.315
	+	269.46		7.522E-01	3.235E-01	3.540E-01	2.213E-02	2.125
		323.87	*	-1.393E-01	7.169E-01	1.014E+00	1.684E-01	-0.137
	+	338.28		7.463E+00	1.714E+00	2.509E+00	2.677E-01	2.974
		445.03		-5.781E-01	2.202E+00	3.480E+00	3.594E-01	-0.166
AC-227		79.80		-9.602E-01	2.491E+00	2.742E+00	6.172E-01	-0.350
		236.00		8.251E-01	2.828E-01	4.522E-01	4.739E-02	1.824
		256.20	*	2.843E-01	3.587E-01	6.132E-01	8.599E-02	0.464
		286.10		9.996E-01	1.485E+00	2.523E+00	2.948E-01	0.396
	+	299.80		3.121E+00	1.962E+00	2.654E+00	4.347E-01	1.176
		304.40		7.596E-01	2.094E+00	3.091E+00	5.375E-01	0.246
		334.20		1.575E+00	3.353E+00	3.672E+00	6.762E-01	0.429
TH-227		79.80		-9.602E-01	2.492E+00	2.742E+00	6.244E-01	-0.350
	+	94.00		8.933E+00	3.587E+00	3.613E+00	8.095E-01	2.472
		236.00		8.251E-01	2.795E-01	4.522E-01	4.109E-02	1.824
		256.20	*	2.843E-01	3.598E-01	6.132E-01	1.039E-01	0.464
		286.10		9.996E-01	1.787E+00	2.523E+00	2.527E+00	0.396
	+	299.80		3.121E+00	1.962E+00	2.654E+00	4.347E-01	1.176
		304.40		7.596E-01	2.094E+00	3.091E+00	5.375E-01	0.246
		334.20		1.575E+00	3.353E+00	3.672E+00	6.762E-01	0.429
TH-229	+	85.43		3.385E-01	2.454E-01	3.355E-01	3.787E-02	1.009
	+	88.47		4.701E-01	1.452E-01	2.119E-01	2.415E-02	2.219
		100.00		1.318E-01	1.838E-01	2.995E-01	2.690E-02	0.440
		193.63	*	-3.322E-01	4.871E-01	7.959E-01	4.416E-02	-0.417
		210.97		1.319E+00	8.101E-01	1.291E+00	7.333E-02	1.022
PA-231		283.67	*	-4.911E-02	1.487E+00	2.450E+00	3.400E-01	-0.020
	+	301.29		1.249E+00	7.690E-01	1.077E+00	1.142E-01	1.159
TH-231		81.07		-1.009E-01	3.141E-01	3.479E-01	3.812E-02	-0.290
	+	83.78		2.261E-01	1.640E-01	2.130E-01	2.375E-02	1.061
		94.90		4.840E-01	2.460E-01	3.784E-01	3.751E-02	1.279
		122.32		1.107E+00	1.755E+00	2.861E+00	1.994E-01	0.387
		144.24		1.929E-01	6.806E-01	1.088E+00	7.748E-02	0.177
		154.21		2.050E-01	3.773E-01	6.506E-01	4.405E-02	0.315
	+	269.46		7.522E-01	3.235E-01	3.540E-01	2.213E-02	2.125
		323.87	*	-1.393E-01	7.169E-01	1.014E+00	1.684E-01	-0.137
	+	338.28		7.463E+00	1.714E+00	2.509E+00	2.677E-01	2.974
		445.03		-5.781E-01	2.202E+00	3.480E+00	3.594E-01	-0.166

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231	+	84.21		6.811E+00	4.939E+00	6.450E+00	7.215E-01	1.056
	+	92.29		6.171E+00	2.149E+00	2.694E+00	2.819E-01	2.291
		95.87	*	-4.214E-01	8.147E-01	1.132E+00	1.101E-01	-0.372
		108.00		3.954E-01	1.533E+00	2.451E+00	1.910E-01	0.161
PA-233	+	75.28		1.994E+01	5.325E+00	7.102E+00	1.179E+00	2.808
	+	86.59		6.741E+00	2.695E+00	3.126E+00	8.702E-01	2.156
	+	300.12		8.702E-01	5.410E-01	7.431E-01	1.007E-01	1.171
		311.98	*	4.263E-03	6.602E-02	1.061E-01	6.806E-03	0.040
		340.50		9.080E-01	7.349E-01	1.097E+00	2.525E-01	0.828
		398.62		-5.239E-01	1.990E+00	3.163E+00	8.182E-01	-0.166
		415.76		1.467E+00	1.755E+00	2.935E+00	6.049E-01	0.500
PA-234		63.00		2.600E+00	1.869E+00	3.057E+00	5.176E-01	0.851
		94.67		4.793E-01	1.877E-01	2.841E-01	3.799E-02	1.687
		98.44		1.129E-01	1.136E-01	1.506E-01	8.417E-02	0.750
		99.86		4.151E-01	4.628E-01	7.584E-01	6.830E-02	0.547
		111.00		-8.351E-02	1.865E-01	2.922E-01	3.288E-02	-0.286
		131.20		7.046E-02	1.206E-01	1.751E-01	1.033E-02	0.402
		152.70		9.031E-02	3.126E-01	5.345E-01	8.397E-02	0.169
	+	186.00		5.850E+00	2.507E+00	2.557E+00	7.797E-01	2.288
		226.40		1.143E-01	3.875E-01	6.536E-01	7.552E-02	0.175
		227.20		2.083E-01	4.178E-01	7.105E-01	4.116E-02	0.293
		248.90		4.351E-01	7.689E-01	1.301E+00	2.799E-01	0.334
	+	293.70		7.149E+00	1.618E+00	1.791E+00	2.897E-01	3.992
		369.80		3.846E-01	8.367E-01	1.393E+00	2.906E-01	0.276
		568.70		9.299E-01	9.447E-01	1.629E+00	9.237E-02	0.571
		569.50		5.472E-02	2.619E-01	4.302E-01	2.439E-02	0.127
		574.00		-8.339E-01	1.414E+00	2.276E+00	1.286E-01	-0.366
		699.00		-4.943E-01	7.534E-01	1.185E+00	2.136E-01	-0.417
		706.10		-4.333E-01	1.057E+00	1.671E+00	7.382E-01	-0.259
		733.00		-3.121E-01	4.555E-01	5.977E-01	1.286E-01	-0.522
		742.81		6.952E-01	1.416E+00	2.297E+00	1.539E+00	0.303
		796.30		1.787E+00	1.120E+00	1.706E+00	4.594E-01	1.047
		805.60		3.529E-01	9.978E-01	1.676E+00	5.129E-01	0.211
		819.60		-1.058E+00	1.240E+00	1.763E+00	6.713E-01	-0.600
		826.30		2.415E-01	8.082E-01	1.347E+00	6.037E-01	0.179
		831.60		-6.781E-01	6.775E-01	9.677E-01	2.902E-01	-0.701
		876.40		2.213E-01	8.768E-01	1.414E+00	1.456E+00	0.156
		880.51		1.043E-01	2.835E-01	4.775E-01	4.997E-02	0.218
		883.24		-2.572E-01	3.360E-01	4.308E-01	2.908E-01	-0.597
		899.00		-4.419E-01	9.528E-01	1.462E+00	6.467E-01	-0.302
		925.00		1.031E+00	1.193E+00	2.080E+00	2.216E-01	0.496
		926.50		-1.684E-03	1.731E-01	2.815E-01	7.329E-02	-0.006
		946.00	*	-2.980E-01	3.204E-01	4.671E-01	9.173E-02	-0.638
		949.00		6.466E-01	4.761E-01	8.525E-01	8.821E-02	0.759
		980.50		-2.175E-01	8.029E-01	1.270E+00	1.258E-01	-0.171
		1394.10		2.838E-01	1.019E+00	1.724E+00	1.121E+00	0.165
PA-234M		766.41		2.602E+01	2.831E+01	3.231E+01	2.474E+01	0.805
		1001.03	*	3.075E+00	6.387E+00	1.078E+01	1.288E+00	0.285
TH-234		63.29	*	1.877E+00	1.594E+00	2.595E+00	4.987E-01	0.723

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.312E+00	8.848E-01	1.006E+00	1.913E-01	2.298
U-235	+	89.95		2.686E+00	1.504E+00	1.844E+00	5.828E-01	1.457
	+	93.35		2.779E+00	1.219E+00	1.189E+00	3.396E-01	2.337
		105.00		-3.493E-02	1.071E+00	1.713E+00	5.091E-01	-0.020
		143.76	*	7.291E-02	2.088E-01	3.342E-01	5.434E-02	0.218
		163.35		2.492E-01	4.424E-01	7.591E-01	1.355E-01	0.328
	+	185.71		2.167E-01	6.632E-02	9.473E-02	5.196E-03	2.287
		205.31		5.106E-02	5.367E-01	7.940E-01	1.424E-01	0.064
NP-236		94.67		3.659E-01	1.388E-01	2.158E-01	2.149E-02	1.696
		98.44		8.530E-02	7.181E-02	1.138E-01	1.053E-02	0.749
		111.00		-6.317E-02	1.409E-01	2.210E-01	1.636E-02	-0.286
		160.31	*	-8.515E-02	7.418E-02	1.200E-01	6.494E-03	-0.710
U-238		63.29	*	1.877E+00	1.594E+00	2.595E+00	4.987E-01	0.723
	+	92.38		2.312E+00	8.049E-01	1.006E+00	1.051E-01	2.298
NP-239		99.55		1.102E-01	1.557E-01	2.537E-01	2.298E-02	0.434
		117.00	*	-3.515E-02	1.911E-01	3.024E-01	2.021E-02	-0.116
	+	209.75		1.911E+00	1.258E+00	1.451E+00	8.230E-02	1.317
		228.18		-2.717E-02	2.165E-01	3.589E-01	2.081E-02	-0.076
		277.60		2.649E-01	1.791E-01	3.140E-01	1.891E-02	0.844
		334.30		8.063E-01	1.890E+00	2.066E+00	1.250E-01	0.390
AM-241		59.54	*	-1.747E-01	1.859E-01	2.915E-01	3.452E-02	-0.599
CM-243		99.55		1.133E-01	1.602E-01	2.611E-01	2.365E-02	0.434
		103.76	*	-4.563E-03	9.480E-02	1.515E-01	1.271E-02	-0.030
		117.00		-3.616E-02	1.966E-01	3.110E-01	2.079E-02	-0.116
	+	209.75		1.884E+00	1.240E+00	1.430E+00	8.112E-02	1.317
		228.18		-2.745E-02	2.187E-01	3.626E-01	2.103E-02	-0.076
		277.60		2.671E-01	1.805E-01	3.165E-01	1.906E-02	0.844
CM-247		278.00		7.582E-01	7.526E-01	1.296E+00	7.807E-02	0.585
		287.40		2.823E-02	1.195E+00	1.972E+00	1.192E-01	0.014
		402.60	*	-5.795E-03	3.664E-02	5.876E-02	3.447E-03	-0.099
CF-249		252.85		-5.741E-01	8.086E-01	1.294E+00	7.675E-02	-0.444
		333.44		-8.516E-02	2.735E-01	2.707E-01	1.638E-02	-0.315
		387.95	*	-9.674E-03	4.060E-02	6.496E-02	3.811E-03	-0.149
CF-251		176.60	*	1.229E-02	1.256E-01	2.093E-01	1.133E-02	0.059
		227.00		1.884E-01	3.713E-01	6.316E-01	3.658E-02	0.298
		285.00		2.201E-01	1.691E+00	2.807E+00	1.695E-01	0.078

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511003      *
* Acquisition date :  7-JUL-2009 10:50:39 Detector SN#     :                *
* Detector ID        : GAM08               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:03.81      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232511003           Analyst initials: MXR1         *
* Batch Number       : 881220               Sample Quantity : 1.5138E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.416E+01	3.373E+00	4.858E-01	0.000E+00
CD-109	3.492E+00	1.057E+00	1.252E+00	0.000E+00
SN-126	3.443E-01	1.042E-01	1.241E-01	0.000E+00
TL-208	5.548E-01	8.254E-02	6.090E-02	0.000E+00
BI-211	4.289E+00	5.026E-01	3.686E-01	0.000E+00
PB-212	1.878E+00	1.753E-01	9.165E-02	0.000E+00
PO-212	1.878E+00	1.753E-01	9.165E-02	0.000E+00
BI-214	1.315E+00	1.746E-01	1.060E-01	0.000E+00
PB-214	1.492E+00	1.908E-01	1.285E-01	0.000E+00
PO-214	1.492E+00	1.908E-01	1.285E-01	0.000E+00
PO-216	1.878E+00	1.753E-01	9.165E-02	0.000E+00
PO-218	1.492E+00	1.908E-01	1.285E-01	0.000E+00
RA-224	4.466E+00	1.091E+00	1.043E+00	0.000E+00
RA-226	1.315E+00	1.746E-01	1.060E-01	0.000E+00
AC-228	1.752E+00	4.013E-01	1.952E-01	0.000E+00
RA-228	1.752E+00	4.013E-01	1.952E-01	0.000E+00
TH-228	1.878E+00	1.753E-01	9.164E-02	0.000E+00
TH-230	1.315E+00	1.746E-01	1.060E-01	0.000E+00
TH-232	1.752E+00	4.013E-01	1.952E-01	0.000E+00
U-234	1.315E+00	1.746E-01	1.060E-01	0.000E+00
NP-237	1.011E+00	3.680E-01	3.696E-01	0.000E+00
AM-243	3.807E-01	8.764E-02	1.018E-01	0.000E+00
ANH-511	1.283E-01	6.802E-02	4.433E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.478E-01	2.975E-01	5.219E-01	0.000E+00	NOT IDENT.
NA-22	1.748E-02	4.426E-02	7.859E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.487E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.695E-02	2.852E-02	4.145E-02	0.000E+00	NOT IDENT.

TI-44	0.000E+00	6.462E-02	9.002E-02	0.000E+00	FAIL ABUN
SC-46	-2.110E-04	4.051E-02	6.881E-02	0.000E+00	FAIL ABUN
V-48	5.528E-02	6.686E-02	1.201E-01	0.000E+00	NOT IDENT.
CR-51	1.805E-01	3.315E-01	5.973E-01	0.000E+00	NOT IDENT.
MN-52	-7.906E-02	1.772E-01	2.834E-01	0.000E+00	NOT IDENT.
MN-54	4.384E-02	3.907E-02	7.170E-02	0.000E+00	NOT IDENT.
CO-56	1.599E-02	3.556E-02	6.301E-02	0.000E+00	NOT IDENT.
CO-57	1.663E-02	2.475E-02	4.419E-02	0.000E+00	NOT IDENT.
CO-58	6.906E-03	3.799E-02	6.605E-02	0.000E+00	NOT IDENT.
FE-59	5.796E-02	9.338E-02	1.637E-01	0.000E+00	NOT IDENT.
CO-60	-2.153E-02	4.236E-02	6.927E-02	0.000E+00	NOT IDENT.
ZN-65	-4.135E-02	1.114E-01	1.521E-01	0.000E+00	NOT IDENT.
GE-68	-8.437E-01	1.373E+00	2.163E+00	0.000E+00	NOT IDENT.
AS-73	1.217E-01	1.050E+00	1.922E+00	0.000E+00	NOT IDENT.
AS-74	-3.667E-02	7.722E-02	1.315E-01	0.000E+00	NOT IDENT.
SE-75	-1.739E-02	4.548E-02	6.912E-02	0.000E+00	NOT IDENT.
BR-77	2.797E+00	5.114E+00	8.969E+00	0.000E+00	FAIL ABUN
SR-82	-1.654E-02	3.824E-01	5.672E-01	0.000E+00	NOT IDENT.
RB-83	3.307E-02	6.239E-02	1.093E-01	0.000E+00	NOT IDENT.
RB-84	-2.769E-02	6.579E-02	1.076E-01	0.000E+00	NOT IDENT.
KR-85	4.868E+00	7.414E+00	1.158E+01	0.000E+00	NOT IDENT.
SR-85	2.440E-02	3.716E-02	5.802E-02	0.000E+00	NOT IDENT.
RB-86	-3.304E-02	7.953E-01	1.322E+00	0.000E+00	NOT IDENT.
Y-88	4.004E-02	3.031E-02	6.196E-02	0.000E+00	NOT IDENT.
ZR-88	7.339E-03	2.912E-02	5.096E-02	0.000E+00	NOT IDENT.
Y-91	1.386E+00	1.884E+01	3.272E+01	0.000E+00	NOT IDENT.
NB-94	6.685E-03	3.307E-02	5.820E-02	0.000E+00	NOT IDENT.
NB-95	6.056E-02	4.655E-02	7.796E-02	0.000E+00	NOT IDENT.
NB-95M	1.798E-01	1.318E-01	2.213E-01	0.000E+00	NOT IDENT.
ZR-95	-2.089E-02	6.702E-02	1.118E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.165E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.260E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-8.617E-01	6.794E+00	1.163E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	9.587E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	8.233E-03	3.125E-02	5.718E-02	0.000E+00	NOT IDENT.
RH-102	-6.400E-03	2.842E-02	4.748E-02	0.000E+00	NOT IDENT.
RU-103	1.433E-02	3.635E-02	6.318E-02	0.000E+00	FAIL ABUN
RH-106	-8.040E-02	3.016E-01	5.193E-01	0.000E+00	NOT IDENT.
RU-106	-8.040E-02	3.015E-01	5.193E-01	0.000E+00	NOT IDENT.
AG-108M	-8.515E-03	3.214E-02	5.401E-02	0.000E+00	NOT IDENT.
AG-110M	-2.019E-02	3.461E-02	5.801E-02	0.000E+00	NOT IDENT.
IN-111	4.257E-01	6.388E-01	1.044E+00	0.000E+00	NOT IDENT.
IN-113M	2.541E-02	4.236E-02	7.559E-02	0.000E+00	NOT IDENT.
SN-113	2.541E-02	4.236E-02	7.559E-02	0.000E+00	NOT IDENT.
IN-114M	9.713E-02	1.818E-01	2.993E-01	0.000E+00	NOT IDENT.
CD-115	-2.078E-01	5.034E+00	8.929E+00	0.000E+00	NOT IDENT.
SN-117M	-1.909E-02	4.439E-02	8.036E-02	0.000E+00	NOT IDENT.
SB-122	-3.792E-01	1.037E+00	1.788E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.373E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.127E-02	2.556E-02	4.556E-02	0.000E+00	NOT IDENT.
I-124	-5.023E-01	4.785E-01	6.951E-01	0.000E+00	FAIL ABUN
SB-124	1.019E-02	6.071E-02	1.048E-01	0.000E+00	FAIL ABUN
SB-125	2.471E-03	9.160E-02	1.571E-01	0.000E+00	FAIL ABUN
TE-125M	2.849E+00	9.299E+00	1.631E+01	0.000E+00	NOT IDENT.
I-126	2.912E-02	1.604E-01	2.831E-01	0.000E+00	NOT IDENT.
SB-126	-6.580E-02	1.339E-01	2.005E-01	0.000E+00	FAIL ABUN
SB-127	-6.668E-02	8.643E-01	1.495E+00	0.000E+00	NOT IDENT.
XE-127	-7.111E-02	4.640E-02	7.204E-02	0.000E+00	NOT IDENT.
I-131	-5.195E-02	9.112E-02	1.525E-01	0.000E+00	NOT IDENT.
TE-132	-4.613E-02	4.095E-01	7.318E-01	0.000E+00	NOT IDENT.
BA-133	2.443E-02	4.954E-02	7.777E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	9.784E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.236E-02	9.239E-02	0.000E+00	FAIL ABUN
CS-135	2.452E-01	1.651E-01	2.796E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.508E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.456E-02	9.827E-02	1.681E-01	0.000E+00	FAIL ABUN
BA-137M	3.123E-02	3.734E-02	6.845E-02	0.000E+00	NOT IDENT.
CS-137	3.301E-02	3.948E-02	7.236E-02	0.000E+00	NOT IDENT.
CE-139	-5.968E-03	2.660E-02	4.838E-02	0.000E+00	NOT IDENT.
BA-140	-1.904E-01	2.214E-01	3.559E-01	0.000E+00	NOT IDENT.
LA-140	-1.133E-01	7.052E-02	8.451E-02	0.000E+00	FAIL ABUN
CE-141	-1.571E-02	6.018E-02	1.024E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.338E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	2.092E-01	2.221E-01	3.557E-01	0.000E+00	NOT IDENT.
PM-144	7.553E-03	3.447E-02	6.075E-02	0.000E+00	NOT IDENT.
PR-144	5.113E-01	2.333E+00	4.112E+00	0.000E+00	NOT IDENT.
PM-146	4.996E-02	4.153E-02	7.600E-02	0.000E+00	NOT IDENT.
ND-147	3.233E-01	4.459E-01	8.255E-01	0.000E+00	FAIL ABUN

PM-149	2.641E+01	4.410E+01	7.991E+01	0.000E+00	NOT IDENT.
EU-152	-6.466E-02	9.844E-02	1.654E-01	0.000E+00	NOT IDENT.
GD-153	-2.328E-02	8.448E-02	1.308E-01	0.000E+00	FAIL ABUN
EU-154	7.637E-02	1.224E-01	2.212E-01	0.000E+00	NOT IDENT.
EU-155	3.360E-02	1.072E-01	1.904E-01	0.000E+00	FAIL ABUN
TB-160	1.199E-01	1.350E-01	2.458E-01	0.000E+00	FAIL ABUN
HO-166M	-7.914E-03	5.959E-02	1.023E-01	0.000E+00	FAIL ABUN
TM-171	-2.570E+01	3.135E+01	5.482E+01	0.000E+00	NOT IDENT.
LU-176	-1.612E-02	2.360E-02	3.995E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.390E+00	1.709E+00	0.000E+00	FAIL ABUN
LU-177M	-1.212E-01	1.773E-01	2.917E-01	0.000E+00	FAIL ABUN
HF-181	2.127E-02	3.877E-02	6.824E-02	0.000E+00	NOT IDENT.
W-181	-2.331E-01	4.082E-01	7.220E-01	0.000E+00	NOT IDENT.
TA-182	-1.693E-02	2.120E-01	3.637E-01	0.000E+00	FAIL ABUN
RE-183	5.096E-02	9.783E-02	1.829E-01	0.000E+00	FAIL ABUN
RE-184	-1.517E-01	2.093E-01	3.598E-01	0.000E+00	NOT IDENT.
OS-185	-2.707E-02	4.046E-02	6.733E-02	0.000E+00	NOT IDENT.
RE-188	1.348E-01	1.558E-01	2.949E-01	0.000E+00	NOT IDENT.
W-188	2.493E+00	7.839E+00	1.240E+01	0.000E+00	NOT IDENT.
IR-192	-2.284E-03	3.307E-02	5.778E-02	0.000E+00	FAIL ABUN
AU-195	2.559E-01	2.196E-01	3.980E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.096E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.254E+00	3.810E+00	6.826E+00	0.000E+00	NOT IDENT.
TL-202	1.098E-02	5.908E-02	1.021E-01	0.000E+00	NOT IDENT.
HG-203	1.452E-02	3.825E-02	6.884E-02	0.000E+00	NOT IDENT.
BI-207	9.436E-03	5.939E-02	1.005E-01	0.000E+00	FAIL ABUN
TL-207	-1.393E-01	7.025E-01	1.061E+00	0.000E+00	FAIL ABUN
PO-209	2.784E+00	7.937E+00	1.384E+01	0.000E+00	NOT IDENT.
BI-210	2.152E-01	5.648E+00	1.011E+01	0.000E+00	NOT IDENT.
PB-210	2.152E-01	5.648E+00	1.011E+01	0.000E+00	NOT IDENT.
PO-210	2.152E-01	5.648E+00	1.011E+01	0.000E+00	NOT IDENT.
PB-211	-3.818E-01	9.679E-01	1.577E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.576E-01	6.866E-01	0.000E+00	FAIL ABUN
PO-215	-1.393E-01	7.025E-01	1.061E+00	0.000E+00	FAIL ABUN
RN-219	-3.005E-01	4.022E-01	6.567E-01	0.000E+00	FAIL ABUN
RN-220	-3.544E+00	2.467E+01	4.334E+01	0.000E+00	NOT IDENT.
RA-223	-1.393E-01	7.025E-01	1.061E+00	0.000E+00	FAIL ABUN
AC-227	2.843E-01	3.516E-01	6.455E-01	0.000E+00	FAIL ABUN
TH-227	2.843E-01	3.526E-01	6.455E-01	0.000E+00	FAIL ABUN
TH-229	-3.322E-01	4.774E-01	8.435E-01	0.000E+00	FAIL ABUN
PA-231	-4.911E-02	1.457E+00	2.572E+00	0.000E+00	FAIL ABUN
TH-231	-1.393E-01	7.025E-01	1.061E+00	0.000E+00	FAIL ABUN
U-231	-4.214E-01	7.984E-01	1.220E+00	0.000E+00	FAIL ABUN
PA-233	4.263E-03	6.470E-02	1.112E-01	0.000E+00	FAIL ABUN
PA-234	-2.980E-01	3.140E-01	4.759E-01	0.000E+00	FAIL ABUN
PA-234M	3.075E+00	6.260E+00	1.097E+01	0.000E+00	NOT IDENT.
TH-234	1.877E+00	1.562E+00	2.822E+00	0.000E+00	FAIL ABUN
U-235	7.291E-02	2.046E-01	3.567E-01	0.000E+00	FAIL ABUN
NP-236	-8.515E-02	7.269E-02	1.277E-01	0.000E+00	NOT IDENT.
U-238	1.877E+00	1.562E+00	2.822E+00	0.000E+00	FAIL ABUN
NP-239	-3.515E-02	1.873E-01	3.243E-01	0.000E+00	FAIL ABUN
AM-241	-1.747E-01	1.822E-01	3.175E-01	0.000E+00	NOT IDENT.
CM-243	-4.563E-03	9.291E-02	1.630E-01	0.000E+00	FAIL ABUN
CM-247	-5.795E-03	3.591E-02	6.118E-02	0.000E+00	NOT IDENT.
CF-249	-9.674E-03	3.979E-02	6.769E-02	0.000E+00	NOT IDENT.
CF-251	1.229E-02	1.231E-01	2.223E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:51:13.74

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511003.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:50:39.
Sample ID         : G232511003           Sample quantity  : 1.51380E+02 GRAM
Detector name     : GAM08                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.81  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1536	10.67*	1.045E+00	3.416E+01	3.416E+01	10.07
CD-109	88.03	284	3.72*	5.533E+00	3.425E+00	3.492E+00	30.87
SN-126	64.28	------	9.60	2.945E+00	------ Line Not Found		------
	86.94	284	8.90	5.533E+00	1.431E+00	1.431E+00	50.89
	87.57	284	37.00*	5.533E+00	3.443E-01	3.443E-01	30.87
TL-208	277.35	------	6.80	4.216E+00	------ Line Not Found		------
	510.84	138	21.60	2.675E+00	5.939E-01	5.939E-01	54.75
	583.14	453	84.20*	2.403E+00	5.548E-01	5.548E-01	15.18
	860.37	59	12.46	1.701E+00	6.899E-01	6.899E-01	59.17
BI-211	72.87	------	1.27	4.110E+00	------ Line Not Found		------
	351.07	794	12.94*	3.546E+00	4.289E+00	4.289E+00	11.96
PB-212	74.81	441	10.70	4.348E+00	2.348E+00	2.348E+00	25.28
	77.11	721	18.00	4.607E+00	2.157E+00	2.157E+00	16.57
	87.30	284	8.00	5.533E+00	1.593E+00	1.593E+00	32.45
	238.63	1586	44.60*	4.694E+00	1.878E+00	1.878E+00	9.52
	300.09	92	3.41	3.985E+00	1.684E+00	1.684E+00	61.26
PO-212	74.81	441	10.70	4.348E+00	2.348E+00	2.348E+00	25.28
	77.11	721	18.00	4.607E+00	2.157E+00	2.157E+00	16.57
	87.30	284	8.00	5.533E+00	1.593E+00	1.593E+00	32.45
	115.19	------	0.60	6.485E+00	------ Line Not Found		------
	238.63	1586	44.60*	4.694E+00	1.878E+00	1.878E+00	9.52
	300.09	92	3.41	3.985E+00	1.684E+00	1.684E+00	61.26
BI-214	609.31	569	46.30*	2.316E+00	1.315E+00	1.315E+00	13.55
	768.36	117	5.04	1.888E+00	3.042E+00	3.042E+00	41.73
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	109	15.10	1.323E+00	1.354E+00	1.354E+00	46.62
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	51	4.11	1.096E+00	2.803E+00	2.803E+00	52.70
	1764.49	94	15.80	9.226E-01	1.602E+00	1.602E+00	27.04
PB-214	74.81	441	6.21	4.348E+00	4.046E+00	4.046E+00	24.63
	77.11	721	10.50	4.607E+00	3.698E+00	3.698E+00	18.23
	87.30	284	4.67	5.533E+00	2.728E+00	2.728E+00	31.82

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	331	7.49	4.654E+00	2.355E+00	2.355E+00	25.55
	295.21	465	19.20	4.032E+00	1.489E+00	1.489E+00	18.07
	351.92	794	37.20*	3.546E+00	1.492E+00	1.492E+00	13.05
PO-214	74.81	441	6.21	4.348E+00	4.046E+00	4.046E+00	24.63
	77.11	721	10.50	4.607E+00	3.698E+00	3.698E+00	18.23
	87.30	284	4.67	5.533E+00	2.728E+00	2.728E+00	31.82
	241.98	331	7.49	4.654E+00	2.355E+00	2.355E+00	25.55
	295.21	465	19.20	4.032E+00	1.489E+00	1.489E+00	18.07
	351.92	794	37.20*	3.546E+00	1.492E+00	1.492E+00	13.05
PO-216	74.81	441	10.70	4.348E+00	2.348E+00	2.348E+00	25.28
	77.11	721	18.00	4.607E+00	2.157E+00	2.157E+00	16.57
	87.30	284	8.00	5.533E+00	1.593E+00	1.593E+00	32.45
	238.63	1586	44.60*	4.694E+00	1.878E+00	1.878E+00	9.52
	300.09	92	3.41	3.985E+00	1.684E+00	1.684E+00	61.26
PO-218	74.81	441	6.21	4.348E+00	4.046E+00	4.046E+00	24.63
	77.11	721	10.50	4.607E+00	3.698E+00	3.698E+00	18.23
	87.30	284	4.67	5.533E+00	2.728E+00	2.728E+00	31.82
	241.98	331	7.49	4.654E+00	2.355E+00	2.355E+00	25.55
	295.21	465	19.20	4.032E+00	1.489E+00	1.489E+00	18.07
	351.92	794	37.20*	3.546E+00	1.492E+00	1.492E+00	13.05
RA-224	240.98	331	3.95*	4.654E+00	4.466E+00	4.466E+00	24.92
RA-226	609.31	569	46.30*	2.316E+00	1.315E+00	1.315E+00	13.55
	768.36	117	5.04	1.888E+00	3.042E+00	3.042E+00	41.73
	934.06	------	3.21	1.574E+00	------	Line Not Found	------
	1120.29	109	15.10	1.323E+00	1.354E+00	1.354E+00	46.62
	1238.11	------	5.94	1.205E+00	------	Line Not Found	------
	1377.67	51	4.11	1.096E+00	2.803E+00	2.803E+00	52.70
	1764.49	94	15.80	9.226E-01	1.602E+00	1.602E+00	27.04
AC-228	338.32	300	11.40	3.650E+00	1.787E+00	1.787E+00	45.59
	911.07	316	27.70*	1.612E+00	1.752E+00	1.752E+00	23.37
	969.11	198	16.60	1.520E+00	1.942E+00	1.942E+00	35.60
RA-228	338.32	300	11.40	3.650E+00	1.787E+00	1.787E+00	45.59
	911.07	316	27.70*	1.612E+00	1.752E+00	1.752E+00	23.37
	969.11	198	16.60	1.520E+00	1.942E+00	1.942E+00	35.60
TH-228	84.40	119	1.21	5.289E+00	4.616E+00	4.616E+00	73.19
	238.60	1586	44.60*	4.694E+00	1.878E+00	1.878E+00	9.52
	300.10	92	3.41	3.985E+00	1.684E+00	1.684E+00	84.60
TH-230	609.31	569	46.30*	2.316E+00	1.315E+00	1.315E+00	13.55
	768.36	117	5.04	1.888E+00	3.042E+00	3.042E+00	41.73
	934.06	------	3.21	1.574E+00	------	Line Not Found	------
	1120.29	109	15.10	1.323E+00	1.354E+00	1.354E+00	46.62
	1238.11	------	5.94	1.205E+00	------	Line Not Found	------
	1377.67	51	4.11	1.096E+00	2.803E+00	2.803E+00	52.70
	1764.49	94	15.80	9.226E-01	1.602E+00	1.602E+00	27.04
TH-232	338.32	300	11.40	3.650E+00	1.787E+00	1.787E+00	21.22
	911.07	316	27.70*	1.612E+00	1.752E+00	1.752E+00	23.37
	969.11	198	16.60	1.520E+00	1.942E+00	1.942E+00	35.60
U-234	609.31	569	46.30*	2.316E+00	1.315E+00	1.315E+00	13.55
	768.36	117	5.04	1.888E+00	3.042E+00	3.042E+00	41.73

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	934.06	------	3.21	1.574E+00	------	Line Not Found	------
	1120.29	109	15.10	1.323E+00	1.354E+00	1.354E+00	46.62
	1238.11	------	5.94	1.205E+00	------	Line Not Found	------
	1377.67	51	4.11	1.096E+00	2.803E+00	2.803E+00	52.70
	1764.49	94	15.80	9.226E-01	1.602E+00	1.602E+00	27.04
NP-237	86.50	284	12.60*	5.533E+00	1.011E+00	1.011E+00	37.14
	95.87	------	2.60	6.030E+00	------	Line Not Found	------
AM-243	74.67	441	66.00*	4.348E+00	3.807E-01	3.807E-01	23.49
	86.72	284	0.34	5.533E+00	3.792E+01	3.792E+01	30.87
	117.66	------	0.55	6.497E+00	------	Line Not Found	------
	142.18	------	0.13	6.311E+00	------	Line Not Found	------
ANH-511	511.00	138	100.00*	2.675E+00	1.283E-01	1.283E-01	54.11

Flag: "*" = Keyline

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

Total number of lines in spectrum 32
Number of unidentified lines 1
Number of lines tentatively identified by NID 31 96.88%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.416E+01	3.416E+01	0.344E+01	10.07	
CD-109	464.00D	1.02	3.425E+00	3.492E+00	1.078E+00	30.87	
SN-126	1.00E+05Y	1.00	3.443E-01	3.443E-01	1.063E-01	30.87	
TL-208	1.41E+10Y	1.00	5.548E-01	5.548E-01	0.842E-01	15.18	
BI-211	7.04E+08Y	1.00	4.289E+00	4.289E+00	0.513E+00	11.96	
PB-212	1.41E+10Y	1.00	1.878E+00	1.878E+00	0.179E+00	9.52	
PO-212	1.41E+10Y	1.00	1.878E+00	1.878E+00	0.179E+00	9.52	
BI-214	1600.00Y	1.00	1.315E+00	1.315E+00	0.178E+00	13.55	
PB-214	1600.00Y	1.00	1.492E+00	1.492E+00	0.195E+00	13.05	
PO-214	1600.00Y	1.00	1.492E+00	1.492E+00	0.195E+00	13.05	
PO-216	1.41E+10Y	1.00	1.878E+00	1.878E+00	0.179E+00	9.52	
PO-218	1600.00Y	1.00	1.492E+00	1.492E+00	0.195E+00	13.05	
RA-224	1.41E+10Y	1.00	4.466E+00	4.466E+00	1.113E+00	24.92	
RA-226	1600.00Y	1.00	1.315E+00	1.315E+00	0.178E+00	13.55	
AC-228	1.41E+10Y	1.00	1.752E+00	1.752E+00	0.410E+00	23.37	
RA-228	1.41E+10Y	1.00	1.752E+00	1.752E+00	0.410E+00	23.37	
TH-228	1.41E+10Y	1.00	1.878E+00	1.878E+00	0.179E+00	9.52	
TH-230	4.47E+09Y	1.00	1.315E+00	1.315E+00	0.178E+00	13.55	
TH-232	1.41E+10Y	1.00	1.752E+00	1.752E+00	0.410E+00	23.37	
U-234	4.47E+09Y	1.00	1.315E+00	1.315E+00	0.178E+00	13.55	
NP-237	2.14E+06Y	1.00	1.011E+00	1.011E+00	0.375E+00	37.14	
AM-243	7380.00Y	1.00	3.807E-01	3.807E-01	0.894E-01	23.49	
ANH-511	1.00E+09Y	1.00	1.283E-01	1.283E-01	0.694E-01	54.11	
			---	---			
	Total Activity :		7.126E+01	7.133E+01			

Grand Total Activity : 7.126E+01 7.133E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	90.08	167	461	1.18	180.23	164	28	2.32E-02	46.2	5.72E+00	T
3	92.88	297	533	1.45	185.83	164	28	4.12E-02	33.3	5.88E+00	T
0	129.49	102	526	1.09	258.96	254	10	1.42E-02	86.6	6.46E+00	T
0	185.88	261	364	1.33	371.61	367	9	3.63E-02	30.1	5.54E+00	T
0	209.08	128	429	1.18	417.95	412	11	1.78E-02	65.6	5.14E+00	T
0	270.23	177	294	1.22	540.12	534	13	2.46E-02	42.6	4.30E+00	T
0	327.99	107	280	1.47	655.54	651	13	1.48E-02	67.3	3.73E+00	T
0	462.54	100	91	1.56	924.43	920	10	1.39E-02	40.9	2.89E+00	T
0	727.02	91	102	1.41	1453.12	1448	11	1.26E-02	47.8	1.99E+00	T
0	794.79	76	39	2.04	1588.62	1584	10	1.05E-02	38.8	1.83E+00	T
0	1728.78	35	3	0.93	3457.55	3450	14	4.83E-03	40.8	9.32E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:51:18.87

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511003.CNF;1 *
* Acquisition date  : 7-JUL-2009 10:50:39.  Detector SN#     :             *
* Detector ID       : GAM08                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:03.81          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232511003            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.51380E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06.7MS Isotope      :                *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.416E+01	3.442E+00	4.823E-01	4.087E-02	70.826
CD-109	3.492E+00	1.078E+00	1.160E+00	1.336E-01	3.011
SN-126	3.443E-01	1.063E-01	1.150E-01	1.320E-02	2.995
TL-208	5.548E-01	8.423E-02	5.904E-02	3.852E-03	9.396
BI-211	4.289E+00	5.129E-01	3.528E-01	2.338E-02	12.156
PB-212	1.878E+00	1.789E-01	8.691E-02	6.413E-03	21.611
PO-212	1.878E+00	1.789E-01	8.691E-02	6.413E-03	21.611
BI-214	1.315E+00	1.781E-01	1.029E-01	7.768E-03	12.777
PB-214	1.492E+00	1.946E-01	1.230E-01	1.037E-02	12.132
PO-214	1.492E+00	1.946E-01	1.230E-01	1.037E-02	12.132
PO-216	1.878E+00	1.789E-01	8.691E-02	6.413E-03	21.611
PO-218	1.492E+00	1.946E-01	1.230E-01	1.037E-02	12.132
RA-224	4.466E+00	1.113E+00	9.890E-01	5.809E-02	4.516
RA-226	1.315E+00	1.781E-01	1.029E-01	7.768E-03	12.777
AC-228	1.752E+00	4.095E-01	1.914E-01	2.490E-02	9.155
RA-228	1.752E+00	4.095E-01	1.914E-01	2.490E-02	9.155
TH-228	1.878E+00	1.789E-01	8.690E-02	6.413E-03	21.613
TH-230	1.315E+00	1.781E-01	1.029E-01	7.768E-03	12.777

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.752E+00	4.095E-01	1.914E-01	2.490E-02	9.155
U-234	1.315E+00	1.781E-01	1.029E-01	7.768E-03	12.777
NP-237	1.011E+00	3.755E-01	3.422E-01	8.064E-02	2.955
AM-243	3.807E-01	8.943E-02	9.397E-02	1.003E-02	4.051
ANH-511	1.283E-01	6.941E-02	4.283E-02	2.503E-03	2.995

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.478E-01		3.036E-01	5.034E-01	3.439E-02	0.294
NA-22	1.748E-02		4.516E-02	7.774E-02	5.961E-03	0.225
NA-24	1.225E-02		3.309E-02	Half-Life too short		
AL-26	-1.695E-02		2.911E-02	4.139E-02	2.553E-03	-0.410
TI-44	3.980E-01	+	6.594E-02	8.316E-02	8.986E-03	4.786
SC-46	-2.110E-04		4.134E-02	6.744E-02	7.226E-03	-0.003
V-48	5.528E-02		6.822E-02	1.180E-01	1.164E-02	0.468
CR-51	1.805E-01		3.383E-01	5.705E-01	3.823E-02	0.316
MN-52	-7.906E-02		1.808E-01	2.812E-01	2.337E-02	-0.281
MN-54	4.384E-02		3.987E-02	7.015E-02	6.459E-03	0.625
CO-56	1.599E-02		3.628E-02	6.167E-02	5.876E-03	0.259
CO-57	1.663E-02		2.526E-02	4.124E-02	2.529E-03	0.403
CO-58	6.906E-03		3.877E-02	6.457E-02	5.551E-03	0.107
FE-59	5.796E-02		9.529E-02	1.613E-01	1.381E-02	0.359
CO-60	-2.153E-02		4.322E-02	6.860E-02	5.887E-03	-0.314
ZN-65	-4.135E-02		1.137E-01	1.500E-01	1.119E-02	-0.276
GE-68	-8.437E-01		1.401E+00	2.130E+00	1.755E-01	-0.396
AS-73	1.217E-01		1.071E+00	1.760E+00	1.984E-01	0.069
AS-74	-3.667E-02		7.880E-02	1.276E-01	7.085E-03	-0.287
SE-75	-1.739E-02		4.641E-02	6.571E-02	3.968E-03	-0.265
BR-77	2.797E+00		5.218E+00	8.671E+00	5.048E-01	0.323
SR-82	-1.654E-02		3.902E-01	5.539E-01	4.274E-02	-0.030
RB-83	3.307E-02		6.367E-02	1.057E-01	6.152E-03	0.313
RB-84	-2.769E-02		6.713E-02	1.054E-01	1.106E-02	-0.263
KR-85	4.868E+00		7.566E+00	1.119E+01	6.530E-01	0.435
SR-85	2.440E-02		3.792E-02	5.607E-02	3.273E-03	0.435
RB-86	-3.304E-02		8.115E-01	1.302E+00	1.074E-01	-0.025
Y-88	4.004E-02		3.092E-02	6.188E-02	3.692E-03	0.647
ZR-88	7.339E-03		2.972E-02	4.892E-02	2.861E-03	0.150
Y-91	1.386E+00		1.922E+01	3.232E+01	2.132E+00	0.043
NB-94	6.685E-03		3.375E-02	5.669E-02	3.412E-03	0.118
NB-95	6.056E-02		4.750E-02	7.610E-02	5.676E-03	0.796
NB-95M	1.798E-01		1.345E-01	2.098E-01	1.587E-02	0.857
ZR-95	-2.089E-02		6.839E-02	1.091E-01	9.004E-03	-0.191
NB-97	-8.838E-03		5.943E-03	Half-Life too short		
ZR-97	6.136E-01		1.153E-01	Half-Life too short		
MO-99	-8.617E-01		6.932E+00	1.134E+01	1.617E+00	-0.076
TC-99M	-2.753E+07		4.891E+07	Half-Life too short		

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101	8.233E-03		3.188E-02	5.399E-02	3.014E-03	0.153
RH-102	-6.400E-03		2.900E-02	4.579E-02	2.700E-03	-0.140
RU-103	1.433E-02		3.709E-02	6.100E-02	7.733E-03	0.235
RH-106	-8.040E-02		3.078E-01	5.042E-01	5.826E-02	-0.159
RU-106	-8.040E-02		3.077E-01	5.042E-01	2.732E-02	-0.159
AG-108M	-8.515E-03		3.280E-02	5.197E-02	3.321E-03	-0.164
AG-110M	-2.019E-02		3.532E-02	5.642E-02	3.165E-03	-0.358
IN-111	4.257E-01		6.518E-01	9.911E-01	5.844E-02	0.430
IN-113M	2.541E-02		4.322E-02	7.256E-02	4.522E-03	0.350
SN-113	2.541E-02		4.322E-02	7.256E-02	4.522E-03	0.350
IN-114M	9.713E-02		1.855E-01	2.823E-01	1.559E-02	0.344
CD-115	-2.078E-01		5.136E+00	8.635E+00	5.012E-01	-0.024
SN-117M	-1.909E-02		4.529E-02	7.546E-02	4.105E-03	-0.253
SB-122	-3.792E-01		1.058E+00	1.732E+00	9.853E-02	-0.219
I-123	-2.806E-01		1.721E-01	Half-Life too short		
TE-123M	-2.127E-02		2.609E-02	4.279E-02	2.360E-03	-0.497
I-124	-5.023E-01		4.883E-01	6.745E-01	3.723E-02	-0.745
SB-124	1.019E-02		6.195E-02	1.044E-01	7.763E-03	0.098
SB-125	2.471E-03		9.347E-02	1.511E-01	9.277E-03	0.016
TE-125M	2.849E+00		9.489E+00	1.518E+01	1.443E+00	0.188
I-126	2.912E-02		1.637E-01	2.754E-01	1.449E-02	0.106
SB-126	-6.580E-02		1.366E-01	1.955E-01	1.253E-02	-0.337
SB-127	-6.668E-02		8.820E-01	1.456E+00	1.251E-01	-0.046
XE-127	-7.111E-02		4.735E-02	6.805E-02	3.825E-03	-1.045
I-131	-5.195E-02		9.298E-02	1.461E-01	9.660E-03	-0.356
TE-132	-4.613E-02		4.179E-01	6.932E-01	9.674E-02	-0.067
BA-133	2.443E-02		5.055E-02	7.448E-02	8.686E-03	0.328
I-133	-1.653E-04		4.992E-04	Half-Life too short		
CS-134	1.346E-01	+	5.343E-02	9.028E-02	7.459E-03	1.491
CS-135	2.452E-01		1.684E-01	2.659E-01	2.076E-02	0.922
I-135	-2.548E+06		1.280E+07	Half-Life too short		
CS-136	2.456E-02		1.003E-01	1.654E-01	1.513E-02	0.148
BA-137M	3.123E-02		3.811E-02	6.657E-02	3.440E-03	0.469
CS-137	3.301E-02		4.028E-02	7.037E-02	3.656E-03	0.469
CE-139	-5.968E-03		2.714E-02	4.548E-02	2.426E-03	-0.131
BA-140	-1.904E-01		2.259E-01	3.443E-01	1.120E-01	-0.553
LA-140	-1.133E-01		7.196E-02	8.409E-02	6.387E-03	-1.348
CE-141	-1.571E-02		6.141E-02	9.597E-02	5.642E-03	-0.164
CE-143	3.449E-04		4.764E-05	Half-Life too short		
CE-144	2.092E-01		2.267E-01	3.327E-01	4.732E-02	0.629
PM-144	7.553E-03		3.517E-02	5.916E-02	3.485E-03	0.128
PR-144	5.113E-01		2.380E+00	4.004E+00	2.357E-01	0.128
PM-146	4.996E-02		4.238E-02	7.322E-02	6.365E-03	0.682
ND-147	3.233E-01		4.550E-01	7.985E-01	1.080E-01	0.405
PM-149	2.641E+01		4.500E+01	7.611E+01	1.086E+01	0.347
EU-152	-6.466E-02		1.005E-01	1.582E-01	1.067E-02	-0.409
GD-153	-2.328E-02		8.620E-02	1.214E-01	1.145E-02	-0.192
EU-154	7.637E-02		1.249E-01	2.188E-01	2.318E-02	0.349

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	3.360E-02		1.094E-01	1.771E-01	1.465E-02	0.190
TB-160	1.199E-01		1.378E-01	2.408E-01	2.512E-02	0.498
HO-166M	-7.914E-03		6.080E-02	9.973E-02	6.199E-03	-0.079
TM-171	-2.570E+01		3.198E+01	5.046E+01	5.421E+00	-0.509
LU-176	-1.612E-02		2.408E-02	3.812E-02	2.313E-03	-0.423
LU-177	2.155E+00	+	1.418E+00	1.616E+00	9.147E-02	1.334
LU-177M	-1.212E-01		1.810E-01	2.804E-01	1.650E-02	-0.432
HF-181	2.127E-02		3.956E-02	6.584E-02	3.877E-03	0.323
W-181	-2.331E-01		4.165E-01	6.642E-01	7.190E-02	-0.351
TA-182	-1.693E-02		2.163E-01	3.594E-01	2.460E-02	-0.047
RE-183	5.096E-02		9.982E-02	1.718E-01	9.249E-03	0.297
RE-184	-1.517E-01		2.136E-01	3.417E-01	2.027E-02	-0.444
OS-185	-2.707E-02		4.128E-02	6.545E-02	3.450E-03	-0.414
RE-188	1.348E-01		1.590E-01	2.768E-01	1.520E-02	0.487
W-188	2.493E+00		7.999E+00	1.181E+01	7.147E-01	0.211
IR-192	-2.284E-03		3.374E-02	5.517E-02	3.364E-03	-0.041
AU-195	2.559E-01		2.241E-01	3.697E-01	3.391E-02	0.692
TL-200	-7.219E-05		5.594E-05	Half-Life too short		
TL-201	-2.254E+00		3.888E+00	6.419E+00	3.428E-01	-0.351
TL-202	1.098E-02		6.028E-02	9.833E-02	5.805E-03	0.112
HG-203	1.452E-02		3.903E-02	6.553E-02	4.176E-03	0.222
BI-207	9.436E-03		6.060E-02	9.893E-02	8.410E-03	0.095
TL-207	-1.393E-01		7.169E-01	1.014E+00	1.684E-01	-0.137
PO-209	2.784E+00		8.099E+00	1.357E+01	1.483E+00	0.205
BI-210	2.152E-01		5.763E+00	9.229E+00	7.794E-01	0.023
PB-210	2.152E-01		5.763E+00	9.229E+00	7.794E-01	0.023
PO-210	2.152E-01		5.763E+00	9.229E+00	6.889E-01	0.023
PB-211	-3.818E-01		9.876E-01	1.515E+00	9.445E-01	-0.252
BI-212	9.618E-01	+	4.669E-01	6.693E-01	5.556E-02	1.437
PO-215	-1.393E-01		7.169E-01	1.014E+00	1.684E-01	-0.137
RN-219	-3.005E-01		4.104E-01	6.308E-01	8.600E-02	-0.476
RN-220	-3.544E+00		2.518E+01	4.195E+01	2.408E+00	-0.084
RA-223	-1.393E-01		7.169E-01	1.014E+00	1.684E-01	-0.137
AC-227	2.843E-01		3.587E-01	6.132E-01	8.599E-02	0.464
TH-227	2.843E-01		3.598E-01	6.132E-01	1.039E-01	0.464
TH-229	-3.322E-01		4.871E-01	7.959E-01	4.416E-02	-0.417
PA-231	-4.911E-02		1.487E+00	2.450E+00	3.400E-01	-0.020
TH-231	-1.393E-01		7.169E-01	1.014E+00	1.684E-01	-0.137
U-231	-4.214E-01		8.147E-01	1.132E+00	1.101E-01	-0.372
PA-233	4.263E-03		6.602E-02	1.061E-01	6.806E-03	0.040
PA-234	-2.980E-01		3.204E-01	4.671E-01	9.173E-02	-0.638
PA-234M	3.075E+00		6.387E+00	1.078E+01	1.288E+00	0.285
TH-234	1.877E+00		1.594E+00	2.595E+00	4.987E-01	0.723
U-235	7.291E-02		2.088E-01	3.342E-01	5.434E-02	0.218
NP-236	-8.515E-02		7.418E-02	1.200E-01	6.494E-03	-0.710
U-238	1.877E+00		1.594E+00	2.595E+00	4.987E-01	0.723
NP-239	-3.515E-02		1.911E-01	3.024E-01	2.021E-02	-0.116
AM-241	-1.747E-01		1.859E-01	2.915E-01	3.452E-02	-0.599

Sample ID : G232511003 Acquisition date : 7-JUL-2009 10:50:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-4.563E-03		9.480E-02	1.515E-01	1.271E-02	-0.030
CM-247	-5.795E-03		3.664E-02	5.876E-02	3.447E-03	-0.099
CF-249	-9.674E-03		4.060E-02	6.496E-02	3.811E-03	-0.149
CF-251	1.229E-02		1.256E-01	2.093E-01	1.133E-02	0.059

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232511003            *
* Acquisition date :  7-JUL-2009 10:50:39 Detector SN#    :                 *
* Detector ID      : GAM08                Sensitivity     : 5.000           *
* Geometry         : CAN                  Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:03.81     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      : 24-JUN-2009 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G232511003           Analyst initials: MXR1            *
* Batch Number     : 881220               Sample Quantity : 1.5138E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.416E+01	3.373E+00	2.430E-01	1.721E+00
CD-109	3.492E+00	1.057E+00	6.263E-01	5.391E-01
SN-126	3.443E-01	1.042E-01	6.211E-02	5.316E-02
TL-208	5.548E-01	8.254E-02	3.047E-02	4.211E-02
BI-211	4.289E+00	5.026E-01	1.844E-01	2.564E-01
PB-212	1.878E+00	1.753E-01	4.585E-02	8.945E-02
PO-212	1.878E+00	1.753E-01	4.585E-02	8.945E-02
BI-214	1.315E+00	1.746E-01	5.305E-02	8.907E-02
PB-214	1.492E+00	1.908E-01	6.427E-02	9.732E-02
PO-214	1.492E+00	1.908E-01	6.427E-02	9.732E-02
PO-216	1.878E+00	1.753E-01	4.585E-02	8.945E-02
PO-218	1.492E+00	1.908E-01	6.427E-02	9.732E-02
RA-224	4.466E+00	1.091E+00	5.216E-01	5.566E-01
RA-226	1.315E+00	1.746E-01	5.305E-02	8.907E-02
AC-228	1.752E+00	4.013E-01	9.765E-02	2.048E-01
RA-228	1.752E+00	4.013E-01	9.765E-02	2.048E-01
TH-228	1.878E+00	1.753E-01	4.585E-02	8.945E-02
TH-230	1.315E+00	1.746E-01	5.305E-02	8.907E-02
TH-232	1.752E+00	4.013E-01	9.765E-02	2.048E-01
U-234	1.315E+00	1.746E-01	5.305E-02	8.907E-02
NP-237	1.011E+00	3.680E-01	1.849E-01	1.877E-01
AM-243	3.807E-01	8.764E-02	5.095E-02	4.471E-02
ANH-511	1.283E-01	6.802E-02	2.218E-02	3.471E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	1.478E-01	2.975E-01	2.611E-01	1.518E-01	NOT IDENT.
NA-22	1.748E-02	4.426E-02	3.932E-02	2.258E-02	NOT IDENT.
NA-24	1.225E+04	6.487E+04	0.000E+00	3.309E+04	SHORT HLIF
AL-26	-1.695E-02	2.852E-02	2.074E-02	1.455E-02	NOT IDENT.

TI-44	3.980E-01	6.462E-02	4.504E-02	3.297E-02	FAIL ABUN
SC-46	-2.110E-04	4.051E-02	3.443E-02	2.067E-02	FAIL ABUN
V-48	5.528E-02	6.686E-02	6.010E-02	3.411E-02	NOT IDENT.
CR-51	1.805E-01	3.315E-01	2.988E-01	1.692E-01	NOT IDENT.
MN-52	-7.906E-02	1.772E-01	1.418E-01	9.038E-02	NOT IDENT.
MN-54	4.384E-02	3.907E-02	3.587E-02	1.993E-02	NOT IDENT.
CO-56	1.599E-02	3.556E-02	3.153E-02	1.814E-02	NOT IDENT.
CO-57	1.663E-02	2.475E-02	2.211E-02	1.263E-02	NOT IDENT.
CO-58	6.906E-03	3.799E-02	3.304E-02	1.938E-02	NOT IDENT.
FE-59	5.796E-02	9.338E-02	8.188E-02	4.764E-02	NOT IDENT.
CO-60	-2.153E-02	4.236E-02	3.466E-02	2.161E-02	NOT IDENT.
ZN-65	-4.135E-02	1.114E-01	7.611E-02	5.684E-02	NOT IDENT.
GE-68	-8.437E-01	1.373E+00	1.082E+00	7.006E-01	NOT IDENT.
AS-73	1.217E-01	1.050E+00	9.616E-01	5.357E-01	NOT IDENT.
AS-74	-3.667E-02	7.722E-02	6.580E-02	3.940E-02	NOT IDENT.
SE-75	-1.739E-02	4.548E-02	3.458E-02	2.320E-02	NOT IDENT.
BR-77	2.797E+00	5.114E+00	4.487E+00	2.609E+00	FAIL ABUN
SR-82	-1.654E-02	3.824E-01	2.838E-01	1.951E-01	NOT IDENT.
RB-83	3.307E-02	6.239E-02	5.468E-02	3.183E-02	NOT IDENT.
RB-84	-2.769E-02	6.579E-02	5.384E-02	3.357E-02	NOT IDENT.
KR-85	4.868E+00	7.414E+00	5.791E+00	3.783E+00	NOT IDENT.
SR-85	2.440E-02	3.716E-02	2.903E-02	1.896E-02	NOT IDENT.
RB-86	-3.304E-02	7.953E-01	6.613E-01	4.057E-01	NOT IDENT.
Y-88	4.004E-02	3.031E-02	3.100E-02	1.546E-02	NOT IDENT.
ZR-88	7.339E-03	2.912E-02	2.550E-02	1.486E-02	NOT IDENT.
Y-91	1.386E+00	1.884E+01	1.637E+01	9.612E+00	NOT IDENT.
NB-94	6.685E-03	3.307E-02	2.912E-02	1.687E-02	NOT IDENT.
NB-95	6.056E-02	4.655E-02	3.900E-02	2.375E-02	NOT IDENT.
NB-95M	1.798E-01	1.318E-01	1.107E-01	6.724E-02	NOT IDENT.
ZR-95	-2.089E-02	6.702E-02	5.594E-02	3.419E-02	NOT IDENT.
NB-97	-8.838E+03	1.165E+04	0.000E+00	5.943E+03	SHORT HLIF
ZR-97	6.136E+05	2.260E+05	0.000E+00	1.153E+05	SHORT HLIF
MO-99	-8.617E-01	6.794E+00	5.819E+00	3.466E+00	NOT IDENT.
TC-99M	-2.753E+13	9.587E+13	0.000E+00	4.891E+13	SHORT HLIF
RH-101	8.233E-03	3.125E-02	2.861E-02	1.594E-02	NOT IDENT.
RH-102	-6.400E-03	2.842E-02	2.375E-02	1.450E-02	NOT IDENT.
RU-103	1.433E-02	3.635E-02	3.161E-02	1.855E-02	FAIL ABUN
RH-106	-8.040E-02	3.016E-01	2.598E-01	1.539E-01	NOT IDENT.
RU-106	-8.040E-02	3.015E-01	2.598E-01	1.538E-01	NOT IDENT.
AG-108M	-8.515E-03	3.214E-02	2.702E-02	1.640E-02	NOT IDENT.
AG-110M	-2.019E-02	3.461E-02	2.902E-02	1.766E-02	NOT IDENT.
IN-111	4.257E-01	6.388E-01	5.225E-01	3.259E-01	NOT IDENT.
IN-113M	2.541E-02	4.236E-02	3.782E-02	2.161E-02	NOT IDENT.
SN-113	2.541E-02	4.236E-02	3.782E-02	2.161E-02	NOT IDENT.
IN-114M	9.713E-02	1.818E-01	1.497E-01	9.274E-02	NOT IDENT.
CD-115	-2.078E-01	5.034E+00	4.467E+00	2.568E+00	NOT IDENT.
SN-117M	-1.909E-02	4.439E-02	4.020E-02	2.265E-02	NOT IDENT.
SB-122	-3.792E-01	1.037E+00	8.944E-01	5.290E-01	NOT IDENT.
I-123	-2.806E+05	3.373E+05	0.000E+00	1.721E+05	SHORT HLIF
TE-123M	-2.127E-02	2.556E-02	2.280E-02	1.304E-02	NOT IDENT.
I-124	-5.023E-01	4.785E-01	3.478E-01	2.441E-01	FAIL ABUN
SB-124	1.019E-02	6.071E-02	5.241E-02	3.097E-02	FAIL ABUN
SB-125	2.471E-03	9.160E-02	7.859E-02	4.673E-02	FAIL ABUN
TE-125M	2.849E+00	9.299E+00	8.160E+00	4.744E+00	NOT IDENT.
I-126	2.912E-02	1.604E-01	1.416E-01	8.185E-02	NOT IDENT.
SB-126	-6.580E-02	1.339E-01	1.003E-01	6.831E-02	FAIL ABUN
SB-127	-6.668E-02	8.643E-01	7.481E-01	4.410E-01	NOT IDENT.
XE-127	-7.111E-02	4.640E-02	3.604E-02	2.367E-02	NOT IDENT.
I-131	-5.195E-02	9.112E-02	7.629E-02	4.649E-02	NOT IDENT.
TE-132	-4.613E-02	4.095E-01	3.661E-01	2.089E-01	NOT IDENT.
BA-133	2.443E-02	4.954E-02	3.891E-02	2.527E-02	NOT IDENT.
I-133	-1.653E+02	9.784E+02	0.000E+00	4.992E+02	SHORT HLIF
CS-134	1.346E-01	5.236E-02	4.622E-02	2.671E-02	FAIL ABUN
CS-135	2.452E-01	1.651E-01	1.399E-01	8.421E-02	NOT IDENT.
I-135	-2.548E+12	2.508E+13	0.000E+00	1.280E+13	SHORT HLIF
CS-136	2.456E-02	9.827E-02	8.409E-02	5.014E-02	FAIL ABUN
BA-137M	3.123E-02	3.734E-02	3.424E-02	1.905E-02	NOT IDENT.
CS-137	3.301E-02	3.948E-02	3.620E-02	2.014E-02	NOT IDENT.
CE-139	-5.968E-03	2.660E-02	2.421E-02	1.357E-02	NOT IDENT.
BA-140	-1.904E-01	2.214E-01	1.781E-01	1.130E-01	NOT IDENT.
LA-140	-1.133E-01	7.052E-02	4.228E-02	3.598E-02	FAIL ABUN
CE-141	-1.571E-02	6.018E-02	5.123E-02	3.070E-02	NOT IDENT.
CE-143	3.449E+02	9.338E+01	0.000E+00	4.764E+01	SHORT HLIF
CE-144	2.092E-01	2.221E-01	1.780E-01	1.133E-01	NOT IDENT.
PM-144	7.553E-03	3.447E-02	3.039E-02	1.758E-02	NOT IDENT.
PR-144	5.113E-01	2.333E+00	2.057E+00	1.190E+00	NOT IDENT.
PM-146	4.996E-02	4.153E-02	3.802E-02	2.119E-02	NOT IDENT.
ND-147	3.233E-01	4.459E-01	4.130E-01	2.275E-01	FAIL ABUN

PM-149	2.641E+01	4.410E+01	3.998E+01	2.250E+01	NOT IDENT.
EU-152	-6.466E-02	9.844E-02	8.274E-02	5.023E-02	NOT IDENT.
GD-153	-2.328E-02	8.448E-02	6.542E-02	4.310E-02	FAIL ABUN
EU-154	7.637E-02	1.224E-01	1.107E-01	6.245E-02	NOT IDENT.
EU-155	3.360E-02	1.072E-01	9.524E-02	5.469E-02	FAIL ABUN
TB-160	1.199E-01	1.350E-01	1.230E-01	6.890E-02	FAIL ABUN
HO-166M	-7.914E-03	5.959E-02	5.121E-02	3.040E-02	FAIL ABUN
TM-171	-2.570E+01	3.135E+01	2.743E+01	1.599E+01	NOT IDENT.
LU-176	-1.612E-02	2.360E-02	1.999E-02	1.204E-02	FAIL ABUN
LU-177	2.155E+00	1.390E+00	8.551E-01	7.092E-01	FAIL ABUN
LU-177M	-1.212E-01	1.773E-01	1.460E-01	9.048E-02	FAIL ABUN
HF-181	2.127E-02	3.877E-02	3.414E-02	1.978E-02	NOT IDENT.
W-181	-2.331E-01	4.082E-01	3.612E-01	2.082E-01	NOT IDENT.
TA-182	-1.693E-02	2.120E-01	1.820E-01	1.082E-01	FAIL ABUN
RE-183	5.096E-02	9.783E-02	9.148E-02	4.991E-02	FAIL ABUN
RE-184	-1.517E-01	2.093E-01	1.800E-01	1.068E-01	NOT IDENT.
OS-185	-2.707E-02	4.046E-02	3.369E-02	2.064E-02	NOT IDENT.
RE-188	1.348E-01	1.558E-01	1.475E-01	7.951E-02	NOT IDENT.
W-188	2.493E+00	7.839E+00	6.202E+00	4.000E+00	NOT IDENT.
IR-192	-2.284E-03	3.307E-02	2.891E-02	1.687E-02	FAIL ABUN
AU-195	2.559E-01	2.196E-01	1.991E-01	1.120E-01	FAIL ABUN
TL-200	-7.219E+01	1.096E+02	0.000E+00	5.594E+01	SHORT HLIF
TL-201	-2.254E+00	3.810E+00	3.415E+00	1.944E+00	NOT IDENT.
TL-202	1.098E-02	5.908E-02	5.110E-02	3.014E-02	NOT IDENT.
HG-203	1.452E-02	3.825E-02	3.444E-02	1.951E-02	NOT IDENT.
BI-207	9.436E-03	5.939E-02	5.027E-02	3.030E-02	FAIL ABUN
TL-207	-1.393E-01	7.025E-01	5.308E-01	3.584E-01	FAIL ABUN
PO-209	2.784E+00	7.937E+00	6.926E+00	4.050E+00	NOT IDENT.
BI-210	2.152E-01	5.648E+00	5.057E+00	2.881E+00	NOT IDENT.
PB-210	2.152E-01	5.648E+00	5.057E+00	2.881E+00	NOT IDENT.
PO-210	2.152E-01	5.648E+00	5.057E+00	2.881E+00	NOT IDENT.
PB-211	-3.818E-01	9.679E-01	7.889E-01	4.938E-01	NOT IDENT.
BI-212	9.618E-01	4.576E-01	3.435E-01	2.335E-01	FAIL ABUN
PO-215	-1.393E-01	7.025E-01	5.308E-01	3.584E-01	FAIL ABUN
RN-219	-3.005E-01	4.022E-01	3.286E-01	2.052E-01	FAIL ABUN
RN-220	-3.544E+00	2.467E+01	2.168E+01	1.259E+01	NOT IDENT.
RA-223	-1.393E-01	7.025E-01	5.308E-01	3.584E-01	FAIL ABUN
AC-227	2.843E-01	3.516E-01	3.230E-01	1.794E-01	FAIL ABUN
TH-227	2.843E-01	3.526E-01	3.230E-01	1.799E-01	FAIL ABUN
TH-229	-3.322E-01	4.774E-01	4.220E-01	2.435E-01	FAIL ABUN
PA-231	-4.911E-02	1.457E+00	1.287E+00	7.436E-01	FAIL ABUN
TH-231	-1.393E-01	7.025E-01	5.308E-01	3.584E-01	FAIL ABUN
U-231	-4.214E-01	7.984E-01	6.105E-01	4.073E-01	FAIL ABUN
PA-233	4.263E-03	6.470E-02	5.562E-02	3.301E-02	FAIL ABUN
PA-234	-2.980E-01	3.140E-01	2.381E-01	1.602E-01	FAIL ABUN
PA-234M	3.075E+00	6.260E+00	5.489E+00	3.194E+00	NOT IDENT.
TH-234	1.877E+00	1.562E+00	1.412E+00	7.969E-01	FAIL ABUN
U-235	7.291E-02	2.046E-01	1.785E-01	1.044E-01	FAIL ABUN
NP-236	-8.515E-02	7.269E-02	6.389E-02	3.709E-02	NOT IDENT.
U-238	1.877E+00	1.562E+00	1.412E+00	7.969E-01	FAIL ABUN
NP-239	-3.515E-02	1.873E-01	1.622E-01	9.557E-02	FAIL ABUN
AM-241	-1.747E-01	1.822E-01	1.588E-01	9.296E-02	NOT IDENT.
CM-243	-4.563E-03	9.291E-02	8.153E-02	4.740E-02	FAIL ABUN
CM-247	-5.795E-03	3.591E-02	3.061E-02	1.832E-02	NOT IDENT.
CF-249	-9.674E-03	3.979E-02	3.386E-02	2.030E-02	NOT IDENT.
CF-251	1.229E-02	1.231E-01	1.112E-01	6.279E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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46.50	399.5264
46.50	399.5264
46.50	399.5264
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49.72	358.9137
51.35	391.6259
52.39	405.7072
52.97	391.9477
53.15	398.2061
53.44	383.1611
54.07	376.5186
56.28	414.0904
56.28	414.0924
57.37	0.0000
57.53	429.5147
57.53	429.5158
57.60	429.5742
57.98	407.2712
57.98	407.2712
59.32	475.3699
59.32	475.3699
59.40	475.4449
59.54	475.5739
59.72	513.9235
60.01	514.2122
61.10	518.3967
61.14	489.4617
61.30	481.3311
63.00	442.3833
63.29	461.3263
63.29	461.3263
63.58	461.5764
64.28	535.0447
65.12	546.3018
65.20	552.6380
65.20	552.6380
66.05	581.6957
66.72	558.3550
66.83	538.5958
66.91	538.6744
67.20	533.7247
67.20	533.7247
67.75	538.4415
67.85	519.6814
68.90	543.2239
68.90	543.2239
69.30	535.7324
69.67	570.7731
70.82	562.4426
70.82	562.4426
70.83	562.4535
72.80	540.0681
72.87	540.1331
72.87	540.1331
74.67	541.7913
74.81	541.9186
74.81	541.9186
74.81	541.9186
74.81	541.9186
74.81	541.9186
74.81	541.9186
74.97	542.0642
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75.70	542.7296
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77.11	544.0057
77.11	544.0057

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77.11	544.0057
77.11	544.0057
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79.80	564.5879
79.80	564.5879
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80.18	523.2062
80.30	523.3082
80.30	523.3082
80.57	523.5345
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81.07	523.9573
81.07	523.9573
81.07	523.9573
81.07	523.9573
82.60	487.6422
83.37	416.1833
83.78	416.4529
83.78	416.4529
83.78	416.4529
83.78	416.4529
84.21	416.7344
84.40	416.8584
84.90	417.1842
85.43	417.5277
86.29	418.0847
86.50	418.2206
86.54	418.2461
86.59	418.2776
86.72	418.3623
86.79	418.4056
86.94	418.5020
87.30	418.7343
87.30	418.7343
87.30	418.7343
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87.30	418.7343
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88.36	419.4114
88.47	419.4823
89.95	420.4212
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92.29	421.8896
92.38	421.9447
92.38	421.9447
93.35	422.5490
94.00	422.9506
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94.67	352.8033
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94.90	352.9214
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94.90	352.9214
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98.44	332.6111
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99.55	348.1163
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103.76	365.6725
105.00	392.9312
105.31	385.3238
108.00	404.5550
109.28	386.2671
111.00	397.2155
111.00	397.2155

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112.95	384.7672
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116.30	340.2369
117.00	367.6023
117.00	367.6023
117.66	387.0962
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121.62	345.9204
121.78	345.9887
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122.32	333.7332
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136.48	365.9540
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142.65	366.1926
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144.24	352.8651
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145.44	380.1509
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152.70	359.6459
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154.21	342.5668
154.21	342.5668
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162.64	311.7375
163.35	311.0731
163.89	299.6499
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167.43	315.9392
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172.10	297.6252
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176.60	322.4173
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186.00	300.7091
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193.63	325.7733
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198.60	315.2499
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202.84	350.3660
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208.81	279.9588

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209.75	274.0414
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215.65	262.8887
216.55	257.4705
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222.10	266.1934
223.80	292.9411
226.40	260.5293
227.00	257.8224
227.08	257.8412
227.20	257.8662
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228.18	265.6328
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236.00	273.9683
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238.63	248.7995
238.63	248.7995
238.63	248.7995
239.00	248.8732
240.98	249.2595
241.98	249.4546
241.98	249.4546
241.98	249.4546
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245.39	206.9940
247.94	225.3246
248.90	198.9062
249.79	209.6174
252.40	210.0349
252.85	218.7805
252.85	218.7805
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256.20	191.3140
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260.90	214.2860
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268.79	184.1272
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269.46	186.3631
269.46	186.3631
269.46	186.3631
271.23	186.6021
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277.60	198.2520
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300.09	216.9061
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300.12	216.9094
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303.91	196.6739
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338.28	184.7120
338.28	184.7120
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391.69	132.8195
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445.03	120.3714
445.03	120.3714
445.03	120.3714
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513.99	102.2361
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569.50	89.1401
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602.71	119.7918
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609.31	91.5520
609.31	91.5520

609.31	91.5520
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621.84	97.6447
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661.65	101.0701
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696.49	99.4896
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768.36	80.2386
768.36	80.2386
768.36	80.2386
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778.57	79.5195
778.89	82.5117
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884.67	67.8611
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911.07	54.9280
911.07	54.9280
911.07	54.9280
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920.93	57.1672
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934.06	70.9518
934.06	70.9518
934.06	70.9518
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944.10	74.2987
946.00	79.5736
949.00	54.4934
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964.01	66.6546
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968.20	108.5297
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969.11	108.5599
969.11	108.5599
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983.50	57.1456
989.30	65.7176
996.32	64.7842
1001.03	55.2982
1001.68	52.1163
1004.76	68.1281
1021.30	0.0000
1024.50	0.0000
1034.80	51.5156
1037.82	61.2249
1038.57	59.0874

1038.76	0.0000
1045.16	54.8873
1046.59	58.1396
1048.07	60.3148
1050.47	78.6746
1050.47	78.6746
1063.62	75.7046
1076.63	71.6235
1077.35	80.3196
1085.78	70.7065
1099.22	61.1270
1112.02	74.2279
1112.84	88.9981
1115.52	82.2107
1120.29	74.6273
1120.29	74.6273
1120.29	74.6273
1120.29	74.6273
1120.51	74.6307
1121.28	74.6439
1124.00	0.0000
1129.67	62.3361
1131.51	0.0000
1147.95	0.0000
1167.94	65.7074
1173.22	60.2313
1175.09	57.4766
1177.93	81.6370
1189.05	82.7893
1204.90	77.5018
1205.75	0.0000
1213.00	86.0703
1221.42	92.8044
1230.97	104.2883
1235.34	98.7537
1236.41	0.0000
1238.11	70.5841
1238.11	70.5841
1238.11	70.5841
1238.11	70.5841
1238.25	70.5841
1246.25	60.3464
1260.41	0.0000
1271.85	54.0637
1274.45	49.3509
1274.54	53.1471
1291.56	48.5907
1298.22	0.0000
1312.09	45.9434
1325.50	45.1201
1325.50	45.1201
1332.49	49.0369
1333.61	42.3153
1360.21	38.6930
1362.66	0.0000
1365.15	27.1147
1368.21	26.7442
1368.53	0.0000
1376.25	29.9531
1377.67	27.1877
1377.67	27.1877
1377.67	27.1877
1377.67	27.1877
1384.27	25.0038
1394.10	21.4369
1395.20	27.2902
1407.95	19.5451
1434.06	33.4093
1436.60	28.5115
1457.56	0.0000
1460.81	21.7377
1489.15	20.8693
1509.49	20.9547
1596.49	32.4779
1620.62	18.3530
1678.03	0.0000
1691.02	11.3630
1691.02	11.3630

1706.46	0.0000
1750.46	0.0000
1764.49	5.3829
1764.49	5.3829
1764.49	5.3829
1764.49	5.3829
1770.23	76.4843
1771.40	20.9587
1791.20	0.0000
1808.65	16.8763
1836.01	6.3584

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232511003

Total Uranium Activity	5.6182E+00	ug/g
Total Uranium Counting Unc.	4.6478E+00	ug/g
Total Uranium Tpu	2.3713E-06	ug/g
Total Uranium Mda	4.2015E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232511003      *
*   ANALYST       : MXR1                      DETECTOR    : GAM08           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 10:50:39.21    SAMPLE ALQT:  151.380 GRAM    *
*                                                                           *
*****************************************************************************


         GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.039E+01
         GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.385E+00
         GROSS GAMMA MDA     (pCi/GRAM  )  : 3.335E+00
         GROSS GAMMA DLC     (pCi/GRAM  )  : 1.623E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:54:39.29

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511004.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:53:59.
Sample ID         : G232511004           Sample quantity  : 1.58270E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:12.77  0.2%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.51	95794	19420	1.02	118.50	112	12	1.33E+01	0.4	
2	1	74.85*	576	1804	1.01	149.18	143	16	8.01E-02	12.5	2.51E+00
3	1	77.16	815	1780	0.98	153.81	143	16	1.13E-01	9.0	
4	0	86.64	180	2579	1.09	172.78	171	8	2.50E-02	49.4	
5	0	92.94*	153	2182	1.40	185.39	182	7	2.13E-02	52.1	
6	0	98.87*	306	2279	2.04	197.25	194	8	4.25E-02	27.7	
7	0	185.77*	302	2435	1.29	371.13	368	7	4.19E-02	27.9	
8	0	209.12*	153	1908	1.03	417.87	415	6	2.12E-02	46.2	
9	0	238.70*	1493	2340	1.13	477.05	473	8	2.07E-01	6.2	
10	0	241.67	223	1737	1.46	483.00	481	6	3.10E-02	30.3	
11	0	295.39	377	1798	1.10	590.48	587	8	5.23E-02	20.2	
12	0	299.94	182	1550	1.10	599.59	597	7	2.53E-02	36.6	
13	0	338.66*	293	1924	1.15	677.06	673	9	4.07E-02	27.6	
14	0	352.07*	748	2149	1.52	703.88	699	10	1.04E-01	12.2	
15	0	511.40*	79	1331	1.53	1022.66	1018	10	1.10E-02	89.9	
16	0	583.54*	483	671	1.25	1166.98	1162	11	6.70E-02	11.4	
17	0	609.59*	643	601	1.43	1219.09	1213	12	8.93E-02	8.7	
18	0	661.96	71836	789	1.49	1323.85	1316	16	9.98E+00	0.4	
19	0	727.79	131	101	1.63	1455.56	1449	16	1.81E-02	19.0	
20	0	769.18	77	87	1.42	1538.35	1532	15	1.07E-02	28.8	
21	0	862.09	52	103	2.07	1724.20	1715	14	7.26E-03	43.7	
22	0	911.73*	335	88	1.72	1823.49	1817	16	4.65E-02	8.4	
23	1	965.04	57	86	2.00	1930.12	1923	25	7.88E-03	33.2	3.23E+00
24	1	969.48	219	75	1.96	1939.00	1923	25	3.04E-02	10.4	
25	0	1120.68	115	60	1.82	2241.41	2234	13	1.60E-02	16.9	
26	0	1239.18	46	91	2.30	2478.41	2471	13	6.39E-03	45.2	
27	0	1333.21	43	30	1.92	2666.47	2661	11	5.99E-03	29.0	
28	0	1461.49*	1574	21	1.99	2922.99	2914	17	2.19E-01	2.6	
29	0	1621.72	23	8	1.34	3243.39	3237	11	3.20E-03	31.8	
30	0	1730.12	47	0	1.24	3460.15	3453	14	6.53E-03	14.6	
31	0	1765.39*	105	4	1.99	3530.66	3524	15	1.46E-02	11.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 12:54:42

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511004.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:53:59
Sample ID : G232511004 Sample quantity : 158.27 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA12 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:12.77 0.2%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.079E+01	2.725E+00	5.513E-01	3.930E-02	55.846
CD-109	+	88.03	*	2.084E+00	2.065E+00	2.306E+00	1.764E-01	0.904
SN-126		64.28		-2.066E-01	9.671E-01	1.466E+00	2.059E-01	-0.141
	+	86.94		8.544E-01	9.145E-01	9.561E-01	3.935E-01	0.894
	+	87.57	*	2.055E-01	2.037E-01	2.285E-01	1.741E-02	0.900
BA-137M	+	661.65	*	8.418E+01	5.497E+00	1.176E-01	7.625E-03	715.712
CS-137	+	661.65	*	8.899E+01	5.830E+00	1.243E-01	8.088E-03	715.711
TL-208		277.35		1.364E+00	9.256E-01	1.563E+00	1.637E-01	0.872
	+	510.84		3.104E-01	5.590E-01	6.602E-01	6.816E-02	0.470
	+	583.14	*	5.431E-01	1.298E-01	1.273E-01	9.103E-03	4.268
		860.37		6.101E-01	3.104E-01	5.642E-01	4.930E-02	1.081
BI-211		72.87		5.067E-01	5.607E+00	8.478E+00	5.688E-01	0.060
	+	351.07	*	3.647E+00	9.168E-01	9.362E-01	5.885E-02	3.896
BI-212	+	727.18	*	1.264E+00	4.930E-01	3.982E-01	3.447E-02	3.174
		785.46		3.230E+00	1.768E+00	3.225E+00	2.409E-01	1.001
	+	1620.62		1.891E+00	1.210E+00	1.567E+00	1.009E-01	1.207
PB-212	+	74.81		2.778E+00	7.676E-01	9.298E-01	1.075E-01	2.988
	+	77.11		2.222E+00	4.281E-01	5.277E-01	3.653E-02	4.210
	+	87.30		9.505E-01	9.467E-01	1.060E+00	1.331E-01	0.897
	+	238.63	*	1.584E+00	2.262E-01	2.277E-01	1.617E-02	6.955
	+	300.09		2.976E+00	2.194E+00	3.221E+00	2.630E-01	0.924
PO-212	+	74.81		2.778E+00	7.676E-01	9.298E-01	1.075E-01	2.988
	+	77.11		2.222E+00	4.281E-01	5.277E-01	3.653E-02	4.210
	+	87.30		9.505E-01	9.467E-01	1.060E+00	1.331E-01	0.897
		115.19		-3.743E-01	7.249E+00	1.190E+01	7.547E-01	-0.031
	+	238.63	*	1.584E+00	2.262E-01	2.277E-01	1.617E-02	6.955
	+	300.09		2.976E+00	2.194E+00	3.221E+00	2.630E-01	0.924
BI-214	+	609.31	*	1.364E+00	2.616E-01	2.305E-01	1.898E-02	5.918
	+	768.36		1.825E+00	1.064E+00	9.739E-01	9.200E-02	1.874
		934.06		2.027E+00	1.220E+00	2.184E+00	2.233E-01	0.928
	+	1120.29		1.269E+00	4.434E-01	4.230E-01	3.842E-02	2.999
	+	1238.11		1.408E+00	1.280E+00	1.472E+00	1.230E-01	0.957
		1377.67		6.302E-01	9.215E-01	1.609E+00	1.511E-01	0.392
	+	1764.49		1.593E+00	3.681E-01	1.587E-01	9.406E-03	10.036

Sample ID : G232511004 Acquisition date : 7-JUL-2009 10:53:59

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-214	+	74.81		4.787E+00	1.294E+00	1.602E+00	1.611E-01	2.988
	+	77.11		3.809E+00	7.891E-01	9.046E-01	9.312E-02	4.210
	+	87.30		1.628E+00	1.618E+00	1.815E+00	1.965E-01	0.897
	+	241.98		1.423E+00	8.691E-01	1.328E+00	1.045E-01	1.071
	+	295.21		1.083E+00	4.463E-01	5.577E-01	4.708E-02	1.942
	+	351.92	*	1.269E+00	3.257E-01	3.304E-01	2.699E-02	3.840
PO-214	+	74.81		4.787E+00	1.294E+00	1.602E+00	1.611E-01	2.988
	+	77.11		3.809E+00	7.891E-01	9.046E-01	9.312E-02	4.210
	+	87.30		1.628E+00	1.618E+00	1.815E+00	1.965E-01	0.897
	+	241.98		1.423E+00	8.691E-01	1.328E+00	1.045E-01	1.071
	+	295.21		1.083E+00	4.463E-01	5.577E-01	4.708E-02	1.942
	+	351.92	*	1.269E+00	3.257E-01	3.304E-01	2.699E-02	3.840
PO-216	+	74.81		2.778E+00	7.676E-01	9.298E-01	1.075E-01	2.988
	+	77.11		2.222E+00	4.281E-01	5.277E-01	3.653E-02	4.210
	+	87.30		9.505E-01	9.467E-01	1.060E+00	1.331E-01	0.897
	+	238.63	*	1.584E+00	2.262E-01	2.277E-01	1.617E-02	6.955
	+	300.09		2.976E+00	2.194E+00	3.221E+00	2.630E-01	0.924
PO-218	+	74.81		4.787E+00	1.294E+00	1.602E+00	1.611E-01	2.988
	+	77.11		3.809E+00	7.891E-01	9.046E-01	9.312E-02	4.210
	+	87.30		1.628E+00	1.618E+00	1.815E+00	1.965E-01	0.897
	+	241.98		1.423E+00	8.691E-01	1.328E+00	1.045E-01	1.071
	+	295.21		1.083E+00	4.463E-01	5.577E-01	4.708E-02	1.942
	+	351.92	*	1.269E+00	3.257E-01	3.304E-01	2.699E-02	3.840
RA-224	+	240.98	*	2.698E+00	1.641E+00	2.582E+00	1.424E-01	1.045
RA-226	+	609.31	*	1.364E+00	2.616E-01	2.305E-01	1.898E-02	5.918
	+	768.36		1.825E+00	1.064E+00	9.739E-01	9.200E-02	1.874
		934.06		2.027E+00	1.220E+00	2.184E+00	2.233E-01	0.928
	+	1120.29		1.269E+00	4.434E-01	4.230E-01	3.842E-02	2.999
	+	1238.11		1.408E+00	1.280E+00	1.472E+00	1.230E-01	0.957
		1377.67		6.302E-01	9.215E-01	1.609E+00	1.511E-01	0.392
	+	1764.49		1.593E+00	3.681E-01	1.587E-01	9.406E-03	10.036
AC-228	+	338.32		1.575E+00	1.081E+00	1.029E+00	4.192E-01	1.531
	+	911.07	*	1.679E+00	3.374E-01	2.102E-01	2.308E-02	7.989
	+	969.11		1.936E+00	6.010E-01	3.593E-01	8.283E-02	5.388
RA-228	+	338.32		1.575E+00	1.081E+00	1.029E+00	4.192E-01	1.531
	+	911.07	*	1.679E+00	3.374E-01	2.102E-01	2.308E-02	7.989
	+	969.11		1.936E+00	6.010E-01	3.593E-01	8.283E-02	5.388
TH-228		84.40		3.440E+00	4.752E+00	7.182E+00	8.880E-01	0.479
	+	238.60	*	1.584E+00	2.262E-01	2.277E-01	1.617E-02	6.956
	+	300.10		2.976E+00	2.798E+00	3.221E+00	1.898E+00	0.924
TH-230	+	609.31	*	1.364E+00	2.616E-01	2.305E-01	1.898E-02	5.918
	+	768.36		1.825E+00	1.064E+00	9.739E-01	9.200E-02	1.874
		934.06		2.027E+00	1.220E+00	2.184E+00	2.233E-01	0.928
	+	1120.29		1.269E+00	4.433E-01	4.230E-01	3.842E-02	2.999
	+	1238.11		1.408E+00	1.280E+00	1.472E+00	1.230E-01	0.957
		1377.67		6.302E-01	9.215E-01	1.609E+00	1.511E-01	0.392
	+	1764.49		1.593E+00	3.681E-01	1.587E-01	9.406E-03	10.036
TH-232	+	338.32		1.575E+00	8.746E-01	1.029E+00	5.827E-02	1.531
	+	911.07	*	1.679E+00	3.374E-01	2.102E-01	2.308E-02	7.989

Sample ID : G232511004 Acquisition date : 7-JUL-2009 10:53:59

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	969.11		1.936E+00	6.010E-01	3.593E-01	8.283E-02	5.388
U-234	+	609.31	*	1.364E+00	2.616E-01	2.305E-01	1.898E-02	5.918
	+	768.36		1.825E+00	1.064E+00	9.739E-01	9.200E-02	1.874
		934.06		2.027E+00	1.220E+00	2.184E+00	2.233E-01	0.928
	+	1120.29		1.269E+00	4.433E-01	4.230E-01	3.842E-02	2.999
	+	1238.11		1.408E+00	1.280E+00	1.472E+00	1.230E-01	0.957
		1377.67		6.302E-01	9.215E-01	1.609E+00	1.511E-01	0.392
	+	1764.49		1.593E+00	3.681E-01	1.587E-01	9.406E-03	10.036
NP-237	+	86.50	*	6.035E-01	6.109E-01	6.779E-01	1.489E-01	0.890
		95.87		-1.047E+00	2.524E+00	2.916E+00	7.035E-01	-0.359
AM-241	+	59.54	*	2.352E+02	1.684E+01	1.022E+00	7.260E-02	230.193
AM-243	+	74.67	*	4.504E-01	1.171E-01	1.512E-01	1.027E-02	2.979
	+	86.72		2.263E+01	2.243E+01	2.536E+01	1.916E+00	0.892
		117.66		-4.053E+00	7.855E+00	1.277E+01	8.045E-01	-0.317
		142.18		-1.482E+01	3.540E+01	5.704E+01	3.229E+00	-0.260
ANH-511	+	511.00	*	6.704E-02	1.206E-01	1.426E-01	8.694E-03	0.470

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-5.605E-01	1.213E+00	1.937E+00	1.333E-01	-0.289
NA-22		1274.54	*	-4.345E-02	4.118E-02	6.062E-02	3.904E-03	-0.717
NA-24		1368.53	*	-4.048E-02	4.118E-02	Half-Life too short		
AL-26		1129.67		4.548E-01	1.653E+00	2.804E+00	1.709E-01	0.162
		1808.65	*	3.114E-02	2.766E-02	5.383E-02	3.088E-03	0.579
TI-44		67.85		4.344E-02	8.056E-02	1.366E-01	8.891E-03	0.318
	+	78.38	*	4.100E-01	7.899E-02	1.073E-01	7.504E-03	3.821
SC-46		889.25	*	1.639E-02	3.980E-02	6.655E-02	5.516E-03	0.246
	+	1120.51		2.133E-01	7.320E-02	1.121E-01	6.966E-03	1.903
V-48		944.10		-2.650E-01	6.921E-01	1.071E+00	8.599E-02	-0.247
		983.50	*	-3.285E-02	5.750E-02	8.681E-02	6.688E-03	-0.378
		1312.09		-3.867E-02	7.050E-02	1.091E-01	7.402E-03	-0.355
CR-51		320.08	*	3.386E-01	9.529E-01	1.589E+00	1.010E-01	0.213
MN-52		744.21		-9.562E-03	1.600E-01	2.618E-01	1.870E-02	-0.037
		848.13		-1.536E+00	5.121E+00	8.125E+00	6.472E-01	-0.189
		935.52		3.403E-01	2.001E-01	3.619E-01	2.931E-02	0.940
		1246.25		3.589E+00	5.732E+00	9.270E+00	5.712E-01	0.387
	+	1333.61		8.253E+00	4.814E+00	7.798E+00	5.446E-01	1.058
		1434.06	*	-7.151E-02	1.799E-01	2.781E-01	1.911E-02	-0.257
MN-54		834.83	*	-3.258E-02	3.869E-02	5.898E-02	4.636E-03	-0.552
CO-56		846.75	*	-1.427E-02	3.967E-02	6.270E-02	4.988E-03	-0.228
		977.42		-1.262E-01	3.003E+00	4.133E+00	3.206E-01	-0.031
		1037.82		-1.369E-01	2.754E-01	4.408E-01	3.405E-02	-0.310
		1175.09		1.067E+00	2.409E+00	4.107E+00	2.264E-01	0.260
	+	1238.25		1.400E-01	1.270E-01	1.609E-01	1.035E-02	0.870
		1360.21		-2.696E-01	8.312E-01	1.301E+00	9.057E-02	-0.207
		1771.40		2.538E-02	1.351E-01	2.064E-01	1.217E-02	0.123
CO-57		122.06	*	4.081E-03	5.310E-02	8.707E-02	5.445E-03	0.047

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-8.177E-02	4.268E-01	6.923E-01	4.656E-02	-0.118
CO-58		810.76	*	-1.942E-02	3.646E-02	5.686E-02	4.375E-03	-0.342
FE-59		142.65		-1.960E+00	5.274E+00	8.487E+00	4.794E-01	-0.231
		192.34		-3.408E-01	2.369E+00	3.767E+00	4.352E-01	-0.090
		1099.22	*	2.381E-02	8.516E-02	1.449E-01	1.070E-02	0.164
		1291.56		-5.054E-03	1.067E-01	1.743E-01	1.404E-02	-0.029
CO-60		1173.22		6.186E-02	4.875E-02	8.737E-02	4.803E-03	0.708
	+	1332.49	*	8.393E-02	4.896E-02	7.998E-02	5.586E-03	1.049
ZN-65		1115.52	*	-8.312E-02	9.615E-02	1.229E-01	7.733E-03	-0.676
GE-68		1077.35	*	-3.775E-01	1.094E+00	1.768E+00	1.192E-01	-0.213
AS-73		53.44	*	-3.754E+00	4.437E+00	7.170E+00	4.629E-01	-0.524
AS-74		595.88	*	-9.476E-02	1.723E-01	2.836E-01	1.805E-02	-0.334
		634.78		1.118E-01	6.944E-01	1.162E+00	7.489E-02	0.096
SE-75		66.05		-5.509E+00	8.301E+00	1.382E+01	1.206E+00	-0.399
		96.73		-4.744E-01	2.061E+00	2.406E+00	3.046E-01	-0.197
		121.11		5.872E-03	2.811E-01	4.607E-01	4.387E-02	0.013
		136.00		-5.365E-03	8.026E-02	1.305E-01	7.706E-03	-0.041
		198.60		-1.026E+00	4.435E+00	7.012E+00	4.711E-01	-0.146
		264.65	*	-2.451E-02	1.087E-01	1.818E-01	1.031E-02	-0.135
		279.53		-1.233E-01	2.681E-01	4.442E-01	2.722E-02	-0.278
		303.91		7.280E-01	6.178E+00	9.063E+00	8.582E-01	0.080
		400.65		-1.675E-01	8.229E-01	1.338E+00	1.196E-01	-0.125
BR-77	+	87.88		2.404E+02	2.382E+02	2.760E+02	2.110E+01	0.871
		200.40		3.920E+01	2.178E+02	3.472E+02	1.841E+01	0.113
	+	239.00		1.354E+02	1.835E+01	2.539E+01	1.398E+00	5.332
		249.79		-2.852E+01	8.622E+01	1.445E+02	8.025E+00	-0.197
		281.68		-4.391E+01	1.210E+02	2.011E+02	1.136E+01	-0.218
		297.23		1.457E+02	1.064E+02	1.190E+02	6.757E+00	1.224
		303.76		7.314E+00	2.839E+02	4.157E+02	2.362E+01	0.018
		439.47		-5.392E+01	2.883E+02	4.658E+02	2.682E+01	-0.116
		484.57		5.495E+01	4.232E+02	6.821E+02	4.081E+01	0.081
		520.65	*	-6.176E+00	1.571E+01	2.486E+01	1.525E+00	-0.248
		574.64		-1.164E+02	2.338E+02	3.868E+02	2.441E+01	-0.301
		578.91		1.108E+01	1.099E+02	1.610E+02	1.018E+01	0.069
		585.48		8.519E+02	2.362E+02	3.773E+02	2.392E+01	2.258
		755.35		5.398E+01	8.357E+01	1.436E+02	1.039E+01	0.376
		817.79		-8.704E+00	6.532E+01	1.054E+02	8.141E+00	-0.083
SR-82		698.33		4.183E+00	3.105E+01	5.178E+01	3.508E+00	0.081
		776.49	*	2.312E-03	3.503E-01	4.971E-01	3.678E-02	0.005
		1395.20		-1.168E+01	8.419E+00	1.068E+01	7.398E-01	-1.093
RB-83		520.41	*	-1.303E-01	1.930E-01	3.032E-01	1.859E-02	-0.430
		529.64		2.262E-01	2.842E-01	4.622E-01	2.850E-02	0.489
		552.65		1.600E-01	4.463E-01	7.577E-01	4.732E-02	0.211
RB-84		881.50	*	-2.304E-02	6.328E-02	9.923E-02	8.164E-03	-0.232
KR-85		513.99	*	3.735E+01	2.159E+01	3.160E+01	1.930E+00	1.182
SR-85		513.99	*	1.872E-01	1.082E-01	1.584E-01	9.673E-03	1.182
RB-86		1076.63	*	-5.310E-01	6.305E-01	9.680E-01	6.535E-02	-0.549
Y-88		898.02		-2.153E-02	4.209E-02	6.519E-02	5.477E-03	-0.330
		1836.01	*	-3.006E-03	2.533E-02	4.081E-02	2.297E-03	-0.074

Sample ID : G232511004 Acquisition date : 7-JUL-2009 10:53:59

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	-5.128E-02	9.662E-02	1.564E-01	8.578E-03	-0.328
Y-91		1204.90	*	8.992E+00	1.894E+01	3.232E+01	1.868E+00	0.278
NB-94		702.63	*	6.969E-03	3.287E-02	5.507E-02	3.750E-03	0.127
		871.10		-7.589E-03	3.295E-02	5.240E-02	4.268E-03	-0.145
NB-95		765.79	*	-9.074E-03	4.196E-02	5.814E-02	4.253E-03	-0.156
NB-95M		235.69	*	1.682E-01	3.045E-01	4.593E-01	3.350E-02	0.366
ZR-95		724.18		-1.507E-02	8.760E-02	1.226E-01	9.670E-03	-0.123
		756.15	*	4.084E-02	6.523E-02	1.120E-01	9.246E-03	0.365
NB-97		657.90	*	1.909E-01	6.523E-02	Half-Life too short		
		1024.50		-5.039E-01	6.523E-02	Half-Life too short		
ZR-97		254.15		5.579E-02	6.523E-02	Half-Life too short		
		355.39		6.104E-01	6.523E-02	Half-Life too short		
		507.63	*	7.877E-02	6.523E-02	Half-Life too short		
		602.52		1.181E-01	6.523E-02	Half-Life too short		
		1021.30		3.028E-01	6.523E-02	Half-Life too short		
		1147.95		6.226E-02	6.523E-02	Half-Life too short		
		1362.66		1.712E-01	6.523E-02	Half-Life too short		
		1750.46		1.033E-01	6.523E-02	Half-Life too short		
MO-99		140.51		1.554E-01	3.079E+01	4.995E+01	1.345E+01	0.003
		181.06		1.061E+01	2.365E+01	3.620E+01	6.134E+00	0.293
		366.43		-1.656E+02	1.505E+02	2.421E+02	1.354E+01	-0.684
		739.58	*	-3.969E+00	6.127E+00	9.513E+00	1.368E+00	-0.417
		778.00		-1.180E+01	1.831E+01	2.746E+01	2.035E+00	-0.430
TC-99M		140.51	*	9.888E+05	1.831E+01	Half-Life too short		
RH-101		127.23		-4.112E-02	6.704E-02	1.084E-01	6.576E-03	-0.379
		198.01	*	-1.537E-02	8.241E-02	1.304E-01	6.900E-03	-0.118
		325.23		-3.914E-01	5.962E-01	9.759E-01	5.543E-02	-0.401
RH-102		418.52		-3.285E-04	9.929E-01	1.615E+00	9.109E-02	0.000
		475.06	*	9.008E-02	1.177E-01	1.916E-01	1.138E-02	0.470
		631.29		-9.424E-02	1.145E-01	1.856E-01	1.195E-02	-0.508
		697.49		-7.446E-02	7.508E-02	1.154E-01	7.815E-03	-0.645
		766.84		7.742E-02	1.116E-01	1.697E-01	1.242E-02	0.456
		1046.59		-5.629E-02	1.143E-01	1.819E-01	1.289E-02	-0.309
		1112.84		-8.618E-02	2.482E-01	3.568E-01	2.252E-02	-0.242
RU-103		497.08	*	4.829E-03	1.245E-01	2.000E-01	2.551E-02	0.024
	+	610.33		1.418E+01	3.310E+00	3.382E+00	5.294E-01	4.194
RH-106	+	511.85		3.335E-01	6.000E-01	7.360E-01	4.488E-02	0.453
		621.84	*	-5.854E-02	6.608E-01	1.099E+00	1.325E-01	-0.053
		1050.47		-4.036E-01	2.268E+00	3.738E+00	2.633E-01	-0.108
RU-106	+	511.85		3.335E-01	6.000E-01	7.360E-01	4.488E-02	0.453
		621.84	*	-5.854E-02	6.608E-01	1.099E+00	7.059E-02	-0.053
		1050.47		-4.036E-01	2.268E+00	3.738E+00	2.633E-01	-0.108
AG-108M		433.93	*	1.324E-02	1.222E-01	1.986E-01	1.237E-02	0.067
		614.37		-2.144E-02	8.820E-02	1.267E-01	8.684E-03	-0.169
		722.95		-1.499E-03	3.914E-02	5.566E-02	4.111E-03	-0.027
AG-110M		657.75	*	4.027E-01	1.065E-01	1.679E-01	1.145E-02	2.398
		677.61		-8.963E-02	2.974E-01	4.826E-01	3.341E-02	-0.186
		706.67		3.937E-02	2.017E-01	3.374E-01	2.409E-02	0.117
		763.93		1.114E-01	1.553E-01	2.385E-01	1.809E-02	0.467

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		1.653E-02	4.705E-02	7.852E-02	6.707E-03	0.211
		937.48		-5.535E-02	1.182E-01	1.832E-01	1.542E-02	-0.302
		1384.27		-4.897E-02	1.661E-01	2.624E-01	1.899E-02	-0.187
IN-111		171.28		7.141E-01	1.311E+00	2.124E+00	1.092E-01	0.336
		245.39	*	1.148E+00	1.686E+00	2.543E+00	1.408E-01	0.451
IN-113M		391.69	*	1.989E-04	1.396E-01	2.281E-01	1.343E-02	0.001
SN-113		391.69	*	1.989E-04	1.396E-01	2.281E-01	1.343E-02	0.001
IN-114M		190.27	*	2.353E-01	4.780E-01	7.309E-01	3.834E-02	0.322
CD-115		260.90		5.310E+01	1.646E+02	2.778E+02	1.554E+01	0.191
		492.35		8.241E+00	6.060E+01	9.759E+01	5.872E+00	0.084
		527.90	*	-2.612E-01	1.553E+01	2.479E+01	1.527E+00	-0.011
SN-117M		156.02		9.740E-01	4.231E+00	6.858E+00	3.662E-01	0.142
		158.56	*	5.253E-02	1.047E-01	1.702E-01	8.992E-03	0.309
SB-122		563.90	*	-1.750E+00	2.532E+00	4.172E+00	2.620E-01	-0.419
		692.80		2.917E+00	2.286E+01	3.815E+01	2.568E+00	0.076
I-123		159.00	*	-1.786E-01	2.286E+01	Half-Life too short		
		528.96		5.584E+01	2.286E+01	Half-Life too short		
TE-123M		159.00	*	-1.349E-02	5.982E-02	9.610E-02	5.149E-03	-0.140
I-124		602.71	*	-6.172E-02	1.015E+00	1.542E+00	9.837E-02	-0.040
		722.78		2.145E-02	2.866E+00	4.097E+00	2.856E-01	0.005
		1325.50		-1.919E+01	2.397E+01	3.214E+01	2.223E+00	-0.597
		1376.25		2.020E+01	1.990E+01	3.584E+01	2.489E+00	0.564
		1509.49		7.767E+00	1.006E+01	1.788E+01	1.203E+00	0.435
		1691.02		-1.339E+00	2.258E+00	3.363E+00	2.087E-01	-0.398
SB-124		602.71		-5.008E-03	8.237E-02	1.251E-01	7.985E-03	-0.040
		645.85		6.117E-01	1.074E+00	1.815E+00	1.295E-01	0.337
		709.31		-5.979E-02	2.686E+00	4.427E+00	3.039E-01	-0.014
		713.82		1.484E+00	1.564E+00	2.731E+00	2.970E-01	0.543
		722.78		2.523E-03	3.371E-01	4.819E-01	3.470E-02	0.005
	+	968.20		1.944E+01	4.319E+00	6.931E+00	5.432E-01	2.804
		1045.16		-1.000E-01	2.345E+00	3.908E+00	2.775E-01	-0.026
		1325.50		-2.411E+00	3.012E+00	4.038E+00	2.793E-01	-0.597
		1368.21		-9.055E-01	1.439E+00	2.091E+00	2.609E-01	-0.433
		1436.60		1.124E-01	3.587E+00	5.854E+00	4.019E-01	0.019
		1691.02	*	-3.714E-02	6.266E-02	9.330E-02	6.226E-03	-0.398
SB-125		427.89	*	3.443E-01	3.400E-01	5.596E-01	3.327E-02	0.615
		463.38		1.752E-01	1.113E+00	1.800E+00	1.230E-01	0.097
		600.56		-1.032E-01	3.534E-01	5.860E-01	4.227E-02	-0.176
		635.90		2.504E-01	5.752E-01	9.697E-01	7.129E-02	0.258
TE-125M		109.28	*	-7.878E+00	1.783E+01	2.913E+01	2.510E+00	-0.270
I-126		388.63		1.031E-02	5.705E-01	9.332E-01	5.126E-02	0.011
		666.33	*	5.342E-01	2.398E-01	3.929E-01	2.562E-02	1.359
		753.82		5.574E-01	1.226E+00	2.081E+00	1.503E-01	0.268
SB-126		223.80		6.815E+00	8.410E+00	1.441E+01	7.830E-01	0.473
		278.60		4.297E+00	5.361E+00	9.058E+00	5.113E-01	0.474
	+	296.50		9.555E+00	3.892E+00	5.345E+00	3.033E-01	1.788
		414.70		-6.277E-02	2.304E-01	3.733E-01	2.097E-02	-0.168
		415.30		5.909E+00	1.912E+01	3.126E+01	1.757E+00	0.189
		555.20		3.367E-01	7.996E+00	1.347E+01	8.421E-01	0.025

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		573.80		-2.367E-01	1.952E+00	3.265E+00	2.059E-01	-0.073
		593.00		1.813E-01	1.725E+00	2.897E+00	1.842E-01	0.063
		656.30		7.259E+00	8.140E+00	1.212E+01	7.850E-01	0.599
		666.33		2.221E-01	9.970E-02	1.634E-01	1.065E-02	1.359
		675.00		5.256E-02	1.783E+00	2.961E+00	1.951E-01	0.018
		695.00		1.131E-02	6.323E-02	1.059E-01	7.146E-03	0.107
		697.00		-2.557E-01	2.369E-01	3.622E-01	2.450E-02	-0.706
		720.50	*	6.479E-02	1.218E-01	1.917E-01	1.333E-02	0.338
		856.80		1.433E-02	4.344E-01	6.122E-01	4.919E-02	0.023
		989.30		9.880E-01	1.076E+00	1.864E+00	1.426E-01	0.530
		1034.80		-2.791E+00	6.903E+00	1.114E+01	8.029E-01	-0.251
		1213.00		-1.779E+00	4.298E+00	6.883E+00	4.030E-01	-0.258
SB-127		61.10		1.865E+04	1.650E+03	5.043E+02	4.419E+01	36.983
		252.40		-4.105E+00	7.406E+00	1.203E+01	4.975E+00	-0.341
		290.80		1.783E+01	4.131E+01	6.121E+01	5.086E+00	0.291
		411.60		1.428E+01	2.760E+01	4.521E+01	6.249E+00	0.316
		444.90		1.167E+01	2.592E+01	4.220E+01	4.282E+00	0.277
		473.00		1.128E+00	4.729E+00	7.643E+00	8.127E-01	0.148
		543.00		1.538E+00	2.679E+01	4.521E+01	5.686E+00	0.034
		603.60		4.198E+00	1.788E+01	2.625E+01	2.747E+00	0.160
		685.20	*	-2.235E-01	8.664E-01	1.408E+00	1.309E-01	-0.159
		698.50		2.259E+00	1.001E+01	1.679E+01	2.424E+00	0.135
		722.20		1.174E-01	1.950E+01	2.787E+01	2.577E+00	0.004
		783.80		2.203E+00	2.393E+00	4.155E+00	4.592E-01	0.530
XE-127		57.60		1.376E+03	9.295E+01	6.648E+01	4.201E+00	20.703
		145.22		-4.832E-01	1.354E+00	2.176E+00	1.216E-01	-0.222
		172.10		-6.518E-03	2.537E-01	4.070E-01	2.095E-02	-0.016
		202.84	*	-5.463E-04	1.114E-01	1.768E-01	9.403E-03	-0.003
		374.96		4.043E-01	5.909E-01	9.790E-01	5.440E-02	0.413
I-131		80.18		-8.459E-01	6.908E+00	1.034E+01	7.397E-01	-0.082
		284.30		1.279E+00	3.167E+00	5.324E+00	3.354E-01	0.240
		364.48	*	-9.792E-02	2.919E-01	4.767E-01	2.991E-02	-0.205
		636.97		2.321E+00	2.719E+00	4.634E+00	3.273E-01	0.501
		722.89		-1.166E-01	5.477E+00	7.805E+00	5.481E-01	-0.015
TE-132		49.72		1.511E+02	5.864E+01	9.916E+01	8.575E+00	1.523
		111.76		9.171E+00	3.746E+01	6.168E+01	5.276E+00	0.149
		116.30		1.392E+01	3.546E+01	5.857E+01	4.969E+00	0.238
		228.16	*	-5.832E-02	1.029E+00	1.742E+00	2.406E-01	-0.033
BA-133		53.15		-3.032E+01	1.869E+01	3.134E+01	2.026E+00	-0.968
		79.62		-4.786E-01	2.350E+00	3.512E+00	5.059E-01	-0.136
		81.00		-8.652E-02	1.802E-01	2.669E-01	4.039E-02	-0.324
		276.40		1.215E+00	9.111E-01	1.534E+00	1.978E-01	0.792
		302.84		-5.168E-02	4.244E-01	6.194E-01	7.185E-02	-0.083
		356.01	*	9.160E-03	1.418E-01	2.049E-01	2.351E-02	0.045
		383.85		-2.218E-01	9.544E-01	1.555E+00	1.668E-01	-0.143
I-133	+	510.53		1.209E-01	9.544E-01	Half-Life too short		
		529.87	*	1.972E-03	9.544E-01	Half-Life too short		
		706.58		1.213E-02	9.544E-01	Half-Life too short		
		856.28		-4.866E-02	9.544E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		875.33		6.040E-03	9.544E-01	Half-Life too short		
		1236.41		3.695E-02	9.544E-01	Half-Life too short		
		1298.22		2.645E-02	9.544E-01	Half-Life too short		
CS-134		475.35		6.975E+00	7.642E+00	1.246E+01	7.404E-01	0.560
		563.23		-3.247E-01	7.610E-01	1.264E+00	8.077E-02	-0.257
		569.32		-9.855E-02	4.222E-01	7.033E-01	4.539E-02	-0.140
		604.70		2.618E-02	7.478E-02	1.103E-01	7.076E-03	0.237
		795.84	*	4.913E-02	4.388E-02	7.736E-02	5.898E-03	0.635
		801.93		3.427E-02	3.666E-01	6.037E-01	4.622E-02	0.057
		1038.57		-2.634E-01	3.441E+00	5.720E+00	4.102E-01	-0.046
		1167.94		-1.557E+00	2.588E+00	4.092E+00	2.280E-01	-0.381
		1365.15		-3.370E-01	9.761E-01	1.516E+00	1.128E-01	-0.222
CS-135		268.24	*	1.105E-02	3.820E-01	6.409E-01	4.820E-02	0.017
I-135		288.45		-2.351E+08	3.820E-01	Half-Life too short		
		417.63		-8.401E+07	3.820E-01	Half-Life too short		
		546.56		-1.781E+07	3.820E-01	Half-Life too short		
		836.80		8.853E+07	3.820E-01	Half-Life too short		
		1038.76		-1.664E+06	3.820E-01	Half-Life too short		
		1124.00		1.496E+08	3.820E-01	Half-Life too short		
		1131.51		1.924E+07	3.820E-01	Half-Life too short		
		1260.41	*	5.902E+06	3.820E-01	Half-Life too short		
		1457.56		1.192E+09	3.820E-01	Half-Life too short		
		1678.03		6.740E+06	3.820E-01	Half-Life too short		
		1706.46		5.923E+07	3.820E-01	Half-Life too short		
		1791.20		-4.736E+06	3.820E-01	Half-Life too short		
CS-136		66.91		4.750E-02	1.204E+00	2.028E+00	2.910E-01	0.023
	+	86.29		2.393E+00	2.383E+00	2.768E+00	3.361E-01	0.865
		153.22		-1.352E-01	1.215E+00	1.954E+00	1.349E-01	-0.069
		163.89		-3.517E-01	2.060E+00	3.307E+00	2.232E-01	-0.106
		176.55		-3.299E-01	7.303E-01	1.161E+00	6.918E-02	-0.284
		273.65		-1.757E+00	9.693E-01	1.566E+00	1.012E-01	-1.122
		340.57		2.074E-01	3.451E-01	5.066E-01	3.056E-02	0.409
		818.51		-8.861E-03	6.148E-02	9.908E-02	7.667E-03	-0.089
		1048.07	*	-1.221E-02	9.492E-02	1.556E-01	1.168E-02	-0.079
		1235.34		1.190E-01	5.973E-01	8.628E-01	8.747E-02	0.138
CE-139		165.85	*	1.081E-02	6.397E-02	1.032E-01	5.288E-03	0.105
BA-140		162.64		1.693E-01	1.436E+00	2.318E+00	1.388E-01	0.073
		304.84		1.305E+00	3.249E+00	5.022E+00	1.369E+00	0.260
		423.70		-3.640E+00	6.209E+00	9.818E+00	3.118E+00	-0.371
		537.32	*	-7.866E-02	5.626E-01	9.449E-01	3.080E-01	-0.083
LA-140		328.77		7.727E-01	6.952E-01	1.169E+00	7.464E-02	0.661
		432.53		-3.257E+00	6.858E+00	1.104E+01	6.992E-01	-0.295
		487.03		-6.180E-01	4.241E-01	6.595E-01	4.443E-02	-0.937
		751.79		-9.340E-01	1.457E+00	2.273E+00	1.883E-01	-0.411
		815.85		-1.252E-01	2.637E-01	4.123E-01	3.632E-02	-0.304
		867.82		3.131E-02	1.363E+00	1.916E+00	1.649E-01	0.016
		919.63		1.471E+00	2.449E+00	3.688E+00	3.806E-01	0.399
		925.24		-4.197E-01	8.600E-01	1.317E+00	1.152E-01	-0.319
		1596.49	*	-1.667E-02	7.398E-02	1.204E-01	7.842E-03	-0.138

---- Non-Identified Nuclides ----

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CE-141		145.44	*	1.513E-02	1.214E-01	1.973E-01	1.148E-02	0.077
CE-143		57.37		6.922E-02	1.214E-01	Half-Life too short		
		231.56		-1.158E-03	1.214E-01	Half-Life too short		
		293.26	*	8.420E-05	1.214E-01	Half-Life too short		
	+	350.59		9.718E-03	1.214E-01	Half-Life too short		
		490.36		2.005E-03	1.214E-01	Half-Life too short		
		664.57		3.806E-01	1.214E-01	Half-Life too short		
		721.93		6.166E-05	1.214E-01	Half-Life too short		
CE-144		80.11		-4.925E-01	3.812E+00	5.707E+00	4.051E-01	-0.086
		133.54	*	2.489E-01	4.196E-01	6.881E-01	9.796E-02	0.362
PM-144		476.78		6.170E-02	2.627E-01	4.245E-01	2.999E-02	0.145
		618.01		3.842E-02	6.582E-02	1.116E-01	7.513E-03	0.344
		696.49	*	-9.989E-03	3.343E-02	5.416E-02	3.664E-03	-0.184
		778.57		-2.221E+00	2.092E+00	3.112E+00	2.309E-01	-0.714
PR-144		696.49	*	-6.761E-01	2.263E+00	3.666E+00	2.479E-01	-0.184
		1489.15		2.774E+00	9.559E+00	1.620E+01	1.097E+00	0.171
PM-146		453.90	*	-3.529E-02	1.727E-01	2.781E-01	2.405E-02	-0.127
		633.02		1.188E+00	2.925E+00	4.878E+00	1.801E+00	0.244
		735.90		-7.619E-03	1.483E-01	2.204E-01	6.211E-02	-0.035
		747.13		-2.517E-02	8.085E-02	1.294E-01	1.708E-02	-0.194
ND-147		91.11		6.313E-01	5.471E-01	6.691E-01	5.486E-02	0.944
		319.41		2.100E+00	7.784E+00	1.296E+01	7.371E-01	0.162
		439.89		-4.288E+00	1.928E+01	3.112E+01	1.794E+00	-0.138
		531.02	*	-4.561E-01	1.340E+00	2.118E+00	2.899E-01	-0.215
PM-149		285.90	*	-3.599E+01	1.197E+02	1.988E+02	2.806E+01	-0.181
EU-152		121.78		3.925E-02	1.545E-01	2.540E-01	2.021E-02	0.155
		244.69		-3.471E-02	8.908E-01	1.325E+00	7.330E-02	-0.026
		344.27	*	1.661E-01	2.975E-01	4.595E-01	2.945E-02	0.362
		443.98		1.246E+00	3.718E+00	6.050E+00	3.499E-01	0.206
		778.89		-1.991E-01	2.390E-01	3.635E-01	2.696E-02	-0.548
		867.32		2.104E-01	8.830E-01	1.274E+00	1.034E-01	0.165
	+	964.01		5.774E-01	3.865E-01	5.137E-01	4.044E-02	1.124
		1085.78		-1.640E-01	3.570E-01	5.707E-01	3.791E-02	-0.287
		1112.02		-1.108E-01	3.391E-01	5.068E-01	3.204E-02	-0.219
		1407.95		7.479E-02	1.675E-01	2.889E-01	1.995E-02	0.259
GD-153		69.67		5.934E-01	3.130E+00	4.753E+00	3.125E-01	0.125
		83.37		2.220E+01	2.722E+01	4.134E+01	3.023E+00	0.537
	+	97.43	*	3.857E-01	2.153E-01	2.564E-01	1.783E-02	1.504
		103.18		2.356E-01	2.297E-01	3.467E-01	2.317E-02	0.680
EU-154		123.07		1.761E-02	1.091E-01	1.790E-01	1.729E-02	0.098
		247.94		1.519E-01	8.822E-01	1.491E+00	1.400E-01	0.102
		591.81		-5.532E-02	1.306E+00	2.184E+00	2.209E-01	-0.025
		723.30		-2.384E-02	1.624E-01	2.279E-01	1.839E-02	-0.105
		756.87		3.869E-01	7.382E-01	1.257E+00	1.386E-01	0.308
		873.19		2.421E-02	2.831E-01	4.627E-01	5.518E-02	0.052
		996.32		-3.914E-01	3.384E-01	5.005E-01	8.653E-02	-0.782
		1004.76		-1.957E-01	1.926E-01	2.932E-01	3.179E-02	-0.668
		1274.45	*	-1.244E-01	1.152E-01	1.686E-01	1.642E-02	-0.738
EU-155		48.70		-2.729E+00	1.092E+01	1.862E+01	1.216E+00	-0.147

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	+	60.01		7.644E+03	4.839E+02	1.114E+02	6.999E+00	68.625
	+	86.54		2.473E-01	2.451E-01	2.887E-01	2.206E-02	0.857
		105.31	*	-2.394E-02	2.123E-01	3.497E-01	2.357E-02	-0.068
TB-160	+	86.79		6.476E-01	6.417E-01	7.569E-01	5.723E-02	0.856
		197.04		2.104E-01	1.368E+00	2.178E+00	1.151E-01	0.097
		215.65		1.610E+00	1.825E+00	2.927E+00	1.577E-01	0.550
	+	298.57		4.241E-01	3.118E-01	4.593E-01	2.608E-02	0.923
		879.36	*	-1.347E-02	1.299E-01	2.088E-01	1.714E-02	-0.065
		962.29		4.353E-01	5.490E-01	8.295E-01	6.541E-02	0.525
	+	966.15		3.885E-01	2.600E-01	4.084E-01	3.208E-02	0.951
		1177.93		-3.377E-01	3.804E-01	5.883E-01	3.259E-02	-0.574
		1271.85		-5.272E-01	6.506E-01	9.846E-01	6.303E-02	-0.535
HO-166M		80.57		5.642E-05	4.912E-01	7.373E-01	5.255E-02	0.000
	+	184.41		1.696E-01	9.497E-02	1.294E-01	6.745E-03	1.310
		280.46		-2.303E-01	2.131E-01	3.496E-01	1.975E-02	-0.659
		410.95		7.899E-02	8.126E-01	1.325E+00	7.417E-02	0.060
		711.68	*	1.210E-02	6.046E-02	1.011E-01	6.960E-03	0.120
		752.31		-2.113E-01	2.604E-01	4.003E-01	2.885E-02	-0.528
		810.29		-2.087E-02	5.564E-02	8.800E-02	6.747E-03	-0.237
TM-171		51.35		7.169E+01	1.519E+02	2.595E+02	1.691E+01	0.276
		52.39		-1.016E+02	8.050E+01	1.356E+02	8.802E+00	-0.749
	+	59.40		4.015E+04	2.542E+03	6.216E+02	3.898E+01	64.596
		66.72	*	-3.382E+01	4.939E+01	8.221E+01	5.321E+00	-0.411
LU-176		88.36		1.169E-01	4.025E-01	5.534E-01	4.217E-02	0.211
		201.83		2.211E-02	7.108E-02	1.135E-01	6.028E-03	0.195
		306.84	*	-1.479E-02	6.700E-02	1.109E-01	6.302E-03	-0.133
		401.10		3.511E+00	2.165E+01	3.541E+01	1.961E+00	0.099
LU-177		112.95		-2.410E+00	2.646E+00	4.265E+00	2.725E-01	-0.565
	+	208.36	*	2.303E+00	2.130E+00	3.421E+00	1.830E-01	0.673
LU-177M		52.97		-1.609E+01	8.387E+00	1.401E+01	9.064E-01	-1.149
		54.07		7.052E+00	4.902E+00	7.561E+00	4.865E-01	0.933
		61.30		3.191E+02	2.107E+01	1.323E+01	8.356E-01	24.129
		121.62		2.099E-01	7.852E-01	1.292E+00	8.065E-02	0.162
		147.16		-7.879E-02	1.329E+00	2.151E+00	1.192E-01	-0.037
		171.86		1.544E-01	1.058E+00	1.703E+00	8.764E-02	0.091
		218.09		-1.664E-01	2.105E+00	3.322E+00	1.795E-01	-0.050
		268.79		1.194E+00	1.897E+00	3.210E+00	1.804E-01	0.372
		319.02		1.014E-01	6.889E-01	1.145E+00	6.509E-02	0.089
		367.43		-9.935E-01	2.749E+00	4.485E+00	2.506E-01	-0.222
		413.65	*	-2.489E-01	5.928E-01	9.580E-01	5.377E-02	-0.260
HF-181		56.28		3.986E+01	6.091E+00	8.898E+00	5.659E-01	4.480
		57.53		1.103E+02	7.488E+00	5.530E+00	3.496E-01	19.937
		65.20		-9.095E-01	1.567E+00	2.616E+00	1.680E-01	-0.348
		133.02		2.168E-03	1.306E-01	2.130E-01	1.256E-02	0.010
		136.25		-1.662E-01	9.117E-01	1.479E+00	8.594E-02	-0.112
		345.85		-9.501E-02	5.475E-01	8.695E-01	4.913E-02	-0.109
		482.03	*	5.459E-02	1.471E-01	2.381E-01	1.422E-02	0.229
W-181		56.28		1.600E+01	2.441E+00	3.565E+00	2.267E-01	4.490
		57.53		4.412E+01	2.997E+00	2.216E+00	1.401E-01	19.915

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		65.20	*	-3.617E-01	6.232E-01	1.040E+00	6.683E-02	-0.348
TA-182		67.75		9.627E-02	1.897E-01	3.216E-01	2.092E-02	0.299
	+	100.10		8.923E-01	4.980E-01	5.737E-01	3.910E-02	1.555
		152.43		9.619E-02	6.870E-01	1.113E+00	6.035E-02	0.086
		222.10		1.376E-01	7.970E-01	1.356E+00	7.353E-02	0.102
		1001.68		-8.173E-01	1.776E+00	2.872E+00	2.165E-01	-0.285
	+	1121.28		5.920E-01	2.031E-01	3.162E-01	1.961E-02	1.872
		1189.05		-4.337E-03	2.928E-01	4.836E-01	2.727E-02	-0.009
		1221.42	*	-2.992E-02	1.892E-01	3.084E-01	1.830E-02	-0.097
		1230.97		1.948E-01	5.229E-01	7.986E-01	4.808E-02	0.244
RE-183		57.98		1.058E+02	6.817E+00	3.004E+00	1.895E-01	35.208
	+	59.32		1.614E+02	1.022E+01	2.515E+00	1.578E-01	64.173
		67.20		1.358E-01	3.368E-01	5.703E-01	3.700E-02	0.238
		162.32	*	2.017E-02	2.310E-01	3.727E-01	1.937E-02	0.054
	+	208.81		2.534E+00	2.343E+00	3.755E+00	2.010E-01	0.675
		291.72		7.055E-01	2.605E+00	3.847E+00	2.181E-01	0.183
RE-184		57.98		3.947E+02	2.544E+01	1.121E+01	7.071E-01	35.208
	+	59.32		6.017E+02	3.809E+01	9.376E+00	5.882E-01	64.173
		67.20		5.066E-01	1.256E+00	2.127E+00	1.380E-01	0.238
		161.27		2.041E-01	7.533E-01	1.219E+00	6.368E-02	0.167
		216.55		7.854E-02	6.584E-01	1.043E+00	5.627E-02	0.075
		252.85	*	-5.248E-02	5.623E-01	9.452E-01	5.260E-02	-0.056
		318.01		-1.230E+00	1.216E+00	1.978E+00	1.125E-01	-0.622
		792.07		-8.085E-01	9.720E-01	1.488E+00	1.120E-01	-0.543
		903.28		4.240E-01	9.978E-01	1.628E+00	1.355E-01	0.260
		920.93		-3.022E-01	4.102E-01	5.918E-01	4.855E-02	-0.511
OS-185	+	59.72		4.427E+02	2.802E+01	6.673E+00	4.188E-01	66.337
		61.14		6.860E+01	4.421E+00	1.972E+00	1.245E-01	34.783
		69.30		9.553E-03	5.576E-01	8.441E-01	5.538E-02	0.011
		592.07		2.166E-01	5.205E+00	8.726E+00	5.547E-01	0.025
		646.12	*	2.615E-02	9.264E-02	1.553E-01	1.004E-02	0.168
		717.42		-8.670E-01	8.443E-01	1.283E+00	8.889E-02	-0.676
		874.81		4.661E-02	5.674E-01	9.268E-01	7.577E-02	0.050
		880.27		-5.936E-01	7.561E-01	1.140E+00	9.367E-02	-0.521
RE-188		155.03	*	-5.298E-02	3.488E-01	5.602E-01	3.004E-02	-0.095
		477.96		-6.324E+00	1.160E+01	1.850E+01	1.101E+00	-0.342
		633.10		2.351E+00	5.727E+00	9.655E+00	6.219E-01	0.244
W-188		63.58		8.217E+01	9.720E+01	1.505E+02	9.602E+00	0.546
		227.08		-2.157E+01	2.938E+01	4.922E+01	2.682E+00	-0.438
		290.67	*	9.970E+00	2.064E+01	3.064E+01	1.736E+00	0.325
IR-192	+	295.96		8.093E-01	3.298E-01	4.561E-01	2.631E-02	1.774
		308.46		-8.365E-02	2.540E-01	4.197E-01	2.414E-02	-0.199
		316.51	*	-9.498E-04	9.109E-02	1.511E-01	8.634E-03	-0.006
		468.07		1.757E-01	2.715E-01	4.415E-01	2.993E-02	0.398
		604.41		3.911E-01	9.918E-01	1.464E+00	1.708E-01	0.267
		612.46		3.102E+00	1.583E+00	2.451E+00	1.972E-01	1.266
AU-195		65.12		-2.025E-01	2.912E-01	4.851E-01	3.116E-02	-0.417
		66.83		-9.919E-02	1.624E-01	2.707E-01	1.753E-02	-0.366
	+	75.70		1.446E+00	3.759E-01	5.772E-01	3.952E-02	2.505

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	98.88	*	1.121E+00	6.257E-01	7.576E-01	5.210E-02	1.480
		129.76		1.850E+00	5.857E+00	9.599E+00	5.752E-01	0.193
TL-200		367.94	*	-2.299E-05	5.857E+00	Half-Life too short		
		579.30		1.665E-03	5.857E+00	Half-Life too short		
		828.27		8.739E-04	5.857E+00	Half-Life too short		
		1205.75		4.427E-04	5.857E+00	Half-Life too short		
TL-201		68.90		-2.671E-01	5.260E+00	8.457E+00	5.536E-01	-0.032
		70.82		-9.661E-01	3.085E+00	4.632E+00	3.066E-01	-0.209
		80.30		-6.146E-01	5.543E+00	8.301E+00	5.902E-01	-0.074
		135.34		8.239E-02	3.202E+01	5.214E+01	3.042E+00	0.002
		167.43	*	-2.686E+00	9.410E+00	1.505E+01	7.716E-01	-0.178
TL-202		68.90		-3.478E-02	6.847E-01	1.101E+00	7.208E-02	-0.032
		70.82		-1.254E-01	4.005E-01	6.013E-01	3.981E-02	-0.209
		80.30		-7.982E-02	7.199E-01	1.078E+00	7.665E-02	-0.074
		439.56	*	-4.339E-02	2.320E-01	3.748E-01	2.158E-02	-0.116
HG-203		70.83		-5.967E-01	1.901E+00	2.852E+00	3.547E-01	-0.209
		72.87		9.759E-02	1.080E+00	1.633E+00	1.966E-01	0.060
		82.60		1.554E+00	1.862E+00	2.999E+00	3.878E-01	0.518
		279.20	*	6.654E-03	9.847E-02	1.646E-01	9.899E-03	0.040
BI-207		72.80		2.668E-04	3.270E-01	4.935E-01	3.309E-02	0.001
	+	74.97		8.085E-01	2.102E-01	3.123E-01	2.127E-02	2.589
		84.90		3.056E-01	3.504E-01	5.320E-01	3.948E-02	0.574
		569.67		-1.062E-02	6.571E-02	1.097E-01	6.905E-03	-0.097
		1063.62	*	5.047E-02	4.853E-02	8.750E-02	6.036E-03	0.577
		1770.23		4.166E-01	4.141E-01	7.362E-01	4.345E-02	0.566
TL-207		81.07		-1.949E-01	3.970E-01	5.889E-01	4.216E-02	-0.331
		83.78		9.855E-02	2.341E-01	3.529E-01	2.591E-02	0.279
		94.90		-7.347E-02	5.882E-01	6.904E-01	4.905E-02	-0.106
		122.32		3.611E-01	3.693E+00	6.057E+00	4.288E-01	0.060
		144.24		-4.075E-01	1.380E+00	2.222E+00	1.574E-01	-0.183
		154.21		-5.802E-01	8.290E-01	1.318E+00	8.790E-02	-0.440
		269.46		4.216E-01	4.501E-01	7.645E-01	4.504E-02	0.552
		323.87	*	-1.594E+00	1.799E+00	2.904E+00	4.785E-01	-0.549
	+	338.28		6.576E+00	3.697E+00	4.635E+00	4.847E-01	1.419
		445.03		4.609E+00	8.917E+00	1.453E+01	1.491E+00	0.317
PO-209		260.50		2.310E+00	2.383E+01	4.009E+01	2.242E+00	0.058
		262.80		-6.607E+00	6.669E+01	1.118E+02	6.263E+00	-0.059
		896.60	*	-5.915E-01	7.727E+00	1.243E+01	1.038E+00	-0.048
BI-210		46.50	*	-3.054E+01	1.445E+01	2.404E+01	1.811E+00	-1.271
PB-210		46.50	*	-3.054E+01	1.445E+01	2.404E+01	1.811E+00	-1.271
PO-210		46.50	*	-3.054E+01	1.440E+01	2.404E+01	1.542E+00	-1.271
PB-211		404.84	*	-6.931E-01	3.053E+00	4.909E+00	3.059E+00	-0.141
		427.08		4.696E+00	8.130E+00	1.245E+01	7.694E+00	0.377
		831.96		-6.737E-01	1.289E+00	1.898E+00	1.188E+00	-0.355
PO-215		81.07		-1.949E-01	3.970E-01	5.889E-01	4.216E-02	-0.331
		83.78		9.855E-02	2.341E-01	3.529E-01	2.591E-02	0.279
		94.90		-7.347E-02	5.882E-01	6.904E-01	4.905E-02	-0.106
		122.32		3.611E-01	3.693E+00	6.057E+00	4.288E-01	0.060
		144.24		-4.075E-01	1.380E+00	2.222E+00	1.574E-01	-0.183

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		154.21		-5.802E-01	8.290E-01	1.318E+00	8.790E-02	-0.440
		269.46		4.216E-01	4.501E-01	7.645E-01	4.504E-02	0.552
		323.87	*	-1.594E+00	1.799E+00	2.904E+00	4.785E-01	-0.549
	+	338.28		6.576E+00	3.697E+00	4.635E+00	4.847E-01	1.419
		445.03		4.609E+00	8.917E+00	1.453E+01	1.491E+00	0.317
RN-219		271.23		1.795E-01	5.737E-01	9.659E-01	7.709E-02	0.186
		401.81	*	-2.427E-01	1.337E+00	2.174E+00	2.935E-01	-0.112
RN-220		549.76	*	8.936E+00	5.992E+01	1.013E+02	6.314E+00	0.088
RA-223		81.07		-1.949E-01	3.970E-01	5.889E-01	4.216E-02	-0.331
		83.78		9.855E-02	2.341E-01	3.529E-01	2.591E-02	0.279
		94.90		-7.347E-02	5.882E-01	6.904E-01	4.905E-02	-0.106
		122.32		3.611E-01	3.693E+00	6.057E+00	4.288E-01	0.060
		144.24		-4.075E-01	1.380E+00	2.222E+00	1.574E-01	-0.183
		154.21		-5.802E-01	8.290E-01	1.318E+00	8.790E-02	-0.440
		269.46		4.216E-01	4.501E-01	7.645E-01	4.504E-02	0.552
		323.87	*	-1.594E+00	1.799E+00	2.904E+00	4.785E-01	-0.549
	+	338.28		6.576E+00	3.697E+00	4.635E+00	4.847E-01	1.419
		445.03		4.609E+00	8.917E+00	1.453E+01	1.491E+00	0.317
AC-227		79.80		-6.739E-01	2.982E+00	4.451E+00	9.317E-01	-0.151
		236.00		4.766E-01	5.768E-01	8.723E-01	8.972E-02	0.546
		256.20	*	4.993E-01	9.389E-01	1.588E+00	2.202E-01	0.314
		286.10		-7.158E-01	3.959E+00	6.592E+00	7.574E-01	-0.109
	+	299.80		5.515E+00	4.140E+00	6.067E+00	9.855E-01	0.909
		304.40		4.135E+00	5.613E+00	8.282E+00	1.429E+00	0.499
		334.20		4.232E+00	6.978E+00	1.021E+01	1.868E+00	0.414
TH-227		79.80		-6.739E-01	2.982E+00	4.451E+00	9.443E-01	-0.151
	+	94.00		4.333E+00	4.604E+00	5.823E+00	1.237E+00	0.744
		236.00		4.766E-01	5.763E-01	8.723E-01	7.732E-02	0.546
		256.20	*	4.993E-01	9.401E-01	1.588E+00	2.671E-01	0.314
		286.10		-7.158E-01	4.022E+00	6.592E+00	6.602E+00	-0.109
	+	299.80		5.515E+00	4.140E+00	6.067E+00	9.855E-01	0.909
		304.40		4.135E+00	5.613E+00	8.282E+00	1.429E+00	0.499
		334.20		4.232E+00	6.978E+00	1.021E+01	1.868E+00	0.414
TH-229	+	85.43		4.608E-01	4.567E-01	5.199E-01	3.878E-02	0.886
		88.47		6.089E-02	2.314E-01	3.179E-01	2.419E-02	0.192
	+	100.00		9.380E-01	5.236E-01	6.062E-01	4.135E-02	1.547
		193.63	*	-3.345E-01	1.304E+00	2.069E+00	1.089E-01	-0.162
		210.97		8.675E-01	2.081E+00	2.953E+00	1.584E-01	0.294
PA-231		283.67	*	1.401E-01	3.884E+00	6.494E+00	8.910E-01	0.022
	+	301.29		2.206E+00	1.633E+00	2.459E+00	2.554E-01	0.897
TH-231		81.07		-1.949E-01	3.970E-01	5.889E-01	4.216E-02	-0.331
		83.78		9.855E-02	2.341E-01	3.529E-01	2.591E-02	0.279
		94.90		-7.347E-02	5.882E-01	6.904E-01	4.905E-02	-0.106
		122.32		3.611E-01	3.693E+00	6.057E+00	4.288E-01	0.060
		144.24		-4.075E-01	1.380E+00	2.222E+00	1.574E-01	-0.183
		154.21		-5.802E-01	8.290E-01	1.318E+00	8.790E-02	-0.440
		269.46		4.216E-01	4.501E-01	7.645E-01	4.504E-02	0.552
		323.87	*	-1.594E+00	1.799E+00	2.904E+00	4.785E-01	-0.549
	+	338.28		6.576E+00	3.697E+00	4.635E+00	4.847E-01	1.419

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		4.609E+00	8.917E+00	1.453E+01	1.491E+00	0.317
U-231		84.21		4.646E+00	7.005E+00	1.060E+01	7.816E-01	0.438
	+	92.29		2.994E+00	3.125E+00	4.160E+00	3.031E-01	0.720
		95.87	*	-8.302E-01	1.993E+00	2.312E+00	1.629E-01	-0.359
		108.00		-2.791E+00	2.812E+00	4.548E+00	2.963E-01	-0.614
PA-233	+	75.28		2.359E+01	6.827E+00	9.202E+00	1.327E+00	2.564
	+	86.59		4.023E+00	4.116E+00	4.703E+00	1.246E+00	0.856
	+	300.12		1.537E+00	1.145E+00	1.697E+00	2.272E-01	0.906
		311.98	*	-3.736E-02	1.730E-01	2.863E-01	1.732E-02	-0.130
		340.50		1.314E+00	1.901E+00	2.763E+00	6.336E-01	0.476
		398.62		4.143E+00	6.921E+00	1.127E+01	2.907E+00	0.368
		415.76		2.724E-01	5.679E+00	9.247E+00	1.899E+00	0.029
PA-234		63.00		1.007E+00	2.954E+00	4.531E+00	6.510E-01	0.222
		94.67		5.273E-02	4.214E-01	4.989E-01	5.693E-02	0.106
	+	98.44		4.579E-01	3.592E-01	3.101E-01	1.722E-01	1.477
	+	99.86		2.374E+00	1.325E+00	1.545E+00	1.055E-01	1.536
		111.00		4.625E-01	3.674E-01	6.120E-01	6.512E-02	0.756
		131.20		-1.785E-01	2.202E-01	3.536E-01	2.104E-02	-0.505
		152.70		1.081E-01	6.687E-01	1.084E+00	1.698E-01	0.100
	+	186.00		6.105E+00	3.879E+00	4.940E+00	1.504E+00	1.236
		226.40		-6.205E-01	9.438E-01	1.580E+00	1.799E-01	-0.393
		227.20		-7.028E-01	1.014E+00	1.700E+00	9.268E-02	-0.413
		248.90		-9.214E-01	2.017E+00	3.359E+00	7.196E-01	-0.274
		293.70		2.501E+00	1.931E+00	2.850E+00	4.571E-01	0.877
		369.80		2.069E+00	2.649E+00	4.347E+00	9.026E-01	0.476
		568.70		5.770E-01	2.140E+00	3.613E+00	2.274E-01	0.160
		569.50		-1.458E-01	5.852E-01	9.742E-01	6.133E-02	-0.150
		574.00		-4.774E-01	3.160E+00	5.282E+00	3.332E-01	-0.090
		699.00		5.986E-01	6.946E-01	1.198E+00	2.195E-01	0.500
		706.10		-5.430E-02	1.005E+00	1.654E+00	7.322E-01	-0.033
		733.00		-2.134E-01	4.027E-01	5.368E-01	1.161E-01	-0.398
		742.81		6.977E-01	1.290E+00	2.068E+00	1.387E+00	0.337
		796.30		8.954E-01	8.899E-01	1.508E+00	4.031E-01	0.594
		805.60		7.185E-01	9.846E-01	1.648E+00	5.008E-01	0.436
		819.60		3.893E-01	1.145E+00	1.906E+00	7.212E-01	0.204
		826.30		-1.299E+00	9.940E-01	1.136E+00	5.064E-01	-1.144
		831.60		-3.287E-01	6.327E-01	9.757E-01	2.891E-01	-0.337
		876.40		1.675E-01	8.214E-01	1.326E+00	1.363E+00	0.126
		880.51		-1.192E-01	2.680E-01	4.171E-01	3.429E-02	-0.286
		883.24		-1.795E-01	3.062E-01	4.308E-01	2.894E-01	-0.417
		899.00		4.862E-01	8.424E-01	1.385E+00	6.047E-01	0.351
		925.00		-5.407E-01	1.010E+00	1.539E+00	1.258E-01	-0.351
		926.50		8.971E-02	1.488E-01	2.518E-01	6.326E-02	0.356
		946.00	*	-3.515E-01	2.719E-01	3.656E-01	6.762E-02	-0.961
		949.00		1.560E-01	3.933E-01	6.572E-01	5.253E-02	0.237
		980.50		-5.034E-01	6.467E-01	9.519E-01	7.359E-02	-0.529
		1394.10		-9.223E-01	1.069E+00	1.195E+00	7.753E-01	-0.772
PA-234M		766.41		1.631E+00	1.838E+01	2.628E+01	2.011E+01	0.062
		1001.03	*	-2.778E+00	5.884E+00	9.507E+00	9.861E-01	-0.292

---- Non-Identified Nuclides ----

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TH-234		63.29	*	1.803E+00	2.509E+00	3.853E+00	6.561E-01	0.468
	+	92.38		1.121E+00	1.184E+00	1.558E+00	2.724E-01	0.720
U-235		89.95		-2.505E+00	2.741E+00	3.015E+00	9.214E-01	-0.831
	+	93.35		1.348E+00	1.452E+00	1.871E+00	5.169E-01	0.720
		105.00		-1.362E+00	2.135E+00	3.425E+00	1.004E+00	-0.398
		143.76	*	-1.134E-01	4.235E-01	6.819E-01	1.108E-01	-0.166
		163.35		-4.022E-02	1.015E+00	1.633E+00	2.905E-01	-0.025
	+	185.71		2.261E-01	1.266E-01	1.813E-01	9.465E-03	1.247
		205.31		4.631E-02	1.415E+00	1.995E+00	3.559E-01	0.023
NP-236		94.67		4.173E-02	3.197E-01	3.785E-01	2.695E-02	0.110
	+	98.44		3.462E-01	1.932E-01	2.344E-01	1.617E-02	1.477
		111.00		3.498E-01	2.763E-01	4.629E-01	2.978E-02	0.756
		160.31	*	-3.694E-02	1.714E-01	2.752E-01	1.443E-02	-0.134
U-238		63.29	*	1.803E+00	2.509E+00	3.853E+00	6.561E-01	0.468
	+	92.38		1.121E+00	1.170E+00	1.558E+00	1.134E-01	0.720
NP-239	+	99.55		7.912E-01	4.417E-01	5.221E-01	3.573E-02	1.515
		117.00	*	-1.321E-01	3.904E-01	6.370E-01	4.020E-02	-0.207
	+	209.75		2.042E+00	1.889E+00	3.043E+00	1.630E-01	0.671
		228.18		3.294E-02	5.323E-01	9.026E-01	4.924E-02	0.036
		277.60		4.983E-01	4.432E-01	7.519E-01	4.242E-02	0.663
		334.30		2.565E+00	3.935E+00	5.795E+00	3.286E-01	0.443
CM-243	+	99.55		8.141E-01	4.544E-01	5.372E-01	3.676E-02	1.515
		103.76	*	1.682E-01	2.019E-01	3.225E-01	2.148E-02	0.522
		117.00		-1.359E-01	4.016E-01	6.553E-01	4.135E-02	-0.207
	+	209.75		2.013E+00	1.861E+00	2.999E+00	1.607E-01	0.671
		228.18		3.328E-02	5.378E-01	9.119E-01	4.975E-02	0.036
		277.60		5.023E-01	4.468E-01	7.579E-01	4.276E-02	0.663
CM-247		278.00		1.185E+00	1.838E+00	3.099E+00	1.749E-01	0.382
		287.40		6.000E-01	3.164E+00	5.299E+00	3.000E-01	0.113
		402.60	*	-7.522E-02	1.196E-01	1.929E-01	1.070E-02	-0.390
CF-249		252.85		-1.987E-01	2.129E+00	3.578E+00	1.991E-01	-0.056
		333.44		-1.385E-01	5.232E-01	7.547E-01	4.281E-02	-0.183
		387.95	*	-3.176E-02	1.252E-01	2.039E-01	1.121E-02	-0.156
CF-251		176.60	*	-1.228E-01	2.823E-01	4.488E-01	2.320E-02	-0.274
		227.00		-6.816E-01	9.005E-01	1.508E+00	8.218E-02	-0.452
		285.00		3.343E+00	4.481E+00	7.569E+00	4.282E-01	0.442

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511004      *
* Acquisition date :  7-JUL-2009 10:53:59 Detector SN#     :                *
* Detector ID        : GAM12               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:12.77     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232511004           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.5827E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.079E+01	2.670E+00	5.564E-01	0.000E+00
CD-109	2.084E+00	2.024E+00	2.513E+00	0.000E+00
SN-126	2.055E-01	1.996E-01	2.491E-01	0.000E+00
BA-137M	8.418E+01	5.387E+00	1.215E-01	0.000E+00
CS-137	8.899E+01	5.714E+00	1.284E-01	0.000E+00
TL-208	5.431E-01	1.272E-01	1.319E-01	0.000E+00
BI-211	3.647E+00	8.985E-01	9.840E-01	0.000E+00
BI-212	1.264E+00	4.831E-01	4.101E-01	0.000E+00
PB-212	1.584E+00	2.216E-01	2.419E-01	0.000E+00
PO-212	1.584E+00	2.216E-01	2.419E-01	0.000E+00
BI-214	1.364E+00	2.563E-01	2.387E-01	0.000E+00
PB-214	1.269E+00	3.192E-01	3.472E-01	0.000E+00
PO-214	1.269E+00	3.192E-01	3.472E-01	0.000E+00
PO-216	1.584E+00	2.216E-01	2.419E-01	0.000E+00
PO-218	1.269E+00	3.192E-01	3.472E-01	0.000E+00
RA-224	2.698E+00	1.608E+00	2.742E+00	0.000E+00
RA-226	1.364E+00	2.563E-01	2.387E-01	0.000E+00
AC-228	1.679E+00	3.306E-01	2.151E-01	0.000E+00
RA-228	1.679E+00	3.306E-01	2.151E-01	0.000E+00
TH-228	1.584E+00	2.216E-01	2.418E-01	0.000E+00
TH-230	1.364E+00	2.563E-01	2.387E-01	0.000E+00
TH-232	1.679E+00	3.306E-01	2.151E-01	0.000E+00
U-234	1.364E+00	2.563E-01	2.387E-01	0.000E+00
NP-237	6.035E-01	5.986E-01	7.392E-01	0.000E+00
AM-241	2.352E+02	1.650E+01	1.125E+00	0.000E+00
AM-243	4.504E-01	1.148E-01	1.655E-01	0.000E+00
ANH-511	6.704E-02	1.182E-01	1.484E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	-5.605E-01	1.189E+00	2.019E+00	0.000E+00	NOT IDENT.
NA-22	-4.345E-02	4.035E-02	6.144E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.659E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.114E-02	2.711E-02	5.399E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.741E-02	1.173E-01	0.000E+00	FAIL ABUN
SC-46	1.639E-02	3.900E-02	6.815E-02	0.000E+00	FAIL ABUN
V-48	-3.285E-02	5.635E-02	8.865E-02	0.000E+00	NOT IDENT.
CR-51	3.386E-01	9.339E-01	1.674E+00	0.000E+00	NOT IDENT.
MN-52	-7.151E-02	1.763E-01	2.809E-01	0.000E+00	FAIL ABUN
MN-54	-3.258E-02	3.791E-02	6.051E-02	0.000E+00	NOT IDENT.
CO-56	-1.427E-02	3.887E-02	6.430E-02	0.000E+00	FAIL ABUN
CO-57	4.081E-03	5.204E-02	9.411E-02	0.000E+00	NOT IDENT.
CO-58	-1.942E-02	3.573E-02	5.838E-02	0.000E+00	NOT IDENT.
FE-59	2.381E-02	8.346E-02	1.475E-01	0.000E+00	NOT IDENT.
CO-60	0.000E+00	4.798E-02	8.095E-02	0.000E+00	FAIL ABUN
ZN-65	-8.312E-02	9.423E-02	1.251E-01	0.000E+00	NOT IDENT.
GE-68	-3.775E-01	1.072E+00	1.801E+00	0.000E+00	NOT IDENT.
AS-73	-3.754E+00	4.348E+00	7.913E+00	0.000E+00	NOT IDENT.
AS-74	-9.476E-02	1.688E-01	2.937E-01	0.000E+00	NOT IDENT.
SE-75	-2.451E-02	1.065E-01	1.926E-01	0.000E+00	NOT IDENT.
BR-77	-6.176E+00	1.539E+01	2.585E+01	0.000E+00	FAIL ABUN
SR-82	2.312E-03	3.433E-01	5.111E-01	0.000E+00	NOT IDENT.
RB-83	-1.303E-01	1.891E-01	3.153E-01	0.000E+00	NOT IDENT.
RB-84	-2.304E-02	6.202E-02	1.016E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	2.115E+01	3.287E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	1.060E-01	1.648E-01	0.000E+00	NOT IDENT.
RB-86	-5.310E-01	6.179E-01	9.859E-01	0.000E+00	NOT IDENT.
Y-88	-3.006E-03	2.483E-02	4.091E-02	0.000E+00	NOT IDENT.
ZR-88	-5.128E-02	9.469E-02	1.639E-01	0.000E+00	NOT IDENT.
Y-91	8.992E+00	1.856E+01	3.281E+01	0.000E+00	NOT IDENT.
NB-94	6.969E-03	3.222E-02	5.677E-02	0.000E+00	NOT IDENT.
NB-95	-9.074E-03	4.112E-02	5.980E-02	0.000E+00	NOT IDENT.
NB-95M	1.682E-01	2.984E-01	4.880E-01	0.000E+00	NOT IDENT.
ZR-95	4.084E-02	6.392E-02	1.152E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.693E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	6.682E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-3.969E+00	6.004E+00	9.794E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.919E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.537E-02	8.076E-02	1.392E-01	0.000E+00	NOT IDENT.
RH-102	9.008E-02	1.153E-01	1.997E-01	0.000E+00	NOT IDENT.
RU-103	4.829E-03	1.220E-01	2.082E-01	0.000E+00	FAIL ABUN
RH-106	-5.854E-02	6.476E-01	1.137E+00	0.000E+00	FAIL ABUN
RU-106	-5.854E-02	6.476E-01	1.137E+00	0.000E+00	FAIL ABUN
AG-108M	1.324E-02	1.198E-01	2.075E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	1.044E-01	1.735E-01	0.000E+00	NOT IDENT.
IN-111	1.148E+00	1.652E+00	2.699E+00	0.000E+00	NOT IDENT.
IN-113M	1.989E-04	1.368E-01	2.391E-01	0.000E+00	NOT IDENT.
SN-113	1.989E-04	1.368E-01	2.391E-01	0.000E+00	NOT IDENT.
IN-114M	2.353E-01	4.685E-01	7.810E-01	0.000E+00	NOT IDENT.
CD-115	-2.612E-01	1.522E+01	2.577E+01	0.000E+00	NOT IDENT.
SN-117M	5.253E-02	1.026E-01	1.827E-01	0.000E+00	NOT IDENT.
SB-122	-1.750E+00	2.481E+00	4.328E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	7.759E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.349E-02	5.863E-02	1.032E-01	0.000E+00	NOT IDENT.
I-124	-6.172E-02	9.948E-01	1.596E+00	0.000E+00	NOT IDENT.
SB-124	-3.714E-02	6.141E-02	9.377E-02	0.000E+00	FAIL ABUN
SB-125	3.443E-01	3.332E-01	5.850E-01	0.000E+00	NOT IDENT.
TE-125M	-7.878E+00	1.747E+01	3.158E+01	0.000E+00	NOT IDENT.
I-126	0.000E+00	2.350E-01	4.057E-01	0.000E+00	NOT IDENT.
SB-126	6.479E-02	1.193E-01	1.975E-01	0.000E+00	FAIL ABUN
SB-127	-2.235E-01	8.491E-01	1.452E+00	0.000E+00	NOT IDENT.
XE-127	-5.463E-04	1.091E-01	1.886E-01	0.000E+00	NOT IDENT.
I-131	-9.792E-02	2.861E-01	5.006E-01	0.000E+00	NOT IDENT.
TE-132	-5.832E-02	1.008E+00	1.852E+00	0.000E+00	NOT IDENT.
BA-133	9.160E-03	1.389E-01	2.153E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.875E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	4.913E-02	4.300E-02	7.948E-02	0.000E+00	NOT IDENT.
CS-135	1.105E-02	3.743E-01	6.786E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.386E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.221E-02	9.302E-02	1.586E-01	0.000E+00	FAIL ABUN
CE-139	1.081E-02	6.269E-02	1.107E-01	0.000E+00	NOT IDENT.
BA-140	-7.866E-02	5.514E-01	9.815E-01	0.000E+00	NOT IDENT.
LA-140	-1.667E-02	7.250E-02	1.212E-01	0.000E+00	NOT IDENT.
CE-141	1.513E-02	1.190E-01	2.123E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.227E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	2.489E-01	4.112E-01	7.421E-01	0.000E+00	NOT IDENT.
PM-144	-9.989E-03	3.276E-02	5.585E-02	0.000E+00	NOT IDENT.
PR-144	-6.761E-01	2.218E+00	3.781E+00	0.000E+00	NOT IDENT.

PM-146	-3.529E-02	1.692E-01	2.903E-01	0.000E+00	NOT IDENT.
ND-147	-4.561E-01	1.313E+00	2.201E+00	0.000E+00	NOT IDENT.
PM-149	-3.599E+01	1.173E+02	2.102E+02	0.000E+00	NOT IDENT.
EU-152	1.661E-01	2.916E-01	4.832E-01	0.000E+00	FAIL ABUN
GD-153	0.000E+00	2.110E-01	2.787E-01	0.000E+00	FAIL ABUN
EU-154	-1.244E-01	1.129E-01	1.708E-01	0.000E+00	NOT IDENT.
EU-155	-2.394E-02	2.080E-01	3.794E-01	0.000E+00	FAIL ABUN
TB-160	-1.347E-02	1.273E-01	2.139E-01	0.000E+00	FAIL ABUN
HO-166M	1.210E-02	5.925E-02	1.042E-01	0.000E+00	FAIL ABUN
TM-171	-3.382E+01	4.840E+01	9.024E+01	0.000E+00	FAIL ABUN
LU-176	-1.479E-02	6.566E-02	1.170E-01	0.000E+00	NOT IDENT.
LU-177	2.303E+00	2.087E+00	3.646E+00	0.000E+00	FAIL ABUN
LU-177M	-2.489E-01	5.809E-01	1.002E+00	0.000E+00	NOT IDENT.
HF-181	5.459E-02	1.441E-01	2.481E-01	0.000E+00	NOT IDENT.
W-181	-3.617E-01	6.107E-01	1.142E+00	0.000E+00	NOT IDENT.
TA-182	-2.992E-02	1.854E-01	3.130E-01	0.000E+00	FAIL ABUN
RE-183	2.017E-02	2.264E-01	3.999E-01	0.000E+00	FAIL ABUN
RE-184	-5.248E-02	5.510E-01	1.002E+00	0.000E+00	FAIL ABUN
OS-185	2.615E-02	9.079E-02	1.605E-01	0.000E+00	FAIL ABUN
RE-188	-5.298E-02	3.418E-01	6.018E-01	0.000E+00	NOT IDENT.
W-188	9.970E+00	2.023E+01	3.237E+01	0.000E+00	NOT IDENT.
IR-192	-9.498E-04	8.927E-02	1.593E-01	0.000E+00	FAIL ABUN
AU-195	0.000E+00	6.132E-01	8.234E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.456E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.686E+00	9.222E+00	1.614E+01	0.000E+00	NOT IDENT.
TL-202	-4.339E-02	2.274E-01	3.915E-01	0.000E+00	NOT IDENT.
HG-203	6.654E-03	9.650E-02	1.741E-01	0.000E+00	NOT IDENT.
BI-207	5.047E-02	4.756E-02	8.915E-02	0.000E+00	FAIL ABUN
TL-207	-1.594E+00	1.763E+00	3.059E+00	0.000E+00	FAIL ABUN
PO-209	-5.915E-01	7.572E+00	1.273E+01	0.000E+00	NOT IDENT.
BI-210	-3.054E+01	1.416E+01	2.662E+01	0.000E+00	NOT IDENT.
PB-210	-3.054E+01	1.416E+01	2.662E+01	0.000E+00	NOT IDENT.
PO-210	-3.054E+01	1.412E+01	2.662E+01	0.000E+00	NOT IDENT.
PB-211	-6.931E-01	2.992E+00	5.139E+00	0.000E+00	NOT IDENT.
PO-215	-1.594E+00	1.763E+00	3.059E+00	0.000E+00	FAIL ABUN
RN-219	-2.427E-01	1.311E+00	2.277E+00	0.000E+00	NOT IDENT.
RN-220	8.936E+00	5.872E+01	1.051E+02	0.000E+00	NOT IDENT.
RA-223	-1.594E+00	1.763E+00	3.059E+00	0.000E+00	FAIL ABUN
AC-227	4.993E-01	9.201E-01	1.683E+00	0.000E+00	FAIL ABUN
TH-227	4.993E-01	9.213E-01	1.683E+00	0.000E+00	FAIL ABUN
TH-229	-3.345E-01	1.278E+00	2.210E+00	0.000E+00	FAIL ABUN
PA-231	1.401E-01	3.806E+00	6.865E+00	0.000E+00	FAIL ABUN
TH-231	-1.594E+00	1.763E+00	3.059E+00	0.000E+00	FAIL ABUN
U-231	-8.302E-01	1.953E+00	2.515E+00	0.000E+00	FAIL ABUN
PA-233	-3.736E-02	1.696E-01	3.019E-01	0.000E+00	FAIL ABUN
PA-234	-3.515E-01	2.665E-01	3.738E-01	0.000E+00	FAIL ABUN
PA-234M	-2.778E+00	5.767E+00	9.703E+00	0.000E+00	NOT IDENT.
TH-234	1.803E+00	2.459E+00	4.235E+00	0.000E+00	FAIL ABUN
U-235	-1.134E-01	4.151E-01	7.339E-01	0.000E+00	FAIL ABUN
NP-236	-3.694E-02	1.679E-01	2.954E-01	0.000E+00	FAIL ABUN
U-238	1.803E+00	2.459E+00	4.235E+00	0.000E+00	FAIL ABUN
NP-239	-1.321E-01	3.826E-01	6.893E-01	0.000E+00	FAIL ABUN
CM-243	1.682E-01	1.978E-01	3.501E-01	0.000E+00	FAIL ABUN
CM-247	-7.522E-02	1.172E-01	2.020E-01	0.000E+00	NOT IDENT.
CF-249	-3.176E-02	1.227E-01	2.137E-01	0.000E+00	NOT IDENT.
CF-251	-1.228E-01	2.766E-01	4.804E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:54:40.28

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511004.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:53:59.
Sample ID         : G232511004           Sample quantity  : 1.58270E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:12.77  0.2%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1574	10.67*	1.137E+00	3.079E+01	3.079E+01	8.85
CD-109	88.03	180	3.72*	5.613E+00	2.044E+00	2.084E+00	99.10
SN-126	64.28	------	9.60	3.338E+00	------ Line Not Found		------
	86.94	180	8.90	5.613E+00	8.544E-01	8.544E-01	107.03
	87.57	180	37.00*	5.613E+00	2.055E-01	2.055E-01	99.10
BA-137M	661.65	71836	89.98*	2.251E+00	8.412E+01	8.418E+01	6.53
CS-137	661.65	71836	85.12*	2.251E+00	8.892E+01	8.899E+01	6.55
TL-208	277.35	------	6.80	4.505E+00	------ Line Not Found		------
	510.84	79	21.60	2.791E+00	3.104E-01	3.104E-01	180.11
	583.14	483	84.20*	2.503E+00	5.431E-01	5.431E-01	23.90
	860.37	------	12.46	1.795E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	4.387E+00	------ Line Not Found		------
	351.07	748	12.94*	3.760E+00	3.647E+00	3.647E+00	25.14
BI-212	727.18	131	11.80*	2.076E+00	1.264E+00	1.264E+00	39.01
	785.46	------	1.97	1.943E+00	------ Line Not Found		------
	1620.62	23	2.75	1.050E+00	1.891E+00	1.891E+00	63.99
PB-212	74.81	576	10.70	4.599E+00	2.778E+00	2.778E+00	27.63
	77.11	815	18.00	4.832E+00	2.222E+00	2.222E+00	19.27
	87.30	180	8.00	5.613E+00	9.505E-01	9.505E-01	99.60
	238.63	1493	44.60*	5.013E+00	1.584E+00	1.584E+00	14.28
	300.09	182	3.41	4.250E+00	2.976E+00	2.976E+00	73.74
PO-212	74.81	576	10.70	4.599E+00	2.778E+00	2.778E+00	27.63
	77.11	815	18.00	4.832E+00	2.222E+00	2.222E+00	19.27
	87.30	180	8.00	5.613E+00	9.505E-01	9.505E-01	99.60
	115.19	------	0.60	6.604E+00	------ Line Not Found		------
	238.63	1493	44.60*	5.013E+00	1.584E+00	1.584E+00	14.28
	300.09	182	3.41	4.250E+00	2.976E+00	2.976E+00	73.74
BI-214	609.31	643	46.30*	2.413E+00	1.364E+00	1.364E+00	19.17
	768.36	77	5.04	1.979E+00	1.825E+00	1.825E+00	58.29
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	115	15.10	1.422E+00	1.269E+00	1.269E+00	34.95
	1238.11	46	5.94	1.304E+00	1.408E+00	1.408E+00	90.87

Sample ID : G232511004 Acquisition date : 7-JUL-2009 10:53:59

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	------	4.11	1.192E+00	------ Line Not Found		------
	1764.49	105	15.80	9.898E-01	1.593E+00	1.593E+00	23.10
PB-214	74.81	576	6.21	4.599E+00	4.787E+00	4.787E+00	27.03
	77.11	815	10.50	4.832E+00	3.809E+00	3.809E+00	20.72
	87.30	180	4.67	5.613E+00	1.628E+00	1.628E+00	99.40
	241.98	223	7.49	4.970E+00	1.423E+00	1.423E+00	61.08
	295.21	377	19.20	4.299E+00	1.083E+00	1.083E+00	41.21
	351.92	748	37.20*	3.760E+00	1.269E+00	1.269E+00	25.67
PO-214	74.81	576	6.21	4.599E+00	4.787E+00	4.787E+00	27.03
	77.11	815	10.50	4.832E+00	3.809E+00	3.809E+00	20.72
	87.30	180	4.67	5.613E+00	1.628E+00	1.628E+00	99.40
	241.98	223	7.49	4.970E+00	1.423E+00	1.423E+00	61.08
	295.21	377	19.20	4.299E+00	1.083E+00	1.083E+00	41.21
	351.92	748	37.20*	3.760E+00	1.269E+00	1.269E+00	25.67
PO-216	74.81	576	10.70	4.599E+00	2.778E+00	2.778E+00	27.63
	77.11	815	18.00	4.832E+00	2.222E+00	2.222E+00	19.27
	87.30	180	8.00	5.613E+00	9.505E-01	9.505E-01	99.60
	238.63	1493	44.60*	5.013E+00	1.584E+00	1.584E+00	14.28
	300.09	182	3.41	4.250E+00	2.976E+00	2.976E+00	73.74
PO-218	74.81	576	6.21	4.599E+00	4.787E+00	4.787E+00	27.03
	77.11	815	10.50	4.832E+00	3.809E+00	3.809E+00	20.72
	87.30	180	4.67	5.613E+00	1.628E+00	1.628E+00	99.40
	241.98	223	7.49	4.970E+00	1.423E+00	1.423E+00	61.08
	295.21	377	19.20	4.299E+00	1.083E+00	1.083E+00	41.21
	351.92	748	37.20*	3.760E+00	1.269E+00	1.269E+00	25.67
RA-224	240.98	223	3.95*	4.970E+00	2.698E+00	2.698E+00	60.83
RA-226	609.31	643	46.30*	2.413E+00	1.364E+00	1.364E+00	19.17
	768.36	77	5.04	1.979E+00	1.825E+00	1.825E+00	58.29
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	115	15.10	1.422E+00	1.269E+00	1.269E+00	34.95
	1238.11	46	5.94	1.304E+00	1.408E+00	1.408E+00	90.87
	1377.67	------	4.11	1.192E+00	------ Line Not Found		------
	1764.49	105	15.80	9.898E-01	1.593E+00	1.593E+00	23.10
AC-228	338.32	293	11.40	3.875E+00	1.575E+00	1.575E+00	68.65
	911.07	335	27.70*	1.706E+00	1.679E+00	1.679E+00	20.09
	969.11	219	16.60	1.616E+00	1.936E+00	1.936E+00	31.05
RA-228	338.32	293	11.40	3.875E+00	1.575E+00	1.575E+00	68.65
	911.07	335	27.70*	1.706E+00	1.679E+00	1.679E+00	20.09
	969.11	219	16.60	1.616E+00	1.936E+00	1.936E+00	31.05
TH-228	84.40	------	1.21	5.453E+00	------ Line Not Found		------
	238.60	1493	44.60*	5.013E+00	1.584E+00	1.584E+00	14.28
	300.10	182	3.41	4.250E+00	2.976E+00	2.976E+00	94.04
TH-230	609.31	643	46.30*	2.413E+00	1.364E+00	1.364E+00	19.17
	768.36	77	5.04	1.979E+00	1.825E+00	1.825E+00	58.29
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	115	15.10	1.422E+00	1.269E+00	1.269E+00	34.95
	1238.11	46	5.94	1.304E+00	1.408E+00	1.408E+00	90.87
	1377.67	------	4.11	1.192E+00	------ Line Not Found		------
	1764.49	105	15.80	9.898E-01	1.593E+00	1.593E+00	23.10

Sample ID : G232511004 Acquisition date : 7-JUL-2009 10:53:59

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-232	338.32	293	11.40	3.875E+00	1.575E+00	1.575E+00	55.54
	911.07	335	27.70*	1.706E+00	1.679E+00	1.679E+00	20.09
	969.11	219	16.60	1.616E+00	1.936E+00	1.936E+00	31.05
U-234	609.31	643	46.30*	2.413E+00	1.364E+00	1.364E+00	19.17
	768.36	77	5.04	1.979E+00	1.825E+00	1.825E+00	58.29
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	115	15.10	1.422E+00	1.269E+00	1.269E+00	34.95
	1238.11	46	5.94	1.304E+00	1.408E+00	1.408E+00	90.87
	1377.67	------	4.11	1.192E+00	------ Line Not Found		------
	1764.49	105	15.80	9.898E-01	1.593E+00	1.593E+00	23.10
NP-237	86.50	180	12.60*	5.613E+00	6.035E-01	6.035E-01	101.22
	95.87	------	2.60	6.124E+00	------ Line Not Found		------
AM-241	59.54	95794	35.90*	2.691E+00	2.352E+02	2.352E+02	7.16
AM-243	74.67	576	66.00*	4.599E+00	4.504E-01	4.504E-01	26.00
	86.72	180	0.34	5.613E+00	2.263E+01	2.263E+01	99.10
	117.66	------	0.55	6.624E+00	------ Line Not Found		------
	142.18	------	0.13	6.534E+00	------ Line Not Found		------
ANH-511	511.00	79	100.00*	2.791E+00	6.704E-02	6.704E-02	179.92

Flag: "*" = Keyline

Sample ID : G232511004 Acquisition date : 7-JUL-2009 10:53:59

Total number of lines in spectrum 31
Number of unidentified lines 2
Number of lines tentatively identified by NID 29 93.55%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.079E+01	3.079E+01	0.272E+01	8.85	
CD-109	464.00D	1.02	2.044E+00	2.084E+00	2.065E+00	99.10	
SN-126	1.00E+05Y	1.00	2.055E-01	2.055E-01	2.037E-01	99.10	
BA-137M	30.17Y	1.00	8.412E+01	8.418E+01	0.550E+01	6.53	
CS-137	30.17Y	1.00	8.892E+01	8.899E+01	0.583E+01	6.55	
TL-208	1.41E+10Y	1.00	5.431E-01	5.431E-01	1.298E-01	23.90	
BI-211	7.04E+08Y	1.00	3.647E+00	3.647E+00	0.917E+00	25.14	
BI-212	1.41E+10Y	1.00	1.264E+00	1.264E+00	0.493E+00	39.01	
PB-212	1.41E+10Y	1.00	1.584E+00	1.584E+00	0.226E+00	14.28	
PO-212	1.41E+10Y	1.00	1.584E+00	1.584E+00	0.226E+00	14.28	
BI-214	1600.00Y	1.00	1.364E+00	1.364E+00	0.262E+00	19.17	
PB-214	1600.00Y	1.00	1.269E+00	1.269E+00	0.326E+00	25.67	
PO-214	1600.00Y	1.00	1.269E+00	1.269E+00	0.326E+00	25.67	
PO-216	1.41E+10Y	1.00	1.584E+00	1.584E+00	0.226E+00	14.28	
PO-218	1600.00Y	1.00	1.269E+00	1.269E+00	0.326E+00	25.67	
RA-224	1.41E+10Y	1.00	2.698E+00	2.698E+00	1.641E+00	60.83	
RA-226	1600.00Y	1.00	1.364E+00	1.364E+00	0.262E+00	19.17	
AC-228	1.41E+10Y	1.00	1.679E+00	1.679E+00	0.337E+00	20.09	
RA-228	1.41E+10Y	1.00	1.679E+00	1.679E+00	0.337E+00	20.09	
TH-228	1.41E+10Y	1.00	1.584E+00	1.584E+00	0.226E+00	14.28	
TH-230	4.47E+09Y	1.00	1.364E+00	1.364E+00	0.262E+00	19.17	
TH-232	1.41E+10Y	1.00	1.679E+00	1.679E+00	0.337E+00	20.09	
U-234	4.47E+09Y	1.00	1.364E+00	1.364E+00	0.262E+00	19.17	
NP-237	2.14E+06Y	1.00	6.035E-01	6.035E-01	6.109E-01	101.22	
AM-241	432.20Y	1.00	2.352E+02	2.352E+02	0.168E+02	7.16	
AM-243	7380.00Y	1.00	4.504E-01	4.504E-01	1.171E-01	26.00	
ANH-511	1.00E+09Y	1.00	6.704E-02	6.704E-02	12.06E-02	179.92	
			---	---			
	Total Activity :		4.712E+02	4.713E+02			

Grand Total Activity : 4.712E+02 4.713E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232511004 Acquisition date : 7-JUL-2009 10:53:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	92.94	153	2182	1.40	185.39	182	7	2.13E-02	****	5.99E+00	T
0	98.87	306	2279	2.04	197.25	194	8	4.25E-02	55.4	6.24E+00	T
0	185.77	302	2435	1.29	371.13	368	7	4.19E-02	55.8	5.86E+00	T
0	209.12	153	1908	1.03	417.87	415	6	2.12E-02	92.3	5.47E+00	T
0	862.09	52	103	2.07	1724.20	1715	14	7.26E-03	87.5	1.79E+00	
1	965.04	57	86	2.00	1930.12	1923	25	7.88E-03	66.5	1.62E+00	T
0	1333.21	43	30	1.92	2666.47	2661	11	5.99E-03	57.9	1.23E+00	T
0	1730.12	47	0	1.24	3460.15	3453	14	6.53E-03	29.2	1.00E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:54:45.33

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                DETECTOR DATA                                *
*                                                                             *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511004.CNF;1    *
* Acquisition date : 7-JUL-2009 10:53:59.  Detector SN#     :                 *
* Detector ID      : GAM12                 Sensitivity      : 5.00000         *
* Geometry         : CAN                   Energy tolerance: 1.50000          *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000         *
* Elapsed real time: 0 02:00:12.77         Half life ratio : 8.00000          *
*******************************************************************************
*                                                                             *
*                                SAMPLE DATA                                  *
*                                                                             *
* Sample date      : 24-JUN-2009 12:00:00  Nuclide Library : SOLID            *
* Sample ID        : G232511004            Analyst initials: MXR1             *
* Batch Number     : 881220                Sample Quantity : 1.58270E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                  QC DATA                                    *
*                                                                             *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24.5MS Isotope      :                  *
* MSD ID           :                       MSD Isotope     :                  *
* LCS ID           : 1032-A                LCS Isotope     :                  *
*******************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.079E+01	2.725E+00	5.513E-01	3.930E-02	55.846
CD-109	2.084E+00	2.065E+00	2.306E+00	1.764E-01	0.904
SN-126	2.055E-01	2.037E-01	2.285E-01	1.741E-02	0.900
BA-137M	8.418E+01	5.497E+00	1.176E-01	7.625E-03	715.712
CS-137	8.899E+01	5.830E+00	1.243E-01	8.088E-03	715.711
TL-208	5.431E-01	1.298E-01	1.273E-01	9.103E-03	4.268
BI-211	3.647E+00	9.168E-01	9.362E-01	5.885E-02	3.896
BI-212	1.264E+00	4.930E-01	3.982E-01	3.447E-02	3.174
PB-212	1.584E+00	2.262E-01	2.277E-01	1.617E-02	6.955
PO-212	1.584E+00	2.262E-01	2.277E-01	1.617E-02	6.955
BI-214	1.364E+00	2.616E-01	2.305E-01	1.898E-02	5.918
PB-214	1.269E+00	3.257E-01	3.304E-01	2.699E-02	3.840
PO-214	1.269E+00	3.257E-01	3.304E-01	2.699E-02	3.840
PO-216	1.584E+00	2.262E-01	2.277E-01	1.617E-02	6.955
PO-218	1.269E+00	3.257E-01	3.304E-01	2.699E-02	3.840
RA-224	2.698E+00	1.641E+00	2.582E+00	1.424E-01	1.045
RA-226	1.364E+00	2.616E-01	2.305E-01	1.898E-02	5.918
AC-228	1.679E+00	3.374E-01	2.102E-01	2.308E-02	7.989

Sample ID : G232511004 Acquisition date : 7-JUL-2009 10:53:59

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.679E+00	3.374E-01	2.102E-01	2.308E-02	7.989
TH-228	1.584E+00	2.262E-01	2.277E-01	1.617E-02	6.956
TH-230	1.364E+00	2.616E-01	2.305E-01	1.898E-02	5.918
TH-232	1.679E+00	3.374E-01	2.102E-01	2.308E-02	7.989
U-234	1.364E+00	2.616E-01	2.305E-01	1.898E-02	5.918
NP-237	6.035E-01	6.109E-01	6.779E-01	1.489E-01	0.890
AM-241	2.352E+02	1.684E+01	1.022E+00	7.260E-02	230.193
AM-243	4.504E-01	1.171E-01	1.512E-01	1.027E-02	2.979
ANH-511	6.704E-02	1.206E-01	1.426E-01	8.694E-03	0.470

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-5.605E-01		1.213E+00	1.937E+00	1.333E-01	-0.289
NA-22	-4.345E-02		4.118E-02	6.062E-02	3.904E-03	-0.717
NA-24	-4.048E-02		2.887E-02	Half-Life too short		
AL-26	3.114E-02		2.766E-02	5.383E-02	3.088E-03	0.579
TI-44	4.100E-01	+	7.899E-02	1.073E-01	7.504E-03	3.821
SC-46	1.639E-02		3.980E-02	6.655E-02	5.516E-03	0.246
V-48	-3.285E-02		5.750E-02	8.681E-02	6.688E-03	-0.378
CR-51	3.386E-01		9.529E-01	1.589E+00	1.010E-01	0.213
MN-52	-7.151E-02		1.799E-01	2.781E-01	1.911E-02	-0.257
MN-54	-3.258E-02		3.869E-02	5.898E-02	4.636E-03	-0.552
CO-56	-1.427E-02		3.967E-02	6.270E-02	4.988E-03	-0.228
CO-57	4.081E-03		5.310E-02	8.707E-02	5.445E-03	0.047
CO-58	-1.942E-02		3.646E-02	5.686E-02	4.375E-03	-0.342
FE-59	2.381E-02		8.516E-02	1.449E-01	1.070E-02	0.164
CO-60	8.393E-02	+	4.896E-02	7.998E-02	5.586E-03	1.049
ZN-65	-8.312E-02		9.615E-02	1.229E-01	7.733E-03	-0.676
GE-68	-3.775E-01		1.094E+00	1.768E+00	1.192E-01	-0.213
AS-73	-3.754E+00		4.437E+00	7.170E+00	4.629E-01	-0.524
AS-74	-9.476E-02		1.723E-01	2.836E-01	1.805E-02	-0.334
SE-75	-2.451E-02		1.087E-01	1.818E-01	1.031E-02	-0.135
BR-77	-6.176E+00		1.571E+01	2.486E+01	1.525E+00	-0.248
SR-82	2.312E-03		3.503E-01	4.971E-01	3.678E-02	0.005
RB-83	-1.303E-01		1.930E-01	3.032E-01	1.859E-02	-0.430
RB-84	-2.304E-02		6.328E-02	9.923E-02	8.164E-03	-0.232
KR-85	3.735E+01		2.159E+01	3.160E+01	1.930E+00	1.182
SR-85	1.872E-01		1.082E-01	1.584E-01	9.673E-03	1.182
RB-86	-5.310E-01		6.305E-01	9.680E-01	6.535E-02	-0.549
Y-88	-3.006E-03		2.533E-02	4.081E-02	2.297E-03	-0.074
ZR-88	-5.128E-02		9.662E-02	1.564E-01	8.578E-03	-0.328
Y-91	8.992E+00		1.894E+01	3.232E+01	1.868E+00	0.278
NB-94	6.969E-03		3.287E-02	5.507E-02	3.750E-03	0.127
NB-95	-9.074E-03		4.196E-02	5.814E-02	4.253E-03	-0.156
NB-95M	1.682E-01		3.045E-01	4.593E-01	3.350E-02	0.366
ZR-95	4.084E-02		6.523E-02	1.120E-01	9.246E-03	0.365

Sample ID : G232511004 Acquisition date : 7-JUL-2009 10:53:59

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	1.909E-01		1.884E-02	Half-Life too short		
ZR-97	7.877E-02		3.409E-01	Half-Life too short		
MO-99	-3.969E+00		6.127E+00	9.513E+00	1.368E+00	-0.417
TC-99M	9.888E+05		9.793E+07	Half-Life too short		
RH-101	-1.537E-02		8.241E-02	1.304E-01	6.900E-03	-0.118
RH-102	9.008E-02		1.177E-01	1.916E-01	1.138E-02	0.470
RU-103	4.829E-03		1.245E-01	2.000E-01	2.551E-02	0.024
RH-106	-5.854E-02		6.608E-01	1.099E+00	1.325E-01	-0.053
RU-106	-5.854E-02		6.608E-01	1.099E+00	7.059E-02	-0.053
AG-108M	1.324E-02		1.222E-01	1.986E-01	1.237E-02	0.067
AG-110M	4.027E-01		1.065E-01	1.679E-01	1.145E-02	2.398
IN-111	1.148E+00		1.686E+00	2.543E+00	1.408E-01	0.451
IN-113M	1.989E-04		1.396E-01	2.281E-01	1.343E-02	0.001
SN-113	1.989E-04		1.396E-01	2.281E-01	1.343E-02	0.001
IN-114M	2.353E-01		4.780E-01	7.309E-01	3.834E-02	0.322
CD-115	-2.612E-01		1.553E+01	2.479E+01	1.527E+00	-0.011
SN-117M	5.253E-02		1.047E-01	1.702E-01	8.992E-03	0.309
SB-122	-1.750E+00		2.532E+00	4.172E+00	2.620E-01	-0.419
I-123	-1.786E-01		3.958E-01	Half-Life too short		
TE-123M	-1.349E-02		5.982E-02	9.610E-02	5.149E-03	-0.140
I-124	-6.172E-02		1.015E+00	1.542E+00	9.837E-02	-0.040
SB-124	-3.714E-02		6.266E-02	9.330E-02	6.226E-03	-0.398
SB-125	3.443E-01		3.400E-01	5.596E-01	3.327E-02	0.615
TE-125M	-7.878E+00		1.783E+01	2.913E+01	2.510E+00	-0.270
I-126	5.342E-01		2.398E-01	3.929E-01	2.562E-02	1.359
SB-126	6.479E-02		1.218E-01	1.917E-01	1.333E-02	0.338
SB-127	-2.235E-01		8.664E-01	1.408E+00	1.309E-01	-0.159
XE-127	-5.463E-04		1.114E-01	1.768E-01	9.403E-03	-0.003
I-131	-9.792E-02		2.919E-01	4.767E-01	2.991E-02	-0.205
TE-132	-5.832E-02		1.029E+00	1.742E+00	2.406E-01	-0.033
BA-133	9.160E-03		1.418E-01	2.049E-01	2.351E-02	0.045
I-133	1.972E-03		1.467E-03	Half-Life too short		
CS-134	4.913E-02		4.388E-02	7.736E-02	5.898E-03	0.635
CS-135	1.105E-02		3.820E-01	6.409E-01	4.820E-02	0.017
I-135	5.902E+06		1.217E+07	Half-Life too short		
CS-136	-1.221E-02		9.492E-02	1.556E-01	1.168E-02	-0.079
CE-139	1.081E-02		6.397E-02	1.032E-01	5.288E-03	0.105
BA-140	-7.866E-02		5.626E-01	9.449E-01	3.080E-01	-0.083
LA-140	-1.667E-02		7.398E-02	1.204E-01	7.842E-03	-0.138
CE-141	1.513E-02		1.214E-01	1.973E-01	1.148E-02	0.077
CE-143	8.420E-05		6.261E-05	Half-Life too short		
CE-144	2.489E-01		4.196E-01	6.881E-01	9.796E-02	0.362
PM-144	-9.989E-03		3.343E-02	5.416E-02	3.664E-03	-0.184
PR-144	-6.761E-01		2.263E+00	3.666E+00	2.479E-01	-0.184
PM-146	-3.529E-02		1.727E-01	2.781E-01	2.405E-02	-0.127
ND-147	-4.561E-01		1.340E+00	2.118E+00	2.899E-01	-0.215
PM-149	-3.599E+01		1.197E+02	1.988E+02	2.806E+01	-0.181
EU-152	1.661E-01		2.975E-01	4.595E-01	2.945E-02	0.362

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	3.857E-01	+	2.153E-01	2.564E-01	1.783E-02	1.504
EU-154	-1.244E-01		1.152E-01	1.686E-01	1.642E-02	-0.738
EU-155	-2.394E-02		2.123E-01	3.497E-01	2.357E-02	-0.068
TB-160	-1.347E-02		1.299E-01	2.088E-01	1.714E-02	-0.065
HO-166M	1.210E-02		6.046E-02	1.011E-01	6.960E-03	0.120
TM-171	-3.382E+01		4.939E+01	8.221E+01	5.321E+00	-0.411
LU-176	-1.479E-02		6.700E-02	1.109E-01	6.302E-03	-0.133
LU-177	2.303E+00	+	2.130E+00	3.421E+00	1.830E-01	0.673
LU-177M	-2.489E-01		5.928E-01	9.580E-01	5.377E-02	-0.260
HF-181	5.459E-02		1.471E-01	2.381E-01	1.422E-02	0.229
W-181	-3.617E-01		6.232E-01	1.040E+00	6.683E-02	-0.348
TA-182	-2.992E-02		1.892E-01	3.084E-01	1.830E-02	-0.097
RE-183	2.017E-02		2.310E-01	3.727E-01	1.937E-02	0.054
RE-184	-5.248E-02		5.623E-01	9.452E-01	5.260E-02	-0.056
OS-185	2.615E-02		9.264E-02	1.553E-01	1.004E-02	0.168
RE-188	-5.298E-02		3.488E-01	5.602E-01	3.004E-02	-0.095
W-188	9.970E+00		2.064E+01	3.064E+01	1.736E+00	0.325
IR-192	-9.498E-04		9.109E-02	1.511E-01	8.634E-03	-0.006
AU-195	1.121E+00	+	6.257E-01	7.576E-01	5.210E-02	1.480
TL-200	-2.299E-05		1.763E-04	Half-Life too short		
TL-201	-2.686E+00		9.410E+00	1.505E+01	7.716E-01	-0.178
TL-202	-4.339E-02		2.320E-01	3.748E-01	2.158E-02	-0.116
HG-203	6.654E-03		9.847E-02	1.646E-01	9.899E-03	0.040
BI-207	5.047E-02		4.853E-02	8.750E-02	6.036E-03	0.577
TL-207	-1.594E+00		1.799E+00	2.904E+00	4.785E-01	-0.549
PO-209	-5.915E-01		7.727E+00	1.243E+01	1.038E+00	-0.048
BI-210	-3.054E+01		1.445E+01	2.404E+01	1.811E+00	-1.271
PB-210	-3.054E+01		1.445E+01	2.404E+01	1.811E+00	-1.271
PO-210	-3.054E+01		1.440E+01	2.404E+01	1.542E+00	-1.271
PB-211	-6.931E-01		3.053E+00	4.909E+00	3.059E+00	-0.141
PO-215	-1.594E+00		1.799E+00	2.904E+00	4.785E-01	-0.549
RN-219	-2.427E-01		1.337E+00	2.174E+00	2.935E-01	-0.112
RN-220	8.936E+00		5.992E+01	1.013E+02	6.314E+00	0.088
RA-223	-1.594E+00		1.799E+00	2.904E+00	4.785E-01	-0.549
AC-227	4.993E-01		9.389E-01	1.588E+00	2.202E-01	0.314
TH-227	4.993E-01		9.401E-01	1.588E+00	2.671E-01	0.314
TH-229	-3.345E-01		1.304E+00	2.069E+00	1.089E-01	-0.162
PA-231	1.401E-01		3.884E+00	6.494E+00	8.910E-01	0.022
TH-231	-1.594E+00		1.799E+00	2.904E+00	4.785E-01	-0.549
U-231	-8.302E-01		1.993E+00	2.312E+00	1.629E-01	-0.359
PA-233	-3.736E-02		1.730E-01	2.863E-01	1.732E-02	-0.130
PA-234	-3.515E-01		2.719E-01	3.656E-01	6.762E-02	-0.961
PA-234M	-2.778E+00		5.884E+00	9.507E+00	9.861E-01	-0.292
TH-234	1.803E+00		2.509E+00	3.853E+00	6.561E-01	0.468
U-235	-1.134E-01		4.235E-01	6.819E-01	1.108E-01	-0.166
NP-236	-3.694E-02		1.714E-01	2.752E-01	1.443E-02	-0.134
U-238	1.803E+00		2.509E+00	3.853E+00	6.561E-01	0.468
NP-239	-1.321E-01		3.904E-01	6.370E-01	4.020E-02	-0.207

Sample ID : G232511004 Acquisition date : 7-JUL-2009 10:53:59

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.682E-01		2.019E-01	3.225E-01	2.148E-02	0.522
CM-247	-7.522E-02		1.196E-01	1.929E-01	1.070E-02	-0.390
CF-249	-3.176E-02		1.252E-01	2.039E-01	1.121E-02	-0.156
CF-251	-1.228E-01		2.823E-01	4.488E-01	2.320E-02	-0.274

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232511004            *
* Acquisition date :  7-JUL-2009 10:53:59 Detector SN#    :                 *
* Detector ID      : GAM12                Sensitivity     : 5.000           *
* Geometry         : CAN                  Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:12.77     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 24-JUN-2009 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G232511004           Analyst initials: MXR1            *
* Batch Number     : 881220               Sample Quantity : 1.5827E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.079E+01	2.670E+00	2.784E-01	1.362E+00
CD-109	2.084E+00	2.024E+00	1.257E+00	1.033E+00
SN-126	2.055E-01	1.996E-01	1.246E-01	1.018E-01
BA-137M	8.418E+01	5.387E+00	6.077E-02	2.749E+00
CS-137	8.899E+01	5.714E+00	6.424E-02	2.915E+00
TL-208	5.431E-01	1.272E-01	6.599E-02	6.490E-02
BI-211	3.647E+00	8.985E-01	4.923E-01	4.584E-01
BI-212	1.264E+00	4.831E-01	2.052E-01	2.465E-01
PB-212	1.584E+00	2.216E-01	1.210E-01	1.131E-01
PO-212	1.584E+00	2.216E-01	1.210E-01	1.131E-01
BI-214	1.364E+00	2.563E-01	1.194E-01	1.308E-01
PB-214	1.269E+00	3.192E-01	1.737E-01	1.629E-01
PO-214	1.269E+00	3.192E-01	1.737E-01	1.629E-01
PO-216	1.584E+00	2.216E-01	1.210E-01	1.131E-01
PO-218	1.269E+00	3.192E-01	1.737E-01	1.629E-01
RA-224	2.698E+00	1.608E+00	1.372E+00	8.205E-01
RA-226	1.364E+00	2.563E-01	1.194E-01	1.308E-01
AC-228	1.679E+00	3.306E-01	1.076E-01	1.687E-01
RA-228	1.679E+00	3.306E-01	1.076E-01	1.687E-01
TH-228	1.584E+00	2.216E-01	1.210E-01	1.131E-01
TH-230	1.364E+00	2.563E-01	1.194E-01	1.308E-01
TH-232	1.679E+00	3.306E-01	1.076E-01	1.687E-01
U-234	1.364E+00	2.563E-01	1.194E-01	1.308E-01
NP-237	6.035E-01	5.986E-01	3.698E-01	3.054E-01
AM-241	2.352E+02	1.650E+01	5.626E-01	8.418E+00
AM-243	4.504E-01	1.148E-01	8.280E-02	5.855E-02
ANH-511	6.704E-02	1.182E-01	7.424E-02	6.031E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-5.605E-01	1.189E+00	1.010E+00	6.066E-01	NOT IDENT.
NA-22	-4.345E-02	4.035E-02	3.074E-02	2.059E-02	NOT IDENT.
NA-24	-4.048E+04	5.659E+04	0.000E+00	2.887E+04	SHORT HLIF
AL-26	3.114E-02	2.711E-02	2.701E-02	1.383E-02	NOT IDENT.
TI-44	4.100E-01	7.741E-02	5.868E-02	3.949E-02	FAIL ABUN
SC-46	1.639E-02	3.900E-02	3.410E-02	1.990E-02	FAIL ABUN
V-48	-3.285E-02	5.635E-02	4.435E-02	2.875E-02	NOT IDENT.
CR-51	3.386E-01	9.339E-01	8.375E-01	4.765E-01	NOT IDENT.
MN-52	-7.151E-02	1.763E-01	1.405E-01	8.993E-02	FAIL ABUN
MN-54	-3.258E-02	3.791E-02	3.027E-02	1.934E-02	NOT IDENT.
CO-56	-1.427E-02	3.887E-02	3.217E-02	1.983E-02	FAIL ABUN
CO-57	4.081E-03	5.204E-02	4.709E-02	2.655E-02	NOT IDENT.
CO-58	-1.942E-02	3.573E-02	2.921E-02	1.823E-02	NOT IDENT.
FE-59	2.381E-02	8.346E-02	7.378E-02	4.258E-02	NOT IDENT.
CO-60	8.393E-02	4.798E-02	4.050E-02	2.448E-02	FAIL ABUN
ZN-65	-8.312E-02	9.423E-02	6.257E-02	4.808E-02	NOT IDENT.
GE-68	-3.775E-01	1.072E+00	9.010E-01	5.469E-01	NOT IDENT.
AS-73	-3.754E+00	4.348E+00	3.959E+00	2.218E+00	NOT IDENT.
AS-74	-9.476E-02	1.688E-01	1.469E-01	8.615E-02	NOT IDENT.
SE-75	-2.451E-02	1.065E-01	9.636E-02	5.436E-02	NOT IDENT.
BR-77	-6.176E+00	1.539E+01	1.293E+01	7.853E+00	FAIL ABUN
SR-82	2.312E-03	3.433E-01	2.557E-01	1.751E-01	NOT IDENT.
RB-83	-1.303E-01	1.891E-01	1.577E-01	9.649E-02	NOT IDENT.
RB-84	-2.304E-02	6.202E-02	5.085E-02	3.164E-02	NOT IDENT.
KR-85	3.735E+01	2.115E+01	1.645E+01	1.079E+01	NOT IDENT.
SR-85	1.872E-01	1.060E-01	8.242E-02	5.409E-02	NOT IDENT.
RB-86	-5.310E-01	6.179E-01	4.932E-01	3.153E-01	NOT IDENT.
Y-88	-3.006E-03	2.483E-02	2.047E-02	1.267E-02	NOT IDENT.
ZR-88	-5.128E-02	9.469E-02	8.199E-02	4.831E-02	NOT IDENT.
Y-91	8.992E+00	1.856E+01	1.641E+01	9.469E+00	NOT IDENT.
NB-94	6.969E-03	3.222E-02	2.840E-02	1.644E-02	NOT IDENT.
NB-95	-9.074E-03	4.112E-02	2.992E-02	2.098E-02	NOT IDENT.
NB-95M	1.682E-01	2.984E-01	2.441E-01	1.523E-01	NOT IDENT.
ZR-95	4.084E-02	6.392E-02	5.762E-02	3.261E-02	NOT IDENT.
NB-97	1.909E+05	3.693E+04	0.000E+00	1.884E+04	SHORT HLIF
ZR-97	7.877E+04	6.682E+05	0.000E+00	3.409E+05	SHORT HLIF
MO-99	-3.969E+00	6.004E+00	4.900E+00	3.063E+00	NOT IDENT.
TC-99M	9.888E+11	1.919E+14	0.000E+00	9.793E+13	SHORT HLIF
RH-101	-1.537E-02	8.076E-02	6.965E-02	4.121E-02	NOT IDENT.
RH-102	9.008E-02	1.153E-01	9.993E-02	5.885E-02	NOT IDENT.
RU-103	4.829E-03	1.220E-01	1.042E-01	6.226E-02	FAIL ABUN
RH-106	-5.854E-02	6.476E-01	5.690E-01	3.304E-01	FAIL ABUN
RU-106	-5.854E-02	6.476E-01	5.690E-01	3.304E-01	FAIL ABUN
AG-108M	1.324E-02	1.198E-01	1.038E-01	6.112E-02	NOT IDENT.
AG-110M	4.027E-01	1.044E-01	8.679E-02	5.327E-02	NOT IDENT.
IN-111	1.148E+00	1.652E+00	1.350E+00	8.430E-01	NOT IDENT.
IN-113M	1.989E-04	1.368E-01	1.196E-01	6.979E-02	NOT IDENT.
SN-113	1.989E-04	1.368E-01	1.196E-01	6.979E-02	NOT IDENT.
IN-114M	2.353E-01	4.685E-01	3.907E-01	2.390E-01	NOT IDENT.
CD-115	-2.612E-01	1.522E+01	1.289E+01	7.766E+00	NOT IDENT.
SN-117M	5.253E-02	1.026E-01	9.143E-02	5.233E-02	NOT IDENT.
SB-122	-1.750E+00	2.481E+00	2.165E+00	1.266E+00	NOT IDENT.
I-123	-1.786E+05	7.759E+05	0.000E+00	3.958E+05	SHORT HLIF
TE-123M	-1.349E-02	5.863E-02	5.161E-02	2.991E-02	NOT IDENT.
I-124	-6.172E-02	9.948E-01	7.986E-01	5.076E-01	NOT IDENT.
SB-124	-3.714E-02	6.141E-02	4.691E-02	3.133E-02	FAIL ABUN
SB-125	3.443E-01	3.332E-01	2.927E-01	1.700E-01	NOT IDENT.
TE-125M	-7.878E+00	1.747E+01	1.580E+01	8.914E+00	NOT IDENT.
I-126	5.342E-01	2.350E-01	2.030E-01	1.199E-01	NOT IDENT.
SB-126	6.479E-02	1.193E-01	9.883E-02	6.089E-02	FAIL ABUN
SB-127	-2.235E-01	8.491E-01	7.266E-01	4.332E-01	NOT IDENT.
XE-127	-5.463E-04	1.091E-01	9.437E-02	5.568E-02	NOT IDENT.
I-131	-9.792E-02	2.861E-01	2.504E-01	1.460E-01	NOT IDENT.
TE-132	-5.832E-02	1.008E+00	9.265E-01	5.145E-01	NOT IDENT.
BA-133	9.160E-03	1.389E-01	1.077E-01	7.089E-02	NOT IDENT.
I-133	1.972E+03	2.875E+03	0.000E+00	1.467E+03	SHORT HLIF
CS-134	4.913E-02	4.300E-02	3.976E-02	2.194E-02	NOT IDENT.
CS-135	1.105E-02	3.743E-01	3.395E-01	1.910E-01	NOT IDENT.
I-135	5.902E+12	2.386E+13	0.000E+00	1.217E+13	SHORT HLIF
CS-136	-1.221E-02	9.302E-02	7.934E-02	4.746E-02	FAIL ABUN
CE-139	1.081E-02	6.269E-02	5.537E-02	3.199E-02	NOT IDENT.
BA-140	-7.866E-02	5.514E-01	4.911E-01	2.813E-01	NOT IDENT.
LA-140	-1.667E-02	7.250E-02	6.065E-02	3.699E-02	NOT IDENT.
CE-141	1.513E-02	1.190E-01	1.062E-01	6.071E-02	NOT IDENT.
CE-143	8.420E+01	1.227E+02	0.000E+00	6.261E+01	SHORT HLIF
CE-144	2.489E-01	4.112E-01	3.712E-01	2.098E-01	NOT IDENT.
PM-144	-9.989E-03	3.276E-02	2.794E-02	1.672E-02	NOT IDENT.
PR-144	-6.761E-01	2.218E+00	1.891E+00	1.131E+00	NOT IDENT.

PM-146	-3.529E-02	1.692E-01	1.452E-01	8.633E-02	NOT IDENT.
ND-147	-4.561E-01	1.313E+00	1.101E+00	6.700E-01	NOT IDENT.
PM-149	-3.599E+01	1.173E+02	1.051E+02	5.986E+01	NOT IDENT.
EU-152	1.661E-01	2.916E-01	2.417E-01	1.488E-01	FAIL ABUN
GD-153	3.857E-01	2.110E-01	1.395E-01	1.076E-01	FAIL ABUN
EU-154	-1.244E-01	1.129E-01	8.547E-02	5.762E-02	NOT IDENT.
EU-155	-2.394E-02	2.080E-01	1.898E-01	1.061E-01	FAIL ABUN
TB-160	-1.347E-02	1.273E-01	1.070E-01	6.496E-02	FAIL ABUN
HO-166M	1.210E-02	5.925E-02	5.214E-02	3.023E-02	FAIL ABUN
TM-171	-3.382E+01	4.840E+01	4.515E+01	2.470E+01	FAIL ABUN
LU-176	-1.479E-02	6.566E-02	5.852E-02	3.350E-02	NOT IDENT.
LU-177	2.303E+00	2.087E+00	1.824E+00	1.065E+00	FAIL ABUN
LU-177M	-2.489E-01	5.809E-01	5.015E-01	2.964E-01	NOT IDENT.
HF-181	5.459E-02	1.441E-01	1.241E-01	7.354E-02	NOT IDENT.
W-181	-3.617E-01	6.107E-01	5.715E-01	3.116E-01	NOT IDENT.
TA-182	-2.992E-02	1.854E-01	1.566E-01	9.459E-02	FAIL ABUN
RE-183	2.017E-02	2.264E-01	2.001E-01	1.155E-01	FAIL ABUN
RE-184	-5.248E-02	5.510E-01	5.015E-01	2.811E-01	FAIL ABUN
OS-185	2.615E-02	9.079E-02	8.031E-02	4.632E-02	FAIL ABUN
RE-188	-5.298E-02	3.418E-01	3.011E-01	1.744E-01	NOT IDENT.
W-188	9.970E+00	2.023E+01	1.619E+01	1.032E+01	NOT IDENT.
IR-192	-9.498E-04	8.927E-02	7.968E-02	4.554E-02	FAIL ABUN
AU-195	1.121E+00	6.132E-01	4.119E-01	3.128E-01	FAIL ABUN
TL-200	-2.299E+01	3.456E+02	0.000E+00	1.763E+02	SHORT HLIF
TL-201	-2.686E+00	9.222E+00	8.074E+00	4.705E+00	NOT IDENT.
TL-202	-4.339E-02	2.274E-01	1.959E-01	1.160E-01	NOT IDENT.
HG-203	6.654E-03	9.650E-02	8.710E-02	4.924E-02	NOT IDENT.
BI-207	5.047E-02	4.756E-02	4.460E-02	2.426E-02	FAIL ABUN
TL-207	-1.594E+00	1.763E+00	1.531E+00	8.996E-01	FAIL ABUN
PO-209	-5.915E-01	7.572E+00	6.368E+00	3.863E+00	NOT IDENT.
BI-210	-3.054E+01	1.416E+01	1.332E+01	7.227E+00	NOT IDENT.
PB-210	-3.054E+01	1.416E+01	1.332E+01	7.227E+00	NOT IDENT.
PO-210	-3.054E+01	1.412E+01	1.332E+01	7.202E+00	NOT IDENT.
PB-211	-6.931E-01	2.992E+00	2.571E+00	1.527E+00	NOT IDENT.
PO-215	-1.594E+00	1.763E+00	1.531E+00	8.996E-01	FAIL ABUN
RN-219	-2.427E-01	1.311E+00	1.139E+00	6.687E-01	NOT IDENT.
RN-220	8.936E+00	5.872E+01	5.259E+01	2.996E+01	NOT IDENT.
RA-223	-1.594E+00	1.763E+00	1.531E+00	8.996E-01	FAIL ABUN
AC-227	4.993E-01	9.201E-01	8.421E-01	4.694E-01	FAIL ABUN
TH-227	4.993E-01	9.213E-01	8.421E-01	4.700E-01	FAIL ABUN
TH-229	-3.345E-01	1.278E+00	1.105E+00	6.521E-01	FAIL ABUN
PA-231	1.401E-01	3.806E+00	3.435E+00	1.942E+00	FAIL ABUN
TH-231	-1.594E+00	1.763E+00	1.531E+00	8.996E-01	FAIL ABUN
U-231	-8.302E-01	1.953E+00	1.258E+00	9.963E-01	FAIL ABUN
PA-233	-3.736E-02	1.696E-01	1.510E-01	8.651E-02	FAIL ABUN
PA-234	-3.515E-01	2.665E-01	1.870E-01	1.360E-01	FAIL ABUN
PA-234M	-2.778E+00	5.767E+00	4.854E+00	2.942E+00	NOT IDENT.
TH-234	1.803E+00	2.459E+00	2.119E+00	1.255E+00	FAIL ABUN
U-235	-1.134E-01	4.151E-01	3.672E-01	2.118E-01	FAIL ABUN
NP-236	-3.694E-02	1.679E-01	1.478E-01	8.569E-02	FAIL ABUN
U-238	1.803E+00	2.459E+00	2.119E+00	1.255E+00	FAIL ABUN
NP-239	-1.321E-01	3.826E-01	3.449E-01	1.952E-01	FAIL ABUN
CM-243	1.682E-01	1.978E-01	1.752E-01	1.009E-01	FAIL ABUN
CM-247	-7.522E-02	1.172E-01	1.011E-01	5.981E-02	NOT IDENT.
CF-249	-3.176E-02	1.227E-01	1.069E-01	6.262E-02	NOT IDENT.
CF-251	-1.228E-01	2.766E-01	2.404E-01	1.411E-01	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	8303.7617
46.50	8303.7617
46.50	8303.7617
48.70	9449.6875
49.72	9725.8457
51.35	11242.6221
52.39	12156.7500
52.97	12666.2666
53.15	12673.4902
53.44	12635.5537
54.07	12343.9551
56.28	13230.7354
56.28	13230.8516
57.37	0.0000
57.53	7985.4302
57.53	7985.4766
57.60	7987.1196
57.98	7996.2168
57.98	7996.2168
59.32	8028.0449
59.32	8028.0449
59.40	8029.9199
59.54	8033.2300
59.72	8037.4658
60.01	8044.2944
61.10	1827.2679
61.14	1827.4802
61.30	1811.0203
63.00	1707.5048
63.29	1671.4280
63.29	1671.4280
63.58	1674.1323
64.28	1794.1635
65.12	1820.3176
65.20	1799.1946
65.20	1799.1946
66.05	1853.7422
66.72	1872.4303
66.83	1873.0012
66.91	1799.5225
67.20	1764.8615
67.20	1764.8615
67.75	1787.3387
67.85	1787.8320
68.90	1836.1586
68.90	1836.1586
69.30	1831.0332
69.67	1813.7667
70.82	1811.0393
70.82	1811.0393
70.83	1811.0898
72.80	1821.6991
72.87	1822.0332
72.87	1822.0332
74.67	1717.7206
74.81	1718.3286
74.81	1718.3286
74.81	1718.3286
74.81	1718.3286
74.81	1718.3286
74.81	1718.3286
74.97	1719.0175
75.28	1720.3523
75.70	1722.1576
77.11	1728.1813
77.11	1728.1813
77.11	1728.1813

77.11	1728.1813
77.11	1728.1813
77.11	1728.1813
78.38	1680.1971
79.62	1707.5831
79.80	1708.3203
79.80	1708.3203
80.11	1692.8241
80.18	1693.1013
80.30	1693.5909
80.30	1693.5909
80.57	1694.6812
81.00	1766.4602
81.07	1766.7584
81.07	1766.7584
81.07	1766.7584
81.07	1766.7584
82.60	1685.1221
83.37	1703.0802
83.78	1756.8931
83.78	1756.8931
83.78	1756.8931
83.78	1756.8931
84.21	1736.0593
84.40	1736.8195
84.90	1731.7593
85.43	1817.3804
86.29	1904.6189
86.50	1882.8291
86.54	1883.0012
86.59	1883.2137
86.72	1883.7706
86.79	1884.0642
86.94	1888.9730
87.30	1890.5052
87.30	1890.5052
87.30	1890.5052
87.30	1890.5052
87.30	1890.5052
87.30	1890.5052
87.57	1891.6620
87.88	1892.9811
88.03	1893.6204
88.36	1964.3622
88.47	1964.8461
89.95	2013.2578
91.11	1746.0428
92.29	1981.4546
92.38	1981.8438
92.38	1981.8438
93.35	1768.9601
94.00	1794.5140
94.67	1837.5156
94.67	1837.5350
94.90	1838.4375
94.90	1838.4375
94.90	1838.4375
94.90	1838.4375
95.87	1842.2223
95.87	1842.2223
96.73	1845.5801
97.43	1809.5300
98.44	1776.4426
98.44	1776.4519
98.88	1736.2916
99.55	1751.3397
99.55	1751.3397
99.86	1752.4567
100.00	1752.9602
100.10	1836.6190
103.18	1706.9725
103.76	1746.3447
105.00	1837.6249
105.31	1782.6479
108.00	1807.9037
109.28	1795.5280
111.00	1689.9854
111.00	1689.9854

111.76	1788.1145
112.95	1908.0182
115.19	1845.8024
116.30	1795.3202
117.00	1841.9141
117.00	1841.9141
117.66	1868.3335
121.11	1843.5212
121.62	1849.2639
121.78	1849.7922
122.06	1872.0499
122.32	1872.9124
122.32	1872.9124
122.32	1872.9124
122.32	1872.9124
123.07	1876.4235
127.23	2017.2330
129.76	1927.1865
131.20	1964.9333
133.02	1852.9480
133.54	1790.3145
135.34	1838.2816
136.00	1843.3999
136.25	1836.8898
136.48	1821.9553
140.51	1811.9287
140.51	0.0000
142.18	1835.6970
142.65	1819.1891
143.76	1807.6617
144.24	1827.9991
144.24	1827.9991
144.24	1827.9991
144.24	1827.9991
145.22	1831.8771
145.44	1801.8827
147.16	1853.3401
152.43	1819.2883
152.70	1809.3528
153.22	1822.5239
154.21	1889.4785
154.21	1889.4785
154.21	1889.4785
154.21	1889.4785
155.03	1827.5017
156.02	1818.3998
158.56	1822.0258
159.00	0.0000
159.00	1865.2443
160.31	1901.2419
161.27	1848.7395
162.32	1879.7245
162.64	1878.4216
163.35	1889.0232
163.89	1906.7811
165.85	1883.8282
167.43	1944.8207
171.28	1865.3759
171.86	1883.3528
172.10	1883.9808
176.55	1933.1090
176.60	1933.2424
181.06	2029.6401
184.41	2099.3333
185.71	2406.6807
186.00	2403.1226
190.27	2505.4048
192.34	2510.9338
193.63	2468.7083
197.04	2311.3562
198.01	2360.7534
198.60	2348.8367
200.40	2307.3691
201.83	2250.9187
202.84	2257.1560
205.31	2207.1924
208.36	2196.3623
208.81	2204.4568

209.75	2160.2500
209.75	2160.2500
210.97	2194.5725
215.65	2054.0620
216.55	2103.8782
218.09	2078.5415
222.10	2043.4545
223.80	2014.0112
226.40	2076.4001
227.00	2090.1538
227.08	2090.3525
227.20	2088.8586
228.16	2054.8948
228.18	2040.8125
228.18	2040.8125
231.56	0.0000
235.69	2014.0425
236.00	1994.7704
236.00	1994.7704
238.60	2131.9917
238.63	2132.0645
238.63	2132.0645
238.63	2132.0645
239.00	2117.1660
240.98	2121.7188
241.98	2006.3143
241.98	2006.3143
241.98	2006.3143
244.69	1964.6370
245.39	1860.9563
247.94	1865.8069
248.90	1904.7461
249.79	1874.8763
252.40	1875.4503
252.85	1830.0607
252.85	1830.0607
254.15	0.0000
256.20	1809.0869
256.20	1809.0869
260.50	1823.4622
260.90	1796.7472
262.80	1838.7211
264.65	1843.9860
268.24	1838.6232
268.79	1784.3005
269.46	1769.7952
269.46	1769.7952
269.46	1769.7952
269.46	1769.7952
271.23	1770.1244
273.65	1915.1669
276.40	1711.2477
277.35	1705.4106
277.60	1735.5657
277.60	1735.5657
278.00	1766.0239
278.60	1733.5216
279.20	1805.3422
279.53	1828.2681
280.46	1856.0297
281.68	1807.7625
283.67	1738.2178
284.30	1728.0336
285.00	1712.3275
285.90	1792.5292
286.10	1793.8170
286.10	1793.8170
287.40	1755.6360
288.45	0.0000
290.67	1729.7637
290.80	1734.5087
291.72	1743.5392
293.26	0.0000
293.70	1810.1909
295.21	1743.8878
295.21	1743.8878
295.21	1743.8878
295.96	1635.3193

296.50	1704.2816
297.23	1637.2178
298.57	1639.2217
299.80	1812.7717
299.80	1812.7717
300.09	1790.4680
300.09	1790.4680
300.09	1790.4680
300.10	1790.4680
300.12	1790.4968
301.29	1743.7330
302.84	1787.3073
303.76	1785.7463
303.91	1776.8241
304.40	1716.5863
304.40	1716.5863
304.84	1757.9786
306.84	1783.4286
308.46	1770.7054
311.98	1733.9926
316.51	1683.0720
318.01	1782.7710
319.02	1664.5553
319.41	1658.3427
320.08	1671.8820
323.87	1783.0867
323.87	1783.0867
323.87	1783.0867
323.87	1783.0867
325.23	1792.9602
328.77	1681.4647
333.44	1765.1714
334.20	1656.6896
334.20	1656.6896
334.30	1656.8187
338.28	1700.0291
338.28	1700.0291
338.28	1700.0291
338.28	1700.0291
338.32	1700.1083
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338.32	1700.1083
340.50	1796.0443
340.57	1796.1278
344.27	1706.6136
345.85	1768.4679
350.59	0.0000
351.07	1713.1497
351.92	1756.6373
351.92	1756.6373
351.92	1756.6373
355.39	0.0000
356.01	1704.0059
364.48	1795.2988
366.43	1851.2678
367.43	1802.4388
367.94	0.0000
369.80	1736.2587
374.96	1780.5887
383.85	1879.1534
387.95	1839.0063
388.63	1820.5299
391.69	1843.0939
391.69	1843.0939
392.90	1891.8853
398.62	1884.3911
400.65	1924.2897
401.10	1880.5825
401.81	1909.4087
402.60	1924.9318
404.84	1919.7916
410.95	1995.6997
411.60	1963.3955
413.65	2043.2361
414.70	2066.5977
415.30	2008.1078
415.76	2001.4911
417.63	0.0000

418.52	2005.3604
423.70	2173.9753
427.08	2162.2705
427.89	2125.6687
432.53	2226.2754
433.93	2175.6152
439.47	2231.4858
439.56	2231.6145
439.89	2240.6040
443.98	2273.3254
444.90	2290.6741
445.03	2286.6191
445.03	2286.6191
445.03	2286.6191
445.03	2286.6191
453.90	2371.7532
463.38	2541.4133
468.07	2521.0308
473.00	2431.5444
475.06	2247.1946
475.35	2207.4893
476.78	2140.0544
477.59	2144.3950
477.96	2113.4126
482.03	1747.5339
484.57	1645.6334
487.03	1697.3044
490.36	0.0000
492.35	1425.6686
497.08	1340.7975
507.63	0.0000
510.53	0.0000
510.84	1305.0164
511.00	1305.1422
511.85	1140.8070
511.85	1140.8070
513.99	1000.1428
513.99	1000.1428
520.41	1045.4028
520.65	1021.0515
527.90	973.8913
528.96	0.0000
529.64	891.9534
529.87	0.0000
531.02	928.5688
537.32	816.6985
543.00	763.3469
546.56	0.0000
549.76	694.6363
552.65	680.3173
555.20	674.9193
563.23	627.6926
563.90	646.2076
568.70	605.7607
569.32	626.1389
569.50	626.2056
569.67	618.9203
573.80	601.0222
574.00	601.0861
574.64	604.9713
578.91	597.4607
579.30	0.0000
583.14	592.0643
585.48	599.5817
591.81	559.5416
592.07	547.5649
593.00	546.8957
595.88	556.0991
600.56	543.4881
602.52	0.0000
602.71	546.6333
602.71	546.6333
603.60	544.6675
604.41	519.9860
604.70	523.1816
609.31	545.9789
609.31	545.9789
609.31	545.9789

609.31	545.9789
610.33	498.1649
612.46	489.3427
614.37	527.3853
618.01	502.3459
621.84	517.4620
621.84	517.4620
631.29	531.3201
633.02	487.2208
633.10	487.2459
634.78	509.4814
635.90	500.2769
636.97	481.5386
645.85	521.8401
646.12	537.1729
656.30	623.2922
657.75	634.9318
657.90	0.0000
661.65	466.2797
661.65	466.2797
664.57	0.0000
666.33	154.1719
666.33	154.1719
675.00	112.2419
677.61	107.5367
685.20	99.1736
692.80	93.6727
695.00	94.7455
696.49	114.3606
696.49	114.3606
697.00	131.0066
697.49	126.1466
698.33	107.6099
698.50	107.6179
699.00	94.9231
702.63	107.8247
706.10	106.0330
706.58	0.0000
706.67	104.0979
709.31	109.1383
711.68	104.3360
713.82	87.6876
717.42	110.5316
720.50	74.8252
721.93	0.0000
722.20	79.1211
722.78	75.8450
722.78	75.8450
722.89	75.8487
722.95	75.8506
723.30	75.8618
724.18	82.4910
727.18	78.3076
733.00	94.4132
735.90	82.4505
739.58	89.7056
742.81	69.8701
744.21	76.9041
747.13	81.0040
751.79	99.2054
752.31	100.2319
753.82	81.2413
755.35	80.2910
756.15	79.3144
756.87	83.3566
763.93	65.4792
765.79	89.0558
766.41	95.8025
766.84	84.0535
768.36	77.7162
768.36	77.7162
768.36	77.7162
768.36	77.7162
776.49	69.2075
778.00	85.5804
778.57	93.2601
778.89	88.2043
783.80	82.2913

785.46	73.1988
792.07	110.1041
795.84	74.5381
796.30	76.5948
801.93	78.8216
805.60	70.7402
810.29	83.2030
810.76	86.3010
815.85	78.2451
817.79	74.1850
818.51	75.2367
819.60	68.0528
826.30	103.3911
828.27	0.0000
831.60	95.3220
831.96	97.4080
834.83	116.1945
836.80	0.0000
846.75	94.8568
848.13	86.5644
856.28	0.0000
856.80	71.5114
860.37	73.3582
867.32	66.5510
867.82	73.5701
871.10	76.8211
873.19	70.5643
874.81	75.8777
875.33	0.0000
876.40	70.6510
879.36	72.8425
880.27	86.5965
880.51	77.0991
881.50	75.0163
883.24	83.5228
884.67	67.7016
889.25	78.4172
896.60	86.0724
898.02	90.3727
899.00	68.0703
903.28	73.3879
911.07	81.1990
911.07	81.1990
911.07	81.1990
919.63	50.0174
920.93	67.9133
925.00	61.2138
925.24	60.1453
926.50	47.2785
934.06	66.8044
934.06	66.8044
934.06	66.8044
934.06	66.8044
935.52	61.4489
937.48	96.0161
944.10	58.3967
946.00	72.5043
949.00	55.2496
962.29	70.7510
964.01	76.2395
966.15	76.2976
968.20	76.3523
969.11	76.3779
969.11	76.3779
969.11	76.3779
977.42	56.5394
980.50	64.6335
983.50	63.6046
989.30	56.0415
996.32	80.7777
1001.03	63.4395
1001.68	61.6143
1004.76	78.2504
1021.30	0.0000
1024.50	0.0000
1034.80	64.1709
1037.82	68.8902
1038.57	62.3872

1038.76	0.0000
1045.16	74.6582
1046.59	80.2926
1048.07	73.7957
1050.47	78.5278
1050.47	78.5278
1063.62	54.4552
1076.63	66.9438
1077.35	64.1291
1085.78	67.1403
1099.22	70.2783
1112.02	85.1858
1112.84	85.8435
1115.52	85.0949
1120.29	67.8770
1120.29	67.8770
1120.29	67.8770
1120.29	67.8770
1120.51	72.1169
1121.28	63.9381
1124.00	0.0000
1129.67	73.8293
1131.51	0.0000
1147.95	0.0000
1167.94	97.9794
1173.22	80.6460
1175.09	94.3042
1177.93	109.9515
1189.05	80.0514
1204.90	88.2751
1205.75	0.0000
1213.00	103.2312
1221.42	89.6855
1230.97	90.4277
1235.34	96.6925
1236.41	0.0000
1238.11	106.9541
1238.11	106.9541
1238.11	106.9541
1238.11	106.9541
1238.25	91.1128
1246.25	67.4992
1260.41	0.0000
1271.85	66.9891
1274.45	71.0404
1274.54	71.0433
1291.56	50.2665
1298.22	0.0000
1312.09	57.6285
1325.50	50.0600
1325.50	50.0600
1332.49	41.6823
1333.61	39.6602
1360.21	34.8218
1362.66	0.0000
1365.15	29.7399
1368.21	32.8438
1368.53	0.0000
1376.25	33.9413
1377.67	38.0689
1377.67	38.0689
1377.67	38.0689
1377.67	38.0689
1384.27	49.4727
1394.10	29.9664
1395.20	37.2100
1407.95	27.9998
1434.06	40.7139
1436.60	35.5163
1457.56	0.0000
1460.81	36.7830
1489.15	19.0503
1509.49	24.4628
1596.49	33.5001
1620.62	16.8430
1678.03	0.0000
1691.02	19.9614
1691.02	19.9614

1706.46	0.0000
1750.46	0.0000
1764.49	5.0698
1764.49	5.0698
1764.49	5.0698
1764.49	5.0698
1770.23	8.4598
1771.40	5.0771
1791.20	0.0000
1808.65	9.7461
1836.01	11.7614

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232511004

Total Uranium Activity	5.3111E+00	ug/g
Total Uranium Counting Unc.	7.3176E+00	ug/g
Total Uranium Tpu	3.7335E-06	ug/g
Total Uranium Mda	6.3057E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID  : G232511004       *
*   ANALYST       : MXR1                      DETECTOR   : GAM12            *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 10:53:59.54    SAMPLE ALQT:  158.270 GRAM    *
*                                                                           *
*****************************************************************************
```

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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.694E+02
GROSS GAMMA ERROR   (pCi/GRAM  )  : 8.161E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 1.141E+01
GROSS GAMMA DLC     (pCi/GRAM  )  : 5.662E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:55:40.32

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511005.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:54:38.
Sample ID         : G232511005           Sample quantity  : 1.56960E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:05.76  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	50.11	1633	11810	1.17	99.99	98	6	2.27E-01	10.8	
2	0	59.91	122471	13245	1.08	119.58	114	11	1.70E+01	0.3	
3	0	63.65*	134	868	1.00	127.07	125	6	1.87E-02	39.2	
4	2	75.25*	801	1076	1.09	150.27	145	15	1.11E-01	7.8	1.53E+00
5	2	77.48*	1033	937	1.04	154.74	145	15	1.43E-01	5.7	
6	0	84.27*	56	949	1.05	168.32	166	7	7.78E-03	93.8	
7	5	87.68	387	857	1.18	175.13	172	20	5.38E-02	13.4	1.53E+00
8	5	90.38	277	957	1.29	180.54	172	20	3.84E-02	20.4	
9	5	93.04*	278	818	1.15	185.86	172	20	3.86E-02	20.6	
10	0	99.59*	261	1016	1.54	198.97	194	10	3.63E-02	23.9	
11	0	129.08	196	928	1.55	257.95	253	9	2.72E-02	29.0	
12	0	186.17*	223	914	1.34	372.16	368	9	3.10E-02	26.4	
13	0	209.65	114	775	1.26	419.14	416	8	1.58E-02	43.4	
14	2	239.05*	1396	577	1.12	477.96	472	17	1.94E-01	4.0	1.03E+00
15	2	241.31	118	488	1.01	482.48	472	17	1.64E-02	35.8	
16	2	242.44	175	567	1.25	484.74	472	17	2.43E-02	24.4	
17	0	295.58*	322	633	0.94	591.04	587	9	4.47E-02	15.3	
18	0	300.85	160	560	0.88	601.59	597	9	2.23E-02	27.8	
19	0	338.98*	252	606	1.37	677.86	673	10	3.50E-02	19.6	
20	0	352.39*	701	484	1.31	704.69	700	9	9.74E-02	6.9	
21	0	510.97*	169	585	2.04	1021.96	1014	16	2.35E-02	34.6	
22	0	583.54*	409	315	1.43	1167.14	1159	15	5.68E-02	10.8	
23	0	609.88*	485	279	1.64	1219.83	1213	14	6.74E-02	8.8	
24	0	662.20	13324	306	1.52	1324.51	1317	17	1.85E+00	0.9	
25	0	727.87*	87	157	1.35	1455.89	1448	14	1.21E-02	32.7	
26	0	861.92	33	101	1.20	1724.09	1717	11	4.65E-03	60.8	
27	0	911.57*	324	80	1.88	1823.43	1815	15	4.49E-02	8.4	
28	0	970.59	142	158	1.82	1941.52	1932	16	1.97E-02	22.1	
29	0	1001.62*	35	79	1.71	2003.59	1996	14	4.81E-03	61.1	
30	0	1121.25	90	97	1.87	2242.98	2236	13	1.25E-02	25.0	
31	0	1461.59*	1215	65	2.06	2923.96	2913	18	1.69E-01	3.2	
32	0	1765.70*	100	8	2.34	3532.50	3524	18	1.38E-02	13.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 12:55:43

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511005.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:54:38
Sample ID : G232511005 Sample quantity : 156.96 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:05.76 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.618E+01	2.336E+00	6.592E-01	4.030E-02	39.717
CD-109	+	88.03	*	3.506E+00	9.823E-01	1.073E+00	8.467E-02	3.267
SN-126	+	64.28		4.530E-01	3.620E-01	4.480E-01	6.975E-02	1.011
	+	86.94		1.437E+00	7.072E-01	4.580E-01	1.888E-01	3.139
	+	87.57	*	3.457E-01	9.686E-02	1.095E-01	8.660E-03	3.158
BA-137M	+	661.65	*	1.758E+01	1.470E+00	7.834E-02	6.389E-03	224.372
CS-137	+	661.65	*	1.858E+01	1.557E+00	8.281E-02	6.768E-03	224.372
TL-208		277.35		5.997E-01	5.648E-01	9.547E-01	1.118E-01	0.628
	+	510.84		7.385E-01	5.172E-01	3.909E-01	4.249E-02	1.889
	+	583.14	*	5.148E-01	1.193E-01	8.366E-02	6.925E-03	6.153
		860.37		6.778E-01	3.610E-01	6.605E-01	5.569E-02	1.026
BI-211		72.87		-2.089E-01	2.335E+00	3.519E+00	3.078E-01	-0.059
	+	351.07	*	3.711E+00	5.791E-01	5.435E-01	3.962E-02	6.828
PB-212	+	74.81		2.433E+00	4.911E-01	4.143E-01	5.270E-02	5.873
	+	77.11		1.870E+00	2.659E-01	2.477E-01	2.104E-02	7.549
	+	87.30		1.599E+00	4.757E-01	5.059E-01	6.455E-02	3.161
	+	238.63	*	1.590E+00	1.922E-01	1.332E-01	1.210E-02	11.940
	+	300.09		2.832E+00	1.600E+00	1.965E+00	1.869E-01	1.441
PO-212	+	74.81		2.433E+00	4.911E-01	4.143E-01	5.270E-02	5.873
	+	77.11		1.870E+00	2.659E-01	2.477E-01	2.104E-02	7.549
	+	87.30		1.599E+00	4.757E-01	5.059E-01	6.455E-02	3.161
		115.19		1.125E-01	4.198E+00	6.877E+00	7.974E-01	0.016
	+	238.63	*	1.590E+00	1.922E-01	1.332E-01	1.210E-02	11.940
	+	300.09		2.832E+00	1.600E+00	1.965E+00	1.869E-01	1.441
BI-214	+	609.31	*	1.156E+00	2.300E-01	1.674E-01	1.565E-02	6.908
		768.36		6.465E-01	8.891E-01	1.547E+00	1.551E-01	0.418
		934.06		1.111E+00	1.403E+00	2.432E+00	2.344E-01	0.457
	+	1120.29		1.104E+00	5.616E-01	5.401E-01	4.832E-02	2.044
		1238.11		1.977E+00	1.067E+00	1.950E+00	1.559E-01	1.014
		1377.67		1.032E+00	1.196E+00	2.114E+00	1.803E-01	0.488
	+	1764.49		1.677E+00	4.534E-01	4.320E-01	2.453E-02	3.882
PB-214	+	74.81		4.192E+00	8.117E-01	7.139E-01	8.119E-02	5.873
	+	77.11		3.205E+00	5.171E-01	4.246E-01	4.845E-02	7.549
	+	87.30		2.739E+00	7.960E-01	8.667E-01	9.582E-02	3.161

Sample ID : G232511005 Acquisition date : 7-JUL-2009 10:54:38

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		1.200E+00	5.980E-01	8.025E-01	7.768E-02	1.495
	+	295.21		9.961E-01	3.210E-01	3.375E-01	3.306E-02	2.951
	+	351.92	*	1.291E+00	2.124E-01	1.896E-01	1.697E-02	6.808
PO-214	+	74.81		4.192E+00	8.117E-01	7.139E-01	8.119E-02	5.873
	+	77.11		3.205E+00	5.171E-01	4.246E-01	4.845E-02	7.549
	+	87.30		2.739E+00	7.960E-01	8.667E-01	9.582E-02	3.161
	+	241.98		1.200E+00	5.980E-01	8.025E-01	7.768E-02	1.495
	+	295.21		9.961E-01	3.210E-01	3.375E-01	3.306E-02	2.951
	+	351.92	*	1.291E+00	2.124E-01	1.896E-01	1.697E-02	6.808
PO-216	+	74.81		2.433E+00	4.911E-01	4.143E-01	5.270E-02	5.873
	+	77.11		1.870E+00	2.659E-01	2.477E-01	2.104E-02	7.549
	+	87.30		1.599E+00	4.757E-01	5.059E-01	6.455E-02	3.161
	+	238.63	*	1.590E+00	1.922E-01	1.332E-01	1.210E-02	11.940
	+	300.09		2.832E+00	1.600E+00	1.965E+00	1.869E-01	1.441
PO-218	+	74.81		4.192E+00	8.117E-01	7.139E-01	8.119E-02	5.873
	+	77.11		3.205E+00	5.171E-01	4.246E-01	4.845E-02	7.549
	+	87.30		2.739E+00	7.960E-01	8.667E-01	9.582E-02	3.161
	+	241.98		1.200E+00	5.980E-01	8.025E-01	7.768E-02	1.495
	+	295.21		9.961E-01	3.210E-01	3.375E-01	3.306E-02	2.951
	+	351.92	*	1.291E+00	2.124E-01	1.896E-01	1.697E-02	6.808
RA-224	+	240.98	*	1.529E+00	1.103E+00	1.516E+00	1.197E-01	1.009
RA-226	+	609.31	*	1.156E+00	2.300E-01	1.674E-01	1.565E-02	6.908
		768.36		6.465E-01	8.891E-01	1.547E+00	1.551E-01	0.418
		934.06		1.111E+00	1.403E+00	2.432E+00	2.344E-01	0.457
	+	1120.29		1.104E+00	5.616E-01	5.401E-01	4.832E-02	2.044
		1238.11		1.977E+00	1.067E+00	1.950E+00	1.559E-01	1.014
		1377.67		1.032E+00	1.196E+00	2.114E+00	1.803E-01	0.488
	+	1764.49		1.677E+00	4.534E-01	4.320E-01	2.453E-02	3.882
AC-228	+	338.32		1.465E+00	8.303E-01	6.140E-01	2.514E-01	2.386
	+	911.07	*	1.828E+00	3.601E-01	2.453E-01	2.547E-02	7.451
	+	969.11		1.413E+00	7.032E-01	4.980E-01	1.137E-01	2.837
RA-228	+	338.32		1.465E+00	8.303E-01	6.140E-01	2.514E-01	2.386
	+	911.07	*	1.828E+00	3.601E-01	2.453E-01	2.547E-02	7.451
	+	969.11		1.413E+00	7.032E-01	4.980E-01	1.137E-01	2.837
TH-228	+	84.40		1.521E+00	2.861E+00	3.528E+00	4.513E-01	0.431
	+	238.60	*	1.590E+00	1.922E-01	1.332E-01	1.210E-02	11.941
	+	300.10		2.832E+00	2.300E+00	1.965E+00	1.162E+00	1.441
TH-229	+	85.43		1.116E-01	2.095E-01	2.459E-01	1.974E-02	0.454
	+	88.47		4.720E-01	1.322E-01	1.447E-01	1.149E-02	3.263
	+	100.00		7.118E-01	3.463E-01	3.233E-01	3.053E-02	2.202
		193.63	*	-4.506E-01	7.422E-01	1.240E+00	9.808E-02	-0.363
	+	210.97		1.621E+00	1.414E+00	1.780E+00	1.412E-01	0.910
TH-230	+	609.31	*	1.156E+00	2.300E-01	1.674E-01	1.565E-02	6.908
		768.36		6.465E-01	8.891E-01	1.547E+00	1.551E-01	0.418
		934.06		1.111E+00	1.403E+00	2.432E+00	2.343E-01	0.457
	+	1120.29		1.104E+00	5.616E-01	5.401E-01	4.831E-02	2.044
		1238.11		1.977E+00	1.067E+00	1.949E+00	1.559E-01	1.014
		1377.67		1.032E+00	1.196E+00	2.114E+00	1.803E-01	0.488
	+	1764.49		1.677E+00	4.534E-01	4.320E-01	2.453E-02	3.882

Sample ID : G232511005 Acquisition date : 7-JUL-2009 10:54:38

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	+	338.32		1.465E+00	5.830E-01	6.140E-01	4.275E-02	2.386
	+	911.07	*	1.828E+00	3.601E-01	2.453E-01	2.547E-02	7.451
	+	969.11		1.413E+00	7.032E-01	4.980E-01	1.137E-01	2.837
TH-234	+	63.29	*	1.144E+00	9.212E-01	1.093E+00	2.006E-01	1.047
	+	92.38		1.711E+00	7.678E-01	7.334E-01	1.320E-01	2.332
U-234	+	609.31	*	1.156E+00	2.300E-01	1.674E-01	1.565E-02	6.908
		768.36		6.465E-01	8.891E-01	1.547E+00	1.551E-01	0.418
		934.06		1.111E+00	1.403E+00	2.432E+00	2.343E-01	0.457
	+	1120.29		1.104E+00	5.616E-01	5.401E-01	4.831E-02	2.044
		1238.11		1.977E+00	1.067E+00	1.949E+00	1.559E-01	1.014
		1377.67		1.032E+00	1.196E+00	2.114E+00	1.803E-01	0.488
	+	1764.49		1.677E+00	4.534E-01	4.320E-01	2.453E-02	3.882
NP-237	+	86.50	*	1.015E+00	3.533E-01	3.231E-01	7.146E-02	3.143
		95.87		4.998E-01	1.296E+00	1.550E+00	3.833E-01	0.322
U-238	+	63.29	*	1.144E+00	9.212E-01	1.093E+00	2.006E-01	1.047
	+	92.38		1.711E+00	7.181E-01	7.334E-01	6.191E-02	2.332
AM-241	+	59.54	*	1.105E+02	1.123E+01	3.990E-01	4.058E-02	276.853
AM-243	+	74.67	*	3.945E-01	7.056E-02	6.715E-02	5.800E-03	5.875
	+	86.72		3.807E+01	1.067E+01	1.212E+01	9.646E-01	3.141
		117.66		-2.342E+00	4.590E+00	7.380E+00	8.832E-01	-0.317
		142.18		-1.654E+01	2.282E+01	3.595E+01	3.809E+00	-0.460
ANH-511	+	511.00	*	1.595E-01	1.109E-01	8.447E-02	5.895E-03	1.888

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.723E-01	6.836E-01	1.155E+00	8.682E-02	0.236
NA-22		1274.54	*	-8.042E-03	4.694E-02	7.690E-02	4.341E-03	-0.105
NA-24		1368.53	*	-7.299E-02	4.694E-02	Half-Life too short		
AL-26		1129.67		-7.154E-01	2.100E+00	3.133E+00	1.857E-01	-0.228
		1808.65	*	-2.549E-04	2.980E-02	4.941E-02	2.788E-03	-0.005
TI-44		67.85		2.735E-02	2.993E-02	4.892E-02	4.429E-03	0.559
	+	78.38	*	3.450E-01	4.906E-02	6.460E-02	5.441E-03	5.340
SC-46		889.25	*	-3.738E-03	4.222E-02	6.941E-02	5.256E-03	-0.054
	+	1120.51		1.857E-01	9.362E-02	1.311E-01	7.880E-03	1.417
V-48		944.10		-3.655E-01	9.253E-01	1.475E+00	1.077E-01	-0.248
		983.50	*	2.107E-02	7.816E-02	1.308E-01	9.250E-03	0.161
		1312.09		5.268E-04	8.968E-02	1.488E-01	8.433E-03	0.004
CR-51		320.08	*	-4.373E-01	5.858E-01	9.332E-01	7.263E-02	-0.469
MN-52		744.21		-2.055E-01	2.236E-01	3.339E-01	2.711E-02	-0.615
		848.13		-1.976E+00	6.442E+00	1.017E+01	7.923E-01	-0.194
		935.52		2.465E-01	2.373E-01	4.177E-01	3.068E-02	0.590
		1246.25		-8.548E+00	6.812E+00	1.032E+01	5.777E-01	-0.828
		1333.61		5.239E+00	4.838E+00	8.535E+00	4.855E-01	0.614
		1434.06	*	-1.519E-01	2.065E-01	3.104E-01	1.784E-02	-0.489
MN-54		834.83	*	3.604E-02	4.427E-02	7.732E-02	6.067E-03	0.466
CO-56		846.75	*	-3.156E-02	4.635E-02	7.333E-02	5.715E-03	-0.430
		977.42		5.505E-01	4.056E+00	5.797E+00	4.122E-01	0.095

Sample ID : G232511005 Acquisition date : 7-JUL-2009 10:54:38

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1037.82		1.427E-01	3.695E-01	6.205E-01	4.520E-02	0.230
		1175.09		1.487E+00	2.806E+00	4.693E+00	2.581E-01	0.317
		1238.25		2.098E-01	1.053E-01	1.945E-01	1.160E-02	1.079
		1360.21		-3.835E-01	1.019E+00	1.613E+00	9.207E-02	-0.238
		1771.40		1.104E-01	3.000E-01	4.578E-01	2.598E-02	0.241
CO-57		122.06	*	9.536E-03	3.246E-02	5.279E-02	6.677E-03	0.181
		136.48		-8.496E-02	2.704E-01	4.335E-01	5.074E-02	-0.196
CO-58		810.76	*	-5.784E-02	4.504E-02	6.795E-02	5.412E-03	-0.851
FE-59		142.65		-1.704E+00	3.456E+00	5.450E+00	5.748E-01	-0.313
		192.34		-3.549E-01	1.328E+00	2.238E+00	2.905E-01	-0.159
		1099.22	*	-8.052E-02	1.054E-01	1.601E-01	1.144E-02	-0.503
		1291.56		-1.014E-01	1.307E-01	2.016E-01	1.472E-02	-0.503
CO-60		1173.22		6.929E-02	5.612E-02	9.827E-02	5.401E-03	0.705
		1332.49	*	5.643E-02	5.051E-02	8.923E-02	5.075E-03	0.632
ZN-65		1115.52	*	1.828E-02	1.222E-01	1.721E-01	1.045E-02	0.106
GE-68		1077.35	*	9.317E-01	1.437E+00	2.455E+00	1.569E-01	0.379
AS-73		53.44	*	-2.123E+00	1.127E+00	1.686E+00	1.425E-01	-1.259
AS-74		595.88	*	8.754E-02	1.262E-01	2.135E-01	1.639E-02	0.410
		634.78		-3.544E-03	4.849E-01	7.907E-01	6.301E-02	-0.004
SE-75		66.05		-3.692E+00	3.113E+00	4.503E+00	4.905E-01	-0.820
		96.73		-1.354E-03	1.056E+00	1.240E+00	1.721E-01	-0.001
		121.11		3.332E-02	1.721E-01	2.793E-01	4.026E-02	0.119
		136.00		-2.619E-03	5.000E-02	8.081E-02	9.129E-03	-0.032
		198.60		1.640E+00	2.580E+00	4.396E+00	3.928E-01	0.373
		264.65	*	-2.466E-02	6.559E-02	1.068E-01	8.365E-03	-0.231
		279.53		-7.738E-02	1.642E-01	2.673E-01	2.151E-02	-0.290
		303.91		-5.780E-01	3.671E+00	5.245E+00	5.572E-01	-0.110
		400.65		2.044E-01	4.829E-01	7.846E-01	7.212E-02	0.261
BR-77	+	87.88		4.045E+02	1.133E+02	1.601E+02	1.264E+01	2.526
		200.40		4.445E+01	1.251E+02	2.133E+02	1.690E+01	0.208
	+	239.00		1.359E+02	1.526E+01	2.073E+01	1.637E+00	6.558
		249.79		-2.790E+01	5.189E+01	8.503E+01	6.686E+00	-0.328
		281.68		-4.275E+01	7.353E+01	1.192E+02	9.137E+00	-0.359
		297.23		1.493E+02	7.357E+01	8.577E+01	6.451E+00	1.741
		303.76		2.305E+01	1.670E+02	2.417E+02	1.801E+01	0.095
		439.47		5.851E+01	1.574E+02	2.675E+02	1.690E+01	0.219
		484.57		-1.115E+02	2.378E+02	3.909E+02	2.636E+01	-0.285
		520.65	*	-4.622E+00	9.411E+00	1.531E+01	1.081E+00	-0.302
		574.64		-1.474E+02	1.679E+02	2.560E+02	1.923E+01	-0.576
		578.91		7.293E+01	7.210E+01	1.097E+02	8.280E+00	0.665
		585.48		1.111E+03	1.997E+02	3.337E+02	2.536E+01	3.328
		755.35		-1.967E+01	1.085E+02	1.719E+02	1.392E+01	-0.114
		817.79		6.335E+01	8.720E+01	1.520E+02	1.203E+01	0.417
SR-82		698.33		-1.915E+01	3.929E+01	6.144E+01	5.016E+00	-0.312
		776.49	*	-5.514E-01	4.159E-01	6.304E-01	5.074E-02	-0.875
		1395.20		3.303E+00	1.030E+01	1.762E+01	1.009E+00	0.187
RB-83		520.41	*	-7.208E-02	1.157E-01	1.871E-01	1.321E-02	-0.385
		529.64		-6.087E-03	1.759E-01	2.911E-01	2.079E-02	-0.021
		552.65		1.769E-01	3.060E-01	5.175E-01	3.796E-02	0.342

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-84		881.50	*	1.650E-02	8.364E-02	1.369E-01	1.043E-02	0.121
KR-85		513.99	*	3.819E+01	1.402E+01	2.248E+01	1.574E+00	1.699
SR-85		513.99	*	1.914E-01	7.025E-02	1.126E-01	7.891E-03	1.699
RB-86		1076.63	*	1.882E-01	8.495E-01	1.406E+00	8.994E-02	0.134
Y-88		898.02		7.218E-02	4.635E-02	8.475E-02	6.415E-03	0.852
		1836.01	*	-5.427E-03	3.709E-02	6.007E-02	3.383E-03	-0.090
ZR-88		392.90	*	2.010E-02	5.657E-02	9.194E-02	5.385E-03	0.219
Y-91		1204.90	*	5.709E+00	2.193E+01	3.727E+01	2.066E+00	0.153
NB-94		702.63	*	-2.553E-02	4.007E-02	6.185E-02	5.048E-03	-0.413
		871.10		-2.227E-02	3.896E-02	6.174E-02	4.738E-03	-0.361
NB-95		765.79	*	3.548E-02	4.769E-02	8.338E-02	6.733E-03	0.426
NB-95M		235.69	*	-7.912E-02	1.862E-01	2.698E-01	2.496E-02	-0.293
ZR-95		724.18		-2.195E-02	1.213E-01	1.653E-01	1.477E-02	-0.133
		756.15	*	3.112E-02	8.294E-02	1.367E-01	1.233E-02	0.228
NB-97		657.90	*	6.266E-02	8.294E-02	Half-Life too short		
		1024.50		-1.716E-01	8.294E-02	Half-Life too short		
ZR-97		254.15		-3.275E-01	8.294E-02	Half-Life too short		
		355.39		-2.099E-02	8.294E-02	Half-Life too short		
		507.63	*	3.912E-01	8.294E-02	Half-Life too short		
		602.52		7.824E-01	8.294E-02	Half-Life too short		
		1021.30		-4.124E-02	8.294E-02	Half-Life too short		
		1147.95		-1.307E-01	8.294E-02	Half-Life too short		
		1362.66		8.377E-01	8.294E-02	Half-Life too short		
		1750.46		2.386E-01	8.294E-02	Half-Life too short		
MO-99		140.51		-2.197E+01	2.050E+01	3.051E+01	8.676E+00	-0.720
		181.06		4.733E+00	1.447E+01	2.201E+01	3.952E+00	0.215
		366.43		1.835E+01	8.616E+01	1.402E+02	9.021E+00	0.131
		739.58	*	-4.256E-01	8.078E+00	1.294E+01	1.929E+00	-0.033
		778.00		-2.157E+01	2.272E+01	3.551E+01	2.857E+00	-0.607
TC-99M		140.51	*	-1.399E+08	2.272E+01	Half-Life too short		
RH-101		127.23		3.046E-02	4.518E-02	6.699E-02	8.135E-03	0.455
		198.01	*	1.196E-02	4.831E-02	8.171E-02	6.470E-03	0.146
		325.23		-5.527E-01	3.632E-01	5.604E-01	4.017E-02	-0.986
RH-102		418.52		-5.016E-02	5.801E-01	9.243E-01	5.651E-02	-0.054
		475.06	*	8.567E-02	6.583E-02	1.134E-01	7.549E-03	0.755
		631.29		3.371E-02	8.033E-02	1.339E-01	1.063E-02	0.252
		697.49		-2.094E-02	9.170E-02	1.460E-01	1.192E-02	-0.143
		766.84		1.647E-01	1.280E-01	2.291E-01	1.849E-02	0.719
		1046.59		-4.623E-04	1.317E-01	2.146E-01	1.424E-02	-0.002
		1112.84		7.247E-02	2.875E-01	4.409E-01	2.682E-02	0.164
RU-103		497.08	*	-2.061E-02	7.160E-02	1.180E-01	1.553E-02	-0.175
	+	610.33		1.202E+01	2.877E+00	3.085E+00	5.020E-01	3.897
RH-106	+	511.85		7.935E-01	5.518E-01	5.689E-01	3.975E-02	1.395
		621.84	*	9.721E-02	4.634E-01	7.652E-01	9.863E-02	0.127
		1050.47		5.280E-01	2.666E+00	4.413E+00	2.916E-01	0.120
RU-106	+	511.85		7.935E-01	5.518E-01	5.689E-01	3.975E-02	1.395
		621.84	*	9.721E-02	4.633E-01	7.652E-01	6.026E-02	0.127
		1050.47		5.280E-01	2.666E+00	4.413E+00	2.916E-01	0.120
AG-108M		433.93	*	-3.264E-02	6.466E-02	1.073E-01	7.220E-03	-0.304

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		614.37		1.299E-02	6.225E-02	8.942E-02	7.324E-03	0.145
		722.95		-2.473E-02	5.565E-02	7.370E-02	6.267E-03	-0.336
AG-110M		657.75	*	1.148E-01	6.561E-02	1.017E-01	8.546E-03	1.129
		677.61		-1.034E-01	3.565E-01	5.661E-01	4.766E-02	-0.183
		706.67		-1.703E-02	2.517E-01	4.047E-01	3.404E-02	-0.042
		763.93		-2.414E-01	1.942E-01	2.990E-01	2.493E-02	-0.807
		884.67		-9.514E-04	5.769E-02	9.545E-02	7.552E-03	-0.010
		937.48		1.107E-01	1.323E-01	2.304E-01	1.774E-02	0.480
		1384.27		-1.610E-01	1.853E-01	2.772E-01	1.686E-02	-0.581
IN-111		171.28		-4.433E-01	8.240E-01	1.289E+00	1.012E-01	-0.344
		245.39	*	6.898E-01	1.015E+00	1.527E+00	1.203E-01	0.452
IN-113M		391.69	*	1.330E-02	8.244E-02	1.332E-01	8.298E-03	0.100
SN-113		391.69	*	1.330E-02	8.244E-02	1.332E-01	8.298E-03	0.100
IN-114M		190.27	*	3.139E-01	3.025E-01	4.393E-01	3.472E-02	0.714
CD-115		260.90		-2.733E+01	1.009E+02	1.662E+02	1.298E+01	-0.164
		492.35		1.352E+01	3.500E+01	5.907E+01	4.024E+00	0.229
		527.90	*	-8.808E-01	9.588E+00	1.584E+01	1.129E+00	-0.056
SN-117M		156.02		5.032E-01	2.673E+00	4.310E+00	3.894E-01	0.117
		158.56	*	-2.051E-02	6.700E-02	1.063E-01	9.281E-03	-0.193
SB-122		563.90	*	-5.364E-02	1.794E+00	2.953E+00	2.193E-01	-0.018
		692.80		-1.224E+01	3.010E+01	4.735E+01	3.866E+00	-0.258
I-123		159.00	*	1.349E-01	3.010E+01	Half-Life too short		
		528.96		2.173E+01	3.010E+01	Half-Life too short		
TE-123M		159.00	*	1.019E-02	3.838E-02	6.191E-02	5.406E-03	0.165
I-124		602.71	*	3.747E-01	7.674E-01	1.124E+00	8.692E-02	0.333
		722.78		-1.194E+00	4.030E+00	5.424E+00	4.419E-01	-0.220
		1325.50		2.295E+00	2.807E+01	4.684E+01	2.661E+00	0.049
		1376.25		3.690E+01	2.583E+01	4.761E+01	2.722E+00	0.775
		1509.49		3.510E+00	1.324E+01	2.226E+01	1.283E+00	0.158
		1691.02		1.385E+00	3.127E+00	5.380E+00	3.081E-01	0.257
SB-124		602.71		3.041E-02	6.227E-02	9.122E-02	7.055E-03	0.333
		645.85		-1.897E-01	7.269E-01	1.167E+00	1.003E-01	-0.163
		709.31		2.156E+00	3.132E+00	5.289E+00	4.315E-01	0.408
		713.82		-2.571E-01	1.822E+00	2.909E+00	3.406E-01	-0.088
		722.78		-1.404E-01	4.740E-01	6.380E-01	5.324E-02	-0.220
		968.20		1.362E+01	4.608E+00	7.671E+00	5.498E-01	1.776
		1045.16		9.347E-01	2.734E+00	4.581E+00	3.045E-01	0.204
		1325.50		2.883E-01	3.526E+00	5.884E+00	3.343E-01	0.049
		1368.21		-1.890E+00	2.013E+00	2.977E+00	3.522E-01	-0.635
		1436.60		1.168E+00	4.164E+00	7.053E+00	4.054E-01	0.166
		1691.02	*	3.843E-02	8.676E-02	1.493E-01	9.296E-03	0.257
SB-125		427.89	*	-9.407E-02	1.852E-01	3.079E-01	1.982E-02	-0.306
		463.38		9.059E-01	6.219E-01	1.074E+00	7.959E-02	0.844
		600.56		-1.965E-01	2.640E-01	4.165E-01	3.506E-02	-0.472
		635.90		1.000E-01	3.951E-01	6.528E-01	5.695E-02	0.153
TE-125M		109.28	*	-6.155E+00	1.052E+01	1.696E+01	2.059E+00	-0.363
I-126		388.63		-1.387E-01	3.414E-01	5.415E-01	3.206E-02	-0.256
		666.33	*	4.470E-01	2.593E-01	4.077E-01	3.326E-02	1.097
		753.82		-1.263E+00	1.656E+00	2.509E+00	2.032E-01	-0.504

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-126		223.80		7.443E-01	5.090E+00	8.580E+00	6.801E-01	0.087
		278.60		4.846E+00	3.279E+00	5.614E+00	4.318E-01	0.863
	+	296.50		8.788E+00	2.778E+00	3.835E+00	2.888E-01	2.291
		414.70		-3.866E-02	1.323E-01	2.096E-01	1.273E-02	-0.184
		415.30		-2.665E-01	1.105E+01	1.765E+01	1.073E+00	-0.015
		555.20		-5.308E+00	5.632E+00	8.884E+00	6.535E-01	-0.597
		573.80		-1.303E+00	1.345E+00	2.102E+00	1.578E-01	-0.620
		593.00		2.095E-01	1.224E+00	2.025E+00	1.551E-01	0.103
		656.30		2.694E+00	5.049E+00	7.369E+00	5.983E-01	0.366
		666.33		1.859E-01	1.078E-01	1.695E-01	1.383E-02	1.097
		675.00		-7.170E-01	2.092E+00	3.313E+00	2.704E-01	-0.216
		695.00		6.379E-02	8.131E-02	1.381E-01	1.127E-02	0.462
		697.00		-8.920E-04	2.817E-01	4.554E-01	3.718E-02	-0.002
		720.50	*	1.791E-01	1.569E-01	2.436E-01	1.985E-02	0.735
		856.80		-1.327E-01	5.596E-01	7.804E-01	6.045E-02	-0.170
		989.30		-6.598E-01	1.378E+00	2.175E+00	1.531E-01	-0.303
		1034.80		5.862E+00	9.472E+00	1.618E+01	1.088E+00	0.362
		1213.00		1.878E+00	4.805E+00	8.231E+00	4.571E-01	0.228
SB-127	+	61.10		2.899E+04	3.294E+03	3.040E+02	3.427E+01	95.364
		252.40		2.625E+00	4.457E+00	7.316E+00	3.052E+00	0.359
		290.80		2.933E+00	2.501E+01	3.631E+01	3.530E+00	0.081
		411.60		-1.884E+00	1.631E+01	2.584E+01	3.620E+00	-0.073
		444.90		-1.313E+01	1.420E+01	2.317E+01	2.430E+00	-0.567
		473.00		8.942E-01	2.616E+00	4.412E+00	4.871E-01	0.203
		543.00		-5.552E+00	1.803E+01	2.940E+01	3.858E+00	-0.189
		603.60		9.858E+00	1.272E+01	1.894E+01	2.149E+00	0.521
		685.20	*	-6.435E-01	1.117E+00	1.734E+00	1.808E-01	-0.371
		698.50		-4.419E+00	1.234E+01	1.945E+01	2.945E+00	-0.227
		722.20		2.014E+00	2.631E+01	3.684E+01	3.745E+00	0.055
		783.80		7.753E-01	2.909E+00	4.949E+00	5.664E-01	0.157
XE-127		57.60		7.985E+01	1.298E+01	1.731E+01	1.599E+00	4.614
		145.22		-2.713E-01	9.106E-01	1.445E+00	1.483E-01	-0.188
		172.10		-2.022E-01	1.618E-01	2.463E-01	1.934E-02	-0.821
		202.84	*	-8.182E-02	6.422E-02	1.047E-01	8.295E-03	-0.782
		374.96		8.845E-02	3.511E-01	5.709E-01	3.565E-02	0.155
I-131		80.18		1.124E+00	3.698E+00	5.134E+00	4.293E-01	0.219
		284.30		1.153E+00	1.909E+00	3.203E+00	2.605E-01	0.360
		364.48	*	6.518E-03	1.671E-01	2.705E-01	1.911E-02	0.024
		636.97		4.078E-01	1.872E+00	3.087E+00	2.620E-01	0.132
		722.89		-3.247E+00	7.790E+00	1.035E+01	8.476E-01	-0.314
TE-132	+	49.72		6.456E+01	1.524E+01	1.921E+01	1.842E+00	3.361
		111.76		-1.036E+01	2.249E+01	3.589E+01	4.468E+00	-0.289
		116.30		3.915E+00	2.071E+01	3.405E+01	4.444E+00	0.115
		228.16	*	2.398E-01	6.166E-01	1.043E+00	1.560E-01	0.230
BA-133		53.15		-8.625E+00	4.853E+00	7.282E+00	6.111E-01	-1.184
		79.62		7.392E-01	1.164E+00	1.766E+00	2.663E-01	0.418
		81.00		-6.813E-02	1.143E-01	1.322E-01	2.074E-02	-0.515
		276.40		2.387E-01	5.592E-01	9.342E-01	1.301E-01	0.256
		302.84		2.262E-01	2.520E-01	3.744E-01	4.705E-02	0.604

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		356.01	*	5.970E-03	8.333E-02	1.196E-01	1.436E-02	0.050
		383.85		-9.965E-02	5.652E-01	9.045E-01	9.950E-02	-0.110
I-133	+	510.53		2.879E-01	5.652E-01	Half-Life too short		
		529.87	*	-3.954E-04	5.652E-01	Half-Life too short		
		706.58		-5.997E-03	5.652E-01	Half-Life too short		
		856.28		-6.369E-02	5.652E-01	Half-Life too short		
		875.33		9.244E-03	5.652E-01	Half-Life too short		
		1236.41		1.399E-01	5.652E-01	Half-Life too short		
		1298.22		2.887E-02	5.652E-01	Half-Life too short		
CS-134		475.35		5.156E+00	4.315E+00	7.419E+00	4.938E-01	0.695
		563.23		5.057E-02	5.440E-01	9.006E-01	6.769E-02	0.056
		569.32		2.687E-01	2.873E-01	4.923E-01	3.744E-02	0.546
		604.70		6.378E-03	5.629E-02	8.040E-02	6.248E-03	0.079
		795.84	*	5.939E-02	5.592E-02	9.909E-02	7.986E-03	0.599
		801.93		-1.073E+00	5.092E-01	6.977E-01	5.599E-02	-1.538
		1038.57		-7.677E-02	4.678E+00	7.624E+00	5.106E-01	-0.010
		1167.94		-3.842E+00	3.128E+00	4.548E+00	2.525E-01	-0.845
		1365.15		1.348E-03	1.326E+00	2.191E+00	1.378E-01	0.001
CS-135		268.24	*	-2.921E-01	2.378E-01	3.775E-01	3.487E-02	-0.774
I-135		288.45		2.410E+07	2.378E-01	Half-Life too short		
		417.63		7.904E+07	2.378E-01	Half-Life too short		
		546.56		-4.346E+07	2.378E-01	Half-Life too short		
		836.80		4.144E+07	2.378E-01	Half-Life too short		
		1038.76		-1.681E+07	2.378E-01	Half-Life too short		
		1124.00		5.306E+08	2.378E-01	Half-Life too short		
		1131.51		-1.015E+07	2.378E-01	Half-Life too short		
		1260.41	*	-2.474E+07	2.378E-01	Half-Life too short		
		1457.56		1.507E+09	2.378E-01	Half-Life too short		
		1678.03		-2.333E+07	2.378E-01	Half-Life too short		
		1706.46		3.545E+07	2.378E-01	Half-Life too short		
		1791.20		-2.232E+07	2.378E-01	Half-Life too short		
CS-136		66.91		2.030E-01	4.536E-01	6.937E-01	1.090E-01	0.293
	+	86.29		4.026E+00	1.191E+00	1.491E+00	1.853E-01	2.701
		153.22		-1.957E-01	7.861E-01	1.252E+00	1.290E-01	-0.156
		163.89		2.195E-01	1.333E+00	2.123E+00	1.948E-01	0.103
		176.55		2.248E-01	4.612E-01	7.429E-01	6.246E-02	0.303
		273.65		-6.283E-01	6.148E-01	9.840E-01	8.223E-02	-0.639
		340.57		5.756E-01	2.150E-01	3.335E-01	2.412E-02	1.726
		818.51		4.294E-02	8.145E-02	1.404E-01	1.112E-02	0.306
		1048.07	*	-3.413E-02	1.110E-01	1.764E-01	1.251E-02	-0.194
		1235.34		-5.237E-01	6.224E-01	9.791E-01	9.655E-02	-0.535
CE-139		165.85	*	-1.715E-02	4.074E-02	6.417E-02	5.031E-03	-0.267
BA-140		162.64		9.784E-02	9.298E-01	1.479E+00	1.296E-01	0.066
		304.84		-1.260E+00	2.080E+00	2.870E+00	7.946E-01	-0.439
		423.70		2.367E+00	3.661E+00	5.837E+00	1.859E+00	0.405
		537.32	*	7.753E-03	3.870E-01	6.410E-01	2.103E-01	0.012
LA-140		328.77		3.907E-01	4.276E-01	7.150E-01	5.502E-02	0.546
		432.53		9.442E-01	3.641E+00	6.179E+00	4.212E-01	0.153
		487.03		8.292E-02	2.338E-01	3.945E-01	2.932E-02	0.210

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		751.79		-6.106E-01	1.854E+00	2.905E+00	2.637E-01	-0.210
		815.85		-1.259E-01	3.465E-01	5.637E-01	5.070E-02	-0.223
		867.82		-3.913E-01	1.556E+00	2.254E+00	1.848E-01	-0.174
		919.63		3.125E+00	3.071E+00	5.215E+00	5.061E-01	0.599
		925.24		-1.071E+00	1.216E+00	1.867E+00	1.498E-01	-0.574
		1596.49	*	-3.150E-02	9.292E-02	1.449E-01	8.353E-03	-0.217
CE-141		145.44	*	9.367E-02	7.953E-02	1.314E-01	1.363E-02	0.713
CE-143		57.37		3.253E-03	7.953E-02	Half-Life too short		
		231.56		-1.923E-04	7.953E-02	Half-Life too short		
		293.26	*	5.612E-05	7.953E-02	Half-Life too short		
		350.59		7.024E-03	7.953E-02	Half-Life too short		
		490.36		-9.030E-05	7.953E-02	Half-Life too short		
		664.57		1.380E-01	7.953E-02	Half-Life too short		
		721.93		1.099E-04	7.953E-02	Half-Life too short		
CE-144		80.11		6.014E-01	2.038E+00	2.828E+00	2.354E-01	0.213
		133.54	*	-2.194E-01	2.788E-01	4.100E-01	7.107E-02	-0.535
PM-144		476.78		1.476E-01	1.511E-01	2.584E-01	1.985E-02	0.571
		618.01		-1.236E-02	4.734E-02	7.420E-02	6.015E-03	-0.167
		696.49	*	3.727E-03	4.038E-02	6.571E-02	5.367E-03	0.057
		778.57		-2.165E+00	2.626E+00	4.146E+00	3.335E-01	-0.522
PR-144		696.49	*	2.522E-01	2.733E+00	4.448E+00	3.632E-01	0.057
		1489.15		-2.545E+00	1.405E+01	2.252E+01	1.298E+00	-0.113
PM-146		453.90	*	-4.141E-02	9.340E-02	1.548E-01	1.405E-02	-0.268
		633.02		8.708E-01	2.040E+00	3.362E+00	1.251E+00	0.259
		735.90		1.431E-03	1.836E-01	2.956E-01	8.411E-02	0.005
		747.13		-3.655E-02	1.121E-01	1.756E-01	2.412E-02	-0.208
ND-147	+	91.11		7.446E-01	3.110E-01	4.047E-01	3.649E-02	1.840
		319.41		-4.965E+00	4.829E+00	7.615E+00	5.524E-01	-0.652
		439.89		8.088E+00	1.054E+01	1.808E+01	1.143E+00	0.447
		531.02	*	-2.808E-01	8.413E-01	1.374E+00	1.945E-01	-0.204
PM-149		285.90	*	-5.900E+01	7.338E+01	1.172E+02	1.759E+01	-0.503
EU-152		121.78		3.300E-02	9.421E-02	1.534E-01	2.075E-02	0.215
		244.69		6.025E-01	5.398E-01	8.232E-01	6.488E-02	0.732
		344.27	*	7.737E-02	1.813E-01	2.627E-01	1.969E-02	0.295
		443.98		-3.890E-01	2.026E+00	3.389E+00	2.156E-01	-0.115
		778.89		-2.165E-01	3.065E-01	4.886E-01	3.930E-02	-0.443
		867.32		4.257E-02	1.050E+00	1.506E+00	1.159E-01	0.028
		964.01		5.771E-01	3.837E-01	6.159E-01	4.429E-02	0.937
		1085.78		1.273E-01	5.079E-01	8.404E-01	5.312E-02	0.151
		1112.02		9.104E-02	3.986E-01	6.275E-01	3.822E-02	0.145
		1407.95		8.846E-02	2.110E-01	3.619E-01	2.075E-02	0.244
GD-153		69.67		-5.173E-01	1.125E+00	1.771E+00	1.584E-01	-0.292
	+	83.37		8.685E+00	1.631E+01	2.057E+01	1.675E+00	0.422
		97.43	*	3.120E-02	1.115E-01	1.329E-01	1.210E-02	0.235
		103.18		-3.531E-02	1.327E-01	1.938E-01	1.915E-02	-0.182
EU-154		123.07		-1.531E-02	6.692E-02	1.072E-01	1.563E-02	-0.143
		247.94		-5.862E-01	5.562E-01	8.608E-01	9.404E-02	-0.681
		591.81		-8.233E-02	9.143E-01	1.494E+00	1.639E-01	-0.055
		723.30		-1.099E-01	2.323E-01	3.065E-01	2.790E-02	-0.359

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		756.87		8.194E-01	9.359E-01	1.587E+00	1.842E-01	0.516
		873.19		1.575E-01	3.391E-01	5.808E-01	6.732E-02	0.271
		996.32		8.992E-02	4.975E-01	7.129E-01	1.214E-01	0.126
		1004.76		4.022E-02	2.970E-01	4.231E-01	4.423E-02	0.095
		1274.45	*	-1.934E-02	1.316E-01	2.160E-01	1.995E-02	-0.090
EU-155	+	48.70		1.164E+01	2.668E+00	3.039E+00	2.294E-01	3.830
	+	60.01		3.591E+03	3.448E+02	4.834E+01	4.627E+00	74.274
	+	86.54		4.161E-01	1.167E-01	1.574E-01	1.268E-02	2.644
		105.31	*	1.814E-01	1.240E-01	2.098E-01	2.153E-02	0.865
TB-160	+	86.79		1.089E+00	3.052E-01	4.199E-01	3.339E-02	2.595
		197.04		6.333E-02	7.965E-01	1.352E+00	1.070E-01	0.047
		215.65		-4.409E-01	1.025E+00	1.705E+00	1.353E-01	-0.259
		298.57		-8.075E-03	2.763E-01	2.865E-01	2.151E-02	-0.028
		879.36	*	2.659E-02	1.676E-01	2.808E-01	2.142E-02	0.095
		962.29		1.645E-01	6.822E-01	9.860E-01	7.100E-02	0.167
		966.15		5.124E-01	2.927E-01	4.707E-01	3.379E-02	1.089
		1177.93		-4.515E-01	4.570E-01	6.810E-01	3.748E-02	-0.663
		1271.85		4.708E-02	7.268E-01	1.215E+00	6.839E-02	0.039
HO-166M		80.57		2.103E-02	3.053E-01	3.670E-01	3.045E-02	0.057
		184.41		1.062E-01	5.505E-02	8.201E-02	6.470E-03	1.295
		280.46		-1.760E-01	1.316E-01	2.076E-01	1.594E-02	-0.848
		410.95		2.386E-01	4.795E-01	7.793E-01	4.706E-02	0.306
		711.68	*	-1.834E-02	7.234E-02	1.147E-01	9.353E-03	-0.160
		752.31		-3.154E-01	3.472E-01	5.197E-01	4.211E-02	-0.607
		810.29		-4.234E-02	6.707E-02	1.068E-01	8.484E-03	-0.396
TM-171	+	51.35		1.861E+02	4.265E+01	5.585E+01	4.496E+00	3.332
		52.39		-2.013E+00	1.970E+01	3.034E+01	2.502E+00	-0.066
	+	59.40		1.886E+04	1.811E+03	2.515E+02	2.412E+01	74.982
		66.72	*	5.875E+00	1.823E+01	2.784E+01	2.541E+00	0.211
LU-176	+	88.36		8.200E-01	2.297E-01	3.239E-01	2.569E-02	2.532
		201.83		-3.987E-02	4.108E-02	6.767E-02	5.362E-03	-0.589
		306.84	*	3.485E-02	3.905E-02	6.569E-02	4.870E-03	0.531
		401.10		6.759E+00	1.272E+01	2.075E+01	1.233E+00	0.326
LU-177		112.95		-5.359E-01	1.556E+00	2.490E+00	2.805E-01	-0.215
	+	208.36	*	1.841E+00	1.606E+00	2.144E+00	1.701E-01	0.859
LU-177M		52.97		-1.714E+00	2.113E+00	3.225E+00	2.696E-01	-0.531
		54.07		-2.879E+00	1.238E+00	1.830E+00	1.568E-01	-1.574
	+	61.30		1.104E+03	1.060E+02	9.978E+00	9.463E-01	110.646
		121.62		1.491E-01	4.779E-01	7.776E-01	9.777E-02	0.192
		147.16		-3.127E-01	8.606E-01	1.370E+00	1.377E-01	-0.228
		171.86		-6.314E-01	6.713E-01	1.035E+00	8.126E-02	-0.610
		218.09		-3.979E-01	1.187E+00	1.979E+00	1.569E-01	-0.201
		268.79		-2.087E-01	1.178E+00	1.943E+00	1.508E-01	-0.107
		319.02		-1.401E-01	4.199E-01	6.790E-01	4.928E-02	-0.206
		367.43		8.210E-01	1.599E+00	2.626E+00	1.683E-01	0.313
		413.65	*	-3.785E-01	3.491E-01	5.338E-01	3.238E-02	-0.709
HF-181		56.28		3.534E+00	1.538E+00	2.355E+00	2.117E-01	1.500
		57.53		5.144E+00	1.010E+00	1.428E+00	1.317E-01	3.604
		65.20		-5.773E-03	5.877E-01	8.904E-01	8.213E-02	-0.006

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		133.02		-2.302E-02	9.050E-02	1.283E-01	1.483E-02	-0.179
		136.25		-6.511E-03	5.709E-01	9.239E-01	1.037E-01	-0.007
		345.85		7.923E-02	3.178E-01	5.027E-01	3.435E-02	0.158
		482.03	*	-6.435E-02	8.310E-02	1.353E-01	9.092E-03	-0.475
W-181		56.28		1.420E+00	6.164E-01	9.436E-01	8.482E-02	1.505
		57.53		2.059E+00	4.046E-01	5.721E-01	5.279E-02	3.599
		65.20	*	-2.296E-03	2.337E-01	3.541E-01	3.266E-02	-0.006
TA-182		67.75		6.539E-02	7.033E-02	1.150E-01	1.042E-02	0.569
	+	100.10		6.771E-01	3.294E-01	3.507E-01	3.317E-02	1.931
		152.43		2.535E-01	4.383E-01	7.147E-01	6.756E-02	0.355
		222.10		1.756E-01	4.869E-01	8.253E-01	6.543E-02	0.213
	+	1001.68		3.033E+00	3.714E+00	4.533E+00	3.154E-01	0.669
	+	1121.28		5.153E-01	2.598E-01	3.623E-01	2.176E-02	1.422
		1189.05		-6.937E-02	3.416E-01	5.634E-01	3.110E-02	-0.123
		1221.42	*	-1.832E-01	2.269E-01	3.577E-01	1.991E-02	-0.512
		1230.97		-1.875E-01	5.466E-01	8.910E-01	4.970E-02	-0.210
RE-183		57.98		9.759E+00	9.959E-01	7.193E-01	6.700E-02	13.567
	+	59.32		7.581E+01	7.280E+00	1.003E+00	9.598E-02	75.605
		67.20		4.985E-02	1.293E-01	1.976E-01	1.798E-02	0.252
		162.32	*	3.560E-02	1.474E-01	2.353E-01	1.947E-02	0.151
	+	208.81		2.026E+00	1.767E+00	2.379E+00	1.887E-01	0.852
		291.72		-6.115E-01	1.599E+00	2.272E+00	1.721E-01	-0.269
RE-184		57.98		3.641E+01	3.716E+00	2.684E+00	2.500E-01	13.567
	+	59.32		2.826E+02	2.714E+01	3.738E+00	3.579E-01	75.605
		67.20		1.860E-01	4.822E-01	7.372E-01	6.705E-02	0.252
		161.27		-1.015E-01	4.850E-01	7.709E-01	6.480E-02	-0.132
		216.55		-2.574E-01	3.693E-01	6.094E-01	4.833E-02	-0.422
		252.85	*	6.077E-02	3.413E-01	5.709E-01	4.482E-02	0.106
		318.01		-1.337E-02	7.209E-01	1.178E+00	8.567E-02	-0.011
		792.07		-9.656E-01	1.195E+00	1.894E+00	1.516E-01	-0.510
		903.28		-9.310E-01	1.398E+00	1.844E+00	1.382E-01	-0.505
		920.93		3.898E-01	5.327E-01	9.243E-01	6.856E-02	0.422
OS-185	+	59.72		2.079E+02	1.997E+01	2.812E+00	2.697E-01	73.945
	+	61.14		1.200E+02	1.152E+01	1.228E+00	1.166E-01	97.672
		69.30		-7.821E-02	1.909E-01	3.148E-01	2.822E-02	-0.248
		592.07		2.287E-01	3.702E+00	6.095E+00	4.662E-01	0.038
		646.12	*	-8.934E-03	6.208E-02	1.003E-01	8.074E-03	-0.089
		717.42		-5.872E-01	1.021E+00	1.574E+00	1.283E-01	-0.373
		874.81		3.236E-01	6.827E-01	1.169E+00	8.949E-02	0.277
		880.27		1.848E-01	9.230E-01	1.551E+00	1.182E-01	0.119
RE-188		155.03	*	-7.809E-02	2.236E-01	3.547E-01	3.246E-02	-0.220
		477.96		1.318E+00	6.527E+00	1.097E+01	7.330E-01	0.120
		633.10		1.543E+00	3.980E+00	6.624E+00	5.270E-01	0.233
W-188	+	63.58		4.501E+01	3.553E+01	5.509E+01	5.140E+00	0.817
		227.08		5.662E+00	1.771E+01	2.995E+01	2.373E+00	0.189
		290.67	*	1.115E+00	1.253E+01	1.818E+01	1.379E+00	0.061
IR-192	+	295.96		7.443E-01	2.354E-01	3.248E-01	2.471E-02	2.291
		308.46		3.581E-02	1.502E-01	2.480E-01	1.847E-02	0.144
		316.51	*	1.580E-02	5.486E-02	9.054E-02	6.622E-03	0.174

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		468.07		-1.482E-01	1.497E-01	2.437E-01	1.799E-02	-0.608
		604.41		7.655E-02	7.470E-01	1.066E+00	1.328E-01	0.072
		612.46		5.602E+00	1.391E+00	2.265E+00	2.084E-01	2.473
AU-195	+	65.12		1.575E-01	1.243E-01	1.673E-01	1.544E-02	0.941
		66.83		2.385E-02	6.024E-02	9.216E-02	8.404E-03	0.259
	+	75.70		1.266E+00	2.265E-01	3.183E-01	2.730E-02	3.978
	+	98.88	*	8.506E-01	4.138E-01	4.358E-01	4.050E-02	1.952
	+	129.76		9.236E+00	5.467E+00	6.318E+00	7.512E-01	1.462
TL-200		367.94	*	-6.384E-05	5.467E+00	Half-Life too short		
		579.30		1.224E-03	5.467E+00	Half-Life too short		
		828.27		-1.613E-04	5.467E+00	Half-Life too short		
		1205.75		1.289E-04	5.467E+00	Half-Life too short		
TL-201		68.90		2.905E-01	1.842E+00	3.118E+00	2.802E-01	0.093
		70.82		-7.057E-01	1.245E+00	1.837E+00	1.629E-01	-0.384
		80.30		9.479E-01	2.975E+00	4.131E+00	3.434E-01	0.229
		135.34		-1.262E+00	1.990E+01	3.216E+01	3.641E+00	-0.039
		167.43	*	-1.405E+00	5.965E+00	9.446E+00	7.402E-01	-0.149
TL-202		68.90		3.781E-02	2.398E-01	4.058E-01	3.648E-02	0.093
		70.82		-9.162E-02	1.616E-01	2.385E-01	2.115E-02	-0.384
		80.30		1.231E-01	3.863E-01	5.365E-01	4.460E-02	0.229
		439.56	*	7.379E-02	1.262E-01	2.156E-01	1.363E-02	0.342
HG-203		70.83		-4.319E-01	7.683E-01	1.132E+00	1.558E-01	-0.382
		72.87		-4.023E-02	4.497E-01	6.778E-01	9.005E-02	-0.059
		82.60		-1.620E-01	1.060E+00	1.445E+00	1.947E-01	-0.112
		279.20	*	3.284E-02	5.958E-02	9.992E-02	7.955E-03	0.329
BI-207		72.80		-1.512E-02	1.360E-01	2.049E-01	1.793E-02	-0.074
	+	74.97		7.080E-01	1.266E-01	1.677E-01	1.446E-02	4.221
	+	84.90		1.130E-01	2.122E-01	2.747E-01	2.213E-02	0.411
		569.67		4.346E-02	4.496E-02	7.714E-02	5.765E-03	0.563
		1063.62	*	-5.659E-02	6.826E-02	1.041E-01	6.768E-03	-0.544
		1770.23		1.060E+00	6.473E-01	1.182E+00	6.705E-02	0.897
TL-207		81.07		-1.604E-01	2.516E-01	2.913E-01	2.409E-02	-0.551
	+	83.78		7.453E-02	1.399E-01	1.808E-01	1.468E-02	0.412
		94.90		7.645E-01	3.182E-01	4.130E-01	3.621E-02	1.851
		122.32		9.272E-01	2.262E+00	3.688E+00	4.818E-01	0.251
		144.24		2.460E-01	9.115E-01	1.470E+00	1.652E-01	0.167
		154.21		-2.772E-01	5.265E-01	8.305E-01	8.348E-02	-0.334
		269.46		3.704E-01	2.780E-01	4.751E-01	3.780E-02	0.780
		323.87	*	-3.529E-01	1.080E+00	1.743E+00	2.973E-01	-0.202
	+	338.28		6.118E+00	2.493E+00	3.119E+00	3.498E-01	1.962
		445.03		-4.106E+00	4.881E+00	7.988E+00	8.470E-01	-0.514
PO-209		260.50		-4.896E+00	1.467E+01	2.413E+01	1.885E+00	-0.203
		262.80		-1.414E+01	4.022E+01	6.557E+01	5.114E+00	-0.216
		896.60	*	7.456E+00	8.605E+00	1.510E+01	1.137E+00	0.494
BI-210		46.50	*	-7.327E+00	1.754E+00	2.424E+00	1.976E-01	-3.022
PB-210		46.50	*	-7.327E+00	1.754E+00	2.424E+00	1.976E-01	-3.022
PO-210		46.50	*	-7.327E+00	1.730E+00	2.424E+00	1.728E-01	-3.022
PB-211		404.84	*	-3.724E-01	1.848E+00	2.919E+00	1.820E+00	-0.128
		427.08		-3.583E+00	4.960E+00	6.896E+00	4.265E+00	-0.520

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		831.96		-1.634E+00	1.738E+00	2.149E+00	1.345E+00	-0.760
BI-212	+	727.18	*	9.527E-01	6.292E-01	7.634E-01	7.328E-02	1.248
		785.46		1.641E+00	2.113E+00	3.696E+00	2.966E-01	0.444
		1620.62		8.312E-01	1.389E+00	2.432E+00	1.400E-01	0.342
PO-215		81.07		-1.604E-01	2.516E-01	2.913E-01	2.409E-02	-0.551
	+	83.78		7.453E-02	1.399E-01	1.808E-01	1.468E-02	0.412
		94.90		7.645E-01	3.182E-01	4.130E-01	3.621E-02	1.851
		122.32		9.272E-01	2.262E+00	3.688E+00	4.818E-01	0.251
		144.24		2.460E-01	9.115E-01	1.470E+00	1.652E-01	0.167
		154.21		-2.772E-01	5.265E-01	8.305E-01	8.348E-02	-0.334
		269.46		3.704E-01	2.780E-01	4.751E-01	3.780E-02	0.780
		323.87	*	-3.529E-01	1.080E+00	1.743E+00	2.973E-01	-0.202
	+	338.28		6.118E+00	2.493E+00	3.119E+00	3.498E-01	1.962
		445.03		-4.106E+00	4.881E+00	7.988E+00	8.470E-01	-0.514
RN-219		271.23		5.463E-01	3.679E-01	6.278E-01	6.023E-02	0.870
		401.81	*	5.926E-01	7.887E-01	1.289E+00	1.762E-01	0.460
RN-220		549.76	*	1.879E+01	4.149E+01	6.984E+01	5.106E+00	0.269
RA-223		81.07		-1.604E-01	2.516E-01	2.913E-01	2.409E-02	-0.551
	+	83.78		7.453E-02	1.399E-01	1.808E-01	1.468E-02	0.412
		94.90		7.645E-01	3.182E-01	4.130E-01	3.621E-02	1.851
		122.32		9.272E-01	2.262E+00	3.688E+00	4.818E-01	0.251
		144.24		2.460E-01	9.115E-01	1.470E+00	1.652E-01	0.167
		154.21		-2.772E-01	5.265E-01	8.305E-01	8.348E-02	-0.334
		269.46		3.704E-01	2.780E-01	4.751E-01	3.780E-02	0.780
		323.87	*	-3.529E-01	1.080E+00	1.743E+00	2.973E-01	-0.202
	+	338.28		6.118E+00	2.493E+00	3.119E+00	3.498E-01	1.962
		445.03		-4.106E+00	4.881E+00	7.988E+00	8.470E-01	-0.514
AC-227		79.80		1.266E-01	1.457E+00	2.183E+00	4.670E-01	0.058
		236.00		-8.752E-02	3.535E-01	5.158E-01	6.062E-02	-0.170
		256.20	*	-2.863E-02	5.803E-01	9.636E-01	1.438E-01	-0.030
		286.10		-1.890E+00	2.418E+00	3.874E+00	4.872E-01	-0.488
	+	299.80		5.248E+00	3.055E+00	3.909E+00	6.631E-01	1.342
		304.40		-1.522E+00	3.344E+00	4.699E+00	8.418E-01	-0.324
		334.20		1.527E+00	4.243E+00	6.131E+00	1.150E+00	0.249
TH-227		79.80		1.266E-01	1.457E+00	2.183E+00	4.731E-01	0.058
	+	94.00		6.610E+00	3.074E+00	4.075E+00	8.880E-01	1.622
		236.00		-8.752E-02	3.535E-01	5.158E-01	5.432E-02	-0.170
		256.20	*	-2.863E-02	5.803E-01	9.636E-01	1.706E-01	-0.030
		286.10		-1.890E+00	3.063E+00	3.874E+00	3.885E+00	-0.488
	+	299.80		5.248E+00	3.055E+00	3.909E+00	6.631E-01	1.342
		304.40		-1.522E+00	3.344E+00	4.699E+00	8.418E-01	-0.324
		334.20		1.527E+00	4.243E+00	6.131E+00	1.150E+00	0.249
PA-231		283.67	*	1.081E+00	2.354E+00	3.930E+00	5.759E-01	0.275
	+	301.29		2.099E+00	1.194E+00	1.552E+00	1.780E-01	1.352
TH-231		81.07		-1.604E-01	2.516E-01	2.913E-01	2.409E-02	-0.551
	+	83.78		7.453E-02	1.399E-01	1.808E-01	1.468E-02	0.412
		94.90		7.645E-01	3.182E-01	4.130E-01	3.621E-02	1.851
		122.32		9.272E-01	2.262E+00	3.688E+00	4.818E-01	0.251
		144.24		2.460E-01	9.115E-01	1.470E+00	1.652E-01	0.167

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		154.21		-2.772E-01	5.265E-01	8.305E-01	8.348E-02	-0.334
		269.46		3.704E-01	2.780E-01	4.751E-01	3.780E-02	0.780
		323.87	*	-3.529E-01	1.080E+00	1.743E+00	2.973E-01	-0.202
	+	338.28		6.118E+00	2.493E+00	3.119E+00	3.498E-01	1.962
		445.03		-4.106E+00	4.881E+00	7.988E+00	8.470E-01	-0.514
U-231	+	84.21		2.246E+00	4.217E+00	5.511E+00	4.461E-01	0.408
	+	92.29		4.569E+00	1.918E+00	2.852E+00	2.405E-01	1.602
		95.87	*	3.963E-01	1.024E+00	1.229E+00	1.093E-01	0.322
		108.00		-1.037E+00	1.666E+00	2.687E+00	2.835E-01	-0.386
PA-233	+	75.28		2.066E+01	4.533E+00	4.971E+00	7.625E-01	4.156
	+	86.59		6.768E+00	2.559E+00	2.570E+00	6.840E-01	2.634
	+	300.12		1.463E+00	8.410E-01	1.092E+00	1.555E-01	1.340
		311.98	*	-3.003E-02	1.026E-01	1.664E-01	1.271E-02	-0.180
		340.50		3.304E+00	1.384E+00	1.828E+00	4.254E-01	1.808
		398.62		7.620E-01	3.972E+00	6.406E+00	1.658E+00	0.119
		415.76		8.959E-01	3.279E+00	5.281E+00	1.092E+00	0.170
PA-234	+	63.00		1.334E+00	1.067E+00	1.618E+00	2.577E-01	0.825
		94.67		7.884E-01	2.468E-01	3.129E-01	3.906E-02	2.520
	+	98.44		3.475E-01	2.555E-01	1.736E-01	9.700E-02	2.002
	+	99.86		1.801E+00	8.764E-01	9.406E-01	8.865E-02	1.915
		111.00		-1.118E-02	2.136E-01	3.499E-01	4.853E-02	-0.032
		131.20		6.902E-02	1.511E-01	2.201E-01	2.585E-02	0.314
		152.70		1.123E-01	4.310E-01	6.966E-01	1.217E-01	0.161
	+	186.00		4.825E+00	2.958E+00	3.376E+00	1.047E+00	1.429
		226.40		-7.814E-02	5.728E-01	9.576E-01	1.222E-01	-0.082
		227.20		2.819E-01	6.087E-01	1.033E+00	8.184E-02	0.273
		248.90		-8.694E-01	1.218E+00	1.962E+00	4.344E-01	-0.443
		293.70		2.920E+00	1.311E+00	1.906E+00	3.202E-01	1.532
		369.80		-7.064E-01	1.552E+00	2.458E+00	5.157E-01	-0.287
		568.70		5.905E-01	1.464E+00	2.455E+00	1.833E-01	0.241
		569.50		3.793E-01	3.986E-01	6.836E-01	5.108E-02	0.555
		574.00		-2.153E+00	2.178E+00	3.400E+00	2.553E-01	-0.633
		699.00		-4.432E-01	8.646E-01	1.321E+00	2.494E-01	-0.335
		706.10		2.686E-01	1.232E+00	2.010E+00	8.947E-01	0.134
		733.00		-5.801E-01	5.717E-01	6.915E-01	1.522E-01	-0.839
		742.81		-7.305E-01	1.700E+00	2.530E+00	1.699E+00	-0.289
		796.30		1.405E+00	1.145E+00	1.947E+00	5.228E-01	0.722
		805.60		1.121E+00	1.198E+00	2.041E+00	6.218E-01	0.549
		819.60		7.871E-01	1.546E+00	2.615E+00	9.903E-01	0.301
		826.30		-3.590E-01	9.534E-01	1.524E+00	6.796E-01	-0.236
		831.60		-7.673E-01	7.608E-01	1.120E+00	3.319E-01	-0.685
		876.40		-1.495E-02	1.012E+00	1.675E+00	1.721E+00	-0.009
		880.51		6.195E-02	3.387E-01	5.684E-01	4.332E-02	0.109
		883.24		4.955E-02	3.527E-01	5.718E-01	3.837E-01	0.087
		899.00		1.290E+00	1.098E+00	1.716E+00	7.465E-01	0.752
		925.00		-1.124E+00	1.422E+00	2.201E+00	1.628E-01	-0.511
		926.50		-1.008E-01	2.118E-01	3.345E-01	8.323E-02	-0.301
		946.00	*	4.369E-02	3.467E-01	5.762E-01	1.048E-01	0.076
		949.00		3.345E-01	5.086E-01	8.779E-01	6.386E-02	0.381

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		980.50		-2.389E-01	8.908E-01	1.431E+00	1.015E-01	-0.167
		1394.10		2.201E-01	1.187E+00	1.986E+00	1.286E+00	0.111
PA-234M		766.41		2.374E+01	2.706E+01	3.590E+01	2.750E+01	0.661
	+	1001.03	*	9.933E+00	1.218E+01	1.525E+01	1.518E+00	0.651
U-235	+	89.95		3.399E+00	1.736E+00	1.760E+00	5.408E-01	1.931
	+	93.35		2.057E+00	1.023E+00	1.318E+00	3.693E-01	1.560
		105.00		1.766E+00	1.315E+00	2.055E+00	6.228E-01	0.860
		143.76	*	3.876E-02	2.830E-01	4.549E-01	8.399E-02	0.085
		163.35		-9.936E-02	6.612E-01	1.043E+00	1.968E-01	-0.095
	+	185.71		1.787E-01	9.553E-02	1.241E-01	9.795E-03	1.440
		205.31		4.200E-01	8.256E-01	1.242E+00	2.332E-01	0.338
NP-236		94.67		6.028E-01	1.796E-01	2.377E-01	2.076E-02	2.537
	+	98.44		2.627E-01	1.278E-01	1.312E-01	1.212E-02	2.002
		111.00		-8.456E-03	1.615E-01	2.647E-01	2.906E-02	-0.032
		160.31	*	-2.563E-02	1.084E-01	1.723E-01	1.468E-02	-0.149
NP-239	+	99.55		6.004E-01	2.921E-01	3.101E-01	2.910E-02	1.936
		117.00	*	-1.795E-01	2.296E-01	3.655E-01	4.337E-02	-0.491
	+	209.75		1.633E+00	1.424E+00	1.906E+00	1.511E-01	0.857
		228.18		1.226E-01	3.190E-01	5.402E-01	4.279E-02	0.227
		277.60		3.250E-01	2.706E-01	4.608E-01	3.548E-02	0.705
		334.30		9.754E-01	2.399E+00	3.480E+00	2.446E-01	0.280
CM-243	+	99.55		6.177E-01	3.006E-01	3.190E-01	2.994E-02	1.936
		103.76	*	-1.493E-02	1.258E-01	1.847E-01	1.839E-02	-0.081
		117.00		-1.846E-01	2.362E-01	3.760E-01	4.462E-02	-0.491
	+	209.75		1.609E+00	1.404E+00	1.878E+00	1.490E-01	0.857
		228.18		1.238E-01	3.223E-01	5.457E-01	4.323E-02	0.227
		277.60		3.276E-01	2.728E-01	4.645E-01	3.577E-02	0.705
CM-247		278.00		1.252E+00	1.125E+00	1.912E+00	1.472E-01	0.655
		287.40		7.290E-01	1.905E+00	3.176E+00	2.419E-01	0.230
		402.60	*	-1.222E-02	7.223E-02	1.152E-01	6.858E-03	-0.106
CF-249		252.85		2.300E-01	1.292E+00	2.161E+00	1.697E-01	0.106
		333.44		5.227E-02	3.147E-01	4.520E-01	3.183E-02	0.116
		387.95	*	2.132E-02	7.354E-02	1.194E-01	7.091E-03	0.179
CF-251		176.60	*	1.042E-01	1.777E-01	2.870E-01	2.258E-02	0.363
		227.00		1.749E-01	5.431E-01	9.185E-01	7.278E-02	0.190
		285.00		1.510E+00	2.703E+00	4.529E+00	3.460E-01	0.333

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511005      *
* Acquisition date :  7-JUL-2009 10:54:38 Detector SN#     :                *
* Detector ID        : GAM13               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:05.76      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232511005           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.5696E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope      :                *
* LCS DPM          :    0.000             LCS Isotope      :                *
* LCSD DPM         :    0.000             LCSD Isotope     :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.618E+01	2.289E+00	6.651E-01	0.000E+00
CD-109	3.506E+00	9.627E-01	1.168E+00	0.000E+00
SN-126	3.457E-01	9.493E-02	1.191E-01	0.000E+00
BA-137M	1.758E+01	1.440E+00	8.084E-02	0.000E+00
CS-137	1.858E+01	1.526E+00	8.545E-02	0.000E+00
TL-208	5.148E-01	1.170E-01	8.663E-02	0.000E+00
BI-211	3.711E+00	5.675E-01	5.706E-01	0.000E+00
PB-212	1.590E+00	1.884E-01	1.413E-01	0.000E+00
PO-212	1.590E+00	1.884E-01	1.413E-01	0.000E+00
BI-214	1.156E+00	2.254E-01	1.731E-01	0.000E+00
PB-214	1.291E+00	2.082E-01	1.990E-01	0.000E+00
PO-214	1.291E+00	2.082E-01	1.990E-01	0.000E+00
PO-216	1.590E+00	1.884E-01	1.413E-01	0.000E+00
PO-218	1.291E+00	2.082E-01	1.990E-01	0.000E+00
RA-224	1.529E+00	1.081E+00	1.608E+00	0.000E+00
RA-226	1.156E+00	2.254E-01	1.731E-01	0.000E+00
AC-228	1.828E+00	3.529E-01	2.509E-01	0.000E+00
RA-228	1.828E+00	3.529E-01	2.509E-01	0.000E+00
TH-228	1.590E+00	1.884E-01	1.412E-01	0.000E+00
TH-229	-4.506E-01	7.274E-01	1.322E+00	0.000E+00
TH-230	1.156E+00	2.254E-01	1.731E-01	0.000E+00
TH-232	1.828E+00	3.529E-01	2.509E-01	0.000E+00
TH-234	1.144E+00	9.028E-01	1.199E+00	0.000E+00
U-234	1.156E+00	2.254E-01	1.731E-01	0.000E+00
NP-237	1.015E+00	3.462E-01	3.517E-01	0.000E+00
U-238	1.144E+00	9.028E-01	1.199E+00	0.000E+00
AM-241	1.105E+02	1.101E+01	4.384E-01	0.000E+00
AM-243	3.945E-01	6.915E-02	7.336E-02	0.000E+00
ANH-511	1.595E-01	1.087E-01	8.779E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line Activity	K.L. Act error	MDA

Nuclide	(pCi/GRAM	) Ided	(pCi/GRAM	)	
BE-7	2.723E-01	6.700E-01	1.202E+00	0.000E+00	NOT IDENT.
NA-22	-8.042E-03	4.600E-02	7.790E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.895E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.549E-04	2.920E-02	4.954E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.808E-02	7.049E-02	0.000E+00	FAIL ABUN
SC-46	-3.738E-03	4.137E-02	7.103E-02	0.000E+00	FAIL ABUN
V-48	2.107E-02	7.660E-02	1.334E-01	0.000E+00	NOT IDENT.
CR-51	-4.373E-01	5.741E-01	9.821E-01	0.000E+00	NOT IDENT.
MN-52	-1.519E-01	2.023E-01	3.134E-01	0.000E+00	NOT IDENT.
MN-54	3.604E-02	4.338E-02	7.927E-02	0.000E+00	NOT IDENT.
CO-56	-3.156E-02	4.543E-02	7.515E-02	0.000E+00	NOT IDENT.
CO-57	9.536E-03	3.181E-02	5.696E-02	0.000E+00	NOT IDENT.
CO-58	-5.784E-02	4.414E-02	6.972E-02	0.000E+00	NOT IDENT.
FE-59	-8.052E-02	1.033E-01	1.628E-01	0.000E+00	NOT IDENT.
CO-60	5.643E-02	4.950E-02	9.027E-02	0.000E+00	NOT IDENT.
ZN-65	1.828E-02	1.197E-01	1.750E-01	0.000E+00	NOT IDENT.
GE-68	9.317E-01	1.408E+00	2.499E+00	0.000E+00	NOT IDENT.
AS-73	-2.123E+00	1.104E+00	1.858E+00	0.000E+00	NOT IDENT.
AS-74	8.754E-02	1.237E-01	2.209E-01	0.000E+00	NOT IDENT.
SE-75	-2.466E-02	6.428E-02	1.129E-01	0.000E+00	NOT IDENT.
BR-77	-4.622E+00	9.223E+00	1.590E+01	0.000E+00	FAIL ABUN
SR-82	-5.514E-01	4.076E-01	6.476E-01	0.000E+00	NOT IDENT.
RB-83	-7.208E-02	1.134E-01	1.944E-01	0.000E+00	NOT IDENT.
RB-84	1.650E-02	8.196E-02	1.401E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.374E+01	2.335E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	6.884E-02	1.170E-01	0.000E+00	NOT IDENT.
RB-86	1.882E-01	8.325E-01	1.431E+00	0.000E+00	NOT IDENT.
Y-88	-5.427E-03	3.635E-02	6.021E-02	0.000E+00	NOT IDENT.
ZR-88	2.010E-02	5.544E-02	9.624E-02	0.000E+00	NOT IDENT.
Y-91	5.709E+00	2.149E+01	3.782E+01	0.000E+00	NOT IDENT.
NB-94	-2.553E-02	3.927E-02	6.371E-02	0.000E+00	NOT IDENT.
NB-95	3.548E-02	4.674E-02	8.569E-02	0.000E+00	NOT IDENT.
NB-95M	-7.912E-02	1.825E-01	2.862E-01	0.000E+00	NOT IDENT.
ZR-95	3.112E-02	8.128E-02	1.405E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.211E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	3.813E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-4.256E-01	7.916E+00	1.331E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.271E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.196E-02	4.734E-02	8.709E-02	0.000E+00	NOT IDENT.
RH-102	8.567E-02	6.451E-02	1.181E-01	0.000E+00	NOT IDENT.
RU-103	-2.061E-02	7.017E-02	1.227E-01	0.000E+00	FAIL ABUN
RH-106	9.721E-02	4.541E-01	7.910E-01	0.000E+00	FAIL ABUN
RU-106	9.721E-02	4.540E-01	7.910E-01	0.000E+00	FAIL ABUN
AG-108M	-3.264E-02	6.337E-02	1.120E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	6.430E-02	1.050E-01	0.000E+00	NOT IDENT.
IN-111	6.898E-01	9.944E-01	1.618E+00	0.000E+00	NOT IDENT.
IN-113M	1.330E-02	8.079E-02	1.394E-01	0.000E+00	NOT IDENT.
SN-113	1.330E-02	8.079E-02	1.394E-01	0.000E+00	NOT IDENT.
IN-114M	3.139E-01	2.965E-01	4.687E-01	0.000E+00	NOT IDENT.
CD-115	-8.808E-01	9.397E+00	1.645E+01	0.000E+00	NOT IDENT.
SN-117M	-2.051E-02	6.566E-02	1.139E-01	0.000E+00	NOT IDENT.
SB-122	-5.364E-02	1.758E+00	3.060E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.980E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.019E-02	3.761E-02	6.636E-02	0.000E+00	NOT IDENT.
I-124	3.747E-01	7.521E-01	1.163E+00	0.000E+00	NOT IDENT.
SB-124	3.843E-02	8.502E-02	1.500E-01	0.000E+00	NOT IDENT.
SB-125	-9.407E-02	1.815E-01	3.216E-01	0.000E+00	NOT IDENT.
TE-125M	-6.155E+00	1.031E+01	1.835E+01	0.000E+00	NOT IDENT.
I-126	0.000E+00	2.541E-01	4.206E-01	0.000E+00	NOT IDENT.
SB-126	1.791E-01	1.537E-01	2.508E-01	0.000E+00	FAIL ABUN
SB-127	-6.435E-01	1.095E+00	1.788E+00	0.000E+00	FAIL ABUN
XE-127	-8.182E-02	6.294E-02	1.115E-01	0.000E+00	NOT IDENT.
I-131	6.518E-03	1.637E-01	2.837E-01	0.000E+00	NOT IDENT.
TE-132	2.398E-01	6.042E-01	1.107E+00	0.000E+00	FAIL ABUN
BA-133	5.970E-03	8.166E-02	1.256E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.775E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.939E-02	5.480E-02	1.017E-01	0.000E+00	NOT IDENT.
CS-135	-2.921E-01	2.330E-01	3.992E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.631E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.413E-02	1.088E-01	1.796E-01	0.000E+00	FAIL ABUN
CE-139	-1.715E-02	3.992E-02	6.870E-02	0.000E+00	NOT IDENT.
BA-140	7.753E-03	3.792E-01	6.652E-01	0.000E+00	NOT IDENT.
LA-140	-3.150E-02	9.106E-02	1.459E-01	0.000E+00	NOT IDENT.
CE-141	9.367E-02	7.794E-02	1.412E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.592E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.194E-01	2.732E-01	4.415E-01	0.000E+00	NOT IDENT.

PM-144	3.727E-03	3.957E-02	6.771E-02	0.000E+00	NOT IDENT.
PR-144	2.522E-01	2.679E+00	4.583E+00	0.000E+00	NOT IDENT.
PM-146	-4.141E-02	9.154E-02	1.614E-01	0.000E+00	NOT IDENT.
ND-147	-2.808E-01	8.245E-01	1.427E+00	0.000E+00	FAIL ABUN
PM-149	-5.900E+01	7.191E+01	1.237E+02	0.000E+00	NOT IDENT.
EU-152	7.737E-02	1.777E-01	2.759E-01	0.000E+00	NOT IDENT.
GD-153	3.120E-02	1.093E-01	1.443E-01	0.000E+00	FAIL ABUN
EU-154	-1.934E-02	1.289E-01	2.188E-01	0.000E+00	NOT IDENT.
EU-155	1.814E-01	1.216E-01	2.272E-01	0.000E+00	FAIL ABUN
TB-160	2.659E-02	1.642E-01	2.874E-01	0.000E+00	FAIL ABUN
HO-166M	-1.834E-02	7.089E-02	1.181E-01	0.000E+00	NOT IDENT.
TM-171	5.875E+00	1.787E+01	3.050E+01	0.000E+00	FAIL ABUN
LU-176	3.485E-02	3.827E-02	6.921E-02	0.000E+00	FAIL ABUN
LU-177	1.841E+00	1.574E+00	2.283E+00	0.000E+00	FAIL ABUN
LU-177M	-3.785E-01	3.421E-01	5.580E-01	0.000E+00	FAIL ABUN
HF-181	-6.435E-02	8.144E-02	1.409E-01	0.000E+00	NOT IDENT.
W-181	-2.296E-03	2.290E-01	3.881E-01	0.000E+00	NOT IDENT.
TA-182	-1.832E-01	2.224E-01	3.628E-01	0.000E+00	FAIL ABUN
RE-183	3.560E-02	1.444E-01	2.521E-01	0.000E+00	FAIL ABUN
RE-184	6.077E-02	3.345E-01	6.046E-01	0.000E+00	FAIL ABUN
OS-185	-8.934E-03	6.084E-02	1.036E-01	0.000E+00	FAIL ABUN
RE-188	-7.809E-02	2.191E-01	3.805E-01	0.000E+00	NOT IDENT.
W-188	1.115E+00	1.228E+01	1.918E+01	0.000E+00	FAIL ABUN
IR-192	1.580E-02	5.376E-02	9.531E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	4.056E-01	4.728E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.034E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.405E+00	5.845E+00	1.011E+01	0.000E+00	NOT IDENT.
TL-202	7.379E-02	1.237E-01	2.250E-01	0.000E+00	NOT IDENT.
HG-203	3.284E-02	5.839E-02	1.055E-01	0.000E+00	NOT IDENT.
BI-207	-5.659E-02	6.690E-02	1.060E-01	0.000E+00	FAIL ABUN
TL-207	-3.529E-01	1.059E+00	1.834E+00	0.000E+00	FAIL ABUN
PO-209	7.456E+00	8.433E+00	1.545E+01	0.000E+00	NOT IDENT.
BI-210	-7.327E+00	1.719E+00	2.679E+00	0.000E+00	NOT IDENT.
PB-210	-7.327E+00	1.719E+00	2.679E+00	0.000E+00	NOT IDENT.
PO-210	-7.327E+00	1.696E+00	2.679E+00	0.000E+00	NOT IDENT.
PB-211	-3.724E-01	1.811E+00	3.053E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.167E-01	7.856E-01	0.000E+00	FAIL ABUN
PO-215	-3.529E-01	1.059E+00	1.834E+00	0.000E+00	FAIL ABUN
RN-219	5.926E-01	7.730E-01	1.349E+00	0.000E+00	NOT IDENT.
RN-220	1.879E+01	4.066E+01	7.243E+01	0.000E+00	NOT IDENT.
RA-223	-3.529E-01	1.059E+00	1.834E+00	0.000E+00	FAIL ABUN
AC-227	-2.863E-02	5.687E-01	1.020E+00	0.000E+00	FAIL ABUN
TH-227	-2.863E-02	5.687E-01	1.020E+00	0.000E+00	FAIL ABUN
PA-231	1.081E+00	2.307E+00	4.149E+00	0.000E+00	FAIL ABUN
TH-231	-3.529E-01	1.059E+00	1.834E+00	0.000E+00	FAIL ABUN
U-231	3.963E-01	1.003E+00	1.335E+00	0.000E+00	FAIL ABUN
PA-233	-3.003E-02	1.005E-01	1.753E-01	0.000E+00	FAIL ABUN
PA-234	4.369E-02	3.398E-01	5.886E-01	0.000E+00	FAIL ABUN
PA-234M	9.933E+00	1.194E+01	1.555E+01	0.000E+00	FAIL ABUN
U-235	3.876E-02	2.774E-01	4.889E-01	0.000E+00	FAIL ABUN
NP-236	-2.563E-02	1.063E-01	1.846E-01	0.000E+00	FAIL ABUN
NP-239	-1.795E-01	2.250E-01	3.948E-01	0.000E+00	FAIL ABUN
CM-243	-1.493E-02	1.233E-01	2.001E-01	0.000E+00	FAIL ABUN
CM-247	-1.222E-02	7.079E-02	1.205E-01	0.000E+00	NOT IDENT.
CF-249	2.132E-02	7.207E-02	1.250E-01	0.000E+00	NOT IDENT.
CF-251	1.042E-01	1.741E-01	3.068E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:55:41.61

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511005.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:54:38.
Sample ID         : G232511005           Sample quantity  : 1.56960E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:05.76  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1215	10.67*	1.040E+00	2.618E+01	2.618E+01	8.92
CD-109	88.03	387	3.72*	7.241E+00	3.439E+00	3.506E+00	28.02
SN-126	64.28	134	9.60	7.391E+00	4.530E-01	4.530E-01	79.92
	86.94	387	8.90	7.241E+00	1.437E+00	1.437E+00	49.20
	87.57	387	37.00*	7.241E+00	3.457E-01	3.457E-01	28.02
BA-137M	661.65	13324	89.98*	2.016E+00	1.756E+01	1.758E+01	8.36
CS-137	661.65	13324	85.12*	2.016E+00	1.857E+01	1.858E+01	8.38
TL-208	277.35	------	6.80	4.225E+00	------ Line Not Found		------
	510.84	169	21.60	2.536E+00	7.385E-01	7.385E-01	70.04
	583.14	409	84.20*	2.255E+00	5.148E-01	5.148E-01	23.19
	860.37	------	12.46	1.606E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	7.369E+00	------ Line Not Found		------
	351.07	701	12.94*	3.493E+00	3.711E+00	3.711E+00	15.61
PB-212	74.81	801	10.70	7.355E+00	2.433E+00	2.433E+00	20.18
	77.11	1033	18.00	7.340E+00	1.870E+00	1.870E+00	14.22
	87.30	387	8.00	7.241E+00	1.599E+00	1.599E+00	29.75
	238.63	1396	44.60*	4.708E+00	1.590E+00	1.590E+00	12.09
	300.09	160	3.41	3.968E+00	2.832E+00	2.832E+00	56.50
PO-212	74.81	801	10.70	7.355E+00	2.433E+00	2.433E+00	20.18
	77.11	1033	18.00	7.340E+00	1.870E+00	1.870E+00	14.22
	87.30	387	8.00	7.241E+00	1.599E+00	1.599E+00	29.75
	115.19	------	0.60	6.822E+00	------ Line Not Found		------
	238.63	1396	44.60*	4.708E+00	1.590E+00	1.590E+00	12.09
	300.09	160	3.41	3.968E+00	2.832E+00	2.832E+00	56.50
BI-214	609.31	485	46.30*	2.168E+00	1.156E+00	1.156E+00	19.89
	768.36	------	5.04	1.770E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	90	15.10	1.286E+00	1.104E+00	1.104E+00	50.86
	1238.11	------	5.94	1.187E+00	------ Line Not Found		------
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	100	15.80	8.982E-01	1.677E+00	1.677E+00	27.04
PB-214	74.81	801	6.21	7.355E+00	4.192E+00	4.192E+00	19.36

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	1033	10.50	7.340E+00	3.205E+00	3.205E+00	16.13
	87.30	387	4.67	7.241E+00	2.739E+00	2.739E+00	29.06
	241.98	175	7.49	4.661E+00	1.200E+00	1.200E+00	49.85
	295.21	322	19.20	4.024E+00	9.961E-01	9.961E-01	32.22
	351.92	701	37.20*	3.493E+00	1.291E+00	1.291E+00	16.45
PO-214	74.81	801	6.21	7.355E+00	4.192E+00	4.192E+00	19.36
	77.11	1033	10.50	7.340E+00	3.205E+00	3.205E+00	16.13
	87.30	387	4.67	7.241E+00	2.739E+00	2.739E+00	29.06
	241.98	175	7.49	4.661E+00	1.200E+00	1.200E+00	49.85
	295.21	322	19.20	4.024E+00	9.961E-01	9.961E-01	32.22
	351.92	701	37.20*	3.493E+00	1.291E+00	1.291E+00	16.45
PO-216	74.81	801	10.70	7.355E+00	2.433E+00	2.433E+00	20.18
	77.11	1033	18.00	7.340E+00	1.870E+00	1.870E+00	14.22
	87.30	387	8.00	7.241E+00	1.599E+00	1.599E+00	29.75
	238.63	1396	44.60*	4.708E+00	1.590E+00	1.590E+00	12.09
	300.09	160	3.41	3.968E+00	2.832E+00	2.832E+00	56.50
PO-218	74.81	801	6.21	7.355E+00	4.192E+00	4.192E+00	19.36
	77.11	1033	10.50	7.340E+00	3.205E+00	3.205E+00	16.13
	87.30	387	4.67	7.241E+00	2.739E+00	2.739E+00	29.06
	241.98	175	7.49	4.661E+00	1.200E+00	1.200E+00	49.85
	295.21	322	19.20	4.024E+00	9.961E-01	9.961E-01	32.22
	351.92	701	37.20*	3.493E+00	1.291E+00	1.291E+00	16.45
RA-224	240.98	118	3.95*	4.677E+00	1.529E+00	1.529E+00	72.11
RA-226	609.31	485	46.30*	2.168E+00	1.156E+00	1.156E+00	19.89
	768.36	------	5.04	1.770E+00	------	Line Not Found	------
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	90	15.10	1.286E+00	1.104E+00	1.104E+00	50.86
	1238.11	------	5.94	1.187E+00	------	Line Not Found	------
	1377.67	------	4.11	1.090E+00	------	Line Not Found	------
	1764.49	100	15.80	8.982E-01	1.677E+00	1.677E+00	27.04
AC-228	338.32	252	11.40	3.606E+00	1.465E+00	1.465E+00	56.67
	911.07	324	27.70*	1.528E+00	1.828E+00	1.828E+00	19.70
	969.11	142	16.60	1.450E+00	1.413E+00	1.413E+00	49.77
RA-228	338.32	252	11.40	3.606E+00	1.465E+00	1.465E+00	56.67
	911.07	324	27.70*	1.528E+00	1.828E+00	1.828E+00	19.70
	969.11	142	16.60	1.450E+00	1.413E+00	1.413E+00	49.77
TH-228	84.40	56	1.21	7.279E+00	1.521E+00	1.521E+00	188.05
	238.60	1396	44.60*	4.708E+00	1.590E+00	1.590E+00	12.09
	300.10	160	3.41	3.968E+00	2.832E+00	2.832E+00	81.23
TH-229	85.43	56	16.50	7.279E+00	1.116E-01	1.116E-01	187.78
	88.47	387	27.10	7.241E+00	4.720E-01	4.720E-01	28.02
	100.00	261	12.40	7.080E+00	7.118E-01	7.118E-01	48.65
	193.63	------	4.59*	5.397E+00	------	Line Not Found	------
	210.97	114	3.26	5.139E+00	1.621E+00	1.621E+00	87.22
TH-230	609.31	485	46.30*	2.168E+00	1.156E+00	1.156E+00	19.89
	768.36	------	5.04	1.770E+00	------	Line Not Found	------
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	90	15.10	1.286E+00	1.104E+00	1.104E+00	50.86
	1238.11	------	5.94	1.187E+00	------	Line Not Found	------

Sample ID : G232511005 Acquisition date : 7-JUL-2009 10:54:38

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	100	15.80	8.982E-01	1.677E+00	1.677E+00	27.04
TH-232	338.32	252	11.40	3.606E+00	1.465E+00	1.465E+00	39.79
	911.07	324	27.70*	1.528E+00	1.828E+00	1.828E+00	19.70
	969.11	142	16.60	1.450E+00	1.413E+00	1.413E+00	49.77
TH-234	63.29	134	3.80*	7.391E+00	1.144E+00	1.144E+00	80.50
	92.38	278	5.41	7.174E+00	1.711E+00	1.711E+00	44.89
U-234	609.31	485	46.30*	2.168E+00	1.156E+00	1.156E+00	19.89
	768.36	------	5.04	1.770E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	90	15.10	1.286E+00	1.104E+00	1.104E+00	50.86
	1238.11	------	5.94	1.187E+00	------ Line Not Found		------
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	100	15.80	8.982E-01	1.677E+00	1.677E+00	27.04
NP-237	86.50	387	12.60*	7.241E+00	1.015E+00	1.015E+00	34.79
	95.87	------	2.60	7.135E+00	------ Line Not Found		------
U-238	63.29	134	3.80*	7.391E+00	1.144E+00	1.144E+00	80.50
	92.38	278	5.41	7.174E+00	1.711E+00	1.711E+00	41.98
AM-241	59.54	122471	35.90*	7.386E+00	1.105E+02	1.105E+02	10.17
AM-243	74.67	801	66.00*	7.355E+00	3.945E-01	3.945E-01	17.89
	86.72	387	0.34	7.241E+00	3.807E+01	3.807E+01	28.02
	117.66	------	0.55	6.778E+00	------ Line Not Found		------
	142.18	------	0.13	6.323E+00	------ Line Not Found		------
ANH-511	511.00	169	100.00*	2.536E+00	1.595E-01	1.595E-01	69.54

Flag: "*" = Keyline

Sample ID : G232511005 Acquisition date : 7-JUL-2009 10:54:38

Total number of lines in spectrum 32
Number of unidentified lines 1
Number of lines tentatively identified by NID 31 96.88%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.618E+01	2.618E+01	0.234E+01	8.92	
CD-109	464.00D	1.02	3.439E+00	3.506E+00	0.982E+00	28.02	
SN-126	1.00E+05Y	1.00	3.457E-01	3.457E-01	0.969E-01	28.02	
BA-137M	30.17Y	1.00	1.756E+01	1.758E+01	0.147E+01	8.36	
CS-137	30.17Y	1.00	1.857E+01	1.858E+01	0.156E+01	8.38	
TL-208	1.41E+10Y	1.00	5.148E-01	5.148E-01	1.193E-01	23.19	
BI-211	7.04E+08Y	1.00	3.711E+00	3.711E+00	0.579E+00	15.61	
PB-212	1.41E+10Y	1.00	1.590E+00	1.590E+00	0.192E+00	12.09	
PO-212	1.41E+10Y	1.00	1.590E+00	1.590E+00	0.192E+00	12.09	
BI-214	1600.00Y	1.00	1.156E+00	1.156E+00	0.230E+00	19.89	
PB-214	1600.00Y	1.00	1.291E+00	1.291E+00	0.212E+00	16.45	
PO-214	1600.00Y	1.00	1.291E+00	1.291E+00	0.212E+00	16.45	
PO-216	1.41E+10Y	1.00	1.590E+00	1.590E+00	0.192E+00	12.09	
PO-218	1600.00Y	1.00	1.291E+00	1.291E+00	0.212E+00	16.45	
RA-224	1.41E+10Y	1.00	1.529E+00	1.529E+00	1.103E+00	72.11	
RA-226	1600.00Y	1.00	1.156E+00	1.156E+00	0.230E+00	19.89	
AC-228	1.41E+10Y	1.00	1.828E+00	1.828E+00	0.360E+00	19.70	
RA-228	1.41E+10Y	1.00	1.828E+00	1.828E+00	0.360E+00	19.70	
TH-228	1.41E+10Y	1.00	1.590E+00	1.590E+00	0.192E+00	12.09	
TH-229	7340.00Y	1.00	4.720E-01	4.720E-01	1.322E-01	28.02	K
TH-230	4.47E+09Y	1.00	1.156E+00	1.156E+00	0.230E+00	19.89	
TH-232	1.41E+10Y	1.00	1.828E+00	1.828E+00	0.360E+00	19.70	
TH-234	4.47E+09Y	1.00	1.144E+00	1.144E+00	0.921E+00	80.50	
U-234	4.47E+09Y	1.00	1.156E+00	1.156E+00	0.230E+00	19.89	
NP-237	2.14E+06Y	1.00	1.015E+00	1.015E+00	0.353E+00	34.79	
U-238	4.47E+09Y	1.00	1.144E+00	1.144E+00	0.921E+00	80.50	
AM-241	432.20Y	1.00	1.105E+02	1.105E+02	0.112E+02	10.17	
AM-243	7380.00Y	1.00	3.945E-01	3.945E-01	0.706E-01	17.89	
ANH-511	1.00E+09Y	1.00	1.595E-01	1.595E-01	1.109E-01	69.54	
	Total Activity :		2.070E+02	2.071E+02			

Grand Total Activity : 2.070E+02 2.071E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232511005 Acquisition date : 7-JUL-2009 10:54:38

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	50.11	1633	11810	1.17	99.99	98	6	2.27E-01	21.5	7.33E+00	T
5	90.38	277	957	1.29	180.54	172	20	3.84E-02	40.8	7.21E+00	T
0	129.08	196	928	1.55	257.95	253	9	2.72E-02	58.0	6.57E+00	T
0	186.17	223	914	1.34	372.16	368	9	3.10E-02	52.9	5.52E+00	T
0	727.87	87	157	1.35	1455.89	1448	14	1.21E-02	65.3	1.86E+00	T
0	861.92	33	101	1.20	1724.09	1717	11	4.65E-03	****	1.60E+00	
0	1001.62	35	79	1.71	2003.59	1996	14	4.81E-03	****	1.41E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:55:46.85

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511005.CNF;1 *
* Acquisition date  : 7-JUL-2009 10:54:38.  Detector SN#     :             *
* Detector ID       : GAM13                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:05.76          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232511005            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.56960E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 2-FEB-2009 10:41:22.03MS Isotope      :                *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.618E+01	2.336E+00	6.592E-01	4.030E-02	39.717
CD-109	3.506E+00	9.823E-01	1.073E+00	8.467E-02	3.267
SN-126	3.457E-01	9.686E-02	1.095E-01	8.660E-03	3.158
BA-137M	1.758E+01	1.470E+00	7.834E-02	6.389E-03	224.372
CS-137	1.858E+01	1.557E+00	8.281E-02	6.768E-03	224.372
TL-208	5.148E-01	1.193E-01	8.366E-02	6.925E-03	6.153
BI-211	3.711E+00	5.791E-01	5.435E-01	3.962E-02	6.828
PB-212	1.590E+00	1.922E-01	1.332E-01	1.210E-02	11.940
PO-212	1.590E+00	1.922E-01	1.332E-01	1.210E-02	11.940
BI-214	1.156E+00	2.300E-01	1.674E-01	1.565E-02	6.908
PB-214	1.291E+00	2.124E-01	1.896E-01	1.697E-02	6.808
PO-214	1.291E+00	2.124E-01	1.896E-01	1.697E-02	6.808
PO-216	1.590E+00	1.922E-01	1.332E-01	1.210E-02	11.940
PO-218	1.291E+00	2.124E-01	1.896E-01	1.697E-02	6.808
RA-224	1.529E+00	1.103E+00	1.516E+00	1.197E-01	1.009
RA-226	1.156E+00	2.300E-01	1.674E-01	1.565E-02	6.908
AC-228	1.828E+00	3.601E-01	2.453E-01	2.547E-02	7.451
RA-228	1.828E+00	3.601E-01	2.453E-01	2.547E-02	7.451

Sample ID : G232511005 Acquisition date : 7-JUL-2009 10:54:38

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.590E+00	1.922E-01	1.332E-01	1.210E-02	11.941
TH-229	4.720E-01	1.322E-01	1.240E+00	9.808E-02	0.381
TH-230	1.156E+00	2.300E-01	1.674E-01	1.565E-02	6.908
TH-232	1.828E+00	3.601E-01	2.453E-01	2.547E-02	7.451
TH-234	1.144E+00	9.212E-01	1.093E+00	2.006E-01	1.047
U-234	1.156E+00	2.300E-01	1.674E-01	1.565E-02	6.908
NP-237	1.015E+00	3.533E-01	3.231E-01	7.146E-02	3.143
U-238	1.144E+00	9.212E-01	1.093E+00	2.006E-01	1.047
AM-241	1.105E+02	1.123E+01	3.990E-01	4.058E-02	276.853
AM-243	3.945E-01	7.056E-02	6.715E-02	5.800E-03	5.875
ANH-511	1.595E-01	1.109E-01	8.447E-02	5.895E-03	1.888

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.723E-01		6.836E-01	1.155E+00	8.682E-02	0.236
NA-22	-8.042E-03		4.694E-02	7.690E-02	4.341E-03	-0.105
NA-24	-7.299E-02		4.028E-02	Half-Life too short		
AL-26	-2.549E-04		2.980E-02	4.941E-02	2.788E-03	-0.005
TI-44	3.450E-01	+	4.906E-02	6.460E-02	5.441E-03	5.340
SC-46	-3.738E-03		4.222E-02	6.941E-02	5.256E-03	-0.054
V-48	2.107E-02		7.816E-02	1.308E-01	9.250E-03	0.161
CR-51	-4.373E-01		5.858E-01	9.332E-01	7.263E-02	-0.469
MN-52	-1.519E-01		2.065E-01	3.104E-01	1.784E-02	-0.489
MN-54	3.604E-02		4.427E-02	7.732E-02	6.067E-03	0.466
CO-56	-3.156E-02		4.635E-02	7.333E-02	5.715E-03	-0.430
CO-57	9.536E-03		3.246E-02	5.279E-02	6.677E-03	0.181
CO-58	-5.784E-02		4.504E-02	6.795E-02	5.412E-03	-0.851
FE-59	-8.052E-02		1.054E-01	1.601E-01	1.144E-02	-0.503
CO-60	5.643E-02		5.051E-02	8.923E-02	5.075E-03	0.632
ZN-65	1.828E-02		1.222E-01	1.721E-01	1.045E-02	0.106
GE-68	9.317E-01		1.437E+00	2.455E+00	1.569E-01	0.379
AS-73	-2.123E+00		1.127E+00	1.686E+00	1.425E-01	-1.259
AS-74	8.754E-02		1.262E-01	2.135E-01	1.639E-02	0.410
SE-75	-2.466E-02		6.559E-02	1.068E-01	8.365E-03	-0.231
BR-77	-4.622E+00		9.411E+00	1.531E+01	1.081E+00	-0.302
SR-82	-5.514E-01		4.159E-01	6.304E-01	5.074E-02	-0.875
RB-83	-7.208E-02		1.157E-01	1.871E-01	1.321E-02	-0.385
RB-84	1.650E-02		8.364E-02	1.369E-01	1.043E-02	0.121
KR-85	3.819E+01		1.402E+01	2.248E+01	1.574E+00	1.699
SR-85	1.914E-01		7.025E-02	1.126E-01	7.891E-03	1.699
RB-86	1.882E-01		8.495E-01	1.406E+00	8.994E-02	0.134
Y-88	-5.427E-03		3.709E-02	6.007E-02	3.383E-03	-0.090
ZR-88	2.010E-02		5.657E-02	9.194E-02	5.385E-03	0.219
Y-91	5.709E+00		2.193E+01	3.727E+01	2.066E+00	0.153
NB-94	-2.553E-02		4.007E-02	6.185E-02	5.048E-03	-0.413
NB-95	3.548E-02		4.769E-02	8.338E-02	6.733E-03	0.426

Sample ID : G232511005 Acquisition date : 7-JUL-2009 10:54:38

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	-7.912E-02		1.862E-01	2.698E-01	2.496E-02	-0.293
ZR-95	3.112E-02		8.294E-02	1.367E-01	1.233E-02	0.228
NB-97	6.266E-02		1.128E-02	Half-Life too short		
ZR-97	3.912E-01		1.945E-01	Half-Life too short		
MO-99	-4.256E-01		8.078E+00	1.294E+01	1.929E+00	-0.033
TC-99M	-1.399E+08		6.483E+07	Half-Life too short		
RH-101	1.196E-02		4.831E-02	8.171E-02	6.470E-03	0.146
RH-102	8.567E-02		6.583E-02	1.134E-01	7.549E-03	0.755
RU-103	-2.061E-02		7.160E-02	1.180E-01	1.553E-02	-0.175
RH-106	9.721E-02		4.634E-01	7.652E-01	9.863E-02	0.127
RU-106	9.721E-02		4.633E-01	7.652E-01	6.026E-02	0.127
AG-108M	-3.264E-02		6.466E-02	1.073E-01	7.220E-03	-0.304
AG-110M	1.148E-01		6.561E-02	1.017E-01	8.546E-03	1.129
IN-111	6.898E-01		1.015E+00	1.527E+00	1.203E-01	0.452
IN-113M	1.330E-02		8.244E-02	1.332E-01	8.298E-03	0.100
SN-113	1.330E-02		8.244E-02	1.332E-01	8.298E-03	0.100
IN-114M	3.139E-01		3.025E-01	4.393E-01	3.472E-02	0.714
CD-115	-8.808E-01		9.588E+00	1.584E+01	1.129E+00	-0.056
SN-117M	-2.051E-02		6.700E-02	1.063E-01	9.281E-03	-0.193
SB-122	-5.364E-02		1.794E+00	2.953E+00	2.193E-01	-0.018
I-123	1.349E-01		2.541E-01	Half-Life too short		
TE-123M	1.019E-02		3.838E-02	6.191E-02	5.406E-03	0.165
I-124	3.747E-01		7.674E-01	1.124E+00	8.692E-02	0.333
SB-124	3.843E-02		8.676E-02	1.493E-01	9.296E-03	0.257
SB-125	-9.407E-02		1.852E-01	3.079E-01	1.982E-02	-0.306
TE-125M	-6.155E+00		1.052E+01	1.696E+01	2.059E+00	-0.363
I-126	4.470E-01		2.593E-01	4.077E-01	3.326E-02	1.097
SB-126	1.791E-01		1.569E-01	2.436E-01	1.985E-02	0.735
SB-127	-6.435E-01		1.117E+00	1.734E+00	1.808E-01	-0.371
XE-127	-8.182E-02		6.422E-02	1.047E-01	8.295E-03	-0.782
I-131	6.518E-03		1.671E-01	2.705E-01	1.911E-02	0.024
TE-132	2.398E-01		6.166E-01	1.043E+00	1.560E-01	0.230
BA-133	5.970E-03		8.333E-02	1.196E-01	1.436E-02	0.050
I-133	-3.954E-04		9.054E-04	Half-Life too short		
CS-134	5.939E-02		5.592E-02	9.909E-02	7.986E-03	0.599
CS-135	-2.921E-01		2.378E-01	3.775E-01	3.487E-02	-0.774
I-135	-2.474E+07		1.342E+07	Half-Life too short		
CS-136	-3.413E-02		1.110E-01	1.764E-01	1.251E-02	-0.194
CE-139	-1.715E-02		4.074E-02	6.417E-02	5.031E-03	-0.267
BA-140	7.753E-03		3.870E-01	6.410E-01	2.103E-01	0.012
LA-140	-3.150E-02		9.292E-02	1.449E-01	8.353E-03	-0.217
CE-141	9.367E-02		7.953E-02	1.314E-01	1.363E-02	0.713
CE-143	5.612E-05		3.873E-05	Half-Life too short		
CE-144	-2.194E-01		2.788E-01	4.100E-01	7.107E-02	-0.535
PM-144	3.727E-03		4.038E-02	6.571E-02	5.367E-03	0.057
PR-144	2.522E-01		2.733E+00	4.448E+00	3.632E-01	0.057
PM-146	-4.141E-02		9.340E-02	1.548E-01	1.405E-02	-0.268
ND-147	-2.808E-01		8.413E-01	1.374E+00	1.945E-01	-0.204

Sample ID : G232511005 Acquisition date : 7-JUL-2009 10:54:38

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	-5.900E+01		7.338E+01	1.172E+02	1.759E+01	-0.503
EU-152	7.737E-02		1.813E-01	2.627E-01	1.969E-02	0.295
GD-153	3.120E-02		1.115E-01	1.329E-01	1.210E-02	0.235
EU-154	-1.934E-02		1.316E-01	2.160E-01	1.995E-02	-0.090
EU-155	1.814E-01		1.240E-01	2.098E-01	2.153E-02	0.865
TB-160	2.659E-02		1.676E-01	2.808E-01	2.142E-02	0.095
HO-166M	-1.834E-02		7.234E-02	1.147E-01	9.353E-03	-0.160
TM-171	5.875E+00		1.823E+01	2.784E+01	2.541E+00	0.211
LU-176	3.485E-02		3.905E-02	6.569E-02	4.870E-03	0.531
LU-177	1.841E+00	+	1.606E+00	2.144E+00	1.701E-01	0.859
LU-177M	-3.785E-01		3.491E-01	5.338E-01	3.238E-02	-0.709
HF-181	-6.435E-02		8.310E-02	1.353E-01	9.092E-03	-0.475
W-181	-2.296E-03		2.337E-01	3.541E-01	3.266E-02	-0.006
TA-182	-1.832E-01		2.269E-01	3.577E-01	1.991E-02	-0.512
RE-183	3.560E-02		1.474E-01	2.353E-01	1.947E-02	0.151
RE-184	6.077E-02		3.413E-01	5.709E-01	4.482E-02	0.106
OS-185	-8.934E-03		6.208E-02	1.003E-01	8.074E-03	-0.089
RE-188	-7.809E-02		2.236E-01	3.547E-01	3.246E-02	-0.220
W-188	1.115E+00		1.253E+01	1.818E+01	1.379E+00	0.061
IR-192	1.580E-02		5.486E-02	9.054E-02	6.622E-03	0.174
AU-195	8.506E-01	+	4.138E-01	4.358E-01	4.050E-02	1.952
TL-200	-6.384E-05		1.038E-04	Half-Life too short		
TL-201	-1.405E+00		5.965E+00	9.446E+00	7.402E-01	-0.149
TL-202	7.379E-02		1.262E-01	2.156E-01	1.363E-02	0.342
HG-203	3.284E-02		5.958E-02	9.992E-02	7.955E-03	0.329
BI-207	-5.659E-02		6.826E-02	1.041E-01	6.768E-03	-0.544
TL-207	-3.529E-01		1.080E+00	1.743E+00	2.973E-01	-0.202
PO-209	7.456E+00		8.605E+00	1.510E+01	1.137E+00	0.494
BI-210	-7.327E+00		1.754E+00	2.424E+00	1.976E-01	-3.022
PB-210	-7.327E+00		1.754E+00	2.424E+00	1.976E-01	-3.022
PO-210	-7.327E+00		1.730E+00	2.424E+00	1.728E-01	-3.022
PB-211	-3.724E-01		1.848E+00	2.919E+00	1.820E+00	-0.128
BI-212	9.527E-01	+	6.292E-01	7.634E-01	7.328E-02	1.248
PO-215	-3.529E-01		1.080E+00	1.743E+00	2.973E-01	-0.202
RN-219	5.926E-01		7.887E-01	1.289E+00	1.762E-01	0.460
RN-220	1.879E+01		4.149E+01	6.984E+01	5.106E+00	0.269
RA-223	-3.529E-01		1.080E+00	1.743E+00	2.973E-01	-0.202
AC-227	-2.863E-02		5.803E-01	9.636E-01	1.438E-01	-0.030
TH-227	-2.863E-02		5.803E-01	9.636E-01	1.706E-01	-0.030
PA-231	1.081E+00		2.354E+00	3.930E+00	5.759E-01	0.275
TH-231	-3.529E-01		1.080E+00	1.743E+00	2.973E-01	-0.202
U-231	3.963E-01		1.024E+00	1.229E+00	1.093E-01	0.322
PA-233	-3.003E-02		1.026E-01	1.664E-01	1.271E-02	-0.180
PA-234	4.369E-02		3.467E-01	5.762E-01	1.048E-01	0.076
PA-234M	9.933E+00	+	1.218E+01	1.525E+01	1.518E+00	0.651
U-235	3.876E-02		2.830E-01	4.549E-01	8.399E-02	0.085
NP-236	-2.563E-02		1.084E-01	1.723E-01	1.468E-02	-0.149
NP-239	-1.795E-01		2.296E-01	3.655E-01	4.337E-02	-0.491

Sample ID : G232511005 Acquisition date : 7-JUL-2009 10:54:38

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.493E-02		1.258E-01	1.847E-01	1.839E-02	-0.081
CM-247	-1.222E-02		7.223E-02	1.152E-01	6.858E-03	-0.106
CF-249	2.132E-02		7.354E-02	1.194E-01	7.091E-03	0.179
CF-251	1.042E-01		1.777E-01	2.870E-01	2.258E-02	0.363

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232511005           *
* Acquisition date  :  7-JUL-2009 10:54:38 Detector SN#     :               *
* Detector ID       : GAM13                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:05.76      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232511005           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.5696E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.618E+01	2.289E+00	3.327E-01	1.168E+00
CD-109	3.506E+00	9.627E-01	5.841E-01	4.912E-01
SN-126	3.457E-01	9.493E-02	5.960E-02	4.843E-02
BA-137M	1.758E+01	1.440E+00	4.044E-02	7.348E-01
CS-137	1.858E+01	1.526E+00	4.275E-02	7.784E-01
TL-208	5.148E-01	1.170E-01	4.334E-02	5.967E-02
BI-211	3.711E+00	5.675E-01	2.855E-01	2.896E-01
PB-212	1.590E+00	1.884E-01	7.067E-02	9.611E-02
PO-212	1.590E+00	1.884E-01	7.067E-02	9.611E-02
BI-214	1.156E+00	2.254E-01	8.662E-02	1.150E-01
PB-214	1.291E+00	2.082E-01	9.958E-02	1.062E-01
PO-214	1.291E+00	2.082E-01	9.958E-02	1.062E-01
PO-216	1.590E+00	1.884E-01	7.067E-02	9.611E-02
PO-218	1.291E+00	2.082E-01	9.958E-02	1.062E-01
RA-224	1.529E+00	1.081E+00	8.044E-01	5.514E-01
RA-226	1.156E+00	2.254E-01	8.662E-02	1.150E-01
AC-228	1.828E+00	3.529E-01	1.255E-01	1.800E-01
RA-228	1.828E+00	3.529E-01	1.255E-01	1.800E-01
TH-228	1.590E+00	1.884E-01	7.066E-02	9.611E-02
TH-229	-4.506E-01	7.274E-01	6.615E-01	3.711E-01
TH-230	1.156E+00	2.254E-01	8.662E-02	1.150E-01
TH-232	1.828E+00	3.529E-01	1.255E-01	1.800E-01
TH-234	1.144E+00	9.028E-01	6.000E-01	4.606E-01
U-234	1.156E+00	2.254E-01	8.662E-02	1.150E-01
NP-237	1.015E+00	3.462E-01	1.759E-01	1.766E-01
U-238	1.144E+00	9.028E-01	6.000E-01	4.606E-01
AM-241	1.105E+02	1.101E+01	2.193E-01	5.617E+00
AM-243	3.945E-01	6.915E-02	3.670E-02	3.528E-02
ANH-511	1.595E-01	1.087E-01	4.392E-02	5.546E-02

---- Non-Identified Nuclides ----

Key-Line Activity	K.L Act error	DLC	TPU

Nuclide	(pCi/GRAM)		(pCi/GRAM)		
BE-7	2.723E-01	6.700E-01	6.015E-01	3.418E-01	NOT IDENT.
NA-22	-8.042E-03	4.600E-02	3.897E-02	2.347E-02	NOT IDENT.
NA-24	-7.299E+04	7.895E+04	0.000E+00	4.028E+04	SHORT HLIF
AL-26	-2.549E-04	2.920E-02	2.479E-02	1.490E-02	NOT IDENT.
TI-44	3.450E-01	4.808E-02	3.527E-02	2.453E-02	FAIL ABUN
SC-46	-3.738E-03	4.137E-02	3.554E-02	2.111E-02	FAIL ABUN
V-48	2.107E-02	7.660E-02	6.676E-02	3.908E-02	NOT IDENT.
CR-51	-4.373E-01	5.741E-01	4.914E-01	2.929E-01	NOT IDENT.
MN-52	-1.519E-01	2.023E-01	1.568E-01	1.032E-01	NOT IDENT.
MN-54	3.604E-02	4.338E-02	3.966E-02	2.213E-02	NOT IDENT.
CO-56	-3.156E-02	4.543E-02	3.760E-02	2.318E-02	NOT IDENT.
CO-57	9.536E-03	3.181E-02	2.850E-02	1.623E-02	NOT IDENT.
CO-58	-5.784E-02	4.414E-02	3.488E-02	2.252E-02	NOT IDENT.
FE-59	-8.052E-02	1.033E-01	8.147E-02	5.270E-02	NOT IDENT.
CO-60	5.643E-02	4.950E-02	4.516E-02	2.526E-02	NOT IDENT.
ZN-65	1.828E-02	1.197E-01	8.755E-02	6.108E-02	NOT IDENT.
GE-68	9.317E-01	1.408E+00	1.250E+00	7.184E-01	NOT IDENT.
AS-73	-2.123E+00	1.104E+00	9.293E-01	5.635E-01	NOT IDENT.
AS-74	8.754E-02	1.237E-01	1.105E-01	6.309E-02	NOT IDENT.
SE-75	-2.466E-02	6.428E-02	5.651E-02	3.279E-02	NOT IDENT.
BR-77	-4.622E+00	9.223E+00	7.956E+00	4.705E+00	FAIL ABUN
SR-82	-5.514E-01	4.076E-01	3.240E-01	2.080E-01	NOT IDENT.
RB-83	-7.208E-02	1.134E-01	9.725E-02	5.784E-02	NOT IDENT.
RB-84	1.650E-02	8.196E-02	7.011E-02	4.182E-02	NOT IDENT.
KR-85	3.819E+01	1.374E+01	1.168E+01	7.008E+00	NOT IDENT.
SR-85	1.914E-01	6.884E-02	5.856E-02	3.512E-02	NOT IDENT.
RB-86	1.882E-01	8.325E-01	7.160E-01	4.248E-01	NOT IDENT.
Y-88	-5.427E-03	3.635E-02	3.012E-02	1.854E-02	NOT IDENT.
ZR-88	2.010E-02	5.544E-02	4.815E-02	2.829E-02	NOT IDENT.
Y-91	5.709E+00	2.149E+01	1.892E+01	1.097E+01	NOT IDENT.
NB-94	-2.553E-02	3.927E-02	3.187E-02	2.003E-02	NOT IDENT.
NB-95	3.548E-02	4.674E-02	4.287E-02	2.385E-02	NOT IDENT.
NB-95M	-7.912E-02	1.825E-01	1.432E-01	9.310E-02	NOT IDENT.
ZR-95	3.112E-02	8.128E-02	7.029E-02	4.147E-02	NOT IDENT.
NB-97	6.266E+04	2.211E+04	0.000E+00	1.128E+04	SHORT HLIF
ZR-97	3.912E+05	3.813E+05	0.000E+00	1.945E+05	SHORT HLIF
MO-99	-4.256E-01	7.916E+00	6.660E+00	4.039E+00	NOT IDENT.
TC-99M	-1.399E+14	1.271E+14	0.000E+00	6.483E+13	SHORT HLIF
RH-101	1.196E-02	4.734E-02	4.357E-02	2.415E-02	NOT IDENT.
RH-102	8.567E-02	6.451E-02	5.910E-02	3.292E-02	NOT IDENT.
RU-103	-2.061E-02	7.017E-02	6.141E-02	3.580E-02	FAIL ABUN
RH-106	9.721E-02	4.541E-01	3.957E-01	2.317E-01	FAIL ABUN
RU-106	9.721E-02	4.540E-01	3.957E-01	2.316E-01	FAIL ABUN
AG-108M	-3.264E-02	6.337E-02	5.605E-02	3.233E-02	NOT IDENT.
AG-110M	1.148E-01	6.430E-02	5.252E-02	3.281E-02	NOT IDENT.
IN-111	6.898E-01	9.944E-01	8.097E-01	5.073E-01	NOT IDENT.
IN-113M	1.330E-02	8.079E-02	6.975E-02	4.122E-02	NOT IDENT.
SN-113	1.330E-02	8.079E-02	6.975E-02	4.122E-02	NOT IDENT.
IN-114M	3.139E-01	2.965E-01	2.345E-01	1.513E-01	NOT IDENT.
CD-115	-8.808E-01	9.397E+00	8.228E+00	4.794E+00	NOT IDENT.
SN-117M	-2.051E-02	6.566E-02	5.700E-02	3.350E-02	NOT IDENT.
SB-122	-5.364E-02	1.758E+00	1.531E+00	8.969E-01	NOT IDENT.
I-123	1.349E+05	4.980E+05	0.000E+00	2.541E+05	SHORT HLIF
TE-123M	1.019E-02	3.761E-02	3.320E-02	1.919E-02	NOT IDENT.
I-124	3.747E-01	7.521E-01	5.819E-01	3.837E-01	NOT IDENT.
SB-124	3.843E-02	8.502E-02	7.503E-02	4.338E-02	NOT IDENT.
SB-125	-9.407E-02	1.815E-01	1.609E-01	9.261E-02	NOT IDENT.
TE-125M	-6.155E+00	1.031E+01	9.181E+00	5.260E+00	NOT IDENT.
I-126	4.470E-01	2.541E-01	2.104E-01	1.296E-01	NOT IDENT.
SB-126	1.791E-01	1.537E-01	1.255E-01	7.844E-02	FAIL ABUN
SB-127	-6.435E-01	1.095E+00	8.945E-01	5.586E-01	FAIL ABUN
XE-127	-8.182E-02	6.294E-02	5.578E-02	3.211E-02	NOT IDENT.
I-131	6.518E-03	1.637E-01	1.419E-01	8.353E-02	NOT IDENT.
TE-132	2.398E-01	6.042E-01	5.540E-01	3.083E-01	FAIL ABUN
BA-133	5.970E-03	8.166E-02	6.282E-02	4.166E-02	NOT IDENT.
I-133	-3.954E+02	1.775E+03	0.000E+00	9.054E+02	SHORT HLIF
CS-134	5.939E-02	5.480E-02	5.089E-02	2.796E-02	NOT IDENT.
CS-135	-2.921E-01	2.330E-01	1.997E-01	1.189E-01	NOT IDENT.
I-135	-2.474E+13	2.631E+13	0.000E+00	1.342E+13	SHORT HLIF
CS-136	-3.413E-02	1.088E-01	8.988E-02	5.551E-02	FAIL ABUN
CE-139	-1.715E-02	3.992E-02	3.437E-02	2.037E-02	NOT IDENT.
BA-140	7.753E-03	3.792E-01	3.328E-01	1.935E-01	NOT IDENT.
LA-140	-3.150E-02	9.106E-02	7.298E-02	4.646E-02	NOT IDENT.
CE-141	9.367E-02	7.794E-02	7.065E-02	3.977E-02	NOT IDENT.
CE-143	5.612E+01	7.592E+01	0.000E+00	3.873E+01	SHORT HLIF
CE-144	-2.194E-01	2.732E-01	2.209E-01	1.394E-01	NOT IDENT.

PM-144	3.727E-03	3.957E-02	3.388E-02	2.019E-02	NOT IDENT.
PR-144	2.522E-01	2.679E+00	2.293E+00	1.367E+00	NOT IDENT.
PM-146	-4.141E-02	9.154E-02	8.074E-02	4.670E-02	NOT IDENT.
ND-147	-2.808E-01	8.245E-01	7.137E-01	4.206E-01	FAIL ABUN
PM-149	-5.900E+01	7.191E+01	6.189E+01	3.669E+01	NOT IDENT.
EU-152	7.737E-02	1.777E-01	1.380E-01	9.066E-02	NOT IDENT.
GD-153	3.120E-02	1.093E-01	7.217E-02	5.576E-02	FAIL ABUN
EU-154	-1.934E-02	1.289E-01	1.094E-01	6.578E-02	NOT IDENT.
EU-155	1.814E-01	1.216E-01	1.137E-01	6.202E-02	FAIL ABUN
TB-160	2.659E-02	1.642E-01	1.438E-01	8.379E-02	FAIL ABUN
HO-166M	-1.834E-02	7.089E-02	5.908E-02	3.617E-02	NOT IDENT.
TM-171	5.875E+00	1.787E+01	1.526E+01	9.116E+00	FAIL ABUN
LU-176	3.485E-02	3.827E-02	3.463E-02	1.953E-02	FAIL ABUN
LU-177	1.841E+00	1.574E+00	1.142E+00	8.030E-01	FAIL ABUN
LU-177M	-3.785E-01	3.421E-01	2.792E-01	1.746E-01	FAIL ABUN
HF-181	-6.435E-02	8.144E-02	7.048E-02	4.155E-02	NOT IDENT.
W-181	-2.296E-03	2.290E-01	1.942E-01	1.168E-01	NOT IDENT.
TA-182	-1.832E-01	2.224E-01	1.815E-01	1.135E-01	FAIL ABUN
RE-183	3.560E-02	1.444E-01	1.261E-01	7.369E-02	FAIL ABUN
RE-184	6.077E-02	3.345E-01	3.025E-01	1.706E-01	FAIL ABUN
OS-185	-8.934E-03	6.084E-02	5.182E-02	3.104E-02	FAIL ABUN
RE-188	-7.809E-02	2.191E-01	1.903E-01	1.118E-01	NOT IDENT.
W-188	1.115E+00	1.228E+01	9.597E+00	6.267E+00	FAIL ABUN
IR-192	1.580E-02	5.376E-02	4.768E-02	2.743E-02	FAIL ABUN
AU-195	8.506E-01	4.056E-01	2.365E-01	2.069E-01	FAIL ABUN
TL-200	-6.384E+01	2.034E+02	0.000E+00	1.038E+02	SHORT HLIF
TL-201	-1.405E+00	5.845E+00	5.059E+00	2.982E+00	NOT IDENT.
TL-202	7.379E-02	1.237E-01	1.126E-01	6.311E-02	NOT IDENT.
HG-203	3.284E-02	5.839E-02	5.280E-02	2.979E-02	NOT IDENT.
BI-207	-5.659E-02	6.690E-02	5.301E-02	3.413E-02	FAIL ABUN
TL-207	-3.529E-01	1.059E+00	9.175E-01	5.402E-01	FAIL ABUN
PO-209	7.456E+00	8.433E+00	7.728E+00	4.303E+00	NOT IDENT.
BI-210	-7.327E+00	1.719E+00	1.341E+00	8.771E-01	NOT IDENT.
PB-210	-7.327E+00	1.719E+00	1.341E+00	8.771E-01	NOT IDENT.
PO-210	-7.327E+00	1.696E+00	1.341E+00	8.651E-01	NOT IDENT.
PB-211	-3.724E-01	1.811E+00	1.527E+00	9.241E-01	NOT IDENT.
BI-212	9.527E-01	6.167E-01	3.931E-01	3.146E-01	FAIL ABUN
PO-215	-3.529E-01	1.059E+00	9.175E-01	5.402E-01	FAIL ABUN
RN-219	5.926E-01	7.730E-01	6.747E-01	3.944E-01	NOT IDENT.
RN-220	1.879E+01	4.066E+01	3.624E+01	2.075E+01	NOT IDENT.
RA-223	-3.529E-01	1.059E+00	9.175E-01	5.402E-01	FAIL ABUN
AC-227	-2.863E-02	5.687E-01	5.103E-01	2.901E-01	FAIL ABUN
TH-227	-2.863E-02	5.687E-01	5.103E-01	2.901E-01	FAIL ABUN
PA-231	1.081E+00	2.307E+00	2.076E+00	1.177E+00	FAIL ABUN
TH-231	-3.529E-01	1.059E+00	9.175E-01	5.402E-01	FAIL ABUN
U-231	3.963E-01	1.003E+00	6.677E-01	5.119E-01	FAIL ABUN
PA-233	-3.003E-02	1.005E-01	8.768E-02	5.130E-02	FAIL ABUN
PA-234	4.369E-02	3.398E-01	2.945E-01	1.734E-01	FAIL ABUN
PA-234M	9.933E+00	1.194E+01	7.781E+00	6.092E+00	FAIL ABUN
U-235	3.876E-02	2.774E-01	2.446E-01	1.415E-01	FAIL ABUN
NP-236	-2.563E-02	1.063E-01	9.236E-02	5.422E-02	FAIL ABUN
NP-239	-1.795E-01	2.250E-01	1.975E-01	1.148E-01	FAIL ABUN
CM-243	-1.493E-02	1.233E-01	1.001E-01	6.289E-02	FAIL ABUN
CM-247	-1.222E-02	7.079E-02	6.027E-02	3.612E-02	NOT IDENT.
CF-249	2.132E-02	7.207E-02	6.255E-02	3.677E-02	NOT IDENT.
CF-251	1.042E-01	1.741E-01	1.535E-01	8.883E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	4930.1201
46.50	4930.1201
46.50	4930.1201
48.70	5298.2202
49.72	6066.6616
51.35	10539.5791
52.39	10587.1396
52.97	10787.2383
53.15	11100.9863
53.44	11113.5684
54.07	11334.0889
56.28	11027.1064
56.28	11027.2363
57.37	0.0000
57.53	11266.8145
57.53	11266.9141
57.60	11269.7305
57.98	11546.6631
57.98	11546.6631
59.32	9040.5879
59.32	9040.5879
59.40	9043.2031
59.54	9047.7734
59.72	9053.6641
60.01	9063.1211
61.10	756.7778
61.14	756.8855
61.30	757.3140
63.00	761.8370
63.29	762.6017
63.29	762.6017
63.58	779.2698
64.28	817.0127
65.12	887.2954
65.20	887.5355
65.20	887.5355
66.05	887.4070
66.72	782.2326
66.83	782.5267
66.91	782.7316
67.20	796.9005
67.20	796.9005
67.75	791.3572
67.85	791.6223
68.90	852.6252
68.90	852.6252
69.30	878.0445
69.67	865.5786
70.82	894.5612
70.82	894.5612
70.83	894.5913
72.80	885.1415
72.87	885.3344
72.87	885.3344
74.67	860.0527
74.81	860.4205
74.81	860.4205
74.81	860.4205
74.81	860.4205
74.81	860.4205
74.81	860.4205
74.97	860.8455
75.28	861.6575
75.70	862.7607
77.11	866.4382
77.11	866.4382
77.11	866.4382

77.11	866.4382
77.11	866.4382
77.11	866.4382
78.38	869.7194
79.62	785.0524
79.80	785.4647
79.80	785.4647
80.11	770.8130
80.18	770.9731
80.30	771.2384
80.30	771.2384
80.57	794.2172
81.00	854.0056
81.07	854.1801
81.07	854.1801
81.07	854.1801
81.07	854.1801
82.60	783.8648
83.37	789.3286
83.78	784.6068
83.78	784.6068
83.78	784.6068
83.78	784.6068
84.21	785.5570
84.40	780.3204
84.90	781.4132
85.43	703.1763
86.29	704.8527
86.50	705.2614
86.54	705.3370
86.59	705.4354
86.72	705.6852
86.79	705.8176
86.94	706.1128
87.30	695.4089
87.30	695.4089
87.30	695.4089
87.30	695.4089
87.30	695.4089
87.30	695.4089
87.57	695.9227
87.88	648.9351
88.03	649.1987
88.36	649.7815
88.47	649.9757
89.95	652.5670
91.11	654.5858
92.29	656.6255
92.38	656.7816
92.38	656.7816
93.35	658.4466
94.00	659.5566
94.67	627.7533
94.67	627.7632
94.90	628.1323
94.90	628.1323
94.90	628.1323
94.90	628.1323
95.87	629.6946
95.87	629.6946
96.73	631.0789
97.43	629.2628
98.44	647.8790
98.44	647.8790
98.88	648.5933
99.55	649.6747
99.55	649.6747
99.86	650.1734
100.00	650.3991
100.10	650.5642
103.18	708.0141
103.76	726.8406
105.00	628.1265
105.31	628.5894
108.00	708.6554
109.28	697.7148
111.00	659.1559
111.00	659.1559

111.76	674.4317
112.95	654.9934
115.19	643.0258
116.30	634.4078
117.00	670.1171
117.00	670.1171
117.66	657.7891
121.11	650.3497
121.62	642.8046
121.78	643.0233
122.06	651.6687
122.32	648.9282
122.32	648.9282
122.32	648.9282
122.32	648.9282
123.07	675.8342
127.23	663.9800
129.76	643.8118
131.20	647.2690
133.02	649.6338
133.54	678.8531
135.34	662.1748
136.00	664.0943
136.25	664.4185
136.48	683.8612
140.51	711.7142
140.51	0.0000
142.18	707.5253
142.65	678.0203
143.76	681.6000
144.24	664.9396
144.24	664.9396
144.24	664.9396
144.24	664.9396
145.22	711.5750
145.44	646.9573
147.16	709.7973
152.43	638.8364
152.70	661.0709
153.22	690.2147
154.21	684.8348
154.21	684.8348
154.21	684.8348
154.21	684.8348
155.03	679.2310
156.02	639.6143
158.56	679.0242
159.00	0.0000
159.00	660.6964
160.31	672.1935
161.27	685.5494
162.32	633.2682
162.64	658.1564
163.35	675.7015
163.89	658.4368
165.85	684.1712
167.43	682.6095
171.28	668.8610
171.86	689.8890
172.10	701.4880
176.55	639.2057
176.60	631.2663
181.06	652.5287
184.41	691.6503
185.71	745.7256
186.00	746.0597
190.27	720.6102
192.34	788.6484
193.63	809.5078
197.04	782.6788
198.01	763.4408
198.60	728.6833
200.40	741.2447
201.83	784.5892
202.84	784.8356
205.31	688.0202
208.36	774.3125
208.81	780.5493

209.75	719.6838
209.75	719.6838
210.97	715.1433
215.65	672.9697
216.55	679.2446
218.09	662.4716
222.10	640.4366
223.80	641.8839
226.40	646.8553
227.00	621.5807
227.08	621.6476
227.20	610.6872
228.16	611.4561
228.18	611.4712
228.18	611.4712
231.56	0.0000
235.69	661.5665
236.00	661.8267
236.00	661.8267
238.60	633.7266
238.63	633.7473
238.63	633.7473
238.63	633.7473
239.00	634.0422
240.98	635.6224
241.98	636.4164
241.98	636.4164
241.98	636.4164
244.69	569.6209
245.39	559.5524
247.94	620.3152
248.90	596.4265
249.79	587.5933
252.40	540.0143
252.85	564.0901
252.85	564.0901
254.15	0.0000
256.20	601.6920
256.20	601.6920
260.50	599.0061
260.90	587.7576
262.80	561.1517
264.65	561.3970
268.24	638.3057
268.79	601.8875
269.46	538.3253
269.46	538.3253
269.46	538.3253
269.46	538.3253
271.23	556.9124
273.65	652.9781
276.40	570.9185
277.35	536.2935
277.60	527.6338
277.60	527.6338
278.00	532.7690
278.60	509.6057
279.20	542.3089
279.53	588.6108
280.46	617.7034
281.68	574.2780
283.67	521.3398
284.30	515.7778
285.00	520.1246
285.90	580.8940
286.10	581.0197
286.10	581.0197
287.40	526.4313
288.45	0.0000
290.67	538.6177
290.80	535.5182
291.72	564.6805
293.26	0.0000
293.70	551.5304
295.21	550.8208
295.21	550.8208
295.21	550.8208
295.96	543.2695

296.50	607.5269
297.23	608.0000
298.57	608.8628
299.80	609.6421
299.80	609.6421
300.09	573.7194
300.09	573.7194
300.09	573.7194
300.10	573.7281
300.12	573.7369
301.29	506.1533
302.84	490.8743
303.76	510.6749
303.91	528.4756
304.40	536.8080
304.40	536.8080
304.84	554.7924
306.84	475.7433
308.46	504.8629
311.98	514.7981
316.51	499.8170
318.01	507.7157
319.02	528.6833
319.41	567.7622
320.08	555.8508
323.87	539.4516
323.87	539.4516
323.87	539.4516
323.87	539.4516
325.23	585.4442
328.77	519.3251
333.44	517.7326
334.20	508.1497
334.20	508.1497
334.30	506.5413
338.28	516.7979
338.28	516.7979
338.28	516.7979
338.28	516.7979
338.32	516.8206
338.32	516.8206
338.32	516.8206
340.50	482.8050
340.57	482.8402
344.27	464.4011
345.85	480.9217
350.59	0.0000
351.07	490.9630
351.92	491.7688
351.92	491.7688
351.92	491.7688
355.39	0.0000
356.01	452.5181
364.48	476.0527
366.43	474.7445
367.43	477.3049
367.94	0.0000
369.80	524.4200
374.96	518.1818
383.85	538.4661
387.95	502.2210
388.63	542.8410
391.69	516.9252
391.69	516.9252
392.90	506.5122
398.62	517.7292
400.65	518.5916
401.10	511.0790
401.81	504.7672
402.60	562.4428
404.84	573.4215
410.95	545.1901
411.60	554.3624
413.65	583.0955
414.70	553.5207
415.30	545.9863
415.76	527.2388
417.63	0.0000

418.52	552.9776
423.70	568.7117
427.08	629.8376
427.89	602.3205
432.53	544.8641
433.93	562.6397
439.47	576.8563
439.56	565.0846
439.89	565.2288
443.98	614.3915
444.90	649.4827
445.03	646.8067
445.03	646.8067
445.03	646.8067
445.03	646.8067
453.90	628.1662
463.38	641.8229
468.07	725.6887
473.00	648.1840
475.06	583.8566
475.35	592.3669
476.78	590.1779
477.59	578.3706
477.96	573.8487
482.03	521.1482
484.57	473.2567
487.03	425.1625
490.36	0.0000
492.35	407.8582
497.08	396.8839
507.63	0.0000
510.53	0.0000
510.84	370.9824
511.00	371.0226
511.85	371.2381
511.85	371.2381
513.99	313.0031
513.99	313.0031
520.41	333.9113
520.65	326.2627
527.90	324.9258
528.96	0.0000
529.64	309.8047
529.87	0.0000
531.02	321.7142
537.32	297.7374
543.00	275.3838
546.56	0.0000
549.76	249.1135
552.65	238.7582
555.20	279.4932
563.23	239.3590
563.90	241.4325
568.70	216.3501
569.32	202.5308
569.50	202.5557
569.67	202.5756
573.80	236.9367
574.00	236.9657
574.64	237.9441
578.91	178.0895
579.30	0.0000
583.14	204.2440
585.48	202.1886
591.81	211.3433
592.07	211.3740
593.00	208.4706
595.88	205.8029
600.56	242.7891
602.52	0.0000
602.71	205.9544
602.71	205.9544
603.60	195.9294
604.41	226.4358
604.70	226.4740
609.31	228.7793
609.31	228.7793
609.31	228.7793

609.31	228.7793
610.33	228.9166
612.46	193.5439
614.37	192.0577
618.01	199.8381
621.84	188.4428
621.84	188.4428
631.29	181.2164
633.02	176.2394
633.10	176.2477
634.78	190.8580
635.90	179.6244
636.97	179.7306
645.85	193.0749
646.12	188.9494
656.30	179.2190
657.75	196.7752
657.90	0.0000
661.65	163.3392
661.65	163.3392
664.57	0.0000
666.33	141.7072
666.33	141.7072
675.00	122.3296
677.61	116.1606
685.20	128.2907
692.80	130.9307
695.00	108.6987
696.49	119.4484
696.49	119.4484
697.00	122.6816
697.49	129.1149
698.33	139.8463
698.50	132.3827
699.00	127.0796
702.63	133.7372
706.10	114.6828
706.58	0.0000
706.67	126.5072
709.31	100.9123
711.68	119.3087
713.82	106.5241
717.42	114.2657
720.50	77.3741
721.93	0.0000
722.20	106.2557
722.78	115.2943
722.78	115.2943
722.89	118.9026
722.95	118.9080
723.30	118.9268
724.18	117.1777
727.18	113.7415
733.00	141.2322
735.90	114.2362
739.58	107.9018
742.81	112.4400
744.21	124.5344
747.13	115.9582
751.79	115.1257
752.31	132.7012
753.82	130.6037
755.35	115.3231
756.15	101.0854
756.87	95.6235
763.93	144.2904
765.79	110.3833
766.41	107.6570
766.84	110.4395
768.36	129.8610
768.36	129.8610
768.36	129.8610
768.36	129.8610
776.49	125.7375
778.00	117.4993
778.57	115.6794
778.89	115.6972
783.80	112.2534

785.46	105.8406
792.07	135.0377
795.84	102.6215
796.30	97.9761
801.93	137.5224
805.60	85.2755
810.29	102.3627
810.76	117.4138
815.85	108.2687
817.79	95.1724
818.51	98.0311
819.60	98.0776
826.30	97.4280
828.27	0.0000
831.60	116.6188
831.96	118.5354
834.83	99.6957
836.80	0.0000
846.75	110.7183
848.13	102.1912
856.28	0.0000
856.80	100.2483
860.37	84.4909
867.32	79.2405
867.82	88.1343
871.10	92.5977
873.19	78.1985
874.81	85.0155
875.33	0.0000
876.40	95.7068
879.36	95.8277
880.27	91.9907
880.51	92.0003
881.50	91.0682
883.24	87.2571
884.67	89.2504
889.25	78.7308
896.60	75.0731
898.02	62.4349
899.00	65.3874
903.28	107.2634
911.07	87.2925
911.07	87.2925
911.07	87.2925
919.63	74.4080
920.93	78.7809
925.00	101.5981
925.24	102.5951
926.50	96.7240
934.06	88.1091
934.06	88.1091
934.06	88.1091
934.06	88.1091
935.52	83.2087
937.48	81.2910
944.10	85.4821
946.00	81.5662
949.00	73.6974
962.29	97.8236
964.01	84.1504
966.15	106.5647
968.20	137.6116
969.11	116.4390
969.11	116.4390
969.11	116.4390
977.42	86.3159
980.50	92.7543
983.50	84.7878
989.30	97.1152
996.32	81.7254
1001.03	79.2568
1001.68	80.1487
1004.76	87.2192
1021.30	0.0000
1024.50	0.0000
1034.80	77.1729
1037.82	81.3787
1038.57	86.5532

1038.76	0.0000
1045.16	72.3014
1046.59	78.5389
1048.07	82.7181
1050.47	77.6154
1050.47	77.6154
1063.62	112.2935
1076.63	77.3001
1077.35	71.0491
1085.78	92.2217
1099.22	95.8136
1112.02	87.5673
1112.84	86.0394
1115.52	90.7575
1120.29	89.0894
1120.29	89.0894
1120.29	89.0894
1120.29	89.0894
1120.51	82.7322
1121.28	81.8450
1124.00	0.0000
1129.67	90.6498
1131.51	0.0000
1147.95	0.0000
1167.94	117.4668
1173.22	83.1253
1175.09	97.2180
1177.93	122.1776
1189.05	93.0106
1204.90	101.9024
1205.75	0.0000
1213.00	95.6037
1221.42	116.5354
1230.97	113.1194
1235.34	134.0412
1236.41	0.0000
1238.11	94.4754
1238.11	94.4754
1238.11	94.4754
1238.11	94.4754
1238.25	91.6479
1246.25	120.2894
1260.41	0.0000
1271.85	60.1436
1274.45	66.8799
1274.54	66.8823
1291.56	71.0707
1298.22	0.0000
1312.09	70.5405
1325.50	57.2386
1325.50	57.2386
1332.49	50.5527
1333.61	47.6516
1360.21	44.1007
1362.66	0.0000
1365.15	42.2006
1368.21	58.9348
1368.53	0.0000
1376.25	45.2877
1377.67	53.1864
1377.67	53.1864
1377.67	53.1864
1377.67	53.1864
1384.27	57.2333
1394.10	32.6536
1395.20	31.6741
1407.95	43.7084
1434.06	48.0268
1436.60	38.0477
1457.56	0.0000
1460.81	43.3389
1489.15	39.6067
1509.49	41.8623
1596.49	41.7592
1620.62	24.1551
1678.03	0.0000
1691.02	21.3644
1691.02	21.3644

1706.46	0.0000
1750.46	0.0000
1764.49	30.4258
1764.49	30.4258
1764.49	30.4258
1764.49	30.4258
1770.23	15.2324
1771.40	20.3158
1791.20	0.0000
1808.65	15.3647
1836.01	20.2886

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232511005

Total Uranium Activity	3.4225E+00	ug/g
Total Uranium Counting Unc.	2.6888E+00	ug/g
Total Uranium Tpu	1.3718E-06	ug/g
Total Uranium Mda	1.7887E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID  : G232511005       *
*   ANALYST       : MXR1                      DETECTOR   : GAM13            *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 10:54:38.83    SAMPLE ALQT:  156.960 GRAM    *
*                                                                           *
*****************************************************************************
```

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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 6.438E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.094E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 7.946E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 3.938E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:58:37.83

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511006.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:58:06.
Sample ID         : G232511006           Sample quantity  : 1.47270E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.84  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.74	3627	1250	0.99	119.49	114	11	5.04E-01	2.5	
2	0	63.33*	82	564	1.04	126.66	125	7	1.14E-02	50.4	
3	5	74.96	645	566	1.23	149.92	143	15	8.96E-02	7.1	4.00E+00
4	5	77.31*	757	374	0.86	154.63	143	15	1.05E-01	5.4	
5	4	84.45*	129	387	1.18	168.90	166	24	1.79E-02	24.6	1.37E+00
6	4	87.34*	341	532	1.12	174.67	166	24	4.74E-02	12.5	
7	4	90.11	184	372	0.89	180.21	166	24	2.56E-02	17.4	
8	4	93.03*	335	584	1.28	186.05	166	24	4.66E-02	14.4	
9	0	186.10*	303	693	0.94	372.20	366	12	4.21E-02	18.7	
10	0	209.30	157	598	0.81	418.59	413	11	2.18E-02	31.2	
11	4	238.73*	1492	238	0.99	477.47	471	19	2.07E-01	3.1	1.72E+00
12	4	241.82	415	413	1.94	483.65	471	19	5.77E-02	13.1	
13	0	270.34	206	297	1.19	540.67	537	10	2.87E-02	17.0	
14	0	295.51*	398	351	1.10	591.02	585	10	5.53E-02	10.2	
15	0	300.31	116	297	1.06	600.62	596	9	1.61E-02	28.4	
16	0	327.92	109	364	1.28	655.85	652	11	1.52E-02	35.0	
17	0	338.67	262	349	1.11	677.33	671	11	3.64E-02	15.1	
18	0	351.74*	854	303	1.12	703.48	696	13	1.19E-01	5.5	
19	0	463.02	81	310	1.30	926.03	922	11	1.13E-02	43.4	
20	0	510.77*	190	237	2.22	1021.54	1015	13	2.64E-02	19.8	
21	0	583.11*	442	132	1.34	1166.22	1161	11	6.14E-02	7.0	
22	0	609.44*	537	124	1.34	1218.88	1211	16	7.45E-02	6.5	
23	0	661.58	3977	151	1.39	1323.17	1316	13	5.52E-01	1.7	
24	0	727.34	111	88	1.25	1454.68	1449	13	1.54E-02	19.8	
25	0	767.88	71	65	1.08	1535.76	1531	9	9.84E-03	23.7	
26	0	794.81	70	89	1.04	1589.61	1583	16	9.74E-03	31.7	
27	0	861.69	34	77	4.10	1723.37	1720	10	4.67E-03	56.5	
28	0	911.11*	329	56	1.61	1822.21	1817	13	4.57E-02	7.5	
29	2	964.44	77	70	2.34	1928.87	1923	21	1.07E-02	22.5	1.92E+00
30	2	968.86*	191	41	1.70	1937.71	1923	21	2.65E-02	10.0	
31	0	1120.09*	131	79	1.99	2240.18	2233	15	1.81E-02	17.8	
32	0	1460.32*	1633	20	1.97	2920.65	2913	16	2.27E-01	2.6	
33	0	1508.95	35	10	2.39	3017.91	3009	19	4.90E-03	26.9	
34	0	1587.53*	32	12	0.91	3175.05	3170	10	4.47E-03	27.9	
35	0	1729.30	35	3	2.51	3458.60	3452	14	4.84E-03	20.3	
36	0	1763.71*	92	7	2.03	3527.42	3519	14	1.27E-02	12.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 12:58:40

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511006.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:58:06
Sample ID : G232511006 Sample quantity : 147.27 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.84 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.175E+01	3.131E+00	4.959E-01	4.174E-02	64.034
CD-109	+	88.03	*	3.810E+00	1.004E+00	1.280E+00	1.104E-01	2.975
SN-126	+	64.28		6.325E-01	6.435E-01	1.025E+00	1.484E-01	0.617
	+	86.94		1.562E+00	7.540E-01	5.313E-01	2.197E-01	2.939
	+	87.57	*	3.757E-01	9.900E-02	1.269E-01	1.090E-02	2.960
BA-137M	+	661.65	*	4.472E+00	3.125E-01	6.380E-02	3.888E-03	70.099
CS-137	+	661.65	*	4.727E+00	3.313E-01	6.744E-02	4.126E-03	70.099
TL-208		277.35		3.809E-01	4.372E-01	6.954E-01	7.256E-02	0.548
	+	510.84		7.175E-01	2.937E-01	2.451E-01	2.498E-02	2.928
	+	583.14	*	4.770E-01	7.476E-02	6.078E-02	4.186E-03	7.849
	+	860.37		3.460E-01	3.926E-01	4.500E-01	4.298E-02	0.769
BI-211		72.87		6.744E+00	3.600E+00	5.571E+00	4.227E-01	1.211
	+	351.07	*	4.037E+00	5.112E-01	3.560E-01	2.211E-02	11.338
PB-212	+	74.81		3.036E+00	5.681E-01	5.544E-01	6.707E-02	5.476
	+	77.11		2.011E+00	2.691E-01	3.066E-01	2.395E-02	6.558
	+	87.30		1.737E+00	4.897E-01	5.887E-01	7.751E-02	2.951
	+	238.63	*	1.556E+00	1.464E-01	9.753E-02	6.880E-03	15.953
	+	300.09		1.849E+00	1.062E+00	1.317E+00	1.068E-01	1.403
PO-212	+	74.81		3.036E+00	5.681E-01	5.544E-01	6.707E-02	5.476
	+	77.11		2.011E+00	2.691E-01	3.066E-01	2.395E-02	6.558
	+	87.30		1.737E+00	4.897E-01	5.887E-01	7.751E-02	2.951
		115.19		1.845E+00	3.819E+00	6.380E+00	4.082E-01	0.289
	+	238.63	*	1.556E+00	1.464E-01	9.753E-02	6.880E-03	15.953
	+	300.09		1.849E+00	1.062E+00	1.317E+00	1.068E-01	1.403
BI-214	+	609.31	*	1.092E+00	1.665E-01	1.059E-01	8.451E-03	10.313
	+	768.36		1.621E+00	7.857E-01	1.054E+00	1.013E-01	1.539
		934.06		7.889E-01	1.045E+00	1.830E+00	2.032E-01	0.431
	+	1120.29		1.418E+00	5.216E-01	4.262E-01	3.968E-02	3.327
		1238.11		1.966E+00	9.663E-01	1.750E+00	1.545E-01	1.124
		1377.67		5.673E-01	8.926E-01	1.545E+00	1.632E-01	0.367
	+	1764.49		1.376E+00	3.573E-01	2.033E-01	1.286E-02	6.768
PB-214	+	74.81		5.231E+00	9.324E-01	9.552E-01	1.019E-01	5.476
	+	77.11		3.447E+00	5.309E-01	5.256E-01	5.735E-02	6.558
	+	87.30		2.976E+00	8.173E-01	1.008E+00	1.162E-01	2.951

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.601E+00	7.094E-01	5.868E-01	4.593E-02	4.432
	+	295.21		1.118E+00	2.467E-01	2.242E-01	1.881E-02	4.986
	+	351.92	*	1.404E+00	1.923E-01	1.310E-01	1.063E-02	10.716
PO-214	+	74.81		5.231E+00	9.324E-01	9.552E-01	1.019E-01	5.476
	+	77.11		3.447E+00	5.309E-01	5.256E-01	5.735E-02	6.558
	+	87.30		2.976E+00	8.173E-01	1.008E+00	1.162E-01	2.951
	+	241.98		2.601E+00	7.094E-01	5.868E-01	4.593E-02	4.432
	+	295.21		1.118E+00	2.467E-01	2.242E-01	1.881E-02	4.986
	+	351.92	*	1.404E+00	1.923E-01	1.310E-01	1.063E-02	10.716
PO-216	+	74.81		3.036E+00	5.681E-01	5.544E-01	6.707E-02	5.476
	+	77.11		2.011E+00	2.691E-01	3.066E-01	2.395E-02	6.558
	+	87.30		1.737E+00	4.897E-01	5.887E-01	7.751E-02	2.951
	+	238.63	*	1.556E+00	1.464E-01	9.753E-02	6.880E-03	15.953
	+	300.09		1.849E+00	1.062E+00	1.317E+00	1.068E-01	1.403
PO-218	+	74.81		5.231E+00	9.324E-01	9.552E-01	1.019E-01	5.476
	+	77.11		3.447E+00	5.309E-01	5.256E-01	5.735E-02	6.558
	+	87.30		2.976E+00	8.173E-01	1.008E+00	1.162E-01	2.951
	+	241.98		2.601E+00	7.094E-01	5.868E-01	4.593E-02	4.432
	+	295.21		1.118E+00	2.467E-01	2.242E-01	1.881E-02	4.986
	+	351.92	*	1.404E+00	1.923E-01	1.310E-01	1.063E-02	10.716
RA-224	+	240.98	*	4.931E+00	1.316E+00	1.109E+00	6.052E-02	4.446
RA-226	+	609.31	*	1.092E+00	1.665E-01	1.059E-01	8.451E-03	10.313
	+	768.36		1.621E+00	7.857E-01	1.054E+00	1.013E-01	1.539
		934.06		7.889E-01	1.045E+00	1.830E+00	2.032E-01	0.431
	+	1120.29		1.418E+00	5.216E-01	4.262E-01	3.968E-02	3.327
		1238.11		1.966E+00	9.663E-01	1.750E+00	1.545E-01	1.124
		1377.67		5.673E-01	8.926E-01	1.545E+00	1.632E-01	0.367
	+	1764.49		1.376E+00	3.573E-01	2.033E-01	1.286E-02	6.768
AC-228	+	338.32		1.368E+00	6.940E-01	4.229E-01	1.723E-01	3.236
	+	911.07	*	1.605E+00	3.072E-01	1.856E-01	2.203E-02	8.646
	+	969.11		1.643E+00	5.066E-01	3.098E-01	7.250E-02	5.303
RA-228	+	338.32		1.368E+00	6.940E-01	4.229E-01	1.723E-01	3.236
	+	911.07	*	1.605E+00	3.072E-01	1.856E-01	2.203E-02	8.646
	+	969.11		1.643E+00	5.066E-01	3.098E-01	7.250E-02	5.303
TH-228	+	84.40		4.508E+00	2.294E+00	4.182E+00	5.414E-01	1.078
	+	238.60	*	1.556E+00	1.464E-01	9.752E-02	6.879E-03	15.955
	+	300.10		1.849E+00	1.514E+00	1.318E+00	7.763E-01	1.403
TH-230	+	609.31	*	1.092E+00	1.665E-01	1.059E-01	8.451E-03	10.313
	+	768.36		1.621E+00	7.857E-01	1.053E+00	1.013E-01	1.539
		934.06		7.889E-01	1.045E+00	1.830E+00	2.032E-01	0.431
	+	1120.29		1.418E+00	5.216E-01	4.262E-01	3.968E-02	3.327
		1238.11		1.966E+00	9.663E-01	1.750E+00	1.545E-01	1.124
		1377.67		5.673E-01	8.925E-01	1.545E+00	1.632E-01	0.367
	+	1764.49		1.376E+00	3.573E-01	2.033E-01	1.286E-02	6.768
TH-232	+	338.32		1.368E+00	4.205E-01	4.229E-01	2.359E-02	3.236
	+	911.07	*	1.605E+00	3.072E-01	1.856E-01	2.203E-02	8.646
	+	969.11		1.643E+00	5.066E-01	3.098E-01	7.250E-02	5.303
TH-234	+	63.29	*	1.598E+00	1.633E+00	2.219E+00	3.858E-01	0.720
	+	92.38		2.385E+00	8.057E-01	8.288E-01	1.477E-01	2.878

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.092E+00	1.665E-01	1.059E-01	8.451E-03	10.313
	+	768.36		1.621E+00	7.857E-01	1.053E+00	1.013E-01	1.539
		934.06		7.889E-01	1.045E+00	1.830E+00	2.032E-01	0.431
	+	1120.29		1.418E+00	5.216E-01	4.262E-01	3.968E-02	3.327
		1238.11		1.966E+00	9.663E-01	1.750E+00	1.545E-01	1.124
		1377.67		5.673E-01	8.925E-01	1.545E+00	1.632E-01	0.367
	+	1764.49		1.376E+00	3.573E-01	2.033E-01	1.286E-02	6.768
NP-237	+	86.50	*	1.103E+00	3.692E-01	3.772E-01	8.418E-02	2.924
		95.87		9.644E-01	1.118E+00	1.647E+00	4.007E-01	0.585
U-238	+	63.29	*	1.598E+00	1.633E+00	2.219E+00	3.858E-01	0.720
	+	92.38		2.385E+00	7.109E-01	8.288E-01	6.683E-02	2.878
AM-241	+	59.54	*	8.931E+00	8.424E-01	3.724E-01	2.966E-02	23.980
AM-243	+	74.67	*	4.922E-01	7.980E-02	9.017E-02	6.921E-03	5.458
	+	86.72		4.137E+01	1.090E+01	1.411E+01	1.201E+00	2.932
		117.66		-2.106E+00	4.071E+00	6.592E+00	4.143E-01	-0.320
		142.18		2.878E+00	1.872E+01	3.078E+01	1.712E+00	0.094
ANH-511	+	511.00	*	1.550E-01	6.212E-02	5.295E-02	3.110E-03	2.927

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.419E-01	3.867E-01	6.180E-01	4.155E-02	-0.391
NA-22		1274.54	*	-3.792E-02	3.854E-02	5.609E-02	4.169E-03	-0.676
NA-24		1368.53	*	3.327E-02	3.854E-02	Half-Life too short		
AL-26		1129.67		3.491E-01	1.728E+00	2.821E+00	1.798E-01	0.124
		1808.65	*	1.983E-02	2.348E-02	4.489E-02	2.680E-03	0.442
TI-44		67.85		1.651E-02	5.827E-02	8.074E-02	5.972E-03	0.204
	+	78.38	*	3.710E-01	4.966E-02	8.138E-02	6.420E-03	4.559
SC-46		889.25	*	-5.575E-03	3.550E-02	5.841E-02	5.490E-03	-0.095
	+	1120.51		2.384E-01	8.628E-02	1.213E-01	7.930E-03	1.966
V-48		944.10		-5.247E-01	7.891E-01	1.171E+00	1.063E-01	-0.448
		983.50	*	1.830E-02	5.981E-02	1.015E-01	8.751E-03	0.180
		1312.09		-2.901E-03	7.027E-02	1.138E-01	9.295E-03	-0.025
CR-51		320.08	*	2.504E-01	4.040E-01	6.838E-01	4.297E-02	0.366
MN-52		744.21		2.503E-02	1.518E-01	2.477E-01	1.784E-02	0.101
		848.13		-3.125E+00	4.661E+00	7.361E+00	6.437E-01	-0.425
		935.52		1.273E-01	1.807E-01	3.156E-01	2.895E-02	0.403
		1246.25		6.834E-01	5.483E+00	9.038E+00	6.215E-01	0.076
		1333.61		-1.576E+00	3.301E+00	5.041E+00	4.324E-01	-0.313
		1434.06	*	-5.478E-02	1.479E-01	2.255E-01	1.865E-02	-0.243
MN-54		834.83	*	-1.696E-02	3.338E-02	5.368E-02	4.584E-03	-0.316
CO-56		846.75	*	-3.889E-02	3.445E-02	5.201E-02	4.537E-03	-0.748
		977.42		6.051E-02	2.673E+00	4.341E+00	3.775E-01	0.014
		1037.82		-2.285E-01	2.699E-01	4.095E-01	3.434E-02	-0.558
		1175.09		2.533E-01	2.323E+00	3.765E+00	2.098E-01	0.067
		1238.25		1.873E-01	9.569E-02	1.736E-01	1.222E-02	1.079
		1360.21		-7.496E-02	8.412E-01	1.349E+00	1.148E-01	-0.056
		1771.40		-4.844E-01	2.453E-01	2.719E-01	1.705E-02	-1.781

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	8.848E-04	2.732E-02	4.498E-02	2.751E-03	0.020
		136.48		3.692E-03	2.226E-01	3.650E-01	2.421E-02	0.010
CO-58		810.76	*	-1.386E-02	3.464E-02	5.624E-02	4.609E-03	-0.246
FE-59		142.65		3.693E-01	2.829E+00	4.615E+00	2.563E-01	0.080
		192.34		1.380E-01	1.087E+00	1.635E+00	1.885E-01	0.084
		1099.22	*	-4.480E-02	8.285E-02	1.298E-01	1.008E-02	-0.345
		1291.56		1.285E-01	1.101E-01	1.981E-01	1.790E-02	0.648
CO-60		1173.22		1.228E-02	4.531E-02	7.426E-02	4.113E-03	0.165
		1332.49	*	-2.298E-02	3.275E-02	4.828E-02	4.143E-03	-0.476
ZN-65		1115.52	*	-1.407E-01	1.074E-01	1.278E-01	8.489E-03	-1.101
GE-68		1077.35	*	3.526E-01	1.213E+00	2.044E+00	1.488E-01	0.172
AS-73		53.44	*	2.828E-01	1.371E+00	2.151E+00	1.589E-01	0.131
AS-74		595.88	*	4.219E-02	8.826E-02	1.477E-01	8.936E-03	0.286
		634.78		-2.699E-01	3.281E-01	5.011E-01	3.050E-02	-0.539
SE-75		66.05		-1.370E+00	5.657E+00	8.214E+00	7.732E-01	-0.167
		96.73		5.974E-01	8.733E-01	1.302E+00	1.694E-01	0.459
		121.11		6.526E-02	1.449E-01	2.415E-01	2.282E-02	0.270
		136.00		2.510E-02	4.146E-02	6.919E-02	4.012E-03	0.363
		198.60		1.651E-01	1.994E+00	3.233E+00	2.158E-01	0.051
		264.65	*	-1.406E-02	5.176E-02	7.520E-02	4.213E-03	-0.187
		279.53		4.928E-02	1.173E-01	1.988E-01	1.205E-02	0.248
		303.91		4.823E-04	2.464E+00	3.607E+00	3.399E-01	0.000
		400.65		-3.181E-01	2.937E-01	4.629E-01	4.111E-02	-0.687
BR-77	+	87.88		4.398E+02	1.159E+02	1.839E+02	1.584E+01	2.392
		200.40		4.994E+01	9.785E+01	1.608E+02	8.439E+00	0.311
	+	239.00		1.331E+02	1.101E+01	1.836E+01	9.999E-01	7.250
		249.79		-1.615E+01	3.982E+01	6.276E+01	3.446E+00	-0.257
		281.68		-7.355E+01	5.272E+01	8.420E+01	4.697E+00	-0.873
		297.23		1.842E+02	5.490E+01	6.865E+01	3.844E+00	2.684
		303.76		5.588E+00	1.134E+02	1.665E+02	9.328E+00	0.034
		439.47		9.016E+01	9.684E+01	1.660E+02	9.330E+00	0.543
		484.57		3.497E+01	1.467E+02	2.441E+02	1.414E+01	0.143
		520.65	*	1.378E-01	6.017E+00	9.877E+00	5.828E-01	0.014
		574.64		-6.504E+01	1.131E+02	1.778E+02	1.070E+01	-0.366
		578.91		-4.468E-01	5.357E+01	7.544E+01	4.545E+00	-0.006
		585.48		8.249E+02	1.389E+02	2.497E+02	1.507E+01	3.303
		755.35		-4.413E+00	8.034E+01	1.285E+02	9.458E+00	-0.034
		817.79		1.300E+01	6.108E+01	1.039E+02	8.605E+00	0.125
SR-82		698.33		1.256E+01	2.961E+01	4.924E+01	3.237E+00	0.255
		776.49	*	-2.184E-01	3.139E-01	4.988E-01	3.824E-02	-0.438
		1395.20		-1.596E+00	1.033E+01	1.643E+01	1.381E+00	-0.097
RB-83		520.41	*	5.513E-03	7.360E-02	1.212E-01	7.149E-03	0.045
		529.64		5.492E-02	1.107E-01	1.863E-01	1.104E-02	0.295
		552.65		1.047E-01	1.949E-01	3.288E-01	1.965E-02	0.318
RB-84		881.50	*	4.052E-02	6.133E-02	1.072E-01	9.943E-03	0.378
KR-85		513.99	*	1.923E+01	8.810E+00	1.426E+01	8.386E-01	1.349
SR-85		513.99	*	9.636E-02	4.416E-02	7.145E-02	4.203E-03	1.349
RB-86		1076.63	*	-1.234E-01	7.240E-01	1.176E+00	8.573E-02	-0.105
Y-88		898.02		-1.996E-02	3.642E-02	5.780E-02	5.536E-03	-0.345

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	1.920E-02	2.424E-02	4.634E-02	2.668E-03	0.414
ZR-88		392.90	*	-3.166E-02	3.465E-02	5.526E-02	2.986E-03	-0.573
Y-91		1204.90	*	-2.174E+01	1.880E+01	2.791E+01	1.705E+00	-0.779
NB-94		702.63	*	-3.197E-03	3.167E-02	5.071E-02	3.363E-03	-0.063
		871.10		1.565E-03	3.030E-02	5.075E-02	4.622E-03	0.031
NB-95		765.79	*	6.992E-02	4.755E-02	7.459E-02	5.603E-03	0.937
NB-95M		235.69	*	1.280E-01	1.473E-01	2.149E-01	1.558E-02	0.596
ZR-95		724.18		7.092E-02	9.637E-02	1.438E-01	1.126E-02	0.493
		756.15	*	-1.598E-02	6.341E-02	9.971E-02	8.354E-03	-0.160
NB-97		657.90	*	8.022E-02	6.341E-02	Half-Life too short		
		1024.50		-4.382E-01	6.341E-02	Half-Life too short		
ZR-97		254.15		3.103E-03	6.341E-02	Half-Life too short		
		355.39		2.216E-01	6.341E-02	Half-Life too short		
		507.63	*	5.197E-01	6.341E-02	Half-Life too short		
		602.52		5.135E-01	6.341E-02	Half-Life too short		
		1021.30		1.317E-02	6.341E-02	Half-Life too short		
		1147.95		-2.862E-01	6.341E-02	Half-Life too short		
		1362.66		-9.103E-01	6.341E-02	Half-Life too short		
		1750.46		-5.113E-01	6.341E-02	Half-Life too short		
MO-99		140.51		-1.359E+01	1.675E+01	2.578E+01	6.937E+00	-0.527
		181.06		5.314E+00	1.221E+01	1.762E+01	2.983E+00	0.302
		366.43		-1.190E+01	5.447E+01	8.997E+01	4.953E+00	-0.132
		739.58	*	2.296E+00	5.504E+00	9.169E+00	1.320E+00	0.250
		778.00		-1.691E+01	1.695E+01	2.617E+01	2.012E+00	-0.646
TC-99M		140.51	*	-8.708E+07	1.695E+01	Half-Life too short		
RH-101		127.23		-2.725E-02	3.443E-02	5.511E-02	3.275E-03	-0.494
		198.01	*	1.962E-02	3.649E-02	6.004E-02	3.143E-03	0.327
		325.23		-5.782E-03	2.798E-01	4.076E-01	2.281E-02	-0.014
RH-102		418.52		-1.128E-01	3.423E-01	5.593E-01	3.092E-02	-0.202
		475.06	*	8.667E-03	3.689E-02	6.139E-02	3.535E-03	0.141
		631.29		7.653E-02	5.368E-02	9.495E-02	5.777E-03	0.806
		697.49		2.653E-02	7.029E-02	1.165E-01	7.649E-03	0.228
	+	766.84		2.424E-01	1.166E-01	1.971E-01	1.484E-02	1.230
		1046.59		-1.548E-01	1.149E-01	1.664E-01	1.290E-02	-0.930
		1112.84		3.454E-02	2.611E-01	3.739E-01	2.496E-02	0.092
RU-103		497.08	*	-2.778E-02	4.596E-02	7.303E-02	9.245E-03	-0.380
	+	610.33		1.135E+01	2.298E+00	2.447E+00	3.798E-01	4.640
RH-106	+	511.85		7.709E-01	3.090E-01	4.257E-01	2.502E-02	1.811
		621.84	*	3.310E-01	3.084E-01	5.326E-01	6.325E-02	0.621
		1050.47		2.146E+00	2.179E+00	3.867E+00	2.977E-01	0.555
RU-106	+	511.85		7.709E-01	3.090E-01	4.257E-01	2.502E-02	1.811
		621.84	*	3.310E-01	3.066E-01	5.326E-01	3.236E-02	0.621
		1050.47		2.146E+00	2.179E+00	3.867E+00	2.977E-01	0.555
AG-108M		433.93	*	-2.475E-02	3.998E-02	6.431E-02	3.930E-03	-0.385
		614.37		1.853E-03	3.766E-02	5.314E-02	3.476E-03	0.035
		722.95		-2.679E-02	4.332E-02	5.576E-02	4.085E-03	-0.480
AG-110M		657.75	*	1.608E-01	4.671E-02	8.063E-02	5.202E-03	1.994
		677.61		-1.368E-01	2.771E-01	4.214E-01	2.794E-02	-0.325
		706.67		-2.814E-02	1.914E-01	3.052E-01	2.133E-02	-0.092

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		4.986E-02	1.800E-01	2.562E-01	1.989E-02	0.195
		884.67		-1.579E-03	4.572E-02	7.599E-02	7.281E-03	-0.021
		937.48		-3.952E-02	1.019E-01	1.639E-01	1.548E-02	-0.241
		1384.27		-4.260E-02	1.432E-01	2.232E-01	1.939E-02	-0.191
IN-111		171.28		-8.066E-01	6.552E-01	1.020E+00	5.180E-02	-0.791
		245.39	*	9.676E-03	7.560E-01	1.058E+00	5.791E-02	0.009
IN-113M		391.69	*	-6.810E-02	5.104E-02	7.976E-02	4.636E-03	-0.854
SN-113		391.69	*	-6.810E-02	5.104E-02	7.976E-02	4.636E-03	-0.854
IN-114M		190.27	*	7.949E-02	2.177E-01	3.135E-01	1.627E-02	0.254
CD-115		260.90		8.807E+00	7.379E+01	1.186E+02	6.555E+00	0.074
		492.35		7.533E+00	2.157E+01	3.606E+01	2.098E+00	0.209
		527.90	*	2.914E+00	5.929E+00	9.975E+00	5.905E-01	0.292
SN-117M		156.02		3.892E-01	2.161E+00	3.546E+00	1.866E-01	0.110
		158.56	*	1.157E-02	5.344E-02	8.773E-02	4.569E-03	0.132
SB-122		563.90	*	-1.383E-01	1.181E+00	1.914E+00	1.148E-01	-0.072
		692.80		-2.291E+01	2.260E+01	3.348E+01	2.176E+00	-0.684
I-123		159.00	*	1.447E-01	2.260E+01	Half-Life too short		
		528.96		1.392E+01	2.260E+01	Half-Life too short		
TE-123M		159.00	*	1.089E-02	3.042E-02	5.015E-02	2.651E-03	0.217
I-124		602.71	*	1.931E-01	5.425E-01	7.857E-01	4.760E-02	0.246
		722.78		-1.923E+00	3.164E+00	4.080E+00	2.818E-01	-0.471
		1325.50		3.716E+01	2.250E+01	4.238E+01	3.576E+00	0.877
		1376.25		1.491E+01	1.955E+01	3.427E+01	2.900E+00	0.435
	+	1509.49		2.231E+01	1.213E+01	1.834E+01	1.457E+00	1.216
		1691.02		2.948E-01	2.344E+00	3.974E+00	2.730E-01	0.074
SB-124		602.71		1.566E-02	4.400E-02	6.373E-02	3.862E-03	0.246
		645.85		-5.768E-01	4.923E-01	7.288E-01	4.958E-02	-0.791
		709.31		-2.948E-01	2.492E+00	3.981E+00	2.676E-01	-0.074
		713.82		-9.400E-03	1.500E+00	2.417E+00	2.610E-01	-0.004
		722.78		-2.261E-01	3.721E-01	4.797E-01	3.424E-02	-0.471
	+	968.20		1.650E+01	3.617E+00	6.459E+00	5.689E-01	2.554
		1045.16		-1.386E+00	2.372E+00	3.708E+00	2.884E-01	-0.374
		1325.50		4.667E+00	2.826E+00	5.322E+00	4.491E-01	0.877
		1368.21		9.401E-01	1.515E+00	2.635E+00	3.528E-01	0.357
		1436.60		1.439E+00	2.853E+00	4.959E+00	4.095E-01	0.290
		1691.02	*	8.176E-03	6.502E-02	1.102E-01	8.039E-03	0.074
SB-125		427.89	*	-2.693E-02	1.091E-01	1.787E-01	1.041E-02	-0.151
	+	463.38		5.960E-01	5.183E-01	6.456E-01	4.320E-02	0.923
		600.56		-7.008E-04	1.907E-01	3.018E-01	2.092E-02	-0.002
		635.90		-2.886E-01	2.704E-01	4.042E-01	2.845E-02	-0.714
TE-125M		109.28	*	-5.657E+00	9.633E+00	1.559E+01	1.370E+00	-0.363
I-126		388.63		2.542E-01	2.140E-01	3.719E-01	2.013E-02	0.683
		666.33	*	-7.379E-03	1.882E-01	2.617E-01	1.611E-02	-0.028
		753.82		5.386E-01	1.174E+00	1.956E+00	1.435E-01	0.275
SB-126		223.80		5.931E-01	4.034E+00	6.527E+00	3.509E-01	0.091
		278.60		-1.509E-01	2.410E+00	4.019E+00	2.240E-01	-0.038
	+	296.50		9.863E+00	2.087E+00	3.124E+00	1.749E-01	3.157
		414.70		-2.965E-02	8.024E-02	1.310E-01	7.216E-03	-0.226
		415.30		-2.584E+00	6.629E+00	1.081E+01	5.958E-01	-0.239

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		-5.360E-01	3.662E+00	5.872E+00	3.513E-01	-0.091
		573.80		-1.328E-01	9.561E-01	1.547E+00	9.306E-02	-0.086
		593.00		-2.958E-01	8.408E-01	1.338E+00	8.092E-02	-0.221
		656.30		6.182E-01	3.544E+00	5.033E+00	3.067E-01	0.123
		666.33		-3.068E-03	7.826E-02	1.088E-01	6.697E-03	-0.028
		675.00		-2.947E-01	1.624E+00	2.540E+00	1.592E-01	-0.116
		695.00		1.902E-02	6.521E-02	1.027E-01	6.707E-03	0.185
		697.00		-1.549E-02	2.175E-01	3.492E-01	2.290E-02	-0.044
		720.50	*	-8.078E-02	1.333E-01	1.822E-01	1.253E-02	-0.443
		856.80		-4.196E-01	4.867E-01	6.355E-01	5.643E-02	-0.660
		989.30		-3.141E-02	9.957E-01	1.644E+00	1.405E-01	-0.019
		1034.80		5.628E-01	6.805E+00	1.132E+01	8.978E-01	0.050
		1213.00		-5.985E-01	4.353E+00	7.046E+00	4.407E-01	-0.085
SB-127	+	61.10		2.344E+03	2.511E+02	1.770E+02	1.675E+01	13.243
		252.40		1.546E+00	3.348E+00	5.362E+00	2.217E+00	0.288
		290.80		-4.219E-01	1.771E+01	2.595E+01	2.143E+00	-0.016
		411.60		1.196E+01	1.001E+01	1.716E+01	2.365E+00	0.697
		444.90		-1.112E+00	8.512E+00	1.399E+01	1.408E+00	-0.080
		473.00		1.498E+00	1.453E+00	2.485E+00	2.618E-01	0.603
		543.00		-1.422E-01	1.186E+01	1.940E+01	2.415E+00	-0.007
		603.60		-1.471E-01	9.120E+00	1.280E+01	1.315E+00	-0.011
		685.20	*	1.062E-03	8.328E-01	1.346E+00	1.225E-01	0.001
		698.50		4.660E+00	9.505E+00	1.584E+01	2.273E+00	0.294
		722.20		-1.342E+01	2.126E+01	2.733E+01	2.512E+00	-0.491
		783.80		3.164E+00	2.242E+00	4.064E+00	4.580E-01	0.778
XE-127		57.60		8.252E+01	1.304E+01	1.992E+01	1.450E+00	4.142
		145.22		7.765E-01	7.150E-01	1.206E+00	6.626E-02	0.644
		172.10		-3.590E-02	1.246E-01	2.006E-01	1.020E-02	-0.179
		202.84	*	-4.439E-03	5.495E-02	8.173E-02	4.301E-03	-0.054
		374.96		1.910E-01	2.199E-01	3.785E-01	2.072E-02	0.505
I-131		80.18		9.237E-01	5.730E+00	6.145E+00	4.947E-01	0.150
		284.30		7.445E-01	1.326E+00	2.278E+00	1.420E-01	0.327
		364.48	*	-1.591E-02	1.068E-01	1.769E-01	1.097E-02	-0.090
		636.97		-1.219E+00	1.298E+00	1.964E+00	1.322E-01	-0.621
		722.89		-3.723E+00	6.057E+00	7.802E+00	5.429E-01	-0.477
TE-132		49.72		-1.770E+01	1.862E+01	3.055E+01	2.831E+00	-0.579
		111.76		-3.101E+00	2.013E+01	3.305E+01	2.865E+00	-0.094
		116.30		-4.145E+00	1.873E+01	3.064E+01	2.605E+00	-0.135
		228.16	*	-3.646E-01	4.939E-01	7.687E-01	1.060E-01	-0.474
BA-133		53.15		1.438E-01	5.825E+00	9.478E+00	7.004E-01	0.015
		79.62		6.969E-01	1.742E+00	2.195E+00	3.263E-01	0.317
		81.00		9.003E-02	1.454E-01	1.601E-01	2.494E-02	0.562
		276.40		5.924E-01	4.725E-01	6.939E-01	8.925E-02	0.854
		302.84		1.671E-01	1.718E-01	2.631E-01	3.041E-02	0.635
		356.01	*	-1.389E-03	5.553E-02	8.049E-02	9.200E-03	-0.017
		383.85		-3.107E-01	3.500E-01	5.581E-01	5.962E-02	-0.557
I-133	+	510.53		2.802E-01	3.500E-01	Half-Life too short		
		529.87	*	3.713E-04	3.500E-01	Half-Life too short		
		706.58		-8.673E-03	3.500E-01	Half-Life too short		

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		856.28		2.194E-02	3.500E-01	Half-Life too short		
		875.33		1.011E-02	3.500E-01	Half-Life too short		
		1236.41		2.174E-01	3.500E-01	Half-Life too short		
		1298.22		-1.625E-02	3.500E-01	Half-Life too short		
CS-134		475.35		2.084E-01	2.418E+00	3.997E+00	2.302E-01	0.052
		563.23		-2.274E-01	3.545E-01	5.550E-01	3.394E-02	-0.410
		569.32		1.590E-01	1.949E-01	3.333E-01	2.058E-02	0.477
		604.70		-1.984E-02	3.967E-02	5.329E-02	3.246E-03	-0.372
	+	795.84	*	1.099E-01	7.031E-02	8.183E-02	6.561E-03	1.343
		801.93		-4.847E-01	4.270E-01	5.439E-01	4.401E-02	-0.891
		1038.57		-3.385E-01	3.533E+00	5.784E+00	4.555E-01	-0.059
		1167.94		-5.100E-01	2.330E+00	3.747E+00	2.115E-01	-0.136
		1365.15		-1.306E-02	1.051E+00	1.702E+00	1.514E-01	-0.008
CS-135		268.24	*	1.854E-01	1.972E-01	2.882E-01	2.153E-02	0.643
I-135		288.45		-1.409E+08	1.972E-01	Half-Life too short		
		417.63		1.350E+07	1.972E-01	Half-Life too short		
		546.56		1.565E+07	1.972E-01	Half-Life too short		
		836.80		-2.808E+07	1.972E-01	Half-Life too short		
		1038.76		1.848E+05	1.972E-01	Half-Life too short		
		1124.00		1.001E+08	1.972E-01	Half-Life too short		
		1131.51		1.607E+07	1.972E-01	Half-Life too short		
		1260.41	*	1.973E+07	1.972E-01	Half-Life too short		
		1457.56		4.489E+09	1.972E-01	Half-Life too short		
		1678.03		2.448E+07	1.972E-01	Half-Life too short		
		1706.46		1.329E+07	1.972E-01	Half-Life too short		
		1791.20		-3.001E+07	1.972E-01	Half-Life too short		
CS-136		66.91		-2.358E-01	8.280E-01	1.199E+00	1.772E-01	-0.197
	+	86.29		4.375E+00	1.226E+00	1.897E+00	2.419E-01	2.307
		153.22		4.471E-01	6.239E-01	1.040E+00	7.118E-02	0.430
		163.89		-4.920E-01	1.049E+00	1.664E+00	1.115E-01	-0.296
		176.55		1.732E-01	3.486E-01	5.755E-01	3.400E-02	0.301
		273.65		-3.940E-01	5.321E-01	7.089E-01	4.540E-02	-0.556
		340.57		4.650E-01	1.494E-01	2.461E-01	1.465E-02	1.889
		818.51		1.220E-02	5.635E-02	9.594E-02	7.959E-03	0.127
		1048.07	*	-8.486E-03	9.296E-02	1.522E-01	1.239E-02	-0.056
		1235.34		5.470E-01	5.896E-01	1.013E+00	1.065E-01	0.540
CE-139		165.85	*	1.800E-03	3.186E-02	5.197E-02	2.629E-03	0.035
BA-140		162.64		3.247E-01	7.297E-01	1.193E+00	7.071E-02	0.272
		304.84		-8.398E-01	1.410E+00	1.968E+00	5.363E-01	-0.427
		423.70		1.689E+00	2.061E+00	3.415E+00	1.084E+00	0.495
		537.32	*	-6.821E-02	2.444E-01	3.920E-01	1.276E-01	-0.174
LA-140	+	328.77		6.259E-01	4.402E-01	5.453E-01	3.442E-02	1.148
		432.53		4.180E-01	2.167E+00	3.615E+00	2.248E-01	0.116
		487.03		1.974E-02	1.462E-01	2.421E-01	1.589E-02	0.082
		751.79		2.403E-01	1.364E+00	2.224E+00	1.863E-01	0.108
		815.85		-1.529E-01	2.514E-01	3.999E-01	3.712E-02	-0.382
		867.82		1.951E-01	1.221E+00	1.789E+00	1.698E-01	0.109
		919.63		-1.686E+00	2.406E+00	3.554E+00	3.992E-01	-0.474
		925.24		9.616E-01	9.072E-01	1.627E+00	1.592E-01	0.591

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1596.49	*	-1.311E-02	6.115E-02	9.674E-02	7.238E-03	-0.135
CE-141		145.44	*	6.370E-02	6.490E-02	1.091E-01	6.257E-03	0.584
CE-143		57.37		1.740E-03	6.490E-02	Half-Life too short		
		231.56		2.203E-04	6.490E-02	Half-Life too short		
		293.26	*	2.312E-04	6.490E-02	Half-Life too short		
	+	350.59		1.077E-02	6.490E-02	Half-Life too short		
		490.36		-3.252E-04	6.490E-02	Half-Life too short		
		664.57		1.692E-02	6.490E-02	Half-Life too short		
		721.93		-2.190E-04	6.490E-02	Half-Life too short		
CE-144		80.11		5.719E-01	3.163E+00	3.396E+00	2.718E-01	0.168
		133.54	*	-6.578E-02	2.241E-01	3.639E-01	5.163E-02	-0.181
PM-144		476.78		-3.178E-02	8.382E-02	1.356E-01	9.376E-03	-0.234
		618.01		1.168E-02	3.030E-02	4.926E-02	3.156E-03	0.237
		696.49	*	-1.868E-03	3.109E-02	4.995E-02	3.273E-03	-0.037
		778.57		-8.347E-01	1.943E+00	3.153E+00	2.427E-01	-0.265
PR-144		696.49	*	-1.264E-01	2.104E+00	3.381E+00	2.215E-01	-0.037
		1489.15		-6.756E+00	1.062E+01	1.541E+01	1.239E+00	-0.438
PM-146		453.90	*	1.452E-02	5.763E-02	9.608E-02	8.207E-03	0.151
		633.02		8.188E-01	1.394E+00	2.298E+00	8.473E-01	0.356
		735.90		2.312E-02	1.216E-01	1.936E-01	5.456E-02	0.119
		747.13		-3.023E-02	7.748E-02	1.200E-01	1.589E-02	-0.252
ND-147	+	91.11		5.900E-01	2.123E-01	4.620E-01	4.139E-02	1.277
		319.41		2.024E+00	3.275E+00	5.544E+00	3.107E-01	0.365
		439.89		5.309E+00	6.452E+00	1.102E+01	6.196E-01	0.482
		531.02	*	-7.989E-02	5.246E-01	8.517E-01	1.156E-01	-0.094
PM-149		285.90	*	1.139E+01	5.038E+01	8.553E+01	1.204E+01	0.133
EU-152		121.78		1.361E-02	8.006E-02	1.323E-01	1.039E-02	0.103
		244.69		2.996E-01	4.064E-01	5.906E-01	3.231E-02	0.507
		344.27	*	1.208E-01	1.315E-01	1.791E-01	1.134E-02	0.675
		443.98		-8.361E-01	1.234E+00	1.981E+00	1.117E-01	-0.422
		778.89		-6.140E-02	2.280E-01	3.749E-01	2.887E-02	-0.164
		867.32		1.001E-01	8.052E-01	1.176E+00	1.064E-01	0.085
	+	964.01		7.668E-01	3.518E-01	5.234E-01	4.635E-02	1.465
		1085.78		-3.469E-01	3.902E-01	5.928E-01	4.232E-02	-0.585
		1112.02		3.115E-01	3.524E-01	5.632E-01	3.768E-02	0.553
		1407.95		2.594E-01	1.700E-01	3.204E-01	2.679E-02	0.810
GD-153		69.67		-9.099E-01	1.927E+00	2.782E+00	2.075E-01	-0.327
	+	83.37		2.573E+01	1.284E+01	2.580E+01	2.126E+00	0.998
		97.43	*	-3.537E-03	9.109E-02	1.323E-01	9.986E-03	-0.027
		103.18		-7.324E-02	1.084E-01	1.752E-01	1.242E-02	-0.418
EU-154		123.07		1.906E-02	5.598E-02	9.296E-02	8.901E-03	0.205
		247.94		2.372E-03	4.544E-01	6.353E-01	5.941E-02	0.004
		591.81		-5.141E-01	6.308E-01	9.697E-01	9.621E-02	-0.530
		723.30		-6.341E-02	1.787E-01	2.378E-01	1.906E-02	-0.267
		756.87		3.783E-02	7.086E-01	1.143E+00	1.271E-01	0.033
		873.19		-1.293E-02	2.714E-01	4.510E-01	5.690E-02	-0.029
		996.32		8.567E-02	3.464E-01	5.840E-01	1.033E-01	0.147
		1004.76		-1.635E-01	2.042E-01	3.159E-01	3.614E-02	-0.517
		1274.45	*	-1.088E-01	1.078E-01	1.558E-01	1.625E-02	-0.699

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		48.70		-1.428E+00	3.649E+00	6.086E+00	4.415E-01	-0.235
	+	60.01		2.903E+02	2.560E+01	2.424E+01	1.754E+00	11.975
	+	86.54		4.521E-01	1.193E-01	1.925E-01	1.653E-02	2.348
		105.31	*	-1.014E-02	1.123E-01	1.849E-01	1.309E-02	-0.055
TB-160	+	86.79		1.184E+00	3.120E-01	4.967E-01	4.232E-02	2.384
		197.04		4.054E-01	6.038E-01	9.979E-01	5.218E-02	0.406
		215.65		3.966E-01	8.609E-01	1.362E+00	7.264E-02	0.291
		298.57		1.741E-01	2.006E-01	2.146E-01	1.202E-02	0.811
		879.36	*	-2.770E-02	1.315E-01	2.157E-01	1.993E-02	-0.128
		962.29		7.025E-01	5.696E-01	9.067E-01	8.049E-02	0.775
		966.15		1.194E+00	2.551E-01	4.829E-01	4.264E-02	2.473
		1177.93		2.247E-01	3.612E-01	6.186E-01	3.478E-02	0.363
		1271.85		-2.470E-01	5.879E-01	9.144E-01	6.739E-02	-0.270
HO-166M		80.57		3.014E-01	3.960E-01	4.416E-01	3.548E-02	0.682
		184.41		1.515E-01	4.592E-02	7.247E-02	3.735E-03	2.091
		280.46		-7.389E-02	9.357E-02	1.518E-01	8.463E-03	-0.487
		410.95		3.936E-01	2.928E-01	5.102E-01	2.802E-02	0.772
		711.68	*	-1.538E-02	5.654E-02	8.923E-02	6.027E-03	-0.172
		752.31		2.089E-01	2.421E-01	4.158E-01	3.043E-02	0.502
		810.29		-1.738E-02	5.386E-02	8.801E-02	7.187E-03	-0.198
TM-171		51.35		-5.123E+00	4.689E+01	7.867E+01	5.818E+00	-0.065
		52.39		1.186E+01	2.443E+01	4.147E+01	3.068E+00	0.286
	+	59.40		1.525E+03	1.345E+02	1.332E+02	9.629E+00	11.450
		66.72	*	-9.936E+00	3.366E+01	4.877E+01	3.592E+00	-0.204
LU-176	+	88.36		8.910E-01	2.348E-01	3.856E-01	3.307E-02	2.311
		201.83		-1.615E-02	3.216E-02	5.108E-02	2.685E-03	-0.316
		306.84	*	5.087E-03	2.679E-02	4.420E-02	2.477E-03	0.115
		401.10		-9.403E+00	7.697E+00	1.208E+01	6.575E-01	-0.779
LU-177		112.95		6.397E-01	1.393E+00	2.327E+00	1.514E-01	0.275
	+	208.36	*	2.334E+00	1.462E+00	1.707E+00	9.038E-02	1.367
LU-177M		52.97		-2.630E-01	2.618E+00	4.247E+00	3.140E-01	-0.062
		54.07		1.289E+00	1.489E+00	2.256E+00	1.663E-01	0.571
		61.30		6.467E+01	5.802E+00	6.193E+00	4.494E-01	10.443
		121.62		2.430E-01	4.017E-01	6.726E-01	4.115E-02	0.361
		147.16		-2.518E-01	7.019E-01	1.134E+00	6.185E-02	-0.222
		171.86		-1.454E-01	5.185E-01	8.350E-01	4.245E-02	-0.174
		218.09		6.262E-02	9.646E-01	1.558E+00	8.329E-02	0.040
		268.79		1.366E+00	1.005E+00	1.498E+00	8.314E-02	0.912
		319.02		2.067E-01	2.846E-01	4.899E-01	2.744E-02	0.422
		367.43		-6.992E-01	9.909E-01	1.600E+00	8.804E-02	-0.437
		413.65	*	-2.919E-01	2.138E-01	3.334E-01	1.835E-02	-0.876
HF-181		56.28		4.606E-01	1.644E+00	2.451E+00	1.793E-01	0.188
		57.53		5.292E+00	1.032E+00	1.603E+00	1.167E-01	3.301
		65.20		2.464E-01	1.123E+00	1.660E+00	1.216E-01	0.148
		133.02		-4.227E-02	7.006E-02	1.127E-01	6.521E-03	-0.375
		136.25		1.252E-01	4.744E-01	7.838E-01	4.470E-02	0.160
		345.85		-4.411E-02	2.230E-01	3.202E-01	1.782E-02	-0.138
		482.03	*	4.297E-03	4.974E-02	8.220E-02	4.754E-03	0.052
W-181		56.28		1.861E-01	6.585E-01	9.816E-01	7.180E-02	0.190

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		57.53		2.103E+00	4.130E-01	6.416E-01	4.671E-02	3.278
		65.20	*	9.797E-02	4.466E-01	6.601E-01	4.837E-02	0.148
TA-182		67.75		4.083E-02	1.374E-01	1.905E-01	1.409E-02	0.214
		100.10		-1.337E-01	1.804E-01	2.911E-01	2.132E-02	-0.459
		152.43		4.312E-01	3.520E-01	5.956E-01	3.180E-02	0.724
		222.10		4.115E-02	3.832E-01	6.193E-01	3.324E-02	0.066
		1001.68		7.332E-01	1.907E+00	3.294E+00	2.763E-01	0.223
	+	1121.28		6.616E-01	2.394E-01	3.371E-01	2.200E-02	1.963
		1189.05		-6.622E-02	2.801E-01	4.494E-01	2.616E-02	-0.147
		1221.42	*	2.463E-02	2.029E-01	3.345E-01	2.144E-02	0.074
		1230.97		7.616E-03	5.120E-01	8.372E-01	5.516E-02	0.009
RE-183		57.98		6.208E+00	6.298E-01	8.260E-01	6.003E-02	7.516
	+	59.32		6.129E+00	5.405E-01	5.385E-01	3.895E-02	11.381
		67.20		-4.571E-02	2.326E-01	3.382E-01	2.496E-02	-0.135
		162.32	*	-1.169E-02	1.191E-01	1.914E-01	9.819E-03	-0.061
	+	208.81		2.567E+00	1.608E+00	1.878E+00	9.947E-02	1.367
		291.72		-2.505E-01	1.114E+00	1.615E+00	9.033E-02	-0.155
RE-184		57.98		2.317E+01	2.350E+00	3.082E+00	2.240E-01	7.516
	+	59.32		2.285E+01	2.015E+00	2.008E+00	1.452E-01	11.381
		67.20		-1.705E-01	8.675E-01	1.262E+00	9.309E-02	-0.135
		161.27		-1.176E-01	3.826E-01	6.172E-01	3.179E-02	-0.191
		216.55		1.160E-01	2.987E-01	4.877E-01	2.604E-02	0.238
		252.85	*	8.474E-03	2.580E-01	4.137E-01	2.276E-02	0.020
		318.01		1.720E-01	4.941E-01	8.396E-01	4.704E-02	0.205
		792.07		7.854E-01	1.022E+00	1.589E+00	1.254E-01	0.494
		903.28		-5.440E-02	8.915E-01	1.408E+00	1.337E-01	-0.039
		920.93		-3.623E-01	4.141E-01	6.361E-01	5.930E-02	-0.570
OS-185	+	59.72		1.681E+01	1.483E+00	1.434E+00	1.037E-01	11.720
	+	61.14		9.698E+00	8.553E-01	7.209E-01	5.229E-02	13.452
		69.30		4.881E-02	3.621E-01	4.995E-01	3.718E-02	0.098
		592.07		-1.931E+00	2.528E+00	3.909E+00	2.363E-01	-0.494
		646.12	*	-4.094E-02	4.141E-02	6.221E-02	3.789E-03	-0.658
		717.42		5.882E-01	8.309E-01	1.383E+00	9.448E-02	0.425
		874.81		7.291E-03	5.345E-01	8.922E-01	8.179E-02	0.008
		880.27		1.097E-01	7.061E-01	1.191E+00	1.102E-01	0.092
RE-188		155.03	*	-1.567E-01	1.827E-01	2.897E-01	1.530E-02	-0.541
		477.96		-2.218E+00	3.734E+00	5.978E+00	3.449E-01	-0.371
		633.10		1.522E+00	2.690E+00	4.529E+00	2.756E-01	0.336
W-188	+	63.58		6.286E+01	6.347E+01	9.506E+01	6.934E+00	0.661
		227.08		-7.256E+00	1.397E+01	2.204E+01	1.189E+00	-0.329
		290.67	*	1.473E-01	8.867E+00	1.302E+01	7.281E-01	0.011
IR-192	+	295.96		8.352E-01	1.770E-01	2.652E-01	1.510E-02	3.149
		308.46		5.778E-02	9.989E-02	1.714E-01	9.723E-03	0.337
		316.51	*	9.842E-03	3.723E-02	6.308E-02	3.553E-03	0.156
		468.07		-5.613E-02	9.523E-02	1.309E-01	8.677E-03	-0.429
		604.41		-2.474E-01	5.280E-01	7.107E-01	8.163E-02	-0.348
		612.46		1.937E+00	7.738E-01	1.292E+00	1.005E-01	1.500
AU-195		65.12		7.138E-02	2.085E-01	3.095E-01	2.267E-02	0.231
		66.83		-3.232E-02	1.105E-01	1.602E-01	1.180E-02	-0.202

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	75.70		1.580E+00	2.561E-01	4.671E-01	3.611E-02	3.382
		98.88	*	-6.502E-02	2.317E-01	3.801E-01	2.821E-02	-0.171
		129.76		3.091E+00	3.057E+00	5.123E+00	3.008E-01	0.603
TL-200		367.94	*	-7.437E-05	3.057E+00	Half-Life too short		
		579.30		1.157E-04	3.057E+00	Half-Life too short		
		828.27		1.507E-04	3.057E+00	Half-Life too short		
		1205.75		-4.893E-05	3.057E+00	Half-Life too short		
TL-201		68.90		-2.895E-01	4.040E+00	5.003E+00	3.718E-01	-0.058
		70.82		-1.388E-03	1.900E+00	2.793E+00	2.095E-01	0.000
		80.30		1.047E+00	4.604E+00	4.959E+00	3.975E-01	0.211
		135.34		1.108E+01	1.655E+01	2.768E+01	1.585E+00	0.400
		167.43	*	5.766E-01	4.723E+00	7.639E+00	3.866E-01	0.075
TL-202		68.90		-3.767E-02	5.257E-01	6.511E-01	4.838E-02	-0.058
		70.82		-1.802E-04	2.466E-01	3.624E-01	2.718E-02	0.000
		80.30		1.359E-01	5.976E-01	6.437E-01	5.160E-02	0.211
		439.56	*	7.190E-02	7.785E-02	1.334E-01	7.498E-03	0.539
HG-203		70.83		8.807E-04	1.170E+00	1.719E+00	2.222E-01	0.001
		72.87		1.299E+00	7.054E-01	1.073E+00	1.347E-01	1.211
		82.60		1.126E+00	1.301E+00	1.827E+00	2.462E-01	0.616
		279.20	*	8.393E-05	4.372E-02	7.306E-02	4.345E-03	0.001
BI-207		72.80		3.505E-01	2.088E-01	3.218E-01	2.441E-02	1.089
	+	74.97		8.833E-01	1.432E-01	2.298E-01	1.768E-02	3.844
	+	84.90		3.349E-01	1.671E-01	3.305E-01	2.764E-02	1.013
		569.67		2.427E-02	3.109E-02	5.302E-02	3.186E-03	0.458
		1063.62	*	4.000E-02	5.272E-02	9.180E-02	6.881E-03	0.436
		1770.23		-2.456E+00	6.698E-01	5.069E-01	3.184E-02	-4.846
TL-207		81.07		1.974E-01	3.198E-01	3.532E-01	2.850E-02	0.559
	+	83.78		2.208E-01	1.102E-01	2.185E-01	1.807E-02	1.011
		94.90		9.012E-01	2.834E-01	4.471E-01	3.484E-02	2.016
		122.32		-4.000E-01	1.907E+00	3.116E+00	2.168E-01	-0.128
		144.24		6.020E-01	7.454E-01	1.239E+00	8.679E-02	0.486
		154.21		-3.100E-01	4.283E-01	6.821E-01	4.506E-02	-0.455
	+	269.46		7.681E-01	2.646E-01	3.675E-01	2.141E-02	2.090
		323.87	*	9.995E-02	8.188E-01	1.202E+00	1.978E-01	0.083
	+	338.28		5.713E+00	1.826E+00	2.388E+00	2.486E-01	2.393
		445.03		-1.390E-01	2.936E+00	4.841E+00	4.929E-01	-0.029
PO-209		260.50		4.900E+00	1.072E+01	1.746E+01	9.651E-01	0.281
		262.80		-3.090E-01	2.981E+01	4.763E+01	2.636E+00	-0.006
		896.60	*	-5.213E+00	6.468E+00	9.990E+00	9.508E-01	-0.522
BI-210		46.50	*	-9.619E-01	5.235E+00	8.740E+00	6.903E-01	-0.110
PB-210		46.50	*	-9.619E-01	5.235E+00	8.740E+00	6.903E-01	-0.110
PO-210		46.50	*	-9.619E-01	5.235E+00	8.740E+00	5.977E-01	-0.110
PB-211		404.84	*	8.399E-02	1.105E+00	1.837E+00	1.145E+00	0.046
		427.08		8.659E-01	2.499E+00	4.103E+00	2.535E+00	0.211
		831.96		6.116E-01	1.161E+00	1.906E+00	1.194E+00	0.321
BI-212	+	727.18	*	1.033E+00	4.195E-01	5.896E-01	5.085E-02	1.752
		785.46		2.001E+00	1.605E+00	2.902E+00	2.263E-01	0.689
		1620.62		3.991E-01	9.829E-01	1.739E+00	1.275E-01	0.230
PO-215		81.07		1.974E-01	3.198E-01	3.532E-01	2.850E-02	0.559

---- Non-Identified Nuclides ----

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	+	83.78		2.208E-01	1.102E-01	2.185E-01	1.807E-02	1.011
		94.90		9.012E-01	2.834E-01	4.471E-01	3.484E-02	2.016
		122.32		-4.000E-01	1.907E+00	3.116E+00	2.168E-01	-0.128
		144.24		6.020E-01	7.454E-01	1.239E+00	8.679E-02	0.486
		154.21		-3.100E-01	4.283E-01	6.821E-01	4.506E-02	-0.455
	+	269.46		7.681E-01	2.646E-01	3.675E-01	2.141E-02	2.090
		323.87	*	9.995E-02	8.188E-01	1.202E+00	1.978E-01	0.083
	+	338.28		5.713E+00	1.826E+00	2.388E+00	2.486E-01	2.393
		445.03		-1.390E-01	2.936E+00	4.841E+00	4.929E-01	-0.029
RN-219	+	271.23		9.855E-01	3.436E-01	4.849E-01	3.846E-02	2.032
		401.81	*	-5.097E-01	4.872E-01	7.651E-01	1.030E-01	-0.666
RN-220		549.76	*	-1.778E+01	2.743E+01	4.307E+01	2.572E+00	-0.413
RA-223		81.07		1.974E-01	3.198E-01	3.532E-01	2.850E-02	0.559
	+	83.78		2.208E-01	1.102E-01	2.185E-01	1.807E-02	1.011
		94.90		9.012E-01	2.834E-01	4.471E-01	3.484E-02	2.016
		122.32		-4.000E-01	1.907E+00	3.116E+00	2.168E-01	-0.128
		144.24		6.020E-01	7.454E-01	1.239E+00	8.679E-02	0.486
		154.21		-3.100E-01	4.283E-01	6.821E-01	4.506E-02	-0.455
	+	269.46		7.681E-01	2.646E-01	3.675E-01	2.141E-02	2.090
		323.87	*	9.995E-02	8.188E-01	1.202E+00	1.978E-01	0.083
	+	338.28		5.713E+00	1.826E+00	2.388E+00	2.486E-01	2.393
		445.03		-1.390E-01	2.936E+00	4.841E+00	4.929E-01	-0.029
AC-227		79.80		1.307E-02	2.187E+00	2.705E+00	5.750E-01	0.005
		236.00		6.106E-01	2.956E-01	4.445E-01	4.558E-02	1.374
		256.20	*	-2.825E-01	4.233E-01	6.559E-01	9.080E-02	-0.431
		286.10		7.526E-02	1.671E+00	2.820E+00	3.231E-01	0.027
	+	299.80		3.427E+00	2.026E+00	2.811E+00	4.559E-01	1.219
		304.40		-7.366E-01	2.260E+00	3.243E+00	5.589E-01	-0.227
		334.20		-3.326E+00	4.657E+00	4.169E+00	7.616E-01	-0.798
TH-227		79.80		1.307E-02	2.187E+00	2.705E+00	5.825E-01	0.005
	+	94.00		9.217E+00	3.308E+00	4.025E+00	8.652E-01	2.290
		236.00		6.106E-01	2.939E-01	4.445E-01	3.924E-02	1.374
		256.20	*	-2.825E-01	4.241E-01	6.559E-01	1.102E-01	-0.431
		286.10		7.526E-02	1.673E+00	2.820E+00	2.825E+00	0.027
	+	299.80		3.427E+00	2.026E+00	2.811E+00	4.559E-01	1.219
		304.40		-7.366E-01	2.260E+00	3.243E+00	5.589E-01	-0.227
		334.20		-3.326E+00	4.657E+00	4.169E+00	7.616E-01	-0.798
TH-229	+	85.43		3.306E-01	1.650E-01	3.488E-01	2.932E-02	0.948
	+	88.47		5.129E-01	1.352E-01	2.220E-01	1.901E-02	2.310
		100.00		-1.375E-01	1.898E-01	3.065E-01	2.247E-02	-0.448
		193.63	*	-1.483E-01	5.632E-01	9.035E-01	4.706E-02	-0.164
		210.97		1.363E+00	1.003E+00	1.494E+00	7.931E-02	0.912
PA-231		283.67	*	6.552E-01	1.667E+00	2.845E+00	3.894E-01	0.230
	+	301.29		1.371E+00	7.920E-01	1.145E+00	1.184E-01	1.198
TH-231		81.07		1.974E-01	3.198E-01	3.532E-01	2.850E-02	0.559
	+	83.78		2.208E-01	1.102E-01	2.185E-01	1.807E-02	1.011
		94.90		9.012E-01	2.834E-01	4.471E-01	3.484E-02	2.016
		122.32		-4.000E-01	1.907E+00	3.116E+00	2.168E-01	-0.128
		144.24		6.020E-01	7.454E-01	1.239E+00	8.679E-02	0.486

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		154.21		-3.100E-01	4.283E-01	6.821E-01	4.506E-02	-0.455
	+	269.46		7.681E-01	2.646E-01	3.675E-01	2.141E-02	2.090
		323.87	*	9.995E-02	8.188E-01	1.202E+00	1.978E-01	0.083
	+	338.28		5.713E+00	1.826E+00	2.388E+00	2.486E-01	2.393
		445.03		-1.390E-01	2.936E+00	4.841E+00	4.929E-01	-0.029
U-231	+	84.21		6.657E+00	3.323E+00	6.450E+00	5.358E-01	1.032
	+	92.29		6.373E+00	1.899E+00	2.901E+00	2.342E-01	2.197
		95.87	*	7.651E-01	8.691E-01	1.307E+00	1.006E-01	0.585
		108.00		1.837E-01	1.493E+00	2.474E+00	1.677E-01	0.074
PA-233	+	75.28		2.578E+01	5.309E+00	7.053E+00	1.048E+00	3.655
	+	86.59		7.354E+00	2.692E+00	3.119E+00	8.354E-01	2.358
	+	300.12		9.554E-01	5.579E-01	7.840E-01	1.047E-01	1.219
		311.98	*	-4.995E-02	6.846E-02	1.115E-01	6.663E-03	-0.448
		340.50		2.690E+00	1.013E+00	1.355E+00	3.104E-01	1.986
		398.62		-2.377E-01	2.407E+00	3.980E+00	1.026E+00	-0.060
		415.76		-2.237E-01	1.959E+00	3.230E+00	6.625E-01	-0.069
PA-234	+	63.00		1.863E+00	1.896E+00	2.928E+00	4.333E-01	0.636
		94.67		7.494E-01	2.207E-01	3.321E-01	3.938E-02	2.256
		98.44		1.553E-02	9.706E-02	1.555E-01	8.648E-02	0.100
		99.86		-3.375E-01	4.808E-01	7.773E-01	5.707E-02	-0.434
		111.00		1.856E-02	1.963E-01	3.247E-01	3.490E-02	0.057
		131.20		7.750E-02	1.154E-01	1.916E-01	1.117E-02	0.405
		152.70		3.427E-01	3.492E-01	5.810E-01	9.088E-02	0.590
	+	186.00		6.051E+00	2.914E+00	2.696E+00	8.208E-01	2.244
		226.40		6.323E-02	4.473E-01	7.233E-01	8.216E-02	0.087
		227.20		-2.581E-01	4.821E-01	7.599E-01	4.098E-02	-0.340
		248.90		-4.165E-01	9.586E-01	1.447E+00	3.097E-01	-0.288
		293.70		4.736E+00	1.207E+00	1.650E+00	2.641E-01	2.870
		369.80		-2.188E-01	9.432E-01	1.555E+00	3.224E-01	-0.141
		568.70		8.491E-01	9.993E-01	1.711E+00	1.028E-01	0.496
		569.50		1.934E-01	2.745E-01	4.664E-01	2.803E-02	0.415
		574.00		-2.156E-01	1.544E+00	2.497E+00	1.503E-01	-0.086
		699.00		1.610E-01	6.624E-01	1.087E+00	1.983E-01	0.148
		706.10		-1.959E-01	9.769E-01	1.546E+00	6.840E-01	-0.127
		733.00		3.199E-01	3.334E-01	5.104E-01	1.104E-01	0.627
		742.81		-5.192E-02	1.150E+00	1.841E+00	1.234E+00	-0.028
	+	796.30		2.140E+00	1.475E+00	1.546E+00	4.149E-01	1.385
		805.60		3.339E-01	8.954E-01	1.531E+00	4.671E-01	0.218
		819.60		-1.678E-01	1.060E+00	1.749E+00	6.640E-01	-0.096
		826.30		-1.610E-01	7.477E-01	1.225E+00	5.474E-01	-0.131
		831.60		3.071E-01	5.802E-01	9.945E-01	2.964E-01	0.309
		876.40		1.430E-01	7.862E-01	1.306E+00	1.344E+00	0.109
		880.51		4.597E-02	2.550E-01	4.311E-01	3.991E-02	0.107
		883.24		-1.077E-01	2.840E-01	4.440E-01	2.989E-01	-0.243
		899.00		-2.174E-01	7.363E-01	1.185E+00	5.204E-01	-0.183
		925.00		1.014E+00	1.056E+00	1.883E+00	1.748E-01	0.538
		926.50		1.090E-01	1.586E-01	2.743E-01	6.995E-02	0.397
		946.00	*	-3.491E-01	3.112E-01	4.353E-01	8.257E-02	-0.802
		949.00		3.343E-01	4.220E-01	7.410E-01	6.689E-02	0.451

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		980.50		3.650E-01	6.919E-01	1.193E+00	1.033E-01	0.306
		1394.10		2.758E-01	1.156E+00	1.902E+00	1.238E+00	0.145
PA-234M	+	766.41		3.891E+01	3.506E+01	3.197E+01	2.448E+01	1.217
		1001.03	*	1.009E+00	6.165E+00	1.049E+01	1.155E+00	0.096
U-235	+	89.95		2.693E+00	1.252E+00	1.915E+00	5.895E-01	1.406
	+	93.35		2.867E+00	1.147E+00	1.263E+00	3.513E-01	2.271
		105.00		6.513E-01	1.106E+00	1.832E+00	5.389E-01	0.355
		143.76	*	2.282E-01	2.321E-01	3.835E-01	6.217E-02	0.595
		163.35		5.655E-02	5.168E-01	8.356E-01	1.485E-01	0.068
	+	185.71		2.241E-01	8.440E-02	9.997E-02	5.161E-03	2.242
		205.31		-1.364E-01	6.552E-01	9.146E-01	1.630E-01	-0.149
NP-236		94.67		5.707E-01	1.596E-01	2.521E-01	1.970E-02	2.264
		98.44		1.172E-02	7.308E-02	1.175E-01	8.769E-03	0.100
		111.00		1.404E-02	1.485E-01	2.456E-01	1.623E-02	0.057
		160.31	*	2.686E-02	8.602E-02	1.416E-01	7.322E-03	0.190
NP-239		99.55		-8.378E-02	1.601E-01	2.605E-01	1.919E-02	-0.322
		117.00	*	-8.538E-02	2.055E-01	3.340E-01	2.109E-02	-0.256
	+	209.75		2.069E+00	1.296E+00	1.542E+00	8.175E-02	1.342
		228.18		-1.917E-01	2.546E-01	3.978E-01	2.147E-02	-0.482
		277.60		9.507E-02	2.057E-01	3.340E-01	1.861E-02	0.285
		334.30		-1.908E+00	2.618E+00	2.360E+00	1.318E-01	-0.809
CM-243		99.55		-8.619E-02	1.647E-01	2.680E-01	1.974E-02	-0.322
		103.76	*	-1.137E-02	1.003E-01	1.651E-01	1.164E-02	-0.069
		117.00		-8.783E-02	2.114E-01	3.436E-01	2.170E-02	-0.256
	+	209.75		2.039E+00	1.277E+00	1.520E+00	8.057E-02	1.342
		228.18		-1.936E-01	2.572E-01	4.019E-01	2.169E-02	-0.482
		277.60		9.583E-02	2.074E-01	3.367E-01	1.876E-02	0.285
CM-247		278.00		1.111E-01	8.411E-01	1.379E+00	7.686E-02	0.081
		287.40		-3.000E-01	1.337E+00	2.234E+00	1.248E-01	-0.134
		402.60	*	-8.823E-03	4.319E-02	7.109E-02	3.876E-03	-0.124
CF-249		252.85		3.208E-02	9.766E-01	1.566E+00	8.615E-02	0.020
		333.44		-1.976E-01	3.432E-01	3.152E-01	1.761E-02	-0.627
		387.95	*	7.219E-02	4.675E-02	8.224E-02	4.453E-03	0.878
CF-251		176.60	*	6.517E-02	1.346E-01	2.222E-01	1.135E-02	0.293
		227.00		-1.784E-01	4.277E-01	6.773E-01	3.652E-02	-0.263
		285.00		6.283E-01	1.888E+00	3.218E+00	1.797E-01	0.195

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511006      *
* Acquisition date :  7-JUL-2009 10:58:06 Detector SN#     :                *
* Detector ID        : GAM16               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:02.84      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232511006           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.4727E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.175E+01	3.068E+00	4.989E-01	0.000E+00
CD-109	3.810E+00	9.839E-01	1.374E+00	0.000E+00
SN-126	3.757E-01	9.702E-02	1.362E-01	0.000E+00
BA-137M	4.472E+00	3.063E-01	6.542E-02	0.000E+00
CS-137	4.727E+00	3.247E-01	6.915E-02	0.000E+00
TL-208	4.770E-01	7.327E-02	6.251E-02	0.000E+00
BI-211	4.037E+00	5.010E-01	3.705E-01	0.000E+00
PB-212	1.556E+00	1.435E-01	1.024E-01	0.000E+00
PO-212	1.556E+00	1.435E-01	1.024E-01	0.000E+00
BI-214	1.092E+00	1.632E-01	1.088E-01	0.000E+00
PB-214	1.404E+00	1.885E-01	1.364E-01	0.000E+00
PO-214	1.404E+00	1.885E-01	1.364E-01	0.000E+00
PO-216	1.556E+00	1.435E-01	1.024E-01	0.000E+00
PO-218	1.404E+00	1.885E-01	1.364E-01	0.000E+00
RA-224	4.931E+00	1.290E+00	1.164E+00	0.000E+00
RA-226	1.092E+00	1.632E-01	1.088E-01	0.000E+00
AC-228	1.605E+00	3.011E-01	1.889E-01	0.000E+00
RA-228	1.605E+00	3.011E-01	1.889E-01	0.000E+00
TH-228	1.556E+00	1.435E-01	1.024E-01	0.000E+00
TH-230	1.092E+00	1.631E-01	1.088E-01	0.000E+00
TH-232	1.605E+00	3.011E-01	1.889E-01	0.000E+00
TH-234	1.598E+00	1.600E+00	2.398E+00	0.000E+00
U-234	1.092E+00	1.631E-01	1.088E-01	0.000E+00
NP-237	1.103E+00	3.619E-01	4.051E-01	0.000E+00
U-238	1.598E+00	1.600E+00	2.398E+00	0.000E+00
AM-241	8.931E+00	8.255E-01	4.031E-01	0.000E+00
AM-243	4.922E-01	7.820E-02	9.712E-02	0.000E+00
ANH-511	1.550E-01	6.088E-02	5.463E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-2.419E-01	3.790E-01	6.386E-01	0.000E+00	NOT IDENT.
NA-22	-3.792E-02	3.777E-02	5.661E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.794E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.983E-02	2.301E-02	4.492E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.866E-02	8.756E-02	0.000E+00	FAIL ABUN
SC-46	-5.575E-03	3.479E-02	5.948E-02	0.000E+00	FAIL ABUN
V-48	1.830E-02	5.861E-02	1.031E-01	0.000E+00	NOT IDENT.
CR-51	2.504E-01	3.959E-01	7.132E-01	0.000E+00	NOT IDENT.
MN-52	-5.478E-02	1.450E-01	2.270E-01	0.000E+00	NOT IDENT.
MN-54	-1.696E-02	3.271E-02	5.475E-02	0.000E+00	NOT IDENT.
CO-56	-3.889E-02	3.376E-02	5.302E-02	0.000E+00	NOT IDENT.
CO-57	8.848E-04	2.678E-02	4.794E-02	0.000E+00	NOT IDENT.
CO-58	-1.386E-02	3.395E-02	5.739E-02	0.000E+00	NOT IDENT.
FE-59	-4.480E-02	8.119E-02	1.315E-01	0.000E+00	NOT IDENT.
CO-60	-2.298E-02	3.210E-02	4.868E-02	0.000E+00	NOT IDENT.
ZN-65	-1.407E-01	1.052E-01	1.295E-01	0.000E+00	NOT IDENT.
GE-68	3.526E-01	1.189E+00	2.072E+00	0.000E+00	NOT IDENT.
AS-73	2.828E-01	1.344E+00	2.334E+00	0.000E+00	NOT IDENT.
AS-74	4.219E-02	8.649E-02	1.519E-01	0.000E+00	NOT IDENT.
SE-75	-1.406E-02	5.072E-02	7.877E-02	0.000E+00	NOT IDENT.
BR-77	1.378E-01	5.896E+00	1.019E+01	0.000E+00	FAIL ABUN
SR-82	-2.184E-01	3.076E-01	5.096E-01	0.000E+00	NOT IDENT.
RB-83	5.513E-03	7.213E-02	1.250E-01	0.000E+00	NOT IDENT.
RB-84	4.052E-02	6.010E-02	1.092E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.634E+00	1.471E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.327E-02	7.371E-02	0.000E+00	NOT IDENT.
RB-86	-1.234E-01	7.095E-01	1.192E+00	0.000E+00	NOT IDENT.
Y-88	1.920E-02	2.376E-02	4.635E-02	0.000E+00	NOT IDENT.
ZR-88	-3.166E-02	3.396E-02	5.737E-02	0.000E+00	NOT IDENT.
Y-91	-2.174E+01	1.843E+01	2.821E+01	0.000E+00	NOT IDENT.
NB-94	-3.197E-03	3.104E-02	5.193E-02	0.000E+00	NOT IDENT.
NB-95	6.992E-02	4.660E-02	7.622E-02	0.000E+00	NOT IDENT.
NB-95M	1.280E-01	1.443E-01	2.257E-01	0.000E+00	NOT IDENT.
ZR-95	-1.598E-02	6.214E-02	1.019E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.684E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.645E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.296E+00	5.394E+00	9.377E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.047E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.962E-02	3.576E-02	6.330E-02	0.000E+00	NOT IDENT.
RH-102	8.667E-03	3.616E-02	6.344E-02	0.000E+00	FAIL ABUN
RU-103	-2.778E-02	4.504E-02	7.539E-02	0.000E+00	FAIL ABUN
RH-106	3.310E-01	3.023E-01	5.469E-01	0.000E+00	FAIL ABUN
RU-106	3.310E-01	3.004E-01	5.469E-01	0.000E+00	FAIL ABUN
AG-108M	-2.475E-02	3.918E-02	6.660E-02	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	4.577E-02	8.269E-02	0.000E+00	NOT IDENT.
IN-111	9.676E-03	7.408E-01	1.110E+00	0.000E+00	NOT IDENT.
IN-113M	-6.810E-02	5.002E-02	8.280E-02	0.000E+00	NOT IDENT.
SN-113	-6.810E-02	5.002E-02	8.280E-02	0.000E+00	NOT IDENT.
IN-114M	7.949E-02	2.134E-01	3.309E-01	0.000E+00	NOT IDENT.
CD-115	2.914E+00	5.810E+00	1.028E+01	0.000E+00	NOT IDENT.
SN-117M	1.157E-02	5.237E-02	9.295E-02	0.000E+00	NOT IDENT.
SB-122	-1.383E-01	1.157E+00	1.970E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.959E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.089E-02	2.981E-02	5.313E-02	0.000E+00	NOT IDENT.
I-124	1.931E-01	5.316E-01	8.074E-01	0.000E+00	FAIL ABUN
SB-124	8.176E-03	6.372E-02	1.105E-01	0.000E+00	FAIL ABUN
SB-125	-2.693E-02	1.070E-01	1.851E-01	0.000E+00	FAIL ABUN
TE-125M	-5.657E+00	9.441E+00	1.666E+01	0.000E+00	NOT IDENT.
I-126	-7.379E-03	1.844E-01	2.683E-01	0.000E+00	NOT IDENT.
SB-126	-8.078E-02	1.306E-01	1.865E-01	0.000E+00	FAIL ABUN
SB-127	1.062E-03	8.162E-01	1.379E+00	0.000E+00	FAIL ABUN
XE-127	-4.439E-03	5.385E-02	8.613E-02	0.000E+00	NOT IDENT.
I-131	-1.591E-02	1.046E-01	1.840E-01	0.000E+00	NOT IDENT.
TE-132	-3.646E-01	4.840E-01	8.079E-01	0.000E+00	NOT IDENT.
BA-133	-1.389E-03	5.442E-02	8.374E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.127E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.891E-02	8.355E-02	0.000E+00	FAIL ABUN
CS-135	1.854E-01	1.932E-01	3.018E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.316E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-8.486E-03	9.110E-02	1.544E-01	0.000E+00	FAIL ABUN
CE-139	1.800E-03	3.123E-02	5.501E-02	0.000E+00	NOT IDENT.
BA-140	-6.821E-02	2.396E-01	4.040E-01	0.000E+00	NOT IDENT.
LA-140	-1.311E-02	5.993E-02	9.711E-02	0.000E+00	FAIL ABUN
CE-141	6.370E-02	6.361E-02	1.159E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.613E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-6.578E-02	2.196E-01	3.870E-01	0.000E+00	NOT IDENT.
PM-144	-1.868E-03	3.047E-02	5.116E-02	0.000E+00	NOT IDENT.

PR-144	-1.264E-01	2.062E+00	3.463E+00	0.000E+00	NOT IDENT.
PM-146	1.452E-02	5.648E-02	9.940E-02	0.000E+00	NOT IDENT.
ND-147	-7.989E-02	5.141E-01	8.779E-01	0.000E+00	FAIL ABUN
PM-149	1.139E+01	4.938E+01	8.943E+01	0.000E+00	NOT IDENT.
EU-152	1.208E-01	1.288E-01	1.865E-01	0.000E+00	FAIL ABUN
GD-153	-3.537E-03	8.927E-02	1.417E-01	0.000E+00	FAIL ABUN
EU-154	-1.088E-01	1.057E-01	1.573E-01	0.000E+00	NOT IDENT.
EU-155	-1.014E-02	1.100E-01	1.977E-01	0.000E+00	FAIL ABUN
TB-160	-2.770E-02	1.288E-01	2.196E-01	0.000E+00	FAIL ABUN
HO-166M	-1.538E-02	5.541E-02	9.134E-02	0.000E+00	NOT IDENT.
TM-171	-9.936E+00	3.299E+01	5.266E+01	0.000E+00	FAIL ABUN
LU-176	5.087E-03	2.625E-02	4.615E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.433E+00	1.798E+00	0.000E+00	FAIL ABUN
LU-177M	-2.919E-01	2.095E-01	3.456E-01	0.000E+00	NOT IDENT.
HF-181	4.297E-03	4.875E-02	8.492E-02	0.000E+00	NOT IDENT.
W-181	9.797E-02	4.377E-01	7.131E-01	0.000E+00	NOT IDENT.
TA-182	2.463E-02	1.989E-01	3.380E-01	0.000E+00	FAIL ABUN
RE-183	-1.169E-02	1.167E-01	2.027E-01	0.000E+00	FAIL ABUN
RE-184	8.474E-03	2.528E-01	4.337E-01	0.000E+00	FAIL ABUN
OS-185	-4.094E-02	4.058E-02	6.383E-02	0.000E+00	FAIL ABUN
RE-188	-1.567E-01	1.790E-01	3.071E-01	0.000E+00	NOT IDENT.
W-188	1.473E-01	8.690E+00	1.361E+01	0.000E+00	FAIL ABUN
IR-192	9.842E-03	3.648E-02	6.580E-02	0.000E+00	FAIL ABUN
AU-195	-6.502E-02	2.270E-01	4.069E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.256E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	5.766E-01	4.628E+00	8.085E+00	0.000E+00	NOT IDENT.
TL-202	7.190E-02	7.629E-02	1.381E-01	0.000E+00	NOT IDENT.
HG-203	8.393E-05	4.285E-02	7.644E-02	0.000E+00	NOT IDENT.
BI-207	4.000E-02	5.167E-02	9.307E-02	0.000E+00	FAIL ABUN
TL-207	9.995E-02	8.025E-01	1.254E+00	0.000E+00	FAIL ABUN
PO-209	-5.213E+00	6.339E+00	1.017E+01	0.000E+00	NOT IDENT.
BI-210	-9.619E-01	5.130E+00	9.510E+00	0.000E+00	NOT IDENT.
PB-210	-9.619E-01	5.130E+00	9.510E+00	0.000E+00	NOT IDENT.
PO-210	-9.619E-01	5.130E+00	9.510E+00	0.000E+00	NOT IDENT.
PB-211	8.399E-02	1.083E+00	1.906E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.111E-01	6.033E-01	0.000E+00	FAIL ABUN
PO-215	9.995E-02	8.025E-01	1.254E+00	0.000E+00	FAIL ABUN
RN-219	-5.097E-01	4.775E-01	7.937E-01	0.000E+00	FAIL ABUN
RN-220	-1.778E+01	2.688E+01	4.436E+01	0.000E+00	NOT IDENT.
RA-223	9.995E-02	8.025E-01	1.254E+00	0.000E+00	FAIL ABUN
AC-227	-2.825E-01	4.148E-01	6.875E-01	0.000E+00	FAIL ABUN
TH-227	-2.825E-01	4.156E-01	6.875E-01	0.000E+00	FAIL ABUN
TH-229	-1.483E-01	5.519E-01	9.531E-01	0.000E+00	FAIL ABUN
PA-231	6.552E-01	1.634E+00	2.975E+00	0.000E+00	FAIL ABUN
TH-231	9.995E-02	8.025E-01	1.254E+00	0.000E+00	FAIL ABUN
U-231	7.651E-01	8.518E-01	1.400E+00	0.000E+00	FAIL ABUN
PA-233	-4.995E-02	6.709E-02	1.164E-01	0.000E+00	FAIL ABUN
PA-234	-3.491E-01	3.049E-01	4.425E-01	0.000E+00	FAIL ABUN
PA-234M	1.009E+00	6.042E+00	1.065E+01	0.000E+00	FAIL ABUN
U-235	2.282E-01	2.275E-01	4.073E-01	0.000E+00	FAIL ABUN
NP-236	2.686E-02	8.430E-02	1.500E-01	0.000E+00	NOT IDENT.
NP-239	-8.538E-02	2.014E-01	3.563E-01	0.000E+00	FAIL ABUN
CM-243	-1.137E-02	9.826E-02	1.766E-01	0.000E+00	FAIL ABUN
CM-247	-8.823E-03	4.233E-02	7.375E-02	0.000E+00	NOT IDENT.
CF-249	7.219E-02	4.582E-02	8.539E-02	0.000E+00	NOT IDENT.
CF-251	6.517E-02	1.319E-01	2.349E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:58:38.79

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511006.CNF;1
Sample date      : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:58:06.
Sample ID        : G232511006           Sample quantity  : 1.47270E+02 GRAM
Detector name    : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:02.84  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : MXR1
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 881220               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1633	10.67*	1.228E+00	3.175E+01	3.175E+01	9.86
CD-109	88.03	341	3.72*	6.256E+00	3.737E+00	3.810E+00	26.35
SN-126	64.28	82	9.60	3.444E+00	6.325E-01	6.325E-01	101.74
	86.94	341	8.90	6.256E+00	1.562E+00	1.562E+00	48.28
	87.57	341	37.00*	6.256E+00	3.757E-01	3.757E-01	26.35
BA-137M	661.65	3977	89.98*	2.521E+00	4.468E+00	4.472E+00	6.99
CS-137	661.65	3977	85.12*	2.521E+00	4.724E+00	4.727E+00	7.01
TL-208	277.35	------	6.80	4.948E+00	------	Line Not Found	------
	510.84	190	21.60	3.130E+00	7.175E-01	7.175E-01	40.94
	583.14	442	84.20*	2.808E+00	4.770E-01	4.770E-01	15.67
	860.37	34	12.46	1.987E+00	3.460E-01	3.460E-01	113.46
BI-211	72.87	------	1.27	4.802E+00	------	Line Not Found	------
	351.07	854	12.94*	4.169E+00	4.037E+00	4.037E+00	12.66
PB-212	74.81	645	10.70	5.060E+00	3.036E+00	3.036E+00	18.71
	77.11	757	18.00	5.331E+00	2.011E+00	2.011E+00	13.38
	87.30	341	8.00	6.256E+00	1.737E+00	1.737E+00	28.19
	238.63	1492	44.60*	5.482E+00	1.556E+00	1.556E+00	9.41
	300.09	116	3.41	4.677E+00	1.849E+00	1.849E+00	57.42
PO-212	74.81	645	10.70	5.060E+00	3.036E+00	3.036E+00	18.71
	77.11	757	18.00	5.331E+00	2.011E+00	2.011E+00	13.38
	87.30	341	8.00	6.256E+00	1.737E+00	1.737E+00	28.19
	115.19	------	0.60	7.278E+00	------	Line Not Found	------
	238.63	1492	44.60*	5.482E+00	1.556E+00	1.556E+00	9.41
	300.09	116	3.41	4.677E+00	1.849E+00	1.849E+00	57.42
BI-214	609.31	537	46.30*	2.705E+00	1.092E+00	1.092E+00	15.24
	768.36	71	5.04	2.209E+00	1.621E+00	1.621E+00	48.46
	934.06	------	3.21	1.843E+00	------	Line Not Found	------
	1120.29	131	15.10	1.554E+00	1.418E+00	1.418E+00	36.79
	1238.11	------	5.94	1.417E+00	------	Line Not Found	------
	1377.67	------	4.11	1.289E+00	------	Line Not Found	------
	1764.49	92	15.80	1.075E+00	1.376E+00	1.376E+00	25.97
PB-214	74.81	645	6.21	5.060E+00	5.231E+00	5.231E+00	17.83

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	757	10.50	5.331E+00	3.447E+00	3.447E+00	15.40
	87.30	341	4.67	6.256E+00	2.976E+00	2.976E+00	27.46
	241.98	415	7.49	5.435E+00	2.601E+00	2.601E+00	27.28
	295.21	398	19.20	4.731E+00	1.118E+00	1.118E+00	22.07
	351.92	854	37.20*	4.169E+00	1.404E+00	1.404E+00	13.70
PO-214	74.81	645	6.21	5.060E+00	5.231E+00	5.231E+00	17.83
	77.11	757	10.50	5.331E+00	3.447E+00	3.447E+00	15.40
	87.30	341	4.67	6.256E+00	2.976E+00	2.976E+00	27.46
	241.98	415	7.49	5.435E+00	2.601E+00	2.601E+00	27.28
	295.21	398	19.20	4.731E+00	1.118E+00	1.118E+00	22.07
	351.92	854	37.20*	4.169E+00	1.404E+00	1.404E+00	13.70
PO-216	74.81	645	10.70	5.060E+00	3.036E+00	3.036E+00	18.71
	77.11	757	18.00	5.331E+00	2.011E+00	2.011E+00	13.38
	87.30	341	8.00	6.256E+00	1.737E+00	1.737E+00	28.19
	238.63	1492	44.60*	5.482E+00	1.556E+00	1.556E+00	9.41
	300.09	116	3.41	4.677E+00	1.849E+00	1.849E+00	57.42
PO-218	74.81	645	6.21	5.060E+00	5.231E+00	5.231E+00	17.83
	77.11	757	10.50	5.331E+00	3.447E+00	3.447E+00	15.40
	87.30	341	4.67	6.256E+00	2.976E+00	2.976E+00	27.46
	241.98	415	7.49	5.435E+00	2.601E+00	2.601E+00	27.28
	295.21	398	19.20	4.731E+00	1.118E+00	1.118E+00	22.07
	351.92	854	37.20*	4.169E+00	1.404E+00	1.404E+00	13.70
RA-224	240.98	415	3.95*	5.435E+00	4.931E+00	4.931E+00	26.69
RA-226	609.31	537	46.30*	2.705E+00	1.092E+00	1.092E+00	15.24
	768.36	71	5.04	2.209E+00	1.621E+00	1.621E+00	48.46
	934.06	------	3.21	1.843E+00	------	Line Not Found	------
	1120.29	131	15.10	1.554E+00	1.418E+00	1.418E+00	36.79
	1238.11	------	5.94	1.417E+00	------	Line Not Found	------
	1377.67	------	4.11	1.289E+00	------	Line Not Found	------
	1764.49	92	15.80	1.075E+00	1.376E+00	1.376E+00	25.97
AC-228	338.32	262	11.40	4.287E+00	1.368E+00	1.368E+00	50.72
	911.07	329	27.70*	1.887E+00	1.605E+00	1.605E+00	19.15
	969.11	191	16.60	1.781E+00	1.643E+00	1.643E+00	30.84
RA-228	338.32	262	11.40	4.287E+00	1.368E+00	1.368E+00	50.72
	911.07	329	27.70*	1.887E+00	1.605E+00	1.605E+00	19.15
	969.11	191	16.60	1.781E+00	1.643E+00	1.643E+00	30.84
TH-228	84.40	129	1.21	6.027E+00	4.508E+00	4.508E+00	50.88
	238.60	1492	44.60*	5.482E+00	1.556E+00	1.556E+00	9.41
	300.10	116	3.41	4.677E+00	1.849E+00	1.849E+00	81.87
TH-230	609.31	537	46.30*	2.705E+00	1.092E+00	1.092E+00	15.24
	768.36	71	5.04	2.209E+00	1.621E+00	1.621E+00	48.46
	934.06	------	3.21	1.843E+00	------	Line Not Found	------
	1120.29	131	15.10	1.554E+00	1.418E+00	1.418E+00	36.79
	1238.11	------	5.94	1.417E+00	------	Line Not Found	------
	1377.67	------	4.11	1.289E+00	------	Line Not Found	------
	1764.49	92	15.80	1.075E+00	1.376E+00	1.376E+00	25.97
TH-232	338.32	262	11.40	4.287E+00	1.368E+00	1.368E+00	30.73
	911.07	329	27.70*	1.887E+00	1.605E+00	1.605E+00	19.15
	969.11	191	16.60	1.781E+00	1.643E+00	1.643E+00	30.84

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	82	3.80*	3.444E+00	1.598E+00	1.598E+00	102.20
	92.38	335	5.41	6.626E+00	2.385E+00	2.385E+00	33.78
U-234	609.31	537	46.30*	2.705E+00	1.092E+00	1.092E+00	15.24
	768.36	71	5.04	2.209E+00	1.621E+00	1.621E+00	48.46
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	131	15.10	1.554E+00	1.418E+00	1.418E+00	36.79
	1238.11	------	5.94	1.417E+00	------ Line Not Found		------
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	92	15.80	1.075E+00	1.376E+00	1.376E+00	25.97
NP-237	86.50	341	12.60*	6.256E+00	1.103E+00	1.103E+00	33.47
	95.87	------	2.60	6.774E+00	------ Line Not Found		------
U-238	63.29	82	3.80*	3.444E+00	1.598E+00	1.598E+00	102.20
	92.38	335	5.41	6.626E+00	2.385E+00	2.385E+00	29.81
AM-241	59.54	3627	35.90*	2.884E+00	8.931E+00	8.931E+00	9.43
AM-243	74.67	645	66.00*	5.060E+00	4.922E-01	4.922E-01	16.21
	86.72	341	0.34	6.256E+00	4.137E+01	4.137E+01	26.35
	117.66	------	0.55	7.296E+00	------ Line Not Found		------
	142.18	------	0.13	7.157E+00	------ Line Not Found		------
ANH-511	511.00	190	100.00*	3.130E+00	1.550E-01	1.550E-01	40.08

Flag: "*" = Keyline

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

Total number of lines in spectrum 36
Number of unidentified lines 2
Number of lines tentatively identified by NID 34 94.44%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.175E+01	3.175E+01	0.313E+01	9.86	
CD-109	464.00D	1.02	3.737E+00	3.810E+00	1.004E+00	26.35	
SN-126	1.00E+05Y	1.00	3.757E-01	3.757E-01	0.990E-01	26.35	
BA-137M	30.17Y	1.00	4.468E+00	4.472E+00	0.313E+00	6.99	
CS-137	30.17Y	1.00	4.724E+00	4.727E+00	0.331E+00	7.01	
TL-208	1.41E+10Y	1.00	4.770E-01	4.770E-01	0.748E-01	15.67	
BI-211	7.04E+08Y	1.00	4.037E+00	4.037E+00	0.511E+00	12.66	
PB-212	1.41E+10Y	1.00	1.556E+00	1.556E+00	0.146E+00	9.41	
PO-212	1.41E+10Y	1.00	1.556E+00	1.556E+00	0.146E+00	9.41	
BI-214	1600.00Y	1.00	1.092E+00	1.092E+00	0.166E+00	15.24	
PB-214	1600.00Y	1.00	1.404E+00	1.404E+00	0.192E+00	13.70	
PO-214	1600.00Y	1.00	1.404E+00	1.404E+00	0.192E+00	13.70	
PO-216	1.41E+10Y	1.00	1.556E+00	1.556E+00	0.146E+00	9.41	
PO-218	1600.00Y	1.00	1.404E+00	1.404E+00	0.192E+00	13.70	
RA-224	1.41E+10Y	1.00	4.931E+00	4.931E+00	1.316E+00	26.69	
RA-226	1600.00Y	1.00	1.092E+00	1.092E+00	0.166E+00	15.24	
AC-228	1.41E+10Y	1.00	1.605E+00	1.605E+00	0.307E+00	19.15	
RA-228	1.41E+10Y	1.00	1.605E+00	1.605E+00	0.307E+00	19.15	
TH-228	1.41E+10Y	1.00	1.556E+00	1.556E+00	0.146E+00	9.41	
TH-230	4.47E+09Y	1.00	1.092E+00	1.092E+00	0.166E+00	15.24	
TH-232	1.41E+10Y	1.00	1.605E+00	1.605E+00	0.307E+00	19.15	
TH-234	4.47E+09Y	1.00	1.598E+00	1.598E+00	1.633E+00	102.20	
U-234	4.47E+09Y	1.00	1.092E+00	1.092E+00	0.166E+00	15.24	
NP-237	2.14E+06Y	1.00	1.103E+00	1.103E+00	0.369E+00	33.47	
U-238	4.47E+09Y	1.00	1.598E+00	1.598E+00	1.633E+00	102.20	
AM-241	432.20Y	1.00	8.931E+00	8.931E+00	0.842E+00	9.43	
AM-243	7380.00Y	1.00	4.922E-01	4.922E-01	0.798E-01	16.21	
ANH-511	1.00E+09Y	1.00	1.550E-01	1.550E-01	0.621E-01	40.08	
	Total Activity :		8.800E+01	8.808E+01			

Grand Total Activity : 8.800E+01 8.808E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	90.11	184	372	0.89	180.21	166	24	2.56E-02	34.8	6.45E+00	T
0	186.10	303	693	0.94	372.20	366	12	4.21E-02	37.3	6.39E+00	T
0	209.30	157	598	0.81	418.59	413	11	2.18E-02	62.4	5.96E+00	T
0	270.34	206	297	1.19	540.67	537	10	2.87E-02	33.9	5.04E+00	T
0	327.92	109	364	1.28	655.85	652	11	1.52E-02	70.0	4.39E+00	T
0	463.02	81	310	1.30	926.03	922	11	1.13E-02	86.7	3.38E+00	T
0	727.34	111	88	1.25	1454.68	1449	13	1.54E-02	39.7	2.32E+00	T
0	794.81	70	89	1.04	1589.61	1583	16	9.74E-03	63.5	2.14E+00	T
2	964.44	77	70	2.34	1928.87	1923	21	1.07E-02	45.0	1.79E+00	T
0	1508.95	35	10	2.39	3017.91	3009	19	4.90E-03	53.8	1.20E+00	T
0	1587.53	32	12	0.91	3175.05	3170	10	4.47E-03	55.8	1.15E+00	
0	1729.30	35	3	2.51	3458.60	3452	14	4.84E-03	40.7	1.09E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:58:43.87

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511006.CNF;1 *
* Acquisition date  : 7-JUL-2009 10:58:06.  Detector SN#     :             *
* Detector ID       : GAM16                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:02.84          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232511006            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.47270E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.175E+01	3.131E+00	4.959E-01	4.174E-02	64.034
CD-109	3.810E+00	1.004E+00	1.280E+00	1.104E-01	2.975
SN-126	3.757E-01	9.900E-02	1.269E-01	1.090E-02	2.960
BA-137M	4.472E+00	3.125E-01	6.380E-02	3.888E-03	70.099
CS-137	4.727E+00	3.313E-01	6.744E-02	4.126E-03	70.099
TL-208	4.770E-01	7.476E-02	6.078E-02	4.186E-03	7.849
BI-211	4.037E+00	5.112E-01	3.560E-01	2.211E-02	11.338
PB-212	1.556E+00	1.464E-01	9.753E-02	6.880E-03	15.953
PO-212	1.556E+00	1.464E-01	9.753E-02	6.880E-03	15.953
BI-214	1.092E+00	1.665E-01	1.059E-01	8.451E-03	10.313
PB-214	1.404E+00	1.923E-01	1.310E-01	1.063E-02	10.716
PO-214	1.404E+00	1.923E-01	1.310E-01	1.063E-02	10.716
PO-216	1.556E+00	1.464E-01	9.753E-02	6.880E-03	15.953
PO-218	1.404E+00	1.923E-01	1.310E-01	1.063E-02	10.716
RA-224	4.931E+00	1.316E+00	1.109E+00	6.052E-02	4.446
RA-226	1.092E+00	1.665E-01	1.059E-01	8.451E-03	10.313
AC-228	1.605E+00	3.072E-01	1.856E-01	2.203E-02	8.646
RA-228	1.605E+00	3.072E-01	1.856E-01	2.203E-02	8.646

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.556E+00	1.464E-01	9.752E-02	6.879E-03	15.955
TH-230	1.092E+00	1.665E-01	1.059E-01	8.451E-03	10.313
TH-232	1.605E+00	3.072E-01	1.856E-01	2.203E-02	8.646
TH-234	1.598E+00	1.633E+00	2.219E+00	3.858E-01	0.720
U-234	1.092E+00	1.665E-01	1.059E-01	8.451E-03	10.313
NP-237	1.103E+00	3.692E-01	3.772E-01	8.418E-02	2.924
U-238	1.598E+00	1.633E+00	2.219E+00	3.858E-01	0.720
AM-241	8.931E+00	8.424E-01	3.724E-01	2.966E-02	23.980
AM-243	4.922E-01	7.980E-02	9.017E-02	6.921E-03	5.458
ANH-511	1.550E-01	6.212E-02	5.295E-02	3.110E-03	2.927

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.419E-01		3.867E-01	6.180E-01	4.155E-02	-0.391
NA-22	-3.792E-02		3.854E-02	5.609E-02	4.169E-03	-0.676
NA-24	3.327E-02		2.956E-02	Half-Life too short		
AL-26	1.983E-02		2.348E-02	4.489E-02	2.680E-03	0.442
TI-44	3.710E-01	+	4.966E-02	8.138E-02	6.420E-03	4.559
SC-46	-5.575E-03		3.550E-02	5.841E-02	5.490E-03	-0.095
V-48	1.830E-02		5.981E-02	1.015E-01	8.751E-03	0.180
CR-51	2.504E-01		4.040E-01	6.838E-01	4.297E-02	0.366
MN-52	-5.478E-02		1.479E-01	2.255E-01	1.865E-02	-0.243
MN-54	-1.696E-02		3.338E-02	5.368E-02	4.584E-03	-0.316
CO-56	-3.889E-02		3.445E-02	5.201E-02	4.537E-03	-0.748
CO-57	8.848E-04		2.732E-02	4.498E-02	2.751E-03	0.020
CO-58	-1.386E-02		3.464E-02	5.624E-02	4.609E-03	-0.246
FE-59	-4.480E-02		8.285E-02	1.298E-01	1.008E-02	-0.345
CO-60	-2.298E-02		3.275E-02	4.828E-02	4.143E-03	-0.476
ZN-65	-1.407E-01		1.074E-01	1.278E-01	8.489E-03	-1.101
GE-68	3.526E-01		1.213E+00	2.044E+00	1.488E-01	0.172
AS-73	2.828E-01		1.371E+00	2.151E+00	1.589E-01	0.131
AS-74	4.219E-02		8.826E-02	1.477E-01	8.936E-03	0.286
SE-75	-1.406E-02		5.176E-02	7.520E-02	4.213E-03	-0.187
BR-77	1.378E-01		6.017E+00	9.877E+00	5.828E-01	0.014
SR-82	-2.184E-01		3.139E-01	4.988E-01	3.824E-02	-0.438
RB-83	5.513E-03		7.360E-02	1.212E-01	7.149E-03	0.045
RB-84	4.052E-02		6.133E-02	1.072E-01	9.943E-03	0.378
KR-85	1.923E+01		8.810E+00	1.426E+01	8.386E-01	1.349
SR-85	9.636E-02		4.416E-02	7.145E-02	4.203E-03	1.349
RB-86	-1.234E-01		7.240E-01	1.176E+00	8.573E-02	-0.105
Y-88	1.920E-02		2.424E-02	4.634E-02	2.668E-03	0.414
ZR-88	-3.166E-02		3.465E-02	5.526E-02	2.986E-03	-0.573
Y-91	-2.174E+01		1.880E+01	2.791E+01	1.705E+00	-0.779
NB-94	-3.197E-03		3.167E-02	5.071E-02	3.363E-03	-0.063
NB-95	6.992E-02		4.755E-02	7.459E-02	5.603E-03	0.937
NB-95M	1.280E-01		1.473E-01	2.149E-01	1.558E-02	0.596

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-1.598E-02		6.341E-02	9.971E-02	8.354E-03	-0.160
NB-97	8.022E-02		8.591E-03	Half-Life too short		
ZR-97	5.197E-01		1.350E-01	Half-Life too short		
MO-99	2.296E+00		5.504E+00	9.169E+00	1.320E+00	0.250
TC-99M	-8.708E+07		5.344E+07	Half-Life too short		
RH-101	1.962E-02		3.649E-02	6.004E-02	3.143E-03	0.327
RH-102	8.667E-03		3.689E-02	6.139E-02	3.535E-03	0.141
RU-103	-2.778E-02		4.596E-02	7.303E-02	9.245E-03	-0.380
RH-106	3.310E-01		3.084E-01	5.326E-01	6.325E-02	0.621
RU-106	3.310E-01		3.066E-01	5.326E-01	3.236E-02	0.621
AG-108M	-2.475E-02		3.998E-02	6.431E-02	3.930E-03	-0.385
AG-110M	1.608E-01		4.671E-02	8.063E-02	5.202E-03	1.994
IN-111	9.676E-03		7.560E-01	1.058E+00	5.791E-02	0.009
IN-113M	-6.810E-02		5.104E-02	7.976E-02	4.636E-03	-0.854
SN-113	-6.810E-02		5.104E-02	7.976E-02	4.636E-03	-0.854
IN-114M	7.949E-02		2.177E-01	3.135E-01	1.627E-02	0.254
CD-115	2.914E+00		5.929E+00	9.975E+00	5.905E-01	0.292
SN-117M	1.157E-02		5.344E-02	8.773E-02	4.569E-03	0.132
SB-122	-1.383E-01		1.181E+00	1.914E+00	1.148E-01	-0.072
I-123	1.447E-01		2.020E-01	Half-Life too short		
TE-123M	1.089E-02		3.042E-02	5.015E-02	2.651E-03	0.217
I-124	1.931E-01		5.425E-01	7.857E-01	4.760E-02	0.246
SB-124	8.176E-03		6.502E-02	1.102E-01	8.039E-03	0.074
SB-125	-2.693E-02		1.091E-01	1.787E-01	1.041E-02	-0.151
TE-125M	-5.657E+00		9.633E+00	1.559E+01	1.370E+00	-0.363
I-126	-7.379E-03		1.882E-01	2.617E-01	1.611E-02	-0.028
SB-126	-8.078E-02		1.333E-01	1.822E-01	1.253E-02	-0.443
SB-127	1.062E-03		8.328E-01	1.346E+00	1.225E-01	0.001
XE-127	-4.439E-03		5.495E-02	8.173E-02	4.301E-03	-0.054
I-131	-1.591E-02		1.068E-01	1.769E-01	1.097E-02	-0.090
TE-132	-3.646E-01		4.939E-01	7.687E-01	1.060E-01	-0.474
BA-133	-1.389E-03		5.553E-02	8.049E-02	9.200E-03	-0.017
I-133	3.713E-04		5.752E-04	Half-Life too short		
CS-134	1.099E-01	+	7.031E-02	8.183E-02	6.561E-03	1.343
CS-135	1.854E-01		1.972E-01	2.882E-01	2.153E-02	0.643
I-135	1.973E+07		1.182E+07	Half-Life too short		
CS-136	-8.486E-03		9.296E-02	1.522E-01	1.239E-02	-0.056
CE-139	1.800E-03		3.186E-02	5.197E-02	2.629E-03	0.035
BA-140	-6.821E-02		2.444E-01	3.920E-01	1.276E-01	-0.174
LA-140	-1.311E-02		6.115E-02	9.674E-02	7.238E-03	-0.135
CE-141	6.370E-02		6.490E-02	1.091E-01	6.257E-03	0.584
CE-143	2.312E-04		3.884E-05	Half-Life too short		
CE-144	-6.578E-02		2.241E-01	3.639E-01	5.163E-02	-0.181
PM-144	-1.868E-03		3.109E-02	4.995E-02	3.273E-03	-0.037
PR-144	-1.264E-01		2.104E+00	3.381E+00	2.215E-01	-0.037
PM-146	1.452E-02		5.763E-02	9.608E-02	8.207E-03	0.151
ND-147	-7.989E-02		5.246E-01	8.517E-01	1.156E-01	-0.094
PM-149	1.139E+01		5.038E+01	8.553E+01	1.204E+01	0.133

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	1.208E-01		1.315E-01	1.791E-01	1.134E-02	0.675
GD-153	-3.537E-03		9.109E-02	1.323E-01	9.986E-03	-0.027
EU-154	-1.088E-01		1.078E-01	1.558E-01	1.625E-02	-0.699
EU-155	-1.014E-02		1.123E-01	1.849E-01	1.309E-02	-0.055
TB-160	-2.770E-02		1.315E-01	2.157E-01	1.993E-02	-0.128
HO-166M	-1.538E-02		5.654E-02	8.923E-02	6.027E-03	-0.172
TM-171	-9.936E+00		3.366E+01	4.877E+01	3.592E+00	-0.204
LU-176	5.087E-03		2.679E-02	4.420E-02	2.477E-03	0.115
LU-177	2.334E+00	+	1.462E+00	1.707E+00	9.038E-02	1.367
LU-177M	-2.919E-01		2.138E-01	3.334E-01	1.835E-02	-0.876
HF-181	4.297E-03		4.974E-02	8.220E-02	4.754E-03	0.052
W-181	9.797E-02		4.466E-01	6.601E-01	4.837E-02	0.148
TA-182	2.463E-02		2.029E-01	3.345E-01	2.144E-02	0.074
RE-183	-1.169E-02		1.191E-01	1.914E-01	9.819E-03	-0.061
RE-184	8.474E-03		2.580E-01	4.137E-01	2.276E-02	0.020
OS-185	-4.094E-02		4.141E-02	6.221E-02	3.789E-03	-0.658
RE-188	-1.567E-01		1.827E-01	2.897E-01	1.530E-02	-0.541
W-188	1.473E-01		8.867E+00	1.302E+01	7.281E-01	0.011
IR-192	9.842E-03		3.723E-02	6.308E-02	3.553E-03	0.156
AU-195	-6.502E-02		2.317E-01	3.801E-01	2.821E-02	-0.171
TL-200	-7.437E-05		6.409E-05	Half-Life too short		
TL-201	5.766E-01		4.723E+00	7.639E+00	3.866E-01	0.075
TL-202	7.190E-02		7.785E-02	1.334E-01	7.498E-03	0.539
HG-203	8.393E-05		4.372E-02	7.306E-02	4.345E-03	0.001
BI-207	4.000E-02		5.272E-02	9.180E-02	6.881E-03	0.436
TL-207	9.995E-02		8.188E-01	1.202E+00	1.978E-01	0.083
PO-209	-5.213E+00		6.468E+00	9.990E+00	9.508E-01	-0.522
BI-210	-9.619E-01		5.235E+00	8.740E+00	6.903E-01	-0.110
PB-210	-9.619E-01		5.235E+00	8.740E+00	6.903E-01	-0.110
PO-210	-9.619E-01		5.235E+00	8.740E+00	5.977E-01	-0.110
PB-211	8.399E-02		1.105E+00	1.837E+00	1.145E+00	0.046
BI-212	1.033E+00	+	4.195E-01	5.896E-01	5.085E-02	1.752
PO-215	9.995E-02		8.188E-01	1.202E+00	1.978E-01	0.083
RN-219	-5.097E-01		4.872E-01	7.651E-01	1.030E-01	-0.666
RN-220	-1.778E+01		2.743E+01	4.307E+01	2.572E+00	-0.413
RA-223	9.995E-02		8.188E-01	1.202E+00	1.978E-01	0.083
AC-227	-2.825E-01		4.233E-01	6.559E-01	9.080E-02	-0.431
TH-227	-2.825E-01		4.241E-01	6.559E-01	1.102E-01	-0.431
TH-229	-1.483E-01		5.632E-01	9.035E-01	4.706E-02	-0.164
PA-231	6.552E-01		1.667E+00	2.845E+00	3.894E-01	0.230
TH-231	9.995E-02		8.188E-01	1.202E+00	1.978E-01	0.083
U-231	7.651E-01		8.691E-01	1.307E+00	1.006E-01	0.585
PA-233	-4.995E-02		6.846E-02	1.115E-01	6.663E-03	-0.448
PA-234	-3.491E-01		3.112E-01	4.353E-01	8.257E-02	-0.802
PA-234M	1.009E+00		6.165E+00	1.049E+01	1.155E+00	0.096
U-235	2.282E-01		2.321E-01	3.835E-01	6.217E-02	0.595
NP-236	2.686E-02		8.602E-02	1.416E-01	7.322E-03	0.190
NP-239	-8.538E-02		2.055E-01	3.340E-01	2.109E-02	-0.256

Sample ID : G232511006 Acquisition date : 7-JUL-2009 10:58:06

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.137E-02		1.003E-01	1.651E-01	1.164E-02	-0.069
CM-247	-8.823E-03		4.319E-02	7.109E-02	3.876E-03	-0.124
CF-249	7.219E-02		4.675E-02	8.224E-02	4.453E-03	0.878
CF-251	6.517E-02		1.346E-01	2.222E-01	1.135E-02	0.293

VAX/VMS Nuclide Identification Report Generated

```
*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232511006       *
* Acquisition date  :  7-JUL-2009 10:58:06 Detector SN#     :           *
* Detector ID       : GAM16                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:02.84      Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232511006           Analyst initials: MXR1       *
* Batch Number      : 881220               Sample Quantity : 1.4727E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
*                                                                       *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
*************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.175E+01	3.068E+00	2.496E-01	1.565E+00
CD-109	3.810E+00	9.839E-01	6.876E-01	5.020E-01
SN-126	3.757E-01	9.702E-02	6.815E-02	4.950E-02
BA-137M	4.472E+00	3.063E-01	3.273E-02	1.563E-01
CS-137	4.727E+00	3.247E-01	3.460E-02	1.657E-01
TL-208	4.770E-01	7.327E-02	3.127E-02	3.738E-02
BI-211	4.037E+00	5.010E-01	1.854E-01	2.556E-01
PB-212	1.556E+00	1.435E-01	5.123E-02	7.322E-02
PO-212	1.556E+00	1.435E-01	5.123E-02	7.322E-02
BI-214	1.092E+00	1.632E-01	5.445E-02	8.324E-02
PB-214	1.404E+00	1.885E-01	6.823E-02	9.616E-02
PO-214	1.404E+00	1.885E-01	6.823E-02	9.616E-02
PO-216	1.556E+00	1.435E-01	5.123E-02	7.322E-02
PO-218	1.404E+00	1.885E-01	6.823E-02	9.616E-02
RA-224	4.931E+00	1.290E+00	5.826E-01	6.582E-01
RA-226	1.092E+00	1.632E-01	5.445E-02	8.324E-02
AC-228	1.605E+00	3.011E-01	9.449E-02	1.536E-01
RA-228	1.605E+00	3.011E-01	9.449E-02	1.536E-01
TH-228	1.556E+00	1.435E-01	5.123E-02	7.322E-02
TH-230	1.092E+00	1.631E-01	5.444E-02	8.324E-02
TH-232	1.605E+00	3.011E-01	9.449E-02	1.536E-01
TH-234	1.598E+00	1.600E+00	1.200E+00	8.165E-01
U-234	1.092E+00	1.631E-01	5.444E-02	8.324E-02
NP-237	1.103E+00	3.619E-01	2.026E-01	1.846E-01
U-238	1.598E+00	1.600E+00	1.200E+00	8.165E-01
AM-241	8.931E+00	8.255E-01	2.017E-01	4.212E-01
AM-243	4.922E-01	7.820E-02	4.859E-02	3.990E-02
ANH-511	1.550E-01	6.088E-02	2.733E-02	3.106E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-2.419E-01	3.790E-01	3.195E-01	1.933E-01	NOT IDENT.
NA-22	-3.792E-02	3.777E-02	2.832E-02	1.927E-02	NOT IDENT.
NA-24	3.327E+04	5.794E+04	0.000E+00	2.956E+04	SHORT HLIF
AL-26	1.983E-02	2.301E-02	2.247E-02	1.174E-02	NOT IDENT.
TI-44	3.710E-01	4.866E-02	4.381E-02	2.483E-02	FAIL ABUN
SC-46	-5.575E-03	3.479E-02	2.976E-02	1.775E-02	FAIL ABUN
V-48	1.830E-02	5.861E-02	5.158E-02	2.990E-02	NOT IDENT.
CR-51	2.504E-01	3.959E-01	3.568E-01	2.020E-01	NOT IDENT.
MN-52	-5.478E-02	1.450E-01	1.136E-01	7.396E-02	NOT IDENT.
MN-54	-1.696E-02	3.271E-02	2.739E-02	1.669E-02	NOT IDENT.
CO-56	-3.889E-02	3.376E-02	2.652E-02	1.722E-02	NOT IDENT.
CO-57	8.848E-04	2.678E-02	2.398E-02	1.366E-02	NOT IDENT.
CO-58	-1.386E-02	3.395E-02	2.871E-02	1.732E-02	NOT IDENT.
FE-59	-4.480E-02	8.119E-02	6.580E-02	4.142E-02	NOT IDENT.
CO-60	-2.298E-02	3.210E-02	2.436E-02	1.638E-02	NOT IDENT.
ZN-65	-1.407E-01	1.052E-01	6.477E-02	5.368E-02	NOT IDENT.
GE-68	3.526E-01	1.189E+00	1.037E+00	6.066E-01	NOT IDENT.
AS-73	2.828E-01	1.344E+00	1.168E+00	6.856E-01	NOT IDENT.
AS-74	4.219E-02	8.649E-02	7.597E-02	4.413E-02	NOT IDENT.
SE-75	-1.406E-02	5.072E-02	3.941E-02	2.588E-02	NOT IDENT.
BR-77	1.378E-01	5.896E+00	5.096E+00	3.008E+00	FAIL ABUN
SR-82	-2.184E-01	3.076E-01	2.549E-01	1.569E-01	NOT IDENT.
RB-83	5.513E-03	7.213E-02	6.252E-02	3.680E-02	NOT IDENT.
RB-84	4.052E-02	6.010E-02	5.463E-02	3.066E-02	NOT IDENT.
KR-85	1.923E+01	8.634E+00	7.357E+00	4.405E+00	NOT IDENT.
SR-85	9.636E-02	4.327E-02	3.688E-02	2.208E-02	NOT IDENT.
RB-86	-1.234E-01	7.095E-01	5.964E-01	3.620E-01	NOT IDENT.
Y-88	1.920E-02	2.376E-02	2.319E-02	1.212E-02	NOT IDENT.
ZR-88	-3.166E-02	3.396E-02	2.870E-02	1.732E-02	NOT IDENT.
Y-91	-2.174E+01	1.843E+01	1.411E+01	9.401E+00	NOT IDENT.
NB-94	-3.197E-03	3.104E-02	2.598E-02	1.583E-02	NOT IDENT.
NB-95	6.992E-02	4.660E-02	3.813E-02	2.378E-02	NOT IDENT.
NB-95M	1.280E-01	1.443E-01	1.129E-01	7.365E-02	NOT IDENT.
ZR-95	-1.598E-02	6.214E-02	5.099E-02	3.171E-02	NOT IDENT.
NB-97	8.022E+04	1.684E+04	0.000E+00	8.591E+03	SHORT HLIF
ZR-97	5.197E+05	2.645E+05	0.000E+00	1.350E+05	SHORT HLIF
MO-99	2.296E+00	5.394E+00	4.691E+00	2.752E+00	NOT IDENT.
TC-99M	-8.708E+13	1.047E+14	0.000E+00	5.344E+13	SHORT HLIF
RH-101	1.962E-02	3.576E-02	3.167E-02	1.825E-02	NOT IDENT.
RH-102	8.667E-03	3.616E-02	3.174E-02	1.845E-02	FAIL ABUN
RU-103	-2.778E-02	4.504E-02	3.772E-02	2.298E-02	FAIL ABUN
RH-106	3.310E-01	3.023E-01	2.736E-01	1.542E-01	FAIL ABUN
RU-106	3.310E-01	3.004E-01	2.736E-01	1.533E-01	FAIL ABUN
AG-108M	-2.475E-02	3.918E-02	3.332E-02	1.999E-02	NOT IDENT.
AG-110M	1.608E-01	4.577E-02	4.137E-02	2.335E-02	NOT IDENT.
IN-111	9.676E-03	7.408E-01	5.554E-01	3.780E-01	NOT IDENT.
IN-113M	-6.810E-02	5.002E-02	4.142E-02	2.552E-02	NOT IDENT.
SN-113	-6.810E-02	5.002E-02	4.142E-02	2.552E-02	NOT IDENT.
IN-114M	7.949E-02	2.134E-01	1.655E-01	1.089E-01	NOT IDENT.
CD-115	2.914E+00	5.810E+00	5.145E+00	2.965E+00	NOT IDENT.
SN-117M	1.157E-02	5.237E-02	4.650E-02	2.672E-02	NOT IDENT.
SB-122	-1.383E-01	1.157E+00	9.856E-01	5.903E-01	NOT IDENT.
I-123	1.447E+05	3.959E+05	0.000E+00	2.020E+05	SHORT HLIF
TE-123M	1.089E-02	2.981E-02	2.658E-02	1.521E-02	NOT IDENT.
I-124	1.931E-01	5.316E-01	4.040E-01	2.712E-01	FAIL ABUN
SB-124	8.176E-03	6.372E-02	5.527E-02	3.251E-02	FAIL ABUN
SB-125	-2.693E-02	1.070E-01	9.262E-02	5.457E-02	FAIL ABUN
TE-125M	-5.657E+00	9.441E+00	8.334E+00	4.817E+00	NOT IDENT.
I-126	-7.379E-03	1.844E-01	1.342E-01	9.410E-02	NOT IDENT.
SB-126	-8.078E-02	1.306E-01	9.328E-02	6.665E-02	FAIL ABUN
SB-127	1.062E-03	8.162E-01	6.898E-01	4.164E-01	FAIL ABUN
XE-127	-4.439E-03	5.385E-02	4.309E-02	2.748E-02	NOT IDENT.
I-131	-1.591E-02	1.046E-01	9.203E-02	5.338E-02	NOT IDENT.
TE-132	-3.646E-01	4.840E-01	4.042E-01	2.469E-01	NOT IDENT.
BA-133	-1.389E-03	5.442E-02	4.189E-02	2.777E-02	NOT IDENT.
I-133	3.713E+02	1.127E+03	0.000E+00	5.752E+02	SHORT HLIF
CS-134	1.099E-01	6.891E-02	4.180E-02	3.516E-02	FAIL ABUN
CS-135	1.854E-01	1.932E-01	1.510E-01	9.859E-02	NOT IDENT.
I-135	1.973E+13	2.316E+13	0.000E+00	1.182E+13	SHORT HLIF
CS-136	-8.486E-03	9.110E-02	7.725E-02	4.648E-02	FAIL ABUN
CE-139	1.800E-03	3.123E-02	2.752E-02	1.593E-02	NOT IDENT.
BA-140	-6.821E-02	2.396E-01	2.021E-01	1.222E-01	NOT IDENT.
LA-140	-1.311E-02	5.993E-02	4.858E-02	3.058E-02	FAIL ABUN
CE-141	6.370E-02	6.361E-02	5.796E-02	3.245E-02	NOT IDENT.
CE-143	2.312E+02	7.613E+01	0.000E+00	3.884E+01	SHORT HLIF
CE-144	-6.578E-02	2.196E-01	1.936E-01	1.120E-01	NOT IDENT.
PM-144	-1.868E-03	3.047E-02	2.560E-02	1.555E-02	NOT IDENT.

PR-144	-1.264E-01	2.062E+00	1.733E+00	1.052E+00	NOT IDENT.
PM-146	1.452E-02	5.648E-02	4.973E-02	2.881E-02	NOT IDENT.
ND-147	-7.989E-02	5.141E-01	4.392E-01	2.623E-01	FAIL ABUN
PM-149	1.139E+01	4.938E+01	4.474E+01	2.519E+01	NOT IDENT.
EU-152	1.208E-01	1.288E-01	9.329E-02	6.573E-02	FAIL ABUN
GD-153	-3.537E-03	8.927E-02	7.087E-02	4.555E-02	FAIL ABUN
EU-154	-1.088E-01	1.057E-01	7.869E-02	5.390E-02	NOT IDENT.
EU-155	-1.014E-02	1.100E-01	9.893E-02	5.613E-02	FAIL ABUN
TB-160	-2.770E-02	1.288E-01	1.099E-01	6.573E-02	FAIL ABUN
HO-166M	-1.538E-02	5.541E-02	4.570E-02	2.827E-02	NOT IDENT.
TM-171	-9.936E+00	3.299E+01	2.635E+01	1.683E+01	FAIL ABUN
LU-176	5.087E-03	2.625E-02	2.309E-02	1.339E-02	FAIL ABUN
LU-177	2.334E+00	1.433E+00	8.996E-01	7.309E-01	FAIL ABUN
LU-177M	-2.919E-01	2.095E-01	1.729E-01	1.069E-01	NOT IDENT.
HF-181	4.297E-03	4.875E-02	4.249E-02	2.487E-02	NOT IDENT.
W-181	9.797E-02	4.377E-01	3.568E-01	2.233E-01	NOT IDENT.
TA-182	2.463E-02	1.989E-01	1.691E-01	1.015E-01	FAIL ABUN
RE-183	-1.169E-02	1.167E-01	1.014E-01	5.956E-02	FAIL ABUN
RE-184	8.474E-03	2.528E-01	2.170E-01	1.290E-01	FAIL ABUN
OS-185	-4.094E-02	4.058E-02	3.194E-02	2.071E-02	FAIL ABUN
RE-188	-1.567E-01	1.790E-01	1.536E-01	9.135E-02	NOT IDENT.
W-188	1.473E-01	8.690E+00	6.809E+00	4.434E+00	FAIL ABUN
IR-192	9.842E-03	3.648E-02	3.292E-02	1.861E-02	FAIL ABUN
AU-195	-6.502E-02	2.270E-01	2.036E-01	1.158E-01	FAIL ABUN
TL-200	-7.437E+01	1.256E+02	0.000E+00	6.409E+01	SHORT HLIF
TL-201	5.766E-01	4.628E+00	4.045E+00	2.361E+00	NOT IDENT.
TL-202	7.190E-02	7.629E-02	6.909E-02	3.892E-02	NOT IDENT.
HG-203	8.393E-05	4.285E-02	3.824E-02	2.186E-02	NOT IDENT.
BI-207	4.000E-02	5.167E-02	4.656E-02	2.636E-02	FAIL ABUN
TL-207	9.995E-02	8.025E-01	6.272E-01	4.094E-01	FAIL ABUN
PO-209	-5.213E+00	6.339E+00	5.088E+00	3.234E+00	NOT IDENT.
BI-210	-9.619E-01	5.130E+00	4.758E+00	2.617E+00	NOT IDENT.
PB-210	-9.619E-01	5.130E+00	4.758E+00	2.617E+00	NOT IDENT.
PO-210	-9.619E-01	5.130E+00	4.758E+00	2.617E+00	NOT IDENT.
PB-211	8.399E-02	1.083E+00	9.535E-01	5.524E-01	NOT IDENT.
BI-212	1.033E+00	4.111E-01	3.018E-01	2.097E-01	FAIL ABUN
PO-215	9.995E-02	8.025E-01	6.272E-01	4.094E-01	FAIL ABUN
RN-219	-5.097E-01	4.775E-01	3.971E-01	2.436E-01	FAIL ABUN
RN-220	-1.778E+01	2.688E+01	2.219E+01	1.371E+01	NOT IDENT.
RA-223	9.995E-02	8.025E-01	6.272E-01	4.094E-01	FAIL ABUN
AC-227	-2.825E-01	4.148E-01	3.440E-01	2.116E-01	FAIL ABUN
TH-227	-2.825E-01	4.156E-01	3.440E-01	2.121E-01	FAIL ABUN
TH-229	-1.483E-01	5.519E-01	4.768E-01	2.816E-01	FAIL ABUN
PA-231	6.552E-01	1.634E+00	1.488E+00	8.336E-01	FAIL ABUN
TH-231	9.995E-02	8.025E-01	6.272E-01	4.094E-01	FAIL ABUN
U-231	7.651E-01	8.518E-01	7.005E-01	4.346E-01	FAIL ABUN
PA-233	-4.995E-02	6.709E-02	5.822E-02	3.423E-02	FAIL ABUN
PA-234	-3.491E-01	3.049E-01	2.214E-01	1.556E-01	FAIL ABUN
PA-234M	1.009E+00	6.042E+00	5.327E+00	3.082E+00	FAIL ABUN
U-235	2.282E-01	2.275E-01	2.038E-01	1.161E-01	FAIL ABUN
NP-236	2.686E-02	8.430E-02	7.504E-02	4.301E-02	NOT IDENT.
NP-239	-8.538E-02	2.014E-01	1.782E-01	1.028E-01	FAIL ABUN
CM-243	-1.137E-02	9.826E-02	8.835E-02	5.013E-02	FAIL ABUN
CM-247	-8.823E-03	4.233E-02	3.690E-02	2.160E-02	NOT IDENT.
CF-249	7.219E-02	4.582E-02	4.272E-02	2.338E-02	NOT IDENT.
CF-251	6.517E-02	1.319E-01	1.175E-01	6.731E-02	NOT IDENT.

```
*************************************************************************
*                        GEL Laboratories LLC                           *
*                           2040 SAVAGE ROAD                            *
*                          CHARLESTON ,SC 29417                         *
*                  GAMMA SPECTROSCOPY BACKGROUND REPORT                 *
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ENERGY	MDA COUNTS
46.50	822.1204
46.50	822.1204
46.50	822.1204
48.70	870.7361
49.72	924.1003
51.35	927.6342
52.39	941.1556
52.97	1009.8303
53.15	1003.8704
53.44	990.0772
54.07	959.3887
56.28	1099.6089
56.28	1099.6134
57.37	0.0000
57.53	1090.0615
57.53	1090.0637
57.60	1071.0315
57.98	1071.6860
57.98	1071.6860
59.32	1034.0894
59.32	1034.0894
59.40	1034.2197
59.54	1034.4482
59.72	1034.7430
60.01	1035.2152
61.10	596.2633
61.14	596.3002
61.30	596.4488
63.00	598.0112
63.29	598.2747
63.29	598.2747
63.58	3777.1184
64.28	888.5255
65.12	672.2195
65.20	672.2994
65.20	672.2994
66.05	641.8086
66.72	651.4054
66.83	651.5145
66.91	651.5917
67.20	651.8684
67.20	651.8684
67.75	622.8405
67.85	622.9319
68.90	661.9797
68.90	661.9797
69.30	646.7408
69.67	685.7260
70.82	662.8027
70.82	662.8027
70.83	662.8135
72.80	660.1385
72.87	660.2026
72.87	660.2026
74.67	636.5441
74.81	636.6675
74.81	636.6675
74.81	636.6675
74.81	636.6675
74.81	636.6675
74.81	636.6675
74.97	636.8064
75.28	637.0789
75.70	637.4440
77.11	610.9985
77.11	610.9985
77.11	610.9985

77.11	610.9985
77.11	610.9985
77.11	610.9985
78.38	640.8997
79.62	651.5927
79.80	651.7469
79.80	651.7469
80.11	605.0812
80.18	605.1370
80.30	605.2316
80.30	605.2316
80.57	559.7534
81.00	579.1196
81.07	579.1730
81.07	579.1730
81.07	579.1730
81.07	579.1730
82.60	624.2369
83.37	629.8239
83.78	631.6878
83.78	631.6878
83.78	631.6878
83.78	631.6878
84.21	661.1151
84.40	661.2759
84.90	615.5551
85.43	615.9696
86.29	616.6417
86.50	616.8060
86.54	616.8354
86.59	616.8747
86.72	616.9777
86.79	617.0292
86.94	617.1470
87.30	617.4266
87.30	617.4266
87.30	617.4266
87.30	617.4266
87.30	617.4266
87.30	617.4266
87.57	617.6351
87.88	617.8754
88.03	617.9907
88.36	618.2434
88.47	618.3292
89.95	619.4625
91.11	620.3455
92.29	621.2358
92.38	621.3046
92.38	621.3046
93.35	564.9569
94.00	556.1038
94.67	562.7463
94.67	562.7497
94.90	541.1950
94.90	541.1950
94.90	541.1950
94.90	541.1950
95.87	532.5042
95.87	532.5042
96.73	509.7353
97.43	533.4839
98.44	516.0932
98.44	516.0952
98.88	546.2658
99.55	534.9977
99.55	534.9977
99.86	542.9871
100.00	543.0742
100.10	543.1400
103.18	541.1381
103.76	519.9503
105.00	494.2005
105.31	528.7029
108.00	519.4600
109.28	565.5086
111.00	539.9180
111.00	539.9180

111.76	563.0811
112.95	536.1053
115.19	524.4959
116.30	543.9696
117.00	547.3490
117.00	547.3490
117.66	538.7808
121.11	502.7964
121.62	496.0729
121.78	524.1048
122.06	524.2550
122.32	536.3793
122.32	536.3793
122.32	536.3793
122.32	536.3793
123.07	513.7980
127.23	577.1792
129.76	512.2076
131.20	520.9918
133.02	582.4807
133.54	562.5754
135.34	495.7609
136.00	498.0959
136.25	513.4056
136.48	519.5949
140.51	546.9891
140.51	0.0000
142.18	529.5096
142.65	522.6086
143.76	502.7493
144.24	510.1128
144.24	510.1128
144.24	510.1128
144.24	510.1128
145.22	502.4014
145.44	511.6949
147.16	556.4844
152.43	465.5906
152.70	480.0938
153.22	486.4857
154.21	548.6722
154.21	548.6722
154.21	548.6722
154.21	548.6722
155.03	558.3420
156.02	499.0253
158.56	503.2294
159.00	0.0000
159.00	494.1154
160.31	492.6036
161.27	517.8680
162.32	513.1463
162.64	480.1039
163.35	493.8820
163.89	514.8698
165.85	494.9279
167.43	488.2936
171.28	537.8990
171.86	489.0449
172.10	489.1413
176.55	444.7614
176.60	444.7775
181.06	478.3729
184.41	523.5488
185.71	510.3464
186.00	510.4643
190.27	463.1669
192.34	474.3788
193.63	494.3357
197.04	464.7036
198.01	477.8423
198.60	504.7277
200.40	481.9023
201.83	511.2921
202.84	502.3978
205.31	494.1598
208.36	488.3815
208.81	469.8337

209.75	456.1642
209.75	456.1642
210.97	492.7460
215.65	455.6259
216.55	454.0622
218.09	465.3784
222.10	438.4691
223.80	438.9869
226.40	423.4447
227.00	441.0437
227.08	445.4247
227.20	445.4621
228.16	456.6509
228.18	456.6573
228.18	456.6573
231.56	0.0000
235.69	413.6309
236.00	415.4704
236.00	415.4704
238.60	404.9958
238.63	405.0042
238.63	405.0042
238.63	405.0042
239.00	405.1027
240.98	405.6348
241.98	405.9023
241.98	405.9023
241.98	405.9023
244.69	356.1532
245.39	349.2602
247.94	355.1385
248.90	381.3735
249.79	381.4341
252.40	346.6350
252.85	360.0287
252.85	360.0287
254.15	0.0000
256.20	368.5658
256.20	368.5658
260.50	337.2826
260.90	340.7108
262.80	345.5713
264.65	339.2725
268.24	329.2863
268.79	334.7693
269.46	306.2512
269.46	306.2512
269.46	306.2512
269.46	306.2512
271.23	372.9222
273.65	412.9724
276.40	320.1349
277.35	339.3411
277.60	359.9609
277.60	359.9609
278.00	352.0477
278.60	357.4745
279.20	351.2999
279.53	327.0412
280.46	359.6747
281.68	396.0217
283.67	329.6540
284.30	311.7087
285.00	323.5853
285.90	328.2819
286.10	337.3619
286.10	337.3619
287.40	342.1472
288.45	0.0000
290.67	338.5703
290.80	338.5931
291.72	341.8002
293.26	0.0000
293.70	346.7380
295.21	295.5112
295.21	295.5112
295.21	295.5112
295.96	336.5771

296.50	336.6810
297.23	336.8210
298.57	337.0785
299.80	300.8511
299.80	300.8511
300.09	314.5767
300.09	314.5767
300.09	314.5767
300.10	314.5767
300.12	314.5809
301.29	275.2524
302.84	281.5838
303.76	298.4821
303.91	298.5060
304.40	310.7771
304.40	310.7771
304.84	326.0897
306.84	285.7794
308.46	276.6736
311.98	307.5073
316.51	296.3131
318.01	299.3237
319.02	289.3499
319.41	290.3329
320.08	298.7389
323.87	297.2001
323.87	297.2001
323.87	297.2001
323.87	297.2001
325.23	317.4492
328.77	310.3371
333.44	371.4746
334.20	371.6260
334.20	371.6260
334.30	371.6455
338.28	304.4589
338.28	304.4589
338.28	304.4589
338.28	304.4589
338.32	304.4629
338.32	304.4629
338.32	304.4629
340.50	279.6460
340.57	279.6533
344.27	233.4961
345.85	261.7275
350.59	0.0000
351.07	263.3723
351.92	293.8036
351.92	293.8036
351.92	293.8036
355.39	0.0000
356.01	283.4532
364.48	264.2192
366.43	262.5899
367.43	270.2791
367.94	0.0000
369.80	260.1892
374.96	257.0563
383.85	296.2776
387.95	242.4534
388.63	253.9891
391.69	303.1274
391.69	303.1274
392.90	286.0793
398.62	266.7062
400.65	293.8489
401.10	292.9519
401.81	299.7744
402.60	278.7391
404.84	280.9538
410.95	255.6965
411.60	256.7393
413.65	324.6058
414.70	286.0996
415.30	281.3450
415.76	268.8340
417.63	0.0000

418.52	274.0111
423.70	234.8629
427.08	246.8842
427.89	259.6145
432.53	241.6395
433.93	275.9112
439.47	258.0187
439.56	258.0284
439.89	260.0222
443.98	300.6367
444.90	285.0820
445.03	285.0997
445.03	285.0997
445.03	285.0997
445.03	285.0997
453.90	290.1277
463.38	254.7687
468.07	280.3381
473.00	234.9807
475.06	251.0574
475.35	256.0505
476.78	257.1947
477.59	257.2832
477.96	257.3212
482.03	227.8986
484.57	220.1664
487.03	217.3986
490.36	0.0000
492.35	198.8810
497.08	219.2887
507.63	0.0000
510.53	0.0000
510.84	195.3250
511.00	195.3368
511.85	181.3030
511.85	181.3030
513.99	161.2930
513.99	161.2930
520.41	167.7629
520.65	167.7792
527.90	153.0497
528.96	0.0000
529.64	152.1387
529.87	0.0000
531.02	163.3820
537.32	160.7233
543.00	153.9345
546.56	0.0000
549.76	161.4833
552.65	126.8699
555.20	138.2563
563.23	146.8857
563.90	140.7595
568.70	125.5683
569.32	123.5391
569.50	129.7253
569.67	129.7314
573.80	149.5206
574.00	148.5000
574.64	150.5981
578.91	144.6313
579.30	0.0000
583.14	146.9229
585.48	115.6361
591.81	146.3426
592.07	145.3184
593.00	140.1746
595.88	137.1981
600.56	151.5398
602.52	0.0000
602.71	138.9193
602.71	138.9193
603.60	145.9131
604.41	159.8545
604.70	159.8695
609.31	125.3174
609.31	125.3174
609.31	125.3174

609.31	125.3174
610.33	125.3613
612.46	95.8337
614.37	95.8986
618.01	102.4208
621.84	97.5433
621.84	97.5433
631.29	92.5998
633.02	105.2881
633.10	105.2905
634.78	130.6359
635.90	132.7922
636.97	133.8957
645.85	134.2957
646.12	126.9053
656.30	123.7988
657.75	100.8563
657.90	0.0000
661.65	148.8218
661.65	148.8218
664.57	0.0000
666.33	124.2090
666.33	124.2090
675.00	92.8857
677.61	92.9643
685.20	91.0492
692.80	109.5255
695.00	83.8138
696.49	98.9045
696.49	98.9045
697.00	101.0706
697.49	95.7098
698.33	96.8093
698.50	95.7402
699.00	100.0590
702.63	107.7124
706.10	104.5947
706.58	0.0000
706.67	101.3782
709.31	98.2249
711.68	100.4586
713.82	97.2817
717.42	81.1597
720.50	106.7681
721.93	0.0000
722.20	102.9542
722.78	101.1650
722.78	101.1650
722.89	101.1696
722.95	101.1719
723.30	95.7627
724.18	90.3666
727.18	78.1488
733.00	50.7420
735.90	62.8799
739.58	63.1911
742.81	73.0686
744.21	68.7355
747.13	77.5332
751.79	79.8277
752.31	68.9032
753.82	76.5950
755.35	85.3868
756.15	88.6926
756.87	85.4268
763.93	96.9467
765.79	93.3402
766.41	100.6789
766.84	96.6646
768.36	97.8066
768.36	97.8066
768.36	97.8066
768.36	97.8066
776.49	92.7169
778.00	91.8396
778.57	83.5870
778.89	83.5944
783.80	72.6754

785.46	75.4720
792.07	82.2040
795.84	66.4673
796.30	66.4761
801.93	98.2914
805.60	76.8365
810.29	87.1363
810.76	86.2206
815.85	81.7033
817.79	68.7427
818.51	66.8979
819.60	72.4950
826.30	81.9432
828.27	0.0000
831.60	79.2673
831.96	77.4106
834.83	94.2745
836.80	0.0000
846.75	89.9023
848.13	85.2533
856.28	0.0000
856.80	111.0782
860.37	88.6269
867.32	62.9629
867.82	64.5857
871.10	69.7604
873.19	74.5157
874.81	76.4368
875.33	0.0000
876.40	73.6360
879.36	85.0323
880.27	73.7137
880.51	70.8832
881.50	66.1747
883.24	86.0660
884.67	76.6379
889.25	76.7318
896.60	75.9326
898.02	76.9098
899.00	71.2311
903.28	68.4595
911.07	66.9653
911.07	66.9653
911.07	66.9653
919.63	81.3553
920.93	83.1024
925.00	56.4156
925.24	55.4630
926.50	59.3082
934.06	65.1736
934.06	65.1736
934.06	65.1736
934.06	65.1736
935.52	68.0749
937.48	79.6193
944.10	78.7935
946.00	93.2524
949.00	66.3847
962.29	79.4314
964.01	74.4983
966.15	62.8061
968.20	62.8378
969.11	59.6752
969.11	59.6752
969.11	59.6752
977.42	66.5935
980.50	65.9386
983.50	65.9884
989.30	64.1389
996.32	71.0633
1001.03	65.2975
1001.68	64.3323
1004.76	81.9390
1021.30	0.0000
1024.50	0.0000
1034.80	57.9701
1037.82	70.7930
1038.57	66.8711

1038.76	0.0000
1045.16	78.7956
1046.59	90.6449
1048.07	74.9053
1050.47	59.1699
1050.47	59.1699
1063.62	70.2344
1076.63	79.3750
1077.35	71.4492
1085.78	85.5066
1099.22	76.7932
1112.02	72.0146
1112.84	82.3192
1115.52	109.8214
1120.29	71.1473
1120.29	71.1473
1120.29	71.1473
1120.29	71.1473
1120.51	71.1502
1121.28	82.4732
1124.00	0.0000
1129.67	78.8714
1131.51	0.0000
1147.95	0.0000
1167.94	75.9460
1173.22	75.0208
1175.09	85.1929
1177.93	80.1701
1189.05	76.2939
1204.90	109.2118
1205.75	0.0000
1213.00	102.2420
1221.42	99.3524
1230.97	113.9177
1235.34	115.0488
1236.41	0.0000
1238.11	89.4178
1238.11	89.4178
1238.11	89.4178
1238.11	89.4178
1238.25	91.4771
1246.25	78.2451
1260.41	0.0000
1271.85	51.7476
1274.45	62.1289
1274.54	62.1313
1291.56	40.5234
1298.22	0.0000
1312.09	52.1667
1325.50	28.2448
1325.50	28.2448
1332.49	40.8551
1333.61	40.8630
1360.21	33.7031
1362.66	0.0000
1365.15	31.6260
1368.21	28.4810
1368.53	0.0000
1376.25	34.8638
1377.67	35.9299
1377.67	35.9299
1377.67	35.9299
1377.67	35.9299
1384.27	37.0337
1394.10	36.0420
1395.20	42.4121
1407.95	23.3822
1434.06	27.7689
1436.60	19.2334
1457.56	0.0000
1460.81	30.0531
1489.15	30.2080
1509.49	23.8208
1596.49	22.3247
1620.62	16.0845
1678.03	0.0000
1691.02	17.2310
1691.02	17.2310

1706.46	0.0000
1750.46	0.0000
1764.49	8.4756
1764.49	8.4756
1764.49	8.4756
1764.49	8.4756
1770.23	80.4699
1771.40	39.7574
1791.20	0.0000
1808.65	7.8030
1836.01	6.8564

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232511006

Total Uranium Activity	4.8596E+00	ug/g
Total Uranium Counting Unc.	4.7624E+00	ug/g
Total Uranium Tpu	2.4298E-06	ug/g
Total Uranium Mda	3.5709E+00	ug/g

```
*******************************************************************************
*                                                                             *
*                          GEL Laboratories LLC                          *
*                               2040 SAVAGE ROAD                              *
*                             CHARLESTON ,SC 29417                            *
*                              GROSS GAMMA REPORT                             *
*                                                                             *
*                                                                             *
*******************************************************************************
*                                                                             *
*   BATCH ID      : 881220                    SAMPLE ID  : G232511006         *
*   ANALYST       : MXR1                      DETECTOR   : GAM16              *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE:  7-JUL-2009 10:58:06.49    SAMPLE ALQT:  147.270 GRAM      *
*                                                                             *
*******************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.690E+01
GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.781E+00
GROSS GAMMA MDA    (pCi/GRAM  )   : 5.042E+00
GROSS GAMMA DLC    (pCi/GRAM  )   : 2.474E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:59:42.85

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871426.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:59:05.
Sample ID         : G1201871426          Sample quantity  : 1.66760E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.45  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	163.06	35	90	6.35	324.93	310	18	4.90E-03	65.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 12:59:45

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871426.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:59:05
Sample ID : G1201871426 Sample quantity : 166.76 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.45 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.607E-02	1.582E-01	2.526E-01	1.778E-02	0.143
NA-22		1274.54	*	-5.846E-03	2.266E-02	3.431E-02	2.029E-03	-0.170
NA-24		1368.53	*	-6.687E-05	2.266E-02	Half-Life too short		
AL-26		1129.67		5.837E-02	1.013E+00	1.675E+00	1.008E-01	0.035
		1808.65	*	1.319E-02	2.311E-02	4.466E-02	2.486E-03	0.295
K-40		1460.81	*	-3.939E-03	3.004E-01	4.827E-01	3.072E-02	-0.008
TI-44		67.85		1.344E-05	6.215E-03	1.012E-02	7.364E-04	0.001
		78.38	*	-2.838E-03	7.067E-03	1.056E-02	8.170E-04	-0.269
SC-46		889.25	*	-5.505E-03	2.075E-02	3.257E-02	2.338E-03	-0.169
		1120.51		1.135E-02	2.852E-02	4.992E-02	3.038E-03	0.227
V-48		944.10		-1.758E-01	3.718E-01	5.549E-01	3.900E-02	-0.317
		983.50	*	-1.429E-02	2.911E-02	4.297E-02	2.956E-03	-0.333
		1312.09		-2.955E-03	3.812E-02	6.075E-02	3.631E-03	-0.049
CR-51		320.08	*	-3.714E-02	1.410E-01	2.257E-01	1.468E-02	-0.165
MN-52		744.21		-5.530E-03	5.854E-02	9.638E-02	7.049E-03	-0.057
		848.13		-6.748E-01	1.597E+00	2.453E+00	1.785E-01	-0.275
		935.52		-2.272E-02	6.038E-02	9.028E-02	6.370E-03	-0.252
		1246.25		-7.167E-01	1.313E+00	1.814E+00	1.059E-01	-0.395
		1333.61		2.137E-01	1.234E+00	2.081E+00	1.252E-01	0.103
		1434.06	*	2.747E-02	7.133E-02	1.249E-01	7.529E-03	0.220
MN-54		834.83	*	1.938E-03	2.269E-02	3.816E-02	2.784E-03	0.051
CO-56		846.75	*	-1.369E-02	2.223E-02	3.280E-02	2.386E-03	-0.417
		977.42		2.994E-01	1.400E+00	2.413E+00	1.667E-01	0.124
		1037.82		-8.826E-02	1.887E-01	2.824E-01	2.035E-02	-0.313
		1175.09		5.902E-02	1.034E+00	1.710E+00	9.699E-02	0.035
		1238.25		1.549E-02	3.832E-02	6.785E-02	4.197E-03	0.228
		1360.21		3.230E-01	7.088E-01	1.254E+00	7.557E-02	0.258
		1771.40		6.315E-02	1.774E-01	3.217E-01	1.817E-02	0.196
CO-57		122.06	*	-8.053E-03	8.442E-03	1.220E-02	1.404E-03	-0.660
		136.48		4.857E-02	7.422E-02	1.257E-01	1.322E-02	0.387
CO-58		810.76	*	-5.482E-03	1.816E-02	2.833E-02	2.081E-03	-0.194
FE-59		142.65		1.283E-01	8.475E-01	1.308E+00	1.207E-01	0.098
		192.34		-4.089E-02	2.898E-01	4.798E-01	5.757E-02	-0.085
		1099.22	*	-3.620E-02	4.690E-02	6.351E-02	4.555E-03	-0.570

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1291.56		-8.612E-03	5.732E-02	8.927E-02	6.720E-03	-0.096
CO-60		1173.22		-3.581E-03	2.653E-02	4.213E-02	2.388E-03	-0.085
		1332.49	*	1.017E-02	2.467E-02	4.379E-02	2.634E-03	0.232
ZN-65		1115.52	*	-6.141E-02	5.987E-02	7.961E-02	4.884E-03	-0.771
GE-68		1077.35	*	-8.675E-01	6.478E-01	6.675E-01	4.260E-02	-1.300
AS-73		53.44	*	1.087E-02	6.193E-02	1.030E-01	6.920E-03	0.106
AS-74		595.88	*	-9.241E-03	4.130E-02	6.428E-02	4.423E-03	-0.144
		634.78		2.206E-02	1.505E-01	2.478E-01	1.747E-02	0.089
SE-75		66.05		-5.764E-01	6.854E-01	9.407E-01	8.756E-02	-0.613
		96.73		-1.988E-01	1.887E-01	2.686E-01	3.725E-02	-0.740
		121.11		-4.830E-02	4.338E-02	6.097E-02	8.214E-03	-0.792
		136.00		8.062E-03	1.339E-02	2.261E-02	2.275E-03	0.357
		198.60		5.472E-01	6.107E-01	1.104E+00	8.216E-02	0.496
		264.65	*	-5.787E-03	1.716E-02	2.747E-02	1.662E-03	-0.211
		279.53		7.905E-03	4.264E-02	7.216E-02	4.551E-03	0.110
		303.91		2.098E-01	9.278E-01	1.571E+00	1.505E-01	0.134
		400.65		-9.420E-03	1.102E-01	1.783E-01	1.586E-02	-0.053
BR-77		87.88		-3.904E-01	4.050E+00	6.502E+00	5.381E-01	-0.060
		200.40		-4.474E-01	6.453E+00	1.075E+01	6.659E-01	-0.042
		239.00		-8.716E-02	4.874E-01	7.903E-01	4.867E-02	-0.110
		249.79		1.659E+00	3.131E+00	5.466E+00	3.336E-01	0.303
		281.68		-3.414E+00	4.244E+00	6.422E+00	3.754E-01	-0.532
		297.23		-1.128E-01	2.433E+00	4.010E+00	2.352E-01	-0.028
		303.76		2.285E+00	8.880E+00	1.508E+01	8.847E-01	0.152
		439.47		3.577E+00	6.836E+00	1.204E+01	7.006E-01	0.297
		484.57		6.356E+00	1.282E+01	2.231E+01	1.380E+00	0.285
		520.65	*	-2.755E-01	6.468E-01	9.819E-01	6.329E-02	-0.281
		574.64		-2.916E+00	1.380E+01	2.159E+01	1.462E+00	-0.135
		578.91		-2.867E+00	5.373E+00	7.945E+00	5.399E-01	-0.361
		585.48		2.220E+00	1.001E+01	1.667E+01	1.139E+00	0.133
		755.35		1.311E+00	1.092E+01	1.854E+01	1.358E+00	0.071
		817.79		-2.199E+00	7.819E+00	1.230E+01	8.998E-01	-0.179
SR-82		698.33		-4.114E+00	1.358E+01	2.154E+01	1.560E+00	-0.191
		776.49	*	3.535E-03	1.707E-01	2.854E-01	2.092E-02	0.012
		1395.20		2.066E+00	5.341E+00	9.536E+00	5.750E-01	0.217
RB-83		520.41	*	-2.310E-02	3.880E-02	5.742E-02	3.700E-03	-0.402
		529.64		-2.017E-02	5.401E-02	8.225E-02	5.350E-03	-0.245
		552.65		1.223E-02	1.026E-01	1.690E-01	1.124E-02	0.072
RB-84		881.50	*	-3.085E-02	3.525E-02	4.814E-02	3.467E-03	-0.641
KR-85		513.99	*	-5.908E+00	6.052E+00	8.916E+00	5.707E-01	-0.663
SR-85		513.99	*	-2.795E-02	2.863E-02	4.218E-02	2.700E-03	-0.663
RB-86		1076.63	*	-3.878E-01	3.063E-01	3.227E-01	2.061E-02	-1.202
Y-88		898.02		1.095E-02	2.453E-02	4.358E-02	3.140E-03	0.251
		1836.01	*	8.547E-03	2.788E-02	4.994E-02	2.756E-03	0.171
ZR-88		392.90	*	1.440E-02	1.301E-02	2.436E-02	1.314E-03	0.591
Y-91		1204.90	*	-4.015E+00	8.154E+00	1.162E+01	6.673E-01	-0.346
NB-94		702.63	*	9.502E-04	1.860E-02	3.138E-02	2.275E-03	0.030
		871.10		-1.053E-02	2.196E-02	3.336E-02	2.411E-03	-0.316
NB-95		765.79	*	5.798E-03	2.096E-02	3.645E-02	2.672E-03	0.159

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M		235.69	*	-1.108E-02	4.704E-02	7.688E-02	6.010E-03	-0.144
ZR-95		724.18		-4.030E-02	4.779E-02	6.877E-02	5.609E-03	-0.586
		756.15	*	1.266E-02	3.865E-02	6.764E-02	5.638E-03	0.187
NB-97		657.90	*	-5.767E-07	3.865E-02	Half-Life too short		
		1024.50		-1.071E-03	3.865E-02	Half-Life too short		
ZR-97		254.15		6.631E-04	3.865E-02	Half-Life too short		
		355.39		-7.426E-05	3.865E-02	Half-Life too short		
		507.63	*	-1.295E-03	3.865E-02	Half-Life too short		
		602.52		1.580E-04	3.865E-02	Half-Life too short		
		1021.30		-1.086E-03	3.865E-02	Half-Life too short		
		1147.95		2.723E-04	3.865E-02	Half-Life too short		
		1362.66		2.514E-03	3.865E-02	Half-Life too short		
		1750.46		-7.746E-04	3.865E-02	Half-Life too short		
MO-99		140.51		-6.989E-01	1.349E+00	2.027E+00	5.670E-01	-0.345
		181.06		1.309E-01	9.005E-01	1.532E+00	2.644E-01	0.085
		366.43		-4.584E+00	5.583E+00	8.112E+00	4.558E-01	-0.565
		739.58	*	4.701E-01	9.694E-01	1.735E+00	2.512E-01	0.271
		778.00		6.965E-01	2.871E+00	4.966E+00	3.641E-01	0.140
TC-99M		140.51	*	-4.498E+00	2.871E+00	Half-Life too short		
RH-101		127.23		1.376E-03	1.084E-02	1.760E-02	1.931E-03	0.078
		198.01	*	8.788E-03	1.177E-02	2.102E-02	1.300E-03	0.418
		325.23		2.827E-02	9.675E-02	1.650E-01	9.629E-03	0.171
RH-102		418.52		1.081E-01	1.305E-01	2.377E-01	1.339E-02	0.455
		475.06	*	3.539E-03	1.431E-02	2.415E-02	1.476E-03	0.147
		631.29		-2.782E-02	3.271E-02	4.465E-02	3.142E-03	-0.623
		697.49		-1.240E-02	3.756E-02	5.927E-02	4.291E-03	-0.209
		766.84		4.282E-02	5.409E-02	1.014E-01	7.434E-03	0.422
		1046.59		-1.993E-02	6.390E-02	9.782E-02	6.424E-03	-0.204
		1112.84		6.175E-02	1.371E-01	2.424E-01	1.489E-02	0.255
RU-103		497.08	*	1.167E-03	2.172E-02	3.551E-02	4.571E-03	0.033
		610.33		-5.985E-02	4.544E-01	7.149E-01	1.136E-01	-0.084
RH-106		511.85		-1.279E-01	1.473E-01	2.623E-01	1.675E-02	-0.488
		621.84	*	-2.183E-01	2.244E-01	2.749E-01	3.401E-02	-0.794
		1050.47		6.380E-01	1.321E+00	2.369E+00	1.551E-01	0.269
RU-106		511.85		-1.279E-01	1.473E-01	2.623E-01	1.675E-02	-0.488
		621.84	*	-2.183E-01	2.233E-01	2.749E-01	1.924E-02	-0.794
		1050.47		6.380E-01	1.321E+00	2.369E+00	1.551E-01	0.269
AG-108M		433.93	*	-6.749E-04	1.564E-02	2.537E-02	1.591E-03	-0.027
		614.37		-1.837E-02	2.546E-02	3.665E-02	2.705E-03	-0.501
		722.95		-2.211E-02	2.359E-02	3.333E-02	2.561E-03	-0.664
CD-109		88.03	*	-2.770E-02	1.721E-01	2.746E-01	2.276E-02	-0.101
AG-110M		657.75	*	7.571E-05	1.849E-02	3.105E-02	2.310E-03	0.002
		677.61		-5.256E-02	1.645E-01	2.616E-01	1.956E-02	-0.201
		706.67		5.117E-02	1.140E-01	2.031E-01	1.531E-02	0.252
		763.93		-4.878E-02	8.507E-02	1.274E-01	9.701E-03	-0.383
		884.67		2.653E-02	2.589E-02	5.081E-02	3.822E-03	0.522
		937.48		1.190E-02	5.570E-02	9.602E-02	7.132E-03	0.124
		1384.27		-2.931E-02	1.330E-01	2.072E-01	1.320E-02	-0.141
IN-111		171.28		1.260E-02	5.247E-02	9.025E-02	5.486E-03	0.140

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		245.39	*	-5.371E-02	6.396E-02	9.696E-02	5.942E-03	-0.554
IN-113M		391.69	*	1.217E-02	2.038E-02	3.591E-02	2.082E-03	0.339
SN-113		391.69	*	1.217E-02	2.038E-02	3.591E-02	2.082E-03	0.339
IN-114M		190.27	*	-2.880E-02	6.040E-02	9.707E-02	5.984E-03	-0.297
CD-115		260.90		3.220E-01	5.114E+00	8.560E+00	5.156E-01	0.038
		492.35		-2.819E-01	1.804E+00	2.863E+00	1.788E-01	-0.098
		527.90	*	-3.067E-01	5.542E-01	8.183E-01	5.314E-02	-0.375
SN-117M		156.02		1.176E-01	6.489E-01	9.243E-01	6.922E-02	0.127
		158.56	*	-6.078E-03	1.446E-02	2.213E-02	1.578E-03	-0.275
SB-122		563.90	*	-5.193E-02	1.696E-01	2.612E-01	1.754E-02	-0.199
		692.80		3.495E-01	2.815E+00	4.819E+00	3.484E-01	0.073
I-123		159.00	*	-3.356E-05	2.815E+00	Half-Life too short		
		528.96		-3.678E-03	2.815E+00	Half-Life too short		
TE-123M		159.00	*	-2.599E-03	1.076E-02	1.678E-02	1.197E-03	-0.155
I-124		602.71	*	2.309E-03	1.159E-01	1.871E-01	1.293E-02	0.012
		722.78		-6.665E-01	7.048E-01	9.981E-01	7.273E-02	-0.668
		1325.50		-2.256E+00	6.682E+00	9.986E+00	5.994E-01	-0.226
		1376.25		9.558E-01	5.151E+00	8.721E+00	5.257E-01	0.110
		1509.49		-1.027E+00	3.150E+00	4.863E+00	2.917E-01	-0.211
		1691.02		-5.605E-01	9.199E-01	1.268E+00	7.348E-02	-0.442
SB-124		602.71		4.376E-04	2.196E-02	3.545E-02	2.452E-03	0.012
		645.85		1.187E-01	2.980E-01	5.063E-01	3.904E-02	0.234
		709.31		-1.510E+00	1.429E+00	1.962E+00	1.425E-01	-0.770
		713.82		6.676E-02	8.866E-01	1.495E+00	1.662E-01	0.045
		722.78		-1.831E-01	1.936E-01	2.742E-01	2.058E-02	-0.668
		968.20		1.432E+00	1.293E+00	2.517E+00	1.747E-01	0.569
		1045.16		-3.323E-01	1.278E+00	1.982E+00	1.303E-01	-0.168
		1325.50		-6.619E-01	1.961E+00	2.930E+00	1.759E-01	-0.226
		1368.21		-6.287E-01	1.044E+00	1.397E+00	1.674E-01	-0.450
		1436.60		2.694E+00	2.636E+00	5.177E+00	3.120E-01	0.520
		1691.02	*	-3.632E-02	5.961E-02	8.216E-02	5.169E-03	-0.442
SB-125		427.89	*	4.049E-04	4.593E-02	7.513E-02	4.482E-03	0.005
		463.38		-8.123E-02	1.345E-01	1.986E-01	1.381E-02	-0.409
		600.56		-3.021E-02	1.109E-01	1.715E-01	1.318E-02	-0.176
		635.90		1.504E-01	1.528E-01	2.834E-01	2.236E-02	0.531
TE-125M		109.28	*	1.741E+00	2.359E+00	4.066E+00	4.727E-01	0.428
I-126		388.63		-4.458E-02	6.562E-02	9.774E-02	5.293E-03	-0.456
		666.33	*	1.129E-02	6.326E-02	1.090E-01	7.801E-03	0.104
		753.82		1.843E-01	5.604E-01	9.824E-01	7.193E-02	0.188
SB-126		223.80		-5.842E-02	1.058E+00	1.759E+00	1.091E-01	-0.033
		278.60		1.979E-01	6.660E-01	1.139E+00	6.661E-02	0.174
		296.50		-2.836E-01	4.398E-01	6.182E-01	3.626E-02	-0.459
		414.70		-1.973E-02	2.399E-02	3.460E-02	1.937E-03	-0.570
		415.30		-1.105E+00	1.928E+00	2.888E+00	1.619E-01	-0.383
		555.20		3.947E-01	1.433E+00	2.413E+00	1.608E-01	0.164
		573.80		-1.606E-01	4.245E-01	6.474E-01	4.382E-02	-0.248
		593.00		7.032E-02	3.696E-01	6.123E-01	4.205E-02	0.115
		656.30		-5.419E-02	1.229E+00	2.051E+00	1.461E-01	-0.026
		666.33		4.637E-03	2.597E-02	4.475E-02	3.203E-03	0.104

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		-2.049E-01	7.903E-01	1.276E+00	9.167E-02	-0.161
		695.00		7.538E-03	2.340E-02	4.138E-02	2.994E-03	0.182
		697.00		2.280E-02	8.271E-02	1.450E-01	1.049E-02	0.157
		720.50	*	-6.238E-03	5.397E-02	8.864E-02	6.456E-03	-0.070
		856.80		-7.619E-02	1.724E-01	2.622E-01	1.903E-02	-0.291
		989.30		-1.890E-01	4.819E-01	7.296E-01	5.002E-02	-0.259
		1034.80		1.784E+00	4.018E+00	7.074E+00	4.693E-01	0.252
		1213.00		2.717E-01	1.336E+00	2.286E+00	1.318E-01	0.119
SN-126		64.28		1.118E-02	6.071E-02	1.006E-01	1.450E-02	0.111
		86.94		-4.665E-02	7.988E-02	1.137E-01	4.693E-02	-0.410
		87.57	*	-1.388E-02	1.888E-02	2.730E-02	2.254E-03	-0.509
SB-127		61.10		-3.988E-01	1.585E+00	2.523E+00	1.994E-01	-0.158
		252.40		1.360E-01	5.290E-01	8.954E-01	3.683E-01	0.152
		290.80		8.024E-01	2.423E+00	4.149E+00	2.833E-01	0.193
		411.60		9.572E-02	1.398E+00	2.309E+00	2.976E-01	0.041
		444.90		-5.617E-01	1.305E+00	2.000E+00	1.780E-01	-0.281
		473.00		5.014E-02	2.123E-01	3.575E-01	3.399E-02	0.140
		543.00		-1.044E+00	2.634E+00	3.998E+00	4.703E-01	-0.261
		603.60		1.038E-01	1.801E+00	2.924E+00	2.805E-01	0.035
		685.20	*	-4.623E-02	1.709E-01	2.728E-01	2.271E-02	-0.169
		698.50		-7.096E-01	1.915E+00	3.000E+00	4.139E-01	-0.237
		722.20		-2.877E+00	4.433E+00	6.673E+00	5.395E-01	-0.431
		783.80		6.199E-03	5.509E-01	9.191E-01	8.990E-02	0.007
XE-127		57.60		1.485E-01	4.831E-01	8.134E-01	5.644E-02	0.183
		145.22		7.982E-02	1.920E-01	3.201E-01	2.853E-02	0.249
		172.10		3.309E-03	3.575E-02	6.069E-02	3.692E-03	0.055
		202.84	*	-8.514E-03	1.530E-02	2.434E-02	1.509E-03	-0.350
		374.96		-2.932E-02	8.815E-02	1.390E-01	7.709E-03	-0.211
I-131		80.18		-1.211E-01	4.517E-01	7.148E-01	5.606E-02	-0.169
		284.30		-4.418E-02	3.573E-01	5.851E-01	3.767E-02	-0.076
		364.48	*	-6.106E-04	2.793E-02	4.578E-02	2.871E-03	-0.013
		636.97		1.340E-01	4.796E-01	8.044E-01	6.107E-02	0.167
		722.89		-1.905E+00	2.055E+00	2.912E+00	2.127E-01	-0.654
TE-132		49.72		-7.798E-02	2.171E-01	3.422E-01	2.508E-02	-0.228
		111.76		-6.152E-01	1.699E+00	2.633E+00	2.871E-01	-0.234
		116.30		1.296E+00	1.612E+00	2.788E+00	3.165E-01	0.465
		228.16	*	-4.061E-03	5.271E-02	8.737E-02	1.166E-02	-0.046
BA-133		53.15		-4.738E-02	2.788E-01	4.486E-01	3.008E-02	-0.106
		79.62		-9.064E-02	2.471E-01	3.871E-01	5.720E-02	-0.234
		81.00		-2.086E-02	2.250E-02	2.941E-02	4.553E-03	-0.710
		276.40		7.168E-02	1.527E-01	2.652E-01	3.447E-02	0.270
		302.84		5.032E-02	6.614E-02	1.174E-01	1.372E-02	0.429
		356.01	*	-1.452E-02	2.288E-02	3.487E-02	4.013E-03	-0.417
		383.85		-7.581E-02	1.383E-01	2.093E-01	2.238E-02	-0.362
I-133		510.53		-2.907E-04	1.383E-01	Half-Life too short		
		529.87	*	-1.195E-06	1.383E-01	Half-Life too short		
		706.58		2.405E-04	1.383E-01	Half-Life too short		
		856.28		-4.540E-04	1.383E-01	Half-Life too short		
		875.33		1.801E-04	1.383E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1236.41		-4.713E-05	1.383E-01	Half-Life too short		
		1298.22		6.047E-05	1.383E-01	Half-Life too short		
CS-134		475.35		7.866E-02	9.541E-01	1.571E+00	9.609E-02	0.050
		563.23		-1.652E-01	2.176E-01	3.110E-01	2.119E-02	-0.531
		569.32		8.532E-02	1.243E-01	2.184E-01	1.506E-02	0.391
		604.70		-3.545E-03	2.217E-02	3.494E-02	2.429E-03	-0.101
		795.84	*	-1.385E-02	2.491E-02	3.727E-02	2.759E-03	-0.372
		801.93		2.231E-01	2.489E-01	4.663E-01	3.443E-02	0.478
		1038.57		-9.644E-01	2.369E+00	3.575E+00	2.364E-01	-0.270
		1167.94		7.865E-02	1.470E+00	2.424E+00	1.384E-01	0.032
		1365.15		1.254E-02	9.031E-01	1.466E+00	9.637E-02	0.009
CS-135		268.24	*	2.832E-02	6.274E-02	1.091E-01	8.483E-03	0.260
I-135		288.45		1.315E+01	6.274E-02	Half-Life too short		
		417.63		4.520E+01	6.274E-02	Half-Life too short		
		546.56		3.383E+01	6.274E-02	Half-Life too short		
		836.80		-3.617E+00	6.274E-02	Half-Life too short		
		1038.76		-2.073E+01	6.274E-02	Half-Life too short		
		1124.00		-9.168E-01	6.274E-02	Half-Life too short		
		1131.51		-3.568E+00	6.274E-02	Half-Life too short		
		1260.41	*	-8.841E-01	6.274E-02	Half-Life too short		
		1457.56		-6.660E+00	6.274E-02	Half-Life too short		
		1678.03		-2.806E+01	6.274E-02	Half-Life too short		
		1706.46		7.884E+01	6.274E-02	Half-Life too short		
		1791.20		7.833E+00	6.274E-02	Half-Life too short		
CS-136		66.91		-9.552E-02	8.081E-02	1.051E-01	1.546E-02	-0.909
		86.29		-1.168E-01	1.614E-01	2.324E-01	2.918E-02	-0.503
		153.22		1.322E-01	1.725E-01	2.647E-01	2.374E-02	0.499
	+	163.89		4.135E-01	5.405E-01	4.483E-01	3.450E-02	0.922
		176.55		-8.190E-02	8.268E-02	1.253E-01	8.500E-03	-0.654
		273.65		-4.458E-04	1.210E-01	2.009E-01	1.345E-02	-0.002
		340.57		-2.813E-02	3.808E-02	5.725E-02	3.514E-03	-0.491
		818.51		-8.713E-03	2.604E-02	4.038E-02	2.954E-03	-0.216
		1048.07	*	7.310E-03	4.099E-02	6.971E-02	4.898E-03	0.105
		1235.34		-5.650E-02	1.978E-01	3.018E-01	3.016E-02	-0.187
BA-137M		661.65	*	-3.520E-03	1.854E-02	3.017E-02	2.155E-03	-0.117
CS-137		661.65	*	-3.721E-03	1.960E-02	3.189E-02	2.285E-03	-0.117
CE-139		165.85	*	7.198E-03	1.079E-02	1.719E-02	1.041E-03	0.419
BA-140	+	162.64		2.878E-01	3.760E-01	3.020E-01	2.171E-02	0.953
		304.84		-1.594E-02	4.029E-01	6.639E-01	1.813E-01	-0.024
		423.70		-5.052E-02	6.025E-01	9.728E-01	3.090E-01	-0.052
		537.32	*	-3.248E-03	8.285E-02	1.331E-01	4.349E-02	-0.024
LA-140		328.77		5.976E-03	8.885E-02	1.477E-01	9.627E-03	0.040
		432.53		-2.860E-01	6.799E-01	1.043E+00	6.641E-02	-0.274
		487.03		1.756E-02	4.991E-02	8.504E-02	5.890E-03	0.206
		751.79		-3.853E-01	7.315E-01	1.125E+00	9.431E-02	-0.343
		815.85		-5.349E-02	1.164E-01	1.762E-01	1.491E-02	-0.304
		867.82		-1.527E-01	5.883E-01	9.325E-01	7.248E-02	-0.164
		919.63		-1.804E-01	9.549E-01	1.514E+00	1.432E-01	-0.119
		925.24		-1.576E-01	4.399E-01	6.760E-01	5.229E-02	-0.233

---- Non-Identified Nuclides ----

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		1596.49	*	1.473E-02	4.871E-02	8.606E-02	5.099E-03	0.171
CE-141		145.44	*	7.482E-03	1.716E-02	2.867E-02	2.591E-03	0.261
CE-143		57.37		1.096E+00	2.088E+00	3.583E+00	2.975E-01	0.306
		231.56		-1.755E+01	2.330E+01	3.367E+01	1.043E+01	-0.521
		293.26	*	-4.448E-01	1.220E+00	1.940E+00	3.968E-01	-0.229
		350.59		-3.701E+00	1.979E+01	3.136E+01	9.507E+00	-0.118
		490.36		8.362E+00	3.237E+01	5.439E+01	1.685E+01	0.154
		664.57		-3.427E+00	1.404E+01	2.256E+01	7.203E+00	-0.152
		721.93		-1.180E+01	1.785E+01	2.636E+01	7.583E+00	-0.448
CE-144		80.11		-1.817E-01	4.008E-01	6.231E-01	4.875E-02	-0.292
		133.54	*	-2.722E-02	7.077E-02	1.090E-01	1.805E-02	-0.250
PM-144		476.78		1.760E-02	3.526E-02	5.840E-02	4.214E-03	0.301
		618.01		-5.129E-04	1.820E-02	2.913E-02	2.118E-03	-0.018
		696.49	*	3.397E-03	1.587E-02	2.756E-02	1.995E-03	0.123
		778.57		-1.498E-01	1.338E+00	2.189E+00	1.605E-01	-0.068
PR-144		696.49	*	2.293E-01	1.071E+00	1.860E+00	1.346E-01	0.123
		1489.15		-1.726E+00	8.648E+00	1.379E+01	8.284E-01	-0.125
PM-146		453.90	*	-1.091E-02	2.053E-02	3.058E-02	2.666E-03	-0.357
		633.02		-2.846E-01	8.593E-01	1.296E+00	4.799E-01	-0.220
		735.90		-2.244E-02	8.744E-02	1.397E-01	3.946E-02	-0.161
		747.13		9.558E-03	5.658E-02	9.674E-02	1.285E-02	0.099
ND-147		91.11		3.587E-02	3.626E-02	6.357E-02	5.877E-03	0.564
		319.41		1.134E-01	9.437E-01	1.580E+00	9.240E-02	0.072
		439.89		2.287E-01	1.665E+00	2.774E+00	1.616E-01	0.082
		531.02	*	8.613E-02	1.724E-01	3.012E-01	4.170E-02	0.286
PM-149		285.90	*	2.269E+00	3.797E+00	6.647E+00	9.422E-01	0.341
EU-152		121.78		-2.108E-02	2.430E-02	3.537E-02	4.416E-03	-0.596
		244.69		-1.614E-01	1.314E-01	1.900E-01	1.165E-02	-0.850
		344.27	*	-2.644E-04	4.964E-02	8.173E-02	5.315E-03	-0.003
		443.98		-2.735E-01	4.986E-01	7.495E-01	4.391E-02	-0.365
		778.89		-2.093E-02	1.560E-01	2.543E-01	1.864E-02	-0.082
		867.32		2.242E-01	4.892E-01	8.738E-01	6.322E-02	0.257
		964.01		4.280E-02	1.537E-01	2.661E-01	1.851E-02	0.161
		1085.78		4.905E-02	2.307E-01	3.940E-01	2.493E-02	0.124
		1112.02		9.883E-02	1.969E-01	3.508E-01	2.156E-02	0.282
		1407.95		-5.486E-02	1.312E-01	1.898E-01	1.145E-02	-0.289
GD-153		69.67		-4.045E-02	2.416E-01	3.872E-01	2.843E-02	-0.104
		83.37		6.223E-01	2.809E+00	4.648E+00	3.721E-01	0.134
		97.43	*	-3.662E-03	1.916E-02	3.035E-02	2.747E-03	-0.121
		103.18		2.312E-03	2.834E-02	4.609E-02	4.410E-03	0.050
EU-154		123.07		1.560E-03	1.713E-02	2.776E-02	3.775E-03	0.056
		247.94		-6.583E-02	1.499E-01	2.384E-01	2.321E-02	-0.276
		591.81		-4.599E-02	3.689E-01	5.829E-01	6.086E-02	-0.079
		723.30		-8.506E-02	9.736E-02	1.391E-01	1.160E-02	-0.612
		756.87		3.209E-02	4.365E-01	7.367E-01	8.162E-02	0.044
		873.19		1.143E-01	1.790E-01	3.277E-01	3.704E-02	0.349
		996.32		-8.484E-02	2.344E-01	3.595E-01	6.099E-02	-0.236
		1004.76		-1.087E-01	1.344E-01	1.854E-01	1.920E-02	-0.586
		1274.45	*	-1.501E-02	6.387E-02	9.738E-02	9.159E-03	-0.154

---- Non-Identified Nuclides ----

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EU-155		48.70		-7.492E-02	1.342E-01	2.075E-01	1.355E-02	-0.361
		60.01		-3.476E-01	5.235E-01	7.967E-01	5.626E-02	-0.436
		86.54		-2.064E-02	2.277E-02	3.234E-02	2.680E-03	-0.638
		105.31	*	-1.566E-02	3.018E-02	4.604E-02	4.540E-03	-0.340
TB-160		86.79		-4.322E-02	5.657E-02	8.160E-02	6.698E-03	-0.530
		197.04		3.825E-02	1.910E-01	3.261E-01	2.017E-02	0.117
		215.65		-4.044E-02	2.630E-01	4.335E-01	2.691E-02	-0.093
		298.57		1.471E-03	4.616E-02	7.667E-02	4.498E-03	0.019
		879.36	*	-7.600E-02	8.236E-02	1.130E-01	8.141E-03	-0.673
		962.29		-1.096E-01	2.469E-01	3.694E-01	2.573E-02	-0.297
		966.15		4.927E-02	9.573E-02	1.725E-01	1.199E-02	0.286
		1177.93		-1.631E-01	1.708E-01	2.093E-01	1.189E-02	-0.779
		1271.85		3.673E-02	3.535E-01	5.887E-01	3.470E-02	0.062
HO-166M		80.57		-3.927E-02	6.052E-02	8.208E-02	6.443E-03	-0.478
		184.41		9.168E-03	1.409E-02	2.328E-02	1.430E-03	0.394
		280.46		-1.262E-02	3.513E-02	5.595E-02	3.269E-03	-0.226
		410.95		5.007E-02	1.101E-01	1.914E-01	1.065E-02	0.262
		711.68	*	-3.172E-02	3.530E-02	5.040E-02	3.663E-03	-0.629
		752.31		-2.684E-02	1.724E-01	2.811E-01	2.058E-02	-0.095
		810.29		-1.171E-02	2.888E-02	4.389E-02	3.213E-03	-0.267
TM-171		51.35		7.334E-01	2.082E+00	3.521E+00	2.333E-01	0.208
		52.39		3.592E-01	1.127E+00	1.900E+00	1.268E-01	0.189
		59.40		-2.439E+00	2.815E+00	4.194E+00	2.956E-01	-0.581
		66.72	*	-5.696E+00	4.362E+00	5.689E+00	4.117E-01	-1.001
LU-176		88.36		-1.682E-02	4.075E-02	6.343E-02	5.272E-03	-0.265
		201.83		-9.809E-03	1.062E-02	1.622E-02	1.005E-03	-0.605
		306.84	*	-3.910E-03	1.180E-02	1.883E-02	1.104E-03	-0.208
		401.10		-2.380E-01	3.013E+00	4.880E+00	2.670E-01	-0.049
LU-177		112.95		-1.875E-01	2.225E-01	3.260E-01	3.431E-02	-0.575
		208.36	*	2.943E-02	1.819E-01	3.089E-01	1.917E-02	0.095
LU-177M		52.97		-4.781E-02	1.227E-01	1.931E-01	1.293E-02	-0.248
		54.07		-1.156E-02	6.929E-02	1.115E-01	7.526E-03	-0.104
		61.30		5.944E-03	1.571E-01	2.572E-01	1.823E-02	0.023
		121.62		-1.098E-01	1.201E-01	1.739E-01	1.991E-02	-0.631
		147.16		-5.176E-02	2.087E-01	3.250E-01	2.817E-02	-0.159
		171.86		7.045E-02	1.585E-01	2.774E-01	1.687E-02	0.254
		218.09		-1.021E-01	3.136E-01	5.080E-01	3.153E-02	-0.201
		268.79		1.199E-01	3.000E-01	5.193E-01	3.091E-02	0.231
		319.02		2.687E-02	1.154E-01	1.956E-01	1.144E-02	0.137
		367.43		-8.035E-02	3.826E-01	6.103E-01	3.425E-02	-0.132
		413.65	*	-8.206E-02	8.217E-02	1.147E-01	6.408E-03	-0.716
HF-181		56.28		8.642E-02	7.236E-02	1.316E-01	9.035E-03	0.657
		57.53		1.552E-02	4.164E-02	7.054E-02	4.892E-03	0.220
		65.20		-5.775E-02	1.185E-01	1.692E-01	1.216E-02	-0.341
		133.02		1.232E-02	1.995E-02	3.377E-02	3.494E-03	0.365
		136.25		9.005E-02	1.457E-01	2.461E-01	2.457E-02	0.366
		345.85		3.796E-02	8.697E-02	1.498E-01	8.616E-03	0.253
		482.03	*	-4.337E-03	1.877E-02	2.941E-02	1.814E-03	-0.147
W-181		56.28		3.669E-02	3.073E-02	5.589E-02	3.837E-03	0.656

---- Non-Identified Nuclides ----

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		57.53		6.631E-03	1.770E-02	2.998E-02	2.079E-03	0.221
		65.20	*	-2.435E-02	4.997E-02	7.134E-02	5.128E-03	-0.341
TA-182		67.75		-3.453E-03	1.433E-02	2.278E-02	1.656E-03	-0.152
		100.10		-1.930E-03	4.589E-02	7.379E-02	6.854E-03	-0.026
		152.43		8.525E-02	1.250E-01	1.902E-01	1.518E-02	0.448
		222.10		9.162E-02	1.271E-01	2.263E-01	1.404E-02	0.405
		1001.68		1.025E+00	1.169E+00	2.208E+00	1.502E-01	0.464
		1121.28		3.450E-02	8.067E-02	1.418E-01	8.620E-03	0.243
		1189.05		1.250E-02	1.282E-01	2.143E-01	1.223E-02	0.058
		1221.42	*	1.852E-02	8.723E-02	1.491E-01	8.620E-03	0.124
		1230.97		6.280E-02	2.228E-01	3.847E-01	2.233E-02	0.163
RE-183		57.98		-1.117E-02	1.829E-02	2.801E-02	1.950E-03	-0.399
		59.32		-9.178E-03	1.079E-02	1.611E-02	1.134E-03	-0.570
		67.20		-3.315E-02	2.833E-02	3.725E-02	2.701E-03	-0.890
	+	162.32	*	5.911E-02	7.722E-02	6.164E-02	4.060E-03	0.959
		208.81		7.465E-02	3.342E-01	5.707E-01	3.541E-02	0.131
		291.72		2.392E-03	3.846E-01	6.376E-01	3.738E-02	0.004
RE-184		57.98		-4.302E-02	7.044E-02	1.079E-01	7.512E-03	-0.399
		59.32		-3.533E-02	4.153E-02	6.201E-02	4.366E-03	-0.570
		67.20		-1.276E-01	1.091E-01	1.434E-01	1.040E-02	-0.890
		161.27		-3.021E-02	1.207E-01	1.992E-01	1.343E-02	-0.152
		216.55		1.082E-02	9.697E-02	1.639E-01	1.017E-02	0.066
		252.85	*	3.656E-02	1.058E-01	1.815E-01	1.104E-02	0.201
		318.01		7.459E-02	2.011E-01	3.457E-01	2.023E-02	0.216
		792.07		-1.933E-01	4.866E-01	7.488E-01	5.489E-02	-0.258
		903.28		-8.573E-02	5.470E-01	8.778E-01	6.269E-02	-0.098
		920.93		-6.718E-02	2.330E-01	3.612E-01	2.564E-02	-0.186
OS-185		59.72		-2.576E-02	2.968E-02	4.418E-02	3.118E-03	-0.583
		61.14		-6.197E-04	1.667E-02	2.709E-02	1.919E-03	-0.023
		69.30		-3.940E-03	4.103E-02	6.619E-02	4.850E-03	-0.060
		592.07		-5.755E-01	1.465E+00	2.218E+00	1.522E-01	-0.259
		646.12	*	1.438E-02	2.615E-02	4.532E-02	3.214E-03	0.317
		717.42		3.421E-01	5.106E-01	9.324E-01	6.786E-02	0.367
		874.81		3.565E-01	3.167E-01	6.234E-01	4.499E-02	0.572
		880.27		-1.779E-01	4.282E-01	6.527E-01	4.703E-02	-0.273
RE-188		155.03	*	-2.243E-02	6.707E-02	8.896E-02	6.784E-03	-0.252
		477.96		-1.086E-01	1.519E+00	2.311E+00	1.418E-01	-0.047
		633.10		-4.790E-01	1.609E+00	2.461E+00	1.733E-01	-0.195
W-188		63.58		3.841E+00	5.619E+00	9.740E+00	6.957E-01	0.394
		227.08		-8.905E-01	4.746E+00	7.788E+00	4.825E-01	-0.114
		290.67	*	8.515E-01	3.068E+00	5.227E+00	3.063E-01	0.163
IR-192		295.96		-4.144E-02	4.787E-02	6.525E-02	3.886E-03	-0.635
		308.46		-1.489E-02	4.087E-02	6.480E-02	3.842E-03	-0.230
		316.51	*	-6.886E-03	1.491E-02	2.333E-02	1.372E-03	-0.295
		468.07		3.828E-04	3.196E-02	5.212E-02	3.602E-03	0.007
		604.41		1.028E-01	2.618E-01	4.435E-01	5.305E-02	0.232
		612.46		3.669E-02	3.995E-01	6.512E-01	5.530E-02	0.056
AU-195		65.12		-7.882E-03	2.323E-02	3.364E-02	2.417E-03	-0.234
		66.83		-1.639E-02	1.395E-02	1.841E-02	1.333E-03	-0.890

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		75.70		-2.972E-02	3.547E-02	4.917E-02	3.738E-03	-0.604
		98.88	*	1.218E-02	5.565E-02	9.185E-02	8.431E-03	0.133
		129.76		-3.007E-01	9.156E-01	1.421E+00	1.521E-01	-0.212
TL-200		367.94	*	-4.418E-01	1.501E+00	2.364E+00	1.325E-01	-0.187
		579.30		-1.154E+01	1.497E+01	2.108E+01	1.433E+00	-0.548
		828.27		3.572E+00	2.080E+01	3.560E+01	2.600E+00	0.100
		1205.75		-6.626E+00	9.380E+00	1.259E+01	7.235E-01	-0.526
TL-201		68.90		-1.248E-03	1.220E-01	1.985E-01	1.451E-02	-0.006
		70.82		4.246E-02	7.399E-02	1.263E-01	9.327E-03	0.336
		80.30		-4.126E-02	1.671E-01	2.650E-01	2.076E-02	-0.156
		135.34		-4.906E-01	1.635E+00	2.547E+00	2.570E-01	-0.193
		167.43	*	1.846E-01	4.597E-01	7.103E-01	4.302E-02	0.260
TL-202		68.90		-4.161E-04	4.067E-02	6.614E-02	4.837E-03	-0.006
		70.82		1.411E-02	2.459E-02	4.197E-02	3.100E-03	0.336
		80.30		-1.372E-02	5.557E-02	8.812E-02	6.903E-03	-0.156
		439.56	*	1.020E-02	1.997E-02	3.512E-02	2.044E-03	0.290
HG-203		70.83		8.463E-02	1.471E-01	2.507E-01	3.223E-02	0.338
		72.87		-1.291E-02	8.992E-02	1.444E-01	1.802E-02	-0.089
		82.60		-1.523E-01	2.294E-01	3.096E-01	4.130E-02	-0.492
		279.20	*	1.986E-03	1.530E-02	2.574E-02	1.595E-03	0.077
BI-207		72.80		-4.752E-03	2.948E-02	4.726E-02	3.530E-03	-0.101
		74.97		-1.583E-02	1.997E-02	2.772E-02	2.098E-03	-0.571
		84.90		-2.372E-02	4.201E-02	6.176E-02	4.999E-03	-0.384
		569.67		5.928E-03	1.994E-02	3.344E-02	2.256E-03	0.177
		1063.62	*	-7.777E-03	3.213E-02	5.020E-02	3.247E-03	-0.155
		1770.23		2.701E-03	4.251E-01	7.052E-01	3.985E-02	0.004
TL-207		81.07		-4.616E-02	4.938E-02	6.505E-02	5.123E-03	-0.710
		83.78		7.694E-03	2.451E-02	4.088E-02	3.282E-03	0.188
		94.90		-3.281E-02	5.539E-02	8.422E-02	7.443E-03	-0.390
		122.32		-4.592E-01	5.941E-01	8.778E-01	1.050E-01	-0.523
		144.24		-9.112E-02	2.454E-01	3.584E-01	3.589E-02	-0.254
		154.21		4.826E-02	1.576E-01	2.286E-01	1.986E-02	0.211
		269.46		1.547E-02	7.553E-02	1.281E-01	7.947E-03	0.121
		323.87	*	-1.001E-01	3.094E-01	4.917E-01	8.127E-02	-0.203
		338.28		6.330E-02	4.395E-01	7.364E-01	7.751E-02	0.086
		445.03		-4.782E-01	1.213E+00	1.869E+00	1.927E-01	-0.256
TL-208		277.35		5.947E-02	1.519E-01	2.623E-01	2.779E-02	0.227
		510.84		-6.388E-02	1.375E-01	2.514E-01	2.639E-02	-0.254
		583.14	*	3.919E-03	2.458E-02	3.396E-02	2.576E-03	0.115
		860.37		-1.092E-01	1.644E-01	2.384E-01	1.906E-02	-0.458
PO-209		260.50		1.031E-01	4.190E+00	6.986E+00	4.210E-01	0.015
		262.80		-1.210E+01	1.118E+01	1.632E+01	9.807E-01	-0.741
		896.60	*	8.616E-01	4.559E+00	7.789E+00	5.576E-01	0.111
BI-210		46.50	*	-2.500E-02	1.479E-01	2.384E-01	1.806E-02	-0.105
PB-210		46.50	*	-2.500E-02	1.479E-01	2.384E-01	1.806E-02	-0.105
PO-210		46.50	*	-2.500E-02	1.479E-01	2.384E-01	1.541E-02	-0.105
BI-211		72.87		-7.277E-02	5.066E-01	8.134E-01	6.078E-02	-0.089
		351.07	*	4.770E-03	1.169E-01	1.898E-01	1.208E-02	0.025
PB-211		404.84	*	-1.092E-01	4.549E-01	7.126E-01	4.440E-01	-0.153

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		427.08		-1.184E-02	1.026E+00	1.673E+00	1.034E+00	-0.007
		831.96		1.137E-01	7.771E-01	1.314E+00	8.209E-01	0.087
BI-212		727.18	*	1.033E-01	1.604E-01	2.930E-01	2.605E-02	0.353
		785.46		2.571E-01	1.004E+00	1.740E+00	1.276E-01	0.148
		1620.62		2.479E-02	6.843E-01	1.153E+00	6.800E-02	0.021
PB-212		74.81		-5.760E-02	6.865E-02	9.439E-02	1.135E-02	-0.610
		77.11		-2.031E-02	3.811E-02	5.621E-02	4.311E-03	-0.361
		87.30		-5.564E-02	8.635E-02	1.255E-01	1.627E-02	-0.443
		238.63	*	5.060E-04	2.824E-02	4.650E-02	3.543E-03	0.011
		300.09		-6.523E-02	3.351E-01	5.432E-01	4.506E-02	-0.120
PO-212		74.81		-5.760E-02	6.865E-02	9.439E-02	1.135E-02	-0.610
		77.11		-2.031E-02	3.811E-02	5.621E-02	4.311E-03	-0.361
		87.30		-5.564E-02	8.635E-02	1.255E-01	1.627E-02	-0.443
		115.19		-1.569E-01	1.086E+00	1.722E+00	1.852E-01	-0.091
		238.63	*	5.060E-04	2.824E-02	4.650E-02	3.543E-03	0.011
		300.09		-6.523E-02	3.351E-01	5.432E-01	4.506E-02	-0.120
BI-214		609.31	*	3.147E-02	4.734E-02	8.196E-02	7.102E-03	0.384
		768.36		3.049E-01	3.674E-01	6.911E-01	6.525E-02	0.441
		934.06		-1.733E-01	6.426E-01	1.005E+00	9.459E-02	-0.172
		1120.29		1.124E-01	1.734E-01	3.158E-01	2.840E-02	0.356
		1238.11		2.098E-01	3.941E-01	7.164E-01	5.848E-02	0.293
		1377.67		6.910E-02	5.765E-01	9.610E-01	8.398E-02	0.072
		1764.49		-1.317E-01	1.686E-01	2.434E-01	1.378E-02	-0.541
PB-214		74.81		-9.924E-02	1.181E-01	1.626E-01	1.721E-02	-0.610
		77.11		-3.481E-02	6.539E-02	9.636E-02	1.042E-02	-0.361
		87.30		-9.532E-02	1.478E-01	2.150E-01	2.427E-02	-0.443
		241.98		-3.839E-03	1.435E-01	2.387E-01	1.986E-02	-0.016
		295.21		-3.537E-04	6.573E-02	9.919E-02	8.502E-03	-0.004
		351.92	*	-1.316E-02	4.123E-02	6.454E-02	5.309E-03	-0.204
PO-214		74.81		-9.924E-02	1.181E-01	1.626E-01	1.721E-02	-0.610
		77.11		-3.481E-02	6.539E-02	9.636E-02	1.042E-02	-0.361
		87.30		-9.532E-02	1.478E-01	2.150E-01	2.427E-02	-0.443
		241.98		-3.839E-03	1.435E-01	2.387E-01	1.986E-02	-0.016
		295.21		-3.537E-04	6.573E-02	9.919E-02	8.502E-03	-0.004
		351.92	*	-1.316E-02	4.123E-02	6.454E-02	5.309E-03	-0.204
PO-215		81.07		-4.616E-02	4.938E-02	6.505E-02	5.123E-03	-0.710
		83.78		7.694E-03	2.451E-02	4.088E-02	3.282E-03	0.188
		94.90		-3.281E-02	5.539E-02	8.422E-02	7.443E-03	-0.390
		122.32		-4.592E-01	5.941E-01	8.778E-01	1.050E-01	-0.523
		144.24		-9.112E-02	2.454E-01	3.584E-01	3.589E-02	-0.254
		154.21		4.826E-02	1.576E-01	2.286E-01	1.986E-02	0.211
		269.46		1.547E-02	7.553E-02	1.281E-01	7.947E-03	0.121
		323.87	*	-1.001E-01	3.094E-01	4.917E-01	8.127E-02	-0.203
		338.28		6.330E-02	4.395E-01	7.364E-01	7.751E-02	0.086
		445.03		-4.782E-01	1.213E+00	1.869E+00	1.927E-01	-0.256
PO-216		74.81		-5.760E-02	6.865E-02	9.439E-02	1.135E-02	-0.610
		77.11		-2.031E-02	3.811E-02	5.621E-02	4.311E-03	-0.361
		87.30		-5.564E-02	8.635E-02	1.255E-01	1.627E-02	-0.443
		238.63	*	5.060E-04	2.824E-02	4.650E-02	3.543E-03	0.011

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		300.09		-6.523E-02	3.351E-01	5.432E-01	4.506E-02	-0.120
PO-218		74.81		-9.924E-02	1.181E-01	1.626E-01	1.721E-02	-0.610
		77.11		-3.481E-02	6.539E-02	9.636E-02	1.042E-02	-0.361
		87.30		-9.532E-02	1.478E-01	2.150E-01	2.427E-02	-0.443
		241.98		-3.839E-03	1.435E-01	2.387E-01	1.986E-02	-0.016
		295.21		-3.537E-04	6.573E-02	9.919E-02	8.502E-03	-0.004
		351.92	*	-1.316E-02	4.123E-02	6.454E-02	5.309E-03	-0.204
RN-219		271.23		-5.105E-02	9.753E-02	1.527E-01	1.252E-02	-0.334
		401.81	*	2.498E-02	1.840E-01	3.071E-01	4.137E-02	0.081
RN-220		549.76	*	-1.005E+01	1.466E+01	2.103E+01	1.394E+00	-0.478
RA-223		81.07		-4.616E-02	4.938E-02	6.505E-02	5.123E-03	-0.710
		83.78		7.694E-03	2.451E-02	4.088E-02	3.282E-03	0.188
		94.90		-3.281E-02	5.539E-02	8.422E-02	7.443E-03	-0.390
		122.32		-4.592E-01	5.941E-01	8.778E-01	1.050E-01	-0.523
		144.24		-9.112E-02	2.454E-01	3.584E-01	3.589E-02	-0.254
		154.21		4.826E-02	1.576E-01	2.286E-01	1.986E-02	0.211
		269.46		1.547E-02	7.553E-02	1.281E-01	7.947E-03	0.121
		323.87	*	-1.001E-01	3.094E-01	4.917E-01	8.127E-02	-0.203
		338.28		6.330E-02	4.395E-01	7.364E-01	7.751E-02	0.086
		445.03		-4.782E-01	1.213E+00	1.869E+00	1.927E-01	-0.256
RA-224		240.98	*	2.386E-01	2.769E-01	4.944E-01	3.041E-02	0.483
RA-226		609.31	*	3.147E-02	4.734E-02	8.196E-02	7.102E-03	0.384
		768.36		3.049E-01	3.674E-01	6.911E-01	6.525E-02	0.441
		934.06		-1.733E-01	6.426E-01	1.005E+00	9.459E-02	-0.172
		1120.29		1.124E-01	1.734E-01	3.158E-01	2.840E-02	0.356
		1238.11		2.098E-01	3.941E-01	7.164E-01	5.848E-02	0.293
		1377.67		6.910E-02	5.765E-01	9.610E-01	8.398E-02	0.072
		1764.49		-1.317E-01	1.686E-01	2.434E-01	1.378E-02	-0.541
AC-227		79.80		-1.203E-01	3.149E-01	4.917E-01	1.042E-01	-0.245
		236.00		3.590E-03	9.532E-02	1.595E-01	1.701E-02	0.023
		256.20	*	-4.733E-02	1.816E-01	2.949E-01	4.149E-02	-0.161
		286.10		6.010E-01	6.847E-01	1.230E+00	1.425E-01	0.489
		299.80		-2.796E-02	6.304E-01	1.039E+00	1.694E-01	-0.027
		304.40		5.689E-02	8.743E-01	1.456E+00	2.522E-01	0.039
		334.20		5.356E-02	1.046E+00	1.734E+00	3.180E-01	0.031
TH-227		79.80		-1.203E-01	3.150E-01	4.917E-01	1.056E-01	-0.245
		94.00		-1.212E-01	4.938E-01	7.317E-01	1.598E-01	-0.166
		236.00		3.590E-03	9.532E-02	1.595E-01	1.483E-02	0.023
		256.20	*	-4.733E-02	1.816E-01	2.949E-01	5.010E-02	-0.161
		286.10		6.010E-01	9.091E-01	1.230E+00	1.232E+00	0.489
		299.80		-2.796E-02	6.304E-01	1.039E+00	1.694E-01	-0.027
		304.40		5.689E-02	8.743E-01	1.456E+00	2.522E-01	0.039
		334.20		5.356E-02	1.046E+00	1.734E+00	3.180E-01	0.031
AC-228		338.32		1.369E-02	1.052E-01	1.758E-01	7.167E-02	0.078
		911.07	*	2.715E-02	6.515E-02	1.168E-01	1.184E-02	0.233
		969.11		8.910E-02	1.359E-01	2.472E-01	5.628E-02	0.361
RA-228		338.32		1.369E-02	1.052E-01	1.758E-01	7.167E-02	0.078
		911.07	*	2.715E-02	6.515E-02	1.168E-01	1.184E-02	0.233
		969.11		8.910E-02	1.359E-01	2.472E-01	5.628E-02	0.361

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228		84.40		2.267E-01	5.121E-01	8.620E-01	1.102E-01	0.263
		238.60	*	7.737E-04	2.826E-02	4.656E-02	3.548E-03	0.017
		300.10		-6.232E-02	3.374E-01	5.443E-01	3.208E-01	-0.114
TH-229		85.43		-3.475E-02	4.183E-02	5.978E-02	4.858E-03	-0.581
		88.47		-9.027E-03	2.352E-02	3.672E-02	3.055E-03	-0.246
		100.00		-2.097E-03	4.985E-02	8.016E-02	7.438E-03	-0.026
		193.63	*	-1.397E-01	1.837E-01	2.859E-01	1.766E-02	-0.489
		210.97		-7.417E-02	2.813E-01	4.595E-01	2.852E-02	-0.161
TH-230		609.31	*	3.147E-02	4.734E-02	8.196E-02	7.102E-03	0.384
		768.36		3.049E-01	3.674E-01	6.911E-01	6.525E-02	0.441
		934.06		-1.733E-01	6.426E-01	1.005E+00	9.459E-02	-0.172
		1120.29		1.124E-01	1.734E-01	3.158E-01	2.840E-02	0.356
		1238.11		2.098E-01	3.941E-01	7.164E-01	5.848E-02	0.293
		1377.67		6.909E-02	5.764E-01	9.610E-01	8.398E-02	0.072
		1764.49		-1.317E-01	1.686E-01	2.434E-01	1.378E-02	-0.541
PA-231		283.67	*	-3.980E-01	6.675E-01	1.031E+00	1.422E-01	-0.386
		301.29		1.538E-01	2.605E-01	4.554E-01	4.777E-02	0.338
TH-231		81.07		-4.616E-02	4.938E-02	6.505E-02	5.123E-03	-0.710
		83.78		7.694E-03	2.451E-02	4.088E-02	3.282E-03	0.188
		94.90		-3.281E-02	5.539E-02	8.422E-02	7.443E-03	-0.390
		122.32		-4.592E-01	5.941E-01	8.778E-01	1.050E-01	-0.523
		144.24		-9.112E-02	2.454E-01	3.584E-01	3.589E-02	-0.254
		154.21		4.826E-02	1.576E-01	2.286E-01	1.986E-02	0.211
		269.46		1.547E-02	7.553E-02	1.281E-01	7.947E-03	0.121
		323.87	*	-1.001E-01	3.094E-01	4.917E-01	8.127E-02	-0.203
		338.28		6.330E-02	4.395E-01	7.364E-01	7.751E-02	0.086
		445.03		-4.782E-01	1.213E+00	1.869E+00	1.927E-01	-0.256
U-231		84.21		1.538E-01	3.039E-01	5.148E-01	4.146E-02	0.299
		92.29		5.482E-02	1.401E-01	2.212E-01	1.907E-02	0.248
		95.87	*	-8.188E-02	7.833E-02	1.130E-01	1.008E-02	-0.725
		108.00		6.246E-02	1.621E-01	2.711E-01	2.718E-02	0.230
TH-232		338.32		1.369E-02	1.051E-01	1.758E-01	1.018E-02	0.078
		911.07	*	2.715E-02	6.515E-02	1.168E-01	1.184E-02	0.233
		969.11		8.910E-02	1.359E-01	2.472E-01	5.628E-02	0.361
PA-233		75.28		-5.105E-01	5.934E-01	8.147E-01	1.205E-01	-0.627
		86.59		-3.308E-01	3.810E-01	5.290E-01	1.412E-01	-0.625
		300.12		-2.919E-02	1.737E-01	2.823E-01	3.802E-02	-0.103
		311.98	*	1.125E-02	2.923E-02	5.035E-02	3.130E-03	0.223
		340.50		-2.034E-01	2.802E-01	4.159E-01	9.550E-02	-0.489
		398.62		-2.301E-01	8.835E-01	1.387E+00	3.574E-01	-0.166
		415.76		-1.611E-03	7.686E-01	1.257E+00	2.581E-01	-0.001
PA-234		63.00		2.176E-01	1.749E-01	3.136E-01	4.618E-02	0.694
		94.67		-1.546E-02	3.949E-02	6.134E-02	7.693E-03	-0.252
		98.44		3.762E-03	2.314E-02	3.784E-02	2.114E-02	0.099
		99.86		2.581E-02	1.231E-01	2.029E-01	1.880E-02	0.127
		111.00		2.784E-02	5.263E-02	8.902E-02	1.189E-02	0.313
		131.20		2.322E-03	3.522E-02	5.685E-02	5.997E-03	0.041
		152.70		1.002E-01	1.261E-01	1.933E-01	3.232E-02	0.518
		186.00		6.921E-02	5.041E-01	7.990E-01	2.447E-01	0.087

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		226.40		-2.101E-02	1.605E-01	2.648E-01	3.115E-02	-0.079
		227.20		-3.046E-02	1.733E-01	2.847E-01	1.764E-02	-0.107
		248.90		9.430E-02	3.437E-01	5.867E-01	1.266E-01	0.161
		293.70		-4.317E-02	2.834E-01	4.619E-01	7.439E-02	-0.093
		369.80		-8.886E-02	3.650E-01	5.780E-01	1.200E-01	-0.154
		568.70		5.715E-01	6.292E-01	1.134E+00	7.641E-02	0.504
		569.50		6.382E-02	1.784E-01	3.013E-01	2.032E-02	0.212
		574.00		-3.542E-01	9.529E-01	1.456E+00	9.860E-02	-0.243
		699.00		-1.504E-01	3.659E-01	5.686E-01	1.052E-01	-0.264
		706.10		7.090E-01	6.395E-01	1.103E+00	4.892E-01	0.643
		733.00		-8.919E-02	2.224E-01	3.469E-01	7.534E-02	-0.257
		742.81		-1.966E-01	8.569E-01	1.364E+00	9.150E-01	-0.144
		796.30		-2.567E-01	5.091E-01	7.656E-01	2.042E-01	-0.335
		805.60		3.230E-02	5.946E-01	9.976E-01	3.024E-01	0.032
		819.60		9.853E-02	6.393E-01	1.092E+00	4.123E-01	0.090
		826.30		-7.659E-01	6.142E-01	6.080E-01	2.706E-01	-1.260
		831.60		1.736E-01	3.934E-01	6.915E-01	2.039E-01	0.251
		876.40		2.690E-01	5.647E-01	8.928E-01	9.168E-01	0.301
		880.51		-1.073E-02	1.578E-01	2.579E-01	1.858E-02	-0.042
		883.24		4.786E-02	1.701E-01	2.908E-01	1.950E-01	0.165
		899.00		4.658E-01	5.378E-01	9.529E-01	4.141E-01	0.489
		925.00		-1.843E-01	7.042E-01	1.106E+00	7.835E-02	-0.167
		926.50		3.809E-02	1.031E-01	1.811E-01	4.489E-02	0.210
		946.00	*	9.770E-02	1.898E-01	3.391E-01	6.134E-02	0.288
		949.00		2.496E-01	2.894E-01	5.423E-01	3.802E-02	0.460
		980.50		2.127E-01	3.847E-01	7.052E-01	4.861E-02	0.302
		1394.10		-1.453E-01	7.735E-01	1.177E+00	7.624E-01	-0.123
PA-234M		766.41		4.041E+00	9.472E+00	1.600E+01	1.225E+01	0.253
		1001.03	*	4.666E+00	3.929E+00	7.717E+00	7.598E-01	0.605
TH-234		63.29	*	1.156E-01	1.533E-01	2.653E-01	4.597E-02	0.436
		92.38		7.145E-02	1.287E-01	2.050E-01	3.707E-02	0.349
U-234		609.31	*	3.147E-02	4.734E-02	8.196E-02	7.102E-03	0.384
		768.36		3.049E-01	3.674E-01	6.911E-01	6.525E-02	0.441
		934.06		-1.733E-01	6.426E-01	1.005E+00	9.459E-02	-0.172
		1120.29		1.124E-01	1.734E-01	3.158E-01	2.840E-02	0.356
		1238.11		2.098E-01	3.941E-01	7.164E-01	5.848E-02	0.293
		1377.67		6.909E-02	5.764E-01	9.610E-01	8.398E-02	0.072
		1764.49		-1.317E-01	1.686E-01	2.434E-01	1.378E-02	-0.541
U-235		89.95		2.291E-02	2.430E-01	3.965E-01	1.221E-01	0.058
		93.35		-2.099E-02	1.556E-01	2.338E-01	6.559E-02	-0.090
		105.00		-9.303E-02	2.944E-01	4.574E-01	1.381E-01	-0.203
		143.76	*	8.844E-03	7.290E-02	1.119E-01	1.986E-02	0.079
	+	163.35		2.732E-01	3.600E-01	2.975E-01	5.413E-02	0.919
		185.71		5.573E-03	1.887E-02	3.036E-02	1.867E-03	0.184
		205.31		8.201E-02	1.909E-01	3.311E-01	5.997E-02	0.248
NP-236		94.67		-1.166E-02	2.994E-02	4.655E-02	4.104E-03	-0.250
		98.44		2.849E-03	1.742E-02	2.861E-02	2.615E-03	0.100
		111.00		2.106E-02	3.977E-02	6.734E-02	6.952E-03	0.313
		160.31	*	-1.922E-02	3.066E-02	4.582E-02	3.153E-03	-0.420

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237		86.50	*	-5.114E-02	5.662E-02	7.888E-02	1.751E-02	-0.648
		95.87		-2.558E-01	2.517E-01	3.530E-01	8.734E-02	-0.725
U-238		63.29	*	1.156E-01	1.533E-01	2.653E-01	4.597E-02	0.436
		92.38		7.145E-02	1.281E-01	2.050E-01	1.769E-02	0.349
NP-239		99.55		9.556E-03	4.108E-02	6.785E-02	6.268E-03	0.141
		117.00	*	6.943E-02	5.633E-02	1.008E-01	1.104E-02	0.689
		209.75		3.700E-02	2.807E-01	4.755E-01	2.951E-02	0.078
		228.18		-6.060E-03	8.800E-02	1.460E-01	9.042E-03	-0.042
		277.60		3.826E-02	7.178E-02	1.258E-01	7.373E-03	0.304
		334.30		5.080E-02	5.948E-01	9.904E-01	5.749E-02	0.051
AM-241		59.54	*	-1.478E-02	1.654E-02	2.455E-02	1.916E-03	-0.602
AM-243		74.67	*	-6.706E-03	1.096E-02	1.545E-02	1.167E-03	-0.434
		86.72		-1.624E+00	2.081E+00	2.996E+00	2.458E-01	-0.542
		117.66		1.149E+00	1.105E+00	1.953E+00	2.152E-01	0.588
		142.18		-6.450E-01	5.973E+00	9.457E+00	8.782E-01	-0.068
CM-243		99.55		9.829E-03	4.225E-02	6.978E-02	6.446E-03	0.141
		103.76	*	-2.397E-03	2.616E-02	4.181E-02	4.023E-03	-0.057
		117.00		7.139E-02	5.792E-02	1.037E-01	1.135E-02	0.689
		209.75		3.646E-02	2.766E-01	4.685E-01	2.908E-02	0.078
		228.18		-6.120E-03	8.888E-02	1.475E-01	9.132E-03	-0.042
		277.60		3.855E-02	7.233E-02	1.268E-01	7.429E-03	0.304
CM-247		278.00		8.293E-02	3.003E-01	5.131E-01	3.004E-02	0.162
		287.40		5.843E-01	5.888E-01	1.065E+00	6.237E-02	0.549
		402.60	*	1.080E-02	1.606E-02	2.875E-02	1.577E-03	0.376
CF-249		252.85		1.416E-01	4.097E-01	7.027E-01	4.275E-02	0.201
		333.44		-2.496E-02	7.907E-02	1.257E-01	7.302E-03	-0.199
		387.95	*	-1.220E-02	1.879E-02	2.805E-02	1.521E-03	-0.435
CF-251		176.60	*	-4.235E-02	4.266E-02	6.466E-02	3.949E-03	-0.655
		227.00		-3.132E-02	1.535E-01	2.515E-01	1.558E-02	-0.125
		285.00		3.056E-01	8.033E-01	1.382E+00	8.089E-02	0.221
ANH-511		511.00	*	-1.415E-02	2.967E-02	5.425E-02	3.461E-03	-0.261

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871426    *
* Acquisition date :  7-JUL-2009 10:59:05 Detector SN#     :               *
* Detector ID        : GAM21               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:08.45      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 30-JUN-2009 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201871426          Analyst initials: MXR1         *
* Batch Number       : 881220               Sample Quantity : 1.6676E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)	
BE-7	3.607E-02	1.551E-01	2.650E-01	0.000E+00 NOT IDENT.
NA-22	-5.846E-03	2.220E-02	3.488E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	9.445E+01	0.000E+00	0.000E+00 SHORT HLIF
AL-26	1.319E-02	2.265E-02	4.487E-02	0.000E+00 NOT IDENT.
K-40	-3.939E-03	2.944E-01	4.885E-01	0.000E+00 NOT IDENT.
TI-44	-2.838E-03	6.926E-03	1.169E-02	0.000E+00 NOT IDENT.
SC-46	-5.505E-03	2.034E-02	3.350E-02	0.000E+00 NOT IDENT.
V-48	-1.429E-02	2.853E-02	4.405E-02	0.000E+00 NOT IDENT.
CR-51	-3.714E-02	1.381E-01	2.397E-01	0.000E+00 NOT IDENT.
MN-52	2.747E-02	6.991E-02	1.265E-01	0.000E+00 NOT IDENT.
MN-54	1.938E-03	2.223E-02	3.933E-02	0.000E+00 NOT IDENT.
CO-56	-1.369E-02	2.178E-02	3.379E-02	0.000E+00 NOT IDENT.
CO-57	-8.053E-03	8.273E-03	1.333E-02	0.000E+00 NOT IDENT.
CO-58	-5.482E-03	1.780E-02	2.923E-02	0.000E+00 NOT IDENT.
FE-59	-3.620E-02	4.596E-02	6.487E-02	0.000E+00 NOT IDENT.
CO-60	1.017E-02	2.417E-02	4.445E-02	0.000E+00 NOT IDENT.
ZN-65	-6.141E-02	5.867E-02	8.129E-02	0.000E+00 NOT IDENT.
GE-68	-8.675E-01	6.348E-01	6.823E-01	0.000E+00 NOT IDENT.
AS-73	1.087E-02	6.070E-02	1.151E-01	0.000E+00 NOT IDENT.
AS-74	-9.241E-03	4.048E-02	6.696E-02	0.000E+00 NOT IDENT.
SE-75	-5.787E-03	1.682E-02	2.935E-02	0.000E+00 NOT IDENT.
BR-77	-2.755E-01	6.339E-01	1.027E+00	0.000E+00 NOT IDENT.
SR-82	3.535E-03	1.673E-01	2.948E-01	0.000E+00 NOT IDENT.
RB-83	-2.310E-02	3.802E-02	6.007E-02	0.000E+00 NOT IDENT.
RB-84	-3.085E-02	3.454E-02	4.953E-02	0.000E+00 NOT IDENT.
KR-85	-5.908E+00	5.930E+00	9.332E+00	0.000E+00 NOT IDENT.

SR-85	-2.795E-02	2.805E-02	4.415E-02	0.000E+00	NOT IDENT.
RB-86	-3.878E-01	3.002E-01	3.299E-01	0.000E+00	NOT IDENT.
Y-88	8.547E-03	2.732E-02	5.015E-02	0.000E+00	NOT IDENT.
ZR-88	1.440E-02	1.275E-02	2.570E-02	0.000E+00	NOT IDENT.
Y-91	-4.015E+00	7.991E+00	1.183E+01	0.000E+00	NOT IDENT.
NB-94	9.502E-04	1.823E-02	3.252E-02	0.000E+00	NOT IDENT.
NB-95	5.798E-03	2.054E-02	3.768E-02	0.000E+00	NOT IDENT.
NB-95M	-1.108E-02	4.610E-02	8.239E-02	0.000E+00	NOT IDENT.
ZR-95	1.266E-02	3.788E-02	6.994E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.733E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.382E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.701E-01	9.500E-01	1.795E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	8.449E+06	0.000E+00	0.000E+00	SHORT HLIF
RH-101	8.788E-03	1.153E-02	2.264E-02	0.000E+00	NOT IDENT.
RH-102	3.539E-03	1.402E-02	2.534E-02	0.000E+00	NOT IDENT.
RU-103	1.167E-03	2.128E-02	3.721E-02	0.000E+00	NOT IDENT.
RH-106	-2.183E-01	2.199E-01	2.860E-01	0.000E+00	NOT IDENT.
RU-106	-2.183E-01	2.188E-01	2.860E-01	0.000E+00	NOT IDENT.
AG-108M	-6.749E-04	1.533E-02	2.670E-02	0.000E+00	NOT IDENT.
CD-109	-2.770E-02	1.687E-01	3.028E-01	0.000E+00	NOT IDENT.
AG-110M	7.571E-05	1.812E-02	3.225E-02	0.000E+00	NOT IDENT.
IN-111	-5.371E-02	6.268E-02	1.038E-01	0.000E+00	NOT IDENT.
IN-113M	1.217E-02	1.998E-02	3.790E-02	0.000E+00	NOT IDENT.
SN-113	1.217E-02	1.998E-02	3.790E-02	0.000E+00	NOT IDENT.
IN-114M	-2.880E-02	5.919E-02	1.047E-01	0.000E+00	NOT IDENT.
CD-115	-3.067E-01	5.431E-01	8.558E-01	0.000E+00	NOT IDENT.
SN-117M	-6.078E-03	1.417E-02	2.400E-02	0.000E+00	NOT IDENT.
SB-122	-5.193E-02	1.662E-01	2.726E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.362E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.599E-03	1.055E-02	1.819E-02	0.000E+00	NOT IDENT.
I-124	2.309E-03	1.135E-01	1.948E-01	0.000E+00	NOT IDENT.
SB-124	-3.632E-02	5.842E-02	8.274E-02	0.000E+00	NOT IDENT.
SB-125	4.049E-04	4.501E-02	7.908E-02	0.000E+00	NOT IDENT.
TE-125M	1.741E+00	2.312E+00	4.456E+00	0.000E+00	NOT IDENT.
I-126	1.129E-02	6.199E-02	1.131E-01	0.000E+00	NOT IDENT.
SB-126	-6.238E-03	5.289E-02	9.179E-02	0.000E+00	NOT IDENT.
SN-126	-1.388E-02	1.851E-02	3.011E-02	0.000E+00	NOT IDENT.
SB-127	-4.623E-02	1.675E-01	2.829E-01	0.000E+00	NOT IDENT.
XE-127	-8.514E-03	1.500E-02	2.620E-02	0.000E+00	NOT IDENT.
I-131	-6.106E-04	2.737E-02	4.843E-02	0.000E+00	NOT IDENT.
TE-132	-4.061E-03	5.165E-02	9.373E-02	0.000E+00	NOT IDENT.
BA-133	-1.452E-02	2.242E-02	3.691E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	6.763E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	-1.385E-02	2.441E-02	3.848E-02	0.000E+00	NOT IDENT.
CS-135	2.832E-02	6.148E-02	1.164E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.448E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.310E-03	4.017E-02	7.133E-02	0.000E+00	FAIL ABUN
BA-137M	-3.520E-03	1.817E-02	3.133E-02	0.000E+00	NOT IDENT.
CS-137	-3.721E-03	1.920E-02	3.312E-02	0.000E+00	NOT IDENT.
CE-139	7.198E-03	1.058E-02	1.861E-02	0.000E+00	NOT IDENT.
BA-140	-3.248E-03	8.119E-02	1.392E-01	0.000E+00	FAIL ABUN
LA-140	1.473E-02	4.774E-02	8.683E-02	0.000E+00	NOT IDENT.
CE-141	7.482E-03	1.682E-02	3.116E-02	0.000E+00	NOT IDENT.
CE-143	-4.448E-01	1.196E+00	2.066E+00	0.000E+00	NOT IDENT.
CE-144	-2.722E-02	6.935E-02	1.188E-01	0.000E+00	NOT IDENT.
PM-144	3.397E-03	1.555E-02	2.857E-02	0.000E+00	NOT IDENT.
PR-144	2.293E-01	1.050E+00	1.928E+00	0.000E+00	NOT IDENT.
PM-146	-1.091E-02	2.012E-02	3.213E-02	0.000E+00	NOT IDENT.
ND-147	8.613E-02	1.690E-01	3.150E-01	0.000E+00	NOT IDENT.
PM-149	2.269E+00	3.721E+00	7.083E+00	0.000E+00	NOT IDENT.
EU-152	-2.644E-04	4.864E-02	8.660E-02	0.000E+00	NOT IDENT.
GD-153	-3.662E-03	1.878E-02	3.337E-02	0.000E+00	NOT IDENT.
EU-154	-1.501E-02	6.259E-02	9.900E-02	0.000E+00	NOT IDENT.
EU-155	-1.566E-02	2.957E-02	5.051E-02	0.000E+00	NOT IDENT.
TB-160	-7.600E-02	8.071E-02	1.162E-01	0.000E+00	NOT IDENT.
HO-166M	-3.172E-02	3.459E-02	5.221E-02	0.000E+00	NOT IDENT.
TM-171	-5.696E+00	4.275E+00	6.322E+00	0.000E+00	NOT IDENT.
LU-176	-3.910E-03	1.156E-02	2.002E-02	0.000E+00	NOT IDENT.
LU-177	2.943E-02	1.782E-01	3.323E-01	0.000E+00	NOT IDENT.
LU-177M	-8.206E-02	8.053E-02	1.208E-01	0.000E+00	NOT IDENT.
HF-181	-4.337E-03	1.839E-02	3.084E-02	0.000E+00	NOT IDENT.
W-181	-2.435E-02	4.897E-02	7.932E-02	0.000E+00	NOT IDENT.
TA-182	1.852E-02	8.549E-02	1.518E-01	0.000E+00	NOT IDENT.
RE-183	5.911E-02	7.567E-02	6.680E-02	0.000E+00	FAIL ABUN
RE-184	3.656E-02	1.037E-01	1.941E-01	0.000E+00	NOT IDENT.
OS-185	1.438E-02	2.562E-02	4.710E-02	0.000E+00	NOT IDENT.
RE-188	-2.243E-02	6.573E-02	9.652E-02	0.000E+00	NOT IDENT.
W-188	8.515E-01	3.007E+00	5.567E+00	0.000E+00	NOT IDENT.

IR-192	-6.886E-03	1.461E-02	2.478E-02	0.000E+00	NOT IDENT.
AU-195	1.218E-02	5.454E-02	1.009E-01	0.000E+00	NOT IDENT.
TL-200	-4.418E-01	1.471E+00	2.500E+00	0.000E+00	NOT IDENT.
TL-201	1.846E-01	4.505E-01	7.690E-01	0.000E+00	NOT IDENT.
TL-202	1.020E-02	1.957E-02	3.694E-02	0.000E+00	NOT IDENT.
HG-203	1.986E-03	1.500E-02	2.744E-02	0.000E+00	NOT IDENT.
BI-207	-7.777E-03	3.149E-02	5.134E-02	0.000E+00	NOT IDENT.
TL-207	-1.001E-01	3.032E-01	5.220E-01	0.000E+00	NOT IDENT.
TL-208	3.919E-03	2.408E-02	3.540E-02	0.000E+00	NOT IDENT.
PO-209	8.616E-01	4.468E+00	8.009E+00	0.000E+00	NOT IDENT.
BI-210	-2.500E-02	1.450E-01	2.675E-01	0.000E+00	NOT IDENT.
PB-210	-2.500E-02	1.450E-01	2.675E-01	0.000E+00	NOT IDENT.
PO-210	-2.500E-02	1.450E-01	2.675E-01	0.000E+00	NOT IDENT.
BI-211	4.770E-03	1.146E-01	2.010E-01	0.000E+00	NOT IDENT.
PB-211	-1.092E-01	4.458E-01	7.513E-01	0.000E+00	NOT IDENT.
BI-212	1.033E-01	1.572E-01	3.033E-01	0.000E+00	NOT IDENT.
PB-212	5.060E-04	2.768E-02	4.982E-02	0.000E+00	NOT IDENT.
PO-212	5.060E-04	2.768E-02	4.982E-02	0.000E+00	NOT IDENT.
BI-214	3.147E-02	4.640E-02	8.533E-02	0.000E+00	NOT IDENT.
PB-214	-1.316E-02	4.041E-02	6.834E-02	0.000E+00	NOT IDENT.
PO-214	-1.316E-02	4.041E-02	6.834E-02	0.000E+00	NOT IDENT.
PO-215	-1.001E-01	3.032E-01	5.220E-01	0.000E+00	NOT IDENT.
PO-216	5.060E-04	2.768E-02	4.982E-02	0.000E+00	NOT IDENT.
PO-218	-1.316E-02	4.041E-02	6.834E-02	0.000E+00	NOT IDENT.
RN-219	2.498E-02	1.803E-01	3.239E-01	0.000E+00	NOT IDENT.
RN-220	-1.005E+01	1.437E+01	2.196E+01	0.000E+00	NOT IDENT.
RA-223	-1.001E-01	3.032E-01	5.220E-01	0.000E+00	NOT IDENT.
RA-224	2.386E-01	2.714E-01	5.296E-01	0.000E+00	NOT IDENT.
RA-226	3.147E-02	4.640E-02	8.533E-02	0.000E+00	NOT IDENT.
AC-227	-4.733E-02	1.779E-01	3.153E-01	0.000E+00	NOT IDENT.
TH-227	-4.733E-02	1.780E-01	3.153E-01	0.000E+00	NOT IDENT.
AC-228	2.715E-02	6.385E-02	1.200E-01	0.000E+00	NOT IDENT.
RA-228	2.715E-02	6.385E-02	1.200E-01	0.000E+00	NOT IDENT.
TH-228	7.737E-04	2.770E-02	4.989E-02	0.000E+00	NOT IDENT.
TH-229	-1.397E-01	1.801E-01	3.082E-01	0.000E+00	NOT IDENT.
TH-230	3.147E-02	4.640E-02	8.533E-02	0.000E+00	NOT IDENT.
PA-231	-3.980E-01	6.541E-01	1.098E+00	0.000E+00	NOT IDENT.
TH-231	-1.001E-01	3.032E-01	5.220E-01	0.000E+00	NOT IDENT.
U-231	-8.188E-02	7.676E-02	1.243E-01	0.000E+00	NOT IDENT.
TH-232	2.715E-02	6.385E-02	1.200E-01	0.000E+00	NOT IDENT.
PA-233	1.125E-02	2.865E-02	5.351E-02	0.000E+00	NOT IDENT.
PA-234	9.770E-02	1.860E-01	3.482E-01	0.000E+00	NOT IDENT.
PA-234M	4.666E+00	3.850E+00	7.907E+00	0.000E+00	NOT IDENT.
TH-234	1.156E-01	1.502E-01	2.953E-01	0.000E+00	NOT IDENT.
U-234	3.147E-02	4.640E-02	8.533E-02	0.000E+00	NOT IDENT.
U-235	8.844E-03	7.144E-02	1.217E-01	0.000E+00	FAIL ABUN
NP-236	-1.922E-02	3.004E-02	4.967E-02	0.000E+00	NOT IDENT.
NP-237	-5.114E-02	5.548E-02	8.702E-02	0.000E+00	NOT IDENT.
U-238	1.156E-01	1.502E-01	2.953E-01	0.000E+00	NOT IDENT.
NP-239	6.943E-02	5.520E-02	1.103E-01	0.000E+00	NOT IDENT.
AM-241	-1.478E-02	1.621E-02	2.737E-02	0.000E+00	NOT IDENT.
AM-243	-6.706E-03	1.074E-02	1.711E-02	0.000E+00	NOT IDENT.
CM-243	-2.397E-03	2.564E-02	4.589E-02	0.000E+00	NOT IDENT.
CM-247	1.080E-02	1.574E-02	3.032E-02	0.000E+00	NOT IDENT.
CF-249	-1.220E-02	1.842E-02	2.962E-02	0.000E+00	NOT IDENT.
CF-251	-4.235E-02	4.180E-02	6.989E-02	0.000E+00	NOT IDENT.
ANH-511	-1.415E-02	2.907E-02	5.679E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:59:43.89

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871426.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:59:05.
Sample ID         : G1201871426          Sample quantity  : 1.66760E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.45  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Flag: "*" = Keyline

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	163.06	35	90	6.35	324.93	310	18	4.90E-03	****	6.19E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:59:49.07

```
*****************************************************************************
*                            GEL Laboratories LLC                            *
*                              2040 Savage Road                              *
*                            Charleston, SC 29414                            *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871426.CNF;1 *
* Acquisition date : 7-JUL-2009 10:59:05.  Detector SN#     :               *
* Detector ID      : GAM21                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:08.45         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-JUN-2009 00:00:00  Nuclide Library : SOLID          *
* Sample ID        : G1201871426           Analyst initials: MXR1          *
* Batch Number     : 881220                Sample Quantity : 1.66760E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.607E-02		1.582E-01	2.526E-01	1.778E-02	0.143
NA-22	-5.846E-03		2.266E-02	3.431E-02	2.029E-03	-0.170
NA-24	-6.687E-05		4.819E-05	Half-Life too short		
AL-26	1.319E-02		2.311E-02	4.466E-02	2.486E-03	0.295
K-40	-3.939E-03		3.004E-01	4.827E-01	3.072E-02	-0.008
TI-44	-2.838E-03		7.067E-03	1.056E-02	8.170E-04	-0.269
SC-46	-5.505E-03		2.075E-02	3.257E-02	2.338E-03	-0.169
V-48	-1.429E-02		2.911E-02	4.297E-02	2.956E-03	-0.333
CR-51	-3.714E-02		1.410E-01	2.257E-01	1.468E-02	-0.165
MN-52	2.747E-02		7.133E-02	1.249E-01	7.529E-03	0.220
MN-54	1.938E-03		2.269E-02	3.816E-02	2.784E-03	0.051
CO-56	-1.369E-02		2.223E-02	3.280E-02	2.386E-03	-0.417
CO-57	-8.053E-03		8.442E-03	1.220E-02	1.404E-03	-0.660
CO-58	-5.482E-03		1.816E-02	2.833E-02	2.081E-03	-0.194
FE-59	-3.620E-02		4.690E-02	6.351E-02	4.555E-03	-0.570
CO-60	1.017E-02		2.467E-02	4.379E-02	2.634E-03	0.232
ZN-65	-6.141E-02		5.987E-02	7.961E-02	4.884E-03	-0.771

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	-8.675E-01		6.478E-01	6.675E-01	4.260E-02	-1.300
AS-73	1.087E-02		6.193E-02	1.030E-01	6.920E-03	0.106
AS-74	-9.241E-03		4.130E-02	6.428E-02	4.423E-03	-0.144
SE-75	-5.787E-03		1.716E-02	2.747E-02	1.662E-03	-0.211
BR-77	-2.755E-01		6.468E-01	9.819E-01	6.329E-02	-0.281
SR-82	3.535E-03		1.707E-01	2.854E-01	2.092E-02	0.012
RB-83	-2.310E-02		3.880E-02	5.742E-02	3.700E-03	-0.402
RB-84	-3.085E-02		3.525E-02	4.814E-02	3.467E-03	-0.641
KR-85	-5.908E+00		6.052E+00	8.916E+00	5.707E-01	-0.663
SR-85	-2.795E-02		2.863E-02	4.218E-02	2.700E-03	-0.663
RB-86	-3.878E-01		3.063E-01	3.227E-01	2.061E-02	-1.202
Y-88	8.547E-03		2.788E-02	4.994E-02	2.756E-03	0.171
ZR-88	1.440E-02		1.301E-02	2.436E-02	1.314E-03	0.591
Y-91	-4.015E+00		8.154E+00	1.162E+01	6.673E-01	-0.346
NB-94	9.502E-04		1.860E-02	3.138E-02	2.275E-03	0.030
NB-95	5.798E-03		2.096E-02	3.645E-02	2.672E-03	0.159
NB-95M	-1.108E-02		4.704E-02	7.688E-02	6.010E-03	-0.144
ZR-95	1.266E-02		3.865E-02	6.764E-02	5.638E-03	0.187
NB-97	-5.767E-07		1.394E-05	Half-Life too short		
ZR-97	-1.295E-03		3.766E-04	Half-Life too short		
MO-99	4.701E-01		9.694E-01	1.735E+00	2.512E-01	0.271
TC-99M	-4.498E+00		4.311E+00	Half-Life too short		
RH-101	8.788E-03		1.177E-02	2.102E-02	1.300E-03	0.418
RH-102	3.539E-03		1.431E-02	2.415E-02	1.476E-03	0.147
RU-103	1.167E-03		2.172E-02	3.551E-02	4.571E-03	0.033
RH-106	-2.183E-01		2.244E-01	2.749E-01	3.401E-02	-0.794
RU-106	-2.183E-01		2.233E-01	2.749E-01	1.924E-02	-0.794
AG-108M	-6.749E-04		1.564E-02	2.537E-02	1.591E-03	-0.027
CD-109	-2.770E-02		1.721E-01	2.746E-01	2.276E-02	-0.101
AG-110M	7.571E-05		1.849E-02	3.105E-02	2.310E-03	0.002
IN-111	-5.371E-02		6.396E-02	9.696E-02	5.942E-03	-0.554
IN-113M	1.217E-02		2.038E-02	3.591E-02	2.082E-03	0.339
SN-113	1.217E-02		2.038E-02	3.591E-02	2.082E-03	0.339
IN-114M	-2.880E-02		6.040E-02	9.707E-02	5.984E-03	-0.297
CD-115	-3.067E-01		5.542E-01	8.183E-01	5.314E-02	-0.375
SN-117M	-6.078E-03		1.446E-02	2.213E-02	1.578E-03	-0.275
SB-122	-5.193E-02		1.696E-01	2.612E-01	1.754E-02	-0.199
I-123	-3.356E-05		6.950E-05	Half-Life too short		
TE-123M	-2.599E-03		1.076E-02	1.678E-02	1.197E-03	-0.155
I-124	2.309E-03		1.159E-01	1.871E-01	1.293E-02	0.012
SB-124	-3.632E-02		5.961E-02	8.216E-02	5.169E-03	-0.442
SB-125	4.049E-04		4.593E-02	7.513E-02	4.482E-03	0.005
TE-125M	1.741E+00		2.359E+00	4.066E+00	4.727E-01	0.428
I-126	1.129E-02		6.326E-02	1.090E-01	7.801E-03	0.104
SB-126	-6.238E-03		5.397E-02	8.864E-02	6.456E-03	-0.070
SN-126	-1.388E-02		1.888E-02	2.730E-02	2.254E-03	-0.509
SB-127	-4.623E-02		1.709E-01	2.728E-01	2.271E-02	-0.169
XE-127	-8.514E-03		1.530E-02	2.434E-02	1.509E-03	-0.350

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	-6.106E-04		2.793E-02	4.578E-02	2.871E-03	-0.013
TE-132	-4.061E-03		5.271E-02	8.737E-02	1.166E-02	-0.046
BA-133	-1.452E-02		2.288E-02	3.487E-02	4.013E-03	-0.417
I-133	-1.195E-06		3.451E-06	Half-Life too short		
CS-134	-1.385E-02		2.491E-02	3.727E-02	2.759E-03	-0.372
CS-135	2.832E-02		6.274E-02	1.091E-01	8.483E-03	0.260
I-135	-8.841E-01		7.388E+00	Half-Life too short		
CS-136	7.310E-03		4.099E-02	6.971E-02	4.898E-03	0.105
BA-137M	-3.520E-03		1.854E-02	3.017E-02	2.155E-03	-0.117
CS-137	-3.721E-03		1.960E-02	3.189E-02	2.285E-03	-0.117
CE-139	7.198E-03		1.079E-02	1.719E-02	1.041E-03	0.419
BA-140	-3.248E-03		8.285E-02	1.331E-01	4.349E-02	-0.024
LA-140	1.473E-02		4.871E-02	8.606E-02	5.099E-03	0.171
CE-141	7.482E-03		1.716E-02	2.867E-02	2.591E-03	0.261
CE-143	-4.448E-01		1.220E+00	1.940E+00	3.968E-01	-0.229
CE-144	-2.722E-02		7.077E-02	1.090E-01	1.805E-02	-0.250
PM-144	3.397E-03		1.587E-02	2.756E-02	1.995E-03	0.123
PR-144	2.293E-01		1.071E+00	1.860E+00	1.346E-01	0.123
PM-146	-1.091E-02		2.053E-02	3.058E-02	2.666E-03	-0.357
ND-147	8.613E-02		1.724E-01	3.012E-01	4.170E-02	0.286
PM-149	2.269E+00		3.797E+00	6.647E+00	9.422E-01	0.341
EU-152	-2.644E-04		4.964E-02	8.173E-02	5.315E-03	-0.003
GD-153	-3.662E-03		1.916E-02	3.035E-02	2.747E-03	-0.121
EU-154	-1.501E-02		6.387E-02	9.738E-02	9.159E-03	-0.154
EU-155	-1.566E-02		3.018E-02	4.604E-02	4.540E-03	-0.340
TB-160	-7.600E-02		8.236E-02	1.130E-01	8.141E-03	-0.673
HO-166M	-3.172E-02		3.530E-02	5.040E-02	3.663E-03	-0.629
TM-171	-5.696E+00		4.362E+00	5.689E+00	4.117E-01	-1.001
LU-176	-3.910E-03		1.180E-02	1.883E-02	1.104E-03	-0.208
LU-177	2.943E-02		1.819E-01	3.089E-01	1.917E-02	0.095
LU-177M	-8.206E-02		8.217E-02	1.147E-01	6.408E-03	-0.716
HF-181	-4.337E-03		1.877E-02	2.941E-02	1.814E-03	-0.147
W-181	-2.435E-02		4.997E-02	7.134E-02	5.128E-03	-0.341
TA-182	1.852E-02		8.723E-02	1.491E-01	8.620E-03	0.124
RE-183	5.911E-02	+	7.722E-02	6.164E-02	4.060E-03	0.959
RE-184	3.656E-02		1.058E-01	1.815E-01	1.104E-02	0.201
OS-185	1.438E-02		2.615E-02	4.532E-02	3.214E-03	0.317
RE-188	-2.243E-02		6.707E-02	8.896E-02	6.784E-03	-0.252
W-188	8.515E-01		3.068E+00	5.227E+00	3.063E-01	0.163
IR-192	-6.886E-03		1.491E-02	2.333E-02	1.372E-03	-0.295
AU-195	1.218E-02		5.565E-02	9.185E-02	8.431E-03	0.133
TL-200	-4.418E-01		1.501E+00	2.364E+00	1.325E-01	-0.187
TL-201	1.846E-01		4.597E-01	7.103E-01	4.302E-02	0.260
TL-202	1.020E-02		1.997E-02	3.512E-02	2.044E-03	0.290
HG-203	1.986E-03		1.530E-02	2.574E-02	1.595E-03	0.077
BI-207	-7.777E-03		3.213E-02	5.020E-02	3.247E-03	-0.155
TL-207	-1.001E-01		3.094E-01	4.917E-01	8.127E-02	-0.203
TL-208	3.919E-03		2.458E-02	3.396E-02	2.576E-03	0.115

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	8.616E-01		4.559E+00	7.789E+00	5.576E-01	0.111
BI-210	-2.500E-02		1.479E-01	2.384E-01	1.806E-02	-0.105
PB-210	-2.500E-02		1.479E-01	2.384E-01	1.806E-02	-0.105
PO-210	-2.500E-02		1.479E-01	2.384E-01	1.541E-02	-0.105
BI-211	4.770E-03		1.169E-01	1.898E-01	1.208E-02	0.025
PB-211	-1.092E-01		4.549E-01	7.126E-01	4.440E-01	-0.153
BI-212	1.033E-01		1.604E-01	2.930E-01	2.605E-02	0.353
PB-212	5.060E-04		2.824E-02	4.650E-02	3.543E-03	0.011
PO-212	5.060E-04		2.824E-02	4.650E-02	3.543E-03	0.011
BI-214	3.147E-02		4.734E-02	8.196E-02	7.102E-03	0.384
PB-214	-1.316E-02		4.123E-02	6.454E-02	5.309E-03	-0.204
PO-214	-1.316E-02		4.123E-02	6.454E-02	5.309E-03	-0.204
PO-215	-1.001E-01		3.094E-01	4.917E-01	8.127E-02	-0.203
PO-216	5.060E-04		2.824E-02	4.650E-02	3.543E-03	0.011
PO-218	-1.316E-02		4.123E-02	6.454E-02	5.309E-03	-0.204
RN-219	2.498E-02		1.840E-01	3.071E-01	4.137E-02	0.081
RN-220	-1.005E+01		1.466E+01	2.103E+01	1.394E+00	-0.478
RA-223	-1.001E-01		3.094E-01	4.917E-01	8.127E-02	-0.203
RA-224	2.386E-01		2.769E-01	4.944E-01	3.041E-02	0.483
RA-226	3.147E-02		4.734E-02	8.196E-02	7.102E-03	0.384
AC-227	-4.733E-02		1.816E-01	2.949E-01	4.149E-02	-0.161
TH-227	-4.733E-02		1.816E-01	2.949E-01	5.010E-02	-0.161
AC-228	2.715E-02		6.515E-02	1.168E-01	1.184E-02	0.233
RA-228	2.715E-02		6.515E-02	1.168E-01	1.184E-02	0.233
TH-228	7.737E-04		2.826E-02	4.656E-02	3.548E-03	0.017
TH-229	-1.397E-01		1.837E-01	2.859E-01	1.766E-02	-0.489
TH-230	3.147E-02		4.734E-02	8.196E-02	7.102E-03	0.384
PA-231	-3.980E-01		6.675E-01	1.031E+00	1.422E-01	-0.386
TH-231	-1.001E-01		3.094E-01	4.917E-01	8.127E-02	-0.203
U-231	-8.188E-02		7.833E-02	1.130E-01	1.008E-02	-0.725
TH-232	2.715E-02		6.515E-02	1.168E-01	1.184E-02	0.233
PA-233	1.125E-02		2.923E-02	5.035E-02	3.130E-03	0.223
PA-234	9.770E-02		1.898E-01	3.391E-01	6.134E-02	0.288
PA-234M	4.666E+00		3.929E+00	7.717E+00	7.598E-01	0.605
TH-234	1.156E-01		1.533E-01	2.653E-01	4.597E-02	0.436
U-234	3.147E-02		4.734E-02	8.196E-02	7.102E-03	0.384
U-235	8.844E-03		7.290E-02	1.119E-01	1.986E-02	0.079
NP-236	-1.922E-02		3.066E-02	4.582E-02	3.153E-03	-0.420
NP-237	-5.114E-02		5.662E-02	7.888E-02	1.751E-02	-0.648
U-238	1.156E-01		1.533E-01	2.653E-01	4.597E-02	0.436
NP-239	6.943E-02		5.633E-02	1.008E-01	1.104E-02	0.689
AM-241	-1.478E-02		1.654E-02	2.455E-02	1.916E-03	-0.602
AM-243	-6.706E-03		1.096E-02	1.545E-02	1.167E-03	-0.434
CM-243	-2.397E-03		2.616E-02	4.181E-02	4.023E-03	-0.057
CM-247	1.080E-02		1.606E-02	2.875E-02	1.577E-03	0.376
CF-249	-1.220E-02		1.879E-02	2.805E-02	1.521E-03	-0.435
CF-251	-4.235E-02		4.266E-02	6.466E-02	3.949E-03	-0.655
ANH-511	-1.415E-02		2.967E-02	5.425E-02	3.461E-03	-0.261

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871426           *
* Acquisition date :  7-JUL-2009 10:59:05 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 5.000           *
* Geometry         : CAN                  Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:08.45     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      : 30-JUN-2009 00:00:00 Nuclide Library : SOLID           *
* Sample ID        : G1201871426          Analyst initials: MXR1            *
* Batch Number     : 881220               Sample Quantity : 1.6676E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	3.607E-02	1.551E-01	1.326E-01	7.912E-02 NOT IDENT.
NA-22	-5.846E-03	2.220E-02	1.745E-02	1.133E-02 NOT IDENT.
NA-24	-6.687E+01	9.445E+01	0.000E+00	4.819E+01 SHORT HLIF
AL-26	1.319E-02	2.265E-02	2.245E-02	1.155E-02 NOT IDENT.
K-40	-3.939E-03	2.944E-01	2.444E-01	1.502E-01 NOT IDENT.
TI-44	-2.838E-03	6.926E-03	5.847E-03	3.533E-03 NOT IDENT.
SC-46	-5.505E-03	2.034E-02	1.676E-02	1.038E-02 NOT IDENT.
V-48	-1.429E-02	2.853E-02	2.204E-02	1.456E-02 NOT IDENT.
CR-51	-3.714E-02	1.381E-01	1.199E-01	7.048E-02 NOT IDENT.
MN-52	2.747E-02	6.991E-02	6.328E-02	3.567E-02 NOT IDENT.
MN-54	1.938E-03	2.223E-02	1.968E-02	1.134E-02 NOT IDENT.
CO-56	-1.369E-02	2.178E-02	1.690E-02	1.111E-02 NOT IDENT.
CO-57	-8.053E-03	8.273E-03	6.667E-03	4.221E-03 NOT IDENT.
CO-58	-5.482E-03	1.780E-02	1.462E-02	9.082E-03 NOT IDENT.
FE-59	-3.620E-02	4.596E-02	3.246E-02	2.345E-02 NOT IDENT.
CO-60	1.017E-02	2.417E-02	2.224E-02	1.233E-02 NOT IDENT.
ZN-65	-6.141E-02	5.867E-02	4.067E-02	2.994E-02 NOT IDENT.
GE-68	-8.675E-01	6.348E-01	3.414E-01	3.239E-01 NOT IDENT.
AS-73	1.087E-02	6.070E-02	5.761E-02	3.097E-02 NOT IDENT.
AS-74	-9.241E-03	4.048E-02	3.350E-02	2.065E-02 NOT IDENT.
SE-75	-5.787E-03	1.682E-02	1.468E-02	8.581E-03 NOT IDENT.
BR-77	-2.755E-01	6.339E-01	5.139E-01	3.234E-01 NOT IDENT.
SR-82	3.535E-03	1.673E-01	1.475E-01	8.535E-02 NOT IDENT.
RB-83	-2.310E-02	3.802E-02	3.005E-02	1.940E-02 NOT IDENT.
RB-84	-3.085E-02	3.454E-02	2.478E-02	1.762E-02 NOT IDENT.
KR-85	-5.908E+00	5.930E+00	4.669E+00	3.026E+00 NOT IDENT.

SR-85	-2.795E-02	2.805E-02	2.209E-02	1.431E-02	NOT IDENT.
RB-86	-3.878E-01	3.002E-01	1.650E-01	1.531E-01	NOT IDENT.
Y-88	8.547E-03	2.732E-02	2.509E-02	1.394E-02	NOT IDENT.
ZR-88	1.440E-02	1.275E-02	1.286E-02	6.505E-03	NOT IDENT.
Y-91	-4.015E+00	7.991E+00	5.920E+00	4.077E+00	NOT IDENT.
NB-94	9.502E-04	1.823E-02	1.627E-02	9.302E-03	NOT IDENT.
NB-95	5.798E-03	2.054E-02	1.885E-02	1.048E-02	NOT IDENT.
NB-95M	-1.108E-02	4.610E-02	4.122E-02	2.352E-02	NOT IDENT.
ZR-95	1.266E-02	3.788E-02	3.499E-02	1.933E-02	NOT IDENT.
NB-97	-5.767E-01	2.733E+01	0.000E+00	1.394E+01	SHORT HLIF
ZR-97	-1.295E+03	7.382E+02	0.000E+00	3.766E+02	SHORT HLIF
MO-99	4.701E-01	9.500E-01	8.982E-01	4.847E-01	NOT IDENT.
TC-99M	-4.498E+06	8.449E+06	0.000E+00	4.311E+06	SHORT HLIF
RH-101	8.788E-03	1.153E-02	1.133E-02	5.883E-03	NOT IDENT.
RH-102	3.539E-03	1.402E-02	1.268E-02	7.155E-03	NOT IDENT.
RU-103	1.167E-03	2.128E-02	1.861E-02	1.086E-02	NOT IDENT.
RH-106	-2.183E-01	2.199E-01	1.431E-01	1.122E-01	NOT IDENT.
RU-106	-2.183E-01	2.188E-01	1.431E-01	1.116E-01	NOT IDENT.
AG-108M	-6.749E-04	1.533E-02	1.336E-02	7.819E-03	NOT IDENT.
CD-109	-2.770E-02	1.687E-01	1.515E-01	8.607E-02	NOT IDENT.
AG-110M	7.571E-05	1.812E-02	1.613E-02	9.243E-03	NOT IDENT.
IN-111	-5.371E-02	6.268E-02	5.193E-02	3.198E-02	NOT IDENT.
IN-113M	1.217E-02	1.998E-02	1.896E-02	1.019E-02	NOT IDENT.
SN-113	1.217E-02	1.998E-02	1.896E-02	1.019E-02	NOT IDENT.
IN-114M	-2.880E-02	5.919E-02	5.238E-02	3.020E-02	NOT IDENT.
CD-115	-3.067E-01	5.431E-01	4.281E-01	2.771E-01	NOT IDENT.
SN-117M	-6.078E-03	1.417E-02	1.201E-02	7.231E-03	NOT IDENT.
SB-122	-5.193E-02	1.662E-01	1.364E-01	8.480E-02	NOT IDENT.
I-123	-3.356E+01	1.362E+02	0.000E+00	6.950E+01	SHORT HLIF
TE-123M	-2.599E-03	1.055E-02	9.101E-03	5.381E-03	NOT IDENT.
I-124	2.309E-03	1.135E-01	9.747E-02	5.793E-02	NOT IDENT.
SB-124	-3.632E-02	5.842E-02	4.139E-02	2.981E-02	NOT IDENT.
SB-125	4.049E-04	4.501E-02	3.956E-02	2.296E-02	NOT IDENT.
TE-125M	1.741E+00	2.312E+00	2.229E+00	1.179E+00	NOT IDENT.
I-126	1.129E-02	6.199E-02	5.661E-02	3.163E-02	NOT IDENT.
SB-126	-6.238E-03	5.289E-02	4.592E-02	2.699E-02	NOT IDENT.
SN-126	-1.388E-02	1.851E-02	1.506E-02	9.442E-03	NOT IDENT.
SB-127	-4.623E-02	1.675E-01	1.415E-01	8.547E-02	NOT IDENT.
XE-127	-8.514E-03	1.500E-02	1.311E-02	7.653E-03	NOT IDENT.
I-131	-6.106E-04	2.737E-02	2.423E-02	1.396E-02	NOT IDENT.
TE-132	-4.061E-03	5.165E-02	4.690E-02	2.635E-02	NOT IDENT.
BA-133	-1.452E-02	2.242E-02	1.847E-02	1.144E-02	NOT IDENT.
I-133	-1.195E+00	6.763E+00	0.000E+00	3.451E+00	SHORT HLIF
CS-134	-1.385E-02	2.441E-02	1.925E-02	1.246E-02	NOT IDENT.
CS-135	2.832E-02	6.148E-02	5.826E-02	3.137E-02	NOT IDENT.
I-135	-8.841E+05	1.448E+07	0.000E+00	7.388E+06	SHORT HLIF
CS-136	7.310E-03	4.017E-02	3.568E-02	2.050E-02	FAIL ABUN
BA-137M	-3.520E-03	1.817E-02	1.567E-02	9.268E-03	NOT IDENT.
CS-137	-3.721E-03	1.920E-02	1.657E-02	9.798E-03	NOT IDENT.
CE-139	7.198E-03	1.058E-02	9.313E-03	5.397E-03	NOT IDENT.
BA-140	-3.248E-03	8.119E-02	6.962E-02	4.143E-02	FAIL ABUN
LA-140	1.473E-02	4.774E-02	4.344E-02	2.436E-02	NOT IDENT.
CE-141	7.482E-03	1.682E-02	1.559E-02	8.581E-03	NOT IDENT.
CE-143	-4.448E-01	1.196E+00	1.034E+00	6.101E-01	NOT IDENT.
CE-144	-2.722E-02	6.935E-02	5.944E-02	3.538E-02	NOT IDENT.
PM-144	3.397E-03	1.555E-02	1.429E-02	7.935E-03	NOT IDENT.
PR-144	2.293E-01	1.050E+00	9.647E-01	5.355E-01	NOT IDENT.
PM-146	-1.091E-02	2.012E-02	1.607E-02	1.027E-02	NOT IDENT.
ND-147	8.613E-02	1.690E-01	1.576E-01	8.620E-02	NOT IDENT.
PM-149	2.269E+00	3.721E+00	3.543E+00	1.898E+00	NOT IDENT.
EU-152	-2.644E-04	4.864E-02	4.333E-02	2.482E-02	NOT IDENT.
GD-153	-3.662E-03	1.878E-02	1.669E-02	9.579E-03	NOT IDENT.
EU-154	-1.501E-02	6.259E-02	4.953E-02	3.193E-02	NOT IDENT.
EU-155	-1.566E-02	2.957E-02	2.527E-02	1.509E-02	NOT IDENT.
TB-160	-7.600E-02	8.071E-02	5.815E-02	4.118E-02	NOT IDENT.
HO-166M	-3.172E-02	3.459E-02	2.612E-02	1.765E-02	NOT IDENT.
TM-171	-5.696E+00	4.275E+00	3.163E+00	2.181E+00	NOT IDENT.
LU-176	-3.910E-03	1.156E-02	1.001E-02	5.900E-03	NOT IDENT.
LU-177	2.943E-02	1.782E-01	1.662E-01	9.093E-02	NOT IDENT.
LU-177M	-8.206E-02	8.053E-02	6.045E-02	4.109E-02	NOT IDENT.
HF-181	-4.337E-03	1.839E-02	1.543E-02	9.385E-03	NOT IDENT.
W-181	-2.435E-02	4.897E-02	3.968E-02	2.498E-02	NOT IDENT.
TA-182	1.852E-02	8.549E-02	7.592E-02	4.362E-02	NOT IDENT.
RE-183	5.911E-02	7.567E-02	3.342E-02	3.861E-02	FAIL ABUN
RE-184	3.656E-02	1.037E-01	9.711E-02	5.291E-02	NOT IDENT.
OS-185	1.438E-02	2.562E-02	2.356E-02	1.307E-02	NOT IDENT.
RE-188	-2.243E-02	6.573E-02	4.829E-02	3.353E-02	NOT IDENT.
W-188	8.515E-01	3.007E+00	2.785E+00	1.534E+00	NOT IDENT.

IR-192	-6.886E-03	1.461E-02	1.240E-02	7.455E-03	NOT IDENT.
AU-195	1.218E-02	5.454E-02	5.050E-02	2.782E-02	NOT IDENT.
TL-200	-4.418E-01	1.471E+00	1.251E+00	7.506E-01	NOT IDENT.
TL-201	1.846E-01	4.505E-01	3.847E-01	2.299E-01	NOT IDENT.
TL-202	1.020E-02	1.957E-02	1.848E-02	9.985E-03	NOT IDENT.
HG-203	1.986E-03	1.500E-02	1.373E-02	7.651E-03	NOT IDENT.
BI-207	-7.777E-03	3.149E-02	2.568E-02	1.607E-02	NOT IDENT.
TL-207	-1.001E-01	3.032E-01	2.611E-01	1.547E-01	NOT IDENT.
TL-208	3.919E-03	2.408E-02	1.771E-02	1.229E-02	NOT IDENT.
PO-209	8.616E-01	4.468E+00	4.007E+00	2.280E+00	NOT IDENT.
BI-210	-2.500E-02	1.450E-01	1.338E-01	7.397E-02	NOT IDENT.
PB-210	-2.500E-02	1.450E-01	1.338E-01	7.397E-02	NOT IDENT.
PO-210	-2.500E-02	1.450E-01	1.338E-01	7.397E-02	NOT IDENT.
BI-211	4.770E-03	1.146E-01	1.005E-01	5.845E-02	NOT IDENT.
PB-211	-1.092E-01	4.458E-01	3.759E-01	2.274E-01	NOT IDENT.
BI-212	1.033E-01	1.572E-01	1.517E-01	8.019E-02	NOT IDENT.
PB-212	5.060E-04	2.768E-02	2.492E-02	1.412E-02	NOT IDENT.
PO-212	5.060E-04	2.768E-02	2.492E-02	1.412E-02	NOT IDENT.
BI-214	3.147E-02	4.640E-02	4.269E-02	2.367E-02	NOT IDENT.
PB-214	-1.316E-02	4.041E-02	3.419E-02	2.062E-02	NOT IDENT.
PO-214	-1.316E-02	4.041E-02	3.419E-02	2.062E-02	NOT IDENT.
PO-215	-1.001E-01	3.032E-01	2.611E-01	1.547E-01	NOT IDENT.
PO-216	5.060E-04	2.768E-02	2.492E-02	1.412E-02	NOT IDENT.
PO-218	-1.316E-02	4.041E-02	3.419E-02	2.062E-02	NOT IDENT.
RN-219	2.498E-02	1.803E-01	1.620E-01	9.200E-02	NOT IDENT.
RN-220	-1.005E+01	1.437E+01	1.099E+01	7.332E+00	NOT IDENT.
RA-223	-1.001E-01	3.032E-01	2.611E-01	1.547E-01	NOT IDENT.
RA-224	2.386E-01	2.714E-01	2.649E-01	1.385E-01	NOT IDENT.
RA-226	3.147E-02	4.640E-02	4.269E-02	2.367E-02	NOT IDENT.
AC-227	-4.733E-02	1.779E-01	1.577E-01	9.078E-02	NOT IDENT.
TH-227	-4.733E-02	1.780E-01	1.577E-01	9.081E-02	NOT IDENT.
AC-228	2.715E-02	6.385E-02	6.003E-02	3.257E-02	NOT IDENT.
RA-228	2.715E-02	6.385E-02	6.003E-02	3.257E-02	NOT IDENT.
TH-228	7.737E-04	2.770E-02	2.496E-02	1.413E-02	NOT IDENT.
TH-229	-1.397E-01	1.801E-01	1.542E-01	9.186E-02	NOT IDENT.
TH-230	3.147E-02	4.640E-02	4.269E-02	2.367E-02	NOT IDENT.
PA-231	-3.980E-01	6.541E-01	5.496E-01	3.337E-01	NOT IDENT.
TH-231	-1.001E-01	3.032E-01	2.611E-01	1.547E-01	NOT IDENT.
U-231	-8.188E-02	7.676E-02	6.219E-02	3.916E-02	NOT IDENT.
TH-232	2.715E-02	6.385E-02	6.003E-02	3.257E-02	NOT IDENT.
PA-233	1.125E-02	2.865E-02	2.677E-02	1.462E-02	NOT IDENT.
PA-234	9.770E-02	1.860E-01	1.742E-01	9.491E-02	NOT IDENT.
PA-234M	4.666E+00	3.850E+00	3.956E+00	1.964E+00	NOT IDENT.
TH-234	1.156E-01	1.502E-01	1.477E-01	7.664E-02	NOT IDENT.
U-234	3.147E-02	4.640E-02	4.269E-02	2.367E-02	NOT IDENT.
U-235	8.844E-03	7.144E-02	6.088E-02	3.645E-02	FAIL ABUN
NP-236	-1.922E-02	3.004E-02	2.485E-02	1.533E-02	NOT IDENT.
NP-237	-5.114E-02	5.548E-02	4.353E-02	2.831E-02	NOT IDENT.
U-238	1.156E-01	1.502E-01	1.477E-01	7.664E-02	NOT IDENT.
NP-239	6.943E-02	5.520E-02	5.517E-02	2.816E-02	NOT IDENT.
AM-241	-1.478E-02	1.621E-02	1.369E-02	8.271E-03	NOT IDENT.
AM-243	-6.706E-03	1.074E-02	8.562E-03	5.479E-03	NOT IDENT.
CM-243	-2.397E-03	2.564E-02	2.296E-02	1.308E-02	NOT IDENT.
CM-247	1.080E-02	1.574E-02	1.517E-02	8.028E-03	NOT IDENT.
CF-249	-1.220E-02	1.842E-02	1.482E-02	9.397E-03	NOT IDENT.
CF-251	-4.235E-02	4.180E-02	3.496E-02	2.133E-02	NOT IDENT.
ANH-511	-1.415E-02	2.907E-02	2.841E-02	1.483E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	51.5619
46.50	51.5619
46.50	51.5619
48.70	60.8474
49.72	52.8081
51.35	50.8887
52.39	48.9207
52.97	61.1976
53.15	57.1312
53.44	54.0912
54.07	59.2427
56.28	36.8755
56.28	36.8756
57.37	46.1579
57.53	46.1672
57.53	46.1673
57.60	46.1712
57.98	61.5908
57.98	61.5908
59.32	67.8625
59.32	67.8625
59.40	67.8691
59.54	67.8809
59.72	66.8671
60.01	62.7744
61.10	59.7664
61.14	55.6472
61.30	55.6579
63.00	40.2794
63.29	48.5585
63.29	48.5585
63.58	48.5752
64.28	55.8559
65.12	56.9462
65.20	60.0579
65.20	60.0579
66.05	66.3362
66.72	75.7229
66.83	71.5829
66.91	71.5895
67.20	69.5377
67.20	69.5377
67.75	60.2346
67.85	56.0869
68.90	63.4328
68.90	63.4328
69.30	63.4615
69.67	65.5696
70.82	60.4431
70.82	60.4431
70.83	60.4437
72.80	73.1079
72.87	73.1134
72.87	73.1134
74.67	61.7447
74.81	66.9873
74.81	66.9873
74.81	66.9873
74.81	66.9873
74.81	66.9873
74.81	66.9873
74.97	66.9988
75.28	70.1629
75.70	70.1943
77.11	65.0534
77.11	65.0534
77.11	65.0534

77.11	65.0534
77.11	65.0534
77.11	65.0534
78.38	64.0897
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79.80	71.5501
79.80	71.5501
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80.18	68.4203
80.30	68.4287
80.30	68.4287
80.57	67.3948
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81.07	73.7510
81.07	73.7510
81.07	73.7510
81.07	73.7510
82.60	67.5349
83.37	59.1390
83.78	58.1073
83.78	58.1073
83.78	58.1073
83.78	58.1073
84.21	58.1322
84.40	59.2005
84.90	63.4609
85.43	67.7275
86.29	64.6080
86.50	70.9774
86.54	70.9802
86.59	70.9838
86.72	68.8738
86.79	68.8783
86.94	64.6494
87.30	64.6724
87.30	64.6724
87.30	64.6724
87.30	64.6724
87.30	64.6724
87.30	64.6724
87.57	67.8708
87.88	67.8916
88.03	67.9016
88.36	71.1072
88.47	71.1149
89.95	69.0913
91.11	53.2066
92.29	55.3973
92.38	51.1403
92.38	51.1403
93.35	60.7850
94.00	59.7553
94.67	65.1313
94.67	65.1315
94.90	67.2815
94.90	67.2815
94.90	67.2815
94.90	67.2815
95.87	74.8249
95.87	74.8249
96.73	69.5361
97.43	55.6646
98.44	51.4305
98.44	51.4305
98.88	51.4512
99.55	53.6278
99.55	53.6278
99.86	53.6428
100.00	59.0147
100.10	59.0202
103.18	55.9554
103.76	54.9077
105.00	59.2793
105.31	62.5298
108.00	50.7900
109.28	45.4370
111.00	48.7544
111.00	48.7544

111.76	60.7115
112.95	68.3691
115.19	59.7998
116.30	45.7076
117.00	39.2006
117.00	39.2006
117.66	39.2220
121.11	73.2025
121.62	69.9536
121.78	69.9626
122.06	74.3522
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122.32	72.1805
122.32	72.1805
122.32	72.1805
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133.02	56.2466
133.54	69.5085
135.34	74.0230
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136.48	59.7118
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140.51	0.0000
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142.65	51.0997
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144.24	58.9445
144.24	58.9445
144.24	58.9445
145.22	47.8570
145.44	47.8645
147.16	56.8400
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152.70	46.5470
153.22	48.3551
154.21	53.7653
154.21	53.7653
154.21	53.7653
154.21	53.7653
155.03	66.3484
156.02	61.0107
158.56	71.9038
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159.00	71.9258
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161.27	63.0329
162.32	58.5722
162.64	57.0827
163.35	55.6073
163.89	49.6138
165.85	45.1630
167.43	46.7176
171.28	49.8585
171.86	47.1571
172.10	52.6064
176.55	60.0357
176.60	60.0377
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184.41	55.7656
185.71	60.3857
186.00	60.3970
190.27	63.3095
192.34	50.5282
193.63	61.6012
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198.01	45.1710
198.60	42.4206
200.40	55.3909
201.83	64.6774
202.84	62.8672
205.31	49.9968
208.36	54.7237
208.81	53.8100

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209.75	52.9111
210.97	57.5933
215.65	53.0910
216.55	49.3905
218.09	54.0975
222.10	43.0017
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226.40	54.3492
227.00	55.3046
227.08	55.3071
227.20	55.3107
228.16	50.6501
228.18	50.6507
228.18	50.6507
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236.00	63.1127
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238.63	57.5419
238.63	57.5419
238.63	57.5419
239.00	60.3836
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241.98	58.5897
241.98	58.5897
241.98	58.5897
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247.94	51.1899
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249.79	46.4950
252.40	57.9597
252.85	54.1716
252.85	54.1716
254.15	0.0000
256.20	61.8809
256.20	61.8809
260.50	47.7051
260.90	44.8520
262.80	53.4919
264.65	43.9802
268.24	37.3547
268.79	36.4066
269.46	41.2106
269.46	41.2106
269.46	41.2106
269.46	41.2106
271.23	47.9614
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277.60	34.6403
278.00	37.5342
278.60	39.4705
279.20	41.4080
279.53	38.5249
280.46	43.3603
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285.90	39.6091
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286.10	34.7823
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290.80	42.6062
291.72	44.5625
293.26	50.4112
293.70	45.5737
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295.21	38.8135
295.21	38.8135
295.96	50.4753

296.50	48.5461
297.23	43.7064
298.57	44.7057
299.80	44.7310
299.80	44.7310
300.09	44.7371
300.09	44.7371
300.09	44.7371
300.10	44.7371
300.12	44.7377
301.29	40.8695
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303.76	41.8898
303.91	41.8930
304.40	43.8514
304.40	43.8514
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306.84	46.8270
308.46	42.9564
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319.02	36.2945
319.41	37.2815
320.08	40.2368
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323.87	43.2534
323.87	43.2534
323.87	43.2534
325.23	33.4430
328.77	39.4058
333.44	42.4473
334.20	37.5241
334.20	37.5241
334.30	37.5255
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338.28	35.6115
338.28	35.6115
338.28	35.6115
338.32	35.6120
338.32	35.6120
338.32	35.6120
340.50	45.5468
340.57	45.5480
344.27	42.6446
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351.92	45.7670
351.92	45.7670
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364.48	31.0030
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367.43	28.0366
367.94	28.0424
369.80	27.0613
374.96	39.1695
383.85	32.2531
387.95	34.3241
388.63	36.3529
391.69	25.2753
391.69	25.2753
392.90	18.2068
398.62	24.3296
400.65	26.3774
401.10	26.3821
401.81	24.3592
402.60	19.2904
404.84	31.5006
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411.60	25.4688
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432.53	29.7742
433.93	24.6533
439.47	17.4978
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439.89	21.6183
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444.90	31.9703
445.03	31.9718
445.03	31.9718
445.03	31.9718
445.03	31.9718
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511.00	23.2072
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511.85	29.5446
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513.99	82.3608
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529.87	0.0000
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546.56	0.0000
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552.65	21.3789
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568.70	22.5591
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569.50	29.0112
569.67	29.0131
573.80	31.2012
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574.64	29.0566
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583.14	17.2629
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592.07	28.1265
593.00	23.8063
595.88	27.0752
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602.71	28.2147
603.60	28.2223
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604.70	34.7461
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609.31	20.6583
609.31	20.6583

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618.01	21.8003
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621.84	28.3715
631.29	27.3541
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633.10	25.1787
634.78	18.6191
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646.12	20.8759
656.30	21.1184
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657.90	0.0000
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661.65	19.3107
664.57	19.3260
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666.33	17.4940
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677.61	20.3184
685.20	16.6582
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695.00	12.0624
696.49	12.9954
696.49	12.9954
697.00	12.9971
697.49	17.6413
698.33	17.6451
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699.00	19.5059
702.63	19.5247
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706.58	0.0000
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709.31	26.0785
711.68	26.0945
713.82	17.7170
717.42	16.8003
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721.93	27.0990
722.20	26.1663
722.78	27.1049
722.78	27.1049
722.89	26.1708
722.95	26.1714
723.30	25.2389
724.18	25.2444
727.18	14.9714
733.00	22.4907
735.90	20.6317
739.58	15.0189
742.81	22.5469
744.21	22.5547
747.13	19.7499
751.79	26.3645
752.31	22.6011
753.82	16.0150
755.35	19.7909
756.15	16.9673
756.87	16.9702
763.93	19.8336
765.79	16.0630
766.41	14.1754
766.84	11.3416
768.36	11.3459
768.36	11.3459
768.36	11.3459
768.36	11.3459
776.49	16.1056
778.00	16.1115
778.57	18.9575
778.89	18.9591
783.80	19.9310

785.46	16.1412
792.07	16.1672
795.84	19.0373
796.30	19.9917
801.93	14.2990
805.60	17.1738
810.29	13.3725
810.76	13.3739
815.85	16.2595
817.79	15.3102
818.51	14.3558
819.60	11.4875
826.30	26.8470
828.27	13.4298
831.60	16.3204
831.96	19.2021
834.83	19.2147
836.80	0.0000
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848.13	19.2745
856.28	0.0000
856.80	17.3815
860.37	19.3286
867.32	12.5837
867.82	19.3616
871.10	20.3450
873.19	11.6311
874.81	7.7570
875.33	0.0000
876.40	11.6396
879.36	22.3243
880.27	16.5040
880.51	13.5921
881.50	19.4218
883.24	12.6292
884.67	6.8025
889.25	14.5917
896.60	14.6158
898.02	13.6457
899.00	9.7489
903.28	14.6375
911.07	8.7975
911.07	8.7975
911.07	8.7975
919.63	11.7522
920.93	12.7350
925.00	15.6878
925.24	15.6886
926.50	11.7698
934.06	14.7363
934.06	14.7363
934.06	14.7363
934.06	14.7363
935.52	11.7927
937.48	9.8315
944.10	15.7526
946.00	12.8043
949.00	11.8269
962.29	14.8257
964.01	12.8535
966.15	10.8809
968.20	8.9064
969.11	10.8879
969.11	10.8879
969.11	10.8879
977.42	8.9238
980.50	7.9373
983.50	14.8920
989.30	14.9100
996.32	17.9180
1001.03	7.9712
1001.68	9.9654
1004.76	19.9434
1021.30	0.0000
1024.50	0.0000
1034.80	15.0494
1037.82	18.0703
1038.57	16.0645

1038.76	0.0000
1045.16	13.0698
1046.59	13.0735
1048.07	11.0653
1050.47	10.0643
1050.47	10.0643
1063.62	15.1361
1076.63	15.1746
1077.35	16.1888
1085.78	11.1477
1099.22	16.2572
1112.02	12.2231
1112.84	12.2251
1115.52	25.4822
1120.29	11.2220
1120.29	11.2220
1120.29	11.2220
1120.29	11.2220
1120.51	13.2629
1121.28	13.2650
1124.00	0.0000
1129.67	13.2862
1131.51	0.0000
1147.95	0.0000
1167.94	13.3814
1173.22	14.4250
1175.09	9.2765
1177.93	14.4375
1189.05	7.2333
1204.90	11.3993
1205.75	13.4740
1213.00	7.2649
1221.42	8.3151
1230.97	9.3706
1235.34	13.5459
1236.41	0.0000
1238.11	7.2974
1238.11	7.2974
1238.11	7.2974
1238.11	7.2974
1238.25	8.3402
1246.25	10.4399
1260.41	0.0000
1271.85	8.3893
1274.45	9.4424
1274.54	9.4424
1291.56	8.4180
1298.22	0.0000
1312.09	11.6154
1325.50	12.7002
1325.50	12.7002
1332.49	7.4170
1333.61	8.4782
1360.21	9.5804
1362.66	0.0000
1365.15	10.6535
1368.21	10.6592
1368.53	0.0000
1376.25	7.4711
1377.67	7.4728
1377.67	7.4728
1377.67	7.4728
1377.67	7.4728
1384.27	9.6185
1394.10	8.5635
1395.20	5.3530
1407.95	11.8012
1434.06	8.6185
1436.60	5.3888
1457.56	0.0000
1460.81	12.9829
1489.15	9.3143
1509.49	10.2780
1596.49	9.4667
1620.62	3.8001
1678.03	0.0000
1691.02	9.5965
1691.02	9.5965

1706.46	0.0000
1750.46	0.0000
1764.49	6.7864
1764.49	6.7864
1764.49	6.7864
1764.49	6.7864
1770.23	7.7620
1771.40	4.8519
1791.20	0.0000
1808.65	2.9259
1836.01	4.8943

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871426

Total Uranium Activity	3.4789E-01	ug/g
Total Uranium Counting Unc.	4.4813E-01	ug/g
Total Uranium Tpu	2.2864E-07	ug/g
Total Uranium Mda	4.4038E-01	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID  : G1201871426      *
*   ANALYST       : MXR1                      DETECTOR   : GAM21            *
*   SAMPLE DATE   : 30-JUN-2009 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 10:59:05.71    SAMPLE ALQT:  166.760 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.284E-02
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 8.378E-03
        GROSS GAMMA MDA     (pCi/GRAM  )  : 1.314E-02
        GROSS GAMMA DLC     (pCi/GRAM  )  : 6.079E-03
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 13:21:29.44

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871427.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 11:20:58.
Sample ID         : G1201871427          Sample quantity  : 1.44910E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.14  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	57.84	136	1711	1.00	114.80	112	12	1.88E-02	50.1	1.14E+00
2	3	59.62	2777	1605	1.02	118.37	112	12	3.86E-01	3.0	
3	4	74.88*	488	2039	1.32	148.88	142	16	6.78E-02	17.1	1.24E+00
4	4	77.14*	767	1542	1.03	153.39	142	16	1.07E-01	9.0	
5	0	87.23	324	1792	1.30	173.57	171	7	4.49E-02	22.4	
6	0	93.08*	304	2126	1.47	185.26	182	8	4.23E-02	27.2	
7	0	186.22*	132	2334	1.31	371.48	367	7	1.83E-02	61.8	
8	4	238.77*	2121	1804	1.13	476.55	472	15	2.95E-01	4.0	1.80E+00
9	4	241.77	490	2176	1.80	482.54	472	15	6.81E-02	18.4	
10	0	295.39*	664	1857	1.30	589.75	586	9	9.22E-02	12.4	
11	0	338.33*	314	1872	1.26	675.59	671	9	4.36E-02	25.6	
12	0	352.22*	1197	2376	1.61	703.37	698	12	1.66E-01	8.7	
13	0	510.99*	173	1577	2.20	1020.82	1016	12	2.40E-02	47.8	
14	0	583.24*	747	910	1.53	1165.27	1158	14	1.04E-01	9.4	
15	0	609.47*	886	820	1.58	1217.73	1210	15	1.23E-01	7.9	
16	0	661.86	82100	772	1.67	1322.48	1313	18	1.14E+01	0.4	
17	0	727.23	209	146	2.20	1453.19	1447	15	2.91E-02	14.3	
18	0	769.16	78	220	1.58	1537.03	1530	16	1.09E-02	43.8	
19	0	786.22	26	122	0.67	1571.14	1566	10	3.57E-03	82.9	
20	0	795.46	125	105	1.03	1589.61	1583	15	1.74E-02	20.0	
21	0	861.01*	77	96	1.09	1720.68	1715	11	1.06E-02	28.0	
22	0	911.57*	535	163	2.11	1821.78	1814	16	7.44E-02	7.0	
23	1	964.98	108	135	2.32	1928.58	1921	30	1.51E-02	23.5	2.77E+00
24	1	969.40	331	94	2.02	1937.42	1921	30	4.60E-02	8.1	
25	0	1120.27	240	81	1.64	2239.12	2230	15	3.33E-02	10.5	
26	0	1237.80	110	149	3.16	2474.14	2465	17	1.53E-02	27.1	
27	0	1378.59	63	64	1.54	2755.68	2747	18	8.80E-03	32.0	
28	0	1461.24*	2670	64	2.56	2920.96	2908	23	3.71E-01	2.1	
29	0	1588.87	59	17	2.40	3176.21	3171	11	8.12E-03	18.8	
30	0	1730.22	53	13	2.92	3458.89	3452	17	7.30E-03	20.9	
31	0	1765.51	155	34	2.27	3529.47	3519	20	2.15E-02	12.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 13:21:32

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871427.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 11:20:58
Sample ID : G1201871427 Sample quantity : 144.91 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.14 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.425E+01	2.968E+00	4.208E-01	3.193E-02	81.387
CD-109	+	88.03	*	3.567E+00	1.630E+00	2.200E+00	2.034E-01	1.621
SN-126		64.28		-7.793E-01	9.864E-01	1.435E+00	2.121E-01	-0.543
	+	86.94		1.462E+00	8.923E-01	8.660E-01	3.592E-01	1.688
	+	87.57	*	3.517E-01	1.607E-01	2.127E-01	1.960E-02	1.654
BA-137M	+	661.65	*	6.596E+01	5.052E+00	7.634E-02	5.819E-03	863.985
CS-137	+	661.65	*	6.972E+01	5.353E+00	8.070E-02	6.167E-03	863.984
TL-208		277.35		7.881E-01	7.586E-01	1.250E+00	1.312E-01	0.631
	+	510.84		4.812E-01	4.629E-01	4.911E-01	5.222E-02	0.980
	+	583.14	*	5.844E-01	1.187E-01	9.827E-02	7.704E-03	5.947
	+	860.37		5.466E-01	3.119E-01	3.530E-01	3.948E-02	1.549
BI-211		72.87		7.765E+00	4.949E+00	8.345E+00	6.890E-01	0.930
	+	351.07	*	4.399E+00	8.140E-01	7.216E-01	4.632E-02	6.097
BI-212	+	727.18	*	1.376E+00	4.156E-01	3.323E-01	3.309E-02	4.142
	+	785.46		1.078E+00	1.790E+00	2.188E+00	2.068E-01	0.493
		1620.62		1.096E+00	9.846E-01	1.808E+00	1.223E-01	0.606
PB-212	+	74.81		2.403E+00	8.735E-01	8.841E-01	1.108E-01	2.718
	+	77.11		2.108E+00	4.200E-01	4.946E-01	4.192E-02	4.263
	+	87.30		1.627E+00	7.608E-01	9.875E-01	1.341E-01	1.647
	+	238.63	*	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
		300.09		2.855E+00	1.769E+00	2.579E+00	2.118E-01	1.107
PO-212	+	74.81		2.403E+00	8.735E-01	8.841E-01	1.108E-01	2.718
	+	77.11		2.108E+00	4.200E-01	4.946E-01	4.192E-02	4.263
	+	87.30		1.627E+00	7.608E-01	9.875E-01	1.341E-01	1.647
		115.19		1.266E+00	6.293E+00	1.017E+01	6.409E-01	0.124
	+	238.63	*	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
		300.09		2.855E+00	1.769E+00	2.579E+00	2.118E-01	1.107
BI-214	+	609.31	*	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
	+	768.36		1.261E+00	1.114E+00	8.935E-01	9.780E-02	1.411
		934.06		5.902E-01	9.037E-01	1.530E+00	1.901E-01	0.386
	+	1120.29		1.761E+00	4.058E-01	4.125E-01	3.949E-02	4.270
	+	1238.11		2.238E+00	1.227E+00	1.168E+00	9.963E-02	1.916
	+	1377.67		2.023E+00	1.309E+00	1.120E+00	1.097E-01	1.807
	+	1764.49		1.500E+00	3.804E-01	2.203E-01	1.339E-02	6.809

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-214	+	74.81		4.140E+00	1.487E+00	1.523E+00	1.701E-01	2.718
	+	77.11		3.614E+00	7.708E-01	8.479E-01	9.664E-02	4.263
	+	87.30		2.787E+00	1.291E+00	1.692E+00	2.029E-01	1.647
	+	241.98		2.513E+00	9.435E-01	1.042E+00	8.240E-02	2.411
	+	295.21		1.483E+00	3.891E-01	4.407E-01	3.739E-02	3.365
	+	351.92	*	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
PO-214	+	74.81		4.140E+00	1.487E+00	1.523E+00	1.701E-01	2.718
	+	77.11		3.614E+00	7.708E-01	8.479E-01	9.664E-02	4.263
	+	87.30		2.787E+00	1.291E+00	1.692E+00	2.029E-01	1.647
	+	241.98		2.513E+00	9.435E-01	1.042E+00	8.240E-02	2.411
	+	295.21		1.483E+00	3.891E-01	4.407E-01	3.739E-02	3.365
	+	351.92	*	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
PO-216	+	74.81		2.403E+00	8.735E-01	8.841E-01	1.108E-01	2.718
	+	77.11		2.108E+00	4.200E-01	4.946E-01	4.192E-02	4.263
	+	87.30		1.627E+00	7.608E-01	9.875E-01	1.341E-01	1.647
	+	238.63	*	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
		300.09		2.855E+00	1.769E+00	2.579E+00	2.118E-01	1.107
PO-218	+	74.81		4.140E+00	1.487E+00	1.523E+00	1.701E-01	2.718
	+	77.11		3.614E+00	7.708E-01	8.479E-01	9.664E-02	4.263
	+	87.30		2.787E+00	1.291E+00	1.692E+00	2.029E-01	1.647
	+	241.98		2.513E+00	9.435E-01	1.042E+00	8.240E-02	2.411
	+	295.21		1.483E+00	3.891E-01	4.407E-01	3.739E-02	3.365
	+	351.92	*	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
RA-224	+	240.98	*	4.764E+00	1.769E+00	1.997E+00	1.112E-01	2.386
RA-226	+	609.31	*	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
	+	768.36		1.261E+00	1.114E+00	8.935E-01	9.780E-02	1.411
		934.06		5.902E-01	9.037E-01	1.530E+00	1.901E-01	0.386
	+	1120.29		1.761E+00	4.058E-01	4.125E-01	3.949E-02	4.270
	+	1238.11		2.238E+00	1.227E+00	1.168E+00	9.963E-02	1.916
	+	1377.67		2.023E+00	1.309E+00	1.120E+00	1.097E-01	1.807
	+	1764.49		1.500E+00	3.804E-01	2.203E-01	1.339E-02	6.809
AC-228	+	338.32		1.279E+00	8.362E-01	7.959E-01	3.244E-01	1.607
	+	911.07	*	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390
	+	969.11		1.960E+00	5.669E-01	2.784E-01	6.668E-02	7.038
RA-228	+	338.32		1.279E+00	8.362E-01	7.959E-01	3.244E-01	1.607
	+	911.07	*	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390
	+	969.11		1.960E+00	5.669E-01	2.784E-01	6.668E-02	7.038
TH-228		84.40		5.461E+00	4.416E+00	6.569E+00	8.780E-01	0.831
	+	238.60	*	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.328
		300.10		2.851E+00	2.429E+00	2.579E+00	1.520E+00	1.105
TH-230	+	609.31	*	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
	+	768.36		1.261E+00	1.114E+00	8.935E-01	9.780E-02	1.411
		934.06		5.902E-01	9.036E-01	1.530E+00	1.901E-01	0.386
	+	1120.29		1.761E+00	4.058E-01	4.125E-01	3.949E-02	4.270
	+	1238.11		2.238E+00	1.227E+00	1.168E+00	9.963E-02	1.916
	+	1377.67		2.023E+00	1.309E+00	1.120E+00	1.097E-01	1.807
	+	1764.49		1.500E+00	3.804E-01	2.203E-01	1.339E-02	6.809
TH-232	+	338.32		1.279E+00	6.579E-01	7.959E-01	4.604E-02	1.607
	+	911.07	*	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	969.11		1.960E+00	5.669E-01	2.784E-01	6.668E-02	7.038
U-234	+	609.31	*	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
	+	768.36		1.261E+00	1.114E+00	8.935E-01	9.780E-02	1.411
		934.06		5.902E-01	9.036E-01	1.530E+00	1.901E-01	0.386
	+	1120.29		1.761E+00	4.058E-01	4.125E-01	3.949E-02	4.270
	+	1238.11		2.238E+00	1.227E+00	1.168E+00	9.963E-02	1.916
	+	1377.67		2.023E+00	1.309E+00	1.120E+00	1.097E-01	1.807
	+	1764.49		1.500E+00	3.804E-01	2.203E-01	1.339E-02	6.809
NP-237	+	86.50	*	1.033E+00	5.178E-01	6.140E-01	1.385E-01	1.682
		95.87		-5.535E-01	1.748E+00	2.515E+00	6.143E-01	-0.220
AM-241	+	59.54	*	8.100E+00	8.284E-01	5.365E-01	4.450E-02	15.097
AM-243	+	74.67	*	3.895E-01	1.369E-01	1.439E-01	1.201E-02	2.707
	+	86.72		3.873E+01	1.770E+01	2.301E+01	2.104E+00	1.683
		117.66		-2.082E-01	6.802E+00	1.093E+01	6.726E-01	-0.019
		142.18		1.063E+01	3.058E+01	4.887E+01	2.692E+00	0.217
ANH-511	+	511.00	*	1.039E-01	9.960E-02	1.035E-01	6.834E-03	1.004

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.781E-01	8.710E-01	1.429E+00	1.036E-01	-0.195
NA-22		1274.54	*	-3.270E-02	3.581E-02	5.480E-02	3.729E-03	-0.597
NA-24		1368.53	*	6.152E-03	3.581E-02	Half-Life too short		
AL-26		1129.67		-7.705E-01	1.396E+00	2.189E+00	1.462E-01	-0.352
		1808.65	*	7.638E-03	2.266E-02	3.886E-02	2.269E-03	0.197
TI-44		67.85		4.435E-02	7.846E-02	1.316E-01	1.058E-02	0.337
	+	78.38	*	3.890E-01	7.749E-02	1.036E-01	8.855E-03	3.756
SC-46		889.25	*	-1.419E-02	3.093E-02	4.890E-02	5.454E-03	-0.290
	+	1120.51		2.962E-01	6.536E-02	1.006E-01	6.948E-03	2.945
V-48		944.10		-2.331E-01	6.535E-01	1.035E+00	1.095E-01	-0.225
		983.50	*	-9.048E-03	5.091E-02	8.133E-02	8.044E-03	-0.111
		1312.09		-1.004E-02	5.830E-02	9.414E-02	6.857E-03	-0.107
CR-51		320.08	*	-7.873E-01	7.753E-01	1.223E+00	7.876E-02	-0.644
MN-52		744.21		8.955E-02	1.511E-01	2.589E-01	2.283E-02	0.346
		848.13		2.411E+00	4.158E+00	7.064E+00	7.390E-01	0.341
		935.52		1.458E-01	1.562E-01	2.684E-01	2.879E-02	0.543
		1246.25		2.963E+00	5.400E+00	8.208E+00	5.278E-01	0.361
		1333.61		4.706E+00	3.236E+00	5.846E+00	4.416E-01	0.805
		1434.06	*	-2.064E-02	1.417E-01	2.266E-01	1.670E-02	-0.091
MN-54		834.83	*	7.727E-03	3.087E-02	5.146E-02	5.271E-03	0.150
CO-56		846.75	*	-4.380E-02	3.266E-02	4.849E-02	5.062E-03	-0.903
		977.42		-5.265E-01	2.661E+00	3.607E+00	3.608E-01	-0.146
		1037.82		1.091E-02	2.375E-01	3.987E-01	3.694E-02	0.027
		1175.09		2.251E+00	1.950E+00	3.426E+00	1.901E-01	0.657
	+	1238.25		2.225E-01	1.214E-01	1.422E-01	9.479E-03	1.564
		1360.21		-6.573E-01	6.732E-01	9.774E-01	7.345E-02	-0.673
		1771.40		1.380E-01	1.744E-01	2.832E-01	1.711E-02	0.488
CO-57		122.06	*	-5.826E-02	4.542E-02	7.091E-02	4.201E-03	-0.822

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-7.943E-02	3.675E-01	5.828E-01	3.815E-02	-0.136
CO-58		810.76	*	-6.722E-03	2.943E-02	4.777E-02	4.716E-03	-0.141
FE-59		142.65		5.671E-01	4.578E+00	7.269E+00	3.999E-01	0.078
		192.34		-1.550E-01	1.844E+00	3.081E+00	3.572E-01	-0.050
		1099.22	*	-3.905E-02	6.609E-02	1.054E-01	8.676E-03	-0.371
		1291.56		3.134E-02	9.418E-02	1.582E-01	1.330E-02	0.198
CO-60		1173.22		6.280E-02	4.069E-02	7.265E-02	4.015E-03	0.864
		1332.49	*	4.299E-02	3.364E-02	6.000E-02	4.534E-03	0.716
ZN-65		1115.52	*	4.617E-02	7.744E-02	1.163E-01	8.192E-03	0.397
GE-68		1077.35	*	5.711E-01	1.026E+00	1.742E+00	1.384E-01	0.328
AS-73		53.44	*	-9.449E-01	2.109E+00	3.344E+00	2.651E-01	-0.283
AS-74		595.88	*	2.040E-02	1.385E-01	2.250E-01	1.617E-02	0.091
		634.78		-5.868E-02	5.364E-01	8.601E-01	6.403E-02	-0.068
SE-75		66.05		-7.096E+00	8.297E+00	1.350E+01	1.337E+00	-0.526
		96.73		-8.845E-01	1.418E+00	2.022E+00	2.667E-01	-0.437
		121.11		-4.240E-02	2.403E-01	3.845E-01	3.589E-02	-0.110
		136.00		-7.768E-03	6.836E-02	1.087E-01	6.188E-03	-0.071
		198.60		-1.469E+00	3.503E+00	5.804E+00	3.938E-01	-0.253
		264.65	*	3.498E-02	8.864E-02	1.458E-01	8.340E-03	0.240
		279.53		6.550E-02	2.191E-01	3.585E-01	2.215E-02	0.183
		303.91		-6.667E+00	4.451E+00	6.938E+00	6.599E-01	-0.961
		400.65		-4.158E-01	6.015E-01	9.937E-01	9.053E-02	-0.418
BR-77	+	87.88		4.137E+02	1.890E+02	2.550E+02	2.356E+01	1.622
		200.40		-2.255E+01	1.725E+02	2.872E+02	1.547E+01	-0.079
	+	239.00		1.559E+02	1.511E+01	2.231E+01	1.241E+00	6.989
		249.79		-1.059E+02	7.216E+01	1.152E+02	6.458E+00	-0.919
		281.68		-8.321E+01	9.933E+01	1.591E+02	9.080E+00	-0.523
		297.23		9.713E+01	6.924E+01	1.008E+02	5.788E+00	0.964
		303.76		-2.489E+02	2.035E+02	3.213E+02	1.848E+01	-0.775
		439.47		-2.434E+02	2.135E+02	3.480E+02	2.121E+01	-0.699
		484.57		3.231E+01	3.074E+02	5.073E+02	3.256E+01	0.064
		520.65	*	-2.011E+01	1.181E+01	1.851E+01	1.235E+00	-1.087
		574.64		-5.780E+01	1.952E+02	3.055E+02	2.151E+01	-0.189
		578.91		5.674E+01	8.787E+01	1.260E+02	8.909E+00	0.450
		585.48		1.167E+03	2.014E+02	3.099E+02	2.205E+01	3.765
		755.35		6.009E+00	6.781E+01	1.131E+02	1.016E+01	0.053
		817.79		-2.740E+00	5.388E+01	8.843E+01	8.813E+00	-0.031
SR-82		698.33		-7.834E+00	2.515E+01	4.037E+01	3.287E+00	-0.194
		776.49	*	-5.860E-02	3.333E-01	4.669E-01	4.348E-02	-0.126
		1395.20		-9.966E+00	8.038E+00	1.135E+01	8.457E-01	-0.878
RB-83		520.41	*	-2.217E-01	1.437E-01	2.264E-01	1.510E-02	-0.979
		529.64		-3.293E-02	2.093E-01	3.410E-01	2.296E-02	-0.097
		552.65		2.230E-02	3.516E-01	5.737E-01	3.954E-02	0.039
RB-84		881.50	*	-5.361E-03	5.730E-02	8.901E-02	9.810E-03	-0.060
KR-85		513.99	*	3.201E+01	1.680E+01	2.489E+01	1.649E+00	1.286
SR-85		513.99	*	1.605E-01	8.421E-02	1.248E-01	8.265E-03	1.286
RB-86		1076.63	*	-3.097E-02	6.101E-01	9.990E-01	7.953E-02	-0.031
Y-88		898.02		-1.308E-02	3.412E-02	5.427E-02	6.152E-03	-0.241
		1836.01	*	2.049E-02	2.617E-02	4.705E-02	2.680E-03	0.436

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	-4.192E-02	7.214E-02	1.197E-01	6.887E-03	-0.350
Y-91		1204.90	*	1.226E+01	1.537E+01	2.651E+01	1.568E+00	0.462
NB-94		702.63	*	-1.584E-02	2.541E-02	4.085E-02	3.351E-03	-0.388
		871.10		3.610E-03	2.862E-02	4.723E-02	5.122E-03	0.076
NB-95		765.79	*	7.065E-02	3.780E-02	6.088E-02	5.569E-03	1.160
NB-95M		235.69	*	3.814E-02	2.506E-01	3.638E-01	2.669E-02	0.105
ZR-95		724.18		2.854E-02	8.620E-02	1.267E-01	1.174E-02	0.225
		756.15	*	1.630E-02	5.299E-02	8.947E-02	8.804E-03	0.182
NB-97		657.90	*	1.373E+00	5.299E-02	Half-Life too short		
		1024.50		2.385E-01	5.299E-02	Half-Life too short		
ZR-97		254.15		8.755E-01	5.299E-02	Half-Life too short		
		355.39		5.138E-01	5.299E-02	Half-Life too short		
		507.63	*	2.151E-01	5.299E-02	Half-Life too short		
		602.52		6.054E-02	5.299E-02	Half-Life too short		
		1021.30		3.220E-01	5.299E-02	Half-Life too short		
		1147.95		7.085E-02	5.299E-02	Half-Life too short		
		1362.66		-3.038E-01	5.299E-02	Half-Life too short		
		1750.46		-2.935E-01	5.299E-02	Half-Life too short		
MO-99		140.51		1.122E+01	2.687E+01	4.266E+01	1.147E+01	0.263
		181.06		4.612E+00	1.996E+01	2.968E+01	5.039E+00	0.155
		366.43		2.347E+01	1.113E+02	1.881E+02	1.087E+01	0.125
		739.58	*	-1.393E-01	5.410E+00	8.976E+00	1.370E+00	-0.016
		778.00		-1.162E-01	1.815E+01	2.580E+01	2.409E+00	-0.005
TC-99M		140.51	*	7.481E+07	1.815E+01	Half-Life too short		
RH-101		127.23		-3.647E-02	5.701E-02	9.010E-02	5.205E-03	-0.405
		198.01	*	-2.124E-02	6.501E-02	1.079E-01	5.800E-03	-0.197
		325.23		-4.030E-02	4.735E-01	7.605E-01	4.394E-02	-0.053
RH-102		418.52		-1.711E-01	7.254E-01	1.205E+00	7.160E-02	-0.142
		475.06	*	5.809E-02	8.444E-02	1.406E-01	8.927E-03	0.413
		631.29		1.083E-01	9.096E-02	1.510E-01	1.121E-02	0.717
		697.49		2.013E-02	5.957E-02	9.914E-02	8.060E-03	0.203
		766.84		1.925E-01	1.046E-01	1.668E-01	1.528E-02	1.154
		1046.59		-7.224E-02	8.697E-02	1.368E-01	1.180E-02	-0.528
		1112.84		3.986E-02	1.909E-01	2.773E-01	1.969E-02	0.144
RU-103		497.08	*	6.379E-02	9.018E-02	1.496E-01	1.942E-02	0.427
	+	610.33		1.352E+01	3.040E+00	2.706E+00	4.339E-01	4.996
RH-106	+	511.85		5.170E-01	4.955E-01	5.855E-01	3.870E-02	0.883
		621.84	*	4.348E-01	5.334E-01	8.756E-01	1.102E-01	0.497
		1050.47		-1.424E+00	1.721E+00	2.705E+00	2.311E-01	-0.527
RU-106	+	511.85		5.170E-01	4.955E-01	5.855E-01	3.870E-02	0.883
		621.84	*	4.348E-01	5.315E-01	8.756E-01	6.443E-02	0.497
		1050.47		-1.424E+00	1.721E+00	2.705E+00	2.311E-01	-0.527
AG-108M		433.93	*	6.122E-02	8.891E-02	1.491E-01	9.741E-03	0.411
		614.37		-3.478E-02	7.026E-02	9.559E-02	7.365E-03	-0.364
		722.95		-1.089E-02	3.703E-02	5.178E-02	4.579E-03	-0.210
AG-110M		657.75	*	2.899E+00	2.559E-01	2.409E-01	1.900E-02	12.038
		677.61		1.068E-02	2.414E-01	4.052E-01	3.287E-02	0.026
		706.67		9.280E-02	1.554E-01	2.676E-01	2.277E-02	0.347
		763.93		8.674E-02	1.442E-01	2.157E-01	2.017E-02	0.402

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		1.546E-02	3.897E-02	6.536E-02	7.381E-03	0.237
		937.48		5.233E-02	8.619E-02	1.457E-01	1.595E-02	0.359
		1384.27		-3.420E-03	1.502E-01	2.075E-01	1.608E-02	-0.016
IN-111		171.28		8.629E-02	1.015E+00	1.714E+00	9.019E-02	0.050
		245.39	*	1.132E+00	1.401E+00	2.047E+00	1.144E-01	0.553
IN-113M		391.69	*	5.172E-02	1.039E-01	1.753E-01	1.075E-02	0.295
SN-113		391.69	*	5.172E-02	1.039E-01	1.753E-01	1.075E-02	0.295
IN-114M		190.27	*	-6.233E-02	3.809E-01	5.903E-01	3.151E-02	-0.106
CD-115		260.90		1.840E+01	1.384E+02	2.270E+02	1.282E+01	0.081
		492.35		-3.097E+01	4.357E+01	7.068E+01	4.575E+00	-0.438
		527.90	*	4.484E-01	1.147E+01	1.878E+01	1.262E+00	0.024
SN-117M		156.02		1.318E+00	3.373E+00	5.753E+00	3.073E-01	0.229
		158.56	*	3.626E-02	8.233E-02	1.399E-01	7.436E-03	0.259
SB-122		563.90	*	-1.149E+00	2.030E+00	3.248E+00	2.263E-01	-0.354
		692.80		5.122E+00	1.907E+01	3.233E+01	2.607E+00	0.158
I-123		159.00	*	2.900E-01	1.907E+01	Half-Life too short		
		528.96		-4.862E+00	1.907E+01	Half-Life too short		
TE-123M		159.00	*	2.141E-02	4.697E-02	7.982E-02	4.306E-03	0.268
I-124		602.71	*	1.618E-01	8.588E-01	1.206E+00	8.723E-02	0.134
		722.78		-8.913E-01	2.706E+00	3.772E+00	3.206E-01	-0.236
		1325.50		-2.335E+01	2.122E+01	3.156E+01	2.355E+00	-0.740
		1376.25		4.825E+01	1.892E+01	3.367E+01	2.521E+00	1.433
		1509.49		1.016E+01	8.241E+00	1.524E+01	1.092E+00	0.667
		1691.02		-2.039E+00	1.960E+00	2.763E+00	1.782E-01	-0.738
SB-124		602.71		1.309E-02	6.949E-02	9.761E-02	7.060E-03	0.134
		645.85		-9.248E-01	8.041E-01	1.239E+00	1.004E-01	-0.746
		709.31		8.579E-01	2.111E+00	3.598E+00	2.987E-01	0.238
		713.82		-7.501E-01	1.281E+00	2.059E+00	2.442E-01	-0.364
		722.78		-1.045E-01	3.174E-01	4.424E-01	3.843E-02	-0.236
	+	968.20		1.968E+01	3.768E+00	5.947E+00	6.047E-01	3.310
		1045.16		-3.218E-01	1.808E+00	2.988E+00	2.587E-01	-0.108
		1325.50		-2.925E+00	2.658E+00	3.954E+00	2.951E-01	-0.740
		1368.21		2.329E-01	1.215E+00	1.902E+00	2.433E-01	0.122
		1436.60		-8.243E-01	2.900E+00	4.570E+00	3.365E-01	-0.180
		1691.02	*	-5.641E-02	5.425E-02	7.643E-02	5.273E-03	-0.738
SB-125		427.89	*	5.772E-02	2.401E-01	4.009E-01	2.505E-02	0.144
		463.38		2.896E-01	8.123E-01	1.349E+00	9.671E-02	0.215
		600.56		-8.744E-02	2.922E-01	4.551E-01	3.625E-02	-0.192
		635.90		-6.529E-01	4.506E-01	6.869E-01	5.665E-02	-0.951
TE-125M		109.28	*	-3.622E+00	1.543E+01	2.482E+01	2.180E+00	-0.146
I-126		388.63		-1.659E-02	4.263E-01	7.144E-01	4.106E-02	-0.023
		666.33	*	2.378E+00	3.001E-01	4.826E-01	3.710E-02	4.927
		753.82		7.294E-01	9.976E-01	1.724E+00	1.545E-01	0.423
SB-126		223.80		3.840E+00	7.018E+00	1.171E+01	6.435E-01	0.328
		278.60		2.296E+00	4.435E+00	7.282E+00	4.149E-01	0.315
	+	296.50		1.310E+01	3.338E+00	4.495E+00	2.580E-01	2.914
		414.70		7.598E-02	1.670E-01	2.804E-01	1.658E-02	0.271
		415.30		4.890E+00	1.392E+01	2.334E+01	1.381E+00	0.210
		555.20		-4.586E-01	6.400E+00	1.040E+01	7.187E-01	-0.044

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		573.80		-1.096E-01	1.567E+00	2.540E+00	1.787E-01	-0.043
		593.00		-8.418E-01	1.407E+00	2.237E+00	1.603E-01	-0.376
		656.30		7.698E+00	5.833E+00	8.813E+00	6.687E-01	0.873
		666.33		9.888E-01	1.248E-01	2.007E-01	1.543E-02	4.927
		675.00		-3.426E-01	1.392E+00	2.300E+00	1.796E-01	-0.149
		695.00		4.125E-02	5.244E-02	9.120E-02	7.381E-03	0.452
		697.00		6.502E-02	1.872E-01	3.118E-01	2.532E-02	0.209
		720.50	*	6.145E-02	1.156E-01	1.729E-01	1.464E-02	0.355
		856.80		-2.710E-01	3.920E-01	5.137E-01	5.448E-02	-0.528
		989.30		-1.091E-01	8.527E-01	1.366E+00	1.336E-01	-0.080
		1034.80		-8.265E-01	6.366E+00	1.016E+01	9.017E-01	-0.081
		1213.00		-2.927E-01	3.467E+00	5.692E+00	3.423E-01	-0.051
SB-127	+	61.10		2.132E+03	2.436E+02	1.659E+02	1.630E+01	12.856
		252.40		-7.999E-02	5.993E+00	9.830E+00	4.066E+00	-0.008
		290.80		1.389E+01	3.322E+01	4.760E+01	3.978E+00	0.292
		411.60		6.965E+00	2.035E+01	3.411E+01	4.757E+00	0.204
		444.90		-2.644E-01	1.892E+01	3.138E+01	3.248E+00	-0.008
		473.00		2.755E+00	3.413E+00	5.674E+00	6.167E-01	0.485
		543.00		-6.683E+00	2.169E+01	3.510E+01	4.526E+00	-0.190
		603.60		1.182E+01	1.403E+01	2.015E+01	2.219E+00	0.587
		685.20	*	-2.732E-02	7.416E-01	1.238E+00	1.271E-01	-0.022
		698.50		-2.461E+00	7.823E+00	1.282E+01	1.940E+00	-0.192
		722.20		5.057E+00	1.706E+01	2.509E+01	2.621E+00	0.202
		783.80		1.658E+00	2.279E+00	3.423E+00	4.269E-01	0.484
XE-127	+	57.60		1.572E+01	1.579E+01	2.406E+01	1.854E+00	0.653
		145.22		-1.214E-02	1.160E+00	1.835E+00	1.003E-01	-0.007
		172.10		-1.325E-02	1.991E-01	3.352E-01	1.765E-02	-0.040
		202.84	*	-3.527E-02	8.893E-02	1.474E-01	7.955E-03	-0.239
		374.96		2.037E-02	4.321E-01	7.271E-01	4.193E-02	0.028
I-131		80.18		3.436E-01	6.565E+00	9.683E+00	8.427E-01	0.035
		284.30		-7.121E-02	2.564E+00	4.166E+00	2.646E-01	-0.017
		364.48	*	-2.192E-03	2.193E-01	3.694E-01	2.378E-02	-0.006
		636.97		-4.056E+00	2.149E+00	3.212E+00	2.569E-01	-1.263
		722.89		-1.588E+00	5.181E+00	7.236E+00	6.181E-01	-0.219
TE-132		49.72		1.258E+00	3.210E+01	5.420E+01	5.218E+00	0.023
		111.76		1.957E+01	3.275E+01	5.336E+01	4.611E+00	0.367
		116.30		-2.049E+01	3.137E+01	4.981E+01	4.195E+00	-0.411
		228.16	*	-2.759E-01	8.488E-01	1.395E+00	1.931E-01	-0.198
BA-133		53.15		-4.239E+00	8.928E+00	1.482E+01	1.176E+00	-0.286
		79.62		3.820E-03	2.242E+00	3.304E+00	5.031E-01	0.001
		81.00		-1.258E-01	1.707E-01	2.450E-01	3.903E-02	-0.514
		276.40		7.603E-01	7.462E-01	1.226E+00	1.584E-01	0.620
		302.84		-1.237E-01	3.002E-01	4.815E-01	5.602E-02	-0.257
		356.01	*	3.021E-03	1.127E-01	1.570E-01	1.813E-02	0.019
		383.85		-4.711E-02	6.984E-01	1.171E+00	1.270E-01	-0.040
I-133	+	510.53		1.903E-01	6.984E-01	Half-Life too short		
		529.87	*	-1.349E-04	6.984E-01	Half-Life too short		
		706.58		3.381E-02	6.984E-01	Half-Life too short		
		856.28		-7.821E-02	6.984E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		875.33		2.702E-03	6.984E-01	Half-Life too short		
	+	1236.41		2.957E-01	6.984E-01	Half-Life too short		
		1298.22		-1.454E-02	6.984E-01	Half-Life too short		
CS-134		475.35		3.189E+00	5.496E+00	9.137E+00	5.805E-01	0.349
		563.23		-4.476E-01	6.076E-01	9.671E-01	6.833E-02	-0.463
		569.32		-8.467E-02	3.322E-01	5.349E-01	3.824E-02	-0.158
		604.70		4.994E-02	6.061E-02	8.715E-02	6.336E-03	0.573
	+	795.84	*	1.372E-01	5.640E-02	7.317E-02	7.077E-03	1.875
		801.93		-3.379E-01	3.754E-01	4.946E-01	4.825E-02	-0.683
		1038.57		9.199E-01	3.013E+00	5.140E+00	4.523E-01	0.179
		1167.94		-3.336E+00	2.250E+00	3.389E+00	1.921E-01	-0.984
		1365.15		8.162E-01	7.866E-01	1.422E+00	1.132E-01	0.574
CS-135		268.24	*	-1.319E-01	3.159E-01	5.121E-01	3.871E-02	-0.258
I-135		288.45		-1.149E+08	3.159E-01	Half-Life too short		
		417.63		-4.482E+07	3.159E-01	Half-Life too short		
		546.56		3.865E+07	3.159E-01	Half-Life too short		
		836.80		2.683E+07	3.159E-01	Half-Life too short		
		1038.76		8.821E+06	3.159E-01	Half-Life too short		
		1124.00		7.548E+08	3.159E-01	Half-Life too short		
		1131.51		-1.773E+07	3.159E-01	Half-Life too short		
		1260.41	*	1.603E+06	3.159E-01	Half-Life too short		
		1457.56		3.349E+09	3.159E-01	Half-Life too short		
		1678.03		8.090E+06	3.159E-01	Half-Life too short		
		1706.46		-1.651E+07	3.159E-01	Half-Life too short		
		1791.20		2.363E+07	3.159E-01	Half-Life too short		
CS-136		66.91		4.698E-01	1.189E+00	1.981E+00	2.991E-01	0.237
	+	86.29		4.100E+00	1.914E+00	2.552E+00	3.364E-01	1.606
		153.22		1.855E-01	9.786E-01	1.666E+00	1.146E-01	0.111
		163.89		6.486E-02	1.617E+00	2.726E+00	1.861E-01	0.024
		176.55		-1.549E-01	5.812E-01	9.737E-01	5.898E-02	-0.159
		273.65		-1.476E+00	8.163E-01	1.282E+00	8.347E-02	-1.151
		340.57		3.598E-01	2.736E-01	3.934E-01	2.419E-02	0.915
		818.51		1.997E-02	4.969E-02	8.396E-02	8.382E-03	0.238
		1048.07	*	-6.551E-02	7.260E-02	1.134E-01	1.016E-02	-0.578
		1235.34		6.427E-01	5.120E-01	7.849E-01	8.067E-02	0.819
CE-139		165.85	*	4.709E-03	4.963E-02	8.396E-02	4.408E-03	0.056
BA-140		162.64		1.098E-02	1.126E+00	1.899E+00	1.151E-01	0.006
		304.84		-2.410E+00	2.520E+00	3.866E+00	1.055E+00	-0.623
		423.70		-1.029E+00	4.353E+00	7.205E+00	2.292E+00	-0.143
		537.32	*	-6.247E-02	4.493E-01	7.305E-01	2.390E-01	-0.086
LA-140		328.77		5.612E-02	5.638E-01	9.076E-01	5.881E-02	0.062
		432.53		-1.412E+00	4.967E+00	8.224E+00	5.452E-01	-0.172
		487.03		-6.021E-02	3.001E-01	4.924E-01	3.513E-02	-0.122
		751.79		-6.813E-01	1.183E+00	1.891E+00	1.858E-01	-0.360
		815.85		1.850E-02	2.213E-01	3.665E-01	3.961E-02	0.050
		867.82		2.950E-01	1.138E+00	1.702E+00	1.900E-01	0.173
		919.63		1.280E+00	2.206E+00	3.370E+00	4.257E-01	0.380
		925.24		-9.419E-01	8.130E-01	1.201E+00	1.360E-01	-0.784
		1596.49	*	1.659E-02	5.994E-02	9.124E-02	6.260E-03	0.182

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	2.354E-03	1.042E-01	1.652E-01	9.431E-03	0.014
CE-143	+	57.37		9.626E-04	1.042E-01	Half-Life too short		
		231.56		4.451E-04	1.042E-01	Half-Life too short		
		293.26	*	2.542E-04	1.042E-01	Half-Life too short		
		350.59		1.101E-02	1.042E-01	Half-Life too short		
		490.36		-3.557E-04	1.042E-01	Half-Life too short		
		664.57		4.435E-01	1.042E-01	Half-Life too short		
		721.93		1.869E-04	1.042E-01	Half-Life too short		
CE-144		80.11		2.264E-01	3.619E+00	5.340E+00	4.623E-01	0.042
		133.54	*	8.166E-02	3.638E-01	5.823E-01	8.233E-02	0.140
PM-144		476.78		3.631E-03	1.895E-01	3.126E-01	2.320E-02	0.012
		618.01		6.160E-03	5.405E-02	8.481E-02	6.455E-03	0.073
		696.49	*	1.075E-02	2.692E-02	4.496E-02	3.650E-03	0.239
		778.57		-6.634E-01	2.108E+00	2.913E+00	2.723E-01	-0.228
PR-144		696.49	*	7.273E-01	1.822E+00	3.043E+00	2.470E-01	0.239
		1489.15		-6.584E+00	9.600E+00	1.433E+01	1.035E+00	-0.459
PM-146		453.90	*	9.551E-03	1.275E-01	2.113E-01	1.880E-02	0.045
		633.02		2.484E+00	2.472E+00	3.810E+00	1.414E+00	0.652
		735.90		-9.939E-02	1.283E-01	1.813E-01	5.189E-02	-0.548
		747.13		-4.437E-03	7.267E-02	1.202E-01	1.706E-02	-0.037
ND-147		91.11		8.653E-01	5.240E-01	6.320E-01	5.944E-02	1.369
		319.41		-2.787E+00	6.343E+00	1.013E+01	5.853E-01	-0.275
		439.89		-1.866E+01	1.426E+01	2.316E+01	1.413E+00	-0.806
		531.02	*	5.684E-03	9.826E-01	1.606E+00	2.241E-01	0.004
PM-149		285.90	*	-1.314E+01	9.687E+01	1.570E+02	2.219E+01	-0.084
EU-152		121.78		-1.006E-01	1.312E-01	2.072E-01	1.597E-02	-0.485
		244.69		-3.601E-02	7.385E-01	1.060E+00	5.920E-02	-0.034
		344.27	*	-8.539E-02	2.237E-01	3.427E-01	2.236E-02	-0.249
		443.98		2.510E+00	2.714E+00	4.554E+00	2.791E-01	0.551
		778.89		-6.350E-02	2.326E-01	3.367E-01	3.148E-02	-0.189
		867.32		-9.685E-02	7.927E-01	1.101E+00	1.187E-01	-0.088
	+	964.01		7.380E-01	3.547E-01	4.436E-01	4.544E-02	1.664
		1085.78		-1.333E-01	3.086E-01	4.992E-01	3.869E-02	-0.267
		1112.02		-8.702E-03	2.779E-01	3.942E-01	2.806E-02	-0.022
		1407.95		1.813E-01	1.693E-01	2.970E-01	2.206E-02	0.610
GD-153		69.67		-9.640E-01	3.075E+00	4.536E+00	3.682E-01	-0.213
		83.37		2.055E+01	2.538E+01	3.782E+01	3.359E+00	0.543
		97.43	*	-1.492E-02	1.460E-01	2.116E-01	1.654E-02	-0.071
		103.18		-2.030E-01	1.799E-01	2.845E-01	2.052E-02	-0.714
EU-154		123.07		-7.395E-02	9.238E-02	1.455E-01	1.376E-02	-0.508
		247.94		3.523E-01	7.267E-01	1.202E+00	1.132E-01	0.293
		591.81		5.823E-02	1.038E+00	1.683E+00	1.790E-01	0.035
		723.30		-4.223E-02	1.575E-01	2.208E-01	2.081E-02	-0.191
		756.87		3.105E-01	5.990E-01	1.022E+00	1.253E-01	0.304
		873.19		1.847E-01	2.470E-01	4.213E-01	5.868E-02	0.439
		996.32		-3.828E-01	2.924E-01	4.109E-01	7.513E-02	-0.932
		1004.76		6.406E-02	1.758E-01	2.908E-01	3.576E-02	0.220
		1274.45	*	-5.434E-02	9.776E-02	1.537E-01	1.536E-02	-0.353
EU-155		48.70		-1.961E+00	6.436E+00	1.081E+01	8.202E-01	-0.181

---- Non-Identified Nuclides ----

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	+	60.01		2.633E+02	2.545E+01	2.789E+01	2.128E+00	9.440
	+	86.54		4.232E-01	1.935E-01	2.639E-01	2.431E-02	1.604
		105.31	*	1.706E-01	1.847E-01	3.036E-01	2.171E-02	0.562
TB-160	+	86.79		1.108E+00	5.065E-01	6.916E-01	6.327E-02	1.603
		197.04		4.978E-01	1.089E+00	1.828E+00	9.816E-02	0.272
		215.65		-1.890E-01	1.438E+00	2.381E+00	1.300E-01	-0.079
		298.57		6.225E-02	2.537E-01	3.612E-01	2.075E-02	0.172
		879.36	*	-1.781E-03	1.120E-01	1.831E-01	2.011E-02	-0.010
		962.29		9.069E-01	4.675E-01	7.479E-01	7.683E-02	1.213
	+	966.15		4.966E-01	2.387E-01	3.936E-01	4.017E-02	1.262
		1177.93		-2.763E-01	3.049E-01	4.765E-01	2.660E-02	-0.580
		1271.85		1.674E-01	5.550E-01	9.309E-01	6.291E-02	0.180
HO-166M		80.57		-1.534E-01	4.689E-01	6.848E-01	5.950E-02	-0.224
		184.41		2.284E-01	7.084E-02	1.097E-01	5.826E-03	2.083
		280.46		-1.572E-02	1.742E-01	2.831E-01	1.615E-02	-0.056
		410.95		-2.486E-02	5.948E-01	9.925E-01	5.842E-02	-0.025
		711.68	*	-9.427E-03	4.767E-02	7.859E-02	6.551E-03	-0.120
		752.31		-7.540E-02	2.122E-01	3.443E-01	3.079E-02	-0.219
		810.29		-1.200E-02	4.513E-02	7.307E-02	7.194E-03	-0.164
TM-171		51.35		2.719E+01	7.798E+01	1.322E+02	1.048E+01	0.206
		52.39		4.366E+00	3.957E+01	6.676E+01	5.304E+00	0.065
	+	59.40		1.383E+03	1.337E+02	1.541E+02	1.170E+01	8.973
		66.72	*	1.204E+01	4.826E+01	8.035E+01	6.424E+00	0.150
LU-176	+	88.36		8.342E-01	3.812E-01	5.112E-01	4.694E-02	1.632
		201.83		-3.045E-02	5.640E-02	9.329E-02	5.031E-03	-0.326
		306.84	*	3.690E-02	5.322E-02	8.698E-02	5.008E-03	0.424
		401.10		-1.486E+01	1.599E+01	2.633E+01	1.531E+00	-0.564
LU-177		112.95		1.127E+00	2.289E+00	3.723E+00	2.399E-01	0.303
		208.36	*	1.480E+00	1.697E+00	2.854E+00	1.548E-01	0.519
LU-177M		52.97		-1.210E+00	4.009E+00	6.678E+00	5.301E-01	-0.181
		54.07		-9.558E-01	2.301E+00	3.431E+00	2.712E-01	-0.279
		61.30		2.183E+01	3.773E+00	5.729E+00	4.427E-01	3.810
		121.62		-4.605E-01	6.674E-01	1.056E+00	6.265E-02	-0.436
		147.16		-5.194E-01	1.135E+00	1.781E+00	9.694E-02	-0.292
		171.86		-6.445E-02	8.252E-01	1.389E+00	7.312E-02	-0.046
		218.09		-6.691E-01	1.662E+00	2.735E+00	1.496E-01	-0.245
		268.79		5.284E-01	1.575E+00	2.585E+00	1.466E-01	0.204
		319.02		-2.243E-02	5.599E-01	9.013E-01	5.203E-02	-0.025
		367.43		6.289E-01	2.040E+00	3.451E+00	1.993E-01	0.182
		413.65	*	-1.175E-01	4.329E-01	7.195E-01	4.249E-02	-0.163
HF-181		56.28		9.059E-01	2.346E+00	3.564E+00	2.776E-01	0.254
	+	57.53		1.326E+00	1.331E+00	2.013E+00	1.552E-01	0.658
		65.20		-2.334E+00	1.596E+00	2.559E+00	2.030E-01	-0.912
		133.02		9.338E-03	1.140E-01	1.822E-01	1.031E-02	0.051
		136.25		-2.006E-01	7.821E-01	1.239E+00	6.940E-02	-0.162
		345.85		-4.173E-01	4.492E-01	6.482E-01	3.750E-02	-0.644
		482.03	*	-4.149E-02	1.068E-01	1.748E-01	1.119E-02	-0.237
W-181		56.28		3.631E-01	9.393E-01	1.427E+00	1.112E-01	0.254
	+	57.53		5.312E-01	5.335E-01	8.065E-01	6.219E-02	0.659

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		65.20	*	-9.279E-01	6.343E-01	1.017E+00	8.070E-02	-0.912
TA-182		67.75		6.285E-02	1.864E-01	3.105E-01	2.496E-02	0.202
		100.10		2.192E-01	2.945E-01	4.846E-01	3.643E-02	0.452
		152.43		-3.200E-02	6.003E-01	9.476E-01	5.098E-02	-0.034
		222.10		6.210E-02	6.740E-01	1.118E+00	6.136E-02	0.056
		1001.68		1.002E+00	1.663E+00	2.766E+00	2.641E-01	0.362
	+	1121.28		8.220E-01	1.814E-01	2.807E-01	1.934E-02	2.929
		1189.05		-1.230E-01	2.388E-01	3.815E-01	2.181E-02	-0.322
		1221.42	*	2.798E-02	1.522E-01	2.538E-01	1.552E-02	0.110
		1230.97		2.937E-01	4.134E-01	6.185E-01	3.857E-02	0.475
RE-183	+	57.98		5.346E-01	5.369E-01	9.044E-01	6.948E-02	0.591
	+	59.32		5.559E+00	5.373E-01	6.239E-01	4.740E-02	8.910
		67.20		1.738E-01	3.329E-01	5.563E-01	4.459E-02	0.313
		162.32	*	5.552E-02	1.802E-01	3.053E-01	1.611E-02	0.182
		208.81		2.091E+00	1.860E+00	3.136E+00	1.702E-01	0.667
		291.72		2.791E-01	2.110E+00	3.003E+00	1.721E-01	0.093
RE-184	+	57.98		1.994E+00	2.003E+00	3.374E+00	2.592E-01	0.591
	+	59.32		2.072E+01	2.003E+00	2.326E+00	1.767E-01	8.910
		67.20		6.484E-01	1.242E+00	2.075E+00	1.663E-01	0.313
		161.27		-4.583E-01	5.908E-01	9.870E-01	5.220E-02	-0.464
		216.55		-3.042E-01	5.162E-01	8.485E-01	4.635E-02	-0.359
		252.85	*	2.757E-02	4.679E-01	7.684E-01	4.316E-02	0.036
		318.01		5.858E-01	9.701E-01	1.579E+00	9.114E-02	0.371
		792.07		3.922E-01	1.338E+00	1.254E+00	1.198E-01	0.313
		903.28		7.893E-02	9.162E-01	1.345E+00	1.510E-01	0.059
		920.93		2.131E-01	3.784E-01	6.117E-01	6.703E-02	0.348
OS-185	+	59.72		1.525E+01	1.474E+00	1.653E+00	1.258E-01	9.222
		61.14		3.129E+00	4.568E-01	6.721E-01	5.186E-02	4.656
		69.30		-1.716E-01	5.490E-01	8.102E-01	6.564E-02	-0.212
		592.07		4.870E-01	4.162E+00	6.761E+00	4.840E-01	0.072
		646.12	*	-7.018E-02	6.875E-02	1.065E-01	8.012E-03	-0.659
		717.42		2.610E-01	7.122E-01	1.210E+00	1.019E-01	0.216
		874.81		-8.500E-02	4.789E-01	7.746E-01	8.450E-02	-0.110
		880.27		-1.898E-01	6.601E-01	1.012E+00	1.113E-01	-0.187
RE-188		155.03	*	1.861E-02	2.788E-01	4.735E-01	2.534E-02	0.039
		477.96		-4.005E+00	8.330E+00	1.363E+01	8.686E-01	-0.294
		633.10		5.330E+00	4.538E+00	7.531E+00	5.598E-01	0.708
W-188		63.58		-1.167E+01	1.002E+02	1.493E+02	1.173E+01	-0.078
		227.08		-1.682E+01	2.452E+01	4.008E+01	2.209E+00	-0.420
		290.67	*	7.654E+00	1.657E+01	2.378E+01	1.362E+00	0.322
IR-192	+	295.96		1.108E+00	2.827E-01	3.828E-01	2.232E-02	2.895
		308.46		2.465E-02	2.035E-01	3.294E-01	1.919E-02	0.075
		316.51	*	2.293E-02	7.417E-02	1.200E-01	6.959E-03	0.191
		468.07		-1.376E-01	1.972E-01	3.223E-01	2.297E-02	-0.427
		604.41		6.584E-01	7.987E-01	1.145E+00	1.392E-01	0.575
		612.46		4.142E+00	1.363E+00	2.042E+00	1.792E-01	2.028
AU-195		65.12		-4.454E-01	2.953E-01	4.730E-01	3.750E-02	-0.942
		66.83		5.608E-02	1.585E-01	2.642E-01	2.114E-02	0.212
	+	75.70		1.250E+00	4.393E-01	5.666E-01	4.759E-02	2.207

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	1.081E-01	3.758E-01	6.144E-01	4.701E-02	0.176
		129.76		1.757E+00	5.038E+00	8.099E+00	4.634E-01	0.217
TL-200		367.94	*	1.520E-05	5.038E+00	Half-Life too short		
		579.30		9.570E-04	5.038E+00	Half-Life too short		
		828.27		3.044E-04	5.038E+00	Half-Life too short		
		1205.75		4.204E-04	5.038E+00	Half-Life too short		
TL-201		68.90		1.199E+00	5.466E+00	8.175E+00	6.609E-01	0.147
		70.82		-8.639E-01	3.042E+00	4.487E+00	3.663E-01	-0.193
		80.30		-1.765E+00	5.330E+00	7.785E+00	6.750E-01	-0.227
		135.34		-5.888E+00	2.777E+01	4.408E+01	2.475E+00	-0.134
		167.43	*	-3.181E+00	7.285E+00	1.221E+01	6.411E-01	-0.260
TL-202		68.90		1.556E-01	7.093E-01	1.061E+00	8.576E-02	0.147
		70.82		-1.118E-01	3.937E-01	5.807E-01	4.741E-02	-0.193
		80.30		-2.285E-01	6.900E-01	1.008E+00	8.738E-02	-0.227
		439.56	*	-1.974E-01	1.710E-01	2.786E-01	1.699E-02	-0.709
HG-203		70.83		-5.249E-01	1.867E+00	2.752E+00	3.667E-01	-0.191
		72.87		1.496E+00	9.651E-01	1.608E+00	2.085E-01	0.930
		82.60		-4.700E-01	1.666E+00	2.723E+00	3.779E-01	-0.173
		279.20	*	6.106E-02	8.013E-02	1.320E-01	8.006E-03	0.463
BI-207		72.80		4.113E-01	2.879E-01	4.851E-01	4.004E-02	0.848
	+	74.97		6.991E-01	2.456E-01	3.033E-01	2.536E-02	2.305
		84.90		5.012E-01	3.234E-01	4.863E-01	4.376E-02	1.031
		569.67		-5.708E-03	5.176E-02	8.368E-02	5.864E-03	-0.068
		1063.62	*	-2.452E-02	4.223E-02	6.782E-02	5.599E-03	-0.362
		1770.23		3.149E-01	5.656E-01	7.581E-01	4.586E-02	0.415
TL-207		81.07		-2.924E-01	3.747E-01	5.398E-01	4.707E-02	-0.542
		83.78		1.591E-01	2.182E-01	3.245E-01	2.892E-02	0.490
		94.90		8.038E-01	4.132E-01	6.223E-01	5.065E-02	1.292
		122.32		-4.146E+00	3.159E+00	4.922E+00	3.343E-01	-0.842
		144.24		-8.266E-01	1.196E+00	1.866E+00	1.302E-01	-0.443
		154.21		-2.819E-01	6.637E-01	1.119E+00	7.444E-02	-0.252
		269.46		4.661E-01	3.735E-01	6.206E-01	3.687E-02	0.751
		323.87	*	-8.104E-01	1.437E+00	2.278E+00	3.761E-01	-0.356
	+	338.28		5.341E+00	2.787E+00	3.688E+00	3.882E-01	1.448
		445.03		-1.643E-01	6.490E+00	1.076E+01	1.126E+00	-0.015
PO-209		260.50		8.403E+00	1.985E+01	3.271E+01	1.846E+00	0.257
		262.80		-1.071E+01	5.510E+01	8.983E+01	5.077E+00	-0.119
		896.60	*	-5.520E-01	6.047E+00	9.814E+00	1.107E+00	-0.056
BI-210		46.50	*	-6.867E+00	9.628E+00	1.607E+01	1.243E+00	-0.427
PB-210		46.50	*	-6.867E+00	9.628E+00	1.607E+01	1.243E+00	-0.427
PO-210		46.50	*	-6.867E+00	9.624E+00	1.607E+01	1.069E+00	-0.427
PB-211		404.84	*	-2.970E-01	2.233E+00	3.712E+00	2.314E+00	-0.080
		427.08		1.644E+00	5.430E+00	8.918E+00	5.514E+00	0.184
		831.96		1.781E-01	9.745E-01	1.610E+00	1.013E+00	0.111
PO-215		81.07		-2.924E-01	3.747E-01	5.398E-01	4.707E-02	-0.542
		83.78		1.591E-01	2.182E-01	3.245E-01	2.892E-02	0.490
		94.90		8.038E-01	4.132E-01	6.223E-01	5.065E-02	1.292
		122.32		-4.146E+00	3.159E+00	4.922E+00	3.343E-01	-0.842
		144.24		-8.266E-01	1.196E+00	1.866E+00	1.302E-01	-0.443

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		154.21		-2.819E-01	6.637E-01	1.119E+00	7.444E-02	-0.252
		269.46		4.661E-01	3.735E-01	6.206E-01	3.687E-02	0.751
		323.87	*	-8.104E-01	1.437E+00	2.278E+00	3.761E-01	-0.356
	+	338.28		5.341E+00	2.787E+00	3.688E+00	3.882E-01	1.448
		445.03		-1.643E-01	6.490E+00	1.076E+01	1.126E+00	-0.015
RN-219		271.23		8.738E-01	4.820E-01	8.016E-01	6.426E-02	1.090
		401.81	*	-1.181E+00	9.976E-01	1.617E+00	2.201E-01	-0.730
RN-220		549.76	*	-3.044E+01	4.792E+01	7.677E+01	5.276E+00	-0.396
RA-223		81.07		-2.924E-01	3.747E-01	5.398E-01	4.707E-02	-0.542
		83.78		1.591E-01	2.182E-01	3.245E-01	2.892E-02	0.490
		94.90		8.038E-01	4.132E-01	6.223E-01	5.065E-02	1.292
		122.32		-4.146E+00	3.159E+00	4.922E+00	3.343E-01	-0.842
		144.24		-8.266E-01	1.196E+00	1.866E+00	1.302E-01	-0.443
		154.21		-2.819E-01	6.637E-01	1.119E+00	7.444E-02	-0.252
		269.46		4.661E-01	3.735E-01	6.206E-01	3.687E-02	0.751
		323.87	*	-8.104E-01	1.437E+00	2.278E+00	3.761E-01	-0.356
	+	338.28		5.341E+00	2.787E+00	3.688E+00	3.882E-01	1.448
		445.03		-1.643E-01	6.490E+00	1.076E+01	1.126E+00	-0.015
AC-227		79.80		3.048E-01	2.825E+00	4.173E+00	8.977E-01	0.073
		236.00		5.563E-01	4.814E-01	7.091E-01	7.315E-02	0.784
		256.20	*	-4.715E-01	7.877E-01	1.274E+00	1.769E-01	-0.370
		286.10		-9.157E-01	3.172E+00	5.126E+00	5.904E-01	-0.179
		299.80		2.831E+00	3.337E+00	4.773E+00	7.765E-01	0.593
		304.40		-5.794E+00	4.120E+00	6.300E+00	1.089E+00	-0.920
		334.20		-2.110E+00	5.796E+00	8.025E+00	1.471E+00	-0.263
TH-227		79.80		3.048E-01	2.825E+00	4.173E+00	9.092E-01	0.073
	+	94.00		8.083E+00	4.735E+00	5.352E+00	1.158E+00	1.510
		236.00		5.563E-01	4.806E-01	7.091E-01	6.311E-02	0.784
		256.20	*	-4.715E-01	7.889E-01	1.274E+00	2.145E-01	-0.370
		286.10		-9.157E-01	3.300E+00	5.126E+00	5.134E+00	-0.179
		299.80		2.831E+00	3.337E+00	4.773E+00	7.765E-01	0.593
		304.40		-5.794E+00	4.120E+00	6.300E+00	1.089E+00	-0.920
		334.20		-2.110E+00	5.796E+00	8.025E+00	1.471E+00	-0.263
TH-229		85.43		4.553E-01	3.205E-01	4.809E-01	4.347E-02	0.947
	+	88.47		4.802E-01	2.194E-01	2.938E-01	2.691E-02	1.635
		100.00		2.545E-01	3.103E-01	5.111E-01	3.848E-02	0.498
		193.63	*	-2.763E-01	1.022E+00	1.703E+00	9.117E-02	-0.162
		210.97		4.354E-01	1.471E+00	2.455E+00	1.335E-01	0.177
PA-231		283.67	*	-5.554E-01	3.165E+00	5.129E+00	7.049E-01	-0.108
		301.29		1.167E+00	1.256E+00	1.906E+00	1.987E-01	0.612
TH-231		81.07		-2.924E-01	3.747E-01	5.398E-01	4.707E-02	-0.542
		83.78		1.591E-01	2.182E-01	3.245E-01	2.892E-02	0.490
		94.90		8.038E-01	4.132E-01	6.223E-01	5.065E-02	1.292
		122.32		-4.146E+00	3.159E+00	4.922E+00	3.343E-01	-0.842
		144.24		-8.266E-01	1.196E+00	1.866E+00	1.302E-01	-0.443
		154.21		-2.819E-01	6.637E-01	1.119E+00	7.444E-02	-0.252
		269.46		4.661E-01	3.735E-01	6.206E-01	3.687E-02	0.751
		323.87	*	-8.104E-01	1.437E+00	2.278E+00	3.761E-01	-0.356
	+	338.28		5.341E+00	2.787E+00	3.688E+00	3.882E-01	1.448

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-1.643E-01	6.490E+00	1.076E+01	1.126E+00	-0.015
U-231		84.21		7.661E+00	6.498E+00	9.733E+00	8.706E-01	0.787
	+	92.29		5.604E+00	3.085E+00	3.869E+00	3.294E-01	1.448
		95.87	*	-4.403E-01	1.386E+00	2.000E+00	1.603E-01	-0.220
		108.00		-2.457E+00	2.490E+00	3.944E+00	2.682E-01	-0.623
PA-233	+	75.28		2.040E+01	7.623E+00	8.933E+00	1.359E+00	2.284
	+	86.59		6.885E+00	3.599E+00	4.295E+00	1.159E+00	1.603
		300.12		1.469E+00	9.273E-01	1.332E+00	1.787E-01	1.103
		311.98	*	1.354E-03	1.394E-01	2.250E-01	1.379E-02	0.006
		340.50		2.183E+00	1.566E+00	2.148E+00	4.932E-01	1.017
		398.62		2.160E+00	5.010E+00	8.386E+00	2.168E+00	0.258
		415.76		2.312E+00	4.169E+00	6.965E+00	1.436E+00	0.332
PA-234		63.00		6.413E-01	3.049E+00	4.581E+00	6.905E-01	0.140
		94.67		6.874E-01	3.050E-01	4.512E-01	5.457E-02	1.524
		98.44		2.188E-02	1.545E-01	2.513E-01	1.399E-01	0.087
		99.86		7.260E-01	7.879E-01	1.300E+00	9.804E-02	0.559
		111.00		-8.557E-02	3.212E-01	5.157E-01	5.533E-02	-0.166
		131.20		1.578E-01	1.887E-01	3.056E-01	1.740E-02	0.516
		152.70		1.634E-01	5.807E-01	9.214E-01	1.443E-01	0.177
	+	186.00		2.238E+00	2.850E+00	4.106E+00	1.251E+00	0.545
		226.40		4.314E-02	7.815E-01	1.294E+00	1.477E-01	0.033
		227.20		-1.311E-01	8.379E-01	1.382E+00	7.617E-02	-0.095
		248.90		-1.913E-01	1.653E+00	2.710E+00	5.808E-01	-0.071
		293.70		5.585E+00	1.812E+00	2.407E+00	3.865E-01	2.321
		369.80		-6.295E-01	1.943E+00	3.246E+00	6.758E-01	-0.194
		568.70		-4.431E-01	1.691E+00	2.723E+00	1.906E-01	-0.163
		569.50		-5.864E-02	4.591E-01	7.419E-01	5.198E-02	-0.079
		574.00		-5.174E-01	2.538E+00	4.097E+00	2.883E-01	-0.126
		699.00		-3.619E-01	5.483E-01	8.746E-01	1.650E-01	-0.414
		706.10		4.152E-01	8.083E-01	1.352E+00	6.018E-01	0.307
		733.00		-5.398E-03	3.190E-01	4.561E-01	1.013E-01	-0.012
		742.81		1.189E-01	1.118E+00	1.863E+00	1.253E+00	0.064
	+	796.30		2.672E+00	1.294E+00	1.413E+00	3.870E-01	1.891
		805.60		5.106E-01	7.934E-01	1.334E+00	4.135E-01	0.383
		819.60		7.038E-02	9.473E-01	1.567E+00	6.011E-01	0.045
		826.30		-3.131E-01	6.403E-01	9.927E-01	4.472E-01	-0.315
		831.60		-2.712E-02	5.014E-01	8.216E-01	2.492E-01	-0.033
		876.40		-6.359E-02	7.102E-01	1.151E+00	1.186E+00	-0.055
		880.51		-1.855E-02	2.399E-01	3.731E-01	4.105E-02	-0.050
		883.24		1.685E-02	2.295E-01	3.767E-01	2.545E-01	0.045
		899.00		-5.018E-01	7.453E-01	1.108E+00	4.912E-01	-0.453
		925.00		-1.272E+00	9.570E-01	1.391E+00	1.516E-01	-0.914
		926.50		-5.338E-02	1.340E-01	2.105E-01	5.500E-02	-0.254
		946.00	*	1.740E-01	2.409E-01	4.068E-01	8.025E-02	0.428
		949.00		1.652E-01	3.663E-01	6.123E-01	6.430E-02	0.270
		980.50		-5.466E-02	6.412E-01	9.181E-01	9.132E-02	-0.060
		1394.10		-8.452E-01	1.049E+00	1.311E+00	8.515E-01	-0.645
PA-234M		766.41		2.969E+01	2.808E+01	2.647E+01	2.032E+01	1.122
		1001.03	*	3.838E+00	5.417E+00	9.054E+00	1.079E+00	0.424

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-234		63.29	*	-3.133E-01	2.585E+00	3.852E+00	6.791E-01	-0.081
	+	92.38		2.092E+00	1.199E+00	1.445E+00	2.604E-01	1.448
U-235		89.95		8.832E-01	2.426E+00	2.818E+00	8.718E-01	0.313
	+	93.35		2.515E+00	1.538E+00	1.718E+00	4.800E-01	1.464
		105.00		1.780E+00	1.879E+00	2.977E+00	8.762E-01	0.598
		143.76	*	-1.078E-01	3.672E-01	5.774E-01	9.352E-02	-0.187
		163.35		-8.663E-02	7.967E-01	1.340E+00	2.388E-01	-0.065
	+	185.71		8.287E-02	1.026E-01	1.511E-01	8.037E-03	0.548
		205.31		1.694E-01	1.022E+00	1.705E+00	3.046E-01	0.099
NP-236		94.67		5.239E-01	2.267E-01	3.424E-01	2.797E-02	1.530
		98.44		1.648E-02	1.165E-01	1.900E-01	1.463E-02	0.087
		111.00		-6.473E-02	2.429E-01	3.901E-01	2.566E-02	-0.166
		160.31	*	-1.261E-01	1.346E-01	2.235E-01	1.184E-02	-0.564
U-238		63.29	*	-3.133E-01	2.585E+00	3.852E+00	6.791E-01	-0.081
	+	92.38		2.092E+00	1.152E+00	1.445E+00	1.228E-01	1.448
NP-239		99.55		3.136E-01	2.629E-01	4.352E-01	3.298E-02	0.721
		117.00	*	-1.006E-01	3.413E-01	5.461E-01	3.380E-02	-0.184
		209.75		6.109E-01	1.487E+00	2.486E+00	1.350E-01	0.246
		228.18		-1.439E-01	4.377E-01	7.197E-01	3.970E-02	-0.200
		277.60		3.921E-01	3.648E-01	6.037E-01	3.438E-02	0.649
		334.30		-1.250E+00	3.277E+00	4.544E+00	2.628E-01	-0.275
CM-243		99.55		3.226E-01	2.705E-01	4.478E-01	3.393E-02	0.721
		103.76	*	3.941E-02	1.649E-01	2.685E-01	1.922E-02	0.147
		117.00		-1.035E-01	3.511E-01	5.618E-01	3.477E-02	-0.184
		209.75		6.022E-01	1.465E+00	2.450E+00	1.331E-01	0.246
		228.18		-1.454E-01	4.422E-01	7.271E-01	4.011E-02	-0.200
		277.60		3.952E-01	3.677E-01	6.085E-01	3.466E-02	0.649
CM-247		278.00		1.314E+00	1.513E+00	2.497E+00	1.423E-01	0.526
		287.40		2.692E+00	2.520E+00	4.163E+00	2.381E-01	0.647
		402.60	*	-9.939E-02	8.847E-02	1.451E-01	8.452E-03	-0.685
CF-249		252.85		1.044E-01	1.771E+00	2.909E+00	1.634E-01	0.036
		333.44		1.232E-01	4.246E-01	5.988E-01	3.463E-02	0.206
		387.95	*	-2.275E-02	9.327E-02	1.558E-01	8.959E-03	-0.146
CF-251		176.60	*	-6.152E-02	2.243E-01	3.758E-01	1.985E-02	-0.164
		227.00		-5.012E-01	7.518E-01	1.230E+00	6.776E-02	-0.408
		285.00		-4.252E-01	3.624E+00	5.880E+00	3.360E-01	-0.072

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871427    *
* Acquisition date :  7-JUL-2009 11:20:58 Detector SN#     :               *
* Detector ID        : GAM18              Sensitivity      : 5.000         *
* Geometry           : CAN                Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:08.14     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201871427          Analyst initials: MXR1         *
* Batch Number       : 881220               Sample Quantity : 1.4491E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.425E+01	2.909E+00	4.231E-01	0.000E+00
CD-109	3.567E+00	1.597E+00	2.353E+00	0.000E+00
SN-126	3.517E-01	1.575E-01	2.275E-01	0.000E+00
BA-137M	6.596E+01	4.951E+00	7.816E-02	0.000E+00
CS-137	6.972E+01	5.246E+00	8.263E-02	0.000E+00
TL-208	5.844E-01	1.163E-01	1.009E-01	0.000E+00
BI-211	4.399E+00	7.977E-01	7.494E-01	0.000E+00
BI-212	1.376E+00	4.073E-01	3.395E-01	0.000E+00
PB-212	1.814E+00	1.899E-01	1.840E-01	0.000E+00
PO-212	1.814E+00	1.899E-01	1.840E-01	0.000E+00
BI-214	1.300E+00	2.309E-01	1.797E-01	0.000E+00
PB-214	1.530E+00	2.883E-01	2.604E-01	0.000E+00
PO-214	1.530E+00	2.883E-01	2.604E-01	0.000E+00
PO-216	1.814E+00	1.899E-01	1.840E-01	0.000E+00
PO-218	1.530E+00	2.883E-01	2.604E-01	0.000E+00
RA-224	4.764E+00	1.734E+00	2.091E+00	0.000E+00
RA-226	1.300E+00	2.309E-01	1.797E-01	0.000E+00
AC-228	1.802E+00	3.395E-01	1.763E-01	0.000E+00
RA-228	1.802E+00	3.395E-01	1.763E-01	0.000E+00
TH-228	1.814E+00	1.899E-01	1.840E-01	0.000E+00
TH-230	1.300E+00	2.309E-01	1.797E-01	0.000E+00
TH-232	1.802E+00	3.395E-01	1.763E-01	0.000E+00
U-234	1.300E+00	2.309E-01	1.797E-01	0.000E+00
NP-237	1.033E+00	5.074E-01	6.571E-01	0.000E+00
AM-241	8.100E+00	8.118E-01	5.786E-01	0.000E+00
AM-243	3.895E-01	1.341E-01	1.545E-01	0.000E+00
ANH-511	1.039E-01	9.761E-02	1.066E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	-2.781E-01	8.535E-01	1.474E+00	0.000E+00	NOT IDENT.
NA-22	-3.270E-02	3.510E-02	5.526E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	4.944E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	7.638E-03	2.221E-02	3.887E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.594E-02	1.111E-01	0.000E+00	FAIL ABUN
SC-46	-1.419E-02	3.031E-02	4.973E-02	0.000E+00	FAIL ABUN
V-48	-9.048E-03	4.989E-02	8.252E-02	0.000E+00	NOT IDENT.
CR-51	-7.873E-01	7.597E-01	1.273E+00	0.000E+00	NOT IDENT.
MN-52	-2.064E-02	1.389E-01	2.279E-01	0.000E+00	NOT IDENT.
MN-54	7.727E-03	3.025E-02	5.240E-02	0.000E+00	NOT IDENT.
CO-56	-4.380E-02	3.201E-02	4.937E-02	0.000E+00	FAIL ABUN
CO-57	-5.826E-02	4.451E-02	7.534E-02	0.000E+00	NOT IDENT.
CO-58	-6.722E-03	2.884E-02	4.869E-02	0.000E+00	NOT IDENT.
FE-59	-3.905E-02	6.477E-02	1.067E-01	0.000E+00	NOT IDENT.
CO-60	4.299E-02	3.297E-02	6.045E-02	0.000E+00	NOT IDENT.
ZN-65	4.617E-02	7.589E-02	1.177E-01	0.000E+00	NOT IDENT.
GE-68	5.711E-01	1.006E+00	1.764E+00	0.000E+00	NOT IDENT.
AS-73	-9.449E-01	2.067E+00	3.614E+00	0.000E+00	NOT IDENT.
AS-74	2.040E-02	1.357E-01	2.309E-01	0.000E+00	NOT IDENT.
SE-75	3.498E-02	8.687E-02	1.524E-01	0.000E+00	NOT IDENT.
BR-77	-2.011E+01	1.157E+01	1.905E+01	0.000E+00	FAIL ABUN
SR-82	-5.860E-02	3.266E-01	4.763E-01	0.000E+00	NOT IDENT.
RB-83	-2.217E-01	1.408E-01	2.330E-01	0.000E+00	NOT IDENT.
RB-84	-5.361E-03	5.615E-02	9.054E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.646E+01	2.563E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	8.253E-02	1.285E-01	0.000E+00	NOT IDENT.
RB-86	-3.097E-02	5.979E-01	1.011E+00	0.000E+00	NOT IDENT.
Y-88	2.049E-02	2.565E-02	4.705E-02	0.000E+00	NOT IDENT.
ZR-88	-4.192E-02	7.070E-02	1.240E-01	0.000E+00	NOT IDENT.
Y-91	1.226E+01	1.507E+01	2.677E+01	0.000E+00	NOT IDENT.
NB-94	-1.584E-02	2.490E-02	4.177E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	3.705E-02	6.213E-02	0.000E+00	NOT IDENT.
NB-95M	3.814E-02	2.455E-01	3.812E-01	0.000E+00	NOT IDENT.
ZR-95	1.630E-02	5.193E-02	9.133E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.110E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.974E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.393E-01	5.301E+00	9.167E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.754E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.124E-02	6.371E-02	1.135E-01	0.000E+00	NOT IDENT.
RH-102	5.809E-02	8.275E-02	1.450E-01	0.000E+00	NOT IDENT.
RU-103	6.379E-02	8.838E-02	1.541E-01	0.000E+00	FAIL ABUN
RH-106	4.348E-01	5.227E-01	8.977E-01	0.000E+00	FAIL ABUN
RU-106	4.348E-01	5.209E-01	8.977E-01	0.000E+00	FAIL ABUN
AG-108M	6.122E-02	8.713E-02	1.541E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	2.508E-01	2.466E-01	0.000E+00	NOT IDENT.
IN-111	1.132E+00	1.373E+00	2.143E+00	0.000E+00	NOT IDENT.
IN-113M	5.172E-02	1.018E-01	1.816E-01	0.000E+00	NOT IDENT.
SN-113	5.172E-02	1.018E-01	1.816E-01	0.000E+00	NOT IDENT.
IN-114M	-6.233E-02	3.733E-01	6.212E-01	0.000E+00	NOT IDENT.
CD-115	4.484E-01	1.124E+01	1.933E+01	0.000E+00	NOT IDENT.
SN-117M	3.626E-02	8.068E-02	1.478E-01	0.000E+00	NOT IDENT.
SB-122	-1.149E+00	1.989E+00	3.337E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	6.237E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.141E-02	4.603E-02	8.433E-02	0.000E+00	NOT IDENT.
I-124	1.618E-01	8.416E-01	1.238E+00	0.000E+00	NOT IDENT.
SB-124	-5.641E-02	5.317E-02	7.657E-02	0.000E+00	FAIL ABUN
SB-125	5.772E-02	2.353E-01	4.145E-01	0.000E+00	NOT IDENT.
TE-125M	-3.622E+00	1.512E+01	2.643E+01	0.000E+00	NOT IDENT.
I-126	0.000E+00	2.941E-01	4.941E-01	0.000E+00	NOT IDENT.
SB-126	6.145E-02	1.133E-01	1.767E-01	0.000E+00	FAIL ABUN
SB-127	-2.732E-02	7.268E-01	1.267E+00	0.000E+00	FAIL ABUN
XE-127	-3.527E-02	8.715E-02	1.549E-01	0.000E+00	FAIL ABUN
I-131	-2.192E-03	2.149E-01	3.833E-01	0.000E+00	NOT IDENT.
TE-132	-2.759E-01	8.318E-01	1.462E+00	0.000E+00	NOT IDENT.
BA-133	3.021E-03	1.105E-01	1.629E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.138E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.528E-02	7.460E-02	0.000E+00	FAIL ABUN
CS-135	-1.319E-01	3.096E-01	5.349E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.169E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-6.551E-02	7.115E-02	1.149E-01	0.000E+00	FAIL ABUN
CE-139	4.709E-03	4.863E-02	8.862E-02	0.000E+00	NOT IDENT.
BA-140	-6.247E-02	4.403E-01	7.515E-01	0.000E+00	NOT IDENT.
LA-140	1.659E-02	5.874E-02	9.153E-02	0.000E+00	NOT IDENT.
CE-141	2.354E-03	1.021E-01	1.749E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.139E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	8.166E-02	3.565E-01	6.175E-01	0.000E+00	NOT IDENT.
PM-144	1.075E-02	2.639E-02	4.598E-02	0.000E+00	NOT IDENT.
PR-144	7.273E-01	1.786E+00	3.112E+00	0.000E+00	NOT IDENT.

PM-146	9.551E-03	1.249E-01	2.182E-01	0.000E+00	NOT IDENT.
ND-147	5.684E-03	9.629E-01	1.653E+00	0.000E+00	NOT IDENT.
PM-149	-1.314E+01	9.493E+01	1.638E+02	0.000E+00	NOT IDENT.
EU-152	-8.539E-02	2.193E-01	3.560E-01	0.000E+00	FAIL ABUN
GD-153	-1.492E-02	1.431E-01	2.259E-01	0.000E+00	NOT IDENT.
EU-154	-5.434E-02	9.580E-02	1.550E-01	0.000E+00	NOT IDENT.
EU-155	1.706E-01	1.810E-01	3.236E-01	0.000E+00	FAIL ABUN
TB-160	-1.781E-03	1.098E-01	1.862E-01	0.000E+00	FAIL ABUN
HO-166M	-9.427E-03	4.672E-02	8.033E-02	0.000E+00	NOT IDENT.
TM-171	1.204E+01	4.730E+01	8.645E+01	0.000E+00	FAIL ABUN
LU-176	3.690E-02	5.215E-02	9.060E-02	0.000E+00	FAIL ABUN
LU-177	1.480E+00	1.663E+00	2.998E+00	0.000E+00	NOT IDENT.
LU-177M	-1.175E-01	4.243E-01	7.444E-01	0.000E+00	NOT IDENT.
HF-181	-4.149E-02	1.046E-01	1.803E-01	0.000E+00	FAIL ABUN
W-181	-9.279E-01	6.217E-01	1.095E+00	0.000E+00	FAIL ABUN
TA-182	2.798E-02	1.492E-01	2.562E-01	0.000E+00	FAIL ABUN
RE-183	5.552E-02	1.766E-01	3.224E-01	0.000E+00	FAIL ABUN
RE-184	2.757E-02	4.586E-01	8.037E-01	0.000E+00	FAIL ABUN
OS-185	-7.018E-02	6.738E-02	1.091E-01	0.000E+00	FAIL ABUN
RE-188	1.861E-02	2.732E-01	5.006E-01	0.000E+00	NOT IDENT.
W-188	7.654E+00	1.624E+01	2.479E+01	0.000E+00	NOT IDENT.
IR-192	2.293E-02	7.268E-02	1.249E-01	0.000E+00	FAIL ABUN
AU-195	1.081E-01	3.683E-01	6.556E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.607E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.181E+00	7.139E+00	1.289E+01	0.000E+00	NOT IDENT.
TL-202	-1.974E-01	1.676E-01	2.879E-01	0.000E+00	NOT IDENT.
HG-203	6.106E-02	7.853E-02	1.378E-01	0.000E+00	NOT IDENT.
BI-207	-2.452E-02	4.139E-02	6.869E-02	0.000E+00	FAIL ABUN
TL-207	-8.104E-01	1.408E+00	2.370E+00	0.000E+00	FAIL ABUN
PO-209	-5.520E-01	5.926E+00	9.979E+00	0.000E+00	NOT IDENT.
BI-210	-6.867E+00	9.435E+00	1.742E+01	0.000E+00	NOT IDENT.
PB-210	-6.867E+00	9.435E+00	1.742E+01	0.000E+00	NOT IDENT.
PO-210	-6.867E+00	9.432E+00	1.742E+01	0.000E+00	NOT IDENT.
PB-211	-2.970E-01	2.188E+00	3.843E+00	0.000E+00	NOT IDENT.
PO-215	-8.104E-01	1.408E+00	2.370E+00	0.000E+00	FAIL ABUN
RN-219	-1.181E+00	9.777E-01	1.674E+00	0.000E+00	NOT IDENT.
RN-220	-3.044E+01	4.696E+01	7.894E+01	0.000E+00	NOT IDENT.
RA-223	-8.104E-01	1.408E+00	2.370E+00	0.000E+00	FAIL ABUN
AC-227	-4.715E-01	7.719E-01	1.332E+00	0.000E+00	NOT IDENT.
TH-227	-4.715E-01	7.732E-01	1.332E+00	0.000E+00	FAIL ABUN
TH-229	-2.763E-01	1.002E+00	1.791E+00	0.000E+00	FAIL ABUN
PA-231	-5.554E-01	3.101E+00	5.352E+00	0.000E+00	NOT IDENT.
TH-231	-8.104E-01	1.408E+00	2.370E+00	0.000E+00	FAIL ABUN
U-231	-4.403E-01	1.359E+00	2.136E+00	0.000E+00	FAIL ABUN
PA-233	1.354E-03	1.366E-01	2.343E-01	0.000E+00	FAIL ABUN
PA-234	1.740E-01	2.361E-01	4.132E-01	0.000E+00	FAIL ABUN
PA-234M	3.838E+00	5.308E+00	9.183E+00	0.000E+00	NOT IDENT.
TH-234	-3.133E-01	2.533E+00	4.149E+00	0.000E+00	FAIL ABUN
U-235	-1.078E-01	3.598E-01	6.114E-01	0.000E+00	FAIL ABUN
NP-236	-1.261E-01	1.319E-01	2.361E-01	0.000E+00	NOT IDENT.
U-238	-3.133E-01	2.533E+00	4.149E+00	0.000E+00	FAIL ABUN
NP-239	-1.006E-01	3.345E-01	5.807E-01	0.000E+00	NOT IDENT.
CM-243	3.941E-02	1.616E-01	2.862E-01	0.000E+00	NOT IDENT.
CM-247	-9.939E-02	8.670E-02	1.502E-01	0.000E+00	NOT IDENT.
CF-249	-2.275E-02	9.141E-02	1.615E-01	0.000E+00	NOT IDENT.
CF-251	-6.152E-02	2.198E-01	3.962E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 13:21:30.54

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871427.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 11:20:58.
Sample ID         : G1201871427          Sample quantity  : 1.44910E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.14  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	2670	10.67*	1.892E+00	3.425E+01	3.425E+01	8.67
CD-109	88.03	324	3.72*	6.440E+00	3.498E+00	3.567E+00	45.69
SN-126	64.28	------	9.60	3.245E+00	------ Line Not Found		------
	86.94	324	8.90	6.440E+00	1.462E+00	1.462E+00	61.02
	87.57	324	37.00*	6.440E+00	3.517E-01	3.517E-01	45.69
BA-137M	661.65	82100	89.98*	3.586E+00	6.590E+01	6.596E+01	7.66
CS-137	661.65	82100	85.12*	3.586E+00	6.967E+01	6.972E+01	7.68
TL-208	277.35	------	6.80	6.258E+00	------ Line Not Found		------
	510.84	173	21.60	4.309E+00	4.812E-01	4.812E-01	96.20
	583.14	747	84.20*	3.933E+00	5.844E-01	5.844E-01	20.31
	860.37	77	12.46	2.913E+00	5.466E-01	5.466E-01	57.05
BI-211	72.87	------	1.27	4.622E+00	------ Line Not Found		------
	351.07	1197	12.94*	5.448E+00	4.399E+00	4.399E+00	18.50
BI-212	727.18	209	11.80*	3.337E+00	1.376E+00	1.376E+00	30.20
	785.46	26	1.97	3.137E+00	1.078E+00	1.078E+00	166.07
	1620.62	------	2.75	1.770E+00	------ Line Not Found		------
PB-212	74.81	488	10.70	4.920E+00	2.403E+00	2.403E+00	36.36
	77.11	767	18.00	5.237E+00	2.108E+00	2.108E+00	19.92
	87.30	324	8.00	6.440E+00	1.627E+00	1.627E+00	46.77
	238.63	2121	44.60*	6.791E+00	1.814E+00	1.814E+00	10.68
	300.09	------	3.41	5.984E+00	------ Line Not Found		------
PO-212	74.81	488	10.70	4.920E+00	2.403E+00	2.403E+00	36.36
	77.11	767	18.00	5.237E+00	2.108E+00	2.108E+00	19.92
	87.30	324	8.00	6.440E+00	1.627E+00	1.627E+00	46.77
	115.19	------	0.60	8.058E+00	------ Line Not Found		------
	238.63	2121	44.60*	6.791E+00	1.814E+00	1.814E+00	10.68
	300.09	------	3.41	5.984E+00	------ Line Not Found		------
BI-214	609.31	886	46.30*	3.811E+00	1.300E+00	1.300E+00	18.12
	768.36	78	5.04	3.193E+00	1.261E+00	1.261E+00	88.32
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	240	15.10	2.334E+00	1.761E+00	1.761E+00	23.04
	1238.11	110	5.94	2.149E+00	2.238E+00	2.238E+00	54.82

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	63	4.11	1.974E+00	2.023E+00	2.023E+00	64.70
	1764.49	155	15.80	1.694E+00	1.500E+00	1.500E+00	25.36
PB-214	74.81	488	6.21	4.920E+00	4.140E+00	4.140E+00	35.91
	77.11	767	10.50	5.237E+00	3.614E+00	3.614E+00	21.33
	87.30	324	4.67	6.440E+00	2.786E+00	2.787E+00	46.34
	241.98	490	7.49	6.747E+00	2.512E+00	2.513E+00	37.55
	295.21	664	19.20	6.039E+00	1.483E+00	1.483E+00	26.24
	351.92	1197	37.20*	5.448E+00	1.530E+00	1.530E+00	19.23
PO-214	74.81	488	6.21	4.920E+00	4.140E+00	4.140E+00	35.91
	77.11	767	10.50	5.237E+00	3.614E+00	3.614E+00	21.33
	87.30	324	4.67	6.440E+00	2.786E+00	2.787E+00	46.34
	241.98	490	7.49	6.747E+00	2.512E+00	2.513E+00	37.55
	295.21	664	19.20	6.039E+00	1.483E+00	1.483E+00	26.24
	351.92	1197	37.20*	5.448E+00	1.530E+00	1.530E+00	19.23
PO-216	74.81	488	10.70	4.920E+00	2.403E+00	2.403E+00	36.36
	77.11	767	18.00	5.237E+00	2.108E+00	2.108E+00	19.92
	87.30	324	8.00	6.440E+00	1.627E+00	1.627E+00	46.77
	238.63	2121	44.60*	6.791E+00	1.814E+00	1.814E+00	10.68
	300.09	------	3.41	5.984E+00	------ Line Not Found		------
PO-218	74.81	488	6.21	4.920E+00	4.140E+00	4.140E+00	35.91
	77.11	767	10.50	5.237E+00	3.614E+00	3.614E+00	21.33
	87.30	324	4.67	6.440E+00	2.786E+00	2.787E+00	46.34
	241.98	490	7.49	6.747E+00	2.512E+00	2.513E+00	37.55
	295.21	664	19.20	6.039E+00	1.483E+00	1.483E+00	26.24
	351.92	1197	37.20*	5.448E+00	1.530E+00	1.530E+00	19.23
RA-224	240.98	490	3.95*	6.747E+00	4.764E+00	4.764E+00	37.13
RA-226	609.31	886	46.30*	3.811E+00	1.300E+00	1.300E+00	18.12
	768.36	78	5.04	3.193E+00	1.261E+00	1.261E+00	88.32
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	240	15.10	2.334E+00	1.761E+00	1.761E+00	23.04
	1238.11	110	5.94	2.149E+00	2.238E+00	2.238E+00	54.82
	1377.67	63	4.11	1.974E+00	2.023E+00	2.023E+00	64.70
	1764.49	155	15.80	1.694E+00	1.500E+00	1.500E+00	25.36
AC-228	338.32	314	11.40	5.580E+00	1.279E+00	1.279E+00	65.37
	911.07	535	27.70*	2.778E+00	1.802E+00	1.802E+00	19.22
	969.11	331	16.60	2.638E+00	1.960E+00	1.960E+00	28.93
RA-228	338.32	314	11.40	5.580E+00	1.279E+00	1.279E+00	65.37
	911.07	535	27.70*	2.778E+00	1.802E+00	1.802E+00	19.22
	969.11	331	16.60	2.638E+00	1.960E+00	1.960E+00	28.93
TH-228	84.40	------	1.21	6.141E+00	------ Line Not Found		------
	238.60	2121	44.60*	6.791E+00	1.814E+00	1.814E+00	10.68
	300.10	------	3.41	5.984E+00	------ Line Not Found		------
TH-230	609.31	886	46.30*	3.811E+00	1.300E+00	1.300E+00	18.12
	768.36	78	5.04	3.193E+00	1.261E+00	1.261E+00	88.32
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	240	15.10	2.334E+00	1.761E+00	1.761E+00	23.04
	1238.11	110	5.94	2.149E+00	2.238E+00	2.238E+00	54.82
	1377.67	63	4.11	1.974E+00	2.023E+00	2.023E+00	64.70
	1764.49	155	15.80	1.694E+00	1.500E+00	1.500E+00	25.36

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-232	338.32	314	11.40	5.580E+00	1.279E+00	1.279E+00	51.43
	911.07	535	27.70*	2.778E+00	1.802E+00	1.802E+00	19.22
	969.11	331	16.60	2.638E+00	1.960E+00	1.960E+00	28.93
U-234	609.31	886	46.30*	3.811E+00	1.300E+00	1.300E+00	18.12
	768.36	78	5.04	3.193E+00	1.261E+00	1.261E+00	88.32
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	240	15.10	2.334E+00	1.761E+00	1.761E+00	23.04
	1238.11	110	5.94	2.149E+00	2.238E+00	2.238E+00	54.82
	1377.67	63	4.11	1.974E+00	2.023E+00	2.023E+00	64.70
	1764.49	155	15.80	1.694E+00	1.500E+00	1.500E+00	25.36
NP-237	86.50	324	12.60*	6.440E+00	1.033E+00	1.033E+00	50.14
	95.87	------	2.60	7.180E+00	------ Line Not Found		------
AM-241	59.54	2777	35.90*	2.474E+00	8.099E+00	8.100E+00	10.23
AM-243	74.67	488	66.00*	4.920E+00	3.895E-01	3.895E-01	35.14
	86.72	324	0.34	6.440E+00	3.873E+01	3.873E+01	45.69
	117.66	------	0.55	8.112E+00	------ Line Not Found		------
	142.18	------	0.13	8.232E+00	------ Line Not Found		------
ANH-511	511.00	173	100.00*	4.309E+00	1.039E-01	1.039E-01	95.84

Flag: "*" = Keyline

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

Total number of lines in spectrum 31
Number of unidentified lines 2
Number of lines tentatively identified by NID 29 93.55%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.425E+01	3.425E+01	0.297E+01	8.67	
CD-109	464.00D	1.02	3.498E+00	3.567E+00	1.630E+00	45.69	
SN-126	1.00E+05Y	1.00	3.517E-01	3.517E-01	1.607E-01	45.69	
BA-137M	30.17Y	1.00	6.590E+01	6.596E+01	0.505E+01	7.66	
CS-137	30.17Y	1.00	6.967E+01	6.972E+01	0.535E+01	7.68	
TL-208	1.41E+10Y	1.00	5.844E-01	5.844E-01	1.187E-01	20.31	
BI-211	7.04E+08Y	1.00	4.399E+00	4.399E+00	0.814E+00	18.50	
BI-212	1.41E+10Y	1.00	1.376E+00	1.376E+00	0.416E+00	30.20	
PB-212	1.41E+10Y	1.00	1.814E+00	1.814E+00	0.194E+00	10.68	
PO-212	1.41E+10Y	1.00	1.814E+00	1.814E+00	0.194E+00	10.68	
BI-214	1600.00Y	1.00	1.300E+00	1.300E+00	0.236E+00	18.12	
PB-214	1600.00Y	1.00	1.530E+00	1.530E+00	0.294E+00	19.23	
PO-214	1600.00Y	1.00	1.530E+00	1.530E+00	0.294E+00	19.23	
PO-216	1.41E+10Y	1.00	1.814E+00	1.814E+00	0.194E+00	10.68	
PO-218	1600.00Y	1.00	1.530E+00	1.530E+00	0.294E+00	19.23	
RA-224	1.41E+10Y	1.00	4.764E+00	4.764E+00	1.769E+00	37.13	
RA-226	1600.00Y	1.00	1.300E+00	1.300E+00	0.236E+00	18.12	
AC-228	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.346E+00	19.22	
RA-228	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.346E+00	19.22	
TH-228	1.41E+10Y	1.00	1.814E+00	1.814E+00	0.194E+00	10.68	
TH-230	4.47E+09Y	1.00	1.300E+00	1.300E+00	0.236E+00	18.12	
TH-232	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.346E+00	19.22	
U-234	4.47E+09Y	1.00	1.300E+00	1.300E+00	0.236E+00	18.12	
NP-237	2.14E+06Y	1.00	1.033E+00	1.033E+00	0.518E+00	50.14	
AM-241	432.20Y	1.00	8.099E+00	8.100E+00	0.828E+00	10.23	
AM-243	7380.00Y	1.00	3.895E-01	3.895E-01	1.369E-01	35.14	
ANH-511	1.00E+09Y	1.00	1.039E-01	1.039E-01	0.996E-01	95.84	
	Total Activity :		2.169E+02	2.171E+02			

Grand Total Activity : 2.169E+02 2.171E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	57.84	136	1711	1.00	114.80	112	12	1.88E-02	****	2.19E+00	T
0	93.08	304	2126	1.47	185.26	182	8	4.23E-02	54.4	6.97E+00	T
0	186.22	132	2334	1.31	371.48	367	7	1.83E-02	****	7.64E+00	T
0	795.46	125	105	1.03	1589.61	1583	15	1.74E-02	40.0	3.11E+00	T
1	964.98	108	135	2.32	1928.58	1921	30	1.51E-02	47.0	2.65E+00	T
0	1588.87	59	17	2.40	3176.21	3171	11	8.12E-03	37.5	1.79E+00	
0	1730.22	53	13	2.92	3458.89	3452	17	7.30E-03	41.7	1.71E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 13:21:35.87

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871427.CNF;1  *
* Acquisition date  : 7-JUL-2009 11:20:58.  Detector SN#     :             *
* Detector ID       : GAM18                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:08.14          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201871427           Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.44910E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.425E+01	2.968E+00	4.208E-01	3.193E-02	81.387
CD-109	3.567E+00	1.630E+00	2.200E+00	2.034E-01	1.621
SN-126	3.517E-01	1.607E-01	2.127E-01	1.960E-02	1.654
BA-137M	6.596E+01	5.052E+00	7.634E-02	5.819E-03	863.985
CS-137	6.972E+01	5.353E+00	8.070E-02	6.167E-03	863.984
TL-208	5.844E-01	1.187E-01	9.827E-02	7.704E-03	5.947
BI-211	4.399E+00	8.140E-01	7.216E-01	4.632E-02	6.097
BI-212	1.376E+00	4.156E-01	3.323E-01	3.309E-02	4.142
PB-212	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
PO-212	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
BI-214	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
PB-214	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
PO-214	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
PO-216	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
PO-218	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
RA-224	4.764E+00	1.769E+00	1.997E+00	1.112E-01	2.386
RA-226	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
AC-228	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390
TH-228	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.328
TH-230	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
TH-232	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390
U-234	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
NP-237	1.033E+00	5.178E-01	6.140E-01	1.385E-01	1.682
AM-241	8.100E+00	8.284E-01	5.365E-01	4.450E-02	15.097
AM-243	3.895E-01	1.369E-01	1.439E-01	1.201E-02	2.707
ANH-511	1.039E-01	9.960E-02	1.035E-01	6.834E-03	1.004

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.781E-01		8.710E-01	1.429E+00	1.036E-01	-0.195
NA-22	-3.270E-02		3.581E-02	5.480E-02	3.729E-03	-0.597
NA-24	6.152E-03		2.523E-02	Half-Life too short		
AL-26	7.638E-03		2.266E-02	3.886E-02	2.269E-03	0.197
TI-44	3.890E-01	+	7.749E-02	1.036E-01	8.855E-03	3.756
SC-46	-1.419E-02		3.093E-02	4.890E-02	5.454E-03	-0.290
V-48	-9.048E-03		5.091E-02	8.133E-02	8.044E-03	-0.111
CR-51	-7.873E-01		7.753E-01	1.223E+00	7.876E-02	-0.644
MN-52	-2.064E-02		1.417E-01	2.266E-01	1.670E-02	-0.091
MN-54	7.727E-03		3.087E-02	5.146E-02	5.271E-03	0.150
CO-56	-4.380E-02		3.266E-02	4.849E-02	5.062E-03	-0.903
CO-57	-5.826E-02		4.542E-02	7.091E-02	4.201E-03	-0.822
CO-58	-6.722E-03		2.943E-02	4.777E-02	4.716E-03	-0.141
FE-59	-3.905E-02		6.609E-02	1.054E-01	8.676E-03	-0.371
CO-60	4.299E-02		3.364E-02	6.000E-02	4.534E-03	0.716
ZN-65	4.617E-02		7.744E-02	1.163E-01	8.192E-03	0.397
GE-68	5.711E-01		1.026E+00	1.742E+00	1.384E-01	0.328
AS-73	-9.449E-01		2.109E+00	3.344E+00	2.651E-01	-0.283
AS-74	2.040E-02		1.385E-01	2.250E-01	1.617E-02	0.091
SE-75	3.498E-02		8.864E-02	1.458E-01	8.340E-03	0.240
BR-77	-2.011E+01		1.181E+01	1.851E+01	1.235E+00	-1.087
SR-82	-5.860E-02		3.333E-01	4.669E-01	4.348E-02	-0.126
RB-83	-2.217E-01		1.437E-01	2.264E-01	1.510E-02	-0.979
RB-84	-5.361E-03		5.730E-02	8.901E-02	9.810E-03	-0.060
KR-85	3.201E+01		1.680E+01	2.489E+01	1.649E+00	1.286
SR-85	1.605E-01		8.421E-02	1.248E-01	8.265E-03	1.286
RB-86	-3.097E-02		6.101E-01	9.990E-01	7.953E-02	-0.031
Y-88	2.049E-02		2.617E-02	4.705E-02	2.680E-03	0.436
ZR-88	-4.192E-02		7.214E-02	1.197E-01	6.887E-03	-0.350
Y-91	1.226E+01		1.537E+01	2.651E+01	1.568E+00	0.462
NB-94	-1.584E-02		2.541E-02	4.085E-02	3.351E-03	-0.388
NB-95	7.065E-02		3.780E-02	6.088E-02	5.569E-03	1.160
NB-95M	3.814E-02		2.506E-01	3.638E-01	2.669E-02	0.105
ZR-95	1.630E-02		5.299E-02	8.947E-02	8.804E-03	0.182

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	1.373E+00		5.664E-02	Half-Life too short		
ZR-97	2.151E-01		2.538E-01	Half-Life too short		
MO-99	-1.393E-01		5.410E+00	8.976E+00	1.370E+00	-0.016
TC-99M	7.481E+07		8.947E+07	Half-Life too short		
RH-101	-2.124E-02		6.501E-02	1.079E-01	5.800E-03	-0.197
RH-102	5.809E-02		8.444E-02	1.406E-01	8.927E-03	0.413
RU-103	6.379E-02		9.018E-02	1.496E-01	1.942E-02	0.427
RH-106	4.348E-01		5.334E-01	8.756E-01	1.102E-01	0.497
RU-106	4.348E-01		5.315E-01	8.756E-01	6.443E-02	0.497
AG-108M	6.122E-02		8.891E-02	1.491E-01	9.741E-03	0.411
AG-110M	2.899E+00		2.559E-01	2.409E-01	1.900E-02	12.038
IN-111	1.132E+00		1.401E+00	2.047E+00	1.144E-01	0.553
IN-113M	5.172E-02		1.039E-01	1.753E-01	1.075E-02	0.295
SN-113	5.172E-02		1.039E-01	1.753E-01	1.075E-02	0.295
IN-114M	-6.233E-02		3.809E-01	5.903E-01	3.151E-02	-0.106
CD-115	4.484E-01		1.147E+01	1.878E+01	1.262E+00	0.024
SN-117M	3.626E-02		8.233E-02	1.399E-01	7.436E-03	0.259
SB-122	-1.149E+00		2.030E+00	3.248E+00	2.263E-01	-0.354
I-123	2.900E-01		3.182E-01	Half-Life too short		
TE-123M	2.141E-02		4.697E-02	7.982E-02	4.306E-03	0.268
I-124	1.618E-01		8.588E-01	1.206E+00	8.723E-02	0.134
SB-124	-5.641E-02		5.425E-02	7.643E-02	5.273E-03	-0.738
SB-125	5.772E-02		2.401E-01	4.009E-01	2.505E-02	0.144
TE-125M	-3.622E+00		1.543E+01	2.482E+01	2.180E+00	-0.146
I-126	2.378E+00		3.001E-01	4.826E-01	3.710E-02	4.927
SB-126	6.145E-02		1.156E-01	1.729E-01	1.464E-02	0.355
SB-127	-2.732E-02		7.416E-01	1.238E+00	1.271E-01	-0.022
XE-127	-3.527E-02		8.893E-02	1.474E-01	7.955E-03	-0.239
I-131	-2.192E-03		2.193E-01	3.694E-01	2.378E-02	-0.006
TE-132	-2.759E-01		8.488E-01	1.395E+00	1.931E-01	-0.198
BA-133	3.021E-03		1.127E-01	1.570E-01	1.813E-02	0.019
I-133	-1.349E-04		1.091E-03	Half-Life too short		
CS-134	1.372E-01	+	5.640E-02	7.317E-02	7.077E-03	1.875
CS-135	-1.319E-01		3.159E-01	5.121E-01	3.871E-02	-0.258
I-135	1.603E+06		1.107E+07	Half-Life too short		
CS-136	-6.551E-02		7.260E-02	1.134E-01	1.016E-02	-0.578
CE-139	4.709E-03		4.963E-02	8.396E-02	4.408E-03	0.056
BA-140	-6.247E-02		4.493E-01	7.305E-01	2.390E-01	-0.086
LA-140	1.659E-02		5.994E-02	9.124E-02	6.260E-03	0.182
CE-141	2.354E-03		1.042E-01	1.652E-01	9.431E-03	0.014
CE-143	2.542E-04		5.810E-05	Half-Life too short		
CE-144	8.166E-02		3.638E-01	5.823E-01	8.233E-02	0.140
PM-144	1.075E-02		2.692E-02	4.496E-02	3.650E-03	0.239
PR-144	7.273E-01		1.822E+00	3.043E+00	2.470E-01	0.239
PM-146	9.551E-03		1.275E-01	2.113E-01	1.880E-02	0.045
ND-147	5.684E-03		9.826E-01	1.606E+00	2.241E-01	0.004
PM-149	-1.314E+01		9.687E+01	1.570E+02	2.219E+01	-0.084
EU-152	-8.539E-02		2.237E-01	3.427E-01	2.236E-02	-0.249

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-1.492E-02		1.460E-01	2.116E-01	1.654E-02	-0.071
EU-154	-5.434E-02		9.776E-02	1.537E-01	1.536E-02	-0.353
EU-155	1.706E-01		1.847E-01	3.036E-01	2.171E-02	0.562
TB-160	-1.781E-03		1.120E-01	1.831E-01	2.011E-02	-0.010
HO-166M	-9.427E-03		4.767E-02	7.859E-02	6.551E-03	-0.120
TM-171	1.204E+01		4.826E+01	8.035E+01	6.424E+00	0.150
LU-176	3.690E-02		5.322E-02	8.698E-02	5.008E-03	0.424
LU-177	1.480E+00		1.697E+00	2.854E+00	1.548E-01	0.519
LU-177M	-1.175E-01		4.329E-01	7.195E-01	4.249E-02	-0.163
HF-181	-4.149E-02		1.068E-01	1.748E-01	1.119E-02	-0.237
W-181	-9.279E-01		6.343E-01	1.017E+00	8.070E-02	-0.912
TA-182	2.798E-02		1.522E-01	2.538E-01	1.552E-02	0.110
RE-183	5.552E-02		1.802E-01	3.053E-01	1.611E-02	0.182
RE-184	2.757E-02		4.679E-01	7.684E-01	4.316E-02	0.036
OS-185	-7.018E-02		6.875E-02	1.065E-01	8.012E-03	-0.659
RE-188	1.861E-02		2.788E-01	4.735E-01	2.534E-02	0.039
W-188	7.654E+00		1.657E+01	2.378E+01	1.362E+00	0.322
IR-192	2.293E-02		7.417E-02	1.200E-01	6.959E-03	0.191
AU-195	1.081E-01		3.758E-01	6.144E-01	4.701E-02	0.176
TL-200	1.520E-05		1.330E-04	Half-Life too short		
TL-201	-3.181E+00		7.285E+00	1.221E+01	6.411E-01	-0.260
TL-202	-1.974E-01		1.710E-01	2.786E-01	1.699E-02	-0.709
HG-203	6.106E-02		8.013E-02	1.320E-01	8.006E-03	0.463
BI-207	-2.452E-02		4.223E-02	6.782E-02	5.599E-03	-0.362
TL-207	-8.104E-01		1.437E+00	2.278E+00	3.761E-01	-0.356
PO-209	-5.520E-01		6.047E+00	9.814E+00	1.107E+00	-0.056
BI-210	-6.867E+00		9.628E+00	1.607E+01	1.243E+00	-0.427
PB-210	-6.867E+00		9.628E+00	1.607E+01	1.243E+00	-0.427
PO-210	-6.867E+00		9.624E+00	1.607E+01	1.069E+00	-0.427
PB-211	-2.970E-01		2.233E+00	3.712E+00	2.314E+00	-0.080
PO-215	-8.104E-01		1.437E+00	2.278E+00	3.761E-01	-0.356
RN-219	-1.181E+00		9.976E-01	1.617E+00	2.201E-01	-0.730
RN-220	-3.044E+01		4.792E+01	7.677E+01	5.276E+00	-0.396
RA-223	-8.104E-01		1.437E+00	2.278E+00	3.761E-01	-0.356
AC-227	-4.715E-01		7.877E-01	1.274E+00	1.769E-01	-0.370
TH-227	-4.715E-01		7.889E-01	1.274E+00	2.145E-01	-0.370
TH-229	-2.763E-01		1.022E+00	1.703E+00	9.117E-02	-0.162
PA-231	-5.554E-01		3.165E+00	5.129E+00	7.049E-01	-0.108
TH-231	-8.104E-01		1.437E+00	2.278E+00	3.761E-01	-0.356
U-231	-4.403E-01		1.386E+00	2.000E+00	1.603E-01	-0.220
PA-233	1.354E-03		1.394E-01	2.250E-01	1.379E-02	0.006
PA-234	1.740E-01		2.409E-01	4.068E-01	8.025E-02	0.428
PA-234M	3.838E+00		5.417E+00	9.054E+00	1.079E+00	0.424
TH-234	-3.133E-01		2.585E+00	3.852E+00	6.791E-01	-0.081
U-235	-1.078E-01		3.672E-01	5.774E-01	9.352E-02	-0.187
NP-236	-1.261E-01		1.346E-01	2.235E-01	1.184E-02	-0.564
U-238	-3.133E-01		2.585E+00	3.852E+00	6.791E-01	-0.081
NP-239	-1.006E-01		3.413E-01	5.461E-01	3.380E-02	-0.184

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	3.941E-02		1.649E-01	2.685E-01	1.922E-02	0.147
CM-247	-9.939E-02		8.847E-02	1.451E-01	8.452E-03	-0.685
CF-249	-2.275E-02		9.327E-02	1.558E-01	8.959E-03	-0.146
CF-251	-6.152E-02		2.243E-01	3.758E-01	1.985E-02	-0.164

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871427          *
* Acquisition date  :  7-JUL-2009 11:20:58 Detector SN#     :               *
* Detector ID       : GAM18                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:08.14      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871427          Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.4491E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.425E+01	2.909E+00	2.117E-01	1.484E+00
CD-109	3.567E+00	1.597E+00	1.177E+00	8.149E-01
SN-126	3.517E-01	1.575E-01	1.138E-01	8.035E-02
BA-137M	6.596E+01	4.951E+00	3.911E-02	2.526E+00
CS-137	6.972E+01	5.246E+00	4.134E-02	2.677E+00
TL-208	5.844E-01	1.163E-01	5.048E-02	5.934E-02
BI-211	4.399E+00	7.977E-01	3.749E-01	4.070E-01
BI-212	1.376E+00	4.073E-01	1.698E-01	2.078E-01
PB-212	1.814E+00	1.899E-01	9.205E-02	9.686E-02
PO-212	1.814E+00	1.899E-01	9.205E-02	9.686E-02
BI-214	1.300E+00	2.309E-01	8.990E-02	1.178E-01
PB-214	1.530E+00	2.883E-01	1.303E-01	1.471E-01
PO-214	1.530E+00	2.883E-01	1.303E-01	1.471E-01
PO-216	1.814E+00	1.899E-01	9.205E-02	9.686E-02
PO-218	1.530E+00	2.883E-01	1.303E-01	1.471E-01
RA-224	4.764E+00	1.734E+00	1.046E+00	8.845E-01
RA-226	1.300E+00	2.309E-01	8.990E-02	1.178E-01
AC-228	1.802E+00	3.395E-01	8.821E-02	1.732E-01
RA-228	1.802E+00	3.395E-01	8.821E-02	1.732E-01
TH-228	1.814E+00	1.899E-01	9.204E-02	9.686E-02
TH-230	1.300E+00	2.309E-01	8.990E-02	1.178E-01
TH-232	1.802E+00	3.395E-01	8.821E-02	1.732E-01
U-234	1.300E+00	2.309E-01	8.990E-02	1.178E-01
NP-237	1.033E+00	5.074E-01	3.287E-01	2.589E-01
AM-241	8.100E+00	8.118E-01	2.895E-01	4.142E-01
AM-243	3.895E-01	1.341E-01	7.727E-02	6.843E-02
ANH-511	1.039E-01	9.761E-02	5.332E-02	4.980E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-2.781E-01	8.535E-01	7.375E-01	4.355E-01	NOT IDENT.
NA-22	-3.270E-02	3.510E-02	2.765E-02	1.791E-02	NOT IDENT.
NA-24	6.152E+03	4.944E+04	0.000E+00	2.523E+04	SHORT HLIF
AL-26	7.638E-03	2.221E-02	1.945E-02	1.133E-02	NOT IDENT.
TI-44	3.890E-01	7.594E-02	5.556E-02	3.875E-02	FAIL ABUN
SC-46	-1.419E-02	3.031E-02	2.488E-02	1.547E-02	FAIL ABUN
V-48	-9.048E-03	4.989E-02	4.128E-02	2.546E-02	NOT IDENT.
CR-51	-7.873E-01	7.597E-01	6.368E-01	3.876E-01	NOT IDENT.
MN-52	-2.064E-02	1.389E-01	1.140E-01	7.085E-02	NOT IDENT.
MN-54	7.727E-03	3.025E-02	2.622E-02	1.543E-02	NOT IDENT.
CO-56	-4.380E-02	3.201E-02	2.470E-02	1.633E-02	FAIL ABUN
CO-57	-5.826E-02	4.451E-02	3.769E-02	2.271E-02	NOT IDENT.
CO-58	-6.722E-03	2.884E-02	2.436E-02	1.472E-02	NOT IDENT.
FE-59	-3.905E-02	6.477E-02	5.336E-02	3.305E-02	NOT IDENT.
CO-60	4.299E-02	3.297E-02	3.024E-02	1.682E-02	NOT IDENT.
ZN-65	4.617E-02	7.589E-02	5.886E-02	3.872E-02	NOT IDENT.
GE-68	5.711E-01	1.006E+00	8.825E-01	5.131E-01	NOT IDENT.
AS-73	-9.449E-01	2.067E+00	1.808E+00	1.054E+00	NOT IDENT.
AS-74	2.040E-02	1.357E-01	1.155E-01	6.925E-02	NOT IDENT.
SE-75	3.498E-02	8.687E-02	7.624E-02	4.432E-02	NOT IDENT.
BR-77	-2.011E+01	1.157E+01	9.533E+00	5.905E+00	FAIL ABUN
SR-82	-5.860E-02	3.266E-01	2.383E-01	1.667E-01	NOT IDENT.
RB-83	-2.217E-01	1.408E-01	1.166E-01	7.185E-02	NOT IDENT.
RB-84	-5.361E-03	5.615E-02	4.530E-02	2.865E-02	NOT IDENT.
KR-85	3.201E+01	1.646E+01	1.282E+01	8.399E+00	NOT IDENT.
SR-85	1.605E-01	8.253E-02	6.427E-02	4.211E-02	NOT IDENT.
RB-86	-3.097E-02	5.979E-01	5.060E-01	3.051E-01	NOT IDENT.
Y-88	2.049E-02	2.565E-02	2.354E-02	1.309E-02	NOT IDENT.
ZR-88	-4.192E-02	7.070E-02	6.206E-02	3.607E-02	NOT IDENT.
Y-91	1.226E+01	1.507E+01	1.340E+01	7.687E+00	NOT IDENT.
NB-94	-1.584E-02	2.490E-02	2.090E-02	1.271E-02	NOT IDENT.
NB-95	7.065E-02	3.705E-02	3.108E-02	1.890E-02	NOT IDENT.
NB-95M	3.814E-02	2.455E-01	1.907E-01	1.253E-01	NOT IDENT.
ZR-95	1.630E-02	5.193E-02	4.569E-02	2.649E-02	NOT IDENT.
NB-97	1.373E+06	1.110E+05	0.000E+00	5.664E+04	SHORT HLIF
ZR-97	2.151E+05	4.974E+05	0.000E+00	2.538E+05	SHORT HLIF
MO-99	-1.393E-01	5.301E+00	4.586E+00	2.705E+00	NOT IDENT.
TC-99M	7.481E+13	1.754E+14	0.000E+00	8.947E+13	SHORT HLIF
RH-101	-2.124E-02	6.371E-02	5.677E-02	3.250E-02	NOT IDENT.
RH-102	5.809E-02	8.275E-02	7.254E-02	4.222E-02	NOT IDENT.
RU-103	6.379E-02	8.838E-02	7.710E-02	4.509E-02	FAIL ABUN
RH-106	4.348E-01	5.227E-01	4.491E-01	2.667E-01	FAIL ABUN
RU-106	4.348E-01	5.209E-01	4.491E-01	2.658E-01	FAIL ABUN
AG-108M	6.122E-02	8.713E-02	7.710E-02	4.446E-02	NOT IDENT.
AG-110M	2.899E+00	2.508E-01	1.234E-01	1.280E-01	NOT IDENT.
IN-111	1.132E+00	1.373E+00	1.072E+00	7.004E-01	NOT IDENT.
IN-113M	5.172E-02	1.018E-01	9.086E-02	5.194E-02	NOT IDENT.
SN-113	5.172E-02	1.018E-01	9.086E-02	5.194E-02	NOT IDENT.
IN-114M	-6.233E-02	3.733E-01	3.108E-01	1.904E-01	NOT IDENT.
CD-115	4.484E-01	1.124E+01	9.669E+00	5.737E+00	NOT IDENT.
SN-117M	3.626E-02	8.068E-02	7.395E-02	4.117E-02	NOT IDENT.
SB-122	-1.149E+00	1.989E+00	1.670E+00	1.015E+00	NOT IDENT.
I-123	2.900E+05	6.237E+05	0.000E+00	3.182E+05	SHORT HLIF
TE-123M	2.141E-02	4.603E-02	4.219E-02	2.349E-02	NOT IDENT.
I-124	1.618E-01	8.416E-01	6.192E-01	4.294E-01	NOT IDENT.
SB-124	-5.641E-02	5.317E-02	3.831E-02	2.713E-02	FAIL ABUN
SB-125	5.772E-02	2.353E-01	2.074E-01	1.200E-01	NOT IDENT.
TE-125M	-3.622E+00	1.512E+01	1.322E+01	7.714E+00	NOT IDENT.
I-126	2.378E+00	2.941E-01	2.472E-01	1.501E-01	NOT IDENT.
SB-126	6.145E-02	1.133E-01	8.841E-02	5.781E-02	FAIL ABUN
SB-127	-2.732E-02	7.268E-01	6.337E-01	3.708E-01	FAIL ABUN
XE-127	-3.527E-02	8.715E-02	7.749E-02	4.447E-02	FAIL ABUN
I-131	-2.192E-03	2.149E-01	1.918E-01	1.096E-01	NOT IDENT.
TE-132	-2.759E-01	8.318E-01	7.314E-01	4.244E-01	NOT IDENT.
BA-133	3.021E-03	1.105E-01	8.152E-02	5.637E-02	NOT IDENT.
I-133	-1.349E+02	2.138E+03	0.000E+00	1.091E+03	SHORT HLIF
CS-134	1.372E-01	5.528E-02	3.732E-02	2.820E-02	FAIL ABUN
CS-135	-1.319E-01	3.096E-01	2.676E-01	1.579E-01	NOT IDENT.
I-135	1.603E+12	2.169E+13	0.000E+00	1.107E+13	SHORT HLIF
CS-136	-6.551E-02	7.115E-02	5.747E-02	3.630E-02	FAIL ABUN
CE-139	4.709E-03	4.863E-02	4.434E-02	2.481E-02	NOT IDENT.
BA-140	-6.247E-02	4.403E-01	3.760E-01	2.246E-01	NOT IDENT.
LA-140	1.659E-02	5.874E-02	4.579E-02	2.997E-02	NOT IDENT.
CE-141	2.354E-03	1.021E-01	8.748E-02	5.208E-02	NOT IDENT.
CE-143	2.542E+02	1.139E+02	0.000E+00	5.810E+01	SHORT HLIF
CE-144	8.166E-02	3.565E-01	3.089E-01	1.819E-01	NOT IDENT.
PM-144	1.075E-02	2.639E-02	2.300E-02	1.346E-02	NOT IDENT.
PR-144	7.273E-01	1.786E+00	1.557E+00	9.112E-01	NOT IDENT.

PM-146	9.551E-03	1.249E-01	1.092E-01	6.373E-02	NOT IDENT.
ND-147	5.684E-03	9.629E-01	8.269E-01	4.913E-01	NOT IDENT.
PM-149	-1.314E+01	9.493E+01	8.195E+01	4.843E+01	NOT IDENT.
EU-152	-8.539E-02	2.193E-01	1.781E-01	1.119E-01	FAIL ABUN
GD-153	-1.492E-02	1.431E-01	1.130E-01	7.299E-02	NOT IDENT.
EU-154	-5.434E-02	9.580E-02	7.757E-02	4.888E-02	NOT IDENT.
EU-155	1.706E-01	1.810E-01	1.619E-01	9.233E-02	FAIL ABUN
TB-160	-1.781E-03	1.098E-01	9.317E-02	5.601E-02	FAIL ABUN
HO-166M	-9.427E-03	4.672E-02	4.019E-02	2.384E-02	NOT IDENT.
TM-171	1.204E+01	4.730E+01	4.325E+01	2.413E+01	FAIL ABUN
LU-176	3.690E-02	5.215E-02	4.533E-02	2.661E-02	FAIL ABUN
LU-177	1.480E+00	1.663E+00	1.500E+00	8.485E-01	NOT IDENT.
LU-177M	-1.175E-01	4.243E-01	3.724E-01	2.165E-01	NOT IDENT.
HF-181	-4.149E-02	1.046E-01	9.019E-02	5.339E-02	FAIL ABUN
W-181	-9.279E-01	6.217E-01	5.479E-01	3.172E-01	FAIL ABUN
TA-182	2.798E-02	1.492E-01	1.282E-01	7.610E-02	FAIL ABUN
RE-183	5.552E-02	1.766E-01	1.613E-01	9.011E-02	FAIL ABUN
RE-184	2.757E-02	4.586E-01	4.021E-01	2.340E-01	FAIL ABUN
OS-185	-7.018E-02	6.738E-02	5.460E-02	3.438E-02	FAIL ABUN
RE-188	1.861E-02	2.732E-01	2.504E-01	1.394E-01	NOT IDENT.
W-188	7.654E+00	1.624E+01	1.240E+01	8.284E+00	NOT IDENT.
IR-192	2.293E-02	7.268E-02	6.248E-02	3.708E-02	FAIL ABUN
AU-195	1.081E-01	3.683E-01	3.280E-01	1.879E-01	FAIL ABUN
TL-200	1.520E+01	2.607E+02	0.000E+00	1.330E+02	SHORT HLIF
TL-201	-3.181E+00	7.139E+00	6.448E+00	3.642E+00	NOT IDENT.
TL-202	-1.974E-01	1.676E-01	1.440E-01	8.550E-02	NOT IDENT.
HG-203	6.106E-02	7.853E-02	6.893E-02	4.007E-02	NOT IDENT.
BI-207	-2.452E-02	4.139E-02	3.436E-02	2.112E-02	FAIL ABUN
TL-207	-8.104E-01	1.408E+00	1.186E+00	7.183E-01	FAIL ABUN
PO-209	-5.520E-01	5.926E+00	4.992E+00	3.023E+00	NOT IDENT.
BI-210	-6.867E+00	9.435E+00	8.715E+00	4.814E+00	NOT IDENT.
PB-210	-6.867E+00	9.435E+00	8.715E+00	4.814E+00	NOT IDENT.
PO-210	-6.867E+00	9.432E+00	8.715E+00	4.812E+00	NOT IDENT.
PB-211	-2.970E-01	2.188E+00	1.922E+00	1.116E+00	NOT IDENT.
PO-215	-8.104E-01	1.408E+00	1.186E+00	7.183E-01	FAIL ABUN
RN-219	-1.181E+00	9.777E-01	8.375E-01	4.988E-01	NOT IDENT.
RN-220	-3.044E+01	4.696E+01	3.949E+01	2.396E+01	NOT IDENT.
RA-223	-8.104E-01	1.408E+00	1.186E+00	7.183E-01	FAIL ABUN
AC-227	-4.715E-01	7.719E-01	6.664E-01	3.938E-01	NOT IDENT.
TH-227	-4.715E-01	7.732E-01	6.664E-01	3.945E-01	FAIL ABUN
TH-229	-2.763E-01	1.002E+00	8.962E-01	5.111E-01	FAIL ABUN
PA-231	-5.554E-01	3.101E+00	2.677E+00	1.582E+00	NOT IDENT.
TH-231	-8.104E-01	1.408E+00	1.186E+00	7.183E-01	FAIL ABUN
U-231	-4.403E-01	1.359E+00	1.069E+00	6.932E-01	FAIL ABUN
PA-233	1.354E-03	1.366E-01	1.172E-01	6.970E-02	FAIL ABUN
PA-234	1.740E-01	2.361E-01	2.067E-01	1.204E-01	FAIL ABUN
PA-234M	3.838E+00	5.308E+00	4.594E+00	2.708E+00	NOT IDENT.
TH-234	-3.133E-01	2.533E+00	2.076E+00	1.292E+00	FAIL ABUN
U-235	-1.078E-01	3.598E-01	3.059E-01	1.836E-01	FAIL ABUN
NP-236	-1.261E-01	1.319E-01	1.181E-01	6.731E-02	NOT IDENT.
U-238	-3.133E-01	2.533E+00	2.076E+00	1.292E+00	FAIL ABUN
NP-239	-1.006E-01	3.345E-01	2.905E-01	1.707E-01	NOT IDENT.
CM-243	3.941E-02	1.616E-01	1.432E-01	8.244E-02	NOT IDENT.
CM-247	-9.939E-02	8.670E-02	7.517E-02	4.424E-02	NOT IDENT.
CF-249	-2.275E-02	9.141E-02	8.079E-02	4.664E-02	NOT IDENT.
CF-251	-6.152E-02	2.198E-01	1.982E-01	1.122E-01	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	1413.2374
46.50	1413.2374
46.50	1413.2374
48.70	1427.8678
49.72	1443.6079
51.35	1454.7224
52.39	1503.2322
52.97	1528.3951
53.15	1546.7296
53.44	1546.6156
54.07	1559.8856
56.28	1546.4685
56.28	1546.4856
57.37	0.0000
57.53	1588.1904
57.53	1588.1992
57.60	1537.2537
57.98	1539.3542
57.98	1539.3542
59.32	1546.6960
59.32	1546.6960
59.40	1547.1313
59.54	1547.8922
59.72	1548.8685
60.01	1550.4409
61.10	1435.5228
61.14	1435.7217
61.30	1374.6671
63.00	1361.4484
63.29	1388.2506
63.29	1388.2506
63.58	1389.6016
64.28	1443.9713
65.12	1484.5363
65.20	1484.9281
65.20	1484.9281
66.05	1476.6954
66.72	1392.1233
66.83	1387.8552
66.91	1388.2102
67.20	1387.6006
67.20	1387.6006
67.75	1421.6447
67.85	1419.2324
68.90	1451.3655
68.90	1451.3655
69.30	1483.5068
69.67	1480.9136
70.82	1481.8735
70.82	1481.8735
70.83	1481.9203
72.80	1477.3026
72.87	1477.6194
72.87	1477.6194
74.67	1485.6544
74.81	1486.2764
74.81	1486.2764
74.81	1486.2764
74.81	1486.2764
74.81	1486.2764
74.81	1486.2764
74.97	1486.9834
75.28	1488.3585
75.70	1490.2128
77.11	1496.3937
77.11	1496.3937
77.11	1496.3937

77.11	1496.3937
77.11	1496.3937
77.11	1496.3937
78.38	1527.6254
79.62	1509.2565
79.80	1487.6924
79.80	1487.6924
80.11	1489.0033
80.18	1489.3005
80.30	1537.5250
80.30	1537.5250
80.57	1538.7048
81.00	1570.4541
81.07	1570.7667
81.07	1570.7667
81.07	1570.7667
81.07	1570.7667
82.60	1571.9908
83.37	1492.1021
83.78	1526.9337
83.78	1526.9337
83.78	1526.9337
83.78	1526.9337
84.21	1471.4463
84.40	1472.2058
84.90	1451.5593
85.43	1502.0535
86.29	1670.8073
86.50	1671.7489
86.54	1671.9255
86.59	1672.1525
86.72	1681.8401
86.79	1682.1444
86.94	1682.8291
87.30	1787.8301
87.30	1787.8301
87.30	1787.8301
87.30	1787.8301
87.30	1787.8301
87.30	1787.8301
87.57	1789.1132
87.88	1886.5087
88.03	1887.2649
88.36	1803.0270
88.47	1803.5504
89.95	1729.9418
91.11	1652.2386
92.29	1908.3164
92.38	1908.7606
92.38	1908.7606
93.35	1752.3480
94.00	1477.3093
94.67	1444.1406
94.67	1444.1620
94.90	1444.9939
94.90	1444.9939
94.90	1444.9939
94.90	1444.9939
95.87	1558.8466
95.87	1558.8466
96.73	1555.9604
97.43	1502.4686
98.44	1502.5369
98.44	1502.5369
98.88	1493.7111
99.55	1421.9100
99.55	1421.9100
99.86	1444.9478
100.00	1445.4395
100.10	1445.7976
103.18	1610.4147
103.76	1509.1182
105.00	1490.1929
105.31	1502.9323
108.00	1653.0244
109.28	1574.4069
111.00	1640.6292
111.00	1640.6292

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115.19	1654.7393
116.30	1733.6718
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117.00	1696.0295
117.66	1667.9279
121.11	1652.6949
121.62	1680.8226
121.78	1681.3829
122.06	1740.6415
122.32	1741.5754
122.32	1741.5754
122.32	1741.5754
122.32	1741.5754
123.07	1693.6018
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131.20	1722.7090
133.02	1762.5804
133.54	1717.0914
135.34	1735.5040
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136.25	1705.7194
136.48	1703.0763
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142.65	1717.2089
143.76	1734.4841
144.24	1771.5995
144.24	1771.5995
144.24	1771.5995
144.24	1771.5995
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154.21	1821.5159
154.21	1821.5159
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156.02	1724.3580
158.56	1681.5432
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159.00	1676.6057
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162.32	1703.7887
162.64	1738.4871
163.35	1756.5709
163.89	1753.6959
165.85	1736.1426
167.43	1780.9810
171.28	1735.2874
171.86	1779.3315
172.10	1791.7485
176.55	1889.0001
176.60	1889.1427
181.06	1944.5765
184.41	2042.9128
185.71	2335.4431
186.00	2278.3320
190.27	2444.2668
192.34	2412.5935
193.63	2417.1582
197.04	2302.4990
198.01	2346.0869
198.60	2344.3091
200.40	2321.1265
201.83	2339.9888
202.84	2347.0989
205.31	2352.3757
208.36	2323.2725
208.81	2286.5635

209.75	2294.2827
209.75	2294.2827
210.97	2273.2493
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216.55	2170.9397
218.09	2140.6484
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227.08	2095.5940
227.20	2024.5916
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228.18	2017.3531
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236.00	1971.3925
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238.63	1952.8660
238.63	1952.8660
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241.98	1909.5597
241.98	1909.5597
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252.85	1877.7828
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260.90	1902.6235
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268.24	1932.9655
268.79	1887.9493
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269.46	1830.7590
269.46	1830.7590
269.46	1830.7590
271.23	1771.5717
273.65	2061.3901
276.40	1803.5088
277.35	1819.9127
277.60	1820.3948
277.60	1820.3948
278.00	1833.6508
278.60	1850.4402
279.20	1800.7218
279.53	1841.8948
280.46	1853.1520
281.68	1880.6031
283.67	1793.8126
284.30	1772.0322
285.00	1788.0167
285.90	1787.6455
286.10	1788.0104
286.10	1788.0104
287.40	1669.9568
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290.80	1713.6499
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293.26	0.0000
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295.21	1801.0876
295.96	1826.1864

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297.23	2004.8326
298.57	1819.2593
299.80	1785.8789
299.80	1785.8789
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300.09	1684.4338
300.10	1684.4338
300.12	1684.4822
301.29	1765.6244
302.84	1836.6167
303.76	1917.2612
303.91	1942.0647
304.40	1935.5681
304.40	1935.5681
304.84	1912.9688
306.84	1736.0522
308.46	1776.3997
311.98	1779.4482
316.51	1751.8125
318.01	1727.3704
319.02	1775.6323
319.41	1805.5521
320.08	1851.1587
323.87	1835.1686
323.87	1835.1686
323.87	1835.1686
323.87	1835.1686
325.23	1793.9926
328.77	1862.3979
333.44	1839.0748
334.20	1907.1736
334.20	1907.1736
334.30	1907.3590
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338.28	1766.7076
338.28	1766.7076
338.28	1766.7076
338.32	1766.7809
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338.32	1766.7809
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340.57	1778.8959
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345.85	1821.3269
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351.92	1782.3007
351.92	1782.3007
351.92	1782.3007
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356.01	1778.9883
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366.43	1811.7709
367.43	1825.1345
367.94	0.0000
369.80	1868.8340
374.96	1844.3577
383.85	1913.4512
387.95	1955.0640
388.63	1949.7211
391.69	1929.7107
391.69	1929.7107
392.90	2032.5332
398.62	1943.5316
400.65	2016.5791
401.10	2053.6855
401.81	2074.4351
402.60	2070.1548
404.84	2017.8427
410.95	2100.0439
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413.65	2126.1956
414.70	2076.1506
415.30	2081.8584
415.76	2056.2156
417.63	0.0000

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423.70	2146.8113
427.08	2131.4941
427.89	2157.5796
432.53	2305.6470
433.93	2246.9294
439.47	2474.3228
439.56	2474.4800
439.89	2505.8438
443.98	2380.5696
444.90	2469.9282
445.03	2476.9275
445.03	2476.9275
445.03	2476.9275
445.03	2476.9275
453.90	2590.2527
463.38	2735.1750
468.07	2809.1130
473.00	2513.9553
475.06	2374.7268
475.35	2366.3567
476.78	2298.6851
477.59	2257.5471
477.96	2230.4866
482.03	1940.7876
484.57	1771.6108
487.03	1694.1565
490.36	0.0000
492.35	1551.7644
497.08	1410.7057
507.63	0.0000
510.53	0.0000
510.84	1440.6338
511.00	1370.4259
511.85	1269.8208
511.85	1269.8208
513.99	1244.6243
513.99	1244.6243
520.41	1248.8633
520.65	1249.0732
527.90	1106.8921
528.96	0.0000
529.64	1070.3121
529.87	0.0000
531.02	1039.5397
537.32	985.1993
543.00	959.8665
546.56	0.0000
549.76	879.0549
552.65	820.4694
555.20	830.0744
563.23	775.7239
563.90	781.2546
568.70	744.7968
569.32	740.8828
569.50	731.5197
569.67	731.6049
573.80	742.8851
574.00	748.2258
574.64	749.9230
578.91	699.1398
579.30	0.0000
583.14	730.1387
585.48	643.6808
591.81	681.8428
592.07	676.6414
593.00	730.1387
595.88	669.6332
600.56	682.0014
602.52	0.0000
602.71	671.5773
602.71	671.5773
603.60	614.8822
604.41	629.4420
604.70	643.8098
609.31	658.7458
609.31	658.7458
609.31	658.7458

609.31	658.7458
610.33	592.2201
612.46	639.5088
614.37	649.1725
618.01	639.7310
621.84	621.2976
621.84	621.2976
631.29	582.2326
633.02	581.6949
633.10	573.0225
634.78	607.3018
635.90	663.2094
636.97	677.7766
645.85	632.8931
646.12	625.3259
656.30	666.9955
657.75	631.3036
657.90	0.0000
661.65	417.8108
661.65	417.8108
664.57	0.0000
666.33	162.8989
666.33	162.8989
675.00	153.8485
677.61	147.5615
685.20	152.8058
692.80	139.3722
695.00	132.0383
696.49	138.6988
696.49	138.6988
697.00	140.6097
697.49	137.8334
698.33	152.8987
698.50	152.9120
699.00	160.4586
702.63	156.0539
706.10	132.7842
706.58	0.0000
706.67	129.0563
709.31	140.5454
711.68	150.1559
713.82	160.7170
717.42	144.9067
720.50	136.5908
721.93	0.0000
722.20	126.9404
722.78	151.3975
722.78	151.3975
722.89	151.4039
722.95	151.4072
723.30	156.3214
724.18	164.5336
727.18	118.0084
733.00	122.7094
735.90	146.5483
739.58	140.7464
742.81	144.8036
744.21	139.1412
747.13	139.3389
751.79	141.5748
752.31	137.7574
753.82	115.6836
755.35	127.3459
756.15	123.5339
756.87	123.5755
763.93	129.5248
765.79	121.3289
766.41	141.3149
766.84	143.0044
768.36	142.6904
768.36	142.6904
768.36	142.6904
768.36	142.6904
776.49	140.3115
778.00	132.0506
778.57	138.7743
778.89	136.0772
783.80	130.7300

785.46	126.2180
792.07	117.7686
795.84	117.9712
796.30	117.9956
801.93	136.8881
805.60	113.5564
810.29	119.7322
810.76	119.7593
815.85	113.0862
817.79	110.2073
818.51	101.3027
819.60	111.2891
826.30	118.5957
828.27	0.0000
831.60	132.8566
831.96	128.8819
834.83	145.0472
836.80	0.0000
846.75	156.8601
848.13	112.6859
856.28	0.0000
856.80	138.4961
860.37	113.2783
867.32	125.2040
867.82	120.2310
871.10	123.9534
873.19	109.8259
874.81	126.1822
875.33	0.0000
876.40	129.3203
879.36	120.3047
880.27	119.3304
880.51	113.2222
881.50	114.2900
883.24	112.3297
884.67	105.2443
889.25	120.8016
896.60	119.1129
898.02	130.4856
899.00	140.8158
903.28	125.1016
911.07	122.9173
911.07	122.9173
911.07	122.9173
919.63	101.0567
920.93	103.2880
925.00	130.8783
925.24	126.7358
926.50	104.9741
934.06	103.2036
934.06	103.2036
934.06	103.2036
934.06	103.2036
935.52	101.1778
937.48	99.1690
944.10	115.1272
946.00	97.4067
949.00	110.1056
962.29	97.5737
964.01	101.2559
966.15	102.3955
968.20	102.4744
969.11	102.5119
969.11	102.5119
969.11	102.5119
977.42	105.4122
980.50	101.8965
983.50	105.1996
989.30	96.9115
996.32	120.6579
1001.03	95.1999
1001.68	98.4313
1004.76	110.3281
1021.30	0.0000
1024.50	0.0000
1034.80	107.2178
1037.82	105.0113
1038.57	101.3207

1038.76	0.0000
1045.16	101.5640
1046.59	112.8045
1048.07	111.9308
1050.47	110.1600
1050.47	110.1600
1063.62	122.8673
1076.63	114.9537
1077.35	102.7273
1085.78	110.5934
1099.22	108.2587
1112.02	105.1551
1112.84	96.8378
1115.52	101.9397
1120.29	145.6230
1120.29	145.6230
1120.29	145.6230
1120.29	145.6230
1120.51	145.6337
1121.28	123.9039
1124.00	0.0000
1129.67	128.1312
1131.51	0.0000
1147.95	0.0000
1167.94	178.7955
1173.22	127.5139
1175.09	128.5656
1177.93	156.9570
1189.05	128.1673
1204.90	127.8327
1205.75	0.0000
1213.00	144.9236
1221.42	125.5339
1230.97	112.7740
1235.34	140.7266
1236.41	0.0000
1238.11	153.0171
1238.11	153.0171
1238.11	153.0171
1238.11	153.0171
1238.25	153.0225
1246.25	128.6113
1260.41	0.0000
1271.85	92.3626
1274.45	105.4944
1274.54	115.5455
1291.56	83.8192
1298.22	0.0000
1312.09	83.3156
1325.50	104.0420
1325.50	104.0420
1332.49	67.4594
1333.61	61.3456
1360.21	57.6953
1362.66	0.0000
1365.15	30.9521
1368.21	42.0554
1368.53	0.0000
1376.25	38.0356
1377.67	56.9470
1377.67	56.9470
1377.67	56.9470
1377.67	56.9470
1384.27	63.5358
1394.10	63.4509
1395.20	69.7130
1407.95	69.9584
1434.06	54.6860
1436.60	56.8288
1457.56	0.0000
1460.81	49.7851
1489.15	55.4967
1509.49	37.5525
1596.49	35.3176
1620.62	32.8244
1678.03	0.0000
1691.02	37.3088
1691.02	37.3088

1706.46	0.0000
1750.46	0.0000
1764.49	23.9648
1764.49	23.9648
1764.49	23.9648
1764.49	23.9648
1770.23	24.8843
1771.40	17.7794
1791.20	0.0000
1808.65	24.2021
1836.01	23.3334

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871427

Total Uranium Activity	-9.8189E-01	ug/g
Total Uranium Counting Unc.	7.5371E+00	ug/g
Total Uranium Tpu	3.8455E-06	ug/g
Total Uranium Mda	6.1764E+00	ug/g

```
*******************************************************************************
*                                                                             *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                              *
*                             CHARLESTON ,SC 29417                            *
*                              GROSS GAMMA REPORT                             *
*                                                                             *
*                                                                             *
*******************************************************************************
*                                                                             *
*   BATCH ID      : 881220                    SAMPLE ID  : G1201871427        *
*   ANALYST       : MXR1                      DETECTOR   : GAM18              *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE:  7-JUL-2009 11:20:58.27    SAMPLE ALQT:  144.910 GRAM      *
*                                                                             *
*******************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.238E+01
GROSS GAMMA ERROR  (pCi/GRAM  )   : 4.267E+00
GROSS GAMMA MDA    (pCi/GRAM  )   : 4.540E+00
GROSS GAMMA DLC    (pCi/GRAM  )   : 2.236E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:31:08.98

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871428.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:00:37.
Sample ID         : G1201871428          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM01                Detector geometry: CAN
Elapsed live time: 0 01:30:00.00         Elapsed real time: 0 01:30:01.87  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.52	3572	1155	1.06	119.80	114	12	6.62E-01	2.6	
2	0	77.28	202	821	1.10	155.32	152	8	3.74E-02	26.0	
3	0	88.06*	2518	951	1.15	176.89	171	12	4.66E-01	3.2	
4	0	92.94*	109	510	1.31	186.64	183	9	2.02E-02	40.0	
5	0	122.06	657	600	1.11	244.88	238	13	1.22E-01	8.6	
6	0	136.78	60	468	1.00	274.32	269	9	1.10E-02	66.6	
7	0	186.23*	84	514	1.30	373.21	368	10	1.56E-02	52.9	
8	0	209.57	90	387	1.08	419.88	416	10	1.67E-02	42.4	
9	2	238.99*	582	322	1.14	478.72	475	14	1.08E-01	6.6	1.03E+00
10	2	241.98*	132	388	1.46	484.70	475	14	2.44E-02	30.1	
11	0	295.12	242	353	1.41	590.96	585	13	4.47E-02	17.2	
12	0	339.09	155	397	1.59	678.89	671	15	2.87E-02	29.3	
13	0	352.08*	348	386	1.50	704.86	697	15	6.45E-02	13.5	
14	0	510.64*	48	314	1.73	1021.91	1014	17	8.83E-03	89.5	
15	0	583.52*	203	189	1.34	1167.63	1161	13	3.76E-02	15.7	
16	0	609.59*	182	200	1.67	1219.76	1213	14	3.38E-02	18.3	
17	0	661.98	2954	150	1.52	1324.49	1318	12	5.47E-01	2.0	
18	0	727.30	37	143	1.31	1455.09	1448	12	6.79E-03	67.5	
19	0	796.68	25	155	0.89	1593.80	1585	11	4.64E-03	99.3	
20	0	911.94*	156	186	1.79	1824.23	1819	14	2.90E-02	20.3	
21	0	970.42	71	254	1.54	1941.15	1933	16	1.32E-02	52.0	
22	0	1173.58	2414	146	1.82	2347.26	2338	19	4.47E-01	2.4	
23	0	1332.85	2305	46	1.83	2665.62	2658	18	4.27E-01	2.2	
24	0	1765.64*	22	16	1.72	3530.60	3523	13	4.05E-03	46.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 11:31:12

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871428.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:00:37
Sample ID : G1201871428 Sample quantity : 155.44 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA1 Detector geometry: CAN
Elapsed live time: 0 01:30:00.00 Elapsed real time: 0 01:30:01.87 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	4.139E-01	7.575E-02	5.410E-02	3.322E-03	7.651
	+	136.48		3.069E-01	4.096E-01	4.537E-01	3.047E-02	0.676
CO-60	+	1173.22		6.675E+00	4.846E-01	1.008E-01	5.551E-03	66.201
	+	1332.49	*	7.138E+00	5.853E-01	7.565E-02	5.243E-03	94.349
CD-109	+	88.03	*	4.243E+01	4.740E+00	1.865E+00	1.716E-01	22.750
SN-126		64.28		2.881E-01	8.357E-01	1.246E+00	1.874E-01	0.231
	+	86.94		1.754E+01	7.359E+00	7.810E-01	3.238E-01	22.455
	+	87.57	*	4.218E+00	4.713E-01	1.864E-01	1.710E-02	22.627
BA-137M	+	661.65	*	5.402E+00	3.493E-01	9.339E-02	4.716E-03	57.840
CS-137	+	661.65	*	5.710E+00	3.705E-01	9.872E-02	5.013E-03	57.840
TL-208		277.35		2.620E-01	5.761E-01	9.667E-01	1.023E-01	0.271
	+	510.84		2.916E-01	5.230E-01	3.793E-01	3.795E-02	0.769
	+	583.14	*	3.558E-01	1.143E-01	9.808E-02	6.214E-03	3.628
		860.37		5.734E-01	6.038E-01	1.038E+00	7.842E-02	0.552
BI-211		72.87		-8.158E-01	5.229E+00	7.474E+00	6.260E-01	-0.109
	+	351.07	*	2.629E+00	7.270E-01	5.293E-01	3.352E-02	4.967
PB-212		74.81		6.563E-01	6.409E-01	9.481E-01	1.193E-01	0.692
	+	77.11		8.339E-01	4.388E-01	5.145E-01	4.383E-02	1.621
	+	87.30		1.951E+01	2.925E+00	8.650E-01	1.173E-01	22.554
	+	238.63	*	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
		300.09		1.796E-01	1.336E+00	1.942E+00	1.608E-01	0.092
PO-212		74.81		6.563E-01	6.409E-01	9.481E-01	1.193E-01	0.692
	+	77.11		8.339E-01	4.388E-01	5.145E-01	4.383E-02	1.621
	+	87.30		1.951E+01	2.925E+00	8.650E-01	1.173E-01	22.554
		115.19		2.278E+00	5.178E+00	7.979E+00	5.188E-01	0.286
	+	238.63	*	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
		300.09		1.796E-01	1.336E+00	1.942E+00	1.608E-01	0.092
PB-214		74.81		1.131E+00	1.102E+00	1.634E+00	1.833E-01	0.692
	+	77.11		1.430E+00	7.601E-01	8.820E-01	1.008E-01	1.621
	+	87.30		3.342E+01	4.537E+00	1.482E+00	1.773E-01	22.554
	+	241.98		1.287E+00	7.823E-01	8.300E-01	6.670E-02	1.551
	+	295.21		1.070E+00	3.803E-01	3.216E-01	2.753E-02	3.328
	+	351.92	*	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
PO-214		74.81		1.131E+00	1.102E+00	1.634E+00	1.833E-01	0.692

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		1.430E+00	7.601E-01	8.820E-01	1.008E-01	1.621
	+	87.30		3.342E+01	4.537E+00	1.482E+00	1.773E-01	22.554
	+	241.98		1.287E+00	7.823E-01	8.300E-01	6.670E-02	1.551
	+	295.21		1.070E+00	3.803E-01	3.216E-01	2.753E-02	3.328
	+	351.92	*	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
PO-216		74.81		6.563E-01	6.409E-01	9.481E-01	1.193E-01	0.692
	+	77.11		8.339E-01	4.388E-01	5.145E-01	4.383E-02	1.621
	+	87.30		1.951E+01	2.925E+00	8.650E-01	1.173E-01	22.554
	+	238.63	*	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
		300.09		1.796E-01	1.336E+00	1.942E+00	1.608E-01	0.092
PO-218		74.81		1.131E+00	1.102E+00	1.634E+00	1.833E-01	0.692
	+	77.11		1.430E+00	7.601E-01	8.820E-01	1.008E-01	1.621
	+	87.30		3.342E+01	4.537E+00	1.482E+00	1.773E-01	22.554
	+	241.98		1.287E+00	7.823E-01	8.300E-01	6.670E-02	1.551
	+	295.21		1.070E+00	3.803E-01	3.216E-01	2.753E-02	3.328
	+	351.92	*	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
RA-224	+	240.98	*	2.441E+00	1.477E+00	1.604E+00	9.225E-02	1.522
AC-228	+	338.32		1.288E+00	9.192E-01	6.058E-01	2.469E-01	2.126
	+	911.07	*	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
	+	969.11		9.976E-01	1.062E+00	8.569E-01	1.949E-01	1.164
RA-228	+	338.32		1.288E+00	9.192E-01	6.058E-01	2.469E-01	2.126
	+	911.07	*	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
	+	969.11		9.976E-01	1.062E+00	8.569E-01	1.949E-01	1.164
TH-228		84.40		4.209E+00	4.260E+00	6.267E+00	8.366E-01	0.672
	+	238.60	*	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
		300.10		1.831E-01	1.341E+00	1.942E+00	1.145E+00	0.094
TH-232	+	338.32		1.288E+00	7.582E-01	6.058E-01	3.483E-02	2.126
	+	911.07	*	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
	+	969.11		9.976E-01	1.062E+00	8.569E-01	1.949E-01	1.164
AM-241	+	59.54	*	1.440E+01	1.508E+00	4.916E-01	4.492E-02	29.303
ANH-511	+	511.00	*	6.299E-02	1.128E-01	8.195E-02	4.538E-03	0.769

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.044E-01	5.708E-01	8.981E-01	5.870E-02	-0.228
NA-22		1274.54	*	-8.165E-03	4.457E-02	7.265E-02	4.657E-03	-0.112
NA-24		1368.53	*	1.171E-05	4.457E-02	Half-Life too short		
AL-26		1129.67		3.656E-02	2.789E+00	4.490E+00	2.633E-01	0.008
		1808.65	*	-1.762E-02	3.594E-02	5.154E-02	2.972E-03	-0.342
K-40		1460.81	*	3.594E-01	5.073E-01	9.317E-01	6.622E-02	0.386
TI-44		67.85		-1.185E-02	6.814E-02	1.096E-01	9.110E-03	-0.108
	+	78.38	*	1.538E-01	8.095E-02	9.555E-02	8.196E-03	1.610
SC-46		889.25	*	2.051E-02	7.184E-02	1.196E-01	8.401E-03	0.172
		1120.51		9.086E-02	9.846E-02	1.672E-01	9.922E-03	0.544
V-48		944.10		-1.530E-01	1.546E+00	2.503E+00	1.740E-01	-0.061
		983.50	*	-7.843E-03	1.093E-01	1.766E-01	1.197E-02	-0.044
		1312.09		4.085E-02	6.003E-02	1.088E-01	7.333E-03	0.375

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CR-51		320.08	*	1.412E-01	4.983E-01	8.266E-01	5.350E-02	0.171
MN-52		744.21		-1.851E-02	1.542E-01	2.528E-01	1.451E-02	-0.073
		848.13		3.818E+00	5.434E+00	9.255E+00	6.156E-01	0.413
		935.52		2.776E-02	2.203E-01	3.614E-01	2.523E-02	0.077
		1246.25		-2.909E-01	2.963E+00	4.899E+00	3.009E-01	-0.059
	+	1333.61		3.535E+02	2.899E+01	3.438E+01	2.382E+00	10.283
		1434.06	*	-8.258E-02	1.022E-01	1.458E-01	9.970E-03	-0.567
MN-54		834.83	*	3.695E-02	6.837E-02	1.157E-01	7.561E-03	0.319
CO-56		846.75	*	3.518E-02	7.580E-02	1.275E-01	8.469E-03	0.276
		977.42		-4.872E-01	7.147E+00	9.964E+00	6.784E-01	-0.049
		1037.82		-5.859E-01	5.767E-01	8.620E-01	6.113E-02	-0.680
		1175.09		2.968E+02	2.074E+01	2.919E+01	1.612E+00	10.170
		1238.25		8.901E-02	8.206E-02	1.518E-01	9.744E-03	0.587
		1360.21		1.815E-01	1.055E+00	1.795E+00	1.241E-01	0.101
		1771.40		-4.033E-01	3.606E-01	4.755E-01	2.816E-02	-0.848
CO-58		810.76	*	-5.083E-02	6.976E-02	1.093E-01	6.940E-03	-0.465
FE-59		142.65		2.319E+00	3.107E+00	5.391E+00	3.064E-01	0.430
		192.34		-5.187E-02	1.178E+00	1.972E+00	2.300E-01	-0.026
		1099.22	*	-1.446E-02	1.710E-01	2.740E-01	1.931E-02	-0.053
		1291.56		7.583E-03	1.169E-01	1.965E-01	1.576E-02	0.039
ZN-65		1115.52	*	-1.136E-01	1.873E-01	2.898E-01	1.735E-02	-0.392
GE-68		1077.35	*	7.092E-01	2.542E+00	4.177E+00	2.608E-01	0.170
AS-73		53.44	*	-1.704E+00	1.842E+00	2.764E+00	2.353E-01	-0.616
AS-74		595.88	*	-3.990E-02	1.028E-01	1.681E-01	8.993E-03	-0.237
		634.78		3.317E-01	4.474E-01	7.775E-01	4.034E-02	0.427
SE-75		66.05		-2.331E+00	6.944E+00	1.111E+01	1.133E+00	-0.210
		96.73		1.573E-01	1.056E+00	1.515E+00	2.006E-01	0.104
	+	121.11		2.171E+00	4.267E-01	4.632E-01	4.389E-02	4.687
	+	136.00		5.628E-02	7.509E-02	9.004E-02	5.304E-03	0.625
		198.60		7.556E-01	2.444E+00	4.100E+00	2.832E-01	0.184
		264.65	*	1.247E-02	6.610E-02	1.101E-01	6.477E-03	0.113
		279.53		1.242E-01	1.577E-01	2.683E-01	1.694E-02	0.463
		303.91		-1.234E+00	3.240E+00	5.231E+00	5.005E-01	-0.236
		400.65		2.191E-01	4.340E-01	7.191E-01	6.381E-02	0.305
BR-77	+	87.88		9.786E+02	1.093E+02	9.915E+01	9.121E+00	9.871
		200.40		-1.078E+01	2.468E+01	4.064E+01	2.252E+00	-0.265
	+	239.00		1.603E+01	2.311E+00	3.940E+00	2.263E-01	4.070
		249.79		8.313E+00	1.132E+01	1.925E+01	1.113E+00	0.432
		281.68		-1.489E+01	1.505E+01	2.373E+01	1.388E+00	-0.628
		297.23		1.779E+01	1.043E+01	1.632E+01	9.548E-01	1.090
		303.76		-4.506E+00	3.025E+01	4.936E+01	2.884E+00	-0.091
		439.47		-6.322E+00	2.984E+01	4.759E+01	2.624E+00	-0.133
		484.57		-2.638E+00	4.443E+01	7.096E+01	3.937E+00	-0.037
		520.65	*	1.020E+00	1.972E+00	3.240E+00	1.791E-01	0.315
		574.64		-7.072E+00	3.571E+01	5.926E+01	3.211E+00	-0.119
		578.91		-3.498E+00	1.614E+01	2.320E+01	1.254E+00	-0.151
		585.48		1.021E+02	3.892E+01	6.532E+01	3.518E+00	1.563
		755.35		-1.147E+01	3.052E+01	4.919E+01	2.870E+00	-0.233
		817.79		-1.611E+00	2.681E+01	4.389E+01	2.800E+00	-0.037

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SR-82		698.33		-2.385E+01	4.328E+01	6.925E+01	3.706E+00	-0.344
		776.49	*	2.392E-01	5.660E-01	9.563E-01	5.754E-02	0.250
		1395.20		2.929E+00	9.773E+00	1.693E+01	1.166E+00	0.173
RB-83		520.41	*	5.707E-02	1.159E-01	1.902E-01	1.052E-02	0.300
		529.64		-1.137E-01	1.702E-01	2.768E-01	1.527E-02	-0.411
		552.65		1.117E-01	3.049E-01	5.228E-01	2.862E-02	0.214
RB-84		881.50	*	5.884E-02	1.233E-01	2.072E-01	1.442E-02	0.284
KR-85		513.99	*	6.157E+00	1.371E+01	1.975E+01	1.093E+00	0.312
SR-85		513.99	*	2.911E-02	6.484E-02	9.336E-02	5.168E-03	0.312
RB-86		1076.63	*	2.050E-01	1.240E+00	2.023E+00	1.264E-01	0.101
Y-88		898.02		5.246E-02	8.613E-02	1.454E-01	1.041E-02	0.361
		1836.01	*	5.930E-02	4.517E-02	8.996E-02	5.092E-03	0.659
ZR-88		392.90	*	7.813E-02	5.081E-02	8.804E-02	4.760E-03	0.887
Y-91		1204.90	*	-1.756E+00	1.999E+01	3.321E+01	1.919E+00	-0.053
NB-94		702.63	*	3.064E-03	5.373E-02	8.944E-02	4.819E-03	0.034
		871.10		-3.061E-02	7.369E-02	1.176E-01	8.070E-03	-0.260
NB-95		765.79	*	-4.655E-02	6.634E-02	1.046E-01	6.199E-03	-0.445
NB-95M		235.69	*	3.040E-02	1.905E-01	2.805E-01	2.097E-02	0.108
ZR-95		724.18		-1.653E-02	1.637E-01	2.331E-01	1.553E-02	-0.071
		756.15	*	-2.249E-02	1.156E-01	1.886E-01	1.333E-02	-0.119
NB-97		657.90	*	4.221E-06	1.156E-01	Half-Life too short		
		1024.50		8.027E-03	1.156E-01	Half-Life too short		
ZR-97		254.15		-2.748E-03	1.156E-01	Half-Life too short		
		355.39		1.013E-03	1.156E-01	Half-Life too short		
		507.63	*	1.194E-03	1.156E-01	Half-Life too short		
		602.52		3.342E-03	1.156E-01	Half-Life too short		
		1021.30		-3.198E-03	1.156E-01	Half-Life too short		
		1147.95		-2.338E-03	1.156E-01	Half-Life too short		
		1362.66		8.449E-04	1.156E-01	Half-Life too short		
		1750.46		9.334E-04	1.156E-01	Half-Life too short		
MO-99		140.51		-4.938E+00	5.770E+00	8.061E+00	2.171E+00	-0.613
		181.06		-2.026E+00	3.882E+00	5.581E+00	9.496E-01	-0.363
		366.43		9.947E-01	2.081E+01	3.394E+01	1.900E+00	0.029
		739.58	*	2.806E-01	2.616E+00	4.358E+00	5.987E-01	0.064
		778.00		9.258E+00	8.790E+00	1.538E+01	9.274E-01	0.602
TC-99M		140.51	*	-2.798E+01	8.790E+00	Half-Life too short		
RH-101		127.23		1.581E-02	4.817E-02	6.895E-02	4.131E-03	0.229
		198.01	*	2.464E-02	4.670E-02	7.891E-02	4.362E-03	0.312
		325.23		-6.339E-02	3.554E-01	5.774E-01	3.347E-02	-0.110
RH-102		418.52		-8.098E-02	4.966E-01	7.953E-01	4.355E-02	-0.102
		475.06	*	3.878E-03	5.847E-02	9.409E-02	5.219E-03	0.041
		631.29		-1.850E-03	9.234E-02	1.540E-01	8.014E-03	-0.012
		697.49		-3.232E-02	1.187E-01	1.936E-01	1.034E-02	-0.167
		766.84		2.255E-02	1.785E-01	2.968E-01	1.761E-02	0.076
		1046.59		3.770E-02	2.354E-01	3.845E-01	2.476E-02	0.098
		1112.84		1.497E-02	4.649E-01	7.498E-01	4.494E-02	0.020
RU-103		497.08	*	1.396E-02	6.626E-02	1.072E-01	1.343E-02	0.130
	+	610.33		5.692E+00	2.253E+00	2.667E+00	4.063E-01	2.134
RH-106	+	511.85		3.101E-01	5.555E-01	5.148E-01	2.850E-02	0.602

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		621.84	*	5.850E-01	5.292E-01	9.315E-01	1.069E-01	0.628
		1050.47		-3.222E+00	4.665E+00	7.175E+00	4.604E-01	-0.449
RU-106	+	511.85		3.101E-01	5.555E-01	5.148E-01	2.850E-02	0.602
		621.84	*	5.850E-01	5.258E-01	9.315E-01	4.889E-02	0.628
		1050.47		-3.222E+00	4.665E+00	7.175E+00	4.604E-01	-0.449
AG-108M		433.93	*	-5.310E-02	6.299E-02	9.717E-02	5.856E-03	-0.547
		614.37		1.551E-02	6.591E-02	9.781E-02	5.689E-03	0.159
		722.95		-1.511E-02	7.839E-02	1.107E-01	6.715E-03	-0.137
AG-110M		657.75	*	-2.627E-02	6.723E-02	9.403E-02	5.168E-03	-0.279
		677.61		8.229E-02	4.998E-01	8.392E-01	4.678E-02	0.098
		706.67		5.773E-02	3.385E-01	5.671E-01	3.284E-02	0.102
		763.93		-1.015E-01	2.724E-01	4.390E-01	2.747E-02	-0.231
		884.67		-4.704E-02	9.833E-02	1.558E-01	1.141E-02	-0.302
		937.48		2.983E-02	2.541E-01	4.165E-01	3.064E-02	0.072
		1384.27		-8.543E-02	1.870E-01	2.899E-01	2.086E-02	-0.295
IN-111		171.28		-2.478E-02	2.002E-01	3.355E-01	1.800E-02	-0.074
		245.39	*	-1.416E-01	2.863E-01	4.062E-01	2.343E-02	-0.349
IN-113M		391.69	*	2.981E-02	7.517E-02	1.241E-01	7.222E-03	0.240
SN-113		391.69	*	2.981E-02	7.517E-02	1.241E-01	7.222E-03	0.240
IN-114M		190.27	*	8.895E-02	2.532E-01	3.806E-01	2.086E-02	0.234
CD-115		260.90		7.213E+00	1.858E+01	3.120E+01	1.815E+00	0.231
		492.35		1.665E+00	5.992E+00	9.740E+00	5.404E-01	0.171
		527.90	*	-3.516E-01	1.663E+00	2.773E+00	1.530E-01	-0.127
SN-117M		156.02		5.498E-01	1.990E+00	3.393E+00	1.859E-01	0.162
		158.56	*	2.460E-03	4.853E-02	8.207E-02	4.466E-03	0.030
SB-122		563.90	*	1.672E-01	4.592E-01	7.865E-01	4.285E-02	0.213
		692.80		-3.130E+00	9.560E+00	1.554E+01	8.244E-01	-0.201
I-123		159.00	*	-7.237E-05	9.560E+00	Half-Life too short		
		528.96		-3.385E-02	9.560E+00	Half-Life too short		
TE-123M		159.00	*	-5.975E-03	3.592E-02	6.028E-02	3.326E-03	-0.099
I-124		602.71	*	1.657E-01	3.263E-01	4.953E-01	2.638E-02	0.334
		722.78		-1.222E+00	2.340E+00	3.204E+00	1.780E-01	-0.382
		1325.50		7.079E-01	1.093E+01	1.589E+01	1.091E+00	0.045
		1376.25		3.319E+00	9.901E+00	1.714E+01	1.183E+00	0.194
		1509.49		4.405E+00	5.026E+00	9.364E+00	6.289E-01	0.470
		1691.02		-5.199E-01	1.268E+00	1.890E+00	1.176E-01	-0.275
SB-124		602.71		3.164E-02	6.232E-02	9.460E-02	5.040E-03	0.334
		645.85		1.235E-02	8.347E-01	1.393E+00	8.302E-02	0.009
		709.31		1.449E+00	4.241E+00	7.097E+00	3.863E-01	0.204
		713.82		-9.703E-01	2.471E+00	3.989E+00	4.002E-01	-0.243
		722.78		-3.385E-01	6.480E-01	8.872E-01	5.182E-02	-0.382
		968.20		4.294E+00	6.451E+00	9.480E+00	6.494E-01	0.453
		1045.16		4.819E+00	4.621E+00	7.961E+00	5.134E-01	0.605
		1325.50		2.093E-01	3.231E+00	4.700E+00	3.226E-01	0.045
		1368.21		5.090E-01	1.682E+00	2.921E+00	3.637E-01	0.174
		1436.60		-3.242E+00	3.870E+00	5.480E+00	3.746E-01	-0.592
		1691.02	*	-3.395E-02	8.278E-02	1.234E-01	8.256E-03	-0.275
SB-125		427.89	*	1.141E-01	1.641E-01	2.738E-01	1.575E-02	0.417
		463.38		2.339E-01	5.377E-01	8.813E-01	5.766E-02	0.265

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		600.56		-3.162E-02	2.735E-01	4.547E-01	2.869E-02	-0.070
		635.90		6.148E-02	4.694E-01	7.889E-01	4.949E-02	0.078
TE-125M		109.28	*	1.589E+01	1.169E+01	1.936E+01	1.726E+00	0.821
I-126		388.63		-2.840E-01	2.391E-01	3.643E-01	1.978E-02	-0.780
		666.33	*	2.030E-01	2.083E-01	3.271E-01	1.664E-02	0.621
		753.82		5.311E-01	1.674E+00	2.819E+00	1.641E-01	0.188
SB-126		223.80		-3.965E+00	3.955E+00	6.332E+00	3.594E-01	-0.626
		278.60		1.876E+00	2.423E+00	4.120E+00	2.408E-01	0.455
	+	296.50		6.924E+00	2.422E+00	2.748E+00	1.607E-01	2.520
		414.70		4.640E-02	8.980E-02	1.487E-01	8.126E-03	0.312
		415.30		1.513E+00	7.363E+00	1.202E+01	6.572E-01	0.126
		555.20		-2.663E+00	4.207E+00	6.818E+00	3.728E-01	-0.391
		573.80		1.539E-01	1.081E+00	1.829E+00	9.916E-02	0.084
		593.00		-8.531E-01	9.549E-01	1.511E+00	8.103E-02	-0.564
		656.30		-2.656E+00	4.268E+00	5.843E+00	2.968E-01	-0.454
		666.33		8.335E-02	8.553E-02	1.343E-01	6.831E-03	0.621
		675.00		-3.943E-01	2.128E+00	3.497E+00	1.804E-01	-0.113
		695.00		7.595E-02	7.788E-02	1.370E-01	7.294E-03	0.554
		697.00		6.697E-02	2.708E-01	4.565E-01	2.438E-02	0.147
		720.50	*	-7.898E-02	1.841E-01	2.543E-01	1.408E-02	-0.311
		856.80		-3.299E-01	6.421E-01	1.021E+00	6.869E-02	-0.323
		989.30		-3.800E-01	1.733E+00	2.772E+00	1.872E-01	-0.137
		1034.80		2.628E+00	1.145E+01	1.881E+01	1.225E+00	0.140
		1213.00		-6.673E-01	3.405E+00	5.592E+00	3.271E-01	-0.119
SB-127		61.10		6.461E+02	7.121E+01	7.987E+01	7.295E+00	8.089
		252.40		-5.767E-01	1.741E+00	2.820E+00	1.158E+00	-0.205
		290.80		-6.929E+00	9.106E+00	1.250E+01	8.509E-01	-0.555
		411.60		4.617E+00	5.616E+00	9.376E+00	1.203E+00	0.492
		444.90		-1.841E+00	4.786E+00	7.557E+00	6.550E-01	-0.244
		473.00		7.469E-01	8.537E-01	1.423E+00	1.303E-01	0.525
		543.00		-6.742E+00	6.898E+00	1.092E+01	1.221E+00	-0.617
		603.60		1.032E+00	5.067E+00	7.501E+00	6.380E-01	0.138
		685.20	*	9.651E-02	5.579E-01	9.367E-01	6.258E-02	0.103
		698.50		-3.657E+00	5.995E+00	9.530E+00	1.229E+00	-0.384
		722.20		-4.341E+00	1.413E+01	1.974E+01	1.294E+00	-0.220
		783.80		9.319E-01	1.545E+00	2.639E+00	2.341E-01	0.353
XE-127		57.60		1.211E+02	1.859E+01	2.704E+01	2.308E+00	4.477
		145.22		-4.661E-01	7.843E-01	1.281E+00	7.231E-02	-0.364
		172.10		-9.512E-02	1.367E-01	2.240E-01	1.203E-02	-0.425
		202.84	*	1.010E-03	5.775E-02	9.663E-02	5.370E-03	0.010
		374.96		1.586E-01	2.888E-01	4.816E-01	2.667E-02	0.329
I-131		80.18		3.074E-01	3.814E+00	5.486E+00	4.764E-01	0.056
		284.30		-1.031E+00	1.231E+00	1.952E+00	1.257E-01	-0.528
		364.48	*	-1.920E-02	1.044E-01	1.685E-01	1.053E-02	-0.114
		636.97		-1.097E+00	1.425E+00	2.271E+00	1.337E-01	-0.483
		722.89		-3.518E+00	6.978E+00	9.571E+00	5.339E-01	-0.368
TE-132		49.72		8.257E+00	8.154E+00	1.364E+01	1.194E+00	0.605
		111.76		-5.125E+00	8.162E+00	1.259E+01	9.390E-01	-0.407
		116.30		2.206E+00	8.531E+00	1.221E+01	8.798E-01	0.181

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		228.16	*	2.171E-01	2.033E-01	3.479E-01	4.564E-02	0.624
BA-133		53.15		-8.185E+00	8.113E+00	1.279E+01	1.088E+00	-0.640
		79.62		1.435E+00	2.058E+00	3.023E+00	4.606E-01	0.475
		81.00		-1.348E-01	1.617E-01	2.212E-01	3.524E-02	-0.609
		276.40		2.235E-01	5.597E-01	9.373E-01	1.217E-01	0.238
		302.84		1.050E-01	2.318E-01	3.875E-01	4.525E-02	0.271
		356.01	*	-2.556E-02	8.420E-02	1.176E-01	1.352E-02	-0.217
		383.85		-5.151E-02	5.252E-01	8.484E-01	9.077E-02	-0.061
I-133	+	510.53		1.345E-03	5.252E-01	Half-Life too short		
		529.87	*	-1.390E-05	5.252E-01	Half-Life too short		
		706.58		-6.565E-05	5.252E-01	Half-Life too short		
		856.28		-5.898E-04	5.252E-01	Half-Life too short		
		875.33		-2.560E-04	5.252E-01	Half-Life too short		
		1236.41		5.311E-05	5.252E-01	Half-Life too short		
		1298.22		1.770E-04	5.252E-01	Half-Life too short		
CS-134		475.35		-4.785E-03	3.794E+00	6.084E+00	3.375E-01	-0.001
		563.23		1.323E-01	5.702E-01	9.700E-01	5.412E-02	0.136
		569.32		-8.733E-02	3.184E-01	5.265E-01	2.957E-02	-0.166
		604.70		5.259E-03	5.919E-02	8.680E-02	4.647E-03	0.061
	+	795.84	*	6.354E-02	1.262E-01	1.467E-01	9.203E-03	0.433
		801.93		1.437E-01	7.676E-01	1.207E+00	7.611E-02	0.119
		1038.57		-6.423E+00	7.714E+00	1.172E+01	7.607E-01	-0.548
		1167.94		-2.175E+00	4.562E+00	6.268E+00	3.479E-01	-0.347
		1365.15		6.122E-01	1.347E+00	2.383E+00	1.762E-01	0.257
CS-135		268.24	*	-1.581E-01	2.428E-01	3.901E-01	2.997E-02	-0.405
I-135		288.45		4.017E+01	2.428E-01	Half-Life too short		
		417.63		1.287E+01	2.428E-01	Half-Life too short		
		546.56		-4.316E+00	2.428E-01	Half-Life too short		
		836.80		8.087E+01	2.428E-01	Half-Life too short		
		1038.76		-1.051E+02	2.428E-01	Half-Life too short		
		1124.00		-1.211E+02	2.428E-01	Half-Life too short		
		1131.51		3.085E-01	2.428E-01	Half-Life too short		
		1260.41	*	-1.196E+01	2.428E-01	Half-Life too short		
		1457.56		-5.471E+01	2.428E-01	Half-Life too short		
		1678.03		1.130E+01	2.428E-01	Half-Life too short		
		1706.46		-1.470E+02	2.428E-01	Half-Life too short		
		1791.20		3.876E+01	2.428E-01	Half-Life too short		
CS-136		66.91		-3.516E-01	7.758E-01	1.233E+00	1.883E-01	-0.285
		86.29		1.526E+01	2.540E+00	2.831E+00	3.725E-01	5.390
		153.22		1.056E-01	5.749E-01	9.778E-01	6.837E-02	0.108
		163.89		4.294E-01	9.885E-01	1.690E+00	1.167E-01	0.254
		176.55		-6.022E-02	3.352E-01	5.601E-01	3.446E-02	-0.108
		273.65		-7.001E-01	4.609E-01	7.087E-01	4.708E-02	-0.988
	+	340.57		4.481E-01	2.640E-01	2.378E-01	1.451E-02	1.884
		818.51		-2.913E-02	9.555E-02	1.540E-01	9.838E-03	-0.189
		1048.07	*	-5.409E-02	1.480E-01	2.332E-01	1.611E-02	-0.232
		1235.34		-2.153E-01	3.666E-01	5.710E-01	5.782E-02	-0.377
CE-139		165.85	*	1.927E-02	3.998E-02	6.845E-02	3.656E-03	0.281
BA-140		162.64		-2.423E-01	6.840E-01	1.140E+00	7.015E-02	-0.213

---- Non-Identified Nuclides ----

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		304.84		4.995E-01	1.357E+00	2.252E+00	6.147E-01	0.222
		423.70		4.232E-01	2.207E+00	3.592E+00	1.140E+00	0.118
		537.32	*	7.318E-02	2.967E-01	5.042E-01	1.637E-01	0.145
LA-140		328.77		2.619E-01	2.946E-01	5.008E-01	3.247E-02	0.523
		432.53		-1.865E+00	2.543E+00	3.944E+00	2.422E-01	-0.473
		487.03		-1.723E-02	1.626E-01	2.589E-01	1.642E-02	-0.067
		751.79		-5.464E-01	1.970E+00	3.197E+00	2.270E-01	-0.171
		815.85		-2.576E-01	4.038E-01	6.358E-01	4.867E-02	-0.405
		867.82		2.092E+00	1.960E+00	3.391E+00	2.509E-01	0.617
		919.63		3.653E+00	4.500E+00	6.763E+00	6.366E-01	0.540
		925.24		-8.648E-01	1.721E+00	2.722E+00	2.089E-01	-0.318
		1596.49	*	-2.910E-02	6.841E-02	1.041E-01	6.786E-03	-0.279
CE-141		145.44	*	-3.866E-02	7.004E-02	1.146E-01	6.735E-03	-0.337
CE-143		57.37		2.710E+02	6.506E+01	9.800E+01	9.480E+00	2.766
		231.56		-7.507E+01	8.359E+01	1.290E+02	3.983E+01	-0.582
		293.26	*	5.366E+00	4.659E+00	6.989E+00	1.428E+00	0.768
	+	350.59		4.275E+02	1.733E+02	1.212E+02	3.674E+01	3.526
		490.36		-3.622E+01	1.056E+02	1.647E+02	5.080E+01	-0.220
		664.57		1.507E+03	4.861E+02	2.219E+02	6.993E+01	6.794
		721.93		-1.466E+01	5.443E+01	7.608E+01	2.159E+01	-0.193
CE-144		80.11		3.701E-01	3.353E+00	4.829E+00	4.186E-01	0.077
		133.54	*	-1.099E-01	3.156E-01	4.335E-01	6.165E-02	-0.254
PM-144		476.78		-6.493E-02	1.332E-01	2.083E-01	1.402E-02	-0.312
		618.01		-1.432E-02	5.024E-02	8.252E-02	4.657E-03	-0.174
		696.49	*	9.801E-03	5.255E-02	8.824E-02	4.710E-03	0.111
		778.57		-4.588E-02	4.136E+00	6.813E+00	4.112E-01	-0.007
PR-144		696.49	*	6.614E-01	3.546E+00	5.955E+00	3.178E-01	0.111
		1489.15		-1.063E+01	1.376E+01	1.958E+01	1.323E+00	-0.543
PM-146		453.90	*	7.127E-02	8.821E-02	1.469E-01	1.240E-02	0.485
		633.02		-1.502E-01	2.394E+00	3.980E+00	1.462E+00	-0.038
		735.90		1.304E-03	2.417E-01	3.999E-01	1.114E-01	0.003
		747.13		-4.994E-02	1.606E-01	2.605E-01	3.253E-02	-0.192
ND-147		91.11		5.642E-01	3.057E-01	3.822E-01	3.599E-02	1.476
		319.41		-1.833E-01	3.330E+00	5.441E+00	3.164E-01	-0.034
		439.89		-7.589E-01	7.003E+00	1.122E+01	6.190E-01	-0.068
		531.02	*	8.381E-02	6.022E-01	1.022E+00	1.369E-01	0.082
PM-149		285.90	*	1.999E+01	1.307E+01	2.239E+01	3.173E+00	0.893
EU-152	+	121.78		1.224E+00	2.319E-01	2.652E-01	2.088E-02	4.616
		244.69		-7.348E-02	5.845E-01	8.466E-01	4.882E-02	-0.087
		344.27	*	1.313E-01	1.873E-01	2.623E-01	1.697E-02	0.501
		443.98		1.109E-01	1.859E+00	3.002E+00	1.658E-01	0.037
		778.89		-1.198E-01	4.769E-01	7.738E-01	4.672E-02	-0.155
		867.32		1.057E+00	1.791E+00	3.027E+00	2.066E-01	0.349
		964.01		4.415E-01	7.304E-01	1.071E+00	7.355E-02	0.412
		1085.78		3.894E-01	8.072E-01	1.343E+00	8.313E-02	0.290
		1112.02		7.352E-02	6.614E-01	1.072E+00	6.433E-02	0.069
		1407.95		-2.462E-02	2.124E-01	3.462E-01	2.379E-02	-0.071
GD-153		69.67		-4.920E-01	2.396E+00	3.846E+00	3.201E-01	-0.128
		83.37		-3.106E+00	2.455E+01	3.482E+01	3.086E+00	-0.089

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		97.43	*	-6.568E-02	1.149E-01	1.586E-01	1.255E-02	-0.414
		103.18		-4.641E-02	1.412E-01	2.223E-01	1.635E-02	-0.209
EU-154	+	123.07		8.587E-01	1.695E-01	1.815E-01	1.742E-02	4.731
		247.94		-3.112E-02	5.834E-01	9.654E-01	9.198E-02	-0.032
		591.81		-4.332E-01	9.943E-01	1.622E+00	1.545E-01	-0.267
		723.30		-5.207E-02	3.279E-01	4.643E-01	3.197E-02	-0.112
		756.87		3.352E-01	1.352E+00	2.265E+00	2.303E-01	0.148
		873.19		-3.237E-01	6.368E-01	1.009E+00	1.119E-01	-0.321
		996.32		1.923E-01	8.012E-01	1.317E+00	2.229E-01	0.146
		1004.76		-3.582E-02	4.246E-01	6.844E-01	7.038E-02	-0.052
		1274.45	*	-2.138E-02	1.252E-01	2.044E-01	1.988E-02	-0.105
EU-155		48.70		-4.488E-01	5.240E+00	8.530E+00	6.712E-01	-0.053
	+	60.01		4.672E+02	4.634E+01	3.730E+01	3.165E+00	12.524
		86.54		3.242E+00	3.748E-01	4.425E-01	4.060E-02	7.327
		105.31	*	-8.985E-02	1.479E-01	2.297E-01	1.678E-02	-0.391
TB-160	+	86.79		1.260E+01	1.408E+00	1.198E+00	1.091E-01	10.523
		197.04		9.164E-02	7.363E-01	1.238E+00	6.837E-02	0.074
		215.65		2.020E-01	1.071E+00	1.671E+00	9.412E-02	0.121
		298.57		-1.579E-01	1.859E-01	2.539E-01	1.485E-02	-0.622
		879.36	*	8.318E-02	2.770E-01	4.588E-01	3.182E-02	0.181
		962.29		5.116E-03	1.197E+00	1.764E+00	1.213E-01	0.003
		966.15		3.493E-01	4.684E-01	6.931E-01	4.754E-02	0.504
		1177.93		9.555E-01	5.378E-01	9.283E-01	5.148E-02	1.029
		1271.85		6.317E-02	6.232E-01	1.055E+00	6.721E-02	0.060
HO-166M		80.57		-3.405E-01	4.470E-01	6.181E-01	5.373E-02	-0.551
		184.41		1.155E-01	5.384E-02	8.670E-02	4.720E-03	1.332
		280.46		-1.172E-02	1.327E-01	2.180E-01	1.275E-02	-0.054
		410.95		3.023E-01	4.402E-01	7.344E-01	4.008E-02	0.412
		711.68	*	-4.323E-02	1.027E-01	1.657E-01	9.054E-03	-0.261
		752.31		-1.573E-01	4.810E-01	7.781E-01	4.519E-02	-0.202
		810.29		-1.930E-02	1.106E-01	1.799E-01	1.136E-02	-0.107
TM-171		51.35		2.280E+01	6.694E+01	1.101E+02	9.221E+00	0.207
		52.39		-1.419E+01	3.530E+01	5.684E+01	4.809E+00	-0.250
	+	59.40		2.446E+03	2.426E+02	2.061E+02	1.753E+01	11.867
		66.72	*	-1.656E+01	4.216E+01	6.730E+01	5.599E+00	-0.246
LU-176	+	88.36		1.000E+01	1.118E+00	1.003E+00	9.177E-02	9.973
		201.83		-2.909E-02	4.098E-02	6.675E-02	3.706E-03	-0.436
		306.84	*	-3.295E-02	4.115E-02	6.511E-02	3.802E-03	-0.506
		401.10		4.906E+00	1.186E+01	1.957E+01	1.063E+00	0.251
LU-177		112.95		-1.101E+00	1.046E+00	1.581E+00	1.050E-01	-0.696
	+	208.36	*	1.168E+00	9.920E-01	1.178E+00	6.583E-02	0.992
LU-177M		52.97		-3.193E+00	3.572E+00	5.658E+00	4.805E-01	-0.564
		54.07		1.850E-01	2.080E+00	3.032E+00	2.586E-01	0.061
		61.30		4.383E+01	5.111E+00	6.837E+00	5.768E-01	6.410
	+	121.62		6.078E+00	1.112E+00	1.318E+00	8.104E-02	4.612
		147.16		2.767E-01	8.079E-01	1.383E+00	7.763E-02	0.200
		171.86		-3.311E-01	6.190E-01	1.021E+00	5.483E-02	-0.324
		218.09		-6.853E-01	1.216E+00	1.984E+00	1.120E-01	-0.345
		268.79		-1.348E-01	1.178E+00	1.937E+00	1.130E-01	-0.070

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		319.02		-9.146E-02	4.144E-01	6.722E-01	3.909E-02	-0.136
		367.43		-8.428E-01	1.513E+00	2.393E+00	1.338E-01	-0.352
		413.65	*	1.325E-02	3.156E-01	5.113E-01	2.793E-02	0.026
HF-181		56.28		2.887E+00	2.118E+00	3.196E+00	2.731E-01	0.903
		57.53		8.927E+00	1.507E+00	2.239E+00	1.910E-01	3.987
		65.20		5.380E-01	1.307E+00	2.045E+00	1.705E-01	0.263
		133.02		-1.150E-02	9.086E-02	1.266E-01	7.421E-03	-0.091
	+	136.25		6.048E-01	8.069E-01	9.709E-01	5.630E-02	0.623
		345.85		-1.375E-01	3.806E-01	4.417E-01	2.525E-02	-0.311
		482.03	*	9.878E-03	7.044E-02	1.134E-01	6.293E-03	0.087
W-181		56.28		1.229E+00	9.000E-01	1.358E+00	1.160E-01	0.905
		57.53		3.777E+00	6.398E-01	9.508E-01	8.113E-02	3.973
		65.20	*	2.269E-01	5.512E-01	8.627E-01	7.191E-02	0.263
TA-182		67.75		-4.129E-02	1.556E-01	2.495E-01	2.074E-02	-0.166
		100.10		2.205E-02	2.270E-01	3.640E-01	2.781E-02	0.061
		152.43		2.104E-01	4.168E-01	7.166E-01	3.964E-02	0.294
		222.10		2.460E-01	4.888E-01	8.289E-01	4.697E-02	0.297
		1001.68		-1.150E+00	3.931E+00	6.318E+00	4.228E-01	-0.182
		1121.28		2.836E-01	2.724E-01	4.657E-01	2.762E-02	0.609
		1189.05		-4.200E-02	3.774E-01	6.267E-01	3.535E-02	-0.067
		1221.42	*	1.170E-01	2.067E-01	3.648E-01	2.161E-02	0.321
		1230.97		-3.518E-01	4.249E-01	6.388E-01	3.837E-02	-0.551
RE-183		57.98		9.281E+00	9.764E-01	1.173E+00	1.001E-01	7.909
	+	59.32		9.356E+00	9.280E-01	7.933E-01	6.751E-02	11.793
		67.20		-1.460E-01	2.761E-01	4.385E-01	3.647E-02	-0.333
		162.32	*	-4.505E-02	1.403E-01	2.341E-01	1.261E-02	-0.192
	+	208.81		2.158E+00	1.832E+00	2.166E+00	1.211E-01	0.996
		291.72		2.139E-01	1.439E+00	2.097E+00	1.227E-01	0.102
RE-184		57.98		3.576E+01	3.762E+00	4.522E+00	3.856E-01	7.909
	+	59.32		3.602E+01	3.573E+00	3.055E+00	2.599E-01	11.793
		67.20		-5.623E-01	1.064E+00	1.689E+00	1.405E-01	-0.333
		161.27		-4.445E-02	4.621E-01	7.771E-01	4.198E-02	-0.057
		216.55		7.102E-02	3.730E-01	6.264E-01	3.531E-02	0.113
		252.85	*	-1.059E-01	3.553E-01	5.816E-01	3.370E-02	-0.182
		318.01		-6.052E-01	7.196E-01	1.133E+00	6.590E-02	-0.534
		792.07		8.669E-02	1.969E+00	2.819E+00	1.735E-01	0.031
		903.28		-1.247E+00	2.138E+00	3.372E+00	2.391E-01	-0.370
		920.93		-2.183E-01	9.773E-01	1.528E+00	1.075E-01	-0.143
OS-185	+	59.72		2.602E+01	2.581E+00	2.135E+00	1.814E-01	12.190
		61.14		6.479E+00	6.898E-01	8.363E-01	7.059E-02	7.747
		69.30		-1.429E-01	4.139E-01	6.613E-01	5.501E-02	-0.216
		592.07		-2.171E+00	3.808E+00	6.161E+00	3.305E-01	-0.352
		646.12	*	-2.832E-03	7.376E-02	1.227E-01	6.298E-03	-0.023
		717.42		4.639E-01	1.431E+00	2.417E+00	1.332E-01	0.192
		874.81		-9.100E-01	1.182E+00	1.841E+00	1.270E-01	-0.494
		880.27		1.246E+00	1.542E+00	2.637E+00	1.831E-01	0.472
RE-188		155.03	*	5.139E-02	2.080E-01	3.544E-01	1.947E-02	0.145
		477.96		-5.131E-01	5.512E+00	8.795E+00	4.879E-01	-0.058
		633.10		-3.684E-01	4.486E+00	7.451E+00	3.872E-01	-0.049

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
W-188		63.58		-4.200E+01	8.223E+01	1.182E+02	9.891E+00	-0.355
		227.08		1.581E+01	1.773E+01	3.042E+01	1.731E+00	0.520
		290.67	*	-8.963E+00	1.169E+01	1.605E+01	9.389E-01	-0.559
IR-192	+	295.96		7.592E-01	2.657E-01	3.045E-01	1.809E-02	2.493
		308.46		5.425E-02	1.479E-01	2.465E-01	1.455E-02	0.220
		316.51	*	1.755E-03	5.326E-02	8.743E-02	5.114E-03	0.020
		468.07		-4.732E-02	1.227E-01	1.931E-01	1.248E-02	-0.245
		604.41		6.765E-02	7.500E-01	1.100E+00	1.222E-01	0.062
		612.46		9.588E-01	1.226E+00	1.887E+00	1.356E-01	0.508
AU-195		65.12		1.136E-01	2.596E-01	4.067E-01	3.390E-02	0.279
		66.83		-5.694E-02	1.359E-01	2.167E-01	1.803E-02	-0.263
		75.70		1.015E+00	3.436E-01	5.274E-01	4.464E-02	1.925
		98.88	*	-2.829E-01	2.950E-01	4.512E-01	3.502E-02	-0.627
		129.76		2.628E+00	3.830E+00	6.221E+00	3.691E-01	0.422
TL-200		367.94	*	-2.860E+00	5.854E+00	9.294E+00	5.193E-01	-0.308
		579.30		-4.909E+00	4.526E+01	6.567E+01	3.550E+00	-0.075
		828.27		-4.640E+01	6.994E+01	1.099E+02	7.117E+00	-0.422
		1205.75		2.680E+00	2.102E+01	3.565E+01	2.063E+00	0.075
TL-201		68.90		-1.646E-01	1.232E+00	1.983E+00	1.649E-01	-0.083
		70.82		-2.369E-01	6.936E-01	1.108E+00	9.234E-02	-0.214
		80.30		-8.778E-01	1.434E+00	1.999E+00	1.734E-01	-0.439
	+	135.34		6.566E+00	8.760E+00	1.040E+01	6.049E-01	0.631
		167.43	*	6.070E-01	1.648E+00	2.811E+00	1.502E-01	0.216
TL-202		68.90		-5.533E-02	4.142E-01	6.666E-01	5.545E-02	-0.083
		70.82		-7.943E-02	2.326E-01	3.714E-01	3.096E-02	-0.214
		80.30		-2.944E-01	4.810E-01	6.703E-01	5.817E-02	-0.439
		439.56	*	-1.943E-02	8.839E-02	1.409E-01	7.770E-03	-0.138
HG-203		70.83		-4.626E-01	1.392E+00	2.223E+00	2.984E-01	-0.208
		72.87		-1.447E-01	9.275E-01	1.325E+00	1.729E-01	-0.109
		82.60		-4.225E-01	1.636E+00	2.314E+00	3.209E-01	-0.183
		279.20	*	4.423E-02	5.560E-02	9.458E-02	5.866E-03	0.468
BI-207		72.80		-7.927E-02	3.046E-01	4.334E-01	3.630E-02	-0.183
		74.97		2.531E-01	1.868E-01	2.799E-01	2.362E-02	0.904
		84.90		3.260E-01	3.167E-01	4.684E-01	4.202E-02	0.696
		569.67		2.022E-03	5.029E-02	8.462E-02	4.597E-03	0.024
		1063.62	*	1.656E-02	1.124E-01	1.831E-01	1.160E-02	0.090
		1770.23		1.546E-01	6.407E-01	9.594E-01	5.686E-02	0.161
TL-207		81.07		-4.145E-01	3.616E-01	4.899E-01	4.273E-02	-0.846
		83.78		1.070E-01	2.111E-01	3.069E-01	2.729E-02	0.349
		94.90		4.008E-01	3.220E-01	4.858E-01	3.987E-02	0.825
	+	122.32		2.918E+01	5.428E+00	6.285E+00	4.388E-01	4.643
		144.24		-1.254E-01	8.954E-01	1.488E+00	1.060E-01	-0.084
		154.21		1.777E-01	5.125E-01	8.762E-01	5.933E-02	0.203
		269.46		1.580E-01	2.822E-01	4.763E-01	2.903E-02	0.332
		323.87	*	-8.459E-01	1.082E+00	1.695E+00	2.799E-01	-0.499
	+	338.28		5.377E+00	3.201E+00	3.085E+00	3.240E-01	1.743
		445.03		-1.378E+00	4.483E+00	7.106E+00	7.188E-01	-0.194
PO-209		260.50		6.748E+00	1.498E+01	2.521E+01	1.466E+00	0.268
		262.80		-3.294E+01	4.243E+01	6.789E+01	3.951E+00	-0.485

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		896.60	*	1.009E+01	1.602E+01	2.709E+01	1.922E+00	0.372
BI-210		46.50	*	-1.153E+01	7.398E+00	1.136E+01	8.996E-01	-1.015
PB-210		46.50	*	-1.153E+01	7.398E+00	1.136E+01	8.996E-01	-1.015
PO-210		46.50	*	-1.153E+01	7.384E+00	1.136E+01	7.798E-01	-1.015
PB-211		404.84	*	-3.102E-01	1.661E+00	2.645E+00	1.648E+00	-0.117
		427.08		3.955E-01	3.755E+00	6.078E+00	3.755E+00	0.065
		831.96		-1.640E+00	2.520E+00	3.613E+00	2.255E+00	-0.454
BI-212	+	727.18	*	5.545E-01	7.499E-01	8.713E-01	6.587E-02	0.636
		785.46		2.134E+00	2.992E+00	5.147E+00	3.137E-01	0.415
		1620.62		5.995E-01	1.512E+00	2.647E+00	1.706E-01	0.226
BI-214	+	609.31	*	6.038E-01	2.251E-01	2.826E-01	2.095E-02	2.137
		768.36		8.276E-01	1.231E+00	2.107E+00	1.773E-01	0.393
		934.06		-2.332E-01	2.612E+00	4.235E+00	3.965E-01	-0.055
		1120.29		6.595E-01	6.111E-01	1.044E+00	9.284E-02	0.632
		1238.11		8.994E-01	8.633E-01	1.589E+00	1.326E-01	0.566
		1377.67		1.644E+00	1.140E+00	2.205E+00	2.064E-01	0.746
	+	1764.49		5.325E-01	4.932E-01	7.631E-01	4.541E-02	0.698
PO-215		81.07		-4.145E-01	3.616E-01	4.899E-01	4.273E-02	-0.846
		83.78		1.070E-01	2.111E-01	3.069E-01	2.729E-02	0.349
		94.90		4.008E-01	3.220E-01	4.858E-01	3.987E-02	0.825
	+	122.32		2.918E+01	5.428E+00	6.285E+00	4.388E-01	4.643
		144.24		-1.254E-01	8.954E-01	1.488E+00	1.060E-01	-0.084
		154.21		1.777E-01	5.125E-01	8.762E-01	5.933E-02	0.203
		269.46		1.580E-01	2.822E-01	4.763E-01	2.903E-02	0.332
		323.87	*	-8.459E-01	1.082E+00	1.695E+00	2.799E-01	-0.499
	+	338.28		5.377E+00	3.201E+00	3.085E+00	3.240E-01	1.743
		445.03		-1.378E+00	4.483E+00	7.106E+00	7.188E-01	-0.194
RN-219		271.23		2.170E-01	3.607E-01	6.095E-01	4.955E-02	0.356
		401.81	*	3.744E-03	7.354E-01	1.191E+00	1.602E-01	0.003
RN-220		549.76	*	1.924E+00	4.322E+01	7.289E+01	3.995E+00	0.026
RA-223		81.07		-4.145E-01	3.616E-01	4.899E-01	4.273E-02	-0.846
		83.78		1.070E-01	2.111E-01	3.069E-01	2.729E-02	0.349
		94.90		4.008E-01	3.220E-01	4.858E-01	3.987E-02	0.825
	+	122.32		2.918E+01	5.428E+00	6.285E+00	4.388E-01	4.643
		144.24		-1.254E-01	8.954E-01	1.488E+00	1.060E-01	-0.084
		154.21		1.777E-01	5.125E-01	8.762E-01	5.933E-02	0.203
		269.46		1.580E-01	2.822E-01	4.763E-01	2.903E-02	0.332
		323.87	*	-8.459E-01	1.082E+00	1.695E+00	2.799E-01	-0.499
	+	338.28		5.377E+00	3.201E+00	3.085E+00	3.240E-01	1.743
		445.03		-1.378E+00	4.483E+00	7.106E+00	7.188E-01	-0.194
RA-226	+	609.31	*	6.038E-01	2.251E-01	2.826E-01	2.095E-02	2.137
		768.36		8.276E-01	1.231E+00	2.107E+00	1.773E-01	0.393
		934.06		-2.332E-01	2.612E+00	4.235E+00	3.965E-01	-0.055
		1120.29		6.595E-01	6.111E-01	1.044E+00	9.284E-02	0.632
		1238.11		8.994E-01	8.633E-01	1.589E+00	1.326E-01	0.566
		1377.67		1.644E+00	1.140E+00	2.205E+00	2.064E-01	0.746
	+	1764.49		5.325E-01	4.932E-01	7.631E-01	4.541E-02	0.698
AC-227		79.80		5.173E-01	2.657E+00	3.838E+00	8.258E-01	0.135
		236.00		1.042E-01	3.840E-01	5.683E-01	5.919E-02	0.183

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		256.20	*	-1.188E-01	5.927E-01	9.730E-01	1.359E-01	-0.122
		286.10		3.121E+00	2.431E+00	4.174E+00	4.836E-01	0.748
		299.80		-2.357E-01	2.490E+00	3.568E+00	5.817E-01	-0.066
		304.40		1.565E-02	3.004E+00	4.935E+00	8.543E-01	0.003
		334.20		8.610E-01	3.989E+00	5.789E+00	1.061E+00	0.149
TH-227		79.80		5.173E-01	2.657E+00	3.838E+00	8.364E-01	0.135
	+	94.00		4.593E+00	3.808E+00	4.451E+00	9.641E-01	1.032
		236.00		1.042E-01	3.840E-01	5.683E-01	5.122E-02	0.183
		256.20	*	-1.188E-01	5.928E-01	9.730E-01	1.645E-01	-0.122
		286.10		3.121E+00	3.943E+00	4.174E+00	4.182E+00	0.748
		299.80		-2.357E-01	2.490E+00	3.568E+00	5.817E-01	-0.066
		304.40		1.565E-02	3.004E+00	4.935E+00	8.543E-01	0.003
		334.20		8.610E-01	3.989E+00	5.789E+00	1.061E+00	0.149
TH-229		85.43		6.201E-01	3.309E-01	4.984E-01	4.491E-02	1.244
	+	88.47		5.759E+00	6.435E-01	5.757E-01	5.255E-02	10.005
		100.00		-9.023E-02	2.513E-01	3.951E-01	3.022E-02	-0.228
		193.63	*	-2.551E-01	7.166E-01	1.185E+00	6.520E-02	-0.215
	+	210.97		1.824E+00	1.549E+00	1.763E+00	9.880E-02	1.035
TH-230	+	609.31	*	6.038E-01	2.251E-01	2.826E-01	2.095E-02	2.137
		768.36		8.276E-01	1.231E+00	2.107E+00	1.773E-01	0.393
		934.06		-2.332E-01	2.612E+00	4.235E+00	3.965E-01	-0.055
		1120.29		6.595E-01	6.111E-01	1.044E+00	9.284E-02	0.632
		1238.11		8.994E-01	8.633E-01	1.589E+00	1.326E-01	0.566
		1377.67		1.644E+00	1.140E+00	2.205E+00	2.064E-01	0.746
	+	1764.49		5.325E-01	4.932E-01	7.631E-01	4.541E-02	0.698
PA-231		283.67	*	-1.155E+00	2.422E+00	3.902E+00	5.385E-01	-0.296
		301.29		4.115E-01	9.969E-01	1.470E+00	1.541E-01	0.280
TH-231		81.07		-4.145E-01	3.616E-01	4.899E-01	4.273E-02	-0.846
		83.78		1.070E-01	2.111E-01	3.069E-01	2.729E-02	0.349
		94.90		4.008E-01	3.220E-01	4.858E-01	3.987E-02	0.825
	+	122.32		2.918E+01	5.428E+00	6.285E+00	4.388E-01	4.643
		144.24		-1.254E-01	8.954E-01	1.488E+00	1.060E-01	-0.084
		154.21		1.777E-01	5.125E-01	8.762E-01	5.933E-02	0.203
		269.46		1.580E-01	2.822E-01	4.763E-01	2.903E-02	0.332
		323.87	*	-8.459E-01	1.082E+00	1.695E+00	2.799E-01	-0.499
	+	338.28		5.377E+00	3.201E+00	3.085E+00	3.240E-01	1.743
		445.03		-1.378E+00	4.483E+00	7.106E+00	7.188E-01	-0.194
U-231		84.21		2.429E+00	2.510E+00	3.708E+00	3.308E-01	0.655
	+	92.29		1.271E+00	1.022E+00	1.314E+00	1.123E-01	0.967
		95.87	*	3.341E-01	4.240E-01	6.280E-01	5.081E-02	0.532
		108.00		-7.495E-01	8.207E-01	1.250E+00	8.719E-02	-0.600
PA-233		75.28		9.749E+00	5.714E+00	8.420E+00	1.284E+00	1.158
	+	86.59		8.258E+01	2.291E+01	7.371E+00	1.988E+00	11.204
		300.12		9.825E-02	6.909E-01	1.004E+00	1.351E-01	0.098
		311.98	*	-5.482E-02	1.074E-01	1.721E-01	1.065E-02	-0.319
	+	340.50		3.262E+00	2.053E+00	1.750E+00	4.017E-01	1.864
		398.62		3.372E-01	3.742E+00	6.086E+00	1.569E+00	0.055
		415.76		-3.006E-01	2.994E+00	4.813E+00	9.866E-01	-0.062
PA-234		63.00		-3.024E+00	2.704E+00	3.726E+00	5.728E-01	-0.811

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.67		2.848E-01	2.371E-01	3.547E-01	4.305E-02	0.803
		98.44		-7.837E-02	1.356E-01	1.897E-01	1.056E-01	-0.413
		99.86		-2.381E-01	6.360E-01	9.994E-01	7.658E-02	-0.238
		111.00		5.313E-04	2.600E-01	4.139E-01	4.488E-02	0.001
		131.20		-3.217E-02	1.693E-01	2.352E-01	1.388E-02	-0.137
		152.70		2.882E-01	4.262E-01	7.330E-01	1.152E-01	0.393
	+	186.00		2.585E+00	2.848E+00	3.270E+00	9.970E-01	0.791
		226.40		3.315E-01	6.036E-01	1.023E+00	1.177E-01	0.324
		227.20		5.679E-01	6.465E-01	1.109E+00	6.311E-02	0.512
		248.90		9.682E-01	1.335E+00	2.246E+00	4.826E-01	0.431
	+	293.70		5.137E+00	1.955E+00	1.875E+00	3.019E-01	2.739
		369.80		-1.054E-01	1.476E+00	2.392E+00	4.967E-01	-0.044
		568.70		-5.053E-01	1.616E+00	2.666E+00	1.449E-01	-0.190
		569.50		-7.440E-02	4.465E-01	7.428E-01	4.036E-02	-0.100
		574.00		3.113E-01	2.388E+00	4.036E+00	2.188E-01	0.077
		699.00		-6.236E-01	1.125E+00	1.791E+00	3.195E-01	-0.348
		706.10		2.580E-02	1.742E+00	2.892E+00	1.275E+00	0.009
		733.00		-1.577E-01	6.991E-01	1.030E+00	2.186E-01	-0.153
		742.81		-8.929E-01	2.338E+00	3.638E+00	2.434E+00	-0.245
	+	796.30		1.244E+00	2.491E+00	2.888E+00	7.618E-01	0.431
		805.60		2.169E+00	1.983E+00	3.292E+00	9.900E-01	0.659
		819.60		-8.113E-01	2.472E+00	3.949E+00	1.484E+00	-0.205
		826.30		-2.998E-01	1.632E+00	2.641E+00	1.172E+00	-0.114
		831.60		-9.265E-01	1.218E+00	1.854E+00	5.433E-01	-0.500
		876.40		-7.303E-03	1.754E+00	2.868E+00	2.945E+00	-0.003
		880.51		5.394E-01	5.857E-01	1.008E+00	7.002E-02	0.535
		883.24		-4.596E-02	5.983E-01	9.725E-01	6.518E-01	-0.047
		899.00		5.619E-01	1.864E+00	3.071E+00	1.334E+00	0.183
		925.00		-7.900E-01	2.720E+00	4.359E+00	3.061E-01	-0.181
		926.50		3.942E-01	4.077E-01	6.811E-01	1.687E-01	0.579
		946.00	*	-2.053E-01	7.149E-01	1.144E+00	2.065E-01	-0.180
		949.00		1.269E-01	1.048E+00	1.717E+00	1.190E-01	0.074
		980.50		9.991E-01	1.631E+00	2.742E+00	1.863E-01	0.364
		1394.10		-4.118E-01	1.300E+00	2.000E+00	1.298E+00	-0.206
PA-234M		766.41		-1.809E+01	3.234E+01	4.640E+01	3.546E+01	-0.390
		1001.03	*	-8.881E-01	1.359E+01	2.216E+01	2.165E+00	-0.040
TH-234		63.29	*	-1.680E+00	2.242E+00	3.163E+00	5.653E-01	-0.531
	+	92.38		1.189E+00	9.749E-01	1.226E+00	2.212E-01	0.970
U-234	+	609.31	*	6.038E-01	2.251E-01	2.826E-01	2.095E-02	2.137
		768.36		8.276E-01	1.231E+00	2.107E+00	1.773E-01	0.393
		934.06		-2.332E-01	2.612E+00	4.235E+00	3.965E-01	-0.055
		1120.29		6.595E-01	6.111E-01	1.044E+00	9.284E-02	0.632
		1238.11		8.994E-01	8.633E-01	1.589E+00	1.326E-01	0.566
		1377.67		1.644E+00	1.140E+00	2.205E+00	2.064E-01	0.746
	+	1764.49		5.325E-01	4.932E-01	7.631E-01	4.541E-02	0.698
U-235		89.95		1.705E+01	5.735E+00	3.572E+00	1.105E+00	4.772
	+	93.35		1.429E+00	1.211E+00	1.469E+00	4.106E-01	0.973
		105.00		-2.912E-01	1.441E+00	2.276E+00	6.705E-01	-0.128
		143.76	*	4.765E-02	2.763E-01	4.641E-01	7.545E-02	0.103

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		163.35		-1.304E-01	6.507E-01	1.089E+00	1.944E-01	-0.120
	+	185.71		9.573E-02	1.015E-01	1.204E-01	6.565E-03	0.795
		205.31		4.596E-01	8.181E-01	1.232E+00	2.206E-01	0.373
NP-236		94.67		2.174E-01	1.789E-01	2.692E-01	2.217E-02	0.808
		98.44		-5.920E-02	9.714E-02	1.434E-01	1.119E-02	-0.413
		111.00		4.019E-04	1.967E-01	3.131E-01	2.118E-02	0.001
		160.31	*	-3.415E-02	1.071E-01	1.787E-01	9.682E-03	-0.191
NP-237		86.50	*	7.171E+00	1.712E+00	1.063E+00	2.397E-01	6.746
		95.87		1.052E+00	1.358E+00	1.978E+00	4.838E-01	0.532
U-238		63.29	*	-1.680E+00	2.242E+00	3.163E+00	5.653E-01	-0.531
	+	92.38		1.189E+00	9.564E-01	1.226E+00	1.046E-01	0.970
NP-239		99.55		-7.294E-02	2.106E-01	3.313E-01	2.549E-02	-0.220
		117.00	*	-3.272E-03	3.010E-01	4.245E-01	2.716E-02	-0.008
	+	209.75		1.838E+00	1.560E+00	1.839E+00	1.030E-01	0.999
		228.18		3.656E-01	3.400E-01	5.867E-01	3.342E-02	0.623
		277.60		7.258E-02	2.797E-01	4.662E-01	2.725E-02	0.156
		334.30		6.541E-01	2.266E+00	3.305E+00	1.906E-01	0.198
AM-243		74.67	*	8.943E-02	1.033E-01	1.528E-01	1.287E-02	0.585
	+	86.72		4.645E+02	5.190E+01	4.366E+01	3.976E+00	10.639
		117.66		-4.349E+00	6.209E+00	8.421E+00	5.356E-01	-0.516
		142.18		1.327E+01	2.240E+01	3.871E+01	2.204E+00	0.343
CM-243		99.55		-7.502E-02	2.166E-01	3.408E-01	2.622E-02	-0.220
		103.76	*	4.435E-02	1.305E-01	2.109E-01	1.541E-02	0.210
		117.00		-3.365E-03	3.095E-01	4.365E-01	2.793E-02	-0.008
	+	209.75		1.811E+00	1.537E+00	1.812E+00	1.014E-01	0.999
		228.18		3.692E-01	3.434E-01	5.925E-01	3.375E-02	0.623
		277.60		7.313E-02	2.819E-01	4.698E-01	2.746E-02	0.156
CM-247		278.00		4.833E-01	1.144E+00	1.919E+00	1.122E-01	0.252
		287.40		-4.229E-02	1.946E+00	3.201E+00	1.873E-01	-0.013
		402.60	*	-3.222E-02	6.645E-02	1.050E-01	5.707E-03	-0.307
CF-249		252.85		-4.101E-01	1.376E+00	2.252E+00	1.305E-01	-0.182
		333.44		-2.570E-01	3.025E-01	4.078E-01	2.353E-02	-0.630
		387.95	*	-8.495E-02	7.055E-02	1.074E-01	5.837E-03	-0.791
CF-251		176.60	*	4.099E-02	1.716E-01	2.909E-01	1.570E-02	0.141
		227.00		5.177E-01	5.748E-01	9.865E-01	5.614E-02	0.525
		285.00		2.312E+00	2.743E+00	4.674E+00	2.734E-01	0.495

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871428    *
* Acquisition date :  7-JUL-2009 10:00:37 Detector SN#    :                 *
* Detector ID        : GAM01              Sensitivity     : 5.000          *
* Geometry           : CAN                Energy tolerance: 1.500          *
* Elapsed live time:    0 01:30:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 01:30:01.87     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 30-JUN-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201871428          Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.5544E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	4.139E-01	7.423E-02	5.826E-02	0.000E+00
CO-60	7.138E+00	5.736E-01	7.650E-02	0.000E+00
CD-109	4.243E+01	4.646E+00	2.025E+00	0.000E+00
SN-126	4.218E+00	4.619E-01	2.024E-01	0.000E+00
BA-137M	5.402E+00	3.423E-01	9.627E-02	0.000E+00
CS-137	5.710E+00	3.631E-01	1.018E-01	0.000E+00
TL-208	3.558E-01	1.120E-01	1.014E-01	0.000E+00
BI-211	2.629E+00	7.125E-01	5.550E-01	0.000E+00
PB-212	9.460E-01	1.400E-01	1.579E-01	0.000E+00
PO-212	9.460E-01	1.400E-01	1.579E-01	0.000E+00
PB-214	9.145E-01	2.522E-01	1.935E-01	0.000E+00
PO-214	9.145E-01	2.522E-01	1.935E-01	0.000E+00
PO-216	9.460E-01	1.400E-01	1.579E-01	0.000E+00
PO-218	9.145E-01	2.522E-01	1.935E-01	0.000E+00
RA-224	2.441E+00	1.448E+00	1.698E+00	0.000E+00
AC-228	1.236E+00	5.056E-01	4.764E-01	0.000E+00
RA-228	1.236E+00	5.056E-01	4.764E-01	0.000E+00
TH-228	9.460E-01	1.400E-01	1.579E-01	0.000E+00
TH-232	1.236E+00	5.056E-01	4.764E-01	0.000E+00
AM-241	1.440E+01	1.478E+00	5.388E-01	0.000E+00
ANH-511	6.299E-02	1.106E-01	8.507E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-2.044E-01	5.594E-01	9.340E-01	0.000E+00	NOT IDENT.
NA-22	-8.165E-03	4.368E-02	7.355E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.487E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.762E-02	3.522E-02	5.167E-02	0.000E+00	NOT IDENT.
K-40	3.594E-01	4.971E-01	9.397E-01	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.933E-02	1.040E-01	0.000E+00	FAIL ABUN

SC-46	2.051E-02	7.041E-02	1.223E-01	0.000E+00	NOT IDENT.
V-48	-7.843E-03	1.071E-01	1.801E-01	0.000E+00	NOT IDENT.
CR-51	1.412E-01	4.883E-01	8.687E-01	0.000E+00	NOT IDENT.
MN-52	-8.258E-02	1.001E-01	1.471E-01	0.000E+00	FAIL ABUN
MN-54	3.695E-02	6.700E-02	1.186E-01	0.000E+00	NOT IDENT.
CO-56	3.518E-02	7.429E-02	1.306E-01	0.000E+00	NOT IDENT.
CO-58	-5.083E-02	6.836E-02	1.121E-01	0.000E+00	NOT IDENT.
FE-59	-1.446E-02	1.676E-01	2.786E-01	0.000E+00	NOT IDENT.
ZN-65	-1.136E-01	1.836E-01	2.945E-01	0.000E+00	NOT IDENT.
GE-68	7.092E-01	2.492E+00	4.249E+00	0.000E+00	NOT IDENT.
AS-73	-1.704E+00	1.805E+00	3.038E+00	0.000E+00	NOT IDENT.
AS-74	-3.990E-02	1.008E-01	1.737E-01	0.000E+00	NOT IDENT.
SE-75	1.247E-02	6.477E-02	1.163E-01	0.000E+00	FAIL ABUN
BR-77	1.020E+00	1.932E+00	3.362E+00	0.000E+00	FAIL ABUN
SR-82	2.392E-01	5.547E-01	9.815E-01	0.000E+00	NOT IDENT.
RB-83	5.707E-02	1.136E-01	1.974E-01	0.000E+00	NOT IDENT.
RB-84	5.884E-02	1.208E-01	2.120E-01	0.000E+00	NOT IDENT.
KR-85	6.157E+00	1.344E+01	2.050E+01	0.000E+00	NOT IDENT.
SR-85	2.911E-02	6.354E-02	9.690E-02	0.000E+00	NOT IDENT.
RB-86	2.050E-01	1.215E+00	2.058E+00	0.000E+00	NOT IDENT.
Y-88	5.930E-02	4.427E-02	9.014E-02	0.000E+00	NOT IDENT.
ZR-88	7.813E-02	4.980E-02	9.203E-02	0.000E+00	NOT IDENT.
Y-91	-1.756E+00	1.959E+01	3.368E+01	0.000E+00	NOT IDENT.
NB-94	3.064E-03	5.266E-02	9.206E-02	0.000E+00	NOT IDENT.
NB-95	-4.655E-02	6.501E-02	1.074E-01	0.000E+00	NOT IDENT.
NB-95M	3.040E-02	1.867E-01	2.971E-01	0.000E+00	NOT IDENT.
ZR-95	-2.249E-02	1.133E-01	1.938E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.329E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.670E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.806E-01	2.564E+00	4.479E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.145E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.464E-02	4.576E-02	8.396E-02	0.000E+00	NOT IDENT.
RH-102	3.878E-03	5.730E-02	9.786E-02	0.000E+00	NOT IDENT.
RU-103	1.396E-02	6.494E-02	1.114E-01	0.000E+00	FAIL ABUN
RH-106	5.850E-01	5.186E-01	9.619E-01	0.000E+00	FAIL ABUN
RU-106	5.850E-01	5.153E-01	9.619E-01	0.000E+00	FAIL ABUN
AG-108M	-5.310E-02	6.173E-02	1.013E-01	0.000E+00	NOT IDENT.
AG-110M	-2.627E-02	6.588E-02	9.695E-02	0.000E+00	NOT IDENT.
IN-111	-1.416E-01	2.806E-01	4.298E-01	0.000E+00	NOT IDENT.
IN-113M	2.981E-02	7.366E-02	1.298E-01	0.000E+00	NOT IDENT.
SN-113	2.981E-02	7.366E-02	1.298E-01	0.000E+00	NOT IDENT.
IN-114M	8.895E-02	2.482E-01	4.054E-01	0.000E+00	NOT IDENT.
CD-115	-3.516E-01	1.630E+00	2.876E+00	0.000E+00	NOT IDENT.
SN-117M	2.460E-03	4.756E-02	8.782E-02	0.000E+00	NOT IDENT.
SB-122	1.672E-01	4.500E-01	8.143E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.264E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-5.975E-03	3.520E-02	6.450E-02	0.000E+00	NOT IDENT.
I-124	1.657E-01	3.198E-01	5.119E-01	0.000E+00	NOT IDENT.
SB-124	-3.395E-02	8.113E-02	1.240E-01	0.000E+00	NOT IDENT.
SB-125	1.141E-01	1.608E-01	2.856E-01	0.000E+00	NOT IDENT.
TE-125M	1.589E+01	1.145E+01	2.091E+01	0.000E+00	NOT IDENT.
I-126	2.030E-01	2.042E-01	3.371E-01	0.000E+00	NOT IDENT.
SB-126	-7.898E-02	1.804E-01	2.616E-01	0.000E+00	FAIL ABUN
SB-127	9.651E-02	5.468E-01	9.647E-01	0.000E+00	NOT IDENT.
XE-127	1.010E-03	5.659E-02	1.028E-01	0.000E+00	NOT IDENT.
I-131	-1.920E-02	1.023E-01	1.765E-01	0.000E+00	NOT IDENT.
TE-132	2.171E-01	1.992E-01	3.688E-01	0.000E+00	NOT IDENT.
BA-133	-2.556E-02	8.252E-02	1.233E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.148E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.354E-02	1.237E-01	1.505E-01	0.000E+00	FAIL ABUN
CS-135	-1.581E-01	2.380E-01	4.119E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.170E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.409E-02	1.450E-01	2.374E-01	0.000E+00	FAIL ABUN
CE-139	1.927E-02	3.918E-02	7.316E-02	0.000E+00	NOT IDENT.
BA-140	7.318E-02	2.907E-01	5.227E-01	0.000E+00	NOT IDENT.
LA-140	-2.910E-02	6.704E-02	1.048E-01	0.000E+00	NOT IDENT.
CE-141	-3.866E-02	6.864E-02	1.229E-01	0.000E+00	NOT IDENT.
CE-143	5.366E+00	4.566E+00	7.362E+00	0.000E+00	FAIL ABUN
CE-144	-1.099E-01	3.093E-01	4.659E-01	0.000E+00	NOT IDENT.
PM-144	9.801E-03	5.150E-02	9.084E-02	0.000E+00	NOT IDENT.
PR-144	6.614E-01	3.475E+00	6.131E+00	0.000E+00	NOT IDENT.
PM-146	7.127E-02	8.645E-02	1.530E-01	0.000E+00	NOT IDENT.
ND-147	8.381E-02	5.902E-01	1.060E+00	0.000E+00	NOT IDENT.
PM-149	1.999E+01	1.281E+01	2.360E+01	0.000E+00	NOT IDENT.
EU-152	1.313E-01	1.835E-01	2.751E-01	0.000E+00	FAIL ABUN
GD-153	-6.568E-02	1.126E-01	1.717E-01	0.000E+00	NOT IDENT.
EU-154	-2.138E-02	1.227E-01	2.069E-01	0.000E+00	FAIL ABUN
EU-155	-8.985E-02	1.449E-01	2.483E-01	0.000E+00	FAIL ABUN

TB-160	8.318E-02	2.715E-01	4.693E-01	0.000E+00	FAIL ABUN
HO-166M	-4.323E-02	1.006E-01	1.705E-01	0.000E+00	NOT IDENT.
TM-171	-1.656E+01	4.132E+01	7.357E+01	0.000E+00	FAIL ABUN
LU-176	-3.295E-02	4.032E-02	6.850E-02	0.000E+00	FAIL ABUN
LU-177	1.168E+00	9.722E-01	1.251E+00	0.000E+00	FAIL ABUN
LU-177M	1.325E-02	3.093E-01	5.337E-01	0.000E+00	FAIL ABUN
HF-181	9.878E-03	6.903E-02	1.179E-01	0.000E+00	FAIL ABUN
W-181	2.269E-01	5.402E-01	9.435E-01	0.000E+00	NOT IDENT.
TA-182	1.170E-01	2.026E-01	3.698E-01	0.000E+00	NOT IDENT.
RE-183	-4.505E-02	1.375E-01	2.503E-01	0.000E+00	FAIL ABUN
RE-184	-1.059E-01	3.482E-01	6.150E-01	0.000E+00	FAIL ABUN
OS-185	-2.832E-03	7.229E-02	1.266E-01	0.000E+00	FAIL ABUN
RE-188	5.139E-02	2.038E-01	3.794E-01	0.000E+00	NOT IDENT.
W-188	-8.963E+00	1.146E+01	1.691E+01	0.000E+00	NOT IDENT.
IR-192	1.755E-03	5.220E-02	9.191E-02	0.000E+00	FAIL ABUN
AU-195	-2.829E-01	2.891E-01	4.885E-01	0.000E+00	NOT IDENT.
TL-200	-2.860E+00	5.737E+00	9.732E+00	0.000E+00	NOT IDENT.
TL-201	6.070E-01	1.615E+00	3.004E+00	0.000E+00	FAIL ABUN
TL-202	-1.943E-02	8.662E-02	1.468E-01	0.000E+00	NOT IDENT.
HG-203	4.423E-02	5.449E-02	9.975E-02	0.000E+00	NOT IDENT.
BI-207	1.656E-02	1.101E-01	1.864E-01	0.000E+00	NOT IDENT.
TL-207	-8.459E-01	1.060E+00	1.780E+00	0.000E+00	FAIL ABUN
PO-209	1.009E+01	1.570E+01	2.770E+01	0.000E+00	NOT IDENT.
BI-210	-1.153E+01	7.250E+00	1.252E+01	0.000E+00	NOT IDENT.
PB-210	-1.153E+01	7.250E+00	1.252E+01	0.000E+00	NOT IDENT.
PO-210	-1.153E+01	7.236E+00	1.252E+01	0.000E+00	NOT IDENT.
PB-211	-3.102E-01	1.628E+00	2.763E+00	0.000E+00	NOT IDENT.
BI-212	5.545E-01	7.349E-01	8.959E-01	0.000E+00	FAIL ABUN
BI-214	0.000E+00	2.206E-01	2.920E-01	0.000E+00	FAIL ABUN
PO-215	-8.459E-01	1.060E+00	1.780E+00	0.000E+00	FAIL ABUN
RN-219	3.744E-03	7.207E-01	1.244E+00	0.000E+00	NOT IDENT.
RN-220	1.924E+00	4.236E+01	7.551E+01	0.000E+00	NOT IDENT.
RA-223	-8.459E-01	1.060E+00	1.780E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	2.206E-01	2.920E-01	0.000E+00	FAIL ABUN
AC-227	-1.188E-01	5.809E-01	1.029E+00	0.000E+00	NOT IDENT.
TH-227	-1.188E-01	5.810E-01	1.029E+00	0.000E+00	FAIL ABUN
TH-229	-2.551E-01	7.023E-01	1.262E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.206E-01	2.920E-01	0.000E+00	FAIL ABUN
PA-231	-1.155E+00	2.374E+00	4.113E+00	0.000E+00	NOT IDENT.
TH-231	-8.459E-01	1.060E+00	1.780E+00	0.000E+00	FAIL ABUN
U-231	3.341E-01	4.155E-01	6.804E-01	0.000E+00	FAIL ABUN
PA-233	-5.482E-02	1.052E-01	1.810E-01	0.000E+00	FAIL ABUN
PA-234	-2.053E-01	7.006E-01	1.167E+00	0.000E+00	FAIL ABUN
PA-234M	-8.881E-01	1.331E+01	2.258E+01	0.000E+00	NOT IDENT.
TH-234	-1.680E+00	2.198E+00	3.462E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	2.206E-01	2.920E-01	0.000E+00	FAIL ABUN
U-235	4.765E-02	2.708E-01	4.978E-01	0.000E+00	FAIL ABUN
NP-236	-3.415E-02	1.050E-01	1.912E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	1.677E+00	1.155E+00	0.000E+00	NOT IDENT.
U-238	-1.680E+00	2.198E+00	3.462E+00	0.000E+00	FAIL ABUN
NP-239	-3.272E-03	2.949E-01	4.577E-01	0.000E+00	FAIL ABUN
AM-243	8.943E-02	1.012E-01	1.665E-01	0.000E+00	FAIL ABUN
CM-243	4.435E-02	1.278E-01	2.281E-01	0.000E+00	FAIL ABUN
CM-247	-3.222E-02	6.512E-02	1.097E-01	0.000E+00	NOT IDENT.
CF-249	-8.495E-02	6.914E-02	1.123E-01	0.000E+00	NOT IDENT.
CF-251	4.099E-02	1.681E-01	3.104E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:31:10.23

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871428.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:00:37.
Sample ID         : G1201871428          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM01                Detector geometry: CAN
Elapsed live time: 0 01:30:00.00         Elapsed real time: 0 01:30:01.87  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	657	85.51*	6.096E+00	4.061E-01	4.139E-01	18.30
	136.48	60	10.60	6.019E+00	3.011E-01	3.069E-01	133.46
CO-60	1173.22	2414	100.00	1.168E+00	6.657E+00	6.675E+00	7.26
	1332.49	2305	100.00*	1.042E+00	7.119E+00	7.138E+00	8.20
CD-109	88.03	2518	3.72*	5.194E+00	4.196E+01	4.243E+01	11.17
SN-126	64.28	------	9.60	2.844E+00	------ Line Not Found		------
	86.94	2518	8.90	5.194E+00	1.754E+01	1.754E+01	41.96
	87.57	2518	37.00*	5.194E+00	4.218E+00	4.218E+00	11.17
BA-137M	661.65	2954	89.98*	1.958E+00	5.399E+00	5.402E+00	6.47
CS-137	661.65	2954	85.12*	1.958E+00	5.707E+00	5.710E+00	6.49
TL-208	277.35	------	6.80	3.972E+00	------ Line Not Found		------
	510.84	48	21.60	2.438E+00	2.916E-01	2.916E-01	179.34
	583.14	203	84.20*	2.181E+00	3.558E-01	3.558E-01	32.11
	860.37	------	12.46	1.552E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.875E+00	------ Line Not Found		------
	351.07	348	12.94*	3.295E+00	2.629E+00	2.629E+00	27.65
PB-212	74.81	------	10.70	4.083E+00	------ Line Not Found		------
	77.11	202	18.00	4.331E+00	8.339E-01	8.339E-01	52.62
	87.30	2518	8.00	5.194E+00	1.951E+01	1.951E+01	14.99
	238.63	582	44.60*	4.443E+00	9.460E-01	9.460E-01	15.10
	300.09	------	3.41	3.737E+00	------ Line Not Found		------
PO-212	74.81	------	10.70	4.083E+00	------ Line Not Found		------
	77.11	202	18.00	4.331E+00	8.339E-01	8.339E-01	52.62
	87.30	2518	8.00	5.194E+00	1.951E+01	1.951E+01	14.99
	115.19	------	0.60	6.067E+00	------ Line Not Found		------
	238.63	582	44.60*	4.443E+00	9.460E-01	9.460E-01	15.10
	300.09	------	3.41	3.737E+00	------ Line Not Found		------
PB-214	74.81	------	6.21	4.083E+00	------ Line Not Found		------
	77.11	202	10.50	4.331E+00	1.429E+00	1.430E+00	53.17
	87.30	2518	4.67	5.194E+00	3.342E+01	3.342E+01	13.57
	241.98	132	7.49	4.402E+00	1.287E+00	1.287E+00	60.77
	295.21	242	19.20	3.786E+00	1.070E+00	1.070E+00	35.53

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	348	37.20*	3.295E+00	9.145E-01	9.145E-01	28.14
PO-214	74.81	------	6.21	4.083E+00	------ Line Not Found		------
	77.11	202	10.50	4.331E+00	1.429E+00	1.430E+00	53.17
	87.30	2518	4.67	5.194E+00	3.342E+01	3.342E+01	13.57
	241.98	132	7.49	4.402E+00	1.287E+00	1.287E+00	60.77
	295.21	242	19.20	3.786E+00	1.070E+00	1.070E+00	35.53
	351.92	348	37.20*	3.295E+00	9.145E-01	9.145E-01	28.14
PO-216	74.81	------	10.70	4.083E+00	------ Line Not Found		------
	77.11	202	18.00	4.331E+00	8.339E-01	8.339E-01	52.62
	87.30	2518	8.00	5.194E+00	1.951E+01	1.951E+01	14.99
	238.63	582	44.60*	4.443E+00	9.460E-01	9.460E-01	15.10
	300.09	------	3.41	3.737E+00	------ Line Not Found		------
PO-218	74.81	------	6.21	4.083E+00	------ Line Not Found		------
	77.11	202	10.50	4.331E+00	1.429E+00	1.430E+00	53.17
	87.30	2518	4.67	5.194E+00	3.342E+01	3.342E+01	13.57
	241.98	132	7.49	4.402E+00	1.287E+00	1.287E+00	60.77
	295.21	242	19.20	3.786E+00	1.070E+00	1.070E+00	35.53
	351.92	348	37.20*	3.295E+00	9.145E-01	9.145E-01	28.14
RA-224	240.98	132	3.95*	4.402E+00	2.441E+00	2.441E+00	60.51
AC-228	338.32	155	11.40	3.395E+00	1.288E+00	1.288E+00	71.38
	911.07	156	27.70*	1.471E+00	1.236E+00	1.236E+00	41.74
	969.11	71	16.60	1.390E+00	9.976E-01	9.976E-01	106.42
RA-228	338.32	155	11.40	3.395E+00	1.288E+00	1.288E+00	71.38
	911.07	156	27.70*	1.471E+00	1.236E+00	1.236E+00	41.74
	969.11	71	16.60	1.390E+00	9.976E-01	9.976E-01	106.42
TH-228	84.40	------	1.21	4.941E+00	------ Line Not Found		------
	238.60	582	44.60*	4.443E+00	9.460E-01	9.460E-01	15.10
	300.10	------	3.41	3.737E+00	------ Line Not Found		------
TH-232	338.32	155	11.40	3.395E+00	1.288E+00	1.288E+00	58.88
	911.07	156	27.70*	1.471E+00	1.236E+00	1.236E+00	41.74
	969.11	71	16.60	1.390E+00	9.976E-01	9.976E-01	106.42
AM-241	59.54	3572	35.90*	2.224E+00	1.440E+01	1.440E+01	10.47
ANH-511	511.00	48	100.00*	2.438E+00	6.299E-02	6.299E-02	179.15

Flag: "*" = Keyline

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

Total number of lines in spectrum 24
Number of unidentified lines 0
Number of lines tentatively identified by NID 24 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	4.061E-01	4.139E-01	0.757E-01	18.30	
CO-60	5.27Y	1.00	7.119E+00	7.138E+00	0.585E+00	8.20	
CD-109	464.00D	1.01	4.196E+01	4.243E+01	0.474E+01	11.17	
SN-126	1.00E+05Y	1.00	4.218E+00	4.218E+00	0.471E+00	11.17	
BA-137M	30.17Y	1.00	5.399E+00	5.402E+00	0.349E+00	6.47	
CS-137	30.17Y	1.00	5.707E+00	5.710E+00	0.370E+00	6.49	
TL-208	1.41E+10Y	1.00	3.558E-01	3.558E-01	1.143E-01	32.11	
BI-211	7.04E+08Y	1.00	2.629E+00	2.629E+00	0.727E+00	27.65	
PB-212	1.41E+10Y	1.00	9.460E-01	9.460E-01	1.428E-01	15.10	
PO-212	1.41E+10Y	1.00	9.460E-01	9.460E-01	1.428E-01	15.10	
PB-214	1600.00Y	1.00	9.145E-01	9.145E-01	2.574E-01	28.14	
PO-214	1600.00Y	1.00	9.145E-01	9.145E-01	2.574E-01	28.14	
PO-216	1.41E+10Y	1.00	9.460E-01	9.460E-01	1.428E-01	15.10	
PO-218	1600.00Y	1.00	9.145E-01	9.145E-01	2.574E-01	28.14	
RA-224	1.41E+10Y	1.00	2.441E+00	2.441E+00	1.477E+00	60.51	
AC-228	1.41E+10Y	1.00	1.236E+00	1.236E+00	0.516E+00	41.74	
RA-228	1.41E+10Y	1.00	1.236E+00	1.236E+00	0.516E+00	41.74	
TH-228	1.41E+10Y	1.00	9.460E-01	9.460E-01	1.428E-01	15.10	
TH-232	1.41E+10Y	1.00	1.236E+00	1.236E+00	0.516E+00	41.74	
AM-241	432.20Y	1.00	1.440E+01	1.440E+01	0.151E+01	10.47	
ANH-511	1.00E+09Y	1.00	6.299E-02	6.299E-02	11.28E-02	179.15	
			---	---			
	Total Activity :		9.493E+01	9.544E+01			

Grand Total Activity : 9.493E+01 9.544E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	92.94	109	510	1.31	186.64	183	9	2.02E-02	80.0	5.47E+00	T
0	186.23	84	514	1.30	373.21	368	10	1.56E-02	****	5.26E+00	T
0	209.57	90	387	1.08	419.88	416	10	1.67E-02	84.7	4.88E+00	T
0	609.59	182	200	1.67	1219.76	1213	14	3.38E-02	36.5	2.10E+00	T
0	727.30	37	143	1.31	1455.09	1448	12	6.79E-03	****	1.80E+00	T
0	796.68	25	155	0.89	1593.80	1585	11	4.64E-03	****	1.66E+00	T
0	1765.64	22	16	1.72	3530.60	3523	13	4.05E-03	92.4	8.36E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:31:15.83

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871428.CNF;1 *
* Acquisition date : 7-JUL-2009 10:00:37.  Detector SN#     :              *
* Detector ID      : GAM01                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 01:30:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 01:30:01.87         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 30-JUN-2009 00:00:00  Nuclide Library : SOLID          *
* Sample ID        : G1201871428           Analyst initials: MXR1           *
* Batch Number     : 881220                Sample Quantity : 1.55440E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56.1MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	4.139E-01	7.575E-02	5.410E-02	3.322E-03	7.651
CO-60	7.138E+00	5.853E-01	7.565E-02	5.243E-03	94.349
CD-109	4.243E+01	4.740E+00	1.865E+00	1.716E-01	22.750
SN-126	4.218E+00	4.713E-01	1.864E-01	1.710E-02	22.627
BA-137M	5.402E+00	3.493E-01	9.339E-02	4.716E-03	57.840
CS-137	5.710E+00	3.705E-01	9.872E-02	5.013E-03	57.840
TL-208	3.558E-01	1.143E-01	9.808E-02	6.214E-03	3.628
BI-211	2.629E+00	7.270E-01	5.293E-01	3.352E-02	4.967
PB-212	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
PO-212	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
PB-214	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
PO-214	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
PO-216	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
PO-218	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
RA-224	2.441E+00	1.477E+00	1.604E+00	9.225E-02	1.522
AC-228	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
RA-228	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
TH-228	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
AM-241	1.440E+01	1.508E+00	4.916E-01	4.492E-02	29.303
ANH-511	6.299E-02	1.128E-01	8.195E-02	4.538E-03	0.769

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.044E-01		5.708E-01	8.981E-01	5.870E-02	-0.228
NA-22	-8.165E-03		4.457E-02	7.265E-02	4.657E-03	-0.112
NA-24	1.171E-05		7.588E-05	Half-Life too short		
AL-26	-1.762E-02		3.594E-02	5.154E-02	2.972E-03	-0.342
K-40	3.594E-01		5.073E-01	9.317E-01	6.622E-02	0.386
TI-44	1.538E-01	+	8.095E-02	9.555E-02	8.196E-03	1.610
SC-46	2.051E-02		7.184E-02	1.196E-01	8.401E-03	0.172
V-48	-7.843E-03		1.093E-01	1.766E-01	1.197E-02	-0.044
CR-51	1.412E-01		4.983E-01	8.266E-01	5.350E-02	0.171
MN-52	-8.258E-02		1.022E-01	1.458E-01	9.970E-03	-0.567
MN-54	3.695E-02		6.837E-02	1.157E-01	7.561E-03	0.319
CO-56	3.518E-02		7.580E-02	1.275E-01	8.469E-03	0.276
CO-58	-5.083E-02		6.976E-02	1.093E-01	6.940E-03	-0.465
FE-59	-1.446E-02		1.710E-01	2.740E-01	1.931E-02	-0.053
ZN-65	-1.136E-01		1.873E-01	2.898E-01	1.735E-02	-0.392
GE-68	7.092E-01		2.542E+00	4.177E+00	2.608E-01	0.170
AS-73	-1.704E+00		1.842E+00	2.764E+00	2.353E-01	-0.616
AS-74	-3.990E-02		1.028E-01	1.681E-01	8.993E-03	-0.237
SE-75	1.247E-02		6.610E-02	1.101E-01	6.477E-03	0.113
BR-77	1.020E+00		1.972E+00	3.240E+00	1.791E-01	0.315
SR-82	2.392E-01		5.660E-01	9.563E-01	5.754E-02	0.250
RB-83	5.707E-02		1.159E-01	1.902E-01	1.052E-02	0.300
RB-84	5.884E-02		1.233E-01	2.072E-01	1.442E-02	0.284
KR-85	6.157E+00		1.371E+01	1.975E+01	1.093E+00	0.312
SR-85	2.911E-02		6.484E-02	9.336E-02	5.168E-03	0.312
RB-86	2.050E-01		1.240E+00	2.023E+00	1.264E-01	0.101
Y-88	5.930E-02		4.517E-02	8.996E-02	5.092E-03	0.659
ZR-88	7.813E-02		5.081E-02	8.804E-02	4.760E-03	0.887
Y-91	-1.756E+00		1.999E+01	3.321E+01	1.919E+00	-0.053
NB-94	3.064E-03		5.373E-02	8.944E-02	4.819E-03	0.034
NB-95	-4.655E-02		6.634E-02	1.046E-01	6.199E-03	-0.445
NB-95M	3.040E-02		1.905E-01	2.805E-01	2.097E-02	0.108
ZR-95	-2.249E-02		1.156E-01	1.886E-01	1.333E-02	-0.119
NB-97	4.221E-06		4.760E-05	Half-Life too short		
ZR-97	1.194E-03		8.519E-04	Half-Life too short		
MO-99	2.806E-01		2.616E+00	4.358E+00	5.987E-01	0.064
TC-99M	-2.798E+01		1.604E+01	Half-Life too short		
RH-101	2.464E-02		4.670E-02	7.891E-02	4.362E-03	0.312
RH-102	3.878E-03		5.847E-02	9.409E-02	5.219E-03	0.041
RU-103	1.396E-02		6.626E-02	1.072E-01	1.343E-02	0.130

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-106	5.850E-01		5.292E-01	9.315E-01	1.069E-01	0.628
RU-106	5.850E-01		5.258E-01	9.315E-01	4.889E-02	0.628
AG-108M	-5.310E-02		6.299E-02	9.717E-02	5.856E-03	-0.547
AG-110M	-2.627E-02		6.723E-02	9.403E-02	5.168E-03	-0.279
IN-111	-1.416E-01		2.863E-01	4.062E-01	2.343E-02	-0.349
IN-113M	2.981E-02		7.517E-02	1.241E-01	7.222E-03	0.240
SN-113	2.981E-02		7.517E-02	1.241E-01	7.222E-03	0.240
IN-114M	8.895E-02		2.532E-01	3.806E-01	2.086E-02	0.234
CD-115	-3.516E-01		1.663E+00	2.773E+00	1.530E-01	-0.127
SN-117M	2.460E-03		4.853E-02	8.207E-02	4.466E-03	0.030
SB-122	1.672E-01		4.592E-01	7.865E-01	4.285E-02	0.213
I-123	-7.237E-05		2.175E-04	Half-Life too short		
TE-123M	-5.975E-03		3.592E-02	6.028E-02	3.326E-03	-0.099
I-124	1.657E-01		3.263E-01	4.953E-01	2.638E-02	0.334
SB-124	-3.395E-02		8.278E-02	1.234E-01	8.256E-03	-0.275
SB-125	1.141E-01		1.641E-01	2.738E-01	1.575E-02	0.417
TE-125M	1.589E+01		1.169E+01	1.936E+01	1.726E+00	0.821
I-126	2.030E-01		2.083E-01	3.271E-01	1.664E-02	0.621
SB-126	-7.898E-02		1.841E-01	2.543E-01	1.408E-02	-0.311
SB-127	9.651E-02		5.579E-01	9.367E-01	6.258E-02	0.103
XE-127	1.010E-03		5.775E-02	9.663E-02	5.370E-03	0.010
I-131	-1.920E-02		1.044E-01	1.685E-01	1.053E-02	-0.114
TE-132	2.171E-01		2.033E-01	3.479E-01	4.564E-02	0.624
BA-133	-2.556E-02		8.420E-02	1.176E-01	1.352E-02	-0.217
I-133	-1.390E-05		1.096E-05	Half-Life too short		
CS-134	6.354E-02	+	1.262E-01	1.467E-01	9.203E-03	0.433
CS-135	-1.581E-01		2.428E-01	3.901E-01	2.997E-02	-0.405
I-135	-1.196E+01		1.107E+01	Half-Life too short		
CS-136	-5.409E-02		1.480E-01	2.332E-01	1.611E-02	-0.232
CE-139	1.927E-02		3.998E-02	6.845E-02	3.656E-03	0.281
BA-140	7.318E-02		2.967E-01	5.042E-01	1.637E-01	0.145
LA-140	-2.910E-02		6.841E-02	1.041E-01	6.786E-03	-0.279
CE-141	-3.866E-02		7.004E-02	1.146E-01	6.735E-03	-0.337
CE-143	5.366E+00		4.659E+00	6.989E+00	1.428E+00	0.768
CE-144	-1.099E-01		3.156E-01	4.335E-01	6.165E-02	-0.254
PM-144	9.801E-03		5.255E-02	8.824E-02	4.710E-03	0.111
PR-144	6.614E-01		3.546E+00	5.955E+00	3.178E-01	0.111
PM-146	7.127E-02		8.821E-02	1.469E-01	1.240E-02	0.485
ND-147	8.381E-02		6.022E-01	1.022E+00	1.369E-01	0.082
PM-149	1.999E+01		1.307E+01	2.239E+01	3.173E+00	0.893
EU-152	1.313E-01		1.873E-01	2.623E-01	1.697E-02	0.501
GD-153	-6.568E-02		1.149E-01	1.586E-01	1.255E-02	-0.414
EU-154	-2.138E-02		1.252E-01	2.044E-01	1.988E-02	-0.105
EU-155	-8.985E-02		1.479E-01	2.297E-01	1.678E-02	-0.391
TB-160	8.318E-02		2.770E-01	4.588E-01	3.182E-02	0.181
HO-166M	-4.323E-02		1.027E-01	1.657E-01	9.054E-03	-0.261
TM-171	-1.656E+01		4.216E+01	6.730E+01	5.599E+00	-0.246
LU-176	-3.295E-02		4.115E-02	6.511E-02	3.802E-03	-0.506

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	1.168E+00	+	9.920E-01	1.178E+00	6.583E-02	0.992
LU-177M	1.325E-02		3.156E-01	5.113E-01	2.793E-02	0.026
HF-181	9.878E-03		7.044E-02	1.134E-01	6.293E-03	0.087
W-181	2.269E-01		5.512E-01	8.627E-01	7.191E-02	0.263
TA-182	1.170E-01		2.067E-01	3.648E-01	2.161E-02	0.321
RE-183	-4.505E-02		1.403E-01	2.341E-01	1.261E-02	-0.192
RE-184	-1.059E-01		3.553E-01	5.816E-01	3.370E-02	-0.182
OS-185	-2.832E-03		7.376E-02	1.227E-01	6.298E-03	-0.023
RE-188	5.139E-02		2.080E-01	3.544E-01	1.947E-02	0.145
W-188	-8.963E+00		1.169E+01	1.605E+01	9.389E-01	-0.559
IR-192	1.755E-03		5.326E-02	8.743E-02	5.114E-03	0.020
AU-195	-2.829E-01		2.950E-01	4.512E-01	3.502E-02	-0.627
TL-200	-2.860E+00		5.854E+00	9.294E+00	5.193E-01	-0.308
TL-201	6.070E-01		1.648E+00	2.811E+00	1.502E-01	0.216
TL-202	-1.943E-02		8.839E-02	1.409E-01	7.770E-03	-0.138
HG-203	4.423E-02		5.560E-02	9.458E-02	5.866E-03	0.468
BI-207	1.656E-02		1.124E-01	1.831E-01	1.160E-02	0.090
TL-207	-8.459E-01		1.082E+00	1.695E+00	2.799E-01	-0.499
PO-209	1.009E+01		1.602E+01	2.709E+01	1.922E+00	0.372
BI-210	-1.153E+01		7.398E+00	1.136E+01	8.996E-01	-1.015
PB-210	-1.153E+01		7.398E+00	1.136E+01	8.996E-01	-1.015
PO-210	-1.153E+01		7.384E+00	1.136E+01	7.798E-01	-1.015
PB-211	-3.102E-01		1.661E+00	2.645E+00	1.648E+00	-0.117
BI-212	5.545E-01	+	7.499E-01	8.713E-01	6.587E-02	0.636
BI-214	6.038E-01	+	2.251E-01	2.826E-01	2.095E-02	2.137
PO-215	-8.459E-01		1.082E+00	1.695E+00	2.799E-01	-0.499
RN-219	3.744E-03		7.354E-01	1.191E+00	1.602E-01	0.003
RN-220	1.924E+00		4.322E+01	7.289E+01	3.995E+00	0.026
RA-223	-8.459E-01		1.082E+00	1.695E+00	2.799E-01	-0.499
RA-226	6.038E-01	+	2.251E-01	2.826E-01	2.095E-02	2.137
AC-227	-1.188E-01		5.927E-01	9.730E-01	1.359E-01	-0.122
TH-227	-1.188E-01		5.928E-01	9.730E-01	1.645E-01	-0.122
TH-229	-2.551E-01		7.166E-01	1.185E+00	6.520E-02	-0.215
TH-230	6.038E-01	+	2.251E-01	2.826E-01	2.095E-02	2.137
PA-231	-1.155E+00		2.422E+00	3.902E+00	5.385E-01	-0.296
TH-231	-8.459E-01		1.082E+00	1.695E+00	2.799E-01	-0.499
U-231	3.341E-01		4.240E-01	6.280E-01	5.081E-02	0.532
PA-233	-5.482E-02		1.074E-01	1.721E-01	1.065E-02	-0.319
PA-234	-2.053E-01		7.149E-01	1.144E+00	2.065E-01	-0.180
PA-234M	-8.881E-01		1.359E+01	2.216E+01	2.165E+00	-0.040
TH-234	-1.680E+00		2.242E+00	3.163E+00	5.653E-01	-0.531
U-234	6.038E-01	+	2.251E-01	2.826E-01	2.095E-02	2.137
U-235	4.765E-02		2.763E-01	4.641E-01	7.545E-02	0.103
NP-236	-3.415E-02		1.071E-01	1.787E-01	9.682E-03	-0.191
NP-237	7.171E+00		1.712E+00	1.063E+00	2.397E-01	6.746
U-238	-1.680E+00		2.242E+00	3.163E+00	5.653E-01	-0.531
NP-239	-3.272E-03		3.010E-01	4.245E-01	2.716E-02	-0.008
AM-243	8.943E-02		1.033E-01	1.528E-01	1.287E-02	0.585

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.435E-02		1.305E-01	2.109E-01	1.541E-02	0.210
CM-247	-3.222E-02		6.645E-02	1.050E-01	5.707E-03	-0.307
CF-249	-8.495E-02		7.055E-02	1.074E-01	5.837E-03	-0.791
CF-251	4.099E-02		1.716E-01	2.909E-01	1.570E-02	0.141

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871428          *
* Acquisition date  :  7-JUL-2009 10:00:37 Detector SN#     :               *
* Detector ID       : GAM01                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 01:30:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 01:30:01.87     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871428          Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.5544E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	4.139E-01	7.423E-02	2.915E-02	3.787E-02
CO-60	7.138E+00	5.736E-01	3.827E-02	2.927E-01
CD-109	4.243E+01	4.646E+00	1.013E+00	2.370E+00
SN-126	4.218E+00	4.619E-01	1.013E-01	2.357E-01
BA-137M	5.402E+00	3.423E-01	4.817E-02	1.746E-01
CS-137	5.710E+00	3.631E-01	5.092E-02	1.852E-01
TL-208	3.558E-01	1.120E-01	5.075E-02	5.713E-02
BI-211	2.629E+00	7.125E-01	2.777E-01	3.635E-01
PB-212	9.460E-01	1.400E-01	7.898E-02	7.141E-02
PO-212	9.460E-01	1.400E-01	7.898E-02	7.141E-02
PB-214	9.145E-01	2.522E-01	9.678E-02	1.287E-01
PO-214	9.145E-01	2.522E-01	9.678E-02	1.287E-01
PO-216	9.460E-01	1.400E-01	7.898E-02	7.141E-02
PO-218	9.145E-01	2.522E-01	9.678E-02	1.287E-01
RA-224	2.441E+00	1.448E+00	8.494E-01	7.386E-01
AC-228	1.236E+00	5.056E-01	2.384E-01	2.580E-01
RA-228	1.236E+00	5.056E-01	2.384E-01	2.580E-01
TH-228	9.460E-01	1.400E-01	7.897E-02	7.141E-02
TH-232	1.236E+00	5.056E-01	2.384E-01	2.580E-01
AM-241	1.440E+01	1.478E+00	2.695E-01	7.538E-01
ANH-511	6.299E-02	1.106E-01	4.256E-02	5.642E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-2.044E-01	5.594E-01	4.673E-01	2.854E-01	NOT IDENT.
NA-22	-8.165E-03	4.368E-02	3.680E-02	2.228E-02	NOT IDENT.
NA-24	1.171E+01	1.487E+02	0.000E+00	7.588E+01	SHORT HLIF
AL-26	-1.762E-02	3.522E-02	2.585E-02	1.797E-02	NOT IDENT.
K-40	3.594E-01	4.971E-01	4.701E-01	2.536E-01	NOT IDENT.
TI-44	1.538E-01	7.933E-02	5.205E-02	4.047E-02	FAIL ABUN

SC-46	2.051E-02	7.041E-02	6.116E-02	3.592E-02	NOT IDENT.
V-48	-7.843E-03	1.071E-01	9.008E-02	5.463E-02	NOT IDENT.
CR-51	1.412E-01	4.883E-01	4.346E-01	2.492E-01	NOT IDENT.
MN-52	-8.258E-02	1.001E-01	7.358E-02	5.109E-02	FAIL ABUN
MN-54	3.695E-02	6.700E-02	5.932E-02	3.418E-02	NOT IDENT.
CO-56	3.518E-02	7.429E-02	6.534E-02	3.790E-02	NOT IDENT.
CO-58	-5.083E-02	6.836E-02	5.608E-02	3.488E-02	NOT IDENT.
FE-59	-1.446E-02	1.676E-01	1.394E-01	8.552E-02	NOT IDENT.
ZN-65	-1.136E-01	1.836E-01	1.473E-01	9.366E-02	NOT IDENT.
GE-68	7.092E-01	2.492E+00	2.126E+00	1.271E+00	NOT IDENT.
AS-73	-1.704E+00	1.805E+00	1.520E+00	9.208E-01	NOT IDENT.
AS-74	-3.990E-02	1.008E-01	8.692E-02	5.141E-02	NOT IDENT.
SE-75	1.247E-02	6.477E-02	5.817E-02	3.305E-02	FAIL ABUN
BR-77	1.020E+00	1.932E+00	1.682E+00	9.858E-01	FAIL ABUN
SR-82	2.392E-01	5.547E-01	4.910E-01	2.830E-01	NOT IDENT.
RB-83	5.707E-02	1.136E-01	9.875E-02	5.795E-02	NOT IDENT.
RB-84	5.884E-02	1.208E-01	1.061E-01	6.163E-02	NOT IDENT.
KR-85	6.157E+00	1.344E+01	1.025E+01	6.857E+00	NOT IDENT.
SR-85	2.911E-02	6.354E-02	4.848E-02	3.242E-02	NOT IDENT.
RB-86	2.050E-01	1.215E+00	1.029E+00	6.201E-01	NOT IDENT.
Y-88	5.930E-02	4.427E-02	4.510E-02	2.259E-02	NOT IDENT.
ZR-88	7.813E-02	4.980E-02	4.604E-02	2.541E-02	NOT IDENT.
Y-91	-1.756E+00	1.959E+01	1.685E+01	9.995E+00	NOT IDENT.
NB-94	3.064E-03	5.266E-02	4.606E-02	2.687E-02	NOT IDENT.
NB-95	-4.655E-02	6.501E-02	5.375E-02	3.317E-02	NOT IDENT.
NB-95M	3.040E-02	1.867E-01	1.487E-01	9.524E-02	NOT IDENT.
ZR-95	-2.249E-02	1.133E-01	9.694E-02	5.782E-02	NOT IDENT.
NB-97	4.221E+00	9.329E+01	0.000E+00	4.760E+01	SHORT HLIF
ZR-97	1.194E+03	1.670E+03	0.000E+00	8.519E+02	SHORT HLIF
MO-99	2.806E-01	2.564E+00	2.241E+00	1.308E+00	NOT IDENT.
TC-99M	-2.798E+07	3.145E+07	0.000E+00	1.604E+07	SHORT HLIF
RH-101	2.464E-02	4.576E-02	4.200E-02	2.335E-02	NOT IDENT.
RH-102	3.878E-03	5.730E-02	4.896E-02	2.923E-02	NOT IDENT.
RU-103	1.396E-02	6.494E-02	5.572E-02	3.313E-02	FAIL ABUN
RH-106	5.850E-01	5.186E-01	4.812E-01	2.646E-01	FAIL ABUN
RU-106	5.850E-01	5.153E-01	4.812E-01	2.629E-01	FAIL ABUN
AG-108M	-5.310E-02	6.173E-02	5.068E-02	3.149E-02	NOT IDENT.
AG-110M	-2.627E-02	6.588E-02	4.850E-02	3.361E-02	NOT IDENT.
IN-111	-1.416E-01	2.806E-01	2.150E-01	1.431E-01	NOT IDENT.
IN-113M	2.981E-02	7.366E-02	6.493E-02	3.758E-02	NOT IDENT.
SN-113	2.981E-02	7.366E-02	6.493E-02	3.758E-02	NOT IDENT.
IN-114M	8.895E-02	2.482E-01	2.028E-01	1.266E-01	NOT IDENT.
CD-115	-3.516E-01	1.630E+00	1.439E+00	8.314E-01	NOT IDENT.
SN-117M	2.460E-03	4.756E-02	4.394E-02	2.426E-02	NOT IDENT.
SB-122	1.672E-01	4.500E-01	4.074E-01	2.296E-01	NOT IDENT.
I-123	-7.237E+01	4.264E+02	0.000E+00	2.175E+02	SHORT HLIF
TE-123M	-5.975E-03	3.520E-02	3.227E-02	1.796E-02	NOT IDENT.
I-124	1.657E-01	3.198E-01	2.561E-01	1.631E-01	NOT IDENT.
SB-124	-3.395E-02	8.113E-02	6.203E-02	4.139E-02	NOT IDENT.
SB-125	1.141E-01	1.608E-01	1.429E-01	8.203E-02	NOT IDENT.
TE-125M	1.589E+01	1.145E+01	1.046E+01	5.843E+00	NOT IDENT.
I-126	2.030E-01	2.042E-01	1.686E-01	1.042E-01	NOT IDENT.
SB-126	-7.898E-02	1.804E-01	1.309E-01	9.204E-02	FAIL ABUN
SB-127	9.651E-02	5.468E-01	4.827E-01	2.790E-01	NOT IDENT.
XE-127	1.010E-03	5.659E-02	5.141E-02	2.887E-02	NOT IDENT.
I-131	-1.920E-02	1.023E-01	8.828E-02	5.221E-02	NOT IDENT.
TE-132	2.171E-01	1.992E-01	1.845E-01	1.016E-01	NOT IDENT.
BA-133	-2.556E-02	8.252E-02	6.168E-02	4.210E-02	NOT IDENT.
I-133	-1.390E+01	2.148E+01	0.000E+00	1.096E+01	SHORT HLIF
CS-134	6.354E-02	1.237E-01	7.528E-02	6.312E-02	FAIL ABUN
CS-135	-1.581E-01	2.380E-01	2.061E-01	1.214E-01	NOT IDENT.
I-135	-1.196E+07	2.170E+07	0.000E+00	1.107E+07	SHORT HLIF
CS-136	-5.409E-02	1.450E-01	1.188E-01	7.399E-02	FAIL ABUN
CE-139	1.927E-02	3.918E-02	3.660E-02	1.999E-02	NOT IDENT.
BA-140	7.318E-02	2.907E-01	2.615E-01	1.483E-01	NOT IDENT.
LA-140	-2.910E-02	6.704E-02	5.242E-02	3.420E-02	NOT IDENT.
CE-141	-3.866E-02	6.864E-02	6.149E-02	3.502E-02	NOT IDENT.
CE-143	5.366E+00	4.566E+00	3.683E+00	2.330E+00	FAIL ABUN
CE-144	-1.099E-01	3.093E-01	2.331E-01	1.578E-01	NOT IDENT.
PM-144	9.801E-03	5.150E-02	4.545E-02	2.627E-02	NOT IDENT.
PR-144	6.614E-01	3.475E+00	3.067E+00	1.773E+00	NOT IDENT.
PM-146	7.127E-02	8.645E-02	7.652E-02	4.411E-02	NOT IDENT.
ND-147	8.381E-02	5.902E-01	5.301E-01	3.011E-01	NOT IDENT.
PM-149	1.999E+01	1.281E+01	1.180E+01	6.535E+00	NOT IDENT.
EU-152	1.313E-01	1.835E-01	1.377E-01	9.364E-02	FAIL ABUN
GD-153	-6.568E-02	1.126E-01	8.592E-02	5.744E-02	NOT IDENT.
EU-154	-2.138E-02	1.227E-01	1.035E-01	6.260E-02	FAIL ABUN
EU-155	-8.985E-02	1.449E-01	1.242E-01	7.393E-02	FAIL ABUN

TB-160	8.318E-02	2.715E-01	2.348E-01	1.385E-01	FAIL ABUN
HO-166M	-4.323E-02	1.006E-01	8.531E-02	5.134E-02	NOT IDENT.
TM-171	-1.656E+01	4.132E+01	3.680E+01	2.108E+01	FAIL ABUN
LU-176	-3.295E-02	4.032E-02	3.427E-02	2.057E-02	FAIL ABUN
LU-177	1.168E+00	9.722E-01	6.260E-01	4.960E-01	FAIL ABUN
LU-177M	1.325E-02	3.093E-01	2.670E-01	1.578E-01	FAIL ABUN
HF-181	9.878E-03	6.903E-02	5.900E-02	3.522E-02	FAIL ABUN
W-181	2.269E-01	5.402E-01	4.720E-01	2.756E-01	NOT IDENT.
TA-182	1.170E-01	2.026E-01	1.850E-01	1.034E-01	NOT IDENT.
RE-183	-4.505E-02	1.375E-01	1.252E-01	7.016E-02	FAIL ABUN
RE-184	-1.059E-01	3.482E-01	3.077E-01	1.777E-01	FAIL ABUN
OS-185	-2.832E-03	7.229E-02	6.332E-02	3.688E-02	FAIL ABUN
RE-188	5.139E-02	2.038E-01	1.898E-01	1.040E-01	NOT IDENT.
W-188	-8.963E+00	1.146E+01	8.458E+00	5.846E+00	NOT IDENT.
IR-192	1.755E-03	5.220E-02	4.598E-02	2.663E-02	FAIL ABUN
AU-195	-2.829E-01	2.891E-01	2.444E-01	1.475E-01	NOT IDENT.
TL-200	-2.860E+00	5.737E+00	4.869E+00	2.927E+00	NOT IDENT.
TL-201	6.070E-01	1.615E+00	1.503E+00	8.240E-01	FAIL ABUN
TL-202	-1.943E-02	8.662E-02	7.347E-02	4.419E-02	NOT IDENT.
HG-203	4.423E-02	5.449E-02	4.990E-02	2.780E-02	NOT IDENT.
BI-207	1.656E-02	1.101E-01	9.323E-02	5.618E-02	NOT IDENT.
TL-207	-8.459E-01	1.060E+00	8.907E-01	5.410E-01	FAIL ABUN
PO-209	1.009E+01	1.570E+01	1.386E+01	8.010E+00	NOT IDENT.
BI-210	-1.153E+01	7.250E+00	6.264E+00	3.699E+00	NOT IDENT.
PB-210	-1.153E+01	7.250E+00	6.264E+00	3.699E+00	NOT IDENT.
PO-210	-1.153E+01	7.236E+00	6.264E+00	3.692E+00	NOT IDENT.
PB-211	-3.102E-01	1.628E+00	1.382E+00	8.304E-01	NOT IDENT.
BI-212	5.545E-01	7.349E-01	4.482E-01	3.749E-01	FAIL ABUN
BI-214	6.038E-01	2.206E-01	1.461E-01	1.125E-01	FAIL ABUN
PO-215	-8.459E-01	1.060E+00	8.907E-01	5.410E-01	FAIL ABUN
RN-219	3.744E-03	7.207E-01	6.225E-01	3.677E-01	NOT IDENT.
RN-220	1.924E+00	4.236E+01	3.778E+01	2.161E+01	NOT IDENT.
RA-223	-8.459E-01	1.060E+00	8.907E-01	5.410E-01	FAIL ABUN
RA-226	6.038E-01	2.206E-01	1.461E-01	1.125E-01	FAIL ABUN
AC-227	-1.188E-01	5.809E-01	5.146E-01	2.964E-01	NOT IDENT.
TH-227	-1.188E-01	5.810E-01	5.146E-01	2.964E-01	FAIL ABUN
TH-229	-2.551E-01	7.023E-01	6.313E-01	3.583E-01	FAIL ABUN
TH-230	6.038E-01	2.206E-01	1.461E-01	1.125E-01	FAIL ABUN
PA-231	-1.155E+00	2.374E+00	2.058E+00	1.211E+00	NOT IDENT.
TH-231	-8.459E-01	1.060E+00	8.907E-01	5.410E-01	FAIL ABUN
U-231	3.341E-01	4.155E-01	3.404E-01	2.120E-01	FAIL ABUN
PA-233	-5.482E-02	1.052E-01	9.055E-02	5.369E-02	FAIL ABUN
PA-234	-2.053E-01	7.006E-01	5.841E-01	3.575E-01	FAIL ABUN
PA-234M	-8.881E-01	1.331E+01	1.130E+01	6.793E+00	NOT IDENT.
TH-234	-1.680E+00	2.198E+00	1.732E+00	1.121E+00	FAIL ABUN
U-234	6.038E-01	2.206E-01	1.461E-01	1.125E-01	FAIL ABUN
U-235	4.765E-02	2.708E-01	2.491E-01	1.382E-01	FAIL ABUN
NP-236	-3.415E-02	1.050E-01	9.566E-02	5.356E-02	NOT IDENT.
NP-237	7.171E+00	1.677E+00	5.776E-01	8.558E-01	NOT IDENT.
U-238	-1.680E+00	2.198E+00	1.732E+00	1.121E+00	FAIL ABUN
NP-239	-3.272E-03	2.949E-01	2.290E-01	1.505E-01	FAIL ABUN
AM-243	8.943E-02	1.012E-01	8.332E-02	5.163E-02	FAIL ABUN
CM-243	4.435E-02	1.278E-01	1.141E-01	6.523E-02	FAIL ABUN
CM-247	-3.222E-02	6.512E-02	5.488E-02	3.322E-02	NOT IDENT.
CF-249	-8.495E-02	6.914E-02	5.618E-02	3.528E-02	NOT IDENT.
CF-251	4.099E-02	1.681E-01	1.553E-01	8.578E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	572.4896
46.50	572.4896
46.50	572.4896
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49.72	561.9010
51.35	628.9204
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52.97	747.1692
53.15	747.4329
53.44	745.3630
54.07	720.6942
56.28	737.8438
56.28	737.8492
57.37	784.8854
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57.53	800.8263
57.60	800.9275
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57.98	687.2939
59.32	688.9955
59.32	688.9955
59.40	689.0973
59.54	689.2725
59.72	689.4994
60.01	689.8647
61.10	508.9362
61.14	508.9731
61.30	474.3347
63.00	510.6627
63.29	485.5362
63.29	485.5362
63.58	485.7842
64.28	448.2327
65.12	481.3594
65.20	481.4263
65.20	481.4263
66.05	516.5703
66.72	519.2893
66.83	517.2575
66.91	517.3292
67.20	522.9088
67.20	522.9088
67.75	505.2740
67.85	501.0962
68.90	526.5457
68.90	526.5457
69.30	526.8967
69.67	528.2922
70.82	551.7951
70.82	551.7951
70.83	551.8029
72.80	615.9237
72.87	615.9937
72.87	615.9937
74.67	675.9908
74.81	676.1406
74.81	676.1406
74.81	676.1406
74.81	676.1406
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74.97	676.3129
75.28	699.3105
75.70	677.0942
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77.11	712.1439
77.11	712.1439

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77.11	712.1439
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80.30	582.4183
80.57	582.6580
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81.07	609.2326
81.07	609.2326
81.07	609.2326
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83.78	564.1493
83.78	564.1493
83.78	564.1493
83.78	564.1493
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84.40	538.4028
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86.50	638.8508
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86.72	564.9365
86.79	564.9927
86.94	565.1157
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87.88	565.8825
88.03	566.0055
88.36	566.2724
88.47	566.3614
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92.38	405.1228
92.38	405.1228
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94.67	349.7768
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94.90	331.5599
94.90	331.5599
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97.43	362.7952
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98.44	361.6128
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99.55	357.6774
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100.00	364.6027
100.10	352.3483
103.18	376.2343
103.76	343.9232
105.00	366.9888
105.31	385.1536
108.00	409.0746
109.28	316.9212
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111.00	385.6578

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117.00	366.7806
117.66	404.8058
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121.62	341.2189
121.78	341.2823
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144.24	365.7655
144.24	365.7655
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152.70	339.5490
153.22	355.7795
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154.21	340.0665
154.21	340.0665
154.21	340.0665
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163.89	369.4479
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167.43	349.9068
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171.86	344.1078
172.10	345.9992
176.55	354.7215
176.60	335.5889
181.06	389.6939
184.41	349.7223
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186.00	368.7938
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193.63	366.6335
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198.60	348.6671
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201.83	382.2511
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205.31	332.1247
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208.81	339.0855

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209.75	322.8307
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227.08	319.7040
227.20	319.7322
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228.18	315.2142
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236.00	366.3422
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238.63	390.1064
238.63	390.1064
238.63	390.1064
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241.98	334.1143
241.98	334.1143
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252.85	321.0679
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256.20	308.2268
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268.24	320.6532
268.79	306.0586
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269.46	281.6660
269.46	281.6660
269.46	281.6660
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277.60	291.1334
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279.20	260.8217
279.53	254.9490
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281.68	310.7324
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284.30	301.3652
285.00	249.9313
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290.80	270.8005
291.72	240.6784
293.26	242.5172
293.70	242.5877
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295.21	243.6240
295.21	243.6240
295.96	243.7431

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299.80	273.9883
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300.09	266.0255
300.09	266.0255
300.10	266.0255
300.12	266.0296
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303.76	276.0868
303.91	285.1484
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304.40	270.1698
304.84	261.2061
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308.46	260.7942
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319.02	264.5405
319.41	253.4523
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323.87	268.3748
323.87	268.3748
323.87	268.3748
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334.20	222.5805
334.30	222.5938
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338.28	246.0901
338.28	246.0901
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351.92	228.4087
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367.43	242.9299
367.94	245.0869
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374.96	208.3463
383.85	233.5512
387.95	261.4792
388.63	261.5776
391.69	225.0255
391.69	225.0255
392.90	196.6288
398.62	233.2733
400.65	220.7842
401.10	222.9616
401.81	234.7248
402.60	248.6357
404.84	236.1595
410.95	225.1695
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413.65	244.7172
414.70	225.6009
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427.89	196.9702
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433.93	254.7796
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439.56	252.2377
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444.90	247.4685
445.03	247.4859
445.03	247.4859
445.03	247.4859
445.03	247.4859
453.90	234.3755
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468.07	246.9246
473.00	221.0951
475.06	233.4180
475.35	232.3492
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487.03	181.5621
490.36	181.8374
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497.08	185.7243
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510.53	0.0000
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511.00	177.9252
511.85	177.9907
511.85	177.9907
513.99	172.1063
513.99	172.1063
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520.65	156.2011
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529.64	179.5956
529.87	0.0000
531.02	168.8661
537.32	163.8854
543.00	169.7244
546.56	0.0000
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552.65	139.4257
555.20	154.1671
563.23	139.1193
563.90	139.1564
568.70	152.2734
569.32	153.2274
569.50	153.2396
569.67	149.5811
573.80	137.8821
574.00	137.8931
574.64	147.1211
578.91	136.6289
579.30	133.5798
583.14	144.8570
585.48	164.6927
591.81	140.7262
592.07	140.7410
593.00	143.5718
595.88	127.9701
600.56	134.7091
602.52	0.0000
602.71	122.4249
602.71	122.4249
603.60	131.7680
604.41	138.0123
604.70	138.0268
609.31	132.3692
609.31	132.3692
609.31	132.3692

609.31	132.3692
610.33	132.4212
612.46	141.5543
614.37	116.7511
618.01	132.8130
621.84	118.0204
621.84	118.0204
631.29	137.2457
633.02	142.9787
633.10	142.9824
634.78	123.3050
635.90	140.3095
636.97	163.9151
645.85	153.1169
646.12	155.9685
656.30	147.0646
657.75	145.5581
657.90	0.0000
661.65	120.7337
661.65	120.7337
664.57	126.8880
666.33	98.4013
666.33	98.4013
675.00	126.0929
677.61	121.4282
685.20	117.9221
692.80	124.0082
695.00	98.1277
696.49	111.6557
696.49	111.6557
697.00	111.6755
697.49	120.3613
698.33	128.1002
698.50	130.0331
699.00	127.1660
702.63	121.5396
706.10	130.3792
706.58	0.0000
706.67	125.5757
709.31	115.0546
711.68	134.5001
713.82	125.8835
717.42	119.2523
720.50	135.8779
721.93	131.0911
722.20	131.1010
722.78	139.2216
722.78	139.2216
722.89	139.2286
722.95	127.8960
723.30	127.9121
724.18	132.8096
727.18	131.3251
733.00	125.3163
735.90	109.2711
739.58	99.6368
742.81	118.3265
744.21	117.4014
747.13	127.3086
751.79	129.4670
752.31	131.4515
753.82	116.7949
755.35	130.6037
756.15	131.6184
756.87	121.8264
763.93	133.9248
765.79	145.8284
766.41	145.8609
766.84	129.1226
768.36	126.2281
768.36	126.2281
768.36	126.2281
768.36	126.2281
776.49	128.5400
778.00	110.7941
778.57	132.5835
778.89	132.5965
783.80	111.9930

785.46	108.0872
792.07	130.8373
795.84	130.9948
796.30	135.9893
801.93	127.0953
805.60	113.7690
810.29	130.9264
810.76	145.9394
815.85	138.1617
817.79	129.2299
818.51	136.2723
819.60	144.3375
826.30	141.6231
828.27	143.7192
831.60	148.8961
831.96	148.9106
834.83	128.9000
836.80	0.0000
846.75	141.4971
848.13	139.5330
856.28	0.0000
856.80	170.3133
860.37	145.1227
867.32	146.4398
867.82	134.2559
871.10	159.8403
873.19	157.9025
874.81	162.0550
875.33	0.0000
876.40	143.7746
879.36	138.7990
880.27	129.6479
880.51	125.5735
881.50	131.7368
883.24	142.0203
884.67	141.0592
889.25	118.7301
896.60	139.4963
898.02	144.6833
899.00	153.9624
903.28	174.7065
911.07	161.3674
911.07	161.3674
911.07	161.3674
919.63	129.0649
920.93	151.4899
925.00	171.6576
925.24	174.7722
926.50	141.7294
934.06	174.1687
934.06	174.1687
934.06	174.1687
934.06	174.1687
935.52	164.9082
937.48	174.3369
944.10	182.9781
946.00	180.9923
949.00	171.7756
962.29	191.0625
964.01	179.4537
966.15	177.8152
968.20	205.8230
969.11	174.8200
969.11	174.8200
969.11	174.8200
977.42	152.1332
980.50	137.5596
983.50	139.7734
989.30	135.7807
996.32	142.3630
1001.03	133.0383
1001.68	130.9508
1004.76	123.6584
1021.30	0.0000
1024.50	0.0000
1034.80	110.7895
1037.82	128.9997
1038.57	129.0233

1038.76	0.0000
1045.16	105.7434
1046.59	121.8152
1048.07	129.3424
1050.47	133.6975
1050.47	133.6975
1063.62	132.0028
1076.63	123.8215
1077.35	120.6133
1085.78	111.1575
1099.22	133.1859
1112.02	132.5201
1112.84	133.6364
1115.52	159.8123
1120.29	120.8155
1120.29	120.8155
1120.29	120.8155
1120.29	120.8155
1120.51	125.1804
1121.28	118.6706
1124.00	0.0000
1129.67	81.8188
1131.51	0.0000
1147.95	0.0000
1167.94	91.2238
1173.22	61.5475
1175.09	61.5748
1177.93	47.2956
1189.05	59.0104
1204.90	49.9724
1205.75	47.2065
1213.00	48.2126
1221.42	39.9451
1230.97	40.9618
1235.34	41.9348
1236.41	0.0000
1238.11	30.7710
1238.11	30.7710
1238.11	30.7710
1238.11	30.7710
1238.25	30.7723
1246.25	38.3007
1260.41	0.0000
1271.85	23.4884
1274.45	30.0820
1274.54	30.0833
1291.56	28.3081
1298.22	0.0000
1312.09	19.9045
1325.50	19.5544
1325.50	19.5544
1332.49	27.6076
1333.61	27.6135
1360.21	22.0239
1362.66	0.0000
1365.15	18.2130
1368.21	17.2654
1368.53	0.0000
1376.25	24.9801
1377.67	16.3380
1377.67	16.3380
1377.67	16.3380
1377.67	16.3380
1384.27	27.9097
1394.10	21.2158
1395.20	18.3266
1407.95	24.1770
1434.06	24.3052
1436.60	24.3174
1457.56	0.0000
1460.81	22.4806
1489.15	22.6069
1509.49	13.8149
1596.49	21.0658
1620.62	14.1065
1678.03	0.0000
1691.02	14.2860
1691.02	14.2860

1706.46	0.0000
1750.46	0.0000
1764.49	9.3018
1764.49	9.3018
1764.49	9.3018
1764.49	9.3018
1770.23	10.6410
1771.40	30.0077
1791.20	0.0000
1808.65	12.4951
1836.01	7.3221

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871428

Total Uranium Activity	-4.9767E+00	ug/g
Total Uranium Counting Unc.	6.5391E+00	ug/g
Total Uranium Tpu	3.3363E-06	ug/g
Total Uranium Mda	5.1534E+00	ug/g

```
*******************************************************************************
*                                                                             *
*                          GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                              *
*                             CHARLESTON ,SC 29417                            *
*                              GROSS GAMMA REPORT                             *
*                                                                             *
*                                                                             *
*******************************************************************************
*                                                                             *
*   BATCH ID      : 881220                    SAMPLE ID  : G1201871428        *
*   ANALYST       : MXR1                      DETECTOR   : GAM01              *
*   SAMPLE DATE   : 30-JUN-2009 00:00:00.00   COUNT TIME :    0 01:30:00.00   *
*   ANALYSIS DATE:  7-JUL-2009 10:00:37.53    SAMPLE ALQT:  155.440 GRAM      *
*                                                                             *
*******************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 2.863E+01
GROSS GAMMA ERROR (pCi/GRAM) : 3.612E+00
GROSS GAMMA MDA (pCi/GRAM) : 4.257E+00
GROSS GAMMA DLC (pCi/GRAM) : 2.084E+00

Radiochemistry Batch Checklist, Rev 9

Batch# 885121 Product: SR 90 Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.	9/17/09 ✓		N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.			N/A
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)			N/A

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Charles Sayler 7/17/09

Secondary Review Performed By: [signature] 7/17/09

LANL 7/20

Strontium 90 Que Sheet

07/14/09

Batch #: 885121 Analyst: JXR1 First Client Due Date: 07/20/2009 Internal Due Date 07/09/2009 Comments

Sr-90 Spike Code: — 7/17/09 Expiration Date: — 7/17/09 Vol: — 7/17/09 Sr Sep. Date/time: 7-16-09 1331

Sr-90 LCS Code: 1067-C Expiration Date: 6-1-10 Vol: 0.1

Sr Carrier Code: 10796463 Exp Date: 3-23-10 Vol: 0.5 Sdt Wt: 9.28

Prep Date: 7-15-09 Initials: JLR Pipet ID: 27668953 Balance #: 17955160 Analytical Scale #: 38110047 Witness: EXK 7/15/09

Sample ID	Client Description	Type	RDL	Collection Date	Matrix	Client	Rad	Pos. #	Wet/Dry Aliquot (mL) or (g)	Det # 1 & 2	Initial Sr wt (g)	Final Sr wt (g)	Net Sr wt (mg)
232511004-2	CAMO-09-6529	SAMPLE	.5 pCi/g	JUN-24-09 12:00 PM	SOIL	LANL010		1	2.006	H1	0.0253	0.0331	7.8
232511005-2	CAMO-09-6528	SAMPLE	.5 pCi/g	JUN-24-09 12:00 PM	SOIL	LANL010		2	2.010	H2	0.0232	0.0312	8.0
1201880683-1	MB for batch 885121	MB	UCF pCi/g		SOIL	QC ACCOUNT		3	1.0 ~~2.029~~	H3	0.0254	0.0333	7.9
1201880684-2	CAMO-09-6529(232511004DUP)	DUP	.5 pCi/g	JUN-24-09 12:00 PM	SOIL	QC ACCOUNT		4	2.029	H4	0.0249	0.0327	7.8
1201880685-1	LCS for batch 885121	LCS	UCF pCi/g		SOIL	QC ACCOUNT	•	5	1.0 ~~2.029~~	B4	0.0250	0.0334	8.4

• Batch 884906 7/17/9

wt ✓
dilution ✓

Instruments used: LB4110 S/N 8219, PIC S/N 10751-4, Pro-Auto 4 (S/n 924233)

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One) Data Reviewed By: Charles Sayle 7/17/09

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 885121

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201880684	DUP	Strontium-90	2.03 g	9.91	1.04	0.126	.019064039	pCi/g	NO
1201880685	LCS	Strontium-90	1.00 g	19.4	2.13	0.513	.0387	pCi/g	NO
1201880683	MB	Strontium-90	1.00 g	0.0387	0.0638	0.213	.0387	pCi/g	YES
232511004	CAMO-09-6529	Strontium-90	2.01 g	10.0	1.06	0.111	.019253731	pCi/g	NO
232511005	CAMO-09-6528	Strontium-90	2.01 g	3.69	0.388	0.106	.019253731	pCi/g	NO

Strontium-90 Solid

Filename : SR90.XLS
File type : Excel
Version # : 1.2.6

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1 ml Stdev : +/- 0.005480 ml

Batch : 885121
Analyst : JXR1
Prep Date : 7/15/2009

LCS S/N : 1067-C
LCS Exp Date : 6/17/2010
LCS Activity (dpm/ml): 433.07
LCS Volume Added: 0.10

Procedure Code : GFC90SRS
Parmname : Strontium-90

Sr-90 Abundance : 1
Method Uncertainty : 0.1005

Carrier S/N : 1096463
Carrier Exp Date : 3/23/2010
Carrier Volume Added: 0.50
Carrier Weight (mg/ml): 18.55
Carrier Weight StDev.: 0.06

Required MDC : 0.5 pCi/G
Halflife of Sr-90 : 28.6 years
Halflife of Y-90 : 64.1 hours
Batch counted on : LB4100
BKG Count time : 500 min

Calibration Date : 1/12/2009
Calibration Due Date : 1/31/2010

Sample Characteristics					Carrier Calculations				
Pos.	Sample ID	Sample Aliquot G	Sample Aliquot StDev. G	Sample Date/Time	Carrier Weight (mg) (Standard)	Net Weight (mg) (Sample)	Net Weight StDev. (mg)	Carrier Aliquot (mL)	Carrier Aliquot StDev. (mL)
1	232511004.2	2.0060	3.4278E-03	6/24/2009 12:00	18.55	7.80	0.040854	0.5	0.002564
2	232511005.2	2.0100	3.4282E-03	6/24/2009 12:00	18.55	8.00	0.041714	0.5	0.002564
3	1201880683.1	1.0000	3.3233E-03	7/15/2009 0:00	18.55	7.90	0.041284	0.5	0.002564
4	1201880684.2	2.0290	3.4302E-03	6/24/2009 12:00	18.55	7.80	0.040854	0.5	0.002564
5	1201880685.1	1.0000	3.3233E-03	7/15/2009 0:00	18.55	8.40	0.043433	0.5	0.002564

Count Raw Data

Pos.	Detector ID	Counting Time (min.)	Gross Counts Alpha	Gross Counts Beta	Gross Beta CPM	Weekly Bkg CPM	Weekly Bkg Count Time (min.)	Detector Efficiency (cpm/dpm) Sr-90	Detector Efficiency (cpm/dpm) Y-90	Detector Efficiency Error (cpm/dpm)	Alpha X-Talk	Count Start Date/Time	Strontium Separation Date/Time	Yttrium Ingrowth	Sr-90 Decay	Calculated Sample Recovery %	Sample Recovery Error %
1	H1	500	13879	10317	19.679	0.948	500	0.4504	0.5908	0.02167	0.03442	7/16/2009 17:33	7/16/2009 13:31	0.085	0.999	84.10%	0.95%
2	H2	500	6433	4340	8.308	0.972	500	0.4669	0.5997	0.01656	0.02890	7/16/2009 17:33	7/16/2009 13:31	0.085	0.999	86.25%	0.95%
3	H3	500	23	516	1.031	0.992	500	0.4770	0.6054	0.01564	0.02861	7/16/2009 17:33	7/16/2009 13:31	0.085	1.000	85.18%	0.95%
4	H4	500	8462	10654	20.807	1.350	500	0.4686	0.5917	0.01752	0.02961	7/16/2009 17:33	7/16/2009 13:31	0.085	0.999	84.10%	0.95%
5	B4	60	11	1128	18.795	0.888	500	0.4313	0.5812	0.02075	0.02883	7/16/2009 17:34	7/16/2009 13:31	0.048	1.000	90.57%	0.95%

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

Results

Pos.	Decision Level pCi/G	Critical Level pCi/G	Required MDC pCi/G	MDC pCi/G	Sample Act. Conc. pCi/G	Sample Act. Error pCi/G	Net Count Rate CPM	Net Count Rate Error CPM	**1 SIGMA** Counting Uncertainty pCi/G	**1 SIGMA** Total Prop. Uncertainty pCi/G	Sample QC	Sample Type	RPD	RER	Nominal pCi/G	Recovery
1	0.0766	0.0541	0.5	0.1114	**10.0044**	0.0261	18.7307	0.2031	0.1085	1.0612		SAMPLE				
2	0.0730	0.0515	0.5	0.1061	**3.6860**	0.0267	7.3362	0.1362	0.0684	0.3881		SAMPLE				
3	0.1469	0.1037	0.5	0.2134	**0.0387**	1.6443	0.0387	0.0636	0.0637	0.0638		MB				
4	0.0872	0.0616	0.5	0.1262	**9.9136**	0.0228	19.4568	0.2105	0.1073	1.0362	232511004.2	DUP	0.9%	0.0216		
5	0.3250	0.2294	0.5	0.5130	**19.3967**	0.0389	17.9067	0.5613	0.6080	2.1289		LCS			19.5076	99.4%

885121.xls

SampleID	Instr	Time (min.)	Alpha Counts	Beta Counts	Total Counts	Count Start Time	Count End Time	Machine
232511004	H1	500	13879	10317		7/16/2009 17:33	7/17/2009 1:53	LB4100
232511005	H2	500	6433	4340		7/16/2009 17:33	7/17/2009 1:53	LB4100
1201880683	H3	500	23	516		7/16/2009 17:33	7/17/2009 1:53	LB4100
1201880684	H4	500	8462	10654		7/16/2009 17:33	7/17/2009 1:53	LB4100
1201880685	B4	60	11	1128		7/16/2009 17:34	7/16/2009 18:34	LB4100

Radiochemistry Batch Checklist, Rev 9

Batch# 884188 Product: PU Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: 7/17/09

Secondary Review Performed By: 7/17/09

7/14-7/20

VAN

✓ P

Plutonium Que Sheet

13-JUL-09

Batch #: 884188 **Analyst:** AXD2 **First Client Due Date:** 20-JUL-09 **Internal Due Date:** 14-JUL-09

Tracer Isotope(s): Pu-242/Pu-238 **Tracer Code:** 1262-A **Expiration Date:** 05/11/10 **Vol:** 0.1

LCS Isotope(s): Pu-239/Pu-238 **LCS Code:** ~~0238-B~~ **Expiration Date:** ~~06/23/10~~ **Vol:** ~~0.1~~ AXD 7/13/09

Spike Isotope(s): Pu-239/Pu-238 **Spike Code:** — **Expiration Date:** — **Vol:** —

Prep Date: 07/13/09 **Initials:** AXD **Pipet ID:** 2971058 **Balance ID:** 50410272 **Witness:** [illegible] 7/13/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (e/1/f)	Pu Det #
232511004-2	CAMO-09-6529	SAMPLE		.05 pCi/g	SOIL	LANL010	24-JUN-09	1	1	0.102	107 113
232511005-2	CAMO-09-6528	SAMPLE		.05 pCi/g	SOIL	LANL010	24-JUN-09	2	2	0.101	108 114
1201878410-1	MB for batch 884188	MB		UCF pCi/g to pCi/g	SOIL	QC ACCOUNT		3	3	~~0.103~~	109
1201878411-2	CAMO-09-6528(232511005DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	24-JUN-09	4	4	0.103	115
1201878412-1	LCS for batch 884188	LCS		UCF pCi/g to pCi/g	SOIL	QC ACCOUNT		5	5	0.101	112

* SRM 0244-B exp. 4/30/20

Choose SOP Used: GL-RAD-A-011 / GL-RAD-A-045 / GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: [signature] 7/13/09

Blank Correction Report

Batch ID 884188

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201878411	DUP	Plutonium-238	0.103 g	24.6	1.93	0.594	-.03029126	pCi/g	NO
		Plutonium-239/240	0.103 g	105	7.41	0.723	.012427184	pCi/g	NO
1201878412	LCS	Plutonium-238	0.101 g	7.67	0.613	0.345	-.03089109	pCi/g	NO
		Plutonium-239/240	0.101 g	39.4	2.56	0.420	.012673267	pCi/g	NO
1201878410	MB	Plutonium-238	1.00 g	-0.00312	0.00312	0.0368	-.00312	pCi/g	NO
		Plutonium-239/240	1.00 g	0.00128	0.00382	0.0449	.00128	pCi/g	YES
232511004	CAMO-09-6529	Plutonium-238	0.102 g	31.8	2.34	0.527	-.03058824	pCi/g	NO
		Plutonium-239/240	0.102 g	114	7.79	0.641	.012549020	pCi/g	NO
232511005	CAMO-09-6528	Plutonium-238	0.101 g	19.4	1.57	0.595	-.03089109	pCi/g	NO
		Plutonium-239/240	0.101 g	136	9.51	0.724	.012673267	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 884188
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S0232511004_PU
SAMPLE QTY: 0.102 G

DETECTOR NUMBER :45-111B4
AVERAGE %EFFICIENCY :25.1992
% YIELD : 104.590

COUNT DATE:16-JUL-2009 14:35:32
ELAPSED LIVE TIME(SEC): 30300.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B113.CNF;375
PCI/G : 1.810E+01	PCI/G : 1.810E+01	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.40043 dpm	EFF FILE : W113.CNF;110
			CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	3434.000	3432.990	1.010	4.1106	99.90000	1.14E+02	7.79E+00	2.76E-01	6.41E-01	1.95E+00
PU-236	5749.000	4.000	2.485	1.515	2.7154	100.0000	8.37E-02	7.37E-02	1.82E-01	4.54E-01	7.35E-02
PU-238	5499.000	960.000	955.960	4.040	3.2589	99.90000	3.18E+01	2.34E+00	2.18E-01	5.27E-01	1.03E+00
PU242	4890.000	562.000	559.980	2.020	1.4213	100.0000	1.86E+01	1.46E+00	9.52E-02	2.80E-01	7.87E-01
PU-244	4589.000	10.000	9.495	0.505	4.8319	99.90000	3.15E-01	1.08E-01	3.24E-01	7.38E-01	1.06E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

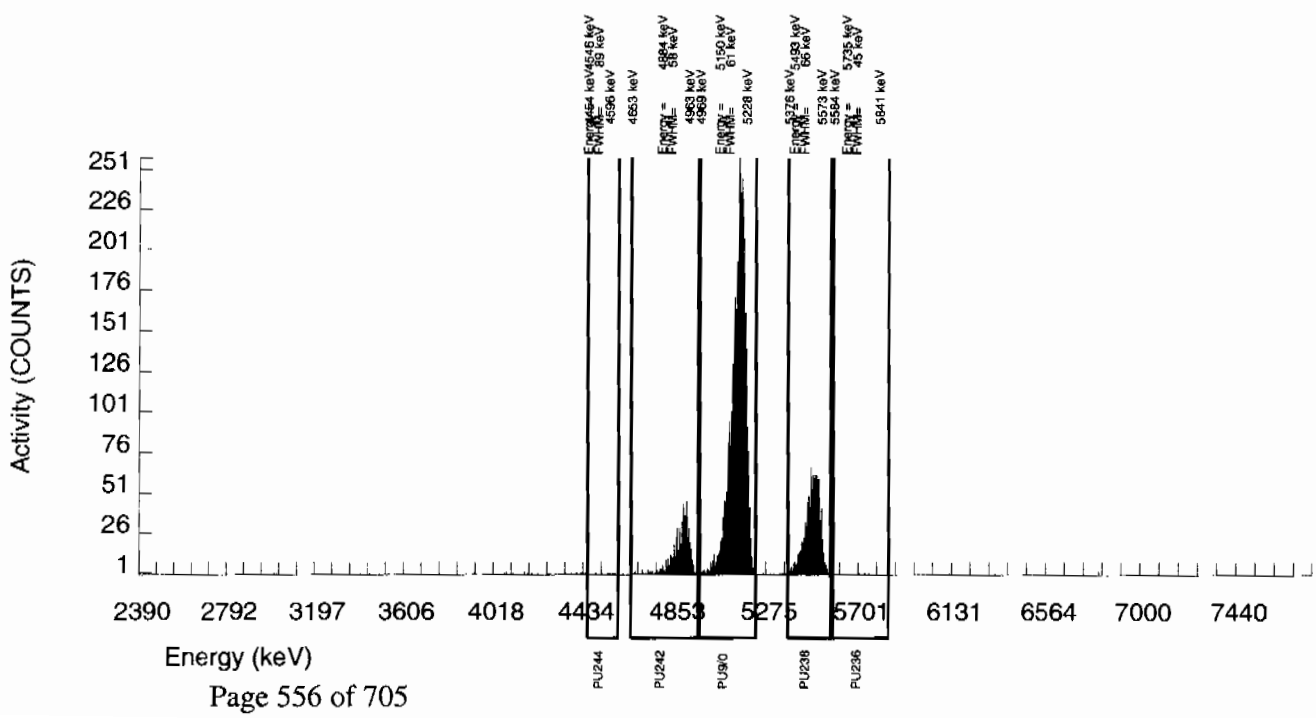

Alpha Spectroscopy Software Version 2 0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 884188 SAMPLE DATE : 24-JUN-2009 00:00:00	SAMPLE ID : S0232511005_PU SAMPLE QTY: 0.101 G
DETECTOR NUMBER :78258 AVERAGE %EFFICIENCY :25.5655 % YIELD : 92.229	COUNT DATE:16-JUL-2009 14:35:33 ELAPSED LIVE TIME(SEC): 30300.00 ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B114.CNF;376
PCI/G : 1.828E+01	PCI/G : 1.828E+01	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 3.88038 dpm	EFF FILE : W114.CNF;106
			CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	3635.000	3632.980	2.020	4.1106	99.90000	1.36E+02	9.51E+00	3.11E-01	7.24E-01	2.26E+00
PU-236	5749.000	2.000	0.485	1.515	2.7154	100.0000	1.84E-02	6.33E-02	2.05E-01	5.12E-01	6.32E-02
PU-238	5499.000	518.000	516.990	1.010	3.2589	99.90000	1.94E+01	1.57E+00	2.47E-01	5.95E-01	8.54E-01
PU242	4890.000	503.000	500.980	2.020	1.4213	100.0000	1.88E+01	1.53E+00	1.07E-01	3.16E-01	8.41E-01
PU-244	4589.000	3.000	3.000	0.000	4.8319	99.90000	1.12E-01	6.54E-02	3.66E-01	8.33E-01	6.49E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

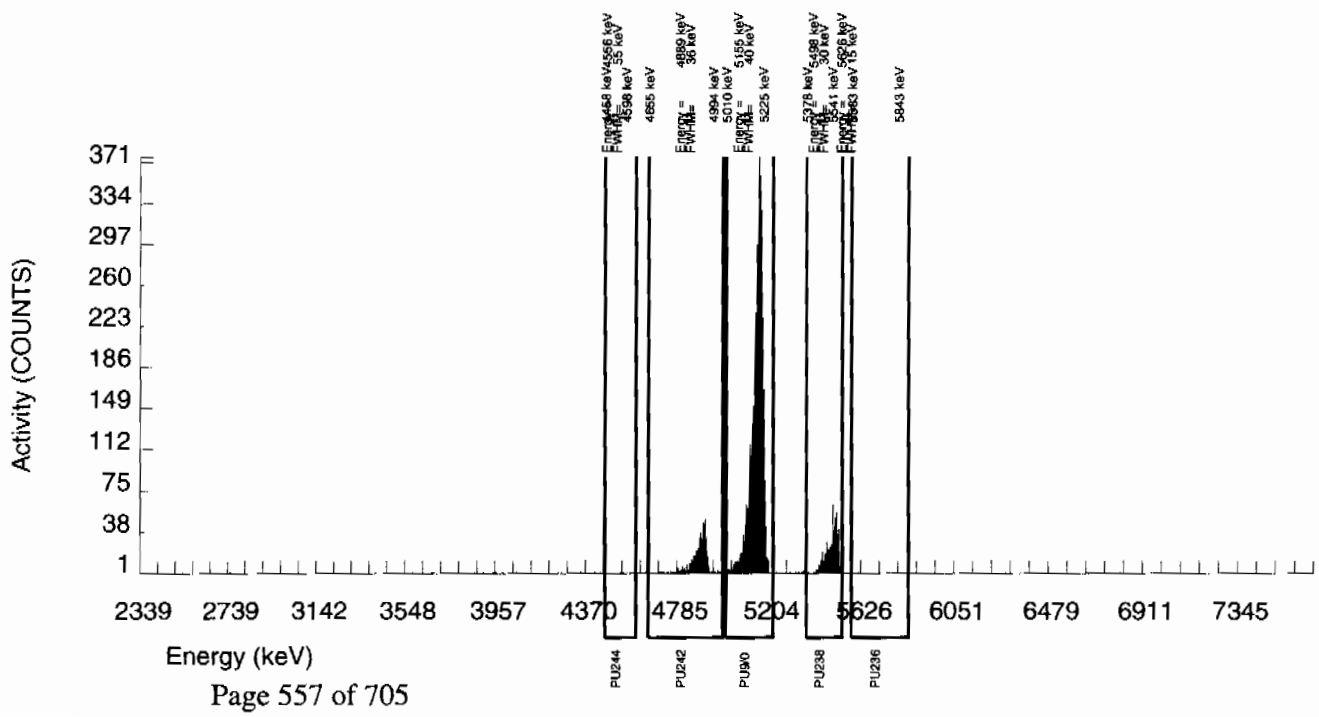

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 884188
SAMPLE DATE : 13-JUL-2009 00:00:00

SAMPLE ID : S1201878410_PU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :79463
AVERAGE %EFFICIENCY :35.5760
% YIELD : 81.189

COUNT DATE:15-JUL-2009 21:16:40
ELAPSED LIVE TIME(SEC): 42581.86
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B109.CNF;615
PCI/G : 1.846E+00	PCI/G : 1.846E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 3.41589 dpm	EFF FILE : W109.CNF;180
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2.000	0.581	1.419	4.1106	99.90000	1.28E-03	3.82E-03	1.94E-02	4.49E-02	3.81E-03
PU-236	5749.000	0.000	-0.710	0.710	2.7154	100.0000	-1.56E-03	2.70E-03	1.28E-02	3.16E-02	2.70E-03
PU-238	5499.000	0.000	-1.419	1.419	3.2589	99.90000	-3.12E-03	3.12E-03	1.54E-02	3.68E-02	3.12E-03
PU242	4890.000	866.000	862.452	3.548	1.8837	100.0000	1.90E+00	1.19E-01	8.90E-03	2.38E-02	6.48E-02
PU-244	4589.000	4.000	3.290	0.710	4.8319	99.90000	7.24E-03	4.68E-03	2.29E-02	5.17E-02	4.67E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

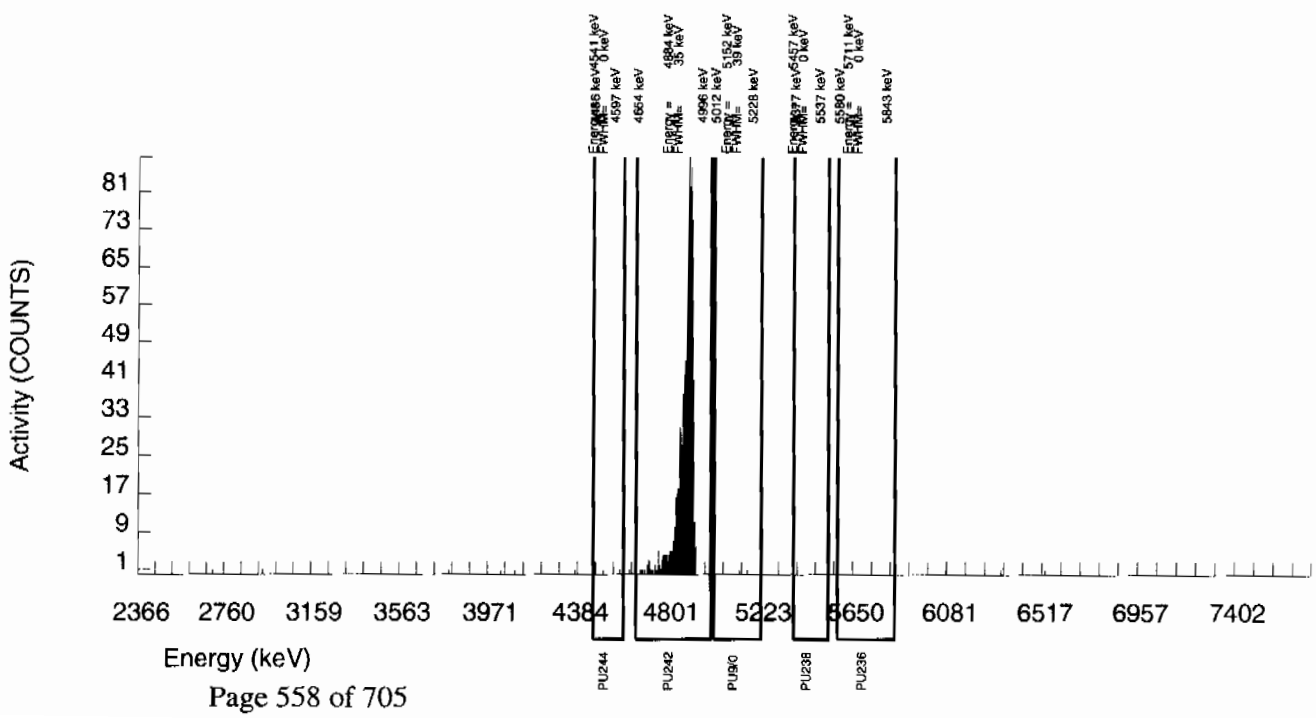

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 884188
SAMPLE DATE : 24-JUN-2009 00:00:00

SAMPLE ID : S1201878411_PU
SAMPLE QTY: 0.103 G

DETECTOR NUMBER :45-132FF4
AVERAGE %EFFICIENCY :26.5489
% YIELD : 87.132

COUNT DATE:16-JUL-2009 14:35:37
ELAPSED LIVE TIME(SEC): 30300.00
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B115.CNF;379
PCI/G : 1.792E+01	PCI/G : 1.792E+01	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 3.66591 dpm	EFF FILE : W115.CNF;126
			CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2811.000	2810.495	0.505	4.1106	99.90000	1.05E+02	7.41E+00	3.11E-01	7.23E-01	1.99E+00
PU-236	5749.000	4.000	-1.050	5.050	2.7154	100.0000	-3.99E-02	9.73E-02	2.05E-01	5.12E-01	9.73E-02
PU-238	5499.000	660.000	655.960	4.040	3.2589	99.90000	2.46E+01	1.93E+00	2.46E-01	5.94E-01	9.65E-01
PU242	4890.000	492.000	491.495	0.505	0.7106	100.0000	1.84E+01	1.50E+00	5.37E-02	2.09E-01	8.31E-01
PU-244	4589.000	3.000	3.000	0.000	4.8319	99.90000	1.12E-01	6.54E-02	3.65E-01	8.32E-01	6.49E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

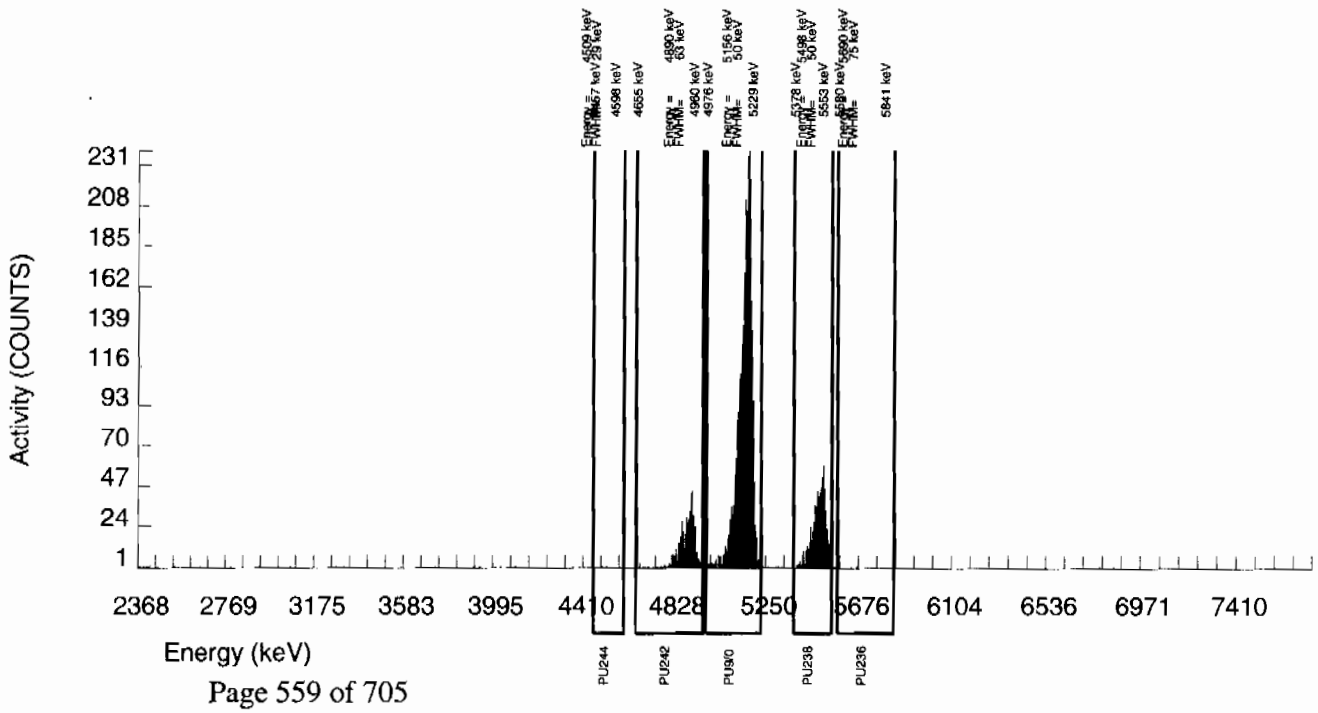

Alpha Spectroscopy Software Version 2.0
effective date 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 884188
SAMPLE DATE : 13-JUL-2009 00:00:00

SAMPLE ID : S1201878412_PU
SAMPLE QTY: 0.101 G

DETECTOR NUMBER :78261
AVERAGE %EFFICIENCY :31.0184
% YIELD : 98.377

COUNT DATE:15-JUL-2009 21:16:40
ELAPSED LIVE TIME(SEC): 42588.10
ANALYST :AXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B112.CNF;622
PCI/G : 1.828E+01	PCI/G : 1.828E+01	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.13905 dpm	EFF FILE : W112.CNF;206
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	1913.000	1910.161	2.839	4.1106	99.90000	3.94E+01	2.56E+00	1.82E-01	4.20E-01	9.02E-01
PU-236	5749.000	0.000	-0.710	0.710	2.7154	100.0000	-1.46E-02	2.53E-02	1.20E-01	2.96E-01	2.53E-02
PU-238	5499.000	372.000	372.000	0.000	3.2589	99.90000	7.67E+00	6.13E-01	1.44E-01	3.45E-01	3.98E-01
PU242	4890.000	912.000	911.290	0.710	0.8425	100.0000	1.88E+01	1.30E+00	3.73E-02	1.30E-01	6.22E-01
PU-244	4589.000	13.000	12.290	0.710	4.8319	99.90000	2.53E-01	7.73E-02	2.14E-01	4.84E-01	7.57E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

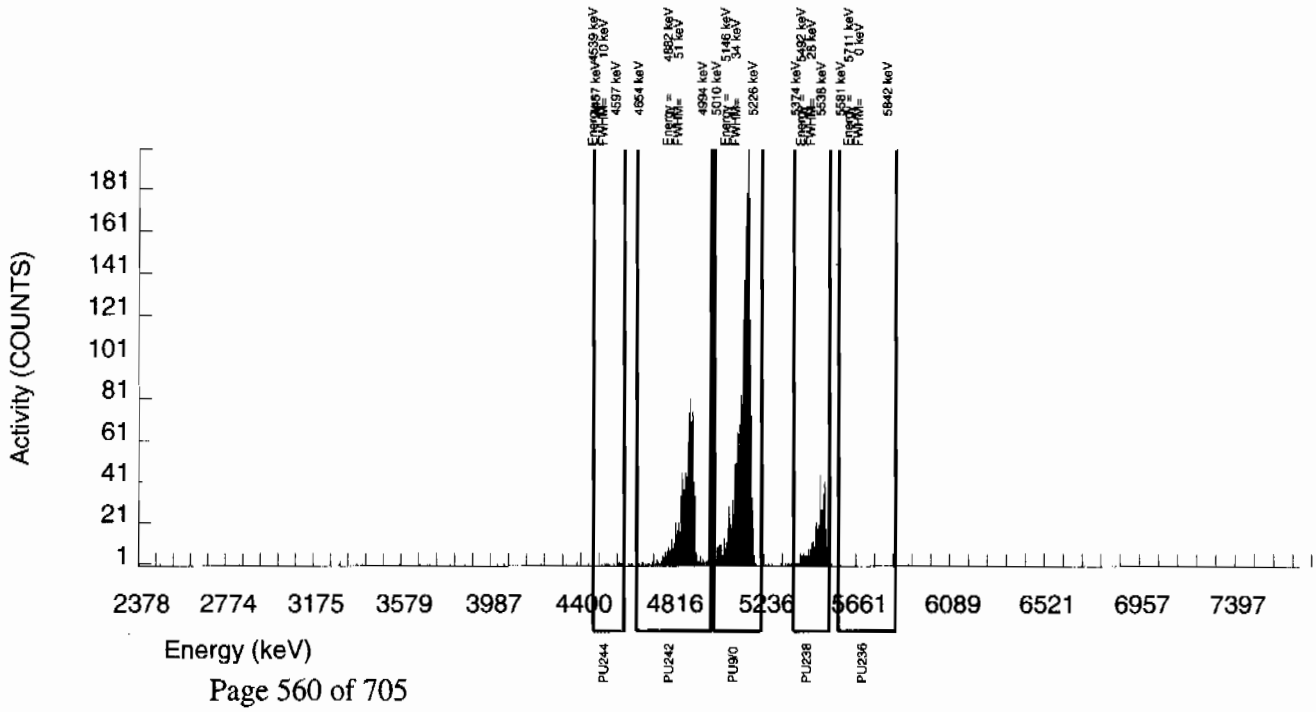

BACKGROUND AND EFFICIENCY DATA

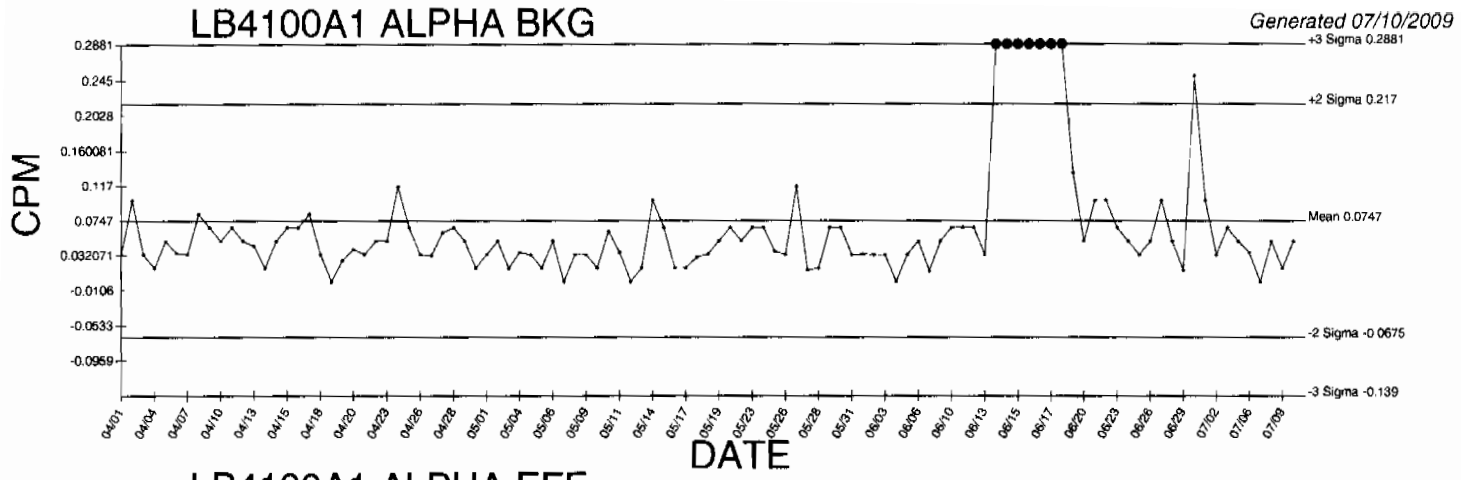

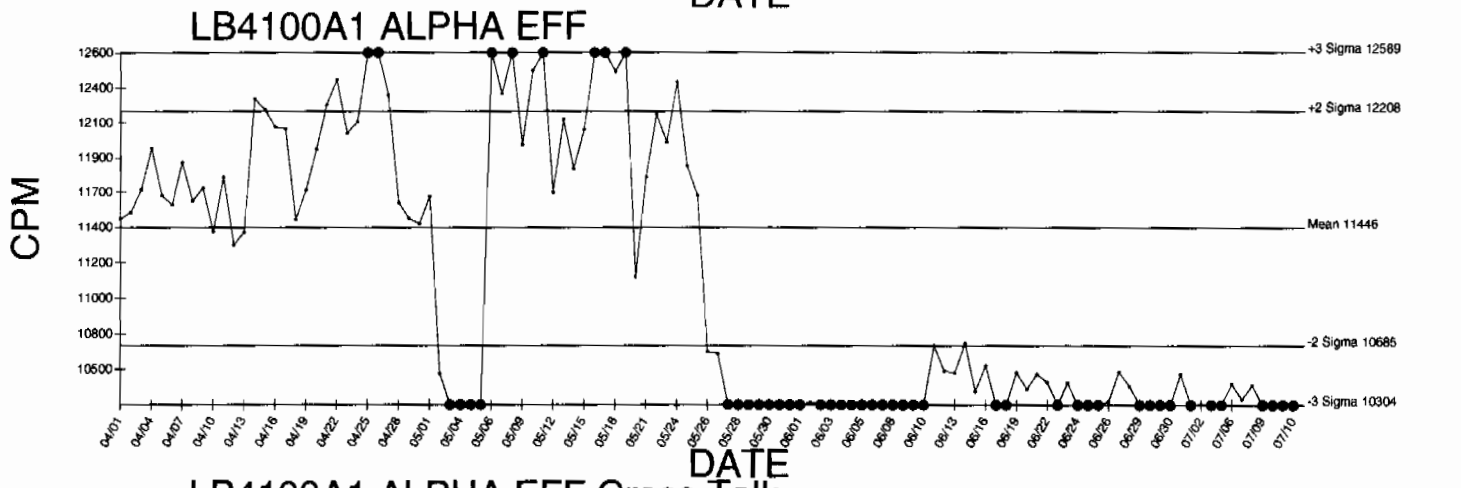

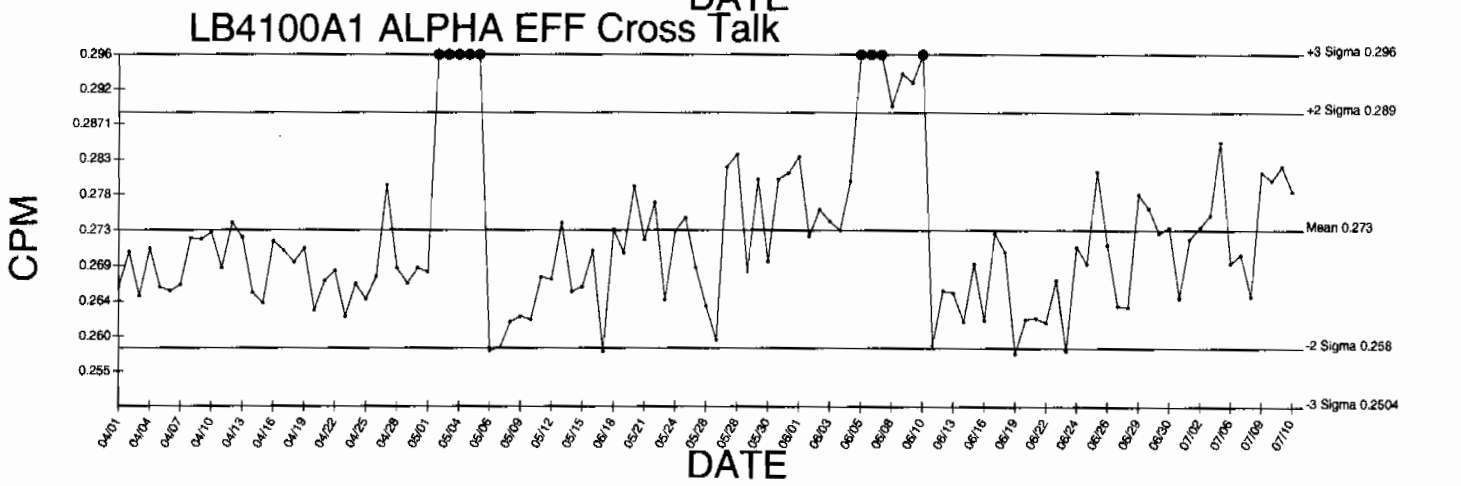

● Denotes Outlier

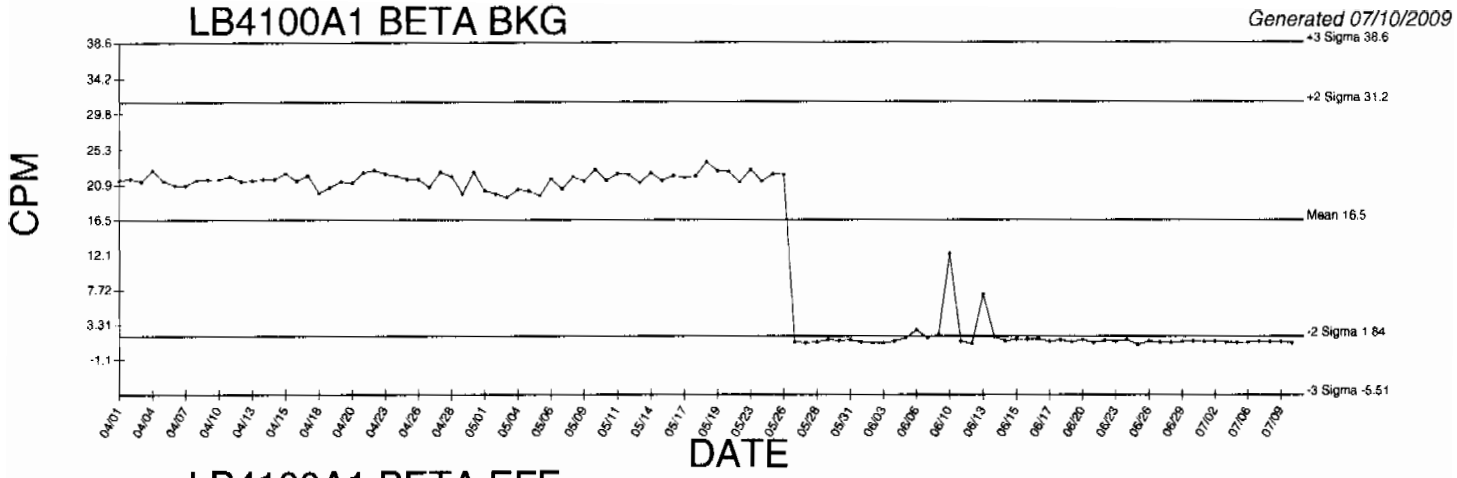

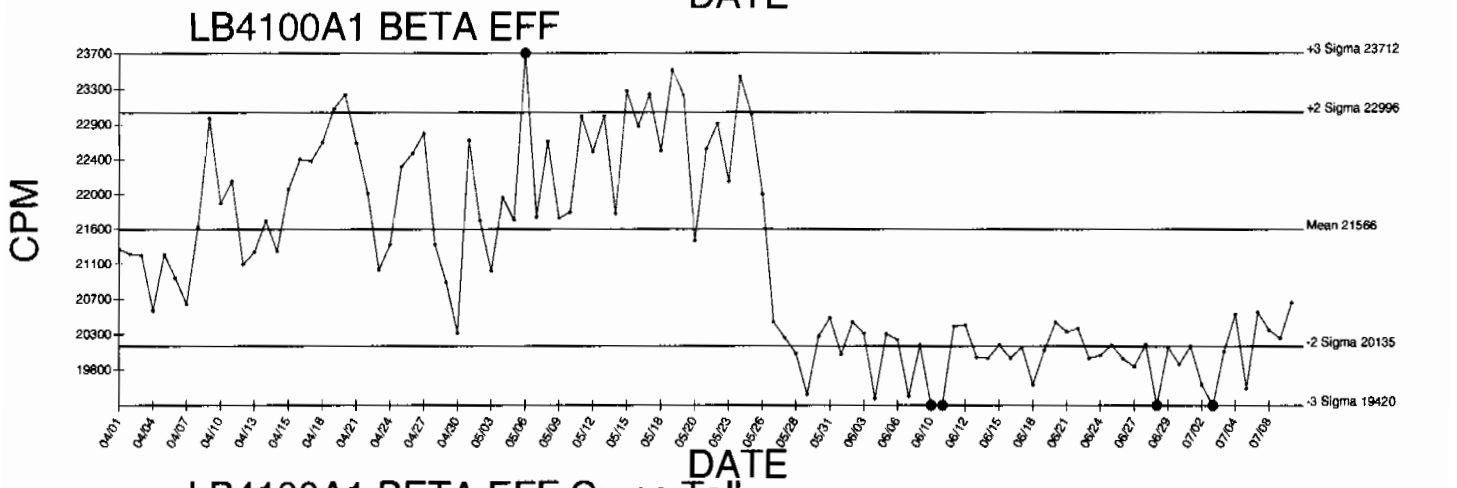

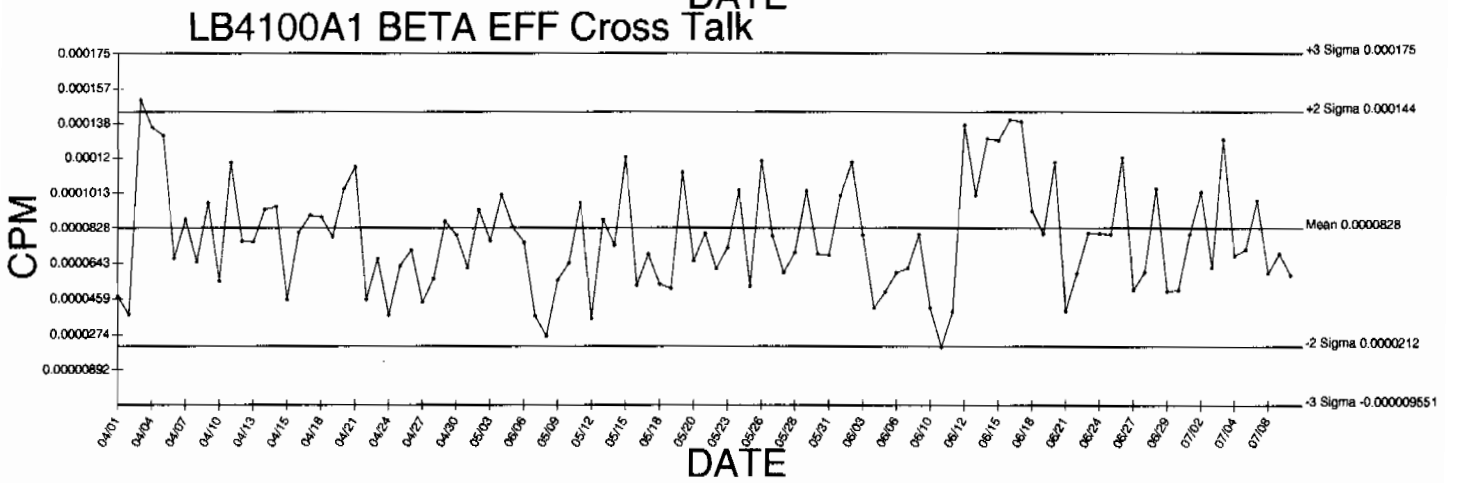

● Denotes Outlier

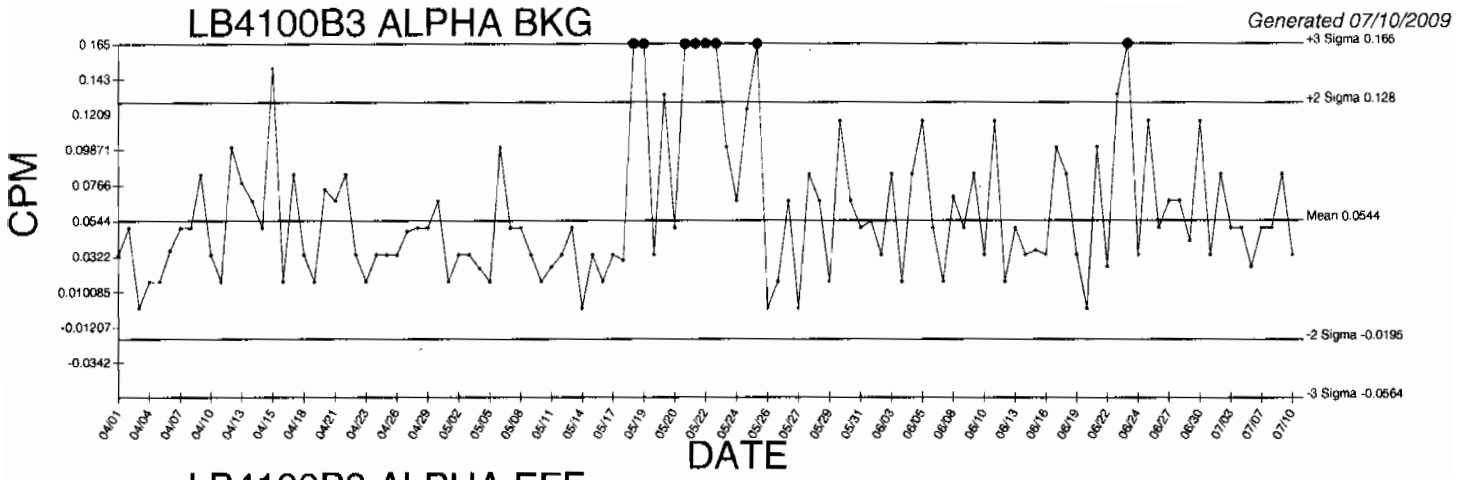

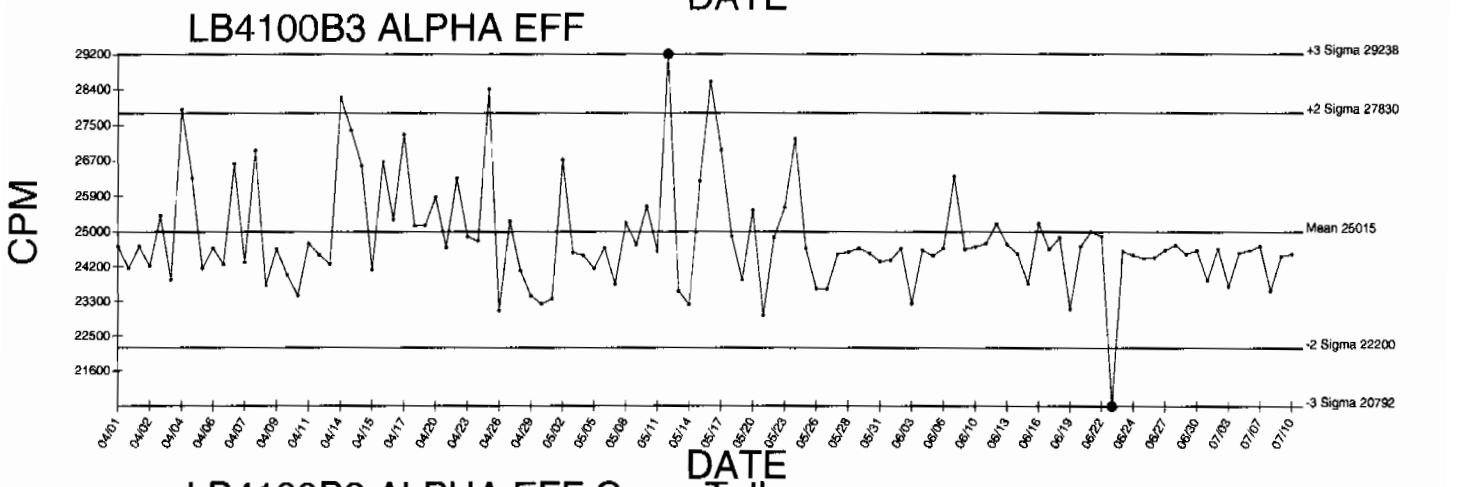

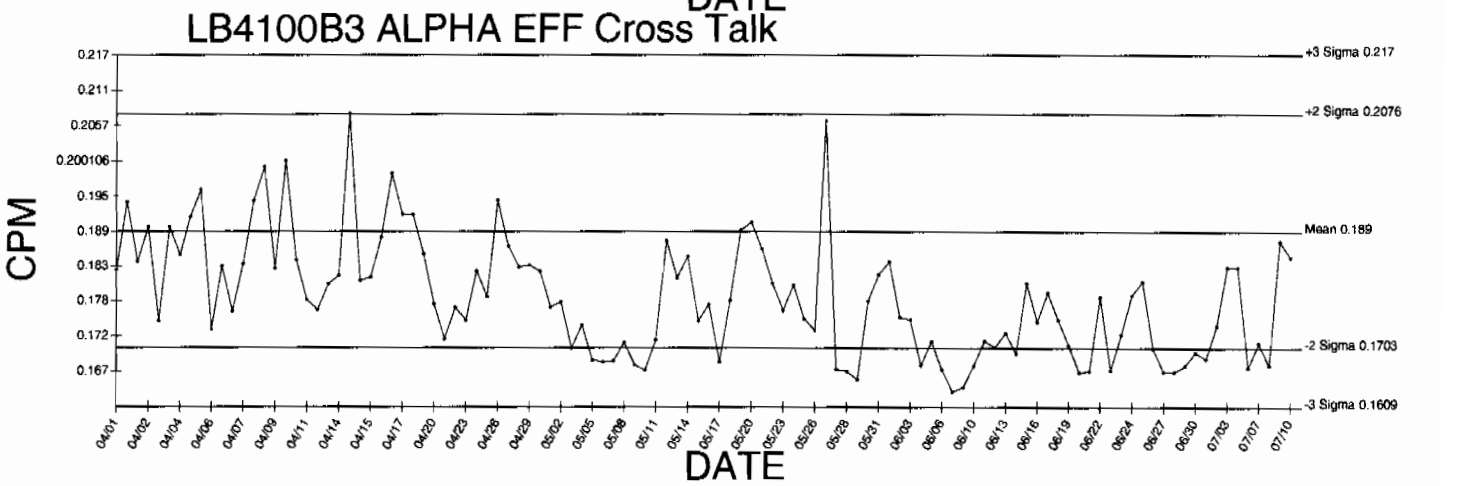

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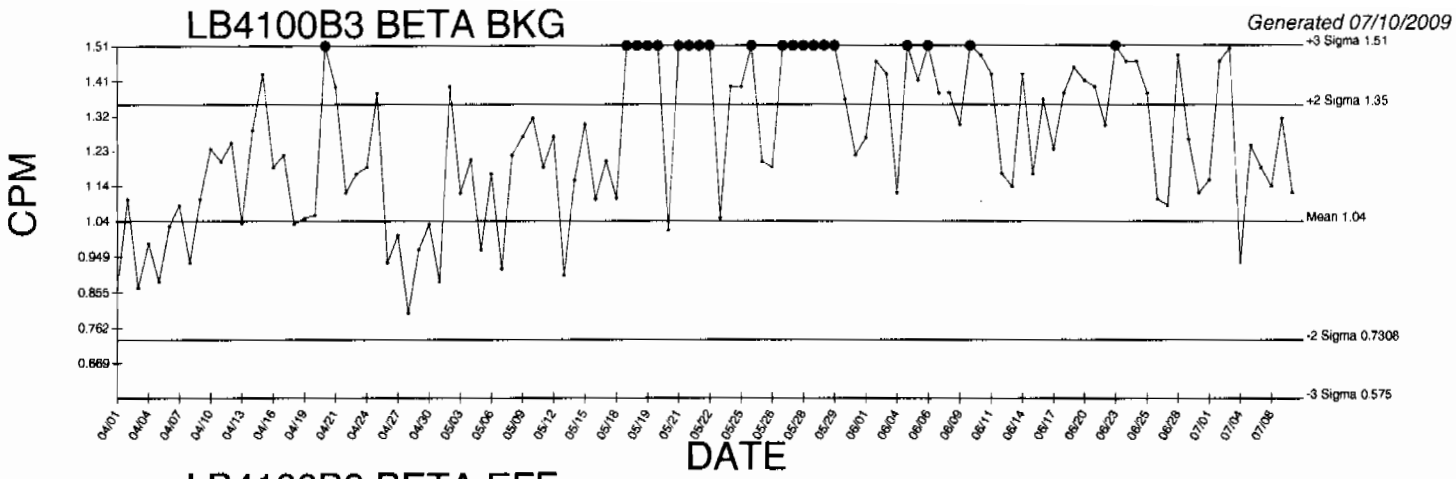

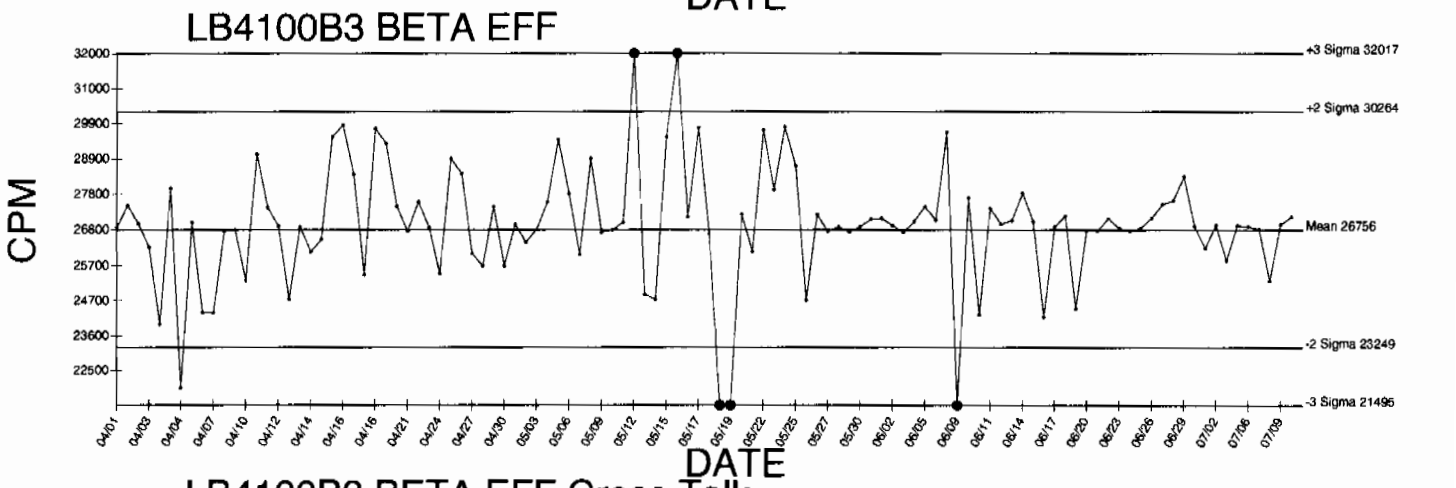

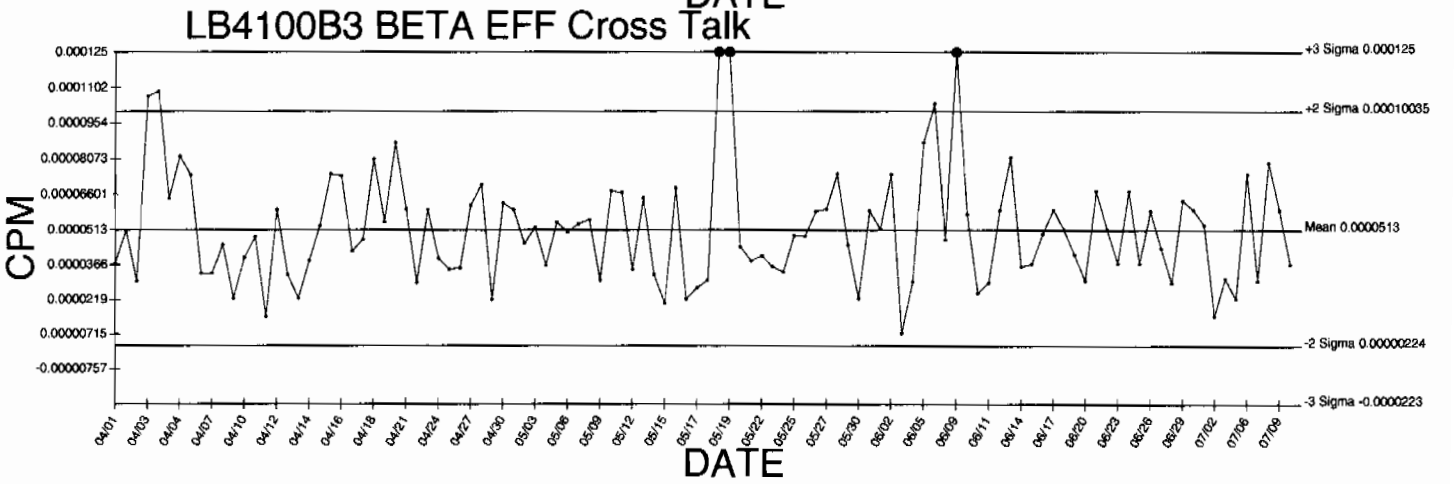

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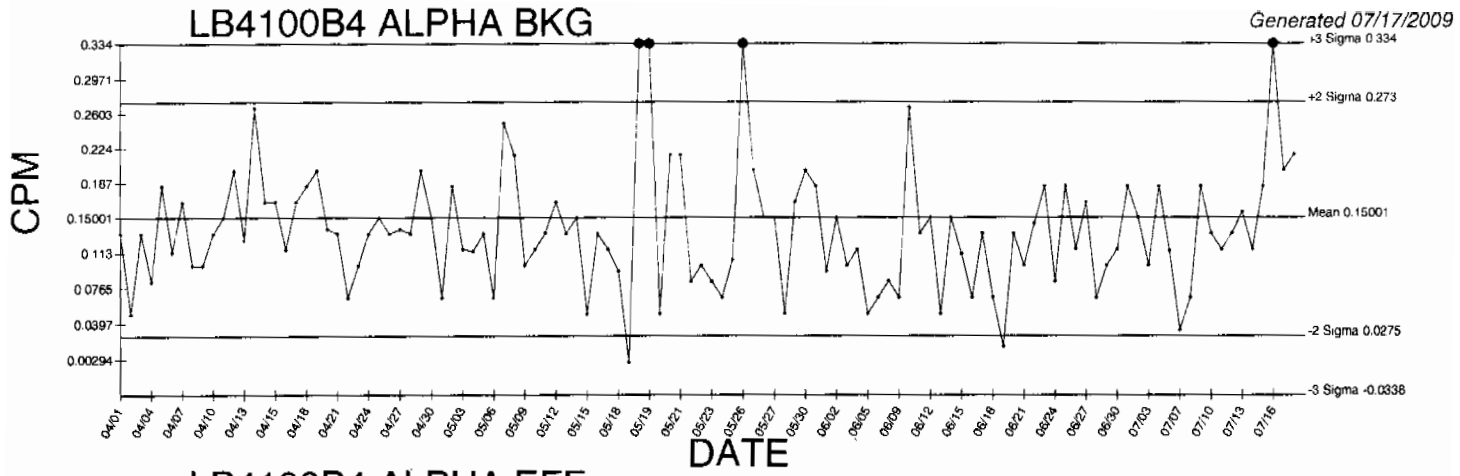

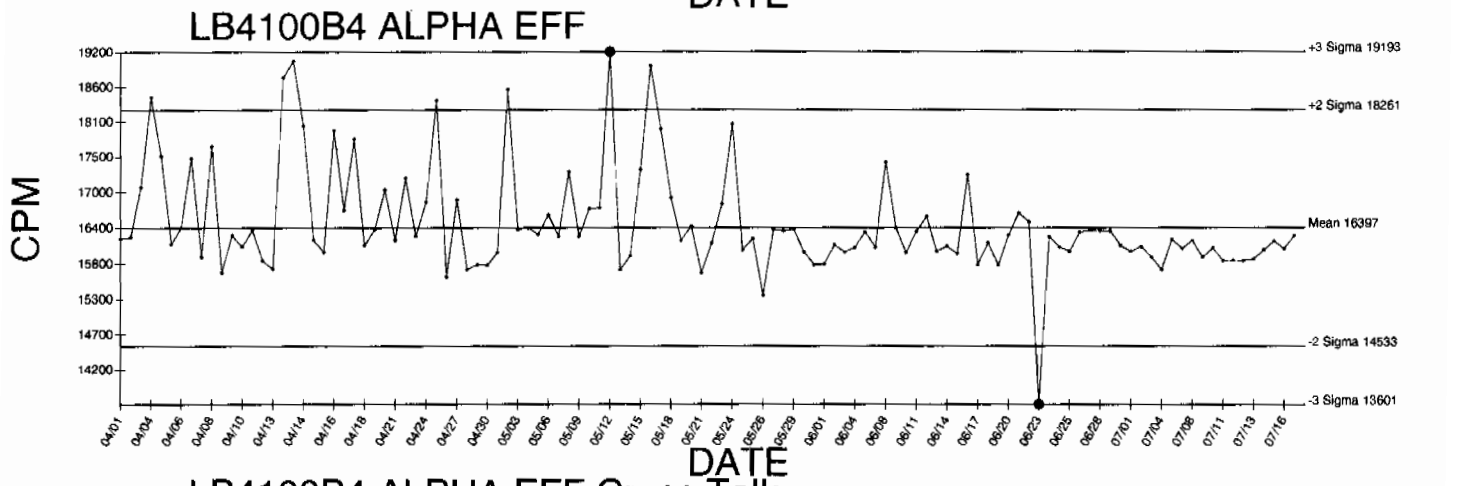

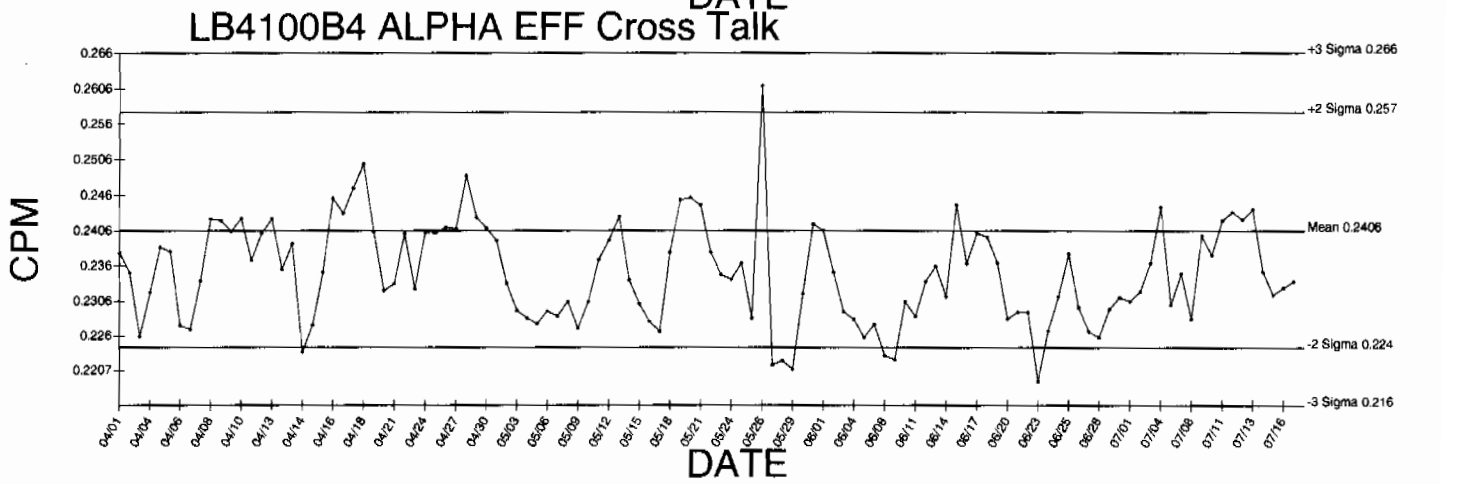

● Denotes Outlier

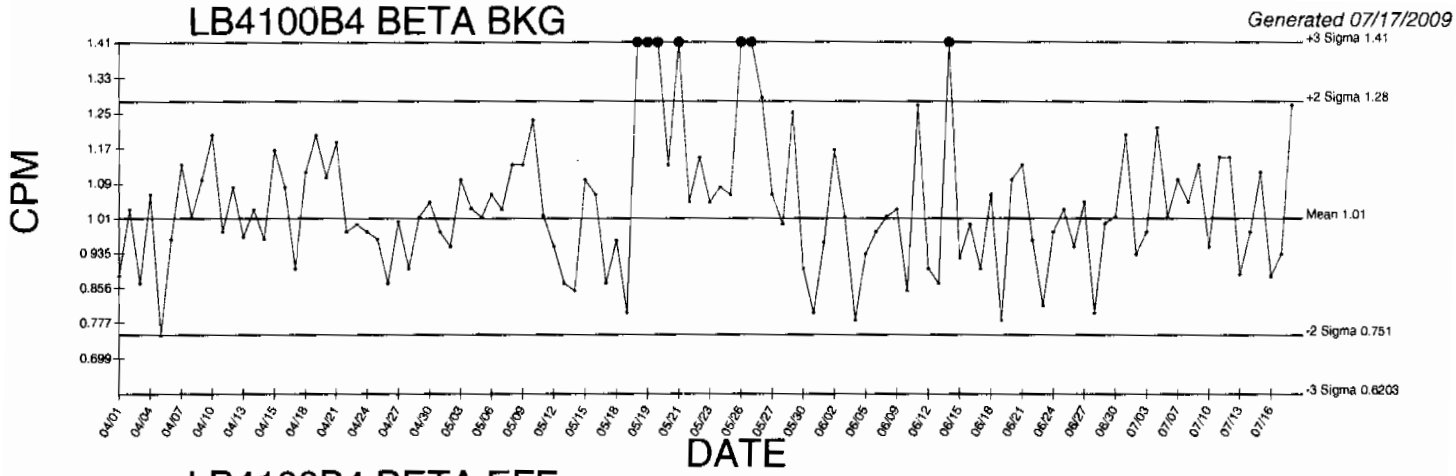

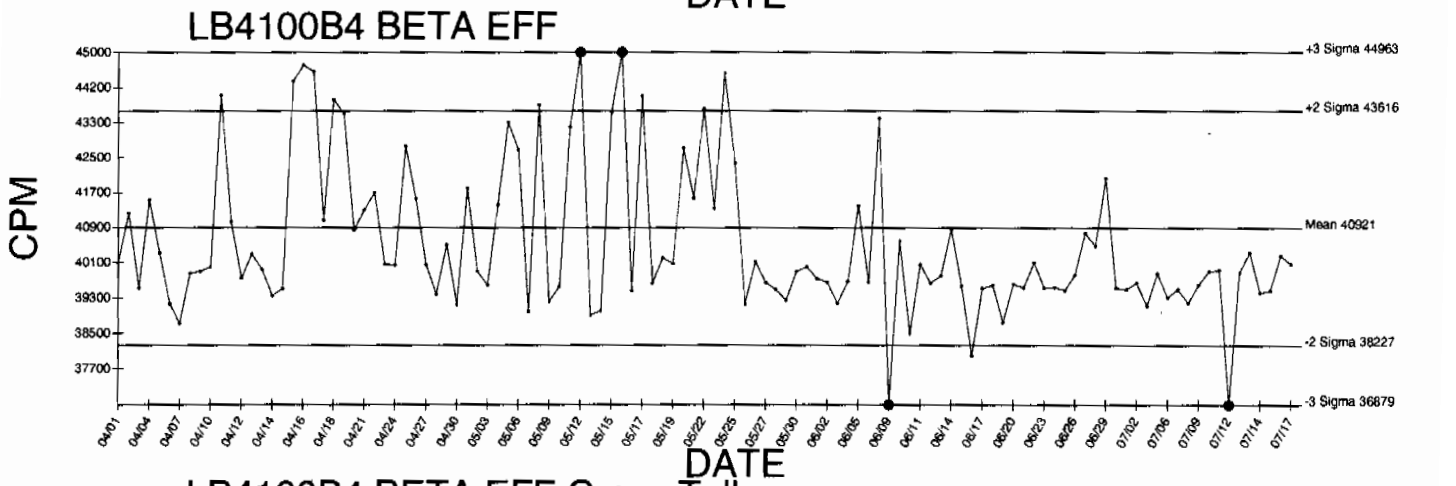

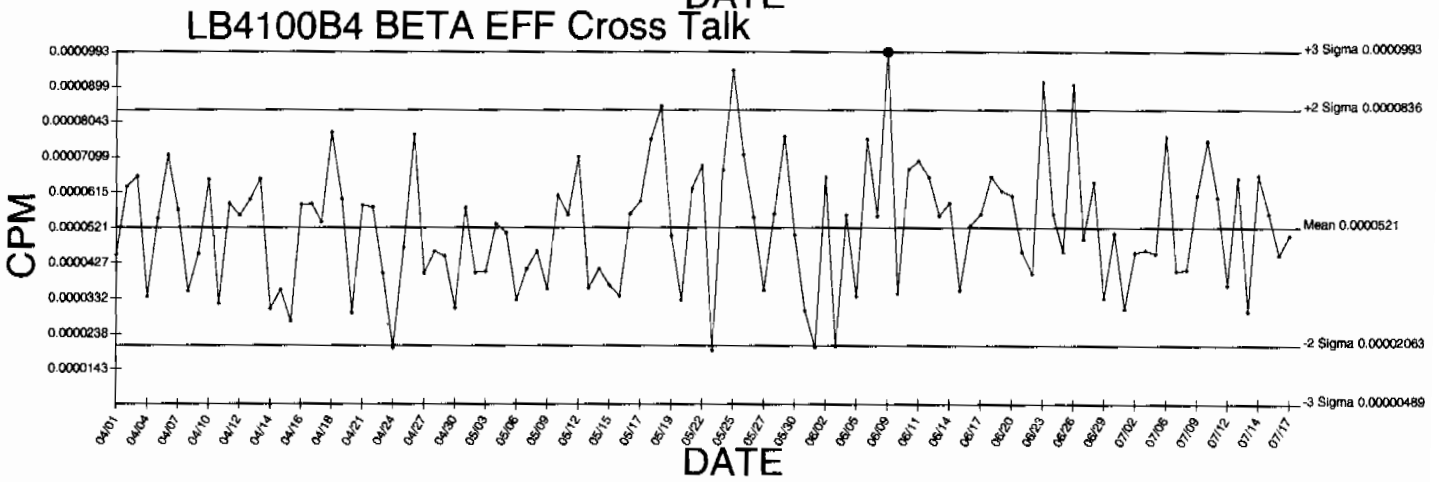

● Denotes Outlier

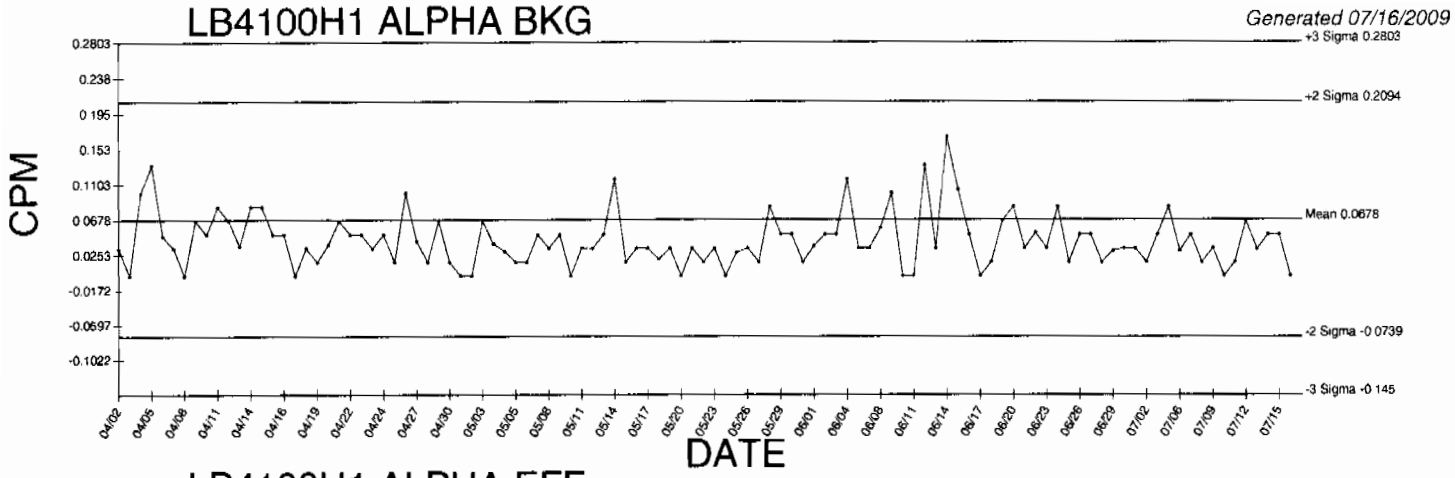

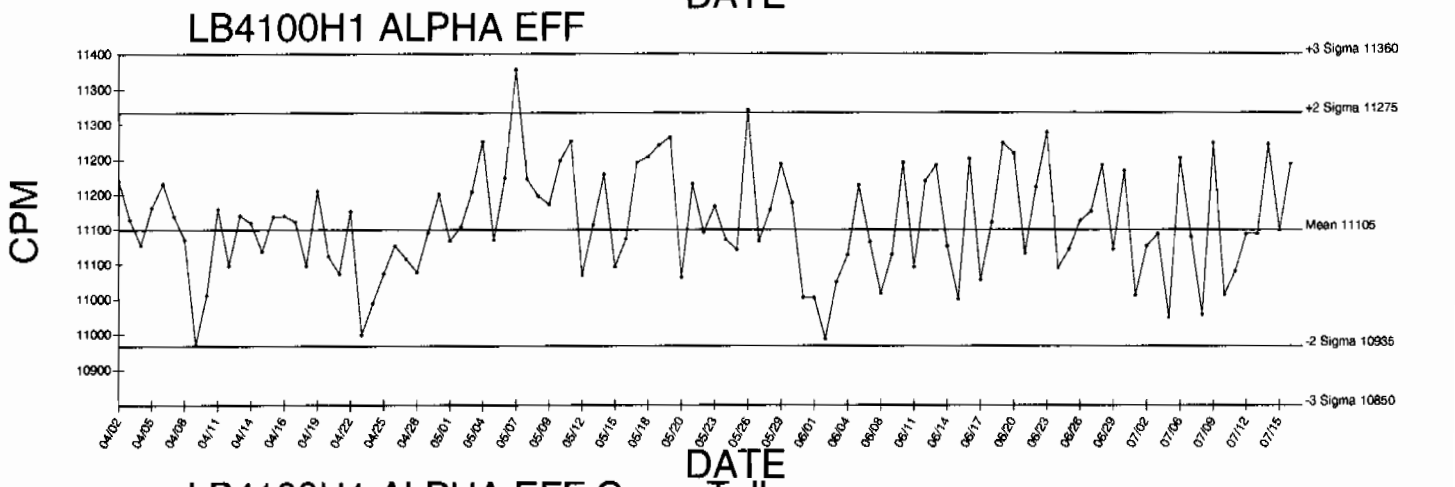

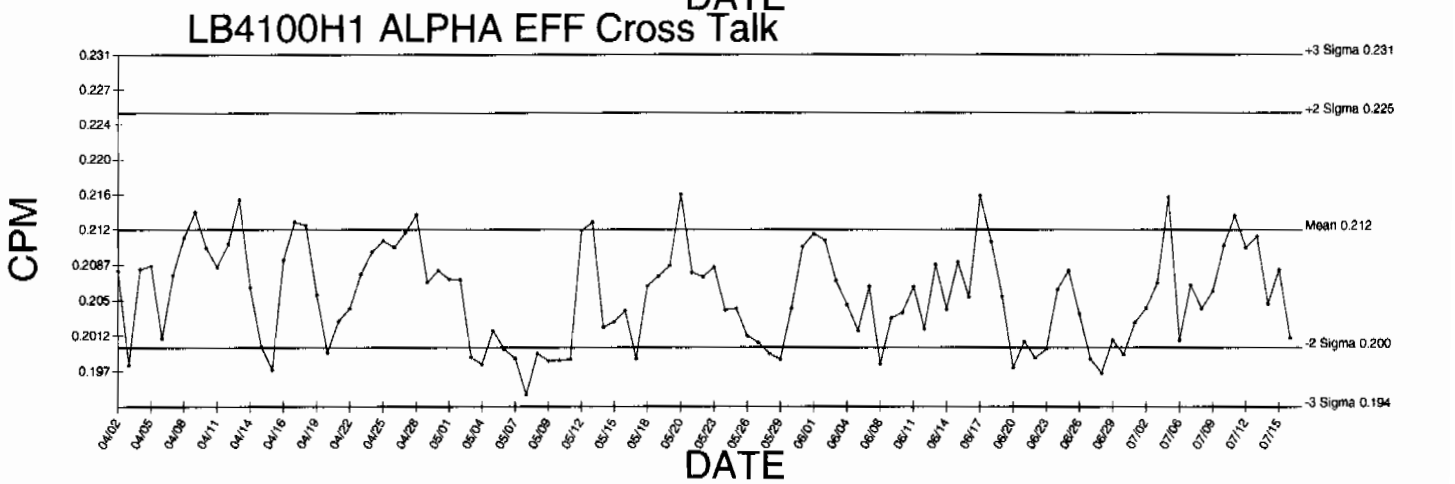

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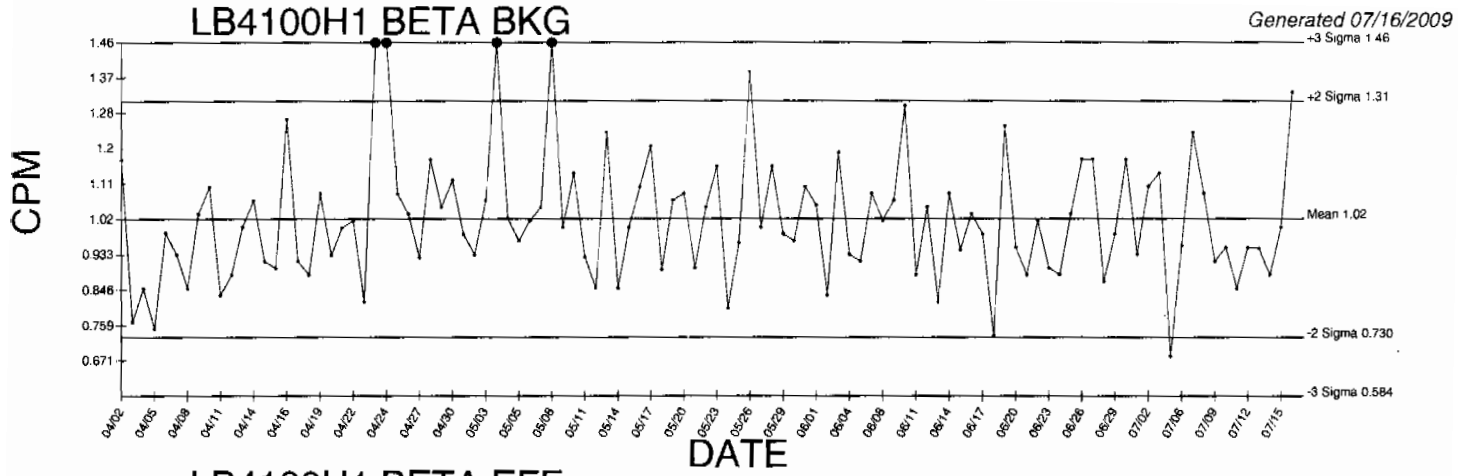

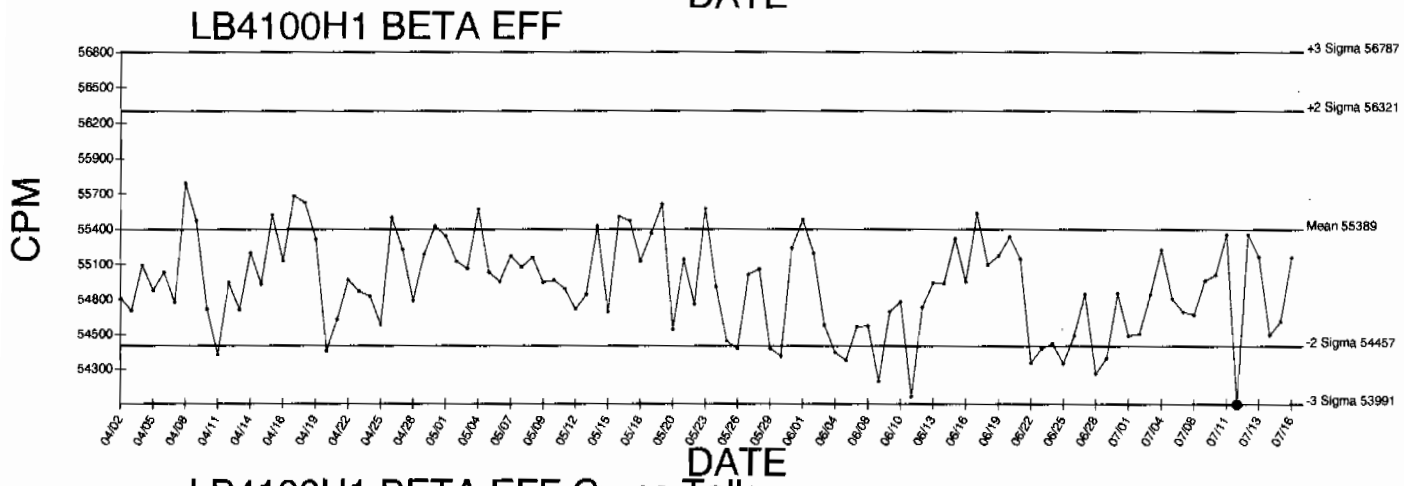

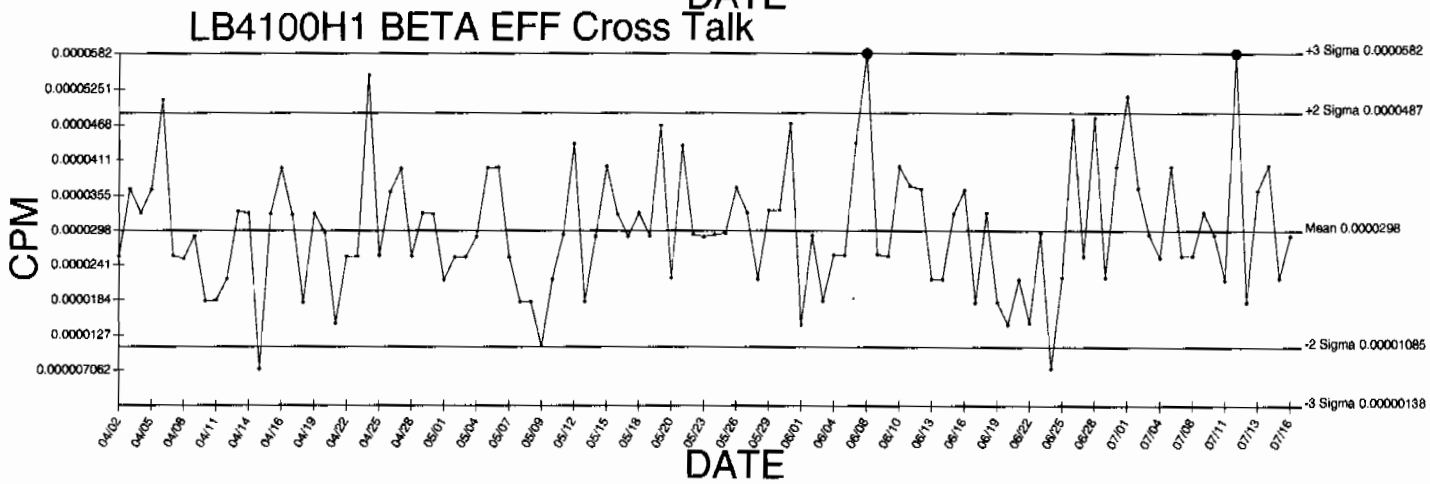

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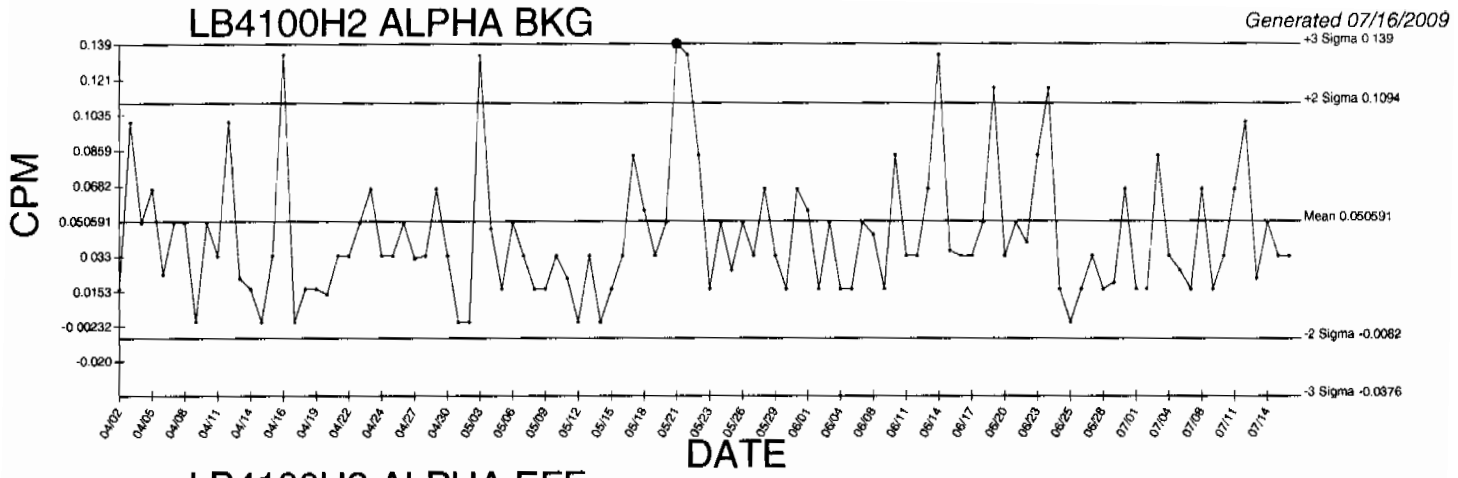

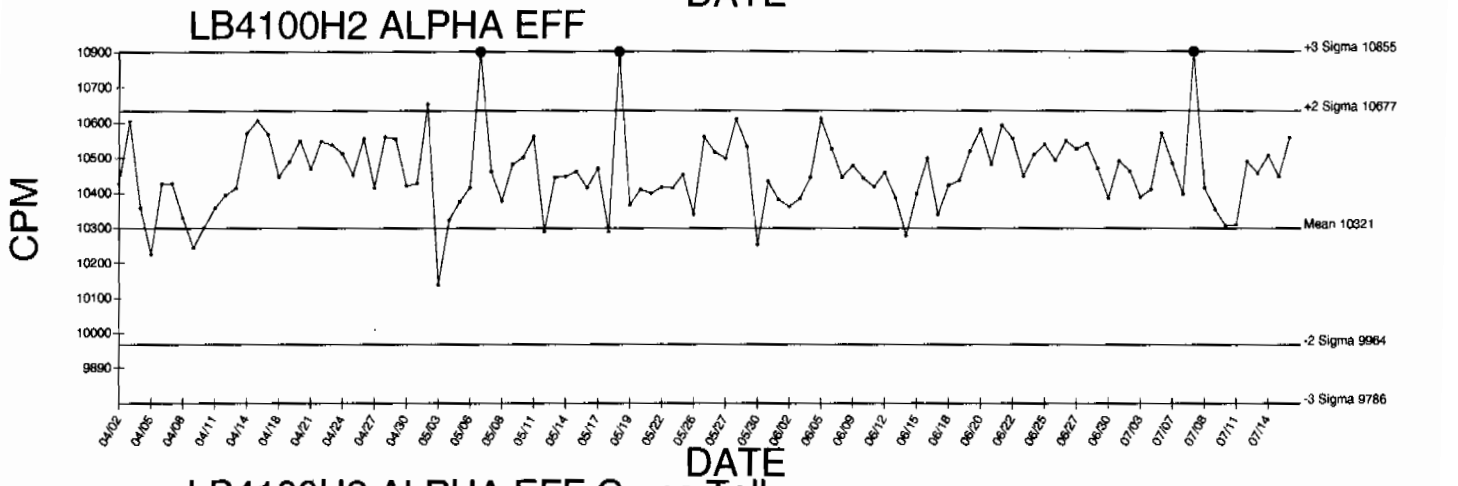

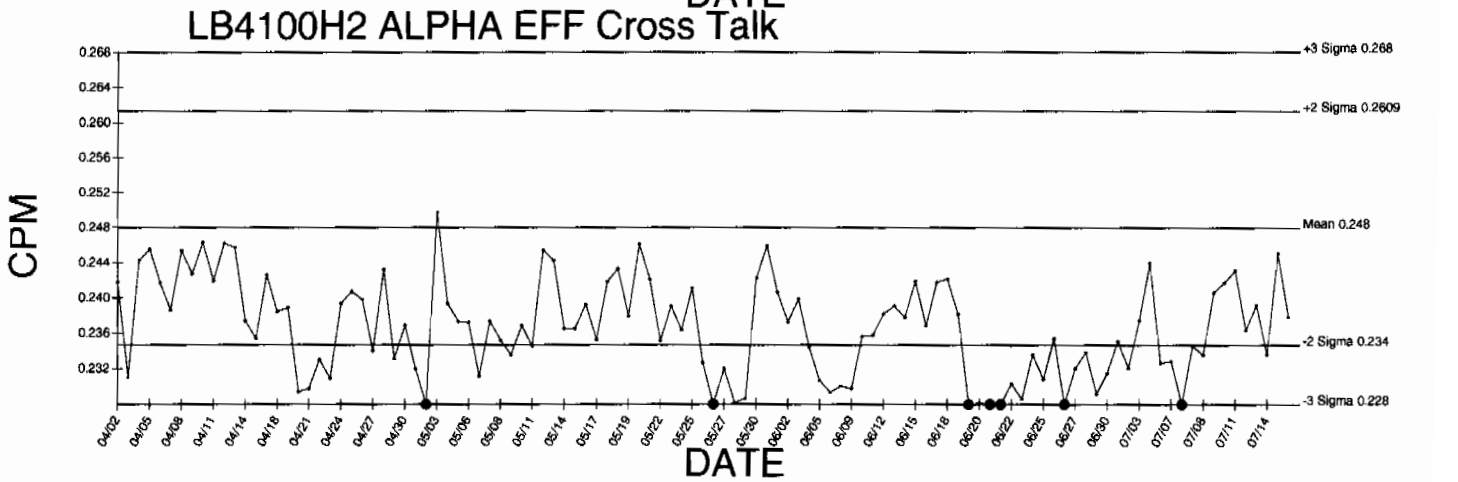

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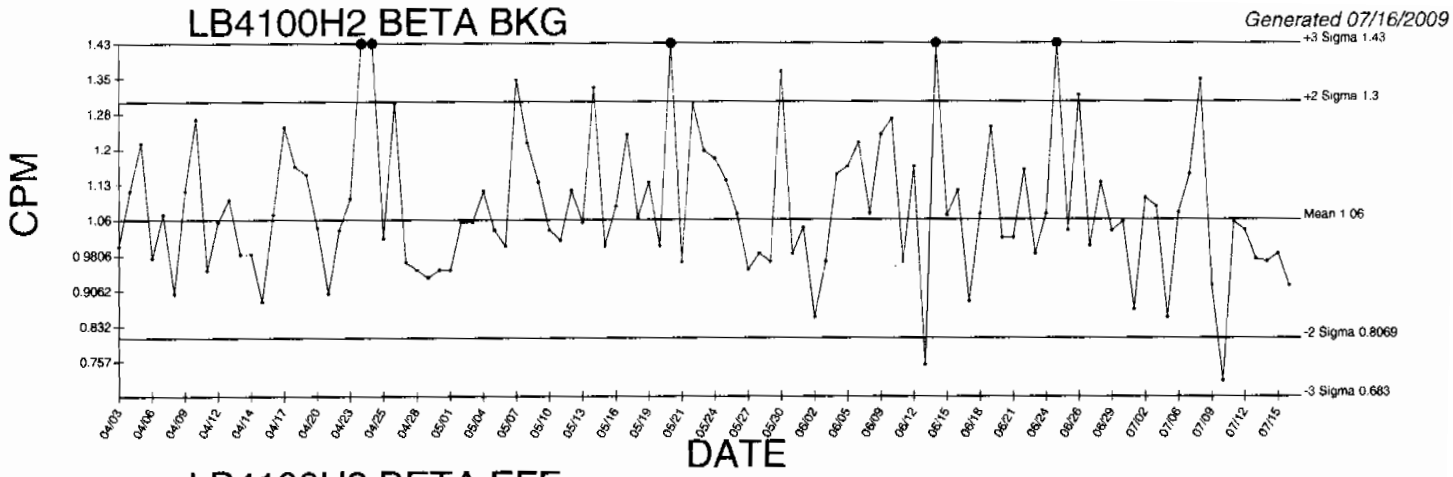

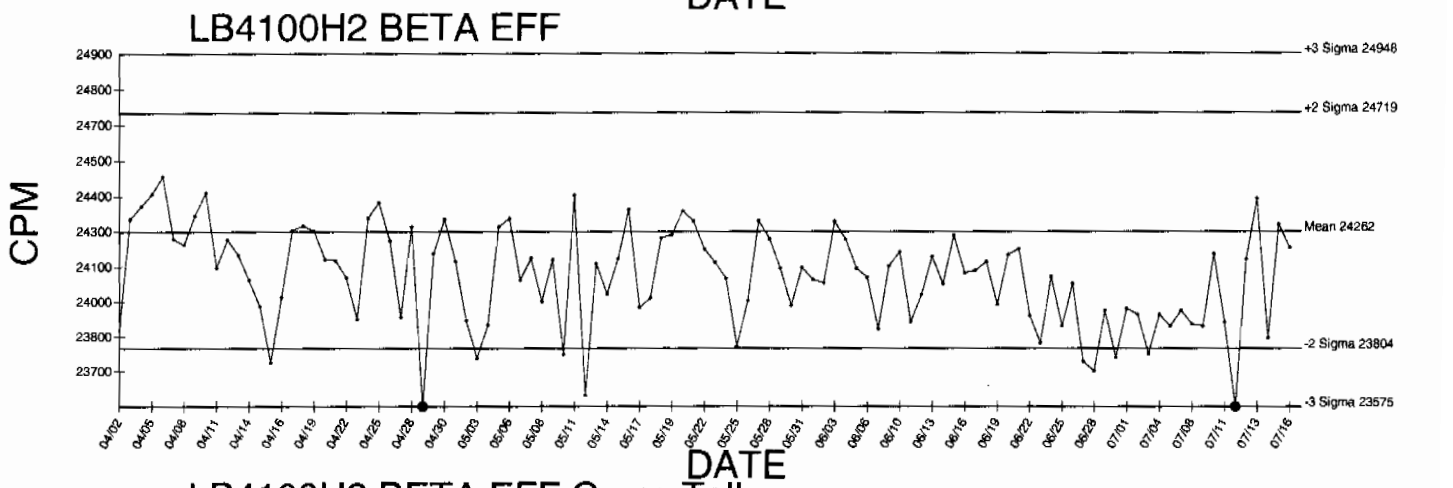

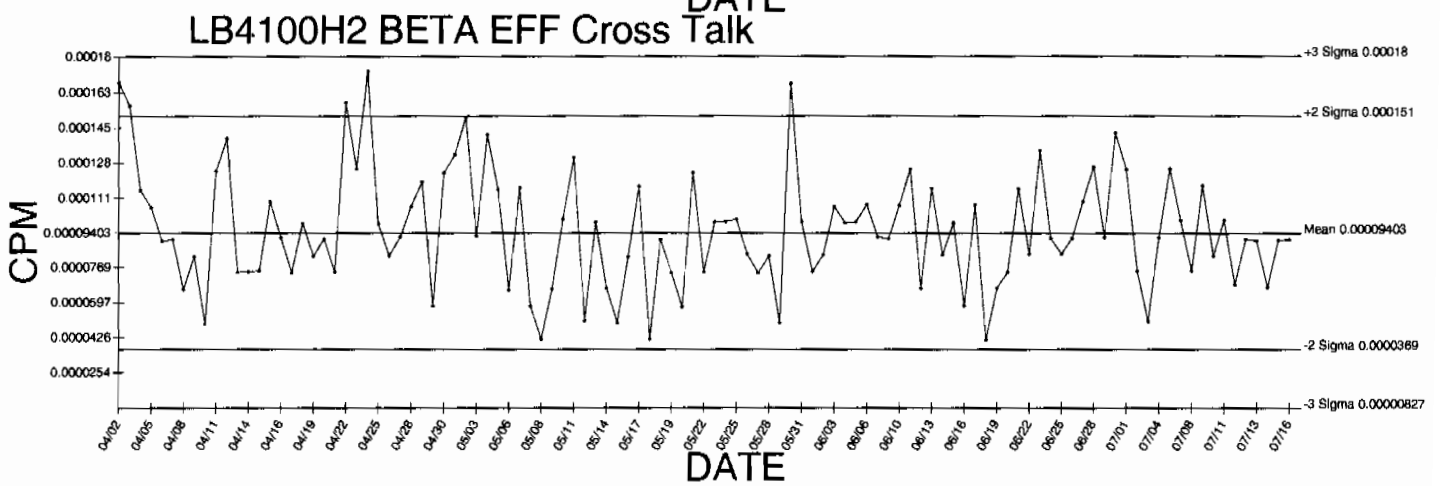

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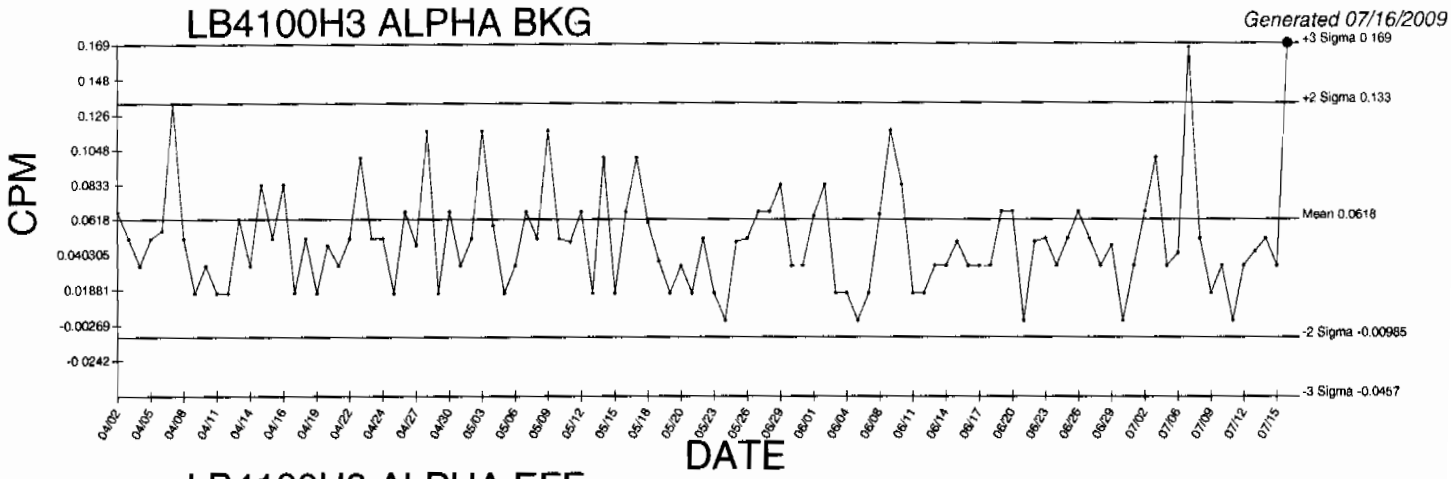

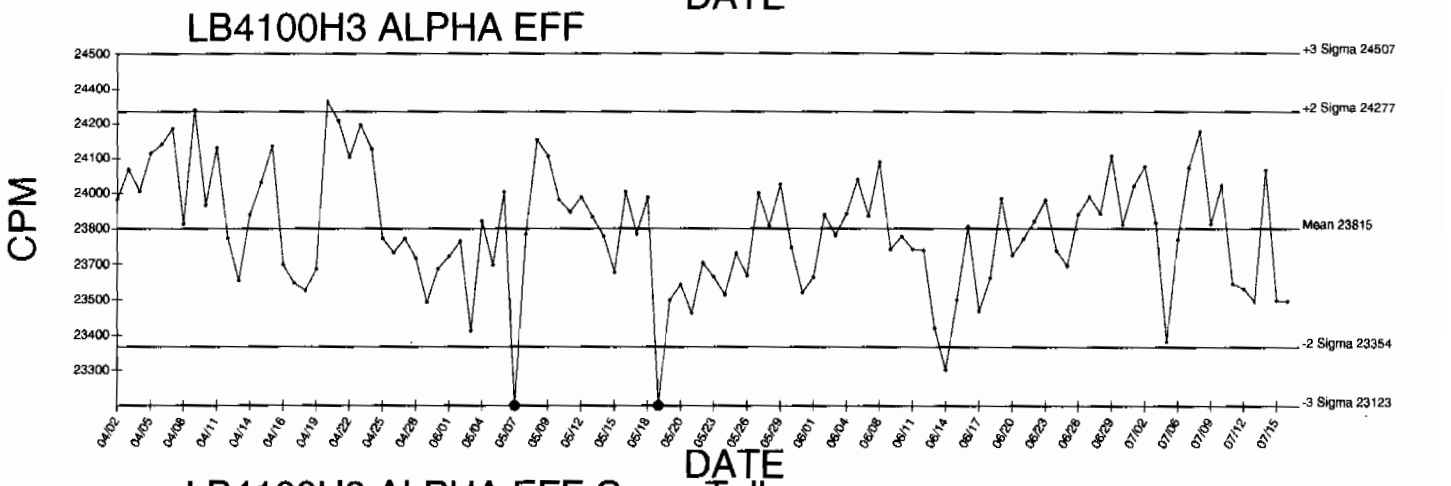

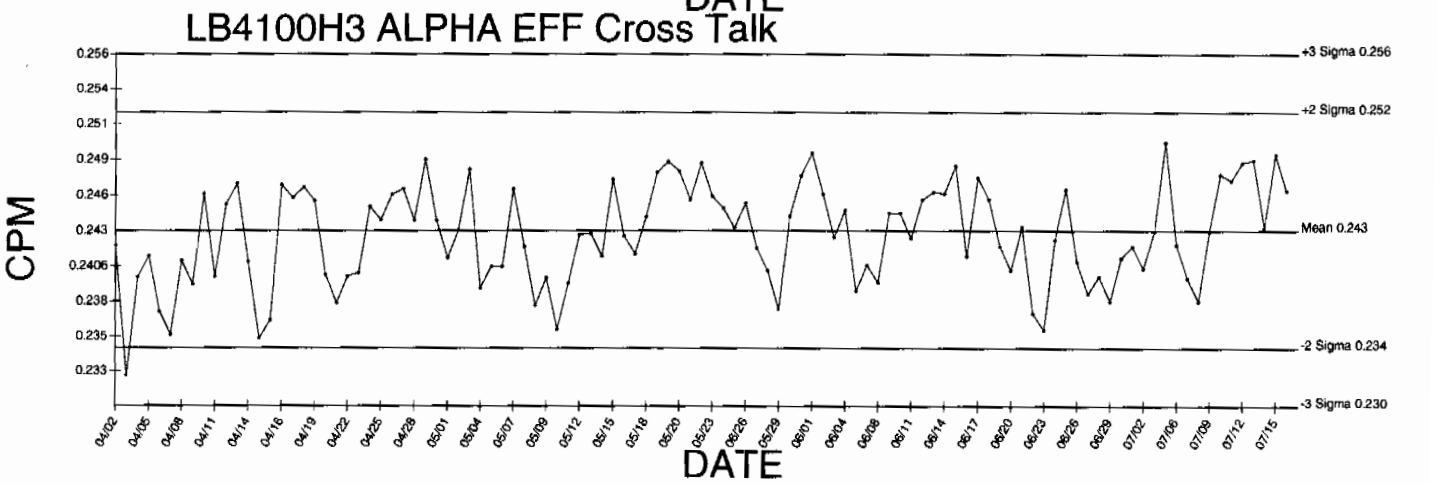

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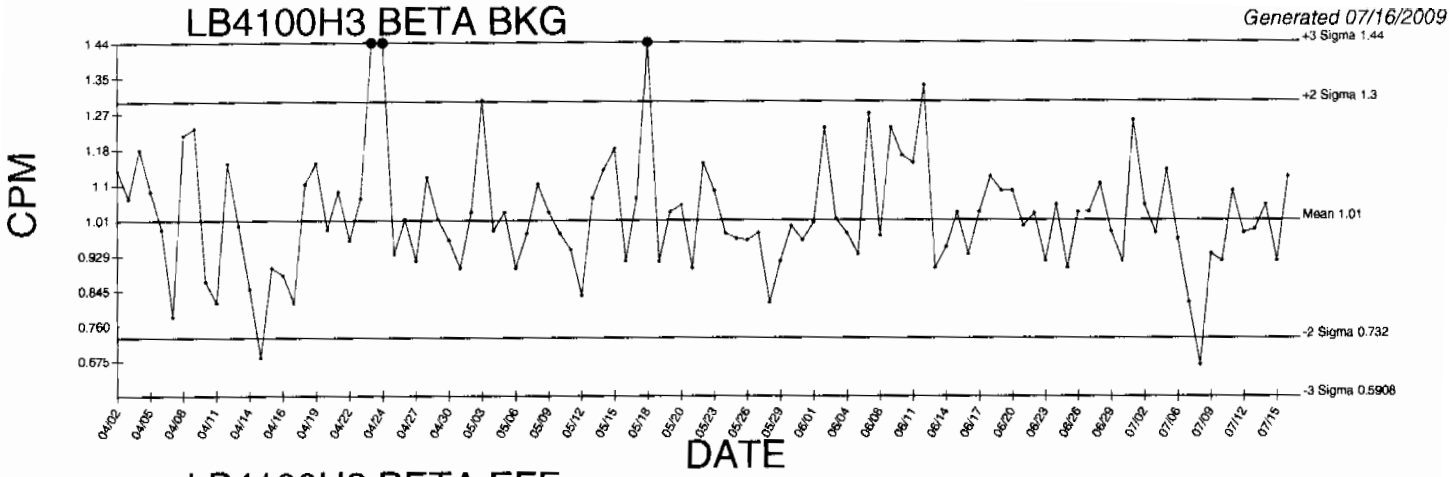

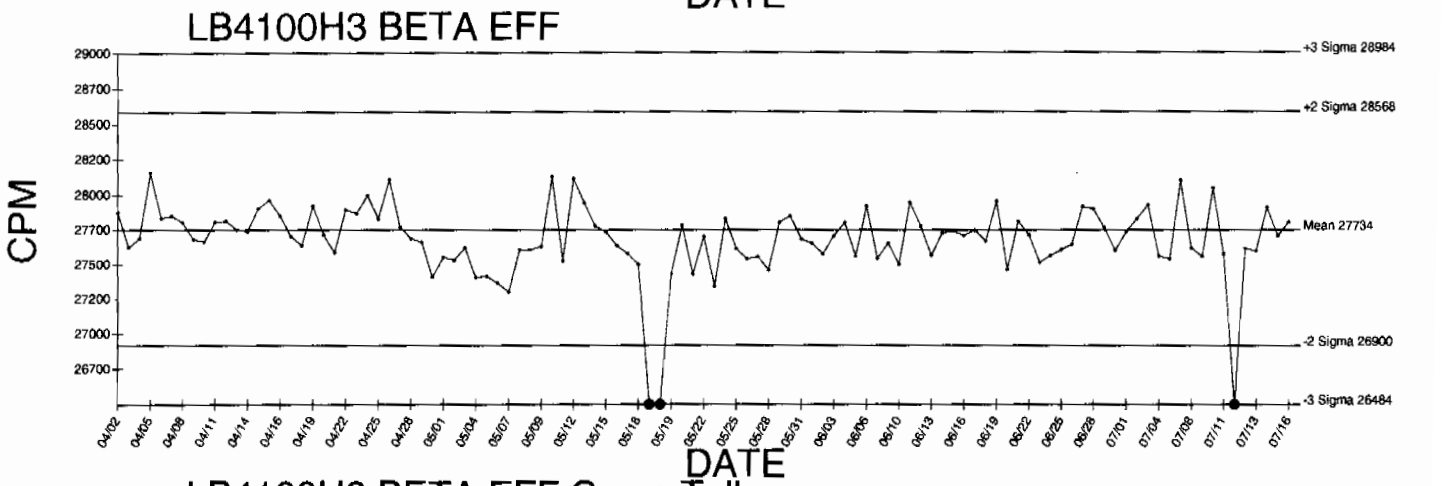

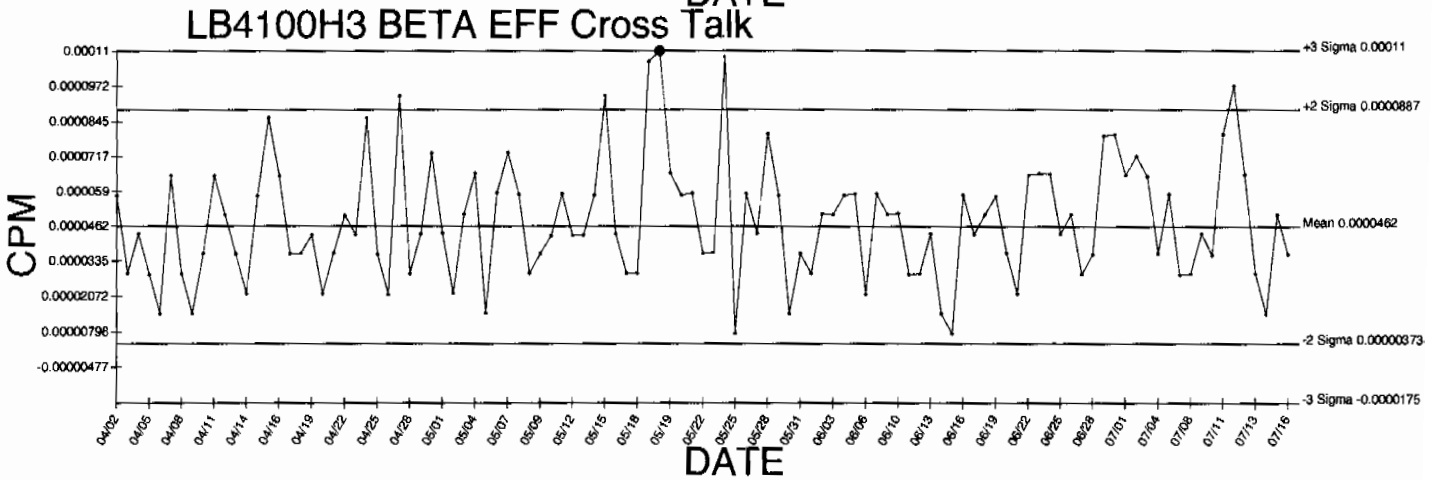

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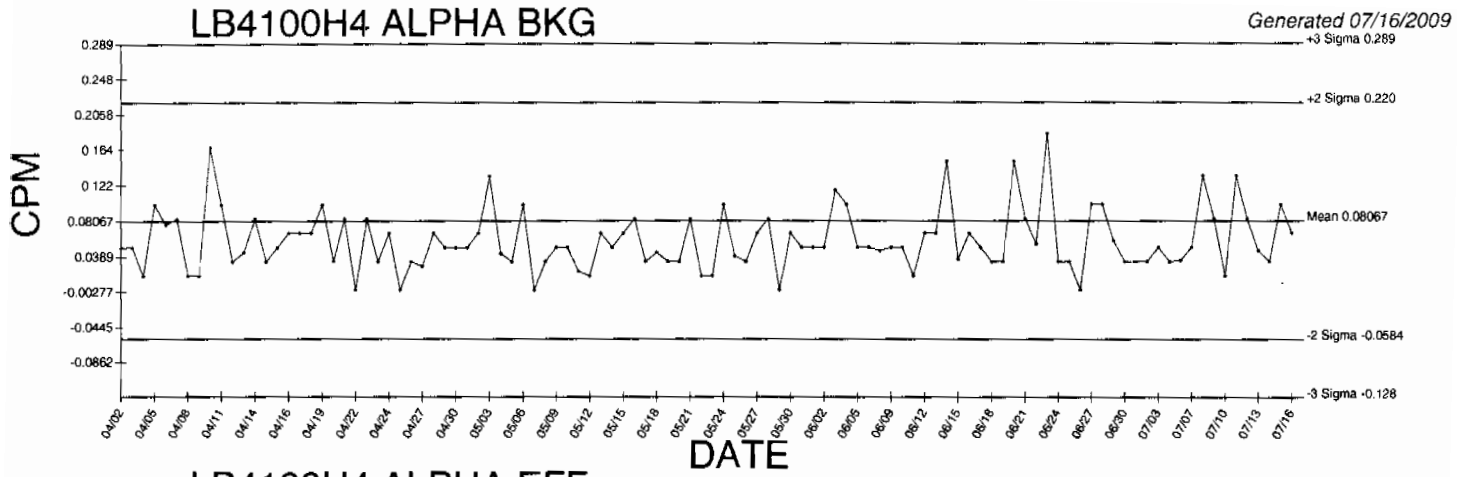

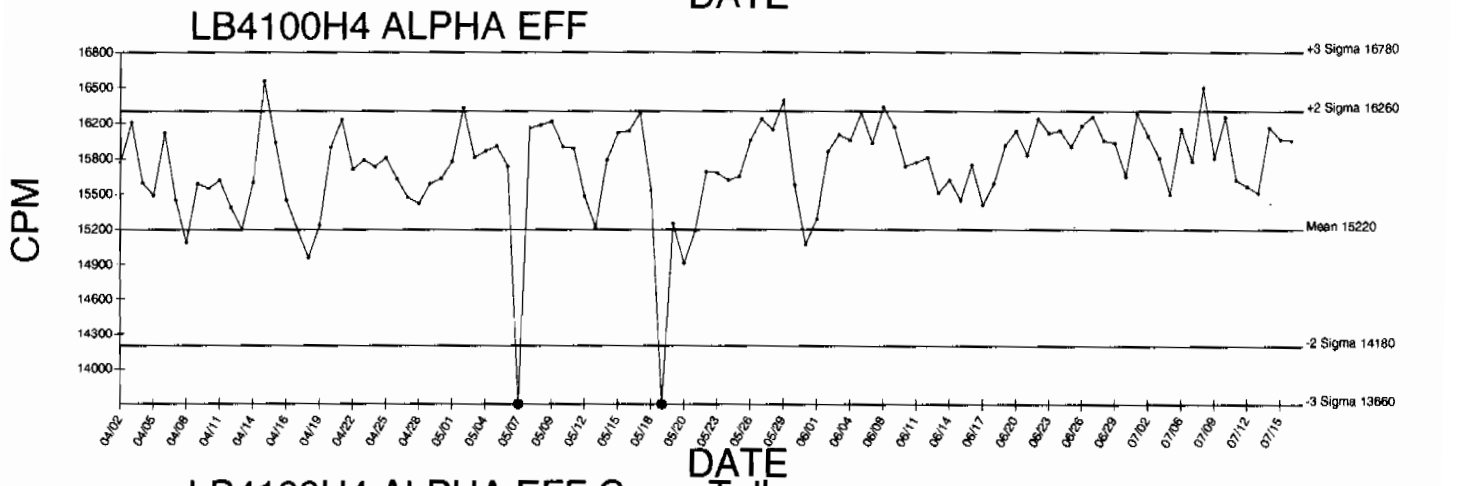

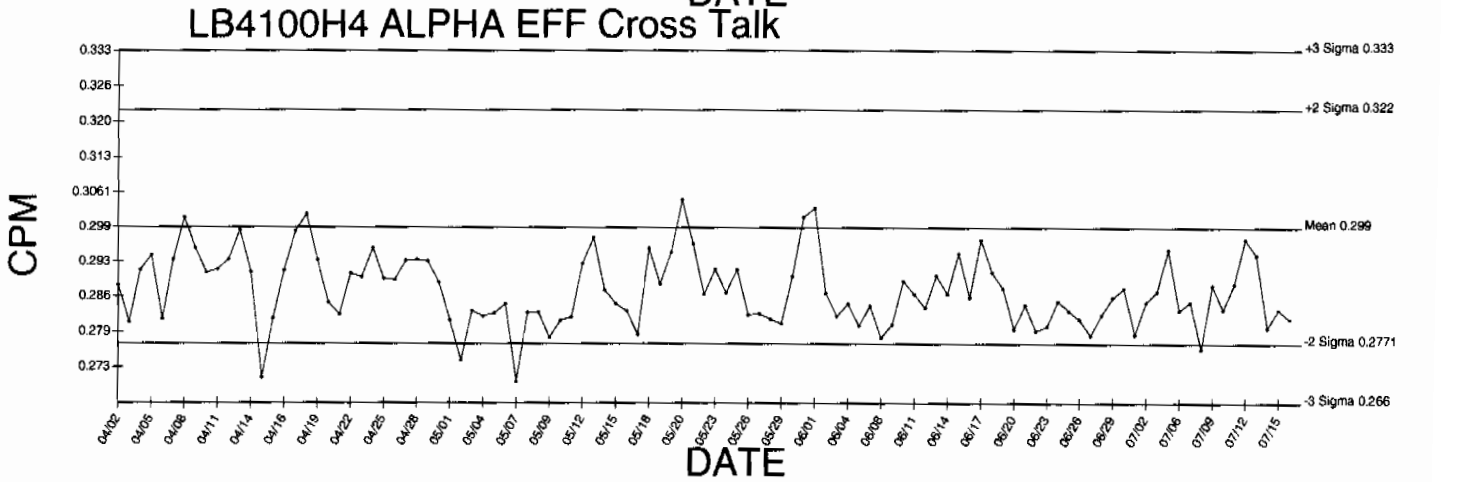

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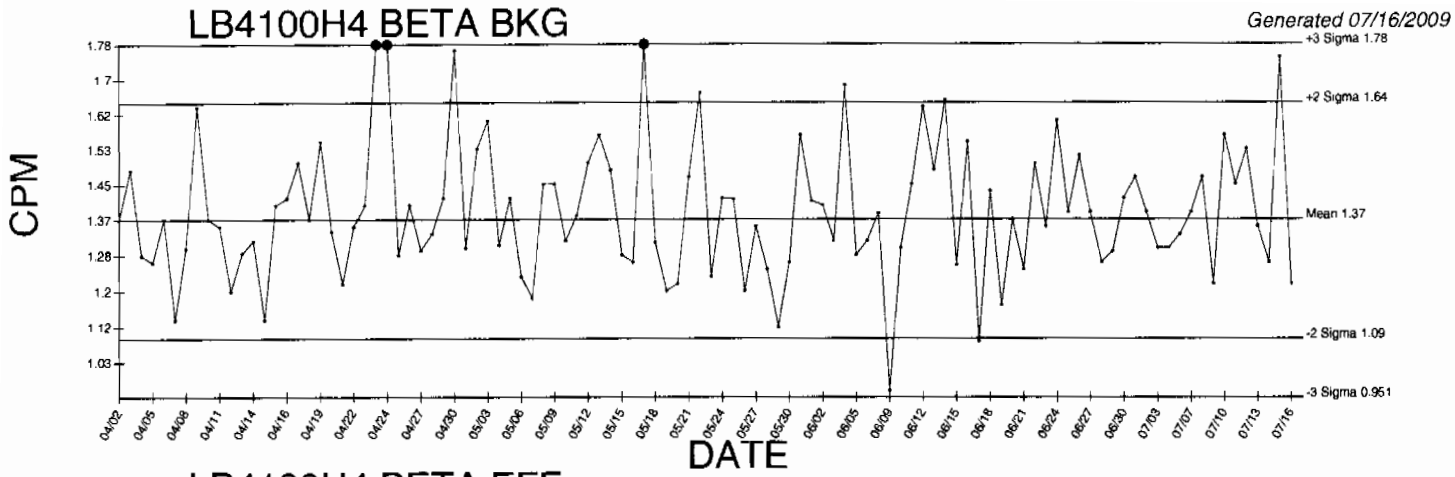

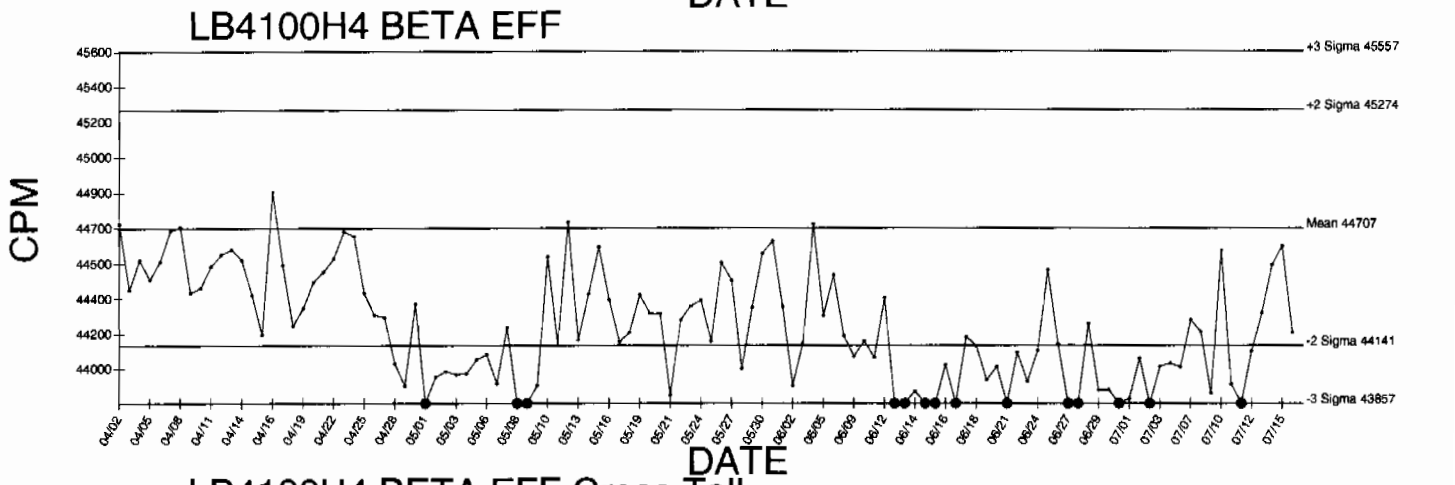

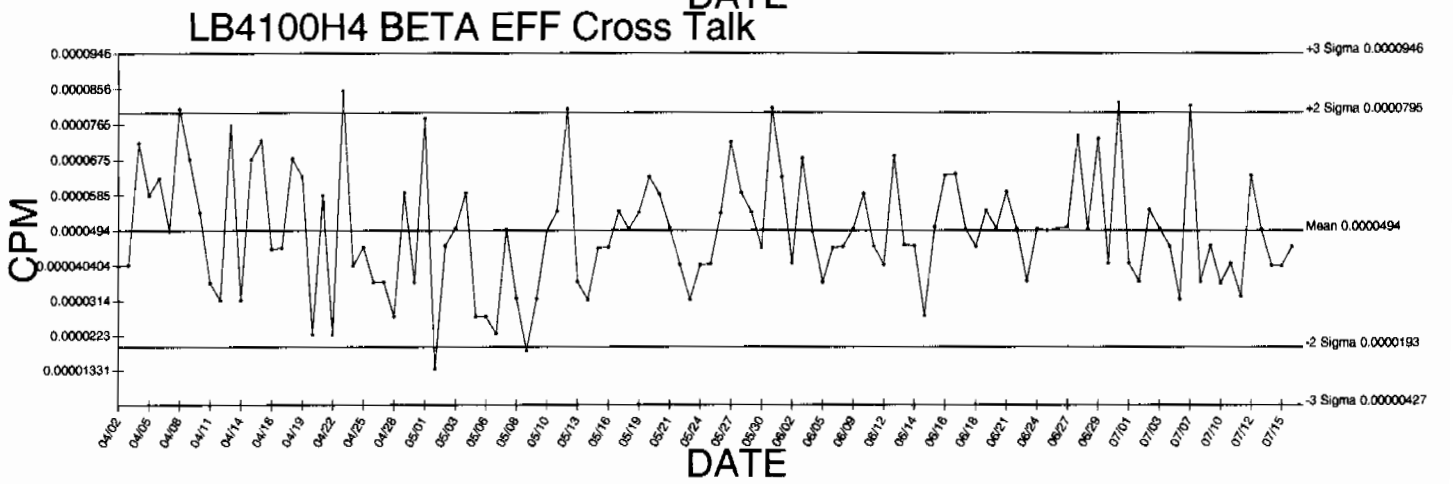

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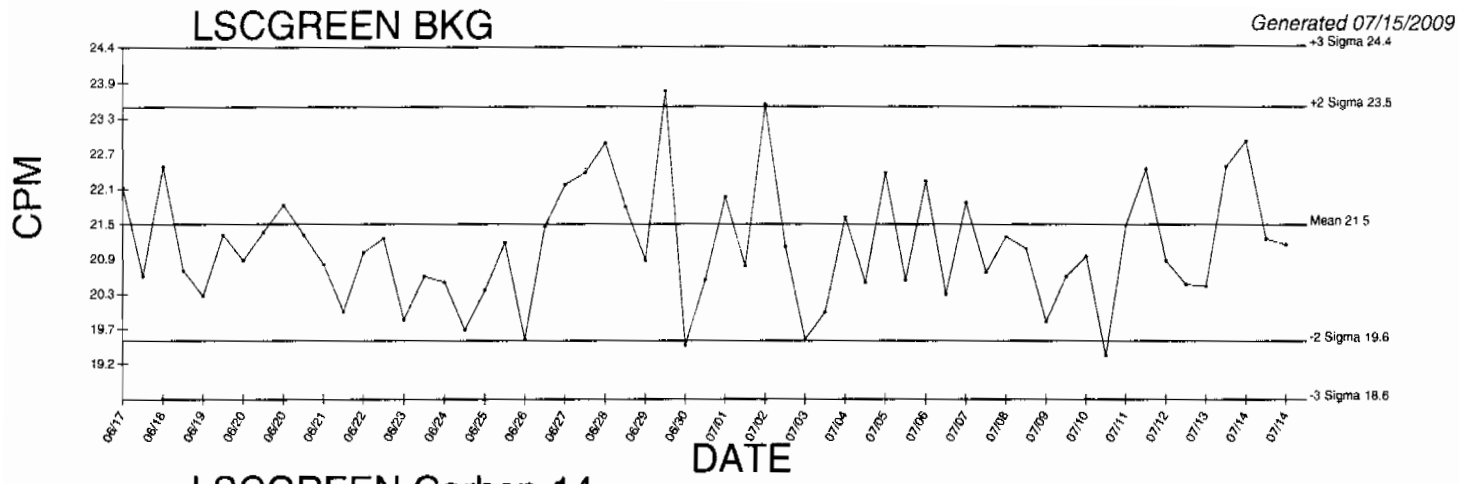

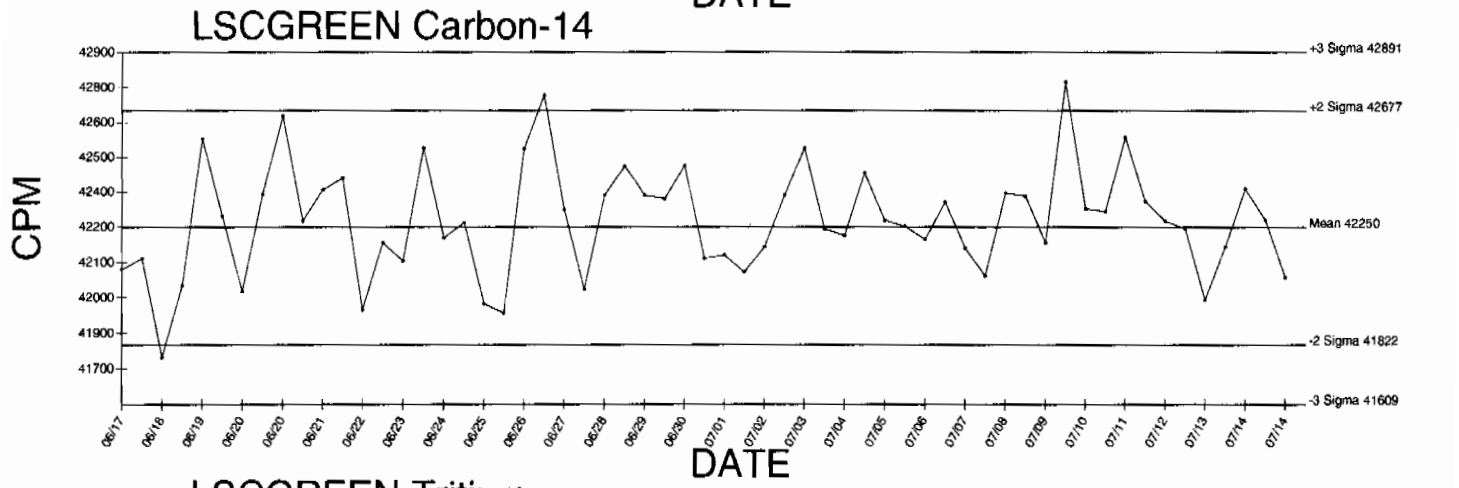

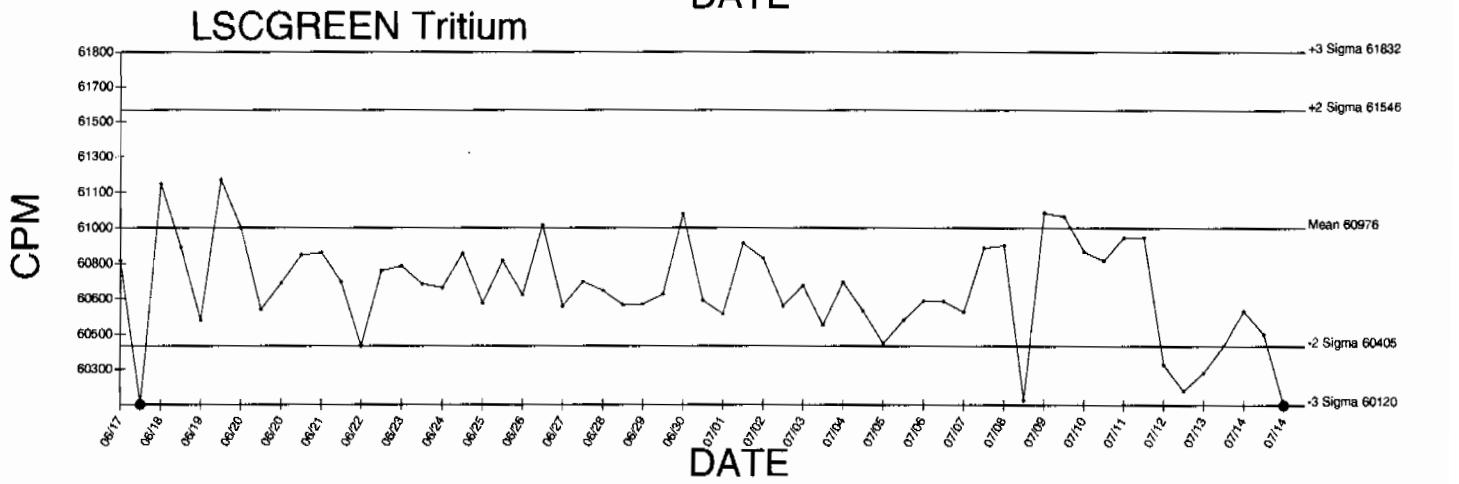

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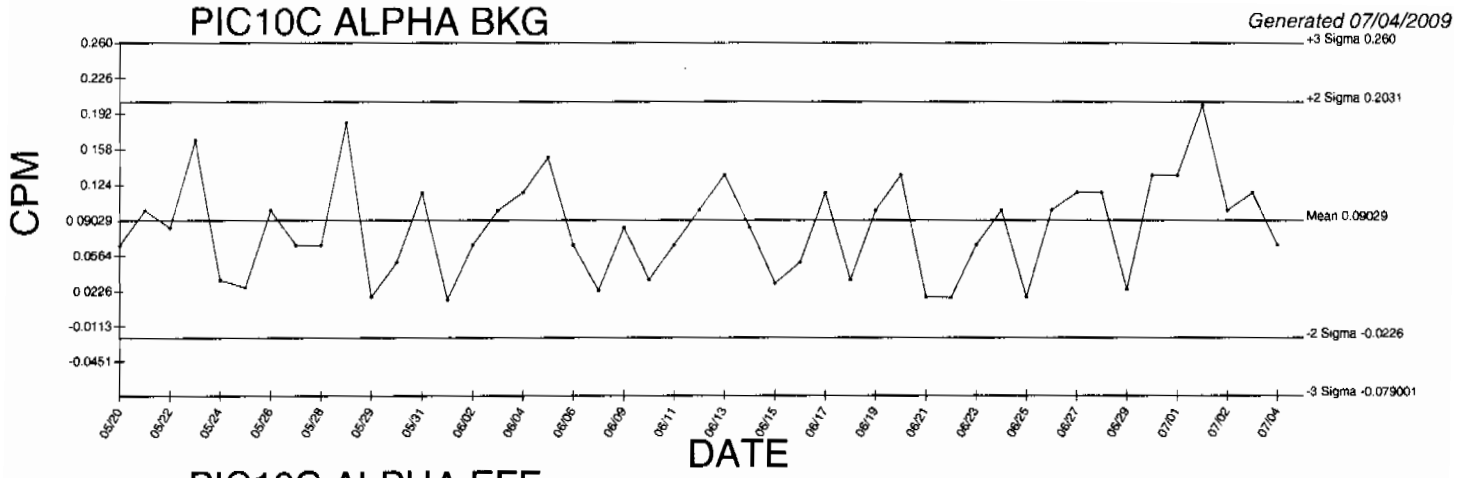

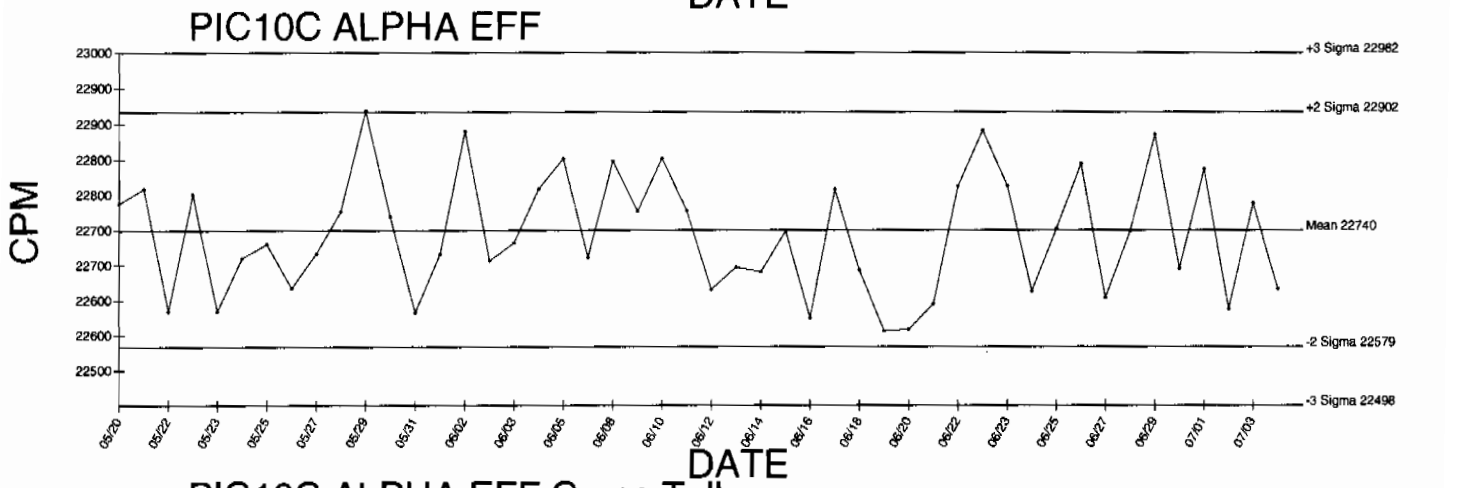

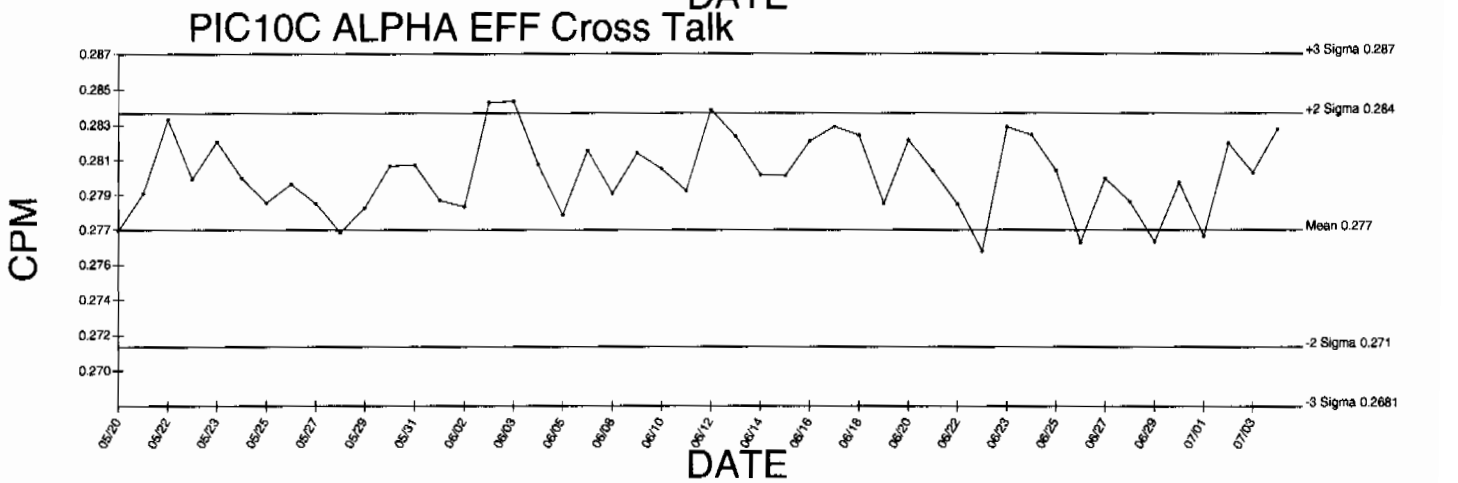

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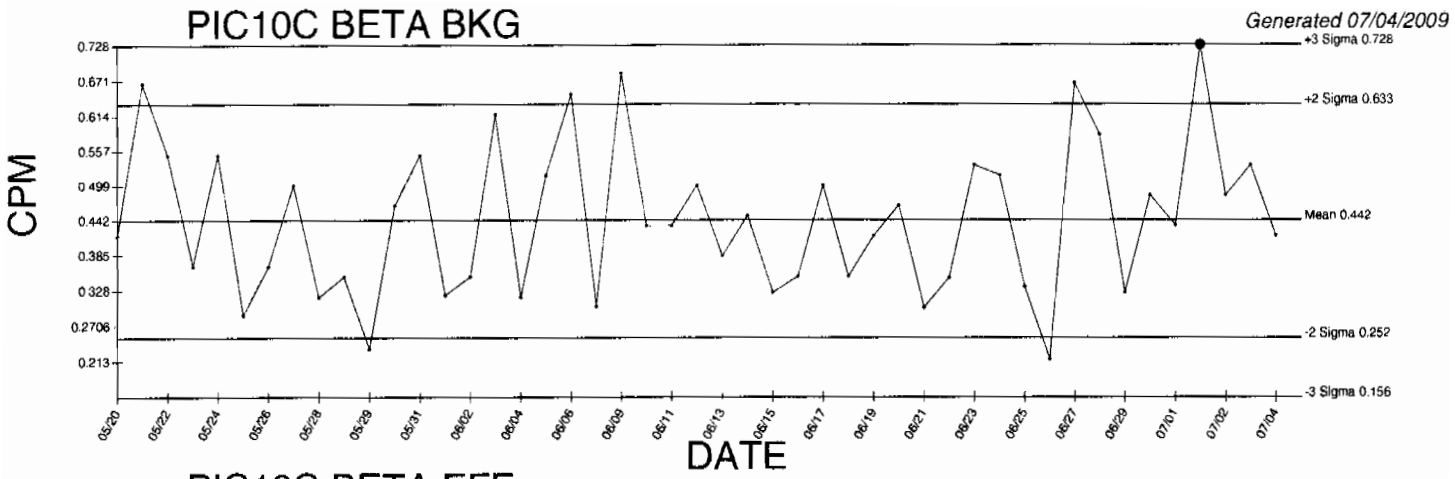

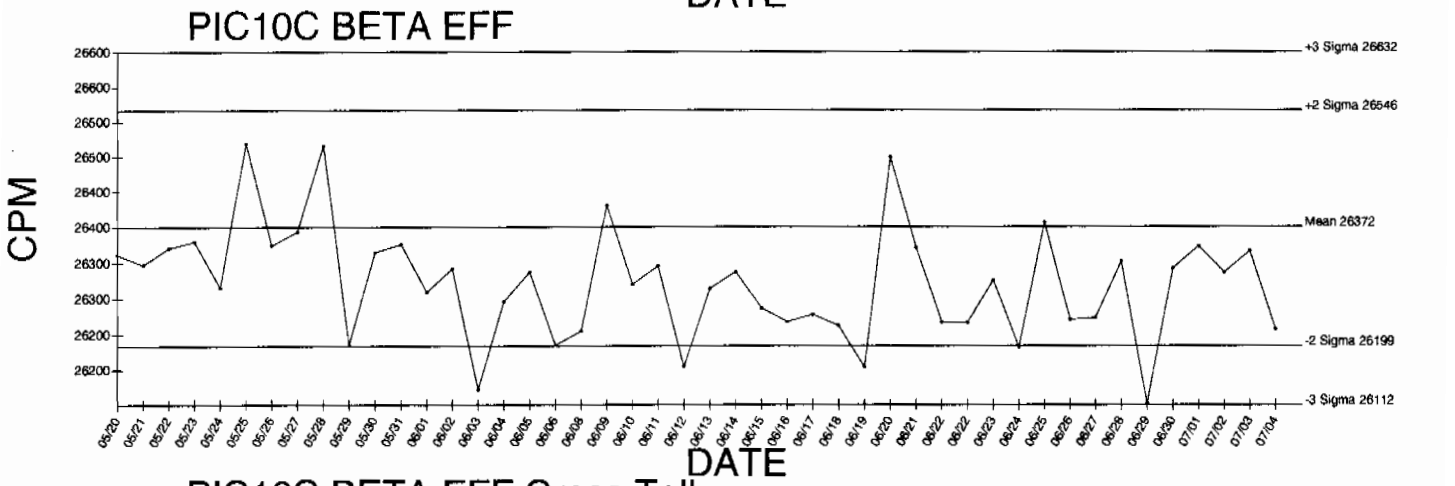

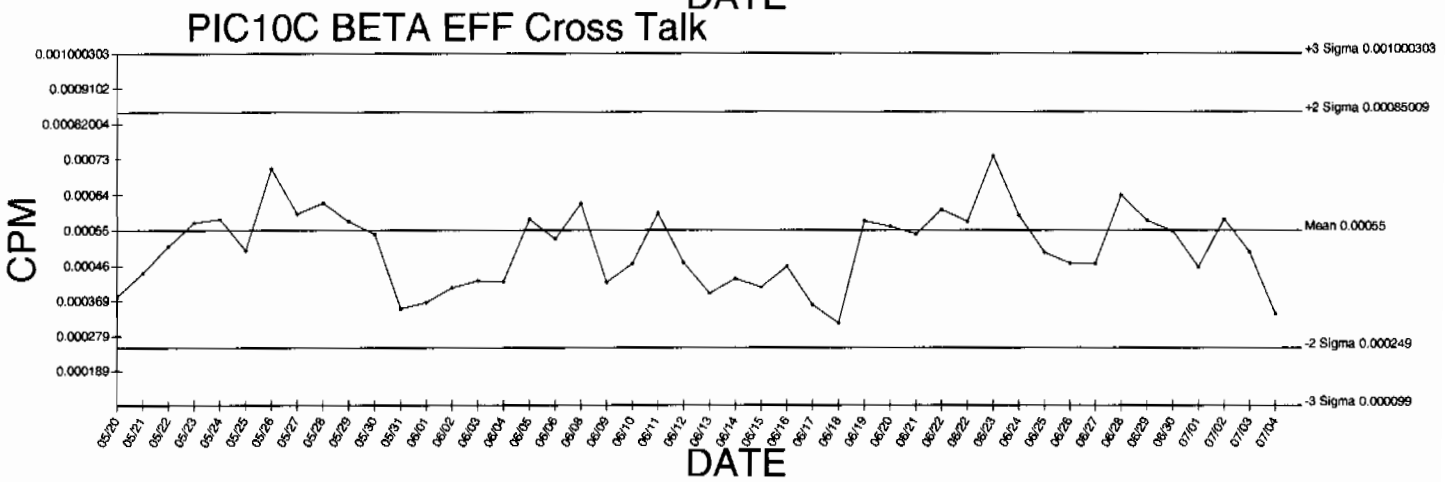

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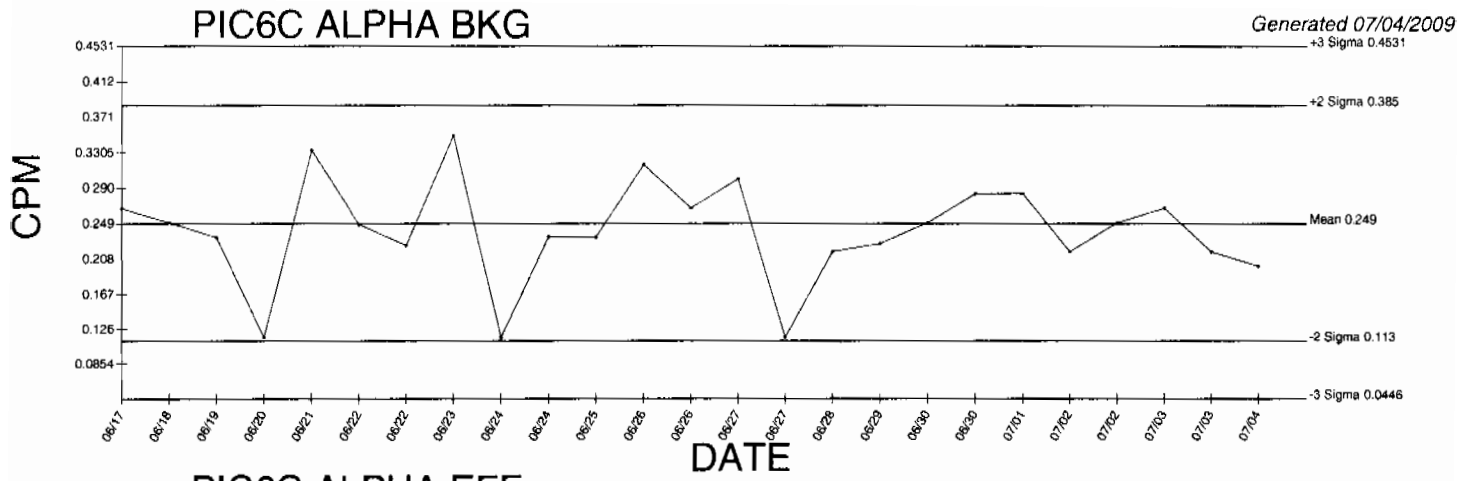

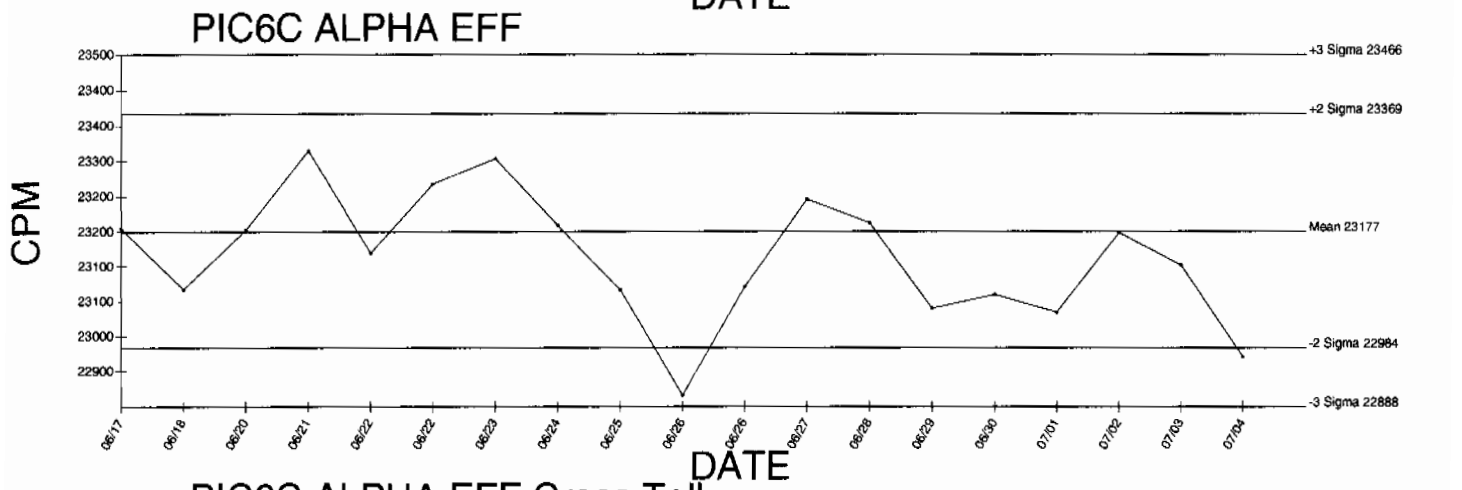

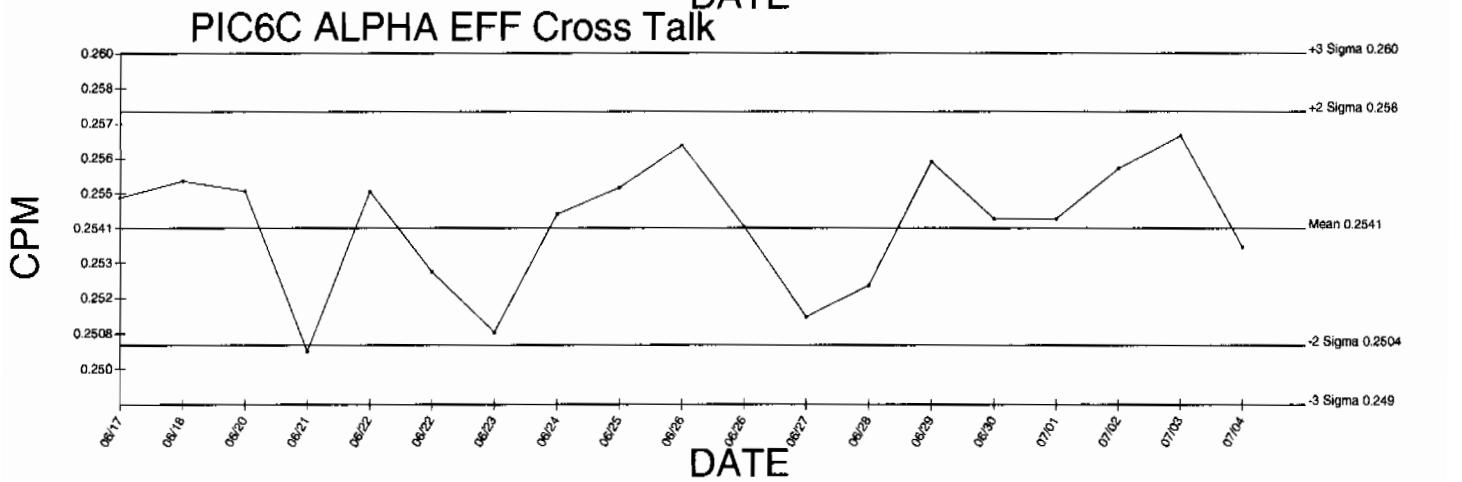

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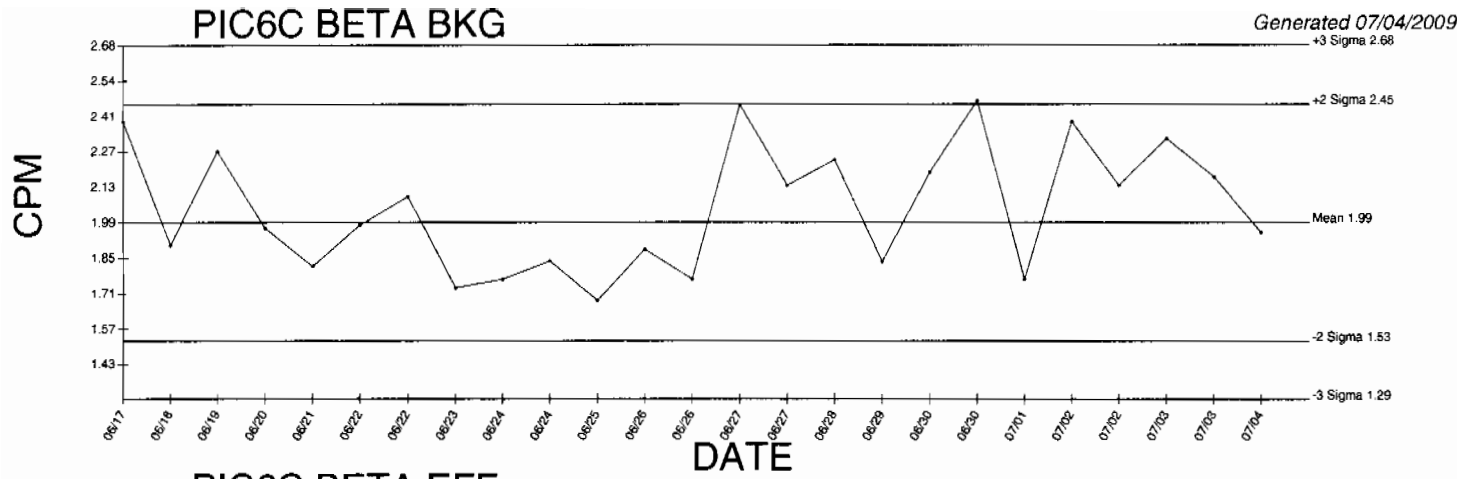

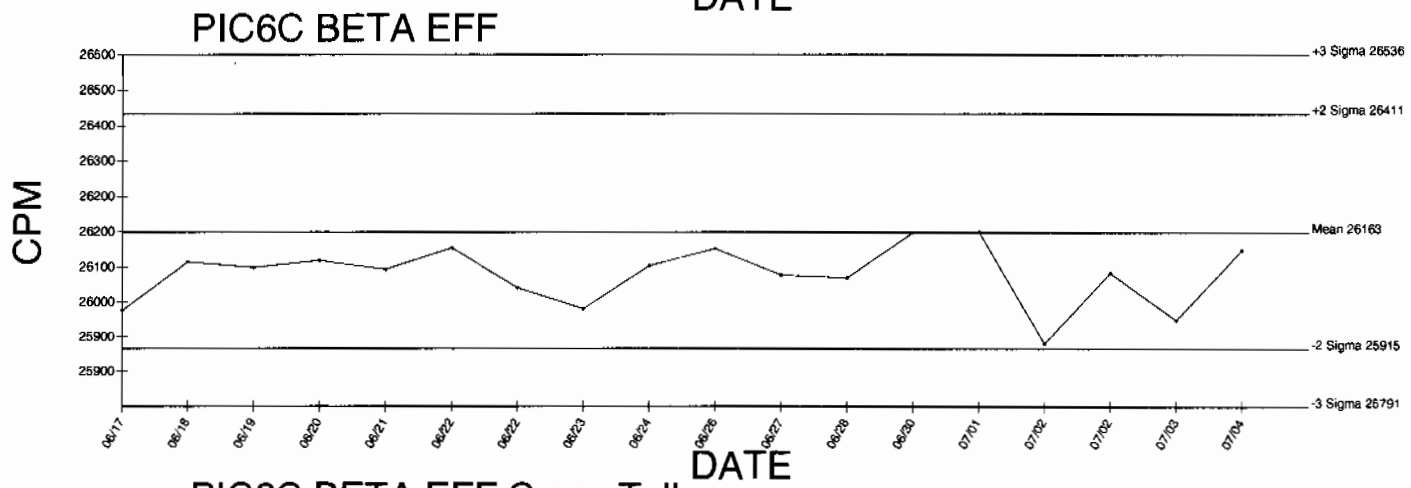

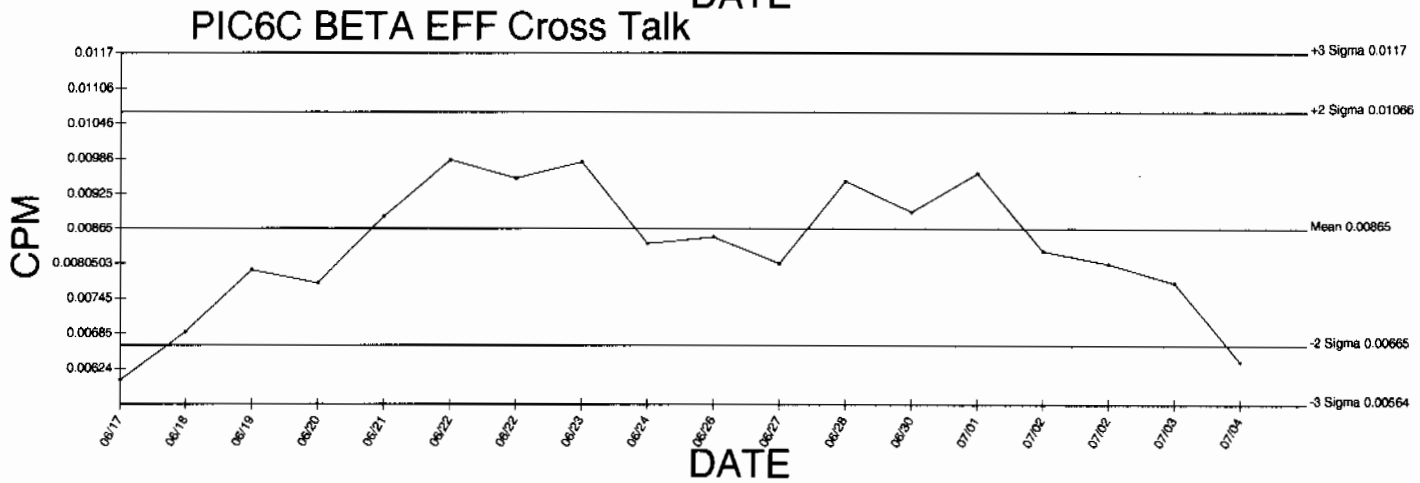

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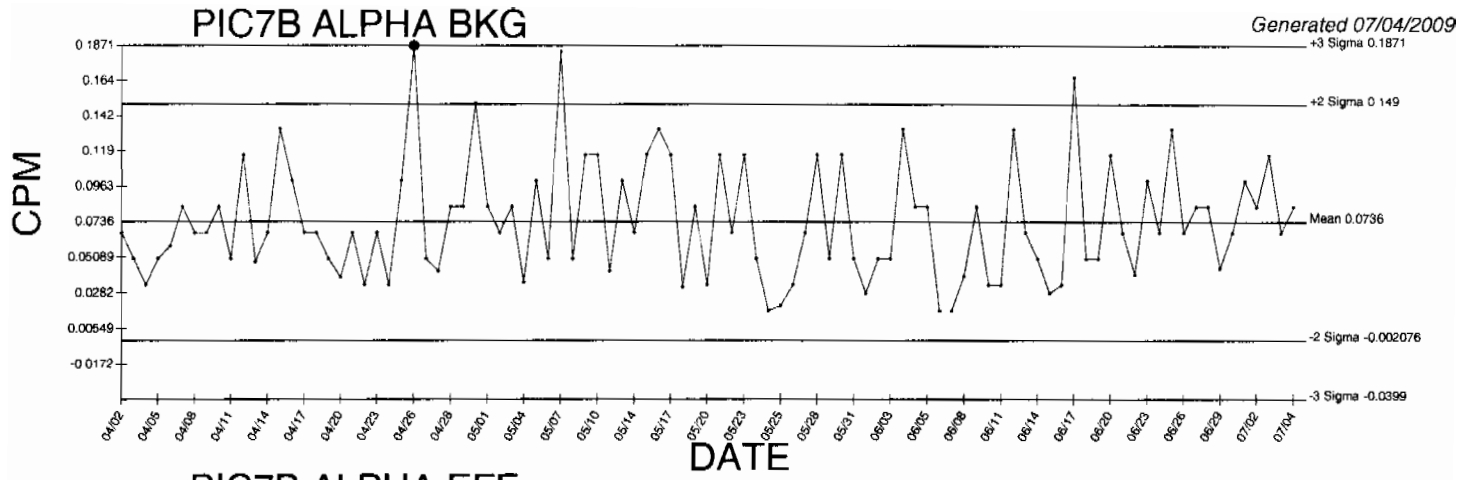

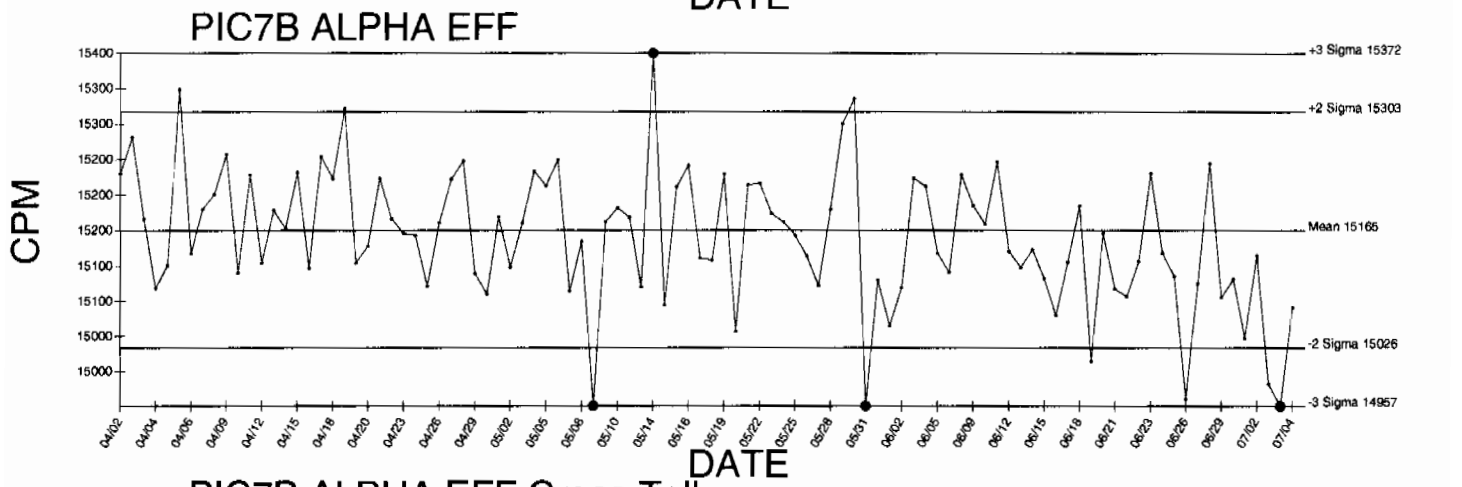

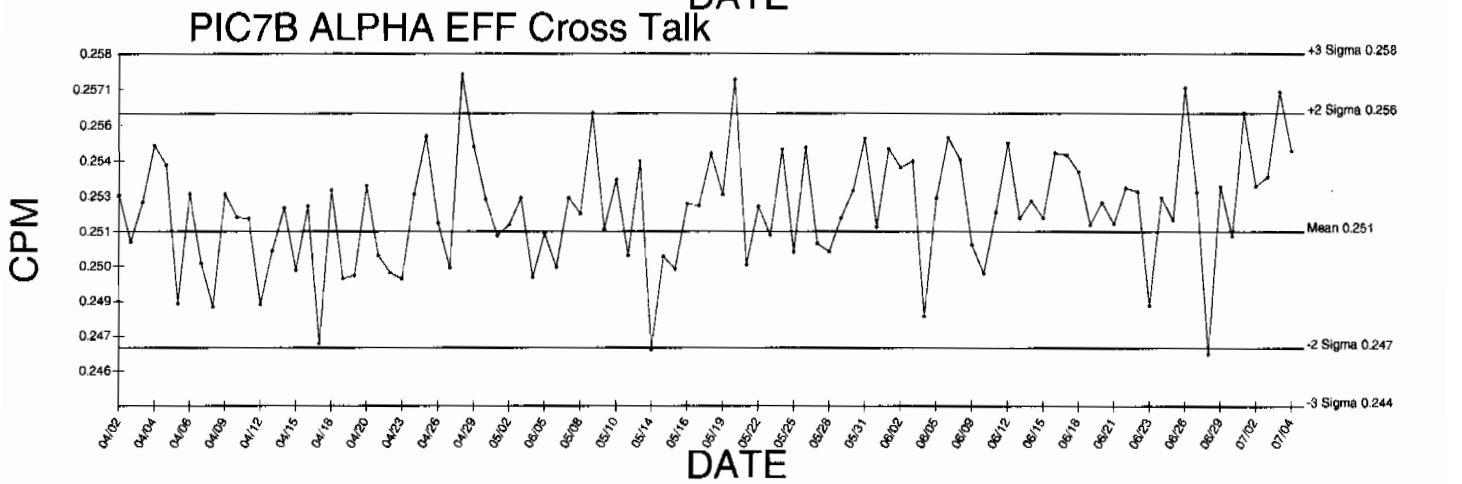

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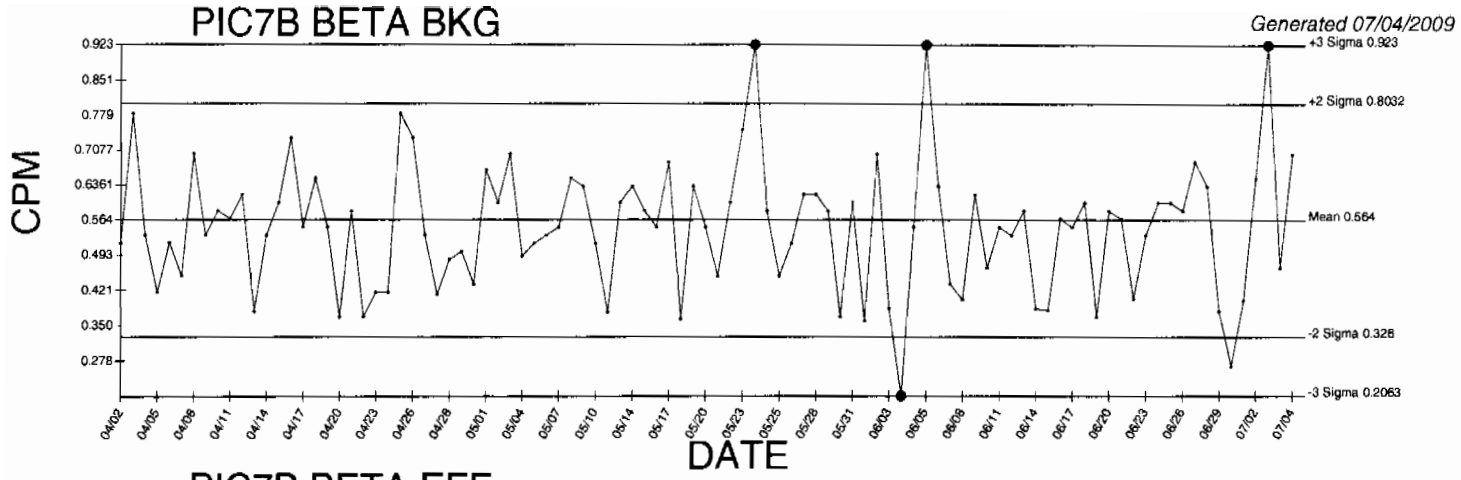

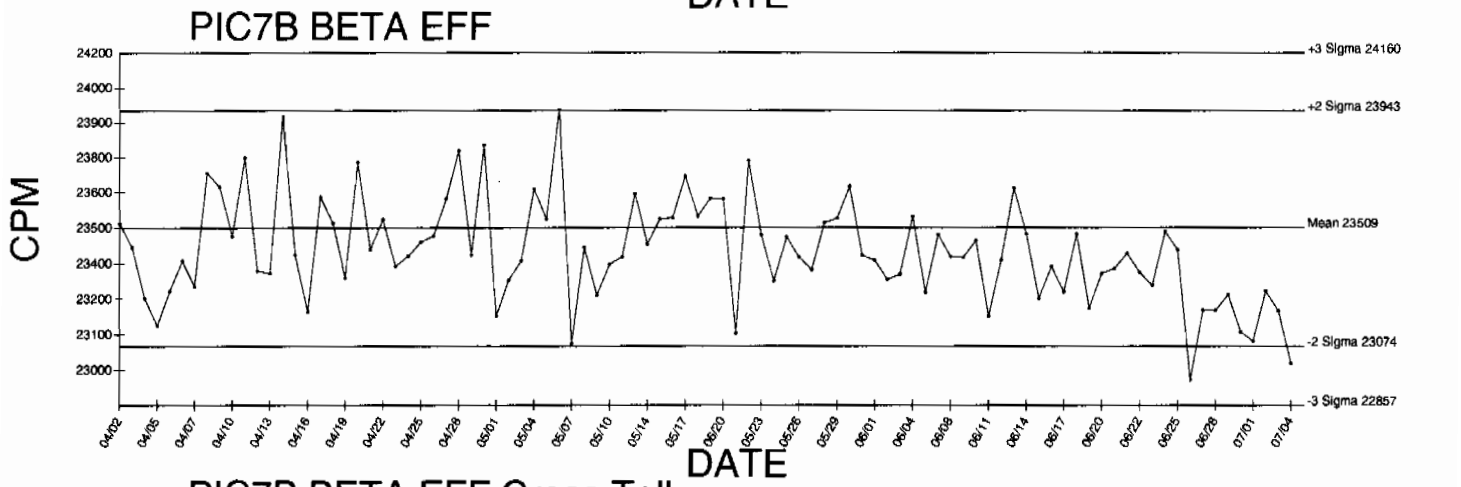

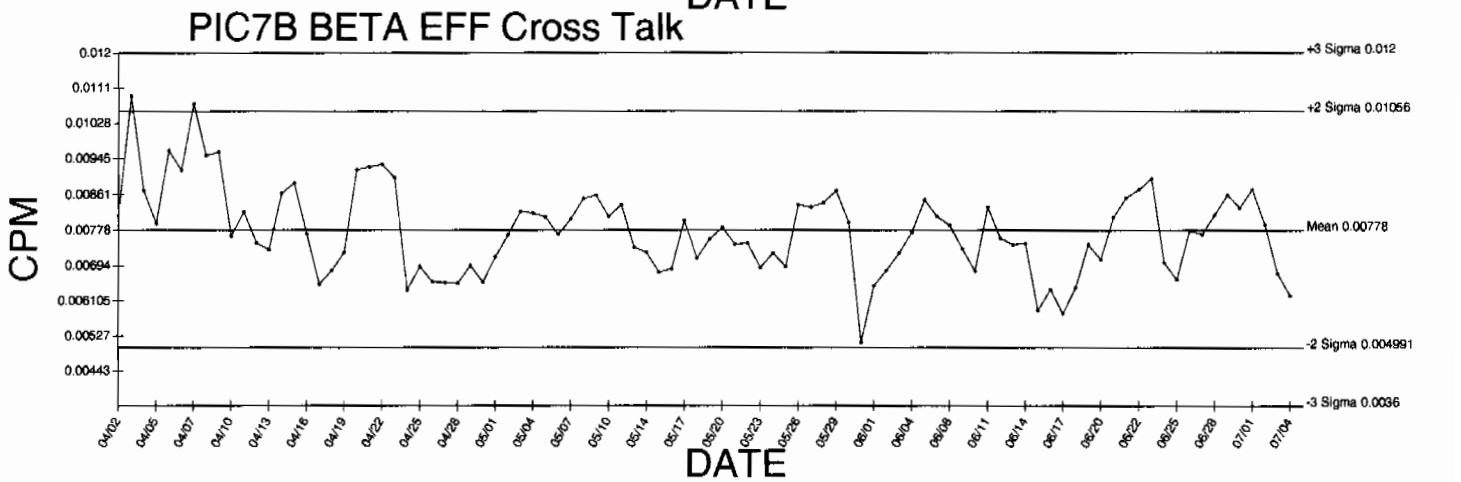

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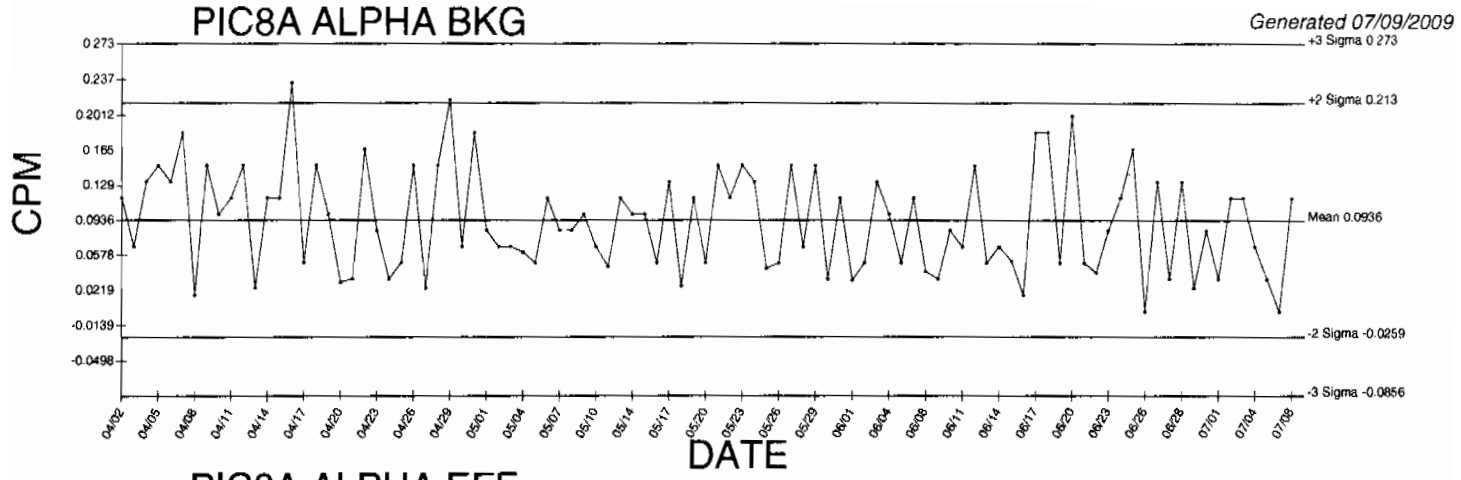

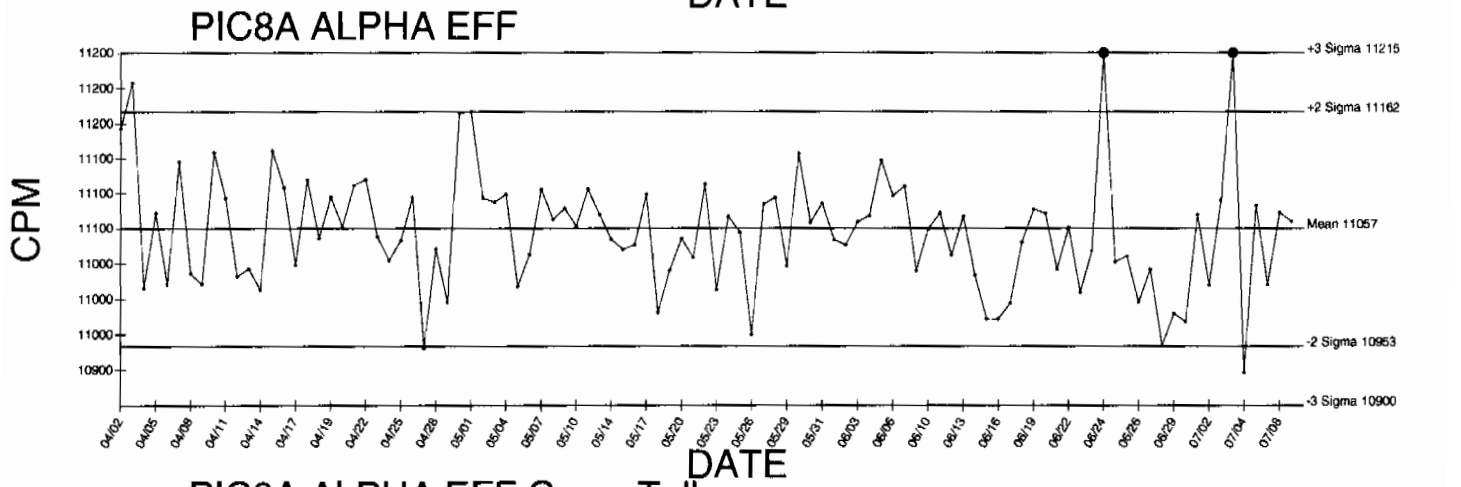

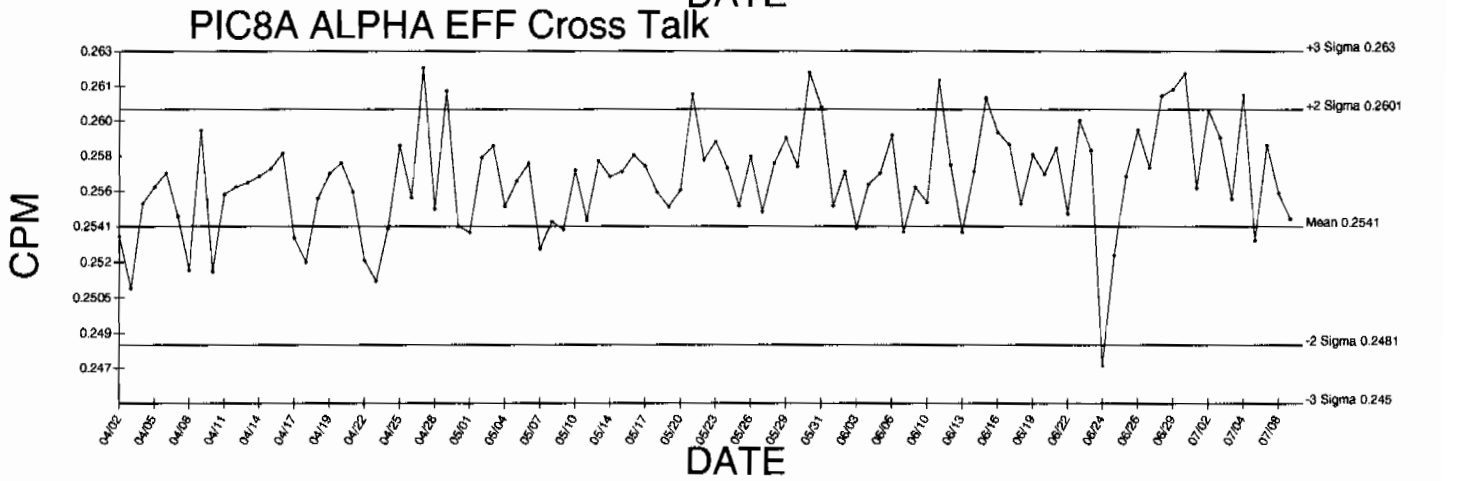

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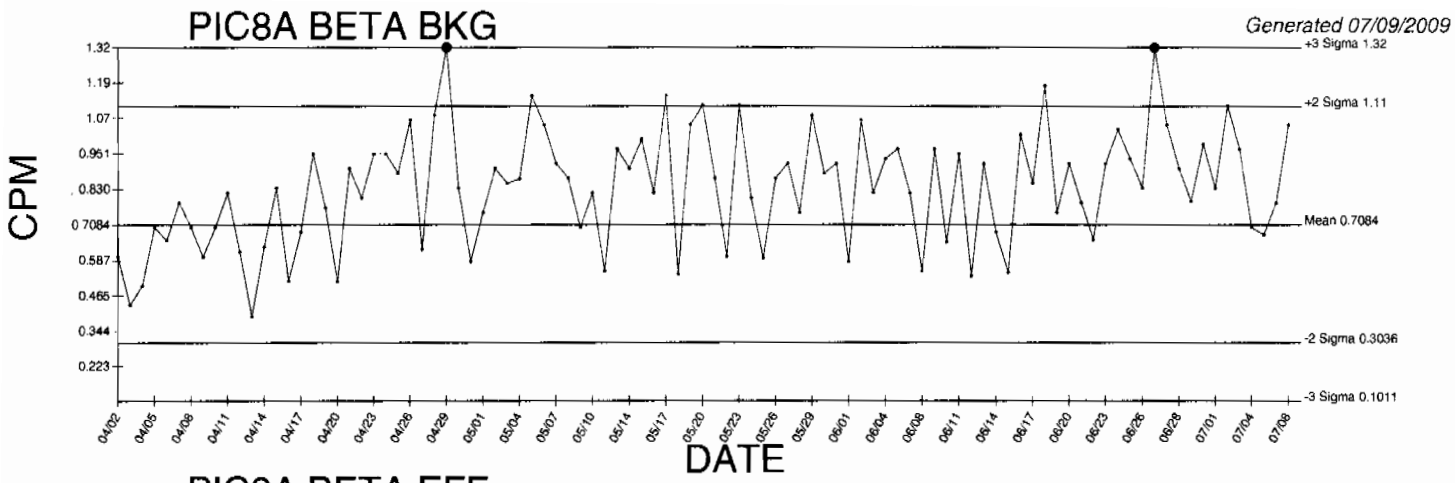

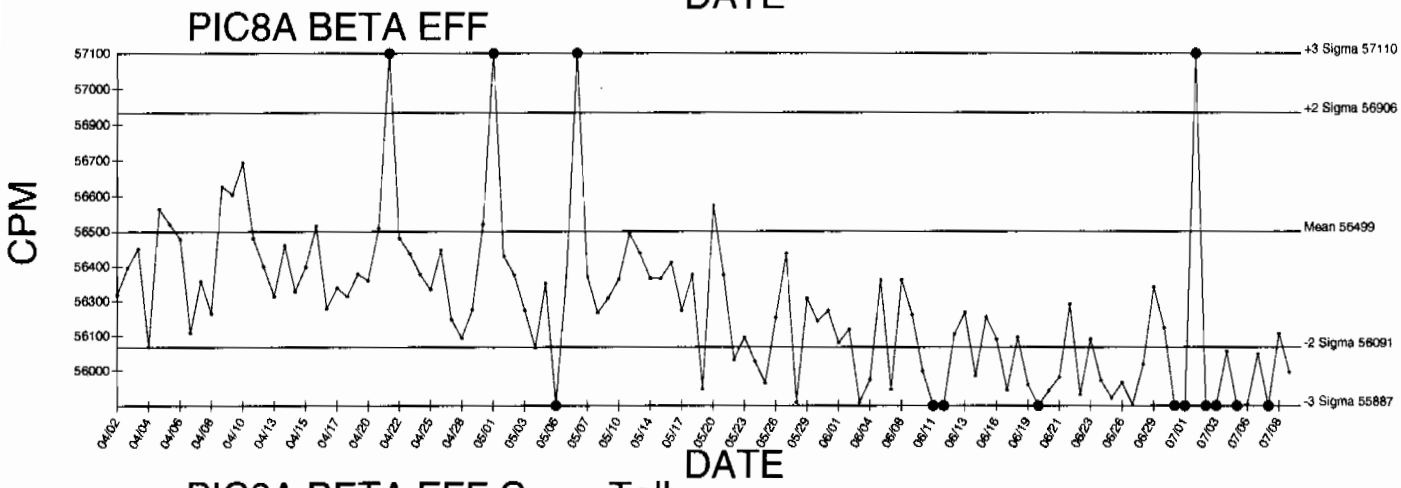

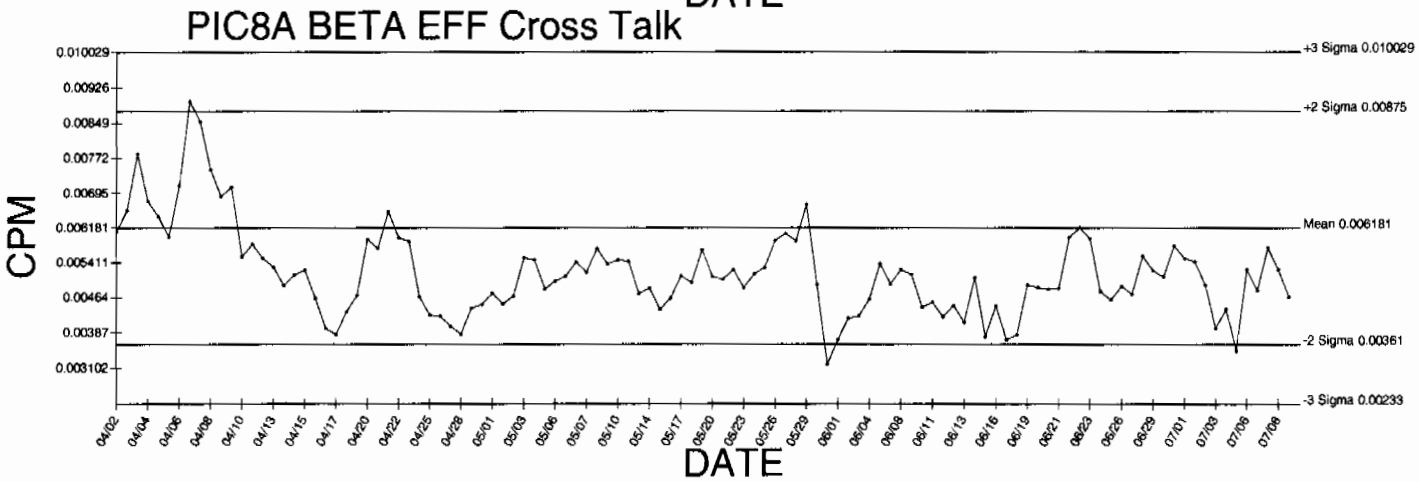

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Parameter Name : AVRGEFF (Average Efficiency)
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Lower/Upper Lmts: 0.313761 through 0.333761

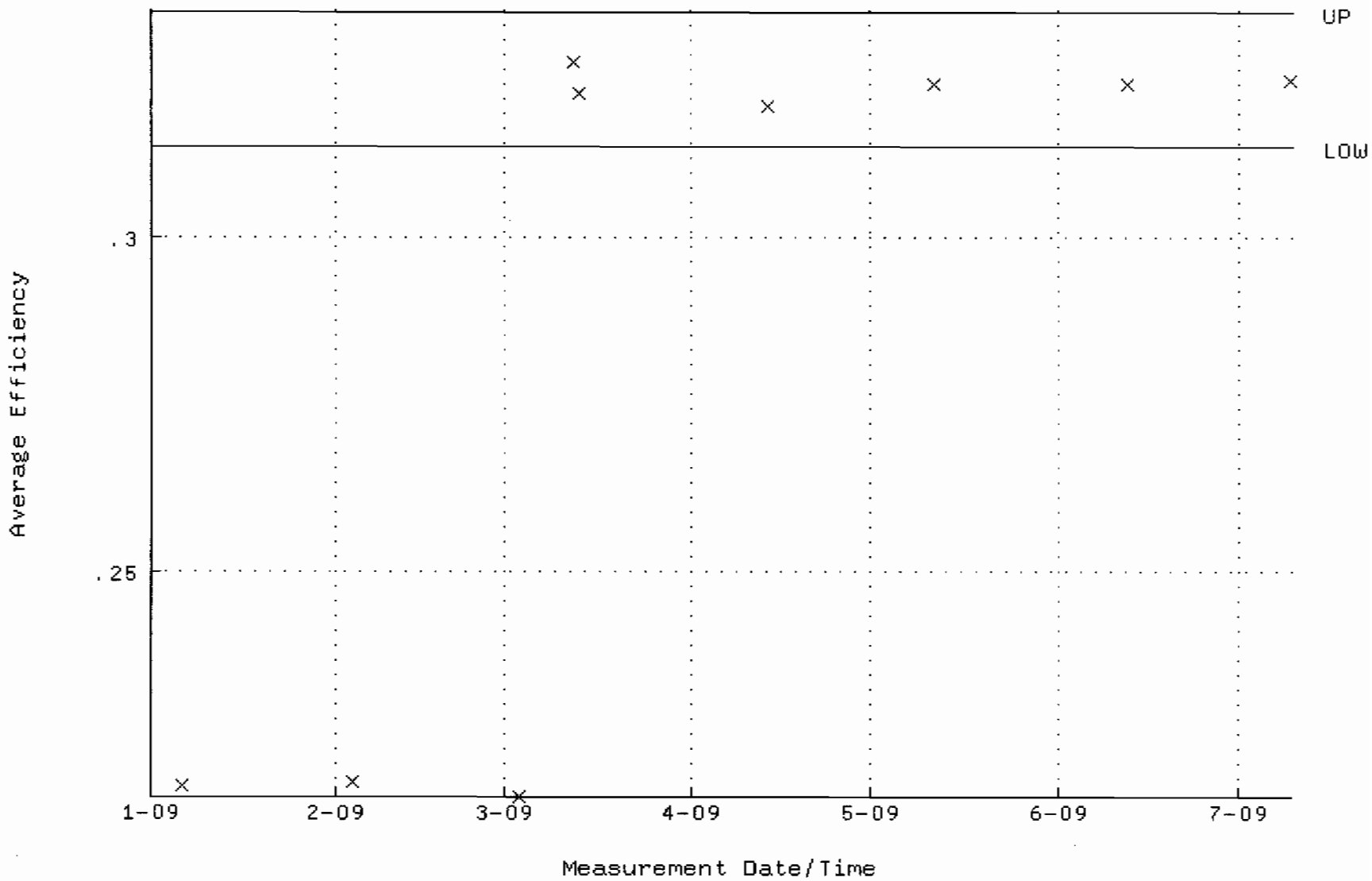

QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:23 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 87.3348 through 96.5280

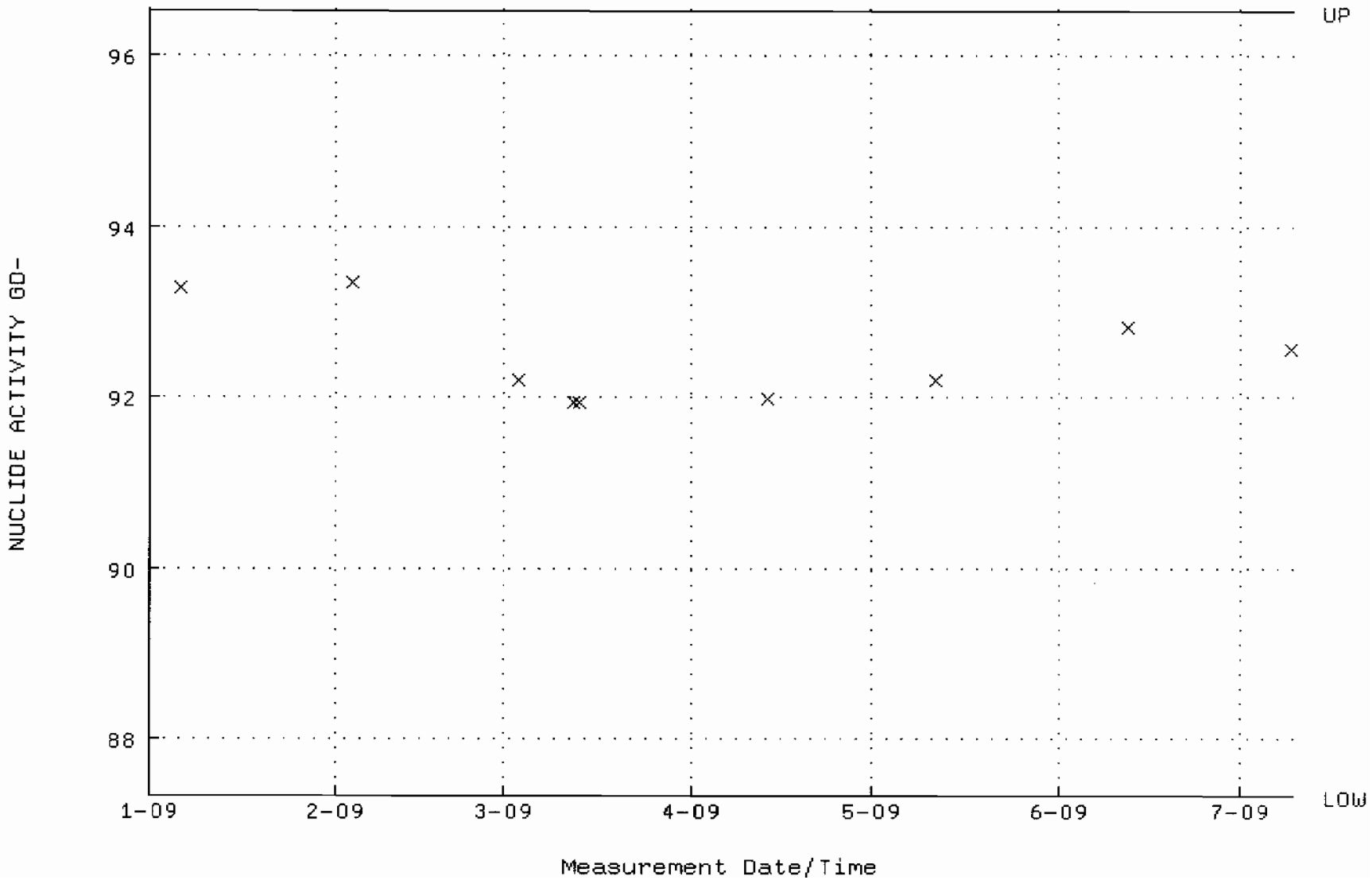

QA filename : DKA100:[ENV_ALPHA.QA.B]B072.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:33 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

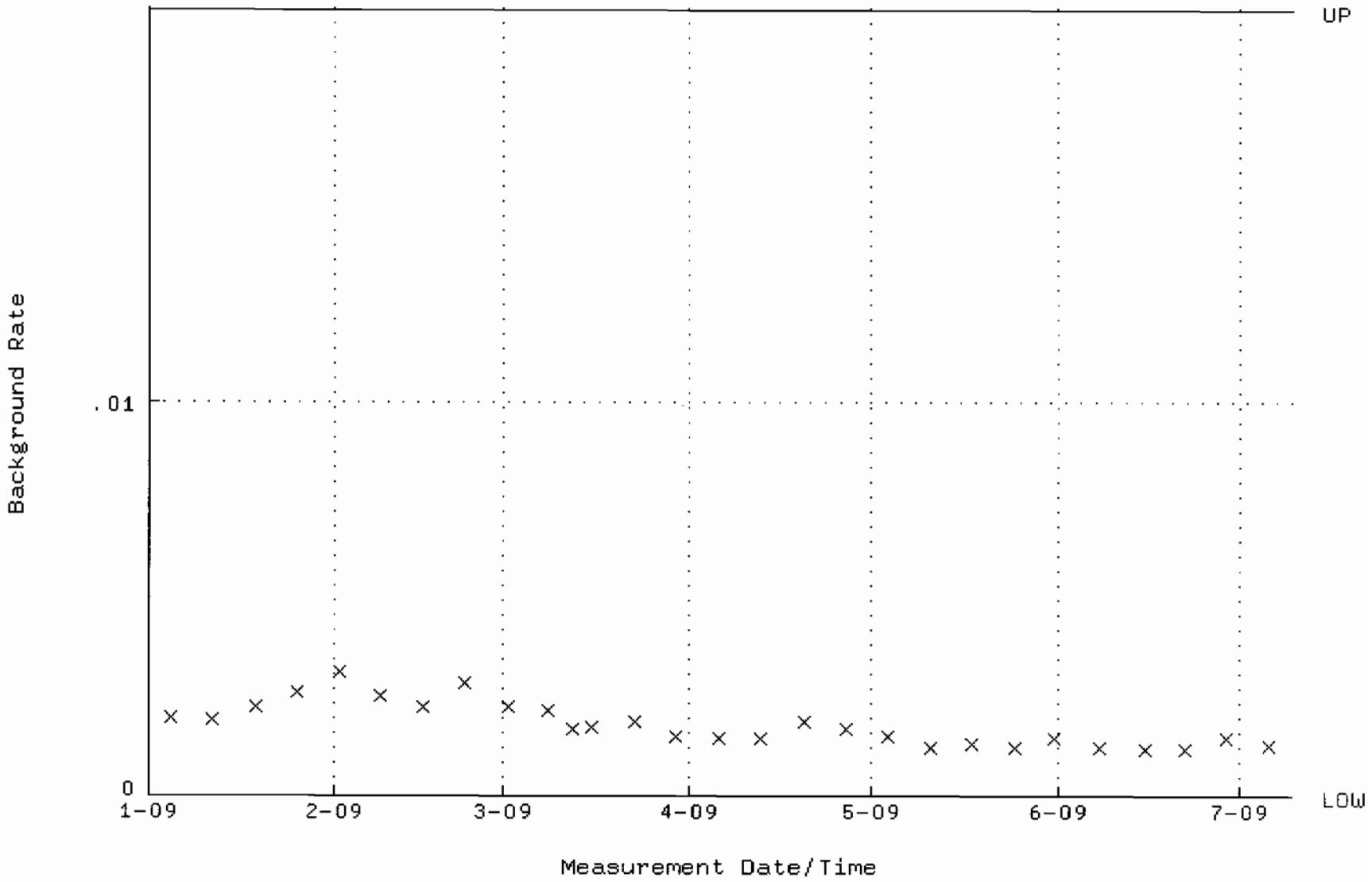

QA filename : DKA100:[ENV_ALPHA.QA.W]W073.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:23 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.323184 through 0.343184

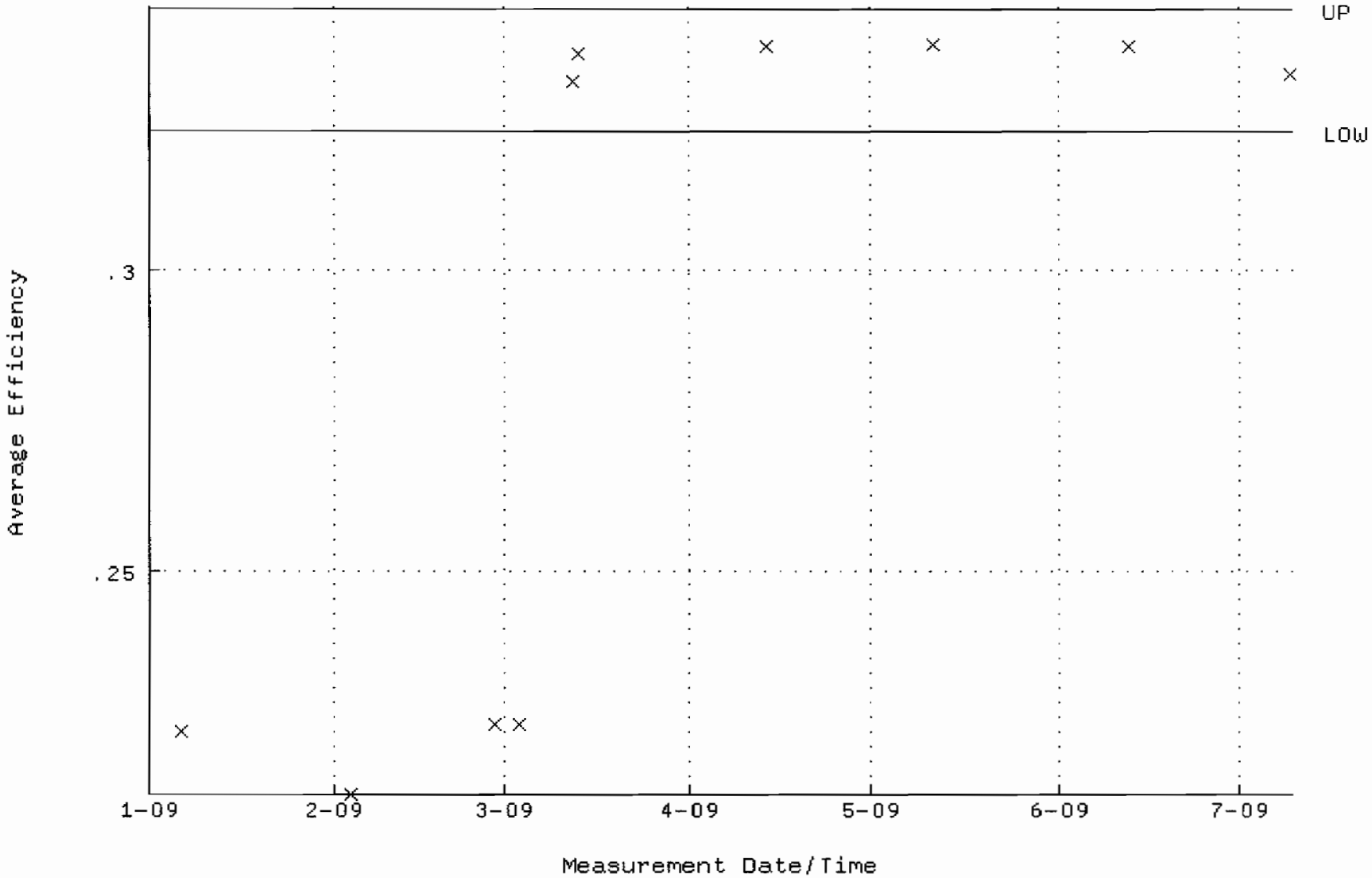

QA filename : DKA100:[ENV_ALPHA.QA.W]W073.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:23 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 86.6734 through 95.7970

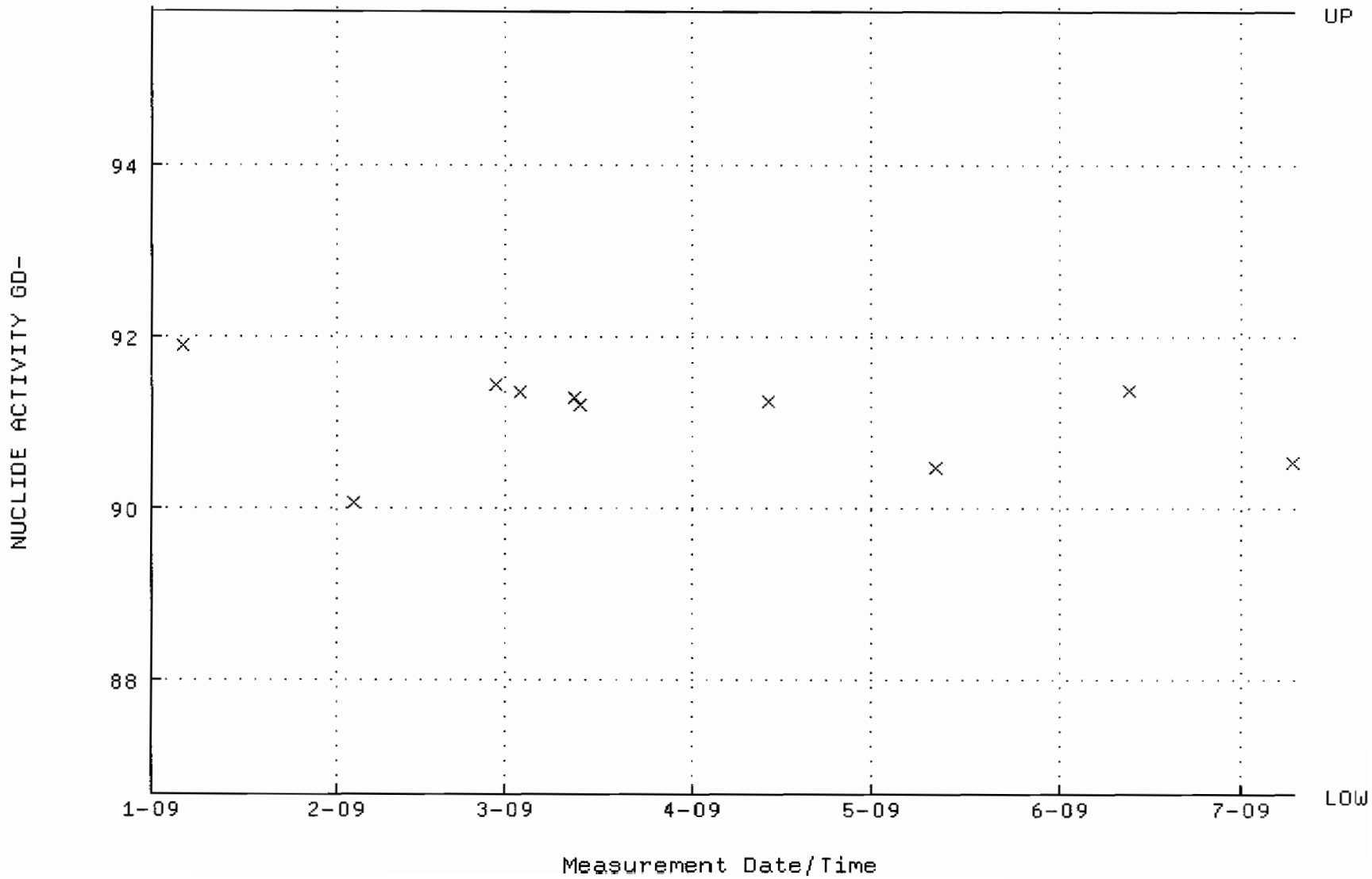

QA filename : DKA100:[ENV_ALPHA.QA.B]B073.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:33 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

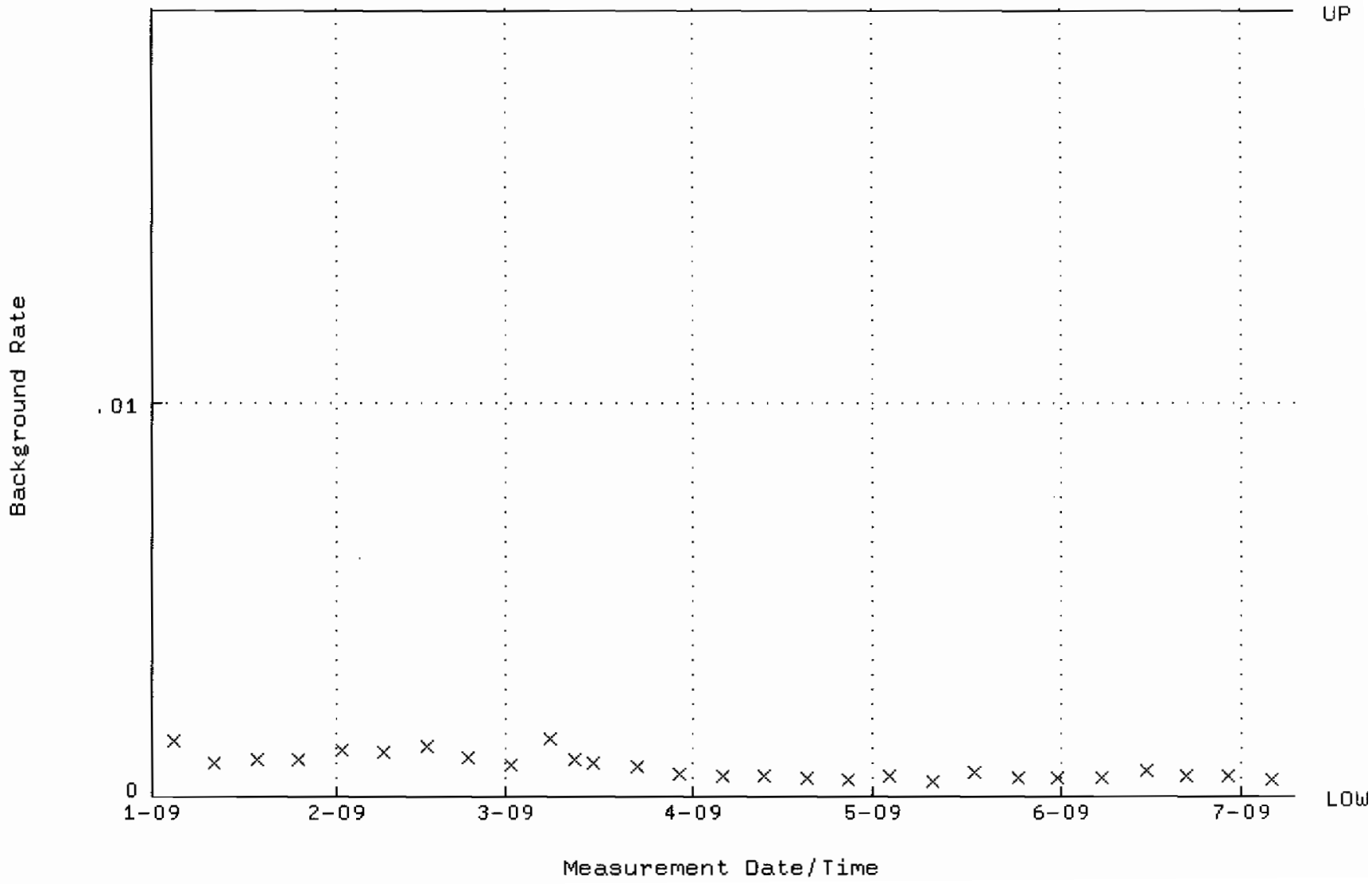

QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:23 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.305830 through 0.325830

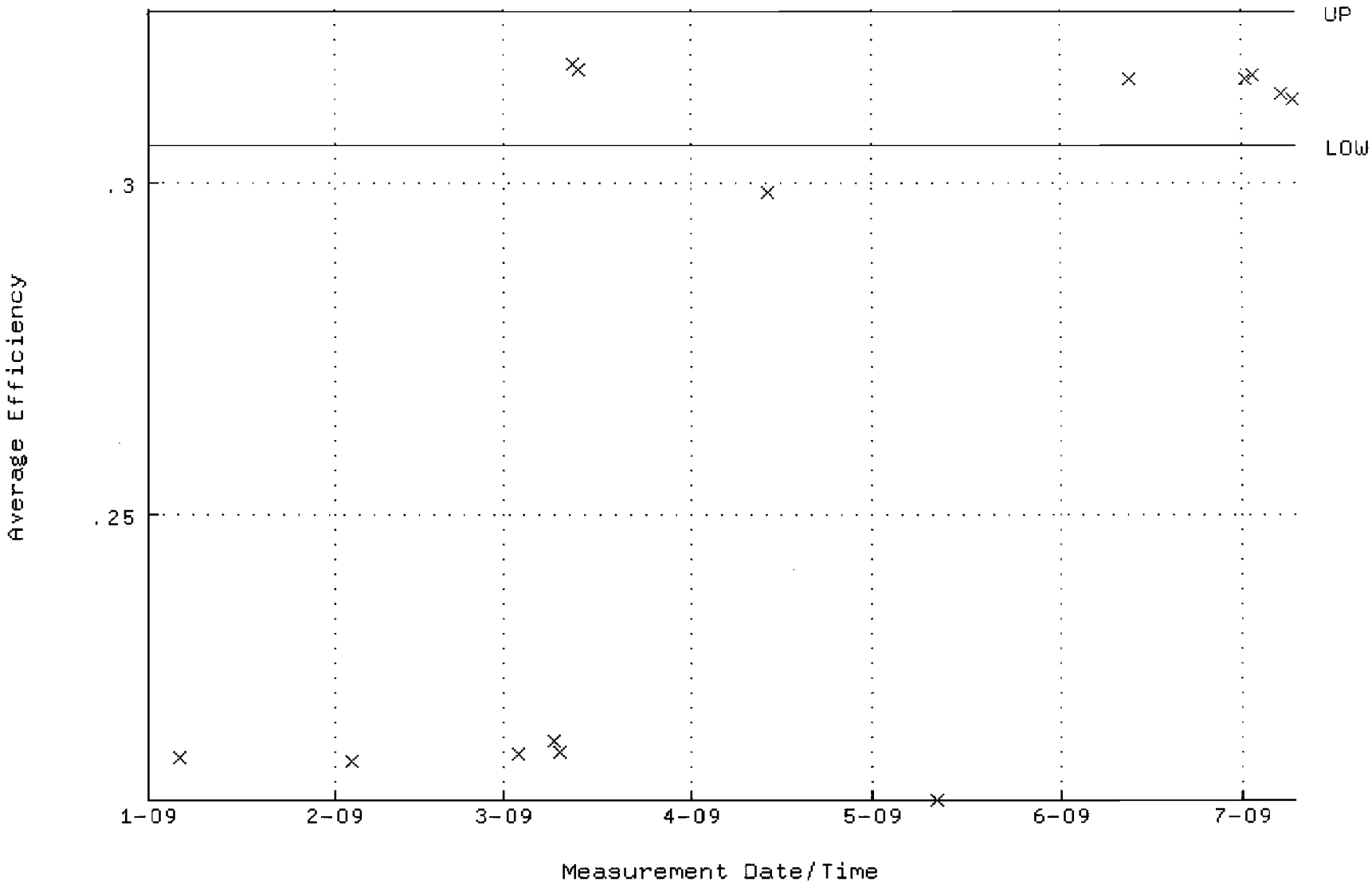

QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:23 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 86.0289 through 95.0845

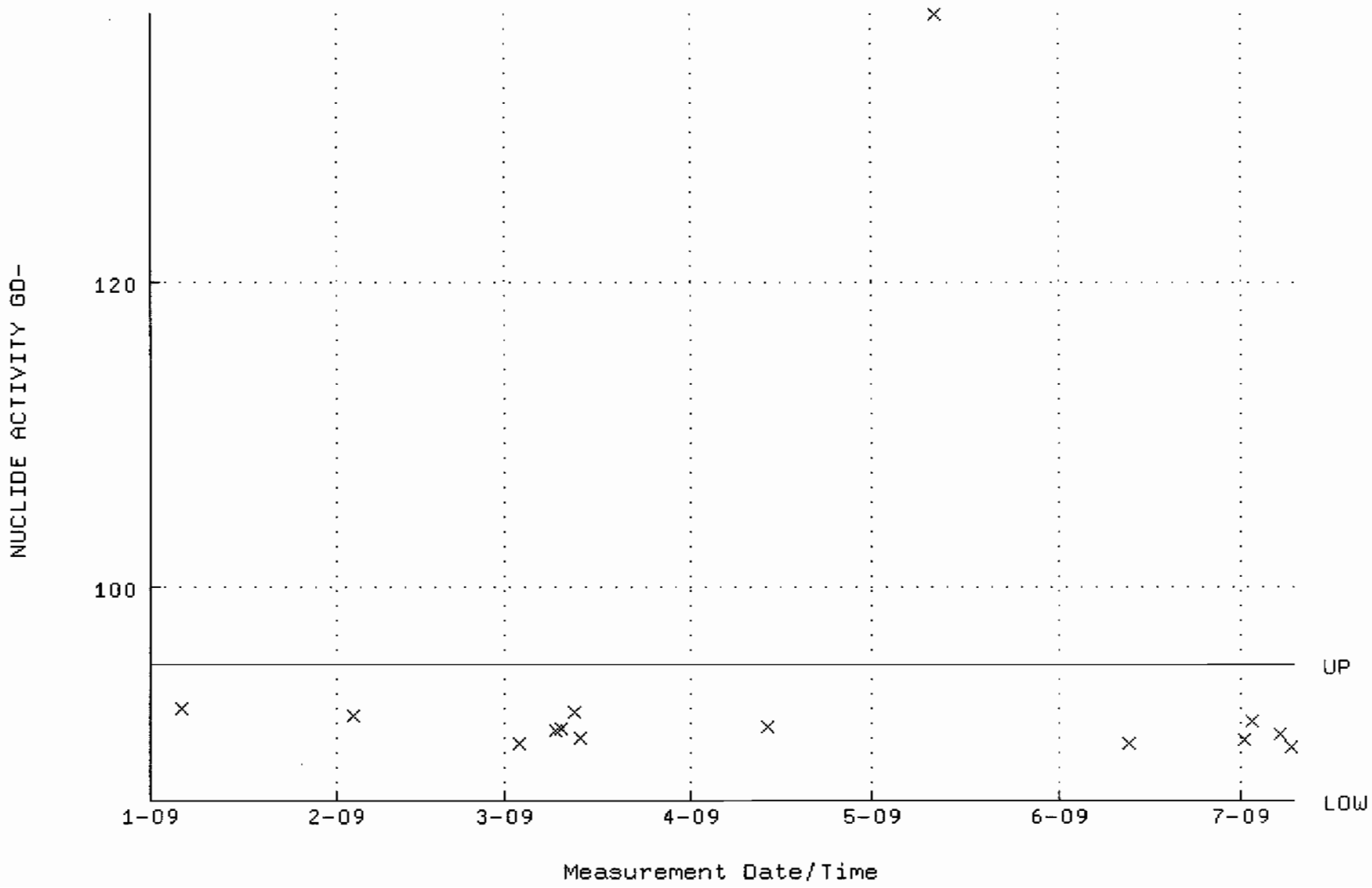

QA filename : DKA100:[ENV_ALPHA.QA.B]B074.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:33 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

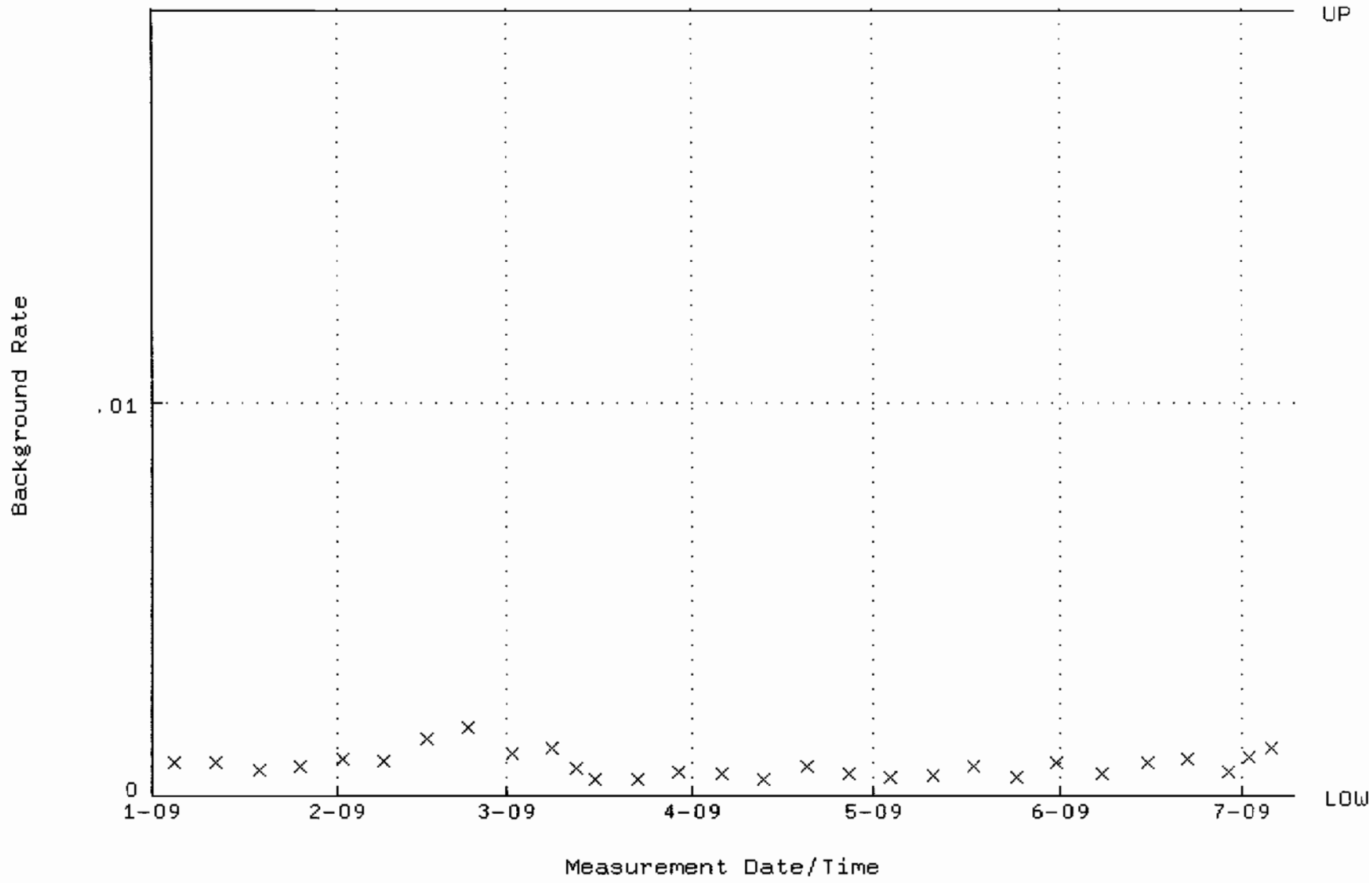

QA filename : DKA100:[ENV_ALPHA.QA.W]W077.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000

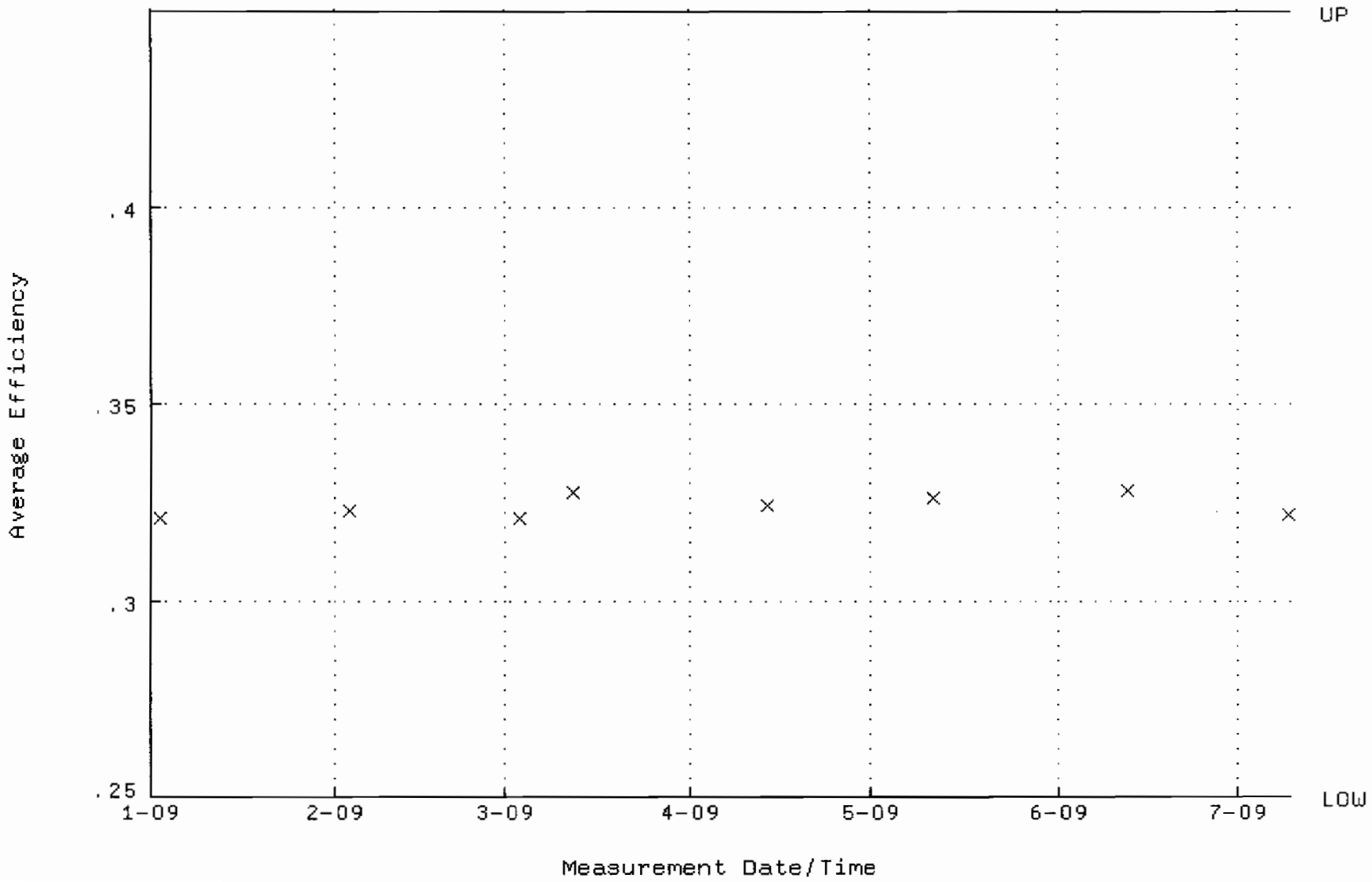

QA filename : DKA100:[ENV_ALPHA.QA.W]W077.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000

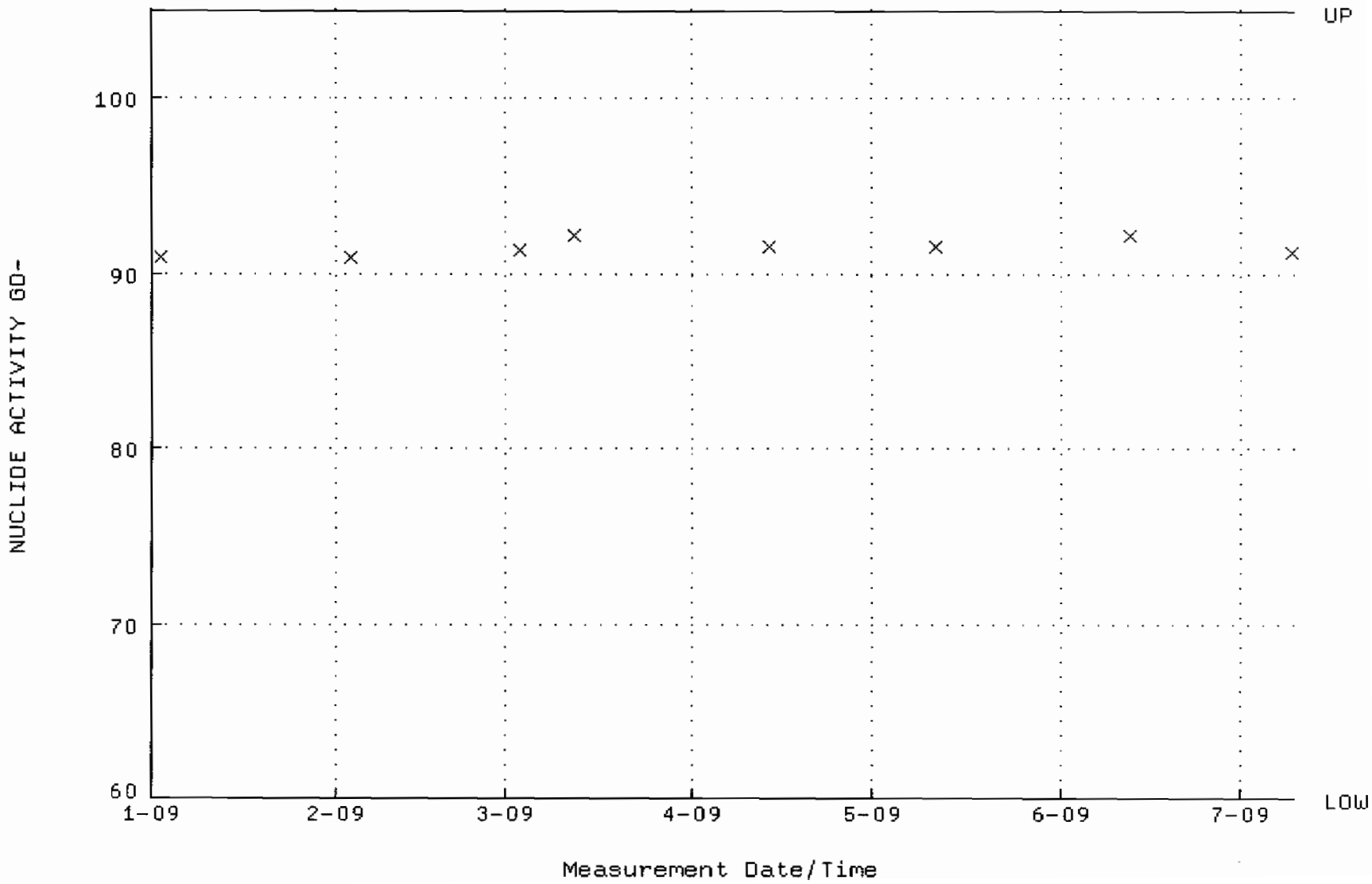

QA filename : DKA100:[ENV_ALPHA.QA.B]B077.QAF;3
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:34 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

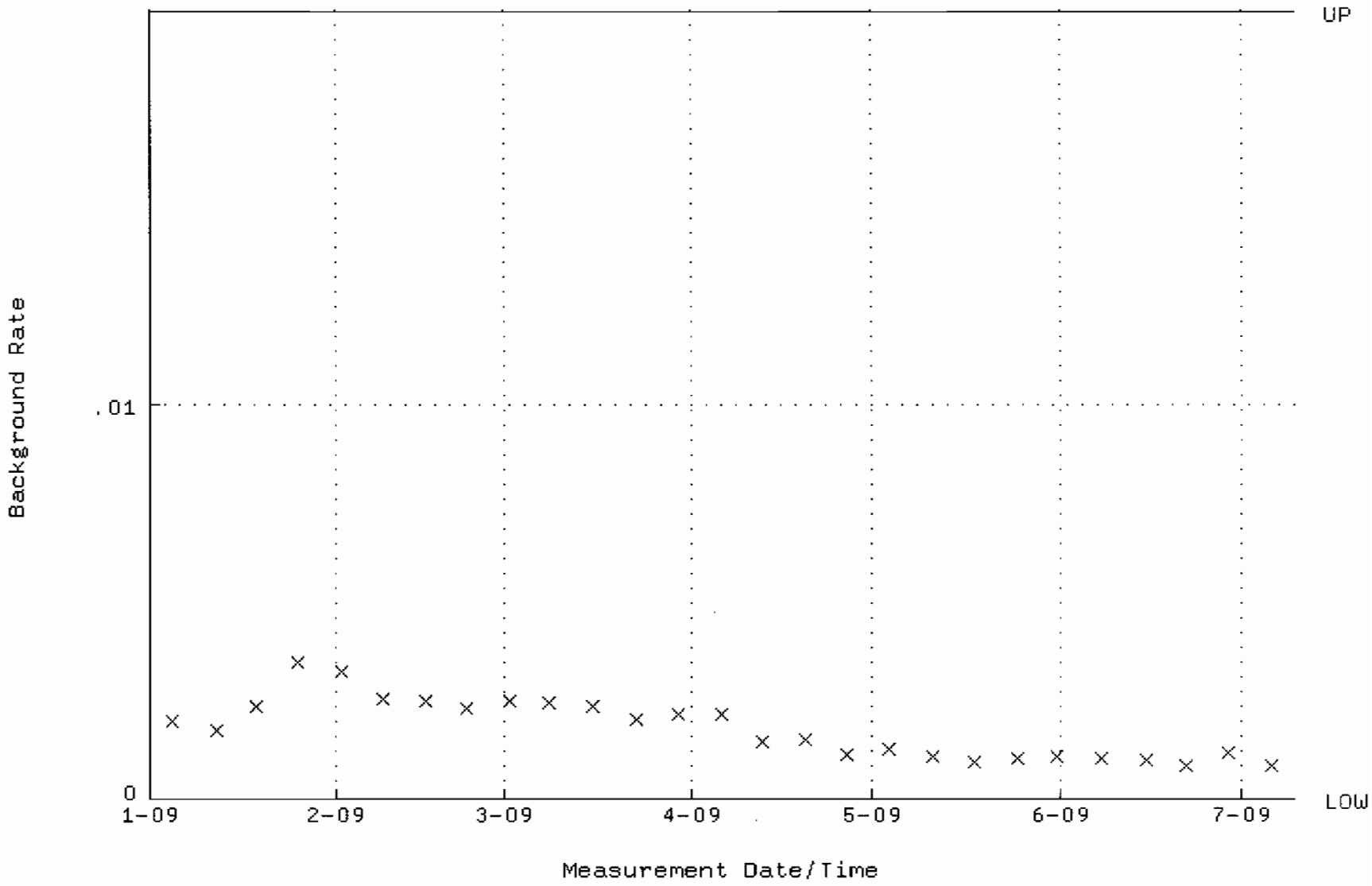

QA filename : DKA100:[ENV_ALPHA.QA.W]W078.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000

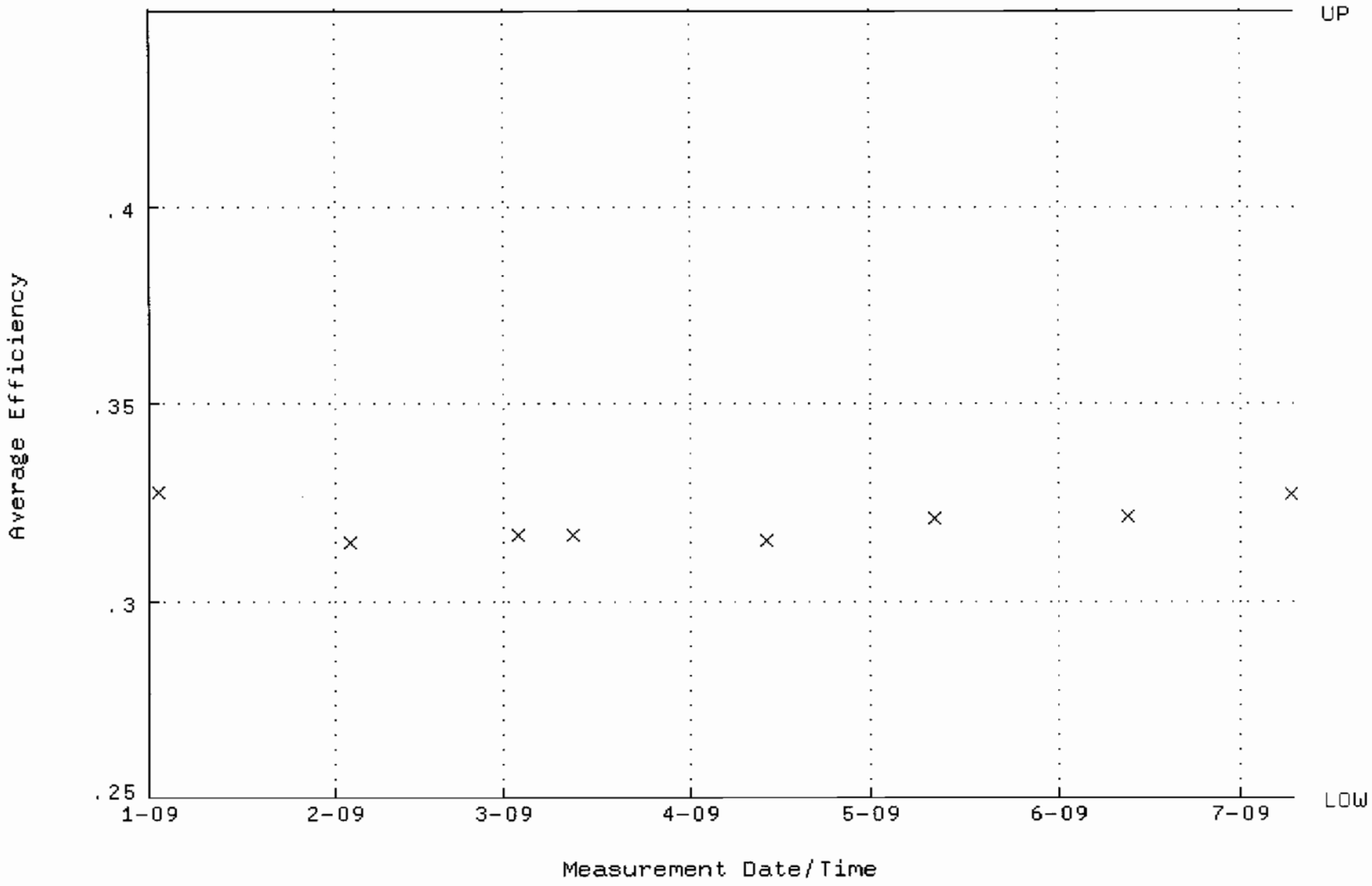

QA filename : DKA100:[ENV_ALPHA.QA.W]W078.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000

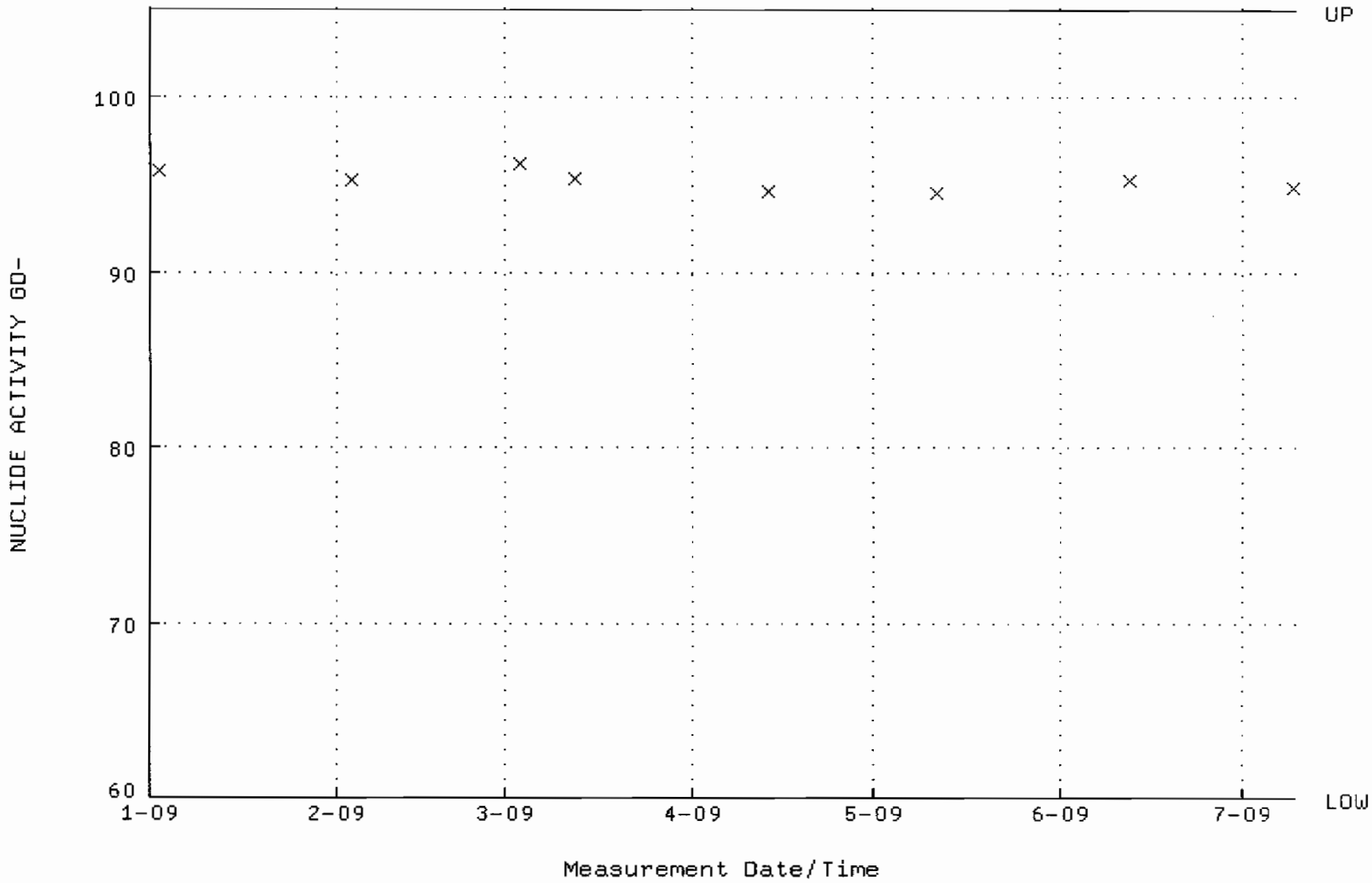

QA filename : DKA100:[ENV_ALPHA.QA.B]B078.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:34 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

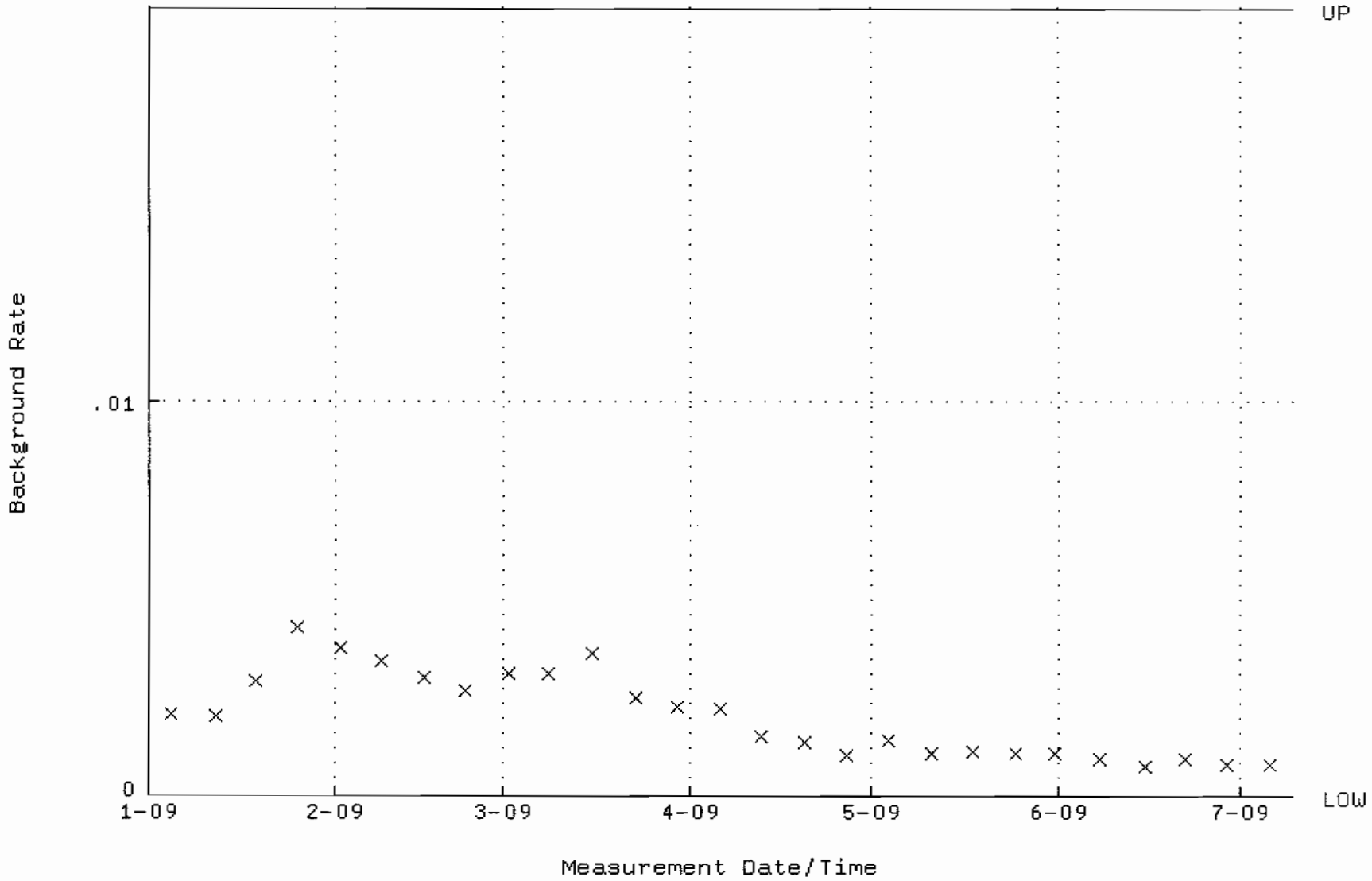

QA filename : DKA100:[ENV_ALPHA.QA.W]W079.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000

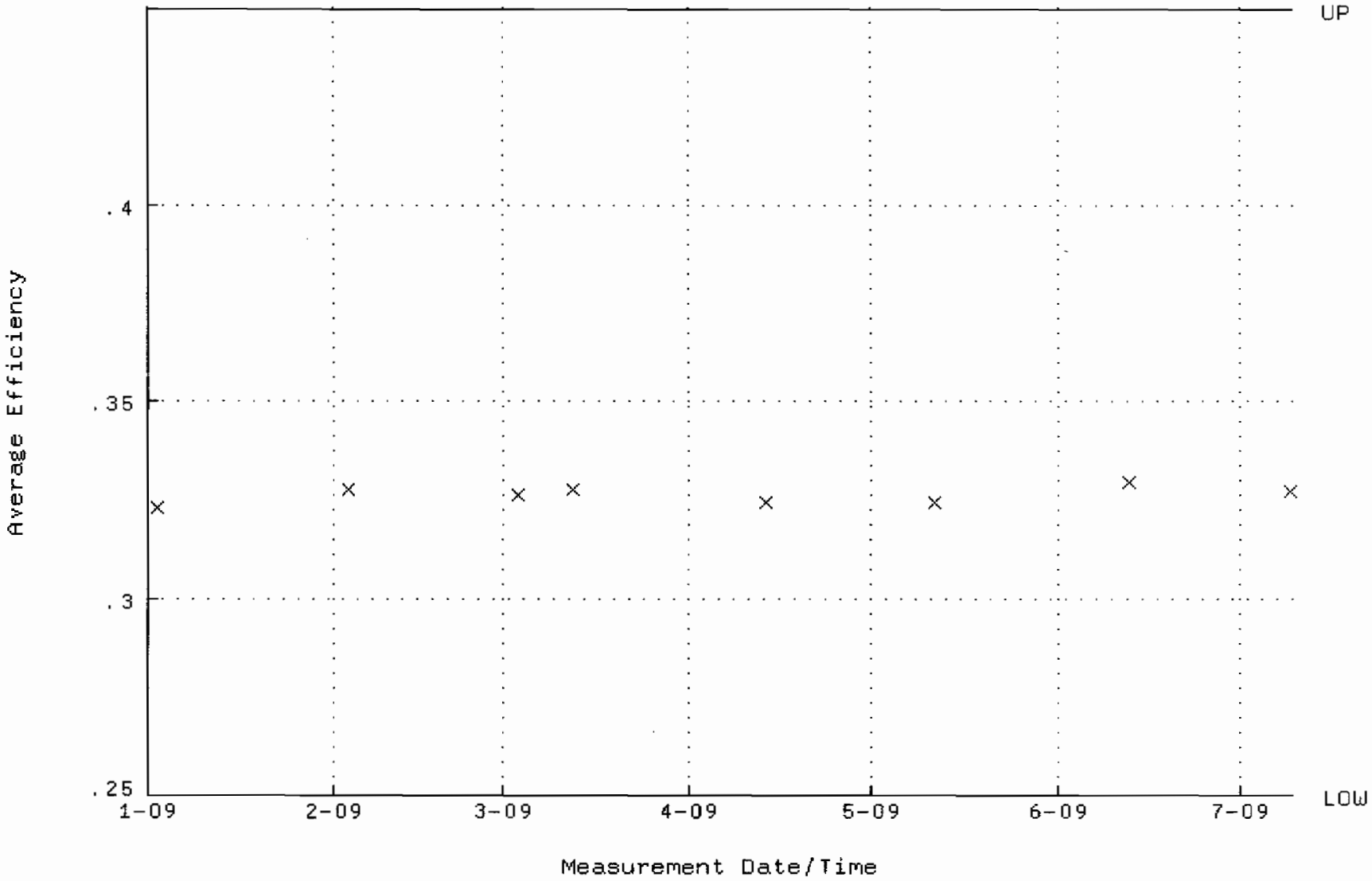

QA filename : DKA100:[ENV_ALPHA.QA.W]W079.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000

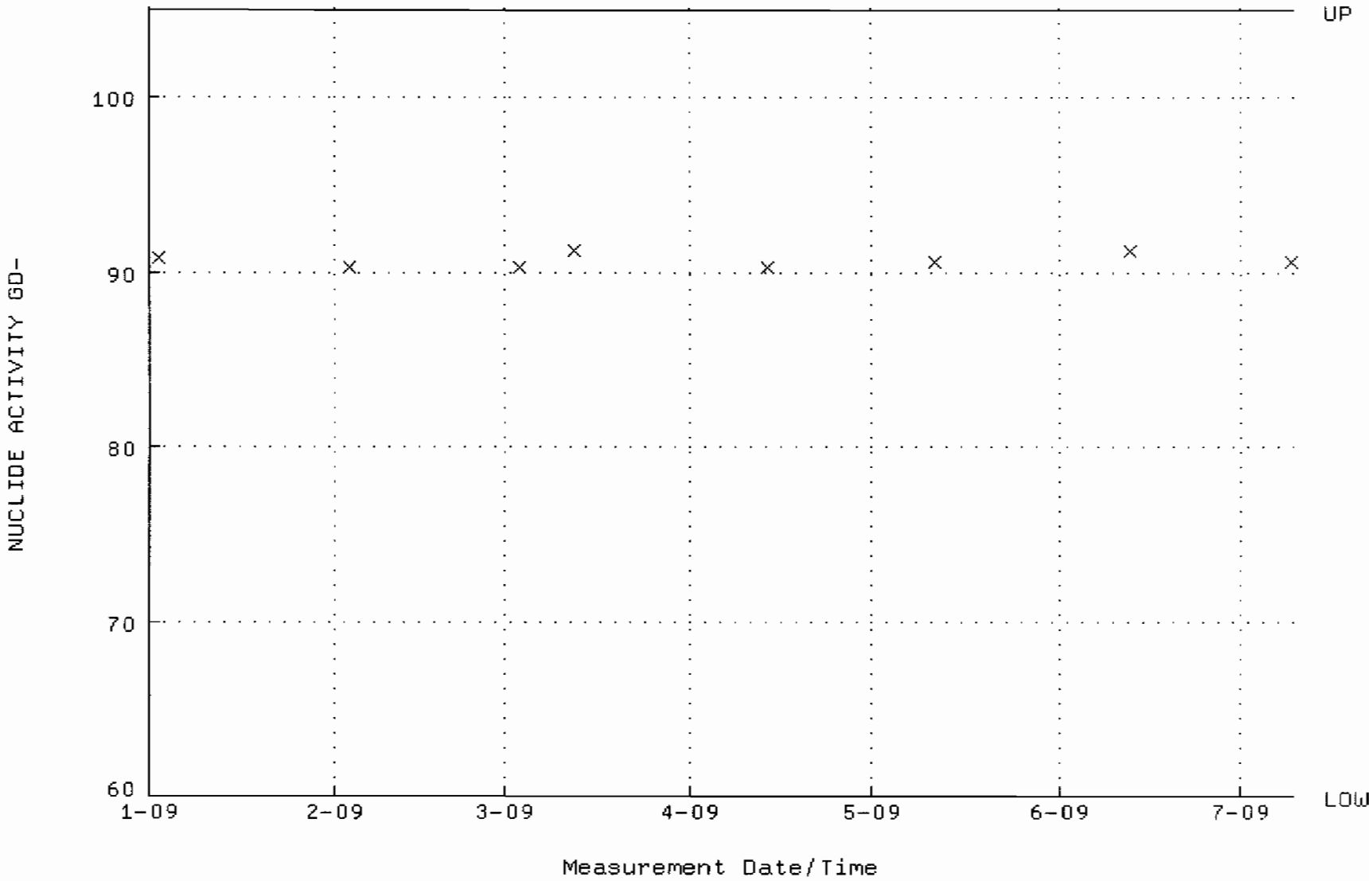

QA filename : DKA100:[ENV_ALPHA.QA.B]B079.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:34 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

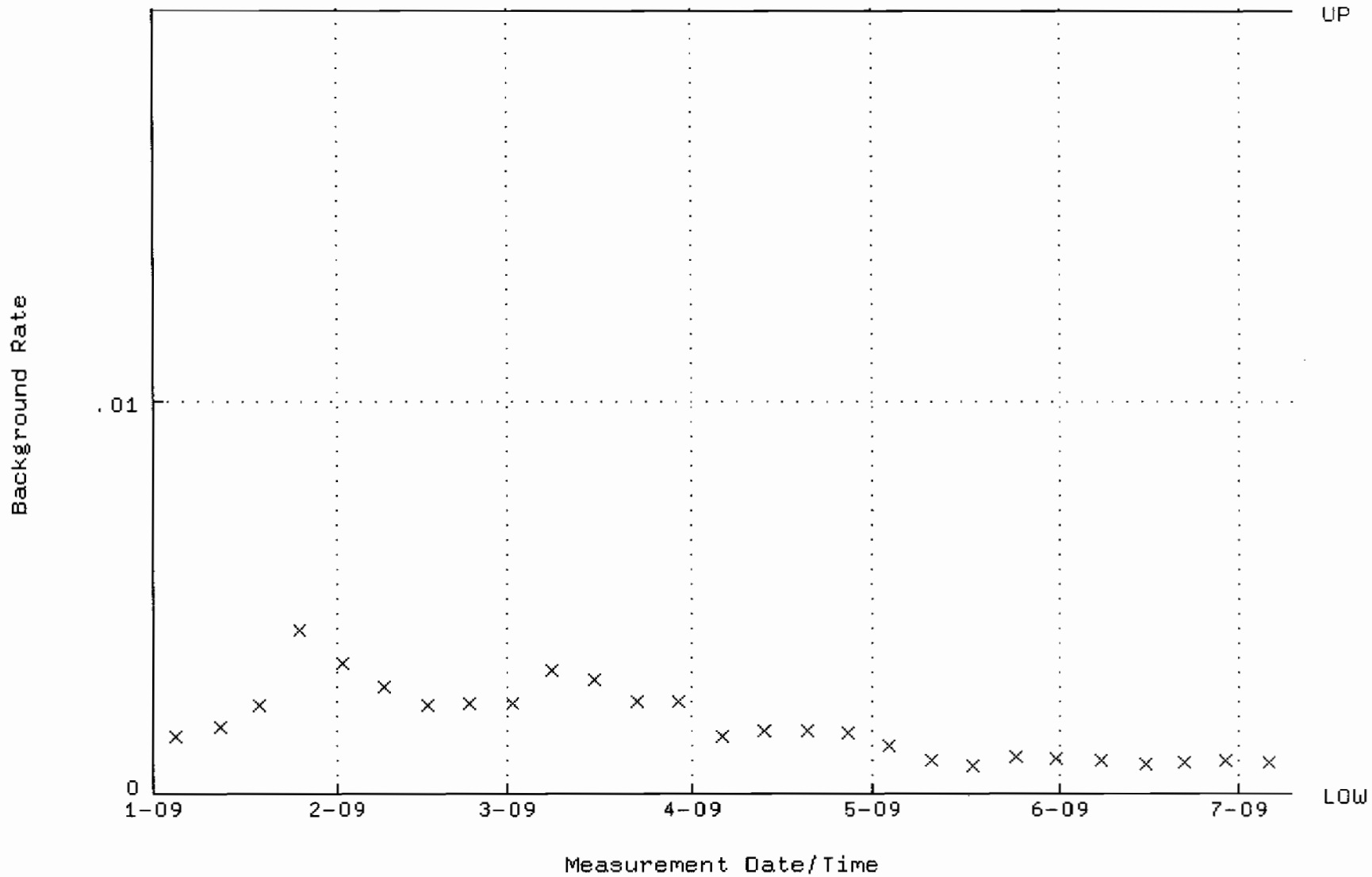

QA filename : DKA100:[ENV_ALPHA.QA.W]W080.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.324032 through 0.344032

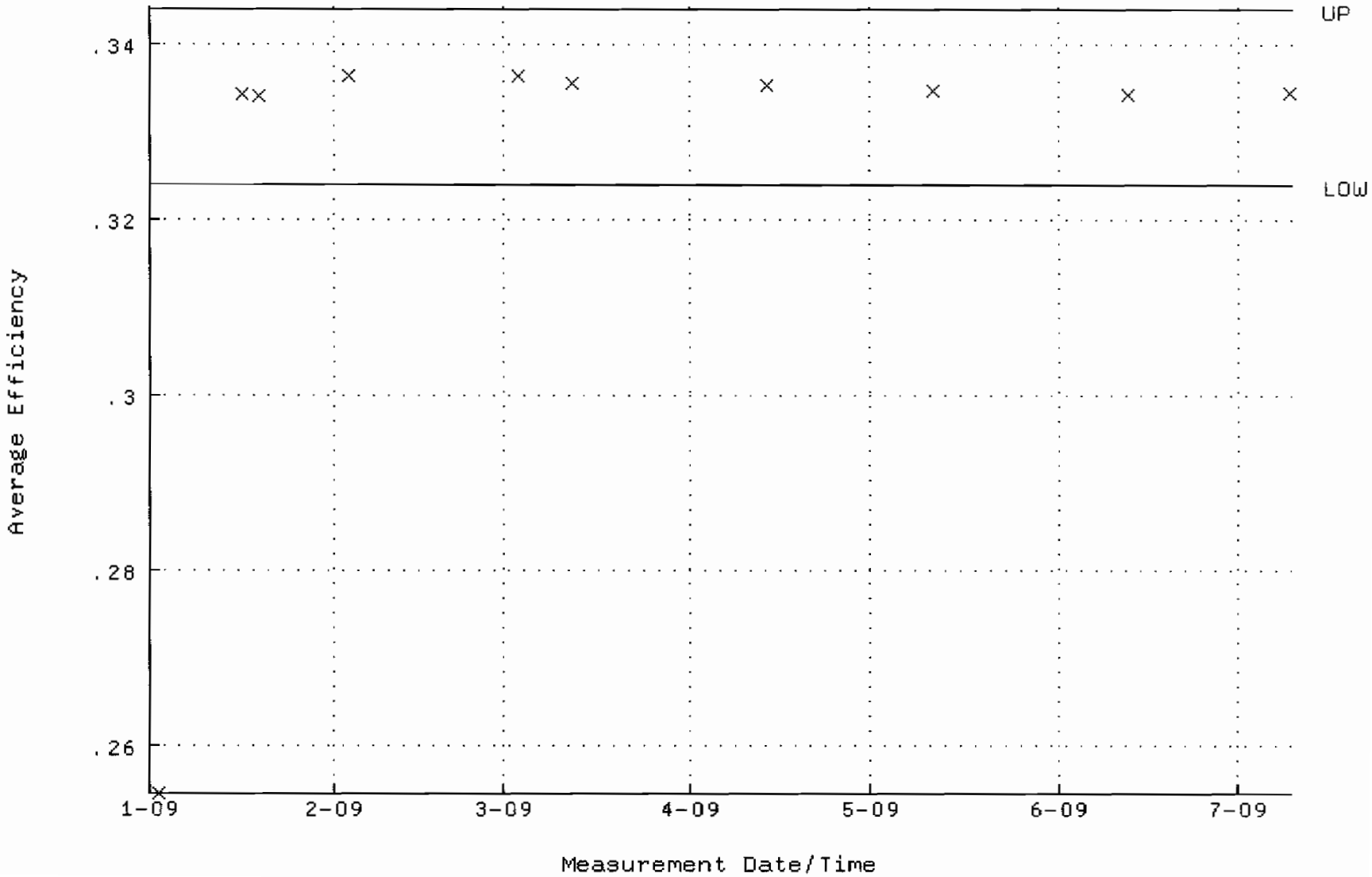

QA filename : DKA100:[ENV_ALPHA.QA.W]W080.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:14:57 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 86.5393 through 95.6487

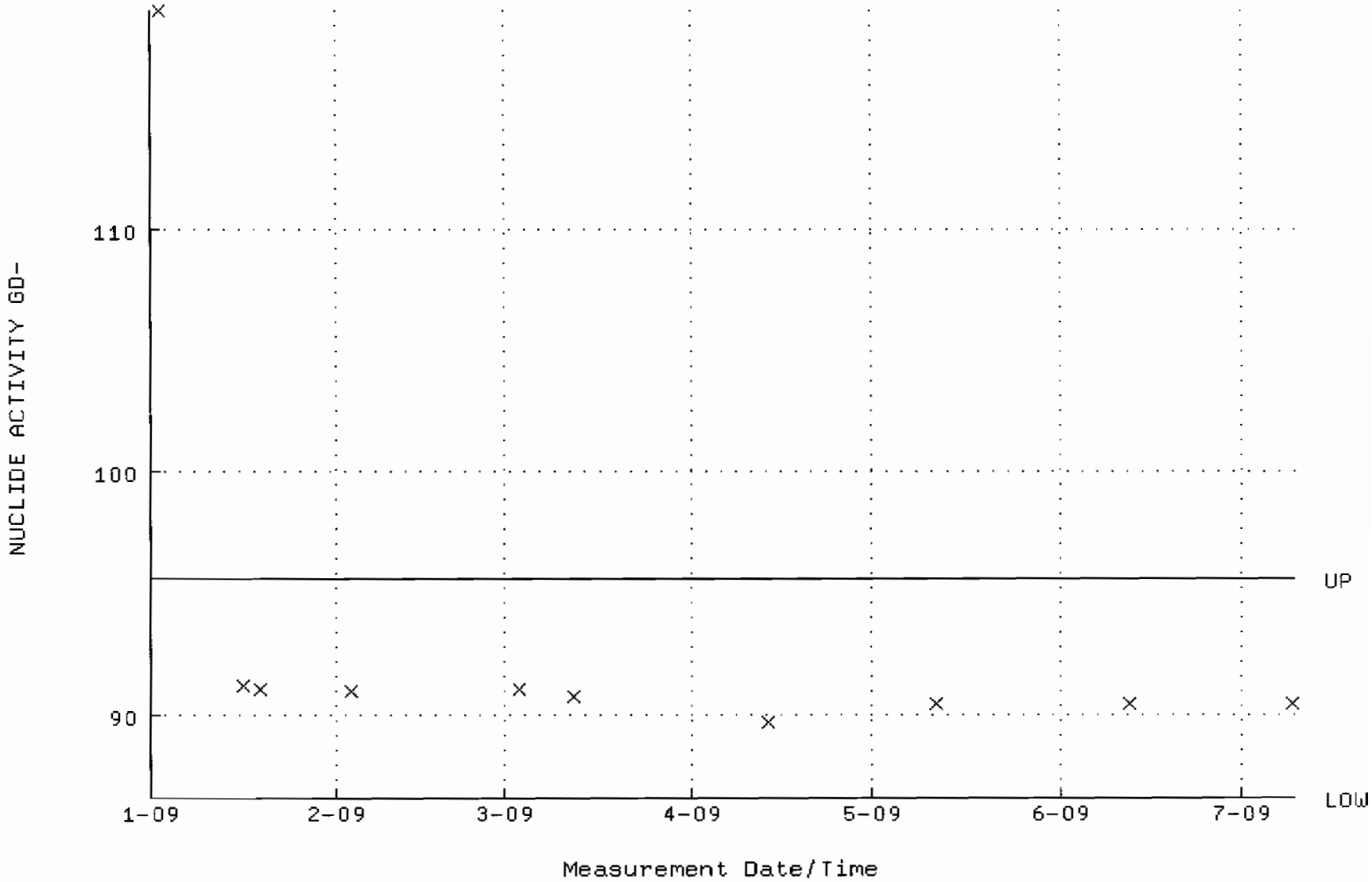

QA filename : DKA100:[ENV_ALPHA.QA.B]B080.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:34 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

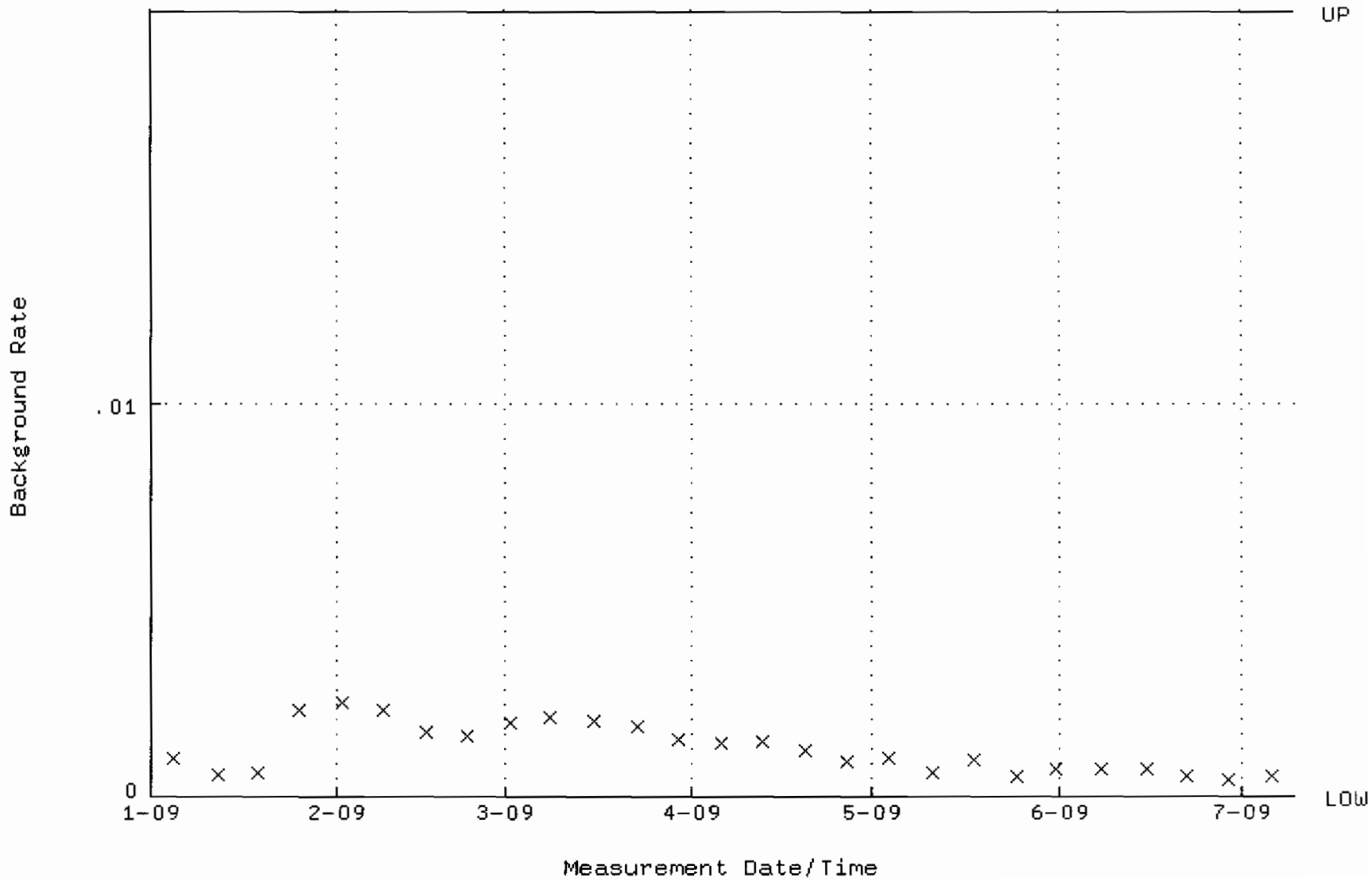

QA filename : DKA100:[ENV_ALPHA.QA.W]W109.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:15:30 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.344397 through 0.364397

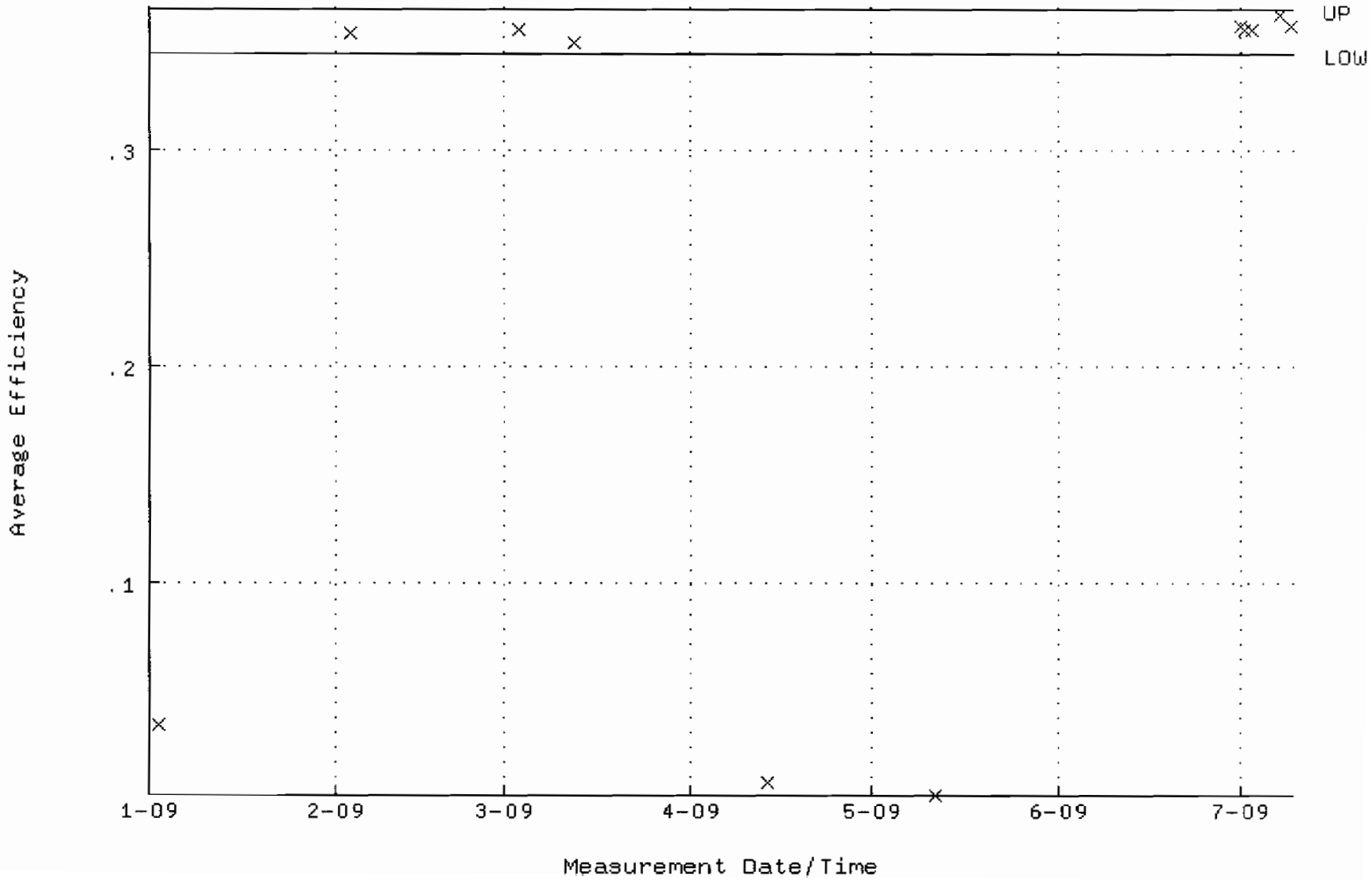

QA filename : DKA100:[ENV_ALPHA.QA.W]W109.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:15:30 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 63.4194 through 70.0952

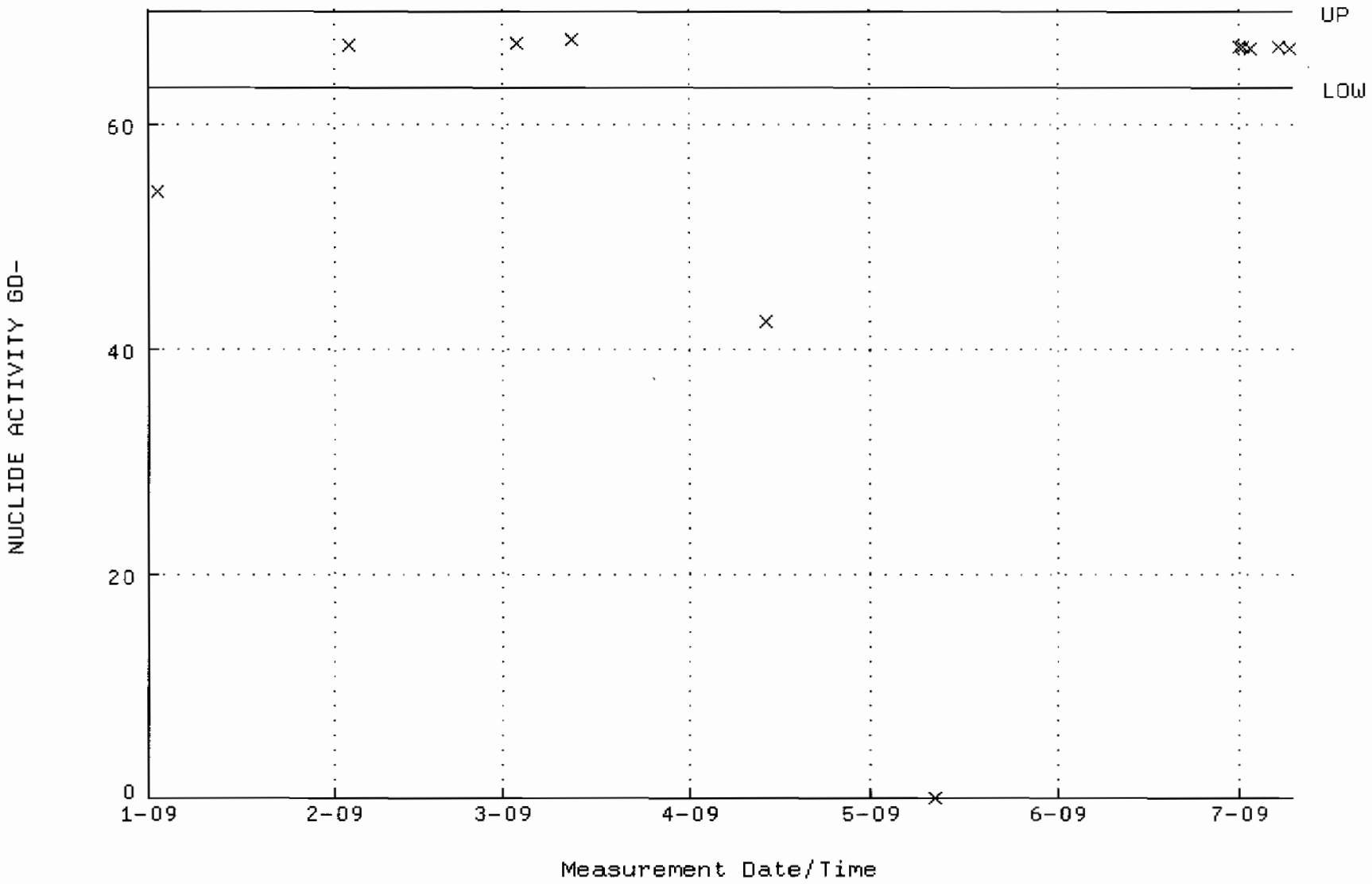

QA filename : DKA100:[ENV_ALPHA.QA.B]B109.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:40 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

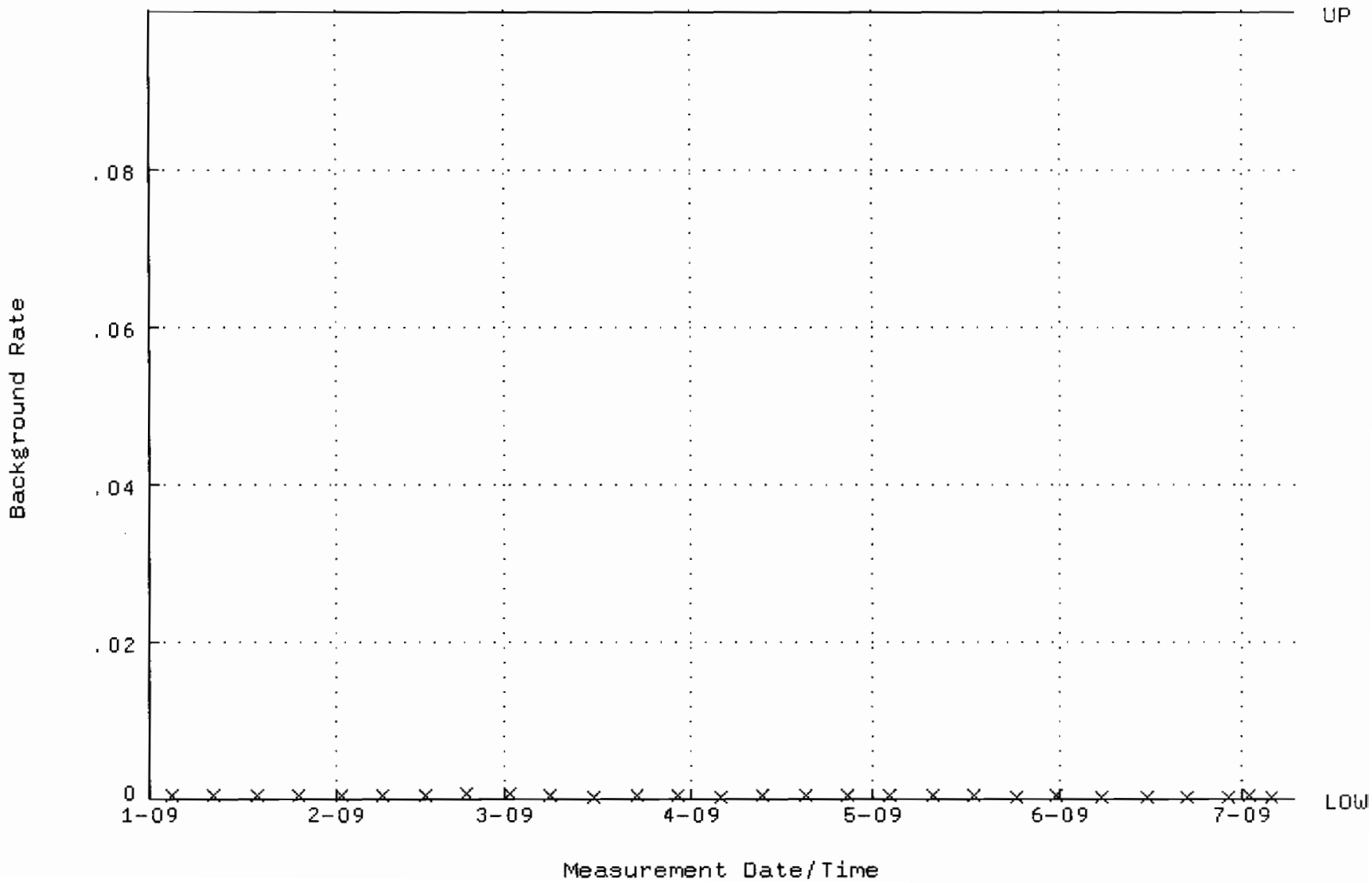

QA filename : DKA100:[ENV_ALPHA.QA.W]W112.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:15:30 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.308263 through 0.328263

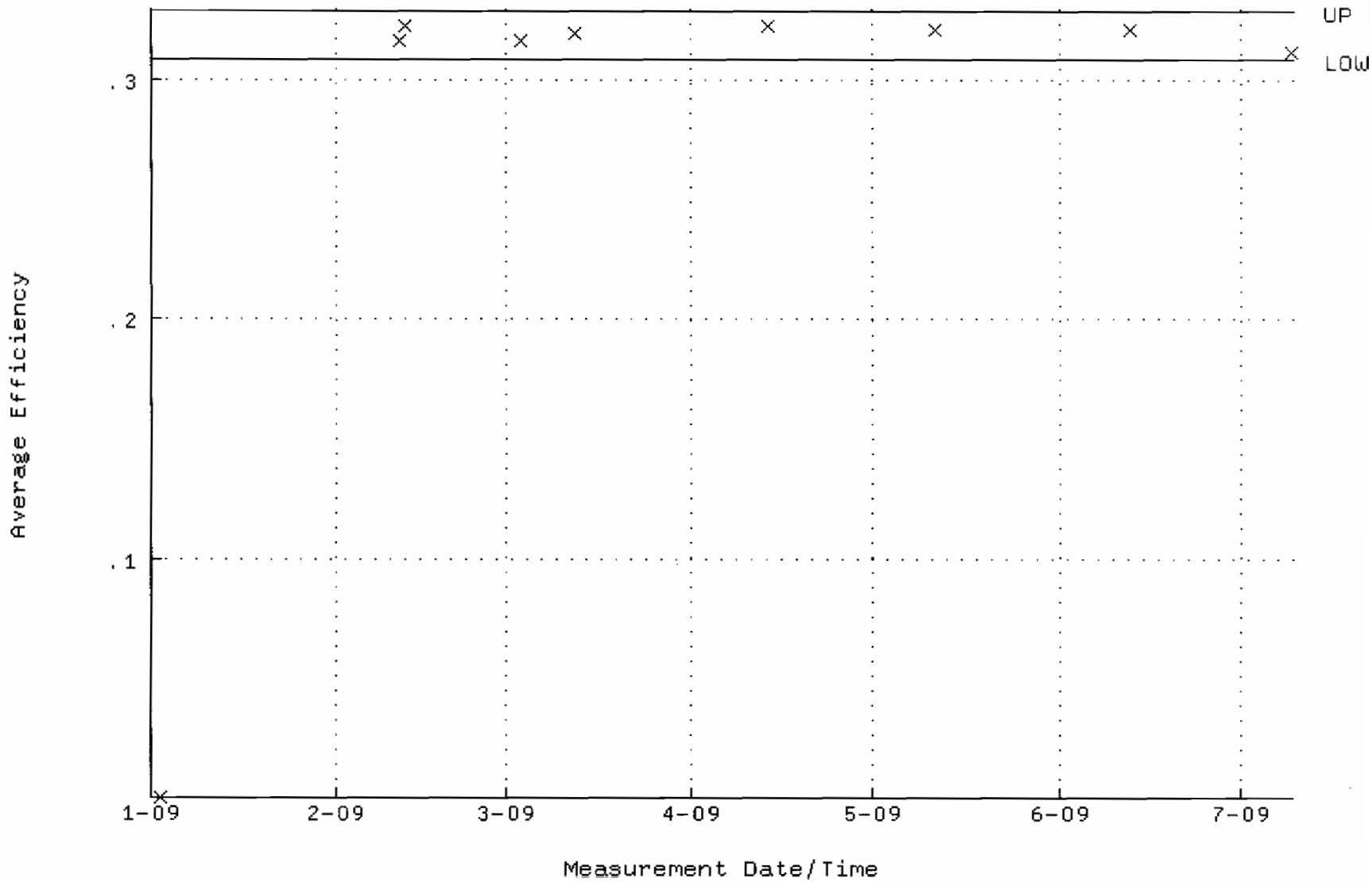

QA filename : DKA100:[ENV_ALPHA.QA.W]W112.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:15:30 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 64.8451 through 71.6709

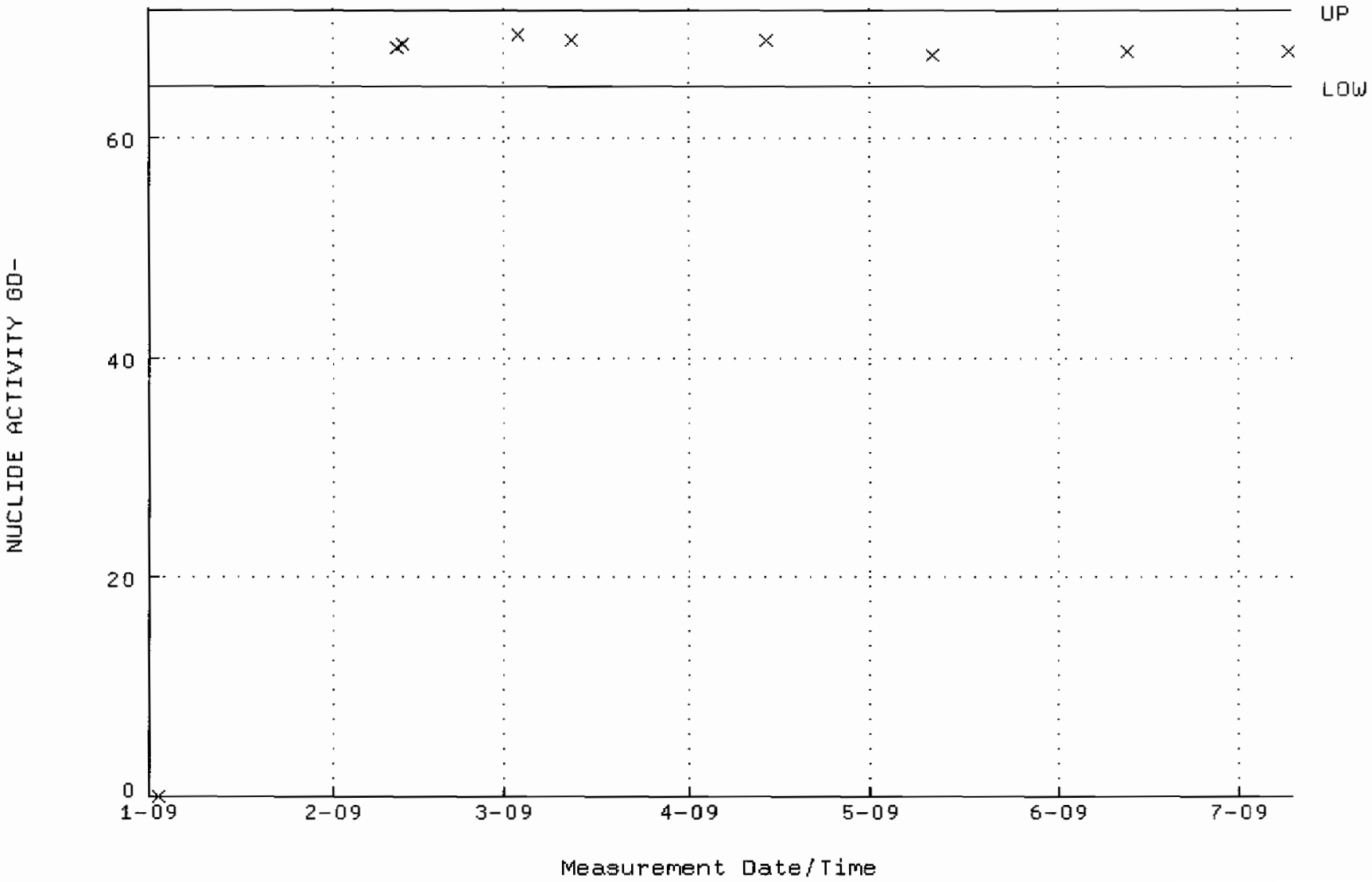

QA filename : DKA100:[ENV_ALPHA.QA.B]B112.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:40 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

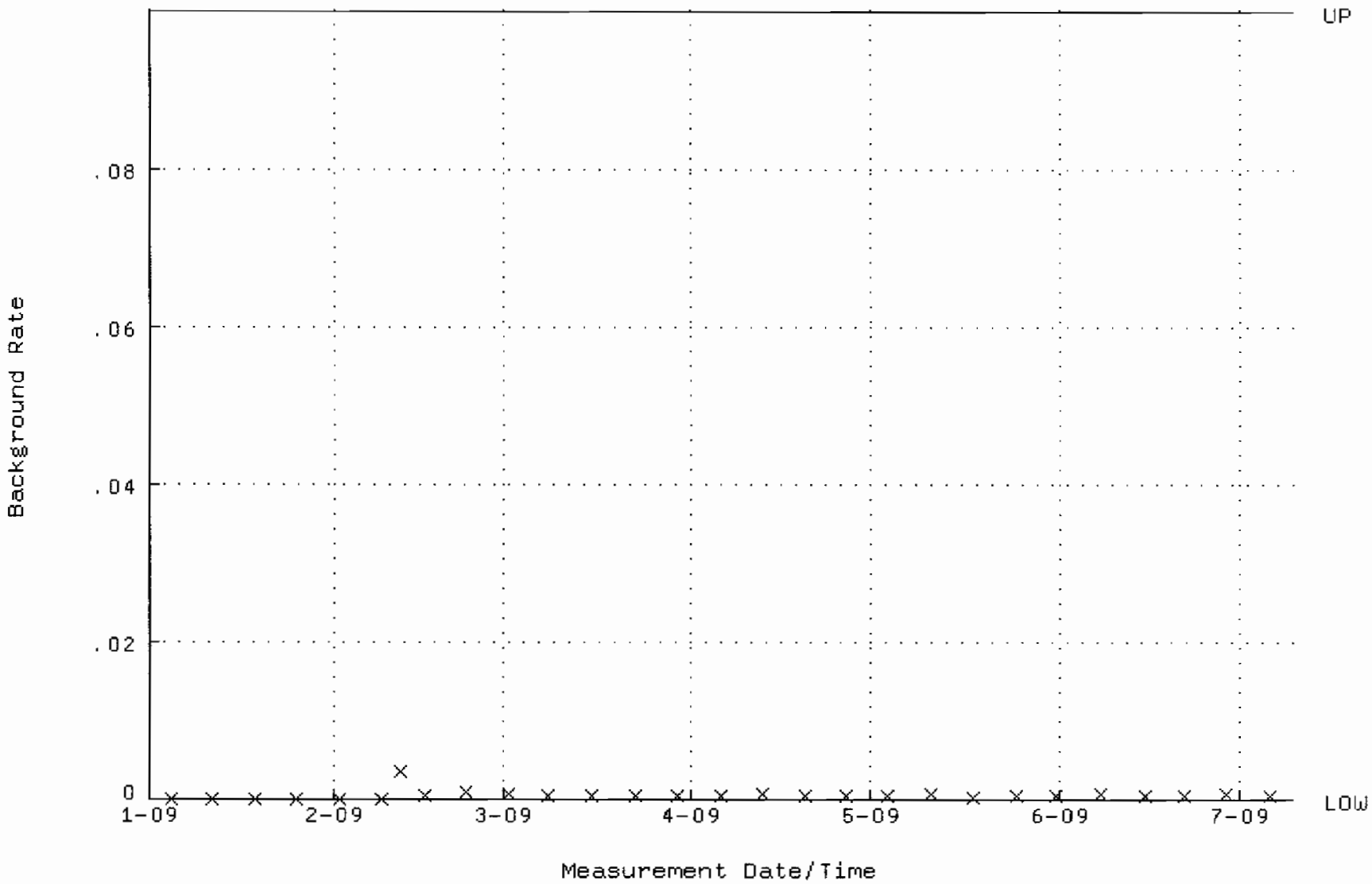

QA filename : DKA100:[ENV_ALPHA.QA.W]W113.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:22:39 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.242598 through 0.262598

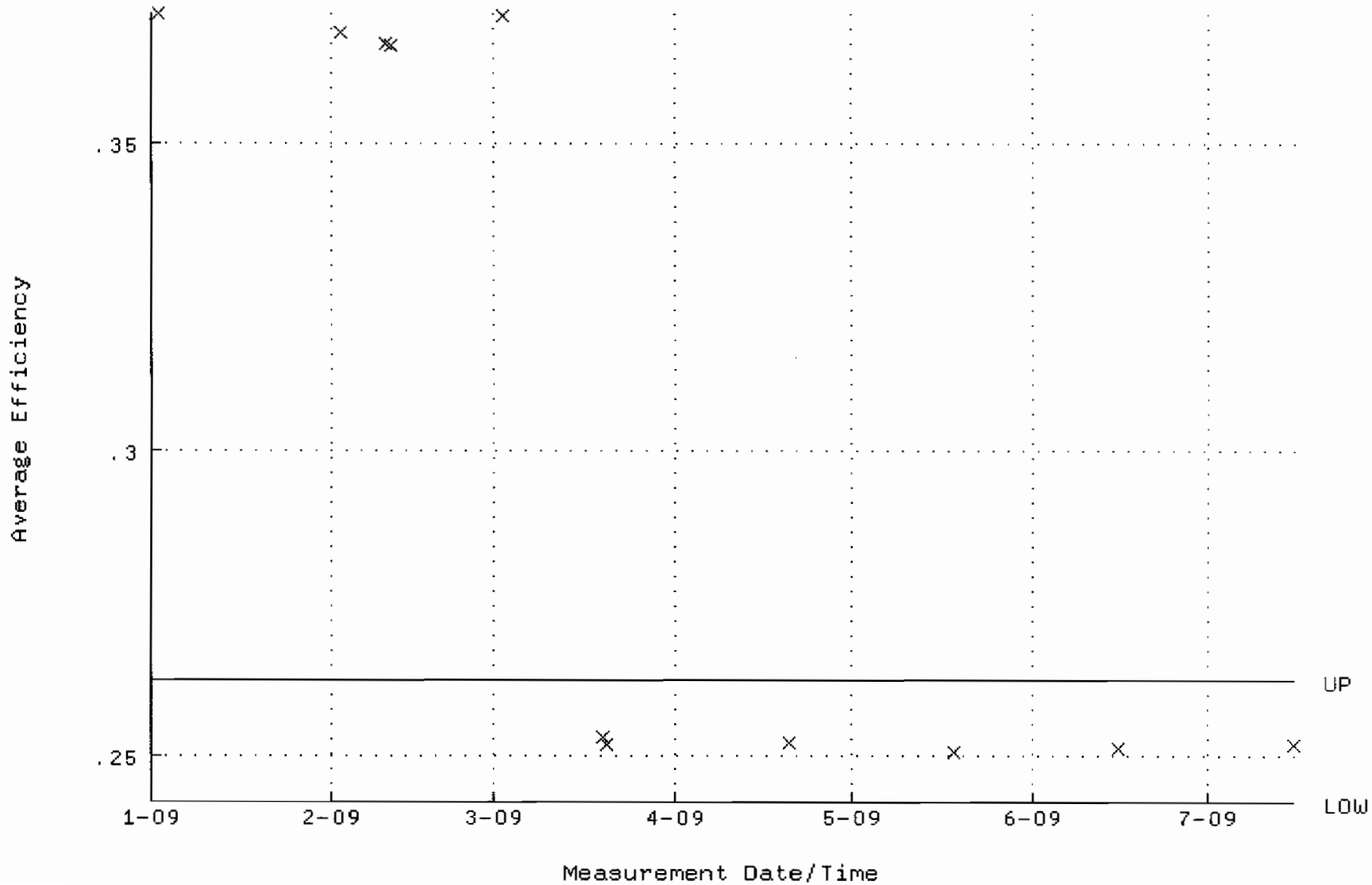

QA filename : DKA100:[ENV_ALPHA.QA.W]W113.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:22:39 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 87.5172 through 96.7296

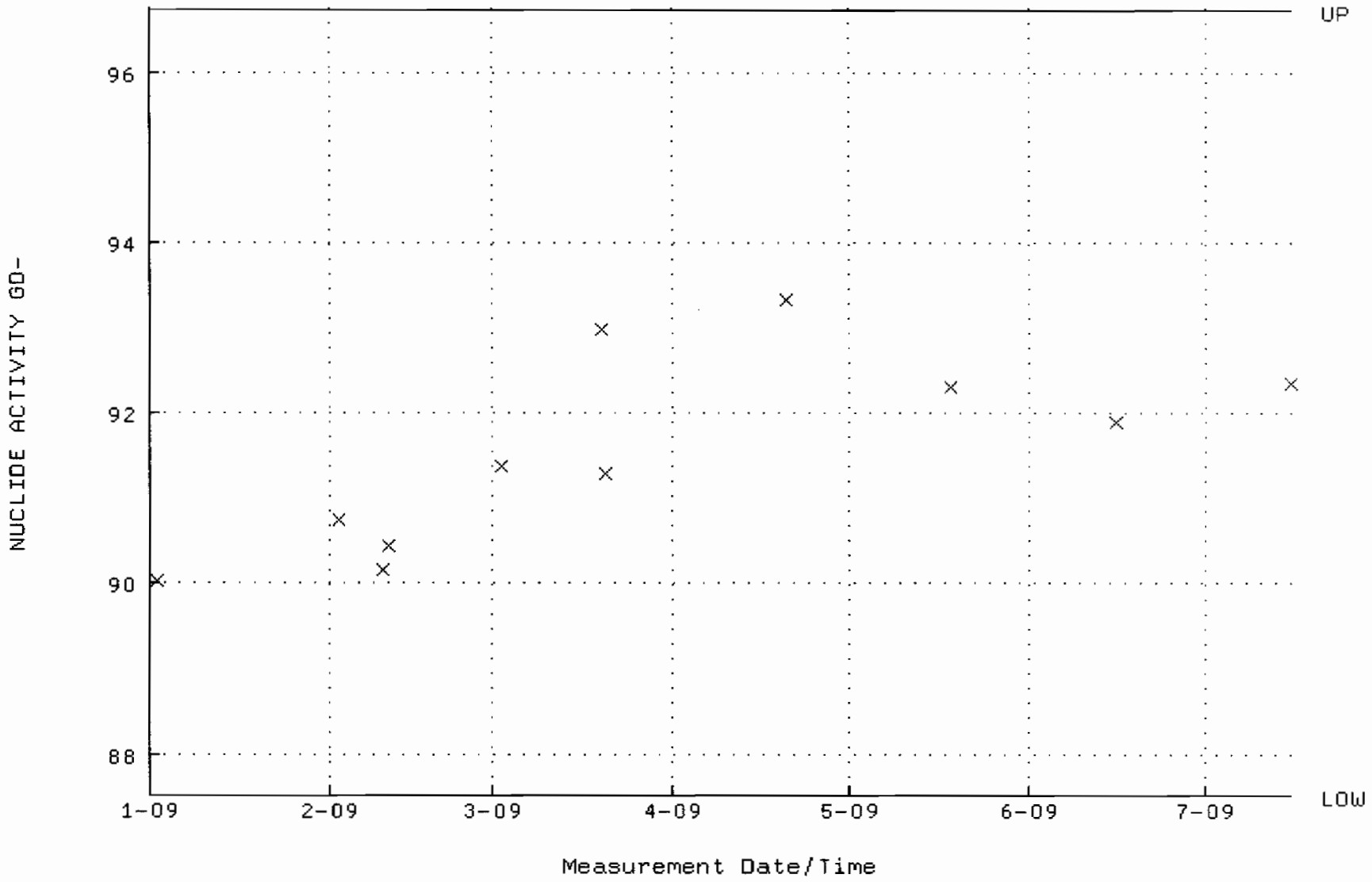

QA filename : DKA100:[ENV_ALPHA.QA.B]B113.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:41 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

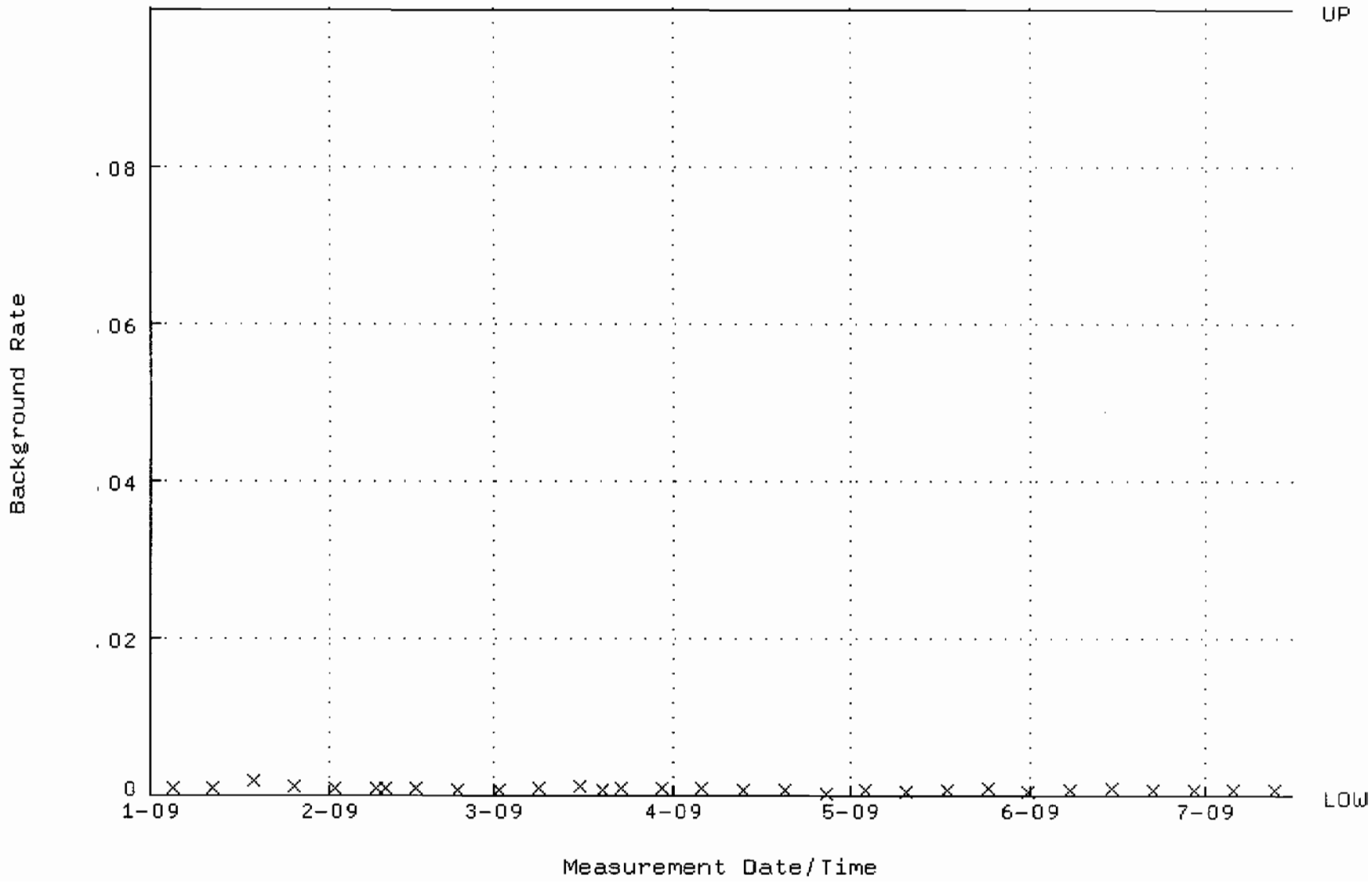

QA filename : DKA100:[ENV_ALPHA.QA.W]W114.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:22:43 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.245499 through 0.265499

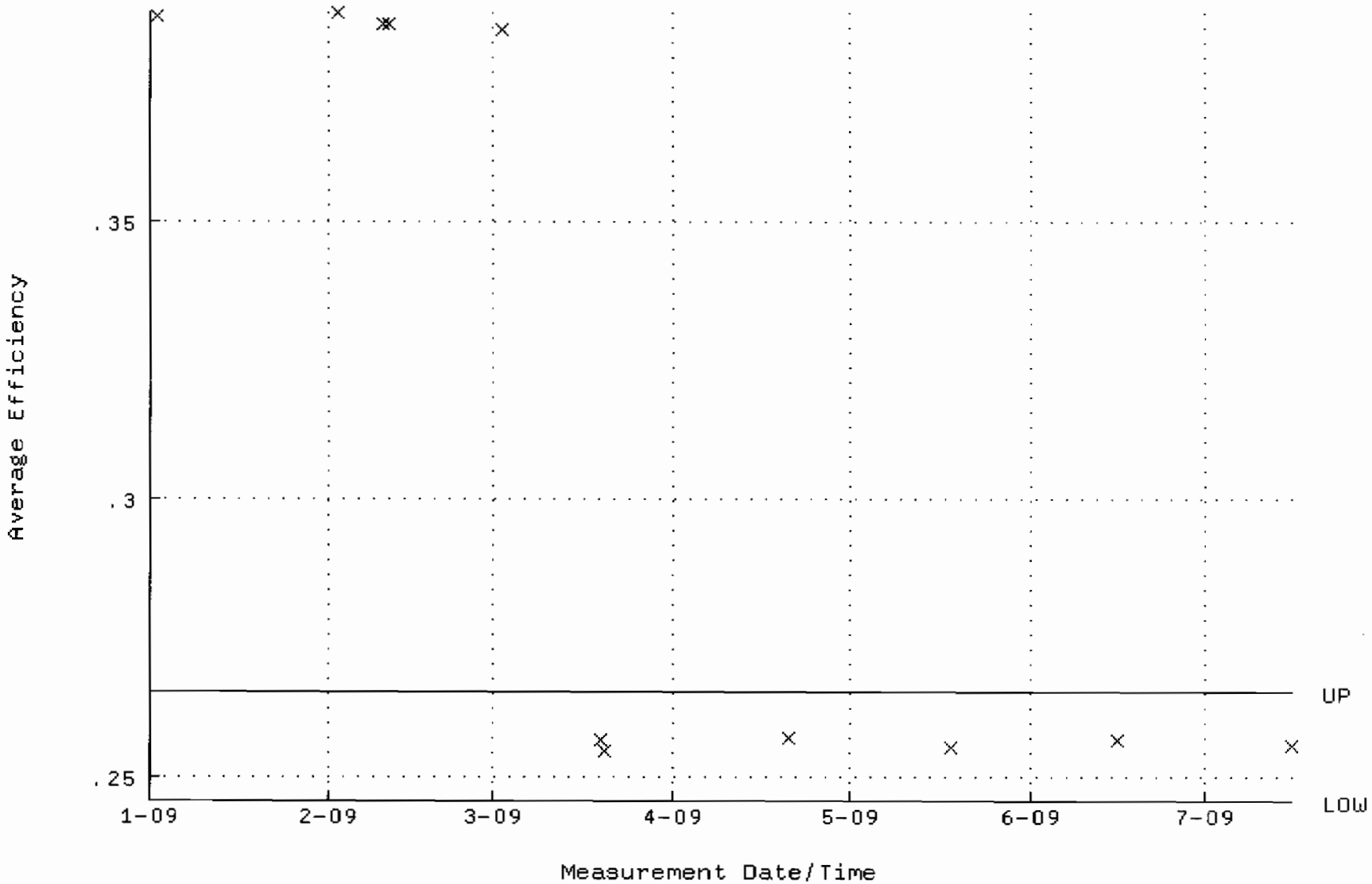

QA filename : DKA100:[ENV_ALPHA.QA.W]W114.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:22:43 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 87.8108 through 97.0540

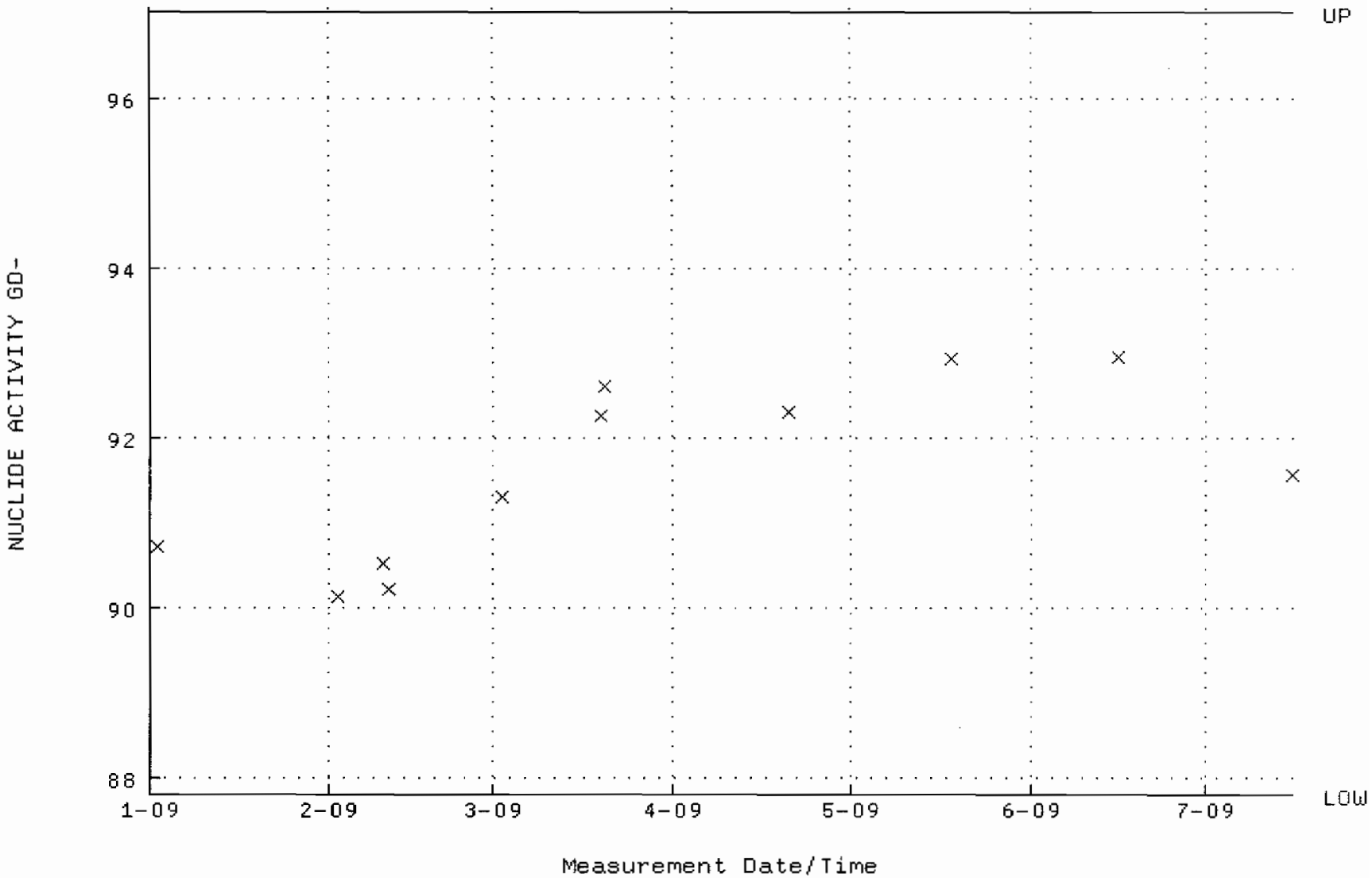

QA filename : DKA100:[ENV_ALPHA.QA.B]B114.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:50 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

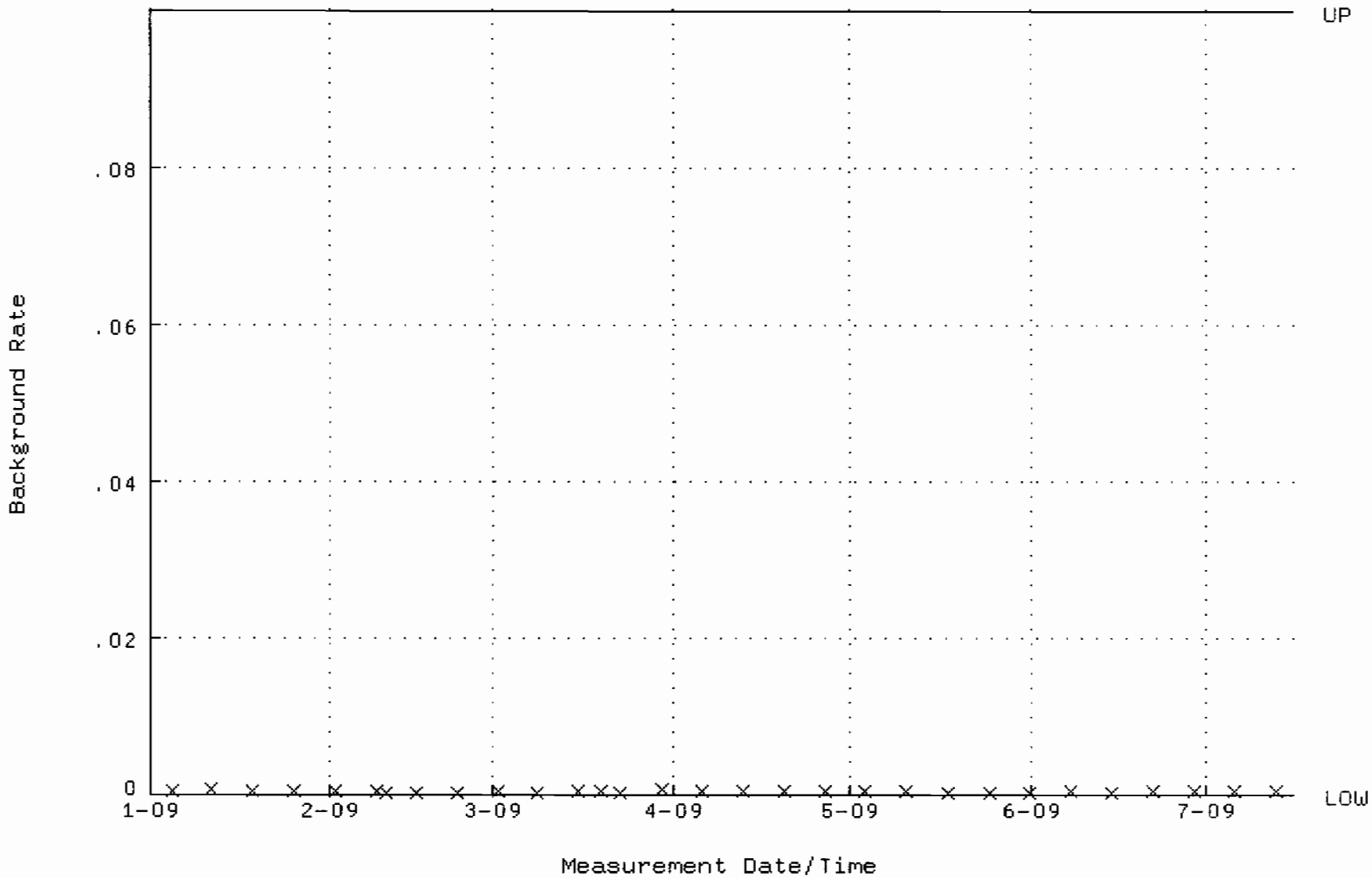

QA filename : DKA100:[ENV_ALPHA.QA.W]W115.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:22:48 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.255018 through 0.275018

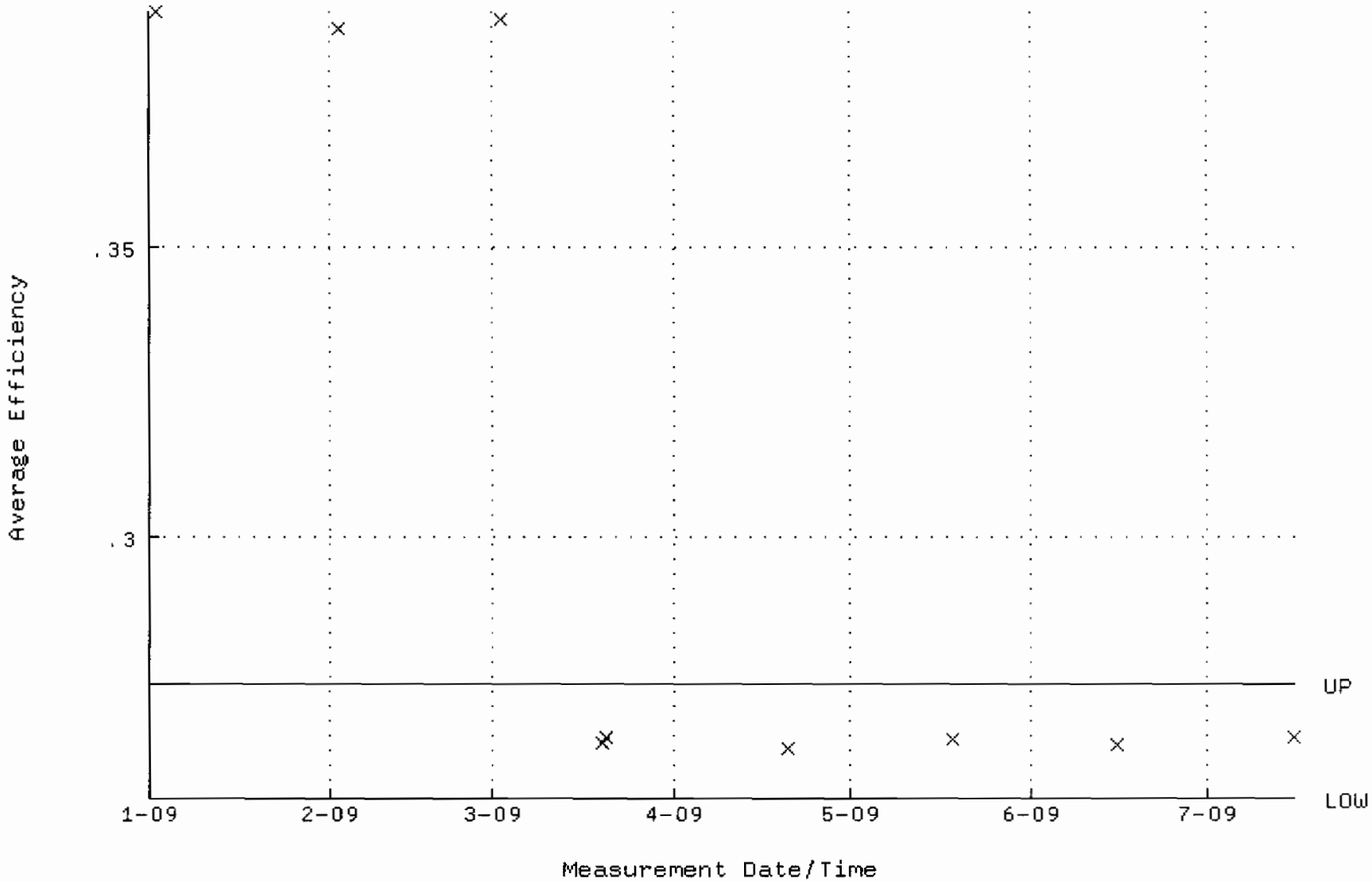

QA filename : DKA100:[ENV_ALPHA.QA.W]W115.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:22:48 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 86.1212 through 95.1866

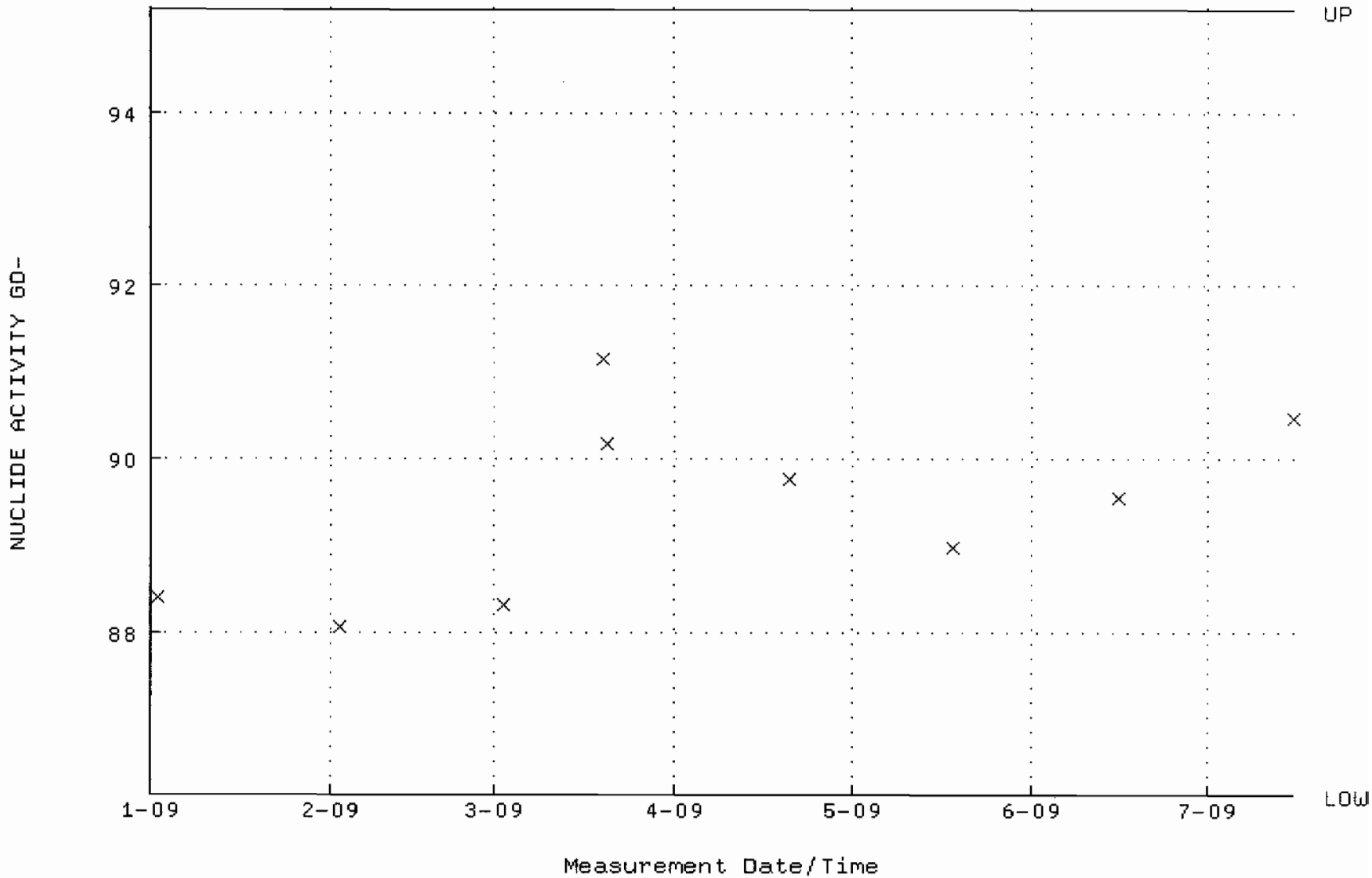

QA filename : DKA100:[ENV_ALPHA.QA.B]B115.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:56 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

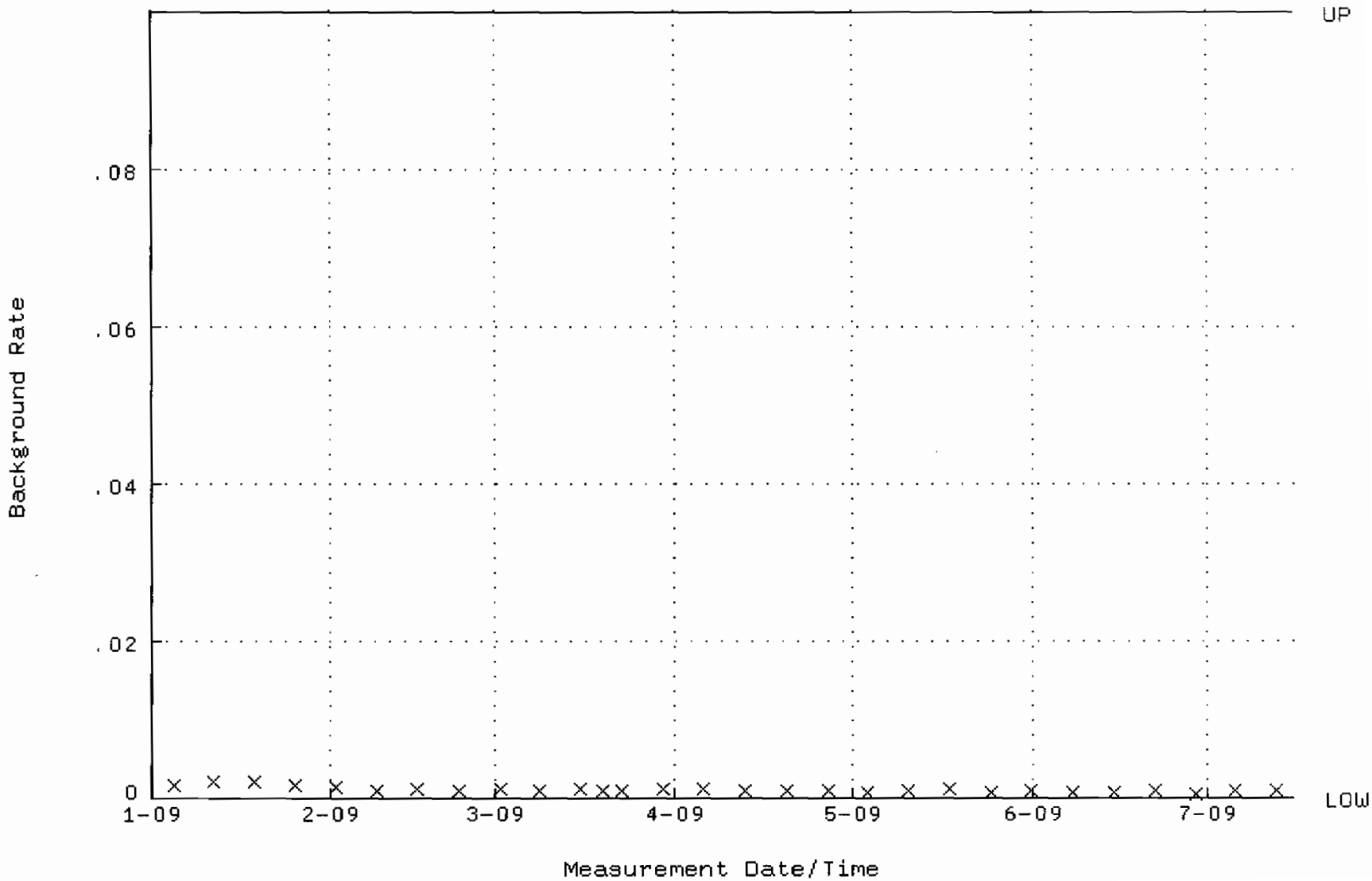

QA filename : DKA100:[ENV_ALPHA.QA.W]W152.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:46 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.238479 through 0.258479

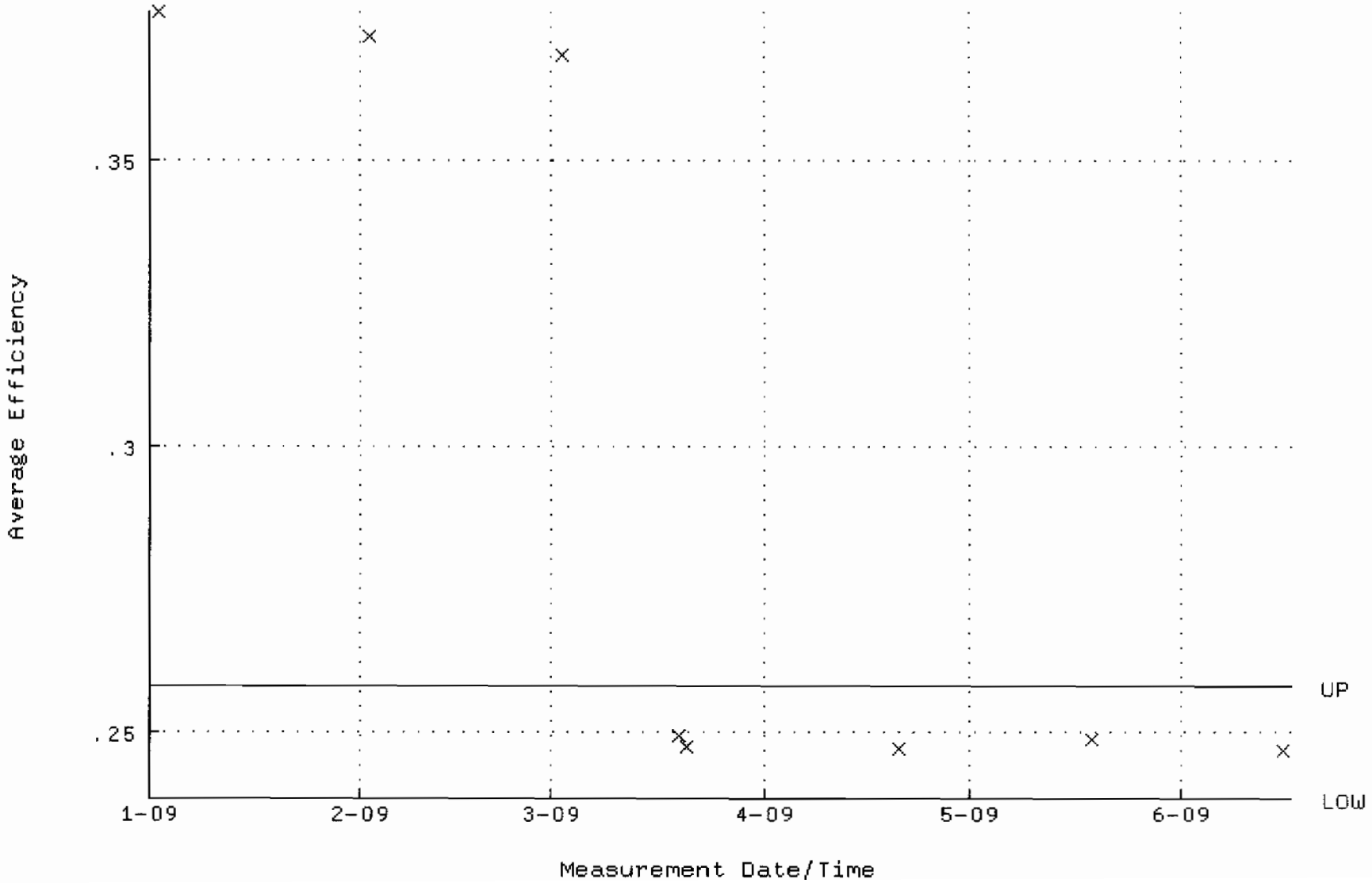

QA filename : DKA100:[ENV_ALPHA.QA.W]W152.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:46 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 83.7180 through 92.5304

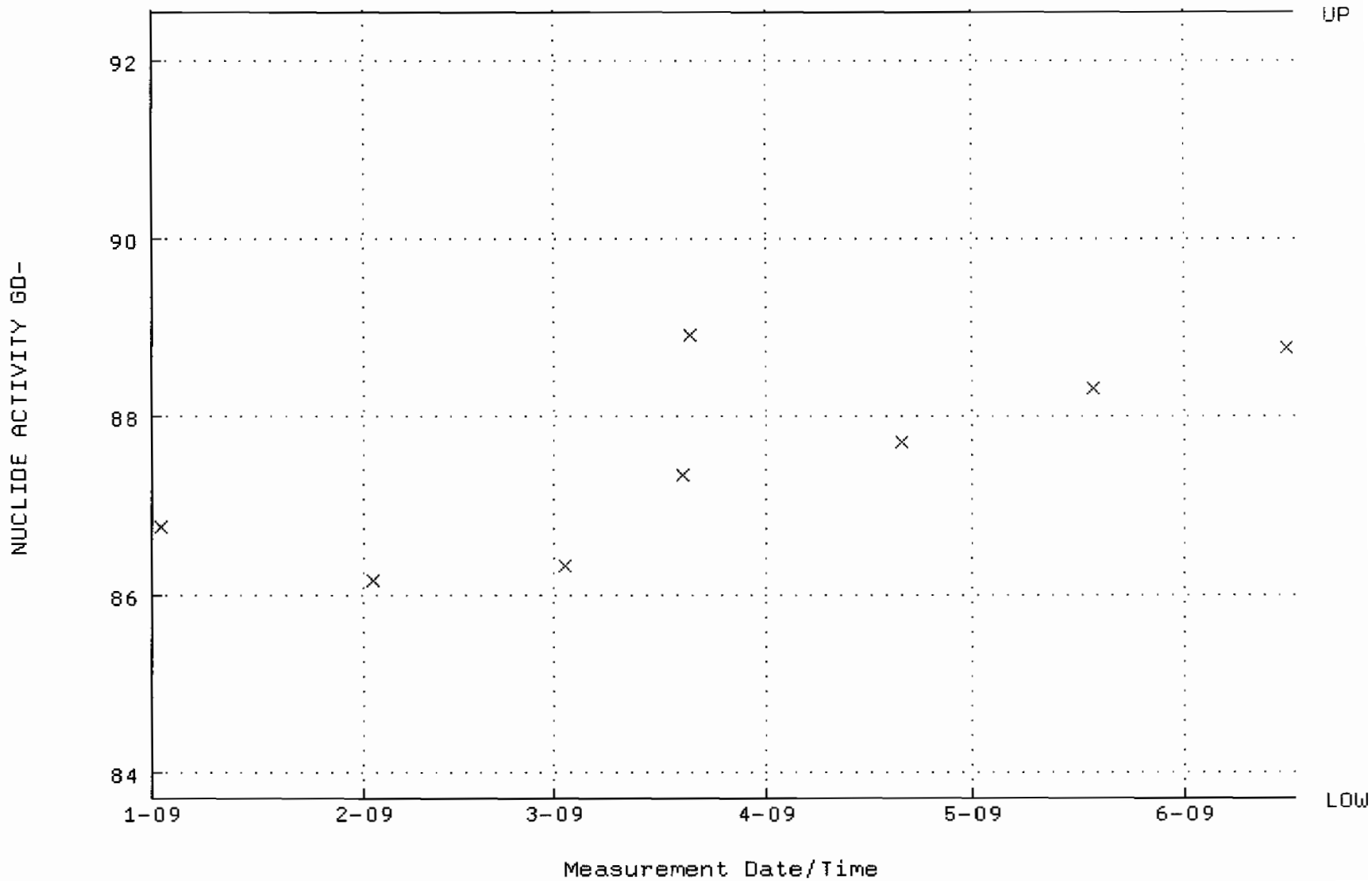

QA filename : DKA100:[ENV_ALPHA.QA.B]B152.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:32 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

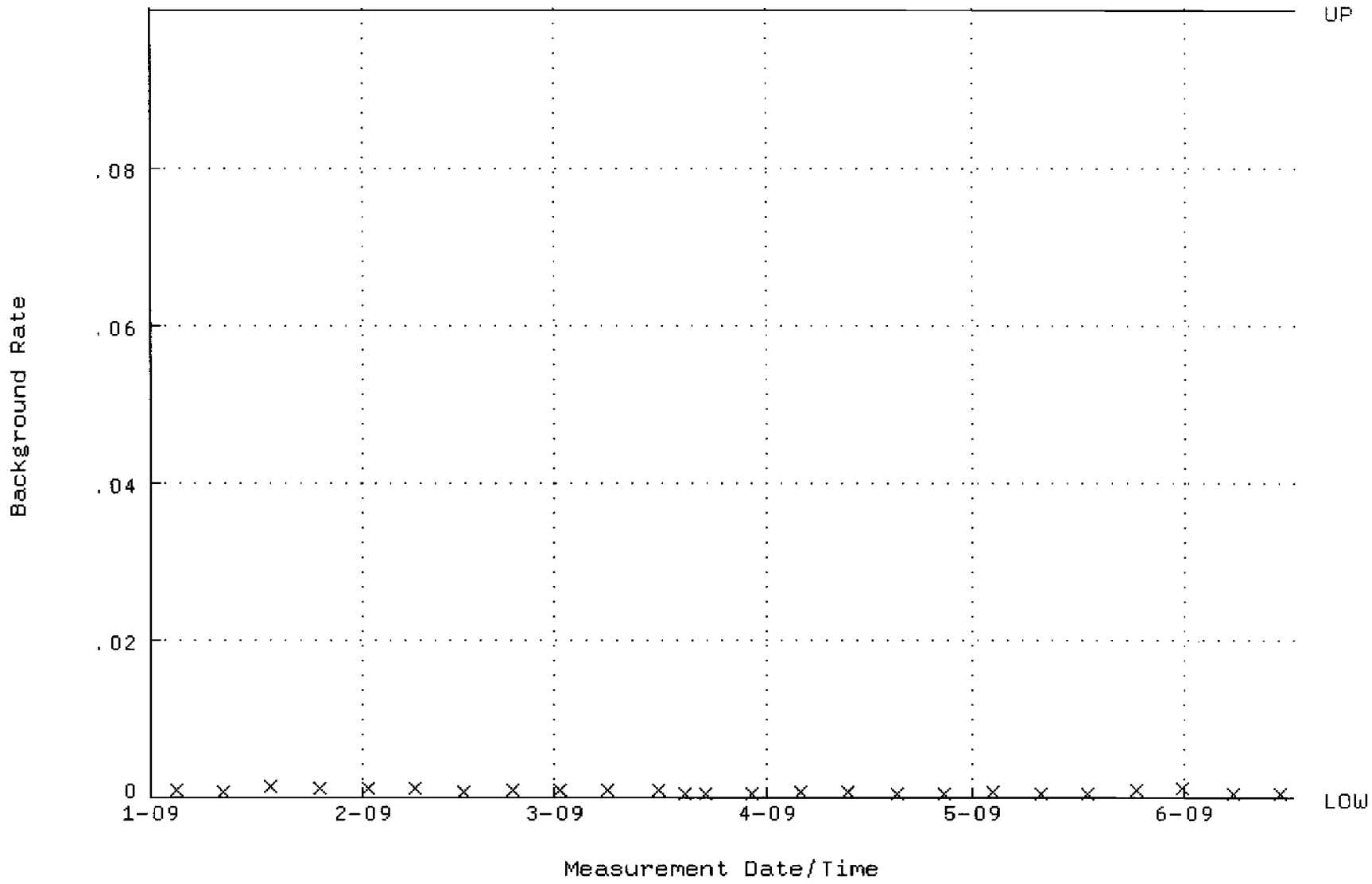

QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.244738 through 0.264738

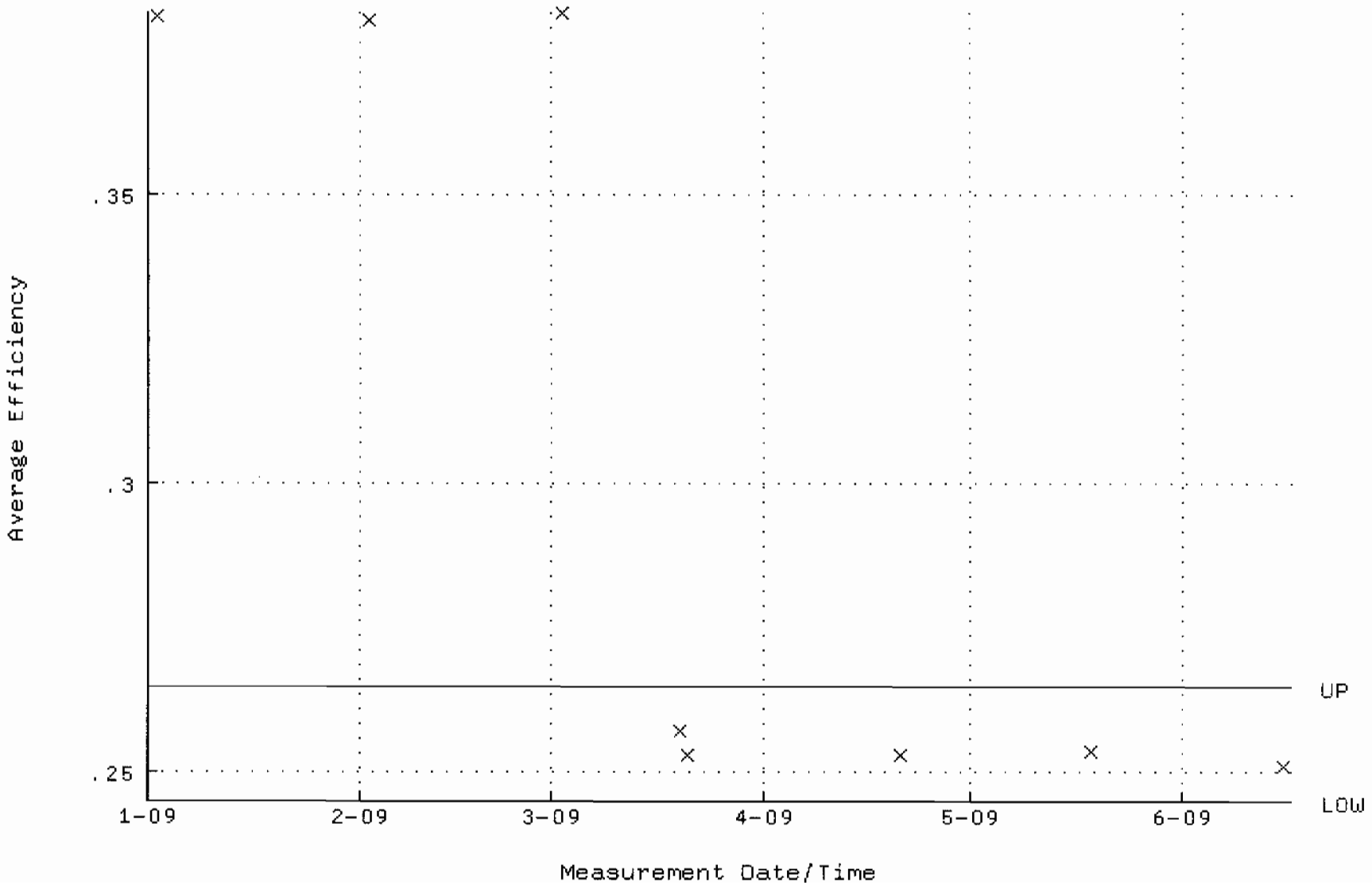

QA filename : DKA100:[ENV_ALPHA.QA.W]W153.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 81.3634 through 89.9280

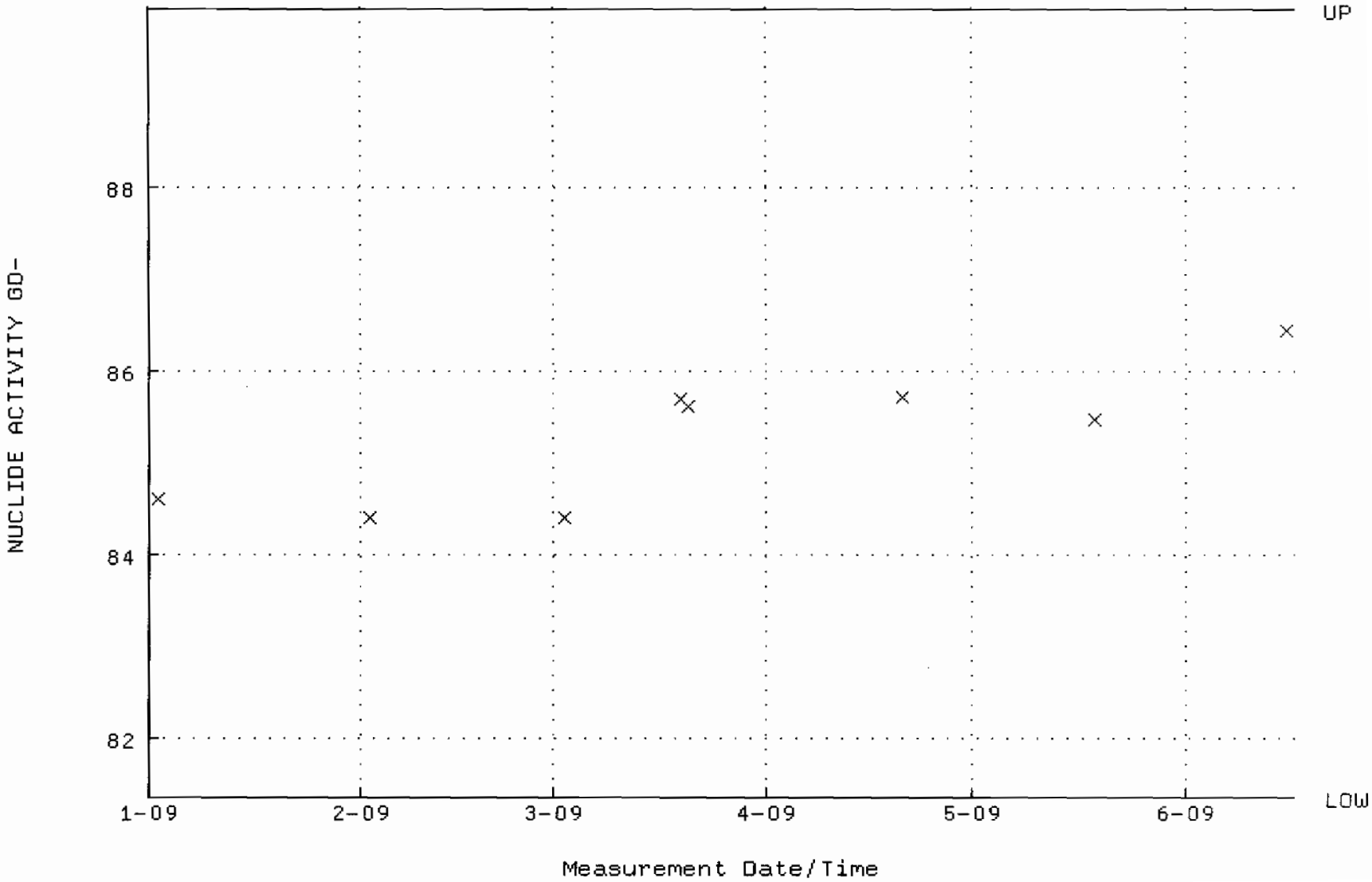

QA filename : DKA100:[ENV_ALPHA.QA.B]B153.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:36 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

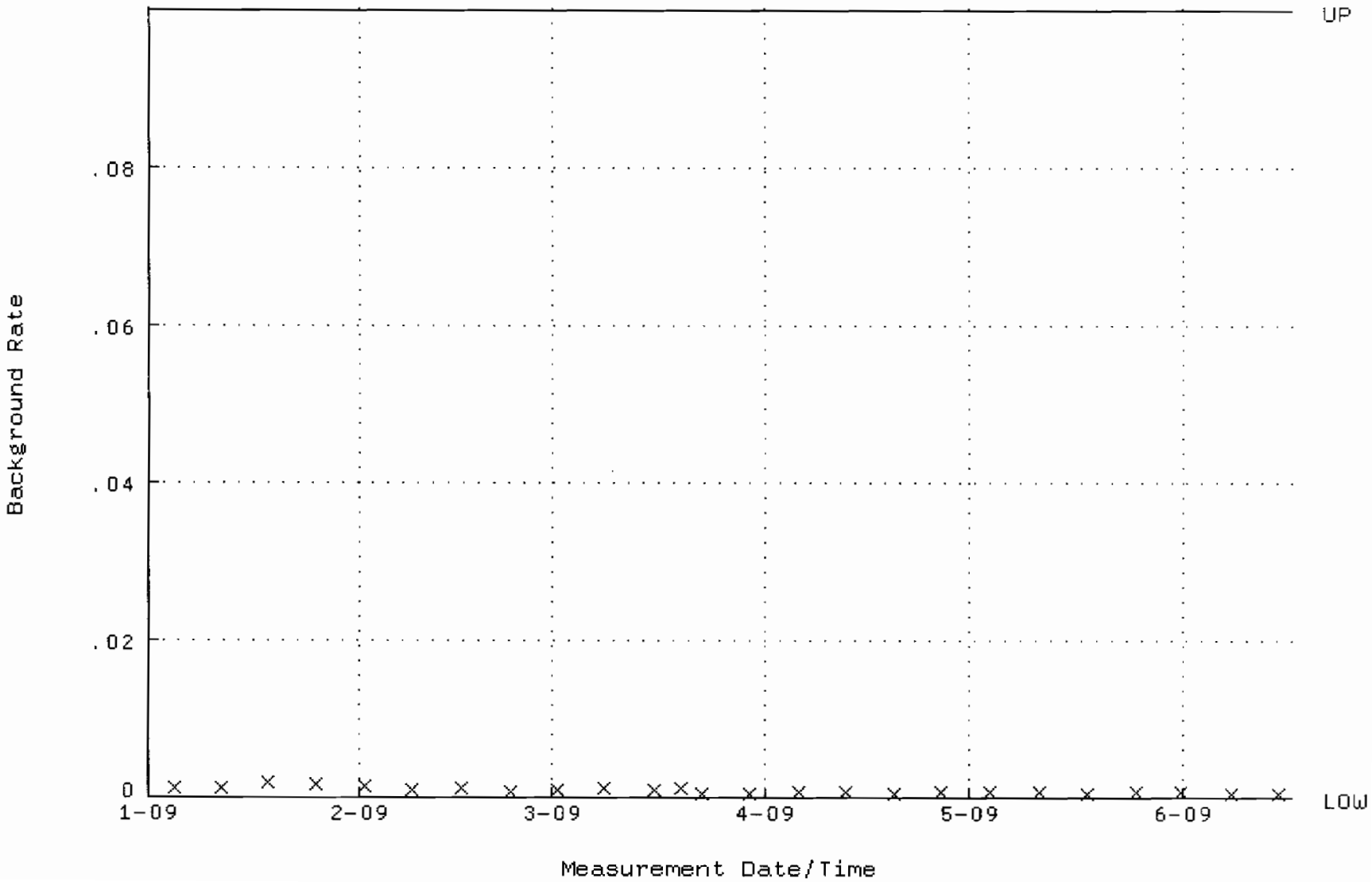

QA filename : DKA100:[ENV_ALPHA.QA.W]W154.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:56 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.251386 through 0.271386

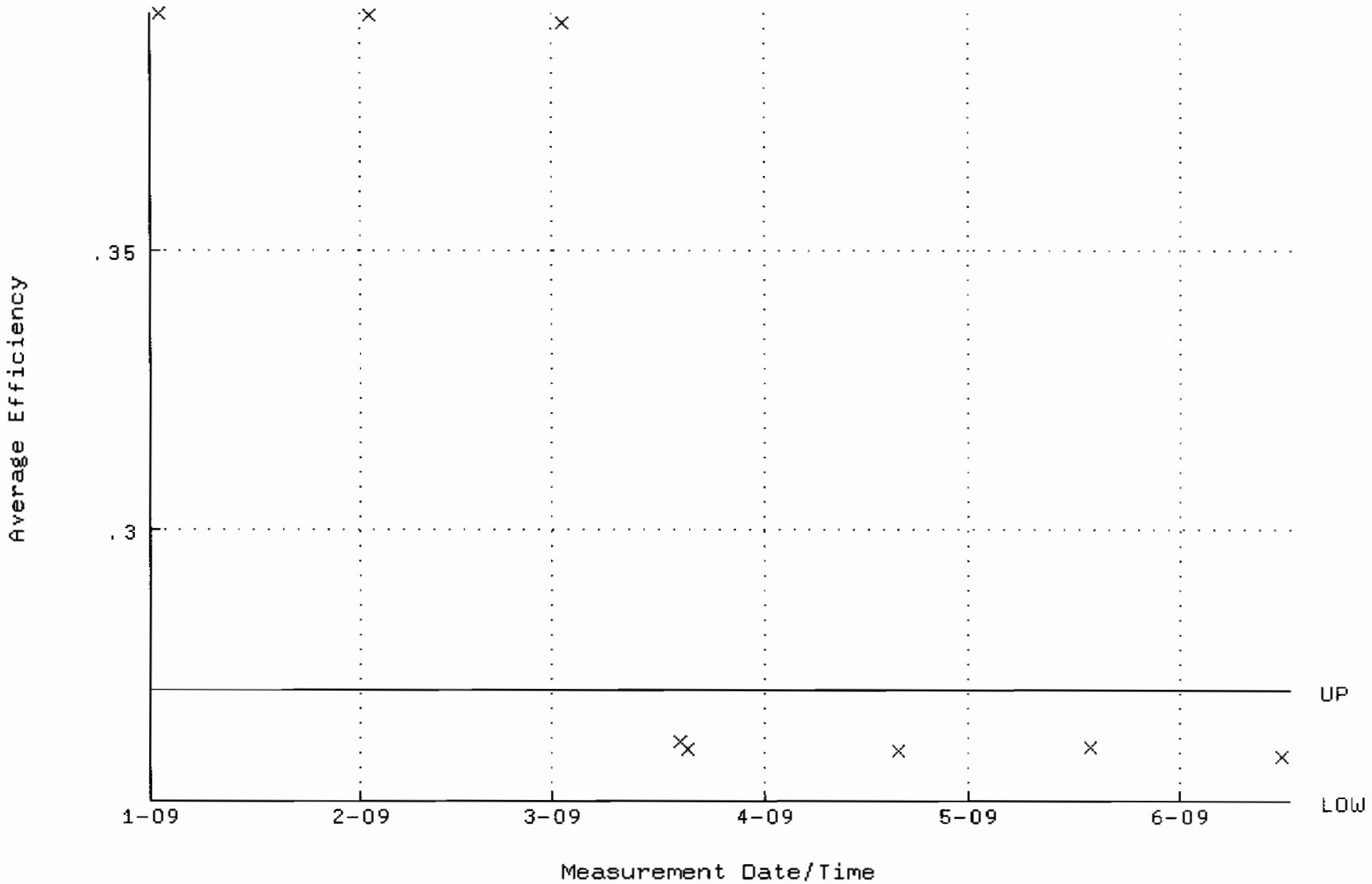

QA filename : DKA100:[ENV_ALPHA.QA.W]W154.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:56 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 79.9003 through 88.3109

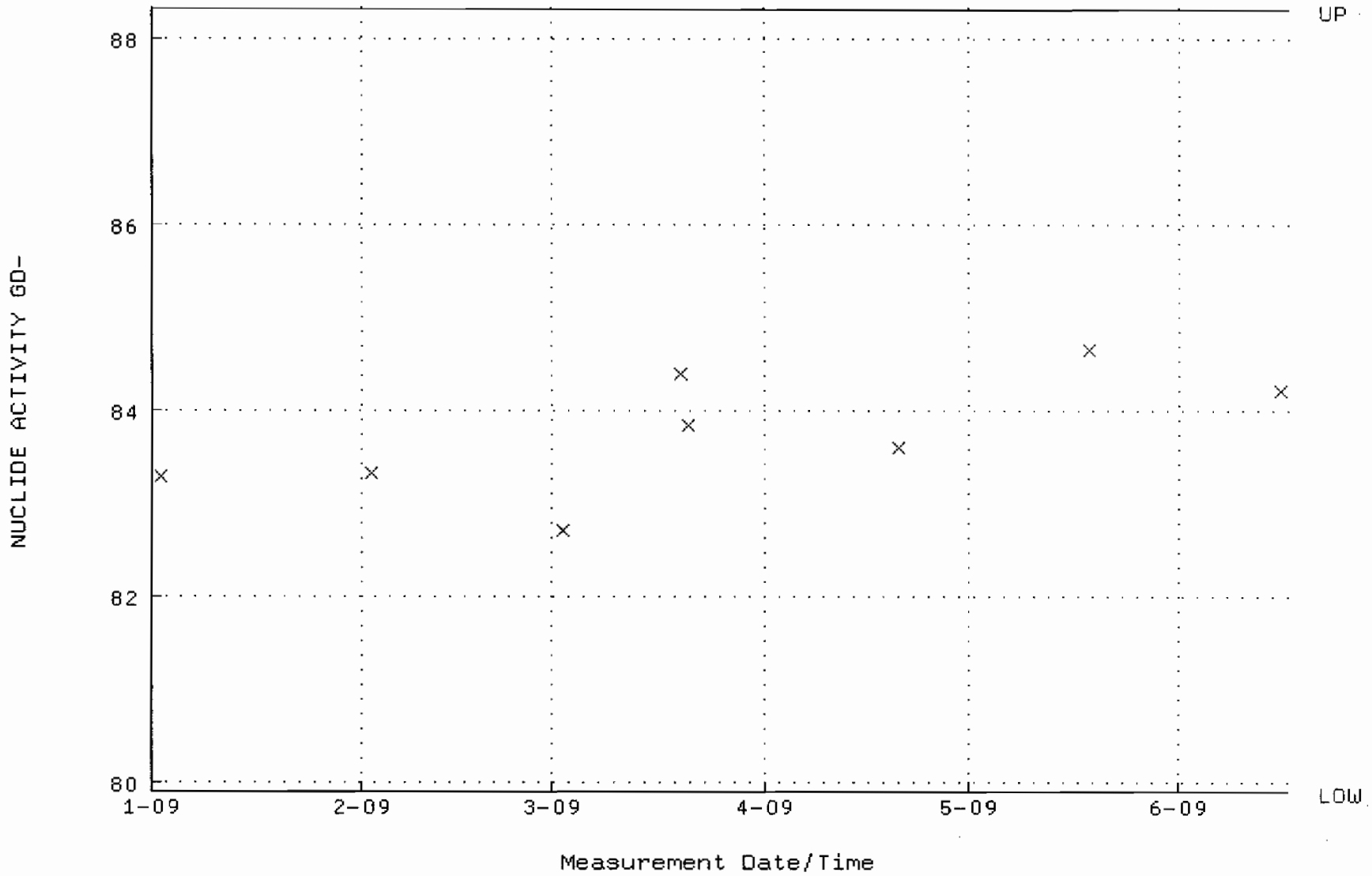

QA filename : DKA100:[ENV_ALPHA.QA.B]B154.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:40 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

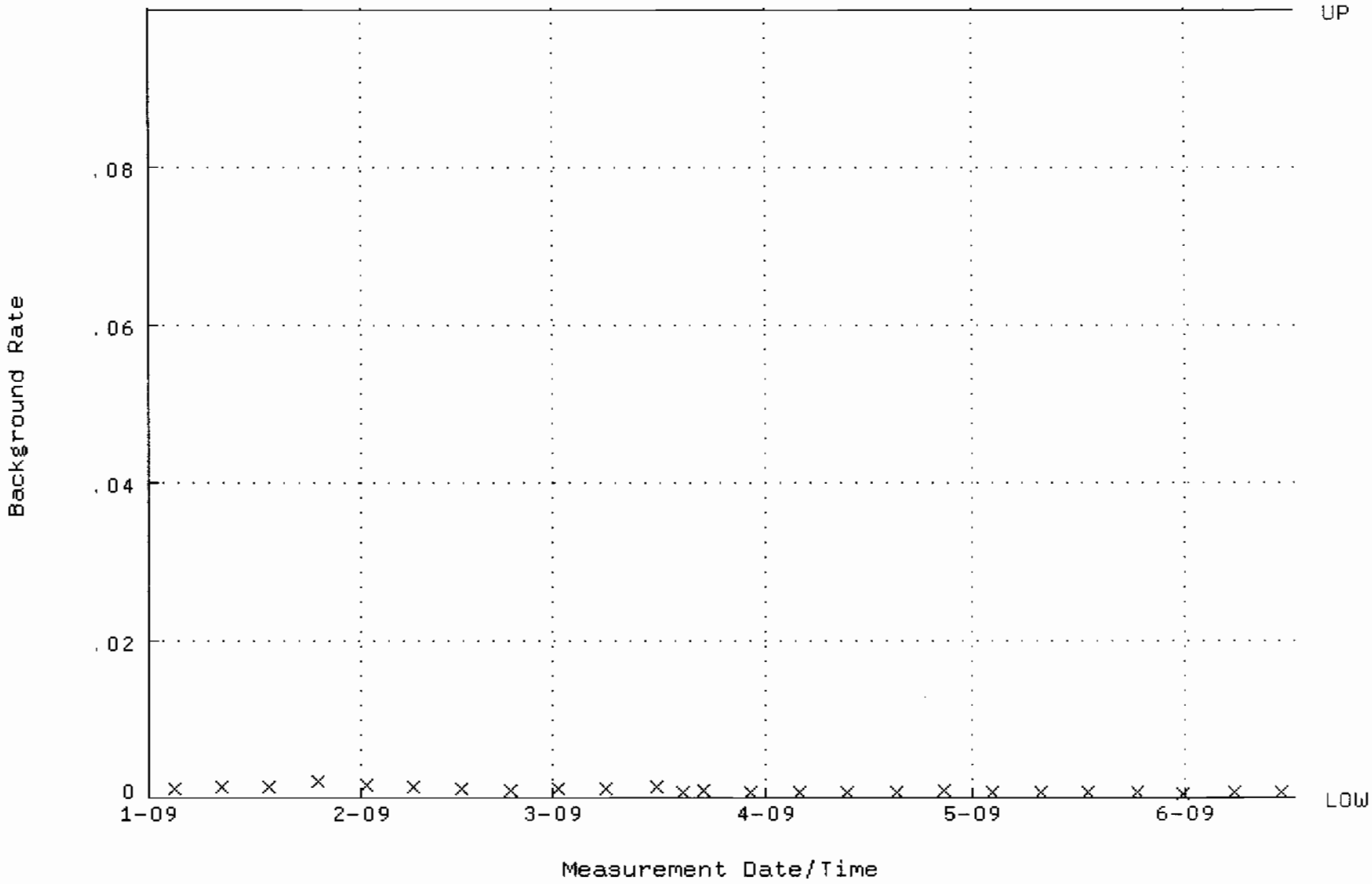

QA filename : DKA100:[ENV_ALPHA.QA.W]W155.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:01 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.247241 through 0.267241

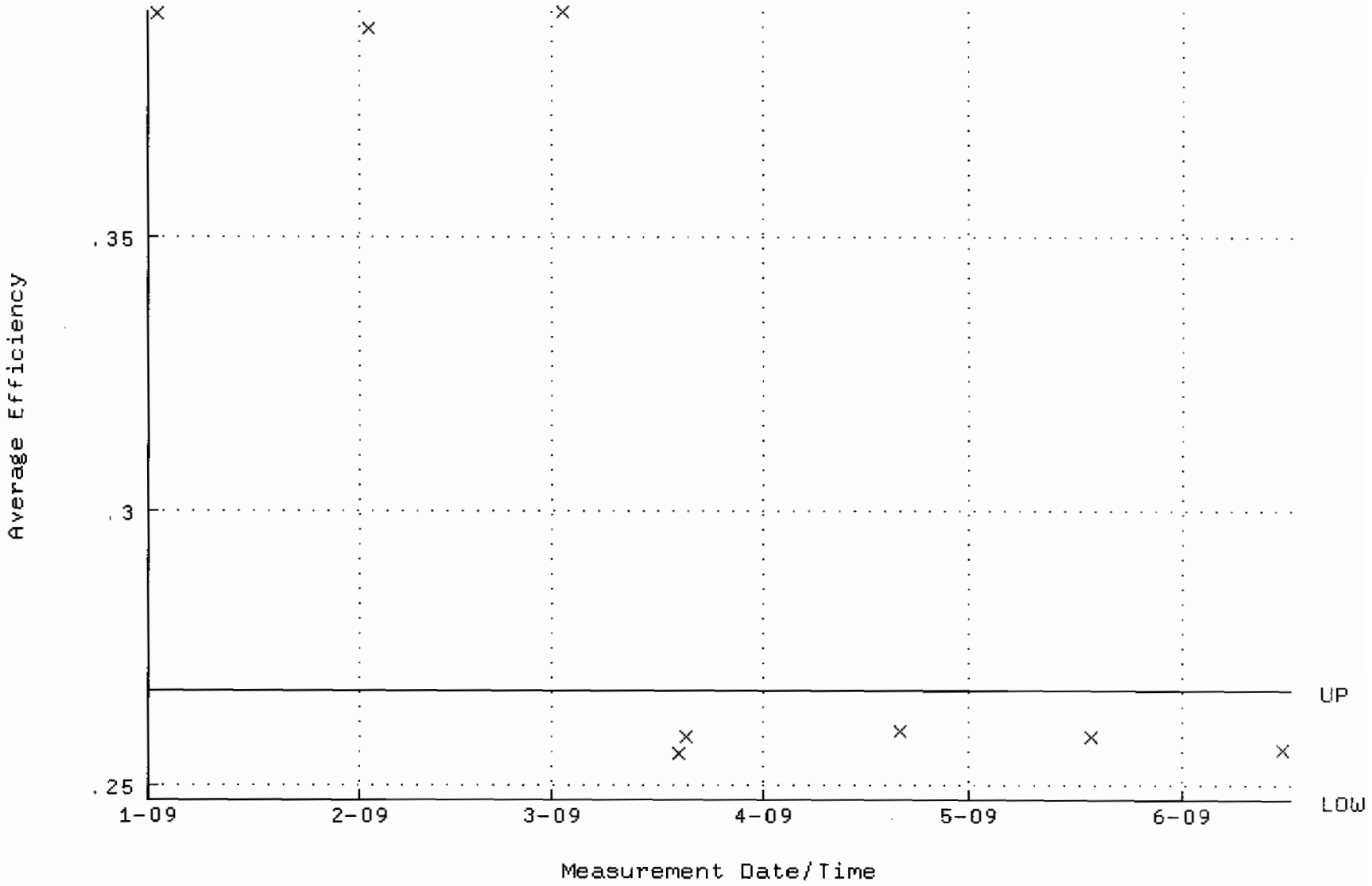

QA filename : DKA100:[ENV_ALPHA.QA.W]W155.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:01 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 83.6873 through 92.4965

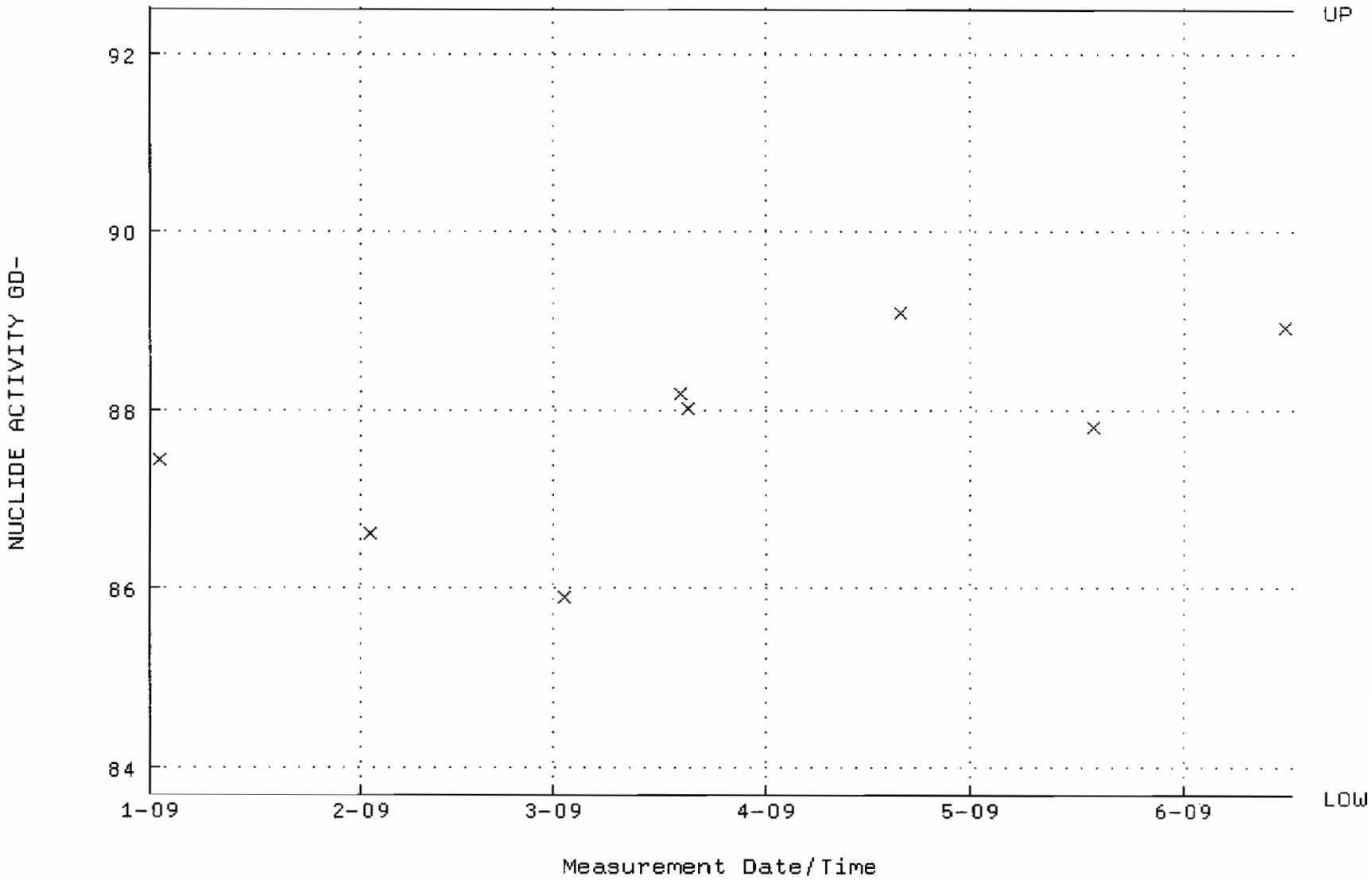

QA filename : DKA100:[ENV_ALPHA.QA.B]B155.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:44 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

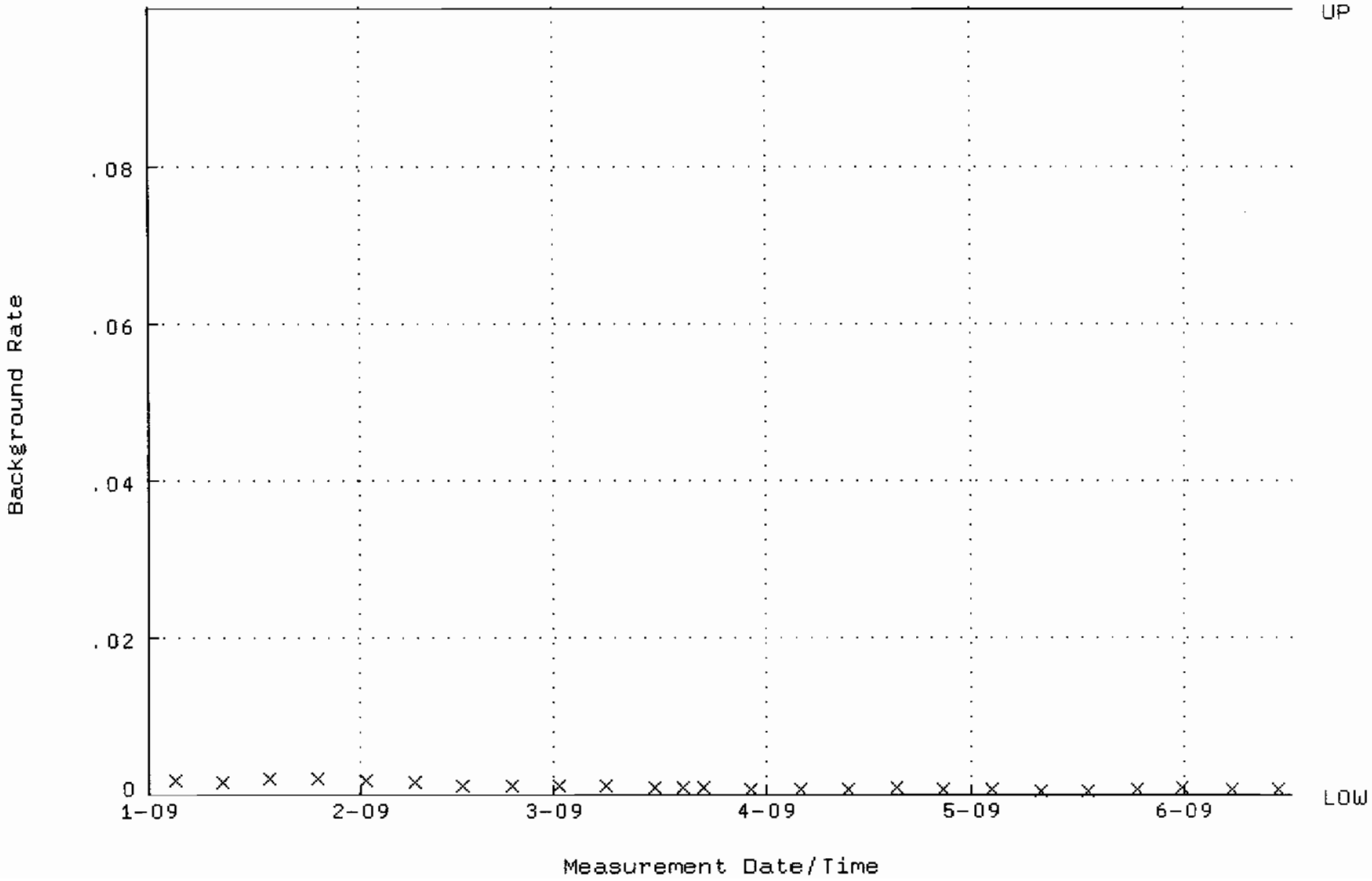

QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:06 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.241250 through 0.261250

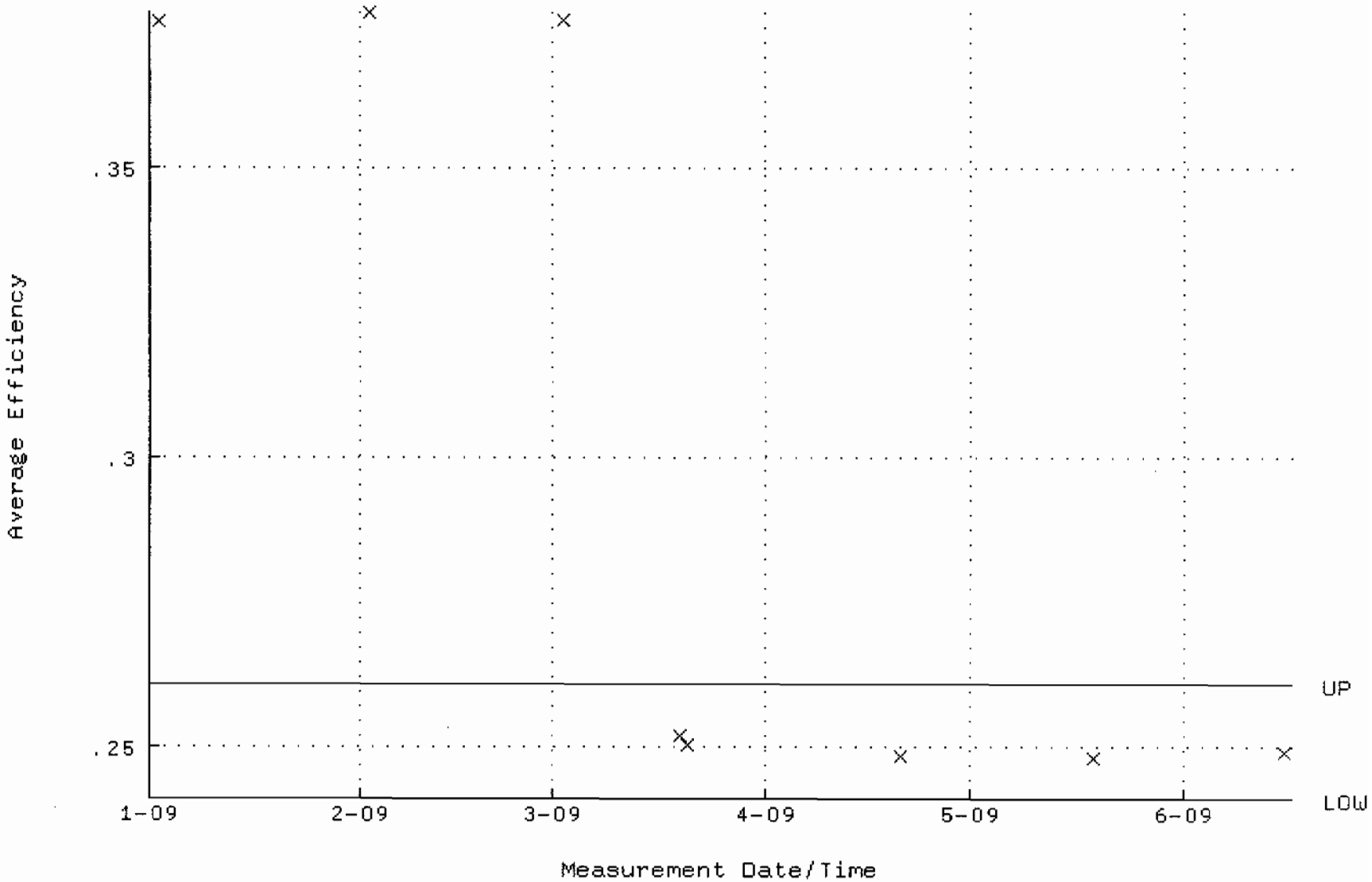

QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:06 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 82.7847 through 91.4989

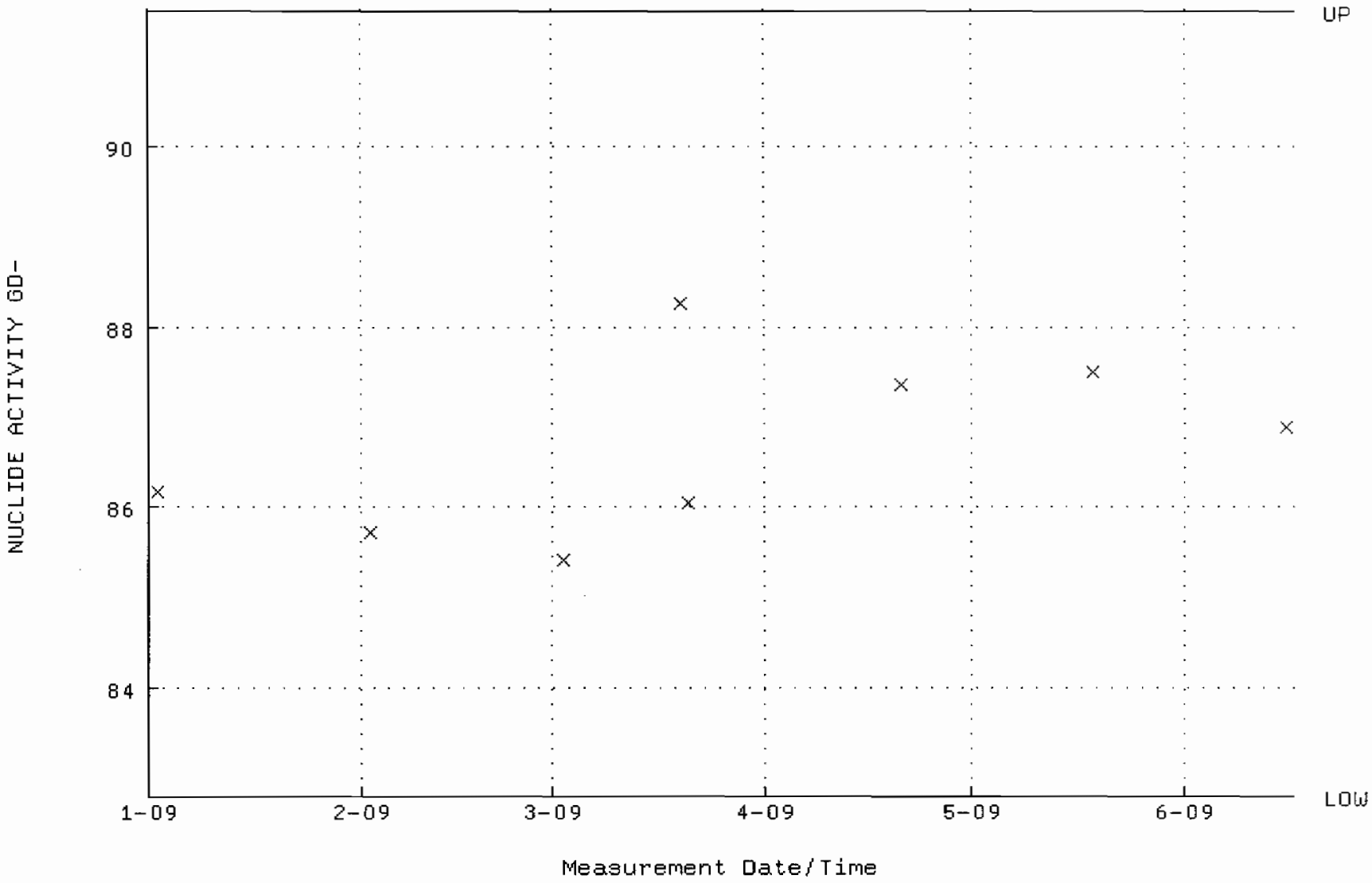

QA filename : DKA100:[ENV_ALPHA.QA.B]B156.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:47 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

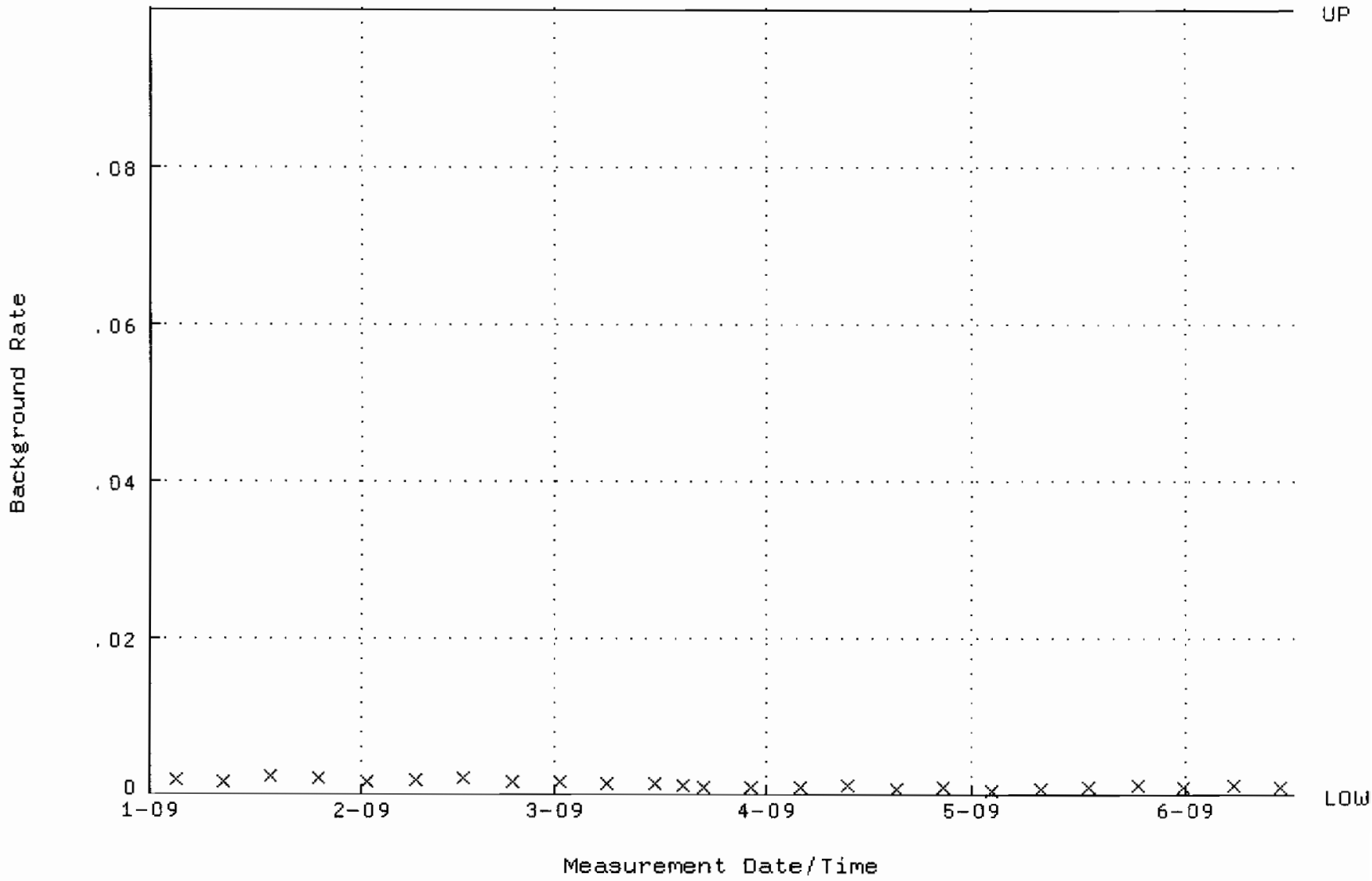

QA filename : DKA100:[ENV_ALPHA.QA.W]W157.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:10 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.237137 through 0.257137

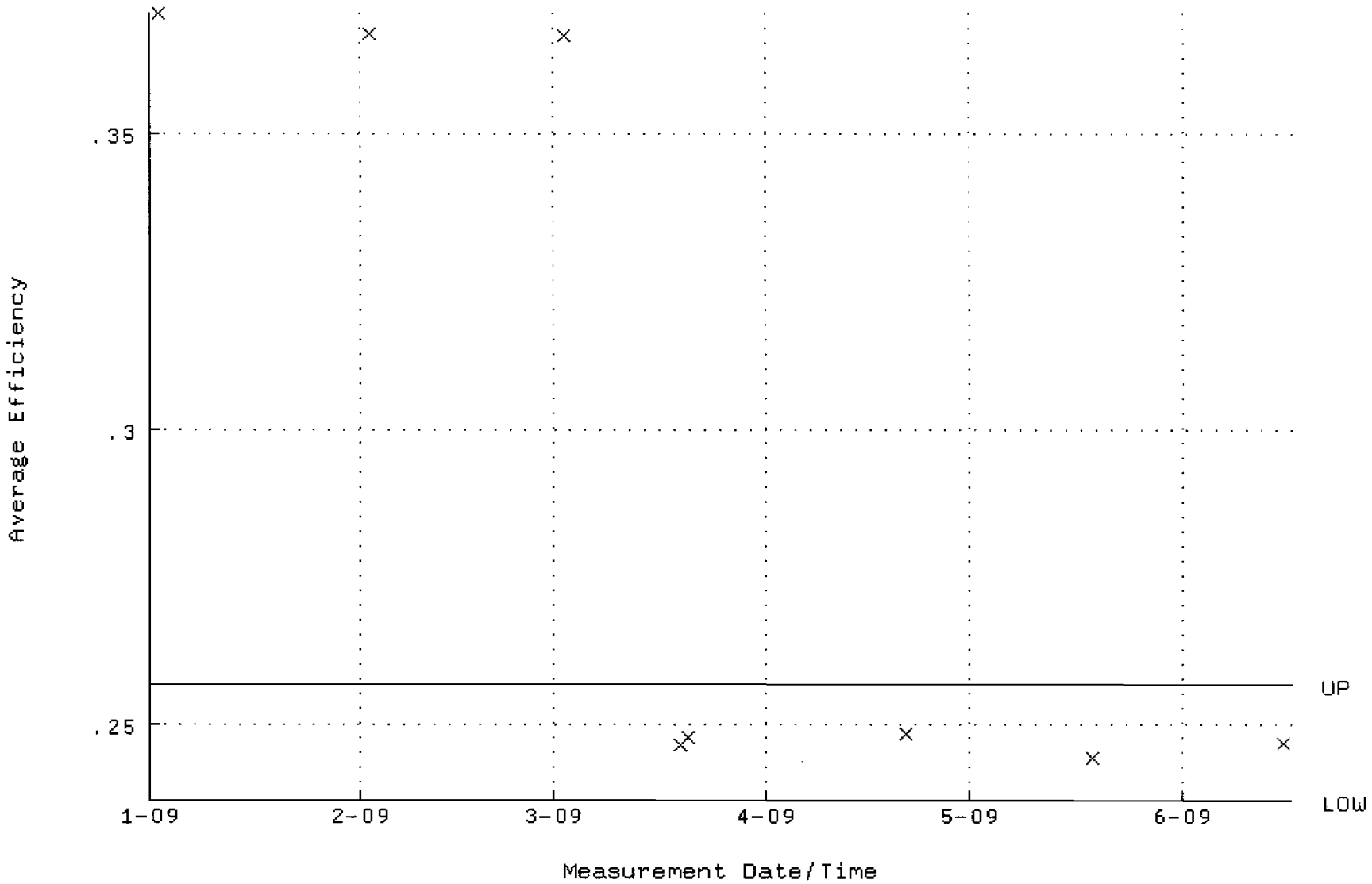

QA filename : DKA100:[ENV_ALPHA.QA.W]W157.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:10 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 85.9292 through 94.9744

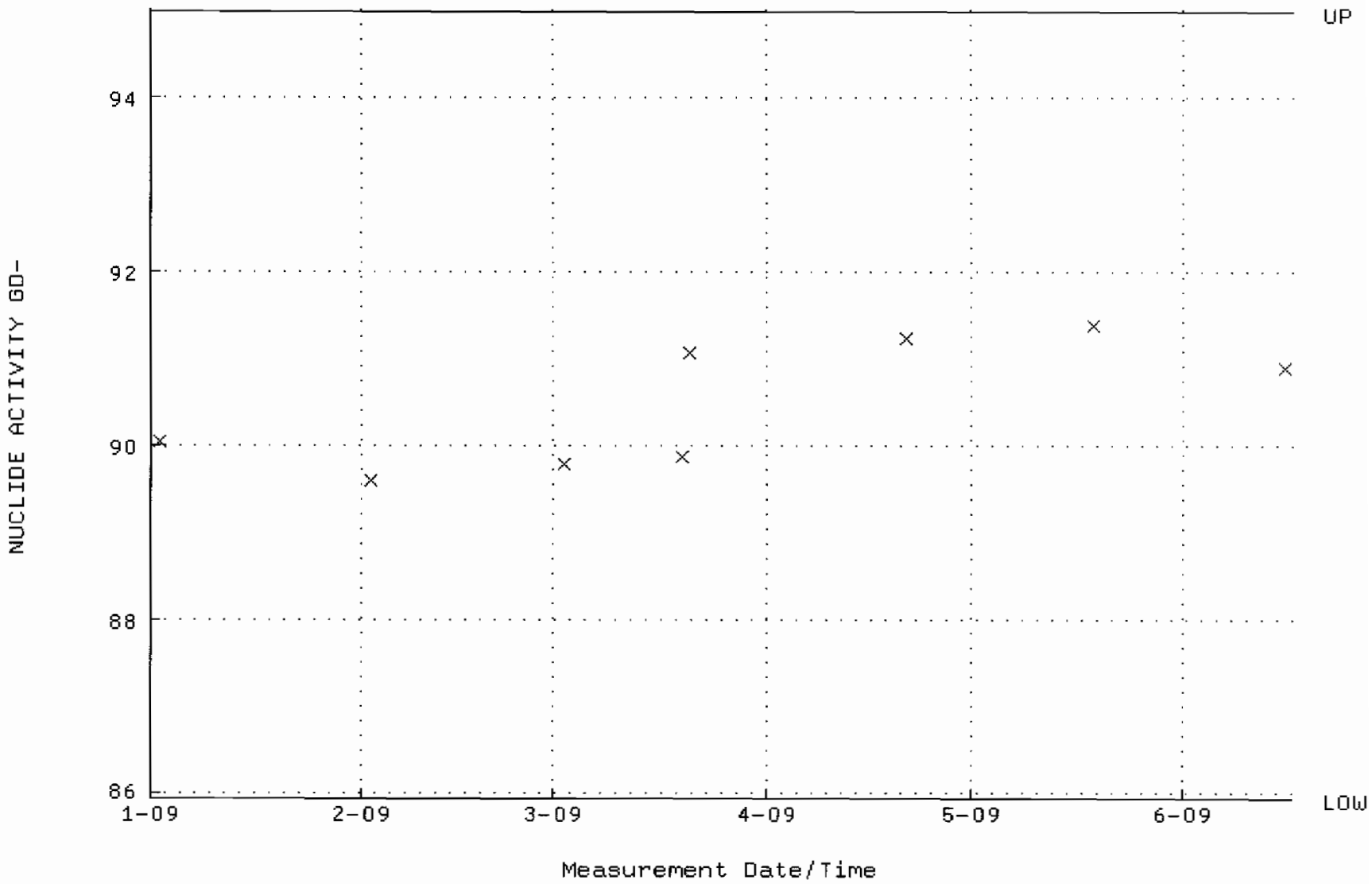

QA filename : DKA100:[ENV_ALPHA.QA.B]B157.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:51 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

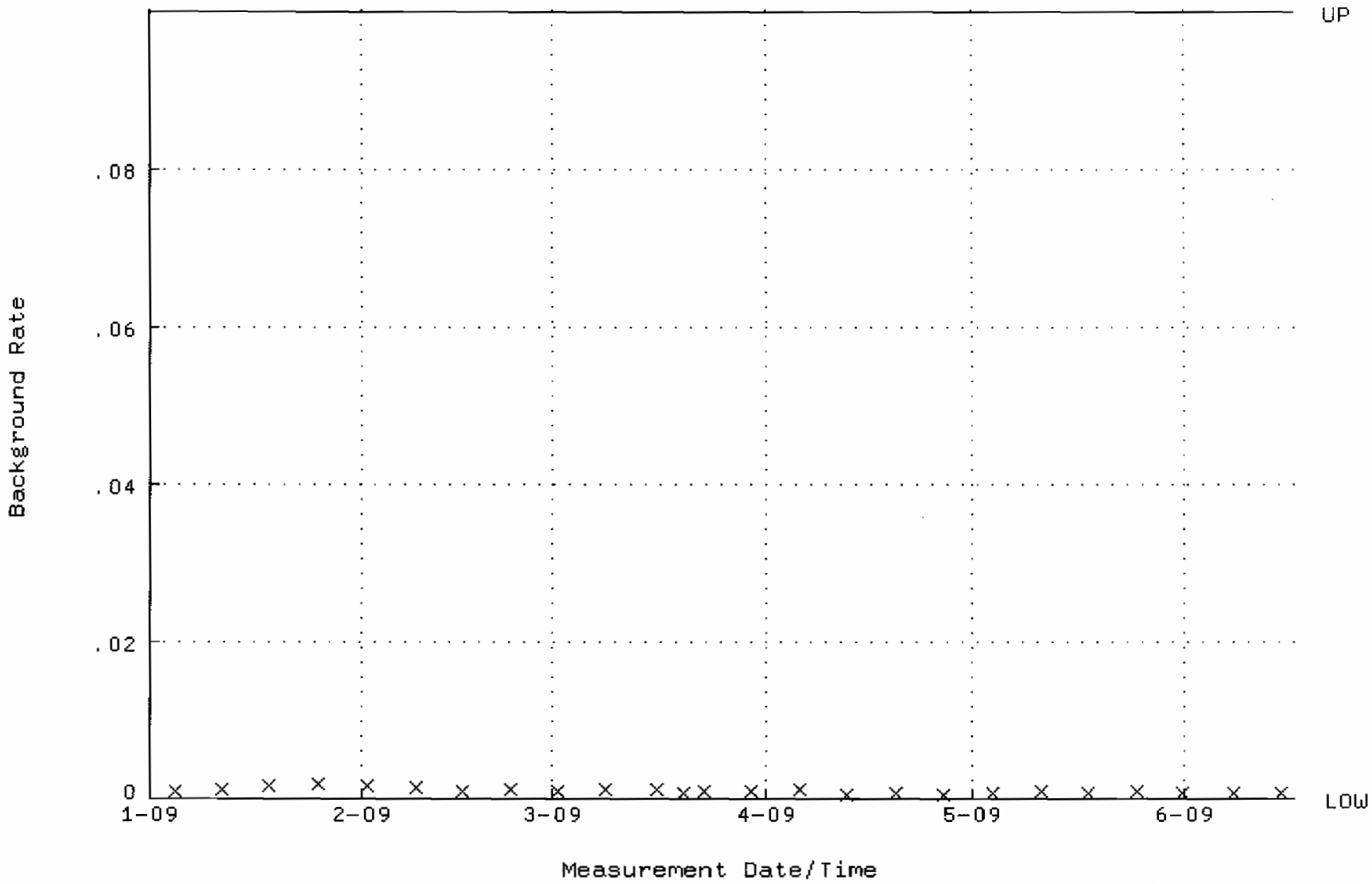

QA filename : DKA100:[ENV_ALPHA.QA.W]W158.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:26:14 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.241466 through 0.261466

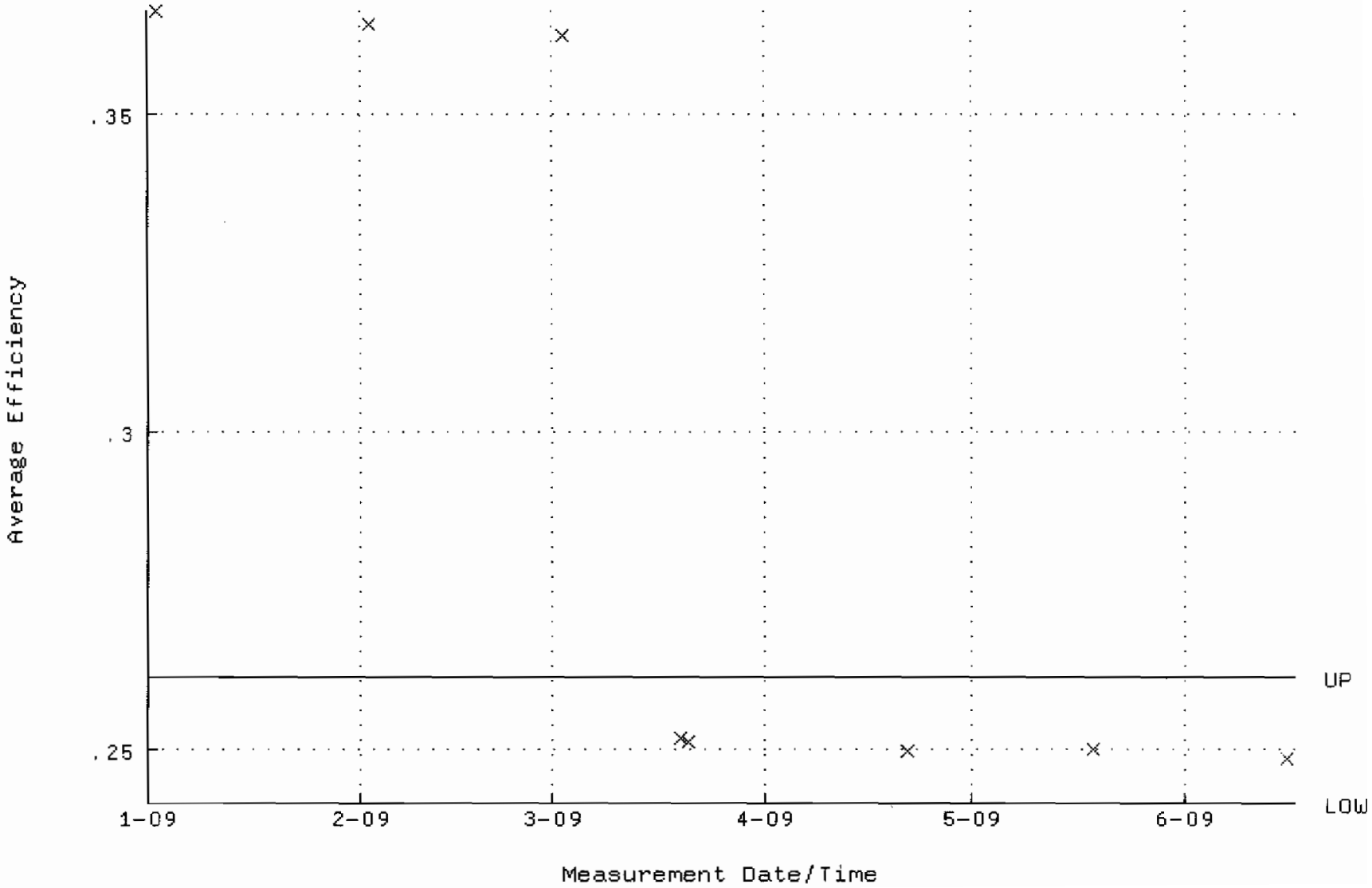

QA filename : DKA100:[ENV_ALPHA.QA.W]W158.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:26:14 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 84.6414 through 93.5510

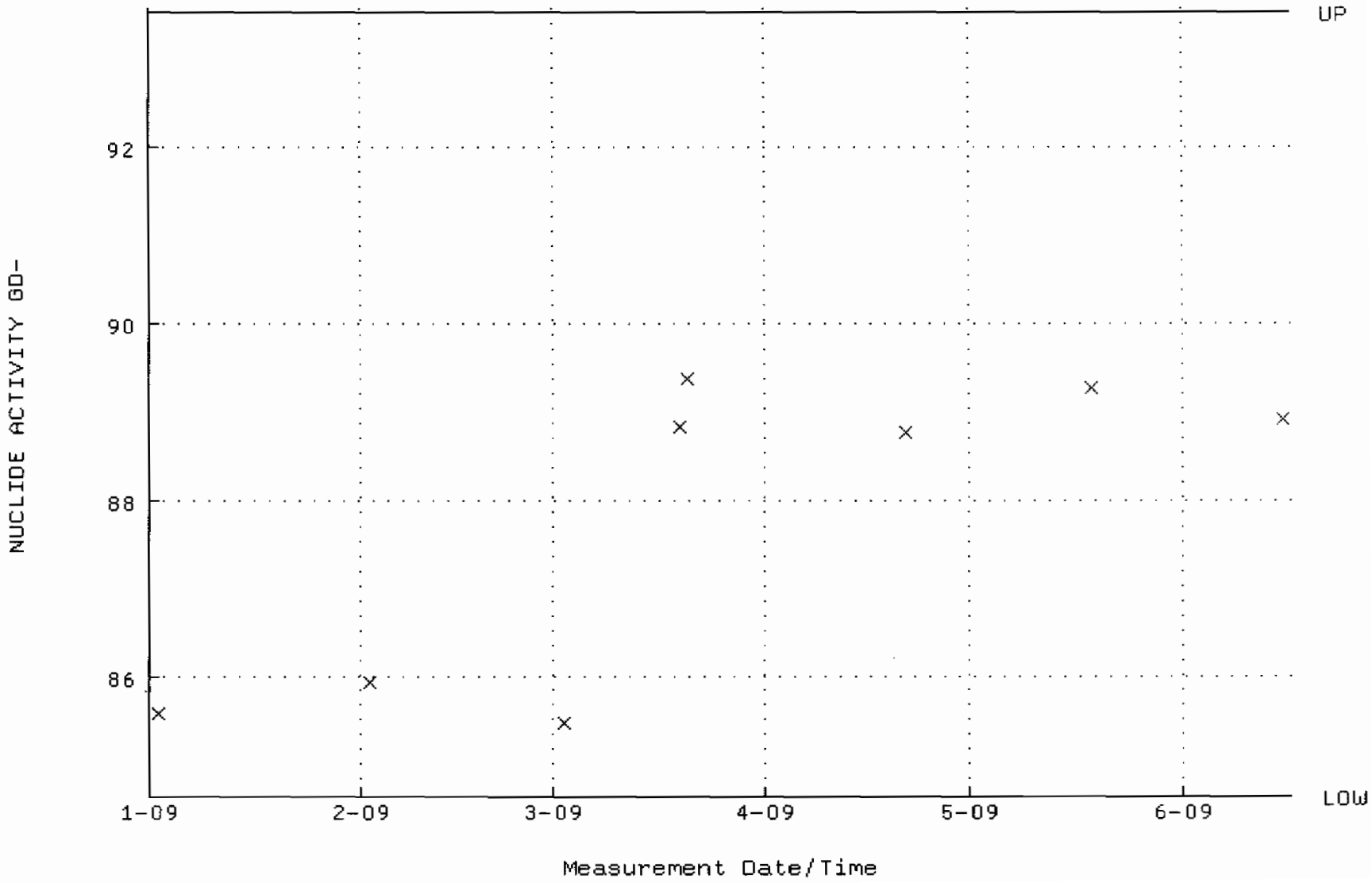

QA filename : DKA100:[ENV_ALPHA.QA.B]B158.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:55 through 16-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

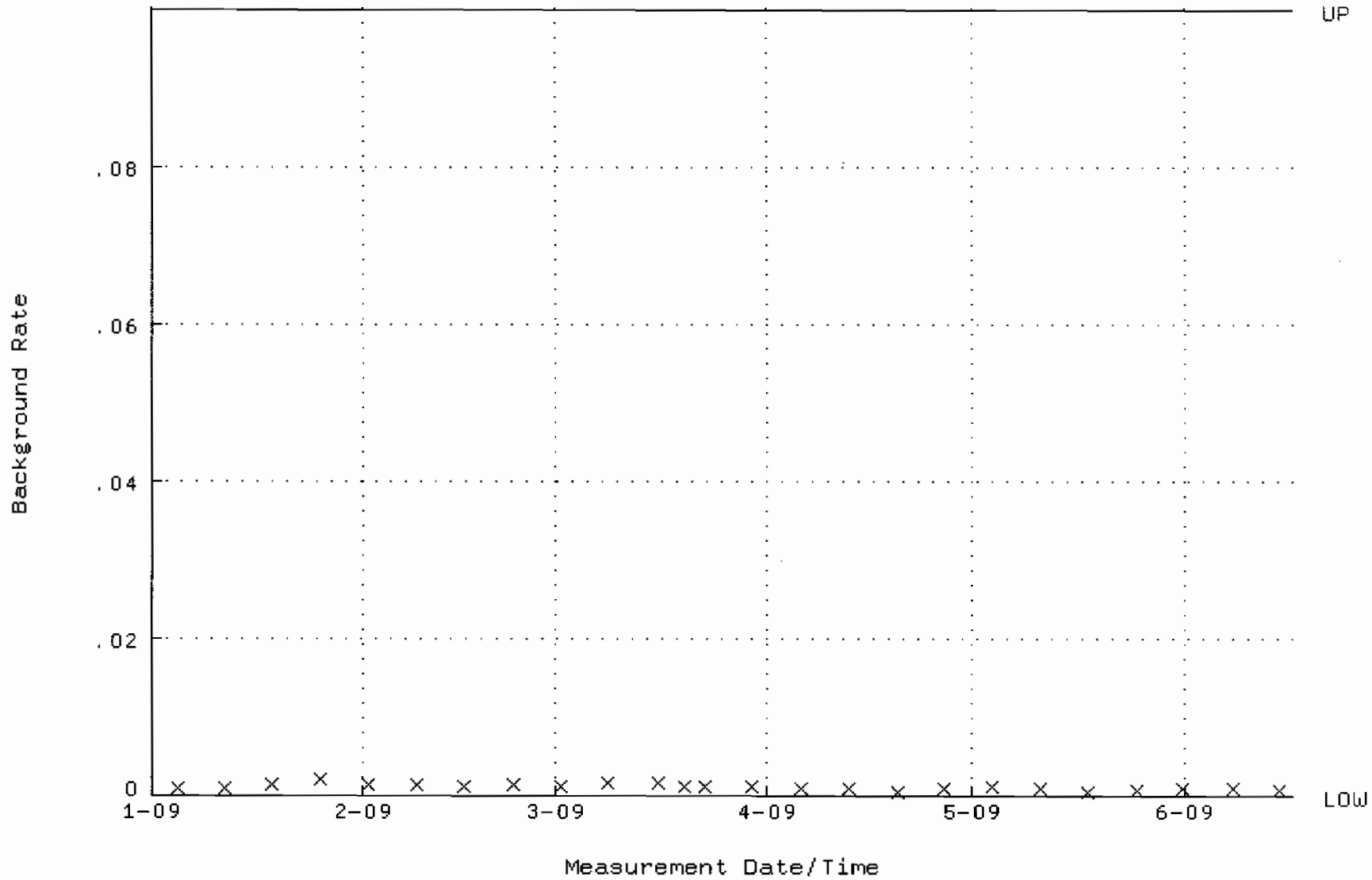

QA filename : DKA100:[ENV_ALPHA.QA.W]W171.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:09:38 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.375364 through 0.395364

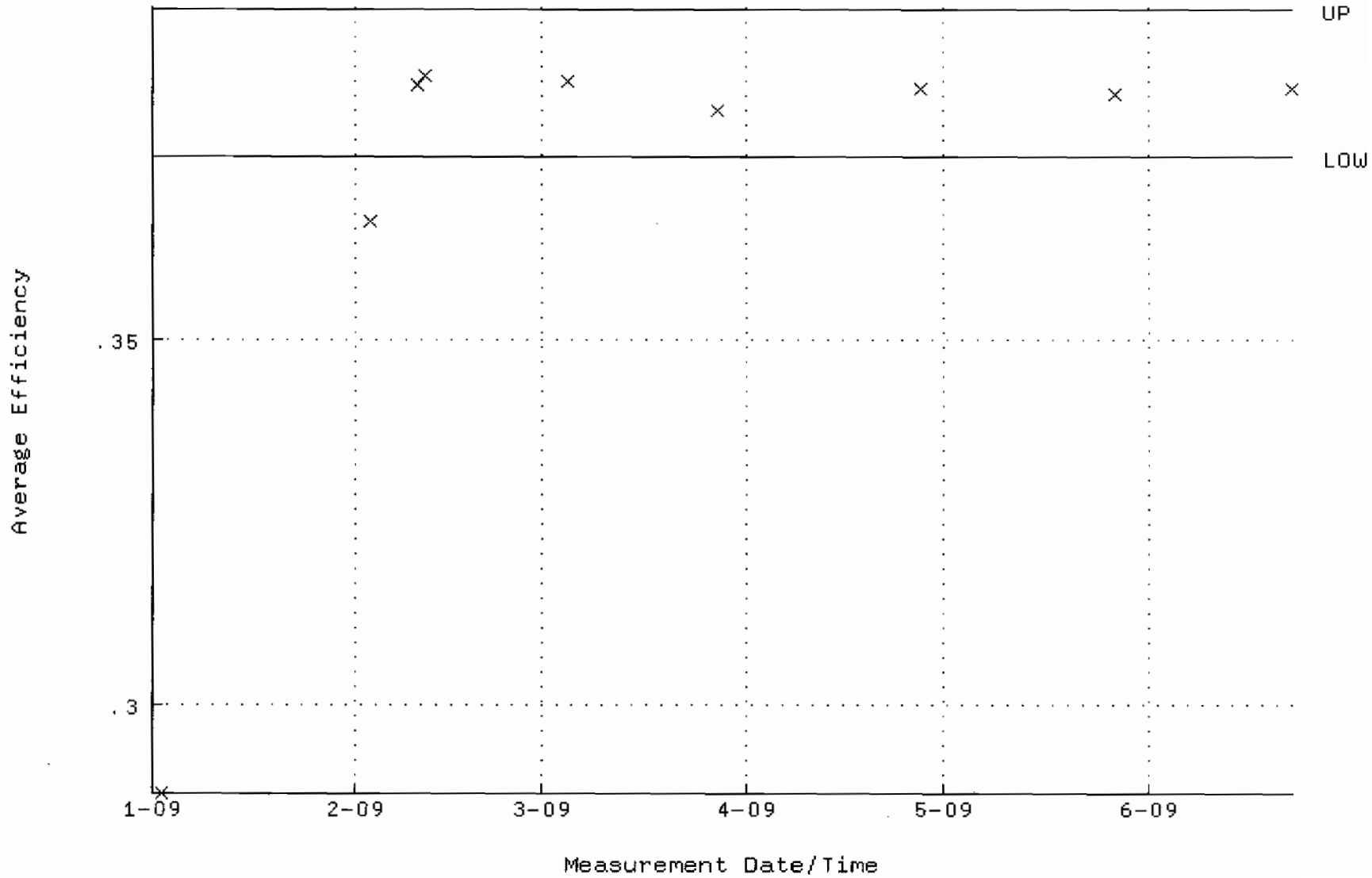

QA filename : DKA100:[ENV_ALPHA.QA.W]W171.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:09:38 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 84.7539 through 93.6753

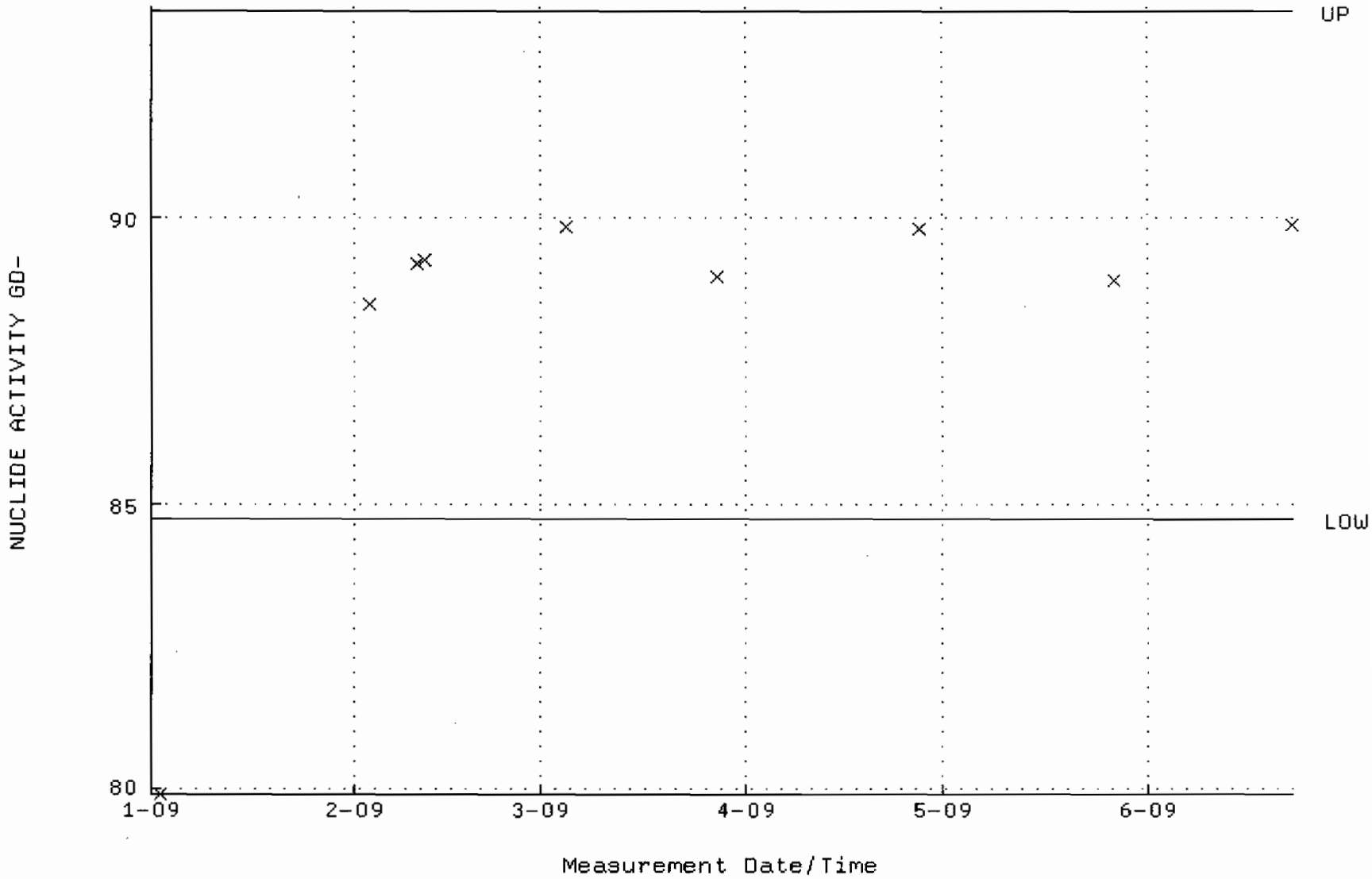

QA filename : DKA100:[ENV_ALPHA.QA.B]B171.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:25:42 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

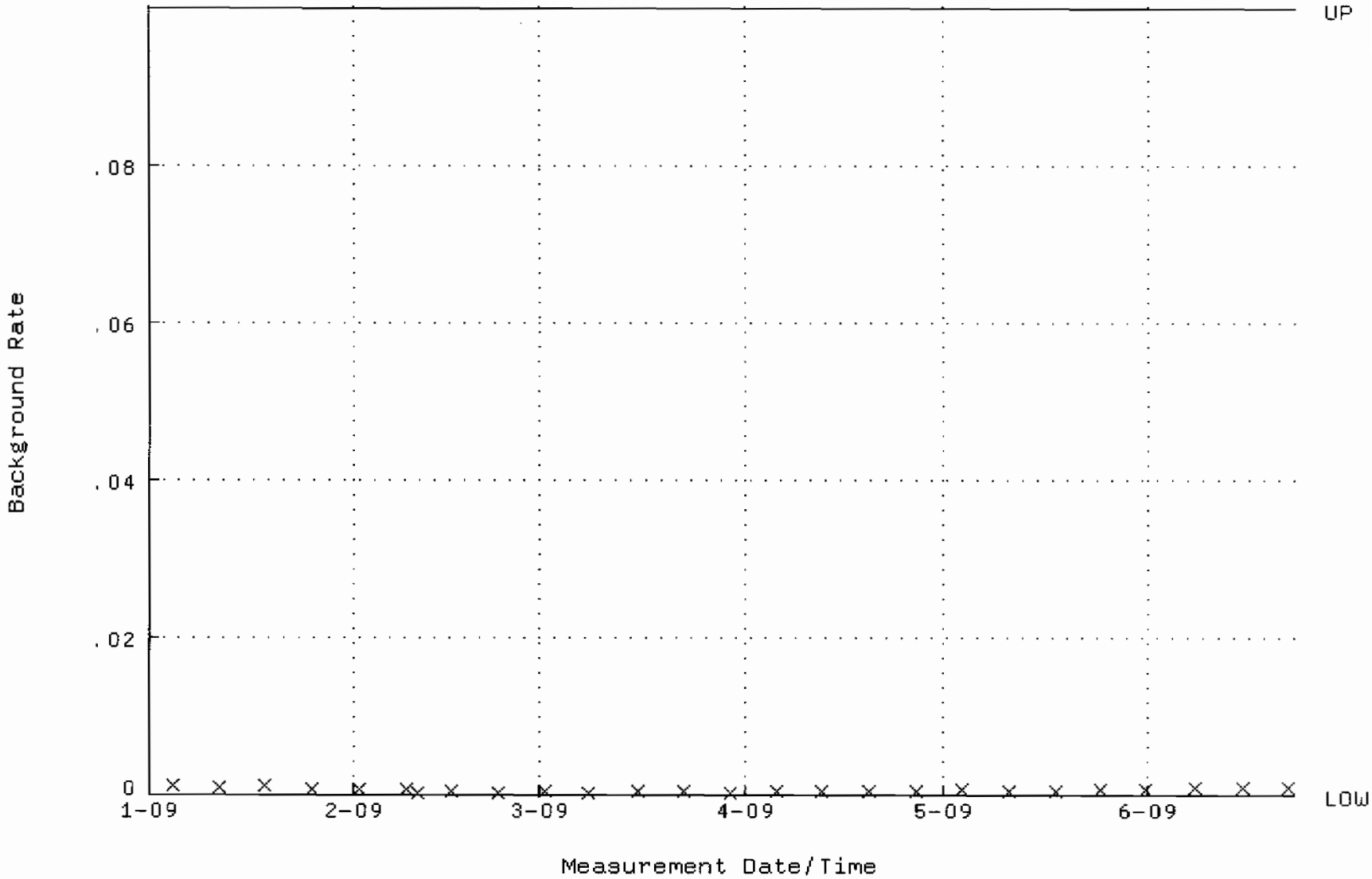

QA filename : DKA100:[ENV_ALPHA.QA.W]W172.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 12:09:49 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.373575 through 0.393575

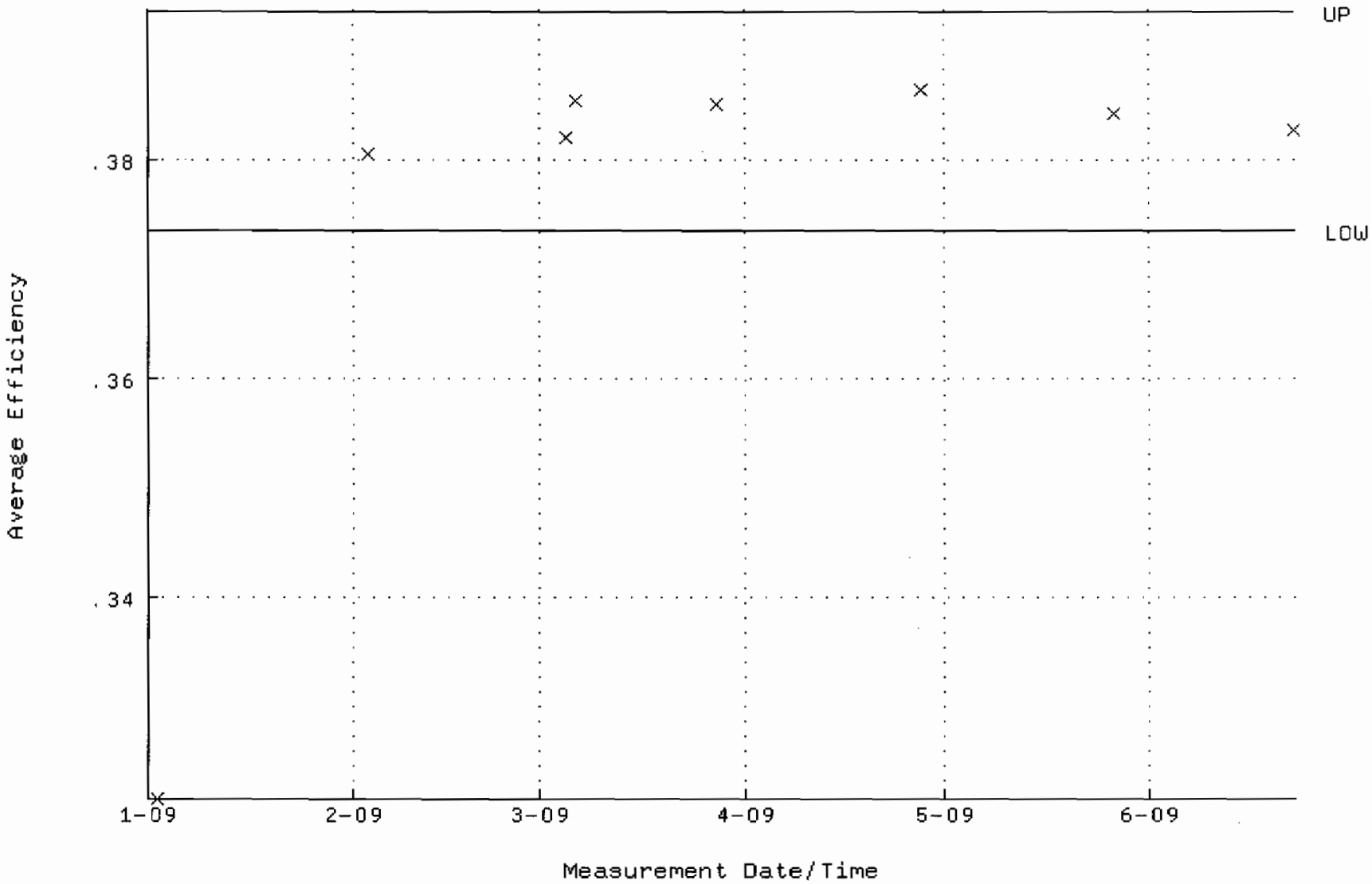

QA filename : DKA100:[ENV_ALPHA.QA.W]W172.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 12:09:49 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 86.5089 through 95.6151

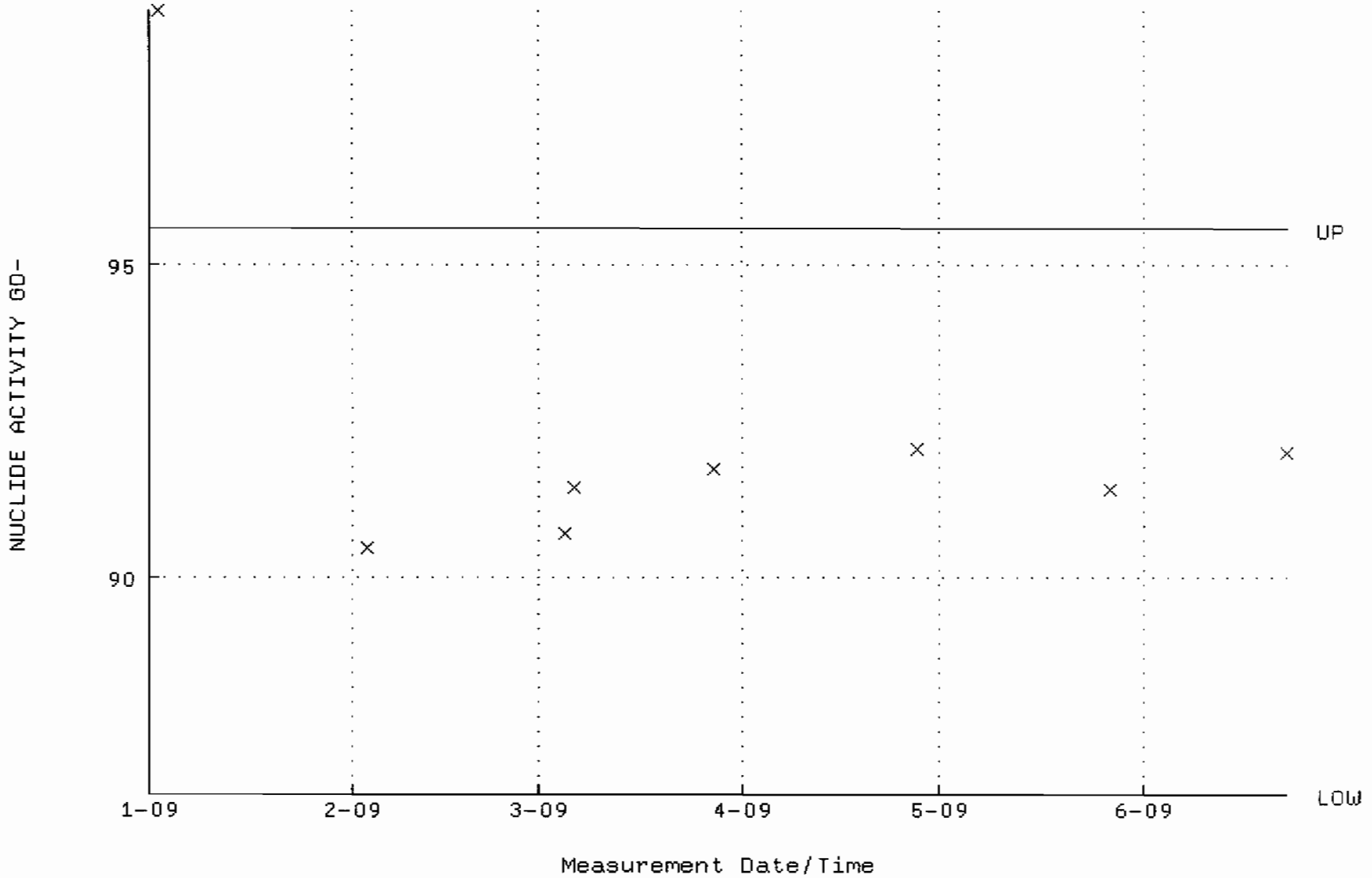

QA filename : DKA100:[ENV_ALPHA.QA.B]B172.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:25:46 through 22-JUN-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

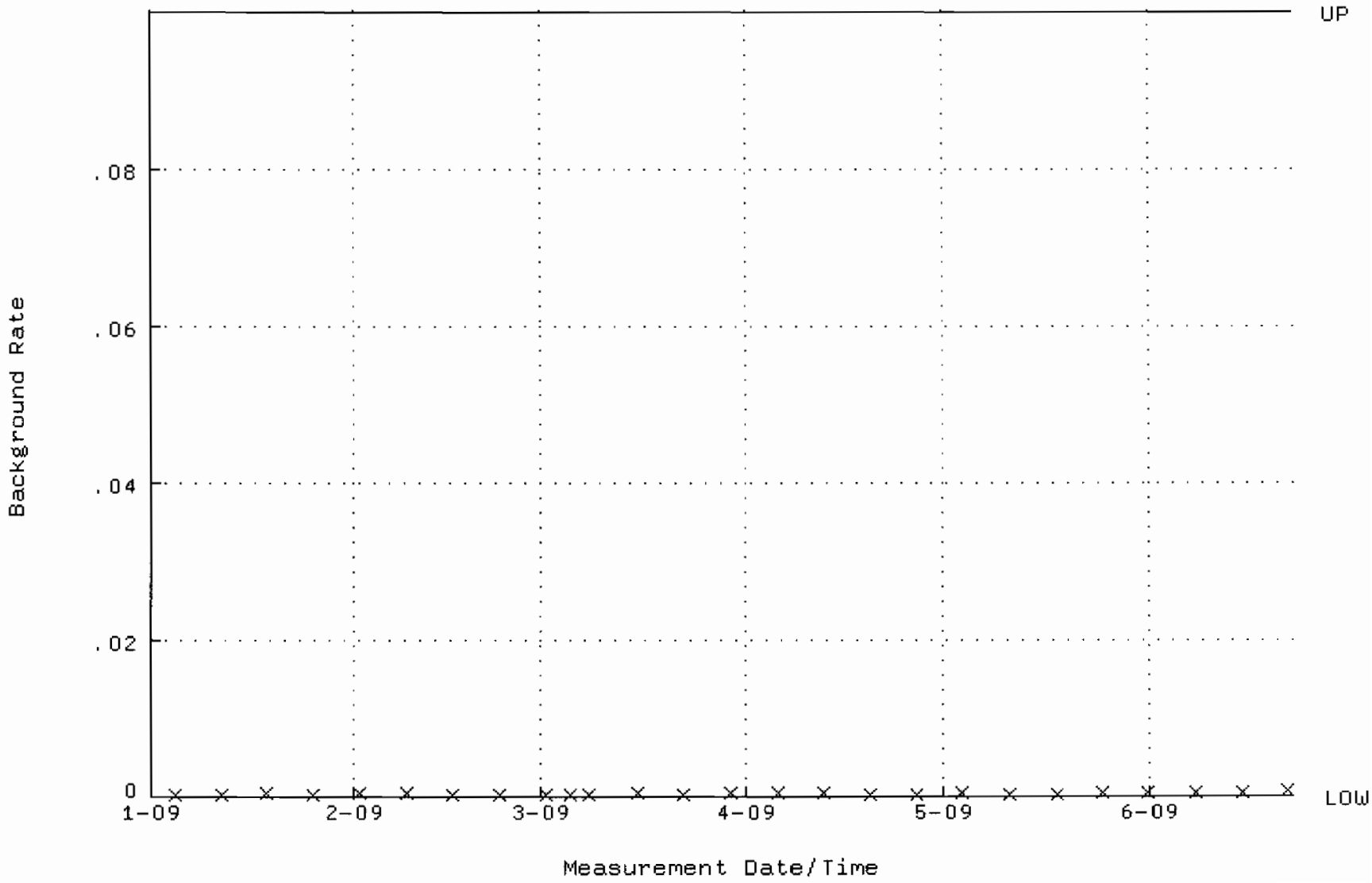

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

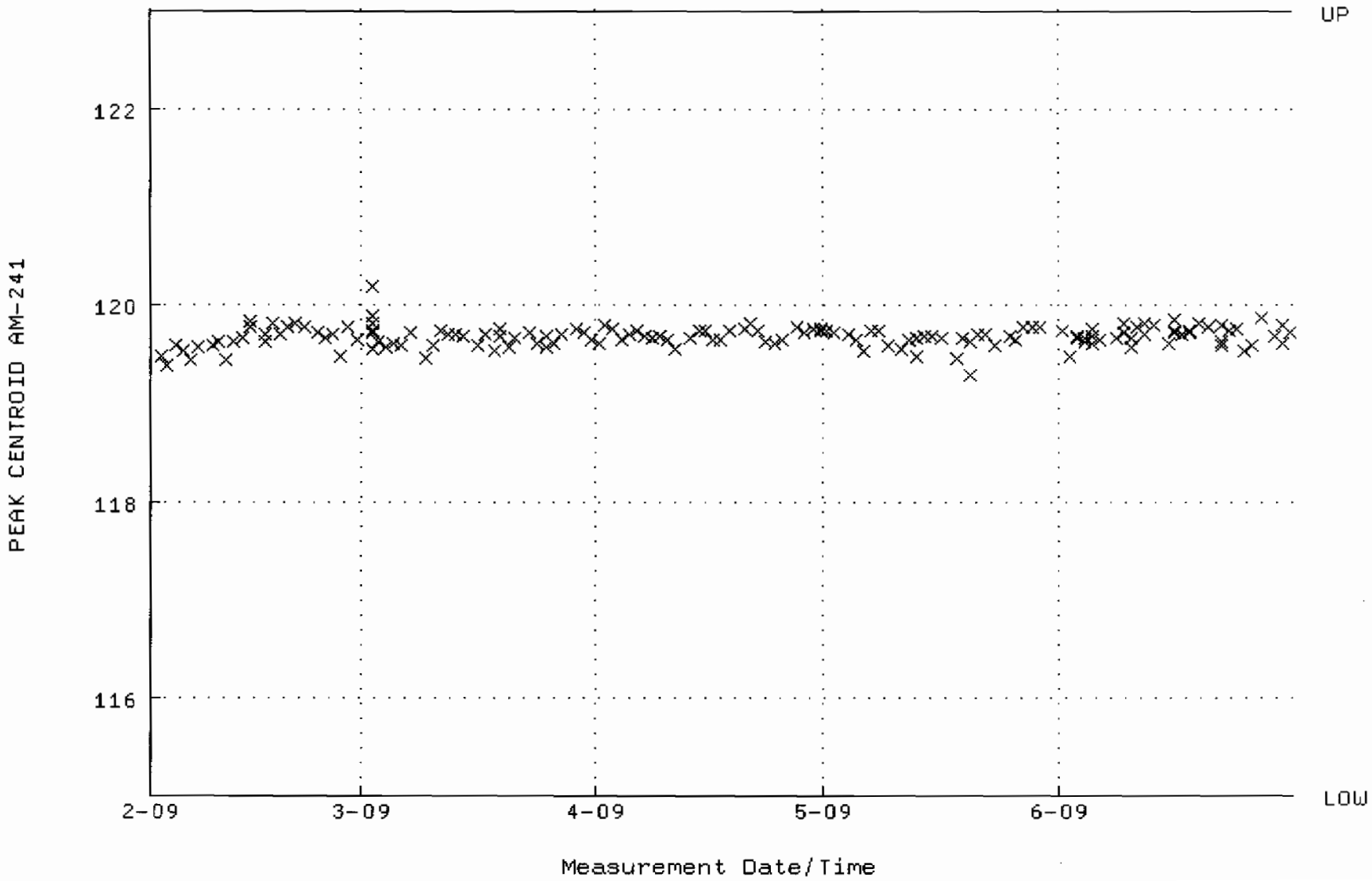

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM01.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:08:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.59940 through 1.87060

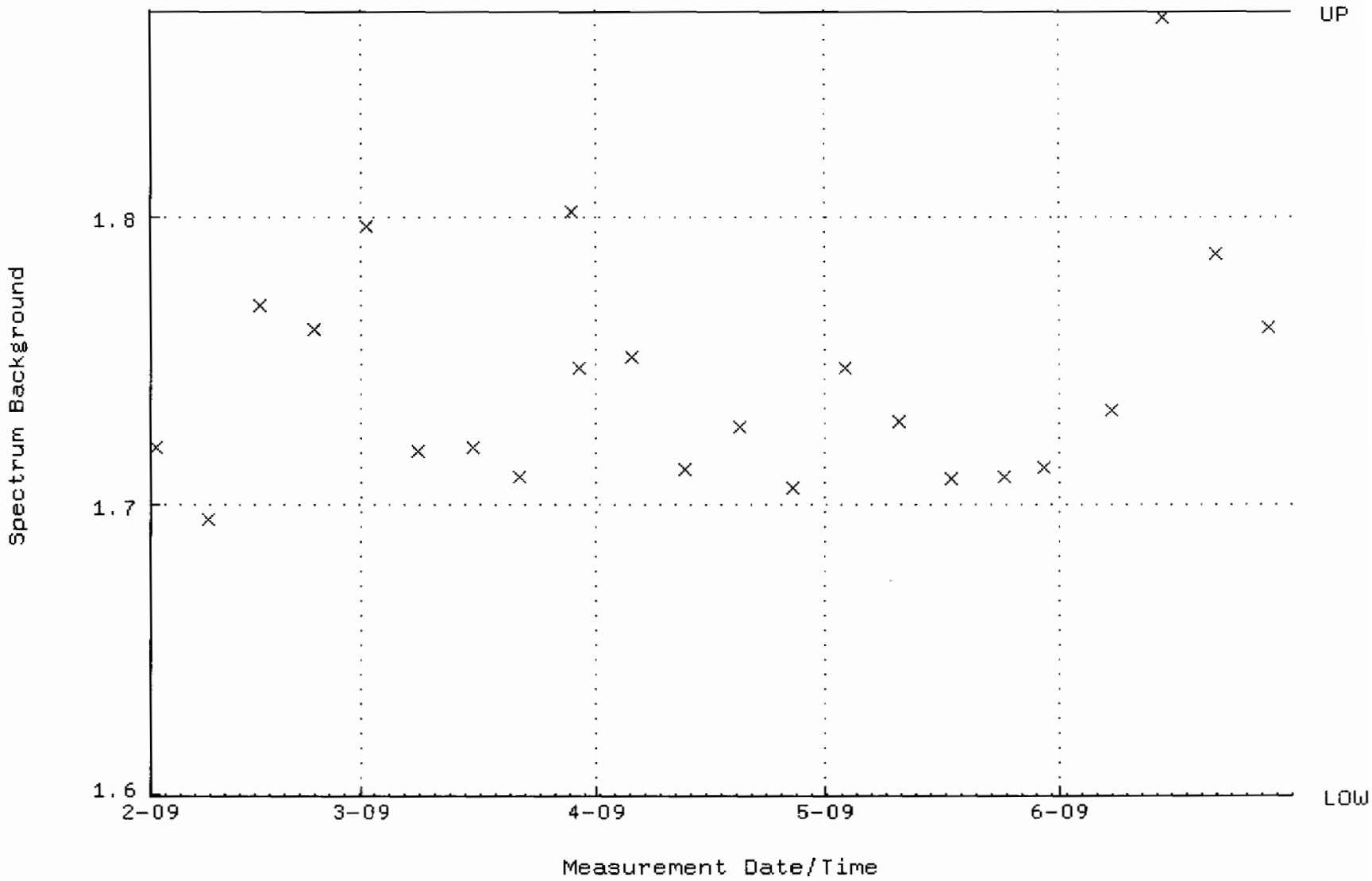

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM02_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:44 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

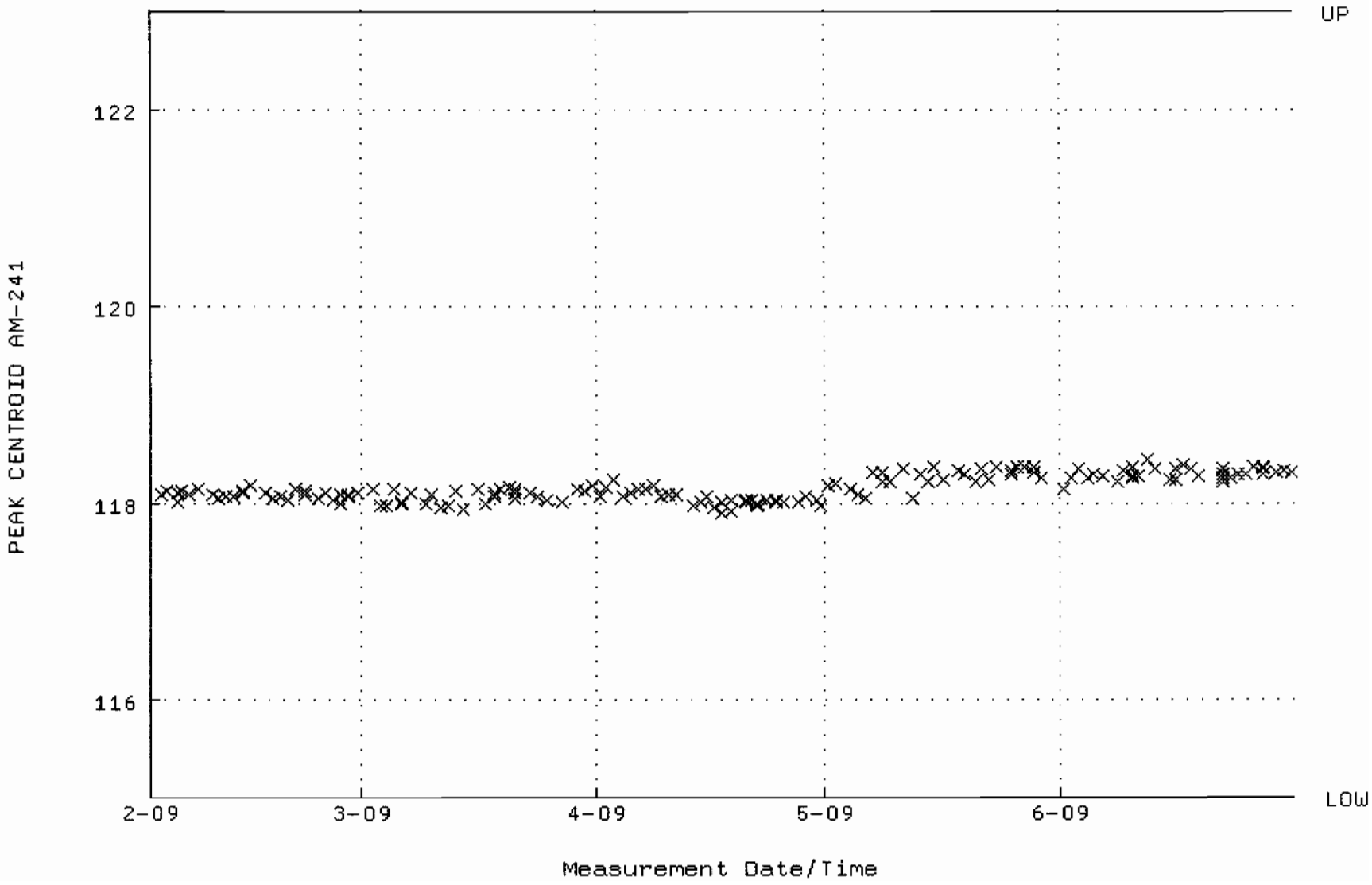

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM02.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.93670 through 2.08210

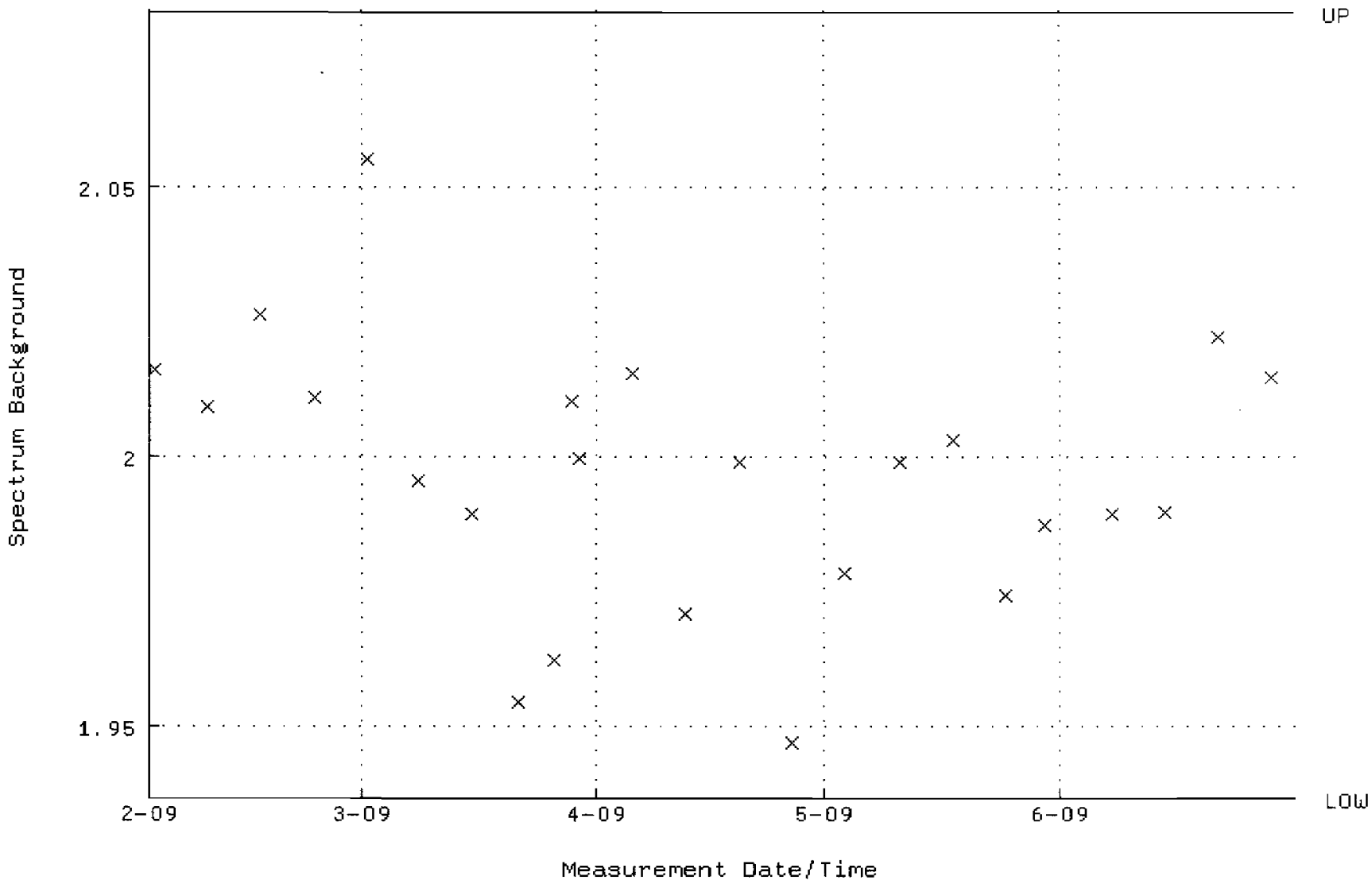

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM08_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-FEB-2009 12:14:25 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

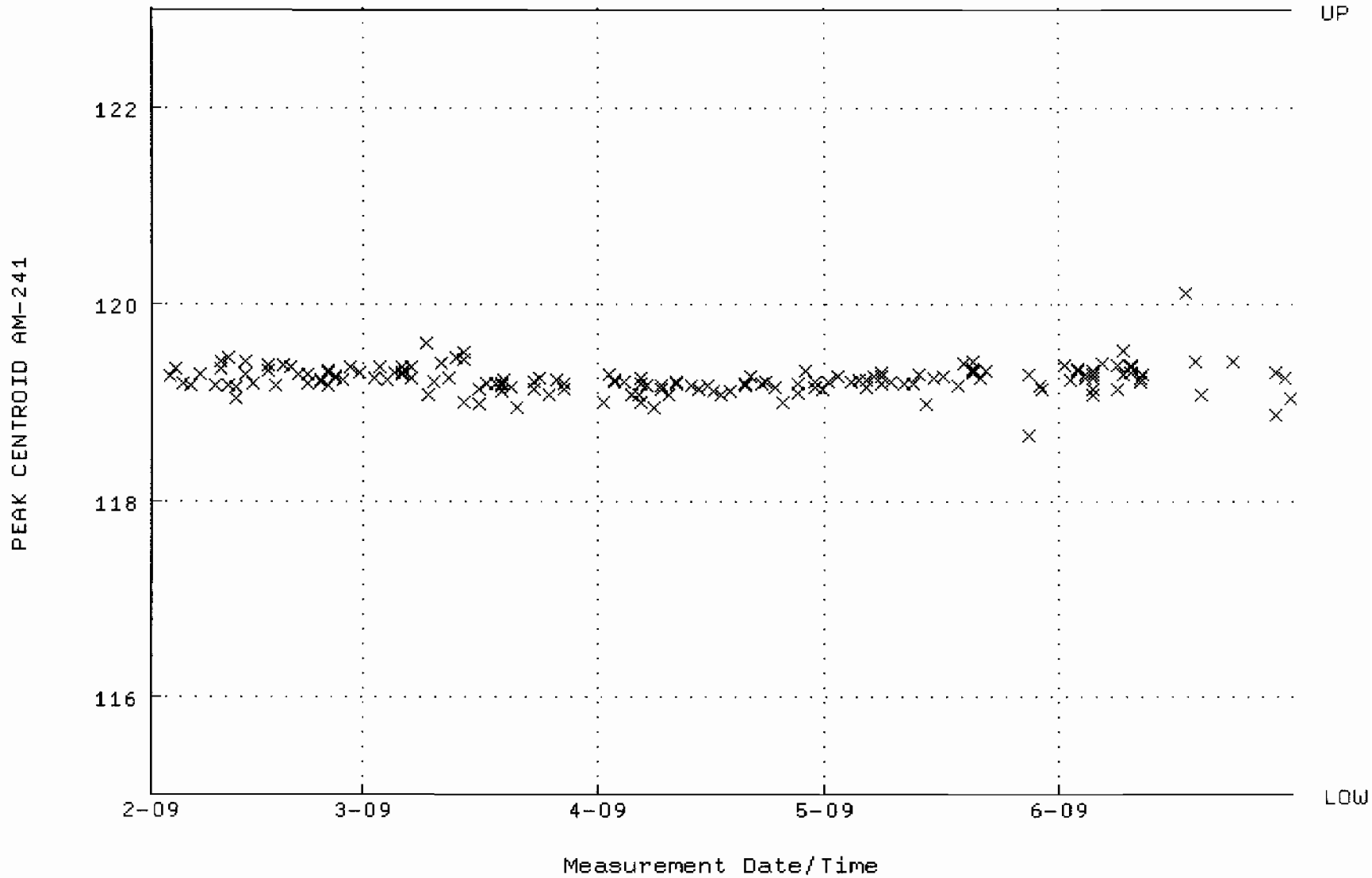

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM08.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.31400 through 1.60600

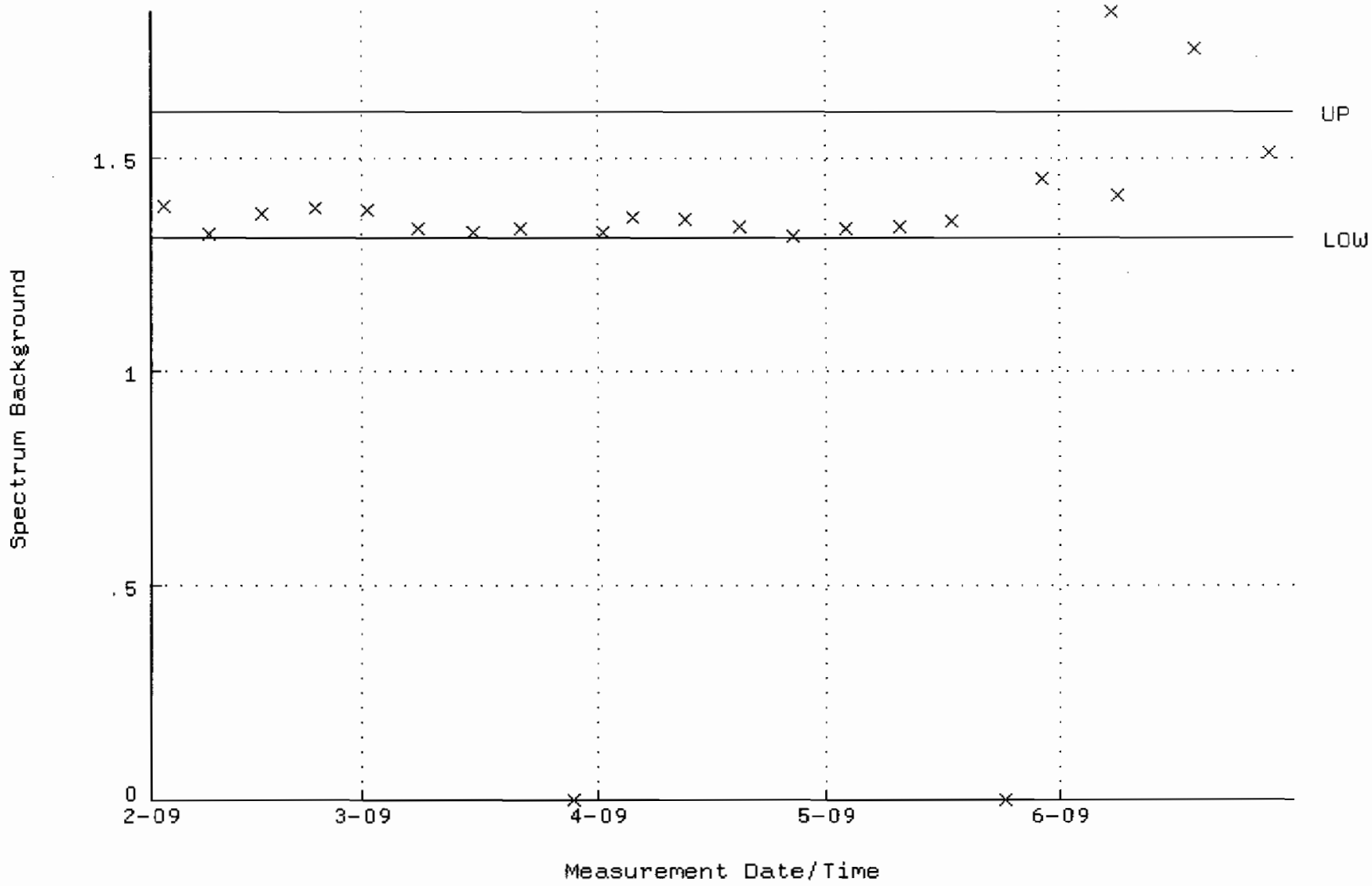

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM12_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:49 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

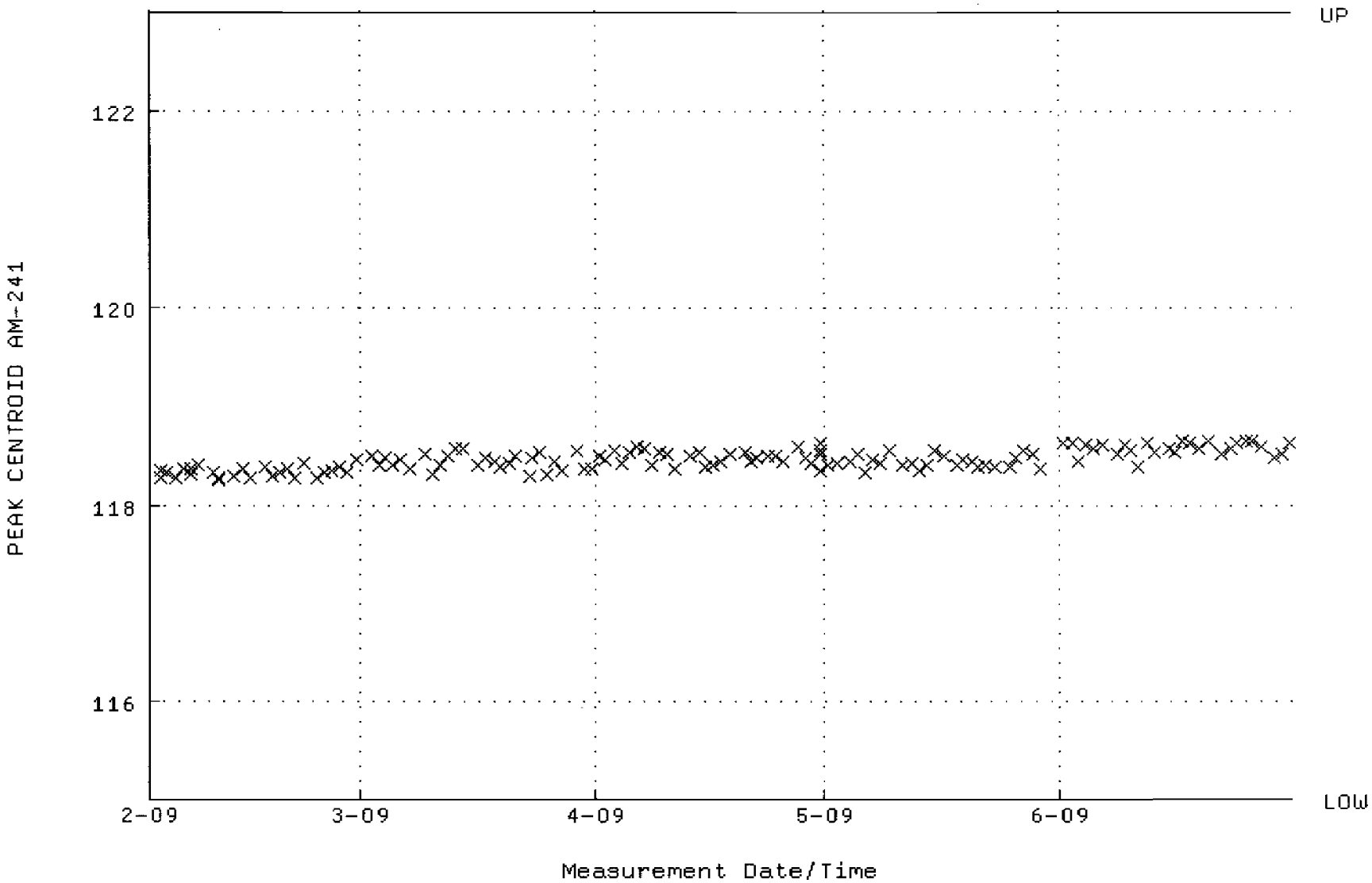

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM12.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:52 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.40364 through 1.71556

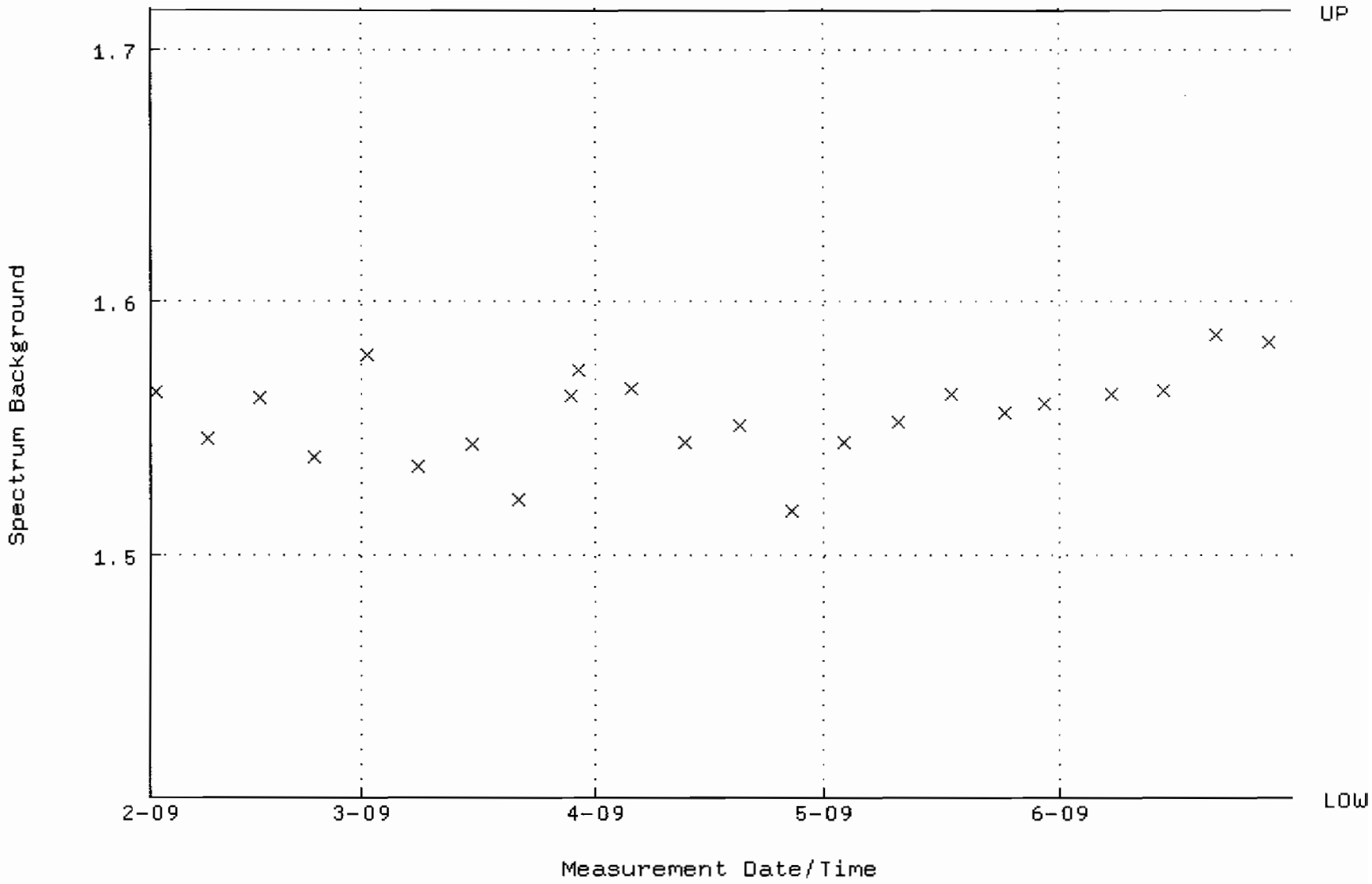

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-FEB-2009 16:33:12 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

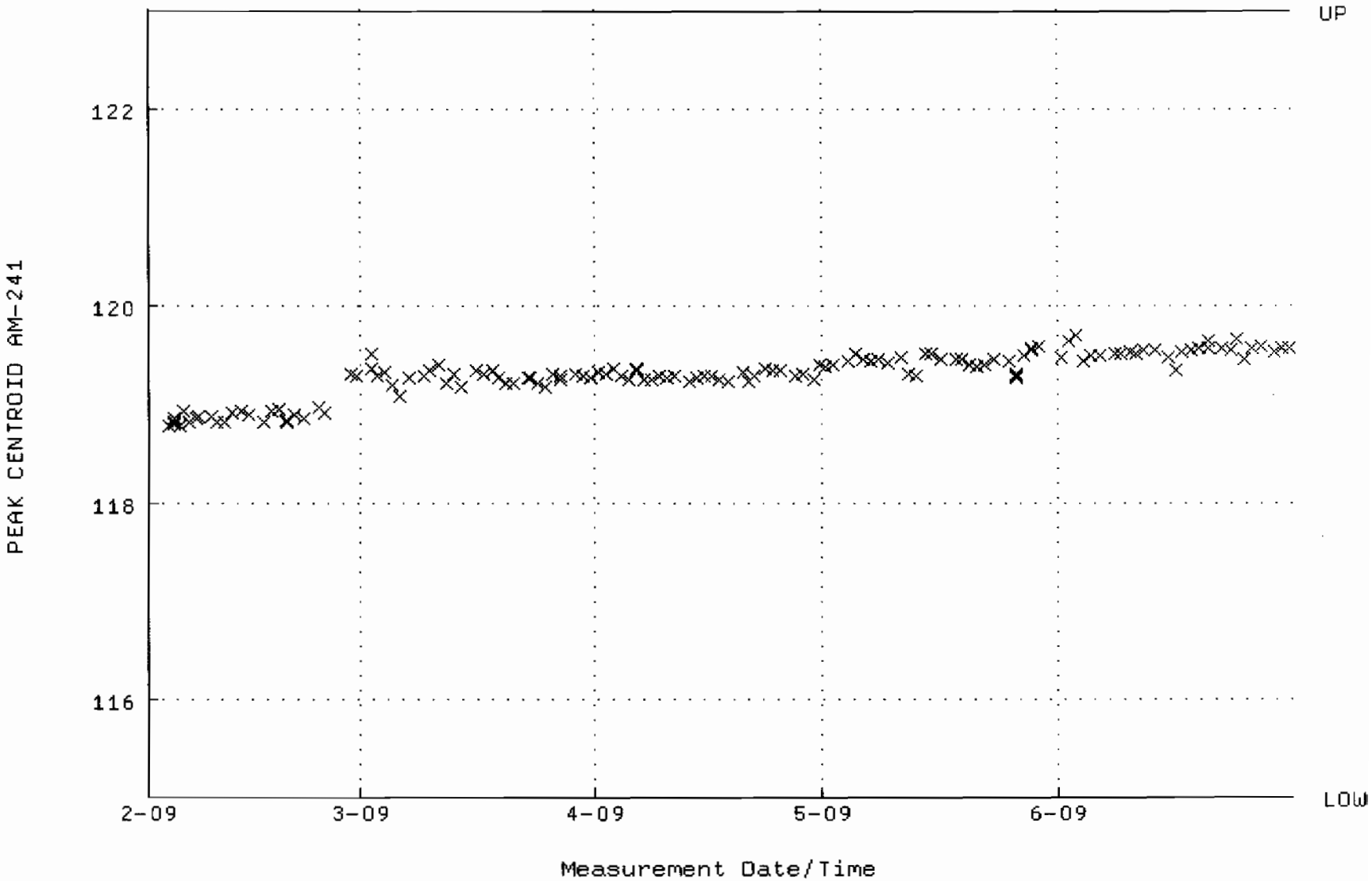

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM13.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:24 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.98827 through 3.65233

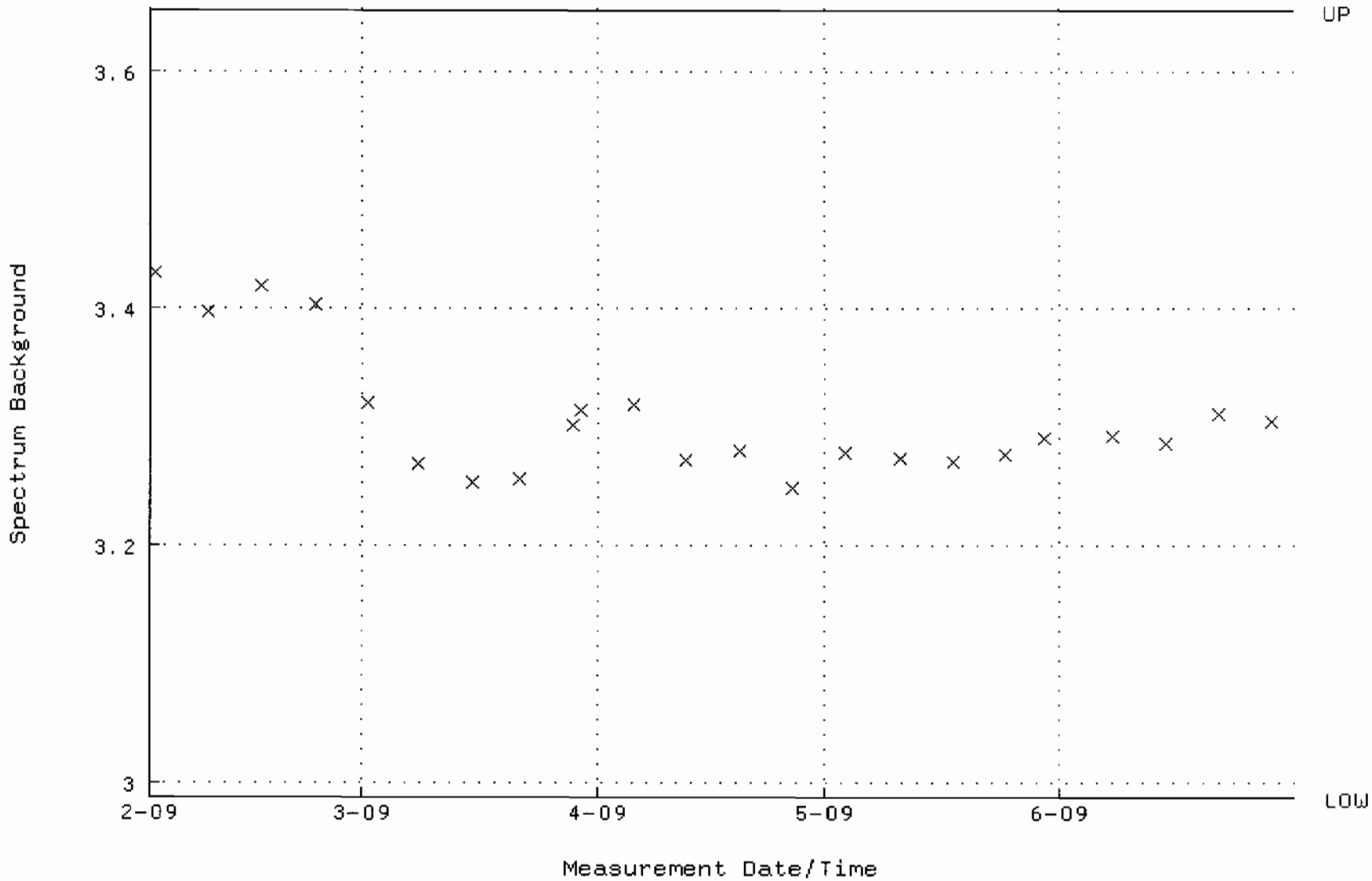

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

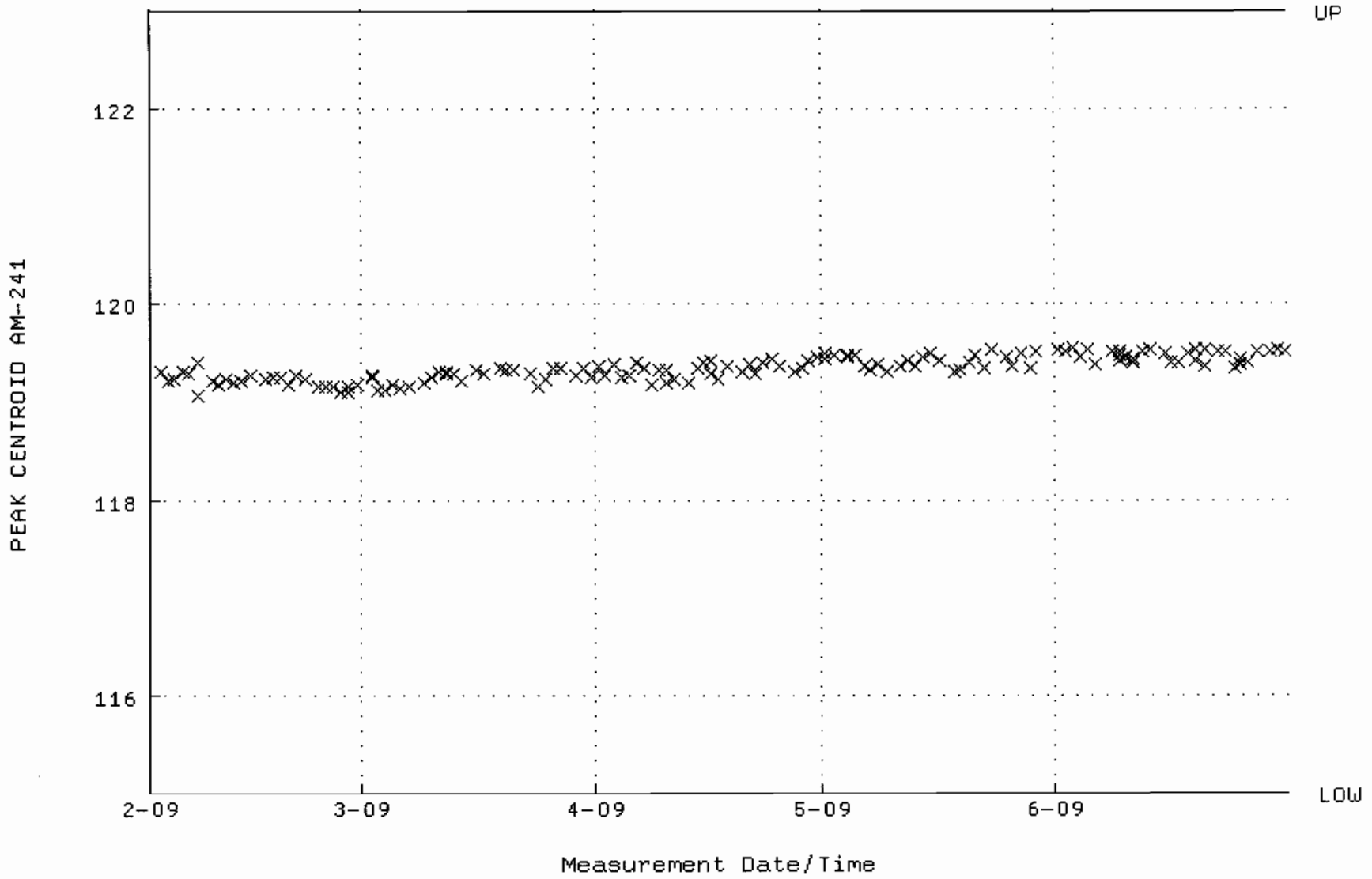

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM16.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:06 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.55150 through 1.89585

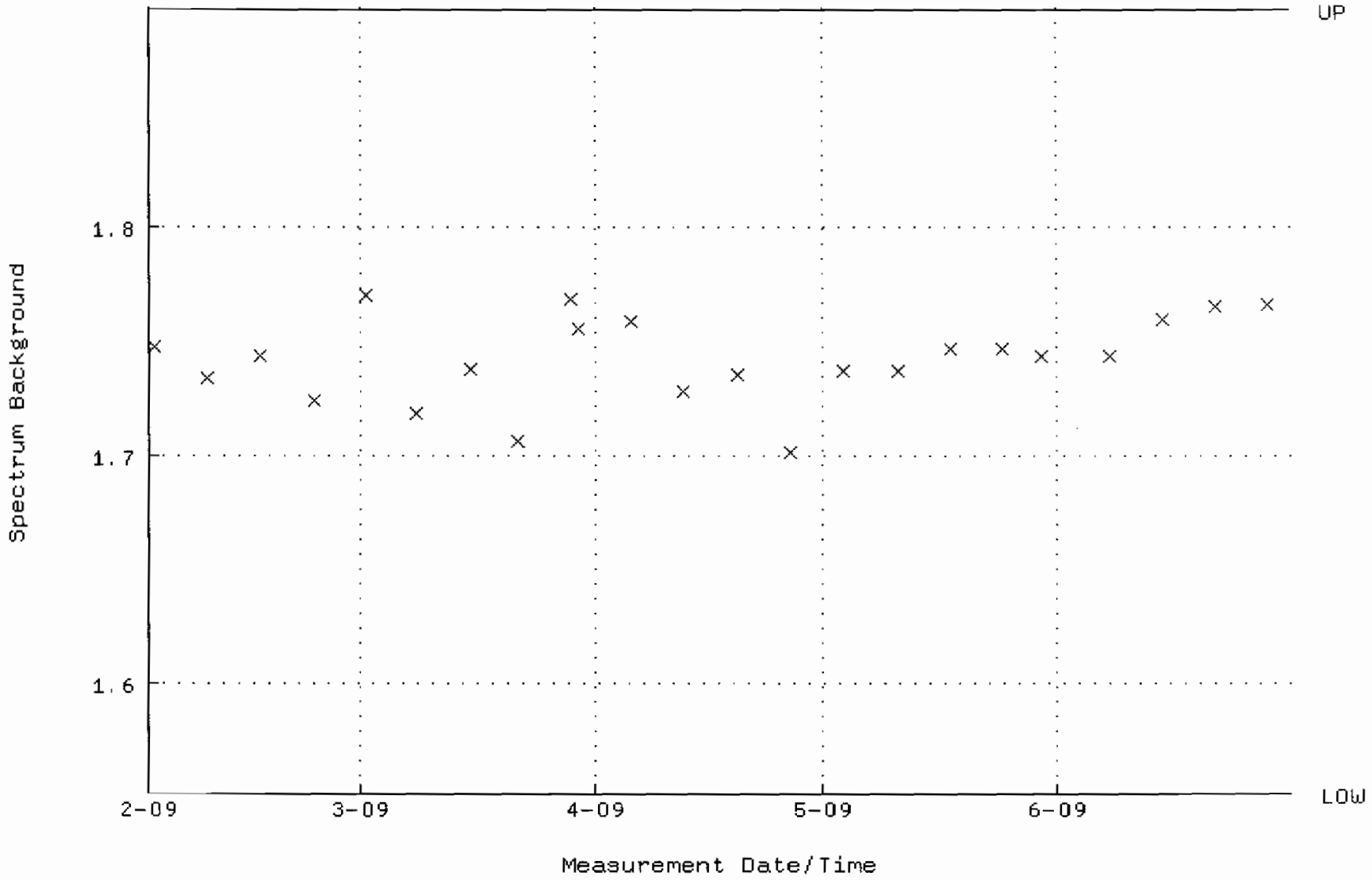

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:14:08 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

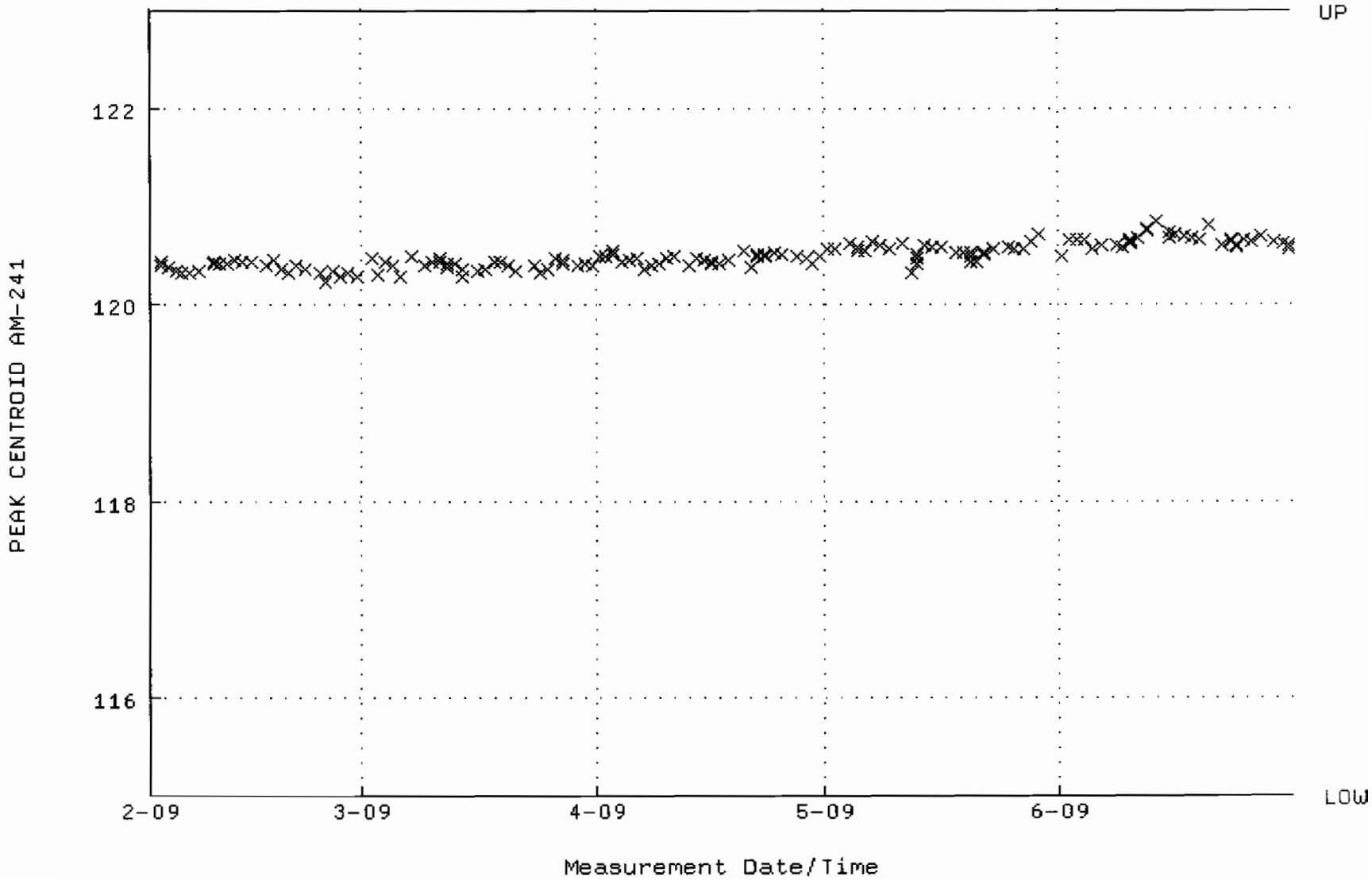

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM17.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.31148 through 1.60292

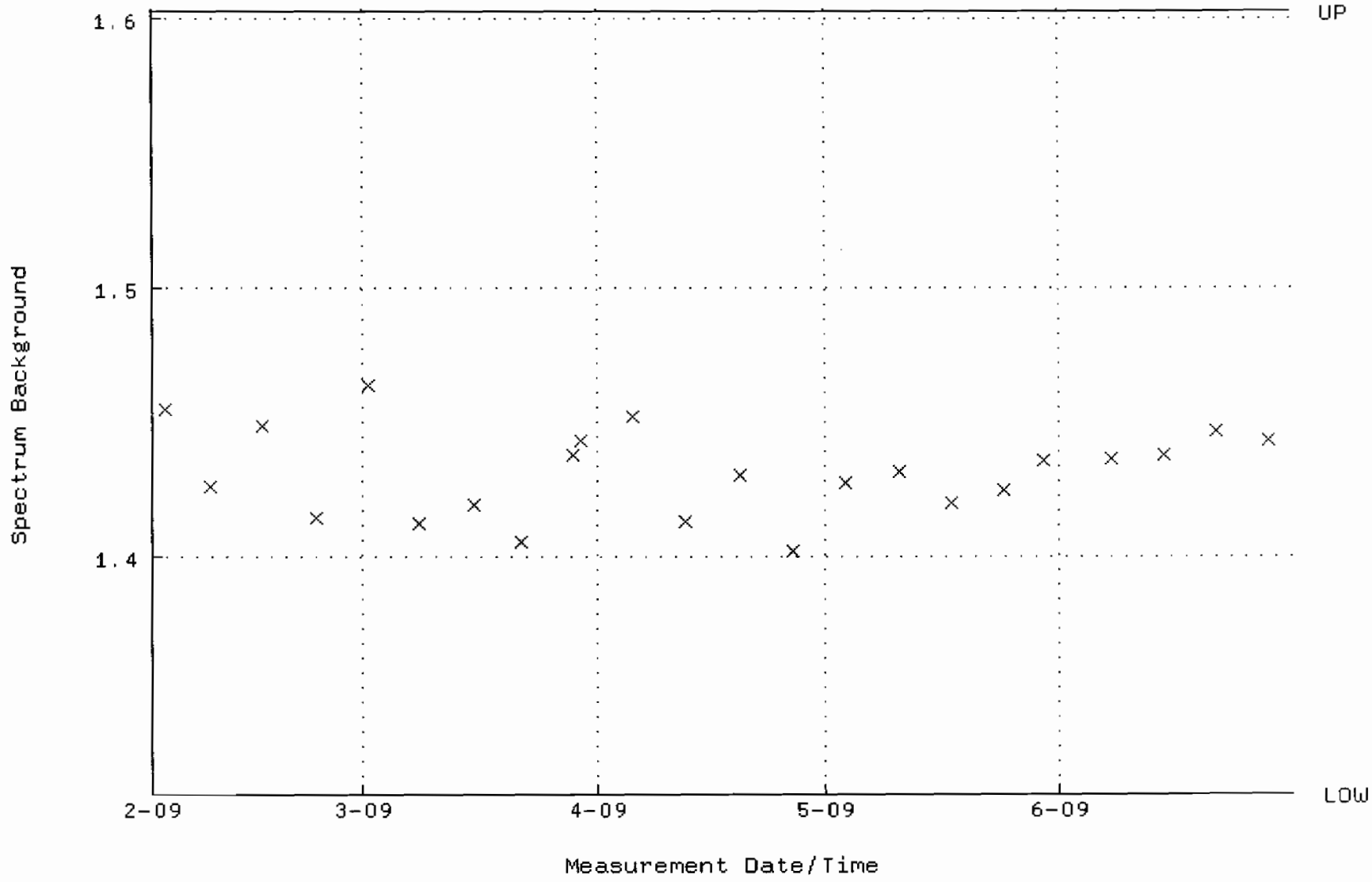

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:24:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

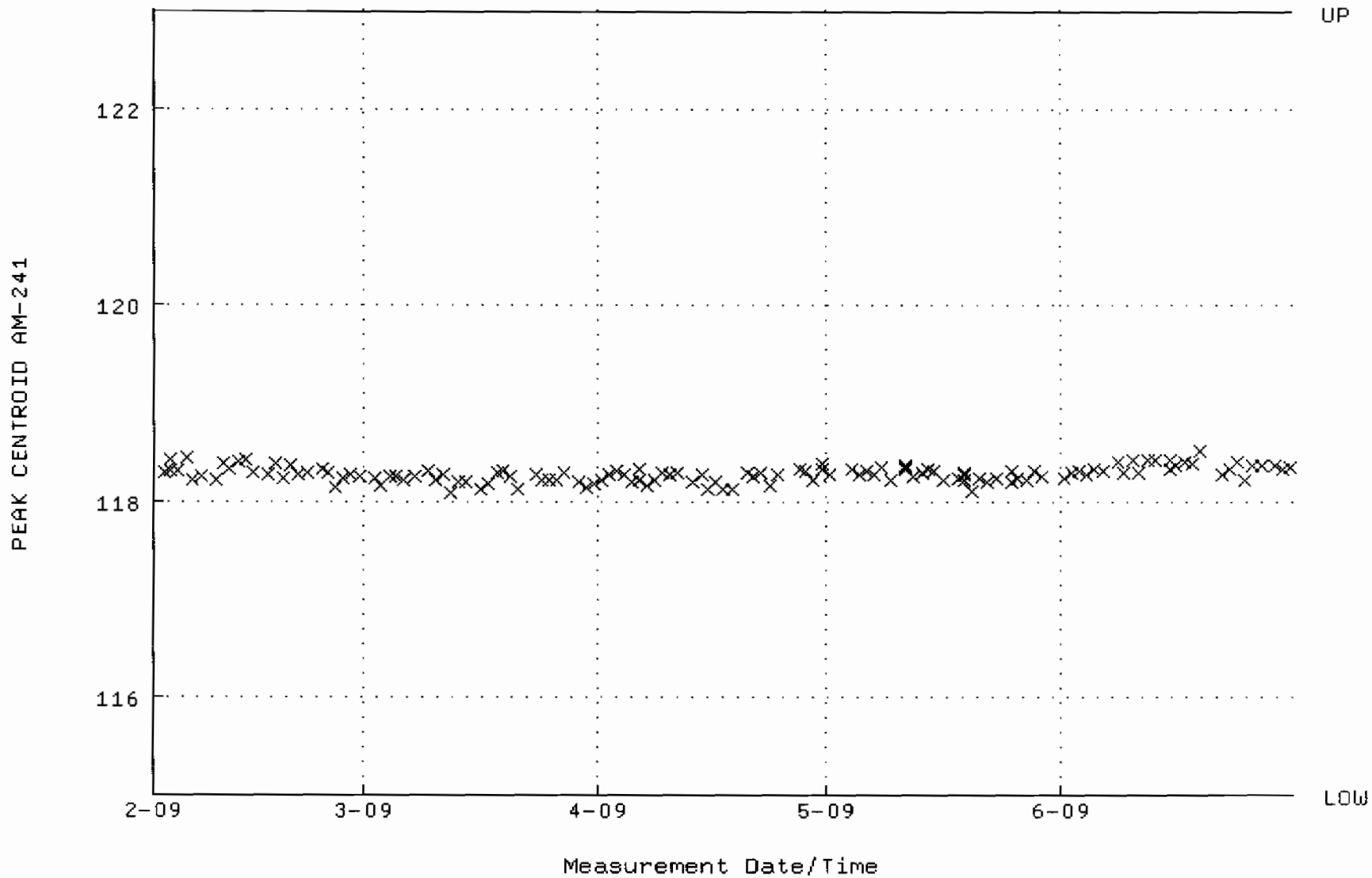

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.22710 through 2.72210

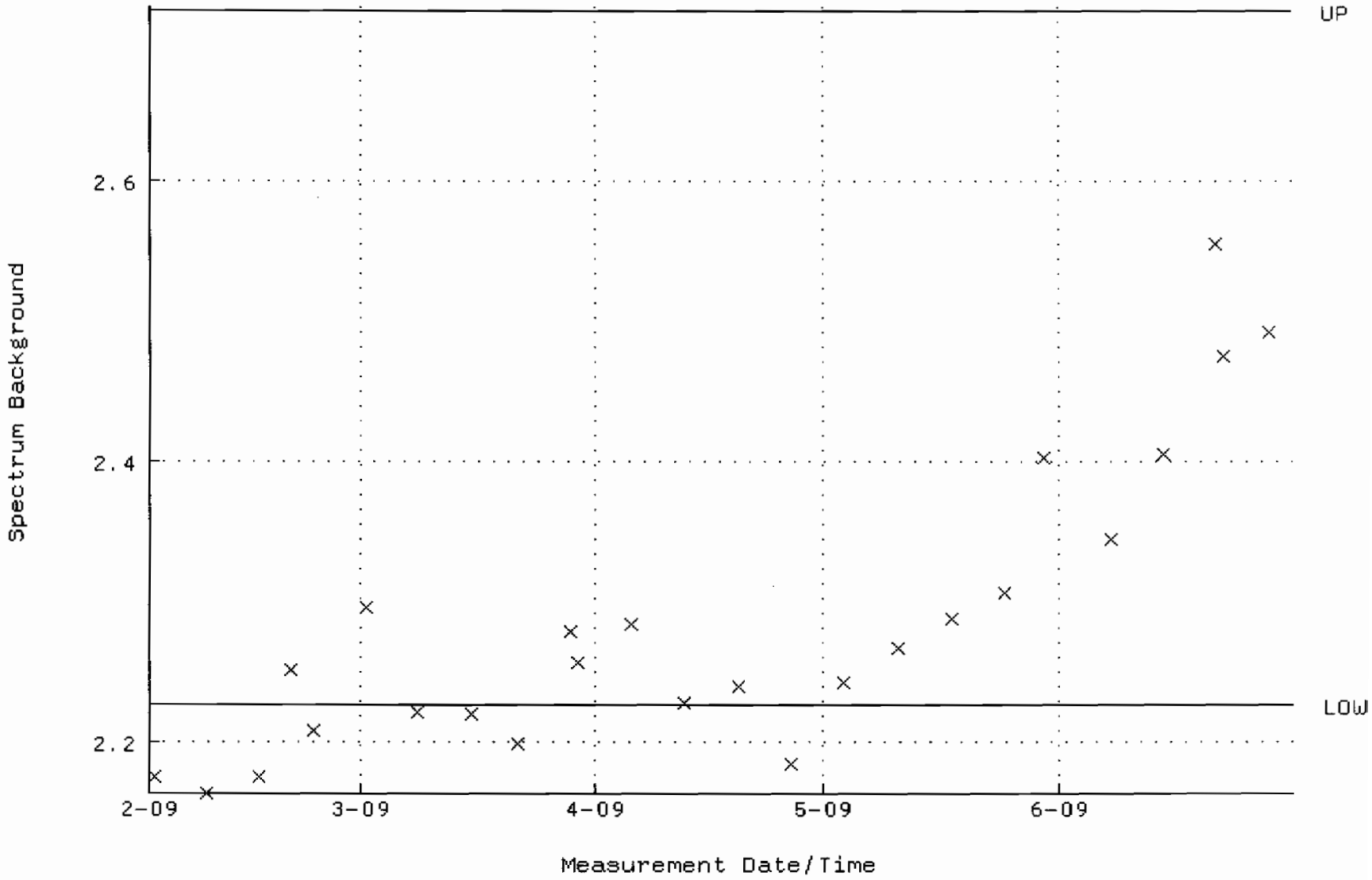

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:33:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

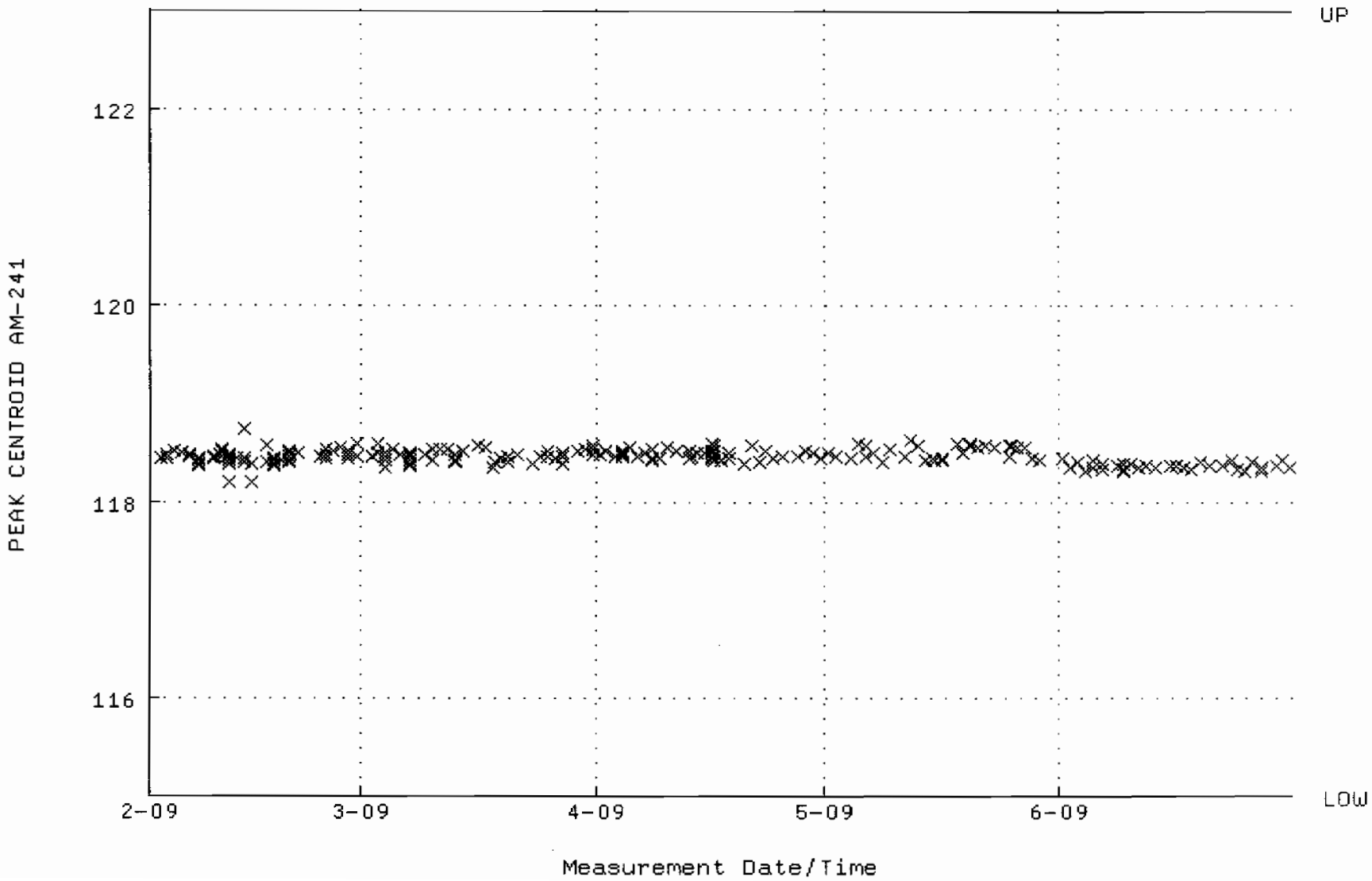

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM21.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:00 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.71450 through 2.09550

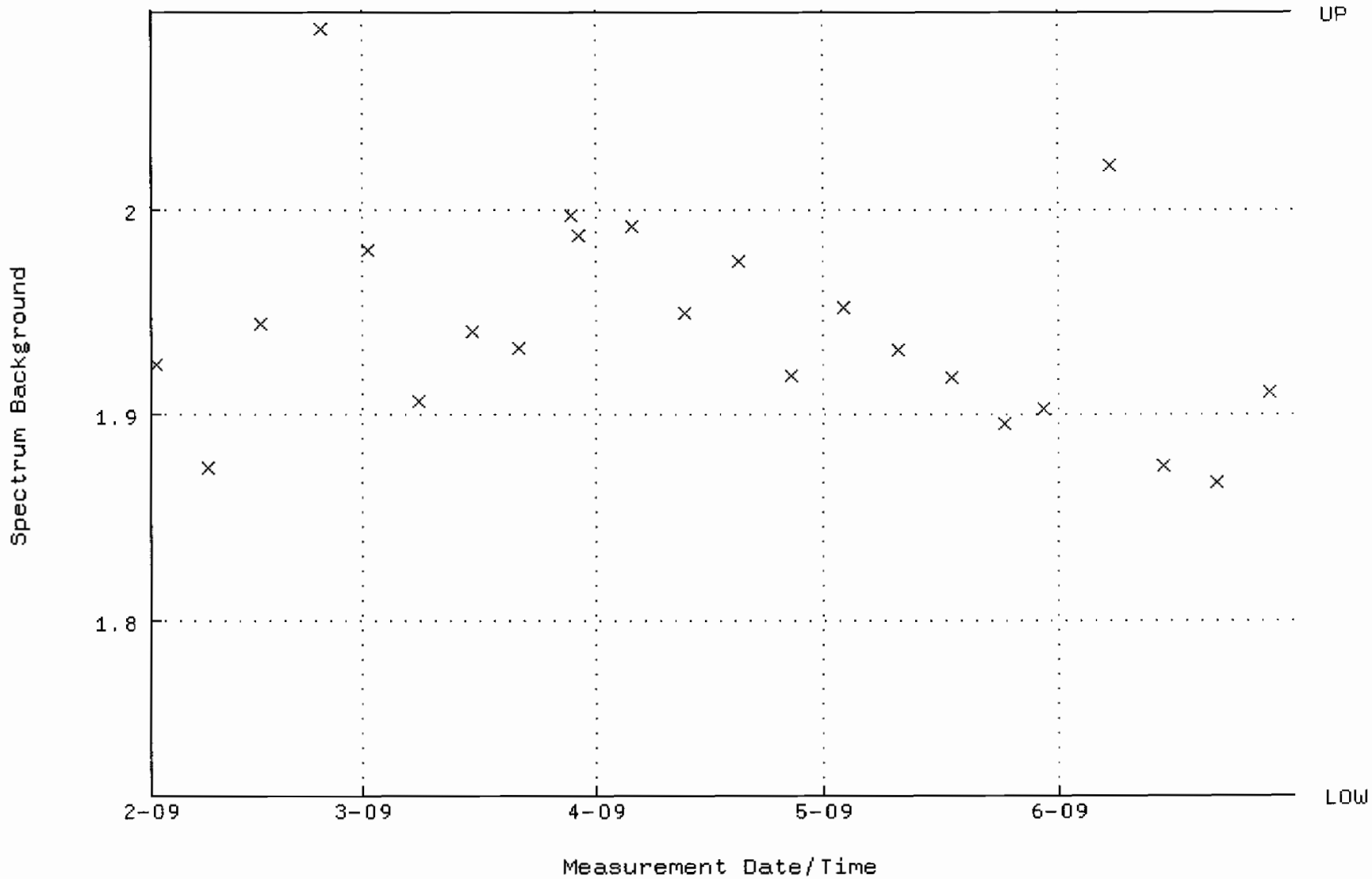

STANDARDS DATA

Amersham International plc
Amersham Laboratories

0134

NAMAS
CALIBRATION
No. 0146

[redacted]

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

RC-5-024-061

W.F. Case

W.F. Case

Amersham
The Health Science Group

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

Mary Ritters 4/9/09
Amanda L. Tate 4/9/09

ANALYTICS
Isotope Products Laboratories Company

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Atlanta, Georgia 30318
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Fax 404·352·2837
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1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-0

Corporate Office
24937 Avenue Tibbitts, Valencia, California 91355

Laboratory
1380 Seaboard Industrial Blvd., Atlanta, Georgia 30318

ANALYTICS
An Isotope Products Laboratories Company

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Atlanta, Georgia 30318

Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

- 4π LS (4 pi Liquid Scintillation Counting)
- HPGe (High Purity Germanium Gamma Ray Spectrometer)
- IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info

Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info

Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David D[illegible] 12/4/08
Amanda A. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

	Isotope	Result	
	Mixed Gamma N1	440.7	pCi/L
	Mixed Gamma N2	461.1	pCi/L
	Mixed Gamma N3	467.4	pCi/L
Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**
Certificate Value =	444.3738739	pCi/L	
Lower Limit =	428.4865624	pCi/L	
Upper Limit =	484.3134376	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	27.91343762		
10 % of Mean =	45.64000000		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David D[illegible] 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr	**Isotope**	**Result**		
12/4/2008		**pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L		**Rule 3 (Pass/Fail)**
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

12/4/08
Amanda L. Fehr
12/4/08

Eckert & Ziegler
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CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

End of Certificate

RECEIVED 12/15/08
RC-S-05

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

Analyst: D. Roy	Serial #	Value		Uncertainty	
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L

Mean Value (Counting) =	2.407	pCi/L	**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L		**Rule 3 (Pass/Fail)**

Target =	2.397	pCi/L
Lower Limit =	2.259244371	pCi/L
Upper Limit =	2.554088963	pCi/L
Rule 1 Pass/Fail	**Pass**	
Two sigma =	0.147422296	
10 % of Mean =	0.240666667	
Rule 2 (Pass/Fail)	**Pass**	

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09
1/5/09

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATA 4/14/2000 Jeff C Neff 12/1/04

Angela L. Johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	425 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01 -> 05

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for Instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: [redacted]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID (LAB USE)
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab

Sample Tracking (SMO USE)
Date Entered (mm/dd/yy)
Entered By
QC Initials

Turnaround Time ☒Normal ☐Rush Required Report Date

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized and materials being sent to GEL on behalf of Hank Mistaer
Please list as separate report.

Abnormal Conditions on Receipt (LAB USE)

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	Douglas E. Perry	DEP	Weston / 7577 / 845-0867

1. Relinquished by	Douglas E. Perry	Org. WESTON	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATA 4/14/2000

Amanda L. Fehr 4/30/04
[illegible] 5/1/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log-In

9911627-01 -> 0

SF 2001-COC (10-97)

Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: [illegible]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: [signature]
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location — Tech Area VI — Building N/A — Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab

Sample Tracking — SMO USE
Date Entered (mm/dd/yy)
Entered By

Turnaround Time ☒Normal ☐Rush Required Report Date
QC Limits

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized rad materials being sent to GEL on behalf of Mark Minter
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DEP	Weston / 7577 / 845-0667

1. Relinquished by	[signature]	Org. WESTON	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original — To Accompany Samples, Laboratory Copy (White)
1st Copy — To Accompany Samples, Return to SMO (Blue)
2nd Copy — SMO Suspense Copy (Yellow)
3rd Copy — Field Copy (Pink)

1262

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

aithersburg, Maryland 20899
anuary 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

RECEIVED 10/5/05

a, 30318

*Notes and references

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH.

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994** [b]*
Massic activity of the solution [c]	**26.31 Bq·g^{-1}**
Relative expanded uncertainty (k=2)	**0.72%** [d] [e]
Solution density	**(1.105 ± 0.002) g·mL^{-1} at 20 °C** [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L^{-1})	Mass Fraction (g·g^{-1})
	H_2O	50	0.81
	HNO_3	3.2	0.19
	$^{242}Pu^{+6}$	8×10^{-7}	2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) Bq·g^{-1} [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three 4πα liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	^{239}Pu + ^{240}Pu <0.000 001 [u]	^{239}Pu + ^{240}Pu 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	^{238}Pu + ^{241}Am <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One µSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (µSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 $s^{-1} \cdot g^{-1}$ for energies less than 3.1 MeV,
0.03 $s^{-1} \cdot g^{-1}$ for energies between 3.1 and 4.4 MeV, and
0.003 $s^{-1} \cdot g^{-1}$ for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 19 and 39 keV,
7×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 49 and 92 keV,
2×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 106 and 507 keV,
1×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 515 and 1456 keV, and
5×10^{-6} $s^{-1} \cdot g^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i| \cdot (x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i| \cdot (x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i| \cdot u(x_i)/y = |\partial y/\partial x_i| \cdot (x_i/y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i| \cdot (x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}·{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1262
Prepared By:	Daniel Roy
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-048-143

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Mary Aders
Prep Date:	05/08/2009
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	1262-A
Dilution(mL):	200 mL
Mass of Parent(g):	5.3306 g
Density(g/mL):	1.0000
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (200 mL) = 42.0744 dpm/mL
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0000 g/mL) / (200 mL) = 42.0744 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1262-*A*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	1262-A	1.830	0.2560
	1262-A	1.890	0.2630
	1262-A	1.810	0.2520
Mean Value (Counting) =	1.843	97.26	**Pass**
Stdev =	0.04163332		**Rule 3 (Pass/Fail)**
Target =	1.90		
Lower Limit =	1.760066693		
Upper Limit =	1.926599973		
Rule 1 Pass/Fail	**Pass**		
Two sigma =	0.08326664		
10 % of Mean =	0.184333333		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1262-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-Y and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Five drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 48% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

Mary Jo. Aders 5/15/09
05/15/09

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

1067

74463-278

Sr-90 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:	Sr-90
ACTIVITY (Bq):	3.835 E4
HALF-LIFE:	28.79 years
CALIBRATION DATE:	February 7, 2007 12:00 EST
RELATIVE EXPANDED UNCERTAINTY (k=2):	1.7%

Impurities: γ-impurities <0.1%

5.01066 grams 0.1M HCl solution with 30 μg/g Sr carrier.

NOTE: This source also contains Y-90 in secular equilibrium with Sr-90. The Y-90 activity is equal to the Sr-90 activity. Since Sr-90 and Y-90 both decay 100% by beta emission, the total beta emission rate for the source is twice the certified Sr-90 activity. The half-life for Y-90 is 64.08 hours.

P O NUMBER 2739 RD, Item 1

RECEIVED 2/8/07

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 2-7-07

RC-S-045-108-A

Corporate Office
24937 Avenue Rockefeller Valencia, California 91355

Laboratory
1380 Seaboard Industrial Blvd. Atlanta, Georgia, 30318

Standard Traceability Log Rad

Source Material Info

Parent Code:	1067
Prepared By:	Daniel Roy
Carrier Conc:	0.1M HCl
Reference Date:	02/07/2007
Ampoule Mass (g):	5.01066 g
Uncertainty:	+/- 1.7 %
LogBook No:	RC-S-045-108

A Solution Material Info

Isotope:	Strontium-90
Prepared By:	Julie Strock
Prep Date:	10/12/2007
Verification Date:	06/17/2009
Expiration Date:	06/23/2010
Primary Code:	1067-A
Dilution(mL):	100 mL
Mass of Parent(g):	4.9657 g
Density(g/mL):	0.9962
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (bq)) * (conversion dpm to bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (bq)) * (conversion dpm to bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(4.9657 g) * (38350 bq) * (60 dpm/bq) / (5.01066 g * 100 mL) = 22803.5343 dpm/mL

(4.9657 g) * (38350 bq) * (60 dpm/bq) / (0.9962 g/mL)/ (5.01066 g * 100 mL) = 22889.8293 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/23/2008	Daniel Roy	20.0611	1000	1067-B	459.1952 dpm/ml	07/23/2008	07/23/2009
06/16/2009	Mary Aders	20.0693	1000	1067-C	459.3829 dpm/mL	06/17/2009	06/17/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Sr-90 Standard 1067-C

6/18/2009	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Vol. Used (mL)	Source DPM/mL
M. Aders	1067-C N1	922.6000	45.1300	877.4700	2.030242	1.0000	432.1997082
	1067-C N2	905.2700	45.1300	860.1400	2.030242	1.0000	423.66378
	1067-C N3	918.2700	45.1300	873.1400	2.030242	1.0000	430.0669575
						Average =	428.6434819
Mean Value (Counting) =	428.6434819		**98.7965109**	**% of known**	**Pass**		
Stdev =	4.442435123		0.01036394				
Certificate Value =	433.865	dpm/mL					
Lower Limit =	419.7586117	dpm/mL					
Upper Limit =	437.5283522	dpm/mL					
Rule 1 Pass/Fail	**Pass**	**Pass**	**Pass**				
Two sigma =	8.884870247						
10 % of Mean =	42.86434819						
Rule 2 (Pass/Fail)	**Pass**						

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for Sr-90 source 1067-C by transferring 1 mL portions of the standard into glass liquid scintillation vials. Thirteen mL of Ecoscint Ultra liquid scintillation coctail was prepared in a similar fashion using 1 mL of DI water and 13 mL of Ecoscint Ultra liquid scintillation coctail. The standard verification vials and Background source were dark adapted for two hours and counted on LSC Green for Sr-90 source standard verification. The Sr-90 efficiency calibration which was used for verification calculations was performed on 6/17/09 using source 0133-A (Sr-90). Calibration data is recorded in this logbook under Sr-90 0133-A. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

RAD SOP M-001

6/18/09
6/27/09

STANDARDIZATION OF STRONTIUM CARRIER

DATE: 4/2/2009 EXP. DATE: 3/23/2010
LOT NUMBER 1096463 Analyst:

STRONTIUM PRECIPITATES

	1	2	3	4
Weight of carrier added	1.0182	1.0197	1.0199	1.0158
Aliquot (1.00 mL)				
Crucible + ppt.	0.0432	0.0432	0.0429	0.0425
Crucible	0.0247	0.0246	0.0243	0.0240
Wt. of ppt., g	0.0185	0.0186	0.0186	0.0185
mg Sr/mL	18.50	18.60	18.60	18.50
mg Sr/g	18.17	18.24	18.24	18.21

Must weigh carrier added

Average	**Std. Dev.**	
18.55	± 0.06	0.0031124
18.21	± 0.03	0.0018043
mg Sr/ 0.5 mL		**9.28**
mg Sr/g		18.21

0.5% of Mean Value = 0.09275 Pass

A satisfactory standardization is obtained when results give a standard deviation of less than 0.5% of the mean value.

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 881220**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232504001	SAMPLE	MXR1	GAM06	07-JUL-09 08:39	DONE	CAN	04-FEB-09 00:00
232504002	SAMPLE	MXR1	GAM08	07-JUL-09 08:43	DONE	CAN	30-JAN-09 00:00
232504003	SAMPLE	MXR1	GAM11	07-JUL-09 08:48	DONE	CAN	01-NOV-08 00:00
232504004	SAMPLE	MXR1	GAM12	07-JUL-09 08:49	DONE	CAN	10-FEB-09 00:00
232504005	SAMPLE	MXR1	GAM13	07-JUL-09 08:50	DONE	CAN	02-FEB-09 00:00
232504006	SAMPLE	MXR1	GAM15	07-JUL-09 08:50	DONE	CAN	16-FEB-09 00:00
232504007	SAMPLE	MXR1	GAM16	07-JUL-09 08:51	DONE	CAN	13-NOV-08 00:00
232504008	SAMPLE	MXR1	GAM21	07-JUL-09 08:51	DONE	CAN	25-JUL-08 00:00
232504009	SAMPLE	MXR1	GAM18	07-JUL-09 09:12	DONE	CAN	23-APR-09 00:00
232504010	SAMPLE	MXR1	GAM22	07-JUL-09 09:12	DONE	CAN	18-FEB-09 00:00
232504011	SAMPLE	MXR1	GAM23	07-JUL-09 09:13	DONE	CAN	02-JUN-09 00:00
232504012	SAMPLE	MXR1	GAM09	07-JUL-09 09:43	DONE	CAN	16-MAR-09 00:00
232504013	SAMPLE	MXR1	GAM14	07-JUL-09 09:44	DONE	CAN	06-MAR-09 00:00
232504014	SAMPLE	MXR1	GAM10	07-JUL-09 09:47	DONE	CAN	16-MAR-09 00:00
1201871428	LCS	MXR1	GAM01	07-JUL-09 10:00	DONE	CAN	30-JAN-09 00:00
232511001	SAMPLE	MXR1	GAM17	07-JUL-09 10:10	DONE	CAN	27-JAN-09 00:00
232511002	SAMPLE	MXR1	GAM02	07-JUL-09 10:19	DONE	CAN	01-NOV-08 00:00
232511003	SAMPLE	MXR1	GAM08	07-JUL-09 10:50	DONE	CAN	30-JAN-09 00:00
232511004	SAMPLE	MXR1	GAM12	07-JUL-09 10:53	DONE	CAN	10-FEB-09 00:00
232511005	SAMPLE	MXR1	GAM13	07-JUL-09 10:54	DONE	CAN	02-FEB-09 00:00
232511006	SAMPLE	MXR1	GAM16	07-JUL-09 10:58	DONE	CAN	13-NOV-08 00:00
1201871426	MB	MXR1	GAM21	07-JUL-09 10:59	DONE	CAN	25-JUL-08 00:00
1201871427	DUP	MXR1	GAM18	07-JUL-09 11:20	DONE	CAN	23-APR-09 00:00

Instrument Run Log

Instrument Type: GFPC **Batch ID: 881413**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1201871822	LCS	JXR1	PIC10C	04-JUL-09 14:59	DONE	Tuffryn Filter	01-JAN-09 00:00
232426001	SAMPLE	JXR1	PIC5D	04-JUL-09 14:59	DONE	Tuffryn Filter	01-JAN-09 00:00
232426002	SAMPLE	JXR1	PIC6B	04-JUL-09 14:59	DONE	Tuffryn Filter	01-JAN-09 00:00
232511001	SAMPLE	JXR1	PIC6C	04-JUL-09 14:59	DONE	Tuffryn Filter	01-JAN-09 00:00
232511003	SAMPLE	JXR1	PIC7B	04-JUL-09 14:59	DONE	Tuffryn Filter	01-JAN-09 00:00
1201871820	MB	JXR1	PIC8A	09-JUL-09 11:53	DONE	Tuffryn Filter	01-JAN-09 00:00
232511005	SAMPLE	JXR1	LB4100B1	10-JUL-09 17:24	DUSE	Tuffryn Filter	12-JAN-09 00:00
232511006	SAMPLE	JXR1	LB4100B3	10-JUL-09 17:24	DONE	Tuffryn Filter	12-JAN-09 00:00
1201871821	DUP	JXR1	LB4100B4	10-JUL-09 17:24	DONE	Tuffryn Filter	12-JAN-09 00:00
232511002	SAMPLE	JXR1	LB4100A1	10-JUL-09 17:25	DONE	Tuffryn Filter	12-JAN-09 00:00
232511004	SAMPLE	JXR1	LB4100A2	10-JUL-09 17:25	DUSE	Tuffryn Filter	12-JAN-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882525**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232069001	SAMPLE	AXD2	1047	09-JUL-09 17:37	DONE		
232069002	SAMPLE	AXD2	1048	09-JUL-09 17:37	DONE		
232069003	SAMPLE	AXD2	1065	09-JUL-09 17:37	DONE		
232069004	SAMPLE	AXD2	1066	09-JUL-09 17:37	DONE		
232069005	SAMPLE	AXD2	1067	09-JUL-09 17:37	DONE		
232069006	SAMPLE	AXD2	1068	09-JUL-09 17:37	DONE		
232424001	SAMPLE	AXD2	1069	09-JUL-09 17:37	DONE		
232426001	SAMPLE	AXD2	1070	09-JUL-09 17:37	DONE		
232426002	SAMPLE	AXD2	1071	09-JUL-09 17:37	DONE		
232511001	SAMPLE	AXD2	1072	09-JUL-09 17:37	DONE		
232511002	SAMPLE	AXD2	1073	09-JUL-09 17:37	DONE		
232511003	SAMPLE	AXD2	1074	09-JUL-09 17:37	DONE		
232511004	SAMPLE	AXD2	1075	09-JUL-09 17:37	DUSE		
232511005	SAMPLE	AXD2	1076	09-JUL-09 17:37	DUSE		
232511006	SAMPLE	AXD2	1077	09-JUL-09 17:37	DONE		
1201874395	MB	AXD2	1078	09-JUL-09 17:37	DONE		
1201874396	DUP	AXD2	1079	09-JUL-09 17:37	DONE		
1201874397	LCS	AXD2	1080	09-JUL-09 17:37	DONE		

Instrument Run Log

Instrument Type: LSC **Batch ID: 883018**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232504001	SAMPLE	KXK2	LSCGREEN	13-JUL-09 23:10	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504002	SAMPLE	KXK2	LSCGREEN	14-JUL-09 01:14	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504003	SAMPLE	KXK2	LSCGREEN	14-JUL-09 05:46	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504004	SAMPLE	KXK2	LSCGREEN	14-JUL-09 07:54	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504005	SAMPLE	KXK2	LSCGREEN	14-JUL-09 08:41	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504006	SAMPLE	KXK2	LSCGREEN	14-JUL-09 09:28	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504007	SAMPLE	KXK2	LSCGREEN	14-JUL-09 10:15	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504008	SAMPLE	KXK2	LSCGREEN	14-JUL-09 11:02	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504009	SAMPLE	KXK2	LSCGREEN	14-JUL-09 11:49	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504010	SAMPLE	KXK2	LSCGREEN	14-JUL-09 12:36	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504011	SAMPLE	KXK2	LSCGREEN	14-JUL-09 13:23	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504012	SAMPLE	KXK2	LSCGREEN	14-JUL-09 14:10	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504013	SAMPLE	KXK2	LSCGREEN	14-JUL-09 14:57	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504014	SAMPLE	KXK2	LSCGREEN	14-JUL-09 15:44	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511001	SAMPLE	KXK2	LSCGREEN	14-JUL-09 16:31	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511002	SAMPLE	KXK2	LSCGREEN	14-JUL-09 17:18	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511003	SAMPLE	KXK2	LSCGREEN	14-JUL-09 18:05	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511004	SAMPLE	KXK2	LSCGREEN	14-JUL-09 18:52	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511005	SAMPLE	KXK2	LSCGREEN	14-JUL-09 19:39	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511006	SAMPLE	KXK2	LSCGREEN	14-JUL-09 20:26	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875580	MB	KXK2	LSCGREEN	14-JUL-09 21:13	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875581	DUP	KXK2	LSCGREEN	14-JUL-09 22:00	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875582	LCS	KXK2	LSCGREEN	14-JUL-09 22:47	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 884188**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232511004	SAMPLE	AXD2	1107	15-JUL-09 21:16	DUSE		
232511005	SAMPLE	AXD2	1108	15-JUL-09 21:16	DUSE		
1201878410	MB	AXD2	1109	15-JUL-09 21:16	DONE		
1201878411	DUP	AXD2	1111	15-JUL-09 21:16	DUSE		
1201878412	LCS	AXD2	1112	15-JUL-09 21:16	DONE		
232511004	SAMPLE	AXD2	1113	16-JUL-09 14:35	DONE		
232511005	SAMPLE	AXD2	1114	16-JUL-09 14:35	DONE		
1201878411	DUP	AXD2	1115	16-JUL-09 14:35	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 885014**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232045001	SAMPLE	AXD2	1138	15-JUL-09 21:12	DONE		
232069001	SAMPLE	AXD2	1139	15-JUL-09 21:12	DONE		
232069002	SAMPLE	AXD2	1140	15-JUL-09 21:12	DONE		
232069003	SAMPLE	AXD2	1141	15-JUL-09 21:12	DONE		
232069004	SAMPLE	AXD2	1142	15-JUL-09 21:12	DONE		
232069005	SAMPLE	AXD2	1144	15-JUL-09 21:12	DONE		
232069006	SAMPLE	AXD2	1145	15-JUL-09 21:12	DONE		
232076001	SAMPLE	AXD2	1146	15-JUL-09 21:12	DONE		
232076002	SAMPLE	AXD2	1147	15-JUL-09 21:13	DONE		
232076003	SAMPLE	AXD2	1148	15-JUL-09 21:13	DONE		
232424001	SAMPLE	AXD2	1149	15-JUL-09 21:13	DONE		
232426002	SAMPLE	AXD2	1151	15-JUL-09 21:13	DONE		
232511001	SAMPLE	AXD2	1152	15-JUL-09 21:13	DONE		
232511002	SAMPLE	AXD2	1153	15-JUL-09 21:13	DONE		
232511003	SAMPLE	AXD2	1154	15-JUL-09 21:13	DONE		
232511004	SAMPLE	AXD2	1155	15-JUL-09 21:13	DONE		
232511005	SAMPLE	AXD2	1156	15-JUL-09 21:13	DONE		
232511006	SAMPLE	AXD2	1157	15-JUL-09 21:13	DONE		
1201880401	MB	AXD2	1158	15-JUL-09 21:13	DONE		
1201880402	DUP	AXD2	1171	15-JUL-09 21:13	DONE		
1201880403	LCS	AXD2	1172	15-JUL-09 21:13	DONE		
232426001	SAMPLE	AXD2	1161	16-JUL-09 07:25	DONE		

Instrument Run Log

Instrument Type: GFPC **Batch ID: 885121**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232511004	SAMPLE	JXR1	LB4100H1	16-JUL-09 17:33	DONE	Tuffryn Filter	12-JAN-09 00:00
232511005	SAMPLE	JXR1	LB4100H2	16-JUL-09 17:33	DONE	Tuffryn Filter	12-JAN-09 00:00
1201880683	MB	JXR1	LB4100H3	16-JUL-09 17:33	DONE	Tuffryn Filter	12-JAN-09 00:00
1201880684	DUP	JXR1	LB4100H4	16-JUL-09 17:33	DONE	Tuffryn Filter	12-JAN-09 00:00
1201880685	LCS	JXR1	LB4100B4	16-JUL-09 17:34	DONE	Tuffryn Filter	12-JAN-09 00:00

Friday, June 26, 2009

REQUEST NUMBER: 09-2500

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2500

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	EPA:353.2	1	CAMO-09-6533	W	6/24/2009	
	SW-846:6010B	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2500

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		1	CAMO-09-6533	W	6/24/2009	
	SW-846:6020	1	CAMO-09-6533	W	6/24/2009	
	SW-846:6850	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		1	CAMO-09-6533	W	6/24/2009	
	SW-846:9012A	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		1	CAMO-09-6533	W	6/24/2009	
	SW-846:9045C	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2500

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2500C

REQUEST NUMBER: 09-2500

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	POLY	METALS-GEL	Ice	R
CAMO-09-6519	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6518	1	POLY	METALS-GEL	Ice	R
CAMO-09-6518	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6527	1	POLY	METALS-GEL	Ice	R
CAMO-09-6527	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6529	1	POLY	METALS-GEL	Ice	R
CAMO-09-6529	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6528	1	POLY	METALS-GEL	Ice	R
CAMO-09-6528	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6531	1	POLY	METALS-GEL	Ice	R
CAMO-09-6531	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6533	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-6533	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-6533	1	POLY	SW-846:6850	Ice	W
CAMO-09-6533	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:		Date	Time	Received By:		Date	Time
		6/26/09	3:00				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6528

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	Qbt2
TIME COLLECTED (HH:MM)		1320	SUB-MEDIA:	UA	ok
PRS ID:		AG 6.24.09 ~~50-006~~ 50-006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605088	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	2.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	
1	↓	GS+ISOPU+ISOU+SR90	1 LITER POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS-GEL	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Extremely weathered tan/white tuff, roots breaking thru tuff

SAMPLE COMMENTS: Interface @ ~~1.5~~ 1.5' bgs AG 6.24.09

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 23 dpm

β/γ ≤ 657 dpm

PID Ambient Reading = 0.0 / 2.0 ppm

COLLECTED BY (PRINT) A. Goumas **REVIEWED BY (PRINT)** J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:57
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6531

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	OK
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	UNK	MO-605085	FIELD QC TYPE:	FD	OK
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER GLASS~~	~~Ice~~ AG 6.24.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-6518

Brown sediment sand → silt slightly moist

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d), below RLW outfall in main drainage of canyon

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 75 dpm

β/γ ≤ 905 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) ~~A. Goumas~~ J. B 6/24/09 J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.24.09	(Printed Name) Sherri Sherwood	6/24/09
(Signature) A. Goumas	1640	(Signature) Sherri Sherwood	4:57

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6527

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1305	SUB-MEDIA:	UA	ok
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605088	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6-24-09	N	
1	15-Dam	8270C+8082	250 ML AMBER GLASS	Ice	Y	
1	↓	GS+ISOPU+ISOU+SR90	1 LITER POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS-GEL	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Brown Sand → silt sediment over weathered tuff with some root material

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d) - 05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 875 dpm

PID Ambient Reading = 0.0 / 1.3 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6533

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1420	SUB-MEDIA:	OTHER	
PRS ID:		50-006(d)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605085	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	W		EXCAVATED: YES / NO / (NA)		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / (NA)

BOREHOLE: YES / NO / (NA) BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~2~~		~~8290~~	~~1 LITER AMBER GLASS~~	~~Ice~~ AG 3/31/09	N	
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-6518

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d)-06

FIELD SCREENING/MEASUREMENT RESULTS: None

COLLECTED BY (PRINT) J. Branch REVIEWED BY (PRINT) A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch (Signature) [signature]	6/24/09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6519

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	QBT2
TIME COLLECTED (HH:MM)		1600	SUB-MEDIA:	UA	OK
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605085	OK	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	J.B 6/24/09 ~~2.0~~ 2.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Regular~~ 15-Day J.B. 6/24/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown / Grey, highly indurated, wet tuff

~~FR: CAMO-09-6533~~ J.B. 6/24/09

SAMPLE COMMENTS: Tuff interface @ 1.5' bgs. Power auger attempt did not advance in tuff. Cutrite auger and ss Breaker Bar used to collect adequate sample material.

LOCATION DESC: 50-006(d)-06

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 17$ dpm

$\beta/\gamma \leq 1624$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/24/09	(Printed Name) S. MARCIAN	6/24/09
(Signature) [signature]	1640	(Signature) [signature]	1640

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6518

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	ok
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605085	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice. AG 6.24.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1	↓	GS+ISOPU+ISOU+SR90	1 LITER POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS-GEL	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Brown sediment sand → silt slightly moist

FD: CAMO-09-6531 FR: CAMO-09-6533

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d) - 06, below RLW outfall in main canyon drainage

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 75 dpm

β/γ ≤ 705 dpm

PID $\frac{\text{Ambient}}{\text{Reading}}$: $\frac{0.0}{0.0}$

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6/24/09	(Printed Name) S. MARCZAK	6/24/09
(Signature) [signature]	1640	(Signature) [signature]	1660

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6529

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	qbt2
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	UA	ok
PRS ID:		50 - 006(d)	SAMPLE TECH CODE:	HA	↓
LOCATION ID:	MO-605088	OK	FIELD QC TYPE:	NA	↓
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0 A-4	~~4.0 3.75~~ 4.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	
1	↓	GS+ISOPU+ISOU+SR90	1 LITER POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS-GEL	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Extremely indurated tan tuff

FTB: CAMO-09-6535

SAMPLE COMMENTS: Power auger refusal @ 3.5' bgs, used breaker bar & cutrite bucket to scrape enough sample TD @ 4.0, hand auger refusal @ 4.0' bgs

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 167 dpm → Allowed to decay for one hour

β/γ ≤ 3820 dpm

PID Ambient / Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6/24/09	(Printed Name) S. MALCZAK	6/26/09
(Signature) [signature]	1640	(Signature) [signature]	1640
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6535

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	OTHER	
PRS ID:		50-006(d)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	mo-605088	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:		NA
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1 2	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6529

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gomez REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARCZAK (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2500 VALIDATION DATE: 08/03/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Rebecca Keith ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☒ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. Samples CAMO-09-6519, -6529 and -6528 were diluted due to over-range detects for perchlorate. Only the diluted sample results, which were detects, were reported, and, thus, no sample data were qualified.
2. It should be noted that the soil and water MS/MSD analyses were performed on LANL samples from other RNs. The raw data for the parent samples were not included in the data package. No sample data were qualified as a result.
3. It should be noted that both the water and soil MS/MSD %R calculations were performed incorrectly. The parent sample results were < the MDLs and, thus, results of 0 µg/L and 0 µg/kg, respectively, should have been used to calculate the %Rs. The laboratory subtracted the parent sample concentrations. The %Rs were within the acceptance limits when calculated correctly. No sample results were qualified.
4. It should be noted that the raw data for both the water and soil ICAL standards were not provided in the data package. No sample data were qualified as a result.

DATA VALIDATION COVER SHEET

5121-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

Reviewed by: JEJ Level: 1 Date: 8/5/09

VALIDATOR'S SIGNATURE: [signature] DATE: 08/03/09

Form 5121-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☒	☐	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☒	☐	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☒	☐	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☒	☐	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6519

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 79

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	63.1	252	895	ug/kg		100	09-JUL-09 13:41	per0709012a
	Perchlorate-O(18)			605	ug/kg		100	09-JUL-09 13:41	per0709012a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

RLK 8/3/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6518

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509002

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 85

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.589	2.36	1.42	ug/kg	J	1	09-JUL-09 13:52	per0709013a
	Perchlorate-O(18)			5.85	ug/kg		1	09-JUL-09 13:52	per0709013a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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RLK 8/3/09

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6527

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509003

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 94.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.531	2.12	2.58	ug/kg		1	08-JUL-09 18:55	per0708050a
	Perchlorate-O(18)			5.11	ug/kg		1	08-JUL-09 18:55	per0708050a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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RLK 8/3/09

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6529

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509004

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 95.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	52.6	210	607	ug/kg		100	09-JUL-09 14:04	per0709014a
	Perchlorate-O(18)			502	ug/kg		100	09-JUL-09 14:04	per0709014a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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RLK 8/3/09

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6528

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509005

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 94.2

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	53.1	212	472	ug/kg		100	09-JUL-09 14:16	per0709015a
	Perchlorate-O(18)			529	ug/kg		100	09-JUL-09 14:16	per0709015a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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RLK 8/3/09

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6531

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509006

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 85

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.588	2.35	1.05	ug/kg	J	1	09-JUL-09 14:28	per0709016a
	Perchlorate-O(18)			6.04	ug/kg		1	09-JUL-09 14:28	per0709016a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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RLK 8/3/09

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-6533

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500-1

GEL Sample ID: 232510001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	30-JUN-09 20:16	per0630074a
	Perchlorate Isotope Ratio						1	30-JUN-09 20:16	per0630074a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	30-JUN-09 20:16	per0630074a
	Perchlorate-O(18)			0.445	ug/L		1	30-JUN-09 20:16	per0630074a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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RLK 8/3/09

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2500 VALIDATION DATE: 08/03/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Rebecca Keith ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☒ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The soil MS %R was <10% for Mn. Thus, all associated sample results were qualified R,I6.

   The soil MS %Rs were < the LAL but ≥ 10% for Ca and Na. The Na results for samples CAMO-09-6518, -6527 and -6531 were qualified NDs and, thus, were qualified UJ,I6a. All other associated sample results were detects and, thus, were qualified J-,I6a.

   The soil MS %Rs were > the laboratory UAL for Al and Fe. All associated sample results for Al were detects and, thus, were qualified J+,I6b. The parent sample concentration for Fe was >4X the spike concentration and, thus, no sample results were qualified, based on professional judgment.

   The water MS %R was < the LAL but ≥ 10% for Tl. The associated sample result was an ND and, thus, was qualified UJ,I6a.

DATA VALIDATION COVER SHEET

5118-1

Records Use only

Data Validation Cover Sheet

2. Sb was detected in the water MB. The associated sample result was an ND and, thus, was not qualified.

3. Al was detected in one of the soil CCBs. All associated Al sample results were detects >5X the CCB concentration and, thus, were not qualified.

   Tl was detected in the water CCB. The associated sample result was an ND and, thus, was not qualified.

4. Na and K were detected in the FR blank, sample -6533, which was associated with all soil samples. The Na results for samples -6518, -6527, and -6531 were detects ≤5X the FR blank concentration and, thus, were qualified U,I4d. The remaining Na results and all associated sample results for K were detects >5X the FR blank concentrations and, thus, were not qualified.

5. The soil duplicate RPD value for Hg was >35%, and both the parent sample and duplicate results were ≥5X the PQLs. The associated result for sample -6527 was an ND and, thus, was qualified UJ,I10a. All other associated sample results were detects and, thus, were qualified J,I10a.

6. Results > the MDLs but < the PQLs were "J" flagged by the laboratory and, thus, were not further qualified J,I1.

7. It should be noted that for the water ICP-MS, the QC sample analyses were performed on LANL samples from other RNs. No sample data were qualified.

Reviewed by: JEJ Level: 1 Date: 8/5/09

VALIDATOR'S SIGNATURE: DATE: 08/03/09

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

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Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☐	☒	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☒	☐	☐	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☒	☐	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☒	☐	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509001 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6519 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 79

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum J+,I6b	2290000	ug/Kg	*N	8580	25200	25200	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-36-0	Antimony	1260	ug/Kg	U	416	1260	1260	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-38-2	Arsenic	1030	ug/kg	J	252	1260	1260	2	MS	PRB	07/08/09 07:38	090707-3	881363
7440-39-3	Barium	27200	ug/Kg		126	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-41-7	Beryllium	579	ug/kg		25.2	126	126	2	MS	PRB	07/08/09 07:38	090707-3	881363
7440-43-9	Cadmium	631	ug/Kg	U	126	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-70-2	Calcium J-,I6a	1350000	ug/Kg	*N	10100	31600	31600	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-47-3	Chromium	14500	ug/Kg		189	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-48-4	Cobalt	827	ug/Kg		189	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-50-8	Copper	10600	ug/Kg		379	1260	1260	1	P	HSC	07/01/09 23:04	070109-1	881347
7439-89-6	Iron	6080000	ug/Kg	*	10100	31600	31600	1	P	HSC	07/01/09 23:04	070109-1	881347
7439-92-1	Lead	10500	ug/Kg		316	1260	1260	1	P	HSC	07/01/09 23:04	070109-1	881347
7439-95-4	Magnesium	387000	ug/Kg		10700	37900	37900	1	P	HSC	07/02/09 17:37	070209-2	881347
7439-96-5	Manganese R,I6	243000	ug/Kg	*N	252	1260	1260	1	P	HSC	07/01/09 23:04	070109-1	881347
7439-97-6	Mercury J,I10a	127	ug/kg	*E	4.83	14.2	14.2	1	AV	JXL1	07/13/09 11:33	071309S2-4	881913
7440-02-0	Nickel	3620	ug/kg		126	505	505	2	MS	PRB	07/08/09 07:38	090707-3	881363
7440-09-7	Potassium	504000	ug/Kg		8080	31600	31600	1	P	HSC	07/01/09 23:04	070109-1	881347
7782-49-2	Selenium	1260	ug/kg	U	631	1260	1260	2	MS	PRB	07/08/09 07:38	090707-3	881363
7440-22-4	Silver	474	ug/Kg	J	126	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-23-5	Sodium J-,I6a	273000	ug/Kg	N	8830	31600	31600	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-28-0	Thallium	218	ug/kg	J	75.7	252	252	2	MS	PRB	07/08/09 07:38	090707-3	881363
7440-62-2	Vanadium	4300	ug/Kg		126	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-66-6	Zinc	30600	ug/Kg		416	1260	1260	1	P	HSC	07/01/09 23:04	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.5	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.533	g	30	mL	07/10/09	AXG2

RLK 8/3/09

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509002 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6518 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 85

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum J+,I6b	2630000	ug/Kg	*N	7890	23200	23200	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-36-0	Antimony	1160	ug/Kg	U	383	1160	1160	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-38-2	Arsenic	1150	ug/kg	J	234	1170	1170	2	MS	PRB	07/08/09 08:19	090707-3	881363
7440-39-3	Barium	34300	ug/Kg		116	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-41-7	Beryllium	458	ug/kg		23.4	117	117	2	MS	PRB	07/08/09 08:19	090707-3	881363
7440-43-9	Cadmium	580	ug/Kg	U	116	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-70-2	Calcium J-,I6a	1120000	ug/Kg	*N	9280	29000	29000	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-47-3	Chromium	4980	ug/Kg		174	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-48-4	Cobalt	1650	ug/Kg		174	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-50-8	Copper	4200	ug/Kg		348	1160	1160	1	P	HSC	07/01/09 23:52	070109-1	881347
7439-89-6	Iron	8810000	ug/Kg	*	9280	29000	29000	1	P	HSC	07/01/09 23:52	070109-1	881347
7439-92-1	Lead	8780	ug/Kg		290	1160	1160	1	P	HSC	07/01/09 23:52	070109-1	881347
7439-95-4	Magnesium	531000	ug/Kg		9860	34800	34800	1	P	HSC	07/02/09 18:25	070209-2	881347
7439-96-5	Manganese R,I6	322000	ug/Kg	*N	232	1160	1160	1	P	HSC	07/01/09 23:52	070109-1	881347
7439-97-6	Mercury J,I10a	18.5	ug/kg	*E	4.15	12.2	12.2	1	AV	JXL1	07/13/09 11:43	071309S2-4	881913
7440-02-0	Nickel	2840	ug/kg		117	469	469	2	MS	PRB	07/08/09 08:19	090707-3	881363
7440-09-7	Potassium	604000	ug/Kg		7430	29000	29000	1	P	HSC	07/01/09 23:52	070109-1	881347
7782-49-2	Selenium	1170	ug/kg	U	586	1170	1170	2	MS	PRB	07/08/09 08:19	090707-3	881363
7440-22-4	Silver	477	ug/Kg	J	116	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-23-5	Sodium U,I4d	43300	ug/Kg	N	8120	29000	29000	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-28-0	Thallium	84.8	ug/kg	J	70.3	234	234	2	MS	PRB	07/08/09 08:19	090707-3	881363
7440-62-2	Vanadium	7500	ug/Kg		116	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-66-6	Zinc	44700	ug/Kg		383	1160	1160	1	P	HSC	07/01/09 23:52	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.508	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.503	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.579	g	30	mL	07/10/09	AXG2

RLK 8/3/09

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509003 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6527 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 94.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum J+,I6b	1580000	ug/Kg	*N	7200	21200	21200	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-36-0	Antimony	1060	ug/Kg	U	349	1060	1060	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-38-2	Arsenic	785	ug/kg	J	209	1050	1050	2	MS	PRB	07/08/09 08:25	090707-3	881363
7440-39-3	Barium	22200	ug/Kg		106	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-41-7	Beryllium	462	ug/kg		20.9	105	105	2	MS	PRB	07/08/09 08:25	090707-3	881363
7440-43-9	Cadmium	529	ug/Kg	U	106	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-70-2	Calcium J-,I6a	646000	ug/Kg	*N	8470	26500	26500	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-47-3	Chromium	1540	ug/Kg		159	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-48-4	Cobalt	653	ug/Kg		159	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-50-8	Copper	1970	ug/Kg		317	1060	1060	1	P	HSC	07/02/09 00:00	070109-1	881347
7439-89-6	Iron	6810000	ug/Kg	*	8470	26500	26500	1	P	HSC	07/02/09 00:00	070109-1	881347
7439-92-1	Lead	7260	ug/Kg		265	1060	1060	1	P	HSC	07/02/09 00:00	070109-1	881347
7439-95-4	Magnesium	370000	ug/Kg		8990	31700	31700	1	P	HSC	07/02/09 18:32	070209-2	881347
7439-96-5	Manganese R,I6	300000	ug/Kg	*N	212	1060	1060	1	P	HSC	07/02/09 00:00	070109-1	881347
7439-97-6	Mercury UJ,I10a	12.4	ug/kg	U*E	4.2	12.4	12.4	1	AV	JXL1	07/13/09 11:45	071309S2-4	881913
7440-02-0	Nickel	1640	ug/kg		105	418	418	2	MS	PRB	07/08/09 08:25	090707-3	881363
7440-09-7	Potassium	375000	ug/Kg		6770	26500	26500	1	P	HSC	07/02/09 00:00	070109-1	881347
7782-49-2	Selenium	1050	ug/kg	U	523	1050	1050	2	MS	PRB	07/08/09 08:25	090707-3	881363
7440-22-4	Silver	296	ug/Kg	J	106	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-23-5	Sodium U,I4d	27600	ug/Kg	N	7410	26500	26500	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-28-0	Thallium	209	ug/kg	U	62.7	209	209	2	MS	PRB	07/08/09 08:25	090707-3	881363
7440-62-2	Vanadium	4110	ug/Kg		106	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-66-6	Zinc	33900	ug/Kg		349	1060	1060	1	P	HSC	07/02/09 00:00	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.502	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.508	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.516	g	30	mL	07/10/09	AXG2

RLK 8/3/09

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509004 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6529 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum J+,I6b	4430000	ug/Kg	*N	6990	20600	20600	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-36-0	Antimony	1030	ug/Kg	U	339	1030	1030	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-38-2	Arsenic	1450	ug/kg		206	1030	1030	2	MS	PRB	07/08/09 08:31	090707-3	881363
7440-39-3	Barium	46400	ug/Kg		103	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-41-7	Beryllium	639	ug/kg		20.6	103	103	2	MS	PRB	07/08/09 08:31	090707-3	881363
7440-43-9	Cadmium	514	ug/Kg	U	103	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-70-2	Calcium J-,I6a	6650000	ug/Kg	*N	8230	25700	25700	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-47-3	Chromium	8890	ug/Kg		154	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-48-4	Cobalt	2180	ug/Kg		154	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-50-8	Copper	16100	ug/Kg		309	1030	1030	1	P	HSC	07/02/09 00:07	070109-1	881347
7439-89-6	Iron	7790000	ug/Kg	*	8230	25700	25700	1	P	HSC	07/02/09 00:07	070109-1	881347
7439-92-1	Lead	8140	ug/Kg		257	1030	1030	1	P	HSC	07/02/09 00:07	070109-1	881347
7439-95-4	Magnesium	744000	ug/Kg		8740	30900	30900	1	P	HSC	07/02/09 18:39	070209-2	881347
7439-96-5	Manganese R,I6	216000	ug/Kg	*N	206	1030	1030	1	P	HSC	07/02/09 00:07	070109-1	881347
7439-97-6	Mercury J,I10a	70.9	ug/kg	*E	3.61	10.6	10.6	1	AV	JXL1	07/13/09 11:47	071309S2-4	881913
7440-02-0	Nickel	4830	ug/kg		103	412	412	2	MS	PRB	07/08/09 08:31	090707-3	881363
7440-09-7	Potassium	837000	ug/Kg		6580	25700	25700	1	P	HSC	07/02/09 00:07	070109-1	881347
7782-49-2	Selenium	1030	ug/kg	U	515	1030	1030	2	MS	PRB	07/08/09 08:31	090707-3	881363
7440-22-4	Silver	364	ug/Kg	J	103	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-23-5	Sodium J-,I6a	457000	ug/Kg	N	7200	25700	25700	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-28-0	Thallium	274	ug/kg		61.8	206	206	2	MS	PRB	07/08/09 08:31	090707-3	881363
7440-62-2	Vanadium	7900	ug/Kg		103	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-66-6	Zinc	27500	ug/Kg		339	1030	1030	1	P	HSC	07/02/09 00:07	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.511	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.51	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.594	g	30	mL	07/10/09	AXG2

RLK 8/3/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509005 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6528 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 94.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum J+,I6b	5810000	ug/Kg	*N	6950	20400	20400	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-36-0	Antimony	400	ug/Kg	J	337	1020	1020	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-38-2	Arsenic	1780	ug/kg		210	1050	1050	2	MS	PRB	07/08/09 08:36	090707-3	881363
7440-39-3	Barium	87400	ug/Kg		102	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-41-7	Beryllium	711	ug/kg		21	105	105	2	MS	PRB	07/08/09 08:36	090707-3	881363
7440-43-9	Cadmium	511	ug/Kg	U	102	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-70-2	Calcium J-,I6a	4220000	ug/Kg	*N	8180	25600	25600	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-47-3	Chromium	14600	ug/Kg		153	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-48-4	Cobalt	3300	ug/Kg		153	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-50-8	Copper	11200	ug/Kg		307	1020	1020	1	P	HSC	07/02/09 00:13	070109-1	881347
7439-89-6	Iron	10100000	ug/Kg	*	8180	25600	25600	1	P	HSC	07/02/09 00:13	070109-1	881347
7439-92-1	Lead	11500	ug/Kg		256	1020	1020	1	P	HSC	07/02/09 00:13	070109-1	881347
7439-95-4	Magnesium	1250000	ug/Kg		8690	30700	30700	1	P	HSC	07/02/09 18:46	070209-2	881347
7439-96-5	Manganese R,I6	279000	ug/Kg	*N	204	1020	1020	1	P	HSC	07/02/09 00:13	070109-1	881347
7439-97-6	Mercury J,I10a	33.8	ug/kg	*E	4.07	12	12	1	AV	JXL1	07/13/09 11:49	071309S2-4	881913
7440-02-0	Nickel	5980	ug/kg		105	420	420	2	MS	PRB	07/08/09 08:36	090707-3	881363
7440-09-7	Potassium	1020000	ug/Kg		6540	25600	25600	1	P	HSC	07/02/09 00:13	070109-1	881347
7782-49-2	Selenium	1050	ug/kg	U	525	1050	1050	2	MS	PRB	07/08/09 08:36	090707-3	881363
7440-22-4	Silver	452	ug/Kg	J	102	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-23-5	Sodium J-,I6a	447000	ug/Kg	N	7160	25600	25600	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-28-0	Thallium	184	ug/kg	J	63	210	210	2	MS	PRB	07/08/09 08:36	090707-3	881363
7440-62-2	Vanadium	13500	ug/Kg		102	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-66-6	Zinc	27800	ug/Kg		337	1020	1020	1	P	HSC	07/02/09 00:13	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.519	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.505	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.532	g	30	mL	07/10/09	AXG2

RLK 8/3/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509006 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6531 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 85

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum J+,I6b	2300000	ug/Kg	*N	7660	22500	22500	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-36-0	Antimony	1130	ug/Kg	U	372	1130	1130	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-38-2	Arsenic	1210	ug/kg		235	1180	1180	2	MS	PRB	07/08/09 08:42	090707-3	881363
7440-39-3	Barium	35400	ug/Kg		113	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-41-7	Beryllium	443	ug/kg		23.5	118	118	2	MS	PRB	07/08/09 08:42	090707-3	881363
7440-43-9	Cadmium	563	ug/Kg	U	113	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-70-2	Calcium J-,I6a	1330000	ug/Kg	*N	9010	28200	28200	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-47-3	Chromium	3430	ug/Kg		169	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-48-4	Cobalt	1300	ug/Kg		169	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-50-8	Copper	3940	ug/Kg		338	1130	1130	1	P	HSC	07/02/09 00:20	070109-1	881347
7439-89-6	Iron	7510000	ug/Kg	*	9010	28200	28200	1	P	HSC	07/02/09 00:20	070109-1	881347
7439-92-1	Lead	8340	ug/Kg		282	1130	1130	1	P	HSC	07/02/09 00:20	070109-1	881347
7439-95-4	Magnesium	508000	ug/Kg		9580	33800	33800	1	P	HSC	07/02/09 18:53	070209-2	881347
7439-96-5	Manganese R,I6	276000	ug/Kg	*N	225	1130	1130	1	P	HSC	07/02/09 00:20	070109-1	881347
7439-97-6	Mercury J,I10a	11.3	ug/kg	J*E	4.32	12.7	12.7	1	AV	JXL1	07/13/09 11:51	071309S2-4	881913
7440-02-0	Nickel	2850	ug/kg		118	471	471	2	MS	PRB	07/08/09 08:42	090707-3	881363
7440-09-7	Potassium	519000	ug/Kg		7210	28200	28200	1	P	HSC	07/02/09 00:20	070109-1	881347
7782-49-2	Selenium	1180	ug/kg	U	588	1180	1180	2	MS	PRB	07/08/09 08:42	090707-3	881363
7440-22-4	Silver	361	ug/Kg	J	113	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-23-5	Sodium U,I4d	36300	ug/Kg	N	7890	28200	28200	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-28-0	Thallium	71.5	ug/kg	J	70.6	235	235	2	MS	PRB	07/08/09 08:42	090707-3	881363
7440-62-2	Vanadium	6970	ug/Kg		113	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-66-6	Zinc	41300	ug/Kg		372	1130	1130	1	P	HSC	07/02/09 00:20	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.522	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.5	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.556	g	30	mL	07/10/09	AXG2

RLK 8/3/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232510001 **BASIS:** As Received **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6533 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/04/09 02:51	090703-2	881357
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/04/09 02:51	090703-2	881357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/04/09 02:51	090703-2	881357
7440-70-2	Calcium	100	ug/L	U	30	100	100	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-47-3	Chromium	5	ug/L	U	2	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	06/30/09 19:34	063009-1	881354
7439-89-6	Iron	100	ug/L	U	25	100	100	1	P	HSC	06/30/09 19:34	063009-1	881354
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/04/09 02:51	090703-2	881357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	06/30/09 19:34	063009-1	881354
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/04/09 02:51	090703-2	881357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	ETL	07/02/09 11:04	070209W1-4	881396
7440-02-0	Nickel	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-09-7	Potassium	126	ug/L	J	50	150	150	1	P	HSC	06/30/09 19:34	063009-1	881354
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-23-5	Sodium	85.2	ug/L	J	45	150	150	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-28-0	Thallium UJ,I6a	1	ug/L	U	0.3	1	1	1	MS	PRB	07/04/09 15:26	090703-3	881357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-66-6	Zinc	10	ug/L	U	2	10	10	1	P	HSC	06/30/09 19:34	063009-1	881354

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881354	881353	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881357	881356	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881396	881395	SW846 7470A Prep	20	mL	20	mL	07/01/09	TXB3

RLK 8/3/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2500 VALIDATION DATE: 08/03/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Rebecca Keith ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☒ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. Total cyanide was detected in the soil MB. The total cyanide results for samples CAMO-09-6519, -6518, -6527, and -6531 were detects ≤5X the MB concentration and, thus, were qualified U,I4. The total cyanide results for the remaining associated samples were NDs and, thus, were not qualified.

   Nitrate/nitrite was detected in the water MB. The associated sample result for nitrate/nitrite was a detect ≤5X the MB concentration and, thus, was qualified U,I4.

2. The soil MS %R for nitrate-N was < the laboratory LAL but ≥10%. The nitrate-N results for samples -6527, -6529, and -6528 were NDs and, thus were qualified UJ,I6a. The remaining associated nitrate-N results were detects and, thus, were qualified J-,I6a.

3. It should be noted that for soil total cyanide the QC sample analyses were performed on a LANL sample from another RN. No sample data were qualified.

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Reviewed by: JEJ Level: 1 Date: 8/5/09

VALIDATOR'S SIGNATURE: DATE: 08/03/09

Form 5120-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☒	☐	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6519	Project:	LANL01004
Sample ID:	232509001	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	20.8%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.5C	H	6.72		0.010	0.100	SU	1	RXG2 06/29/09	1304	881153	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	179	U,I4	82.5	303	ug/kg	1	AXC2 07/07/09	1157	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	42.0	J-,I6a	0.379	1.26	mg/kg	1	MAR1 07/09/09	2118	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

RLK 8/3/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6518	Project:	LANL01004
Sample ID:	232509002	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	15.2%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.1C	H	7.24		0.010	0.100	SU	1	RXG2 06/29/09	1309	881153	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	151	U,I4	78.6	289	ug/kg	1	AXC2 07/07/09	1158	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	1.31	J-,I6a	0.354	1.18	mg/kg	1	MAR1 07/09/09	2313	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

RLK 8/3/09

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6527	Project:	LANL01004
Sample ID:	232509003	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	5.87%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.1C	H	7.14		0.010	0.100	SU	1	RXG2 06/29/09	1311	881153	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	118	U,I4	68.2	251	ug/kg	1	AXC2 07/07/09	1159	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.319	1.06	mg/kg	1	MAR1 07/09/09	2342	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

RLK 8/3/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6529	Project:	LANL01004
Sample ID:	232509004	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.85%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.8C	H	8.86		0.010	0.100	SU	1	RXG2 06/29/09	1322	881153	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		70.1	258	ug/kg	1	AXC2 07/07/09	1200	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.315	1.05	mg/kg	1	MAR1 07/10/09	0011	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

RLK 8/3/09

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6528	Project:	LANL01004
Sample ID:	232509005	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	5.76%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 22.0C	H	8.67		0.010	0.100	SU	1	RXG2 06/29/09	1322	881153	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND		64.4	237	ug/kg	1	AXC2 07/07/09	1201	881039	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	UJ,I6a	0.318	1.06	mg/kg	1	MAR1 07/10/09	0138	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

RLK 8/3/09

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6531	Project:	LANL01004
Sample ID:	232509006	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	15%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 21.7C	H	7.13		0.010	0.100	SU	1	RXG2 06/29/09	1327	881153	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	208	U,I4	74.1	272	ug/kg	1	AXC2 07/02/09	0953	881270	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	1.27	J-,I6a	0.353	1.18	mg/kg	1	MAR1 07/10/09	0207	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

RLK 8/3/09

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2500-1

Client Sample ID: CAMO-09-6533
Sample ID: 232510001
Matrix: W
Collect Date: 24-JUN-09 12:00
Receive Date: 27-JUN-09
Collector: Client

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal											
SW9012A Cyanide, Total "As Received"											
Cyanide, Total	U	ND		1.66	5.00	ug/L	1	AXC2 07/02/09	0949	881036	1
Nutrient Analysis											
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"											
Nitrogen, Nitrate/Nitrite	J	0.063	U,I4	0.050	0.250	mg/L	5	AXH3 06/29/09	1455	881227	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0847	881035

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

RLK 8/3/09

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2500C

REQUEST NUMBER: 09-2500

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232509, 232510

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	POLY	METALS-GEL	Ice	R
CAMO-09-6519	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6518	1	POLY	METALS-GEL	Ice	R
CAMO-09-6518	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6527	1	POLY	METALS-GEL	Ice	R
CAMO-09-6527	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6529	1	POLY	METALS-GEL	Ice	R
CAMO-09-6529	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6528	1	POLY	METALS-GEL	Ice	R
CAMO-09-6528	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6531	1	POLY	METALS-GEL	Ice	R
CAMO-09-6531	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6533	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-6533	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-6533	1	POLY	SW-846:6850	Ice	W
CAMO-09-6533	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	6/26/09	3:00	Patricia Dent P. Dent	6/27/09	09:05
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name / Signature

Friday, June 26, 2009

REQUEST NUMBER: 09-2500

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2500
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009
TURNAROUND/REPORT DUE: 7/11/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	EPA:353.2	1	CAMO-09-6533	W	6/24/2009	
	SW-846:6010B	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	

6

Friday, June 26, 2009

REQUEST NUMBER: 09-2500

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		1	CAMO-09-6533	W	6/24/2009	
	SW-846:6020	1	CAMO-09-6533	W	6/24/2009	
	SW-846:6850	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		1	CAMO-09-6533	W	6/24/2009	
	SW-846:9012A	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		1	CAMO-09-6533	W	6/24/2009	
	SW-846:9045C	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2500

GEL Laboratories LLC
a member of The GEL Group Inc

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 17, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Orders: 232509 232510
SDG: 09-2500

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 27, 2009, and analyzed for General Chemistry, Metals and Perchlorates by LCMSMS. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2500
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232509 and 232510
SDG: 09-2500

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232509 and 232510
SDG # : 09-2500

July 17, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 27, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232509001	CAMO-09-6519
232509002	CAMO-09-6518
232509003	CAMO-09-6527
232509004	CAMO-09-6529
232509005	CAMO-09-6528
232509006	CAMO-09-6531
232510001	CAMO-09-6533

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry, Metals and Perchlorates by LCMSMS.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

List of current GEL Certifications as of 17 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88–0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH–0169
Dept. of Navy	NFESC 413
EPA Region 5	WG–15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C–SC–01
Kansas – NELAP	E–10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M–SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68–00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235–07B–TX
U.S. Dept. of Agriculture	S–52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2500C

REQUEST NUMBER: 09-2500

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232509, 232510

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	POLY	METALS-GEL	Ice	R
CAMO-09-6519	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6518	1	POLY	METALS-GEL	Ice	R
CAMO-09-6518	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6527	1	POLY	METALS-GEL	Ice	R
CAMO-09-6527	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6529	1	POLY	METALS-GEL	Ice	R
CAMO-09-6529	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6528	1	POLY	METALS-GEL	Ice	R
CAMO-09-6528	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6531	1	POLY	METALS-GEL	Ice	R
CAMO-09-6531	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6533	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-6533	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-6533	1	POLY	SW-846:6850	Ice	W
CAMO-09-6533	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:		Date	Time	Received By:		Date	Time
		6/26/09	3:00	Patricia Dent	P. Dent	6/27/09	09:05
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Friday, June 26, 2009

REQUEST NUMBER: 09-2500

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2500

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	EPA:353.2	1	CAMO-09-6533	W	6/24/2009	
	SW-846:6010B	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2500

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		1	CAMO-09-6533	W	6/24/2009	
	SW-846:6020	1	CAMO-09-6533	W	6/24/2009	
	SW-846:6850	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		1	CAMO-09-6533	W	6/24/2009	
	SW-846:9012A	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
		1	CAMO-09-6533	W	6/24/2009	
	SW-846:9045C	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2500

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2500**
Received By: Patricia Dent	**Date Received: JUNE 27, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **20 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) 2,6,24C
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5723 6C
7209 7847 5701 2C
7209 7847 5712 24C
7209 7847 5734 2C

PM (or PMA) review: Initials JOL Date 27 JUN 09

ORIGIN ID: SAFA (505) 665-0068
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA60 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 69.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B010WR2A0512BGD0

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7209 7847 5723 Form 0201

Deliver By: 27JUN09

29407 -SC-US X0 CHSA CHS A1

Part # 150148-434 NRRT V3 04-09

ORIGIN ID: SAFA (505) 665-0068
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA60 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 56.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B010WR2A0512BGD0

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7209 7847 5761 Form 0201

Deliver By: 27JUN09

29407 -SC-US X0 CHSA CHS A1

Part # 150148-434 NRRT V3 04-09

ORIGIN ID: SAFA (505) 665-9948
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 56.0 LB MAN
System#: 8014176/CAFE2351
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B818MR20B512BGD0

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7289 7847 5712 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

156148-434 AIRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9948
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 52.0 LB MAN
System#: 8014176/CAFE2351
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B818MR20B512BGD0

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7289 7847 5734 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

156148-434 AIRIT V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

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LC/MS/MS PERCHLORATE ANALYSIS

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2500

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881646
Prep Batch Number:	881643

Sample Analysis

Sample ID	Client ID
232509001	CAMO-09-6519
232509002	CAMO-09-6518
232509003	CAMO-09-6527
232509004	CAMO-09-6529
232509005	CAMO-09-6528
232509006	CAMO-09-6531
1201872346	Interference Check Sample (ICS)
1201872342	Method Blank (MB)
1201872343	Laboratory Control Sample (LCS)
1201872344	232591001(CAMO-09-9946) Matrix Spike (MS)
1201872345	232591001(CAMO-09-9946) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

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Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232591001 (CAMO-09-9946) from SDG 09-2510 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

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Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
Samples 232509001 (CAMO-09-6519), 232509004 (CAMO-09-6529) and 232509005 (CAMO-09-6528) were diluted to bring the over range concentrations within the calibration range. The diluted analyses are reported.

Sample Re-extraction/Re-analysis
Samples 232509002 (CAMO-09-6518) and 232509006 (CAMO-09-6531) were re-analyzed to confirm the potential of carryover from the previous sample. The re-analyses are reported.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Heather M Maier **Date:** 07/13/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6519

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 79

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	63.1	252	895	ug/kg		100	09-JUL-09 13:41	per0709012a
	Perchlorate-O(18)			605	ug/kg		100	09-JUL-09 13:41	per0709012a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6518

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509002

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 85

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.589	2.36	1.42	ug/kg	J	1	09-JUL-09 13:52	per0709013a
	Perchlorate-O(18)			5.85	ug/kg		1	09-JUL-09 13:52	per0709013a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6527

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509003

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 94.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.531	2.12	2.58	ug/kg		1	08-JUL-09 18:55	per0708050a
	Perchlorate-O(18)			5.11	ug/kg		1	08-JUL-09 18:55	per0708050a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6529

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509004

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 95.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	52.6	210	607	ug/kg		100	09-JUL-09 14:04	per0709014a
	Perchlorate-O(18)			502	ug/kg		100	09-JUL-09 14:04	per0709014a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMQ-09-6528

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509005

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 94.2

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	53.1	212	472	ug/kg		100	09-JUL-09 14:16	per0709015a
	Perchlorate-O(18)			529	ug/kg		100	09-JUL-09 14:16	per0709015a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6531

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509006

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 85

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.588	2.35	1.05	ug/kg	J	1	09-JUL-09 14:28	per0709016a
	Perchlorate-O(18)			6.04	ug/kg		1	09-JUL-09 14:28	per0709016a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09-2500

Extract Batch Code: 881643

Date Filtered: 01-JUL-09

Matrix: SOIL

Sample ID: 1201872343

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.04	ug/kg	102		70 – 130
Perchlorate–O(18)		4.78	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2500

Extract Batch Code: 881643

Date Filtered: 01–JUL–09

Matrix: SOIL

Sample ID: 1201872346

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.15	ug/kg	108		70 – 130
Perchlorate–O(18)		5.09	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708047a
Date: 08-Jul-2009
Time: 18:32:44
ID: 1201872346
Vial: 2:1,C

|LANL|881646|SOUZO|IG|1|

07-09-09

Perchlorate

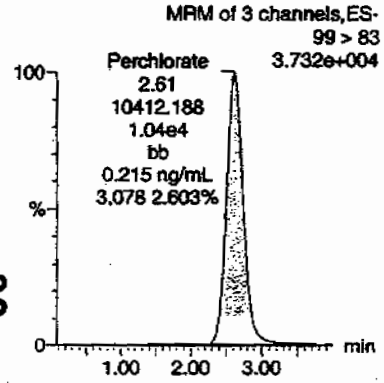

Perchlorate

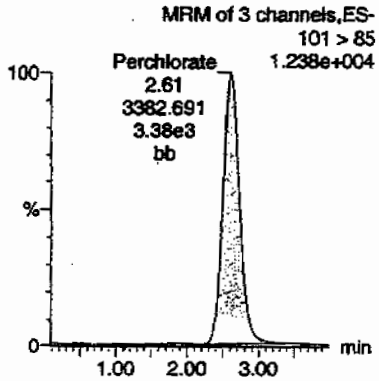

Perchlorate-101

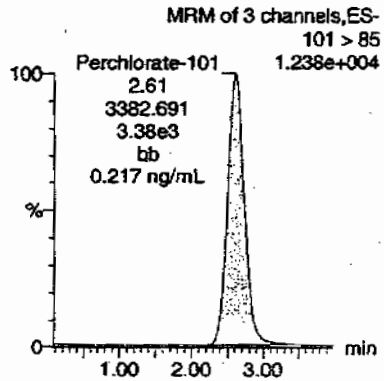

Perchlorate-O(18)

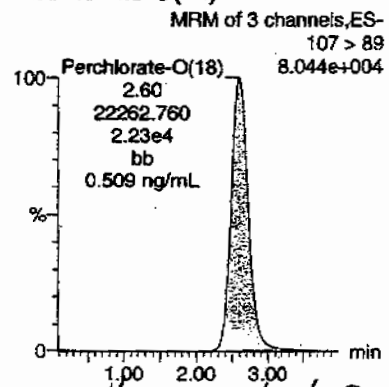

Hnm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872346	Perchlorate	99 > 83	2.61	10412.188	10412.188	bb			0.2154	107.71	7.71	2796.1...	3.08
1201872346	Perchlorate-101	101 > 85	2.61	3382.691	3382.691	bb			0.2173	108.63	8.63	1805.9...	
1201872346	Perchlorate-O(18)	107 > 89	2.60	22262.760	22262.760	bb			0.5086	101.72	1.72	10354....	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2500

Extract Batch Code: 881643

Date Extracted: 01–JUL–09

GEL MS/PS ID: 1201872344

Client ID: CAMO–09–9946

GEL MSD/PSD ID: 1201872345

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.46	0.218	ug/kg	2.74	102	2.79	105	1.92	30	75 – 125
Perchlorate–O(18)	0	6.38	ug/kg	6.24		6.22		.283		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2500

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08–JUL–09	per0708001a	IPB001
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708001a	IPB001
Perchlorate	0.00	0	NA	08–JUL–09	per0708002a	IPB001
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708002a	IPB001
Perchlorate	0.00	0	NA	09–JUL–09	per0709001a	IPB001
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709001a	IPB001
Perchlorate	0.00	0	NA	09–JUL–09	per0709002a	IPB001
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709002a	IPB001

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Name: per0708001a
Date: 08-Jul-2009
Time: 12:35:59
ID: IPB001
Vial: 1:1,A

cwd 07-09-09

Perchlorate

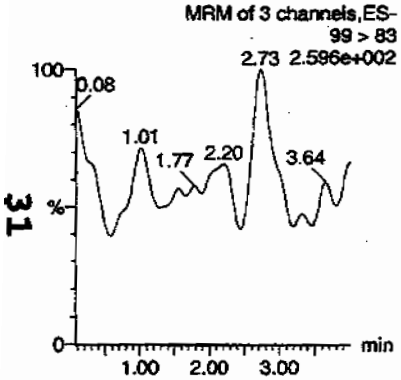

Perchlorate

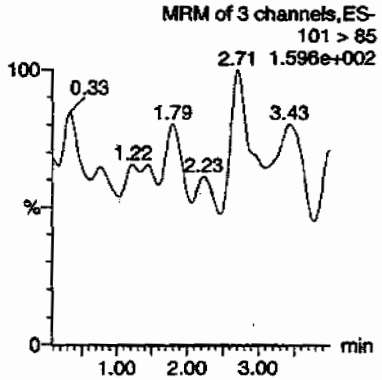

Perchlorate-101

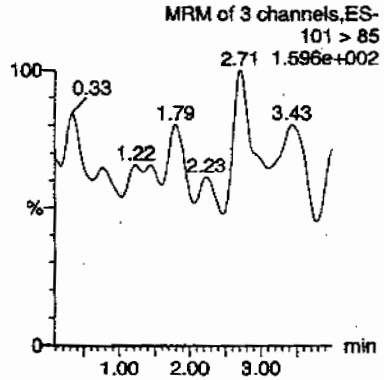

Perchlorate-O(18)

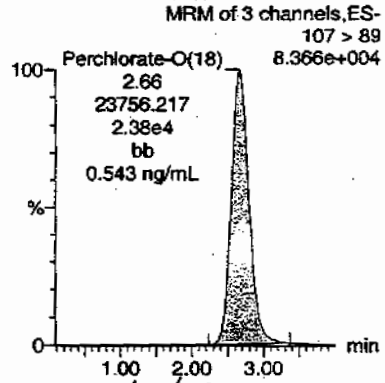

thw 08/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.66	23756.217	23756.217	bb			0.5427	108.54	8.54	2563.6...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708002a
Date: 08-Jul-2009
Time: 12:43:43
ID: IPB001
Vial: 1:1,A

CWW
07-09-09

Perchlorate

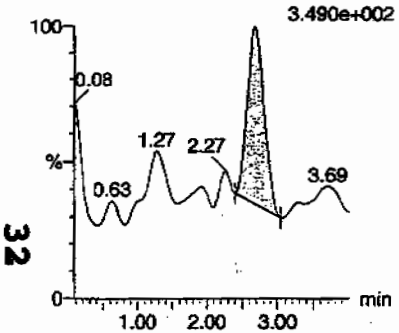

Perchlorate

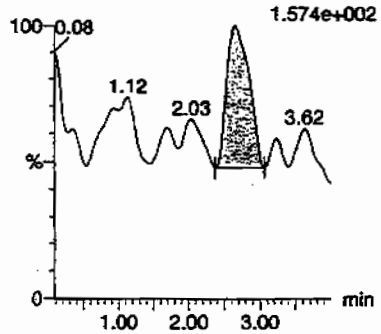

Perchlorate-101

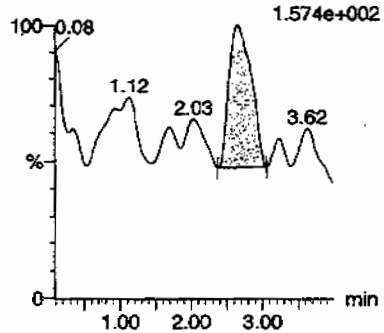

Perchlorate-O(18)

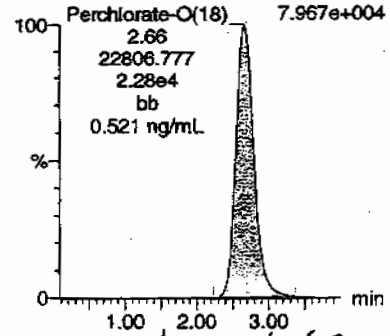

tmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.68	62.756	62.756	bb			0.0013			9.964	2.10
IPB001	Perchlorate-101	101 > 85	2.64	29.952	29.952	bb			0.0019			7.781	
IPB001	Perchlorate-O(18)	107 > 89	2.66	22806.777	22806.777	bb			0.5210	104.21	4.21	7277.3...	

DKM
07.09.09

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070909a.mdb 09 Jul 2009 12:57:10
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070909a.cdb 10 Jul 2009 12:34:11

Name: per0709001a
Date: 09-Jul-2009
Time: 11:30:36
ID: IPB001
Vial: 1:1,A

CWW 07-10-09

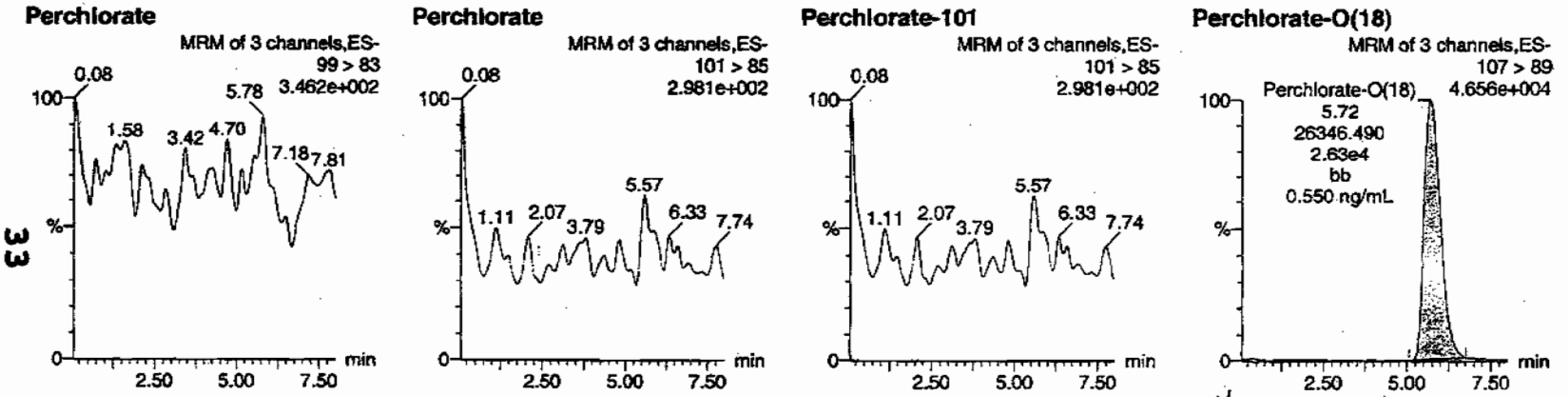

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	5.72	26346.490	26346.490	bb			0.5499	109.97	9.97	2381.6...	

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709002a
Date: 09-Jul-2009
Time: 11:42:20
ID: IPB001
Vial: 1:1,A

Chris 07-10-09

Perchlorate

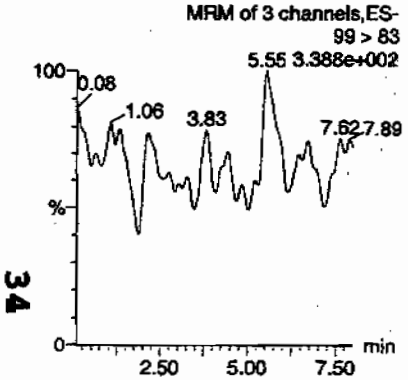

Perchlorate

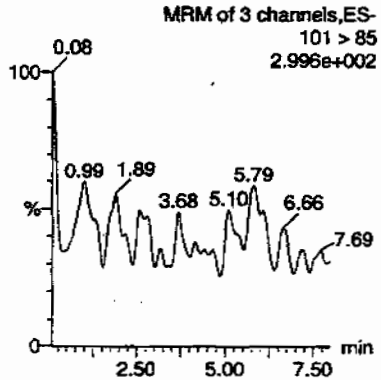

Perchlorate-101

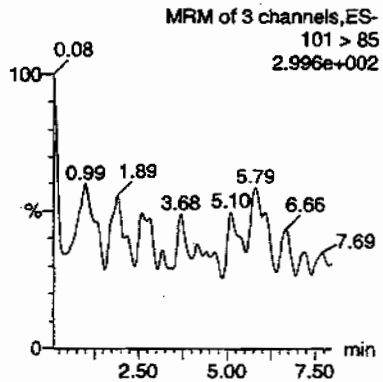

Perchlorate-O(18)

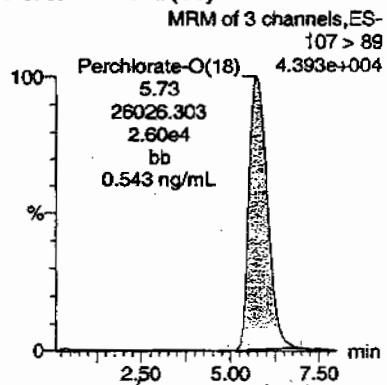

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	5.73	26026.303	26026.303	bb			0.5432	108.64	8.64	1104.9...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2500

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08-JUL-09	per0708008a	IPB002
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708008a	IPB002
Perchlorate	0.00	0	NA	08-JUL-09	per0708010a	IPB003
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708010a	IPB003
Perchlorate	0.00	0	NA	08-JUL-09	per0708023a	IPB004
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708023a	IPB004
Perchlorate	0.00	0	NA	08-JUL-09	per0708034a	IPB005
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708034a	IPB005
Perchlorate	0.00	0	NA	08-JUL-09	per0708043a	IPB006
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708043a	IPB006
Perchlorate	0.00	0	NA	08-JUL-09	per0708055a	IPB007
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708055a	IPB007
Perchlorate	0.00	0	NA	09-JUL-09	per0709008a	IPB002

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2500

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709008a	IPB002
Perchlorate	0.00	0	NA	09-JUL-09	per0709010a	IPB003
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709010a	IPB003
Perchlorate	0.00	0	NA	09-JUL-09	per0709018a	IPB004
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709018a	IPB004

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708008a
Date: 08-Jul-2009
Time: 13:30:03
ID: IPB002
Vial: 1:1,A

CWW 07-07-09

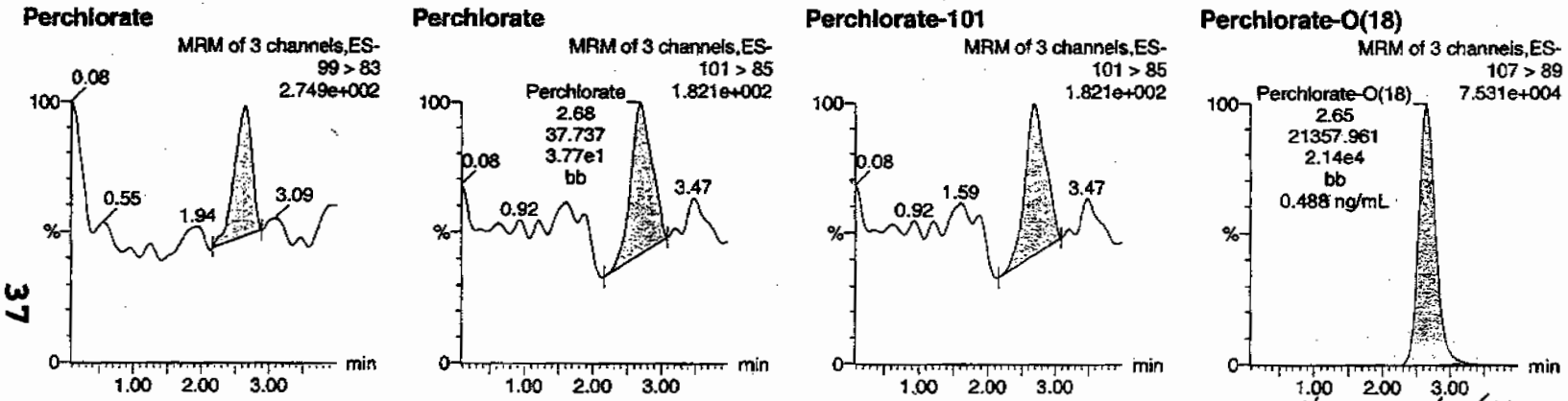

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.64	40.789	40.789	bb			0.0008			16.642	1.08
IPB002	Perchlorate-101	101 > 85	2.68	37.737	37.737	bb			0.0024			9.640	
IPB002	Perchlorate-O(18)	107 > 89	2.65	21357.961	21357.961	bb			0.4879	97.59	-2.41	8484.7...	

OKAY
LOD

37

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708010a
Date: 08-Jul-2009
Time: 13:45:31
ID: IPB003
Vial: 1:1,A

GWO
07-29-09

Perchlorate

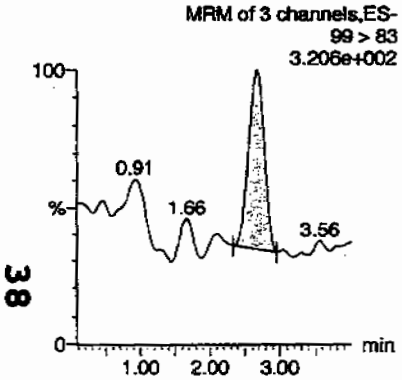

Perchlorate

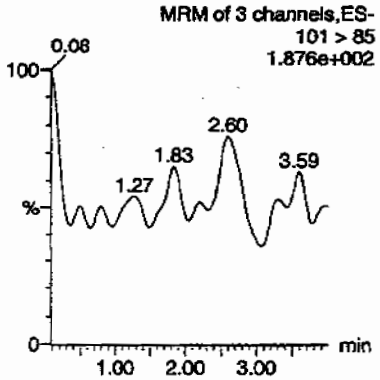

Perchlorate-101

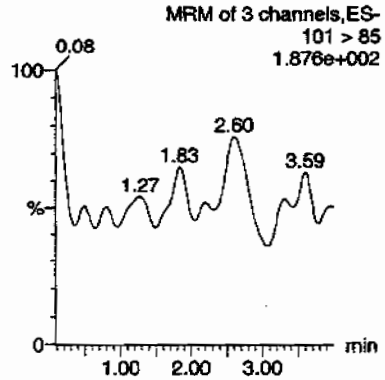

Perchlorate-O(18)

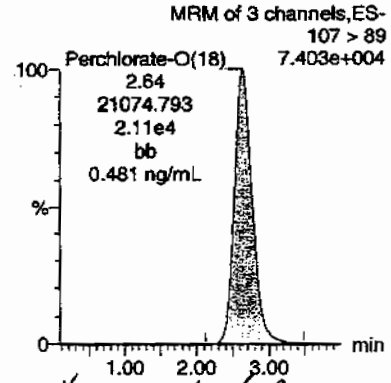

tnm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.66	56.577	56.577	bb			0.0012			14.377	0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	2.64	21074.793	21074.793	bb			0.4815	96.29	-3.71	1018.8...	

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708023a
Date: 08-Jul-2009
Time: 15:26:24
ID: IPB004
Vial: 1:1,A

Cmw 07-09-09

Perchlorate

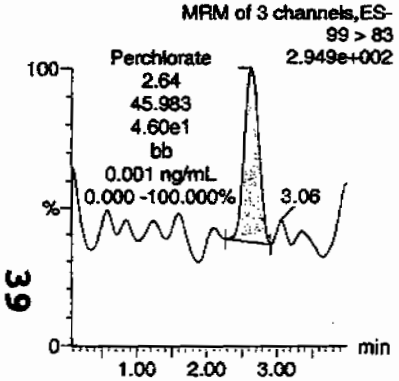

Perchlorate

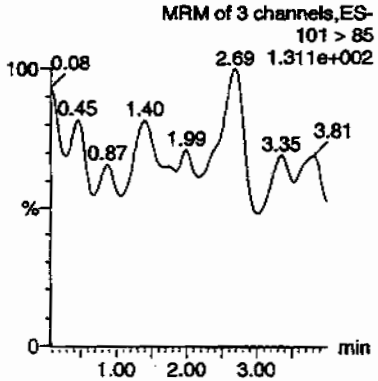

Perchlorate-101

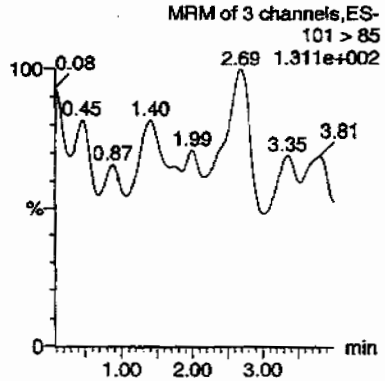

Perchlorate-O(18)

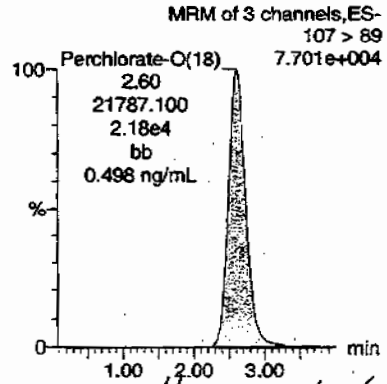

tmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.64	45.983	45.983	bb			0.0010			14.762	0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	2.60	21787.100	21787.100	bb			0.4977	99.55	-0.45	5673.5...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708034a
Date: 08-Jul-2009
Time: 16:51:46
ID: IPB005
Vial: 1:1,A

CWW 07-09-09

Perchlorate

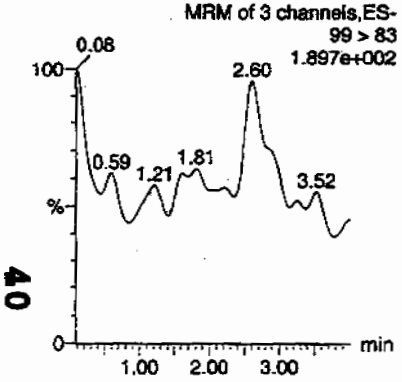

Perchlorate

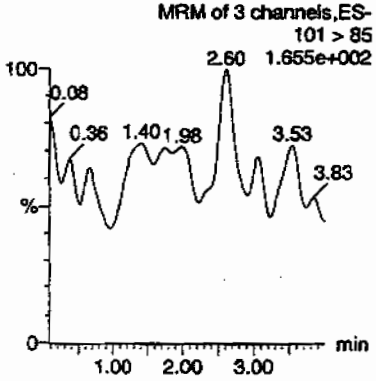

Perchlorate-101

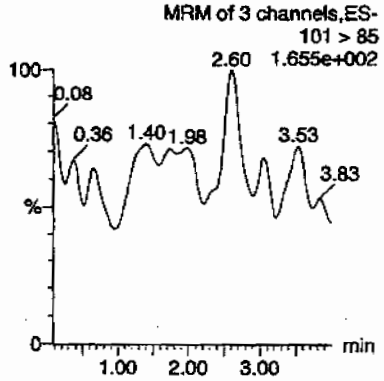

Perchlorate-O(18)

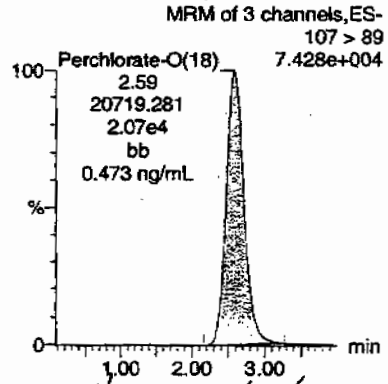

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev.	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.59	20719.281	20719.281	bb			0.4733	94.67	-5.33	6050.7...	

40

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708043a
Date: 08-Jul-2009
Time: 18:01:32
ID: IPB006
Vial: 1:1,A

CWW 07-09-09

Perchlorate

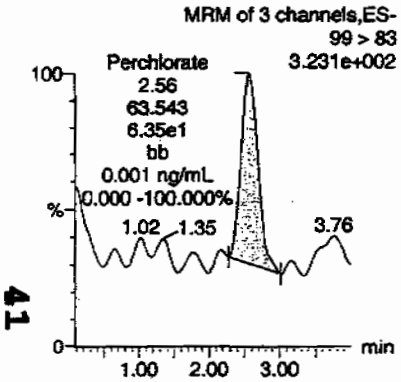

Perchlorate

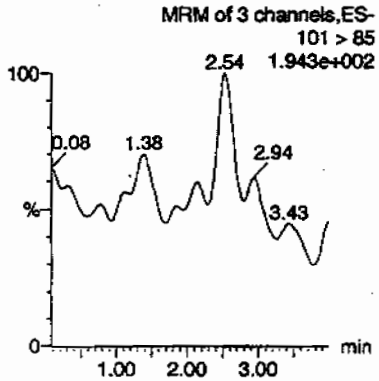

Perchlorate-101

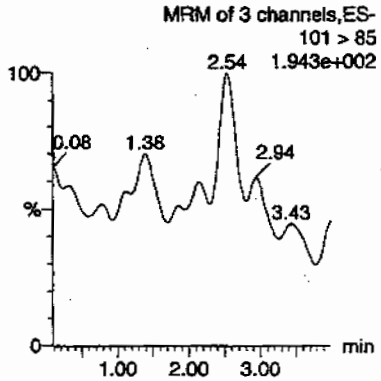

Perchlorate-O(18)

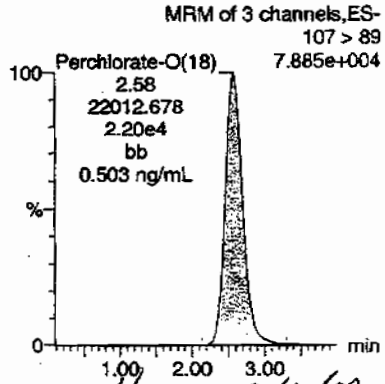

HMW 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	2.56	63.543	63.543	bb			0.0013			22.698	0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	2.58	22012.678	22012.678	bb			0.5029	100.58	0.58	3651.4...	

41

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708055a
Date: 08-Jul-2009
Time: 19:34:48
ID: IPB007
Vial: 1:1,A

07 09 09

Perchlorate

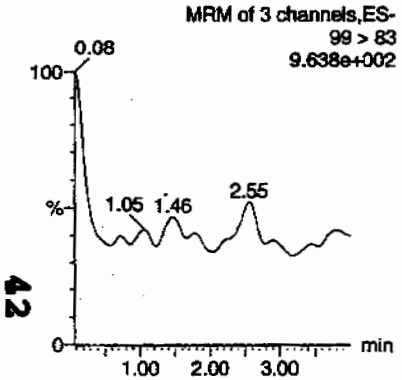

Perchlorate

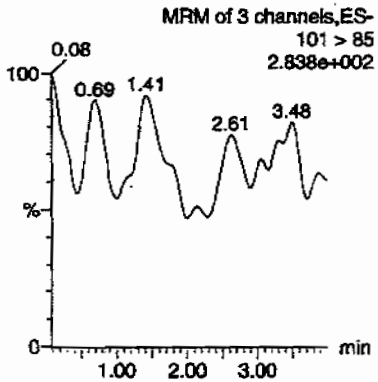

Perchlorate-101

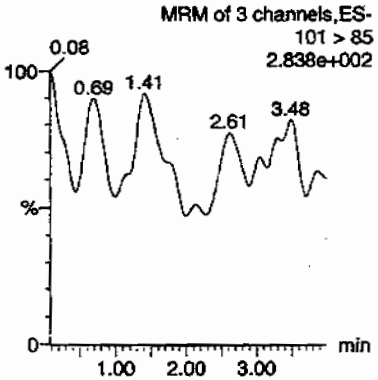

Perchlorate-O(18)

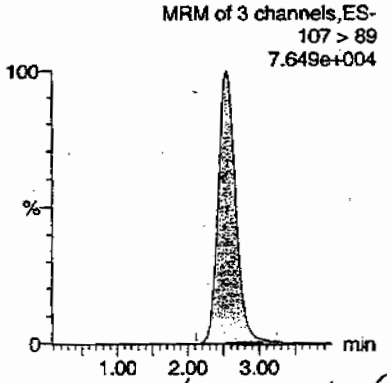

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83											0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	2.54	21404.643	21404.643	bb			0.4890	97.80	-2.20	2876.2...	

42

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709008a
Date: 09-Jul-2009
Time: 12:52:54
ID: IPB002
Vial: 1:1,A

AWD 07-10-09

Perchlorate

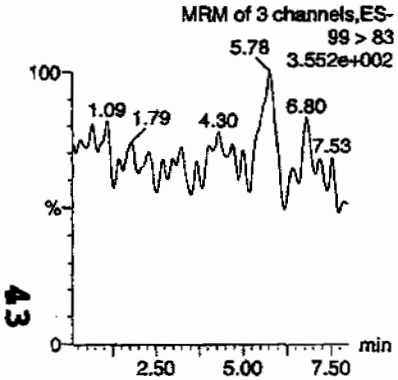

Perchlorate

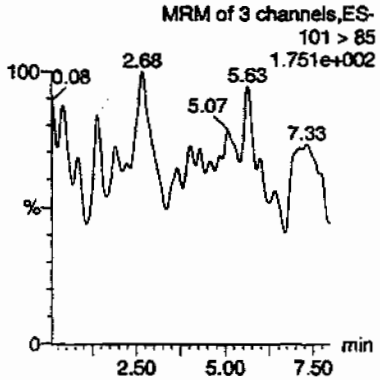

Perchlorate-101

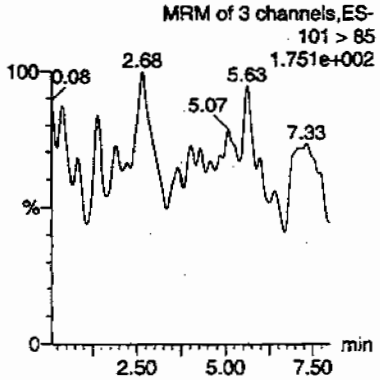

Perchlorate-O(18)

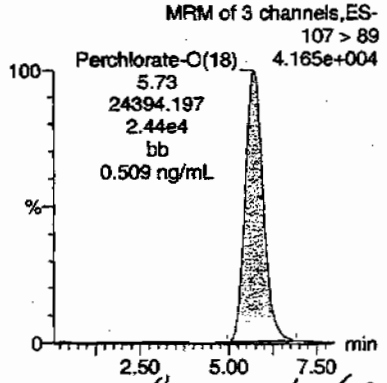

Anne 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83											0.00
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	5.73	24394.197	24394.197	bb			0.5091	101.83	1.83	268.656	

43

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709010a
Date: 09-Jul-2009
Time: 13:16:22
ID: IPB003
Vial: 1:1,A

CMJ 07-10-09

Perchlorate

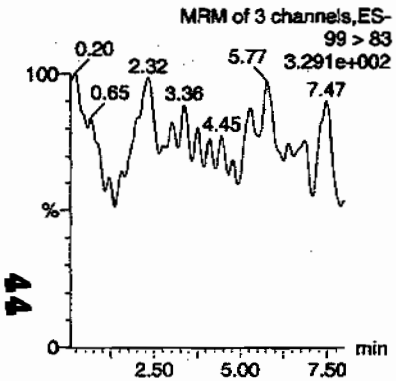

Perchlorate

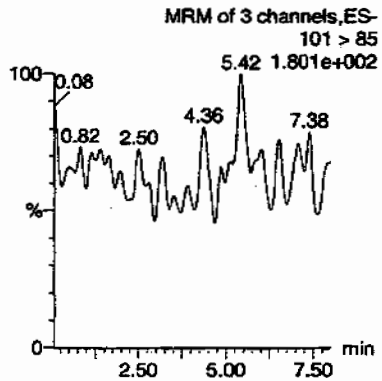

Perchlorate-101

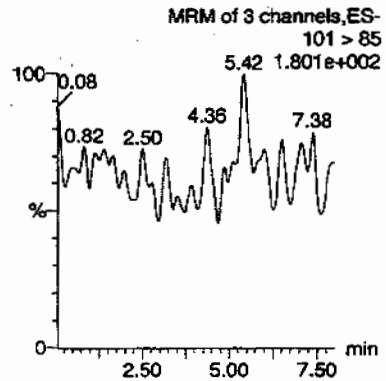

Perchlorate-O(18)

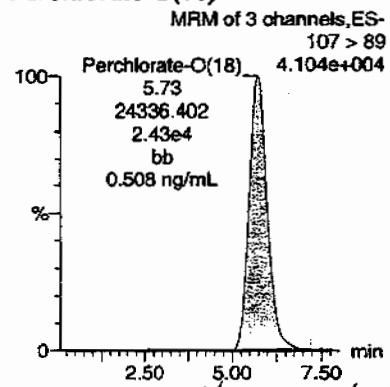

HMM 07-10-09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83											0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	5.73	24336.402	24336.402	bb			0.5079	101.58	1.58	1846.7...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709018a
Date: 09-Jul-2009
Time: 14:51:37
ID: IPB004
Vial: 1:1,A

CWW 07-10-09

Perchlorate

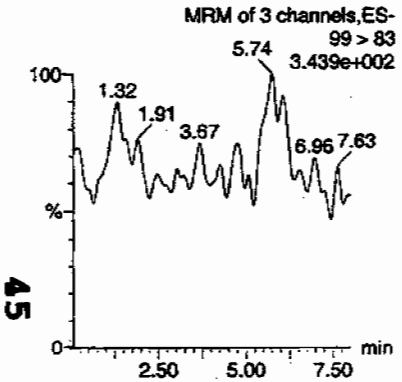

Perchlorate

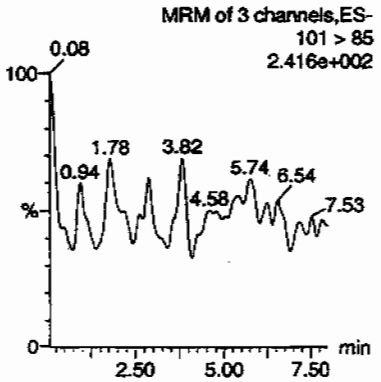

Perchlorate-101

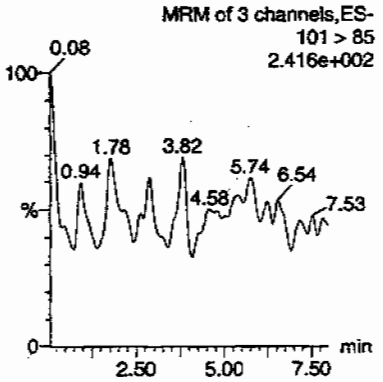

Perchlorate-O(18)

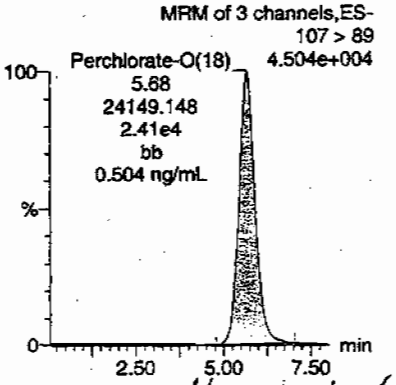

Hmc 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83											0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	5.68	24149.148	24149.148	bb			0.5040	100.80	0.80	2223.6...	

45

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

MASS HIGHLIGHTED BY CWJ 01-09-08

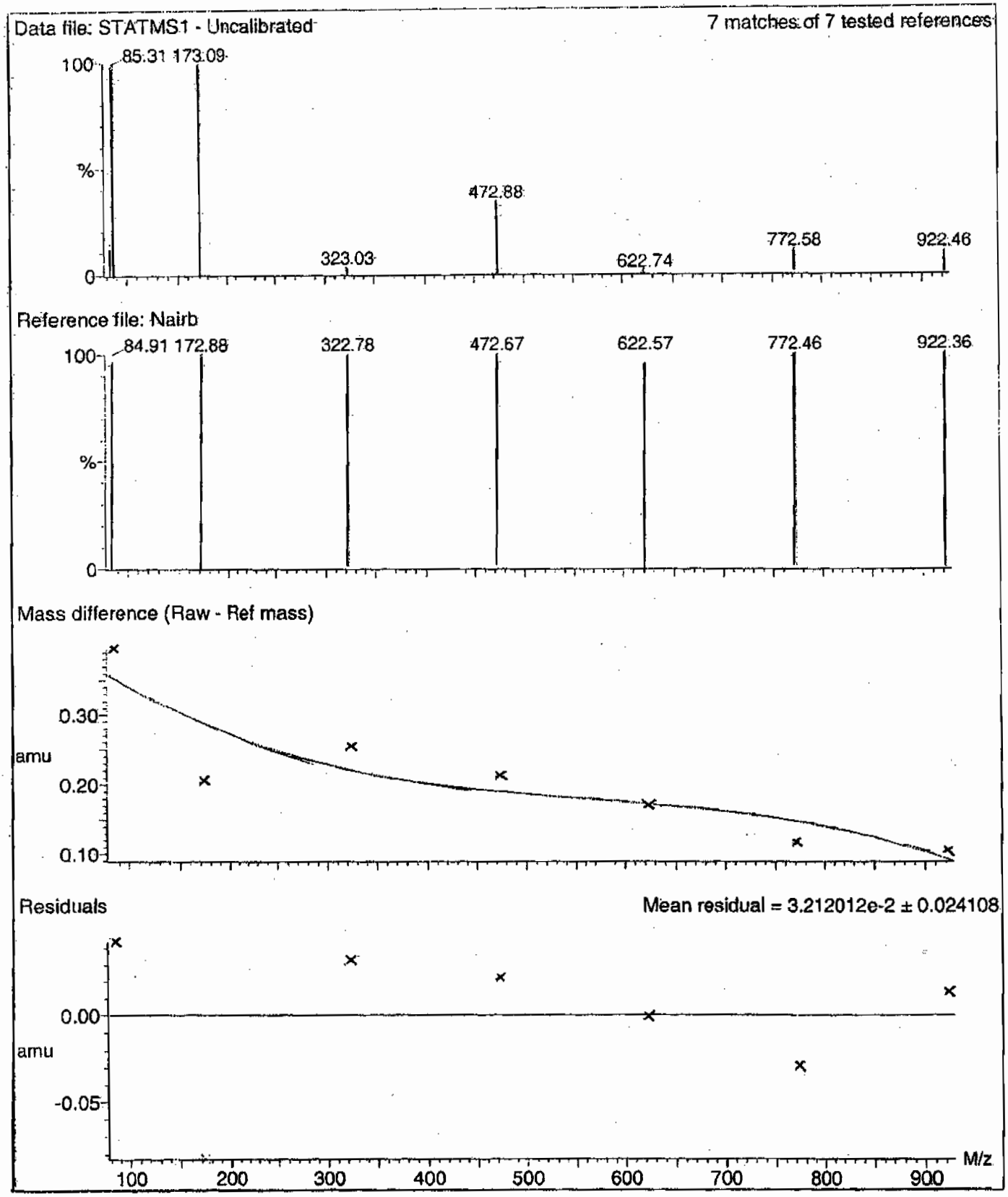

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Calibration Report - MSI Scanning

Printed: Tue Jan 08 12:20:09 2008

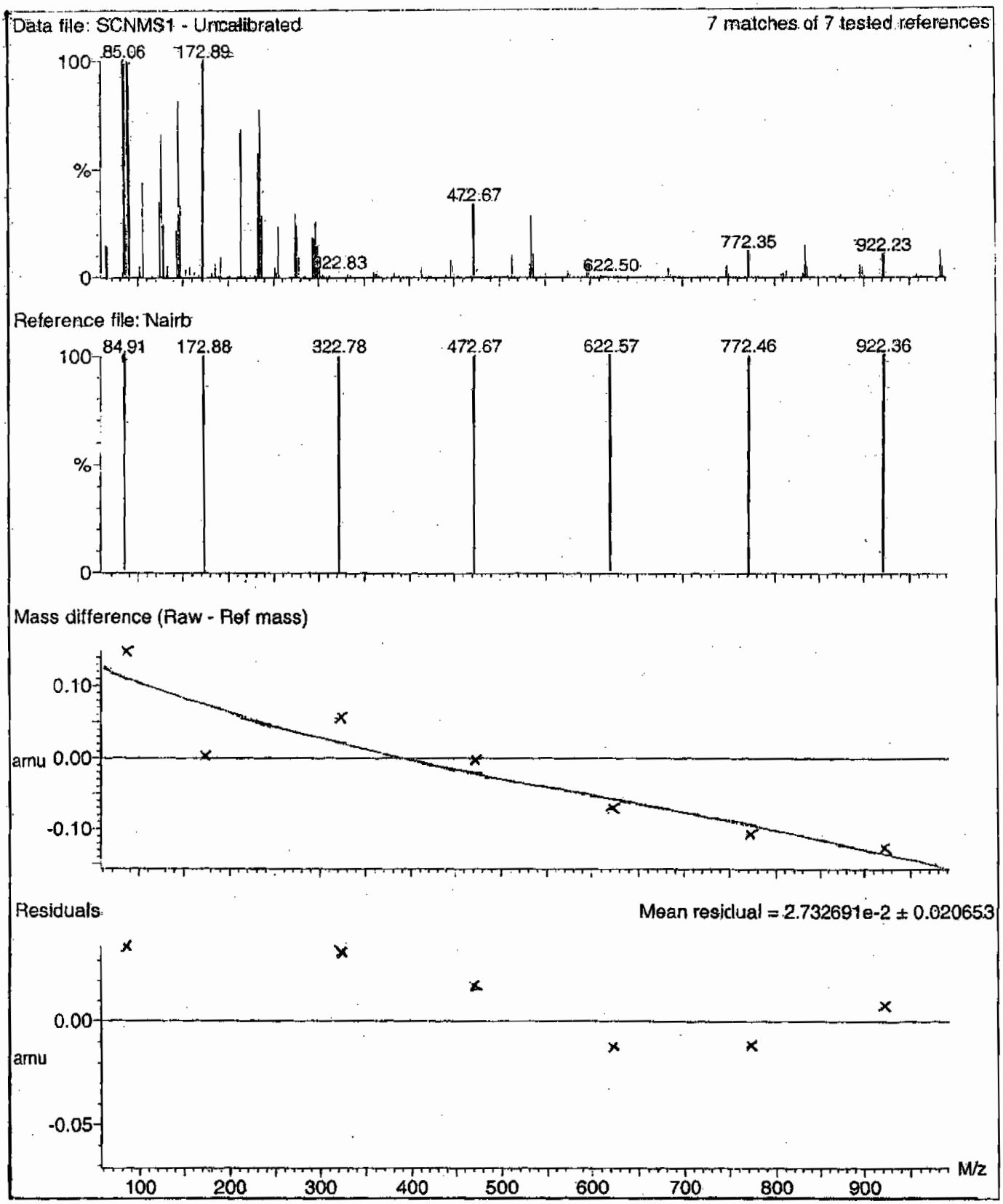

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

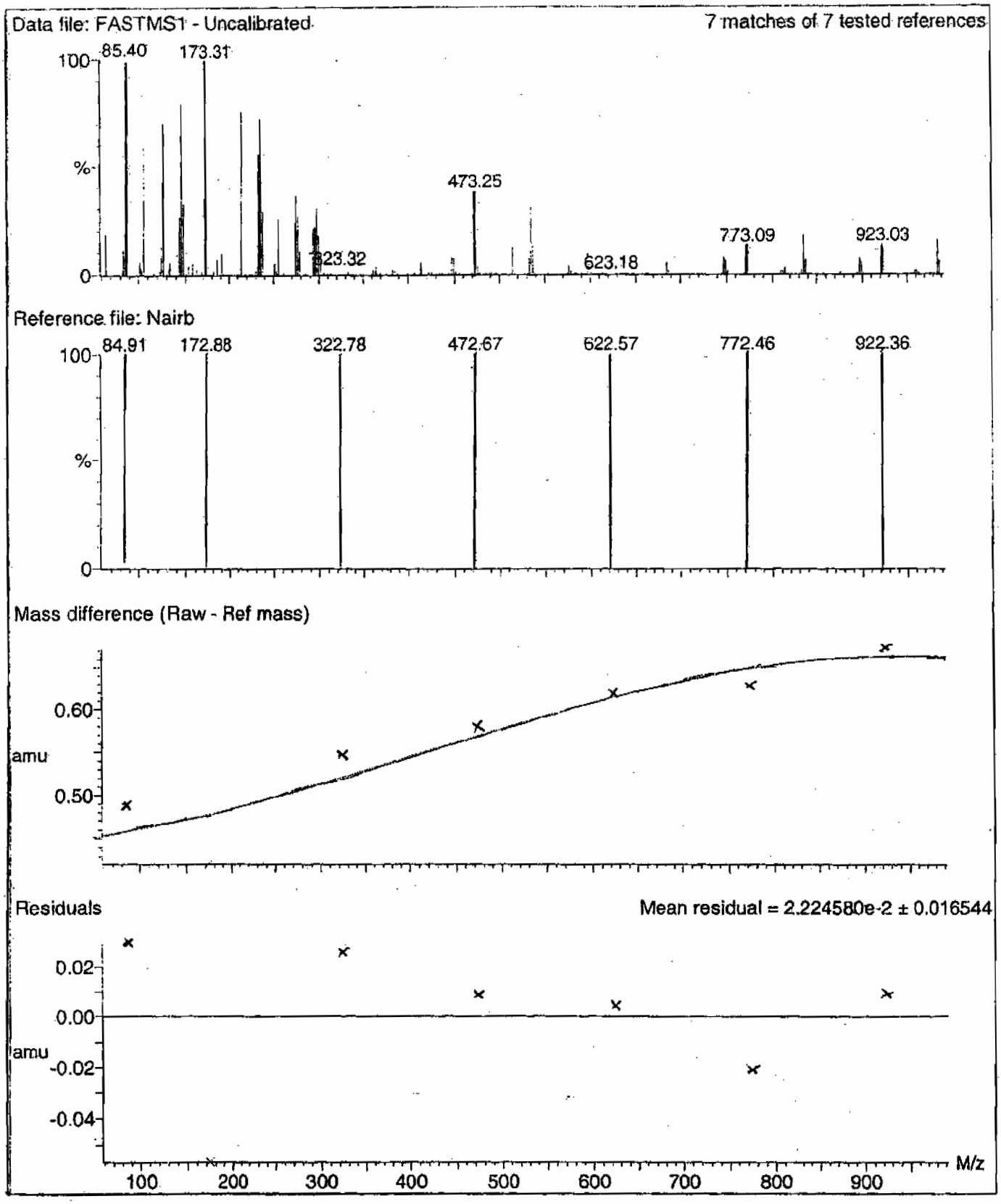

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

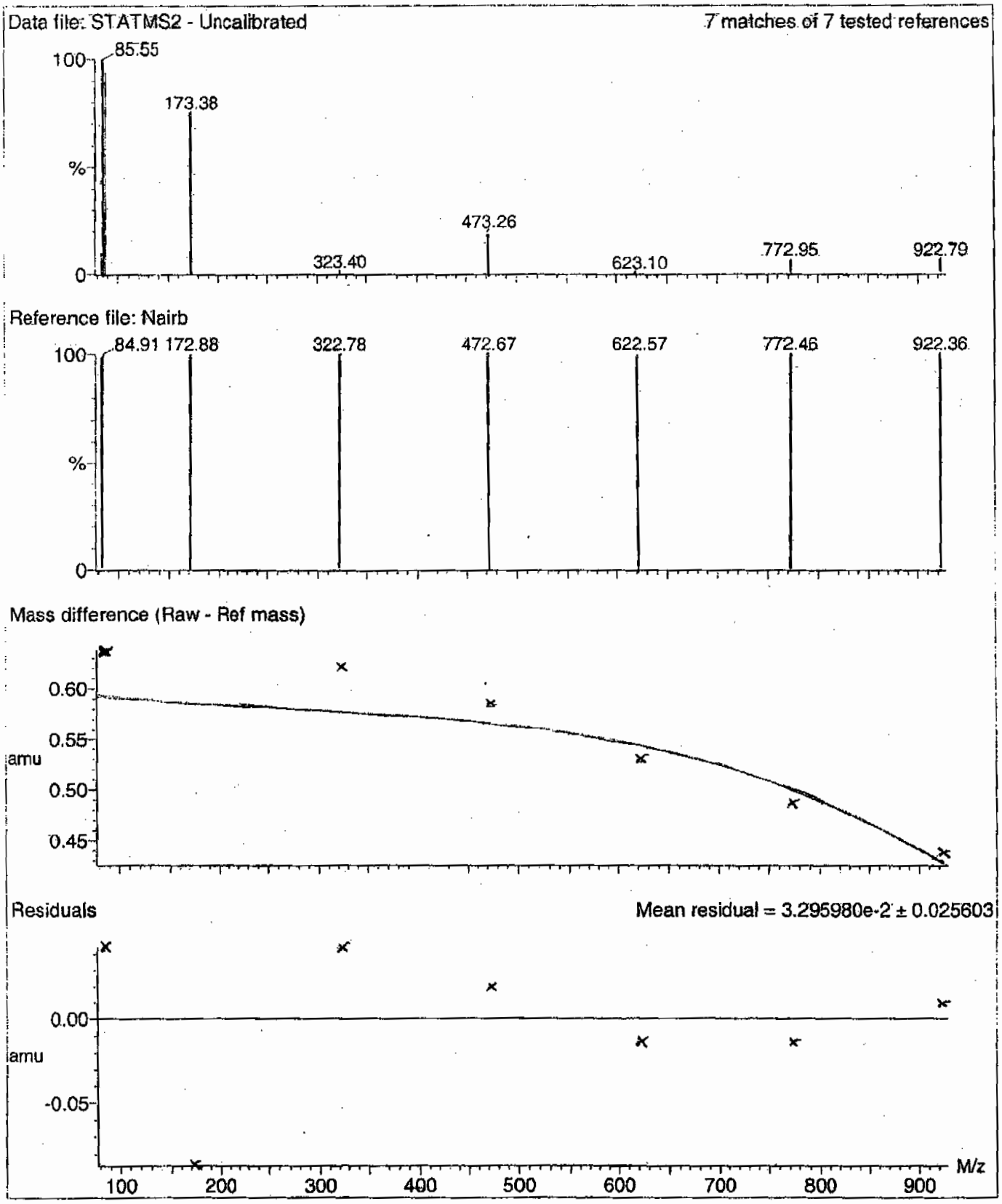

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

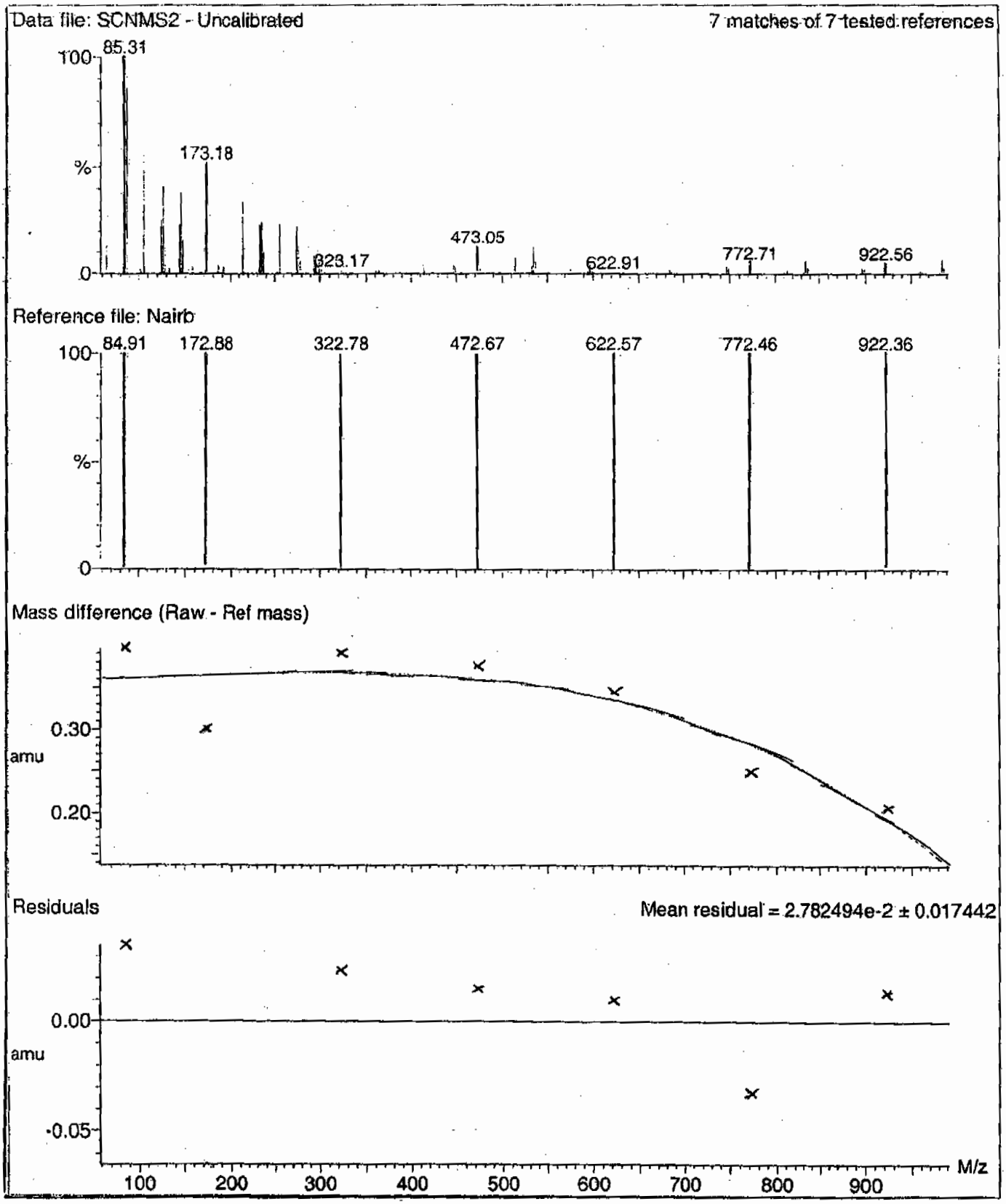

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

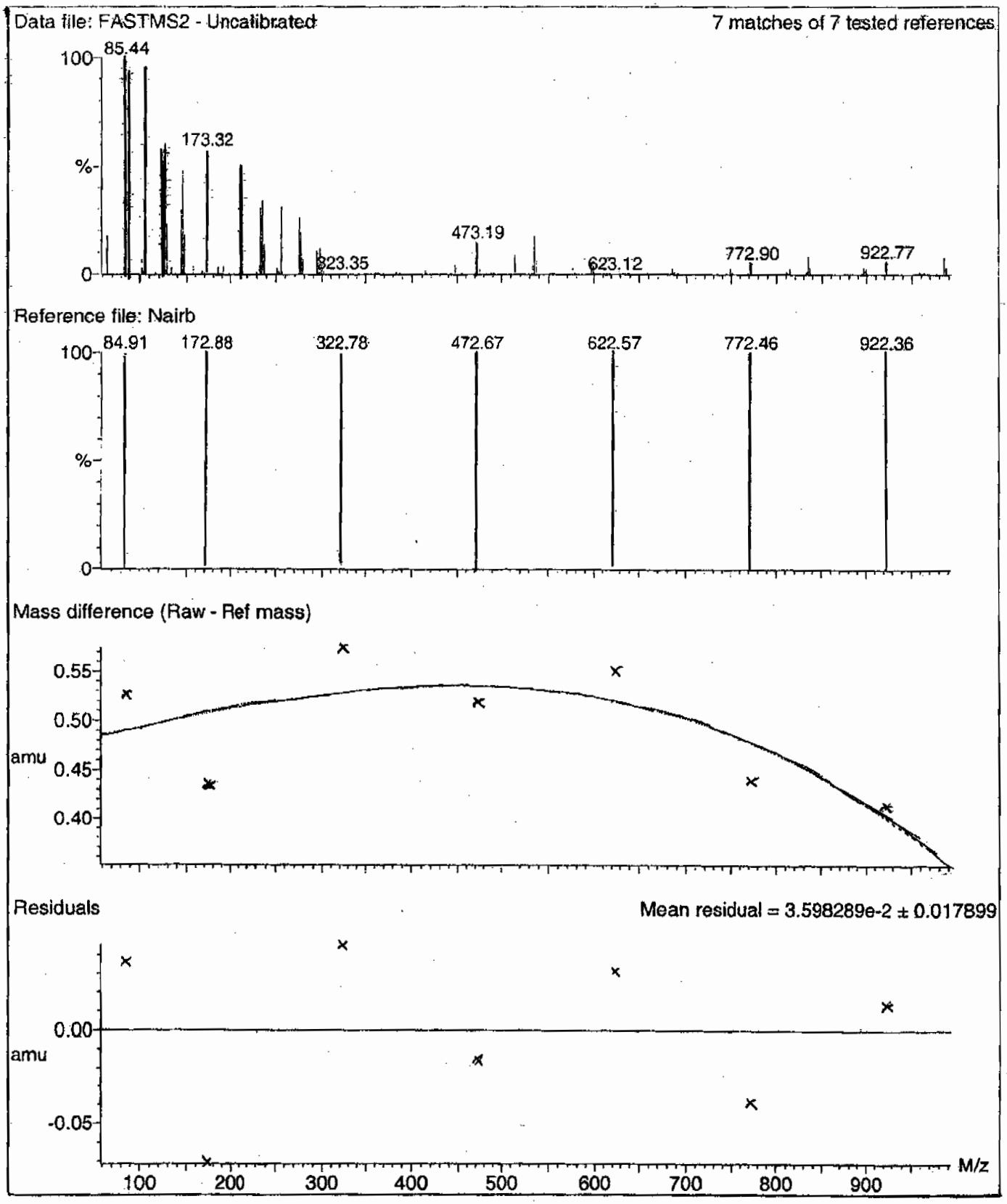

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Wednesday, July 08, 2009 11:04:53 Eastern Daylight Time

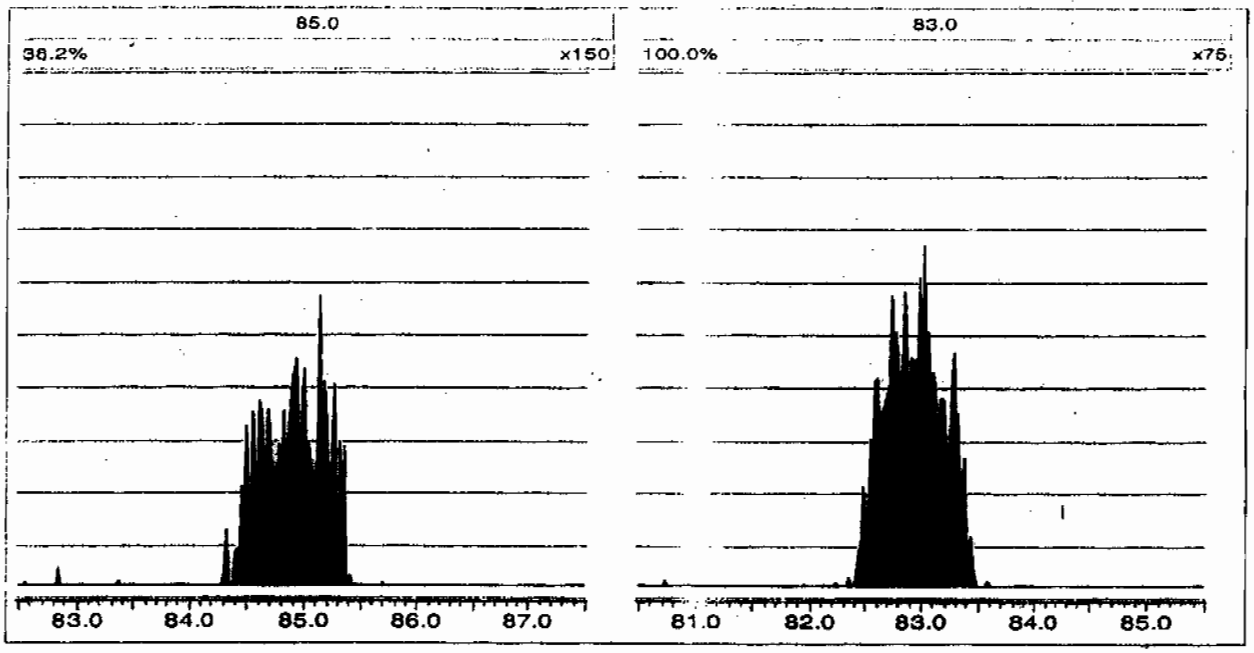

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File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Thursday, July 09, 2009 10:52:59 Eastern Daylight Time

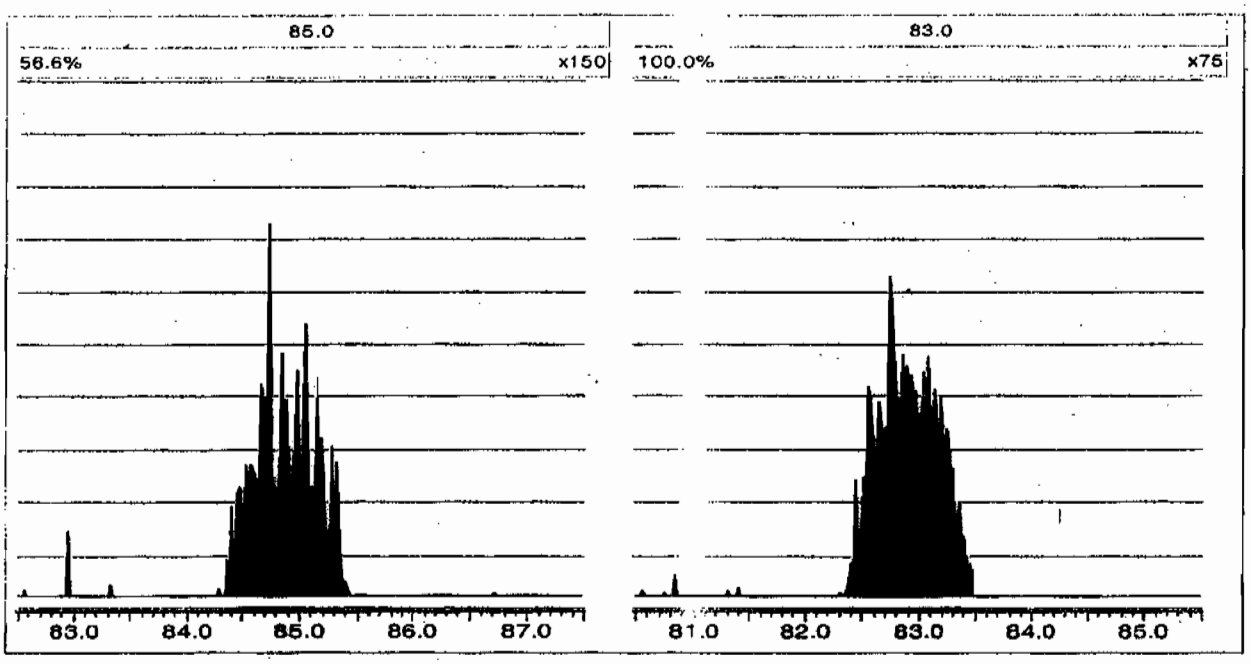

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2500

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	**per0708006a**	**08-JUL-09**	**20767.2**				
Lower Area Limit			**10383.6**				
Upper Area Limit			**41534.4**				
1201872342	per0708045a	08-JUL-09 18:17	20710.1	2.56	2.5884	1.011	
1201872343	per0708046a	08-JUL-09 18:25	20944.1	2.58	2.5884	1.003	
1201872346	per0708047a	08-JUL-09 18:32	22262.8	2.6	2.6134	1.005	
232509003	per0708050a	08-JUL-09 18:55	21035.2	2.56	2.57605	1.006	

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Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2500

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	**per0709006a**	**09-JUL-09**	**23518.3**				
Lower Area Limit			**11759.15**				
Upper Area Limit			**47036.6**				
232509001	per0709012a	09-JUL-09 13:41	22964.3	5.71	5.74387	1.006	
232509002	per0709013a	09-JUL-09 13:52	23769.9	5.72	5.7314	1.002	
232509004	per0709014a	09-JUL-09 14:04	22881.1	5.66	5.6941	1.006	
232509005	per0709015a	09-JUL-09 14:16	23892.9	5.68	5.70672	1.005	
232509006	per0709016a	09-JUL-09 14:28	24584.2	5.67	5.69427	1.004	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6519

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509001

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 79

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	63.1	252	895	ug/kg		100	09-JUL-09 13:41	per0709012a
	Perchlorate-O(18)			605	ug/kg		100	09-JUL-09 13:41	per0709012a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709012a
Date: 09-Jul-2009
Time: 13:41:10
ID: 232509001 |LANL|88K646|5020|100|OL
Vial: 1:3,A

ans
07-10-09

Perchlorate

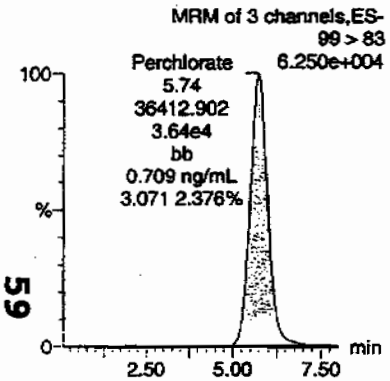

Perchlorate

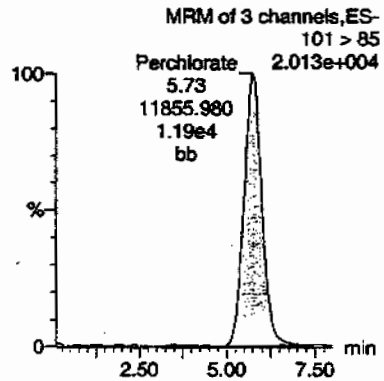

Perchlorate-101

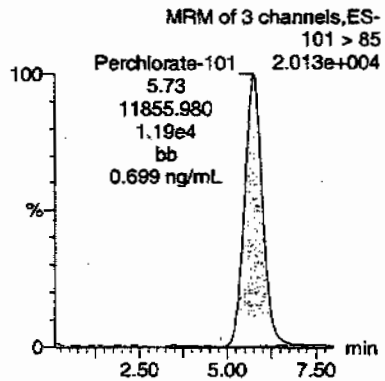

Perchlorate-O(18)

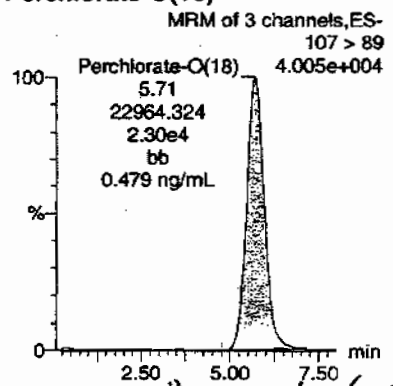

59

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232509001	Perchlorate	99 > 83	5.74	36412.902	36412.902	bb			0.7090			1017.5...	3.07
232509001	Perchlorate-101	101 > 85	5.73	11855.980	11855.980	bb			0.6988			892.275	
232509001	Perchlorate-O(18)	107 > 89	5.71	22964.324	22964.324	bb			0.4793	95.86	-4.14	1493.8...	

= 70.9
X100
= 69.9

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6518

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509002

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 85

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.589	2.36	1.42	ug/kg	J	1	09-JUL-09 13:52	per0709013a
	Perchlorate-O(18)			5.85	ug/kg		1	09-JUL-09 13:52	per0709013a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709013a
Date: 09-Jul-2009
Time: 13:52:55
ID: 232509002 | LANL | 881646 | SOLID | 1 | RA
Vial: 1:3,B

CWW 07-10-09

Perchlorate

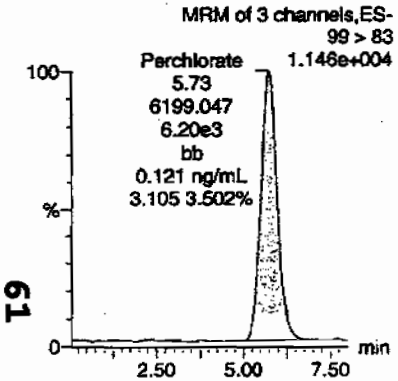

Perchlorate

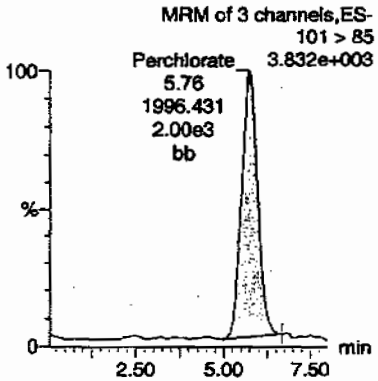

Perchlorate-101

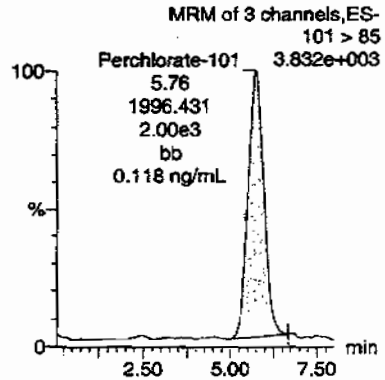

Perchlorate-O(18)

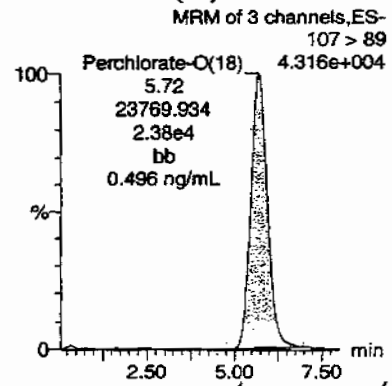

9/71 m 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232509002	Perchlorate	99 > 83	5.73	6199.047	6199.047	bb			0.1207			324.122	3.11
232509002	Perchlorate-101	101 > 85	5.76	1996.431	1996.431	bb			0.1177			102.896	
232509002	Perchlorate-O(18)	107 > 89	5.72	23769.934	23769.934	bb			0.4961	99.22	-0.78	1263.7...	

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GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6527

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509003

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 94.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.531	2.12	2.58	ug/kg		1	08-JUL-09 18:55	per0708050a
	Perchlorate-O(18)			5.11	ug/kg		1	08-JUL-09 18:55	per0708050a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708050a
Date: 08-Jul-2009
Time: 18:55:54
ID: 232509003
Vial: 2:1,F

|LANL|881646|SOLID|1|

GWO 07-09-09

Perchlorate

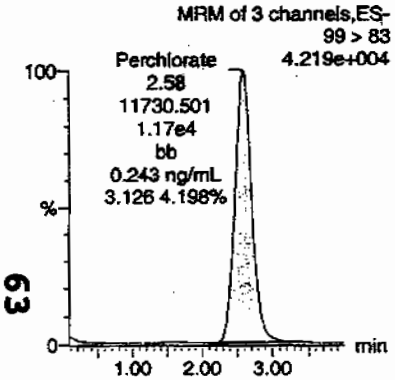

Perchlorate

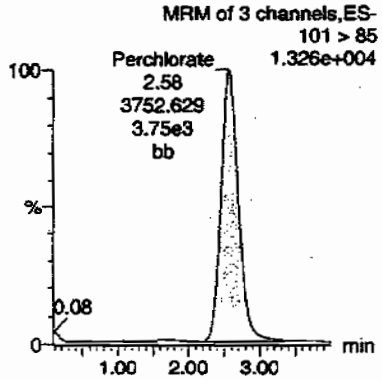

Perchlorate-101

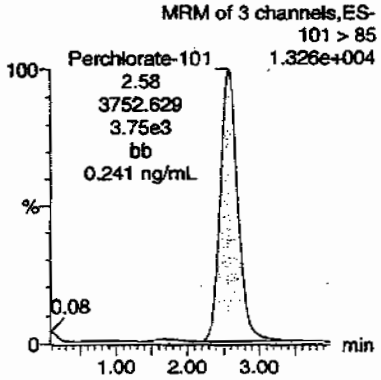

Perchlorate-O(18)

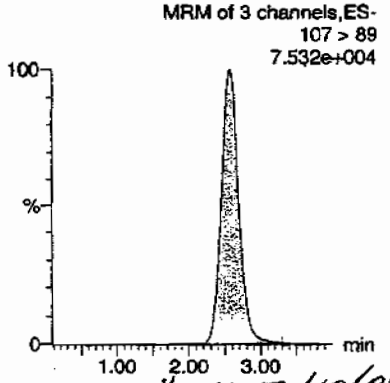

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232509003	Perchlorate	99 > 83	2.58	11730.501	11730.501	bb			0.2427			670.390	3.13
232509003	Perchlorate-101	101 > 85	2.58	3752.629	3752.629	bb			0.2410			298.277	
232509003	Perchlorate-O(18)	107 > 89	2.56	21035.174	21035.174	bb			0.4806	96.11	-3.89	3597.0...	

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6529

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509004

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 95.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	52.6	210	607	ug/kg		100	09-JUL-09 14:04	per0709014a
	Perchlorate-O(18)			502	ug/kg		100	09-JUL-09 14:04	per0709014a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709014a
Date: 09-Jul-2009
Time: 14:04:39
ID: 232509004
Vial: 1:3,C

|LAN|881646|50120|100|DL

CWW 07-10-09

Perchlorate

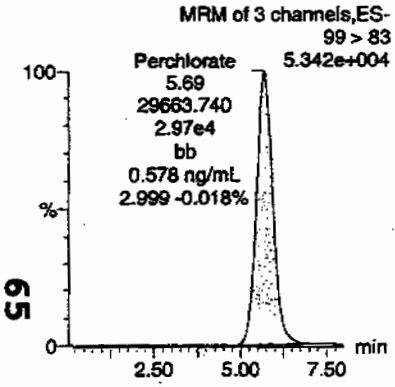

Perchlorate

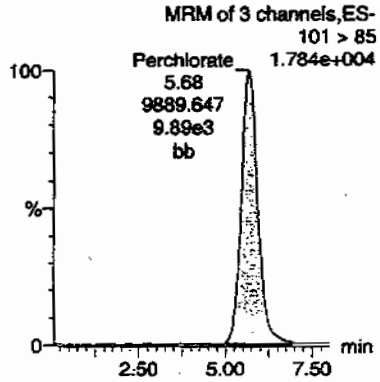

Perchlorate-101

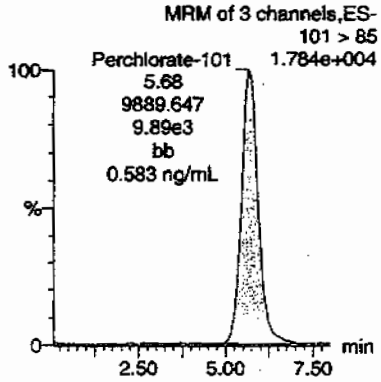

Perchlorate-O(18)

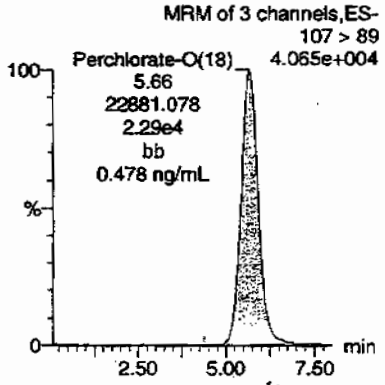

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232509004	Perchlorate	99 > 83	5.69	29663.740	29663.740	bb			0.5776			964.875	3.00
232509004	Perchlorate-101	101 > 85	5.68	9889.647	9889.647	bb			0.5829			980.646	
232509004	Perchlorate-O(18)	107 > 89	5.66	22881.078	22881.078	bb			0.4775	95.51	-4.49	1900.5...	

= 57.8
×100
= 58.3

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PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6528

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509005

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 94.2

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	53.1	212	472	ug/kg		100	09-JUL-09 14:16	per0709015a
	Perchlorate-O(18)			529	ug/kg		100	09-JUL-09 14:16	per0709015a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709015a
Date: 09-Jul-2009
Time: 14:16:24
ID: 232509005 1LANL | 881646 | 50120 | 100 | DL
Vial: 1:3,D

WWO 07-10-09

Perchlorate

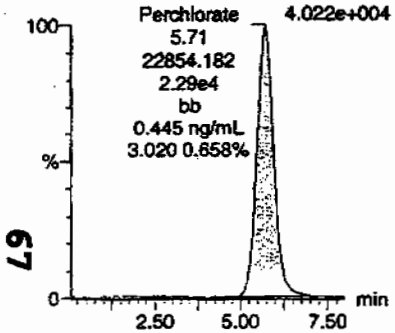

Perchlorate

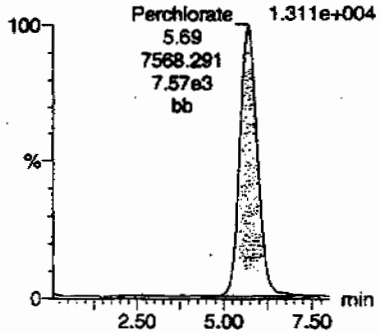

Perchlorate-101

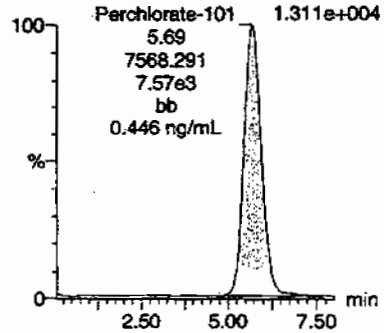

Perchlorate-O(18)

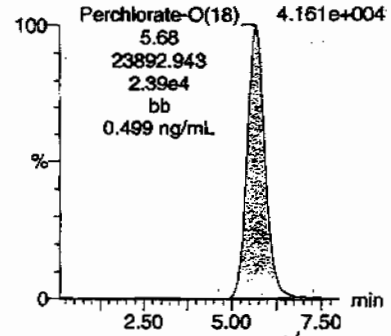

67

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232509005	Perchlorate	99 > 83	5.71	22854.182	22854.182	bb			0.4450			1681.3...	3.02
232509005	Perchlorate-101	101 > 85	5.69	7568.291	7568.291	bb			0.4461			633.070	
232509005	Perchlorate-O(18)	107 > 89	5.68	23892.943	23892.943	bb			0.4987	99.73	-0.27	2770.2...	

= 44.5
x100
= 44.6

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6531

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 232509006

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 85

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.588	2.35	1.05	ug/kg	J	1	09-JUL-09 14:28	per0709016a
	Perchlorate-O(18)			6.04	ug/kg		1	09-JUL-09 14:28	per0709016a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709016a
Date: 09-Jul-2009
Time: 14:28:09
ID: 232509006
Vial: 1:3,E

| LANL | 881646 | SOLID | 1 | RA

CWO
07-10-09

Perchlorate

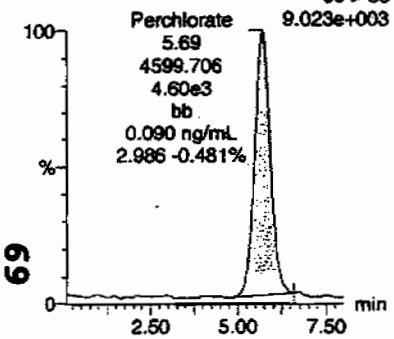

Perchlorate

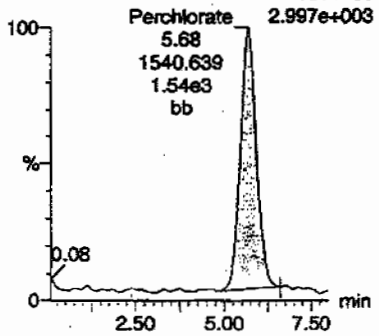

Perchlorate-101

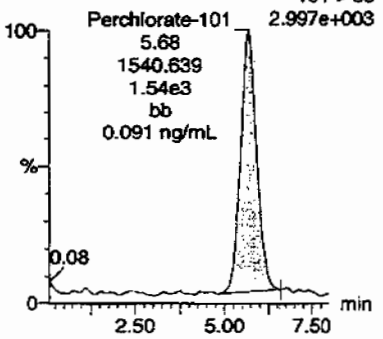

Perchlorate-O(18)

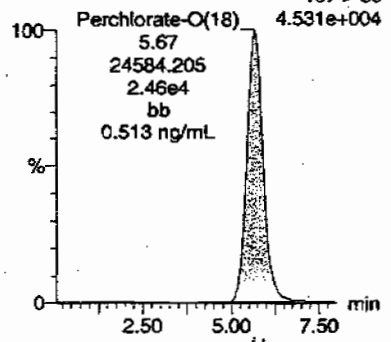

HM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232509006	Perchlorate	99 > 83	5.69	4599.706	4599.706	bb			0.0896			89.815	2.99
232509006	Perchlorate-101	101 > 85	5.68	1540.639	1540.639	bb			0.0908			96.775	
232509006	Perchlorate-O(18)	107 > 89	5.67	24584.205	24584.205	bb			0.5131	102.62	2.62	4208.2...	

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2500

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 48333.4

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2500

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 15570.4

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Compound name: Perchlorate
Response Factor: 48333.4
RRF SD: 3128.21, % Relative SD: 6.47216
Response type: External Std, Area
Curve type: RF

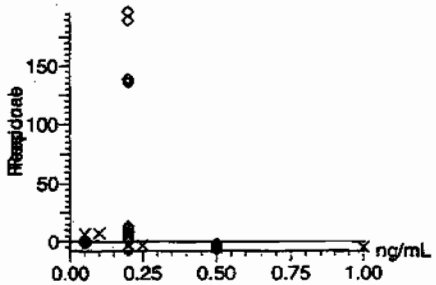

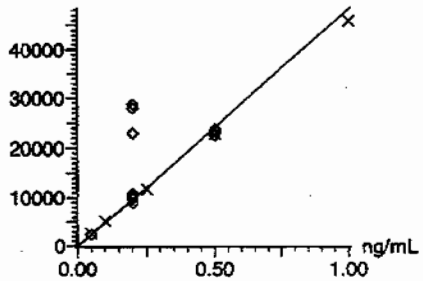

CWW
07-09-09

Compound name: Perchlorate-101
Response Factor: 15570.4
RRF SD: 1259.19, % Relative SD: 8.08705
Response type: External Std, Area
Curve type: RF

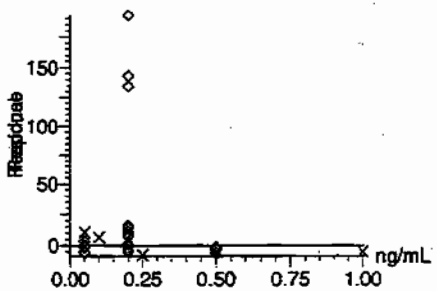

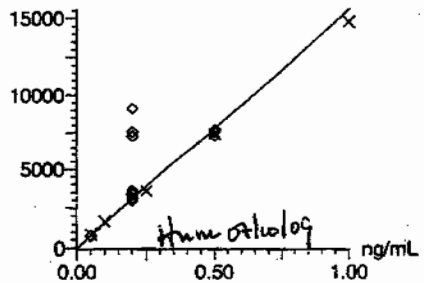

Hum Atuloc

73

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 43772.6
RRF SD: 1463.7, % Relative SD: 3.34387
Response type: External Std, Area
Curve type: RF

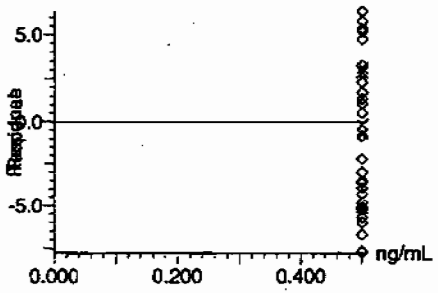

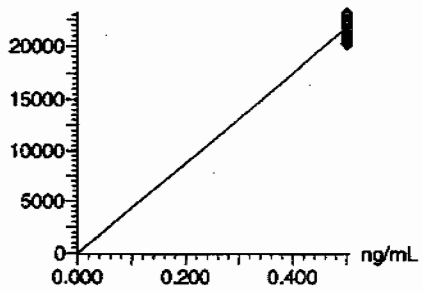

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2500

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 09–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 51358.26

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2500

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 09-JUL-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 16966.94

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070909a.mdb 09 Jul 2009 12:57:10
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070909a.cdb 10 Jul 2009 12:34:11

Compound name: Perchlorate
Response Factor: 51358.3
RRF SD: 1527.39, % Relative SD: 2.97399
Response type: External Std, Area
Curve type: RF

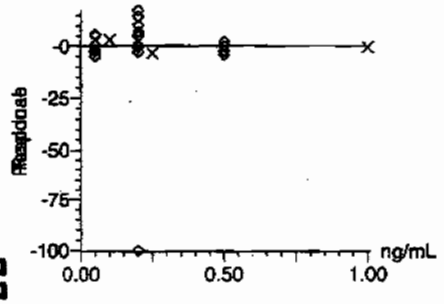

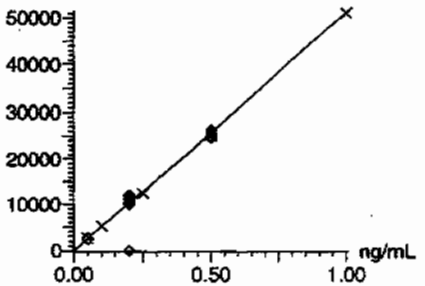

CWW
07-10-09

77

Compound name: Perchlorate-101
Response Factor: 16966.9
RRF SD: 317.037, % Relative SD: 1.86856
Response type: External Std, Area
Curve type: RF

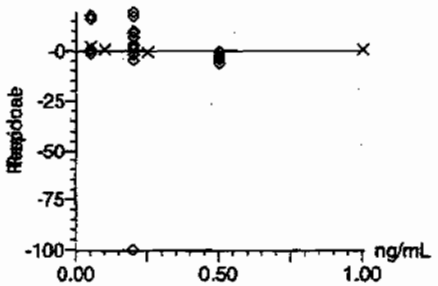

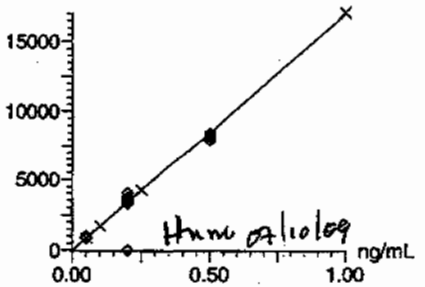

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 47913.7
RRF SD: 906.151, % Relative SD: 1.89121
Response type: External Std, Area
Curve type: RF

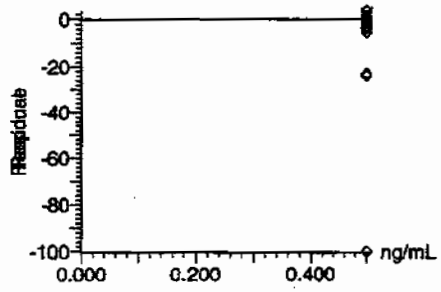

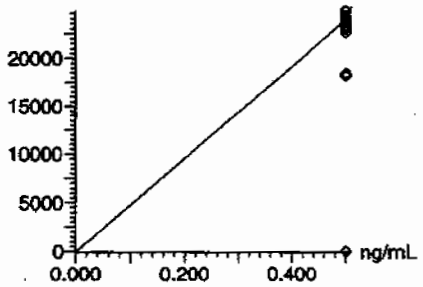

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2500

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	93.91	08–JUL–09 13:37	per0708009a
Perchlorate Isotope Ratio		2.99		08–JUL–09 13:37	per0708009a
Perchlorate–101	.5	.49	97.64	08–JUL–09 13:37	per0708009a
Perchlorate	.5	.49	97.75	09–JUL–09 13:04	per0709009a
Perchlorate Isotope Ratio		2.96		09–JUL–09 13:04	per0709009a
Perchlorate–101	.5	.5	99.96	09–JUL–09 13:04	per0709009a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708009a
Date: 08-Jul-2009
Time: 13:37:46
ID: WCL090706-06ICV
Vial: 1:2,A

Pass
CWW
07-09-09

Perchlorate

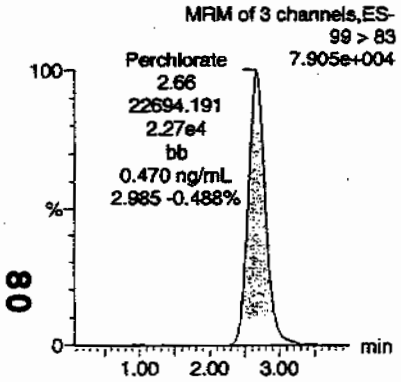

Perchlorate

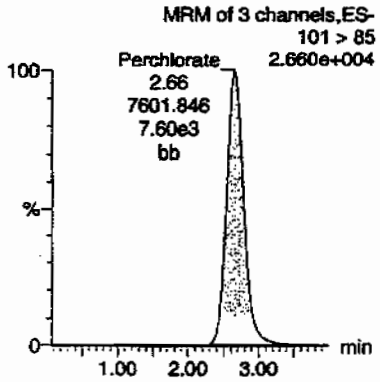

Perchlorate-101

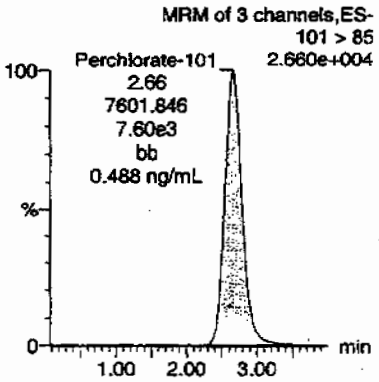

Perchlorate-O(18)

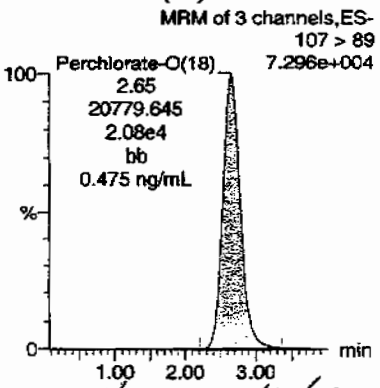

Hrm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06ICV	Perchlorate	99 > 83	2.66	22694.191	22694.191	bb			0.4695	93.91	-6.09	2453.8...	2.99
WCL090706-06ICV	Perchlorate-101	101 > 85	2.66	7601.846	7601.846	bb			0.4882	97.64	-2.36	2701.9...	
WCL090706-06ICV	Perchlorate-O(18)	107 > 89	2.65	20779.645	20779.645	bb			0.4747	94.94	-5.06	3233.6...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709009a
Date: 09-Jul-2009
Time: 13:04:38
ID: WCL090706-06ICV
Vial: 1:2,A

Pwso
aw
07-10-09

Perchlorate

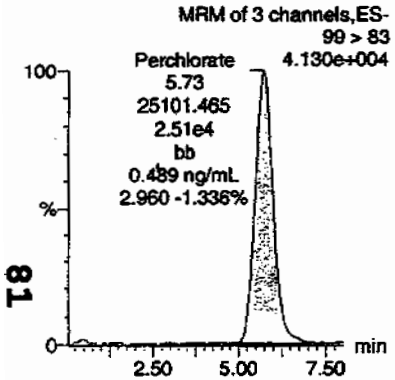

Perchlorate

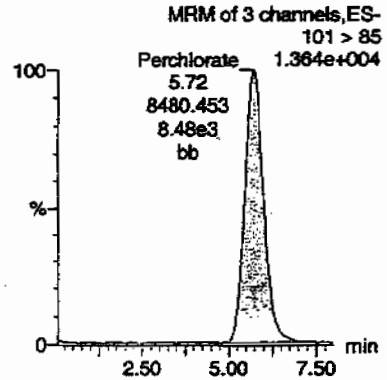

Perchlorate-101

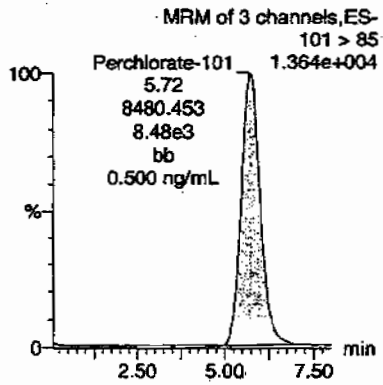

Perchlorate-O(18)

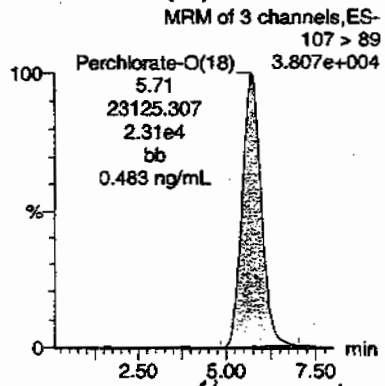

Amu 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06ICV	Perchlorate	99 > 83	5.73	25101.465	25101.465	bb			0.4888	97.75	-2.25	1414.1...	2.96
WCL090706-06ICV	Perchlorate-101	101 > 85	5.72	8480.453	8480.453	bb			0.4998	99.96	-0.04	260.261	
WCL090706-06ICV	Perchlorate-O(18)	107 > 89	5.71	23125.307	23125.307	bb			0.4826	96.53	-3.47	1799.4...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2500

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.46	92.96	08–JUL–09 15:18	per0708022a
Perchlorate Isotope Ratio		3.07		08–JUL–09 15:18	per0708022a
Perchlorate–101	.5	.47	94.1	08–JUL–09 15:18	per0708022a
Perchlorate	.5	.49	97.48	08–JUL–09 16:44	per0708033a
Perchlorate Isotope Ratio		3.09		08–JUL–09 16:44	per0708033a
Perchlorate–101	.5	.49	97.78	08–JUL–09 16:44	per0708033a
Perchlorate	.5	.49	97.63	08–JUL–09 17:53	per0708042a
Perchlorate Isotope Ratio		3.08		08–JUL–09 17:53	per0708042a
Perchlorate–101	.5	.49	98.44	08–JUL–09 17:53	per0708042a
Perchlorate	.5	.49	98.38	08–JUL–09 19:26	per0708054a
Perchlorate Isotope Ratio		3.1		08–JUL–09 19:26	per0708054a
Perchlorate–101	.5	.49	98.62	08–JUL–09 19:26	per0708054a
Perchlorate	.5	.5	100.03	09–JUL–09 14:39	per0709017a

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2500

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate Isotope Ratio		3.13		09-JUL-09 14:39	per0709017a
Perchlorate-101	.5	.48	96.77	09-JUL-09 14:39	per0709017a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708022a
Date: 08-Jul-2009
Time: 15:18:39
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
aw
07-08-09

Perchlorate

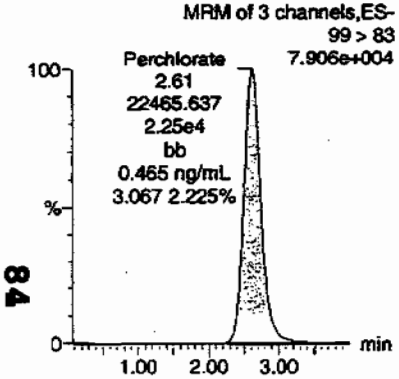

Perchlorate

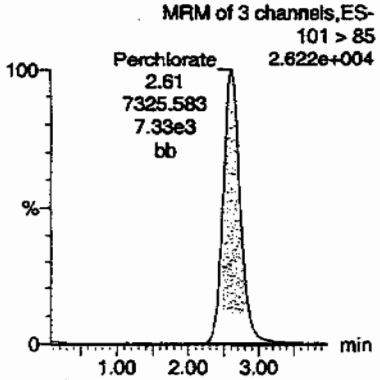

Perchlorate-101

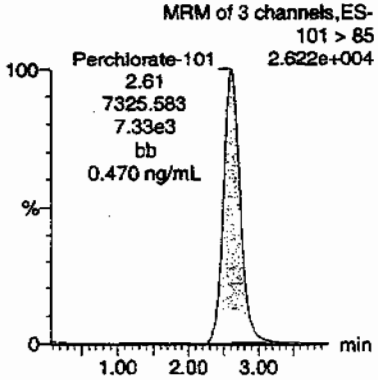

Perchlorate-O(18)

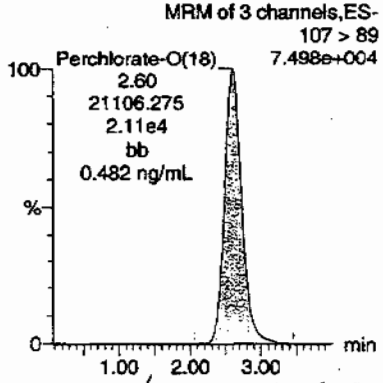

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.61	22465.637	22465.637	bb			0.4648	92.96	-7.04	5659.4...	3.07
WCL090706-06CCV	Perchlorate-101	101 > 85	2.61	7325.583	7325.583	bb			0.4705	94.10	-5.90	675.146	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.60	21106.275	21106.275	bb			0.4822	96.44	-3.56	2111.2...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708033a
Date: 08-Jul-2009
Time: 16:44:02
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
and
07-09-09

Perchlorate

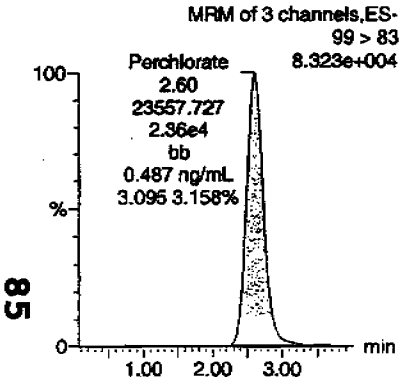

Perchlorate

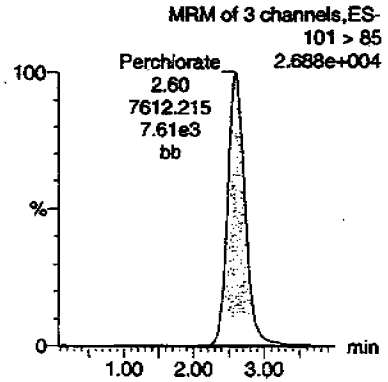

Perchlorate-101

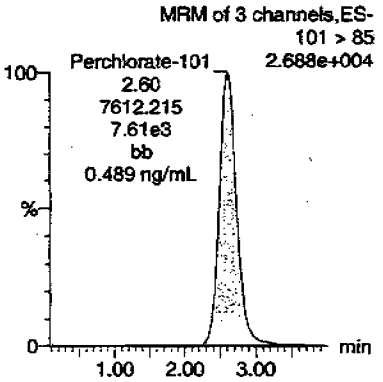

Perchlorate-O(18)

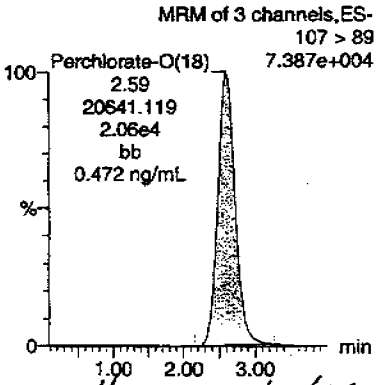

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.60	23557.727	23557.727	bb			0.4874	97.48	-2.52	5212.1...	3.09
WCL090706-06CCV	Perchlorate-101	101 > 85	2.60	7612.215	7612.215	bb			0.4889	97.78	-2.22	3842.9...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.59	20641.119	20641.119	bb			0.4716	94.31	-5.69	4254.1...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708042a
Date: 08-Jul-2009
Time: 17:53:47
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
ana
07-09-09

Perchlorate

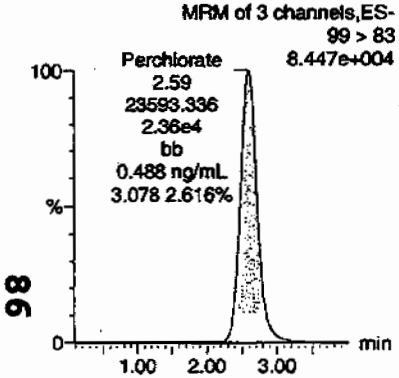

Perchlorate

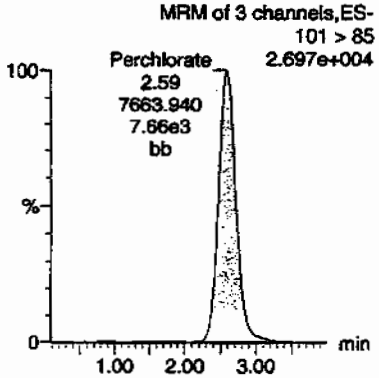

Perchlorate-101

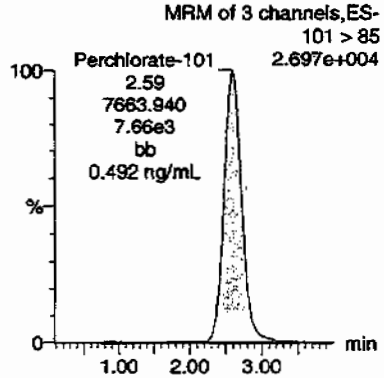

Perchlorate-O(18)

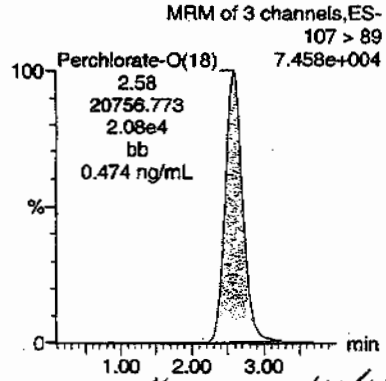

Hrnk 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.59	23593.336	23593.336	bb			0.4881	97.63	-2.37	5344.7...	3.08
WCL090706-06CCV	Perchlorate-101	101 > 85	2.59	7663.940	7663.940	bb			0.4922	98.44	-1.56	1302.8...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.58	20756.773	20756.773	bb			0.4742	94.84	-5.16	6634.2...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708054a
Date: 08-Jul-2009
Time: 19:26:49
ID: WCL090706-06CCV
Vial: 1:2,A

Pros
GMD
07-09-09

Perchlorate

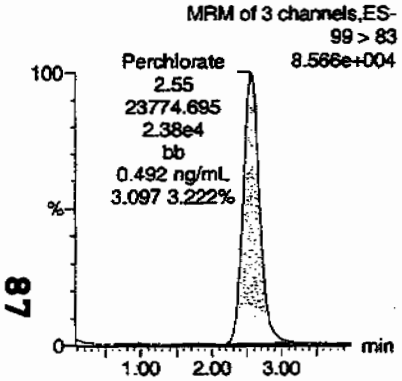

Perchlorate

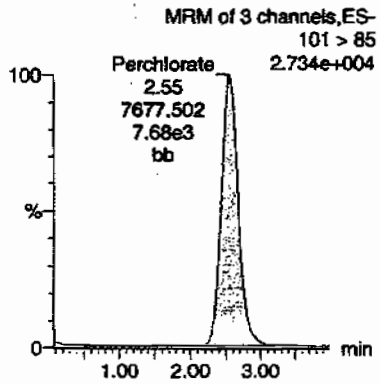

Perchlorate-101

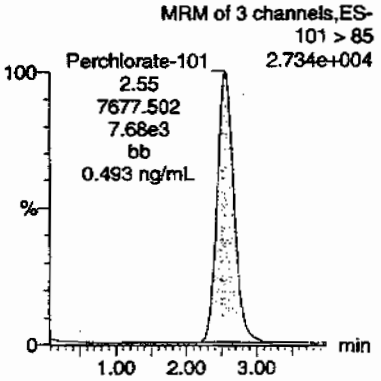

Perchlorate-O(18)

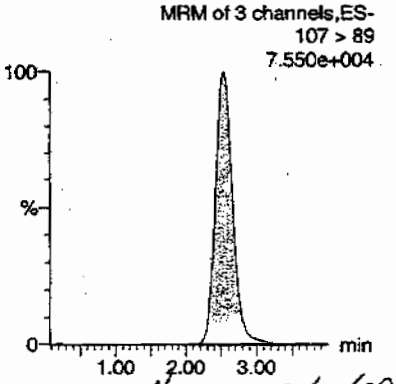

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.55	23774.695	23774.695	bb			0.4919	98.38	-1.62	3999.8...	3.10
WCL090706-06CCV	Perchlorate-101	101 > 85	2.55	7677.502	7677.502	bb			0.4931	98.62	-1.38	1650.2...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.54	21119.523	21119.523	bb			0.4825	96.50	-3.50	4934.7...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709017a
Date: 09-Jul-2009
Time: 14:39:53
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
and
07-1009

Perchlorate

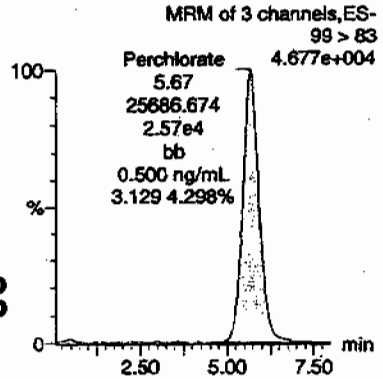

Perchlorate

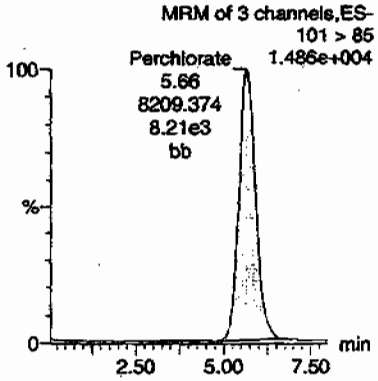

Perchlorate-101

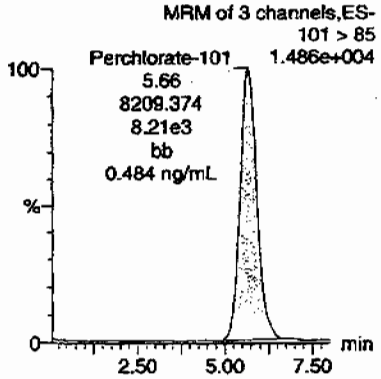

Perchlorate-O(18)

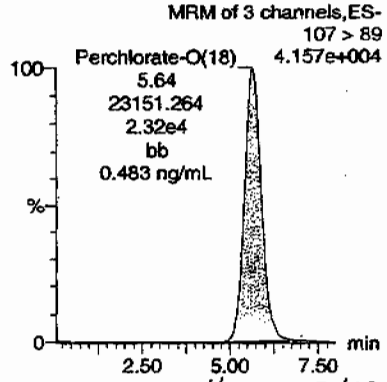

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	5.67	25686.674	25686.674	bb			0.5001	100.03	0.03	1875.1...	3.13
WCL090706-06CCV	Perchlorate-101	101 > 85	5.66	8209.374	8209.374	bb			0.4838	96.77	-3.23	1077.0...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	5.64	23151.264	23151.264	bb			0.4832	96.64	-3.36	1990.8...	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2500

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	102.31	08–JUL–09 13:53	per0708011a
Perchlorate Isotope Ratio		3.35		08–JUL–09 13:53	per0708011a
Perchlorate–101	.05	.05	94.69	08–JUL–09 13:53	per0708011a
Perchlorate	.05	.05	97.69	08–JUL–09 15:34	per0708024a
Perchlorate Isotope Ratio		3.08		08–JUL–09 15:34	per0708024a
Perchlorate–101	.05	.05	98.51	08–JUL–09 15:34	per0708024a
Perchlorate	.05	.05	99.89	08–JUL–09 16:59	per0708035a
Perchlorate Isotope Ratio		3.25		08–JUL–09 16:59	per0708035a
Perchlorate–101	.05	.05	95.4	08–JUL–09 16:59	per0708035a
Perchlorate	.05	.05	101.76	08–JUL–09 18:09	per0708044a
Perchlorate Isotope Ratio		3.06		08–JUL–09 18:09	per0708044a

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2500

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate–101	.05	.05	103.31	08–JUL–09 18:09	per0708044a
Perchlorate	.05	.05	99.09	08–JUL–09 19:42	per0708056a
Perchlorate Isotope Ratio		3.09		08–JUL–09 19:42	per0708056a
Perchlorate–101	.05	.05	99.47	08–JUL–09 19:42	per0708056a
Perchlorate	.05	.05	95.54	09–JUL–09 13:28	per0709011a
Perchlorate Isotope Ratio		2.45		09–JUL–09 13:28	per0709011a
Perchlorate–101	.05	.06	117.82	09–JUL–09 13:28	per0709011a
Perchlorate	.05	.05	97.29	09–JUL–09 15:03	per0709019a
Perchlorate Isotope Ratio		2.99		09–JUL–09 15:03	per0709019a
Perchlorate–101	.05	.05	98.62	09–JUL–09 15:03	per0709019a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708011a
Date: 08-Jul-2009
Time: 13:53:16
ID: WCL090706-07CRI
Vial: 1:2,B

CWW 07-09-09

Perchlorate

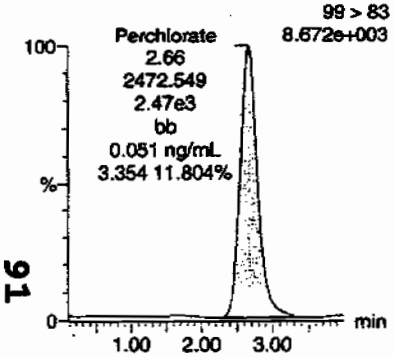

Perchlorate

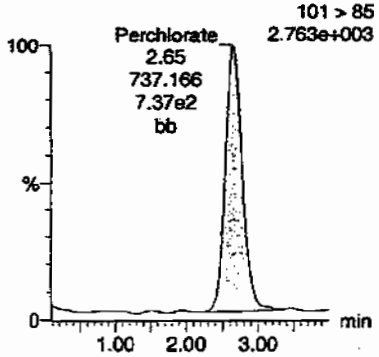

Perchlorate-101

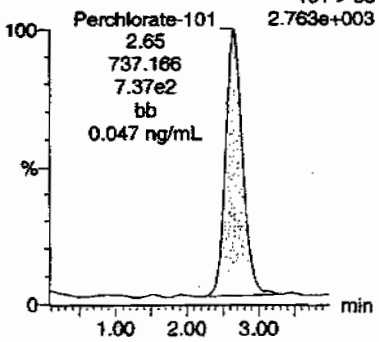

Perchlorate-O(18)

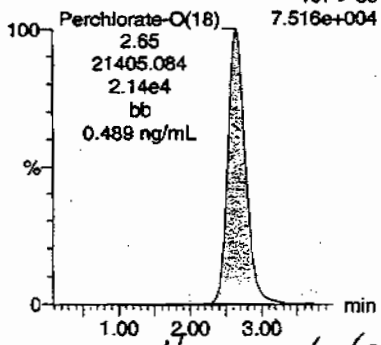

Amm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.66	2472.549	2472.549	bb			0.0512	102.31	2.31	911.588	3.35
WCL090706-07CRI	Perchlorate-101	101 > 85	2.65	737.166	737.166	bb			0.0473	94.69	-5.31	141.523	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.65	21405.084	21405.084	bb			0.4890	97.80	-2.20	1236.3...	

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708024a
Date: 08-Jul-2009
Time: 15:34:09
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
ano
07-09-09

Perchlorate

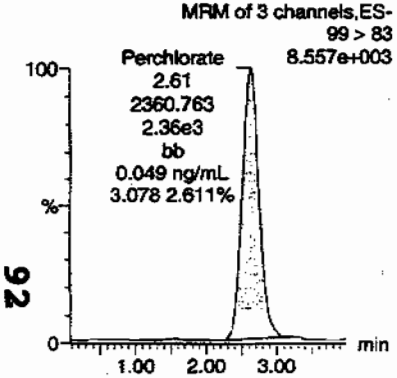

Perchlorate

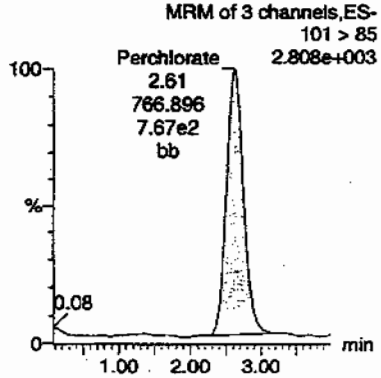

Perchlorate-101

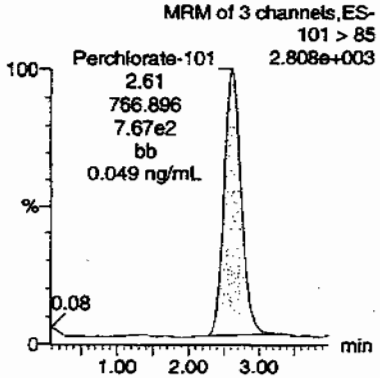

Perchlorate-O(18)

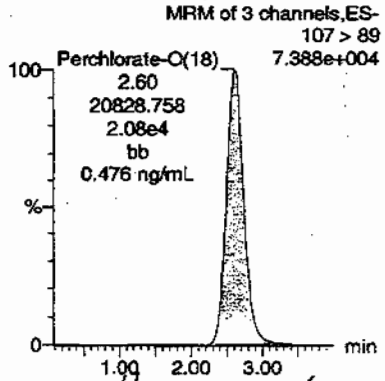

Hmc 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.61	2360.763	2360.763	bb			0.0488	97.69	-2.31	448.651	3.08
WCL090706-07CRI	Perchlorate-101	101 > 85	2.61	766.896	766.896	bb			0.0493	98.51	-1.49	215.016	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.60	20828.758	20828.758	bb			0.4758	95.17	-4.83	12080....	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708035a
Date: 08-Jul-2009
Time: 16:59:31
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
ad
07-09-09

Perchlorate

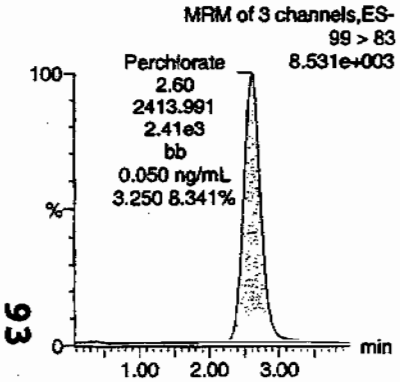

Perchlorate

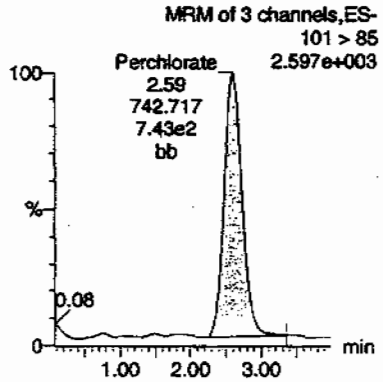

Perchlorate-101

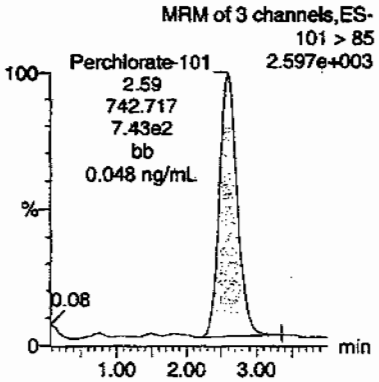

Perchlorate-O(18)

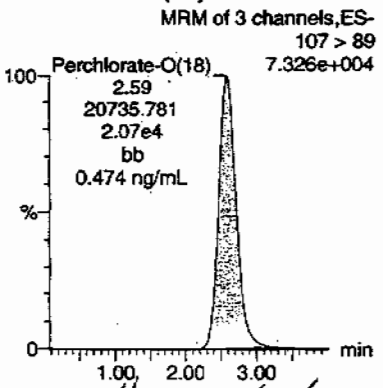

HAM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.60	2413.991	2413.991	bb			0.0499	99.89	-0.11	1123.0...	3.25
WCL090706-07CRI	Perchlorate-101	101 > 85	2.59	742.717	742.717	bb			0.0477	95.40	-4.60	195.036	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.59	20735.781	20735.781	bb			0.4737	94.74	-5.26	10141....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708044a
Date: 08-Jul-2009
Time: 18:09:17
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
CMO
07-09-09

Perchlorate

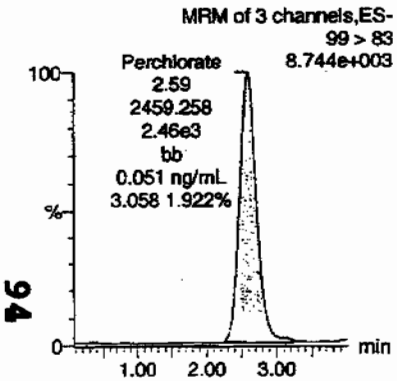

Perchlorate

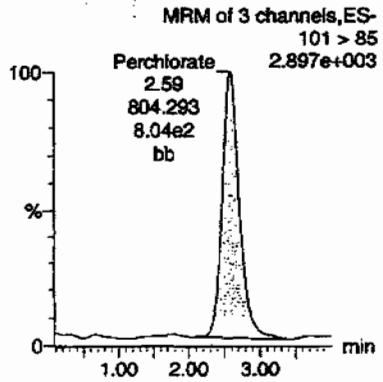

Perchlorate-101

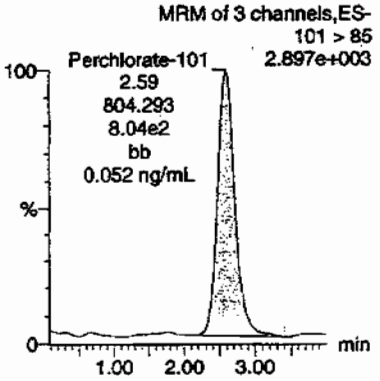

Perchlorate-O(18)

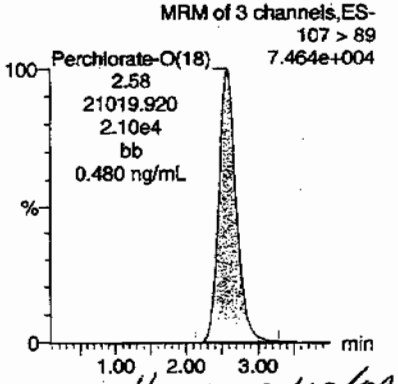

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.59	2459.258	2459.258	bb			0.0509	101.76	1.76	195.218	3.06
WCL090706-07CRI	Perchlorate-101	101 > 85	2.59	804.293	804.293	bb			0.0517	103.31	3.31	216.046	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.58	21019.920	21019.920	bb			0.4802	96.04	-3.96	3753.1...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708056a
Date: 08-Jul-2009
Time: 19:42:33
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
CWW
07-31-09

Perchlorate

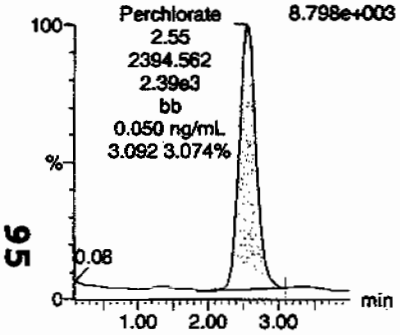

Perchlorate

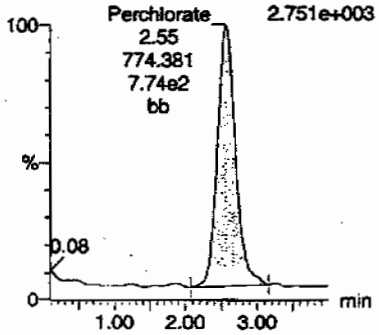

Perchlorate-101

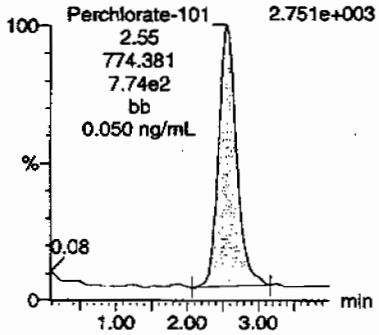

Perchlorate-O(18)

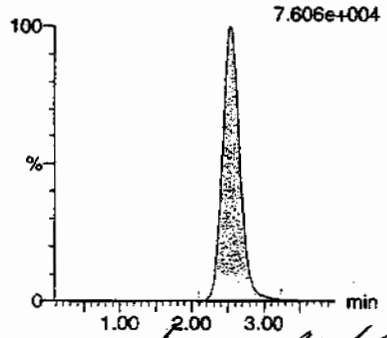

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.55	2394.562	2394.562	bb			0.0495	99.09	-0.91	283.551	3.09
WCL090706-07CRI	Perchlorate-101	101 > 85	2.55	774.381	774.381	bb			0.0497	99.47	-0.53	232.638	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.54	21226.893	21226.893	bb			0.4849	96.99	-3.01	4679.5...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709011a
Date: 09-Jul-2009
Time: 13:28:07
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
07-10-09

Perchlorate

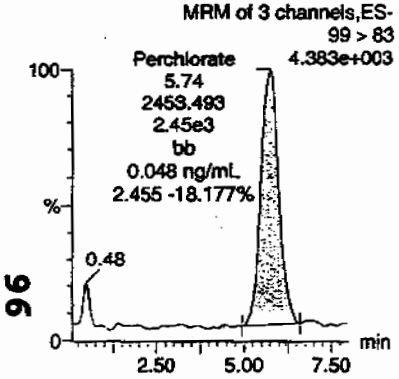

Perchlorate

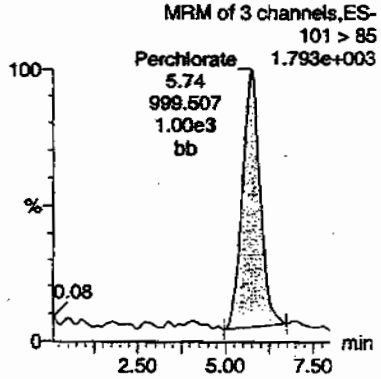

Perchlorate-101

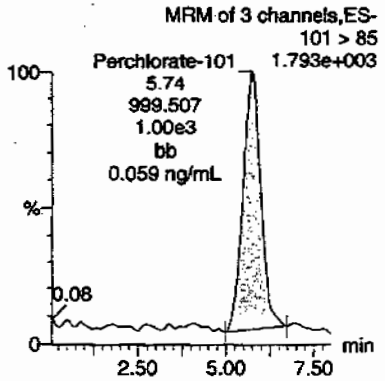

Perchlorate-O(18)

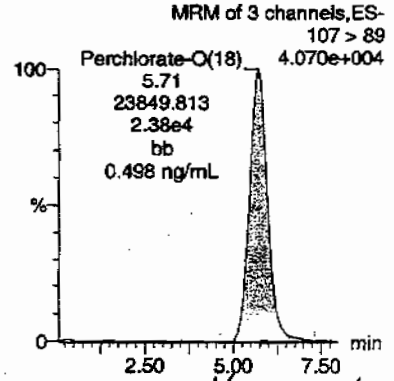

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	5.74	2453.493	2453.493	bb			0.0478	95.54	-4.46	80.551	2.45
WCL090706-07CRI	Perchlorate-101	101 > 85	5.74	999.507	999.507	bb			0.0589	117.82	17.82	103.947	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	5.71	23849.813	23849.813	bb			0.4978	99.55	-0.45	504.934	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709019a
Date: 09-Jul-2009
Time: 15:03:21
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
amo
07-10-09

Perchlorate

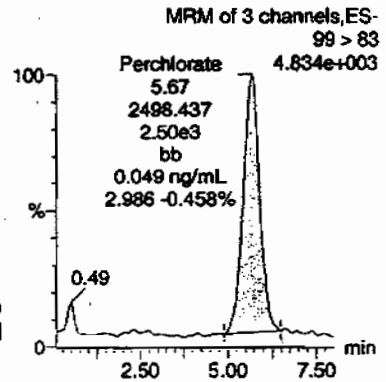

Perchlorate

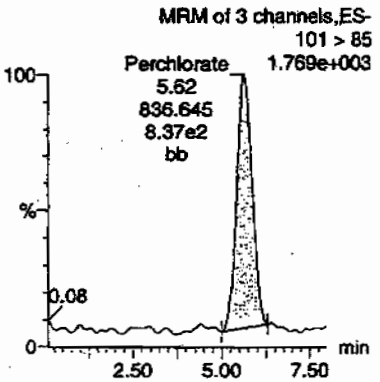

Perchlorate-101

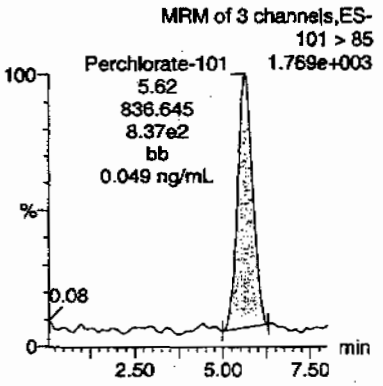

Perchlorate-O(18)

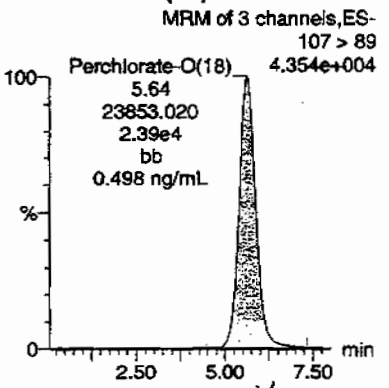

Hmc 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	5.67	2498.437	2498.437	bb			0.0486	97.29	-2.71	7.903	2.99
WCL090706-07CRI	Perchlorate-101	101 > 85	5.62	836.645	836.645	bb			0.0493	98.62	-1.38	72.784	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	5.64	23853.020	23853.020	bb			0.4978	99.57	-0.43	928.339	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 1201872342

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	08-JUL-09 18:17	per0708045a
	Perchlorate-O(18)			4.73	ug/kg		1	08-JUL-09 18:17	per0708045a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708045a
Date: 08-Jul-2009
Time: 18:17:05
ID: 1201872342
Vial: 2:1,A

|LANL|881646|SDWD|MB|1|

CWW 07-09-09

Perchlorate

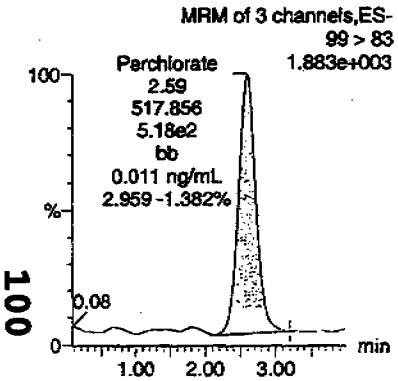

Perchlorate

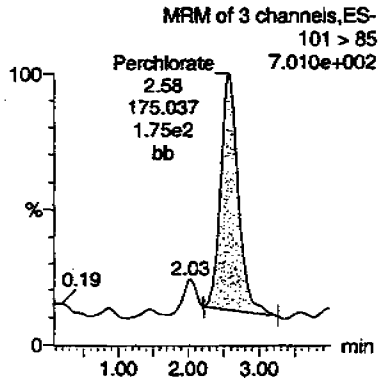

Perchlorate-101

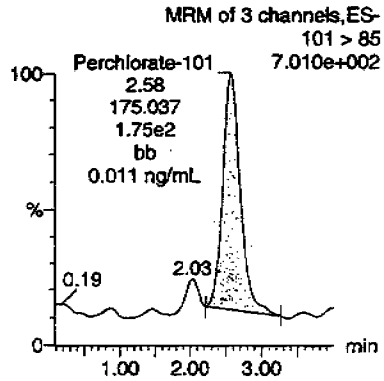

Perchlorate-O(18)

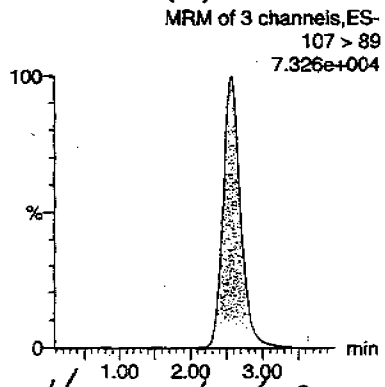

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872342	Perchlorate	99 > 83	2.59	517.856	517.856	bb			0.0107			140.764	2.96
1201872342	Perchlorate-101	101 > 85	2.58	175.037	175.037	bb			0.0112			80.373	
1201872342	Perchlorate-O(18)	107 > 89	2.56	20710.131	20710.131	bb			0.4731	94.63	-5.37	413.279	

100

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 881643

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2500

GEL Sample ID: 1201872343

Date Filtered: 01-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.04	ug/kg		1	08-JUL-09 18:25	per0708046a
	Perchlorate-O(18)			4.78	ug/kg		1	08-JUL-09 18:25	per0708046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708046a
Date: 08-Jul-2009
Time: 18:25:00
ID: 1201872343
Vial: 2:1,B

|LANL| 881646 |50620|LCS|1|

Cwa 07-09-09

Perchlorate

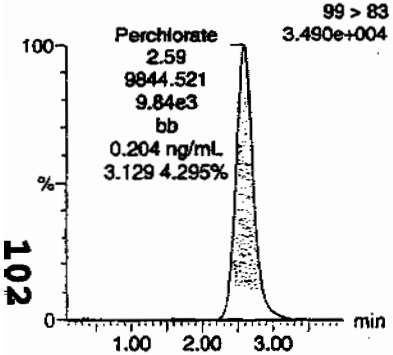

Perchlorate

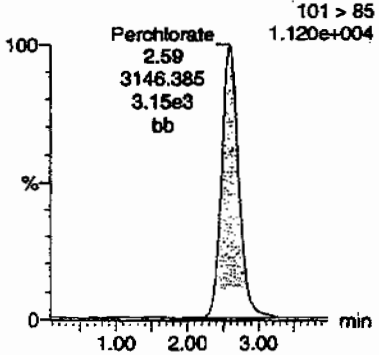

Perchlorate-101

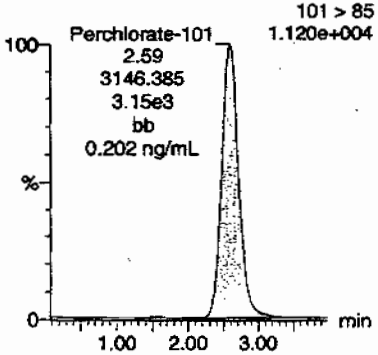

Perchlorate-O(18)

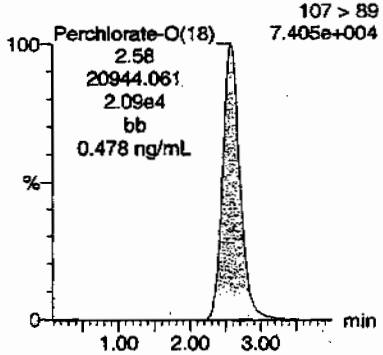

102

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872343	Perchlorate	99 > 83	2.59	9844.521	9844.521	bb			0.2037	101.84	1.84	733.467	3.13
1201872343	Perchlorate-101	101 > 85	2.59	3146.385	3146.385	bb			0.2021	101.04	1.04	1504.8...	
1201872343	Perchlorate-O(18)	107 > 89	2.58	20944.061	20944.061	bb			0.4785	95.69	-4.31	2058.2...	

$$\frac{9844.521}{48333.4} = 0.2037$$

HMW
07/10/09

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 881643 Verified by:
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201872342 MB	01-JUL-2009 13:18:37	2	20	10
1201872343 LCS	01-JUL-2009 13:18:37	2	20	10
232509001	01-JUL-2009 13:18:37	2	20	10
232509002	01-JUL-2009 13:18:37	2	20	10
232509003	01-JUL-2009 13:18:37	2	20	10
232509004	01-JUL-2009 13:18:37	2	20	10
232509005	01-JUL-2009 13:18:37	2	20	10
232509006	01-JUL-2009 13:18:37	2	20	10
232582001	01-JUL-2009 13:18:37	2	20	10
232582002	01-JUL-2009 13:18:37	2	20	10
232585001	01-JUL-2009 13:18:37	2	20	10
232585002	01-JUL-2009 13:18:37	2	20	10
232585003	01-JUL-2009 13:18:37	2	20	10
232591001	01-JUL-2009 13:18:37	2	20	10
1201872344 MS (232591001)	01-JUL-2009 13:18:37	2	20	10
1201872345 MSD (232591001)	01-JUL-2009 13:18:37	2	20	10
1201872346 ICS	01-JUL-2009 13:18:37	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201872346	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
LCS	1201872343	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MS	1201872344	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL
MSD	1201872345	10 ug/L CCV Second Source	UCL090527-01.2	.4	mL

Comments:

Desalting cartridges used: 090408-1-Ba & 090608-1-H

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 07/08/09
Extr. Injection Volume: 20uL
Sequence Number: per070809a
Initial Calibration Date: 07/08/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: Anne
Date 7/10/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0708001a	IPB001	CWW	7/8/2009 12:35			1		USE	B
per0708002a	IPB001	CWW	7/8/2009 12:43			1		USE	B
per0708003a	WCLICAL-01	CWW	7/8/2009 12:51			1		USE	I
per0708004a	WCLICAL-02	CWW	7/8/2009 12:59			1		USE	I
per0708005a	WCLICAL-03	CWW	7/8/2009 13:06			1		USE	I
per0708006a	WCLICAL-04	CWW	7/8/2009 13:14			1		USE	I
per0708007a	WCLICAL-05	CWW	7/8/2009 13:22			1		USE	I
per0708008a	IPB002	CWW	7/8/2009 13:30			1		USE	B
per0708009a	WCLICV	CWW	7/8/2009 13:37			1		USE	C
per0708010a	IPB003	CWW	7/8/2009 13:45			1		USE	B
per0708011a	WCLCRI	CWW	7/8/2009 13:53			1		USE	C
per0708012a	1201874299	CWW	7/8/2009 14:01	882496	VARIOUS	1	LANL	USE	S
per0708013a	1201874300	CWW	7/8/2009 14:08	882496	VARIOUS	1	LANL	USE	S
per0708014a	1201874307	CWW	7/8/2009 14:16	882496	VARIOUS	1	LANL	USE	S
per0708015a	232662001	CWW	7/8/2009 14:24	882496	09-2516	1	LANL	USE	S
per0708016a	1201874303	CWW	7/8/2009 14:32	882496	09-2516	1	LANL	USE	S
per0708017a	1201874305	CWW	7/8/2009 14:39	882496	09-2516	1	LANL	USE	S
per0708018a	232674001	CWW	7/8/2009 14:47	882496	09-2519	1	LANL	USE	S
per0708019a	232675001	CWW	7/8/2009 14:55	882496	09-2522	1	LANL	USE	S
per0708020a	1201874304	CWW	7/8/2009 15:03	882496	09-2522	1	LANL	USE	S
per0708021a	1201874306	CWW	7/8/2009 15:10	882496	09-2522	1	LANL	USE	S
per0708022a	WCLCCV	CWW	7/8/2009 15:18			1		USE	C
per0708023a	IPB004	CWW	7/8/2009 15:26			1		USE	B
per0708024a	WCLCRI	CWW	7/8/2009 15:34			1		USE	C
per0708025a	232742001	CWW	7/8/2009 15:41	882496	09-2525	1	LANL	USE	S
per0708026a	232750001	CWW	7/8/2009 15:49	882496	09-2528	1	LANL	USE	S
per0708027a	232755001	CWW	7/8/2009 15:57	882496	09-2536-1	1	LANL	USE	S
per0708028a	232757001	CWW	7/8/2009 16:05	882496	09-2539	1	LANL	USE	S
per0708029a	232759001	CWW	7/8/2009 16:13	882496	09-2542	1	LANL	USE	S

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per0708030a	232761001	CWW	7/8/2009 16:20	882496	09-2543	1	LANL	USE	S
per0708031a	1201874301	CWW	7/8/2009 16:28	882496	09-2543	1	LANL	USE	S
per0708032a	1201874302	CWW	7/8/2009 16:36	882496	09-2543	1	LANL	USE	S
per0708033a	WCLCCV	CWW	7/8/2009 16:44			1		USE	C
per0708034a	IPB005	CWW	7/8/2009 16:51			1		USE	B
per0708035a	WCLCRI	CWW	7/8/2009 16:59			1		USE	C
per0708036a	1201876313	CWW	7/8/2009 17:07	883299	09-2549	1	LANL	USE	S
per0708037a	1201876314	CWW	7/8/2009 17:15	883299	09-2549	1	LANL	USE	S
per0708038a	1201876317	CWW	7/8/2009 17:22	883299	09-2549	1	LANL	USE	S
per0708039a	232855001	CWW	7/8/2009 17:30	883299	09-2549	1	LANL	USE	S
per0708040a	1201876315	CWW	7/8/2009 17:38	883299	09-2549	1	LANL	USE	S
per0708041a	1201876316	CWW	7/8/2009 17:46	883299	09-2549	1	LANL	USE	S
per0708042a	WCLCCV	CWW	7/8/2009 17:53			1		USE	C
per0708043a	IPB006	CWW	7/8/2009 18:01			1		USE	B
per0708044a	WCLCRI	CWW	7/8/2009 18:09			1		USE	C
per0708045a	1201872342	CWW	7/8/2009 18:17	881646	VARIOUS	1	LANL	USE	S
per0708046a	1201872343	CWW	7/8/2009 18:25	881646	VARIOUS	1	LANL	USE	S
per0708047a	1201872346	CWW	7/8/2009 18:32	881646	VARIOUS	1	LANL	USE	S
per0708048a	232509001	CWW	7/8/2009 18:40	881646	09-2500	1	LANL	DUSE-DL	S
per0708049a	232509002	CWW	7/8/2009 18:48	881646	09-2500	1	LANL	DUSE-RA	S
per0708050a	232509003	CWW	7/8/2009 18:55	881646	09-2500	1	LANL	USE	S
per0708051a	232509004	CWW	7/8/2009 19:03	881646	09-2500	1	LANL	DUSE-DL	S
per0708052a	232509005	CWW	7/8/2009 19:11	881646	09-2500	1	LANL	DUSE-DL	S
per0708053a	232509006	CWW	7/8/2009 19:19	881646	09-2500	1	LANL	DUSE-RA	S
per0708054a	WCLCCV	CWW	7/8/2009 19:26			1		USE	C
per0708055a	IPB007	CWW	7/8/2009 19:34			1		USE	B
per0708056a	WCLCRI	CWW	7/8/2009 19:42			1		USE	C
per0708057a	232582001	CWW	7/8/2009 19:50	881646	09-2508	1	LANL	USE	S
per0708058a	232582002	CWW	7/8/2009 19:58	881646	09-2508	1	LANL	USE	S
per0708059a	232585001	CWW	7/8/2009 20:05	881646	09-2506	1	LANL	USE	S
per0708060a	232585002	CWW	7/8/2009 20:13	881646	09-2506	1	LANL	USE	S
per0708061a	232585003	CWW	7/8/2009 20:21	881646	09-2506	1	LANL	USE	S
per0708062a	232591001	CWW	7/8/2009 20:29	881646	09-2510	1	LANL	USE	S
per0708063a	1201872344	CWW	7/8/2009 20:36	881646	09-2510	1	LANL	USE	S
per0708064a	1201872345	CWW	7/8/2009 20:44	881646	09-2510	1	LANL	USE	S
per0708065a	WCLCCV	CWW	7/8/2009 20:52			1		USE	C
per0708066a	IPB008	CWW	7/8/2009 21:00			1		USE	B

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per0708067a WCLCRI CWW 7/8/2009 21:08 1 USE C

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 07/09/09
Extr. Injection Volume: 20uL
Sequence Number: per070909a
Initial Calibration Date: 07/09/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1152119, 1141273
Standard-Samp Reagent Lot#:: 1141273

Reviewed BY: [illegible]
Date: 07/10/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0709001a	IPB001	CWW	7/9/2009 11:30			1		USE	B
per0709002a	IPB001	CWW	7/9/2009 11:42			1		USE	B
per0709003a	WCLICAL-01	CWW	7/9/2009 11:54			1		USE	I
per0709004a	WCLICAL-02	CWW	7/9/2009 12:05			1		USE	I
per0709005a	WCLICAL-03	CWW	7/9/2009 12:17			1		USE	I
per0709006a	WCLICAL-04	CWW	7/9/2009 12:29			1		USE	I
per0709007a	WCLICAL-05	CWW	7/9/2009 12:41			1		USE	I
per0709008a	IPB002	CWW	7/9/2009 12:52			1		USE	B
per0709009a	WCLICV	CWW	7/9/2009 13:04			1		USE	C
per0709010a	IPB003	CWW	7/9/2009 13:16			1		USE	B
per0709011a	WCLCRI	CWW	7/9/2009 13:28			1		USE	C
per0709012a	232509001	CWW	7/9/2009 13:41	881646	09-2500	100	LANL	USE	S
per0709013a	232509002	CWW	7/9/2009 13:52	881646	09-2500	1	LANL	USE	S
per0709014a	232509004	CWW	7/9/2009 14:04	881646	09-2500	100	LANL	USE	S
per0709015a	232509005	CWW	7/9/2009 14:16	881646	09-2500	100	LANL	USE	S
per0709016a	232509006	CWW	7/9/2009 14:28	881646	09-2500	1	LANL	USE	S
per0709017a	WCLCCV	CWW	7/9/2009 14:39			1		USE	C
per0709018a	IPB004	CWW	7/9/2009 14:51			1		USE	B
per0709019a	WCLCRI	CWW	7/9/2009 15:03			1		USE	C
per0709020a	1201872358	CWW	7/9/2009 15:15	881654	09-2512	1	LANL	USE	S
per0709021a	1201872359	CWW	7/9/2009 15:26	881654	09-2512	1	LANL	USE	S
per0709022a	1201872362	CWW	7/9/2009 15:38	881654	09-2512	1	LANL	DUSE-RA	S
per0709023a	232594001	CWW	7/9/2009 15:50	881654	09-2512	1	LANL	USE	S
per0709024a	1201872360	CWW	7/9/2009 16:02	881654	09-2512	1	LANL	USE	S
per0709025a	1201872361	CWW	7/9/2009 16:13	881654	09-2512	1	LANL	USE	S
per0709026a	232594002	CWW	7/9/2009 16:25	881654	09-2512	1	LANL	USE	S
per0709027a	232594003	CWW	7/9/2009 16:37	881654	09-2512	1	LANL	USE	S
per0709028a	232594004	CWW	7/9/2009 16:49	881654	09-2512	1	LANL	USE	S
per0709029a	232594005	CWW	7/9/2009 17:00	881654	09-2512	1	LANL	USE	S

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per0709030a	WCLCCV	CWW	7/9/2009 17:12			1		USE	C
per0709031a	IPB005	CWW	7/9/2009 17:24			1		USE	B
per0709032a	WCLCRI	CWW	7/9/2009 17:36			1		USE	C
per0709033a	1201874308	CWW	7/9/2009 17:48	882499	VARIOUS	1	LANL	USE	S
per0709034a	1201874309	CWW	7/9/2009 17:59	882499	VARIOUS	1	LANL	USE	S
per0709035a	1201874312	CWW	7/9/2009 18:11	882499	VARIOUS	1	LANL	USE	S
per0709036a	232663001	CWW	7/9/2009 18:23	882499	09-2516-1	1	LANL	USE	S
per0709037a	232663002	CWW	7/9/2009 18:35	882499	09-2516-1	1	LANL	USE	S
per0709038a	232663003	CWW	7/9/2009 18:46	882499	09-2516-1	1	LANL	USE	S
per0709039a	232663004	CWW	7/9/2009 18:58	882499	09-2516-1	1	LANL	USE	S
per0709040a	232663005	CWW	7/9/2009 19:10	882499	09-2516-1	1	LANL	USE	S
per0709041a	232744001	CWW	7/9/2009 19:22	882499	09-2525-1	1	LANL	USE	S
per0709042a	232744002	CWW	7/9/2009 19:33	882499	09-2525-1	1	LANL	USE	S
per0709043a	WCLCCV	CWW	7/9/2009 19:45			1		USE	C
per0709044a	IPB006	CWW	7/9/2009 19:57			1		USE	B
per0709045a	WCLCRI	CWW	7/9/2009 20:09			1		USE	C
per0709046a	232744003	CWW	7/9/2009 20:20	882499	09-2525-1	1	LANL	USE	S
per0709047a	232744004	CWW	7/9/2009 20:32	882499	09-2525-1	1	LANL	USE	S
per0709048a	232744005	CWW	7/9/2009 20:44	882499	09-2525-1	1	LANL	USE	S
per0709049a	232744006	CWW	7/9/2009 20:56	882499	09-2525-1	1	LANL	USE	S
per0709050a	232744007	CWW	7/9/2009 21:08	882499	09-2525-1	1	LANL	USE	S
per0709051a	232744008	CWW	7/9/2009 21:19	882499	09-2525-1	1	LANL	USE	S
per0709052a	232754001	CWW	7/9/2009 21:31	882499	09-2536	1	LANL	USE	S
per0709053a	232754002	CWW	7/9/2009 21:43	882499	09-2536	1	LANL	USE	S
per0709054a	232754003	CWW	7/9/2009 21:55	882499	09-2536	1	LANL	USE	S
per0709055a	WCLCCV	CWW	7/9/2009 22:06			1		USE	C
per0709056a	IPB007	CWW	7/9/2009 22:18			1		USE	B
per0709057a	WCLCRI	CWW	7/9/2009 22:30			1		USE	C
per0709058a	232760001	CWW	7/9/2009 22:42	882499	09-2542-1	1	LANL	USE	S
per0709059a	1201874310	CWW	7/9/2009 22:54	882499	09-2542-1	1	LANL	USE	S
per0709060a	1201874311	CWW	7/9/2009 23:05	882499	09-2542-1	1	LANL	USE	S
per0709061a	232760002	CWW	7/9/2009 23:17	882499	09-2542-1	1	LANL	USE	S
per0709062a	232760003	CWW	7/9/2009 23:29	882499	09-2542-1	1	LANL	USE	S
per0709063a	232760004	CWW	7/9/2009 23:41	882499	09-2542-1	1	LANL	USE	S
per0709064a	WCLCCV	CWW	7/9/2009 23:52			1		USE	C
per0709065a	IPB008	CWW	7/10/2009 0:04			1		USE	B
per0709066a	WCLCRI	CWW	7/10/2009 0:16			1		USE	C

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per0709067a	1201877137	CWW	7/10/2009 0:28	883633	09-2547	1	LANL	USE	S
per0709068a	1201877138	CWW	7/10/2009 0:40	883633	09-2547	1	LANL	USE	S
per0709069a	1201877142	CWW	7/10/2009 0:52	883633	09-2547	1	LANL	USE	S
per0709070a	232851001	CWW	7/10/2009 1:03	883633	09-2547	1	LANL	USE	S
per0709071a	1201877139	CWW	7/10/2009 1:15	883633	09-2547	1	LANL	USE	S
per0709072a	1201877140	CWW	7/10/2009 1:27	883633	09-2547	1	LANL	USE	S
per0709073a	232851002	CWW	7/10/2009 1:39	883633	09-2547	1	LANL	USE	S
per0709074a	IPB009	CWW	7/10/2009 1:50			1		USE	B
per0709075a	1201872362	CWW	7/10/2009 2:02	881654	09-2512	1	LANL	USE	S
per0709076a	WCLCCV	CWW	7/10/2009 2:14			1		USE	C
per0709077a	IPB010	CWW	7/10/2009 2:26			1		USE	B
per0709078a	WCLCRI	CWW	7/10/2009 2:38			1		USE	C

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708063a
Date: 08-Jul-2009
Time: 20:36:55
ID: 1201872344
Vial: 2:3,D

|LANL|881646|SOLID|MS|11|

07-09-09

Perchlorate

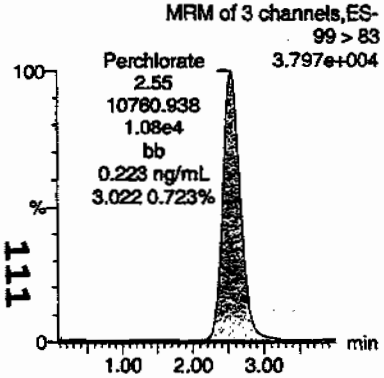

Perchlorate

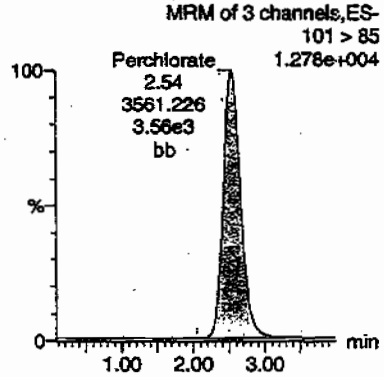

Perchlorate-101

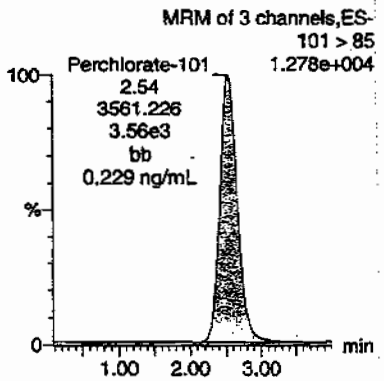

Perchlorate-O(18)

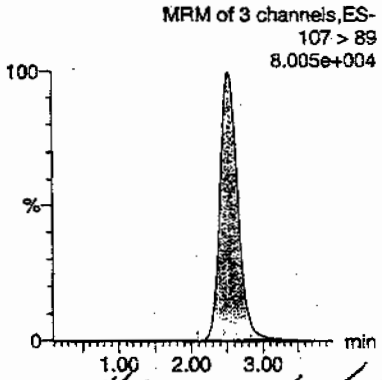

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HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872344	Perchlorate	99 > 83	2.55	10760.938	10760.938	bb			0.2226	111.32	11.32	1778.7...	3.02
1201872344	Perchlorate-101	101 > 85	2.54	3561.226	3561.226	bb			0.2287	114.36	14.36	409.957	
1201872344	Perchlorate-O(18)	107 > 89	2.53	22184.420	22184.420	bb			0.5068	101.36	1.36	7341.0...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708064a
Date: 08-Jul-2009
Time: 20:44:39
ID: 1201872345
Vial: 2:3,E

|LANL|881646|5020|MSD|1|

07 09 09

Perchlorate

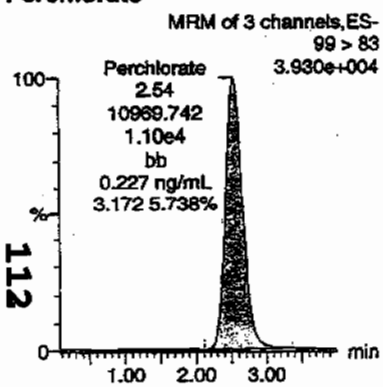

Perchlorate

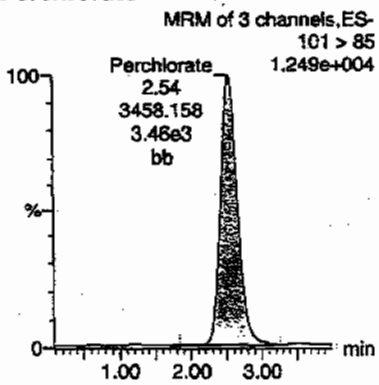

Perchlorate-101

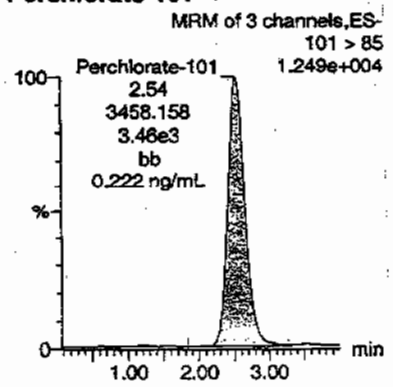

Perchlorate-O(18)

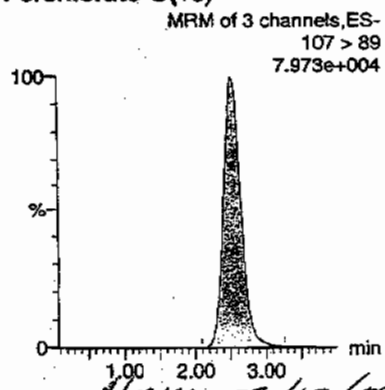

HNM 08/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201872345	Perchlorate	99 > 83	2.54	10969.742	10969.742	bb			0.2270	113.48	13.48	2005.0...	3.17
1201872345	Perchlorate-101	101 > 85	2.54	3458.158	3458.158	bb			0.2221	111.05	11.05	2356.5...	
1201872345	Perchlorate-O(18)	107 > 89	2.53	22121.789	22121.789	bb			0.5054	101.08	1.08	4214.8...	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2500-1

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	881216
Prep Batch Number:	881215

Sample Analysis

Sample ID	Client ID
232510001	CAMO-09-6533
1201871417	Interference Check Sample (ICS)
1201871409	Method Blank (MB)
1201871410	Laboratory Control Sample (LCS)
1201871414	232370001(CAMO-09-6053) Matrix Spike (MS)
1201871416	232370001(CAMO-09-6053) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

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CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232370001 (CAMO-09-6053) from SDG 09-2452-1 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

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Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The sample in this SDG was not originally analyzed using EPA Method 314.0.

Additional Comments
The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

Perchlorate Isotope Ratio
The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert M Maier **Date:** 07/07/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-6533

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500-1

GEL Sample ID: 232510001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	30-JUN-09 20:16	per0630074a
	Perchlorate Isotope Ratio						1	30-JUN-09 20:16	per0630074a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	30-JUN-09 20:16	per0630074a
	Perchlorate-O(18)			0.445	ug/L		1	30-JUN-09 20:16	per0630074a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09-2500-1

Extract Batch Code: 881215

Date Filtered: 30-JUN-09

Matrix: GROUND WATER

Sample ID: 1201871410

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.186	ug/L	93.1		85 – 115
Perchlorate Isotope Ratio		2.71				–
Perchlorate–101	0.200	.189	ug/L	94.6		85 – 115
Perchlorate–O(18)		.435	ug/L			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09-2500-1

Extract Batch Code: 881215

Date Filtered: 30-JUN-09

Matrix: WATER

Sample ID: 1201871417

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.2	ug/L	100		70 – 130
Perchlorate Isotope Ratio		2.62				
Perchlorate–101	0.200	.211	ug/L	105		70 – 130
Perchlorate–O(18)		.467	ug/L			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630047a
Date: 30-Jun-2009
Time: 16:33:09
ID: 1201871417
Vial: 2:1,C

|LANL|881216|LZQ|IC5|1|

CWW 07-01-5

Perchlorate

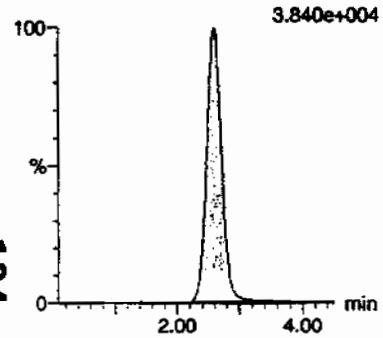

Perchlorate

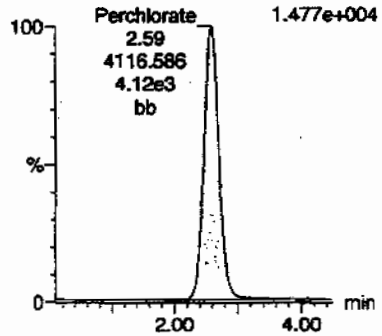

Perchlorate-101

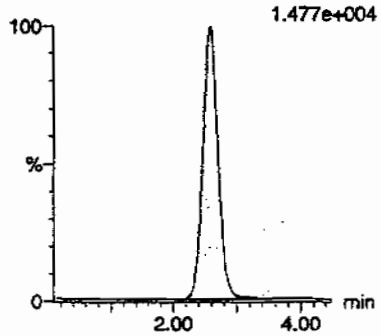

Perchlorate-O(18)

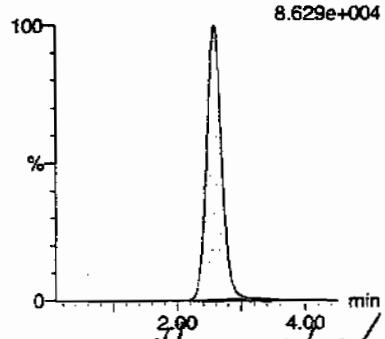

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871417	Perchlorate	99 > 83	2.59	10770.017	10770.017	bb			0.2002	100.10	0.10	617.777	2.62
1201871417	Perchlorate-101	101 > 85	2.59	4116.586	4116.586	bb			0.2106	105.31	5.31	471.114	
1201871417	Perchlorate-O(18)	107 > 89	2.58	23954.342	23954.342	bb			0.4666	93.32	-6.68	1264.8...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2500–1

Extract Batch Code: 881215

Date Extracted: 30–JUN–09

GEL MS/PS ID: 1201871414

Client ID: CAMO–09–6053

GEL MSD/PSD ID: 1201871416

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	0.200	0.00507	ug/L	0.192	93.3	.184	89.6	3.92	30	75 – 125
Perchlorate Isotope Ratio	0	0.00		2.68		2.65		0		–
Perchlorate–101	0.200	0.00467	ug/L	0.197	96	.191	93.3	2.8	30	75 – 125
Perchlorate–O(18)	0	0.442	ug/L	0.444		.445		.283		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2500-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	30-JUN-09	per0630001a	IPB001
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630001a	IPB001
Perchlorate	0.00	0	NA	30-JUN-09	per0630002a	IPB001
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630002a	IPB001

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per063009a.mdb 30 Jun 2009 11:03:27
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per063009a.cdb 01 Jul 2009 08:12:45

Name: per0630001a
Date: 30-Jun-2009
Time: 10:13:26
ID: IPB001
Vial: 1:1,A

cwd
07-01-09

Perchlorate

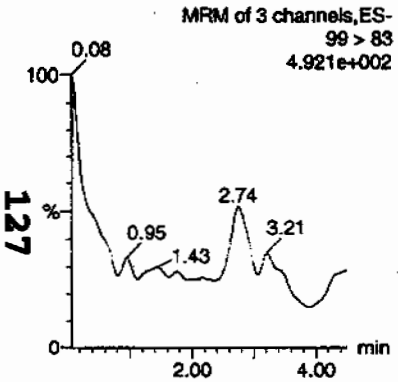

Perchlorate

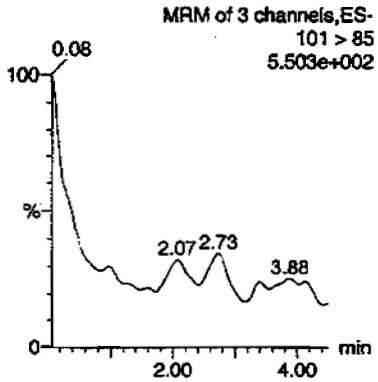

Perchlorate-101

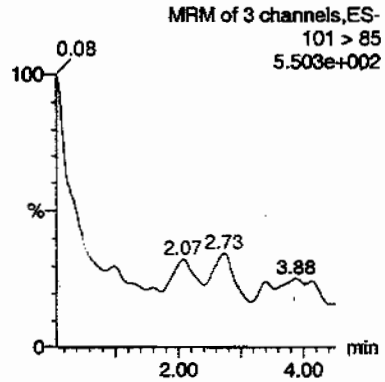

Perchlorate-O(18)

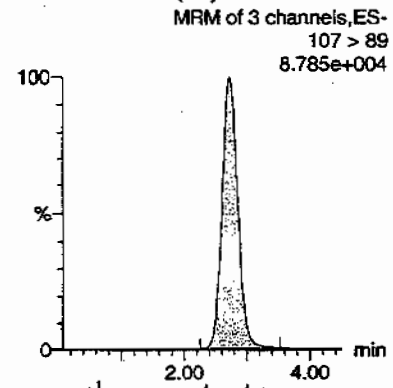

Anwc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.74	25499.680	25499.680	bb			0.4967	99.34	-0.66	1986.5...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630002a
Date: 30-Jun-2009
Time: 10:21:51
ID: IPB001
Vial: 1:1,A

CWW 07-01-09

Perchlorate

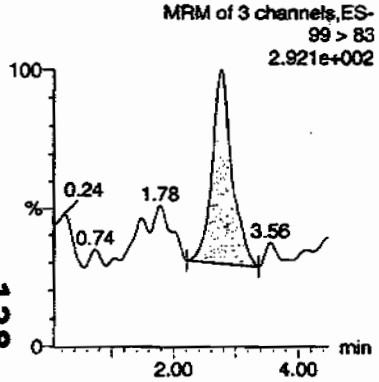

Perchlorate

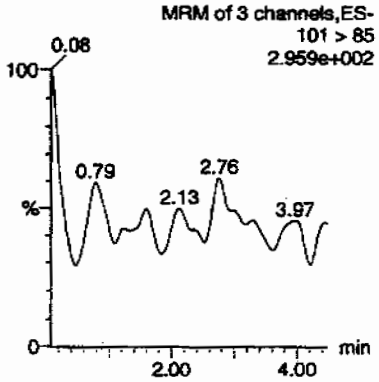

Perchlorate-101

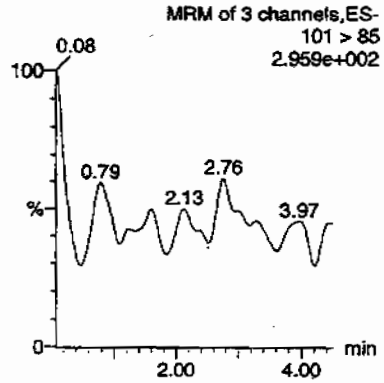

Perchlorate-O(18)

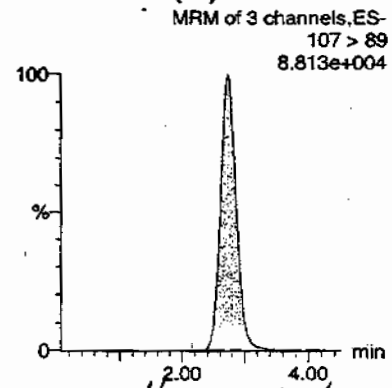

HNM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.77	78.075	78.075	bb			0.0015			13.957	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.74	25611.930	25611.930	bb			0.4989	99.78	-0.22	5316.7...	

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2500–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	30–JUN–09	per0630008a	IPB002
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630008a	IPB002
Perchlorate	0.00	0	NA	30–JUN–09	per0630010a	IPB003
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630010a	IPB003
Perchlorate	0.00	0	NA	30–JUN–09	per0630021a	IPB004
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630021a	IPB004
Perchlorate	0.00	0	NA	30–JUN–09	per0630032a	IPB005
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630032a	IPB005
Perchlorate	0.00	0	NA	30–JUN–09	per0630043a	IPB006
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630043a	IPB006
Perchlorate	0.00	0	NA	30–JUN–09	per0630054a	IPB007
Perchlorate–101	0.00	0	NA	30–JUN–09	per0630054a	IPB007
Perchlorate	0.00	0	NA	30–JUN–09	per0630065a	IPB008

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2500-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630065a	IPB008
Perchlorate	0.00	0	NA	30-JUN-09	per0630076a	IPB009
Perchlorate-101	0.00	0	NA	30-JUN-09	per0630076a	IPB009

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630008a
Date: 30-Jun-2009
Time: 11:11:24
ID: IPB002
Vial: 1:1,A

AWO 07-01-09

Perchlorate

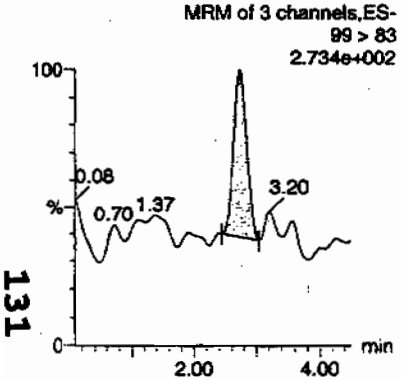

Perchlorate

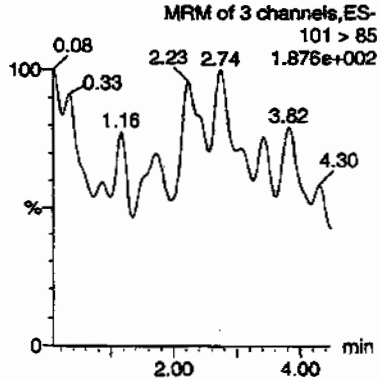

Perchlorate-101

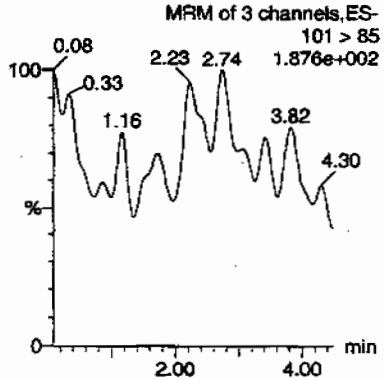

Perchlorate-O(18)

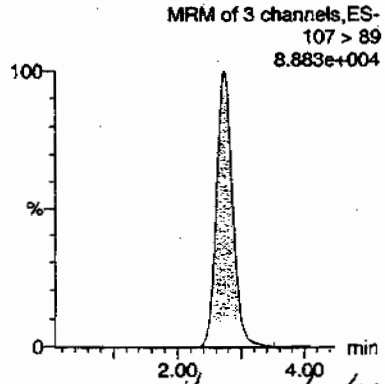

HM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.73	41.477	41.477	bb			0.0008			22.735	0.00
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	2.74	25865.879	25865.879	bb			0.5039	100.77	0.77	13696....	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630010a
Date: 30-Jun-2009
Time: 11:27:53
ID: IPB003
Vial: 1:1,A

Perchlorate

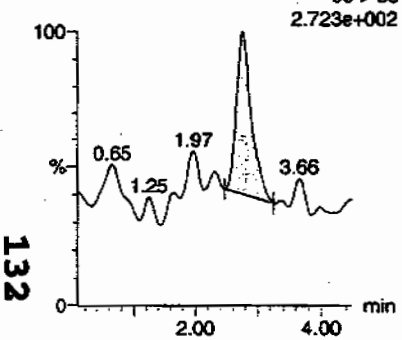

Perchlorate

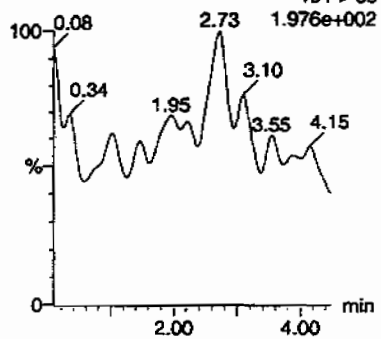

Perchlorate-101

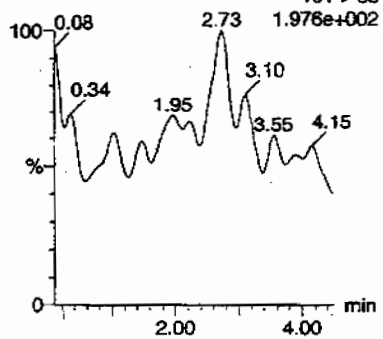

Perchlorate-O(18)

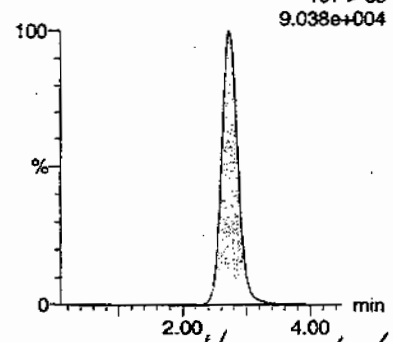

Hmc 02/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.76	46.613	46.613	bb			0.0009			12.878	0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	2.74	26347.156	26347.156	bb			0.5132	102.65	2.65	1443.4...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630021a
Date: 30-Jun-2009
Time: 12:58:33
ID: IPB004
Vial: 1:1,A

07-01-09

Perchlorate

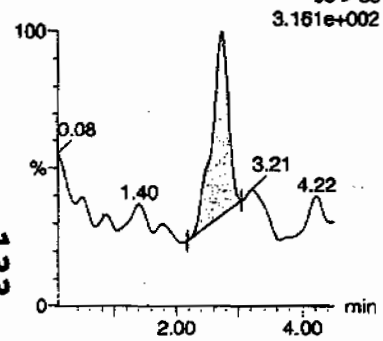

Perchlorate

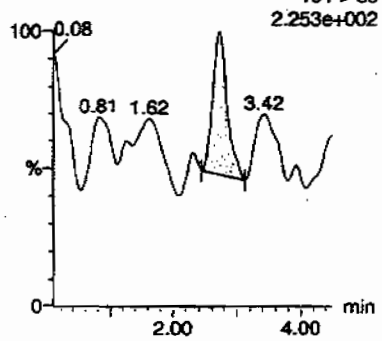

Perchlorate-101

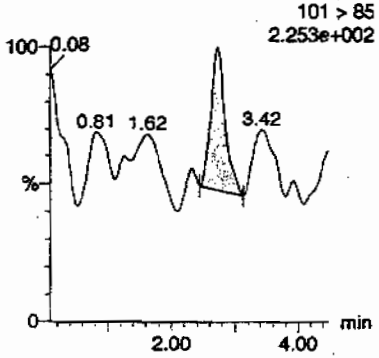

Perchlorate-O(18)

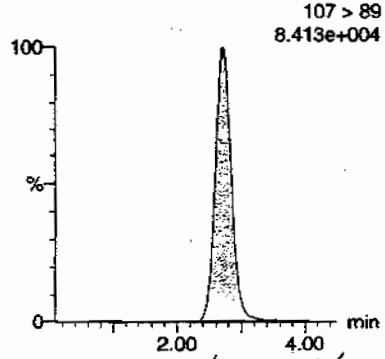

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.73	66.205	66.205	bb			0.0012			10.897	2.12
IPB004	Perchlorate-101	101 > 85	2.73	31.188	31.188	bb			0.0016			11.767	
IPB004	Perchlorate-O(18)	107 > 89	2.71	24336.664	24336.664	bb			0.4741	94.81	-5.19	9731.8...	

OKAY
LA 0500

133

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630032a
Date: 30-Jun-2009
Time: 14:29:15
ID: IPB005
Vial: 1:1,A

CWW 07-01-09

Perchlorate

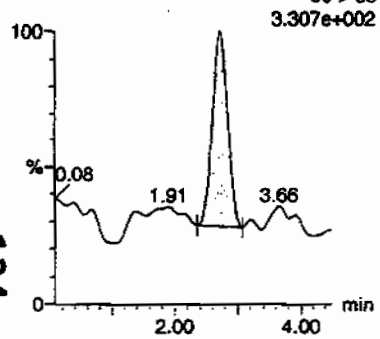

Perchlorate

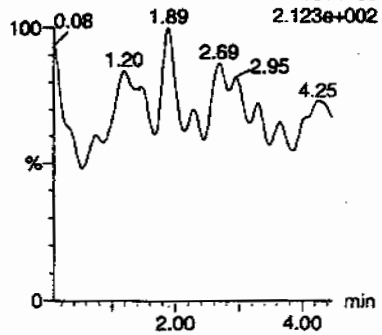

Perchlorate-101

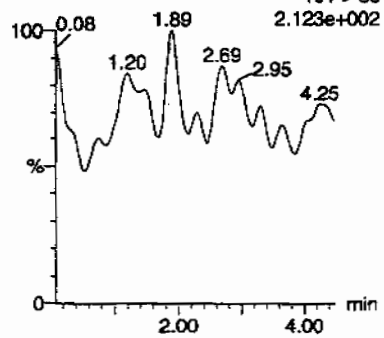

Perchlorate-O(18)

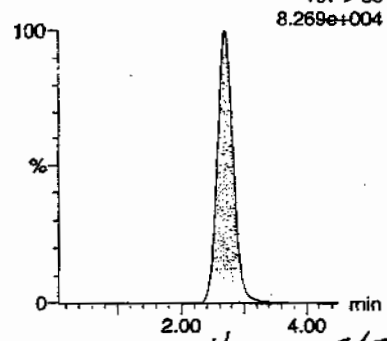

Hnm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83	2.73	68.128	68.128	bb			0.0013			10.633	0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.69	24007.066	24007.066	bb			0.4676	93.53	-6.47	4573.8...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630043a
Date: 30-Jun-2009
Time: 15:59:59
ID: IPB006
Vial: 1:1,A

07-01-09

Perchlorate

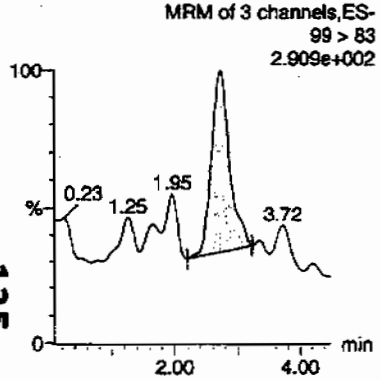

Perchlorate

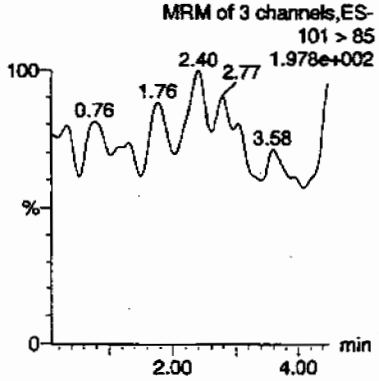

Perchlorate-101

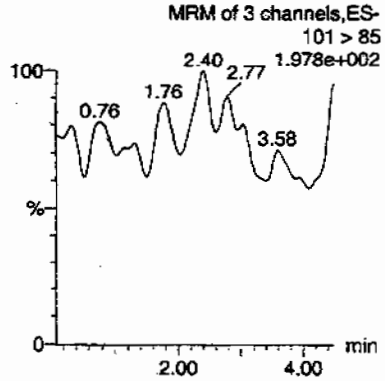

Perchlorate-O(18)

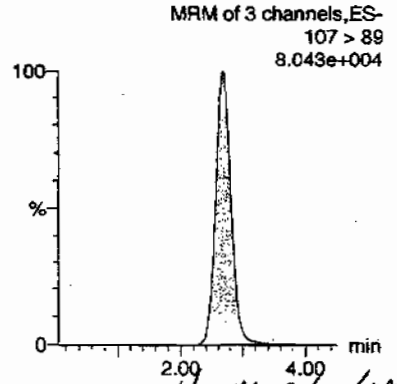

Am 07/01/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	2.71	66.098	66.098	bb			0.0012			24.923	0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	2.68	22968.156	22968.156	bb			0.4474	89.48	-10.52	10845....	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630054a
Date: 30-Jun-2009
Time: 17:30:59
ID: IPB007
Vial: 1:1,A

CWW 07-01-09

Perchlorate

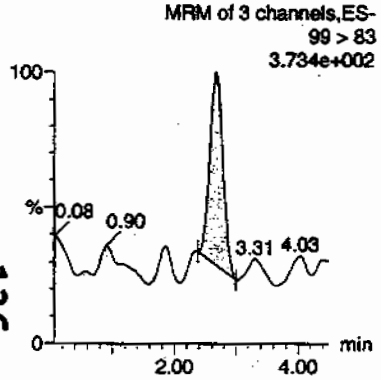

Perchlorate

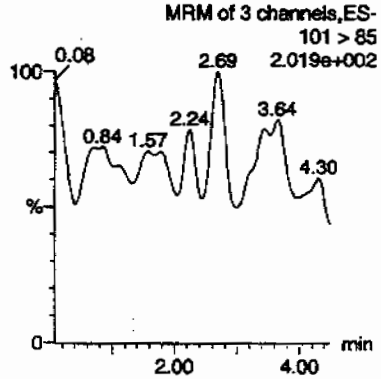

Perchlorate-101

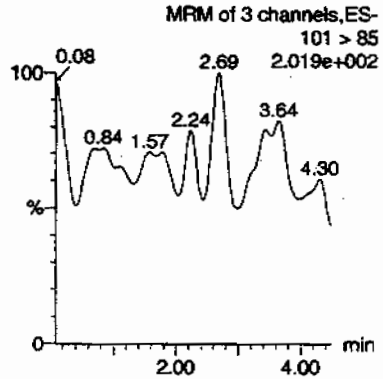

Perchlorate-O(18)

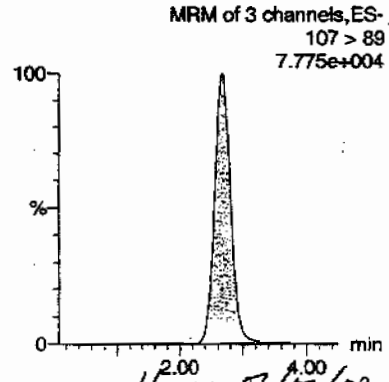

Hmc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83	2.68	66.521	66.521	bb			0.0012			16.943	0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	2.68	22485.289	22485.289	bb			0.4380	87.60	-12.40	12877....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630065a
Date: 30-Jun-2009
Time: 19:01:59
ID: IPB008
Vial: 1:1,A

CWW 07-01-09

Perchlorate

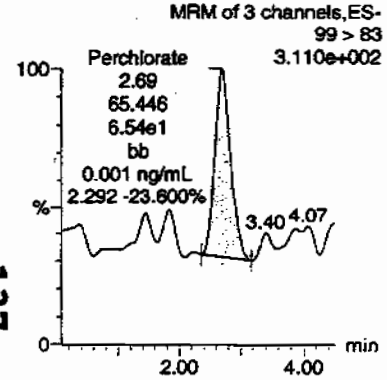

Perchlorate

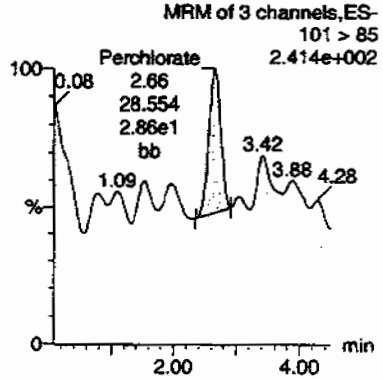

Perchlorate-101

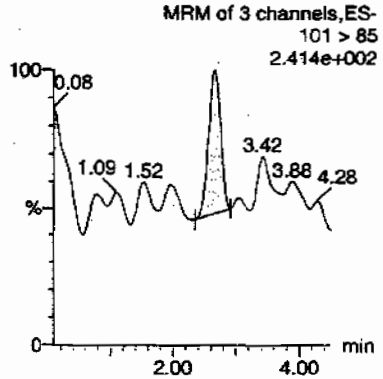

Perchlorate-O(18)

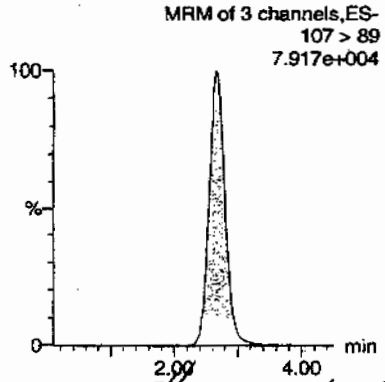

HMK 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83	2.69	65.446	65.446	bb			0.0012			24.164	2.29
IPB008	Perchlorate-101	101 > 85	2.66	28.554	28.554	bb			0.0015			5.670	
IPB008	Perchlorate-O(18)	107 > 89	2.66	22664.361	22664.361	bb			0.4415	88.30	-11.70	11124....	

OKAY
LOQ500

137

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630076a
Date: 30-Jun-2009
Time: 20:33:01
ID: IPB009
Vial: 1:1,A

CWW 07-01-09

Perchlorate

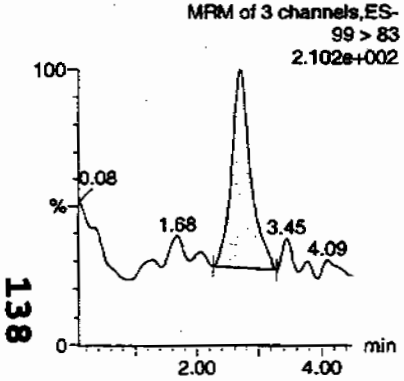

Perchlorate

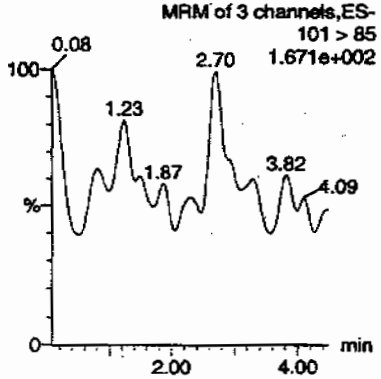

Perchlorate-101

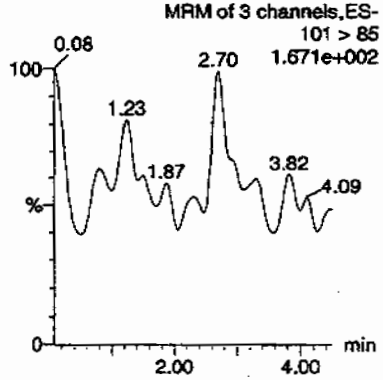

Perchlorate-O(18)

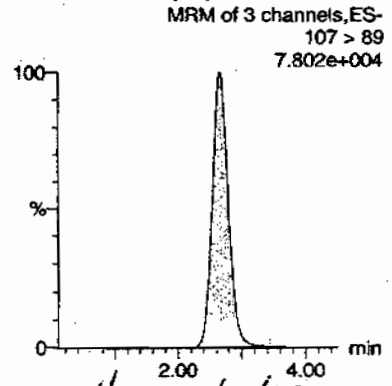

HMC 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB009	Perchlorate	99 > 83	2.70	55.756	55.756	bb			0.0010			23.163	0.00
IPB009	Perchlorate-101	101 > 85											
IPB009	Perchlorate-O(18)	107 > 89	2.66	22488.906	22488.906	bb			0.4381	87.61	-12.39	7445.5...	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWD 01-07-08

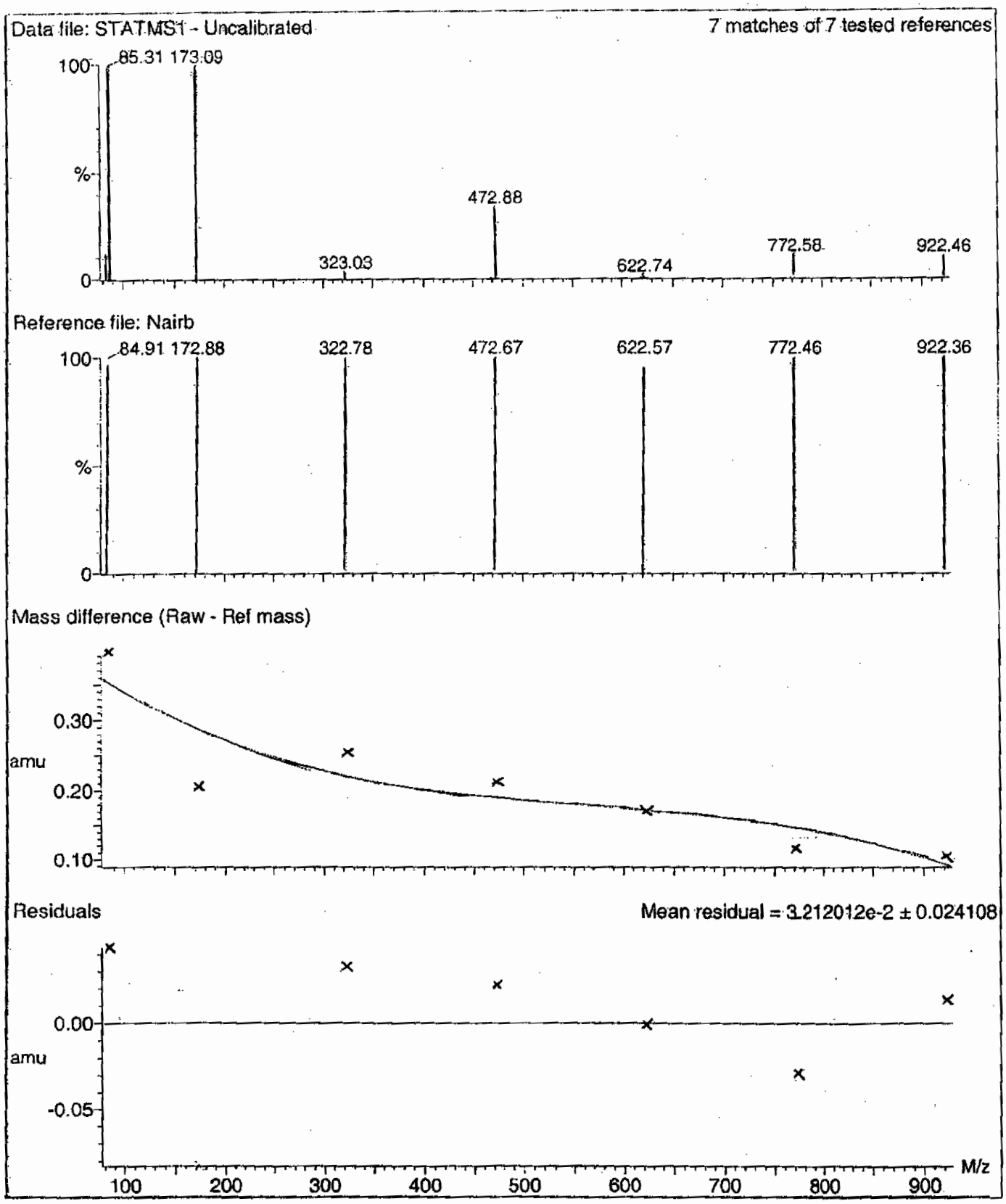

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

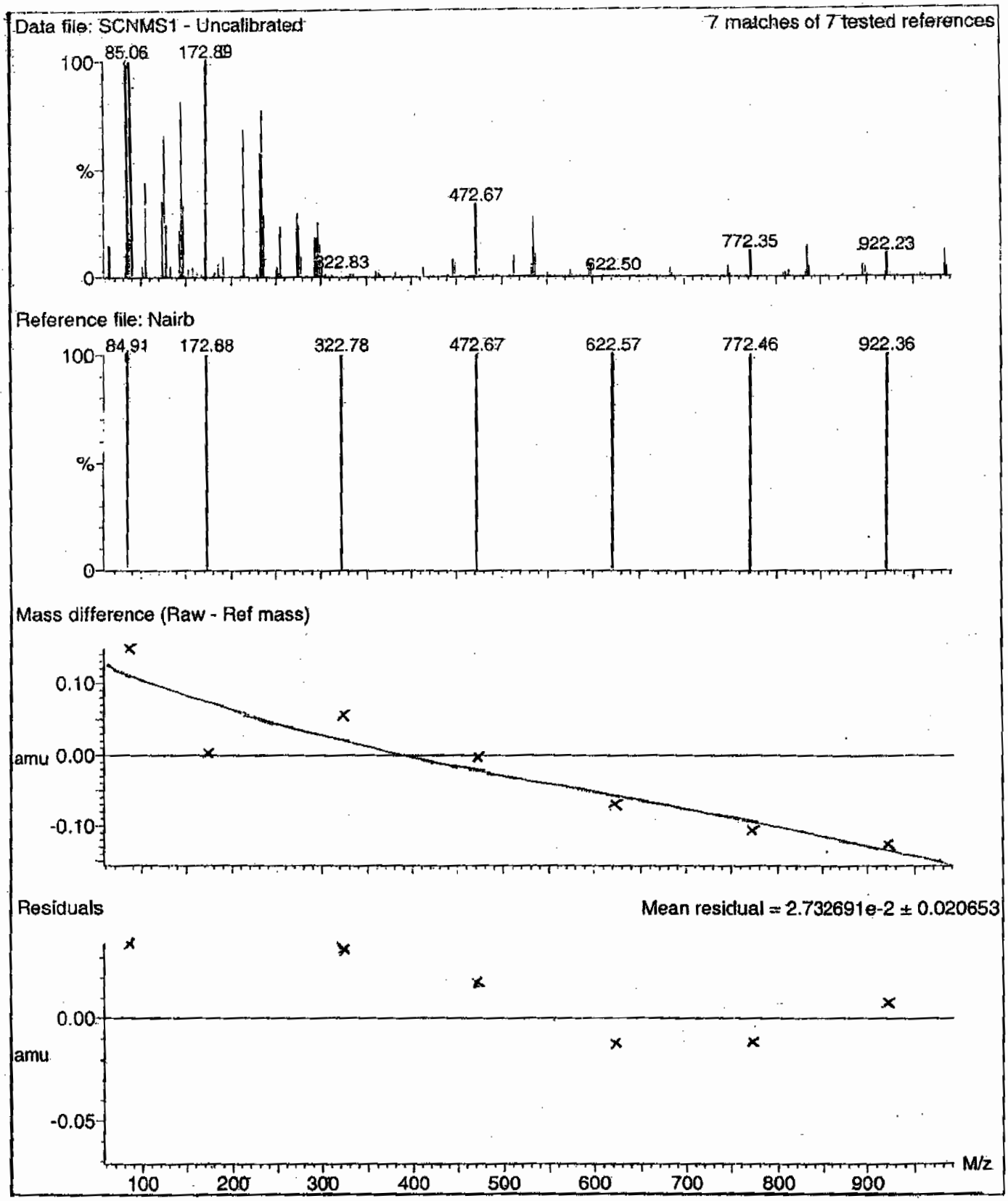

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Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

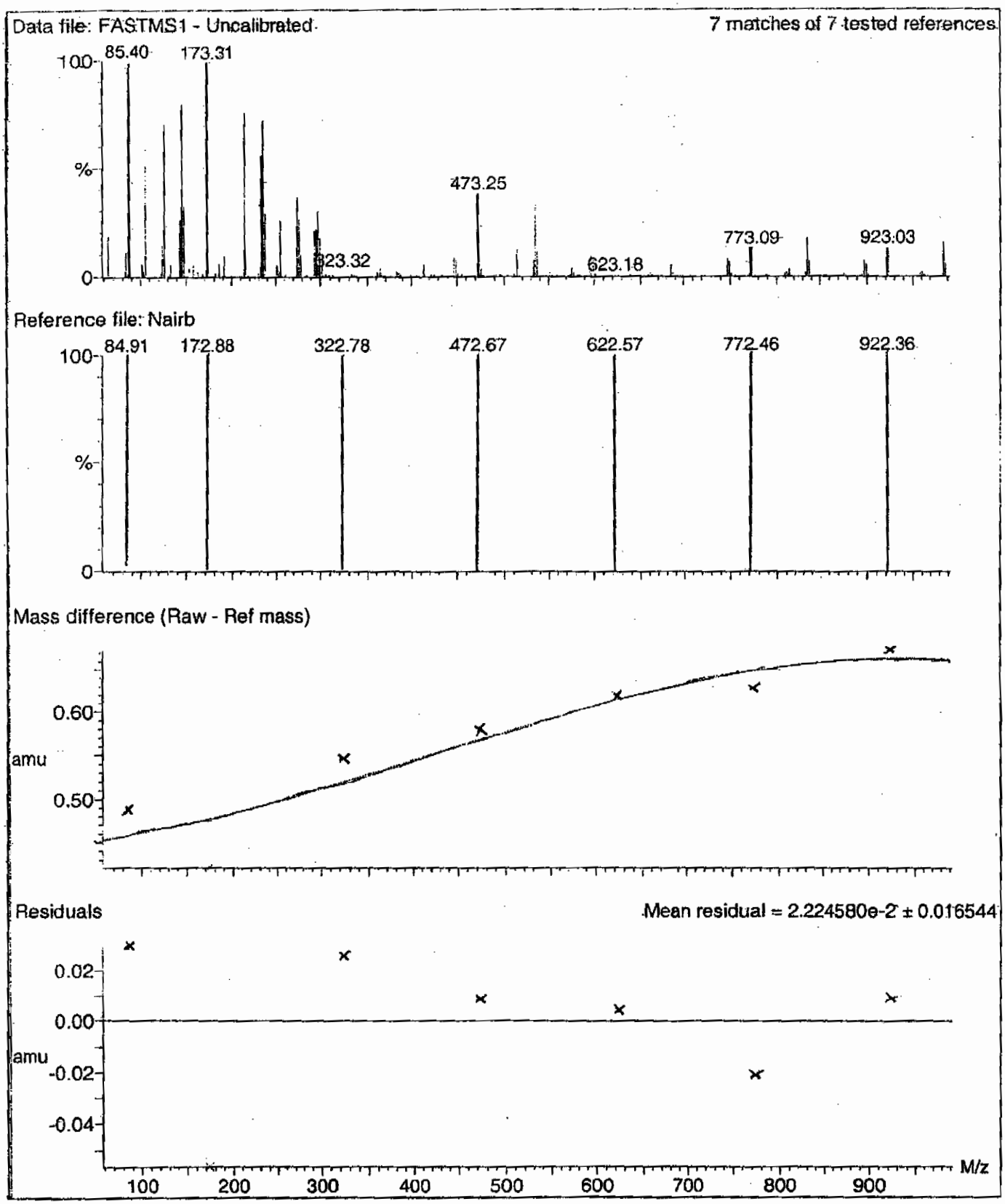

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Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

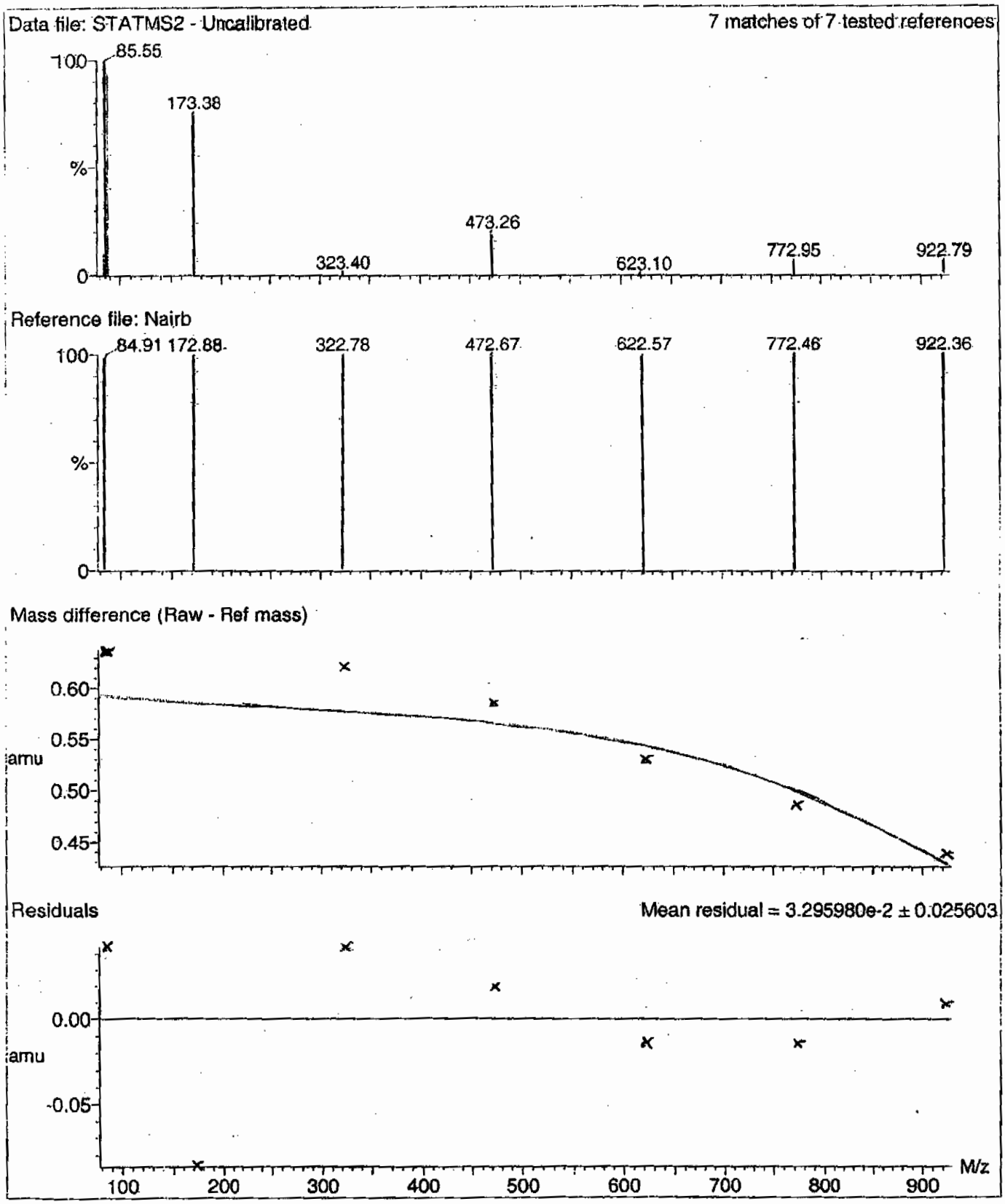

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Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

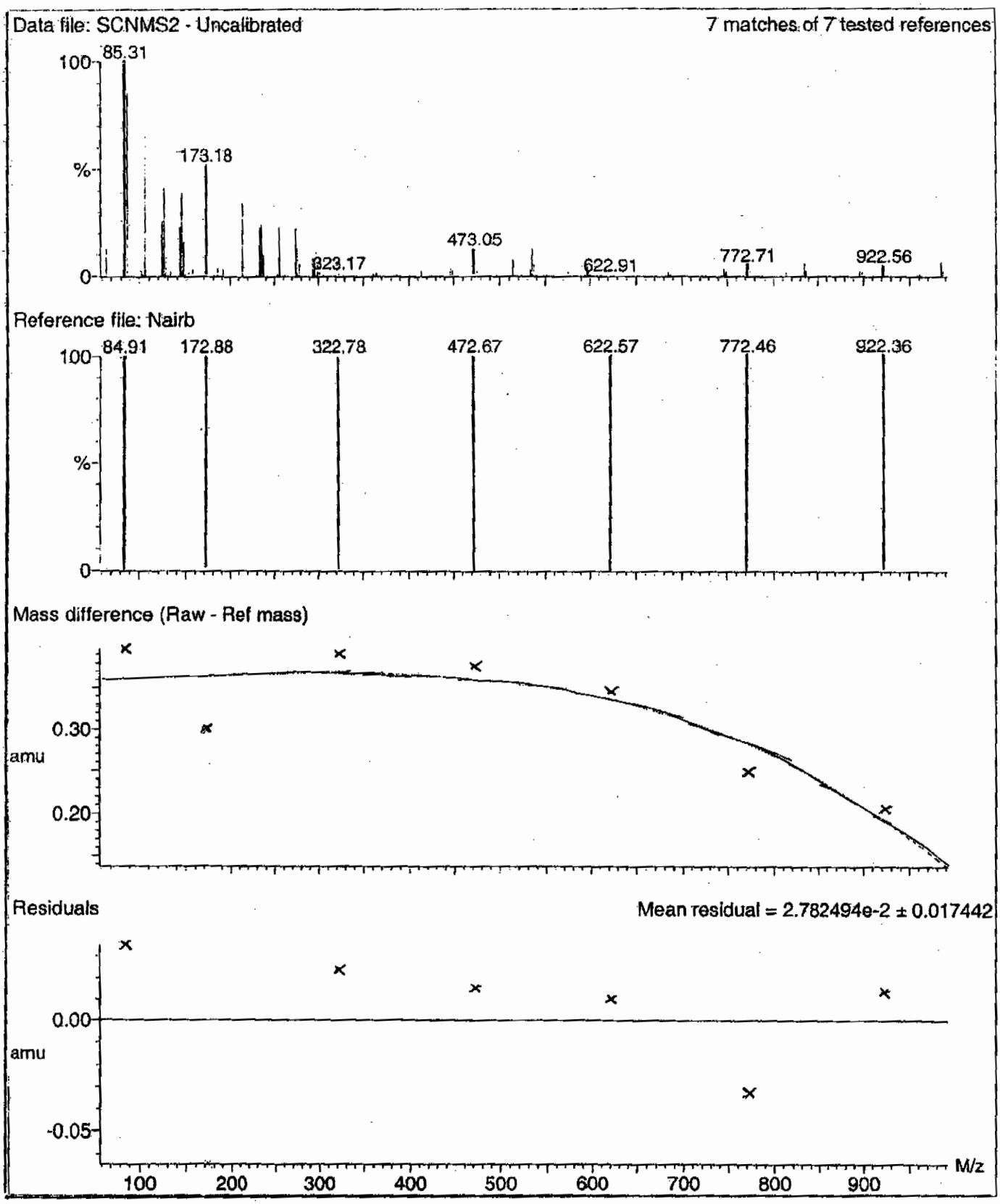

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Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

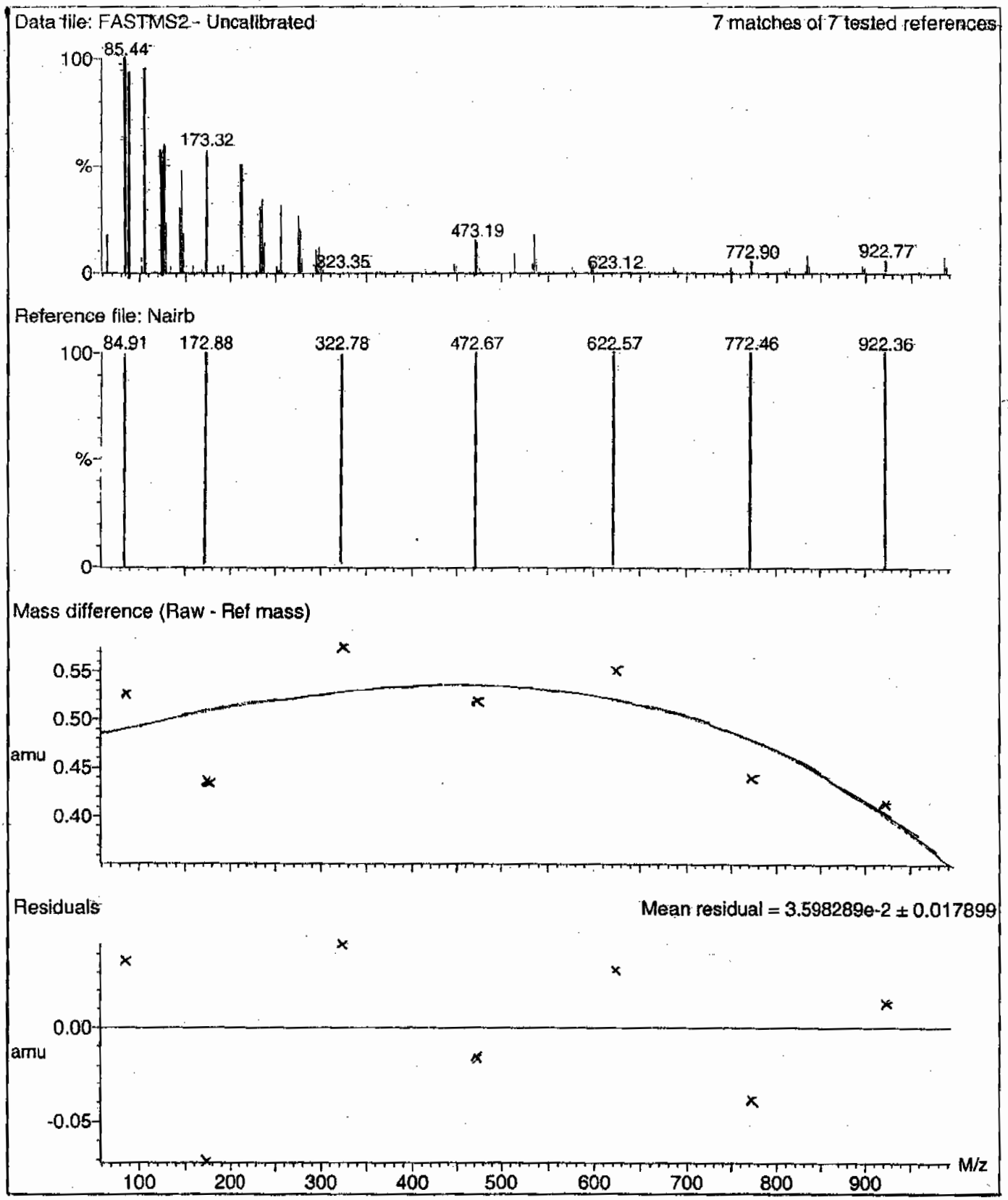

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File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Tuesday, June 30, 2009 10:00:39 Eastern Daylight Time

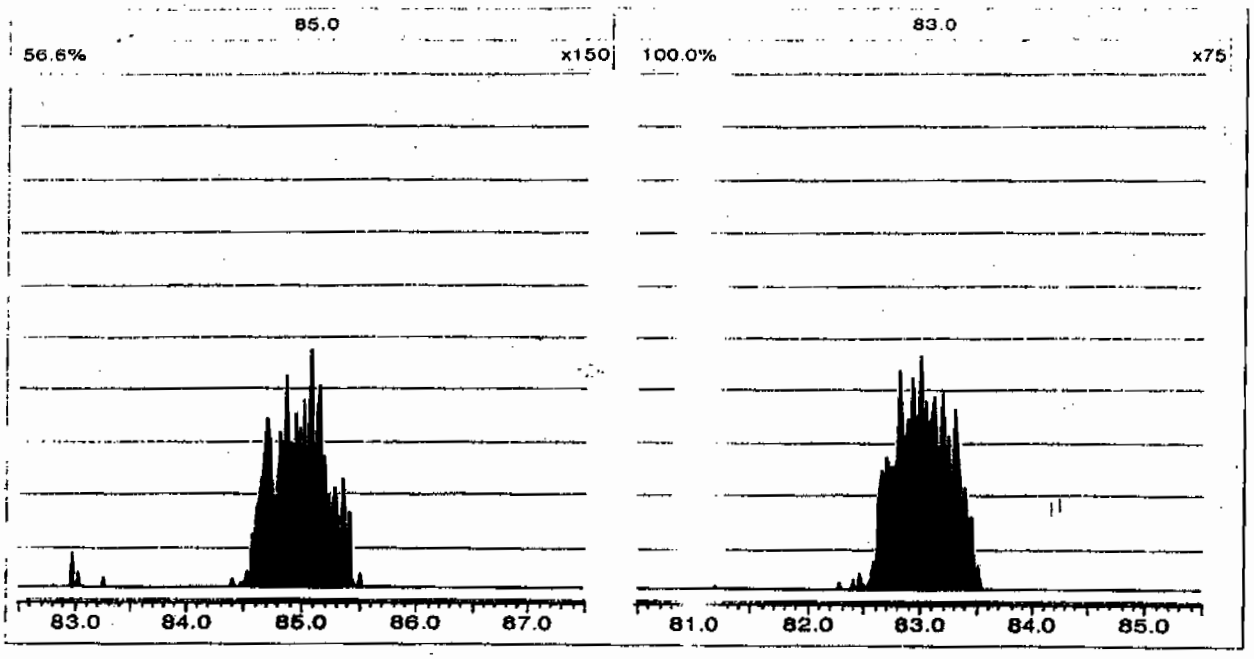

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2500–1

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0630006a**	**30–JUN–09**	**25387.5**				
Lower Area Limit			**12693.75**				
Upper Area Limit			**50775**				
1201871409	per0630045a	30–JUN–09 16:16	21871.3	2.68	2.68793	1.003	
1201871410	per0630046a	30–JUN–09 16:24	22316.8	2.69	2.7002	1.004	
1201871417	per0630047a	30–JUN–09 16:33	23954.3	2.58	2.58837	1.003	
232510001	per0630074a	30–JUN–09 20:16	22824.3	2.66	2.66297	1.001	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-6533

Date Received: 27-JUN-09

GEL Job No (SDG): 09-2500-1

GEL Sample ID: 232510001

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	30-JUN-09 20:16	per0630074a
	Perchlorate Isotope Ratio						1	30-JUN-09 20:16	per0630074a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	30-JUN-09 20:16	per0630074a
	Perchlorate-O(18)			0.445	ug/L		1	30-JUN-09 20:16	per0630074a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630074a
Date: 30-Jun-2009
Time: 20:16:18
ID: 232510001
Vial: 2:4,F

|LANL|881216|LZQ|1|

AWS 07-01-09

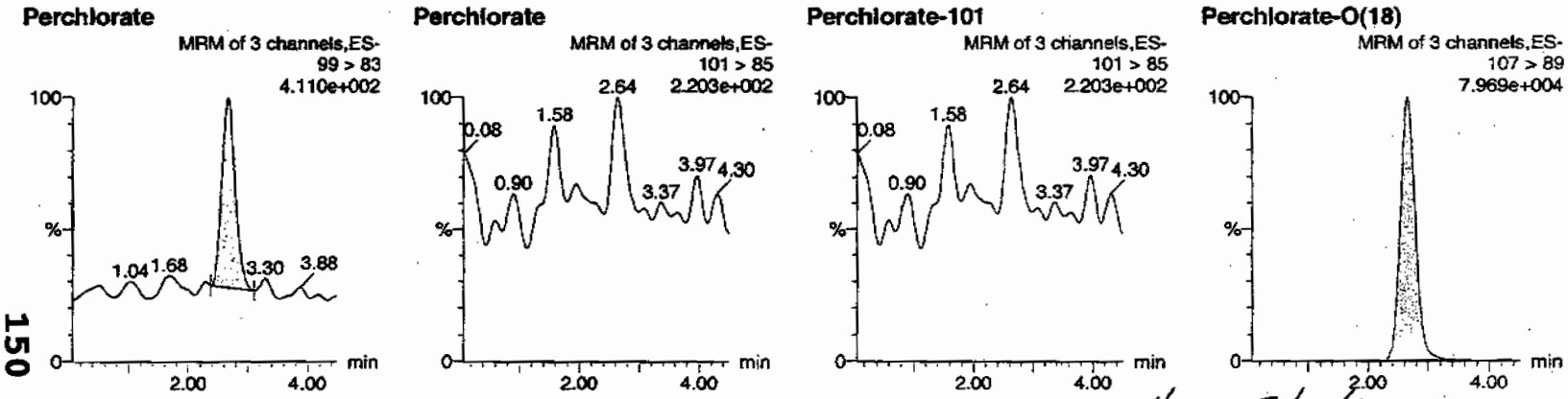

Dmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232510001	Perchlorate	99 > 83	2.66	80.103	80.103	bb			0.0015			33.659	0.00
232510001	Perchlorate-101	101 > 85											
232510001	Perchlorate-O(18)	107 > 89	2.66	22824.313	22824.313	bb			0.4446	88.92	-11.08	5572.6...	

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2500-1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 30-JUN-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 53797.02

Response Type: External Standard

Curve Type: RF

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2500-1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 30-JUN-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 19544.92

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 9:01:25 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per063009a.mdb 30 Jun 2009 11:03:27
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per063009a.cdb 01 Jul 2009 08:12:45

Compound name: Perchlorate
Response Factor: 53797
RRF SD: 950.099, % Relative SD: 1.76608
Response type: External Std, Area
Curve type: RF

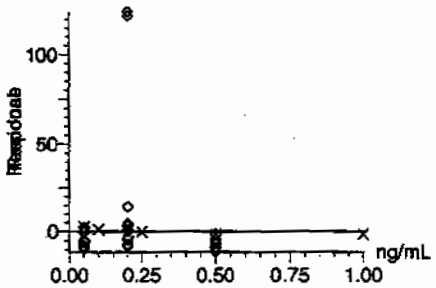

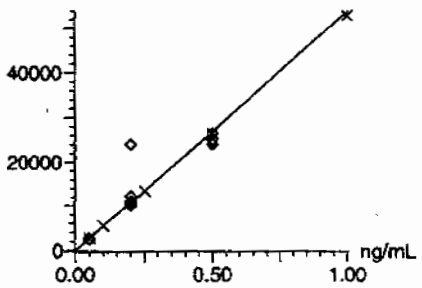

CWW 07-01-09

Compound name: Perchlorate-101
Response Factor: 19544.9
RRF SD: 835.421, % Relative SD: 4.27437
Response type: External Std, Area
Curve type: RF

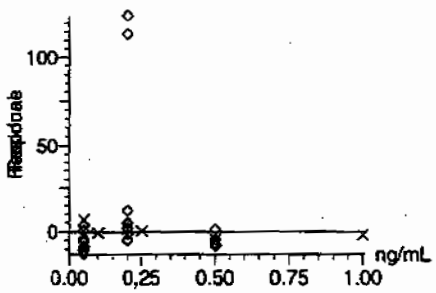

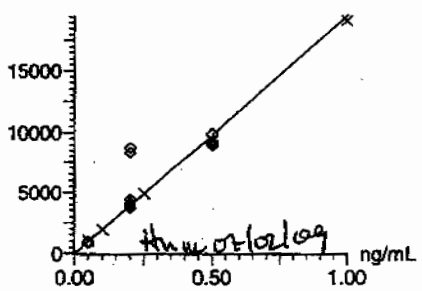

thw 07/02/09

154

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 9:01:25 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 51336.3
RRF SD: 459.349, % Relative SD: 0.894783
Response type: External Std, Area
Curve type: RF

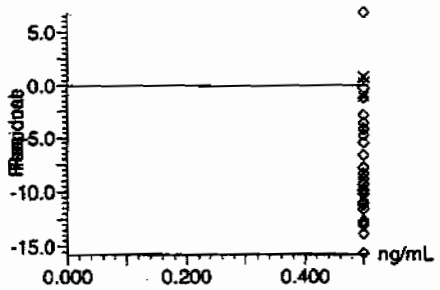

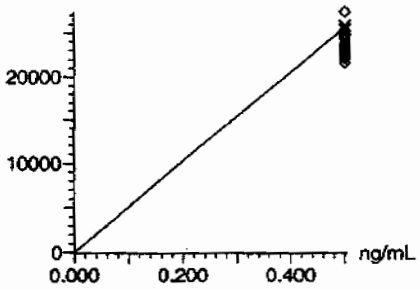

155

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2500-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	98.41	30-JUN-09 11:19	per0630009a
Perchlorate Isotope Ratio		2.68		30-JUN-09 11:19	per0630009a
Perchlorate-101	.5	.51	101.17	30-JUN-09 11:19	per0630009a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630009a
Date: 30-Jun-2009
Time: 11:19:39
ID: WCL090610-06ICV
Vial: 1:2,A

aw
07-01-09

Perchlorate

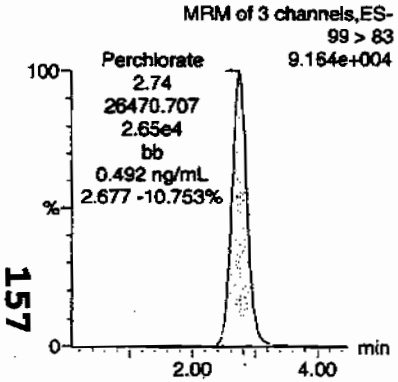

Perchlorate

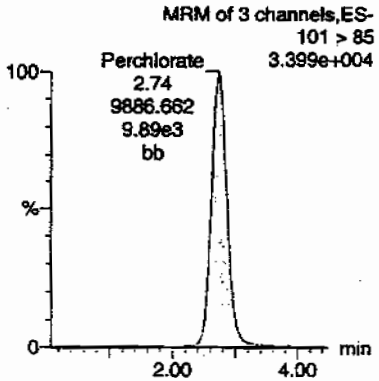

Perchlorate-101

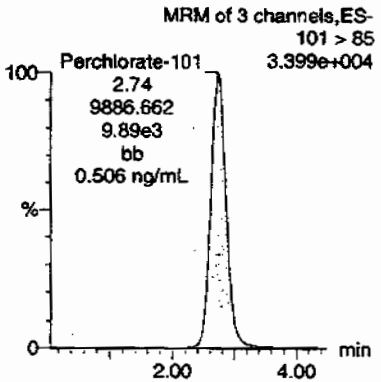

Perchlorate-O(18)

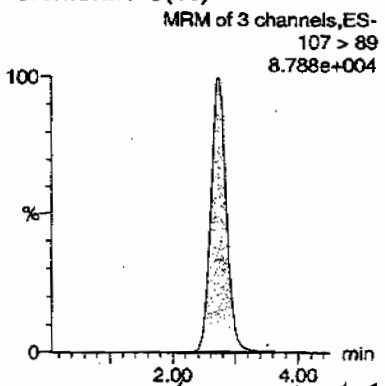

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06ICV	Perchlorate	99 > 83	2.74	26470.707	26470.707	bb			0.4920	98.41	-1.59	15047....	2.68
WCL090610-06ICV	Perchlorate-101	101 > 85	2.74	9886.662	9886.662	bb			0.5058	101.17	1.17	1131.1...	
WCL090610-06ICV	Perchlorate-O(18)	107 > 89	2.73	25360.139	25360.139	bb			0.4940	98.80	-1.20	4237.8...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2500-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	93.51	30-JUN-09 12:50	per0630020a
Perchlorate Isotope Ratio		2.71		30-JUN-09 12:50	per0630020a
Perchlorate-101	.5	.47	94.92	30-JUN-09 12:50	per0630020a
Perchlorate	.5	.47	93.43	30-JUN-09 14:21	per0630031a
Perchlorate Isotope Ratio		2.75		30-JUN-09 14:21	per0630031a
Perchlorate-101	.5	.47	93.52	30-JUN-09 14:21	per0630031a
Perchlorate	.5	.47	93.5	30-JUN-09 15:51	per0630042a
Perchlorate Isotope Ratio		2.7		30-JUN-09 15:51	per0630042a
Perchlorate-101	.5	.48	95.26	30-JUN-09 15:51	per0630042a
Perchlorate	.5	.47	93.35	30-JUN-09 17:22	per0630053a
Perchlorate Isotope Ratio		2.8		30-JUN-09 17:22	per0630053a
Perchlorate-101	.5	.46	91.73	30-JUN-09 17:22	per0630053a
Perchlorate	.5	.45	89.18	30-JUN-09 18:53	per0630064a

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2500–1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		2.66		30–JUN–09 18:53	per0630064a
Perchlorate–101	.5	.46	92.31	30–JUN–09 18:53	per0630064a
Perchlorate	.5	.46	91.12	30–JUN–09 20:24	per0630075a
Perchlorate Isotope Ratio		2.74		30–JUN–09 20:24	per0630075a
Perchlorate–101	.5	.46	91.55	30–JUN–09 20:24	per0630075a

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Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630020a
Date: 30-Jun-2009
Time: 12:50:19
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
amo
07/01/09

Perchlorate

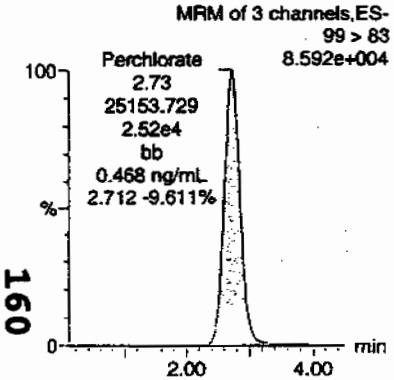

Perchlorate

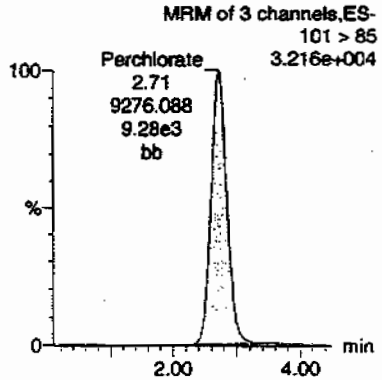

Perchlorate-101

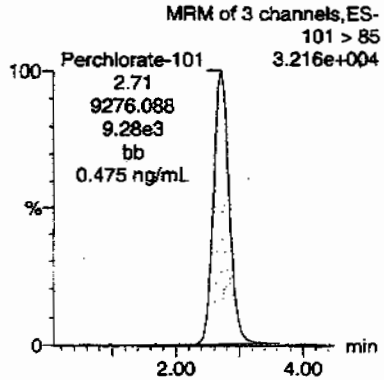

Perchlorate-O(18)

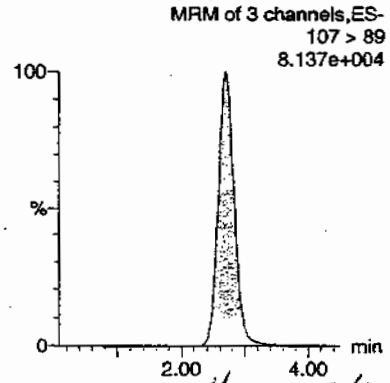

Hmc 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.73	25153.729	25153.729	bb			0.4676	93.51	-6.49	13956....	2.71
WCL090610-06CCV	Perchlorate-101	101 > 85	2.71	9276.088	9276.088	bb			0.4746	94.92	-5.08	1180.7...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.70	23519.236	23519.236	bb			0.4581	91.63	-8.37	4023.7...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630031a
Date: 30-Jun-2009
Time: 14:21:01
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
07-01-09

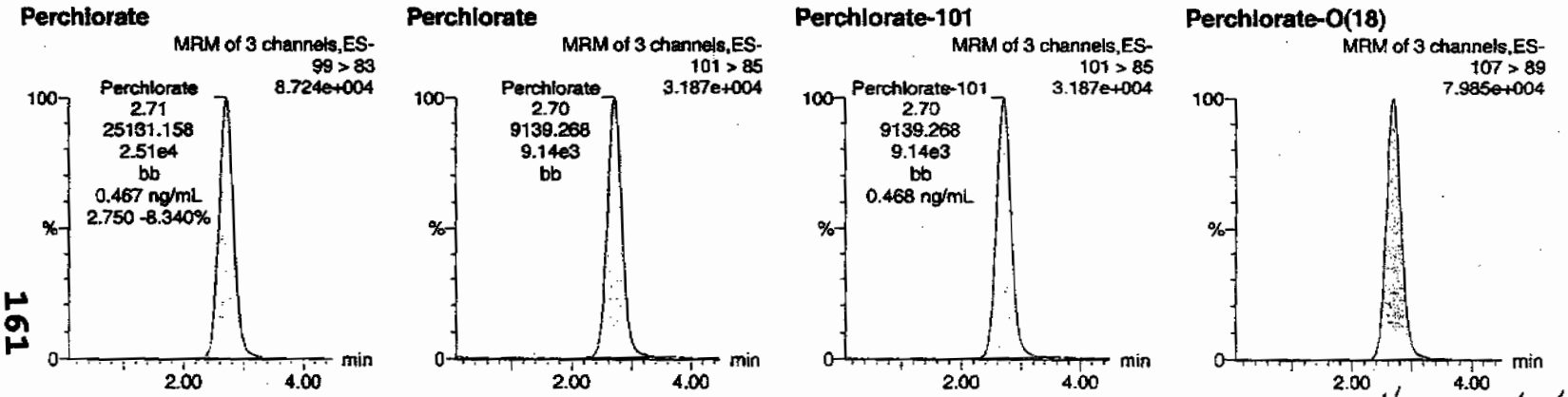

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.71	25131.158	25131.158	bb			0.4671	93.43	-6.57	583.159	2.75
WCL090610-06CCV	Perchlorate-101	101 > 85	2.70	9139.268	9139.268	bb			0.4676	93.52	-6.48	1409.9...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.69	23116.545	23116.545	bb			0.4503	90.06	-9.94	7340.3...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630042a
Date: 30-Jun-2009
Time: 15:51:45
ID: WCL090610-06CCV
Vial: 1:2,A

Pwas
ano
07-01-09

Perchlorate

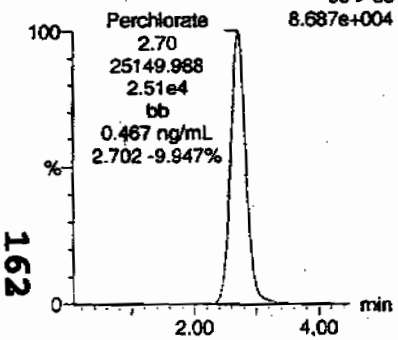

Perchlorate

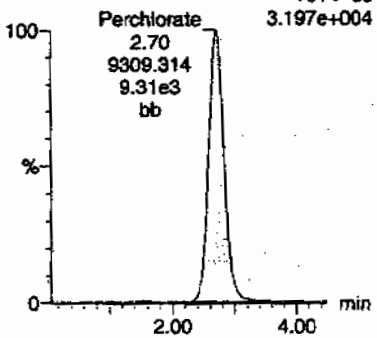

Perchlorate-101

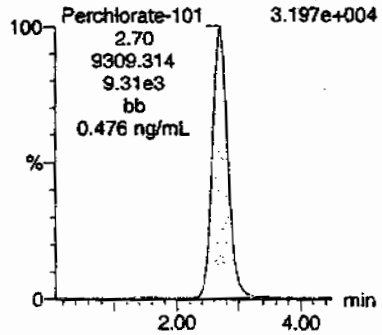

Perchlorate-O(18)

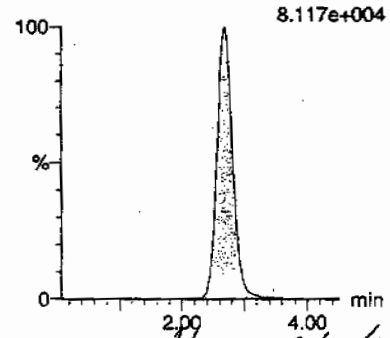

Anne 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.70	25149.988	25149.988	bb			0.4675	93.50	-6.50	12682....	2.70
WCL090610-06CCV	Perchlorate-101	101 > 85	2.70	9309.314	9309.314	bb			0.4763	95.26	-4.74	2339.4...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.69	23399.309	23399.309	bb			0.4558	91.16	-8.84	10568....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630053a
Date: 30-Jun-2009
Time: 17:22:30
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
07-01-09

Perchlorate

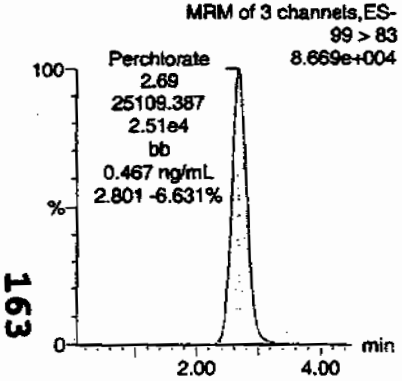

Perchlorate

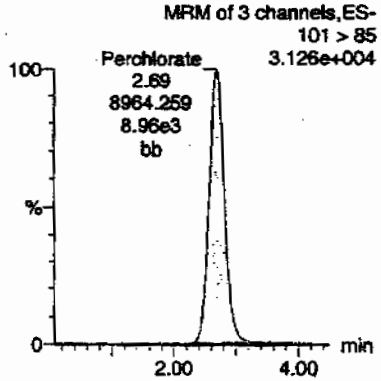

Perchlorate-101

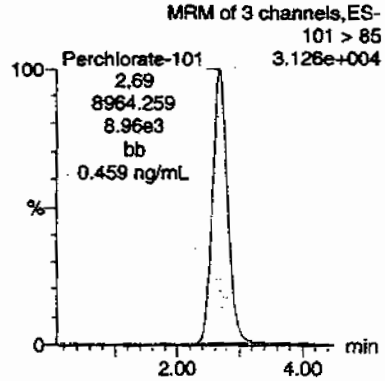

Perchlorate-O(18)

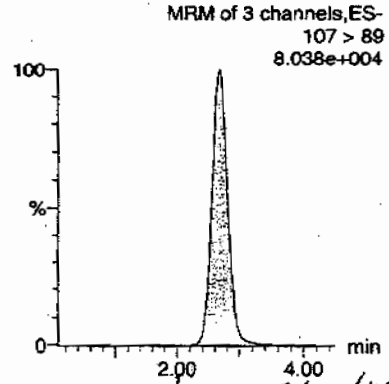

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.69	25109.387	25109.387	bb			0.4667	93.35	-6.65	5465.5...	2.80
WCL090610-06CCV	Perchlorate-101	101 > 85	2.69	8964.259	8964.259	bb			0.4586	91.73	-8.27	2400.4...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.68	23249.029	23249.029	bb			0.4529	90.58	-9.42	2653.1...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630064a
Date: 30-Jun-2009
Time: 18:53:30
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
ana
07/01/09

Perchlorate

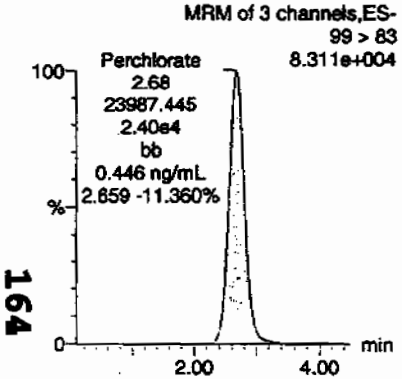

Perchlorate

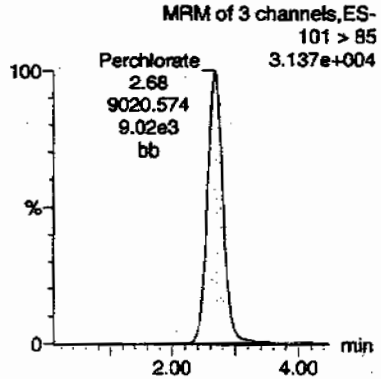

Perchlorate-101

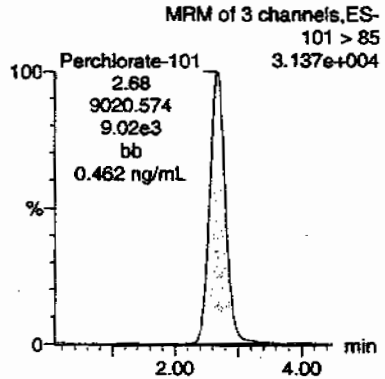

Perchlorate-O(18)

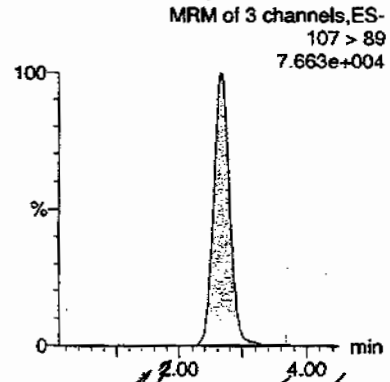

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.68	23987.445	23987.445	bb			0.4459	89.18	-10.82	4248.5...	2.66
WCL090610-06CCV	Perchlorate-101	101 > 85	2.68	9020.574	9020.574	bb			0.4615	92.31	-7.69	1904.7...	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.66	22107.057	22107.057	bb			0.4306	86.13	-13.87	6813.9...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630075a
Date: 30-Jun-2009
Time: 20:24:31
ID: WCL090610-06CCV
Vial: 1:2,A

Pass
aw
07-01-09

Perchlorate

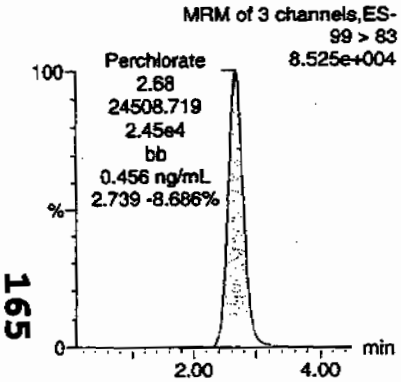

Perchlorate

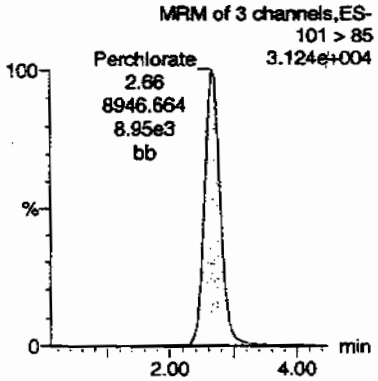

Perchlorate-101

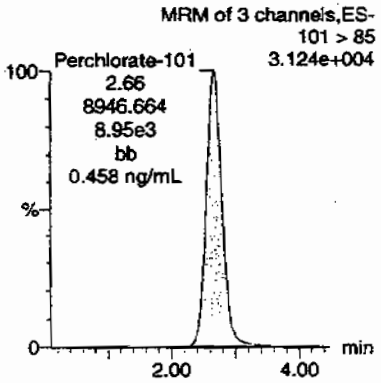

Perchlorate-O(18)

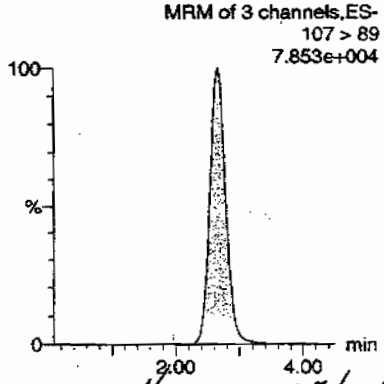

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-06CCV	Perchlorate	99 > 83	2.68	24508.719	24508.719	bb			0.4556	91.12	-8.88	9412.3...	2.74
WCL090610-06CCV	Perchlorate-101	101 > 85	2.66	8946.664	8946.664	bb			0.4577	91.55	-8.45	733.396	
WCL090610-06CCV	Perchlorate-O(18)	107 > 89	2.66	22412.301	22412.301	bb			0.4366	87.32	-12.68	2534.5...	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2500-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	99.87	30-JUN-09 11:36	per0630011a
Perchlorate Isotope Ratio		2.73		30-JUN-09 11:36	per0630011a
Perchlorate-101	.05	.05	100.55	30-JUN-09 11:36	per0630011a
Perchlorate	.05	.05	95.32	30-JUN-09 13:06	per0630022a
Perchlorate Isotope Ratio		2.93		30-JUN-09 13:06	per0630022a
Perchlorate-101	.05	.04	89.51	30-JUN-09 13:06	per0630022a
Perchlorate	.05	.05	102.07	30-JUN-09 14:37	per0630033a
Perchlorate Isotope Ratio		2.93		30-JUN-09 14:37	per0630033a
Perchlorate-101	.05	.05	95.89	30-JUN-09 14:37	per0630033a
Perchlorate	.05	.05	94.41	30-JUN-09 16:08	per0630044a
Perchlorate Isotope Ratio		2.51		30-JUN-09 16:08	per0630044a

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2500–1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate–101	.05	.05	103.53	30–JUN–09 16:08	per0630044a
Perchlorate	.05	.05	93.98	30–JUN–09 17:39	per0630055a
Perchlorate Isotope Ratio		2.75		30–JUN–09 17:39	per0630055a
Perchlorate–101	.05	.05	94.06	30–JUN–09 17:39	per0630055a
Perchlorate	.05	.05	90.83	30–JUN–09 19:10	per0630066a
Perchlorate Isotope Ratio		2.86		30–JUN–09 19:10	per0630066a
Perchlorate–101	.05	.04	87.49	30–JUN–09 19:10	per0630066a
Perchlorate	.05	.05	92.22	30–JUN–09 20:41	per0630077a
Perchlorate Isotope Ratio		2.78		30–JUN–09 20:41	per0630077a
Perchlorate–101	.05	.05	91.33	30–JUN–09 20:41	per0630077a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630011a
Date: 30-Jun-2009
Time: 11:36:07
ID: WCL090610-07CRI
Vial: 1:2,B

CWW 07-01-09

Perchlorate

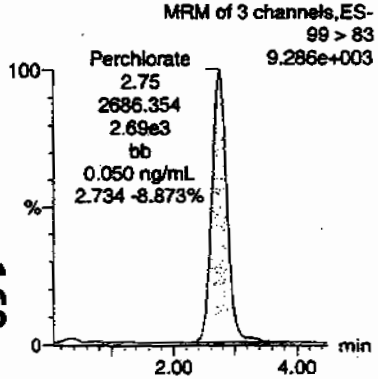

Perchlorate

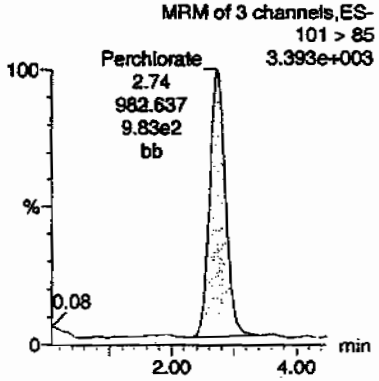

Perchlorate-101

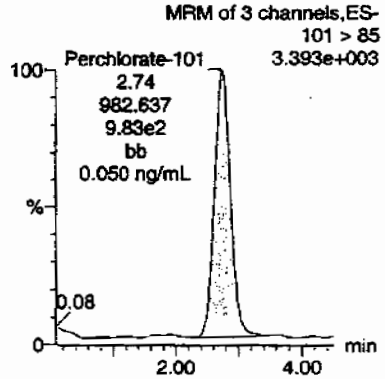

Perchlorate-O(18)

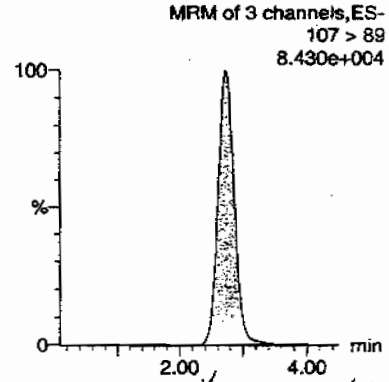

HMW 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.75	2686.354	2686.354	bb			0.0499	99.87	-0.13	924.865	2.73
WCL090610-07CRI	Perchlorate-101	101 > 85	2.74	982.637	982.637	bb			0.0503	100.55	0.55	313.910	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.73	24612.648	24612.648	bb			0.4794	95.89	-4.11	2349.9...	

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Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630022a
Date: 30-Jun-2009
Time: 13:06:48
ID: WCL090610-07CRI
Vial: 1:2,B

Page 22 of 07-01-09

Perchlorate

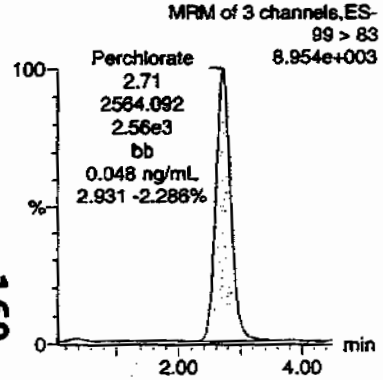

Perchlorate

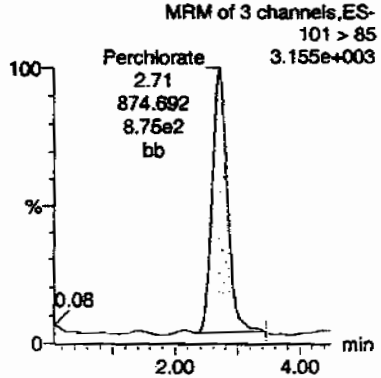

Perchlorate-101

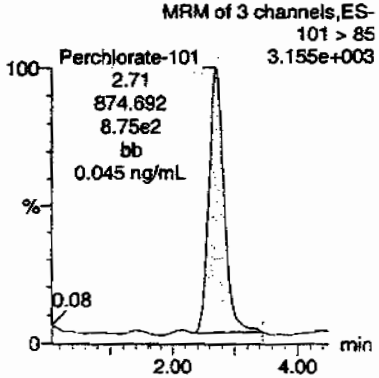

Perchlorate-O(18)

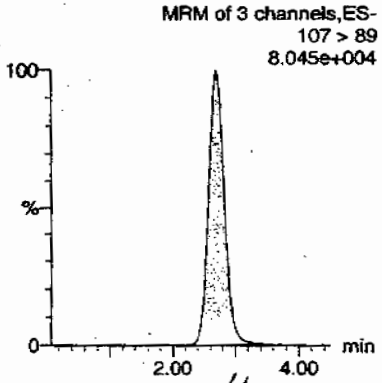

Anne 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.71	2564.092	2564.092	bb			0.0477	95.32	-4.68	377.492	2.93
WCL090610-07CRI	Perchlorate-101	101 > 85	2.71	874.692	874.692	bb			0.0448	89.51	-10.49	144.469	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.70	23144.973	23144.973	bb			0.4508	90.17	-9.83	8866.8...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630033a
Date: 30-Jun-2009
Time: 14:37:30
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
and
07/02/09

Perchlorate

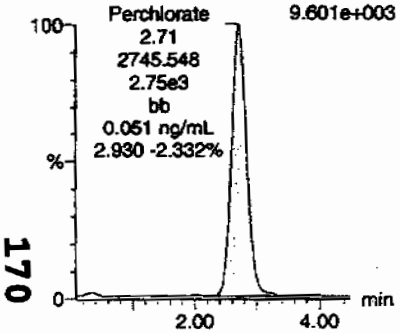

Perchlorate

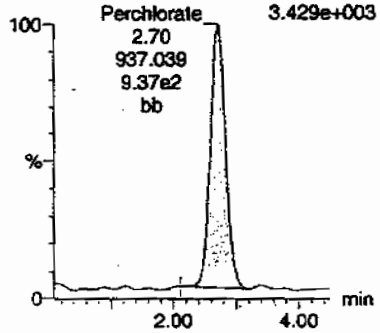

Perchlorate-101

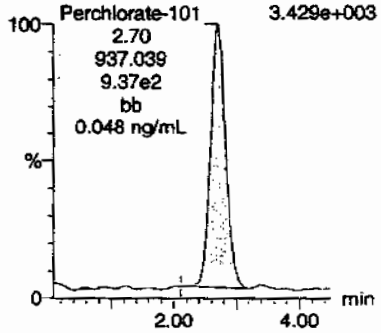

Perchlorate-O(18)

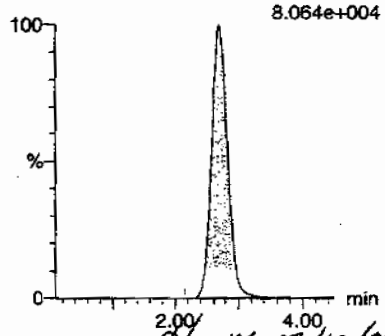

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.71	2745.548	2745.548	bb			0.0510	102.07	2.07	1568.9...	2.93
WCL090610-07CRI	Perchlorate-101	101 > 85	2.70	937.039	937.039	bb			0.0479	95.89	-4.11	119.555	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.70	23314.953	23314.953	bb			0.4542	90.83	-9.17	6251.4...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630044a
Date: 30-Jun-2009
Time: 16:08:13
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
cwo
07-01-09

Perchlorate

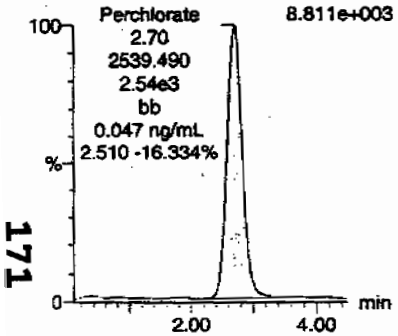

Perchlorate

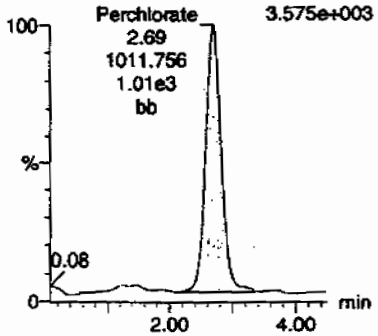

Perchlorate-101

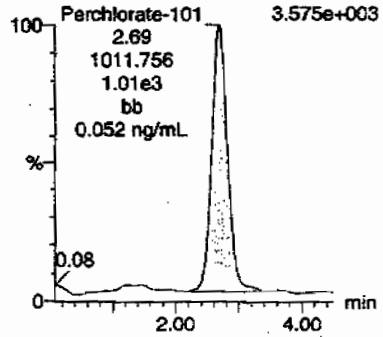

Perchlorate-O(18)

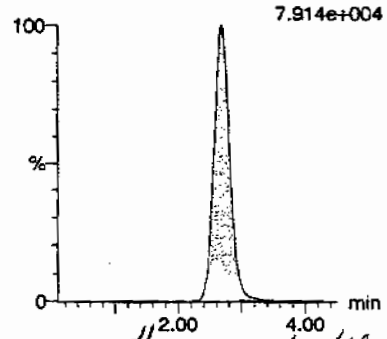

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.70	2539.490	2539.490	bb			0.0472	94.41	-5.59	337.441	2.51
WCL090610-07CRI	Perchlorate-101	101 > 85	2.69	1011.756	1011.756	bb			0.0518	103.53	3.53	78.842	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.69	22688.219	22688.219	bb			0.4420	88.39	-11.61	5355.6...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630055a
Date: 30-Jun-2009
Time: 17:39:13
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
and
07-01-5

Perchlorate

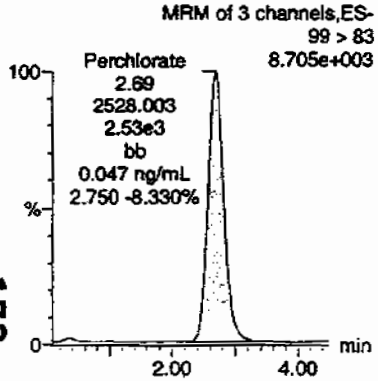

Perchlorate

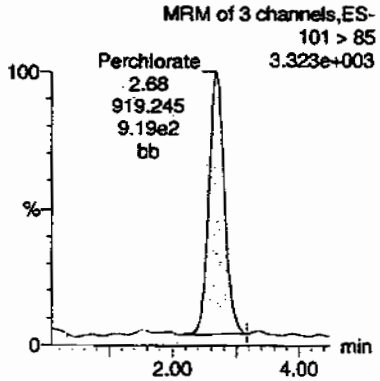

Perchlorate-101

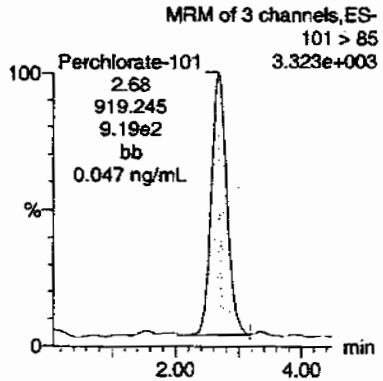

Perchlorate-O(18)

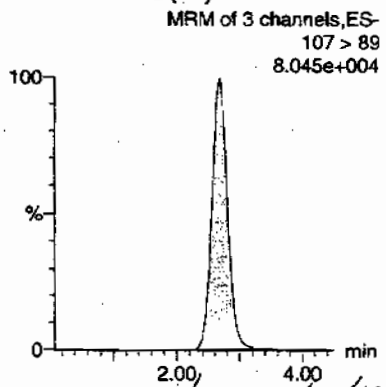

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.69	2528.003	2528.003	bb			0.0470	93.98	-6.02	555.542	2.75
WCL090610-07CRI	Perchlorate-101	101 > 85	2.68	919.245	919.245	bb			0.0470	94.06	-5.94	154.618	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.68	23038.914	23038.914	bb			0.4488	89.76	-10.24	5496.9...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630066a
Date: 30-Jun-2009
Time: 19:10:13
ID: WCL090610-07CRI
Vial: 1:2,B

Pass
and
07-01-09

Perchlorate

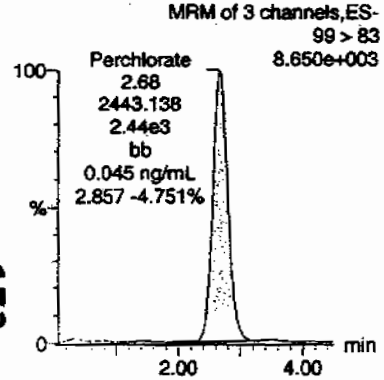

Perchlorate

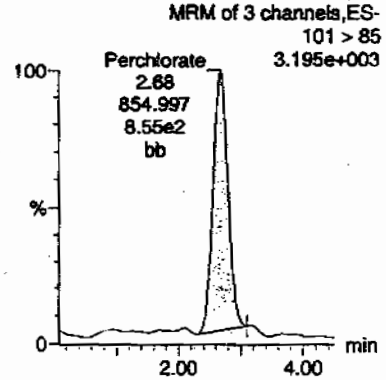

Perchlorate-101

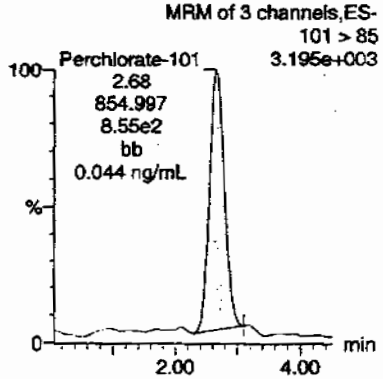

Perchlorate-O(18)

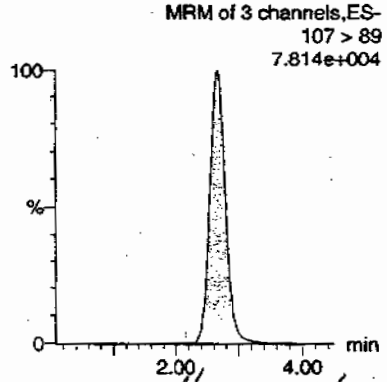

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.68	2443.138	2443.138	bb			0.0454	90.83	-9.17	545.751	2.86
WCL090610-07CRI	Perchlorate-101	101 > 85	2.68	854.997	854.997	bb			0.0437	87.49	-12.51	419.408	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.66	22362.273	22362.273	bb			0.4356	87.12	-12.88	9605.5...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630077a
Date: 30-Jun-2009
Time: 20:41:15
ID: WCL090610-07CRI
Vial: 1:2,B

Rwo
aw
07-01-09

Perchlorate

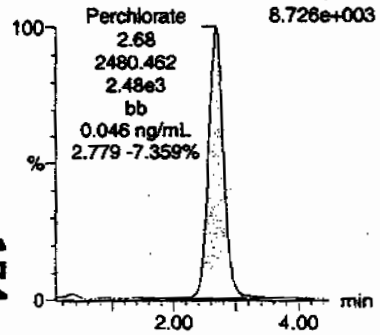

Perchlorate

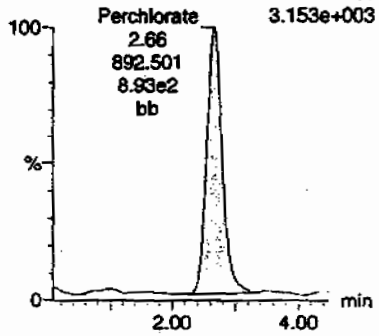

Perchlorate-101

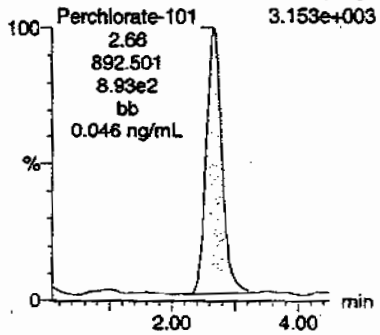

Perchlorate-O(18)

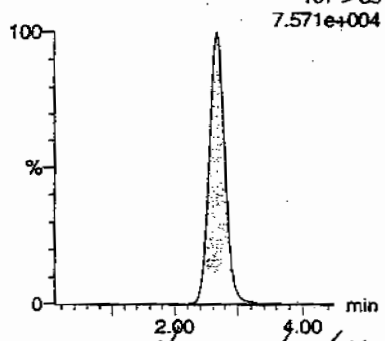

dmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090610-07CRI	Perchlorate	99 > 83	2.68	2480.462	2480.462	bb			0.0461	92.22	-7.78	1340.2...	2.78
WCL090610-07CRI	Perchlorate-101	101 > 85	2.66	892.501	892.501	bb			0.0457	91.33	-8.67	256.642	
WCL090610-07CRI	Perchlorate-O(18)	107 > 89	2.66	21644.928	21644.928	bb			0.4216	84.33	-15.67	7490.0...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: GROUND WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

MB

Date Received: 30–JUN–09

GEL Job No (SDG): 09–2500–1

GEL Sample ID: 1201871409

Date Filtered: 30–JUN–09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.050	ug/L	U	1	30–JUN–09 16:16	per0630045a
	Perchlorate Isotope Ratio						1	30–JUN–09 16:16	per0630045a
14797–73–0	Perchlorate–101	.05	.2	0.050	ug/L	U	1	30–JUN–09 16:16	per0630045a
	Perchlorate–O(18)			0.426	ug/L		1	30–JUN–09 16:16	per0630045a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630045a
Date: 30-Jun-2009
Time: 16:16:29
ID: 1201871409
Vial: 2:1,A

|LAN|881216|L2Q|MB|1|

Cmw 07-01-09

Perchlorate

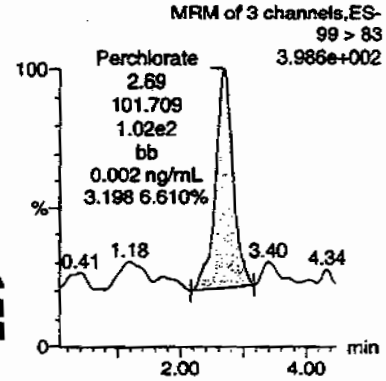

Perchlorate

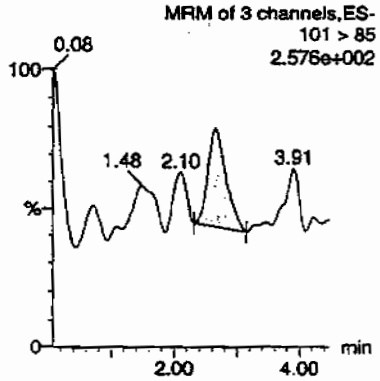

Perchlorate-101

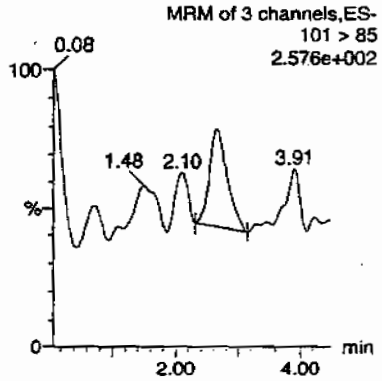

Perchlorate-O(18)

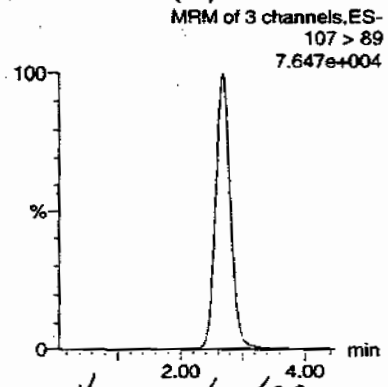

Hmm 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871409	Perchlorate	99 > 83	2.69	101.709	101.709	bb			0.0019			47.727	3.20
1201871409	Perchlorate-101	101 > 85	2.65	31.801	31.801	bb			0.0016			8.847	
1201871409	Perchlorate-O(18)	107 > 89	2.68	21871.309	21871.309	bb			0.4260	85.21	-14.79	18447....	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: GROUND WATER

Extraction Batch ID: 881215

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
LCS

Date Received: 30-JUN-09

GEL Job No (SDG): 09-2500-1

GEL Sample ID: 1201871410

Date Filtered: 30-JUN-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.186	ug/L	J	1	30-JUN-09 16:24	per0630046a
	Perchlorate Isotope Ratio			2.71			1	30-JUN-09 16:24	per0630046a
14797-73-0	Perchlorate-101	.05	.2	0.189	ug/L	J	1	30-JUN-09 16:24	per0630046a
	Perchlorate-O(18)			0.435	ug/L		1	30-JUN-09 16:24	per0630046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630046a
Date: 30-Jun-2009
Time: 16:24:55
ID: 1201871410
Vial: 2:1,B

|LANL| 881216 |L2Q|LCS|1|

07-01-09

Perchlorate

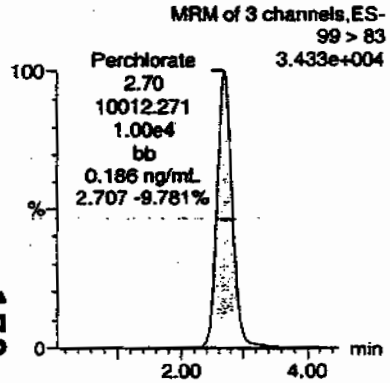

Perchlorate

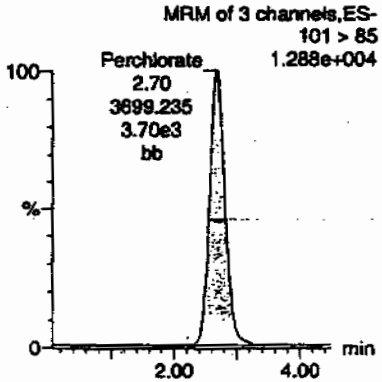

Perchlorate-101

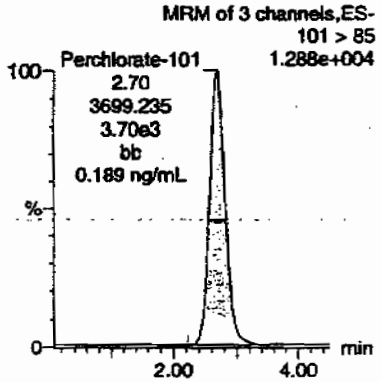

Perchlorate-O(18)

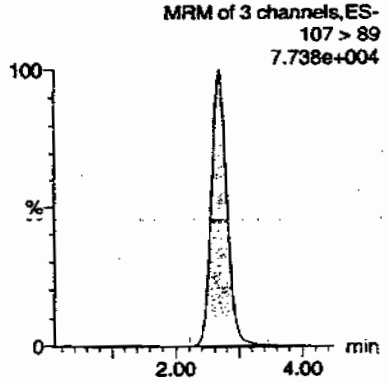

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871410	Perchlorate	99 > 83	2.70	10012.271	10012.271	bb			0.1861	93.06	-6.94	5613.9...	2.71
1201871410	Perchlorate-101	101 > 85	2.70	3699.235	3699.235	bb			0.1893	94.63	-5.37	1128.3...	
1201871410	Perchlorate-O(18)	107 > 89	2.69	22316.830	22316.830	bb			0.4347	86.94	-13.06	7263.1...	

$\frac{10012.271}{53797} = 0.1861$

Hnm 07/02/09

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GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 881215 Verified by:
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1201871409 MB	30-JUN-2009 11:11:16	10	10	1
1201871410 LCS	30-JUN-2009 11:11:16	10	10	1
232341002	30-JUN-2009 11:11:16	10	10	1
232345001	30-JUN-2009 11:11:16	10	10	1
1201871411 MS (232345001)	30-JUN-2009 11:11:16	10	10	1
1201871412 MSD (232345001)	30-JUN-2009 11:11:16	10	10	1
232345003	30-JUN-2009 11:11:16	10	10	1
232345008	30-JUN-2009 11:11:16	10	10	1
232345009	30-JUN-2009 11:11:16	10	10	1
232370001	30-JUN-2009 11:11:16	10	10	1
1201871414 MS (232370001)	30-JUN-2009 11:11:16	10	10	1
1201871416 MSD (232370001)	30-JUN-2009 11:11:16	10	10	1
232425001	30-JUN-2009 11:11:16	10	10	1
232432001	30-JUN-2009 11:11:16	10	10	1
232435002	30-JUN-2009 11:11:16	10	10	1
232437001	30-JUN-2009 11:11:16	10	10	1
1201871413 MS (232437001)	30-JUN-2009 11:11:16	10	10	1
1201871415 MSD (232437001)	30-JUN-2009 11:11:16	10	10	1
232502001	30-JUN-2009 11:11:16	10	10	1
232502002	30-JUN-2009 11:11:16	10	10	1
232502003	30-JUN-2009 11:11:16	10	10	1
232502004	30-JUN-2009 11:11:16	10	10	1
232510001	30-JUN-2009 11:11:16	10	10	1
1201871417 ICS	30-JUN-2009 11:11:16	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201871417	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
LCS	1201871410	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MS	1201871411	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MS	1201871413	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MS	1201871414	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MSD	1201871412	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MSD	1201871415	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
MSD	1201871416	10 ug/L CCV Second Source	UCL090527-01.2	.2	mL
RGNT	All	500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1133543	10	mL
RGNT	All	O2SI HPLC Grade Water	1141273	10	mL

Comments:

Desalting cartridges used: 090603-1-H & 090401-Ba

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 06/30/09
Extr. Injection Volume: 20uL
Sequence Number: per063009a
Initial Calibration Date: 06/30/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: [illegible]
Date: 07/02/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090618-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0630001a	IPB001	CWW	6/30/2009 10:13			1		USE	B
per0630002a	IPB001	CWW	6/30/2009 10:21			1		USE	B
per0630003a	WCLICAL-01	CWW	6/30/2009 10:30			1		USE	I
per0630004a	WCLICAL-02	CWW	6/30/2009 10:38			1		USE	I
per0630005a	WCLICAL-03	CWW	6/30/2009 10:46			1		USE	I
per0630006a	WCLICAL-04	CWW	6/30/2009 10:54			1		USE	I
per0630007a	WCLICAL-05	CWW	6/30/2009 11:02			1		USE	I
per0630008a	IPB002	CWW	6/30/2009 11:11			1		USE	B
per0630009a	WCLICV	CWW	6/30/2009 11:19			1		USE	C
per0630010a	IPB003	CWW	6/30/2009 11:27			1		USE	B
per0630011a	WCLCRI	CWW	6/30/2009 11:36			1		USE	C
per0630012a	1201864376	CWW	6/30/2009 11:44	878266	09-2331-1	1	LANL	USE	S
per0630013a	1201864377	CWW	6/30/2009 11:52	878266	09-2331-1	1	LANL	USE	S
per0630014a	1201864380	CWW	6/30/2009 12:00	878266	09-2331-1	1	LANL	USE	S
per0630015a	231844001	CWW	6/30/2009 12:09	878266	09-2331-1	1	LANL	USE	S
per0630016a	1201864378	CWW	6/30/2009 12:17	878266	09-2331-1	1	LANL	USE	S
per0630017a	1201864379	CWW	6/30/2009 12:25	878266	09-2331-1	1	LANL	USE	S
per0630018a	231844002	CWW	6/30/2009 12:33	878266	09-2331-1	1	LANL	USE	S
per0630019a	231844003	CWW	6/30/2009 12:42	878266	09-2331-1	1	LANL	USE	S
per0630020a	WCLCCV	CWW	6/30/2009 12:50			1		USE	C
per0630021a	IPB004	CWW	6/30/2009 12:58			1		USE	B
per0630022a	WCLCRI	CWW	6/30/2009 13:06			1		USE	C
per0630023a	231844004	CWW	6/30/2009 13:15	878266	09-2331-1	1	LANL	USE	S
per0630024a	231844005	CWW	6/30/2009 13:23	878266	09-2331-1	1	LANL	USE	S
per0630025a	231844006	CWW	6/30/2009 13:31	878266	09-2331-1	1	LANL	USE	S
per0630026a	231844007	CWW	6/30/2009 13:39	878266	09-2331-1	1	LANL	USE	S
per0630027a	231844008	CWW	6/30/2009 13:48	878266	09-2331-1	1	LANL	USE	S
per0630028a	231844009	CWW	6/30/2009 13:56	878266	09-2331-1	1	LANL	USE	S
per0630029a	231844010	CWW	6/30/2009 14:04	878266	09-2331-1	1	LANL	USE	S

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per0630030a	231844011	CWW	6/30/2009 14:12	878266	09-2331-1	1	LANL	USE	S
per0630031a	WCLCCV	CWW	6/30/2009 14:21			1		USE	C
per0630032a	IPB005	CWW	6/30/2009 14:29			1		USE	B
per0630033a	WCLCRI	CWW	6/30/2009 14:37			1		USE	C
per0630034a	231844012	CWW	6/30/2009 14:45	878266	09-2331-1	1	LANL	USE	S
per0630035a	231844013	CWW	6/30/2009 14:54	878266	09-2331-1	1	LANL	USE	S
per0630036a	231844014	CWW	6/30/2009 15:02	878266	09-2331-1	1	LANL	USE	S
per0630037a	231844015	CWW	6/30/2009 15:10	878266	09-2331-1	1	LANL	USE	S
per0630038a	231844016	CWW	6/30/2009 15:18	878266	09-2331-1	1	LANL	USE	S
per0630039a	231844017	CWW	6/30/2009 15:27	878266	09-2331-1	1	LANL	USE	S
per0630040a	231844018	CWW	6/30/2009 15:35	878266	09-2331-1	1	LANL	USE	S
per0630041a	231844019	CWW	6/30/2009 15:43	878266	09-2331-1	1	LANL	USE	S
per0630042a	WCLCCV	CWW	6/30/2009 15:51			1		USE	C
per0630043a	IPB006	CWW	6/30/2009 15:59			1		USE	B
per0630044a	WCLCRI	CWW	6/30/2009 16:08			1		USE	C
per0630045a	1201871409	CWW	6/30/2009 16:16	881216	VARIOUS	1	LANL	USE	S
per0630046a	1201871410	CWW	6/30/2009 16:24	881216	VARIOUS	1	LANL	USE	S
per0630047a	1201871417	CWW	6/30/2009 16:33	881216	VARIOUS	1	LANL	USE	S
per0630048a	232341002	CWW	6/30/2009 16:41	881216	09-2469	1	LANL	USE	S
per0630049a	232345001	CWW	6/30/2009 16:49	881216	09-2464	1	LANL	USE	S
per0630050a	1201871411	CWW	6/30/2009 16:57	881216	09-2464	1	LANL	USE	S
per0630051a	1201871412	CWW	6/30/2009 17:06	881216	09-2464	1	LANL	USE	S
per0630052a	232345003	CWW	6/30/2009 17:14	881216	09-2464	1	LANL	USE	S
per0630053a	WCLCCV	CWW	6/30/2009 17:22			1		USE	C
per0630054a	IPB007	CWW	6/30/2009 17:30			1		USE	B
per0630055a	WCLCRI	CWW	6/30/2009 17:39			1		USE	C
per0630056a	232345008	CWW	6/30/2009 17:47	881216	09-2464	1	LANL	USE	S
per0630057a	232345009	CWW	6/30/2009 17:55	881216	09-2464	1	LANL	USE	S
per0630058a	232370001	CWW	6/30/2009 18:04	881216	09-2452-1	1	LANL	USE	S
per0630059a	1201871414	CWW	6/30/2009 18:12	881216	09-2452-1	1	LANL	USE	S
per0630060a	1201871416	CWW	6/30/2009 18:20	881216	09-2452-1	1	LANL	USE	S
per0630061a	232425001	CWW	6/30/2009 18:28	881216	09-2473-1	1	LANL	USE	S
per0630062a	232432001	CWW	6/30/2009 18:37	881216	09-2478-1	1	LANL	USE	S
per0630063a	232435002	CWW	6/30/2009 18:45	881216	09-2484	1	LANL	USE	S
per0630064a	WCLCCV	CWW	6/30/2009 18:53			1		USE	C
per0630065a	IPB008	CWW	6/30/2009 19:01			1		USE	B
per0630066a	WCLCRI	CWW	6/30/2009 19:10			1		USE	C

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per0630067a	232437001	CWW	6/30/2009 19:18	881216	09-2493	1	LANL	USE	S
per0630068a	1201871413	CWW	6/30/2009 19:26	881216	09-2493	1	LANL	USE	S
per0630069a	1201871415	CWW	6/30/2009 19:35	881216	09-2493	1	LANL	USE	S
per0630070a	232502001	CWW	6/30/2009 19:43	881216	09-2496	1	LANL	USE	S
per0630071a	232502002	CWW	6/30/2009 19:51	881216	09-2496	1	LANL	USE	S
per0630072a	232502003	CWW	6/30/2009 19:59	881216	09-2496	1	LANL	USE	S
per0630073a	232502004	CWW	6/30/2009 20:08	881216	09-2496	1	LANL	USE	S
per0630074a	232510001	CWW	6/30/2009 20:16	881216	09-2500-1	1	LANL	USE	S
per0630075a	WCLCCV	CWW	6/30/2009 20:24			1		USE	C
per0630076a	IPB009	CWW	6/30/2009 20:33			1		USE	B
per0630077a	WCLCRI	CWW	6/30/2009 20:41			1		USE	C

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630059a
Date: 30-Jun-2009
Time: 18:12:19
ID: 1201871414
Vial: 2:2,F

|LANL|881216|IZQ|MS|1|

CWW 07-01-09

Perchlorate

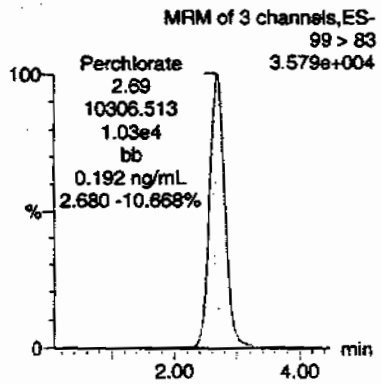

Perchlorate

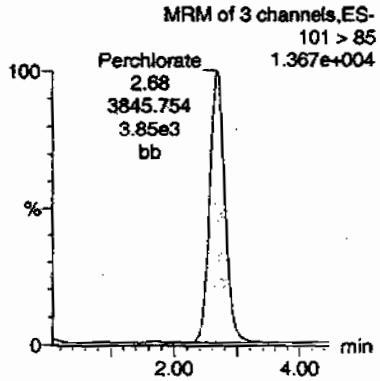

Perchlorate-101

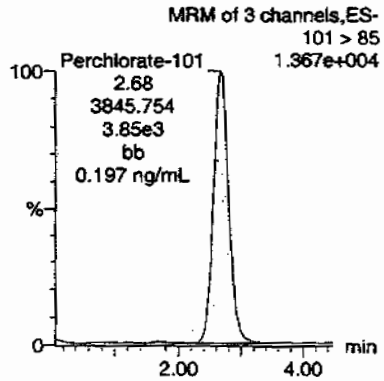

Perchlorate-O(18)

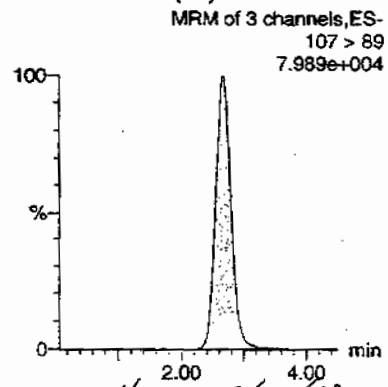

HMM 07/02/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871414	Perchlorate	99 > 83	2.69	10306.513	10306.513	bb			0.1916	95.79	-4.21	1474.6...	2.68
1201871414	Perchlorate-101	101 > 85	2.68	3845.754	3845.754	bb			0.1968	98.38	-1.62	515.957	
1201871414	Perchlorate-O(18)	107 > 89	2.66	22800.783	22800.783	bb			0.4441	88.83	-11.17	10123....	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per063009a.qld

Last Altered: Wednesday, July 01, 2009 8:12:46 AM Eastern Daylight Time
Printed: Wednesday, July 01, 2009 8:56:16 AM Eastern Daylight Time

Name: per0630060a
Date: 30-Jun-2009
Time: 18:20:32
ID: 1201871416
Vial: 2:3,A

LCNL | 881216 | LIQ | MSO | 1 |

CWW 07-01-09

Perchlorate

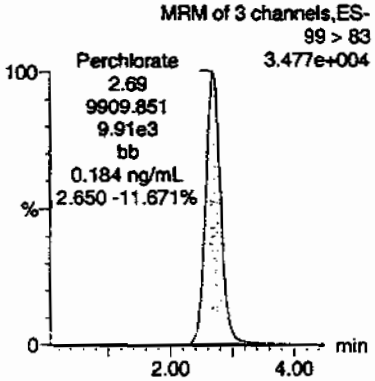

Perchlorate

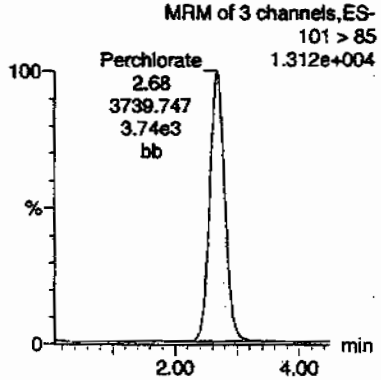

Perchlorate-101

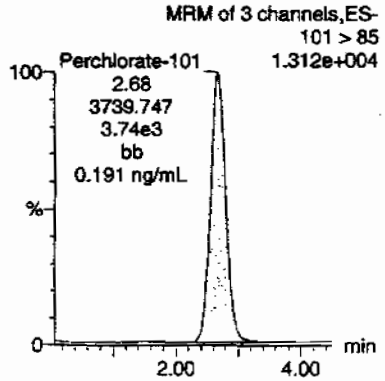

Perchlorate-O(18)

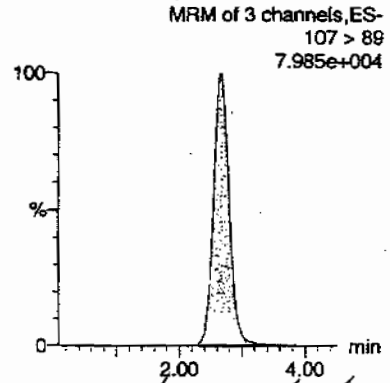

Amm ot/2/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201871416	Perchlorate	99 > 83	2.69	9909.851	9909.851	bb			0.1842	92.10	-7.90	3219.4...	2.65
1201871416	Perchlorate-101	101 > 85	2.68	3739.747	3739.747	bb			0.1913	95.67	-4.33	1064.5...	
1201871416	Perchlorate-O(18)	107 > 89	2.66	22865.434	22865.434	bb			0.4454	89.08	-10.92	5575.2...	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2500

Sample Analysis

Sample ID	Client ID
232509001	CAMO-09-6519
232509002	CAMO-09-6518
232509003	CAMO-09-6527
232509004	CAMO-09-6529
232509005	CAMO-09-6528
232509006	CAMO-09-6531
1201871694	Method Blank (MB) **ICP**
1201871695	Laboratory Control Sample (LCS)
1201871698	232509001(CAMO-09-6519L) Serial Dilution (SD)
1201871696	232509001(CAMO-09-6519D) Sample Duplicate (DUP)
1201871697	232509001(CAMO-09-6519S) Matrix Spike (MS)
1201871699	232509001(CAMO-09-6519SD) Matrix Spike Duplicate (MSD)
1201871724	Method Blank (MB) **ICP-MS**
1201871725	Laboratory Control Sample (LCS)
1201871728	232509001(CAMO-09-6519L) Serial Dilution (SD)
1201871726	232509001(CAMO-09-6519D) Sample Duplicate (DUP)
1201871727	232509001(CAMO-09-6519S) Matrix Spike (MS)
1201871729	232509001(CAMO-09-6519SD) Matrix Spike Duplicate (MSD)
1201873031	Method Blank (MB) **CVAA**
1201873032	Laboratory Control Sample (LCS)
1201873036	232509001(CAMO-09-6519L) Serial Dilution (SD)
1201873033	232509001(CAMO-09-6519D) Sample Duplicate (DUP)
1201873034	232509001(CAMO-09-6519S) Matrix Spike (MS)
1201873037	232509001(CAMO-09-6519SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	881347, 881363 and 881913
Prep Batch :	881346, 881362 and 881912
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 3607 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 3607 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verification (CCV) bracketing this SDG met the established acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following sample was selected as the quality control (QC) sample for this SDG: 232509001 (CAMO-09-6519)-ICP, ICP-MS and CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exception of aluminum, calcium, manganese, and sodium, as indicated by the "N" qualifiers.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exception of aluminum, as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated matrix spike duplicate (MSD) is evaluated based on acceptance criteria of 20%. The RPD between qualifying elements results in the MS and MSD were within the acceptance limits of 20%, with the exception of aluminum, calcium, iron, and manganese, as indicated by the "*" qualifiers.

Duplicate Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of RL is used to evaluate the DUP results. All applicable analytes met these requirements, with the exception of mercury, as indicated by the "*" qualifiers.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D), with the exception of mercury, as indicated by the "E" qualifiers.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change

from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCRs were generated for this SDG. NCR 707930 and NCR 710801. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: _____ **Date:** 7/17/09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2500 GEL Work Order: 232509

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/17/09

Reviewed by

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509001 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6519 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 79

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2290000	ug/Kg	*N	8580	25200	25200	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-36-0	Antimony	1260	ug/Kg	U	416	1260	1260	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-38-2	Arsenic	1030	ug/kg	J	252	1260	1260	2	MS	PRB	07/08/09 07:38	090707-3	881363
7440-39-3	Barium	27200	ug/Kg		126	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-41-7	Beryllium	579	ug/kg		25.2	126	126	2	MS	PRB	07/08/09 07:38	090707-3	881363
7440-43-9	Cadmium	631	ug/Kg	U	126	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-70-2	Calcium	1350000	ug/Kg	*N	10100	31600	31600	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-47-3	Chromium	14500	ug/Kg		189	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-48-4	Cobalt	827	ug/Kg		189	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-50-8	Copper	10600	ug/Kg		379	1260	1260	1	P	HSC	07/01/09 23:04	070109-1	881347
7439-89-6	Iron	6080000	ug/Kg	*	10100	31600	31600	1	P	HSC	07/01/09 23:04	070109-1	881347
7439-92-1	Lead	10500	ug/Kg		316	1260	1260	1	P	HSC	07/01/09 23:04	070109-1	881347
7439-95-4	Magnesium	387000	ug/Kg		10700	37900	37900	1	P	HSC	07/02/09 17:37	070209-2	881347
7439-96-5	Manganese	243000	ug/Kg	*N	252	1260	1260	1	P	HSC	07/01/09 23:04	070109-1	881347
7439-97-6	Mercury	127	ug/kg	*E	4.83	14.2	14.2	1	AV	JXL1	07/13/09 11:33	071309S2-4	881913
7440-02-0	Nickel	3620	ug/kg		126	505	505	2	MS	PRB	07/08/09 07:38	090707-3	881363
7440-09-7	Potassium	504000	ug/Kg		8080	31600	31600	1	P	HSC	07/01/09 23:04	070109-1	881347
7782-49-2	Selenium	1260	ug/kg	U	631	1260	1260	2	MS	PRB	07/08/09 07:38	090707-3	881363
7440-22-4	Silver	474	ug/Kg	J	126	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-23-5	Sodium	273000	ug/Kg	N	8830	31600	31600	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-28-0	Thallium	218	ug/kg	J	75.7	252	252	2	MS	PRB	07/08/09 07:38	090707-3	881363
7440-62-2	Vanadium	4300	ug/Kg		126	631	631	1	P	HSC	07/01/09 23:04	070109-1	881347
7440-66-6	Zinc	30600	ug/Kg		416	1260	1260	1	P	HSC	07/01/09 23:04	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.5	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.533	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509002 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6518 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 85

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2630000	ug/Kg	*N	7890	23200	23200	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-36-0	Antimony	1160	ug/Kg	U	383	1160	1160	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-38-2	Arsenic	1150	ug/kg	J	234	1170	1170	2	MS	PRB	07/08/09 08:19	090707-3	881363
7440-39-3	Barium	34300	ug/Kg		116	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-41-7	Beryllium	458	ug/kg		23.4	117	117	2	MS	PRB	07/08/09 08:19	090707-3	881363
7440-43-9	Cadmium	580	ug/Kg	U	116	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-70-2	Calcium	1120000	ug/Kg	*N	9280	29000	29000	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-47-3	Chromium	4980	ug/Kg		174	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-48-4	Cobalt	1650	ug/Kg		174	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-50-8	Copper	4200	ug/Kg		348	1160	1160	1	P	HSC	07/01/09 23:52	070109-1	881347
7439-89-6	Iron	8810000	ug/Kg	*	9280	29000	29000	1	P	HSC	07/01/09 23:52	070109-1	881347
7439-92-1	Lead	8780	ug/Kg		290	1160	1160	1	P	HSC	07/01/09 23:52	070109-1	881347
7439-95-4	Magnesium	531000	ug/Kg		9860	34800	34800	1	P	HSC	07/02/09 18:25	070209-2	881347
7439-96-5	Manganese	322000	ug/Kg	*N	232	1160	1160	1	P	HSC	07/01/09 23:52	070109-1	881347
7439-97-6	Mercury	18.5	ug/kg	*E	4.15	12.2	12.2	1	AV	JXL1	07/13/09 11:43	071309S2-4	881913
7440-02-0	Nickel	2840	ug/kg		117	469	469	2	MS	PRB	07/08/09 08:19	090707-3	881363
7440-09-7	Potassium	604000	ug/Kg		7430	29000	29000	1	P	HSC	07/01/09 23:52	070109-1	881347
7782-49-2	Selenium	1170	ug/kg	U	586	1170	1170	2	MS	PRB	07/08/09 08:19	090707-3	881363
7440-22-4	Silver	477	ug/Kg	J	116	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-23-5	Sodium	43300	ug/Kg	N	8120	29000	29000	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-28-0	Thallium	84.8	ug/kg	J	70.3	234	234	2	MS	PRB	07/08/09 08:19	090707-3	881363
7440-62-2	Vanadium	7500	ug/Kg		116	580	580	1	P	HSC	07/01/09 23:52	070109-1	881347
7440-66-6	Zinc	44700	ug/Kg		383	1160	1160	1	P	HSC	07/01/09 23:52	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.508	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.503	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.579	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509003 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6527 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 94.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1580000	ug/Kg	*N	7200	21200	21200	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-36-0	Antimony	1060	ug/Kg	U	349	1060	1060	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-38-2	Arsenic	785	ug/kg	J	209	1050	1050	2	MS	PRB	07/08/09 08:25	090707-3	881363
7440-39-3	Barium	22200	ug/Kg		106	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-41-7	Beryllium	462	ug/kg		20.9	105	105	2	MS	PRB	07/08/09 08:25	090707-3	881363
7440-43-9	Cadmium	529	ug/Kg	U	106	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-70-2	Calcium	646000	ug/Kg	*N	8470	26500	26500	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-47-3	Chromium	1540	ug/Kg		159	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-48-4	Cobalt	653	ug/Kg		159	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-50-8	Copper	1970	ug/Kg		317	1060	1060	1	P	HSC	07/02/09 00:00	070109-1	881347
7439-89-6	Iron	6810000	ug/Kg	*	8470	26500	26500	1	P	HSC	07/02/09 00:00	070109-1	881347
7439-92-1	Lead	7260	ug/Kg		265	1060	1060	1	P	HSC	07/02/09 00:00	070109-1	881347
7439-95-4	Magnesium	370000	ug/Kg		8990	31700	31700	1	P	HSC	07/02/09 18:32	070209-2	881347
7439-96-5	Manganese	300000	ug/Kg	*N	212	1060	1060	1	P	HSC	07/02/09 00:00	070109-1	881347
7439-97-6	Mercury	12.4	ug/kg	U*E	4.2	12.4	12.4	1	AV	JXL1	07/13/09 11:45	071309S2-4	881913
7440-02-0	Nickel	1640	ug/kg		105	418	418	2	MS	PRB	07/08/09 08:25	090707-3	881363
7440-09-7	Potassium	375000	ug/Kg		6770	26500	26500	1	P	HSC	07/02/09 00:00	070109-1	881347
7782-49-2	Selenium	1050	ug/kg	U	523	1050	1050	2	MS	PRB	07/08/09 08:25	090707-3	881363
7440-22-4	Silver	296	ug/Kg	J	106	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-23-5	Sodium	27600	ug/Kg	N	7410	26500	26500	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-28-0	Thallium	209	ug/kg	U	62.7	209	209	2	MS	PRB	07/08/09 08:25	090707-3	881363
7440-62-2	Vanadium	4110	ug/Kg		106	529	529	1	P	HSC	07/02/09 00:00	070109-1	881347
7440-66-6	Zinc	33900	ug/Kg		349	1060	1060	1	P	HSC	07/02/09 00:00	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.502	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.508	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.516	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509004 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6529 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4430000	ug/Kg	*N	6990	20600	20600	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-36-0	Antimony	1030	ug/Kg	U	339	1030	1030	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-38-2	Arsenic	1450	ug/kg		206	1030	1030	2	MS	PRB	07/08/09 08:31	090707-3	881363
7440-39-3	Barium	46400	ug/Kg		103	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-41-7	Beryllium	639	ug/kg		20.6	103	103	2	MS	PRB	07/08/09 08:31	090707-3	881363
7440-43-9	Cadmium	514	ug/Kg	U	103	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-70-2	Calcium	6650000	ug/Kg	*N	8230	25700	25700	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-47-3	Chromium	8890	ug/Kg		154	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-48-4	Cobalt	2180	ug/Kg		154	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-50-8	Copper	16100	ug/Kg		309	1030	1030	1	P	HSC	07/02/09 00:07	070109-1	881347
7439-89-6	Iron	7790000	ug/Kg	*	8230	25700	25700	1	P	HSC	07/02/09 00:07	070109-1	881347
7439-92-1	Lead	8140	ug/Kg		257	1030	1030	1	P	HSC	07/02/09 00:07	070109-1	881347
7439-95-4	Magnesium	744000	ug/Kg		8740	30900	30900	1	P	HSC	07/02/09 18:39	070209-2	881347
7439-96-5	Manganese	216000	ug/Kg	*N	206	1030	1030	1	P	HSC	07/02/09 00:07	070109-1	881347
7439-97-6	Mercury	70.9	ug/kg	*E	3.61	10.6	10.6	1	AV	JXL1	07/13/09 11:47	071309S2-4	881913
7440-02-0	Nickel	4830	ug/kg		103	412	412	2	MS	PRB	07/08/09 08:31	090707-3	881363
7440-09-7	Potassium	837000	ug/Kg		6580	25700	25700	1	P	HSC	07/02/09 00:07	070109-1	881347
7782-49-2	Selenium	1030	ug/kg	U	515	1030	1030	2	MS	PRB	07/08/09 08:31	090707-3	881363
7440-22-4	Silver	364	ug/Kg	J	103	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-23-5	Sodium	457000	ug/Kg	N	7200	25700	25700	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-28-0	Thallium	274	ug/kg		61.8	206	206	2	MS	PRB	07/08/09 08:31	090707-3	881363
7440-62-2	Vanadium	7900	ug/Kg		103	514	514	1	P	HSC	07/02/09 00:07	070109-1	881347
7440-66-6	Zinc	27500	ug/Kg		339	1030	1030	1	P	HSC	07/02/09 00:07	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.511	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.51	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.594	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509005 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6528 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 94.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5810000	ug/Kg	*N	6950	20400	20400	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-36-0	Antimony	400	ug/Kg	J	337	1020	1020	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-38-2	Arsenic	1780	ug/kg		210	1050	1050	2	MS	PRB	07/08/09 08:36	090707-3	881363
7440-39-3	Barium	87400	ug/Kg		102	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-41-7	Beryllium	711	ug/kg		21	105	105	2	MS	PRB	07/08/09 08:36	090707-3	881363
7440-43-9	Cadmium	511	ug/Kg	U	102	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-70-2	Calcium	4220000	ug/Kg	*N	8180	25600	25600	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-47-3	Chromium	14600	ug/Kg		153	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-48-4	Cobalt	3300	ug/Kg		153	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-50-8	Copper	11200	ug/Kg		307	1020	1020	1	P	HSC	07/02/09 00:13	070109-1	881347
7439-89-6	Iron	10100000	ug/Kg	*	8180	25600	25600	1	P	HSC	07/02/09 00:13	070109-1	881347
7439-92-1	Lead	11500	ug/Kg		256	1020	1020	1	P	HSC	07/02/09 00:13	070109-1	881347
7439-95-4	Magnesium	1250000	ug/Kg		8690	30700	30700	1	P	HSC	07/02/09 18:46	070209-2	881347
7439-96-5	Manganese	279000	ug/Kg	*N	204	1020	1020	1	P	HSC	07/02/09 00:13	070109-1	881347
7439-97-6	Mercury	33.8	ug/kg	*E	4.07	12	12	1	AV	JXL1	07/13/09 11:49	071309S2-4	881913
7440-02-0	Nickel	5980	ug/kg		105	420	420	2	MS	PRB	07/08/09 08:36	090707-3	881363
7440-09-7	Potassium	1020000	ug/Kg		6540	25600	25600	1	P	HSC	07/02/09 00:13	070109-1	881347
7782-49-2	Selenium	1050	ug/kg	U	525	1050	1050	2	MS	PRB	07/08/09 08:36	090707-3	881363
7440-22-4	Silver	452	ug/Kg	J	102	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-23-5	Sodium	447000	ug/Kg	N	7160	25600	25600	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-28-0	Thallium	184	ug/kg	J	63	210	210	2	MS	PRB	07/08/09 08:36	090707-3	881363
7440-62-2	Vanadium	13500	ug/Kg		102	511	511	1	P	HSC	07/02/09 00:13	070109-1	881347
7440-66-6	Zinc	27800	ug/Kg		337	1020	1020	1	P	HSC	07/02/09 00:13	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.519	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.505	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.532	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232509006 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6531 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 85

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2300000	ug/Kg	*N	7660	22500	22500	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-36-0	Antimony	1130	ug/Kg	U	372	1130	1130	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-38-2	Arsenic	1210	ug/kg		235	1180	1180	2	MS	PRB	07/08/09 08:42	090707-3	881363
7440-39-3	Barium	35400	ug/Kg		113	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-41-7	Beryllium	443	ug/kg		23.5	118	118	2	MS	PRB	07/08/09 08:42	090707-3	881363
7440-43-9	Cadmium	563	ug/Kg	U	113	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-70-2	Calcium	1330000	ug/Kg	*N	9010	28200	28200	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-47-3	Chromium	3430	ug/Kg		169	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-48-4	Cobalt	1300	ug/Kg		169	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-50-8	Copper	3940	ug/Kg		338	1130	1130	1	P	HSC	07/02/09 00:20	070109-1	881347
7439-89-6	Iron	7510000	ug/Kg	*	9010	28200	28200	1	P	HSC	07/02/09 00:20	070109-1	881347
7439-92-1	Lead	8340	ug/Kg		282	1130	1130	1	P	HSC	07/02/09 00:20	070109-1	881347
7439-95-4	Magnesium	508000	ug/Kg		9580	33800	33800	1	P	HSC	07/02/09 18:53	070209-2	881347
7439-96-5	Manganese	276000	ug/Kg	*N	225	1130	1130	1	P	HSC	07/02/09 00:20	070109-1	881347
7439-97-6	Mercury	11.3	ug/kg	J*E	4.32	12.7	12.7	1	AV	JXL1	07/13/09 11:51	071309S2-4	881913
7440-02-0	Nickel	2850	ug/kg		118	471	471	2	MS	PRB	07/08/09 08:42	090707-3	881363
7440-09-7	Potassium	519000	ug/Kg		7210	28200	28200	1	P	HSC	07/02/09 00:20	070109-1	881347
7782-49-2	Selenium	1180	ug/kg	U	588	1180	1180	2	MS	PRB	07/08/09 08:42	090707-3	881363
7440-22-4	Silver	361	ug/Kg	J	113	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-23-5	Sodium	36300	ug/Kg	N	7890	28200	28200	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-28-0	Thallium	71.5	ug/kg	J	70.6	235	235	2	MS	PRB	07/08/09 08:42	090707-3	881363
7440-62-2	Vanadium	6970	ug/Kg		113	563	563	1	P	HSC	07/02/09 00:20	070109-1	881347
7440-66-6	Zinc	41300	ug/Kg		372	1130	1130	1	P	HSC	07/02/09 00:20	070109-1	881347

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881347	881346	SW846 3050B	0.522	g	50	mL	06/30/09	FGA
881363	881362	SW846 3050B	0.5	g	50	mL	07/06/09	AXG2
881913	881912	SW846 7471A Prep	0.556	g	30	mL	07/10/09	AXG2

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5300	ug/L	5000	ug/L	106	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Antimony	510	ug/L	500	ug/L	102	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Barium	517	ug/L	500	ug/L	103.3	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Cadmium	483	ug/L	500	ug/L	96.7	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Calcium	5060	ug/L	5000	ug/L	101.3	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Chromium	485	ug/L	500	ug/L	97.1	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Cobalt	461	ug/L	500	ug/L	92.2	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Copper	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Iron	5160	ug/L	5000	ug/L	103.2	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Lead	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Manganese	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Potassium	2510	ug/L	2500	ug/L	100.6	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Silver	244	ug/L	250	ug/L	97.7	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Sodium	2620	ug/L	2500	ug/L	104.6	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Vanadium	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Zinc	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	01-JUL-09 11:03	070109-1
	Magnesium	5330	ug/L	5000	ug/L	106.6	90.0 - 110.0	P	02-JUL-09 11:09	070209-2
	Arsenic	48.2	ug/L	50	ug/L	96.4	90.0 - 110.0	MS	08-JUL-09 03:54	090707-3
	Beryllium	50.4	ug/L	50	ug/L	100.8	90.0 - 110.0	MS	08-JUL-09 03:54	090707-3
	Nickel	51.7	ug/L	50	ug/L	103.4	90.0 - 110.0	MS	08-JUL-09 03:54	090707-3
	Selenium	51.2	ug/L	50	ug/L	102.4	90.0 - 110.0	MS	08-JUL-09 03:54	090707-3
	Thallium	50.1	ug/L	50	ug/L	100.2	90.0 - 110.0	MS	08-JUL-09 03:54	090707-3
	Mercury	5.22	ug/L	5	ug/L	104.4	90.0 - 110.0	AV	13-JUL-09 09:48	071309S2-4
CCV01										
	Aluminum	5100	ug/L	5000	ug/L	102	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Antimony	493	ug/L	500	ug/L	98.7	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Barium	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Cadmium	478	ug/L	500	ug/L	95.6	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Calcium	5280	ug/L	5000	ug/L	105.7	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Chromium	491	ug/L	500	ug/L	98.1	90.0 - 110.0	P	01-JUL-09 12:01	070109-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Copper	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Iron	5200	ug/L	5000	ug/L	104	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Lead	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Manganese	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Potassium	4990	ug/L	5000	ug/L	99.8	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Silver	492	ug/L	500	ug/L	98.3	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Sodium	9830	ug/L	10000	ug/L	98.3	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Vanadium	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Zinc	486	ug/L	500	ug/L	97.3	90.0 - 110.0	P	01-JUL-09 12:01	070109-1
	Magnesium	5160	ug/L	5000	ug/L	103.2	90.0 - 110.0	P	02-JUL-09 11:53	070209-2
	Arsenic	48.7	ug/L	50	ug/L	97.4	90.0 - 110.0	MS	08-JUL-09 04:22	090707-3
	Beryllium	51.2	ug/L	50	ug/L	102.4	90.0 - 110.0	MS	08-JUL-09 04:22	090707-3
	Nickel	52.3	ug/L	50	ug/L	104.7	90.0 - 110.0	MS	08-JUL-09 04:22	090707-3
	Selenium	49.7	ug/L	50	ug/L	99.4	90.0 - 110.0	MS	08-JUL-09 04:22	090707-3
	Thallium	49.4	ug/L	50	ug/L	98.8	90.0 - 110.0	MS	08-JUL-09 04:22	090707-3
	Mercury	5.16	ug/L	5	ug/L	103.2	80.0 - 120.0	AV	13-JUL-09 09:54	071309S2-4
CCV02										
	Aluminum	5080	ug/L	5000	ug/L	101.6	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Antimony	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Barium	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Cadmium	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Calcium	5290	ug/L	5000	ug/L	105.9	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Chromium	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Cobalt	485	ug/L	500	ug/L	97.1	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Copper	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Iron	5350	ug/L	5000	ug/L	107	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Lead	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Manganese	492	ug/L	500	ug/L	98.5	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Potassium	5050	ug/L	5000	ug/L	100.9	90.0 - 110.0	P	01-JUL-09 12:29	070109-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Sodium	9940	ug/L	10000	ug/L	99.4	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Vanadium	495	ug/L	500	ug/L	99	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Zinc	488	ug/L	500	ug/L	97.5	90.0 - 110.0	P	01-JUL-09 12:29	070109-1
	Magnesium	5030	ug/L	5000	ug/L	100.6	90.0 - 110.0	P	02-JUL-09 12:23	070209-2
	Arsenic	48.5	ug/L	50	ug/L	97.1	90.0 - 110.0	MS	08-JUL-09 04:39	090707-3
	Beryllium	49.9	ug/L	50	ug/L	99.7	90.0 - 110.0	MS	08-JUL-09 04:39	090707-3
	Nickel	50	ug/L	50	ug/L	100	90.0 - 110.0	MS	08-JUL-09 04:39	090707-3
	Selenium	49	ug/L	50	ug/L	98	90.0 - 110.0	MS	08-JUL-09 04:39	090707-3
	Thallium	49.1	ug/L	50	ug/L	98.1	90.0 - 110.0	MS	08-JUL-09 04:39	090707-3
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 - 120.0	AV	13-JUL-09 10:18	071309S2-4
CCV03										
	Aluminum	5120	ug/L	5000	ug/L	102.3	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Antimony	492	ug/L	500	ug/L	98.3	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Barium	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Cadmium	478	ug/L	500	ug/L	95.7	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Calcium	5200	ug/L	5000	ug/L	103.9	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Chromium	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Iron	5250	ug/L	5000	ug/L	105.1	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Lead	497	ug/L	500	ug/L	99.5	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Manganese	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Potassium	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Silver	495	ug/L	500	ug/L	99	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Sodium	9780	ug/L	10000	ug/L	97.8	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Zinc	488	ug/L	500	ug/L	97.6	90.0 - 110.0	P	01-JUL-09 13:30	070109-1
	Magnesium	5220	ug/L	5000	ug/L	104.5	90.0 - 110.0	P	02-JUL-09 13:42	070209-2
	Arsenic	48.3	ug/L	50	ug/L	96.7	90.0 - 110.0	MS	08-JUL-09 05:20	090707-3

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	49	ug/L	50	ug/L	98	90.0 - 110.0	MS	08-JUL-09 05:20	090707-3
	Nickel	51.8	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	08-JUL-09 05:20	090707-3
	Selenium	49.6	ug/L	50	ug/L	99.1	90.0 - 110.0	MS	08-JUL-09 05:20	090707-3
	Thallium	49.3	ug/L	50	ug/L	98.6	90.0 - 110.0	MS	08-JUL-09 05:20	090707-3
	Mercury	5.04	ug/L	5	ug/L	100.9	80.0 - 120.0	AV	13-JUL-09 10:42	071309S2-4
CCV04										
	Aluminum	5150	ug/L	5000	ug/L	102.9	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Antimony	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Barium	492	ug/L	500	ug/L	98.3	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Cadmium	473	ug/L	500	ug/L	94.6	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Calcium	5400	ug/L	5000	ug/L	108	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Chromium	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Cobalt	479	ug/L	500	ug/L	95.7	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Copper	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Iron	5360	ug/L	5000	ug/L	107.2	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Lead	491	ug/L	500	ug/L	98.3	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Manganese	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Potassium	5010	ug/L	5000	ug/L	100.3	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Silver	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Sodium	10100	ug/L	10000	ug/L	100.9	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Vanadium	495	ug/L	500	ug/L	99	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Zinc	485	ug/L	500	ug/L	97.1	90.0 - 110.0	P	01-JUL-09 14:22	070109-1
	Magnesium	5220	ug/L	5000	ug/L	104.4	90.0 - 110.0	P	02-JUL-09 14:09	070209-2
	Arsenic	47.4	ug/L	50	ug/L	94.7	90.0 - 110.0	MS	08-JUL-09 06:17	090707-3
	Beryllium	48.1	ug/L	50	ug/L	96.2	90.0 - 110.0	MS	08-JUL-09 06:17	090707-3
	Nickel	48.7	ug/L	50	ug/L	97.4	90.0 - 110.0	MS	08-JUL-09 06:17	090707-3
	Selenium	49.6	ug/L	50	ug/L	99.2	90.0 - 110.0	MS	08-JUL-09 06:17	090707-3
	Thallium	47.4	ug/L	50	ug/L	94.8	90.0 - 110.0	MS	08-JUL-09 06:17	090707-3
	Mercury	5.1	ug/L	5	ug/L	102	80.0 - 120.0	AV	13-JUL-09 11:06	071309S2-4

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV05										
	Aluminum	5190	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Antimony	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Barium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Cadmium	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Calcium	5480	ug/L	5000	ug/L	109.7	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Chromium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Copper	495	ug/L	500	ug/L	98.9	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Iron	5430	ug/L	5000	ug/L	108.7	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Lead	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Manganese	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Potassium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Silver	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Zinc	488	ug/L	500	ug/L	97.5	90.0 – 110.0	P	01-JUL-09 15:24	070109-1
	Magnesium	5130	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	02-JUL-09 15:11	070209-2
	Arsenic	47.5	ug/L	50	ug/L	95	90.0 – 110.0	MS	08-JUL-09 07:15	090707-3
	Beryllium	48	ug/L	50	ug/L	96.1	90.0 – 110.0	MS	08-JUL-09 07:15	090707-3
	Nickel	49	ug/L	50	ug/L	98	90.0 – 110.0	MS	08-JUL-09 07:15	090707-3
	Selenium	48.4	ug/L	50	ug/L	96.8	90.0 – 110.0	MS	08-JUL-09 07:15	090707-3
	Thallium	46.5	ug/L	50	ug/L	92.9	90.0 – 110.0	MS	08-JUL-09 07:15	090707-3
	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 – 120.0	AV	13-JUL-09 11:29	071309S2-4
CCV06										
	Aluminum	4970	ug/L	5000	ug/L	99.4	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Antimony	487	ug/L	500	ug/L	97.5	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Barium	485	ug/L	500	ug/L	97.1	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Cadmium	483	ug/L	500	ug/L	96.6	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Calcium	5390	ug/L	5000	ug/L	107.7	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Chromium	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	01-JUL-09 16:27	070109-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	474	ug/L	500	ug/L	94.8	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Copper	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Iron	5330	ug/L	5000	ug/L	106.7	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Lead	486	ug/L	500	ug/L	97.3	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Manganese	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Potassium	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Silver	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Sodium	9720	ug/L	10000	ug/L	97.2	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Vanadium	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Zinc	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	01-JUL-09 16:27	070109-1
	Magnesium	5300	ug/L	5000	ug/L	105.9	90.0 – 110.0	P	02-JUL-09 16:14	070209-2
	Arsenic	47.5	ug/L	50	ug/L	95	90.0 – 110.0	MS	08-JUL-09 08:07	090707-3
	Beryllium	47.5	ug/L	50	ug/L	95	90.0 – 110.0	MS	08-JUL-09 08:07	090707-3
	Nickel	48.6	ug/L	50	ug/L	97.1	90.0 – 110.0	MS	08-JUL-09 08:07	090707-3
	Selenium	50.4	ug/L	50	ug/L	100.8	90.0 – 110.0	MS	08-JUL-09 08:07	090707-3
	Thallium	46.5	ug/L	50	ug/L	92.9	90.0 – 110.0	MS	08-JUL-09 08:07	090707-3
	Mercury	5.13	ug/L	5	ug/L	102.6	80.0 – 120.0	AV	13-JUL-09 11:53	071309S2-4
CCV07										
	Aluminum	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Antimony	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Barium	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Cadmium	466	ug/L	500	ug/L	93.3	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Calcium	5480	ug/L	5000	ug/L	109.5	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Chromium	485	ug/L	500	ug/L	97.1	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Cobalt	471	ug/L	500	ug/L	94.2	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Copper	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Iron	5420	ug/L	5000	ug/L	108.4	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Lead	483	ug/L	500	ug/L	96.6	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Manganese	485	ug/L	500	ug/L	97	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Potassium	4950	ug/L	5000	ug/L	99.1	90.0 – 110.0	P	01-JUL-09 17:30	070109-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Sodium	9880	ug/L	10000	ug/L	98.8	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Vanadium	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Zinc	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	01-JUL-09 17:30	070109-1
	Magnesium	5260	ug/L	5000	ug/L	105.2	90.0 – 110.0	P	02-JUL-09 17:09	070209-2
	Arsenic	47.4	ug/L	50	ug/L	94.9	90.0 – 110.0	MS	08-JUL-09 08:48	090707-3
	Beryllium	46.4	ug/L	50	ug/L	92.8	90.0 – 110.0	MS	08-JUL-09 08:48	090707-3
	Nickel	47.1	ug/L	50	ug/L	94.3	90.0 – 110.0	MS	08-JUL-09 08:48	090707-3
	Selenium	48	ug/L	50	ug/L	96	90.0 – 110.0	MS	08-JUL-09 08:48	090707-3
	Thallium	46	ug/L	50	ug/L	91.9	90.0 – 110.0	MS	08-JUL-09 08:48	090707-3
CCV08										
	Aluminum	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Antimony	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Barium	482	ug/L	500	ug/L	96.5	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Cadmium	470	ug/L	500	ug/L	94	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Calcium	5440	ug/L	5000	ug/L	108.8	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Chromium	483	ug/L	500	ug/L	96.6	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Cobalt	474	ug/L	500	ug/L	94.8	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Copper	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Iron	5330	ug/L	5000	ug/L	106.6	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Lead	489	ug/L	500	ug/L	97.7	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Manganese	482	ug/L	500	ug/L	96.4	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Potassium	4960	ug/L	5000	ug/L	99.3	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Silver	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Sodium	9890	ug/L	10000	ug/L	98.9	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Vanadium	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Zinc	479	ug/L	500	ug/L	95.8	90.0 – 110.0	P	01-JUL-09 18:33	070109-1
	Magnesium	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	02-JUL-09 18:11	070209-2
CCV09										
	Aluminum	5030	ug/L	5000	ug/L	100.5	90.0 – 110.0	P	01-JUL-09 19:36	070109-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Antimony	490	ug/L	500	ug/L	98	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Barium	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Cadmium	487	ug/L	500	ug/L	97.5	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Calcium	5460	ug/L	5000	ug/L	109.2	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Chromium	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Cobalt	481	ug/L	500	ug/L	96.2	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Copper	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Iron	5320	ug/L	5000	ug/L	106.4	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Lead	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Manganese	488	ug/L	500	ug/L	97.7	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Potassium	4910	ug/L	5000	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Silver	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Sodium	9700	ug/L	10000	ug/L	97	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Vanadium	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Zinc	485	ug/L	500	ug/L	97	90.0 - 110.0	P	01-JUL-09 19:36	070109-1
	Magnesium	4960	ug/L	5000	ug/L	99.3	90.0 - 110.0	P	02-JUL-09 19:00	070209-2
CCV10										
	Aluminum	5000	ug/L	5000	ug/L	100.1	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Antimony	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Barium	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Cadmium	474	ug/L	500	ug/L	94.8	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Calcium	5490	ug/L	5000	ug/L	109.8	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Chromium	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Cobalt	478	ug/L	500	ug/L	95.5	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Iron	5340	ug/L	5000	ug/L	106.8	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Lead	491	ug/L	500	ug/L	98.3	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Manganese	490	ug/L	500	ug/L	98	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Potassium	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Silver	499	ug/L	500	ug/L	99.9	90.0 - 110.0	P	01-JUL-09 20:38	070109-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Vanadium	497	ug/L	500	ug/L	99.3	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
	Zinc	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	01-JUL-09 20:38	070109-1
CCV11										
	Aluminum	5070	ug/L	5000	ug/L	101.5	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Antimony	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Barium	492	ug/L	500	ug/L	98.5	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Cadmium	480	ug/L	500	ug/L	96	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Calcium	5480	ug/L	5000	ug/L	109.6	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Chromium	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Copper	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Iron	5290	ug/L	5000	ug/L	105.8	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Lead	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Manganese	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Potassium	4910	ug/L	5000	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Silver	499	ug/L	500	ug/L	99.7	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Vanadium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
	Zinc	487	ug/L	500	ug/L	97.5	90.0 - 110.0	P	01-JUL-09 21:41	070109-1
CCV12										
	Aluminum	5070	ug/L	5000	ug/L	101.5	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Antimony	496	ug/L	500	ug/L	99.3	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Cadmium	482	ug/L	500	ug/L	96.3	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Calcium	5520	ug/L	5000	ug/L	110.4	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Chromium	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Copper	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Iron	5310	ug/L	5000	ug/L	106.3	90.0 - 110.0	P	01-JUL-09 22:37	070109-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Lead	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Manganese	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Potassium	4970	ug/L	5000	ug/L	99.3	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Silver	501	ug/L	500	ug/L	100.2	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Sodium	9570	ug/L	10000	ug/L	95.7	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	01-JUL-09 22:37	070109-1
CCV13										
	Aluminum	5070	ug/L	5000	ug/L	101.3	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Antimony	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Barium	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Cadmium	483	ug/L	500	ug/L	96.6	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Calcium	5510	ug/L	5000	ug/L	110.2	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Iron	5280	ug/L	5000	ug/L	105.6	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Lead	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Manganese	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Potassium	4930	ug/L	5000	ug/L	98.5	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Silver	500	ug/L	500	ug/L	100	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Sodium	9610	ug/L	10000	ug/L	96.1	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Vanadium	497	ug/L	500	ug/L	99.5	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
	Zinc	490	ug/L	500	ug/L	97.9	90.0 - 110.0	P	01-JUL-09 23:39	070109-1
CCV14										
	Aluminum	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	02-JUL-09 00:27	070109-1
	Antimony	482	ug/L	500	ug/L	96.4	90.0 - 110.0	P	02-JUL-09 00:27	070109-1
	Barium	481	ug/L	500	ug/L	96.1	90.0 - 110.0	P	02-JUL-09 00:27	070109-1
	Cadmium	480	ug/L	500	ug/L	96.1	90.0 - 110.0	P	02-JUL-09 00:27	070109-1
	Calcium	5270	ug/L	5000	ug/L	105.3	90.0 - 110.0	P	02-JUL-09 00:27	070109-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2500

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Chromium	481	ug/L	500	ug/L	96.3	90.0 – 110.0	P	02–JUL–09 00:27	070109–1
	Cobalt	473	ug/L	500	ug/L	94.5	90.0 – 110.0	P	02–JUL–09 00:27	070109–1
	Copper	481	ug/L	500	ug/L	96.3	90.0 – 110.0	P	02–JUL–09 00:27	070109–1
	Iron	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	02–JUL–09 00:27	070109–1
	Lead	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	02–JUL–09 00:27	070109–1
	Manganese	480	ug/L	500	ug/L	96	90.0 – 110.0	P	02–JUL–09 00:27	070109–1
	Potassium	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	02–JUL–09 00:27	070109–1
	Silver	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	02–JUL–09 00:27	070109–1
	Sodium	9450	ug/L	10000	ug/L	94.5	90.0 – 110.0	P	02–JUL–09 00:27	070109–1
	Vanadium	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	02–JUL–09 00:27	070109–1
	Zinc	478	ug/L	500	ug/L	95.5	90.0 – 110.0	P	02–JUL–09 00:27	070109–1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Arsenic	5.42	ug/L	5	ug/L	108.5	70.0 - 130.0	MS	08-JUL-09 04:05	090707-3
	Beryllium	.48	ug/L	.5	ug/L	96	70.0 - 130.0	MS	08-JUL-09 04:05	090707-3
	Nickel	2.18	ug/L	2	ug/L	109.2	70.0 - 130.0	MS	08-JUL-09 04:05	090707-3
	Thallium	.994	ug/L	1	ug/L	99.4	70.0 - 130.0	MS	08-JUL-09 04:05	090707-3
	Selenium	5.41	ug/L	5	ug/L	108.3	70.0 - 130.0	MS	08-JUL-09 04:05	090707-3
	Mercury	.146	ug/L	.2	ug/L	72.8	70.0 - 130.0	AV	13-JUL-09 09:52	071309S2-4
PQL01										
	Potassium	147	ug/L	150	ug/L	98.1	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Antimony	10.2	ug/L	10	ug/L	101.9	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Cadmium	4.82	ug/L	5	ug/L	96.5	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Manganese	12.2	ug/L	10	ug/L	122.3	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Lead	10.8	ug/L	10	ug/L	108.4	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Iron	114	ug/L	100	ug/L	114.3	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Copper	10.4	ug/L	10	ug/L	103.7	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Cobalt	4.75	ug/L	5	ug/L	94.9	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Chromium	4.63	ug/L	5	ug/L	92.6	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Calcium	210	ug/L	200	ug/L	104.8	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Barium	5.21	ug/L	5	ug/L	104.1	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Aluminum	229	ug/L	200	ug/L	114.4	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Silver	5.55	ug/L	5	ug/L	111.1	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Sodium	276	ug/L	300	ug/L	92	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Vanadium	4.86	ug/L	5	ug/L	97.3	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Zinc	12.5	ug/L	10	ug/L	124.5	70.0 - 130.0	P	01-JUL-09 11:16	070109-1
	Magnesium	306	ug/L	300	ug/L	101.9	70.0 - 130.0	P	02-JUL-09 11:22	070209-2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-JUL-09 11:10	070109-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 11:10	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 11:10	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 11:10	070109-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 11:10	070109-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 11:10	070109-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 11:10	070109-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-JUL-09 11:10	070109-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 11:10	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-JUL-09 11:10	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-JUL-09 11:10	070109-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-JUL-09 11:10	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 11:10	070109-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	01-JUL-09 11:10	070109-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 11:10	070109-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 11:10	070109-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 11:15	070209-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	08-JUL-09 03:59	090707-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	08-JUL-09 03:59	090707-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	08-JUL-09 03:59	090707-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	08-JUL-09 03:59	090707-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	08-JUL-09 03:59	090707-3
	Mercury	-0.121	+/-.2	J	0.068	0.2	SOL	AV	13-JUL-09 09:50	071309S2-4
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-JUL-09 12:09	070109-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 12:09	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 12:09	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 12:09	070109-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 12:09	070109-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 12:09	070109-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 12:09	070109-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-JUL-09 12:09	070109-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 12:09	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-JUL-09 12:09	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-JUL-09 12:09	070109-1
	Potassium	107.67	+/-250	J	64.0	250	SOL	P	01-JUL-09 12:09	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 12:09	070109-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	01-JUL-09 12:09	070109-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 12:09	070109-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 12:09	070109-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 12:01	070209-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	08-JUL-09 04:28	090707-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	08-JUL-09 04:28	090707-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	08-JUL-09 04:28	090707-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	08-JUL-09 04:28	090707-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	08-JUL-09 04:28	090707-3
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 09:56	071309S2-4
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-JUL-09 12:36	070109-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 12:36	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 12:36	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 12:36	070109-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 12:36	070109-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 12:36	070109-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 12:36	070109-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-JUL-09 12:36	070109-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 12:36	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-JUL-09 12:36	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-JUL-09 12:36	070109-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-JUL-09 12:36	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 12:36	070109-1
	Sodium	-81.77	+/-250	J	70.0	250	SOL	P	01-JUL-09 12:36	070109-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 12:36	070109–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–JUL–09 12:36	070109–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	02–JUL–09 12:30	070209–2
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	08–JUL–09 04:45	090707–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	08–JUL–09 04:45	090707–3
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	08–JUL–09 04:45	090707–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	08–JUL–09 04:45	090707–3
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	08–JUL–09 04:45	090707–3
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	13–JUL–09 10:20	071309S2–4
CCB03										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	01–JUL–09 13:37	070109–1
	Antimony	3.34	+/–10	J	3.3	10.0	SOL	P	01–JUL–09 13:37	070109–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 13:37	070109–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 13:37	070109–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–JUL–09 13:37	070109–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–JUL–09 13:37	070109–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	01–JUL–09 13:37	070109–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	01–JUL–09 13:37	070109–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	01–JUL–09 13:37	070109–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	01–JUL–09 13:37	070109–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–JUL–09 13:37	070109–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–JUL–09 13:37	070109–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 13:37	070109–1
	Sodium	–110.25	+/–250	J	70.0	250	SOL	P	01–JUL–09 13:37	070109–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 13:37	070109–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–JUL–09 13:37	070109–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	02–JUL–09 13:49	070209–2
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	08–JUL–09 05:25	090707–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	08–JUL–09 05:25	090707–3
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	08–JUL–09 05:25	090707–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	08–JUL–09 05:25	090707–3

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	08-JUL-09 05:25	090707-3
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:44	071309S2-4
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-JUL-09 14:28	070109-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 14:28	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 14:28	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 14:28	070109-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 14:28	070109-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 14:28	070109-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 14:28	070109-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-JUL-09 14:28	070109-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 14:28	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-JUL-09 14:28	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-JUL-09 14:28	070109-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-JUL-09 14:28	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 14:28	070109-1
	Sodium	-127.94	+/-250	J	70.0	250	SOL	P	01-JUL-09 14:28	070109-1
	Vanadium	-1.44	+/-5	J	1.0	5.0	SOL	P	01-JUL-09 14:28	070109-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 14:28	070109-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 14:16	070209-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	08-JUL-09 06:23	090707-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	08-JUL-09 06:23	090707-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	08-JUL-09 06:23	090707-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	08-JUL-09 06:23	090707-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	08-JUL-09 06:23	090707-3
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:08	071309S2-4
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-JUL-09 15:31	070109-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 15:31	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 15:31	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 15:31	070109-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 15:31	070109-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 15:31	070109-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 15:31	070109-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-JUL-09 15:31	070109-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 15:31	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-JUL-09 15:31	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-JUL-09 15:31	070109-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-JUL-09 15:31	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 15:31	070109-1
	Sodium	-140.23	+/-250	J	70.0	250	SOL	P	01-JUL-09 15:31	070109-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 15:31	070109-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 15:31	070109-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 15:18	070209-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	08-JUL-09 07:21	090707-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	08-JUL-09 07:21	090707-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	08-JUL-09 07:21	090707-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	08-JUL-09 07:21	090707-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	08-JUL-09 07:21	090707-3
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:31	071309S2-4
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-JUL-09 16:34	070109-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 16:34	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 16:34	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 16:34	070109-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 16:34	070109-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 16:34	070109-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 16:34	070109-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-JUL-09 16:34	070109-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 16:34	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-JUL-09 16:34	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-JUL-09 16:34	070109-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-JUL-09 16:34	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 16:34	070109-1
	Sodium	-146.49	+/-250	J	70.0	250	SOL	P	01-JUL-09 16:34	070109-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 16:34	070109-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 16:34	070109-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 16:20	070209-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	08-JUL-09 08:13	090707-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	08-JUL-09 08:13	090707-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	08-JUL-09 08:13	090707-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	08-JUL-09 08:13	090707-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	08-JUL-09 08:13	090707-3
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:55	071309S2-4
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-JUL-09 17:37	070109-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 17:37	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 17:37	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 17:37	070109-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 17:37	070109-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 17:37	070109-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 17:37	070109-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-JUL-09 17:37	070109-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 17:37	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-JUL-09 17:37	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-JUL-09 17:37	070109-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-JUL-09 17:37	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 17:37	070109-1
	Sodium	-158.41	+/-250	J	70.0	250	SOL	P	01-JUL-09 17:37	070109-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 17:37	070109-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 17:37	070109-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 17:16	070209-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	08-JUL-09 08:54	090707-3

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	08–JUL–09 08:54	090707–3
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	08–JUL–09 08:54	090707–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	08–JUL–09 08:54	090707–3
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	08–JUL–09 08:54	090707–3
CCB08										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	01–JUL–09 18:40	070109–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	01–JUL–09 18:40	070109–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 18:40	070109–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 18:40	070109–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–JUL–09 18:40	070109–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–JUL–09 18:40	070109–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	01–JUL–09 18:40	070109–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	01–JUL–09 18:40	070109–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	01–JUL–09 18:40	070109–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	01–JUL–09 18:40	070109–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–JUL–09 18:40	070109–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–JUL–09 18:40	070109–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 18:40	070109–1
	Sodium	–162.59	+/–250	J	70.0	250	SOL	P	01–JUL–09 18:40	070109–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 18:40	070109–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–JUL–09 18:40	070109–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	02–JUL–09 18:19	070209–2
CCB09										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	01–JUL–09 19:43	070109–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	01–JUL–09 19:43	070109–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 19:43	070109–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 19:43	070109–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–JUL–09 19:43	070109–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–JUL–09 19:43	070109–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	01–JUL–09 19:43	070109–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	01–JUL–09 19:43	070109–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 19:43	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-JUL-09 19:43	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-JUL-09 19:43	070109-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-JUL-09 19:43	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 19:43	070109-1
	Sodium	-162.86	+/-250	J	70.0	250	SOL	P	01-JUL-09 19:43	070109-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 19:43	070109-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 19:43	070109-1
	Magnesium	-97.51	+/-300	J	85.0	300	SOL	P	02-JUL-09 19:07	070209-2
CCB10										
	Aluminum	94.25	+/-200	J	68.0	200	SOL	P	01-JUL-09 20:45	070109-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 20:45	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 20:45	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 20:45	070109-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 20:45	070109-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 20:45	070109-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 20:45	070109-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-JUL-09 20:45	070109-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 20:45	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-JUL-09 20:45	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-JUL-09 20:45	070109-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-JUL-09 20:45	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 20:45	070109-1
	Sodium	-174.63	+/-250	J	70.0	250	SOL	P	01-JUL-09 20:45	070109-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 20:45	070109-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 20:45	070109-1
CCB11										
	Aluminum	110.88	+/-200	J	68.0	200	SOL	P	01-JUL-09 21:48	070109-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 21:48	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 21:48	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 21:48	070109-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–JUL–09 21:48	070109–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–JUL–09 21:48	070109–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	01–JUL–09 21:48	070109–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	01–JUL–09 21:48	070109–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	01–JUL–09 21:48	070109–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	01–JUL–09 21:48	070109–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–JUL–09 21:48	070109–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–JUL–09 21:48	070109–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 21:48	070109–1
	Sodium	–176.2	+/–250	J	70.0	250	SOL	P	01–JUL–09 21:48	070109–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 21:48	070109–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–JUL–09 21:48	070109–1
CCB12										
	Aluminum	85.11	+/–200	J	68.0	200	SOL	P	01–JUL–09 22:44	070109–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	01–JUL–09 22:44	070109–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 22:44	070109–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 22:44	070109–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–JUL–09 22:44	070109–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–JUL–09 22:44	070109–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	01–JUL–09 22:44	070109–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	01–JUL–09 22:44	070109–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	01–JUL–09 22:44	070109–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	01–JUL–09 22:44	070109–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–JUL–09 22:44	070109–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–JUL–09 22:44	070109–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 22:44	070109–1
	Sodium	–175.5	+/–250	J	70.0	250	SOL	P	01–JUL–09 22:44	070109–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–JUL–09 22:44	070109–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–JUL–09 22:44	070109–1
CCB13										
	Aluminum	83.67	+/–200	J	68.0	200	SOL	P	01–JUL–09 23:46	070109–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 23:46	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 23:46	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 23:46	070109-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 23:46	070109-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 23:46	070109-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-JUL-09 23:46	070109-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-JUL-09 23:46	070109-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-JUL-09 23:46	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-JUL-09 23:46	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-JUL-09 23:46	070109-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-JUL-09 23:46	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-JUL-09 23:46	070109-1
	Sodium	-181.46	+/-250	J	70.0	250	SOL	P	01-JUL-09 23:46	070109-1
	Vanadium	-1.37	+/-5	J	1.0	5.0	SOL	P	01-JUL-09 23:46	070109-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-JUL-09 23:46	070109-1
CCB14										
	Aluminum	102.4	+/-200	J	68.0	200	SOL	P	02-JUL-09 00:34	070109-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 00:34	070109-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 00:34	070109-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 00:34	070109-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 00:34	070109-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 00:34	070109-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 00:34	070109-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 00:34	070109-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 00:34	070109-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 00:34	070109-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 00:34	070109-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 00:34	070109-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 00:34	070109-1
	Sodium	-179.18	+/-250	J	70.0	250	SOL	P	02-JUL-09 00:34	070109-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 00:34	070109-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2500

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 00:34	070109-1

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 09--2500

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201871694								
	Aluminum	6510	ug/Kg	+/-19157.088	U	P	6510	19200
	Antimony	316	ug/Kg	+/-957.854	U	P	316	958
	Barium	95.8	ug/Kg	+/-478.927	U	P	95.8	479
	Cadmium	95.8	ug/Kg	+/-478.927	U	P	95.8	479
	Calcium	7660	ug/Kg	+/-23946.36	U	P	7660	23900
	Chromium	144	ug/Kg	+/-478.927	U	P	144	479
	Cobalt	144	ug/Kg	+/-478.927	U	P	144	479
	Copper	287	ug/Kg	+/-957.854	U	P	287	958
	Iron	7660	ug/Kg	+/-23946.36	U	P	7660	23900
	Lead	239	ug/Kg	+/-957.854	U	P	239	958
	Magnesium	8140	ug/Kg	+/-28735.632	U	P	8140	28700
	Manganese	192	ug/Kg	+/-957.854	U	P	192	958
	Potassium	6130	ug/Kg	+/-23946.36	U	P	6130	23900
	Silver	95.8	ug/Kg	+/-478.927	U	P	95.8	479
	Sodium	-16300	ug/Kg	+/-23946.36	J	P	6700	23900
	Vanadium	95.8	ug/Kg	+/-478.927	U	P	95.8	479
	Zinc	316	ug/Kg	+/-957.854	U	P	316	958
1201871724								
	Arsenic	200	ug/kg	+/-1000	U	MS	200	1000
	Beryllium	20	ug/kg	+/-100	U	MS	20	100
	Nickel	100	ug/kg	+/-400	U	MS	100	400
	Selenium	500	ug/kg	+/-1000	U	MS	500	1000
	Thallium	60	ug/kg	+/-200	U	MS	60	200
1201873031								
	Mercury	3.52	ug/kg	+/-10.345	U	AV	3.52	10.3

METALS
-4-
Interference Check Sample

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	519000	ug/L	500000	ug/L	104	80.0 - 120.0	01-JUL-09 11:23	070109-1
	Antimony	12.7	ug/L					01-JUL-09 11:23	070109-1
	Barium	-5.71	ug/L					01-JUL-09 11:23	070109-1
	Cadmium	-4.09	ug/L					01-JUL-09 11:23	070109-1
	Calcium	481000	ug/L	500000	ug/L	96.1	80.0 - 120.0	01-JUL-09 11:23	070109-1
	Chromium	2.42	ug/L					01-JUL-09 11:23	070109-1
	Cobalt	-1.4	ug/L					01-JUL-09 11:23	070109-1
	Copper	1.38	ug/L					01-JUL-09 11:23	070109-1
	Iron	183000	ug/L	200000	ug/L	91.5	80.0 - 120.0	01-JUL-09 11:23	070109-1
	Lead	-6.88	ug/L					01-JUL-09 11:23	070109-1
	Manganese	12.1	ug/L					01-JUL-09 11:23	070109-1
	Potassium	-110.0	ug/L					01-JUL-09 11:23	070109-1
	Silver	-0.354	ug/L					01-JUL-09 11:23	070109-1
	Sodium	108	ug/L					01-JUL-09 11:23	070109-1
	Vanadium	-3.68	ug/L					01-JUL-09 11:23	070109-1
	Zinc	-8.26	ug/L					01-JUL-09 11:23	070109-1
ICSAB01									
	Aluminum	516000	ug/L	500000	ug/L	103	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Antimony	531	ug/L	500	ug/L	106	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Barium	482	ug/L	500	ug/L	96.4	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Cadmium	460	ug/L	500	ug/L	92	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Calcium	480000	ug/L	500000	ug/L	95.9	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Chromium	478	ug/L	500	ug/L	95.6	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Cobalt	452	ug/L	500	ug/L	90.4	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Copper	547	ug/L	500	ug/L	109	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Iron	183000	ug/L	200000	ug/L	91.3	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Lead	455	ug/L	500	ug/L	90.9	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Manganese	484	ug/L	500	ug/L	96.9	80.0 - 120.0	01-JUL-09 11:29	070109-1
	Potassium	5290	ug/L	5000	ug/L	106	80.0 - 120.0	01-JUL-09 11:29	070109-1

METALS
-4-
Interference Check Sample

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silver	276	ug/L	250	ug/L	110	80.0 – 120.0	01-JUL-09 11:29	070109-1
	Sodium	5530	ug/L	5000	ug/L	111	80.0 – 120.0	01-JUL-09 11:29	070109-1
	Vanadium	511	ug/L	500	ug/L	102	80.0 – 120.0	01-JUL-09 11:29	070109-1
	Zinc	488	ug/L	500	ug/L	97.7	80.0 – 120.0	01-JUL-09 11:29	070109-1

METALS
-4-
Interference Check Sample

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Magnesium	480000	ug/L	500000	ug/L	95.9	80.0 – 120.0	02-JUL-09 11:29	070209-2
ICSAB01									
	Magnesium	471000	ug/L	500000	ug/L	94.2	80.0 – 120.0	02-JUL-09 11:35	070209-2

METALS
-4-
Interference Check Sample

SDG No: 09-2500

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	0.057	ug/L					08-JUL-09 04:11	090707-3
	Beryllium	0.049	ug/L					08-JUL-09 04:11	090707-3
	Nickel	2.54	ug/L					08-JUL-09 04:11	090707-3
	Selenium	-0.402	ug/L					08-JUL-09 04:11	090707-3
	Thallium	0.027	ug/L					08-JUL-09 04:11	090707-3
ICSAB01									
	Arsenic	21.1	ug/L	20	ug/L	106	80.0 - 120.0	08-JUL-09 04:16	090707-3
	Beryllium	21.4	ug/L	20	ug/L	107	80.0 - 120.0	08-JUL-09 04:16	090707-3
	Nickel	21.4	ug/L	22.7	ug/L	94.1	80.0 - 120.0	08-JUL-09 04:16	090707-3
	Selenium	19.5	ug/L	20	ug/L	97.5	80.0 - 120.0	08-JUL-09 04:16	090707-3
	Thallium	19.4	ug/L	20	ug/L	97	80.0 - 120.0	08-JUL-09 04:16	090707-3

METALS
–5a–
Matrix Spike Summary

SDG NO. 09–2500 **Client ID** CAMO–09–6519S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 79

Sample ID: 232509001 **Spike ID:** 1201871697

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg	75–125	3320000		2290000		624000	166	N	P
Antimony	ug/Kg	75–125	57600		416	U	62400	92.2		P
Barium	ug/Kg	75–125	79300		27200		62400	83.4		P
Cadmium	ug/Kg	75–125	57600		126	U	62400	92.4		P
Calcium	ug/Kg	75–125	1440000		1350000		624000	13.5	N	P
Chromium	ug/Kg	75–125	66000		14500		62400	82.6		P
Cobalt	ug/Kg	75–125	57000		827		62400	90		P
Copper	ug/Kg	75–125	65700		10600		62400	88.3		P
Iron	ug/Kg		4400000		6080000		624000	–269	N/A	P
Lead	ug/Kg	75–125	65200		10500		62400	87.7		P
Magnesium	ug/Kg	75–125	1010000		387000		624000	100		P
Manganese	ug/Kg	75–125	239000		243000		62400	–5.27	N	P
Potassium	ug/Kg	75–125	997000		504000		624000	79		P
Silver	ug/Kg	75–125	60200		474	J	62400	95.8		P
Sodium	ug/Kg	75–125	735000		273000		624000	74.1	N	P
Vanadium	ug/Kg	75–125	61000		4300		62400	91		P
Zinc	ug/Kg	75–125	77300		30600		62400	75		P

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2500 **Client ID** CAMO-09-6519SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 79

Sample ID: 232509001 **Spike ID:** 1201871699

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg	75-125	5100000		2290000		620000	452	N	P
Antimony	ug/Kg	75-125	56000		416	U	62000	90.3		P
Barium	ug/Kg	75-125	84000		27200		62000	91.6		P
Cadmium	ug/Kg	75-125	56000		126	U	62000	90.3		P
Calcium	ug/Kg	75-125	1920000		1350000		620000	90.9		P
Chromium	ug/Kg	75-125	72000		14500		62000	92.8		P
Cobalt	ug/Kg	75-125	55700		827		62000	88.6		P
Copper	ug/Kg	75-125	69400		10600		62000	94.8		P
Iron	ug/Kg		7720000		6080000		620000	266	N/A	P
Lead	ug/Kg	75-125	69000		10500		62000	94.4		P
Magnesium	ug/Kg	75-125	1150000		387000		620000	123		P
Manganese	ug/Kg	75-125	310000		243000		62000	109		P
Potassium	ug/Kg	75-125	1190000		504000		620000	111		P
Silver	ug/Kg	75-125	58800		474	J	62000	94.1		P
Sodium	ug/Kg	75-125	833000		273000		620000	90.3		P
Vanadium	ug/Kg	75-125	63100		4300		62000	94.8		P
Zinc	ug/Kg	75-125	90300		30600		62000	96.3		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2500 **Client ID** CAMO-09-6519S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 79

Sample ID: 232509001 **Spike ID:** 1201871727

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	10600		1030	J	10000	95.8		MS
Beryllium	ug/kg	75-125	6510		579		6250	94.9		MS
Nickel	ug/kg	75-125	9710		3620		6250	97.4		MS
Selenium	ug/kg	75-125	2580		631	U	2500	89		MS
Thallium	ug/kg	75-125	11700		218	J	12500	91.5		MS

METALS
–5a–

Matrix Spike Duplicate Summary

SDG NO.	09–2500	**Client ID**	CAMO–09–6519SD
Contract:	LANL01004	**Level:**	Low
Matrix:	SOIL	**% Solids:**	79
Sample ID:	232509001	**Spike ID:**	1201871729

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75–125	11000		1030	J	9960	100		MS
Beryllium	ug/kg	75–125	6940		579		6220	102		MS
Nickel	ug/kg	75–125	10700		3620		6220	113		MS
Selenium	ug/kg	75–125	2770		631	U	2490	96.9		MS
Thallium	ug/kg	75–125	12400		218	J	12400	97.7		MS

METALS
-5a-

Matrix Spike Summary

SDG NO.	09-2500	**Client ID**	CAMO-09-6519S
Contract:	LANL01004	**Level:**	Low
Matrix:	SOIL	**% Solids:**	79
Sample ID:	232509001	**Spike ID:**	1201873034

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	251		127		135	92		AV

METALS
–5a–

Matrix Spike Duplicate Summary

SDG NO.	09–2500	**Client ID**	CAMO–09–6519SD
Contract:	LANL01004	**Level:**	Low
Matrix:	SOIL	**% Solids:**	79
Sample ID:	232509001	**Spike ID:**	1201873037

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75–125	275		127		142	105		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-6519D

Sample ID: 232509001 **Duplicate ID:** 1201871696 **Percent Solids for Dup:** 79

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	2290000		2720000		17.2		P
Antimony	ug/Kg		416	U	410	U			P
Barium	ug/Kg	+/-20%	27200		23300		15.7		P
Cadmium	ug/Kg		126	U	124	U			P
Calcium	ug/Kg	+/-20%	1350000		1310000		3.35		P
Chromium	ug/Kg	+/-20%	14500		14500		.233		P
Cobalt	ug/Kg	+/-621	827		1270		42.3		P
Copper	ug/Kg	+/-20%	10600		8770		19.4		P
Iron	ug/Kg	+/-20%	6080000		7010000		14.2		P
Lead	ug/Kg	+/-20%	10500		11300		6.89		P
Magnesium	ug/Kg	+/-20%	387000		402000		3.86		P
Manganese	ug/Kg	+/-20%	243000		259000		6.64		P
Potassium	ug/Kg	+/-20%	504000		544000		7.49		P
Silver	ug/Kg	+/-621	474	J	389	J	19.8		P
Sodium	ug/Kg	+/-20%	273000		282000		2.98		P
Vanadium	ug/Kg	+/-20%	4300		4650		7.83		P
Zinc	ug/Kg	+/-20%	30600		29500		3.44		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-6519SD

Sample ID: 1201871697 **Duplicate ID:** 1201871699 **Percent Solids for Dup:** 79

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	3320000		5100000		42.1	*	P
Antimony	ug/Kg	+/-20	57600		56000		2.69		P
Barium	ug/Kg	+/-20	79300		84000		5.84		P
Cadmium	ug/Kg	+/-20	57600		56000		2.9		P
Calcium	ug/Kg	+/-20	1440000		1920000		28.6	*	P
Chromium	ug/Kg	+/-20	66000		72000		8.73		P
Cobalt	ug/Kg	+/-20	57000		55700		2.2		P
Copper	ug/Kg	+/-20	65700		69400		5.45		P
Iron	ug/Kg	+/-20	4400000		7720000		54.9	*	P
Lead	ug/Kg	+/-20	65200		69000		5.71		P
Magnesium	ug/Kg	+/-20	1010000		1150000		12.9		P
Manganese	ug/Kg	+/-20	239000		310000		25.7	*	P
Potassium	ug/Kg	+/-20	997000		1190000		18		P
Silver	ug/Kg	+/-20	60200		58800		2.4		P
Sodium	ug/Kg	+/-20	735000		833000		12.5		P
Vanadium	ug/Kg	+/-20	61000		63100		3.26		P
Zinc	ug/Kg	+/-20	77300		90300		15.5		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09--2500

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-6519D

Sample ID: 232509001 **Duplicate ID:** 1201871726 **Percent Solids for Dup:** 79

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-1200	1030	J	1410		30.7		MS
Beryllium	ug/kg	+/-120	579		696		18.3		MS
Nickel	ug/kg	+/-20%	3620		3700		2.09		MS
Selenium	ug/kg		631	U	601	U			MS
Thallium	ug/kg	+/-240	218	J	208	J	4.65		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-6519SD

Sample ID: 1201871727 **Duplicate ID:** 1201871729 **Percent Solids for Dup:** 79

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-20	10600		11000		3.85		MS
Beryllium	ug/kg	+/-20	6510		6940		6.44		MS
Nickel	ug/kg	+/-20	9710		10700		9.54		MS
Selenium	ug/kg	+/-20	2580		2770		7.05		MS
Thallium	ug/kg	+/-20	11700		12400		6		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-6519D

Sample ID: 232509001 **Duplicate ID:** 1201873033 **Percent Solids for Dup:** 79

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20%	127		68.7		59.5	*	AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2500

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-6519SD

Sample ID: 1201873034 **Duplicate ID:** 1201873037 **Percent Solids for Dup:** 79

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	251		275		9.29		AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2500

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871695								
	Cadmium	ug/Kg	116000	110000		94.4	77.9-115.2	P
	Calcium	ug/Kg	3720000	3630000		97.5	77.4-111.7	P
	Chromium	ug/Kg	84000	71200		84.7	66.6-116.5	P
	Cobalt	ug/Kg	83000	76600		92.3	79-113.9	P
	Copper	ug/Kg	105000	96100		91.6	77.6-112	P
	Iron	ug/Kg	20000000	16400000		82.3	51.5-145.5	P
	Lead	ug/Kg	161000	155000		96.2	83.1-114.7	P
	Magnesium	ug/Kg	2980000	2910000		97.8	81-114.3	P
	Manganese	ug/Kg	398000	344000		86.4	76.6-106.6	P
	Potassium	ug/Kg	2390000	2000000		83.8	72.2-111.1	P
	Silver	ug/Kg	133000	125000		94.2	81.7-115.7	P
	Sodium	ug/Kg	614000	476000		77.5	71.5-109.3	P
	Vanadium	ug/Kg	166000	137000		82.6	65-118.6	P
	Zinc	ug/Kg	195000	185000		94.8	82.8-111.9	P
	Aluminum	ug/Kg	7290000	6010000		82.4	63.5-118	P
	Antimony	ug/Kg	121000	111000		91.4	39.1-132.1	P
	Barium	ug/Kg	475000	441000		92.7	82-110.6	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2500

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871725								
	Arsenic	ug/kg	255000	251000		98.6	83-120	MS
	Beryllium	ug/kg	86400	89700		104	81.2-126.8	MS
	Nickel	ug/kg	101000	101000		100	83.3-121.4	MS
	Selenium	ug/kg	171000	187000		109	80.2-125.9	MS
	Thallium	ug/kg	203000	200000		98.5	78-123.2	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2500

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873032								
	Mercury	ug/kg	5150	5110		99.1	71.6-128.3	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2500 **Client ID** CAMO-09-6519L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232509001 **Serial Dilution ID:** 1201871698

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	18200		18900		3.85		10	P
Antimony	3.3	U	16.5	U				P
Barium	216		218		.926		10	P
Cadmium	1	U	5	U				P
Calcium	10700		11200		4.67		10	P
Chromium	115		115		0		10	P
Cobalt	6.56		7.5	U	100			P
Copper	84.4		87.5		3.67			P
Iron	48100		50500		4.99		10	P
Lead	83.6		94		12.4			P
Magnesium	3070		3200		4.07			P
Manganese	1920		1990		3.39		10	P
Potassium	4000		4230		5.75		10	P
Silver	3.76	J	5	U	100			P
Sodium	2170		1550		28.8			P
Vanadium	34		30.3		10.9			P
Zinc	242		254		4.75		10	P

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 09–2500 **Client ID** CAMO–09–6519L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232509001 **Serial Dilution ID:** 1201871728

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	4.1	J	6.25	J	52.4			MS
Beryllium	2.29		2.28	J	.437			MS
Nickel	14.4		14.4		0			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.865	J	1.5	U	100			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2500 **Client ID** CAMO-09-6519L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232509001 **Serial Dilution ID:** 1201873036

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	1.79		1.29		27.9	E	10	AV

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2500 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881346						
1201871694	MB for batch 881346	MB	S	30-JUN-09	.522g	50mL	
1201871695	LCS for batch 881346	LCS	S	30-JUN-09	.508g	50mL	
1201871697	CAMO-09-6519S	MS	S	30-JUN-09	.506g	50mL	
1201871699	CAMO-09-6519SD	MSD	S	30-JUN-09	.509g	50mL	
1201871696	CAMO-09-6519D	DUP	S	30-JUN-09	.508g	50mL	
232509001	CAMO-09-6519	SAMPLE	S	30-JUN-09	.5g	50mL	
232509002	CAMO-09-6518	SAMPLE	S	30-JUN-09	.508g	50mL	
232509003	CAMO-09-6527	SAMPLE	S	30-JUN-09	.502g	50mL	
232509004	CAMO-09-6529	SAMPLE	S	30-JUN-09	.511g	50mL	
232509005	CAMO-09-6528	SAMPLE	S	30-JUN-09	.519g	50mL	
232509006	CAMO-09-6531	SAMPLE	S	30-JUN-09	.522g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2500 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881362						
1201871724	MB for batch 881362	MB	S	06-JUL-09	.5g	50mL	
1201871725	LCS for batch 881362	LCS	S	06-JUL-09	.511g	50mL	
1201871727	CAMO-09-6519S	MS	S	06-JUL-09	.505g	50mL	
1201871729	CAMO-09-6519SD	MSD	S	06-JUL-09	.507g	50mL	
1201871726	CAMO-09-6519D	DUP	S	06-JUL-09	.525g	50mL	
232509001	CAMO-09-6519	SAMPLE	S	06-JUL-09	.5g	50mL	
232509002	CAMO-09-6518	SAMPLE	S	06-JUL-09	.503g	50mL	
232509003	CAMO-09-6527	SAMPLE	S	06-JUL-09	.508g	50mL	
232509004	CAMO-09-6529	SAMPLE	S	06-JUL-09	.51g	50mL	
232509005	CAMO-09-6528	SAMPLE	S	06-JUL-09	.505g	50mL	
232509006	CAMO-09-6531	SAMPLE	S	06-JUL-09	.5g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2500 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881912						
1201873031	MB for batch 881912	MB	S	10-JUL-09	.58g	30mL	
1201873032	LCS for batch 881912	LCS	S	10-JUL-09	.201g	30mL	
1201873034	CAMO-09-6519S	MS	S	10-JUL-09	.561g	30mL	
1201873037	CAMO-09-6519SD	MSD	S	10-JUL-09	.535g	30mL	
1201873033	CAMO-09-6519D	DUP	S	10-JUL-09	.519g	30mL	
232509001	CAMO-09-6519	SAMPLE	S	10-JUL-09	.533g	30mL	
232509002	CAMO-09-6518	SAMPLE	S	10-JUL-09	.579g	30mL	
232509003	CAMO-09-6527	SAMPLE	S	10-JUL-09	.516g	30mL	
232509004	CAMO-09-6529	SAMPLE	S	10-JUL-09	.594g	30mL	
232509005	CAMO-09-6528	SAMPLE	S	10-JUL-09	.532g	30mL	
232509006	CAMO-09-6531	SAMPLE	S	10-JUL-09	.556g	30mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 01–JUL–09 **End Date:** 02–JUL–09

Client Sdg: 09–2500
Method P
Data File: 070109–1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	10:30	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
S0.1	1	10:37		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	10:43	X	X		X		X	X	X	X	X		X		X			X		X			X	X
SCAL	1	10:50	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
S10	1	10:57	X						X				X									X			
ICV01	1	11:03	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ICB01	1	11:10	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
PQL01	1	11:16	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ICSA01	1	11:23	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ICSAB01	1	11:29	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
LR01	1	11:35	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
LR02	1	11:41	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ZZZZZZ	1	11:48																							
ZZZZZZ	1	11:55																							
CCV01	1	12:01	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB01	1	12:09	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
LR03	1	12:15	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
LR04	1	12:22	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCV02	1	12:29	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB02	1	12:36	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ZZZZZZ	1	12:43																							
ZZZZZZ	1	12:50																							
ZZZZZZ	1	12:56																							
ZZZZZZ	1	13:03																							
ZZZZZZ	1	13:10																							
ZZZZZZ	1	13:17																							
ZZZZZZ	1	13:23																							
CCV03	1	13:30	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB03	1	13:37	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCV04	1	14:22	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB04	1	14:28	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ZZZZZZ	1	14:35																							
ZZZZZZ	2	14:42																							
ZZZZZZ	1	14:49																							
ZZZZZZ	1	14:56																							
ZZZZZZ	1	15:03																							
ZZZZZZ	1	15:10																							
ZZZZZZ	5	15:17																							
CCV05	1	15:24	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB05	1	15:31	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	15:37																							
ZZZZZZ	1	15:44																							
ZZZZZZ	1	15:51																							
ZZZZZZ	1	15:59																							
ZZZZZZ	1	16:06																							
ZZZZZZ	1	16:13																							
ZZZZZZ	1	16:20																							
CCV06	1	16:27	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB06	1	16:34	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ZZZZZZ	1	16:42																							
ZZZZZZ	2	16:49																							
ZZZZZZ	1	16:56																							
ZZZZZZ	1	17:03																							
ZZZZZZ	1	17:10																							
ZZZZZZ	1	17:17																							
ZZZZZZ	5	17:24																							
CCV07	1	17:30	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB07	1	17:37	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ZZZZZZ	1	17:44																							
ZZZZZZ	1	17:51																							
ZZZZZZ	1	17:58																							
ZZZZZZ	1	18:05																							
ZZZZZZ	1	18:12																							
ZZZZZZ	1	18:19																							
ZZZZZZ	1	18:26																							
CCV08	1	18:33	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB08	1	18:40	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ZZZZZZ	1	18:47																							
ZZZZZZ	1	18:54																							
ZZZZZZ	1	19:01																							
ZZZZZZ	1	19:08																							
ZZZZZZ	1	19:15																							
ZZZZZZ	1	19:22																							
ZZZZZZ	1	19:29																							
CCV09	1	19:36	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB09	1	19:43	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ZZZZZZ	1	19:50																							
ZZZZZZ	2	19:56																							
ZZZZZZ	1	20:03																							
ZZZZZZ	1	20:10																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	20:17																							
ZZZZZZ	1	20:24																							
ZZZZZZ	5	20:31																							
CCV10	1	20:38	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB10	1	20:45	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ZZZZZZ	1	20:52																							
ZZZZZZ	1	20:59																							
ZZZZZZ	1	21:06																							
ZZZZZZ	1	21:13																							
ZZZZZZ	1	21:20																							
ZZZZZZ	1	21:27																							
ZZZZZZ	1	21:34																							
CCV11	1	21:41	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB11	1	21:48	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
ZZZZZZ	1	21:55																							
ZZZZZZ	1	22:02																							
ZZZZZZ	1	22:09																							
ZZZZZZ	1	22:16																							
ZZZZZZ	1	22:23																							
ZZZZZZ	1	22:30																							
CCV12	1	22:37	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB12	1	22:44	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
1201871694	1	22:50	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
1201871695	2	22:57	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
232509001	1	23:04	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
1201871696	1	23:11	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
1201871697	1	23:18	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
1201871699	1	23:25	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
1201871698	5	23:32	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCV13	1	23:39	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB13	1	23:46	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
232509002	1	23:52	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
232509003	1	00:00	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
232509004	1	00:07	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
232509005	1	00:13	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
232509006	1	00:20	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCV14	1	00:27	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X
CCB14	1	00:34	X	X		X		X	X	X	X	X	X	X		X			X		X	X		X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 02-JUL-09 **End Date:** 02-JUL-09

Client Sdg: 09-2500
Method P
Data File: 070209-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	10:36													X										
S0.1	1	10:43																							
S0.5	1	10:49													X										
SCAL	1	10:56													X										
S10	1	11:03													X										
ICV01	1	11:09													X										
ICB01	1	11:15													X										
PQL01	1	11:22													X										
ICSA01	1	11:29													X										
ICSAB01	1	11:35													X										
LR01	1	11:40													X										
LR02	1	11:47													X										
CCV01	1	11:53													X										
CCB01	1	12:01													X										
LR03	1	12:09													X										
LR04	1	12:16													X										
CCV02	1	12:23													X										
CCB02	1	12:30													X										
ZZZZZZ	1	12:40																							
ZZZZZZ	1	12:47																							
ZZZZZZ	1	12:54																							
ZZZZZZ	1	13:01																							
ZZZZZZ	1	13:08																							
ZZZZZZ	1	13:14																							
ZZZZZZ	1	13:21																							
ZZZZZZ	1	13:28																							
ZZZZZZ	5	13:35																							
CCV03	1	13:42													X										
CCB03	1	13:49													X										
CCV04	1	14:09													X										
CCB04	1	14:16													X										
ZZZZZZ	1	14:22																							
ZZZZZZ	2	14:29																							
ZZZZZZ	1	14:36																							
ZZZZZZ	1	14:43																							
ZZZZZZ	1	14:50																							
ZZZZZZ	1	14:57																							
ZZZZZZ	5	15:04																							
CCV05	1	15:11													X										
CCB05	1	15:18													X										

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	1	15:24																						
ZZZZZZ	1	15:31																						
ZZZZZZ	1	15:39																						
ZZZZZZ	1	15:46																						
ZZZZZZ	1	15:53																						
ZZZZZZ	1	16:00																						
ZZZZZZ	1	16:07																						
CCV06	1	16:14												X										
CCB06	1	16:20												X										
ZZZZZZ	1	16:27																						
ZZZZZZ	1	16:34																						
ZZZZZZ	1	16:41																						
ZZZZZZ	1	16:48																						
ZZZZZZ	1	16:55																						
ZZZZZZ	1	17:02																						
CCV07	1	17:09												X										
CCB07	1	17:16												X										
1201871694	1	17:23												X										
1201871695	2	17:30												X										
232509001	1	17:37												X										
1201871696	1	17:44												X										
1201871697	1	17:51												X										
1201871699	1	17:58												X										
1201871698	5	18:05												X										
CCV08	1	18:11												X										
CCB08	1	18:19												X										
232509002	1	18:25												X										
232509003	1	18:32												X										
232509004	1	18:39												X										
232509005	1	18:46												X										
232509006	1	18:53												X										
CCV09	1	19:00												X										
CCB09	1	19:07												X										

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 13-JUL-09 **End Date:** 13-JUL-09

Client Sdg: 09-2500
Method AV
Data File: 071309S2-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:36															X								
S0.2	1	09:38															X								
S0.5	1	09:40															X								
S2.0	1	09:42															X								
S5.0	1	09:44															X								
S10	1	09:46															X								
ICV01	1	09:48															X								
ICB01	1	09:50															X								
CRDL01	1	09:52															X								
CCV01	1	09:54															X								
CCB01	1	09:56															X								
ZZZZZZ	1	09:58																							
ZZZZZZ	10	10:00																							
ZZZZZZ	1	10:02																							
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
ZZZZZZ	1	10:08																							
ZZZZZZ	1	10:10																							
ZZZZZZ	1	10:12																							
ZZZZZZ	1	10:14																							
ZZZZZZ	5	10:16																							
CCV02	1	10:18															X								
CCB02	1	10:20															X								
ZZZZZZ	1	10:22																							
ZZZZZZ	1	10:24																							
ZZZZZZ	1	10:26																							
ZZZZZZ	1	10:28																							
ZZZZZZ	1	10:30																							
ZZZZZZ	1	10:32																							
ZZZZZZ	1	10:34																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:38																							
ZZZZZZ	1	10:40																							
CCV03	1	10:42															X								
CCB03	1	10:44															X								
ZZZZZZ	1	10:46																							
ZZZZZZ	1	10:48																							
ZZZZZZ	1	10:50																							
ZZZZZZ	1	10:52																							
1201873031	1	10:54															X								

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																						
1201873032	10	10:56														X								
ZZZZZZ	1	10:58																						
ZZZZZZ	1	11:00																						
ZZZZZZ	1	11:02																						
ZZZZZZ	1	11:04																						
CCV04	1	11:06														X								
CCB04	1	11:08														X								
ZZZZZZ	1	11:10																						
ZZZZZZ	1	11:12																						
ZZZZZZ	1	11:14																						
ZZZZZZ	1	11:16																						
ZZZZZZ	1	11:18																						
ZZZZZZ	1	11:20																						
ZZZZZZ	1	11:22																						
ZZZZZZ	1	11:24																						
ZZZZZZ	1	11:26																						
ZZZZZZ	1	11:27																						
CCV05	1	11:29														X								
CCB05	1	11:31														X								
232509001	1	11:33														X								
1201873033	1	11:35														X								
1201873034	1	11:37														X								
1201873037	1	11:39														X								
1201873036	5	11:41														X								
232509002	1	11:43														X								
232509003	1	11:45														X								
232509004	1	11:47														X								
232509005	1	11:49														X								
232509006	1	11:51														X								
CCV06	1	11:53														X								
CCB06	1	11:55														X								

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 08-JUL-09 **End Date:** 08-JUL-09

Client Sdg: 09-2500
Method MS
Data File: 090707-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	03:36			X		X											X		X			X		
S10	1	03:42			X		X											X		X			X		
S100	1	03:48			X		X											X		X			X		
ICV01	1	03:54			X		X											X		X			X		
ICB01	1	03:59			X		X											X		X			X		
CRDL01	1	04:05			X		X											X		X			X		
ICSA01	1	04:11			X		X											X		X			X		
ICSAB01	1	04:16			X		X											X		X			X		
CCV01	1	04:22			X		X											X		X			X		
CCB01	1	04:28			X		X											X		X			X		
LR01	1	04:34			X		X											X		X			X		
CCV02	1	04:39			X		X											X		X			X		
CCB02	1	04:45			X		X											X		X			X		
ZZZZZZ	1	04:51																							
ZZZZZZ	1	04:57																							
ZZZZZZ	1	05:02																							
ZZZZZZ	1	05:08																							
ZZZZZZ	5	05:14																							
CCV03	1	05:20			X		X											X		X			X		
CCB03	1	05:25			X		X											X		X			X		
ZZZZZZ	2	05:31																							
ZZZZZZ	2	05:37																							
ZZZZZZ	2	05:43																							
ZZZZZZ	2	05:49																							
ZZZZZZ	2	05:54																							
ZZZZZZ	2	06:00																							
ZZZZZZ	2	06:06																							
ZZZZZZ	10	06:12																							
CCV04	1	06:17			X		X											X		X			X		
CCB04	1	06:23			X		X											X		X			X		
ZZZZZZ	2	06:29																							
ZZZZZZ	40	06:35																							
ZZZZZZ	2	06:41																							
ZZZZZZ	2	06:46																							
ZZZZZZ	2	06:52																							
ZZZZZZ	2	06:58																							
ZZZZZZ	10	07:04																							
ZZZZZZ	2	07:10																							
CCV05	1	07:15			X		X											X		X			X		
CCB05	1	07:21			X		X											X		X			X		

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																								
1201871724	2	07:27			X		X											X		X			X			
1201871725	40	07:33			X		X											X		X			X			
232509001	2	07:38			X		X											X		X			X			
1201871726	2	07:44			X		X											X		X			X			
1201871727	2	07:50			X		X											X		X			X			
1201871729	2	07:56			X		X											X		X			X			
1201871728	10	08:02			X		X											X		X			X			
CCV06	1	08:07			X		X											X		X			X			
CCB06	1	08:13			X		X											X		X			X			
232509002	2	08:19			X		X											X		X			X			
232509003	2	08:25			X		X											X		X			X			
232509004	2	08:31			X		X											X		X			X			
232509005	2	08:36			X		X											X		X			X			
232509006	2	08:42			X		X											X		X			X			
CCV07	1	08:48			X		X											X		X			X			
CCB07	1	08:54			X		X											X		X			X			

Standards

METALS
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Instrument Detection Limits

SDG NO. 09-2500

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2500

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2500

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 09-2500
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-MAY-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2500
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2500
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2500
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2500
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2500
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2500

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2500

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

Raw Data

Spectra

Method: Hg_ReAlign
Result: 071409

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

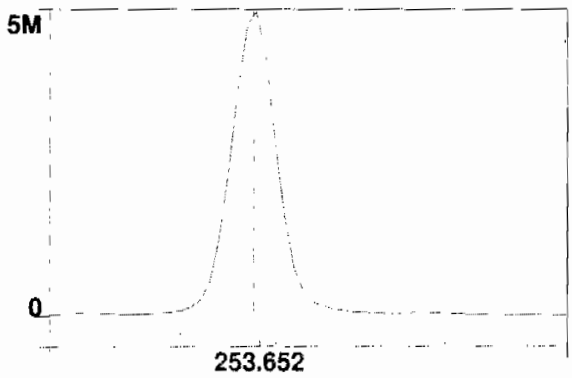

Intensity: 5172900.3 cps
Conc:

1

Analysis Begun

Start Time: 7/1/2009 10:30:58
Plasma On Time: 6/29/2009 15:26:31
Logged In Analyst: Optima3
Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601**Autosampler Model:** S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 070109
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX
Method Last Saved: 7/1/2009 10:29:21
IEC File: 040209.iec
MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1
Autosampler Location: 8
Sample ID: S0
Date Collected: 7/1/2009 10:30:59
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7256.1	7256.1	100	%	10:32:52
1	Y RADIAL	6685.8	6685.8	100.1	%	10:32:52
1	Al 396.153Radial†	-68.3	-68.2	[0.00]	ug/L	10:32:52

1	Ca 317.933Radial†	31.6	31.6	[0.00]	ug/L	10:33:13
1	Fe 238.204 Radial†	37.8	37.8	[0.00]	ug/L	10:33:13
1	K 766.490 Radial†	2918.6	2917.3	[0.00]	ug/L	10:32:52
1	Mg 279.077 IEC†	4.6	4.6	[0.00]	ug/L	10:33:13
1	Na 589.592 Radial†	3071.1	3069.6	[0.00]	ug/L	10:32:52
1	Sr 421.552†	-89.9	-89.9	[0.00]	ug/L	10:32:52
1	Sc 361.383	789960.5	789960.5	100.51	%	10:34:09
1	Y 371.029	615693.9	615693.9	100.56	%	10:34:09
1	Ag 328.068†	714.1	710.5	[0.00]	ug/L	10:34:09
1	As 188.979†	-35.1	-35.0	[0.00]	ug/L	10:34:29
1	B 249.677†	-862.9	-858.5	[0.00]	ug/L	10:34:09
1	Ba 233.527†	21.6	21.5	[0.00]	ug/L	10:34:29
1	Be 313.107†	-4953.1	-4928.0	[0.00]	ug/L	10:34:09
1	Cd 226.502†	-298.6	-297.1	[0.00]	ug/L	10:34:29
1	Co 228.616†	-119.9	-119.3	[0.00]	ug/L	10:34:29
1	Cr 267.716†	-9.8	-9.7	[0.00]	ug/L	10:34:09
1	Cu 324.752†	5990.7	5960.4	[0.00]	ug/L	10:34:09
1	Mn 257.610†	743.7	740.0	[0.00]	ug/L	10:34:09
1	Mo 202.031†	7.6	7.6	[0.00]	ug/L	10:34:29
1	Ni 231.604†	172.6	171.7	[0.00]	ug/L	10:34:29
1	P 214.914†	296.6	295.1	[0.00]	ug/L	10:34:29
1	Pb 220.353†	-23.9	-23.8	[0.00]	ug/L	10:34:29
1	S 181.975 Axial†	104.5	104.0	[0.00]	ug/L	10:34:29
1	Sb 206.836†	51.3	51.1	[0.00]	ug/L	10:34:29
1	Se 196.026†	-23.7	-23.6	[0.00]	ug/L	10:34:29
1	Si 251.611†	468.6	466.2	[0.00]	ug/L	10:34:29
1	Sn 189.927†	26.6	26.4	[0.00]	ug/L	10:34:29
1	Ti 334.940†	-1474.1	-1466.6	[0.00]	ug/L	10:34:09
1	Tl 190.801†	-51.7	-51.5	[0.00]	ug/L	10:34:29
1	U 409.014†	-5379.5	-5352.2	[0.00]	ug/L	10:34:09
1	V 292.402†	-1724.9	-1716.1	[0.00]	ug/L	10:34:09
1	Zn 213.857†	1031.2	1026.0	[0.00]	ug/L	10:34:29
1	SiO2†	451.1	448.8	[0.00]	ug/L	10:35:26
2	Sc Radial	7236.2	7236.2	99.8	%	10:33:18
2	Y RADIAL	6641.1	6641.1	99.39	%	10:33:18
2	Al 396.153Radial†	-99.9	-100.2	[0.00]	ug/L	10:33:18
2	Ca 317.933Radial†	26.4	26.5	[0.00]	ug/L	10:33:38
2	Fe 238.204 Radial†	38.4	38.5	[0.00]	ug/L	10:33:38
2	K 766.490 Radial†	2845.6	2852.1	[0.00]	ug/L	10:33:18
2	Mg 279.077 IEC†	0.8	0.8	[0.00]	ug/L	10:33:38
2	Na 589.592 Radial†	3111.4	3118.5	[0.00]	ug/L	10:33:18
2	Sr 421.552†	-77.5	-77.7	[0.00]	ug/L	10:33:18
2	Sc 361.383	778863.5	778863.5	99.097	%	10:34:35
2	Y 371.029	607091.5	607091.5	99.157	%	10:34:35
2	Ag 328.068†	751.8	758.7	[0.00]	ug/L	10:34:35
2	As 188.979†	-38.3	-38.7	[0.00]	ug/L	10:34:55
2	B 249.677†	-758.3	-765.2	[0.00]	ug/L	10:34:35
2	Ba 233.527†	19.1	19.3	[0.00]	ug/L	10:34:55
2	Be 313.107†	-4844.3	-4888.4	[0.00]	ug/L	10:34:35
2	Cd 226.502†	-276.8	-279.3	[0.00]	ug/L	10:34:55
2	Co 228.616†	-94.6	-95.4	[0.00]	ug/L	10:34:55
2	Cr 267.716†	-8.2	-8.2	[0.00]	ug/L	10:34:35
2	Cu 324.752†	5897.7	5951.4	[0.00]	ug/L	10:34:35
2	Mn 257.610†	780.7	787.9	[0.00]	ug/L	10:34:35
2	Mo 202.031†	7.8	7.9	[0.00]	ug/L	10:34:55
2	Ni 231.604†	168.5	170.0	[0.00]	ug/L	10:34:55
2	P 214.914†	299.4	302.2	[0.00]	ug/L	10:34:55
2	Pb 220.353†	-40.4	-40.8	[0.00]	ug/L	10:34:55
2	S 181.975 Axial†	109.5	110.5	[0.00]	ug/L	10:34:55
2	Sb 206.836†	59.4	60.0	[0.00]	ug/L	10:34:55
2	Se 196.026†	-35.1	-35.4	[0.00]	ug/L	10:34:55
2	Si 251.611†	491.8	496.2	[0.00]	ug/L	10:34:55
2	Sn 189.927†	6.3	6.4	[0.00]	ug/L	10:34:55
2	Ti 334.940†	-1483.2	-1496.7	[0.00]	ug/L	10:34:35
2	Tl 190.801†	-65.9	-66.5	[0.00]	ug/L	10:34:55
2	U 409.014†	-5266.8	-5314.7	[0.00]	ug/L	10:34:35
2	V 292.402†	-1701.3	-1716.8	[0.00]	ug/L	10:34:35
2	Zn 213.857†	1013.4	1022.7	[0.00]	ug/L	10:34:55
2	SiO2†	502.0	506.5	[0.00]	ug/L	10:35:31
3	Sc Radial	7265.6	7265.6	100	%	10:33:43
3	Y RADIAL	6719.5	6719.5	100.6	%	10:33:43

3	Al 396.153Radial†	-82.2	-82.0	[0.00]	ug/L	10:33:43
3	Ca 317.933Radial†	32.9	32.8	[0.00]	ug/L	10:34:03
3	Fe 238.204 Radial†	35.5	35.4	[0.00]	ug/L	10:34:03
3	K 766.490 Radial†	2786.0	2781.0	[0.00]	ug/L	10:33:43
3	Mg 279.077 IEC†	1.5	1.5	[0.00]	ug/L	10:34:03
3	Na 589.592 Radial†	3067.8	3062.3	[0.00]	ug/L	10:33:43
3	Sr 421.552†	-31.3	-31.2	[0.00]	ug/L	10:33:43
3	Sc 361.383	789050.5	789050.5	100.39	%	10:35:00
3	Y 371.029	613966.8	613966.8	100.28	%	10:35:00
3	Ag 328.068†	658.2	655.6	[0.00]	ug/L	10:35:00
3	As 188.979†	-31.2	-31.1	[0.00]	ug/L	10:35:20
3	B 249.677†	-851.8	-848.5	[0.00]	ug/L	10:35:00
3	Ba 233.527†	18.0	18.0	[0.00]	ug/L	10:35:20
3	Be 313.107†	-4966.9	-4947.4	[0.00]	ug/L	10:35:00
3	Cd 226.502†	-302.7	-301.5	[0.00]	ug/L	10:35:20
3	Co 228.616†	-84.9	-84.6	[0.00]	ug/L	10:35:20
3	Cr 267.716†	-1.5	-1.5	[0.00]	ug/L	10:35:00
3	Cu 324.752†	5828.4	5805.5	[0.00]	ug/L	10:35:00
3	Mn 257.610†	768.8	765.8	[0.00]	ug/L	10:35:00
3	Mo 202.031†	16.2	16.2	[0.00]	ug/L	10:35:20
3	Ni 231.604†	155.1	154.5	[0.00]	ug/L	10:35:20
3	P 214.914†	291.7	290.6	[0.00]	ug/L	10:35:20
3	Pb 220.353†	-15.5	-15.5	[0.00]	ug/L	10:35:20
3	S 181.975 Axial†	100.5	100.1	[0.00]	ug/L	10:35:20
3	Sb 206.836†	53.3	53.0	[0.00]	ug/L	10:35:20
3	Se 196.026†	-36.5	-36.4	[0.00]	ug/L	10:35:20
3	Si 251.611†	496.2	494.3	[0.00]	ug/L	10:35:20
3	Sn 189.927†	6.1	6.0	[0.00]	ug/L	10:35:20
3	Ti 334.940†	-1455.1	-1449.4	[0.00]	ug/L	10:35:00
3	Tl 190.801†	-64.3	-64.0	[0.00]	ug/L	10:35:20
3	U 409.014†	-5157.0	-5136.8	[0.00]	ug/L	10:35:00
3	V 292.402†	-1670.9	-1664.4	[0.00]	ug/L	10:35:00
3	Zn 213.857†	1049.3	1045.2	[0.00]	ug/L	10:35:20
3	SiO2†	496.9	495.0	[0.00]	ug/L	10:35:36

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	785958.2	6161.01	0.78%	100.00	%
Sc Radial	7252.6	15.03	0.21%	100	%
Y 371.029	612250.7	4550.70	0.74%	100.000	%
Y RADIAL	6682.1	39.32	0.59%	100.0	%
Ag 328.068†	708.3	51.57	7.28%	[0.00]	ug/L
Al 396.153Radial†	-83.5	16.01	19.18%	[0.00]	ug/L
As 188.979†	-34.9	3.78	10.84%	[0.00]	ug/L
B 249.677†	-824.1	51.25	6.22%	[0.00]	ug/L
Ba 233.527†	19.6	1.78	9.11%	[0.00]	ug/L
Be 313.107†	-4921.2	30.06	0.61%	[0.00]	ug/L
Ca 317.933Radial†	30.3	3.35	11.05%	[0.00]	ug/L
Cd 226.502†	-292.6	11.76	4.02%	[0.00]	ug/L
Co 228.616†	-99.8	17.73	17.78%	[0.00]	ug/L
Cr 267.716†	-6.5	4.39	67.83%	[0.00]	ug/L
Cu 324.752†	5905.8	86.92	1.47%	[0.00]	ug/L
Fe 238.204 Radial†	37.2	1.58	4.25%	[0.00]	ug/L
K 766.490 Radial†	2850.1	68.14	2.39%	[0.00]	ug/L
Mg 279.077 IEC†	2.3	1.98	85.55%	[0.00]	ug/L
Mn 257.610†	764.5	23.97	3.14%	[0.00]	ug/L
Mo 202.031†	10.5	4.86	46.11%	[0.00]	ug/L
Na 589.592 Radial†	3083.5	30.56	0.99%	[0.00]	ug/L
Ni 231.604†	165.4	9.50	5.74%	[0.00]	ug/L
P 214.914†	295.9	5.85	1.98%	[0.00]	ug/L
Pb 220.353†	-26.7	12.90	48.34%	[0.00]	ug/L
S 181.975 Axial†	104.9	5.26	5.01%	[0.00]	ug/L
Sb 206.836†	54.7	4.68	8.56%	[0.00]	ug/L
Se 196.026†	-31.8	7.16	22.50%	[0.00]	ug/L
Si 251.611†	485.6	16.82	3.46%	[0.00]	ug/L
Sn 189.927†	13.0	11.69	90.26%	[0.00]	ug/L
Sr 421.552†	-66.3	30.97	46.73%	[0.00]	ug/L
Ti 334.940†	-1470.9	23.94	1.63%	[0.00]	ug/L
Tl 190.801†	-60.7	8.06	13.29%	[0.00]	ug/L

U 409.014†	-5267.9	115.08	2.18%	[0.00] ug/L
V 292.402†	-1699.1	30.10	1.77%	[0.00] ug/L
Zn 213.857†	1031.3	12.16	1.18%	[0.00] ug/L
SiO2†	483.4	30.55	6.32%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/1/2009 10:37:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7209.8	7209.8	99.4	%	10:39:43
1	Y RADIAL	6620.3	6620.3	99.07	%	10:39:43
1	K 766.490 Radial†	8002.7	5200.2	[1000]	ug/L	10:39:38
1	Sr 421.552†	35394.3	35670.9	[100]	ug/L	10:39:38
1	Sc 361.383	777542.6	777542.6	98.929	%	10:40:10
1	Y 371.029	604533.4	604533.4	98.740	%	10:40:10
1	Ag 328.068†	19900.7	19407.8	[100]	ug/L	10:40:10
1	As 188.979†	302.0	340.2	[100]	ug/L	10:40:30
1	B 249.677†	3836.8	4702.4	[100]	ug/L	10:40:10
1	Ba 233.527†	16540.8	16700.3	[100]	ug/L	10:40:10
1	Be 313.107†	253510.5	261175.6	[100]	ug/L	10:40:10
1	Cd 226.502†	8894.6	9283.5	[100]	ug/L	10:40:30
1	Co 228.616†	6632.0	6803.5	[100]	ug/L	10:40:30
1	Cr 267.716†	8298.5	8394.8	[100]	ug/L	10:40:10
1	Cu 324.752†	37567.5	32068.3	[100]	ug/L	10:40:10
1	Mn 257.610†	107728.0	108129.4	[100]	ug/L	10:40:10
1	Mo 202.031†	1678.3	1685.9	[100]	ug/L	10:40:30
1	Ni 231.604†	4500.6	4383.9	[100]	ug/L	10:40:30
1	P 214.914†	1488.3	1208.5	[500]	ug/L	10:40:30
1	Pb 220.353†	967.2	1004.3	[100]	ug/L	10:40:30
1	S 181.975 Axial†	279.3	177.4	[200]	ug/L	10:40:30
1	Sb 206.836†	449.7	399.8	[100]	ug/L	10:40:30
1	Se 196.026†	203.5	237.5	[100]	ug/L	10:40:30
1	Si 251.611†	19073.7	18794.6	[500]	ug/L	10:40:10
1	Sn 189.927†	684.3	678.7	[100]	ug/L	10:40:30
1	Ti 334.940†	60870.6	63000.3	[100]	ug/L	10:40:10
1	Tl 190.801†	392.1	457.0	[100]	ug/L	10:40:30
1	U 409.014†	-1950.0	3296.9	[100]	ug/L	10:40:10
1	V 292.402†	10974.6	12792.5	[100]	ug/L	10:40:10
1	Zn 213.857†	13825.5	12943.9	[100]	ug/L	10:40:10
1	SiO2†	18910.2	18631.4	[1069.5]	ug/L	10:41:27
2	Sc Radial	7231.5	7231.5	99.7	%	10:39:53
2	Y RADIAL	6645.0	6645.0	99.44	%	10:39:53
2	K 766.490 Radial†	7985.1	5158.3	[1000]	ug/L	10:39:48
2	Sr 421.552†	35138.8	35307.8	[100]	ug/L	10:39:48
2	Sc 361.383	769961.5	769961.5	97.965	%	10:40:36
2	Y 371.029	599108.5	599108.5	97.853	%	10:40:36
2	Ag 328.068†	19671.0	19371.4	[100]	ug/L	10:40:36
2	As 188.979†	311.3	352.6	[100]	ug/L	10:40:56
2	B 249.677†	3730.7	4632.3	[100]	ug/L	10:40:36
2	Ba 233.527†	16339.9	16659.8	[100]	ug/L	10:40:36
2	Be 313.107†	250708.8	260838.8	[100]	ug/L	10:40:36
2	Cd 226.502†	8873.6	9350.6	[100]	ug/L	10:40:56
2	Co 228.616†	6635.6	6873.2	[100]	ug/L	10:40:56
2	Cr 267.716†	8226.6	8404.0	[100]	ug/L	10:40:36
2	Cu 324.752†	37129.2	31994.9	[100]	ug/L	10:40:36
2	Mn 257.610†	106480.6	107928.3	[100]	ug/L	10:40:36
2	Mo 202.031†	1677.7	1702.0	[100]	ug/L	10:40:56
2	Ni 231.604†	4489.3	4417.2	[100]	ug/L	10:40:56
2	P 214.914†	1482.6	1217.5	[500]	ug/L	10:40:56
2	Pb 220.353†	977.2	1024.2	[100]	ug/L	10:40:56
2	S 181.975 Axial†	273.4	174.2	[200]	ug/L	10:40:56
2	Sb 206.836†	445.9	400.5	[100]	ug/L	10:40:56
2	Se 196.026†	202.9	238.9	[100]	ug/L	10:40:56
2	Si 251.611†	18824.1	18729.6	[500]	ug/L	10:40:36
2	Sn 189.927†	701.0	702.6	[100]	ug/L	10:40:56
2	Ti 334.940†	60336.3	63060.8	[100]	ug/L	10:40:36
2	Tl 190.801†	392.7	461.5	[100]	ug/L	10:40:56
2	U 409.014†	-1836.0	3393.7	[100]	ug/L	10:40:36

2	V 292.402†	10834.1	12758.2	[100]	ug/L	10:40:36
2	Zn 213.857†	13675.1	12927.9	[100]	ug/L	10:40:36
2	SiO2†	19267.7	19184.6	[1069.5]	ug/L	10:41:32
3	Sc Radial	7285.3	7285.3	100	%	10:40:03
3	Y RADIAL	6709.1	6709.1	100.4	%	10:40:03
3	K 766.490 Radial†	8089.0	5202.6	[1000]	ug/L	10:39:58
3	Sr 421.552†	35559.2	35465.8	[100]	ug/L	10:39:58
3	Sc 361.383	773874.1	773874.1	98.463	%	10:41:01
3	Y 371.029	602609.0	602609.0	98.425	%	10:41:01
3	Ag 328.068†	19743.2	19343.2	[100]	ug/L	10:41:01
3	As 188.979†	302.1	341.7	[100]	ug/L	10:41:21
3	B 249.677†	3760.0	4642.8	[100]	ug/L	10:41:01
3	Ba 233.527†	16385.2	16621.4	[100]	ug/L	10:41:01
3	Be 313.107†	251779.7	260632.5	[100]	ug/L	10:41:01
3	Cd 226.502†	8884.6	9316.0	[100]	ug/L	10:41:21
3	Co 228.616†	6623.8	6827.0	[100]	ug/L	10:41:21
3	Cr 267.716†	8271.8	8407.5	[100]	ug/L	10:41:01
3	Cu 324.752†	37369.8	32047.5	[100]	ug/L	10:41:01
3	Mn 257.610†	106572.1	107471.7	[100]	ug/L	10:41:01
3	Mo 202.031†	1686.7	1702.5	[100]	ug/L	10:41:21
3	Ni 231.604†	4480.7	4385.3	[100]	ug/L	10:41:21
3	P 214.914†	1482.4	1209.6	[500]	ug/L	10:41:21
3	Pb 220.353†	978.7	1020.6	[100]	ug/L	10:41:21
3	S 181.975 Axial†	282.9	182.4	[200]	ug/L	10:41:21
3	Sb 206.836†	447.3	399.6	[100]	ug/L	10:41:21
3	Se 196.026†	204.8	239.8	[100]	ug/L	10:41:21
3	Si 251.611†	18896.5	18706.0	[500]	ug/L	10:41:01
3	Sn 189.927†	683.7	681.4	[100]	ug/L	10:41:21
3	Ti 334.940†	60442.9	62857.6	[100]	ug/L	10:41:01
3	Tl 190.801†	405.1	472.1	[100]	ug/L	10:41:21
3	U 409.014†	-1829.4	3409.9	[100]	ug/L	10:41:01
3	V 292.402†	10976.8	12847.3	[100]	ug/L	10:41:01
3	Zn 213.857†	13749.4	12932.8	[100]	ug/L	10:41:01
3	SiO2†	18966.9	18779.6	[1069.5]	ug/L	10:41:37

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	773792.7	3791.18	0.49%	98.452	%
Sc Radial	7242.2	38.90	0.54%	99.9	%
Y 371.029	602083.6	2750.30	0.46%	98.339	%
Y RADIAL	6658.1	45.85	0.69%	99.64	%
Ag 328.068†	19374.1	32.39	0.17%	[100]	ug/L
As 188.979†	344.8	6.79	1.97%	[100]	ug/L
B 249.677†	4659.2	37.83	0.81%	[100]	ug/L
Ba 233.527†	16660.5	39.42	0.24%	[100]	ug/L
Be 313.107†	260882.3	274.15	0.11%	[100]	ug/L
Cd 226.502†	9316.7	33.51	0.36%	[100]	ug/L
Co 228.616†	6834.6	35.48	0.52%	[100]	ug/L
Cr 267.716†	8402.1	6.54	0.08%	[100]	ug/L
Cu 324.752†	32036.9	37.86	0.12%	[100]	ug/L
K 766.490 Radial†	5187.0	24.88	0.48%	[1000]	ug/L
Mn 257.610†	107843.1	337.04	0.31%	[100]	ug/L
Mo 202.031†	1696.8	9.43	0.56%	[100]	ug/L
Ni 231.604†	4395.5	18.85	0.43%	[100]	ug/L
P 214.914†	1211.9	4.90	0.40%	[500]	ug/L
Pb 220.353†	1016.4	10.59	1.04%	[100]	ug/L
S 181.975 Axial†	178.0	4.13	2.32%	[200]	ug/L
Sb 206.836†	400.0	0.45	0.11%	[100]	ug/L
Se 196.026†	238.8	1.16	0.48%	[100]	ug/L
Si 251.611†	18743.4	45.84	0.24%	[500]	ug/L
Sn 189.927†	687.6	13.07	1.90%	[100]	ug/L
Sr 421.552†	35481.5	182.05	0.51%	[100]	ug/L
Ti 334.940†	62972.9	104.31	0.17%	[100]	ug/L
Tl 190.801†	463.6	7.74	1.67%	[100]	ug/L
U 409.014†	3366.8	61.15	1.82%	[100]	ug/L
V 292.402†	12799.4	44.92	0.35%	[100]	ug/L
Zn 213.857†	12934.9	8.18	0.06%	[100]	ug/L
SiO2†	18865.2	286.35	1.52%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/1/2009 10:43:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	6946.5	6946.5	95.8	%	10:45:59
1	Y RADIAL	6369.8	6369.8	95.33	%	10:45:59
1	Al 396.153Radial†	6348.4	6711.6	[5000]	ug/L	10:45:39
1	Ca 317.933Radial†	3736.7	3871.1	[5000]	ug/L	10:45:59
1	K 766.490 Radial†	28861.3	27283.1	[5000]	ug/L	10:45:39
1	Mg 279.077 IEC†	224.3	231.9	[5000]	ug/L	10:45:59
1	Sr 421.552†	175606.1	183411.2	[500]	ug/L	10:45:39
1	Sc 361.383	792327.5	792327.5	100.81	%	10:46:58
1	Y 371.029	608445.8	608445.8	99.379	%	10:46:58
1	Ag 328.068†	96674.9	95189.5	[500]	ug/L	10:46:58
1	As 188.979†	1644.9	1666.5	[500]	ug/L	10:47:18
1	B 249.677†	22327.4	22972.0	[500]	ug/L	10:46:58
1	Ba 233.527†	82365.0	81683.3	[500]	ug/L	10:46:58
1	Be 313.107†	1301535.6	1295994.1	[500]	ug/L	10:46:58
1	Cd 226.502†	46853.7	46769.7	[500]	ug/L	10:46:58
1	Co 228.616†	33134.5	32967.9	[500]	ug/L	10:47:18
1	Cr 267.716†	41882.6	41552.4	[500]	ug/L	10:46:58
1	Cu 324.752†	164364.9	157137.9	[500]	ug/L	10:46:58
1	Mn 257.610†	531378.2	526342.1	[500]	ug/L	10:46:58
1	Mo 202.031†	8323.1	8245.7	[500]	ug/L	10:47:18
1	Ni 231.604†	21922.6	21580.9	[500]	ug/L	10:47:18
1	P 214.914†	6231.4	5885.4	[2500]	ug/L	10:47:18
1	Pb 220.353†	5002.6	4989.1	[500]	ug/L	10:47:18
1	S 181.975 Axial†	996.0	883.1	[1000]	ug/L	10:47:18
1	Sb 206.836†	2039.6	1968.5	[500]	ug/L	10:47:18
1	Se 196.026†	1148.8	1171.3	[500]	ug/L	10:47:18
1	Si 251.611†	95401.4	94148.9	[2500]	ug/L	10:46:58
1	Sn 189.927†	3389.8	3349.6	[500]	ug/L	10:47:18
1	Ti 334.940†	312779.7	311736.3	[500]	ug/L	10:46:58
1	Tl 190.801†	2183.6	2226.7	[500]	ug/L	10:47:18
1	U 409.014†	11052.4	16231.5	[500]	ug/L	10:46:58
1	V 292.402†	62225.8	63424.7	[500]	ug/L	10:46:58
1	Zn 213.857†	65056.3	63502.1	[500]	ug/L	10:46:58
1	SiO2†	95084.5	93836.6	[5347.5]	ug/L	10:48:19
2	Sc Radial	7041.4	7041.4	97.1	%	10:46:24
2	Y RADIAL	6463.1	6463.1	96.72	%	10:46:24
2	Al 396.153Radial†	6240.0	6510.7	[5000]	ug/L	10:46:04
2	Ca 317.933Radial†	3718.4	3799.6	[5000]	ug/L	10:46:24
2	K 766.490 Radial†	28462.8	26466.6	[5000]	ug/L	10:46:04
2	Mg 279.077 IEC†	227.8	232.3	[5000]	ug/L	10:46:24
2	Sr 421.552†	172325.1	177561.3	[500]	ug/L	10:46:04
2	Sc 361.383	787543.9	787543.9	100.20	%	10:47:26
2	Y 371.029	605331.9	605331.9	98.870	%	10:47:26
2	Ag 328.068†	95968.5	95067.0	[500]	ug/L	10:47:26
2	As 188.979†	1642.1	1673.7	[500]	ug/L	10:47:46
2	B 249.677†	22179.8	22959.2	[500]	ug/L	10:47:26
2	Ba 233.527†	82065.4	81880.6	[500]	ug/L	10:47:26
2	Be 313.107†	1293084.6	1295402.1	[500]	ug/L	10:47:26
2	Cd 226.502†	46559.4	46758.3	[500]	ug/L	10:47:26
2	Co 228.616†	33207.0	33239.9	[500]	ug/L	10:47:46
2	Cr 267.716†	41652.7	41575.3	[500]	ug/L	10:47:26
2	Cu 324.752†	162702.8	156469.5	[500]	ug/L	10:47:26
2	Mn 257.610†	527966.9	526139.3	[500]	ug/L	10:47:26
2	Mo 202.031†	8375.5	8348.1	[500]	ug/L	10:47:46
2	Ni 231.604†	21987.2	21777.5	[500]	ug/L	10:47:46
2	P 214.914†	6265.6	5957.0	[2500]	ug/L	10:47:46
2	Pb 220.353†	4990.4	5007.0	[500]	ug/L	10:47:46
2	S 181.975 Axial†	989.2	882.3	[1000]	ug/L	10:47:46
2	Sb 206.836†	2046.0	1987.2	[500]	ug/L	10:47:46

2	Se 196.026†	1157.1	1186.6	[500]	ug/L	10:47:46
2	Si 251.611†	94708.3	94032.0	[2500]	ug/L	10:47:26
2	Sn 189.927†	3392.3	3372.5	[500]	ug/L	10:47:46
2	Ti 334.940†	310404.2	311250.1	[500]	ug/L	10:47:26
2	Tl 190.801†	2186.6	2242.9	[500]	ug/L	10:47:46
2	U 409.014†	10875.2	16121.2	[500]	ug/L	10:47:26
2	V 292.402†	61910.9	63485.4	[500]	ug/L	10:47:26
2	Zn 213.857†	64641.0	63479.5	[500]	ug/L	10:47:26
2	SiO2†	94776.0	94101.7	[5347.5]	ug/L	10:48:24
3	Sc Radial	7038.8	7038.8	97.1	%	10:46:50
3	Y RADIAL	6440.5	6440.5	96.38	%	10:46:50
3	Al 396.153Radial†	6411.3	6689.5	[5000]	ug/L	10:46:29
3	Ca 317.933Radial†	3709.6	3792.0	[5000]	ug/L	10:46:50
3	K 766.490 Radial†	29113.4	27147.6	[5000]	ug/L	10:46:29
3	Mg 279.077 IEC†	221.4	225.8	[5000]	ug/L	10:46:50
3	Sr 421.552†	178195.9	183674.5	[500]	ug/L	10:46:29
3	Sc 361.383	796843.4	796843.4	101.38	%	10:47:53
3	Y 371.029	612435.5	612435.5	100.03	%	10:47:53
3	Ag 328.068†	97071.4	95037.1	[500]	ug/L	10:47:53
3	As 188.979†	1639.9	1652.4	[500]	ug/L	10:48:13
3	B 249.677†	22499.3	23016.0	[500]	ug/L	10:47:53
3	Ba 233.527†	82601.8	81453.9	[500]	ug/L	10:47:53
3	Be 313.107†	1308785.5	1295828.0	[500]	ug/L	10:47:53
3	Cd 226.502†	46996.4	46647.0	[500]	ug/L	10:47:53
3	Co 228.616†	33083.9	32731.7	[500]	ug/L	10:48:13
3	Cr 267.716†	42066.3	41498.1	[500]	ug/L	10:47:53
3	Cu 324.752†	165581.0	157413.3	[500]	ug/L	10:47:53
3	Mn 257.610†	533611.5	525557.6	[500]	ug/L	10:47:53
3	Mo 202.031†	8330.1	8205.7	[500]	ug/L	10:48:13
3	Ni 231.604†	21907.7	21443.1	[500]	ug/L	10:48:13
3	P 214.914†	6212.6	5831.8	[2500]	ug/L	10:48:13
3	Pb 220.353†	4980.9	4939.5	[500]	ug/L	10:48:13
3	S 181.975 Axial†	975.2	857.0	[1000]	ug/L	10:48:13
3	Sb 206.836†	2038.8	1956.3	[500]	ug/L	10:48:13
3	Se 196.026†	1137.4	1153.7	[500]	ug/L	10:48:13
3	Si 251.611†	95908.6	94112.9	[2500]	ug/L	10:47:53
3	Sn 189.927†	3385.6	3326.4	[500]	ug/L	10:48:13
3	Ti 334.940†	314172.3	311351.4	[500]	ug/L	10:47:53
3	Tl 190.801†	2168.9	2199.9	[500]	ug/L	10:48:13
3	U 409.014†	11199.7	16314.6	[500]	ug/L	10:47:53
3	V 292.402†	62582.3	63426.5	[500]	ug/L	10:47:53
3	Zn 213.857†	65403.3	63478.6	[500]	ug/L	10:47:53
3	SiO2†	94386.0	92613.2	[5347.5]	ug/L	10:48:29

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	792238.3	4650.40	0.59%	100.80	%
Sc Radial	7008.9	54.06	0.77%	96.6	%
Y 371.029	608737.7	3560.76	0.58%	99.426	%
Y RADIAL	6424.5	48.65	0.76%	96.14	%
Ag 328.068†	95097.9	80.77	0.08%	[500]	ug/L
Al 396.153Radial†	6637.3	110.17	1.66%	[5000]	ug/L
As 188.979†	1664.2	10.84	0.65%	[500]	ug/L
B 249.677†	22982.4	29.79	0.13%	[500]	ug/L
Ba 233.527†	81672.6	213.57	0.26%	[500]	ug/L
Be 313.107†	1295741.4	305.32	0.02%	[500]	ug/L
Ca 317.933Radial†	3820.9	43.63	1.14%	[5000]	ug/L
Cd 226.502†	46725.0	67.78	0.15%	[500]	ug/L
Co 228.616†	32979.8	254.33	0.77%	[500]	ug/L
Cr 267.716†	41541.9	39.64	0.10%	[500]	ug/L
Cu 324.752†	157006.9	485.37	0.31%	[500]	ug/L
K 766.490 Radial†	26965.7	437.54	1.62%	[5000]	ug/L
Mg 279.077 IEC†	230.0	3.66	1.59%	[5000]	ug/L
Mn 257.610†	526013.0	407.20	0.08%	[500]	ug/L
Mo 202.031†	8266.5	73.41	0.89%	[500]	ug/L
Ni 231.604†	21600.5	168.07	0.78%	[500]	ug/L
P 214.914†	5891.4	62.83	1.07%	[2500]	ug/L
Pb 220.353†	4978.6	34.98	0.70%	[500]	ug/L
S 181.975 Axial†	874.1	14.81	1.69%	[1000]	ug/L

Sb 206.836†	1970.6	15.55	0.79%	[500]	ug/L
Se 196.026†	1170.5	16.48	1.41%	[500]	ug/L
Si 251.611†	94097.9	59.85	0.06%	[2500]	ug/L
Sn 189.927†	3349.5	23.05	0.69%	[500]	ug/L
Sr 421.552†	181549.0	3455.95	1.90%	[500]	ug/L
Ti 334.940†	311445.9	256.49	0.08%	[500]	ug/L
Tl 190.801†	2223.2	21.70	0.98%	[500]	ug/L
U 409.014†	16222.5	97.00	0.60%	[500]	ug/L
V 292.402†	63445.5	34.52	0.05%	[500]	ug/L
Zn 213.857†	63486.7	13.29	0.02%	[500]	ug/L
SiO2†	93517.2	794.05	0.85%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/1/2009 10:50:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7133.9	7133.9	98.4	%	10:52:52
1	Y RADIAL	6521.4	6521.4	97.59	%	10:52:52
1	Al 396.153Radial†	12707.5	13002.5	[10000]	ug/L	10:52:32
1	Ca 317.933Radial†	7295.3	7386.4	[10000]	ug/L	10:52:52
1	Fe 238.204 Radial†	2629.0	2635.5	[10000]	ug/L	10:52:52
1	K 766.490 Radial†	54480.8	52537.1	[10000]	ug/L	10:52:32
1	Mg 279.077 IEC†	450.3	455.5	[10000]	ug/L	10:52:52
1	Na 589.592 Radial†	190631.9	190720.3	[10000]	ug/L	10:52:32
1	Sr 421.552†	348935.4	354807.5	[1000]	ug/L	10:52:32
1	Sc 361.383	777249.9	777249.9	98.892	%	10:53:55
1	Y 371.029	602478.0	602478.0	98.404	%	10:53:55
1	Ag 328.068†	194464.2	195934.7	[1000]	ug/L	10:53:55
1	As 188.979†	3311.2	3383.2	[1000]	ug/L	10:54:15
1	B 249.677†	46089.4	47429.8	[1000]	ug/L	10:53:55
1	Ba 233.527†	164565.8	166390.0	[1000]	ug/L	10:53:55
1	Be 313.107†	2586071.5	2619966.8	[1000]	ug/L	10:53:50
1	Cd 226.502†	93908.4	95253.2	[1000]	ug/L	10:53:55
1	Co 228.616†	68000.5	68862.1	[1000]	ug/L	10:53:55
1	Cr 267.716†	84098.4	85047.1	[1000]	ug/L	10:53:55
1	Cu 324.752†	323690.9	321411.7	[1000]	ug/L	10:53:55
1	Mn 257.610†	1048891.3	1059878.4	[1000]	ug/L	10:53:50
1	Mo 202.031†	16578.1	16753.3	[1000]	ug/L	10:54:15
1	Ni 231.604†	44512.2	44845.5	[1000]	ug/L	10:53:55
1	P 214.914†	12136.5	11976.6	[5000]	ug/L	10:54:15
1	Pb 220.353†	9950.8	10089.0	[1000]	ug/L	10:54:15
1	S 181.975 Axial†	1876.0	1792.2	[2000]	ug/L	10:54:15
1	Sb 206.836†	4028.4	4018.8	[1000]	ug/L	10:54:15
1	Se 196.026†	2332.8	2390.7	[1000]	ug/L	10:54:15
1	Si 251.611†	189117.7	190751.0	[5000]	ug/L	10:53:55
1	Sn 189.927†	6761.0	6823.8	[1000]	ug/L	10:54:15
1	Ti 334.940†	617408.9	625797.2	[1000]	ug/L	10:53:55
1	Tl 190.801†	4396.2	4506.1	[1000]	ug/L	10:54:15
1	U 409.014†	28547.5	34135.2	[1000]	ug/L	10:53:55
1	V 292.402†	127094.7	130217.7	[1000]	ug/L	10:53:55
1	Zn 213.857†	129132.0	129547.5	[1000]	ug/L	10:53:55
1	SiO2†	190282.6	191931.1	[10695]	ug/L	10:55:24
2	Sc Radial	7140.7	7140.7	98.5	%	10:53:17
2	Y RADIAL	6525.8	6525.8	97.66	%	10:53:17
2	Al 396.153Radial†	12872.7	13158.0	[10000]	ug/L	10:52:57
2	Ca 317.933Radial†	7290.2	7374.2	[10000]	ug/L	10:53:17
2	Fe 238.204 Radial†	2628.9	2632.9	[10000]	ug/L	10:53:17
2	K 766.490 Radial†	54964.3	52975.7	[10000]	ug/L	10:52:57
2	Mg 279.077 IEC†	444.0	448.7	[10000]	ug/L	10:53:17
2	Na 589.592 Radial†	193060.8	193003.4	[10000]	ug/L	10:52:57
2	Sr 421.552†	353180.8	358782.8	[1000]	ug/L	10:52:57
2	Sc 361.383	770061.4	770061.4	97.977	%	10:54:27
2	Y 371.029	595963.9	595963.9	97.340	%	10:54:27
2	Ag 328.068†	192017.3	195272.9	[1000]	ug/L	10:54:27
2	As 188.979†	3354.0	3458.2	[1000]	ug/L	10:54:47
2	B 249.677†	45385.2	47146.2	[1000]	ug/L	10:54:27
2	Ba 233.527†	162604.4	165941.5	[1000]	ug/L	10:54:27
2	Be 313.107†	2615405.0	2674317.2	[1000]	ug/L	10:54:21
2	Cd 226.502†	92782.5	94990.5	[1000]	ug/L	10:54:27
2	Co 228.616†	67067.9	68552.2	[1000]	ug/L	10:54:27
2	Cr 267.716†	83077.2	84798.6	[1000]	ug/L	10:54:27
2	Cu 324.752†	319969.9	320669.4	[1000]	ug/L	10:54:27
2	Mn 257.610†	1060671.8	1081803.2	[1000]	ug/L	10:54:21
2	Mo 202.031†	16716.9	17051.5	[1000]	ug/L	10:54:47
2	Ni 231.604†	43914.0	44655.2	[1000]	ug/L	10:54:27

2	P 214.914†	12290.3	12248.0	[5000]	ug/L	10:54:47
2	Pb 220.353†	10008.3	10241.6	[1000]	ug/L	10:54:47
2	S 181.975 Axial†	1901.9	1836.3	[2000]	ug/L	10:54:47
2	Sb 206.836†	4062.6	4091.8	[1000]	ug/L	10:54:47
2	Se 196.026†	2338.7	2418.8	[1000]	ug/L	10:54:47
2	Si 251.611†	186771.0	190141.0	[5000]	ug/L	10:54:27
2	Sn 189.927†	6822.0	6949.9	[1000]	ug/L	10:54:47
2	Ti 334.940†	609701.8	623759.1	[1000]	ug/L	10:54:27
2	Tl 190.801†	4429.1	4581.2	[1000]	ug/L	10:54:47
2	U 409.014†	28126.0	33974.6	[1000]	ug/L	10:54:27
2	V 292.402†	125680.5	129974.1	[1000]	ug/L	10:54:27
2	Zn 213.857†	127690.0	129294.6	[1000]	ug/L	10:54:27
2	SiO2†	187388.3	190773.2	[10695]	ug/L	10:55:29
3	Sc Radial	7094.2	7094.2	97.8	%	10:53:42
3	Y RADIAL	6481.9	6481.9	97.00	%	10:53:42
3	Al 396.153Radial†	12809.2	13178.8	[10000]	ug/L	10:53:22
3	Ca 317.933Radial†	7260.6	7392.4	[10000]	ug/L	10:53:42
3	Fe 238.204 Radial†	2621.9	2643.2	[10000]	ug/L	10:53:42
3	K 766.490 Radial†	54887.5	53263.3	[10000]	ug/L	10:53:22
3	Mg 279.077 IEC†	444.6	452.3	[10000]	ug/L	10:53:42
3	Na 589.592 Radial†	192908.3	194133.3	[10000]	ug/L	10:53:22
3	Sr 421.552†	352952.0	360901.2	[1000]	ug/L	10:53:22
3	Sc 361.383	778302.3	778302.3	99.026	%	10:54:58
3	Y 371.029	602200.9	602200.9	98.359	%	10:54:58
3	Ag 328.068†	194540.5	195745.9	[1000]	ug/L	10:54:58
3	As 188.979†	3323.5	3391.1	[1000]	ug/L	10:55:18
3	B 249.677†	46123.2	47400.9	[1000]	ug/L	10:54:58
3	Ba 233.527†	164716.7	166317.4	[1000]	ug/L	10:54:58
3	Be 313.107†	2619072.4	2649756.4	[1000]	ug/L	10:54:53
3	Cd 226.502†	94306.9	95527.2	[1000]	ug/L	10:54:58
3	Co 228.616†	68145.6	68915.7	[1000]	ug/L	10:54:58
3	Cr 267.716†	84187.5	85022.1	[1000]	ug/L	10:54:58
3	Cu 324.752†	323620.2	320897.8	[1000]	ug/L	10:54:58
3	Mn 257.610†	1062362.8	1072048.3	[1000]	ug/L	10:54:53
3	Mo 202.031†	16574.3	16726.8	[1000]	ug/L	10:55:18
3	Ni 231.604†	44702.2	44976.5	[1000]	ug/L	10:54:58
3	P 214.914†	12169.6	11993.3	[5000]	ug/L	10:55:18
3	Pb 220.353†	9914.7	10038.9	[1000]	ug/L	10:55:18
3	S 181.975 Axial†	1877.6	1791.2	[2000]	ug/L	10:55:18
3	Sb 206.836†	4028.1	4013.0	[1000]	ug/L	10:55:18
3	Se 196.026†	2341.4	2396.2	[1000]	ug/L	10:55:18
3	Si 251.611†	189480.7	190858.9	[5000]	ug/L	10:54:58
3	Sn 189.927†	6767.9	6821.6	[1000]	ug/L	10:55:18
3	Ti 334.940†	617072.8	624613.6	[1000]	ug/L	10:54:58
3	Tl 190.801†	4385.9	4489.7	[1000]	ug/L	10:55:18
3	U 409.014†	28583.3	34132.4	[1000]	ug/L	10:54:58
3	V 292.402†	127406.1	130358.4	[1000]	ug/L	10:54:58
3	Zn 213.857†	129490.7	129733.2	[1000]	ug/L	10:54:58
3	SiO2†	185540.8	186882.4	[10695]	ug/L	10:55:34

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	775204.6	4485.05	0.58%	98.632	%
Sc Radial	7122.9	25.13	0.35%	98.2	%
Y 371.029	600214.2	3683.55	0.61%	98.034	%
Y RADIAL	6509.7	24.16	0.37%	97.42	%
Ag 328.068†	195651.2	340.89	0.17%	[1000]	ug/L
Al 396.153Radial†	13113.1	96.36	0.73%	[10000]	ug/L
As 188.979†	3410.8	41.19	1.21%	[1000]	ug/L
B 249.677†	47325.6	156.06	0.33%	[1000]	ug/L
Ba 233.527†	166216.3	240.70	0.14%	[1000]	ug/L
Be 313.107†	2648013.5	27217.12	1.03%	[1000]	ug/L
Ca 317.933Radial†	7384.4	9.28	0.13%	[10000]	ug/L
Cd 226.502†	95256.9	268.37	0.28%	[1000]	ug/L
Co 228.616†	68776.7	196.25	0.29%	[1000]	ug/L
Cr 267.716†	84956.0	136.81	0.16%	[1000]	ug/L
Cu 324.752†	320993.0	380.20	0.12%	[1000]	ug/L
Fe 238.204 Radial†	2637.2	5.38	0.20%	[10000]	ug/L
K 766.490 Radial†	52925.4	365.68	0.69%	[10000]	ug/L

Mg 279.077 IEC†	452.1	3.42	0.76%	[10000]	ug/L
Mn 257.610†	1071243.3	10984.53	1.03%	[1000]	ug/L
Mo 202.031†	16843.9	180.27	1.07%	[1000]	ug/L
Na 589.592 Radial†	192619.0	1738.64	0.90%	[10000]	ug/L
Ni 231.604†	44825.7	161.57	0.36%	[1000]	ug/L
P 214.914†	12072.6	152.13	1.26%	[5000]	ug/L
Pb 220.353†	10123.2	105.54	1.04%	[1000]	ug/L
S 181.975 Axial†	1806.5	25.76	1.43%	[2000]	ug/L
Sb 206.836†	4041.2	43.92	1.09%	[1000]	ug/L
Se 196.026†	2401.9	14.90	0.62%	[1000]	ug/L
Si 251.611†	190583.7	387.11	0.20%	[5000]	ug/L
Sn 189.927†	6865.1	73.47	1.07%	[1000]	ug/L
Sr 421.552†	358163.8	3093.63	0.86%	[1000]	ug/L
Ti 334.940†	624723.3	1023.48	0.16%	[1000]	ug/L
Tl 190.801†	4525.7	48.75	1.08%	[1000]	ug/L
U 409.014†	34080.7	91.94	0.27%	[1000]	ug/L
V 292.402†	130183.4	194.47	0.15%	[1000]	ug/L
Zn 213.857†	129525.1	220.13	0.17%	[1000]	ug/L
SiO2†	189862.2	2644.75	1.39%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/1/2009 10:57:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7141.2	7141.2	98.5	%	10:59:59
1	Y RADIAL	6501.6	6501.6	97.30	%	10:59:59
1	Al 396.153Radial†	60851.3	61884.2	[50000]	ug/L	10:59:39
1	Ca 317.933Radial†	35029.7	35545.9	[50000]	ug/L	10:59:59
1	Fe 238.204 Radial†	5062.8	5104.6	[20000]	ug/L	10:59:59
1	Mg 279.077 IEC†	2100.7	2131.2	[50000]	ug/L	10:59:59
1	Na 589.592 Radial†	369002.9	371676.6	[20000]	ug/L	10:59:39
1	Sc 361.383	768580.5	768580.5	97.789	%	11:00:56
1	Y 371.029	588195.2	588195.2	96.071	%	11:00:56
2	Sc Radial	7178.6	7178.6	99.0	%	11:00:24
2	Y RADIAL	6572.2	6572.2	98.35	%	11:00:24
2	Al 396.153Radial†	60981.8	61693.8	[50000]	ug/L	11:00:04
2	Ca 317.933Radial†	35166.8	35499.0	[50000]	ug/L	11:00:24
2	Fe 238.204 Radial†	5087.1	5102.3	[20000]	ug/L	11:00:24
2	Mg 279.077 IEC†	2108.7	2128.2	[50000]	ug/L	11:00:24
2	Na 589.592 Radial†	370250.7	370983.8	[20000]	ug/L	11:00:04
2	Sc 361.383	771234.8	771234.8	98.127	%	11:01:02
2	Y 371.029	589869.9	589869.9	96.344	%	11:01:02
3	Sc Radial	7102.5	7102.5	97.9	%	11:00:49
3	Y RADIAL	6487.2	6487.2	97.08	%	11:00:49
3	Al 396.153Radial†	61368.4	62749.4	[50000]	ug/L	11:00:29
3	Ca 317.933Radial†	34780.6	35485.7	[50000]	ug/L	11:00:49
3	Fe 238.204 Radial†	5021.2	5090.2	[20000]	ug/L	11:00:49
3	Mg 279.077 IEC†	2085.9	2127.7	[50000]	ug/L	11:00:49
3	Na 589.592 Radial†	371387.6	376156.5	[20000]	ug/L	11:00:29
3	Sc 361.383	775917.8	775917.8	98.723	%	11:01:07
3	Y 371.029	593765.3	593765.3	96.981	%	11:01:07

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	771911.0	3715.12	0.48%	98.213	%
Sc Radial	7140.8	38.09	0.53%	98.5	%
Y 371.029	590610.1	2857.88	0.48%	96.465	%
Y RADIAL	6520.3	45.46	0.70%	97.58	%
Al 396.153Radial†	62109.1	562.60	0.91%	[50000]	ug/L
Ca 317.933Radial†	35510.2	31.65	0.09%	[50000]	ug/L
Fe 238.204 Radial†	5099.0	7.75	0.15%	[20000]	ug/L
Mg 279.077 IEC†	2129.0	1.86	0.09%	[50000]	ug/L
Na 589.592 Radial†	372939.0	2807.90	0.75%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	194.6	0.00000	0.999938	
Al 396.153Radial	3	Lin Thru 0	0.0	1.246	0.00000	0.999923	
As 188.979	3	Lin Thru 0	0.0	3.395	0.00000	0.999952	
B 249.677	3	Lin Thru 0	0.0	47.05	0.00000	0.999933	
Ba 233.527	3	Lin Thru 0	0.0	165.6	0.00000	0.999976	
Be 313.107	3	Lin Thru 0	0.0	2636	0.00000	0.999963	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.7118	0.00000	0.999945	
Cd 226.502	3	Lin Thru 0	0.0	94.88	0.00000	0.999970	
Co 228.616	3	Lin Thru 0	0.0	68.21	0.00000	0.999865	
Cr 267.716	3	Lin Thru 0	0.0	84.58	0.00000	0.999961	
Cu 324.752	3	Lin Thru 0	0.0	319.6	0.00000	0.999962	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.2567	0.00000	0.999907	
K 766.490 Radial	3	Lin Thru 0	0.0	5.312	0.00000	0.999969	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0427	0.00000	0.999902
Mn 257.610	3	Lin Thru 0	0.0	1067	0.00000	0.999974
Mo 202.031	3	Lin Thru 0	0.0	16.78	0.00000	0.999972
Na 589.592 Radia	2	Lin Thru 0	0.0	18.77	0.00000	0.999914
Ni 231.604	3	Lin Thru 0	0.0	44.50	0.00000	0.999894
P 214.914	3	Lin Thru 0	0.0	2.403	0.00000	0.999954
Pb 220.353	3	Lin Thru 0	0.0	10.09	0.00000	0.999978
S 181.975 Axial	3	Lin Thru 0	0.0	0.8974	0.00000	0.999916
Sb 206.836	3	Lin Thru 0	0.0	4.021	0.00000	0.999951
Se 196.026	3	Lin Thru 0	0.0	2.390	0.00000	0.999949
Si 251.611	3	Lin Thru 0	0.0	38.02	0.00000	0.999987
Sn 189.927	3	Lin Thru 0	0.0	6.832	0.00000	0.999953
Sr 421.552	3	Lin Thru 0	0.0	359.1	0.00000	0.999984
Ti 334.940	3	Lin Thru 0	0.0	624.4	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	4.511	0.00000	0.999972
U 409.014	3	Lin Thru 0	0.0	33.75	0.00000	0.999814
V 292.402	3	Lin Thru 0	0.0	129.5	0.00000	0.999948
Zn 213.857	3	Lin Thru 0	0.0	129.0	0.00000	0.999969
SiO2	3	Lin Thru 0	0.0	17.70	0.00000	0.999982

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/1/2009 11:03:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7043.1	7043.1	97.1	%			11:05:32
1	Y RADIAL	6480.1	6480.1	96.98	%			11:05:32
1	Al 396.153Radial†	6358.3	6630.9	5301.7	ug/L	5301.7	ppb	11:05:12
1	Ca 317.933Radial†	3534.8	3609.6	5071.2	ug/L	5071.2	ppb	11:05:32
1	Fe 238.204 Radial†	1313.7	1315.6	5139.2	ug/L	5139.2	ppb	11:05:32
1	K 766.490 Radial†	15802.4	13422.3	2514.7	ug/L	2514.7	ppb	11:05:12
1	Mg 279.077 IEC†	229.4	233.9	5481.9	ug/L	5481.9	ppb	11:05:32
1	Na 589.592 Radial†	50868.8	49298.2	2626.4	ug/L	2626.4	ppb	11:05:12
1	Sr 421.552†	172423.3	177617.8	494.55	ug/L	494.55	ppb	11:05:12
1	Sc 361.383	790732.1	790732.1	100.61	%			11:06:30
1	Y 371.029	610064.6	610064.6	99.643	%			11:06:30
1	Ag 328.068†	47879.0	46881.7	244.02	ug/L	244.02	ppb	11:06:30
1	As 188.979†	1542.7	1568.3	464.84	ug/L	464.84	ppb	11:06:50
1	B 249.677†	22082.5	22773.2	481.33	ug/L	481.33	ppb	11:06:30
1	Ba 233.527†	85932.1	85393.7	516.56	ug/L	516.56	ppb	11:06:30
1	Be 313.107†	651980.4	652965.4	248.82	ug/L	248.82	ppb	11:06:30
1	Cd 226.502†	45868.0	45883.7	483.31	ug/L	483.31	ppb	11:06:30
1	Co 228.616†	31328.7	31239.3	458.21	ug/L	458.21	ppb	11:06:50
1	Cr 267.716†	41276.8	41034.0	485.85	ug/L	485.85	ppb	11:06:30
1	Cu 324.752†	167282.6	160366.8	502.06	ug/L	502.06	ppb	11:06:30
1	Mn 257.610†	537308.8	533300.4	500.12	ug/L	500.12	ppb	11:06:30
1	Mo 202.031†	8529.2	8467.2	504.84	ug/L	504.84	ppb	11:06:50
1	Ni 231.604†	22685.0	22382.6	502.73	ug/L	502.73	ppb	11:06:50
1	P 214.914†	6205.0	5871.6	2348.1	ug/L	2348.1	ppb	11:06:50
1	Pb 220.353†	4922.3	4919.3	489.07	ug/L	489.07	ppb	11:06:50
1	S 181.975 Axial†	2366.8	2247.6	2503.6	ug/L	2503.6	ppb	11:06:50
1	Sb 206.836†	2079.6	2012.4	507.38	ug/L	507.38	ppb	11:06:50
1	Se 196.026†	5977.0	5972.8	2517.5	ug/L	2517.5	ppb	11:06:50
1	Si 251.611†	182392.1	180805.4	4739.4	ug/L	4739.4	ppb	11:06:30
1	Sn 189.927†	3513.7	3479.5	510.18	ug/L	510.18	ppb	11:06:50
1	Ti 334.940†	310610.1	310205.7	496.71	ug/L	496.71	ppb	11:06:30
1	Tl 190.801†	2109.0	2156.9	481.48	ug/L	481.48	ppb	11:06:50
1	U 409.014†	11659.8	16857.4	497.87	ug/L	497.87	ppb	11:06:30
1	V 292.402†	60776.4	62108.6	485.54	ug/L	485.54	ppb	11:06:30
1	Zn 213.857†	64737.8	63315.7	486.15	ug/L	486.15	ppb	11:06:30
1	SiO2†	181498.4	179919.2	10129	ug/L	10129	ppb	11:07:47
2	Sc Radial	7106.8	7106.8	98.0	%			11:05:57
2	Y RADIAL	6526.1	6526.1	97.66	%			11:05:57
2	Al 396.153Radial†	6346.8	6560.5	5245.0	ug/L	5245.0	ppb	11:05:37
2	Ca 317.933Radial†	3560.5	3603.2	5062.2	ug/L	5062.2	ppb	11:05:57
2	Fe 238.204 Radial†	1337.7	1327.9	5187.6	ug/L	5187.6	ppb	11:05:57
2	K 766.490 Radial†	15845.2	13320.2	2495.4	ug/L	2495.4	ppb	11:05:37
2	Mg 279.077 IEC†	227.8	230.1	5393.4	ug/L	5393.4	ppb	11:05:57
2	Na 589.592 Radial†	50474.5	48426.6	2580.0	ug/L	2580.0	ppb	11:05:37
2	Sr 421.552†	171776.8	175367.4	488.28	ug/L	488.28	ppb	11:05:37
2	Sc 361.383	784747.8	784747.8	99.846	%			11:06:56
2	Y 371.029	605507.8	605507.8	98.899	%			11:06:56
2	Ag 328.068†	47691.0	47056.2	244.93	ug/L	244.93	ppb	11:06:56
2	As 188.979†	1540.8	1578.1	467.73	ug/L	467.73	ppb	11:07:16
2	B 249.677†	22101.8	22959.9	485.27	ug/L	485.27	ppb	11:06:56
2	Ba 233.527†	85270.2	85382.1	516.49	ug/L	516.49	ppb	11:06:56
2	Be 313.107†	648211.3	654132.3	249.26	ug/L	249.26	ppb	11:06:56
2	Cd 226.502†	45482.6	45845.4	482.91	ug/L	482.91	ppb	11:06:56
2	Co 228.616†	31387.3	31535.5	462.56	ug/L	462.56	ppb	11:07:16
2	Cr 267.716†	40938.6	41008.2	485.54	ug/L	485.54	ppb	11:06:56
2	Cu 324.752†	166889.5	161241.2	504.80	ug/L	504.80	ppb	11:06:56
2	Mn 257.610†	533915.8	533974.7	500.76	ug/L	500.76	ppb	11:06:56
2	Mo 202.031†	8542.7	8545.4	509.50	ug/L	509.50	ppb	11:07:16
2	Ni 231.604†	22700.2	22569.8	506.93	ug/L	506.93	ppb	11:07:16

2	P 214.914†	6199.2	5912.9	2364.7	ug/L	2364.7 ppb	11:07:16
2	Pb 220.353†	4931.2	4965.5	493.65	ug/L	493.65 ppb	11:07:16
2	S 181.975 Axial†	2363.5	2262.3	2519.9	ug/L	2519.9 ppb	11:07:16
2	Sb 206.836†	2082.0	2030.6	512.11	ug/L	512.11 ppb	11:07:16
2	Se 196.026†	5986.9	6027.9	2540.8	ug/L	2540.8 ppb	11:07:16
2	Si 251.611†	181263.2	181057.2	4745.9	ug/L	4745.9 ppb	11:06:56
2	Sn 189.927†	3528.0	3520.5	516.18	ug/L	516.18 ppb	11:07:16
2	Ti 334.940†	308920.6	310868.0	497.77	ug/L	497.77 ppb	11:06:56
2	Tl 190.801†	2135.7	2199.6	490.93	ug/L	490.93 ppb	11:07:16
2	U 409.014†	11624.9	16910.7	499.44	ug/L	499.44 ppb	11:06:56
2	V 292.402†	60388.2	62180.5	486.14	ug/L	486.14 ppb	11:06:56
2	Zn 213.857†	64273.6	63341.4	486.31	ug/L	486.31 ppb	11:06:56
2	SiO2†	183933.8	183734.1	10344	ug/L	10344 ppb	11:07:53
3	Sc Radial	7074.5	7074.5	97.5	%		11:06:22
3	Y RADIAL	6482.1	6482.1	97.01	%		11:06:22
3	Al 396.153Radial†	6453.5	6699.5	5356.7	ug/L	5356.7 ppb	11:06:02
3	Ca 317.933Radial†	3542.5	3601.4	5059.6	ug/L	5059.6 ppb	11:06:22
3	Fe 238.204 Radial†	1323.3	1319.4	5154.3	ug/L	5154.3 ppb	11:06:22
3	K 766.490 Radial†	15973.5	13525.7	2534.1	ug/L	2534.1 ppb	11:06:02
3	Mg 279.077 IEC†	225.4	228.8	5361.4	ug/L	5361.4 ppb	11:06:22
3	Na 589.592 Radial†	51349.7	49559.2	2640.4	ug/L	2640.4 ppb	11:06:02
3	Sr 421.552†	174549.8	179011.5	498.43	ug/L	498.43 ppb	11:06:02
3	Sc 361.383	791211.6	791211.6	100.67	%		11:07:22
3	Y 371.029	610596.1	610596.1	99.730	%		11:07:22
3	Ag 328.068†	47909.9	46883.5	244.03	ug/L	244.03 ppb	11:07:22
3	As 188.979†	1561.7	1586.2	470.12	ug/L	470.12 ppb	11:07:42
3	B 249.677†	22125.6	22802.7	481.94	ug/L	481.94 ppb	11:07:22
3	Ba 233.527†	86024.3	85433.6	516.80	ug/L	516.80 ppb	11:07:22
3	Be 313.107†	653775.2	654355.5	249.35	ug/L	249.35 ppb	11:07:22
3	Cd 226.502†	45937.7	45925.3	483.75	ug/L	483.75 ppb	11:07:22
3	Co 228.616†	31570.7	31460.8	461.46	ug/L	461.46 ppb	11:07:42
3	Cr 267.716†	41230.2	40962.9	485.01	ug/L	485.01 ppb	11:07:22
3	Cu 324.752†	167660.8	160641.8	502.93	ug/L	502.93 ppb	11:07:22
3	Mn 257.610†	537947.2	533610.8	500.42	ug/L	500.42 ppb	11:07:22
3	Mo 202.031†	8570.5	8503.0	506.97	ug/L	506.97 ppb	11:07:42
3	Ni 231.604†	22891.3	22573.9	507.02	ug/L	507.02 ppb	11:07:42
3	P 214.914†	6238.6	5901.3	2360.3	ug/L	2360.3 ppb	11:07:42
3	Pb 220.353†	4963.7	4957.4	492.87	ug/L	492.87 ppb	11:07:42
3	S 181.975 Axial†	2381.0	2260.3	2517.8	ug/L	2517.8 ppb	11:07:42
3	Sb 206.836†	2095.2	2026.6	511.03	ug/L	511.03 ppb	11:07:42
3	Se 196.026†	6020.5	6012.3	2534.1	ug/L	2534.1 ppb	11:07:42
3	Si 251.611†	182461.5	180764.4	4738.3	ug/L	4738.3 ppb	11:07:22
3	Sn 189.927†	3539.1	3502.6	513.57	ug/L	513.57 ppb	11:07:42
3	Ti 334.940†	311139.0	310544.0	497.25	ug/L	497.25 ppb	11:07:22
3	Tl 190.801†	2124.4	2171.0	484.59	ug/L	484.59 ppb	11:07:42
3	U 409.014†	11793.9	16983.5	501.60	ug/L	501.60 ppb	11:07:22
3	V 292.402†	60906.5	62201.3	486.28	ug/L	486.28 ppb	11:07:22
3	Zn 213.857†	64695.2	63234.3	485.49	ug/L	485.49 ppb	11:07:22
3	SiO2†	184236.5	182529.8	10276	ug/L	10276 ppb	11:07:58

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	788897.2	100.37	%	0.458				0.46%
Sc Radial	7074.8	97.5	%	0.44				0.45%
Y 371.029	608722.8	99.424	%	0.4568				0.46%
Y RADIAL	6496.1	97.22	%	0.389				0.40%
Ag 328.068†	46940.5	244.33	ug/L	0.524	244.33	ppb	0.524	0.21%
QC value within limits for Ag 328.068 Recovery = 97.73%								
Al 396.153Radial†	6630.3	5301.1	ug/L	55.82	5301.1	ppb	55.82	1.05%
QC value within limits for Al 396.153Radial Recovery = 106.02%								
As 188.979†	1577.6	467.56	ug/L	2.642	467.56	ppb	2.642	0.57%
QC value within limits for As 188.979 Recovery = 93.51%								
B 249.677†	22845.3	482.85	ug/L	2.122	482.85	ppb	2.122	0.44%
QC value within limits for B 249.677 Recovery = 96.57%								
Ba 233.527†	85403.1	516.62	ug/L	0.163	516.62	ppb	0.163	0.03%
QC value within limits for Ba 233.527 Recovery = 103.32%								
Be 313.107†	653817.7	249.14	ug/L	0.284	249.14	ppb	0.284	0.11%
QC value within limits for Be 313.107 Recovery = 99.66%								
Ca 317.933Radial†	3604.8	5064.3	ug/L	6.06	5064.3	ppb	6.06	0.12%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.29%
Cd 226.502†          45884.8      483.32 ug/L        0.423      483.32 ppb        0.423   0.09%
   QC value within limits for Cd 226.502  Recovery = 96.66%
Co 228.616†          31411.9      460.74 ug/L        2.262      460.74 ppb        2.262   0.49%
   QC value within limits for Co 228.616  Recovery = 92.15%
Cr 267.716†          41001.7      485.47 ug/L        0.426      485.47 ppb        0.426   0.09%
   QC value within limits for Cr 267.716  Recovery = 97.09%
Cu 324.752†         160749.9      503.26 ug/L        1.400      503.26 ppb        1.400   0.28%
   QC value within limits for Cu 324.752  Recovery = 100.65%
Fe 238.204 Radial†   1321.0       5160.4 ug/L       24.77      5160.4 ppb        24.77   0.48%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.21%
K 766.490 Radial†    13422.7      2514.8 ug/L       19.34      2514.8 ppb        19.34   0.77%
   QC value within limits for K 766.490 Radial  Recovery = 100.59%
Mg 279.077 IEC†        230.9      5412.2 ug/L       62.41      5412.2 ppb        62.41   1.15%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.24%
Mn 257.610†         533628.6      500.43 ug/L        0.320      500.43 ppb        0.320   0.06%
   QC value within limits for Mn 257.610  Recovery = 100.09%
Mo 202.031†          8505.2       507.10 ug/L        2.334      507.10 ppb        2.334   0.46%
   QC value within limits for Mo 202.031  Recovery = 101.42%
Na 589.592 Radial†   49094.7      2615.6 ug/L       31.60      2615.6 ppb        31.60   1.21%
   QC value within limits for Na 589.592 Radial  Recovery = 104.62%
Ni 231.604†          22508.8      505.56 ug/L        2.454      505.56 ppb        2.454   0.49%
   QC value within limits for Ni 231.604  Recovery = 101.11%
P 214.914†            5895.2      2357.7 ug/L        8.62      2357.7 ppb         8.62   0.37%
   QC value within limits for P 214.914  Recovery = 94.31%
Pb 220.353†           4947.4       491.86 ug/L        2.447      491.86 ppb        2.447   0.50%
   QC value within limits for Pb 220.353  Recovery = 98.37%
S 181.975 Axial†      2256.7      2513.8 ug/L        8.89      2513.8 ppb         8.89   0.35%
   QC value within limits for S 181.975 Axial  Recovery = 100.55%
Sb 206.836†           2023.2       510.17 ug/L        2.474      510.17 ppb        2.474   0.48%
   QC value within limits for Sb 206.836  Recovery = 102.03%
Se 196.026†           6004.3      2530.8 ug/L       11.98      2530.8 ppb        11.98   0.47%
   QC value within limits for Se 196.026  Recovery = 101.23%
Si 251.611†         180875.6      4741.2 ug/L        4.11      4741.2 ppb         4.11   0.09%
   QC value within limits for Si 251.611  Recovery = 94.82%
Sn 189.927†           3500.9       513.31 ug/L        3.007      513.31 ppb        3.007   0.59%
   QC value within limits for Sn 189.927  Recovery = 102.66%
Sr 421.552†         177332.2       493.75 ug/L        5.120      493.75 ppb        5.120   1.04%
   QC value within limits for Sr 421.552  Recovery = 98.75%
Ti 334.940†         310539.2       497.24 ug/L        0.530      497.24 ppb        0.530   0.11%
   QC value within limits for Ti 334.940  Recovery = 99.45%
Tl 190.801†           2175.8       485.67 ug/L        4.818      485.67 ppb        4.818   0.99%
   QC value within limits for Tl 190.801  Recovery = 97.13%
U 409.014†           16917.2       499.64 ug/L        1.876      499.64 ppb        1.876   0.38%
   QC value within limits for U 409.014  Recovery = 99.93%
V 292.402†           62163.4       485.99 ug/L        0.397      485.99 ppb        0.397   0.08%
   QC value within limits for V 292.402  Recovery = 97.20%
Zn 213.857†          63297.1       485.98 ug/L        0.435      485.98 ppb        0.435   0.09%
   QC value within limits for Zn 213.857  Recovery = 97.20%
SiO2†               182061.0        10250 ug/L        110.0       10250 ppb        110.0   1.07%
   QC value within limits for SiO2  Recovery = 95.84%
All analyte(s) passed QC.
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Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/1/2009 11:10:08
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7221.3	7221.3	99.6	%			11:12:01
1	Y RADIAL	6680.9	6680.9	99.98	%			11:12:01
1	Al 396.153Radial†	-47.9	35.4	28.384	ug/L	28.384	ppb	11:12:01
1	Ca 317.933Radial†	28.1	-2.1	-2.9499	ug/L	-2.9499	ppb	11:12:21
1	Fe 238.204 Radial†	37.4	0.4	1.4774	ug/L	1.4774	ppb	11:12:21
1	K 766.490 Radial†	2805.3	-32.7	-6.1515	ug/L	-6.1515	ppb	11:12:01
1	Mg 279.077 IEC†	4.9	2.7	62.243	ug/L	62.243	ppb	11:12:21
1	Na 589.592 Radial†	2588.0	-484.2	-25.799	ug/L	-25.799	ppb	11:12:01
1	Sr 421.552†	-59.1	6.9	0.0191	ug/L	0.0191	ppb	11:12:01
1	Sc 361.383	775737.7	775737.7	98.700	%			11:13:18
1	Y 371.029	605143.1	605143.1	98.839	%			11:13:18
1	Ag 328.068†	754.0	55.6	0.2949	ug/L	0.2949	ppb	11:13:18
1	As 188.979†	-27.9	6.6	1.9387	ug/L	1.9387	ppb	11:13:38
1	B 249.677†	-575.6	240.9	5.1201	ug/L	5.1201	ppb	11:13:18
1	Ba 233.527†	20.5	1.2	0.0072	ug/L	0.0072	ppb	11:13:38
1	Be 313.107†	-4865.3	-8.1	-0.0031	ug/L	-0.0031	ppb	11:13:18
1	Cd 226.502†	-282.5	6.4	0.0675	ug/L	0.0675	ppb	11:13:38
1	Co 228.616†	-97.1	1.4	0.0205	ug/L	0.0205	ppb	11:13:38
1	Cr 267.716†	-57.8	-52.1	-0.6126	ug/L	-0.6126	ppb	11:13:18
1	Cu 324.752†	5891.3	63.2	0.1977	ug/L	0.1977	ppb	11:13:18
1	Mn 257.610†	763.8	9.3	0.0077	ug/L	0.0077	ppb	11:13:18
1	Mo 202.031†	12.4	2.0	0.1184	ug/L	0.1184	ppb	11:13:38
1	Ni 231.604†	156.6	-6.7	-0.1507	ug/L	-0.1507	ppb	11:13:38
1	P 214.914†	300.9	8.9	3.7102	ug/L	3.7102	ppb	11:13:38
1	Pb 220.353†	-33.7	-7.5	-0.7342	ug/L	-0.7342	ppb	11:13:38
1	S 181.975 Axial†	103.8	0.3	0.2945	ug/L	0.2945	ppb	11:13:38
1	Sb 206.836†	49.2	-4.8	-1.1465	ug/L	-1.1465	ppb	11:13:38
1	Se 196.026†	-34.8	-3.4	-1.4347	ug/L	-1.4347	ppb	11:13:38
1	Si 251.611†	506.3	27.4	0.6964	ug/L	0.6964	ppb	11:13:38
1	Sn 189.927†	25.3	12.7	1.8517	ug/L	1.8517	ppb	11:13:38
1	Ti 334.940†	-1455.6	-3.9	-0.0018	ug/L	-0.0018	ppb	11:13:18
1	Tl 190.801†	-52.5	7.5	1.6679	ug/L	1.6679	ppb	11:13:38
1	U 409.014†	-5530.0	-334.9	-9.9225	ug/L	-9.9225	ppb	11:13:18
1	V 292.402†	-1679.7	-2.7	-0.0374	ug/L	-0.0374	ppb	11:13:18
1	Zn 213.857†	1052.7	35.3	0.2719	ug/L	0.2719	ppb	11:13:38
1	SiO2†	530.9	54.5	3.0211	ug/L	3.0211	ppb	11:14:35
2	Sc Radial	7337.8	7337.8	101	%			11:12:26
2	Y RADIAL	6755.9	6755.9	101.1	%			11:12:26
2	Al 396.153Radial†	-64.6	19.6	15.752	ug/L	15.752	ppb	11:12:26
2	Ca 317.933Radial†	29.5	-1.2	-1.6399	ug/L	-1.6399	ppb	11:12:46
2	Fe 238.204 Radial†	35.6	-2.0	-7.9503	ug/L	-7.9503	ppb	11:12:46
2	K 766.490 Radial†	2791.6	-90.9	-17.111	ug/L	-17.111	ppb	11:12:26
2	Mg 279.077 IEC†	6.8	4.4	102.61	ug/L	102.61	ppb	11:12:46
2	Na 589.592 Radial†	2517.6	-595.1	-31.702	ug/L	-31.702	ppb	11:12:26
2	Sr 421.552†	-46.8	20.0	0.0556	ug/L	0.0556	ppb	11:12:26
2	Sc 361.383	780611.6	780611.6	99.320	%			11:13:44
2	Y 371.029	608426.6	608426.6	99.375	%			11:13:44
2	Ag 328.068†	770.9	67.9	0.3507	ug/L	0.3507	ppb	11:13:44
2	As 188.979†	-43.8	-9.2	-2.7135	ug/L	-2.7135	ppb	11:14:04
2	B 249.677†	-524.7	295.7	6.2862	ug/L	6.2862	ppb	11:13:44
2	Ba 233.527†	20.9	1.5	0.0098	ug/L	0.0098	ppb	11:14:04
2	Be 313.107†	-4734.6	154.2	0.0583	ug/L	0.0583	ppb	11:13:44
2	Cd 226.502†	-286.1	4.6	0.0487	ug/L	0.0487	ppb	11:14:04
2	Co 228.616†	-96.3	2.8	0.0408	ug/L	0.0408	ppb	11:14:04
2	Cr 267.716†	25.1	31.7	0.3767	ug/L	0.3767	ppb	11:13:44
2	Cu 324.752†	5929.0	63.9	0.1994	ug/L	0.1994	ppb	11:13:44
2	Mn 257.610†	828.3	69.4	0.0620	ug/L	0.0620	ppb	11:13:44
2	Mo 202.031†	8.8	-1.7	-0.0999	ug/L	-0.0999	ppb	11:14:04
2	Ni 231.604†	146.6	-17.8	-0.3993	ug/L	-0.3993	ppb	11:14:04

2	P 214.914†	292.1	-1.8	-0.7782 ug/L	-0.7782 ppb	11:14:04
2	Pb 220.353†	-34.0	-7.5	-0.7414 ug/L	-0.7414 ppb	11:14:04
2	S 181.975 Axial†	99.7	-4.5	-4.9682 ug/L	-4.9682 ppb	11:14:04
2	Sb 206.836†	56.7	2.4	0.5889 ug/L	0.5889 ppb	11:14:04
2	Se 196.026†	-44.2	-12.7	-5.3478 ug/L	-5.3478 ppb	11:14:04
2	Si 251.611†	514.6	32.5	0.8547 ug/L	0.8547 ppb	11:14:04
2	Sn 189.927†	16.9	4.0	0.5886 ug/L	0.5886 ppb	11:14:04
2	Ti 334.940†	-1511.5	-50.9	-0.0804 ug/L	-0.0804 ppb	11:13:44
2	Tl 190.801†	-44.6	15.8	3.5034 ug/L	3.5034 ppb	11:14:04
2	U 409.014†	-5334.0	-102.6	-3.0395 ug/L	-3.0395 ppb	11:13:44
2	V 292.402†	-1638.7	49.2	0.3753 ug/L	0.3753 ppb	11:13:44
2	Zn 213.857†	1052.6	28.5	0.2204 ug/L	0.2204 ppb	11:14:04
2	SiO2†	531.7	51.9	2.9317 ug/L	2.9317 ppb	11:14:40
3	Sc Radial	7137.6	7137.6	98.4 %		11:12:52
3	Y RADIAL	6588.2	6588.2	98.59 %		11:12:52
3	Al 396.153Radial†	-71.5	10.8	8.6813 ug/L	8.6813 ppb	11:12:52
3	Ca 317.933Radial†	27.4	-2.4	-3.4415 ug/L	-3.4415 ppb	11:13:12
3	Fe 238.204 Radial†	41.1	4.6	17.826 ug/L	17.826 ppb	11:13:12
3	K 766.490 Radial†	2871.2	67.4	12.681 ug/L	12.681 ppb	11:12:52
3	Mg 279.077 IEC†	4.2	1.9	44.802 ug/L	44.802 ppb	11:13:12
3	Na 589.592 Radial†	2577.5	-464.5	-24.744 ug/L	-24.744 ppb	11:12:52
3	Sr 421.552†	-46.4	19.1	0.0531 ug/L	0.0531 ppb	11:12:52
3	Sc 361.383	777441.6	777441.6	98.916 %		11:14:09
3	Y 371.029	606080.5	606080.5	98.992 %		11:14:09
3	Ag 328.068†	757.8	57.9	0.3077 ug/L	0.3077 ppb	11:14:09
3	As 188.979†	-41.7	-7.3	-2.1521 ug/L	-2.1521 ppb	11:14:29
3	B 249.677†	-518.7	299.7	6.3673 ug/L	6.3673 ppb	11:14:09
3	Ba 233.527†	20.0	0.6	0.0034 ug/L	0.0034 ppb	11:14:29
3	Be 313.107†	-4874.9	-7.1	-0.0029 ug/L	-0.0029 ppb	11:14:09
3	Cd 226.502†	-284.2	5.3	0.0541 ug/L	0.0541 ppb	11:14:29
3	Co 228.616†	-94.0	4.7	0.0705 ug/L	0.0705 ppb	11:14:29
3	Cr 267.716†	-30.9	-24.8	-0.2912 ug/L	-0.2912 ppb	11:14:09
3	Cu 324.752†	5984.5	144.3	0.4525 ug/L	0.4525 ppb	11:14:09
3	Mn 257.610†	770.8	14.7	0.0151 ug/L	0.0151 ppb	11:14:09
3	Mo 202.031†	17.1	6.7	0.4000 ug/L	0.4000 ppb	11:14:29
3	Ni 231.604†	153.9	-9.8	-0.2211 ug/L	-0.2211 ppb	11:14:29
3	P 214.914†	295.1	2.4	0.8884 ug/L	0.8884 ppb	11:14:29
3	Pb 220.353†	-36.8	-10.5	-1.0404 ug/L	-1.0404 ppb	11:14:29
3	S 181.975 Axial†	90.9	-12.9	-14.421 ug/L	-14.421 ppb	11:14:29
3	Sb 206.836†	50.2	-3.9	-0.9603 ug/L	-0.9603 ppb	11:14:29
3	Se 196.026†	-37.0	-5.6	-2.2677 ug/L	-2.2677 ppb	11:14:29
3	Si 251.611†	512.0	32.1	0.8390 ug/L	0.8390 ppb	11:14:29
3	Sn 189.927†	9.4	-3.4	-0.5038 ug/L	-0.5038 ppb	11:14:29
3	Ti 334.940†	-1516.1	-61.8	-0.0966 ug/L	-0.0966 ppb	11:14:09
3	Tl 190.801†	-61.7	-1.7	-0.3863 ug/L	-0.3863 ppb	11:14:29
3	U 409.014†	-5399.8	-191.0	-5.6609 ug/L	-5.6609 ppb	11:14:09
3	V 292.402†	-1693.0	-12.5	-0.1037 ug/L	-0.1037 ppb	11:14:09
3	Zn 213.857†	1026.4	6.4	0.0471 ug/L	0.0471 ppb	11:14:29
3	SiO2†	567.2	90.0	5.0749 ug/L	5.0749 ppb	11:14:45

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	777930.3	98.979	%	0.3147				0.32%
Sc Radial	7232.2	99.7	%	1.39				1.39%
Y 371.029	606550.0	99.069	%	0.2763				0.28%
Y RADIAL	6675.0	99.89	%	1.257				1.26%
Ag 328.068†	60.5	0.3178	ug/L	0.02923	0.3178	ppb	0.02923	9.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	21.9	17.606	ug/L	9.9810	17.606	ppb	9.9810	56.69%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-3.3	-0.9756	ug/L	2.53942	-0.9756	ppb	2.53942	260.28%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	278.8	5.9245	ug/L	0.69786	5.9245	ppb	0.69786	11.78%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	1.1	0.0068	ug/L	0.00322	0.0068	ppb	0.00322	47.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	46.3	0.0174	ug/L	0.03540	0.0174	ppb	0.03540	203.10%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.9	-2.6771	ug/L	0.93126	-2.6771	ppb	0.93126	34.79%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                5.4      0.0567 ug/L       0.00968      0.0567 ppb        0.00968  17.06%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                3.0      0.0439 ug/L       0.02511      0.0439 ppb        0.02511  57.17%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -15.0     -0.1757 ug/L       0.50469     -0.1757 ppb        0.50469 287.23%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               90.4      0.2832 ug/L       0.14665      0.2832 ppb        0.14665  51.78%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         1.0      3.7844 ug/L      13.04220      3.7844 ppb       13.04220 344.63%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -18.7     -3.5271 ug/L      15.06865     -3.5271 ppb       15.06865 427.22%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            3.0      69.885 ug/L       29.6517      69.885 ppb        29.6517  42.43%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               31.1      0.0283 ug/L       0.02945      0.0283 ppb        0.02945 104.07%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                2.3      0.1395 ug/L       0.25065      0.1395 ppb        0.25065 179.66%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      -514.6     -27.415 ug/L        3.7502     -27.415 ppb         3.7502  13.68%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              -11.4     -0.2570 ug/L       0.12818     -0.2570 ppb        0.12818  49.87%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 3.2      1.2735 ug/L       2.26883      1.2735 ppb        2.26883 178.16%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -8.5     -0.8387 ug/L       0.17473     -0.8387 ppb        0.17473  20.83%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -5.7     -6.3650 ug/L       7.45669     -6.3650 ppb        7.45669 117.15%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               -2.1     -0.5059 ug/L       0.95273     -0.5059 ppb        0.95273 188.31%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -7.2     -3.0168 ug/L       2.06129     -3.0168 ppb        2.06129  68.33%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               30.7      0.7967 ug/L       0.08724      0.7967 ppb        0.08724  10.95%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.4      0.6455 ug/L       1.17876      0.6455 ppb        1.17876 182.61%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               15.3      0.0426 ug/L       0.02038      0.0426 ppb        0.02038  47.82%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -38.9     -0.0596 ug/L       0.05071     -0.0596 ppb        0.05071  85.03%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                7.2      1.5950 ug/L       1.94589      1.5950 ppb        1.94589 122.00%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -209.5     -6.2076 ug/L       3.47394     -6.2076 ppb        3.47394  55.96%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                11.3      0.0781 ug/L       0.25951      0.0781 ppb        0.25951 332.40%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               23.4      0.1798 ug/L       0.11780      0.1798 ppb        0.11780  65.51%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     65.5      3.6759 ug/L       1.21241      3.6759 ppb        1.21241  32.98%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/1/2009 11:16:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7264.6	7264.6	100	%			11:18:48
1	Y RADIAL	6677.0	6677.0	99.92	%			11:18:48
1	Al 396.153Radial†	181.8	265.0	212.26	ug/L	212.26	ppb	11:18:48
1	Ca 317.933Radial†	178.4	147.8	207.63	ug/L	207.63	ppb	11:19:08
1	Fe 238.204 Radial†	64.1	26.8	104.43	ug/L	104.43	ppb	11:19:08
1	K 766.490 Radial†	3552.6	696.7	130.83	ug/L	130.83	ppb	11:18:48
1	Mg 279.077 IEC†	15.3	12.9	302.86	ug/L	302.86	ppb	11:19:08
1	Na 589.592 Radial†	8293.8	5196.7	276.86	ug/L	276.86	ppb	11:18:48
1	Sr 421.552†	1732.6	1796.0	4.9992	ug/L	4.9992	ppb	11:18:48
1	Sc 361.383	777086.1	777086.1	98.871	%			11:20:05
1	Y 371.029	606071.2	606071.2	98.991	%			11:20:05
1	Ag 328.068†	1722.2	1033.6	5.3183	ug/L	5.3183	ppb	11:20:05
1	As 188.979†	63.7	99.3	29.260	ug/L	29.260	ppb	11:20:25
1	B 249.677†	1615.7	2458.2	52.216	ug/L	52.216	ppb	11:20:25
1	Ba 233.527†	866.8	857.1	5.1838	ug/L	5.1838	ppb	11:20:25
1	Be 313.107†	8062.5	13075.8	4.9711	ug/L	4.9711	ppb	11:20:05
1	Cd 226.502†	167.9	462.5	4.8654	ug/L	4.8654	ppb	11:20:25
1	Co 228.616†	222.7	325.0	4.7799	ug/L	4.7799	ppb	11:20:25
1	Cr 267.716†	379.2	390.0	4.6036	ug/L	4.6036	ppb	11:20:25
1	Cu 324.752†	9162.5	3361.4	10.523	ug/L	10.523	ppb	11:20:05
1	Mn 257.610†	13618.6	13009.5	12.194	ug/L	12.194	ppb	11:20:05
1	Mo 202.031†	184.3	175.9	10.487	ug/L	10.487	ppb	11:20:25
1	Ni 231.604†	376.6	215.5	4.8411	ug/L	4.8411	ppb	11:20:25
1	P 214.914†	664.4	376.1	154.52	ug/L	154.52	ppb	11:20:25
1	Pb 220.353†	88.0	115.7	11.522	ug/L	11.522	ppb	11:20:25
1	S 181.975 Axial†	190.2	87.5	97.422	ug/L	97.422	ppb	11:20:25
1	Sb 206.836†	95.8	42.2	10.735	ug/L	10.735	ppb	11:20:25
1	Se 196.026†	45.3	77.6	32.835	ug/L	32.835	ppb	11:20:25
1	Si 251.611†	4167.8	3729.8	97.763	ug/L	97.763	ppb	11:20:25
1	Sn 189.927†	73.0	60.8	8.9333	ug/L	8.9333	ppb	11:20:25
1	Ti 334.940†	1618.6	3107.9	4.9656	ug/L	4.9656	ppb	11:20:05
1	Tl 190.801†	40.5	101.6	22.604	ug/L	22.604	ppb	11:20:25
1	U 409.014†	-3516.8	1711.0	50.669	ug/L	50.669	ppb	11:20:05
1	V 292.402†	-1087.0	599.7	4.8442	ug/L	4.8442	ppb	11:20:05
1	Zn 213.857†	2593.6	1592.0	12.273	ug/L	12.273	ppb	11:20:25
1	SiO2†	4193.2	3757.7	211.54	ug/L	211.54	ppb	11:21:21
2	Sc Radial	7188.0	7188.0	99.1	%			11:19:14
2	Y RADIAL	6616.8	6616.8	99.02	%			11:19:14
2	Al 396.153Radial†	212.2	297.6	238.43	ug/L	238.43	ppb	11:19:14
2	Ca 317.933Radial†	180.5	151.9	213.34	ug/L	213.34	ppb	11:19:34
2	Fe 238.204 Radial†	68.4	31.8	123.92	ug/L	123.92	ppb	11:19:34
2	K 766.490 Radial†	3770.7	954.4	179.35	ug/L	179.35	ppb	11:19:14
2	Mg 279.077 IEC†	19.5	17.4	406.80	ug/L	406.80	ppb	11:19:34
2	Na 589.592 Radial†	8068.2	5057.2	269.43	ug/L	269.43	ppb	11:19:14
2	Sr 421.552†	1716.6	1798.3	5.0055	ug/L	5.0055	ppb	11:19:14
2	Sc 361.383	765076.6	765076.6	97.343	%			11:20:31
2	Y 371.029	596642.1	596642.1	97.451	%			11:20:31
2	Ag 328.068†	1789.1	1129.7	5.8204	ug/L	5.8204	ppb	11:20:31
2	As 188.979†	73.6	110.5	32.574	ug/L	32.574	ppb	11:20:51
2	B 249.677†	1662.6	2532.0	53.783	ug/L	53.783	ppb	11:20:51
2	Ba 233.527†	865.9	869.9	5.2605	ug/L	5.2605	ppb	11:20:51
2	Be 313.107†	7933.7	13071.5	4.9698	ug/L	4.9698	ppb	11:20:31
2	Cd 226.502†	149.1	445.8	4.6878	ug/L	4.6878	ppb	11:20:51
2	Co 228.616†	216.7	322.4	4.7429	ug/L	4.7429	ppb	11:20:51
2	Cr 267.716†	379.2	396.1	4.6769	ug/L	4.6769	ppb	11:20:51
2	Cu 324.752†	8956.9	3295.6	10.319	ug/L	10.319	ppb	11:20:31
2	Mn 257.610†	13437.1	13039.4	12.223	ug/L	12.223	ppb	11:20:31
2	Mo 202.031†	185.8	180.3	10.754	ug/L	10.754	ppb	11:20:51
2	Ni 231.604†	414.2	260.1	5.8424	ug/L	5.8424	ppb	11:20:51

2	P 214.914†	651.3	373.1	153.34 ug/L	153.34 ppb	11:20:51
2	Pb 220.353†	78.9	107.8	10.738 ug/L	10.738 ppb	11:20:51
2	S 181.975 Axial†	186.2	86.4	96.190 ug/L	96.190 ppb	11:20:51
2	Sb 206.836†	90.8	38.6	9.8714 ug/L	9.8714 ppb	11:20:51
2	Se 196.026†	38.9	71.8	30.476 ug/L	30.476 ppb	11:20:51
2	Si 251.611†	4171.7	3800.0	99.562 ug/L	99.562 ppb	11:20:51
2	Sn 189.927†	84.4	73.8	10.830 ug/L	10.830 ppb	11:20:51
2	Ti 334.940†	1665.2	3181.6	5.0858 ug/L	5.0858 ppb	11:20:31
2	Tl 190.801†	39.5	101.3	22.525 ug/L	22.525 ppb	11:20:51
2	U 409.014†	-3604.7	1564.8	46.336 ug/L	46.336 ppb	11:20:31
2	V 292.402†	-1118.5	550.0	4.4548 ug/L	4.4548 ppb	11:20:31
2	Zn 213.857†	2575.5	1614.5	12.436 ug/L	12.436 ppb	11:20:51
2	SiO2†	4194.5	3825.6	215.27 ug/L	215.27 ppb	11:21:26
3	Sc Radial	7206.2	7206.2	99.4 %		11:19:39
3	Y RADIAL	6666.9	6666.9	99.77 %		11:19:39
3	Al 396.153Radial†	209.2	294.0	235.63 ug/L	235.63 ppb	11:19:39
3	Ca 317.933Radial†	177.2	148.1	208.01 ug/L	208.01 ppb	11:19:59
3	Fe 238.204 Radial†	66.1	29.3	114.41 ug/L	114.41 ppb	11:19:59
3	K 766.490 Radial†	3526.2	698.8	131.23 ug/L	131.23 ppb	11:19:39
3	Mg 279.077 IEC†	16.8	14.6	342.22 ug/L	342.22 ppb	11:19:59
3	Na 589.592 Radial†	8314.2	5284.3	281.53 ug/L	281.53 ppb	11:19:39
3	Sr 421.552†	1699.3	1776.6	4.9450 ug/L	4.9450 ppb	11:19:39
3	Sc 361.383	764864.2	764864.2	97.316 %		11:20:56
3	Y 371.029	596498.2	596498.2	97.427 %		11:20:56
3	Ag 328.068†	1730.9	1070.4	5.5188 ug/L	5.5188 ppb	11:20:56
3	As 188.979†	76.5	113.5	33.433 ug/L	33.433 ppb	11:21:16
3	B 249.677†	1612.4	2481.0	52.699 ug/L	52.699 ppb	11:21:16
3	Ba 233.527†	851.1	855.0	5.1723 ug/L	5.1723 ppb	11:21:16
3	Be 313.107†	7815.1	12951.9	4.9244 ug/L	4.9244 ppb	11:20:56
3	Cd 226.502†	170.3	467.6	4.9186 ug/L	4.9186 ppb	11:21:16
3	Co 228.616†	214.9	320.6	4.7130 ug/L	4.7130 ppb	11:21:16
3	Cr 267.716†	373.3	390.0	4.6079 ug/L	4.6079 ppb	11:21:16
3	Cu 324.752†	8933.9	3274.6	10.252 ug/L	10.252 ppb	11:20:56
3	Mn 257.610†	13475.4	13082.5	12.263 ug/L	12.263 ppb	11:20:56
3	Mo 202.031†	169.3	163.4	9.7447 ug/L	9.7447 ppb	11:21:16
3	Ni 231.604†	390.6	236.0	5.3012 ug/L	5.3012 ppb	11:21:16
3	P 214.914†	658.8	381.0	156.65 ug/L	156.65 ppb	11:21:16
3	Pb 220.353†	74.4	103.1	10.272 ug/L	10.272 ppb	11:21:16
3	S 181.975 Axial†	193.7	94.1	104.85 ug/L	104.85 ppb	11:21:16
3	Sb 206.836†	91.1	39.0	9.9566 ug/L	9.9566 ppb	11:21:16
3	Se 196.026†	37.4	70.3	29.813 ug/L	29.813 ppb	11:21:16
3	Si 251.611†	4145.6	3774.3	98.920 ug/L	98.920 ppb	11:21:16
3	Sn 189.927†	85.3	74.7	10.956 ug/L	10.956 ppb	11:21:16
3	Ti 334.940†	1662.3	3179.0	5.0829 ug/L	5.0829 ppb	11:20:56
3	Tl 190.801†	34.6	96.3	21.415 ug/L	21.415 ppb	11:21:16
3	U 409.014†	-3717.6	1447.8	42.871 ug/L	42.871 ppb	11:20:56
3	V 292.402†	-1010.7	660.5	5.2884 ug/L	5.2884 ppb	11:20:56
3	Zn 213.857†	2600.7	1641.1	12.649 ug/L	12.649 ppb	11:21:16
3	SiO2†	4175.0	3806.7	214.28 ug/L	214.28 ppb	11:21:31

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	769008.9	97.843	%	0.8901				0.91%
Sc Radial	7219.6	99.5	%	0.55				0.55%
Y 371.029	599737.2	97.956	%	0.8960				0.91%
Y RADIAL	6653.6	99.57	%	0.482				0.48%
Ag 328.068†	1077.9	5.5525	ug/L	0.25274	5.5525	ppb	0.25274	4.55%
QC value within limits for Ag 328.068 Recovery = 111.05%								
Al 396.153Radial†	285.5	228.77	ug/L	14.372	228.77	ppb	14.372	6.28%
QC value within limits for Al 396.153Radial Recovery = 114.39%								
As 188.979†	107.8	31.756	ug/L	2.2035	31.756	ppb	2.2035	6.94%
QC value within limits for As 188.979 Recovery = 105.85%								
B 249.677†	2490.4	52.899	ug/L	0.8025	52.899	ppb	0.8025	1.52%
QC value within limits for B 249.677 Recovery = 105.80%								
Ba 233.527†	860.7	5.2056	ug/L	0.04795	5.2056	ppb	0.04795	0.92%
QC value within limits for Ba 233.527 Recovery = 104.11%								
Be 313.107†	13033.1	4.9551	ug/L	0.02659	4.9551	ppb	0.02659	0.54%
QC value within limits for Be 313.107 Recovery = 99.10%								
Ca 317.933Radial†	149.2	209.66	ug/L	3.194	209.66	ppb	3.194	1.52%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.83%
Cd 226.502†              458.6      4.8239 ug/L       0.12084      4.8239 ppb       0.12084   2.51%
   QC value within limits for Cd 226.502  Recovery = 96.48%
Co 228.616†              322.6      4.7452 ug/L       0.03352      4.7452 ppb       0.03352   0.71%
   QC value within limits for Co 228.616  Recovery = 94.90%
Cr 267.716†              392.0      4.6295 ug/L       0.04114      4.6295 ppb       0.04114   0.89%
   QC value within limits for Cr 267.716  Recovery = 92.59%
Cu 324.752†             3310.5      10.365 ug/L        0.1413      10.365 ppb        0.1413   1.36%
   QC value within limits for Cu 324.752  Recovery = 103.65%
Fe 238.204 Radial†        29.3      114.25 ug/L         9.749      114.25 ppb         9.749   8.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 114.25%
K 766.490 Radial†        783.3      147.14 ug/L        27.898      147.14 ppb        27.898  18.96%
   QC value within limits for K 766.490 Radial  Recovery = 98.09%
Mg 279.077 IEC†           15.0      350.62 ug/L        52.479      350.62 ppb        52.479  14.97%
   QC value within limits for Mg 279.077 IEC  Recovery = 116.87%
Mn 257.610†            13043.8      12.227 ug/L        0.0346      12.227 ppb        0.0346   0.28%
   QC value within limits for Mn 257.610  Recovery = 122.27%
Mo 202.031†              173.2      10.329 ug/L        0.5230      10.329 ppb        0.5230   5.06%
   QC value within limits for Mo 202.031  Recovery = 103.29%
Na 589.592 Radial†      5179.4      275.94 ug/L         6.102      275.94 ppb         6.102   2.21%
   QC value within limits for Na 589.592 Radial  Recovery = 91.98%
Ni 231.604†              237.2      5.3282 ug/L       0.50120      5.3282 ppb       0.50120   9.41%
   QC value within limits for Ni 231.604  Recovery = 106.56%
P 214.914†               376.7      154.84 ug/L         1.675      154.84 ppb         1.675   1.08%
   QC value within limits for P 214.914  Recovery = 103.23%
Pb 220.353†              108.9      10.844 ug/L        0.6316      10.844 ppb        0.6316   5.82%
   QC value within limits for Pb 220.353  Recovery = 108.44%
S 181.975 Axial†          89.3      99.486 ug/L        4.6821      99.486 ppb        4.6821   4.71%
   QC value within limits for S 181.975 Axial  Recovery = 99.49%
Sb 206.836†               39.9      10.188 ug/L        0.4757      10.188 ppb        0.4757   4.67%
   QC value within limits for Sb 206.836  Recovery = 101.88%
Se 196.026†               73.2      31.041 ug/L        1.5885      31.041 ppb        1.5885   5.12%
   QC value within limits for Se 196.026  Recovery = 103.47%
Si 251.611†             3768.0      98.749 ug/L        0.9118      98.749 ppb        0.9118   0.92%
   QC value within limits for Si 251.611  Recovery = 98.75%
Sn 189.927†               69.8      10.240 ug/L        1.1332      10.240 ppb        1.1332  11.07%
   QC value within limits for Sn 189.927  Recovery = 102.40%
Sr 421.552†             1790.3      4.9832 ug/L       0.03325      4.9832 ppb       0.03325   0.67%
   QC value within limits for Sr 421.552  Recovery = 99.66%
Ti 334.940†             3156.2      5.0447 ug/L       0.06858      5.0447 ppb       0.06858   1.36%
   QC value within limits for Ti 334.940  Recovery = 100.89%
Tl 190.801†               99.7      22.181 ug/L        0.6653      22.181 ppb        0.6653   3.00%
   QC value within limits for Tl 190.801  Recovery = 110.91%
U 409.014†              1574.5      46.625 ug/L        3.9070      46.625 ppb        3.9070   8.38%
   QC value within limits for U 409.014  Recovery = 93.25%
V 292.402†               603.4      4.8625 ug/L       0.41714      4.8625 ppb       0.41714   8.58%
   QC value within limits for V 292.402  Recovery = 97.25%
Zn 213.857†             1615.9      12.452 ug/L        0.1884      12.452 ppb        0.1884   1.51%
   QC value within limits for Zn 213.857  Recovery = 124.52%
SiO2†                   3796.6      213.70 ug/L         1.933      213.70 ppb         1.933   0.90%
   QC value within limits for SiO2  Recovery = 100.33%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/1/2009 11:23:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6630.8	6630.8	91.4	%			11:25:41
1	Y RADIAL	6075.3	6075.3	90.92	%			11:25:41
1	Al 396.153Radial†	596128.2	652111.2	523520	ug/L	523520	ppb	11:25:36
1	Ca 317.933Radial†	315907.6	345500.3	485390	ug/L	485390	ppb	11:25:36
1	Fe 238.204 Radial†	43173.3	47184.5	183810	ug/L	183810	ppb	11:25:41
1	K 766.490 Radial†	2392.6	-233.1	-94.436	ug/L	-94.436	ppb	11:25:36
1	Mg 279.077 IEC†	18707.4	20459.3	478830	ug/L	478830	ppb	11:25:41
1	Na 589.592 Radial†	4640.4	1992.0	106.13	ug/L	106.13	ppb	11:25:36
1	Sr 421.552†	1332.8	1524.1	-0.5248	ug/L	-0.5248	ppb	11:25:41
1	Sc 361.383	680946.9	680946.9	86.639	%			11:26:08
1	Y 371.029	521394.2	521394.2	85.160	%			11:26:08
1	Ag 328.068†	-8128.4	-10090.2	-0.1311	ug/L	-0.1311	ppb	11:26:08
1	As 188.979†	-94.5	-74.1	14.781	ug/L	14.781	ppb	11:26:28
1	B 249.677†	24.3	852.1	5.5581	ug/L	5.5581	ppb	11:26:08
1	Ba 233.527†	-685.0	-810.2	-5.7120	ug/L	-5.7120	ppb	11:26:28
1	Be 313.107†	-5025.1	-878.8	-0.4019	ug/L	-0.4019	ppb	11:26:08
1	Cd 226.502†	1199.5	1677.1	-3.7470	ug/L	-3.7470	ppb	11:26:28
1	Co 228.616†	-37.6	56.3	-1.7792	ug/L	-1.7792	ppb	11:26:28
1	Cr 267.716†	-101.7	-110.9	2.4751	ug/L	2.4751	ppb	11:26:28
1	Cu 324.752†	2561.7	-2949.0	1.3998	ug/L	1.3998	ppb	11:26:08
1	Mn 257.610†	-790.8	-1677.3	12.295	ug/L	12.295	ppb	11:26:08
1	Mo 202.031†	-245.4	-293.8	-5.5141	ug/L	-5.5141	ppb	11:26:28
1	Ni 231.604†	328.7	214.0	4.8079	ug/L	4.8079	ppb	11:26:28
1	P 214.914†	255.1	-1.4	29.666	ug/L	29.666	ppb	11:26:28
1	Pb 220.353†	-833.9	-935.8	-8.2158	ug/L	-8.2158	ppb	11:26:28
1	S 181.975 Axial†	150.9	69.3	-25.727	ug/L	-25.727	ppb	11:26:28
1	Sb 206.836†	128.8	94.0	13.062	ug/L	13.062	ppb	11:26:28
1	Se 196.026†	-1367.9	-1547.0	-1.2632	ug/L	-1.2632	ppb	11:26:28
1	Si 251.611†	-214.9	-733.7	-18.245	ug/L	-18.245	ppb	11:26:28
1	Sn 189.927†	-312.3	-373.5	8.8203	ug/L	8.8203	ppb	11:26:28
1	Ti 334.940†	-17231.7	-18418.2	-1.1940	ug/L	-1.1940	ppb	11:26:08
1	Tl 190.801†	-106.9	-62.7	-1.3782	ug/L	-1.3782	ppb	11:26:28
1	U 409.014†	-4161.2	465.0	-8.8092	ug/L	-8.8092	ppb	11:26:08
1	V 292.402†	125.9	1844.5	-3.5932	ug/L	-3.5932	ppb	11:26:28
1	Zn 213.857†	3981.8	3564.6	-8.1609	ug/L	-8.1609	ppb	11:26:28
1	SiO2†	-275.0	-800.8	-42.868	ug/L	-42.868	ppb	11:27:25
2	Sc Radial	6746.9	6746.9	93.0	%			11:25:51
2	Y RADIAL	6115.4	6115.4	91.52	%			11:25:51
2	Al 396.153Radial†	602332.1	647567.9	519870	ug/L	519870	ppb	11:25:46
2	Ca 317.933Radial†	317686.7	341471.0	479730	ug/L	479730	ppb	11:25:46
2	Fe 238.204 Radial†	43719.4	46959.5	182930	ug/L	182930	ppb	11:25:51
2	K 766.490 Radial†	2313.7	-363.0	-118.33	ug/L	-118.33	ppb	11:25:46
2	Mg 279.077 IEC†	18905.3	20320.2	475580	ug/L	475580	ppb	11:25:51
2	Na 589.592 Radial†	4710.7	1980.3	105.51	ug/L	105.51	ppb	11:25:46
2	Sr 421.552†	1415.1	1587.5	-0.2926	ug/L	-0.2926	ppb	11:25:51
2	Sc 361.383	685552.8	685552.8	87.225	%			11:26:34
2	Y 371.029	525118.6	525118.6	85.769	%			11:26:34
2	Ag 328.068†	-8170.2	-10075.0	-0.2569	ug/L	-0.2569	ppb	11:26:34
2	As 188.979†	-94.0	-72.9	14.976	ug/L	14.976	ppb	11:26:54
2	B 249.677†	33.3	862.3	5.8315	ug/L	5.8315	ppb	11:26:34
2	Ba 233.527†	-687.3	-807.5	-5.6922	ug/L	-5.6922	ppb	11:26:54
2	Be 313.107†	-5154.6	-988.3	-0.4442	ug/L	-0.4442	ppb	11:26:34
2	Cd 226.502†	1177.7	1642.9	-4.0064	ug/L	-4.0064	ppb	11:26:54
2	Co 228.616†	-4.7	94.4	-1.2056	ug/L	-1.2056	ppb	11:26:54
2	Cr 267.716†	-147.8	-163.0	1.8389	ug/L	1.8389	ppb	11:26:54
2	Cu 324.752†	2663.9	-2851.7	1.6536	ug/L	1.6536	ppb	11:26:34
2	Mn 257.610†	-964.1	-1869.9	12.068	ug/L	12.068	ppb	11:26:34
2	Mo 202.031†	-235.0	-279.9	-4.7436	ug/L	-4.7436	ppb	11:26:54
2	Ni 231.604†	318.9	200.2	4.4985	ug/L	4.4985	ppb	11:26:54

2	P 214.914†	236.2	-25.1	19.231 ug/L	19.231 ppb	11:26:54
2	Pb 220.353†	-845.5	-942.7	-9.5231 ug/L	-9.5231 ppb	11:26:54
2	S 181.975 Axial†	132.0	46.5	-50.444 ug/L	-50.444 ppb	11:26:54
2	Sb 206.836†	125.8	89.5	12.062 ug/L	12.062 ppb	11:26:54
2	Se 196.026†	-1384.2	-1555.1	-7.7908 ug/L	-7.7908 ppb	11:26:54
2	Si 251.611†	-208.6	-724.7	-18.031 ug/L	-18.031 ppb	11:26:54
2	Sn 189.927†	-308.1	-366.1	9.2469 ug/L	9.2469 ppb	11:26:54
2	Ti 334.940†	-17525.0	-18620.8	-1.8515 ug/L	-1.8515 ppb	11:26:34
2	Tl 190.801†	-98.7	-52.5	0.7847 ug/L	0.7847 ppb	11:26:54
2	U 409.014†	-3988.1	695.8	-1.8628 ug/L	-1.8628 ppb	11:26:34
2	V 292.402†	115.8	1831.9	-3.5979 ug/L	-3.5979 ppb	11:26:54
2	Zn 213.857†	3987.2	3539.9	-8.1465 ug/L	-8.1465 ppb	11:26:54
2	SiO2†	-238.2	-756.5	-40.413 ug/L	-40.413 ppb	11:27:30
3	Sc Radial	6718.6	6718.6	92.6 %		11:26:02
3	Y RADIAL	6100.5	6100.5	91.30 %		11:26:02
3	Al 396.153Radial†	593562.5	640827.3	514460 ug/L	514460 ppb	11:25:57
3	Ca 317.933Radial†	314229.1	339176.4	476510 ug/L	476510 ppb	11:25:57
3	Fe 238.204 Radial†	43411.3	46824.8	182410 ug/L	182410 ppb	11:26:02
3	K 766.490 Radial†	2299.7	-367.7	-118.52 ug/L	-118.52 ppb	11:25:57
3	Mg 279.077 IEC†	18831.9	20326.5	475730 ug/L	475730 ppb	11:26:02
3	Na 589.592 Radial†	4814.3	2113.5	112.60 ug/L	112.60 ppb	11:25:57
3	Sr 421.552†	1357.8	1532.0	-0.4156 ug/L	-0.4156 ppb	11:26:02
3	Sc 361.383	690675.9	690675.9	87.877 %		11:26:59
3	Y 371.029	529002.6	529002.6	86.403 %		11:26:59
3	Ag 328.068†	-8281.5	-10132.3	-0.6729 ug/L	-0.6729 ppb	11:26:59
3	As 188.979†	-80.7	-56.9	19.575 ug/L	19.575 ppb	11:27:19
3	B 249.677†	27.3	855.2	5.7160 ug/L	5.7160 ppb	11:26:59
3	Ba 233.527†	-698.7	-814.6	-5.7334 ug/L	-5.7334 ppb	11:27:19
3	Be 313.107†	-5229.3	-1029.5	-0.4607 ug/L	-0.4607 ppb	11:26:59
3	Cd 226.502†	1139.0	1588.8	-4.5158 ug/L	-4.5158 ppb	11:27:19
3	Co 228.616†	-5.5	93.5	-1.2038 ug/L	-1.2038 ppb	11:27:19
3	Cr 267.716†	-65.5	-68.0	2.9502 ug/L	2.9502 ppb	11:27:19
3	Cu 324.752†	2532.1	-3024.4	1.0831 ug/L	1.0831 ppb	11:26:59
3	Mn 257.610†	-1083.9	-1997.9	11.879 ug/L	11.879 ppb	11:26:59
3	Mo 202.031†	-196.7	-234.3	-2.0608 ug/L	-2.0608 ppb	11:27:19
3	Ni 231.604†	293.4	168.5	3.7860 ug/L	3.7860 ppb	11:27:19
3	P 214.914†	208.3	-58.8	3.8774 ug/L	3.8774 ppb	11:27:19
3	Pb 220.353†	-784.3	-865.8	-2.8984 ug/L	-2.8984 ppb	11:27:19
3	S 181.975 Axial†	140.2	54.7	-40.293 ug/L	-40.293 ppb	11:27:19
3	Sb 206.836†	129.5	92.7	12.960 ug/L	12.960 ppb	11:27:19
3	Se 196.026†	-1388.0	-1547.7	-6.8022 ug/L	-6.8022 ppb	11:27:19
3	Si 251.611†	-201.2	-714.5	-17.782 ug/L	-17.782 ppb	11:27:19
3	Sn 189.927†	-322.3	-379.7	6.8878 ug/L	6.8878 ppb	11:27:19
3	Ti 334.940†	-17878.3	-18873.8	-2.4450 ug/L	-2.4450 ppb	11:26:59
3	Tl 190.801†	-92.5	-44.6	2.4098 ug/L	2.4098 ppb	11:27:19
3	U 409.014†	-4026.7	685.8	-2.0965 ug/L	-2.0965 ppb	11:26:59
3	V 292.402†	76.7	1786.4	-3.8396 ug/L	-3.8396 ppb	11:27:19
3	Zn 213.857†	3972.4	3489.2	-8.4849 ug/L	-8.4849 ppb	11:27:19
3	SiO2†	-260.0	-779.3	-41.741 ug/L	-41.741 ppb	11:27:35

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	685725.2	87.247	%	0.6192				0.71%
Sc Radial	6698.8	92.4	%	0.83				0.90%
Y 371.029	525171.8	85.777	%	0.6214				0.72%
Y RADIAL	6097.1	91.24	%	0.304				0.33%
Ag 328.068†	-10099.2	-0.3536	ug/L	0.28359	-0.3536	ppb	0.28359	80.19%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	646835.5	519290	ug/L	4558.0	519290	ppb	4558.0	0.88%
QC value within limits for Al 396.153Radial Recovery = 103.86%								
As 188.979†	-68.0	16.444	ug/L	2.7132	16.444	ppb	2.7132	16.50%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	856.5	5.7019	ug/L	0.13725	5.7019	ppb	0.13725	2.41%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-810.8	-5.7125	ug/L	0.02063	-5.7125	ppb	0.02063	0.36%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-965.5	-0.4356	ug/L	0.03035	-0.4356	ppb	0.03035	6.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	342049.2	480550	ug/L	4497.6	480550	ppb	4497.6	0.94%

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   QC value within limits for Ca 317.933Radial  Recovery = 96.11%
Cd 226.502†            1636.3     -4.0897 ug/L       0.39110     -4.0897 ppb        0.39110   9.56%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              81.4     -1.3962 ug/L       0.33169     -1.3962 ppb        0.33169  23.76%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -114.0      2.4214 ug/L       0.55760      2.4214 ppb        0.55760  23.03%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -2941.7      1.3788 ug/L       0.28585      1.3788 ppb        0.28585  20.73%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    46989.6    183050 ug/L         707.9     183050 ppb          707.9   0.39%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.52%
K 766.490 Radial†      -321.3     -110.43 ug/L        13.851     -110.43 ppb         13.851  12.54%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       20368.7     476710 ug/L        1838.3     476710 ppb         1838.3   0.39%
   QC value within limits for Mg 279.077 IEC  Recovery = 95.34%
Mn 257.610†           -1848.4      12.081 ug/L        0.2086      12.081 ppb         0.2086   1.73%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -269.4     -4.1062 ug/L       1.81275     -4.1062 ppb        1.81275  44.15%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     2028.6     108.08 ug/L         3.930      108.08 ppb          3.930   3.64%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†             194.2      4.3641 ug/L       0.52405      4.3641 ppb        0.52405  12.01%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -28.5     17.592 ug/L       12.9723      17.592 ppb        12.9723  73.74%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -914.8     -6.8791 ug/L       3.50881     -6.8791 ppb        3.50881  51.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         56.8    -38.821 ug/L       12.4238     -38.821 ppb        12.4238  32.00%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              92.1     12.695 ug/L        0.5501      12.695 ppb         0.5501   4.33%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†           -1549.9     -5.2854 ug/L       3.51820     -5.2854 ppb        3.51820  66.56%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -724.3    -18.019 ug/L        0.2315     -18.019 ppb         0.2315   1.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -373.1      8.3183 ug/L       1.25710      8.3183 ppb        1.25710  15.11%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†            1547.8     -0.4110 ug/L       0.11617     -0.4110 ppb        0.11617  28.26%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†          -18637.6     -1.8302 ug/L       0.62578     -1.8302 ppb        0.62578  34.19%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†             -53.3      0.6054 ug/L       1.90037      0.6054 ppb        1.90037 313.88%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              615.5     -4.2562 ug/L       3.94473     -4.2562 ppb        3.94473  92.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†             1820.9     -3.6769 ug/L       0.14091     -3.6769 ppb        0.14091   3.83%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            3531.2     -8.2641 ug/L       0.19133     -8.2641 ppb        0.19133   2.32%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                  -778.9    -41.674 ug/L        1.2288     -41.674 ppb         1.2288   2.95%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/1/2009 11:29:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6698.8	6698.8	92.4	%			11:31:44
1	Y RADIAL	6097.7	6097.7	91.25	%			11:31:44
1	Al 396.153Radial†	594366.6	643588.9	516660	ug/L	516660	ppb	11:31:39
1	Ca 317.933Radial†	315675.1	341743.0	480120	ug/L	480120	ppb	11:31:39
1	Fe 238.204 Radial†	43293.3	46835.3	182460	ug/L	182460	ppb	11:31:44
1	K 766.490 Radial†	28895.3	28434.1	5291.1	ug/L	5291.1	ppb	11:31:39
1	Mg 279.077 IEC†	18670.6	20211.9	473050	ug/L	473050	ppb	11:31:44
1	Na 589.592 Radial†	98691.3	103767.0	5528.4	ug/L	5528.4	ppb	11:31:39
1	Sr 421.552†	162936.0	176472.8	486.69	ug/L	486.69	ppb	11:31:39
1	Sc 361.383	701082.2	701082.2	89.201	%			11:32:12
1	Y 371.029	535614.4	535614.4	87.483	%			11:32:12
1	Ag 328.068†	39345.0	43400.0	276.03	ug/L	276.03	ppb	11:32:12
1	As 188.979†	1419.1	1625.8	517.16	ug/L	517.16	ppb	11:32:17
1	B 249.677†	21679.4	25128.0	519.30	ug/L	519.30	ppb	11:32:12
1	Ba 233.527†	71223.7	79826.8	482.23	ug/L	482.23	ppb	11:32:12
1	Be 313.107†	567773.7	641432.0	244.42	ug/L	244.42	ppb	11:32:12
1	Cd 226.502†	40208.7	45369.2	457.19	ug/L	457.19	ppb	11:32:17
1	Co 228.616†	27407.3	30825.2	449.54	ug/L	449.54	ppb	11:32:17
1	Cr 267.716†	35578.3	39892.0	476.04	ug/L	476.04	ppb	11:32:17
1	Cu 324.752†	157783.4	170979.5	545.52	ug/L	545.52	ppb	11:32:12
1	Mn 257.610†	448387.0	501906.1	483.98	ug/L	483.98	ppb	11:32:12
1	Mo 202.031†	7097.4	7946.0	485.36	ug/L	485.36	ppb	11:32:17
1	Ni 231.604†	18287.4	20335.9	456.73	ug/L	456.73	ppb	11:32:17
1	P 214.914†	5672.0	6062.7	2450.2	ug/L	2450.2	ppb	11:32:17
1	Pb 220.353†	3309.9	3737.3	454.65	ug/L	454.65	ppb	11:32:17
1	S 181.975 Axial†	2288.3	2460.5	2640.2	ug/L	2640.2	ppb	11:32:17
1	Sb 206.836†	1917.1	2094.5	517.38	ug/L	517.38	ppb	11:32:17
1	Se 196.026†	4009.5	4526.7	2536.1	ug/L	2536.1	ppb	11:32:17
1	Si 251.611†	177929.7	198985.0	5218.2	ug/L	5218.2	ppb	11:32:12
1	Sn 189.927†	2666.5	2976.3	498.47	ug/L	498.47	ppb	11:32:17
1	Ti 334.940†	269581.0	303688.5	513.97	ug/L	513.97	ppb	11:32:12
1	Tl 190.801†	1739.7	2011.0	461.37	ug/L	461.37	ppb	11:32:17
1	U 409.014†	11004.9	17605.1	498.26	ug/L	498.26	ppb	11:32:12
1	V 292.402†	58741.6	67552.2	510.28	ug/L	510.28	ppb	11:32:12
1	Zn 213.857†	61568.8	67991.3	487.93	ug/L	487.93	ppb	11:32:12
1	SiO2†	176563.3	197455.3	11121	ug/L	11121	ppb	11:32:44
2	Sc Radial	6795.2	6795.2	93.7	%			11:31:54
2	Y RADIAL	6150.1	6150.1	92.04	%			11:31:54
2	Al 396.153Radial†	595716.5	635905.5	510490	ug/L	510490	ppb	11:31:49
2	Ca 317.933Radial†	316211.6	337469.7	474110	ug/L	474110	ppb	11:31:49
2	Fe 238.204 Radial†	43901.6	46819.9	182400	ug/L	182400	ppb	11:31:54
2	K 766.490 Radial†	28960.6	28060.2	5221.6	ug/L	5221.6	ppb	11:31:49
2	Mg 279.077 IEC†	18981.7	20257.3	474120	ug/L	474120	ppb	11:31:54
2	Na 589.592 Radial†	99194.4	102789.0	5476.3	ug/L	5476.3	ppb	11:31:49
2	Sr 421.552†	163606.4	174687.1	481.78	ug/L	481.78	ppb	11:31:49
2	Sc 361.383	703882.4	703882.4	89.557	%			11:32:23
2	Y 371.029	537868.0	537868.0	87.851	%			11:32:23
2	Ag 328.068†	39483.2	43378.8	275.99	ug/L	275.99	ppb	11:32:23
2	As 188.979†	1452.4	1656.6	526.22	ug/L	526.22	ppb	11:32:28
2	B 249.677†	21856.2	25228.7	521.42	ug/L	521.42	ppb	11:32:23
2	Ba 233.527†	71360.2	79661.6	481.23	ug/L	481.23	ppb	11:32:23
2	Be 313.107†	570747.0	642219.8	244.72	ug/L	244.72	ppb	11:32:23
2	Cd 226.502†	41019.4	46095.1	464.85	ug/L	464.85	ppb	11:32:28
2	Co 228.616†	27913.5	31268.1	456.07	ug/L	456.07	ppb	11:32:28
2	Cr 267.716†	36091.6	40306.5	480.94	ug/L	480.94	ppb	11:32:28
2	Cu 324.752†	159385.7	172065.0	548.92	ug/L	548.92	ppb	11:32:23
2	Mn 257.610†	450588.2	502364.2	484.38	ug/L	484.38	ppb	11:32:23
2	Mo 202.031†	7343.5	8189.2	499.84	ug/L	499.84	ppb	11:32:28
2	Ni 231.604†	18571.3	20571.4	462.02	ug/L	462.02	ppb	11:32:28

2	P 214.914†	5687.3	6054.6	2444.2 ug/L	2444.2 ppb	11:32:28
2	Pb 220.353†	3308.3	3720.8	451.85 ug/L	451.85 ppb	11:32:28
2	S 181.975 Axial†	2382.1	2555.0	2746.8 ug/L	2746.8 ppb	11:32:28
2	Sb 206.836†	2028.4	2210.2	546.65 ug/L	546.65 ppb	11:32:28
2	Se 196.026†	4050.6	4554.7	2547.2 ug/L	2547.2 ppb	11:32:28
2	Si 251.611†	179074.5	199469.7	5230.6 ug/L	5230.6 ppb	11:32:23
2	Sn 189.927†	2734.3	3040.2	507.19 ug/L	507.19 ppb	11:32:28
2	Ti 334.940†	270713.0	303750.2	513.72 ug/L	513.72 ppb	11:32:23
2	Tl 190.801†	1740.9	2004.6	459.77 ug/L	459.77 ppb	11:32:28
2	U 409.014†	11215.6	17791.3	503.77 ug/L	503.77 ppb	11:32:23
2	V 292.402†	59028.8	67610.9	510.95 ug/L	510.95 ppb	11:32:23
2	Zn 213.857†	61912.6	68100.6	488.71 ug/L	488.71 ppb	11:32:23
2	SiO2†	180206.2	200735.6	11306 ug/L	11306 ppb	11:32:49
3	Sc Radial	6659.1	6659.1	91.8 %		11:32:05
3	Y RADIAL	6033.3	6033.3	90.29 %		11:32:05
3	Al 396.153Radial†	596194.3	649417.7	521340 ug/L	521340 ppb	11:32:00
3	Ca 317.933Radial†	316631.7	344823.4	484440 ug/L	484440 ppb	11:32:00
3	Fe 238.204 Radial†	43154.8	46964.0	182960 ug/L	182960 ppb	11:32:05
3	K 766.490 Radial†	29115.9	28860.9	5370.8 ug/L	5370.8 ppb	11:32:00
3	Mg 279.077 IEC†	18687.9	20351.3	476320 ug/L	476320 ppb	11:32:05
3	Na 589.592 Radial†	99223.4	104983.9	5593.2 ug/L	5593.2 ppb	11:32:00
3	Sr 421.552†	163814.3	178481.7	492.24 ug/L	492.24 ppb	11:32:00
3	Sc 361.383	708720.0	708720.0	90.173 %		11:32:33
3	Y 371.029	541603.4	541603.4	88.461 %		11:32:33
3	Ag 328.068†	39598.3	43205.6	275.14 ug/L	275.14 ppb	11:32:33
3	As 188.979†	1492.0	1689.6	536.06 ug/L	536.06 ppb	11:32:39
3	B 249.677†	21909.5	25121.3	519.12 ug/L	519.12 ppb	11:32:33
3	Ba 233.527†	71992.4	79818.8	482.18 ug/L	482.18 ppb	11:32:33
3	Be 313.107†	575500.9	643141.8	245.07 ug/L	245.07 ppb	11:32:33
3	Cd 226.502†	40741.4	45474.1	458.24 ug/L	458.24 ppb	11:32:39
3	Co 228.616†	27761.6	30886.9	450.43 ug/L	450.43 ppb	11:32:39
3	Cr 267.716†	36086.0	40025.2	477.62 ug/L	477.62 ppb	11:32:39
3	Cu 324.752†	160065.7	171604.3	547.51 ug/L	547.51 ppb	11:32:33
3	Mn 257.610†	454158.1	502888.9	484.90 ug/L	484.90 ppb	11:32:33
3	Mo 202.031†	7171.2	7942.2	485.16 ug/L	485.16 ppb	11:32:39
3	Ni 231.604†	18577.9	20437.1	459.01 ug/L	459.01 ppb	11:32:39
3	P 214.914†	5726.0	6054.1	2447.4 ug/L	2447.4 ppb	11:32:39
3	Pb 220.353†	3360.4	3753.3	457.10 ug/L	457.10 ppb	11:32:39
3	S 181.975 Axial†	2328.8	2477.7	2658.5 ug/L	2658.5 ppb	11:32:39
3	Sb 206.836†	1977.4	2138.2	528.02 ug/L	528.02 ppb	11:32:39
3	Se 196.026†	4073.2	4548.9	2547.4 ug/L	2547.4 ppb	11:32:39
3	Si 251.611†	180224.0	199379.7	5228.7 ug/L	5228.7 ppb	11:32:33
3	Sn 189.927†	2665.0	2942.5	494.00 ug/L	494.00 ppb	11:32:39
3	Ti 334.940†	272813.9	304016.8	514.75 ug/L	514.75 ppb	11:32:33
3	Tl 190.801†	1676.4	1919.8	441.26 ug/L	441.26 ppb	11:32:39
3	U 409.014†	11031.7	17501.9	495.13 ug/L	495.13 ppb	11:32:33
3	V 292.402†	59475.5	67656.4	511.06 ug/L	511.06 ppb	11:32:33
3	Zn 213.857†	62300.6	68059.0	488.27 ug/L	488.27 ppb	11:32:33
3	SiO2†	179001.8	198026.5	11153 ug/L	11153 ppb	11:32:55

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	704561.6	89.644	%	0.4916				0.55%
Sc Radial	6717.7	92.6	%	0.96				1.04%
Y 371.029	538361.9	87.932	%	0.4941				0.56%
Y RADIAL	6093.7	91.19	%	0.876				0.96%
Ag 328.068†	43328.2	275.72	ug/L	0.506	275.72	ppb	0.506	0.18%
QC value within limits for Ag 328.068 Recovery = 110.29%								
Al 396.153Radial†	642970.7	516160	ug/L	5441.2	516160	ppb	5441.2	1.05%
QC value within limits for Al 396.153Radial Recovery = 103.23%								
As 188.979†	1657.3	526.48	ug/L	9.451	526.48	ppb	9.451	1.80%
QC value within limits for As 188.979 Recovery = 105.30%								
B 249.677†	25159.4	519.95	ug/L	1.275	519.95	ppb	1.275	0.25%
QC value within limits for B 249.677 Recovery = 103.99%								
Ba 233.527†	79769.0	481.88	ug/L	0.562	481.88	ppb	0.562	0.12%
QC value within limits for Ba 233.527 Recovery = 96.38%								
Be 313.107†	642264.5	244.74	ug/L	0.325	244.74	ppb	0.325	0.13%
QC value within limits for Be 313.107 Recovery = 97.89%								
Ca 317.933Radial†	341345.4	479560	ug/L	5188.3	479560	ppb	5188.3	1.08%

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   QC value within limits for Ca 317.933Radial  Recovery = 95.91%
Cd 226.502†            45646.1      460.09 ug/L          4.153      460.09 ppb          4.153   0.90%
   QC value within limits for Cd 226.502  Recovery = 92.02%
Co 228.616†            30993.4      452.01 ug/L          3.540      452.01 ppb          3.540   0.78%
   QC value within limits for Co 228.616  Recovery = 90.40%
Cr 267.716†            40074.6      478.20 ug/L          2.499      478.20 ppb          2.499   0.52%
   QC value within limits for Cr 267.716  Recovery = 95.64%
Cu 324.752†           171549.6      547.31 ug/L          1.704      547.31 ppb          1.704   0.31%
   QC value within limits for Cu 324.752  Recovery = 109.46%
Fe 238.204 Radial†     46873.1      182610 ug/L          308.3      182610 ppb          308.3   0.17%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.30%
K 766.490 Radial†      28451.7      5294.5 ug/L          74.63      5294.5 ppb          74.63   1.41%
   QC value within limits for K 766.490 Radial  Recovery = 105.89%
Mg 279.077 IEC†        20273.5      474500 ug/L         1664.9      474500 ppb         1664.9   0.35%
   QC value within limits for Mg 279.077 IEC  Recovery = 94.90%
Mn 257.610†           502386.4      484.42 ug/L          0.462      484.42 ppb          0.462   0.10%
   QC value within limits for Mn 257.610  Recovery = 96.88%
Mo 202.031†             8025.8      490.12 ug/L          8.422      490.12 ppb          8.422   1.72%
   QC value within limits for Mo 202.031  Recovery = 98.02%
Na 589.592 Radial†    103846.7      5532.6 ug/L          58.58      5532.6 ppb          58.58   1.06%
   QC value within limits for Na 589.592 Radial  Recovery = 110.65%
Ni 231.604†            20448.2      459.26 ug/L          2.653      459.26 ppb          2.653   0.58%
   QC value within limits for Ni 231.604  Recovery = 91.85%
P 214.914†              6057.1      2447.3 ug/L           2.99      2447.3 ppb           2.99   0.12%
   QC value within limits for P 214.914  Recovery = 97.89%
Pb 220.353†             3737.1      454.53 ug/L          2.625      454.53 ppb          2.625   0.58%
   QC value within limits for Pb 220.353  Recovery = 90.91%
S 181.975 Axial†        2497.7      2681.8 ug/L          56.99      2681.8 ppb          56.99   2.13%
   QC value within limits for S 181.975 Axial  Recovery = 107.27%
Sb 206.836†             2147.6      530.69 ug/L         14.815      530.69 ppb         14.815   2.79%
   QC value within limits for Sb 206.836  Recovery = 106.14%
Se 196.026†             4543.4      2543.6 ug/L           6.46      2543.6 ppb           6.46   0.25%
   QC value within limits for Se 196.026  Recovery = 101.74%
Si 251.611†           199278.2      5225.8 ug/L           6.66      5225.8 ppb           6.66   0.13%
   QC value within limits for Si 251.611  Recovery = 104.52%
Sn 189.927†             2986.3      499.89 ug/L          6.711      499.89 ppb          6.711   1.34%
   QC value within limits for Sn 189.927  Recovery = 99.98%
Sr 421.552†           176547.2      486.90 ug/L          5.236      486.90 ppb          5.236   1.08%
   QC value within limits for Sr 421.552  Recovery = 97.38%
Ti 334.940†           303818.5      514.15 ug/L          0.539      514.15 ppb          0.539   0.10%
   QC value within limits for Ti 334.940  Recovery = 102.83%
Tl 190.801†             1978.4      454.14 ug/L         11.175      454.14 ppb         11.175   2.46%
   QC value within limits for Tl 190.801  Recovery = 90.83%
U 409.014†             17632.8      499.05 ug/L          4.373      499.05 ppb          4.373   0.88%
   QC value within limits for U 409.014  Recovery = 99.81%
V 292.402†             67606.5      510.76 ug/L          0.422      510.76 ppb          0.422   0.08%
   QC value within limits for V 292.402  Recovery = 102.15%
Zn 213.857†            68050.3      488.31 ug/L          0.390      488.31 ppb          0.390   0.08%
   QC value within limits for Zn 213.857  Recovery = 97.66%
SiO2†                 198739.1       11193 ug/L           98.5       11193 ppb           98.5   0.88%
   QC value within limits for SiO2  Recovery = 104.66%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/1/2009 11:35:04
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6616.5	6616.5	91.2	%			11:37:10
1	Y RADIAL	5992.0	5992.0	89.67	%			11:37:10
1	Al 396.153Radial†	580051.1	635902.1	510510	ug/L	510510	ppb	11:37:05
1	Ca 317.933Radial†	309126.1	338816.0	476000	ug/L	476000	ppb	11:37:05
1	Fe 238.204 Radial†	103232.0	113119.8	440660	ug/L	440660	ppb	11:37:05
1	K 766.490 Radial†	2644.6	48.7	-51.277	ug/L	-51.277	ppb	11:37:05
1	Mg 279.077 IEC†	18456.2	20228.3	473210	ug/L	473210	ppb	11:37:10
1	Na 589.592 Radial†	8412799.3	9218543.2	491130	ug/L	491130	ppb	11:37:00
1	Sr 421.552†	1681.6	1909.6	0.6409	ug/L	0.6409	ppb	11:37:10
1	Sc 361.383	686021.5	686021.5	87.285	%			11:37:52
1	Y 371.029	525529.2	525529.2	85.836	%			11:37:52
1	Ag 328.068†	-20066.6	-23698.1	0.0312	ug/L	0.0312	ppb	11:37:52
1	As 188.979†	-233.2	-232.2	19.613	ug/L	19.613	ppb	11:38:12
1	B 249.677†	921.6	1880.0	9.8448	ug/L	9.8448	ppb	11:37:52
1	Ba 233.527†	-1872.0	-2164.3	-15.061	ug/L	-15.061	ppb	11:38:12
1	Be 313.107†	-10310.3	-6891.1	-2.6598	ug/L	-2.6598	ppb	11:37:52
1	Cd 226.502†	3210.0	3970.2	-9.5189	ug/L	-9.5189	ppb	11:38:12
1	Co 228.616†	253.3	389.9	-0.6180	ug/L	-0.6180	ppb	11:38:12
1	Cr 267.716†	23.9	33.9	4.8555	ug/L	4.8555	ppb	11:38:12
1	Cu 324.752†	-96.8	-6016.7	6.6514	ug/L	6.6514	ppb	11:37:52
1	Mn 257.610†	-30315.5	-35496.2	13.012	ug/L	13.012	ppb	11:37:52
1	Mo 202.031†	-484.7	-565.9	-4.9657	ug/L	-4.9657	ppb	11:37:52
1	Ni 231.604†	408.4	302.5	6.7954	ug/L	6.7954	ppb	11:38:12
1	P 214.914†	732.5	543.3	46.628	ug/L	46.628	ppb	11:38:12
1	Pb 220.353†	-544.7	-597.4	-1.5059	ug/L	-1.5059	ppb	11:38:12
1	S 181.975 Axial†	179.1	100.3	11.308	ug/L	11.308	ppb	11:38:12
1	Sb 206.836†	88.0	46.1	5.6025	ug/L	5.6025	ppb	11:38:12
1	Se 196.026†	-3220.0	-3657.3	-30.219	ug/L	-30.219	ppb	11:38:12
1	Si 251.611†	-2039.8	-2822.6	-72.825	ug/L	-72.825	ppb	11:38:12
1	Sn 189.927†	-359.9	-425.3	19.395	ug/L	19.395	ppb	11:38:12
1	Ti 334.940†	-12076.2	-12364.5	1.6294	ug/L	1.6294	ppb	11:37:52
1	Tl 190.801†	-126.7	-84.5	-6.6273	ug/L	-6.6273	ppb	11:38:12
1	U 409.014†	417825.4	483960.3	14284	ug/L	14284	ppb	11:37:52
1	V 292.402†	1027.0	2875.7	-3.9308	ug/L	-3.9308	ppb	11:38:12
1	Zn 213.857†	7093.5	7095.6	-7.3928	ug/L	-7.3928	ppb	11:38:12
1	SiO2†	-2185.5	-2987.3	-165.60	ug/L	-165.60	ppb	11:39:09
2	Sc Radial	6584.3	6584.3	90.8	%			11:37:28
2	Y RADIAL	5969.1	5969.1	89.33	%			11:37:28
2	Al 396.153Radial†	579086.1	637949.6	512150	ug/L	512150	ppb	11:37:23
2	Ca 317.933Radial†	308981.3	340314.1	478110	ug/L	478110	ppb	11:37:23
2	Fe 238.204 Radial†	103123.7	113554.0	442350	ug/L	442350	ppb	11:37:23
2	K 766.490 Radial†	2627.9	44.6	-52.753	ug/L	-52.753	ppb	11:37:23
2	Mg 279.077 IEC†	18457.5	20328.8	475560	ug/L	475560	ppb	11:37:28
2	Na 589.592 Radial†	8462940.5	9318885.3	496480	ug/L	496480	ppb	11:37:17
2	Sr 421.552†	1714.4	1954.7	0.7459	ug/L	0.7459	ppb	11:37:28
2	Sc 361.383	677697.6	677697.6	86.226	%			11:38:18
2	Y 371.029	519984.5	519984.5	84.930	%			11:38:18
2	Ag 328.068†	-19551.4	-23382.9	2.1225	ug/L	2.1225	ppb	11:38:18
2	As 188.979†	-223.8	-224.7	22.182	ug/L	22.182	ppb	11:38:38
2	B 249.677†	893.7	1860.6	9.3177	ug/L	9.3177	ppb	11:38:18
2	Ba 233.527†	-1894.6	-2216.9	-15.387	ug/L	-15.387	ppb	11:38:38
2	Be 313.107†	-10274.3	-6994.3	-2.6998	ug/L	-2.6998	ppb	11:38:18
2	Cd 226.502†	3219.5	4026.4	-9.1236	ug/L	-9.1236	ppb	11:38:38
2	Co 228.616†	241.1	379.4	-0.7948	ug/L	-0.7948	ppb	11:38:38
2	Cr 267.716†	4.5	11.7	4.6126	ug/L	4.6126	ppb	11:38:38
2	Cu 324.752†	-161.4	-6093.0	6.5106	ug/L	6.5106	ppb	11:38:18
2	Mn 257.610†	-30362.8	-35977.7	12.729	ug/L	12.729	ppb	11:38:18
2	Mo 202.031†	-471.9	-557.9	-4.3775	ug/L	-4.3775	ppb	11:38:18
2	Ni 231.604†	414.1	314.9	7.0725	ug/L	7.0725	ppb	11:38:38

2	P 214.914†	758.3	583.5	62.642	ug/L	62.642 ppb	11:38:38
2	Pb 220.353†	-566.5	-630.3	-4.6053	ug/L	-4.6053 ppb	11:38:38
2	S 181.975 Axial†	166.5	88.2	-2.4080	ug/L	-2.4080 ppb	11:38:38
2	Sb 206.836†	133.8	100.5	19.170	ug/L	19.170 ppb	11:38:38
2	Se 196.026†	-3243.3	-3729.6	-54.749	ug/L	-54.749 ppb	11:38:38
2	Si 251.611†	-2043.6	-2855.6	-73.724	ug/L	-73.724 ppb	11:38:38
2	Sn 189.927†	-345.9	-414.1	21.377	ug/L	21.377 ppb	11:38:38
2	Ti 334.940†	-12144.4	-12613.5	1.3343	ug/L	1.3343 ppb	11:38:18
2	Tl 190.801†	-155.3	-119.4	-14.332	ug/L	-14.332 ppb	11:38:38
2	U 409.014†	414010.4	485415.5	14327	ug/L	14327 ppb	11:38:18
2	V 292.402†	957.3	2809.4	-4.5491	ug/L	-4.5491 ppb	11:38:38
2	Zn 213.857†	7099.5	7202.4	-6.8244	ug/L	-6.8244 ppb	11:38:38
2	SiO2†	-2239.3	-3080.5	-170.93	ug/L	-170.93 ppb	11:39:14
3	Sc Radial	6600.0	6600.0	91.0	%		11:37:45
3	Y RADIAL	5984.2	5984.2	89.56	%		11:37:45
3	Al 396.153Radial†	577994.2	635234.0	509970	ug/L	509970 ppb	11:37:40
3	Ca 317.933Radial†	309401.8	339967.4	477620	ug/L	477620 ppb	11:37:40
3	Fe 238.204 Radial†	103324.1	113504.3	442160	ug/L	442160 ppb	11:37:40
3	K 766.490 Radial†	2534.2	-65.3	-72.587	ug/L	-72.587 ppb	11:37:40
3	Mg 279.077 IEC†	18434.0	20254.5	473820	ug/L	473820 ppb	11:37:45
3	Na 589.592 Radial†	8415149.3	9244218.1	492500	ug/L	492500 ppb	11:37:35
3	Sr 421.552†	1690.8	1924.3	0.6660	ug/L	0.6660 ppb	11:37:45
3	Sc 361.383	677001.1	677001.1	86.137	%		11:38:44
3	Y 371.029	519095.7	519095.7	84.785	%		11:38:44
3	Ag 328.068†	-19787.7	-23680.6	0.5599	ug/L	0.5599 ppb	11:38:44
3	As 188.979†	-220.5	-221.0	23.215	ug/L	23.215 ppb	11:39:04
3	B 249.677†	725.5	1666.4	5.2012	ug/L	5.2012 ppb	11:38:44
3	Ba 233.527†	-1918.2	-2246.5	-15.564	ug/L	-15.564 ppb	11:39:04
3	Be 313.107†	-10228.4	-6953.3	-2.6832	ug/L	-2.6832 ppb	11:38:44
3	Cd 226.502†	3243.7	4058.4	-8.7644	ug/L	-8.7644 ppb	11:39:04
3	Co 228.616†	267.6	410.4	-0.3458	ug/L	-0.3458 ppb	11:39:04
3	Cr 267.716†	-10.8	-6.1	4.4076	ug/L	4.4076 ppb	11:39:04
3	Cu 324.752†	-109.1	-6032.5	6.6888	ug/L	6.6888 ppb	11:38:44
3	Mn 257.610†	-30656.3	-36354.7	12.385	ug/L	12.385 ppb	11:38:44
3	Mo 202.031†	-512.6	-605.6	-7.2329	ug/L	-7.2329 ppb	11:38:44
3	Ni 231.604†	423.1	325.7	7.3166	ug/L	7.3166 ppb	11:39:04
3	P 214.914†	763.5	590.4	64.846	ug/L	64.846 ppb	11:39:04
3	Pb 220.353†	-560.4	-623.9	-4.3888	ug/L	-4.3888 ppb	11:39:04
3	S 181.975 Axial†	163.1	84.5	-6.1749	ug/L	-6.1749 ppb	11:39:04
3	Sb 206.836†	110.1	73.2	12.299	ug/L	12.299 ppb	11:39:04
3	Se 196.026†	-3238.4	-3727.8	-54.753	ug/L	-54.753 ppb	11:39:04
3	Si 251.611†	-2047.6	-2862.7	-73.808	ug/L	-73.808 ppb	11:39:04
3	Sn 189.927†	-365.6	-437.3	17.906	ug/L	17.906 ppb	11:39:04
3	Ti 334.940†	-11878.8	-12319.7	1.7871	ug/L	1.7871 ppb	11:38:44
3	Tl 190.801†	-157.2	-121.8	-14.917	ug/L	-14.917 ppb	11:39:04
3	U 409.014†	412887.7	484606.0	14303	ug/L	14303 ppb	11:38:44
3	V 292.402†	1007.1	2868.3	-4.1792	ug/L	-4.1792 ppb	11:39:04
3	Zn 213.857†	7126.1	7241.7	-6.4408	ug/L	-6.4408 ppb	11:39:04
3	SiO2†	-2114.8	-2938.6	-162.68	ug/L	-162.68 ppb	11:39:19

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	680240.1	86.549	%	0.6386				0.74%
Sc Radial	6600.3	91.0	%	0.22				0.24%
Y 371.029	521536.5	85.183	%	0.5694				0.67%
Y RADIAL	5981.8	89.52	%	0.175				0.20%
Ag 328.068†	-23587.2	0.9045	ug/L	1.08740	0.9045	ppb	1.08740	120.22%
Al 396.153Radial†	636361.9	510880	ug/L	1135.9	510880	ppb	1135.9	0.22%
QC value within limits for Al 396.153Radial Recovery = 102.18%								
As 188.979†	-226.0	21.670	ug/L	1.8547	21.670	ppb	1.8547	8.56%
B 249.677†	1802.3	8.1212	ug/L	2.54248	8.1212	ppb	2.54248	31.31%
Ba 233.527†	-2209.2	-15.337	ug/L	0.2553	-15.337	ppb	0.2553	1.66%
Be 313.107†	-6946.2	-2.6809	ug/L	0.02014	-2.6809	ppb	0.02014	0.75%
Ca 317.933Radial†	339699.1	477240	ug/L	1101.8	477240	ppb	1101.8	0.23%
QC value within limits for Ca 317.933Radial Recovery = 95.45%								
Cd 226.502†	4018.3	-9.1356	ug/L	0.37741	-9.1356	ppb	0.37741	4.13%
Co 228.616†	393.2	-0.5862	ug/L	0.22622	-0.5862	ppb	0.22622	38.59%
Cr 267.716†	13.2	4.6253	ug/L	0.22421	4.6253	ppb	0.22421	4.85%
Cu 324.752†	-6047.4	6.6169	ug/L	0.09397	6.6169	ppb	0.09397	1.42%

Fe 238.204 Radial†	113392.7	441720 ug/L	925.8	441720 ppb		925.8	0.21%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 88.34%							
K 766.490 Radial†	9.3	-58.872 ug/L	11.9003	-58.872 ppb		11.9003	20.21%
Mg 279.077 IEC†	20270.5	474190 ug/L	1219.0	474190 ppb		1219.0	0.26%
QC value within limits for Mg 279.077 IEC Recovery = 94.84%							
Mn 257.610†	-35942.9	12.709 ug/L	0.3144	12.709 ppb		0.3144	2.47%
Mo 202.031†	-576.5	-5.5254 ug/L	1.50774	-5.5254 ppb		1.50774	27.29%
Na 589.592 Radial†	9260548.9	493370 ug/L	2777.1	493370 ppb		2777.1	0.56%
QC value within limits for Na 589.592 Radial Recovery = 98.67%							
Ni 231.604†	314.4	7.0615 ug/L	0.26080	7.0615 ppb		0.26080	3.69%
P 214.914†	572.4	58.039 ug/L	9.9436	58.039 ppb		9.9436	17.13%
Pb 220.353†	-617.2	-3.5000 ug/L	1.73032	-3.5000 ppb		1.73032	49.44%
S 181.975 Axial†	91.0	0.9083 ug/L	9.20101	0.9083 ppb		9.20101	>999.9%
Sb 206.836†	73.3	12.357 ug/L	6.7838	12.357 ppb		6.7838	54.90%
Se 196.026†	-3704.9	-46.574 ug/L	14.1633	-46.574 ppb		14.1633	30.41%
Si 251.611†	-2847.0	-73.452 ug/L	0.5451	-73.452 ppb		0.5451	0.74%
Sn 189.927†	-425.6	19.559 ug/L	1.7414	19.559 ppb		1.7414	8.90%
Sr 421.552†	1929.5	0.6843 ug/L	0.05484	0.6843 ppb		0.05484	8.01%
Ti 334.940†	-12432.6	1.5836 ug/L	0.22983	1.5836 ppb		0.22983	14.51%
Tl 190.801†	-108.6	-11.959 ug/L	4.6266	-11.959 ppb		4.6266	38.69%
U 409.014†	484660.6	14305 ug/L	21.5	14305 ppb		21.5	0.15%
QC value within limits for U 409.014 Recovery = 95.37%							
V 292.402†	2851.1	-4.2197 ug/L	0.31115	-4.2197 ppb		0.31115	7.37%
Zn 213.857†	7179.9	-6.8860 ug/L	0.47898	-6.8860 ppb		0.47898	6.96%
SiO2†	-3002.1	-166.40 ug/L	4.182	-166.40 ppb		4.182	2.51%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/1/2009 11:41:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6938.3	6938.3	95.7	%			11:43:28
1	Y RADIAL	6292.6	6292.6	94.17	%			11:43:28
1	Al 396.153Radial†	453.8	557.8	48.031	ug/L	48.031	ppb	11:43:28
1	Ca 317.933Radial†	37.8	9.2	12.966	ug/L	12.966	ppb	11:43:48
1	Fe 238.204 Radial†	-31.6	-70.2	-9.7306	ug/L	-9.7306	ppb	11:43:48
1	K 766.490 Radial†	1458010.2	1521222.4	286170	ug/L	286170	ppb	11:43:23
1	Mg 279.077 IEC†	-7.4	-10.0	-44.925	ug/L	-44.925	ppb	11:43:48
1	Na 589.592 Radial†	5321.4	2479.1	132.08	ug/L	132.08	ppb	11:43:28
1	Sr 421.552†	3159480.5	3302702.7	9196.8	ug/L	9196.8	ppb	11:43:23
1	Sc 361.383	716624.2	716624.2	91.178	%			11:45:06
1	Y 371.029	547982.3	547982.3	89.503	%			11:45:06
1	Ag 328.068†	-4826.5	-6001.8	7.8108	ug/L	7.8108	ppb	11:45:11
1	As 188.979†	29133.2	31986.7	9475.4	ug/L	9475.4	ppb	11:45:11
1	B 249.677†	206943.4	227789.4	4798.6	ug/L	4798.6	ppb	11:45:06
1	Ba 233.527†	2083725.2	2285307.6	13818	ug/L	13818	ppb	11:45:06
1	Be 313.107†	6786205.6	7447697.1	2847.5	ug/L	2847.5	ppb	11:44:59
1	Cd 226.502†	838001.8	919371.7	9695.9	ug/L	9695.9	ppb	11:45:06
1	Co 228.616†	520223.6	570655.3	8366.6	ug/L	8366.6	ppb	11:45:11
1	Cr 267.716†	1821939.6	1998220.1	23641	ug/L	23641	ppb	11:45:06
1	Cu 324.752†	5736172.6	6285245.6	19666	ug/L	19666	ppb	11:44:59
1	Mn 257.610†	8976740.0	9844481.4	9222.1	ug/L	9222.1	ppb	11:44:59
1	Mo 202.031†	142905.6	156721.3	9338.0	ug/L	9338.0	ppb	11:45:11
1	Ni 231.604†	390407.7	428014.5	9613.7	ug/L	9613.7	ppb	11:45:06
1	P 214.914†	36735.6	39993.9	12858	ug/L	12858	ppb	11:45:11
1	Pb 220.353†	213762.5	234470.9	23251	ug/L	23251	ppb	11:45:11
1	S 181.975 Axial†	39551.0	43272.7	48221	ug/L	48221	ppb	11:45:11
1	Sb 206.836†	36472.6	39946.6	9709.7	ug/L	9709.7	ppb	11:45:11
1	Se 196.026†	20816.1	22861.9	9580.3	ug/L	9580.3	ppb	11:45:11
1	Si 251.611†	1618136.2	1774206.5	46280	ug/L	46280	ppb	11:45:06
1	Sn 189.927†	60962.7	66847.9	9784.2	ug/L	9784.2	ppb	11:45:11
1	Ti 334.940†	5545340.2	6083326.7	9734.4	ug/L	9734.4	ppb	11:44:59
1	Tl 190.801†	38034.0	41774.5	9323.2	ug/L	9323.2	ppb	11:45:11
1	U 409.014†	-4147.5	719.2	-24.295	ug/L	-24.295	ppb	11:45:11
1	V 292.402†	1149713.6	1262648.3	9847.2	ug/L	9847.2	ppb	11:45:06
1	Zn 213.857†	1639382.5	1796962.6	13840	ug/L	13840	ppb	11:45:06
1	SiO2†	1626895.8	1783815.6	99919	ug/L	99919	ppb	11:45:58
2	Sc Radial	6547.1	6547.1	90.3	%			11:43:59
2	Y RADIAL	5924.2	5924.2	88.66	%			11:43:59
2	Al 396.153Radial†	423.6	552.7	40.126	ug/L	40.126	ppb	11:43:59
2	Ca 317.933Radial†	36.6	10.2	14.381	ug/L	14.381	ppb	11:44:19
2	Fe 238.204 Radial†	-30.1	-70.6	-9.6935	ug/L	-9.6935	ppb	11:44:19
2	K 766.490 Radial†	1414774.9	1564389.0	294300	ug/L	294300	ppb	11:43:54
2	Mg 279.077 IEC†	-6.2	-9.2	-23.280	ug/L	-23.280	ppb	11:44:19
2	Na 589.592 Radial†	5096.7	2562.5	136.52	ug/L	136.52	ppb	11:43:59
2	Sr 421.552†	3063205.6	3393380.5	9449.3	ug/L	9449.3	ppb	11:43:54
2	Sc 361.383	715684.8	715684.8	91.059	%			11:45:26
2	Y 371.029	547125.3	547125.3	89.363	%			11:45:26
2	Ag 328.068†	-4886.7	-6074.8	7.4374	ug/L	7.4374	ppb	11:45:31
2	As 188.979†	29455.9	32383.0	9592.0	ug/L	9592.0	ppb	11:45:31
2	B 249.677†	207307.8	228487.5	4813.2	ug/L	4813.2	ppb	11:45:26
2	Ba 233.527†	2079795.2	2283991.5	13810	ug/L	13810	ppb	11:45:26
2	Be 313.107†	6768205.1	7437698.9	2843.7	ug/L	2843.7	ppb	11:45:19
2	Cd 226.502†	836920.2	919390.3	9696.1	ug/L	9696.1	ppb	11:45:26
2	Co 228.616†	522433.8	573831.5	8413.4	ug/L	8413.4	ppb	11:45:31
2	Cr 267.716†	1819715.8	1998400.8	23643	ug/L	23643	ppb	11:45:26
2	Cu 324.752†	5737055.2	6294473.1	19695	ug/L	19695	ppb	11:45:19
2	Mn 257.610†	8963684.0	9843066.9	9220.7	ug/L	9220.7	ppb	11:45:19
2	Mo 202.031†	144076.1	158212.4	9426.8	ug/L	9426.8	ppb	11:45:31
2	Ni 231.604†	389953.4	428077.7	9615.1	ug/L	9615.1	ppb	11:45:26

2	P 214.914†	37243.1	40604.1	13108	ug/L	13108	ppb	11:45:31
2	Pb 220.353†	215786.5	237001.3	23502	ug/L	23502	ppb	11:45:31
2	S 181.975 Axial†	39870.2	43680.2	48675	ug/L	48675	ppb	11:45:31
2	Sb 206.836†	36903.6	40472.5	9843.9	ug/L	9843.9	ppb	11:45:31
2	Se 196.026†	21080.9	23182.6	9714.7	ug/L	9714.7	ppb	11:45:31
2	Si 251.611†	1619232.9	1777740.4	46367	ug/L	46367	ppb	11:45:26
2	Sn 189.927†	61474.1	67497.3	9879.3	ug/L	9879.3	ppb	11:45:31
2	Ti 334.940†	5538328.7	6083610.2	9734.8	ug/L	9734.8	ppb	11:45:19
2	Tl 190.801†	38383.6	42213.1	9420.2	ug/L	9420.2	ppb	11:45:31
2	U 409.014†	-4341.6	500.0	-30.793	ug/L	-30.793	ppb	11:45:31
2	V 292.402†	1148111.0	1262543.5	9847.5	ug/L	9847.5	ppb	11:45:26
2	Zn 213.857†	1638921.2	1798816.2	13855	ug/L	13855	ppb	11:45:26
2	SiO2†	1640710.5	1801329.1	100900	ug/L	100900	ppb	11:46:05
3	Sc Radial	6312.0	6312.0	87.0	%			11:44:29
3	Y RADIAL	5752.0	5752.0	86.08	%			11:44:29
3	Al 396.153Radial†	389.1	530.6	18.708	ug/L	18.708	ppb	11:44:29
3	Ca 317.933Radial†	38.1	13.4	18.879	ug/L	18.879	ppb	11:44:49
3	Fe 238.204 Radial†	-32.0	-74.0	-21.948	ug/L	-21.948	ppb	11:44:49
3	K 766.490 Radial†	1371722.7	1573291.2	295970	ug/L	295970	ppb	11:44:24
3	Mg 279.077 IEC†	-6.5	-9.8	-37.504	ug/L	-37.504	ppb	11:44:49
3	Na 589.592 Radial†	4862.0	2503.1	133.36	ug/L	133.36	ppb	11:44:29
3	Sr 421.552†	2967734.1	3410061.9	9495.7	ug/L	9495.7	ppb	11:44:24
3	Sc 361.383	715849.1	715849.1	91.080	%			11:45:45
3	Y 371.029	547736.1	547736.1	89.463	%			11:45:45
3	Ag 328.068†	-5084.7	-6290.9	6.3407	ug/L	6.3407	ppb	11:45:51
3	As 188.979†	29731.7	32678.5	9678.7	ug/L	9678.7	ppb	11:45:51
3	B 249.677†	207290.1	228415.8	4811.6	ug/L	4811.6	ppb	11:45:45
3	Ba 233.527†	2084804.6	2288967.3	13840	ug/L	13840	ppb	11:45:45
3	Be 313.107†	6740433.6	7405501.7	2831.4	ug/L	2831.4	ppb	11:45:39
3	Cd 226.502†	839145.1	921622.2	9719.6	ug/L	9719.6	ppb	11:45:45
3	Co 228.616†	524232.0	575674.1	8440.7	ug/L	8440.7	ppb	11:45:51
3	Cr 267.716†	1822405.6	2000895.5	23673	ug/L	23673	ppb	11:45:45
3	Cu 324.752†	5693442.7	6245143.1	19540	ug/L	19540	ppb	11:45:39
3	Mn 257.610†	8933855.8	9808058.1	9188.0	ug/L	9188.0	ppb	11:45:39
3	Mo 202.031†	145413.2	159644.2	9512.1	ug/L	9512.1	ppb	11:45:51
3	Ni 231.604†	390964.2	429089.2	9637.8	ug/L	9637.8	ppb	11:45:45
3	P 214.914†	37520.4	40899.1	13263	ug/L	13263	ppb	11:45:51
3	Pb 220.353†	217404.3	238723.2	23673	ug/L	23673	ppb	11:45:51
3	S 181.975 Axial†	40358.4	44206.1	49261	ug/L	49261	ppb	11:45:51
3	Sb 206.836†	37208.1	40797.5	9927.4	ug/L	9927.4	ppb	11:45:51
3	Se 196.026†	21283.8	23400.1	9805.8	ug/L	9805.8	ppb	11:45:51
3	Si 251.611†	1618861.0	1776924.0	46342	ug/L	46342	ppb	11:45:45
3	Sn 189.927†	62047.6	68111.4	9969.1	ug/L	9969.1	ppb	11:45:51
3	Ti 334.940†	5511489.0	6052745.9	9685.4	ug/L	9685.4	ppb	11:45:39
3	Tl 190.801†	38660.3	42507.3	9484.7	ug/L	9484.7	ppb	11:45:51
3	U 409.014†	-4187.7	670.1	-25.809	ug/L	-25.809	ppb	11:45:51
3	V 292.402†	1149055.4	1263291.1	9854.4	ug/L	9854.4	ppb	11:45:45
3	Zn 213.857†	1641159.9	1800861.0	13871	ug/L	13871	ppb	11:45:45
3	SiO2†	1663554.8	1825997.1	102280	ug/L	102280	ppb	11:46:12

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	716052.7	91.106	%	0.0638				0.07%
Sc Radial	6599.1	91.0	%	4.36				4.79%
Y 371.029	547614.6	89.443	%	0.0721				0.08%
Y RADIAL	5989.6	89.64	%	4.133				4.61%
Ag 328.068†	-6122.5	7.1963	ug/L	0.76415	7.1963	ppb	0.76415	10.62%
Al 396.153Radial†	547.0	35.622	ug/L	15.1718	35.622	ppb	15.1718	42.59%
As 188.979†	32349.4	9582.0	ug/L	102.03	9582.0	ppb	102.03	1.06%
QC value within limits for As 188.979 Recovery = 95.82%								
B 249.677†	228230.9	4807.8	ug/L	7.99	4807.8	ppb	7.99	0.17%
QC value within limits for B 249.677 Recovery = 96.16%								
Ba 233.527†	2286088.8	13823	ug/L	15.6	13823	ppb	15.6	0.11%
QC value within limits for Ba 233.527 Recovery = 92.15%								
Be 313.107†	7430299.2	2840.9	ug/L	8.43	2840.9	ppb	8.43	0.30%
QC value within limits for Be 313.107 Recovery = 94.70%								
Ca 317.933Radial†	11.0	15.408	ug/L	3.0874	15.408	ppb	3.0874	20.04%
Cd 226.502†	920128.0	9703.8	ug/L	13.65	9703.8	ppb	13.65	0.14%
QC value within limits for Cd 226.502 Recovery = 97.04%								

```
Co 228.616†          573387.0      8406.9 ug/L        37.49      8406.9 ppb        37.49   0.45%
   QC value less than the lower limit for Co 228.616  Recovery = 84.07%
Cr 267.716†         1999172.1     23652 ug/L          17.7       23652 ppb         17.7   0.07%
   QC value within limits for Cr 267.716  Recovery = 94.61%
Cu 324.752†         6274954.0     19634 ug/L          82.1       19634 ppb         82.1   0.42%
   QC value within limits for Cu 324.752  Recovery = 98.17%
Fe 238.204 Radial†      -71.6    -13.791 ug/L        7.0647    -13.791 ppb      7.0647  51.23%
K 766.490 Radial†    1552967.5    292150 ug/L        5242.4     292150 ppb      5242.4   1.79%
   QC value within limits for K 766.490 Radial  Recovery = 97.38%
Mg 279.077 IEC†          -9.7    -35.236 ug/L       10.9990    -35.236 ppb     10.9990  31.21%
Mn 257.610†          9831868.8     9210.3 ug/L        19.33      9210.3 ppb        19.33   0.21%
   QC value within limits for Mn 257.610  Recovery = 92.10%
Mo 202.031†           158192.6     9425.7 ug/L        87.09      9425.7 ppb        87.09   0.92%
   QC value within limits for Mo 202.031  Recovery = 94.26%
Na 589.592 Radial†      2514.9     133.98 ug/L        2.287     133.98 ppb        2.287   1.71%
Ni 231.604†           428393.8     9622.2 ug/L        13.53      9622.2 ppb        13.53   0.14%
   QC value within limits for Ni 231.604  Recovery = 96.22%
P 214.914†             40499.0      13076 ug/L        204.0       13076 ppb        204.0   1.56%
   QC value less than the lower limit for P 214.914  Recovery = 87.17%
Pb 220.353†           236731.8      23475 ug/L        212.2       23475 ppb        212.2   0.90%
   QC value within limits for Pb 220.353  Recovery = 93.90%
S 181.975 Axial†       43719.6      48719 ug/L        521.5       48719 ppb        521.5   1.07%
   QC value within limits for S 181.975 Axial  Recovery = 97.44%
Sb 206.836†            40405.5     9827.0 ug/L       109.80      9827.0 ppb       109.80   1.12%
   QC value within limits for Sb 206.836  Recovery = 98.27%
Se 196.026†            23148.2     9700.3 ug/L       113.41      9700.3 ppb       113.41   1.17%
   QC value within limits for Se 196.026  Recovery = 97.00%
Si 251.611†          1776290.3      46330 ug/L        45.1       46330 ppb         45.1   0.10%
   QC value within limits for Si 251.611  Recovery = 92.66%
Sn 189.927†            67485.6     9877.5 ug/L        92.48      9877.5 ppb        92.48   0.94%
   QC value within limits for Sn 189.927  Recovery = 98.78%
Sr 421.552†          3368715.0     9380.6 ug/L       160.88      9380.6 ppb       160.88   1.72%
   QC value within limits for Sr 421.552  Recovery = 93.81%
Ti 334.940†          6073227.6     9718.2 ug/L        28.41      9718.2 ppb        28.41   0.29%
   QC value within limits for Ti 334.940  Recovery = 97.18%
Tl 190.801†            42165.0     9409.4 ug/L        81.28      9409.4 ppb        81.28   0.86%
   QC value within limits for Tl 190.801  Recovery = 94.09%
U 409.014†               629.8    -26.965 ug/L       3.3998    -26.965 ppb      3.3998  12.61%
V 292.402†           1262827.6     9849.7 ug/L        4.08      9849.7 ppb        4.08   0.04%
   QC value within limits for V 292.402  Recovery = 98.50%
Zn 213.857†          1798880.0      13855 ug/L        15.1       13855 ppb        15.1   0.11%
   QC value within limits for Zn 213.857  Recovery = 92.37%
SiO2†                1803714.0     101030 ug/L       1187.7      101030 ppb      1187.7   1.18%
   QC value within limits for SiO2  Recovery = 94.42%
QC Failed.  Continue with analysis.
```

Analysis Begun

Start Time: 7/1/2009 12:01:57
Plasma On Time: 6/29/2009 15:26:31
Logged In Analyst: Optima3
Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 070109
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX
Method Last Saved: 7/1/2009 10:35:37
IEC File: 040209.iec
MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1
Autosampler Location: 7
Sample ID: CCV
Date Collected: 7/1/2009 12:01:58
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6717.2	6717.2	92.6	%			12:03:55
1	Y RADIAL	6108.0	6108.0	91.41	%			12:03:55
1	Al 396.153Radial†	5854.0	6404.1	5119.9	ug/L	5119.9	ppb	12:03:55

1	Ca 317.933Radial†	3538.8	3790.6	5325.4 ug/L	5325.4 ppb	12:03:55
1	Fe 238.204 Radial†	1271.8	1335.9	5219.5 ug/L	5219.5 ppb	12:04:15
1	K 766.490 Radial†	27180.6	26497.0	4975.4 ug/L	4975.4 ppb	12:03:50
1	Mg 279.077 IEC†	214.3	229.0	5367.8 ug/L	5367.8 ppb	12:04:15
1	Na 589.592 Radial†	173327.0	184059.5	9806.1 ug/L	9806.1 ppb	12:03:50
1	Sr 421.552†	156777.3	169340.3	471.49 ug/L	471.49 ppb	12:03:50
1	Sc 361.383	745221.2	745221.2	94.817 %		12:05:24
1	Y 371.029	574485.2	574485.2	93.832 %		12:05:24
1	Ag 328.068†	90807.4	95063.0	491.75 ug/L	491.75 ppb	12:05:24
1	As 188.979†	1560.8	1681.1	498.07 ug/L	498.07 ppb	12:05:44
1	B 249.677†	21361.4	23353.1	493.49 ug/L	493.49 ppb	12:05:24
1	Ba 233.527†	77338.2	81546.2	493.36 ug/L	493.36 ppb	12:05:24
1	Be 313.107†	1217813.5	1289305.6	490.18 ug/L	490.18 ppb	12:05:24
1	Cd 226.502†	43306.7	45966.7	484.17 ug/L	484.17 ppb	12:05:44
1	Co 228.616†	31584.3	33410.6	490.01 ug/L	490.01 ppb	12:05:44
1	Cr 267.716†	39370.0	41528.6	491.72 ug/L	491.72 ppb	12:05:24
1	Cu 324.752†	154077.5	156594.2	490.27 ug/L	490.27 ppb	12:05:24
1	Mn 257.610†	497615.7	524052.9	491.47 ug/L	491.47 ppb	12:05:24
1	Mo 202.031†	7966.9	8391.9	500.36 ug/L	500.36 ppb	12:05:44
1	Ni 231.604†	20920.0	21898.2	491.82 ug/L	491.82 ppb	12:05:44
1	P 214.914†	5911.1	5938.3	2377.9 ug/L	2377.9 ppb	12:05:44
1	Pb 220.353†	4764.6	5051.8	502.15 ug/L	502.15 ppb	12:05:44
1	S 181.975 Axial†	927.8	873.6	972.48 ug/L	972.48 ppb	12:05:44
1	Sb 206.836†	1936.9	1988.1	500.96 ug/L	500.96 ppb	12:05:44
1	Se 196.026†	1081.9	1172.8	509.21 ug/L	509.21 ppb	12:05:44
1	Si 251.611†	89413.4	93815.6	2450.7 ug/L	2450.7 ppb	12:05:24
1	Sn 189.927†	3239.7	3403.8	499.13 ug/L	499.13 ppb	12:05:44
1	Ti 334.940†	292600.9	310066.6	496.51 ug/L	496.51 ppb	12:05:24
1	Tl 190.801†	2082.3	2256.8	503.39 ug/L	503.39 ppb	12:05:44
1	U 409.014†	10077.0	15895.7	469.36 ug/L	469.36 ppb	12:05:24
1	V 292.402†	58505.2	63402.4	495.40 ug/L	495.40 ppb	12:05:24
1	Zn 213.857†	61067.9	63374.9	486.69 ug/L	486.69 ppb	12:05:24
1	SiO2†	90729.5	95205.7	5341.2 ug/L	5341.2 ppb	12:06:45
2	Sc Radial	6753.7	6753.7	93.1 %		12:04:26
2	Y RADIAL	6103.1	6103.1	91.33 %		12:04:26
2	Al 396.153Radial†	5855.0	6371.0	5093.6 ug/L	5093.6 ppb	12:04:26
2	Ca 317.933Radial†	3518.1	3747.6	5265.1 ug/L	5265.1 ppb	12:04:26
2	Fe 238.204 Radial†	1266.6	1322.9	5168.8 ug/L	5168.8 ppb	12:04:46
2	K 766.490 Radial†	26989.9	26133.5	4907.1 ug/L	4907.1 ppb	12:04:21
2	Mg 279.077 IEC†	212.1	225.5	5284.1 ug/L	5284.1 ppb	12:04:46
2	Na 589.592 Radial†	171789.1	181395.8	9664.2 ug/L	9664.2 ppb	12:04:21
2	Sr 421.552†	155314.2	166853.6	464.57 ug/L	464.57 ppb	12:04:21
2	Sc 361.383	751263.1	751263.1	95.586 %		12:05:52
2	Y 371.029	578467.5	578467.5	94.482 %		12:05:52
2	Ag 328.068†	91613.8	95136.4	492.11 ug/L	492.11 ppb	12:05:52
2	As 188.979†	1553.6	1660.3	491.94 ug/L	491.94 ppb	12:06:12
2	B 249.677†	21548.8	23368.0	493.85 ug/L	493.85 ppb	12:05:52
2	Ba 233.527†	77999.0	81581.6	493.57 ug/L	493.57 ppb	12:05:52
2	Be 313.107†	1226255.5	1287808.0	489.61 ug/L	489.61 ppb	12:05:52
2	Cd 226.502†	42865.7	45138.0	475.44 ug/L	475.44 ppb	12:06:12
2	Co 228.616†	31335.1	32882.0	482.24 ug/L	482.24 ppb	12:06:12
2	Cr 267.716†	39558.5	41391.9	490.10 ug/L	490.10 ppb	12:05:52
2	Cu 324.752†	155512.4	156788.5	490.87 ug/L	490.87 ppb	12:05:52
2	Mn 257.610†	502053.1	524474.5	491.86 ug/L	491.86 ppb	12:05:52
2	Mo 202.031†	7902.7	8257.1	492.32 ug/L	492.32 ppb	12:06:12
2	Ni 231.604†	20757.0	21550.2	484.01 ug/L	484.01 ppb	12:06:12
2	P 214.914†	5848.9	5823.1	2329.7 ug/L	2329.7 ppb	12:06:12
2	Pb 220.353†	4744.9	4990.8	496.09 ug/L	496.09 ppb	12:06:12
2	S 181.975 Axial†	923.3	861.1	958.56 ug/L	958.56 ppb	12:06:12
2	Sb 206.836†	1925.8	1960.0	493.61 ug/L	493.61 ppb	12:06:12
2	Se 196.026†	1094.9	1177.2	510.88 ug/L	510.88 ppb	12:06:12
2	Si 251.611†	90262.2	93945.1	2454.4 ug/L	2454.4 ppb	12:05:52
2	Sn 189.927†	3174.6	3308.3	485.14 ug/L	485.14 ppb	12:06:12
2	Ti 334.940†	294949.4	310041.8	496.47 ug/L	496.47 ppb	12:05:52
2	Tl 190.801†	2076.0	2232.5	498.05 ug/L	498.05 ppb	12:06:12
2	U 409.014†	10202.9	15942.0	470.74 ug/L	470.74 ppb	12:05:52
2	V 292.402†	58772.5	63185.9	493.63 ug/L	493.63 ppb	12:05:52
2	Zn 213.857†	61731.1	63550.7	488.11 ug/L	488.11 ppb	12:05:52
2	SiO2†	90852.3	94564.6	5305.8 ug/L	5305.8 ppb	12:06:50
3	Sc Radial	6662.9	6662.9	91.9 %		12:04:56
3	Y RADIAL	6074.8	6074.8	90.91 %		12:04:56

3	Al 396.153Radial†	5770.3	6364.5	5088.5 ug/L	5088.5 ppb	12:04:56
3	Ca 317.933Radial†	3467.7	3744.3	5260.4 ug/L	5260.4 ppb	12:04:56
3	Fe 238.204 Radial†	1261.0	1335.4	5217.4 ug/L	5217.4 ppb	12:05:16
3	K 766.490 Radial†	27510.1	27095.1	5088.1 ug/L	5088.1 ppb	12:04:51
3	Mg 279.077 IEC†	215.5	232.2	5442.8 ug/L	5442.8 ppb	12:05:16
3	Na 589.592 Radial†	175413.4	187857.0	10008 ug/L	10008 ppb	12:04:51
3	Sr 421.552†	158651.3	172760.9	481.02 ug/L	481.02 ppb	12:04:51
3	Sc 361.383	754266.0	754266.0	95.968 %		12:06:19
3	Y 371.029	581590.7	581590.7	94.992 %		12:06:19
3	Ag 328.068†	91811.5	94960.9	491.22 ug/L	491.22 ppb	12:06:19
3	As 188.979†	1536.7	1636.2	484.86 ug/L	484.86 ppb	12:06:39
3	B 249.677†	21611.5	23343.6	493.33 ug/L	493.33 ppb	12:06:19
3	Ba 233.527†	77957.9	81213.9	491.35 ug/L	491.35 ppb	12:06:19
3	Be 313.107†	1228513.9	1285053.8	488.56 ug/L	488.56 ppb	12:06:19
3	Cd 226.502†	42955.6	45053.1	474.54 ug/L	474.54 ppb	12:06:39
3	Co 228.616†	31414.4	32834.1	481.54 ug/L	481.54 ppb	12:06:39
3	Cr 267.716†	39736.5	41412.6	490.35 ug/L	490.35 ppb	12:06:19
3	Cu 324.752†	155964.4	156611.8	490.32 ug/L	490.32 ppb	12:06:19
3	Mn 257.610†	501732.2	522049.0	489.59 ug/L	489.59 ppb	12:06:19
3	Mo 202.031†	7917.5	8239.6	491.28 ug/L	491.28 ppb	12:06:39
3	Ni 231.604†	20864.3	21575.6	484.58 ug/L	484.58 ppb	12:06:39
3	P 214.914†	5881.6	5832.8	2333.8 ug/L	2333.8 ppb	12:06:39
3	Pb 220.353†	4762.6	4989.4	495.95 ug/L	495.95 ppb	12:06:39
3	S 181.975 Axial†	925.5	859.5	956.79 ug/L	956.79 ppb	12:06:39
3	Sb 206.836†	1903.5	1928.8	485.84 ug/L	485.84 ppb	12:06:39
3	Se 196.026†	1073.5	1150.4	499.80 ug/L	499.80 ppb	12:06:39
3	Si 251.611†	90304.8	93613.6	2445.7 ug/L	2445.7 ppb	12:06:19
3	Sn 189.927†	3186.0	3306.9	484.95 ug/L	484.95 ppb	12:06:39
3	Ti 334.940†	295512.4	309399.8	495.44 ug/L	495.44 ppb	12:06:19
3	Tl 190.801†	2061.7	2209.1	492.83 ug/L	492.83 ppb	12:06:39
3	U 409.014†	10265.0	15964.3	471.39 ug/L	471.39 ppb	12:06:19
3	V 292.402†	59008.2	63186.7	493.63 ug/L	493.63 ppb	12:06:19
3	Zn 213.857†	61536.5	63090.8	484.53 ug/L	484.53 ppb	12:06:19
3	SiO2†	89911.2	93205.6	5228.9 ug/L	5228.9 ppb	12:06:55

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	750250.1	95.457	%	0.5861				0.61%
Sc Radial	6711.3	92.5	%	0.63				0.68%
Y 371.029	578181.1	94.435	%	0.5817				0.62%
Y RADIAL	6095.3	91.22	%	0.268				0.29%
Ag 328.068†	95053.4	491.69	ug/L	0.446	491.69	ppb	0.446	0.09%
QC value within limits for Ag 328.068 Recovery = 98.34%								
Al 396.153Radial†	6379.9	5100.7	ug/L	16.85	5100.7	ppb	16.85	0.33%
QC value within limits for Al 396.153Radial Recovery = 102.01%								
As 188.979†	1659.2	491.63	ug/L	6.610	491.63	ppb	6.610	1.34%
QC value within limits for As 188.979 Recovery = 98.33%								
B 249.677†	23354.9	493.55	ug/L	0.266	493.55	ppb	0.266	0.05%
QC value within limits for B 249.677 Recovery = 98.71%								
Ba 233.527†	81447.2	492.76	ug/L	1.225	492.76	ppb	1.225	0.25%
QC value within limits for Ba 233.527 Recovery = 98.55%								
Be 313.107†	1287389.2	489.45	ug/L	0.819	489.45	ppb	0.819	0.17%
QC value within limits for Be 313.107 Recovery = 97.89%								
Ca 317.933Radial†	3760.9	5283.6	ug/L	36.25	5283.6	ppb	36.25	0.69%
QC value within limits for Ca 317.933Radial Recovery = 105.67%								
Cd 226.502†	45385.9	478.05	ug/L	5.321	478.05	ppb	5.321	1.11%
QC value within limits for Cd 226.502 Recovery = 95.61%								
Co 228.616†	33042.2	484.60	ug/L	4.702	484.60	ppb	4.702	0.97%
QC value within limits for Co 228.616 Recovery = 96.92%								
Cr 267.716†	41444.4	490.72	ug/L	0.873	490.72	ppb	0.873	0.18%
QC value within limits for Cr 267.716 Recovery = 98.14%								
Cu 324.752†	156664.9	490.49	ug/L	0.335	490.49	ppb	0.335	0.07%
QC value within limits for Cu 324.752 Recovery = 98.10%								
Fe 238.204 Radial†	1331.4	5201.9	ug/L	28.72	5201.9	ppb	28.72	0.55%
QC value within limits for Fe 238.204 Radial Recovery = 104.04%								
K 766.490 Radial†	26575.2	4990.2	ug/L	91.42	4990.2	ppb	91.42	1.83%
QC value within limits for K 766.490 Radial Recovery = 99.80%								
Mg 279.077 IEC†	228.9	5364.9	ug/L	79.39	5364.9	ppb	79.39	1.48%
QC value within limits for Mg 279.077 IEC Recovery = 107.30%								

```
Mn 257.610†          523525.5      490.98 ug/L        1.213      490.98 ppb        1.213   0.25%
   QC value within limits for Mn 257.610  Recovery = 98.20%
Mo 202.031†            8296.2      494.66 ug/L        4.966      494.66 ppb        4.966   1.00%
   QC value within limits for Mo 202.031  Recovery = 98.93%
Na 589.592 Radial†   184437.4      9826.2 ug/L      173.00      9826.2 ppb      173.00   1.76%
   QC value within limits for Na 589.592 Radial  Recovery = 98.26%
Ni 231.604†           21674.7      486.80 ug/L        4.356      486.80 ppb        4.356   0.89%
   QC value within limits for Ni 231.604  Recovery = 97.36%
P 214.914†             5864.7     2347.1 ug/L       26.72      2347.1 ppb       26.72   1.14%
   QC value within limits for P 214.914  Recovery = 93.88%
Pb 220.353†            5010.7      498.06 ug/L        3.543      498.06 ppb        3.543   0.71%
   QC value within limits for Pb 220.353  Recovery = 99.61%
S 181.975 Axial†        864.7      962.61 ug/L        8.596      962.61 ppb        8.596   0.89%
   QC value within limits for S 181.975 Axial  Recovery = 96.26%
Sb 206.836†            1959.0      493.47 ug/L        7.563      493.47 ppb        7.563   1.53%
   QC value within limits for Sb 206.836  Recovery = 98.69%
Se 196.026†            1166.8      506.63 ug/L        5.970      506.63 ppb        5.970   1.18%
   QC value within limits for Se 196.026  Recovery = 101.33%
Si 251.611†           93791.4     2450.2 ug/L         4.39     2450.2 ppb         4.39   0.18%
   QC value within limits for Si 251.611  Recovery = 98.01%
Sn 189.927†            3339.7      489.74 ug/L        8.136      489.74 ppb        8.136   1.66%
   QC value within limits for Sn 189.927  Recovery = 97.95%
Sr 421.552†          169651.6      472.36 ug/L        8.259      472.36 ppb        8.259   1.75%
   QC value within limits for Sr 421.552  Recovery = 94.47%
Ti 334.940†          309836.1      496.14 ug/L        0.607      496.14 ppb        0.607   0.12%
   QC value within limits for Ti 334.940  Recovery = 99.23%
Tl 190.801†            2232.8      498.09 ug/L        5.278      498.09 ppb        5.278   1.06%
   QC value within limits for Tl 190.801  Recovery = 99.62%
U 409.014†            15934.0      470.49 ug/L        1.038      470.49 ppb        1.038   0.22%
   QC value within limits for U 409.014  Recovery = 94.10%
V 292.402†            63258.3      494.22 ug/L        1.021      494.22 ppb        1.021   0.21%
   QC value within limits for V 292.402  Recovery = 98.84%
Zn 213.857†           63338.8      486.44 ug/L        1.802      486.44 ppb        1.802   0.37%
   QC value within limits for Zn 213.857  Recovery = 97.29%
SiO2†                 94325.3     5292.0 ug/L       57.42      5292.0 ppb       57.42   1.08%
   QC value within limits for SiO2  Recovery = 98.96%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/1/2009 12:09:04
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6684.8	6684.8	92.2	%			12:10:57
1	Y RADIAL	6100.9	6100.9	91.30	%			12:10:57
1	Al 396.153Radial†	-89.0	-13.1	-10.480	ug/L	-10.480	ppb	12:10:57
1	Ca 317.933Radial†	31.9	4.4	6.1176	ug/L	6.1176	ppb	12:11:17
1	Fe 238.204 Radial†	38.7	4.8	18.537	ug/L	18.537	ppb	12:11:17
1	K 766.490 Radial†	3095.2	508.0	95.655	ug/L	95.655	ppb	12:10:57
1	Mg 279.077 IEC†	1.3	-0.9	-21.299	ug/L	-21.299	ppb	12:11:17
1	Na 589.592 Radial†	1777.6	-1154.8	-61.526	ug/L	-61.526	ppb	12:10:57
1	Sr 421.552†	-43.1	19.5	0.0542	ug/L	0.0542	ppb	12:10:57
1	Sc 361.383	738938.1	738938.1	94.017	%			12:12:14
1	Y 371.029	576971.6	576971.6	94.238	%			12:12:14
1	Ag 328.068†	748.6	88.0	0.4663	ug/L	0.4663	ppb	12:12:14
1	As 188.979†	-30.1	2.8	0.8306	ug/L	0.8306	ppb	12:12:34
1	B 249.677†	-92.2	726.0	15.430	ug/L	15.430	ppb	12:12:14
1	Ba 233.527†	28.9	11.2	0.0675	ug/L	0.0675	ppb	12:12:34
1	Be 313.107†	-4765.2	-147.2	-0.0562	ug/L	-0.0562	ppb	12:12:14
1	Cd 226.502†	-273.1	2.2	0.0206	ug/L	0.0206	ppb	12:12:34
1	Co 228.616†	-96.0	-2.4	-0.0345	ug/L	-0.0345	ppb	12:12:34
1	Cr 267.716†	-60.3	-57.7	-0.6783	ug/L	-0.6783	ppb	12:12:14
1	Cu 324.752†	5864.3	331.7	1.0389	ug/L	1.0389	ppb	12:12:14
1	Mn 257.610†	725.5	7.2	0.0095	ug/L	0.0095	ppb	12:12:14
1	Mo 202.031†	7.8	-2.2	-0.1308	ug/L	-0.1308	ppb	12:12:34
1	Ni 231.604†	134.5	-22.4	-0.5028	ug/L	-0.5028	ppb	12:12:34
1	P 214.914†	299.4	22.5	9.1661	ug/L	9.1661	ppb	12:12:34
1	Pb 220.353†	0.2	26.9	2.6572	ug/L	2.6572	ppb	12:12:34
1	S 181.975 Axial†	91.1	-8.0	-8.9430	ug/L	-8.9430	ppb	12:12:34
1	Sb 206.836†	62.3	11.6	2.9028	ug/L	2.9028	ppb	12:12:34
1	Se 196.026†	-33.6	-4.0	-1.5984	ug/L	-1.5984	ppb	12:12:34
1	Si 251.611†	494.8	40.7	1.0304	ug/L	1.0304	ppb	12:12:34
1	Sn 189.927†	17.1	5.3	0.7760	ug/L	0.7760	ppb	12:12:34
1	Ti 334.940†	-1482.1	-105.6	-0.1644	ug/L	-0.1644	ppb	12:12:14
1	Tl 190.801†	-53.4	3.8	0.8470	ug/L	0.8470	ppb	12:12:34
1	U 409.014†	-5240.9	-306.5	-9.0817	ug/L	-9.0817	ppb	12:12:14
1	V 292.402†	-1583.5	14.9	0.0931	ug/L	0.0931	ppb	12:12:14
1	Zn 213.857†	1034.9	69.4	0.5388	ug/L	0.5388	ppb	12:12:34
1	SiO2†	502.4	50.9	2.7875	ug/L	2.7875	ppb	12:13:30
2	Sc Radial	6645.1	6645.1	91.6	%			12:11:22
2	Y RADIAL	6085.6	6085.6	91.07	%			12:11:22
2	Al 396.153Radial†	-40.1	39.7	31.820	ug/L	31.820	ppb	12:11:22
2	Ca 317.933Radial†	22.5	-5.8	-8.1221	ug/L	-8.1221	ppb	12:11:42
2	Fe 238.204 Radial†	38.5	4.8	18.563	ug/L	18.563	ppb	12:11:42
2	K 766.490 Radial†	3239.1	685.2	129.00	ug/L	129.00	ppb	12:11:22
2	Mg 279.077 IEC†	1.7	-0.5	-10.681	ug/L	-10.681	ppb	12:11:42
2	Na 589.592 Radial†	1734.8	-1190.1	-63.403	ug/L	-63.403	ppb	12:11:22
2	Sr 421.552†	-40.6	22.0	0.0613	ug/L	0.0613	ppb	12:11:22
2	Sc 361.383	727905.7	727905.7	92.614	%			12:12:39
2	Y 371.029	568919.9	568919.9	92.923	%			12:12:39
2	Ag 328.068†	698.2	45.6	0.2459	ug/L	0.2459	ppb	12:12:39
2	As 188.979†	-40.5	-8.9	-2.6215	ug/L	-2.6215	ppb	12:13:00
2	B 249.677†	-220.1	586.4	12.463	ug/L	12.463	ppb	12:12:39
2	Ba 233.527†	13.8	-4.7	-0.0298	ug/L	-0.0298	ppb	12:13:00
2	Be 313.107†	-4873.6	-341.1	-0.1298	ug/L	-0.1298	ppb	12:12:39
2	Cd 226.502†	-266.9	4.4	0.0442	ug/L	0.0442	ppb	12:13:00
2	Co 228.616†	-92.6	-0.3	-0.0019	ug/L	-0.0019	ppb	12:13:00
2	Cr 267.716†	-77.4	-77.1	-0.9087	ug/L	-0.9087	ppb	12:12:39
2	Cu 324.752†	5708.5	258.0	0.8084	ug/L	0.8084	ppb	12:12:39
2	Mn 257.610†	635.2	-78.7	-0.0712	ug/L	-0.0712	ppb	12:12:39
2	Mo 202.031†	18.3	9.2	0.5512	ug/L	0.5512	ppb	12:13:00
2	Ni 231.604†	150.7	-2.7	-0.0609	ug/L	-0.0609	ppb	12:13:00

2	P 214.914†	301.7	29.8	12.255 ug/L	12.255 ppb	12:13:00
2	Pb 220.353†	-20.9	4.1	0.4143 ug/L	0.4143 ppb	12:13:00
2	S 181.975 Axial†	99.8	2.9	3.2072 ug/L	3.2072 ppb	12:13:00
2	Sb 206.836†	58.9	8.9	2.2733 ug/L	2.2733 ppb	12:13:00
2	Se 196.026†	-27.3	2.3	1.0426 ug/L	1.0426 ppb	12:13:00
2	Si 251.611†	491.9	45.5	1.1233 ug/L	1.1233 ppb	12:13:00
2	Sn 189.927†	22.5	11.3	1.6614 ug/L	1.6614 ppb	12:13:00
2	Ti 334.940†	-1458.7	-104.1	-0.1631 ug/L	-0.1631 ppb	12:12:39
2	Tl 190.801†	-65.9	-10.5	-2.3233 ug/L	-2.3233 ppb	12:13:00
2	U 409.014†	-5152.8	-295.9	-8.7666 ug/L	-8.7666 ppb	12:12:39
2	V 292.402†	-1638.1	-69.6	-0.5497 ug/L	-0.5497 ppb	12:12:39
2	Zn 213.857†	1040.9	92.6	0.7158 ug/L	0.7158 ppb	12:13:00
2	SiO2†	534.2	93.3	5.1046 ug/L	5.1046 ppb	12:13:35
3	Sc Radial	6658.9	6658.9	91.8 %		12:11:47
3	Y RADIAL	6076.9	6076.9	90.94 %		12:11:47
3	Al 396.153Radial†	-51.7	27.1	21.737 ug/L	21.737 ppb	12:11:47
3	Ca 317.933Radial†	28.7	0.9	1.3221 ug/L	1.3221 ppb	12:12:07
3	Fe 238.204 Radial†	40.3	6.6	25.868 ug/L	25.868 ppb	12:12:07
3	K 766.490 Radial†	3096.5	522.5	98.371 ug/L	98.371 ppb	12:11:47
3	Mg 279.077 IEC†	3.1	1.1	26.167 ug/L	26.167 ppb	12:12:07
3	Na 589.592 Radial†	1755.2	-1171.8	-62.428 ug/L	-62.428 ppb	12:11:47
3	Sr 421.552†	-67.0	-6.7	-0.0187 ug/L	-0.0187 ppb	12:11:47
3	Sc 361.383	734301.0	734301.0	93.427 %		12:13:05
3	Y 371.029	573788.2	573788.2	93.718 %		12:13:05
3	Ag 328.068†	706.5	48.0	0.2646 ug/L	0.2646 ppb	12:13:05
3	As 188.979†	-41.1	-9.1	-2.6765 ug/L	-2.6765 ppb	12:13:25
3	B 249.677†	-166.7	645.6	13.721 ug/L	13.721 ppb	12:13:05
3	Ba 233.527†	17.7	-0.7	-0.0048 ug/L	-0.0048 ppb	12:13:25
3	Be 313.107†	-4797.7	-213.9	-0.0816 ug/L	-0.0816 ppb	12:13:05
3	Cd 226.502†	-257.2	17.4	0.1802 ug/L	0.1802 ppb	12:13:25
3	Co 228.616†	-108.6	-16.4	-0.2374 ug/L	-0.2374 ppb	12:13:25
3	Cr 267.716†	-58.2	-55.8	-0.6555 ug/L	-0.6555 ppb	12:13:05
3	Cu 324.752†	5801.4	303.7	0.9518 ug/L	0.9518 ppb	12:13:05
3	Mn 257.610†	666.4	-51.2	-0.0452 ug/L	-0.0452 ppb	12:13:05
3	Mo 202.031†	28.4	19.9	1.1871 ug/L	1.1871 ppb	12:13:25
3	Ni 231.604†	166.4	12.7	0.2854 ug/L	0.2854 ppb	12:13:25
3	P 214.914†	305.9	31.5	12.931 ug/L	12.931 ppb	12:13:25
3	Pb 220.353†	-13.7	12.0	1.1973 ug/L	1.1973 ppb	12:13:25
3	S 181.975 Axial†	86.3	-12.5	-13.948 ug/L	-13.948 ppb	12:13:25
3	Sb 206.836†	66.0	16.0	4.0670 ug/L	4.0670 ppb	12:13:25
3	Se 196.026†	-22.9	7.3	3.1445 ug/L	3.1445 ppb	12:13:25
3	Si 251.611†	507.0	57.1	1.4078 ug/L	1.4078 ppb	12:13:25
3	Sn 189.927†	31.4	20.7	3.0320 ug/L	3.0320 ppb	12:13:25
3	Ti 334.940†	-1494.8	-129.0	-0.2007 ug/L	-0.2007 ppb	12:13:05
3	Tl 190.801†	-41.7	16.1	3.5650 ug/L	3.5650 ppb	12:13:25
3	U 409.014†	-5322.1	-428.6	-12.699 ug/L	-12.699 ppb	12:13:05
3	V 292.402†	-1621.2	-36.1	-0.2912 ug/L	-0.2912 ppb	12:13:05
3	Zn 213.857†	1038.5	80.3	0.6154 ug/L	0.6154 ppb	12:13:25
3	SiO2†	526.8	80.4	4.3335 ug/L	4.3335 ppb	12:13:40

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	733714.9	93.353	%	0.7048				0.75%
Sc Radial	6662.9	91.9	%	0.28				0.30%
Y 371.029	573226.6	93.626	%	0.6623				0.71%
Y RADIAL	6087.8	91.11	%	0.182				0.20%
Ag 328.068†	60.5	0.3256	ug/L	0.12222	0.3256	ppb	0.12222	37.53%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.9	14.359	ug/L	22.0940	14.359	ppb	22.0940	153.87%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-5.0	-1.4891	ug/L	2.00913	-1.4891	ppb	2.00913	134.92%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	652.7	13.871	ug/L	1.4894	13.871	ppb	1.4894	10.74%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	1.9	0.0110	ug/L	0.05056	0.0110	ppb	0.05056	461.58%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-234.1	-0.0892	ug/L	0.03735	-0.0892	ppb	0.03735	41.87%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-0.2	-0.2275	ug/L	7.24524	-0.2275	ppb	7.24524	>999.9%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 8.0      0.0817 ug/L       0.08615      0.0817 ppb        0.08615 105.48%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -6.3     -0.0912 ug/L       0.12763     -0.0912 ppb        0.12763 139.87%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -63.5     -0.7475 ug/L       0.14008     -0.7475 ppb        0.14008  18.74%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               297.8      0.9330 ug/L       0.11638      0.9330 ppb        0.11638  12.47%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          5.4      20.989 ug/L        4.2251      20.989 ppb         4.2251  20.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         571.9      107.67 ug/L        18.516      107.67 ppb         18.516  17.20%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.1     -1.9376 ug/L      24.91188     -1.9376 ppb       24.91188 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -40.9     -0.0357 ug/L       0.04116     -0.0357 ppb        0.04116 115.45%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 9.0      0.5358 ug/L       0.65909      0.5358 ppb        0.65909 123.00%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      -1172.2     -62.452 ug/L        0.9391     -62.452 ppb         0.9391   1.50%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                -4.1     -0.0928 ug/L       0.39505     -0.0928 ppb        0.39505 425.71%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 27.9      11.451 ug/L        2.0072      11.451 ppb         2.0072  17.53%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                14.3      1.4230 ug/L       1.13837      1.4230 ppb        1.13837  80.00%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.9     -6.5613 ug/L       8.82217     -6.5613 ppb        8.82217 134.46%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                12.2      3.0810 ug/L       0.91003      3.0810 ppb        0.91003  29.54%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 1.9      0.8629 ug/L       2.37659      0.8629 ppb        2.37659 275.41%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                47.8      1.1872 ug/L       0.19661      1.1872 ppb        0.19661  16.56%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                12.4      1.8231 ug/L       1.13667      1.8231 ppb        1.13667  62.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                11.6      0.0322 ug/L       0.04428      0.0322 ppb        0.04428 137.38%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -112.9     -0.1761 ug/L       0.02137     -0.1761 ppb        0.02137  12.14%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.1      0.6962 ug/L       2.94701      0.6962 ppb        2.94701 423.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -343.6     -10.182 ug/L        2.1852     -10.182 ppb         2.1852  21.46%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -30.3     -0.2493 ug/L       0.32347     -0.2493 ppb        0.32347 129.77%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                80.8      0.6233 ug/L       0.08879      0.6233 ppb        0.08879  14.24%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      74.9      4.0752 ug/L       1.17995      4.0752 ppb        1.17995  28.95%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: LR1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 36
Date Collected: 7/1/2009 12:15:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6584.4	6584.4	90.8	%			12:17:44
1	Y RADIAL	6063.4	6063.4	90.74	%			12:17:44
1	Al 396.153Radial†	-94.3	-20.4	-15.360	ug/L	-15.360	ppb	12:17:44
1	Ca 317.933Radial†	18.1	-10.4	-14.582	ug/L	-14.582	ppb	12:18:04
1	Fe 238.204 Radial†	91674.4	100940.2	393220	ug/L	393220	ppb	12:17:44
1	K 766.490 Radial†	2658.1	77.7	101.50	ug/L	101.50	ppb	12:17:44
1	Mg 279.077 IEC†	14.1	13.3	-26.490	ug/L	-26.490	ppb	12:18:04
1	Na 589.592 Radial†	1782.9	-1119.6	-59.650	ug/L	-59.650	ppb	12:17:44
1	Sr 421.552†	66.7	139.8	0.3893	ug/L	0.3893	ppb	12:17:44
1	Sc 361.383	739394.3	739394.3	94.076	%			12:19:01
1	Y 371.029	574725.9	574725.9	93.871	%			12:19:01
1	Ag 328.068†	-20534.5	-22535.9	10.102	ug/L	10.102	ppb	12:19:01
1	As 188.979†	-265.9	-247.8	5.6190	ug/L	5.6190	ppb	12:19:22
1	B 249.677†	1355.2	2264.6	21.266	ug/L	21.266	ppb	12:19:01
1	Ba 233.527†	-1868.0	-2005.2	-13.818	ug/L	-13.818	ppb	12:19:22
1	Be 313.107†	-4704.9	-80.0	-0.0302	ug/L	-0.0302	ppb	12:19:01
1	Cd 226.502†	2885.0	3359.3	-10.429	ug/L	-10.429	ppb	12:19:22
1	Co 228.616†	189.8	301.5	-1.2503	ug/L	-1.2503	ppb	12:19:22
1	Cr 267.716†	-653.2	-687.9	-0.0123	ug/L	-0.0123	ppb	12:19:22
1	Cu 324.752†	-1955.7	-7984.6	-2.2489	ug/L	-2.2489	ppb	12:19:01
1	Mn 257.610†	-43215.7	-46701.8	5.6831	ug/L	5.6831	ppb	12:19:01
1	Mo 202.031†	-368.5	-402.3	1.6887	ug/L	1.6887	ppb	12:19:22
1	Ni 231.604†	330.1	185.5	4.1669	ug/L	4.1669	ppb	12:19:22
1	P 214.914†	957.6	722.0	-11.687	ug/L	-11.687	ppb	12:19:22
1	Pb 220.353†	291.9	337.0	-3.7939	ug/L	-3.7939	ppb	12:19:22
1	S 181.975 Axial†	99.3	0.7	0.7823	ug/L	0.7823	ppb	12:19:22
1	Sb 206.836†	61.4	10.6	9.5623	ug/L	9.5623	ppb	12:19:22
1	Se 196.026†	-2698.8	-2837.0	121.70	ug/L	121.70	ppb	12:19:22
1	Si 251.611†	-2164.1	-2786.0	-72.832	ug/L	-72.832	ppb	12:19:22
1	Sn 189.927†	-6.1	-19.4	26.429	ug/L	26.429	ppb	12:19:22
1	Ti 334.940†	-1346.0	40.1	0.0410	ug/L	0.0410	ppb	12:19:22
1	Tl 190.801†	-65.5	-8.9	-2.3097	ug/L	-2.3097	ppb	12:19:22
1	U 409.014†	-3142.1	1927.9	8.8124	ug/L	8.8124	ppb	12:19:01
1	V 292.402†	4500.4	6483.0	-4.9481	ug/L	-4.9481	ppb	12:19:22
1	Zn 213.857†	5243.4	4542.4	-5.8060	ug/L	-5.8060	ppb	12:19:22
1	SiO2†	-2254.3	-2879.7	-161.72	ug/L	-161.72	ppb	12:20:18
2	Sc Radial	6584.5	6584.5	90.8	%			12:18:10
2	Y RADIAL	6069.0	6069.0	90.82	%			12:18:10
2	Al 396.153Radial†	-73.9	2.1	2.6294	ug/L	2.6294	ppb	12:18:10
2	Ca 317.933Radial†	17.3	-11.3	-15.842	ug/L	-15.842	ppb	12:18:30
2	Fe 238.204 Radial†	91554.5	100807.7	392700	ug/L	392700	ppb	12:18:10
2	K 766.490 Radial†	2682.5	104.5	106.42	ug/L	106.42	ppb	12:18:10
2	Mg 279.077 IEC†	12.5	11.5	-67.394	ug/L	-67.394	ppb	12:18:30
2	Na 589.592 Radial†	1654.6	-1260.9	-67.178	ug/L	-67.178	ppb	12:18:10
2	Sr 421.552†	72.7	146.3	0.4077	ug/L	0.4077	ppb	12:18:10
2	Sc 361.383	746481.9	746481.9	94.977	%			12:19:27
2	Y 371.029	579922.4	579922.4	94.720	%			12:19:27
2	Ag 328.068†	-20543.9	-22338.6	10.941	ug/L	10.941	ppb	12:19:27
2	As 188.979†	-267.2	-246.4	5.9175	ug/L	5.9175	ppb	12:19:47
2	B 249.677†	1381.1	2278.2	21.589	ug/L	21.589	ppb	12:19:27
2	Ba 233.527†	-1903.0	-2023.3	-13.927	ug/L	-13.927	ppb	12:19:47
2	Be 313.107†	-4657.4	17.6	0.0070	ug/L	0.0070	ppb	12:19:27
2	Cd 226.502†	2881.1	3326.1	-10.718	ug/L	-10.718	ppb	12:19:47
2	Co 228.616†	186.6	296.2	-1.3173	ug/L	-1.3173	ppb	12:19:47
2	Cr 267.716†	-646.1	-673.7	0.1402	ug/L	0.1402	ppb	12:19:47
2	Cu 324.752†	-2085.4	-8101.5	-2.6444	ug/L	-2.6444	ppb	12:19:27
2	Mn 257.610†	-43568.5	-46637.1	5.6796	ug/L	5.6796	ppb	12:19:27
2	Mo 202.031†	-351.5	-380.6	2.9441	ug/L	2.9441	ppb	12:19:47
2	Ni 231.604†	335.5	187.9	4.2189	ug/L	4.2189	ppb	12:19:47

2	P 214.914†	952.9	707.4	-17.283	ug/L	-17.283 ppb	12:19:47
2	Pb 220.353†	269.7	310.6	-6.3493	ug/L	-6.3493 ppb	12:19:47
2	S 181.975 Axial†	109.4	10.3	11.495	ug/L	11.495 ppb	12:19:47
2	Sb 206.836†	67.3	16.2	10.942	ug/L	10.942 ppb	12:19:47
2	Se 196.026†	-2711.2	-2822.8	125.93	ug/L	125.93 ppb	12:19:47
2	Si 251.611†	-2169.2	-2769.5	-72.412	ug/L	-72.412 ppb	12:19:47
2	Sn 189.927†	-10.6	-24.1	25.711	ug/L	25.711 ppb	12:19:47
2	Ti 334.940†	-1316.7	84.6	0.1098	ug/L	0.1098 ppb	12:19:47
2	Tl 190.801†	-62.7	-5.4	-1.5245	ug/L	-1.5245 ppb	12:19:47
2	U 409.014†	-3001.4	2107.8	14.207	ug/L	14.207 ppb	12:19:27
2	V 292.402†	4369.5	6299.7	-6.2653	ug/L	-6.2653 ppb	12:19:47
2	Zn 213.857†	5216.1	4460.7	-6.3838	ug/L	-6.3838 ppb	12:19:47
2	SiO2†	-2218.0	-2818.7	-158.31	ug/L	-158.31 ppb	12:20:23
3	Sc Radial	6656.9	6656.9	91.8	%		12:18:35
3	Y RADIAL	6097.6	6097.6	91.25	%		12:18:35
3	Al 396.153Radial†	-67.4	10.1	9.1258	ug/L	9.1258 ppb	12:18:35
3	Ca 317.933Radial†	21.3	-7.1	-9.9367	ug/L	-9.9367 ppb	12:18:55
3	Fe 238.204 Radial†	92566.3	100812.2	392720	ug/L	392720 ppb	12:18:35
3	K 766.490 Radial†	2669.4	58.2	97.715	ug/L	97.715 ppb	12:18:35
3	Mg 279.077 IEC†	18.5	17.8	81.138	ug/L	81.138 ppb	12:18:55
3	Na 589.592 Radial†	1724.3	-1204.9	-64.192	ug/L	-64.192 ppb	12:18:35
3	Sr 421.552†	40.6	110.5	0.3078	ug/L	0.3078 ppb	12:18:35
3	Sc 361.383	746614.2	746614.2	94.994	%		12:19:53
3	Y 371.029	579903.3	579903.3	94.717	%		12:19:53
3	Ag 328.068†	-20595.1	-22388.7	10.688	ug/L	10.688 ppb	12:19:53
3	As 188.979†	-256.4	-235.1	9.2638	ug/L	9.2638 ppb	12:20:13
3	B 249.677†	1434.3	2334.0	22.776	ug/L	22.776 ppb	12:19:53
3	Ba 233.527†	-1897.0	-2016.6	-13.886	ug/L	-13.886 ppb	12:20:13
3	Be 313.107†	-4716.8	-44.1	-0.0164	ug/L	-0.0164 ppb	12:19:53
3	Cd 226.502†	2887.2	3331.9	-10.660	ug/L	-10.660 ppb	12:20:13
3	Co 228.616†	178.2	287.4	-1.4510	ug/L	-1.4510 ppb	12:20:13
3	Cr 267.716†	-634.5	-661.5	0.2850	ug/L	0.2850 ppb	12:20:13
3	Cu 324.752†	-1989.7	-8000.4	-2.3271	ug/L	-2.3271 ppb	12:19:53
3	Mn 257.610†	-43928.7	-47008.1	5.3314	ug/L	5.3314 ppb	12:19:53
3	Mo 202.031†	-371.9	-402.1	1.6658	ug/L	1.6658 ppb	12:20:13
3	Ni 231.604†	307.0	157.8	3.5438	ug/L	3.5438 ppb	12:20:13
3	P 214.914†	947.0	701.0	-20.028	ug/L	-20.028 ppb	12:20:13
3	Pb 220.353†	273.9	315.0	-5.9158	ug/L	-5.9158 ppb	12:20:13
3	S 181.975 Axial†	109.7	10.6	11.768	ug/L	11.768 ppb	12:20:13
3	Sb 206.836†	50.0	-2.1	6.3728	ug/L	6.3728 ppb	12:20:13
3	Se 196.026†	-2727.7	-2839.6	118.94	ug/L	118.94 ppb	12:20:13
3	Si 251.611†	-2188.6	-2789.5	-72.905	ug/L	-72.905 ppb	12:20:13
3	Sn 189.927†	-15.1	-28.8	25.020	ug/L	25.020 ppb	12:20:13
3	Ti 334.940†	-1301.5	100.8	0.1338	ug/L	0.1338 ppb	12:20:13
3	Tl 190.801†	-73.1	-16.2	-3.9350	ug/L	-3.9350 ppb	12:20:13
3	U 409.014†	-2839.5	2278.8	19.269	ug/L	19.269 ppb	12:19:53
3	V 292.402†	4470.2	6404.8	-5.4600	ug/L	-5.4600 ppb	12:20:13
3	Zn 213.857†	5239.8	4484.7	-6.2009	ug/L	-6.2009 ppb	12:20:13
3	SiO2†	-2180.1	-2778.4	-155.95	ug/L	-155.95 ppb	12:20:28

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	744163.5	94.682	%	0.5256				0.56%
Sc Radial	6608.6	91.1	%	0.58				0.63%
Y 371.029	578183.9	94.436	%	0.4891				0.52%
Y RADIAL	6076.7	90.94	%	0.274				0.30%
Ag 328.068†	-22421.1	10.577	ug/L	0.4303	10.577	ppb	0.4303	4.07%
Al 396.153Radial†	-2.8	-1.2015	ug/L	12.68430	-1.2015	ppb	12.68430	>999.9%
As 188.979†	-243.1	6.9334	ug/L	2.02367	6.9334	ppb	2.02367	29.19%
B 249.677†	2292.3	21.877	ug/L	0.7949	21.877	ppb	0.7949	3.63%
Ba 233.527†	-2015.0	-13.877	ug/L	0.0553	-13.877	ppb	0.0553	0.40%
Be 313.107†	-35.5	-0.0132	ug/L	0.01879	-0.0132	ppb	0.01879	142.46%
Ca 317.933Radial†	-9.6	-13.454	ug/L	3.1102	-13.454	ppb	3.1102	23.12%
Cd 226.502†	3339.1	-10.602	ug/L	0.1528	-10.602	ppb	0.1528	1.44%
Co 228.616†	295.0	-1.3395	ug/L	0.10217	-1.3395	ppb	0.10217	7.63%
Cr 267.716†	-674.4	0.1376	ug/L	0.14865	0.1376	ppb	0.14865	108.00%
Cu 324.752†	-8028.8	-2.4068	ug/L	0.20949	-2.4068	ppb	0.20949	8.70%
Fe 238.204 Radial†	100853.4	392880	ug/L	293.1	392880	ppb	293.1	0.07%
K 766.490 Radial†	80.2	101.88	ug/L	4.364	101.88	ppb	4.364	4.28%

Mg 279.077 IEC†	14.2	-4.2490	ug/L	76.72324	-4.2490	ppb	76.72324	>999.9%
Mn 257.610†	-46782.3	5.5647	ug/L	0.20208	5.5647	ppb	0.20208	3.63%
Mo 202.031†	-395.0	2.0995	ug/L	0.73147	2.0995	ppb	0.73147	34.84%
Na 589.592 Radial†	-1195.1	-63.673	ug/L	3.7905	-63.673	ppb	3.7905	5.95%
Ni 231.604†	177.1	3.9766	ug/L	0.37564	3.9766	ppb	0.37564	9.45%
P 214.914†	710.1	-16.333	ug/L	4.2509	-16.333	ppb	4.2509	26.03%
Pb 220.353†	320.9	-5.3530	ug/L	1.36747	-5.3530	ppb	1.36747	25.55%
S 181.975 Axial†	7.2	8.0151	ug/L	6.26522	8.0151	ppb	6.26522	78.17%
Sb 206.836†	8.2	8.9591	ug/L	2.34368	8.9591	ppb	2.34368	26.16%
Se 196.026†	-2833.1	122.19	ug/L	3.518	122.19	ppb	3.518	2.88%
Si 251.611†	-2781.7	-72.716	ug/L	0.2660	-72.716	ppb	0.2660	0.37%
Sn 189.927†	-24.1	25.720	ug/L	0.7042	25.720	ppb	0.7042	2.74%
Sr 421.552†	132.2	0.3683	ug/L	0.05316	0.3683	ppb	0.05316	14.44%
Ti 334.940†	75.2	0.0949	ug/L	0.04819	0.0949	ppb	0.04819	50.80%
Tl 190.801†	-10.2	-2.5897	ug/L	1.22943	-2.5897	ppb	1.22943	47.47%
U 409.014†	2104.8	14.096	ug/L	5.2290	14.096	ppb	5.2290	37.10%
V 292.402†	6395.8	-5.5578	ug/L	0.66400	-5.5578	ppb	0.66400	11.95%
Zn 213.857†	4495.9	-6.1302	ug/L	0.29528	-6.1302	ppb	0.29528	4.82%
SiO2†	-2825.6	-158.66	ug/L	2.901	-158.66	ppb	2.901	1.83%

Sequence No.: 4
Sample ID: LR2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/1/2009 12:22:40
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	6597.9	6597.9	91.0	%			12:24:33
1	Y RADIAL	6076.0	6076.0	90.93	%			12:24:33
1	Al 396.153Radial†	-79.0	-3.4	-2.7632	ug/L	-2.7632	ppb	12:24:33
1	Ca 317.933Radial†	40.6	14.3	20.075	ug/L	20.075	ppb	12:24:53
1	Fe 238.204 Radial†	0.3	-36.8	15.672	ug/L	15.672	ppb	12:24:53
1	K 766.490 Radial†	2925.6	365.8	68.838	ug/L	68.838	ppb	12:24:33
1	Mg 279.077 IEC†	7.2	5.7	132.53	ug/L	132.53	ppb	12:24:53
1	Na 589.592 Radial†	1445.2	-1494.9	-79.643	ug/L	-79.643	ppb	12:24:33
1	Sr 421.552†	-91.8	-34.7	-0.0967	ug/L	-0.0967	ppb	12:24:33
1	Sc 361.383	738617.8	738617.8	93.977	%			12:25:50
1	Y 371.029	579221.6	579221.6	94.605	%			12:25:50
1	Ag 328.068†	733.9	72.7	0.3370	ug/L	0.3370	ppb	12:25:50
1	As 188.979†	-26.2	7.0	2.0202	ug/L	2.0202	ppb	12:26:10
1	B 249.677†	258.9	1099.5	-2.4658	ug/L	-2.4658	ppb	12:25:50
1	Ba 233.527†	-1.6	-21.3	-0.1288	ug/L	-0.1288	ppb	12:26:10
1	Be 313.107†	-4873.8	-264.9	-0.1006	ug/L	-0.1006	ppb	12:25:50
1	Cd 226.502†	-307.7	-34.8	-0.3474	ug/L	-0.3474	ppb	12:26:10
1	Co 228.616†	323450.4	344281.2	5047.1	ug/L	5047.1	ppb	12:25:50
1	Cr 267.716†	47.2	56.7	0.6712	ug/L	0.6712	ppb	12:25:50
1	Cu 324.752†	5262.9	-305.6	-0.9644	ug/L	-0.9644	ppb	12:25:50
1	Mn 257.610†	892.9	185.6	0.1532	ug/L	0.1532	ppb	12:25:50
1	Mo 202.031†	17.0	7.5	0.4403	ug/L	0.4403	ppb	12:26:10
1	Ni 231.604†	294.7	148.1	0.1063	ug/L	0.1063	ppb	12:26:10
1	P 214.914†	302.0	25.4	10.910	ug/L	10.910	ppb	12:26:10
1	Pb 220.353†	10.3	37.6	3.7406	ug/L	3.7406	ppb	12:26:10
1	S 181.975 Axial†	103.6	5.3	5.9247	ug/L	5.9247	ppb	12:26:10
1	Sb 206.836†	63.4	12.8	3.2006	ug/L	3.2006	ppb	12:26:10
1	Se 196.026†	-42.9	-13.9	-6.2840	ug/L	-6.2840	ppb	12:26:10
1	Si 251.611†	474.4	19.3	0.4524	ug/L	0.4524	ppb	12:26:10
1	Sn 189.927†	23.7	12.3	1.7887	ug/L	1.7887	ppb	12:26:10
1	Ti 334.940†	-1422.7	-43.0	-0.0622	ug/L	-0.0622	ppb	12:25:50
1	Tl 190.801†	45.9	109.6	-2.1001	ug/L	-2.1001	ppb	12:26:10
1	U 409.014†	-5358.8	-434.3	-12.851	ug/L	-12.851	ppb	12:25:50
1	V 292.402†	-1642.1	-48.3	-0.3701	ug/L	-0.3701	ppb	12:25:50
1	Zn 213.857†	1241.9	290.2	2.2396	ug/L	2.2396	ppb	12:26:10
1	SiO2†	497.7	46.2	2.4855	ug/L	2.4855	ppb	12:27:06
2	Sc Radial	6584.7	6584.7	90.8	%			12:24:58
2	Y RADIAL	6088.6	6088.6	91.12	%			12:24:58
2	Al 396.153Radial†	-73.5	2.5	2.0346	ug/L	2.0346	ppb	12:24:58
2	Ca 317.933Radial†	30.4	3.2	4.5167	ug/L	4.5167	ppb	12:25:18
2	Fe 238.204 Radial†	-1.4	-38.8	7.8261	ug/L	7.8261	ppb	12:25:18
2	K 766.490 Radial†	3042.4	500.8	94.264	ug/L	94.264	ppb	12:24:58
2	Mg 279.077 IEC†	4.1	2.2	50.803	ug/L	50.803	ppb	12:25:18
2	Na 589.592 Radial†	1373.9	-1570.2	-83.657	ug/L	-83.657	ppb	12:24:58
2	Sr 421.552†	-33.2	29.7	0.0828	ug/L	0.0828	ppb	12:24:58
2	Sc 361.383	741498.6	741498.6	94.343	%			12:26:15
2	Y 371.029	582300.8	582300.8	95.108	%			12:26:15
2	Ag 328.068†	755.5	92.6	0.4350	ug/L	0.4350	ppb	12:26:15
2	As 188.979†	-30.1	3.0	0.8536	ug/L	0.8536	ppb	12:26:36
2	B 249.677†	312.5	1155.3	-1.2098	ug/L	-1.2098	ppb	12:26:15
2	Ba 233.527†	2.9	-16.6	-0.1011	ug/L	-0.1011	ppb	12:26:36
2	Be 313.107†	-4840.0	-209.0	-0.0790	ug/L	-0.0790	ppb	12:26:15
2	Cd 226.502†	-307.1	-32.8	-0.3264	ug/L	-0.3264	ppb	12:26:36
2	Co 228.616†	323842.1	343359.1	5033.5	ug/L	5033.5	ppb	12:26:15
2	Cr 267.716†	88.3	100.1	1.1835	ug/L	1.1835	ppb	12:26:15
2	Cu 324.752†	5274.2	-315.3	-0.9953	ug/L	-0.9953	ppb	12:26:15
2	Mn 257.610†	833.0	118.4	0.0910	ug/L	0.0910	ppb	12:26:15
2	Mo 202.031†	11.1	1.3	0.0647	ug/L	0.0647	ppb	12:26:36
2	Ni 231.604†	290.8	142.8	-0.0045	ug/L	-0.0045	ppb	12:26:36

2	P 214.914†	318.0	41.2	17.470	ug/L	17.470 ppb	12:26:36
2	Pb 220.353†	5.4	32.5	3.2320	ug/L	3.2320 ppb	12:26:36
2	S 181.975 Axial†	94.4	-4.8	-5.3776	ug/L	-5.3776 ppb	12:26:36
2	Sb 206.836†	69.3	18.8	4.6576	ug/L	4.6576 ppb	12:26:36
2	Se 196.026†	-22.9	7.6	2.6654	ug/L	2.6654 ppb	12:26:36
2	Si 251.611†	465.9	8.2	0.1721	ug/L	0.1721 ppb	12:26:36
2	Sn 189.927†	17.8	5.9	0.8534	ug/L	0.8534 ppb	12:26:36
2	Ti 334.940†	-1332.7	58.3	0.0988	ug/L	0.0988 ppb	12:26:15
2	Tl 190.801†	25.2	87.4	-6.9455	ug/L	-6.9455 ppb	12:26:36
2	U 409.014†	-5375.4	-429.8	-12.717	ug/L	-12.717 ppb	12:26:15
2	V 292.402†	-1704.7	-107.8	-0.8345	ug/L	-0.8345 ppb	12:26:15
2	Zn 213.857†	1251.2	295.0	2.2811	ug/L	2.2811 ppb	12:26:36
2	SiO2†	475.8	20.9	1.0790	ug/L	1.0790 ppb	12:27:11
3	Sc Radial	6770.7	6770.7	93.4	%		12:25:23
3	Y RADIAL	6210.6	6210.6	92.94	%		12:25:23
3	Al 396.153Radial†	-60.1	19.1	15.279	ug/L	15.279 ppb	12:25:23
3	Ca 317.933Radial†	27.6	-0.8	-1.0972	ug/L	-1.0972 ppb	12:25:43
3	Fe 238.204 Radial†	-0.1	-37.3	13.150	ug/L	13.150 ppb	12:25:43
3	K 766.490 Radial†	2937.2	296.1	55.707	ug/L	55.707 ppb	12:25:23
3	Mg 279.077 IEC†	4.9	2.9	68.334	ug/L	68.334 ppb	12:25:43
3	Na 589.592 Radial†	1397.5	-1586.5	-84.524	ug/L	-84.524 ppb	12:25:23
3	Sr 421.552†	12.7	79.9	0.2224	ug/L	0.2224 ppb	12:25:23
3	Sc 361.383	734311.6	734311.6	93.429	%		12:26:41
3	Y 371.029	577008.1	577008.1	94.244	%		12:26:41
3	Ag 328.068†	754.7	99.5	0.4668	ug/L	0.4668 ppb	12:26:41
3	As 188.979†	-25.5	7.7	2.2105	ug/L	2.2105 ppb	12:27:01
3	B 249.677†	253.9	1095.9	-2.4428	ug/L	-2.4428 ppb	12:26:41
3	Ba 233.527†	29.9	12.5	0.0730	ug/L	0.0730 ppb	12:27:01
3	Be 313.107†	-4794.0	-209.9	-0.0799	ug/L	-0.0799 ppb	12:26:41
3	Cd 226.502†	-296.8	-25.1	-0.2448	ug/L	-0.2448 ppb	12:27:01
3	Co 228.616†	320316.7	342945.4	5027.5	ug/L	5027.5 ppb	12:26:41
3	Cr 267.716†	19.6	27.5	0.3228	ug/L	0.3228 ppb	12:26:41
3	Cu 324.752†	5106.2	-440.5	-1.3866	ug/L	-1.3866 ppb	12:26:41
3	Mn 257.610†	861.7	157.8	0.1282	ug/L	0.1282 ppb	12:26:41
3	Mo 202.031†	32.1	23.8	1.4064	ug/L	1.4064 ppb	12:27:01
3	Ni 231.604†	317.3	174.2	0.7055	ug/L	0.7055 ppb	12:27:01
3	P 214.914†	295.1	19.9	8.6845	ug/L	8.6845 ppb	12:27:01
3	Pb 220.353†	-15.2	10.4	1.0483	ug/L	1.0483 ppb	12:27:01
3	S 181.975 Axial†	89.3	-9.3	-10.313	ug/L	-10.313 ppb	12:27:01
3	Sb 206.836†	54.0	3.1	0.8097	ug/L	0.8097 ppb	12:27:01
3	Se 196.026†	-19.8	10.6	3.9427	ug/L	3.9427 ppb	12:27:01
3	Si 251.611†	457.0	3.6	0.0378	ug/L	0.0378 ppb	12:27:01
3	Sn 189.927†	18.1	6.5	0.9353	ug/L	0.9353 ppb	12:27:01
3	Ti 334.940†	-1445.5	-76.3	-0.1187	ug/L	-0.1187 ppb	12:26:41
3	Tl 190.801†	54.6	119.1	0.1252	ug/L	0.1252 ppb	12:27:01
3	U 409.014†	-5181.3	-277.8	-8.2138	ug/L	-8.2138 ppb	12:26:41
3	V 292.402†	-1742.8	-166.3	-1.2605	ug/L	-1.2605 ppb	12:26:41
3	Zn 213.857†	1228.5	283.6	2.1880	ug/L	2.1880 ppb	12:27:01
3	SiO2†	522.7	76.0	4.1688	ug/L	4.1688 ppb	12:27:16

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	738142.7	93.916	%	0.4602				0.49%
Sc Radial	6651.1	91.7	%	1.43				1.56%
Y 371.029	579510.2	94.652	%	0.4342				0.46%
Y RADIAL	6125.1	91.66	%	1.113				1.21%
Ag 328.068†	88.3	0.4129	ug/L	0.06765	0.4129	ppb	0.06765	16.38%
Al 396.153Radial†	6.1	4.8502	ug/L	9.34482	4.8502	ppb	9.34482	192.67%
As 188.979†	5.9	1.6947	ug/L	0.73466	1.6947	ppb	0.73466	43.35%
B 249.677†	1116.9	-2.0395	ug/L	0.71858	-2.0395	ppb	0.71858	35.23%
Ba 233.527†	-8.5	-0.0523	ug/L	0.10941	-0.0523	ppb	0.10941	209.21%
Be 313.107†	-227.9	-0.0865	ug/L	0.01223	-0.0865	ppb	0.01223	14.14%
Ca 317.933Radial†	5.6	7.8316	ug/L	10.96859	7.8316	ppb	10.96859	140.06%
Cd 226.502†	-30.9	-0.3062	ug/L	0.05423	-0.3062	ppb	0.05423	17.71%
Co 228.616†	343528.6	5036.0	ug/L	10.02	5036.0	ppb	10.02	0.20%
Cr 267.716†	61.4	0.7258	ug/L	0.43294	0.7258	ppb	0.43294	59.65%
Cu 324.752†	-353.8	-1.1154	ug/L	0.23533	-1.1154	ppb	0.23533	21.10%
Fe 238.204 Radial†	-37.6	12.216	ug/L	4.0054	12.216	ppb	4.0054	32.79%
K 766.490 Radial†	387.6	72.936	ug/L	19.6026	72.936	ppb	19.6026	26.88%

Mg 279.077 IEC†	3.6	83.888	ug/L	43.0254	83.888	ppb	43.0254 51.29%
Mn 257.610†	153.9	0.1241	ug/L	0.03132	0.1241	ppb	0.03132 25.23%
Mo 202.031†	10.9	0.6371	ug/L	0.69214	0.6371	ppb	0.69214 108.64%
Na 589.592 Radial†	-1550.5	-82.608	ug/L	2.6044	-82.608	ppb	2.6044 3.15%
Ni 231.604†	155.1	0.2691	ug/L	0.38194	0.2691	ppb	0.38194 141.93%
P 214.914†	28.8	12.355	ug/L	4.5675	12.355	ppb	4.5675 36.97%
Pb 220.353†	26.8	2.6737	ug/L	1.43034	2.6737	ppb	1.43034 53.50%
S 181.975 Axial†	-2.9	-3.2553	ug/L	8.32424	-3.2553	ppb	8.32424 255.71%
Sb 206.836†	11.6	2.8893	ug/L	1.94277	2.8893	ppb	1.94277 67.24%
Se 196.026†	1.4	0.1080	ug/L	5.57238	0.1080	ppb	5.57238 >999.9%
Si 251.611†	10.4	0.2208	ug/L	0.21154	0.2208	ppb	0.21154 95.82%
Sn 189.927†	8.2	1.1925	ug/L	0.51798	1.1925	ppb	0.51798 43.44%
Sr 421.552†	25.0	0.0695	ug/L	0.15997	0.0695	ppb	0.15997 230.18%
Ti 334.940†	-20.3	-0.0274	ug/L	0.11287	-0.0274	ppb	0.11287 412.37%
Tl 190.801†	105.4	-2.9735	ug/L	3.61535	-2.9735	ppb	3.61535 121.59%
U 409.014†	-380.6	-11.261	ug/L	2.6394	-11.261	ppb	2.6394 23.44%
V 292.402†	-107.4	-0.8217	ug/L	0.44537	-0.8217	ppb	0.44537 54.20%
Zn 213.857†	289.6	2.2362	ug/L	0.04668	2.2362	ppb	0.04668 2.09%
SiO2†	47.7	2.5778	ug/L	1.54694	2.5778	ppb	1.54694 60.01%

Sequence No.: 5
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/1/2009 12:29:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6730.1	6730.1	92.8	%			12:31:20
1	Y RADIAL	6163.4	6163.4	92.24	%			12:31:20
1	Al 396.153Radial†	5798.5	6332.2	5062.3	ug/L	5062.3	ppb	12:31:20
1	Ca 317.933Radial†	3505.1	3746.9	5264.1	ug/L	5264.1	ppb	12:31:40
1	Fe 238.204 Radial†	1292.7	1355.9	5297.3	ug/L	5297.3	ppb	12:31:40
1	K 766.490 Radial†	27578.2	26869.5	5045.6	ug/L	5045.6	ppb	12:31:20
1	Mg 279.077 IEC†	216.3	230.8	5408.7	ug/L	5408.7	ppb	12:31:40
1	Na 589.592 Radial†	175742.6	186305.2	9925.7	ug/L	9925.7	ppb	12:31:20
1	Sr 421.552†	160083.1	172579.5	480.52	ug/L	480.52	ppb	12:31:20
1	Sc 361.383	751655.4	751655.4	95.636	%			12:32:39
1	Y 371.029	578845.0	578845.0	94.544	%			12:32:39
1	Ag 328.068†	91723.2	95200.9	492.49	ug/L	492.49	ppb	12:32:39
1	As 188.979†	1554.1	1659.9	491.87	ug/L	491.87	ppb	12:32:59
1	B 249.677†	21372.3	23171.7	489.64	ug/L	489.64	ppb	12:32:39
1	Ba 233.527†	78159.2	81706.5	494.32	ug/L	494.32	ppb	12:32:39
1	Be 313.107†	1230609.0	1291690.7	491.09	ug/L	491.09	ppb	12:32:39
1	Cd 226.502†	44302.2	46616.6	491.01	ug/L	491.01	ppb	12:32:39
1	Co 228.616†	31643.1	33186.9	486.72	ug/L	486.72	ppb	12:32:59
1	Cr 267.716†	39633.2	41448.4	490.77	ug/L	490.77	ppb	12:32:39
1	Cu 324.752†	155468.2	156657.5	490.47	ug/L	490.47	ppb	12:32:39
1	Mn 257.610†	503469.0	525681.0	493.01	ug/L	493.01	ppb	12:32:39
1	Mo 202.031†	7980.5	8334.2	496.92	ug/L	496.92	ppb	12:32:59
1	Ni 231.604†	20961.5	21752.7	488.55	ug/L	488.55	ppb	12:32:59
1	P 214.914†	5905.0	5878.5	2352.8	ug/L	2352.8	ppb	12:32:59
1	Pb 220.353†	4758.2	5002.0	497.20	ug/L	497.20	ppb	12:32:59
1	S 181.975 Axial†	919.3	856.3	953.27	ug/L	953.27	ppb	12:32:59
1	Sb 206.836†	1928.0	1961.3	494.12	ug/L	494.12	ppb	12:32:59
1	Se 196.026†	1090.8	1172.4	509.28	ug/L	509.28	ppb	12:32:59
1	Si 251.611†	90498.2	94142.6	2459.4	ug/L	2459.4	ppb	12:32:39
1	Sn 189.927†	3214.6	3348.3	491.01	ug/L	491.01	ppb	12:32:59
1	Ti 334.940†	295756.4	310724.5	497.57	ug/L	497.57	ppb	12:32:39
1	Tl 190.801†	2090.8	2246.9	501.23	ug/L	501.23	ppb	12:32:59
1	U 409.014†	10072.3	15799.9	466.51	ug/L	466.51	ppb	12:32:39
1	V 292.402†	58985.0	63376.0	495.13	ug/L	495.13	ppb	12:32:39
1	Zn 213.857†	61821.7	63611.7	488.53	ug/L	488.53	ppb	12:32:39
1	SiO2†	90926.9	94593.1	5306.9	ug/L	5306.9	ppb	12:33:59
2	Sc Radial	6686.0	6686.0	92.2	%			12:31:45
2	Y RADIAL	6084.7	6084.7	91.06	%			12:31:45
2	Al 396.153Radial†	5803.0	6378.2	5099.3	ug/L	5099.3	ppb	12:31:45
2	Ca 317.933Radial†	3498.3	3764.5	5288.8	ug/L	5288.8	ppb	12:32:05
2	Fe 238.204 Radial†	1295.8	1368.4	5345.9	ug/L	5345.9	ppb	12:32:05
2	K 766.490 Radial†	27346.5	26813.9	5035.1	ug/L	5035.1	ppb	12:31:45
2	Mg 279.077 IEC†	213.3	229.0	5368.0	ug/L	5368.0	ppb	12:32:05
2	Na 589.592 Radial†	174637.1	186353.0	9928.3	ug/L	9928.3	ppb	12:31:45
2	Sr 421.552†	158870.9	172400.4	480.02	ug/L	480.02	ppb	12:31:45
2	Sc 361.383	754697.3	754697.3	96.023	%			12:33:06
2	Y 371.029	581756.1	581756.1	95.019	%			12:33:06
2	Ag 328.068†	92043.0	95147.4	492.22	ug/L	492.22	ppb	12:33:06
2	As 188.979†	1560.5	1660.1	491.92	ug/L	491.92	ppb	12:33:26
2	B 249.677†	21488.4	23202.5	490.30	ug/L	490.30	ppb	12:33:06
2	Ba 233.527†	78356.1	81582.1	493.57	ug/L	493.57	ppb	12:33:06
2	Be 313.107†	1234209.3	1290253.7	490.54	ug/L	490.54	ppb	12:33:06
2	Cd 226.502†	44368.7	46499.2	489.77	ug/L	489.77	ppb	12:33:06
2	Co 228.616†	31630.8	33040.8	484.57	ug/L	484.57	ppb	12:33:26
2	Cr 267.716†	39772.6	41426.6	490.52	ug/L	490.52	ppb	12:33:06
2	Cu 324.752†	156146.6	156708.7	490.63	ug/L	490.63	ppb	12:33:06
2	Mn 257.610†	503969.9	524080.7	491.51	ug/L	491.51	ppb	12:33:06
2	Mo 202.031†	7981.8	8301.8	495.00	ug/L	495.00	ppb	12:33:26
2	Ni 231.604†	20999.8	21704.2	487.46	ug/L	487.46	ppb	12:33:26

2	P 214.914†	5926.8	5876.3	2351.8	ug/L	2351.8 ppb	12:33:26
2	Pb 220.353†	4799.6	5025.1	499.48	ug/L	499.48 ppb	12:33:26
2	S 181.975 Axial†	926.1	859.5	956.83	ug/L	956.83 ppb	12:33:26
2	Sb 206.836†	1934.8	1960.2	493.77	ug/L	493.77 ppb	12:33:26
2	Se 196.026†	1081.9	1158.5	503.64	ug/L	503.64 ppb	12:33:26
2	Si 251.611†	90517.4	93781.2	2450.0	ug/L	2450.0 ppb	12:33:06
2	Sn 189.927†	3210.3	3330.3	488.39	ug/L	488.39 ppb	12:33:26
2	Ti 334.940†	296650.1	310408.8	497.06	ug/L	497.06 ppb	12:33:06
2	Tl 190.801†	2081.2	2228.1	497.06	ug/L	497.06 ppb	12:33:26
2	U 409.014†	10259.2	15952.1	471.01	ug/L	471.01 ppb	12:33:06
2	V 292.402†	59207.3	63358.9	494.98	ug/L	494.98 ppb	12:33:06
2	Zn 213.857†	61875.5	63407.2	486.95	ug/L	486.95 ppb	12:33:06
2	SiO2†	91863.7	95185.5	5340.5	ug/L	5340.5 ppb	12:34:04
3	Sc Radial	6647.2	6647.2	91.7	%		12:32:10
3	Y RADIAL	6077.1	6077.1	90.95	%		12:32:10
3	Al 396.153Radial†	5749.7	6356.9	5082.2	ug/L	5082.2 ppb	12:32:10
3	Ca 317.933Radial†	3502.2	3790.8	5325.8	ug/L	5325.8 ppb	12:32:30
3	Fe 238.204 Radial†	1304.2	1385.8	5413.5	ug/L	5413.5 ppb	12:32:30
3	K 766.490 Radial†	27309.2	26946.4	5060.1	ug/L	5060.1 ppb	12:32:10
3	Mg 279.077 IEC†	217.9	235.4	5516.6	ug/L	5516.6 ppb	12:32:30
3	Na 589.592 Radial†	174328.3	187122.6	9969.3	ug/L	9969.3 ppb	12:32:10
3	Sr 421.552†	158319.6	172805.5	481.14	ug/L	481.14 ppb	12:32:10
3	Sc 361.383	760241.2	760241.2	96.728	%		12:33:34
3	Y 371.029	585000.7	585000.7	95.549	%		12:33:34
3	Ag 328.068†	92965.8	95402.3	493.55	ug/L	493.55 ppb	12:33:34
3	As 188.979†	1557.9	1645.5	487.66	ug/L	487.66 ppb	12:33:54
3	B 249.677†	21675.9	23233.2	490.95	ug/L	490.95 ppb	12:33:34
3	Ba 233.527†	79084.1	81739.7	494.53	ug/L	494.53 ppb	12:33:34
3	Be 313.107†	1246370.6	1293453.3	491.76	ug/L	491.76 ppb	12:33:34
3	Cd 226.502†	44769.7	46576.8	490.58	ug/L	490.58 ppb	12:33:34
3	Co 228.616†	31854.3	33031.6	484.43	ug/L	484.43 ppb	12:33:54
3	Cr 267.716†	40205.7	41572.2	492.24	ug/L	492.24 ppb	12:33:34
3	Cu 324.752†	157846.1	157279.8	492.42	ug/L	492.42 ppb	12:33:34
3	Mn 257.610†	508746.3	525191.4	492.56	ug/L	492.56 ppb	12:33:34
3	Mo 202.031†	8024.9	8285.8	494.05	ug/L	494.05 ppb	12:33:54
3	Ni 231.604†	21128.1	21677.4	486.86	ug/L	486.86 ppb	12:33:54
3	P 214.914†	5965.8	5871.6	2349.4	ug/L	2349.4 ppb	12:33:54
3	Pb 220.353†	4819.4	5009.1	497.88	ug/L	497.88 ppb	12:33:54
3	S 181.975 Axial†	936.4	863.2	960.88	ug/L	960.88 ppb	12:33:54
3	Sb 206.836†	1935.1	1945.8	490.16	ug/L	490.16 ppb	12:33:54
3	Se 196.026†	1093.9	1162.7	505.60	ug/L	505.60 ppb	12:33:54
3	Si 251.611†	91679.7	94295.4	2463.5	ug/L	2463.5 ppb	12:33:34
3	Sn 189.927†	3246.1	3343.0	490.24	ug/L	490.24 ppb	12:33:54
3	Ti 334.940†	299667.5	311275.3	498.45	ug/L	498.45 ppb	12:33:34
3	Tl 190.801†	2108.6	2240.6	499.85	ug/L	499.85 ppb	12:33:54
3	U 409.014†	10459.8	16081.6	474.84	ug/L	474.84 ppb	12:33:34
3	V 292.402†	59715.7	63434.8	495.55	ug/L	495.55 ppb	12:33:34
3	Zn 213.857†	62417.9	63498.1	487.65	ug/L	487.65 ppb	12:33:34
3	SiO2†	90382.5	92956.5	5214.6	ug/L	5214.6 ppb	12:34:09

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	755531.3	96.129	%	0.5539				0.58%
Sc Radial	6687.8	92.2	%	0.57				0.62%
Y 371.029	581867.3	95.037	%	0.5030				0.53%
Y RADIAL	6108.4	91.41	%	0.715				0.78%
Ag 328.068†	95250.2	492.76	ug/L	0.704	492.76	ppb	0.704	0.14%
QC value within limits for Ag 328.068 Recovery = 98.55%								
Al 396.153Radial†	6355.8	5081.3	ug/L	18.51	5081.3	ppb	18.51	0.36%
QC value within limits for Al 396.153Radial Recovery = 101.63%								
As 188.979†	1655.2	490.49	ug/L	2.449	490.49	ppb	2.449	0.50%
QC value within limits for As 188.979 Recovery = 98.10%								
B 249.677†	23202.5	490.30	ug/L	0.655	490.30	ppb	0.655	0.13%
QC value within limits for B 249.677 Recovery = 98.06%								
Ba 233.527†	81676.1	494.14	ug/L	0.502	494.14	ppb	0.502	0.10%
QC value within limits for Ba 233.527 Recovery = 98.83%								
Be 313.107†	1291799.2	491.13	ug/L	0.609	491.13	ppb	0.609	0.12%
QC value within limits for Be 313.107 Recovery = 98.23%								
Ca 317.933Radial†	3767.4	5292.9	ug/L	31.05	5292.9	ppb	31.05	0.59%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.86%
Cd 226.502†            46564.2      490.45 ug/L         0.632      490.45 ppb          0.632   0.13%
   QC value within limits for Cd 226.502  Recovery = 98.09%
Co 228.616†            33086.4      485.24 ug/L         1.282      485.24 ppb          1.282   0.26%
   QC value within limits for Co 228.616  Recovery = 97.05%
Cr 267.716†            41482.4      491.18 ug/L         0.929      491.18 ppb          0.929   0.19%
   QC value within limits for Cr 267.716  Recovery = 98.24%
Cu 324.752†           156882.0      491.17 ug/L         1.084      491.17 ppb          1.084   0.22%
   QC value within limits for Cu 324.752  Recovery = 98.23%
Fe 238.204 Radial†      1370.0      5352.2 ug/L         58.36      5352.2 ppb          58.36   1.09%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.04%
K 766.490 Radial†      26876.6      5046.9 ug/L         12.54      5046.9 ppb          12.54   0.25%
   QC value within limits for K 766.490 Radial  Recovery = 100.94%
Mg 279.077 IEC†          231.7      5431.1 ug/L         76.78      5431.1 ppb          76.78   1.41%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.62%
Mn 257.610†           524984.3      492.36 ug/L         0.766      492.36 ppb          0.766   0.16%
   QC value within limits for Mn 257.610  Recovery = 98.47%
Mo 202.031†             8307.3      495.32 ug/L         1.464      495.32 ppb          1.464   0.30%
   QC value within limits for Mo 202.031  Recovery = 99.06%
Na 589.592 Radial†    186593.6      9941.1 ug/L         24.44      9941.1 ppb          24.44   0.25%
   QC value within limits for Na 589.592 Radial  Recovery = 99.41%
Ni 231.604†            21711.4      487.63 ug/L         0.858      487.63 ppb          0.858   0.18%
   QC value within limits for Ni 231.604  Recovery = 97.53%
P 214.914†              5875.5      2351.3 ug/L          1.72      2351.3 ppb           1.72   0.07%
   QC value within limits for P 214.914  Recovery = 94.05%
Pb 220.353†             5012.1      498.19 ug/L         1.174      498.19 ppb          1.174   0.24%
   QC value within limits for Pb 220.353  Recovery = 99.64%
S 181.975 Axial†         859.7      957.00 ug/L         3.808      957.00 ppb          3.808   0.40%
   QC value within limits for S 181.975 Axial  Recovery = 95.70%
Sb 206.836†             1955.8      492.68 ug/L         2.194      492.68 ppb          2.194   0.45%
   QC value within limits for Sb 206.836  Recovery = 98.54%
Se 196.026†             1164.5      506.17 ug/L         2.860      506.17 ppb          2.860   0.57%
   QC value within limits for Se 196.026  Recovery = 101.23%
Si 251.611†            94073.1      2457.6 ug/L          6.93      2457.6 ppb           6.93   0.28%
   QC value within limits for Si 251.611  Recovery = 98.31%
Sn 189.927†             3340.5      489.88 ug/L         1.349      489.88 ppb          1.349   0.28%
   QC value within limits for Sn 189.927  Recovery = 97.98%
Sr 421.552†           172595.1      480.56 ug/L         0.565      480.56 ppb          0.565   0.12%
   QC value within limits for Sr 421.552  Recovery = 96.11%
Ti 334.940†           310802.9      497.69 ug/L         0.702      497.69 ppb          0.702   0.14%
   QC value within limits for Ti 334.940  Recovery = 99.54%
Tl 190.801†             2238.6      499.38 ug/L         2.125      499.38 ppb          2.125   0.43%
   QC value within limits for Tl 190.801  Recovery = 99.88%
U 409.014†             15944.5      470.79 ug/L         4.169      470.79 ppb          4.169   0.89%
   QC value within limits for U 409.014  Recovery = 94.16%
V 292.402†             63389.9      495.22 ug/L         0.296      495.22 ppb          0.296   0.06%
   QC value within limits for V 292.402  Recovery = 99.04%
Zn 213.857†            63505.6      487.71 ug/L         0.793      487.71 ppb          0.793   0.16%
   QC value within limits for Zn 213.857  Recovery = 97.54%
SiO2†                  94245.0      5287.3 ug/L         65.23      5287.3 ppb          65.23   1.23%
   QC value within limits for SiO2  Recovery = 98.88%
All analyte(s) passed QC.
```

Sequence No.: 6
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/1/2009 12:36:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6708.0	6708.0	92.5	%			12:38:12
1	Y RADIAL	6123.3	6123.3	91.64	%			12:38:12
1	Al 396.153Radial†	-80.2	-3.3	-2.6397	ug/L	-2.6397	ppb	12:38:12
1	Ca 317.933Radial†	25.3	-2.9	-4.0987	ug/L	-4.0987	ppb	12:38:32
1	Fe 238.204 Radial†	41.6	7.8	30.258	ug/L	30.258	ppb	12:38:32
1	K 766.490 Radial†	2923.1	310.3	58.431	ug/L	58.431	ppb	12:38:12
1	Mg 279.077 IEC†	7.7	6.0	141.58	ug/L	141.58	ppb	12:38:32
1	Na 589.592 Radial†	1154.9	-1834.8	-97.753	ug/L	-97.753	ppb	12:38:12
1	Sr 421.552†	-76.4	-16.3	-0.0454	ug/L	-0.0454	ppb	12:38:12
1	Sc 361.383	730520.8	730520.8	92.947	%			12:39:29
1	Y 371.029	570866.2	570866.2	93.241	%			12:39:29
1	Ag 328.068†	721.4	67.9	0.3629	ug/L	0.3629	ppb	12:39:29
1	As 188.979†	-32.8	-0.4	-0.1192	ug/L	-0.1192	ppb	12:39:49
1	B 249.677†	-290.5	511.5	10.870	ug/L	10.870	ppb	12:39:29
1	Ba 233.527†	9.2	-9.6	-0.0605	ug/L	-0.0605	ppb	12:39:49
1	Be 313.107†	-4815.7	-259.9	-0.0989	ug/L	-0.0989	ppb	12:39:29
1	Cd 226.502†	-294.0	-23.7	-0.2531	ug/L	-0.2531	ppb	12:39:49
1	Co 228.616†	-90.8	2.1	0.0314	ug/L	0.0314	ppb	12:39:49
1	Cr 267.716†	-29.7	-25.5	-0.2991	ug/L	-0.2991	ppb	12:39:29
1	Cu 324.752†	5751.2	281.9	0.8837	ug/L	0.8837	ppb	12:39:29
1	Mn 257.610†	707.0	-3.8	-0.0025	ug/L	-0.0025	ppb	12:39:29
1	Mo 202.031†	12.7	3.1	0.1873	ug/L	0.1873	ppb	12:39:49
1	Ni 231.604†	171.6	19.3	0.4330	ug/L	0.4330	ppb	12:39:49
1	P 214.914†	296.7	23.3	9.4976	ug/L	9.4976	ppb	12:39:49
1	Pb 220.353†	-30.5	-6.1	-0.6122	ug/L	-0.6122	ppb	12:39:49
1	S 181.975 Axial†	88.9	-9.2	-10.297	ug/L	-10.297	ppb	12:39:49
1	Sb 206.836†	47.1	-4.0	-0.9508	ug/L	-0.9508	ppb	12:39:49
1	Se 196.026†	-29.3	0.2	0.2016	ug/L	0.2016	ppb	12:39:49
1	Si 251.611†	446.7	-5.0	-0.1757	ug/L	-0.1757	ppb	12:39:49
1	Sn 189.927†	22.2	10.9	1.5974	ug/L	1.5974	ppb	12:39:49
1	Ti 334.940†	-1453.2	-92.6	-0.1442	ug/L	-0.1442	ppb	12:39:29
1	Tl 190.801†	-51.6	5.2	1.1441	ug/L	1.1441	ppb	12:39:49
1	U 409.014†	-5196.5	-322.9	-9.5695	ug/L	-9.5695	ppb	12:39:29
1	V 292.402†	-1696.4	-126.0	-0.9906	ug/L	-0.9906	ppb	12:39:29
1	Zn 213.857†	1023.0	69.3	0.5252	ug/L	0.5252	ppb	12:39:49
1	SiO2†	469.8	22.0	1.1431	ug/L	1.1431	ppb	12:40:45
2	Sc Radial	6734.6	6734.6	92.9	%			12:38:37
2	Y RADIAL	6133.0	6133.0	91.78	%			12:38:37
2	Al 396.153Radial†	-58.2	20.8	16.679	ug/L	16.679	ppb	12:38:37
2	Ca 317.933Radial†	24.9	-3.5	-4.9324	ug/L	-4.9324	ppb	12:38:57
2	Fe 238.204 Radial†	38.0	3.7	14.582	ug/L	14.582	ppb	12:38:57
2	K 766.490 Radial†	3034.1	417.3	78.568	ug/L	78.568	ppb	12:38:37
2	Mg 279.077 IEC†	3.1	1.0	24.092	ug/L	24.092	ppb	12:38:57
2	Na 589.592 Radial†	1843.1	-1098.6	-58.528	ug/L	-58.528	ppb	12:38:37
2	Sr 421.552†	-87.0	-27.4	-0.0763	ug/L	-0.0763	ppb	12:38:37
2	Sc 361.383	744657.6	744657.6	94.745	%			12:39:54
2	Y 371.029	581254.3	581254.3	94.937	%			12:39:54
2	Ag 328.068†	693.5	23.7	0.1310	ug/L	0.1310	ppb	12:39:54
2	As 188.979†	-31.6	1.5	0.4394	ug/L	0.4394	ppb	12:40:14
2	B 249.677†	-293.2	514.6	10.935	ug/L	10.935	ppb	12:39:54
2	Ba 233.527†	23.2	4.9	0.0289	ug/L	0.0289	ppb	12:40:14
2	Be 313.107†	-4874.0	-223.1	-0.0848	ug/L	-0.0848	ppb	12:39:54
2	Cd 226.502†	-243.2	35.9	0.3769	ug/L	0.3769	ppb	12:40:14
2	Co 228.616†	-87.0	7.9	0.1187	ug/L	0.1187	ppb	12:40:14
2	Cr 267.716†	-45.8	-41.9	-0.4930	ug/L	-0.4930	ppb	12:39:54
2	Cu 324.752†	5877.6	297.8	0.9325	ug/L	0.9325	ppb	12:39:54
2	Mn 257.610†	690.3	-36.0	-0.0323	ug/L	-0.0323	ppb	12:39:54
2	Mo 202.031†	26.9	17.9	1.0673	ug/L	1.0673	ppb	12:40:14
2	Ni 231.604†	139.2	-18.5	-0.4160	ug/L	-0.4160	ppb	12:40:14

2	P 214.914†	311.2	32.5	13.364	ug/L	13.364 ppb	12:40:14
2	Pb 220.353†	-4.0	22.4	2.2285	ug/L	2.2285 ppb	12:40:14
2	S 181.975 Axial†	95.0	-4.6	-5.1469	ug/L	-5.1469 ppb	12:40:14
2	Sb 206.836†	50.7	-1.2	-0.2335	ug/L	-0.2335 ppb	12:40:14
2	Se 196.026†	-32.6	-2.6	-1.0229	ug/L	-1.0229 ppb	12:40:14
2	Si 251.611†	485.8	27.2	0.6395	ug/L	0.6395 ppb	12:40:14
2	Sn 189.927†	27.2	15.8	2.3087	ug/L	2.3087 ppb	12:40:14
2	Ti 334.940†	-1438.5	-47.4	-0.0732	ug/L	-0.0732 ppb	12:39:54
2	Tl 190.801†	-53.2	4.5	0.9912	ug/L	0.9912 ppb	12:40:14
2	U 409.014†	-5195.4	-215.6	-6.3885	ug/L	-6.3885 ppb	12:39:54
2	V 292.402†	-1637.1	-28.8	-0.2223	ug/L	-0.2223 ppb	12:39:54
2	Zn 213.857†	998.7	22.8	0.1761	ug/L	0.1761 ppb	12:40:14
2	SiO2†	467.1	9.5	0.3695	ug/L	0.3695 ppb	12:40:50
3	Sc Radial	6673.2	6673.2	92.0	%		12:39:02
3	Y RADIAL	6094.2	6094.2	91.20	%		12:39:02
3	Al 396.153Radial†	-50.4	28.7	22.975	ug/L	22.975 ppb	12:39:02
3	Ca 317.933Radial†	26.4	-1.6	-2.2788	ug/L	-2.2788 ppb	12:39:22
3	Fe 238.204 Radial†	38.9	5.0	19.637	ug/L	19.637 ppb	12:39:22
3	K 766.490 Radial†	2848.8	246.0	46.325	ug/L	46.325 ppb	12:39:02
3	Mg 279.077 IEC†	2.0	-0.1	-2.9379	ug/L	-2.9379 ppb	12:39:22
3	Na 589.592 Radial†	1299.6	-1671.1	-89.029	ug/L	-89.029 ppb	12:39:02
3	Sr 421.552†	-54.0	7.5	0.0210	ug/L	0.0210 ppb	12:39:02
3	Sc 361.383	734262.9	734262.9	93.423	%		12:40:20
3	Y 371.029	573720.4	573720.4	93.707	%		12:40:20
3	Ag 328.068†	923.6	280.3	1.4580	ug/L	1.4580 ppb	12:40:20
3	As 188.979†	-26.8	6.2	1.8196	ug/L	1.8196 ppb	12:40:40
3	B 249.677†	-299.7	503.3	10.694	ug/L	10.694 ppb	12:40:20
3	Ba 233.527†	10.6	-8.2	-0.0500	ug/L	-0.0500 ppb	12:40:40
3	Be 313.107†	-4884.1	-306.8	-0.1165	ug/L	-0.1165 ppb	12:40:20
3	Cd 226.502†	-258.9	15.5	0.1611	ug/L	0.1611 ppb	12:40:40
3	Co 228.616†	-74.9	19.5	0.2887	ug/L	0.2887 ppb	12:40:40
3	Cr 267.716†	-110.1	-111.3	-1.3121	ug/L	-1.3121 ppb	12:40:20
3	Cu 324.752†	5878.1	386.2	1.2095	ug/L	1.2095 ppb	12:40:20
3	Mn 257.610†	726.0	12.6	0.0143	ug/L	0.0143 ppb	12:40:20
3	Mo 202.031†	20.7	11.6	0.6920	ug/L	0.6920 ppb	12:40:40
3	Ni 231.604†	133.2	-22.9	-0.5140	ug/L	-0.5140 ppb	12:40:40
3	P 214.914†	312.3	38.4	15.751	ug/L	15.751 ppb	12:40:40
3	Pb 220.353†	-7.6	18.6	1.8467	ug/L	1.8467 ppb	12:40:40
3	S 181.975 Axial†	95.5	-2.7	-3.0171	ug/L	-3.0171 ppb	12:40:40
3	Sb 206.836†	55.8	5.1	1.3415	ug/L	1.3415 ppb	12:40:40
3	Se 196.026†	-24.0	6.1	2.6140	ug/L	2.6140 ppb	12:40:40
3	Si 251.611†	458.7	5.4	0.0886	ug/L	0.0886 ppb	12:40:40
3	Sn 189.927†	24.4	13.2	1.9291	ug/L	1.9291 ppb	12:40:40
3	Ti 334.940†	-1404.6	-32.6	-0.0459	ug/L	-0.0459 ppb	12:40:20
3	Tl 190.801†	-53.9	3.0	0.6559	ug/L	0.6559 ppb	12:40:40
3	U 409.014†	-5340.0	-448.1	-13.275	ug/L	-13.275 ppb	12:40:20
3	V 292.402†	-1606.3	-20.2	-0.1755	ug/L	-0.1755 ppb	12:40:20
3	Zn 213.857†	989.7	28.1	0.2176	ug/L	0.2176 ppb	12:40:40
3	SiO2†	471.0	20.7	1.0520	ug/L	1.0520 ppb	12:40:55

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	736480.4	93.705	%	0.9319				0.99%
Sc Radial	6705.3	92.5	%	0.42				0.46%
Y 371.029	575280.3	93.962	%	0.8766				0.93%
Y RADIAL	6116.9	91.54	%	0.302				0.33%
Ag 328.068†	124.0	0.6506	ug/L	0.70874	0.6506	ppb	0.70874	108.94%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	15.4	12.338	ug/L	13.3476	12.338	ppb	13.3476	108.18%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.4	0.7133	ug/L	0.99797	0.7133	ppb	0.99797	139.91%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	509.8	10.833	ug/L	0.1247	10.833	ppb	0.1247	1.15%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-4.3	-0.0272	ug/L	0.04885	-0.0272	ppb	0.04885	179.41%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-263.3	-0.1001	ug/L	0.01588	-0.1001	ppb	0.01588	15.86%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.7	-3.7700	ug/L	1.35703	-3.7700	ppb	1.35703	36.00%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 9.3      0.0949 ug/L       0.32017      0.0949 ppb        0.32017 337.22%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 9.9      0.1463 ug/L       0.13085      0.1463 ppb        0.13085  89.45%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -59.6     -0.7014 ug/L       0.53767     -0.7014 ppb        0.53767  76.66%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               321.9      1.0086 ug/L       0.17571      1.0086 ppb        0.17571  17.42%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          5.5     21.492 ug/L        8.0009     21.492 ppb         8.0009  37.23%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         324.5     61.108 ug/L       16.2874     61.108 ppb        16.2874  26.65%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             2.3     54.246 ug/L       76.8339     54.246 ppb        76.8339 141.64%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -9.1     -0.0068 ug/L       0.02362     -0.0068 ppb        0.02362 345.27%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                10.9      0.6488 ug/L       0.44159      0.6488 ppb        0.44159  68.06%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      -1534.8    -81.770 ug/L       20.5950    -81.770 ppb        20.5950  25.19%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                -7.4     -0.1657 ug/L       0.52076     -0.1657 ppb        0.52076 314.35%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 31.4     12.871 ug/L        3.1558     12.871 ppb         3.1558  24.52%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                11.6      1.1543 ug/L       1.54173      1.1543 ppb        1.54173 133.56%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.5     -6.1538 ug/L       3.74316     -6.1538 ppb        3.74316  60.83%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.0      0.0524 ug/L       1.17262      0.0524 ppb        1.17262 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 1.3      0.5976 ug/L       1.85050      0.5976 ppb        1.85050 309.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                 9.2      0.1841 ug/L       0.41595      0.1841 ppb        0.41595 225.91%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                13.3      1.9451 ug/L       0.35590      1.9451 ppb        0.35590  18.30%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -12.1     -0.0336 ug/L       0.04969     -0.0336 ppb        0.04969 147.99%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -57.5     -0.0878 ug/L       0.05075     -0.0878 ppb        0.05075  57.80%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 4.2      0.9304 ug/L       0.24973      0.9304 ppb        0.24973  26.84%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -328.9     -9.7444 ug/L       3.44672     -9.7444 ppb        3.44672  35.37%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -58.3     -0.4628 ug/L       0.45765     -0.4628 ppb        0.45765  98.89%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                40.1      0.3063 ug/L       0.19071      0.3063 ppb        0.19071  62.26%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      17.4      0.8549 ug/L       0.42281      0.8549 ppb        0.42281  49.46%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/1/2009 13:30:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6731.0	6731.0	92.8	%			13:32:38
1	Y RADIAL	6090.0	6090.0	91.14	%			13:32:38
1	Al 396.153Radial†	5875.1	6413.8	5128.0	ug/L	5128.0	ppb	13:32:38
1	Ca 317.933Radial†	3476.7	3715.8	5220.4	ug/L	5220.4	ppb	13:32:58
1	Fe 238.204 Radial†	1286.0	1348.5	5268.2	ug/L	5268.2	ppb	13:32:58
1	K 766.490 Radial†	26612.3	25824.4	4848.9	ug/L	4848.9	ppb	13:32:33
1	Mg 279.077 IEC†	216.5	231.0	5413.8	ug/L	5413.8	ppb	13:32:58
1	Na 589.592 Radial†	171505.1	181711.4	9681.0	ug/L	9681.0	ppb	13:32:33
1	Sr 421.552†	155878.6	168023.8	467.83	ug/L	467.83	ppb	13:32:33
1	Sc 361.383	752704.2	752704.2	95.769	%			13:34:01
1	Y 371.029	579150.0	579150.0	94.594	%			13:34:01
1	Ag 328.068†	92359.8	95731.9	495.21	ug/L	495.21	ppb	13:34:01
1	As 188.979†	1534.3	1637.0	485.13	ug/L	485.13	ppb	13:34:21
1	B 249.677†	21374.7	23143.1	489.05	ug/L	489.05	ppb	13:34:01
1	Ba 233.527†	78111.5	81542.9	493.34	ug/L	493.34	ppb	13:34:01
1	Be 313.107†	1234714.0	1294184.0	492.04	ug/L	492.04	ppb	13:34:01
1	Cd 226.502†	43077.5	45273.3	476.85	ug/L	476.85	ppb	13:34:21
1	Co 228.616†	31518.0	33010.2	484.11	ug/L	484.11	ppb	13:34:21
1	Cr 267.716†	39776.1	41539.9	491.85	ug/L	491.85	ppb	13:34:01
1	Cu 324.752†	156894.0	157919.7	494.42	ug/L	494.42	ppb	13:34:01
1	Mn 257.610†	503812.8	525306.4	492.65	ug/L	492.65	ppb	13:34:01
1	Mo 202.031†	7921.9	8261.3	492.58	ug/L	492.58	ppb	13:34:21
1	Ni 231.604†	20866.2	21622.6	485.63	ug/L	485.63	ppb	13:34:21
1	P 214.914†	5885.9	5850.0	2340.1	ug/L	2340.1	ppb	13:34:21
1	Pb 220.353†	4743.1	4979.3	494.95	ug/L	494.95	ppb	13:34:21
1	S 181.975 Axial†	922.9	858.8	956.04	ug/L	956.04	ppb	13:34:21
1	Sb 206.836†	1920.2	1950.4	491.24	ug/L	491.24	ppb	13:34:21
1	Se 196.026†	1093.3	1173.4	509.62	ug/L	509.62	ppb	13:34:21
1	Si 251.611†	90714.8	94236.9	2462.1	ug/L	2462.1	ppb	13:34:01
1	Sn 189.927†	3206.0	3334.7	489.02	ug/L	489.02	ppb	13:34:21
1	Ti 334.940†	297291.9	311896.9	499.44	ug/L	499.44	ppb	13:34:01
1	Tl 190.801†	2055.3	2206.8	492.36	ug/L	492.36	ppb	13:34:21
1	U 409.014†	10354.7	16080.1	474.81	ug/L	474.81	ppb	13:34:01
1	V 292.402†	59192.0	63506.2	496.10	ug/L	496.10	ppb	13:34:01
1	Zn 213.857†	61839.0	63539.7	487.99	ug/L	487.99	ppb	13:34:01
1	SiO2†	89795.4	93279.1	5233.0	ug/L	5233.0	ppb	13:35:21
2	Sc Radial	6813.0	6813.0	93.9	%			13:33:08
2	Y RADIAL	6171.2	6171.2	92.35	%			13:33:08
2	Al 396.153Radial†	5942.9	6409.8	5124.7	ug/L	5124.7	ppb	13:33:08
2	Ca 317.933Radial†	3471.9	3665.6	5149.8	ug/L	5149.8	ppb	13:33:28
2	Fe 238.204 Radial†	1284.3	1329.9	5196.2	ug/L	5196.2	ppb	13:33:28
2	K 766.490 Radial†	27324.6	26237.7	4926.6	ug/L	4926.6	ppb	13:33:03
2	Mg 279.077 IEC†	215.3	226.9	5318.4	ug/L	5318.4	ppb	13:33:28
2	Na 589.592 Radial†	176625.0	184939.2	9852.9	ug/L	9852.9	ppb	13:33:03
2	Sr 421.552†	161170.5	171637.2	477.89	ug/L	477.89	ppb	13:33:03
2	Sc 361.383	750970.5	750970.5	95.548	%			13:34:28
2	Y 371.029	578546.0	578546.0	94.495	%			13:34:28
2	Ag 328.068†	92061.9	95642.7	494.72	ug/L	494.72	ppb	13:34:28
2	As 188.979†	1549.6	1656.7	490.91	ug/L	490.91	ppb	13:34:48
2	B 249.677†	21261.2	23075.8	487.62	ug/L	487.62	ppb	13:34:28
2	Ba 233.527†	77973.1	81586.3	493.60	ug/L	493.60	ppb	13:34:28
2	Be 313.107†	1233179.5	1295554.5	492.55	ug/L	492.55	ppb	13:34:28
2	Cd 226.502†	43259.4	45567.5	479.97	ug/L	479.97	ppb	13:34:48
2	Co 228.616†	31540.6	33109.8	485.58	ug/L	485.58	ppb	13:34:48
2	Cr 267.716†	39791.1	41651.5	493.17	ug/L	493.17	ppb	13:34:28
2	Cu 324.752†	155908.4	157266.4	492.37	ug/L	492.37	ppb	13:34:28
2	Mn 257.610†	502700.2	525356.4	492.69	ug/L	492.69	ppb	13:34:28
2	Mo 202.031†	7931.1	8290.1	494.29	ug/L	494.29	ppb	13:34:48
2	Ni 231.604†	20943.9	21754.3	488.59	ug/L	488.59	ppb	13:34:48

2	P 214.914†	5909.8	5889.2	2356.9 ug/L	2356.9 ppb	13:34:48
2	Pb 220.353†	4763.8	5012.4	498.24 ug/L	498.24 ppb	13:34:48
2	S 181.975 Axial†	925.2	863.4	961.11 ug/L	961.11 ppb	13:34:48
2	Sb 206.836†	1927.2	1962.3	494.26 ug/L	494.26 ppb	13:34:48
2	Se 196.026†	1095.2	1178.0	511.30 ug/L	511.30 ppb	13:34:48
2	Si 251.611†	90379.1	94104.3	2458.5 ug/L	2458.5 ppb	13:34:28
2	Sn 189.927†	3213.4	3350.2	491.27 ug/L	491.27 ppb	13:34:48
2	Ti 334.940†	296381.2	311660.4	499.05 ug/L	499.05 ppb	13:34:28
2	Tl 190.801†	2062.4	2219.1	495.08 ug/L	495.08 ppb	13:34:48
2	U 409.014†	10541.1	16300.1	481.34 ug/L	481.34 ppb	13:34:28
2	V 292.402†	59157.0	63612.2	496.96 ug/L	496.96 ppb	13:34:28
2	Zn 213.857†	61673.9	63516.0	487.80 ug/L	487.80 ppb	13:34:28
2	SiO2†	89627.4	93319.7	5235.2 ug/L	5235.2 ppb	13:35:26
3	Sc Radial	6766.7	6766.7	93.3 %		13:33:39
3	Y RADIAL	6129.7	6129.7	91.73 %		13:33:39
3	Al 396.153Radial†	5869.1	6374.0	5096.0 ug/L	5096.0 ppb	13:33:39
3	Ca 317.933Radial†	3495.8	3716.5	5221.4 ug/L	5221.4 ppb	13:33:52
3	Fe 238.204 Radial†	1299.9	1356.0	5297.7 ug/L	5297.7 ppb	13:33:52
3	K 766.490 Radial†	27110.1	26206.7	4920.8 ug/L	4920.8 ppb	13:33:34
3	Mg 279.077 IEC†	220.4	233.9	5482.5 ug/L	5482.5 ppb	13:33:52
3	Na 589.592 Radial†	174359.9	183796.8	9792.1 ug/L	9792.1 ppb	13:33:34
3	Sr 421.552†	158959.1	170439.9	474.56 ug/L	474.56 ppb	13:33:34
3	Sc 361.383	755004.0	755004.0	96.062 %		13:34:56
3	Y 371.029	581553.8	581553.8	94.986 %		13:34:56
3	Ag 328.068†	92569.1	95656.1	494.83 ug/L	494.83 ppb	13:34:56
3	As 188.979†	1551.3	1649.8	488.91 ug/L	488.91 ppb	13:35:16
3	B 249.677†	21415.6	23117.7	488.51 ug/L	488.51 ppb	13:34:56
3	Ba 233.527†	78511.1	81710.4	494.35 ug/L	494.35 ppb	13:34:56
3	Be 313.107†	1240123.8	1295888.4	492.68 ug/L	492.68 ppb	13:34:56
3	Cd 226.502†	43348.7	45418.6	478.38 ug/L	478.38 ppb	13:35:16
3	Co 228.616†	31595.7	32990.9	483.83 ug/L	483.83 ppb	13:35:16
3	Cr 267.716†	39982.4	41628.1	492.90 ug/L	492.90 ppb	13:34:56
3	Cu 324.752†	157304.9	157848.4	494.19 ug/L	494.19 ppb	13:34:56
3	Mn 257.610†	505712.5	525681.5	493.01 ug/L	493.01 ppb	13:34:56
3	Mo 202.031†	7971.3	8287.6	494.15 ug/L	494.15 ppb	13:35:16
3	Ni 231.604†	20970.1	21664.4	486.57 ug/L	486.57 ppb	13:35:16
3	P 214.914†	5913.2	5859.7	2344.2 ug/L	2344.2 ppb	13:35:16
3	Pb 220.353†	4799.2	5022.6	499.23 ug/L	499.23 ppb	13:35:16
3	S 181.975 Axial†	918.7	851.4	947.80 ug/L	947.80 ppb	13:35:16
3	Sb 206.836†	1917.5	1941.4	489.03 ug/L	489.03 ppb	13:35:16
3	Se 196.026†	1091.0	1167.5	507.25 ug/L	507.25 ppb	13:35:16
3	Si 251.611†	91046.2	94293.3	2463.5 ug/L	2463.5 ppb	13:34:56
3	Sn 189.927†	3217.6	3336.5	489.28 ug/L	489.28 ppb	13:35:16
3	Ti 334.940†	298286.5	311986.8	499.58 ug/L	499.58 ppb	13:34:56
3	Tl 190.801†	2064.7	2210.0	493.07 ug/L	493.07 ppb	13:35:16
3	U 409.014†	10528.3	16227.9	479.18 ug/L	479.18 ppb	13:34:56
3	V 292.402†	59596.3	63738.8	497.92 ug/L	497.92 ppb	13:34:56
3	Zn 213.857†	62058.0	63571.1	488.22 ug/L	488.22 ppb	13:34:56
3	SiO2†	90454.7	93679.8	5255.6 ug/L	5255.6 ppb	13:35:31

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	752892.9	95.793	%	0.2574				0.27%
Sc Radial	6770.3	93.3	%	0.57				0.61%
Y 371.029	579749.9	94.692	%	0.2599				0.27%
Y RADIAL	6130.3	91.74	%	0.607				0.66%
Ag 328.068†	95676.9	494.92	ug/L	0.254	494.92	ppb	0.254	0.05%
QC value within limits for Ag 328.068 Recovery = 98.98%								
Al 396.153Radial†	6399.2	5116.2	ug/L	17.60	5116.2	ppb	17.60	0.34%
QC value within limits for Al 396.153Radial Recovery = 102.32%								
As 188.979†	1647.8	488.32	ug/L	2.939	488.32	ppb	2.939	0.60%
QC value within limits for As 188.979 Recovery = 97.66%								
B 249.677†	23112.2	488.39	ug/L	0.724	488.39	ppb	0.724	0.15%
QC value within limits for B 249.677 Recovery = 97.68%								
Ba 233.527†	81613.2	493.77	ug/L	0.527	493.77	ppb	0.527	0.11%
QC value within limits for Ba 233.527 Recovery = 98.75%								
Be 313.107†	1295209.0	492.42	ug/L	0.343	492.42	ppb	0.343	0.07%
QC value within limits for Be 313.107 Recovery = 98.48%								
Ca 317.933Radial†	3699.3	5197.2	ug/L	41.02	5197.2	ppb	41.02	0.79%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.94%
Cd 226.502†            45419.8      478.40 ug/L         1.556      478.40 ppb          1.556   0.33%
   QC value within limits for Cd 226.502  Recovery = 95.68%
Co 228.616†            33036.9      484.51 ug/L         0.938      484.51 ppb          0.938   0.19%
   QC value within limits for Co 228.616  Recovery = 96.90%
Cr 267.716†            41606.5      492.64 ug/L         0.695      492.64 ppb          0.695   0.14%
   QC value within limits for Cr 267.716  Recovery = 98.53%
Cu 324.752†           157678.2      493.66 ug/L         1.124      493.66 ppb          1.124   0.23%
   QC value within limits for Cu 324.752  Recovery = 98.73%
Fe 238.204 Radial†      1344.8      5254.0 ug/L        52.25      5254.0 ppb          52.25   0.99%
   QC value within limits for Fe 238.204 Radial  Recovery = 105.08%
K 766.490 Radial†      26089.6      4898.8 ug/L        43.32      4898.8 ppb          43.32   0.88%
   QC value within limits for K 766.490 Radial  Recovery = 97.98%
Mg 279.077 IEC†          230.6      5404.9 ug/L        82.43      5404.9 ppb          82.43   1.53%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.10%
Mn 257.610†           525448.1      492.78 ug/L         0.194      492.78 ppb          0.194   0.04%
   QC value within limits for Mn 257.610  Recovery = 98.56%
Mo 202.031†             8279.7      493.67 ug/L         0.948      493.67 ppb          0.948   0.19%
   QC value within limits for Mo 202.031  Recovery = 98.73%
Na 589.592 Radial†    183482.5      9775.3 ug/L        87.20      9775.3 ppb          87.20   0.89%
   QC value within limits for Na 589.592 Radial  Recovery = 97.75%
Ni 231.604†            21680.4      486.93 ug/L         1.512      486.93 ppb          1.512   0.31%
   QC value within limits for Ni 231.604  Recovery = 97.39%
P 214.914†              5866.3      2347.1 ug/L         8.77      2347.1 ppb           8.77   0.37%
   QC value within limits for P 214.914  Recovery = 93.88%
Pb 220.353†             5004.8      497.47 ug/L         2.242      497.47 ppb          2.242   0.45%
   QC value within limits for Pb 220.353  Recovery = 99.49%
S 181.975 Axial†         857.9      954.98 ug/L         6.719      954.98 ppb          6.719   0.70%
   QC value within limits for S 181.975 Axial  Recovery = 95.50%
Sb 206.836†             1951.4      491.51 ug/L         2.626      491.51 ppb          2.626   0.53%
   QC value within limits for Sb 206.836  Recovery = 98.30%
Se 196.026†             1173.0      509.39 ug/L         2.031      509.39 ppb          2.031   0.40%
   QC value within limits for Se 196.026  Recovery = 101.88%
Si 251.611†            94211.5      2461.3 ug/L         2.58      2461.3 ppb           2.58   0.10%
   QC value within limits for Si 251.611  Recovery = 98.45%
Sn 189.927†             3340.5      489.85 ug/L         1.229      489.85 ppb          1.229   0.25%
   QC value within limits for Sn 189.927  Recovery = 97.97%
Sr 421.552†           170033.6      473.43 ug/L         5.126      473.43 ppb          5.126   1.08%
   QC value within limits for Sr 421.552  Recovery = 94.69%
Ti 334.940†           311848.1      499.36 ug/L         0.273      499.36 ppb          0.273   0.05%
   QC value within limits for Ti 334.940  Recovery = 99.87%
Tl 190.801†             2212.0      493.51 ug/L         1.409      493.51 ppb          1.409   0.29%
   QC value within limits for Tl 190.801  Recovery = 98.70%
U 409.014†             16202.7      478.45 ug/L         3.325      478.45 ppb          3.325   0.69%
   QC value within limits for U 409.014  Recovery = 95.69%
V 292.402†             63619.1      497.00 ug/L         0.911      497.00 ppb          0.911   0.18%
   QC value within limits for V 292.402  Recovery = 99.40%
Zn 213.857†            63542.2      488.01 ug/L         0.211      488.01 ppb          0.211   0.04%
   QC value within limits for Zn 213.857  Recovery = 97.60%
SiO2†                  93426.2      5241.3 ug/L        12.44      5241.3 ppb          12.44   0.24%
   QC value within limits for SiO2  Recovery = 98.01%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/1/2009 13:37:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6693.5	6693.5	92.3	%			13:39:34
1	Y RADIAL	6083.4	6083.4	91.04	%			13:39:34
1	Al 396.153Radial†	-69.4	8.3	6.6347	ug/L	6.6347	ppb	13:39:34
1	Ca 317.933Radial†	27.8	-0.2	-0.2616	ug/L	-0.2616	ppb	13:39:54
1	Fe 238.204 Radial†	41.3	7.5	29.360	ug/L	29.360	ppb	13:39:54
1	K 766.490 Radial†	2870.1	259.7	48.914	ug/L	48.914	ppb	13:39:34
1	Mg 279.077 IEC†	7.0	5.3	124.20	ug/L	124.20	ppb	13:39:54
1	Na 589.592 Radial†	930.7	-2075.0	-110.55	ug/L	-110.55	ppb	13:39:34
1	Sr 421.552†	-32.3	31.2	0.0870	ug/L	0.0870	ppb	13:39:34
1	Sc 361.383	733562.4	733562.4	93.334	%			13:40:51
1	Y 371.029	573046.9	573046.9	93.597	%			13:40:51
1	Ag 328.068†	763.0	109.2	0.5771	ug/L	0.5771	ppb	13:40:51
1	As 188.979†	-30.8	1.9	0.5717	ug/L	0.5717	ppb	13:41:11
1	B 249.677†	-504.4	283.6	6.0256	ug/L	6.0256	ppb	13:40:51
1	Ba 233.527†	4.9	-14.3	-0.0872	ug/L	-0.0872	ppb	13:41:11
1	Be 313.107†	-4840.6	-265.1	-0.1007	ug/L	-0.1007	ppb	13:40:51
1	Cd 226.502†	-287.3	-15.2	-0.1644	ug/L	-0.1644	ppb	13:41:11
1	Co 228.616†	-91.9	1.3	0.0215	ug/L	0.0215	ppb	13:41:11
1	Cr 267.716†	-36.4	-32.5	-0.3808	ug/L	-0.3808	ppb	13:40:51
1	Cu 324.752†	5843.7	355.3	1.1134	ug/L	1.1134	ppb	13:40:51
1	Mn 257.610†	727.9	15.4	0.0157	ug/L	0.0157	ppb	13:40:51
1	Mo 202.031†	20.8	11.7	0.7012	ug/L	0.7012	ppb	13:41:11
1	Ni 231.604†	138.3	-17.2	-0.3870	ug/L	-0.3870	ppb	13:41:11
1	P 214.914†	290.4	15.2	6.1229	ug/L	6.1229	ppb	13:41:11
1	Pb 220.353†	-17.0	8.4	0.8362	ug/L	0.8362	ppb	13:41:11
1	S 181.975 Axial†	84.5	-14.3	-15.987	ug/L	-15.987	ppb	13:41:11
1	Sb 206.836†	60.5	10.2	2.5824	ug/L	2.5824	ppb	13:41:11
1	Se 196.026†	-25.9	4.1	1.8027	ug/L	1.8027	ppb	13:41:11
1	Si 251.611†	467.3	15.2	0.3454	ug/L	0.3454	ppb	13:41:11
1	Sn 189.927†	23.9	12.6	1.8472	ug/L	1.8472	ppb	13:41:11
1	Ti 334.940†	-1425.7	-56.7	-0.0867	ug/L	-0.0867	ppb	13:40:51
1	Tl 190.801†	-55.2	1.6	0.3457	ug/L	0.3457	ppb	13:41:11
1	U 409.014†	-5202.9	-306.6	-9.0872	ug/L	-9.0872	ppb	13:40:51
1	V 292.402†	-1622.2	-39.0	-0.3114	ug/L	-0.3114	ppb	13:40:51
1	Zn 213.857†	1016.0	57.3	0.4377	ug/L	0.4377	ppb	13:41:11
1	SiO2†	458.9	8.2	0.3455	ug/L	0.3455	ppb	13:42:07
2	Sc Radial	6684.0	6684.0	92.2	%			13:39:59
2	Y RADIAL	6060.7	6060.7	90.70	%			13:39:59
2	Al 396.153Radial†	-46.1	33.4	26.822	ug/L	26.822	ppb	13:39:59
2	Ca 317.933Radial†	30.3	2.6	3.6900	ug/L	3.6900	ppb	13:40:19
2	Fe 238.204 Radial†	35.7	1.5	5.7731	ug/L	5.7731	ppb	13:40:19
2	K 766.490 Radial†	2769.4	154.8	29.161	ug/L	29.161	ppb	13:39:59
2	Mg 279.077 IEC†	4.5	2.6	61.086	ug/L	61.086	ppb	13:40:19
2	Na 589.592 Radial†	898.7	-2108.3	-112.32	ug/L	-112.32	ppb	13:39:59
2	Sr 421.552†	-91.5	-33.1	-0.0921	ug/L	-0.0921	ppb	13:39:59
2	Sc 361.383	726606.4	726606.4	92.448	%			13:41:16
2	Y 371.029	567519.2	567519.2	92.694	%			13:41:16
2	Ag 328.068†	722.6	73.3	0.3788	ug/L	0.3788	ppb	13:41:16
2	As 188.979†	-32.0	0.2	0.0684	ug/L	0.0684	ppb	13:41:36
2	B 249.677†	-476.1	309.0	6.5680	ug/L	6.5680	ppb	13:41:16
2	Ba 233.527†	5.5	-13.7	-0.0854	ug/L	-0.0854	ppb	13:41:36
2	Be 313.107†	-4795.4	-265.9	-0.1013	ug/L	-0.1013	ppb	13:41:16
2	Cd 226.502†	-280.7	-11.0	-0.1163	ug/L	-0.1163	ppb	13:41:36
2	Co 228.616†	-94.8	-2.8	-0.0401	ug/L	-0.0401	ppb	13:41:36
2	Cr 267.716†	-8.5	-2.7	-0.0320	ug/L	-0.0320	ppb	13:41:16
2	Cu 324.752†	5817.8	387.3	1.2121	ug/L	1.2121	ppb	13:41:16
2	Mn 257.610†	699.8	-7.6	-0.0075	ug/L	-0.0075	ppb	13:41:16
2	Mo 202.031†	12.7	3.2	0.1886	ug/L	0.1886	ppb	13:41:36
2	Ni 231.604†	147.6	-5.7	-0.1282	ug/L	-0.1282	ppb	13:41:36

2	P 214.914†	308.3	37.6	15.391	ug/L	15.391 ppb	13:41:36
2	Pb 220.353†	-28.7	-4.4	-0.4274	ug/L	-0.4274 ppb	13:41:36
2	S 181.975 Axial†	86.3	-11.5	-12.818	ug/L	-12.818 ppb	13:41:36
2	Sb 206.836†	70.8	21.9	5.4538	ug/L	5.4538 ppb	13:41:36
2	Se 196.026†	-46.9	-18.9	-7.8825	ug/L	-7.8825 ppb	13:41:36
2	Si 251.611†	446.2	-2.9	-0.0875	ug/L	-0.0875 ppb	13:41:36
2	Sn 189.927†	10.6	-1.5	-0.2122	ug/L	-0.2122 ppb	13:41:36
2	Ti 334.940†	-1482.5	-132.7	-0.2097	ug/L	-0.2097 ppb	13:41:16
2	Tl 190.801†	-59.8	-4.0	-0.8930	ug/L	-0.8930 ppb	13:41:36
2	U 409.014†	-5051.6	-196.3	-5.8172	ug/L	-5.8172 ppb	13:41:16
2	V 292.402†	-1713.6	-154.5	-1.2014	ug/L	-1.2014 ppb	13:41:16
2	Zn 213.857†	1029.2	82.0	0.6317	ug/L	0.6317 ppb	13:41:36
2	SiO2†	484.7	40.9	2.2865	ug/L	2.2865 ppb	13:42:12
3	Sc Radial	6587.3	6587.3	90.8	%		13:40:24
3	Y RADIAL	6023.8	6023.8	90.15	%		13:40:24
3	Al 396.153Radial†	-50.1	28.3	22.741	ug/L	22.741 ppb	13:40:24
3	Ca 317.933Radial†	32.2	5.2	7.2901	ug/L	7.2901 ppb	13:40:44
3	Fe 238.204 Radial†	37.2	3.7	14.411	ug/L	14.411 ppb	13:40:44
3	K 766.490 Radial†	2847.8	285.3	53.734	ug/L	53.734 ppb	13:40:24
3	Mg 279.077 IEC†	6.2	4.5	104.49	ug/L	104.49 ppb	13:40:44
3	Na 589.592 Radial†	961.4	-2025.0	-107.88	ug/L	-107.88 ppb	13:40:24
3	Sr 421.552†	-89.9	-32.7	-0.0910	ug/L	-0.0910 ppb	13:40:24
3	Sc 361.383	729831.2	729831.2	92.859	%		13:41:42
3	Y 371.029	569719.2	569719.2	93.053	%		13:41:42
3	Ag 328.068†	720.8	68.0	0.3616	ug/L	0.3616 ppb	13:41:42
3	As 188.979†	-18.2	15.3	4.5042	ug/L	4.5042 ppb	13:42:02
3	B 249.677†	-598.6	179.4	3.8119	ug/L	3.8119 ppb	13:41:42
3	Ba 233.527†	26.7	9.1	0.0538	ug/L	0.0538 ppb	13:42:02
3	Be 313.107†	-4955.3	-415.1	-0.1575	ug/L	-0.1575 ppb	13:41:42
3	Cd 226.502†	-264.8	7.4	0.0762	ug/L	0.0762 ppb	13:42:02
3	Co 228.616†	-88.9	4.0	0.0593	ug/L	0.0593 ppb	13:42:02
3	Cr 267.716†	-93.4	-94.1	-1.1092	ug/L	-1.1092 ppb	13:41:42
3	Cu 324.752†	5908.3	456.9	1.4304	ug/L	1.4304 ppb	13:41:42
3	Mn 257.610†	680.8	-31.4	-0.0296	ug/L	-0.0296 ppb	13:41:42
3	Mo 202.031†	11.3	1.7	0.1006	ug/L	0.1006 ppb	13:42:02
3	Ni 231.604†	132.5	-22.7	-0.5108	ug/L	-0.5108 ppb	13:42:02
3	P 214.914†	303.2	30.6	12.459	ug/L	12.459 ppb	13:42:02
3	Pb 220.353†	-24.1	0.8	0.0799	ug/L	0.0799 ppb	13:42:02
3	S 181.975 Axial†	95.0	-2.6	-2.9090	ug/L	-2.9090 ppb	13:42:02
3	Sb 206.836†	58.0	7.8	1.9743	ug/L	1.9743 ppb	13:42:02
3	Se 196.026†	-26.8	3.0	1.2968	ug/L	1.2968 ppb	13:42:02
3	Si 251.611†	475.1	26.0	0.6524	ug/L	0.6524 ppb	13:42:02
3	Sn 189.927†	17.9	6.4	0.9344	ug/L	0.9344 ppb	13:42:02
3	Ti 334.940†	-1385.9	-21.6	-0.0289	ug/L	-0.0289 ppb	13:41:42
3	Tl 190.801†	-56.4	-0.1	-0.0236	ug/L	-0.0236 ppb	13:42:02
3	U 409.014†	-5241.9	-377.1	-11.173	ug/L	-11.173 ppb	13:41:42
3	V 292.402†	-1639.5	-66.5	-0.5338	ug/L	-0.5338 ppb	13:41:42
3	Zn 213.857†	1045.1	94.2	0.7261	ug/L	0.7261 ppb	13:42:02
3	SiO2†	456.1	7.8	0.3658	ug/L	0.3658 ppb	13:42:17

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	730000.0	92.880	%	0.4429				0.48%
Sc Radial	6654.9	91.8	%	0.81				0.88%
Y 371.029	570095.1	93.115	%	0.4545				0.49%
Y RADIAL	6056.0	90.63	%	0.450				0.50%
Ag 328.068†	83.5	0.4392	ug/L	0.11977	0.4392	ppb	0.11977	27.27%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	23.4	18.733	ug/L	10.6740	18.733	ppb	10.6740	56.98%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.8	1.7148	ug/L	2.42879	1.7148	ppb	2.42879	141.64%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	257.3	5.4685	ug/L	1.46006	5.4685	ppb	1.46006	26.70%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-6.3	-0.0396	ug/L	0.08091	-0.0396	ppb	0.08091	204.35%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-315.4	-0.1199	ug/L	0.03262	-0.1199	ppb	0.03262	27.21%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2.5	3.5728	ug/L	3.77723	3.5728	ppb	3.77723	105.72%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -6.3     -0.0681 ug/L      0.12731     -0.0681 ppb       0.12731 186.84%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               0.9      0.0135 ug/L      0.05017      0.0135 ppb       0.05017 370.68%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -43.1     -0.5073 ug/L      0.54960     -0.5073 ppb       0.54960 108.33%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             399.8      1.2519 ug/L      0.16225      1.2519 ppb       0.16225  12.96%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        4.2      16.515 ug/L      11.9336      16.515 ppb       11.9336  72.26%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       233.3      43.937 ug/L      13.0207      43.937 ppb       13.0207  29.64%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           4.1      96.591 ug/L      32.2885      96.591 ppb       32.2885  33.43%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -7.9     -0.0072 ug/L      0.02267     -0.0072 ppb       0.02267 316.99%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.5      0.3301 ug/L      0.32434      0.3301 ppb       0.32434  98.26%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†    -2069.4     -110.25 ug/L        2.234     -110.25 ppb         2.234   2.03%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†             -15.2     -0.3420 ug/L      0.19523     -0.3420 ppb       0.19523  57.08%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               27.8      11.324 ug/L       4.7369      11.324 ppb        4.7369  41.83%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               1.6      0.1629 ug/L      0.63588      0.1629 ppb       0.63588 390.35%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -9.5     -10.571 ug/L       6.8225     -10.571 ppb        6.8225  64.54%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              13.3      3.3368 ug/L      1.85840      3.3368 ppb       1.85840  55.69%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -3.9     -1.5943 ug/L      5.45158     -1.5943 ppb       5.45158 341.93%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              12.7      0.3034 ug/L      0.37171      0.3034 ppb       0.37171 122.50%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               5.8      0.8565 ug/L      1.03193      0.8565 ppb       1.03193 120.48%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             -11.5     -0.0320 ug/L      0.10309     -0.0320 ppb       0.10309 321.70%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -70.3     -0.1084 ug/L      0.09236     -0.1084 ppb       0.09236  85.20%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -0.9     -0.1903 ug/L      0.63596     -0.1903 ppb       0.63596 334.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†            -293.4     -8.6924 ug/L      2.69949     -8.6924 ppb       2.69949  31.06%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -86.7     -0.6822 ug/L      0.46320     -0.6822 ppb       0.46320  67.90%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              77.8      0.5985 ug/L      0.14704      0.5985 ppb       0.14704  24.57%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    18.9      0.9993 ug/L      1.11483      0.9993 ppb       1.11483 111.56%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/1/2009 14:21:54
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601

Plasma On Time: 6/29/2009 15:26:31
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070109.sif
Batch ID:
Results Data Set: 070109
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX
IEC File: 040209.iec
Method Description:

Method Last Saved: 7/1/2009 10:29:21
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/1/2009 14:22:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	6653.9	6653.9	91.7	%			14:24:16
1	Y RADIAL	6043.3	6043.3	99.62	%			14:24:16
1	Al 396.153Radial†	5904.0	6518.7	5212.4	ug/L	5212.4	ppb	14:23:56

1	Ca 317.933Radial†	3557.3	3847.1	5404.8 ug/L	5404.8 ppb	14:24:16
1	Fe 238.204 Radial†	1292.5	1371.6	5358.3 ug/L	5358.3 ppb	14:24:16
1	K 766.490 Radial†	27391.7	27006.4	5071.4 ug/L	5071.4 ppb	14:23:56
1	Mg 279.077 IEC†	214.6	231.6	5427.0 ug/L	5427.0 ppb	14:24:16
1	Na 589.592 Radial†	178972.7	191993.8	10229 ug/L	10229 ppb	14:23:56
1	Sr 421.552†	163478.0	178254.5	496.32 ug/L	496.32 ppb	14:23:56
1	Sc 361.383	758543.9	758543.9	96.512 %		14:25:15
1	Y 371.029	583873.1	583873.1	99.997 %		14:25:15
1	Ag 328.068†	92313.0	94941.0	491.16 ug/L	491.16 ppb	14:25:15
1	As 188.979†	1530.5	1620.8	480.36 ug/L	480.36 ppb	14:25:35
1	B 249.677†	21228.1	22819.4	482.19 ug/L	482.19 ppb	14:25:15
1	Ba 233.527†	78560.9	81380.5	492.36 ug/L	492.36 ppb	14:25:15
1	Be 313.107†	1239836.0	1289565.7	490.28 ug/L	490.28 ppb	14:25:15
1	Cd 226.502†	42979.5	44825.4	472.12 ug/L	472.12 ppb	14:25:35
1	Co 228.616†	31350.5	32583.3	477.84 ug/L	477.84 ppb	14:25:35
1	Cr 267.716†	40047.6	41501.5	491.40 ug/L	491.40 ppb	14:25:15
1	Cu 324.752†	156955.2	156721.9	490.67 ug/L	490.67 ppb	14:25:15
1	Mn 257.610†	506145.8	523673.7	491.13 ug/L	491.13 ppb	14:25:15
1	Mo 202.031†	7903.2	8178.2	487.64 ug/L	487.64 ppb	14:25:35
1	Ni 231.604†	20807.4	21394.0	480.50 ug/L	480.50 ppb	14:25:35
1	P 214.914†	5855.7	5771.4	2308.0 ug/L	2308.0 ppb	14:25:35
1	Pb 220.353†	4745.8	4944.0	491.45 ug/L	491.45 ppb	14:25:35
1	S 181.975 Axial†	912.8	841.0	936.09 ug/L	936.09 ppb	14:25:35
1	Sb 206.836†	1922.4	1937.2	487.79 ug/L	487.79 ppb	14:25:35
1	Se 196.026†	1063.3	1133.5	493.22 ug/L	493.22 ppb	14:25:35
1	Si 251.611†	90932.2	93733.0	2448.9 ug/L	2448.9 ppb	14:25:15
1	Sn 189.927†	3193.7	3296.1	483.39 ug/L	483.39 ppb	14:25:35
1	Ti 334.940†	298428.5	310684.7	497.50 ug/L	497.50 ppb	14:25:15
1	Tl 190.801†	2043.2	2177.7	485.94 ug/L	485.94 ppb	14:25:35
1	U 409.014†	10580.2	16230.5	479.26 ug/L	479.26 ppb	14:25:15
1	V 292.402†	59522.0	63372.3	495.01 ug/L	495.01 ppb	14:25:15
1	Zn 213.857†	62090.5	63303.2	486.19 ug/L	486.19 ppb	14:25:15
1	SiO2†	90966.1	93770.2	5261.0 ug/L	5261.0 ppb	14:26:35
2	Sc Radial	6698.6	6698.6	92.4 %		14:24:41
2	Y RADIAL	6074.1	6074.1	100.1 %		14:24:41
2	Al 396.153Radial†	5863.9	6432.3	5143.1 ug/L	5143.1 ppb	14:24:21
2	Ca 317.933Radial†	3568.3	3833.1	5385.2 ug/L	5385.2 ppb	14:24:41
2	Fe 238.204 Radial†	1297.0	1367.0	5340.3 ug/L	5340.3 ppb	14:24:41
2	K 766.490 Radial†	27342.9	26754.1	5024.0 ug/L	5024.0 ppb	14:24:21
2	Mg 279.077 IEC†	220.3	236.2	5535.2 ug/L	5535.2 ppb	14:24:41
2	Na 589.592 Radial†	178349.8	190016.3	10123 ug/L	10123 ppb	14:24:21
2	Sr 421.552†	163001.4	176548.3	491.57 ug/L	491.57 ppb	14:24:21
2	Sc 361.383	763190.1	763190.1	97.103 %		14:25:42
2	Y 371.029	587080.7	587080.7	100.55 %		14:25:42
2	Ag 328.068†	93148.6	95219.2	492.59 ug/L	492.59 ppb	14:25:42
2	As 188.979†	1549.6	1630.8	483.31 ug/L	483.31 ppb	14:26:02
2	B 249.677†	21394.9	22857.2	483.00 ug/L	483.00 ppb	14:25:42
2	Ba 233.527†	78957.3	81293.2	491.83 ug/L	491.83 ppb	14:25:42
2	Be 313.107†	1246457.5	1288563.9	489.90 ug/L	489.90 ppb	14:25:42
2	Cd 226.502†	43157.3	44737.4	471.19 ug/L	471.19 ppb	14:26:02
2	Co 228.616†	31496.2	32535.6	477.14 ug/L	477.14 ppb	14:26:02
2	Cr 267.716†	40223.2	41429.7	490.55 ug/L	490.55 ppb	14:25:42
2	Cu 324.752†	158139.5	156951.5	491.39 ug/L	491.39 ppb	14:25:42
2	Mn 257.610†	508742.9	523155.6	490.64 ug/L	490.64 ppb	14:25:42
2	Mo 202.031†	7932.5	8158.6	486.46 ug/L	486.46 ppb	14:26:02
2	Ni 231.604†	20882.6	21340.2	479.29 ug/L	479.29 ppb	14:26:02
2	P 214.914†	5873.0	5752.2	2299.9 ug/L	2299.9 ppb	14:26:02
2	Pb 220.353†	4763.7	4932.5	490.29 ug/L	490.29 ppb	14:26:02
2	S 181.975 Axial†	923.0	845.6	941.32 ug/L	941.32 ppb	14:26:02
2	Sb 206.836†	1909.4	1911.7	481.37 ug/L	481.37 ppb	14:26:02
2	Se 196.026†	1079.3	1143.3	497.25 ug/L	497.25 ppb	14:26:02
2	Si 251.611†	91461.2	93704.1	2448.2 ug/L	2448.2 ppb	14:25:42
2	Sn 189.927†	3189.1	3271.3	479.75 ug/L	479.75 ppb	14:26:02
2	Ti 334.940†	300422.1	310855.4	497.78 ug/L	497.78 ppb	14:25:42
2	Tl 190.801†	2048.0	2169.8	484.18 ug/L	484.18 ppb	14:26:02
2	U 409.014†	10431.4	16010.5	472.74 ug/L	472.74 ppb	14:25:42
2	V 292.402†	59894.9	63380.8	495.05 ug/L	495.05 ppb	14:25:42
2	Zn 213.857†	62419.6	63250.4	485.78 ug/L	485.78 ppb	14:25:42
2	SiO2†	90122.0	92327.2	5179.7 ug/L	5179.7 ppb	14:26:40
3	Sc Radial	6694.1	6694.1	92.3 %		14:25:06
3	Y RADIAL	6082.2	6082.2	100.3 %		14:25:06

3	Al 396.153Radial†	5792.1	6358.9	5083.9 ug/L	5083.9 ppb	14:24:46
3	Ca 317.933Radial†	3577.3	3845.5	5402.5 ug/L	5402.5 ppb	14:25:06
3	Fe 238.204 Radial†	1306.4	1378.2	5383.9 ug/L	5383.9 ppb	14:25:06
3	K 766.490 Radial†	26924.5	26320.8	4942.4 ug/L	4942.4 ppb	14:24:46
3	Mg 279.077 IEC†	219.0	234.9	5506.0 ug/L	5506.0 ppb	14:25:06
3	Na 589.592 Radial†	174725.7	186220.4	9921.2 ug/L	9921.2 ppb	14:24:46
3	Sr 421.552†	159737.1	173131.0	482.05 ug/L	482.05 ppb	14:24:46
3	Sc 361.383	753260.1	753260.1	95.840 %		14:26:09
3	Y 371.029	580725.8	580725.8	99.458 %		14:26:09
3	Ag 328.068†	91813.1	95090.3	491.94 ug/L	491.94 ppb	14:26:09
3	As 188.979†	1545.2	1647.2	488.15 ug/L	488.15 ppb	14:26:30
3	B 249.677†	21046.6	22784.3	481.43 ug/L	481.43 ppb	14:26:09
3	Ba 233.527†	77716.8	81070.8	490.49 ug/L	490.49 ppb	14:26:09
3	Be 313.107†	1227952.9	1286178.0	488.99 ug/L	488.99 ppb	14:26:09
3	Cd 226.502†	42997.4	45156.4	475.61 ug/L	475.61 ppb	14:26:30
3	Co 228.616†	31306.8	32765.5	480.52 ug/L	480.52 ppb	14:26:30
3	Cr 267.716†	39695.9	41425.5	490.50 ug/L	490.50 ppb	14:26:09
3	Cu 324.752†	155833.7	156692.4	490.58 ug/L	490.58 ppb	14:26:09
3	Mn 257.610†	500798.0	521772.5	489.35 ug/L	489.35 ppb	14:26:09
3	Mo 202.031†	7904.7	8237.3	491.16 ug/L	491.16 ppb	14:26:30
3	Ni 231.604†	20859.7	21599.7	485.12 ug/L	485.12 ppb	14:26:30
3	P 214.914†	5865.8	5824.5	2330.1 ug/L	2330.1 ppb	14:26:30
3	Pb 220.353†	4723.6	4955.4	492.55 ug/L	492.55 ppb	14:26:30
3	S 181.975 Axial†	912.0	846.7	942.48 ug/L	942.48 ppb	14:26:30
3	Sb 206.836†	1915.0	1943.5	489.48 ug/L	489.48 ppb	14:26:30
3	Se 196.026†	1078.1	1156.7	503.00 ug/L	503.00 ppb	14:26:30
3	Si 251.611†	90048.9	93472.3	2442.0 ug/L	2442.0 ppb	14:26:09
3	Sn 189.927†	3185.9	3311.3	485.61 ug/L	485.61 ppb	14:26:30
3	Ti 334.940†	296031.2	310352.4	496.97 ug/L	496.97 ppb	14:26:09
3	Tl 190.801†	2055.6	2205.5	492.07 ug/L	492.07 ppb	14:26:30
3	U 409.014†	10401.0	16120.4	476.00 ug/L	476.00 ppb	14:26:09
3	V 292.402†	59097.2	63361.7	494.96 ug/L	494.96 ppb	14:26:09
3	Zn 213.857†	61392.2	63025.9	484.00 ug/L	484.00 ppb	14:26:09
3	SiO2†	90614.6	94064.7	5277.5 ug/L	5277.5 ppb	14:26:45

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	758331.4	96.485	%	0.6321				0.66%
Sc Radial	6682.2	92.1	%	0.34				0.37%
Y 371.029	583893.2	100.00	%	0.544				0.54%
Y RADIAL	6066.5	100.0	%	0.34				0.34%
Ag 328.068†	95083.5	491.90	ug/L	0.716	491.90	ppb	0.716	0.15%
QC value within limits for Ag 328.068 Recovery = 98.38%								
Al 396.153Radial†	6436.6	5146.5	ug/L	64.31	5146.5	ppb	64.31	1.25%
QC value within limits for Al 396.153Radial Recovery = 102.93%								
As 188.979†	1632.9	483.94	ug/L	3.933	483.94	ppb	3.933	0.81%
QC value within limits for As 188.979 Recovery = 96.79%								
B 249.677†	22820.3	482.21	ug/L	0.786	482.21	ppb	0.786	0.16%
QC value within limits for B 249.677 Recovery = 96.44%								
Ba 233.527†	81248.2	491.56	ug/L	0.964	491.56	ppb	0.964	0.20%
QC value within limits for Ba 233.527 Recovery = 98.31%								
Be 313.107†	1288102.6	489.72	ug/L	0.661	489.72	ppb	0.661	0.13%
QC value within limits for Be 313.107 Recovery = 97.94%								
Ca 317.933Radial†	3841.9	5397.5	ug/L	10.73	5397.5	ppb	10.73	0.20%
QC value within limits for Ca 317.933Radial Recovery = 107.95%								
Cd 226.502†	44906.4	472.97	ug/L	2.328	472.97	ppb	2.328	0.49%
QC value within limits for Cd 226.502 Recovery = 94.59%								
Co 228.616†	32628.1	478.50	ug/L	1.786	478.50	ppb	1.786	0.37%
QC value within limits for Co 228.616 Recovery = 95.70%								
Cr 267.716†	41452.2	490.82	ug/L	0.504	490.82	ppb	0.504	0.10%
QC value within limits for Cr 267.716 Recovery = 98.16%								
Cu 324.752†	156788.6	490.88	ug/L	0.443	490.88	ppb	0.443	0.09%
QC value within limits for Cu 324.752 Recovery = 98.18%								
Fe 238.204 Radial†	1372.3	5360.8	ug/L	21.93	5360.8	ppb	21.93	0.41%
QC value within limits for Fe 238.204 Radial Recovery = 107.22%								
K 766.490 Radial†	26693.8	5012.6	ug/L	65.26	5012.6	ppb	65.26	1.30%
QC value within limits for K 766.490 Radial Recovery = 100.25%								
Mg 279.077 IEC†	234.2	5489.4	ug/L	56.01	5489.4	ppb	56.01	1.02%
QC value within limits for Mg 279.077 IEC Recovery = 109.79%								

Mn 257.610†	522867.2	490.38 ug/L	0.919	490.38 ppb	0.919	0.19%
QC value within limits for Mn 257.610 Recovery = 98.08%						
Mo 202.031†	8191.4	488.42 ug/L	2.442	488.42 ppb	2.442	0.50%
QC value within limits for Mo 202.031 Recovery = 97.68%						
Na 589.592 Radial†	189410.2	10091 ug/L	156.3	10091 ppb	156.3	1.55%
QC value within limits for Na 589.592 Radial Recovery = 100.91%						
Ni 231.604†	21444.6	481.63 ug/L	3.078	481.63 ppb	3.078	0.64%
QC value within limits for Ni 231.604 Recovery = 96.33%						
P 214.914†	5782.7	2312.7 ug/L	15.66	2312.7 ppb	15.66	0.68%
QC value within limits for P 214.914 Recovery = 92.51%						
Pb 220.353†	4944.0	491.43 ug/L	1.131	491.43 ppb	1.131	0.23%
QC value within limits for Pb 220.353 Recovery = 98.29%						
S 181.975 Axial†	844.4	939.96 ug/L	3.405	939.96 ppb	3.405	0.36%
QC value within limits for S 181.975 Axial Recovery = 94.00%						
Sb 206.836†	1930.8	486.21 ug/L	4.277	486.21 ppb	4.277	0.88%
QC value within limits for Sb 206.836 Recovery = 97.24%						
Se 196.026†	1144.5	497.82 ug/L	4.915	497.82 ppb	4.915	0.99%
QC value within limits for Se 196.026 Recovery = 99.56%						
Si 251.611†	93636.5	2446.4 ug/L	3.81	2446.4 ppb	3.81	0.16%
QC value within limits for Si 251.611 Recovery = 97.85%						
Sn 189.927†	3292.9	482.92 ug/L	2.960	482.92 ppb	2.960	0.61%
QC value within limits for Sn 189.927 Recovery = 96.58%						
Sr 421.552†	175977.9	489.98 ug/L	7.265	489.98 ppb	7.265	1.48%
QC value within limits for Sr 421.552 Recovery = 98.00%						
Ti 334.940†	310630.8	497.42 ug/L	0.410	497.42 ppb	0.410	0.08%
QC value within limits for Ti 334.940 Recovery = 99.48%						
Tl 190.801†	2184.4	487.39 ug/L	4.143	487.39 ppb	4.143	0.85%
QC value within limits for Tl 190.801 Recovery = 97.48%						
U 409.014†	16120.5	476.00 ug/L	3.257	476.00 ppb	3.257	0.68%
QC value within limits for U 409.014 Recovery = 95.20%						
V 292.402†	63371.6	495.00 ug/L	0.044	495.00 ppb	0.044	0.01%
QC value within limits for V 292.402 Recovery = 99.00%						
Zn 213.857†	63193.2	485.32 ug/L	1.162	485.32 ppb	1.162	0.24%
QC value within limits for Zn 213.857 Recovery = 97.06%						
SiO2†	93387.3	5239.4 ug/L	52.39	5239.4 ppb	52.39	1.00%
QC value within limits for SiO2 Recovery = 97.98%						

All analyte(s) passed QC.

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/1/2009 14:28:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6682.8	6682.8	92.1	%			14:30:48
1	Y RADIAL	6137.5	6137.5	101.2	%			14:30:48
1	Al 396.153Radial†	-56.2	22.5	18.007	ug/L	18.007	ppb	14:30:48
1	Ca 317.933Radial†	28.0	0.1	0.1613	ug/L	0.1613	ppb	14:31:08
1	Fe 238.204 Radial†	37.3	3.3	12.698	ug/L	12.698	ppb	14:31:08
1	K 766.490 Radial†	2680.2	58.6	11.040	ug/L	11.040	ppb	14:30:48
1	Mg 279.077 IEC†	5.0	3.1	72.979	ug/L	72.979	ppb	14:31:08
1	Na 589.592 Radial†	683.2	-2342.0	-124.77	ug/L	-124.77	ppb	14:30:48
1	Sr 421.552†	-33.4	30.0	0.0836	ug/L	0.0836	ppb	14:30:48
1	Sc 361.383	725443.6	725443.6	92.301	%			14:32:05
1	Y 371.029	566183.3	566183.3	96.967	%			14:32:05
1	Ag 328.068†	861.6	225.2	1.1627	ug/L	1.1627	ppb	14:32:05
1	As 188.979†	-27.2	5.4	1.5887	ug/L	1.5887	ppb	14:32:25
1	B 249.677†	-646.2	124.0	2.6349	ug/L	2.6349	ppb	14:32:05
1	Ba 233.527†	18.2	0.1	-0.0025	ug/L	-0.0025	ppb	14:32:25
1	Be 313.107†	-4864.7	-349.2	-0.1329	ug/L	-0.1329	ppb	14:32:05
1	Cd 226.502†	-272.3	-2.3	-0.0260	ug/L	-0.0260	ppb	14:32:25
1	Co 228.616†	-98.4	-6.9	-0.0972	ug/L	-0.0972	ppb	14:32:25
1	Cr 267.716†	-0.2	6.2	0.0745	ug/L	0.0745	ppb	14:32:05
1	Cu 324.752†	5804.9	383.4	1.2003	ug/L	1.2003	ppb	14:32:05
1	Mn 257.610†	702.9	-3.0	-0.0026	ug/L	-0.0026	ppb	14:32:25
1	Mo 202.031†	31.6	23.7	1.4117	ug/L	1.4117	ppb	14:32:25
1	Ni 231.604†	158.5	6.4	0.1431	ug/L	0.1431	ppb	14:32:25
1	P 214.914†	311.2	41.3	16.929	ug/L	16.929	ppb	14:32:25
1	Pb 220.353†	-24.4	0.2	0.0299	ug/L	0.0299	ppb	14:32:25
1	S 181.975 Axial†	91.8	-5.5	-6.0949	ug/L	-6.0949	ppb	14:32:25
1	Sb 206.836†	56.2	6.2	1.5541	ug/L	1.5541	ppb	14:32:25
1	Se 196.026†	-34.2	-5.2	-2.1332	ug/L	-2.1332	ppb	14:32:25
1	Si 251.611†	451.0	3.1	0.0526	ug/L	0.0526	ppb	14:32:25
1	Sn 189.927†	11.9	-0.1	-0.0095	ug/L	-0.0095	ppb	14:32:25
1	Ti 334.940†	-1472.0	-123.9	-0.1947	ug/L	-0.1947	ppb	14:32:05
1	Tl 190.801†	-53.8	2.4	0.5339	ug/L	0.5339	ppb	14:32:25
1	U 409.014†	-5121.9	-281.2	-8.3324	ug/L	-8.3324	ppb	14:32:05
1	V 292.402†	-1744.6	-191.0	-1.4735	ug/L	-1.4735	ppb	14:32:05
1	Zn 213.857†	1024.0	78.1	0.5993	ug/L	0.5993	ppb	14:32:25
1	SiO2†	500.6	58.9	3.2661	ug/L	3.2661	ppb	14:33:21
2	Sc Radial	6710.6	6710.6	92.5	%			14:31:13
2	Y RADIAL	6127.9	6127.9	101.0	%			14:31:13
2	Al 396.153Radial†	-68.2	9.8	7.8269	ug/L	7.8269	ppb	14:31:13
2	Ca 317.933Radial†	29.3	1.4	1.9857	ug/L	1.9857	ppb	14:31:33
2	Fe 238.204 Radial†	37.7	3.5	13.819	ug/L	13.819	ppb	14:31:33
2	K 766.490 Radial†	2714.7	83.9	15.799	ug/L	15.799	ppb	14:31:13
2	Mg 279.077 IEC†	4.9	3.0	71.038	ug/L	71.038	ppb	14:31:33
2	Na 589.592 Radial†	627.8	-2405.0	-128.13	ug/L	-128.13	ppb	14:31:13
2	Sr 421.552†	-76.6	-16.5	-0.0460	ug/L	-0.0460	ppb	14:31:13
2	Sc 361.383	721791.5	721791.5	91.836	%			14:32:30
2	Y 371.029	564053.7	564053.7	96.602	%			14:32:30
2	Ag 328.068†	765.0	124.8	0.6463	ug/L	0.6463	ppb	14:32:30
2	As 188.979†	-28.6	3.8	1.1090	ug/L	1.1090	ppb	14:32:50
2	B 249.677†	-598.5	172.4	3.6626	ug/L	3.6626	ppb	14:32:30
2	Ba 233.527†	33.1	16.4	0.0959	ug/L	0.0959	ppb	14:32:50
2	Be 313.107†	-4920.1	-436.2	-0.1658	ug/L	-0.1658	ppb	14:32:30
2	Cd 226.502†	-283.5	-16.1	-0.1716	ug/L	-0.1716	ppb	14:32:50
2	Co 228.616†	-82.1	10.4	0.1548	ug/L	0.1548	ppb	14:32:50
2	Cr 267.716†	-68.3	-67.9	-0.8020	ug/L	-0.8020	ppb	14:32:30
2	Cu 324.752†	5870.5	486.7	1.5235	ug/L	1.5235	ppb	14:32:30
2	Mn 257.610†	645.3	-61.9	-0.0576	ug/L	-0.0576	ppb	14:32:50
2	Mo 202.031†	21.6	12.9	0.7709	ug/L	0.7709	ppb	14:32:50
2	Ni 231.604†	142.4	-10.3	-0.2327	ug/L	-0.2327	ppb	14:32:50

2	P 214.914†	322.1	54.8	22.497 ug/L	22.497 ppb	14:32:50
2	Pb 220.353†	-23.3	1.3	0.1347 ug/L	0.1347 ppb	14:32:50
2	S 181.975 Axial†	93.5	-3.1	-3.4491 ug/L	-3.4491 ppb	14:32:50
2	Sb 206.836†	60.5	11.2	2.8245 ug/L	2.8245 ppb	14:32:50
2	Se 196.026†	-38.0	-9.6	-3.9690 ug/L	-3.9690 ppb	14:32:50
2	Si 251.611†	443.9	-2.2	-0.0833 ug/L	-0.0833 ppb	14:32:50
2	Sn 189.927†	14.6	2.9	0.4298 ug/L	0.4298 ppb	14:32:50
2	Ti 334.940†	-1423.0	-78.6	-0.1221 ug/L	-0.1221 ppb	14:32:30
2	Tl 190.801†	-56.1	-0.5	-0.0997 ug/L	-0.0997 ppb	14:32:50
2	U 409.014†	-5073.8	-256.9	-7.6125 ug/L	-7.6125 ppb	14:32:30
2	V 292.402†	-1734.8	-190.0	-1.4721 ug/L	-1.4721 ppb	14:32:30
2	Zn 213.857†	1008.7	67.1	0.5159 ug/L	0.5159 ppb	14:32:50
2	SiO2†	472.3	30.8	1.6889 ug/L	1.6889 ppb	14:33:26
3	Sc Radial	6517.4	6517.4	89.9 %		14:31:38
3	Y RADIAL	5962.2	5962.2	98.28 %		14:31:38
3	Al 396.153Radial†	-52.0	25.6	20.557 ug/L	20.557 ppb	14:31:38
3	Ca 317.933Radial†	27.5	0.3	0.4014 ug/L	0.4014 ppb	14:31:58
3	Fe 238.204 Radial†	39.3	6.5	25.392 ug/L	25.392 ppb	14:31:58
3	K 766.490 Radial†	2796.8	262.2	49.381 ug/L	49.381 ppb	14:31:38
3	Mg 279.077 IEC†	-2.5	-5.1	-118.91 ug/L	-118.91 ppb	14:31:58
3	Na 589.592 Radial†	562.6	-2457.4	-130.92 ug/L	-130.92 ppb	14:31:38
3	Sr 421.552†	-61.4	-2.1	-0.0058 ug/L	-0.0058 ppb	14:31:38
3	Sc 361.383	717158.0	717158.0	91.246 %		14:32:55
3	Y 371.029	560967.3	560967.3	96.074 %		14:32:55
3	Ag 328.068†	572.3	-81.0	-0.4042 ug/L	-0.4042 ppb	14:32:55
3	As 188.979†	-32.1	-0.3	-0.0741 ug/L	-0.0741 ppb	14:33:15
3	B 249.677†	-582.0	186.2	3.9561 ug/L	3.9561 ppb	14:32:55
3	Ba 233.527†	21.4	3.9	0.0202 ug/L	0.0202 ppb	14:33:15
3	Be 313.107†	-4867.7	-413.5	-0.1573 ug/L	-0.1573 ppb	14:32:55
3	Cd 226.502†	-278.6	-12.7	-0.1370 ug/L	-0.1370 ppb	14:33:15
3	Co 228.616†	-97.6	-7.2	-0.1043 ug/L	-0.1043 ppb	14:33:15
3	Cr 267.716†	-70.7	-71.0	-0.8371 ug/L	-0.8371 ppb	14:32:55
3	Cu 324.752†	5820.6	473.2	1.4822 ug/L	1.4822 ppb	14:32:55
3	Mn 257.610†	654.1	-47.6	-0.0391 ug/L	-0.0391 ppb	14:33:15
3	Mo 202.031†	17.4	8.5	0.5080 ug/L	0.5080 ppb	14:33:15
3	Ni 231.604†	147.6	-3.6	-0.0819 ug/L	-0.0819 ppb	14:33:15
3	P 214.914†	302.0	35.0	14.297 ug/L	14.297 ppb	14:33:15
3	Pb 220.353†	16.2	44.4	4.4018 ug/L	4.4018 ppb	14:33:15
3	S 181.975 Axial†	85.2	-11.5	-12.784 ug/L	-12.784 ppb	14:33:15
3	Sb 206.836†	60.9	12.1	3.0690 ug/L	3.0690 ppb	14:33:15
3	Se 196.026†	-26.7	2.6	1.1599 ug/L	1.1599 ppb	14:33:15
3	Si 251.611†	468.8	28.2	0.6889 ug/L	0.6889 ppb	14:33:15
3	Sn 189.927†	24.4	13.8	2.0249 ug/L	2.0249 ppb	14:33:15
3	Ti 334.940†	-1459.0	-128.0	-0.1998 ug/L	-0.1998 ppb	14:32:55
3	Tl 190.801†	-55.3	0.0	0.0052 ug/L	0.0052 ppb	14:33:15
3	U 409.014†	-5151.1	-377.3	-11.181 ug/L	-11.181 ppb	14:32:55
3	V 292.402†	-1709.1	-173.9	-1.3632 ug/L	-1.3632 ppb	14:32:55
3	Zn 213.857†	1012.8	78.7	0.6099 ug/L	0.6099 ppb	14:33:15
3	SiO2†	468.2	29.7	1.5582 ug/L	1.5582 ppb	14:33:31

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	721464.4	91.794	%	0.5283				0.58%
Sc Radial	6636.9	91.5	%	1.44				1.57%
Y 371.029	563734.8	96.548	%	0.4492				0.47%
Y RADIAL	6075.9	100.2	%	1.62				1.62%
Ag 328.068†	89.6	0.4683	ug/L	0.79847	0.4683	ppb	0.79847	170.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.3	15.464	ug/L	6.7353	15.464	ppb	6.7353	43.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.0	0.8745	ug/L	0.85581	0.8745	ppb	0.85581	97.86%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	160.9	3.4179	ug/L	0.69378	3.4179	ppb	0.69378	20.30%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	6.8	0.0379	ug/L	0.05152	0.0379	ppb	0.05152	135.98%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-399.6	-0.1520	ug/L	0.01705	-0.1520	ppb	0.01705	11.22%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.6	0.8495	ug/L	0.99134	0.8495	ppb	0.99134	116.70%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -10.4     -0.1116 ug/L       0.07607     -0.1116 ppb       0.07607  68.19%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -1.2     -0.0156 ug/L       0.14758     -0.0156 ppb       0.14758 947.23%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -44.2     -0.5215 ug/L       0.51652     -0.5215 ppb       0.51652  99.04%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              447.8      1.4020 ug/L       0.17587      1.4020 ppb       0.17587  12.54%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         4.4     17.303 ug/L        7.0278     17.303 ppb        7.0278  40.62%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        134.9     25.407 ug/L       20.8981     25.407 ppb       20.8981  82.25%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.4      8.3683 ug/L     110.23270      8.3683 ppb     110.23270 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -37.5     -0.0331 ug/L       0.02797     -0.0331 ppb       0.02797  84.45%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               15.0      0.8969 ug/L       0.46482      0.8969 ppb       0.46482  51.83%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -2401.4    -127.94 ug/L         3.077    -127.94 ppb         3.077   2.41%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -2.5     -0.0572 ug/L       0.18910     -0.0572 ppb       0.18910 330.77%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                43.7     17.908 ug/L        4.1867     17.908 ppb        4.1867  23.38%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               15.3      1.5221 ug/L       2.49444      1.5221 ppb       2.49444 163.88%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -6.7     -7.4426 ug/L       4.81105     -7.4426 ppb       4.81105  64.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                9.8      2.4826 ug/L       0.81328      2.4826 ppb       0.81328  32.76%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.1     -1.6474 ug/L       2.59871     -1.6474 ppb       2.59871 157.74%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                9.7      0.2194 ug/L       0.41222      0.2194 ppb       0.41222 187.91%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                5.6      0.8151 ug/L       1.07053      0.8151 ppb       1.07053 131.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                3.8      0.0106 ug/L       0.06637      0.0106 ppb       0.06637 626.72%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -110.2     -0.1722 ug/L       0.04346     -0.1722 ppb       0.04346  25.23%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.7      0.1465 ug/L       0.33959      0.1465 ppb       0.33959 231.82%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -305.2     -9.0420 ug/L       1.88712     -9.0420 ppb       1.88712  20.87%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -185.0     -1.4363 ug/L       0.06329     -1.4363 ppb       0.06329   4.41%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               74.7      0.5750 ug/L       0.05146      0.5750 ppb       0.05146   8.95%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     39.8      2.1711 ug/L       0.95058      2.1711 ppb       0.95058  43.78%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/1/2009 15:24:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6689.8	6689.8	92.2	%			15:26:25
1	Y RADIAL	6067.5	6067.5	100.0	%			15:26:25
1	Al 396.153Radial†	5888.4	6467.3	5170.7	ug/L	5170.7	ppb	15:26:05
1	Ca 317.933Radial†	3641.8	3917.9	5504.3	ug/L	5504.3	ppb	15:26:25
1	Fe 238.204 Radial†	1326.4	1400.7	5471.9	ug/L	5471.9	ppb	15:26:25
1	K 766.490 Radial†	27230.2	26671.0	5008.2	ug/L	5008.2	ppb	15:26:05
1	Mg 279.077 IEC†	221.0	237.3	5560.4	ug/L	5560.4	ppb	15:26:25
1	Na 589.592 Radial†	177474.8	189322.9	10086	ug/L	10086	ppb	15:26:05
1	Sr 421.552†	161984.7	175679.3	489.14	ug/L	489.14	ppb	15:26:05
1	Sc 361.383	752390.2	752390.2	95.729	%			15:27:24
1	Y 371.029	579564.9	579564.9	99.259	%			15:27:24
1	Ag 328.068†	92628.7	96053.0	496.92	ug/L	496.92	ppb	15:27:24
1	As 188.979†	1560.4	1664.9	493.39	ug/L	493.39	ppb	15:27:45
1	B 249.677†	21214.3	22984.9	485.65	ug/L	485.65	ppb	15:27:24
1	Ba 233.527†	78335.0	81810.3	494.96	ug/L	494.96	ppb	15:27:24
1	Be 313.107†	1242711.9	1303076.9	495.41	ug/L	495.41	ppb	15:27:24
1	Cd 226.502†	43524.9	45759.4	481.96	ug/L	481.96	ppb	15:27:45
1	Co 228.616†	31729.6	33244.9	487.56	ug/L	487.56	ppb	15:27:45
1	Cr 267.716†	40082.0	41876.7	495.84	ug/L	495.84	ppb	15:27:24
1	Cu 324.752†	157272.3	158383.3	495.88	ug/L	495.88	ppb	15:27:24
1	Mn 257.610†	505315.9	527096.1	494.35	ug/L	494.35	ppb	15:27:24
1	Mo 202.031†	8009.6	8356.4	498.26	ug/L	498.26	ppb	15:27:45
1	Ni 231.604†	21046.7	21820.3	490.07	ug/L	490.07	ppb	15:27:45
1	P 214.914†	5931.0	5899.7	2360.4	ug/L	2360.4	ppb	15:27:45
1	Pb 220.353†	4786.6	5026.8	499.66	ug/L	499.66	ppb	15:27:45
1	S 181.975 Axial†	932.5	869.3	967.64	ug/L	967.64	ppb	15:27:45
1	Sb 206.836†	1945.7	1977.8	498.09	ug/L	498.09	ppb	15:27:45
1	Se 196.026†	1097.3	1178.0	512.24	ug/L	512.24	ppb	15:27:45
1	Si 251.611†	91233.2	94818.0	2477.2	ug/L	2477.2	ppb	15:27:24
1	Sn 189.927†	3209.4	3339.6	489.78	ug/L	489.78	ppb	15:27:45
1	Ti 334.940†	298604.4	313397.6	501.85	ug/L	501.85	ppb	15:27:24
1	Tl 190.801†	2097.5	2251.8	502.34	ug/L	502.34	ppb	15:27:45
1	U 409.014†	10662.1	16405.7	484.43	ug/L	484.43	ppb	15:27:24
1	V 292.402†	59574.7	63931.7	499.45	ug/L	499.45	ppb	15:27:24
1	Zn 213.857†	62123.7	63864.1	490.45	ug/L	490.45	ppb	15:27:24
1	SiO2†	91960.0	95579.4	5362.7	ug/L	5362.7	ppb	15:28:45
2	Sc Radial	6700.8	6700.8	92.4	%			15:26:51
2	Y RADIAL	6103.1	6103.1	100.6	%			15:26:51
2	Al 396.153Radial†	5890.8	6459.4	5164.6	ug/L	5164.6	ppb	15:26:31
2	Ca 317.933Radial†	3621.6	3889.6	5464.5	ug/L	5464.5	ppb	15:26:51
2	Fe 238.204 Radial†	1313.7	1384.6	5409.0	ug/L	5409.0	ppb	15:26:51
2	K 766.490 Radial†	27455.3	26866.3	5045.0	ug/L	5045.0	ppb	15:26:31
2	Mg 279.077 IEC†	223.3	239.3	5608.8	ug/L	5608.8	ppb	15:26:51
2	Na 589.592 Radial†	178366.4	189972.3	10121	ug/L	10121	ppb	15:26:31
2	Sr 421.552†	162982.4	176471.0	491.35	ug/L	491.35	ppb	15:26:31
2	Sc 361.383	757685.2	757685.2	96.403	%			15:27:52
2	Y 371.029	583374.3	583374.3	99.911	%			15:27:52
2	Ag 328.068†	93191.4	95960.5	496.43	ug/L	496.43	ppb	15:27:52
2	As 188.979†	1545.7	1638.3	485.55	ug/L	485.55	ppb	15:28:12
2	B 249.677†	21514.9	23141.8	489.02	ug/L	489.02	ppb	15:27:52
2	Ba 233.527†	78606.4	81520.0	493.20	ug/L	493.20	ppb	15:27:52
2	Be 313.107†	1244931.4	1296307.1	492.84	ug/L	492.84	ppb	15:27:52
2	Cd 226.502†	43372.4	45283.5	476.95	ug/L	476.95	ppb	15:28:12
2	Co 228.616†	31549.7	32826.7	481.42	ug/L	481.42	ppb	15:28:12
2	Cr 267.716†	40057.0	41558.2	492.07	ug/L	492.07	ppb	15:27:52
2	Cu 324.752†	158272.7	158272.9	495.53	ug/L	495.53	ppb	15:27:52
2	Mn 257.610†	506610.4	524750.0	492.14	ug/L	492.14	ppb	15:27:52
2	Mo 202.031†	7970.4	8257.2	492.35	ug/L	492.35	ppb	15:28:12
2	Ni 231.604†	21003.2	21621.6	485.61	ug/L	485.61	ppb	15:28:12

2	P 214.914†	5896.4	5820.5	2327.5 ug/L	2327.5 ppb	15:28:12
2	Pb 220.353†	4756.8	4961.0	493.12 ug/L	493.12 ppb	15:28:12
2	S 181.975 Axial†	919.7	849.1	945.21 ug/L	945.21 ppb	15:28:12
2	Sb 206.836†	1937.6	1955.2	492.40 ug/L	492.40 ppb	15:28:12
2	Se 196.026†	1087.1	1159.4	504.22 ug/L	504.22 ppb	15:28:12
2	Si 251.611†	91528.1	94457.9	2467.8 ug/L	2467.8 ppb	15:27:52
2	Sn 189.927†	3211.5	3318.4	486.66 ug/L	486.66 ppb	15:28:12
2	Ti 334.940†	299641.7	312293.7	500.08 ug/L	500.08 ppb	15:27:52
2	Tl 190.801†	2081.3	2219.6	495.23 ug/L	495.23 ppb	15:28:12
2	U 409.014†	10545.8	16207.2	478.56 ug/L	478.56 ppb	15:27:52
2	V 292.402†	59758.7	63687.7	497.49 ug/L	497.49 ppb	15:27:52
2	Zn 213.857†	62230.8	63521.6	487.83 ug/L	487.83 ppb	15:27:52
2	SiO2†	91202.4	94122.1	5280.6 ug/L	5280.6 ppb	15:28:50
3	Sc Radial	6647.2	6647.2	91.7 %		15:27:16
3	Y RADIAL	6018.8	6018.8	99.21 %		15:27:16
3	Al 396.153Radial†	5908.1	6529.7	5220.7 ug/L	5220.7 ppb	15:26:56
3	Ca 317.933Radial†	3604.2	3902.2	5482.2 ug/L	5482.2 ppb	15:27:16
3	Fe 238.204 Radial†	1305.2	1386.9	5418.2 ug/L	5418.2 ppb	15:27:16
3	K 766.490 Radial†	27368.7	27011.4	5072.2 ug/L	5072.2 ppb	15:26:56
3	Mg 279.077 IEC†	221.7	239.6	5614.9 ug/L	5614.9 ppb	15:27:16
3	Na 589.592 Radial†	177756.0	190863.1	10169 ug/L	10169 ppb	15:26:56
3	Sr 421.552†	162432.2	177293.2	493.64 ug/L	493.64 ppb	15:26:56
3	Sc 361.383	748890.4	748890.4	95.284 %		15:28:19
3	Y 371.029	577918.6	577918.6	98.977 %		15:28:19
3	Ag 328.068†	91595.2	95420.6	493.65 ug/L	493.65 ppb	15:28:19
3	As 188.979†	1550.1	1661.7	492.42 ug/L	492.42 ppb	15:28:39
3	B 249.677†	20983.2	22845.8	482.69 ug/L	482.69 ppb	15:28:19
3	Ba 233.527†	77367.4	81177.2	491.13 ug/L	491.13 ppb	15:28:19
3	Be 313.107†	1226253.1	1291870.0	491.15 ug/L	491.15 ppb	15:28:19
3	Cd 226.502†	43555.5	46003.9	484.54 ug/L	484.54 ppb	15:28:39
3	Co 228.616†	31688.4	33356.7	489.21 ug/L	489.21 ppb	15:28:39
3	Cr 267.716†	39454.8	41414.2	490.37 ug/L	490.37 ppb	15:28:19
3	Cu 324.752†	155395.2	157181.0	492.11 ug/L	492.11 ppb	15:28:19
3	Mn 257.610†	497892.8	521772.4	489.36 ug/L	489.36 ppb	15:28:19
3	Mo 202.031†	8007.9	8393.7	500.48 ug/L	500.48 ppb	15:28:39
3	Ni 231.604†	21075.5	21953.2	493.06 ug/L	493.06 ppb	15:28:39
3	P 214.914†	5939.5	5937.6	2377.0 ug/L	2377.0 ppb	15:28:39
3	Pb 220.353†	4801.4	5065.7	503.54 ug/L	503.54 ppb	15:28:39
3	S 181.975 Axial†	930.5	871.7	970.35 ug/L	970.35 ppb	15:28:39
3	Sb 206.836†	1939.7	1981.1	499.14 ug/L	499.14 ppb	15:28:39
3	Se 196.026†	1098.2	1184.3	514.69 ug/L	514.69 ppb	15:28:39
3	Si 251.611†	89891.0	93854.8	2451.7 ug/L	2451.7 ppb	15:28:19
3	Sn 189.927†	3216.3	3362.5	493.12 ug/L	493.12 ppb	15:28:39
3	Ti 334.940†	294727.0	310785.9	497.67 ug/L	497.67 ppb	15:28:19
3	Tl 190.801†	2103.9	2268.8	506.05 ug/L	506.05 ppb	15:28:39
3	U 409.014†	10246.7	16021.8	473.07 ug/L	473.07 ppb	15:28:19
3	V 292.402†	58815.1	63425.4	495.56 ug/L	495.56 ppb	15:28:19
3	Zn 213.857†	61148.0	63143.4	484.85 ug/L	484.85 ppb	15:28:19
3	SiO2†	91410.8	95452.0	5355.2 ug/L	5355.2 ppb	15:28:55

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	752988.6	95.805	%	0.5634				0.59%
Sc Radial	6679.3	92.1	%	0.39				0.42%
Y 371.029	580286.0	99.382	%	0.4793				0.48%
Y RADIAL	6063.1	99.94	%	0.698				0.70%
Ag 328.068†	95811.4	495.67	ug/L	1.764	495.67	ppb	1.764	0.36%
QC value within limits for Ag 328.068 Recovery = 99.13%								
Al 396.153Radial†	6485.5	5185.3	ug/L	30.79	5185.3	ppb	30.79	0.59%
QC value within limits for Al 396.153Radial Recovery = 103.71%								
As 188.979†	1655.0	490.45	ug/L	4.274	490.45	ppb	4.274	0.87%
QC value within limits for As 188.979 Recovery = 98.09%								
B 249.677†	22990.8	485.79	ug/L	3.167	485.79	ppb	3.167	0.65%
QC value within limits for B 249.677 Recovery = 97.16%								
Ba 233.527†	81502.5	493.10	ug/L	1.917	493.10	ppb	1.917	0.39%
QC value within limits for Ba 233.527 Recovery = 98.62%								
Be 313.107†	1297084.7	493.14	ug/L	2.145	493.14	ppb	2.145	0.44%
QC value within limits for Be 313.107 Recovery = 98.63%								
Ca 317.933Radial†	3903.2	5483.7	ug/L	19.93	5483.7	ppb	19.93	0.36%

```
   QC value within limits for Ca 317.933Radial  Recovery = 109.67%
Cd 226.502†          45682.3      481.15 ug/L        3.862      481.15 ppb        3.862   0.80%
   QC value within limits for Cd 226.502  Recovery = 96.23%
Co 228.616†          33142.8      486.06 ug/L        4.107      486.06 ppb        4.107   0.84%
   QC value within limits for Co 228.616  Recovery = 97.21%
Cr 267.716†          41616.4      492.76 ug/L        2.800      492.76 ppb        2.800   0.57%
   QC value within limits for Cr 267.716  Recovery = 98.55%
Cu 324.752†         157945.7      494.51 ug/L        2.080      494.51 ppb        2.080   0.42%
   QC value within limits for Cu 324.752  Recovery = 98.90%
Fe 238.204 Radial†    1390.8      5433.0 ug/L       33.99      5433.0 ppb        33.99   0.63%
   QC value within limits for Fe 238.204 Radial  Recovery = 108.66%
K 766.490 Radial†    26849.6      5041.8 ug/L       32.16      5041.8 ppb        32.16   0.64%
   QC value within limits for K 766.490 Radial  Recovery = 100.84%
Mg 279.077 IEC†        238.7      5594.7 ug/L       29.88      5594.7 ppb        29.88   0.53%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 111.89%
Mn 257.610†         524539.5      491.95 ug/L        2.503      491.95 ppb        2.503   0.51%
   QC value within limits for Mn 257.610  Recovery = 98.39%
Mo 202.031†          8335.8      497.03 ug/L        4.204      497.03 ppb        4.204   0.85%
   QC value within limits for Mo 202.031  Recovery = 99.41%
Na 589.592 Radial†  190052.8       10125 ug/L         41.2       10125 ppb         41.2   0.41%
   QC value within limits for Na 589.592 Radial  Recovery = 101.25%
Ni 231.604†          21798.4      489.58 ug/L        3.749      489.58 ppb        3.749   0.77%
   QC value within limits for Ni 231.604  Recovery = 97.92%
P 214.914†            5885.9      2355.0 ug/L       25.19      2355.0 ppb        25.19   1.07%
   QC value within limits for P 214.914  Recovery = 94.20%
Pb 220.353†           5017.8      498.77 ug/L        5.263      498.77 ppb        5.263   1.06%
   QC value within limits for Pb 220.353  Recovery = 99.75%
S 181.975 Axial†       863.4      961.07 ug/L       13.801      961.07 ppb       13.801   1.44%
   QC value within limits for S 181.975 Axial  Recovery = 96.11%
Sb 206.836†           1971.3      496.55 ug/L        3.627      496.55 ppb        3.627   0.73%
   QC value within limits for Sb 206.836  Recovery = 99.31%
Se 196.026†           1173.9      510.39 ug/L        5.476      510.39 ppb        5.476   1.07%
   QC value within limits for Se 196.026  Recovery = 102.08%
Si 251.611†          94376.9      2465.6 ug/L       12.87      2465.6 ppb        12.87   0.52%
   QC value within limits for Si 251.611  Recovery = 98.62%
Sn 189.927†           3340.2      489.85 ug/L        3.235      489.85 ppb        3.235   0.66%
   QC value within limits for Sn 189.927  Recovery = 97.97%
Sr 421.552†         176481.2      491.38 ug/L        2.247      491.38 ppb        2.247   0.46%
   QC value within limits for Sr 421.552  Recovery = 98.28%
Ti 334.940†         312159.1      499.87 ug/L        2.097      499.87 ppb        2.097   0.42%
   QC value within limits for Ti 334.940  Recovery = 99.97%
Tl 190.801†           2246.7      501.20 ug/L        5.497      501.20 ppb        5.497   1.10%
   QC value within limits for Tl 190.801  Recovery = 100.24%
U 409.014†           16211.6      478.68 ug/L        5.680      478.68 ppb        5.680   1.19%
   QC value within limits for U 409.014  Recovery = 95.74%
V 292.402†           63681.6      497.50 ug/L        1.944      497.50 ppb        1.944   0.39%
   QC value within limits for V 292.402  Recovery = 99.50%
Zn 213.857†          63509.7      487.71 ug/L        2.800      487.71 ppb        2.800   0.57%
   QC value within limits for Zn 213.857  Recovery = 97.54%
SiO2†                95051.1      5332.8 ug/L       45.37      5332.8 ppb        45.37   0.85%
   QC value within limits for SiO2  Recovery = 99.73%
QC Failed.  Continue with analysis.
```

Sequence No.: 11
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/1/2009 15:31:04
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6687.3	6687.3	92.2	%			15:32:57
1	Y RADIAL	6106.4	6106.4	100.7	%			15:32:57
1	Al 396.153Radial†	-52.5	26.6	21.290	ug/L	21.290	ppb	15:32:57
1	Ca 317.933Radial†	30.2	2.5	3.4643	ug/L	3.4643	ppb	15:33:17
1	Fe 238.204 Radial†	39.9	6.1	23.761	ug/L	23.761	ppb	15:33:17
1	K 766.490 Radial†	2738.5	119.9	22.589	ug/L	22.589	ppb	15:32:57
1	Mg 279.077 IEC†	3.6	1.6	37.924	ug/L	37.924	ppb	15:33:17
1	Na 589.592 Radial†	396.4	-2653.5	-141.37	ug/L	-141.37	ppb	15:32:57
1	Sr 421.552†	-4.5	61.4	0.1709	ug/L	0.1709	ppb	15:32:57
1	Sc 361.383	733635.3	733635.3	93.343	%			15:34:14
1	Y 371.029	572716.8	572716.8	98.086	%			15:34:14
1	Ag 328.068†	751.5	96.8	0.5041	ug/L	0.5041	ppb	15:34:14
1	As 188.979†	-29.8	2.9	0.8646	ug/L	0.8646	ppb	15:34:34
1	B 249.677†	-448.7	343.4	7.2975	ug/L	7.2975	ppb	15:34:14
1	Ba 233.527†	38.0	21.2	0.1263	ug/L	0.1263	ppb	15:34:34
1	Be 313.107†	-4903.2	-331.6	-0.1261	ug/L	-0.1261	ppb	15:34:14
1	Cd 226.502†	-265.1	8.6	0.0880	ug/L	0.0880	ppb	15:34:34
1	Co 228.616†	-102.6	-10.2	-0.1459	ug/L	-0.1459	ppb	15:34:34
1	Cr 267.716†	-25.3	-20.6	-0.2433	ug/L	-0.2433	ppb	15:34:14
1	Cu 324.752†	5873.4	386.6	1.2109	ug/L	1.2109	ppb	15:34:14
1	Mn 257.610†	712.1	-1.7	0.0007	ug/L	0.0007	ppb	15:34:14
1	Mo 202.031†	26.9	18.3	1.0924	ug/L	1.0924	ppb	15:34:34
1	Ni 231.604†	144.6	-10.5	-0.2362	ug/L	-0.2362	ppb	15:34:34
1	P 214.914†	310.1	36.3	14.878	ug/L	14.878	ppb	15:34:34
1	Pb 220.353†	-12.4	13.4	1.3291	ug/L	1.3291	ppb	15:34:34
1	S 181.975 Axial†	96.6	-1.4	-1.5131	ug/L	-1.5131	ppb	15:34:34
1	Sb 206.836†	51.6	0.6	0.2249	ug/L	0.2249	ppb	15:34:34
1	Se 196.026†	-25.0	5.0	2.1807	ug/L	2.1807	ppb	15:34:34
1	Si 251.611†	616.0	174.3	4.5162	ug/L	4.5162	ppb	15:34:34
1	Sn 189.927†	32.6	22.0	3.2181	ug/L	3.2181	ppb	15:34:34
1	Ti 334.940†	-1459.5	-92.7	-0.1474	ug/L	-0.1474	ppb	15:34:14
1	Tl 190.801†	-52.4	4.6	1.0111	ug/L	1.0111	ppb	15:34:34
1	U 409.014†	-4970.6	-57.2	-1.6973	ug/L	-1.6973	ppb	15:34:14
1	V 292.402†	-1661.2	-80.6	-0.6140	ug/L	-0.6140	ppb	15:34:14
1	Zn 213.857†	1043.2	86.4	0.6655	ug/L	0.6655	ppb	15:34:34
1	SiO2†	634.7	196.5	10.947	ug/L	10.947	ppb	15:35:30
2	Sc Radial	6689.4	6689.4	92.2	%			15:33:22
2	Y RADIAL	6170.3	6170.3	101.7	%			15:33:22
2	Al 396.153Radial†	-65.4	12.6	10.075	ug/L	10.075	ppb	15:33:22
2	Ca 317.933Radial†	23.1	-5.3	-7.4349	ug/L	-7.4349	ppb	15:33:42
2	Fe 238.204 Radial†	40.2	6.4	24.944	ug/L	24.944	ppb	15:33:42
2	K 766.490 Radial†	2788.1	172.7	32.540	ug/L	32.540	ppb	15:33:22
2	Mg 279.077 IEC†	2.1	-0.0	-0.9837	ug/L	-0.9837	ppb	15:33:42
2	Na 589.592 Radial†	470.8	-2573.1	-137.09	ug/L	-137.09	ppb	15:33:22
2	Sr 421.552†	-58.1	3.3	0.0091	ug/L	0.0091	ppb	15:33:22
2	Sc 361.383	726616.8	726616.8	92.450	%			15:34:39
2	Y 371.029	568099.4	568099.4	97.295	%			15:34:39
2	Ag 328.068†	640.5	-15.5	-0.0667	ug/L	-0.0667	ppb	15:34:39
2	As 188.979†	-38.7	-7.0	-2.0628	ug/L	-2.0628	ppb	15:34:59
2	B 249.677†	-578.5	198.3	4.2136	ug/L	4.2136	ppb	15:34:39
2	Ba 233.527†	6.5	-12.6	-0.0764	ug/L	-0.0764	ppb	15:34:59
2	Be 313.107†	-4837.2	-311.0	-0.1181	ug/L	-0.1181	ppb	15:34:39
2	Cd 226.502†	-287.4	-18.2	-0.1950	ug/L	-0.1950	ppb	15:34:59
2	Co 228.616†	-96.5	-4.6	-0.0668	ug/L	-0.0668	ppb	15:34:59
2	Cr 267.716†	-44.6	-41.7	-0.4912	ug/L	-0.4912	ppb	15:34:39
2	Cu 324.752†	5923.6	501.6	1.5710	ug/L	1.5710	ppb	15:34:39
2	Mn 257.610†	714.0	7.8	0.0105	ug/L	0.0105	ppb	15:34:39
2	Mo 202.031†	13.5	4.1	0.2453	ug/L	0.2453	ppb	15:34:59
2	Ni 231.604†	146.4	-7.1	-0.1589	ug/L	-0.1589	ppb	15:34:59

2	P 214.914†	304.8	33.7	13.723 ug/L	13.723 ppb	15:34:59
2	Pb 220.353†	-1.7	24.8	2.4583 ug/L	2.4583 ppb	15:34:59
2	S 181.975 Axial†	89.2	-8.4	-9.3856 ug/L	-9.3856 ppb	15:34:59
2	Sb 206.836†	61.7	12.1	3.0449 ug/L	3.0449 ppb	15:34:59
2	Se 196.026†	-22.0	8.0	3.4110 ug/L	3.4110 ppb	15:34:59
2	Si 251.611†	603.0	166.7	4.3517 ug/L	4.3517 ppb	15:34:59
2	Sn 189.927†	20.5	9.2	1.3527 ug/L	1.3527 ppb	15:34:59
2	Ti 334.940†	-1392.4	-35.3	-0.0539 ug/L	-0.0539 ppb	15:34:39
2	Tl 190.801†	-59.0	-3.1	-0.6857 ug/L	-0.6857 ppb	15:34:59
2	U 409.014†	-5072.5	-218.9	-6.4861 ug/L	-6.4861 ppb	15:34:39
2	V 292.402†	-1588.3	-18.9	-0.1587 ug/L	-0.1587 ppb	15:34:39
2	Zn 213.857†	1033.4	86.5	0.6669 ug/L	0.6669 ppb	15:34:59
2	SiO2†	659.4	229.8	12.908 ug/L	12.908 ppb	15:35:35
3	Sc Radial	6686.6	6686.6	92.2 %		15:33:47
3	Y RADIAL	6121.3	6121.3	100.9 %		15:33:47
3	Al 396.153Radial†	-46.4	33.2	26.579 ug/L	26.579 ppb	15:33:47
3	Ca 317.933Radial†	34.0	6.6	9.2600 ug/L	9.2600 ppb	15:34:07
3	Fe 238.204 Radial†	38.5	4.6	17.831 ug/L	17.831 ppb	15:34:07
3	K 766.490 Radial†	2783.6	169.1	31.841 ug/L	31.841 ppb	15:33:47
3	Mg 279.077 IEC†	3.2	1.1	26.003 ug/L	26.003 ppb	15:34:07
3	Na 589.592 Radial†	381.4	-2669.8	-142.24 ug/L	-142.24 ppb	15:33:47
3	Sr 421.552†	-84.7	-25.6	-0.0714 ug/L	-0.0714 ppb	15:33:47
3	Sc 361.383	734683.2	734683.2	93.476 %		15:35:05
3	Y 371.029	574327.1	574327.1	98.362 %		15:35:05
3	Ag 328.068†	769.5	114.9	0.5935 ug/L	0.5935 ppb	15:35:05
3	As 188.979†	-38.0	-5.8	-1.6998 ug/L	-1.6998 ppb	15:35:25
3	B 249.677†	-610.8	170.6	3.6241 ug/L	3.6241 ppb	15:35:05
3	Ba 233.527†	-3.7	-23.5	-0.1453 ug/L	-0.1453 ppb	15:35:25
3	Be 313.107†	-4892.2	-312.3	-0.1185 ug/L	-0.1185 ppb	15:35:05
3	Cd 226.502†	-292.7	-20.5	-0.2185 ug/L	-0.2185 ppb	15:35:25
3	Co 228.616†	-76.2	18.3	0.2705 ug/L	0.2705 ppb	15:35:25
3	Cr 267.716†	-35.2	-31.1	-0.3687 ug/L	-0.3687 ppb	15:35:05
3	Cu 324.752†	5841.8	343.7	1.0765 ug/L	1.0765 ppb	15:35:05
3	Mn 257.610†	741.5	28.7	0.0287 ug/L	0.0287 ppb	15:35:05
3	Mo 202.031†	28.0	19.4	1.1571 ug/L	1.1571 ppb	15:35:25
3	Ni 231.604†	144.2	-11.1	-0.2498 ug/L	-0.2498 ppb	15:35:25
3	P 214.914†	314.3	40.3	16.540 ug/L	16.540 ppb	15:35:25
3	Pb 220.353†	-27.8	-3.1	-0.2979 ug/L	-0.2979 ppb	15:35:25
3	S 181.975 Axial†	90.5	-8.0	-8.9375 ug/L	-8.9375 ppb	15:35:25
3	Sb 206.836†	65.9	15.8	3.9470 ug/L	3.9470 ppb	15:35:25
3	Se 196.026†	-21.4	8.9	3.8009 ug/L	3.8009 ppb	15:35:25
3	Si 251.611†	612.4	169.6	4.4334 ug/L	4.4334 ppb	15:35:25
3	Sn 189.927†	10.4	-1.9	-0.2698 ug/L	-0.2698 ppb	15:35:25
3	Ti 334.940†	-1388.0	-14.0	-0.0202 ug/L	-0.0202 ppb	15:35:05
3	Tl 190.801†	-49.7	7.5	1.6577 ug/L	1.6577 ppb	15:35:25
3	U 409.014†	-5035.5	-119.0	-3.5262 ug/L	-3.5262 ppb	15:35:05
3	V 292.402†	-1759.9	-183.6	-1.4118 ug/L	-1.4118 ppb	15:35:05
3	Zn 213.857†	1035.1	76.1	0.5872 ug/L	0.5872 ppb	15:35:25
3	SiO2†	601.0	159.5	8.9514 ug/L	8.9514 ppb	15:35:40

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	731645.1	93.090	%	0.5581				0.60%
Sc Radial	6687.7	92.2	%	0.02				0.02%
Y 371.029	571714.4	97.914	%	0.5536				0.57%
Y RADIAL	6132.6	101.1	%	0.55				0.54%
Ag 328.068†	65.4	0.3436	ug/L	0.35813	0.3436	ppb	0.35813	104.22%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	24.1	19.314	ug/L	8.4271	19.314	ppb	8.4271	43.63%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-3.3	-0.9660	ug/L	1.59568	-0.9660	ppb	1.59568	165.19%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	237.4	5.0451	ug/L	1.97281	5.0451	ppb	1.97281	39.10%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-5.0	-0.0318	ug/L	0.14119	-0.0318	ppb	0.14119	444.19%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-318.3	-0.1209	ug/L	0.00453	-0.1209	ppb	0.00453	3.74%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.3	1.7632	ug/L	8.47649	1.7632	ppb	8.47649	480.76%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -10.0     -0.1085 ug/L       0.17059     -0.1085 ppb        0.17059 157.21%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                1.2      0.0192 ug/L       0.22115      0.0192 ppb        0.22115 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -31.2     -0.3678 ug/L       0.12394     -0.3678 ppb        0.12394  33.70%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              410.6      1.2861 ug/L       0.25572      1.2861 ppb        0.25572  19.88%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         5.7     22.179 ug/L        3.8116     22.179 ppb         3.8116  17.19%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        153.9     28.990 ug/L        5.5542     28.990 ppb         5.5542  19.16%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.9     20.981 ug/L       19.9340     20.981 ppb        19.9340  95.01%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               11.6      0.0133 ug/L       0.01419      0.0133 ppb        0.01419 106.92%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               13.9      0.8316 ug/L       0.50878      0.8316 ppb        0.50878  61.18%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -2632.1    -140.23 ug/L         2.758    -140.23 ppb          2.758   1.97%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -9.6     -0.2150 ug/L       0.04903     -0.2150 ppb        0.04903  22.81%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                36.8     15.047 ug/L        1.4157     15.047 ppb         1.4157   9.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               11.7      1.1632 ug/L       1.38560      1.1632 ppb        1.38560 119.12%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -5.9     -6.6121 ug/L       4.42155     -6.6121 ppb        4.42155  66.87%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                9.5      2.4056 ug/L       1.94169      2.4056 ppb        1.94169  80.71%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                7.3      3.1309 ug/L       0.84561      3.1309 ppb        0.84561  27.01%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              170.2      4.4338 ug/L       0.08221      4.4338 ppb        0.08221   1.85%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                9.8      1.4336 ug/L       1.74536      1.4336 ppb        1.74536 121.74%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               13.0      0.0362 ug/L       0.12339      0.0362 ppb        0.12339 340.62%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -47.3     -0.0738 ug/L       0.06594     -0.0738 ppb        0.06594  89.30%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                3.0      0.6611 ug/L       1.21028      0.6611 ppb        1.21028 183.08%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -131.7     -3.9032 ug/L       2.41659     -3.9032 ppb        2.41659  61.91%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -94.4     -0.7282 ug/L       0.63428     -0.7282 ppb        0.63428  87.11%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               83.0      0.6399 ug/L       0.04560      0.6399 ppb        0.04560   7.13%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    195.3     10.935 ug/L        1.9782     10.935 ppb         1.9782  18.09%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/1/2009 16:27:12
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6846.7	6846.7	94.4	%			16:29:24
1	Y RADIAL	6190.2	6190.2	102.0	%			16:29:24
1	Al 396.153Radial†	5670.7	6090.4	4868.4	ug/L	4868.4	ppb	16:29:04
1	Ca 317.933Radial†	3626.8	3811.5	5354.8	ug/L	5354.8	ppb	16:29:24
1	Fe 238.204 Radial†	1316.4	1357.2	5302.2	ug/L	5302.2	ppb	16:29:24
1	K 766.490 Radial†	26584.2	25310.2	4752.3	ug/L	4752.3	ppb	16:29:04
1	Mg 279.077 IEC†	222.1	232.9	5458.1	ug/L	5458.1	ppb	16:29:24
1	Na 589.592 Radial†	171486.1	178569.8	9513.6	ug/L	9513.6	ppb	16:29:04
1	Sr 421.552†	156525.0	165871.4	461.84	ug/L	461.84	ppb	16:29:04
1	Sc 361.383	757416.9	757416.9	96.369	%			16:30:23
1	Y 371.029	583756.7	583756.7	99.977	%			16:30:23
1	Ag 328.068†	92668.5	95452.2	493.75	ug/L	493.75	ppb	16:30:23
1	As 188.979†	1524.9	1617.2	479.31	ug/L	479.31	ppb	16:30:43
1	B 249.677†	20889.2	22500.4	475.42	ug/L	475.42	ppb	16:30:23
1	Ba 233.527†	77313.9	80207.7	485.27	ug/L	485.27	ppb	16:30:23
1	Be 313.107†	1226279.8	1277410.2	485.67	ug/L	485.67	ppb	16:30:23
1	Cd 226.502†	43838.5	45783.1	482.22	ug/L	482.22	ppb	16:30:23
1	Co 228.616†	31220.8	32497.0	476.59	ug/L	476.59	ppb	16:30:43
1	Cr 267.716†	39437.2	40929.8	484.63	ug/L	484.63	ppb	16:30:23
1	Cu 324.752†	156083.0	156058.8	488.59	ug/L	488.59	ppb	16:30:23
1	Mn 257.610†	498507.3	516527.7	484.43	ug/L	484.43	ppb	16:30:23
1	Mo 202.031†	7945.0	8233.9	490.95	ug/L	490.95	ppb	16:30:43
1	Ni 231.604†	20740.2	21356.4	479.65	ug/L	479.65	ppb	16:30:43
1	P 214.914†	5848.1	5772.5	2308.8	ug/L	2308.8	ppb	16:30:43
1	Pb 220.353†	4731.1	4936.1	490.61	ug/L	490.61	ppb	16:30:43
1	S 181.975 Axial†	929.4	859.6	956.92	ug/L	956.92	ppb	16:30:43
1	Sb 206.836†	1927.6	1945.5	490.07	ug/L	490.07	ppb	16:30:43
1	Se 196.026†	1071.1	1143.3	497.09	ug/L	497.09	ppb	16:30:43
1	Si 251.611†	91161.8	94111.5	2458.9	ug/L	2458.9	ppb	16:30:23
1	Sn 189.927†	3185.3	3292.4	482.83	ug/L	482.83	ppb	16:30:43
1	Ti 334.940†	298161.1	310867.4	497.80	ug/L	497.80	ppb	16:30:23
1	Tl 190.801†	2044.2	2181.9	486.83	ug/L	486.83	ppb	16:30:43
1	U 409.014†	10491.4	16154.6	477.03	ug/L	477.03	ppb	16:30:23
1	V 292.402†	58809.8	62725.0	490.06	ug/L	490.06	ppb	16:30:23
1	Zn 213.857†	61246.8	62523.5	480.16	ug/L	480.16	ppb	16:30:23
1	SiO2†	90915.2	93857.7	5266.1	ug/L	5266.1	ppb	16:31:44
2	Sc Radial	6735.0	6735.0	92.9	%			16:29:50
2	Y RADIAL	6085.4	6085.4	100.3	%			16:29:50
2	Al 396.153Radial†	5673.6	6193.1	4951.1	ug/L	4951.1	ppb	16:29:29
2	Ca 317.933Radial†	3604.2	3850.9	5410.2	ug/L	5410.2	ppb	16:29:50
2	Fe 238.204 Radial†	1305.4	1368.5	5345.9	ug/L	5345.9	ppb	16:29:50
2	K 766.490 Radial†	26737.4	25942.1	4871.3	ug/L	4871.3	ppb	16:29:29
2	Mg 279.077 IEC†	219.3	233.8	5480.0	ug/L	5480.0	ppb	16:29:50
2	Na 589.592 Radial†	172239.9	182393.6	9717.3	ug/L	9717.3	ppb	16:29:29
2	Sr 421.552†	157198.8	169346.4	471.51	ug/L	471.51	ppb	16:29:29
2	Sc 361.383	765906.1	765906.1	97.449	%			16:30:51
2	Y 371.029	590005.4	590005.4	101.05	%			16:30:51
2	Ag 328.068†	93652.7	95396.3	493.48	ug/L	493.48	ppb	16:30:51
2	As 188.979†	1523.8	1598.6	473.83	ug/L	473.83	ppb	16:31:11
2	B 249.677†	21162.5	22540.6	476.31	ug/L	476.31	ppb	16:30:51
2	Ba 233.527†	78175.4	80202.5	485.23	ug/L	485.23	ppb	16:30:51
2	Be 313.107†	1240075.4	1277462.9	485.69	ug/L	485.69	ppb	16:30:51
2	Cd 226.502†	44422.1	45877.7	483.21	ug/L	483.21	ppb	16:30:51
2	Co 228.616†	31148.5	32063.8	470.22	ug/L	470.22	ppb	16:31:11
2	Cr 267.716†	39827.1	40876.3	484.00	ug/L	484.00	ppb	16:30:51
2	Cu 324.752†	157616.3	155837.0	487.90	ug/L	487.90	ppb	16:30:51
2	Mn 257.610†	504137.2	516571.4	484.48	ug/L	484.48	ppb	16:30:51
2	Mo 202.031†	7929.3	8126.3	484.54	ug/L	484.54	ppb	16:31:11
2	Ni 231.604†	20702.0	21078.6	473.41	ug/L	473.41	ppb	16:31:11

2	P 214.914†	5815.3	5671.6	2266.9	ug/L	2266.9 ppb	16:31:11
2	Pb 220.353†	4693.6	4843.2	481.40	ug/L	481.40 ppb	16:31:11
2	S 181.975 Axial†	926.2	845.6	941.29	ug/L	941.29 ppb	16:31:11
2	Sb 206.836†	1919.8	1915.4	482.34	ug/L	482.34 ppb	16:31:11
2	Se 196.026†	1077.0	1137.0	494.59	ug/L	494.59 ppb	16:31:11
2	Si 251.611†	92092.7	94018.2	2456.6	ug/L	2456.6 ppb	16:30:51
2	Sn 189.927†	3175.6	3245.8	476.02	ug/L	476.02 ppb	16:31:11
2	Ti 334.940†	301117.0	310471.4	497.17	ug/L	497.17 ppb	16:30:51
2	Tl 190.801†	2039.8	2153.9	480.66	ug/L	480.66 ppb	16:31:11
2	U 409.014†	10609.9	16155.6	477.05	ug/L	477.05 ppb	16:30:51
2	V 292.402†	59544.6	62802.7	490.57	ug/L	490.57 ppb	16:30:51
2	Zn 213.857†	61999.0	62590.9	480.71	ug/L	480.71 ppb	16:30:51
2	SiO2†	91365.3	93273.9	5233.4	ug/L	5233.4 ppb	16:31:49
3	Sc Radial	6777.9	6777.9	93.5	%		16:30:15
3	Y RADIAL	6132.6	6132.6	101.1	%		16:30:15
3	Al 396.153Radial†	5864.0	6358.3	5083.4	ug/L	5083.4 ppb	16:29:55
3	Ca 317.933Radial†	3614.8	3837.7	5391.5	ug/L	5391.5 ppb	16:30:15
3	Fe 238.204 Radial†	1316.2	1371.2	5356.5	ug/L	5356.5 ppb	16:30:15
3	K 766.490 Radial†	27163.9	26216.4	4922.8	ug/L	4922.8 ppb	16:29:55
3	Mg 279.077 IEC†	217.8	230.8	5408.0	ug/L	5408.0 ppb	16:30:15
3	Na 589.592 Radial†	176829.7	186131.7	9916.5	ug/L	9916.5 ppb	16:29:55
3	Sr 421.552†	161613.2	172999.1	481.68	ug/L	481.68 ppb	16:29:55
3	Sc 361.383	762188.9	762188.9	96.976	%		16:31:18
3	Y 371.029	586889.3	586889.3	100.51	%		16:31:18
3	Ag 328.068†	93057.0	95250.8	492.74	ug/L	492.74 ppb	16:31:18
3	As 188.979†	1534.2	1617.0	479.24	ug/L	479.24 ppb	16:31:38
3	B 249.677†	21101.7	22583.8	477.20	ug/L	477.20 ppb	16:31:18
3	Ba 233.527†	77866.0	80274.7	485.67	ug/L	485.67 ppb	16:31:18
3	Be 313.107†	1234673.6	1278098.7	485.93	ug/L	485.93 ppb	16:31:18
3	Cd 226.502†	44270.4	45943.6	483.91	ug/L	483.91 ppb	16:31:18
3	Co 228.616†	31350.4	32427.9	475.58	ug/L	475.58 ppb	16:31:38
3	Cr 267.716†	39742.9	40988.8	485.33	ug/L	485.33 ppb	16:31:18
3	Cu 324.752†	156723.2	155704.9	487.49	ug/L	487.49 ppb	16:31:18
3	Mn 257.610†	502067.5	516960.2	484.84	ug/L	484.84 ppb	16:31:18
3	Mo 202.031†	8010.4	8249.6	491.89	ug/L	491.89 ppb	16:31:38
3	Ni 231.604†	20884.5	21370.4	479.97	ug/L	479.97 ppb	16:31:38
3	P 214.914†	5881.5	5769.0	2307.6	ug/L	2307.6 ppb	16:31:38
3	Pb 220.353†	4725.5	4899.5	487.02	ug/L	487.02 ppb	16:31:38
3	S 181.975 Axial†	934.7	859.0	956.18	ug/L	956.18 ppb	16:31:38
3	Sb 206.836†	1939.3	1945.0	489.95	ug/L	489.95 ppb	16:31:38
3	Se 196.026†	1076.5	1141.9	496.72	ug/L	496.72 ppb	16:31:38
3	Si 251.611†	91705.5	94079.8	2458.0	ug/L	2458.0 ppb	16:31:18
3	Sn 189.927†	3205.7	3292.7	482.89	ug/L	482.89 ppb	16:31:38
3	Ti 334.940†	299885.7	310708.7	497.55	ug/L	497.55 ppb	16:31:18
3	Tl 190.801†	2049.4	2174.0	485.09	ug/L	485.09 ppb	16:31:38
3	U 409.014†	10496.7	16092.0	475.17	ug/L	475.17 ppb	16:31:18
3	V 292.402†	59223.0	62769.0	490.40	ug/L	490.40 ppb	16:31:18
3	Zn 213.857†	61791.9	62687.6	481.42	ug/L	481.42 ppb	16:31:18
3	SiO2†	91499.6	93869.6	5266.6	ug/L	5266.6 ppb	16:31:54

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	761837.3	96.931	%	0.5414				0.56%
Sc Radial	6786.5	93.6	%	0.78				0.83%
Y 371.029	586883.8	100.51	%	0.535				0.53%
Y RADIAL	6136.1	101.1	%	0.87				0.86%
Ag 328.068†	95366.4	493.32	ug/L	0.526	493.32	ppb	0.526	0.11%
QC value within limits for Ag 328.068 Recovery = 98.66%								
Al 396.153Radial†	6213.9	4967.7	ug/L	108.44	4967.7	ppb	108.44	2.18%
QC value within limits for Al 396.153Radial Recovery = 99.35%								
As 188.979†	1610.9	477.46	ug/L	3.144	477.46	ppb	3.144	0.66%
QC value within limits for As 188.979 Recovery = 95.49%								
B 249.677†	22541.6	476.31	ug/L	0.887	476.31	ppb	0.887	0.19%
QC value within limits for B 249.677 Recovery = 95.26%								
Ba 233.527†	80228.3	485.39	ug/L	0.243	485.39	ppb	0.243	0.05%
QC value within limits for Ba 233.527 Recovery = 97.08%								
Be 313.107†	1277657.3	485.76	ug/L	0.145	485.76	ppb	0.145	0.03%
QC value within limits for Be 313.107 Recovery = 97.15%								
Ca 317.933Radial†	3833.4	5385.5	ug/L	28.19	5385.5	ppb	28.19	0.52%

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   QC value within limits for Ca 317.933Radial  Recovery = 107.71%
Cd 226.502†            45868.1      483.11 ug/L        0.847      483.11 ppb          0.847   0.18%
   QC value within limits for Cd 226.502  Recovery = 96.62%
Co 228.616†            32329.6      474.13 ug/L        3.422      474.13 ppb          3.422   0.72%
   QC value within limits for Co 228.616  Recovery = 94.83%
Cr 267.716†            40931.6      484.65 ug/L        0.666      484.65 ppb          0.666   0.14%
   QC value within limits for Cr 267.716  Recovery = 96.93%
Cu 324.752†           155866.9      488.00 ug/L        0.558      488.00 ppb          0.558   0.11%
   QC value within limits for Cu 324.752  Recovery = 97.60%
Fe 238.204 Radial†      1365.6      5334.9 ug/L       28.80      5334.9 ppb          28.80   0.54%
   QC value within limits for Fe 238.204 Radial  Recovery = 106.70%
K 766.490 Radial†      25822.9      4848.8 ug/L       87.45      4848.8 ppb          87.45   1.80%
   QC value within limits for K 766.490 Radial  Recovery = 96.98%
Mg 279.077 IEC†          232.5      5448.7 ug/L       36.92      5448.7 ppb          36.92   0.68%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.97%
Mn 257.610†           516686.4      484.58 ug/L        0.226      484.58 ppb          0.226   0.05%
   QC value within limits for Mn 257.610  Recovery = 96.92%
Mo 202.031†             8203.3      489.13 ug/L        3.998      489.13 ppb          3.998   0.82%
   QC value within limits for Mo 202.031  Recovery = 97.83%
Na 589.592 Radial†    182365.0      9715.8 ug/L      201.44      9715.8 ppb         201.44   2.07%
   QC value within limits for Na 589.592 Radial  Recovery = 97.16%
Ni 231.604†            21268.4      477.68 ug/L        3.696      477.68 ppb          3.696   0.77%
   QC value within limits for Ni 231.604  Recovery = 95.54%
P 214.914†              5737.7      2294.5 ug/L       23.89      2294.5 ppb          23.89   1.04%
   QC value within limits for P 214.914  Recovery = 91.78%
Pb 220.353†             4892.9      486.35 ug/L        4.642      486.35 ppb          4.642   0.95%
   QC value within limits for Pb 220.353  Recovery = 97.27%
S 181.975 Axial†         854.7      951.46 ug/L        8.816      951.46 ppb          8.816   0.93%
   QC value within limits for S 181.975 Axial  Recovery = 95.15%
Sb 206.836†             1935.3      487.46 ug/L        4.430      487.46 ppb          4.430   0.91%
   QC value within limits for Sb 206.836  Recovery = 97.49%
Se 196.026†             1140.7      496.13 ug/L        1.347      496.13 ppb          1.347   0.27%
   QC value within limits for Se 196.026  Recovery = 99.23%
Si 251.611†            94069.8      2457.8 ug/L         1.15      2457.8 ppb           1.15   0.05%
   QC value within limits for Si 251.611  Recovery = 98.31%
Sn 189.927†             3276.9      480.58 ug/L        3.948      480.58 ppb          3.948   0.82%
   QC value within limits for Sn 189.927  Recovery = 96.12%
Sr 421.552†           169405.6      471.68 ug/L        9.925      471.68 ppb          9.925   2.10%
   QC value within limits for Sr 421.552  Recovery = 94.34%
Ti 334.940†           310682.5      497.50 ug/L        0.318      497.50 ppb          0.318   0.06%
   QC value within limits for Ti 334.940  Recovery = 99.50%
Tl 190.801†             2169.9      484.20 ug/L        3.180      484.20 ppb          3.180   0.66%
   QC value within limits for Tl 190.801  Recovery = 96.84%
U 409.014†             16134.1      476.42 ug/L        1.083      476.42 ppb          1.083   0.23%
   QC value within limits for U 409.014  Recovery = 95.28%
V 292.402†             62765.6      490.34 ug/L        0.261      490.34 ppb          0.261   0.05%
   QC value within limits for V 292.402  Recovery = 98.07%
Zn 213.857†            62600.7      480.76 ug/L        0.635      480.76 ppb          0.635   0.13%
   QC value within limits for Zn 213.857  Recovery = 96.15%
SiO2†                  93667.1      5255.4 ug/L        18.98      5255.4 ppb          18.98   0.36%
   QC value within limits for SiO2  Recovery = 98.28%
All analyte(s) passed QC.
```

Sequence No.: 20
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/1/2009 16:34:04
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6597.9	6597.9	91.0	%			16:35:57
1	Y RADIAL	6031.9	6031.9	99.43	%			16:35:57
1	Al 396.153Radial†	-69.1	7.5	6.0165	ug/L	6.0165	ppb	16:35:57
1	Ca 317.933Radial†	29.5	2.1	2.9553	ug/L	2.9553	ppb	16:36:17
1	Fe 238.204 Radial†	38.2	4.7	18.467	ug/L	18.467	ppb	16:36:17
1	K 766.490 Radial†	2735.3	156.6	29.494	ug/L	29.494	ppb	16:35:57
1	Mg 279.077 IEC†	5.7	3.9	92.265	ug/L	92.265	ppb	16:36:17
1	Na 589.592 Radial†	348.4	-2700.5	-143.87	ug/L	-143.87	ppb	16:35:57
1	Sr 421.552†	-36.1	26.6	0.0740	ug/L	0.0740	ppb	16:35:57
1	Sc 361.383	730526.8	730526.8	92.947	%			16:37:14
1	Y 371.029	571592.7	571592.7	97.893	%			16:37:14
1	Ag 328.068†	721.2	67.6	0.3546	ug/L	0.3546	ppb	16:37:14
1	As 188.979†	-33.4	-1.0	-0.2938	ug/L	-0.2938	ppb	16:37:34
1	B 249.677†	-703.1	67.6	1.4365	ug/L	1.4365	ppb	16:37:14
1	Ba 233.527†	25.9	8.3	0.0485	ug/L	0.0485	ppb	16:37:34
1	Be 313.107†	-4848.0	-294.6	-0.1118	ug/L	-0.1118	ppb	16:37:14
1	Cd 226.502†	-283.6	-12.5	-0.1343	ug/L	-0.1343	ppb	16:37:34
1	Co 228.616†	-95.3	-2.8	-0.0394	ug/L	-0.0394	ppb	16:37:34
1	Cr 267.716†	0.4	6.9	0.0818	ug/L	0.0818	ppb	16:37:14
1	Cu 324.752†	5891.8	433.1	1.3562	ug/L	1.3562	ppb	16:37:14
1	Mn 257.610†	739.2	30.8	0.0294	ug/L	0.0294	ppb	16:37:14
1	Mo 202.031†	21.1	12.1	0.7239	ug/L	0.7239	ppb	16:37:34
1	Ni 231.604†	153.7	-0.0	-0.0004	ug/L	-0.0004	ppb	16:37:34
1	P 214.914†	318.5	46.8	19.190	ug/L	19.190	ppb	16:37:34
1	Pb 220.353†	-16.9	8.5	0.8454	ug/L	0.8454	ppb	16:37:34
1	S 181.975 Axial†	101.0	3.7	4.1672	ug/L	4.1672	ppb	16:37:34
1	Sb 206.836†	59.2	9.0	2.2592	ug/L	2.2592	ppb	16:37:34
1	Se 196.026†	-18.8	11.6	4.9092	ug/L	4.9092	ppb	16:37:34
1	Si 251.611†	605.4	165.8	4.3259	ug/L	4.3259	ppb	16:37:34
1	Sn 189.927†	17.7	6.1	0.8919	ug/L	0.8919	ppb	16:37:34
1	Ti 334.940†	-1376.4	-10.0	-0.0138	ug/L	-0.0138	ppb	16:37:14
1	Tl 190.801†	-48.5	8.5	1.8854	ug/L	1.8854	ppb	16:37:34
1	U 409.014†	-5036.1	-150.3	-4.4553	ug/L	-4.4553	ppb	16:37:14
1	V 292.402†	-1660.1	-86.9	-0.6716	ug/L	-0.6716	ppb	16:37:14
1	Zn 213.857†	1087.5	138.7	1.0681	ug/L	1.0681	ppb	16:37:34
1	SiO2†	591.3	152.7	8.5511	ug/L	8.5511	ppb	16:38:30
2	Sc Radial	6754.2	6754.2	93.1	%			16:36:22
2	Y RADIAL	6159.7	6159.7	101.5	%			16:36:22
2	Al 396.153Radial†	-63.1	15.7	12.596	ug/L	12.596	ppb	16:36:22
2	Ca 317.933Radial†	34.3	6.5	9.1879	ug/L	9.1879	ppb	16:36:42
2	Fe 238.204 Radial†	38.6	4.3	16.598	ug/L	16.598	ppb	16:36:42
2	K 766.490 Radial†	2615.3	-41.8	-7.8484	ug/L	-7.8484	ppb	16:36:22
2	Mg 279.077 IEC†	3.7	1.6	38.141	ug/L	38.141	ppb	16:36:42
2	Na 589.592 Radial†	258.2	-2806.2	-149.51	ug/L	-149.51	ppb	16:36:22
2	Sr 421.552†	-95.2	-36.0	-0.1004	ug/L	-0.1004	ppb	16:36:22
2	Sc 361.383	732539.1	732539.1	93.203	%			16:37:39
2	Y 371.029	572173.3	572173.3	97.993	%			16:37:39
2	Ag 328.068†	781.4	130.1	0.6711	ug/L	0.6711	ppb	16:37:39
2	As 188.979†	-22.6	10.6	3.1245	ug/L	3.1245	ppb	16:37:59
2	B 249.677†	-611.6	167.9	3.5663	ug/L	3.5663	ppb	16:37:39
2	Ba 233.527†	26.1	8.4	0.0490	ug/L	0.0490	ppb	16:37:59
2	Be 313.107†	-4920.7	-358.3	-0.1361	ug/L	-0.1361	ppb	16:37:39
2	Cd 226.502†	-273.3	-0.6	-0.0084	ug/L	-0.0084	ppb	16:37:59
2	Co 228.616†	-91.2	1.9	0.0294	ug/L	0.0294	ppb	16:37:59
2	Cr 267.716†	-33.3	-29.3	-0.3471	ug/L	-0.3471	ppb	16:37:39
2	Cu 324.752†	5858.9	380.4	1.1912	ug/L	1.1912	ppb	16:37:39
2	Mn 257.610†	733.5	22.4	0.0224	ug/L	0.0224	ppb	16:37:39
2	Mo 202.031†	17.9	8.7	0.5166	ug/L	0.5166	ppb	16:37:59
2	Ni 231.604†	154.8	0.7	0.0149	ug/L	0.0149	ppb	16:37:59

2	P 214.914†	311.4	38.1	15.629	ug/L	15.629 ppb	16:37:59
2	Pb 220.353†	-25.9	-1.1	-0.1027	ug/L	-0.1027 ppb	16:37:59
2	S 181.975 Axial†	92.8	-5.4	-5.9843	ug/L	-5.9843 ppb	16:37:59
2	Sb 206.836†	62.6	12.5	3.1449	ug/L	3.1449 ppb	16:37:59
2	Se 196.026†	-30.5	-0.9	-0.3261	ug/L	-0.3261 ppb	16:37:59
2	Si 251.611†	594.5	152.3	3.9889	ug/L	3.9889 ppb	16:37:59
2	Sn 189.927†	17.1	5.4	0.7910	ug/L	0.7910 ppb	16:37:59
2	Ti 334.940†	-1424.0	-57.0	-0.0904	ug/L	-0.0904 ppb	16:37:39
2	Tl 190.801†	-48.6	8.5	1.8901	ug/L	1.8901 ppb	16:37:59
2	U 409.014†	-4922.3	-13.3	-0.3963	ug/L	-0.3963 ppb	16:37:39
2	V 292.402†	-1680.1	-103.5	-0.7947	ug/L	-0.7947 ppb	16:37:39
2	Zn 213.857†	1081.4	129.0	0.9949	ug/L	0.9949 ppb	16:37:59
2	SiO2†	616.7	178.3	10.035	ug/L	10.035 ppb	16:38:35
3	Sc Radial	6831.6	6831.6	94.2	%		16:36:47
3	Y RADIAL	6228.5	6228.5	102.7	%		16:36:47
3	Al 396.153Radial†	-51.6	28.7	23.034	ug/L	23.034 ppb	16:36:47
3	Ca 317.933Radial†	26.2	-2.5	-3.5192	ug/L	-3.5192 ppb	16:37:07
3	Fe 238.204 Radial†	41.3	6.6	25.757	ug/L	25.757 ppb	16:37:07
3	K 766.490 Radial†	2665.7	-20.1	-3.7711	ug/L	-3.7711 ppb	16:36:47
3	Mg 279.077 IEC†	4.3	2.3	52.904	ug/L	52.904 ppb	16:37:07
3	Na 589.592 Radial†	321.3	-2742.4	-146.11	ug/L	-146.11 ppb	16:36:47
3	Sr 421.552†	-93.8	-33.3	-0.0928	ug/L	-0.0928 ppb	16:36:47
3	Sc 361.383	732477.5	732477.5	93.195	%		16:38:05
3	Y 371.029	572210.4	572210.4	97.999	%		16:38:05
3	Ag 328.068†	743.7	89.8	0.4725	ug/L	0.4725 ppb	16:38:05
3	As 188.979†	-34.6	-2.2	-0.6412	ug/L	-0.6412 ppb	16:38:25
3	B 249.677†	-692.2	81.3	1.7277	ug/L	1.7277 ppb	16:38:05
3	Ba 233.527†	12.6	-6.0	-0.0400	ug/L	-0.0400 ppb	16:38:25
3	Be 313.107†	-4901.3	-337.9	-0.1282	ug/L	-0.1282 ppb	16:38:05
3	Cd 226.502†	-297.4	-26.4	-0.2817	ug/L	-0.2817 ppb	16:38:25
3	Co 228.616†	-103.2	-10.9	-0.1580	ug/L	-0.1580 ppb	16:38:25
3	Cr 267.716†	-89.9	-90.0	-1.0623	ug/L	-1.0623 ppb	16:38:05
3	Cu 324.752†	5955.3	484.3	1.5170	ug/L	1.5170 ppb	16:38:05
3	Mn 257.610†	794.2	87.7	0.0844	ug/L	0.0844 ppb	16:38:05
3	Mo 202.031†	23.4	14.5	0.8684	ug/L	0.8684 ppb	16:38:25
3	Ni 231.604†	157.6	3.8	0.0845	ug/L	0.0845 ppb	16:38:25
3	P 214.914†	313.0	39.9	16.301	ug/L	16.301 ppb	16:38:25
3	Pb 220.353†	-7.5	18.6	1.8497	ug/L	1.8497 ppb	16:38:25
3	S 181.975 Axial†	94.7	-3.3	-3.6365	ug/L	-3.6365 ppb	16:38:25
3	Sb 206.836†	59.7	9.3	2.3676	ug/L	2.3676 ppb	16:38:25
3	Se 196.026†	-35.0	-5.8	-2.3322	ug/L	-2.3322 ppb	16:38:25
3	Si 251.611†	609.7	168.6	4.4194	ug/L	4.4194 ppb	16:38:25
3	Sn 189.927†	13.0	1.0	0.1525	ug/L	0.1525 ppb	16:38:25
3	Ti 334.940†	-1387.7	-18.1	-0.0244	ug/L	-0.0244 ppb	16:38:05
3	Tl 190.801†	-52.0	4.9	1.0890	ug/L	1.0890 ppb	16:38:25
3	U 409.014†	-5227.3	-341.0	-10.104	ug/L	-10.104 ppb	16:38:05
3	V 292.402†	-1761.4	-190.9	-1.4849	ug/L	-1.4849 ppb	16:38:05
3	Zn 213.857†	1075.7	122.9	0.9457	ug/L	0.9457 ppb	16:38:25
3	SiO2†	643.2	206.7	11.642	ug/L	11.642 ppb	16:38:40

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	731847.8	93.115	%	0.1456				0.16%
Sc Radial	6727.9	92.8	%	1.64				1.77%
Y 371.029	571992.1	97.962	%	0.0593				0.06%
Y RADIAL	6140.0	101.2	%	1.64				1.63%
Ag 328.068†	95.8	0.4994	ug/L	0.15998	0.4994	ppb	0.15998	32.04%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.3	13.882	ug/L	8.5813	13.882	ppb	8.5813	61.81%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.5	0.7298	ug/L	2.08113	0.7298	ppb	2.08113	285.15%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	105.6	2.2435	ug/L	1.15479	2.2435	ppb	1.15479	51.47%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.6	0.0192	ug/L	0.05119	0.0192	ppb	0.05119	267.19%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-330.3	-0.1254	ug/L	0.01242	-0.1254	ppb	0.01242	9.91%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2.0	2.8747	ug/L	6.35396	2.8747	ppb	6.35396	221.03%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -13.2     -0.1414 ug/L       0.13680     -0.1414 ppb        0.13680  96.72%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -3.9     -0.0560 ug/L       0.09484     -0.0560 ppb        0.09484 169.37%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -37.5     -0.4425 ug/L       0.57802     -0.4425 ppb        0.57802 130.62%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              432.6      1.3548 ug/L       0.16289      1.3548 ppb        0.16289  12.02%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         5.2      20.274 ug/L        4.8396      20.274 ppb         4.8396  23.87%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         31.6      5.9580 ug/L      20.48406      5.9580 ppb       20.48406 343.81%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            2.6      61.103 ug/L       27.9779      61.103 ppb        27.9779  45.79%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               47.0      0.0454 ug/L       0.03396      0.0454 ppb        0.03396  74.85%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               11.8      0.7030 ug/L       0.17683      0.7030 ppb        0.17683  25.15%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -2749.7     -146.49 ug/L         2.837     -146.49 ppb          2.837   1.94%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                1.5      0.0330 ug/L       0.04526      0.0330 ppb        0.04526 137.32%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                41.6      17.040 ug/L        1.8922      17.040 ppb         1.8922  11.10%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                8.7      0.8641 ug/L       0.97634      0.8641 ppb        0.97634 112.99%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -1.6     -1.8179 ug/L       5.31452     -1.8179 ppb        5.31452 292.35%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               10.3      2.5906 ug/L       0.48313      2.5906 ppb        0.48313  18.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                1.6      0.7503 ug/L       3.73874      0.7503 ppb        3.73874 498.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              162.2      4.2447 ug/L       0.22645      4.2447 ppb        0.22645   5.33%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.2      0.6118 ug/L       0.40098      0.6118 ppb        0.40098  65.54%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              -14.2     -0.0397 ug/L       0.09857     -0.0397 ppb        0.09857 248.27%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -28.3     -0.0429 ug/L       0.04150     -0.0429 ppb        0.04150  96.80%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                7.3      1.6215 ug/L       0.46118      1.6215 ppb        0.46118  28.44%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -168.2     -4.9853 ug/L       4.87564     -4.9853 ppb        4.87564  97.80%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -127.1     -0.9837 ug/L       0.43838     -0.9837 ppb        0.43838  44.56%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              130.2      1.0029 ug/L       0.06157      1.0029 ppb        0.06157   6.14%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    179.2      10.076 ug/L        1.5461      10.076 ppb         1.5461  15.34%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/1/2009 17:30:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6640.7	6640.7	91.6	%			17:33:07
1	Y RADIAL	5982.7	5982.7	98.62	%			17:33:07
1	Al 396.153Radial†	5749.2	6362.4	5087.5	ug/L	5087.5	ppb	17:32:47
1	Ca 317.933Radial†	3606.7	3908.8	5491.4	ug/L	5491.4	ppb	17:33:07
1	Fe 238.204 Radial†	1313.2	1397.0	5456.4	ug/L	5456.4	ppb	17:33:07
1	K 766.490 Radial†	26847.1	26470.8	4971.1	ug/L	4971.1	ppb	17:32:47
1	Mg 279.077 IEC†	216.0	233.6	5474.6	ug/L	5474.6	ppb	17:33:07
1	Na 589.592 Radial†	173238.8	186118.5	9915.8	ug/L	9915.8	ppb	17:32:47
1	Sr 421.552†	158388.1	173049.1	481.82	ug/L	481.82	ppb	17:32:47
1	Sc 361.383	778067.0	778067.0	98.996	%			17:34:06
1	Y 371.029	600267.5	600267.5	102.80	%			17:34:06
1	Ag 328.068†	92210.9	92437.8	478.26	ug/L	478.26	ppb	17:34:06
1	As 188.979†	1511.7	1561.9	462.99	ug/L	462.99	ppb	17:34:26
1	B 249.677†	20934.1	21970.5	464.24	ug/L	464.24	ppb	17:34:06
1	Ba 233.527†	76991.9	77753.2	470.42	ug/L	470.42	ppb	17:34:06
1	Be 313.107†	1221298.7	1238606.4	470.91	ug/L	470.91	ppb	17:34:06
1	Cd 226.502†	42418.2	43141.1	454.34	ug/L	454.34	ppb	17:34:26
1	Co 228.616†	30874.0	31286.9	458.83	ug/L	458.83	ppb	17:34:26
1	Cr 267.716†	39225.8	39630.1	469.25	ug/L	469.25	ppb	17:34:06
1	Cu 324.752†	155058.0	150724.8	471.91	ug/L	471.91	ppb	17:34:06
1	Mn 257.610†	496261.4	500529.9	469.46	ug/L	469.46	ppb	17:34:06
1	Mo 202.031†	7872.9	7942.2	473.58	ug/L	473.58	ppb	17:34:26
1	Ni 231.604†	20508.0	20550.6	461.56	ug/L	461.56	ppb	17:34:26
1	P 214.914†	5771.3	5533.9	2212.6	ug/L	2212.6	ppb	17:34:26
1	Pb 220.353†	4652.7	4726.6	469.84	ug/L	469.84	ppb	17:34:26
1	S 181.975 Axial†	917.5	821.9	914.88	ug/L	914.88	ppb	17:34:26
1	Sb 206.836†	1885.1	1849.5	465.93	ug/L	465.93	ppb	17:34:26
1	Se 196.026†	1052.7	1095.1	477.45	ug/L	477.45	ppb	17:34:26
1	Si 251.611†	90691.4	91125.6	2380.8	ug/L	2380.8	ppb	17:34:06
1	Sn 189.927†	3156.5	3175.5	465.76	ug/L	465.76	ppb	17:34:26
1	Ti 334.940†	296229.4	300704.6	481.54	ug/L	481.54	ppb	17:34:06
1	Tl 190.801†	2017.7	2098.9	468.35	ug/L	468.35	ppb	17:34:26
1	U 409.014†	10293.9	15666.2	462.57	ug/L	462.57	ppb	17:34:06
1	V 292.402†	58597.0	60890.4	475.65	ug/L	475.65	ppb	17:34:06
1	Zn 213.857†	60904.4	60490.9	464.52	ug/L	464.52	ppb	17:34:06
1	SiO2†	90826.3	91264.0	5120.5	ug/L	5120.5	ppb	17:35:26
2	Sc Radial	6558.1	6558.1	90.4	%			17:33:32
2	Y RADIAL	5918.6	5918.6	97.56	%			17:33:32
2	Al 396.153Radial†	5754.3	6447.2	5154.1	ug/L	5154.1	ppb	17:33:12
2	Ca 317.933Radial†	3587.6	3937.2	5531.4	ug/L	5531.4	ppb	17:33:32
2	Fe 238.204 Radial†	1299.3	1399.7	5467.9	ug/L	5467.9	ppb	17:33:32
2	K 766.490 Radial†	26809.2	26798.4	5032.0	ug/L	5032.0	ppb	17:33:12
2	Mg 279.077 IEC†	220.5	241.5	5660.0	ug/L	5660.0	ppb	17:33:32
2	Na 589.592 Radial†	172895.6	188122.8	10023	ug/L	10023	ppb	17:33:12
2	Sr 421.552†	158131.6	174945.1	487.10	ug/L	487.10	ppb	17:33:12
2	Sc 361.383	742519.8	742519.8	94.473	%			17:34:33
2	Y 371.029	572668.5	572668.5	98.078	%			17:34:33
2	Ag 328.068†	92580.1	97287.9	503.28	ug/L	503.28	ppb	17:34:33
2	As 188.979†	1534.3	1658.9	491.65	ug/L	491.65	ppb	17:34:53
2	B 249.677†	21049.8	23105.3	488.20	ug/L	488.20	ppb	17:34:33
2	Ba 233.527†	77773.3	82303.6	497.94	ug/L	497.94	ppb	17:34:33
2	Be 313.107†	1232239.6	1309248.4	497.77	ug/L	497.77	ppb	17:34:33
2	Cd 226.502†	43310.6	46137.0	485.94	ug/L	485.94	ppb	17:34:53
2	Co 228.616†	31494.4	33436.6	490.38	ug/L	490.38	ppb	17:34:53
2	Cr 267.716†	39673.8	42001.2	497.32	ug/L	497.32	ppb	17:34:33
2	Cu 324.752†	155710.4	158913.9	497.54	ug/L	497.54	ppb	17:34:33
2	Mn 257.610†	500476.7	528990.6	496.12	ug/L	496.12	ppb	17:34:33
2	Mo 202.031†	8056.0	8516.8	507.81	ug/L	507.81	ppb	17:34:53
2	Ni 231.604†	20915.8	21974.0	493.52	ug/L	493.52	ppb	17:34:53

2	P 214.914†	5898.4	5947.5	2380.1	ug/L	2380.1 ppb	17:34:53
2	Pb 220.353†	4766.6	5072.1	504.17	ug/L	504.17 ppb	17:34:53
2	S 181.975 Axial†	927.1	876.4	975.61	ug/L	975.61 ppb	17:34:53
2	Sb 206.836†	1936.9	1995.6	502.86	ug/L	502.86 ppb	17:34:53
2	Se 196.026†	1084.8	1180.1	513.10	ug/L	513.10 ppb	17:34:53
2	Si 251.611†	91452.5	96317.0	2516.3	ug/L	2516.3 ppb	17:34:33
2	Sn 189.927†	3240.0	3416.6	501.05	ug/L	501.05 ppb	17:34:53
2	Ti 334.940†	298160.2	317073.9	507.74	ug/L	507.74 ppb	17:34:33
2	Tl 190.801†	2061.7	2242.9	500.42	ug/L	500.42 ppb	17:34:53
2	U 409.014†	10374.5	16249.4	479.79	ug/L	479.79 ppb	17:34:33
2	V 292.402†	59047.0	64200.4	501.63	ug/L	501.63 ppb	17:34:33
2	Zn 213.857†	61587.7	64159.4	492.71	ug/L	492.71 ppb	17:34:33
2	SiO2†	92404.3	97326.6	5460.7	ug/L	5460.7 ppb	17:35:31
3	Sc Radial	6788.0	6788.0	93.6	%		17:33:57
3	Y RADIAL	6125.7	6125.7	101.0	%		17:33:57
3	Al 396.153Radial†	5745.7	6222.4	4974.9	ug/L	4974.9 ppb	17:33:37
3	Ca 317.933Radial†	3629.0	3847.1	5404.8	ug/L	5404.8 ppb	17:33:57
3	Fe 238.204 Radial†	1313.0	1365.6	5334.5	ug/L	5334.5 ppb	17:33:57
3	K 766.490 Radial†	26883.8	25873.8	4858.4	ug/L	4858.4 ppb	17:33:37
3	Mg 279.077 IEC†	224.5	237.6	5567.6	ug/L	5567.6 ppb	17:33:57
3	Na 589.592 Radial†	173187.0	181957.6	9694.1	ug/L	9694.1 ppb	17:33:37
3	Sr 421.552†	158316.3	169218.8	471.16	ug/L	471.16 ppb	17:33:37
3	Sc 361.383	758814.4	758814.4	96.546	%		17:35:01
3	Y 371.029	584545.5	584545.5	100.11	%		17:35:01
3	Ag 328.068†	93576.2	96215.2	497.71	ug/L	497.71 ppb	17:35:01
3	As 188.979†	1478.9	1566.7	464.47	ug/L	464.47 ppb	17:35:21
3	B 249.677†	21225.8	22809.2	482.05	ug/L	482.05 ppb	17:35:01
3	Ba 233.527†	78184.6	80961.8	489.83	ug/L	489.83 ppb	17:35:01
3	Be 313.107†	1240598.1	1289897.0	490.41	ug/L	490.41 ppb	17:35:01
3	Cd 226.502†	41800.0	43587.8	459.07	ug/L	459.07 ppb	17:35:21
3	Co 228.616†	30471.2	31661.0	464.29	ug/L	464.29 ppb	17:35:21
3	Cr 267.716†	39883.0	41316.1	489.21	ug/L	489.21 ppb	17:35:01
3	Cu 324.752†	157289.5	157010.1	491.57	ug/L	491.57 ppb	17:35:01
3	Mn 257.610†	503895.9	521156.3	488.77	ug/L	488.77 ppb	17:35:01
3	Mo 202.031†	7777.7	8045.4	479.72	ug/L	479.72 ppb	17:35:21
3	Ni 231.604†	20292.2	20852.7	468.34	ug/L	468.34 ppb	17:35:21
3	P 214.914†	5704.4	5612.5	2241.6	ug/L	2241.6 ppb	17:35:21
3	Pb 220.353†	4588.9	4779.7	475.10	ug/L	475.10 ppb	17:35:21
3	S 181.975 Axial†	898.6	825.9	919.32	ug/L	919.32 ppb	17:35:21
3	Sb 206.836†	1872.6	1884.9	474.51	ug/L	474.51 ppb	17:35:21
3	Se 196.026†	1034.1	1102.9	480.28	ug/L	480.28 ppb	17:35:21
3	Si 251.611†	92183.0	94994.9	2482.4	ug/L	2482.4 ppb	17:35:01
3	Sn 189.927†	3131.5	3230.5	473.79	ug/L	473.79 ppb	17:35:21
3	Ti 334.940†	300625.6	312850.2	500.98	ug/L	500.98 ppb	17:35:01
3	Tl 190.801†	2006.6	2139.1	477.45	ug/L	477.45 ppb	17:35:21
3	U 409.014†	10384.3	16023.7	473.14	ug/L	473.14 ppb	17:35:01
3	V 292.402†	59507.2	63334.9	494.61	ug/L	494.61 ppb	17:35:01
3	Zn 213.857†	62015.8	63202.9	485.48	ug/L	485.48 ppb	17:35:01
3	SiO2†	90945.0	93714.8	5258.6	ug/L	5258.6 ppb	17:35:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	759800.4	96.672	%	2.2640				2.34%
Sc Radial	6662.3	91.9	%	1.61				1.75%
Y 371.029	585827.2	100.33	%	2.371				2.36%
Y RADIAL	6009.0	99.05	%	1.748				1.76%
Ag 328.068†	95313.7	493.08	ug/L	13.135	493.08	ppb	13.135	2.66%
QC value within limits for Ag 328.068 Recovery = 98.62%								
Al 396.153Radial†	6344.0	5072.2	ug/L	90.60	5072.2	ppb	90.60	1.79%
QC value within limits for Al 396.153Radial Recovery = 101.44%								
As 188.979†	1595.9	473.04	ug/L	16.139	473.04	ppb	16.139	3.41%
QC value within limits for As 188.979 Recovery = 94.61%								
B 249.677†	22628.3	478.16	ug/L	12.442	478.16	ppb	12.442	2.60%
QC value within limits for B 249.677 Recovery = 95.63%								
Ba 233.527†	80339.5	486.06	ug/L	14.145	486.06	ppb	14.145	2.91%
QC value within limits for Ba 233.527 Recovery = 97.21%								
Be 313.107†	1279250.6	486.37	ug/L	13.878	486.37	ppb	13.878	2.85%
QC value within limits for Be 313.107 Recovery = 97.27%								
Ca 317.933Radial†	3897.7	5475.9	ug/L	64.71	5475.9	ppb	64.71	1.18%

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   QC value within limits for Ca 317.933Radial  Recovery = 109.52%
Cd 226.502†            44288.6      466.45 ug/L        17.041      466.45 ppb        17.041   3.65%
   QC value within limits for Cd 226.502  Recovery = 93.29%
Co 228.616†            32128.1      471.17 ug/L        16.861      471.17 ppb        16.861   3.58%
   QC value within limits for Co 228.616  Recovery = 94.23%
Cr 267.716†            40982.5      485.26 ug/L        14.446      485.26 ppb        14.446   2.98%
   QC value within limits for Cr 267.716  Recovery = 97.05%
Cu 324.752†           155549.6      487.01 ug/L        13.408      487.01 ppb        13.408   2.75%
   QC value within limits for Cu 324.752  Recovery = 97.40%
Fe 238.204 Radial†      1387.4      5419.6 ug/L         73.95      5419.6 ppb         73.95   1.36%
   QC value within limits for Fe 238.204 Radial  Recovery = 108.39%
K 766.490 Radial†      26381.0      4953.8 ug/L         88.08      4953.8 ppb         88.08   1.78%
   QC value within limits for K 766.490 Radial  Recovery = 99.08%
Mg 279.077 IEC†          237.6      5567.4 ug/L         92.70      5567.4 ppb         92.70   1.67%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 111.35%
Mn 257.610†           516892.3      484.79 ug/L        13.769      484.79 ppb        13.769   2.84%
   QC value within limits for Mn 257.610  Recovery = 96.96%
Mo 202.031†             8168.1      487.04 ug/L        18.254      487.04 ppb        18.254   3.75%
   QC value within limits for Mo 202.031  Recovery = 97.41%
Na 589.592 Radial†    185399.6      9877.5 ug/L        167.55      9877.5 ppb        167.55   1.70%
   QC value within limits for Na 589.592 Radial  Recovery = 98.77%
Ni 231.604†            21125.8      474.47 ug/L        16.843      474.47 ppb        16.843   3.55%
   QC value within limits for Ni 231.604  Recovery = 94.89%
P 214.914†              5698.0      2278.1 ug/L         89.54      2278.1 ppb         89.54   3.93%
   QC value within limits for P 214.914  Recovery = 91.12%
Pb 220.353†             4859.5      483.04 ug/L        18.488      483.04 ppb        18.488   3.83%
   QC value within limits for Pb 220.353  Recovery = 96.61%
S 181.975 Axial†         841.4      936.60 ug/L        33.854      936.60 ppb        33.854   3.61%
   QC value within limits for S 181.975 Axial  Recovery = 93.66%
Sb 206.836†             1910.0      481.10 ug/L        19.325      481.10 ppb        19.325   4.02%
   QC value within limits for Sb 206.836  Recovery = 96.22%
Se 196.026†             1126.0      490.28 ug/L        19.817      490.28 ppb        19.817   4.04%
   QC value within limits for Se 196.026  Recovery = 98.06%
Si 251.611†            94145.8      2459.8 ug/L         70.50      2459.8 ppb         70.50   2.87%
   QC value within limits for Si 251.611  Recovery = 98.39%
Sn 189.927†             3274.2      480.20 ug/L        18.499      480.20 ppb        18.499   3.85%
   QC value within limits for Sn 189.927  Recovery = 96.04%
Sr 421.552†           172404.3      480.03 ug/L         8.122      480.03 ppb         8.122   1.69%
   QC value within limits for Sr 421.552  Recovery = 96.01%
Ti 334.940†           310209.6      496.75 ug/L        13.601      496.75 ppb        13.601   2.74%
   QC value within limits for Ti 334.940  Recovery = 99.35%
Tl 190.801†             2160.3      482.07 ug/L        16.529      482.07 ppb        16.529   3.43%
   QC value within limits for Tl 190.801  Recovery = 96.41%
U 409.014†             15979.8      471.83 ug/L         8.686      471.83 ppb         8.686   1.84%
   QC value within limits for U 409.014  Recovery = 94.37%
V 292.402†             62808.6      490.63 ug/L        13.442      490.63 ppb        13.442   2.74%
   QC value within limits for V 292.402  Recovery = 98.13%
Zn 213.857†            62617.7      480.91 ug/L        14.641      480.91 ppb        14.641   3.04%
   QC value within limits for Zn 213.857  Recovery = 96.18%
SiO2†                  94101.8      5279.9 ug/L        171.06      5279.9 ppb        171.06   3.24%
   QC value within limits for SiO2  Recovery = 98.74%
QC Failed.  Continue with analysis.
```

Sequence No.: 9
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/1/2009 17:37:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6807.9	6807.9	93.9	%			17:39:39
1	Y RADIAL	6213.9	6213.9	102.4	%			17:39:39
1	Al 396.153Radial†	-77.0	1.4	1.1273	ug/L	1.1273	ppb	17:39:39
1	Ca 317.933Radial†	31.2	3.0	4.1886	ug/L	4.1886	ppb	17:39:59
1	Fe 238.204 Radial†	35.7	0.8	3.1601	ug/L	3.1601	ppb	17:39:59
1	K 766.490 Radial†	2700.1	26.3	4.9744	ug/L	4.9744	ppb	17:39:39
1	Mg 279.077 IEC†	4.8	2.8	65.062	ug/L	65.062	ppb	17:39:59
1	Na 589.592 Radial†	130.4	-2944.6	-156.88	ug/L	-156.88	ppb	17:39:39
1	Sr 421.552†	-2.8	63.2	0.1761	ug/L	0.1761	ppb	17:39:39
1	Sc 361.383	741401.1	741401.1	94.331	%			17:40:56
1	Y 371.029	579967.5	579967.5	99.328	%			17:40:56
1	Ag 328.068†	745.0	81.5	0.4163	ug/L	0.4163	ppb	17:40:56
1	As 188.979†	-31.8	1.2	0.3421	ug/L	0.3421	ppb	17:41:16
1	B 249.677†	-611.4	175.9	3.7390	ug/L	3.7390	ppb	17:40:56
1	Ba 233.527†	36.0	18.6	0.1090	ug/L	0.1090	ppb	17:41:16
1	Be 313.107†	-4805.3	-172.8	-0.0653	ug/L	-0.0653	ppb	17:40:56
1	Cd 226.502†	-278.4	-2.5	-0.0266	ug/L	-0.0266	ppb	17:41:16
1	Co 228.616†	-92.1	2.1	0.0319	ug/L	0.0319	ppb	17:41:16
1	Cr 267.716†	-55.6	-52.5	-0.6218	ug/L	-0.6218	ppb	17:40:56
1	Cu 324.752†	5961.7	414.2	1.2961	ug/L	1.2961	ppb	17:40:56
1	Mn 257.610†	775.0	57.0	0.0526	ug/L	0.0526	ppb	17:40:56
1	Mo 202.031†	13.9	4.2	0.2515	ug/L	0.2515	ppb	17:41:16
1	Ni 231.604†	165.1	9.6	0.2152	ug/L	0.2152	ppb	17:41:16
1	P 214.914†	304.5	26.9	10.937	ug/L	10.937	ppb	17:41:16
1	Pb 220.353†	-2.8	23.7	2.3479	ug/L	2.3479	ppb	17:41:16
1	S 181.975 Axial†	91.8	-7.6	-8.4837	ug/L	-8.4837	ppb	17:41:16
1	Sb 206.836†	64.0	13.2	3.3043	ug/L	3.3043	ppb	17:41:16
1	Se 196.026†	-31.3	-1.4	-0.5570	ug/L	-0.5570	ppb	17:41:16
1	Si 251.611†	704.5	261.3	6.8632	ug/L	6.8632	ppb	17:41:16
1	Sn 189.927†	14.1	2.0	0.2988	ug/L	0.2988	ppb	17:41:16
1	Ti 334.940†	-1333.0	57.8	0.0940	ug/L	0.0940	ppb	17:40:56
1	Tl 190.801†	-54.0	3.5	0.7709	ug/L	0.7709	ppb	17:41:16
1	U 409.014†	-5045.0	-80.3	-2.3777	ug/L	-2.3777	ppb	17:40:56
1	V 292.402†	-1770.2	-177.4	-1.3707	ug/L	-1.3707	ppb	17:40:56
1	Zn 213.857†	1064.3	97.0	0.7462	ug/L	0.7462	ppb	17:41:16
1	SiO2†	695.1	253.4	14.296	ug/L	14.296	ppb	17:42:12
2	Sc Radial	6765.2	6765.2	93.3	%			17:40:04
2	Y RADIAL	6135.2	6135.2	101.1	%			17:40:04
2	Al 396.153Radial†	-41.5	39.0	31.289	ug/L	31.289	ppb	17:40:04
2	Ca 317.933Radial†	26.1	-2.3	-3.1833	ug/L	-3.1833	ppb	17:40:24
2	Fe 238.204 Radial†	41.5	7.3	28.270	ug/L	28.270	ppb	17:40:24
2	K 766.490 Radial†	2674.4	17.0	3.2095	ug/L	3.2095	ppb	17:40:04
2	Mg 279.077 IEC†	8.3	6.6	154.11	ug/L	154.11	ppb	17:40:24
2	Na 589.592 Radial†	97.1	-2979.4	-158.73	ug/L	-158.73	ppb	17:40:04
2	Sr 421.552†	-94.0	-34.5	-0.0961	ug/L	-0.0961	ppb	17:40:04
2	Sc 361.383	736643.5	736643.5	93.726	%			17:41:21
2	Y 371.029	575443.1	575443.1	98.553	%			17:41:21
2	Ag 328.068†	682.9	20.3	0.1181	ug/L	0.1181	ppb	17:41:21
2	As 188.979†	-27.9	5.1	1.5039	ug/L	1.5039	ppb	17:41:41
2	B 249.677†	-555.8	231.0	4.9080	ug/L	4.9080	ppb	17:41:21
2	Ba 233.527†	2.6	-16.8	-0.1027	ug/L	-0.1027	ppb	17:41:41
2	Be 313.107†	-4900.2	-307.0	-0.1165	ug/L	-0.1165	ppb	17:41:21
2	Cd 226.502†	-282.3	-8.6	-0.0940	ug/L	-0.0940	ppb	17:41:41
2	Co 228.616†	-91.9	1.7	0.0257	ug/L	0.0257	ppb	17:41:41
2	Cr 267.716†	-31.0	-26.6	-0.3123	ug/L	-0.3123	ppb	17:41:21
2	Cu 324.752†	5988.7	483.8	1.5155	ug/L	1.5155	ppb	17:41:21
2	Mn 257.610†	706.3	-10.9	-0.0096	ug/L	-0.0096	ppb	17:41:21
2	Mo 202.031†	20.7	11.6	0.6903	ug/L	0.6903	ppb	17:41:41
2	Ni 231.604†	152.7	-2.5	-0.0563	ug/L	-0.0563	ppb	17:41:41

2	P 214.914†	307.1	31.8	12.907	ug/L	12.907 ppb	17:41:41
2	Pb 220.353†	-27.0	-2.1	-0.2051	ug/L	-0.2051 ppb	17:41:41
2	S 181.975 Axial†	93.7	-4.9	-5.4805	ug/L	-5.4805 ppb	17:41:41
2	Sb 206.836†	51.1	-0.2	-0.0109	ug/L	-0.0109 ppb	17:41:41
2	Se 196.026†	-28.1	1.9	0.8739	ug/L	0.8739 ppb	17:41:41
2	Si 251.611†	687.4	247.8	6.4977	ug/L	6.4977 ppb	17:41:41
2	Sn 189.927†	16.1	4.2	0.6156	ug/L	0.6156 ppb	17:41:41
2	Ti 334.940†	-1380.6	-2.1	-0.0004	ug/L	-0.0004 ppb	17:41:21
2	Tl 190.801†	-46.4	11.2	2.4836	ug/L	2.4836 ppb	17:41:41
2	U 409.014†	-5158.9	-236.3	-7.0043	ug/L	-7.0043 ppb	17:41:21
2	V 292.402†	-1638.2	-48.7	-0.3823	ug/L	-0.3823 ppb	17:41:21
2	Zn 213.857†	1088.5	130.1	0.9982	ug/L	0.9982 ppb	17:41:41
2	SiO2†	721.7	286.6	16.145	ug/L	16.145 ppb	17:42:17
3	Sc Radial	6893.9	6893.9	95.1	%		17:40:29
3	Y RADIAL	6271.0	6271.0	103.4	%		17:40:29
3	Al 396.153Radial†	-75.9	3.7	2.9639	ug/L	2.9639 ppb	17:40:29
3	Ca 317.933Radial†	29.2	0.4	0.5777	ug/L	0.5777 ppb	17:40:49
3	Fe 238.204 Radial†	37.8	2.5	9.8004	ug/L	9.8004 ppb	17:40:49
3	K 766.490 Radial†	2623.9	-89.7	-16.855	ug/L	-16.855 ppb	17:40:29
3	Mg 279.077 IEC†	1.1	-1.2	-28.072	ug/L	-28.072 ppb	17:40:49
3	Na 589.592 Radial†	83.2	-2995.9	-159.61	ug/L	-159.61 ppb	17:40:29
3	Sr 421.552†	-71.2	-8.6	-0.0241	ug/L	-0.0241 ppb	17:40:29
3	Sc 361.383	735810.3	735810.3	93.620	%		17:41:47
3	Y 371.029	574673.1	574673.1	98.421	%		17:41:47
3	Ag 328.068†	611.4	-55.2	-0.2766	ug/L	-0.2766 ppb	17:41:47
3	As 188.979†	-31.2	1.6	0.4642	ug/L	0.4642 ppb	17:42:07
3	B 249.677†	-606.0	176.7	3.7548	ug/L	3.7548 ppb	17:41:47
3	Ba 233.527†	9.3	-9.7	-0.0588	ug/L	-0.0588 ppb	17:42:07
3	Be 313.107†	-4870.7	-281.4	-0.1069	ug/L	-0.1069 ppb	17:41:47
3	Cd 226.502†	-299.6	-27.4	-0.2902	ug/L	-0.2902 ppb	17:42:07
3	Co 228.616†	-89.8	3.8	0.0553	ug/L	0.0553 ppb	17:42:07
3	Cr 267.716†	-53.2	-50.3	-0.5931	ug/L	-0.5931 ppb	17:41:47
3	Cu 324.752†	5903.8	400.4	1.2535	ug/L	1.2535 ppb	17:41:47
3	Mn 257.610†	790.3	79.6	0.0764	ug/L	0.0764 ppb	17:41:47
3	Mo 202.031†	2.2	-8.2	-0.4869	ug/L	-0.4869 ppb	17:42:07
3	Ni 231.604†	154.4	-0.5	-0.0112	ug/L	-0.0112 ppb	17:42:07
3	P 214.914†	295.8	20.0	8.0916	ug/L	8.0916 ppb	17:42:07
3	Pb 220.353†	13.4	41.0	4.0644	ug/L	4.0644 ppb	17:42:07
3	S 181.975 Axial†	91.2	-7.5	-8.3182	ug/L	-8.3182 ppb	17:42:07
3	Sb 206.836†	51.3	0.1	0.0529	ug/L	0.0529 ppb	17:42:07
3	Se 196.026†	-36.1	-6.8	-2.8197	ug/L	-2.8197 ppb	17:42:07
3	Si 251.611†	690.7	252.2	6.6191	ug/L	6.6191 ppb	17:42:07
3	Sn 189.927†	25.3	14.1	2.0642	ug/L	2.0642 ppb	17:42:07
3	Ti 334.940†	-1421.1	-47.0	-0.0727	ug/L	-0.0727 ppb	17:41:47
3	Tl 190.801†	-60.8	-4.2	-0.9372	ug/L	-0.9372 ppb	17:42:07
3	U 409.014†	-5099.3	-178.9	-5.3004	ug/L	-5.3004 ppb	17:41:47
3	V 292.402†	-1613.7	-24.6	-0.2076	ug/L	-0.2076 ppb	17:41:47
3	Zn 213.857†	1066.2	107.5	0.8319	ug/L	0.8319 ppb	17:42:07
3	SiO2†	682.0	245.1	13.813	ug/L	13.813 ppb	17:42:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	737951.6	93.892	%	0.3838				0.41%
Sc Radial	6822.3	94.1	%	0.90				0.96%
Y 371.029	576694.5	98.767	%	0.4899				0.50%
Y RADIAL	6206.7	102.3	%	1.12				1.10%
Ag 328.068†	15.5	0.0859	ug/L	0.34757	0.0859	ppb	0.34757	404.65%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	14.7	11.793	ug/L	16.9087	11.793	ppb	16.9087	143.37%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.6	0.7701	ug/L	0.63842	0.7701	ppb	0.63842	82.91%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	194.6	4.1339	ug/L	0.67040	4.1339	ppb	0.67040	16.22%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-2.6	-0.0175	ug/L	0.11172	-0.0175	ppb	0.11172	639.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-253.7	-0.0962	ug/L	0.02718	-0.0962	ppb	0.02718	28.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.4	0.5277	ug/L	3.68623	0.5277	ppb	3.68623	698.60%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -12.8     -0.1369 ug/L       0.13696     -0.1369 ppb        0.13696 100.02%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                2.5      0.0377 ug/L       0.01563      0.0377 ppb        0.01563  41.49%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -43.1     -0.5091 ug/L       0.17098     -0.5091 ppb        0.17098  33.59%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              432.8      1.3550 ug/L       0.14056      1.3550 ppb        0.14056  10.37%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         3.5      13.743 ug/L       13.0109      13.743 ppb        13.0109  94.67%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -15.5     -2.8905 ug/L      12.12605     -2.8905 ppb       12.12605 419.52%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            2.7      63.699 ug/L       91.0965      63.699 ppb        91.0965 143.01%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               41.9      0.0398 ug/L       0.04441      0.0398 ppb        0.04441 111.68%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                2.5      0.1517 ug/L       0.59490      0.1517 ppb        0.59490 392.28%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -2973.3     -158.41 ug/L         1.397     -158.41 ppb          1.397   0.88%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                2.2      0.0492 ug/L       0.14553      0.0492 ppb        0.14553 295.52%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                26.2      10.645 ug/L        2.4209      10.645 ppb         2.4209  22.74%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               20.9      2.0690 ug/L       2.14834      2.0690 ppb        2.14834 103.83%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -6.7     -7.4275 ug/L       1.68815     -7.4275 ppb        1.68815  22.73%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.4      1.1155 ug/L       1.89590      1.1155 ppb        1.89590 169.97%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -2.1     -0.8343 ug/L       1.86232     -0.8343 ppb        1.86232 223.22%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              253.8      6.6600 ug/L       0.18615      6.6600 ppb        0.18615   2.80%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.8      0.9928 ug/L       0.94124      0.9928 ppb        0.94124  94.80%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                6.7      0.0186 ug/L       0.14101      0.0186 ppb        0.14101 756.39%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                2.9      0.0070 ug/L       0.08361      0.0070 ppb        0.08361 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                3.5      0.7724 ug/L       1.71041      0.7724 ppb        1.71041 221.43%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -165.2     -4.8941 ug/L       2.33994     -4.8941 ppb        2.33994  47.81%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -83.6     -0.6536 ug/L       0.62722     -0.6536 ppb        0.62722  95.97%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              111.5      0.8588 ug/L       0.12814      0.8588 ppb        0.12814  14.92%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    261.7      14.751 ug/L        1.2309      14.751 ppb         1.2309   8.34%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/1/2009 18:33:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6756.9	6756.9	93.2	%			18:36:00
1	Y RADIAL	6097.2	6097.2	100.5	%			18:36:00
1	Al 396.153Radial†	5895.6	6411.6	5126.4	ug/L	5126.4	ppb	18:35:40
1	Ca 317.933Radial†	3653.2	3890.9	5466.4	ug/L	5466.4	ppb	18:36:00
1	Fe 238.204 Radial†	1311.9	1370.9	5355.4	ug/L	5355.4	ppb	18:36:00
1	K 766.490 Radial†	27350.8	26507.4	4977.6	ug/L	4977.6	ppb	18:35:40
1	Mg 279.077 IEC†	221.7	235.7	5522.8	ug/L	5522.8	ppb	18:36:00
1	Na 589.592 Radial†	176865.3	186758.4	9949.9	ug/L	9949.9	ppb	18:35:40
1	Sr 421.552†	162325.0	174301.0	485.31	ug/L	485.31	ppb	18:35:40
1	Sc 361.383	762056.4	762056.4	96.959	%			18:36:59
1	Y 371.029	587514.8	587514.8	100.62	%			18:36:59
1	Ag 328.068†	92244.3	94429.2	488.50	ug/L	488.50	ppb	18:36:59
1	As 188.979†	1541.7	1625.0	481.58	ug/L	481.58	ppb	18:37:19
1	B 249.677†	20878.4	22357.3	472.40	ug/L	472.40	ppb	18:36:59
1	Ba 233.527†	77087.5	79485.7	480.90	ug/L	480.90	ppb	18:36:59
1	Be 313.107†	1226508.7	1269899.2	482.81	ug/L	482.81	ppb	18:36:59
1	Cd 226.502†	42868.2	44505.4	468.75	ug/L	468.75	ppb	18:37:19
1	Co 228.616†	31165.3	32242.6	472.86	ug/L	472.86	ppb	18:37:19
1	Cr 267.716†	39464.0	40708.2	482.01	ug/L	482.01	ppb	18:36:59
1	Cu 324.752†	155110.2	154069.4	482.37	ug/L	482.37	ppb	18:36:59
1	Mn 257.610†	497754.9	512602.4	480.76	ug/L	480.76	ppb	18:36:59
1	Mo 202.031†	7942.9	8181.5	487.83	ug/L	487.83	ppb	18:37:19
1	Ni 231.604†	20738.2	21223.3	476.66	ug/L	476.66	ppb	18:37:19
1	P 214.914†	5842.9	5730.2	2292.5	ug/L	2292.5	ppb	18:37:19
1	Pb 220.353†	4741.2	4916.6	488.72	ug/L	488.72	ppb	18:37:19
1	S 181.975 Axial†	931.9	856.3	953.18	ug/L	953.18	ppb	18:37:19
1	Sb 206.836†	1924.0	1929.6	486.11	ug/L	486.11	ppb	18:37:19
1	Se 196.026†	1069.6	1134.9	493.80	ug/L	493.80	ppb	18:37:19
1	Si 251.611†	90762.8	93124.0	2432.9	ug/L	2432.9	ppb	18:36:59
1	Sn 189.927†	3199.2	3286.6	482.01	ug/L	482.01	ppb	18:37:19
1	Ti 334.940†	297095.4	307884.7	493.03	ug/L	493.03	ppb	18:36:59
1	Tl 190.801†	2050.6	2175.6	485.41	ug/L	485.41	ppb	18:37:19
1	U 409.014†	10269.7	15859.7	468.29	ug/L	468.29	ppb	18:36:59
1	V 292.402†	58750.2	62292.0	486.66	ug/L	486.66	ppb	18:36:59
1	Zn 213.857†	61392.5	62286.8	478.34	ug/L	478.34	ppb	18:36:59
1	SiO2†	91742.1	94136.2	5281.8	ug/L	5281.8	ppb	18:38:19
2	Sc Radial	7010.7	7010.7	96.7	%			18:36:25
2	Y RADIAL	6335.1	6335.1	104.4	%			18:36:25
2	Al 396.153Radial†	5804.1	6087.8	4866.3	ug/L	4866.3	ppb	18:36:05
2	Ca 317.933Radial†	3599.9	3693.8	5189.5	ug/L	5189.5	ppb	18:36:25
2	Fe 238.204 Radial†	1290.9	1298.2	5072.3	ug/L	5072.3	ppb	18:36:25
2	K 766.490 Radial†	27026.8	25109.3	4714.4	ug/L	4714.4	ppb	18:36:05
2	Mg 279.077 IEC†	214.8	219.9	5155.1	ug/L	5155.1	ppb	18:36:25
2	Na 589.592 Radial†	173180.3	176072.8	9380.6	ug/L	9380.6	ppb	18:36:05
2	Sr 421.552†	158859.2	164407.2	457.76	ug/L	457.76	ppb	18:36:05
2	Sc 361.383	763592.5	763592.5	97.154	%			18:37:26
2	Y 371.029	588629.2	588629.2	100.81	%			18:37:26
2	Ag 328.068†	92757.1	94765.7	490.15	ug/L	490.15	ppb	18:37:26
2	As 188.979†	1534.1	1613.9	478.26	ug/L	478.26	ppb	18:37:46
2	B 249.677†	20928.3	22365.3	472.58	ug/L	472.58	ppb	18:37:26
2	Ba 233.527†	77403.6	79651.1	481.90	ug/L	481.90	ppb	18:37:26
2	Be 313.107†	1230447.7	1271408.8	483.38	ug/L	483.38	ppb	18:37:26
2	Cd 226.502†	43161.6	44718.5	471.03	ug/L	471.03	ppb	18:37:46
2	Co 228.616†	31376.2	32395.0	475.11	ug/L	475.11	ppb	18:37:46
2	Cr 267.716†	39568.1	40733.5	482.31	ug/L	482.31	ppb	18:37:26
2	Cu 324.752†	155717.2	154372.4	483.31	ug/L	483.31	ppb	18:37:26
2	Mn 257.610†	499184.0	513040.6	481.14	ug/L	481.14	ppb	18:37:26
2	Mo 202.031†	8030.6	8255.3	492.21	ug/L	492.21	ppb	18:37:46
2	Ni 231.604†	20931.2	21378.9	480.16	ug/L	480.16	ppb	18:37:46

2	P 214.914†	5896.9	5773.7	2310.6	ug/L	2310.6 ppb	18:37:46
2	Pb 220.353†	4758.5	4924.6	489.50	ug/L	489.50 ppb	18:37:46
2	S 181.975 Axial†	936.6	859.2	956.45	ug/L	956.45 ppb	18:37:46
2	Sb 206.836†	1928.3	1930.1	486.32	ug/L	486.32 ppb	18:37:46
2	Se 196.026†	1093.7	1157.6	502.31	ug/L	502.31 ppb	18:37:46
2	Si 251.611†	91091.1	93273.6	2436.8	ug/L	2436.8 ppb	18:37:26
2	Sn 189.927†	3217.4	3298.7	483.72	ug/L	483.72 ppb	18:37:46
2	Ti 334.940†	298210.0	308415.5	493.86	ug/L	493.86 ppb	18:37:26
2	Tl 190.801†	2056.1	2177.0	485.72	ug/L	485.72 ppb	18:37:46
2	U 409.014†	10377.7	15949.6	470.99	ug/L	470.99 ppb	18:37:26
2	V 292.402†	59005.8	62433.2	487.84	ug/L	487.84 ppb	18:37:26
2	Zn 213.857†	61407.4	62174.8	477.49	ug/L	477.49 ppb	18:37:26
2	SiO2†	92446.3	94670.6	5311.9	ug/L	5311.9 ppb	18:38:24
3	Sc Radial	6498.6	6498.6	89.6	%		18:36:50
3	Y RADIAL	5867.4	5867.4	96.72	%		18:36:50
3	Al 396.153Radial†	5919.9	6690.2	5349.9	ug/L	5349.9 ppb	18:36:30
3	Ca 317.933Radial†	3643.8	4036.3	5670.6	ug/L	5670.6 ppb	18:36:50
3	Fe 238.204 Radial†	1308.5	1423.1	5558.6	ug/L	5558.6 ppb	18:36:50
3	K 766.490 Radial†	27363.9	27688.7	5199.9	ug/L	5199.9 ppb	18:36:30
3	Mg 279.077 IEC†	220.2	243.5	5705.6	ug/L	5705.6 ppb	18:36:50
3	Na 589.592 Radial†	176762.9	194188.4	10346	ug/L	10346 ppb	18:36:30
3	Sr 421.552†	162505.4	181426.4	505.15	ug/L	505.15 ppb	18:36:30
3	Sc 361.383	767402.4	767402.4	97.639	%		18:37:53
3	Y 371.029	591619.7	591619.7	101.32	%		18:37:53
3	Ag 328.068†	93644.2	95200.3	492.54	ug/L	492.54 ppb	18:37:53
3	As 188.979†	1551.3	1623.7	481.25	ug/L	481.25 ppb	18:38:13
3	B 249.677†	21302.6	22641.7	478.42	ug/L	478.42 ppb	18:37:53
3	Ba 233.527†	78141.7	80011.6	484.08	ug/L	484.08 ppb	18:37:53
3	Be 313.107†	1245133.5	1280162.1	486.71	ug/L	486.71 ppb	18:37:53
3	Cd 226.502†	43276.1	44615.1	469.88	ug/L	469.88 ppb	18:38:13
3	Co 228.616†	31453.9	32314.2	473.91	ug/L	473.91 ppb	18:38:13
3	Cr 267.716†	39896.6	40867.8	483.91	ug/L	483.91 ppb	18:37:53
3	Cu 324.752†	157630.1	155535.8	486.97	ug/L	486.97 ppb	18:37:53
3	Mn 257.610†	504449.9	515883.0	483.86	ug/L	483.86 ppb	18:37:53
3	Mo 202.031†	8046.0	8230.0	490.73	ug/L	490.73 ppb	18:38:13
3	Ni 231.604†	20973.5	21315.2	478.73	ug/L	478.73 ppb	18:38:13
3	P 214.914†	5906.7	5753.6	2301.2	ug/L	2301.2 ppb	18:38:13
3	Pb 220.353†	4760.7	4902.5	487.35	ug/L	487.35 ppb	18:38:13
3	S 181.975 Axial†	930.6	848.2	944.19	ug/L	944.19 ppb	18:38:13
3	Sb 206.836†	1944.2	1936.5	487.81	ug/L	487.81 ppb	18:38:13
3	Se 196.026†	1081.2	1139.2	496.26	ug/L	496.26 ppb	18:38:13
3	Si 251.611†	92148.1	93890.6	2453.0	ug/L	2453.0 ppb	18:37:53
3	Sn 189.927†	3216.8	3281.6	481.31	ug/L	481.31 ppb	18:38:13
3	Ti 334.940†	301468.0	310228.4	496.79	ug/L	496.79 ppb	18:37:53
3	Tl 190.801†	2066.3	2176.9	485.75	ug/L	485.75 ppb	18:38:13
3	U 409.014†	10484.2	16005.7	472.59	ug/L	472.59 ppb	18:37:53
3	V 292.402†	59541.6	62680.4	489.67	ug/L	489.67 ppb	18:37:53
3	Zn 213.857†	62108.2	62578.7	480.56	ug/L	480.56 ppb	18:37:53
3	SiO2†	93241.6	95012.8	5331.1	ug/L	5331.1 ppb	18:38:29

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	764350.4	97.251	%	0.3502				0.36%
Sc Radial	6755.4	93.1	%	3.53				3.79%
Y 371.029	589254.6	100.92	%	0.364				0.36%
Y RADIAL	6099.9	100.5	%	3.86				3.83%
Ag 328.068†	94798.4	490.40	ug/L	2.028	490.40	ppb	2.028	0.41%
QC value within limits for Ag 328.068 Recovery = 98.08%								
Al 396.153Radial†	6396.5	5114.2	ug/L	242.05	5114.2	ppb	242.05	4.73%
QC value within limits for Al 396.153Radial Recovery = 102.28%								
As 188.979†	1620.9	480.37	ug/L	1.828	480.37	ppb	1.828	0.38%
QC value within limits for As 188.979 Recovery = 96.07%								
B 249.677†	22454.8	474.47	ug/L	3.429	474.47	ppb	3.429	0.72%
QC value within limits for B 249.677 Recovery = 94.89%								
Ba 233.527†	79716.2	482.29	ug/L	1.626	482.29	ppb	1.626	0.34%
QC value within limits for Ba 233.527 Recovery = 96.46%								
Be 313.107†	1273823.3	484.30	ug/L	2.106	484.30	ppb	2.106	0.43%
QC value within limits for Be 313.107 Recovery = 96.86%								
Ca 317.933Radial†	3873.7	5442.1	ug/L	241.47	5442.1	ppb	241.47	4.44%

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   QC value within limits for Ca 317.933Radial  Recovery = 108.84%
Cd 226.502†            44613.0      469.88 ug/L         1.140      469.88 ppb          1.140   0.24%
   QC value within limits for Cd 226.502  Recovery = 93.98%
Co 228.616†            32317.3      473.96 ug/L         1.125      473.96 ppb          1.125   0.24%
   QC value within limits for Co 228.616  Recovery = 94.79%
Cr 267.716†            40769.9      482.74 ug/L         1.019      482.74 ppb          1.019   0.21%
   QC value within limits for Cr 267.716  Recovery = 96.55%
Cu 324.752†           154659.2      484.22 ug/L         2.432      484.22 ppb          2.432   0.50%
   QC value within limits for Cu 324.752  Recovery = 96.84%
Fe 238.204 Radial†      1364.1      5328.8 ug/L       244.26      5328.8 ppb        244.26   4.58%
   QC value within limits for Fe 238.204 Radial  Recovery = 106.58%
K 766.490 Radial†      26435.1      4964.0 ug/L       243.02      4964.0 ppb        243.02   4.90%
   QC value within limits for K 766.490 Radial  Recovery = 99.28%
Mg 279.077 IEC†          233.0      5461.2 ug/L       280.42      5461.2 ppb        280.42   5.13%
   QC value within limits for Mg 279.077 IEC  Recovery = 109.22%
Mn 257.610†           513842.0      481.92 ug/L         1.688      481.92 ppb          1.688   0.35%
   QC value within limits for Mn 257.610  Recovery = 96.38%
Mo 202.031†             8222.3      490.26 ug/L         2.229      490.26 ppb          2.229   0.45%
   QC value within limits for Mo 202.031  Recovery = 98.05%
Na 589.592 Radial†    185673.2      9892.1 ug/L       485.16      9892.1 ppb        485.16   4.90%
   QC value within limits for Na 589.592 Radial  Recovery = 98.92%
Ni 231.604†            21305.8      478.52 ug/L         1.758      478.52 ppb          1.758   0.37%
   QC value within limits for Ni 231.604  Recovery = 95.70%
P 214.914†              5752.5      2301.4 ug/L         9.03      2301.4 ppb          9.03   0.39%
   QC value within limits for P 214.914  Recovery = 92.06%
Pb 220.353†             4914.6      488.52 ug/L         1.090      488.52 ppb          1.090   0.22%
   QC value within limits for Pb 220.353  Recovery = 97.70%
S 181.975 Axial†         854.6      951.27 ug/L         6.350      951.27 ppb          6.350   0.67%
   QC value within limits for S 181.975 Axial  Recovery = 95.13%
Sb 206.836†             1932.1      486.75 ug/L         0.929      486.75 ppb          0.929   0.19%
   QC value within limits for Sb 206.836  Recovery = 97.35%
Se 196.026†             1143.9      497.46 ug/L         4.384      497.46 ppb          4.384   0.88%
   QC value within limits for Se 196.026  Recovery = 99.49%
Si 251.611†            93429.4      2440.9 ug/L        10.63      2440.9 ppb         10.63   0.44%
   QC value within limits for Si 251.611  Recovery = 97.64%
Sn 189.927†             3289.0      482.35 ug/L         1.242      482.35 ppb          1.242   0.26%
   QC value within limits for Sn 189.927  Recovery = 96.47%
Sr 421.552†           173378.2      482.74 ug/L        23.798      482.74 ppb         23.798   4.93%
   QC value within limits for Sr 421.552  Recovery = 96.55%
Ti 334.940†           308842.8      494.56 ug/L         1.976      494.56 ppb          1.976   0.40%
   QC value within limits for Ti 334.940  Recovery = 98.91%
Tl 190.801†             2176.5      485.63 ug/L         0.189      485.63 ppb          0.189   0.04%
   QC value within limits for Tl 190.801  Recovery = 97.13%
U 409.014†             15938.3      470.62 ug/L         2.171      470.62 ppb          2.171   0.46%
   QC value within limits for U 409.014  Recovery = 94.12%
V 292.402†             62468.5      488.05 ug/L         1.518      488.05 ppb          1.518   0.31%
   QC value within limits for V 292.402  Recovery = 97.61%
Zn 213.857†            62346.8      478.80 ug/L         1.583      478.80 ppb          1.583   0.33%
   QC value within limits for Zn 213.857  Recovery = 95.76%
SiO2†                  94606.5      5308.3 ug/L        24.84      5308.3 ppb         24.84   0.47%
   QC value within limits for SiO2  Recovery = 99.27%
All analyte(s) passed QC.
```

Sequence No.: 18
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/1/2009 18:40:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7003.9	7003.9	96.6	%			18:42:31
1	Y RADIAL	6352.8	6352.8	104.7	%			18:42:31
1	Al 396.153Radial†	-56.2	25.3	20.283	ug/L	20.283	ppb	18:42:31
1	Ca 317.933Radial†	29.8	0.5	0.7477	ug/L	0.7477	ppb	18:42:51
1	Fe 238.204 Radial†	38.8	2.9	11.453	ug/L	11.453	ppb	18:42:51
1	K 766.490 Radial†	2742.5	-10.2	-1.9000	ug/L	-1.9000	ppb	18:42:31
1	Mg 279.077 IEC†	1.9	-0.4	-8.6479	ug/L	-8.6479	ppb	18:42:51
1	Na 589.592 Radial†	-26.8	-3111.2	-165.76	ug/L	-165.76	ppb	18:42:31
1	Sr 421.552†	-62.0	2.1	0.0059	ug/L	0.0059	ppb	18:42:31
1	Sc 361.383	726354.6	726354.6	92.416	%			18:43:48
1	Y 371.029	566954.1	566954.1	97.099	%			18:43:48
1	Ag 328.068†	681.4	29.0	0.1625	ug/L	0.1625	ppb	18:43:48
1	As 188.979†	-32.7	-0.5	-0.1463	ug/L	-0.1463	ppb	18:44:08
1	B 249.677†	-752.0	10.4	0.2202	ug/L	0.2202	ppb	18:43:48
1	Ba 233.527†	21.7	3.9	0.0220	ug/L	0.0220	ppb	18:44:08
1	Be 313.107†	-4856.6	-333.9	-0.1269	ug/L	-0.1269	ppb	18:43:48
1	Cd 226.502†	-271.2	-0.8	-0.0103	ug/L	-0.0103	ppb	18:44:08
1	Co 228.616†	-99.4	-7.8	-0.1138	ug/L	-0.1138	ppb	18:44:08
1	Cr 267.716†	-48.0	-45.4	-0.5333	ug/L	-0.5333	ppb	18:43:48
1	Cu 324.752†	5892.3	470.0	1.4714	ug/L	1.4714	ppb	18:43:48
1	Mn 257.610†	847.6	152.6	0.1445	ug/L	0.1445	ppb	18:43:48
1	Mo 202.031†	13.7	4.2	0.2534	ug/L	0.2534	ppb	18:44:08
1	Ni 231.604†	147.7	-5.5	-0.1246	ug/L	-0.1246	ppb	18:44:08
1	P 214.914†	299.5	28.1	11.433	ug/L	11.433	ppb	18:44:08
1	Pb 220.353†	-11.1	14.7	1.4558	ug/L	1.4558	ppb	18:44:08
1	S 181.975 Axial†	83.5	-14.5	-16.176	ug/L	-16.176	ppb	18:44:08
1	Sb 206.836†	50.7	0.2	0.1013	ug/L	0.1013	ppb	18:44:08
1	Se 196.026†	-21.2	8.8	3.7281	ug/L	3.7281	ppb	18:44:08
1	Si 251.611†	618.1	183.3	4.7879	ug/L	4.7879	ppb	18:44:08
1	Sn 189.927†	25.5	14.7	2.1457	ug/L	2.1457	ppb	18:44:08
1	Ti 334.940†	-1412.6	-57.7	-0.0858	ug/L	-0.0858	ppb	18:43:48
1	Tl 190.801†	-63.1	-7.6	-1.6810	ug/L	-1.6810	ppb	18:44:08
1	U 409.014†	-5310.6	-478.5	-14.177	ug/L	-14.177	ppb	18:43:48
1	V 292.402†	-1642.1	-77.7	-0.6258	ug/L	-0.6258	ppb	18:43:48
1	Zn 213.857†	1097.8	156.6	1.2119	ug/L	1.2119	ppb	18:44:08
1	SiO2†	589.2	154.1	8.6328	ug/L	8.6328	ppb	18:45:04
2	Sc Radial	6861.6	6861.6	94.6	%			18:42:56
2	Y RADIAL	6228.1	6228.1	102.7	%			18:42:56
2	Al 396.153Radial†	-60.6	19.4	15.524	ug/L	15.524	ppb	18:42:56
2	Ca 317.933Radial†	32.3	3.9	5.4320	ug/L	5.4320	ppb	18:43:16
2	Fe 238.204 Radial†	41.9	7.1	27.710	ug/L	27.710	ppb	18:43:16
2	K 766.490 Radial†	2623.7	-76.9	-14.465	ug/L	-14.465	ppb	18:42:56
2	Mg 279.077 IEC†	3.2	1.1	26.126	ug/L	26.126	ppb	18:43:16
2	Na 589.592 Radial†	85.6	-2993.0	-159.46	ug/L	-159.46	ppb	18:42:56
2	Sr 421.552†	-29.8	34.7	0.0967	ug/L	0.0967	ppb	18:42:56
2	Sc 361.383	723935.6	723935.6	92.109	%			18:44:13
2	Y 371.029	565707.7	565707.7	96.885	%			18:44:13
2	Ag 328.068†	829.2	192.0	0.9959	ug/L	0.9959	ppb	18:44:13
2	As 188.979†	-30.8	1.5	0.4298	ug/L	0.4298	ppb	18:44:34
2	B 249.677†	-630.7	139.3	2.9584	ug/L	2.9584	ppb	18:44:13
2	Ba 233.527†	44.8	29.0	0.1726	ug/L	0.1726	ppb	18:44:34
2	Be 313.107†	-4844.1	-337.8	-0.1281	ug/L	-0.1281	ppb	18:44:13
2	Cd 226.502†	-272.4	-3.1	-0.0362	ug/L	-0.0362	ppb	18:44:34
2	Co 228.616†	-92.0	-0.1	0.0018	ug/L	0.0018	ppb	18:44:34
2	Cr 267.716†	-131.2	-135.9	-1.6065	ug/L	-1.6065	ppb	18:44:13
2	Cu 324.752†	5943.5	546.9	1.7128	ug/L	1.7128	ppb	18:44:13
2	Mn 257.610†	893.5	205.5	0.1955	ug/L	0.1955	ppb	18:44:13
2	Mo 202.031†	26.6	18.3	1.0937	ug/L	1.0937	ppb	18:44:34
2	Ni 231.604†	125.3	-29.4	-0.6602	ug/L	-0.6602	ppb	18:44:34

2	P 214.914†	309.3	39.9	16.219	ug/L	16.219 ppb	18:44:34
2	Pb 220.353†	-12.3	13.3	1.3187	ug/L	1.3187 ppb	18:44:34
2	S 181.975 Axial†	99.9	3.5	3.9231	ug/L	3.9231 ppb	18:44:34
2	Sb 206.836†	51.5	1.3	0.3514	ug/L	0.3514 ppb	18:44:34
2	Se 196.026†	-28.7	0.6	0.3414	ug/L	0.3414 ppb	18:44:34
2	Si 251.611†	624.6	192.5	5.0696	ug/L	5.0696 ppb	18:44:34
2	Sn 189.927†	2.7	-10.1	-1.4706	ug/L	-1.4706 ppb	18:44:34
2	Ti 334.940†	-1348.4	7.0	0.0147	ug/L	0.0147 ppb	18:44:13
2	Tl 190.801†	-56.1	-0.2	-0.0479	ug/L	-0.0479 ppb	18:44:34
2	U 409.014†	-5035.7	-199.2	-5.9017	ug/L	-5.9017 ppb	18:44:13
2	V 292.402†	-1702.5	-149.3	-1.1530	ug/L	-1.1530 ppb	18:44:13
2	Zn 213.857†	1090.5	152.6	1.1811	ug/L	1.1811 ppb	18:44:34
2	SiO2†	612.6	181.6	10.277	ug/L	10.277 ppb	18:45:09
3	Sc Radial	6720.0	6720.0	92.7	%		18:43:21
3	Y RADIAL	6125.9	6125.9	101.0	%		18:43:21
3	Al 396.153Radial†	-88.6	-12.1	-9.7945	ug/L	-9.7945 ppb	18:43:21
3	Ca 317.933Radial†	35.3	7.8	10.947	ug/L	10.947 ppb	18:43:41
3	Fe 238.204 Radial†	40.3	6.2	24.261	ug/L	24.261 ppb	18:43:41
3	K 766.490 Radial†	2657.8	18.3	3.4537	ug/L	3.4537 ppb	18:43:21
3	Mg 279.077 IEC†	2.4	0.3	6.9623	ug/L	6.9623 ppb	18:43:41
3	Na 589.592 Radial†	29.9	-3051.2	-162.56	ug/L	-162.56 ppb	18:43:21
3	Sr 421.552†	-41.8	21.2	0.0588	ug/L	0.0588 ppb	18:43:21
3	Sc 361.383	724956.1	724956.1	92.239	%		18:44:39
3	Y 371.029	566767.1	566767.1	97.067	%		18:44:39
3	Ag 328.068†	663.6	11.1	0.0718	ug/L	0.0718 ppb	18:44:39
3	As 188.979†	-30.1	2.3	0.6756	ug/L	0.6756 ppb	18:44:59
3	B 249.677†	-743.4	18.1	0.3831	ug/L	0.3831 ppb	18:44:39
3	Ba 233.527†	8.2	-10.7	-0.0662	ug/L	-0.0662 ppb	18:44:59
3	Be 313.107†	-4834.4	-320.0	-0.1218	ug/L	-0.1218 ppb	18:44:39
3	Cd 226.502†	-266.6	3.5	0.0343	ug/L	0.0343 ppb	18:44:59
3	Co 228.616†	-92.5	-0.6	-0.0048	ug/L	-0.0048 ppb	18:44:59
3	Cr 267.716†	-57.3	-55.7	-0.6553	ug/L	-0.6553 ppb	18:44:39
3	Cu 324.752†	5910.7	502.3	1.5732	ug/L	1.5732 ppb	18:44:39
3	Mn 257.610†	803.6	106.7	0.1028	ug/L	0.1028 ppb	18:44:39
3	Mo 202.031†	29.4	21.3	1.2723	ug/L	1.2723 ppb	18:44:59
3	Ni 231.604†	140.1	-13.5	-0.3041	ug/L	-0.3041 ppb	18:44:59
3	P 214.914†	316.6	47.3	19.354	ug/L	19.354 ppb	18:44:59
3	Pb 220.353†	-11.0	14.8	1.4639	ug/L	1.4639 ppb	18:44:59
3	S 181.975 Axial†	89.7	-7.6	-8.4643	ug/L	-8.4643 ppb	18:44:59
3	Sb 206.836†	64.2	14.9	3.7514	ug/L	3.7514 ppb	18:44:59
3	Se 196.026†	-32.0	-2.9	-1.1373	ug/L	-1.1373 ppb	18:44:59
3	Si 251.611†	621.0	187.6	4.9122	ug/L	4.9122 ppb	18:44:59
3	Sn 189.927†	12.1	0.1	0.0210	ug/L	0.0210 ppb	18:44:59
3	Ti 334.940†	-1477.9	-131.3	-0.2043	ug/L	-0.2043 ppb	18:44:39
3	Tl 190.801†	-59.9	-4.3	-0.9571	ug/L	-0.9571 ppb	18:44:59
3	U 409.014†	-5222.2	-393.7	-11.667	ug/L	-11.667 ppb	18:44:39
3	V 292.402†	-1657.2	-97.5	-0.7626	ug/L	-0.7626 ppb	18:44:39
3	Zn 213.857†	1100.3	161.6	1.2493	ug/L	1.2493 ppb	18:44:59
3	SiO2†	633.0	202.8	11.410	ug/L	11.410 ppb	18:45:14

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	725082.1	92.255	%	0.1545				0.17%
Sc Radial	6861.8	94.6	%	1.96				2.07%
Y 371.029	566476.3	97.017	%	0.1151				0.12%
Y RADIAL	6235.6	102.8	%	1.87				1.82%
Ag 328.068†	77.4	0.4101	ug/L	0.50939	0.4101	ppb	0.50939	124.23%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	10.8	8.6709	ug/L	16.16755	8.6709	ppb	16.16755	186.46%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.1	0.3197	ug/L	0.42190	0.3197	ppb	0.42190	131.97%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	55.9	1.1872	ug/L	1.53607	1.1872	ppb	1.53607	129.38%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.4	0.0428	ug/L	0.12076	0.0428	ppb	0.12076	282.06%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-330.6	-0.1256	ug/L	0.00331	-0.1256	ppb	0.00331	2.64%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.1	5.7089	ug/L	5.10529	5.7089	ppb	5.10529	89.43%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -0.1     -0.0041 ug/L       0.03565     -0.0041 ppb       0.03565 879.32%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -2.8     -0.0389 ug/L       0.06492     -0.0389 ppb       0.06492 166.68%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -79.0     -0.9317 ug/L       0.58754     -0.9317 ppb       0.58754  63.06%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             506.4      1.5858 ug/L       0.12121      1.5858 ppb       0.12121   7.64%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        5.4      21.141 ug/L        8.5659      21.141 ppb        8.5659  40.52%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -22.9     -4.3037 ug/L       9.19791     -4.3037 ppb       9.19791 213.72%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.3      8.1468 ug/L      17.41719      8.1468 ppb      17.41719 213.79%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             154.9      0.1476 ug/L       0.04641      0.1476 ppb       0.04641  31.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              14.6      0.8731 ug/L       0.54411      0.8731 ppb       0.54411  62.32%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†    -3051.8     -162.59 ug/L         3.148     -162.59 ppb         3.148   1.94%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†             -16.2     -0.3629 ug/L       0.27261     -0.3629 ppb       0.27261  75.11%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               38.4      15.669 ug/L        3.9890      15.669 ppb        3.9890  25.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              14.2      1.4128 ug/L       0.08160      1.4128 ppb       0.08160   5.78%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -6.2     -6.9057 ug/L      10.13975     -6.9057 ppb      10.13975 146.83%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               5.5      1.4014 ug/L       2.03901      1.4014 ppb       2.03901 145.50%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               2.2      0.9774 ug/L       2.49426      0.9774 ppb       2.49426 255.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             187.8      4.9232 ug/L       0.14117      4.9232 ppb       0.14117   2.87%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.6      0.2321 ug/L       1.81736      0.2321 ppb       1.81736 783.10%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              19.3      0.0538 ug/L       0.04563      0.0538 ppb       0.04563  84.84%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -60.7     -0.0918 ug/L       0.10964     -0.0918 ppb       0.10964 119.42%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -4.0     -0.8953 ug/L       0.81832     -0.8953 ppb       0.81832  91.40%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -357.1     -10.582 ug/L        4.2428     -10.582 ppb        4.2428  40.10%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -108.2     -0.8471 ug/L       0.27360     -0.8471 ppb       0.27360  32.30%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             156.9      1.2141 ug/L       0.03414      1.2141 ppb       0.03414   2.81%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   179.5      10.107 ug/L        1.3962      10.107 ppb        1.3962  13.82%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 26
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/1/2009 19:36:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6815.9	6815.9	94.0	%			19:38:35
1	Y RADIAL	6141.6	6141.6	101.2	%			19:38:35
1	Al 396.153Radial†	5816.7	6272.9	5014.5	ug/L	5014.5	ppb	19:38:15
1	Ca 317.933Radial†	3687.2	3893.2	5469.6	ug/L	5469.6	ppb	19:38:35
1	Fe 238.204 Radial†	1319.6	1367.0	5340.4	ug/L	5340.4	ppb	19:38:35
1	K 766.490 Radial†	27193.7	26086.2	4898.2	ug/L	4898.2	ppb	19:38:15
1	Mg 279.077 IEC†	224.9	237.0	5554.4	ug/L	5554.4	ppb	19:38:35
1	Na 589.592 Radial†	173388.1	181415.8	9665.2	ug/L	9665.2	ppb	19:38:15
1	Sr 421.552†	159141.5	169405.9	471.68	ug/L	471.68	ppb	19:38:15
1	Sc 361.383	753096.1	753096.1	95.819	%			19:39:34
1	Y 371.029	581862.8	581862.8	99.652	%			19:39:34
1	Ag 328.068†	92746.4	96085.3	497.04	ug/L	497.04	ppb	19:39:34
1	As 188.979†	1541.9	1644.1	487.24	ug/L	487.24	ppb	19:39:54
1	B 249.677†	20857.3	22591.5	477.32	ug/L	477.32	ppb	19:39:34
1	Ba 233.527†	77581.3	80947.1	489.74	ug/L	489.74	ppb	19:39:34
1	Be 313.107†	1233253.5	1291989.0	491.21	ug/L	491.21	ppb	19:39:34
1	Cd 226.502†	44056.8	46271.9	487.37	ug/L	487.37	ppb	19:39:34
1	Co 228.616†	31493.4	32967.4	483.50	ug/L	483.50	ppb	19:39:54
1	Cr 267.716†	39594.7	41329.0	489.36	ug/L	489.36	ppb	19:39:34
1	Cu 324.752†	155939.3	156838.1	491.04	ug/L	491.04	ppb	19:39:34
1	Mn 257.610†	499339.2	520363.8	488.03	ug/L	488.03	ppb	19:39:34
1	Mo 202.031†	8047.3	8387.9	500.13	ug/L	500.13	ppb	19:39:54
1	Ni 231.604†	20982.2	21732.4	488.10	ug/L	488.10	ppb	19:39:54
1	P 214.914†	5905.7	5867.4	2348.0	ug/L	2348.0	ppb	19:39:54
1	Pb 220.353†	4767.1	5001.8	497.17	ug/L	497.17	ppb	19:39:54
1	S 181.975 Axial†	928.5	864.1	961.97	ug/L	961.97	ppb	19:39:54
1	Sb 206.836†	1933.1	1962.8	494.62	ug/L	494.62	ppb	19:39:54
1	Se 196.026†	1084.6	1163.8	505.82	ug/L	505.82	ppb	19:39:54
1	Si 251.611†	91148.3	94640.0	2472.5	ug/L	2472.5	ppb	19:39:34
1	Sn 189.927†	3238.4	3366.7	493.73	ug/L	493.73	ppb	19:39:54
1	Ti 334.940†	298186.0	312668.5	500.69	ug/L	500.69	ppb	19:39:34
1	Tl 190.801†	2058.7	2209.2	492.90	ug/L	492.90	ppb	19:39:54
1	U 409.014†	10282.2	15998.8	472.40	ug/L	472.40	ppb	19:39:34
1	V 292.402†	59057.2	63333.3	494.85	ug/L	494.85	ppb	19:39:34
1	Zn 213.857†	61512.5	63165.3	485.07	ug/L	485.07	ppb	19:39:34
1	SiO2†	91461.8	94969.4	5328.1	ug/L	5328.1	ppb	19:40:54
2	Sc Radial	6757.6	6757.6	93.2	%			19:39:00
2	Y RADIAL	6095.3	6095.3	100.5	%			19:39:00
2	Al 396.153Radial†	5780.0	6286.9	5025.8	ug/L	5025.8	ppb	19:38:40
2	Ca 317.933Radial†	3649.5	3886.5	5460.2	ug/L	5460.2	ppb	19:39:00
2	Fe 238.204 Radial†	1303.9	1362.2	5321.5	ug/L	5321.5	ppb	19:39:00
2	K 766.490 Radial†	27008.5	26137.0	4907.7	ug/L	4907.7	ppb	19:38:40
2	Mg 279.077 IEC†	219.9	233.7	5477.3	ug/L	5477.3	ppb	19:39:00
2	Na 589.592 Radial†	172551.8	182109.2	9702.2	ug/L	9702.2	ppb	19:38:40
2	Sr 421.552†	158169.1	169822.6	472.84	ug/L	472.84	ppb	19:38:40
2	Sc 361.383	754962.9	754962.9	96.056	%			19:40:01
2	Y 371.029	582177.0	582177.0	99.706	%			19:40:01
2	Ag 328.068†	92866.7	95971.1	496.44	ug/L	496.44	ppb	19:40:01
2	As 188.979†	1554.2	1652.9	489.81	ug/L	489.81	ppb	19:40:21
2	B 249.677†	20922.9	22606.0	477.64	ug/L	477.64	ppb	19:40:01
2	Ba 233.527†	77658.4	80827.1	489.01	ug/L	489.01	ppb	19:40:01
2	Be 313.107†	1232792.4	1288326.3	489.82	ug/L	489.82	ppb	19:40:01
2	Cd 226.502†	44114.8	46218.6	486.81	ug/L	486.81	ppb	19:40:01
2	Co 228.616†	31499.3	32892.3	482.40	ug/L	482.40	ppb	19:40:21
2	Cr 267.716†	39614.3	41247.1	488.39	ug/L	488.39	ppb	19:40:01
2	Cu 324.752†	156147.6	156652.5	490.45	ug/L	490.45	ppb	19:40:01
2	Mn 257.610†	500305.2	520080.9	487.76	ug/L	487.76	ppb	19:40:01
2	Mo 202.031†	8041.9	8361.6	498.56	ug/L	498.56	ppb	19:40:21
2	Ni 231.604†	20982.5	21678.6	486.89	ug/L	486.89	ppb	19:40:21

2	P 214.914†	5919.0	5866.1	2347.6	ug/L	2347.6 ppb	19:40:21
2	Pb 220.353†	4770.6	4993.2	496.32	ug/L	496.32 ppb	19:40:21
2	S 181.975 Axial†	931.6	865.0	962.87	ug/L	962.87 ppb	19:40:21
2	Sb 206.836†	1926.5	1950.9	491.61	ug/L	491.61 ppb	19:40:21
2	Se 196.026†	1082.5	1158.8	503.66	ug/L	503.66 ppb	19:40:21
2	Si 251.611†	91301.6	94564.5	2470.5	ug/L	2470.5 ppb	19:40:01
2	Sn 189.927†	3228.1	3347.7	490.94	ug/L	490.94 ppb	19:40:21
2	Ti 334.940†	298693.7	312427.5	500.30	ug/L	500.30 ppb	19:40:01
2	Tl 190.801†	2069.1	2214.7	494.11	ug/L	494.11 ppb	19:40:21
2	U 409.014†	10228.7	15916.6	469.97	ug/L	469.97 ppb	19:40:01
2	V 292.402†	59084.2	63209.1	493.87	ug/L	493.87 ppb	19:40:01
2	Zn 213.857†	61544.5	63039.9	484.11	ug/L	484.11 ppb	19:40:01
2	SiO2†	92343.4	95651.2	5366.7	ug/L	5366.7 ppb	19:40:59
3	Sc Radial	6717.8	6717.8	92.6	%		19:39:25
3	Y RADIAL	6083.5	6083.5	100.3	%		19:39:25
3	Al 396.153Radial†	5763.2	6305.5	5041.1	ug/L	5041.1 ppb	19:39:05
3	Ca 317.933Radial†	3624.3	3882.5	5454.6	ug/L	5454.6 ppb	19:39:25
3	Fe 238.204 Radial†	1291.3	1356.9	5300.9	ug/L	5300.9 ppb	19:39:25
3	K 766.490 Radial†	26914.0	26206.8	4920.9	ug/L	4920.9 ppb	19:39:05
3	Mg 279.077 IEC†	217.6	232.6	5450.7	ug/L	5450.7 ppb	19:39:25
3	Na 589.592 Radial†	172183.3	182809.0	9739.5	ug/L	9739.5 ppb	19:39:05
3	Sr 421.552†	157968.0	170611.6	475.03	ug/L	475.03 ppb	19:39:05
3	Sc 361.383	754831.6	754831.6	96.040	%		19:40:29
3	Y 371.029	582303.1	582303.1	99.728	%		19:40:29
3	Ag 328.068†	92899.6	96022.1	496.70	ug/L	496.70 ppb	19:40:29
3	As 188.979†	1526.3	1624.1	481.35	ug/L	481.35 ppb	19:40:49
3	B 249.677†	20911.2	22597.6	477.49	ug/L	477.49 ppb	19:40:29
3	Ba 233.527†	77755.1	80941.8	489.71	ug/L	489.71 ppb	19:40:29
3	Be 313.107†	1235016.6	1290865.4	490.78	ug/L	490.78 ppb	19:40:29
3	Cd 226.502†	44205.8	46321.3	487.89	ug/L	487.89 ppb	19:40:29
3	Co 228.616†	31126.9	32510.2	476.78	ug/L	476.78 ppb	19:40:49
3	Cr 267.716†	39708.1	41352.0	489.63	ug/L	489.63 ppb	19:40:29
3	Cu 324.752†	156268.1	156806.2	490.93	ug/L	490.93 ppb	19:40:29
3	Mn 257.610†	501524.8	521441.4	489.03	ug/L	489.03 ppb	19:40:29
3	Mo 202.031†	7929.0	8245.5	491.64	ug/L	491.64 ppb	19:40:49
3	Ni 231.604†	20675.0	21362.2	479.78	ug/L	479.78 ppb	19:40:49
3	P 214.914†	5824.4	5768.7	2306.9	ug/L	2306.9 ppb	19:40:49
3	Pb 220.353†	4696.2	4916.5	488.70	ug/L	488.70 ppb	19:40:49
3	S 181.975 Axial†	920.3	853.4	949.94	ug/L	949.94 ppb	19:40:49
3	Sb 206.836†	1897.2	1920.7	483.85	ug/L	483.85 ppb	19:40:49
3	Se 196.026†	1068.6	1144.5	497.61	ug/L	497.61 ppb	19:40:49
3	Si 251.611†	91458.7	94744.5	2475.4	ug/L	2475.4 ppb	19:40:29
3	Sn 189.927†	3194.4	3313.1	485.88	ug/L	485.88 ppb	19:40:49
3	Ti 334.940†	298938.0	312736.0	500.80	ug/L	500.80 ppb	19:40:29
3	Tl 190.801†	2059.7	2205.4	492.08	ug/L	492.08 ppb	19:40:49
3	U 409.014†	10300.5	15993.2	472.24	ug/L	472.24 ppb	19:40:29
3	V 292.402†	59184.5	63324.2	494.68	ug/L	494.68 ppb	19:40:29
3	Zn 213.857†	61737.5	63252.1	485.80	ug/L	485.80 ppb	19:40:29
3	SiO2†	92031.7	95343.4	5349.8	ug/L	5349.8 ppb	19:41:04

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	754296.9	95.972	%	0.1326				0.14%
Sc Radial	6763.7	93.3	%	0.68				0.73%
Y 371.029	582114.3	99.695	%	0.0388				0.04%
Y RADIAL	6106.8	100.7	%	0.51				0.50%
Ag 328.068†	96026.2	496.73	ug/L	0.298	496.73	ppb	0.298	0.06%
QC value within limits for Ag 328.068 Recovery = 99.35%								
Al 396.153Radial†	6288.4	5027.2	ug/L	13.33	5027.2	ppb	13.33	0.27%
QC value within limits for Al 396.153Radial Recovery = 100.54%								
As 188.979†	1640.4	486.13	ug/L	4.339	486.13	ppb	4.339	0.89%
QC value within limits for As 188.979 Recovery = 97.23%								
B 249.677†	22598.4	477.48	ug/L	0.157	477.48	ppb	0.157	0.03%
QC value within limits for B 249.677 Recovery = 95.50%								
Ba 233.527†	80905.3	489.49	ug/L	0.411	489.49	ppb	0.411	0.08%
QC value within limits for Ba 233.527 Recovery = 97.90%								
Be 313.107†	1290393.6	490.60	ug/L	0.712	490.60	ppb	0.712	0.15%
QC value within limits for Be 313.107 Recovery = 98.12%								
Ca 317.933Radial†	3887.4	5461.4	ug/L	7.58	5461.4	ppb	7.58	0.14%

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   QC value within limits for Ca 317.933Radial  Recovery = 109.23%
Cd 226.502†            46270.6      487.36 ug/L        0.540      487.36 ppb        0.540   0.11%
   QC value within limits for Cd 226.502  Recovery = 97.47%
Co 228.616†            32790.0      480.89 ug/L        3.606      480.89 ppb        3.606   0.75%
   QC value within limits for Co 228.616  Recovery = 96.18%
Cr 267.716†            41309.4      489.13 ug/L        0.652      489.13 ppb        0.652   0.13%
   QC value within limits for Cr 267.716  Recovery = 97.83%
Cu 324.752†           156765.6      490.81 ug/L        0.311      490.81 ppb        0.311   0.06%
   QC value within limits for Cu 324.752  Recovery = 98.16%
Fe 238.204 Radial†      1362.0      5320.9 ug/L       19.72      5320.9 ppb       19.72   0.37%
   QC value within limits for Fe 238.204 Radial  Recovery = 106.42%
K 766.490 Radial†      26143.3      4908.9 ug/L       11.43      4908.9 ppb       11.43   0.23%
   QC value within limits for K 766.490 Radial  Recovery = 98.18%
Mg 279.077 IEC†          234.4      5494.1 ug/L       53.87      5494.1 ppb       53.87   0.98%
   QC value within limits for Mg 279.077 IEC  Recovery = 109.88%
Mn 257.610†           520628.7      488.28 ug/L        0.671      488.28 ppb        0.671   0.14%
   QC value within limits for Mn 257.610  Recovery = 97.66%
Mo 202.031†             8331.6      496.77 ug/L        4.517      496.77 ppb        4.517   0.91%
   QC value within limits for Mo 202.031  Recovery = 99.35%
Na 589.592 Radial†    182111.3      9702.3 ug/L       37.11      9702.3 ppb       37.11   0.38%
   QC value within limits for Na 589.592 Radial  Recovery = 97.02%
Ni 231.604†            21591.1      484.92 ug/L        4.493      484.92 ppb        4.493   0.93%
   QC value within limits for Ni 231.604  Recovery = 96.98%
P 214.914†              5834.1      2334.2 ug/L       23.62      2334.2 ppb       23.62   1.01%
   QC value within limits for P 214.914  Recovery = 93.37%
Pb 220.353†             4970.5      494.06 ug/L        4.660      494.06 ppb        4.660   0.94%
   QC value within limits for Pb 220.353  Recovery = 98.81%
S 181.975 Axial†         860.8      958.26 ug/L        7.217      958.26 ppb        7.217   0.75%
   QC value within limits for S 181.975 Axial  Recovery = 95.83%
Sb 206.836†             1944.8      490.03 ug/L        5.559      490.03 ppb        5.559   1.13%
   QC value within limits for Sb 206.836  Recovery = 98.01%
Se 196.026†             1155.7      502.36 ug/L        4.257      502.36 ppb        4.257   0.85%
   QC value within limits for Se 196.026  Recovery = 100.47%
Si 251.611†            94649.7      2472.8 ug/L        2.48      2472.8 ppb         2.48   0.10%
   QC value within limits for Si 251.611  Recovery = 98.91%
Sn 189.927†             3342.5      490.18 ug/L        3.978      490.18 ppb        3.978   0.81%
   QC value within limits for Sn 189.927  Recovery = 98.04%
Sr 421.552†           169946.7      473.18 ug/L        1.705      473.18 ppb        1.705   0.36%
   QC value within limits for Sr 421.552  Recovery = 94.64%
Ti 334.940†           312610.7      500.60 ug/L        0.259      500.60 ppb        0.259   0.05%
   QC value within limits for Ti 334.940  Recovery = 100.12%
Tl 190.801†             2209.8      493.03 ug/L        1.024      493.03 ppb        1.024   0.21%
   QC value within limits for Tl 190.801  Recovery = 98.61%
U 409.014†             15969.5      471.53 ug/L        1.360      471.53 ppb        1.360   0.29%
   QC value within limits for U 409.014  Recovery = 94.31%
V 292.402†             63288.8      494.47 ug/L        0.524      494.47 ppb        0.524   0.11%
   QC value within limits for V 292.402  Recovery = 98.89%
Zn 213.857†            63152.4      484.99 ug/L        0.848      484.99 ppb        0.848   0.17%
   QC value within limits for Zn 213.857  Recovery = 97.00%
SiO2†                  95321.3      5348.2 ug/L       19.38      5348.2 ppb       19.38   0.36%
   QC value within limits for SiO2  Recovery = 100.01%
All analyte(s) passed QC.
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Sequence No.: 27
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/1/2009 19:43:15
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6705.7	6705.7	92.5	%			19:45:07
1	Y RADIAL	6101.1	6101.1	100.6	%			19:45:07
1	Al 396.153Radial†	-59.1	19.6	15.689	ug/L	15.689	ppb	19:45:07
1	Ca 317.933Radial†	34.2	6.7	9.3820	ug/L	9.3820	ppb	19:45:27
1	Fe 238.204 Radial†	40.2	6.2	24.312	ug/L	24.312	ppb	19:45:27
1	K 766.490 Radial†	2648.5	14.4	2.7342	ug/L	2.7342	ppb	19:45:07
1	Mg 279.077 IEC†	4.7	2.8	65.852	ug/L	65.852	ppb	19:45:27
1	Na 589.592 Radial†	71.3	-3006.4	-160.17	ug/L	-160.17	ppb	19:45:07
1	Sr 421.552†	-57.1	4.5	0.0125	ug/L	0.0125	ppb	19:45:07
1	Sc 361.383	726456.1	726456.1	92.429	%			19:46:24
1	Y 371.029	568039.2	568039.2	97.285	%			19:46:24
1	Ag 328.068†	738.3	90.5	0.4765	ug/L	0.4765	ppb	19:46:24
1	As 188.979†	-34.3	-2.3	-0.6607	ug/L	-0.6607	ppb	19:46:44
1	B 249.677†	-746.1	16.8	0.3541	ug/L	0.3541	ppb	19:46:24
1	Ba 233.527†	20.4	2.5	0.0144	ug/L	0.0144	ppb	19:46:44
1	Be 313.107†	-4757.3	-225.7	-0.0854	ug/L	-0.0854	ppb	19:46:24
1	Cd 226.502†	-273.7	-3.5	-0.0400	ug/L	-0.0400	ppb	19:46:44
1	Co 228.616†	-76.5	17.0	0.2499	ug/L	0.2499	ppb	19:46:44
1	Cr 267.716†	-85.7	-86.2	-1.0175	ug/L	-1.0175	ppb	19:46:24
1	Cu 324.752†	5917.5	496.4	1.5545	ug/L	1.5545	ppb	19:46:24
1	Mn 257.610†	909.3	219.2	0.2071	ug/L	0.2071	ppb	19:46:24
1	Mo 202.031†	17.5	8.4	0.4998	ug/L	0.4998	ppb	19:46:44
1	Ni 231.604†	163.3	11.3	0.2537	ug/L	0.2537	ppb	19:46:44
1	P 214.914†	301.4	30.1	12.218	ug/L	12.218	ppb	19:46:44
1	Pb 220.353†	-4.8	21.5	2.1308	ug/L	2.1308	ppb	19:46:44
1	S 181.975 Axial†	91.5	-5.9	-6.5644	ug/L	-6.5644	ppb	19:46:44
1	Sb 206.836†	64.4	15.0	3.7665	ug/L	3.7665	ppb	19:46:44
1	Se 196.026†	-24.6	5.1	2.2296	ug/L	2.2296	ppb	19:46:44
1	Si 251.611†	622.4	187.8	4.9318	ug/L	4.9318	ppb	19:46:44
1	Sn 189.927†	11.0	-1.0	-0.1452	ug/L	-0.1452	ppb	19:46:44
1	Ti 334.940†	-1317.0	46.1	0.0769	ug/L	0.0769	ppb	19:46:24
1	Tl 190.801†	-52.0	4.4	0.9691	ug/L	0.9691	ppb	19:46:44
1	U 409.014†	-5027.4	-171.2	-5.0734	ug/L	-5.0734	ppb	19:46:24
1	V 292.402†	-1591.0	-22.3	-0.1774	ug/L	-0.1774	ppb	19:46:24
1	Zn 213.857†	1098.5	157.2	1.2098	ug/L	1.2098	ppb	19:46:44
1	SiO2†	622.5	190.1	10.723	ug/L	10.723	ppb	19:47:41
2	Sc Radial	6724.7	6724.7	92.7	%			19:45:32
2	Y RADIAL	6068.6	6068.6	100.0	%			19:45:32
2	Al 396.153Radial†	-68.3	9.8	7.8380	ug/L	7.8380	ppb	19:45:32
2	Ca 317.933Radial†	37.0	9.6	13.455	ug/L	13.455	ppb	19:45:52
2	Fe 238.204 Radial†	37.7	3.4	13.221	ug/L	13.221	ppb	19:45:52
2	K 766.490 Radial†	2839.6	212.4	40.001	ug/L	40.001	ppb	19:45:32
2	Mg 279.077 IEC†	2.4	0.2	5.2374	ug/L	5.2374	ppb	19:45:52
2	Na 589.592 Radial†	32.1	-3048.8	-162.43	ug/L	-162.43	ppb	19:45:32
2	Sr 421.552†	-36.7	26.7	0.0742	ug/L	0.0742	ppb	19:45:32
2	Sc 361.383	728797.6	728797.6	92.727	%			19:46:50
2	Y 371.029	569486.9	569486.9	97.533	%			19:46:50
2	Ag 328.068†	746.8	97.1	0.5041	ug/L	0.5041	ppb	19:46:50
2	As 188.979†	-31.6	0.8	0.2283	ug/L	0.2283	ppb	19:47:10
2	B 249.677†	-782.8	-20.1	-0.4286	ug/L	-0.4286	ppb	19:46:50
2	Ba 233.527†	34.0	17.1	0.1016	ug/L	0.1016	ppb	19:47:10
2	Be 313.107†	-4770.8	-223.7	-0.0855	ug/L	-0.0855	ppb	19:46:50
2	Cd 226.502†	-273.1	-1.9	-0.0218	ug/L	-0.0218	ppb	19:47:10
2	Co 228.616†	-96.5	-4.3	-0.0581	ug/L	-0.0581	ppb	19:47:10
2	Cr 267.716†	-98.0	-99.2	-1.1726	ug/L	-1.1726	ppb	19:46:50
2	Cu 324.752†	5923.7	482.6	1.5107	ug/L	1.5107	ppb	19:46:50
2	Mn 257.610†	868.6	172.2	0.1629	ug/L	0.1629	ppb	19:46:50
2	Mo 202.031†	31.7	23.7	1.4107	ug/L	1.4107	ppb	19:47:10
2	Ni 231.604†	160.2	7.4	0.1661	ug/L	0.1661	ppb	19:47:10

2	P 214.914†	303.2	31.0	12.610	ug/L	12.610 ppb	19:47:10
2	Pb 220.353†	-2.4	24.1	2.3926	ug/L	2.3926 ppb	19:47:10
2	S 181.975 Axial†	88.8	-9.1	-10.159	ug/L	-10.159 ppb	19:47:10
2	Sb 206.836†	60.8	10.9	2.7885	ug/L	2.7885 ppb	19:47:10
2	Se 196.026†	-29.4	0.1	0.1044	ug/L	0.1044 ppb	19:47:10
2	Si 251.611†	571.0	130.3	3.3779	ug/L	3.3779 ppb	19:47:10
2	Sn 189.927†	17.0	5.4	0.7881	ug/L	0.7881 ppb	19:47:10
2	Ti 334.940†	-1534.6	-184.1	-0.2915	ug/L	-0.2915 ppb	19:46:50
2	Tl 190.801†	-63.3	-7.6	-1.6755	ug/L	-1.6755 ppb	19:47:10
2	U 409.014†	-5034.6	-161.5	-4.7839	ug/L	-4.7839 ppb	19:46:50
2	V 292.402†	-1661.1	-92.3	-0.7049	ug/L	-0.7049 ppb	19:46:50
2	Zn 213.857†	1115.7	172.0	1.3283	ug/L	1.3283 ppb	19:47:10
2	SiO2†	588.6	151.3	8.4415	ug/L	8.4415 ppb	19:47:46
3	Sc Radial	6638.6	6638.6	91.5	%		19:45:57
3	Y RADIAL	6025.8	6025.8	99.33	%		19:45:57
3	Al 396.153Radial†	-58.2	19.9	15.936	ug/L	15.936 ppb	19:45:57
3	Ca 317.933Radial†	32.0	4.7	6.5767	ug/L	6.5767 ppb	19:46:18
3	Fe 238.204 Radial†	39.5	6.0	23.224	ug/L	23.224 ppb	19:46:18
3	K 766.490 Radial†	2641.3	35.5	6.6864	ug/L	6.6864 ppb	19:45:57
3	Mg 279.077 IEC†	4.4	2.5	57.815	ug/L	57.815 ppb	19:46:18
3	Na 589.592 Radial†	-29.3	-3115.4	-165.98	ug/L	-165.98 ppb	19:45:57
3	Sr 421.552†	-27.1	36.7	0.1021	ug/L	0.1021 ppb	19:45:57
3	Sc 361.383	731493.8	731493.8	93.070	%		19:47:15
3	Y 371.029	571143.9	571143.9	97.816	%		19:47:15
3	Ag 328.068†	806.2	157.9	0.8249	ug/L	0.8249 ppb	19:47:15
3	As 188.979†	-19.6	13.8	4.0651	ug/L	4.0651 ppb	19:47:35
3	B 249.677†	-768.4	-1.6	-0.0353	ug/L	-0.0353 ppb	19:47:15
3	Ba 233.527†	36.4	19.5	0.1167	ug/L	0.1167 ppb	19:47:35
3	Be 313.107†	-4856.3	-296.7	-0.1129	ug/L	-0.1129 ppb	19:47:15
3	Cd 226.502†	-270.1	2.4	0.0225	ug/L	0.0225 ppb	19:47:35
3	Co 228.616†	-86.5	6.8	0.1034	ug/L	0.1034 ppb	19:47:35
3	Cr 267.716†	-136.8	-140.5	-1.6584	ug/L	-1.6584 ppb	19:47:15
3	Cu 324.752†	5869.2	400.4	1.2541	ug/L	1.2541 ppb	19:47:15
3	Mn 257.610†	836.8	134.6	0.1279	ug/L	0.1279 ppb	19:47:15
3	Mo 202.031†	29.9	21.6	1.2905	ug/L	1.2905 ppb	19:47:35
3	Ni 231.604†	169.5	16.7	0.3751	ug/L	0.3751 ppb	19:47:35
3	P 214.914†	302.0	28.6	11.628	ug/L	11.628 ppb	19:47:35
3	Pb 220.353†	-33.4	-9.2	-0.9049	ug/L	-0.9049 ppb	19:47:35
3	S 181.975 Axial†	82.3	-16.4	-18.289	ug/L	-18.289 ppb	19:47:35
3	Sb 206.836†	43.2	-8.2	-1.9822	ug/L	-1.9822 ppb	19:47:35
3	Se 196.026†	-26.4	3.5	1.5287	ug/L	1.5287 ppb	19:47:35
3	Si 251.611†	544.7	99.7	2.6017	ug/L	2.6017 ppb	19:47:35
3	Sn 189.927†	10.1	-2.1	-0.3040	ug/L	-0.3040 ppb	19:47:35
3	Ti 334.940†	-1452.6	-89.8	-0.1390	ug/L	-0.1390 ppb	19:47:15
3	Tl 190.801†	-45.5	11.8	2.6198	ug/L	2.6198 ppb	19:47:35
3	U 409.014†	-5177.8	-295.4	-8.7512	ug/L	-8.7512 ppb	19:47:15
3	V 292.402†	-1628.8	-50.9	-0.3954	ug/L	-0.3954 ppb	19:47:15
3	Zn 213.857†	1091.5	141.5	1.0885	ug/L	1.0885 ppb	19:47:35
3	SiO2†	545.8	103.0	5.7727	ug/L	5.7727 ppb	19:47:51

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	728915.9	92.742	%	0.3207				0.35%
Sc Radial	6689.7	92.2	%	0.62				0.68%
Y 371.029	569556.6	97.545	%	0.2661				0.27%
Y RADIAL	6065.2	99.98	%	0.623				0.62%
Ag 328.068†	115.2	0.6018	ug/L	0.19364	0.6018	ppb	0.19364	32.17%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	16.4	13.154	ug/L	4.6057	13.154	ppb	4.6057	35.01%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.1	1.2109	ug/L	2.51144	1.2109	ppb	2.51144	207.41%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	-1.6	-0.0366	ug/L	0.39135	-0.0366	ppb	0.39135	>999.9%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	13.0	0.0776	ug/L	0.05523	0.0776	ppb	0.05523	71.19%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-248.7	-0.0946	ug/L	0.01580	-0.0946	ppb	0.01580	16.70%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	7.0	9.8046	ug/L	3.45862	9.8046	ppb	3.45862	35.28%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -1.0     -0.0131 ug/L      0.03211     -0.0131 ppb      0.03211 244.96%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               6.5      0.0984 ug/L      0.15402      0.0984 ppb      0.15402 156.55%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -108.6     -1.2829 ug/L      0.33438     -1.2829 ppb      0.33438  26.06%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             459.8      1.4398 ug/L      0.16226      1.4398 ppb      0.16226  11.27%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        5.2     20.252 ug/L       6.1138     20.252 ppb       6.1138  30.19%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        87.4     16.474 ug/L      20.4704     16.474 ppb      20.4704 124.26%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           1.8     42.968 ug/L      32.9219     42.968 ppb      32.9219  76.62%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             175.3      0.1660 ug/L      0.03970      0.1660 ppb      0.03970  23.92%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              17.9      1.0670 ug/L      0.49486      1.0670 ppb      0.49486  46.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -3056.9    -162.86 ug/L        2.928    -162.86 ppb        2.928   1.80%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              11.8      0.2650 ug/L      0.10494      0.2650 ppb      0.10494  39.61%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               29.9     12.152 ug/L       0.4944     12.152 ppb       0.4944   4.07%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              12.1      1.2062 ug/L      1.83294      1.2062 ppb      1.83294 151.96%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†        -10.5    -11.671 ug/L       6.0065    -11.671 ppb       6.0065  51.47%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               5.9      1.5243 ug/L      3.07577      1.5243 ppb      3.07577 201.79%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               2.9      1.2876 ug/L      1.08294      1.2876 ppb      1.08294  84.11%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             139.2      3.6371 ug/L      1.18649      3.6371 ppb      1.18649  32.62%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               0.8      0.1130 ug/L      0.59007      0.1130 ppb      0.59007 522.31%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              22.6      0.0629 ug/L      0.04585      0.0629 ppb      0.04585  72.85%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -75.9     -0.1179 ug/L      0.18509     -0.1179 ppb      0.18509 157.04%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               2.9      0.6378 ug/L      2.16673      0.6378 ppb      2.16673 339.73%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†             -209.4     -6.2028 ug/L      2.21172     -6.2028 ppb      2.21172  35.66%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -55.2     -0.4259 ug/L      0.26506     -0.4259 ppb      0.26506  62.23%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             156.9      1.2089 ug/L      0.11991      1.2089 ppb      0.11991   9.92%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   148.1      8.3125 ug/L      2.47790      8.3125 ppb      2.47790  29.81%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 35
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/1/2009 20:38:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6703.1	6703.1	92.4	%			20:40:49
1	Y RADIAL	6036.4	6036.4	99.50	%			20:40:49
1	Al 396.153Radial†	5750.8	6305.7	5041.3	ug/L	5041.3	ppb	20:40:29
1	Ca 317.933Radial†	3628.6	3895.7	5473.1	ug/L	5473.1	ppb	20:40:49
1	Fe 238.204 Radial†	1295.8	1364.8	5331.7	ug/L	5331.7	ppb	20:40:49
1	K 766.490 Radial†	26727.5	26068.4	4894.9	ug/L	4894.9	ppb	20:40:29
1	Mg 279.077 IEC†	220.8	236.6	5545.5	ug/L	5545.5	ppb	20:40:49
1	Na 589.592 Radial†	169727.5	180557.4	9619.5	ug/L	9619.5	ppb	20:40:29
1	Sr 421.552†	156376.4	169261.6	471.27	ug/L	471.27	ppb	20:40:29
1	Sc 361.383	762478.0	762478.0	97.013	%			20:41:48
1	Y 371.029	588073.2	588073.2	100.72	%			20:41:48
1	Ag 328.068†	94336.8	96533.6	499.34	ug/L	499.34	ppb	20:41:48
1	As 188.979†	1541.0	1623.4	481.14	ug/L	481.14	ppb	20:42:08
1	B 249.677†	21314.6	22795.0	481.69	ug/L	481.69	ppb	20:41:48
1	Ba 233.527†	78859.3	81268.1	491.68	ug/L	491.68	ppb	20:41:48
1	Be 313.107†	1253708.8	1297237.5	493.20	ug/L	493.20	ppb	20:41:48
1	Cd 226.502†	43064.5	44683.2	470.62	ug/L	470.62	ppb	20:42:08
1	Co 228.616†	31332.3	32396.9	475.11	ug/L	475.11	ppb	20:42:08
1	Cr 267.716†	40328.2	41576.5	492.29	ug/L	492.29	ppb	20:41:48
1	Cu 324.752†	158918.8	157906.9	494.38	ug/L	494.38	ppb	20:41:48
1	Mn 257.610†	508195.5	523080.6	490.57	ug/L	490.57	ppb	20:41:48
1	Mo 202.031†	7988.9	8224.4	490.39	ug/L	490.39	ppb	20:42:08
1	Ni 231.604†	20858.3	21335.2	479.18	ug/L	479.18	ppb	20:42:08
1	P 214.914†	5860.3	5744.8	2296.2	ug/L	2296.2	ppb	20:42:08
1	Pb 220.353†	4723.4	4895.5	486.62	ug/L	486.62	ppb	20:42:08
1	S 181.975 Axial†	928.7	852.4	948.93	ug/L	948.93	ppb	20:42:08
1	Sb 206.836†	1922.8	1927.3	485.34	ug/L	485.34	ppb	20:42:08
1	Se 196.026†	1068.4	1133.1	492.94	ug/L	492.94	ppb	20:42:08
1	Si 251.611†	93111.3	95493.0	2495.2	ug/L	2495.2	ppb	20:41:48
1	Sn 189.927†	3202.8	3288.5	482.28	ug/L	482.28	ppb	20:42:08
1	Ti 334.940†	303109.4	313914.4	502.68	ug/L	502.68	ppb	20:41:48
1	Tl 190.801†	2077.8	2202.5	491.47	ug/L	491.47	ppb	20:42:08
1	U 409.014†	10577.1	16170.7	477.49	ug/L	477.49	ppb	20:41:48
1	V 292.402†	59937.0	63481.8	495.88	ug/L	495.88	ppb	20:41:48
1	Zn 213.857†	62583.2	63479.1	487.55	ug/L	487.55	ppb	20:41:48
1	SiO2†	92174.7	94529.8	5304.0	ug/L	5304.0	ppb	20:43:08
2	Sc Radial	6723.3	6723.3	92.7	%			20:41:14
2	Y RADIAL	6073.5	6073.5	100.1	%			20:41:14
2	Al 396.153Radial†	5640.8	6168.4	4930.8	ug/L	4930.8	ppb	20:40:54
2	Ca 317.933Radial†	3635.9	3891.8	5467.6	ug/L	5467.6	ppb	20:41:14
2	Fe 238.204 Radial†	1297.7	1362.6	5323.3	ug/L	5323.3	ppb	20:41:14
2	K 766.490 Radial†	26391.9	25619.6	4810.4	ug/L	4810.4	ppb	20:40:54
2	Mg 279.077 IEC†	222.2	237.3	5562.1	ug/L	5562.1	ppb	20:41:14
2	Na 589.592 Radial†	167450.3	177549.9	9459.3	ug/L	9459.3	ppb	20:40:54
2	Sr 421.552†	153780.4	165953.6	462.06	ug/L	462.06	ppb	20:40:54
2	Sc 361.383	759272.0	759272.0	96.605	%			20:42:15
2	Y 371.029	585326.4	585326.4	100.25	%			20:42:15
2	Ag 328.068†	93970.2	96564.7	499.50	ug/L	499.50	ppb	20:42:15
2	As 188.979†	1556.0	1645.6	487.68	ug/L	487.68	ppb	20:42:35
2	B 249.677†	21256.5	22827.7	482.36	ug/L	482.36	ppb	20:42:15
2	Ba 233.527†	78389.5	81125.1	490.82	ug/L	490.82	ppb	20:42:15
2	Be 313.107†	1246549.5	1295283.2	492.46	ug/L	492.46	ppb	20:42:15
2	Cd 226.502†	43407.0	45225.2	476.34	ug/L	476.34	ppb	20:42:35
2	Co 228.616†	31536.8	32744.9	480.22	ug/L	480.22	ppb	20:42:35
2	Cr 267.716†	40171.4	41589.8	492.44	ug/L	492.44	ppb	20:42:15
2	Cu 324.752†	157574.5	157207.0	492.19	ug/L	492.19	ppb	20:42:15
2	Mn 257.610†	505763.8	522775.4	490.29	ug/L	490.29	ppb	20:42:15
2	Mo 202.031†	8045.7	8317.9	495.96	ug/L	495.96	ppb	20:42:35
2	Ni 231.604†	21020.8	21594.2	485.00	ug/L	485.00	ppb	20:42:35

2	P 214.914†	5904.2	5815.7	2326.2 ug/L	2326.2 ppb	20:42:35
2	Pb 220.353†	4782.9	4977.7	494.75 ug/L	494.75 ppb	20:42:35
2	S 181.975 Axial†	919.3	846.7	942.59 ug/L	942.59 ppb	20:42:35
2	Sb 206.836†	1945.2	1958.8	493.41 ug/L	493.41 ppb	20:42:35
2	Se 196.026†	1085.9	1155.9	502.44 ug/L	502.44 ppb	20:42:35
2	Si 251.611†	92444.6	95208.1	2487.6 ug/L	2487.6 ppb	20:42:15
2	Sn 189.927†	3236.7	3337.5	489.46 ug/L	489.46 ppb	20:42:35
2	Ti 334.940†	301681.3	313755.4	502.43 ug/L	502.43 ppb	20:42:15
2	Tl 190.801†	2082.9	2216.8	494.61 ug/L	494.61 ppb	20:42:35
2	U 409.014†	10584.4	16224.4	479.08 ug/L	479.08 ppb	20:42:15
2	V 292.402†	59794.3	63595.0	496.83 ug/L	496.83 ppb	20:42:15
2	Zn 213.857†	62301.5	63459.9	487.37 ug/L	487.37 ppb	20:42:15
2	SiO2†	91692.2	94431.5	5298.1 ug/L	5298.1 ppb	20:43:13
3	Sc Radial	6720.6	6720.6	92.7 %		20:41:39
3	Y RADIAL	6078.1	6078.1	100.2 %		20:41:39
3	Al 396.153Radial†	5759.2	6298.5	5035.3 ug/L	5035.3 ppb	20:41:19
3	Ca 317.933Radial†	3673.1	3933.6	5526.3 ug/L	5526.3 ppb	20:41:39
3	Fe 238.204 Radial†	1305.5	1371.6	5358.2 ug/L	5358.2 ppb	20:41:39
3	K 766.490 Radial†	26719.6	25984.5	4879.1 ug/L	4879.1 ppb	20:41:19
3	Mg 279.077 IEC†	222.6	237.9	5576.2 ug/L	5576.2 ppb	20:41:39
3	Na 589.592 Radial†	169607.6	179949.6	9587.1 ug/L	9587.1 ppb	20:41:19
3	Sr 421.552†	156204.8	168635.6	469.53 ug/L	469.53 ppb	20:41:19
3	Sc 361.383	761350.5	761350.5	96.869 %		20:42:43
3	Y 371.029	587428.0	587428.0	100.61 %		20:42:43
3	Ag 328.068†	94106.4	96439.8	498.87 ug/L	498.87 ppb	20:42:43
3	As 188.979†	1555.2	1640.3	486.14 ug/L	486.14 ppb	20:43:03
3	B 249.677†	21468.1	22986.0	485.74 ug/L	485.74 ppb	20:42:43
3	Ba 233.527†	78501.2	81018.8	490.18 ug/L	490.18 ppb	20:42:43
3	Be 313.107†	1250531.8	1295871.5	492.68 ug/L	492.68 ppb	20:42:43
3	Cd 226.502†	43337.1	45030.4	474.28 ug/L	474.28 ppb	20:43:03
3	Co 228.616†	31447.5	32563.6	477.56 ug/L	477.56 ppb	20:43:03
3	Cr 267.716†	40173.2	41478.1	491.13 ug/L	491.13 ppb	20:42:43
3	Cu 324.752†	158320.0	157531.3	493.21 ug/L	493.21 ppb	20:42:43
3	Mn 257.610†	506356.5	521957.9	489.52 ug/L	489.52 ppb	20:42:43
3	Mo 202.031†	8048.2	8297.8	494.76 ug/L	494.76 ppb	20:43:03
3	Ni 231.604†	20957.0	21469.0	482.18 ug/L	482.18 ppb	20:43:03
3	P 214.914†	5895.2	5789.8	2315.2 ug/L	2315.2 ppb	20:43:03
3	Pb 220.353†	4775.7	4956.8	492.69 ug/L	492.69 ppb	20:43:03
3	S 181.975 Axial†	926.3	851.4	947.74 ug/L	947.74 ppb	20:43:03
3	Sb 206.836†	1929.5	1937.2	487.96 ug/L	487.96 ppb	20:43:03
3	Se 196.026†	1077.1	1143.7	497.46 ug/L	497.46 ppb	20:43:03
3	Si 251.611†	92649.2	95158.2	2486.3 ug/L	2486.3 ppb	20:42:43
3	Sn 189.927†	3215.0	3306.0	484.85 ug/L	484.85 ppb	20:43:03
3	Ti 334.940†	302401.8	313646.6	502.26 ug/L	502.26 ppb	20:42:43
3	Tl 190.801†	2086.2	2214.3	494.07 ug/L	494.07 ppb	20:43:03
3	U 409.014†	10568.2	16177.7	477.69 ug/L	477.69 ppb	20:42:43
3	V 292.402†	59993.8	63631.9	497.09 ug/L	497.09 ppb	20:42:43
3	Zn 213.857†	62318.3	63301.2	486.15 ug/L	486.15 ppb	20:42:43
3	SiO2†	91291.2	93758.4	5260.2 ug/L	5260.2 ppb	20:43:18

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	761033.5	96.829	%	0.2069				0.21%
Sc Radial	6715.7	92.6	%	0.15				0.16%
Y 371.029	586942.5	100.52	%	0.246				0.24%
Y RADIAL	6062.7	99.94	%	0.377				0.38%
Ag 328.068†	96512.7	499.24	ug/L	0.327	499.24	ppb	0.327	0.07%
QC value within limits for Ag 328.068 Recovery = 99.85%								
Al 396.153Radial†	6257.5	5002.5	ug/L	62.12	5002.5	ppb	62.12	1.24%
QC value within limits for Al 396.153Radial Recovery = 100.05%								
As 188.979†	1636.4	484.99	ug/L	3.418	484.99	ppb	3.418	0.70%
QC value within limits for As 188.979 Recovery = 97.00%								
B 249.677†	22869.6	483.26	ug/L	2.168	483.26	ppb	2.168	0.45%
QC value within limits for B 249.677 Recovery = 96.65%								
Ba 233.527†	81137.3	490.89	ug/L	0.754	490.89	ppb	0.754	0.15%
QC value within limits for Ba 233.527 Recovery = 98.18%								
Be 313.107†	1296130.7	492.78	ug/L	0.381	492.78	ppb	0.381	0.08%
QC value within limits for Be 313.107 Recovery = 98.56%								
Ca 317.933Radial†	3907.0	5489.0	ug/L	32.37	5489.0	ppb	32.37	0.59%

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   QC value within limits for Ca 317.933Radial  Recovery = 109.78%
Cd 226.502†            44979.6      473.75 ug/L         2.895      473.75 ppb          2.895   0.61%
   QC value within limits for Cd 226.502  Recovery = 94.75%
Co 228.616†            32568.5      477.63 ug/L         2.559      477.63 ppb          2.559   0.54%
   QC value within limits for Co 228.616  Recovery = 95.53%
Cr 267.716†            41548.1      491.95 ug/L         0.720      491.95 ppb          0.720   0.15%
   QC value within limits for Cr 267.716  Recovery = 98.39%
Cu 324.752†           157548.4      493.26 ug/L         1.096      493.26 ppb          1.096   0.22%
   QC value within limits for Cu 324.752  Recovery = 98.65%
Fe 238.204 Radial†      1366.4      5337.7 ug/L        18.20      5337.7 ppb         18.20   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 106.75%
K 766.490 Radial†      25890.8      4861.4 ug/L        44.93      4861.4 ppb         44.93   0.92%
   QC value within limits for K 766.490 Radial  Recovery = 97.23%
Mg 279.077 IEC†          237.3      5561.3 ug/L        15.40      5561.3 ppb         15.40   0.28%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 111.23%
Mn 257.610†           522604.6      490.13 ug/L         0.542      490.13 ppb          0.542   0.11%
   QC value within limits for Mn 257.610  Recovery = 98.03%
Mo 202.031†             8280.0      493.70 ug/L         2.932      493.70 ppb          2.932   0.59%
   QC value within limits for Mo 202.031  Recovery = 98.74%
Na 589.592 Radial†    179352.3      9555.3 ug/L        84.72      9555.3 ppb         84.72   0.89%
   QC value within limits for Na 589.592 Radial  Recovery = 95.55%
Ni 231.604†            21466.1      482.12 ug/L         2.910      482.12 ppb          2.910   0.60%
   QC value within limits for Ni 231.604  Recovery = 96.42%
P 214.914†              5783.5      2312.5 ug/L        15.18      2312.5 ppb         15.18   0.66%
   QC value within limits for P 214.914  Recovery = 92.50%
Pb 220.353†             4943.3      491.35 ug/L         4.230      491.35 ppb          4.230   0.86%
   QC value within limits for Pb 220.353  Recovery = 98.27%
S 181.975 Axial†         850.2      946.42 ug/L         3.372      946.42 ppb          3.372   0.36%
   QC value within limits for S 181.975 Axial  Recovery = 94.64%
Sb 206.836†             1941.1      488.90 ug/L         4.118      488.90 ppb          4.118   0.84%
   QC value within limits for Sb 206.836  Recovery = 97.78%
Se 196.026†             1144.2      497.61 ug/L         4.750      497.61 ppb          4.750   0.95%
   QC value within limits for Se 196.026  Recovery = 99.52%
Si 251.611†            95286.4      2489.7 ug/L          4.82      2489.7 ppb           4.82   0.19%
   QC value within limits for Si 251.611  Recovery = 99.59%
Sn 189.927†             3310.7      485.53 ug/L         3.638      485.53 ppb          3.638   0.75%
   QC value within limits for Sn 189.927  Recovery = 97.11%
Sr 421.552†           167950.2      467.62 ug/L         4.893      467.62 ppb          4.893   1.05%
   QC value within limits for Sr 421.552  Recovery = 93.52%
Ti 334.940†           313772.1      502.45 ug/L         0.214      502.45 ppb          0.214   0.04%
   QC value within limits for Ti 334.940  Recovery = 100.49%
Tl 190.801†             2211.2      493.38 ug/L         1.674      493.38 ppb          1.674   0.34%
   QC value within limits for Tl 190.801  Recovery = 98.68%
U 409.014†             16190.9      478.09 ug/L         0.865      478.09 ppb          0.865   0.18%
   QC value within limits for U 409.014  Recovery = 95.62%
V 292.402†             63569.6      496.60 ug/L         0.638      496.60 ppb          0.638   0.13%
   QC value within limits for V 292.402  Recovery = 99.32%
Zn 213.857†            63413.4      487.02 ug/L         0.761      487.02 ppb          0.761   0.16%
   QC value within limits for Zn 213.857  Recovery = 97.40%
SiO2†                  94239.9      5287.4 ug/L        23.77      5287.4 ppb         23.77   0.45%
   QC value within limits for SiO2  Recovery = 98.88%
QC Failed.  Continue with analysis.
```

Sequence No.: 36
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/1/2009 20:45:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6718.4	6718.4	92.6	%			20:47:20
1	Y RADIAL	6129.8	6129.8	101.0	%			20:47:20
1	Al 396.153Radial†	57.8	145.9	117.09	ug/L	117.09	ppb	20:47:20
1	Ca 317.933Radial†	31.3	3.5	4.8940	ug/L	4.8940	ppb	20:47:40
1	Fe 238.204 Radial†	42.9	9.1	35.457	ug/L	35.457	ppb	20:47:40
1	K 766.490 Radial†	2782.5	153.6	28.939	ug/L	28.939	ppb	20:47:20
1	Mg 279.077 IEC†	1.3	-0.9	-21.778	ug/L	-21.778	ppb	20:47:40
1	Na 589.592 Radial†	-214.7	-3315.2	-176.62	ug/L	-176.62	ppb	20:47:20
1	Sr 421.552†	-39.7	23.4	0.0650	ug/L	0.0650	ppb	20:47:20
1	Sc 361.383	734822.1	734822.1	93.494	%			20:48:37
1	Y 371.029	574562.1	574562.1	98.402	%			20:48:37
1	Ag 328.068†	724.7	66.9	0.3570	ug/L	0.3570	ppb	20:48:37
1	As 188.979†	-29.2	3.7	1.0932	ug/L	1.0932	ppb	20:48:57
1	B 249.677†	-662.9	115.0	2.4430	ug/L	2.4430	ppb	20:48:37
1	Ba 233.527†	55.2	39.5	0.2367	ug/L	0.2367	ppb	20:48:57
1	Be 313.107†	-4845.3	-261.3	-0.0996	ug/L	-0.0996	ppb	20:48:37
1	Cd 226.502†	-282.6	-9.6	-0.1060	ug/L	-0.1060	ppb	20:48:57
1	Co 228.616†	-99.7	-6.9	-0.1004	ug/L	-0.1004	ppb	20:48:57
1	Cr 267.716†	-113.9	-115.4	-1.3628	ug/L	-1.3628	ppb	20:48:37
1	Cu 324.752†	5944.2	452.1	1.4167	ug/L	1.4167	ppb	20:48:37
1	Mn 257.610†	740.7	27.7	0.0308	ug/L	0.0308	ppb	20:48:37
1	Mo 202.031†	13.0	3.4	0.2054	ug/L	0.2054	ppb	20:48:57
1	Ni 231.604†	141.4	-14.2	-0.3187	ug/L	-0.3187	ppb	20:48:57
1	P 214.914†	300.6	25.5	10.382	ug/L	10.382	ppb	20:48:57
1	Pb 220.353†	-29.0	-4.3	-0.4098	ug/L	-0.4098	ppb	20:48:57
1	S 181.975 Axial†	84.0	-15.1	-16.814	ug/L	-16.814	ppb	20:48:57
1	Sb 206.836†	57.7	7.1	1.8281	ug/L	1.8281	ppb	20:48:57
1	Se 196.026†	-24.3	5.8	2.5457	ug/L	2.5457	ppb	20:48:57
1	Si 251.611†	723.0	287.7	7.5282	ug/L	7.5282	ppb	20:48:57
1	Sn 189.927†	24.9	13.7	2.0095	ug/L	2.0095	ppb	20:48:57
1	Ti 334.940†	-1510.5	-144.8	-0.2287	ug/L	-0.2287	ppb	20:48:37
1	Tl 190.801†	-46.5	10.9	2.4187	ug/L	2.4187	ppb	20:48:57
1	U 409.014†	-5092.2	-178.7	-5.2956	ug/L	-5.2956	ppb	20:48:37
1	V 292.402†	-1665.5	-82.3	-0.6479	ug/L	-0.6479	ppb	20:48:37
1	Zn 213.857†	1003.2	41.7	0.3204	ug/L	0.3204	ppb	20:48:57
1	SiO2†	770.7	340.9	19.170	ug/L	19.170	ppb	20:49:53
2	Sc Radial	6768.6	6768.6	93.3	%			20:47:45
2	Y RADIAL	6182.4	6182.4	101.9	%			20:47:45
2	Al 396.153Radial†	25.2	110.4	88.649	ug/L	88.649	ppb	20:47:45
2	Ca 317.933Radial†	28.5	0.3	0.3950	ug/L	0.3950	ppb	20:48:05
2	Fe 238.204 Radial†	39.1	4.6	18.019	ug/L	18.019	ppb	20:48:05
2	K 766.490 Radial†	2814.7	165.8	31.231	ug/L	31.231	ppb	20:47:45
2	Mg 279.077 IEC†	3.2	1.1	26.520	ug/L	26.520	ppb	20:48:05
2	Na 589.592 Radial†	-163.9	-3259.1	-173.63	ug/L	-173.63	ppb	20:47:45
2	Sr 421.552†	-38.0	25.6	0.0712	ug/L	0.0712	ppb	20:47:45
2	Sc 361.383	744985.2	744985.2	94.787	%			20:49:02
2	Y 371.029	582339.6	582339.6	99.734	%			20:49:02
2	Ag 328.068†	780.1	114.7	0.5958	ug/L	0.5958	ppb	20:49:02
2	As 188.979†	-32.6	0.5	0.1407	ug/L	0.1407	ppb	20:49:22
2	B 249.677†	-603.4	187.5	3.9831	ug/L	3.9831	ppb	20:49:02
2	Ba 233.527†	51.4	34.7	0.2073	ug/L	0.2073	ppb	20:49:22
2	Be 313.107†	-4831.2	-175.6	-0.0662	ug/L	-0.0662	ppb	20:49:02
2	Cd 226.502†	-278.0	-0.7	-0.0095	ug/L	-0.0095	ppb	20:49:22
2	Co 228.616†	-83.9	11.3	0.1662	ug/L	0.1662	ppb	20:49:22
2	Cr 267.716†	-65.7	-62.8	-0.7419	ug/L	-0.7419	ppb	20:49:02
2	Cu 324.752†	5981.5	404.7	1.2673	ug/L	1.2673	ppb	20:49:02
2	Mn 257.610†	1060.1	353.9	0.3332	ug/L	0.3332	ppb	20:49:02
2	Mo 202.031†	15.6	5.9	0.3530	ug/L	0.3530	ppb	20:49:22
2	Ni 231.604†	154.8	-2.0	-0.0460	ug/L	-0.0460	ppb	20:49:22

2	P 214.914†	307.6	28.6	11.693	ug/L	11.693 ppb	20:49:22
2	Pb 220.353†	-24.3	1.1	0.1206	ug/L	0.1206 ppb	20:49:22
2	S 181.975 Axial†	85.9	-14.3	-15.941	ug/L	-15.941 ppb	20:49:22
2	Sb 206.836†	53.6	1.8	0.5070	ug/L	0.5070 ppb	20:49:22
2	Se 196.026†	-30.9	-0.8	-0.2728	ug/L	-0.2728 ppb	20:49:22
2	Si 251.611†	762.0	318.3	8.3343	ug/L	8.3343 ppb	20:49:22
2	Sn 189.927†	22.9	11.2	1.6359	ug/L	1.6359 ppb	20:49:22
2	Ti 334.940†	-1297.3	102.2	0.1659	ug/L	0.1659 ppb	20:49:02
2	Tl 190.801†	-56.0	1.6	0.3698	ug/L	0.3698 ppb	20:49:22
2	U 409.014†	-5134.8	-149.3	-4.4237	ug/L	-4.4237 ppb	20:49:02
2	V 292.402†	-1710.9	-105.9	-0.8239	ug/L	-0.8239 ppb	20:49:02
2	Zn 213.857†	1021.8	46.7	0.3576	ug/L	0.3576 ppb	20:49:22
2	SiO2†	721.4	277.7	15.602	ug/L	15.602 ppb	20:49:58
3	Sc Radial	6972.0	6972.0	96.1	%		20:48:10
3	Y RADIAL	6326.8	6326.8	104.3	%		20:48:10
3	Al 396.153Radial†	12.0	95.9	77.006	ug/L	77.006 ppb	20:48:10
3	Ca 317.933Radial†	27.8	-1.4	-1.9176	ug/L	-1.9176 ppb	20:48:30
3	Fe 238.204 Radial†	40.3	4.7	18.129	ug/L	18.129 ppb	20:48:30
3	K 766.490 Radial†	2828.2	91.9	17.317	ug/L	17.317 ppb	20:48:10
3	Mg 279.077 IEC†	4.2	2.0	47.013	ug/L	47.013 ppb	20:48:30
3	Na 589.592 Radial†	-168.6	-3258.9	-173.62	ug/L	-173.62 ppb	20:48:10
3	Sr 421.552†	-13.2	52.5	0.1462	ug/L	0.1462 ppb	20:48:10
3	Sc 361.383	736958.4	736958.4	93.766	%		20:49:28
3	Y 371.029	576610.4	576610.4	98.753	%		20:49:28
3	Ag 328.068†	769.4	112.2	0.5885	ug/L	0.5885 ppb	20:49:28
3	As 188.979†	-34.7	-2.1	-0.6089	ug/L	-0.6089 ppb	20:49:48
3	B 249.677†	-748.0	26.4	0.5584	ug/L	0.5584 ppb	20:49:28
3	Ba 233.527†	44.2	27.6	0.1633	ug/L	0.1633 ppb	20:49:48
3	Be 313.107†	-4730.5	-123.7	-0.0466	ug/L	-0.0466 ppb	20:49:28
3	Cd 226.502†	-262.6	12.5	0.1297	ug/L	0.1297 ppb	20:49:48
3	Co 228.616†	-84.7	9.4	0.1389	ug/L	0.1389 ppb	20:49:48
3	Cr 267.716†	-96.5	-96.4	-1.1375	ug/L	-1.1375 ppb	20:49:28
3	Cu 324.752†	5827.9	309.6	0.9699	ug/L	0.9699 ppb	20:49:28
3	Mn 257.610†	778.3	65.5	0.0627	ug/L	0.0627 ppb	20:49:28
3	Mo 202.031†	16.6	7.1	0.4263	ug/L	0.4263 ppb	20:49:48
3	Ni 231.604†	129.5	-27.2	-0.6124	ug/L	-0.6124 ppb	20:49:48
3	P 214.914†	304.0	28.3	11.573	ug/L	11.573 ppb	20:49:48
3	Pb 220.353†	-22.3	2.9	0.3033	ug/L	0.3033 ppb	20:49:48
3	S 181.975 Axial†	90.1	-8.8	-9.8396	ug/L	-9.8396 ppb	20:49:48
3	Sb 206.836†	51.2	-0.1	-0.0017	ug/L	-0.0017 ppb	20:49:48
3	Se 196.026†	-38.0	-8.7	-3.5733	ug/L	-3.5733 ppb	20:49:48
3	Si 251.611†	728.9	291.8	7.6633	ug/L	7.6633 ppb	20:49:48
3	Sn 189.927†	11.6	-0.6	-0.0900	ug/L	-0.0900 ppb	20:49:48
3	Ti 334.940†	-1284.7	100.8	0.1674	ug/L	0.1674 ppb	20:49:28
3	Tl 190.801†	-62.7	-6.2	-1.3635	ug/L	-1.3635 ppb	20:49:48
3	U 409.014†	-5353.2	-441.2	-13.073	ug/L	-13.073 ppb	20:49:28
3	V 292.402†	-1758.3	-176.1	-1.3815	ug/L	-1.3815 ppb	20:49:28
3	Zn 213.857†	1000.3	35.5	0.2741	ug/L	0.2741 ppb	20:49:48
3	SiO2†	757.4	324.4	18.301	ug/L	18.301 ppb	20:50:03

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	738921.9	94.015	%	0.6818				0.73%
Sc Radial	6819.7	94.0	%	1.85				1.97%
Y 371.029	577837.4	98.963	%	0.6904				0.70%
Y RADIAL	6213.0	102.4	%	1.68				1.64%
Ag 328.068†	97.9	0.5138	ug/L	0.13581	0.5138	ppb	0.13581	26.43%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	117.4	94.248	ug/L	20.6203	94.248	ppb	20.6203	21.88%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.7	0.2083	ug/L	0.85309	0.2083	ppb	0.85309	409.49%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	109.6	2.3282	ug/L	1.71522	2.3282	ppb	1.71522	73.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	33.9	0.2024	ug/L	0.03693	0.2024	ppb	0.03693	18.24%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-186.9	-0.0708	ug/L	0.02684	-0.0708	ppb	0.02684	37.90%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.8	1.1238	ug/L	3.46375	1.1238	ppb	3.46375	308.22%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                0.7      0.0047 ug/L       0.11847      0.0047 ppb        0.11847 >999.9%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.6      0.0682 ug/L       0.14670      0.0682 ppb        0.14670 214.97%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -91.5     -1.0807 ug/L       0.31430     -1.0807 ppb        0.31430  29.08%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              388.8      1.2180 ug/L       0.22747      1.2180 ppb        0.22747  18.68%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         6.1      23.868 ug/L       10.0364      23.868 ppb        10.0364  42.05%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        137.1      25.829 ug/L        7.4600      25.829 ppb         7.4600  28.88%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.7      17.252 ug/L       35.3200      17.252 ppb        35.3200 204.73%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              149.0      0.1423 ug/L       0.16616      0.1423 ppb        0.16616 116.81%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                5.5      0.3282 ug/L       0.11252      0.3282 ppb        0.11252  34.28%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -3277.7     -174.63 ug/L         1.730     -174.63 ppb          1.730   0.99%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              -14.5     -0.3257 ug/L       0.28329     -0.3257 ppb        0.28329  86.98%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                27.5      11.216 ug/L        0.7247      11.216 ppb         0.7247   6.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -0.1      0.0047 ug/L       0.37041      0.0047 ppb        0.37041 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -12.7     -14.198 ug/L        3.7998     -14.198 ppb         3.7998  26.76%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                2.9      0.7778 ug/L       0.94446      0.7778 ppb        0.94446 121.43%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -1.2     -0.4334 ug/L       3.06268     -0.4334 ppb        3.06268 706.59%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              299.3      7.8419 ug/L       0.43169      7.8419 ppb        0.43169   5.50%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                8.1      1.1851 ug/L       1.11998      1.1851 ppb        1.11998  94.50%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               33.8      0.0941 ug/L       0.04516      0.0941 ppb        0.04516  47.98%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               19.4      0.0349 ug/L       0.22829      0.0349 ppb        0.22829 654.56%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                2.1      0.4750 ug/L       1.89327      0.4750 ppb        1.89327 398.59%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -256.4     -7.5973 ug/L       4.76174     -7.5973 ppb        4.76174  62.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -121.5     -0.9511 ug/L       0.38297     -0.9511 ppb        0.38297  40.27%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               41.3      0.3174 ug/L       0.04183      0.3174 ppb        0.04183  13.18%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    314.3      17.691 ug/L        1.8603      17.691 ppb         1.8603  10.52%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 44
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/1/2009 21:41:31
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6713.2	6713.2	92.6	%			21:43:43
1	Y RADIAL	6057.7	6057.7	99.85	%			21:43:43
1	Al 396.153Radial†	5747.9	6293.3	5030.9	ug/L	5030.9	ppb	21:43:23
1	Ca 317.933Radial†	3627.6	3888.8	5463.4	ug/L	5463.4	ppb	21:43:43
1	Fe 238.204 Radial†	1287.7	1353.9	5289.6	ug/L	5289.6	ppb	21:43:43
1	K 766.490 Radial†	26717.8	26014.7	4884.7	ug/L	4884.7	ppb	21:43:23
1	Mg 279.077 IEC†	219.7	235.1	5509.3	ug/L	5509.3	ppb	21:43:43
1	Na 589.592 Radial†	168746.5	179223.4	9548.4	ug/L	9548.4	ppb	21:43:23
1	Sr 421.552†	155462.5	168021.6	467.82	ug/L	467.82	ppb	21:43:23
1	Sc 361.383	753692.4	753692.4	95.895	%			21:44:42
1	Y 371.029	581444.5	581444.5	99.581	%			21:44:42
1	Ag 328.068†	93016.5	96290.3	498.08	ug/L	498.08	ppb	21:44:42
1	As 188.979†	1546.8	1647.9	488.34	ug/L	488.34	ppb	21:45:02
1	B 249.677†	20772.2	22485.5	475.07	ug/L	475.07	ppb	21:44:42
1	Ba 233.527†	77908.2	81223.8	491.41	ug/L	491.41	ppb	21:44:42
1	Be 313.107†	1236871.4	1294743.4	492.25	ug/L	492.25	ppb	21:44:42
1	Cd 226.502†	43342.4	45490.6	479.14	ug/L	479.14	ppb	21:45:02
1	Co 228.616†	31525.4	32974.7	483.61	ug/L	483.61	ppb	21:45:02
1	Cr 267.716†	39875.4	41589.0	492.44	ug/L	492.44	ppb	21:44:42
1	Cu 324.752†	155718.9	156479.5	489.91	ug/L	489.91	ppb	21:44:42
1	Mn 257.610†	501852.1	522571.9	490.09	ug/L	490.09	ppb	21:44:42
1	Mo 202.031†	8052.2	8386.3	500.03	ug/L	500.03	ppb	21:45:02
1	Ni 231.604†	20993.3	21726.7	487.97	ug/L	487.97	ppb	21:45:02
1	P 214.914†	5884.6	5840.6	2337.1	ug/L	2337.1	ppb	21:45:02
1	Pb 220.353†	4747.8	4977.7	494.79	ug/L	494.79	ppb	21:45:02
1	S 181.975 Axial†	926.3	861.1	958.60	ug/L	958.60	ppb	21:45:02
1	Sb 206.836†	1939.8	1968.1	495.85	ug/L	495.85	ppb	21:45:02
1	Se 196.026†	1086.4	1164.7	506.05	ug/L	506.05	ppb	21:45:02
1	Si 251.611†	91795.9	95240.1	2488.3	ug/L	2488.3	ppb	21:44:42
1	Sn 189.927†	3233.3	3358.7	492.55	ug/L	492.55	ppb	21:45:02
1	Ti 334.940†	298373.8	312618.1	500.61	ug/L	500.61	ppb	21:44:42
1	Tl 190.801†	2074.4	2223.8	496.14	ug/L	496.14	ppb	21:45:02
1	U 409.014†	10150.9	15853.4	468.09	ug/L	468.09	ppb	21:44:42
1	V 292.402†	59142.5	63373.6	495.16	ug/L	495.16	ppb	21:44:42
1	Zn 213.857†	61743.4	63355.4	486.55	ug/L	486.55	ppb	21:44:42
1	SiO2†	91979.9	95434.2	5354.4	ug/L	5354.4	ppb	21:46:02
2	Sc Radial	6716.6	6716.6	92.6	%			21:44:08
2	Y RADIAL	6064.5	6064.5	99.97	%			21:44:08
2	Al 396.153Radial†	5833.3	6382.3	5102.2	ug/L	5102.2	ppb	21:43:48
2	Ca 317.933Radial†	3650.2	3911.2	5494.8	ug/L	5494.8	ppb	21:44:08
2	Fe 238.204 Radial†	1291.2	1357.0	5301.7	ug/L	5301.7	ppb	21:44:08
2	K 766.490 Radial†	26999.6	26304.0	4939.1	ug/L	4939.1	ppb	21:43:48
2	Mg 279.077 IEC†	219.8	235.1	5508.9	ug/L	5508.9	ppb	21:44:08
2	Na 589.592 Radial†	171513.4	182116.8	9702.6	ug/L	9702.6	ppb	21:43:48
2	Sr 421.552†	157615.2	170259.1	474.05	ug/L	474.05	ppb	21:43:48
2	Sc 361.383	747266.1	747266.1	95.077	%			21:45:09
2	Y 371.029	576424.9	576424.9	98.721	%			21:45:09
2	Ag 328.068†	92378.3	96453.2	498.93	ug/L	498.93	ppb	21:45:09
2	As 188.979†	1541.0	1655.7	490.66	ug/L	490.66	ppb	21:45:29
2	B 249.677†	20684.2	22579.2	477.05	ug/L	477.05	ppb	21:45:09
2	Ba 233.527†	77467.2	81458.8	492.83	ug/L	492.83	ppb	21:45:09
2	Be 313.107†	1226185.6	1294596.4	492.20	ug/L	492.20	ppb	21:45:09
2	Cd 226.502†	43260.5	45793.1	482.33	ug/L	482.33	ppb	21:45:29
2	Co 228.616†	31478.3	33208.0	487.04	ug/L	487.04	ppb	21:45:29
2	Cr 267.716†	39462.5	41512.3	491.53	ug/L	491.53	ppb	21:45:09
2	Cu 324.752†	154671.3	156774.2	490.83	ug/L	490.83	ppb	21:45:09
2	Mn 257.610†	498826.1	523889.8	491.33	ug/L	491.33	ppb	21:45:09
2	Mo 202.031†	8036.6	8442.2	503.36	ug/L	503.36	ppb	21:45:29
2	Ni 231.604†	20960.1	21880.0	491.41	ug/L	491.41	ppb	21:45:29

2	P 214.914†	5871.2	5879.3	2353.1 ug/L	2353.1 ppb	21:45:29
2	Pb 220.353†	4790.0	5064.7	503.43 ug/L	503.43 ppb	21:45:29
2	S 181.975 Axial†	924.5	867.5	965.65 ug/L	965.65 ppb	21:45:29
2	Sb 206.836†	1920.0	1964.7	495.13 ug/L	495.13 ppb	21:45:29
2	Se 196.026†	1079.7	1167.4	507.21 ug/L	507.21 ppb	21:45:29
2	Si 251.611†	91164.0	95398.7	2492.3 ug/L	2492.3 ppb	21:45:09
2	Sn 189.927†	3222.7	3376.7	495.18 ug/L	495.18 ppb	21:45:29
2	Ti 334.940†	296531.2	313355.9	501.79 ug/L	501.79 ppb	21:45:09
2	Tl 190.801†	2088.1	2256.9	503.46 ug/L	503.46 ppb	21:45:29
2	U 409.014†	9961.1	15744.8	464.87 ug/L	464.87 ppb	21:45:09
2	V 292.402†	58719.7	63459.2	495.85 ug/L	495.85 ppb	21:45:09
2	Zn 213.857†	61393.5	63541.0	487.96 ug/L	487.96 ppb	21:45:09
2	SiO2†	92732.6	97050.7	5445.5 ug/L	5445.5 ppb	21:46:07
3	Sc Radial	6704.2	6704.2	92.4 %		21:44:33
3	Y RADIAL	6050.9	6050.9	99.74 %		21:44:33
3	Al 396.153Radial†	5804.9	6363.3	5087.1 ug/L	5087.1 ppb	21:44:13
3	Ca 317.933Radial†	3629.9	3896.6	5474.3 ug/L	5474.3 ppb	21:44:33
3	Fe 238.204 Radial†	1283.9	1351.7	5280.7 ug/L	5280.7 ppb	21:44:33
3	K 766.490 Radial†	26807.1	26150.1	4910.1 ug/L	4910.1 ppb	21:44:13
3	Mg 279.077 IEC†	220.7	236.4	5540.3 ug/L	5540.3 ppb	21:44:33
3	Na 589.592 Radial†	170253.3	181098.4	9648.3 ug/L	9648.3 ppb	21:44:13
3	Sr 421.552†	156593.9	169471.2	471.86 ug/L	471.86 ppb	21:44:13
3	Sc 361.383	753723.5	753723.5	95.899 %		21:45:36
3	Y 371.029	580829.8	580829.8	99.475 %		21:45:36
3	Ag 328.068†	93099.6	96372.9	498.51 ug/L	498.51 ppb	21:45:36
3	As 188.979†	1548.6	1649.7	488.88 ug/L	488.88 ppb	21:45:56
3	B 249.677†	20918.7	22637.4	478.31 ug/L	478.31 ppb	21:45:36
3	Ba 233.527†	78091.7	81411.8	492.55 ug/L	492.55 ppb	21:45:36
3	Be 313.107†	1238421.3	1296306.3	492.85 ug/L	492.85 ppb	21:45:36
3	Cd 226.502†	43334.4	45480.4	479.04 ug/L	479.04 ppb	21:45:56
3	Co 228.616†	31499.0	32945.8	483.18 ug/L	483.18 ppb	21:45:56
3	Cr 267.716†	39840.0	41550.3	491.98 ug/L	491.98 ppb	21:45:36
3	Cu 324.752†	156308.2	157087.3	491.81 ug/L	491.81 ppb	21:45:36
3	Mn 257.610†	502704.5	523439.2	490.90 ug/L	490.90 ppb	21:45:36
3	Mo 202.031†	8046.6	8380.2	499.66 ug/L	499.66 ppb	21:45:56
3	Ni 231.604†	21009.3	21742.4	488.32 ug/L	488.32 ppb	21:45:56
3	P 214.914†	5898.0	5854.3	2342.5 ug/L	2342.5 ppb	21:45:56
3	Pb 220.353†	4771.5	5002.2	497.23 ug/L	497.23 ppb	21:45:56
3	S 181.975 Axial†	929.5	864.4	962.20 ug/L	962.20 ppb	21:45:56
3	Sb 206.836†	1940.6	1968.9	496.08 ug/L	496.08 ppb	21:45:56
3	Se 196.026†	1071.7	1149.3	499.57 ug/L	499.57 ppb	21:45:56
3	Si 251.611†	91811.5	95252.5	2488.6 ug/L	2488.6 ppb	21:45:36
3	Sn 189.927†	3241.9	3367.6	493.86 ug/L	493.86 ppb	21:45:56
3	Ti 334.940†	299279.3	313549.5	502.10 ug/L	502.10 ppb	21:45:36
3	Tl 190.801†	2082.0	2231.8	497.91 ug/L	497.91 ppb	21:45:56
3	U 409.014†	10189.9	15893.6	469.28 ug/L	469.28 ppb	21:45:36
3	V 292.402†	59318.1	63554.1	496.55 ug/L	496.55 ppb	21:45:36
3	Zn 213.857†	61887.8	63503.3	487.69 ug/L	487.69 ppb	21:45:36
3	SiO2†	92526.7	96000.4	5386.3 ug/L	5386.3 ppb	21:46:12

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	751560.7	95.623	%	0.4732				0.49%
Sc Radial	6711.3	92.5	%	0.09				0.10%
Y 371.029	579566.4	99.259	%	0.4689				0.47%
Y RADIAL	6057.7	99.85	%	0.112				0.11%
Ag 328.068†	96372.1	498.51	ug/L	0.423	498.51	ppb	0.423	0.08%
QC value within limits for Ag 328.068 Recovery = 99.70%								
Al 396.153Radial†	6346.3	5073.4	ug/L	37.58	5073.4	ppb	37.58	0.74%
QC value within limits for Al 396.153Radial Recovery = 101.47%								
As 188.979†	1651.1	489.29	ug/L	1.213	489.29	ppb	1.213	0.25%
QC value within limits for As 188.979 Recovery = 97.86%								
B 249.677†	22567.4	476.81	ug/L	1.629	476.81	ppb	1.629	0.34%
QC value within limits for B 249.677 Recovery = 95.36%								
Ba 233.527†	81364.8	492.26	ug/L	0.752	492.26	ppb	0.752	0.15%
QC value within limits for Ba 233.527 Recovery = 98.45%								
Be 313.107†	1295215.4	492.43	ug/L	0.361	492.43	ppb	0.361	0.07%
QC value within limits for Be 313.107 Recovery = 98.49%								
Ca 317.933Radial†	3898.8	5477.5	ug/L	15.97	5477.5	ppb	15.97	0.29%

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   QC value within limits for Ca 317.933Radial  Recovery = 109.55%
Cd 226.502†          45588.0      480.17 ug/L        1.873      480.17 ppb        1.873   0.39%
   QC value within limits for Cd 226.502  Recovery = 96.03%
Co 228.616†          33042.9      484.61 ug/L        2.112      484.61 ppb        2.112   0.44%
   QC value within limits for Co 228.616  Recovery = 96.92%
Cr 267.716†          41550.5      491.98 ug/L        0.452      491.98 ppb        0.452   0.09%
   QC value within limits for Cr 267.716  Recovery = 98.40%
Cu 324.752†         156780.3      490.85 ug/L        0.951      490.85 ppb        0.951   0.19%
   QC value within limits for Cu 324.752  Recovery = 98.17%
Fe 238.204 Radial†    1354.2      5290.6 ug/L        10.53      5290.6 ppb        10.53   0.20%
   QC value within limits for Fe 238.204 Radial  Recovery = 105.81%
K 766.490 Radial†    26156.3      4911.3 ug/L        27.21      4911.3 ppb        27.21   0.55%
   QC value within limits for K 766.490 Radial  Recovery = 98.23%
Mg 279.077 IEC†        235.5      5519.5 ug/L        18.01      5519.5 ppb        18.01   0.33%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 110.39%
Mn 257.610†         523300.3      490.77 ug/L        0.628      490.77 ppb        0.628   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.15%
Mo 202.031†          8402.9      501.02 ug/L        2.037      501.02 ppb        2.037   0.41%
   QC value within limits for Mo 202.031  Recovery = 100.20%
Na 589.592 Radial†  180812.9      9633.1 ug/L        78.19      9633.1 ppb        78.19   0.81%
   QC value within limits for Na 589.592 Radial  Recovery = 96.33%
Ni 231.604†          21783.0      489.24 ug/L        1.894      489.24 ppb        1.894   0.39%
   QC value within limits for Ni 231.604  Recovery = 97.85%
P 214.914†            5858.0      2344.2 ug/L         8.12      2344.2 ppb         8.12   0.35%
   QC value within limits for P 214.914  Recovery = 93.77%
Pb 220.353†           5014.9      498.48 ug/L        4.454      498.48 ppb        4.454   0.89%
   QC value within limits for Pb 220.353  Recovery = 99.70%
S 181.975 Axial†       864.3      962.15 ug/L        3.525      962.15 ppb        3.525   0.37%
   QC value within limits for S 181.975 Axial  Recovery = 96.22%
Sb 206.836†           1967.3      495.69 ug/L        0.496      495.69 ppb        0.496   0.10%
   QC value within limits for Sb 206.836  Recovery = 99.14%
Se 196.026†           1160.5      504.28 ug/L        4.115      504.28 ppb        4.115   0.82%
   QC value within limits for Se 196.026  Recovery = 100.86%
Si 251.611†          95297.1      2489.7 ug/L         2.26      2489.7 ppb         2.26   0.09%
   QC value within limits for Si 251.611  Recovery = 99.59%
Sn 189.927†           3367.7      493.87 ug/L        1.315      493.87 ppb        1.315   0.27%
   QC value within limits for Sn 189.927  Recovery = 98.77%
Sr 421.552†         169250.7      471.24 ug/L        3.160      471.24 ppb        3.160   0.67%
   QC value within limits for Sr 421.552  Recovery = 94.25%
Ti 334.940†         313174.5      501.50 ug/L        0.788      501.50 ppb        0.788   0.16%
   QC value within limits for Ti 334.940  Recovery = 100.30%
Tl 190.801†           2237.5      499.17 ug/L        3.820      499.17 ppb        3.820   0.77%
   QC value within limits for Tl 190.801  Recovery = 99.83%
U 409.014†           15830.6      467.42 ug/L        2.281      467.42 ppb        2.281   0.49%
   QC value within limits for U 409.014  Recovery = 93.48%
V 292.402†           63462.3      495.85 ug/L        0.696      495.85 ppb        0.696   0.14%
   QC value within limits for V 292.402  Recovery = 99.17%
Zn 213.857†          63466.6      487.40 ug/L        0.750      487.40 ppb        0.750   0.15%
   QC value within limits for Zn 213.857  Recovery = 97.48%
SiO2†                96161.8      5395.4 ug/L        46.22      5395.4 ppb        46.22   0.86%
   QC value within limits for SiO2  Recovery = 100.90%
QC Failed.  Continue with analysis.
```

Sequence No.: 45
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/1/2009 21:48:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6746.8	6746.8	93.0	%			21:50:13
1	Y RADIAL	6159.0	6159.0	101.5	%			21:50:13
1	Al 396.153Radial†	74.0	163.0	130.87	ug/L	130.87	ppb	21:50:13
1	Ca 317.933Radial†	20.3	-8.5	-11.958	ug/L	-11.958	ppb	21:50:33
1	Fe 238.204 Radial†	40.0	5.8	22.428	ug/L	22.428	ppb	21:50:33
1	K 766.490 Radial†	2596.6	-58.8	-11.068	ug/L	-11.068	ppb	21:50:13
1	Mg 279.077 IEC†	2.5	0.4	8.7985	ug/L	8.7985	ppb	21:50:33
1	Na 589.592 Radial†	-293.4	-3398.9	-181.08	ug/L	-181.08	ppb	21:50:13
1	Sr 421.552†	-88.5	-28.9	-0.0804	ug/L	-0.0804	ppb	21:50:13
1	Sc 361.383	740355.1	740355.1	94.198	%			21:51:30
1	Y 371.029	579394.4	579394.4	99.230	%			21:51:30
1	Ag 328.068†	751.6	89.6	0.4711	ug/L	0.4711	ppb	21:51:30
1	As 188.979†	-34.3	-1.5	-0.4530	ug/L	-0.4530	ppb	21:51:50
1	B 249.677†	-674.6	107.9	2.2911	ug/L	2.2911	ppb	21:51:30
1	Ba 233.527†	40.7	23.7	0.1415	ug/L	0.1415	ppb	21:51:50
1	Be 313.107†	-4751.0	-122.3	-0.0468	ug/L	-0.0468	ppb	21:51:30
1	Cd 226.502†	-292.2	-17.5	-0.1875	ug/L	-0.1875	ppb	21:51:50
1	Co 228.616†	-87.5	6.9	0.1032	ug/L	0.1032	ppb	21:51:50
1	Cr 267.716†	-45.9	-42.3	-0.4984	ug/L	-0.4984	ppb	21:51:30
1	Cu 324.752†	5914.6	373.2	1.1690	ug/L	1.1690	ppb	21:51:30
1	Mn 257.610†	735.3	16.1	0.0177	ug/L	0.0177	ppb	21:51:30
1	Mo 202.031†	19.2	9.8	0.5864	ug/L	0.5864	ppb	21:51:50
1	Ni 231.604†	150.0	-6.1	-0.1374	ug/L	-0.1374	ppb	21:51:50
1	P 214.914†	301.8	24.4	9.9572	ug/L	9.9572	ppb	21:51:50
1	Pb 220.353†	-33.6	-9.0	-0.8704	ug/L	-0.8704	ppb	21:51:50
1	S 181.975 Axial†	84.2	-15.5	-17.244	ug/L	-17.244	ppb	21:51:50
1	Sb 206.836†	43.5	-8.5	-2.0848	ug/L	-2.0848	ppb	21:51:50
1	Se 196.026†	-30.3	-0.3	-0.0572	ug/L	-0.0572	ppb	21:51:50
1	Si 251.611†	668.9	224.6	5.9015	ug/L	5.9015	ppb	21:51:50
1	Sn 189.927†	11.8	-0.5	-0.0681	ug/L	-0.0681	ppb	21:51:50
1	Ti 334.940†	-1496.5	-117.8	-0.1863	ug/L	-0.1863	ppb	21:51:30
1	Tl 190.801†	-49.4	8.2	1.8264	ug/L	1.8264	ppb	21:51:50
1	U 409.014†	-5166.6	-216.9	-6.4278	ug/L	-6.4278	ppb	21:51:30
1	V 292.402†	-1666.1	-69.7	-0.5455	ug/L	-0.5455	ppb	21:51:30
1	Zn 213.857†	1022.7	54.4	0.4185	ug/L	0.4185	ppb	21:51:50
1	SiO2†	669.7	227.5	12.843	ug/L	12.843	ppb	21:52:47
2	Sc Radial	6822.1	6822.1	94.1	%			21:50:38
2	Y RADIAL	6182.2	6182.2	101.9	%			21:50:38
2	Al 396.153Radial†	51.7	138.5	111.13	ug/L	111.13	ppb	21:50:38
2	Ca 317.933Radial†	23.0	-5.8	-8.1645	ug/L	-8.1645	ppb	21:50:58
2	Fe 238.204 Radial†	38.2	3.4	13.408	ug/L	13.408	ppb	21:50:58
2	K 766.490 Radial†	2661.5	-20.6	-3.8775	ug/L	-3.8775	ppb	21:50:38
2	Mg 279.077 IEC†	5.4	3.4	79.319	ug/L	79.319	ppb	21:50:58
2	Na 589.592 Radial†	-161.6	-3255.3	-173.43	ug/L	-173.43	ppb	21:50:38
2	Sr 421.552†	-24.8	39.9	0.1111	ug/L	0.1111	ppb	21:50:38
2	Sc 361.383	725898.3	725898.3	92.358	%			21:51:56
2	Y 371.029	568047.6	568047.6	97.286	%			21:51:56
2	Ag 328.068†	720.5	71.9	0.3800	ug/L	0.3800	ppb	21:51:56
2	As 188.979†	-35.1	-3.1	-0.9054	ug/L	-0.9054	ppb	21:52:16
2	B 249.677†	-688.3	78.8	1.6729	ug/L	1.6729	ppb	21:51:56
2	Ba 233.527†	56.3	41.4	0.2475	ug/L	0.2475	ppb	21:52:16
2	Be 313.107†	-4778.9	-253.0	-0.0965	ug/L	-0.0965	ppb	21:51:56
2	Cd 226.502†	-289.6	-20.9	-0.2214	ug/L	-0.2214	ppb	21:52:16
2	Co 228.616†	-86.6	6.0	0.0899	ug/L	0.0899	ppb	21:52:16
2	Cr 267.716†	-6.3	-0.3	-0.0013	ug/L	-0.0013	ppb	21:51:56
2	Cu 324.752†	5835.0	412.0	1.2898	ug/L	1.2898	ppb	21:51:56
2	Mn 257.610†	788.4	89.1	0.0836	ug/L	0.0836	ppb	21:51:56
2	Mo 202.031†	22.9	14.2	0.8477	ug/L	0.8477	ppb	21:52:16
2	Ni 231.604†	172.1	20.9	0.4703	ug/L	0.4703	ppb	21:52:16

2	P 214.914†	303.2	32.3	13.240 ug/L	13.240 ppb		21:52:16
2	Pb 220.353†	-46.3	-23.5	-2.3050 ug/L	-2.3050 ppb		21:52:16
2	S 181.975 Axial†	86.5	-11.3	-12.566 ug/L	-12.566 ppb		21:52:16
2	Sb 206.836†	50.2	-0.3	-0.0473 ug/L	-0.0473 ppb		21:52:16
2	Se 196.026†	-26.0	3.6	1.5608 ug/L	1.5608 ppb		21:52:16
2	Si 251.611†	687.0	258.3	6.7690 ug/L	6.7690 ppb		21:52:16
2	Sn 189.927†	17.6	6.1	0.8868 ug/L	0.8868 ppb		21:52:16
2	Ti 334.940†	-1485.9	-138.0	-0.2163 ug/L	-0.2163 ppb		21:51:56
2	Tl 190.801†	-43.4	13.7	3.0354 ug/L	3.0354 ppb		21:52:16
2	U 409.014†	-5230.0	-394.8	-11.700 ug/L	-11.700 ppb		21:51:56
2	V 292.402†	-1681.4	-121.4	-0.9499 ug/L	-0.9499 ppb		21:51:56
2	Zn 213.857†	1029.0	82.8	0.6331 ug/L	0.6331 ppb		21:52:16
2	SiO2†	674.3	246.7	13.879 ug/L	13.879 ppb		21:52:52
3	Sc Radial	6687.2	6687.2	92.2 %			21:51:04
3	Y RADIAL	6097.1	6097.1	100.5 %			21:51:04
3	Al 396.153Radial†	27.2	112.9	90.628 ug/L	90.628 ppb		21:51:04
3	Ca 317.933Radial†	24.8	-3.4	-4.8156 ug/L	-4.8156 ppb		21:51:24
3	Fe 238.204 Radial†	34.8	0.5	1.8680 ug/L	1.8680 ppb		21:51:24
3	K 766.490 Radial†	2649.8	23.7	4.4688 ug/L	4.4688 ppb		21:51:04
3	Mg 279.077 IEC†	6.8	5.1	118.88 ug/L	118.88 ppb		21:51:24
3	Na 589.592 Radial†	-169.6	-3267.4	-174.08 ug/L	-174.08 ppb		21:51:04
3	Sr 421.552†	-55.4	6.2	0.0172 ug/L	0.0172 ppb		21:51:04
3	Sc 361.383	733788.8	733788.8	93.362 %			21:52:21
3	Y 371.029	574104.5	574104.5	98.324 %			21:52:21
3	Ag 328.068†	769.2	115.6	0.6052 ug/L	0.6052 ppb		21:52:21
3	As 188.979†	-32.3	0.3	0.0966 ug/L	0.0966 ppb		21:52:41
3	B 249.677†	-791.3	-23.4	-0.4998 ug/L	-0.4998 ppb		21:52:21
3	Ba 233.527†	49.2	33.1	0.2001 ug/L	0.2001 ppb		21:52:41
3	Be 313:107†	-4789.7	-209.0	-0.0795 ug/L	-0.0795 ppb		21:52:21
3	Cd 226.502†	-295.7	-24.1	-0.2545 ug/L	-0.2545 ppb		21:52:41
3	Co 228.616†	-77.5	16.7	0.2480 ug/L	0.2480 ppb		21:52:41
3	Cr 267.716†	-120.7	-122.9	-1.4487 ug/L	-1.4487 ppb		21:52:21
3	Cu 324.752†	5770.1	274.6	0.8592 ug/L	0.8592 ppb		21:52:21
3	Mn 257.610†	838.5	133.6	0.1231 ug/L	0.1231 ppb		21:52:21
3	Mo 202.031†	24.3	15.4	0.9205 ug/L	0.9205 ppb		21:52:41
3	Ni 231.604†	164.9	11.3	0.2531 ug/L	0.2531 ppb		21:52:41
3	P 214.914†	303.1	28.7	11.841 ug/L	11.841 ppb		21:52:41
3	Pb 220.353†	-22.1	3.0	0.3183 ug/L	0.3183 ppb		21:52:41
3	S 181.975 Axial†	90.5	-8.0	-8.8976 ug/L	-8.8976 ppb		21:52:41
3	Sb 206.836†	64.5	14.4	3.6583 ug/L	3.6583 ppb		21:52:41
3	Se 196.026†	-30.5	-0.9	-0.3652 ug/L	-0.3652 ppb		21:52:41
3	Si 251.611†	659.1	220.4	5.7518 ug/L	5.7518 ppb		21:52:41
3	Sn 189.927†	24.8	13.6	1.9948 ug/L	1.9948 ppb		21:52:41
3	Ti 334.940†	-1426.3	-56.8	-0.0855 ug/L	-0.0855 ppb		21:52:21
3	Tl 190.801†	-49.0	8.1	1.8065 ug/L	1.8065 ppb		21:52:41
3	U 409.014†	-5289.2	-397.3	-11.768 ug/L	-11.768 ppb		21:52:21
3	V 292.402†	-1578.9	7.9	0.0524 ug/L	0.0524 ppb		21:52:21
3	Zn 213.857†	1018.1	59.3	0.4522 ug/L	0.4522 ppb		21:52:41
3	SiO2†	664.9	228.7	12.824 ug/L	12.824 ppb		21:52:57

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	733347.4	93.306	%	0.9210				0.99%
Sc Radial	6752.0	93.1	%	0.93				1.00%
Y 371.029	573848.8	98.280	%	0.9724				0.99%
Y RADIAL	6146.1	101.3	%	0.73				0.72%
Ag 328.068†	92.3	0.4854	ug/L	0.11329	0.4854	ppb	0.11329	23.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	138.2	110.88	ug/L	20.120	110.88	ppb	20.120	18.15%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.4	-0.4206	ug/L	0.50178	-0.4206	ppb	0.50178	119.29%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	54.4	1.1547	ug/L	1.46581	1.1547	ppb	1.46581	126.94%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.7	0.1964	ug/L	0.05308	0.1964	ppb	0.05308	27.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-194.8	-0.0743	ug/L	0.02522	-0.0743	ppb	0.02522	33.96%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-5.9	-8.3126	ug/L	3.57331	-8.3126	ppb	3.57331	42.99%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -20.9      -0.2212 ug/L       0.03349      -0.2212 ppb        0.03349  15.14%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                9.9       0.1470 ug/L       0.08770       0.1470 ppb        0.08770  59.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -55.2      -0.6495 ug/L       0.73540      -0.6495 ppb        0.73540 113.23%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              353.3       1.1060 ug/L       0.22207       1.1060 ppb        0.22207  20.08%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         3.2      12.568 ug/L       10.3056      12.568 ppb        10.3056  82.00%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -18.6      -3.4922 ug/L       7.77545      -3.4922 ppb        7.77545 222.65%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            2.9      68.998 ug/L       55.7603      68.998 ppb        55.7603  80.81%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               79.6       0.0748 ug/L       0.05325       0.0748 ppb        0.05325  71.18%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               13.2       0.7849 ug/L       0.17570       0.7849 ppb        0.17570  22.39%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -3307.2     -176.20 ug/L         4.243     -176.20 ppb          4.243   2.41%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                8.7       0.1954 ug/L       0.30794       0.1954 ppb        0.30794 157.63%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                28.5      11.679 ug/L        1.6474      11.679 ppb         1.6474  14.11%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -9.8      -0.9524 ug/L       1.31358      -0.9524 ppb        1.31358 137.93%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -11.6     -12.903 ug/L        4.1834     -12.903 ppb         4.1834  32.42%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                1.9       0.5087 ug/L       2.91164       0.5087 ppb        2.91164 572.35%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                0.8       0.3795 ug/L       1.03460       0.3795 ppb        1.03460 272.63%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              234.4       6.1408 ug/L       0.54918       6.1408 ppb        0.54918   8.94%
   QC value within limits for Si 25I.611  Recovery = Not calculated
Sn 189.927†                6.4       0.9378 ug/L       1.03240       0.9378 ppb        1.03240 110.08%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                5.7       0.0160 ug/L       0.09577       0.0160 ppb        0.09577 599.76%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -104.2      -0.1627 ug/L       0.06851      -0.1627 ppb        0.06851  42.11%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               10.0       2.2228 ug/L       0.70381       2.2228 ppb        0.70381  31.66%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -336.3      -9.9653 ug/L       3.06380      -9.9653 ppb        3.06380  30.74%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -61.1      -0.4810 ug/L       0.50426      -0.4810 ppb        0.50426 104.83%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               65.5       0.5012 ug/L       0.11541       0.5012 ppb        0.11541  23.03%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    234.3      13.182 ug/L        0.6041      13.182 ppb         0.6041   4.58%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 52
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/1/2009 22:37:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6792.1	6792.1	93.7	%			22:39:32
1	Y RADIAL	6165.7	6165.7	101.6	%			22:39:32
1	Al 396.153Radial†	5842.5	6322.1	5054.0	ug/L	5054.0	ppb	22:39:12
1	Ca 317.933Radial†	3704.0	3924.9	5514.0	ug/L	5514.0	ppb	22:39:32
1	Fe 238.204 Radial†	1307.0	1358.3	5306.8	ug/L	5306.8	ppb	22:39:32
1	K 766.490 Radial†	27363.4	26368.4	4951.2	ug/L	4951.2	ppb	22:39:12
1	Mg 279.077 IEC†	226.0	239.0	5601.5	ug/L	5601.5	ppb	22:39:32
1	Na 589.592 Radial†	170707.9	179197.7	9547.1	ug/L	9547.1	ppb	22:39:12
1	Sr 421.552†	158163.5	168952.6	470.41	ug/L	470.41	ppb	22:39:12
1	Sc 361.383	751530.7	751530.7	95.620	%			22:40:30
1	Y 371.029	579058.4	579058.4	99.172	%			22:40:30
1	Ag 328.068†	93350.4	96918.5	501.33	ug/L	501.33	ppb	22:40:30
1	As 188.979†	1539.6	1645.0	487.52	ug/L	487.52	ppb	22:40:50
1	B 249.677†	20971.8	22756.5	480.82	ug/L	480.82	ppb	22:40:30
1	Ba 233.527†	78390.1	81961.5	495.88	ug/L	495.88	ppb	22:40:30
1	Be 313.107†	1242574.8	1304418.1	495.93	ug/L	495.93	ppb	22:40:30
1	Cd 226.502†	43340.1	45618.1	480.49	ug/L	480.49	ppb	22:40:50
1	Co 228.616†	31535.9	33080.3	485.15	ug/L	485.15	ppb	22:40:50
1	Cr 267.716†	40006.1	41845.3	495.47	ug/L	495.47	ppb	22:40:30
1	Cu 324.752†	156831.6	158110.3	495.01	ug/L	495.01	ppb	22:40:30
1	Mn 257.610†	505304.1	527687.5	494.88	ug/L	494.88	ppb	22:40:30
1	Mo 202.031†	8043.6	8401.5	500.94	ug/L	500.94	ppb	22:40:50
1	Ni 231.604†	20965.9	21761.0	488.74	ug/L	488.74	ppb	22:40:50
1	P 214.914†	5909.1	5883.8	2354.1	ug/L	2354.1	ppb	22:40:50
1	Pb 220.353†	4766.8	5011.9	498.18	ug/L	498.18	ppb	22:40:50
1	S 181.975 Axial†	928.3	865.9	963.91	ug/L	963.91	ppb	22:40:50
1	Sb 206.836†	1936.7	1970.7	496.50	ug/L	496.50	ppb	22:40:50
1	Se 196.026†	1066.8	1147.5	498.89	ug/L	498.89	ppb	22:40:50
1	Si 251.611†	91922.0	95647.3	2498.9	ug/L	2498.9	ppb	22:40:30
1	Sn 189.927†	3246.3	3382.1	495.98	ug/L	495.98	ppb	22:40:50
1	Ti 334.940†	300111.7	315330.7	504.95	ug/L	504.95	ppb	22:40:30
1	Tl 190.801†	2069.8	2225.3	496.51	ug/L	496.51	ppb	22:40:50
1	U 409.014†	10380.6	16124.0	476.10	ug/L	476.10	ppb	22:40:30
1	V 292.402†	59599.4	64028.7	500.24	ug/L	500.24	ppb	22:40:30
1	Zn 213.857†	62271.3	64092.6	492.25	ug/L	492.25	ppb	22:40:30
1	SiO2†	91587.6	95299.8	5346.6	ug/L	5346.6	ppb	22:41:50
2	Sc Radial	6716.8	6716.8	92.6	%			22:39:57
2	Y RADIAL	6056.0	6056.0	99.83	%			22:39:57
2	Al 396.153Radial†	5873.4	6425.4	5137.0	ug/L	5137.0	ppb	22:39:37
2	Ca 317.933Radial†	3671.8	3934.4	5527.5	ug/L	5527.5	ppb	22:39:57
2	Fe 238.204 Radial†	1295.1	1361.1	5317.6	ug/L	5317.6	ppb	22:39:57
2	K 766.490 Radial†	27444.5	26783.7	5029.4	ug/L	5029.4	ppb	22:39:37
2	Mg 279.077 IEC†	218.0	233.1	5462.1	ug/L	5462.1	ppb	22:39:57
2	Na 589.592 Radial†	170900.6	181449.9	9667.0	ug/L	9667.0	ppb	22:39:37
2	Sr 421.552†	158589.7	171306.6	476.97	ug/L	476.97	ppb	22:39:37
2	Sc 361.383	756122.2	756122.2	96.204	%			22:40:58
2	Y 371.029	582978.4	582978.4	99.843	%			22:40:58
2	Ag 328.068†	93739.0	96729.6	500.36	ug/L	500.36	ppb	22:40:58
2	As 188.979†	1547.0	1643.0	486.92	ug/L	486.92	ppb	22:41:18
2	B 249.677†	21040.2	22694.5	479.52	ug/L	479.52	ppb	22:40:58
2	Ba 233.527†	78699.0	81784.8	494.80	ug/L	494.80	ppb	22:40:58
2	Be 313.107†	1249281.9	1303498.7	495.58	ug/L	495.58	ppb	22:40:58
2	Cd 226.502†	43440.2	45447.0	478.68	ug/L	478.68	ppb	22:41:18
2	Co 228.616†	31594.7	32941.1	483.11	ug/L	483.11	ppb	22:41:18
2	Cr 267.716†	40223.1	41816.8	495.13	ug/L	495.13	ppb	22:40:58
2	Cu 324.752†	157556.5	157867.8	494.26	ug/L	494.26	ppb	22:40:58
2	Mn 257.610†	506973.8	526214.0	493.51	ug/L	493.51	ppb	22:40:58
2	Mo 202.031†	8070.8	8378.8	499.58	ug/L	499.58	ppb	22:41:18
2	Ni 231.604†	21029.6	21694.0	487.24	ug/L	487.24	ppb	22:41:18

2	P 214.914†	5911.8	5849.1	2339.8 ug/L	2339.8 ppb	22:41:18
2	Pb 220.353†	4785.6	5001.1	497.12 ug/L	497.12 ppb	22:41:18
2	S 181.975 Axial†	931.8	863.7	961.44 ug/L	961.44 ppb	22:41:18
2	Sb 206.836†	1927.1	1948.5	490.88 ug/L	490.88 ppb	22:41:18
2	Se 196.026†	1082.6	1157.1	502.95 ug/L	502.95 ppb	22:41:18
2	Si 251.611†	92427.8	95589.3	2497.4 ug/L	2497.4 ppb	22:40:58
2	Sn 189.927†	3242.8	3357.8	492.43 ug/L	492.43 ppb	22:41:18
2	Ti 334.940†	301540.1	314909.5	504.28 ug/L	504.28 ppb	22:40:58
2	Tl 190.801†	2079.6	2222.3	495.85 ug/L	495.85 ppb	22:41:18
2	U 409.014†	10300.6	15975.0	471.69 ug/L	471.69 ppb	22:40:58
2	V 292.402†	59714.1	63769.5	498.21 ug/L	498.21 ppb	22:40:58
2	Zn 213.857†	62367.8	63797.5	489.97 ug/L	489.97 ppb	22:40:58
2	SiO2†	92091.0	95241.4	5343.4 ug/L	5343.4 ppb	22:41:56
3	Sc Radial	6800.7	6800.7	93.8 %		22:40:22
3	Y RADIAL	6119.6	6119.6	100.9 %		22:40:22
3	Al 396.153Radial†	5821.6	6291.9	5029.6 ug/L	5029.6 ppb	22:40:02
3	Ca 317.933Radial†	3706.5	3922.4	5510.7 ug/L	5510.7 ppb	22:40:22
3	Fe 238.204 Radial†	1311.2	1361.1	5317.8 ug/L	5317.8 ppb	22:40:22
3	K 766.490 Radial†	27247.0	26207.4	4920.9 ug/L	4920.9 ppb	22:40:02
3	Mg 279.077 IEC†	225.2	237.8	5573.4 ug/L	5573.4 ppb	22:40:22
3	Na 589.592 Radial†	170010.5	178224.2	9495.2 ug/L	9495.2 ppb	22:40:02
3	Sr 421.552†	157400.8	167926.3	467.56 ug/L	467.56 ppb	22:40:02
3	Sc 361.383	746899.9	746899.9	95.030 %		22:41:25
3	Y 371.029	576036.6	576036.6	98.654 %		22:41:25
3	Ag 328.068†	92629.1	96764.7	500.55 ug/L	500.55 ppb	22:41:25
3	As 188.979†	1551.9	1667.9	494.26 ug/L	494.26 ppb	22:41:45
3	B 249.677†	20716.6	22624.0	477.98 ug/L	477.98 ppb	22:41:25
3	Ba 233.527†	77898.8	81952.8	495.82 ug/L	495.82 ppb	22:41:25
3	Be 313.107†	1233756.8	1303195.9	495.46 ug/L	495.46 ppb	22:41:25
3	Cd 226.502†	43511.8	46079.8	485.35 ug/L	485.35 ppb	22:41:45
3	Co 228.616†	31633.8	33387.8	489.67 ug/L	489.67 ppb	22:41:45
3	Cr 267.716†	39806.3	41894.4	496.05 ug/L	496.05 ppb	22:41:25
3	Cu 324.752†	155070.0	157273.4	492.40 ug/L	492.40 ppb	22:41:25
3	Mn 257.610†	501185.3	526629.7	493.89 ug/L	493.89 ppb	22:41:25
3	Mo 202.031†	8061.1	8472.1	505.15 ug/L	505.15 ppb	22:41:45
3	Ni 231.604†	21078.7	22015.6	494.46 ug/L	494.46 ppb	22:41:45
3	P 214.914†	5921.1	5934.8	2375.9 ug/L	2375.9 ppb	22:41:45
3	Pb 220.353†	4766.7	5042.6	501.23 ug/L	501.23 ppb	22:41:45
3	S 181.975 Axial†	925.8	869.3	967.72 ug/L	967.72 ppb	22:41:45
3	Sb 206.836†	1942.7	1989.6	501.35 ug/L	501.35 ppb	22:41:45
3	Se 196.026†	1084.6	1173.1	509.67 ug/L	509.67 ppb	22:41:45
3	Si 251.611†	91240.2	95526.0	2495.6 ug/L	2495.6 ppb	22:41:25
3	Sn 189.927†	3256.3	3413.6	500.60 ug/L	500.60 ppb	22:41:45
3	Ti 334.940†	297685.9	314723.9	503.98 ug/L	503.98 ppb	22:41:25
3	Tl 190.801†	2094.3	2264.5	505.16 ug/L	505.16 ppb	22:41:45
3	U 409.014†	9968.9	15758.1	465.26 ug/L	465.26 ppb	22:41:25
3	V 292.402†	59076.7	63865.2	499.00 ug/L	499.00 ppb	22:41:25
3	Zn 213.857†	61668.6	63862.2	490.43 ug/L	490.43 ppb	22:41:25
3	SiO2†	91326.8	95619.2	5364.4 ug/L	5364.4 ppb	22:42:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	751517.6	95.618	%	0.5867				0.61%
Sc Radial	6769.9	93.3	%	0.64				0.68%
Y 371.029	579357.8	99.223	%	0.5961				0.60%
Y RADIAL	6113.8	100.8	%	0.91				0.90%
Ag 328.068†	96804.3	500.74	ug/L	0.515	500.74	ppb	0.515	0.10%
QC value within limits for Ag 328.068 Recovery = 100.15%								
Al 396.153Radial†	6346.5	5073.5	ug/L	56.31	5073.5	ppb	56.31	1.11%
QC value within limits for Al 396.153Radial Recovery = 101.47%								
As 188.979†	1652.0	489.57	ug/L	4.076	489.57	ppb	4.076	0.83%
QC value within limits for As 188.979 Recovery = 97.91%								
B 249.677†	22691.7	479.44	ug/L	1.422	479.44	ppb	1.422	0.30%
QC value within limits for B 249.677 Recovery = 95.89%								
Ba 233.527†	81899.7	495.50	ug/L	0.603	495.50	ppb	0.603	0.12%
QC value within limits for Ba 233.527 Recovery = 99.10%								
Be 313.107†	1303704.2	495.66	ug/L	0.243	495.66	ppb	0.243	0.05%
QC value within limits for Be 313.107 Recovery = 99.13%								
Ca 317.933Radial†	3927.2	5517.4	ug/L	8.89	5517.4	ppb	8.89	0.16%

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   QC value greater than the upper limit for Ca 317.933Radial  Recovery = 110.35%
Cd 226.502†            45715.0      481.51 ug/L        3.452      481.51 ppb        3.452   0.72%
   QC value within limits for Cd 226.502  Recovery = 96.30%
Co 228.616†            33136.4      485.98 ug/L        3.359      485.98 ppb        3.359   0.69%
   QC value within limits for Co 228.616  Recovery = 97.20%
Cr 267.716†            41852.2      495.55 ug/L        0.466      495.55 ppb        0.466   0.09%
   QC value within limits for Cr 267.716  Recovery = 99.11%
Cu 324.752†           157750.5      493.89 ug/L        1.347      493.89 ppb        1.347   0.27%
   QC value within limits for Cu 324.752  Recovery = 98.78%
Fe 238.204 Radial†      1360.2      5314.1 ug/L         6.31      5314.1 ppb         6.31   0.12%
   QC value within limits for Fe 238.204 Radial  Recovery = 106.28%
K 766.490 Radial†      26453.2      4967.2 ug/L        55.99      4967.2 ppb        55.99   1.13%
   QC value within limits for K 766.490 Radial  Recovery = 99.34%
Mg 279.077 IEC†          236.6      5545.7 ug/L        73.74      5545.7 ppb        73.74   1.33%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 110.91%
Mn 257.610†           526843.7      494.10 ug/L        0.710      494.10 ppb        0.710   0.14%
   QC value within limits for Mn 257.610  Recovery = 98.82%
Mo 202.031†             8417.5      501.89 ug/L        2.901      501.89 ppb        2.901   0.58%
   QC value within limits for Mo 202.031  Recovery = 100.38%
Na 589.592 Radial†    179623.9      9569.8 ug/L        88.15      9569.8 ppb        88.15   0.92%
   QC value within limits for Na 589.592 Radial  Recovery = 95.70%
Ni 231.604†            21823.5      490.15 ug/L        3.811      490.15 ppb        3.811   0.78%
   QC value within limits for Ni 231.604  Recovery = 98.03%
P 214.914†              5889.2      2356.6 ug/L        18.17      2356.6 ppb        18.17   0.77%
   QC value within limits for P 214.914  Recovery = 94.26%
Pb 220.353†             5018.5      498.84 ug/L        2.134      498.84 ppb        2.134   0.43%
   QC value within limits for Pb 220.353  Recovery = 99.77%
S 181.975 Axial†         866.3      964.36 ug/L        3.167      964.36 ppb        3.167   0.33%
   QC value within limits for S 181.975 Axial  Recovery = 96.44%
Sb 206.836†             1969.6      496.24 ug/L        5.239      496.24 ppb        5.239   1.06%
   QC value within limits for Sb 206.836  Recovery = 99.25%
Se 196.026†             1159.2      503.84 ug/L        5.443      503.84 ppb        5.443   1.08%
   QC value within limits for Se 196.026  Recovery = 100.77%
Si 251.611†            95587.5      2497.3 ug/L         1.66      2497.3 ppb         1.66   0.07%
   QC value within limits for Si 251.611  Recovery = 99.89%
Sn 189.927†             3384.5      496.34 ug/L        4.097      496.34 ppb        4.097   0.83%
   QC value within limits for Sn 189.927  Recovery = 99.27%
Sr 421.552†           169395.2      471.65 ug/L        4.826      471.65 ppb        4.826   1.02%
   QC value within limits for Sr 421.552  Recovery = 94.33%
Ti 334.940†           314988.0      504.40 ug/L        0.496      504.40 ppb        0.496   0.10%
   QC value within limits for Ti 334.940  Recovery = 100.88%
Tl 190.801†             2237.4      499.17 ug/L        5.195      499.17 ppb        5.195   1.04%
   QC value within limits for Tl 190.801  Recovery = 99.83%
U 409.014†             15952.4      471.02 ug/L        5.453      471.02 ppb        5.453   1.16%
   QC value within limits for U 409.014  Recovery = 94.20%
V 292.402†             63887.8      499.15 ug/L        1.023      499.15 ppb        1.023   0.20%
   QC value within limits for V 292.402  Recovery = 99.83%
Zn 213.857†            63917.4      490.88 ug/L        1.203      490.88 ppb        1.203   0.25%
   QC value within limits for Zn 213.857  Recovery = 98.18%
SiO2†                  95386.8      5351.5 ug/L        11.30      5351.5 ppb        11.30   0.21%
   QC value within limits for SiO2  Recovery = 100.07%
QC Failed.  Continue with analysis.
```

Sequence No.: 53
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/1/2009 22:44:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6807.1	6807.1	93.9	%			22:46:02
1	Y RADIAL	6232.5	6232.5	102.7	%			22:46:02
1	Al 396.153Radial†	22.2	107.2	86.018	ug/L	86.018	ppb	22:46:02
1	Ca 317.933Radial†	26.1	-2.5	-3.5483	ug/L	-3.5483	ppb	22:46:22
1	Fe 238.204 Radial†	39.4	4.7	18.319	ug/L	18.319	ppb	22:46:22
1	K 766.490 Radial†	2829.6	164.7	31.023	ug/L	31.023	ppb	22:46:02
1	Mg 279.077 IEC†	5.0	3.0	71.232	ug/L	71.232	ppb	22:46:22
1	Na 589.592 Radial†	-311.8	-3415.7	-181.98	ug/L	-181.98	ppb	22:46:02
1	Sr 421.552†	-13.5	51.9	0.1446	ug/L	0.1446	ppb	22:46:02
1	Sc 361.383	724317.6	724317.6	92.157	%			22:47:19
1	Y 371.029	566691.4	566691.4	97.054	%			22:47:19
1	Ag 328.068†	714.9	67.5	0.3611	ug/L	0.3611	ppb	22:47:19
1	As 188.979†	-29.1	3.3	0.9878	ug/L	0.9878	ppb	22:47:39
1	B 249.677†	-807.7	-52.4	-1.1135	ug/L	-1.1135	ppb	22:47:19
1	Ba 233.527†	34.7	18.1	0.1079	ug/L	0.1079	ppb	22:47:39
1	Be 313.107†	-4743.9	-226.3	-0.0860	ug/L	-0.0860	ppb	22:47:19
1	Cd 226.502†	-302.0	-35.0	-0.3712	ug/L	-0.3712	ppb	22:47:39
1	Co 228.616†	-103.1	-12.1	-0.1759	ug/L	-0.1759	ppb	22:47:39
1	Cr 267.716†	-79.5	-79.8	-0.9404	ug/L	-0.9404	ppb	22:47:19
1	Cu 324.752†	5841.5	432.9	1.3554	ug/L	1.3554	ppb	22:47:19
1	Mn 257.610†	852.5	160.6	0.1513	ug/L	0.1513	ppb	22:47:19
1	Mo 202.031†	19.0	10.1	0.6017	ug/L	0.6017	ppb	22:47:39
1	Ni 231.604†	157.1	5.1	0.1136	ug/L	0.1136	ppb	22:47:39
1	P 214.914†	295.5	24.7	10.076	ug/L	10.076	ppb	22:47:39
1	Pb 220.353†	3.0	29.9	2.9803	ug/L	2.9803	ppb	22:47:39
1	S 181.975 Axial†	90.9	-6.3	-7.0156	ug/L	-7.0156	ppb	22:47:39
1	Sb 206.836†	48.8	-1.8	-0.3708	ug/L	-0.3708	ppb	22:47:39
1	Se 196.026†	-25.2	4.4	1.9111	ug/L	1.9111	ppb	22:47:39
1	Si 251.611†	574.9	138.3	3.5833	ug/L	3.5833	ppb	22:47:39
1	Sn 189.927†	27.3	16.6	2.4360	ug/L	2.4360	ppb	22:47:39
1	Ti 334.940†	-1401.0	-49.4	-0.0738	ug/L	-0.0738	ppb	22:47:19
1	Tl 190.801†	-52.3	4.0	0.8831	ug/L	0.8831	ppb	22:47:39
1	U 409.014†	-5217.1	-393.1	-11.648	ug/L	-11.648	ppb	22:47:19
1	V 292.402†	-1619.3	-58.0	-0.4638	ug/L	-0.4638	ppb	22:47:19
1	Zn 213.857†	1006.8	61.2	0.4676	ug/L	0.4676	ppb	22:47:39
1	SiO2†	553.1	116.8	6.4758	ug/L	6.4758	ppb	22:48:35
2	Sc Radial	6738.9	6738.9	92.9	%			22:46:27
2	Y RADIAL	6107.7	6107.7	100.7	%			22:46:27
2	Al 396.153Radial†	18.4	103.3	82.888	ug/L	82.888	ppb	22:46:27
2	Ca 317.933Radial†	21.7	-6.9	-9.6954	ug/L	-9.6954	ppb	22:46:47
2	Fe 238.204 Radial†	40.2	6.0	23.474	ug/L	23.474	ppb	22:46:47
2	K 766.490 Radial†	2841.3	207.8	39.142	ug/L	39.142	ppb	22:46:27
2	Mg 279.077 IEC†	4.7	2.8	65.308	ug/L	65.308	ppb	22:46:47
2	Na 589.592 Radial†	-342.1	-3451.6	-183.89	ug/L	-183.89	ppb	22:46:27
2	Sr 421.552†	-62.3	-0.8	-0.0022	ug/L	-0.0022	ppb	22:46:27
2	Sc 361.383	720042.3	720042.3	91.613	%			22:47:45
2	Y 371.029	563909.7	563909.7	96.578	%			22:47:45
2	Ag 328.068†	748.2	108.4	0.5712	ug/L	0.5712	ppb	22:47:45
2	As 188.979†	-30.6	1.5	0.4440	ug/L	0.4440	ppb	22:48:05
2	B 249.677†	-729.0	28.3	0.6004	ug/L	0.6004	ppb	22:47:45
2	Ba 233.527†	45.5	30.1	0.1799	ug/L	0.1799	ppb	22:48:05
2	Be 313.107†	-4685.4	-193.1	-0.0737	ug/L	-0.0737	ppb	22:47:45
2	Cd 226.502†	-290.3	-24.3	-0.2583	ug/L	-0.2583	ppb	22:48:05
2	Co 228.616†	-90.9	0.5	0.0080	ug/L	0.0080	ppb	22:48:05
2	Cr 267.716†	-64.9	-64.3	-0.7579	ug/L	-0.7579	ppb	22:47:45
2	Cu 324.752†	5770.7	393.3	1.2318	ug/L	1.2318	ppb	22:47:45
2	Mn 257.610†	835.4	147.3	0.1397	ug/L	0.1397	ppb	22:47:45
2	Mo 202.031†	11.1	1.6	0.0960	ug/L	0.0960	ppb	22:48:05
2	Ni 231.604†	161.0	10.3	0.2319	ug/L	0.2319	ppb	22:48:05

2	P 214.914†	296.8	28.0	11.413	ug/L	11.413 ppb	22:48:05
2	Pb 220.353†	-20.4	4.4	0.4522	ug/L	0.4522 ppb	22:48:05
2	S 181.975 Axial†	80.9	-16.6	-18.515	ug/L	-18.515 ppb	22:48:05
2	Sb 206.836†	53.9	4.2	1.0523	ug/L	1.0523 ppb	22:48:05
2	Se 196.026†	-30.2	-1.2	-0.4092	ug/L	-0.4092 ppb	22:48:05
2	Si 251.611†	568.7	135.2	3.5421	ug/L	3.5421 ppb	22:48:05
2	Sn 189.927†	11.2	-0.8	-0.1115	ug/L	-0.1115 ppb	22:48:05
2	Ti 334.940†	-1460.1	-122.9	-0.1924	ug/L	-0.1924 ppb	22:47:45
2	Tl 190.801†	-61.0	-6.0	-1.3189	ug/L	-1.3189 ppb	22:48:05
2	U 409.014†	-5155.4	-359.5	-10.652	ug/L	-10.652 ppb	22:47:45
2	V 292.402†	-1634.9	-85.5	-0.6810	ug/L	-0.6810 ppb	22:47:45
2	Zn 213.857†	1013.6	75.1	0.5742	ug/L	0.5742 ppb	22:48:05
2	SiO2†	543.7	110.0	6.1870	ug/L	6.1870 ppb	22:48:40
3	Sc Radial	6734.4	6734.4	92.9	%		22:46:52
3	Y RADIAL	6147.5	6147.5	101.3	%		22:46:52
3	Al 396.153Radial†	22.5	107.7	86.411	ug/L	86.411 ppb	22:46:52
3	Ca 317.933Radial†	24.7	-3.6	-5.1230	ug/L	-5.1230 ppb	22:47:12
3	Fe 238.204 Radial†	38.6	4.4	17.017	ug/L	17.017 ppb	22:47:12
3	K 766.490 Radial†	2799.4	164.7	31.006	ug/L	31.006 ppb	22:46:52
3	Mg 279.077 IEC†	3.6	1.6	37.102	ug/L	37.102 ppb	22:47:12
3	Na 589.592 Radial†	63.3	-3015.3	-160.65	ug/L	-160.65 ppb	22:46:52
3	Sr 421.552†	-8.8	56.8	0.1581	ug/L	0.1581 ppb	22:46:52
3	Sc 361.383	723981.7	723981.7	92.115	%		22:48:10
3	Y 371.029	566865.4	566865.4	97.084	%		22:48:10
3	Ag 328.068†	725.9	79.8	0.4210	ug/L	0.4210 ppb	22:48:10
3	As 188.979†	-28.5	3.9	1.1522	ug/L	1.1522 ppb	22:48:30
3	B 249.677†	-733.7	27.6	0.5844	ug/L	0.5844 ppb	22:48:10
3	Ba 233.527†	40.8	24.7	0.1466	ug/L	0.1466 ppb	22:48:30
3	Be 313.107†	-4675.8	-154.9	-0.0593	ug/L	-0.0593 ppb	22:48:10
3	Cd 226.502†	-283.4	-15.0	-0.1600	ug/L	-0.1600 ppb	22:48:30
3	Co 228.616†	-82.7	9.9	0.1485	ug/L	0.1485 ppb	22:48:30
3	Cr 267.716†	-65.0	-64.1	-0.7557	ug/L	-0.7557 ppb	22:48:10
3	Cu 324.752†	5878.7	476.2	1.4909	ug/L	1.4909 ppb	22:48:10
3	Mn 257.610†	850.9	159.2	0.1506	ug/L	0.1506 ppb	22:48:10
3	Mo 202.031†	22.1	13.4	0.7998	ug/L	0.7998 ppb	22:48:30
3	Ni 231.604†	162.5	11.0	0.2471	ug/L	0.2471 ppb	22:48:30
3	P 214.914†	308.2	38.6	15.818	ug/L	15.818 ppb	22:48:30
3	Pb 220.353†	-15.8	9.5	0.9624	ug/L	0.9624 ppb	22:48:30
3	S 181.975 Axial†	90.8	-6.3	-7.0152	ug/L	-7.0152 ppb	22:48:30
3	Sb 206.836†	60.6	11.1	2.8296	ug/L	2.8296 ppb	22:48:30
3	Se 196.026†	-33.8	-4.9	-1.9955	ug/L	-1.9955 ppb	22:48:30
3	Si 251.611†	565.7	128.5	3.3333	ug/L	3.3333 ppb	22:48:30
3	Sn 189.927†	22.7	11.7	1.7111	ug/L	1.7111 ppb	22:48:30
3	Ti 334.940†	-1503.8	-161.7	-0.2542	ug/L	-0.2542 ppb	22:48:10
3	Tl 190.801†	-56.4	-0.6	-0.1241	ug/L	-0.1241 ppb	22:48:30
3	U 409.014†	-5189.5	-365.8	-10.838	ug/L	-10.838 ppb	22:48:10
3	V 292.402†	-1687.7	-133.1	-1.0399	ug/L	-1.0399 ppb	22:48:10
3	Zn 213.857†	1023.4	79.7	0.6114	ug/L	0.6114 ppb	22:48:30
3	SiO2†	576.1	142.0	7.9158	ug/L	7.9158 ppb	22:48:45

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	722780.6	91.962	%	0.3025				0.33%
Sc Radial	6760.1	93.2	%	0.56				0.60%
Y 371.029	565822.2	96.905	%	0.2840				0.29%
Y RADIAL	6162.5	101.6	%	1.05				1.03%
Ag 328.068†	85.2	0.4511	ug/L	0.10820	0.4511	ppb	0.10820	23.99%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	106.0	85.106	ug/L	1.9308	85.106	ppb	1.9308	2.27%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.9	0.8614	ug/L	0.37066	0.8614	ppb	0.37066	43.03%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1.2	0.0238	ug/L	0.98492	0.0238	ppb	0.98492	>999.9%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	24.3	0.1448	ug/L	0.03602	0.1448	ppb	0.03602	24.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-191.4	-0.0730	ug/L	0.01336	-0.0730	ppb	0.01336	18.29%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-4.4	-6.1222	ug/L	3.19307	-6.1222	ppb	3.19307	52.16%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -24.8     -0.2631 ug/L       0.10569     -0.2631 ppb        0.10569  40.17%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -0.6     -0.0065 ug/L       0.16265     -0.0065 ppb        0.16265 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -69.4     -0.8180 ug/L       0.10599     -0.8180 ppb        0.10599  12.96%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              434.1      1.3594 ug/L       0.12958      1.3594 ppb        0.12958   9.53%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         5.0     19.604 ug/L        3.4148     19.604 ppb         3.4148  17.42%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        179.1     33.724 ug/L        4.6925     33.724 ppb         4.6925  13.91%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            2.5     57.881 ug/L       18.2372     57.881 ppb        18.2372  31.51%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              155.7      0.1472 ug/L       0.00651      0.1472 ppb        0.00651   4.43%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                8.4      0.4992 ug/L       0.36293      0.4992 ppb        0.36293  72.71%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -3294.2    -175.50 ug/L        12.903    -175.50 ppb         12.903   7.35%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                8.8      0.1975 ug/L       0.07305      0.1975 ppb        0.07305  36.98%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                30.5     12.436 ug/L        3.0042     12.436 ppb         3.0042  24.16%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               14.6      1.4650 ug/L       1.33687      1.4650 ppb        1.33687  91.26%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -9.7    -10.849 ug/L        6.6392    -10.849 ppb         6.6392  61.20%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.5      1.1704 ug/L       1.60350      1.1704 ppb        1.60350 137.01%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -0.6     -0.1646 ug/L       1.96475     -0.1646 ppb        1.96475 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              134.0      3.4862 ug/L       0.13405      3.4862 ppb        0.13405   3.85%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                9.2      1.3452 ug/L       1.31257      1.3452 ppb        1.31257  97.58%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               36.0      0.1002 ug/L       0.08892      0.1002 ppb        0.08892  88.75%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -111.3     -0.1734 ug/L       0.09166     -0.1734 ppb        0.09166  52.85%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -0.9     -0.1866 ug/L       1.10233     -0.1866 ppb        1.10233 590.68%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -372.8    -11.046 ug/L        0.5299    -11.046 ppb         0.5299   4.80%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -92.2     -0.7282 ug/L       0.29093     -0.7282 ppb        0.29093  39.95%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               72.0      0.5511 ug/L       0.07466      0.5511 ppb        0.07466  13.55%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    122.9      6.8595 ug/L       0.92609      6.8595 ppb        0.92609  13.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 54
Sample ID: 1201871694|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 79
Date Collected: 7/1/2009 22:50:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871694|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6709.9	6709.9	92.5	%			22:52:48
1	Y RADIAL	6113.8	6113.8	100.8	%			22:52:48
1	Al 396.153Radial†	-81.8	-4.9	-3.9277	ug/L	-3.9277	ppb	22:52:48
1	Ca 317.933Radial†	40.8	13.8	19.426	ug/L	19.426	ppb	22:53:08
1	Fe 238.204 Radial†	43.1	9.4	36.444	ug/L	36.444	ppb	22:53:08
1	K 766.490 Radial†	2667.6	33.3	6.2937	ug/L	6.2937	ppb	22:52:48
1	Mg 279.077 IEC†	10.2	8.8	204.98	ug/L	204.98	ppb	22:53:08
1	Na 589.592 Radial†	-144.0	-3239.1	-172.57	ug/L	-172.57	ppb	22:52:48
1	Sr 421.552†	-36.0	27.4	0.0760	ug/L	0.0760	ppb	22:52:48
1	Sc 361.383	730999.5	730999.5	93.007	%			22:54:05
1	Y 371.029	570737.2	570737.2	97.747	%			22:54:05
1	Ag 328.068†	715.9	61.4	0.3336	ug/L	0.3336	ppb	22:54:05
1	As 188.979†	-18.7	14.8	4.3747	ug/L	4.3747	ppb	22:54:25
1	B 249.677†	-715.1	55.2	1.1681	ug/L	1.1681	ppb	22:54:25
1	Ba 233.527†	51.7	36.0	0.2157	ug/L	0.2157	ppb	22:54:25
1	Be 313.107†	-4788.9	-227.7	-0.0861	ug/L	-0.0861	ppb	22:54:05
1	Cd 226.502†	-312.5	-43.4	-0.4615	ug/L	-0.4615	ppb	22:54:25
1	Co 228.616†	-71.1	23.3	0.3407	ug/L	0.3407	ppb	22:54:25
1	Cr 267.716†	-33.0	-29.0	-0.3391	ug/L	-0.3391	ppb	22:54:25
1	Cu 324.752†	5803.5	334.1	1.0475	ug/L	1.0475	ppb	22:54:05
1	Mn 257.610†	1108.7	427.6	0.4011	ug/L	0.4011	ppb	22:54:25
1	Mo 202.031†	7.1	-2.9	-0.1720	ug/L	-0.1720	ppb	22:54:25
1	Ni 231.604†	178.4	26.4	0.5940	ug/L	0.5940	ppb	22:54:25
1	P 214.914†	316.3	44.2	18.146	ug/L	18.146	ppb	22:54:25
1	Pb 220.353†	-21.2	3.9	0.3792	ug/L	0.3792	ppb	22:54:25
1	S 181.975 Axial†	85.5	-12.9	-14.390	ug/L	-14.390	ppb	22:54:25
1	Sb 206.836†	37.5	-14.3	-3.5515	ug/L	-3.5515	ppb	22:54:25
1	Se 196.026†	-34.1	-4.9	-1.9367	ug/L	-1.9367	ppb	22:54:25
1	Si 251.611†	926.5	510.6	13.426	ug/L	13.426	ppb	22:54:25
1	Sn 189.927†	14.9	3.1	0.4552	ug/L	0.4552	ppb	22:54:25
1	Ti 334.940†	-1306.8	65.9	0.1116	ug/L	0.1116	ppb	22:54:05
1	Tl 190.801†	-57.1	-0.7	-0.1545	ug/L	-0.1545	ppb	22:54:25
1	U 409.014†	-5244.3	-370.7	-10.986	ug/L	-10.986	ppb	22:54:05
1	V 292.402†	-1666.0	-92.1	-0.7365	ug/L	-0.7365	ppb	22:54:05
1	Zn 213.857†	1171.0	227.8	1.7492	ug/L	1.7492	ppb	22:54:25
1	SiO2†	943.4	530.8	29.981	ug/L	29.981	ppb	22:55:21
2	Sc Radial	6809.8	6809.8	93.9	%			22:53:13
2	Y RADIAL	6171.0	6171.0	101.7	%			22:53:13
2	Al 396.153Radial†	-76.8	1.7	1.3835	ug/L	1.3835	ppb	22:53:13
2	Ca 317.933Radial†	37.3	9.4	13.240	ug/L	13.240	ppb	22:53:33
2	Fe 238.204 Radial†	42.7	8.2	32.130	ug/L	32.130	ppb	22:53:33
2	K 766.490 Radial†	2787.3	118.4	22.312	ug/L	22.312	ppb	22:53:13
2	Mg 279.077 IEC†	1.6	-0.6	-15.015	ug/L	-15.015	ppb	22:53:33
2	Na 589.592 Radial†	-82.4	-3171.3	-168.95	ug/L	-168.95	ppb	22:53:13
2	Sr 421.552†	-17.6	47.5	0.1321	ug/L	0.1321	ppb	22:53:13
2	Sc 361.383	730627.1	730627.1	92.960	%			22:54:30
2	Y 371.029	570706.1	570706.1	97.742	%			22:54:30
2	Ag 328.068†	716.5	62.5	0.3379	ug/L	0.3379	ppb	22:54:30
2	As 188.979†	-35.3	-3.0	-0.8879	ug/L	-0.8879	ppb	22:54:50
2	B 249.677†	-767.8	-1.9	-0.0428	ug/L	-0.0428	ppb	22:54:50
2	Ba 233.527†	33.8	16.8	0.0998	ug/L	0.0998	ppb	22:54:50
2	Be 313.107†	-4757.3	-196.4	-0.0742	ug/L	-0.0742	ppb	22:54:30
2	Cd 226.502†	-303.7	-34.1	-0.3630	ug/L	-0.3630	ppb	22:54:50
2	Co 228.616†	-92.2	0.6	0.0078	ug/L	0.0078	ppb	22:54:50
2	Cr 267.716†	-31.0	-26.9	-0.3151	ug/L	-0.3151	ppb	22:54:50
2	Cu 324.752†	5712.8	239.7	0.7518	ug/L	0.7518	ppb	22:54:30
2	Mn 257.610†	1144.3	466.4	0.4413	ug/L	0.4413	ppb	22:54:50
2	Mo 202.031†	6.3	-3.7	-0.2212	ug/L	-0.2212	ppb	22:54:50
2	Ni 231.604†	169.6	17.0	0.3820	ug/L	0.3820	ppb	22:54:50

2	P 214.914†	308.5	36.0	14.760	ug/L	14.760 ppb	22:54:50
2	Pb 220.353†	-35.0	-11.0	-1.0952	ug/L	-1.0952 ppb	22:54:50
2	S 181.975 Axial†	91.2	-6.7	-7.5198	ug/L	-7.5198 ppb	22:54:50
2	Sb 206.836†	53.9	3.3	0.7954	ug/L	0.7954 ppb	22:54:50
2	Se 196.026†	-26.1	3.7	1.6626	ug/L	1.6626 ppb	22:54:50
2	Si 251.611†	892.3	474.3	12.501	ug/L	12.501 ppb	22:54:50
2	Sn 189.927†	-1.5	-14.6	-2.1356	ug/L	-2.1356 ppb	22:54:50
2	Ti 334.940†	-1293.3	79.6	0.1330	ug/L	0.1330 ppb	22:54:30
2	Tl 190.801†	-72.3	-17.1	-3.7836	ug/L	-3.7836 ppb	22:54:50
2	U 409.014†	-5221.6	-349.2	-10.348	ug/L	-10.348 ppb	22:54:30
2	V 292.402†	-1650.4	-76.3	-0.6168	ug/L	-0.6168 ppb	22:54:30
2	Zn 213.857†	1180.5	238.6	1.8434	ug/L	1.8434 ppb	22:54:50
2	SiO2†	924.0	510.6	28.905	ug/L	28.905 ppb	22:55:26
3	Sc Radial	6751.6	6751.6	93.1	%		22:53:38
3	Y RADIAL	6145.0	6145.0	101.3	%		22:53:38
3	Al 396.153Radial†	-41.4	39.0	31.302	ug/L	31.302 ppb	22:53:38
3	Ca 317.933Radial†	39.0	11.6	16.274	ug/L	16.274 ppb	22:53:58
3	Fe 238.204 Radial†	44.6	10.7	41.817	ug/L	41.817 ppb	22:53:58
3	K 766.490 Radial†	2624.7	-30.6	-5.7463	ug/L	-5.7463 ppb	22:53:38
3	Mg 279.077 IEC†	3.6	1.5	35.560	ug/L	35.560 ppb	22:53:58
3	Na 589.592 Radial†	-106.4	-3197.7	-170.36	ug/L	-170.36 ppb	22:53:38
3	Sr 421.552†	-53.8	8.4	0.0233	ug/L	0.0233 ppb	22:53:38
3	Sc 361.383	725835.8	725835.8	92.350	%		22:54:55
3	Y 371.029	567266.8	567266.8	97.152	%		22:54:55
3	Ag 328.068†	684.5	33.0	0.1861	ug/L	0.1861 ppb	22:54:55
3	As 188.979†	-36.2	-4.3	-1.2718	ug/L	-1.2718 ppb	22:55:15
3	B 249.677†	-787.3	-28.4	-0.6082	ug/L	-0.6082 ppb	22:55:15
3	Ba 233.527†	24.9	7.4	0.0430	ug/L	0.0430 ppb	22:55:15
3	Be 313.107†	-4750.1	-222.3	-0.0842	ug/L	-0.0842 ppb	22:54:55
3	Cd 226.502†	-299.4	-31.6	-0.3375	ug/L	-0.3375 ppb	22:55:15
3	Co 228.616†	-81.5	11.5	0.1683	ug/L	0.1683 ppb	22:55:15
3	Cr 267.716†	-49.7	-47.3	-0.5574	ug/L	-0.5574 ppb	22:55:15
3	Cu 324.752†	5825.5	402.3	1.2610	ug/L	1.2610 ppb	22:54:55
3	Mn 257.610†	1156.2	487.4	0.4612	ug/L	0.4612 ppb	22:55:15
3	Mo 202.031†	13.3	3.9	0.2340	ug/L	0.2340 ppb	22:55:15
3	Ni 231.604†	166.1	14.5	0.3251	ug/L	0.3251 ppb	22:55:15
3	P 214.914†	311.3	41.2	16.891	ug/L	16.891 ppb	22:55:15
3	Pb 220.353†	-28.2	-3.9	-0.3821	ug/L	-0.3821 ppb	22:55:15
3	S 181.975 Axial†	102.9	6.6	7.3314	ug/L	7.3314 ppb	22:55:15
3	Sb 206.836†	55.6	5.6	1.4272	ug/L	1.4272 ppb	22:55:15
3	Se 196.026†	-37.1	-8.4	-3.3670	ug/L	-3.3670 ppb	22:55:15
3	Si 251.611†	938.7	530.9	13.939	ug/L	13.939 ppb	22:55:15
3	Sn 189.927†	22.6	11.5	1.6910	ug/L	1.6910 ppb	22:55:15
3	Ti 334.940†	-1329.6	31.1	0.0540	ug/L	0.0540 ppb	22:54:55
3	Tl 190.801†	-44.3	12.7	2.8088	ug/L	2.8088 ppb	22:55:15
3	U 409.014†	-5075.6	-228.1	-6.7611	ug/L	-6.7611 ppb	22:54:55
3	V 292.402†	-1639.0	-75.7	-0.5998	ug/L	-0.5998 ppb	22:54:55
3	Zn 213.857†	1213.3	282.5	2.1805	ug/L	2.1805 ppb	22:55:15
3	SiO2†	941.4	535.9	30.224	ug/L	30.224 ppb	22:55:31

Mean Data: 1201871694|881347|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	729154.1	92.773	%	0.3664				0.39%
Sc Radial	6757.1	93.2	%	0.69				0.74%
Y 371.029	569570.1	97.547	%	0.3416				0.35%
Y RADIAL	6143.3	101.3	%	0.47				0.47%
Ag 328.068†	52.3	0.2858	ug/L	0.08644	0.2858	ppb	0.08644	30.24%
Al 396.153Radial†	11.9	9.5859	ug/L	18.99328	9.5859	ppb	18.99328	198.14%
As 188.979†	2.5	0.7383	ug/L	3.15500	0.7383	ppb	3.15500	427.32%
B 249.677†	8.3	0.1724	ug/L	0.90747	0.1724	ppb	0.90747	526.45%
Ba 233.527†	20.1	0.1195	ug/L	0.08802	0.1195	ppb	0.08802	73.65%
Be 313.107†	-215.5	-0.0815	ug/L	0.00640	-0.0815	ppb	0.00640	7.86%
Ca 317.933Radial†	11.6	16.313	ug/L	3.0933	16.313	ppb	3.0933	18.96%
Cd 226.502†	-36.4	-0.3873	ug/L	0.06546	-0.3873	ppb	0.06546	16.90%
Co 228.616†	11.8	0.1722	ug/L	0.16648	0.1722	ppb	0.16648	96.65%
Cr 267.716†	-34.4	-0.4039	ug/L	0.13350	-0.4039	ppb	0.13350	33.06%
Cu 324.752†	325.3	1.0201	ug/L	0.25573	1.0201	ppb	0.25573	25.07%
Fe 238.204 Radial†	9.4	36.797	ug/L	4.8532	36.797	ppb	4.8532	13.19%
K 766.490 Radial†	40.3	7.6199	ug/L	14.07632	7.6199	ppb	14.07632	184.73%

Mg 279.077 IEC†	3.2	75.174	ug/L	115.2217	75.174	ppb	115.2217 153.27%
Mn 257.610†	460.5	0.4345	ug/L	0.03056	0.4345	ppb	0.03056 7.03%
Mo 202.031†	-0.9	-0.0531	ug/L	0.24984	-0.0531	ppb	0.24984 470.68%
Na 589.592 Radial†	-3202.7	-170.63	ug/L	1.821	-170.63	ppb	1.821 1.07%
Ni 231.604†	19.3	0.4337	ug/L	0.14169	0.4337	ppb	0.14169 32.67%
P 214.914†	40.4	16.599	ug/L	1.7117	16.599	ppb	1.7117 10.31%
Pb 220.353†	-3.7	-0.3660	ug/L	0.73731	-0.3660	ppb	0.73731 201.44%
S 181.975 Axial†	-4.4	-4.8593	ug/L	11.10220	-4.8593	ppb	11.10220 228.47%
Sb 206.836†	-1.8	-0.4430	ug/L	2.71054	-0.4430	ppb	2.71054 611.88%
Se 196.026†	-3.2	-1.2137	ug/L	2.59159	-1.2137	ppb	2.59159 213.53%
Si 251.611†	505.3	13.289	ug/L	0.7288	13.289	ppb	0.7288 5.48%
Sn 189.927†	-0.0	0.0036	ug/L	1.95288	0.0036	ppb	1.95288 >999.9%
Sr 421.552†	27.8	0.0771	ug/L	0.05440	0.0771	ppb	0.05440 70.54%
Ti 334.940†	58.9	0.0995	ug/L	0.04085	0.0995	ppb	0.04085 41.05%
Tl 190.801†	-1.7	-0.3764	ug/L	3.30177	-0.3764	ppb	3.30177 877.10%
U 409.014†	-316.0	-9.3650	ug/L	2.27748	-9.3650	ppb	2.27748 24.32%
V 292.402†	-81.4	-0.6510	ug/L	0.07454	-0.6510	ppb	0.07454 11.45%
Zn 213.857†	249.6	1.9243	ug/L	0.22675	1.9243	ppb	0.22675 11.78%
SiO2†	525.8	29.703	ug/L	0.7019	29.703	ppb	0.7019 2.36%

Sequence No.: 55
Sample ID: 1201871695|881347|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 80
Date Collected: 7/1/2009 22:57:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871695|881347|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7061.4	7061.4	97.4	%			22:59:55
1	Y RADIAL	6768.4	6768.4	111.6	%			22:59:55
1	Al 396.153Radial†	36852.5	37934.1	30437	ug/L	30437	ppb	22:59:35
1	Ca 317.933Radial†	12798.1	13114.5	18425	ug/L	18425	ppb	22:59:55
1	Fe 238.204 Radial†	20761.7	21286.8	82936	ug/L	82936	ppb	22:59:35
1	K 766.490 Radial†	55079.5	53721.2	10101	ug/L	10101	ppb	22:59:35
1	Mg 279.077 IEC†	606.6	620.7	14469	ug/L	14469	ppb	22:59:55
1	Na 589.592 Radial†	46834.6	45019.6	2398.5	ug/L	2398.5	ppb	22:59:35
1	Sr 421.552†	251306.4	258179.1	718.75	ug/L	718.75	ppb	22:59:35
1	Sc 361.383	766508.7	766508.7	97.525	%			23:00:54
1	Y 371.029	627882.7	627882.7	107.53	%			23:00:54
1	Ag 328.068†	115877.9	118109.9	636.24	ug/L	636.24	ppb	23:00:54
1	As 188.979†	3939.2	4074.0	1223.0	ug/L	1223.0	ppb	23:01:14
1	B 249.677†	27828.0	29358.2	616.31	ug/L	616.31	ppb	23:00:54
1	Ba 233.527†	361654.1	370811.1	2239.7	ug/L	2239.7	ppb	23:00:54
1	Be 313.107†	1089851.5	1122426.8	429.16	ug/L	429.16	ppb	23:00:54
1	Cd 226.502†	52050.6	53664.0	556.23	ug/L	556.23	ppb	23:00:54
1	Co 228.616†	25983.8	26742.9	389.64	ug/L	389.64	ppb	23:01:14
1	Cr 267.716†	29542.9	30299.0	361.06	ug/L	361.06	ppb	23:00:54
1	Cu 324.752†	156524.7	154590.6	488.49	ug/L	488.49	ppb	23:00:54
1	Mn 257.610†	1808326.2	1853446.3	1746.4	ug/L	1746.4	ppb	23:00:54
1	Mo 202.031†	6534.9	6690.2	404.03	ug/L	404.03	ppb	23:01:14
1	Ni 231.604†	21239.0	21612.5	485.46	ug/L	485.46	ppb	23:01:14
1	P 214.914†	8843.4	8771.8	3504.3	ug/L	3504.3	ppb	23:01:14
1	Pb 220.353†	7731.7	7954.6	787.17	ug/L	787.17	ppb	23:01:14
1	S 181.975 Axial†	1025.8	946.9	1049.2	ug/L	1049.2	ppb	23:01:14
1	Sb 206.836†	2230.8	2232.7	561.79	ug/L	561.79	ppb	23:01:14
1	Se 196.026†	1367.3	1433.7	878.60	ug/L	878.60	ppb	23:01:14
1	Si 251.611†	114133.7	116544.2	3048.4	ug/L	3048.4	ppb	23:00:54
1	Sn 189.927†	3412.0	3485.6	518.23	ug/L	518.23	ppb	23:01:14
1	Ti 334.940†	898672.2	922946.1	1479.1	ug/L	1479.1	ppb	23:00:54
1	Tl 190.801†	4060.7	4224.4	954.55	ug/L	954.55	ppb	23:01:14
1	U 409.014†	-9277.8	-4245.3	-136.66	ug/L	-136.66	ppb	23:00:54
1	V 292.402†	87252.6	91165.7	695.61	ug/L	695.61	ppb	23:00:54
1	Zn 213.857†	120861.0	122896.4	939.66	ug/L	939.66	ppb	23:00:54
1	SiO2†	114741.8	117169.8	6581.8	ug/L	6581.8	ppb	23:02:15
2	Sc Radial	7162.6	7162.6	98.8	%			23:00:20
2	Y RADIAL	6861.2	6861.2	113.1	%			23:00:20
2	Al 396.153Radial†	37530.7	38086.1	30559	ug/L	30559	ppb	23:00:00
2	Ca 317.933Radial†	12978.7	13111.6	18421	ug/L	18421	ppb	23:00:20
2	Fe 238.204 Radial†	21230.2	21459.9	83610	ug/L	83610	ppb	23:00:00
2	K 766.490 Radial†	56305.2	54163.0	10184	ug/L	10184	ppb	23:00:00
2	Mg 279.077 IEC†	618.1	623.6	14535	ug/L	14535	ppb	23:00:20
2	Na 589.592 Radial†	47797.1	45314.6	2414.2	ug/L	2414.2	ppb	23:00:00
2	Sr 421.552†	256219.7	259507.5	722.45	ug/L	722.45	ppb	23:00:00
2	Sc 361.383	770704.4	770704.4	98.059	%			23:01:22
2	Y 371.029	631676.4	631676.4	108.18	%			23:01:22
2	Ag 328.068†	116596.3	118195.7	636.89	ug/L	636.89	ppb	23:01:22
2	As 188.979†	3954.9	4068.1	1221.3	ug/L	1221.3	ppb	23:01:42
2	B 249.677†	28095.3	29475.4	618.76	ug/L	618.76	ppb	23:01:22
2	Ba 233.527†	362978.1	370142.6	2235.7	ug/L	2235.7	ppb	23:01:22
2	Be 313.107†	1096510.0	1123133.3	429.43	ug/L	429.43	ppb	23:01:22
2	Cd 226.502†	52329.2	53657.5	556.08	ug/L	556.08	ppb	23:01:22
2	Co 228.616†	26037.4	26652.5	388.30	ug/L	388.30	ppb	23:01:42
2	Cr 267.716†	29788.2	30384.2	362.08	ug/L	362.08	ppb	23:01:22
2	Cu 324.752†	157598.5	154811.9	489.22	ug/L	489.22	ppb	23:01:22
2	Mn 257.610†	1816857.2	1852051.8	1745.2	ug/L	1745.2	ppb	23:01:22
2	Mo 202.031†	6575.9	6695.5	404.40	ug/L	404.40	ppb	23:01:42
2	Ni 231.604†	21251.6	21506.8	483.09	ug/L	483.09	ppb	23:01:42

2	P 214.914†	8820.6	8699.2	3473.5	ug/L	3473.5 ppb	23:01:42
2	Pb 220.353†	7746.6	7926.7	784.36	ug/L	784.36 ppb	23:01:42
2	S 181.975 Axial†	1021.5	936.9	1038.0	ug/L	1038.0 ppb	23:01:42
2	Sb 206.836†	2242.7	2232.4	561.78	ug/L	561.78 ppb	23:01:42
2	Se 196.026†	1363.3	1422.1	875.98	ug/L	875.98 ppb	23:01:42
2	Si 251.611†	114239.1	116014.6	3034.4	ug/L	3034.4 ppb	23:01:22
2	Sn 189.927†	3458.2	3513.7	522.40	ug/L	522.40 ppb	23:01:42
2	Ti 334.940†	903186.1	922532.7	1478.5	ug/L	1478.5 ppb	23:01:22
2	Tl 190.801†	4090.1	4231.7	956.16	ug/L	956.16 ppb	23:01:42
2	U 409.014†	-8807.8	-3714.2	-121.01	ug/L	-121.01 ppb	23:01:22
2	V 292.402†	87877.3	91315.7	696.71	ug/L	696.71 ppb	23:01:22
2	Zn 213.857†	121377.8	122748.8	938.46	ug/L	938.46 ppb	23:01:22
2	SiO2†	115295.7	117094.2	6577.4	ug/L	6577.4 ppb	23:02:20
3	Sc Radial	7097.2	7097.2	97.9	%		23:00:45
3	Y RADIAL	6793.4	6793.4	112.0	%		23:00:45
3	Al 396.153Radial†	37304.8	38205.5	30655	ug/L	30655 ppb	23:00:25
3	Ca 317.933Radial†	12847.3	13098.5	18402	ug/L	18402 ppb	23:00:45
3	Fe 238.204 Radial†	21100.0	21525.0	83864	ug/L	83864 ppb	23:00:25
3	K 766.490 Radial†	55920.0	54294.9	10209	ug/L	10209 ppb	23:00:25
3	Mg 279.077 IEC†	614.3	625.5	14580	ug/L	14580 ppb	23:00:45
3	Na 589.592 Radial†	47739.4	45701.7	2434.8	ug/L	2434.8 ppb	23:00:25
3	Sr 421.552†	255254.4	260912.4	726.36	ug/L	726.36 ppb	23:00:25
3	Sc 361.383	767662.6	767662.6	97.672	%		23:01:49
3	Y 371.029	628213.0	628213.0	107.59	%		23:01:49
3	Ag 328.068†	115880.1	117933.6	635.63	ug/L	635.63 ppb	23:01:49
3	As 188.979†	3950.8	4079.9	1224.9	ug/L	1224.9 ppb	23:02:09
3	B 249.677†	27911.0	29400.3	617.14	ug/L	617.14 ppb	23:01:49
3	Ba 233.527†	362002.8	370610.8	2238.5	ug/L	2238.5 ppb	23:01:49
3	Be 313.107†	1090217.2	1121121.4	428.67	ug/L	428.67 ppb	23:01:49
3	Cd 226.502†	52231.1	53768.5	557.23	ug/L	557.23 ppb	23:01:49
3	Co 228.616†	26038.5	26758.9	389.86	ug/L	389.86 ppb	23:02:09
3	Cr 267.716†	29638.3	30351.1	361.70	ug/L	361.70 ppb	23:01:49
3	Cu 324.752†	156447.2	154270.0	487.54	ug/L	487.54 ppb	23:01:49
3	Mn 257.610†	1810522.0	1852907.3	1746.0	ug/L	1746.0 ppb	23:01:49
3	Mo 202.031†	6566.4	6712.4	405.42	ug/L	405.42 ppb	23:02:09
3	Ni 231.604†	21285.8	21627.7	485.80	ug/L	485.80 ppb	23:02:09
3	P 214.914†	8827.5	8741.9	3491.4	ug/L	3491.4 ppb	23:02:09
3	Pb 220.353†	7764.7	7976.4	789.29	ug/L	789.29 ppb	23:02:09
3	S 181.975 Axial†	1023.7	943.2	1045.0	ug/L	1045.0 ppb	23:02:09
3	Sb 206.836†	2231.0	2229.4	561.05	ug/L	561.05 ppb	23:02:09
3	Se 196.026†	1355.5	1419.6	875.79	ug/L	875.79 ppb	23:02:09
3	Si 251.611†	113780.1	116006.3	3034.2	ug/L	3034.2 ppb	23:01:49
3	Sn 189.927†	3434.4	3503.3	520.90	ug/L	520.90 ppb	23:02:09
3	Ti 334.940†	899207.0	922108.5	1477.8	ug/L	1477.8 ppb	23:01:49
3	Tl 190.801†	4087.4	4245.5	959.21	ug/L	959.21 ppb	23:02:09
3	U 409.014†	-8952.8	-3898.2	-126.49	ug/L	-126.49 ppb	23:01:49
3	V 292.402†	87525.8	91310.9	696.65	ug/L	696.65 ppb	23:01:49
3	Zn 213.857†	120910.6	122760.9	938.51	ug/L	938.51 ppb	23:01:49
3	SiO2†	113979.4	116212.4	6527.5	ug/L	6527.5 ppb	23:02:25

Mean Data: 1201871695|881347|2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	768291.9	97.752	%	0.2758				0.28%
Sc Radial	7107.0	98.0	%	0.71				0.72%
Y 371.029	629257.4	107.77	%	0.360				0.33%
Y RADIAL	6807.6	112.2	%	0.79				0.71%
Ag 328.068†	118079.7	636.26	ug/L	0.631	636.26	ppb	0.631	0.10%
Al 396.153Radial†	38075.2	30550	ug/L	109.2	30550	ppb	109.2	0.36%
As 188.979†	4074.0	1223.1	ug/L	1.76	1223.1	ppb	1.76	0.14%
B 249.677†	29411.3	617.41	ug/L	1.247	617.41	ppb	1.247	0.20%
Ba 233.527†	370521.5	2238.0	ug/L	2.07	2238.0	ppb	2.07	0.09%
Be 313.107†	1122227.1	429.09	ug/L	0.388	429.09	ppb	0.388	0.09%
Ca 317.933Radial†	13108.2	18416	ug/L	12.0	18416	ppb	12.0	0.07%
Cd 226.502†	53696.6	556.52	ug/L	0.621	556.52	ppb	0.621	0.11%
Co 228.616†	26718.1	389.27	ug/L	0.844	389.27	ppb	0.844	0.22%
Cr 267.716†	30344.8	361.61	ug/L	0.514	361.61	ppb	0.514	0.14%
Cu 324.752†	154557.5	488.42	ug/L	0.843	488.42	ppb	0.843	0.17%
Fe 238.204 Radial†	21423.9	83470	ug/L	479.5	83470	ppb	479.5	0.57%
K 766.490 Radial†	54059.7	10165	ug/L	56.7	10165	ppb	56.7	0.56%

Mg 279.077 IEC†	623.2	14528	ug/L	56.3	14528	ppb	56.3	0.39%
Mn 257.610†	1852801.8	1745.9	ug/L	0.62	1745.9	ppb	0.62	0.04%
Mo 202.031†	6699.3	404.62	ug/L	0.717	404.62	ppb	0.717	0.18%
Na 589.592 Radial†	45345.3	2415.8	ug/L	18.22	2415.8	ppb	18.22	0.75%
Ni 231.604†	21582.3	484.78	ug/L	1.479	484.78	ppb	1.479	0.31%
P 214.914†	8737.7	3489.8	ug/L	15.47	3489.8	ppb	15.47	0.44%
Pb 220.353†	7952.5	786.94	ug/L	2.471	786.94	ppb	2.471	0.31%
S 181.975 Axial†	942.3	1044.1	ug/L	5.70	1044.1	ppb	5.70	0.55%
Sb 206.836†	2231.5	561.54	ug/L	0.424	561.54	ppb	0.424	0.08%
Se 196.026†	1425.1	876.79	ug/L	1.570	876.79	ppb	1.570	0.18%
Si 251.611†	116188.3	3039.0	ug/L	8.16	3039.0	ppb	8.16	0.27%
Sn 189.927†	3500.9	520.51	ug/L	2.109	520.51	ppb	2.109	0.41%
Sr 421.552†	259533.0	722.52	ug/L	3.806	722.52	ppb	3.806	0.53%
Ti 334.940†	922529.1	1478.5	ug/L	0.67	1478.5	ppb	0.67	0.05%
Tl 190.801†	4233.9	956.64	ug/L	2.369	956.64	ppb	2.369	0.25%
U 409.014†	-3952.6	-128.05	ug/L	7.942	-128.05	ppb	7.942	6.20%
V 292.402†	91264.1	696.33	ug/L	0.617	696.33	ppb	0.617	0.09%
Zn 213.857†	122802.0	938.87	ug/L	0.680	938.87	ppb	0.680	0.07%
SiO2†	116825.5	6562.2	ug/L	30.14	6562.2	ppb	30.14	0.46%

Sequence No.: 56
Sample ID: 232509001|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 81
Date Collected: 7/1/2009 23:04:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509001|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7140.8	7140.8	98.5	%			23:06:29
1	Y RADIAL	7947.4	7947.4	131.0	%			23:06:29
1	Al 396.153Radial†	21922.0	22348.9	17941	ug/L	17941	ppb	23:06:29
1	Ca 317.933Radial†	7463.8	7550.5	10608	ug/L	10608	ppb	23:06:29
1	Fe 238.204 Radial†	12047.8	12199.3	47523	ug/L	47523	ppb	23:06:29
1	K 766.490 Radial†	23619.0	21138.9	3962.9	ug/L	3962.9	ppb	23:06:29
1	Mg 279.077 IEC†	143.3	143.2	3312.7	ug/L	3312.7	ppb	23:06:49
1	Na 589.592 Radial†	42605.8	40189.8	2141.2	ug/L	2141.2	ppb	23:06:29
1	Sr 421.552†	18107.2	18457.2	51.292	ug/L	51.292	ppb	23:06:29
1	Sc 361.383	781289.6	781289.6	99.406	%			23:07:46
1	Y 371.029	742485.2	742485.2	127.16	%			23:07:46
1	Ag 328.068†	-1573.8	-2291.5	3.5981	ug/L	3.5981	ppb	23:07:52
1	As 188.979†	-32.2	2.5	16.089	ug/L	16.089	ppb	23:08:12
1	B 249.677†	-171.5	651.5	10.554	ug/L	10.554	ppb	23:07:52
1	Ba 233.527†	35402.2	35594.1	214.75	ug/L	214.75	ppb	23:07:52
1	Be 313.107†	-4037.8	859.3	3.2386	ug/L	3.2386	ppb	23:07:52
1	Cd 226.502†	172.0	465.7	-0.5927	ug/L	-0.5927	ppb	23:08:12
1	Co 228.616†	555.0	658.0	6.4333	ug/L	6.4333	ppb	23:08:12
1	Cr 267.716†	9584.6	9648.4	115.18	ug/L	115.18	ppb	23:07:52
1	Cu 324.752†	31603.8	25886.9	83.745	ug/L	83.745	ppb	23:07:52
1	Mn 257.610†	2034475.1	2045867.4	1922.4	ug/L	1922.4	ppb	23:07:46
1	Mo 202.031†	493.3	485.7	32.043	ug/L	32.043	ppb	23:08:12
1	Ni 231.604†	2864.6	2716.4	61.040	ug/L	61.040	ppb	23:08:12
1	P 214.914†	1375.1	1087.4	403.99	ug/L	403.99	ppb	23:08:12
1	Pb 220.353†	838.1	869.8	85.235	ug/L	85.235	ppb	23:08:12
1	S 181.975 Axial†	752.7	652.3	723.36	ug/L	723.36	ppb	23:08:12
1	Sb 206.836†	82.8	28.7	1.7681	ug/L	1.7681	ppb	23:08:12
1	Se 196.026†	-376.2	-346.6	14.369	ug/L	14.369	ppb	23:08:12
1	Si 251.611†	194347.9	195023.7	5128.2	ug/L	5128.2	ppb	23:07:52
1	Sn 189.927†	-51.2	-64.5	-4.8110	ug/L	-4.8110	ppb	23:08:12
1	Ti 334.940†	776364.5	782474.5	1253.8	ug/L	1253.8	ppb	23:07:46
1	Tl 190.801†	-147.2	-87.4	0.6822	ug/L	0.6822	ppb	23:08:12
1	U 409.014†	-11700.4	-6502.4	-198.71	ug/L	-198.71	ppb	23:07:46
1	V 292.402†	3661.0	5382.0	33.552	ug/L	33.552	ppb	23:07:52
1	Zn 213.857†	32662.0	31825.9	241.11	ug/L	241.11	ppb	23:07:52
1	SiO2†	193329.9	194001.7	10957	ug/L	10957	ppb	23:09:19
2	Sc Radial	6873.0	6873.0	94.8	%			23:06:54
2	Y RADIAL	7669.3	7669.3	126.4	%			23:06:54
2	Al 396.153Radial†	21848.9	23139.2	18575	ug/L	18575	ppb	23:06:54
2	Ca 317.933Radial†	7414.7	7794.0	10950	ug/L	10950	ppb	23:06:54
2	Fe 238.204 Radial†	12039.9	12667.8	49348	ug/L	49348	ppb	23:06:54
2	K 766.490 Radial†	23292.0	21728.5	4074.2	ug/L	4074.2	ppb	23:06:54
2	Mg 279.077 IEC†	137.3	142.5	3295.3	ug/L	3295.3	ppb	23:07:14
2	Na 589.592 Radial†	42274.5	41526.1	2212.4	ug/L	2212.4	ppb	23:06:54
2	Sr 421.552†	18073.1	19137.6	53.183	ug/L	53.183	ppb	23:06:54
2	Sc 361.383	777171.1	777171.1	98.882	%			23:08:17
2	Y 371.029	739129.7	739129.7	126.59	%			23:08:17
2	Ag 328.068†	-1601.5	-2327.8	3.9993	ug/L	3.9993	ppb	23:08:23
2	As 188.979†	-30.9	3.7	16.789	ug/L	16.789	ppb	23:08:43
2	B 249.677†	-51.0	772.5	13.000	ug/L	13.000	ppb	23:08:23
2	Ba 233.527†	35721.2	36105.5	217.83	ug/L	217.83	ppb	23:08:23
2	Be 313.107†	-4081.1	794.1	3.2160	ug/L	3.2160	ppb	23:08:23
2	Cd 226.502†	155.3	449.7	-0.9732	ug/L	-0.9732	ppb	23:08:43
2	Co 228.616†	570.6	676.8	6.6815	ug/L	6.6815	ppb	23:08:43
2	Cr 267.716†	9603.5	9718.6	116.05	ug/L	116.05	ppb	23:08:23
2	Cu 324.752†	31878.9	26333.5	85.248	ug/L	85.248	ppb	23:08:23
2	Mn 257.610†	2024779.0	2046907.5	1923.6	ug/L	1923.6	ppb	23:08:17
2	Mo 202.031†	490.1	485.1	32.124	ug/L	32.124	ppb	23:08:43
2	Ni 231.604†	2850.3	2717.2	61.058	ug/L	61.058	ppb	23:08:43

2	P 214.914†	1397.1	1117.0	414.77	ug/L	414.77 ppb	23:08:43
2	Pb 220.353†	811.7	847.6	82.986	ug/L	82.986 ppb	23:08:43
2	S 181.975 Axial†	761.6	665.3	737.74	ug/L	737.74 ppb	23:08:43
2	Sb 206.836†	78.5	24.7	0.7844	ug/L	0.7844 ppb	23:08:43
2	Se 196.026†	-364.6	-336.9	24.548	ug/L	24.548 ppb	23:08:43
2	Si 251.611†	194782.9	196499.6	5167.0	ug/L	5167.0 ppb	23:08:23
2	Sn 189.927†	-48.6	-62.1	-4.2980	ug/L	-4.2980 ppb	23:08:43
2	Ti 334.940†	772861.8	783071.0	1254.8	ug/L	1254.8 ppb	23:08:17
2	Tl 190.801†	-139.2	-80.1	2.3236	ug/L	2.3236 ppb	23:08:43
2	U 409.014†	-11807.2	-6672.8	-203.98	ug/L	-203.98 ppb	23:08:17
2	V 292.402†	3800.8	5542.9	34.528	ug/L	34.528 ppb	23:08:23
2	Zn 213.857†	32953.9	32295.2	244.55	ug/L	244.55 ppb	23:08:23
2	SiO2†	195277.3	197001.7	11127	ug/L	11127 ppb	23:09:24
3	Sc Radial	7076.4	7076.4	97.6	%		23:07:19
3	Y RADIAL	7900.8	7900.8	130.2	%		23:07:19
3	Al 396.153Radial†	21747.6	22372.6	17960	ug/L	17960 ppb	23:07:19
3	Ca 317.933Radial†	7394.9	7548.8	10605	ug/L	10605 ppb	23:07:19
3	Fe 238.204 Radial†	11943.5	12203.6	47540	ug/L	47540 ppb	23:07:19
3	K 766.490 Radial†	23353.7	21085.1	3952.8	ug/L	3952.8 ppb	23:07:19
3	Mg 279.077 IEC†	137.8	138.9	3212.5	ug/L	3212.5 ppb	23:07:39
3	Na 589.592 Radial†	42287.0	40256.5	2144.7	ug/L	2144.7 ppb	23:07:19
3	Sr 421.552†	17930.3	18443.1	51.253	ug/L	51.253 ppb	23:07:19
3	Sc 361.383	780239.7	780239.7	99.272	%		23:08:48
3	Y 371.029	740942.4	740942.4	126.90	%		23:08:48
3	Ag 328.068†	-1558.4	-2278.1	3.6768	ug/L	3.6768 ppb	23:08:54
3	As 188.979†	-26.3	8.4	17.806	ug/L	17.806 ppb	23:09:14
3	B 249.677†	4.6	828.7	14.318	ug/L	14.318 ppb	23:08:54
3	Ba 233.527†	35410.3	35650.2	215.09	ug/L	215.09 ppb	23:08:54
3	Be 313.107†	-4114.4	776.7	3.2042	ug/L	3.2042 ppb	23:08:54
3	Cd 226.502†	169.3	463.1	-0.6219	ug/L	-0.6219 ppb	23:09:14
3	Co 228.616†	562.3	666.2	6.5552	ug/L	6.5552 ppb	23:09:14
3	Cr 267.716†	9485.1	9561.1	114.15	ug/L	114.15 ppb	23:08:54
3	Cu 324.752†	31662.0	25988.3	84.063	ug/L	84.063 ppb	23:08:54
3	Mn 257.610†	2028143.0	2042243.0	1919.0	ug/L	1919.0 ppb	23:08:48
3	Mo 202.031†	489.4	482.4	31.846	ug/L	31.846 ppb	23:09:14
3	Ni 231.604†	2813.1	2668.3	59.960	ug/L	59.960 ppb	23:09:14
3	P 214.914†	1362.4	1076.5	399.37	ug/L	399.37 ppb	23:09:14
3	Pb 220.353†	808.9	841.5	82.438	ug/L	82.438 ppb	23:09:14
3	S 181.975 Axial†	746.9	647.5	718.02	ug/L	718.02 ppb	23:09:14
3	Sb 206.836†	75.0	20.8	-0.1291	ug/L	-0.1291 ppb	23:09:14
3	Se 196.026†	-361.0	-331.9	20.596	ug/L	20.596 ppb	23:09:14
3	Si 251.611†	193183.9	194114.1	5104.3	ug/L	5104.3 ppb	23:08:54
3	Sn 189.927†	-43.1	-56.4	-3.6232	ug/L	-3.6232 ppb	23:09:14
3	Ti 334.940†	774504.8	781652.1	1252.5	ug/L	1252.5 ppb	23:08:48
3	Tl 190.801†	-139.4	-79.7	2.3598	ug/L	2.3598 ppb	23:09:14
3	U 409.014†	-11779.9	-6598.3	-201.55	ug/L	-201.55 ppb	23:08:48
3	V 292.402†	3722.2	5448.6	34.056	ug/L	34.056 ppb	23:08:54
3	Zn 213.857†	32647.4	31855.3	241.35	ug/L	241.35 ppb	23:08:54
3	SiO2†	195628.1	196578.5	11103	ug/L	11103 ppb	23:09:30

Mean Data: 232509001|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	779566.8	99.187	%	0.2723				0.27%
Sc Radial	7030.1	96.9	%	1.93				1.99%
Y 371.029	740852.4	126.88	%	0.288				0.23%
Y RADIAL	7839.2	129.2	%	2.46				1.90%
Ag 328.068†	-2299.1	3.7581	ug/L	0.21258	3.7581	ppb	0.21258	5.66%
Al 396.153Radial†	22620.2	18158	ug/L	360.9	18158	ppb	360.9	1.99%
As 188.979†	4.9	16.895	ug/L	0.8635	16.895	ppb	0.8635	5.11%
B 249.677†	750.9	12.624	ug/L	1.9095	12.624	ppb	1.9095	15.13%
Ba 233.527†	35783.3	215.89	ug/L	1.690	215.89	ppb	1.690	0.78%
Be 313.107†	810.0	3.2196	ug/L	0.01747	3.2196	ppb	0.01747	0.54%
Ca 317.933Radial†	7631.1	10721	ug/L	198.2	10721	ppb	198.2	1.85%
Cd 226.502†	459.5	-0.7293	ug/L	0.21176	-0.7293	ppb	0.21176	29.04%
Co 228.616†	667.0	6.5566	ug/L	0.12409	6.5566	ppb	0.12409	1.89%
Cr 267.716†	9642.7	115.13	ug/L	0.952	115.13	ppb	0.952	0.83%
Cu 324.752†	26069.6	84.352	ug/L	0.7920	84.352	ppb	0.7920	0.94%
Fe 238.204 Radial†	12356.9	48137	ug/L	1048.8	48137	ppb	1048.8	2.18%
K 766.490 Radial†	21317.5	3996.6	ug/L	67.35	3996.6	ppb	67.35	1.69%

Mg 279.077 IEC†	141.6	3273.5	ug/L	53.57	3273.5	ppb	53.57	1.64%
Mn 257.610†	2045005.9	1921.7	ug/L	2.38	1921.7	ppb	2.38	0.12%
Mo 202.031†	484.4	32.004	ug/L	0.1431	32.004	ppb	0.1431	0.45%
Na 589.592 Radial†	40657.5	2166.1	ug/L	40.12	2166.1	ppb	40.12	1.85%
Ni 231.604†	2700.6	60.686	ug/L	0.6292	60.686	ppb	0.6292	1.04%
P 214.914†	1093.6	406.05	ug/L	7.901	406.05	ppb	7.901	1.95%
Pb 220.353†	853.0	83.553	ug/L	1.4822	83.553	ppb	1.4822	1.77%
S 181.975 Axial†	655.0	726.37	ug/L	10.197	726.37	ppb	10.197	1.40%
Sb 206.836†	24.7	0.8078	ug/L	0.94886	0.8078	ppb	0.94886	117.46%
Se 196.026†	-338.5	19.838	ug/L	5.1318	19.838	ppb	5.1318	25.87%
Si 251.611†	195212.5	5133.2	ug/L	31.65	5133.2	ppb	31.65	0.62%
Sn 189.927†	-61.0	-4.2441	ug/L	0.59570	-4.2441	ppb	0.59570	14.04%
Sr 421.552†	18679.3	51.909	ug/L	1.1035	51.909	ppb	1.1035	2.13%
Ti 334.940†	782399.2	1253.7	ug/L	1.15	1253.7	ppb	1.15	0.09%
Tl 190.801†	-82.4	1.7885	ug/L	0.95828	1.7885	ppb	0.95828	53.58%
U 409.014†	-6591.2	-201.41	ug/L	2.640	-201.41	ppb	2.640	1.31%
V 292.402†	5457.8	34.046	ug/L	0.4881	34.046	ppb	0.4881	1.43%
Zn 213.857†	31992.1	242.34	ug/L	1.925	242.34	ppb	1.925	0.79%
SiO2†	195860.6	11062	ug/L	91.7	11062	ppb	91.7	0.83%

Sequence No.: 57
Sample ID: 1201871696|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 82
Date Collected: 7/1/2009 23:11:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871696|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7125.7	7125.7	98.3	%			23:13:34
1	Y RADIAL	7604.3	7604.3	125.3	%			23:13:34
1	Al 396.153Radial†	26661.9	27220.1	21851	ug/L	21851	ppb	23:13:34
1	Ca 317.933Radial†	7384.8	7486.0	10517	ug/L	10517	ppb	23:13:34
1	Fe 238.204 Radial†	14204.5	14420.2	56175	ug/L	56175	ppb	23:13:34
1	K 766.490 Radial†	25709.4	23317.0	4372.2	ug/L	4372.2	ppb	23:13:34
1	Mg 279.077 IEC†	142.7	143.0	3299.5	ug/L	3299.5	ppb	23:13:54
1	Na 589.592 Radial†	44744.6	42457.9	2262.0	ug/L	2262.0	ppb	23:13:34
1	Sr 421.552†	17305.0	17679.4	49.127	ug/L	49.127	ppb	23:13:34
1	Sc 361.383	772693.8	772693.8	98.312	%			23:14:51
1	Y 371.029	706077.1	706077.1	120.93	%			23:14:51
1	Ag 328.068†	-2156.5	-2901.8	3.2209	ug/L	3.2209	ppb	23:14:56
1	As 188.979†	-42.7	-8.5	14.518	ug/L	14.518	ppb	23:15:16
1	B 249.677†	-96.9	725.5	11.515	ug/L	11.515	ppb	23:14:56
1	Ba 233.527†	30665.3	31172.1	188.02	ug/L	188.02	ppb	23:14:56
1	Be 313.107†	-5767.6	-945.3	2.5367	ug/L	2.5367	ppb	23:14:56
1	Cd 226.502†	207.8	504.0	-1.1975	ug/L	-1.1975	ppb	23:15:16
1	Co 228.616†	821.9	935.8	10.395	ug/L	10.395	ppb	23:15:16
1	Cr 267.716†	9606.4	9777.8	116.88	ug/L	116.88	ppb	23:14:56
1	Cu 324.752†	27004.2	21562.0	70.713	ug/L	70.713	ppb	23:14:56
1	Mn 257.610†	2185325.7	2222075.2	2088.6	ug/L	2088.6	ppb	23:14:51
1	Mo 202.031†	551.7	550.6	36.473	ug/L	36.473	ppb	23:15:16
1	Ni 231.604†	2833.3	2716.5	61.041	ug/L	61.041	ppb	23:15:16
1	P 214.914†	1225.6	950.7	344.15	ug/L	344.15	ppb	23:15:16
1	Pb 220.353†	899.7	941.8	92.333	ug/L	92.333	ppb	23:15:16
1	S 181.975 Axial†	765.4	673.6	746.38	ug/L	746.38	ppb	23:15:16
1	Sb 206.836†	87.3	34.1	3.2600	ug/L	3.2600	ppb	23:15:16
1	Se 196.026†	-433.7	-409.3	17.185	ug/L	17.185	ppb	23:15:16
1	Si 251.611†	234546.2	238086.9	6260.7	ug/L	6260.7	ppb	23:14:56
1	Sn 189.927†	-49.2	-63.0	-3.9532	ug/L	-3.9532	ppb	23:15:16
1	Ti 334.940†	763226.4	777799.1	1246.3	ug/L	1246.3	ppb	23:14:51
1	Tl 190.801†	-140.8	-82.6	2.5253	ug/L	2.5253	ppb	23:15:16
1	U 409.014†	-10450.3	-5361.7	-165.98	ug/L	-165.98	ppb	23:14:51
1	V 292.402†	4247.5	6019.5	37.390	ug/L	37.390	ppb	23:14:56
1	Zn 213.857†	32028.2	31546.7	238.06	ug/L	238.06	ppb	23:14:56
1	SiO2†	239481.7	243109.2	13731	ug/L	13731	ppb	23:16:24
2	Sc Radial	7097.0	7097.0	97.9	%			23:13:59
2	Y RADIAL	7599.5	7599.5	125.3	%			23:13:59
2	Al 396.153Radial†	26652.2	27320.3	21931	ug/L	21931	ppb	23:13:59
2	Ca 317.933Radial†	7370.5	7501.9	10539	ug/L	10539	ppb	23:13:59
2	Fe 238.204 Radial†	14200.7	14474.9	56388	ug/L	56388	ppb	23:13:59
2	K 766.490 Radial†	25562.2	23272.7	4364.0	ug/L	4364.0	ppb	23:13:59
2	Mg 279.077 IEC†	151.0	152.0	3510.7	ug/L	3510.7	ppb	23:14:19
2	Na 589.592 Radial†	44608.4	42503.4	2264.4	ug/L	2264.4	ppb	23:13:59
2	Sr 421.552†	17319.9	17766.1	49.368	ug/L	49.368	ppb	23:13:59
2	Sc 361.383	783463.9	783463.9	99.683	%			23:15:22
2	Y 371.029	715843.8	715843.8	122.60	%			23:15:22
2	Ag 328.068†	-2296.1	-3011.7	2.7217	ug/L	2.7217	ppb	23:15:27
2	As 188.979†	-23.7	11.2	20.368	ug/L	20.368	ppb	23:15:47
2	B 249.677†	-185.0	638.5	9.6513	ug/L	9.6513	ppb	23:15:27
2	Ba 233.527†	30972.2	31051.2	187.29	ug/L	187.29	ppb	23:15:27
2	Be 313.107†	-5779.6	-876.7	2.5629	ug/L	2.5629	ppb	23:15:27
2	Cd 226.502†	214.4	507.7	-1.1835	ug/L	-1.1835	ppb	23:15:47
2	Co 228.616†	827.2	929.6	10.301	ug/L	10.301	ppb	23:15:47
2	Cr 267.716†	9742.3	9779.8	116.91	ug/L	116.91	ppb	23:15:27
2	Cu 324.752†	27413.2	21594.8	70.827	ug/L	70.827	ppb	23:15:27
2	Mn 257.610†	2214672.1	2220958.3	2087.6	ug/L	2087.6	ppb	23:15:22
2	Mo 202.031†	565.1	556.4	36.831	ug/L	36.831	ppb	23:15:47
2	Ni 231.604†	2818.4	2662.0	59.816	ug/L	59.816	ppb	23:15:47

2	P 214.914†	1218.8	926.8	334.03 ug/L	334.03 ppb	23:15:47
2	Pb 220.353†	892.6	922.2	90.383 ug/L	90.383 ppb	23:15:47
2	S 181.975 Axial†	759.4	656.9	727.72 ug/L	727.72 ppb	23:15:47
2	Sb 206.836†	73.4	18.9	-0.4907 ug/L	-0.4907 ppb	23:15:47
2	Se 196.026†	-409.8	-379.3	30.464 ug/L	30.464 ppb	23:15:47
2	Si 251.611†	235722.4	235987.3	6205.5 ug/L	6205.5 ppb	23:15:27
2	Sn 189.927†	-44.6	-57.7	-3.1683 ug/L	-3.1683 ppb	23:15:47
2	Ti 334.940†	773920.1	777854.8	1246.4 ug/L	1246.4 ppb	23:15:22
2	Tl 190.801†	-158.4	-98.2	-0.9367 ug/L	-0.9367 ppb	23:15:47
2	U 409.014†	-10575.1	-5340.8	-165.39 ug/L	-165.39 ppb	23:15:22
2	V 292.402†	4258.3	5970.9	36.995 ug/L	36.995 ppb	23:15:27
2	Zn 213.857†	32468.9	31541.0	237.99 ug/L	237.99 ppb	23:15:27
2	SiO2†	234170.4	234432.4	13241 ug/L	13241 ppb	23:16:29
3	Sc Radial	7132.5	7132.5	98.3 %		23:14:24
3	Y RADIAL	7656.5	7656.5	126.2 %		23:14:24
3	Al 396.153Radial†	26862.9	27398.7	21994 ug/L	21994 ppb	23:14:24
3	Ca 317.933Radial†	7411.0	7505.5	10544 ug/L	10544 ppb	23:14:24
3	Fe 238.204 Radial†	14343.5	14547.8	56672 ug/L	56672 ppb	23:14:24
3	K 766.490 Radial†	25842.7	23427.7	4393.2 ug/L	4393.2 ppb	23:14:24
3	Mg 279.077 IEC†	142.8	142.9	3297.2 ug/L	3297.2 ppb	23:14:44
3	Na 589.592 Radial†	45037.0	42711.8	2275.5 ug/L	2275.5 ppb	23:14:24
3	Sr 421.552†	17482.9	17843.6	49.584 ug/L	49.584 ppb	23:14:24
3	Sc 361.383	780110.1	780110.1	99.256 %		23:15:53
3	Y 371.029	712936.6	712936.6	122.10 %		23:15:53
3	Ag 328.068†	-2164.7	-2889.2	3.4437 ug/L	3.4437 ppb	23:15:58
3	As 188.979†	-30.6	4.1	18.317 ug/L	18.317 ppb	23:16:18
3	B 249.677†	-272.5	549.5	7.7417 ug/L	7.7417 ppb	23:15:58
3	Ba 233.527†	30775.1	30986.2	186.90 ug/L	186.90 ppb	23:15:58
3	Be 313.107†	-5614.1	-734.9	2.6095 ug/L	2.6095 ppb	23:15:58
3	Cd 226.502†	238.8	533.2	-0.9471 ug/L	-0.9471 ppb	23:16:18
3	Co 228.616†	804.0	909.8	10.014 ug/L	10.014 ppb	23:16:18
3	Cr 267.716†	9650.7	9729.5	116.32 ug/L	116.32 ppb	23:15:58
3	Cu 324.752†	27081.9	21379.2	70.169 ug/L	70.169 ppb	23:15:58
3	Mn 257.610†	2201142.0	2216878.2	2083.8 ug/L	2083.8 ppb	23:15:53
3	Mo 202.031†	562.6	556.2	36.841 ug/L	36.841 ppb	23:16:18
3	Ni 231.604†	2851.9	2707.8	60.847 ug/L	60.847 ppb	23:16:18
3	P 214.914†	1215.7	928.9	334.84 ug/L	334.84 ppb	23:16:18
3	Pb 220.353†	886.3	919.6	90.119 ug/L	90.119 ppb	23:16:18
3	S 181.975 Axial†	755.4	656.2	726.88 ug/L	726.88 ppb	23:16:18
3	Sb 206.836†	82.0	27.9	1.7845 ug/L	1.7845 ppb	23:16:18
3	Se 196.026†	-438.1	-409.6	18.752 ug/L	18.752 ppb	23:16:18
3	Si 251.611†	235032.7	236309.0	6213.9 ug/L	6213.9 ppb	23:15:58
3	Sn 189.927†	-41.1	-54.3	-2.6512 ug/L	-2.6512 ppb	23:16:18
3	Ti 334.940†	768678.4	775911.7	1243.3 ug/L	1243.3 ppb	23:15:53
3	Tl 190.801†	-145.2	-85.6	1.8137 ug/L	1.8137 ppb	23:16:18
3	U 409.014†	-10468.2	-5278.8	-163.58 ug/L	-163.58 ppb	23:15:53
3	V 292.402†	4353.1	6084.8	37.838 ug/L	37.838 ppb	23:15:58
3	Zn 213.857†	32285.8	31496.6	237.62 ug/L	237.62 ppb	23:15:58
3	SiO2†	236930.3	238223.0	13455 ug/L	13455 ppb	23:16:34

Mean Data: 1201871696|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	778755.9	99.084	%	0.7012				0.71%
Sc Radial	7118.4	98.1	%	0.26				0.27%
Y 371.029	711619.2	121.87	%	0.859				0.70%
Y RADIAL	7620.1	125.6	%	0.52				0.42%
Ag 328.068†	-2934.2	3.1288	ug/L	0.36974	3.1288	ppb	0.36974	11.82%
Al 396.153Radial†	27313.0	21926	ug/L	71.9	21926	ppb	71.9	0.33%
As 188.979†	2.2	17.734	ug/L	2.9682	17.734	ppb	2.9682	16.74%
B 249.677†	637.8	9.6360	ug/L	1.88666	9.6360	ppb	1.88666	19.58%
Ba 233.527†	31069.9	187.41	ug/L	0.570	187.41	ppb	0.570	0.30%
Be 313.107†	-852.3	2.5697	ug/L	0.03686	2.5697	ppb	0.03686	1.43%
Ca 317.933Radial†	7497.8	10534	ug/L	14.6	10534	ppb	14.6	0.14%
Cd 226.502†	515.0	-1.1094	ug/L	0.14071	-1.1094	ppb	0.14071	12.68%
Co 228.616†	925.0	10.237	ug/L	0.1988	10.237	ppb	0.1988	1.94%
Cr 267.716†	9762.4	116.70	ug/L	0.332	116.70	ppb	0.332	0.28%
Cu 324.752†	21512.0	70.570	ug/L	0.3516	70.570	ppb	0.3516	0.50%
Fe 238.204 Radial†	14481.0	56411	ug/L	249.2	56411	ppb	249.2	0.44%
K 766.490 Radial†	23339.1	4376.5	ug/L	15.09	4376.5	ppb	15.09	0.34%

Mg 279.077 IEC†	145.9	3369.1	ug/L	122.61	3369.1	ppb	122.61	3.64%
Mn 257.610†	2219970.6	2086.6	ug/L	2.53	2086.6	ppb	2.53	0.12%
Mo 202.031†	554.4	36.715	ug/L	0.2097	36.715	ppb	0.2097	0.57%
Na 589.592 Radial†	42557.7	2267.3	ug/L	7.21	2267.3	ppb	7.21	0.32%
Ni 231.604†	2695.4	60.568	ug/L	0.6585	60.568	ppb	0.6585	1.09%
P 214.914†	935.4	337.67	ug/L	5.625	337.67	ppb	5.625	1.67%
Pb 220.353†	927.9	90.945	ug/L	1.2091	90.945	ppb	1.2091	1.33%
S 181.975 Axial†	662.2	733.66	ug/L	11.025	733.66	ppb	11.025	1.50%
Sb 206.836†	27.0	1.5179	ug/L	1.88952	1.5179	ppb	1.88952	124.48%
Se 196.026†	-399.4	22.133	ug/L	7.2566	22.133	ppb	7.2566	32.79%
Si 251.611†	236794.4	6226.7	ug/L	29.76	6226.7	ppb	29.76	0.48%
Sn 189.927†	-58.3	-3.2575	ug/L	0.65557	-3.2575	ppb	0.65557	20.12%
Sr 421.552†	17763.0	49.360	ug/L	0.2285	49.360	ppb	0.2285	0.46%
Ti 334.940†	777188.5	1245.3	ug/L	1.77	1245.3	ppb	1.77	0.14%
Tl 190.801†	-88.8	1.1341	ug/L	1.82835	1.1341	ppb	1.82835	161.21%
U 409.014†	-5327.1	-164.98	ug/L	1.249	-164.98	ppb	1.249	0.76%
V 292.402†	6025.1	37.408	ug/L	0.4220	37.408	ppb	0.4220	1.13%
Zn 213.857†	31528.1	237.89	ug/L	0.236	237.89	ppb	0.236	0.10%
SiO2†	238588.2	13476	ug/L	245.8	13476	ppb	245.8	1.82%

Sequence No.: 58
Sample ID: 1201871697|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 83
Date Collected: 7/1/2009 23:18:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871697|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6958.3	6958.3	95.9	%			23:20:58
1	Y RADIAL	7507.0	7507.0	123.7	%			23:20:38
1	Al 396.153Radial†	31604.3	33024.5	26492	ug/L	26492	ppb	23:20:38
1	Ca 317.933Radial†	7840.4	8141.7	11438	ug/L	11438	ppb	23:20:38
1	Fe 238.204 Radial†	8649.0	8977.6	34987	ug/L	34987	ppb	23:20:38
1	K 766.490 Radial†	43430.8	42417.6	7959.4	ug/L	7959.4	ppb	23:20:38
1	Mg 279.077 IEC†	332.7	344.5	8044.5	ug/L	8044.5	ppb	23:20:58
1	Na 589.592 Radial†	108570.9	110079.5	5864.7	ug/L	5864.7	ppb	23:20:38
1	Sr 421.552†	168615.6	175813.5	489.46	ug/L	489.46	ppb	23:20:38
1	Sc 361.383	771465.7	771465.7	98.156	%			23:21:57
1	Y 371.029	692401.1	692401.1	118.58	%			23:21:57
1	Ag 328.068†	90715.1	91711.0	484.07	ug/L	484.07	ppb	23:21:57
1	As 188.979†	1501.2	1564.3	473.36	ug/L	473.36	ppb	23:22:17
1	B 249.677†	20983.2	22201.5	467.14	ug/L	467.14	ppb	23:21:57
1	Ba 233.527†	103366.5	105288.7	636.55	ug/L	636.55	ppb	23:21:57
1	Be 313.107†	1232915.3	1260997.7	481.28	ug/L	481.28	ppb	23:21:57
1	Cd 226.502†	43100.8	44203.1	462.12	ug/L	462.12	ppb	23:22:17
1	Co 228.616†	30605.9	31280.6	456.66	ug/L	456.66	ppb	23:22:17
1	Cr 267.716†	43934.7	44766.5	530.66	ug/L	530.66	ppb	23:21:57
1	Cu 324.752†	171074.8	168382.8	528.87	ug/L	528.87	ppb	23:21:57
1	Mn 257.610†	2010431.7	2047434.4	1922.2	ug/L	1922.2	ppb	23:21:57
1	Mo 202.031†	7803.3	7939.3	475.33	ug/L	475.33	ppb	23:22:17
1	Ni 231.604†	21871.7	22117.2	496.76	ug/L	496.76	ppb	23:22:17
1	P 214.914†	2162.6	1907.3	675.83	ug/L	675.83	ppb	23:22:17
1	Pb 220.353†	5130.8	5253.8	523.44	ug/L	523.44	ppb	23:22:17
1	S 181.975 Axial†	4603.1	4584.6	5103.7	ug/L	5103.7	ppb	23:22:17
1	Sb 206.836†	1873.1	1853.6	463.21	ug/L	463.21	ppb	23:22:17
1	Se 196.026†	859.8	907.7	498.72	ug/L	498.72	ppb	23:22:17
1	Si 251.611†	313781.2	319190.2	8378.9	ug/L	8378.9	ppb	23:21:57
1	Sn 189.927†	3112.6	3158.1	466.01	ug/L	466.01	ppb	23:22:17
1	Ti 334.940†	786846.2	803098.5	1286.5	ug/L	1286.5	ppb	23:21:57
1	Tl 190.801†	1950.6	2047.9	471.24	ug/L	471.24	ppb	23:22:17
1	U 409.014†	6124.5	11507.4	335.61	ug/L	335.61	ppb	23:21:57
1	V 292.402†	60673.5	63512.4	490.67	ug/L	490.67	ppb	23:21:57
1	Zn 213.857†	80825.3	81312.3	622.44	ug/L	622.44	ppb	23:21:57
1	SiO2†	317330.0	322807.8	18201	ug/L	18201	ppb	23:23:17
2	Sc Radial	6998.5	6998.5	96.5	%			23:21:23
2	Y RADIAL	7670.6	7670.6	126.4	%			23:21:03
2	Al 396.153Radial†	31972.0	33216.5	26646	ug/L	26646	ppb	23:21:03
2	Ca 317.933Radial†	7960.3	8219.1	11547	ug/L	11547	ppb	23:21:03
2	Fe 238.204 Radial†	8783.4	9065.1	35328	ug/L	35328	ppb	23:21:03
2	K 766.490 Radial†	43779.3	42519.1	7978.5	ug/L	7978.5	ppb	23:21:03
2	Mg 279.077 IEC†	324.6	334.0	7799.9	ug/L	7799.9	ppb	23:21:23
2	Na 589.592 Radial†	109802.8	110706.8	5898.1	ug/L	5898.1	ppb	23:21:03
2	Sr 421.552†	170168.9	176414.9	491.13	ug/L	491.13	ppb	23:21:03
2	Sc 361.383	771923.3	771923.3	98.214	%			23:22:24
2	Y 371.029	692949.5	692949.5	118.68	%			23:22:24
2	Ag 328.068†	90566.2	91504.6	483.12	ug/L	483.12	ppb	23:22:24
2	As 188.979†	1514.8	1577.2	477.21	ug/L	477.21	ppb	23:22:45
2	B 249.677†	20911.6	22115.8	465.30	ug/L	465.30	ppb	23:22:24
2	Ba 233.527†	103314.5	105173.3	635.85	ug/L	635.85	ppb	23:22:24
2	Be 313.107†	1232768.7	1260103.7	480.93	ug/L	480.93	ppb	23:22:24
2	Cd 226.502†	43026.0	44100.9	461.00	ug/L	461.00	ppb	23:22:45
2	Co 228.616†	30567.5	31223.0	455.82	ug/L	455.82	ppb	23:22:45
2	Cr 267.716†	43898.7	44703.3	529.92	ug/L	529.92	ppb	23:22:24
2	Cu 324.752†	170357.7	167549.4	526.28	ug/L	526.28	ppb	23:22:24
2	Mn 257.610†	2008441.1	2044193.2	1919.2	ug/L	1919.2	ppb	23:22:24
2	Mo 202.031†	7831.9	7963.8	476.81	ug/L	476.81	ppb	23:22:45
2	Ni 231.604†	21868.5	22100.7	496.39	ug/L	496.39	ppb	23:22:45

2	P 214.914†	2144.4	1887.5	667.94	ug/L	667.94 ppb	23:22:45
2	Pb 220.353†	5120.9	5240.7	522.15	ug/L	522.15 ppb	23:22:45
2	S 181.975 Axial†	4610.0	4588.9	5108.4	ug/L	5108.4 ppb	23:22:45
2	Sb 206.836†	1863.0	1842.2	460.49	ug/L	460.49 ppb	23:22:45
2	Se 196.026†	858.3	905.7	499.04	ug/L	499.04 ppb	23:22:45
2	Si 251.611†	313246.3	318456.0	8359.5	ug/L	8359.5 ppb	23:22:24
2	Sn 189.927†	3134.6	3178.6	469.05	ug/L	469.05 ppb	23:22:45
2	Ti 334.940†	784981.2	800724.3	1282.7	ug/L	1282.7 ppb	23:22:24
2	Tl 190.801†	1939.6	2035.5	468.45	ug/L	468.45 ppb	23:22:45
2	U 409.014†	5777.0	11150.0	324.98	ug/L	324.98 ppb	23:22:24
2	V 292.402†	60549.1	63349.1	489.35	ug/L	489.35 ppb	23:22:24
2	Zn 213.857†	80597.5	81031.6	620.24	ug/L	620.24 ppb	23:22:24
2	SiO2†	317119.5	322401.8	18178	ug/L	18178 ppb	23:23:23
3	Sc Radial	6963.4	6963.4	96.0	%		23:21:49
3	Y RADIAL	7653.6	7653.6	126.2	%		23:21:29
3	Al 396.153Radial†	32033.2	33447.2	26831	ug/L	26831 ppb	23:21:29
3	Ca 317.933Radial†	7952.0	8252.0	11593	ug/L	11593 ppb	23:21:29
3	Fe 238.204 Radial†	8767.4	9094.3	35442	ug/L	35442 ppb	23:21:29
3	K 766.490 Radial†	43887.9	42860.7	8042.9	ug/L	8042.9 ppb	23:21:29
3	Mg 279.077 IEC†	327.1	338.4	7901.9	ug/L	7901.9 ppb	23:21:49
3	Na 589.592 Radial†	109696.4	111169.3	5922.7	ug/L	5922.7 ppb	23:21:29
3	Sr 421.552†	170252.8	177390.7	493.85	ug/L	493.85 ppb	23:21:29
3	Sc 361.383	769158.7	769158.7	97.863	%		23:22:52
3	Y 371.029	690141.7	690141.7	118.20	%		23:22:52
3	Ag 328.068†	89999.7	91257.2	481.88	ug/L	481.88 ppb	23:22:52
3	As 188.979†	1518.3	1586.4	479.91	ug/L	479.91 ppb	23:23:12
3	B 249.677†	20826.5	22105.4	465.06	ug/L	465.06 ppb	23:22:52
3	Ba 233.527†	102701.2	104924.7	634.35	ug/L	634.35 ppb	23:22:52
3	Be 313.107†	1226124.9	1257826.4	480.06	ug/L	480.06 ppb	23:22:52
3	Cd 226.502†	43074.9	44308.3	463.17	ug/L	463.17 ppb	23:23:12
3	Co 228.616†	30613.8	31382.2	458.16	ug/L	458.16 ppb	23:23:12
3	Cr 267.716†	43534.9	44492.2	527.42	ug/L	527.42 ppb	23:22:52
3	Cu 324.752†	169715.2	167516.3	526.19	ug/L	526.19 ppb	23:22:52
3	Mn 257.610†	1995402.8	2038220.6	1913.7	ug/L	1913.7 ppb	23:22:52
3	Mo 202.031†	7833.2	7993.7	478.61	ug/L	478.61 ppb	23:23:12
3	Ni 231.604†	21870.9	22183.1	498.24	ug/L	498.24 ppb	23:23:12
3	P 214.914†	2164.4	1915.7	679.69	ug/L	679.69 ppb	23:23:12
3	Pb 220.353†	5111.7	5250.0	523.10	ug/L	523.10 ppb	23:23:12
3	S 181.975 Axial†	4599.2	4594.8	5115.0	ug/L	5115.0 ppb	23:23:12
3	Sb 206.836†	1859.2	1845.1	461.31	ug/L	461.31 ppb	23:23:12
3	Se 196.026†	850.3	900.7	497.33	ug/L	497.33 ppb	23:23:12
3	Si 251.611†	311078.1	317386.9	8331.3	ug/L	8331.3 ppb	23:22:52
3	Sn 189.927†	3124.5	3179.8	469.24	ug/L	469.24 ppb	23:23:12
3	Ti 334.940†	781085.8	799616.7	1281.0	ug/L	1281.0 ppb	23:22:52
3	Tl 190.801†	1930.9	2033.7	468.01	ug/L	468.01 ppb	23:23:12
3	U 409.014†	5698.1	11090.5	323.21	ug/L	323.21 ppb	23:22:52
3	V 292.402†	60178.4	63191.9	488.15	ug/L	488.15 ppb	23:22:52
3	Zn 213.857†	79946.6	80661.5	617.35	ug/L	617.35 ppb	23:22:52
3	SiO2†	314604.9	320992.9	18098	ug/L	18098 ppb	23:23:28

Mean Data: 1201871697|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	770849.2	98.078	%	0.1885				0.19%
Sc Radial	6973.4	96.1	%	0.30				0.31%
Y 371.029	691830.8	118.49	%	0.255				0.22%
Y RADIAL	7610.4	125.4	%	1.48				1.18%
Ag 328.068†	91490.9	483.02	ug/L	1.098	483.02	ppb	1.098	0.23%
Al 396.153Radial†	33229.4	26657	ug/L	169.9	26657	ppb	169.9	0.64%
As 188.979†	1576.0	476.83	ug/L	3.291	476.83	ppb	3.291	0.69%
B 249.677†	22140.9	465.83	ug/L	1.138	465.83	ppb	1.138	0.24%
Ba 233.527†	105128.9	635.58	ug/L	1.126	635.58	ppb	1.126	0.18%
Be 313.107†	1259642.6	480.76	ug/L	0.626	480.76	ppb	0.626	0.13%
Ca 317.933Radial†	8204.3	11526	ug/L	79.5	11526	ppb	79.5	0.69%
Cd 226.502†	44204.1	462.10	ug/L	1.087	462.10	ppb	1.087	0.24%
Co 228.616†	31295.3	456.88	ug/L	1.186	456.88	ppb	1.186	0.26%
Cr 267.716†	44654.0	529.33	ug/L	1.694	529.33	ppb	1.694	0.32%
Cu 324.752†	167816.1	527.11	ug/L	1.523	527.11	ppb	1.523	0.29%
Fe 238.204 Radial†	9045.7	35252	ug/L	236.7	35252	ppb	236.7	0.67%
K 766.490 Radial†	42599.1	7993.6	ug/L	43.76	7993.6	ppb	43.76	0.55%

Mg 279.077 IEC†	339.0	7915.4	ug/L	122.83	7915.4	ppb	122.83	1.55%
Mn 257.610†	2043282.7	1918.4	ug/L	4.35	1918.4	ppb	4.35	0.23%
Mo 202.031†	7965.6	476.92	ug/L	1.639	476.92	ppb	1.639	0.34%
Na 589.592 Radial†	110651.9	5895.2	ug/L	29.14	5895.2	ppb	29.14	0.49%
Ni 231.604†	22133.7	497.13	ug/L	0.980	497.13	ppb	0.980	0.20%
P 214.914†	1903.5	674.49	ug/L	5.990	674.49	ppb	5.990	0.89%
Pb 220.353†	5248.2	522.90	ug/L	0.670	522.90	ppb	0.670	0.13%
S 181.975 Axial†	4589.5	5109.0	ug/L	5.65	5109.0	ppb	5.65	0.11%
Sb 206.836†	1847.0	461.67	ug/L	1.397	461.67	ppb	1.397	0.30%
Se 196.026†	904.7	498.36	ug/L	0.910	498.36	ppb	0.910	0.18%
Si 251.611†	318344.4	8356.6	ug/L	23.92	8356.6	ppb	23.92	0.29%
Sn 189.927†	3172.2	468.10	ug/L	1.813	468.10	ppb	1.813	0.39%
Sr 421.552†	176539.7	491.48	ug/L	2.216	491.48	ppb	2.216	0.45%
Ti 334.940†	801146.5	1283.4	ug/L	2.84	1283.4	ppb	2.84	0.22%
Tl 190.801†	2039.0	469.23	ug/L	1.753	469.23	ppb	1.753	0.37%
U 409.014†	11249.3	327.93	ug/L	6.708	327.93	ppb	6.708	2.05%
V 292.402†	63351.1	489.39	ug/L	1.258	489.39	ppb	1.258	0.26%
Zn 213.857†	81001.8	620.01	ug/L	2.554	620.01	ppb	2.554	0.41%
SiO2†	322067.5	18159	ug/L	53.9	18159	ppb	53.9	0.30%

Sequence No.: 59
Sample ID: 1201871699|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 84
Date Collected: 7/1/2009 23:25:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871699|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7035.7	7035.7	97.0	%			23:27:52
1	Y RADIAL	8733.8	8733.8	144.0	%			23:27:32
1	Al 396.153Radial†	50123.8	51752.6	41527	ug/L	41527	ppb	23:27:32
1	Ca 317.933Radial†	10848.6	11152.8	15669	ug/L	15669	ppb	23:27:32
1	Fe 238.204 Radial†	15780.2	16229.5	63237	ug/L	63237	ppb	23:27:32
1	K 766.490 Radial†	53197.1	51987.1	9757.7	ug/L	9757.7	ppb	23:27:32
1	Mg 279.077 IEC†	400.5	410.5	9566.8	ug/L	9566.8	ppb	23:27:52
1	Na 589.592 Radial†	127076.5	127910.9	6814.7	ug/L	6814.7	ppb	23:27:32
1	Sr 421.552†	176839.1	182357.5	507.64	ug/L	507.64	ppb	23:27:32
1	Sc 361.383	777618.6	777618.6	98.939	%			23:28:51
1	Y 371.029	791431.0	791431.0	135.54	%			23:28:51
1	Ag 328.068†	87923.5	88158.2	474.96	ug/L	474.96	ppb	23:28:51
1	As 188.979†	1498.7	1549.6	478.01	ug/L	478.01	ppb	23:29:11
1	B 249.677†	21256.5	22308.5	467.53	ug/L	467.53	ppb	23:28:51
1	Ba 233.527†	110852.5	112021.8	677.12	ug/L	677.12	ppb	23:28:51
1	Be 313.107†	1205074.2	1222919.2	468.49	ug/L	468.49	ppb	23:28:51
1	Cd 226.502†	42415.5	43163.1	447.88	ug/L	447.88	ppb	23:29:11
1	Co 228.616†	30268.5	30692.9	446.14	ug/L	446.14	ppb	23:29:11
1	Cr 267.716†	48446.8	48972.9	581.04	ug/L	581.04	ppb	23:28:51
1	Cu 324.752†	182528.2	178579.9	562.41	ug/L	562.41	ppb	23:28:51
1	Mn 257.610†	2633755.3	2661236.4	2500.8	ug/L	2500.8	ppb	23:28:51
1	Mo 202.031†	7961.5	8036.4	482.96	ug/L	482.96	ppb	23:29:11
1	Ni 231.604†	22827.2	22906.6	514.51	ug/L	514.51	ppb	23:29:11
1	P 214.914†	2695.2	2428.2	868.39	ug/L	868.39	ppb	23:29:11
1	Pb 220.353†	5465.8	5551.1	553.16	ug/L	553.16	ppb	23:29:11
1	S 181.975 Axial†	4822.7	4769.5	5306.7	ug/L	5306.7	ppb	23:29:11
1	Sb 206.836†	1845.4	1810.5	449.38	ug/L	449.38	ppb	23:29:11
1	Se 196.026†	648.9	687.7	501.69	ug/L	501.69	ppb	23:29:11
1	Si 251.611†	395034.0	398784.9	10472	ug/L	10472	ppb	23:28:51
1	Sn 189.927†	3057.9	3077.7	456.79	ug/L	456.79	ppb	23:29:11
1	Ti 334.940†	1233113.9	1247809.2	1999.0	ug/L	1999.0	ppb	23:28:51
1	Tl 190.801†	1855.2	1935.7	455.58	ug/L	455.58	ppb	23:29:11
1	U 409.014†	2746.3	8043.7	229.42	ug/L	229.42	ppb	23:28:51
1	V 292.402†	64021.4	66407.1	508.17	ug/L	508.17	ppb	23:28:51
1	Zn 213.857†	95454.0	95446.4	728.84	ug/L	728.84	ppb	23:28:51
1	SiO2†	391788.8	395507.1	22307	ug/L	22307	ppb	23:30:11
2	Sc Radial	7018.3	7018.3	96.8	%			23:28:17
2	Y RADIAL	8577.8	8577.8	141.4	%			23:27:57
2	Al 396.153Radial†	49247.1	50975.1	40902	ug/L	40902	ppb	23:27:57
2	Ca 317.933Radial†	10627.5	10952.1	15387	ug/L	15387	ppb	23:27:57
2	Fe 238.204 Radial†	15382.6	15859.0	61794	ug/L	61794	ppb	23:27:57
2	K 766.490 Radial†	52206.8	51100.0	9590.4	ug/L	9590.4	ppb	23:27:57
2	Mg 279.077 IEC†	402.6	413.8	9644.2	ug/L	9644.2	ppb	23:28:17
2	Na 589.592 Radial†	124350.8	125419.8	6682.0	ug/L	6682.0	ppb	23:27:57
2	Sr 421.552†	173085.1	178931.3	498.10	ug/L	498.10	ppb	23:27:57
2	Sc 361.383	765260.4	765260.4	97.367	%			23:29:18
2	Y 371.029	779810.0	779810.0	133.55	%			23:29:18
2	Ag 328.068†	86632.0	88266.8	475.07	ug/L	475.07	ppb	23:29:18
2	As 188.979†	1480.3	1555.2	479.36	ug/L	479.36	ppb	23:29:38
2	B 249.677†	20738.7	22123.7	463.67	ug/L	463.67	ppb	23:29:18
2	Ba 233.527†	109457.2	112398.0	679.40	ug/L	679.40	ppb	23:29:18
2	Be 313.107†	1186413.3	1223423.0	468.68	ug/L	468.68	ppb	23:29:18
2	Cd 226.502†	42265.1	43700.8	453.71	ug/L	453.71	ppb	23:29:38
2	Co 228.616†	30142.4	31057.4	451.53	ug/L	451.53	ppb	23:29:38
2	Cr 267.716†	47693.2	48989.6	581.21	ug/L	581.21	ppb	23:29:18
2	Cu 324.752†	178784.4	177714.2	559.62	ug/L	559.62	ppb	23:29:18
2	Mn 257.610†	2595169.7	2664595.8	2503.7	ug/L	2503.7	ppb	23:29:18
2	Mo 202.031†	7953.9	8158.5	490.14	ug/L	490.14	ppb	23:29:38
2	Ni 231.604†	22705.5	23154.2	520.07	ug/L	520.07	ppb	23:29:38

2	P 214.914†	2660.0	2436.0	873.25	ug/L	873.25 ppb	23:29:38
2	Pb 220.353†	5432.6	5606.3	558.66	ug/L	558.66 ppb	23:29:38
2	S 181.975 Axial†	4795.4	4820.2	5363.4	ug/L	5363.4 ppb	23:29:38
2	Sb 206.836†	1828.6	1823.3	452.84	ug/L	452.84 ppb	23:29:38
2	Se 196.026†	652.0	701.4	502.59	ug/L	502.59 ppb	23:29:38
2	Si 251.611†	388694.4	398721.7	10470	ug/L	10470 ppb	23:29:18
2	Sn 189.927†	3057.3	3127.1	463.87	ug/L	463.87 ppb	23:29:38
2	Ti 334.940†	1213454.1	1247744.9	1998.9	ug/L	1998.9 ppb	23:29:18
2	Tl 190.801†	1866.5	1977.7	464.84	ug/L	464.84 ppb	23:29:38
2	U 409.014†	2595.0	7933.1	226.32	ug/L	226.32 ppb	23:29:18
2	V 292.402†	63128.8	66535.3	509.45	ug/L	509.45 ppb	23:29:18
2	Zn 213.857†	93929.0	95438.2	728.89	ug/L	728.89 ppb	23:29:18
2	SiO2†	395631.3	405848.3	22891	ug/L	22891 ppb	23:30:16
3	Sc Radial	7056.2	7056.2	97.3	%		23:28:42
3	Y RADIAL	8676.4	8676.4	143.0	%		23:28:22
3	Al 396.153Radial†	49485.0	50945.9	40879	ug/L	40879 ppb	23:28:22
3	Ca 317.933Radial†	10637.3	10903.1	15318	ug/L	15318 ppb	23:28:22
3	Fe 238.204 Radial†	15478.2	15871.8	61844	ug/L	61844 ppb	23:28:22
3	K 766.490 Radial†	52333.0	50939.6	9560.3	ug/L	9560.3 ppb	23:28:22
3	Mg 279.077 IEC†	403.1	412.0	9603.4	ug/L	9603.4 ppb	23:28:42
3	Na 589.592 Radial†	124598.1	124983.0	6658.7	ug/L	6658.7 ppb	23:28:22
3	Sr 421.552†	173769.5	178672.8	497.38	ug/L	497.38 ppb	23:28:22
3	Sc 361.383	770299.9	770299.9	98.008	%		23:29:45
3	Y 371.029	785254.0	785254.0	134.49	%		23:29:45
3	Ag 328.068†	86828.2	87884.9	473.12	ug/L	473.12 ppb	23:29:45
3	As 188.979†	1496.3	1561.7	481.24	ug/L	481.24 ppb	23:30:05
3	B 249.677†	20767.0	22013.2	461.32	ug/L	461.32 ppb	23:29:45
3	Ba 233.527†	109782.2	111994.2	676.96	ug/L	676.96 ppb	23:29:45
3	Be 313.107†	1192335.1	1221493.6	467.94	ug/L	467.94 ppb	23:29:45
3	Cd 226.502†	42483.1	43639.3	453.06	ug/L	453.06 ppb	23:30:05
3	Co 228.616†	30308.6	31024.4	451.05	ug/L	451.05 ppb	23:30:05
3	Cr 267.716†	47993.5	48975.5	581.04	ug/L	581.04 ppb	23:29:45
3	Cu 324.752†	179377.8	177118.3	557.76	ug/L	557.76 ppb	23:29:45
3	Mn 257.610†	2603982.5	2656150.5	2495.8	ug/L	2495.8 ppb	23:29:45
3	Mo 202.031†	7975.0	8126.5	488.24	ug/L	488.24 ppb	23:30:05
3	Ni 231.604†	22874.9	23174.5	520.53	ug/L	520.53 ppb	23:30:05
3	P 214.914†	2657.4	2415.5	865.01	ug/L	865.01 ppb	23:30:05
3	Pb 220.353†	5471.7	5609.6	558.98	ug/L	558.98 ppb	23:30:05
3	S 181.975 Axial†	4828.9	4822.2	5365.6	ug/L	5365.6 ppb	23:30:05
3	Sb 206.836†	1845.5	1828.3	454.02	ug/L	454.02 ppb	23:30:05
3	Se 196.026†	658.0	703.2	503.49	ug/L	503.49 ppb	23:30:05
3	Si 251.611†	389999.9	397442.1	10437	ug/L	10437 ppb	23:29:45
3	Sn 189.927†	3060.4	3109.6	461.32	ug/L	461.32 ppb	23:30:05
3	Ti 334.940†	1218743.7	1244988.6	1994.5	ug/L	1994.5 ppb	23:29:45
3	Tl 190.801†	1850.6	1948.9	458.39	ug/L	458.39 ppb	23:30:05
3	U 409.014†	2621.9	7943.2	226.62	ug/L	226.62 ppb	23:29:45
3	V 292.402†	63386.6	66374.2	508.18	ug/L	508.18 ppb	23:29:45
3	Zn 213.857†	94332.3	95218.6	727.18	ug/L	727.18 ppb	23:29:45
3	SiO2†	395013.5	402559.7	22705	ug/L	22705 ppb	23:30:22

Mean Data: 1201871699|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	771059.6	98.104	%	0.7906				0.81%
Sc Radial	7036.7	97.0	%	0.26				0.27%
Y 371.029	785498.3	134.53	%	0.996				0.74%
Y RADIAL	8662.7	142.8	%	1.30				0.91%
Ag 328.068†	88103.3	474.38	ug/L	1.097	474.38	ppb	1.097	0.23%
Al 396.153Radial†	51224.5	41103	ug/L	367.5	41103	ppb	367.5	0.89%
As 188.979†	1555.5	479.54	ug/L	1.627	479.54	ppb	1.627	0.34%
B 249.677†	22148.5	464.17	ug/L	3.134	464.17	ppb	3.134	0.68%
Ba 233.527†	112138.0	677.82	ug/L	1.365	677.82	ppb	1.365	0.20%
Be 313.107†	1222611.9	468.37	ug/L	0.385	468.37	ppb	0.385	0.08%
Ca 317.933Radial†	11002.7	15458	ug/L	185.9	15458	ppb	185.9	1.20%
Cd 226.502†	43501.1	451.55	ug/L	3.199	451.55	ppb	3.199	0.71%
Co 228.616†	30924.9	449.57	ug/L	2.980	449.57	ppb	2.980	0.66%
Cr 267.716†	48979.3	581.10	ug/L	0.098	581.10	ppb	0.098	0.02%
Cu 324.752†	177804.1	559.93	ug/L	2.342	559.93	ppb	2.342	0.42%
Fe 238.204 Radial†	15986.8	62291	ug/L	819.0	62291	ppb	819.0	1.31%
K 766.490 Radial†	51342.3	9636.1	ug/L	106.36	9636.1	ppb	106.36	1.10%

Mg 279.077 IEC†	412.1	9604.8	ug/L	38.73	9604.8	ppb	38.73	0.40%
Mn 257.610†	2660660.9	2500.1	ug/L	3.99	2500.1	ppb	3.99	0.16%
Mo 202.031†	8107.1	487.11	ug/L	3.721	487.11	ppb	3.721	0.76%
Na 589.592 Radial†	126104.6	6718.4	ug/L	84.15	6718.4	ppb	84.15	1.25%
Ni 231.604†	23078.4	518.37	ug/L	3.350	518.37	ppb	3.350	0.65%
P 214.914†	2426.6	868.88	ug/L	4.146	868.88	ppb	4.146	0.48%
Pb 220.353†	5589.0	556.94	ug/L	3.271	556.94	ppb	3.271	0.59%
S 181.975 Axial†	4804.0	5345.2	ug/L	33.37	5345.2	ppb	33.37	0.62%
Sb 206.836†	1820.7	452.08	ug/L	2.412	452.08	ppb	2.412	0.53%
Se 196.026†	697.4	502.59	ug/L	0.900	502.59	ppb	0.900	0.18%
Si 251.611†	398316.3	10460	ug/L	19.9	10460	ppb	19.9	0.19%
Sn 189.927†	3104.8	460.66	ug/L	3.586	460.66	ppb	3.586	0.78%
Sr 421.552†	179987.2	501.04	ug/L	5.726	501.04	ppb	5.726	1.14%
Ti 334.940†	1246847.6	1997.5	ug/L	2.59	1997.5	ppb	2.59	0.13%
Tl 190.801†	1954.1	459.61	ug/L	4.748	459.61	ppb	4.748	1.03%
U 409.014†	7973.3	227.45	ug/L	1.712	227.45	ppb	1.712	0.75%
V 292.402†	66438.8	508.60	ug/L	0.736	508.60	ppb	0.736	0.14%
Zn 213.857†	95367.7	728.30	ug/L	0.970	728.30	ppb	0.970	0.13%
SiO2†	401305.0	22634	ug/L	298.3	22634	ppb	298.3	1.32%

Sequence No.: 60
Sample ID: 1201871698|881347|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 85
Date Collected: 7/1/2009 23:32:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871698|881347|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6250.3	6250.3	86.2	%			23:34:26
1	Y RADIAL	5952.3	5952.3	98.12	%			23:34:26
1	Al 396.153Radial†	4091.5	4831.2	3878.2	ug/L	3878.2	ppb	23:34:26
1	Ca 317.933Radial†	1471.1	1676.8	2355.7	ug/L	2355.7	ppb	23:34:46
1	Fe 238.204 Radial†	2370.8	2713.8	10572	ug/L	10572	ppb	23:34:46
1	K 766.490 Radial†	6622.5	4834.4	906.92	ug/L	906.92	ppb	23:34:26
1	Mg 279.077 IEC†	31.2	33.9	785.33	ug/L	785.33	ppb	23:34:46
1	Na 589.592 Radial†	7862.3	6039.8	321.78	ug/L	321.78	ppb	23:34:26
1	Sr 421.552†	3360.4	3965.6	11.019	ug/L	11.019	ppb	23:34:26
1	Sc 361.383	751657.7	751657.7	95.636	%			23:35:43
1	Y 371.029	610136.6	610136.6	104.49	%			23:35:43
1	Ag 328.068†	264.2	-432.0	1.1932	ug/L	1.1932	ppb	23:35:43
1	As 188.979†	-28.4	5.2	4.7963	ug/L	4.7963	ppb	23:36:03
1	B 249.677†	-519.1	281.3	5.2467	ug/L	5.2467	ppb	23:36:03
1	Ba 233.527†	6868.6	7162.5	43.206	ug/L	43.206	ppb	23:36:03
1	Be 313.107†	-4663.7	44.7	0.5915	ug/L	0.5915	ppb	23:35:43
1	Cd 226.502†	-193.5	90.3	-0.2725	ug/L	-0.2725	ppb	23:36:03
1	Co 228.616†	28.4	129.5	1.2488	ug/L	1.2488	ppb	23:36:03
1	Cr 267.716†	1820.9	1910.5	22.831	ug/L	22.831	ppb	23:36:03
1	Cu 324.752†	10661.6	5242.4	17.014	ug/L	17.014	ppb	23:35:43
1	Mn 257.610†	396276.5	413595.3	388.76	ug/L	388.76	ppb	23:35:43
1	Mo 202.031†	110.1	104.6	6.9223	ug/L	6.9223	ppb	23:36:03
1	Ni 231.604†	709.5	576.5	12.955	ug/L	12.955	ppb	23:36:03
1	P 214.914†	511.1	238.5	88.763	ug/L	88.763	ppb	23:36:03
1	Pb 220.353†	165.6	199.9	19.571	ug/L	19.571	ppb	23:36:03
1	S 181.975 Axial†	216.0	121.0	134.08	ug/L	134.08	ppb	23:36:03
1	Sb 206.836†	54.2	2.0	-0.5376	ug/L	-0.5376	ppb	23:36:03
1	Se 196.026†	-101.0	-73.8	4.5673	ug/L	4.5673	ppb	23:36:03
1	Si 251.611†	38008.7	39257.6	1032.2	ug/L	1032.2	ppb	23:35:43
1	Sn 189.927†	2.7	-10.1	-0.4532	ug/L	-0.4532	ppb	23:36:03
1	Ti 334.940†	146199.9	154342.3	247.33	ug/L	247.33	ppb	23:35:43
1	Tl 190.801†	-74.4	-17.1	0.2272	ug/L	0.2272	ppb	23:36:03
1	U 409.014†	-6426.4	-1451.8	-44.354	ug/L	-44.354	ppb	23:35:43
1	V 292.402†	-702.7	964.4	5.6994	ug/L	5.6994	ppb	23:35:43
1	Zn 213.857†	7323.8	6626.7	50.128	ug/L	50.128	ppb	23:36:03
1	SiO2†	38701.3	39983.9	2258.2	ug/L	2258.2	ppb	23:37:00
2	Sc Radial	6612.7	6612.7	91.2	%			23:34:52
2	Y RADIAL	6287.7	6287.7	103.6	%			23:34:52
2	Al 396.153Radial†	4410.1	4920.4	3949.8	ug/L	3949.8	ppb	23:34:52
2	Ca 317.933Radial†	1515.0	1631.4	2291.9	ug/L	2291.9	ppb	23:35:12
2	Fe 238.204 Radial†	2444.7	2644.1	10300	ug/L	10300	ppb	23:35:12
2	K 766.490 Radial†	6898.0	4715.5	884.33	ug/L	884.33	ppb	23:34:52
2	Mg 279.077 IEC†	27.8	28.1	649.89	ug/L	649.89	ppb	23:35:12
2	Na 589.592 Radial†	8438.3	6171.5	328.79	ug/L	328.79	ppb	23:34:52
2	Sr 421.552†	3629.7	4047.2	11.247	ug/L	11.247	ppb	23:34:52
2	Sc 361.383	749791.9	749791.9	95.398	%			23:36:09
2	Y 371.029	609279.3	609279.3	104.35	%			23:36:09
2	Ag 328.068†	261.5	-434.1	1.0906	ug/L	1.0906	ppb	23:36:09
2	As 188.979†	-36.7	-3.6	2.1934	ug/L	2.1934	ppb	23:36:29
2	B 249.677†	-553.4	243.9	4.4705	ug/L	4.4705	ppb	23:36:29
2	Ba 233.527†	6888.0	7200.7	43.438	ug/L	43.438	ppb	23:36:29
2	Be 313.107†	-4813.0	-123.9	0.5456	ug/L	0.5456	ppb	23:36:09
2	Cd 226.502†	-205.7	77.0	-0.3813	ug/L	-0.3813	ppb	23:36:29
2	Co 228.616†	39.3	140.9	1.4067	ug/L	1.4067	ppb	23:36:29
2	Cr 267.716†	1814.7	1908.7	22.802	ug/L	22.802	ppb	23:36:29
2	Cu 324.752†	10827.6	5444.1	17.629	ug/L	17.629	ppb	23:36:09
2	Mn 257.610†	406310.5	425144.4	399.55	ug/L	399.55	ppb	23:36:09
2	Mo 202.031†	124.5	120.0	7.8225	ug/L	7.8225	ppb	23:36:29
2	Ni 231.604†	703.8	572.3	12.861	ug/L	12.861	ppb	23:36:29

2	P 214.914†	527.5	257.1	96.568	ug/L	96.568	ppb	23:36:29
2	Pb 220.353†	142.9	176.5	17.296	ug/L	17.296	ppb	23:36:29
2	S 181.975 Axial†	215.3	120.8	133.79	ug/L	133.79	ppb	23:36:29
2	Sb 206.836†	55.2	3.2	-0.2724	ug/L	-0.2724	ppb	23:36:29
2	Se 196.026†	-96.3	-69.2	5.6025	ug/L	5.6025	ppb	23:36:29
2	Si 251.611†	39172.3	40576.2	1066.9	ug/L	1066.9	ppb	23:36:09
2	Sn 189.927†	-5.0	-18.2	-1.6548	ug/L	-1.6548	ppb	23:36:29
2	Ti 334.940†	150482.7	159212.1	255.13	ug/L	255.13	ppb	23:36:09
2	Tl 190.801†	-68.2	-10.8	1.7357	ug/L	1.7357	ppb	23:36:29
2	U 409.014†	-6188.1	-1218.6	-37.414	ug/L	-37.414	ppb	23:36:09
2	V 292.402†	-693.7	972.0	5.8103	ug/L	5.8103	ppb	23:36:09
2	Zn 213.857†	7327.2	6649.3	50.336	ug/L	50.336	ppb	23:36:29
2	SiO2†	38793.9	40181.7	2269.4	ug/L	2269.4	ppb	23:37:05
3	Sc Radial	7195.8	7195.8	99.2	%			23:35:17
3	Y RADIAL	6828.2	6828.2	112.6	%			23:35:17
3	Al 396.153Radial†	4241.2	4358.2	3498.5	ug/L	3498.5	ppb	23:35:17
3	Ca 317.933Radial†	1499.1	1480.6	2080.1	ug/L	2080.1	ppb	23:35:37
3	Fe 238.204 Radial†	2420.2	2402.1	9357.7	ug/L	9357.7	ppb	23:35:37
3	K 766.490 Radial†	6776.0	3979.4	745.59	ug/L	745.59	ppb	23:35:17
3	Mg 279.077 IEC†	27.1	25.0	578.57	ug/L	578.57	ppb	23:35:37
3	Na 589.592 Radial†	8184.6	5165.8	275.21	ug/L	275.21	ppb	23:35:17
3	Sr 421.552†	3494.7	3588.6	9.9723	ug/L	9.9723	ppb	23:35:17
3	Sc 361.383	742617.3	742617.3	94.486	%			23:36:34
3	Y 371.029	603746.6	603746.6	103.40	%			23:36:34
3	Ag 328.068†	198.6	-498.1	0.4738	ug/L	0.4738	ppb	23:36:34
3	As 188.979†	-33.6	-0.7	2.8561	ug/L	2.8561	ppb	23:36:54
3	B 249.677†	-585.3	204.7	3.7019	ug/L	3.7019	ppb	23:36:54
3	Ba 233.527†	6953.6	7339.9	44.285	ug/L	44.285	ppb	23:36:54
3	Be 313.107†	-4758.2	-114.6	0.5513	ug/L	0.5513	ppb	23:36:34
3	Cd 226.502†	-210.3	70.0	-0.3443	ug/L	-0.3443	ppb	23:36:54
3	Co 228.616†	18.6	119.5	1.1043	ug/L	1.1043	ppb	23:36:54
3	Cr 267.716†	1851.8	1966.3	23.468	ug/L	23.468	ppb	23:36:54
3	Cu 324.752†	10828.1	5554.3	17.920	ug/L	17.920	ppb	23:36:34
3	Mn 257.610†	404765.3	427623.9	401.75	ug/L	401.75	ppb	23:36:34
3	Mo 202.031†	129.0	126.0	8.1176	ug/L	8.1176	ppb	23:36:54
3	Ni 231.604†	702.3	577.8	12.985	ug/L	12.985	ppb	23:36:54
3	P 214.914†	533.7	268.9	102.04	ug/L	102.04	ppb	23:36:54
3	Pb 220.353†	162.1	198.2	19.452	ug/L	19.452	ppb	23:36:54
3	S 181.975 Axial†	222.0	130.1	144.31	ug/L	144.31	ppb	23:36:54
3	Sb 206.836†	56.9	5.5	0.2880	ug/L	0.2880	ppb	23:36:54
3	Se 196.026†	-104.8	-79.1	-1.7121	ug/L	-1.7121	ppb	23:36:54
3	Si 251.611†	38789.4	40567.7	1066.8	ug/L	1066.8	ppb	23:36:34
3	Sn 189.927†	-6.8	-20.1	-2.0368	ug/L	-2.0368	ppb	23:36:54
3	Ti 334.940†	149575.9	159776.3	256.02	ug/L	256.02	ppb	23:36:34
3	Tl 190.801†	-74.7	-18.4	0.0569	ug/L	0.0569	ppb	23:36:54
3	U 409.014†	-6412.3	-1518.6	-46.188	ug/L	-46.188	ppb	23:36:34
3	V 292.402†	-594.2	1070.2	6.6850	ug/L	6.6850	ppb	23:36:34
3	Zn 213.857†	7418.0	6819.7	51.756	ug/L	51.756	ppb	23:36:54
3	SiO2†	38639.9	40411.6	2282.5	ug/L	2282.5	ppb	23:37:10

Mean Data: 1201871698|881347|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	748022.3	95.173	%	0.6073				0.64%
Sc Radial	6686.2	92.2	%	6.58				7.13%
Y 371.029	607720.8	104.08	%	0.594				0.57%
Y RADIAL	6356.1	104.8	%	7.28				6.95%
Ag 328.068†	-454.7	0.9192	ug/L	0.38911	0.9192	ppb	0.38911	42.33%
Al 396.153Radial†	4703.2	3775.5	ug/L	242.55	3775.5	ppb	242.55	6.42%
As 188.979†	0.3	3.2819	ug/L	1.35267	3.2819	ppb	1.35267	41.22%
B 249.677†	243.3	4.4730	ug/L	0.77243	4.4730	ppb	0.77243	17.27%
Ba 233.527†	7234.4	43.643	ug/L	0.5676	43.643	ppb	0.5676	1.30%
Be 313.107†	-64.6	0.5628	ug/L	0.02500	0.5628	ppb	0.02500	4.44%
Ca 317.933Radial†	1596.2	2242.6	ug/L	144.27	2242.6	ppb	144.27	6.43%
Cd 226.502†	79.1	-0.3327	ug/L	0.05532	-0.3327	ppb	0.05532	16.63%
Co 228.616†	130.0	1.2533	ug/L	0.15124	1.2533	ppb	0.15124	12.07%
Cr 267.716†	1928.5	23.034	ug/L	0.3767	23.034	ppb	0.3767	1.64%
Cu 324.752†	5413.6	17.521	ug/L	0.4626	17.521	ppb	0.4626	2.64%
Fe 238.204 Radial†	2586.7	10077	ug/L	637.2	10077	ppb	637.2	6.32%
K 766.490 Radial†	4509.8	845.61	ug/L	87.360	845.61	ppb	87.360	10.33%

Mg 279.077 IEC†	29.0	671.26	ug/L	105.024	671.26	ppb	105.024	15.65%
Mn 257.610†	422121.2	396.69	ug/L	6.953	396.69	ppb	6.953	1.75%
Mo 202.031†	116.9	7.6208	ug/L	0.62263	7.6208	ppb	0.62263	8.17%
Na 589.592 Radial†	5792.3	308.60	ug/L	29.121	308.60	ppb	29.121	9.44%
Ni 231.604†	575.6	12.934	ug/L	0.0645	12.934	ppb	0.0645	0.50%
P 214.914†	254.8	95.789	ug/L	6.6718	95.789	ppb	6.6718	6.97%
Pb 220.353†	191.5	18.773	ug/L	1.2804	18.773	ppb	1.2804	6.82%
S 181.975 Axial†	124.0	137.39	ug/L	5.992	137.39	ppb	5.992	4.36%
Sb 206.836†	3.5	-0.1740	ug/L	0.42149	-0.1740	ppb	0.42149	242.25%
Se 196.026†	-74.0	2.8192	ug/L	3.95822	2.8192	ppb	3.95822	140.40%
Si 251.611†	40133.8	1055.3	ug/L	19.98	1055.3	ppb	19.98	1.89%
Sn 189.927†	-16.1	-1.3816	ug/L	0.82638	-1.3816	ppb	0.82638	59.81%
Sr 421.552†	3867.1	10.746	ug/L	0.6800	10.746	ppb	0.6800	6.33%
Ti 334.940†	157776.9	252.83	ug/L	4.778	252.83	ppb	4.778	1.89%
Tl 190.801†	-15.4	0.6733	ug/L	0.92403	0.6733	ppb	0.92403	137.24%
U 409.014†	-1396.3	-42.652	ug/L	4.6280	-42.652	ppb	4.6280	10.85%
V 292.402†	1002.2	6.0649	ug/L	0.53985	6.0649	ppb	0.53985	8.90%
Zn 213.857†	6698.6	50.740	ug/L	0.8860	50.740	ppb	0.8860	1.75%
SiO2†	40192.4	2270.1	ug/L	12.15	2270.1	ppb	12.15	0.54%

Sequence No.: 61
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/1/2009 23:39:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	6810.0	6810.0	93.9	%			23:41:33
1	Y RADIAL	6146.7	6146.7	101.3	%			23:41:33
1	Al 396.153Radial†	5863.0	6327.5	5058.4	ug/L	5058.4	ppb	23:41:13
1	Ca 317.933Radial†	3724.3	3936.0	5529.7	ug/L	5529.7	ppb	23:41:33
1	Fe 238.204 Radial†	1306.7	1354.4	5291.3	ug/L	5291.3	ppb	23:41:33
1	K 766.490 Radial†	27289.5	26212.9	4921.9	ug/L	4921.9	ppb	23:41:13
1	Mg 279.077 IEC†	225.6	237.9	5575.5	ug/L	5575.5	ppb	23:41:33
1	Na 589.592 Radial†	172721.8	180863.4	9635.8	ug/L	9635.8	ppb	23:41:13
1	Sr 421.552†	159592.5	170030.6	473.42	ug/L	473.42	ppb	23:41:13
1	Sc 361.383	756353.2	756353.2	96.233	%			23:42:32
1	Y 371.029	582511.9	582511.9	99.763	%			23:42:32
1	Ag 328.068†	93826.7	96791.0	500.66	ug/L	500.66	ppb	23:42:32
1	As 188.979†	1558.7	1654.6	490.32	ug/L	490.32	ppb	23:42:52
1	B 249.677†	21223.3	22878.0	483.41	ug/L	483.41	ppb	23:42:32
1	Ba 233.527†	78331.5	81378.0	492.35	ug/L	492.35	ppb	23:42:32
1	Be 313.107†	1246653.7	1300371.1	494.39	ug/L	494.39	ppb	23:42:32
1	Cd 226.502†	43705.2	45708.5	481.44	ug/L	481.44	ppb	23:42:52
1	Co 228.616†	31695.7	33036.1	484.50	ug/L	484.50	ppb	23:42:52
1	Cr 267.716†	40283.4	41866.6	495.72	ug/L	495.72	ppb	23:42:32
1	Cu 324.752†	157706.9	157974.0	494.59	ug/L	494.59	ppb	23:42:32
1	Mn 257.610†	508170.3	527296.4	494.52	ug/L	494.52	ppb	23:42:32
1	Mo 202.031†	8088.0	8394.1	500.49	ug/L	500.49	ppb	23:42:52
1	Ni 231.604†	21176.8	21840.3	490.52	ug/L	490.52	ppb	23:42:52
1	P 214.914†	5942.9	5879.5	2352.4	ug/L	2352.4	ppb	23:42:52
1	Pb 220.353†	4806.3	5021.1	499.09	ug/L	499.09	ppb	23:42:52
1	S 181.975 Axial†	949.8	882.1	981.95	ug/L	981.95	ppb	23:42:52
1	Sb 206.836†	1944.9	1966.3	495.34	ug/L	495.34	ppb	23:42:52
1	Se 196.026†	1084.3	1158.5	503.45	ug/L	503.45	ppb	23:42:52
1	Si 251.611†	92585.9	95724.3	2501.0	ug/L	2501.0	ppb	23:42:32
1	Sn 189.927†	3253.1	3367.5	493.84	ug/L	493.84	ppb	23:42:52
1	Ti 334.940†	301217.2	314478.3	503.59	ug/L	503.59	ppb	23:42:32
1	Tl 190.801†	2092.4	2235.0	498.65	ug/L	498.65	ppb	23:42:52
1	U 409.014†	10472.3	16150.1	476.88	ug/L	476.88	ppb	23:42:32
1	V 292.402†	59645.2	63679.0	497.53	ug/L	497.53	ppb	23:42:32
1	Zn 213.857†	62367.0	63776.9	489.79	ug/L	489.79	ppb	23:42:32
1	SiO2†	93144.5	96306.9	5403.6	ug/L	5403.6	ppb	23:43:52
2	Sc Radial	6891.7	6891.7	95.0	%			23:41:58
2	Y RADIAL	6206.9	6206.9	102.3	%			23:41:58
2	Al 396.153Radial†	5927.2	6321.0	5053.1	ug/L	5053.1	ppb	23:41:38
2	Ca 317.933Radial†	3748.8	3914.8	5499.9	ug/L	5499.9	ppb	23:41:58
2	Fe 238.204 Radial†	1318.8	1350.7	5276.9	ug/L	5276.9	ppb	23:41:58
2	K 766.490 Radial†	27579.9	26174.0	4914.6	ug/L	4914.6	ppb	23:41:38
2	Mg 279.077 IEC†	226.8	236.4	5540.3	ug/L	5540.3	ppb	23:41:58
2	Na 589.592 Radial†	173290.3	179281.0	9551.5	ug/L	9551.5	ppb	23:41:38
2	Sr 421.552†	160177.4	168631.2	469.52	ug/L	469.52	ppb	23:41:38
2	Sc 361.383	754695.0	754695.0	96.022	%			23:42:59
2	Y 371.029	581069.1	581069.1	99.516	%			23:42:59
2	Ag 328.068†	93467.6	96631.2	499.84	ug/L	499.84	ppb	23:42:59
2	As 188.979†	1568.4	1668.3	494.36	ug/L	494.36	ppb	23:43:19
2	B 249.677†	21090.6	22788.3	481.50	ug/L	481.50	ppb	23:42:59
2	Ba 233.527†	78285.8	81509.2	493.14	ug/L	493.14	ppb	23:42:59
2	Be 313.107†	1244162.5	1300623.0	494.49	ug/L	494.49	ppb	23:42:59
2	Cd 226.502†	43765.9	45871.5	483.16	ug/L	483.16	ppb	23:43:19
2	Co 228.616†	31742.2	33156.9	486.28	ug/L	486.28	ppb	23:43:19
2	Cr 267.716†	39987.5	41650.5	493.17	ug/L	493.17	ppb	23:42:59
2	Cu 324.752†	156758.3	157346.2	492.62	ug/L	492.62	ppb	23:42:59
2	Mn 257.610†	504579.5	524717.1	492.10	ug/L	492.10	ppb	23:42:59
2	Mo 202.031†	8104.7	8429.9	502.62	ug/L	502.62	ppb	23:43:19
2	Ni 231.604†	21165.9	21877.3	491.35	ug/L	491.35	ppb	23:43:19

2	P 214.914†	5965.9	5917.1	2368.5	ug/L	2368.5 ppb	23:43:19
2	Pb 220.353†	4809.4	5035.4	500.51	ug/L	500.51 ppb	23:43:19
2	S 181.975 Axial†	952.4	887.0	987.42	ug/L	987.42 ppb	23:43:19
2	Sb 206.836†	1936.7	1962.2	494.50	ug/L	494.50 ppb	23:43:19
2	Se 196.026†	1098.4	1175.7	510.61	ug/L	510.61 ppb	23:43:19
2	Si 251.611†	92206.3	95540.3	2496.0	ug/L	2496.0 ppb	23:42:59
2	Sn 189.927†	3270.5	3393.0	497.57	ug/L	497.57 ppb	23:43:19
2	Ti 334.940†	300360.5	314273.8	503.26	ug/L	503.26 ppb	23:42:59
2	Tl 190.801†	2095.0	2242.4	500.27	ug/L	500.27 ppb	23:43:19
2	U 409.014†	10262.2	15955.2	471.11	ug/L	471.11 ppb	23:42:59
2	V 292.402†	59584.4	63751.8	498.12	ug/L	498.12 ppb	23:42:59
2	Zn 213.857†	62130.2	63672.6	488.98	ug/L	488.98 ppb	23:42:59
2	SiO2†	93564.9	96957.4	5440.2	ug/L	5440.2 ppb	23:43:57
3	Sc Radial	6834.6	6834.6	94.2	%		23:42:23
3	Y RADIAL	6182.3	6182.3	101.9	%		23:42:23
3	Al 396.153Radial†	5919.2	6364.7	5088.1	ug/L	5088.1 ppb	23:42:03
3	Ca 317.933Radial†	3718.7	3915.9	5501.4	ug/L	5501.4 ppb	23:42:23
3	Fe 238.204 Radial†	1306.1	1348.8	5269.7	ug/L	5269.7 ppb	23:42:23
3	K 766.490 Radial†	27475.9	26306.3	4939.5	ug/L	4939.5 ppb	23:42:03
3	Mg 279.077 IEC†	221.8	233.0	5461.2	ug/L	5461.2 ppb	23:42:23
3	Na 589.592 Radial†	173341.9	180861.0	9635.7	ug/L	9635.7 ppb	23:42:03
3	Sr 421.552†	160413.2	170291.2	474.14	ug/L	474.14 ppb	23:42:03
3	Sc 361.383	753926.6	753926.6	95.925	%		23:43:26
3	Y 371.029	580682.1	580682.1	99.450	%		23:43:26
3	Ag 328.068†	93231.3	96484.0	499.08	ug/L	499.08 ppb	23:43:26
3	As 188.979†	1573.9	1675.7	496.53	ug/L	496.53 ppb	23:43:46
3	B 249.677†	21161.7	22884.8	483.54	ug/L	483.54 ppb	23:43:26
3	Ba 233.527†	78188.3	81490.7	493.02	ug/L	493.02 ppb	23:43:26
3	Be 313.107†	1242271.9	1299972.6	494.24	ug/L	494.24 ppb	23:43:26
3	Cd 226.502†	43829.9	45984.7	484.36	ug/L	484.36 ppb	23:43:46
3	Co 228.616†	31774.0	33223.7	487.27	ug/L	487.27 ppb	23:43:46
3	Cr 267.716†	39967.1	41671.7	493.42	ug/L	493.42 ppb	23:43:26
3	Cu 324.752†	156270.2	157003.8	491.55	ug/L	491.55 ppb	23:43:26
3	Mn 257.610†	504174.1	524830.1	492.21	ug/L	492.21 ppb	23:43:26
3	Mo 202.031†	8118.6	8453.0	504.00	ug/L	504.00 ppb	23:43:46
3	Ni 231.604†	21190.2	21925.1	492.43	ug/L	492.43 ppb	23:43:46
3	P 214.914†	5983.0	5941.3	2378.8	ug/L	2378.8 ppb	23:43:46
3	Pb 220.353†	4809.9	5040.9	501.07	ug/L	501.07 ppb	23:43:46
3	S 181.975 Axial†	953.9	889.5	990.25	ug/L	990.25 ppb	23:43:46
3	Sb 206.836†	1961.7	1990.4	501.55	ug/L	501.55 ppb	23:43:46
3	Se 196.026†	1086.6	1164.5	505.92	ug/L	505.92 ppb	23:43:46
3	Si 251.611†	91930.4	95350.6	2491.0	ug/L	2491.0 ppb	23:43:26
3	Sn 189.927†	3281.1	3407.5	499.70	ug/L	499.70 ppb	23:43:46
3	Ti 334.940†	299627.0	313827.9	502.55	ug/L	502.55 ppb	23:43:26
3	Tl 190.801†	2089.0	2238.4	499.38	ug/L	499.38 ppb	23:43:46
3	U 409.014†	10134.7	15833.2	467.49	ug/L	467.49 ppb	23:43:26
3	V 292.402†	59315.4	63534.6	496.45	ug/L	496.45 ppb	23:43:26
3	Zn 213.857†	62204.2	63815.7	490.09	ug/L	490.09 ppb	23:43:26
3	SiO2†	91991.6	95416.6	5353.0	ug/L	5353.0 ppb	23:44:02

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	754991.6	96.060	%	0.1578				0.16%
Sc Radial	6845.5	94.4	%	0.58				0.61%
Y 371.029	581421.0	99.577	%	0.1652				0.17%
Y RADIAL	6178.6	101.8	%	0.50				0.49%
Ag 328.068†	96635.4	499.86	ug/L	0.791	499.86	ppb	0.791	0.16%
QC value within limits for Ag 328.068 Recovery = 99.97%								
Al 396.153Radial†	6337.8	5066.5	ug/L	18.87	5066.5	ppb	18.87	0.37%
QC value within limits for Al 396.153Radial Recovery = 101.33%								
As 188.979†	1666.2	493.74	ug/L	3.150	493.74	ppb	3.150	0.64%
QC value within limits for As 188.979 Recovery = 98.75%								
B 249.677†	22850.4	482.82	ug/L	1.146	482.82	ppb	1.146	0.24%
QC value within limits for B 249.677 Recovery = 96.56%								
Ba 233.527†	81459.3	492.84	ug/L	0.429	492.84	ppb	0.429	0.09%
QC value within limits for Ba 233.527 Recovery = 98.57%								
Be 313.107†	1300322.3	494.37	ug/L	0.125	494.37	ppb	0.125	0.03%
QC value within limits for Be 313.107 Recovery = 98.87%								
Ca 317.933Radial†	3922.2	5510.3	ug/L	16.79	5510.3	ppb	16.79	0.30%

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   QC value greater than the upper limit for Ca 317.933Radial  Recovery = 110.21%
Cd 226.502†            45854.9      482.99 ug/L        1.465      482.99 ppb          1.465   0.30%
   QC value within limits for Cd 226.502  Recovery = 96.60%
Co 228.616†            33138.9      486.02 ug/L        1.401      486.02 ppb          1.401   0.29%
   QC value within limits for Co 228.616  Recovery = 97.20%
Cr 267.716†            41729.6      494.10 ug/L        1.408      494.10 ppb          1.408   0.28%
   QC value within limits for Cr 267.716  Recovery = 98.82%
Cu 324.752†           157441.3      492.92 ug/L        1.540      492.92 ppb          1.540   0.31%
   QC value within limits for Cu 324.752  Recovery = 98.58%
Fe 238.204 Radial†      1351.3      5279.3 ug/L       11.02      5279.3 ppb          11.02   0.21%
   QC value within limits for Fe 238.204 Radial  Recovery = 105.59%
K 766.490 Radial†      26231.1      4925.3 ug/L       12.79      4925.3 ppb          12.79   0.26%
   QC value within limits for K 766.490 Radial  Recovery = 98.51%
Mg 279.077 IEC†          235.8      5525.7 ug/L       58.50      5525.7 ppb          58.50   1.06%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 110.51%
Mn 257.610†           525614.5      492.94 ug/L        1.366      492.94 ppb          1.366   0.28%
   QC value within limits for Mn 257.610  Recovery = 98.59%
Mo 202.031†             8425.6      502.37 ug/L        1.768      502.37 ppb          1.768   0.35%
   QC value within limits for Mo 202.031  Recovery = 100.47%
Na 589.592 Radial†    180335.1      9607.7 ug/L       48.64      9607.7 ppb          48.64   0.51%
   QC value within limits for Na 589.592 Radial  Recovery = 96.08%
Ni 231.604†            21880.9      491.43 ug/L        0.955      491.43 ppb          0.955   0.19%
   QC value within limits for Ni 231.604  Recovery = 98.29%
P 214.914†              5912.7      2366.6 ug/L       13.31      2366.6 ppb          13.31   0.56%
   QC value within limits for P 214.914  Recovery = 94.66%
Pb 220.353†             5032.5      500.23 ug/L        1.021      500.23 ppb          1.021   0.20%
   QC value within limits for Pb 220.353  Recovery = 100.05%
S 181.975 Axial†         886.2      986.54 ug/L        4.216      986.54 ppb          4.216   0.43%
   QC value within limits for S 181.975 Axial  Recovery = 98.65%
Sb 206.836†             1973.0      497.13 ug/L        3.852      497.13 ppb          3.852   0.77%
   QC value within limits for Sb 206.836  Recovery = 99.43%
Se 196.026†             1166.2      506.66 ug/L        3.639      506.66 ppb          3.639   0.72%
   QC value within limits for Se 196.026  Recovery = 101.33%
Si 251.611†            95538.4      2496.0 ug/L         4.99      2496.0 ppb           4.99   0.20%
   QC value within limits for Si 251.611  Recovery = 99.84%
Sn 189.927†             3389.3      497.04 ug/L        2.966      497.04 ppb          2.966   0.60%
   QC value within limits for Sn 189.927  Recovery = 99.41%
Sr 421.552†           169651.0      472.36 ug/L        2.486      472.36 ppb          2.486   0.53%
   QC value within limits for Sr 421.552  Recovery = 94.47%
Ti 334.940†           314193.3      503.13 ug/L        0.531      503.13 ppb          0.531   0.11%
   QC value within limits for Ti 334.940  Recovery = 100.63%
Tl 190.801†             2238.6      499.44 ug/L        0.813      499.44 ppb          0.813   0.16%
   QC value within limits for Tl 190.801  Recovery = 99.89%
U 409.014†             15979.5      471.83 ug/L        4.732      471.83 ppb          4.732   1.00%
   QC value within limits for U 409.014  Recovery = 94.37%
V 292.402†             63655.1      497.37 ug/L        0.846      497.37 ppb          0.846   0.17%
   QC value within limits for V 292.402  Recovery = 99.47%
Zn 213.857†            63755.1      489.62 ug/L        0.573      489.62 ppb          0.573   0.12%
   QC value within limits for Zn 213.857  Recovery = 97.92%
SiO2†                  96226.9      5398.9 ug/L       43.79      5398.9 ppb          43.79   0.81%
   QC value within limits for SiO2  Recovery = 100.96%
QC Failed.  Continue with analysis.
```

Sequence No.: 62
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/1/2009 23:46:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7158.9	7158.9	98.7	%			23:48:03
1	Y RADIAL	6535.7	6535.7	107.7	%			23:48:03
1	Al 396.153Radial†	21.0	104.8	84.081	ug/L	84.081	ppb	23:48:03
1	Ca 317.933Radial†	30.3	0.4	0.6204	ug/L	0.6204	ppb	23:48:23
1	Fe 238.204 Radial†	39.7	3.0	11.535	ug/L	11.535	ppb	23:48:23
1	K 766.490 Radial†	2768.2	-45.7	-8.5904	ug/L	-8.5904	ppb	23:48:03
1	Mg 279.077 IEC†	1.0	-1.3	-30.294	ug/L	-30.294	ppb	23:48:23
1	Na 589.592 Radial†	-347.9	-3435.9	-183.06	ug/L	-183.06	ppb	23:48:03
1	Sr 421.552†	-72.4	-7.1	-0.0198	ug/L	-0.0198	ppb	23:48:03
1	Sc 361.383	714946.6	714946.6	90.965	%			23:49:20
1	Y 371.029	559034.1	559034.1	95.743	%			23:49:20
1	Ag 328.068†	769.8	137.9	0.7206	ug/L	0.7206	ppb	23:49:20
1	As 188.979†	-33.7	-2.1	-0.6269	ug/L	-0.6269	ppb	23:49:40
1	B 249.677†	-708.8	44.9	0.9544	ug/L	0.9544	ppb	23:49:20
1	Ba 233.527†	69.6	56.9	0.3392	ug/L	0.3392	ppb	23:49:40
1	Be 313.107†	-4750.5	-301.0	-0.1147	ug/L	-0.1147	ppb	23:49:20
1	Cd 226.502†	-266.4	-0.3	-0.0047	ug/L	-0.0047	ppb	23:49:40
1	Co 228.616†	-112.0	-23.3	-0.3385	ug/L	-0.3385	ppb	23:49:40
1	Cr 267.716†	-114.2	-119.0	-1.4041	ug/L	-1.4041	ppb	23:49:20
1	Cu 324.752†	5750.7	416.1	1.3025	ug/L	1.3025	ppb	23:49:20
1	Mn 257.610†	801.4	116.5	0.1112	ug/L	0.1112	ppb	23:49:20
1	Mo 202.031†	25.1	17.0	1.0156	ug/L	1.0156	ppb	23:49:40
1	Ni 231.604†	121.8	-31.5	-0.7083	ug/L	-0.7083	ppb	23:49:40
1	P 214.914†	308.4	43.1	17.719	ug/L	17.719	ppb	23:49:40
1	Pb 220.353†	-38.1	-15.2	-1.4935	ug/L	-1.4935	ppb	23:49:40
1	S 181.975 Axial†	96.4	1.1	1.2509	ug/L	1.2509	ppb	23:49:40
1	Sb 206.836†	57.6	8.6	2.2091	ug/L	2.2091	ppb	23:49:40
1	Se 196.026†	-36.2	-8.0	-3.3144	ug/L	-3.3144	ppb	23:49:40
1	Si 251.611†	683.5	265.8	6.9566	ug/L	6.9566	ppb	23:49:40
1	Sn 189.927†	21.4	10.6	1.5479	ug/L	1.5479	ppb	23:49:40
1	Ti 334.940†	-1457.3	-131.2	-0.2016	ug/L	-0.2016	ppb	23:49:20
1	Tl 190.801†	-57.0	-2.0	-0.4257	ug/L	-0.4257	ppb	23:49:40
1	U 409.014†	-5345.3	-608.3	-18.022	ug/L	-18.022	ppb	23:49:20
1	V 292.402†	-1769.1	-245.7	-1.9206	ug/L	-1.9206	ppb	23:49:20
1	Zn 213.857†	1016.0	85.6	0.6661	ug/L	0.6661	ppb	23:49:40
1	SiO2†	722.5	310.8	17.483	ug/L	17.483	ppb	23:50:36
2	Sc Radial	6525.9	6525.9	90.0	%			23:48:28
2	Y RADIAL	5912.5	5912.5	97.46	%			23:48:28
2	Al 396.153Radial†	30.8	117.7	94.452	ug/L	94.452	ppb	23:48:28
2	Ca 317.933Radial†	27.3	0.1	0.0916	ug/L	0.0916	ppb	23:48:48
2	Fe 238.204 Radial†	41.0	8.3	32.319	ug/L	32.319	ppb	23:48:48
2	K 766.490 Radial†	2694.2	144.1	27.141	ug/L	27.141	ppb	23:48:28
2	Mg 279.077 IEC†	5.9	4.3	100.25	ug/L	100.25	ppb	23:48:48
2	Na 589.592 Radial†	-328.8	-3448.9	-183.74	ug/L	-183.74	ppb	23:48:28
2	Sr 421.552†	-67.7	-9.0	-0.0251	ug/L	-0.0251	ppb	23:48:28
2	Sc 361.383	716692.3	716692.3	91.187	%			23:49:45
2	Y 371.029	560466.5	560466.5	95.988	%			23:49:45
2	Ag 328.068†	581.1	-71.1	-0.3489	ug/L	-0.3489	ppb	23:49:45
2	As 188.979†	-31.8	0.0	0.0126	ug/L	0.0126	ppb	23:50:06
2	B 249.677†	-577.9	190.4	4.0436	ug/L	4.0436	ppb	23:49:45
2	Ba 233.527†	48.9	34.0	0.2033	ug/L	0.2033	ppb	23:50:06
2	Be 313.107†	-4819.1	-363.6	-0.1386	ug/L	-0.1386	ppb	23:49:45
2	Cd 226.502†	-290.1	-25.5	-0.2722	ug/L	-0.2722	ppb	23:50:06
2	Co 228.616†	-89.7	1.3	0.0229	ug/L	0.0229	ppb	23:50:06
2	Cr 267.716†	-61.0	-60.4	-0.7109	ug/L	-0.7109	ppb	23:49:45
2	Cu 324.752†	5805.5	460.8	1.4437	ug/L	1.4437	ppb	23:49:45
2	Mn 257.610†	849.4	166.9	0.1585	ug/L	0.1585	ppb	23:49:45
2	Mo 202.031†	25.7	17.6	1.0505	ug/L	1.0505	ppb	23:50:06
2	Ni 231.604†	157.2	6.9	0.1561	ug/L	0.1561	ppb	23:50:06

2	P 214.914†	298.6	31.5	12.819	ug/L	12.819 ppb	23:50:06
2	Pb 220.353†	-7.8	18.1	1.8113	ug/L	1.8113 ppb	23:50:06
2	S 181.975 Axial†	92.1	-3.9	-4.3622	ug/L	-4.3622 ppb	23:50:06
2	Sb 206.836†	57.9	8.8	2.2259	ug/L	2.2259 ppb	23:50:06
2	Se 196.026†	-29.5	-0.5	-0.1002	ug/L	-0.1002 ppb	23:50:06
2	Si 251.611†	671.6	250.9	6.5688	ug/L	6.5688 ppb	23:50:06
2	Sn 189.927†	13.6	1.9	0.2852	ug/L	0.2852 ppb	23:50:06
2	Ti 334.940†	-1498.9	-172.9	-0.2717	ug/L	-0.2717 ppb	23:49:45
2	Tl 190.801†	-54.6	0.8	0.1754	ug/L	0.1754 ppb	23:50:06
2	U 409.014†	-5142.2	-371.2	-11.001	ug/L	-11.001 ppb	23:49:45
2	V 292.402†	-1651.6	-112.1	-0.8760	ug/L	-0.8760 ppb	23:49:45
2	Zn 213.857†	1025.5	93.3	0.7137	ug/L	0.7137 ppb	23:50:06
2	SiO2†	765.5	356.0	20.047	ug/L	20.047 ppb	23:50:41
3	Sc Radial	7190.7	7190.7	99.1	%		23:48:53
3	Y RADIAL	6466.6	6466.6	106.6	%		23:48:53
3	Al 396.153Radial†	6.8	90.3	72.462	ug/L	72.462 ppb	23:48:53
3	Ca 317.933Radial†	21.8	-8.3	-11.629	ug/L	-11.629 ppb	23:49:13
3	Fe 238.204 Radial†	41.6	4.7	18.480	ug/L	18.480 ppb	23:49:13
3	K 766.490 Radial†	2729.0	-97.7	-18.381	ug/L	-18.381 ppb	23:48:53
3	Mg 279.077 IEC†	5.8	3.6	83.460	ug/L	83.460 ppb	23:49:13
3	Na 589.592 Radial†	-247.7	-3333.3	-177.59	ug/L	-177.59 ppb	23:48:53
3	Sr 421.552†	-61.8	3.9	0.0110	ug/L	0.0110 ppb	23:48:53
3	Sc 361.383	721377.3	721377.3	91.783	%		23:50:11
3	Y 371.029	563740.8	563740.8	96.549	%		23:50:11
3	Ag 328.068†	768.6	129.2	0.6747	ug/L	0.6747 ppb	23:50:11
3	As 188.979†	-30.8	1.4	0.3989	ug/L	0.3989 ppb	23:50:31
3	B 249.677†	-669.2	94.9	2.0158	ug/L	2.0158 ppb	23:50:11
3	Ba 233.527†	39.0	22.9	0.1350	ug/L	0.1350 ppb	23:50:31
3	Be 313.107†	-4893.7	-410.5	-0.1561	ug/L	-0.1561 ppb	23:50:11
3	Cd 226.502†	-279.7	-12.1	-0.1291	ug/L	-0.1291 ppb	23:50:31
3	Co 228.616†	-86.5	5.5	0.0839	ug/L	0.0839 ppb	23:50:31
3	Cr 267.716†	-15.6	-10.5	-0.1224	ug/L	-0.1224 ppb	23:50:11
3	Cu 324.752†	5830.1	446.2	1.3973	ug/L	1.3973 ppb	23:50:11
3	Mn 257.610†	785.8	91.6	0.0865	ug/L	0.0865 ppb	23:50:11
3	Mo 202.031†	24.1	15.7	0.9382	ug/L	0.9382 ppb	23:50:31
3	Ni 231.604†	168.0	17.7	0.3975	ug/L	0.3975 ppb	23:50:31
3	P 214.914†	311.3	43.2	17.727	ug/L	17.727 ppb	23:50:31
3	Pb 220.353†	-2.8	23.6	2.3515	ug/L	2.3515 ppb	23:50:31
3	S 181.975 Axial†	84.8	-12.5	-13.963	ug/L	-13.963 ppb	23:50:31
3	Sb 206.836†	57.5	8.0	2.0185	ug/L	2.0185 ppb	23:50:31
3	Se 196.026†	-28.4	0.8	0.4204	ug/L	0.4204 ppb	23:50:31
3	Si 251.611†	653.9	226.9	5.9487	ug/L	5.9487 ppb	23:50:31
3	Sn 189.927†	15.8	4.3	0.6258	ug/L	0.6258 ppb	23:50:31
3	Ti 334.940†	-1456.3	-115.8	-0.1811	ug/L	-0.1811 ppb	23:50:11
3	Tl 190.801†	-49.3	6.9	1.5399	ug/L	1.5399 ppb	23:50:31
3	U 409.014†	-5189.1	-385.7	-11.430	ug/L	-11.430 ppb	23:50:11
3	V 292.402†	-1713.5	-167.8	-1.3066	ug/L	-1.3066 ppb	23:50:11
3	Zn 213.857†	1031.5	92.5	0.7079	ug/L	0.7079 ppb	23:50:31
3	SiO2†	749.4	333.0	18.775	ug/L	18.775 ppb	23:50:46

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	717672.1	91.312	%	0.4231				0.46%
Sc Radial	6958.5	95.9	%	5.17				5.39%
Y 371.029	561080.5	96.093	%	0.4132				0.43%
Y RADIAL	6304.9	103.9	%	5.63				5.42%
Ag 328.068†	65.4	0.3488	ug/L	0.60465	0.3488	ppb	0.60465	173.36%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	104.3	83.665	ug/L	11.0007	83.665	ppb	11.0007	13.15%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.2	-0.0718	ug/L	0.51808	-0.0718	ppb	0.51808	721.58%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	110.0	2.3379	ug/L	1.56960	2.3379	ppb	1.56960	67.14%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	37.9	0.2258	ug/L	0.10396	0.2258	ppb	0.10396	46.04%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-358.4	-0.1365	ug/L	0.02081	-0.1365	ppb	0.02081	15.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.6	-3.6391	ug/L	6.92467	-3.6391	ppb	6.92467	190.29%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -12.6     -0.1354 ug/L       0.13385     -0.1354 ppb        0.13385  98.89%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -5.5     -0.0773 ug/L       0.22829     -0.0773 ppb        0.22829 295.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -63.3     -0.7458 ug/L       0.64159     -0.7458 ppb        0.64159  86.03%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              441.0      1.3812 ug/L       0.07195      1.3812 ppb        0.07195   5.21%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         5.3      20.778 ug/L       10.5811      20.778 ppb        10.5811  50.92%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          0.3      0.0568 ug/L      23.96121      0.0568 ppb       23.96121 >999.9%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            2.2      51.138 ug/L       71.0196      51.138 ppb        71.0196 138.88%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              125.0      0.1187 ug/L       0.03661      0.1187 ppb        0.03661  30.83%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               16.8      1.0014 ug/L       0.05745      1.0014 ppb        0.05745   5.74%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -3406.0     -181.46 ug/L         3.373     -181.46 ppb          3.373   1.86%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -2.3     -0.0516 ug/L       0.58145     -0.0516 ppb        0.58145 >999.9%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                39.3      16.088 ug/L        2.8309      16.088 ppb         2.8309  17.60%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                8.8      0.8898 ug/L       2.08155      0.8898 ppb        2.08155 233.94%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -5.1     -5.6914 ug/L       7.69364     -5.6914 ppb        7.69364 135.18%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                8.5      2.1512 ug/L       0.11518      2.1512 ppb        0.11518   5.35%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -2.6     -0.9981 ug/L       2.02280     -0.9981 ppb        2.02280 202.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              247.9      6.4913 ug/L       0.50839      6.4913 ppb        0.50839   7.83%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                5.6      0.8197 ug/L       0.65329      0.8197 ppb        0.65329  79.70%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -4.1     -0.0113 ug/L       0.01949     -0.0113 ppb        0.01949 172.62%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -139.9     -0.2181 ug/L       0.04754     -0.2181 ppb        0.04754  21.79%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.9      0.4298 ug/L       1.00719      0.4298 ppb        1.00719 234.32%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -455.1     -13.484 ug/L        3.9356     -13.484 ppb         3.9356  29.19%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -175.2     -1.3677 ug/L       0.52497     -1.3677 ppb        0.52497  38.38%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               90.5      0.6959 ug/L       0.02597      0.6959 ppb        0.02597   3.73%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    333.3      18.769 ug/L        1.2819      18.769 ppb         1.2819   6.83%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 63
Sample ID: 232509002|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 86
Date Collected: 7/1/2009 23:52:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509002|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7090.9	7090.9	97.8	%			23:55:10
1	Y RADIAL	7748.7	7748.7	127.7	%			23:54:50
1	Al 396.153Radial†	27322.2	28028.7	22501	ug/L	22501	ppb	23:54:50
1	Ca 317.933Radial†	6790.4	6915.0	9714.8	ug/L	9714.8	ppb	23:55:10
1	Fe 238.204 Radial†	18901.3	19295.0	75165	ug/L	75165	ppb	23:54:50
1	K 766.490 Radial†	29794.7	27624.0	5179.2	ug/L	5179.2	ppb	23:54:50
1	Mg 279.077 IEC†	198.7	200.9	4640.3	ug/L	4640.3	ppb	23:55:10
1	Na 589.592 Radial†	9743.0	6881.7	366.64	ug/L	366.64	ppb	23:54:50
1	Sr 421.552†	16879.5	17330.7	48.164	ug/L	48.164	ppb	23:54:50
1	Sc 361.383	778802.2	778802.2	99.090	%			23:56:07
1	Y 371.029	720141.1	720141.1	123.33	%			23:56:07
1	Ag 328.068†	-3287.3	-4025.7	3.7276	ug/L	3.7276	ppb	23:56:12
1	As 188.979†	-37.3	-2.8	22.534	ug/L	22.534	ppb	23:56:32
1	B 249.677†	3.2	827.3	12.355	ug/L	12.355	ppb	23:56:12
1	Ba 233.527†	48656.7	49084.2	296.14	ug/L	296.14	ppb	23:56:12
1	Be 313.107†	-5866.5	-999.1	3.8074	ug/L	3.8074	ppb	23:56:12
1	Cd 226.502†	367.3	663.3	-1.7542	ug/L	-1.7542	ppb	23:56:32
1	Co 228.616†	1179.3	1289.9	14.161	ug/L	14.161	ppb	23:56:32
1	Cr 267.716†	3468.6	3507.0	43.204	ug/L	43.204	ppb	23:56:32
1	Cu 324.752†	15952.9	10193.7	36.241	ug/L	36.241	ppb	23:56:12
1	Mn 257.610†	2928473.2	2954616.9	2777.2	ug/L	2777.2	ppb	23:56:07
1	Mo 202.031†	236.8	228.4	18.514	ug/L	18.514	ppb	23:56:32
1	Ni 231.604†	1292.9	1139.3	25.593	ug/L	25.593	ppb	23:56:32
1	P 214.914†	1975.4	1697.6	647.04	ug/L	647.04	ppb	23:56:32
1	Pb 220.353†	773.0	806.8	77.254	ug/L	77.254	ppb	23:56:32
1	S 181.975 Axial†	381.2	279.8	307.35	ug/L	307.35	ppb	23:56:32
1	Sb 206.836†	72.1	18.0	-0.3704	ug/L	-0.3704	ppb	23:56:32
1	Se 196.026†	-540.7	-513.8	36.676	ug/L	36.676	ppb	23:56:32
1	Si 251.611†	178775.1	179932.2	4731.0	ug/L	4731.0	ppb	23:56:12
1	Sn 189.927†	-13.2	-26.2	2.7538	ug/L	2.7538	ppb	23:56:32
1	Ti 334.940†	1112965.8	1124663.2	1801.9	ug/L	1801.9	ppb	23:56:07
1	Tl 190.801†	-196.9	-138.0	-1.8432	ug/L	-1.8432	ppb	23:56:32
1	U 409.014†	-13490.9	-8347.0	-256.61	ug/L	-256.61	ppb	23:56:07
1	V 292.402†	8215.2	9989.8	64.424	ug/L	64.424	ppb	23:56:12
1	Zn 213.857†	51519.3	50961.4	386.79	ug/L	386.79	ppb	23:56:12
1	SiO2†	179731.8	180899.8	10217	ug/L	10217	ppb	23:57:40
2	Sc Radial	7023.7	7023.7	96.8	%			23:55:35
2	Y RADIAL	7907.2	7907.2	130.3	%			23:55:15
2	Al 396.153Radial†	27521.7	28502.4	22881	ug/L	22881	ppb	23:55:15
2	Ca 317.933Radial†	6647.2	6833.6	9600.5	ug/L	9600.5	ppb	23:55:35
2	Fe 238.204 Radial†	19069.1	19653.6	76562	ug/L	76562	ppb	23:55:15
2	K 766.490 Radial†	29799.9	27921.3	5235.3	ug/L	5235.3	ppb	23:55:15
2	Mg 279.077 IEC†	199.5	203.7	4703.2	ug/L	4703.2	ppb	23:55:35
2	Na 589.592 Radial†	9815.4	7051.9	375.70	ug/L	375.70	ppb	23:55:15
2	Sr 421.552†	17030.8	17652.3	49.061	ug/L	49.061	ppb	23:55:15
2	Sc 361.383	784301.6	784301.6	99.789	%			23:56:38
2	Y 371.029	724549.0	724549.0	124.09	%			23:56:38
2	Ag 328.068†	-3287.9	-4003.1	4.2952	ug/L	4.2952	ppb	23:56:43
2	As 188.979†	-35.6	-0.8	23.415	ug/L	23.415	ppb	23:57:03
2	B 249.677†	-29.9	794.1	11.555	ug/L	11.555	ppb	23:56:43
2	Ba 233.527†	48891.4	48975.0	295.47	ug/L	295.47	ppb	23:56:43
2	Be 313.107†	-5855.9	-947.1	3.8339	ug/L	3.8339	ppb	23:56:43
2	Cd 226.502†	350.1	643.5	-2.1261	ug/L	-2.1261	ppb	23:57:03
2	Co 228.616†	1192.3	1294.6	14.204	ug/L	14.204	ppb	23:57:03
2	Cr 267.716†	3465.1	3478.9	42.902	ug/L	42.902	ppb	23:57:03
2	Cu 324.752†	15981.7	10109.6	36.058	ug/L	36.058	ppb	23:56:43
2	Mn 257.610†	2954864.3	2960340.7	2782.7	ug/L	2782.7	ppb	23:56:38
2	Mo 202.031†	237.2	227.2	18.531	ug/L	18.531	ppb	23:57:03
2	Ni 231.604†	1301.2	1138.6	25.576	ug/L	25.576	ppb	23:57:03

2	P 214.914†	1945.1	1653.3	627.65	ug/L	627.65 ppb	23:57:03
2	Pb 220.353†	772.5	800.8	76.605	ug/L	76.605 ppb	23:57:03
2	S 181.975 Axial†	377.2	273.1	299.87	ug/L	299.87 ppb	23:57:03
2	Sb 206.836†	87.3	32.8	3.3279	ug/L	3.3279 ppb	23:57:03
2	Se 196.026†	-552.4	-521.8	38.030	ug/L	38.030 ppb	23:57:03
2	Si 251.611†	178445.7	178337.1	4689.0	ug/L	4689.0 ppb	23:56:43
2	Sn 189.927†	-8.6	-21.6	3.5231	ug/L	3.5231 ppb	23:57:03
2	Ti 334.940†	1122626.7	1126468.7	1804.7	ug/L	1804.7 ppb	23:56:38
2	Tl 190.801†	-183.1	-122.8	1.5859	ug/L	1.5859 ppb	23:57:03
2	U 409.014†	-13679.8	-8440.8	-259.56	ug/L	-259.56 ppb	23:56:38
2	V 292.402†	8293.3	10009.9	64.376	ug/L	64.376 ppb	23:56:43
2	Zn 213.857†	51682.5	50760.3	385.08	ug/L	385.08 ppb	23:56:43
2	SiO2†	176491.4	176380.7	9961.2	ug/L	9961.2 ppb	23:57:45
3	Sc Radial	7105.9	7105.9	98.0	%		23:56:00
3	Y RADIAL	7930.1	7930.1	130.7	%		23:55:40
3	Al 396.153Radial†	27551.1	28203.3	22641	ug/L	22641 ppb	23:55:40
3	Ca 317.933Radial†	6708.8	6817.0	9577.2	ug/L	9577.2 ppb	23:56:00
3	Fe 238.204 Radial†	19146.3	19504.3	75980	ug/L	75980 ppb	23:55:40
3	K 766.490 Radial†	29952.2	27720.5	5197.5	ug/L	5197.5 ppb	23:55:40
3	Mg 279.077 IEC†	197.7	199.5	4606.0	ug/L	4606.0 ppb	23:56:00
3	Na 589.592 Radial†	9935.8	7057.4	376.00	ug/L	376.00 ppb	23:55:40
3	Sr 421.552†	17107.9	17527.4	48.713	ug/L	48.713 ppb	23:55:40
3	Sc 361.383	787371.6	787371.6	100.18	%		23:57:09
3	Y 371.029	727421.1	727421.1	124.58	%		23:57:09
3	Ag 328.068†	-3260.3	-3962.7	4.3158	ug/L	4.3158 ppb	23:57:14
3	As 188.979†	-42.8	-7.8	21.191	ug/L	21.191 ppb	23:57:34
3	B 249.677†	77.3	901.2	13.870	ug/L	13.870 ppb	23:57:14
3	Ba 233.527†	48952.9	48845.4	294.69	ug/L	294.69 ppb	23:57:14
3	Be 313.107†	-5837.3	-905.6	3.8378	ug/L	3.8378 ppb	23:57:14
3	Cd 226.502†	380.5	672.5	-1.7530	ug/L	-1.7530 ppb	23:57:34
3	Co 228.616†	1195.5	1293.1	14.199	ug/L	14.199 ppb	23:57:34
3	Cr 267.716†	3458.3	3458.6	42.649	ug/L	42.649 ppb	23:57:34
3	Cu 324.752†	16129.9	10195.1	36.292	ug/L	36.292 ppb	23:57:14
3	Mn 257.610†	2958485.8	2952410.3	2775.2	ug/L	2775.2 ppb	23:57:09
3	Mo 202.031†	227.5	216.5	17.857	ug/L	17.857 ppb	23:57:34
3	Ni 231.604†	1311.9	1144.1	25.701	ug/L	25.701 ppb	23:57:34
3	P 214.914†	1960.1	1660.7	631.08	ug/L	631.08 ppb	23:57:34
3	Pb 220.353†	741.7	767.0	73.264	ug/L	73.264 ppb	23:57:34
3	S 181.975 Axial†	370.1	264.6	290.36	ug/L	290.36 ppb	23:57:34
3	Sb 206.836†	74.1	19.2	-0.0218	ug/L	-0.0218 ppb	23:57:34
3	Se 196.026†	-542.7	-509.9	41.042	ug/L	41.042 ppb	23:57:34
3	Si 251.611†	179037.3	178230.3	4686.2	ug/L	4686.2 ppb	23:57:14
3	Sn 189.927†	-1.1	-14.1	4.5805	ug/L	4.5805 ppb	23:57:34
3	Ti 334.940†	1123845.1	1123298.5	1799.7	ug/L	1799.7 ppb	23:57:09
3	Tl 190.801†	-179.1	-118.1	2.5559	ug/L	2.5559 ppb	23:57:34
3	U 409.014†	-13594.0	-8301.6	-255.37	ug/L	-255.37 ppb	23:57:09
3	V 292.402†	8395.6	10079.6	65.000	ug/L	65.000 ppb	23:57:14
3	Zn 213.857†	51838.1	50713.8	384.78	ug/L	384.78 ppb	23:57:14
3	SiO2†	178203.6	177400.2	10019	ug/L	10019 ppb	23:57:50

Mean Data: 232509002|881347|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	783491.8	99.686	%	0.5524				0.55%
Sc Radial	7073.5	97.5	%	0.60				0.62%
Y 371.029	724037.1	124.00	%	0.628				0.51%
Y RADIAL	7862.0	129.6	%	1.63				1.26%
Ag 328.068†	-3997.2	4.1129	ug/L	0.33381	4.1129	ppb	0.33381	8.12%
Al 396.153Radial†	28244.8	22675	ug/L	192.3	22675	ppb	192.3	0.85%
As 188.979†	-3.8	22.380	ug/L	1.1196	22.380	ppb	1.1196	5.00%
B 249.677†	840.9	12.593	ug/L	1.1761	12.593	ppb	1.1761	9.34%
Ba 233.527†	48968.2	295.43	ug/L	0.723	295.43	ppb	0.723	0.24%
Be 313.107†	-950.6	3.8264	ug/L	0.01653	3.8264	ppb	0.01653	0.43%
Ca 317.933Radial†	6855.2	9630.8	ug/L	73.67	9630.8	ppb	73.67	0.76%
Cd 226.502†	659.8	-1.8778	ug/L	0.21505	-1.8778	ppb	0.21505	11.45%
Co 228.616†	1292.5	14.188	ug/L	0.0234	14.188	ppb	0.0234	0.16%
Cr 267.716†	3481.5	42.918	ug/L	0.2778	42.918	ppb	0.2778	0.65%
Cu 324.752†	10166.2	36.197	ug/L	0.1229	36.197	ppb	0.1229	0.34%
Fe 238.204 Radial†	19484.3	75902	ug/L	701.6	75902	ppb	701.6	0.92%
K 766.490 Radial†	27755.3	5204.0	ug/L	28.64	5204.0	ppb	28.64	0.55%

Mg 279.077 IEC†	201.4	4649.8	ug/L	49.28	4649.8	ppb	49.28	1.06%
Mn 257.610†	2955789.3	2778.4	ug/L	3.89	2778.4	ppb	3.89	0.14%
Mo 202.031†	224.0	18.301	ug/L	0.3841	18.301	ppb	0.3841	2.10%
Na 589.592 Radial†	6997.0	372.78	ug/L	5.322	372.78	ppb	5.322	1.43%
Ni 231.604†	1140.7	25.623	ug/L	0.0675	25.623	ppb	0.0675	0.26%
P 214.914†	1670.5	635.26	ug/L	10.347	635.26	ppb	10.347	1.63%
Pb 220.353†	791.5	75.708	ug/L	2.1409	75.708	ppb	2.1409	2.83%
S 181.975 Axial†	272.5	299.19	ug/L	8.515	299.19	ppb	8.515	2.85%
Sb 206.836†	23.4	0.9786	ug/L	2.04202	0.9786	ppb	2.04202	208.67%
Se 196.026†	-515.2	38.583	ug/L	2.2352	38.583	ppb	2.2352	5.79%
Si 251.611†	178833.2	4702.1	ug/L	25.09	4702.1	ppb	25.09	0.53%
Sn 189.927†	-20.6	3.6191	ug/L	0.91712	3.6191	ppb	0.91712	25.34%
Sr 421.552†	17503.5	48.646	ug/L	0.4522	48.646	ppb	0.4522	0.93%
Ti 334.940†	1124810.1	1802.1	ug/L	2.55	1802.1	ppb	2.55	0.14%
Tl 190.801†	-126.3	0.7662	ug/L	2.31126	0.7662	ppb	2.31126	301.65%
U 409.014†	-8363.1	-257.18	ug/L	2.154	-257.18	ppb	2.154	0.84%
V 292.402†	10026.4	64.600	ug/L	0.3470	64.600	ppb	0.3470	0.54%
Zn 213.857†	50811.8	385.55	ug/L	1.081	385.55	ppb	1.081	0.28%
SiO2†	178226.9	10066	ug/L	133.9	10066	ppb	133.9	1.33%

Sequence No.: 64
Sample ID: 232509003|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 87
Date Collected: 7/2/2009 00:00:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509003|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7503.7	7503.7	103	%			00:01:55
1	Y RADIAL	8426.8	8426.8	138.9	%			00:01:55
1	Al 396.153Radial†	18805.0	18259.4	14658	ug/L	14658	ppb	00:01:55
1	Ca 317.933Radial†	4439.0	4260.2	5985.2	ug/L	5985.2	ppb	00:01:55
1	Fe 238.204 Radial†	16818.3	16218.4	63180	ug/L	63180	ppb	00:01:55
1	K 766.490 Radial†	22145.1	18554.2	3469.6	ug/L	3469.6	ppb	00:01:55
1	Mg 279.077 IEC†	157.0	149.5	3445.2	ug/L	3445.2	ppb	00:02:15
1	Na 589.592 Radial†	8143.9	4788.0	255.09	ug/L	255.09	ppb	00:01:55
1	Sr 421.552†	10826.4	10530.5	29.264	ug/L	29.264	ppb	00:01:55
1	Sc 361.383	787711.2	787711.2	100.22	%			00:03:12
1	Y 371.029	761470.8	761470.8	130.41	%			00:03:12
1	Ag 328.068†	-2824.8	-3526.7	2.4129	ug/L	2.4129	ppb	00:03:17
1	As 188.979†	-42.8	-7.8	19.045	ug/L	19.045	ppb	00:03:37
1	B 249.677†	-178.0	646.4	9.3695	ug/L	9.3695	ppb	00:03:17
1	Ba 233.527†	34719.4	34622.6	208.83	ug/L	208.83	ppb	00:03:17
1	Be 313.107†	-7865.7	-2926.9	3.2842	ug/L	3.2842	ppb	00:03:17
1	Cd 226.502†	300.1	592.1	-1.1148	ug/L	-1.1148	ppb	00:03:37
1	Co 228.616†	655.0	753.3	6.2313	ug/L	6.2313	ppb	00:03:37
1	Cr 267.716†	1111.4	1115.4	14.642	ug/L	14.642	ppb	00:03:37
1	Cu 324.752†	10689.1	4759.6	18.545	ug/L	18.545	ppb	00:03:17
1	Mn 257.610†	3023328.6	3015835.6	2833.0	ug/L	2833.0	ppb	00:03:12
1	Mo 202.031†	136.5	125.7	11.610	ug/L	11.610	ppb	00:03:37
1	Ni 231.604†	823.7	656.5	14.747	ug/L	14.747	ppb	00:03:37
1	P 214.914†	1856.4	1556.3	598.71	ug/L	598.71	ppb	00:03:37
1	Pb 220.353†	700.7	725.8	68.828	ug/L	68.828	ppb	00:03:37
1	S 181.975 Axial†	316.3	210.7	231.95	ug/L	231.95	ppb	00:03:37
1	Sb 206.836†	67.5	12.7	-1.4181	ug/L	-1.4181	ppb	00:03:37
1	Se 196.026†	-492.2	-459.3	19.068	ug/L	19.068	ppb	00:03:37
1	Si 251.611†	202594.3	201657.9	5303.1	ug/L	5303.1	ppb	00:03:17
1	Sn 189.927†	20.6	7.6	6.4263	ug/L	6.4263	ppb	00:03:37
1	Ti 334.940†	1181693.7	1180534.7	1891.1	ug/L	1891.1	ppb	00:03:12
1	Tl 190.801†	-201.1	-139.9	-1.3168	ug/L	-1.3168	ppb	00:03:37
1	U 409.014†	-13956.9	-8657.9	-264.30	ug/L	-264.30	ppb	00:03:12
1	V 292.402†	4781.6	6470.1	38.716	ug/L	38.716	ppb	00:03:17
1	Zn 213.857†	43121.3	41994.0	318.67	ug/L	318.67	ppb	00:03:17
1	SiO2†	206155.5	205213.3	11592	ug/L	11592	ppb	00:04:45
2	Sc Radial	7335.3	7335.3	101	%			00:02:20
2	Y RADIAL	8301.0	8301.0	136.8	%			00:02:20
2	Al 396.153Radial†	18860.0	18730.8	15037	ug/L	15037	ppb	00:02:20
2	Ca 317.933Radial†	4468.3	4387.6	6164.2	ug/L	6164.2	ppb	00:02:20
2	Fe 238.204 Radial†	16912.5	16684.5	64995	ug/L	64995	ppb	00:02:20
2	K 766.490 Radial†	22194.6	19094.2	3571.5	ug/L	3571.5	ppb	00:02:20
2	Mg 279.077 IEC†	156.8	152.7	3519.8	ug/L	3519.8	ppb	00:02:40
2	Na 589.592 Radial†	8209.8	5033.8	268.18	ug/L	268.18	ppb	00:02:20
2	Sr 421.552†	10888.1	10831.6	30.101	ug/L	30.101	ppb	00:02:20
2	Sc 361.383	790925.4	790925.4	100.63	%			00:03:43
2	Y 371.029	763743.8	763743.8	130.80	%			00:03:43
2	Ag 328.068†	-2817.9	-3508.5	3.0835	ug/L	3.0835	ppb	00:03:48
2	As 188.979†	-47.4	-12.2	18.122	ug/L	18.122	ppb	00:04:08
2	B 249.677†	-61.0	763.4	11.732	ug/L	11.732	ppb	00:03:48
2	Ba 233.527†	34763.8	34525.8	208.24	ug/L	208.24	ppb	00:03:48
2	Be 313.107†	-7801.0	-2830.7	3.3253	ug/L	3.3253	ppb	00:03:48
2	Cd 226.502†	302.3	593.0	-1.3164	ug/L	-1.3164	ppb	00:04:08
2	Co 228.616†	658.3	753.9	6.2069	ug/L	6.2069	ppb	00:04:08
2	Cr 267.716†	1085.8	1085.4	14.325	ug/L	14.325	ppb	00:04:08
2	Cu 324.752†	10697.9	4724.9	18.542	ug/L	18.542	ppb	00:03:48
2	Mn 257.610†	3038494.4	3018647.1	2835.9	ug/L	2835.9	ppb	00:03:43
2	Mo 202.031†	119.5	108.2	10.691	ug/L	10.691	ppb	00:04:08
2	Ni 231.604†	837.8	667.1	14.985	ug/L	14.985	ppb	00:04:08

2	P 214.914†	1856.3	1548.7	594.18	ug/L	594.18 ppb	00:04:08
2	Pb 220.353†	707.2	729.4	69.086	ug/L	69.086 ppb	00:04:08
2	S 181.975 Axial†	310.9	204.1	224.44	ug/L	224.44 ppb	00:04:08
2	Sb 206.836†	76.9	21.8	0.8217	ug/L	0.8217 ppb	00:04:08
2	Se 196.026†	-483.9	-449.1	29.416	ug/L	29.416 ppb	00:04:08
2	Si 251.611†	203517.0	201753.3	5305.6	ug/L	5305.6 ppb	00:03:48
2	Sn 189.927†	11.6	-1.4	5.2595	ug/L	5.2595 ppb	00:04:08
2	Ti 334.940†	1187770.1	1181781.4	1893.1	ug/L	1893.1 ppb	00:03:43
2	Tl 190.801†	-195.0	-133.1	0.2480	ug/L	0.2480 ppb	00:04:08
2	U 409.014†	-13948.3	-8592.8	-262.59	ug/L	-262.59 ppb	00:03:43
2	V 292.402†	4802.9	6471.9	38.466	ug/L	38.466 ppb	00:03:48
2	Zn 213.857†	43259.6	41956.6	318.18	ug/L	318.18 ppb	00:03:48
2	SiO2†	201730.0	199979.7	11296	ug/L	11296 ppb	00:04:50
3	Sc Radial	7275.6	7275.6	100	%		00:02:45
3	Y RADIAL	8234.8	8234.8	135.7	%		00:02:45
3	Al 396.153Radial†	18790.7	18814.8	15104	ug/L	15104 ppb	00:02:45
3	Ca 317.933Radial†	4430.1	4385.9	6161.7	ug/L	6161.7 ppb	00:02:45
3	Fe 238.204 Radial†	16782.3	16692.0	65025	ug/L	65025 ppb	00:02:45
3	K 766.490 Radial†	22108.9	19188.9	3589.4	ug/L	3589.4 ppb	00:02:45
3	Mg 279.077 IEC†	155.1	152.3	3510.0	ug/L	3510.0 ppb	00:03:05
3	Na 589.592 Radial†	7987.1	4878.4	259.91	ug/L	259.91 ppb	00:02:45
3	Sr 421.552†	10829.5	10861.5	30.185	ug/L	30.185 ppb	00:02:45
3	Sc 361.383	781536.8	781536.8	99.437	%		00:04:14
3	Y 371.029	755506.3	755506.3	129.39	%		00:04:14
3	Ag 328.068†	-2820.5	-3544.7	2.9090	ug/L	2.9090 ppb	00:04:19
3	As 188.979†	-43.6	-8.9	19.081	ug/L	19.081 ppb	00:04:39
3	B 249.677†	-138.7	684.6	10.055	ug/L	10.055 ppb	00:04:19
3	Ba 233.527†	35012.0	35190.5	212.25	ug/L	212.25 ppb	00:04:19
3	Be 313.107†	-7708.6	-2830.9	3.3219	ug/L	3.3219 ppb	00:04:19
3	Cd 226.502†	290.7	584.9	-1.4054	ug/L	-1.4054 ppb	00:04:39
3	Co 228.616†	640.3	743.7	6.0625	ug/L	6.0625 ppb	00:04:39
3	Cr 267.716†	1114.3	1127.1	14.819	ug/L	14.819 ppb	00:04:39
3	Cu 324.752†	10623.1	4777.4	18.707	ug/L	18.707 ppb	00:04:19
3	Mn 257.610†	2999811.9	3016018.1	2833.4	ug/L	2833.4 ppb	00:04:14
3	Mo 202.031†	123.1	113.2	10.989	ug/L	10.989 ppb	00:04:39
3	Ni 231.604†	821.5	660.7	14.842	ug/L	14.842 ppb	00:04:39
3	P 214.914†	1862.4	1577.0	605.94	ug/L	605.94 ppb	00:04:39
3	Pb 220.353†	687.8	718.4	68.007	ug/L	68.007 ppb	00:04:39
3	S 181.975 Axial†	309.3	206.2	226.80	ug/L	226.80 ppb	00:04:39
3	Sb 206.836†	84.3	30.1	2.9040	ug/L	2.9040 ppb	00:04:39
3	Se 196.026†	-486.9	-457.8	25.868	ug/L	25.868 ppb	00:04:39
3	Si 251.611†	205423.5	206100.1	5419.9	ug/L	5419.9 ppb	00:04:19
3	Sn 189.927†	15.8	3.0	5.9106	ug/L	5.9106 ppb	00:04:39
3	Ti 334.940†	1172784.6	1180890.2	1891.7	ug/L	1891.7 ppb	00:04:14
3	Tl 190.801†	-207.2	-147.7	-3.0300	ug/L	-3.0300 ppb	00:04:39
3	U 409.014†	-13753.6	-8563.5	-261.73	ug/L	-261.73 ppb	00:04:14
3	V 292.402†	4845.7	6572.3	39.244	ug/L	39.244 ppb	00:04:19
3	Zn 213.857†	43479.6	42694.3	323.90	ug/L	323.90 ppb	00:04:19
3	SiO2†	201175.7	201830.3	11400	ug/L	11400 ppb	00:04:55

Mean Data: 232509003|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	786724.5	100.10	%	0.607				0.61%
Sc Radial	7371.5	102	%	1.6				1.60%
Y 371.029	760240.3	130.20	%	0.729				0.56%
Y RADIAL	8320.9	137.2	%	1.61				1.17%
Ag 328.068†	-3526.6	2.8018	ug/L	0.34792	2.8018	ppb	0.34792	12.42%
Al 396.153Radial†	18601.7	14933	ug/L	240.4	14933	ppb	240.4	1.61%
As 188.979†	-9.6	18.750	ug/L	0.5434	18.750	ppb	0.5434	2.90%
B 249.677†	698.1	10.386	ug/L	1.2156	10.386	ppb	1.2156	11.70%
Ba 233.527†	34779.6	209.77	ug/L	2.167	209.77	ppb	2.167	1.03%
Be 313.107†	-2862.9	3.3105	ug/L	0.02283	3.3105	ppb	0.02283	0.69%
Ca 317.933Radial†	4344.6	6103.7	ug/L	102.64	6103.7	ppb	102.64	1.68%
Cd 226.502†	590.0	-1.2789	ug/L	0.14892	-1.2789	ppb	0.14892	11.64%
Co 228.616†	750.3	6.1669	ug/L	0.09122	6.1669	ppb	0.09122	1.48%
Cr 267.716†	1109.3	14.595	ug/L	0.2501	14.595	ppb	0.2501	1.71%
Cu 324.752†	4754.0	18.598	ug/L	0.0948	18.598	ppb	0.0948	0.51%
Fe 238.204 Radial†	16531.7	64400	ug/L	1056.9	64400	ppb	1056.9	1.64%
K 766.490 Radial†	18945.8	3543.5	ug/L	64.66	3543.5	ppb	64.66	1.82%

Mg 279.077 IEC†	151.5	3491.7	ug/L	40.56	3491.7	ppb	40.56	1.16%
Mn 257.610†	3016833.6	2834.1	ug/L	1.55	2834.1	ppb	1.55	0.05%
Mo 202.031†	115.7	11.097	ug/L	0.4691	11.097	ppb	0.4691	4.23%
Na 589.592 Radial†	4900.1	261.06	ug/L	6.623	261.06	ppb	6.623	2.54%
Ni 231.604†	661.4	14.858	ug/L	0.1198	14.858	ppb	0.1198	0.81%
P 214.914†	1560.7	599.61	ug/L	5.928	599.61	ppb	5.928	0.99%
Pb 220.353†	724.5	68.640	ug/L	0.5635	68.640	ppb	0.5635	0.82%
S 181.975 Axial†	207.0	227.73	ug/L	3.841	227.73	ppb	3.841	1.69%
Sb 206.836†	21.5	0.7692	ug/L	2.16153	0.7692	ppb	2.16153	281.00%
Se 196.026†	-455.4	24.784	ug/L	5.2588	24.784	ppb	5.2588	21.22%
Si 251.611†	203170.4	5342.9	ug/L	66.74	5342.9	ppb	66.74	1.25%
Sn 189.927†	3.0	5.8655	ug/L	0.58472	5.8655	ppb	0.58472	9.97%
Sr 421.552†	10741.2	29.850	ug/L	0.5089	29.850	ppb	0.5089	1.70%
Ti 334.940†	1181068.8	1892.0	ug/L	1.03	1892.0	ppb	1.03	0.05%
Tl 190.801†	-140.2	-1.3663	ug/L	1.63954	-1.3663	ppb	1.63954	120.00%
U 409.014†	-8604.8	-262.87	ug/L	1.308	-262.87	ppb	1.308	0.50%
V 292.402†	6504.8	38.809	ug/L	0.3971	38.809	ppb	0.3971	1.02%
Zn 213.857†	42215.0	320.25	ug/L	3.169	320.25	ppb	3.169	0.99%
SiO2†	202341.1	11429	ug/L	149.9	11429	ppb	149.9	1.31%

Sequence No.: 65
Sample ID: 232509004|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 88
Date Collected: 7/2/2009 00:07:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509004|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6964.2	6964.2	96.0	%			00:09:19
1	Y RADIAL	7786.4	7786.4	128.3	%			00:08:59
1	Al 396.153Radial†	53290.5	55580.9	44621	ug/L	44621	ppb	00:08:59
1	Ca 317.933Radial†	45756.9	47621.5	66904	ug/L	66904	ppb	00:08:59
1	Fe 238.204 Radial†	19350.5	20114.6	78358	ug/L	78358	ppb	00:08:59
1	K 766.490 Radial†	45689.8	44731.8	8402.9	ug/L	8402.9	ppb	00:08:59
1	Mg 279.077 IEC†	313.1	323.7	7512.5	ug/L	7512.5	ppb	00:09:19
1	Na 589.592 Radial†	85912.8	86387.2	4602.4	ug/L	4602.4	ppb	00:08:59
1	Sr 421.552†	44653.5	46569.0	129.02	ug/L	129.02	ppb	00:08:59
1	Sc 361.383	774967.2	774967.2	98.602	%			00:10:17
1	Y 371.029	748181.8	748181.8	128.14	%			00:10:17
1	Ag 328.068†	-3230.3	-3984.4	4.1674	ug/L	4.1674	ppb	00:10:17
1	As 188.979†	-33.4	1.1	24.679	ug/L	24.679	ppb	00:10:37
1	B 249.677†	-23.8	800.0	11.520	ug/L	11.520	ppb	00:10:17
1	Ba 233.527†	73726.8	74752.9	451.11	ug/L	451.11	ppb	00:10:17
1	Be 313.107†	-5464.1	-620.4	4.1174	ug/L	4.1174	ppb	00:10:17
1	Cd 226.502†	395.5	693.7	-1.7867	ug/L	-1.7867	ppb	00:10:37
1	Co 228.616†	1647.9	1771.0	21.048	ug/L	21.048	ppb	00:10:37
1	Cr 267.716†	7065.4	7172.1	86.620	ug/L	86.620	ppb	00:10:37
1	Cu 324.752†	53771.0	48627.9	156.68	ug/L	156.68	ppb	00:10:17
1	Mn 257.610†	2201069.0	2231521.2	2100.1	ug/L	2100.1	ppb	00:10:17
1	Mo 202.031†	101.4	92.3	10.612	ug/L	10.612	ppb	00:10:37
1	Ni 231.604†	2603.9	2475.4	55.615	ug/L	55.615	ppb	00:10:37
1	P 214.914†	1623.2	1350.3	483.15	ug/L	483.15	ppb	00:10:37
1	Pb 220.353†	761.8	799.3	80.445	ug/L	80.445	ppb	00:10:37
1	S 181.975 Axial†	521.1	423.6	463.28	ug/L	463.28	ppb	00:10:37
1	Sb 206.836†	83.3	29.8	0.3469	ug/L	0.3469	ppb	00:10:37
1	Se 196.026†	-559.8	-535.9	39.507	ug/L	39.507	ppb	00:10:37
1	Si 251.611†	187639.0	189814.6	4990.3	ug/L	4990.3	ppb	00:10:17
1	Sn 189.927†	-150.3	-165.4	-11.511	ug/L	-11.511	ppb	00:10:37
1	Ti 334.940†	1151539.1	1169341.7	1876.7	ug/L	1876.7	ppb	00:10:17
1	Tl 190.801†	-146.8	-88.2	7.1487	ug/L	7.1487	ppb	00:10:37
1	U 409.014†	-13232.2	-8152.0	-251.31	ug/L	-251.31	ppb	00:10:17
1	V 292.402†	9734.1	11571.2	76.050	ug/L	76.050	ppb	00:10:37
1	Zn 213.857†	36191.1	35673.1	267.51	ug/L	267.51	ppb	00:10:17
1	SiO2†	187718.7	189897.6	10724	ug/L	10724	ppb	00:11:37
2	Sc Radial	7154.3	7154.3	98.6	%			00:09:44
2	Y RADIAL	8093.2	8093.2	133.4	%			00:09:24
2	Al 396.153Radial†	51493.4	52284.9	41974	ug/L	41974	ppb	00:09:24
2	Ca 317.933Radial†	44188.5	44765.7	62891	ug/L	62891	ppb	00:09:24
2	Fe 238.204 Radial†	18667.7	18887.1	73576	ug/L	73576	ppb	00:09:24
2	K 766.490 Radial†	44432.2	42193.0	7924.5	ug/L	7924.5	ppb	00:09:24
2	Mg 279.077 IEC†	305.9	307.8	7144.0	ug/L	7144.0	ppb	00:09:44
2	Na 589.592 Radial†	82942.3	80999.3	4315.4	ug/L	4315.4	ppb	00:09:24
2	Sr 421.552†	43040.0	43698.1	121.06	ug/L	121.06	ppb	00:09:24
2	Sc 361.383	775556.2	775556.2	98.677	%			00:10:44
2	Y 371.029	748450.8	748450.8	128.18	%			00:10:44
2	Ag 328.068†	-3212.6	-3963.9	2.8029	ug/L	2.8029	ppb	00:10:44
2	As 188.979†	-25.4	9.2	26.104	ug/L	26.104	ppb	00:11:04
2	B 249.677†	-122.6	699.9	9.7196	ug/L	9.7196	ppb	00:10:44
2	Ba 233.527†	73615.4	74583.2	450.11	ug/L	450.11	ppb	00:10:44
2	Be 313.107†	-5664.4	-819.1	4.0334	ug/L	4.0334	ppb	00:10:44
2	Cd 226.502†	390.3	688.1	-1.2889	ug/L	-1.2889	ppb	00:11:04
2	Co 228.616†	1642.0	1763.7	21.019	ug/L	21.019	ppb	00:11:04
2	Cr 267.716†	6987.0	7087.2	85.520	ug/L	85.520	ppb	00:11:04
2	Cu 324.752†	53703.1	48517.7	156.06	ug/L	156.06	ppb	00:10:44
2	Mn 257.610†	2196514.0	2225209.7	2093.6	ug/L	2093.6	ppb	00:10:44
2	Mo 202.031†	111.4	102.3	10.897	ug/L	10.897	ppb	00:11:04
2	Ni 231.604†	2560.0	2429.0	54.572	ug/L	54.572	ppb	00:11:04

2	P 214.914†	1605.4	1331.0	478.11	ug/L	478.11 ppb	00:11:04
2	Pb 220.353†	736.6	773.2	77.792	ug/L	77.792 ppb	00:11:04
2	S 181.975 Axial†	521.5	423.6	463.79	ug/L	463.79 ppb	00:11:04
2	Sb 206.836†	72.5	18.8	-2.4343	ug/L	-2.4343 ppb	00:11:04
2	Se 196.026†	-550.0	-525.6	27.721	ug/L	27.721 ppb	00:11:04
2	Si 251.611†	186854.0	188874.6	4965.8	ug/L	4965.8 ppb	00:10:44
2	Sn 189.927†	-175.0	-190.3	-15.919	ug/L	-15.919 ppb	00:11:04
2	Ti 334.940†	1150133.4	1167030.2	1872.8	ug/L	1872.8 ppb	00:10:44
2	Tl 190.801†	-180.4	-122.1	-0.4911	ug/L	-0.4911 ppb	00:11:04
2	U 409.014†	-13285.1	-8195.4	-252.01	ug/L	-252.01 ppb	00:10:44
2	V 292.402†	9749.0	11578.9	76.779	ug/L	76.779 ppb	00:11:04
2	Zn 213.857†	36122.9	35576.1	267.27	ug/L	267.27 ppb	00:10:44
2	SiO2†	186492.2	188510.0	10646	ug/L	10646 ppb	00:11:42
3	Sc Radial	7114.3	7114.3	98.1	%		00:10:09
3	Y RADIAL	8256.0	8256.0	136.1	%		00:09:49
3	Al 396.153Radial†	52137.2	53234.6	42737	ug/L	42737 ppb	00:09:49
3	Ca 317.933Radial†	44894.5	45737.2	64256	ug/L	64256 ppb	00:09:49
3	Fe 238.204 Radial†	18999.3	19331.5	75307	ug/L	75307 ppb	00:09:49
3	K 766.490 Radial†	45090.7	43117.4	8098.7	ug/L	8098.7 ppb	00:09:49
3	Mg 279.077 IEC†	306.7	310.3	7200.8	ug/L	7200.8 ppb	00:10:09
3	Na 589.592 Radial†	84119.0	82671.3	4404.5	ug/L	4404.5 ppb	00:09:49
3	Sr 421.552†	43780.1	44697.7	123.83	ug/L	123.83 ppb	00:09:49
3	Sc 361.383	767768.9	767768.9	97.686	%		00:11:11
3	Y 371.029	741828.9	741828.9	127.05	%		00:11:11
3	Ag 328.068†	-3121.1	-3903.3	3.6554	ug/L	3.6554 ppb	00:11:11
3	As 188.979†	-34.1	0.0	23.750	ug/L	23.750 ppb	00:11:31
3	B 249.677†	-65.4	757.1	10.815	ug/L	10.815 ppb	00:11:11
3	Ba 233.527†	73023.3	74733.8	451.01	ug/L	451.01 ppb	00:11:11
3	Be 313.107†	-5512.9	-722.3	4.0715	ug/L	4.0715 ppb	00:11:11
3	Cd 226.502†	396.7	698.8	-1.3781	ug/L	-1.3781 ppb	00:11:31
3	Co 228.616†	1661.5	1800.7	21.533	ug/L	21.533 ppb	00:11:31
3	Cr 267.716†	7054.8	7228.4	87.227	ug/L	87.227 ppb	00:11:31
3	Cu 324.752†	52978.0	48327.3	155.56	ug/L	155.56 ppb	00:11:11
3	Mn 257.610†	2177416.7	2228237.6	2096.7	ug/L	2096.7 ppb	00:11:11
3	Mo 202.031†	103.8	95.8	10.619	ug/L	10.619 ppb	00:11:31
3	Ni 231.604†	2581.0	2476.8	55.646	ug/L	55.646 ppb	00:11:31
3	P 214.914†	1616.2	1358.6	488.64	ug/L	488.64 ppb	00:11:31
3	Pb 220.353†	743.6	787.9	79.238	ug/L	79.238 ppb	00:11:31
3	S 181.975 Axial†	521.1	428.6	469.17	ug/L	469.17 ppb	00:11:31
3	Sb 206.836†	92.0	39.5	2.7448	ug/L	2.7448 ppb	00:11:31
3	Se 196.026†	-546.7	-527.9	32.594	ug/L	32.594 ppb	00:11:31
3	Si 251.611†	185176.4	189077.9	4971.0	ug/L	4971.0 ppb	00:11:11
3	Sn 189.927†	-148.2	-164.7	-11.907	ug/L	-11.907 ppb	00:11:31
3	Ti 334.940†	1138950.6	1167404.5	1873.5	ug/L	1873.5 ppb	00:11:11
3	Tl 190.801†	-165.3	-108.6	2.5438	ug/L	2.5438 ppb	00:11:31
3	U 409.014†	-13267.5	-8313.9	-255.74	ug/L	-255.74 ppb	00:11:11
3	V 292.402†	9775.8	11706.5	77.511	ug/L	77.511 ppb	00:11:31
3	Zn 213.857†	35680.8	35494.8	266.45	ug/L	266.45 ppb	00:11:11
3	SiO2†	187899.6	191867.7	10835	ug/L	10835 ppb	00:11:47

Mean Data: 232509004|881347|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	772764.1	98.321	%	0.5517				0.56%
Sc Radial	7077.6	97.6	%	1.38				1.42%
Y 371.029	746153.8	127.79	%	0.642				0.50%
Y RADIAL	8045.2	132.6	%	3.93				2.96%
Ag 328.068†	-3950.5	3.5419	ug/L	0.68931	3.5419	ppb	0.68931	19.46%
Al 396.153Radial†	53700.1	43111	ug/L	1362.1	43111	ppb	1362.1	3.16%
As 188.979†	3.4	24.844	ug/L	1.1856	24.844	ppb	1.1856	4.77%
B 249.677†	752.3	10.685	ug/L	0.9073	10.685	ppb	0.9073	8.49%
Ba 233.527†	74689.9	450.74	ug/L	0.552	450.74	ppb	0.552	0.12%
Be 313.107†	-720.6	4.0741	ug/L	0.04205	4.0741	ppb	0.04205	1.03%
Ca 317.933Radial†	46041.5	64684	ug/L	2039.9	64684	ppb	2039.9	3.15%
Cd 226.502†	693.5	-1.4846	ug/L	0.26539	-1.4846	ppb	0.26539	17.88%
Co 228.616†	1778.5	21.200	ug/L	0.2888	21.200	ppb	0.2888	1.36%
Cr 267.716†	7162.6	86.456	ug/L	0.8655	86.456	ppb	0.8655	1.00%
Cu 324.752†	48490.9	156.10	ug/L	0.560	156.10	ppb	0.560	0.36%
Fe 238.204 Radial†	19444.4	75747	ug/L	2421.0	75747	ppb	2421.0	3.20%
K 766.490 Radial†	43347.4	8142.0	ug/L	242.12	8142.0	ppb	242.12	2.97%

Mg 279.077 IEC†	314.0	7285.8	ug/L	198.41	7285.8	ppb	198.41	2.72%
Mn 257.610†	2228322.8	2096.8	ug/L	3.26	2096.8	ppb	3.26	0.16%
Mo 202.031†	96.8	10.709	ug/L	0.1624	10.709	ppb	0.1624	1.52%
Na 589.592 Radial†	83352.6	4440.8	ug/L	146.93	4440.8	ppb	146.93	3.31%
Ni 231.604†	2460.4	55.277	ug/L	0.6115	55.277	ppb	0.6115	1.11%
P 214.914†	1346.6	483.30	ug/L	5.262	483.30	ppb	5.262	1.09%
Pb 220.353†	786.8	79.159	ug/L	1.3283	79.159	ppb	1.3283	1.68%
S 181.975 Axial†	425.3	465.41	ug/L	3.267	465.41	ppb	3.267	0.70%
Sb 206.836†	29.3	0.2191	ug/L	2.59191	0.2191	ppb	2.59191	>999.9%
Se 196.026†	-529.8	33.274	ug/L	5.9220	33.274	ppb	5.9220	17.80%
Si 251.611†	189255.7	4975.7	ug/L	12.92	4975.7	ppb	12.92	0.26%
Sn 189.927†	-173.5	-13.113	ug/L	2.4388	-13.113	ppb	2.4388	18.60%
Sr 421.552†	44988.2	124.64	ug/L	4.038	124.64	ppb	4.038	3.24%
Ti 334.940†	1167925.5	1874.3	ug/L	2.10	1874.3	ppb	2.10	0.11%
Tl 190.801†	-106.3	3.0671	ug/L	3.84666	3.0671	ppb	3.84666	125.42%
U 409.014†	-8220.4	-253.02	ug/L	2.379	-253.02	ppb	2.379	0.94%
V 292.402†	11618.9	76.780	ug/L	0.7306	76.780	ppb	0.7306	0.95%
Zn 213.857†	35581.3	267.08	ug/L	0.553	267.08	ppb	0.553	0.21%
SiO2†	190091.8	10735	ug/L	95.2	10735	ppb	95.2	0.89%

Sequence No.: 66
Sample ID: 232509005|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 89
Date Collected: 7/2/2009 00:13:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509005|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7133.6	7133.6	98.4	%			00:16:12
1	Y RADIAL	7912.9	7912.9	130.4	%			00:15:52
1	Al 396.153Radial†	68975.6	70209.6	56365	ug/L	56365	ppb	00:15:52
1	Ca 317.933Radial†	28775.0	29224.7	41058	ug/L	41058	ppb	00:15:52
1	Fe 238.204 Radial†	24916.2	25294.7	98537	ug/L	98537	ppb	00:15:52
1	K 766.490 Radial†	54788.5	52852.3	9928.2	ug/L	9928.2	ppb	00:15:52
1	Mg 279.077 IEC†	529.7	536.3	12471	ug/L	12471	ppb	00:16:12
1	Na 589.592 Radial†	83233.0	81537.9	4344.1	ug/L	4344.1	ppb	00:15:52
1	Sr 421.552†	64133.7	65269.7	181.35	ug/L	181.35	ppb	00:15:52
1	Sc 361.383	771628.5	771628.5	98.177	%			00:17:10
1	Y 371.029	718209.3	718209.3	123.00	%			00:17:10
1	Ag 328.068†	-4525.0	-5317.3	4.4064	ug/L	4.4064	ppb	00:17:10
1	As 188.979†	-39.1	-4.9	30.055	ug/L	30.055	ppb	00:17:31
1	B 249.677†	222.2	1050.4	15.401	ug/L	15.401	ppb	00:17:10
1	Ba 233.527†	139253.0	141819.4	856.02	ug/L	856.02	ppb	00:17:10
1	Be 313.107†	-5146.2	-320.5	5.7639	ug/L	5.7639	ppb	00:17:10
1	Cd 226.502†	587.7	891.2	-2.0257	ug/L	-2.0257	ppb	00:17:31
1	Co 228.616†	2492.5	2638.6	32.240	ug/L	32.240	ppb	00:17:31
1	Cr 267.716†	11650.7	11873.5	142.72	ug/L	142.72	ppb	00:17:31
1	Cu 324.752†	38552.0	33362.2	110.08	ug/L	110.08	ppb	00:17:10
1	Mn 257.610†	2851558.5	2903749.2	2732.3	ug/L	2732.3	ppb	00:17:10
1	Mo 202.031†	119.9	111.5	13.075	ug/L	13.075	ppb	00:17:31
1	Ni 231.604†	4734.2	4656.7	104.63	ug/L	104.63	ppb	00:17:31
1	P 214.914†	2128.0	1871.6	697.37	ug/L	697.37	ppb	00:17:31
1	Pb 220.353†	1070.2	1116.7	112.31	ug/L	112.31	ppb	00:17:31
1	S 181.975 Axial†	669.2	576.8	631.62	ug/L	631.62	ppb	00:17:31
1	Sb 206.836†	94.8	41.9	0.4301	ug/L	0.4301	ppb	00:17:31
1	Se 196.026†	-725.4	-707.1	35.826	ug/L	35.826	ppb	00:17:31
1	Si 251.611†	208711.3	212101.7	5576.0	ug/L	5576.0	ppb	00:17:10
1	Sn 189.927†	-135.6	-151.1	-10.563	ug/L	-10.563	ppb	00:17:31
1	Ti 334.940†	1550850.8	1581122.0	2534.7	ug/L	2534.7	ppb	00:17:10
1	Tl 190.801†	-206.8	-150.0	2.1915	ug/L	2.1915	ppb	00:17:31
1	U 409.014†	-13862.3	-8851.8	-274.63	ug/L	-274.63	ppb	00:17:10
1	V 292.402†	17328.0	19348.9	132.60	ug/L	132.60	ppb	00:17:31
1	Zn 213.857†	36960.4	36615.5	272.28	ug/L	272.28	ppb	00:17:10
1	SiO2†	208410.9	211797.8	11960	ug/L	11960	ppb	00:18:30
2	Sc Radial	7119.0	7119.0	98.2	%			00:16:37
2	Y RADIAL	8082.0	8082.0	133.2	%			00:16:17
2	Al 396.153Radial†	70642.6	72051.8	57843	ug/L	57843	ppb	00:16:17
2	Ca 317.933Radial†	29384.3	29905.4	42014	ug/L	42014	ppb	00:16:17
2	Fe 238.204 Radial†	25476.2	25917.0	100960	ug/L	100960	ppb	00:16:17
2	K 766.490 Radial†	56161.5	54365.3	10213	ug/L	10213	ppb	00:16:17
2	Mg 279.077 IEC†	524.2	531.7	12362	ug/L	12362	ppb	00:16:37
2	Na 589.592 Radial†	85157.9	83672.6	4457.8	ug/L	4457.8	ppb	00:16:17
2	Sr 421.552†	65776.7	67077.4	186.37	ug/L	186.37	ppb	00:16:17
2	Sc 361.383	773896.2	773896.2	98.465	%			00:17:37
2	Y 371.029	721704.1	721704.1	123.60	%			00:17:37
2	Ag 328.068†	-4613.0	-5393.2	4.7784	ug/L	4.7784	ppb	00:17:37
2	As 188.979†	-37.9	-3.6	30.888	ug/L	30.888	ppb	00:17:57
2	B 249.677†	211.8	1039.2	14.996	ug/L	14.996	ppb	00:17:37
2	Ba 233.527†	139167.2	141316.6	852.97	ug/L	852.97	ppb	00:17:37
2	Be 313.107†	-5278.9	-439.9	5.7054	ug/L	5.7054	ppb	00:17:37
2	Cd 226.502†	598.1	900.0	-2.2158	ug/L	-2.2158	ppb	00:17:57
2	Co 228.616†	2504.6	2643.4	32.287	ug/L	32.287	ppb	00:17:57
2	Cr 267.716†	11665.3	11853.6	142.53	ug/L	142.53	ppb	00:17:57
2	Cu 324.752†	38487.2	33181.3	109.66	ug/L	109.66	ppb	00:17:37
2	Mn 257.610†	2848055.8	2891681.0	2721.3	ug/L	2721.3	ppb	00:17:37
2	Mo 202.031†	124.1	115.5	13.469	ug/L	13.469	ppb	00:17:57
2	Ni 231.604†	4766.8	4675.7	105.06	ug/L	105.06	ppb	00:17:57

2	P 214.914†	2139.6	1877.0	698.32	ug/L	698.32 ppb	00:17:57
2	Pb 220.353†	1056.9	1100.1	110.72	ug/L	110.72 ppb	00:17:57
2	S 181.975 Axial†	666.7	572.2	626.30	ug/L	626.30 ppb	00:17:57
2	Sb 206.836†	121.3	68.5	7.1432	ug/L	7.1432 ppb	00:17:57
2	Se 196.026†	-730.2	-709.8	42.852	ug/L	42.852 ppb	00:17:57
2	Si 251.611†	207704.0	210455.7	5532.6	ug/L	5532.6 ppb	00:17:37
2	Sn 189.927†	-114.7	-129.4	-7.1141	ug/L	-7.1141 ppb	00:17:57
2	Ti 334.940†	1551921.2	1577580.3	2529.1	ug/L	2529.1 ppb	00:17:37
2	Tl 190.801†	-205.1	-147.6	2.6466	ug/L	2.6466 ppb	00:17:57
2	U 409.014†	-13999.2	-8949.4	-277.82	ug/L	-277.82 ppb	00:17:37
2	V 292.402†	17314.9	19283.9	131.76	ug/L	131.76 ppb	00:17:57
2	Zn 213.857†	36988.9	36534.1	271.40	ug/L	271.40 ppb	00:17:37
2	SiO2†	207741.5	210496.0	11886	ug/L	11886 ppb	00:18:35
3	Sc Radial	7168.8	7168.8	98.8	%		00:17:02
3	Y RADIAL	7893.8	7893.8	130.1	%		00:16:42
3	Al 396.153Radial†	69288.3	70181.6	56342	ug/L	56342 ppb	00:16:42
3	Ca 317.933Radial†	28816.9	29123.5	40916	ug/L	40916 ppb	00:16:42
3	Fe 238.204 Radial†	24935.9	25190.2	98130	ug/L	98130 ppb	00:16:42
3	K 766.490 Radial†	55036.3	52829.4	9923.8	ug/L	9923.8 ppb	00:16:42
3	Mg 279.077 IEC†	538.8	542.8	12625	ug/L	12625 ppb	00:17:02
3	Na 589.592 Radial†	83138.2	81026.4	4316.8	ug/L	4316.8 ppb	00:16:42
3	Sr 421.552†	64240.9	65058.1	180.76	ug/L	180.76 ppb	00:16:42
3	Sc 361.383	771426.0	771426.0	98.151	%		00:18:04
3	Y 371.029	718981.7	718981.7	123.14	%		00:18:04
3	Ag 328.068†	-4560.1	-5354.3	4.0862	ug/L	4.0862 ppb	00:18:04
3	As 188.979†	-38.8	-4.6	30.059	ug/L	30.059 ppb	00:18:24
3	B 249.677†	261.4	1090.4	16.278	ug/L	16.278 ppb	00:18:04
3	Ba 233.527†	139078.5	141678.8	855.17	ug/L	855.17 ppb	00:18:04
3	Be 313.107†	-5250.4	-428.0	5.7231	ug/L	5.7231 ppb	00:18:04
3	Cd 226.502†	613.2	917.3	-1.7031	ug/L	-1.7031 ppb	00:18:24
3	Co 228.616†	2495.5	2642.3	32.297	ug/L	32.297 ppb	00:18:24
3	Cr 267.716†	11614.0	11839.3	142.31	ug/L	142.31 ppb	00:18:24
3	Cu 324.752†	38425.6	33243.7	109.69	ug/L	109.69 ppb	00:18:04
3	Mn 257.610†	2848916.0	2901819.4	2730.5	ug/L	2730.5 ppb	00:18:04
3	Mo 202.031†	102.7	94.1	12.010	ug/L	12.010 ppb	00:18:24
3	Ni 231.604†	4747.0	4671.0	104.95	ug/L	104.95 ppb	00:18:24
3	P 214.914†	2131.9	1876.1	699.67	ug/L	699.67 ppb	00:18:24
3	Pb 220.353†	1080.8	1127.9	113.44	ug/L	113.44 ppb	00:18:24
3	S 181.975 Axial†	670.9	578.7	633.76	ug/L	633.76 ppb	00:18:24
3	Sb 206.836†	109.5	56.9	4.1731	ug/L	4.1731 ppb	00:18:24
3	Se 196.026†	-717.5	-699.3	37.727	ug/L	37.727 ppb	00:18:24
3	Si 251.611†	207942.2	211373.8	5556.9	ug/L	5556.9 ppb	00:18:04
3	Sn 189.927†	-122.0	-137.2	-8.5819	ug/L	-8.5819 ppb	00:18:24
3	Ti 334.940†	1550422.6	1581100.4	2534.6	ug/L	2534.6 ppb	00:18:04
3	Tl 190.801†	-203.4	-146.5	2.9482	ug/L	2.9482 ppb	00:18:24
3	U 409.014†	-13850.9	-8843.9	-274.35	ug/L	-274.35 ppb	00:18:04
3	V 292.402†	17272.0	19296.5	132.24	ug/L	132.24 ppb	00:18:24
3	Zn 213.857†	36988.0	36653.5	272.61	ug/L	272.61 ppb	00:18:04
3	SiO2†	210304.3	213782.6	12072	ug/L	12072 ppb	00:18:40

Mean Data: 232509005|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	772316.9	98.264	%	0.1745				0.18%
Sc Radial	7140.5	98.5	%	0.35				0.36%
Y 371.029	719631.7	123.25	%	0.314				0.26%
Y RADIAL	7962.9	131.3	%	1.71				1.30%
Ag 328.068†	-5354.9	4.4237	ug/L	0.34644	4.4237	ppb	0.34644	7.83%
Al 396.153Radial†	70814.4	56850	ug/L	860.4	56850	ppb	860.4	1.51%
As 188.979†	-4.4	30.334	ug/L	0.4797	30.334	ppb	0.4797	1.58%
B 249.677†	1060.0	15.558	ug/L	0.6557	15.558	ppb	0.6557	4.21%
Ba 233.527†	141605.0	854.72	ug/L	1.573	854.72	ppb	1.573	0.18%
Be 313.107†	-396.1	5.7308	ug/L	0.03000	5.7308	ppb	0.03000	0.52%
Ca 317.933Radial†	29417.9	41329	ug/L	597.4	41329	ppb	597.4	1.45%
Cd 226.502†	902.9	-1.9815	ug/L	0.25917	-1.9815	ppb	0.25917	13.08%
Co 228.616†	2641.4	32.275	ug/L	0.0306	32.275	ppb	0.0306	0.09%
Cr 267.716†	11855.5	142.52	ug/L	0.207	142.52	ppb	0.207	0.15%
Cu 324.752†	33262.4	109.81	ug/L	0.237	109.81	ppb	0.237	0.22%
Fe 238.204 Radial†	25467.3	99210	ug/L	1530.9	99210	ppb	1530.9	1.54%
K 766.490 Radial†	53349.0	10022	ug/L	166.0	10022	ppb	166.0	1.66%

Mg 279.077 IEC†	536.9	12486	ug/L	132.1	12486	ppb	132.1	1.06%
Mn 257.610†	2899083.2	2728.0	ug/L	5.89	2728.0	ppb	5.89	0.22%
Mo 202.031†	107.0	12.851	ug/L	0.7549	12.851	ppb	0.7549	5.87%
Na 589.592 Radial†	82079.0	4372.9	ug/L	74.78	4372.9	ppb	74.78	1.71%
Ni 231.604†	4667.8	104.88	ug/L	0.223	104.88	ppb	0.223	0.21%
P 214.914†	1874.9	698.45	ug/L	1.155	698.45	ppb	1.155	0.17%
Pb 220.353†	1114.9	112.16	ug/L	1.369	112.16	ppb	1.369	1.22%
S 181.975 Axial†	575.9	630.56	ug/L	3.842	630.56	ppb	3.842	0.61%
Sb 206.836†	55.8	3.9155	ug/L	3.36396	3.9155	ppb	3.36396	85.91%
Se 196.026†	-705.4	38.802	ug/L	3.6340	38.802	ppb	3.6340	9.37%
Si 251.611†	211310.4	5555.1	ug/L	21.77	5555.1	ppb	21.77	0.39%
Sn 189.927†	-139.2	-8.7531	ug/L	1.73093	-8.7531	ppb	1.73093	19.77%
Sr 421.552†	65801.7	182.83	ug/L	3.085	182.83	ppb	3.085	1.69%
Ti 334.940†	1579934.2	2532.8	ug/L	3.23	2532.8	ppb	3.23	0.13%
Tl 190.801†	-148.1	2.5954	ug/L	0.38095	2.5954	ppb	0.38095	14.68%
U 409.014†	-8881.7	-275.60	ug/L	1.928	-275.60	ppb	1.928	0.70%
V 292.402†	19309.8	132.20	ug/L	0.421	132.20	ppb	0.421	0.32%
Zn 213.857†	36601.0	272.10	ug/L	0.627	272.10	ppb	0.627	0.23%
SiO2†	212025.4	11972	ug/L	93.6	11972	ppb	93.6	0.78%

Sequence No.: 67
Sample ID: 232509006|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 90
Date Collected: 7/2/2009 00:20:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509006|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7153.8	7153.8	98.6	%			00:23:05
1	Y RADIAL	7837.3	7837.3	129.2	%			00:22:45
1	Al 396.153Radial†	24951.1	25379.3	20374	ug/L	20374	ppb	00:22:45
1	Ca 317.933Radial†	8301.5	8385.9	11781	ug/L	11781	ppb	00:22:45
1	Fe 238.204 Radial†	16862.5	17058.2	66451	ug/L	66451	ppb	00:22:45
1	K 766.490 Radial†	27057.7	24581.4	4608.7	ug/L	4608.7	ppb	00:22:45
1	Mg 279.077 IEC†	200.2	200.6	4640.5	ug/L	4640.5	ppb	00:23:05
1	Na 589.592 Radial†	8978.6	6019.2	320.68	ug/L	320.68	ppb	00:22:45
1	Sr 421.552†	20050.2	20393.4	56.672	ug/L	56.672	ppb	00:22:45
1	Sc 361.383	792348.6	792348.6	100.81	%			00:24:02
1	Y 371.029	722510.5	722510.5	123.74	%			00:24:02
1	Ag 328.068†	-2861.5	-3546.7	3.3280	ug/L	3.3280	ppb	00:24:07
1	As 188.979†	-52.7	-17.3	17.784	ug/L	17.784	ppb	00:24:27
1	B 249.677†	-6.3	817.8	12.760	ug/L	12.760	ppb	00:24:07
1	Ba 233.527†	51814.7	51377.2	310.01	ug/L	310.01	ppb	00:24:07
1	Be 313.107†	-8589.5	-3599.0	3.4803	ug/L	3.4803	ppb	00:24:07
1	Cd 226.502†	304.9	595.1	-1.4592	ug/L	-1.4592	ppb	00:24:27
1	Co 228.616†	1040.6	1132.0	11.385	ug/L	11.385	ppb	00:24:27
1	Cr 267.716†	2455.7	2442.4	30.421	ug/L	30.421	ppb	00:24:27
1	Cu 324.752†	15887.3	9853.4	34.672	ug/L	34.672	ppb	00:24:07
1	Mn 257.610†	2621613.7	2599705.5	2443.6	ug/L	2443.6	ppb	00:24:02
1	Mo 202.031†	279.1	266.3	20.204	ug/L	20.204	ppb	00:24:27
1	Ni 231.604†	1235.0	1059.6	23.803	ug/L	23.803	ppb	00:24:27
1	P 214.914†	2169.4	1855.9	719.41	ug/L	719.41	ppb	00:24:27
1	Pb 220.353†	746.7	767.4	73.763	ug/L	73.763	ppb	00:24:27
1	S 181.975 Axial†	467.1	358.4	395.38	ug/L	395.38	ppb	00:24:27
1	Sb 206.836†	95.1	39.6	4.4013	ug/L	4.4013	ppb	00:24:27
1	Se 196.026†	-490.6	-454.9	32.202	ug/L	32.202	ppb	00:24:27
1	Si 251.611†	194990.7	192932.5	5073.2	ug/L	5073.2	ppb	00:24:07
1	Sn 189.927†	-25.9	-38.6	0.5013	ug/L	0.5013	ppb	00:24:27
1	Ti 334.940†	1310807.9	1301706.9	2085.5	ug/L	2085.5	ppb	00:24:02
1	Tl 190.801†	-180.8	-118.7	3.3301	ug/L	3.3301	ppb	00:24:27
1	U 409.014†	-12762.8	-7391.9	-227.22	ug/L	-227.22	ppb	00:24:02
1	V 292.402†	7703.5	9340.5	60.402	ug/L	60.402	ppb	00:24:07
1	Zn 213.857†	49037.6	47610.8	361.74	ug/L	361.74	ppb	00:24:07
1	SiO2†	198845.4	196758.2	11113	ug/L	11113	ppb	00:25:35
2	Sc Radial	7154.0	7154.0	98.6	%			00:23:30
2	Y RADIAL	7783.5	7783.5	128.3	%			00:23:10
2	Al 396.153Radial†	25053.0	25482.0	20456	ug/L	20456	ppb	00:23:10
2	Ca 317.933Radial†	8299.8	8384.0	11779	ug/L	11779	ppb	00:23:10
2	Fe 238.204 Radial†	16916.7	17112.8	66664	ug/L	66664	ppb	00:23:10
2	K 766.490 Radial†	27009.7	24532.1	4599.4	ug/L	4599.4	ppb	00:23:10
2	Mg 279.077 IEC†	200.0	200.4	4635.7	ug/L	4635.7	ppb	00:23:30
2	Na 589.592 Radial†	8980.4	6020.8	320.77	ug/L	320.77	ppb	00:23:10
2	Sr 421.552†	20015.5	20357.7	56.573	ug/L	56.573	ppb	00:23:10
2	Sc 361.383	783573.4	783573.4	99.697	%			00:24:33
2	Y 371.029	714558.2	714558.2	122.38	%			00:24:33
2	Ag 328.068†	-2850.1	-3567.1	3.3044	ug/L	3.3044	ppb	00:24:38
2	As 188.979†	-49.4	-14.6	18.614	ug/L	18.614	ppb	00:24:58
2	B 249.677†	-30.1	793.9	12.235	ug/L	12.235	ppb	00:24:38
2	Ba 233.527†	52062.1	52201.0	314.99	ug/L	314.99	ppb	00:24:38
2	Be 313.107†	-8582.0	-3686.9	3.4402	ug/L	3.4402	ppb	00:24:38
2	Cd 226.502†	312.1	605.7	-1.3716	ug/L	-1.3716	ppb	00:24:58
2	Co 228.616†	1052.1	1155.0	11.730	ug/L	11.730	ppb	00:24:58
2	Cr 267.716†	2441.4	2455.3	30.583	ug/L	30.583	ppb	00:24:58
2	Cu 324.752†	15779.1	9921.3	34.897	ug/L	34.897	ppb	00:24:38
2	Mn 257.610†	2594453.1	2601584.7	2445.4	ug/L	2445.4	ppb	00:24:33
2	Mo 202.031†	290.3	280.7	21.073	ug/L	21.073	ppb	00:24:58
2	Ni 231.604†	1242.9	1081.3	24.289	ug/L	24.289	ppb	00:24:58

2	P 214.914†	2172.1	1882.8	730.37	ug/L	730.37	ppb	00:24:58
2	Pb 220.353†	743.7	772.6	74.282	ug/L	74.282	ppb	00:24:58
2	S 181.975 Axial†	467.3	363.9	401.43	ug/L	401.43	ppb	00:24:58
2	Sb 206.836†	81.2	26.8	1.2077	ug/L	1.2077	ppb	00:24:58
2	Se 196.026†	-505.2	-474.9	24.538	ug/L	24.538	ppb	00:24:58
2	Si 251.611†	196018.3	196129.3	5157.3	ug/L	5157.3	ppb	00:24:38
2	Sn 189.927†	-36.3	-49.4	-1.0556	ug/L	-1.0556	ppb	00:24:58
2	Ti 334.940†	1294462.0	1299872.5	2082.6	ug/L	2082.6	ppb	00:24:33
2	Tl 190.801†	-181.2	-121.0	2.7850	ug/L	2.7850	ppb	00:24:58
2	U 409.014†	-12809.8	-7580.9	-232.85	ug/L	-232.85	ppb	00:24:33
2	V 292.402†	7884.7	9607.8	62.439	ug/L	62.439	ppb	00:24:38
2	Zn 213.857†	49323.7	48442.5	368.16	ug/L	368.16	ppb	00:24:38
2	SiO2†	196502.8	196617.5	11105	ug/L	11105	ppb	00:25:40
3	Sc Radial	7212.6	7212.6	99.4	%			00:23:55
3	Y RADIAL	7882.0	7882.0	129.9	%			00:23:35
3	Al 396.153Radial†	25346.2	25570.2	20527	ug/L	20527	ppb	00:23:35
3	Ca 317.933Radial†	8370.5	8386.6	11782	ug/L	11782	ppb	00:23:35
3	Fe 238.204 Radial†	17111.6	17169.2	66884	ug/L	66884	ppb	00:23:35
3	K 766.490 Radial†	27316.3	24617.7	4615.6	ug/L	4615.6	ppb	00:23:35
3	Mg 279.077 IEC†	200.9	199.7	4618.4	ug/L	4618.4	ppb	00:23:55
3	Na 589.592 Radial†	9136.1	6103.3	325.16	ug/L	325.16	ppb	00:23:35
3	Sr 421.552†	20291.9	20470.7	56.887	ug/L	56.887	ppb	00:23:35
3	Sc 361.383	782422.9	782422.9	99.550	%			00:25:04
3	Y 371.029	713112.1	713112.1	122.13	%			00:25:04
3	Ag 328.068†	-2922.9	-3644.3	2.9826	ug/L	2.9826	ppb	00:25:09
3	As 188.979†	-36.2	-1.4	22.552	ug/L	22.552	ppb	00:25:29
3	B 249.677†	-29.5	794.4	12.234	ug/L	12.234	ppb	00:25:09
3	Ba 233.527†	52342.0	52559.0	317.15	ug/L	317.15	ppb	00:25:09
3	Be 313.107†	-8506.6	-3623.8	3.4666	ug/L	3.4666	ppb	00:25:09
3	Cd 226.502†	334.6	628.8	-1.1541	ug/L	-1.1541	ppb	00:25:29
3	Co 228.616†	1026.4	1130.8	11.371	ug/L	11.371	ppb	00:25:29
3	Cr 267.716†	2420.7	2438.1	30.386	ug/L	30.386	ppb	00:25:29
3	Cu 324.752†	15923.1	10089.3	35.435	ug/L	35.435	ppb	00:25:09
3	Mn 257.610†	2593229.0	2604181.4	2447.9	ug/L	2447.9	ppb	00:25:04
3	Mo 202.031†	290.5	281.3	21.126	ug/L	21.126	ppb	00:25:29
3	Ni 231.604†	1241.1	1081.3	24.290	ug/L	24.290	ppb	00:25:29
3	P 214.914†	2160.6	1874.4	726.63	ug/L	726.63	ppb	00:25:29
3	Pb 220.353†	739.5	769.5	73.965	ug/L	73.965	ppb	00:25:29
3	S 181.975 Axial†	457.6	354.8	391.34	ug/L	391.34	ppb	00:25:29
3	Sb 206.836†	64.9	10.5	-2.8327	ug/L	-2.8327	ppb	00:25:29
3	Se 196.026†	-485.0	-455.4	33.441	ug/L	33.441	ppb	00:25:29
3	Si 251.611†	197244.3	197649.9	5197.3	ug/L	5197.3	ppb	00:25:09
3	Sn 189.927†	-36.3	-49.4	-1.0459	ug/L	-1.0459	ppb	00:25:29
3	Ti 334.940†	1293226.1	1300540.2	2083.6	ug/L	2083.6	ppb	00:25:04
3	Tl 190.801†	-180.6	-120.8	2.8689	ug/L	2.8689	ppb	00:25:29
3	U 409.014†	-12919.2	-7709.7	-236.69	ug/L	-236.69	ppb	00:25:04
3	V 292.402†	7931.7	9666.7	62.854	ug/L	62.854	ppb	00:25:09
3	Zn 213.857†	49528.1	48720.6	370.29	ug/L	370.29	ppb	00:25:09
3	SiO2†	196155.2	196558.0	11102	ug/L	11102	ppb	00:25:45

Mean Data: 232509006|881347|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	786115.0	100.02	%	0.691				0.69%
Sc Radial	7173.5	98.9	%	0.47				0.47%
Y 371.029	716727.0	122.75	%	0.867				0.71%
Y RADIAL	7834.3	129.1	%	0.81				0.63%
Ag 328.068†	-3586.0	3.2050	ug/L	0.19293	3.2050	ppb	0.19293	6.02%
Al 396.153Radial†	25477.2	20453	ug/L	76.7	20453	ppb	76.7	0.37%
As 188.979†	-11.1	19.650	ug/L	2.5472	19.650	ppb	2.5472	12.96%
B 249.677†	802.0	12.410	ug/L	0.3033	12.410	ppb	0.3033	2.44%
Ba 233.527†	52045.7	314.05	ug/L	3.660	314.05	ppb	3.660	1.17%
Be 313.107†	-3636.6	3.4624	ug/L	0.02041	3.4624	ppb	0.02041	0.59%
Ca 317.933Radial†	8385.5	11781	ug/L	1.9	11781	ppb	1.9	0.02%
Cd 226.502†	609.8	-1.3283	ug/L	0.15711	-1.3283	ppb	0.15711	11.83%
Co 228.616†	1139.3	11.495	ug/L	0.2034	11.495	ppb	0.2034	1.77%
Cr 267.716†	2445.3	30.463	ug/L	0.1052	30.463	ppb	0.1052	0.35%
Cu 324.752†	9954.7	35.001	ug/L	0.3921	35.001	ppb	0.3921	1.12%
Fe 238.204 Radial†	17113.4	66666	ug/L	216.3	66666	ppb	216.3	0.32%
K 766.490 Radial†	24577.0	4607.9	ug/L	8.10	4607.9	ppb	8.10	0.18%

Mg 279.077 IEC†	200.2	4631.5	ug/L	11.60	4631.5	ppb	11.60	0.25%
Mn 257.610†	2601823.9	2445.6	ug/L	2.13	2445.6	ppb	2.13	0.09%
Mo 202.031†	276.1	20.801	ug/L	0.5173	20.801	ppb	0.5173	2.49%
Na 589.592 Radial†	6047.8	322.20	ug/L	2.563	322.20	ppb	2.563	0.80%
Ni 231.604†	1074.1	24.127	ug/L	0.2808	24.127	ppb	0.2808	1.16%
P 214.914†	1871.0	725.47	ug/L	5.573	725.47	ppb	5.573	0.77%
Pb 220.353†	769.8	74.004	ug/L	0.2620	74.004	ppb	0.2620	0.35%
S 181.975 Axial†	359.0	396.05	ug/L	5.083	396.05	ppb	5.083	1.28%
Sb 206.836†	25.6	0.9254	ug/L	3.62525	0.9254	ppb	3.62525	391.74%
Se 196.026†	-461.7	30.060	ug/L	4.8223	30.060	ppb	4.8223	16.04%
Si 251.611†	195570.6	5142.6	ug/L	63.34	5142.6	ppb	63.34	1.23%
Sn 189.927†	-45.8	-0.5334	ug/L	0.89613	-0.5334	ppb	0.89613	168.00%
Sr 421.552†	20407.3	56.711	ug/L	0.1608	56.711	ppb	0.1608	0.28%
Ti 334.940†	1300706.6	2083.9	ug/L	1.49	2083.9	ppb	1.49	0.07%
Tl 190.801†	-120.2	2.9947	ug/L	0.29352	2.9947	ppb	0.29352	9.80%
U 409.014†	-7560.8	-232.25	ug/L	4.762	-232.25	ppb	4.762	2.05%
V 292.402†	9538.3	61.898	ug/L	1.3127	61.898	ppb	1.3127	2.12%
Zn 213.857†	48258.0	366.73	ug/L	4.452	366.73	ppb	4.452	1.21%
SiO2†	196644.6	11107	ug/L	5.8	11107	ppb	5.8	0.05%

Sequence No.: 68
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/2/2009 00:27:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6819.3	6819.3	94.0	%			00:29:48
1	Y RADIAL	6141.6	6141.6	101.2	%			00:29:48
1	Al 396.153Radial†	6073.4	6542.8	5231.6	ug/L	5231.6	ppb	00:29:48
1	Ca 317.933Radial†	3663.1	3865.6	5430.7	ug/L	5430.7	ppb	00:30:08
1	Fe 238.204 Radial†	1302.3	1347.8	5265.3	ug/L	5265.3	ppb	00:30:08
1	K 766.490 Radial†	28295.8	27243.6	5116.1	ug/L	5116.1	ppb	00:29:48
1	Mg 279.077 IEC†	221.4	233.2	5464.3	ug/L	5464.3	ppb	00:30:08
1	Na 589.592 Radial†	177242.5	185421.2	9878.6	ug/L	9878.6	ppb	00:29:48
1	Sr 421.552†	165487.7	176069.2	490.23	ug/L	490.23	ppb	00:29:48
1	Sc 361.383	767876.3	767876.3	97.699	%			00:31:07
1	Y 371.029	591477.2	591477.2	101.30	%			00:31:07
1	Ag 328.068†	94721.2	96243.4	497.83	ug/L	497.83	ppb	00:31:07
1	As 188.979†	1549.1	1620.5	480.27	ug/L	480.27	ppb	00:31:27
1	B 249.677†	21383.2	22710.8	479.91	ug/L	479.91	ppb	00:31:07
1	Ba 233.527†	78943.3	80782.7	488.75	ug/L	488.75	ppb	00:31:07
1	Be 313.107†	1258454.9	1293010.1	491.59	ug/L	491.59	ppb	00:31:07
1	Cd 226.502†	45011.2	46363.8	488.34	ug/L	488.34	ppb	00:31:07
1	Co 228.616†	31537.0	32379.4	474.86	ug/L	474.86	ppb	00:31:27
1	Cr 267.716†	40459.9	41419.1	490.43	ug/L	490.43	ppb	00:31:07
1	Cu 324.752†	159390.5	157238.1	492.28	ug/L	492.28	ppb	00:31:07
1	Mn 257.610†	510008.1	521253.2	488.85	ug/L	488.85	ppb	00:31:07
1	Mo 202.031†	8052.5	8231.6	490.81	ug/L	490.81	ppb	00:31:27
1	Ni 231.604†	21051.7	21382.0	480.23	ug/L	480.23	ppb	00:31:27
1	P 214.914†	5879.1	5721.6	2287.1	ug/L	2287.1	ppb	00:31:27
1	Pb 220.353†	4788.7	4928.2	489.90	ug/L	489.90	ppb	00:31:27
1	S 181.975 Axial†	941.4	858.7	955.88	ug/L	955.88	ppb	00:31:27
1	Sb 206.836†	1925.9	1916.5	482.77	ug/L	482.77	ppb	00:31:27
1	Se 196.026†	1076.4	1133.6	492.93	ug/L	492.93	ppb	00:31:27
1	Si 251.611†	93142.8	94850.6	2478.2	ug/L	2478.2	ppb	00:31:07
1	Sn 189.927†	3252.4	3316.0	486.30	ug/L	486.30	ppb	00:31:27
1	Ti 334.940†	304009.7	312639.4	500.64	ug/L	500.64	ppb	00:31:07
1	Tl 190.801†	2075.6	2185.1	487.61	ug/L	487.61	ppb	00:31:27
1	U 409.014†	10385.7	15898.2	469.43	ug/L	469.43	ppb	00:31:07
1	V 292.402†	60177.3	63293.5	494.43	ug/L	494.43	ppb	00:31:07
1	Zn 213.857†	62827.1	63275.3	485.98	ug/L	485.98	ppb	00:31:07
1	SiO2†	92138.2	93824.4	5263.8	ug/L	5263.8	ppb	00:32:27
2	Sc Radial	7153.1	7153.1	98.6	%			00:30:13
2	Y RADIAL	6421.4	6421.4	105.9	%			00:30:13
2	Al 396.153Radial†	5927.8	6093.7	4871.3	ug/L	4871.3	ppb	00:30:13
2	Ca 317.933Radial†	3648.1	3668.5	5153.9	ug/L	5153.9	ppb	00:30:33
2	Fe 238.204 Radial†	1296.1	1276.9	4988.8	ug/L	4988.8	ppb	00:30:33
2	K 766.490 Radial†	27757.1	25293.0	4749.2	ug/L	4749.2	ppb	00:30:13
2	Mg 279.077 IEC†	220.0	220.7	5172.8	ug/L	5172.8	ppb	00:30:33
2	Na 589.592 Radial†	173338.8	172666.0	9199.1	ug/L	9199.1	ppb	00:30:13
2	Sr 421.552†	160987.5	163292.6	454.66	ug/L	454.66	ppb	00:30:13
2	Sc 361.383	783895.5	783895.5	99.738	%			00:31:34
2	Y 371.029	603639.2	603639.2	103.38	%			00:31:34
2	Ag 328.068†	93858.9	93397.6	483.07	ug/L	483.07	ppb	00:31:34
2	As 188.979†	1566.5	1605.6	475.75	ug/L	475.75	ppb	00:31:55
2	B 249.677†	21184.1	22063.9	466.21	ug/L	466.21	ppb	00:31:34
2	Ba 233.527†	78278.9	78465.3	474.73	ug/L	474.73	ppb	00:31:34
2	Be 313.107†	1244821.6	1253018.3	476.39	ug/L	476.39	ppb	00:31:34
2	Cd 226.502†	44630.5	45040.6	474.43	ug/L	474.43	ppb	00:31:34
2	Co 228.616†	31741.2	31924.5	468.21	ug/L	468.21	ppb	00:31:55
2	Cr 267.716†	40073.3	40185.2	475.81	ug/L	475.81	ppb	00:31:34
2	Cu 324.752†	157400.2	151908.6	475.59	ug/L	475.59	ppb	00:31:34
2	Mn 257.610†	504775.0	505338.7	473.92	ug/L	473.92	ppb	00:31:34
2	Mo 202.031†	8112.3	8123.1	484.32	ug/L	484.32	ppb	00:31:55
2	Ni 231.604†	21164.1	21054.4	472.87	ug/L	472.87	ppb	00:31:55

2	P 214.914†	5947.7	5667.4	2267.9 ug/L	2267.9 ppb	00:31:55
2	Pb 220.353†	4816.3	4855.7	482.66 ug/L	482.66 ppb	00:31:55
2	S 181.975 Axial†	952.9	850.6	946.87 ug/L	946.87 ppb	00:31:55
2	Sb 206.836†	1952.0	1902.4	479.38 ug/L	479.38 ppb	00:31:55
2	Se 196.026†	1091.0	1125.7	488.67 ug/L	488.67 ppb	00:31:55
2	Si 251.611†	92110.2	91867.0	2400.0 ug/L	2400.0 ppb	00:31:34
2	Sn 189.927†	3272.6	3268.3	479.26 ug/L	479.26 ppb	00:31:55
2	Ti 334.940†	300372.3	302633.6	484.61 ug/L	484.61 ppb	00:31:34
2	Tl 190.801†	2087.7	2153.8	480.52 ug/L	480.52 ppb	00:31:55
2	U 409.014†	10294.0	15589.0	460.33 ug/L	460.33 ppb	00:31:34
2	V 292.402†	59596.3	61452.2	480.17 ug/L	480.17 ppb	00:31:34
2	Zn 213.857†	62275.3	61407.9	471.61 ug/L	471.61 ppb	00:31:34
2	SiO2†	90728.6	90483.9	5075.8 ug/L	5075.8 ppb	00:32:33
3	Sc Radial	7000.9	7000.9	96.5 %		00:30:38
3	Y RADIAL	6305.0	6305.0	103.9 %		00:30:38
3	Al 396.153Radial†	5867.4	6161.8	4925.7 ug/L	4925.7 ppb	00:30:38
3	Ca 317.933Radial†	3611.8	3711.3	5214.0 ug/L	5214.0 ppb	00:30:58
3	Fe 238.204 Radial†	1281.7	1290.5	5042.3 ug/L	5042.3 ppb	00:30:58
3	K 766.490 Radial†	27483.9	25621.9	4811.0 ug/L	4811.0 ppb	00:30:38
3	Mg 279.077 IEC†	219.4	225.0	5274.0 ug/L	5274.0 ppb	00:30:58
3	Na 589.592 Radial†	171175.8	174246.1	9283.3 ug/L	9283.3 ppb	00:30:38
3	Sr 421.552†	159493.7	165293.8	460.23 ug/L	460.23 ppb	00:30:38
3	Sc 361.383	768381.6	768381.6	97.764 %		00:32:02
3	Y 371.029	591888.4	591888.4	101.37 %		00:32:02
3	Ag 328.068†	92517.4	93925.5	485.80 ug/L	485.80 ppb	00:32:02
3	As 188.979†	1547.8	1618.1	479.47 ug/L	479.47 ppb	00:32:22
3	B 249.677†	20807.0	22107.0	467.09 ug/L	467.09 ppb	00:32:02
3	Ba 233.527†	77368.1	79118.3	478.67 ug/L	478.67 ppb	00:32:02
3	Be 313.107†	1226418.7	1259394.0	478.81 ug/L	478.81 ppb	00:32:02
3	Cd 226.502†	44081.7	45382.6	478.03 ug/L	478.03 ppb	00:32:02
3	Co 228.616†	31556.3	32377.9	474.87 ug/L	474.87 ppb	00:32:22
3	Cr 267.716†	39445.3	40354.1	477.81 ug/L	477.81 ppb	00:32:02
3	Cu 324.752†	154467.9	152095.5	476.18 ug/L	476.18 ppb	00:32:02
3	Mn 257.610†	498573.6	509213.8	477.55 ug/L	477.55 ppb	00:32:02
3	Mo 202.031†	8073.4	8247.5	491.75 ug/L	491.75 ppb	00:32:22
3	Ni 231.604†	21035.9	21351.7	479.55 ug/L	479.55 ppb	00:32:22
3	P 214.914†	5902.3	5741.4	2298.6 ug/L	2298.6 ppb	00:32:22
3	Pb 220.353†	4769.9	4905.7	487.65 ug/L	487.65 ppb	00:32:22
3	S 181.975 Axial†	933.2	849.6	945.83 ug/L	945.83 ppb	00:32:22
3	Sb 206.836†	1929.5	1918.9	483.63 ug/L	483.63 ppb	00:32:22
3	Se 196.026†	1096.6	1153.5	500.52 ug/L	500.52 ppb	00:32:22
3	Si 251.611†	90911.8	92505.8	2416.6 ug/L	2416.6 ppb	00:32:02
3	Sn 189.927†	3228.2	3289.1	482.32 ug/L	482.32 ppb	00:32:22
3	Ti 334.940†	296206.1	304452.7	487.52 ug/L	487.52 ppb	00:32:02
3	Tl 190.801†	2069.1	2177.1	485.69 ug/L	485.69 ppb	00:32:22
3	U 409.014†	10185.6	15686.5	463.21 ug/L	463.21 ppb	00:32:02
3	V 292.402†	58667.2	61708.3	482.24 ug/L	482.24 ppb	00:32:02
3	Zn 213.857†	61485.7	61860.9	475.07 ug/L	475.07 ppb	00:32:02
3	SiO2†	91105.0	92705.6	5200.9 ug/L	5200.9 ppb	00:32:38

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	773384.4	98.400	%	1.1586				1.18%
Sc Radial	6991.1	96.4	%	2.30				2.39%
Y 371.029	595668.3	102.02	%	1.183				1.16%
Y RADIAL	6289.3	103.7	%	2.32				2.24%
Ag 328.068†	94522.2	488.90	ug/L	7.852	488.90	ppb	7.852	1.61%
QC value within limits for Ag 328.068 Recovery = 97.78%								
Al 396.153Radial†	6266.1	5009.5	ug/L	194.21	5009.5	ppb	194.21	3.88%
QC value within limits for Al 396.153Radial Recovery = 100.19%								
As 188.979†	1614.7	478.50	ug/L	2.413	478.50	ppb	2.413	0.50%
QC value within limits for As 188.979 Recovery = 95.70%								
B 249.677†	22293.9	471.07	ug/L	7.667	471.07	ppb	7.667	1.63%
QC value within limits for B 249.677 Recovery = 94.21%								
Ba 233.527†	79455.4	480.71	ug/L	7.230	480.71	ppb	7.230	1.50%
QC value within limits for Ba 233.527 Recovery = 96.14%								
Be 313.107†	1268474.1	482.26	ug/L	8.170	482.26	ppb	8.170	1.69%
QC value within limits for Be 313.107 Recovery = 96.45%								
Ca 317.933Radial†	3748.5	5266.2	ug/L	145.62	5266.2	ppb	145.62	2.77%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.32%
Cd 226.502†            45595.7      480.27 ug/L        7.224      480.27 ppb        7.224   1.50%
   QC value within limits for Cd 226.502  Recovery = 96.05%
Co 228.616†            32227.3      472.64 ug/L        3.842      472.64 ppb        3.842   0.81%
   QC value within limits for Co 228.616  Recovery = 94.53%
Cr 267.716†            40652.8      481.35 ug/L        7.923      481.35 ppb        7.923   1.65%
   QC value within limits for Cr 267.716  Recovery = 96.27%
Cu 324.752†           153747.4      481.35 ug/L        9.471      481.35 ppb        9.471   1.97%
   QC value within limits for Cu 324.752  Recovery = 96.27%
Fe 238.204 Radial†      1305.1      5098.8 ug/L      146.65      5098.8 ppb      146.65   2.88%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.98%
K 766.490 Radial†      26052.8      4892.1 ug/L      196.43      4892.1 ppb      196.43   4.02%
   QC value within limits for K 766.490 Radial  Recovery = 97.84%
Mg 279.077 IEC†          226.3      5303.7 ug/L      148.01      5303.7 ppb      148.01   2.79%
   QC value within limits for Mg 279.077 IEC  Recovery = 106.07%
Mn 257.610†           511935.3      480.11 ug/L        7.790      480.11 ppb        7.790   1.62%
   QC value within limits for Mn 257.610  Recovery = 96.02%
Mo 202.031†             8200.7      488.96 ug/L        4.041      488.96 ppb        4.041   0.83%
   QC value within limits for Mo 202.031  Recovery = 97.79%
Na 589.592 Radial†    177444.4      9453.6 ug/L      370.44      9453.6 ppb      370.44   3.92%
   QC value within limits for Na 589.592 Radial  Recovery = 94.54%
Ni 231.604†            21262.7      477.55 ug/L        4.066      477.55 ppb        4.066   0.85%
   QC value within limits for Ni 231.604  Recovery = 95.51%
P 214.914†              5710.1      2284.5 ug/L       15.51      2284.5 ppb       15.51   0.68%
   QC value within limits for P 214.914  Recovery = 91.38%
Pb 220.353†             4896.5      486.74 ug/L        3.705      486.74 ppb        3.705   0.76%
   QC value within limits for Pb 220.353  Recovery = 97.35%
S 181.975 Axial†         853.0      949.53 ug/L        5.525      949.53 ppb        5.525   0.58%
   QC value within limits for S 181.975 Axial  Recovery = 94.95%
Sb 206.836†             1912.6      481.93 ug/L        2.249      481.93 ppb        2.249   0.47%
   QC value within limits for Sb 206.836  Recovery = 96.39%
Se 196.026†             1137.6      494.04 ug/L        6.004      494.04 ppb        6.004   1.22%
   QC value within limits for Se 196.026  Recovery = 98.81%
Si 251.611†            93074.5      2431.6 ug/L       41.17      2431.6 ppb       41.17   1.69%
   QC value within limits for Si 251.611  Recovery = 97.26%
Sn 189.927†             3291.1      482.63 ug/L        3.528      482.63 ppb        3.528   0.73%
   QC value within limits for Sn 189.927  Recovery = 96.53%
Sr 421.552†           168218.5      468.37 ug/L       19.135      468.37 ppb       19.135   4.09%
   QC value within limits for Sr 421.552  Recovery = 93.67%
Ti 334.940†           306575.2      490.92 ug/L        8.540      490.92 ppb        8.540   1.74%
   QC value within limits for Ti 334.940  Recovery = 98.18%
Tl 190.801†             2172.0      484.60 ug/L        3.667      484.60 ppb        3.667   0.76%
   QC value within limits for Tl 190.801  Recovery = 96.92%
U 409.014†             15724.6      464.32 ug/L        4.650      464.32 ppb        4.650   1.00%
   QC value within limits for U 409.014  Recovery = 92.86%
V 292.402†             62151.3      485.61 ug/L        7.705      485.61 ppb        7.705   1.59%
   QC value within limits for V 292.402  Recovery = 97.12%
Zn 213.857†            62181.4      477.55 ug/L        7.498      477.55 ppb        7.498   1.57%
   QC value within limits for Zn 213.857  Recovery = 95.51%
SiO2†                  92338.0      5180.2 ug/L       95.70      5180.2 ppb       95.70   1.85%
   QC value within limits for SiO2  Recovery = 96.87%
All analyte(s) passed QC.
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Sequence No.: 69
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/2/2009 00:34:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7237.5	7237.5	99.8	%			00:36:39
1	Y RADIAL	6573.0	6573.0	108.3	%			00:36:39
1	Al 396.153Radial†	59.5	143.1	114.81	ug/L	114.81	ppb	00:36:39
1	Ca 317.933Radial†	24.2	-6.0	-8.4298	ug/L	-8.4298	ppb	00:36:59
1	Fe 238.204 Radial†	38.2	1.1	4.1811	ug/L	4.1811	ppb	00:36:59
1	K 766.490 Radial†	2733.0	-111.4	-20.977	ug/L	-20.977	ppb	00:36:39
1	Mg 279.077 IEC†	-0.7	-3.0	-69.855	ug/L	-69.855	ppb	00:36:59
1	Na 589.592 Radial†	-297.1	-3381.2	-180.14	ug/L	-180.14	ppb	00:36:39
1	Sr 421.552†	-69.7	-3.6	-0.0099	ug/L	-0.0099	ppb	00:36:39
1	Sc 361.383	740429.0	740429.0	94.207	%			00:37:56
1	Y 371.029	579156.2	579156.2	99.189	%			00:37:56
1	Ag 328.068†	793.1	133.6	0.6934	ug/L	0.6934	ppb	00:37:56
1	As 188.979†	-40.6	-8.1	-2.4028	ug/L	-2.4028	ppb	00:38:16
1	B 249.677†	-665.4	117.7	2.5036	ug/L	2.5036	ppb	00:37:56
1	Ba 233.527†	48.0	31.3	0.1877	ug/L	0.1877	ppb	00:38:16
1	Be 313.107†	-4769.6	-141.7	-0.0540	ug/L	-0.0540	ppb	00:37:56
1	Cd 226.502†	-268.1	8.0	0.0843	ug/L	0.0843	ppb	00:38:16
1	Co 228.616†	-123.2	-31.0	-0.4505	ug/L	-0.4505	ppb	00:38:16
1	Cr 267.716†	-54.9	-51.8	-0.6104	ug/L	-0.6104	ppb	00:37:56
1	Cu 324.752†	5828.8	281.4	0.8808	ug/L	0.8808	ppb	00:37:56
1	Mn 257.610†	795.0	79.3	0.0762	ug/L	0.0762	ppb	00:37:56
1	Mo 202.031†	32.0	23.5	1.3990	ug/L	1.3990	ppb	00:38:16
1	Ni 231.604†	162.0	6.5	0.1473	ug/L	0.1473	ppb	00:38:16
1	P 214.914†	312.5	35.8	14.790	ug/L	14.790	ppb	00:38:16
1	Pb 220.353†	-33.0	-8.3	-0.7965	ug/L	-0.7965	ppb	00:38:16
1	S 181.975 Axial†	77.2	-22.9	-25.522	ug/L	-25.522	ppb	00:38:16
1	Sb 206.836†	57.1	5.9	1.5425	ug/L	1.5425	ppb	00:38:16
1	Se 196.026†	-42.9	-13.8	-5.7365	ug/L	-5.7365	ppb	00:38:16
1	Si 251.611†	608.9	160.7	4.1882	ug/L	4.1882	ppb	00:38:16
1	Sn 189.927†	22.7	11.2	1.6321	ug/L	1.6321	ppb	00:38:16
1	Ti 334.940†	-1465.1	-84.3	-0.1312	ug/L	-0.1312	ppb	00:37:56
1	Tl 190.801†	-53.5	3.9	0.8651	ug/L	0.8651	ppb	00:38:16
1	U 409.014†	-5251.7	-306.7	-9.0849	ug/L	-9.0849	ppb	00:37:56
1	V 292.402†	-1673.7	-77.5	-0.5996	ug/L	-0.5996	ppb	00:37:56
1	Zn 213.857†	1012.8	43.8	0.3394	ug/L	0.3394	ppb	00:38:16
1	SiO2†	622.7	177.5	9.9423	ug/L	9.9423	ppb	00:39:12
2	Sc Radial	6612.1	6612.1	91.2	%			00:37:04
2	Y RADIAL	6012.5	6012.5	99.11	%			00:37:04
2	Al 396.153Radial†	39.4	126.7	101.69	ug/L	101.69	ppb	00:37:04
2	Ca 317.933Radial†	18.7	-9.8	-13.728	ug/L	-13.728	ppb	00:37:24
2	Fe 238.204 Radial†	38.9	5.4	21.193	ug/L	21.193	ppb	00:37:24
2	K 766.490 Radial†	2827.4	251.1	47.285	ug/L	47.285	ppb	00:37:04
2	Mg 279.077 IEC†	4.4	2.5	57.987	ug/L	57.987	ppb	00:37:24
2	Na 589.592 Radial†	-258.9	-3367.5	-179.41	ug/L	-179.41	ppb	00:37:04
2	Sr 421.552†	-66.0	-6.2	-0.0171	ug/L	-0.0171	ppb	00:37:04
2	Sc 361.383	730246.5	730246.5	92.912	%			00:38:22
2	Y 371.029	570491.9	570491.9	97.705	%			00:38:22
2	Ag 328.068†	778.5	129.6	0.6774	ug/L	0.6774	ppb	00:38:22
2	As 188.979†	-36.1	-3.9	-1.1524	ug/L	-1.1524	ppb	00:38:42
2	B 249.677†	-743.5	23.8	0.5041	ug/L	0.5041	ppb	00:38:22
2	Ba 233.527†	53.3	37.8	0.2260	ug/L	0.2260	ppb	00:38:42
2	Be 313.107†	-4845.7	-294.1	-0.1121	ug/L	-0.1121	ppb	00:38:22
2	Cd 226.502†	-290.1	-19.6	-0.2086	ug/L	-0.2086	ppb	00:38:42
2	Co 228.616†	-77.0	16.9	0.2514	ug/L	0.2514	ppb	00:38:42
2	Cr 267.716†	-35.0	-31.1	-0.3663	ug/L	-0.3663	ppb	00:38:22
2	Cu 324.752†	5854.4	395.3	1.2381	ug/L	1.2381	ppb	00:38:22
2	Mn 257.610†	809.8	107.0	0.1018	ug/L	0.1018	ppb	00:38:22
2	Mo 202.031†	25.8	17.2	1.0287	ug/L	1.0287	ppb	00:38:42
2	Ni 231.604†	156.4	3.0	0.0669	ug/L	0.0669	ppb	00:38:42

2	P 214.914†	313.0	41.0	16.835	ug/L	16.835 ppb	00:38:42
2	Pb 220.353†	-35.7	-11.8	-1.1471	ug/L	-1.1471 ppb	00:38:42
2	S 181.975 Axial†	100.7	3.5	3.9356	ug/L	3.9356 ppb	00:38:42
2	Sb 206.836†	61.5	11.5	2.9127	ug/L	2.9127 ppb	00:38:42
2	Se 196.026†	-30.7	-1.3	-0.4565	ug/L	-0.4565 ppb	00:38:42
2	Si 251.611†	598.1	158.1	4.1135	ug/L	4.1135 ppb	00:38:42
2	Sn 189.927†	17.5	5.9	0.8615	ug/L	0.8615 ppb	00:38:42
2	Ti 334.940†	-1505.2	-149.2	-0.2354	ug/L	-0.2354 ppb	00:38:22
2	Tl 190.801†	-64.0	-8.2	-1.8122	ug/L	-1.8122 ppb	00:38:42
2	U 409.014†	-5190.3	-318.3	-9.4327	ug/L	-9.4327 ppb	00:38:22
2	V 292.402†	-1695.7	-125.9	-0.9792	ug/L	-0.9792 ppb	00:38:22
2	Zn 213.857†	1022.4	69.1	0.5295	ug/L	0.5295 ppb	00:38:42
2	SiO2†	633.8	198.7	11.124	ug/L	11.124 ppb	00:39:17
3	Sc Radial	6730.8	6730.8	92.8	%		00:37:29
3	Y RADIAL	6106.2	6106.2	100.7	%		00:37:29
3	Al 396.153Radial†	27.4	113.0	90.698	ug/L	90.698 ppb	00:37:29
3	Ca 317.933Radial†	27.3	-0.9	-1.2615	ug/L	-1.2615 ppb	00:37:49
3	Fe 238.204 Radial†	42.1	8.2	31.875	ug/L	31.875 ppb	00:37:49
3	K 766.490 Radial†	2738.6	100.8	18.982	ug/L	18.982 ppb	00:37:29
3	Mg 279.077 IEC†	4.2	2.3	53.000	ug/L	53.000 ppb	00:37:49
3	Na 589.592 Radial†	-239.1	-3341.1	-178.00	ug/L	-178.00 ppb	00:37:29
3	Sr 421.552†	-87.5	-28.0	-0.0779	ug/L	-0.0779 ppb	00:37:29
3	Sc 361.383	725214.2	725214.2	92.271	%		00:38:47
3	Y 371.029	566696.3	566696.3	97.055	%		00:38:47
3	Ag 328.068†	703.7	54.4	0.2998	ug/L	0.2998 ppb	00:38:47
3	As 188.979†	-34.4	-2.4	-0.7113	ug/L	-0.7113 ppb	00:39:07
3	B 249.677†	-698.0	67.6	1.4344	ug/L	1.4344 ppb	00:38:47
3	Ba 233.527†	53.8	38.8	0.2327	ug/L	0.2327 ppb	00:39:07
3	Be 313.107†	-4795.3	-275.7	-0.1050	ug/L	-0.1050 ppb	00:38:47
3	Cd 226.502†	-293.5	-25.4	-0.2717	ug/L	-0.2717 ppb	00:39:07
3	Co 228.616†	-102.0	-10.8	-0.1562	ug/L	-0.1562 ppb	00:39:07
3	Cr 267.716†	-41.0	-38.0	-0.4445	ug/L	-0.4445 ppb	00:38:47
3	Cu 324.752†	5860.0	445.1	1.3944	ug/L	1.3944 ppb	00:38:47
3	Mn 257.610†	820.7	125.0	0.1200	ug/L	0.1200 ppb	00:38:47
3	Mo 202.031†	23.6	15.1	0.8999	ug/L	0.8999 ppb	00:39:07
3	Ni 231.604†	164.2	12.6	0.2822	ug/L	0.2822 ppb	00:39:07
3	P 214.914†	302.3	31.7	12.908	ug/L	12.908 ppb	00:39:07
3	Pb 220.353†	-25.9	-1.4	-0.1194	ug/L	-0.1194 ppb	00:39:07
3	S 181.975 Axial†	89.5	-7.9	-8.7920	ug/L	-8.7920 ppb	00:39:07
3	Sb 206.836†	49.5	-1.0	-0.2304	ug/L	-0.2304 ppb	00:39:07
3	Se 196.026†	-29.8	-0.5	-0.0920	ug/L	-0.0920 ppb	00:39:07
3	Si 251.611†	599.1	163.7	4.2859	ug/L	4.2859 ppb	00:39:07
3	Sn 189.927†	11.2	-0.8	-0.1125	ug/L	-0.1125 ppb	00:39:07
3	Ti 334.940†	-1461.3	-112.8	-0.1742	ug/L	-0.1742 ppb	00:38:47
3	Tl 190.801†	-55.7	0.3	0.0771	ug/L	0.0771 ppb	00:39:07
3	U 409.014†	-5308.1	-484.8	-14.366	ug/L	-14.366 ppb	00:38:47
3	V 292.402†	-1629.1	-66.4	-0.5324	ug/L	-0.5324 ppb	00:38:47
3	Zn 213.857†	997.9	50.2	0.3800	ug/L	0.3800 ppb	00:39:07
3	SiO2†	601.7	168.7	9.4859	ug/L	9.4859 ppb	00:39:23

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	731963.2	93.130	%	0.9862				1.06%
Sc Radial	6860.1	94.6	%	4.58				4.84%
Y 371.029	572114.8	97.983	%	1.0938				1.12%
Y RADIAL	6230.6	102.7	%	4.95				4.82%
Ag 328.068†	105.8	0.5569	ug/L	0.22274	0.5569	ppb	0.22274	40.00%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	127.6	102.40	ug/L	12.070	102.40	ppb	12.070	11.79%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.8	-1.4222	ug/L	0.87740	-1.4222	ppb	0.87740	61.69%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	69.7	1.4807	ug/L	1.00054	1.4807	ppb	1.00054	67.57%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	36.0	0.2155	ug/L	0.02425	0.2155	ppb	0.02425	11.25%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-237.2	-0.0904	ug/L	0.03167	-0.0904	ppb	0.03167	35.04%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-5.6	-7.8064	ug/L	6.25647	-7.8064	ppb	6.25647	80.15%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -12.3     -0.1320 ug/L       0.18993     -0.1320 ppb        0.18993 143.91%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -8.3     -0.1185 ug/L       0.35248     -0.1185 ppb        0.35248 297.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -40.3     -0.4737 ug/L       0.12467     -0.4737 ppb        0.12467  26.31%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              373.9      1.1711 ug/L       0.26324      1.1711 ppb        0.26324  22.48%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         4.9      19.083 ug/L       13.9668      19.083 ppb        13.9668  73.19%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         80.2      15.097 ug/L       34.2965      15.097 ppb        34.2965 227.18%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.6      13.710 ug/L       72.4129      13.710 ppb        72.4129 528.16%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              103.8      0.0993 ug/L       0.02203      0.0993 ppb        0.02203  22.17%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               18.6      1.1092 ug/L       0.25912      1.1092 ppb        0.25912  23.36%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     -3363.3     -179.18 ug/L         1.085     -179.18 ppb          1.085   0.61%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                7.4      0.1655 ug/L       0.10880      0.1655 ppb        0.10880  65.74%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                36.2      14.844 ug/L        1.9641      14.844 ppb         1.9641  13.23%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -7.1     -0.6877 ug/L       0.52242     -0.6877 ppb        0.52242  75.97%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -9.1     -10.126 ug/L       14.7741     -10.126 ppb        14.7741 145.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                5.5      1.4083 ug/L       1.57583      1.4083 ppb        1.57583 111.90%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -5.2     -2.0950 ug/L       3.15890     -2.0950 ppb        3.15890 150.78%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              160.8      4.1959 ug/L       0.08644      4.1959 ppb        0.08644   2.06%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                5.4      0.7937 ug/L       0.87429      0.7937 ppb        0.87429 110.16%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              -12.6     -0.0350 ug/L       0.03736     -0.0350 ppb        0.03736 106.81%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -115.4     -0.1803 ug/L       0.05236     -0.1803 ppb        0.05236  29.05%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -1.3     -0.2900 ug/L       1.37587     -0.2900 ppb        1.37587 474.47%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -369.9     -10.961 ug/L        2.9539     -10.961 ppb         2.9539  26.95%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -89.9     -0.7037 ug/L       0.24094     -0.7037 ppb        0.24094  34.24%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               54.4      0.4163 ug/L       0.10012      0.4163 ppb        0.10012  24.05%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    181.6      10.184 ug/L        0.8456      10.184 ppb         0.8456   8.30%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

7/2/2009 10:35:46 Hg ReAlign... Actual peak offset (nm): -0.009
Drift (nm): 0.000 Slit adjustment: 0

Analysis Begun

Start Time: 7/2/2009 10:36:43 **Plasma On Time: 6/29/2009 15:26:31**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070209.sif
Batch ID:
Results Data Set: 070209
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX **Method Last Saved: 7/1/2009 10:29:21**
IEC File: 040209.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 7/2/2009 10:36:44**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

	Net	Corrected	Calib.	Analysis

Repl#	Analyte	Intensity	Intensity	Conc.	Units	Time
1	Sc Radial	6897.7	6897.7	99.4	%	10:38:37
1	Y RADIAL	6336.8	6336.8	99.65	%	10:38:37
1	Al 396.153Radial†	-70.1	-70.5	[0.00]	ug/L	10:38:37
1	Ca 317.933Radial†	27.5	27.6	[0.00]	ug/L	10:38:57
1	Fe 238.204 Radial†	38.1	38.4	[0.00]	ug/L	10:38:57
1	K 766.490 Radial†	2778.7	2795.2	[0.00]	ug/L	10:38:37
1	Mg 279.077 IEC†	5.0	5.0	[0.00]	ug/L	10:38:57
1	Na 589.592 Radial†	-296.7	-298.5	[0.00]	ug/L	10:38:37
1	Sr 421.552†	-110.8	-111.4	[0.00]	ug/L	10:38:37
1	Sc 361.383	746324.2	746324.2	100.22	%	10:39:54
1	Y 371.029	582929.7	582929.7	100.26	%	10:39:54
1	Ag 328.068†	687.7	686.1	[0.00]	ug/L	10:39:54
1	As 188.979†	-39.0	-38.9	[0.00]	ug/L	10:40:14
1	B 249.677†	-918.1	-916.0	[0.00]	ug/L	10:39:54
1	Ba 233.527†	19.9	19.8	[0.00]	ug/L	10:40:14
1	Be 313.107†	-4762.1	-4751.5	[0.00]	ug/L	10:39:54
1	Cd 226.502†	-302.3	-301.7	[0.00]	ug/L	10:40:14
1	Co 228.616†	-94.3	-94.1	[0.00]	ug/L	10:40:14
1	Cr 267.716†	-117.8	-117.5	[0.00]	ug/L	10:39:54
1	Cu 324.752†	5753.0	5740.1	[0.00]	ug/L	10:39:54
1	Mn 257.610†	707.5	705.9	[0.00]	ug/L	10:39:54
1	Mo 202.031†	9.3	9.3	[0.00]	ug/L	10:40:14
1	Ni 231.604†	154.4	154.1	[0.00]	ug/L	10:40:14
1	P 214.914†	303.4	302.8	[0.00]	ug/L	10:40:14
1	Pb 220.353†	-13.5	-13.5	[0.00]	ug/L	10:40:14
1	S 181.975 Axial†	138.0	137.7	[0.00]	ug/L	10:40:14
1	Sb 206.836†	59.0	58.8	[0.00]	ug/L	10:40:14
1	Se 196.026†	-37.4	-37.4	[0.00]	ug/L	10:40:14
1	Si 251.611†	456.5	455.5	[0.00]	ug/L	10:40:14
1	Sn 189.927†	17.5	17.5	[0.00]	ug/L	10:40:14
1	Ti 334.940†	-1556.2	-1552.7	[0.00]	ug/L	10:39:54
1	Tl 190.801†	-61.1	-61.0	[0.00]	ug/L	10:40:14
1	U 409.014†	-5280.3	-5268.4	[0.00]	ug/L	10:39:54
1	V 292.402†	-1593.6	-1590.0	[0.00]	ug/L	10:39:54
1	Zn 213.857†	968.0	965.9	[0.00]	ug/L	10:40:14
1	SiO2†	490.0	488.9	[0.00]	ug/L	10:41:10
2	Sc Radial	6906.7	6906.7	99.5	%	10:39:02
2	Y RADIAL	6310.5	6310.5	99.24	%	10:39:02
2	Al 396.153Radial†	-63.5	-63.8	[0.00]	ug/L	10:39:02
2	Ca 317.933Radial†	26.6	26.7	[0.00]	ug/L	10:39:22
2	Fe 238.204 Radial†	39.1	39.2	[0.00]	ug/L	10:39:22
2	K 766.490 Radial†	2751.4	2764.2	[0.00]	ug/L	10:39:02
2	Mg 279.077 IEC†	3.6	3.7	[0.00]	ug/L	10:39:22
2	Na 589.592 Radial†	-284.4	-285.8	[0.00]	ug/L	10:39:02
2	Sr 421.552†	-12.3	-12.4	[0.00]	ug/L	10:39:02
2	Sc 361.383	740241.2	740241.2	99.407	%	10:40:20
2	Y 371.029	578063.6	578063.6	99.426	%	10:40:20
2	Ag 328.068†	700.7	704.9	[0.00]	ug/L	10:40:20
2	As 188.979†	-35.9	-36.1	[0.00]	ug/L	10:40:40
2	B 249.677†	-824.5	-829.4	[0.00]	ug/L	10:40:20
2	Ba 233.527†	25.2	25.3	[0.00]	ug/L	10:40:40
2	Be 313.107†	-4766.0	-4794.5	[0.00]	ug/L	10:40:20
2	Cd 226.502†	-304.1	-305.9	[0.00]	ug/L	10:40:40
2	Co 228.616†	-114.1	-114.8	[0.00]	ug/L	10:40:40
2	Cr 267.716†	-59.6	-59.9	[0.00]	ug/L	10:40:20
2	Cu 324.752†	5725.4	5759.6	[0.00]	ug/L	10:40:20
2	Mn 257.610†	715.3	719.6	[0.00]	ug/L	10:40:20
2	Mo 202.031†	3.2	3.2	[0.00]	ug/L	10:40:40
2	Ni 231.604†	125.8	126.5	[0.00]	ug/L	10:40:40
2	P 214.914†	292.6	294.4	[0.00]	ug/L	10:40:40
2	Pb 220.353†	-0.3	-0.3	[0.00]	ug/L	10:40:40
2	S 181.975 Axial†	136.1	136.9	[0.00]	ug/L	10:40:40
2	Sb 206.836†	53.5	53.9	[0.00]	ug/L	10:40:40
2	Se 196.026†	-38.0	-38.2	[0.00]	ug/L	10:40:40
2	Si 251.611†	441.8	444.5	[0.00]	ug/L	10:40:40
2	Sn 189.927†	15.1	15.1	[0.00]	ug/L	10:40:40
2	Ti 334.940†	-1539.2	-1548.4	[0.00]	ug/L	10:40:20
2	Tl 190.801†	-52.4	-52.7	[0.00]	ug/L	10:40:40
2	U 409.014†	-5264.8	-5296.2	[0.00]	ug/L	10:40:20
2	V 292.402†	-1730.2	-1740.5	[0.00]	ug/L	10:40:20

2	Zn 213.857†	981.5	987.4	[0.00]	ug/L	10:40:40
2	SiO2†	479.0	481.8	[0.00]	ug/L	10:41:15
3	Sc Radial	7012.1	7012.1	101	%	10:39:27
3	Y RADIAL	6430.0	6430.0	101.1	%	10:39:27
3	Al 396.153Radial†	-78.3	-77.5	[0.00]	ug/L	10:39:27
3	Ca 317.933Radial†	25.1	24.8	[0.00]	ug/L	10:39:47
3	Fe 238.204 Radial†	39.7	39.2	[0.00]	ug/L	10:39:47
3	K 766.490 Radial†	2830.1	2800.5	[0.00]	ug/L	10:39:27
3	Mg 279.077 IEC†	3.2	3.2	[0.00]	ug/L	10:39:47
3	Na 589.592 Radial†	-413.6	-409.3	[0.00]	ug/L	10:39:27
3	Sr 421.552†	-63.7	-63.1	[0.00]	ug/L	10:39:27
3	Sc 361.383	747397.6	747397.6	100.37	%	10:40:45
3	Y 371.029	583214.8	583214.8	100.31	%	10:40:45
3	Ag 328.068†	729.3	726.7	[0.00]	ug/L	10:40:45
3	As 188.979†	-28.0	-27.9	[0.00]	ug/L	10:41:05
3	B 249.677†	-901.8	-898.5	[0.00]	ug/L	10:40:45
3	Ba 233.527†	22.2	22.1	[0.00]	ug/L	10:41:05
3	Be 313.107†	-4826.0	-4808.3	[0.00]	ug/L	10:40:45
3	Cd 226.502†	-273.2	-272.2	[0.00]	ug/L	10:41:05
3	Co 228.616†	-92.9	-92.6	[0.00]	ug/L	10:41:05
3	Cr 267.716†	-116.9	-116.5	[0.00]	ug/L	10:40:45
3	Cu 324.752†	5894.5	5872.9	[0.00]	ug/L	10:40:45
3	Mn 257.610†	730.8	728.1	[0.00]	ug/L	10:40:45
3	Mo 202.031†	0.8	0.8	[0.00]	ug/L	10:41:05
3	Ni 231.604†	129.8	129.3	[0.00]	ug/L	10:41:05
3	P 214.914†	284.5	283.5	[0.00]	ug/L	10:41:05
3	Pb 220.353†	-39.9	-39.7	[0.00]	ug/L	10:41:05
3	S 181.975 Axial†	133.8	133.3	[0.00]	ug/L	10:41:05
3	Sb 206.836†	45.2	45.1	[0.00]	ug/L	10:41:05
3	Se 196.026†	-29.1	-29.0	[0.00]	ug/L	10:41:05
3	Si 251.611†	447.9	446.3	[0.00]	ug/L	10:41:05
3	Sn 189.927†	6.3	6.3	[0.00]	ug/L	10:41:05
3	Ti 334.940†	-1484.8	-1479.3	[0.00]	ug/L	10:40:45
3	Tl 190.801†	-70.0	-69.8	[0.00]	ug/L	10:41:05
3	U 409.014†	-5248.2	-5228.9	[0.00]	ug/L	10:40:45
3	V 292.402†	-1754.5	-1748.0	[0.00]	ug/L	10:40:45
3	Zn 213.857†	1003.6	999.9	[0.00]	ug/L	10:41:05
3	SiO2†	457.5	455.8	[0.00]	ug/L	10:41:21

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	744654.3	3859.36	0.52%	100.00	%
Sc Radial	6938.8	63.61	0.92%	100	%
Y 371.029	581402.7	2895.24	0.50%	100.00	%
Y RADIAL	6359.1	62.76	0.99%	100.0	%
Ag 328.068†	705.9	20.29	2.87%	[0.00]	ug/L
Al 396.153Radial†	-70.6	6.85	9.70%	[0.00]	ug/L
As 188.979†	-34.3	5.69	16.57%	[0.00]	ug/L
B 249.677†	-881.3	45.80	5.20%	[0.00]	ug/L
Ba 233.527†	22.4	2.76	12.29%	[0.00]	ug/L
Be 313.107†	-4784.7	29.64	0.62%	[0.00]	ug/L
Ca 317.933Radial†	26.4	1.42	5.38%	[0.00]	ug/L
Cd 226.502†	-293.2	18.37	6.26%	[0.00]	ug/L
Co 228.616†	-100.5	12.40	12.34%	[0.00]	ug/L
Cr 267.716†	-98.0	32.97	33.65%	[0.00]	ug/L
Cu 324.752†	5790.9	71.69	1.24%	[0.00]	ug/L
Fe 238.204 Radial†	38.9	0.50	1.29%	[0.00]	ug/L
K 766.490 Radial†	2786.7	19.61	0.70%	[0.00]	ug/L
Mg 279.077 IEC†	3.9	0.94	23.84%	[0.00]	ug/L
Mn 257.610†	717.9	11.21	1.56%	[0.00]	ug/L
Mo 202.031†	4.4	4.37	98.78%	[0.00]	ug/L
Na 589.592 Radial†	-331.2	67.95	20.52%	[0.00]	ug/L
Ni 231.604†	136.6	15.19	11.12%	[0.00]	ug/L
P 214.914†	293.5	9.68	3.30%	[0.00]	ug/L
Pb 220.353†	-17.8	20.08	112.62%	[0.00]	ug/L
S 181.975 Axial†	136.0	2.36	1.74%	[0.00]	ug/L
Sb 206.836†	52.6	6.97	13.25%	[0.00]	ug/L
Se 196.026†	-34.8	5.11	14.66%	[0.00]	ug/L
Si 251.611†	448.8	5.92	1.32%	[0.00]	ug/L

Sn 189.927†	13.0	5.90	45.38%	[0.00]	ug/L
Sr 421.552†	-62.3	49.52	79.48%	[0.00]	ug/L
Ti 334.940†	-1526.8	41.18	2.70%	[0.00]	ug/L
Tl 190.801†	-61.2	8.53	13.95%	[0.00]	ug/L
U 409.014†	-5264.5	33.82	0.64%	[0.00]	ug/L
V 292.402†	-1692.9	89.17	5.27%	[0.00]	ug/L
Zn 213.857†	984.4	17.22	1.75%	[0.00]	ug/L
SiO2†	475.5	17.43	3.66%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/2/2009 10:43:31
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7086.2	7086.2	102	%	10:45:28
1	Y RADIAL	6441.4	6441.4	101.3	%	10:45:28
1	K 766.490 Radial†	7537.3	4593.9	[1000]	ug/L	10:45:23
1	Sr 421.552†	32268.5	31659.8	[100]	ug/L	10:45:28
1	Sc 361.383	753276.1	753276.1	101.16	%	10:45:55
1	Y 371.029	586704.3	586704.3	100.91	%	10:45:55
1	Ag 328.068†	19174.2	18248.8	[100]	ug/L	10:45:55
1	As 188.979†	286.6	317.6	[100]	ug/L	10:46:15
1	B 249.677†	3497.7	4339.0	[100]	ug/L	10:45:55
1	Ba 233.527†	15908.8	15704.3	[100]	ug/L	10:45:55
1	Be 313.107†	245384.6	247360.7	[100]	ug/L	10:45:55
1	Cd 226.502†	8632.8	8827.2	[100]	ug/L	10:46:15
1	Co 228.616†	6389.3	6416.7	[100]	ug/L	10:46:15
1	Cr 267.716†	8059.6	8065.4	[100]	ug/L	10:45:55
1	Cu 324.752†	35650.5	29451.6	[100]	ug/L	10:45:55
1	Mn 257.610†	103220.4	101321.1	[100]	ug/L	10:45:55
1	Mo 202.031†	1615.0	1592.1	[100]	ug/L	10:46:15
1	Ni 231.604†	4372.9	4186.2	[100]	ug/L	10:46:15
1	P 214.914†	1427.9	1118.0	[500]	ug/L	10:46:15
1	Pb 220.353†	948.9	955.9	[100]	ug/L	10:46:15
1	S 181.975 Axial†	300.7	161.3	[200]	ug/L	10:46:15
1	Sb 206.836†	424.3	366.8	[100]	ug/L	10:46:15
1	Se 196.026†	191.1	223.7	[100]	ug/L	10:46:15
1	Si 251.611†	18242.3	17584.7	[500]	ug/L	10:45:55
1	Sn 189.927†	669.4	648.7	[100]	ug/L	10:46:15
1	Ti 334.940†	58004.7	58867.6	[100]	ug/L	10:45:55
1	Tl 190.801†	374.5	431.4	[100]	ug/L	10:46:15
1	U 409.014†	-2006.2	3281.3	[100]	ug/L	10:45:55
1	V 292.402†	10423.9	11997.5	[100]	ug/L	10:45:55
1	Zn 213.857†	13350.6	12213.4	[100]	ug/L	10:45:55
1	SiO2†	18128.9	17445.9	[1069.5]	ug/L	10:47:12
2	Sc Radial	7057.7	7057.7	102	%	10:45:38
2	Y RADIAL	6446.8	6446.8	101.4	%	10:45:38
2	K 766.490 Radial†	7556.9	4642.9	[1000]	ug/L	10:45:33
2	Sr 421.552†	32038.7	31561.1	[100]	ug/L	10:45:38
2	Sc 361.383	758233.9	758233.9	101.82	%	10:46:21
2	Y 371.029	590763.7	590763.7	101.61	%	10:46:21
2	Ag 328.068†	19300.5	18249.0	[100]	ug/L	10:46:21
2	As 188.979†	286.2	315.4	[100]	ug/L	10:46:41
2	B 249.677†	3549.5	4367.2	[100]	ug/L	10:46:21
2	Ba 233.527†	15881.4	15574.6	[100]	ug/L	10:46:21
2	Be 313.107†	246067.9	246445.7	[100]	ug/L	10:46:21
2	Cd 226.502†	8539.5	8679.8	[100]	ug/L	10:46:41
2	Co 228.616†	6336.2	6323.3	[100]	ug/L	10:46:41
2	Cr 267.716†	8047.6	8001.4	[100]	ug/L	10:46:21
2	Cu 324.752†	35854.5	29421.5	[100]	ug/L	10:46:21
2	Mn 257.610†	103690.3	101115.4	[100]	ug/L	10:46:21
2	Mo 202.031†	1608.7	1575.5	[100]	ug/L	10:46:41
2	Ni 231.604†	4372.8	4157.9	[100]	ug/L	10:46:41
2	P 214.914†	1406.4	1087.7	[500]	ug/L	10:46:41
2	Pb 220.353†	938.9	939.9	[100]	ug/L	10:46:41
2	S 181.975 Axial†	294.8	153.6	[200]	ug/L	10:46:41
2	Sb 206.836†	430.2	369.9	[100]	ug/L	10:46:41
2	Se 196.026†	190.4	221.9	[100]	ug/L	10:46:41
2	Si 251.611†	18291.3	17514.9	[500]	ug/L	10:46:21
2	Sn 189.927†	653.1	628.4	[100]	ug/L	10:46:41
2	Ti 334.940†	58252.2	58735.7	[100]	ug/L	10:46:21
2	Tl 190.801†	360.7	415.4	[100]	ug/L	10:46:41
2	U 409.014†	-2084.0	3217.8	[100]	ug/L	10:46:21

2	V 292.402†	10429.6	11935.7	[100]	ug/L	10:46:21
2	Zn 213.857†	13335.2	12112.0	[100]	ug/L	10:46:21
2	SiO2†	18069.7	17270.5	[1069.5]	ug/L	10:47:17
3	Sc Radial	7141.8	7141.8	103	%	10:45:48
3	Y RADIAL	6529.1	6529.1	102.7	%	10:45:48
3	K 766.490 Radial†	7576.2	4574.2	[1000]	ug/L	10:45:43
3	Sr 421.552†	32361.4	31504.0	[100]	ug/L	10:45:48
3	Sc 361.383	758172.3	758172.3	101.82	%	10:46:46
3	Y 371.029	590755.2	590755.2	101.61	%	10:46:46
3	Ag 328.068†	19333.0	18282.4	[100]	ug/L	10:46:46
3	As 188.979†	296.2	325.3	[100]	ug/L	10:47:06
3	B 249.677†	3520.9	4339.4	[100]	ug/L	10:46:46
3	Ba 233.527†	16016.4	15708.4	[100]	ug/L	10:46:46
3	Be 313.107†	247177.8	247555.4	[100]	ug/L	10:46:46
3	Cd 226.502†	8583.2	8723.4	[100]	ug/L	10:47:06
3	Co 228.616†	6363.4	6350.5	[100]	ug/L	10:47:06
3	Cr 267.716†	8091.1	8044.8	[100]	ug/L	10:46:46
3	Cu 324.752†	35864.0	29433.7	[100]	ug/L	10:46:46
3	Mn 257.610†	104029.9	101457.1	[100]	ug/L	10:46:46
3	Mo 202.031†	1613.8	1580.6	[100]	ug/L	10:47:06
3	Ni 231.604†	4365.9	4151.5	[100]	ug/L	10:47:06
3	P 214.914†	1408.3	1089.6	[500]	ug/L	10:47:06
3	Pb 220.353†	959.0	959.7	[100]	ug/L	10:47:06
3	S 181.975 Axial†	304.7	163.2	[200]	ug/L	10:47:06
3	Sb 206.836†	420.1	360.0	[100]	ug/L	10:47:06
3	Se 196.026†	198.9	230.1	[100]	ug/L	10:47:06
3	Si 251.611†	18278.1	17503.4	[500]	ug/L	10:46:46
3	Sn 189.927†	666.1	641.3	[100]	ug/L	10:47:06
3	Ti 334.940†	58585.8	59068.1	[100]	ug/L	10:46:46
3	Tl 190.801†	390.6	444.8	[100]	ug/L	10:47:06
3	U 409.014†	-1954.5	3344.9	[100]	ug/L	10:46:46
3	V 292.402†	10573.1	12077.5	[100]	ug/L	10:46:46
3	Zn 213.857†	13433.8	12209.9	[100]	ug/L	10:46:46
3	SiO2†	18205.9	17405.8	[1069.5]	ug/L	10:47:22

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	756560.8	2844.75	0.38%	101.60	%
Sc Radial	7095.2	42.76	0.60%	102	%
Y 371.029	589407.7	2341.22	0.40%	101.38	%
Y RADIAL	6472.4	49.17	0.76%	101.8	%
Ag 328.068†	18260.1	19.36	0.11%	[100]	ug/L
As 188.979†	319.4	5.16	1.62%	[100]	ug/L
B 249.677†	4348.5	16.16	0.37%	[100]	ug/L
Ba 233.527†	15662.4	76.11	0.49%	[100]	ug/L
Be 313.107†	247120.6	592.55	0.24%	[100]	ug/L
Cd 226.502†	8743.5	75.74	0.87%	[100]	ug/L
Co 228.616†	6363.5	48.04	0.75%	[100]	ug/L
Cr 267.716†	8037.2	32.63	0.41%	[100]	ug/L
Cu 324.752†	29435.6	15.12	0.05%	[100]	ug/L
K 766.490 Radial†	4603.7	35.39	0.77%	[1000]	ug/L
Mn 257.610†	101297.9	172.04	0.17%	[100]	ug/L
Mo 202.031†	1582.7	8.52	0.54%	[100]	ug/L
Ni 231.604†	4165.2	18.47	0.44%	[100]	ug/L
P 214.914†	1098.4	16.99	1.55%	[500]	ug/L
Pb 220.353†	951.8	10.49	1.10%	[100]	ug/L
S 181.975 Axial†	159.4	5.12	3.21%	[200]	ug/L
Sb 206.836†	365.6	5.06	1.38%	[100]	ug/L
Se 196.026†	225.2	4.35	1.93%	[100]	ug/L
Si 251.611†	17534.4	43.98	0.25%	[500]	ug/L
Sn 189.927†	639.5	10.29	1.61%	[100]	ug/L
Sr 421.552†	31575.0	78.82	0.25%	[100]	ug/L
Ti 334.940†	58890.5	167.35	0.28%	[100]	ug/L
Tl 190.801†	430.5	14.70	3.42%	[100]	ug/L
U 409.014†	3281.3	63.53	1.94%	[100]	ug/L
V 292.402†	12003.5	71.09	0.59%	[100]	ug/L
Zn 213.857†	12178.4	57.57	0.47%	[100]	ug/L
SiO2†	17374.1	91.87	0.53%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/2/2009 10:49:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	6735.9	6735.9	97.1	%	10:51:44
1	Y RADIAL	6115.7	6115.7	96.17	%	10:51:44
1	Al 396.153Radial†	6019.8	6271.7	[5000]	ug/L	10:51:24
1	Ca 317.933Radial†	3520.3	3599.9	[5000]	ug/L	10:51:44
1	K 766.490 Radial†	26797.8	24818.5	[5000]	ug/L	10:51:24
1	Mg 279.077 IEC†	203.9	206.0	[5000]	ug/L	10:51:44
1	Sr 421.552†	159251.2	164111.3	[500]	ug/L	10:51:24
1	Sc 361.383	770749.0	770749.0	103.50	%	10:52:43
1	Y 371.029	593963.5	593963.5	102.16	%	10:52:43
1	Ag 328.068†	93344.0	89477.8	[500]	ug/L	10:52:43
1	As 188.979†	1562.2	1543.7	[500]	ug/L	10:53:03
1	B 249.677†	21023.9	21193.4	[500]	ug/L	10:52:43
1	Ba 233.527†	78218.6	75548.0	[500]	ug/L	10:52:43
1	Be 313.107†	1251172.0	1213596.7	[500]	ug/L	10:52:43
1	Cd 226.502†	44782.7	43559.7	[500]	ug/L	10:52:43
1	Co 228.616†	31450.8	30486.5	[500]	ug/L	10:53:03
1	Cr 267.716†	40162.0	38900.3	[500]	ug/L	10:52:43
1	Cu 324.752†	156097.8	145022.1	[500]	ug/L	10:52:43
1	Mn 257.610†	504436.9	486640.7	[500]	ug/L	10:52:43
1	Mo 202.031†	8060.0	7782.7	[500]	ug/L	10:53:03
1	Ni 231.604†	21072.9	20222.8	[500]	ug/L	10:53:03
1	P 214.914†	5897.9	5404.7	[2500]	ug/L	10:53:03
1	Pb 220.353†	4803.7	4658.9	[500]	ug/L	10:53:03
1	S 181.975 Axial†	962.3	793.7	[1000]	ug/L	10:53:03
1	Sb 206.836†	1922.8	1805.1	[500]	ug/L	10:53:03
1	Se 196.026†	1090.3	1088.2	[500]	ug/L	10:53:03
1	Si 251.611†	91524.0	87976.6	[2500]	ug/L	10:52:43
1	Sn 189.927†	3236.3	3113.7	[500]	ug/L	10:53:03
1	Ti 334.940†	299159.0	290557.4	[500]	ug/L	10:52:43
1	Tl 190.801†	2060.5	2051.9	[500]	ug/L	10:53:03
1	U 409.014†	10162.4	15082.9	[500]	ug/L	10:52:43
1	V 292.402†	59620.4	59294.7	[500]	ug/L	10:52:43
1	Zn 213.857†	62312.3	59218.2	[500]	ug/L	10:52:43
1	SiO2†	92253.6	88654.7	[5347.5]	ug/L	10:54:03
2	Sc Radial	6842.6	6842.6	98.6	%	10:52:09
2	Y RADIAL	6229.1	6229.1	97.96	%	10:52:09
2	Al 396.153Radial†	5900.7	6054.2	[5000]	ug/L	10:51:49
2	Ca 317.933Radial†	3552.9	3576.4	[5000]	ug/L	10:52:09
2	K 766.490 Radial†	26603.5	24190.7	[5000]	ug/L	10:51:49
2	Mg 279.077 IEC†	206.8	205.8	[5000]	ug/L	10:52:09
2	Sr 421.552†	155865.5	158118.4	[500]	ug/L	10:51:49
2	Sc 361.383	767356.4	767356.4	103.05	%	10:53:10
2	Y 371.029	591702.4	591702.4	101.77	%	10:53:10
2	Ag 328.068†	93090.3	89630.4	[500]	ug/L	10:53:10
2	As 188.979†	1558.9	1547.1	[500]	ug/L	10:53:31
2	B 249.677†	20918.3	21180.7	[500]	ug/L	10:53:10
2	Ba 233.527†	78103.2	75770.1	[500]	ug/L	10:53:10
2	Be 313.107†	1249921.2	1217727.4	[500]	ug/L	10:53:10
2	Cd 226.502†	44659.7	43631.7	[500]	ug/L	10:53:10
2	Co 228.616†	31432.9	30603.5	[500]	ug/L	10:53:31
2	Cr 267.716†	40153.3	39063.4	[500]	ug/L	10:53:10
2	Cu 324.752†	156025.7	145618.9	[500]	ug/L	10:53:10
2	Mn 257.610†	503431.3	487819.5	[500]	ug/L	10:53:10
2	Mo 202.031†	8061.8	7818.8	[500]	ug/L	10:53:31
2	Ni 231.604†	21075.3	20315.2	[500]	ug/L	10:53:31
2	P 214.914†	5906.0	5437.7	[2500]	ug/L	10:53:31
2	Pb 220.353†	4809.9	4685.4	[500]	ug/L	10:53:31
2	S 181.975 Axial†	955.5	791.2	[1000]	ug/L	10:53:31
2	Sb 206.836†	1898.3	1789.5	[500]	ug/L	10:53:31

2	Se 196.026†	1081.7	1084.6	[500]	ug/L	10:53:31
2	Si 251.611†	91442.4	88288.3	[2500]	ug/L	10:53:10
2	Sn 189.927†	3248.5	3139.4	[500]	ug/L	10:53:31
2	Ti 334.940†	298927.7	291610.8	[500]	ug/L	10:53:10
2	Tl 190.801†	2085.2	2084.7	[500]	ug/L	10:53:31
2	U 409.014†	10103.2	15068.9	[500]	ug/L	10:53:10
2	V 292.402†	59647.3	59575.5	[500]	ug/L	10:53:10
2	Zn 213.857†	62013.4	59194.4	[500]	ug/L	10:53:10
2	SiO2†	91818.2	88626.3	[5347.5]	ug/L	10:54:09
3	Sc Radial	6901.4	6901.4	99.5	%	10:52:34
3	Y RADIAL	6261.1	6261.1	98.46	%	10:52:34
3	Al 396.153Radial†	5952.5	6055.3	[5000]	ug/L	10:52:14
3	Ca 317.933Radial†	3574.2	3567.2	[5000]	ug/L	10:52:34
3	K 766.490 Radial†	26717.5	24075.5	[5000]	ug/L	10:52:14
3	Mg 279.077 IEC†	208.4	205.6	[5000]	ug/L	10:52:34
3	Sr 421.552†	157614.5	158530.3	[500]	ug/L	10:52:14
3	Sc 361.383	770738.6	770738.6	103.50	%	10:53:38
3	Y 371.029	594096.0	594096.0	102.18	%	10:53:38
3	Ag 328.068†	93411.3	89544.1	[500]	ug/L	10:53:38
3	As 188.979†	1552.7	1534.4	[500]	ug/L	10:53:58
3	B 249.677†	20971.3	21142.8	[500]	ug/L	10:53:38
3	Ba 233.527†	78413.5	75737.3	[500]	ug/L	10:53:38
3	Be 313.107†	1253781.2	1216134.0	[500]	ug/L	10:53:38
3	Cd 226.502†	44858.6	43633.7	[500]	ug/L	10:53:38
3	Co 228.616†	31524.1	30557.7	[500]	ug/L	10:53:58
3	Cr 267.716†	40301.2	39035.3	[500]	ug/L	10:53:38
3	Cu 324.752†	156347.9	145265.7	[500]	ug/L	10:53:38
3	Mn 257.610†	505407.2	487584.7	[500]	ug/L	10:53:38
3	Mo 202.031†	8075.1	7797.3	[500]	ug/L	10:53:58
3	Ni 231.604†	21129.3	20277.6	[500]	ug/L	10:53:58
3	P 214.914†	5915.8	5422.0	[2500]	ug/L	10:53:58
3	Pb 220.353†	4805.4	4660.6	[500]	ug/L	10:53:58
3	S 181.975 Axial†	966.4	797.8	[1000]	ug/L	10:53:58
3	Sb 206.836†	1924.2	1806.5	[500]	ug/L	10:53:58
3	Se 196.026†	1092.9	1090.8	[500]	ug/L	10:53:58
3	Si 251.611†	91745.8	88192.1	[2500]	ug/L	10:53:38
3	Sn 189.927†	3250.4	3127.4	[500]	ug/L	10:53:58
3	Ti 334.940†	299773.7	291155.2	[500]	ug/L	10:53:38
3	Tl 190.801†	2080.3	2071.1	[500]	ug/L	10:53:58
3	U 409.014†	10132.2	15053.8	[500]	ug/L	10:53:38
3	V 292.402†	59838.5	59506.2	[500]	ug/L	10:53:38
3	Zn 213.857†	62326.6	59232.9	[500]	ug/L	10:53:38
3	SiO2†	90323.0	86790.7	[5347.5]	ug/L	10:54:14

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	769614.6	1955.73	0.25%	103.35	%
Sc Radial	6826.7	83.93	1.23%	98.4	%
Y 371.029	593254.0	1345.31	0.23%	102.04	%
Y RADIAL	6202.0	76.42	1.23%	97.53	%
Ag 328.068†	89550.8	76.48	0.09%	[500]	ug/L
Al 396.153Radial†	6127.1	125.28	2.04%	[5000]	ug/L
As 188.979†	1541.7	6.54	0.42%	[500]	ug/L
B 249.677†	21172.3	26.30	0.12%	[500]	ug/L
Ba 233.527†	75685.1	119.89	0.16%	[500]	ug/L
Be 313.107†	1215819.4	2083.21	0.17%	[500]	ug/L
Ca 317.933Radial†	3581.2	16.88	0.47%	[5000]	ug/L
Cd 226.502†	43608.4	42.15	0.10%	[500]	ug/L
Co 228.616†	30549.2	58.97	0.19%	[500]	ug/L
Cr 267.716†	38999.6	87.19	0.22%	[500]	ug/L
Cu 324.752†	145302.2	300.07	0.21%	[500]	ug/L
K 766.490 Radial†	24361.6	399.88	1.64%	[5000]	ug/L
Mg 279.077 IEC†	205.8	0.22	0.11%	[5000]	ug/L
Mn 257.610†	487348.3	623.96	0.13%	[500]	ug/L
Mo 202.031†	7799.6	18.20	0.23%	[500]	ug/L
Ni 231.604†	20271.9	46.44	0.23%	[500]	ug/L
P 214.914†	5421.5	16.54	0.31%	[2500]	ug/L
Pb 220.353†	4668.3	14.83	0.32%	[500]	ug/L
S 181.975 Axial†	794.2	3.28	0.41%	[1000]	ug/L

Sb 206.836†	1800.4	9.41	0.52%	[500]	ug/L
Se 196.026†	1087.9	3.12	0.29%	[500]	ug/L
Si 251.611†	88152.3	159.63	0.18%	[2500]	ug/L
Sn 189.927†	3126.9	12.85	0.41%	[500]	ug/L
Sr 421.552†	160253.3	3347.41	2.09%	[500]	ug/L
Ti 334.940†	291107.8	528.30	0.18%	[500]	ug/L
Tl 190.801†	2069.2	16.48	0.80%	[500]	ug/L
U 409.014†	15068.5	14.55	0.10%	[500]	ug/L
V 292.402†	59458.8	146.27	0.25%	[500]	ug/L
Zn 213.857†	59215.2	19.46	0.03%	[500]	ug/L
SiO2†	88023.9	1068.11	1.21%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/2/2009 10:56:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	6725.9	6725.9	96.9	%	10:58:37
1	Y RADIAL	6095.2	6095.2	95.85	%	10:58:37
1	Al 396.153Radial†	12156.3	12611.8	[10000]	ug/L	10:58:17
1	Ca 317.933Radial†	6975.7	7170.1	[10000]	ug/L	10:58:37
1	Fe 238.204 Radial†	2300.7	2334.6	[10000]	ug/L	10:58:37
1	K 766.490 Radial†	51222.1	50057.1	[10000]	ug/L	10:58:17
1	Mg 279.077 IEC†	412.0	421.1	[10000]	ug/L	10:58:37
1	Na 589.592 Radial†	165257.0	170820.1	[10000]	ug/L	10:58:17
1	Sr 421.552†	323221.1	333516.5	[1000]	ug/L	10:58:17
1	Sc 361.383	749608.5	749608.5	100.67	%	10:59:40
1	Y 371.029	581962.6	581962.6	100.10	%	10:59:40
1	Ag 328.068†	184873.0	182945.3	[1000]	ug/L	10:59:40
1	As 188.979†	3131.3	3144.9	[1000]	ug/L	11:00:01
1	B 249.677†	43188.4	43784.2	[1000]	ug/L	10:59:40
1	Ba 233.527†	155000.6	153953.8	[1000]	ug/L	10:59:40
1	Be 313.107†	2493125.7	2481433.3	[1000]	ug/L	10:59:35
1	Cd 226.502†	88972.1	88677.3	[1000]	ug/L	10:59:40
1	Co 228.616†	63724.7	63404.1	[1000]	ug/L	10:59:40
1	Cr 267.716†	80249.3	79816.9	[1000]	ug/L	10:59:40
1	Cu 324.752†	305796.3	297984.5	[1000]	ug/L	10:59:40
1	Mn 257.610†	998499.0	991182.0	[1000]	ug/L	10:59:35
1	Mo 202.031†	15761.4	15652.8	[1000]	ug/L	11:00:01
1	Ni 231.604†	42285.0	41869.0	[1000]	ug/L	10:59:40
1	P 214.914†	11433.5	11064.4	[5000]	ug/L	11:00:01
1	Pb 220.353†	9465.6	9420.9	[1000]	ug/L	11:00:01
1	S 181.975 Axial†	1797.6	1649.7	[2000]	ug/L	11:00:01
1	Sb 206.836†	3741.0	3663.7	[1000]	ug/L	11:00:01
1	Se 196.026†	2171.8	2192.3	[1000]	ug/L	11:00:01
1	Si 251.611†	177918.7	176294.1	[5000]	ug/L	10:59:40
1	Sn 189.927†	6407.2	6351.9	[1000]	ug/L	11:00:01
1	Ti 334.940†	582641.6	580317.7	[1000]	ug/L	10:59:40
1	Tl 190.801†	4166.2	4199.8	[1000]	ug/L	11:00:01
1	U 409.014†	26675.6	31763.8	[1000]	ug/L	10:59:40
1	V 292.402†	121191.1	122083.0	[1000]	ug/L	10:59:40
1	Zn 213.857†	122511.4	120717.4	[1000]	ug/L	10:59:40
1	SiO2†	178218.2	176564.8	[10695]	ug/L	11:01:09
2	Sc Radial	6913.4	6913.4	99.6	%	10:59:03
2	Y RADIAL	6291.8	6291.8	98.94	%	10:59:03
2	Al 396.153Radial†	11841.1	11955.2	[10000]	ug/L	10:58:42
2	Ca 317.933Radial†	7091.8	7091.4	[10000]	ug/L	10:59:03
2	Fe 238.204 Radial†	2342.9	2312.5	[10000]	ug/L	10:59:03
2	K 766.490 Radial†	50052.7	47450.0	[10000]	ug/L	10:58:42
2	Mg 279.077 IEC†	417.3	414.9	[10000]	ug/L	10:59:03
2	Na 589.592 Radial†	160796.6	161718.9	[10000]	ug/L	10:58:42
2	Sr 421.552†	314001.9	315218.4	[1000]	ug/L	10:58:42
2	Sc 361.383	744093.5	744093.5	99.925	%	11:00:12
2	Y 371.029	576331.7	576331.7	99.128	%	11:00:12
2	Ag 328.068†	184785.7	184219.1	[1000]	ug/L	11:00:12
2	As 188.979†	3151.9	3188.5	[1000]	ug/L	11:00:32
2	B 249.677†	43365.4	44279.4	[1000]	ug/L	11:00:12
2	Ba 233.527†	155455.1	155549.9	[1000]	ug/L	11:00:12
2	Be 313.107†	2510431.4	2517108.4	[1000]	ug/L	11:00:07
2	Cd 226.502†	89280.3	89640.9	[1000]	ug/L	11:00:12
2	Co 228.616†	63974.1	64122.8	[1000]	ug/L	11:00:12
2	Cr 267.716†	80488.0	80646.6	[1000]	ug/L	11:00:12
2	Cu 324.752†	305537.8	299977.3	[1000]	ug/L	11:00:12
2	Mn 257.610†	1005336.7	1005376.6	[1000]	ug/L	11:00:07
2	Mo 202.031†	15917.6	15925.1	[1000]	ug/L	11:00:32
2	Ni 231.604†	42421.8	42317.2	[1000]	ug/L	11:00:12

2	P 214.914†	11535.9	11251.1	[5000]	ug/L	11:00:32
2	Pb 220.353†	9527.3	9552.3	[1000]	ug/L	11:00:32
2	S 181.975 Axial†	1844.6	1710.1	[2000]	ug/L	11:00:32
2	Sb 206.836†	3795.0	3745.3	[1000]	ug/L	11:00:32
2	Se 196.026†	2195.6	2232.1	[1000]	ug/L	11:00:32
2	Si 251.611†	178199.3	177884.9	[5000]	ug/L	11:00:12
2	Sn 189.927†	6477.2	6469.1	[1000]	ug/L	11:00:32
2	Ti 334.940†	583846.6	585813.5	[1000]	ug/L	11:00:12
2	Tl 190.801†	4180.2	4244.5	[1000]	ug/L	11:00:32
2	U 409.014†	26906.3	32191.1	[1000]	ug/L	11:00:12
2	V 292.402†	121424.9	123209.3	[1000]	ug/L	11:00:12
2	Zn 213.857†	122905.1	122013.3	[1000]	ug/L	11:00:12
2	SiO2†	176839.1	176496.9	[10695]	ug/L	11:01:14
3	Sc Radial	6865.0	6865.0	98.9	%	10:59:28
3	Y RADIAL	6212.6	6212.6	97.70	%	10:59:28
3	Al 396.153Radial†	11799.3	11996.8	[10000]	ug/L	10:59:08
3	Ca 317.933Radial†	7011.9	7060.9	[10000]	ug/L	10:59:28
3	Fe 238.204 Radial†	2318.1	2304.1	[10000]	ug/L	10:59:28
3	K 766.490 Radial†	49779.1	47527.8	[10000]	ug/L	10:59:08
3	Mg 279.077 IEC†	415.7	416.2	[10000]	ug/L	10:59:28
3	Na 589.592 Radial†	160670.4	162729.3	[10000]	ug/L	10:59:08
3	Sr 421.552†	313429.5	316862.1	[1000]	ug/L	10:59:08
3	Sc 361.383	744648.9	744648.9	99.999	%	11:00:43
3	Y 371.029	576781.2	576781.2	99.205	%	11:00:43
3	Ag 328.068†	184377.4	183672.8	[1000]	ug/L	11:00:43
3	As 188.979†	3151.3	3185.6	[1000]	ug/L	11:01:04
3	B 249.677†	43274.3	44155.9	[1000]	ug/L	11:00:43
3	Ba 233.527†	155009.3	154988.0	[1000]	ug/L	11:00:43
3	Be 313.107†	2487138.9	2491941.7	[1000]	ug/L	11:00:38
3	Cd 226.502†	89082.1	89376.0	[1000]	ug/L	11:00:43
3	Co 228.616†	63686.5	63787.5	[1000]	ug/L	11:00:43
3	Cr 267.716†	80190.7	80289.3	[1000]	ug/L	11:00:43
3	Cu 324.752†	304596.4	298807.8	[1000]	ug/L	11:00:43
3	Mn 257.610†	996108.4	995397.7	[1000]	ug/L	11:00:38
3	Mo 202.031†	15866.4	15862.1	[1000]	ug/L	11:01:04
3	Ni 231.604†	42308.0	42171.7	[1000]	ug/L	11:00:43
3	P 214.914†	11488.5	11195.0	[5000]	ug/L	11:01:04
3	Pb 220.353†	9502.4	9520.3	[1000]	ug/L	11:01:04
3	S 181.975 Axial†	1806.7	1670.7	[2000]	ug/L	11:01:04
3	Sb 206.836†	3760.7	3708.1	[1000]	ug/L	11:01:04
3	Se 196.026†	2194.4	2229.3	[1000]	ug/L	11:01:04
3	Si 251.611†	177595.4	177147.9	[5000]	ug/L	11:00:43
3	Sn 189.927†	6447.3	6434.3	[1000]	ug/L	11:01:04
3	Ti 334.940†	581021.9	582552.9	[1000]	ug/L	11:00:43
3	Tl 190.801†	4168.9	4230.1	[1000]	ug/L	11:01:04
3	U 409.014†	26782.4	32047.1	[1000]	ug/L	11:00:43
3	V 292.402†	121045.1	122738.9	[1000]	ug/L	11:00:43
3	Zn 213.857†	122548.4	121564.9	[1000]	ug/L	11:00:43
3	SiO2†	179337.2	178863.0	[10695]	ug/L	11:01:20

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	746117.0	3036.50	0.41%	100.20	%
Sc Radial	6834.8	97.35	1.42%	98.5	%
Y 371.029	578358.5	3129.32	0.54%	99.476	%
Y RADIAL	6199.9	98.96	1.60%	97.50	%
Ag 328.068†	183612.4	639.05	0.35%	[1000]	ug/L
Al 396.153Radial†	12187.9	367.65	3.02%	[10000]	ug/L
As 188.979†	3173.0	24.41	0.77%	[1000]	ug/L
B 249.677†	44073.2	257.75	0.58%	[1000]	ug/L
Ba 233.527†	154830.6	809.61	0.52%	[1000]	ug/L
Be 313.107†	2496827.8	18332.60	0.73%	[1000]	ug/L
Ca 317.933Radial†	7107.5	56.35	0.79%	[10000]	ug/L
Cd 226.502†	89231.4	497.78	0.56%	[1000]	ug/L
Co 228.616†	63771.4	359.63	0.56%	[1000]	ug/L
Cr 267.716†	80250.9	416.17	0.52%	[1000]	ug/L
Cu 324.752†	298923.2	1001.40	0.34%	[1000]	ug/L
Fe 238.204 Radial†	2317.1	15.74	0.68%	[10000]	ug/L
K 766.490 Radial†	48345.0	1483.31	3.07%	[10000]	ug/L

Mg 279.077 IEC†	417.4	3.29	0.79%	[10000]	ug/L
Mn 257.610†	997318.8	7289.69	0.73%	[1000]	ug/L
Mo 202.031†	15813.4	142.54	0.90%	[1000]	ug/L
Na 589.592 Radial†	165089.4	4988.59	3.02%	[10000]	ug/L
Ni 231.604†	42119.3	228.67	0.54%	[1000]	ug/L
P 214.914†	11170.2	95.78	0.86%	[5000]	ug/L
Pb 220.353†	9497.8	68.53	0.72%	[1000]	ug/L
S 181.975 Axial†	1676.8	30.63	1.83%	[2000]	ug/L
Sb 206.836†	3705.7	40.84	1.10%	[1000]	ug/L
Se 196.026†	2217.9	22.23	1.00%	[1000]	ug/L
Si 251.611†	177109.0	796.13	0.45%	[5000]	ug/L
Sn 189.927†	6418.5	60.20	0.94%	[1000]	ug/L
Sr 421.552†	321865.7	10123.32	3.15%	[1000]	ug/L
Ti 334.940†	582894.7	2763.80	0.47%	[1000]	ug/L
Tl 190.801†	4224.8	22.83	0.54%	[1000]	ug/L
U 409.014†	32000.7	217.41	0.68%	[1000]	ug/L
V 292.402†	122677.1	565.69	0.46%	[1000]	ug/L
Zn 213.857†	121431.9	658.14	0.54%	[1000]	ug/L
SiO2†	177308.2	1346.91	0.76%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/2/2009 11:03:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	6795.0	6795.0	97.9	%	11:05:44
1	Y RADIAL	6160.4	6160.4	96.88	%	11:05:44
1	Al 396.153Radial†	57833.0	59127.7	[50000]	ug/L	11:05:24
1	Ca 317.933Radial†	33247.0	33924.3	[50000]	ug/L	11:05:44
1	Fe 238.204 Radial†	4389.3	4443.3	[20000]	ug/L	11:05:44
1	Mg 279.077 IEC†	1921.3	1958.0	[50000]	ug/L	11:05:44
1	Na 589.592 Radial†	315791.6	322806.8	[20000]	ug/L	11:05:24
1	Sc 361.383	748166.4	748166.4	100.47	%	11:06:41
1	Y 371.029	574525.0	574525.0	98.817	%	11:06:41
2	Sc Radial	6742.2	6742.2	97.2	%	11:06:09
2	Y RADIAL	6104.6	6104.6	96.00	%	11:06:09
2	Al 396.153Radial†	57597.6	59347.9	[50000]	ug/L	11:05:49
2	Ca 317.933Radial†	32953.5	33888.1	[50000]	ug/L	11:06:09
2	Fe 238.204 Radial†	4351.5	4439.5	[20000]	ug/L	11:06:09
2	Mg 279.077 IEC†	1903.1	1954.6	[50000]	ug/L	11:06:09
2	Na 589.592 Radial†	315523.8	325056.7	[20000]	ug/L	11:05:49
2	Sc 361.383	757860.1	757860.1	101.77	%	11:06:47
2	Y 371.029	580783.2	580783.2	99.893	%	11:06:47
3	Sc Radial	6848.0	6848.0	98.7	%	11:06:34
3	Y RADIAL	6213.3	6213.3	97.71	%	11:06:34
3	Al 396.153Radial†	58158.2	59000.3	[50000]	ug/L	11:06:14
3	Ca 317.933Radial†	33297.9	33713.3	[50000]	ug/L	11:06:34
3	Fe 238.204 Radial†	4403.6	4423.0	[20000]	ug/L	11:06:34
3	Mg 279.077 IEC†	1911.2	1932.6	[50000]	ug/L	11:06:34
3	Na 589.592 Radial†	318827.5	323388.5	[20000]	ug/L	11:06:14
3	Sc 361.383	743126.3	743126.3	99.795	%	11:06:52
3	Y 371.029	570580.5	570580.5	98.139	%	11:06:52

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	749717.6	7488.35	1.00%	100.68	%
Sc Radial	6795.0	52.89	0.78%	97.9	%
Y 371.029	575296.3	5144.89	0.89%	98.950	%
Y RADIAL	6159.4	54.37	0.88%	96.86	%
Al 396.153Radial†	59158.7	175.87	0.30%	[50000]	ug/L
Ca 317.933Radial†	33841.9	112.85	0.33%	[50000]	ug/L
Fe 238.204 Radial†	4435.3	10.76	0.24%	[20000]	ug/L
Mg 279.077 IEC†	1948.4	13.78	0.71%	[50000]	ug/L
Na 589.592 Radial†	323750.7	1167.83	0.36%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	182.7	0.00000	0.999952	
Al 396.153Radial	3	Lin Thru 0	0.0	1.185	0.00000	0.999978	
As 188.979	3	Lin Thru 0	0.0	3.155	0.00000	0.999935	
B 249.677	3	Lin Thru 0	0.0	43.73	0.00000	0.999876	
Ba 233.527	3	Lin Thru 0	0.0	154.2	0.00000	0.999959	
Be 313.107	3	Lin Thru 0	0.0	2484	0.00000	0.999945	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.6785	0.00000	0.999939	
Cd 226.502	3	Lin Thru 0	0.0	88.82	0.00000	0.999958	
Co 228.616	3	Lin Thru 0	0.0	63.24	0.00000	0.999858	
Cr 267.716	3	Lin Thru 0	0.0	79.81	0.00000	0.999937	
Cu 324.752	3	Lin Thru 0	0.0	297.2	0.00000	0.999937	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.2238	0.00000	0.999842	
K 766.490 Radial	3	Lin Thru 0	0.0	4.840	0.00000	0.999986	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0391	0.00000	0.999894
Mn 257.610	3	Lin Thru 0	0.0	993.0	0.00000	0.999957
Mo 202.031	3	Lin Thru 0	0.0	15.77	0.00000	0.999985
Na 589.592 Radia	2	Lin Thru 0	0.0	16.25	0.00000	0.999969
Ni 231.604	3	Lin Thru 0	0.0	41.80	0.00000	0.999887
P 214.914	3	Lin Thru 0	0.0	2.221	0.00000	0.999931
Pb 220.353	3	Lin Thru 0	0.0	9.466	0.00000	0.999977
S 181.975 Axial	3	Lin Thru 0	0.0	0.8293	0.00000	0.999769
Sb 206.836	3	Lin Thru 0	0.0	3.684	0.00000	0.999935
Se 196.026	3	Lin Thru 0	0.0	2.210	0.00000	0.999970
Si 251.611	3	Lin Thru 0	0.0	35.39	0.00000	0.999998
Sn 189.927	3	Lin Thru 0	0.0	6.386	0.00000	0.999947
Sr 421.552	3	Lin Thru 0	0.0	321.5	0.00000	0.999997
Ti 334.940	3	Lin Thru 0	0.0	582.8	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	4.208	0.00000	0.999964
U 409.014	3	Lin Thru 0	0.0	31.64	0.00000	0.999719
V 292.402	3	Lin Thru 0	0.0	121.9	0.00000	0.999924
Zn 213.857	3	Lin Thru 0	0.0	120.8	0.00000	0.999951
SiO2	3	Lin Thru 0	0.0	16.55	0.00000	0.999995

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/2/2009 11:09:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7288.6	7288.6	105	%			11:10:56
1	Y RADIAL	6617.5	6617.5	104.1	%			11:10:56
1	Al 396.153Radial†	6204.2	5977.1	5022.3	ug/L	5022.3	ppb	11:10:56
1	Ca 317.933Radial†	3459.2	3266.8	4814.7	ug/L	4814.7	ppb	11:11:16
1	Fe 238.204 Radial†	1207.5	1110.6	4978.1	ug/L	4978.1	ppb	11:11:16
1	K 766.490 Radial†	15039.0	11530.7	2369.9	ug/L	2369.9	ppb	11:10:56
1	Mg 279.077 IEC†	220.0	205.5	5261.4	ug/L	5261.4	ppb	11:11:16
1	Na 589.592 Radial†	42971.3	41240.5	2537.6	ug/L	2537.6	ppb	11:10:56
1	Sr 421.552†	162883.0	155129.1	482.40	ug/L	482.40	ppb	11:10:56
1	Sc 361.383	766818.9	766818.9	102.98	%			11:12:14
1	Y 371.029	593177.9	593177.9	102.03	%			11:12:14
1	Ag 328.068†	46626.2	44572.6	246.97	ug/L	246.97	ppb	11:12:14
1	As 188.979†	1495.0	1486.1	473.80	ug/L	473.80	ppb	11:12:34
1	B 249.677†	20815.0	21094.7	479.71	ug/L	479.71	ppb	11:12:14
1	Ba 233.527†	82535.9	80127.8	520.84	ug/L	520.84	ppb	11:12:14
1	Be 313.107†	635004.7	621434.9	251.37	ug/L	251.37	ppb	11:12:14
1	Cd 226.502†	43507.0	42542.7	478.74	ug/L	478.74	ppb	11:12:34
1	Co 228.616†	30232.2	29458.9	466.09	ug/L	466.09	ppb	11:12:34
1	Cr 267.716†	39925.6	38869.5	487.74	ug/L	487.74	ppb	11:12:14
1	Cu 324.752†	160043.5	149626.7	503.68	ug/L	503.68	ppb	11:12:14
1	Mn 257.610†	518067.7	502375.3	506.46	ug/L	506.46	ppb	11:12:14
1	Mo 202.031†	8347.2	8101.5	514.02	ug/L	514.02	ppb	11:12:34
1	Ni 231.604†	22294.8	21513.8	514.35	ug/L	514.35	ppb	11:12:34
1	P 214.914†	5950.8	5485.2	2374.5	ug/L	2374.5	ppb	11:12:34
1	Pb 220.353†	4814.9	4693.6	497.38	ug/L	497.38	ppb	11:12:34
1	S 181.975 Axial†	2292.4	2090.2	2519.4	ug/L	2519.4	ppb	11:12:34
1	Sb 206.836†	2000.9	1890.4	520.30	ug/L	520.30	ppb	11:12:34
1	Se 196.026†	5758.3	5626.7	2563.9	ug/L	2563.9	ppb	11:12:34
1	Si 251.611†	175649.6	170123.7	4790.8	ug/L	4790.8	ppb	11:12:14
1	Sn 189.927†	3417.8	3306.1	518.60	ug/L	518.60	ppb	11:12:34
1	Ti 334.940†	298464.6	291364.4	499.82	ug/L	499.82	ppb	11:12:14
1	Tl 190.801†	2061.7	2063.2	493.58	ug/L	493.58	ppb	11:12:34
1	U 409.014†	10824.4	15776.0	497.10	ug/L	497.10	ppb	11:12:14
1	V 292.402†	59068.2	59053.7	490.51	ug/L	490.51	ppb	11:12:14
1	Zn 213.857†	62752.6	59954.4	491.49	ug/L	491.49	ppb	11:12:14
1	SiO2†	177952.8	172333.6	10374	ug/L	10374	ppb	11:13:31
2	Sc Radial	7031.3	7031.3	101	%			11:11:21
2	Y RADIAL	6380.4	6380.4	100.3	%			11:11:21
2	Al 396.153Radial†	6016.1	6007.6	5048.1	ug/L	5048.1	ppb	11:11:21
2	Ca 317.933Radial†	3430.5	3358.9	4950.5	ug/L	4950.5	ppb	11:11:41
2	Fe 238.204 Radial†	1196.1	1141.4	5115.9	ug/L	5115.9	ppb	11:11:41
2	K 766.490 Radial†	14697.7	11717.8	2408.6	ug/L	2408.6	ppb	11:11:21
2	Mg 279.077 IEC†	216.8	210.0	5376.7	ug/L	5376.7	ppb	11:11:41
2	Na 589.592 Radial†	41259.9	41048.4	2525.8	ug/L	2525.8	ppb	11:11:21
2	Sr 421.552†	156141.3	154150.2	479.35	ug/L	479.35	ppb	11:11:21
2	Sc 361.383	769420.4	769420.4	103.33	%			11:12:40
2	Y 371.029	595382.0	595382.0	102.40	%			11:12:40
2	Ag 328.068†	46699.1	44490.0	246.56	ug/L	246.56	ppb	11:12:40
2	As 188.979†	1496.5	1482.7	472.75	ug/L	472.75	ppb	11:13:00
2	B 249.677†	21116.0	21317.7	484.81	ug/L	484.81	ppb	11:12:40
2	Ba 233.527†	82654.6	79971.7	519.83	ug/L	519.83	ppb	11:12:40
2	Be 313.107†	637334.5	621604.7	251.44	ug/L	251.44	ppb	11:12:40
2	Cd 226.502†	43442.4	42337.3	476.41	ug/L	476.41	ppb	11:13:00
2	Co 228.616†	30215.5	29343.4	464.26	ug/L	464.26	ppb	11:13:00
2	Cr 267.716†	40096.7	38904.0	488.17	ug/L	488.17	ppb	11:12:40
2	Cu 324.752†	161022.7	150048.9	505.11	ug/L	505.11	ppb	11:12:40
2	Mn 257.610†	519421.7	501984.7	506.08	ug/L	506.08	ppb	11:12:40
2	Mo 202.031†	8339.7	8066.9	511.83	ug/L	511.83	ppb	11:13:00
2	Ni 231.604†	22295.5	21441.3	512.62	ug/L	512.62	ppb	11:13:00

2	P 214.914†	5956.3	5471.0	2367.8 ug/L	2367.8 ppb	11:13:00
2	Pb 220.353†	4805.8	4668.9	494.76 ug/L	494.76 ppb	11:13:00
2	S 181.975 Axial†	2287.2	2077.6	2504.2 ug/L	2504.2 ppb	11:13:00
2	Sb 206.836†	1974.4	1858.3	511.54 ug/L	511.54 ppb	11:13:00
2	Se 196.026†	5726.2	5576.7	2541.7 ug/L	2541.7 ppb	11:13:00
2	Si 251.611†	176287.0	170164.0	4792.0 ug/L	4792.0 ppb	11:12:40
2	Sn 189.927†	3439.1	3315.4	520.08 ug/L	520.08 ppb	11:13:00
2	Ti 334.940†	299775.2	291652.8	500.32 ug/L	500.32 ppb	11:12:40
2	Tl 190.801†	2064.3	2059.0	492.60 ug/L	492.60 ppb	11:13:00
2	U 409.014†	10966.6	15878.1	500.31 ug/L	500.31 ppb	11:12:40
2	V 292.402†	59285.5	59070.1	490.61 ug/L	490.61 ppb	11:12:40
2	Zn 213.857†	62894.5	59885.7	490.92 ug/L	490.92 ppb	11:12:40
2	SiO2†	176101.8	169957.9	10231 ug/L	10231 ppb	11:13:36
3	Sc Radial	7109.2	7109.2	102 %		11:11:46
3	Y RADIAL	6504.7	6504.7	102.3 %		11:11:46
3	Al 396.153Radial†	6075.1	6000.0	5041.9 ug/L	5041.9 ppb	11:11:46
3	Ca 317.933Radial†	3419.7	3311.3	4880.4 ug/L	4880.4 ppb	11:12:06
3	Fe 238.204 Radial†	1197.0	1129.3	5061.7 ug/L	5061.7 ppb	11:12:06
3	K 766.490 Radial†	14752.2	11611.9	2386.8 ug/L	2386.8 ppb	11:11:46
3	Mg 279.077 IEC†	218.2	209.1	5353.7 ug/L	5353.7 ppb	11:12:06
3	Na 589.592 Radial†	41572.4	40907.2	2517.1 ug/L	2517.1 ppb	11:11:46
3	Sr 421.552†	158115.5	154388.0	480.09 ug/L	480.09 ppb	11:11:46
3	Sc 361.383	773182.2	773182.2	103.83 %		11:13:06
3	Y 371.029	598559.7	598559.7	102.95 %		11:13:06
3	Ag 328.068†	46968.3	44529.4	246.75 ug/L	246.75 ppb	11:13:06
3	As 188.979†	1487.5	1466.9	467.74 ug/L	467.74 ppb	11:13:26
3	B 249.677†	21137.9	21239.3	483.04 ug/L	483.04 ppb	11:13:06
3	Ba 233.527†	83001.6	79916.7	519.47 ug/L	519.47 ppb	11:13:06
3	Be 313.107†	641212.5	622338.7	251.73 ug/L	251.73 ppb	11:13:06
3	Cd 226.502†	43276.2	41972.7	472.31 ug/L	472.31 ppb	11:13:26
3	Co 228.616†	30102.4	29092.2	460.28 ug/L	460.28 ppb	11:13:26
3	Cr 267.716†	40179.2	38794.7	486.80 ug/L	486.80 ppb	11:13:06
3	Cu 324.752†	161747.0	149988.2	504.90 ug/L	504.90 ppb	11:13:06
3	Mn 257.610†	521733.8	501765.6	505.86 ug/L	505.86 ppb	11:13:06
3	Mo 202.031†	8318.0	8006.7	508.02 ug/L	508.02 ppb	11:13:26
3	Ni 231.604†	22187.1	21231.8	507.61 ug/L	507.61 ppb	11:13:26
3	P 214.914†	5932.5	5420.0	2344.8 ug/L	2344.8 ppb	11:13:26
3	Pb 220.353†	4772.0	4613.8	488.92 ug/L	488.92 ppb	11:13:26
3	S 181.975 Axial†	2294.9	2074.2	2500.1 ug/L	2500.1 ppb	11:13:26
3	Sb 206.836†	1982.9	1857.2	511.07 ug/L	511.07 ppb	11:13:26
3	Se 196.026†	5716.5	5540.5	2525.1 ug/L	2525.1 ppb	11:13:26
3	Si 251.611†	177178.6	170192.6	4792.9 ug/L	4792.9 ppb	11:13:06
3	Sn 189.927†	3405.6	3267.0	512.50 ug/L	512.50 ppb	11:13:26
3	Ti 334.940†	301095.0	291512.4	500.07 ug/L	500.07 ppb	11:13:06
3	Tl 190.801†	2058.4	2043.6	488.95 ug/L	488.95 ppb	11:13:26
3	U 409.014†	11347.7	16193.5	510.29 ug/L	510.29 ppb	11:13:06
3	V 292.402†	59603.9	59097.6	490.81 ug/L	490.81 ppb	11:13:06
3	Zn 213.857†	63143.9	59829.7	490.49 ug/L	490.49 ppb	11:13:06
3	SiO2†	174289.5	167383.3	10076 ug/L	10076 ppb	11:13:42

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	769807.2	103.38	%	0.430				0.42%
Sc Radial	7143.0	103	%	1.9				1.85%
Y 371.029	595706.5	102.46	%	0.465				0.45%
Y RADIAL	6500.8	102.2	%	1.87				1.82%
Ag 328.068†	44530.7	246.76	ug/L	0.206	246.76	ppb	0.206	0.08%
QC value within limits for Ag 328.068 Recovery = 98.70%								
Al 396.153Radial†	5994.9	5037.4	ug/L	13.48	5037.4	ppb	13.48	0.27%
QC value within limits for Al 396.153Radial Recovery = 100.75%								
As 188.979†	1478.6	471.43	ug/L	3.234	471.43	ppb	3.234	0.69%
QC value within limits for As 188.979 Recovery = 94.29%								
B 249.677†	21217.2	482.52	ug/L	2.589	482.52	ppb	2.589	0.54%
QC value within limits for B 249.677 Recovery = 96.50%								
Ba 233.527†	80005.4	520.05	ug/L	0.710	520.05	ppb	0.710	0.14%
QC value within limits for Ba 233.527 Recovery = 104.01%								
Be 313.107†	621792.8	251.51	ug/L	0.193	251.51	ppb	0.193	0.08%
QC value within limits for Be 313.107 Recovery = 100.61%								
Ca 317.933Radial†	3312.4	4881.9	ug/L	67.90	4881.9	ppb	67.90	1.39%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.64%
Cd 226.502†            42284.2      475.82 ug/L         3.257      475.82 ppb          3.257   0.68%
   QC value within limits for Cd 226.502  Recovery = 95.16%
Co 228.616†            29298.2      463.54 ug/L         2.973      463.54 ppb          2.973   0.64%
   QC value within limits for Co 228.616  Recovery = 92.71%
Cr 267.716†            38856.1      487.57 ug/L         0.702      487.57 ppb          0.702   0.14%
   QC value within limits for Cr 267.716  Recovery = 97.51%
Cu 324.752†           149887.9      504.56 ug/L         0.772      504.56 ppb          0.772   0.15%
   QC value within limits for Cu 324.752  Recovery = 100.91%
Fe 238.204 Radial†      1127.1      5051.9 ug/L        69.42      5051.9 ppb         69.42   1.37%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.04%
K 766.490 Radial†      11620.1      2388.4 ug/L        19.40      2388.4 ppb         19.40   0.81%
   QC value within limits for K 766.490 Radial  Recovery = 95.54%
Mg 279.077 IEC†          208.2      5330.6 ug/L        61.05      5330.6 ppb         61.05   1.15%
   QC value within limits for Mg 279.077 IEC  Recovery = 106.61%
Mn 257.610†           502041.9      506.13 ug/L         0.306      506.13 ppb          0.306   0.06%
   QC value within limits for Mn 257.610  Recovery = 101.23%
Mo 202.031†             8058.4      511.29 ug/L         3.039      511.29 ppb          3.039   0.59%
   QC value within limits for Mo 202.031  Recovery = 102.26%
Na 589.592 Radial†     41065.4      2526.8 ug/L        10.29      2526.8 ppb         10.29   0.41%
   QC value within limits for Na 589.592 Radial  Recovery = 101.07%
Ni 231.604†            21395.6      511.52 ug/L         3.501      511.52 ppb          3.501   0.68%
   QC value within limits for Ni 231.604  Recovery = 102.30%
P 214.914†              5458.8      2362.4 ug/L        15.59      2362.4 ppb         15.59   0.66%
   QC value within limits for P 214.914  Recovery = 94.49%
Pb 220.353†             4658.8      493.69 ug/L         4.327      493.69 ppb          4.327   0.88%
   QC value within limits for Pb 220.353  Recovery = 98.74%
S 181.975 Axial†        2080.7      2507.9 ug/L        10.14      2507.9 ppb         10.14   0.40%
   QC value within limits for S 181.975 Axial  Recovery = 100.32%
Sb 206.836†             1868.6      514.30 ug/L         5.199      514.30 ppb          5.199   1.01%
   QC value within limits for Sb 206.836  Recovery = 102.86%
Se 196.026†             5581.3      2543.6 ug/L        19.44      2543.6 ppb         19.44   0.76%
   QC value within limits for Se 196.026  Recovery = 101.74%
Si 251.611†           170160.1      4791.9 ug/L         1.06      4791.9 ppb          1.06   0.02%
   QC value within limits for Si 251.611  Recovery = 95.84%
Sn 189.927†             3296.1      517.06 ug/L         4.021      517.06 ppb          4.021   0.78%
   QC value within limits for Sn 189.927  Recovery = 103.41%
Sr 421.552†           154555.7      480.61 ug/L         1.588      480.61 ppb          1.588   0.33%
   QC value within limits for Sr 421.552  Recovery = 96.12%
Ti 334.940†           291509.9      500.07 ug/L         0.251      500.07 ppb          0.251   0.05%
   QC value within limits for Ti 334.940  Recovery = 100.01%
Tl 190.801†             2055.3      491.71 ug/L         2.442      491.71 ppb          2.442   0.50%
   QC value within limits for Tl 190.801  Recovery = 98.34%
U 409.014†             15949.2      502.57 ug/L         6.877      502.57 ppb          6.877   1.37%
   QC value within limits for U 409.014  Recovery = 100.51%
V 292.402†             59073.8      490.64 ug/L         0.153      490.64 ppb          0.153   0.03%
   QC value within limits for V 292.402  Recovery = 98.13%
Zn 213.857†            59889.9      490.97 ug/L         0.503      490.97 ppb          0.503   0.10%
   QC value within limits for Zn 213.857  Recovery = 98.19%
SiO2†                 169891.6       10227 ug/L         149.4       10227 ppb          149.4   1.46%
   QC value within limits for SiO2  Recovery = 95.62%
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/2/2009 11:15:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7056.6	7056.6	102	%			11:17:45
1	Y RADIAL	6475.6	6475.6	101.8	%			11:17:45
1	Al 396.153Radial†	-78.7	-6.8	-5.7883	ug/L	-5.7883	ppb	11:17:45
1	Ca 317.933Radial†	22.5	-4.3	-6.3326	ug/L	-6.3326	ppb	11:18:05
1	Fe 238.204 Radial†	40.1	0.5	2.3722	ug/L	2.3722	ppb	11:18:05
1	K 766.490 Radial†	2788.2	-45.0	-9.3108	ug/L	-9.3108	ppb	11:17:45
1	Mg 279.077 IEC†	2.0	-2.0	-50.955	ug/L	-50.955	ppb	11:18:05
1	Na 589.592 Radial†	-192.8	141.6	8.7154	ug/L	8.7154	ppb	11:17:45
1	Sr 421.552†	-50.6	12.6	0.0392	ug/L	0.0392	ppb	11:17:45
1	Sc 361.383	757185.1	757185.1	101.68	%			11:19:02
1	Y 371.029	591251.2	591251.2	101.69	%			11:19:02
1	Ag 328.068†	701.8	-15.7	-0.0843	ug/L	-0.0843	ppb	11:19:02
1	As 188.979†	-34.3	0.6	0.1746	ug/L	0.1746	ppb	11:19:22
1	B 249.677†	-569.2	321.6	7.3539	ug/L	7.3539	ppb	11:19:02
1	Ba 233.527†	29.6	6.7	0.0454	ug/L	0.0454	ppb	11:19:22
1	Be 313.107†	-4783.7	80.2	0.0324	ug/L	0.0324	ppb	11:19:02
1	Cd 226.502†	-293.0	5.1	0.0572	ug/L	0.0572	ppb	11:19:22
1	Co 228.616†	-100.8	1.4	0.0253	ug/L	0.0253	ppb	11:19:22
1	Cr 267.716†	-130.6	-30.5	-0.3817	ug/L	-0.3817	ppb	11:19:02
1	Cu 324.752†	5885.8	-2.4	-0.0081	ug/L	-0.0081	ppb	11:19:02
1	Mn 257.610†	711.4	-18.2	-0.0171	ug/L	-0.0171	ppb	11:19:02
1	Mo 202.031†	24.4	19.6	1.2406	ug/L	1.2406	ppb	11:19:22
1	Ni 231.604†	159.0	19.7	0.4716	ug/L	0.4716	ppb	11:19:22
1	P 214.914†	291.3	-7.1	-3.1841	ug/L	-3.1841	ppb	11:19:22
1	Pb 220.353†	-21.9	-3.7	-0.3880	ug/L	-0.3880	ppb	11:19:22
1	S 181.975 Axial†	126.7	-11.4	-13.704	ug/L	-13.704	ppb	11:19:22
1	Sb 206.836†	47.9	-5.5	-1.4444	ug/L	-1.4444	ppb	11:19:22
1	Se 196.026†	-31.2	4.1	1.8742	ug/L	1.8742	ppb	11:19:22
1	Si 251.611†	486.0	29.2	0.8089	ug/L	0.8089	ppb	11:19:22
1	Sn 189.927†	12.7	-0.5	-0.0827	ug/L	-0.0827	ppb	11:19:22
1	Ti 334.940†	-1517.7	34.2	0.0570	ug/L	0.0570	ppb	11:19:02
1	Tl 190.801†	-54.7	7.4	1.7575	ug/L	1.7575	ppb	11:19:22
1	U 409.014†	-5245.0	106.3	3.3618	ug/L	3.3618	ppb	11:19:02
1	V 292.402†	-1609.4	110.1	0.9244	ug/L	0.9244	ppb	11:19:02
1	Zn 213.857†	1014.8	13.6	0.1113	ug/L	0.1113	ppb	11:19:22
1	SiO2†	542.8	58.3	3.4827	ug/L	3.4827	ppb	11:20:18
2	Sc Radial	6905.1	6905.1	99.5	%			11:18:10
2	Y RADIAL	6350.3	6350.3	99.86	%			11:18:10
2	Al 396.153Radial†	-67.8	2.5	2.0782	ug/L	2.0782	ppb	11:18:10
2	Ca 317.933Radial†	29.0	2.8	4.0668	ug/L	4.0668	ppb	11:18:30
2	Fe 238.204 Radial†	35.3	-3.5	-15.670	ug/L	-15.670	ppb	11:18:30
2	K 766.490 Radial†	2694.7	-78.9	-16.307	ug/L	-16.307	ppb	11:18:10
2	Mg 279.077 IEC†	4.7	0.7	18.933	ug/L	18.933	ppb	11:18:30
2	Na 589.592 Radial†	-302.2	27.6	1.6960	ug/L	1.6960	ppb	11:18:10
2	Sr 421.552†	-55.9	6.2	0.0192	ug/L	0.0192	ppb	11:18:10
2	Sc 361.383	748845.2	748845.2	100.56	%			11:19:27
2	Y 371.029	585353.2	585353.2	100.68	%			11:19:27
2	Ag 328.068†	680.8	-28.9	-0.1694	ug/L	-0.1694	ppb	11:19:27
2	As 188.979†	-35.4	-0.9	-0.2861	ug/L	-0.2861	ppb	11:19:47
2	B 249.677†	-569.9	314.6	7.1947	ug/L	7.1947	ppb	11:19:27
2	Ba 233.527†	7.3	-15.2	-0.0986	ug/L	-0.0986	ppb	11:19:47
2	Be 313.107†	-4800.0	11.6	0.0051	ug/L	0.0051	ppb	11:19:27
2	Cd 226.502†	-288.2	6.6	0.0766	ug/L	0.0766	ppb	11:19:47
2	Co 228.616†	-92.0	9.0	0.1438	ug/L	0.1438	ppb	11:19:47
2	Cr 267.716†	-99.7	-1.1	-0.0169	ug/L	-0.0169	ppb	11:19:27
2	Cu 324.752†	5844.1	20.5	0.0681	ug/L	0.0681	ppb	11:19:27
2	Mn 257.610†	694.9	-26.8	-0.0294	ug/L	-0.0294	ppb	11:19:27
2	Mo 202.031†	18.8	14.3	0.9056	ug/L	0.9056	ppb	11:19:47
2	Ni 231.604†	155.7	18.2	0.4354	ug/L	0.4354	ppb	11:19:47

2	P 214.914†	299.3	4.1	1.8786 ug/L	1.8786 ppb		11:19:47
2	Pb 220.353†	-28.8	-10.8	-1.1359 ug/L	-1.1359 ppb		11:19:47
2	S 181.975 Axial†	115.7	-20.9	-25.216 ug/L	-25.216 ppb		11:19:47
2	Sb 206.836†	56.1	3.2	0.9022 ug/L	0.9022 ppb		11:19:47
2	Se 196.026†	-34.9	0.1	0.0151 ug/L	0.0151 ppb		11:19:47
2	Si 251.611†	477.4	26.0	0.7049 ug/L	0.7049 ppb		11:19:47
2	Sn 189.927†	22.3	9.1	1.4317 ug/L	1.4317 ppb		11:19:47
2	Ti 334.940†	-1430.7	104.1	0.1758 ug/L	0.1758 ppb		11:19:27
2	Tl 190.801†	-56.9	4.6	1.0962 ug/L	1.0962 ppb		11:19:47
2	U 409.014†	-5072.5	220.4	6.9697 ug/L	6.9697 ppb		11:19:27
2	V 292.402†	-1707.9	-5.4	-0.0174 ug/L	-0.0174 ppb		11:19:27
2	Zn 213.857†	1015.9	25.8	0.2120 ug/L	0.2120 ppb		11:19:47
2	SiO2†	556.9	78.3	4.6652 ug/L	4.6652 ppb		11:20:23
3	Sc Radial	6801.0	6801.0	98.0 %			11:18:35
3	Y RADIAL	6242.7	6242.7	98.17 %			11:18:35
3	Al 396.153Radial†	-80.4	-11.4	-9.7067 ug/L	-9.7067 ppb		11:18:35
3	Ca 317.933Radial†	25.9	-0.0	-0.0332 ug/L	-0.0332 ppb		11:18:55
3	Fe 238.204 Radial†	42.9	4.8	21.419 ug/L	21.419 ppb		11:18:55
3	K 766.490 Radial†	2837.0	107.8	22.258 ug/L	22.258 ppb		11:18:35
3	Mg 279.077 IEC†	4.5	0.6	15.170 ug/L	15.170 ppb		11:18:55
3	Na 589.592 Radial†	-336.2	-11.8	-0.7291 ug/L	-0.7291 ppb		11:18:35
3	Sr 421.552†	-25.0	36.8	0.1144 ug/L	0.1144 ppb		11:18:35
3	Sc 361.383	759986.2	759986.2	102.06 %			11:19:53
3	Y 371.029	594423.9	594423.9	102.24 %			11:19:53
3	Ag 328.068†	656.5	-62.6	-0.3407 ug/L	-0.3407 ppb		11:19:53
3	As 188.979†	-27.3	7.6	2.3986 ug/L	2.3986 ppb		11:20:13
3	B 249.677†	-580.8	312.3	7.1385 ug/L	7.1385 ppb		11:19:53
3	Ba 233.527†	31.8	8.7	0.0560 ug/L	0.0560 ppb		11:20:13
3	Be 313.107†	-4738.4	141.9	0.0574 ug/L	0.0574 ppb		11:19:53
3	Cd 226.502†	-296.9	2.4	0.0243 ug/L	0.0243 ppb		11:20:13
3	Co 228.616†	-84.5	17.7	0.2830 ug/L	0.2830 ppb		11:20:13
3	Cr 267.716†	-128.0	-27.5	-0.3459 ug/L	-0.3459 ppb		11:19:53
3	Cu 324.752†	5868.1	-41.1	-0.1371 ug/L	-0.1371 ppb		11:19:53
3	Mn 257.610†	697.5	-34.5	-0.0323 ug/L	-0.0323 ppb		11:19:53
3	Mo 202.031†	23.8	18.9	1.2005 ug/L	1.2005 ppb		11:20:13
3	Ni 231.604†	157.7	17.9	0.4280 ug/L	0.4280 ppb		11:20:13
3	P 214.914†	285.9	-13.4	-5.9863 ug/L	-5.9863 ppb		11:20:13
3	Pb 220.353†	-55.8	-36.9	-3.8977 ug/L	-3.8977 ppb		11:20:13
3	S 181.975 Axial†	125.9	-12.6	-15.189 ug/L	-15.189 ppb		11:20:13
3	Sb 206.836†	58.1	4.4	1.2522 ug/L	1.2522 ppb		11:20:13
3	Se 196.026†	-29.1	6.3	2.9221 ug/L	2.9221 ppb		11:20:13
3	Si 251.611†	480.4	22.0	0.5682 ug/L	0.5682 ppb		11:20:13
3	Sn 189.927†	25.2	11.7	1.8379 ug/L	1.8379 ppb		11:20:13
3	Ti 334.940†	-1497.3	59.7	0.1004 ug/L	0.1004 ppb		11:19:53
3	Tl 190.801†	-58.5	3.9	0.9217 ug/L	0.9217 ppb		11:20:13
3	U 409.014†	-5211.4	158.3	5.0012 ug/L	5.0012 ppb		11:19:53
3	V 292.402†	-1748.0	-19.9	-0.1408 ug/L	-0.1408 ppb		11:19:53
3	Zn 213.857†	995.9	-8.5	-0.0760 ug/L	-0.0760 ppb		11:20:13
3	SiO2†	491.3	5.8	0.2349 ug/L	0.2349 ppb		11:20:28

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	755338.8	101.43	%	0.778				0.77%
Sc Radial	6920.9	99.7	%	1.85				1.86%
Y 371.029	590342.8	101.54	%	0.792				0.78%
Y RADIAL	6356.2	99.96	%	1.833				1.83%
Ag 328.068†	-35.7	-0.1982	ug/L	0.13061	-0.1982	ppb	0.13061	65.91%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-5.2	-4.4723	ug/L	6.00168	-4.4723	ppb	6.00168	134.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.4	0.7623	ug/L	1.43562	0.7623	ppb	1.43562	188.32%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	316.1	7.2291	ug/L	0.11172	7.2291	ppb	0.11172	1.55%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	0.1	0.0009	ug/L	0.08637	0.0009	ppb	0.08637	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	77.9	0.0316	ug/L	0.02616	0.0316	ppb	0.02616	82.73%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-0.5	-0.7663	ug/L	5.23834	-0.7663	ppb	5.23834	683.55%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                4.7      0.0527 ug/L       0.02642      0.0527 ppb        0.02642  50.13%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                9.4      0.1507 ug/L       0.12900      0.1507 ppb        0.12900  85.58%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -19.7     -0.2482 ug/L       0.20111     -0.2482 ppb        0.20111  81.04%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -7.7     -0.0257 ug/L       0.10372     -0.0257 ppb        0.10372 403.98%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.6      2.7072 ug/L      18.54669      2.7072 ppb       18.54669 685.08%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -5.4     -1.1200 ug/L      20.54623     -1.1200 ppb       20.54623 >999.9%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.2     -5.6175 ug/L      39.30854     -5.6175 ppb       39.30854 699.75%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -26.5     -0.0263 ug/L       0.00807     -0.0263 ppb        0.00807  30.74%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               17.6      1.1155 ug/L       0.18291      1.1155 ppb        0.18291  16.40%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        52.5      3.2275 ug/L       4.90497      3.2275 ppb        4.90497 151.98%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               18.6      0.4450 ug/L       0.02334      0.4450 ppb        0.02334   5.24%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -5.4     -2.4306 ug/L       3.98622     -2.4306 ppb        3.98622 164.00%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -17.1     -1.8072 ug/L       1.84863     -1.8072 ppb        1.84863 102.29%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -15.0    -18.036 ug/L        6.2616    -18.036 ppb         6.2616  34.72%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                0.7      0.2367 ug/L       1.46634      0.2367 ppb        1.46634 619.58%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                3.5      1.6038 ug/L       1.47221      1.6038 ppb        1.47221  91.79%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               25.7      0.6940 ug/L       0.12073      0.6940 ppb        0.12073  17.40%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.8      1.0623 ug/L       1.01218      1.0623 ppb        1.01218  95.28%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               18.5      0.0576 ug/L       0.05024      0.0576 ppb        0.05024  87.23%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               66.0      0.1111 ug/L       0.06014      0.1111 ppb        0.06014  54.14%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                5.3      1.2585 ug/L       0.44086      1.2585 ppb        0.44086  35.03%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               161.7      5.1109 ug/L       1.80648      5.1109 ppb        1.80648  35.35%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                28.3      0.2554 ug/L       0.58263      0.2554 ppb        0.58263 228.12%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               10.3      0.0824 ug/L       0.14614      0.0824 ppb        0.14614 177.33%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     47.5      2.7943 ug/L       2.29398      2.7943 ppb        2.29398  82.10%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/2/2009 11:22:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6958.1	6958.1	100	%			11:24:34
1	Y RADIAL	6358.8	6358.8	100.00	%			11:24:34
1	Al 396.153Radial†	188.5	258.6	217.76	ug/L	217.76	ppb	11:24:34
1	Ca 317.933Radial†	172.4	145.5	214.50	ug/L	214.50	ppb	11:24:54
1	Fe 238.204 Radial†	63.5	24.4	109.18	ug/L	109.18	ppb	11:24:54
1	K 766.490 Radial†	3526.7	730.2	150.55	ug/L	150.55	ppb	11:24:34
1	Mg 279.077 IEC†	14.8	10.9	277.88	ug/L	277.88	ppb	11:24:54
1	Na 589.592 Radial†	4523.4	4842.0	297.94	ug/L	297.94	ppb	11:24:34
1	Sr 421.552†	1490.0	1548.2	4.8127	ug/L	4.8127	ppb	11:24:34
1	Sc 361.383	749590.0	749590.0	100.66	%			11:25:50
1	Y 371.029	585835.5	585835.5	100.76	%			11:25:50
1	Ag 328.068†	1805.9	1088.1	5.9620	ug/L	5.9620	ppb	11:25:50
1	As 188.979†	61.3	95.2	30.167	ug/L	30.167	ppb	11:26:11
1	B 249.677†	1496.0	2367.4	54.110	ug/L	54.110	ppb	11:26:11
1	Ba 233.527†	875.6	847.4	5.5067	ug/L	5.5067	ppb	11:26:11
1	Be 313.107†	7752.4	12486.1	5.0394	ug/L	5.0394	ppb	11:25:50
1	Cd 226.502†	154.3	446.5	5.0184	ug/L	5.0184	ppb	11:26:11
1	Co 228.616†	216.4	315.5	5.0052	ug/L	5.0052	ppb	11:26:11
1	Cr 267.716†	341.7	437.4	5.4743	ug/L	5.4743	ppb	11:26:11
1	Cu 324.752†	8931.6	3082.0	10.375	ug/L	10.375	ppb	11:25:50
1	Mn 257.610†	11933.8	11137.3	11.225	ug/L	11.225	ppb	11:25:50
1	Mo 202.031†	178.3	172.7	10.959	ug/L	10.959	ppb	11:26:11
1	Ni 231.604†	379.3	240.1	5.7410	ug/L	5.7410	ppb	11:26:11
1	P 214.914†	618.3	320.7	142.49	ug/L	142.49	ppb	11:26:11
1	Pb 220.353†	79.5	96.8	10.283	ug/L	10.283	ppb	11:26:11
1	S 181.975 Axial†	215.5	78.1	94.177	ug/L	94.177	ppb	11:26:11
1	Sb 206.836†	93.2	40.0	11.109	ug/L	11.109	ppb	11:26:11
1	Se 196.026†	40.2	74.8	34.256	ug/L	34.256	ppb	11:26:11
1	Si 251.611†	4025.9	3550.6	99.953	ug/L	99.953	ppb	11:26:11
1	Sn 189.927†	81.3	67.8	10.643	ug/L	10.643	ppb	11:26:11
1	Ti 334.940†	1530.5	3047.2	5.2168	ug/L	5.2168	ppb	11:25:50
1	Tl 190.801†	21.4	82.5	19.662	ug/L	19.662	ppb	11:26:11
1	U 409.014†	-3696.5	1592.4	50.307	ug/L	50.307	ppb	11:25:50
1	V 292.402†	-1156.3	544.2	4.6813	ug/L	4.6813	ppb	11:25:50
1	Zn 213.857†	2447.6	1447.1	11.904	ug/L	11.904	ppb	11:26:11
1	SiO2†	4102.2	3599.6	216.61	ug/L	216.61	ppb	11:27:07
2	Sc Radial	7037.8	7037.8	101	%			11:24:59
2	Y RADIAL	6415.7	6415.7	100.9	%			11:24:59
2	Al 396.153Radial†	208.7	276.4	232.81	ug/L	232.81	ppb	11:24:59
2	Ca 317.933Radial†	173.6	144.7	213.32	ug/L	213.32	ppb	11:25:19
2	Fe 238.204 Radial†	65.7	25.8	115.62	ug/L	115.62	ppb	11:25:19
2	K 766.490 Radial†	3482.0	646.4	133.23	ug/L	133.23	ppb	11:24:59
2	Mg 279.077 IEC†	15.6	11.4	292.31	ug/L	292.31	ppb	11:25:19
2	Na 589.592 Radial†	4653.5	4919.2	302.69	ug/L	302.69	ppb	11:24:59
2	Sr 421.552†	1521.6	1562.5	4.8572	ug/L	4.8572	ppb	11:24:59
2	Sc 361.383	757072.8	757072.8	101.67	%			11:26:16
2	Y 371.029	592158.9	592158.9	101.85	%			11:26:16
2	Ag 328.068†	1759.0	1024.2	5.6120	ug/L	5.6120	ppb	11:26:16
2	As 188.979†	62.5	95.8	30.360	ug/L	30.360	ppb	11:26:36
2	B 249.677†	1509.4	2366.0	54.075	ug/L	54.075	ppb	11:26:36
2	Ba 233.527†	872.1	835.4	5.4298	ug/L	5.4298	ppb	11:26:36
2	Be 313.107†	7807.5	12464.2	5.0305	ug/L	5.0305	ppb	11:26:16
2	Cd 226.502†	152.0	442.7	4.9746	ug/L	4.9746	ppb	11:26:36
2	Co 228.616†	232.3	329.0	5.2181	ug/L	5.2181	ppb	11:26:36
2	Cr 267.716†	319.2	411.9	5.1536	ug/L	5.1536	ppb	11:26:36
2	Cu 324.752†	8928.0	2990.7	10.068	ug/L	10.068	ppb	11:26:16
2	Mn 257.610†	11997.5	11082.8	11.170	ug/L	11.170	ppb	11:26:16
2	Mo 202.031†	174.7	167.4	10.625	ug/L	10.625	ppb	11:26:36
2	Ni 231.604†	378.0	235.1	5.6215	ug/L	5.6215	ppb	11:26:36

2	P 214.914†	622.8	319.1	141.80 ug/L	141.80 ppb	11:26:36
2	Pb 220.353†	88.0	104.4	11.081 ug/L	11.081 ppb	11:26:36
2	S 181.975 Axial†	204.2	64.9	78.218 ug/L	78.218 ppb	11:26:36
2	Sb 206.836†	72.8	19.0	5.4247 ug/L	5.4247 ppb	11:26:36
2	Se 196.026†	35.6	69.9	32.044 ug/L	32.044 ppb	11:26:36
2	Si 251.611†	4012.0	3497.5	98.470 ug/L	98.470 ppb	11:26:36
2	Sn 189.927†	78.5	64.3	10.096 ug/L	10.096 ppb	11:26:36
2	Ti 334.940†	1526.4	3028.2	5.1818 ug/L	5.1818 ppb	11:26:16
2	Tl 190.801†	27.9	88.6	21.119 ug/L	21.119 ppb	11:26:36
2	U 409.014†	-3549.4	1773.3	56.028 ug/L	56.028 ppb	11:26:16
2	V 292.402†	-1092.4	618.3	5.2960 ug/L	5.2960 ppb	11:26:16
2	Zn 213.857†	2444.4	1419.9	11.679 ug/L	11.679 ppb	11:26:36
2	SiO2†	4172.5	3628.6	218.40 ug/L	218.40 ppb	11:27:12
3	Sc Radial	7012.7	7012.7	101 %		11:25:24
3	Y RADIAL	6392.3	6392.3	100.5 %		11:25:24
3	Al 396.153Radial†	198.7	267.2	224.97 ug/L	224.97 ppb	11:25:24
3	Ca 317.933Radial†	173.6	145.3	214.17 ug/L	214.17 ppb	11:25:44
3	Fe 238.204 Radial†	63.2	23.6	105.80 ug/L	105.80 ppb	11:25:44
3	K 766.490 Radial†	3640.0	815.0	168.05 ug/L	168.05 ppb	11:25:24
3	Mg 279.077 IEC†	17.7	13.6	347.05 ug/L	347.05 ppb	11:25:44
3	Na 589.592 Radial†	4649.7	4931.9	303.47 ug/L	303.47 ppb	11:25:24
3	Sr 421.552†	1589.3	1634.9	5.0823 ug/L	5.0823 ppb	11:25:24
3	Sc 361.383	749539.9	749539.9	100.66 %		11:26:41
3	Y 371.029	586372.7	586372.7	100.85 %		11:26:41
3	Ag 328.068†	1597.0	880.7	4.8272 ug/L	4.8272 ppb	11:26:41
3	As 188.979†	65.7	99.5	31.550 ug/L	31.550 ppb	11:27:01
3	B 249.677†	1493.5	2365.1	54.055 ug/L	54.055 ppb	11:27:01
3	Ba 233.527†	864.2	836.1	5.4344 ug/L	5.4344 ppb	11:27:01
3	Be 313.107†	7677.6	12412.3	5.0100 ug/L	5.0100 ppb	11:26:41
3	Cd 226.502†	154.4	446.6	5.0201 ug/L	5.0201 ppb	11:27:01
3	Co 228.616†	232.4	331.4	5.2578 ug/L	5.2578 ppb	11:27:01
3	Cr 267.716†	309.0	404.9	5.0674 ug/L	5.0674 ppb	11:27:01
3	Cu 324.752†	8859.6	3011.0	10.136 ug/L	10.136 ppb	11:26:41
3	Mn 257.610†	11959.6	11163.8	11.250 ug/L	11.250 ppb	11:26:41
3	Mo 202.031†	187.2	181.5	11.518 ug/L	11.518 ppb	11:27:01
3	Ni 231.604†	378.0	238.9	5.7107 ug/L	5.7107 ppb	11:27:01
3	P 214.914†	629.2	331.6	147.45 ug/L	147.45 ppb	11:27:01
3	Pb 220.353†	96.1	113.3	12.030 ug/L	12.030 ppb	11:27:01
3	S 181.975 Axial†	217.8	80.4	96.923 ug/L	96.923 ppb	11:27:01
3	Sb 206.836†	82.9	29.8	8.3845 ug/L	8.3845 ppb	11:27:01
3	Se 196.026†	35.4	70.0	32.064 ug/L	32.064 ppb	11:27:01
3	Si 251.611†	4063.8	3588.5	101.00 ug/L	101.00 ppb	11:27:01
3	Sn 189.927†	86.4	72.8	11.434 ug/L	11.434 ppb	11:27:01
3	Ti 334.940†	1608.9	3125.2	5.3503 ug/L	5.3503 ppb	11:26:41
3	Tl 190.801†	44.2	105.1	25.031 ug/L	25.031 ppb	11:27:01
3	U 409.014†	-3668.4	1620.0	51.182 ug/L	51.182 ppb	11:26:41
3	V 292.402†	-1087.4	612.6	5.2527 ug/L	5.2527 ppb	11:26:41
3	Zn 213.857†	2439.2	1438.9	11.835 ug/L	11.835 ppb	11:27:01
3	SiO2†	4145.4	3642.8	219.17 ug/L	219.17 ppb	11:27:17

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	752067.6	101.00	%	0.582				0.58%
Sc Radial	7002.9	101	%	0.6				0.58%
Y 371.029	588122.4	101.16	%	0.603				0.60%
Y RADIAL	6388.9	100.5	%	0.45				0.45%
Ag 328.068†	997.7	5.4671	ug/L	0.58111	5.4671	ppb	0.58111	10.63%
QC value within limits for Ag 328.068 Recovery = 109.34%								
Al 396.153Radial†	267.4	225.18	ug/L	7.531	225.18	ppb	7.531	3.34%
QC value within limits for Al 396.153Radial Recovery = 112.59%								
As 188.979†	96.8	30.693	ug/L	0.7489	30.693	ppb	0.7489	2.44%
QC value within limits for As 188.979 Recovery = 102.31%								
B 249.677†	2366.1	54.080	ug/L	0.0279	54.080	ppb	0.0279	0.05%
QC value within limits for B 249.677 Recovery = 108.16%								
Ba 233.527†	839.6	5.4570	ug/L	0.04309	5.4570	ppb	0.04309	0.79%
QC value within limits for Ba 233.527 Recovery = 109.14%								
Be 313.107†	12454.2	5.0266	ug/L	0.01507	5.0266	ppb	0.01507	0.30%
QC value within limits for Be 313.107 Recovery = 100.53%								
Ca 317.933Radial†	145.2	214.00	ug/L	0.608	214.00	ppb	0.608	0.28%

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   QC value within limits for Ca 317.933Radial  Recovery = 107.00%
Cd 226.502†              445.3      5.0044 ug/L       0.02581      5.0044 ppb        0.02581   0.52%
   QC value within limits for Cd 226.502  Recovery = 100.09%
Co 228.616†              325.3      5.1603 ug/L       0.13582      5.1603 ppb        0.13582   2.63%
   QC value within limits for Co 228.616  Recovery = 103.21%
Cr 267.716†              418.1      5.2318 ug/L       0.21443      5.2318 ppb        0.21443   4.10%
   QC value within limits for Cr 267.716  Recovery = 104.64%
Cu 324.752†             3027.9      10.193 ug/L        0.1612      10.193 ppb         0.1612   1.58%
   QC value within limits for Cu 324.752  Recovery = 101.93%
Fe 238.204 Radial†        24.6      110.20 ug/L         4.988      110.20 ppb         4.988   4.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 110.20%
K 766.490 Radial†        730.5      150.61 ug/L        17.409      150.61 ppb        17.409  11.56%
   QC value within limits for K 766.490 Radial  Recovery = 100.41%
Mg 279.077 IEC†           11.9      305.75 ug/L        36.491      305.75 ppb        36.491  11.94%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.92%
Mn 257.610†            11128.0      11.215 ug/L        0.0406      11.215 ppb        0.0406   0.36%
   QC value within limits for Mn 257.610  Recovery = 112.15%
Mo 202.031†              173.9      11.034 ug/L        0.4515      11.034 ppb        0.4515   4.09%
   QC value within limits for Mo 202.031  Recovery = 110.34%
Na 589.592 Radial†      4897.7      301.36 ug/L         2.992      301.36 ppb         2.992   0.99%
   QC value within limits for Na 589.592 Radial  Recovery = 100.45%
Ni 231.604†              238.0      5.6911 ug/L       0.06215      5.6911 ppb       0.06215   1.09%
   QC value within limits for Ni 231.604  Recovery = 113.82%
P 214.914†               323.8      143.92 ug/L         3.081      143.92 ppb         3.081   2.14%
   QC value within limits for P 214.914  Recovery = 95.94%
Pb 220.353†              104.8      11.131 ug/L        0.8747      11.131 ppb        0.8747   7.86%
   QC value within limits for Pb 220.353  Recovery = 111.31%
S 181.975 Axial†          74.5      89.772 ug/L       10.1004      89.772 ppb       10.1004  11.25%
   QC value within limits for S 181.975 Axial  Recovery = 89.77%
Sb 206.836†               29.6      8.3060 ug/L       2.84287      8.3060 ppb       2.84287  34.23%
   QC value within limits for Sb 206.836  Recovery = 83.06%
Se 196.026†               71.6      32.788 ug/L        1.2713      32.788 ppb        1.2713   3.88%
   QC value within limits for Se 196.026  Recovery = 109.29%
Si 251.611†             3545.5      99.807 ug/L        1.2702      99.807 ppb        1.2702   1.27%
   QC value within limits for Si 251.611  Recovery = 99.81%
Sn 189.927†               68.3      10.724 ug/L        0.6729      10.724 ppb        0.6729   6.27%
   QC value within limits for Sn 189.927  Recovery = 107.24%
Sr 421.552†             1581.9      4.9174 ug/L       0.14457      4.9174 ppb       0.14457   2.94%
   QC value within limits for Sr 421.552  Recovery = 98.35%
Ti 334.940†             3066.8      5.2496 ug/L       0.08896      5.2496 ppb       0.08896   1.69%
   QC value within limits for Ti 334.940  Recovery = 104.99%
Tl 190.801†               92.0      21.937 ug/L        2.7766      21.937 ppb        2.7766  12.66%
   QC value within limits for Tl 190.801  Recovery = 109.69%
U 409.014†              1661.9      52.506 ug/L        3.0813      52.506 ppb        3.0813   5.87%
   QC value within limits for U 409.014  Recovery = 105.01%
V 292.402†               591.7      5.0766 ug/L       0.34308      5.0766 ppb       0.34308   6.76%
   QC value within limits for V 292.402  Recovery = 101.53%
Zn 213.857†             1435.3      11.806 ug/L        0.1152      11.806 ppb        0.1152   0.98%
   QC value within limits for Zn 213.857  Recovery = 118.06%
SiO2†                   3623.7      218.06 ug/L         1.309      218.06 ppb         1.309   0.60%
   QC value within limits for SiO2  Recovery = 102.38%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/2/2009 11:29:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6483.0	6483.0	93.4	%			11:31:27
1	Y RADIAL	5849.8	5849.8	91.99	%			11:31:27
1	Al 396.153Radial†	571903.7	612182.7	516640	ug/L	516640	ppb	11:31:22
1	Ca 317.933Radial†	310734.5	332554.7	490130	ug/L	490130	ppb	11:31:22
1	Fe 238.204 Radial†	38665.2	41344.6	184780	ug/L	184780	ppb	11:31:27
1	K 766.490 Radial†	2222.6	-407.9	-133.98	ug/L	-133.98	ppb	11:31:22
1	Mg 279.077 IEC†	17567.2	18798.3	480680	ug/L	480680	ppb	11:31:27
1	Na 589.592 Radial†	339.2	694.3	42.720	ug/L	42.720	ppb	11:31:27
1	Sr 421.552†	1192.7	1338.9	-0.6515	ug/L	-0.6515	ppb	11:31:27
1	Sc 361.383	663540.0	663540.0	89.107	%			11:31:54
1	Y 371.029	509251.6	509251.6	87.590	%			11:31:54
1	Ag 328.068†	-7740.0	-9392.1	0.5688	ug/L	0.5688	ppb	11:31:54
1	As 188.979†	-89.4	-66.0	15.887	ug/L	15.887	ppb	11:32:14
1	B 249.677†	-54.3	820.4	6.1424	ug/L	6.1424	ppb	11:31:54
1	Ba 233.527†	-732.5	-844.5	-6.3061	ug/L	-6.3061	ppb	11:32:14
1	Be 313.107†	-5088.5	-925.8	-0.4425	ug/L	-0.4425	ppb	11:31:54
1	Cd 226.502†	1108.4	1537.1	-4.2289	ug/L	-4.2289	ppb	11:32:14
1	Co 228.616†	-34.2	62.1	-1.6343	ug/L	-1.6343	ppb	11:32:14
1	Cr 267.716†	-246.3	-178.5	1.5698	ug/L	1.5698	ppb	11:32:14
1	Cu 324.752†	2393.5	-3104.8	0.2375	ug/L	0.2375	ppb	11:31:54
1	Mn 257.610†	-1508.3	-2410.6	11.525	ug/L	11.525	ppb	11:31:54
1	Mo 202.031†	-233.5	-266.5	-4.8409	ug/L	-4.8409	ppb	11:32:14
1	Ni 231.604†	339.5	244.3	5.8444	ug/L	5.8444	ppb	11:32:14
1	P 214.914†	252.2	-10.5	22.660	ug/L	22.660	ppb	11:32:14
1	Pb 220.353†	-801.4	-881.5	-10.032	ug/L	-10.032	ppb	11:32:14
1	S 181.975 Axial†	226.2	117.9	40.505	ug/L	40.505	ppb	11:32:14
1	Sb 206.836†	111.6	72.7	9.5957	ug/L	9.5957	ppb	11:32:14
1	Se 196.026†	-1413.2	-1551.1	-53.047	ug/L	-53.047	ppb	11:32:14
1	Si 251.611†	-239.5	-717.5	-19.197	ug/L	-19.197	ppb	11:32:14
1	Sn 189.927†	-309.1	-359.8	7.6871	ug/L	7.6871	ppb	11:32:14
1	Ti 334.940†	-16940.4	-17484.5	-1.4183	ug/L	-1.4183	ppb	11:31:54
1	Tl 190.801†	-85.1	-34.4	4.1783	ug/L	4.1783	ppb	11:32:14
1	U 409.014†	-4457.2	262.4	-14.408	ug/L	-14.408	ppb	11:31:54
1	V 292.402†	-87.3	1594.9	-4.8590	ug/L	-4.8590	ppb	11:32:14
1	Zn 213.857†	3889.1	3380.1	-7.9878	ug/L	-7.9878	ppb	11:32:14
1	SiO2†	-198.0	-697.7	-39.714	ug/L	-39.714	ppb	11:33:10
2	Sc Radial	6635.6	6635.6	95.6	%			11:31:37
2	Y RADIAL	5972.7	5972.7	93.92	%			11:31:37
2	Al 396.153Radial†	573407.2	599675.7	506090	ug/L	506090	ppb	11:31:32
2	Ca 317.933Radial†	310149.3	324293.0	477950	ug/L	477950	ppb	11:31:32
2	Fe 238.204 Radial†	39382.1	41142.5	183870	ug/L	183870	ppb	11:31:37
2	K 766.490 Radial†	2276.8	-405.9	-131.82	ug/L	-131.82	ppb	11:31:32
2	Mg 279.077 IEC†	17859.3	18671.4	477430	ug/L	477430	ppb	11:31:37
2	Na 589.592 Radial†	352.4	699.7	43.053	ug/L	43.053	ppb	11:31:37
2	Sr 421.552†	1279.0	1399.7	-0.3427	ug/L	-0.3427	ppb	11:31:37
2	Sc 361.383	664560.7	664560.7	89.244	%			11:32:19
2	Y 371.029	509594.8	509594.8	87.649	%			11:32:19
2	Ag 328.068†	-7795.8	-9441.2	0.1818	ug/L	0.1818	ppb	11:32:19
2	As 188.979†	-99.8	-77.6	12.050	ug/L	12.050	ppb	11:32:40
2	B 249.677†	-203.0	653.8	2.3936	ug/L	2.3936	ppb	11:32:19
2	Ba 233.527†	-683.6	-788.5	-5.9397	ug/L	-5.9397	ppb	11:32:40
2	Be 313.107†	-5064.9	-890.6	-0.4281	ug/L	-0.4281	ppb	11:32:19
2	Cd 226.502†	1104.7	1531.1	-4.1915	ug/L	-4.1915	ppb	11:32:40
2	Co 228.616†	-25.2	72.2	-1.4650	ug/L	-1.4650	ppb	11:32:40
2	Cr 267.716†	-175.6	-98.8	2.5471	ug/L	2.5471	ppb	11:32:40
2	Cu 324.752†	2370.8	-3134.3	0.0860	ug/L	0.0860	ppb	11:32:19
2	Mn 257.610†	-1499.9	-2398.5	11.486	ug/L	11.486	ppb	11:32:19
2	Mo 202.031†	-250.2	-284.8	-6.0611	ug/L	-6.0611	ppb	11:32:40
2	Ni 231.604†	341.8	246.3	5.8916	ug/L	5.8916	ppb	11:32:40

2	P 214.914†	227.4	-38.8	7.0951	ug/L	7.0951 ppb	11:32:40
2	Pb 220.353†	-848.7	-933.2	-17.462	ug/L	-17.462 ppb	11:32:40
2	S 181.975 Axial†	229.7	121.4	46.788	ug/L	46.788 ppb	11:32:40
2	Sb 206.836†	106.9	67.2	8.2978	ug/L	8.2978 ppb	11:32:40
2	Se 196.026†	-1362.4	-1491.7	-29.874	ug/L	-29.874 ppb	11:32:40
2	Si 251.611†	-203.1	-676.4	-18.029	ug/L	-18.029 ppb	11:32:40
2	Sn 189.927†	-303.5	-353.1	7.4235	ug/L	7.4235 ppb	11:32:40
2	Ti 334.940†	-16915.6	-17427.5	-2.0336	ug/L	-2.0336 ppb	11:32:19
2	Tl 190.801†	-107.3	-59.1	-1.9402	ug/L	-1.9402 ppb	11:32:40
2	U 409.014†	-4290.6	456.8	-8.1548	ug/L	-8.1548 ppb	11:32:19
2	V 292.402†	-140.5	1535.4	-5.2783	ug/L	-5.2783 ppb	11:32:40
2	Zn 213.857†	3921.4	3409.7	-7.5365	ug/L	-7.5365 ppb	11:32:40
2	SiO2†	-234.4	-738.2	-42.148	ug/L	-42.148 ppb	11:33:15
3	Sc Radial	6550.3	6550.3	94.4	%		11:31:47
3	Y RADIAL	5920.5	5920.5	93.10	%		11:31:47
3	Al 396.153Radial†	569044.4	602866.3	508780	ug/L	508780 ppb	11:31:42
3	Ca 317.933Radial†	308697.3	326980.4	481910	ug/L	481910 ppb	11:31:42
3	Fe 238.204 Radial†	39122.2	41403.6	185040	ug/L	185040 ppb	11:31:47
3	K 766.490 Radial†	2231.6	-422.7	-135.59	ug/L	-135.59 ppb	11:31:42
3	Mg 279.077 IEC†	17763.8	18813.4	481060	ug/L	481060 ppb	11:31:47
3	Na 589.592 Radial†	359.1	711.6	43.785	ug/L	43.785 ppb	11:31:47
3	Sr 421.552†	1224.9	1359.9	-0.5053	ug/L	-0.5053 ppb	11:31:47
3	Sc 361.383	662137.4	662137.4	88.919	%		11:32:45
3	Y 371.029	508138.8	508138.8	87.399	%		11:32:45
3	Ag 328.068†	-7896.0	-9585.9	-0.2976	ug/L	-0.2976 ppb	11:32:45
3	As 188.979†	-99.8	-77.9	12.188	ug/L	12.188 ppb	11:33:05
3	B 249.677†	-258.3	590.8	0.8753	ug/L	0.8753 ppb	11:32:45
3	Ba 233.527†	-678.2	-785.2	-5.9247	ug/L	-5.9247 ppb	11:33:05
3	Be 313.107†	-4954.1	-786.8	-0.3862	ug/L	-0.3862 ppb	11:32:45
3	Cd 226.502†	1106.9	1538.1	-4.2487	ug/L	-4.2487 ppb	11:33:05
3	Co 228.616†	-33.9	62.3	-1.6370	ug/L	-1.6370 ppb	11:33:05
3	Cr 267.716†	-183.9	-108.8	2.4440	ug/L	2.4440 ppb	11:33:05
3	Cu 324.752†	2381.3	-3112.8	0.2259	ug/L	0.2259 ppb	11:32:45
3	Mn 257.610†	-1264.4	-2139.9	11.824	ug/L	11.824 ppb	11:32:45
3	Mo 202.031†	-243.7	-278.5	-5.5863	ug/L	-5.5863 ppb	11:33:05
3	Ni 231.604†	315.9	218.6	5.2289	ug/L	5.2289 ppb	11:33:05
3	P 214.914†	232.5	-32.0	10.095	ug/L	10.095 ppb	11:33:05
3	Pb 220.353†	-826.5	-911.7	-14.774	ug/L	-14.774 ppb	11:33:05
3	S 181.975 Axial†	239.6	133.5	60.882	ug/L	60.882 ppb	11:33:05
3	Sb 206.836†	101.8	61.9	6.8282	ug/L	6.8282 ppb	11:33:05
3	Se 196.026†	-1382.4	-1519.9	-38.541	ug/L	-38.541 ppb	11:33:05
3	Si 251.611†	-199.2	-672.8	-17.932	ug/L	-17.932 ppb	11:33:05
3	Sn 189.927†	-302.7	-353.4	7.8644	ug/L	7.8644 ppb	11:33:05
3	Ti 334.940†	-16839.4	-17411.2	-1.7755	ug/L	-1.7755 ppb	11:32:45
3	Tl 190.801†	-90.7	-40.9	2.4453	ug/L	2.4453 ppb	11:33:05
3	U 409.014†	-4223.0	515.3	-6.4497	ug/L	-6.4497 ppb	11:32:45
3	V 292.402†	-180.9	1489.4	-5.7490	ug/L	-5.7490 ppb	11:33:05
3	Zn 213.857†	3895.8	3396.9	-7.8856	ug/L	-7.8856 ppb	11:33:05
3	SiO2†	-153.3	-648.0	-36.707	ug/L	-36.707 ppb	11:33:20

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	663412.7	89.090	%	0.1634				0.18%
Sc Radial	6556.3	94.5	%	1.10				1.17%
Y 371.029	508995.0	87.546	%	0.1309				0.15%
Y RADIAL	5914.3	93.01	%	0.970				1.04%
Ag 328.068†	-9473.1	0.1510	ug/L	0.43402	0.1510	ppb	0.43402	287.44%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	604908.2	510500	ug/L	5484.5	510500	ppb	5484.5	1.07%
QC value within limits for Al 396.153Radial Recovery = 102.10%								
As 188.979†	-73.8	13.375	ug/L	2.1768	13.375	ppb	2.1768	16.28%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	688.3	3.1371	ug/L	2.71115	3.1371	ppb	2.71115	86.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-806.0	-6.0568	ug/L	0.21598	-6.0568	ppb	0.21598	3.57%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-867.7	-0.4189	ug/L	0.02922	-0.4189	ppb	0.02922	6.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	327942.7	483330	ug/L	6210.8	483330	ppb	6210.8	1.28%

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   QC value within limits for Ca 317.933Radial  Recovery = 96.67%
Cd 226.502†            1535.5     -4.2230 ug/L       0.02909     -4.2230 ppb        0.02909   0.69%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              65.5     -1.5788 ug/L       0.09850     -1.5788 ppb        0.09850   6.24%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -128.7      2.1870 ug/L       0.53694      2.1870 ppb        0.53694  24.55%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -3117.3      0.1831 ug/L       0.08432      0.1831 ppb        0.08432  46.05%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    41296.9      184570 ug/L         612.1      184570 ppb          612.1   0.33%
   QC value within limits for Fe 238.204 Radial  Recovery = 92.28%
K 766.490 Radial†      -412.1     -133.80 ug/L         1.891     -133.80 ppb          1.891   1.41%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       18761.0      479720 ug/L        1995.6      479720 ppb         1995.6   0.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 95.94%
Mn 257.610†           -2316.3      11.612 ug/L        0.1844      11.612 ppb         0.1844   1.59%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -276.6     -5.4961 ug/L       0.61509     -5.4961 ppb        0.61509  11.19%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      701.8      43.186 ug/L        0.5447      43.186 ppb         0.5447   1.26%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†             236.4      5.6550 ug/L       0.36976      5.6550 ppb        0.36976   6.54%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -27.1      13.283 ug/L        8.2576      13.283 ppb         8.2576  62.16%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -908.8     -14.089 ug/L        3.7620     -14.089 ppb         3.7620  26.70%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†        124.2      49.392 ug/L       10.4353      49.392 ppb        10.4353  21.13%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              67.2      8.2406 ug/L       1.38464      8.2406 ppb        1.38464  16.80%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†           -1520.9     -40.487 ug/L       11.7084     -40.487 ppb        11.7084  28.92%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -688.9     -18.386 ug/L        0.7041     -18.386 ppb         0.7041   3.83%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -355.5      7.6583 ug/L       0.22183      7.6583 ppb        0.22183   2.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†            1366.2     -0.4998 ug/L       0.15449     -0.4998 ppb        0.15449  30.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†          -17441.1     -1.7424 ug/L       0.30899     -1.7424 ppb        0.30899  17.73%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -44.8      1.5611 ug/L       3.15362      1.5611 ppb        3.15362 202.01%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              411.5     -9.6709 ug/L       4.19031     -9.6709 ppb        4.19031  43.33%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†             1539.9     -5.2955 ug/L       0.44525     -5.2955 ppb        0.44525   8.41%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            3395.6     -7.8033 ug/L       0.23662     -7.8033 ppb        0.23662   3.03%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                  -694.6     -39.523 ug/L        2.7254     -39.523 ppb         2.7254   6.90%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/2/2009 11:35:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	6531.4	6531.4	94.1	%			11:37:30
1	Y RADIAL	5882.0	5882.0	92.50	%			11:37:30
1	Al 396.153Radial†	557317.4	592151.2	499710	ug/L	499710	ppb	11:37:25
1	Ca 317.933Radial†	298401.2	316987.8	467190	ug/L	467190	ppb	11:37:25
1	Fe 238.204 Radial†	38554.2	40920.1	182900	ug/L	182900	ppb	11:37:30
1	K 766.490 Radial†	26414.2	25275.2	5162.9	ug/L	5162.9	ppb	11:37:25
1	Mg 279.077 IEC†	17426.9	18510.0	473310	ug/L	473310	ppb	11:37:30
1	Na 589.592 Radial†	79719.5	85023.2	5231.6	ug/L	5231.6	ppb	11:37:25
1	Sr 421.552†	146945.7	156173.9	481.10	ug/L	481.10	ppb	11:37:25
1	Sc 361.383	676734.0	676734.0	90.879	%			11:37:58
1	Y 371.029	517962.3	517962.3	89.088	%			11:37:58
1	Ag 328.068†	37489.4	40546.1	275.19	ug/L	275.19	ppb	11:37:58
1	As 188.979†	1352.4	1522.4	520.81	ug/L	520.81	ppb	11:38:03
1	B 249.677†	20417.6	23348.1	519.18	ug/L	519.18	ppb	11:37:58
1	Ba 233.527†	67261.5	73989.8	480.28	ug/L	480.28	ppb	11:37:58
1	Be 313.107†	544014.2	603398.9	244.07	ug/L	244.07	ppb	11:37:58
1	Cd 226.502†	38359.0	42502.2	457.51	ug/L	457.51	ppb	11:38:03
1	Co 228.616†	25806.3	28496.8	448.26	ug/L	448.26	ppb	11:38:03
1	Cr 267.716†	34093.7	37613.5	475.70	ug/L	475.70	ppb	11:38:03
1	Cu 324.752†	148941.5	158099.2	542.47	ug/L	542.47	ppb	11:37:58
1	Mn 257.610†	423226.7	464985.9	482.14	ug/L	482.14	ppb	11:37:58
1	Mo 202.031†	6784.0	7460.5	484.98	ug/L	484.98	ppb	11:38:03
1	Ni 231.604†	17456.6	19072.0	455.95	ug/L	455.95	ppb	11:38:03
1	P 214.914†	5276.8	5512.9	2404.3	ug/L	2404.3	ppb	11:38:03
1	Pb 220.353†	3168.1	3503.9	451.09	ug/L	451.09	ppb	11:38:03
1	S 181.975 Axial†	2294.9	2389.3	2782.7	ug/L	2782.7	ppb	11:38:03
1	Sb 206.836†	1836.3	1968.0	531.01	ug/L	531.01	ppb	11:38:03
1	Se 196.026†	3637.9	4037.8	2469.4	ug/L	2469.4	ppb	11:38:03
1	Si 251.611†	167499.0	183861.2	5179.9	ug/L	5179.9	ppb	11:37:58
1	Sn 189.927†	2527.2	2767.9	495.01	ug/L	495.01	ppb	11:38:03
1	Ti 334.940†	254604.4	281684.5	510.18	ug/L	510.18	ppb	11:37:58
1	Tl 190.801†	1641.8	1867.8	458.95	ug/L	458.95	ppb	11:38:03
1	U 409.014†	10046.4	16319.3	492.44	ug/L	492.44	ppb	11:37:58
1	V 292.402†	55859.2	63158.4	506.70	ug/L	506.70	ppb	11:37:58
1	Zn 213.857†	57116.9	61865.1	472.86	ug/L	472.86	ppb	11:38:03
1	SiO2†	171223.9	187933.3	11319	ug/L	11319	ppb	11:38:30
2	Sc Radial	6517.0	6517.0	93.9	%			11:37:40
2	Y RADIAL	5921.7	5921.7	93.12	%			11:37:40
2	Al 396.153Radial†	555942.4	591995.1	499580	ug/L	499580	ppb	11:37:35
2	Ca 317.933Radial†	297947.0	317204.5	467510	ug/L	467510	ppb	11:37:35
2	Fe 238.204 Radial†	38333.9	40776.0	182250	ug/L	182250	ppb	11:37:40
2	K 766.490 Radial†	26353.4	25272.4	5161.8	ug/L	5161.8	ppb	11:37:35
2	Mg 279.077 IEC†	17308.8	18425.2	471140	ug/L	471140	ppb	11:37:40
2	Na 589.592 Radial†	79620.4	85104.8	5236.6	ug/L	5236.6	ppb	11:37:35
2	Sr 421.552†	146452.1	155993.2	480.54	ug/L	480.54	ppb	11:37:35
2	Sc 361.383	673779.4	673779.4	90.482	%			11:38:08
2	Y 371.029	515653.3	515653.3	88.691	%			11:38:08
2	Ag 328.068†	38074.1	41373.3	279.55	ug/L	279.55	ppb	11:38:08
2	As 188.979†	1373.9	1552.8	530.34	ug/L	530.34	ppb	11:38:13
2	B 249.677†	20663.1	23717.9	527.59	ug/L	527.59	ppb	11:38:08
2	Ba 233.527†	68228.2	75382.7	489.34	ug/L	489.34	ppb	11:38:08
2	Be 313.107†	553408.7	616406.6	249.33	ug/L	249.33	ppb	11:38:08
2	Cd 226.502†	39677.6	44144.5	476.09	ug/L	476.09	ppb	11:38:13
2	Co 228.616†	26730.6	29642.9	466.41	ug/L	466.41	ppb	11:38:13
2	Cr 267.716†	35255.1	39061.5	493.84	ug/L	493.84	ppb	11:38:13
2	Cu 324.752†	151572.1	161725.2	554.63	ug/L	554.63	ppb	11:38:08
2	Mn 257.610†	430298.2	474843.5	492.03	ug/L	492.03	ppb	11:38:08
2	Mo 202.031†	6996.0	7727.5	501.87	ug/L	501.87	ppb	11:38:13
2	Ni 231.604†	18139.8	19911.2	476.01	ug/L	476.01	ppb	11:38:13

2	P 214.914†	5470.9	5752.9	2510.6	ug/L	2510.6 ppb	11:38:13
2	Pb 220.353†	3297.7	3662.4	467.90	ug/L	467.90 ppb	11:38:13
2	S 181.975 Axial†	2351.2	2462.5	2871.1	ug/L	2871.1 ppb	11:38:13
2	Sb 206.836†	1912.0	2060.6	556.29	ug/L	556.29 ppb	11:38:13
2	Se 196.026†	3763.0	4193.7	2537.9	ug/L	2537.9 ppb	11:38:13
2	Si 251.611†	170225.8	187683.1	5287.4	ug/L	5287.4 ppb	11:38:08
2	Sn 189.927†	2602.3	2863.0	509.89	ug/L	509.89 ppb	11:38:13
2	Ti 334.940†	258566.3	287291.7	519.81	ug/L	519.81 ppb	11:38:08
2	Tl 190.801†	1755.6	2001.4	490.71	ug/L	490.71 ppb	11:38:13
2	U 409.014†	10023.8	16342.7	493.22	ug/L	493.22 ppb	11:38:08
2	V 292.402†	56724.8	64384.5	517.00	ug/L	517.00 ppb	11:38:08
2	Zn 213.857†	59172.5	64412.4	493.94	ug/L	493.94 ppb	11:38:13
2	SiO2†	169034.8	186340.1	11221	ug/L	11221 ppb	11:38:35
3	Sc Radial	6563.8	6563.8	94.6	%		11:37:50
3	Y RADIAL	5907.1	5907.1	92.89	%		11:37:50
3	Al 396.153Radial†	563054.7	595297.1	502370	ug/L	502370 ppb	11:37:45
3	Ca 317.933Radial†	302108.3	319343.7	470660	ug/L	470660 ppb	11:37:45
3	Fe 238.204 Radial†	38413.4	40569.3	181330	ug/L	181330 ppb	11:37:50
3	K 766.490 Radial†	26588.6	25321.2	5170.2	ug/L	5170.2 ppb	11:37:45
3	Mg 279.077 IEC†	17354.3	18341.9	469020	ug/L	469020 ppb	11:37:50
3	Na 589.592 Radial†	80979.7	85937.9	5287.9	ug/L	5287.9 ppb	11:37:45
3	Sr 421.552†	148809.1	157374.0	484.80	ug/L	484.80 ppb	11:37:45
3	Sc 361.383	616767.1	616767.1	82.826	%		11:38:19
3	Y 371.029	472851.8	472851.8	81.329	%		11:38:19
3	Ag 328.068†	38142.7	45345.7	301.11	ug/L	301.11 ppb	11:38:19
3	As 188.979†	1336.9	1648.4	560.64	ug/L	560.64 ppb	11:38:24
3	B 249.677†	20757.5	25942.9	578.38	ug/L	578.38 ppb	11:38:19
3	Ba 233.527†	68465.0	82638.9	536.52	ug/L	536.52 ppb	11:38:19
3	Be 313.107†	555237.7	675151.4	273.09	ug/L	273.09 ppb	11:38:19
3	Cd 226.502†	38732.7	47057.3	509.01	ug/L	509.01 ppb	11:38:24
3	Co 228.616†	26059.7	31563.7	496.80	ug/L	496.80 ppb	11:38:24
3	Cr 267.716†	34309.2	41521.2	524.71	ug/L	524.71 ppb	11:38:24
3	Cu 324.752†	152620.8	178475.9	610.93	ug/L	610.93 ppb	11:38:19
3	Mn 257.610†	431743.3	520547.8	537.98	ug/L	537.98 ppb	11:38:19
3	Mo 202.031†	6881.0	8303.4	538.33	ug/L	538.33 ppb	11:38:24
3	Ni 231.604†	17623.9	21141.5	505.42	ug/L	505.42 ppb	11:38:24
3	P 214.914†	5259.2	6056.2	2638.1	ug/L	2638.1 ppb	11:38:24
3	Pb 220.353†	3197.3	3878.1	491.39	ug/L	491.39 ppb	11:38:24
3	S 181.975 Axial†	2292.7	2632.2	3075.1	ug/L	3075.1 ppb	11:38:24
3	Sb 206.836†	1864.7	2198.7	594.22	ug/L	594.22 ppb	11:38:24
3	Se 196.026†	3621.1	4406.8	2631.5	ug/L	2631.5 ppb	11:38:24
3	Si 251.611†	170876.5	205859.1	5800.0	ug/L	5800.0 ppb	11:38:19
3	Sn 189.927†	2543.5	3058.0	540.67	ug/L	540.67 ppb	11:38:24
3	Ti 334.940†	260450.1	315981.4	569.19	ug/L	569.19 ppb	11:38:19
3	Tl 190.801†	1644.1	2046.2	501.79	ug/L	501.79 ppb	11:38:24
3	U 409.014†	10207.0	17588.0	532.64	ug/L	532.64 ppb	11:38:19
3	V 292.402†	56960.9	70464.6	567.44	ug/L	567.44 ppb	11:38:19
3	Zn 213.857†	57620.7	68584.0	528.36	ug/L	528.36 ppb	11:38:24
3	SiO2†	171155.6	206169.3	12417	ug/L	12417 ppb	11:38:40

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	655760.2	88.062	%	4.5392				5.15%
Sc Radial	6537.4	94.2	%	0.35				0.37%
Y 371.029	502155.8	86.370	%	4.3695				5.06%
Y RADIAL	5903.6	92.84	%	0.315				0.34%
Ag 328.068†	42421.7	285.29	ug/L	13.880	285.29	ppb	13.880	4.87%
QC value within limits for Ag 328.068 Recovery = 114.11%								
Al 396.153Radial†	593147.8	500550	ug/L	1571.1	500550	ppb	1571.1	0.31%
QC value within limits for Al 396.153Radial Recovery = 100.11%								
As 188.979†	1574.5	537.26	ug/L	20.798	537.26	ppb	20.798	3.87%
QC value within limits for As 188.979 Recovery = 107.45%								
B 249.677†	24336.3	541.71	ug/L	32.029	541.71	ppb	32.029	5.91%
QC value within limits for B 249.677 Recovery = 108.34%								
Ba 233.527†	77337.1	502.05	ug/L	30.201	502.05	ppb	30.201	6.02%
QC value within limits for Ba 233.527 Recovery = 100.41%								
Be 313.107†	631652.3	255.50	ug/L	15.465	255.50	ppb	15.465	6.05%
QC value within limits for Be 313.107 Recovery = 102.20%								
Ca 317.933Radial†	317845.4	468450	ug/L	1919.1	468450	ppb	1919.1	0.41%

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   QC value within limits for Ca 317.933Radial  Recovery = 93.69%
Cd 226.502†          44568.0      480.87 ug/L        26.081      480.87 ppb        26.081   5.42%
   QC value within limits for Cd 226.502  Recovery = 96.17%
Co 228.616†          29901.1      470.49 ug/L        24.526      470.49 ppb        24.526   5.21%
   QC value within limits for Co 228.616  Recovery = 94.10%
Cr 267.716†          39398.8      498.08 ug/L        24.780      498.08 ppb        24.780   4.98%
   QC value within limits for Cr 267.716  Recovery = 99.62%
Cu 324.752†         166100.1      569.35 ug/L        36.526      569.35 ppb        36.526   6.42%
   QC value within limits for Cu 324.752  Recovery = 113.87%
Fe 238.204 Radial†   40755.1      182160 ug/L         787.2      182160 ppb         787.2   0.43%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.08%
K 766.490 Radial†    25289.6      5165.0 ug/L          4.56      5165.0 ppb          4.56   0.09%
   QC value within limits for K 766.490 Radial  Recovery = 103.30%
Mg 279.077 IEC†      18425.7      471160 ug/L        2148.3      471160 ppb        2148.3   0.46%
   QC value within limits for Mg 279.077 IEC  Recovery = 94.23%
Mn 257.610†         486792.4      504.05 ug/L        29.799      504.05 ppb        29.799   5.91%
   QC value within limits for Mn 257.610  Recovery = 100.81%
Mo 202.031†           7830.5      508.39 ug/L        27.264      508.39 ppb        27.264   5.36%
   QC value within limits for Mo 202.031  Recovery = 101.68%
Na 589.592 Radial†   85355.3      5252.0 ug/L         31.14      5252.0 ppb         31.14   0.59%
   QC value within limits for Na 589.592 Radial  Recovery = 105.04%
Ni 231.604†          20041.6      479.13 ug/L        24.885      479.13 ppb        24.885   5.19%
   QC value within limits for Ni 231.604  Recovery = 95.83%
P 214.914†            5774.0      2517.7 ug/L        117.05      2517.7 ppb        117.05   4.65%
   QC value within limits for P 214.914  Recovery = 100.71%
Pb 220.353†           3681.5      470.13 ug/L        20.240      470.13 ppb        20.240   4.31%
   QC value within limits for Pb 220.353  Recovery = 94.03%
S 181.975 Axial†      2494.7      2909.6 ug/L        149.94      2909.6 ppb        149.94   5.15%
   QC value within limits for S 181.975 Axial  Recovery = 116.38%
Sb 206.836†           2075.8      560.51 ug/L        31.814      560.51 ppb        31.814   5.68%
   QC value within limits for Sb 206.836  Recovery = 112.10%
Se 196.026†           4212.8      2546.3 ug/L         81.33      2546.3 ppb         81.33   3.19%
   QC value within limits for Se 196.026  Recovery = 101.85%
Si 251.611†         192467.8      5422.4 ug/L        331.36      5422.4 ppb        331.36   6.11%
   QC value within limits for Si 251.611  Recovery = 108.45%
Sn 189.927†           2896.3      515.19 ug/L        23.288      515.19 ppb        23.288   4.52%
   QC value within limits for Sn 189.927  Recovery = 103.04%
Sr 421.552†         156513.7      482.15 ug/L         2.316      482.15 ppb         2.316   0.48%
   QC value within limits for Sr 421.552  Recovery = 96.43%
Ti 334.940†         294985.9      533.06 ug/L        31.660      533.06 ppb        31.660   5.94%
   QC value within limits for Ti 334.940  Recovery = 106.61%
Tl 190.801†           1971.8      483.82 ug/L        22.237      483.82 ppb        22.237   4.60%
   QC value within limits for Tl 190.801  Recovery = 96.76%
U 409.014†           16750.0      506.10 ug/L        22.986      506.10 ppb        22.986   4.54%
   QC value within limits for U 409.014  Recovery = 101.22%
V 292.402†           66002.5      530.38 ug/L        32.508      530.38 ppb        32.508   6.13%
   QC value within limits for V 292.402  Recovery = 106.08%
Zn 213.857†          64953.8      498.39 ug/L        28.020      498.39 ppb        28.020   5.62%
   QC value within limits for Zn 213.857  Recovery = 99.68%
SiO2†               193480.9       11652 ug/L         664.0       11652 ppb         664.0   5.70%
   QC value within limits for SiO2  Recovery = 108.95%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/2/2009 11:40:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6475.7	6475.7	93.3	%			11:42:54
1	Y RADIAL	5848.3	5848.3	91.97	%			11:42:54
1	Al 396.153Radial†	564519.3	604958.6	510540	ug/L	510540	ppb	11:42:48
1	Ca 317.933Radial†	298475.0	319792.5	471320	ug/L	471320	ppb	11:42:48
1	Fe 238.204 Radial†	92680.4	99269.0	443660	ug/L	443660	ppb	11:42:48
1	K 766.490 Radial†	2570.5	-32.4	-66.374	ug/L	-66.374	ppb	11:42:48
1	Mg 279.077 IEC†	17156.3	18379.2	469730	ug/L	469730	ppb	11:42:54
1	Na 589.592 Radial†	7472129.8	8006792.1	492670	ug/L	492670	ppb	11:42:43
1	Sr 421.552†	1629.7	1808.5	0.9940	ug/L	0.9940	ppb	11:42:54
1	Sc 361.383	664334.4	664334.4	89.214	%			11:43:33
1	Y 371.029	510229.3	510229.3	87.758	%			11:43:33
1	Ag 328.068†	-19377.4	-22426.0	0.1035	ug/L	0.1035	ppb	11:43:33
1	As 188.979†	-216.0	-207.8	22.775	ug/L	22.775	ppb	11:43:53
1	B 249.677†	502.4	1444.4	2.7178	ug/L	2.7178	ppb	11:43:33
1	Ba 233.527†	-1809.4	-2050.6	-15.318	ug/L	-15.318	ppb	11:43:53
1	Be 313.107†	-9871.5	-6280.3	-2.5770	ug/L	-2.5770	ppb	11:43:33
1	Cd 226.502†	3136.2	3808.6	-8.8296	ug/L	-8.8296	ppb	11:43:53
1	Co 228.616†	227.0	355.0	-0.7705	ug/L	-0.7705	ppb	11:43:53
1	Cr 267.716†	-49.3	42.7	5.0437	ug/L	5.0437	ppb	11:43:53
1	Cu 324.752†	-314.8	-6143.7	4.9806	ug/L	4.9806	ppb	11:43:33
1	Mn 257.610†	-31190.8	-35679.7	10.775	ug/L	10.775	ppb	11:43:33
1	Mo 202.031†	-517.5	-584.4	-8.1109	ug/L	-8.1109	ppb	11:43:33
1	Ni 231.604†	433.7	349.5	8.3565	ug/L	8.3565	ppb	11:43:53
1	P 214.914†	716.2	509.2	47.794	ug/L	47.794	ppb	11:43:53
1	Pb 220.353†	-537.2	-584.3	-4.3147	ug/L	-4.3147	ppb	11:43:53
1	S 181.975 Axial†	287.2	186.0	123.81	ug/L	123.81	ppb	11:43:53
1	Sb 206.836†	88.9	47.1	6.8603	ug/L	6.8603	ppb	11:43:53
1	Se 196.026†	-3306.8	-3671.8	-151.42	ug/L	-151.42	ppb	11:43:53
1	Si 251.611†	-2035.3	-2730.1	-75.638	ug/L	-75.638	ppb	11:43:53
1	Sn 189.927†	-354.7	-410.6	17.089	ug/L	17.089	ppb	11:43:53
1	Ti 334.940†	-12190.3	-12137.4	0.3285	ug/L	0.3285	ppb	11:43:33
1	Tl 190.801†	-139.0	-94.7	-10.413	ug/L	-10.413	ppb	11:43:53
1	U 409.014†	400260.6	453917.7	14293	ug/L	14293	ppb	11:43:33
1	V 292.402†	571.5	2333.5	-7.4918	ug/L	-7.4918	ppb	11:43:53
1	Zn 213.857†	7020.8	6885.2	-5.6109	ug/L	-5.6109	ppb	11:43:53
1	SiO2†	-2212.4	-2955.4	-175.16	ug/L	-175.16	ppb	11:44:50
2	Sc Radial	6466.1	6466.1	93.2	%			11:43:10
2	Y RADIAL	5924.2	5924.2	93.16	%			11:43:10
2	Al 396.153Radial†	571768.0	613640.6	517870	ug/L	517870	ppb	11:43:05
2	Ca 317.933Radial†	301210.6	323205.7	476350	ug/L	476350	ppb	11:43:05
2	Fe 238.204 Radial†	93525.1	100323.8	448370	ug/L	448370	ppb	11:43:05
2	K 766.490 Radial†	2374.7	-238.3	-108.81	ug/L	-108.81	ppb	11:43:05
2	Mg 279.077 IEC†	17299.2	18560.0	474360	ug/L	474360	ppb	11:43:10
2	Na 589.592 Radial†	7420675.2	7963532.3	490010	ug/L	490010	ppb	11:42:59
2	Sr 421.552†	1545.9	1721.2	0.6731	ug/L	0.6731	ppb	11:43:10
2	Sc 361.383	711724.5	711724.5	95.578	%			11:43:59
2	Y 371.029	545615.1	545615.1	93.845	%			11:43:59
2	Ag 328.068†	-19020.1	-20606.0	12.410	ug/L	12.410	ppb	11:43:59
2	As 188.979†	-235.7	-212.3	22.279	ug/L	22.279	ppb	11:44:19
2	B 249.677†	361.8	1259.8	-1.8251	ug/L	-1.8251	ppb	11:43:59
2	Ba 233.527†	-1804.0	-1909.9	-14.426	ug/L	-14.426	ppb	11:44:19
2	Be 313.107†	-9971.7	-5648.4	-2.3179	ug/L	-2.3179	ppb	11:43:59
2	Cd 226.502†	3112.6	3549.8	-12.293	ug/L	-12.293	ppb	11:44:19
2	Co 228.616†	234.7	346.1	-0.9654	ug/L	-0.9654	ppb	11:44:19
2	Cr 267.716†	9.8	108.2	6.3048	ug/L	6.3048	ppb	11:44:19
2	Cu 324.752†	-129.6	-5926.4	5.9842	ug/L	5.9842	ppb	11:43:59
2	Mn 257.610†	-30455.0	-32582.0	14.398	ug/L	14.398	ppb	11:43:59
2	Mo 202.031†	-457.9	-483.5	-1.4033	ug/L	-1.4033	ppb	11:43:59
2	Ni 231.604†	459.8	344.4	8.2356	ug/L	8.2356	ppb	11:44:19

2	P 214.914†	732.4	472.7	29.940 ug/L	29.940 ppb	11:44:19
2	Pb 220.353†	-581.6	-590.7	-3.9902 ug/L	-3.9902 ppb	11:44:19
2	S 181.975 Axial†	304.6	182.7	118.41 ug/L	118.41 ppb	11:44:19
2	Sb 206.836†	115.1	67.8	12.565 ug/L	12.565 ppb	11:44:19
2	Se 196.026†	-3259.4	-3375.4	-1.0993 ug/L	-1.0993 ppb	11:44:19
2	Si 251.611†	-2021.3	-2563.6	-71.081 ug/L	-71.081 ppb	11:44:19
2	Sn 189.927†	-357.0	-386.5	21.721 ug/L	21.721 ppb	11:44:19
2	Ti 334.940†	-11932.3	-10957.6	3.1162 ug/L	3.1162 ppb	11:43:59
2	Tl 190.801†	-135.6	-80.7	-6.8727 ug/L	-6.8727 ppb	11:44:19
2	U 409.014†	396599.6	420213.9	13227 ug/L	13227 ppb	11:43:59
2	V 292.402†	655.5	2378.7	-9.6919 ug/L	-9.6919 ppb	11:44:19
2	Zn 213.857†	6964.3	6302.1	-11.089 ug/L	-11.089 ppb	11:44:19
2	SiO2†	-2208.8	-2786.5	-165.28 ug/L	-165.28 ppb	11:44:55
3	Sc Radial	6504.9	6504.9	93.7 %		11:43:26
3	Y RADIAL	5899.2	5899.2	92.77 %		11:43:26
3	Al 396.153Radial†	570174.7	608277.8	513350 ug/L	513350 ppb	11:43:21
3	Ca 317.933Radial†	299213.1	319145.2	470370 ug/L	470370 ppb	11:43:21
3	Fe 238.204 Radial†	92775.5	98924.9	442120 ug/L	442120 ppb	11:43:21
3	K 766.490 Radial†	2534.5	-83.2	-77.427 ug/L	-77.427 ppb	11:43:21
3	Mg 279.077 IEC†	17213.0	18357.2	469170 ug/L	469170 ppb	11:43:26
3	Na 589.592 Radial†	7497075.8	7997486.0	492100 ug/L	492100 ppb	11:43:16
3	Sr 421.552†	1646.5	1818.6	1.0347 ug/L	1.0347 ppb	11:43:26
3	Sc 361.383	683883.4	683883.4	91.839 %		11:44:24
3	Y 371.029	525007.1	525007.1	90.300 %		11:44:24
3	Ag 328.068†	-19658.8	-22111.6	1.4201 ug/L	1.4201 ppb	11:44:24
3	As 188.979†	-228.6	-214.7	20.290 ug/L	20.290 ppb	11:44:45
3	B 249.677†	549.4	1479.6	3.6248 ug/L	3.6248 ppb	11:44:24
3	Ba 233.527†	-1870.1	-2058.7	-15.363 ug/L	-15.363 ppb	11:44:45
3	Be 313.107†	-10223.2	-6346.9	-2.6035 ug/L	-2.6035 ppb	11:44:24
3	Cd 226.502†	3169.3	3744.2	-9.3753 ug/L	-9.3753 ppb	11:44:45
3	Co 228.616†	252.6	375.6	-0.4233 ug/L	-0.4233 ppb	11:44:45
3	Cr 267.716†	-32.2	62.9	5.2928 ug/L	5.2928 ppb	11:44:45
3	Cu 324.752†	-290.6	-6107.2	5.0145 ug/L	5.0145 ppb	11:44:24
3	Mn 257.610†	-31469.5	-34983.9	11.293 ug/L	11.293 ppb	11:44:24
3	Mo 202.031†	-534.8	-586.7	-8.3545 ug/L	-8.3545 ppb	11:44:24
3	Ni 231.604†	447.1	350.2	8.3740 ug/L	8.3740 ppb	11:44:45
3	P 214.914†	783.4	559.5	72.685 ug/L	72.685 ppb	11:44:45
3	Pb 220.353†	-540.7	-570.9	-2.2098 ug/L	-2.2098 ppb	11:44:45
3	S 181.975 Axial†	315.5	207.6	149.30 ug/L	149.30 ppb	11:44:45
3	Sb 206.836†	73.5	27.4	1.4977 ug/L	1.4977 ppb	11:44:45
3	Se 196.026†	-3302.8	-3561.5	-106.43 ug/L	-106.43 ppb	11:44:45
3	Si 251.611†	-2043.7	-2674.0	-74.119 ug/L	-74.119 ppb	11:44:45
3	Sn 189.927†	-334.0	-376.6	22.189 ug/L	22.189 ppb	11:44:45
3	Ti 334.940†	-12480.9	-12063.2	0.4376 ug/L	0.4376 ppb	11:44:24
3	Tl 190.801†	-157.4	-110.2	-14.022 ug/L	-14.022 ppb	11:44:45
3	U 409.014†	409569.3	451228.8	14208 ug/L	14208 ppb	11:44:24
3	V 292.402†	616.4	2364.0	-7.2037 ug/L	-7.2037 ppb	11:44:45
3	Zn 213.857†	7000.8	6638.5	-7.4728 ug/L	-7.4728 ppb	11:44:45
3	SiO2†	-2018.1	-2673.0	-158.25 ug/L	-158.25 ppb	11:45:00

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	686647.4	92.210	%	3.1982				3.47%
Sc Radial	6482.2	93.4	%	0.29				0.31%
Y 371.029	526950.5	90.634	%	3.0569				3.37%
Y RADIAL	5890.5	92.63	%	0.608				0.66%
Ag 328.068†	-21714.5	4.6445	ug/L	6.75718	4.6445	ppb	6.75718	145.49%
Al 396.153Radial†	608959.0	513920	ug/L	3697.0	513920	ppb	3697.0	0.72%
QC value within limits for Al 396.153Radial Recovery = 102.78%								
As 188.979†	-211.6	21.781	ug/L	1.3150	21.781	ppb	1.3150	6.04%
B 249.677†	1394.6	1.5058	ug/L	2.92008	1.5058	ppb	2.92008	193.92%
Ba 233.527†	-2006.4	-15.036	ug/L	0.5282	-15.036	ppb	0.5282	3.51%
Be 313.107†	-6091.9	-2.4995	ug/L	0.15783	-2.4995	ppb	0.15783	6.31%
Ca 317.933Radial†	320714.5	472680	ug/L	3215.3	472680	ppb	3215.3	0.68%
QC value within limits for Ca 317.933Radial Recovery = 94.54%								
Cd 226.502†	3700.9	-10.166	ug/L	1.8621	-10.166	ppb	1.8621	18.32%
Co 228.616†	358.9	-0.7197	ug/L	0.27461	-0.7197	ppb	0.27461	38.15%
Cr 267.716†	71.3	5.5471	ug/L	0.66791	5.5471	ppb	0.66791	12.04%
Cu 324.752†	-6059.1	5.3264	ug/L	0.56989	5.3264	ppb	0.56989	10.70%

Fe 238.204 Radial†	99505.9	444710 ug/L	3257.5	444710 ppb	3257.5	0.73%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 88.94%						
K 766.490 Radial†	-118.0	-84.205 ug/L	22.0172	-84.205 ppb	22.0172	26.15%
Mg 279.077 IEC†	18432.1	471090 ug/L	2844.4	471090 ppb	2844.4	0.60%
QC value within limits for Mg 279.077 IEC Recovery = 94.22%						
Mn 257.610†	-34415.2	12.156 ug/L	1.9594	12.156 ppb	1.9594	16.12%
Mo 202.031†	-551.6	-5.9562 ug/L	3.94480	-5.9562 ppb	3.94480	66.23%
Na 589.592 Radial†	7989270.1	491590 ug/L	1401.1	491590 ppb	1401.1	0.29%
QC value within limits for Na 589.592 Radial Recovery = 98.32%						
Ni 231.604†	348.0	8.3221 ug/L	0.07535	8.3221 ppb	0.07535	0.91%
P 214.914†	513.8	50.140 ug/L	21.4691	50.140 ppb	21.4691	42.82%
Pb 220.353†	-582.0	-3.5049 ug/L	1.13325	-3.5049 ppb	1.13325	32.33%
S 181.975 Axial†	192.1	130.51 ug/L	16.498	130.51 ppb	16.498	12.64%
Sb 206.836†	47.5	6.9744 ug/L	5.53457	6.9744 ppb	5.53457	79.36%
Se 196.026†	-3536.2	-86.316 ug/L	77.1531	-86.316 ppb	77.1531	89.38%
Si 251.611†	-2655.9	-73.613 ug/L	2.3200	-73.613 ppb	2.3200	3.15%
Sn 189.927†	-391.2	20.333 ug/L	2.8191	20.333 ppb	2.8191	13.86%
Sr 421.552†	1782.8	0.9006 ug/L	0.19807	0.9006 ppb	0.19807	21.99%
Ti 334.940†	-11719.4	1.2941 ug/L	1.57895	1.2941 ppb	1.57895	122.01%
Tl 190.801†	-95.2	-10.436 ug/L	3.5748	-10.436 ppb	3.5748	34.26%
U 409.014†	441786.8	13909 ug/L	592.4	13909 ppb	592.4	4.26%
QC value within limits for U 409.014 Recovery = 92.73%						
V 292.402†	2358.7	-8.1291 ug/L	1.36103	-8.1291 ppb	1.36103	16.74%
Zn 213.857†	6608.6	-8.0574 ug/L	2.78520	-8.0574 ppb	2.78520	34.57%
SiO2†	-2805.0	-166.23 ug/L	8.496	-166.23 ppb	8.496	5.11%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/2/2009 11:47:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6626.0	6626.0	95.5	%			11:49:08
1	Y RADIAL	6052.6	6052.6	95.18	%			11:49:08
1	Al 396.153Radial†	423.2	513.8	26.134	ug/L	26.134	ppb	11:49:08
1	Ca 317.933Radial†	48.0	23.8	35.151	ug/L	35.151	ppb	11:49:28
1	Fe 238.204 Radial†	-20.6	-60.6	-2.7138	ug/L	-2.7138	ppb	11:49:28
1	K 766.490 Radial†	1345516.0	1406251.4	290310	ug/L	290310	ppb	11:49:03
1	Mg 279.077 IEC†	-10.3	-14.7	-184.04	ug/L	-184.04	ppb	11:49:28
1	Na 589.592 Radial†	2757.7	3219.1	198.08	ug/L	198.08	ppb	11:49:08
1	Sr 421.552†	2995852.9	3137349.9	9757.0	ug/L	9757.0	ppb	11:49:03
1	Sc 361.383	725224.3	725224.3	97.391	%			11:50:46
1	Y 371.029	554661.3	554661.3	95.401	%			11:50:46
1	Ag 328.068†	-4723.9	-5556.4	8.5981	ug/L	8.5981	ppb	11:50:51
1	As 188.979†	29868.4	30703.0	9783.1	ug/L	9783.1	ppb	11:50:51
1	B 249.677†	209856.9	216360.6	4904.7	ug/L	4904.7	ppb	11:50:46
1	Ba 233.527†	2073030.0	2128547.8	13830	ug/L	13830	ppb	11:50:46
1	Be 313.107†	6816841.2	7004261.4	2842.6	ug/L	2842.6	ppb	11:50:40
1	Cd 226.502†	855584.6	878800.5	9900.8	ug/L	9900.8	ppb	11:50:46
1	Co 228.616†	522945.3	537056.5	8493.8	ug/L	8493.8	ppb	11:50:51
1	Cr 267.716†	1855993.0	1905816.4	23896	ug/L	23896	ppb	11:50:46
1	Cu 324.752†	5673546.0	5819759.6	19580	ug/L	19580	ppb	11:50:40
1	Mn 257.610†	8937086.4	9175809.1	9240.9	ug/L	9240.9	ppb	11:50:40
1	Mo 202.031†	146186.5	150098.6	9517.4	ug/L	9517.4	ppb	11:50:51
1	Ni 231.604†	397789.9	408310.7	9762.1	ug/L	9762.1	ppb	11:50:46
1	P 214.914†	37251.8	37956.3	13328	ug/L	13328	ppb	11:50:51
1	Pb 220.353†	219400.0	225295.9	23815	ug/L	23815	ppb	11:50:51
1	S 181.975 Axial†	40426.7	41373.8	49889	ug/L	49889	ppb	11:50:51
1	Sb 206.836†	37220.0	38164.6	10136	ug/L	10136	ppb	11:50:51
1	Se 196.026†	21341.4	21948.0	9946.0	ug/L	9946.0	ppb	11:50:51
1	Si 251.611†	1625263.3	1668358.3	46748	ug/L	46748	ppb	11:50:46
1	Sn 189.927†	62624.9	64289.7	10068	ug/L	10068	ppb	11:50:51
1	Ti 334.940†	5499560.1	5648430.0	9683.4	ug/L	9683.4	ppb	11:50:40
1	Tl 190.801†	38754.4	39853.9	9531.3	ug/L	9531.3	ppb	11:50:51
1	U 409.014†	-4237.5	913.5	-17.221	ug/L	-17.221	ppb	11:50:51
1	V 292.402†	1166474.4	1199419.2	9938.8	ug/L	9938.8	ppb	11:50:46
1	Zn 213.857†	1666904.9	1710579.9	14067	ug/L	14067	ppb	11:50:46
1	SiO2†	1622332.2	1665321.9	99723	ug/L	99723	ppb	11:51:37
2	Sc Radial	6652.6	6652.6	95.9	%			11:49:39
2	Y RADIAL	6071.4	6071.4	95.48	%			11:49:39
2	Al 396.153Radial†	419.7	508.3	24.093	ug/L	24.093	ppb	11:49:39
2	Ca 317.933Radial†	47.4	23.1	33.995	ug/L	33.995	ppb	11:49:59
2	Fe 238.204 Radial†	-24.9	-65.0	-27.010	ug/L	-27.010	ppb	11:49:59
2	K 766.490 Radial†	1344350.0	1399394.0	288900	ug/L	288900	ppb	11:49:34
2	Mg 279.077 IEC†	-7.3	-11.6	-104.81	ug/L	-104.81	ppb	11:49:59
2	Na 589.592 Radial†	2570.1	3011.9	185.33	ug/L	185.33	ppb	11:49:39
2	Sr 421.552†	3000817.8	3129968.0	9734.1	ug/L	9734.1	ppb	11:49:34
2	Sc 361.383	742117.4	742117.4	99.659	%			11:51:06
2	Y 371.029	567747.7	567747.7	97.651	%			11:51:06
2	Ag 328.068†	-4869.2	-5591.8	8.4255	ug/L	8.4255	ppb	11:51:11
2	As 188.979†	30385.4	30523.6	9725.4	ug/L	9725.4	ppb	11:51:11
2	B 249.677†	214985.7	216602.0	4911.0	ug/L	4911.0	ppb	11:51:06
2	Ba 233.527†	2116053.0	2123264.4	13795	ug/L	13795	ppb	11:51:06
2	Be 313.107†	6855318.1	6883538.1	2793.6	ug/L	2793.6	ppb	11:51:00
2	Cd 226.502†	876260.1	879548.8	9909.2	ug/L	9909.2	ppb	11:51:06
2	Co 228.616†	525910.8	527809.1	8347.8	ug/L	8347.8	ppb	11:51:11
2	Cr 267.716†	1898464.2	1905052.1	23886	ug/L	23886	ppb	11:51:06
2	Cu 324.752†	5700545.5	5714242.2	19225	ug/L	19225	ppb	11:51:00
2	Mn 257.610†	8962820.0	8992741.9	9056.5	ug/L	9056.5	ppb	11:51:00
2	Mo 202.031†	148654.9	149158.7	9457.8	ug/L	9457.8	ppb	11:51:11
2	Ni 231.604†	406933.7	408188.2	9759.2	ug/L	9759.2	ppb	11:51:06

2	P 214.914†	37913.2	37749.3	13305	ug/L	13305	ppb	11:51:11
2	Pb 220.353†	223034.6	223814.9	23659	ug/L	23659	ppb	11:51:11
2	S 181.975 Axial†	41122.9	41127.5	49592	ug/L	49592	ppb	11:51:11
2	Sb 206.836†	37788.8	37865.4	10053	ug/L	10053	ppb	11:51:11
2	Se 196.026†	21702.9	21811.9	9884.3	ug/L	9884.3	ppb	11:51:11
2	Si 251.611†	1663591.0	1668829.3	46764	ug/L	46764	ppb	11:51:06
2	Sn 189.927†	63559.7	63764.0	9985.6	ug/L	9985.6	ppb	11:51:11
2	Ti 334.940†	5519634.7	5540030.6	9497.4	ug/L	9497.4	ppb	11:51:00
2	Tl 190.801†	39236.4	39431.7	9429.3	ug/L	9429.3	ppb	11:51:11
2	U 409.014†	-4271.8	978.1	-15.159	ug/L	-15.159	ppb	11:51:11
2	V 292.402†	1194534.5	1200311.0	9945.6	ug/L	9945.6	ppb	11:51:06
2	Zn 213.857†	1701271.9	1706103.3	14031	ug/L	14031	ppb	11:51:06
2	SiO2†	1609781.8	1614809.4	96677	ug/L	96677	ppb	11:51:43
3	Sc Radial	6427.3	6427.3	92.6	%			11:50:10
3	Y RADIAL	5868.3	5868.3	92.28	%			11:50:10
3	Al 396.153Radial†	416.6	520.3	34.728	ug/L	34.728	ppb	11:50:10
3	Ca 317.933Radial†	45.6	22.8	33.598	ug/L	33.598	ppb	11:50:30
3	Fe 238.204 Radial†	-21.4	-62.0	-11.631	ug/L	-11.631	ppb	11:50:30
3	K 766.490 Radial†	1321082.8	1423437.9	293860	ug/L	293860	ppb	11:50:05
3	Mg 279.077 IEC†	-5.9	-10.4	-73.493	ug/L	-73.493	ppb	11:50:30
3	Na 589.592 Radial†	2431.0	2955.6	181.87	ug/L	181.87	ppb	11:50:10
3	Sr 421.552†	2945008.2	3179456.5	9888.0	ug/L	9888.0	ppb	11:50:05
3	Sc 361.383	731451.8	731451.8	98.227	%			11:51:26
3	Y 371.029	560211.6	560211.6	96.355	%			11:51:26
3	Ag 328.068†	-4824.1	-5617.0	8.3114	ug/L	8.3114	ppb	11:51:31
3	As 188.979†	29951.2	30526.1	9727.3	ug/L	9727.3	ppb	11:51:31
3	B 249.677†	211597.9	216298.4	4903.6	ug/L	4903.6	ppb	11:51:26
3	Ba 233.527†	2087914.1	2125577.9	13810	ug/L	13810	ppb	11:51:26
3	Be 313.107†	6919231.3	7048906.2	2860.7	ug/L	2860.7	ppb	11:51:19
3	Cd 226.502†	863355.6	879232.1	9905.6	ug/L	9905.6	ppb	11:51:26
3	Co 228.616†	522878.2	532416.5	8420.1	ug/L	8420.1	ppb	11:51:31
3	Cr 267.716†	1872654.5	1906553.3	23905	ug/L	23905	ppb	11:51:26
3	Cu 324.752†	5744097.7	5841986.2	19654	ug/L	19654	ppb	11:51:19
3	Mn 257.610†	9038079.7	9200496.5	9265.7	ug/L	9265.7	ppb	11:51:19
3	Mo 202.031†	146330.5	148967.3	9445.6	ug/L	9445.6	ppb	11:51:31
3	Ni 231.604†	401004.9	408106.3	9757.2	ug/L	9757.2	ppb	11:51:26
3	P 214.914†	37133.0	37509.7	13111	ug/L	13111	ppb	11:51:31
3	Pb 220.353†	219500.3	223480.1	23623	ug/L	23623	ppb	11:51:31
3	S 181.975 Axial†	40506.9	41102.0	49561	ug/L	49561	ppb	11:51:31
3	Sb 206.836†	37130.3	37747.9	10020	ug/L	10020	ppb	11:51:31
3	Se 196.026†	21289.0	21708.1	9837.3	ug/L	9837.3	ppb	11:51:31
3	Si 251.611†	1639047.0	1668182.6	46745	ug/L	46745	ppb	11:51:26
3	Sn 189.927†	62561.5	63677.7	9972.1	ug/L	9972.1	ppb	11:51:31
3	Ti 334.940†	5574579.8	5676726.2	9731.9	ug/L	9731.9	ppb	11:51:19
3	Tl 190.801†	38746.3	39506.8	9449.7	ug/L	9449.7	ppb	11:51:31
3	U 409.014†	-4287.7	899.5	-17.682	ug/L	-17.682	ppb	11:51:31
3	V 292.402†	1177909.9	1200863.7	9949.7	ug/L	9949.7	ppb	11:51:26
3	Zn 213.857†	1678847.0	1708165.3	14047	ug/L	14047	ppb	11:51:26
3	SiO2†	1576300.5	1604276.7	96038	ug/L	96038	ppb	11:51:49

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	732931.2	98.426	%	1.1473				1.17%
Sc Radial	6568.6	94.7	%	1.77				1.87%
Y 371.029	560873.5	96.469	%	1.1297				1.17%
Y RADIAL	5997.5	94.31	%	1.765				1.87%
Ag 328.068†	-5588.4	8.4450	ug/L	0.14433	8.4450	ppb	0.14433	1.71%
Al 396.153Radial†	514.2	28.318	ug/L	5.6440	28.318	ppb	5.6440	19.93%
As 188.979†	30584.2	9745.3	ug/L	32.74	9745.3	ppb	32.74	0.34%
QC value within limits for As 188.979 Recovery = 97.45%								
B 249.677†	216420.4	4906.4	ug/L	3.96	4906.4	ppb	3.96	0.08%
QC value within limits for B 249.677 Recovery = 98.13%								
Ba 233.527†	2125796.7	13812	ug/L	17.2	13812	ppb	17.2	0.12%
QC value within limits for Ba 233.527 Recovery = 92.08%								
Be 313.107†	6978901.9	2832.3	ug/L	34.73	2832.3	ppb	34.73	1.23%
QC value within limits for Be 313.107 Recovery = 94.41%								
Ca 317.933Radial†	23.2	34.248	ug/L	0.8065	34.248	ppb	0.8065	2.35%
Cd 226.502†	879193.8	9905.2	ug/L	4.23	9905.2	ppb	4.23	0.04%
QC value within limits for Cd 226.502 Recovery = 99.05%								

```
Co 228.616†          532427.4      8420.6 ug/L        73.00      8420.6 ppb        73.00   0.87%
   QC value less than the lower limit for Co 228.616  Recovery = 84.21%
Cr 267.716†         1905807.3       23896 ug/L          9.4       23896 ppb         9.4   0.04%
   QC value within limits for Cr 267.716  Recovery = 95.58%
Cu 324.752†         5791996.0       19486 ug/L        229.6       19486 ppb       229.6   1.18%
   QC value within limits for Cu 324.752  Recovery = 97.43%
Fe 238.204 Radial†      -62.5     -13.785 ug/L      12.2904     -13.785 ppb     12.2904  89.16%
K 766.490 Radial†   1409694.4      291030 ug/L       2558.1      291030 ppb      2558.1   0.88%
   QC value within limits for K 766.490 Radial  Recovery = 97.01%
Mg 279.077 IEC†         -12.2     -120.78 ug/L       56.977     -120.78 ppb      56.977  47.17%
Mn 257.610†         9123015.8      9187.7 ug/L       114.30      9187.7 ppb      114.30   1.24%
   QC value within limits for Mn 257.610  Recovery = 91.88%
Mo 202.031†          149408.2      9473.6 ug/L        38.40      9473.6 ppb       38.40   0.41%
   QC value within limits for Mo 202.031  Recovery = 94.74%
Na 589.592 Radial†     3062.2      188.42 ug/L        8.537      188.42 ppb       8.537   4.53%
Ni 231.604†          408201.7      9759.5 ug/L         2.43      9759.5 ppb        2.43   0.02%
   QC value within limits for Ni 231.604  Recovery = 97.60%
P 214.914†            37738.4       13248 ug/L        119.2       13248 ppb       119.2   0.90%
   QC value less than the lower limit for P 214.914  Recovery = 88.32%
Pb 220.353†          224197.0       23699 ug/L        102.2       23699 ppb       102.2   0.43%
   QC value within limits for Pb 220.353  Recovery = 94.80%
S 181.975 Axial†      41201.1       49681 ug/L        181.0       49681 ppb       181.0   0.36%
   QC value within limits for S 181.975 Axial  Recovery = 99.36%
Sb 206.836†           37926.0       10070 ug/L         60.0       10070 ppb        60.0   0.60%
   QC value within limits for Sb 206.836  Recovery = 100.70%
Se 196.026†           21822.7      9889.2 ug/L        54.51      9889.2 ppb       54.51   0.55%
   QC value within limits for Se 196.026  Recovery = 98.89%
Si 251.611†         1668456.7       46753 ug/L         10.4       46753 ppb        10.4   0.02%
   QC value within limits for Si 251.611  Recovery = 93.51%
Sn 189.927†           63910.5       10009 ug/L         51.9       10009 ppb        51.9   0.52%
   QC value within limits for Sn 189.927  Recovery = 100.09%
Sr 421.552†         3148924.8      9793.0 ug/L        83.03      9793.0 ppb       83.03   0.85%
   QC value within limits for Sr 421.552  Recovery = 97.93%
Ti 334.940†         5621728.9      9637.5 ug/L       123.80      9637.5 ppb      123.80   1.28%
   QC value within limits for Ti 334.940  Recovery = 96.38%
Tl 190.801†           39597.4      9470.1 ug/L        53.99      9470.1 ppb       53.99   0.57%
   QC value within limits for Tl 190.801  Recovery = 94.70%
U 409.014†              930.3     -16.687 ug/L       1.3432     -16.687 ppb      1.3432   8.05%
V 292.402†          1200197.9      9944.7 ug/L         5.50      9944.7 ppb        5.50   0.06%
   QC value within limits for V 292.402  Recovery = 99.45%
Zn 213.857†         1708282.8       14049 ug/L         18.3       14049 ppb        18.3   0.13%
   QC value within limits for Zn 213.857  Recovery = 93.66%
SiO2†               1628136.0       97479 ug/L       1969.1       97479 ppb      1969.1   2.02%
   QC value within limits for SiO2  Recovery = 91.10%
QC Failed.  Continue with analysis.
```

Sequence No.: 13
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 11:53:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7045.9	7045.9	102	%			11:55:56
1	Y RADIAL	6468.4	6468.4	101.7	%			11:55:56
1	Al 396.153Radial†	6079.7	6057.9	5091.5	ug/L	5091.5	ppb	11:55:56
1	Ca 317.933Radial†	3548.5	3468.1	5111.4	ug/L	5111.4	ppb	11:55:56
1	Fe 238.204 Radial†	1192.9	1135.9	5091.4	ug/L	5091.4	ppb	11:56:16
1	K 766.490 Radial†	27066.1	23868.0	4918.4	ug/L	4918.4	ppb	11:55:51
1	Mg 279.077 IEC†	206.6	199.5	5109.3	ug/L	5109.3	ppb	11:56:16
1	Na 589.592 Radial†	159925.7	157825.9	9711.3	ug/L	9711.3	ppb	11:55:51
1	Sr 421.552†	157439.2	155108.4	482.33	ug/L	482.33	ppb	11:55:51
1	Sc 361.383	791578.6	791578.6	106.30	%			11:57:25
1	Y 371.029	609245.4	609245.4	104.79	%			11:57:25
1	Ag 328.068†	95398.4	89037.4	490.39	ug/L	490.39	ppb	11:57:25
1	As 188.979†	1598.4	1538.0	490.27	ug/L	490.27	ppb	11:57:45
1	B 249.677†	23070.9	22584.6	513.73	ug/L	513.73	ppb	11:57:25
1	Ba 233.527†	79765.6	75014.7	487.67	ug/L	487.67	ppb	11:57:25
1	Be 313.107†	1280319.8	1209208.0	488.01	ug/L	488.01	ppb	11:57:25
1	Cd 226.502†	44228.2	41899.6	471.47	ug/L	471.47	ppb	11:57:45
1	Co 228.616†	31864.5	30076.1	475.78	ug/L	475.78	ppb	11:57:45
1	Cr 267.716†	40925.6	38597.5	484.34	ug/L	484.34	ppb	11:57:25
1	Cu 324.752†	160142.2	144858.2	487.64	ug/L	487.64	ppb	11:57:25
1	Mn 257.610†	515642.4	484357.5	488.33	ug/L	488.33	ppb	11:57:25
1	Mo 202.031†	8194.0	7703.9	488.81	ug/L	488.81	ppb	11:57:45
1	Ni 231.604†	21347.9	19945.8	476.83	ug/L	476.83	ppb	11:57:45
1	P 214.914†	6026.2	5375.4	2327.7	ug/L	2327.7	ppb	11:57:45
1	Pb 220.353†	4887.4	4615.6	489.08	ug/L	489.08	ppb	11:57:45
1	S 181.975 Axial†	1019.4	823.0	991.33	ug/L	991.33	ppb	11:57:45
1	Sb 206.836†	1958.6	1790.0	492.04	ug/L	492.04	ppb	11:57:45
1	Se 196.026†	1115.6	1084.3	508.67	ug/L	508.67	ppb	11:57:45
1	Si 251.611†	93924.1	87907.6	2467.5	ug/L	2467.5	ppb	11:57:25
1	Sn 189.927†	3298.6	3090.1	484.82	ug/L	484.82	ppb	11:57:45
1	Ti 334.940†	306113.4	289494.0	496.64	ug/L	496.64	ppb	11:57:25
1	Tl 190.801†	2115.3	2051.1	490.54	ug/L	490.54	ppb	11:57:45
1	U 409.014†	10333.4	14985.3	472.10	ug/L	472.10	ppb	11:57:25
1	V 292.402†	60937.1	59017.7	489.84	ug/L	489.84	ppb	11:57:25
1	Zn 213.857†	63942.1	59167.3	485.23	ug/L	485.23	ppb	11:57:25
1	SiO2†	93509.9	87491.2	5248.6	ug/L	5248.6	ppb	11:58:45
2	Sc Radial	7045.7	7045.7	102	%			11:56:26
2	Y RADIAL	6472.9	6472.9	101.8	%			11:56:26
2	Al 396.153Radial†	6088.0	6066.2	5098.4	ug/L	5098.4	ppb	11:56:26
2	Ca 317.933Radial†	3528.0	3448.1	5081.9	ug/L	5081.9	ppb	11:56:26
2	Fe 238.204 Radial†	1192.7	1135.7	5090.6	ug/L	5090.6	ppb	11:56:46
2	K 766.490 Radial†	27536.7	24332.2	5014.2	ug/L	5014.2	ppb	11:56:21
2	Mg 279.077 IEC†	212.4	205.2	5254.6	ug/L	5254.6	ppb	11:56:46
2	Na 589.592 Radial†	163517.0	161367.2	9929.2	ug/L	9929.2	ppb	11:56:21
2	Sr 421.552†	161510.5	159122.2	494.81	ug/L	494.81	ppb	11:56:21
2	Sc 361.383	782558.0	782558.0	105.09	%			11:57:52
2	Y 371.029	603083.6	603083.6	103.73	%			11:57:52
2	Ag 328.068†	94213.8	88944.6	489.87	ug/L	489.87	ppb	11:57:52
2	As 188.979†	1578.5	1536.3	489.73	ug/L	489.73	ppb	11:58:12
2	B 249.677†	22672.9	22456.0	510.78	ug/L	510.78	ppb	11:57:52
2	Ba 233.527†	78734.9	74898.9	486.92	ug/L	486.92	ppb	11:57:52
2	Be 313.107†	1261973.4	1205633.7	486.57	ug/L	486.57	ppb	11:57:52
2	Cd 226.502†	43869.3	42037.7	473.02	ug/L	473.02	ppb	11:58:12
2	Co 228.616†	31587.3	30157.8	477.08	ug/L	477.08	ppb	11:58:12
2	Cr 267.716†	40542.8	38677.1	485.34	ug/L	485.34	ppb	11:57:52
2	Cu 324.752†	157711.7	144281.9	485.70	ug/L	485.70	ppb	11:57:52
2	Mn 257.610†	508146.2	482816.0	486.78	ug/L	486.78	ppb	11:57:52
2	Mo 202.031†	8152.8	7753.5	491.96	ug/L	491.96	ppb	11:58:12
2	Ni 231.604†	21166.2	20004.4	478.24	ug/L	478.24	ppb	11:58:12

2	P 214.914†	5960.7	5378.4	2329.5 ug/L	2329.5 ppb	11:58:12
2	Pb 220.353†	4822.1	4606.3	488.12 ug/L	488.12 ppb	11:58:12
2	S 181.975 Axial†	1011.4	826.4	995.51 ug/L	995.51 ppb	11:58:12
2	Sb 206.836†	1932.8	1786.6	491.19 ug/L	491.19 ppb	11:58:12
2	Se 196.026†	1101.1	1082.6	507.89 ug/L	507.89 ppb	11:58:12
2	Si 251.611†	92540.5	87609.5	2459.0 ug/L	2459.0 ppb	11:57:52
2	Sn 189.927†	3270.8	3099.4	486.27 ug/L	486.27 ppb	11:58:12
2	Ti 334.940†	301923.8	288826.7	495.49 ug/L	495.49 ppb	11:57:52
2	Tl 190.801†	2102.4	2061.8	493.06 ug/L	493.06 ppb	11:58:12
2	U 409.014†	10323.6	15088.1	475.35 ug/L	475.35 ppb	11:57:52
2	V 292.402†	60108.8	58890.2	488.84 ug/L	488.84 ppb	11:57:52
2	Zn 213.857†	62901.3	58870.2	482.76 ug/L	482.76 ppb	11:57:52
2	SiO2†	92831.2	87859.3	5270.6 ug/L	5270.6 ppb	11:58:50
3	Sc Radial	7119.8	7119.8	103 %		11:56:56
3	Y RADIAL	6505.9	6505.9	102.3 %		11:56:56
3	Al 396.153Radial†	6110.0	6025.3	5063.8 ug/L	5063.8 ppb	11:56:56
3	Ca 317.933Radial†	3541.6	3425.1	5048.1 ug/L	5048.1 ppb	11:56:56
3	Fe 238.204 Radial†	1199.5	1130.1	5065.6 ug/L	5065.6 ppb	11:57:16
3	K 766.490 Radial†	27511.3	24025.3	4950.8 ug/L	4950.8 ppb	11:56:51
3	Mg 279.077 IEC†	209.2	199.9	5119.8 ug/L	5119.8 ppb	11:57:16
3	Na 589.592 Radial†	163917.3	160082.1	9850.1 ug/L	9850.1 ppb	11:56:51
3	Sr 421.552†	161837.2	157786.0	490.66 ug/L	490.66 ppb	11:56:51
3	Sc 361.383	781144.5	781144.5	104.90 %		11:58:19
3	Y 371.029	602230.3	602230.3	103.58 %		11:58:19
3	Ag 328.068†	94059.2	88959.5	489.96 ug/L	489.96 ppb	11:58:19
3	As 188.979†	1577.7	1538.3	490.36 ug/L	490.36 ppb	11:58:39
3	B 249.677†	22612.9	22437.9	510.36 ug/L	510.36 ppb	11:58:19
3	Ba 233.527†	78758.9	75057.4	487.95 ug/L	487.95 ppb	11:58:19
3	Be 313.107†	1261338.7	1207201.6	487.20 ug/L	487.20 ppb	11:58:19
3	Cd 226.502†	43997.2	42235.1	475.25 ug/L	475.25 ppb	11:58:39
3	Co 228.616†	31660.6	30282.1	479.05 ug/L	479.05 ppb	11:58:39
3	Cr 267.716†	40492.3	38698.7	485.61 ug/L	485.61 ppb	11:58:19
3	Cu 324.752†	157723.1	144564.4	486.65 ug/L	486.65 ppb	11:58:19
3	Mn 257.610†	507833.8	483393.1	487.36 ug/L	487.36 ppb	11:58:19
3	Mo 202.031†	8159.8	7774.2	493.27 ug/L	493.27 ppb	11:58:39
3	Ni 231.604†	21269.5	20139.3	481.46 ug/L	481.46 ppb	11:58:39
3	P 214.914†	5937.6	5366.7	2324.1 ug/L	2324.1 ppb	11:58:39
3	Pb 220.353†	4865.1	4655.7	493.33 ug/L	493.33 ppb	11:58:39
3	S 181.975 Axial†	1010.7	827.5	996.79 ug/L	996.79 ppb	11:58:39
3	Sb 206.836†	1953.3	1809.5	497.51 ug/L	497.51 ppb	11:58:39
3	Se 196.026†	1085.9	1070.0	502.13 ug/L	502.13 ppb	11:58:39
3	Si 251.611†	92489.9	87720.6	2462.1 ug/L	2462.1 ppb	11:58:19
3	Sn 189.927†	3298.3	3131.2	491.25 ug/L	491.25 ppb	11:58:39
3	Ti 334.940†	301734.6	289166.2	496.08 ug/L	496.08 ppb	11:58:19
3	Tl 190.801†	2097.9	2061.1	492.89 ug/L	492.89 ppb	11:58:39
3	U 409.014†	9992.7	14790.5	465.94 ug/L	465.94 ppb	11:58:19
3	V 292.402†	60133.1	59016.9	489.88 ug/L	489.88 ppb	11:58:19
3	Zn 213.857†	62903.4	58980.5	483.66 ug/L	483.66 ppb	11:58:19
3	SiO2†	92602.9	87801.6	5267.0 ug/L	5267.0 ppb	11:58:55

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	785093.7	105.43	%	0.760				0.72%
Sc Radial	7070.5	102	%	0.6				0.60%
Y 371.029	604853.1	104.03	%	0.658				0.63%
Y RADIAL	6482.4	101.9	%	0.32				0.32%
Ag 328.068†	88980.5	490.07	ug/L	0.276	490.07	ppb	0.276	0.06%
QC value within limits for Ag 328.068 Recovery = 98.01%								
Al 396.153Radial†	6049.8	5084.6	ug/L	18.31	5084.6	ppb	18.31	0.36%
QC value within limits for Al 396.153Radial Recovery = 101.69%								
As 188.979†	1537.6	490.12	ug/L	0.339	490.12	ppb	0.339	0.07%
QC value within limits for As 188.979 Recovery = 98.02%								
B 249.677†	22492.8	511.62	ug/L	1.836	511.62	ppb	1.836	0.36%
QC value within limits for B 249.677 Recovery = 102.32%								
Ba 233.527†	74990.3	487.51	ug/L	0.533	487.51	ppb	0.533	0.11%
QC value within limits for Ba 233.527 Recovery = 97.50%								
Be 313.107†	1207347.8	487.26	ug/L	0.723	487.26	ppb	0.723	0.15%
QC value within limits for Be 313.107 Recovery = 97.45%								
Ca 317.933Radial†	3447.1	5080.5	ug/L	31.71	5080.5	ppb	31.71	0.62%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.61%
Cd 226.502†            42057.5      473.24 ug/L        1.902      473.24 ppb          1.902   0.40%
   QC value within limits for Cd 226.502  Recovery = 94.65%
Co 228.616†            30172.0      477.30 ug/L        1.647      477.30 ppb          1.647   0.34%
   QC value within limits for Co 228.616  Recovery = 95.46%
Cr 267.716†            38657.8      485.10 ug/L        0.668      485.10 ppb          0.668   0.14%
   QC value within limits for Cr 267.716  Recovery = 97.02%
Cu 324.752†           144568.2      486.67 ug/L        0.969      486.67 ppb          0.969   0.20%
   QC value within limits for Cu 324.752  Recovery = 97.33%
Fe 238.204 Radial†      1133.9      5082.6 ug/L       14.64      5082.6 ppb         14.64   0.29%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.65%
K 766.490 Radial†      24075.2      4961.1 ug/L       48.75      4961.1 ppb         48.75   0.98%
   QC value within limits for K 766.490 Radial  Recovery = 99.22%
Mg 279.077 IEC†          201.6      5161.3 ug/L       81.04      5161.3 ppb         81.04   1.57%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.23%
Mn 257.610†           483522.2      487.49 ug/L        0.786      487.49 ppb          0.786   0.16%
   QC value within limits for Mn 257.610  Recovery = 97.50%
Mo 202.031†             7743.9      491.35 ug/L        2.291      491.35 ppb          2.291   0.47%
   QC value within limits for Mo 202.031  Recovery = 98.27%
Na 589.592 Radial†    159758.4      9830.2 ug/L      110.31      9830.2 ppb        110.31   1.12%
   QC value within limits for Na 589.592 Radial  Recovery = 98.30%
Ni 231.604†            20029.8      478.84 ug/L        2.372      478.84 ppb          2.372   0.50%
   QC value within limits for Ni 231.604  Recovery = 95.77%
P 214.914†              5373.5      2327.1 ug/L         2.76      2327.1 ppb           2.76   0.12%
   QC value within limits for P 214.914  Recovery = 93.08%
Pb 220.353†             4625.9      490.18 ug/L        2.774      490.18 ppb          2.774   0.57%
   QC value within limits for Pb 220.353  Recovery = 98.04%
S 181.975 Axial†         825.6      994.54 ug/L        2.856      994.54 ppb          2.856   0.29%
   QC value within limits for S 181.975 Axial  Recovery = 99.45%
Sb 206.836†             1795.3      493.58 ug/L        3.432      493.58 ppb          3.432   0.70%
   QC value within limits for Sb 206.836  Recovery = 98.72%
Se 196.026†             1079.0      506.23 ug/L        3.571      506.23 ppb          3.571   0.71%
   QC value within limits for Se 196.026  Recovery = 101.25%
Si 251.611†            87745.9      2462.9 ug/L         4.32      2462.9 ppb           4.32   0.18%
   QC value within limits for Si 251.611  Recovery = 98.51%
Sn 189.927†             3106.9      487.44 ug/L        3.373      487.44 ppb          3.373   0.69%
   QC value within limits for Sn 189.927  Recovery = 97.49%
Sr 421.552†           157338.9      489.27 ug/L        6.357      489.27 ppb          6.357   1.30%
   QC value within limits for Sr 421.552  Recovery = 97.85%
Ti 334.940†           289162.3      496.07 ug/L        0.574      496.07 ppb          0.574   0.12%
   QC value within limits for Ti 334.940  Recovery = 99.21%
Tl 190.801†             2058.0      492.16 ug/L        1.406      492.16 ppb          1.406   0.29%
   QC value within limits for Tl 190.801  Recovery = 98.43%
U 409.014†             14954.6      471.13 ug/L        4.777      471.13 ppb          4.777   1.01%
   QC value within limits for U 409.014  Recovery = 94.23%
V 292.402†             58974.9      489.52 ug/L        0.587      489.52 ppb          0.587   0.12%
   QC value within limits for V 292.402  Recovery = 97.90%
Zn 213.857†            59006.0      483.89 ug/L        1.250      483.89 ppb          1.250   0.26%
   QC value within limits for Zn 213.857  Recovery = 96.78%
SiO2†                  87717.4      5262.1 ug/L        11.79      5262.1 ppb         11.79   0.22%
   QC value within limits for SiO2  Recovery = 98.40%
All analyte(s) passed QC.
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Sequence No.: 14
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 12:01:04
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7526.5	7526.5	108	%			12:02:57
1	Y RADIAL	6907.7	6907.7	108.6	%			12:02:57
1	Al 396.153Radial†	-76.0	0.5	0.3608	ug/L	0.3608	ppb	12:02:57
1	Ca 317.933Radial†	26.0	-2.5	-3.6393	ug/L	-3.6393	ppb	12:03:17
1	Fe 238.204 Radial†	33.7	-7.8	-35.051	ug/L	-35.051	ppb	12:03:17
1	K 766.490 Radial†	3281.7	238.8	49.299	ug/L	49.299	ppb	12:02:57
1	Mg 279.077 IEC†	5.1	0.7	18.631	ug/L	18.631	ppb	12:03:17
1	Na 589.592 Radial†	363.1	666.0	40.978	ug/L	40.978	ppb	12:02:57
1	Sr 421.552†	-38.1	27.1	0.0844	ug/L	0.0844	ppb	12:02:57
1	Sc 361.383	760663.9	760663.9	102.15	%			12:04:13
1	Y 371.029	593421.1	593421.1	102.07	%			12:04:13
1	Ag 328.068†	768.6	46.5	0.2421	ug/L	0.2421	ppb	12:04:13
1	As 188.979†	-29.7	5.2	1.6267	ug/L	1.6267	ppb	12:04:33
1	B 249.677†	69.4	949.3	21.711	ug/L	21.711	ppb	12:04:33
1	Ba 233.527†	19.4	-3.5	-0.0225	ug/L	-0.0225	ppb	12:04:33
1	Be 313.107†	-4835.4	51.1	0.0209	ug/L	0.0209	ppb	12:04:13
1	Cd 226.502†	-214.9	82.9	0.9376	ug/L	0.9376	ppb	12:04:33
1	Co 228.616†	-86.6	15.7	0.2535	ug/L	0.2535	ppb	12:04:33
1	Cr 267.716†	-54.1	45.0	0.5632	ug/L	0.5632	ppb	12:04:33
1	Cu 324.752†	5870.9	-43.5	-0.1484	ug/L	-0.1484	ppb	12:04:13
1	Mn 257.610†	685.5	-46.9	-0.0519	ug/L	-0.0519	ppb	12:04:33
1	Mo 202.031†	36.3	31.1	1.9679	ug/L	1.9679	ppb	12:04:33
1	Ni 231.604†	176.7	36.3	0.8686	ug/L	0.8686	ppb	12:04:33
1	P 214.914†	305.8	5.9	2.7026	ug/L	2.7026	ppb	12:04:33
1	Pb 220.353†	-13.9	4.2	0.4549	ug/L	0.4549	ppb	12:04:33
1	S 181.975 Axial†	149.5	10.3	12.470	ug/L	12.470	ppb	12:04:33
1	Sb 206.836†	52.7	-1.0	-0.2244	ug/L	-0.2244	ppb	12:04:33
1	Se 196.026†	-26.7	8.7	3.8148	ug/L	3.8148	ppb	12:04:33
1	Si 251.611†	584.2	123.2	3.4197	ug/L	3.4197	ppb	12:04:33
1	Sn 189.927†	18.0	4.7	0.7271	ug/L	0.7271	ppb	12:04:33
1	Ti 334.940†	-1467.5	90.2	0.1537	ug/L	0.1537	ppb	12:04:13
1	Tl 190.801†	-46.2	15.9	3.7897	ug/L	3.7897	ppb	12:04:33
1	U 409.014†	-5332.1	44.7	1.4153	ug/L	1.4153	ppb	12:04:13
1	V 292.402†	-1735.2	-5.8	-0.0154	ug/L	-0.0154	ppb	12:04:13
1	Zn 213.857†	1163.3	154.4	1.2754	ug/L	1.2754	ppb	12:04:33
1	SiO2†	575.7	88.0	5.1849	ug/L	5.1849	ppb	12:05:29
2	Sc Radial	6884.3	6884.3	99.2	%			12:03:22
2	Y RADIAL	6354.2	6354.2	99.92	%			12:03:22
2	Al 396.153Radial†	-75.8	-5.8	-4.9271	ug/L	-4.9271	ppb	12:03:22
2	Ca 317.933Radial†	24.0	-2.2	-3.2519	ug/L	-3.2519	ppb	12:03:42
2	Fe 238.204 Radial†	36.8	-1.9	-8.4977	ug/L	-8.4977	ppb	12:03:42
2	K 766.490 Radial†	3347.7	587.5	121.37	ug/L	121.37	ppb	12:03:22
2	Mg 279.077 IEC†	1.0	-2.9	-75.301	ug/L	-75.301	ppb	12:03:42
2	Na 589.592 Radial†	369.2	703.3	43.277	ug/L	43.277	ppb	12:03:22
2	Sr 421.552†	-60.3	1.5	0.0046	ug/L	0.0046	ppb	12:03:22
2	Sc 361.383	774896.0	774896.0	104.06	%			12:04:39
2	Y 371.029	605060.0	605060.0	104.07	%			12:04:39
2	Ag 328.068†	814.2	76.5	0.4142	ug/L	0.4142	ppb	12:04:39
2	As 188.979†	-15.1	19.8	6.2633	ug/L	6.2633	ppb	12:04:59
2	B 249.677†	72.8	951.3	21.756	ug/L	21.756	ppb	12:04:59
2	Ba 233.527†	3.9	-18.6	-0.1215	ug/L	-0.1215	ppb	12:04:59
2	Be 313.107†	-4822.6	150.3	0.0606	ug/L	0.0606	ppb	12:04:39
2	Cd 226.502†	-230.4	71.9	0.8100	ug/L	0.8100	ppb	12:04:59
2	Co 228.616†	-102.4	2.0	0.0348	ug/L	0.0348	ppb	12:04:59
2	Cr 267.716†	-66.5	34.1	0.4259	ug/L	0.4259	ppb	12:04:59
2	Cu 324.752†	5791.3	-225.6	-0.7595	ug/L	-0.7595	ppb	12:04:39
2	Mn 257.610†	675.7	-68.6	-0.0687	ug/L	-0.0687	ppb	12:04:59
2	Mo 202.031†	21.8	16.5	1.0476	ug/L	1.0476	ppb	12:04:59
2	Ni 231.604†	134.2	-7.7	-0.1838	ug/L	-0.1838	ppb	12:04:59

2	P 214.914†	277.9	-26.5	-11.720	ug/L	-11.720	ppb	12:04:59
2	Pb 220.353†	-10.5	7.8	0.8220	ug/L	0.8220	ppb	12:04:59
2	S 181.975 Axial†	141.7	0.2	0.2789	ug/L	0.2789	ppb	12:04:59
2	Sb 206.836†	59.3	4.4	1.2591	ug/L	1.2591	ppb	12:04:59
2	Se 196.026†	-28.1	7.8	3.5018	ug/L	3.5018	ppb	12:04:59
2	Si 251.611†	576.8	105.5	2.8887	ug/L	2.8887	ppb	12:04:59
2	Sn 189.927†	30.9	16.7	2.6090	ug/L	2.6090	ppb	12:04:59
2	Ti 334.940†	-1558.1	29.5	0.0498	ug/L	0.0498	ppb	12:04:39
2	Tl 190.801†	-42.4	20.4	4.8533	ug/L	4.8533	ppb	12:04:59
2	U 409.014†	-5441.4	35.5	1.1232	ug/L	1.1232	ppb	12:04:39
2	V 292.402†	-1793.3	-30.5	-0.2347	ug/L	-0.2347	ppb	12:04:39
2	Zn 213.857†	1159.4	129.8	1.0799	ug/L	1.0799	ppb	12:04:59
2	SiO2†	581.6	83.4	4.8264	ug/L	4.8264	ppb	12:05:35
3	Sc Radial	6834.8	6834.8	98.5	%			12:03:47
3	Y RADIAL	6291.1	6291.1	98.93	%			12:03:47
3	Al 396.153Radial†	-76.6	-7.2	-6.1185	ug/L	-6.1185	ppb	12:03:47
3	Ca 317.933Radial†	25.6	-0.4	-0.6313	ug/L	-0.6313	ppb	12:04:07
3	Fe 238.204 Radial†	39.8	1.4	6.3344	ug/L	6.3344	ppb	12:04:07
3	K 766.490 Radial†	3246.0	508.8	105.10	ug/L	105.10	ppb	12:03:47
3	Mg 279.077 IEC†	2.8	-1.1	-27.942	ug/L	-27.942	ppb	12:04:07
3	Na 589.592 Radial†	286.7	622.2	38.287	ug/L	38.287	ppb	12:03:47
3	Sr 421.552†	-72.9	-11.7	-0.0365	ug/L	-0.0365	ppb	12:03:47
3	Sc 361.383	775742.7	775742.7	104.17	%			12:05:04
3	Y 371.029	605615.2	605615.2	104.16	%			12:05:04
3	Ag 328.068†	820.0	81.2	0.4470	ug/L	0.4470	ppb	12:05:04
3	As 188.979†	-23.2	12.1	3.8193	ug/L	3.8193	ppb	12:05:24
3	B 249.677†	17.7	898.3	20.544	ug/L	20.544	ppb	12:05:24
3	Ba 233.527†	24.0	0.6	0.0066	ug/L	0.0066	ppb	12:05:24
3	Be 313.107†	-4825.5	152.6	0.0617	ug/L	0.0617	ppb	12:05:04
3	Cd 226.502†	-239.8	63.0	0.7092	ug/L	0.7092	ppb	12:05:24
3	Co 228.616†	-94.0	10.3	0.1665	ug/L	0.1665	ppb	12:05:24
3	Cr 267.716†	-67.3	33.4	0.4187	ug/L	0.4187	ppb	12:05:24
3	Cu 324.752†	5744.0	-277.0	-0.9317	ug/L	-0.9317	ppb	12:05:04
3	Mn 257.610†	712.5	-34.0	-0.0329	ug/L	-0.0329	ppb	12:05:24
3	Mo 202.031†	29.5	23.9	1.5158	ug/L	1.5158	ppb	12:05:24
3	Ni 231.604†	150.5	7.8	0.1865	ug/L	0.1865	ppb	12:05:24
3	P 214.914†	288.0	-17.1	-7.5169	ug/L	-7.5169	ppb	12:05:24
3	Pb 220.353†	-13.3	5.0	0.5338	ug/L	0.5338	ppb	12:05:24
3	S 181.975 Axial†	150.7	8.7	10.514	ug/L	10.514	ppb	12:05:24
3	Sb 206.836†	70.7	15.3	4.1842	ug/L	4.1842	ppb	12:05:24
3	Se 196.026†	-30.6	5.5	2.5039	ug/L	2.5039	ppb	12:05:24
3	Si 251.611†	553.4	82.5	2.2594	ug/L	2.2594	ppb	12:05:24
3	Sn 189.927†	18.6	4.9	0.7682	ug/L	0.7682	ppb	12:05:24
3	Ti 334.940†	-1527.9	60.1	0.1010	ug/L	0.1010	ppb	12:05:04
3	Tl 190.801†	-47.1	15.9	3.7825	ug/L	3.7825	ppb	12:05:24
3	U 409.014†	-5334.9	143.5	4.5328	ug/L	4.5328	ppb	12:05:04
3	V 292.402†	-1628.1	130.0	1.0927	ug/L	1.0927	ppb	12:05:04
3	Zn 213.857†	1147.3	117.0	0.9682	ug/L	0.9682	ppb	12:05:24
3	SiO2†	621.5	121.1	7.1571	ug/L	7.1571	ppb	12:05:40

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	770434.2	103.46	%	1.138				1.10%
Sc Radial	7081.9	102	%	5.6				5.45%
Y 371.029	601365.4	103.43	%	1.184				1.14%
Y RADIAL	6517.7	102.5	%	5.33				5.20%
Ag 328.068†	68.1	0.3678	ug/L	0.11009	0.3678	ppb	0.11009	29.94%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-4.1	-3.5616	ug/L	3.44873	-3.5616	ppb	3.44873	96.83%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	12.4	3.9031	ug/L	2.31941	3.9031	ppb	2.31941	59.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	933.0	21.337	ug/L	0.6874	21.337	ppb	0.6874	3.22%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-7.2	-0.0458	ug/L	0.06710	-0.0458	ppb	0.06710	146.46%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	118.0	0.0478	ug/L	0.02323	0.0478	ppb	0.02323	48.65%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.7	-2.5075	ug/L	1.63635	-2.5075	ppb	1.63635	65.26%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                72.6      0.8189 ug/L       0.11446      0.8189 ppb        0.11446  13.98%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 9.4      0.1516 ug/L       0.11010      0.1516 ppb        0.11010  72.63%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                37.5      0.4692 ug/L       0.08143      0.4692 ppb        0.08143  17.35%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -182.0     -0.6132 ug/L       0.41165     -0.6132 ppb        0.41165  67.13%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -2.8     -12.405 ug/L       20.9674     -12.405 ppb        20.9674 169.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         445.0      91.922 ug/L       37.7992      91.922 ppb        37.7992  41.12%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.1     -28.204 ug/L       46.9669     -28.204 ppb        46.9669 166.53%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -49.8     -0.0512 ug/L       0.01792     -0.0512 ppb        0.01792  35.02%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                23.8      1.5104 ug/L       0.46018      1.5104 ppb        0.46018  30.47%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        663.8      40.847 ug/L        2.4978      40.847 ppb         2.4978   6.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                12.1      0.2905 ug/L       0.53385      0.2905 ppb        0.53385 183.80%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -12.6      -5.5113 ug/L       7.41728     -5.5113 ppb        7.41728 134.58%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 5.7      0.6036 ug/L       0.19323      0.6036 ppb        0.19323  32.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            6.4      7.7546 ug/L       6.54759      7.7546 ppb        6.54759  84.44%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.3      1.7396 ug/L       2.24323      1.7396 ppb        2.24323 128.95%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 7.3      3.2735 ug/L       0.68460      3.2735 ppb        0.68460  20.91%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               103.7      2.8559 ug/L       0.58081      2.8559 ppb        0.58081  20.34%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 8.7      1.3681 ug/L       1.07483      1.3681 ppb        1.07483  78.56%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 5.6      0.0175 ug/L       0.06148      0.0175 ppb        0.06148 350.57%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                59.9      0.1015 ug/L       0.05192      0.1015 ppb        0.05192  51.16%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                17.4      4.1418 ug/L       0.61618      4.1418 ppb        0.61618  14.88%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 74.6      2.3571 ug/L       1.88983      2.3571 ppb        1.88983  80.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 31.2      0.2809 ug/L       0.71158      0.2809 ppb        0.71158 253.35%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               133.7      1.1078 ug/L       0.15546      1.1078 ppb        0.15546  14.03%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      97.5      5.7228 ug/L       1.25499      5.7228 ppb        1.25499  21.93%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Analysis Begun

Start Time: 7/2/2009 12:09:53 **Plasma On Time:** 6/29/2009 15:26:31
Logged In Analyst: Optima3 **Technique:** ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601**Autosampler Model:** S10

Sample Information File: C:\pe\Optima3\Sample Information\070209.sif
Batch ID:
Results Data Set: 070209
Results Library: C:\pe\Optima3\Results\Results.mdb

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Method Loaded
Method Name: General Eng.2AX **Method Last Saved:** 7/2/2009 10:41:22
IEC File: 040209.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

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Sequence No.: 1 **Autosampler Location:** 36
Sample ID: LR1 **Date Collected:** 7/2/2009 12:09:54
Analyst: HSC **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7198.8	7198.8	104	%			12:11:47
1	Y RADIAL	6641.4	6641.4	104.4	%			12:11:47
1	Al 396.153Radial†	-108.9	-34.4	-28.103	ug/L	-28.103	ppb	12:11:47

1	Ca 317.933Radial†	29.9	2.4	3.5737	ug/L	3.5737 ppb	12:12:07
1	Fe 238.204 Radial†	90939.4	87616.2	391580	ug/L	391580 ppb	12:11:47
1	K 766.490 Radial†	2606.6	-274.2	29.835	ug/L	29.835 ppb	12:11:47
1	Mg 279.077 IEC†	15.2	10.7	-62.375	ug/L	-62.375 ppb	12:12:07
1	Na 589.592 Radial†	396.9	713.7	43.916	ug/L	43.916 ppb	12:11:47
1	Sr 421.552†	95.2	154.0	0.4790	ug/L	0.4790 ppb	12:11:47
1	Sc 361.383	780907.6	780907.6	104.87	%		12:13:04
1	Y 371.029	606395.8	606395.8	104.30	%		12:13:04
1	Ag 328.068†	-21577.2	-21281.4	8.9161	ug/L	8.9161 ppb	12:13:04
1	As 188.979†	-275.6	-228.5	5.8587	ug/L	5.8587 ppb	12:13:24
1	B 249.677†	1209.8	2035.0	19.785	ug/L	19.785 ppb	12:13:04
1	Ba 233.527†	-1960.0	-1891.4	-13.979	ug/L	-13.979 ppb	12:13:24
1	Be 313.107†	-4693.5	309.1	0.1253	ug/L	0.1253 ppb	12:13:04
1	Cd 226.502†	2992.3	3146.7	-10.213	ug/L	-10.213 ppb	12:13:24
1	Co 228.616†	195.5	286.9	-1.1038	ug/L	-1.1038 ppb	12:13:24
1	Cr 267.716†	-677.4	-547.9	1.2140	ug/L	1.2140 ppb	12:13:24
1	Cu 324.752†	-2953.3	-8607.0	-6.3178	ug/L	-6.3178 ppb	12:13:04
1	Mn 257.610†	-46760.4	-45307.4	3.5981	ug/L	3.5981 ppb	12:13:04
1	Mo 202.031†	-346.7	-335.0	4.3082	ug/L	4.3082 ppb	12:13:24
1	Ni 231.604†	409.5	253.9	6.0708	ug/L	6.0708 ppb	12:13:24
1	P 214.914†	977.2	638.3	-22.635	ug/L	-22.635 ppb	12:13:24
1	Pb 220.353†	266.3	271.7	-8.3205	ug/L	-8.3205 ppb	12:13:24
1	S 181.975 Axial†	154.1	11.0	13.251	ug/L	13.251 ppb	12:13:24
1	Sb 206.836†	40.4	-14.0	3.0671	ug/L	3.0671 ppb	12:13:24
1	Se 196.026†	-2967.5	-2794.8	38.656	ug/L	38.656 ppb	12:13:24
1	Si 251.611†	-2303.1	-2645.0	-74.283	ug/L	-74.283 ppb	12:13:24
1	Sn 189.927†	-21.9	-33.8	23.856	ug/L	23.856 ppb	12:13:24
1	Ti 334.940†	-1386.6	204.5	0.3227	ug/L	0.3227 ppb	12:13:24
1	Tl 190.801†	-57.3	6.5	1.2008	ug/L	1.2008 ppb	12:13:24
1	U 409.014†	-3198.0	2215.0	21.906	ug/L	21.906 ppb	12:13:04
1	V 292.402†	4379.2	5868.7	-6.5785	ug/L	-6.5785 ppb	12:13:24
1	Zn 213.857†	5510.2	4270.0	-5.5119	ug/L	-5.5119 ppb	12:13:24
1	SiO2†	-2385.9	-2750.7	-165.17	ug/L	-165.17 ppb	12:14:21
2	Sc Radial	7180.9	7180.9	103	%		12:12:12
2	Y RADIAL	6607.2	6607.2	103.9	%		12:12:12
2	Al 396.153Radial†	-96.7	-22.8	-18.266	ug/L	-18.266 ppb	12:12:12
2	Ca 317.933Radial†	23.0	-4.2	-6.2061	ug/L	-6.2061 ppb	12:12:32
2	Fe 238.204 Radial†	89777.7	86712.4	387540	ug/L	387540 ppb	12:12:12
2	K 766.490 Radial†	2612.3	-262.4	31.414	ug/L	31.414 ppb	12:12:12
2	Mg 279.077 IEC†	14.6	10.1	-73.031	ug/L	-73.031 ppb	12:12:32
2	Na 589.592 Radial†	322.3	642.6	39.540	ug/L	39.540 ppb	12:12:12
2	Sr 421.552†	82.9	142.4	0.4430	ug/L	0.4430 ppb	12:12:12
2	Sc 361.383	780274.0	780274.0	104.78	%		12:13:30
2	Y 371.029	605603.9	605603.9	104.16	%		12:13:30
2	Ag 328.068†	-21707.7	-21422.7	6.8493	ug/L	6.8493 ppb	12:13:30
2	As 188.979†	-287.3	-239.9	1.4494	ug/L	1.4494 ppb	12:13:50
2	B 249.677†	1280.6	2103.4	21.625	ug/L	21.625 ppb	12:13:30
2	Ba 233.527†	-2038.0	-1967.4	-14.452	ug/L	-14.452 ppb	12:13:50
2	Be 313.107†	-4601.1	393.6	0.1593	ug/L	0.1593 ppb	12:13:30
2	Cd 226.502†	3033.8	3188.5	-9.2720	ug/L	-9.2720 ppb	12:13:50
2	Co 228.616†	208.0	299.0	-0.8602	ug/L	-0.8602 ppb	12:13:50
2	Cr 267.716†	-712.3	-581.8	0.7060	ug/L	0.7060 ppb	12:13:50
2	Cu 324.752†	-2924.0	-8581.4	-6.4649	ug/L	-6.4649 ppb	12:13:30
2	Mn 257.610†	-47054.5	-45624.3	2.7714	ug/L	2.7714 ppb	12:13:30
2	Mo 202.031†	-376.9	-364.2	2.1957	ug/L	2.1957 ppb	12:13:50
2	Ni 231.604†	355.9	203.0	4.8539	ug/L	4.8539 ppb	12:13:50
2	P 214.914†	968.6	630.9	-22.732	ug/L	-22.732 ppb	12:13:50
2	Pb 220.353†	260.1	266.1	-8.5384	ug/L	-8.5384 ppb	12:13:50
2	S 181.975 Axial†	152.7	9.8	11.801	ug/L	11.801 ppb	12:13:50
2	Sb 206.836†	58.8	3.6	7.7333	ug/L	7.7333 ppb	12:13:50
2	Se 196.026†	-2958.1	-2788.2	28.214	ug/L	28.214 ppb	12:13:50
2	Si 251.611†	-2243.1	-2589.4	-72.676	ug/L	-72.676 ppb	12:13:50
2	Sn 189.927†	-25.1	-37.0	23.065	ug/L	23.065 ppb	12:13:50
2	Ti 334.940†	-1389.9	200.3	0.3132	ug/L	0.3132 ppb	12:13:50
2	Tl 190.801†	-71.9	-7.4	-2.1104	ug/L	-2.1104 ppb	12:13:50
2	U 409.014†	-3056.3	2347.8	26.599	ug/L	26.599 ppb	12:13:30
2	V 292.402†	4433.8	5924.3	-5.5748	ug/L	-5.5748 ppb	12:13:50
2	Zn 213.857†	5525.7	4289.0	-4.9249	ug/L	-4.9249 ppb	12:13:50
2	SiO2†	-2390.2	-2756.6	-165.45	ug/L	-165.45 ppb	12:14:26
3	Sc Radial	7170.5	7170.5	103	%		12:12:37
3	Y RADIAL	6580.6	6580.6	103.5	%		12:12:37

3	Al 396.153Radial†	-101.0	-27.2	-21.911 ug/L	-21.911 ppb	12:12:37
3	Ca 317.933Radial†	32.6	5.1	7.5650 ug/L	7.5650 ppb	12:12:57
3	Fe 238.204 Radial†	89419.0	86490.6	386550 ug/L	386550 ppb	12:12:37
3	K 766.490 Radial†	2745.3	-130.1	58.553 ug/L	58.553 ppb	12:12:37
3	Mg 279.077 IEC†	16.6	12.1	-21.591 ug/L	-21.591 ppb	12:12:57
3	Na 589.592 Radial†	252.5	575.5	35.414 ug/L	35.414 ppb	12:12:37
3	Sr 421.552†	70.9	131.0	0.4072 ug/L	0.4072 ppb	12:12:37
3	Sc 361.383	786871.0	786871.0	105.67 %		12:13:56
3	Y 371.029	610584.3	610584.3	105.02 %		12:13:56
3	Ag 328.068†	-22042.6	-21565.8	5.7466 ug/L	5.7466 ppb	12:13:56
3	As 188.979†	-275.2	-226.1	5.6083 ug/L	5.6083 ppb	12:14:16
3	B 249.677†	1128.4	1949.2	18.165 ug/L	18.165 ppb	12:13:56
3	Ba 233.527†	-1995.7	-1911.0	-14.083 ug/L	-14.083 ppb	12:14:16
3	Be 313.107†	-4741.4	297.8	0.1207 ug/L	0.1207 ppb	12:13:56
3	Cd 226.502†	3037.3	3167.6	-9.3922 ug/L	-9.3922 ppb	12:14:16
3	Co 228.616†	209.6	298.8	-0.8505 ug/L	-0.8505 ppb	12:14:16
3	Cr 267.716†	-665.7	-532.0	1.3091 ug/L	1.3091 ppb	12:14:16
3	Cu 324.752†	-2960.1	-8592.2	-6.5586 ug/L	-6.5586 ppb	12:13:56
3	Mn 257.610†	-47840.7	-45991.8	2.2757 ug/L	2.2757 ppb	12:13:56
3	Mo 202.031†	-387.0	-370.6	1.7198 ug/L	1.7198 ppb	12:14:16
3	Ni 231.604†	354.1	198.5	4.7449 ug/L	4.7449 ppb	12:14:16
3	P 214.914†	967.8	622.4	-25.765 ug/L	-25.765 ppb	12:14:16
3	Pb 220.353†	276.1	279.1	-7.0725 ug/L	-7.0725 ppb	12:14:16
3	S 181.975 Axial†	163.5	18.7	22.604 ug/L	22.604 ppb	12:14:16
3	Sb 206.836†	44.9	-10.1	3.9958 ug/L	3.9958 ppb	12:14:16
3	Se 196.026†	-2969.0	-2774.8	30.963 ug/L	30.963 ppb	12:14:16
3	Si 251.611†	-2296.4	-2621.9	-73.596 ug/L	-73.596 ppb	12:14:16
3	Sn 189.927†	-25.5	-37.1	22.965 ug/L	22.965 ppb	12:14:16
3	Ti 334.940†	-1405.1	197.1	0.3085 ug/L	0.3085 ppb	12:14:16
3	Tl 190.801†	-75.4	-10.2	-2.7638 ug/L	-2.7638 ppb	12:14:16
3	U 409.014†	-3107.4	2323.9	25.964 ug/L	25.964 ppb	12:13:56
3	V 292.402†	4396.7	5853.7	-6.0219 ug/L	-6.0219 ppb	12:14:16
3	Zn 213.857†	5499.8	4220.3	-5.3912 ug/L	-5.3912 ppb	12:14:16
3	SiO2†	-2393.3	-2740.4	-164.47 ug/L	-164.47 ppb	12:14:31

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	782684.2	105.11	%	0.489				0.47%
Sc Radial	7183.4	104	%	0.2				0.20%
Y 371.029	607528.0	104.49	%	0.460				0.44%
Y RADIAL	6609.7	103.9	%	0.48				0.46%
Ag 328.068†	-21423.3	7.1706	ug/L	1.60901	7.1706	ppb	1.60901	22.44%
Al 396.153Radial†	-28.1	-22.760	ug/L	4.9727	-22.760	ppb	4.9727	21.85%
As 188.979†	-231.5	4.3055	ug/L	2.47660	4.3055	ppb	2.47660	57.52%
B 249.677†	2029.2	19.858	ug/L	1.7314	19.858	ppb	1.7314	8.72%
Ba 233.527†	-1923.3	-14.171	ug/L	0.2486	-14.171	ppb	0.2486	1.75%
Be 313.107†	333.5	0.1351	ug/L	0.02109	0.1351	ppb	0.02109	15.62%
Ca 317.933Radial†	1.1	1.6442	ug/L	7.08542	1.6442	ppb	7.08542	430.94%
Cd 226.502†	3167.6	-9.6258	ug/L	0.51227	-9.6258	ppb	0.51227	5.32%
Co 228.616†	294.9	-0.9382	ug/L	0.14355	-0.9382	ppb	0.14355	15.30%
Cr 267.716†	-553.9	1.0763	ug/L	0.32426	1.0763	ppb	0.32426	30.13%
Cu 324.752†	-8593.5	-6.4471	ug/L	0.12140	-6.4471	ppb	0.12140	1.88%
Fe 238.204 Radial†	86939.8	388550	ug/L	2664.7	388550	ppb	2664.7	0.69%
K 766.490 Radial†	-222.2	39.934	ug/L	16.1437	39.934	ppb	16.1437	40.43%
Mg 279.077 IEC†	11.0	-52.332	ug/L	27.1508	-52.332	ppb	27.1508	51.88%
Mn 257.610†	-45641.2	2.8817	ug/L	0.66807	2.8817	ppb	0.66807	23.18%
Mo 202.031†	-356.6	2.7412	ug/L	1.37774	2.7412	ppb	1.37774	50.26%
Na 589.592 Radial†	644.0	39.624	ug/L	4.2516	39.624	ppb	4.2516	10.73%
Ni 231.604†	218.5	5.2232	ug/L	0.73606	5.2232	ppb	0.73606	14.09%
P 214.914†	630.5	-23.710	ug/L	1.7795	-23.710	ppb	1.7795	7.51%
Pb 220.353†	272.3	-7.9771	ug/L	0.79096	-7.9771	ppb	0.79096	9.92%
S 181.975 Axial†	13.2	15.886	ug/L	5.8636	15.886	ppb	5.8636	36.91%
Sb 206.836†	-6.8	4.9321	ug/L	2.46999	4.9321	ppb	2.46999	50.08%
Se 196.026†	-2786.0	32.611	ug/L	5.4123	32.611	ppb	5.4123	16.60%
Si 251.611†	-2618.8	-73.518	ug/L	0.8066	-73.518	ppb	0.8066	1.10%
Sn 189.927†	-36.0	23.296	ug/L	0.4879	23.296	ppb	0.4879	2.09%
Sr 421.552†	142.5	0.4430	ug/L	0.03588	0.4430	ppb	0.03588	8.10%
Ti 334.940†	200.7	0.3148	ug/L	0.00722	0.3148	ppb	0.00722	2.29%
Tl 190.801†	-3.7	-1.2245	ug/L	2.12560	-1.2245	ppb	2.12560	173.59%

U 409.014†	2295.5	24.823	ug/L	2.5464	24.823	ppb	2.5464	10.26%
V 292.402†	5882.2	-6.0584	ug/L	0.50288	-6.0584	ppb	0.50288	8.30%
Zn 213.857†	4259.8	-5.2760	ug/L	0.31000	-5.2760	ppb	0.31000	5.88%
SiO2†	-2749.2	-165.03	ug/L	0.502	-165.03	ppb	0.502	0.30%

Sequence No.: 2
Sample ID: LR2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/2/2009 12:16:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7119.7	7119.7	103	%			12:18:36
1	Y RADIAL	6597.2	6597.2	103.7	%			12:18:36
1	Al 396.153Radial†	-93.1	-20.1	-17.028	ug/L	-17.028	ppb	12:18:36
1	Ca 317.933Radial†	24.8	-2.2	-3.2663	ug/L	-3.2663	ppb	12:18:56
1	Fe 238.204 Radial†	4.3	-34.7	4.8663	ug/L	4.8663	ppb	12:18:56
1	K 766.490 Radial†	2936.7	75.4	15.538	ug/L	15.538	ppb	12:18:36
1	Mg 279.077 IEC†	4.2	0.2	4.0272	ug/L	4.0272	ppb	12:18:56
1	Na 589.592 Radial†	2.7	333.8	20.540	ug/L	20.540	ppb	12:18:36
1	Sr 421.552†	-42.7	20.7	0.0643	ug/L	0.0643	ppb	12:18:36
1	Sc 361.383	775370.3	775370.3	104.12	%			12:19:53
1	Y 371.029	608897.1	608897.1	104.73	%			12:19:53
1	Ag 328.068†	658.5	-73.4	-0.4564	ug/L	-0.4564	ppb	12:19:53
1	As 188.979†	-25.5	9.8	3.0747	ug/L	3.0747	ppb	12:20:13
1	B 249.677†	236.9	1108.8	-0.6145	ug/L	-0.6145	ppb	12:20:13
1	Ba 233.527†	12.6	-10.3	-0.0650	ug/L	-0.0650	ppb	12:20:13
1	Be 313.107†	-4833.7	142.5	0.0579	ug/L	0.0579	ppb	12:19:53
1	Cd 226.502†	-306.8	-1.4	0.0056	ug/L	0.0056	ppb	12:20:13
1	Co 228.616†	334030.7	320898.7	5074.3	ug/L	5074.3	ppb	12:19:53
1	Cr 267.716†	16.0	113.3	1.4152	ug/L	1.4152	ppb	12:20:13
1	Cu 324.752†	5179.4	-816.6	-2.7564	ug/L	-2.7564	ppb	12:19:53
1	Mn 257.610†	810.6	60.6	0.0415	ug/L	0.0415	ppb	12:20:13
1	Mo 202.031†	18.7	13.5	0.8488	ug/L	0.8488	ppb	12:20:13
1	Ni 231.604†	347.2	196.8	1.4680	ug/L	1.4680	ppb	12:20:13
1	P 214.914†	283.0	-21.7	-9.0937	ug/L	-9.0937	ppb	12:20:13
1	Pb 220.353†	-0.1	17.8	1.8925	ug/L	1.8925	ppb	12:20:13
1	S 181.975 Axial†	142.3	0.7	0.8311	ug/L	0.8311	ppb	12:20:13
1	Sb 206.836†	43.9	-10.4	-2.8192	ug/L	-2.8192	ppb	12:20:13
1	Se 196.026†	-26.8	9.2	3.6253	ug/L	3.6253	ppb	12:20:13
1	Si 251.611†	501.3	32.6	0.8769	ug/L	0.8769	ppb	12:20:13
1	Sn 189.927†	26.2	12.2	1.8920	ug/L	1.8920	ppb	12:20:13
1	Ti 334.940†	-1457.7	126.8	0.2131	ug/L	0.2131	ppb	12:19:53
1	Tl 190.801†	46.4	105.7	-1.4096	ug/L	-1.4096	ppb	12:20:13
1	U 409.014†	-5202.4	268.2	8.4949	ug/L	8.4949	ppb	12:19:53
1	V 292.402†	-1685.7	73.9	0.6547	ug/L	0.6547	ppb	12:19:53
1	Zn 213.857†	1097.3	69.4	0.5641	ug/L	0.5641	ppb	12:20:13
1	SiO2†	489.8	-5.1	-0.4132	ug/L	-0.4132	ppb	12:21:09
2	Sc Radial	7086.2	7086.2	102	%			12:19:01
2	Y RADIAL	6564.9	6564.9	103.2	%			12:19:01
2	Al 396.153Radial†	-56.2	15.5	13.085	ug/L	13.085	ppb	12:19:01
2	Ca 317.933Radial†	26.7	-0.3	-0.4542	ug/L	-0.4542	ppb	12:19:21
2	Fe 238.204 Radial†	5.0	-34.1	8.3396	ug/L	8.3396	ppb	12:19:21
2	K 766.490 Radial†	2880.9	34.3	7.0404	ug/L	7.0404	ppb	12:19:01
2	Mg 279.077 IEC†	5.3	1.2	31.572	ug/L	31.572	ppb	12:19:21
2	Na 589.592 Radial†	-38.4	293.6	18.063	ug/L	18.063	ppb	12:19:01
2	Sr 421.552†	-87.4	-23.3	-0.0725	ug/L	-0.0725	ppb	12:19:01
2	Sc 361.383	771927.5	771927.5	103.66	%			12:20:18
2	Y 371.029	605600.4	605600.4	104.16	%			12:20:18
2	Ag 328.068†	876.0	139.1	0.7084	ug/L	0.7084	ppb	12:20:18
2	As 188.979†	-28.6	6.7	2.0864	ug/L	2.0864	ppb	12:20:38
2	B 249.677†	260.1	1132.2	-0.1626	ug/L	-0.1626	ppb	12:20:38
2	Ba 233.527†	8.8	-13.9	-0.0900	ug/L	-0.0900	ppb	12:20:38
2	Be 313.107†	-4836.6	119.0	0.0484	ug/L	0.0484	ppb	12:20:18
2	Cd 226.502†	-300.3	3.6	0.0607	ug/L	0.0607	ppb	12:20:38
2	Co 228.616†	333610.7	321924.3	5090.5	ug/L	5090.5	ppb	12:20:18
2	Cr 267.716†	37.6	134.2	1.6774	ug/L	1.6774	ppb	12:20:38
2	Cu 324.752†	5220.9	-754.5	-2.5470	ug/L	-2.5470	ppb	12:20:18
2	Mn 257.610†	835.0	87.6	0.0685	ug/L	0.0685	ppb	12:20:38
2	Mo 202.031†	11.4	6.6	0.4064	ug/L	0.4064	ppb	12:20:38
2	Ni 231.604†	312.0	164.4	0.6810	ug/L	0.6810	ppb	12:20:38

2	P 214.914†	290.1	-13.7	-5.5361 ug/L	-5.5361 ppb	12:20:38
2	Pb 220.353†	-9.9	8.3	0.8965 ug/L	0.8965 ppb	12:20:38
2	S 181.975 Axial†	150.2	8.9	10.705 ug/L	10.705 ppb	12:20:38
2	Sb 206.836†	25.0	-28.5	-7.7839 ug/L	-7.7839 ppb	12:20:38
2	Se 196.026†	-21.5	14.1	5.8732 ug/L	5.8732 ppb	12:20:38
2	Si 251.611†	488.7	22.7	0.6420 ug/L	0.6420 ppb	12:20:38
2	Sn 189.927†	8.6	-4.7	-0.7502 ug/L	-0.7502 ppb	12:20:38
2	Ti 334.940†	-1472.1	106.7	0.1805 ug/L	0.1805 ppb	12:20:18
2	Tl 190.801†	42.2	101.9	-2.4000 ug/L	-2.4000 ppb	12:20:38
2	U 409.014†	-5316.6	135.7	4.3053 ug/L	4.3053 ppb	12:20:18
2	V 292.402†	-1778.2	-22.5	-0.1499 ug/L	-0.1499 ppb	12:20:18
2	Zn 213.857†	1087.9	65.1	0.5315 ug/L	0.5315 ppb	12:20:38
2	SiO2†	546.0	51.2	3.0970 ug/L	3.0970 ppb	12:21:14
3	Sc Radial	7217.2	7217.2	104 %		12:19:26
3	Y RADIAL	6654.5	6654.5	104.6 %		12:19:26
3	Al 396.153Radial†	-80.9	-7.2	-6.0844 ug/L	-6.0844 ppb	12:19:26
3	Ca 317.933Radial†	28.9	1.4	2.0537 ug/L	2.0537 ppb	12:19:46
3	Fe 238.204 Radial†	2.7	-36.4	-1.9130 ug/L	-1.9130 ppb	12:19:46
3	K 766.490 Radial†	2931.6	31.8	6.5299 ug/L	6.5299 ppb	12:19:26
3	Mg 279.077 IEC†	2.3	-1.7	-43.722 ug/L	-43.722 ppb	12:19:46
3	Na 589.592 Radial†	-163.2	174.3	10.726 ug/L	10.726 ppb	12:19:26
3	Sr 421.552†	-131.7	-64.3	-0.2001 ug/L	-0.2001 ppb	12:19:26
3	Sc 361.383	772112.1	772112.1	103.69 %		12:20:43
3	Y 371.029	606000.4	606000.4	104.23 %		12:20:43
3	Ag 328.068†	811.9	77.2	0.3660 ug/L	0.3660 ppb	12:20:43
3	As 188.979†	-36.9	-1.3	-0.4625 ug/L	-0.4625 ppb	12:21:04
3	B 249.677†	249.7	1122.1	-0.4102 ug/L	-0.4102 ppb	12:21:04
3	Ba 233.527†	15.5	-7.5	-0.0470 ug/L	-0.0470 ppb	12:21:04
3	Be 313.107†	-4840.6	116.3	0.0472 ug/L	0.0472 ppb	12:20:43
3	Cd 226.502†	-302.2	1.7	0.0411 ug/L	0.0411 ppb	12:21:04
3	Co 228.616†	333896.4	322122.9	5093.7 ug/L	5093.7 ppb	12:20:43
3	Cr 267.716†	29.3	126.2	1.5764 ug/L	1.5764 ppb	12:21:04
3	Cu 324.752†	5191.4	-784.1	-2.6473 ug/L	-2.6473 ppb	12:20:43
3	Mn 257.610†	830.6	83.1	0.0641 ug/L	0.0641 ppb	12:21:04
3	Mo 202.031†	19.9	14.7	0.9237 ug/L	0.9237 ppb	12:21:04
3	Ni 231.604†	307.8	160.2	0.5799 ug/L	0.5799 ppb	12:21:04
3	P 214.914†	304.6	0.2	0.7557 ug/L	0.7557 ppb	12:21:04
3	Pb 220.353†	-17.6	0.8	0.1064 ug/L	0.1064 ppb	12:21:04
3	S 181.975 Axial†	136.5	-4.3	-5.1846 ug/L	-5.1846 ppb	12:21:04
3	Sb 206.836†	48.9	-5.4	-1.4783 ug/L	-1.4783 ppb	12:21:04
3	Se 196.026†	-24.6	11.2	4.5082 ug/L	4.5082 ppb	12:21:04
3	Si 251.611†	504.8	38.1	1.0469 ug/L	1.0469 ppb	12:21:04
3	Sn 189.927†	19.1	5.4	0.8399 ug/L	0.8399 ppb	12:21:04
3	Ti 334.940†	-1475.6	103.7	0.1746 ug/L	0.1746 ppb	12:20:43
3	Tl 190.801†	46.4	105.9	-1.4680 ug/L	-1.4680 ppb	12:21:04
3	U 409.014†	-5242.1	208.9	6.6187 ug/L	6.6187 ppb	12:20:43
3	V 292.402†	-1714.0	39.8	0.3720 ug/L	0.3720 ppb	12:20:43
3	Zn 213.857†	1106.3	82.6	0.6811 ug/L	0.6811 ppb	12:21:04
3	SiO2†	491.1	-1.9	-0.1824 ug/L	-0.1824 ppb	12:21:19

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	773136.6	103.82	%	0.260				0.25%
Sc Radial	7141.0	103	%	1.0				0.95%
Y 371.029	606832.6	104.37	%	0.309				0.30%
Y RADIAL	6605.5	103.9	%	0.71				0.69%
Ag 328.068†	47.6	0.2060	ug/L	0.59863	0.2060	ppb	0.59863	290.58%
Al 396.153Radial†	-3.9	-3.3424	ug/L	15.24223	-3.3424	ppb	15.24223	456.02%
As 188.979†	5.1	1.5662	ug/L	1.82508	1.5662	ppb	1.82508	116.53%
B 249.677†	1121.0	-0.3958	ug/L	0.22631	-0.3958	ppb	0.22631	57.18%
Ba 233.527†	-10.6	-0.0673	ug/L	0.02160	-0.0673	ppb	0.02160	32.10%
Be 313.107†	125.9	0.0512	ug/L	0.00585	0.0512	ppb	0.00585	11.44%
Ca 317.933Radial†	-0.4	-0.5556	ug/L	2.66144	-0.5556	ppb	2.66144	479.03%
Cd 226.502†	1.3	0.0358	ug/L	0.02793	0.0358	ppb	0.02793	77.99%
Co 228.616†	321648.6	5086.2	ug/L	10.39	5086.2	ppb	10.39	0.20%
Cr 267.716†	124.6	1.5563	ug/L	0.13224	1.5563	ppb	0.13224	8.50%
Cu 324.752†	-785.1	-2.6502	ug/L	0.10470	-2.6502	ppb	0.10470	3.95%
Fe 238.204 Radial†	-35.1	3.7643	ug/L	5.21441	3.7643	ppb	5.21441	138.52%
K 766.490 Radial†	47.2	9.7027	ug/L	5.05969	9.7027	ppb	5.05969	52.15%

Mg 279.077 IEC†	-0.1	-2.7075	ug/L	38.09633	-2.7075	ppb	38.09633	>999.9%
Mn 257.610†	77.1	0.0580	ug/L	0.01450	0.0580	ppb	0.01450	24.98%
Mo 202.031†	11.6	0.7263	ug/L	0.27959	0.7263	ppb	0.27959	38.50%
Na 589.592 Radial†	267.2	16.443	ug/L	5.1038	16.443	ppb	5.1038	31.04%
Ni 231.604†	173.8	0.9096	ug/L	0.48620	0.9096	ppb	0.48620	53.45%
P 214.914†	-11.7	-4.6247	ug/L	4.98753	-4.6247	ppb	4.98753	107.84%
Pb 220.353†	9.0	0.9651	ug/L	0.89501	0.9651	ppb	0.89501	92.74%
S 181.975 Axial†	1.8	2.1171	ug/L	8.02236	2.1171	ppb	8.02236	378.94%
Sb 206.836†	-14.8	-4.0271	ug/L	3.32183	-4.0271	ppb	3.32183	82.49%
Se 196.026†	11.5	4.6689	ug/L	1.13249	4.6689	ppb	1.13249	24.26%
Si 251.611†	31.2	0.8553	ug/L	0.20334	0.8553	ppb	0.20334	23.78%
Sn 189.927†	4.3	0.6605	ug/L	1.33019	0.6605	ppb	1.33019	201.38%
Sr 421.552†	-22.3	-0.0694	ug/L	0.13221	-0.0694	ppb	0.13221	190.41%
Ti 334.940†	112.4	0.1894	ug/L	0.02076	0.1894	ppb	0.02076	10.96%
Tl 190.801†	104.5	-1.7592	ug/L	0.55574	-1.7592	ppb	0.55574	31.59%
U 409.014†	204.3	6.4730	ug/L	2.09860	6.4730	ppb	2.09860	32.42%
V 292.402†	30.4	0.2923	ug/L	0.40817	0.2923	ppb	0.40817	139.65%
Zn 213.857†	72.4	0.5922	ug/L	0.07869	0.5922	ppb	0.07869	13.29%
SiO2†	14.7	0.8338	ug/L	1.96338	0.8338	ppb	1.96338	235.47%

Sequence No.: 3
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 12:23:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7376.3	7376.3	106	%			12:25:27
1	Y RADIAL	6721.0	6721.0	105.7	%			12:25:27
1	Al 396.153Radial†	6258.4	5957.8	5006.6	ug/L	5006.6	ppb	12:25:27
1	Ca 317.933Radial†	3645.1	3402.5	5014.7	ug/L	5014.7	ppb	12:25:27
1	Fe 238.204 Radial†	1215.9	1104.9	4953.2	ug/L	4953.2	ppb	12:25:47
1	K 766.490 Radial†	26915.1	22532.0	4642.1	ug/L	4642.1	ppb	12:25:22
1	Mg 279.077 IEC†	211.6	195.1	4995.7	ug/L	4995.7	ppb	12:25:47
1	Na 589.592 Radial†	163447.8	154084.0	9481.0	ug/L	9481.0	ppb	12:25:22
1	Sr 421.552†	162170.3	152613.3	474.57	ug/L	474.57	ppb	12:25:22
1	Sc 361.383	783700.5	783700.5	105.24	%			12:26:56
1	Y 371.029	602708.6	602708.6	103.66	%			12:26:56
1	Ag 328.068†	96662.3	91140.4	501.90	ug/L	501.90	ppb	12:26:56
1	As 188.979†	1612.6	1566.6	499.37	ug/L	499.37	ppb	12:27:16
1	B 249.677†	22407.2	22172.1	504.25	ug/L	504.25	ppb	12:26:56
1	Ba 233.527†	81106.9	77043.5	500.86	ug/L	500.86	ppb	12:26:56
1	Be 313.107†	1301713.0	1241642.7	501.10	ug/L	501.10	ppb	12:26:56
1	Cd 226.502†	44789.0	42850.8	482.20	ug/L	482.20	ppb	12:27:16
1	Co 228.616†	32215.3	30710.7	485.82	ug/L	485.82	ppb	12:27:16
1	Cr 267.716†	41748.9	39766.9	499.01	ug/L	499.01	ppb	12:26:56
1	Cu 324.752†	162328.9	148450.4	499.72	ug/L	499.72	ppb	12:26:56
1	Mn 257.610†	523425.4	496629.0	500.68	ug/L	500.68	ppb	12:26:56
1	Mo 202.031†	8276.8	7860.0	498.71	ug/L	498.71	ppb	12:27:16
1	Ni 231.604†	21611.7	20398.3	487.65	ug/L	487.65	ppb	12:27:16
1	P 214.914†	6082.2	5485.6	2375.2	ug/L	2375.2	ppb	12:27:16
1	Pb 220.353†	4940.9	4712.6	499.34	ug/L	499.34	ppb	12:27:16
1	S 181.975 Axial†	1006.6	820.4	988.32	ug/L	988.32	ppb	12:27:16
1	Sb 206.836†	1980.7	1829.4	502.82	ug/L	502.82	ppb	12:27:16
1	Se 196.026†	1115.6	1094.8	512.99	ug/L	512.99	ppb	12:27:16
1	Si 251.611†	95286.9	90090.7	2528.9	ug/L	2528.9	ppb	12:26:56
1	Sn 189.927†	3361.1	3180.6	498.97	ug/L	498.97	ppb	12:27:16
1	Ti 334.940†	310431.1	296491.3	508.63	ug/L	508.63	ppb	12:26:56
1	Tl 190.801†	2134.5	2089.3	499.71	ug/L	499.71	ppb	12:27:16
1	U 409.014†	10471.5	15214.3	479.33	ug/L	479.33	ppb	12:26:56
1	V 292.402†	61946.8	60553.2	502.57	ug/L	502.57	ppb	12:26:56
1	Zn 213.857†	64794.3	60581.7	496.87	ug/L	496.87	ppb	12:26:56
1	SiO2†	93585.5	88447.3	5305.8	ug/L	5305.8	ppb	12:28:16
2	Sc Radial	7425.5	7425.5	107	%			12:25:57
2	Y RADIAL	6808.6	6808.6	107.1	%			12:25:57
2	Al 396.153Radial†	6297.4	5955.3	5004.3	ug/L	5004.3	ppb	12:25:57
2	Ca 317.933Radial†	3652.9	3387.1	4992.0	ug/L	4992.0	ppb	12:25:57
2	Fe 238.204 Radial†	1222.2	1103.1	4945.6	ug/L	4945.6	ppb	12:26:17
2	K 766.490 Radial†	27119.5	22555.4	4646.9	ug/L	4646.9	ppb	12:25:52
2	Mg 279.077 IEC†	213.5	195.5	5007.0	ug/L	5007.0	ppb	12:26:17
2	Na 589.592 Radial†	165508.5	154992.5	9536.9	ug/L	9536.9	ppb	12:25:52
2	Sr 421.552†	164201.3	153502.0	477.34	ug/L	477.34	ppb	12:25:52
2	Sc 361.383	777621.8	777621.8	104.43	%			12:27:23
2	Y 371.029	597942.2	597942.2	102.84	%			12:27:23
2	Ag 328.068†	94580.0	89864.4	494.90	ug/L	494.90	ppb	12:27:23
2	As 188.979†	1625.1	1590.5	506.92	ug/L	506.92	ppb	12:27:43
2	B 249.677†	21962.3	21912.5	498.28	ug/L	498.28	ppb	12:27:23
2	Ba 233.527†	79825.4	76418.7	496.80	ug/L	496.80	ppb	12:27:23
2	Be 313.107†	1278096.1	1228695.6	495.88	ug/L	495.88	ppb	12:27:23
2	Cd 226.502†	44984.3	43370.4	488.05	ug/L	488.05	ppb	12:27:43
2	Co 228.616†	32369.5	31097.6	491.96	ug/L	491.96	ppb	12:27:43
2	Cr 267.716†	41076.6	39433.2	494.82	ug/L	494.82	ppb	12:27:23
2	Cu 324.752†	158908.9	146381.1	492.76	ug/L	492.76	ppb	12:27:23
2	Mn 257.610†	514954.9	492405.4	496.42	ug/L	496.42	ppb	12:27:23
2	Mo 202.031†	8288.8	7933.0	503.33	ug/L	503.33	ppb	12:27:43
2	Ni 231.604†	21724.3	20666.7	494.07	ug/L	494.07	ppb	12:27:43

2	P 214.914†	6125.2	5572.0	2415.6 ug/L	2415.6 ppb	12:27:43
2	Pb 220.353†	4941.8	4750.1	503.33 ug/L	503.33 ppb	12:27:43
2	S 181.975 Axial†	1020.5	841.2	1013.4 ug/L	1013.4 ppb	12:27:43
2	Sb 206.836†	1987.0	1850.2	508.79 ug/L	508.79 ppb	12:27:43
2	Se 196.026†	1116.5	1104.0	517.13 ug/L	517.13 ppb	12:27:43
2	Si 251.611†	93463.3	89052.1	2499.4 ug/L	2499.4 ppb	12:27:23
2	Sn 189.927†	3387.5	3230.9	506.84 ug/L	506.84 ppb	12:27:43
2	Ti 334.940†	305149.6	293739.5	503.92 ug/L	503.92 ppb	12:27:23
2	Tl 190.801†	2125.4	2096.4	501.31 ug/L	501.31 ppb	12:27:43
2	U 409.014†	10192.8	15025.2	473.36 ug/L	473.36 ppb	12:27:23
2	V 292.402†	60881.7	59993.4	498.03 ug/L	498.03 ppb	12:27:23
2	Zn 213.857†	63542.2	59863.9	490.90 ug/L	490.90 ppb	12:27:23
2	SiO2†	94116.8	89651.1	5378.1 ug/L	5378.1 ppb	12:28:21
3	Sc Radial	7183.3	7183.3	104 %		12:26:27
3	Y RADIAL	6602.6	6602.6	103.8 %		12:26:27
3	Al 396.153Radial†	6312.3	6168.0	5183.9 ug/L	5183.9 ppb	12:26:27
3	Ca 317.933Radial†	3689.4	3537.4	5213.5 ug/L	5213.5 ppb	12:26:27
3	Fe 238.204 Radial†	1236.0	1155.0	5177.3 ug/L	5177.3 ppb	12:26:47
3	K 766.490 Radial†	27094.0	23385.0	4818.3 ug/L	4818.3 ppb	12:26:22
3	Mg 279.077 IEC†	209.4	198.4	5079.7 ug/L	5079.7 ppb	12:26:47
3	Na 589.592 Radial†	165072.1	159783.9	9831.8 ug/L	9831.8 ppb	12:26:22
3	Sr 421.552†	163804.4	158290.5	492.23 ug/L	492.23 ppb	12:26:22
3	Sc 361.383	785154.2	785154.2	105.44 %		12:27:51
3	Y 371.029	604154.5	604154.5	103.91 %		12:27:51
3	Ag 328.068†	95849.4	90199.4	496.79 ug/L	496.79 ppb	12:27:51
3	As 188.979†	1618.0	1568.9	500.11 ug/L	500.11 ppb	12:28:11
3	B 249.677†	22133.5	21873.1	497.38 ug/L	497.38 ppb	12:27:51
3	Ba 233.527†	80244.5	76082.9	494.62 ug/L	494.62 ppb	12:27:51
3	Be 313.107†	1289449.0	1227721.3	495.48 ug/L	495.48 ppb	12:27:51
3	Cd 226.502†	45112.8	43079.0	484.74 ug/L	484.74 ppb	12:28:11
3	Co 228.616†	32450.0	30876.7	488.45 ug/L	488.45 ppb	12:28:11
3	Cr 267.716†	41331.0	39297.0	493.12 ug/L	493.12 ppb	12:27:51
3	Cu 324.752†	160852.6	146764.7	494.06 ug/L	494.06 ppb	12:27:51
3	Mn 257.610†	518555.1	491089.0	495.12 ug/L	495.12 ppb	12:27:51
3	Mo 202.031†	8328.9	7894.9	500.93 ug/L	500.93 ppb	12:28:11
3	Ni 231.604†	21779.3	20519.3	490.55 ug/L	490.55 ppb	12:28:11
3	P 214.914†	6145.6	5535.0	2398.5 ug/L	2398.5 ppb	12:28:11
3	Pb 220.353†	4953.1	4715.5	499.67 ug/L	499.67 ppb	12:28:11
3	S 181.975 Axial†	1023.2	834.5	1005.2 ug/L	1005.2 ppb	12:28:11
3	Sb 206.836†	1983.4	1828.5	502.82 ug/L	502.82 ppb	12:28:11
3	Se 196.026†	1122.0	1099.0	515.63 ug/L	515.63 ppb	12:28:11
3	Si 251.611†	94267.3	88956.0	2496.7 ug/L	2496.7 ppb	12:27:51
3	Sn 189.927†	3386.1	3198.4	501.81 ug/L	501.81 ppb	12:28:11
3	Ti 334.940†	307994.2	293634.0	503.74 ug/L	503.74 ppb	12:27:51
3	Tl 190.801†	2161.9	2111.6	504.93 ug/L	504.93 ppb	12:28:11
3	U 409.014†	10623.4	15340.0	483.28 ug/L	483.28 ppb	12:27:51
3	V 292.402†	61349.6	59877.9	497.04 ug/L	497.04 ppb	12:27:51
3	Zn 213.857†	64192.3	59896.8	491.17 ug/L	491.17 ppb	12:27:51
3	SiO2†	91977.9	86758.0	5203.4 ug/L	5203.4 ppb	12:28:26

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	782158.8	105.04	%	0.537				0.51%
Sc Radial	7328.4	106	%	1.8				1.75%
Y 371.029	601601.8	103.47	%	0.559				0.54%
Y RADIAL	6710.7	105.5	%	1.63				1.54%
Ag 328.068†	90401.4	497.86	ug/L	3.621	497.86	ppb	3.621	0.73%
QC value within limits for Ag 328.068 Recovery = 99.57%								
Al 396.153Radial†	6027.0	5065.0	ug/L	103.05	5065.0	ppb	103.05	2.03%
QC value within limits for Al 396.153Radial Recovery = 101.30%								
As 188.979†	1575.3	502.13	ug/L	4.162	502.13	ppb	4.162	0.83%
QC value within limits for As 188.979 Recovery = 100.43%								
B 249.677†	21985.9	499.97	ug/L	3.732	499.97	ppb	3.732	0.75%
QC value within limits for B 249.677 Recovery = 99.99%								
Ba 233.527†	76515.0	497.43	ug/L	3.169	497.43	ppb	3.169	0.64%
QC value within limits for Ba 233.527 Recovery = 99.49%								
Be 313.107†	1232686.6	497.49	ug/L	3.135	497.49	ppb	3.135	0.63%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	3442.3	5073.4	ug/L	121.88	5073.4	ppb	121.88	2.40%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.47%
Cd 226.502†          43100.1      485.00 ug/L        2.936      485.00 ppb        2.936   0.61%
   QC value within limits for Cd 226.502  Recovery = 97.00%
Co 228.616†          30895.0      488.74 ug/L        3.080      488.74 ppb        3.080   0.63%
   QC value within limits for Co 228.616  Recovery = 97.75%
Cr 267.716†          39499.0      495.65 ug/L        3.032      495.65 ppb        3.032   0.61%
   QC value within limits for Cr 267.716  Recovery = 99.13%
Cu 324.752†         147198.7      495.51 ug/L        3.701      495.51 ppb        3.701   0.75%
   QC value within limits for Cu 324.752  Recovery = 99.10%
Fe 238.204 Radial†   1121.0       5025.3 ug/L      131.63      5025.3 ppb      131.63   2.62%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.51%
K 766.490 Radial†   22824.1       4702.4 ug/L      100.39      4702.4 ppb      100.39   2.13%
   QC value within limits for K 766.490 Radial  Recovery = 94.05%
Mg 279.077 IEC†       196.3       5027.5 ug/L       45.57      5027.5 ppb       45.57   0.91%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.55%
Mn 257.610†         493374.5      497.41 ug/L        2.905      497.41 ppb        2.905   0.58%
   QC value within limits for Mn 257.610  Recovery = 99.48%
Mo 202.031†          7896.0       500.99 ug/L        2.314      500.99 ppb        2.314   0.46%
   QC value within limits for Mo 202.031  Recovery = 100.20%
Na 589.592 Radial†  156286.8      9616.6 ug/L      188.44      9616.6 ppb      188.44   1.96%
   QC value within limits for Na 589.592 Radial  Recovery = 96.17%
Ni 231.604†          20528.1      490.76 ug/L        3.213      490.76 ppb        3.213   0.65%
   QC value within limits for Ni 231.604  Recovery = 98.15%
P 214.914†            5530.9      2396.4 ug/L       20.28      2396.4 ppb       20.28   0.85%
   QC value within limits for P 214.914  Recovery = 95.86%
Pb 220.353†           4726.1      500.78 ug/L        2.211      500.78 ppb        2.211   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.16%
S 181.975 Axial†       832.0      1002.3 ug/L       12.78      1002.3 ppb       12.78   1.28%
   QC value within limits for S 181.975 Axial  Recovery = 100.23%
Sb 206.836†           1836.0      504.81 ug/L        3.450      504.81 ppb        3.450   0.68%
   QC value within limits for Sb 206.836  Recovery = 100.96%
Se 196.026†           1099.3      515.25 ug/L        2.096      515.25 ppb        2.096   0.41%
   QC value within limits for Se 196.026  Recovery = 103.05%
Si 251.611†          89366.3      2508.4 ug/L       17.87      2508.4 ppb       17.87   0.71%
   QC value within limits for Si 251.611  Recovery = 100.33%
Sn 189.927†           3203.3      502.54 ug/L        3.986      502.54 ppb        3.986   0.79%
   QC value within limits for Sn 189.927  Recovery = 100.51%
Sr 421.552†         154801.9      481.38 ug/L        9.496      481.38 ppb        9.496   1.97%
   QC value within limits for Sr 421.552  Recovery = 96.28%
Ti 334.940†         294621.6      505.43 ug/L        2.775      505.43 ppb        2.775   0.55%
   QC value within limits for Ti 334.940  Recovery = 101.09%
Tl 190.801†           2099.1      501.98 ug/L        2.674      501.98 ppb        2.674   0.53%
   QC value within limits for Tl 190.801  Recovery = 100.40%
U 409.014†           15193.1      478.66 ug/L        4.996      478.66 ppb        4.996   1.04%
   QC value within limits for U 409.014  Recovery = 95.73%
V 292.402†           60141.5      499.22 ug/L        2.947      499.22 ppb        2.947   0.59%
   QC value within limits for V 292.402  Recovery = 99.84%
Zn 213.857†          60114.1      492.98 ug/L        3.373      492.98 ppb        3.373   0.68%
   QC value within limits for Zn 213.857  Recovery = 98.60%
SiO2†                88285.5      5295.8 ug/L       87.76      5295.8 ppb       87.76   1.66%
   QC value within limits for SiO2  Recovery = 99.03%
All analyte(s) passed QC.
```

Sequence No.: 4
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 12:30:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7032.0	7032.0	101	%			12:32:29
1	Y RADIAL	6440.8	6440.8	101.3	%			12:32:29
1	Al 396.153Radial†	-96.8	-24.9	-21.101	ug/L	-21.101	ppb	12:32:29
1	Ca 317.933Radial†	31.2	4.4	6.5225	ug/L	6.5225	ppb	12:32:49
1	Fe 238.204 Radial†	44.4	4.9	21.902	ug/L	21.902	ppb	12:32:49
1	K 766.490 Radial†	3027.1	200.3	41.379	ug/L	41.379	ppb	12:32:29
1	Mg 279.077 IEC†	4.6	0.6	14.493	ug/L	14.493	ppb	12:32:49
1	Na 589.592 Radial†	-268.5	66.3	4.0785	ug/L	4.0785	ppb	12:32:29
1	Sr 421.552†	-70.0	-6.8	-0.0212	ug/L	-0.0212	ppb	12:32:29
1	Sc 361.383	767710.4	767710.4	103.10	%			12:33:46
1	Y 371.029	599297.7	599297.7	103.08	%			12:33:46
1	Ag 328.068†	893.8	161.1	0.8887	ug/L	0.8887	ppb	12:33:46
1	As 188.979†	-28.2	6.9	2.1934	ug/L	2.1934	ppb	12:34:06
1	B 249.677†	-325.5	565.6	12.932	ug/L	12.932	ppb	12:34:06
1	Ba 233.527†	16.3	-6.6	-0.0415	ug/L	-0.0415	ppb	12:34:06
1	Be 313.107†	-4797.5	131.3	0.0530	ug/L	0.0530	ppb	12:33:46
1	Cd 226.502†	-269.9	31.4	0.3519	ug/L	0.3519	ppb	12:34:06
1	Co 228.616†	-90.3	12.9	0.2072	ug/L	0.2072	ppb	12:34:06
1	Cr 267.716†	-65.9	34.1	0.4275	ug/L	0.4275	ppb	12:34:06
1	Cu 324.752†	5836.4	-129.7	-0.4351	ug/L	-0.4351	ppb	12:33:46
1	Mn 257.610†	699.6	-39.3	-0.0371	ug/L	-0.0371	ppb	12:34:06
1	Mo 202.031†	29.7	24.4	1.5483	ug/L	1.5483	ppb	12:34:06
1	Ni 231.604†	190.0	47.7	1.1408	ug/L	1.1408	ppb	12:34:06
1	P 214.914†	303.4	0.8	0.4183	ug/L	0.4183	ppb	12:34:06
1	Pb 220.353†	-38.3	-19.3	-2.0420	ug/L	-2.0420	ppb	12:34:06
1	S 181.975 Axial†	139.1	-1.0	-1.2296	ug/L	-1.2296	ppb	12:34:06
1	Sb 206.836†	49.7	-4.4	-1.1596	ug/L	-1.1596	ppb	12:34:06
1	Se 196.026†	-46.7	-10.5	-4.6777	ug/L	-4.6777	ppb	12:34:06
1	Si 251.611†	523.2	58.7	1.6079	ug/L	1.6079	ppb	12:34:06
1	Sn 189.927†	18.3	4.8	0.7464	ug/L	0.7464	ppb	12:34:06
1	Ti 334.940†	-1530.8	42.0	0.0709	ug/L	0.0709	ppb	12:33:46
1	Tl 190.801†	-50.0	12.7	3.0141	ug/L	3.0141	ppb	12:34:06
1	U 409.014†	-5327.2	97.3	3.0726	ug/L	3.0726	ppb	12:33:46
1	V 292.402†	-1658.1	84.5	0.7156	ug/L	0.7156	ppb	12:33:46
1	Zn 213.857†	1114.2	96.3	0.7877	ug/L	0.7877	ppb	12:34:06
1	SiO2†	498.4	8.0	0.3686	ug/L	0.3686	ppb	12:35:02
2	Sc Radial	6905.5	6905.5	99.5	%			12:32:54
2	Y RADIAL	6373.8	6373.8	100.2	%			12:32:54
2	Al 396.153Radial†	-85.2	-15.0	-12.700	ug/L	-12.700	ppb	12:32:54
2	Ca 317.933Radial†	28.7	2.4	3.5801	ug/L	3.5801	ppb	12:33:14
2	Fe 238.204 Radial†	38.8	0.1	0.3411	ug/L	0.3411	ppb	12:33:14
2	K 766.490 Radial†	2798.5	25.4	5.2270	ug/L	5.2270	ppb	12:32:54
2	Mg 279.077 IEC†	3.0	-0.9	-23.579	ug/L	-23.579	ppb	12:33:14
2	Na 589.592 Radial†	-125.7	204.8	12.604	ug/L	12.604	ppb	12:32:54
2	Sr 421.552†	-25.9	36.2	0.1127	ug/L	0.1127	ppb	12:32:54
2	Sc 361.383	744071.7	744071.7	99.922	%			12:34:11
2	Y 371.029	580270.9	580270.9	99.805	%			12:34:11
2	Ag 328.068†	726.7	21.4	0.1206	ug/L	0.1206	ppb	12:34:11
2	As 188.979†	-32.4	1.9	0.5950	ug/L	0.5950	ppb	12:34:31
2	B 249.677†	-333.0	548.0	12.531	ug/L	12.531	ppb	12:34:31
2	Ba 233.527†	17.0	-5.4	-0.0359	ug/L	-0.0359	ppb	12:34:31
2	Be 313.107†	-4813.8	-32.8	-0.0130	ug/L	-0.0130	ppb	12:34:11
2	Cd 226.502†	-275.2	17.8	0.2014	ug/L	0.2014	ppb	12:34:31
2	Co 228.616†	-69.9	30.5	0.4844	ug/L	0.4844	ppb	12:34:31
2	Cr 267.716†	-33.9	64.1	0.8043	ug/L	0.8043	ppb	12:34:31
2	Cu 324.752†	5848.9	62.6	0.2108	ug/L	0.2108	ppb	12:34:11
2	Mn 257.610†	698.2	-19.1	-0.0188	ug/L	-0.0188	ppb	12:34:31
2	Mo 202.031†	20.5	16.1	1.0233	ug/L	1.0233	ppb	12:34:31
2	Ni 231.604†	178.2	41.8	0.9986	ug/L	0.9986	ppb	12:34:31

2	P 214.914†	295.7	2.4	1.0583	ug/L	1.0583 ppb	12:34:31
2	Pb 220.353†	-21.0	-3.2	-0.3379	ug/L	-0.3379 ppb	12:34:31
2	S 181.975 Axial†	136.8	0.9	1.1333	ug/L	1.1333 ppb	12:34:31
2	Sb 206.836†	54.7	2.1	0.6132	ug/L	0.6132 ppb	12:34:31
2	Se 196.026†	-26.7	8.1	3.6640	ug/L	3.6640 ppb	12:34:31
2	Si 251.611†	560.8	112.4	3.1291	ug/L	3.1291 ppb	12:34:31
2	Sn 189.927†	26.8	13.8	2.1630	ug/L	2.1630 ppb	12:34:31
2	Ti 334.940†	-1475.0	50.6	0.0891	ug/L	0.0891 ppb	12:34:11
2	Tl 190.801†	-61.1	-0.0	-0.0076	ug/L	-0.0076 ppb	12:34:31
2	U 409.014†	-5423.7	-163.4	-5.1664	ug/L	-5.1664 ppb	12:34:11
2	V 292.402†	-1728.1	-36.6	-0.2984	ug/L	-0.2984 ppb	12:34:11
2	Zn 213.857†	1119.1	135.6	1.1161	ug/L	1.1161 ppb	12:34:31
2	SiO2†	514.8	39.6	2.2858	ug/L	2.2858 ppb	12:35:07
3	Sc Radial	6866.7	6866.7	99.0	%		12:33:19
3	Y RADIAL	6311.4	6311.4	99.25	%		12:33:19
3	Al 396.153Radial†	-69.1	0.7	0.5593	ug/L	0.5593 ppb	12:33:19
3	Ca 317.933Radial†	23.2	-2.9	-4.3055	ug/L	-4.3055 ppb	12:33:39
3	Fe 238.204 Radial†	35.5	-3.1	-13.913	ug/L	-13.913 ppb	12:33:39
3	K 766.490 Radial†	2819.8	62.8	12.946	ug/L	12.946 ppb	12:33:19
3	Mg 279.077 IEC†	8.3	4.4	112.66	ug/L	112.66 ppb	12:33:39
3	Na 589.592 Radial†	-155.7	173.9	10.698	ug/L	10.698 ppb	12:33:19
3	Sr 421.552†	-112.1	-50.9	-0.1584	ug/L	-0.1584 ppb	12:33:19
3	Sc 361.383	770249.9	770249.9	103.44	%		12:34:36
3	Y 371.029	601092.9	601092.9	103.39	%		12:34:36
3	Ag 328.068†	783.2	51.2	0.2695	ug/L	0.2695 ppb	12:34:36
3	As 188.979†	-18.7	16.2	5.1374	ug/L	5.1374 ppb	12:34:56
3	B 249.677†	-355.3	537.8	12.301	ug/L	12.301 ppb	12:34:56
3	Ba 233.527†	36.2	12.5	0.0808	ug/L	0.0808 ppb	12:34:56
3	Be 313.107†	-4794.6	149.5	0.0604	ug/L	0.0604 ppb	12:34:36
3	Cd 226.502†	-264.9	37.1	0.4200	ug/L	0.4200 ppb	12:34:56
3	Co 228.616†	-104.3	-0.4	-0.0020	ug/L	-0.0020 ppb	12:34:56
3	Cr 267.716†	-69.9	30.4	0.3785	ug/L	0.3785 ppb	12:34:56
3	Cu 324.752†	5863.5	-122.2	-0.4118	ug/L	-0.4118 ppb	12:34:36
3	Mn 257.610†	685.5	-55.1	-0.0594	ug/L	-0.0594 ppb	12:34:56
3	Mo 202.031†	29.6	24.2	1.5341	ug/L	1.5341 ppb	12:34:56
3	Ni 231.604†	158.4	16.5	0.3947	ug/L	0.3947 ppb	12:34:56
3	P 214.914†	293.5	-9.8	-4.3208	ug/L	-4.3208 ppb	12:34:56
3	Pb 220.353†	-29.7	-10.9	-1.1460	ug/L	-1.1460 ppb	12:34:56
3	S 181.975 Axial†	138.2	-2.3	-2.8024	ug/L	-2.8024 ppb	12:34:56
3	Sb 206.836†	65.0	10.2	2.8078	ug/L	2.8078 ppb	12:34:56
3	Se 196.026†	-33.5	2.5	1.0889	ug/L	1.0889 ppb	12:34:56
3	Si 251.611†	522.3	56.2	1.5447	ug/L	1.5447 ppb	12:34:56
3	Sn 189.927†	19.1	5.5	0.8571	ug/L	0.8571 ppb	12:34:56
3	Ti 334.940†	-1529.0	48.6	0.0803	ug/L	0.0803 ppb	12:34:36
3	Tl 190.801†	-51.3	11.6	2.7543	ug/L	2.7543 ppb	12:34:56
3	U 409.014†	-5238.1	200.4	6.3367	ug/L	6.3367 ppb	12:34:36
3	V 292.402†	-1790.0	-37.7	-0.2740	ug/L	-0.2740 ppb	12:34:36
3	Zn 213.857†	1119.5	97.9	0.8060	ug/L	0.8060 ppb	12:34:56
3	SiO2†	590.3	95.2	5.6553	ug/L	5.6553 ppb	12:35:12

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	760677.3	102.15	%	1.939				1.90%
Sc Radial	6934.7	99.9	%	1.25				1.25%
Y 371.029	593553.8	102.09	%	1.985				1.94%
Y RADIAL	6375.3	100.3	%	1.02				1.01%
Ag 328.068†	77.9	0.4262	ug/L	0.40735	0.4262	ppb	0.40735	95.57%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.1	-11.081	ug/L	10.9206	-11.081	ppb	10.9206	98.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	8.4	2.6419	ug/L	2.30416	2.6419	ppb	2.30416	87.22%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	550.5	12.588	ug/L	0.3192	12.588	ppb	0.3192	2.54%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	0.2	0.0011	ug/L	0.06904	0.0011	ppb	0.06904	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	82.7	0.0335	ug/L	0.04041	0.0335	ppb	0.04041	120.73%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.3	1.9324	ug/L	5.59888	1.9324	ppb	5.59888	289.74%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                28.8      0.3244 ug/L       0.11183      0.3244 ppb        0.11183  34.47%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                14.3      0.2299 ug/L       0.24400      0.2299 ppb        0.24400 106.14%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                42.9      0.5368 ug/L       0.23297      0.5368 ppb        0.23297  43.40%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -63.1     -0.2120 ug/L       0.36635     -0.2120 ppb        0.36635 172.77%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.6      2.7768 ug/L      18.03168      2.7768 ppb       18.03168 649.38%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          96.2     19.851 ug/L       19.0392      19.851 ppb        19.0392  95.91%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.3     34.525 ug/L       70.2945      34.525 ppb        70.2945 203.60%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -37.9     -0.0384 ug/L       0.02037     -0.0384 ppb        0.02037  52.99%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                21.6      1.3686 ug/L       0.29910      1.3686 ppb        0.29910  21.86%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        148.3      9.1269 ug/L       4.47476      9.1269 ppb        4.47476  49.03%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                35.3      0.8447 ug/L       0.39613      0.8447 ppb        0.39613  46.90%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -2.2     -0.9481 ug/L       2.93836     -0.9481 ppb        2.93836 309.93%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -11.1     -1.1753 ug/L       0.85243     -1.1753 ppb        0.85243  72.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -0.8     -0.9663 ug/L       1.98101     -0.9663 ppb        1.98101 205.02%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 2.6      0.7538 ug/L       1.98744      0.7538 ppb        1.98744 263.67%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.0      0.0251 ug/L       4.27144      0.0251 ppb        4.27144 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                75.8      2.0939 ug/L       0.89705      2.0939 ppb        0.89705  42.84%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 8.0      1.2555 ug/L       0.78791      1.2555 ppb        0.78791  62.76%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                -7.2     -0.0223 ug/L       0.13551     -0.0223 ppb        0.13551 607.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                47.1      0.0801 ug/L       0.00906      0.0801 ppb        0.00906  11.31%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 8.1      1.9203 ug/L       1.67463      1.9203 ppb        1.67463  87.21%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 44.8      1.4143 ug/L       5.92812      1.4143 ppb        5.92812 419.16%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  3.4      0.0478 ug/L       0.57852      0.0478 ppb        0.57852 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               109.9      0.9033 ug/L       0.18454      0.9033 ppb        0.18454  20.43%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      47.6      2.7699 ug/L       2.67637      2.7699 ppb        2.67637  96.62%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 13:42:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7214.0	7214.0	104	%			13:44:02
1	Y RADIAL	6611.4	6611.4	104.0	%			13:44:02
1	Al 396.153Radial†	6229.8	6062.8	5095.2	ug/L	5095.2	ppb	13:44:02
1	Ca 317.933Radial†	3569.7	3407.2	5021.6	ug/L	5021.6	ppb	13:44:22
1	Fe 238.204 Radial†	1244.3	1157.9	5190.4	ug/L	5190.4	ppb	13:44:22
1	K 766.490 Radial†	27587.8	23748.8	4893.6	ug/L	4893.6	ppb	13:44:02
1	Mg 279.077 IEC†	216.1	203.9	5221.1	ug/L	5221.1	ppb	13:44:22
1	Na 589.592 Radial†	166789.5	160758.5	9891.7	ug/L	9891.7	ppb	13:44:02
1	Sr 421.552†	166577.1	160285.3	498.43	ug/L	498.43	ppb	13:44:02
1	Sc 361.383	785320.2	785320.2	105.46	%			13:45:20
1	Y 371.029	604198.7	604198.7	103.92	%			13:45:20
1	Ag 328.068†	95369.8	89725.4	494.20	ug/L	494.20	ppb	13:45:20
1	As 188.979†	1608.7	1559.7	497.18	ug/L	497.18	ppb	13:45:41
1	B 249.677†	22111.3	21847.6	496.81	ug/L	496.81	ppb	13:45:20
1	Ba 233.527†	79665.2	75517.5	490.94	ug/L	490.94	ppb	13:45:20
1	Be 313.107†	1282396.0	1220775.0	492.68	ug/L	492.68	ppb	13:45:20
1	Cd 226.502†	44952.4	42917.9	482.93	ug/L	482.93	ppb	13:45:41
1	Co 228.616†	32340.5	30766.3	486.71	ug/L	486.71	ppb	13:45:41
1	Cr 267.716†	41083.8	39054.3	490.07	ug/L	490.07	ppb	13:45:20
1	Cu 324.752†	160216.5	146129.2	491.93	ug/L	491.93	ppb	13:45:20
1	Mn 257.610†	515381.1	487975.5	491.99	ug/L	491.99	ppb	13:45:20
1	Mo 202.031†	8290.6	7856.8	498.52	ug/L	498.52	ppb	13:45:41
1	Ni 231.604†	21679.5	20420.2	488.18	ug/L	488.18	ppb	13:45:41
1	P 214.914†	6130.8	5519.8	2392.0	ug/L	2392.0	ppb	13:45:41
1	Pb 220.353†	4954.5	4715.7	499.68	ug/L	499.68	ppb	13:45:41
1	S 181.975 Axial†	1057.5	866.8	1044.2	ug/L	1044.2	ppb	13:45:41
1	Sb 206.836†	1980.0	1824.8	501.75	ug/L	501.75	ppb	13:45:41
1	Se 196.026†	1110.0	1087.3	510.38	ug/L	510.38	ppb	13:45:41
1	Si 251.611†	93857.5	88548.6	2485.3	ug/L	2485.3	ppb	13:45:20
1	Sn 189.927†	3347.7	3161.4	495.98	ug/L	495.98	ppb	13:45:41
1	Ti 334.940†	306289.3	291955.7	500.86	ug/L	500.86	ppb	13:45:20
1	Tl 190.801†	2129.8	2080.7	497.56	ug/L	497.56	ppb	13:45:41
1	U 409.014†	10490.1	15211.4	479.23	ug/L	479.23	ppb	13:45:20
1	V 292.402†	61001.0	59535.1	494.20	ug/L	494.20	ppb	13:45:20
1	Zn 213.857†	63817.7	59528.7	488.13	ug/L	488.13	ppb	13:45:20
1	SiO2†	93154.7	87855.4	5270.0	ug/L	5270.0	ppb	13:46:41
2	Sc Radial	7171.0	7171.0	103	%			13:44:27
2	Y RADIAL	6556.8	6556.8	103.1	%			13:44:27
2	Al 396.153Radial†	6178.6	6049.1	5083.7	ug/L	5083.7	ppb	13:44:27
2	Ca 317.933Radial†	3575.8	3433.6	5060.5	ug/L	5060.5	ppb	13:44:47
2	Fe 238.204 Radial†	1238.5	1159.4	5197.1	ug/L	5197.1	ppb	13:44:47
2	K 766.490 Radial†	27601.6	23921.1	4929.1	ug/L	4929.1	ppb	13:44:27
2	Mg 279.077 IEC†	212.2	201.4	5157.3	ug/L	5157.3	ppb	13:44:47
2	Na 589.592 Radial†	166816.8	161745.9	9952.5	ug/L	9952.5	ppb	13:44:27
2	Sr 421.552†	166733.5	161396.4	501.89	ug/L	501.89	ppb	13:44:27
2	Sc 361.383	787317.3	787317.3	105.73	%			13:45:48
2	Y 371.029	604965.4	604965.4	104.05	%			13:45:48
2	Ag 328.068†	95691.5	89800.3	494.61	ug/L	494.61	ppb	13:45:48
2	As 188.979†	1613.5	1560.4	497.40	ug/L	497.40	ppb	13:46:08
2	B 249.677†	22236.1	21912.5	498.29	ug/L	498.29	ppb	13:45:48
2	Ba 233.527†	80060.9	75700.2	492.13	ug/L	492.13	ppb	13:45:48
2	Be 313.107†	1287053.3	1222095.6	493.21	ug/L	493.21	ppb	13:45:48
2	Cd 226.502†	45110.4	42959.2	483.39	ug/L	483.39	ppb	13:46:08
2	Co 228.616†	32410.1	30754.4	486.52	ug/L	486.52	ppb	13:46:08
2	Cr 267.716†	41298.5	39158.6	491.38	ug/L	491.38	ppb	13:45:48
2	Cu 324.752†	161003.3	146488.0	493.13	ug/L	493.13	ppb	13:45:48
2	Mn 257.610†	517517.1	488756.2	492.78	ug/L	492.78	ppb	13:45:48
2	Mo 202.031†	8313.9	7858.9	498.65	ug/L	498.65	ppb	13:46:08
2	Ni 231.604†	21789.7	20472.3	489.42	ug/L	489.42	ppb	13:46:08

2	P 214.914†	6109.0	5484.4	2375.8 ug/L	2375.8 ppb	13:46:08
2	Pb 220.353†	4960.6	4709.7	499.03 ug/L	499.03 ppb	13:46:08
2	S 181.975 Axial†	1050.8	857.8	1033.4 ug/L	1033.4 ppb	13:46:08
2	Sb 206.836†	1993.6	1833.0	503.94 ug/L	503.94 ppb	13:46:08
2	Se 196.026†	1117.8	1092.1	512.54 ug/L	512.54 ppb	13:46:08
2	Si 251.611†	94211.6	88657.7	2488.4 ug/L	2488.4 ppb	13:45:48
2	Sn 189.927†	3362.4	3167.2	496.90 ug/L	496.90 ppb	13:46:08
2	Ti 334.940†	307578.6	292438.4	501.69 ug/L	501.69 ppb	13:45:48
2	Tl 190.801†	2144.4	2089.3	499.62 ug/L	499.62 ppb	13:46:08
2	U 409.014†	10513.5	15208.3	479.12 ug/L	479.12 ppb	13:45:48
2	V 292.402†	61303.9	59674.8	495.34 ug/L	495.34 ppb	13:45:48
2	Zn 213.857†	64107.4	59649.2	489.12 ug/L	489.12 ppb	13:45:48
2	SiO2†	94502.9	88906.5	5333.4 ug/L	5333.4 ppb	13:46:46
3	Sc Radial	7059.8	7059.8	102 %		13:44:52
3	Y RADIAL	6444.3	6444.3	101.3 %		13:44:52
3	Al 396.153Radial†	6053.5	6020.4	5059.5 ug/L	5059.5 ppb	13:44:52
3	Ca 317.933Radial†	3596.4	3508.3	5170.7 ug/L	5170.7 ppb	13:45:12
3	Fe 238.204 Radial†	1248.7	1188.4	5326.5 ug/L	5326.5 ppb	13:45:12
3	K 766.490 Radial†	26963.8	23715.1	4886.7 ug/L	4886.7 ppb	13:44:52
3	Mg 279.077 IEC†	214.2	206.6	5288.9 ug/L	5288.9 ppb	13:45:12
3	Na 589.592 Radial†	162100.2	159653.9	9823.8 ug/L	9823.8 ppb	13:44:52
3	Sr 421.552†	162025.9	159312.0	495.40 ug/L	495.40 ppb	13:44:52
3	Sc 361.383	790899.5	790899.5	106.21 %		13:46:15
3	Y 371.029	608801.3	608801.3	104.71 %		13:46:15
3	Ag 328.068†	95857.4	89546.6	493.25 ug/L	493.25 ppb	13:46:15
3	As 188.979†	1606.6	1547.0	493.18 ug/L	493.18 ppb	13:46:35
3	B 249.677†	22313.9	21890.5	497.79 ug/L	497.79 ppb	13:46:15
3	Ba 233.527†	79999.5	75299.4	489.53 ug/L	489.53 ppb	13:46:15
3	Be 313.107†	1289865.0	1219229.3	492.06 ug/L	492.06 ppb	13:46:15
3	Cd 226.502†	45035.5	42695.4	480.40 ug/L	480.40 ppb	13:46:35
3	Co 228.616†	32366.5	30574.5	483.67 ug/L	483.67 ppb	13:46:35
3	Cr 267.716†	41277.3	38961.7	488.91 ug/L	488.91 ppb	13:46:15
3	Cu 324.752†	161345.4	146120.4	491.90 ug/L	491.90 ppb	13:46:15
3	Mn 257.610†	517414.7	486442.8	490.46 ug/L	490.46 ppb	13:46:15
3	Mo 202.031†	8317.8	7827.0	496.64 ug/L	496.64 ppb	13:46:35
3	Ni 231.604†	21725.5	20318.5	485.75 ug/L	485.75 ppb	13:46:35
3	P 214.914†	6113.2	5462.3	2365.9 ug/L	2365.9 ppb	13:46:35
3	Pb 220.353†	4914.7	4645.1	492.20 ug/L	492.20 ppb	13:46:35
3	S 181.975 Axial†	1050.6	853.2	1027.8 ug/L	1027.8 ppb	13:46:35
3	Sb 206.836†	1983.1	1814.6	498.95 ug/L	498.95 ppb	13:46:35
3	Se 196.026†	1128.8	1097.6	515.49 ug/L	515.49 ppb	13:46:35
3	Si 251.611†	94317.5	88353.8	2479.9 ug/L	2479.9 ppb	13:46:15
3	Sn 189.927†	3368.2	3158.3	495.52 ug/L	495.52 ppb	13:46:35
3	Ti 334.940†	307707.6	291242.2	499.64 ug/L	499.64 ppb	13:46:15
3	Tl 190.801†	2134.7	2071.0	495.26 ug/L	495.26 ppb	13:46:35
3	U 409.014†	10647.1	15289.1	481.66 ug/L	481.66 ppb	13:46:15
3	V 292.402†	61342.3	59448.3	493.45 ug/L	493.45 ppb	13:46:15
3	Zn 213.857†	63976.3	59251.1	485.83 ug/L	485.83 ppb	13:46:15
3	SiO2†	93330.3	87397.7	5242.4 ug/L	5242.4 ppb	13:46:51

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	787845.7	105.80	%	0.380				0.36%
Sc Radial	7148.3	103	%	1.1				1.11%
Y 371.029	605988.5	104.23	%	0.424				0.41%
Y RADIAL	6537.5	102.8	%	1.34				1.30%
Ag 328.068†	89690.8	494.02	ug/L	0.696	494.02	ppb	0.696	0.14%
QC value within limits for Ag 328.068 Recovery = 98.80%								
Al 396.153Radial†	6044.1	5079.5	ug/L	18.21	5079.5	ppb	18.21	0.36%
QC value within limits for Al 396.153Radial Recovery = 101.59%								
As 188.979†	1555.7	495.92	ug/L	2.373	495.92	ppb	2.373	0.48%
QC value within limits for As 188.979 Recovery = 99.18%								
B 249.677†	21883.5	497.63	ug/L	0.755	497.63	ppb	0.755	0.15%
QC value within limits for B 249.677 Recovery = 99.53%								
Ba 233.527†	75505.7	490.87	ug/L	1.304	490.87	ppb	1.304	0.27%
QC value within limits for Ba 233.527 Recovery = 98.17%								
Be 313.107†	1220700.0	492.65	ug/L	0.580	492.65	ppb	0.580	0.12%
QC value within limits for Be 313.107 Recovery = 98.53%								
Ca 317.933Radial†	3449.7	5084.2	ug/L	77.35	5084.2	ppb	77.35	1.52%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.68%
Cd 226.502†            42857.5      482.24 ug/L          1.607      482.24 ppb          1.607   0.33%
   QC value within limits for Cd 226.502  Recovery = 96.45%
Co 228.616†            30698.4      485.63 ug/L          1.702      485.63 ppb          1.702   0.35%
   QC value within limits for Co 228.616  Recovery = 97.13%
Cr 267.716†            39058.2      490.12 ug/L          1.235      490.12 ppb          1.235   0.25%
   QC value within limits for Cr 267.716  Recovery = 98.02%
Cu 324.752†           146245.9      492.32 ug/L          0.703      492.32 ppb          0.703   0.14%
   QC value within limits for Cu 324.752  Recovery = 98.46%
Fe 238.204 Radial†      1168.6      5238.0 ug/L         76.74      5238.0 ppb         76.74   1.47%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.76%
K 766.490 Radial†      23795.0      4903.1 ug/L         22.79      4903.1 ppb         22.79   0.46%
   QC value within limits for K 766.490 Radial  Recovery = 98.06%
Mg 279.077 IEC†          204.0      5222.4 ug/L         65.78      5222.4 ppb         65.78   1.26%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.45%
Mn 257.610†           487724.8      491.74 ug/L          1.178      491.74 ppb          1.178   0.24%
   QC value within limits for Mn 257.610  Recovery = 98.35%
Mo 202.031†             7847.6      497.94 ug/L          1.127      497.94 ppb          1.127   0.23%
   QC value within limits for Mo 202.031  Recovery = 99.59%
Na 589.592 Radial†    160719.4      9889.3 ug/L         64.39      9889.3 ppb         64.39   0.65%
   QC value within limits for Na 589.592 Radial  Recovery = 98.89%
Ni 231.604†            20403.7      487.78 ug/L          1.870      487.78 ppb          1.870   0.38%
   QC value within limits for Ni 231.604  Recovery = 97.56%
P 214.914†              5488.8      2377.9 ug/L         13.14      2377.9 ppb         13.14   0.55%
   QC value within limits for P 214.914  Recovery = 95.12%
Pb 220.353†             4690.2      496.97 ug/L          4.147      496.97 ppb          4.147   0.83%
   QC value within limits for Pb 220.353  Recovery = 99.39%
S 181.975 Axial†         859.3      1035.1 ug/L          8.33      1035.1 ppb          8.33   0.80%
   QC value within limits for S 181.975 Axial  Recovery = 103.51%
Sb 206.836†             1824.1      501.55 ug/L          2.501      501.55 ppb          2.501   0.50%
   QC value within limits for Sb 206.836  Recovery = 100.31%
Se 196.026†             1092.3      512.80 ug/L          2.564      512.80 ppb          2.564   0.50%
   QC value within limits for Se 196.026  Recovery = 102.56%
Si 251.611†            88520.0      2484.5 ug/L          4.32      2484.5 ppb          4.32   0.17%
   QC value within limits for Si 251.611  Recovery = 99.38%
Sn 189.927†             3162.3      496.13 ug/L          0.699      496.13 ppb          0.699   0.14%
   QC value within limits for Sn 189.927  Recovery = 99.23%
Sr 421.552†           160331.2      498.57 ug/L          3.244      498.57 ppb          3.244   0.65%
   QC value within limits for Sr 421.552  Recovery = 99.71%
Ti 334.940†           291878.8      500.73 ug/L          1.029      500.73 ppb          1.029   0.21%
   QC value within limits for Ti 334.940  Recovery = 100.15%
Tl 190.801†             2080.3      497.48 ug/L          2.181      497.48 ppb          2.181   0.44%
   QC value within limits for Tl 190.801  Recovery = 99.50%
U 409.014†             15236.3      480.00 ug/L          1.439      480.00 ppb          1.439   0.30%
   QC value within limits for U 409.014  Recovery = 96.00%
V 292.402†             59552.7      494.33 ug/L          0.952      494.33 ppb          0.952   0.19%
   QC value within limits for V 292.402  Recovery = 98.87%
Zn 213.857†            59476.3      487.70 ug/L          1.687      487.70 ppb          1.687   0.35%
   QC value within limits for Zn 213.857  Recovery = 97.54%
SiO2†                  88053.2      5281.9 ug/L         46.67      5281.9 ppb         46.67   0.88%
   QC value within limits for SiO2  Recovery = 98.77%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 13:49:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7383.5	7383.5	106	%			13:50:53
1	Y RADIAL	6726.0	6726.0	105.8	%			13:50:53
1	Al 396.153Radial†	-71.2	3.7	3.0953	ug/L	3.0953	ppb	13:50:53
1	Ca 317.933Radial†	36.3	7.7	11.349	ug/L	11.349	ppb	13:51:13
1	Fe 238.204 Radial†	40.0	-1.3	-5.8841	ug/L	-5.8841	ppb	13:51:13
1	K 766.490 Radial†	2853.3	-105.2	-21.748	ug/L	-21.748	ppb	13:50:53
1	Mg 279.077 IEC†	4.9	0.7	17.418	ug/L	17.418	ppb	13:51:13
1	Na 589.592 Radial†	-29.1	303.9	18.698	ug/L	18.698	ppb	13:50:53
1	Sr 421.552†	-32.8	31.5	0.0978	ug/L	0.0978	ppb	13:50:53
1	Sc 361.383	764989.3	764989.3	102.73	%			13:52:10
1	Y 371.029	596575.9	596575.9	102.61	%			13:52:10
1	Ag 328.068†	633.6	-89.1	-0.4906	ug/L	-0.4906	ppb	13:52:10
1	As 188.979†	-28.8	6.3	1.9954	ug/L	1.9954	ppb	13:52:30
1	B 249.677†	-364.7	526.3	12.038	ug/L	12.038	ppb	13:52:10
1	Ba 233.527†	40.3	16.8	0.1115	ug/L	0.1115	ppb	13:52:30
1	Be 313.107†	-4814.7	98.0	0.0397	ug/L	0.0397	ppb	13:52:10
1	Cd 226.502†	-278.1	22.5	0.2548	ug/L	0.2548	ppb	13:52:30
1	Co 228.616†	-109.0	-5.6	-0.0868	ug/L	-0.0868	ppb	13:52:30
1	Cr 267.716†	-104.3	-3.6	-0.0449	ug/L	-0.0449	ppb	13:52:10
1	Cu 324.752†	5886.3	-61.0	-0.2055	ug/L	-0.2055	ppb	13:52:10
1	Mn 257.610†	749.1	11.3	0.0103	ug/L	0.0103	ppb	13:52:10
1	Mo 202.031†	16.1	11.3	0.7135	ug/L	0.7135	ppb	13:52:30
1	Ni 231.604†	161.5	20.6	0.4920	ug/L	0.4920	ppb	13:52:30
1	P 214.914†	290.0	-11.2	-5.0086	ug/L	-5.0086	ppb	13:52:30
1	Pb 220.353†	-53.3	-34.0	-3.5898	ug/L	-3.5898	ppb	13:52:30
1	S 181.975 Axial†	157.2	17.1	20.597	ug/L	20.597	ppb	13:52:30
1	Sb 206.836†	58.4	4.3	1.1952	ug/L	1.1952	ppb	13:52:30
1	Se 196.026†	-32.0	3.7	1.6736	ug/L	1.6736	ppb	13:52:30
1	Si 251.611†	507.6	45.4	1.2692	ug/L	1.2692	ppb	13:52:30
1	Sn 189.927†	17.1	3.6	0.5708	ug/L	0.5708	ppb	13:52:30
1	Ti 334.940†	-1491.9	74.6	0.1261	ug/L	0.1261	ppb	13:52:10
1	Tl 190.801†	-51.0	11.5	2.7379	ug/L	2.7379	ppb	13:52:30
1	U 409.014†	-5223.0	180.4	5.7022	ug/L	5.7022	ppb	13:52:10
1	V 292.402†	-1611.3	124.4	1.0417	ug/L	1.0417	ppb	13:52:10
1	Zn 213.857†	1038.8	26.8	0.2190	ug/L	0.2190	ppb	13:52:30
1	SiO2†	528.0	38.4	2.2932	ug/L	2.2932	ppb	13:53:27
2	Sc Radial	7149.0	7149.0	103	%			13:51:18
2	Y RADIAL	6603.0	6603.0	103.8	%			13:51:18
2	Al 396.153Radial†	-41.0	30.8	25.938	ug/L	25.938	ppb	13:51:18
2	Ca 317.933Radial†	31.1	3.8	5.5573	ug/L	5.5573	ppb	13:51:38
2	Fe 238.204 Radial†	41.6	1.4	6.4352	ug/L	6.4352	ppb	13:51:38
2	K 766.490 Radial†	3027.2	151.5	31.298	ug/L	31.298	ppb	13:51:18
2	Mg 279.077 IEC†	1.3	-2.7	-68.014	ug/L	-68.014	ppb	13:51:38
2	Na 589.592 Radial†	-90.9	243.0	14.951	ug/L	14.951	ppb	13:51:18
2	Sr 421.552†	-45.3	18.3	0.0569	ug/L	0.0569	ppb	13:51:18
2	Sc 361.383	757896.3	757896.3	101.78	%			13:52:36
2	Y 371.029	591360.3	591360.3	101.71	%			13:52:36
2	Ag 328.068†	798.1	78.3	0.4222	ug/L	0.4222	ppb	13:52:36
2	As 188.979†	-26.7	8.1	2.5702	ug/L	2.5702	ppb	13:52:56
2	B 249.677†	-381.7	506.3	11.576	ug/L	11.576	ppb	13:52:36
2	Ba 233.527†	11.7	-10.9	-0.0707	ug/L	-0.0707	ppb	13:52:56
2	Be 313.107†	-4857.0	12.6	0.0058	ug/L	0.0058	ppb	13:52:36
2	Cd 226.502†	-290.6	7.7	0.0868	ug/L	0.0868	ppb	13:52:56
2	Co 228.616†	-83.7	18.3	0.2896	ug/L	0.2896	ppb	13:52:56
2	Cr 267.716†	-107.7	-7.9	-0.1017	ug/L	-0.1017	ppb	13:52:36
2	Cu 324.752†	5867.9	-25.5	-0.0854	ug/L	-0.0854	ppb	13:52:36
2	Mn 257.610†	733.2	2.5	0.0047	ug/L	0.0047	ppb	13:52:36
2	Mo 202.031†	11.4	6.8	0.4292	ug/L	0.4292	ppb	13:52:56
2	Ni 231.604†	156.7	17.3	0.4138	ug/L	0.4138	ppb	13:52:56

2	P 214.914†	298.0	-0.8	-0.3301	ug/L	-0.3301 ppb	13:52:56
2	Pb 220.353†	-18.9	-0.8	-0.0770	ug/L	-0.0770 ppb	13:52:56
2	S 181.975 Axial†	160.3	21.5	25.976	ug/L	25.976 ppb	13:52:56
2	Sb 206.836†	62.3	8.6	2.3447	ug/L	2.3447 ppb	13:52:56
2	Se 196.026†	-28.5	6.8	3.0999	ug/L	3.0999 ppb	13:52:56
2	Si 251.611†	481.8	24.7	0.6755	ug/L	0.6755 ppb	13:52:56
2	Sn 189.927†	14.8	1.5	0.2434	ug/L	0.2434 ppb	13:52:56
2	Ti 334.940†	-1377.4	173.4	0.2934	ug/L	0.2934 ppb	13:52:36
2	Tl 190.801†	-57.4	4.8	1.1384	ug/L	1.1384 ppb	13:52:56
2	U 409.014†	-5022.8	329.4	10.412	ug/L	10.412 ppb	13:52:36
2	V 292.402†	-1704.7	17.9	0.1705	ug/L	0.1705 ppb	13:52:36
2	Zn 213.857†	1066.6	63.6	0.5254	ug/L	0.5254 ppb	13:52:56
2	SiO2†	512.7	28.3	1.6615	ug/L	1.6615 ppb	13:53:32
3	Sc Radial	7070.4	7070.4	102	%		13:51:44
3	Y RADIAL	6506.1	6506.1	102.3	%		13:51:44
3	Al 396.153Radial†	-82.1	-10.0	-8.4712	ug/L	-8.4712 ppb	13:51:44
3	Ca 317.933Radial†	24.2	-2.6	-3.8710	ug/L	-3.8710 ppb	13:52:04
3	Fe 238.204 Radial†	41.2	1.5	6.5424	ug/L	6.5424 ppb	13:52:04
3	K 766.490 Radial†	2968.3	126.4	26.098	ug/L	26.098 ppb	13:51:44
3	Mg 279.077 IEC†	3.9	-0.2	-4.2531	ug/L	-4.2531 ppb	13:52:04
3	Na 589.592 Radial†	-85.2	247.6	15.236	ug/L	15.236 ppb	13:51:44
3	Sr 421.552†	-67.9	-4.3	-0.0134	ug/L	-0.0134 ppb	13:51:44
3	Sc 361.383	760445.2	760445.2	102.12	%		13:53:01
3	Y 371.029	593580.6	593580.6	102.09	%		13:53:01
3	Ag 328.068†	787.8	65.5	0.3582	ug/L	0.3582 ppb	13:53:01
3	As 188.979†	-21.7	13.1	4.1375	ug/L	4.1375 ppb	13:53:21
3	B 249.677†	-414.9	475.0	10.861	ug/L	10.861 ppb	13:53:01
3	Ba 233.527†	11.0	-11.6	-0.0760	ug/L	-0.0760 ppb	13:53:21
3	Be 313.107†	-4830.9	54.2	0.0223	ug/L	0.0223 ppb	13:53:01
3	Cd 226.502†	-285.7	13.4	0.1506	ug/L	0.1506 ppb	13:53:21
3	Co 228.616†	-84.3	18.0	0.2879	ug/L	0.2879 ppb	13:53:21
3	Cr 267.716†	-50.3	48.8	0.6101	ug/L	0.6101 ppb	13:53:01
3	Cu 324.752†	5848.6	-63.7	-0.2138	ug/L	-0.2138 ppb	13:53:01
3	Mn 257.610†	678.2	-53.8	-0.0532	ug/L	-0.0532 ppb	13:53:01
3	Mo 202.031†	31.1	26.0	1.6508	ug/L	1.6508 ppb	13:53:21
3	Ni 231.604†	151.3	11.6	0.2766	ug/L	0.2766 ppb	13:53:21
3	P 214.914†	299.8	0.0	0.0455	ug/L	0.0455 ppb	13:53:21
3	Pb 220.353†	-12.4	5.7	0.5994	ug/L	0.5994 ppb	13:53:21
3	S 181.975 Axial†	160.0	20.7	24.957	ug/L	24.957 ppb	13:53:21
3	Sb 206.836†	66.5	12.6	3.4278	ug/L	3.4278 ppb	13:53:21
3	Se 196.026†	-47.4	-11.6	-5.2144	ug/L	-5.2144 ppb	13:53:21
3	Si 251.611†	504.2	45.0	1.2342	ug/L	1.2342 ppb	13:53:21
3	Sn 189.927†	12.9	-0.4	-0.0575	ug/L	-0.0575 ppb	13:53:21
3	Ti 334.940†	-1441.0	115.7	0.1973	ug/L	0.1973 ppb	13:53:01
3	Tl 190.801†	-58.5	3.9	0.9294	ug/L	0.9294 ppb	13:53:21
3	U 409.014†	-5312.1	62.7	1.9807	ug/L	1.9807 ppb	13:53:01
3	V 292.402†	-1755.0	-25.7	-0.1879	ug/L	-0.1879 ppb	13:53:01
3	Zn 213.857†	1052.1	45.8	0.3773	ug/L	0.3773 ppb	13:53:21
3	SiO2†	506.8	20.8	1.1740	ug/L	1.1740 ppb	13:53:37

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	761110.3	102.21	%	0.482				0.47%
Sc Radial	7201.0	104	%	2.3				2.26%
Y 371.029	593838.9	102.14	%	0.450				0.44%
Y RADIAL	6611.7	104.0	%	1.73				1.67%
Ag 328.068†	18.2	0.0966	ug/L	0.50952	0.0966	ppb	0.50952	527.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	8.2	6.8539	ug/L	17.50955	6.8539	ppb	17.50955	255.47%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	9.2	2.9010	ug/L	1.10871	2.9010	ppb	1.10871	38.22%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	502.5	11.492	ug/L	0.5928	11.492	ppb	0.5928	5.16%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-1.9	-0.0117	ug/L	0.10676	-0.0117	ppb	0.10676	910.49%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	54.9	0.0226	ug/L	0.01700	0.0226	ppb	0.01700	75.24%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2.9	4.3451	ug/L	7.68197	4.3451	ppb	7.68197	176.80%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                14.6      0.1641 ug/L       0.08480      0.1641 ppb        0.08480  51.69%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                10.2      0.1635 ug/L       0.21683      0.1635 ppb        0.21683 132.58%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                12.4      0.1545 ug/L       0.39560      0.1545 ppb        0.39560 256.03%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -50.1     -0.1683 ug/L       0.07185     -0.1683 ppb        0.07185  42.70%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.5      2.3645 ug/L       7.14367      2.3645 ppb        7.14367 302.12%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          57.6     11.883 ug/L       29.2407     11.883 ppb        29.2407 246.08%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.7    -18.283 ug/L       44.4106    -18.283 ppb        44.4106 242.91%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -13.3     -0.0128 ug/L       0.03516     -0.0128 ppb        0.03516 275.55%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                14.7      0.9311 ug/L       0.63926      0.9311 ppb        0.63926  68.65%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        264.8     16.295 ug/L        2.0857     16.295 ppb         2.0857  12.80%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                16.5      0.3941 ug/L       0.10900      0.3941 ppb        0.10900  27.65%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -4.0     -1.7644 ug/L       2.81581     -1.7644 ppb        2.81581 159.59%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -9.7     -1.0225 ug/L       2.24894     -1.0225 ppb        2.24894 219.95%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           19.8     23.843 ug/L        2.8571     23.843 ppb         2.8571  11.98%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 8.5      2.3226 ug/L       1.11649      2.3226 ppb        1.11649  48.07%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -0.3     -0.1470 ug/L       4.44610     -0.1470 ppb        4.44610 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                38.3      1.0597 ug/L       0.33310      1.0597 ppb        0.33310  31.44%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.6      0.2522 ug/L       0.31426      0.2522 ppb        0.31426 124.59%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                15.2      0.0471 ug/L       0.05622      0.0471 ppb        0.05622 119.33%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               121.3      0.2056 ug/L       0.08393      0.2056 ppb        0.08393  40.82%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.7      1.6019 ug/L       0.98934      1.6019 ppb        0.98934  61.76%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                190.8      6.0318 ug/L       4.22552      6.0318 ppb        4.22552  70.05%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 38.9      0.3414 ug/L       0.63238      0.3414 ppb        0.63238 185.23%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                45.4      0.3739 ug/L       0.15320      0.3739 ppb        0.15320  40.97%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      29.2      1.7096 ug/L       0.56113      1.7096 ppb        0.56113  32.82%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/2/2009 14:09:08
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601
Plasma On Time: 6/29/2009 15:26:31
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070209.sif
Batch ID:
Results Data Set: 070209
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 7
Date Collected: 7/2/2009 14:09:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7081.6	7081.6	102	%			14:11:21
1	Y RADIAL	6475.7	6475.7	101.8	%			14:11:21
1	Al 396.153Radial†	6352.0	6294.5	5290.8	ug/L	5290.8	ppb	14:11:01
1	Ca 317.933Radial†	3646.4	3546.4	5226.8	ug/L	5226.8	ppb	14:11:21
1	Fe 238.204 Radial†	1247.1	1183.1	5302.7	ug/L	5302.7	ppb	14:11:21
1	K 766.490 Radial†	27818.8	24471.2	5042.8	ug/L	5042.8	ppb	14:11:01
1	Mg 279.077 IEC†	216.1	207.8	5320.5	ug/L	5320.5	ppb	14:11:21
1	Na 589.592 Radial†	171170.6	168050.1	10340	ug/L	10340	ppb	14:11:01
1	Sr 421.552†	171045.9	167659.0	521.36	ug/L	521.36	ppb	14:11:01
1	Sc 361.383	791782.2	791782.2	106.33	%			14:12:20
1	Y 371.029	608802.7	608802.7	104.71	%			14:12:20
1	Ag 328.068†	95801.8	89393.7	492.41	ug/L	492.41	ppb	14:12:20
1	As 188.979†	1636.9	1573.8	501.67	ug/L	501.67	ppb	14:12:40
1	B 249.677†	22059.6	21627.9	491.78	ug/L	491.78	ppb	14:12:20
1	Ba 233.527†	80139.0	75346.6	489.83	ug/L	489.83	ppb	14:12:20
1	Be 313.107†	1288391.2	1216489.3	490.95	ug/L	490.95	ppb	14:12:20
1	Cd 226.502†	45263.9	42863.0	482.29	ug/L	482.29	ppb	14:12:40
1	Co 228.616†	32552.0	30714.9	485.89	ug/L	485.89	ppb	14:12:40
1	Cr 267.716†	41235.0	38878.7	487.87	ug/L	487.87	ppb	14:12:20
1	Cu 324.752†	161329.1	145935.7	491.28	ug/L	491.28	ppb	14:12:20
1	Mn 257.610†	518387.6	486814.6	490.83	ug/L	490.83	ppb	14:12:20
1	Mo 202.031†	8350.8	7849.3	498.05	ug/L	498.05	ppb	14:12:40
1	Ni 231.604†	21810.7	20375.9	487.12	ug/L	487.12	ppb	14:12:40
1	P 214.914†	6168.3	5507.6	2386.6	ug/L	2386.6	ppb	14:12:40
1	Pb 220.353†	4947.0	4670.3	494.91	ug/L	494.91	ppb	14:12:40
1	S 181.975 Axial†	1016.2	819.8	987.45	ug/L	987.45	ppb	14:12:40
1	Sb 206.836†	2011.7	1839.4	505.75	ug/L	505.75	ppb	14:12:40
1	Se 196.026†	1130.9	1098.5	515.81	ug/L	515.81	ppb	14:12:40
1	Si 251.611†	94241.3	88183.2	2475.0	ug/L	2475.0	ppb	14:12:20
1	Sn 189.927†	3373.3	3159.6	495.73	ug/L	495.73	ppb	14:12:40
1	Ti 334.940†	308170.3	291354.4	499.83	ug/L	499.83	ppb	14:12:20
1	Tl 190.801†	2144.1	2077.7	496.84	ug/L	496.84	ppb	14:12:40
1	U 409.014†	10752.8	15377.3	484.46	ug/L	484.46	ppb	14:12:20
1	V 292.402†	61418.2	59455.4	493.54	ug/L	493.54	ppb	14:12:20
1	Zn 213.857†	64127.9	59326.5	486.45	ug/L	486.45	ppb	14:12:20
1	SiO2†	95361.3	89209.7	5351.7	ug/L	5351.7	ppb	14:13:40
2	Sc Radial	7192.7	7192.7	104	%			14:11:47
2	Y RADIAL	6573.6	6573.6	103.4	%			14:11:47
2	Al 396.153Radial†	6142.8	5996.6	5039.2	ug/L	5039.2	ppb	14:11:27
2	Ca 317.933Radial†	3618.6	3464.5	5106.0	ug/L	5106.0	ppb	14:11:47
2	Fe 238.204 Radial†	1233.7	1151.2	5160.5	ug/L	5160.5	ppb	14:11:47
2	K 766.490 Radial†	27006.1	23266.2	4793.8	ug/L	4793.8	ppb	14:11:27
2	Mg 279.077 IEC†	210.4	199.1	5097.6	ug/L	5097.6	ppb	14:11:47
2	Na 589.592 Radial†	164679.4	159197.8	9795.7	ug/L	9795.7	ppb	14:11:27
2	Sr 421.552†	164816.0	159060.7	494.62	ug/L	494.62	ppb	14:11:27
2	Sc 361.383	782481.6	782481.6	105.08	%			14:12:48
2	Y 371.029	601490.1	601490.1	103.45	%			14:12:48

2	Ag 328.068†	95212.7	89904.0	495.17 ug/L	495.17 ppb	14:12:48
2	As 188.979†	1614.7	1571.0	500.75 ug/L	500.75 ppb	14:13:08
2	B 249.677†	21977.8	21796.6	495.64 ug/L	495.64 ppb	14:12:48
2	Ba 233.527†	79536.7	75669.2	491.93 ug/L	491.93 ppb	14:12:48
2	Be 313.107†	1278251.7	1221242.3	492.87 ug/L	492.87 ppb	14:12:48
2	Cd 226.502†	44956.9	43076.8	484.72 ug/L	484.72 ppb	14:13:08
2	Co 228.616†	32342.3	30879.2	488.50 ug/L	488.50 ppb	14:13:08
2	Cr 267.716†	40994.1	39110.3	490.78 ug/L	490.78 ppb	14:12:48
2	Cu 324.752†	159590.3	146084.5	491.77 ug/L	491.77 ppb	14:12:48
2	Mn 257.610†	513923.6	488361.2	492.37 ug/L	492.37 ppb	14:12:48
2	Mo 202.031†	8305.9	7900.0	501.25 ug/L	501.25 ppb	14:13:08
2	Ni 231.604†	21679.2	20494.5	489.95 ug/L	489.95 ppb	14:13:08
2	P 214.914†	6124.1	5534.5	2398.7 ug/L	2398.7 ppb	14:13:08
2	Pb 220.353†	4915.5	4695.7	497.56 ug/L	497.56 ppb	14:13:08
2	S 181.975 Axial†	1001.5	817.1	984.30 ug/L	984.30 ppb	14:13:08
2	Sb 206.836†	1986.0	1837.4	505.29 ug/L	505.29 ppb	14:13:08
2	Se 196.026†	1113.4	1094.5	513.51 ug/L	513.51 ppb	14:13:08
2	Si 251.611†	93490.6	88522.2	2484.5 ug/L	2484.5 ppb	14:12:48
2	Sn 189.927†	3368.7	3192.9	500.92 ug/L	500.92 ppb	14:13:08
2	Ti 334.940†	305478.6	292237.7	501.35 ug/L	501.35 ppb	14:12:48
2	Tl 190.801†	2134.6	2092.6	500.38 ug/L	500.38 ppb	14:13:08
2	U 409.014†	10248.5	15017.6	473.10 ug/L	473.10 ppb	14:12:48
2	V 292.402†	61000.8	59744.8	495.94 ug/L	495.94 ppb	14:12:48
2	Zn 213.857†	63524.9	59469.5	487.64 ug/L	487.64 ppb	14:12:48
2	SiO2†	93824.3	88813.1	5327.6 ug/L	5327.6 ppb	14:13:46
3	Sc Radial	7079.0	7079.0	102 %		14:12:12
3	Y RADIAL	6462.9	6462.9	101.6 %		14:12:12
3	Al 396.153Radial†	6168.7	6117.1	5140.9 ug/L	5140.9 ppb	14:11:52
3	Ca 317.933Radial†	3643.6	3545.0	5224.8 ug/L	5224.8 ppb	14:12:12
3	Fe 238.204 Radial†	1242.5	1178.9	5284.5 ug/L	5284.5 ppb	14:12:12
3	K 766.490 Radial†	27277.4	23950.6	4935.2 ug/L	4935.2 ppb	14:11:52
3	Mg 279.077 IEC†	212.9	204.7	5241.8 ug/L	5241.8 ppb	14:12:12
3	Na 589.592 Radial†	166293.8	163332.4	10050 ug/L	10050 ppb	14:11:52
3	Sr 421.552†	165907.1	162684.4	505.89 ug/L	505.89 ppb	14:11:52
3	Sc 361.383	781573.3	781573.3	104.96 %		14:13:15
3	Y 371.029	601799.5	601799.5	103.51 %		14:13:15
3	Ag 328.068†	94944.7	89753.9	494.38 ug/L	494.38 ppb	14:13:15
3	As 188.979†	1617.9	1575.8	502.29 ug/L	502.29 ppb	14:13:35
3	B 249.677†	21862.4	21711.0	493.65 ug/L	493.65 ppb	14:13:15
3	Ba 233.527†	79424.3	75650.2	491.81 ug/L	491.81 ppb	14:13:15
3	Be 313.107†	1274941.7	1219502.4	492.17 ug/L	492.17 ppb	14:13:15
3	Cd 226.502†	45147.4	43308.0	487.31 ug/L	487.31 ppb	14:13:35
3	Co 228.616†	32497.4	31062.8	491.41 ug/L	491.41 ppb	14:13:35
3	Cr 267.716†	40840.7	39009.5	489.51 ug/L	489.51 ppb	14:13:15
3	Cu 324.752†	159163.7	145854.5	491.01 ug/L	491.01 ppb	14:13:15
3	Mn 257.610†	512500.7	487573.9	491.59 ug/L	491.59 ppb	14:13:15
3	Mo 202.031†	8336.0	7937.8	503.66 ug/L	503.66 ppb	14:13:35
3	Ni 231.604†	21791.5	20625.6	493.09 ug/L	493.09 ppb	14:13:35
3	P 214.914†	6129.7	5546.6	2404.3 ug/L	2404.3 ppb	14:13:35
3	Pb 220.353†	4957.7	4741.4	502.40 ug/L	502.40 ppb	14:13:35
3	S 181.975 Axial†	1010.5	826.7	995.88 ug/L	995.88 ppb	14:13:35
3	Sb 206.836†	2006.0	1858.6	511.16 ug/L	511.16 ppb	14:13:35
3	Se 196.026†	1120.4	1102.3	517.49 ug/L	517.49 ppb	14:13:35
3	Si 251.611†	93132.9	88284.9	2477.7 ug/L	2477.7 ppb	14:13:15
3	Sn 189.927†	3379.9	3207.3	503.20 ug/L	503.20 ppb	14:13:35
3	Ti 334.940†	304751.2	291882.6	500.74 ug/L	500.74 ppb	14:13:15
3	Tl 190.801†	2138.4	2098.5	501.77 ug/L	501.77 ppb	14:13:35
3	U 409.014†	10462.1	15232.5	479.88 ug/L	479.88 ppb	14:13:15
3	V 292.402†	60812.3	59632.5	495.05 ug/L	495.05 ppb	14:13:15
3	Zn 213.857†	63363.8	59386.3	486.91 ug/L	486.91 ppb	14:13:15
3	SiO2†	94801.1	89847.5	5389.9 ug/L	5389.9 ppb	14:13:51

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	785279.0	105.46	%	0.759				0.72%
Sc Radial	7117.8	103	%	0.9				0.91%
Y 371.029	604030.8	103.89	%	0.711				0.68%
Y RADIAL	6504.1	102.3	%	0.95				0.93%
Ag 328.068†	89683.9	493.99	ug/L	1.426	493.99	ppb	1.426	0.29%

```
   QC value within limits for Ag 328.068  Recovery = 98.80%
Al 396.153Radial†       6136.1      5157.0 ug/L        126.58      5157.0 ppb         126.58   2.45%
   QC value within limits for Al 396.153Radial  Recovery = 103.14%
As 188.979†             1573.5      501.57 ug/L         0.776      501.57 ppb          0.776   0.15%
   QC value within limits for As 188.979  Recovery = 100.31%
B 249.677†             21711.9      493.69 ug/L         1.928      493.69 ppb          1.928   0.39%
   QC value within limits for B 249.677  Recovery = 98.74%
Ba 233.527†            75555.4      491.19 ug/L         1.177      491.19 ppb          1.177   0.24%
   QC value within limits for Ba 233.527  Recovery = 98.24%
Be 313.107†          1219078.0      492.00 ug/L         0.970      492.00 ppb          0.970   0.20%
   QC value within limits for Be 313.107  Recovery = 98.40%
Ca 317.933Radial†       3518.6      5185.9 ug/L        69.18      5185.9 ppb         69.18   1.33%
   QC value within limits for Ca 317.933Radial  Recovery = 103.72%
Cd 226.502†            43082.6      484.77 ug/L         2.509      484.77 ppb          2.509   0.52%
   QC value within limits for Cd 226.502  Recovery = 96.95%
Co 228.616†            30885.7      488.60 ug/L         2.759      488.60 ppb          2.759   0.56%
   QC value within limits for Co 228.616  Recovery = 97.72%
Cr 267.716†            38999.5      489.39 ug/L         1.458      489.39 ppb          1.458   0.30%
   QC value within limits for Cr 267.716  Recovery = 97.88%
Cu 324.752†           145958.2      491.35 ug/L         0.388      491.35 ppb          0.388   0.08%
   QC value within limits for Cu 324.752  Recovery = 98.27%
Fe 238.204 Radial†      1171.1      5249.2 ug/L        77.37      5249.2 ppb         77.37   1.47%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.98%
K 766.490 Radial†      23896.0      4923.9 ug/L       124.84      4923.9 ppb        124.84   2.54%
   QC value within limits for K 766.490 Radial  Recovery = 98.48%
Mg 279.077 IEC†          203.9      5220.0 ug/L       113.04      5220.0 ppb        113.04   2.17%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.40%
Mn 257.610†           487583.3      491.60 ug/L         0.772      491.60 ppb          0.772   0.16%
   QC value within limits for Mn 257.610  Recovery = 98.32%
Mo 202.031†             7895.7      500.99 ug/L         2.815      500.99 ppb          2.815   0.56%
   QC value within limits for Mo 202.031  Recovery = 100.20%
Na 589.592 Radial†    163526.8       10062 ug/L         272.5       10062 ppb         272.5   2.71%
   QC value within limits for Na 589.592 Radial  Recovery = 100.62%
Ni 231.604†            20498.6      490.05 ug/L         2.986      490.05 ppb          2.986   0.61%
   QC value within limits for Ni 231.604  Recovery = 98.01%
P 214.914†              5529.6      2396.5 ug/L         9.05      2396.5 ppb          9.05   0.38%
   QC value within limits for P 214.914  Recovery = 95.86%
Pb 220.353†             4702.5      498.29 ug/L         3.798      498.29 ppb          3.798   0.76%
   QC value within limits for Pb 220.353  Recovery = 99.66%
S 181.975 Axial†         821.2      989.21 ug/L         5.989      989.21 ppb          5.989   0.61%
   QC value within limits for S 181.975 Axial  Recovery = 98.92%
Sb 206.836†             1845.2      507.40 ug/L         3.264      507.40 ppb          3.264   0.64%
   QC value within limits for Sb 206.836  Recovery = 101.48%
Se 196.026†             1098.4      515.60 ug/L         2.000      515.60 ppb          2.000   0.39%
   QC value within limits for Se 196.026  Recovery = 103.12%
Si 251.611†            88330.1      2479.0 ug/L         4.91      2479.0 ppb          4.91   0.20%
   QC value within limits for Si 251.611  Recovery = 99.16%
Sn 189.927†             3186.6      499.95 ug/L         3.830      499.95 ppb          3.830   0.77%
   QC value within limits for Sn 189.927  Recovery = 99.99%
Sr 421.552†           163134.7      507.29 ug/L        13.424      507.29 ppb         13.424   2.65%
   QC value within limits for Sr 421.552  Recovery = 101.46%
Ti 334.940†           291824.9      500.64 ug/L         0.761      500.64 ppb          0.761   0.15%
   QC value within limits for Ti 334.940  Recovery = 100.13%
Tl 190.801†             2089.6      499.66 ug/L         2.540      499.66 ppb          2.540   0.51%
   QC value within limits for Tl 190.801  Recovery = 99.93%
U 409.014†             15209.1      479.15 ug/L         5.715      479.15 ppb          5.715   1.19%
   QC value within limits for U 409.014  Recovery = 95.83%
V 292.402†             59610.9      494.84 ug/L         1.216      494.84 ppb          1.216   0.25%
   QC value within limits for V 292.402  Recovery = 98.97%
Zn 213.857†            59394.1      487.00 ug/L         0.598      487.00 ppb          0.598   0.12%
   QC value within limits for Zn 213.857  Recovery = 97.40%
SiO2†                  89290.1      5356.4 ug/L        31.38      5356.4 ppb         31.38   0.59%
   QC value within limits for SiO2  Recovery = 100.17%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 14:16:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7838.6	7838.6	113	%			14:17:53
1	Y RADIAL	7212.3	7212.3	113.4	%			14:17:53
1	Al 396.153Radial†	-57.2	19.9	16.780	ug/L	16.780	ppb	14:17:53
1	Ca 317.933Radial†	24.4	-4.8	-7.0924	ug/L	-7.0924	ppb	14:18:13
1	Fe 238.204 Radial†	37.0	-6.2	-27.742	ug/L	-27.742	ppb	14:18:13
1	K 766.490 Radial†	2880.7	-236.7	-48.918	ug/L	-48.918	ppb	14:17:53
1	Mg 279.077 IEC†	1.6	-2.5	-64.082	ug/L	-64.082	ppb	14:18:13
1	Na 589.592 Radial†	-187.8	164.9	10.147	ug/L	10.147	ppb	14:17:53
1	Sr 421.552†	-9.1	54.2	0.1686	ug/L	0.1686	ppb	14:17:53
1	Sc 361.383	759249.5	759249.5	101.96	%			14:19:10
1	Y 371.029	592556.2	592556.2	101.92	%			14:19:10
1	Ag 328.068†	774.8	54.0	0.2876	ug/L	0.2876	ppb	14:19:10
1	As 188.979†	-34.1	0.9	0.2690	ug/L	0.2690	ppb	14:19:30
1	B 249.677†	-494.3	396.5	9.0685	ug/L	9.0685	ppb	14:19:30
1	Ba 233.527†	28.2	5.2	0.0342	ug/L	0.0342	ppb	14:19:30
1	Be 313.107†	-4869.2	9.1	0.0040	ug/L	0.0040	ppb	14:19:10
1	Cd 226.502†	-285.4	13.3	0.1536	ug/L	0.1536	ppb	14:19:30
1	Co 228.616†	-93.3	8.9	0.1438	ug/L	0.1438	ppb	14:19:30
1	Cr 267.716†	-48.4	50.5	0.6322	ug/L	0.6322	ppb	14:19:30
1	Cu 324.752†	5948.7	43.5	0.1447	ug/L	0.1447	ppb	14:19:10
1	Mn 257.610†	706.3	-25.1	-0.0275	ug/L	-0.0275	ppb	14:19:30
1	Mo 202.031†	19.3	14.5	0.9207	ug/L	0.9207	ppb	14:19:30
1	Ni 231.604†	181.9	41.8	0.9996	ug/L	0.9996	ppb	14:19:30
1	P 214.914†	296.6	-2.7	-1.2238	ug/L	-1.2238	ppb	14:19:30
1	Pb 220.353†	-30.5	-12.1	-1.2679	ug/L	-1.2679	ppb	14:19:30
1	S 181.975 Axial†	129.7	-8.8	-10.573	ug/L	-10.573	ppb	14:19:30
1	Sb 206.836†	62.7	8.9	2.3905	ug/L	2.3905	ppb	14:19:30
1	Se 196.026†	-36.5	-1.0	-0.5395	ug/L	-0.5395	ppb	14:19:30
1	Si 251.611†	500.6	42.2	1.2118	ug/L	1.2118	ppb	14:19:30
1	Sn 189.927†	3.9	-9.1	-1.4311	ug/L	-1.4311	ppb	14:19:30
1	Ti 334.940†	-1479.3	75.9	0.1301	ug/L	0.1301	ppb	14:19:10
1	Tl 190.801†	-61.2	1.2	0.2747	ug/L	0.2747	ppb	14:19:30
1	U 409.014†	-5404.1	-35.7	-1.1260	ug/L	-1.1260	ppb	14:19:10
1	V 292.402†	-1725.7	0.3	0.0143	ug/L	0.0143	ppb	14:19:10
1	Zn 213.857†	1061.3	56.5	0.4661	ug/L	0.4661	ppb	14:19:30
1	SiO2†	527.4	41.8	2.5688	ug/L	2.5688	ppb	14:20:26
2	Sc Radial	7467.8	7467.8	108	%			14:18:18
2	Y RADIAL	6834.3	6834.3	107.5	%			14:18:18
2	Al 396.153Radial†	-89.6	-12.6	-10.684	ug/L	-10.684	ppb	14:18:18
2	Ca 317.933Radial†	27.2	-1.1	-1.6307	ug/L	-1.6307	ppb	14:18:38
2	Fe 238.204 Radial†	40.9	-1.0	-4.3451	ug/L	-4.3451	ppb	14:18:38
2	K 766.490 Radial†	2788.5	-195.7	-40.446	ug/L	-40.446	ppb	14:18:18
2	Mg 279.077 IEC†	1.8	-2.2	-57.415	ug/L	-57.415	ppb	14:18:38
2	Na 589.592 Radial†	-207.3	138.6	8.5256	ug/L	8.5256	ppb	14:18:18
2	Sr 421.552†	-45.6	19.9	0.0621	ug/L	0.0621	ppb	14:18:18
2	Sc 361.383	758151.4	758151.4	101.81	%			14:19:35
2	Y 371.029	591769.1	591769.1	101.78	%			14:19:35
2	Ag 328.068†	840.8	119.9	0.6471	ug/L	0.6471	ppb	14:19:35
2	As 188.979†	-31.7	3.2	1.0157	ug/L	1.0157	ppb	14:19:55
2	B 249.677†	-477.6	412.3	9.4279	ug/L	9.4279	ppb	14:19:55
2	Ba 233.527†	35.5	12.5	0.0803	ug/L	0.0803	ppb	14:19:55
2	Be 313.107†	-4852.6	18.5	0.0080	ug/L	0.0080	ppb	14:19:35
2	Cd 226.502†	-312.0	-13.2	-0.1480	ug/L	-0.1480	ppb	14:19:55
2	Co 228.616†	-94.6	7.6	0.1212	ug/L	0.1212	ppb	14:19:55
2	Cr 267.716†	-70.6	28.6	0.3556	ug/L	0.3556	ppb	14:19:55
2	Cu 324.752†	5914.7	18.5	0.0621	ug/L	0.0621	ppb	14:19:35
2	Mn 257.610†	705.9	-24.5	-0.0241	ug/L	-0.0241	ppb	14:19:55
2	Mo 202.031†	12.9	8.2	0.5226	ug/L	0.5226	ppb	14:19:55
2	Ni 231.604†	159.6	20.2	0.4822	ug/L	0.4822	ppb	14:19:55

2	P 214.914†	308.7	9.7	4.3643	ug/L	4.3643 ppb	14:19:55
2	Pb 220.353†	-8.3	9.7	1.0222	ug/L	1.0222 ppb	14:19:55
2	S 181.975 Axial†	121.8	-16.4	-19.717	ug/L	-19.717 ppb	14:19:55
2	Sb 206.836†	48.0	-5.5	-1.4655	ug/L	-1.4655 ppb	14:19:55
2	Se 196.026†	-46.2	-10.6	-4.7980	ug/L	-4.7980 ppb	14:19:55
2	Si 251.611†	494.9	37.3	1.0459	ug/L	1.0459 ppb	14:19:55
2	Sn 189.927†	19.4	6.1	0.9524	ug/L	0.9524 ppb	14:19:55
2	Ti 334.940†	-1413.6	138.4	0.2338	ug/L	0.2338 ppb	14:19:35
2	Tl 190.801†	-62.7	-0.4	-0.1030	ug/L	-0.1030 ppb	14:19:55
2	U 409.014†	-5111.7	243.9	7.7080	ug/L	7.7080 ppb	14:19:35
2	V 292.402†	-1760.1	-35.9	-0.2737	ug/L	-0.2737 ppb	14:19:35
2	Zn 213.857†	1063.3	60.0	0.4959	ug/L	0.4959 ppb	14:19:55
2	SiO2†	510.9	26.3	1.5679	ug/L	1.5679 ppb	14:20:31
3	Sc Radial	7100.2	7100.2	102	%		14:18:43
3	Y RADIAL	6557.7	6557.7	103.1	%		14:18:43
3	Al 396.153Radial†	-85.3	-12.7	-10.811	ug/L	-10.811 ppb	14:18:43
3	Ca 317.933Radial†	39.7	12.4	18.284	ug/L	18.284 ppb	14:19:03
3	Fe 238.204 Radial†	37.6	-2.2	-9.7460	ug/L	-9.7460 ppb	14:19:03
3	K 766.490 Radial†	2994.4	139.7	28.838	ug/L	28.838 ppb	14:18:43
3	Mg 279.077 IEC†	5.7	1.6	41.723	ug/L	41.723 ppb	14:19:03
3	Na 589.592 Radial†	-147.5	187.0	11.508	ug/L	11.508 ppb	14:18:43
3	Sr 421.552†	-71.6	-7.6	-0.0240	ug/L	-0.0240 ppb	14:18:43
3	Sc 361.383	719811.8	719811.8	96.664	%		14:20:00
3	Y 371.029	560822.8	560822.8	96.460	%		14:20:00
3	Ag 328.068†	703.3	21.7	0.1206	ug/L	0.1206 ppb	14:20:00
3	As 188.979†	-33.6	-0.5	-0.1578	ug/L	-0.1578 ppb	14:20:20
3	B 249.677†	-497.1	367.0	8.3956	ug/L	8.3956 ppb	14:20:20
3	Ba 233.527†	28.3	6.9	0.0449	ug/L	0.0449 ppb	14:20:20
3	Be 313.107†	-4933.5	-319.1	-0.1285	ug/L	-0.1285 ppb	14:20:00
3	Cd 226.502†	-286.9	-3.5	-0.0381	ug/L	-0.0381 ppb	14:20:20
3	Co 228.616†	-108.2	-11.4	-0.1776	ug/L	-0.1776 ppb	14:20:20
3	Cr 267.716†	-57.4	38.6	0.4853	ug/L	0.4853 ppb	14:20:20
3	Cu 324.752†	5869.4	281.1	0.9450	ug/L	0.9450 ppb	14:20:00
3	Mn 257.610†	713.7	20.4	0.0186	ug/L	0.0186 ppb	14:20:20
3	Mo 202.031†	23.5	19.8	1.2579	ug/L	1.2579 ppb	14:20:20
3	Ni 231.604†	166.0	35.1	0.8392	ug/L	0.8392 ppb	14:20:20
3	P 214.914†	301.3	18.2	8.0056	ug/L	8.0056 ppb	14:20:20
3	Pb 220.353†	-27.6	-10.7	-1.1298	ug/L	-1.1298 ppb	14:20:20
3	S 181.975 Axial†	122.4	-9.4	-11.281	ug/L	-11.281 ppb	14:20:20
3	Sb 206.836†	51.1	0.3	0.0793	ug/L	0.0793 ppb	14:20:20
3	Se 196.026†	-30.4	3.4	1.5230	ug/L	1.5230 ppb	14:20:20
3	Si 251.611†	511.5	80.4	2.2442	ug/L	2.2442 ppb	14:20:20
3	Sn 189.927†	11.2	-1.4	-0.2143	ug/L	-0.2143 ppb	14:20:20
3	Ti 334.940†	-1492.5	-17.3	-0.0261	ug/L	-0.0261 ppb	14:20:00
3	Tl 190.801†	-53.9	5.4	1.2881	ug/L	1.2881 ppb	14:20:20
3	U 409.014†	-5272.0	-189.4	-5.9862	ug/L	-5.9862 ppb	14:20:00
3	V 292.402†	-1629.5	7.1	0.0646	ug/L	0.0646 ppb	14:20:00
3	Zn 213.857†	1056.1	108.2	0.8881	ug/L	0.8881 ppb	14:20:20
3	SiO2†	504.7	46.6	2.7551	ug/L	2.7551 ppb	14:20:36

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	745737.6	100.15	%	3.016				3.01%
Sc Radial	7468.9	108	%	5.3				4.94%
Y 371.029	581716.1	100.05	%	3.113				3.11%
Y RADIAL	6868.1	108.0	%	5.17				4.78%
Ag 328.068†	65.2	0.3518	ug/L	0.26906	0.3518	ppb	0.26906	76.49%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.8	-1.5717	ug/L	15.89338	-1.5717	ppb	15.89338	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.2	0.3756	ug/L	0.59397	0.3756	ppb	0.59397	158.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	391.9	8.9640	ug/L	0.52402	8.9640	ppb	0.52402	5.85%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.2	0.0531	ug/L	0.02413	0.0531	ppb	0.02413	45.45%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-97.1	-0.0389	ug/L	0.07769	-0.0389	ppb	0.07769	199.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2.2	3.1868	ug/L	13.35629	3.1868	ppb	13.35629	419.11%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -1.1     -0.0108 ug/L       0.15261     -0.0108 ppb        0.15261 >999.9%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 1.7      0.0291 ug/L       0.17941      0.0291 ppb        0.17941 616.42%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                39.2      0.4910 ug/L       0.13841      0.4910 ppb        0.13841  28.19%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               114.4      0.3840 ug/L       0.48767      0.3840 ppb        0.48767 127.01%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -3.1     -13.944 ug/L      12.2504     -13.944 ppb        12.2504  87.85%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -97.6     -20.176 ug/L      42.6576     -20.176 ppb        42.6576 211.43%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.0     -26.591 ug/L      59.2558     -26.591 ppb        59.2558 222.84%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -9.7     -0.0110 ug/L       0.02570     -0.0110 ppb        0.02570 232.62%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                14.2      0.9004 ug/L       0.36808      0.9004 ppb        0.36808  40.88%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        163.5      10.060 ug/L        1.4931      10.060 ppb         1.4931  14.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                32.3      0.7737 ug/L       0.26485      0.7737 ppb        0.26485  34.23%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  8.4      3.7154 ug/L       4.64882      3.7154 ppb        4.64882 125.12%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -4.4     -0.4585 ug/L       1.28419     -0.4585 ppb        1.28419 280.09%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -11.5     -13.857 ug/L        5.0875     -13.857 ppb         5.0875  36.71%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 1.2      0.3348 ug/L       1.94070      0.3348 ppb        1.94070 579.73%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.7     -1.2715 ug/L       3.22345     -1.2715 ppb        3.22345 253.52%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                53.3      1.5006 ug/L       0.64925      1.5006 ppb        0.64925  43.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.5     -0.2310 ug/L       1.19180     -0.2310 ppb        1.19180 515.94%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                22.2      0.0689 ug/L       0.09649      0.0689 ppb        0.09649 140.01%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                65.7      0.1126 ug/L       0.13082      0.1126 ppb        0.13082 116.17%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 2.0      0.4866 ug/L       0.71937      0.4866 ppb        0.71937 147.83%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                  6.3      0.1986 ug/L       6.94251      0.1986 ppb        6.94251 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 -9.5     -0.0649 ug/L       0.18253     -0.0649 ppb        0.18253 281.07%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                74.9      0.6167 ug/L       0.23553      0.6167 ppb        0.23553  38.19%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      38.2      2.2973 ug/L       0.63847      2.2973 ppb        0.63847  27.79%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/2/2009 15:11:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7258.8	7258.8	105	%			15:13:12
1	Y RADIAL	6659.2	6659.2	104.7	%			15:13:12
1	Al 396.153Radial†	6231.9	6027.8	5065.6	ug/L	5065.6	ppb	15:13:12
1	Ca 317.933Radial†	3649.5	3462.2	5102.6	ug/L	5102.6	ppb	15:13:12
1	Fe 238.204 Radial†	1253.0	1158.9	5194.5	ug/L	5194.5	ppb	15:13:32
1	K 766.490 Radial†	27298.3	23308.2	4802.5	ug/L	4802.5	ppb	15:13:12
1	Mg 279.077 IEC†	211.3	198.1	5072.1	ug/L	5072.1	ppb	15:13:32
1	Na 589.592 Radial†	166341.7	159339.7	9804.4	ug/L	9804.4	ppb	15:13:12
1	Sr 421.552†	168283.9	160927.4	500.43	ug/L	500.43	ppb	15:13:12
1	Sc 361.383	782892.2	782892.2	105.13	%			15:14:31
1	Y 371.029	602449.0	602449.0	103.62	%			15:14:31
1	Ag 328.068†	95233.4	89876.1	495.02	ug/L	495.02	ppb	15:14:31
1	As 188.979†	1617.5	1572.8	501.34	ug/L	501.34	ppb	15:14:51
1	B 249.677†	21886.6	21698.9	493.40	ug/L	493.40	ppb	15:14:31
1	Ba 233.527†	79369.0	75470.0	490.64	ug/L	490.64	ppb	15:14:31
1	Be 313.107†	1280386.5	1222634.9	493.43	ug/L	493.43	ppb	15:14:31
1	Cd 226.502†	45909.2	43960.2	494.66	ug/L	494.66	ppb	15:14:31
1	Co 228.616†	32315.4	30837.5	487.84	ug/L	487.84	ppb	15:14:51
1	Cr 267.716†	41024.1	39118.4	490.87	ug/L	490.87	ppb	15:14:31
1	Cu 324.752†	159390.7	145814.9	490.87	ug/L	490.87	ppb	15:14:31
1	Mn 257.610†	513733.8	487924.3	491.94	ug/L	491.94	ppb	15:14:31
1	Mo 202.031†	8288.9	7879.6	499.96	ug/L	499.96	ppb	15:14:51
1	Ni 231.604†	21685.1	20489.3	489.83	ug/L	489.83	ppb	15:14:51
1	P 214.914†	6101.3	5509.8	2387.7	ug/L	2387.7	ppb	15:14:51
1	Pb 220.353†	4960.9	4736.4	501.86	ug/L	501.86	ppb	15:14:51
1	S 181.975 Axial†	991.1	806.7	971.72	ug/L	971.72	ppb	15:14:51
1	Sb 206.836†	2000.5	1850.2	508.66	ug/L	508.66	ppb	15:14:51
1	Se 196.026†	1121.0	1101.1	516.64	ug/L	516.64	ppb	15:14:51
1	Si 251.611†	94019.9	88979.0	2497.5	ug/L	2497.5	ppb	15:14:31
1	Sn 189.927†	3345.1	3168.7	497.14	ug/L	497.14	ppb	15:14:51
1	Ti 334.940†	305150.3	291773.1	500.55	ug/L	500.55	ppb	15:14:31
1	Tl 190.801†	2129.6	2086.8	499.00	ug/L	499.00	ppb	15:14:51
1	U 409.014†	10514.6	15265.5	480.93	ug/L	480.93	ppb	15:14:31
1	V 292.402†	60897.3	59615.8	494.88	ug/L	494.88	ppb	15:14:31
1	Zn 213.857†	63669.8	59575.7	488.52	ug/L	488.52	ppb	15:14:31
1	SiO2†	95420.9	90284.8	5416.7	ug/L	5416.7	ppb	15:15:51
2	Sc Radial	7317.7	7317.7	105	%			15:13:37
2	Y RADIAL	6665.7	6665.7	104.8	%			15:13:37
2	Al 396.153Radial†	6266.5	6012.7	5053.2	ug/L	5053.2	ppb	15:13:37
2	Ca 317.933Radial†	3684.7	3467.5	5110.6	ug/L	5110.6	ppb	15:13:37
2	Fe 238.204 Radial†	1258.5	1154.4	5174.2	ug/L	5174.2	ppb	15:13:57
2	K 766.490 Radial†	27409.6	23203.9	4781.1	ug/L	4781.1	ppb	15:13:37
2	Mg 279.077 IEC†	216.0	200.9	5144.2	ug/L	5144.2	ppb	15:13:57
2	Na 589.592 Radial†	167443.3	159105.4	9790.0	ug/L	9790.0	ppb	15:13:37
2	Sr 421.552†	169065.9	160375.1	498.71	ug/L	498.71	ppb	15:13:37
2	Sc 361.383	791469.9	791469.9	106.29	%			15:14:58
2	Y 371.029	609332.0	609332.0	104.80	%			15:14:58
2	Ag 328.068†	96265.5	89865.5	494.96	ug/L	494.96	ppb	15:14:58
2	As 188.979†	1598.1	1537.9	490.28	ug/L	490.28	ppb	15:15:18
2	B 249.677†	22251.8	21816.9	496.14	ug/L	496.14	ppb	15:14:58
2	Ba 233.527†	80058.6	75300.7	489.54	ug/L	489.54	ppb	15:14:58
2	Be 313.107†	1294322.0	1222547.4	493.40	ug/L	493.40	ppb	15:14:58
2	Cd 226.502†	46202.8	43763.1	492.44	ug/L	492.44	ppb	15:14:58
2	Co 228.616†	32178.2	30375.3	480.51	ug/L	480.51	ppb	15:15:18
2	Cr 267.716†	41419.3	39067.3	490.23	ug/L	490.23	ppb	15:14:58
2	Cu 324.752†	162061.5	146684.7	493.79	ug/L	493.79	ppb	15:14:58
2	Mn 257.610†	518575.9	487184.2	491.19	ug/L	491.19	ppb	15:14:58
2	Mo 202.031†	8240.8	7748.9	491.68	ug/L	491.68	ppb	15:15:18
2	Ni 231.604†	21618.3	20203.0	482.98	ug/L	482.98	ppb	15:15:18

2	P 214.914†	6082.3	5428.9	2350.6	ug/L	2350.6 ppb	15:15:18
2	Pb 220.353†	4913.0	4640.3	491.68	ug/L	491.68 ppb	15:15:18
2	S 181.975 Axial†	979.4	785.5	946.13	ug/L	946.13 ppb	15:15:18
2	Sb 206.836†	1986.9	1816.8	499.34	ug/L	499.34 ppb	15:15:18
2	Se 196.026†	1120.9	1089.4	511.25	ug/L	511.25 ppb	15:15:18
2	Si 251.611†	95020.6	88951.4	2496.9	ug/L	2496.9 ppb	15:14:58
2	Sn 189.927†	3338.5	3128.0	490.76	ug/L	490.76 ppb	15:15:18
2	Ti 334.940†	308988.6	292238.6	501.35	ug/L	501.35 ppb	15:14:58
2	Tl 190.801†	2114.7	2050.7	490.47	ug/L	490.47 ppb	15:15:18
2	U 409.014†	10621.4	15257.7	480.69	ug/L	480.69 ppb	15:14:58
2	V 292.402†	61648.8	59695.1	495.43	ug/L	495.43 ppb	15:14:58
2	Zn 213.857†	64176.3	59395.8	487.07	ug/L	487.07 ppb	15:14:58
2	SiO2†	95243.3	89134.2	5347.7	ug/L	5347.7 ppb	15:15:56
3	Sc Radial	7298.0	7298.0	105	%		15:14:02
3	Y RADIAL	6660.9	6660.9	104.7	%		15:14:02
3	Al 396.153Radial†	6274.5	6036.3	5073.0	ug/L	5073.0 ppb	15:14:02
3	Ca 317.933Radial†	3659.4	3452.9	5088.9	ug/L	5088.9 ppb	15:14:02
3	Fe 238.204 Radial†	1260.1	1159.1	5195.7	ug/L	5195.7 ppb	15:14:22
3	K 766.490 Radial†	27310.0	23179.2	4775.9	ug/L	4775.9 ppb	15:14:02
3	Mg 279.077 IEC†	216.0	201.5	5158.6	ug/L	5158.6 ppb	15:14:22
3	Na 589.592 Radial†	167473.0	159561.7	9818.1	ug/L	9818.1 ppb	15:14:02
3	Sr 421.552†	168991.8	160736.9	499.84	ug/L	499.84 ppb	15:14:02
3	Sc 361.383	792100.2	792100.2	106.37	%		15:15:26
3	Y 371.029	609868.2	609868.2	104.90	%		15:15:26
3	Ag 328.068†	96444.8	89962.0	495.50	ug/L	495.50 ppb	15:15:26
3	As 188.979†	1608.2	1546.2	492.91	ug/L	492.91 ppb	15:15:46
3	B 249.677†	22231.8	21781.4	495.31	ug/L	495.31 ppb	15:15:26
3	Ba 233.527†	80411.5	75572.6	491.30	ug/L	491.30 ppb	15:15:26
3	Be 313.107†	1297779.3	1224828.6	494.31	ug/L	494.31 ppb	15:15:26
3	Cd 226.502†	46511.1	44018.4	495.31	ug/L	495.31 ppb	15:15:26
3	Co 228.616†	32418.0	30576.7	483.70	ug/L	483.70 ppb	15:15:46
3	Cr 267.716†	41556.5	39165.3	491.46	ug/L	491.46 ppb	15:15:26
3	Cu 324.752†	161769.1	146288.4	492.46	ug/L	492.46 ppb	15:15:26
3	Mn 257.610†	519885.0	488026.6	492.04	ug/L	492.04 ppb	15:15:26
3	Mo 202.031†	8327.2	7824.0	496.44	ug/L	496.44 ppb	15:15:46
3	Ni 231.604†	21797.6	20355.3	486.63	ug/L	486.63 ppb	15:15:46
3	P 214.914†	6138.2	5477.0	2372.6	ug/L	2372.6 ppb	15:15:46
3	Pb 220.353†	4934.6	4656.9	493.45	ug/L	493.45 ppb	15:15:46
3	S 181.975 Axial†	992.8	797.4	960.47	ug/L	960.47 ppb	15:15:46
3	Sb 206.836†	1987.0	1815.4	499.10	ug/L	499.10 ppb	15:15:46
3	Se 196.026†	1120.5	1088.3	510.82	ug/L	510.82 ppb	15:15:46
3	Si 251.611†	95182.5	89032.4	2499.1	ug/L	2499.1 ppb	15:15:26
3	Sn 189.927†	3366.1	3151.5	494.43	ug/L	494.43 ppb	15:15:46
3	Ti 334.940†	309261.5	292263.9	501.39	ug/L	501.39 ppb	15:15:26
3	Tl 190.801†	2120.3	2054.5	491.36	ug/L	491.36 ppb	15:15:46
3	U 409.014†	10605.3	15234.5	479.95	ug/L	479.95 ppb	15:15:26
3	V 292.402†	61678.7	59677.1	495.34	ug/L	495.34 ppb	15:15:26
3	Zn 213.857†	64355.8	59516.6	488.04	ug/L	488.04 ppb	15:15:26
3	SiO2†	94621.2	88478.0	5307.8	ug/L	5307.8 ppb	15:16:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	788820.7	105.93	%	0.691				0.65%
Sc Radial	7291.5	105	%	0.4				0.41%
Y 371.029	607216.4	104.44	%	0.712				0.68%
Y RADIAL	6661.9	104.8	%	0.05				0.05%
Ag 328.068†	89901.2	495.16	ug/L	0.293	495.16	ppb	0.293	0.06%
QC value within limits for Ag 328.068 Recovery = 99.03%								
Al 396.153Radial†	6025.6	5063.9	ug/L	9.96	5063.9	ppb	9.96	0.20%
QC value within limits for Al 396.153Radial Recovery = 101.28%								
As 188.979†	1552.3	494.84	ug/L	5.779	494.84	ppb	5.779	1.17%
QC value within limits for As 188.979 Recovery = 98.97%								
B 249.677†	21765.7	494.95	ug/L	1.403	494.95	ppb	1.403	0.28%
QC value within limits for B 249.677 Recovery = 98.99%								
Ba 233.527†	75447.8	490.49	ug/L	0.890	490.49	ppb	0.890	0.18%
QC value within limits for Ba 233.527 Recovery = 98.10%								
Be 313.107†	1223337.0	493.71	ug/L	0.521	493.71	ppb	0.521	0.11%
QC value within limits for Be 313.107 Recovery = 98.74%								
Ca 317.933Radial†	3460.9	5100.7	ug/L	10.95	5100.7	ppb	10.95	0.21%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.01%
Cd 226.502†            43913.9      494.14 ug/L         1.507      494.14 ppb          1.507   0.30%
   QC value within limits for Cd 226.502  Recovery = 98.83%
Co 228.616†            30596.5      484.02 ug/L         3.676      484.02 ppb          3.676   0.76%
   QC value within limits for Co 228.616  Recovery = 96.80%
Cr 267.716†            39117.0      490.86 ug/L         0.614      490.86 ppb          0.614   0.13%
   QC value within limits for Cr 267.716  Recovery = 98.17%
Cu 324.752†           146262.7      492.37 ug/L         1.465      492.37 ppb          1.465   0.30%
   QC value within limits for Cu 324.752  Recovery = 98.47%
Fe 238.204 Radial†      1157.4      5188.2 ug/L        12.06      5188.2 ppb         12.06   0.23%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.76%
K 766.490 Radial†      23230.4      4786.5 ug/L        14.11      4786.5 ppb         14.11   0.29%
   QC value within limits for K 766.490 Radial  Recovery = 95.73%
Mg 279.077 IEC†          200.1      5125.0 ug/L        46.32      5125.0 ppb         46.32   0.90%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.50%
Mn 257.610†           487711.7      491.72 ug/L         0.465      491.72 ppb          0.465   0.09%
   QC value within limits for Mn 257.610  Recovery = 98.34%
Mo 202.031†             7817.5      496.03 ug/L         4.158      496.03 ppb          4.158   0.84%
   QC value within limits for Mo 202.031  Recovery = 99.21%
Na 589.592 Radial†    159335.6      9804.2 ug/L        14.04      9804.2 ppb         14.04   0.14%
   QC value within limits for Na 589.592 Radial  Recovery = 98.04%
Ni 231.604†            20349.2      486.48 ug/L         3.425      486.48 ppb          3.425   0.70%
   QC value within limits for Ni 231.604  Recovery = 97.30%
P 214.914†              5471.9      2370.3 ug/L        18.63      2370.3 ppb         18.63   0.79%
   QC value within limits for P 214.914  Recovery = 94.81%
Pb 220.353†             4677.8      495.66 ug/L         5.439      495.66 ppb          5.439   1.10%
   QC value within limits for Pb 220.353  Recovery = 99.13%
S 181.975 Axial†         796.5      959.44 ug/L        12.823      959.44 ppb         12.823   1.34%
   QC value within limits for S 181.975 Axial  Recovery = 95.94%
Sb 206.836†             1827.5      502.37 ug/L         5.452      502.37 ppb          5.452   1.09%
   QC value within limits for Sb 206.836  Recovery = 100.47%
Se 196.026†             1092.9      512.90 ug/L         3.241      512.90 ppb          3.241   0.63%
   QC value within limits for Se 196.026  Recovery = 102.58%
Si 251.611†            88987.6      2497.8 ug/L         1.12      2497.8 ppb          1.12   0.04%
   QC value within limits for Si 251.611  Recovery = 99.91%
Sn 189.927†             3149.4      494.11 ug/L         3.200      494.11 ppb          3.200   0.65%
   QC value within limits for Sn 189.927  Recovery = 98.82%
Sr 421.552†           160679.8      499.66 ug/L         0.873      499.66 ppb          0.873   0.17%
   QC value within limits for Sr 421.552  Recovery = 99.93%
Ti 334.940†           292091.9      501.09 ug/L         0.474      501.09 ppb          0.474   0.09%
   QC value within limits for Ti 334.940  Recovery = 100.22%
Tl 190.801†             2064.0      493.61 ug/L         4.689      493.61 ppb          4.689   0.95%
   QC value within limits for Tl 190.801  Recovery = 98.72%
U 409.014†             15252.6      480.52 ug/L         0.511      480.52 ppb          0.511   0.11%
   QC value within limits for U 409.014  Recovery = 96.10%
V 292.402†             59662.7      495.21 ug/L         0.294      495.21 ppb          0.294   0.06%
   QC value within limits for V 292.402  Recovery = 99.04%
Zn 213.857†            59496.0      487.88 ug/L         0.739      487.88 ppb          0.739   0.15%
   QC value within limits for Zn 213.857  Recovery = 97.58%
SiO2†                  89299.0      5357.4 ug/L        55.10      5357.4 ppb         55.10   1.03%
   QC value within limits for SiO2  Recovery = 100.19%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/2/2009 15:18:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7836.0	7836.0	113	%			15:20:03
1	Y RADIAL	7204.0	7204.0	113.3	%			15:20:03
1	Al 396.153Radial†	-82.3	-2.3	-1.9972	ug/L	-1.9972	ppb	15:20:03
1	Ca 317.933Radial†	31.6	1.6	2.3164	ug/L	2.3164	ppb	15:20:23
1	Fe 238.204 Radial†	37.6	-5.6	-25.154	ug/L	-25.154	ppb	15:20:23
1	K 766.490 Radial†	2764.6	-338.6	-69.978	ug/L	-69.978	ppb	15:20:03
1	Mg 279.077 IEC†	1.9	-2.3	-58.877	ug/L	-58.877	ppb	15:20:23
1	Na 589.592 Radial†	-198.1	155.8	9.5839	ug/L	9.5839	ppb	15:20:03
1	Sr 421.552†	-32.8	33.2	0.1034	ug/L	0.1034	ppb	15:20:03
1	Sc 361.383	759879.2	759879.2	102.04	%			15:21:20
1	Y 371.029	592567.0	592567.0	101.92	%			15:21:20
1	Ag 328.068†	730.5	10.0	0.0430	ug/L	0.0430	ppb	15:21:20
1	As 188.979†	-32.7	2.3	0.7045	ug/L	0.7045	ppb	15:21:40
1	B 249.677†	-471.2	419.6	9.5966	ug/L	9.5966	ppb	15:21:20
1	Ba 233.527†	41.1	17.8	0.1157	ug/L	0.1157	ppb	15:21:40
1	Be 313.107†	-4849.6	32.3	0.0135	ug/L	0.0135	ppb	15:21:20
1	Cd 226.502†	-274.8	23.9	0.2731	ug/L	0.2731	ppb	15:21:40
1	Co 228.616†	-91.3	11.1	0.1788	ug/L	0.1788	ppb	15:21:40
1	Cr 267.716†	-71.7	27.7	0.3453	ug/L	0.3453	ppb	15:21:20
1	Cu 324.752†	5818.4	-89.0	-0.3009	ug/L	-0.3009	ppb	15:21:20
1	Mn 257.610†	739.6	6.9	0.0049	ug/L	0.0049	ppb	15:21:20
1	Mo 202.031†	29.2	24.2	1.5300	ug/L	1.5300	ppb	15:21:40
1	Ni 231.604†	177.0	36.9	0.8817	ug/L	0.8817	ppb	15:21:40
1	P 214.914†	307.6	7.9	3.6504	ug/L	3.6504	ppb	15:21:40
1	Pb 220.353†	-15.3	2.8	0.3017	ug/L	0.3017	ppb	15:21:40
1	S 181.975 Axial†	115.4	-22.9	-27.567	ug/L	-27.567	ppb	15:21:40
1	Sb 206.836†	45.9	-7.6	-2.0171	ug/L	-2.0171	ppb	15:21:40
1	Se 196.026†	-34.5	1.0	0.3701	ug/L	0.3701	ppb	15:21:40
1	Si 251.611†	755.4	291.5	8.2177	ug/L	8.2177	ppb	15:21:40
1	Sn 189.927†	21.8	8.3	1.3032	ug/L	1.3032	ppb	15:21:40
1	Ti 334.940†	-1422.0	133.3	0.2270	ug/L	0.2270	ppb	15:21:20
1	Tl 190.801†	-53.8	8.4	2.0047	ug/L	2.0047	ppb	15:21:40
1	U 409.014†	-5247.1	122.6	3.8772	ug/L	3.8772	ppb	15:21:20
1	V 292.402†	-1733.9	-6.4	-0.0231	ug/L	-0.0231	ppb	15:21:20
1	Zn 213.857†	1063.1	57.4	0.4742	ug/L	0.4742	ppb	15:21:40
1	SiO2†	768.2	277.3	16.708	ug/L	16.708	ppb	15:22:36
2	Sc Radial	7262.1	7262.1	105	%			15:20:28
2	Y RADIAL	6673.4	6673.4	104.9	%			15:20:28
2	Al 396.153Radial†	-81.0	-6.8	-5.7661	ug/L	-5.7661	ppb	15:20:28
2	Ca 317.933Radial†	22.2	-5.2	-7.6921	ug/L	-7.6921	ppb	15:20:48
2	Fe 238.204 Radial†	35.9	-4.7	-20.950	ug/L	-20.950	ppb	15:20:48
2	K 766.490 Radial†	2823.5	-88.9	-18.376	ug/L	-18.376	ppb	15:20:28
2	Mg 279.077 IEC†	7.3	3.0	77.097	ug/L	77.097	ppb	15:20:48
2	Na 589.592 Radial†	-362.3	-15.0	-0.9225	ug/L	-0.9225	ppb	15:20:28
2	Sr 421.552†	-81.6	-15.6	-0.0486	ug/L	-0.0486	ppb	15:20:28
2	Sc 361.383	775206.2	775206.2	104.10	%			15:21:45
2	Y 371.029	605283.5	605283.5	104.11	%			15:21:45
2	Ag 328.068†	788.8	51.8	0.2754	ug/L	0.2754	ppb	15:21:45
2	As 188.979†	-23.8	11.4	3.6047	ug/L	3.6047	ppb	15:22:05
2	B 249.677†	-531.7	370.6	8.4767	ug/L	8.4767	ppb	15:21:45
2	Ba 233.527†	31.2	7.5	0.0511	ug/L	0.0511	ppb	15:22:05
2	Be 313.107†	-4862.3	114.1	0.0468	ug/L	0.0468	ppb	15:21:45
2	Cd 226.502†	-277.5	26.6	0.3025	ug/L	0.3025	ppb	15:22:05
2	Co 228.616†	-99.0	5.4	0.0874	ug/L	0.0874	ppb	15:22:05
2	Cr 267.716†	-95.8	6.0	0.0736	ug/L	0.0736	ppb	15:21:45
2	Cu 324.752†	5924.9	-99.5	-0.3359	ug/L	-0.3359	ppb	15:21:45
2	Mn 257.610†	837.7	86.8	0.0833	ug/L	0.0833	ppb	15:21:45
2	Mo 202.031†	19.5	14.3	0.9059	ug/L	0.9059	ppb	15:22:05
2	Ni 231.604†	153.8	11.1	0.2666	ug/L	0.2666	ppb	15:22:05

2	P 214.914†	306.5	0.8	0.4618	ug/L	0.4618 ppb	15:22:05
2	Pb 220.353†	-17.1	1.4	0.1529	ug/L	0.1529 ppb	15:22:05
2	S 181.975 Axial†	115.8	-24.8	-29.855	ug/L	-29.855 ppb	15:22:05
2	Sb 206.836†	41.1	-13.1	-3.5411	ug/L	-3.5411 ppb	15:22:05
2	Se 196.026†	-34.1	2.1	0.8687	ug/L	0.8687 ppb	15:22:05
2	Si 251.611†	764.0	285.1	8.0430	ug/L	8.0430 ppb	15:22:05
2	Sn 189.927†	15.6	2.0	0.3109	ug/L	0.3109 ppb	15:22:05
2	Ti 334.940†	-1368.0	212.7	0.3617	ug/L	0.3617 ppb	15:21:45
2	Tl 190.801†	-59.0	4.5	1.0621	ug/L	1.0621 ppb	15:22:05
2	U 409.014†	-5275.6	196.8	6.2228	ug/L	6.2228 ppb	15:21:45
2	V 292.402†	-1640.6	117.0	0.9866	ug/L	0.9866 ppb	15:21:45
2	Zn 213.857†	1040.1	14.7	0.1201	ug/L	0.1201 ppb	15:22:05
2	SiO2†	759.6	254.1	15.322	ug/L	15.322 ppb	15:22:41
3	Sc Radial	7197.0	7197.0	104	%		15:20:53
3	Y RADIAL	6642.2	6642.2	104.5	%		15:20:53
3	Al 396.153Radial†	-63.2	9.7	8.1448	ug/L	8.1448 ppb	15:20:53
3	Ca 317.933Radial†	24.5	-2.8	-4.0995	ug/L	-4.0995 ppb	15:21:13
3	Fe 238.204 Radial†	39.1	-1.2	-5.4154	ug/L	-5.4154 ppb	15:21:13
3	K 766.490 Radial†	2728.8	-155.7	-32.191	ug/L	-32.191 ppb	15:20:53
3	Mg 279.077 IEC†	5.1	1.0	24.605	ug/L	24.605 ppb	15:21:13
3	Na 589.592 Radial†	-283.8	57.6	3.5419	ug/L	3.5419 ppb	15:20:53
3	Sr 421.552†	7.4	69.5	0.2161	ug/L	0.2161 ppb	15:20:53
3	Sc 361.383	765116.2	765116.2	102.75	%		15:22:11
3	Y 371.029	596710.1	596710.1	102.63	%		15:22:11
3	Ag 328.068†	770.2	43.7	0.2325	ug/L	0.2325 ppb	15:22:11
3	As 188.979†	-30.6	4.5	1.4161	ug/L	1.4161 ppb	15:22:31
3	B 249.677†	-467.8	426.0	9.7415	ug/L	9.7415 ppb	15:22:11
3	Ba 233.527†	4.0	-18.5	-0.1187	ug/L	-0.1187 ppb	15:22:31
3	Be 313.107†	-4901.6	14.2	0.0063	ug/L	0.0063 ppb	15:22:11
3	Cd 226.502†	-281.3	19.5	0.2198	ug/L	0.2198 ppb	15:22:31
3	Co 228.616†	-91.6	11.3	0.1803	ug/L	0.1803 ppb	15:22:31
3	Cr 267.716†	-33.8	65.1	0.8139	ug/L	0.8139 ppb	15:22:11
3	Cu 324.752†	5840.5	-106.6	-0.3588	ug/L	-0.3588 ppb	15:22:11
3	Mn 257.610†	716.8	-20.3	-0.0216	ug/L	-0.0216 ppb	15:22:11
3	Mo 202.031†	20.1	15.2	0.9623	ug/L	0.9623 ppb	15:22:31
3	Ni 231.604†	147.7	7.1	0.1693	ug/L	0.1693 ppb	15:22:31
3	P 214.914†	302.2	0.5	0.3264	ug/L	0.3264 ppb	15:22:31
3	Pb 220.353†	-10.3	7.8	0.8269	ug/L	0.8269 ppb	15:22:31
3	S 181.975 Axial†	109.5	-29.4	-35.412	ug/L	-35.412 ppb	15:22:31
3	Sb 206.836†	49.8	-4.1	-1.1145	ug/L	-1.1145 ppb	15:22:31
3	Se 196.026†	-29.2	6.4	2.8836	ug/L	2.8836 ppb	15:22:31
3	Si 251.611†	738.4	269.8	7.6143	ug/L	7.6143 ppb	15:22:31
3	Sn 189.927†	15.9	2.5	0.3889	ug/L	0.3889 ppb	15:22:31
3	Ti 334.940†	-1409.6	154.9	0.2613	ug/L	0.2613 ppb	15:22:11
3	Tl 190.801†	-61.7	1.1	0.2520	ug/L	0.2520 ppb	15:22:31
3	U 409.014†	-5123.3	278.3	8.7942	ug/L	8.7942 ppb	15:22:11
3	V 292.402†	-1663.3	74.1	0.6372	ug/L	0.6372 ppb	15:22:11
3	Zn 213.857†	1026.1	14.3	0.1175	ug/L	0.1175 ppb	15:22:31
3	SiO2†	748.9	253.3	15.280	ug/L	15.280 ppb	15:22:46

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	766733.9	102.97	%	1.046				1.02%
Sc Radial	7431.7	107	%	5.1				4.73%
Y 371.029	598186.9	102.89	%	1.116				1.08%
Y RADIAL	6839.9	107.6	%	4.96				4.62%
Ag 328.068†	35.2	0.1836	ug/L	0.12366	0.1836	ppb	0.12366	67.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	0.2	0.1272	ug/L	7.19464	0.1272	ppb	7.19464	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	6.0	1.9084	ug/L	1.51152	1.9084	ppb	1.51152	79.20%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	405.4	9.2716	ug/L	0.69221	9.2716	ppb	0.69221	7.47%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	2.3	0.0160	ug/L	0.12104	0.0160	ppb	0.12104	754.47%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	53.5	0.0222	ug/L	0.02158	0.0222	ppb	0.02158	97.13%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.1	-3.1584	ug/L	5.07018	-3.1584	ppb	5.07018	160.53%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                23.3      0.2651 ug/L       0.04196      0.2651 ppb        0.04196  15.83%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 9.3      0.1488 ug/L       0.05322      0.1488 ppb        0.05322  35.76%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                32.9      0.4109 ug/L       0.37444      0.4109 ppb        0.37444  91.12%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -98.4     -0.3319 ug/L       0.02915     -0.3319 ppb        0.02915   8.78%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -3.8     -17.173 ug/L       10.3972     -17.173 ppb        10.3972  60.54%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -194.4     -40.182 ug/L       26.7128     -40.182 ppb        26.7128  66.48%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.6      14.275 ug/L       68.5732      14.275 ppb        68.5732 480.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                24.5      0.0222 ug/L       0.05451      0.0222 ppb        0.05451 245.37%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                17.9      1.1327 ug/L       0.34519      1.1327 ppb        0.34519  30.47%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         66.1      4.0677 ug/L       5.27289      4.0677 ppb        5.27289 129.63%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                18.4      0.4392 ug/L       0.38630      0.4392 ppb        0.38630  87.95%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  3.1      1.4796 ug/L       1.88124      1.4796 ppb        1.88124 127.15%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 4.0      0.4272 ug/L       0.35409      0.4272 ppb        0.35409  82.89%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -25.7     -30.945 ug/L        4.0344     -30.945 ppb         4.0344  13.04%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -8.3     -2.2243 ug/L       1.22649     -2.2243 ppb        1.22649  55.14%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.2      1.3741 ug/L       1.33081      1.3741 ppb        1.33081  96.85%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               282.2      7.9583 ug/L       0.31048      7.9583 ppb        0.31048   3.90%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 4.3      0.6677 ug/L       0.55178      0.6677 ppb        0.55178  82.64%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                29.0      0.0903 ug/L       0.13283      0.0903 ppb        0.13283 147.10%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               166.9      0.2833 ug/L       0.07001      0.2833 ppb        0.07001  24.71%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 4.7      1.1063 ug/L       0.87717      1.1063 ppb        0.87717  79.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                199.2      6.2981 ug/L       2.45939      6.2981 ppb        2.45939  39.05%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 61.6      0.5336 ug/L       0.51277      0.5336 ppb        0.51277  96.10%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                28.8      0.2373 ug/L       0.20519      0.2373 ppb        0.20519  86.47%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     261.6      15.770 ug/L        0.8130      15.770 ppb         0.8130   5.16%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/2/2009 16:14:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7087.6	7087.6	102	%			16:16:15
1	Y RADIAL	6467.1	6467.1	101.7	%			16:16:15
1	Al 396.153Radial†	6269.3	6208.3	5218.0	ug/L	5218.0	ppb	16:15:55
1	Ca 317.933Radial†	3648.0	3545.0	5224.7	ug/L	5224.7	ppb	16:16:15
1	Fe 238.204 Radial†	1264.1	1198.6	5372.1	ug/L	5372.1	ppb	16:16:15
1	K 766.490 Radial†	27346.7	23986.0	4942.5	ug/L	4942.5	ppb	16:15:55
1	Mg 279.077 IEC†	218.9	210.4	5386.6	ug/L	5386.6	ppb	16:16:15
1	Na 589.592 Radial†	167680.7	164492.1	10121	ug/L	10121	ppb	16:15:55
1	Sr 421.552†	169326.6	165834.6	515.69	ug/L	515.69	ppb	16:15:55
1	Sc 361.383	789215.8	789215.8	105.98	%			16:17:14
1	Y 371.029	607472.8	607472.8	104.48	%			16:17:14
1	Ag 328.068†	96061.9	89932.0	495.39	ug/L	495.39	ppb	16:17:14
1	As 188.979†	1627.5	1569.9	500.45	ug/L	500.45	ppb	16:17:34
1	B 249.677†	22076.4	21711.2	493.67	ug/L	493.67	ppb	16:17:14
1	Ba 233.527†	80076.1	75532.3	491.04	ug/L	491.04	ppb	16:17:14
1	Be 313.107†	1294211.4	1225921.1	494.75	ug/L	494.75	ppb	16:17:14
1	Cd 226.502†	46288.9	43968.6	494.74	ug/L	494.74	ppb	16:17:14
1	Co 228.616†	32607.2	30866.6	488.30	ug/L	488.30	ppb	16:17:34
1	Cr 267.716†	41362.5	39125.1	490.96	ug/L	490.96	ppb	16:17:14
1	Cu 324.752†	161592.3	146677.5	493.78	ug/L	493.78	ppb	16:17:14
1	Mn 257.610†	517924.6	487963.1	492.00	ug/L	492.00	ppb	16:17:14
1	Mo 202.031†	8370.6	7893.6	500.86	ug/L	500.86	ppb	16:17:34
1	Ni 231.604†	21898.3	20525.2	490.69	ug/L	490.69	ppb	16:17:34
1	P 214.914†	6181.2	5538.7	2400.0	ug/L	2400.0	ppb	16:17:34
1	Pb 220.353†	4967.2	4704.6	498.51	ug/L	498.51	ppb	16:17:34
1	S 181.975 Axial†	1005.1	812.4	978.55	ug/L	978.55	ppb	16:17:34
1	Sb 206.836†	1998.8	1833.3	504.13	ug/L	504.13	ppb	16:17:34
1	Se 196.026†	1138.7	1109.3	520.93	ug/L	520.93	ppb	16:17:34
1	Si 251.611†	94924.5	89116.0	2501.3	ug/L	2501.3	ppb	16:17:14
1	Sn 189.927†	3381.3	3177.4	498.52	ug/L	498.52	ppb	16:17:34
1	Ti 334.940†	308013.9	292149.3	501.20	ug/L	501.20	ppb	16:17:14
1	Tl 190.801†	2153.9	2093.4	500.59	ug/L	500.59	ppb	16:17:34
1	U 409.014†	10632.1	15296.3	481.88	ug/L	481.88	ppb	16:17:14
1	V 292.402†	61544.9	59762.8	496.08	ug/L	496.08	ppb	16:17:14
1	Zn 213.857†	64217.1	59606.8	488.74	ug/L	488.74	ppb	16:17:14
1	SiO2†	95096.6	89251.7	5354.1	ug/L	5354.1	ppb	16:18:35
2	Sc Radial	7084.7	7084.7	102	%			16:16:40
2	Y RADIAL	6486.6	6486.6	102.0	%			16:16:40
2	Al 396.153Radial†	6307.4	6248.1	5251.8	ug/L	5251.8	ppb	16:16:20
2	Ca 317.933Radial†	3656.9	3555.2	5239.7	ug/L	5239.7	ppb	16:16:40
2	Fe 238.204 Radial†	1269.2	1204.1	5396.7	ug/L	5396.7	ppb	16:16:40
2	K 766.490 Radial†	27519.5	24166.1	4979.8	ug/L	4979.8	ppb	16:16:20
2	Mg 279.077 IEC†	213.8	205.5	5260.8	ug/L	5260.8	ppb	16:16:40
2	Na 589.592 Radial†	168520.9	165381.7	10176	ug/L	10176	ppb	16:16:20
2	Sr 421.552†	170581.1	167130.6	519.72	ug/L	519.72	ppb	16:16:20
2	Sc 361.383	798144.9	798144.9	107.18	%			16:17:41
2	Y 371.029	613471.3	613471.3	105.52	%			16:17:41
2	Ag 328.068†	97176.9	89958.4	495.53	ug/L	495.53	ppb	16:17:41
2	As 188.979†	1629.5	1554.6	495.62	ug/L	495.62	ppb	16:18:02
2	B 249.677†	22343.8	21727.7	494.08	ug/L	494.08	ppb	16:17:41
2	Ba 233.527†	80927.0	75481.0	490.71	ug/L	490.71	ppb	16:17:41
2	Be 313.107†	1309912.1	1226908.4	495.15	ug/L	495.15	ppb	16:17:41
2	Cd 226.502†	46954.7	44101.1	496.22	ug/L	496.22	ppb	16:17:41
2	Co 228.616†	32532.7	30452.9	481.73	ug/L	481.73	ppb	16:18:02
2	Cr 267.716†	41837.5	39131.6	491.04	ug/L	491.04	ppb	16:17:41
2	Cu 324.752†	163214.2	146485.0	493.13	ug/L	493.13	ppb	16:17:41
2	Mn 257.610†	524487.4	488619.1	492.66	ug/L	492.66	ppb	16:17:41
2	Mo 202.031†	8338.4	7775.1	493.35	ug/L	493.35	ppb	16:18:02
2	Ni 231.604†	21879.0	20276.0	484.73	ug/L	484.73	ppb	16:18:02

2	P 214.914†	6170.4	5463.3	2366.1 ug/L	2366.1 ppb	16:18:02
2	Pb 220.353†	4961.0	4646.4	492.35 ug/L	492.35 ppb	16:18:02
2	S 181.975 Axial†	986.6	784.5	944.87 ug/L	944.87 ppb	16:18:02
2	Sb 206.836†	1992.2	1806.1	496.50 ug/L	496.50 ppb	16:18:02
2	Se 196.026†	1134.3	1093.1	513.69 ug/L	513.69 ppb	16:18:02
2	Si 251.611†	96161.0	89267.7	2505.7 ug/L	2505.7 ppb	16:17:41
2	Sn 189.927†	3383.4	3143.6	493.24 ug/L	493.24 ppb	16:18:02
2	Ti 334.940†	311619.7	292262.2	501.39 ug/L	501.39 ppb	16:17:41
2	Tl 190.801†	2147.3	2064.6	493.77 ug/L	493.77 ppb	16:18:02
2	U 409.014†	10841.9	15379.8	484.52 ug/L	484.52 ppb	16:17:41
2	V 292.402†	62092.4	59623.9	494.84 ug/L	494.84 ppb	16:17:41
2	Zn 213.857†	64961.0	59623.0	488.91 ug/L	488.91 ppb	16:17:41
2	SiO2†	95917.3	89013.5	5340.1 ug/L	5340.1 ppb	16:18:40
3	Sc Radial	7089.4	7089.4	102 %		16:17:05
3	Y RADIAL	6505.2	6505.2	102.3 %		16:17:05
3	Al 396.153Radial†	6214.0	6152.6	5171.2 ug/L	5171.2 ppb	16:16:45
3	Ca 317.933Radial†	3647.9	3544.0	5223.3 ug/L	5223.3 ppb	16:17:05
3	Fe 238.204 Radial†	1262.3	1196.6	5362.8 ug/L	5362.8 ppb	16:17:05
3	K 766.490 Radial†	27221.0	23856.2	4915.8 ug/L	4915.8 ppb	16:16:45
3	Mg 279.077 IEC†	213.1	204.6	5239.8 ug/L	5239.8 ppb	16:17:05
3	Na 589.592 Radial†	166673.7	163465.3	10058 ug/L	10058 ppb	16:16:45
3	Sr 421.552†	168728.0	165207.1	513.74 ug/L	513.74 ppb	16:16:45
3	Sc 361.383	793551.9	793551.9	106.57 %		16:18:09
3	Y 371.029	609940.2	609940.2	104.91 %		16:18:09
3	Ag 328.068†	96851.2	90177.5	496.73 ug/L	496.73 ppb	16:18:09
3	As 188.979†	1614.1	1549.0	493.84 ug/L	493.84 ppb	16:18:29
3	B 249.677†	22294.7	21802.3	495.79 ug/L	495.79 ppb	16:18:09
3	Ba 233.527†	80762.1	75763.3	492.54 ug/L	492.54 ppb	16:18:09
3	Be 313.107†	1305184.0	1229545.2	496.21 ug/L	496.21 ppb	16:18:09
3	Cd 226.502†	46815.0	44223.5	497.60 ug/L	497.60 ppb	16:18:09
3	Co 228.616†	32338.0	30445.9	481.63 ug/L	481.63 ppb	16:18:29
3	Cr 267.716†	41678.6	39208.4	492.01 ug/L	492.01 ppb	16:18:09
3	Cu 324.752†	162507.8	146703.4	493.87 ug/L	493.87 ppb	16:18:09
3	Mn 257.610†	522553.0	489636.1	493.68 ug/L	493.68 ppb	16:18:09
3	Mo 202.031†	8314.8	7798.0	494.80 ug/L	494.80 ppb	16:18:29
3	Ni 231.604†	21771.5	20293.3	485.14 ug/L	485.14 ppb	16:18:29
3	P 214.914†	6122.1	5451.3	2360.6 ug/L	2360.6 ppb	16:18:29
3	Pb 220.353†	4937.0	4650.6	492.79 ug/L	492.79 ppb	16:18:29
3	S 181.975 Axial†	992.4	795.3	957.98 ug/L	957.98 ppb	16:18:29
3	Sb 206.836†	1989.9	1814.7	498.81 ug/L	498.81 ppb	16:18:29
3	Se 196.026†	1120.9	1086.7	510.66 ug/L	510.66 ppb	16:18:29
3	Si 251.611†	95747.7	89399.1	2509.5 ug/L	2509.5 ppb	16:18:09
3	Sn 189.927†	3352.0	3132.5	491.49 ug/L	491.49 ppb	16:18:29
3	Ti 334.940†	310207.1	292619.3	502.01 ug/L	502.01 ppb	16:18:09
3	Tl 190.801†	2122.0	2052.4	490.88 ug/L	490.88 ppb	16:18:29
3	U 409.014†	10639.3	15248.2	480.36 ug/L	480.36 ppb	16:18:09
3	V 292.402†	61986.2	59859.6	496.79 ug/L	496.79 ppb	16:18:09
3	Zn 213.857†	64812.0	59834.0	490.66 ug/L	490.66 ppb	16:18:09
3	SiO2†	95660.5	89290.5	5356.9 ug/L	5356.9 ppb	16:18:45

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	793637.5	106.58	%	0.600				0.56%
Sc Radial	7087.2	102	%	0.0				0.03%
Y 371.029	610294.8	104.97	%	0.519				0.49%
Y RADIAL	6486.3	102.0	%	0.30				0.29%
Ag 328.068†	90022.6	495.88	ug/L	0.738	495.88	ppb	0.738	0.15%
QC value within limits for Ag 328.068 Recovery = 99.18%								
Al 396.153Radial†	6203.0	5213.7	ug/L	40.50	5213.7	ppb	40.50	0.78%
QC value within limits for Al 396.153Radial Recovery = 104.27%								
As 188.979†	1557.8	496.64	ug/L	3.422	496.64	ppb	3.422	0.69%
QC value within limits for As 188.979 Recovery = 99.33%								
B 249.677†	21747.1	494.51	ug/L	1.123	494.51	ppb	1.123	0.23%
QC value within limits for B 249.677 Recovery = 98.90%								
Ba 233.527†	75592.2	491.43	ug/L	0.977	491.43	ppb	0.977	0.20%
QC value within limits for Ba 233.527 Recovery = 98.29%								
Be 313.107†	1227458.2	495.37	ug/L	0.755	495.37	ppb	0.755	0.15%
QC value within limits for Be 313.107 Recovery = 99.07%								
Ca 317.933Radial†	3548.1	5229.3	ug/L	9.08	5229.3	ppb	9.08	0.17%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.59%
Cd 226.502†            44097.7      496.19 ug/L         1.434      496.19 ppb          1.434   0.29%
   QC value within limits for Cd 226.502  Recovery = 99.24%
Co 228.616†            30588.5      483.89 ug/L         3.820      483.89 ppb          3.820   0.79%
   QC value within limits for Co 228.616  Recovery = 96.78%
Cr 267.716†            39155.0      491.34 ug/L         0.582      491.34 ppb          0.582   0.12%
   QC value within limits for Cr 267.716  Recovery = 98.27%
Cu 324.752†           146622.0      493.59 ug/L         0.400      493.59 ppb          0.400   0.08%
   QC value within limits for Cu 324.752  Recovery = 98.72%
Fe 238.204 Radial†      1199.8      5377.2 ug/L         17.50      5377.2 ppb          17.50   0.33%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.54%
K 766.490 Radial†      24002.8      4946.0 ug/L         32.16      4946.0 ppb          32.16   0.65%
   QC value within limits for K 766.490 Radial  Recovery = 98.92%
Mg 279.077 IEC†          206.8      5295.7 ug/L         79.39      5295.7 ppb          79.39   1.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.91%
Mn 257.610†           488739.4      492.78 ug/L         0.849      492.78 ppb          0.849   0.17%
   QC value within limits for Mn 257.610  Recovery = 98.56%
Mo 202.031†             7822.2      496.34 ug/L         3.985      496.34 ppb          3.985   0.80%
   QC value within limits for Mo 202.031  Recovery = 99.27%
Na 589.592 Radial†    164446.4       10119 ug/L          59.0       10119 ppb           59.0   0.58%
   QC value within limits for Na 589.592 Radial  Recovery = 101.19%
Ni 231.604†            20364.9      486.85 ug/L         3.326      486.85 ppb          3.326   0.68%
   QC value within limits for Ni 231.604  Recovery = 97.37%
P 214.914†              5484.4      2375.6 ug/L         21.35      2375.6 ppb          21.35   0.90%
   QC value within limits for P 214.914  Recovery = 95.02%
Pb 220.353†             4667.2      494.55 ug/L         3.438      494.55 ppb          3.438   0.70%
   QC value within limits for Pb 220.353  Recovery = 98.91%
S 181.975 Axial†         797.4      960.47 ug/L        16.979      960.47 ppb         16.979   1.77%
   QC value within limits for S 181.975 Axial  Recovery = 96.05%
Sb 206.836†             1818.1      499.82 ug/L         3.914      499.82 ppb          3.914   0.78%
   QC value within limits for Sb 206.836  Recovery = 99.96%
Se 196.026†             1096.4      515.09 ug/L         5.279      515.09 ppb          5.279   1.02%
   QC value within limits for Se 196.026  Recovery = 103.02%
Si 251.611†            89260.9      2505.5 ug/L          4.11      2505.5 ppb           4.11   0.16%
   QC value within limits for Si 251.611  Recovery = 100.22%
Sn 189.927†             3151.2      494.41 ug/L         3.661      494.41 ppb          3.661   0.74%
   QC value within limits for Sn 189.927  Recovery = 98.88%
Sr 421.552†           166057.5      516.38 ug/L         3.051      516.38 ppb          3.051   0.59%
   QC value within limits for Sr 421.552  Recovery = 103.28%
Ti 334.940†           292343.6      501.53 ug/L         0.421      501.53 ppb          0.421   0.08%
   QC value within limits for Ti 334.940  Recovery = 100.31%
Tl 190.801†             2070.1      495.08 ug/L         4.982      495.08 ppb          4.982   1.01%
   QC value within limits for Tl 190.801  Recovery = 99.02%
U 409.014†             15308.1      482.25 ug/L         2.103      482.25 ppb          2.103   0.44%
   QC value within limits for U 409.014  Recovery = 96.45%
V 292.402†             59748.8      495.90 ug/L         0.985      495.90 ppb          0.985   0.20%
   QC value within limits for V 292.402  Recovery = 99.18%
Zn 213.857†            59687.9      489.43 ug/L         1.062      489.43 ppb          1.062   0.22%
   QC value within limits for Zn 213.857  Recovery = 97.89%
SiO2†                  89185.2      5350.4 ug/L          8.99      5350.4 ppb           8.99   0.17%
   QC value within limits for SiO2  Recovery = 100.05%
All analyte(s) passed QC.
```

Sequence No.: 20
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/2/2009 16:20:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7396.9	7396.9	107	%			16:22:46
1	Y RADIAL	6794.6	6794.6	106.8	%			16:22:46
1	Al 396.153Radial†	-43.6	29.7	24.965	ug/L	24.965	ppb	16:22:46
1	Ca 317.933Radial†	24.4	-3.5	-5.2134	ug/L	-5.2134	ppb	16:23:06
1	Fe 238.204 Radial†	39.7	-1.7	-7.8157	ug/L	-7.8157	ppb	16:23:06
1	K 766.490 Radial†	2701.0	-252.9	-52.278	ug/L	-52.278	ppb	16:22:46
1	Mg 279.077 IEC†	5.9	1.6	40.230	ug/L	40.230	ppb	16:23:06
1	Na 589.592 Radial†	-332.3	19.5	1.1988	ug/L	1.1988	ppb	16:22:46
1	Sr 421.552†	-39.4	25.3	0.0789	ug/L	0.0789	ppb	16:22:46
1	Sc 361.383	775887.3	775887.3	104.19	%			16:24:03
1	Y 371.029	605298.0	605298.0	104.11	%			16:24:03
1	Ag 328.068†	817.5	78.7	0.4252	ug/L	0.4252	ppb	16:24:03
1	As 188.979†	-28.9	6.6	2.0881	ug/L	2.0881	ppb	16:24:23
1	B 249.677†	-639.4	267.6	6.1211	ug/L	6.1211	ppb	16:24:03
1	Ba 233.527†	16.3	-6.8	-0.0416	ug/L	-0.0416	ppb	16:24:23
1	Be 313.107†	-4923.3	59.7	0.0247	ug/L	0.0247	ppb	16:24:03
1	Cd 226.502†	-266.2	37.8	0.4260	ug/L	0.4260	ppb	16:24:23
1	Co 228.616†	-99.4	5.0	0.0833	ug/L	0.0833	ppb	16:24:23
1	Cr 267.716†	-31.1	68.1	0.8520	ug/L	0.8520	ppb	16:24:03
1	Cu 324.752†	5933.3	-96.4	-0.3249	ug/L	-0.3249	ppb	16:24:03
1	Mn 257.610†	702.8	-43.4	-0.0454	ug/L	-0.0454	ppb	16:24:03
1	Mo 202.031†	32.0	26.3	1.6647	ug/L	1.6647	ppb	16:24:23
1	Ni 231.604†	146.8	4.3	0.1018	ug/L	0.1018	ppb	16:24:23
1	P 214.914†	299.8	-5.8	-2.5172	ug/L	-2.5172	ppb	16:24:23
1	Pb 220.353†	-18.7	-0.1	-0.0052	ug/L	-0.0052	ppb	16:24:23
1	S 181.975 Axial†	103.6	-36.5	-44.053	ug/L	-44.053	ppb	16:24:23
1	Sb 206.836†	62.5	7.4	2.0268	ug/L	2.0268	ppb	16:24:23
1	Se 196.026†	-26.3	9.6	4.3446	ug/L	4.3446	ppb	16:24:23
1	Si 251.611†	684.0	207.7	5.8462	ug/L	5.8462	ppb	16:24:23
1	Sn 189.927†	19.2	5.5	0.8561	ug/L	0.8561	ppb	16:24:23
1	Ti 334.940†	-1423.8	160.3	0.2705	ug/L	0.2705	ppb	16:24:03
1	Tl 190.801†	-50.3	12.9	3.0577	ug/L	3.0577	ppb	16:24:23
1	U 409.014†	-5188.3	285.1	9.0103	ug/L	9.0103	ppb	16:24:03
1	V 292.402†	-1617.9	140.1	1.1891	ug/L	1.1891	ppb	16:24:03
1	Zn 213.857†	1038.6	12.4	0.1017	ug/L	0.1017	ppb	16:24:23
1	SiO2†	641.4	140.0	8.4093	ug/L	8.4093	ppb	16:25:19
2	Sc Radial	7203.2	7203.2	104	%			16:23:11
2	Y RADIAL	6653.0	6653.0	104.6	%			16:23:11
2	Al 396.153Radial†	-52.1	20.4	17.204	ug/L	17.204	ppb	16:23:11
2	Ca 317.933Radial†	23.3	-4.0	-5.8285	ug/L	-5.8285	ppb	16:23:31
2	Fe 238.204 Radial†	37.5	-2.8	-12.638	ug/L	-12.638	ppb	16:23:31
2	K 766.490 Radial†	2724.2	-162.5	-33.586	ug/L	-33.586	ppb	16:23:11
2	Mg 279.077 IEC†	0.3	-3.6	-92.494	ug/L	-92.494	ppb	16:23:31
2	Na 589.592 Radial†	-302.5	39.8	2.4476	ug/L	2.4476	ppb	16:23:11
2	Sr 421.552†	-13.1	49.7	0.1545	ug/L	0.1545	ppb	16:23:11
2	Sc 361.383	779309.2	779309.2	104.65	%			16:24:28
2	Y 371.029	607911.5	607911.5	104.56	%			16:24:28
2	Ag 328.068†	743.2	4.3	0.0122	ug/L	0.0122	ppb	16:24:28
2	As 188.979†	-30.3	5.4	1.7017	ug/L	1.7017	ppb	16:24:48
2	B 249.677†	-681.7	229.9	5.2570	ug/L	5.2570	ppb	16:24:28
2	Ba 233.527†	38.5	14.4	0.0942	ug/L	0.0942	ppb	16:24:48
2	Be 313.107†	-5008.6	-1.1	0.0002	ug/L	0.0002	ppb	16:24:28
2	Cd 226.502†	-282.9	23.0	0.2601	ug/L	0.2601	ppb	16:24:48
2	Co 228.616†	-83.8	20.4	0.3244	ug/L	0.3244	ppb	16:24:48
2	Cr 267.716†	-54.3	46.1	0.5741	ug/L	0.5741	ppb	16:24:28
2	Cu 324.752†	5916.0	-137.9	-0.4647	ug/L	-0.4647	ppb	16:24:28
2	Mn 257.610†	759.4	7.7	0.0080	ug/L	0.0080	ppb	16:24:28
2	Mo 202.031†	21.4	16.0	1.0150	ug/L	1.0150	ppb	16:24:48
2	Ni 231.604†	152.3	8.9	0.2132	ug/L	0.2132	ppb	16:24:48

2	P 214.914†	287.9	-18.4	-8.1695	ug/L	-8.1695 ppb	16:24:48
2	Pb 220.353†	-29.5	-10.4	-1.0915	ug/L	-1.0915 ppb	16:24:48
2	S 181.975 Axial†	96.6	-43.7	-52.641	ug/L	-52.641 ppb	16:24:48
2	Sb 206.836†	41.6	-12.8	-3.4517	ug/L	-3.4517 ppb	16:24:48
2	Se 196.026†	-6.1	29.0	13.078	ug/L	13.078 ppb	16:24:48
2	Si 251.611†	668.7	190.2	5.3449	ug/L	5.3449 ppb	16:24:48
2	Sn 189.927†	24.7	10.6	1.6662	ug/L	1.6662 ppb	16:24:48
2	Ti 334.940†	-1426.2	164.0	0.2764	ug/L	0.2764 ppb	16:24:28
2	Tl 190.801†	-60.0	3.9	0.9156	ug/L	0.9156 ppb	16:24:48
2	U 409.014†	-5171.9	322.6	10.198	ug/L	10.198 ppb	16:24:28
2	V 292.402†	-1726.6	43.0	0.3853	ug/L	0.3853 ppb	16:24:28
2	Zn 213.857†	1034.0	3.6	0.0335	ug/L	0.0335 ppb	16:24:48
2	SiO2†	708.9	201.8	12.129	ug/L	12.129 ppb	16:25:24
3	Sc Radial	7282.7	7282.7	105	%		16:23:36
3	Y RADIAL	6691.5	6691.5	105.2	%		16:23:36
3	Al 396.153Radial†	-52.9	20.2	17.033	ug/L	17.033 ppb	16:23:36
3	Ca 317.933Radial†	25.9	-1.7	-2.5027	ug/L	-2.5027 ppb	16:23:56
3	Fe 238.204 Radial†	39.4	-1.4	-6.4389	ug/L	-6.4389 ppb	16:23:56
3	K 766.490 Radial†	2682.1	-231.2	-47.776	ug/L	-47.776 ppb	16:23:36
3	Mg 279.077 IEC†	3.4	-0.7	-17.686	ug/L	-17.686 ppb	16:23:56
3	Na 589.592 Radial†	-315.9	30.2	1.8587	ug/L	1.8587 ppb	16:23:36
3	Sr 421.552†	-86.7	-20.3	-0.0631	ug/L	-0.0631 ppb	16:23:36
3	Sc 361.383	769348.9	769348.9	103.32	%		16:24:54
3	Y 371.029	600065.8	600065.8	103.21	%		16:24:54
3	Ag 328.068†	817.3	85.2	0.4595	ug/L	0.4595 ppb	16:24:54
3	As 188.979†	-43.7	-8.0	-2.5423	ug/L	-2.5423 ppb	16:25:14
3	B 249.677†	-609.3	291.6	6.6674	ug/L	6.6674 ppb	16:24:54
3	Ba 233.527†	-1.5	-23.8	-0.1543	ug/L	-0.1543 ppb	16:25:14
3	Be 313.107†	-5013.9	-68.2	-0.0273	ug/L	-0.0273 ppb	16:24:54
3	Cd 226.502†	-294.1	8.6	0.0979	ug/L	0.0979 ppb	16:25:14
3	Co 228.616†	-79.7	23.4	0.3718	ug/L	0.3718 ppb	16:25:14
3	Cr 267.716†	-60.4	39.5	0.4934	ug/L	0.4934 ppb	16:24:54
3	Cu 324.752†	5855.3	-123.5	-0.4159	ug/L	-0.4159 ppb	16:24:54
3	Mn 257.610†	783.9	40.9	0.0407	ug/L	0.0407 ppb	16:24:54
3	Mo 202.031†	19.7	14.7	0.9289	ug/L	0.9289 ppb	16:25:14
3	Ni 231.604†	172.0	29.9	0.7141	ug/L	0.7141 ppb	16:25:14
3	P 214.914†	307.9	4.5	2.1485	ug/L	2.1485 ppb	16:25:14
3	Pb 220.353†	-44.0	-24.7	-2.6044	ug/L	-2.6044 ppb	16:25:14
3	S 181.975 Axial†	107.9	-31.6	-38.047	ug/L	-38.047 ppb	16:25:14
3	Sb 206.836†	58.1	3.6	1.0239	ug/L	1.0239 ppb	16:25:14
3	Se 196.026†	-39.5	-3.4	-1.5646	ug/L	-1.5646 ppb	16:25:14
3	Si 251.611†	668.2	198.0	5.5689	ug/L	5.5689 ppb	16:25:14
3	Sn 189.927†	25.6	11.8	1.8515	ug/L	1.8515 ppb	16:25:14
3	Ti 334.940†	-1528.3	47.6	0.0786	ug/L	0.0786 ppb	16:24:54
3	Tl 190.801†	-58.6	4.4	1.0462	ug/L	1.0462 ppb	16:25:14
3	U 409.014†	-5235.2	197.4	6.2390	ug/L	6.2390 ppb	16:24:54
3	V 292.402†	-1730.6	17.8	0.1701	ug/L	0.1701 ppb	16:24:54
3	Zn 213.857†	1047.6	29.6	0.2421	ug/L	0.2421 ppb	16:25:14
3	SiO2†	682.9	185.4	11.146	ug/L	11.146 ppb	16:25:29

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	774848.5	104.05	%	0.680				0.65%
Sc Radial	7294.2	105	%	1.4				1.33%
Y 371.029	604425.1	103.96	%	0.687				0.66%
Y RADIAL	6713.1	105.6	%	1.15				1.09%
Ag 328.068†	56.1	0.2990	ug/L	0.24891	0.2990	ppb	0.24891	83.25%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	23.4	19.734	ug/L	4.5309	19.734	ppb	4.5309	22.96%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.3	0.4158	ug/L	2.56912	0.4158	ppb	2.56912	617.85%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	263.0	6.0152	ug/L	0.71114	6.0152	ppb	0.71114	11.82%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-5.4	-0.0339	ug/L	0.12444	-0.0339	ppb	0.12444	366.69%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-3.2	-0.0008	ug/L	0.02598	-0.0008	ppb	0.02598	>999.9%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.1	-4.5149	ug/L	1.76950	-4.5149	ppb	1.76950	39.19%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                23.1      0.2613 ug/L       0.16409      0.2613 ppb        0.16409  62.79%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                16.3      0.2599 ug/L       0.15471      0.2599 ppb        0.15471  59.53%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                51.2      0.6398 ug/L       0.18812      0.6398 ppb        0.18812  29.40%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -119.3     -0.4018 ug/L       0.07098     -0.4018 ppb        0.07098  17.66%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -2.0     -8.9642 ug/L       3.25526     -8.9642 ppb        3.25526  36.31%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -215.5     -44.547 ug/L        9.7556     -44.547 ppb         9.7556  21.90%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.9     -23.317 ug/L       66.5407     -23.317 ppb        66.5407 285.38%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                 1.7      0.0011 ug/L       0.04346      0.0011 ppb        0.04346 >999.9%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                19.0      1.2028 ug/L       0.40226      1.2028 ppb        0.40226  33.44%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         29.8      1.8350 ug/L       0.62473      1.8350 ppb        0.62473  34.04%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.3      0.3430 ug/L       0.32618      0.3430 ppb        0.32618  95.08%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.6     -2.8461 ug/L       5.16684     -2.8461 ppb        5.16684 181.54%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -11.8     -1.2337 ug/L       1.30540     -1.2337 ppb        1.30540 105.81%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -37.2     -44.914 ug/L        7.3351     -44.914 ppb         7.3351  16.33%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.6     -0.1336 ug/L       2.91695     -0.1336 ppb        2.91695 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                11.7      5.2860 ug/L       7.36653      5.2860 ppb        7.36653 139.36%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               198.6      5.5867 ug/L       0.25110      5.5867 ppb        0.25110   4.49%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.3      1.4579 ug/L       0.52938      1.4579 ppb        0.52938  36.31%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                18.2      0.0568 ug/L       0.11047      0.0568 ppb        0.11047 194.65%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               124.0      0.2085 ug/L       0.11255      0.2085 ppb        0.11255  53.98%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 7.0      1.6732 ug/L       1.20078      1.6732 ppb        1.20078  71.77%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                268.4      8.4825 ug/L       2.03165      8.4825 ppb        2.03165  23.95%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 67.0      0.5815 ug/L       0.53710      0.5815 ppb        0.53710  92.37%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                15.2      0.1257 ug/L       0.10637      0.1257 ppb        0.10637  84.60%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     175.8      10.561 ug/L        1.9273      10.561 ppb         1.9273  18.25%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 27
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/2/2009 17:09:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7157.7	7157.7	103	%			17:12:02
1	Y RADIAL	6538.7	6538.7	102.8	%			17:12:02
1	Al 396.153Radial†	6315.1	6192.6	5205.0	ug/L	5205.0	ppb	17:11:42
1	Ca 317.933Radial†	3677.3	3538.5	5215.1	ug/L	5215.1	ppb	17:12:02
1	Fe 238.204 Radial†	1285.9	1207.6	5412.2	ug/L	5412.2	ppb	17:12:02
1	K 766.490 Radial†	27131.0	23514.7	4845.3	ug/L	4845.3	ppb	17:11:42
1	Mg 279.077 IEC†	213.2	202.8	5191.8	ug/L	5191.8	ppb	17:12:02
1	Na 589.592 Radial†	168712.2	163884.8	10084	ug/L	10084	ppb	17:11:42
1	Sr 421.552†	170624.2	165469.5	514.55	ug/L	514.55	ppb	17:11:42
1	Sc 361.383	796849.8	796849.8	107.01	%			17:13:01
1	Y 371.029	613390.3	613390.3	105.50	%			17:13:01
1	Ag 328.068†	97011.9	89951.5	495.50	ug/L	495.50	ppb	17:13:01
1	As 188.979†	1631.6	1559.0	497.02	ug/L	497.02	ppb	17:13:21
1	B 249.677†	22142.3	21573.2	490.54	ug/L	490.54	ppb	17:13:01
1	Ba 233.527†	80726.6	75416.4	490.29	ug/L	490.29	ppb	17:13:01
1	Be 313.107†	1306407.9	1225620.0	494.63	ug/L	494.63	ppb	17:13:01
1	Cd 226.502†	45309.4	42634.7	479.71	ug/L	479.71	ppb	17:13:21
1	Co 228.616†	32498.6	30470.4	482.01	ug/L	482.01	ppb	17:13:21
1	Cr 267.716†	41792.0	39152.5	491.31	ug/L	491.31	ppb	17:13:01
1	Cu 324.752†	162692.3	146244.7	492.33	ug/L	492.33	ppb	17:13:01
1	Mn 257.610†	522438.2	487499.5	491.54	ug/L	491.54	ppb	17:13:01
1	Mo 202.031†	8335.9	7785.5	494.01	ug/L	494.01	ppb	17:13:21
1	Ni 231.604†	21841.8	20274.4	484.69	ug/L	484.69	ppb	17:13:21
1	P 214.914†	6141.3	5445.5	2358.3	ug/L	2358.3	ppb	17:13:21
1	Pb 220.353†	4942.1	4636.2	491.26	ug/L	491.26	ppb	17:13:21
1	S 181.975 Axial†	985.4	784.9	945.43	ug/L	945.43	ppb	17:13:21
1	Sb 206.836†	1998.5	1815.0	498.91	ug/L	498.91	ppb	17:13:21
1	Se 196.026†	1126.3	1087.3	511.12	ug/L	511.12	ppb	17:13:21
1	Si 251.611†	95341.7	88647.9	2488.3	ug/L	2488.3	ppb	17:13:01
1	Sn 189.927†	3375.0	3140.9	492.82	ug/L	492.82	ppb	17:13:21
1	Ti 334.940†	310603.7	291785.2	500.57	ug/L	500.57	ppb	17:13:01
1	Tl 190.801†	2140.1	2061.0	492.91	ug/L	492.91	ppb	17:13:21
1	U 409.014†	10875.9	15428.0	486.04	ug/L	486.04	ppb	17:13:01
1	V 292.402†	62110.1	59734.6	495.76	ug/L	495.76	ppb	17:13:01
1	Zn 213.857†	64740.3	59515.2	488.02	ug/L	488.02	ppb	17:13:01
1	SiO2†	95461.8	88733.4	5323.3	ug/L	5323.3	ppb	17:14:21
2	Sc Radial	7186.3	7186.3	104	%			17:12:28
2	Y RADIAL	6559.3	6559.3	103.1	%			17:12:28
2	Al 396.153Radial†	6233.4	6089.4	5117.9	ug/L	5117.9	ppb	17:12:08
2	Ca 317.933Radial†	3687.7	3534.3	5208.9	ug/L	5208.9	ppb	17:12:28
2	Fe 238.204 Radial†	1280.6	1197.5	5367.2	ug/L	5367.2	ppb	17:12:28
2	K 766.490 Radial†	26716.2	23009.6	4740.9	ug/L	4740.9	ppb	17:12:08
2	Mg 279.077 IEC†	217.5	206.1	5276.9	ug/L	5276.9	ppb	17:12:28
2	Na 589.592 Radial†	166381.8	160983.7	9905.6	ug/L	9905.6	ppb	17:12:08
2	Sr 421.552†	168607.6	162864.0	506.45	ug/L	506.45	ppb	17:12:08
2	Sc 361.383	801103.5	801103.5	107.58	%			17:13:29
2	Y 371.029	615868.0	615868.0	105.93	%			17:13:29
2	Ag 328.068†	97474.3	89900.0	495.21	ug/L	495.21	ppb	17:13:29
2	As 188.979†	1622.8	1542.8	491.87	ug/L	491.87	ppb	17:13:49
2	B 249.677†	22388.3	21692.0	493.26	ug/L	493.26	ppb	17:13:29
2	Ba 233.527†	81095.0	75358.3	489.91	ug/L	489.91	ppb	17:13:29
2	Be 313.107†	1313213.6	1225463.8	494.57	ug/L	494.57	ppb	17:13:29
2	Cd 226.502†	45488.1	42576.1	479.05	ug/L	479.05	ppb	17:13:49
2	Co 228.616†	32681.5	30479.2	482.15	ug/L	482.15	ppb	17:13:49
2	Cr 267.716†	41947.7	39089.9	490.52	ug/L	490.52	ppb	17:13:29
2	Cu 324.752†	163936.5	146594.0	493.50	ug/L	493.50	ppb	17:13:29
2	Mn 257.610†	525648.9	487891.6	491.92	ug/L	491.92	ppb	17:13:29
2	Mo 202.031†	8363.7	7770.0	493.02	ug/L	493.02	ppb	17:13:49
2	Ni 231.604†	21976.6	20291.4	485.10	ug/L	485.10	ppb	17:13:49

2	P 214.914†	6203.4	5472.8	2370.3 ug/L	2370.3 ppb	17:13:49
2	Pb 220.353†	4987.0	4653.4	493.07 ug/L	493.07 ppb	17:13:49
2	S 181.975 Axial†	988.9	783.3	943.45 ug/L	943.45 ppb	17:13:49
2	Sb 206.836†	1999.0	1805.6	496.39 ug/L	496.39 ppb	17:13:49
2	Se 196.026†	1142.8	1097.1	515.39 ug/L	515.39 ppb	17:13:49
2	Si 251.611†	95958.6	88748.2	2491.1 ug/L	2491.1 ppb	17:13:29
2	Sn 189.927†	3408.8	3155.6	495.11 ug/L	495.11 ppb	17:13:49
2	Ti 334.940†	312681.6	292175.5	501.24 ug/L	501.24 ppb	17:13:29
2	Tl 190.801†	2140.0	2050.3	490.37 ug/L	490.37 ppb	17:13:49
2	U 409.014†	10833.8	15334.9	483.11 ug/L	483.11 ppb	17:13:29
2	V 292.402†	62447.0	59739.6	495.79 ug/L	495.79 ppb	17:13:29
2	Zn 213.857†	65095.6	59524.3	488.09 ug/L	488.09 ppb	17:13:29
2	SiO2†	95566.0	88356.5	5300.6 ug/L	5300.6 ppb	17:14:27
3	Sc Radial	7219.7	7219.7	104 %		17:12:53
3	Y RADIAL	6629.6	6629.6	104.3 %		17:12:53
3	Al 396.153Radial†	6230.5	6058.7	5092.2 ug/L	5092.2 ppb	17:12:33
3	Ca 317.933Radial†	3716.5	3545.5	5225.4 ug/L	5225.4 ppb	17:12:53
3	Fe 238.204 Radial†	1293.2	1203.9	5395.7 ug/L	5395.7 ppb	17:12:53
3	K 766.490 Radial†	26712.9	22887.1	4715.7 ug/L	4715.7 ppb	17:12:33
3	Mg 279.077 IEC†	220.0	207.5	5311.8 ug/L	5311.8 ppb	17:12:53
3	Na 589.592 Radial†	165551.3	159442.5	9810.8 ug/L	9810.8 ppb	17:12:33
3	Sr 421.552†	167757.3	161293.8	501.57 ug/L	501.57 ppb	17:12:33
3	Sc 361.383	803531.7	803531.7	107.91 %		17:13:56
3	Y 371.029	617571.5	617571.5	106.22 %		17:13:56
3	Ag 328.068†	97489.6	89640.3	493.79 ug/L	493.79 ppb	17:13:56
3	As 188.979†	1613.8	1529.8	487.78 ug/L	487.78 ppb	17:14:16
3	B 249.677†	22506.0	21738.2	494.34 ug/L	494.34 ppb	17:13:56
3	Ba 233.527†	81093.7	75129.3	488.43 ug/L	488.43 ppb	17:13:56
3	Be 313.107†	1314820.6	1223264.3	493.68 ug/L	493.68 ppb	17:13:56
3	Cd 226.502†	45188.4	42170.6	474.48 ug/L	474.48 ppb	17:14:16
3	Co 228.616†	32451.8	30174.5	477.32 ug/L	477.32 ppb	17:14:16
3	Cr 267.716†	41985.2	39006.8	489.48 ug/L	489.48 ppb	17:13:56
3	Cu 324.752†	164328.8	146497.0	493.17 ug/L	493.17 ppb	17:13:56
3	Mn 257.610†	525504.8	486281.5	490.31 ug/L	490.31 ppb	17:13:56
3	Mo 202.031†	8326.8	7712.2	489.36 ug/L	489.36 ppb	17:14:16
3	Ni 231.604†	21803.9	20069.6	479.80 ug/L	479.80 ppb	17:14:16
3	P 214.914†	6136.7	5393.5	2334.6 ug/L	2334.6 ppb	17:14:16
3	Pb 220.353†	4917.6	4575.1	484.78 ug/L	484.78 ppb	17:14:16
3	S 181.975 Axial†	980.2	772.4	930.34 ug/L	930.34 ppb	17:14:16
3	Sb 206.836†	1986.5	1788.3	491.54 ug/L	491.54 ppb	17:14:16
3	Se 196.026†	1122.3	1074.9	505.41 ug/L	505.41 ppb	17:14:16
3	Si 251.611†	96083.8	88594.7	2487.0 ug/L	2487.0 ppb	17:13:56
3	Sn 189.927†	3367.7	3108.0	487.65 ug/L	487.65 ppb	17:14:16
3	Ti 334.940†	313211.1	291788.0	500.58 ug/L	500.58 ppb	17:13:56
3	Tl 190.801†	2118.0	2023.9	484.11 ug/L	484.11 ppb	17:14:16
3	U 409.014†	10897.7	15363.7	484.01 ug/L	484.01 ppb	17:13:56
3	V 292.402†	62482.2	59596.8	494.57 ug/L	494.57 ppb	17:13:56
3	Zn 213.857†	65075.0	59322.3	486.45 ug/L	486.45 ppb	17:13:56
3	SiO2†	96612.0	89057.4	5343.3 ug/L	5343.3 ppb	17:14:32

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	800495.0	107.50	%	0.454				0.42%
Sc Radial	7187.9	104	%	0.4				0.43%
Y 371.029	615610.0	105.88	%	0.362				0.34%
Y RADIAL	6575.9	103.4	%	0.75				0.73%
Ag 328.068†	89830.6	494.83	ug/L	0.915	494.83	ppb	0.915	0.18%
QC value within limits for Ag 328.068 Recovery = 98.97%								
Al 396.153Radial†	6113.6	5138.4	ug/L	59.14	5138.4	ppb	59.14	1.15%
QC value within limits for Al 396.153Radial Recovery = 102.77%								
As 188.979†	1543.9	492.22	ug/L	4.631	492.22	ppb	4.631	0.94%
QC value within limits for As 188.979 Recovery = 98.44%								
B 249.677†	21667.8	492.71	ug/L	1.957	492.71	ppb	1.957	0.40%
QC value within limits for B 249.677 Recovery = 98.54%								
Ba 233.527†	75301.3	489.54	ug/L	0.986	489.54	ppb	0.986	0.20%
QC value within limits for Ba 233.527 Recovery = 97.91%								
Be 313.107†	1224782.7	494.29	ug/L	0.531	494.29	ppb	0.531	0.11%
QC value within limits for Be 313.107 Recovery = 98.86%								
Ca 317.933Radial†	3539.4	5216.5	ug/L	8.33	5216.5	ppb	8.33	0.16%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.33%
Cd 226.502†          42460.5      477.75 ug/L        2.848      477.75 ppb        2.848   0.60%
   QC value within limits for Cd 226.502  Recovery = 95.55%
Co 228.616†          30374.7      480.49 ug/L        2.749      480.49 ppb        2.749   0.57%
   QC value within limits for Co 228.616  Recovery = 96.10%
Cr 267.716†          39083.1      490.44 ug/L        0.917      490.44 ppb        0.917   0.19%
   QC value within limits for Cr 267.716  Recovery = 98.09%
Cu 324.752†         146445.3      493.00 ug/L        0.605      493.00 ppb        0.605   0.12%
   QC value within limits for Cu 324.752  Recovery = 98.60%
Fe 238.204 Radial†    1203.0      5391.7 ug/L        22.76      5391.7 ppb        22.76   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.83%
K 766.490 Radial†    23137.1      4767.3 ug/L        68.68      4767.3 ppb        68.68   1.44%
   QC value within limits for K 766.490 Radial  Recovery = 95.35%
Mg 279.077 IEC†        205.4      5260.2 ug/L        61.71      5260.2 ppb        61.71   1.17%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.20%
Mn 257.610†         487224.2      491.26 ug/L        0.845      491.26 ppb        0.845   0.17%
   QC value within limits for Mn 257.610  Recovery = 98.25%
Mo 202.031†          7755.9      492.13 ug/L        2.448      492.13 ppb        2.448   0.50%
   QC value within limits for Mo 202.031  Recovery = 98.43%
Na 589.592 Radial†  161437.0      9933.5 ug/L       138.79      9933.5 ppb       138.79   1.40%
   QC value within limits for Na 589.592 Radial  Recovery = 99.33%
Ni 231.604†          20211.8      483.20 ug/L        2.951      483.20 ppb        2.951   0.61%
   QC value within limits for Ni 231.604  Recovery = 96.64%
P 214.914†            5437.2      2354.4 ug/L        18.20      2354.4 ppb        18.20   0.77%
   QC value within limits for P 214.914  Recovery = 94.18%
Pb 220.353†           4621.6      489.70 ug/L        4.359      489.70 ppb        4.359   0.89%
   QC value within limits for Pb 220.353  Recovery = 97.94%
S 181.975 Axial†       780.2      939.74 ug/L        8.197      939.74 ppb        8.197   0.87%
   QC value within limits for S 181.975 Axial  Recovery = 93.97%
Sb 206.836†           1803.0      495.61 ug/L        3.750      495.61 ppb        3.750   0.76%
   QC value within limits for Sb 206.836  Recovery = 99.12%
Se 196.026†           1086.4      510.64 ug/L        5.008      510.64 ppb        5.008   0.98%
   QC value within limits for Se 196.026  Recovery = 102.13%
Si 251.611†          88663.6      2488.8 ug/L         2.13      2488.8 ppb         2.13   0.09%
   QC value within limits for Si 251.611  Recovery = 99.55%
Sn 189.927†           3134.8      491.86 ug/L        3.818      491.86 ppb        3.818   0.78%
   QC value within limits for Sn 189.927  Recovery = 98.37%
Sr 421.552†         163209.1      507.52 ug/L        6.559      507.52 ppb        6.559   1.29%
   QC value within limits for Sr 421.552  Recovery = 101.50%
Ti 334.940†         291916.2      500.80 ug/L        0.385      500.80 ppb        0.385   0.08%
   QC value within limits for Ti 334.940  Recovery = 100.16%
Tl 190.801†           2045.1      489.13 ug/L        4.530      489.13 ppb        4.530   0.93%
   QC value within limits for Tl 190.801  Recovery = 97.83%
U 409.014†           15375.6      484.39 ug/L        1.503      484.39 ppb        1.503   0.31%
   QC value within limits for U 409.014  Recovery = 96.88%
V 292.402†           59690.3      495.37 ug/L        0.695      495.37 ppb        0.695   0.14%
   QC value within limits for V 292.402  Recovery = 99.07%
Zn 213.857†          59453.9      487.52 ug/L        0.927      487.52 ppb        0.927   0.19%
   QC value within limits for Zn 213.857  Recovery = 97.50%
SiO2†                88715.7      5322.4 ug/L        21.38      5322.4 ppb        21.38   0.40%
   QC value within limits for SiO2  Recovery = 99.53%
All analyte(s) passed QC.
```

Sequence No.: 28
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/2/2009 17:16:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7158.6	7158.6	103	%			17:18:34
1	Y RADIAL	6586.3	6586.3	103.6	%			17:18:34
1	Al 396.153Radial†	-46.6	25.4	21.403	ug/L	21.403	ppb	17:18:34
1	Ca 317.933Radial†	26.1	-1.1	-1.5774	ug/L	-1.5774	ppb	17:18:54
1	Fe 238.204 Radial†	39.2	-0.9	-4.1099	ug/L	-4.1099	ppb	17:18:54
1	K 766.490 Radial†	2637.8	-229.8	-47.503	ug/L	-47.503	ppb	17:18:34
1	Mg 279.077 IEC†	1.6	-2.4	-62.371	ug/L	-62.371	ppb	17:18:54
1	Na 589.592 Radial†	-352.3	-10.3	-0.6325	ug/L	-0.6325	ppb	17:18:34
1	Sr 421.552†	-65.0	-0.7	-0.0020	ug/L	-0.0020	ppb	17:18:34
1	Sc 361.383	768529.6	768529.6	103.21	%			17:19:51
1	Y 371.029	599565.1	599565.1	103.12	%			17:19:51
1	Ag 328.068†	742.5	13.6	0.0709	ug/L	0.0709	ppb	17:19:51
1	As 188.979†	-31.2	4.0	1.2734	ug/L	1.2734	ppb	17:20:11
1	B 249.677†	-708.6	194.7	4.4521	ug/L	4.4521	ppb	17:19:51
1	Ba 233.527†	14.6	-8.2	-0.0519	ug/L	-0.0519	ppb	17:20:11
1	Be 313.107†	-4838.0	97.0	0.0395	ug/L	0.0395	ppb	17:19:51
1	Cd 226.502†	-275.6	26.2	0.2954	ug/L	0.2954	ppb	17:20:11
1	Co 228.616†	-88.1	15.2	0.2431	ug/L	0.2431	ppb	17:20:11
1	Cr 267.716†	-69.8	30.4	0.3796	ug/L	0.3796	ppb	17:19:51
1	Cu 324.752†	5755.6	-214.0	-0.7203	ug/L	-0.7203	ppb	17:19:51
1	Mn 257.610†	704.2	-35.6	-0.0352	ug/L	-0.0352	ppb	17:19:51
1	Mo 202.031†	29.0	23.7	1.4998	ug/L	1.4998	ppb	17:20:11
1	Ni 231.604†	149.0	7.7	0.1851	ug/L	0.1851	ppb	17:20:11
1	P 214.914†	305.3	2.3	1.1643	ug/L	1.1643	ppb	17:20:11
1	Pb 220.353†	-30.9	-12.1	-1.2732	ug/L	-1.2732	ppb	17:20:11
1	S 181.975 Axial†	102.5	-36.7	-44.254	ug/L	-44.254	ppb	17:20:11
1	Sb 206.836†	46.4	-7.6	-2.0530	ug/L	-2.0530	ppb	17:20:11
1	Se 196.026†	-42.1	-6.0	-2.7157	ug/L	-2.7157	ppb	17:20:11
1	Si 251.611†	570.5	104.0	2.9344	ug/L	2.9344	ppb	17:20:11
1	Sn 189.927†	10.7	-2.7	-0.4183	ug/L	-0.4183	ppb	17:20:11
1	Ti 334.940†	-1461.2	110.9	0.1875	ug/L	0.1875	ppb	17:19:51
1	Tl 190.801†	-55.6	7.3	1.7278	ug/L	1.7278	ppb	17:20:11
1	U 409.014†	-5242.0	185.4	5.8599	ug/L	5.8599	ppb	17:19:51
1	V 292.402†	-1657.3	87.0	0.7434	ug/L	0.7434	ppb	17:19:51
1	Zn 213.857†	1022.4	6.3	0.0543	ug/L	0.0543	ppb	17:20:11
1	SiO2†	631.9	136.8	8.2541	ug/L	8.2541	ppb	17:21:07
2	Sc Radial	7191.8	7191.8	104	%			17:18:59
2	Y RADIAL	6591.4	6591.4	103.7	%			17:18:59
2	Al 396.153Radial†	-95.9	-22.0	-18.627	ug/L	-18.627	ppb	17:18:59
2	Ca 317.933Radial†	26.4	-0.9	-1.3742	ug/L	-1.3742	ppb	17:19:19
2	Fe 238.204 Radial†	38.4	-1.9	-8.3502	ug/L	-8.3502	ppb	17:19:19
2	K 766.490 Radial†	2719.5	-162.8	-33.664	ug/L	-33.664	ppb	17:18:59
2	Mg 279.077 IEC†	0.6	-3.4	-87.193	ug/L	-87.193	ppb	17:19:19
2	Na 589.592 Radial†	-387.6	-42.7	-2.6299	ug/L	-2.6299	ppb	17:18:59
2	Sr 421.552†	-28.7	34.6	0.1077	ug/L	0.1077	ppb	17:18:59
2	Sc 361.383	779997.8	779997.8	104.75	%			17:20:16
2	Y 371.029	607624.9	607624.9	104.51	%			17:20:16
2	Ag 328.068†	652.9	-82.6	-0.4647	ug/L	-0.4647	ppb	17:20:16
2	As 188.979†	-28.9	6.7	2.1132	ug/L	2.1132	ppb	17:20:36
2	B 249.677†	-715.4	198.3	4.5342	ug/L	4.5342	ppb	17:20:16
2	Ba 233.527†	7.4	-15.4	-0.0991	ug/L	-0.0991	ppb	17:20:36
2	Be 313.107†	-4997.5	13.7	0.0062	ug/L	0.0062	ppb	17:20:16
2	Cd 226.502†	-283.5	22.6	0.2550	ug/L	0.2550	ppb	17:20:36
2	Co 228.616†	-83.9	20.4	0.3276	ug/L	0.3276	ppb	17:20:36
2	Cr 267.716†	-79.1	22.5	0.2780	ug/L	0.2780	ppb	17:20:16
2	Cu 324.752†	5927.1	-132.4	-0.4458	ug/L	-0.4458	ppb	17:20:16
2	Mn 257.610†	812.1	57.4	0.0585	ug/L	0.0585	ppb	17:20:16
2	Mo 202.031†	38.6	32.4	2.0528	ug/L	2.0528	ppb	17:20:36
2	Ni 231.604†	151.7	8.2	0.1960	ug/L	0.1960	ppb	17:20:36

2	P 214.914†	297.6	-9.4	-4.1359	ug/L	-4.1359 ppb	17:20:36
2	Pb 220.353†	-30.6	-11.4	-1.1977	ug/L	-1.1977 ppb	17:20:36
2	S 181.975 Axial†	101.4	-39.2	-47.225	ug/L	-47.225 ppb	17:20:36
2	Sb 206.836†	59.6	4.3	1.2021	ug/L	1.2021 ppb	17:20:36
2	Se 196.026†	-42.2	-5.4	-2.4846	ug/L	-2.4846 ppb	17:20:36
2	Si 251.611†	564.2	89.9	2.5132	ug/L	2.5132 ppb	17:20:36
2	Sn 189.927†	14.8	1.1	0.1776	ug/L	0.1776 ppb	17:20:36
2	Ti 334.940†	-1407.8	182.7	0.3076	ug/L	0.3076 ppb	17:20:16
2	Tl 190.801†	-48.9	14.5	3.4404	ug/L	3.4404 ppb	17:20:36
2	U 409.014†	-5080.1	414.6	13.104	ug/L	13.104 ppb	17:20:16
2	V 292.402†	-1739.4	32.3	0.3154	ug/L	0.3154 ppb	17:20:16
2	Zn 213.857†	1010.7	-19.4	-0.1577	ug/L	-0.1577 ppb	17:20:36
2	SiO2†	615.0	111.6	6.6867	ug/L	6.6867 ppb	17:21:12
3	Sc Radial	7144.8	7144.8	103	%		17:19:24
3	Y RADIAL	6577.9	6577.9	103.4	%		17:19:24
3	Al 396.153Radial†	-50.9	21.2	17.831	ug/L	17.831 ppb	17:19:24
3	Ca 317.933Radial†	24.9	-2.2	-3.3085	ug/L	-3.3085 ppb	17:19:44
3	Fe 238.204 Radial†	36.7	-3.3	-14.737	ug/L	-14.737 ppb	17:19:44
3	K 766.490 Radial†	2712.3	-152.6	-31.535	ug/L	-31.535 ppb	17:19:24
3	Mg 279.077 IEC†	2.0	-2.0	-50.317	ug/L	-50.317 ppb	17:19:44
3	Na 589.592 Radial†	-459.8	-115.3	-7.0957	ug/L	-7.0957 ppb	17:19:24
3	Sr 421.552†	-92.5	-27.5	-0.0856	ug/L	-0.0856 ppb	17:19:24
3	Sc 361.383	771850.2	771850.2	103.65	%		17:20:41
3	Y 371.029	601911.2	601911.2	103.53	%		17:20:41
3	Ag 328.068†	684.4	-45.6	-0.2633	ug/L	-0.2633 ppb	17:20:41
3	As 188.979†	-38.5	-2.8	-0.9031	ug/L	-0.9031 ppb	17:21:01
3	B 249.677†	-707.4	198.8	4.5470	ug/L	4.5470 ppb	17:20:41
3	Ba 233.527†	16.3	-6.7	-0.0427	ug/L	-0.0427 ppb	17:21:01
3	Be 313.107†	-4974.2	-14.2	-0.0052	ug/L	-0.0052 ppb	17:20:41
3	Cd 226.502†	-295.2	8.4	0.0968	ug/L	0.0968 ppb	17:21:01
3	Co 228.616†	-96.6	7.3	0.1173	ug/L	0.1173 ppb	17:21:01
3	Cr 267.716†	-21.6	77.1	0.9624	ug/L	0.9624 ppb	17:20:41
3	Cu 324.752†	5852.1	-144.9	-0.4885	ug/L	-0.4885 ppb	17:20:41
3	Mn 257.610†	693.3	-49.0	-0.0503	ug/L	-0.0503 ppb	17:20:41
3	Mo 202.031†	23.4	18.2	1.1522	ug/L	1.1522 ppb	17:21:01
3	Ni 231.604†	154.6	12.5	0.3000	ug/L	0.3000 ppb	17:21:01
3	P 214.914†	293.4	-10.5	-4.6089	ug/L	-4.6089 ppb	17:21:01
3	Pb 220.353†	-34.0	-15.0	-1.5761	ug/L	-1.5761 ppb	17:21:01
3	S 181.975 Axial†	106.1	-33.6	-40.507	ug/L	-40.507 ppb	17:21:01
3	Sb 206.836†	46.8	-7.4	-2.0177	ug/L	-2.0177 ppb	17:21:01
3	Se 196.026†	-26.9	8.9	3.9602	ug/L	3.9602 ppb	17:21:01
3	Si 251.611†	572.4	103.4	2.9132	ug/L	2.9132 ppb	17:21:01
3	Sn 189.927†	13.4	-0.0	-0.0092	ug/L	-0.0092 ppb	17:21:01
3	Ti 334.940†	-1440.6	136.9	0.2290	ug/L	0.2290 ppb	17:20:41
3	Tl 190.801†	-56.8	6.4	1.5120	ug/L	1.5120 ppb	17:21:01
3	U 409.014†	-5055.3	387.3	12.243	ug/L	12.243 ppb	17:20:41
3	V 292.402†	-1712.1	41.1	0.3759	ug/L	0.3759 ppb	17:20:41
3	Zn 213.857†	1015.3	-4.9	-0.0386	ug/L	-0.0386 ppb	17:21:01
3	SiO2†	592.5	96.1	5.7858	ug/L	5.7858 ppb	17:21:17

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	773459.2	103.87	%	0.792				0.76%
Sc Radial	7165.1	103	%	0.3				0.34%
Y 371.029	603033.7	103.72	%	0.713				0.69%
Y RADIAL	6585.2	103.6	%	0.11				0.10%
Ag 328.068†	-38.2	-0.2190	ug/L	0.27052	-0.2190	ppb	0.27052	123.50%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	8.2	6.8689	ug/L	22.15238	6.8689	ppb	22.15238	322.50%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.6	0.8279	ug/L	1.55673	0.8279	ppb	1.55673	188.04%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	197.3	4.5111	ug/L	0.05149	4.5111	ppb	0.05149	1.14%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-10.1	-0.0645	ug/L	0.03029	-0.0645	ppb	0.03029	46.94%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	32.2	0.0135	ug/L	0.02321	0.0135	ppb	0.02321	171.65%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.4	-2.0867	ug/L	1.06299	-2.0867	ppb	1.06299	50.94%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                19.1      0.2157 ug/L       0.10497      0.2157 ppb        0.10497  48.66%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                14.3      0.2293 ug/L       0.10581      0.2293 ppb        0.10581  46.13%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                43.3      0.5400 ug/L       0.36928      0.5400 ppb        0.36928  68.39%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -163.8     -0.5515 ug/L       0.14769     -0.5515 ppb        0.14769  26.78%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -2.0     -9.0656 ug/L       5.34930     -9.0656 ppb        5.34930  59.01%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -181.7     -37.567 ug/L        8.6697     -37.567 ppb         8.6697  23.08%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -2.6     -66.627 ug/L       18.8029     -66.627 ppb        18.8029  28.22%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -9.1     -0.0090 ug/L       0.05892     -0.0090 ppb        0.05892 655.92%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                24.7      1.5682 ug/L       0.45419      1.5682 ppb        0.45419  28.96%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -56.1     -3.4527 ug/L       3.30927     -3.4527 ppb        3.30927  95.85%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 9.5      0.2270 ug/L       0.06341      0.2270 ppb        0.06341  27.93%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -5.9     -2.5268 ug/L       3.20533     -2.5268 ppb        3.20533 126.85%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -12.8     -1.3490 ug/L       0.20026     -1.3490 ppb        0.20026  14.85%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -36.5     -43.995 ug/L        3.3666     -43.995 ppb         3.3666   7.65%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -3.6     -0.9562 ug/L       1.86925     -0.9562 ppb        1.86925 195.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -0.9     -0.4134 ug/L       3.78942     -0.4134 ppb        3.78942 916.70%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                99.1      2.7869 ug/L       0.23733      2.7869 ppb        0.23733   8.52%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -0.5     -0.0833 ug/L       0.30478     -0.0833 ppb        0.30478 365.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 2.1      0.0067 ug/L       0.09693      0.0067 ppb        0.09693 >999.9%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               143.5      0.2414 ug/L       0.06097      0.2414 ppb        0.06097  25.26%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 9.4      2.2268 ug/L       1.05660      2.2268 ppb        1.05660  47.45%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                329.1      10.402 ug/L        3.9575      10.402 ppb         3.9575  38.04%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 53.5      0.4782 ug/L       0.23161      0.4782 ppb        0.23161  48.43%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                -6.0     -0.0473 ug/L       0.10628     -0.0473 ppb        0.10628 224.58%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     114.8      6.9088 ug/L       1.24905      6.9088 ppb        1.24905  18.08%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 29
Sample ID: 1201871694|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 58
Date Collected: 7/2/2009 17:23:26
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871694|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7261.4	7261.4	105	%			17:25:19
1	Y RADIAL	6641.6	6641.6	104.4	%			17:25:19
1	Al 396.153Radial†	-84.9	-10.5	-8.9061	ug/L	-8.9061	ppb	17:25:19
1	Ca 317.933Radial†	64.2	35.0	51.526	ug/L	51.526	ppb	17:25:39
1	Fe 238.204 Radial†	47.0	5.9	26.497	ug/L	26.497	ppb	17:25:39
1	K 766.490 Radial†	2745.6	-163.0	-33.689	ug/L	-33.689	ppb	17:25:19
1	Mg 279.077 IEC†	3.9	-0.3	-6.5955	ug/L	-6.5955	ppb	17:25:39
1	Na 589.592 Radial†	-96.0	239.5	14.737	ug/L	14.737	ppb	17:25:19
1	Sr 421.552†	-60.3	4.7	0.0140	ug/L	0.0140	ppb	17:25:19
1	Sc 361.383	772916.1	772916.1	103.80	%			17:26:36
1	Y 371.029	601921.8	601921.8	103.53	%			17:26:36
1	Ag 328.068†	758.8	25.2	0.1412	ug/L	0.1412	ppb	17:26:36
1	As 188.979†	-35.8	-0.2	-0.0600	ug/L	-0.0600	ppb	17:26:56
1	B 249.677†	-742.6	165.8	3.7911	ug/L	3.7911	ppb	17:26:36
1	Ba 233.527†	36.5	12.7	0.0832	ug/L	0.0832	ppb	17:26:56
1	Be 313.107†	-4883.5	79.8	0.0331	ug/L	0.0331	ppb	17:26:36
1	Cd 226.502†	-292.7	11.3	0.1241	ug/L	0.1241	ppb	17:26:56
1	Co 228.616†	-104.9	-0.5	-0.0097	ug/L	-0.0097	ppb	17:26:56
1	Cr 267.716†	-99.2	2.4	0.0294	ug/L	0.0294	ppb	17:26:36
1	Cu 324.752†	5741.7	-259.1	-0.8700	ug/L	-0.8700	ppb	17:26:36
1	Mn 257.610†	1193.4	431.9	0.4384	ug/L	0.4384	ppb	17:26:36
1	Mo 202.031†	5.7	1.0	0.0664	ug/L	0.0664	ppb	17:26:56
1	Ni 231.604†	161.2	18.7	0.4479	ug/L	0.4479	ppb	17:26:56
1	P 214.914†	296.3	-8.1	-3.4602	ug/L	-3.4602	ppb	17:26:56
1	Pb 220.353†	-19.1	-0.5	-0.0595	ug/L	-0.0595	ppb	17:26:56
1	S 181.975 Axial†	116.8	-23.5	-28.295	ug/L	-28.295	ppb	17:26:56
1	Sb 206.836†	46.0	-8.3	-2.2172	ug/L	-2.2172	ppb	17:26:56
1	Se 196.026†	-29.6	6.4	2.9682	ug/L	2.9682	ppb	17:26:56
1	Si 251.611†	959.9	476.0	13.444	ug/L	13.444	ppb	17:26:56
1	Sn 189.927†	22.4	8.5	1.3457	ug/L	1.3457	ppb	17:26:56
1	Ti 334.940†	-1344.7	231.2	0.3967	ug/L	0.3967	ppb	17:26:36
1	Tl 190.801†	-56.4	6.8	1.6207	ug/L	1.6207	ppb	17:26:56
1	U 409.014†	-5234.4	221.5	6.9983	ug/L	6.9983	ppb	17:26:36
1	V 292.402†	-1710.3	45.1	0.3802	ug/L	0.3802	ppb	17:26:36
1	Zn 213.857†	1275.5	244.5	2.0189	ug/L	2.0189	ppb	17:26:56
1	SiO2†	1019.2	506.4	30.575	ug/L	30.575	ppb	17:27:52
2	Sc Radial	7279.5	7279.5	105	%			17:25:44
2	Y RADIAL	6673.2	6673.2	104.9	%			17:25:44
2	Al 396.153Radial†	-61.9	11.6	9.7243	ug/L	9.7243	ppb	17:25:44
2	Ca 317.933Radial†	64.2	34.8	51.329	ug/L	51.329	ppb	17:26:04
2	Fe 238.204 Radial†	44.1	3.1	13.728	ug/L	13.728	ppb	17:26:04
2	K 766.490 Radial†	2722.1	-192.0	-39.686	ug/L	-39.686	ppb	17:25:44
2	Mg 279.077 IEC†	0.1	-3.9	-99.321	ug/L	-99.321	ppb	17:26:04
2	Na 589.592 Radial†	-81.3	253.7	15.610	ug/L	15.610	ppb	17:25:44
2	Sr 421.552†	-21.3	42.0	0.1300	ug/L	0.1300	ppb	17:25:44
2	Sc 361.383	769402.1	769402.1	103.32	%			17:27:01
2	Y 371.029	599585.9	599585.9	103.13	%			17:27:01
2	Ag 328.068†	784.5	53.3	0.2844	ug/L	0.2844	ppb	17:27:01
2	As 188.979†	-30.0	5.3	1.6887	ug/L	1.6887	ppb	17:27:21
2	B 249.677†	-769.3	136.7	3.1245	ug/L	3.1245	ppb	17:27:01
2	Ba 233.527†	43.8	20.0	0.1302	ug/L	0.1302	ppb	17:27:21
2	Be 313.107†	-5002.7	-57.0	-0.0220	ug/L	-0.0220	ppb	17:27:01
2	Cd 226.502†	-301.4	1.6	0.0163	ug/L	0.0163	ppb	17:27:21
2	Co 228.616†	-85.9	17.3	0.2763	ug/L	0.2763	ppb	17:27:21
2	Cr 267.716†	12.0	109.6	1.3691	ug/L	1.3691	ppb	17:27:01
2	Cu 324.752†	5911.3	-69.7	-0.2336	ug/L	-0.2336	ppb	17:27:01
2	Mn 257.610†	1147.2	392.5	0.3989	ug/L	0.3989	ppb	17:27:01
2	Mo 202.031†	28.0	22.7	1.4378	ug/L	1.4378	ppb	17:27:21
2	Ni 231.604†	164.6	22.7	0.5432	ug/L	0.5432	ppb	17:27:21

2	P 214.914†	301.6	-1.6	-0.6890	ug/L	-0.6890	ppb	17:27:21
2	Pb 220.353†	-25.3	-6.7	-0.6997	ug/L	-0.6997	ppb	17:27:21
2	S 181.975 Axial†	127.7	-12.4	-14.957	ug/L	-14.957	ppb	17:27:21
2	Sb 206.836†	53.7	-0.6	-0.1427	ug/L	-0.1427	ppb	17:27:21
2	Se 196.026†	-30.6	5.3	2.4327	ug/L	2.4327	ppb	17:27:21
2	Si 251.611†	970.0	490.0	13.822	ug/L	13.822	ppb	17:27:21
2	Sn 189.927†	19.9	6.3	0.9938	ug/L	0.9938	ppb	17:27:21
2	Ti 334.940†	-1327.7	241.8	0.4110	ug/L	0.4110	ppb	17:27:01
2	Tl 190.801†	-57.8	5.2	1.2471	ug/L	1.2471	ppb	17:27:21
2	U 409.014†	-4966.3	458.0	14.472	ug/L	14.472	ppb	17:27:01
2	V 292.402†	-1711.5	36.4	0.3403	ug/L	0.3403	ppb	17:27:01
2	Zn 213.857†	1250.9	226.3	1.8716	ug/L	1.8716	ppb	17:27:21
2	SiO2†	1028.5	519.9	31.352	ug/L	31.352	ppb	17:27:57
3	Sc Radial	7295.6	7295.6	105	%			17:26:09
3	Y RADIAL	6700.9	6700.9	105.4	%			17:26:09
3	Al 396.153Radial†	-53.3	19.9	16.752	ug/L	16.752	ppb	17:26:09
3	Ca 317.933Radial†	61.0	31.6	46.614	ug/L	46.614	ppb	17:26:29
3	Fe 238.204 Radial†	44.0	2.9	12.768	ug/L	12.768	ppb	17:26:29
3	K 766.490 Radial†	2851.4	-74.7	-15.451	ug/L	-15.451	ppb	17:26:09
3	Mg 279.077 IEC†	3.9	-0.2	-5.6425	ug/L	-5.6425	ppb	17:26:29
3	Na 589.592 Radial†	-52.1	281.7	17.332	ug/L	17.332	ppb	17:26:09
3	Sr 421.552†	-53.0	11.9	0.0365	ug/L	0.0365	ppb	17:26:09
3	Sc 361.383	774876.6	774876.6	104.06	%			17:27:27
3	Y 371.029	603743.8	603743.8	103.84	%			17:27:27
3	Ag 328.068†	841.9	103.2	0.5544	ug/L	0.5544	ppb	17:27:27
3	As 188.979†	-27.8	7.6	2.4009	ug/L	2.4009	ppb	17:27:47
3	B 249.677†	-747.5	163.0	3.7254	ug/L	3.7254	ppb	17:27:27
3	Ba 233.527†	26.0	2.6	0.0172	ug/L	0.0172	ppb	17:27:47
3	Be 313.107†	-4974.0	4.8	0.0034	ug/L	0.0034	ppb	17:27:27
3	Cd 226.502†	-274.7	29.2	0.3280	ug/L	0.3280	ppb	17:27:47
3	Co 228.616†	-97.8	6.5	0.1019	ug/L	0.1019	ppb	17:27:47
3	Cr 267.716†	-61.0	39.4	0.4883	ug/L	0.4883	ppb	17:27:27
3	Cu 324.752†	5838.1	-180.4	-0.6064	ug/L	-0.6064	ppb	17:27:27
3	Mn 257.610†	1178.4	414.6	0.4192	ug/L	0.4192	ppb	17:27:27
3	Mo 202.031†	9.3	4.5	0.2845	ug/L	0.2845	ppb	17:27:47
3	Ni 231.604†	176.7	33.2	0.7946	ug/L	0.7946	ppb	17:27:47
3	P 214.914†	303.5	-1.8	-0.7080	ug/L	-0.7080	ppb	17:27:47
3	Pb 220.353†	9.0	26.5	2.7973	ug/L	2.7973	ppb	17:27:47
3	S 181.975 Axial†	129.2	-11.8	-14.276	ug/L	-14.276	ppb	17:27:47
3	Sb 206.836†	48.0	-6.5	-1.7533	ug/L	-1.7533	ppb	17:27:47
3	Se 196.026†	-36.9	-0.6	-0.2315	ug/L	-0.2315	ppb	17:27:47
3	Si 251.611†	959.1	472.9	13.358	ug/L	13.358	ppb	17:27:47
3	Sn 189.927†	16.8	3.2	0.5040	ug/L	0.5040	ppb	17:27:47
3	Ti 334.940†	-1198.1	375.4	0.6389	ug/L	0.6389	ppb	17:27:27
3	Tl 190.801†	-56.2	7.1	1.7045	ug/L	1.7045	ppb	17:27:47
3	U 409.014†	-4899.8	555.9	17.567	ug/L	17.567	ppb	17:27:27
3	V 292.402†	-1723.7	36.4	0.3337	ug/L	0.3337	ppb	17:27:27
3	Zn 213.857†	1244.4	211.4	1.7443	ug/L	1.7443	ppb	17:27:47
3	SiO2†	1017.2	502.0	30.315	ug/L	30.315	ppb	17:28:02

Mean Data: 1201871694|881347|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	772398.3	103.73	%	0.372				0.36%
Sc Radial	7278.8	105	%	0.2				0.23%
Y 371.029	601750.5	103.50	%	0.358				0.35%
Y RADIAL	6671.9	104.9	%	0.47				0.44%
Ag 328.068†	60.6	0.3267	ug/L	0.20978	0.3267	ppb	0.20978	64.22%
Al 396.153Radial†	7.0	5.8568	ug/L	13.25914	5.8568	ppb	13.25914	226.39%
As 188.979†	4.2	1.3432	ug/L	1.26629	1.3432	ppb	1.26629	94.27%
B 249.677†	155.2	3.5470	ug/L	0.36734	3.5470	ppb	0.36734	10.36%
Ba 233.527†	11.7	0.0768	ug/L	0.05676	0.0768	ppb	0.05676	73.88%
Be 313.107†	9.2	0.0048	ug/L	0.02755	0.0048	ppb	0.02755	570.92%
Ca 317.933Radial†	33.8	49.823	ug/L	2.7811	49.823	ppb	2.7811	5.58%
Cd 226.502†	14.0	0.1561	ug/L	0.15831	0.1561	ppb	0.15831	101.41%
Co 228.616†	7.8	0.1228	ug/L	0.14414	0.1228	ppb	0.14414	117.34%
Cr 267.716†	50.5	0.6289	ug/L	0.68081	0.6289	ppb	0.68081	108.25%
Cu 324.752†	-169.7	-0.5700	ug/L	0.31974	-0.5700	ppb	0.31974	56.10%
Fe 238.204 Radial†	4.0	17.664	ug/L	7.6643	17.664	ppb	7.6643	43.39%
K 766.490 Radial†	-143.2	-29.609	ug/L	12.6222	-29.609	ppb	12.6222	42.63%

Mg 279.077 IEC†	-1.5	-37.186	ug/L	53.8121	-37.186	ppb	53.8121 144.71%
Mn 257.610†	413.0	0.4188	ug/L	0.01978	0.4188	ppb	0.01978 4.72%
Mo 202.031†	9.4	0.5962	ug/L	0.73692	0.5962	ppb	0.73692 123.60%
Na 589.592 Radial†	258.3	15.893	ug/L	1.3204	15.893	ppb	1.3204 8.31%
Ni 231.604†	24.9	0.5952	ug/L	0.17914	0.5952	ppb	0.17914 30.10%
P 214.914†	-3.9	-1.6190	ug/L	1.59449	-1.6190	ppb	1.59449 98.48%
Pb 220.353†	6.4	0.6794	ug/L	1.86193	0.6794	ppb	1.86193 274.07%
S 181.975 Axial†	-15.9	-19.176	ug/L	7.9048	-19.176	ppb	7.9048 41.22%
Sb 206.836†	-5.1	-1.3710	ug/L	1.08880	-1.3710	ppb	1.08880 79.41%
Se 196.026†	3.7	1.7232	ug/L	1.71378	1.7232	ppb	1.71378 99.46%
Si 251.611†	479.7	13.542	ug/L	0.2468	13.542	ppb	0.2468 1.82%
Sn 189.927†	6.0	0.9478	ug/L	0.42270	0.9478	ppb	0.42270 44.60%
Sr 421.552†	19.5	0.0602	ug/L	0.06151	0.0602	ppb	0.06151 102.21%
Ti 334.940†	282.8	0.4822	ug/L	0.13593	0.4822	ppb	0.13593 28.19%
Tl 190.801†	6.4	1.5241	ug/L	0.24353	1.5241	ppb	0.24353 15.98%
U 409.014†	411.8	13.012	ug/L	5.4336	13.012	ppb	5.4336 41.76%
V 292.402†	39.3	0.3514	ug/L	0.02512	0.3514	ppb	0.02512 7.15%
Zn 213.857†	227.4	1.8782	ug/L	0.13741	1.8782	ppb	0.13741 7.32%
SiO2†	509.4	30.747	ug/L	0.5393	30.747	ppb	0.5393 1.75%

Sequence No.: 30
Sample ID: 1201871695|881347|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 59
Date Collected: 7/2/2009 17:30:14
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871695|881347|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7370.0	7370.0	106	%			17:32:27
1	Y RADIAL	7318.0	7318.0	115.1	%			17:32:07
1	Al 396.153Radial†	40858.5	38538.6	32507	ug/L	32507	ppb	17:32:07
1	Ca 317.933Radial†	13137.0	12342.0	18190	ug/L	18190	ppb	17:32:07
1	Fe 238.204 Radial†	21071.0	19799.2	88499	ug/L	88499	ppb	17:32:07
1	K 766.490 Radial†	57291.1	51152.5	10556	ug/L	10556	ppb	17:32:07
1	Mg 279.077 IEC†	611.3	571.6	14552	ug/L	14552	ppb	17:32:27
1	Na 589.592 Radial†	47472.9	45026.6	2770.6	ug/L	2770.6	ppb	17:32:07
1	Sr 421.552†	277533.8	261358.2	812.64	ug/L	812.64	ppb	17:32:07
Saturated within auto integration window (code 4)								
1	Sc 361.383	821692.6	821692.6	110.35	%			17:33:26
1	Y 371.029	671083.8	671083.8	115.42	%			17:33:26
1	Ag 328.068†	123502.4	111217.4	639.65	ug/L	639.65	ppb	17:33:26
1	As 188.979†	4142.0	3787.9	1224.5	ug/L	1224.5	ppb	17:33:46
1	B 249.677†	30639.5	28648.1	647.14	ug/L	647.14	ppb	17:33:26
1	Ba 233.527†	382027.7	346188.0	2246.9	ug/L	2246.9	ppb	17:33:26
1	Be 313.107†	1176187.6	1070698.2	434.57	ug/L	434.57	ppb	17:33:26
1	Cd 226.502†	56245.8	51265.6	567.20	ug/L	567.20	ppb	17:33:26
1	Co 228.616†	27089.7	24650.3	387.24	ug/L	387.24	ppb	17:33:46
1	Cr 267.716†	31643.7	28774.9	363.50	ug/L	363.50	ppb	17:33:26
1	Cu 324.752†	167201.7	145734.7	495.42	ug/L	495.42	ppb	17:33:26
1	Mn 257.610†	1921813.6	1740915.0	1764.1	ug/L	1764.1	ppb	17:33:26
1	Mo 202.031†	6765.5	6126.8	394.26	ug/L	394.26	ppb	17:33:46
1	Ni 231.604†	22300.5	20073.1	479.93	ug/L	479.93	ppb	17:33:46
1	P 214.914†	9270.9	8108.1	3500.0	ug/L	3500.0	ppb	17:33:46
1	Pb 220.353†	8118.8	7375.4	777.85	ug/L	777.85	ppb	17:33:46
1	S 181.975 Axial†	1116.2	875.6	1049.4	ug/L	1049.4	ppb	17:33:46
1	Sb 206.836†	2050.8	1805.9	496.37	ug/L	496.37	ppb	17:33:46
1	Se 196.026†	1439.0	1338.9	903.17	ug/L	903.17	ppb	17:33:46
1	Si 251.611†	227667.8	205873.9	5800.7	ug/L	5800.7	ppb	17:33:26
1	Sn 189.927†	3586.1	3236.9	515.36	ug/L	515.36	ppb	17:33:46
1	Ti 334.940†	961413.5	872802.4	1498.6	ug/L	1498.6	ppb	17:33:26
1	Tl 190.801†	4232.6	3897.0	944.35	ug/L	944.35	ppb	17:33:46
1	U 409.014†	-9064.4	-2950.1	-104.82	ug/L	-104.82	ppb	17:33:26
1	V 292.402†	93604.3	86521.3	700.55	ug/L	700.55	ppb	17:33:26
1	Zn 213.857†	129344.7	116233.5	948.43	ug/L	948.43	ppb	17:33:26
1	SiO2†	224656.3	203118.0	12233	ug/L	12233	ppb	17:34:47
2	Sc Radial	7178.6	7178.6	103	%			17:32:52
2	Y RADIAL	7585.6	7585.6	119.3	%			17:32:32
2	Al 396.153Radial†	41399.4	40087.4	33814	ug/L	33814	ppb	17:32:32
2	Ca 317.933Radial†	13298.6	12828.1	18906	ug/L	18906	ppb	17:32:32
2	Fe 238.204 Radial†	21296.7	20546.5	91839	ug/L	91839	ppb	17:32:32
2	K 766.490 Radial†	57896.7	53176.5	10975	ug/L	10975	ppb	17:32:32
2	Mg 279.077 IEC†	629.0	604.0	15380	ug/L	15380	ppb	17:32:52
2	Na 589.592 Radial†	48174.2	46896.5	2885.6	ug/L	2885.6	ppb	17:32:32
2	Sr 421.552†	281505.2	272166.1	846.24	ug/L	846.24	ppb	17:32:32
Saturated within auto integration window (code 4)								
2	Sc 361.383	804849.1	804849.1	108.08	%			17:33:54
2	Y 371.029	657819.5	657819.5	113.14	%			17:33:54
2	Ag 328.068†	121192.5	111422.6	641.86	ug/L	641.86	ppb	17:33:54
2	As 188.979†	4136.2	3861.1	1248.4	ug/L	1248.4	ppb	17:34:14
2	B 249.677†	29975.7	28615.1	646.12	ug/L	646.12	ppb	17:33:54
2	Ba 233.527†	376880.4	348671.1	2263.0	ug/L	2263.0	ppb	17:33:54
2	Be 313.107†	1155167.9	1073557.4	435.74	ug/L	435.74	ppb	17:33:54
2	Cd 226.502†	55400.8	51550.6	570.02	ug/L	570.02	ppb	17:33:54
2	Co 228.616†	27025.2	25104.5	394.38	ug/L	394.38	ppb	17:34:14
2	Cr 267.716†	31186.1	28951.6	365.79	ug/L	365.79	ppb	17:33:54
2	Cu 324.752†	163492.3	145473.8	494.73	ug/L	494.73	ppb	17:33:54
2	Mn 257.610†	1891197.9	1749037.0	1772.7	ug/L	1772.7	ppb	17:33:54

2	Mo 202.031†	6722.2	6215.0	400.07	ug/L	400.07 ppb	17:34:14
2	Ni 231.604†	22250.0	20449.2	488.93	ug/L	488.93 ppb	17:34:14
2	P 214.914†	9266.3	8279.7	3575.4	ug/L	3575.4 ppb	17:34:14
2	Pb 220.353†	8068.0	7482.5	789.11	ug/L	789.11 ppb	17:34:14
2	S 181.975 Axial†	1103.9	885.4	1060.9	ug/L	1060.9 ppb	17:34:14
2	Sb 206.836†	2030.3	1825.9	502.08	ug/L	502.08 ppb	17:34:14
2	Se 196.026†	1445.3	1372.0	929.37	ug/L	929.37 ppb	17:34:14
2	Si 251.611†	222465.3	205378.4	5786.3	ug/L	5786.3 ppb	17:33:54
2	Sn 189.927†	3594.2	3312.4	527.51	ug/L	527.51 ppb	17:34:14
2	Ti 334.940†	945426.2	876244.4	1504.5	ug/L	1504.5 ppb	17:33:54
2	Tl 190.801†	4224.4	3969.6	961.69	ug/L	961.69 ppb	17:34:14
2	U 409.014†	-9232.1	-3277.1	-115.57	ug/L	-115.57 ppb	17:33:54
2	V 292.402†	92101.5	86906.1	703.30	ug/L	703.30 ppb	17:33:54
2	Zn 213.857†	127124.4	116632.4	951.30	ug/L	951.30 ppb	17:33:54
2	SiO2†	225622.0	208272.2	12543	ug/L	12543 ppb	17:34:52
3	Sc Radial	7448.2	7448.2	107	%		17:33:18
3	Y RADIAL	7378.5	7378.5	116.0	%		17:32:57
3	Al 396.153Radial†	40483.2	37784.9	31871	ug/L	31871 ppb	17:32:57
3	Ca 317.933Radial†	12993.5	12078.4	17801	ug/L	17801 ppb	17:32:57
3	Fe 238.204 Radial†	20818.2	19355.4	86516	ug/L	86516 ppb	17:32:57
3	K 766.490 Radial†	56541.3	49887.4	10294	ug/L	10294 ppb	17:32:57
3	Mg 279.077 IEC†	614.2	568.3	14470	ug/L	14470 ppb	17:33:18
3	Na 589.592 Radial†	46885.6	44010.0	2708.0	ug/L	2708.0 ppb	17:32:57
3	Sr 421.552†	274222.0	255528.4	794.51	ug/L	794.51 ppb	17:32:57
Saturated within auto integration window (code 4)							
3	Sc 361.383	805566.4	805566.4	108.18	%		17:34:21
3	Y 371.029	658623.2	658623.2	113.28	%		17:34:21
3	Ag 328.068†	121452.8	111563.4	640.93	ug/L	640.93 ppb	17:34:21
3	As 188.979†	4179.1	3897.4	1258.9	ug/L	1258.9 ppb	17:34:41
3	B 249.677†	29929.0	28547.2	644.93	ug/L	644.93 ppb	17:34:21
3	Ba 233.527†	375815.1	347375.8	2254.6	ug/L	2254.6 ppb	17:34:21
3	Be 313.107†	1154748.8	1072218.3	435.20	ug/L	435.20 ppb	17:34:21
3	Cd 226.502†	55001.7	51136.1	565.98	ug/L	565.98 ppb	17:34:21
3	Co 228.616†	27134.1	25182.9	395.70	ug/L	395.70 ppb	17:34:41
3	Cr 267.716†	31084.3	28831.8	364.17	ug/L	364.17 ppb	17:34:21
3	Cu 324.752†	164019.3	145826.3	495.61	ug/L	495.61 ppb	17:34:21
3	Mn 257.610†	1887654.0	1744203.0	1767.2	ug/L	1767.2 ppb	17:34:21
3	Mo 202.031†	6775.1	6258.4	402.48	ug/L	402.48 ppb	17:34:41
3	Ni 231.604†	22371.8	20543.6	491.18	ug/L	491.18 ppb	17:34:41
3	P 214.914†	9284.0	8288.4	3582.7	ug/L	3582.7 ppb	17:34:41
3	Pb 220.353†	8137.2	7539.7	795.29	ug/L	795.29 ppb	17:34:41
3	S 181.975 Axial†	1108.5	888.7	1065.3	ug/L	1065.3 ppb	17:34:41
3	Sb 206.836†	2050.5	1842.9	506.72	ug/L	506.72 ppb	17:34:41
3	Se 196.026†	1453.7	1378.6	914.51	ug/L	914.51 ppb	17:34:41
3	Si 251.611†	222833.4	205535.3	5790.9	ug/L	5790.9 ppb	17:34:21
3	Sn 189.927†	3595.0	3310.2	526.65	ug/L	526.65 ppb	17:34:41
3	Ti 334.940†	946010.9	876006.0	1504.0	ug/L	1504.0 ppb	17:34:21
3	Tl 190.801†	4225.6	3967.2	961.05	ug/L	961.05 ppb	17:34:41
3	U 409.014†	-9101.9	-3149.2	-110.87	ug/L	-110.87 ppb	17:34:21
3	V 292.402†	91997.1	86733.7	702.66	ug/L	702.66 ppb	17:34:21
3	Zn 213.857†	126962.6	116378.1	949.76	ug/L	949.76 ppb	17:34:21
3	SiO2†	224741.5	207272.4	12483	ug/L	12483 ppb	17:34:57

Mean Data: 1201871695|881347|2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	810702.7	108.87	%	1.279				1.17%
Sc Radial	7332.3	106	%	2.0				1.89%
Y 371.029	662508.9	113.95	%	1.279				1.12%
Y RADIAL	7427.3	116.8	%	2.21				1.89%
Ag 328.068†	111401.1	640.81	ug/L	1.106	640.81	ppb	1.106	0.17%
Al 396.153Radial†	38803.6	32731	ug/L	990.7	32731	ppb	990.7	3.03%
As 188.979†	3848.8	1244.0	ug/L	17.59	1244.0	ppb	17.59	1.41%
B 249.677†	28603.5	646.07	ug/L	1.109	646.07	ppb	1.109	0.17%
Ba 233.527†	347411.6	2254.8	ug/L	8.05	2254.8	ppb	8.05	0.36%
Be 313.107†	1072158.0	435.17	ug/L	0.583	435.17	ppb	0.583	0.13%
Ca 317.933Radial†	12416.1	18299	ug/L	560.5	18299	ppb	560.5	3.06%
Cd 226.502†	51317.5	567.73	ug/L	2.075	567.73	ppb	2.075	0.37%
Co 228.616†	24979.3	392.44	ug/L	4.553	392.44	ppb	4.553	1.16%
Cr 267.716†	28852.8	364.49	ug/L	1.177	364.49	ppb	1.177	0.32%

Cu 324.752†	145678.3	495.25	ug/L	0.461	495.25	ppb	0.461	0.09%
Fe 238.204 Radial†	19900.3	88952	ug/L	2690.3	88952	ppb	2690.3	3.02%
K 766.490 Radial†	51405.5	10608	ug/L	343.2	10608	ppb	343.2	3.23%
Mg 279.077 IEC†	581.3	14800	ug/L	503.4	14800	ppb	503.4	3.40%
Mn 257.610†	1744718.3	1768.0	ug/L	4.35	1768.0	ppb	4.35	0.25%
Mo 202.031†	6200.1	398.93	ug/L	4.225	398.93	ppb	4.225	1.06%
Na 589.592 Radial†	45311.0	2788.1	ug/L	90.09	2788.1	ppb	90.09	3.23%
Ni 231.604†	20355.3	486.68	ug/L	5.952	486.68	ppb	5.952	1.22%
P 214.914†	8225.4	3552.7	ug/L	45.76	3552.7	ppb	45.76	1.29%
Pb 220.353†	7465.9	787.42	ug/L	8.843	787.42	ppb	8.843	1.12%
S 181.975 Axial†	883.2	1058.5	ug/L	8.21	1058.5	ppb	8.21	0.78%
Sb 206.836†	1824.9	501.72	ug/L	5.185	501.72	ppb	5.185	1.03%
Se 196.026†	1363.2	915.69	ug/L	13.143	915.69	ppb	13.143	1.44%
Si 251.611†	205595.9	5792.6	ug/L	7.35	5792.6	ppb	7.35	0.13%
Sn 189.927†	3286.5	523.17	ug/L	6.776	523.17	ppb	6.776	1.30%
Sr 421.552†	263017.6	817.79	ug/L	26.249	817.79	ppb	26.249	3.21%
Saturated within auto integration window (code 4)								
Ti 334.940†	875017.6	1502.4	ug/L	3.31	1502.4	ppb	3.31	0.22%
Tl 190.801†	3944.6	955.69	ug/L	9.830	955.69	ppb	9.830	1.03%
U 409.014†	-3125.5	-110.42	ug/L	5.391	-110.42	ppb	5.391	4.88%
V 292.402†	86720.4	702.17	ug/L	1.437	702.17	ppb	1.437	0.20%
Zn 213.857†	116414.6	949.83	ug/L	1.435	949.83	ppb	1.435	0.15%
SiO2†	206220.9	12420	ug/L	164.7	12420	ppb	164.7	1.33%

Sequence No.: 31
Sample ID: 232509001|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 60
Date Collected: 7/2/2009 17:37:08
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509001|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7815.9	7815.9	113	%			17:39:02
1	Y RADIAL	8810.1	8810.1	138.5	%			17:39:02
1	Al 396.153Radial†	24544.8	21861.0	18448	ug/L	18448	ppb	17:39:02
1	Ca 317.933Radial†	7719.4	6826.8	10061	ug/L	10061	ppb	17:39:02
1	Fe 238.204 Radial†	12423.2	10990.1	49118	ug/L	49118	ppb	17:39:02
1	K 766.490 Radial†	24366.3	18845.3	3877.5	ug/L	3877.5	ppb	17:39:02
1	Mg 279.077 IEC†	142.0	122.1	3082.0	ug/L	3082.0	ppb	17:39:22
1	Na 589.592 Radial†	43416.7	38875.7	2392.1	ug/L	2392.1	ppb	17:39:02
1	Sr 421.552†	20278.9	18065.5	56.084	ug/L	56.084	ppb	17:39:02
1	Sc 361.383	835619.2	835619.2	112.22	%			17:40:20
1	Y 371.029	785525.3	785525.3	135.11	%			17:40:20
1	Ag 328.068†	-1654.6	-2180.4	3.9453	ug/L	3.9453	ppb	17:40:25
1	As 188.979†	-24.8	12.2	19.393	ug/L	19.393	ppb	17:40:45
1	B 249.677†	141.9	1007.8	19.642	ug/L	19.642	ppb	17:40:25
1	Ba 233.527†	36812.2	32782.4	212.52	ug/L	212.52	ppb	17:40:25
1	Be 313.107†	-4286.5	964.9	3.2385	ug/L	3.2385	ppb	17:40:25
1	Cd 226.502†	172.4	446.9	-0.6564	ug/L	-0.6564	ppb	17:40:45
1	Co 228.616†	615.4	648.9	7.0816	ug/L	7.0816	ppb	17:40:45
1	Cr 267.716†	9964.1	8977.4	113.62	ug/L	113.62	ppb	17:40:25
1	Cu 324.752†	32966.0	23586.5	82.192	ug/L	82.192	ppb	17:40:25
1	Mn 257.610†	2088324.3	1860273.1	1879.6	ug/L	1879.6	ppb	17:40:20
1	Mo 202.031†	515.4	454.9	32.050	ug/L	32.050	ppb	17:40:45
1	Ni 231.604†	2905.8	2452.9	58.671	ug/L	58.671	ppb	17:40:45
1	P 214.914†	1417.9	970.0	387.53	ug/L	387.53	ppb	17:40:45
1	Pb 220.353†	861.3	785.4	81.958	ug/L	81.958	ppb	17:40:45
1	S 181.975 Axial†	813.6	589.0	706.65	ug/L	706.65	ppb	17:40:45
1	Sb 206.836†	66.0	6.2	-3.4858	ug/L	-3.4858	ppb	17:40:45
1	Se 196.026†	-368.2	-293.3	32.020	ug/L	32.020	ppb	17:40:45
1	Si 251.611†	305753.5	272020.7	7685.3	ug/L	7685.3	ppb	17:40:25
1	Sn 189.927†	-31.7	-41.2	-1.7651	ug/L	-1.7651	ppb	17:40:45
1	Ti 334.940†	800222.3	714637.6	1226.8	ug/L	1226.8	ppb	17:40:20
1	Tl 190.801†	-144.5	-67.6	3.5657	ug/L	3.5657	ppb	17:40:45
1	U 409.014†	-11856.4	-5301.2	-173.81	ug/L	-173.81	ppb	17:40:20
1	V 292.402†	3981.5	5240.9	34.838	ug/L	34.838	ppb	17:40:25
1	Zn 213.857†	34293.1	29575.6	239.04	ug/L	239.04	ppb	17:40:25
1	SiO2†	310509.6	276232.3	16684	ug/L	16684	ppb	17:41:52
2	Sc Radial	7641.2	7641.2	110	%			17:39:27
2	Y RADIAL	8624.0	8624.0	135.6	%			17:39:27
2	Al 396.153Radial†	24104.9	21959.7	18531	ug/L	18531	ppb	17:39:27
2	Ca 317.933Radial†	7591.5	6867.3	10121	ug/L	10121	ppb	17:39:27
2	Fe 238.204 Radial†	12150.1	10994.3	49136	ug/L	49136	ppb	17:39:27
2	K 766.490 Radial†	23896.6	18913.3	3890.9	ug/L	3890.9	ppb	17:39:27
2	Mg 279.077 IEC†	145.0	127.8	3226.3	ug/L	3226.3	ppb	17:39:47
2	Na 589.592 Radial†	42231.4	38680.5	2380.1	ug/L	2380.1	ppb	17:39:27
2	Sr 421.552†	19890.5	18124.5	56.267	ug/L	56.267	ppb	17:39:27
2	Sc 361.383	813484.2	813484.2	109.24	%			17:40:51
2	Y 371.029	769711.2	769711.2	132.39	%			17:40:51
2	Ag 328.068†	-1641.0	-2208.0	3.8027	ug/L	3.8027	ppb	17:40:56
2	As 188.979†	-33.4	3.7	16.888	ug/L	16.888	ppb	17:41:16
2	B 249.677†	76.7	951.5	18.354	ug/L	18.354	ppb	17:40:56
2	Ba 233.527†	36792.5	33657.0	218.20	ug/L	218.20	ppb	17:40:56
2	Be 313.107†	-4096.6	1034.7	3.3512	ug/L	3.3512	ppb	17:40:56
2	Cd 226.502†	204.7	480.7	-0.2766	ug/L	-0.2766	ppb	17:41:16
2	Co 228.616†	586.7	637.6	6.8281	ug/L	6.8281	ppb	17:41:16
2	Cr 267.716†	9984.4	9237.6	116.88	ug/L	116.88	ppb	17:40:56
2	Cu 324.752†	32812.8	24245.6	84.411	ug/L	84.411	ppb	17:40:56
2	Mn 257.610†	2092918.6	1915116.3	1934.8	ug/L	1934.8	ppb	17:40:51
2	Mo 202.031†	513.0	465.2	32.702	ug/L	32.702	ppb	17:41:16
2	Ni 231.604†	2936.6	2551.5	61.030	ug/L	61.030	ppb	17:41:16

2	P 214.914†	1447.5	1031.5	414.75 ug/L	414.75 ppb	17:41:16
2	Pb 220.353†	842.5	789.1	82.363 ug/L	82.363 ppb	17:41:16
2	S 181.975 Axial†	812.9	608.1	729.61 ug/L	729.61 ppb	17:41:16
2	Sb 206.836†	67.1	8.8	-3.0052 ug/L	-3.0052 ppb	17:41:16
2	Se 196.026†	-385.3	-317.8	20.987 ug/L	20.987 ppb	17:41:16
2	Si 251.611†	305057.4	278797.3	7876.8 ug/L	7876.8 ppb	17:40:56
2	Sn 189.927†	-55.8	-64.1	-5.3378 ug/L	-5.3378 ppb	17:41:16
2	Ti 334.940†	802206.6	735857.7	1263.2 ug/L	1263.2 ppb	17:40:51
2	Tl 190.801†	-130.6	-58.4	6.3407 ug/L	6.3407 ppb	17:41:16
2	U 409.014†	-11789.8	-5527.8	-180.98 ug/L	-180.98 ppb	17:40:51
2	V 292.402†	3797.1	5168.7	34.198 ug/L	34.198 ppb	17:40:56
2	Zn 213.857†	34270.2	30386.2	245.72 ug/L	245.72 ppb	17:40:56
2	SiO2†	310880.9	284101.4	17160 ug/L	17160 ppb	17:41:58
3	Sc Radial	8270.1	8270.1	119 %		17:39:52
3	Y RADIAL	9151.2	9151.2	143.9 %		17:39:52
3	Al 396.153Radial†	23998.0	20205.3	17051 ug/L	17051 ppb	17:39:52
3	Ca 317.933Radial†	7557.5	6314.5	9306.5 ug/L	9306.5 ppb	17:39:52
3	Fe 238.204 Radial†	12093.9	10108.1	45176 ug/L	45176 ppb	17:39:52
3	K 766.490 Radial†	23785.1	17169.5	3528.7 ug/L	3528.7 ppb	17:39:52
3	Mg 279.077 IEC†	141.1	114.4	2888.1 ug/L	2888.1 ppb	17:40:13
3	Na 589.592 Radial†	42242.8	35773.7	2201.2 ug/L	2201.2 ppb	17:39:52
3	Sr 421.552†	19811.1	16684.2	51.796 ug/L	51.796 ppb	17:39:52
3	Sc 361.383	780169.1	780169.1	104.77 %		17:41:22
3	Y 371.029	747095.9	747095.9	128.50 %		17:41:22
3	Ag 328.068†	-1750.8	-2377.0	1.6432 ug/L	1.6432 ppb	17:41:27
3	As 188.979†	-20.1	15.2	20.046 ug/L	20.046 ppb	17:41:47
3	B 249.677†	41.9	921.3	17.932 ug/L	17.932 ppb	17:41:27
3	Ba 233.527†	37205.2	35489.2	230.10 ug/L	230.10 ppb	17:41:27
3	Be 313.107†	-4298.2	682.2	3.3713 ug/L	3.3713 ppb	17:41:27
3	Cd 226.502†	195.4	479.8	0.1768 ug/L	0.1768 ppb	17:41:47
3	Co 228.616†	595.7	669.1	7.2393 ug/L	7.2393 ppb	17:41:47
3	Cr 267.716†	10132.5	9769.3	123.47 ug/L	123.47 ppb	17:41:27
3	Cu 324.752†	33486.0	26170.8	90.659 ug/L	90.659 ppb	17:41:27
3	Mn 257.610†	2113299.8	2016380.6	2036.3 ug/L	2036.3 ppb	17:41:22
3	Mo 202.031†	505.0	477.6	33.228 ug/L	33.228 ppb	17:41:47
3	Ni 231.604†	2946.1	2675.4	63.993 ug/L	63.993 ppb	17:41:47
3	P 214.914†	1444.5	1085.2	440.35 ug/L	440.35 ppb	17:41:47
3	Pb 220.353†	862.4	841.0	87.930 ug/L	87.930 ppb	17:41:47
3	S 181.975 Axial†	824.3	650.8	781.38 ug/L	781.38 ppb	17:41:47
3	Sb 206.836†	90.2	33.5	3.3366 ug/L	3.3366 ppb	17:41:47
3	Se 196.026†	-393.5	-340.7	-2.6543 ug/L	-2.6543 ppb	17:41:47
3	Si 251.611†	309873.9	295319.2	8343.8 ug/L	8343.8 ppb	17:41:27
3	Sn 189.927†	-43.8	-54.8	-4.2647 ug/L	-4.2647 ppb	17:41:47
3	Ti 334.940†	811915.3	776482.2	1332.9 ug/L	1332.9 ppb	17:41:22
3	Tl 190.801†	-154.1	-85.9	0.8350 ug/L	0.8350 ppb	17:41:47
3	U 409.014†	-11696.2	-5899.2	-192.25 ug/L	-192.25 ppb	17:41:22
3	V 292.402†	3973.0	5485.0	37.247 ug/L	37.247 ppb	17:41:27
3	Zn 213.857†	34739.1	32173.4	260.91 ug/L	260.91 ppb	17:41:27
3	SiO2†	310303.3	295702.2	17861 ug/L	17861 ppb	17:42:03

Mean Data: 232509001|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	809757.5	108.74	%	3.748				3.45%
Sc Radial	7909.1	114	%	4.7				4.10%
Y 371.029	767444.2	132.00	%	3.322				2.52%
Y RADIAL	8861.7	139.4	%	4.20				3.02%
Ag 328.068†	-2255.1	3.1304	ug/L	1.28990	3.1304	ppb	1.28990	41.21%
Al 396.153Radial†	21342.0	18010	ug/L	831.8	18010	ppb	831.8	4.62%
As 188.979†	10.4	18.776	ug/L	1.6673	18.776	ppb	1.6673	8.88%
B 249.677†	960.2	18.643	ug/L	0.8911	18.643	ppb	0.8911	4.78%
Ba 233.527†	33976.2	220.27	ug/L	8.973	220.27	ppb	8.973	4.07%
Be 313.107†	893.9	3.3203	ug/L	0.07159	3.3203	ppb	0.07159	2.16%
Ca 317.933Radial†	6669.5	9829.7	ug/L	454.13	9829.7	ppb	454.13	4.62%
Cd 226.502†	469.1	-0.2521	ug/L	0.41714	-0.2521	ppb	0.41714	165.49%
Co 228.616†	651.9	7.0497	ug/L	0.20746	7.0497	ppb	0.20746	2.94%
Cr 267.716†	9328.1	117.99	ug/L	5.018	117.99	ppb	5.018	4.25%
Cu 324.752†	24667.6	85.754	ug/L	4.3901	85.754	ppb	4.3901	5.12%
Fe 238.204 Radial†	10697.5	47810	ug/L	2281.3	47810	ppb	2281.3	4.77%
K 766.490 Radial†	18309.4	3765.7	ug/L	205.36	3765.7	ppb	205.36	5.45%

Mg 279.077 1EC†	121.4	3065.5	ug/L	169.71	3065.5	ppb	169.71	5.54%
Mn 257.610†	1930590.0	1950.2	ug/L	79.49	1950.2	ppb	79.49	4.08%
Mo 202.031†	465.9	32.660	ug/L	0.5904	32.660	ppb	0.5904	1.81%
Na 589.592 Radial†	37776.7	2324.5	ug/L	106.90	2324.5	ppb	106.90	4.60%
Ni 231.604†	2559.9	61.231	ug/L	2.6670	61.231	ppb	2.6670	4.36%
P 214.914†	1028.9	414.21	ug/L	26.414	414.21	ppb	26.414	6.38%
Pb 220.353†	805.2	84.084	ug/L	3.3369	84.084	ppb	3.3369	3.97%
S 181.975 Axial†	616.0	739.21	ug/L	38.279	739.21	ppb	38.279	5.18%
Sb 206.836†	16.2	-1.0515	ug/L	3.80776	-1.0515	ppb	3.80776	362.13%
Se 196.026†	-317.3	16.784	ug/L	17.7151	16.784	ppb	17.7151	105.55%
Si 251.611†	282045.7	7968.6	ug/L	338.72	7968.6	ppb	338.72	4.25%
Sn 189.927†	-53.4	-3.7892	ug/L	1.83317	-3.7892	ppb	1.83317	48.38%
Sr 421.552†	17624.7	54.716	ug/L	2.5304	54.716	ppb	2.5304	4.62%
Ti 334.940†	742325.8	1274.3	ug/L	53.90	1274.3	ppb	53.90	4.23%
Tl 190.801†	-70.6	3.5805	ug/L	2.75285	3.5805	ppb	2.75285	76.88%
U 409.014†	-5576.0	-182.35	ug/L	9.294	-182.35	ppb	9.294	5.10%
V 292.402†	5298.2	35.428	ug/L	1.6078	35.428	ppb	1.6078	4.54%
Zn 213.857†	30711.7	248.56	ug/L	11.207	248.56	ppb	11.207	4.51%
SiO2†	285345.3	17235	ug/L	591.9	17235	ppb	591.9	3.43%

Sequence No.: 32
Sample ID: 1201871696|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 61
Date Collected: 7/2/2009 17:44:14
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871696|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7691.6	7691.6	111	%			17:46:07
1	Y RADIAL	8332.7	8332.7	131.0	%			17:46:07
1	Al 396.153Radial†	29618.6	26790.4	22608	ug/L	22608	ppb	17:46:07
1	Ca 317.933Radial†	7603.2	6832.7	10070	ug/L	10070	ppb	17:46:07
1	Fe 238.204 Radial†	14524.5	13064.0	58386	ug/L	58386	ppb	17:46:07
1	K 766.490 Radial†	26177.0	20828.3	4285.7	ug/L	4285.7	ppb	17:46:07
1	Mg 279.077 IEC†	144.2	126.2	3177.6	ug/L	3177.6	ppb	17:46:27
1	Na 589.592 Radial†	44946.0	40878.1	2515.3	ug/L	2515.3	ppb	17:46:07
1	Sr 421.552†	19217.3	17398.7	54.010	ug/L	54.010	ppb	17:46:07
1	Sc 361.383	815161.6	815161.6	109.47	%			17:47:25
1	Y 371.029	742065.3	742065.3	127.63	%			17:47:25
1	Ag 328.068†	-2437.0	-2932.1	2.7944	ug/L	2.7944	ppb	17:47:30
1	As 188.979†	-39.9	-2.1	16.917	ug/L	16.917	ppb	17:47:50
1	B 249.677†	-118.8	772.7	13.617	ug/L	13.617	ppb	17:47:30
1	Ba 233.527†	32206.6	29398.5	190.54	ug/L	190.54	ppb	17:47:30
1	Be 313.107†	-5945.3	-646.3	2.6947	ug/L	2.6947	ppb	17:47:30
1	Cd 226.502†	247.6	519.4	-0.9180	ug/L	-0.9180	ppb	17:47:50
1	Co 228.616†	832.6	861.1	10.208	ug/L	10.208	ppb	17:47:50
1	Cr 267.716†	10254.6	9465.6	119.93	ug/L	119.93	ppb	17:47:30
1	Cu 324.752†	28487.0	20232.2	71.443	ug/L	71.443	ppb	17:47:30
1	Mn 257.610†	2290922.4	2092051.7	2114.2	ug/L	2114.2	ppb	17:47:25
1	Mo 202.031†	576.2	521.9	36.905	ug/L	36.905	ppb	17:47:50
1	Ni 231.604†	2964.6	2571.5	61.506	ug/L	61.506	ppb	17:47:50
1	P 214.914†	1244.8	843.5	326.76	ug/L	326.76	ppb	17:47:50
1	Pb 220.353†	928.8	866.3	90.452	ug/L	90.452	ppb	17:47:50
1	S 181.975 Axial†	831.4	623.5	747.39	ug/L	747.39	ppb	17:47:50
1	Sb 206.836†	78.1	18.7	-0.2052	ug/L	-0.2052	ppb	17:47:50
1	Se 196.026†	-442.8	-369.7	28.581	ug/L	28.581	ppb	17:47:50
1	Si 251.611†	327781.7	298981.5	8447.0	ug/L	8447.0	ppb	17:47:30
1	Sn 189.927†	-34.4	-44.4	-1.5699	ug/L	-1.5699	ppb	17:47:50
1	Ti 334.940†	809436.0	740950.8	1272.0	ug/L	1272.0	ppb	17:47:25
1	Tl 190.801†	-152.0	-77.7	2.7229	ug/L	2.7229	ppb	17:47:50
1	U 409.014†	-10690.8	-4501.6	-149.69	ug/L	-149.69	ppb	17:47:25
1	V 292.402†	4569.9	5867.5	38.738	ug/L	38.738	ppb	17:47:30
1	Zn 213.857†	34225.6	30280.9	243.90	ug/L	243.90	ppb	17:47:30
1	SiO2†	331752.0	302581.6	18276	ug/L	18276	ppb	17:48:57
2	Sc Radial	7507.1	7507.1	108	%			17:46:32
2	Y RADIAL	8137.9	8137.9	128.0	%			17:46:32
2	Al 396.153Radial†	29157.3	27020.6	22802	ug/L	22802	ppb	17:46:32
2	Ca 317.933Radial†	7453.6	6863.0	10115	ug/L	10115	ppb	17:46:32
2	Fe 238.204 Radial†	14212.4	13097.5	58536	ug/L	58536	ppb	17:46:32
2	K 766.490 Radial†	25787.5	21048.6	4331.4	ug/L	4331.4	ppb	17:46:32
2	Mg 279.077 IEC†	143.8	129.0	3250.1	ug/L	3250.1	ppb	17:46:52
2	Na 589.592 Radial†	43962.6	40965.6	2520.7	ug/L	2520.7	ppb	17:46:32
2	Sr 421.552†	18790.5	17430.3	54.108	ug/L	54.108	ppb	17:46:32
2	Sc 361.383	815509.0	815509.0	109.52	%			17:47:56
2	Y 371.029	743656.8	743656.8	127.91	%			17:47:56
2	Ag 328.068†	-2300.6	-2806.6	3.5322	ug/L	3.5322	ppb	17:48:01
2	As 188.979†	-32.5	4.6	19.075	ug/L	19.075	ppb	17:48:21
2	B 249.677†	-85.7	803.0	14.299	ug/L	14.299	ppb	17:48:01
2	Ba 233.527†	32263.8	29438.2	190.80	ug/L	190.80	ppb	17:48:01
2	Be 313.107†	-5961.3	-658.6	2.6833	ug/L	2.6833	ppb	17:48:01
2	Cd 226.502†	220.2	494.3	-1.2182	ug/L	-1.2182	ppb	17:48:21
2	Co 228.616†	841.2	868.6	10.332	ug/L	10.332	ppb	17:48:21
2	Cr 267.716†	10269.7	9475.4	120.05	ug/L	120.05	ppb	17:48:01
2	Cu 324.752†	28532.5	20262.6	71.554	ug/L	71.554	ppb	17:48:01
2	Mn 257.610†	2283792.8	2084649.9	2106.7	ug/L	2106.7	ppb	17:47:56
2	Mo 202.031†	582.5	527.5	37.264	ug/L	37.264	ppb	17:48:21
2	Ni 231.604†	3016.5	2617.8	62.614	ug/L	62.614	ppb	17:48:21

2	P 214.914†	1272.1	868.0	337.71	ug/L	337.71 ppb	17:48:21
2	Pb 220.353†	918.2	856.2	89.415	ug/L	89.415 ppb	17:48:21
2	S 181.975 Axial†	830.7	622.6	746.24	ug/L	746.24 ppb	17:48:21
2	Sb 206.836†	66.2	7.9	-3.1469	ug/L	-3.1469 ppb	17:48:21
2	Se 196.026†	-448.2	-374.4	26.978	ug/L	26.978 ppb	17:48:21
2	Si 251.611†	327497.6	298594.6	8436.0	ug/L	8436.0 ppb	17:48:01
2	Sn 189.927†	-34.4	-44.4	-1.5618	ug/L	-1.5618 ppb	17:48:21
2	Ti 334.940†	808016.6	739339.7	1269.2	ug/L	1269.2 ppb	17:47:56
2	Tl 190.801†	-147.9	-73.9	3.5720	ug/L	3.5720 ppb	17:48:21
2	U 409.014†	-10823.9	-4618.9	-153.42	ug/L	-153.42 ppb	17:47:56
2	V 292.402†	4589.0	5883.2	38.847	ug/L	38.847 ppb	17:48:01
2	Zn 213.857†	34212.8	30255.8	243.67	ug/L	243.67 ppb	17:48:01
2	SiO2†	329138.3	300065.9	18124	ug/L	18124 ppb	17:49:02
3	Sc Radial	7531.1	7531.1	109	%		17:46:57
3	Y RADIAL	8157.6	8157.6	128.3	%		17:46:57
3	Al 396.153Radial†	29126.9	26906.7	22706	ug/L	22706 ppb	17:46:57
3	Ca 317.933Radial†	7457.1	6844.2	10087	ug/L	10087 ppb	17:46:57
3	Fe 238.204 Radial†	14236.8	13078.2	58450	ug/L	58450 ppb	17:46:57
3	K 766.490 Radial†	25868.7	21047.6	4331.1	ug/L	4331.1 ppb	17:46:57
3	Mg 279.077 IEC†	145.7	130.3	3283.8	ug/L	3283.8 ppb	17:47:17
3	Na 589.592 Radial†	44106.6	40968.9	2520.9	ug/L	2520.9 ppb	17:46:57
3	Sr 421.552†	18839.8	17420.4	54.078	ug/L	54.078 ppb	17:46:57
3	Sc 361.383	818813.0	818813.0	109.96	%		17:48:26
3	Y 371.029	747106.9	747106.9	128.50	%		17:48:26
3	Ag 328.068†	-2292.5	-2790.8	3.5852	ug/L	3.5852 ppb	17:48:32
3	As 188.979†	-24.9	11.7	21.297	ug/L	21.297 ppb	17:48:52
3	B 249.677†	-65.0	822.2	14.743	ug/L	14.743 ppb	17:48:32
3	Ba 233.527†	31882.3	28972.3	187.77	ug/L	187.77 ppb	17:48:32
3	Be 313.107†	-5912.7	-592.5	2.7114	ug/L	2.7114 ppb	17:48:32
3	Cd 226.502†	252.4	522.8	-0.8881	ug/L	-0.8881 ppb	17:48:52
3	Co 228.616†	843.0	867.2	10.308	ug/L	10.308 ppb	17:48:52
3	Cr 267.716†	10182.6	9358.4	118.58	ug/L	118.58 ppb	17:48:32
3	Cu 324.752†	28410.9	20046.9	70.824	ug/L	70.824 ppb	17:48:32
3	Mn 257.610†	2294341.4	2085828.5	2107.9	ug/L	2107.9 ppb	17:48:26
3	Mo 202.031†	584.4	527.1	37.234	ug/L	37.234 ppb	17:48:52
3	Ni 231.604†	2975.7	2569.6	61.460	ug/L	61.460 ppb	17:48:52
3	P 214.914†	1253.3	846.3	328.06	ug/L	328.06 ppb	17:48:52
3	Pb 220.353†	916.2	851.0	88.855	ug/L	88.855 ppb	17:48:52
3	S 181.975 Axial†	836.1	624.4	748.43	ug/L	748.43 ppb	17:48:52
3	Sb 206.836†	75.2	15.8	-0.9954	ug/L	-0.9954 ppb	17:48:52
3	Se 196.026†	-439.0	-364.4	31.193	ug/L	31.193 ppb	17:48:52
3	Si 251.611†	324245.9	294430.6	8318.4	ug/L	8318.4 ppb	17:48:32
3	Sn 189.927†	-49.4	-57.9	-3.6795	ug/L	-3.6795 ppb	17:48:52
3	Ti 334.940†	811681.9	739695.9	1269.8	ug/L	1269.8 ppb	17:48:26
3	Tl 190.801†	-144.3	-70.1	4.4911	ug/L	4.4911 ppb	17:48:52
3	U 409.014†	-10692.8	-4459.8	-148.38	ug/L	-148.38 ppb	17:48:26
3	V 292.402†	4528.9	5811.6	38.282	ug/L	38.282 ppb	17:48:32
3	Zn 213.857†	33846.4	29796.6	239.89	ug/L	239.89 ppb	17:48:32
3	SiO2†	328490.4	298264.0	18015	ug/L	18015 ppb	17:49:08

Mean Data: 1201871696|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	816494.5	109.65	%	0.271				0.25%
Sc Radial	7576.6	109	%	1.4				1.32%
Y 371.029	744276.3	128.01	%	0.443				0.35%
Y RADIAL	8209.4	129.1	%	1.69				1.31%
Ag 328.068†	-2843.2	3.3040	ug/L	0.44205	3.3040	ppb	0.44205	13.38%
Al 396.153Radial†	26905.9	22705	ug/L	97.2	22705	ppb	97.2	0.43%
As 188.979†	4.7	19.096	ug/L	2.1900	19.096	ppb	2.1900	11.47%
B 249.677†	799.3	14.220	ug/L	0.5671	14.220	ppb	0.5671	3.99%
Ba 233.527†	29269.7	189.70	ug/L	1.676	189.70	ppb	1.676	0.88%
Be 313.107†	-632.5	2.6964	ug/L	0.01411	2.6964	ppb	0.01411	0.52%
Ca 317.933Radial†	6846.6	10091	ug/L	22.5	10091	ppb	22.5	0.22%
Cd 226.502†	512.2	-1.0081	ug/L	0.18257	-1.0081	ppb	0.18257	18.11%
Co 228.616†	865.6	10.283	ug/L	0.0658	10.283	ppb	0.0658	0.64%
Cr 267.716†	9433.1	119.52	ug/L	0.815	119.52	ppb	0.815	0.68%
Cu 324.752†	20180.6	71.274	ug/L	0.3937	71.274	ppb	0.3937	0.55%
Fe 238.204 Radial†	13079.9	58457	ug/L	75.2	58457	ppb	75.2	0.13%
K 766.490 Radial†	20974.8	4316.1	ug/L	26.27	4316.1	ppb	26.27	0.61%

Mg 279.077 IEC†	128.5	3237.2	ug/L	54.25	3237.2	ppb	54.25	1.68%
Mn 257.610†	2087510.0	2109.6	ug/L	4.00	2109.6	ppb	4.00	0.19%
Mo 202.031†	525.5	37.134	ug/L	0.1994	37.134	ppb	0.1994	0.54%
Na 589.592 Radial†	40937.6	2519.0	ug/L	3.17	2519.0	ppb	3.17	0.13%
Ni 231.604†	2586.3	61.860	ug/L	0.6534	61.860	ppb	0.6534	1.06%
P 214.914†	852.6	330.85	ug/L	5.983	330.85	ppb	5.983	1.81%
Pb 220.353†	857.8	89.574	ug/L	0.8102	89.574	ppb	0.8102	0.90%
S 181.975 Axial†	623.5	747.35	ug/L	1.095	747.35	ppb	1.095	0.15%
Sb 206.836†	14.1	-1.4492	ug/L	1.52245	-1.4492	ppb	1.52245	105.06%
Se 196.026†	-369.5	28.917	ug/L	2.1274	28.917	ppb	2.1274	7.36%
Si 251.611†	297335.6	8400.5	ug/L	71.29	8400.5	ppb	71.29	0.85%
Sn 189.927†	-48.9	-2.2704	ug/L	1.22033	-2.2704	ppb	1.22033	53.75%
Sr 421.552†	17416.5	54.065	ug/L	0.0501	54.065	ppb	0.0501	0.09%
Ti 334.940†	739995.5	1270.3	ug/L	1.45	1270.3	ppb	1.45	0.11%
Tl 190.801†	-73.9	3.5953	ug/L	0.88432	3.5953	ppb	0.88432	24.60%
U 409.014†	-4526.8	-150.50	ug/L	2.616	-150.50	ppb	2.616	1.74%
V 292.402†	5854.1	38.622	ug/L	0.2999	38.622	ppb	0.2999	0.78%
Zn 213.857†	30111.1	242.49	ug/L	2.255	242.49	ppb	2.255	0.93%
SiO2†	300303.9	18138	ug/L	131.0	18138	ppb	131.0	0.72%

Sequence No.: 33
Sample ID: 1201871697|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 62
Date Collected: 7/2/2009 17:51:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871697|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6511.4	6511.4	93.8	%			17:53:32
1	Y RADIAL	8368.7	8368.7	131.6	%			17:53:12
1	Al 396.153Radial†	34691.5	37039.4	31239	ug/L	31239	ppb	17:53:12
1	Ca 317.933Radial†	7889.8	8381.3	12353	ug/L	12353	ppb	17:53:12
1	Fe 238.204 Radial†	8616.7	9143.3	40878	ug/L	40878	ppb	17:53:12
1	K 766.490 Radial†	43470.0	43536.9	8969.4	ug/L	8969.4	ppb	17:53:12
1	Mg 279.077 IEC†	323.3	340.6	8686.0	ug/L	8686.0	ppb	17:53:32
1	Na 589.592 Radial†	106828.8	114172.5	7025.2	ug/L	7025.2	ppb	17:53:12
1	Sr 421.552†	181986.6	193995.1	603.20	ug/L	603.20	ppb	17:53:12
1	Sc 361.383	820170.1	820170.1	110.14	%			17:54:31
1	Y 371.029	732762.2	732762.2	126.03	%			17:54:31
1	Ag 328.068†	93828.7	84483.7	476.91	ug/L	476.91	ppb	17:54:31
1	As 188.979†	1600.1	1487.1	485.01	ug/L	485.01	ppb	17:54:51
1	B 249.677†	21984.5	20841.7	471.52	ug/L	471.52	ppb	17:54:31
1	Ba 233.527†	105956.9	96178.7	624.79	ug/L	624.79	ppb	17:54:31
1	Be 313.107†	1286314.8	1172664.3	475.13	ug/L	475.13	ppb	17:54:31
1	Cd 226.502†	45816.2	41891.0	467.21	ug/L	467.21	ppb	17:54:31
1	Co 228.616†	31740.5	28918.5	455.29	ug/L	455.29	ppb	17:54:51
1	Cr 267.716†	45518.8	41425.7	520.55	ug/L	520.55	ppb	17:54:31
1	Cu 324.752†	177566.8	155426.8	525.27	ug/L	525.27	ppb	17:54:31
1	Mn 257.610†	2066764.4	1875752.8	1894.0	ug/L	1894.0	ppb	17:54:31
1	Mo 202.031†	8158.0	7402.4	472.04	ug/L	472.04	ppb	17:54:51
1	Ni 231.604†	22838.6	20599.2	492.48	ug/L	492.48	ppb	17:54:51
1	P 214.914†	2205.0	1708.4	649.10	ug/L	649.10	ppb	17:54:51
1	Pb 220.353†	5323.5	4851.2	515.62	ug/L	515.62	ppb	17:54:51
1	S 181.975 Axial†	4847.1	4264.9	5136.5	ug/L	5136.5	ppb	17:54:51
1	Sb 206.836†	1924.6	1694.8	462.37	ug/L	462.37	ppb	17:54:51
1	Se 196.026†	872.9	827.3	513.19	ug/L	513.19	ppb	17:54:51
1	Si 251.611†	398481.1	361342.9	10194	ug/L	10194	ppb	17:54:31
1	Sn 189.927†	3258.9	2945.9	465.64	ug/L	465.64	ppb	17:54:51
1	Ti 334.940†	821760.4	747625.0	1283.2	ug/L	1283.2	ppb	17:54:31
1	Tl 190.801†	2012.7	1888.6	465.98	ug/L	465.98	ppb	17:54:51
1	U 409.014†	6268.0	10955.4	340.26	ug/L	340.26	ppb	17:54:31
1	V 292.402†	62945.6	58842.8	482.10	ug/L	482.10	ppb	17:54:31
1	Zn 213.857†	83354.1	74695.0	609.73	ug/L	609.73	ppb	17:54:31
1	SiO2†	405138.6	367360.6	22155	ug/L	22155	ppb	17:55:51
2	Sc Radial	7284.5	7284.5	105	%			17:53:57
2	Y RADIAL	7975.5	7975.5	125.4	%			17:53:37
2	Al 396.153Radial†	35853.2	34222.5	28861	ug/L	28861	ppb	17:53:37
2	Ca 317.933Radial†	8113.0	7701.7	11351	ug/L	11351	ppb	17:53:37
2	Fe 238.204 Radial†	8916.9	8454.8	37801	ug/L	37801	ppb	17:53:37
2	K 766.490 Radial†	44547.4	39646.9	8165.0	ug/L	8165.0	ppb	17:53:37
2	Mg 279.077 IEC†	328.9	309.4	7890.2	ug/L	7890.2	ppb	17:53:57
2	Na 589.592 Radial†	109582.0	104713.4	6443.2	ug/L	6443.2	ppb	17:53:37
2	Sr 421.552†	187634.0	178792.9	555.93	ug/L	555.93	ppb	17:53:37
2	Sc 361.383	805754.7	805754.7	108.21	%			17:54:58
2	Y 371.029	722090.9	722090.9	124.20	%			17:54:58
2	Ag 328.068†	93286.9	85507.0	481.57	ug/L	481.57	ppb	17:54:58
2	As 188.979†	1583.5	1497.7	487.82	ug/L	487.82	ppb	17:55:18
2	B 249.677†	21897.7	21118.5	478.02	ug/L	478.02	ppb	17:54:58
2	Ba 233.527†	105885.7	97834.0	635.56	ug/L	635.56	ppb	17:54:58
2	Be 313.107†	1284807.0	1192164.9	483.02	ug/L	483.02	ppb	17:54:58
2	Cd 226.502†	45902.0	42714.5	476.84	ug/L	476.84	ppb	17:54:58
2	Co 228.616†	31720.9	29416.0	463.18	ug/L	463.18	ppb	17:55:18
2	Cr 267.716†	45486.6	42135.3	529.39	ug/L	529.39	ppb	17:54:58
2	Cu 324.752†	176809.9	157611.5	532.44	ug/L	532.44	ppb	17:54:58
2	Mn 257.610†	2065079.9	1907767.0	1925.9	ug/L	1925.9	ppb	17:54:58
2	Mo 202.031†	8141.3	7519.5	479.26	ug/L	479.26	ppb	17:55:18
2	Ni 231.604†	22846.9	20977.8	501.53	ug/L	501.53	ppb	17:55:18

2	P 214.914†	2242.9	1779.3	681.35	ug/L	681.35 ppb	17:55:18
2	Pb 220.353†	5348.5	4960.7	527.04	ug/L	527.04 ppb	17:55:18
2	S 181.975 Axial†	4842.5	4339.3	5226.7	ug/L	5226.7 ppb	17:55:18
2	Sb 206.836†	1942.9	1742.9	475.47	ug/L	475.47 ppb	17:55:18
2	Se 196.026†	892.6	859.7	517.47	ug/L	517.47 ppb	17:55:18
2	Si 251.611†	397756.5	367145.8	10358	ug/L	10358 ppb	17:54:58
2	Sn 189.927†	3262.3	3001.9	474.09	ug/L	474.09 ppb	17:55:18
2	Ti 334.940†	819480.3	758865.9	1302.4	ug/L	1302.4 ppb	17:54:58
2	Tl 190.801†	2010.6	1919.3	473.48	ug/L	473.48 ppb	17:55:18
2	U 409.014†	6322.1	11107.2	345.42	ug/L	345.42 ppb	17:54:58
2	V 292.402†	62827.0	59755.6	490.09	ug/L	490.09 ppb	17:54:58
2	Zn 213.857†	83311.2	76009.3	620.89	ug/L	620.89 ppb	17:54:58
2	SiO2†	405157.2	373958.6	22554	ug/L	22554 ppb	17:55:56
3	Sc Radial	7450.6	7450.6	107	%		17:54:22
3	Y RADIAL	8142.5	8142.5	128.0	%		17:54:02
3	Al 396.153Radial†	35087.8	32748.1	27617	ug/L	27617 ppb	17:54:02
3	Ca 317.933Radial†	7977.7	7403.3	10911	ug/L	10911 ppb	17:54:02
3	Fe 238.204 Radial†	8708.3	8071.1	36086	ug/L	36086 ppb	17:54:02
3	K 766.490 Radial†	43902.6	38100.1	7845.3	ug/L	7845.3 ppb	17:54:02
3	Mg 279.077 IEC†	331.8	305.0	7781.0	ug/L	7781.0 ppb	17:54:22
3	Na 589.592 Radial†	108202.9	101101.2	6220.9	ug/L	6220.9 ppb	17:54:02
3	Sr 421.552†	184358.8	171756.8	534.05	ug/L	534.05 ppb	17:54:02
3	Sc 361.383	808037.6	808037.6	108.51	%		17:55:26
3	Y 371.029	723271.1	723271.1	124.40	%		17:55:26
3	Ag 328.068†	93735.9	85677.3	481.95	ug/L	481.95 ppb	17:55:26
3	As 188.979†	1584.3	1494.4	486.43	ug/L	486.43 ppb	17:55:46
3	B 249.677†	22004.8	21160.0	479.10	ug/L	479.10 ppb	17:55:26
3	Ba 233.527†	106178.9	97827.7	635.53	ug/L	635.53 ppb	17:55:26
3	Be 313.107†	1284844.2	1188844.5	481.69	ug/L	481.69 ppb	17:55:26
3	Cd 226.502†	45883.5	42577.6	475.50	ug/L	475.50 ppb	17:55:26
3	Co 228.616†	31649.8	29267.6	460.86	ug/L	460.86 ppb	17:55:46
3	Cr 267.716†	45543.4	42068.9	528.52	ug/L	528.52 ppb	17:55:26
3	Cu 324.752†	176967.2	157294.9	531.28	ug/L	531.28 ppb	17:55:26
3	Mn 257.610†	2069114.9	1906093.6	1924.0	ug/L	1924.0 ppb	17:55:26
3	Mo 202.031†	8146.0	7502.6	478.07	ug/L	478.07 ppb	17:55:46
3	Ni 231.604†	22795.7	20870.9	498.97	ug/L	498.97 ppb	17:55:46
3	P 214.914†	2245.8	1776.1	681.03	ug/L	681.03 ppb	17:55:46
3	Pb 220.353†	5324.3	4924.5	523.13	ug/L	523.13 ppb	17:55:46
3	S 181.975 Axial†	4811.6	4298.2	5177.4	ug/L	5177.4 ppb	17:55:46
3	Sb 206.836†	1913.1	1710.5	466.60	ug/L	466.60 ppb	17:55:46
3	Se 196.026†	886.6	851.9	508.14	ug/L	508.14 ppb	17:55:46
3	Si 251.611†	398460.1	366755.7	10347	ug/L	10347 ppb	17:55:26
3	Sn 189.927†	3247.2	2979.5	470.40	ug/L	470.40 ppb	17:55:46
3	Ti 334.940†	821935.2	758988.5	1302.6	ug/L	1302.6 ppb	17:55:26
3	Tl 190.801†	1997.4	1901.9	469.33	ug/L	469.33 ppb	17:55:46
3	U 409.014†	6222.2	10998.7	342.20	ug/L	342.20 ppb	17:55:26
3	V 292.402†	62900.6	59659.5	489.51	ug/L	489.51 ppb	17:55:26
3	Zn 213.857†	83432.5	75903.6	620.21	ug/L	620.21 ppb	17:55:26
3	SiO2†	403634.5	371497.5	22405	ug/L	22405 ppb	17:56:02

Mean Data: 1201871697|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	811320.8	108.95	%	1.041				0.96%
Sc Radial	7082.2	102	%	7.2				7.08%
Y 371.029	726041.4	124.88	%	1.006				0.81%
Y RADIAL	8162.2	128.4	%	3.10				2.42%
Ag 328.068†	85222.7	480.14	ug/L	2.808	480.14	ppb	2.808	0.58%
Al 396.153Radial†	34670.0	29239	ug/L	1840.2	29239	ppb	1840.2	6.29%
As 188.979†	1493.1	486.42	ug/L	1.409	486.42	ppb	1.409	0.29%
B 249.677†	21040.1	476.21	ug/L	4.101	476.21	ppb	4.101	0.86%
Ba 233.527†	97280.1	631.96	ug/L	6.207	631.96	ppb	6.207	0.98%
Be 313.107†	1184557.9	479.95	ug/L	4.226	479.95	ppb	4.226	0.88%
Ca 317.933Radial†	7828.7	11538	ug/L	738.7	11538	ppb	738.7	6.40%
Cd 226.502†	42394.4	473.18	ug/L	5.219	473.18	ppb	5.219	1.10%
Co 228.616†	29200.7	459.78	ug/L	4.054	459.78	ppb	4.054	0.88%
Cr 267.716†	41876.6	526.16	ug/L	4.872	526.16	ppb	4.872	0.93%
Cu 324.752†	156777.7	529.66	ug/L	3.849	529.66	ppb	3.849	0.73%
Fe 238.204 Radial†	8556.4	38255	ug/L	2427.9	38255	ppb	2427.9	6.35%
K 766.490 Radial†	40428.0	8326.6	ug/L	579.21	8326.6	ppb	579.21	6.96%

Mg 279.077 IEC†	318.3	8119.1	ug/L	493.99	8119.1	ppb	493.99	6.08%
Mn 257.610†	1896537.8	1914.6	ug/L	17.88	1914.6	ppb	17.88	0.93%
Mo 202.031†	7474.8	476.46	ug/L	3.875	476.46	ppb	3.875	0.81%
Na 589.592 Radial†	106662.4	6563.1	ug/L	415.34	6563.1	ppb	415.34	6.33%
Ni 231.604†	20816.0	497.66	ug/L	4.667	497.66	ppb	4.667	0.94%
P 214.914†	1754.6	670.49	ug/L	18.526	670.49	ppb	18.526	2.76%
Pb 220.353†	4912.1	521.93	ug/L	5.802	521.93	ppb	5.802	1.11%
S 181.975 Axial†	4300.8	5180.2	ug/L	45.16	5180.2	ppb	45.16	0.87%
Sb 206.836†	1716.1	468.15	ug/L	6.687	468.15	ppb	6.687	1.43%
Se 196.026†	846.3	512.93	ug/L	4.671	512.93	ppb	4.671	0.91%
Si 251.611†	365081.5	10300	ug/L	91.7	10300	ppb	91.7	0.89%
Sn 189.927†	2975.8	470.04	ug/L	4.233	470.04	ppb	4.233	0.90%
Sr 421.552†	181514.9	564.39	ug/L	35.341	564.39	ppb	35.341	6.26%
Ti 334.940†	755159.8	1296.1	ug/L	11.15	1296.1	ppb	11.15	0.86%
Tl 190.801†	1903.2	469.60	ug/L	3.755	469.60	ppb	3.755	0.80%
U 409.014†	11020.4	342.62	ug/L	2.607	342.62	ppb	2.607	0.76%
V 292.402†	59419.3	487.24	ug/L	4.452	487.24	ppb	4.452	0.91%
Zn 213.857†	75536.0	616.94	ug/L	6.256	616.94	ppb	6.256	1.01%
SiO2†	370938.9	22371	ug/L	201.5	22371	ppb	201.5	0.90%

Sequence No.: 34
Sample ID: 1201871699|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 7/2/2009 17:58:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871699|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7486.8	7486.8	108	%			18:00:26
1	Y RADIAL	9357.5	9357.5	147.2	%			18:00:05
1	Al 396.153Radial†	54664.2	50733.4	42795	ug/L	42795	ppb	18:00:05
1	Ca 317.933Radial†	10811.3	9993.5	14729	ug/L	14729	ppb	18:00:05
1	Fe 238.204 Radial†	15668.5	14482.7	64741	ug/L	64741	ppb	18:00:05
1	K 766.490 Radial†	53321.6	46631.8	9604.7	ug/L	9604.7	ppb	18:00:05
1	Mg 279.077 IEC†	400.2	367.0	9341.2	ug/L	9341.2	ppb	18:00:26
1	Na 589.592 Radial†	124778.2	115975.7	7136.2	ug/L	7136.2	ppb	18:00:05
1	Sr 421.552†	190585.4	176697.1	549.38	ug/L	549.38	ppb	18:00:05
1	Sc 361.383	812232.8	812232.8	109.08	%			18:01:25
1	Y 371.029	825608.0	825608.0	142.00	%			18:01:25
1	Ag 328.068†	90856.1	82590.9	474.37	ug/L	474.37	ppb	18:01:25
1	As 188.979†	1555.2	1460.1	484.63	ug/L	484.63	ppb	18:01:45
1	B 249.677†	22230.3	21262.0	479.50	ug/L	479.50	ppb	18:01:25
1	Ba 233.527†	113978.6	104473.1	678.56	ug/L	678.56	ppb	18:01:25
1	Be 313.107†	1262532.6	1162273.6	472.64	ug/L	472.64	ppb	18:01:25
1	Cd 226.502†	45470.3	41980.4	465.45	ug/L	465.45	ppb	18:01:25
1	Co 228.616†	31431.6	28916.9	453.41	ug/L	453.41	ppb	18:01:45
1	Cr 267.716†	50468.7	46367.6	583.05	ug/L	583.05	ppb	18:01:25
1	Cu 324.752†	187786.2	166371.4	563.47	ug/L	563.47	ppb	18:01:25
1	Mn 257.610†	2716989.6	2490215.8	2515.8	ug/L	2515.8	ppb	18:01:25
1	Mo 202.031†	8318.6	7622.1	487.52	ug/L	487.52	ppb	18:01:45
1	Ni 231.604†	23855.8	21734.3	519.63	ug/L	519.63	ppb	18:01:45
1	P 214.914†	2767.6	2243.8	867.44	ug/L	867.44	ppb	18:01:45
1	Pb 220.353†	5679.5	5224.8	555.11	ug/L	555.11	ppb	18:01:45
1	S 181.975 Axial†	5087.8	4528.5	5452.1	ug/L	5452.1	ppb	18:01:45
1	Sb 206.836†	1911.3	1699.6	460.56	ug/L	460.56	ppb	18:01:45
1	Se 196.026†	695.7	672.7	523.41	ug/L	523.41	ppb	18:01:45
1	Si 251.611†	503724.4	461365.3	13020	ug/L	13020	ppb	18:01:25
1	Sn 189.927†	3198.9	2919.7	463.57	ug/L	463.57	ppb	18:01:45
1	Ti 334.940†	1278357.2	1173523.6	2014.1	ug/L	2014.1	ppb	18:01:25
1	Tl 190.801†	1922.1	1823.3	459.90	ug/L	459.90	ppb	18:01:45
1	U 409.014†	2714.5	7753.2	235.99	ug/L	235.99	ppb	18:01:25
1	V 292.402†	66775.7	62912.7	511.32	ug/L	511.32	ppb	18:01:25
1	Zn 213.857†	98982.5	89762.7	731.69	ug/L	731.69	ppb	18:01:25
1	SiO2†	507170.9	464498.3	28023	ug/L	28023	ppb	18:02:45
2	Sc Radial	7493.3	7493.3	108	%			18:00:51
2	Y RADIAL	9153.3	9153.3	143.9	%			18:00:31
2	Al 396.153Radial†	53549.1	49656.9	41886	ug/L	41886	ppb	18:00:31
2	Ca 317.933Radial†	10633.7	9820.4	14474	ug/L	14474	ppb	18:00:31
2	Fe 238.204 Radial†	15357.7	14182.2	63398	ug/L	63398	ppb	18:00:31
2	K 766.490 Radial†	52450.2	45782.1	9429.0	ug/L	9429.0	ppb	18:00:31
2	Mg 279.077 IEC†	397.0	363.6	9257.1	ug/L	9257.1	ppb	18:00:51
2	Na 589.592 Radial†	122434.8	113705.5	6996.5	ug/L	6996.5	ppb	18:00:31
2	Sr 421.552†	186719.0	172963.5	537.77	ug/L	537.77	ppb	18:00:31
2	Sc 361.383	816357.0	816357.0	109.63	%			18:01:52
2	Y 371.029	828714.7	828714.7	142.54	%			18:01:52
2	Ag 328.068†	91378.5	82646.6	474.25	ug/L	474.25	ppb	18:01:52
2	As 188.979†	1562.9	1459.9	484.30	ug/L	484.30	ppb	18:02:12
2	B 249.677†	22449.6	21359.1	481.82	ug/L	481.82	ppb	18:01:52
2	Ba 233.527†	114569.0	104483.6	678.64	ug/L	678.64	ppb	18:01:52
2	Be 313.107†	1269052.6	1162373.3	472.68	ug/L	472.68	ppb	18:01:52
2	Cd 226.502†	45679.9	41960.9	465.38	ug/L	465.38	ppb	18:01:52
2	Co 228.616†	31442.8	28781.6	451.28	ug/L	451.28	ppb	18:02:12
2	Cr 267.716†	50657.4	46306.0	582.25	ug/L	582.25	ppb	18:01:52
2	Cu 324.752†	189457.0	167025.7	565.59	ug/L	565.59	ppb	18:01:52
2	Mn 257.610†	2730755.8	2490188.8	2515.6	ug/L	2515.6	ppb	18:01:52
2	Mo 202.031†	8325.7	7590.0	485.40	ug/L	485.40	ppb	18:02:12
2	Ni 231.604†	23853.8	21622.0	516.95	ug/L	516.95	ppb	18:02:12

2	P 214.914†	2781.4	2243.6	867.65	ug/L	867.65	ppb	18:02:12
2	Pb 220.353†	5701.0	5218.1	554.34	ug/L	554.34	ppb	18:02:12
2	S 181.975 Axial†	5097.3	4513.6	5434.3	ug/L	5434.3	ppb	18:02:12
2	Sb 206.836†	1891.6	1672.8	453.22	ug/L	453.22	ppb	18:02:12
2	Se 196.026†	684.2	658.9	512.66	ug/L	512.66	ppb	18:02:12
2	Si 251.611†	508871.0	463726.9	13087	ug/L	13087	ppb	18:01:52
2	Sn 189.927†	3200.9	2906.8	461.41	ug/L	461.41	ppb	18:02:12
2	Ti 334.940†	1285449.2	1174071.7	2015.0	ug/L	2015.0	ppb	18:01:52
2	Tl 190.801†	1939.3	1830.1	461.52	ug/L	461.52	ppb	18:02:12
2	U 409.014†	2765.4	7787.0	237.22	ug/L	237.22	ppb	18:01:52
2	V 292.402†	67202.1	62992.4	512.14	ug/L	512.14	ppb	18:01:52
2	Zn 213.857†	99662.0	89924.1	733.18	ug/L	733.18	ppb	18:01:52
2	SiO2†	512863.5	467341.9	28195	ug/L	28195	ppb	18:02:51
3	Sc Radial	7547.1	7547.1	109	%			18:01:16
3	Y RADIAL	9210.6	9210.6	144.8	%			18:00:56
3	Al 396.153Radial†	53866.6	49595.5	41835	ug/L	41835	ppb	18:00:56
3	Ca 317.933Radial†	10713.5	9823.6	14478	ug/L	14478	ppb	18:00:56
3	Fe 238.204 Radial†	15411.8	14130.6	63167	ug/L	63167	ppb	18:00:56
3	K 766.490 Radial†	52516.0	45496.5	9370.0	ug/L	9370.0	ppb	18:00:56
3	Mg 279.077 IEC†	401.1	364.9	9288.4	ug/L	9288.4	ppb	18:01:16
3	Na 589.592 Radial†	122974.1	113393.4	6977.3	ug/L	6977.3	ppb	18:00:56
3	Sr 421.552†	187954.6	172867.5	537.47	ug/L	537.47	ppb	18:00:56
3	Sc 361.383	818086.5	818086.5	109.86	%			18:02:19
3	Y 371.029	830790.3	830790.3	142.89	%			18:02:19
3	Ag 328.068†	91309.1	82407.2	472.86	ug/L	472.86	ppb	18:02:19
3	As 188.979†	1572.5	1465.6	486.06	ug/L	486.06	ppb	18:02:39
3	B 249.677†	22430.7	21298.6	480.46	ug/L	480.46	ppb	18:02:19
3	Ba 233.527†	114517.8	104216.2	676.90	ug/L	676.90	ppb	18:02:19
3	Be 313.107†	1269891.0	1160689.2	472.00	ug/L	472.00	ppb	18:02:19
3	Cd 226.502†	45742.8	41930.1	465.06	ug/L	465.06	ppb	18:02:19
3	Co 228.616†	31380.1	28663.9	449.42	ug/L	449.42	ppb	18:02:39
3	Cr 267.716†	50775.8	46316.1	582.37	ug/L	582.37	ppb	18:02:19
3	Cu 324.752†	189247.7	166469.8	563.71	ug/L	563.71	ppb	18:02:19
3	Mn 257.610†	2732741.4	2486730.2	2512.1	ug/L	2512.1	ppb	18:02:19
3	Mo 202.031†	8310.7	7560.3	483.50	ug/L	483.50	ppb	18:02:39
3	Ni 231.604†	23803.2	21530.0	514.75	ug/L	514.75	ppb	18:02:39
3	P 214.914†	2733.8	2194.8	846.20	ug/L	846.20	ppb	18:02:39
3	Pb 220.353†	5696.7	5203.2	552.77	ug/L	552.77	ppb	18:02:39
3	S 181.975 Axial†	5070.6	4479.5	5393.2	ug/L	5393.2	ppb	18:02:39
3	Sb 206.836†	1893.6	1671.0	452.63	ug/L	452.63	ppb	18:02:39
3	Se 196.026†	687.4	660.5	512.62	ug/L	512.62	ppb	18:02:39
3	Si 251.611†	508524.1	462429.8	13050	ug/L	13050	ppb	18:02:19
3	Sn 189.927†	3182.3	2883.6	457.77	ug/L	457.77	ppb	18:02:39
3	Ti 334.940†	1286481.4	1172532.4	2012.4	ug/L	2012.4	ppb	18:02:19
3	Tl 190.801†	1933.0	1820.7	459.24	ug/L	459.24	ppb	18:02:39
3	U 409.014†	2827.9	7838.6	238.88	ug/L	238.88	ppb	18:02:19
3	V 292.402†	67125.8	62793.4	510.52	ug/L	510.52	ppb	18:02:19
3	Zn 213.857†	99727.3	89791.3	732.12	ug/L	732.12	ppb	18:02:19
3	SiO2†	510932.7	464595.4	28029	ug/L	28029	ppb	18:02:56

Mean Data: 1201871699|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	815558.8	109.52	%	0.404				0.37%
Sc Radial	7509.1	108	%	0.5				0.44%
Y 371.029	828371.0	142.48	%	0.449				0.31%
Y RADIAL	9240.5	145.3	%	1.66				1.14%
Ag 328.068†	82548.3	473.82	ug/L	0.840	473.82	ppb	0.840	0.18%
Al 396.153Radial†	49995.3	42172	ug/L	540.0	42172	ppb	540.0	1.28%
As 188.979†	1461.9	484.99	ug/L	0.935	484.99	ppb	0.935	0.19%
B 249.677†	21306.5	480.60	ug/L	1.167	480.60	ppb	1.167	0.24%
Ba 233.527†	104391.0	678.03	ug/L	0.982	678.03	ppb	0.982	0.14%
Be 313.107†	1161778.7	472.44	ug/L	0.383	472.44	ppb	0.383	0.08%
Ca 317.933Radial†	9879.1	14560	ug/L	146.0	14560	ppb	146.0	1.00%
Cd 226.502†	41957.1	465.30	ug/L	0.207	465.30	ppb	0.207	0.04%
Co 228.616†	28787.5	451.37	ug/L	1.995	451.37	ppb	1.995	0.44%
Cr 267.716†	46329.9	582.56	ug/L	0.431	582.56	ppb	0.431	0.07%
Cu 324.752†	166622.3	564.26	ug/L	1.163	564.26	ppb	1.163	0.21%
Fe 238.204 Radial†	14265.2	63769	ug/L	849.7	63769	ppb	849.7	1.33%
K 766.490 Radial†	45970.1	9467.9	ug/L	122.08	9467.9	ppb	122.08	1.29%

Mg 279.077 IEC†	365.2	9295.6	ug/L	42.50	9295.6	ppb	42.50	0.46%
Mn 257.610†	2489044.9	2514.5	ug/L	2.09	2514.5	ppb	2.09	0.08%
Mo 202.031†	7590.8	485.47	ug/L	2.009	485.47	ppb	2.009	0.41%
Na 589.592 Radial†	114358.2	7036.6	ug/L	86.73	7036.6	ppb	86.73	1.23%
Ni 231.604†	21628.8	517.11	ug/L	2.447	517.11	ppb	2.447	0.47%
P 214.914†	2227.4	860.43	ug/L	12.321	860.43	ppb	12.321	1.43%
Pb 220.353†	5215.4	554.07	ug/L	1.190	554.07	ppb	1.190	0.21%
S 181.975 Axial†	4507.2	5426.5	ug/L	30.24	5426.5	ppb	30.24	0.56%
Sb 206.836†	1681.2	455.47	ug/L	4.416	455.47	ppb	4.416	0.97%
Se 196.026†	664.0	516.23	ug/L	6.217	516.23	ppb	6.217	1.20%
Si 251.611†	462507.3	13052	ug/L	33.5	13052	ppb	33.5	0.26%
Sn 189.927†	2903.4	460.92	ug/L	2.928	460.92	ppb	2.928	0.64%
Sr 421.552†	174176.0	541.54	ug/L	6.790	541.54	ppb	6.790	1.25%
Ti 334.940†	1173375.9	2013.9	ug/L	1.34	2013.9	ppb	1.34	0.07%
Tl 190.801†	1824.7	460.22	ug/L	1.169	460.22	ppb	1.169	0.25%
U 409.014†	7792.9	237.36	ug/L	1.452	237.36	ppb	1.452	0.61%
V 292.402†	62899.5	511.33	ug/L	0.809	511.33	ppb	0.809	0.16%
Zn 213.857†	89826.0	732.33	ug/L	0.768	732.33	ppb	0.768	0.10%
SiO2†	465478.5	28082	ug/L	97.6	28082	ppb	97.6	0.35%

Sequence No.: 35
Sample ID: 1201871698|881347|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 7/2/2009 18:05:07
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871698|881347|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7654.4	7654.4	110	%			18:07:00
1	Y RADIAL	7343.8	7343.8	115.5	%			18:07:00
1	Al 396.153Radial†	4725.9	4354.7	3674.8	ug/L	3674.8	ppb	18:07:00
1	Ca 317.933Radial†	1490.9	1325.1	1953.0	ug/L	1953.0	ppb	18:07:20
1	Fe 238.204 Radial†	2399.9	2136.6	9549.0	ug/L	9549.0	ppb	18:07:20
1	K 766.490 Radial†	6768.2	3348.8	688.38	ug/L	688.38	ppb	18:07:00
1	Mg 279.077 IEC†	36.2	28.9	731.41	ug/L	731.41	ppb	18:07:20
1	Na 589.592 Radial†	8101.0	7674.8	472.24	ug/L	472.24	ppb	18:07:00
1	Sr 421.552†	3906.3	3603.4	11.187	ug/L	11.187	ppb	18:07:00
1	Sc 361.383	802101.0	802101.0	107.71	%			18:08:17
1	Y 371.029	650523.6	650523.6	111.89	%			18:08:17
1	Ag 328.068†	285.2	-441.1	0.6656	ug/L	0.6656	ppb	18:08:17
1	As 188.979†	-24.4	11.7	6.7748	ug/L	6.7748	ppb	18:08:37
1	B 249.677†	-454.8	459.1	9.8380	ug/L	9.8380	ppb	18:08:37
1	Ba 233.527†	7114.6	6582.6	42.676	ug/L	42.676	ppb	18:08:37
1	Be 313.107†	-4813.9	315.6	0.7133	ug/L	0.7133	ppb	18:08:17
1	Cd 226.502†	-180.1	126.1	0.3148	ug/L	0.3148	ppb	18:08:37
1	Co 228.616†	26.1	124.7	1.3236	ug/L	1.3236	ppb	18:08:37
1	Cr 267.716†	1901.6	1863.4	23.565	ug/L	23.565	ppb	18:08:37
1	Cu 324.752†	11083.4	4498.7	15.687	ug/L	15.687	ppb	18:08:17
1	Mn 257.610†	421531.3	390623.2	394.58	ug/L	394.58	ppb	18:08:17
1	Mo 202.031†	95.5	84.2	5.9623	ug/L	5.9623	ppb	18:08:37
1	Ni 231.604†	748.5	558.3	13.354	ug/L	13.354	ppb	18:08:37
1	P 214.914†	526.2	194.9	78.258	ug/L	78.258	ppb	18:08:37
1	Pb 220.353†	146.3	153.7	16.053	ug/L	16.053	ppb	18:08:37
1	S 181.975 Axial†	243.9	90.4	108.31	ug/L	108.31	ppb	18:08:37
1	Sb 206.836†	58.9	2.1	-0.5650	ug/L	-0.5650	ppb	18:08:37
1	Se 196.026†	-103.4	-61.1	4.3674	ug/L	4.3674	ppb	18:08:37
1	Si 251.611†	61274.9	56437.6	1594.6	ug/L	1594.6	ppb	18:08:17
1	Sn 189.927†	-10.9	-23.1	-2.7083	ug/L	-2.7083	ppb	18:08:37
1	Ti 334.940†	156684.1	146989.1	252.32	ug/L	252.32	ppb	18:08:17
1	Tl 190.801†	-70.6	-4.4	3.0376	ug/L	3.0376	ppb	18:08:37
1	U 409.014†	-6391.8	-669.5	-22.381	ug/L	-22.381	ppb	18:08:17
1	V 292.402†	-639.5	1099.2	7.4365	ug/L	7.4365	ppb	18:08:17
1	Zn 213.857†	7500.2	5978.7	48.349	ug/L	48.349	ppb	18:08:37
1	SiO2†	60331.6	55535.2	3354.5	ug/L	3354.5	ppb	18:09:33
2	Sc Radial	7512.3	7512.3	108	%			18:07:25
2	Y RADIAL	7229.3	7229.3	113.7	%			18:07:25
2	Al 396.153Radial†	4605.6	4324.6	3649.3	ug/L	3649.3	ppb	18:07:25
2	Ca 317.933Radial†	1480.1	1340.7	1976.0	ug/L	1976.0	ppb	18:07:45
2	Fe 238.204 Radial†	2385.4	2164.3	9672.9	ug/L	9672.9	ppb	18:07:45
2	K 766.490 Radial†	6764.8	3461.7	711.73	ug/L	711.73	ppb	18:07:25
2	Mg 279.077 IEC†	28.9	22.7	573.67	ug/L	573.67	ppb	18:07:45
2	Na 589.592 Radial†	7904.9	7632.7	469.65	ug/L	469.65	ppb	18:07:25
2	Sr 421.552†	3754.3	3530.0	10.959	ug/L	10.959	ppb	18:07:25
2	Sc 361.383	800983.7	800983.7	107.56	%			18:08:42
2	Y 371.029	649393.2	649393.2	111.69	%			18:08:42
2	Ag 328.068†	287.2	-438.9	0.7101	ug/L	0.7101	ppb	18:08:42
2	As 188.979†	-23.4	12.6	7.0975	ug/L	7.0975	ppb	18:09:02
2	B 249.677†	-495.8	420.4	8.9427	ug/L	8.9427	ppb	18:09:02
2	Ba 233.527†	7127.3	6603.7	42.813	ug/L	42.813	ppb	18:09:02
2	Be 313.107†	-4834.8	290.0	0.7025	ug/L	0.7025	ppb	18:08:42
2	Cd 226.502†	-174.3	131.2	0.3587	ug/L	0.3587	ppb	18:09:02
2	Co 228.616†	34.0	132.1	1.4429	ug/L	1.4429	ppb	18:09:02
2	Cr 267.716†	1917.8	1880.9	23.785	ug/L	23.785	ppb	18:09:02
2	Cu 324.752†	11153.9	4578.6	15.963	ug/L	15.963	ppb	18:08:42
2	Mn 257.610†	420564.9	390270.7	394.24	ug/L	394.24	ppb	18:08:42
2	Mo 202.031†	121.9	108.9	7.5377	ug/L	7.5377	ppb	18:09:02
2	Ni 231.604†	745.5	556.4	13.309	ug/L	13.309	ppb	18:09:02

2	P 214.914†	529.0	198.3	79.620 ug/L	79.620 ppb	18:09:02
2	Pb 220.353†	135.0	143.3	14.947 ug/L	14.947 ppb	18:09:02
2	S 181.975 Axial†	242.5	89.5	107.15 ug/L	107.15 ppb	18:09:02
2	Sb 206.836†	47.9	-8.1	-3.2744 ug/L	-3.2744 ppb	18:09:02
2	Se 196.026†	-100.7	-58.8	5.8487 ug/L	5.8487 ppb	18:09:02
2	Si 251.611†	61113.3	56366.7	1592.5 ug/L	1592.5 ppb	18:08:42
2	Sn 189.927†	-3.9	-16.6	-1.6830 ug/L	-1.6830 ppb	18:09:02
2	Ti 334.940†	156339.8	146872.0	252.12 ug/L	252.12 ppb	18:08:42
2	Tl 190.801†	-78.5	-11.9	1.2488 ug/L	1.2488 ppb	18:09:02
2	U 409.014†	-6089.7	-396.9	-13.779 ug/L	-13.779 ppb	18:08:42
2	V 292.402†	-624.2	1112.5	7.5628 ug/L	7.5628 ppb	18:08:42
2	Zn 213.857†	7532.9	6018.8	48.673 ug/L	48.673 ppb	18:09:02
2	SiO2†	60367.7	55646.8	3361.1 ug/L	3361.1 ppb	18:09:38
3	Sc Radial	7476.2	7476.2	108 %		18:07:50
3	Y RADIAL	7160.5	7160.5	112.6 %		18:07:50
3	Al 396.153Radial†	4596.1	4336.3	3659.3 ug/L	3659.3 ppb	18:07:50
3	Ca 317.933Radial†	1496.5	1362.5	2008.1 ug/L	2008.1 ppb	18:08:10
3	Fe 238.204 Radial†	2408.2	2196.1	9815.0 ug/L	9815.0 ppb	18:08:10
3	K 766.490 Radial†	6667.2	3401.3	699.29 ug/L	699.29 ppb	18:07:50
3	Mg 279.077 IEC†	30.4	24.3	612.33 ug/L	612.33 ppb	18:08:10
3	Na 589.592 Radial†	7935.5	7696.3	473.56 ug/L	473.56 ppb	18:07:50
3	Sr 421.552†	3809.8	3598.2	11.171 ug/L	11.171 ppb	18:07:50
3	Sc 361.383	799605.1	799605.1	107.38 %		18:09:08
3	Y 371.029	648500.4	648500.4	111.54 %		18:09:08
3	Ag 328.068†	212.7	-507.8	0.3839 ug/L	0.3839 ppb	18:09:08
3	As 188.979†	-25.1	10.9	6.6025 ug/L	6.6025 ppb	18:09:28
3	B 249.677†	-528.0	389.6	8.2269 ug/L	8.2269 ppb	18:09:28
3	Ba 233.527†	7090.9	6581.2	42.667 ug/L	42.667 ppb	18:09:28
3	Be 313.107†	-4890.4	230.5	0.6794 ug/L	0.6794 ppb	18:09:08
3	Cd 226.502†	-194.5	112.1	0.1266 ug/L	0.1266 ppb	18:09:28
3	Co 228.616†	54.9	151.6	1.7486 ug/L	1.7486 ppb	18:09:28
3	Cr 267.716†	1950.9	1914.8	24.216 ug/L	24.216 ppb	18:09:28
3	Cu 324.752†	11044.3	4494.5	15.688 ug/L	15.688 ppb	18:09:08
3	Mn 257.610†	419615.9	390061.0	394.05 ug/L	394.05 ppb	18:09:08
3	Mo 202.031†	123.1	110.2	7.6287 ug/L	7.6287 ppb	18:09:28
3	Ni 231.604†	742.8	555.1	13.277 ug/L	13.277 ppb	18:09:28
3	P 214.914†	531.9	201.8	81.141 ug/L	81.141 ppb	18:09:28
3	Pb 220.353†	150.2	157.7	16.454 ug/L	16.454 ppb	18:09:28
3	S 181.975 Axial†	249.0	95.9	114.88 ug/L	114.88 ppb	18:09:28
3	Sb 206.836†	54.1	-2.2	-1.6657 ug/L	-1.6657 ppb	18:09:28
3	Se 196.026†	-89.9	-48.9	10.815 ug/L	10.815 ppb	18:09:28
3	Si 251.611†	61150.0	56498.8	1596.3 ug/L	1596.3 ppb	18:09:08
3	Sn 189.927†	-1.6	-14.5	-1.3281 ug/L	-1.3281 ppb	18:09:28
3	Ti 334.940†	156309.7	147094.5	252.51 ug/L	252.51 ppb	18:09:08
3	Tl 190.801†	-72.0	-5.9	2.6570 ug/L	2.6570 ppb	18:09:28
3	U 409.014†	-6239.2	-545.9	-18.506 ug/L	-18.506 ppb	18:09:08
3	V 292.402†	-558.2	1173.0	8.0314 ug/L	8.0314 ppb	18:09:08
3	Zn 213.857†	7495.1	5995.6	48.467 ug/L	48.467 ppb	18:09:28
3	SiO2†	60985.0	56318.4	3401.7 ug/L	3401.7 ppb	18:09:43

Mean Data: 1201871698|881347|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	800896.6	107.55	%	0.168				0.16%
Sc Radial	7547.7	109	%	1.4				1.25%
Y 371.029	649472.4	111.71	%	0.174				0.16%
Y RADIAL	7244.5	113.9	%	1.46				1.28%
Ag 328.068†	-462.6	0.5865	ug/L	0.17685	0.5865	ppb	0.17685	30.15%
Al 396.153Radial†	4338.5	3661.1	ug/L	12.83	3661.1	ppb	12.83	0.35%
As 188.979†	11.7	6.8250	ug/L	0.25131	6.8250	ppb	0.25131	3.68%
B 249.677†	423.0	9.0025	ug/L	0.80722	9.0025	ppb	0.80722	8.97%
Ba 233.527†	6589.2	42.719	ug/L	0.0815	42.719	ppb	0.0815	0.19%
Be 313.107†	278.7	0.6984	ug/L	0.01731	0.6984	ppb	0.01731	2.48%
Ca 317.933Radial†	1342.8	1979.0	ug/L	27.69	1979.0	ppb	27.69	1.40%
Cd 226.502†	123.1	0.2667	ug/L	0.12331	0.2667	ppb	0.12331	46.24%
Co 228.616†	136.1	1.5051	ug/L	0.21920	1.5051	ppb	0.21920	14.56%
Cr 267.716†	1886.4	23.855	ug/L	0.3307	23.855	ppb	0.3307	1.39%
Cu 324.752†	4523.9	15.780	ug/L	0.1590	15.780	ppb	0.1590	1.01%
Fe 238.204 Radial†	2165.7	9679.0	ug/L	133.10	9679.0	ppb	133.10	1.38%
K 766.490 Radial†	3403.9	699.80	ug/L	11.682	699.80	ppb	11.682	1.67%

Mg 279.077 IEC†	25.3	639.14	ug/L	82.217	639.14	ppb	82.217	12.86%
Mn 257.610†	390318.3	394.29	ug/L	0.268	394.29	ppb	0.268	0.07%
Mo 202.031†	101.1	7.0429	ug/L	0.93695	7.0429	ppb	0.93695	13.30%
Na 589.592 Radial†	7667.9	471.82	ug/L	1.991	471.82	ppb	1.991	0.42%
Ni 231.604†	556.6	13.313	ug/L	0.0389	13.313	ppb	0.0389	0.29%
P 214.914†	198.3	79.673	ug/L	1.4423	79.673	ppb	1.4423	1.81%
Pb 220.353†	151.6	15.818	ug/L	0.7803	15.818	ppb	0.7803	4.93%
S 181.975 Axial†	91.9	110.11	ug/L	4.168	110.11	ppb	4.168	3.78%
Sb 206.836†	-2.7	-1.8350	ug/L	1.36261	-1.8350	ppb	1.36261	74.26%
Se 196.026†	-56.3	7.0102	ug/L	3.37688	7.0102	ppb	3.37688	48.17%
Si 251.611†	56434.4	1594.5	ug/L	1.87	1594.5	ppb	1.87	0.12%
Sn 189.927†	-18.1	-1.9065	ug/L	0.71670	-1.9065	ppb	0.71670	37.59%
Sr 421.552†	3577.2	11.106	ug/L	0.1274	11.106	ppb	0.1274	1.15%
Ti 334.940†	146985.2	252.32	ug/L	0.193	252.32	ppb	0.193	0.08%
Tl 190.801†	-7.4	2.3145	ug/L	0.94228	2.3145	ppb	0.94228	40.71%
U 409.014†	-537.4	-18.222	ug/L	4.3082	-18.222	ppb	4.3082	23.64%
V 292.402†	1128.2	7.6769	ug/L	0.31347	7.6769	ppb	0.31347	4.08%
Zn 213.857†	5997.7	48.496	ug/L	0.1642	48.496	ppb	0.1642	0.34%
SiO2†	55833.5	3372.4	ug/L	25.56	3372.4	ppb	25.56	0.76%

Sequence No.: 36
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/2/2009 18:11:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7389.0	7389.0	106	%			18:13:52
1	Y RADIAL	6735.4	6735.4	105.9	%			18:13:52
1	Al 396.153Radial†	6371.1	6053.5	5087.3	ug/L	5087.3	ppb	18:13:52
1	Ca 317.933Radial†	3710.1	3457.7	5096.0	ug/L	5096.0	ppb	18:13:52
1	Fe 238.204 Radial†	1277.8	1161.0	5204.1	ug/L	5204.1	ppb	18:14:12
1	K 766.490 Radial†	26938.7	22510.8	4637.8	ug/L	4637.8	ppb	18:13:47
1	Mg 279.077 IEC†	216.5	199.4	5105.0	ug/L	5105.0	ppb	18:14:12
1	Na 589.592 Radial†	166390.8	156584.8	9634.9	ug/L	9634.9	ppb	18:13:47
1	Sr 421.552†	168566.5	158359.1	492.44	ug/L	492.44	ppb	18:13:47
1	Sc 361.383	791740.4	791740.4	106.32	%			18:15:21
1	Y 371.029	609097.4	609097.4	104.76	%			18:15:21
1	Ag 328.068†	96402.1	89963.0	495.51	ug/L	495.51	ppb	18:15:21
1	As 188.979†	1634.1	1571.2	500.83	ug/L	500.83	ppb	18:15:41
1	B 249.677†	22089.0	21656.7	492.43	ug/L	492.43	ppb	18:15:21
1	Ba 233.527†	80381.2	75578.4	491.34	ug/L	491.34	ppb	18:15:21
1	Be 313.107†	1297891.7	1225488.7	494.58	ug/L	494.58	ppb	18:15:21
1	Cd 226.502†	45524.1	43110.0	485.09	ug/L	485.09	ppb	18:15:41
1	Co 228.616†	32700.9	30856.6	488.14	ug/L	488.14	ppb	18:15:41
1	Cr 267.716†	41478.4	39109.6	490.77	ug/L	490.77	ppb	18:15:21
1	Cu 324.752†	161590.3	146189.4	492.13	ug/L	492.13	ppb	18:15:21
1	Mn 257.610†	519508.7	487894.8	491.91	ug/L	491.91	ppb	18:15:21
1	Mo 202.031†	8398.5	7894.6	500.92	ug/L	500.92	ppb	18:15:41
1	Ni 231.604†	21997.9	20553.0	491.35	ug/L	491.35	ppb	18:15:41
1	P 214.914†	6195.7	5533.7	2398.2	ug/L	2398.2	ppb	18:15:41
1	Pb 220.353†	4982.2	4703.7	498.41	ug/L	498.41	ppb	18:15:41
1	S 181.975 Axial†	987.1	792.4	954.48	ug/L	954.48	ppb	18:15:41
1	Sb 206.836†	2018.2	1845.6	507.44	ug/L	507.44	ppb	18:15:41
1	Se 196.026†	1140.4	1107.5	519.54	ug/L	519.54	ppb	18:15:41
1	Si 251.611†	94967.0	88870.4	2494.4	ug/L	2494.4	ppb	18:15:21
1	Sn 189.927†	3385.0	3170.7	497.46	ug/L	497.46	ppb	18:15:41
1	Ti 334.940†	308855.6	292014.3	500.96	ug/L	500.96	ppb	18:15:21
1	Tl 190.801†	2155.0	2088.0	499.30	ug/L	499.30	ppb	18:15:41
1	U 409.014†	10460.8	15103.2	475.80	ug/L	475.80	ppb	18:15:21
1	V 292.402†	61730.3	59751.9	496.00	ug/L	496.00	ppb	18:15:21
1	Zn 213.857†	64318.4	59508.9	487.95	ug/L	487.95	ppb	18:15:21
1	SiO2†	95576.9	89417.3	5364.4	ug/L	5364.4	ppb	18:16:41
2	Sc Radial	7394.2	7394.2	107	%			18:14:22
2	Y RADIAL	6744.7	6744.7	106.1	%			18:14:22
2	Al 396.153Radial†	6386.5	6063.8	5096.0	ug/L	5096.0	ppb	18:14:22
2	Ca 317.933Radial†	3718.2	3462.8	5103.6	ug/L	5103.6	ppb	18:14:22
2	Fe 238.204 Radial†	1278.0	1160.3	5201.1	ug/L	5201.1	ppb	18:14:42
2	K 766.490 Radial†	27240.2	22776.0	4692.6	ug/L	4692.6	ppb	18:14:17
2	Mg 279.077 IEC†	220.1	202.6	5188.3	ug/L	5188.3	ppb	18:14:42
2	Na 589.592 Radial†	169748.9	159626.7	9822.1	ug/L	9822.1	ppb	18:14:17
2	Sr 421.552†	172570.9	162006.0	503.78	ug/L	503.78	ppb	18:14:17
2	Sc 361.383	791344.4	791344.4	106.27	%			18:15:48
2	Y 371.029	608918.3	608918.3	104.73	%			18:15:48
2	Ag 328.068†	96083.8	89708.9	494.11	ug/L	494.11	ppb	18:15:48
2	As 188.979†	1615.1	1554.1	495.42	ug/L	495.42	ppb	18:16:08
2	B 249.677†	22105.3	21682.4	493.03	ug/L	493.03	ppb	18:15:48
2	Ba 233.527†	79902.5	75165.7	488.66	ug/L	488.66	ppb	18:15:48
2	Be 313.107†	1292524.6	1221049.1	492.79	ug/L	492.79	ppb	18:15:48
2	Cd 226.502†	45304.4	42924.6	483.00	ug/L	483.00	ppb	18:16:08
2	Co 228.616†	32538.6	30719.3	485.97	ug/L	485.97	ppb	18:16:08
2	Cr 267.716†	41261.1	38924.6	488.45	ug/L	488.45	ppb	18:15:48
2	Cu 324.752†	161213.2	145910.6	491.19	ug/L	491.19	ppb	18:15:48
2	Mn 257.610†	517170.4	485938.9	489.94	ug/L	489.94	ppb	18:15:48
2	Mo 202.031†	8378.0	7879.2	499.94	ug/L	499.94	ppb	18:16:08
2	Ni 231.604†	21836.5	20411.5	487.97	ug/L	487.97	ppb	18:16:08

2	P 214.914†	6158.6	5501.7	2383.9 ug/L	2383.9 ppb	18:16:08
2	Pb 220.353†	4967.2	4692.0	497.17 ug/L	497.17 ppb	18:16:08
2	S 181.975 Axial†	978.0	784.3	944.75 ug/L	944.75 ppb	18:16:08
2	Sb 206.836†	1984.1	1814.4	498.98 ug/L	498.98 ppb	18:16:08
2	Se 196.026†	1138.9	1106.6	519.13 ug/L	519.13 ppb	18:16:08
2	Si 251.611†	94530.5	88504.4	2484.1 ug/L	2484.1 ppb	18:15:48
2	Sn 189.927†	3366.1	3154.5	494.92 ug/L	494.92 ppb	18:16:08
2	Ti 334.940†	307926.7	291285.5	499.71 ug/L	499.71 ppb	18:15:48
2	Tl 190.801†	2136.8	2071.9	495.45 ug/L	495.45 ppb	18:16:08
2	U 409.014†	10496.3	15141.5	477.02 ug/L	477.02 ppb	18:15:48
2	V 292.402†	61357.6	59430.3	493.35 ug/L	493.35 ppb	18:15:48
2	Zn 213.857†	64026.9	59264.9	485.95 ug/L	485.95 ppb	18:15:48
2	SiO2†	94726.4	88661.9	5318.8 ug/L	5318.8 ppb	18:16:46
3	Sc Radial	7394.5	7394.5	107 %		18:14:52
3	Y RADIAL	6771.9	6771.9	106.5 %		18:14:52
3	Al 396.153Radial†	6413.6	6089.0	5117.5 ug/L	5117.5 ppb	18:14:52
3	Ca 317.933Radial†	3733.7	3477.2	5124.8 ug/L	5124.8 ppb	18:14:52
3	Fe 238.204 Radial†	1267.8	1150.7	5157.9 ug/L	5157.9 ppb	18:15:12
3	K 766.490 Radial†	26428.0	22012.8	4535.0 ug/L	4535.0 ppb	18:14:47
3	Mg 279.077 IEC†	217.4	200.1	5123.4 ug/L	5123.4 ppb	18:15:12
3	Na 589.592 Radial†	162893.4	153186.9	9425.8 ug/L	9425.8 ppb	18:14:47
3	Sr 421.552†	165374.9	155246.6	482.76 ug/L	482.76 ppb	18:14:47
3	Sc 361.383	795308.9	795308.9	106.80 %		18:16:15
3	Y 371.029	612188.5	612188.5	105.30 %		18:16:15
3	Ag 328.068†	96515.6	89662.5	493.84 ug/L	493.84 ppb	18:16:15
3	As 188.979†	1608.2	1540.1	490.97 ug/L	490.97 ppb	18:16:35
3	B 249.677†	22227.1	21692.7	493.29 ug/L	493.29 ppb	18:16:15
3	Ba 233.527†	80502.0	75352.3	489.87 ug/L	489.87 ppb	18:16:15
3	Be 313.107†	1302429.0	1224259.8	494.08 ug/L	494.08 ppb	18:16:15
3	Cd 226.502†	45280.2	42689.5	480.36 ug/L	480.36 ppb	18:16:35
3	Co 228.616†	32450.5	30484.2	482.24 ug/L	482.24 ppb	18:16:35
3	Cr 267.716†	41528.6	38981.6	489.16 ug/L	489.16 ppb	18:16:15
3	Cu 324.752†	162381.4	146248.2	492.32 ug/L	492.32 ppb	18:16:15
3	Mn 257.610†	520199.0	486348.8	490.35 ug/L	490.35 ppb	18:16:15
3	Mo 202.031†	8328.4	7793.5	494.50 ug/L	494.50 ppb	18:16:35
3	Ni 231.604†	21815.9	20289.7	485.06 ug/L	485.06 ppb	18:16:35
3	P 214.914†	6137.5	5453.1	2361.9 ug/L	2361.9 ppb	18:16:35
3	Pb 220.353†	4966.5	4668.0	494.63 ug/L	494.63 ppb	18:16:35
3	S 181.975 Axial†	979.8	781.5	941.28 ug/L	941.28 ppb	18:16:35
3	Sb 206.836†	1999.4	1819.5	500.20 ug/L	500.20 ppb	18:16:35
3	Se 196.026†	1122.7	1086.0	509.68 ug/L	509.68 ppb	18:16:35
3	Si 251.611†	95263.0	88746.8	2491.1 ug/L	2491.1 ppb	18:16:15
3	Sn 189.927†	3375.8	3147.8	493.86 ug/L	493.86 ppb	18:16:35
3	Ti 334.940†	309863.8	291654.8	500.35 ug/L	500.35 ppb	18:16:15
3	Tl 190.801†	2148.9	2073.2	495.80 ug/L	495.80 ppb	18:16:35
3	U 409.014†	10663.3	15248.7	480.41 ug/L	480.41 ppb	18:16:15
3	V 292.402†	61908.3	59658.1	495.16 ug/L	495.16 ppb	18:16:15
3	Zn 213.857†	64477.4	59386.3	486.98 ug/L	486.98 ppb	18:16:15
3	SiO2†	95071.8	88541.0	5311.9 ug/L	5311.9 ppb	18:16:51

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	792797.9	106.47	%	0.293				0.28%
Sc Radial	7392.5	107	%	0.0				0.04%
Y 371.029	610068.1	104.93	%	0.316				0.30%
Y RADIAL	6750.7	106.2	%	0.30				0.28%
Ag 328.068†	89778.1	494.49	ug/L	0.896	494.49	ppb	0.896	0.18%
QC value within limits for Ag 328.068 Recovery = 98.90%								
Al 396.153Radial†	6068.8	5100.3	ug/L	15.56	5100.3	ppb	15.56	0.31%
QC value within limits for Al 396.153Radial Recovery = 102.01%								
As 188.979†	1555.1	495.74	ug/L	4.939	495.74	ppb	4.939	1.00%
QC value within limits for As 188.979 Recovery = 99.15%								
B 249.677†	21677.3	492.92	ug/L	0.440	492.92	ppb	0.440	0.09%
QC value within limits for B 249.677 Recovery = 98.58%								
Ba 233.527†	75365.5	489.96	ug/L	1.344	489.96	ppb	1.344	0.27%
QC value within limits for Ba 233.527 Recovery = 97.99%								
Be 313.107†	1223599.2	493.82	ug/L	0.924	493.82	ppb	0.924	0.19%
QC value within limits for Be 313.107 Recovery = 98.76%								
Ca 317.933Radial†	3465.9	5108.1	ug/L	14.89	5108.1	ppb	14.89	0.29%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.16%
Cd 226.502†            42908.0      482.82 ug/L         2.372      482.82 ppb          2.372   0.49%
   QC value within limits for Cd 226.502  Recovery = 96.56%
Co 228.616†            30686.7      485.45 ug/L         2.986      485.45 ppb          2.986   0.62%
   QC value within limits for Co 228.616  Recovery = 97.09%
Cr 267.716†            39005.3      489.46 ug/L         1.189      489.46 ppb          1.189   0.24%
   QC value within limits for Cr 267.716  Recovery = 97.89%
Cu 324.752†           146116.1      491.88 ug/L         0.606      491.88 ppb          0.606   0.12%
   QC value within limits for Cu 324.752  Recovery = 98.38%
Fe 238.204 Radial†      1157.3      5187.7 ug/L         25.85      5187.7 ppb          25.85   0.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.75%
K 766.490 Radial†      22433.2      4621.8 ug/L         80.00      4621.8 ppb          80.00   1.73%
   QC value within limits for K 766.490 Radial  Recovery = 92.44%
Mg 279.077 IEC†          200.7      5138.9 ug/L         43.76      5138.9 ppb          43.76   0.85%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.78%
Mn 257.610†           486727.5      490.73 ug/L         1.041      490.73 ppb          1.041   0.21%
   QC value within limits for Mn 257.610  Recovery = 98.15%
Mo 202.031†             7855.8      498.45 ug/L         3.455      498.45 ppb          3.455   0.69%
   QC value within limits for Mo 202.031  Recovery = 99.69%
Na 589.592 Radial†    156466.1      9627.6 ug/L        198.23      9627.6 ppb         198.23   2.06%
   QC value within limits for Na 589.592 Radial  Recovery = 96.28%
Ni 231.604†            20418.1      488.13 ug/L         3.150      488.13 ppb          3.150   0.65%
   QC value within limits for Ni 231.604  Recovery = 97.63%
P 214.914†              5496.1      2381.3 ug/L         18.31      2381.3 ppb          18.31   0.77%
   QC value within limits for P 214.914  Recovery = 95.25%
Pb 220.353†             4687.9      496.74 ug/L         1.925      496.74 ppb          1.925   0.39%
   QC value within limits for Pb 220.353  Recovery = 99.35%
S 181.975 Axial†         786.1      946.84 ug/L         6.845      946.84 ppb          6.845   0.72%
   QC value within limits for S 181.975 Axial  Recovery = 94.68%
Sb 206.836†             1826.5      502.20 ug/L         4.573      502.20 ppb          4.573   0.91%
   QC value within limits for Sb 206.836  Recovery = 100.44%
Se 196.026†             1100.0      516.12 ug/L         5.579      516.12 ppb          5.579   1.08%
   QC value within limits for Se 196.026  Recovery = 103.22%
Si 251.611†            88707.2      2489.9 ug/L          5.27      2489.9 ppb           5.27   0.21%
   QC value within limits for Si 251.611  Recovery = 99.60%
Sn 189.927†             3157.7      495.41 ug/L         1.846      495.41 ppb          1.846   0.37%
   QC value within limits for Sn 189.927  Recovery = 99.08%
Sr 421.552†           158537.2      492.99 ug/L        10.522      492.99 ppb         10.522   2.13%
   QC value within limits for Sr 421.552  Recovery = 98.60%
Ti 334.940†           291651.5      500.34 ug/L         0.625      500.34 ppb          0.625   0.12%
   QC value within limits for Ti 334.940  Recovery = 100.07%
Tl 190.801†             2077.7      496.85 ug/L         2.127      496.85 ppb          2.127   0.43%
   QC value within limits for Tl 190.801  Recovery = 99.37%
U 409.014†             15164.5      477.74 ug/L         2.388      477.74 ppb          2.388   0.50%
   QC value within limits for U 409.014  Recovery = 95.55%
V 292.402†             59613.4      494.84 ug/L         1.352      494.84 ppb          1.352   0.27%
   QC value within limits for V 292.402  Recovery = 98.97%
Zn 213.857†            59386.7      486.96 ug/L         1.000      486.96 ppb          1.000   0.21%
   QC value within limits for Zn 213.857  Recovery = 97.39%
SiO2†                  88873.4      5331.7 ug/L         28.52      5331.7 ppb          28.52   0.53%
   QC value within limits for SiO2  Recovery = 99.70%
All analyte(s) passed QC.
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Sequence No.: 37
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/2/2009 18:19:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7194.1	7194.1	104	%			18:20:52
1	Y RADIAL	6575.8	6575.8	103.4	%			18:20:52
1	Al 396.153Radial†	-67.8	5.2	4.3577	ug/L	4.3577	ppb	18:20:52
1	Ca 317.933Radial†	28.9	1.5	2.2268	ug/L	2.2268	ppb	18:21:12
1	Fe 238.204 Radial†	37.1	-3.1	-13.969	ug/L	-13.969	ppb	18:21:12
1	K 766.490 Radial†	2572.6	-305.3	-63.088	ug/L	-63.088	ppb	18:20:52
1	Mg 279.077 IEC†	1.9	-2.2	-55.252	ug/L	-55.252	ppb	18:21:12
1	Na 589.592 Radial†	-321.6	21.0	1.2925	ug/L	1.2925	ppb	18:20:52
1	Sr 421.552†	-23.8	39.3	0.1222	ug/L	0.1222	ppb	18:20:52
1	Sc 361.383	781673.4	781673.4	104.97	%			18:22:09
1	Y 371.029	609729.4	609729.4	104.87	%			18:22:09
1	Ag 328.068†	759.8	17.9	0.0911	ug/L	0.0911	ppb	18:22:09
1	As 188.979†	-28.9	6.8	2.1396	ug/L	2.1396	ppb	18:22:29
1	B 249.677†	-660.8	251.8	5.7578	ug/L	5.7578	ppb	18:22:09
1	Ba 233.527†	6.6	-16.1	-0.1023	ug/L	-0.1023	ppb	18:22:29
1	Be 313.107†	-4914.1	103.4	0.0421	ug/L	0.0421	ppb	18:22:09
1	Cd 226.502†	-267.9	38.0	0.4304	ug/L	0.4304	ppb	18:22:29
1	Co 228.616†	-83.0	21.4	0.3393	ug/L	0.3393	ppb	18:22:29
1	Cr 267.716†	-45.9	54.3	0.6787	ug/L	0.6787	ppb	18:22:09
1	Cu 324.752†	5930.2	-141.5	-0.4770	ug/L	-0.4770	ppb	18:22:09
1	Mn 257.610†	729.1	-23.3	-0.0242	ug/L	-0.0242	ppb	18:22:09
1	Mo 202.031†	9.6	4.7	0.2955	ug/L	0.2955	ppb	18:22:29
1	Ni 231.604†	180.8	35.7	0.8527	ug/L	0.8527	ppb	18:22:29
1	P 214.914†	294.0	-13.5	-5.9404	ug/L	-5.9404	ppb	18:22:29
1	Pb 220.353†	-13.3	5.2	0.5482	ug/L	0.5482	ppb	18:22:29
1	S 181.975 Axial†	98.3	-42.4	-51.072	ug/L	-51.072	ppb	18:22:29
1	Sb 206.836†	59.8	4.3	1.1874	ug/L	1.1874	ppb	18:22:29
1	Se 196.026†	-37.2	-0.6	-0.3343	ug/L	-0.3343	ppb	18:22:29
1	Si 251.611†	644.6	165.3	4.6732	ug/L	4.6732	ppb	18:22:29
1	Sn 189.927†	20.6	6.6	1.0359	ug/L	1.0359	ppb	18:22:29
1	Ti 334.940†	-1482.7	114.3	0.1928	ug/L	0.1928	ppb	18:22:09
1	Tl 190.801†	-62.5	1.6	0.3750	ug/L	0.3750	ppb	18:22:29
1	U 409.014†	-5284.6	230.2	7.2771	ug/L	7.2771	ppb	18:22:09
1	V 292.402†	-1658.7	112.7	0.9427	ug/L	0.9427	ppb	18:22:09
1	Zn 213.857†	1043.5	9.7	0.0791	ug/L	0.0791	ppb	18:22:29
1	SiO2†	693.2	184.9	11.173	ug/L	11.173	ppb	18:23:25
2	Sc Radial	7032.8	7032.8	101	%			18:21:17
2	Y RADIAL	6459.1	6459.1	101.6	%			18:21:17
2	Al 396.153Radial†	-62.6	8.9	7.4472	ug/L	7.4472	ppb	18:21:17
2	Ca 317.933Radial†	27.5	0.7	1.0110	ug/L	1.0110	ppb	18:21:37
2	Fe 238.204 Radial†	36.7	-2.8	-12.335	ug/L	-12.335	ppb	18:21:37
2	K 766.490 Radial†	2561.4	-259.5	-53.623	ug/L	-53.623	ppb	18:21:17
2	Mg 279.077 IEC†	1.7	-2.3	-58.390	ug/L	-58.390	ppb	18:21:37
2	Na 589.592 Radial†	-517.3	-179.2	-11.027	ug/L	-11.027	ppb	18:21:17
2	Sr 421.552†	-85.5	-22.0	-0.0685	ug/L	-0.0685	ppb	18:21:17
2	Sc 361.383	773112.2	773112.2	103.82	%			18:22:34
2	Y 371.029	603502.7	603502.7	103.80	%			18:22:34
2	Ag 328.068†	840.7	103.9	0.5541	ug/L	0.5541	ppb	18:22:34
2	As 188.979†	-35.0	0.6	0.1876	ug/L	0.1876	ppb	18:22:54
2	B 249.677†	-549.5	352.1	8.0501	ug/L	8.0501	ppb	18:22:34
2	Ba 233.527†	36.9	13.1	0.0864	ug/L	0.0864	ppb	18:22:54
2	Be 313.107†	-4999.7	-31.0	-0.0116	ug/L	-0.0116	ppb	18:22:34
2	Cd 226.502†	-271.6	31.6	0.3574	ug/L	0.3574	ppb	18:22:54
2	Co 228.616†	-75.0	28.3	0.4485	ug/L	0.4485	ppb	18:22:54
2	Cr 267.716†	-83.2	17.8	0.2189	ug/L	0.2189	ppb	18:22:34
2	Cu 324.752†	5914.5	-94.0	-0.3170	ug/L	-0.3170	ppb	18:22:34
2	Mn 257.610†	765.4	19.3	0.0190	ug/L	0.0190	ppb	18:22:34
2	Mo 202.031†	19.8	14.7	0.9283	ug/L	0.9283	ppb	18:22:54
2	Ni 231.604†	157.5	15.1	0.3610	ug/L	0.3610	ppb	18:22:54

2	P 214.914†	284.4	-19.6	-8.7432	ug/L	-8.7432 ppb	18:22:54
2	Pb 220.353†	-6.9	11.2	1.1915	ug/L	1.1915 ppb	18:22:54
2	S 181.975 Axial†	107.6	-32.4	-39.017	ug/L	-39.017 ppb	18:22:54
2	Sb 206.836†	59.9	5.1	1.3958	ug/L	1.3958 ppb	18:22:54
2	Se 196.026†	-31.7	4.3	1.9142	ug/L	1.9142 ppb	18:22:54
2	Si 251.611†	615.2	143.8	4.0612	ug/L	4.0612 ppb	18:22:54
2	Sn 189.927†	16.0	2.4	0.3802	ug/L	0.3802 ppb	18:22:54
2	Ti 334.940†	-1354.2	222.4	0.3751	ug/L	0.3751 ppb	18:22:34
2	Tl 190.801†	-43.8	19.0	4.5047	ug/L	4.5047 ppb	18:22:54
2	U 409.014†	-4987.0	461.1	14.574	ug/L	14.574 ppb	18:22:34
2	V 292.402†	-1692.7	62.5	0.5529	ug/L	0.5529 ppb	18:22:34
2	Zn 213.857†	1036.7	14.2	0.1186	ug/L	0.1186 ppb	18:22:54
2	SiO2†	706.6	205.1	12.385	ug/L	12.385 ppb	18:23:30
3	Sc Radial	7369.4	7369.4	106	%		18:21:42
3	Y RADIAL	6741.8	6741.8	106.0	%		18:21:42
3	Al 396.153Radial†	-66.8	7.7	6.4900	ug/L	6.4900 ppb	18:21:42
3	Ca 317.933Radial†	28.3	0.2	0.3368	ug/L	0.3368 ppb	18:22:02
3	Fe 238.204 Radial†	37.8	-3.4	-15.187	ug/L	-15.187 ppb	18:22:02
3	K 766.490 Radial†	2687.7	-256.0	-52.900	ug/L	-52.900 ppb	18:21:42
3	Mg 279.077 IEC†	4.0	-0.1	-3.4598	ug/L	-3.4598 ppb	18:22:02
3	Na 589.592 Radial†	-364.7	-12.2	-0.7525	ug/L	-0.7525 ppb	18:21:42
3	Sr 421.552†	-19.5	44.0	0.1368	ug/L	0.1368 ppb	18:21:42
3	Sc 361.383	777938.0	777938.0	104.47	%		18:23:00
3	Y 371.029	606995.8	606995.8	104.40	%		18:23:00
3	Ag 328.068†	648.5	-85.1	-0.4815	ug/L	-0.4815 ppb	18:23:00
3	As 188.979†	-32.9	2.8	0.8836	ug/L	0.8836 ppb	18:23:20
3	B 249.677†	-627.5	280.7	6.4199	ug/L	6.4199 ppb	18:23:00
3	Ba 233.527†	14.8	-8.3	-0.0535	ug/L	-0.0535 ppb	18:23:20
3	Be 313.107†	-4898.3	96.0	0.0395	ug/L	0.0395 ppb	18:23:00
3	Cd 226.502†	-276.2	28.9	0.3270	ug/L	0.3270 ppb	18:23:20
3	Co 228.616†	-100.7	4.1	0.0664	ug/L	0.0664 ppb	18:23:20
3	Cr 267.716†	-18.7	80.1	0.9989	ug/L	0.9989 ppb	18:23:00
3	Cu 324.752†	5902.2	-141.2	-0.4759	ug/L	-0.4759 ppb	18:23:00
3	Mn 257.610†	740.5	-9.1	-0.0110	ug/L	-0.0110 ppb	18:23:00
3	Mo 202.031†	18.2	13.0	0.8246	ug/L	0.8246 ppb	18:23:20
3	Ni 231.604†	155.0	11.8	0.2815	ug/L	0.2815 ppb	18:23:20
3	P 214.914†	297.1	-9.2	-4.0029	ug/L	-4.0029 ppb	18:23:20
3	Pb 220.353†	-16.3	2.2	0.2358	ug/L	0.2358 ppb	18:23:20
3	S 181.975 Axial†	100.4	-39.9	-48.135	ug/L	-48.135 ppb	18:23:20
3	Sb 206.836†	63.1	7.8	2.1211	ug/L	2.1211 ppb	18:23:20
3	Se 196.026†	-28.2	7.8	3.4931	ug/L	3.4931 ppb	18:23:20
3	Si 251.611†	658.8	181.9	5.1249	ug/L	5.1249 ppb	18:23:20
3	Sn 189.927†	22.7	8.7	1.3632	ug/L	1.3632 ppb	18:23:20
3	Ti 334.940†	-1385.0	201.1	0.3391	ug/L	0.3391 ppb	18:23:00
3	Tl 190.801†	-54.5	9.0	2.1332	ug/L	2.1332 ppb	18:23:20
3	U 409.014†	-5081.1	400.8	12.668	ug/L	12.668 ppb	18:23:00
3	V 292.402†	-1769.6	-1.1	0.0275	ug/L	0.0275 ppb	18:23:00
3	Zn 213.857†	1025.9	-2.4	-0.0193	ug/L	-0.0193 ppb	18:23:20
3	SiO2†	668.6	164.5	9.9027	ug/L	9.9027 ppb	18:23:35

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	777574.5	104.42	%	0.576				0.55%
Sc Radial	7198.8	104	%	2.4				2.34%
Y 371.029	606742.6	104.36	%	0.537				0.51%
Y RADIAL	6592.2	103.7	%	2.23				2.15%
Ag 328.068†	12.2	0.0546	ug/L	0.51880	0.0546	ppb	0.51880	950.46%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	7.3	6.0983	ug/L	1.58159	6.0983	ppb	1.58159	25.93%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.4	1.0703	ug/L	0.98930	1.0703	ppb	0.98930	92.43%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	294.8	6.7426	ug/L	1.17975	6.7426	ppb	1.17975	17.50%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-3.7	-0.0231	ug/L	0.09792	-0.0231	ppb	0.09792	423.31%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	56.2	0.0233	ug/L	0.03026	0.0233	ppb	0.03026	129.72%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.8	1.1915	ug/L	0.95788	1.1915	ppb	0.95788	80.39%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                32.8      0.3716 ug/L       0.05311      0.3716 ppb        0.05311  14.29%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                17.9      0.2847 ug/L       0.19681      0.2847 ppb        0.19681  69.13%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                50.7      0.6321 ug/L       0.39210      0.6321 ppb        0.39210  62.03%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -125.6     -0.4233 ug/L       0.09206     -0.4233 ppb        0.09206  21.75%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -3.1     -13.830 ug/L        1.4309     -13.830 ppb         1.4309  10.35%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -273.6     -56.537 ug/L        5.6845     -56.537 ppb         5.6845  10.05%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.5     -39.034 ug/L       30.8482     -39.034 ppb        30.8482  79.03%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -4.4     -0.0054 ug/L       0.02216     -0.0054 ppb        0.02216 412.43%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                10.8      0.6828 ug/L       0.33943      0.6828 ppb        0.33943  49.71%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -56.8     -3.4957 ug/L       6.60200     -3.4957 ppb        6.60200 188.86%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                20.8      0.4984 ug/L       0.30939      0.4984 ppb        0.30939  62.08%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -14.1     -6.2288 ug/L       2.38327     -6.2288 ppb        2.38327  38.26%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 6.2      0.6585 ug/L       0.48732      0.6585 ppb        0.48732  74.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -38.2     -46.075 ug/L        6.2862     -46.075 ppb         6.2862  13.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 5.7      1.5681 ug/L       0.49007      1.5681 ppb        0.49007  31.25%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.8      1.6910 ug/L       1.92345      1.6910 ppb        1.92345 113.74%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               163.7      4.6197 ug/L       0.53386      4.6197 ppb        0.53386  11.56%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.9      0.9264 ug/L       0.50054      0.9264 ppb        0.50054  54.03%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                20.4      0.0635 ug/L       0.11453      0.0635 ppb        0.11453 180.36%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               179.2      0.3023 ug/L       0.09659      0.3023 ppb        0.09659  31.95%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 9.8      2.3377 ug/L       2.07244      2.3377 ppb        2.07244  88.65%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                364.0      11.506 ug/L        3.7847      11.506 ppb         3.7847  32.89%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 58.0      0.5077 ug/L       0.45927      0.5077 ppb        0.45927  90.46%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 7.2      0.0595 ug/L       0.07106      0.0595 ppb        0.07106 119.50%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     184.8      11.154 ug/L        1.2413      11.154 ppb         1.2413  11.13%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 38
Sample ID: 232509002|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 65
Date Collected: 7/2/2009 18:25:44
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509002|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7434.8	7434.8	107	%			18:27:57
1	Y RADIAL	8457.3	8457.3	133.0	%			18:27:37
1	Al 396.153Radial†	30184.2	28241.1	23833	ug/L	23833	ppb	18:27:37
1	Ca 317.933Radial†	6699.0	6225.7	9175.6	ug/L	9175.6	ppb	18:27:57
1	Fe 238.204 Radial†	19009.0	17701.9	79115	ug/L	79115	ppb	18:27:37
1	K 766.490 Radial†	30126.7	25330.2	5212.0	ug/L	5212.0	ppb	18:27:37
1	Mg 279.077 IEC†	200.6	183.3	4621.2	ug/L	4621.2	ppb	18:27:57
1	Na 589.592 Radial†	9626.1	9315.1	573.17	ug/L	573.17	ppb	18:27:37
1	Sr 421.552†	18479.1	17308.6	53.739	ug/L	53.739	ppb	18:27:37
1	Sc 361.383	819055.7	819055.7	109.99	%			18:28:54
1	Y 371.029	757318.3	757318.3	130.26	%			18:28:54
1	Ag 328.068†	-3613.8	-3991.4	3.8482	ug/L	3.8482	ppb	18:29:00
1	As 188.979†	-21.5	14.8	29.001	ug/L	29.001	ppb	18:29:20
1	B 249.677†	66.5	941.7	16.037	ug/L	16.037	ppb	18:29:00
1	Ba 233.527†	51688.6	46970.9	304.50	ug/L	304.50	ppb	18:29:00
1	Be 313.107†	-5980.7	-652.6	4.0202	ug/L	4.0202	ppb	18:29:00
1	Cd 226.502†	382.4	640.9	-1.9891	ug/L	-1.9891	ppb	18:29:20
1	Co 228.616†	1248.8	1235.8	14.651	ug/L	14.651	ppb	18:29:20
1	Cr 267.716†	3625.8	3394.4	44.354	ug/L	44.354	ppb	18:29:20
1	Cu 324.752†	16609.1	9309.5	35.894	ug/L	35.894	ppb	18:29:00
1	Mn 257.610†	3076836.6	2796625.0	2826.3	ug/L	2826.3	ppb	18:28:54
1	Mo 202.031†	228.8	203.6	18.070	ug/L	18.070	ppb	18:29:20
1	Ni 231.604†	1364.1	1103.5	26.386	ug/L	26.386	ppb	18:29:20
1	P 214.914†	2033.4	1555.1	638.28	ug/L	638.28	ppb	18:29:20
1	Pb 220.353†	791.1	737.1	75.049	ug/L	75.049	ppb	18:29:20
1	S 181.975 Axial†	419.6	245.5	291.32	ug/L	291.32	ppb	18:29:20
1	Sb 206.836†	70.8	11.7	-1.7596	ug/L	-1.7596	ppb	18:29:20
1	Se 196.026†	-562.4	-476.5	49.309	ug/L	49.309	ppb	18:29:20
1	Si 251.611†	316848.5	287617.9	8125.8	ug/L	8125.8	ppb	18:29:00
1	Sn 189.927†	-3.6	-16.2	4.2893	ug/L	4.2893	ppb	18:29:20
1	Ti 334.940†	1179604.0	1073977.9	1843.4	ug/L	1843.4	ppb	18:28:54
1	Tl 190.801†	-213.7	-133.2	-2.2739	ug/L	-2.2739	ppb	18:29:20
1	U 409.014†	-14148.5	-7598.8	-249.99	ug/L	-249.99	ppb	18:28:54
1	V 292.402†	8781.7	9676.9	66.075	ug/L	66.075	ppb	18:29:00
1	Zn 213.857†	54302.4	48385.3	391.79	ug/L	391.79	ppb	18:29:00
1	SiO2†	320103.5	290550.4	17549	ug/L	17549	ppb	18:30:27
2	Sc Radial	7526.7	7526.7	108	%			18:28:22
2	Y RADIAL	8307.5	8307.5	130.6	%			18:28:02
2	Al 396.153Radial†	29769.0	27514.6	23220	ug/L	23220	ppb	18:28:02
2	Ca 317.933Radial†	6785.0	6228.7	9180.0	ug/L	9180.0	ppb	18:28:22
2	Fe 238.204 Radial†	18689.2	17190.6	76829	ug/L	76829	ppb	18:28:02
2	K 766.490 Radial†	29460.4	24372.8	5013.9	ug/L	5013.9	ppb	18:28:02
2	Mg 279.077 IEC†	200.5	180.9	4560.8	ug/L	4560.8	ppb	18:28:22
2	Na 589.592 Radial†	9628.2	9207.4	566.55	ug/L	566.55	ppb	18:28:02
2	Sr 421.552†	18122.8	16769.7	52.063	ug/L	52.063	ppb	18:28:02
2	Sc 361.383	822963.4	822963.4	110.52	%			18:29:25
2	Y 371.029	761079.7	761079.7	130.90	%			18:29:25
2	Ag 328.068†	-3391.6	-3774.8	4.2961	ug/L	4.2961	ppb	18:29:31
2	As 188.979†	-52.4	-13.1	19.711	ug/L	19.711	ppb	18:29:51
2	B 249.677†	61.6	937.0	16.086	ug/L	16.086	ppb	18:29:31
2	Ba 233.527†	51651.0	46713.8	302.85	ug/L	302.85	ppb	18:29:31
2	Be 313.107†	-6039.1	-679.7	4.0040	ug/L	4.0040	ppb	18:29:31
2	Cd 226.502†	387.4	643.8	-1.6903	ug/L	-1.6903	ppb	18:29:51
2	Co 228.616†	1235.2	1218.2	14.407	ug/L	14.407	ppb	18:29:51
2	Cr 267.716†	3616.1	3370.0	43.999	ug/L	43.999	ppb	18:29:51
2	Cu 324.752†	16587.1	9217.9	35.454	ug/L	35.454	ppb	18:29:31
2	Mn 257.610†	3081467.3	2787532.4	2816.9	ug/L	2816.9	ppb	18:29:25
2	Mo 202.031†	225.4	199.5	17.663	ug/L	17.663	ppb	18:29:51
2	Ni 231.604†	1365.9	1099.3	26.285	ug/L	26.285	ppb	18:29:51

2	P 214.914†	2053.8	1564.9	644.36	ug/L	644.36 ppb	18:29:51
2	Pb 220.353†	757.0	702.8	71.531	ug/L	71.531 ppb	18:29:51
2	S 181.975 Axial†	411.1	236.0	279.98	ug/L	279.98 ppb	18:29:51
2	Sb 206.836†	83.0	22.5	1.1621	ug/L	1.1621 ppb	18:29:51
2	Se 196.026†	-576.1	-486.4	37.161	ug/L	37.161 ppb	18:29:51
2	Si 251.611†	317333.6	286689.0	8099.7	ug/L	8099.7 ppb	18:29:31
2	Sn 189.927†	0.7	-12.4	4.7225	ug/L	4.7225 ppb	18:29:51
2	Ti 334.940†	1183763.2	1072649.0	1841.1	ug/L	1841.1 ppb	18:29:25
2	Tl 190.801†	-198.5	-118.5	1.1364	ug/L	1.1364 ppb	18:29:51
2	U 409.014†	-13938.6	-7347.8	-241.77	ug/L	-241.77 ppb	18:29:25
2	V 292.402†	8824.5	9677.6	66.414	ug/L	66.414 ppb	18:29:31
2	Zn 213.857†	54066.7	47937.6	388.32	ug/L	388.32 ppb	18:29:31
2	SiO2†	321587.2	290511.1	17547	ug/L	17547 ppb	18:30:32
3	Sc Radial	7399.7	7399.7	107	%		18:28:47
3	Y RADIAL	8323.7	8323.7	130.9	%		18:28:27
3	Al 396.153Radial†	29801.5	28016.1	23643	ug/L	23643 ppb	18:28:27
3	Ca 317.933Radial†	6698.7	6255.1	9218.9	ug/L	9218.9 ppb	18:28:47
3	Fe 238.204 Radial†	18728.1	17522.7	78314	ug/L	78314 ppb	18:28:27
3	K 766.490 Radial†	29600.1	24969.9	5137.3	ug/L	5137.3 ppb	18:28:27
3	Mg 279.077 IEC†	196.6	180.4	4546.8	ug/L	4546.8 ppb	18:28:47
3	Na 589.592 Radial†	9576.0	9310.8	572.91	ug/L	572.91 ppb	18:28:27
3	Sr 421.552†	18207.5	17135.8	53.201	ug/L	53.201 ppb	18:28:27
3	Sc 361.383	817024.6	817024.6	109.72	%		18:29:56
3	Y 371.029	755722.8	755722.8	129.98	%		18:29:56
3	Ag 328.068†	-3461.7	-3861.0	4.3087	ug/L	4.3087 ppb	18:30:02
3	As 188.979†	-37.6	0.0	24.186	ug/L	24.186 ppb	18:30:22
3	B 249.677†	96.5	969.2	16.720	ug/L	16.720 ppb	18:30:02
3	Ba 233.527†	52039.3	47407.3	307.34	ug/L	307.34 ppb	18:30:02
3	Be 313.107†	-5951.8	-639.9	4.0340	ug/L	4.0340 ppb	18:30:02
3	Cd 226.502†	420.4	676.4	-1.4960	ug/L	-1.4960 ppb	18:30:22
3	Co 228.616†	1250.1	1239.9	14.720	ug/L	14.720 ppb	18:30:22
3	Cr 267.716†	3647.6	3422.5	44.691	ug/L	44.691 ppb	18:30:22
3	Cu 324.752†	16785.3	9507.6	36.514	ug/L	36.514 ppb	18:30:02
3	Mn 257.610†	3074194.0	2801170.9	2830.8	ug/L	2830.8 ppb	18:29:56
3	Mo 202.031†	231.0	206.1	18.178	ug/L	18.178 ppb	18:30:22
3	Ni 231.604†	1398.2	1137.7	27.203	ug/L	27.203 ppb	18:30:22
3	P 214.914†	2039.0	1564.8	643.11	ug/L	643.11 ppb	18:30:22
3	Pb 220.353†	793.9	741.5	75.552	ug/L	75.552 ppb	18:30:22
3	S 181.975 Axial†	413.7	241.0	285.99	ug/L	285.99 ppb	18:30:22
3	Sb 206.836†	80.0	20.3	0.5508	ug/L	0.5508 ppb	18:30:22
3	Se 196.026†	-589.4	-502.4	34.920	ug/L	34.920 ppb	18:30:22
3	Si 251.611†	319656.3	290893.1	8218.4	ug/L	8218.4 ppb	18:30:02
3	Sn 189.927†	0.7	-12.3	4.8450	ug/L	4.8450 ppb	18:30:22
3	Ti 334.940†	1179038.3	1076128.5	1847.1	ug/L	1847.1 ppb	18:29:56
3	Tl 190.801†	-203.2	-124.1	-0.0674	ug/L	-0.0674 ppb	18:30:22
3	U 409.014†	-14122.2	-7606.8	-250.14	ug/L	-250.14 ppb	18:29:56
3	V 292.402†	8864.1	9771.8	66.961	ug/L	66.961 ppb	18:30:02
3	Zn 213.857†	54675.8	48848.3	395.70	ug/L	395.70 ppb	18:30:02
3	SiO2†	320189.1	291351.9	17597	ug/L	17597 ppb	18:30:38

Mean Data: 232509002|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	819681.2	110.08	%	0.405				0.37%
Sc Radial	7453.7	107	%	0.9				0.88%
Y 371.029	758040.3	130.38	%	0.473				0.36%
Y RADIAL	8362.8	131.5	%	1.29				0.98%
Ag 328.068†	-3875.7	4.1510	ug/L	0.26232	4.1510	ppb	0.26232	6.32%
Al 396.153Radial†	27923.9	23565	ug/L	313.9	23565	ppb	313.9	1.33%
As 188.979†	0.6	24.299	ug/L	4.6463	24.299	ppb	4.6463	19.12%
B 249.677†	949.3	16.281	ug/L	0.3809	16.281	ppb	0.3809	2.34%
Ba 233.527†	47030.7	304.90	ug/L	2.273	304.90	ppb	2.273	0.75%
Be 313.107†	-657.4	4.0194	ug/L	0.01498	4.0194	ppb	0.01498	0.37%
Ca 317.933Radial†	6236.5	9191.5	ug/L	23.86	9191.5	ppb	23.86	0.26%
Cd 226.502†	653.7	-1.7251	ug/L	0.24838	-1.7251	ppb	0.24838	14.40%
Co 228.616†	1231.3	14.593	ug/L	0.1640	14.593	ppb	0.1640	1.12%
Cr 267.716†	3395.6	44.348	ug/L	0.3461	44.348	ppb	0.3461	0.78%
Cu 324.752†	9345.0	35.954	ug/L	0.5328	35.954	ppb	0.5328	1.48%
Fe 238.204 Radial†	17471.8	78086	ug/L	1159.6	78086	ppb	1159.6	1.48%
K 766.490 Radial†	24891.0	5121.1	ug/L	100.05	5121.1	ppb	100.05	1.95%

Mg 279.077 IEC†	181.5	4576.3	ug/L	39.55	4576.3	ppb	39.55	0.86%
Mn 257.610†	2795109.4	2824.7	ug/L	7.11	2824.7	ppb	7.11	0.25%
Mo 202.031†	203.1	17.970	ug/L	0.2718	17.970	ppb	0.2718	1.51%
Na 589.592 Radial†	9277.8	570.88	ug/L	3.752	570.88	ppb	3.752	0.66%
Ni 231.604†	1113.5	26.625	ug/L	0.5035	26.625	ppb	0.5035	1.89%
P 214.914†	1561.6	641.92	ug/L	3.209	641.92	ppb	3.209	0.50%
Pb 220.353†	727.1	74.044	ug/L	2.1912	74.044	ppb	2.1912	2.96%
S 181.975 Axial†	240.8	285.76	ug/L	5.671	285.76	ppb	5.671	1.98%
Sb 206.836†	18.2	-0.0156	ug/L	1.54098	-0.0156	ppb	1.54098	>999.9%
Se 196.026†	-488.4	40.463	ug/L	7.7421	40.463	ppb	7.7421	19.13%
Si 251.611†	288400.0	8148.0	ug/L	62.39	8148.0	ppb	62.39	0.77%
Sn 189.927†	-13.7	4.6189	ug/L	0.29197	4.6189	ppb	0.29197	6.32%
Sr 421.552†	17071.4	53.001	ug/L	0.8558	53.001	ppb	0.8558	1.61%
Ti 334.940†	1074251.8	1843.9	ug/L	3.02	1843.9	ppb	3.02	0.16%
Tl 190.801†	-125.2	-0.4017	ug/L	1.72955	-0.4017	ppb	1.72955	430.61%
U 409.014†	-7517.8	-247.30	ug/L	4.789	-247.30	ppb	4.789	1.94%
V 292.402†	9708.8	66.484	ug/L	0.4472	66.484	ppb	0.4472	0.67%
Zn 213.857†	48390.4	391.94	ug/L	3.690	391.94	ppb	3.690	0.94%
SiO2†	290804.5	17564	ug/L	28.6	17564	ppb	28.6	0.16%

Sequence No.: 39
Sample ID: 232509003|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 66
Date Collected: 7/2/2009 18:32:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509003|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7676.6	7676.6	111	%			18:34:42
1	Y RADIAL	8815.7	8815.7	138.6	%			18:34:42
1	Al 396.153Radial†	20562.2	18656.6	15745	ug/L	15745	ppb	18:34:42
1	Ca 317.933Radial†	4416.6	3965.7	5844.8	ug/L	5844.8	ppb	18:34:42
1	Fe 238.204 Radial†	16700.5	15056.5	67291	ug/L	67291	ppb	18:34:42
1	K 766.490 Radial†	22087.7	17178.3	3526.0	ug/L	3526.0	ppb	18:34:42
1	Mg 279.077 IEC†	160.0	140.7	3540.4	ug/L	3540.4	ppb	18:35:02
1	Na 589.592 Radial†	7816.4	7396.4	455.11	ug/L	455.11	ppb	18:34:42
1	Sr 421.552†	11758.1	10690.4	33.189	ug/L	33.189	ppb	18:34:42
1	Sc 361.383	815417.3	815417.3	109.50	%			18:35:59
1	Y 371.029	785874.6	785874.6	135.17	%			18:35:59
1	Ag 328.068†	-3094.9	-3532.2	2.5172	ug/L	2.5172	ppb	18:36:04
1	As 188.979†	-45.3	-7.0	20.010	ug/L	20.010	ppb	18:36:24
1	B 249.677†	-81.9	806.5	13.794	ug/L	13.794	ppb	18:36:04
1	Ba 233.527†	36056.7	32905.3	213.25	ug/L	213.25	ppb	18:36:04
1	Be 313.107†	-7903.1	-2432.5	3.4545	ug/L	3.4545	ppb	18:36:04
1	Cd 226.502†	312.9	579.0	-1.3152	ug/L	-1.3152	ppb	18:36:24
1	Co 228.616†	666.8	709.5	6.3155	ug/L	6.3155	ppb	18:36:24
1	Cr 267.716†	1149.6	1147.8	15.919	ug/L	15.919	ppb	18:36:24
1	Cu 324.752†	10850.7	4118.2	17.745	ug/L	17.745	ppb	18:36:04
1	Mn 257.610†	3102017.1	2832102.1	2860.6	ug/L	2860.6	ppb	18:35:59
1	Mo 202.031†	149.2	131.8	12.749	ug/L	12.749	ppb	18:36:24
1	Ni 231.604†	849.6	639.2	15.284	ug/L	15.284	ppb	18:36:24
1	P 214.914†	1927.3	1466.5	608.68	ug/L	608.68	ppb	18:36:24
1	Pb 220.353†	724.2	679.2	68.478	ug/L	68.478	ppb	18:36:24
1	S 181.975 Axial†	352.8	186.2	221.45	ug/L	221.45	ppb	18:36:24
1	Sb 206.836†	66.9	8.5	-2.2904	ug/L	-2.2904	ppb	18:36:24
1	Se 196.026†	-525.1	-444.7	23.790	ug/L	23.790	ppb	18:36:24
1	Si 251.611†	291411.0	265673.2	7506.3	ug/L	7506.3	ppb	18:36:04
1	Sn 189.927†	8.3	-5.4	4.7633	ug/L	4.7633	ppb	18:36:24
1	Ti 334.940†	1215801.4	1111819.3	1908.1	ug/L	1908.1	ppb	18:35:59
1	Tl 190.801†	-201.6	-122.9	0.7889	ug/L	0.7889	ppb	18:36:24
1	U 409.014†	-14078.6	-7592.3	-248.28	ug/L	-248.28	ppb	18:35:59
1	V 292.402†	5011.2	6269.2	39.636	ug/L	39.636	ppb	18:36:04
1	Zn 213.857†	45211.3	40303.4	326.27	ug/L	326.27	ppb	18:36:04
1	SiO2†	296201.3	270021.0	16310	ug/L	16310	ppb	18:37:32
2	Sc Radial	7733.4	7733.4	111	%			18:35:07
2	Y RADIAL	8879.0	8879.0	139.6	%			18:35:07
2	Al 396.153Radial†	20656.0	18604.2	15700	ug/L	15700	ppb	18:35:07
2	Ca 317.933Radial†	4437.2	3954.9	5828.9	ug/L	5828.9	ppb	18:35:07
2	Fe 238.204 Radial†	16794.3	15029.8	67172	ug/L	67172	ppb	18:35:07
2	K 766.490 Radial†	22256.2	17182.8	3526.9	ug/L	3526.9	ppb	18:35:07
2	Mg 279.077 IEC†	158.0	137.8	3468.4	ug/L	3468.4	ppb	18:35:27
2	Na 589.592 Radial†	7916.7	7434.5	457.45	ug/L	457.45	ppb	18:35:07
2	Sr 421.552†	11808.4	10657.4	33.087	ug/L	33.087	ppb	18:35:07
2	Sc 361.383	817472.9	817472.9	109.78	%			18:36:30
2	Y 371.029	788808.5	788808.5	135.67	%			18:36:30
2	Ag 328.068†	-3040.5	-3475.5	2.7931	ug/L	2.7931	ppb	18:36:35
2	As 188.979†	-48.9	-10.3	18.966	ug/L	18.966	ppb	18:36:55
2	B 249.677†	-161.7	734.0	12.144	ug/L	12.144	ppb	18:36:35
2	Ba 233.527†	36085.2	32848.4	212.89	ug/L	212.89	ppb	18:36:35
2	Be 313.107†	-8104.5	-2597.8	3.3864	ug/L	3.3864	ppb	18:36:35
2	Cd 226.502†	320.2	584.9	-1.2347	ug/L	-1.2347	ppb	18:36:55
2	Co 228.616†	675.3	715.7	6.4157	ug/L	6.4157	ppb	18:36:55
2	Cr 267.716†	1144.8	1140.8	15.830	ug/L	15.830	ppb	18:36:55
2	Cu 324.752†	11013.1	4241.2	18.152	ug/L	18.152	ppb	18:36:35
2	Mn 257.610†	3111723.6	2833820.7	2862.3	ug/L	2862.3	ppb	18:36:30
2	Mo 202.031†	141.2	124.2	12.257	ug/L	12.257	ppb	18:36:55
2	Ni 231.604†	857.5	644.5	15.411	ug/L	15.411	ppb	18:36:55

2	P 214.914†	1917.7	1453.4	602.78	ug/L	602.78 ppb	18:36:55
2	Pb 220.353†	737.7	689.9	69.603	ug/L	69.603 ppb	18:36:55
2	S 181.975 Axial†	343.5	176.9	210.26	ug/L	210.26 ppb	18:36:55
2	Sb 206.836†	74.1	14.9	-0.5332	ug/L	-0.5332 ppb	18:36:55
2	Se 196.026†	-516.1	-435.3	27.651	ug/L	27.651 ppb	18:36:55
2	Si 251.611†	290544.9	264215.1	7465.1	ug/L	7465.1 ppb	18:36:35
2	Sn 189.927†	26.9	11.5	7.4055	ug/L	7.4055 ppb	18:36:55
2	Ti 334.940†	1218443.2	1111433.9	1907.5	ug/L	1907.5 ppb	18:36:30
2	Tl 190.801†	-193.8	-115.4	2.5764	ug/L	2.5764 ppb	18:36:55
2	U 409.014†	-14327.1	-7786.3	-254.39	ug/L	-254.39 ppb	18:36:30
2	V 292.402†	4973.3	6223.2	39.256	ug/L	39.256 ppb	18:36:35
2	Zn 213.857†	45183.9	40174.6	325.22	ug/L	325.22 ppb	18:36:35
2	SiO2†	291325.0	264898.9	16000	ug/L	16000 ppb	18:37:37
3	Sc Radial	7612.4	7612.4	110	%		18:35:32
3	Y RADIAL	8703.5	8703.5	136.9	%		18:35:32
3	Al 396.153Radial†	20474.6	18733.4	15809	ug/L	15809 ppb	18:35:32
3	Ca 317.933Radial†	4405.7	3989.5	5879.8	ug/L	5879.8 ppb	18:35:32
3	Fe 238.204 Radial†	16601.5	15093.6	67457	ug/L	67457 ppb	18:35:32
3	K 766.490 Radial†	22005.1	17271.2	3545.2	ug/L	3545.2 ppb	18:35:32
3	Mg 279.077 IEC†	156.1	138.3	3481.1	ug/L	3481.1 ppb	18:35:52
3	Na 589.592 Radial†	7794.4	7435.9	457.54	ug/L	457.54 ppb	18:35:32
3	Sr 421.552†	11648.2	10679.8	33.156	ug/L	33.156 ppb	18:35:32
3	Sc 361.383	820043.6	820043.6	110.12	%		18:37:01
3	Y 371.029	790134.4	790134.4	135.90	%		18:37:01
3	Ag 328.068†	-2933.8	-3370.0	3.4533	ug/L	3.4533 ppb	18:37:06
3	As 188.979†	-53.1	-13.9	17.877	ug/L	17.877 ppb	18:37:26
3	B 249.677†	-125.7	767.2	12.882	ug/L	12.882 ppb	18:37:06
3	Ba 233.527†	36123.7	32780.3	212.44	ug/L	212.44 ppb	18:37:06
3	Be 313.107†	-7997.0	-2477.1	3.4405	ug/L	3.4405 ppb	18:37:06
3	Cd 226.502†	306.3	571.4	-1.4207	ug/L	-1.4207 ppb	18:37:26
3	Co 228.616†	693.5	730.2	6.6360	ug/L	6.6360 ppb	18:37:26
3	Cr 267.716†	1162.3	1153.5	15.991	ug/L	15.991 ppb	18:37:26
3	Cu 324.752†	10913.9	4119.7	17.760	ug/L	17.760 ppb	18:37:06
3	Mn 257.610†	3121437.5	2833755.7	2862.3	ug/L	2862.3 ppb	18:37:01
3	Mo 202.031†	137.7	120.6	12.048	ug/L	12.048 ppb	18:37:26
3	Ni 231.604†	845.8	631.4	15.097	ug/L	15.097 ppb	18:37:26
3	P 214.914†	1924.9	1454.4	603.09	ug/L	603.09 ppb	18:37:26
3	Pb 220.353†	718.9	670.6	67.563	ug/L	67.563 ppb	18:37:26
3	S 181.975 Axial†	354.2	185.6	220.73	ug/L	220.73 ppb	18:37:26
3	Sb 206.836†	65.8	7.2	-2.6771	ug/L	-2.6771 ppb	18:37:26
3	Se 196.026†	-514.2	-432.1	30.071	ug/L	30.071 ppb	18:37:26
3	Si 251.611†	290396.0	263250.2	7437.9	ug/L	7437.9 ppb	18:37:06
3	Sn 189.927†	11.6	-2.4	5.2439	ug/L	5.2439 ppb	18:37:26
3	Ti 334.940†	1223789.2	1112809.0	1909.8	ug/L	1909.8 ppb	18:37:01
3	Tl 190.801†	-205.2	-125.2	0.2863	ug/L	0.2863 ppb	18:37:26
3	U 409.014†	-14106.4	-7545.0	-246.80	ug/L	-246.80 ppb	18:37:01
3	V 292.402†	4951.4	6189.1	38.947	ug/L	38.947 ppb	18:37:06
3	Zn 213.857†	45215.9	40074.7	324.36	ug/L	324.36 ppb	18:37:06
3	SiO2†	290936.5	263714.3	15929	ug/L	15929 ppb	18:37:42

Mean Data: 232509003|881347|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	817644.6	109.80	%	0.311				0.28%
Sc Radial	7674.1	111	%	0.9				0.79%
Y 371.029	788272.5	135.58	%	0.375				0.28%
Y RADIAL	8799.4	138.4	%	1.40				1.01%
Ag 328.068†	-3459.2	2.9212	ug/L	0.48101	2.9212	ppb	0.48101	16.47%
Al 396.153Radial†	18664.8	15751	ug/L	54.9	15751	ppb	54.9	0.35%
As 188.979†	-10.4	18.951	ug/L	1.0669	18.951	ppb	1.0669	5.63%
B 249.677†	769.3	12.940	ug/L	0.8265	12.940	ppb	0.8265	6.39%
Ba 233.527†	32844.7	212.86	ug/L	0.407	212.86	ppb	0.407	0.19%
Be 313.107†	-2502.5	3.4272	ug/L	0.03596	3.4272	ppb	0.03596	1.05%
Ca 317.933Radial†	3970.0	5851.1	ug/L	26.05	5851.1	ppb	26.05	0.45%
Cd 226.502†	578.4	-1.3235	ug/L	0.09330	-1.3235	ppb	0.09330	7.05%
Co 228.616†	718.5	6.4557	ug/L	0.16393	6.4557	ppb	0.16393	2.54%
Cr 267.716†	1147.4	15.913	ug/L	0.0806	15.913	ppb	0.0806	0.51%
Cu 324.752†	4159.7	17.886	ug/L	0.2308	17.886	ppb	0.2308	1.29%
Fe 238.204 Radial†	15059.9	67307	ug/L	143.2	67307	ppb	143.2	0.21%
K 766.490 Radial†	17210.8	3532.7	ug/L	10.85	3532.7	ppb	10.85	0.31%

Mg 279.077 IEC†	138.9	3496.6	ug/L	38.43	3496.6	ppb	38.43	1.10%
Mn 257.610†	2833226.2	2861.7	ug/L	0.98	2861.7	ppb	0.98	0.03%
Mo 202.031†	125.5	12.352	ug/L	0.3597	12.352	ppb	0.3597	2.91%
Na 589.592 Radial†	7422.3	456.70	ug/L	1.379	456.70	ppb	1.379	0.30%
Ni 231.604†	638.4	15.264	ug/L	0.1578	15.264	ppb	0.1578	1.03%
P 214.914†	1458.1	604.85	ug/L	3.323	604.85	ppb	3.323	0.55%
Pb 220.353†	679.9	68.548	ug/L	1.0220	68.548	ppb	1.0220	1.49%
S 181.975 Axial†	182.9	217.48	ug/L	6.265	217.48	ppb	6.265	2.88%
Sb 206.836†	10.2	-1.8336	ug/L	1.14264	-1.8336	ppb	1.14264	62.32%
Se 196.026†	-437.4	27.171	ug/L	3.1677	27.171	ppb	3.1677	11.66%
Si 251.611†	264379.5	7469.8	ug/L	34.47	7469.8	ppb	34.47	0.46%
Sn 189.927†	1.2	5.8042	ug/L	1.40741	5.8042	ppb	1.40741	24.25%
Sr 421.552†	10675.8	33.144	ug/L	0.0523	33.144	ppb	0.0523	0.16%
Ti 334.940†	1112020.8	1908.5	ug/L	1.22	1908.5	ppb	1.22	0.06%
Tl 190.801†	-121.2	1.2172	ug/L	1.20364	1.2172	ppb	1.20364	98.88%
U 409.014†	-7641.2	-249.82	ug/L	4.025	-249.82	ppb	4.025	1.61%
V 292.402†	6227.2	39.280	ug/L	0.3452	39.280	ppb	0.3452	0.88%
Zn 213.857†	40184.3	325.28	ug/L	0.955	325.28	ppb	0.955	0.29%
SiO2†	266211.4	16080	ug/L	202.5	16080	ppb	202.5	1.26%

Sequence No.: 40
Sample ID: 232509004|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 67
Date Collected: 7/2/2009 18:39:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509004|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7076.8	7076.8	102	%			18:42:05
1	Y RADIAL	8240.4	8240.4	129.6	%			18:41:45
1	Al 396.153Radial†	57644.0	56590.7	47758	ug/L	47758	ppb	18:41:45
1	Ca 317.933Radial†	44999.6	44095.9	64990	ug/L	64990	ppb	18:41:45
1	Fe 238.204 Radial†	19002.0	18592.6	83095	ug/L	83095	ppb	18:41:45
1	K 766.490 Radial†	45016.5	41352.2	8525.5	ug/L	8525.5	ppb	18:41:45
1	Mg 279.077 IEC†	306.0	296.1	7502.1	ug/L	7502.1	ppb	18:42:05
1	Na 589.592 Radial†	82828.2	81544.5	5017.6	ug/L	5017.6	ppb	18:41:45
1	Sr 421.552†	47518.3	46654.2	144.45	ug/L	144.45	ppb	18:41:45
1	Sc 361.383	806898.0	806898.0	108.36	%			18:43:04
1	Y 371.029	778506.3	778506.3	133.90	%			18:43:04
1	Ag 328.068†	-3241.2	-3697.1	5.9527	ug/L	5.9527	ppb	18:43:04
1	As 188.979†	-28.5	8.0	27.922	ug/L	27.922	ppb	18:43:24
1	B 249.677†	-37.5	846.7	13.556	ug/L	13.556	ppb	18:43:04
1	Ba 233.527†	76860.1	70908.7	459.79	ug/L	459.79	ppb	18:43:04
1	Be 313.107†	-5238.8	-49.9	4.3693	ug/L	4.3693	ppb	18:43:04
1	Cd 226.502†	422.4	683.0	-1.9596	ug/L	-1.9596	ppb	18:43:24
1	Co 228.616†	1709.4	1678.0	21.525	ug/L	21.525	ppb	18:43:24
1	Cr 267.716†	7285.0	6821.0	87.388	ug/L	87.388	ppb	18:43:24
1	Cu 324.752†	55123.9	45080.9	156.47	ug/L	156.47	ppb	18:43:04
1	Mn 257.610†	2267732.0	2092082.7	2117.2	ug/L	2117.2	ppb	18:43:04
1	Mo 202.031†	113.5	100.3	11.783	ug/L	11.783	ppb	18:43:24
1	Ni 231.604†	2708.3	2362.7	56.504	ug/L	56.504	ppb	18:43:24
1	P 214.914†	1648.3	1227.6	471.38	ug/L	471.38	ppb	18:43:24
1	Pb 220.353†	776.4	734.3	78.970	ug/L	78.970	ppb	18:43:24
1	S 181.975 Axial†	548.5	370.2	436.97	ug/L	436.97	ppb	18:43:24
1	Sb 206.836†	69.6	11.6	-3.9719	ug/L	-3.9719	ppb	18:43:24
1	Se 196.026†	-581.0	-501.3	52.880	ug/L	52.880	ppb	18:43:24
1	Si 251.611†	380555.3	350750.7	9909.2	ug/L	9909.2	ppb	18:43:04
1	Sn 189.927†	-168.3	-168.3	-13.509	ug/L	-13.509	ppb	18:43:24
1	Ti 334.940†	1190995.9	1100650.0	1892.4	ug/L	1892.4	ppb	18:43:04
1	Tl 190.801†	-170.2	-95.9	4.1963	ug/L	4.1963	ppb	18:43:24
1	U 409.014†	-13644.0	-7326.9	-241.97	ug/L	-241.97	ppb	18:43:04
1	V 292.402†	10154.4	11064.0	76.813	ug/L	76.813	ppb	18:43:24
1	Zn 213.857†	37418.2	33547.4	268.13	ug/L	268.13	ppb	18:43:04
1	SiO2†	381440.7	351541.0	21232	ug/L	21232	ppb	18:44:23
2	Sc Radial	7436.0	7436.0	107	%			18:42:30
2	Y RADIAL	8742.7	8742.7	137.5	%			18:42:10
2	Al 396.153Radial†	57220.5	53464.8	45120	ug/L	45120	ppb	18:42:10
2	Ca 317.933Radial†	44694.8	41679.7	61429	ug/L	61429	ppb	18:42:10
2	Fe 238.204 Radial†	18911.5	17608.0	78695	ug/L	78695	ppb	18:42:10
2	K 766.490 Radial†	44879.2	39091.5	8057.9	ug/L	8057.9	ppb	18:42:10
2	Mg 279.077 IEC†	306.4	282.0	7145.0	ug/L	7145.0	ppb	18:42:30
2	Na 589.592 Radial†	82910.5	77697.7	4780.9	ug/L	4780.9	ppb	18:42:10
2	Sr 421.552†	47386.1	44279.8	137.10	ug/L	137.10	ppb	18:42:10
2	Sc 361.383	805076.9	805076.9	108.11	%			18:43:31
2	Y 371.029	775781.2	775781.2	133.43	%			18:43:31
2	Ag 328.068†	-3389.1	-3840.7	3.8155	ug/L	3.8155	ppb	18:43:31
2	As 188.979†	-23.9	12.2	28.392	ug/L	28.392	ppb	18:43:51
2	B 249.677†	-28.0	855.4	14.055	ug/L	14.055	ppb	18:43:31
2	Ba 233.527†	76820.6	71032.6	460.62	ug/L	460.62	ppb	18:43:31
2	Be 313.107†	-5273.1	-92.6	4.3570	ug/L	4.3570	ppb	18:43:31
2	Cd 226.502†	422.8	684.3	-1.4319	ug/L	-1.4319	ppb	18:43:51
2	Co 228.616†	1713.6	1685.5	21.700	ug/L	21.700	ppb	18:43:51
2	Cr 267.716†	7309.5	6858.9	87.774	ug/L	87.774	ppb	18:43:51
2	Cu 324.752†	55143.8	45214.3	156.67	ug/L	156.67	ppb	18:43:31
2	Mn 257.610†	2268485.6	2097513.7	2122.2	ug/L	2122.2	ppb	18:43:31
2	Mo 202.031†	106.6	94.2	11.106	ug/L	11.106	ppb	18:43:51
2	Ni 231.604†	2705.8	2366.1	56.584	ug/L	56.584	ppb	18:43:51

2	P 214.914†	1651.7	1234.2	476.91	ug/L	476.91 ppb	18:43:51
2	Pb 220.353†	790.1	748.6	80.380	ug/L	80.380 ppb	18:43:51
2	S 181.975 Axial†	559.0	381.1	450.61	ug/L	450.61 ppb	18:43:51
2	Sb 206.836†	74.0	15.9	-2.8470	ug/L	-2.8470 ppb	18:43:51
2	Se 196.026†	-588.9	-509.9	34.169	ug/L	34.169 ppb	18:43:51
2	Si 251.611†	381471.1	352392.2	9955.8	ug/L	9955.8 ppb	18:43:31
2	Sn 189.927†	-163.0	-163.8	-13.486	ug/L	-13.486 ppb	18:43:51
2	Ti 334.940†	1189624.6	1101867.9	1894.3	ug/L	1894.3 ppb	18:43:31
2	Tl 190.801†	-184.4	-109.4	0.9711	ug/L	0.9711 ppb	18:43:51
2	U 409.014†	-13706.3	-7413.1	-244.15	ug/L	-244.15 ppb	18:43:31
2	V 292.402†	10190.9	11118.9	77.858	ug/L	77.858 ppb	18:43:51
2	Zn 213.857†	37471.8	33675.1	269.66	ug/L	269.66 ppb	18:43:31
2	SiO2†	377667.2	348847.1	21070	ug/L	21070 ppb	18:44:29
3	Sc Radial	7331.8	7331.8	106	%		18:42:56
3	Y RADIAL	8605.7	8605.7	135.3	%		18:42:36
3	Al 396.153Radial†	56105.2	53168.3	44870	ug/L	44870 ppb	18:42:36
3	Ca 317.933Radial†	43842.5	41465.9	61114	ug/L	61114 ppb	18:42:36
3	Fe 238.204 Radial†	18536.6	17504.0	78230	ug/L	78230 ppb	18:42:36
3	K 766.490 Radial†	44174.6	39019.9	8043.2	ug/L	8043.2 ppb	18:42:36
3	Mg 279.077 IEC†	298.6	278.7	7061.7	ug/L	7061.7 ppb	18:42:56
3	Na 589.592 Radial†	81344.9	77315.6	4757.4	ug/L	4757.4 ppb	18:42:36
3	Sr 421.552†	46384.9	43960.8	136.12	ug/L	136.12 ppb	18:42:36
3	Sc 361.383	815664.9	815664.9	109.54	%		18:43:58
3	Y 371.029	785622.1	785622.1	135.13	%		18:43:58
3	Ag 328.068†	-3325.1	-3741.5	4.1984	ug/L	4.1984 ppb	18:43:58
3	As 188.979†	-26.0	10.6	27.764	ug/L	27.764 ppb	18:44:18
3	B 249.677†	-3.0	878.6	14.618	ug/L	14.618 ppb	18:43:58
3	Ba 233.527†	77695.8	70909.3	459.82	ug/L	459.82 ppb	18:43:58
3	Be 313.107†	-5219.4	19.7	4.3986	ug/L	4.3986 ppb	18:43:58
3	Cd 226.502†	408.3	666.0	-1.5852	ug/L	-1.5852 ppb	18:44:18
3	Co 228.616†	1706.6	1658.5	21.282	ug/L	21.282 ppb	18:44:18
3	Cr 267.716†	7278.0	6742.3	86.298	ug/L	86.298 ppb	18:44:18
3	Cu 324.752†	55998.7	45332.7	157.04	ug/L	157.04 ppb	18:43:58
3	Mn 257.610†	2291365.2	2091164.4	2115.7	ug/L	2115.7 ppb	18:43:58
3	Mo 202.031†	102.3	88.9	10.743	ug/L	10.743 ppb	18:44:18
3	Ni 231.604†	2688.5	2317.8	55.429	ug/L	55.429 ppb	18:44:18
3	P 214.914†	1650.5	1213.3	467.72	ug/L	467.72 ppb	18:44:18
3	Pb 220.353†	765.7	716.9	77.023	ug/L	77.023 ppb	18:44:18
3	S 181.975 Axial†	558.0	373.4	441.43	ug/L	441.43 ppb	18:44:18
3	Sb 206.836†	83.8	23.9	-0.6309	ug/L	-0.6309 ppb	18:44:18
3	Se 196.026†	-577.9	-492.7	40.370	ug/L	40.370 ppb	18:44:18
3	Si 251.611†	386275.1	352197.8	9950.3	ug/L	9950.3 ppb	18:43:58
3	Sn 189.927†	-161.7	-160.6	-13.054	ug/L	-13.054 ppb	18:44:18
3	Ti 334.940†	1204290.4	1100973.4	1892.7	ug/L	1892.7 ppb	18:43:58
3	Tl 190.801†	-174.6	-98.2	3.5836	ug/L	3.5836 ppb	18:44:18
3	U 409.014†	-13451.8	-7016.2	-231.55	ug/L	-231.55 ppb	18:43:58
3	V 292.402†	10161.8	10970.0	76.723	ug/L	76.723 ppb	18:44:18
3	Zn 213.857†	37882.5	33600.1	269.09	ug/L	269.09 ppb	18:43:58
3	SiO2†	377951.5	344572.1	20811	ug/L	20811 ppb	18:44:34

Mean Data: 232509004|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	809213.3	108.67	%	0.760				0.70%
Sc Radial	7281.6	105	%	2.7				2.54%
Y 371.029	779969.9	134.15	%	0.874				0.65%
Y RADIAL	8529.6	134.1	%	4.08				3.04%
Ag 328.068†	-3759.8	4.6555	ug/L	1.13957	4.6555	ppb	1.13957	24.48%
Al 396.153Radial†	54407.9	45916	ug/L	1600.2	45916	ppb	1600.2	3.49%
As 188.979†	10.3	28.026	ug/L	0.3263	28.026	ppb	0.3263	1.16%
B 249.677†	860.2	14.076	ug/L	0.5314	14.076	ppb	0.5314	3.77%
Ba 233.527†	70950.2	460.08	ug/L	0.469	460.08	ppb	0.469	0.10%
Be 313.107†	-40.9	4.3749	ug/L	0.02140	4.3749	ppb	0.02140	0.49%
Ca 317.933Radial†	42413.8	62511	ug/L	2152.7	62511	ppb	2152.7	3.44%
Cd 226.502†	677.8	-1.6589	ug/L	0.27150	-1.6589	ppb	0.27150	16.37%
Co 228.616†	1674.0	21.502	ug/L	0.2095	21.502	ppb	0.2095	0.97%
Cr 267.716†	6807.4	87.154	ug/L	0.7654	87.154	ppb	0.7654	0.88%
Cu 324.752†	45209.3	156.72	ug/L	0.288	156.72	ppb	0.288	0.18%
Fe 238.204 Radial†	17901.5	80007	ug/L	2684.9	80007	ppb	2684.9	3.36%
K 766.490 Radial†	39821.2	8208.9	ug/L	274.30	8208.9	ppb	274.30	3.34%

Mg 279.077 IEC†	285.6	7236.3	ug/L	234.01	7236.3	ppb	234.01	3.23%
Mn 257.610†	2093586.9	2118.4	ug/L	3.37	2118.4	ppb	3.37	0.16%
Mo 202.031†	94.5	11.211	ug/L	0.5279	11.211	ppb	0.5279	4.71%
Na 589.592 Radial†	78852.6	4851.9	ug/L	143.93	4851.9	ppb	143.93	2.97%
Ni 231.604†	2348.9	56.172	ug/L	0.6449	56.172	ppb	0.6449	1.15%
P 214.914†	1225.0	472.00	ug/L	4.627	472.00	ppb	4.627	0.98%
Pb 220.353†	733.3	78.791	ug/L	1.6858	78.791	ppb	1.6858	2.14%
S 181.975 Axial†	374.9	443.00	ug/L	6.952	443.00	ppb	6.952	1.57%
Sb 206.836†	17.1	-2.4832	ug/L	1.69993	-2.4832	ppb	1.69993	68.46%
Se 196.026†	-501.3	42.473	ug/L	9.5309	42.473	ppb	9.5309	22.44%
Si 251.611†	351780.2	9938.4	ug/L	25.43	9938.4	ppb	25.43	0.26%
Sn 189.927†	-164.2	-13.350	ug/L	0.2562	-13.350	ppb	0.2562	1.92%
Sr 421.552†	44964.9	139.22	ug/L	4.556	139.22	ppb	4.556	3.27%
Ti 334.940†	1101163.7	1893.1	ug/L	1.01	1893.1	ppb	1.01	0.05%
Tl 190.801†	-101.2	2.9170	ug/L	1.71282	2.9170	ppb	1.71282	58.72%
U 409.014†	-7252.1	-239.22	ug/L	6.736	-239.22	ppb	6.736	2.82%
V 292.402†	11051.0	77.131	ug/L	0.6311	77.131	ppb	0.6311	0.82%
Zn 213.857†	33607.5	268.96	ug/L	0.772	268.96	ppb	0.772	0.29%
SiO2†	348320.1	21038	ug/L	212.1	21038	ppb	212.1	1.01%

Sequence No.: 41
Sample ID: 232509005|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 68
Date Collected: 7/2/2009 18:46:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509005|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7477.5	7477.5	108	%			18:48:58
1	Y RADIAL	8452.2	8452.2	132.9	%			18:48:38
1	Al 396.153Radial†	75641.0	70262.0	59296	ug/L	59296	ppb	18:48:38
1	Ca 317.933Radial†	28794.2	26693.3	39341	ug/L	39341	ppb	18:48:38
1	Fe 238.204 Radial†	25086.8	23240.5	103870	ug/L	103870	ppb	18:48:38
1	K 766.490 Radial†	55272.3	48503.5	9999.8	ug/L	9999.8	ppb	18:48:38
1	Mg 279.077 IEC†	523.3	481.7	12232	ug/L	12232	ppb	18:48:58
1	Na 589.592 Radial†	82262.6	76667.1	4717.5	ug/L	4717.5	ppb	18:48:38
1	Sr 421.552†	69802.8	64836.1	201.25	ug/L	201.25	ppb	18:48:38
1	Sc 361.383	827619.1	827619.1	111.14	%			18:49:56
1	Y 371.029	768795.4	768795.4	132.23	%			18:49:56
1	Ag 328.068†	-4908.4	-5122.2	5.4119	ug/L	5.4119	ppb	18:49:56
1	As 188.979†	-32.3	5.2	34.150	ug/L	34.150	ppb	18:50:16
1	B 249.677†	237.8	1095.3	17.760	ug/L	17.760	ppb	18:49:56
1	Ba 233.527†	147651.9	132828.1	861.49	ug/L	861.49	ppb	18:49:56
1	Be 313.107†	-5227.2	81.6	5.8858	ug/L	5.8858	ppb	18:49:56
1	Cd 226.502†	638.2	867.4	-2.2743	ug/L	-2.2743	ppb	18:50:16
1	Co 228.616†	2603.8	2443.3	32.149	ug/L	32.149	ppb	18:50:16
1	Cr 267.716†	12235.3	11106.8	141.61	ug/L	141.61	ppb	18:50:16
1	Cu 324.752†	40618.6	30755.9	109.48	ug/L	109.48	ppb	18:49:56
1	Mn 257.610†	3003086.7	2701323.9	2733.3	ug/L	2733.3	ppb	18:49:56
1	Mo 202.031†	115.6	99.6	13.090	ug/L	13.090	ppb	18:50:16
1	Ni 231.604†	4970.6	4335.7	103.69	ug/L	103.69	ppb	18:50:16
1	P 214.914†	2214.8	1699.2	680.66	ug/L	680.66	ppb	18:50:16
1	Pb 220.353†	1108.7	1015.4	108.97	ug/L	108.97	ppb	18:50:16
1	S 181.975 Axial†	737.3	527.4	624.27	ug/L	624.27	ppb	18:50:16
1	Sb 206.836†	99.6	37.0	0.2568	ug/L	0.2568	ppb	18:50:16
1	Se 196.026†	-776.9	-664.2	49.085	ug/L	49.085	ppb	18:50:16
1	Si 251.611†	416669.3	374451.5	10578	ug/L	10578	ppb	18:49:56
1	Sn 189.927†	-98.9	-102.0	-4.1983	ug/L	-4.1983	ppb	18:50:16
1	Ti 334.940†	1629473.7	1467653.7	2520.6	ug/L	2520.6	ppb	18:49:56
1	Tl 190.801†	-216.8	-133.9	3.5684	ug/L	3.5684	ppb	18:50:16
1	U 409.014†	-14367.4	-7662.6	-255.23	ug/L	-255.23	ppb	18:49:56
1	V 292.402†	18232.0	18097.2	130.95	ug/L	130.95	ppb	18:50:16
1	Zn 213.857†	39240.3	34322.3	271.97	ug/L	271.97	ppb	18:49:56
1	SiO2†	409467.3	367944.7	22222	ug/L	22222	ppb	18:51:16
2	Sc Radial	7540.7	7540.7	109	%			18:49:23
2	Y RADIAL	8550.7	8550.7	134.5	%			18:49:03
2	Al 396.153Radial†	76486.1	70452.0	59456	ug/L	59456	ppb	18:49:03
2	Ca 317.933Radial†	29213.3	26855.3	39580	ug/L	39580	ppb	18:49:03
2	Fe 238.204 Radial†	25338.9	23277.5	104030	ug/L	104030	ppb	18:49:03
2	K 766.490 Radial†	55772.3	48534.2	10006	ug/L	10006	ppb	18:49:03
2	Mg 279.077 IEC†	528.0	481.9	12237	ug/L	12237	ppb	18:49:23
2	Na 589.592 Radial†	83210.3	76900.2	4731.8	ug/L	4731.8	ppb	18:49:03
2	Sr 421.552†	70432.9	64873.7	201.37	ug/L	201.37	ppb	18:49:03
2	Sc 361.383	818401.8	818401.8	109.90	%			18:50:23
2	Y 371.029	760637.4	760637.4	130.83	%			18:50:23
2	Ag 328.068†	-4881.8	-5147.8	5.3266	ug/L	5.3266	ppb	18:50:23
2	As 188.979†	-25.3	11.2	36.105	ug/L	36.105	ppb	18:50:43
2	B 249.677†	191.1	1055.1	16.831	ug/L	16.831	ppb	18:50:23
2	Ba 233.527†	146387.3	133173.7	863.73	ug/L	863.73	ppb	18:50:23
2	Be 313.107†	-5138.8	109.0	5.9048	ug/L	5.9048	ppb	18:50:23
2	Cd 226.502†	644.0	879.2	-2.1599	ug/L	-2.1599	ppb	18:50:43
2	Co 228.616†	2579.8	2447.9	32.213	ug/L	32.213	ppb	18:50:43
2	Cr 267.716†	12177.5	11178.2	142.51	ug/L	142.51	ppb	18:50:43
2	Cu 324.752†	40227.4	30811.6	109.67	ug/L	109.67	ppb	18:50:23
2	Mn 257.610†	2975948.6	2707063.2	2739.1	ug/L	2739.1	ppb	18:50:23
2	Mo 202.031†	112.6	98.0	13.004	ug/L	13.004	ppb	18:50:43
2	Ni 231.604†	4976.7	4391.6	105.03	ug/L	105.03	ppb	18:50:43

2	P 214.914†	2195.6	1704.2	682.73	ug/L	682.73 ppb	18:50:43
2	Pb 220.353†	1081.5	1001.9	107.56	ug/L	107.56 ppb	18:50:43
2	S 181.975 Axial†	736.9	534.5	632.79	ug/L	632.79 ppb	18:50:43
2	Sb 206.836†	107.2	45.0	2.3344	ug/L	2.3344 ppb	18:50:43
2	Se 196.026†	-756.3	-653.3	54.568	ug/L	54.568 ppb	18:50:43
2	Si 251.611†	411164.2	373664.8	10556	ug/L	10556 ppb	18:50:23
2	Sn 189.927†	-117.1	-119.5	-6.9077	ug/L	-6.9077 ppb	18:50:43
2	Ti 334.940†	1613524.9	1469654.4	2524.0	ug/L	2524.0 ppb	18:50:23
2	Tl 190.801†	-208.2	-128.3	4.9636	ug/L	4.9636 ppb	18:50:43
2	U 409.014†	-14217.0	-7671.4	-255.53	ug/L	-255.53 ppb	18:50:23
2	V 292.402†	18200.3	18253.1	132.20	ug/L	132.20 ppb	18:50:43
2	Zn 213.857†	38840.8	34356.4	272.23	ug/L	272.23 ppb	18:50:23
2	SiO2†	410802.7	373309.1	22546	ug/L	22546 ppb	18:51:21
3	Sc Radial	7472.0	7472.0	108	%		18:49:48
3	Y RADIAL	8369.5	8369.5	131.6	%		18:49:28
3	Al 396.153Radial†	75020.3	69737.6	58853	ug/L	58853 ppb	18:49:28
3	Ca 317.933Radial†	28634.2	26564.5	39152	ug/L	39152 ppb	18:49:28
3	Fe 238.204 Radial†	24713.5	22911.1	102400	ug/L	102400 ppb	18:49:28
3	K 766.490 Radial†	54859.6	48158.3	9928.4	ug/L	9928.4 ppb	18:49:28
3	Mg 279.077 IEC†	521.9	480.7	12208	ug/L	12208 ppb	18:49:48
3	Na 589.592 Radial†	81461.8	75980.1	4675.2	ug/L	4675.2 ppb	18:49:28
3	Sr 421.552†	68990.0	64129.4	199.06	ug/L	199.06 ppb	18:49:28
3	Sc 361.383	813357.8	813357.8	109.23	%		18:50:50
3	Y 371.029	754713.6	754713.6	129.81	%		18:50:50
3	Ag 328.068†	-4815.5	-5114.6	4.9973	ug/L	4.9973 ppb	18:50:50
3	As 188.979†	-32.3	4.8	33.640	ug/L	33.640 ppb	18:51:10
3	B 249.677†	123.8	994.7	15.557	ug/L	15.557 ppb	18:50:50
3	Ba 233.527†	144559.1	132325.9	858.24	ug/L	858.24 ppb	18:50:50
3	Be 313.107†	-5108.5	107.8	5.8574	ug/L	5.8574 ppb	18:50:50
3	Cd 226.502†	635.6	875.2	-2.0140	ug/L	-2.0140 ppb	18:51:10
3	Co 228.616†	2592.6	2474.1	32.688	ug/L	32.688 ppb	18:51:10
3	Cr 267.716†	12249.8	11313.1	144.17	ug/L	144.17 ppb	18:51:10
3	Cu 324.752†	39657.8	30517.1	108.59	ug/L	108.59 ppb	18:50:50
3	Mn 257.610†	2938076.8	2689182.7	2720.9	ug/L	2720.9 ppb	18:50:50
3	Mo 202.031†	94.9	82.5	11.910	ug/L	11.910 ppb	18:51:10
3	Ni 231.604†	5006.1	4446.6	106.35	ug/L	106.35 ppb	18:51:10
3	P 214.914†	2214.3	1733.7	697.33	ug/L	697.33 ppb	18:51:10
3	Pb 220.353†	1117.5	1041.0	111.72	ug/L	111.72 ppb	18:51:10
3	S 181.975 Axial†	733.6	535.7	634.33	ug/L	634.33 ppb	18:51:10
3	Sb 206.836†	93.6	33.1	-0.9212	ug/L	-0.9212 ppb	18:51:10
3	Se 196.026†	-772.3	-672.2	40.512	ug/L	40.512 ppb	18:51:10
3	Si 251.611†	405076.6	370411.4	10464	ug/L	10464 ppb	18:50:50
3	Sn 189.927†	-122.5	-125.2	-7.9644	ug/L	-7.9644 ppb	18:51:10
3	Ti 334.940†	1590730.2	1457889.6	2503.8	ug/L	2503.8 ppb	18:50:50
3	Tl 190.801†	-202.6	-124.3	5.6376	ug/L	5.6376 ppb	18:51:10
3	U 409.014†	-14215.6	-7750.3	-257.83	ug/L	-257.83 ppb	18:50:50
3	V 292.402†	18237.9	18390.3	133.56	ug/L	133.56 ppb	18:51:10
3	Zn 213.857†	38381.6	34155.2	270.73	ug/L	270.73 ppb	18:50:50
3	SiO2†	411035.8	375840.5	22699	ug/L	22699 ppb	18:51:26

Mean Data: 232509005|881347|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	819792.9	110.09	%	0.971				0.88%
Sc Radial	7496.7	108	%	0.5				0.51%
Y 371.029	761382.2	130.96	%	1.216				0.93%
Y RADIAL	8457.5	133.0	%	1.43				1.07%
Ag 328.068†	-5128.2	5.2452	ug/L	0.21894	5.2452	ppb	0.21894	4.17%
Al 396.153Radial†	70150.6	59202	ug/L	312.2	59202	ppb	312.2	0.53%
As 188.979†	7.1	34.631	ug/L	1.3012	34.631	ppb	1.3012	3.76%
B 249.677†	1048.4	16.716	ug/L	1.1059	16.716	ppb	1.1059	6.62%
Ba 233.527†	132775.9	861.15	ug/L	2.760	861.15	ppb	2.760	0.32%
Be 313.107†	99.4	5.8827	ug/L	0.02386	5.8827	ppb	0.02386	0.41%
Ca 317.933Radial†	26704.4	39358	ug/L	214.7	39358	ppb	214.7	0.55%
Cd 226.502†	874.0	-2.1494	ug/L	0.13045	-2.1494	ppb	0.13045	6.07%
Co 228.616†	2455.1	32.350	ug/L	0.2942	32.350	ppb	0.2942	0.91%
Cr 267.716†	11199.3	142.76	ug/L	1.298	142.76	ppb	1.298	0.91%
Cu 324.752†	30694.9	109.25	ug/L	0.578	109.25	ppb	0.578	0.53%
Fe 238.204 Radial†	23143.0	103430	ug/L	901.5	103430	ppb	901.5	0.87%
K 766.490 Radial†	48398.7	9978.1	ug/L	43.16	9978.1	ppb	43.16	0.43%

Mg 279.077 IEC†	481.4	12226	ug/L	15.4	12226	ppb	15.4	0.13%
Mn 257.610†	2699189.9	2731.1	ug/L	9.30	2731.1	ppb	9.30	0.34%
Mo 202.031†	93.4	12.668	ug/L	0.6576	12.668	ppb	0.6576	5.19%
Na 589.592 Radial†	76515.8	4708.1	ug/L	29.43	4708.1	ppb	29.43	0.63%
Ni 231.604†	4391.3	105.02	ug/L	1.326	105.02	ppb	1.326	1.26%
P 214.914†	1712.4	686.91	ug/L	9.086	686.91	ppb	9.086	1.32%
Pb 220.353†	1019.4	109.42	ug/L	2.118	109.42	ppb	2.118	1.94%
S 181.975 Axial†	532.5	630.47	ug/L	5.421	630.47	ppb	5.421	0.86%
Sb 206.836†	38.4	0.5567	ug/L	1.64840	0.5567	ppb	1.64840	296.11%
Se 196.026†	-663.2	48.055	ug/L	7.0840	48.055	ppb	7.0840	14.74%
Si 251.611†	372842.6	10533	ug/L	60.5	10533	ppb	60.5	0.57%
Sn 189.927†	-115.5	-6.3568	ug/L	1.94252	-6.3568	ppb	1.94252	30.56%
Sr 421.552†	64613.1	200.56	ug/L	1.302	200.56	ppb	1.302	0.65%
Ti 334.940†	1465065.9	2516.2	ug/L	10.81	2516.2	ppb	10.81	0.43%
Tl 190.801†	-128.9	4.7232	ug/L	1.05536	4.7232	ppb	1.05536	22.34%
U 409.014†	-7694.8	-256.20	ug/L	1.421	-256.20	ppb	1.421	0.55%
V 292.402†	18246.9	132.24	ug/L	1.304	132.24	ppb	1.304	0.99%
Zn 213.857†	34278.0	271.64	ug/L	0.803	271.64	ppb	0.803	0.30%
SiO2†	372364.8	22489	ug/L	243.7	22489	ppb	243.7	1.08%

Sequence No.: 42
Sample ID: 232509006|881347|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 69
Date Collected: 7/2/2009 18:53:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232509006|881347|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7245.6	7245.6	104	%			18:55:30
1	Y RADIAL	7935.3	7935.3	124.8	%			18:55:30
1	Al 396.153Radial†	27823.4	26716.0	22546	ug/L	22546	ppb	18:55:30
1	Ca 317.933Radial†	8462.0	8077.4	11905	ug/L	11905	ppb	18:55:30
1	Fe 238.204 Radial†	17225.6	16457.4	73552	ug/L	73552	ppb	18:55:30
1	K 766.490 Radial†	27338.1	23394.0	4815.1	ug/L	4815.1	ppb	18:55:30
1	Mg 279.077 IEC†	198.1	185.8	4688.7	ug/L	4688.7	ppb	18:55:50
1	Na 589.592 Radial†	9084.0	9030.6	555.67	ug/L	555.67	ppb	18:55:30
1	Sr 421.552†	22094.0	21220.9	65.879	ug/L	65.879	ppb	18:55:30
1	Sc 361.383	815837.6	815837.6	109.56	%			18:56:47
1	Y 371.029	743494.5	743494.5	127.88	%			18:56:47
1	Ag 328.068†	-2975.5	-3421.8	5.1113	ug/L	5.1113	ppb	18:56:52
1	As 188.979†	-50.1	-11.4	20.777	ug/L	20.777	ppb	18:57:13
1	B 249.677†	45.6	922.9	15.997	ug/L	15.997	ppb	18:56:52
1	Ba 233.527†	54405.1	49635.7	321.81	ug/L	321.81	ppb	18:56:52
1	Be 313.107†	-8892.2	-3331.6	3.5448	ug/L	3.5448	ppb	18:56:52
1	Cd 226.502†	348.6	611.5	-1.6735	ug/L	-1.6735	ppb	18:57:13
1	Co 228.616†	1100.3	1104.8	12.126	ug/L	12.126	ppb	18:57:13
1	Cr 267.716†	2568.9	2442.8	32.303	ug/L	32.303	ppb	18:57:13
1	Cu 324.752†	16319.3	9104.5	34.883	ug/L	34.883	ppb	18:56:52
1	Mn 257.610†	2685491.5	2450459.7	2477.0	ug/L	2477.0	ppb	18:56:47
1	Mo 202.031†	278.0	249.3	20.606	ug/L	20.606	ppb	18:57:13
1	Ni 231.604†	1273.4	1025.6	24.524	ug/L	24.524	ppb	18:57:13
1	P 214.914†	2251.9	1761.9	735.51	ug/L	735.51	ppb	18:57:13
1	Pb 220.353†	772.8	723.2	73.865	ug/L	73.865	ppb	18:57:13
1	S 181.975 Axial†	518.2	337.0	401.91	ug/L	401.91	ppb	18:57:13
1	Sb 206.836†	72.2	13.3	-1.8458	ug/L	-1.8458	ppb	18:57:13
1	Se 196.026†	-519.6	-439.4	47.479	ug/L	47.479	ppb	18:57:13
1	Si 251.611†	311295.9	283686.0	8014.9	ug/L	8014.9	ppb	18:56:52
1	Sn 189.927†	-25.4	-36.2	1.0283	ug/L	1.0283	ppb	18:57:13
1	Ti 334.940†	1340687.4	1225236.8	2103.1	ug/L	2103.1	ppb	18:56:47
1	Tl 190.801†	-190.7	-112.9	3.1550	ug/L	3.1550	ppb	18:57:13
1	U 409.014†	-13194.6	-6778.9	-223.37	ug/L	-223.37	ppb	18:56:47
1	V 292.402†	8307.5	9275.5	63.366	ug/L	63.366	ppb	18:56:52
1	Zn 213.857†	52023.5	46500.0	376.78	ug/L	376.78	ppb	18:56:52
1	SiO2†	311960.8	284266.1	17170	ug/L	17170	ppb	18:58:20
2	Sc Radial	7557.2	7557.2	109	%			18:55:55
2	Y RADIAL	8155.4	8155.4	128.2	%			18:55:55
2	Al 396.153Radial†	27044.4	24902.1	21015	ug/L	21015	ppb	18:55:55
2	Ca 317.933Radial†	8243.4	7542.5	11116	ug/L	11116	ppb	18:55:55
2	Fe 238.204 Radial†	16692.6	15287.8	68325	ug/L	68325	ppb	18:55:55
2	K 766.490 Radial†	26831.1	21849.0	4495.0	ug/L	4495.0	ppb	18:55:55
2	Mg 279.077 IEC†	193.5	173.7	4385.0	ug/L	4385.0	ppb	18:56:15
2	Na 589.592 Radial†	8589.7	8218.1	505.67	ug/L	505.67	ppb	18:55:55
2	Sr 421.552†	21427.4	19736.4	61.270	ug/L	61.270	ppb	18:55:55
2	Sc 361.383	815088.1	815088.1	109.46	%			18:57:18
2	Y 371.029	741840.6	741840.6	127.59	%			18:57:18
2	Ag 328.068†	-2968.6	-3418.0	3.4722	ug/L	3.4722	ppb	18:57:23
2	As 188.979†	-43.8	-5.7	21.511	ug/L	21.511	ppb	18:57:43
2	B 249.677†	104.6	976.9	17.588	ug/L	17.588	ppb	18:57:23
2	Ba 233.527†	54051.8	49358.6	320.03	ug/L	320.03	ppb	18:57:23
2	Be 313.107†	-8855.9	-3305.9	3.5419	ug/L	3.5419	ppb	18:57:23
2	Cd 226.502†	351.8	614.7	-1.0274	ug/L	-1.0274	ppb	18:57:43
2	Co 228.616†	1088.4	1094.9	12.055	ug/L	12.055	ppb	18:57:43
2	Cr 267.716†	2585.9	2460.4	32.417	ug/L	32.417	ppb	18:57:43
2	Cu 324.752†	16230.2	9036.9	34.353	ug/L	34.353	ppb	18:57:23
2	Mn 257.610†	2675826.0	2443883.4	2469.7	ug/L	2469.7	ppb	18:57:18
2	Mo 202.031†	279.8	251.2	20.386	ug/L	20.386	ppb	18:57:43
2	Ni 231.604†	1323.8	1072.8	25.652	ug/L	25.652	ppb	18:57:43

2	P 214.914†	2237.4	1750.5	734.13	ug/L	734.13 ppb	18:57:43
2	Pb 220.353†	772.3	723.4	74.081	ug/L	74.081 ppb	18:57:43
2	S 181.975 Axial†	525.5	344.1	410.79	ug/L	410.79 ppb	18:57:43
2	Sb 206.836†	82.1	22.4	0.5646	ug/L	0.5646 ppb	18:57:43
2	Se 196.026†	-505.4	-426.9	35.665	ug/L	35.665 ppb	18:57:43
2	Si 251.611†	309106.8	281947.4	7965.8	ug/L	7965.8 ppb	18:57:23
2	Sn 189.927†	-27.1	-37.7	0.3177	ug/L	0.3177 ppb	18:57:43
2	Ti 334.940†	1335813.1	1221909.0	2097.3	ug/L	2097.3 ppb	18:57:18
2	Tl 190.801†	-188.3	-110.8	3.5290	ug/L	3.5290 ppb	18:57:43
2	U 409.014†	-13268.9	-6857.8	-225.22	ug/L	-225.22 ppb	18:57:18
2	V 292.402†	8241.1	9221.8	63.652	ug/L	63.652 ppb	18:57:23
2	Zn 213.857†	51676.3	46226.4	375.06	ug/L	375.06 ppb	18:57:23
2	SiO2†	313922.6	286320.3	17294	ug/L	17294 ppb	18:58:25
3	Sc Radial	7687.4	7687.4	111	%		18:56:20
3	Y RADIAL	8319.2	8319.2	130.8	%		18:56:20
3	Al 396.153Radial†	27510.8	24902.5	21015	ug/L	21015 ppb	18:56:20
3	Ca 317.933Radial†	8349.1	7509.7	11068	ug/L	11068 ppb	18:56:20
3	Fe 238.204 Radial†	16883.6	15200.6	67935	ug/L	67935 ppb	18:56:20
3	K 766.490 Radial†	27177.5	21744.4	4473.5	ug/L	4473.5 ppb	18:56:20
3	Mg 279.077 IEC†	199.2	175.8	4439.6	ug/L	4439.6 ppb	18:56:40
3	Na 589.592 Radial†	8816.8	8289.5	510.06	ug/L	510.06 ppb	18:56:20
3	Sr 421.552†	21869.4	19802.1	61.475	ug/L	61.475 ppb	18:56:20
3	Sc 361.383	824719.3	824719.3	110.75	%		18:57:49
3	Y 371.029	750848.6	750848.6	129.14	%		18:57:49
3	Ag 328.068†	-2962.7	-3381.0	3.5388	ug/L	3.5388 ppb	18:57:54
3	As 188.979†	-47.5	-8.5	20.516	ug/L	20.516 ppb	18:58:14
3	B 249.677†	63.3	938.5	16.738	ug/L	16.738 ppb	18:57:54
3	Ba 233.527†	53855.9	48605.1	315.15	ug/L	315.15 ppb	18:57:54
3	Be 313.107†	-8769.8	-3133.7	3.5991	ug/L	3.5991 ppb	18:57:54
3	Cd 226.502†	335.3	596.0	-1.1932	ug/L	-1.1932 ppb	18:58:14
3	Co 228.616†	1081.0	1076.5	11.779	ug/L	11.779 ppb	18:58:14
3	Cr 267.716†	2551.9	2402.1	31.674	ug/L	31.674 ppb	18:58:14
3	Cu 324.752†	16239.8	8872.4	33.777	ug/L	33.777 ppb	18:57:54
3	Mn 257.610†	2694831.4	2432495.3	2458.2	ug/L	2458.2 ppb	18:57:49
3	Mo 202.031†	275.3	244.1	19.911	ug/L	19.911 ppb	18:58:14
3	Ni 231.604†	1288.7	1026.9	24.555	ug/L	24.555 ppb	18:58:14
3	P 214.914†	2229.7	1719.7	720.69	ug/L	720.69 ppb	18:58:14
3	Pb 220.353†	739.2	685.3	70.095	ug/L	70.095 ppb	18:58:14
3	S 181.975 Axial†	514.5	328.6	392.07	ug/L	392.07 ppb	18:58:14
3	Sb 206.836†	85.5	24.6	1.1651	ug/L	1.1651 ppb	18:58:14
3	Se 196.026†	-505.2	-421.3	36.880	ug/L	36.880 ppb	18:58:14
3	Si 251.611†	308563.3	278158.7	7858.8	ug/L	7858.8 ppb	18:57:54
3	Sn 189.927†	-30.8	-40.8	-0.2019	ug/L	-0.2019 ppb	18:58:14
3	Ti 334.940†	1348235.9	1218873.9	2092.1	ug/L	2092.1 ppb	18:57:49
3	Tl 190.801†	-191.7	-111.9	3.1854	ug/L	3.1854 ppb	18:58:14
3	U 409.014†	-13148.8	-6607.8	-217.27	ug/L	-217.27 ppb	18:57:49
3	V 292.402†	8166.1	9066.2	62.446	ug/L	62.446 ppb	18:57:54
3	Zn 213.857†	51368.7	45397.3	368.25	ug/L	368.25 ppb	18:57:54
3	SiO2†	311338.2	280637.5	16951	ug/L	16951 ppb	18:58:30

Mean Data: 232509006|881347|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	818548.3	109.92	%	0.719				0.65%
Sc Radial	7496.7	108	%	3.3				3.03%
Y 371.029	745394.6	128.21	%	0.825				0.64%
Y RADIAL	8136.6	128.0	%	3.03				2.37%
Ag 328.068†	-3406.9	4.0407	ug/L	0.92770	4.0407	ppb	0.92770	22.96%
Al 396.153Radial†	25506.8	21525	ug/L	883.7	21525	ppb	883.7	4.11%
As 188.979†	-8.6	20.935	ug/L	0.5161	20.935	ppb	0.5161	2.47%
B 249.677†	946.1	16.774	ug/L	0.7962	16.774	ppb	0.7962	4.75%
Ba 233.527†	49199.8	319.00	ug/L	3.451	319.00	ppb	3.451	1.08%
Be 313.107†	-3257.1	3.5620	ug/L	0.03223	3.5620	ppb	0.03223	0.90%
Ca 317.933Radial†	7709.9	11363	ug/L	469.7	11363	ppb	469.7	4.13%
Cd 226.502†	607.4	-1.2980	ug/L	0.33559	-1.2980	ppb	0.33559	25.85%
Co 228.616†	1092.1	11.987	ug/L	0.1837	11.987	ppb	0.1837	1.53%
Cr 267.716†	2435.1	32.131	ug/L	0.4002	32.131	ppb	0.4002	1.25%
Cu 324.752†	9004.6	34.338	ug/L	0.5531	34.338	ppb	0.5531	1.61%
Fe 238.204 Radial†	15648.6	69938	ug/L	3136.4	69938	ppb	3136.4	4.48%
K 766.490 Radial†	22329.1	4594.5	ug/L	191.30	4594.5	ppb	191.30	4.16%

Mg 279.077 IEC†	178.4	4504.4	ug/L	161.87	4504.4	ppb	161.87	3.59%
Mn 257.610†	2442279.5	2468.3	ug/L	9.48	2468.3	ppb	9.48	0.38%
Mo 202.031†	248.2	20.301	ug/L	0.3551	20.301	ppb	0.3551	1.75%
Na 589.592 Radial†	8512.7	523.80	ug/L	27.683	523.80	ppb	27.683	5.29%
Ni 231.604†	1041.8	24.910	ug/L	0.6423	24.910	ppb	0.6423	2.58%
P 214.914†	1744.0	730.11	ug/L	8.190	730.11	ppb	8.190	1.12%
Pb 220.353†	710.6	72.680	ug/L	2.2413	72.680	ppb	2.2413	3.08%
S 181.975 Axial†	336.6	401.59	ug/L	9.366	401.59	ppb	9.366	2.33%
Sb 206.836†	20.1	-0.0387	ug/L	1.59358	-0.0387	ppb	1.59358	>999.9%
Se 196.026†	-429.2	40.008	ug/L	6.4981	40.008	ppb	6.4981	16.24%
Si 251.611†	281264.0	7946.5	ug/L	79.81	7946.5	ppb	79.81	1.00%
Sn 189.927†	-38.3	0.3814	ug/L	0.61758	0.3814	ppb	0.61758	161.94%
Sr 421.552†	20253.1	62.875	ug/L	2.6039	62.875	ppb	2.6039	4.14%
Ti 334.940†	1222006.6	2097.5	ug/L	5.49	2097.5	ppb	5.49	0.26%
Tl 190.801†	-111.9	3.2898	ug/L	0.20773	3.2898	ppb	0.20773	6.31%
U 409.014†	-6748.1	-221.95	ug/L	4.160	-221.95	ppb	4.160	1.87%
V 292.402†	9187.9	63.154	ug/L	0.6301	63.154	ppb	0.6301	1.00%
Zn 213.857†	46041.2	373.36	ug/L	4.512	373.36	ppb	4.512	1.21%
SiO2†	283741.3	17138	ug/L	173.8	17138	ppb	173.8	1.01%

Sequence No.: 43
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/2/2009 19:00:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7568.5	7568.5	109	%			19:02:38
1	Y RADIAL	6945.8	6945.8	109.2	%			19:02:38
1	Al 396.153Radial†	6410.9	5948.1	4998.2	ug/L	4998.2	ppb	19:02:38
1	Ca 317.933Radial†	3723.3	3387.1	4991.9	ug/L	4991.9	ppb	19:02:38
1	Fe 238.204 Radial†	1286.8	1140.8	5113.8	ug/L	5113.8	ppb	19:02:58
1	K 766.490 Radial†	26606.9	21606.4	4450.9	ug/L	4450.9	ppb	19:02:33
1	Mg 279.077 IEC†	223.3	200.8	5142.0	ug/L	5142.0	ppb	19:02:58
1	Na 589.592 Radial†	166088.5	152600.6	9389.8	ug/L	9389.8	ppb	19:02:33
1	Sr 421.552†	168976.9	154979.8	481.93	ug/L	481.93	ppb	19:02:33
1	Sc 361.383	794605.4	794605.4	106.71	%			19:04:07
1	Y 371.029	611820.2	611820.2	105.23	%			19:04:07
1	Ag 328.068†	96959.1	90158.1	496.55	ug/L	496.55	ppb	19:04:07
1	As 188.979†	1655.9	1586.2	505.56	ug/L	505.56	ppb	19:04:28
1	B 249.677†	22215.8	21700.6	493.43	ug/L	493.43	ppb	19:04:07
1	Ba 233.527†	80651.2	75558.8	491.22	ug/L	491.22	ppb	19:04:07
1	Be 313.107†	1307994.1	1230554.8	496.62	ug/L	496.62	ppb	19:04:07
1	Cd 226.502†	46820.5	44170.5	497.04	ug/L	497.04	ppb	19:04:07
1	Co 228.616†	33010.8	31036.1	490.98	ug/L	490.98	ppb	19:04:28
1	Cr 267.716†	41730.1	39204.8	491.96	ug/L	491.96	ppb	19:04:07
1	Cu 324.752†	162822.5	146796.2	494.17	ug/L	494.17	ppb	19:04:07
1	Mn 257.610†	522558.8	488991.5	493.00	ug/L	493.00	ppb	19:04:07
1	Mo 202.031†	8465.3	7928.8	503.08	ug/L	503.08	ppb	19:04:28
1	Ni 231.604†	22182.5	20651.4	493.70	ug/L	493.70	ppb	19:04:28
1	P 214.914†	6253.3	5566.7	2412.8	ug/L	2412.8	ppb	19:04:28
1	Pb 220.353†	5024.6	4726.6	500.82	ug/L	500.82	ppb	19:04:28
1	S 181.975 Axial†	1005.1	805.9	970.81	ug/L	970.81	ppb	19:04:28
1	Sb 206.836†	2015.4	1836.1	504.99	ug/L	504.99	ppb	19:04:28
1	Se 196.026†	1142.3	1105.4	518.29	ug/L	518.29	ppb	19:04:28
1	Si 251.611†	95474.1	89023.6	2498.7	ug/L	2498.7	ppb	19:04:07
1	Sn 189.927†	3439.0	3209.8	503.56	ug/L	503.56	ppb	19:04:28
1	Ti 334.940†	310648.8	292647.3	502.04	ug/L	502.04	ppb	19:04:07
1	Tl 190.801†	2170.1	2094.8	500.90	ug/L	500.90	ppb	19:04:28
1	U 409.014†	10617.5	15214.6	479.33	ug/L	479.33	ppb	19:04:07
1	V 292.402†	62137.1	59923.9	497.45	ug/L	497.45	ppb	19:04:07
1	Zn 213.857†	65005.9	59935.0	491.47	ug/L	491.47	ppb	19:04:07
1	SiO2†	96317.7	89787.4	5386.6	ug/L	5386.6	ppb	19:05:28
2	Sc Radial	7695.8	7695.8	111	%			19:03:09
2	Y RADIAL	7036.3	7036.3	110.6	%			19:03:09
2	Al 396.153Radial†	6259.1	5714.0	4802.4	ug/L	4802.4	ppb	19:03:09
2	Ca 317.933Radial†	3623.9	3241.0	4776.7	ug/L	4776.7	ppb	19:03:09
2	Fe 238.204 Radial†	1278.1	1113.5	4990.6	ug/L	4990.6	ppb	19:03:29
2	K 766.490 Radial†	26369.0	20988.5	4324.3	ug/L	4324.3	ppb	19:03:04
2	Mg 279.077 IEC†	218.8	193.3	4949.8	ug/L	4949.8	ppb	19:03:29
2	Na 589.592 Radial†	162956.6	147258.3	9061.0	ug/L	9061.0	ppb	19:03:04
2	Sr 421.552†	166082.7	149808.1	465.85	ug/L	465.85	ppb	19:03:04
2	Sc 361.383	854842.3	854842.3	114.80	%			19:04:35
2	Y 371.029	658397.2	658397.2	113.24	%			19:04:35
2	Ag 328.068†	95910.0	82841.4	456.34	ug/L	456.34	ppb	19:04:35
2	As 188.979†	1623.8	1448.8	461.84	ug/L	461.84	ppb	19:04:55
2	B 249.677†	21990.4	20037.2	455.60	ug/L	455.60	ppb	19:04:35
2	Ba 233.527†	79551.5	69275.0	450.37	ug/L	450.37	ppb	19:04:35
2	Be 313.107†	1290383.0	1128839.3	455.57	ug/L	455.57	ppb	19:04:35
2	Cd 226.502†	46080.8	40434.3	454.96	ug/L	454.96	ppb	19:04:35
2	Co 228.616†	32660.0	28550.7	451.67	ug/L	451.67	ppb	19:04:55
2	Cr 267.716†	41057.6	35863.4	450.04	ug/L	450.04	ppb	19:04:35
2	Cu 324.752†	160918.6	134385.6	452.40	ug/L	452.40	ppb	19:04:35
2	Mn 257.610†	514923.4	447832.6	451.54	ug/L	451.54	ppb	19:04:35
2	Mo 202.031†	8402.4	7315.0	464.15	ug/L	464.15	ppb	19:04:55
2	Ni 231.604†	21982.8	19012.6	454.53	ug/L	454.53	ppb	19:04:55

2	P 214.914†	6157.9	5070.7	2197.2 ug/L	2197.2 ppb	19:04:55
2	Pb 220.353†	4991.2	4365.6	462.59 ug/L	462.59 ppb	19:04:55
2	S 181.975 Axial†	997.3	732.8	882.64 ug/L	882.64 ppb	19:04:55
2	Sb 206.836†	2012.0	1700.0	467.59 ug/L	467.59 ppb	19:04:55
2	Se 196.026†	1129.9	1019.1	478.76 ug/L	478.76 ppb	19:04:55
2	Si 251.611†	94268.1	81668.3	2292.1 ug/L	2292.1 ppb	19:04:35
2	Sn 189.927†	3393.0	2942.7	461.69 ug/L	461.69 ppb	19:04:55
2	Ti 334.940†	306538.3	268552.7	460.71 ug/L	460.71 ppb	19:04:35
2	Tl 190.801†	2175.3	1956.1	467.67 ug/L	467.67 ppb	19:04:55
2	U 409.014†	10325.4	14259.0	449.22 ug/L	449.22 ppb	19:04:35
2	V 292.402†	61276.9	55071.2	457.17 ug/L	457.17 ppb	19:04:35
2	Zn 213.857†	63892.6	54672.5	448.24 ug/L	448.24 ppb	19:04:35
2	SiO2†	95424.1	82648.6	4958.2 ug/L	4958.2 ppb	19:05:33
3	Sc Radial	7898.7	7898.7	114 %		19:03:39
3	Y RADIAL	7239.1	7239.1	113.8 %		19:03:39
3	Al 396.153Radial†	6264.9	5574.2	4683.0 ug/L	4683.0 ppb	19:03:39
3	Ca 317.933Radial†	3658.5	3187.5	4697.8 ug/L	4697.8 ppb	19:03:39
3	Fe 238.204 Radial†	1263.6	1071.1	4802.2 ug/L	4802.2 ppb	19:03:59
3	K 766.490 Radial†	27372.2	21259.3	4379.3 ug/L	4379.3 ppb	19:03:34
3	Mg 279.077 IEC†	217.6	187.2	4795.3 ug/L	4795.3 ppb	19:03:59
3	Na 589.592 Radial†	170878.2	150444.3	9257.1 ug/L	9257.1 ppb	19:03:34
3	Sr 421.552†	174429.3	153295.0	476.70 ug/L	476.70 ppb	19:03:34
3	Sc 361.383	803293.3	803293.3	107.87 %		19:05:02
3	Y 371.029	618438.8	618438.8	106.37 %		19:05:02
3	Ag 328.068†	98035.1	90172.8	496.53 ug/L	496.53 ppb	19:05:02
3	As 188.979†	1636.6	1551.5	494.52 ug/L	494.52 ppb	19:05:22
3	B 249.677†	22663.7	21890.6	497.84 ug/L	497.84 ppb	19:05:02
3	Ba 233.527†	81405.8	75440.9	490.46 ug/L	490.46 ppb	19:05:02
3	Be 313.107†	1324408.4	1232513.7	497.41 ug/L	497.41 ppb	19:05:02
3	Cd 226.502†	47255.5	44099.1	496.27 ug/L	496.27 ppb	19:05:02
3	Co 228.616†	32735.5	30446.3	481.64 ug/L	481.64 ppb	19:05:22
3	Cr 267.716†	42224.7	39240.3	492.40 ug/L	492.40 ppb	19:05:02
3	Cu 324.752†	165007.3	147171.2	495.41 ug/L	495.41 ppb	19:05:02
3	Mn 257.610†	527750.9	488508.2	492.48 ug/L	492.48 ppb	19:05:02
3	Mo 202.031†	8410.9	7792.5	494.42 ug/L	494.42 ppb	19:05:22
3	Ni 231.604†	22029.3	20284.6	484.94 ug/L	484.94 ppb	19:05:22
3	P 214.914†	6218.0	5470.6	2369.2 ug/L	2369.2 ppb	19:05:22
3	Pb 220.353†	4996.4	4649.5	492.62 ug/L	492.62 ppb	19:05:22
3	S 181.975 Axial†	998.7	789.8	951.48 ug/L	951.48 ppb	19:05:22
3	Sb 206.836†	2012.0	1812.6	498.21 ug/L	498.21 ppb	19:05:22
3	Se 196.026†	1126.6	1079.2	505.37 ug/L	505.37 ppb	19:05:22
3	Si 251.611†	96314.0	88834.5	2493.7 ug/L	2493.7 ppb	19:05:02
3	Sn 189.927†	3392.0	3131.4	491.23 ug/L	491.23 ppb	19:05:22
3	Ti 334.940†	314120.0	292716.6	502.14 ug/L	502.14 ppb	19:05:02
3	Tl 190.801†	2147.3	2051.7	490.70 ug/L	490.70 ppb	19:05:22
3	U 409.014†	10895.1	15364.3	484.10 ug/L	484.10 ppb	19:05:02
3	V 292.402†	62744.0	59856.6	496.84 ug/L	496.84 ppb	19:05:02
3	Zn 213.857†	65577.6	59806.2	490.50 ug/L	490.50 ppb	19:05:02
3	SiO2†	95292.3	87860.6	5270.9 ug/L	5270.9 ppb	19:05:38

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	817580.3	109.79	%	4.373				3.98%
Sc Radial	7721.0	111	%	2.4				2.16%
Y 371.029	629552.1	108.28	%	4.334				4.00%
Y RADIAL	7073.7	111.2	%	2.36				2.12%
Ag 328.068†	87724.1	483.14	ug/L	23.211	483.14	ppb	23.211	4.80%
QC value within limits for Ag 328.068 Recovery = 96.63%								
Al 396.153Radial†	5745.4	4827.9	ug/L	159.14	4827.9	ppb	159.14	3.30%
QC value within limits for Al 396.153Radial Recovery = 96.56%								
As 188.979†	1528.8	487.31	ug/L	22.733	487.31	ppb	22.733	4.67%
QC value within limits for As 188.979 Recovery = 97.46%								
B 249.677†	21209.5	482.29	ug/L	23.222	482.29	ppb	23.222	4.81%
QC value within limits for B 249.677 Recovery = 96.46%								
Ba 233.527†	73424.9	477.35	ug/L	23.368	477.35	ppb	23.368	4.90%
QC value within limits for Ba 233.527 Recovery = 95.47%								
Be 313.107†	1197302.6	483.20	ug/L	23.931	483.20	ppb	23.931	4.95%
QC value within limits for Be 313.107 Recovery = 96.64%								
Ca 317.933Radial†	3271.9	4822.2	ug/L	152.22	4822.2	ppb	152.22	3.16%

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   QC value within limits for Ca 317.933Radial  Recovery = 96.44%
Cd 226.502†            42901.3      482.76 ug/L        24.073      482.76 ppb        24.073   4.99%
   QC value within limits for Cd 226.502  Recovery = 96.55%
Co 228.616†            30011.0      474.76 ug/L        20.540      474.76 ppb        20.540   4.33%
   QC value within limits for Co 228.616  Recovery = 94.95%
Cr 267.716†            38102.8      478.13 ug/L        24.332      478.13 ppb        24.332   5.09%
   QC value within limits for Cr 267.716  Recovery = 95.63%
Cu 324.752†           142784.4      480.66 ug/L        24.477      480.66 ppb        24.477   5.09%
   QC value within limits for Cu 324.752  Recovery = 96.13%
Fe 238.204 Radial†      1108.4      4968.9 ug/L       156.90      4968.9 ppb        156.90   3.16%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.38%
K 766.490 Radial†      21284.7      4384.9 ug/L        63.50      4384.9 ppb         63.50   1.45%
   QC value less than the lower limit for K 766.490 Radial  Recovery = 87.70%
Mg 279.077 IEC†          193.8      4962.4 ug/L       173.69      4962.4 ppb        173.69   3.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.25%
Mn 257.610†           475110.8      479.01 ug/L        23.790      479.01 ppb        23.790   4.97%
   QC value within limits for Mn 257.610  Recovery = 95.80%
Mo 202.031†             7678.7      487.21 ug/L        20.439      487.21 ppb        20.439   4.20%
   QC value within limits for Mo 202.031  Recovery = 97.44%
Na 589.592 Radial†    150101.1      9236.0 ug/L       165.37      9236.0 ppb        165.37   1.79%
   QC value within limits for Na 589.592 Radial  Recovery = 92.36%
Ni 231.604†            19982.9      477.72 ug/L        20.561      477.72 ppb        20.561   4.30%
   QC value within limits for Ni 231.604  Recovery = 95.54%
P 214.914†              5369.3      2326.4 ug/L       113.99      2326.4 ppb        113.99   4.90%
   QC value within limits for P 214.914  Recovery = 93.06%
Pb 220.353†             4580.6      485.35 ug/L        20.130      485.35 ppb        20.130   4.15%
   QC value within limits for Pb 220.353  Recovery = 97.07%
S 181.975 Axial†         776.2      934.98 ug/L        46.344      934.98 ppb        46.344   4.96%
   QC value within limits for S 181.975 Axial  Recovery = 93.50%
Sb 206.836†             1782.9      490.26 ug/L        19.924      490.26 ppb        19.924   4.06%
   QC value within limits for Sb 206.836  Recovery = 98.05%
Se 196.026†             1067.9      500.81 ug/L        20.153      500.81 ppb        20.153   4.02%
   QC value within limits for Se 196.026  Recovery = 100.16%
Si 251.611†            86508.8      2428.2 ug/L       117.84      2428.2 ppb        117.84   4.85%
   QC value within limits for Si 251.611  Recovery = 97.13%
Sn 189.927†             3094.6      485.49 ug/L        21.517      485.49 ppb        21.517   4.43%
   QC value within limits for Sn 189.927  Recovery = 97.10%
Sr 421.552†           152694.3      474.83 ug/L         8.202      474.83 ppb         8.202   1.73%
   QC value within limits for Sr 421.552  Recovery = 94.97%
Ti 334.940†           284638.9      488.30 ug/L        23.889      488.30 ppb        23.889   4.89%
   QC value within limits for Ti 334.940  Recovery = 97.66%
Tl 190.801†             2034.2      486.42 ug/L        17.026      486.42 ppb        17.026   3.50%
   QC value within limits for Tl 190.801  Recovery = 97.28%
U 409.014†             14946.0      470.88 ug/L        18.911      470.88 ppb        18.911   4.02%
   QC value within limits for U 409.014  Recovery = 94.18%
V 292.402†             58283.9      483.82 ug/L        23.080      483.82 ppb        23.080   4.77%
   QC value within limits for V 292.402  Recovery = 96.76%
Zn 213.857†            58137.9      476.74 ug/L        24.681      476.74 ppb        24.681   5.18%
   QC value within limits for Zn 213.857  Recovery = 95.35%
SiO2†                  86765.5      5205.2 ug/L       221.64      5205.2 ppb        221.64   4.26%
   QC value within limits for SiO2  Recovery = 97.34%
QC Failed.  Continue with analysis.
```

Sequence No.: 44
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/2/2009 19:07:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7436.2	7436.2	107	%			19:09:39
1	Y RADIAL	6851.3	6851.3	107.7	%			19:09:39
1	Al 396.153Radial†	-62.1	12.6	10.566	ug/L	10.566	ppb	19:09:39
1	Ca 317.933Radial†	30.5	2.0	3.0094	ug/L	3.0094	ppb	19:09:59
1	Fe 238.204 Radial†	39.9	-1.7	-7.4756	ug/L	-7.4756	ppb	19:09:59
1	K 766.490 Radial†	2728.6	-240.6	-49.729	ug/L	-49.729	ppb	19:09:39
1	Mg 279.077 IEC†	-0.1	-4.0	-102.32	ug/L	-102.32	ppb	19:09:59
1	Na 589.592 Radial†	-428.2	-68.3	-4.2044	ug/L	-4.2044	ppb	19:09:39
1	Sr 421.552†	-9.7	53.3	0.1657	ug/L	0.1657	ppb	19:09:39
1	Sc 361.383	762763.0	762763.0	102.43	%			19:10:56
1	Y 371.029	595337.1	595337.1	102.40	%			19:10:56
1	Ag 328.068†	842.3	116.4	0.6305	ug/L	0.6305	ppb	19:10:56
1	As 188.979†	-26.8	8.2	2.5892	ug/L	2.5892	ppb	19:11:16
1	B 249.677†	-692.4	205.3	4.6955	ug/L	4.6955	ppb	19:10:56
1	Ba 233.527†	45.2	21.7	0.1409	ug/L	0.1409	ppb	19:11:16
1	Be 313.107†	-4930.2	-28.4	-0.0110	ug/L	-0.0110	ppb	19:10:56
1	Cd 226.502†	-287.5	12.5	0.1425	ug/L	0.1425	ppb	19:11:16
1	Co 228.616†	-92.5	10.2	0.1654	ug/L	0.1654	ppb	19:11:16
1	Cr 267.716†	-60.7	38.7	0.4836	ug/L	0.4836	ppb	19:10:56
1	Cu 324.752†	5811.8	-117.1	-0.3943	ug/L	-0.3943	ppb	19:10:56
1	Mn 257.610†	777.3	41.0	0.0423	ug/L	0.0423	ppb	19:10:56
1	Mo 202.031†	30.5	25.4	1.6097	ug/L	1.6097	ppb	19:11:16
1	Ni 231.604†	185.6	44.5	1.0653	ug/L	1.0653	ppb	19:11:16
1	P 214.914†	308.7	7.8	3.6417	ug/L	3.6417	ppb	19:11:16
1	Pb 220.353†	-24.3	-5.9	-0.6115	ug/L	-0.6115	ppb	19:11:16
1	S 181.975 Axial†	101.8	-36.6	-44.125	ug/L	-44.125	ppb	19:11:16
1	Sb 206.836†	51.5	-2.3	-0.5727	ug/L	-0.5727	ppb	19:11:16
1	Se 196.026†	-30.2	5.4	2.4120	ug/L	2.4120	ppb	19:11:16
1	Si 251.611†	579.0	116.5	3.2590	ug/L	3.2590	ppb	19:11:16
1	Sn 189.927†	23.8	10.3	1.6074	ug/L	1.6074	ppb	19:11:16
1	Ti 334.940†	-1440.4	120.6	0.2049	ug/L	0.2049	ppb	19:10:56
1	Tl 190.801†	-39.2	22.8	5.4289	ug/L	5.4289	ppb	19:11:16
1	U 409.014†	-5246.7	142.4	4.5016	ug/L	4.5016	ppb	19:10:56
1	V 292.402†	-1743.3	-9.1	-0.0466	ug/L	-0.0466	ppb	19:10:56
1	Zn 213.857†	1018.4	9.9	0.0796	ug/L	0.0796	ppb	19:11:16
1	SiO2†	591.4	101.8	6.0783	ug/L	6.0783	ppb	19:12:12
2	Sc Radial	7231.0	7231.0	104	%			19:10:04
2	Y RADIAL	6686.1	6686.1	105.1	%			19:10:04
2	Al 396.153Radial†	-68.7	4.7	3.9206	ug/L	3.9206	ppb	19:10:04
2	Ca 317.933Radial†	23.9	-3.5	-5.1163	ug/L	-5.1163	ppb	19:10:24
2	Fe 238.204 Radial†	37.6	-2.8	-12.597	ug/L	-12.597	ppb	19:10:24
2	K 766.490 Radial†	2672.2	-222.5	-45.987	ug/L	-45.987	ppb	19:10:04
2	Mg 279.077 IEC†	-1.1	-5.0	-127.17	ug/L	-127.17	ppb	19:10:24
2	Na 589.592 Radial†	-454.0	-104.4	-6.4258	ug/L	-6.4258	ppb	19:10:04
2	Sr 421.552†	-81.9	-16.3	-0.0507	ug/L	-0.0507	ppb	19:10:04
2	Sc 361.383	770443.0	770443.0	103.46	%			19:11:21
2	Y 371.029	602434.7	602434.7	103.62	%			19:11:21
2	Ag 328.068†	767.6	36.0	0.1888	ug/L	0.1888	ppb	19:11:21
2	As 188.979†	-31.7	3.7	1.1632	ug/L	1.1632	ppb	19:11:41
2	B 249.677†	-706.5	198.5	4.5393	ug/L	4.5393	ppb	19:11:21
2	Ba 233.527†	30.5	7.1	0.0462	ug/L	0.0462	ppb	19:11:41
2	Be 313.107†	-4891.1	57.4	0.0232	ug/L	0.0232	ppb	19:11:21
2	Cd 226.502†	-287.3	15.5	0.1768	ug/L	0.1768	ppb	19:11:41
2	Co 228.616†	-96.5	7.3	0.1180	ug/L	0.1180	ppb	19:11:41
2	Cr 267.716†	-22.1	76.6	0.9585	ug/L	0.9585	ppb	19:11:21
2	Cu 324.752†	5812.4	-173.0	-0.5828	ug/L	-0.5828	ppb	19:11:21
2	Mn 257.610†	829.7	84.0	0.0855	ug/L	0.0855	ppb	19:11:21
2	Mo 202.031†	24.8	19.6	1.2403	ug/L	1.2403	ppb	19:11:41
2	Ni 231.604†	176.6	34.1	0.8154	ug/L	0.8154	ppb	19:11:41

2	P 214.914†	301.7	-2.0	-0.7601	ug/L	-0.7601 ppb	19:11:41
2	Pb 220.353†	-13.4	4.9	0.5226	ug/L	0.5226 ppb	19:11:41
2	S 181.975 Axial†	104.6	-34.9	-42.032	ug/L	-42.032 ppb	19:11:41
2	Sb 206.836†	51.6	-2.7	-0.7254	ug/L	-0.7254 ppb	19:11:41
2	Se 196.026†	-22.4	13.2	5.9381	ug/L	5.9381 ppb	19:11:41
2	Si 251.611†	570.7	102.9	2.9002	ug/L	2.9002 ppb	19:11:41
2	Sn 189.927†	13.6	0.1	0.0161	ug/L	0.0161 ppb	19:11:41
2	Ti 334.940†	-1564.8	14.4	0.0216	ug/L	0.0216 ppb	19:11:21
2	Tl 190.801†	-42.0	20.6	4.8882	ug/L	4.8882 ppb	19:11:41
2	U 409.014†	-5259.3	181.2	5.7278	ug/L	5.7278 ppb	19:11:21
2	V 292.402†	-1739.3	11.8	0.1229	ug/L	0.1229 ppb	19:11:21
2	Zn 213.857†	1038.4	19.3	0.1608	ug/L	0.1608 ppb	19:11:41
2	SiO2†	587.3	92.1	5.5526	ug/L	5.5526 ppb	19:12:17
3	Sc Radial	7178.9	7178.9	103	%		19:10:29
3	Y RADIAL	6636.7	6636.7	104.4	%		19:10:29
3	Al 396.153Radial†	-62.3	10.4	8.7177	ug/L	8.7177 ppb	19:10:29
3	Ca 317.933Radial†	25.2	-2.0	-2.9637	ug/L	-2.9637 ppb	19:10:49
3	Fe 238.204 Radial†	39.1	-1.2	-5.1547	ug/L	-5.1547 ppb	19:10:49
3	K 766.490 Radial†	2744.2	-134.3	-27.754	ug/L	-27.754 ppb	19:10:29
3	Mg 279.077 IEC†	1.5	-2.5	-63.043	ug/L	-63.043 ppb	19:10:49
3	Na 589.592 Radial†	-525.8	-177.0	-10.891	ug/L	-10.891 ppb	19:10:29
3	Sr 421.552†	-62.5	1.9	0.0058	ug/L	0.0058 ppb	19:10:29
3	Sc 361.383	786918.7	786918.7	105.68	%		19:11:47
3	Y 371.029	613452.7	613452.7	105.51	%		19:11:47
3	Ag 328.068†	791.4	43.0	0.2256	ug/L	0.2256 ppb	19:11:47
3	As 188.979†	-37.5	-1.2	-0.3719	ug/L	-0.3719 ppb	19:12:07
3	B 249.677†	-752.6	169.1	3.8675	ug/L	3.8675 ppb	19:11:47
3	Ba 233.527†	29.7	5.7	0.0392	ug/L	0.0392 ppb	19:12:07
3	Be 313.107†	-4955.7	95.2	0.0389	ug/L	0.0389 ppb	19:11:47
3	Cd 226.502†	-281.0	27.3	0.3081	ug/L	0.3081 ppb	19:12:07
3	Co 228.616†	-95.3	10.4	0.1658	ug/L	0.1658 ppb	19:12:07
3	Cr 267.716†	-88.1	14.6	0.1798	ug/L	0.1798 ppb	19:11:47
3	Cu 324.752†	5894.7	-212.7	-0.7159	ug/L	-0.7159 ppb	19:11:47
3	Mn 257.610†	746.3	-11.7	-0.0112	ug/L	-0.0112 ppb	19:11:47
3	Mo 202.031†	21.1	15.6	0.9873	ug/L	0.9873 ppb	19:12:07
3	Ni 231.604†	165.0	19.5	0.4662	ug/L	0.4662 ppb	19:12:07
3	P 214.914†	290.5	-18.6	-8.2231	ug/L	-8.2231 ppb	19:12:07
3	Pb 220.353†	-9.4	8.9	0.9450	ug/L	0.9450 ppb	19:12:07
3	S 181.975 Axial†	102.1	-39.4	-47.479	ug/L	-47.479 ppb	19:12:07
3	Sb 206.836†	58.3	2.5	0.7272	ug/L	0.7272 ppb	19:12:07
3	Se 196.026†	-33.2	3.4	1.5348	ug/L	1.5348 ppb	19:12:07
3	Si 251.611†	550.7	72.4	2.0223	ug/L	2.0223 ppb	19:12:07
3	Sn 189.927†	21.0	6.9	1.0744	ug/L	1.0744 ppb	19:12:07
3	Ti 334.940†	-1478.1	128.1	0.2134	ug/L	0.2134 ppb	19:11:47
3	Tl 190.801†	-55.2	8.9	2.1217	ug/L	2.1217 ppb	19:12:07
3	U 409.014†	-5098.9	439.5	13.892	ug/L	13.892 ppb	19:11:47
3	V 292.402†	-1671.3	111.3	0.9516	ug/L	0.9516 ppb	19:11:47
3	Zn 213.857†	1030.3	-9.5	-0.0775	ug/L	-0.0775 ppb	19:12:07
3	SiO2†	550.0	44.9	2.6650	ug/L	2.6650 ppb	19:12:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	773374.9	103.86	%	1.657				1.60%
Sc Radial	7282.1	105	%	2.0				1.87%
Y 371.029	603741.5	103.84	%	1.570				1.51%
Y RADIAL	6724.7	105.7	%	1.77				1.67%
Ag 328.068†	65.2	0.3483	ug/L	0.24509	0.3483	ppb	0.24509	70.37%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.2	7.7348	ug/L	3.43007	7.7348	ppb	3.43007	44.35%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.6	1.1268	ug/L	1.48089	1.1268	ppb	1.48089	131.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	191.0	4.3674	ug/L	0.43991	4.3674	ppb	0.43991	10.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	11.5	0.0754	ug/L	0.05678	0.0754	ppb	0.05678	75.28%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	41.4	0.0170	ug/L	0.02548	0.0170	ppb	0.02548	149.72%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.1	-1.6902	ug/L	4.20987	-1.6902	ppb	4.20987	249.08%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                18.4      0.2091 ug/L       0.08740      0.2091 ppb        0.08740  41.79%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 9.3      0.1497 ug/L       0.02751      0.1497 ppb        0.02751  18.37%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                43.3      0.5406 ug/L       0.39246      0.5406 ppb        0.39246  72.59%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -167.6     -0.5643 ug/L       0.16160     -0.5643 ppb        0.16160  28.64%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -1.9     -8.4091 ug/L       3.80798     -8.4091 ppb        3.80798  45.28%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -199.1     -41.157 ug/L       11.7569     -41.157 ppb        11.7569  28.57%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -3.8     -97.512 ug/L       32.3344     -97.512 ppb        32.3344  33.16%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                37.8      0.0389 ug/L       0.04844      0.0389 ppb        0.04844 124.61%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                20.2      1.2791 ug/L       0.31303      1.2791 ppb        0.31303  24.47%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -116.6     -7.1739 ug/L       3.40569     -7.1739 ppb        3.40569  47.47%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                32.7      0.7823 ug/L       0.30093      0.7823 ppb        0.30093  38.47%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -4.3     -1.7805 ug/L       5.99787     -1.7805 ppb        5.99787 336.86%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 2.6      0.2854 ug/L       0.80494      0.2854 ppb        0.80494 282.07%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -36.9     -44.545 ug/L        2.7479     -44.545 ppb         2.7479   6.17%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.8     -0.1903 ug/L       0.79826     -0.1903 ppb        0.79826 419.44%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 7.3      3.2950 ug/L       2.33065      3.2950 ppb        2.33065  70.73%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                97.2      2.7272 ug/L       0.63624      2.7272 ppb        0.63624  23.33%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.7      0.8993 ug/L       0.80998      0.8993 ppb        0.80998  90.07%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                12.9      0.0403 ug/L       0.11221      0.0403 ppb        0.11221 278.64%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                87.7      0.1466 ug/L       0.10838      0.1466 ppb        0.10838  73.92%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                17.4      4.1462 ug/L       1.77407      4.1462 ppb        1.77407  42.79%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                254.4      8.0406 ug/L       5.10471      8.0406 ppb        5.10471  63.49%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 38.0      0.3426 ug/L       0.53415      0.3426 ppb        0.53415 155.90%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 6.6      0.0543 ug/L       0.12116      0.0543 ppb        0.12116 223.14%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      79.6      4.7653 ug/L       1.83784      4.7653 ppb        1.83784  38.57%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, July 07, 2009 13:05:14
Sample Description:
Method File: C:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.1331
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1916.5	1916.529	32.235	1.7
	Mg	24.0	18552.8	18552.841	229.781	1.2
	Co	58.9	35089.4	35089.445	336.458	1.0
	Rh	102.9	75018.9	75018.870	643.023	0.9
	In	114.9	101616.6	101616.583	1428.496	1.4
	Pb	208.0	43416.9	43416.887	620.190	1.4
⌈>	Ba	137.9	95511.6	95511.650	905.671	0.9
⌊	Ba++	69.0	3122.2	0.033	0.002	4.8
⌈>	Ce	139.9	121200.4	121200.393	1060.108	0.9
⌊	CeO	155.9	1629.5	0.013	0.000	1.5
	Bkgd	220.0	9.6	9.600	1.387	14.5

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-2000.00	Analog Stage Voltage
1950.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	7.8	1795.1
Co	59	17	8.5	32444.8
In	115	17	9.3	121864.9

ICPMS#3 Instrument Tuning Report

File Name: 090707.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	579	2070	0.640
Be	9.0	9.0	2070	2070	0.595
Mg	24.0	24.0	5700	2120	0.552
Mg	25.0	25.0	5931	2050	0.655
Mg	26.0	26.0	6193	2130	0.629
Co	58.9	59.0	14203	2110	0.674
Rh	102.9	102.9	24902	2170	0.664
In	114.9	114.9	27820	2180	0.661
Ce	139.9	139.9	33903	2200	0.689
Pb	206.0	206.0	49992	2270	0.679
Pb	207.0	207.0	50281	2300	0.706
Pb	208.0	208.0	50486	2320	0.639
U	238.1	238.0	57831	2340	0.691

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, July 08, 2009 03:36:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\Blank.294

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		27	
	Be	9		ug/L		18	
	B	11		ug/L		229	
	Na	23		ug/L		12673	
	Mg	24		ug/L		1667	
	Al	27		ug/L		4668	
	P	31		ug/L		2571	
	K	39		ug/L		487171	
	Ca	43		ug/L		419	
>	Sc	45		ug/L		643993	
	Ti	47		ug/L		170	
	V	51		ug/L		-7055	
	Cr	52		ug/L		-1435	
	Cr	53		ug/L		160675	
	Mn	55		ug/L		1142	
	Fe	57		ug/L		5669	
	Co	59		ug/L		139	
	Ni	60		ug/L		65	
	Cu	63		ug/L		150	
	Cu	65		ug/L		86	
	Zn	66		ug/L		421	
	Zn	67		ug/L		6176	
	Zn	68		ug/L		811	
>	Ge	74		ug/L		224473	
	As	75		ug/L		273	
	Se	77		ug/L		6453	
	Se	82		ug/L		-3	
	Kr	83		ug/L		77	
	Sr	88		ug/L		214	
	Y	89		ug/L		32	
	Zr	90		ug/L		160	
	Mo	98		ug/L		98	
	Ag	107		ug/L		53	
	Cd	111		ug/L		9	
	Cd	114		ug/L		44	
>	In	115		ug/L		158377	
	Sn	120		ug/L		137	
	Sb	121		ug/L		325	
	Sb	123		ug/L		252	
	Ba	135		ug/L		34	
	Ba	137		ug/L		55	
	Ho	165		ug/L		37	
>	Lu	175		ug/L		222519	
	Tl	205		ug/L		378	
	Pb	208		ug/L		333	
	Th	232		ug/L		226	
	U	238		ug/L		2447	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, July 08, 2009 03:42:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\Standard 1.295

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	2.891	2230	0.003
	Be	9	**10.000**	**ug/L**	3.123	1695	0.003
	B	11	**20.000**	**ug/L**	3.705	2386	0.003
	Na	23	**1000.000**	**ug/L**	6.733	1059688	1.636
	Mg	24	**1000.000**	**ug/L**	2.228	849535	1.325
	Al	27	**1000.000**	**ug/L**	3.916	1243601	1.936
	P	31	**1000.000**	**ug/L**	0.994	95074	0.145
	K	39	**1000.000**	**ug/L**	8.612	2513665	3.174
	Ca	43	**1000.000**	**ug/L**	3.819	4888	0.007
>	Sc	45		**ug/L**		639764	639763.794
	Ti	47	**10.000**	**ug/L**	0.504	2580	0.004
	V	51	**10.000**	**ug/L**	9.324	16208	0.036
	Cr	52	**10.000**	**ug/L**	3.133	23930	0.040
	Cr	53		**ug/L**		156452	-0.005
	Mn	55	**10.000**	**ug/L**	2.702	41248	0.063
	Fe	57	**1000.000**	**ug/L**	2.810	85678	0.125
	Co	59	**10.000**	**ug/L**	1.721	30232	0.047
	Ni	60	**10.000**	**ug/L**	1.449	6555	0.010
	Cu	63		**ug/L**		15374	0.024
	Cu	65	**10.000**	**ug/L**	0.701	7185	0.011
	Zn	66	**10.000**	**ug/L**	2.541	4967	0.020
	Zn	67		**ug/L**		6668	0.002
	Zn	68		**ug/L**		3991	0.014
>	Ge	74		**ug/L**		227822	227821.975
	As	75	**10.000**	**ug/L**	1.073	6304	0.026
	Se	77		**ug/L**		6774	0.001
	Se	82	**10.000**	**ug/L**	6.477	524	0.002
	Kr	83		**ug/L**		72	-0.000
	Sr	88	**10.000**	**ug/L**	1.519	66611	0.414
	Y	89		**ug/L**		37	0.000
	Zr	90	**10.000**	**ug/L**	2.787	37195	0.231
	Mo	98	**10.000**	**ug/L**	4.042	17312	0.107
	Ag	107	**10.000**	**ug/L**	1.268	29202	0.182
	Cd	111	**10.000**	**ug/L**	1.474	6718	0.042
	Cd	114		**ug/L**		16273	0.101
>	In	115		**ug/L**		160288	160287.951
	Sn	120	**10.000**	**ug/L**	3.479	30059	0.187
	Sb	121	**10.000**	**ug/L**	2.421	28831	0.178
	Sb	123		**ug/L**		22904	0.141
	Ba	135		**ug/L**		7956	0.035
	Ba	137	**10.000**	**ug/L**	0.762	14091	0.062
	Ho	165		**ug/L**		37	-0.000
>	Lu	175		**ug/L**		225065	225064.815
	Tl	205	**10.000**	**ug/L**	1.946	73514	0.325
	Pb	208	**10.000**	**ug/L**	1.136	79956	0.354
	Th	232	**10.000**	**ug/L**	1.456	84254	0.373
	U	238	**10.000**	**ug/L**	1.053	82466	0.355

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, July 08, 2009 03:48:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\Standard 2.296

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.002**	**ug/L**	4.056	21279	0.035
	Be	9	**99.983**	**ug/L**	4.606	15892	0.026
	B	11	**200.080**	**ug/L**	5.682	21859	0.035
	Na	23	**10000.931**	**ug/L**	5.488	10183998	16.518
	Mg	24	**10001.271**	**ug/L**	6.169	8267852	13.427
	Al	27	**10008.588**	**ug/L**	4.319	13057336	21.201
	P	31	**9999.556**	**ug/L**	3.219	889025	1.440
	K	39	**10004.771**	**ug/L**	6.172	20998366	33.346
	Ca	43	**10002.889**	**ug/L**	1.773	44742	0.072
>	Sc	45		**ug/L**		616123	616122.863
	Ti	47	**99.983**	**ug/L**	2.770	22984	0.037
	V	51	**100.032**	**ug/L**	3.469	224030	0.375
	Cr	52	**100.003**	**ug/L**	1.804	243584	0.398
	Cr	53		**ug/L**		172923	0.031
	Mn	55	**100.008**	**ug/L**	3.227	390261	0.632
	Fe	57	**9998.983**	**ug/L**	3.597	768073	1.239
	Co	59	**100.003**	**ug/L**	2.608	290765	0.472
	Ni	60	**99.982**	**ug/L**	0.641	61427	0.100
	Cu	63		**ug/L**		146658	0.238
	Cu	65	**100.003**	**ug/L**	2.850	68608	0.111
	Zn	66	**100.020**	**ug/L**	3.725	46098	0.203
	Zn	67		**ug/L**		13205	0.031
	Zn	68		**ug/L**		32728	0.142
>	Ge	74		**ug/L**		224651	224651.154
	As	75	**100.015**	**ug/L**	3.446	60609	0.269
	Se	77		**ug/L**		9256	0.012
	Se	82	**99.892**	**ug/L**	3.072	4683	0.021
	Kr	83		**ug/L**		89	0.000
	Sr	88	**100.000**	**ug/L**	0.759	638368	4.141
	Y	89		**ug/L**		84	0.000
	Zr	90	**100.017**	**ug/L**	2.338	362449	2.351
	Mo	98	**100.013**	**ug/L**	1.320	167824	1.089
	Ag	107	**99.994**	**ug/L**	3.505	278622	1.808
	Cd	111	**100.003**	**ug/L**	1.314	64730	0.420
	Cd	114		**ug/L**		157157	1.020
>	In	115		**ug/L**		154110	154109.586
	Sn	120	**99.997**	**ug/L**	1.026	286898	1.861
	Sb	121	**100.031**	**ug/L**	2.106	283134	1.836
	Sb	123		**ug/L**		221791	1.438
	Ba	135		**ug/L**		78426	0.362
	Ba	137	**100.004**	**ug/L**	2.222	135595	0.626
	Ho	165		**ug/L**		36	-0.000
>	Lu	175		**ug/L**		216580	216580.081
	Tl	205	**99.994**	**ug/L**	5.043	698824	3.229
	Pb	208	**99.994**	**ug/L**	2.742	761292	3.516
	Th	232	**99.980**	**ug/L**	3.961	792392	3.661
	U	238	**99.999**	**ug/L**	3.583	770666	3.550

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, July 08, 2009 03:54:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 1.297

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.072**	**ug/L**	3.822	11119	0.018
	Be	9	**50.401**	**ug/L**	0.898	8198	0.013
	B	11	**99.109**	**ug/L**	1.533	11182	0.017
	Na	23	**5082.087**	**ug/L**	8.084	5292803	8.394
	Mg	24	**5013.075**	**ug/L**	6.337	4237948	6.730
	Al	27	**4464.350**	**ug/L**	7.858	5952032	9.457
	P	31	**4924.385**	**ug/L**	2.297	448655	0.709
	K	39	**4940.102**	**ug/L**	9.704	10829928	16.465
	Ca	43	**4892.170**	**ug/L**	2.864	22564	0.035
>	Sc	45		**ug/L**		629390	629390.020
	Ti	47	**49.055**	**ug/L**	1.265	11610	0.018
	V	51	**49.254**	**ug/L**	0.942	109264	0.185
	Cr	52	**50.448**	**ug/L**	2.662	124838	0.201
	Cr	53		**ug/L**		162126	0.008
	Mn	55	**47.446**	**ug/L**	1.303	189800	0.300
	Fe	57	**4900.092**	**ug/L**	1.655	387517	0.607
	Co	59	**49.819**	**ug/L**	2.106	148072	0.235
	Ni	60	**51.706**	**ug/L**	2.718	32476	0.052
	Cu	63		**ug/L**		72105	0.114
	Cu	65	**47.813**	**ug/L**	1.728	33565	0.053
	Zn	66	**51.644**	**ug/L**	0.274	23711	0.105
	Zn	67		**ug/L**		9587	0.016
	Zn	68		**ug/L**		16974	0.073
>	Ge	74		**ug/L**		221731	221730.524
	As	75	**48.220**	**ug/L**	1.130	29001	0.130
	Se	77		**ug/L**		7767	0.006
	Se	82	**51.216**	**ug/L**	5.485	2368	0.011
	Kr	83		**ug/L**		87	0.000
	Sr	88	**51.003**	**ug/L**	4.665	325547	2.112
	Y	89		**ug/L**		43	0.000
	Zr	90	**49.929**	**ug/L**	5.514	180929	1.174
	Mo	98	**48.907**	**ug/L**	5.224	82074	0.532
	Ag	107	**50.685**	**ug/L**	3.299	141278	0.917
	Cd	111	**53.215**	**ug/L**	5.527	34428	0.224
	Cd	114		**ug/L**		83445	0.541
>	In	115		**ug/L**		154222	154222.487
	Sn	120	**50.029**	**ug/L**	5.932	143509	0.931
	Sb	121	**49.431**	**ug/L**	4.917	140025	0.907
	Sb	123		**ug/L**		108880	0.705
	Ba	135		**ug/L**		39318	0.183
	Ba	137	**50.482**	**ug/L**	3.873	67954	0.316
	Ho	165		**ug/L**		54	0.000
>	Lu	175		**ug/L**		215042	215041.672
	Tl	205	**50.113**	**ug/L**	4.472	347910	1.618
	Pb	208	**51.442**	**ug/L**	5.226	388736	1.809
	Th	232	**51.869**	**ug/L**	4.042	408180	1.899
	U	238	**53.327**	**ug/L**	4.642	408989	1.893

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	102.143				
	Be	9	100.803				
	B	11	99.109				
	Na	23	101.642				
	Mg	24	100.261				
	Al	27	88.403				
	P	31	98.488				
	K	39	98.802				
	Ca	43	97.843				
>	Sc	45		97.7			
	Ti	47	98.110				
	V	51	98.508				
	Cr	52	100.895				
	Cr	53					
	Mn	55	94.892				
	Fe	57	98.002				
	Co	59	99.638				
	Ni	60	103.411				
	Cu	63					
	Cu	65	95.626				
	Zn	66	103.289				
	Zn	67					
	Zn	68					
>	Ge	74		98.8			
	As	75	96.441				
	Se	77					
	Se	82	102.433				
	Kr	83					
	Sr	88	102.006				
	Y	89					
	Zr	90	99.858				
	Mo	98	97.814				
	Ag	107	101.369				
	Cd	111	106.431				
	Cd	114					
>	In	115		97.4			
	Sn	120	100.059				
	Sb	121	98.861				
	Sb	123					
	Ba	135					
	Ba	137	100.963				
	Ho	165					
>	Lu	175		96.6			
	Tl	205	100.226				
	Pb	208	102.885				
	Th	232	103.738				
	U	238	106.654				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 1	Al	27ICV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, July 08, 2009 03:59:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 2.298

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.068**	ug/L	67.956	41	0.000
	Be	9	**-0.016**	ug/L	332.010	15	-0.000
	B	11	**1.864**	ug/L	14.847	432	0.000
	Na	23	**0.540**	ug/L	490.502	13006	0.001
	Mg	24	**-0.388**	ug/L	450.576	1333	-0.001
	Al	27	**-0.690**	ug/L	345.048	3667	-0.001
	P	31	**0.704**	ug/L	24.639	2592	0.000
	K	39	**11.347**	ug/L	142.961	503432	0.038
	Ca	43	**-2.852**	ug/L	361.454	399	-0.000
>	Sc	45		ug/L		633121	633121.391
	Ti	47	**0.031**	ug/L	223.696	174	0.000
	V	51	**0.442**	ug/L	528.030	-5941	0.002
	Cr	52	**0.136**	ug/L	62.074	-1070	0.001
	Cr	53		ug/L		150923	-0.011
	Mn	55	**-0.011**	ug/L	51.680	1080	-0.000
	Fe	57	**1.626**	ug/L	81.378	5699	0.000
	Co	59	**0.001**	ug/L	688.826	138	0.000
	Ni	60	**-0.001**	ug/L	2982.843	63	-0.000
	Cu	63		ug/L		141	-0.000
	Cu	65	**0.008**	ug/L	103.579	90	0.000
	Zn	66	**0.001**	ug/L	7315.631	414	0.000
	Zn	67		ug/L		5984	-0.000
	Zn	68		ug/L		783	-0.000
>	Ge	74		ug/L		221131	221131.361
	As	75	**-0.121**	ug/L	134.260	200	-0.000
	Se	77		ug/L		6231	-0.001
	Se	82	**-0.199**	ug/L	98.056	-12	-0.000
	Kr	83		ug/L		91	0.000
	Sr	88	**-0.001**	ug/L	300.539	206	-0.000
	Y	89		ug/L		31	-0.000
	Zr	90	**0.040**	ug/L	6.230	307	0.001
	Mo	98	**0.025**	ug/L	34.553	141	0.000
	Ag	107	**0.001**	ug/L	140.261	57	0.000
	Cd	111	**0.006**	ug/L	156.377	13	0.000
	Cd	114		ug/L		47	0.000
>	In	115		ug/L		157706	157706.393
	Sn	120	**0.020**	ug/L	5.089	196	0.000
	Sb	121	**0.384**	ug/L	12.304	1439	0.007
	Sb	123		ug/L		1148	0.006
	Ba	135		ug/L		35	0.000
	Ba	137	**0.002**	ug/L	335.669	57	0.000
	Ho	165		ug/L		32	-0.000
>	Lu	175		ug/L		223228	223227.949
	Tl	205	**0.115**	ug/L	17.662	1209	0.004
	Pb	208	**0.008**	ug/L	51.189	394	0.000
	Th	232	**0.039**	ug/L	15.128	543	0.001
	U	238	**0.003**	ug/L	301.604	2476	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.3		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			98.5		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			99.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			100.3		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, July 08, 2009 04:05:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 3.299

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.274**	**ug/L**	4.230	2232	0.004
	Be	9	**0.480**	**ug/L**	8.783	94	0.000
	B	11	**15.412**	**ug/L**	5.079	1905	0.003
	Na	23	**249.306**	**ug/L**	12.617	269219	0.412
	Mg	24	**15.526**	**ug/L**	39.036	14675	0.021
	Al	27	**28.026**	**ug/L**	7.657	41393	0.059
	P	31	**50.944**	**ug/L**	8.979	7040	0.007
	K	39	**314.364**	**ug/L**	20.685	1120147	1.048
	Ca	43	**200.702**	**ug/L**	7.736	1303	0.001
>	Sc	45		**ug/L**		622349	622349.085
	Ti	47	**8.822**	**ug/L**	3.869	2197	0.003
	V	51	**9.359**	**ug/L**	15.479	14959	0.035
	Cr	52	**10.071**	**ug/L**	2.416	23530	0.040
	Cr	53		**ug/L**		155845	0.001
	Mn	55	**5.148**	**ug/L**	5.281	21322	0.033
	Fe	57	**102.666**	**ug/L**	6.506	13381	0.013
	Co	59	**1.011**	**ug/L**	7.595	3099	0.005
	Ni	60	**2.183**	**ug/L**	2.181	1415	0.002
	Cu	63		**ug/L**		1723	0.003
	Cu	65	**1.080**	**ug/L**	6.044	830	0.001
	Zn	66	**10.328**	**ug/L**	2.921	5128	0.021
	Zn	67		**ug/L**		6689	0.002
	Zn	68		**ug/L**		3955	0.014
>	Ge	74		**ug/L**		224149	224148.860
	As	75	**5.423**	**ug/L**	5.688	3537	0.015
	Se	77		**ug/L**		6426	-0.000
	Se	82	**5.414**	**ug/L**	8.006	250	0.001
	Kr	83		**ug/L**		81	0.000
	Sr	88	**10.097**	**ug/L**	0.603	66220	0.418
	Y	89		**ug/L**		31	-0.000
	Zr	90	**1.948**	**ug/L**	1.707	7390	0.046
	Mo	98	**0.481**	**ug/L**	6.429	925	0.005
	Ag	107	**1.007**	**ug/L**	1.426	2927	0.018
	Cd	111	**0.960**	**ug/L**	6.281	645	0.004
	Cd	114		**ug/L**		1625	0.010
>	In	115		**ug/L**		157870	157869.520
	Sn	120	**4.987**	**ug/L**	1.401	14785	0.093
	Sb	121	**2.956**	**ug/L**	0.830	8889	0.054
	Sb	123		**ug/L**		6920	0.042
	Ba	135		**ug/L**		1592	0.007
	Ba	137	**1.938**	**ug/L**	2.522	2747	0.012
	Ho	165		**ug/L**		36	-0.000
>	Lu	175		**ug/L**		221889	221889.286
	Tl	205	**0.994**	**ug/L**	1.246	7498	0.032
	Pb	208	**2.014**	**ug/L**	0.389	16043	0.071
	Th	232	**1.013**	**ug/L**	1.342	8458	0.037
	U	238	**-0.077**	**ug/L**	9.958	1834	-0.003

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	102.740				
	Be	9	96.057				
	B	11	102.746				
	Na	23	99.723				
	Mg	24	103.506				
	Al	27	93.421				
	P	31	101.888				
	K	39	104.788				
	Ca	43	100.351				
>	Sc	45			96.6		
	Ti	47	88.224				
	V	51	93.590				
	Cr	52	100.708				
	Cr	53					
	Mn	55	102.954				
	Fe	57	102.666				
	Co	59	101.121				
	Ni	60	109.147				
	Cu	63					
	Cu	65	108.013				
	Zn	66	103.282				
	Zn	67					
	Zn	68					
>	Ge	74			99.9		
	As	75	108.451				
	Se	77					
	Se	82	108.273				
	Kr	83					
	Sr	88	100.970				
	Y	89					
	Zr	90	97.408				
	Mo	98	96.226				
	Ag	107	100.698				
	Cd	111	95.980				
	Cd	114					
>	In	115			99.7		
	Sn	120	99.731				
	Sb	121	98.543				
	Sb	123					
	Ba	135					
	Ba	137	96.902				
	Ho	165					
>	Lu	175			99.7		
	Tl	205	99.382				
	Pb	208	100.682				
	Th	232	101.328				
	U	238	-38.490				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 3	U	238CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, July 08, 2009 04:11:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 4.300

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.090**	ug/L	45.946	42	0.000
	Be	9	**0.049**	ug/L	58.622	23	0.000
	B	11	**1.244**	ug/L	13.721	330	0.000
	Na	23	**100068.772**	ug/L	6.439	95037430	165.276
	Mg	24	**93714.693**	ug/L	5.448	72327652	125.811
	Al	27	**87352.463**	ug/L	8.815	106278821	185.033
	P	31	**91840.498**	ug/L	1.926	7600524	13.223
	K	39	**98092.378**	ug/L	3.510	188307925	326.941
	Ca	43	**97228.255**	ug/L	0.256	402481	0.700
>	Sc	45		ug/L		574665	574664.616
	Ti	47	**1810.771**	ug/L	1.125	385814	0.671
	V	51	**-1.956**	ug/L	62.186	-10490	-0.007
	Cr	52	**2.420**	ug/L	7.504	4249	0.010
	Cr	53		ug/L		133630	-0.017
	Mn	55	**5.946**	ug/L	1.414	22608	0.038
	Fe	57	**91760.352**	ug/L	2.362	6535742	11.367
	Co	59	**0.223**	ug/L	5.931	729	0.001
	Ni	60	**2.539**	ug/L	1.272	1511	0.003
	Cu	63		ug/L		2813	0.005
	Cu	65	**2.268**	ug/L	0.794	1527	0.003
	Zn	66	**2.583**	ug/L	2.742	1470	0.005
	Zn	67		ug/L		5707	0.000
	Zn	68		ug/L		862	0.001
>	Ge	74		ug/L		206134	206133.973
	As	75	**0.057**	ug/L	259.785	283	0.000
	Se	77		ug/L		6234	0.001
	Se	82	**-0.402**	ug/L	73.196	-20	-0.000
	Kr	83		ug/L		123	0.000
	Sr	88	**1.145**	ug/L	0.800	7014	0.047
	Y	89		ug/L		170	0.001
	Zr	90	**0.554**	ug/L	40.604	2021	0.013
	Mo	98	**1827.556**	ug/L	1.014	2861199	19.891
	Ag	107	**0.042**	ug/L	11.067	157	0.001
	Cd	111	**0.279**	ug/L	56.209	176	0.001
	Cd	114		ug/L		3178	0.022
>	In	115		ug/L		143852	143851.866
	Sn	120	**0.190**	ug/L	1.940	632	0.004
	Sb	121	**0.150**	ug/L	14.319	692	0.003
	Sb	123		ug/L		566	0.002
	Ba	135		ug/L		498	0.002
	Ba	137	**0.645**	ug/L	2.105	892	0.004
	Ho	165		ug/L		467	0.002
>	Lu	175		ug/L		208015	208014.624
	Tl	205	**0.027**	ug/L	14.315	535	0.001
	Pb	208	**0.177**	ug/L	2.441	1608	0.006
	Th	232	**0.039**	ug/L	38.225	509	0.001
	U	238	**-0.190**	ug/L	1.319	882	-0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23	100.069				
	Mg	24	93.715				
	Al	27	87.352				
	P	31	91.840				
	K	39	98.092				
	Ca	43	97.228				
>	Sc	45			89.2		
	Ti	47	90.539				
	V	51					
	Cr	52	65.393				
	Cr	53					
	Mn	55	102.514				
	Fe	57	91.760				
	Co	59	89.148				
	Ni	60	94.023				
	Cu	63					
	Cu	65	78.212				
	Zn	66	71.751				
	Zn	67					
	Zn	68					
>	Ge	74			91.8		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	95.401				
	Y	89					
	Zr	90					
	Mo	98	91.378				
	Ag	107					
	Cd	111	69.741				
	Cd	114					
>	In	115			90.8		
	Sn	120					
	Sb	121	150.053				
	Sb	123					
	Ba	135					
	Ba	137	96.321				
	Ho	165					
>	Lu	175			93.5		
	Tl	205					
	Pb	208	88.603				
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, July 08, 2009 04:16:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 5.301

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**20.988**	**ug/L**	5.692	4112	0.007
	Be	9	**21.359**	**ug/L**	4.864	3124	0.006
	B	11	**20.728**	**ug/L**	6.184	2256	0.004
	Na	23	**103932.842**	**ug/L**	2.324	96941352	171.658
	Mg	24	**96126.622**	**ug/L**	6.762	72820795	129.049
	Al	27	**89268.936**	**ug/L**	3.751	106780925	189.093
	P	31	**92147.196**	**ug/L**	2.988	7491863	13.267
	K	39	**97757.540**	**ug/L**	8.072	184243726	325.825
	Ca	43	**96653.873**	**ug/L**	2.884	393049	0.696
>	Sc	45		**ug/L**		564742	564741.627
	Ti	47	**1825.631**	**ug/L**	2.686	382150	0.677
	V	51	**18.616**	**ug/L**	13.568	33142	0.070
	Cr	52	**22.247**	**ug/L**	4.819	48678	0.088
	Cr	53		**ug/L**		136247	-0.008
	Mn	55	**25.874**	**ug/L**	3.892	93284	0.163
	Fe	57	**91252.636**	**ug/L**	4.038	6385001	11.304
	Co	59	**20.298**	**ug/L**	3.616	54189	0.096
	Ni	60	**21.353**	**ug/L**	0.845	12071	0.021
	Cu	63		**ug/L**		28591	0.050
	Cu	65	**21.585**	**ug/L**	4.008	13632	0.024
	Zn	66	**22.494**	**ug/L**	3.459	9563	0.046
	Zn	67		**ug/L**		6946	0.007
	Zn	68		**ug/L**		6638	0.029
>	Ge	74		**ug/L**		200887	200887.242
	As	75	**21.099**	**ug/L**	5.696	11623	0.057
	Se	77		**ug/L**		6747	0.005
	Se	82	**19.504**	**ug/L**	2.075	816	0.004
	Kr	83		**ug/L**		134	0.000
	Sr	88	**22.504**	**ug/L**	6.757	127609	0.932
	Y	89		**ug/L**		172	0.001
	Zr	90	**21.602**	**ug/L**	4.139	69640	0.508
	Mo	98	**1893.682**	**ug/L**	6.532	2818381	20.610
	Ag	107	**20.707**	**ug/L**	4.541	51280	0.374
	Cd	111	**21.234**	**ug/L**	5.829	12206	0.089
	Cd	114		**ug/L**		32466	0.237
>	In	115		**ug/L**		137038	137037.865
	Sn	120	**21.608**	**ug/L**	5.044	55133	0.402
	Sb	121	**22.596**	**ug/L**	6.015	56992	0.415
	Sb	123		**ug/L**		44829	0.326
	Ba	135		**ug/L**		15004	0.074
	Ba	137	**20.937**	**ug/L**	6.475	26640	0.131
	Ho	165		**ug/L**		477	0.002
>	Lu	175		**ug/L**		203353	203353.183
	Tl	205	**19.390**	**ug/L**	5.589	127386	0.626
	Pb	208	**20.742**	**ug/L**	6.327	148251	0.729
	Th	232	**21.782**	**ug/L**	7.282	161925	0.798
	U	238	**21.816**	**ug/L**	6.952	159309	0.775

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	104.942				
	Be	9	106.796				
	B	11	103.639				
	Na	23	103.933				
	Mg	24	96.127				
	Al	27	89.269				
	P	31	92.147				
	K	39	97.758				
	Ca	43	96.654				
>	Sc	45		87.7			
	Ti	47	91.282				
	V	51	93.079				
	Cr	52	93.868				
	Cr	53					
	Mn	55	100.285				
	Fe	57	91.253				
	Co	59	100.237				
	Ni	60	94.065				
	Cu	63					
	Cu	65	94.257				
	Zn	66	95.312				
	Zn	67					
	Zn	68					
>	Ge	74		89.5			
	As	75	105.497				
	Se	77					
	Se	82	97.521				
	Kr	83					
	Sr	88	106.150				
	Y	89					
	Zr	90	108.010				
	Mo	98	94.684				
	Ag	107	103.533				
	Cd	111	104.089				
	Cd	114					
>	In	115		86.5			
	Sn	120	108.040				
	Sb	121	112.417				
	Sb	123					
	Ba	135					
	Ba	137	101.292				
	Ho	165					
>	Lu	175		91.4			
	Tl	205	96.951				
	Pb	208	102.683				
	Th	232	108.908				
	U	238	109.082				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 08, 2009 04:22:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 6.302

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.971**	ug/L	5.383	11528	0.019
	Be	9	**51.190**	ug/L	3.795	8172	0.013
	B	11	**96.656**	ug/L	5.740	10707	0.017
	Na	23	**5098.518**	ug/L	8.201	5228348	8.421
	Mg	24	**4917.583**	ug/L	6.824	4078704	6.602
	Al	27	**4303.269**	ug/L	11.418	5625141	9.115
	P	31	**4877.206**	ug/L	2.964	436313	0.702
	K	39	**5043.826**	ug/L	6.583	10861680	16.811
	Ca	43	**4856.914**	ug/L	4.093	21994	0.035
>	Sc	45		ug/L		618249	618249.298
	Ti	47	**49.140**	ug/L	1.935	11419	0.018
	V	51	**49.194**	ug/L	4.881	107080	0.184
	Cr	52	**50.646**	ug/L	3.537	123046	0.201
	Cr	53		ug/L		157361	0.005
	Mn	55	**47.854**	ug/L	3.229	187923	0.302
	Fe	57	**5008.774**	ug/L	3.534	388716	0.620
	Co	59	**51.449**	ug/L	5.098	150059	0.243
	Ni	60	**52.326**	ug/L	3.905	32263	0.052
	Cu	63		ug/L		71857	0.116
	Cu	65	**49.547**	ug/L	3.758	34138	0.055
	Zn	66	**51.405**	ug/L	1.442	23908	0.105
	Zn	67		ug/L		9336	0.014
	Zn	68		ug/L		17081	0.072
>	Ge	74		ug/L		224599	224598.752
	As	75	**48.689**	ug/L	1.489	29658	0.131
	Se	77		ug/L		7540	0.005
	Se	82	**49.696**	ug/L	1.944	2329	0.010
	Kr	83		ug/L		87	0.000
	Sr	88	**50.706**	ug/L	0.404	325558	2.100
	Y	89		ug/L		47	0.000
	Zr	90	**49.360**	ug/L	1.093	179954	1.160
	Mo	98	**49.413**	ug/L	1.037	83426	0.538
	Ag	107	**50.086**	ug/L	1.879	140372	0.906
	Cd	111	**53.190**	ug/L	1.113	34622	0.223
	Cd	114		ug/L		82570	0.533
>	In	115		ug/L		154942	154942.065
	Sn	120	**49.928**	ug/L	0.633	144103	0.929
	Sb	121	**48.938**	ug/L	1.687	139451	0.898
	Sb	123		ug/L		108209	0.697
	Ba	135		ug/L		38627	0.177
	Ba	137	**50.115**	ug/L	1.401	68397	0.314
	Ho	165		ug/L		52	0.000
>	Lu	175		ug/L		217822	217821.842
	Tl	205	**49.396**	ug/L	2.209	347726	1.595
	Pb	208	**50.670**	ug/L	0.985	388372	1.782
	Th	232	**51.023**	ug/L	1.391	407106	1.868
	U	238	**52.692**	ug/L	2.331	409782	1.871

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	107.942				
	Be	9	102.381				
	B	11	96.656				
	Na	23	101.970				
	Mg	24	98.352				
	Al	27	85.213				
	P	31	97.544				
	K	39	100.877				
	Ca	43	97.138				
>	Sc	45		96.0			
	Ti	47	98.280				
	V	51	98.389				
	Cr	52	101.291				
	Cr	53					
	Mn	55	95.709				
	Fe	57	100.175				
	Co	59	102.898				
	Ni	60	104.652				
	Cu	63					
	Cu	65	99.095				
	Zn	66	102.809				
	Zn	67					
	Zn	68					
>	Ge	74		100.1			
	As	75	97.378				
	Se	77					
	Se	82	99.393				
	Kr	83					
	Sr	88	101.412				
	Y	89					
	Zr	90	98.720				
	Mo	98	98.826				
	Ag	107	100.171				
	Cd	111	106.380				
	Cd	114					
>	In	115		97.8			
	Sn	120	99.857				
	Sb	121	97.876				
	Sb	123					
	Ba	135					
	Ba	137	100.230				
	Ho	165					
>	Lu	175		97.9			
	Tl	205	98.792				
	Pb	208	101.340				
	Th	232	102.045				
	U	238	105.383				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Al	27CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 08, 2009 04:28:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 7.303

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	0.037	ug/L	35.502	35	0.000
	Be	9	-0.035	ug/L	87.543	12	-0.000
	B	11	1.143	ug/L	40.335	358	0.000
	Na	23	3.156	ug/L	203.225	16010	0.005
	Mg	24	3.455	ug/L	96.094	4668	0.005
	Al	27	-0.009	ug/L	9492.470	4667	-0.000
	P	31	-2.142	ug/L	61.724	2378	-0.000
	K	39	-7.361	ug/L	266.139	472030	-0.025
	Ca	43	-5.550	ug/L	85.046	395	-0.000
>	Sc	45		ug/L		645583	645582.579
	Ti	47	0.084	ug/L	115.919	190	0.000
	V	51	-1.161	ug/L	54.444	-9865	-0.004
	Cr	52	0.098	ug/L	92.799	-1186	0.000
	Cr	53		ug/L		146152	-0.023
	Mn	55	-0.023	ug/L	28.096	1052	-0.000
	Fe	57	-1.974	ug/L	129.004	5523	-0.000
	Co	59	-0.000	ug/L	1097.994	138	-0.000
	Ni	60	0.001	ug/L	641.385	66	0.000
	Cu	63		ug/L		135	-0.000
	Cu	65	0.009	ug/L	227.989	92	0.000
	Zn	66	0.025	ug/L	142.758	444	0.000
	Zn	67		ug/L		5624	-0.003
	Zn	68		ug/L		719	-0.000
>	Ge	74		ug/L		230451	230451.060
	As	75	0.427	ug/L	189.395	544	0.001
	Se	77		ug/L		6090	-0.002
	Se	82	-0.010	ug/L	4854.252	-4	-0.000
	Kr	83		ug/L		87	0.000
	Sr	88	-0.000	ug/L	1029.865	215	-0.000
	Y	89		ug/L		32	-0.000
	Zr	90	0.040	ug/L	27.285	311	0.001
	Mo	98	0.071	ug/L	14.991	221	0.001
	Ag	107	0.002	ug/L	125.215	58	0.000
	Cd	111	0.012	ug/L	77.301	17	0.000
	Cd	114		ug/L		44	-0.000
>	In	115		ug/L		159228	159228.104
	Sn	120	0.013	ug/L	19.941	176	0.000
	Sb	121	0.269	ug/L	24.600	1116	0.005
	Sb	123		ug/L		832	0.004
	Ba	135		ug/L		35	0.000
	Ba	137	0.002	ug/L	322.768	59	0.000
	Ho	165		ug/L		40	0.000
>	Lu	175		ug/L		224471	224470.931
	Tl	205	0.111	ug/L	28.278	1190	0.004
	Pb	208	0.009	ug/L	48.254	403	0.000
	Th	232	0.032	ug/L	14.753	495	0.001
	U	238	0.003	ug/L	234.654	2493	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Wednesday, July 08, 2009 04:34:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 10.304

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**982.145**	ug/L	3.470	200948	0.339
	Be	9	**990.166**	ug/L	2.180	151400	0.255
	B	11	**0.734**	ug/L	24.865	287	0.000
	Na	23	**50111.485**	ug/L	9.693	49025986	82.765
	Mg	24	**46496.692**	ug/L	6.595	36985731	62.421
	Al	27	**46274.007**	ug/L	6.710	58076773	98.019
	P	31	**23242.455**	ug/L	5.205	1985375	3.346
	K	39	**50984.619**	ug/L	8.687	101096971	169.931
	Ca	43	**47691.866**	ug/L	1.836	203865	0.343
>	Sc	45		ug/L		592979	592978.972
	Ti	47	**29.332**	ug/L	2.749	6605	0.011
	V	51	**872.610**	ug/L	4.942	1931159	3.269
	Cr	52	**922.317**	ug/L	4.184	2172471	3.668
	Cr	53		ug/L		408599	0.440
	Mn	55	**898.018**	ug/L	3.922	3364563	5.675
	Fe	57	**45559.983**	ug/L	4.228	3350243	5.644
	Co	59	**868.772**	ug/L	4.957	2429606	4.100
	Ni	60	**929.621**	ug/L	3.347	549014	0.926
	Cu	63		ug/L		1274143	2.149
	Cu	65	**932.682**	ug/L	2.513	615320	1.038
	Zn	66	**2349.870**	ug/L	2.139	1020304	4.780
	Zn	67		ug/L		175525	0.795
	Zn	68		ug/L		724932	3.394
>	Ge	74		ug/L		213409	213409.215
	As	75	**951.987**	ug/L	2.453	546005	2.558
	Se	77		ug/L		21419	0.072
	Se	82	**494.564**	ug/L	1.636	22049	0.103
	Kr	83		ug/L		101	0.000
	Sr	88	**922.445**	ug/L	0.679	5496884	38.200
	Y	89		ug/L		441	0.003
	Zr	90	**484.331**	ug/L	2.704	1638187	11.387
	Mo	98	**940.046**	ug/L	3.123	1471848	10.231
	Ag	107	**251.400**	ug/L	2.501	654041	4.546
	Cd	111	**984.398**	ug/L	2.445	594787	4.134
	Cd	114		ug/L		1406981	9.780
>	In	115		ug/L		143898	143898.325
	Sn	120	**892.794**	ug/L	0.949	2390770	16.615
	Sb	121	**249.680**	ug/L	2.609	659395	4.582
	Sb	123		ug/L		514069	3.572
	Ba	135		ug/L		1637386	7.854
	Ba	137	**2129.792**	ug/L	1.208	2780341	13.335
	Ho	165		ug/L		196	0.001
>	Lu	175		ug/L		208506	208505.774
	Tl	205	**399.381**	ug/L	0.937	2689430	12.896
	Pb	208	**4199.196**	ug/L	0.419	30785846	147.653
	Th	232	**2086.473**	ug/L	0.323	15929831	76.398
	U	238	**4462.427**	ug/L	0.579	33037220	158.433

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	98.215				
	Be	9	99.017				
	B	11					
	Na	23	100.223				
	Mg	24	92.993				
	Al	27	92.548				
	P	31	92.970				
	K	39	101.969				
	Ca	43	95.384				
>	Sc	45		92.1			
	Ti	47					
	V	51	87.261				
	Cr	52	92.232				
	Cr	53					
	Mn	55	89.802				
	Fe	57	91.120				
	Co	59	86.877				
	Ni	60	92.962				
	Cu	63					
	Cu	65	93.268				
	Zn	66	93.995				
	Zn	67					
	Zn	68					
>	Ge	74		95.1			
	As	75	95.199				
	Se	77					
	Se	82	98.913				
	Kr	83					
	Sr	88	92.245				
	Y	89					
	Zr	90	96.866				
	Mo	98	94.005				
	Ag	107	100.560				
	Cd	111	98.440				
	Cd	114					
>	In	115		90.9			
	Sn	120	89.279				
	Sb	121	99.872				
	Sb	123					
	Ba	135					
	Ba	137	85.192				
	Ho	165					
>	Lu	175		93.7			
	Tl	205	79.876				
	Pb	208	83.984				
	Th	232	83.459				
	U	238	89.249				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 10	V	51LRS is out of limits (+/- 10%)
QC Std 10	Mn	55LRS is out of limits (+/- 10%)
QC Std 10	Co	59LRS is out of limits (+/- 10%)
QC Std 10	Sn	120LRS is out of limits (+/- 10%)
QC Std 10	Ba	137LRS is out of limits (+/- 10%)
QC Std 10	Tl	205LRS is out of limits (+/- 10%)
QC Std 10	Pb	208LRS is out of limits (+/- 10%)

QC Std 10	Th	232LRS is out of limits (+/- 10%)
QC Std 10	U	238LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Wednesday, July 08, 2009 04:39:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 11.305

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.753**	ug/L	3.070	10977	0.018
	Be	9	**49.845**	ug/L	2.633	8054	0.013
	B	11	**97.286**	ug/L	3.580	10909	0.017
	Na	23	**5234.314**	ug/L	8.020	5416757	8.645
	Mg	24	**4974.167**	ug/L	10.032	4176305	6.678
	Al	27	**4204.813**	ug/L	3.124	5572839	8.907
	P	31	**4819.105**	ug/L	1.354	436307	0.694
	K	39	**5039.554**	ug/L	3.720	10972810	16.797
	Ca	43	**4775.624**	ug/L	2.684	21893	0.034
>	Sc	45		ug/L		625261	625261.264
	Ti	47	**48.000**	ug/L	0.052	11289	0.018
	V	51	**48.963**	ug/L	3.776	107834	0.183
	Cr	52	**49.299**	ug/L	1.157	121183	0.196
	Cr	53		ug/L		159357	0.005
	Mn	55	**46.251**	ug/L	0.847	183846	0.292
	Fe	57	**4844.508**	ug/L	1.101	380699	0.600
	Co	59	**48.715**	ug/L	1.873	143860	0.230
	Ni	60	**50.018**	ug/L	0.805	31219	0.050
	Cu	63		ug/L		70475	0.112
	Cu	65	**47.073**	ug/L	1.825	32834	0.052
	Zn	66	**50.662**	ug/L	1.404	23011	0.103
	Zn	67		ug/L		9521	0.016
	Zn	68		ug/L		16424	0.071
>	Ge	74		ug/L		219288	219287.776
	As	75	**48.527**	ug/L	2.282	28866	0.130
	Se	77		ug/L		7208	0.004
	Se	82	**49.021**	ug/L	2.863	2242	0.010
	Kr	83		ug/L		88	0.000
	Sr	88	**49.678**	ug/L	0.368	313398	2.057
	Y	89		ug/L		42	0.000
	Zr	90	**49.975**	ug/L	1.447	178989	1.175
	Mo	98	**48.292**	ug/L	2.377	80092	0.526
	Ag	107	**48.802**	ug/L	1.700	134372	0.882
	Cd	111	**51.900**	ug/L	1.381	33190	0.218
	Cd	114		ug/L		79566	0.522
>	In	115		ug/L		152235	152234.947
	Sn	120	**49.474**	ug/L	1.399	140276	0.921
	Sb	121	**49.941**	ug/L	2.676	139798	0.916
	Sb	123		ug/L		108561	0.712
	Ba	135		ug/L		37735	0.178
	Ba	137	**49.516**	ug/L	2.260	65881	0.310
	Ho	165		ug/L		50	0.000
>	Lu	175		ug/L		212368	212368.000
	Tl	205	**49.065**	ug/L	2.144	336733	1.584
	Pb	208	**50.026**	ug/L	1.572	373805	1.759
	Th	232	**50.458**	ug/L	0.327	392566	1.848
	U	238	**52.352**	ug/L	1.825	396989	1.859

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	101.506				
	Be	9	99.690				
	B	11	97.286				
	Na	23	104.686				
	Mg	24	99.483				
	Al	27	83.264				
	P	31	96.382				
	K	39	100.791				
	Ca	43	95.512				
>	Sc	45		97.1			
	Ti	47	96.000				
	V	51	97.926				
	Cr	52	98.597				
	Cr	53					
	Mn	55	92.502				
	Fe	57	96.890				
	Co	59	97.430				
	Ni	60	100.037				
	Cu	63					
	Cu	65	94.147				
	Zn	66	101.324				
	Zn	67					
	Zn	68					
>	Ge	74		97.7			
	As	75	97.053				
	Se	77					
	Se	82	98.042				
	Kr	83					
	Sr	88	99.356				
	Y	89					
	Zr	90	99.950				
	Mo	98	96.585				
	Ag	107	97.604				
	Cd	111	103.800				
	Cd	114					
>	In	115		96.1			
	Sn	120	98.948				
	Sb	121	99.882				
	Sb	123					
	Ba	135					
	Ba	137	99.032				
	Ho	165					
>	Lu	175		95.4			
	Tl	205	98.131				
	Pb	208	100.052				
	Th	232	100.916				
	U	238	104.703				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 11	Al	27CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Wednesday, July 08, 2009 04:45:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 12.306

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.170**	**ug/L**	13.599	64	0.000
	Be	9	**0.002**	**ug/L**	1948.109	18	0.000
	B	11	**1.167**	**ug/L**	32.081	360	0.000
	Na	23	**2.198**	**ug/L**	196.905	15008	0.004
	Mg	24	**3.836**	**ug/L**	77.601	5001	0.005
	Al	27	**2.679**	**ug/L**	66.332	8336	0.006
	P	31	**-1.839**	**ug/L**	99.751	2399	-0.000
	K	39	**-11.134**	**ug/L**	91.507	463060	-0.037
	Ca	43	**-5.520**	**ug/L**	306.445	393	-0.000
>	Sc	45		**ug/L**		643839	643839.488
	Ti	47	**0.025**	**ug/L**	91.673	176	0.000
	V	51	**-0.594**	**ug/L**	114.114	-8482	-0.002
	Cr	52	**0.115**	**ug/L**	73.674	-1140	0.000
	Cr	53		**ug/L**		147349	-0.021
	Mn	55	**-0.023**	**ug/L**	16.136	1047	-0.000
	Fe	57	**-1.931**	**ug/L**	131.929	5512	-0.000
	Co	59	**0.012**	**ug/L**	18.083	176	0.000
	Ni	60	**0.005**	**ug/L**	226.137	68	0.000
	Cu	63		**ug/L**		216	0.000
	Cu	65	**0.037**	**ug/L**	32.351	112	0.000
	Zn	66	**0.002**	**ug/L**	3659.337	420	0.000
	Zn	67		**ug/L**		5830	-0.001
	Zn	68		**ug/L**		773	-0.000
>	Ge	74		**ug/L**		223484	223484.203
	As	75	**0.518**	**ug/L**	74.040	584	0.001
	Se	77		**ug/L**		5910	-0.002
	Se	82	**0.068**	**ug/L**	876.567	-0	0.000
	Kr	83		**ug/L**		79	0.000
	Sr	88	**0.003**	**ug/L**	87.134	231	0.000
	Y	89		**ug/L**		29	-0.000
	Zr	90	**0.057**	**ug/L**	9.496	370	0.001
	Mo	98	**0.102**	**ug/L**	7.582	271	0.001
	Ag	107	**0.004**	**ug/L**	19.806	66	0.000
	Cd	111	**0.020**	**ug/L**	16.232	22	0.000
	Cd	114		**ug/L**		52	0.000
>	In	115		**ug/L**		157156	157156.230
	Sn	120	**0.117**	**ug/L**	6.213	479	0.002
	Sb	121	**0.833**	**ug/L**	11.334	2725	0.015
	Sb	123		**ug/L**		2100	0.012
	Ba	135		**ug/L**		38	0.000
	Ba	137	**0.013**	**ug/L**	4.849	72	0.000
	Ho	165		**ug/L**		36	-0.000
>	Lu	175		**ug/L**		219930	219929.738
	Tl	205	**0.214**	**ug/L**	14.992	1892	0.007
	Pb	208	**0.028**	**ug/L**	17.425	548	0.001
	Th	232	**0.083**	**ug/L**	13.478	888	0.003
	U	238	**0.059**	**ug/L**	46.256	2876	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.8			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 08, 2009 05:20:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 6.312

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	47.873	ug/L	7.556	9929	0.017
	Be	9	49.014	ug/L	6.892	7593	0.013
	B	11	97.072	ug/L	7.905	10435	0.017
	Na	23	5017.991	ug/L	6.705	4980441	8.288
	Mg	24	4876.267	ug/L	5.288	3929734	6.546
	Al	27	4613.970	ug/L	9.802	5857888	9.773
	P	31	5097.839	ug/L	6.464	442391	0.734
	K	39	4715.728	ug/L	3.091	9906487	15.717
	Ca	43	4954.767	ug/L	7.398	21761	0.036
>	Sc	45		ug/L		600781	600781.352
	Ti	47	49.233	ug/L	8.332	11092	0.018
	V	51	47.000	ug/L	7.121	98955	0.176
	Cr	52	50.371	ug/L	5.958	118769	0.200
	Cr	53		ug/L		176625	0.045
	Mn	55	47.820	ug/L	5.964	182235	0.302
	Fe	57	5053.729	ug/L	5.998	380631	0.626
	Co	59	50.663	ug/L	4.950	143528	0.239
	Ni	60	51.769	ug/L	5.266	30992	0.052
	Cu	63		ug/L		69016	0.115
	Cu	65	48.265	ug/L	5.931	32280	0.054
	Zn	66	50.391	ug/L	3.059	22698	0.103
	Zn	67		ug/L		9873	0.018
	Zn	68		ug/L		16388	0.072
>	Ge	74		ug/L		217552	217552.332
	As	75	48.340	ug/L	3.681	28505	0.130
	Se	77		ug/L		8123	0.009
	Se	82	49.564	ug/L	1.882	2249	0.010
	Kr	83		ug/L		84	0.000
	Sr	88	50.331	ug/L	1.297	317134	2.084
	Y	89		ug/L		51	0.000
	Zr	90	49.112	ug/L	1.695	175715	1.155
	Mo	98	48.133	ug/L	1.799	79755	0.524
	Ag	107	50.213	ug/L	2.637	138101	0.908
	Cd	111	52.193	ug/L	1.633	33342	0.219
	Cd	114		ug/L		80908	0.532
>	In	115		ug/L		152073	152073.361
	Sn	120	50.287	ug/L	1.599	142432	0.936
	Sb	121	48.807	ug/L	0.871	136510	0.896
	Sb	123		ug/L		106789	0.701
	Ba	135		ug/L		37433	0.174
	Ba	137	49.360	ug/L	3.641	66374	0.309
	Ho	165		ug/L		48	0.000
>	Lu	175		ug/L		214752	214751.657
	Tl	205	49.306	ug/L	3.012	342078	1.592
	Pb	208	51.185	ug/L	3.962	386499	1.800
	Th	232	50.854	ug/L	2.257	399910	1.862
	U	238	52.536	ug/L	3.468	402627	1.865

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	95.746				
	Be	9	98.027				
	B	11	97.072				
	Na	23	100.360				
	Mg	24	97.525				
	Al	27	91.366				
	P	31	101.957				
	K	39	94.315				
	Ca	43	99.095				
>	Sc	45			93.3		
	Ti	47	98.466				
	V	51	94.000				
	Cr	52	100.742				
	Cr	53					
	Mn	55	95.639				
	Fe	57	101.075				
	Co	59	101.327				
	Ni	60	103.538				
	Cu	63					
	Cu	65	96.530				
	Zn	66	100.782				
	Zn	67					
	Zn	68					
>	Ge	74			96.9		
	As	75	96.680				
	Se	77					
	Se	82	99.128				
	Kr	83					
	Sr	88	100.662				
	Y	89					
	Zr	90	98.224				
	Mo	98	96.267				
	Ag	107	100.425				
	Cd	111	104.386				
	Cd	114					
>	In	115			96.0		
	Sn	120	100.575				
	Sb	121	97.615				
	Sb	123					
	Ba	135					
	Ba	137	98.721				
	Ho	165					
>	Lu	175			96.5		
	Tl	205	98.612				
	Pb	208	102.371				
	Th	232	101.709				
	U	238	105.072				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 08, 2009 05:25:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 7.313

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	0.057	ug/L	51.712	38	0.000
	Be	9	-0.018	ug/L	62.479	14	-0.000
	B	11	1.496	ug/L	16.159	381	0.000
	Na	23	0.211	ug/L	602.973	12339	0.000
	Mg	24	0.861	ug/L	348.582	2334	0.001
	Al	27	-0.336	ug/L	623.446	4001	-0.001
	P	31	-0.493	ug/L	302.650	2417	-0.000
	K	39	-1.919	ug/L	457.316	462721	-0.006
	Ca	43	-5.654	ug/L	164.439	376	-0.000
>	Sc	45		ug/L		616658	616658.488
	Ti	47	0.037	ug/L	21.425	171	0.000
	V	51	-0.782	ug/L	164.033	-8554	-0.003
	Cr	52	-0.053	ug/L	335.114	-1506	-0.000
	Cr	53		ug/L		156284	0.004
	Mn	55	-0.007	ug/L	137.081	1065	-0.000
	Fe	57	-0.404	ug/L	190.608	5397	-0.000
	Co	59	0.004	ug/L	81.258	144	0.000
	Ni	60	-0.001	ug/L	1069.083	61	-0.000
	Cu	63		ug/L		139	-0.000
	Cu	65	0.011	ug/L	36.859	90	0.000
	Zn	66	-0.062	ug/L	100.342	386	-0.000
	Zn	67		ug/L		5991	-0.000
	Zn	68		ug/L		776	-0.000
>	Ge	74		ug/L		220846	220846.402
	As	75	0.604	ug/L	49.264	626	0.002
	Se	77		ug/L		6345	-0.000
	Se	82	0.025	ug/L	889.053	-2	0.000
	Kr	83		ug/L		80	0.000
	Sr	88	0.002	ug/L	118.896	222	0.000
	Y	89		ug/L		26	-0.000
	Zr	90	0.045	ug/L	11.639	320	0.001
	Mo	98	0.032	ug/L	23.555	150	0.000
	Ag	107	0.001	ug/L	695.529	54	0.000
	Cd	111	0.012	ug/L	89.608	16	0.000
	Cd	114		ug/L		40	-0.000
>	In	115		ug/L		155157	155156.534
	Sn	120	0.012	ug/L	33.111	168	0.000
	Sb	121	0.345	ug/L	18.462	1303	0.006
	Sb	123		ug/L		1013	0.005
	Ba	135		ug/L		48	0.000
	Ba	137	0.005	ug/L	97.935	61	0.000
	Ho	165		ug/L		35	-0.000
>	Lu	175		ug/L		218031	218030.940
	Tl	205	0.160	ug/L	10.214	1501	0.005
	Pb	208	0.014	ug/L	31.468	430	0.000
	Th	232	0.042	ug/L	7.478	557	0.002
	U	238	0.011	ug/L	160.072	2477	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			95.8		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			98.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.0		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			98.0		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 08, 2009 06:17:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 6.322

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**47.579**	ug/L	1.548	10183	0.016
	Be	9	**48.088**	ug/L	1.258	7688	0.012
	B	11	**95.431**	ug/L	2.977	10590	0.017
	Na	23	**4698.930**	ug/L	1.877	4811865	7.761
	Mg	24	**4452.761**	ug/L	6.981	3698573	5.978
	Al	27	**4480.679**	ug/L	5.120	5873579	9.491
	P	31	**4812.438**	ug/L	0.620	431024	0.693
	K	39	**4812.254**	ug/L	0.941	10388052	16.039
	Ca	43	**4682.366**	ug/L	1.209	21245	0.034
>	Sc	45		ug/L		618490	618489.823
	Ti	47	**47.686**	ug/L	0.691	11095	0.018
	V	51	**46.980**	ug/L	0.163	102091	0.176
	Cr	52	**48.719**	ug/L	1.550	118461	0.194
	Cr	53		ug/L		154162	-0.000
	Mn	55	**46.198**	ug/L	2.573	181636	0.292
	Fe	57	**4773.148**	ug/L	1.866	371109	0.591
	Co	59	**47.687**	ug/L	0.733	139313	0.225
	Ni	60	**48.682**	ug/L	1.996	30060	0.049
	Cu	63		ug/L		67453	0.109
	Cu	65	**46.106**	ug/L	1.927	31811	0.051
	Zn	66	**49.374**	ug/L	1.024	22374	0.100
	Zn	67		ug/L		8966	0.013
	Zn	68		ug/L		16128	0.070
>	Ge	74		ug/L		218696	218695.791
	As	75	**47.372**	ug/L	2.076	28098	0.127
	Se	77		ug/L		7250	0.004
	Se	82	**49.607**	ug/L	4.473	2263	0.010
	Kr	83		ug/L		79	0.000
	Sr	88	**48.999**	ug/L	1.975	308182	2.029
	Y	89		ug/L		60	0.000
	Zr	90	**48.039**	ug/L	3.700	171524	1.129
	Mo	98	**47.122**	ug/L	3.085	77922	0.513
	Ag	107	**49.026**	ug/L	1.973	134604	0.887
	Cd	111	**50.550**	ug/L	3.414	32227	0.212
	Cd	114		ug/L		78344	0.516
>	In	115		ug/L		151821	151821.426
	Sn	120	**48.364**	ug/L	2.373	136732	0.900
	Sb	121	**47.314**	ug/L	3.552	132061	0.868
	Sb	123		ug/L		103010	0.677
	Ba	135		ug/L		37169	0.170
	Ba	137	**47.974**	ug/L	2.584	65605	0.300
	Ho	165		ug/L		55	0.000
>	Lu	175		ug/L		218263	218262.784
	Tl	205	**47.379**	ug/L	1.948	334228	1.530
	Pb	208	**48.648**	ug/L	1.233	373634	1.711
	Th	232	**48.474**	ug/L	1.633	387566	1.775
	U	238	**50.113**	ug/L	2.300	390648	1.779

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	95.158				
	Be	9	96.175				
	B	11	95.431				
	Na	23	93.979				
	Mg	24	89.055				
	Al	27	88.726				
	P	31	96.249				
	K	39	96.245				
	Ca	43	93.647				
>	Sc	45		96.0			
	Ti	47	95.372				
	V	51	93.960				
	Cr	52	97.438				
	Cr	53					
	Mn	55	92.396				
	Fe	57	95.463				
	Co	59	95.374				
	Ni	60	97.363				
	Cu	63					
	Cu	65	92.211				
	Zn	66	98.749				
	Zn	67					
	Zn	68					
>	Ge	74		97.4			
	As	75	94.744				
	Se	77					
	Se	82	99.214				
	Kr	83					
	Sr	88	97.999				
	Y	89					
	Zr	90	96.078				
	Mo	98	94.244				
	Ag	107	98.052				
	Cd	111	101.101				
	Cd	114					
>	In	115		95.9			
	Sn	120	96.728				
	Sb	121	94.628				
	Sb	123					
	Ba	135					
	Ba	137	95.948				
	Ho	165					
>	Lu	175		98.1			
	Tl	205	94.758				
	Pb	208	97.296				
	Th	232	96.948				
	U	238	100.226				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Mg	24CCV is out of limits (+/- 10%)
QC Std 6	Al	27CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 08, 2009 06:23:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 7.323

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.054**	ug/L	39.060	38	0.000
	Be	9	**-0.035**	ug/L	25.283	12	-0.000
	B	11	**1.235**	ug/L	32.739	362	0.000
	Na	23	**2.417**	ug/L	115.352	15008	0.004
	Mg	24	**2.757**	ug/L	112.057	4001	0.004
	Al	27	**-0.203**	ug/L	828.089	4334	-0.000
	P	31	**2.899**	ug/L	17.313	2795	0.000
	K	39	**-3.962**	ug/L	188.327	470976	-0.013
	Ca	43	**-9.290**	ug/L	101.558	370	-0.000
>	Sc	45		ug/L		633696	633695.611
	Ti	47	**0.060**	ug/L	171.707	181	0.000
	V	51	**-0.587**	ug/L	191.096	-8354	-0.002
	Cr	52	**0.093**	ug/L	152.891	-1178	0.000
	Cr	53		ug/L		144872	-0.021
	Mn	55	**-0.014**	ug/L	28.124	1067	-0.000
	Fe	57	**1.022**	ug/L	184.181	5658	0.000
	Co	59	**0.007**	ug/L	44.012	156	0.000
	Ni	60	**-0.001**	ug/L	3256.243	63	-0.000
	Cu	63		ug/L		152	0.000
	Cu	65	**0.010**	ug/L	40.672	91	0.000
	Zn	66	**0.038**	ug/L	111.870	430	0.000
	Zn	67		ug/L		5410	-0.003
	Zn	68		ug/L		792	-0.000
>	Ge	74		ug/L		219981	219981.300
	As	75	**0.171**	ug/L	353.776	368	0.000
	Se	77		ug/L		5890	-0.002
	Se	82	**0.085**	ug/L	404.078	1	0.000
	Kr	83		ug/L		80	0.000
	Sr	88	**0.001**	ug/L	719.982	212	0.000
	Y	89		ug/L		30	-0.000
	Zr	90	**0.039**	ug/L	4.951	296	0.001
	Mo	98	**0.026**	ug/L	19.657	139	0.000
	Ag	107	**0.007**	ug/L	71.043	72	0.000
	Cd	111	**0.006**	ug/L	87.553	12	0.000
	Cd	114		ug/L		42	-0.000
>	In	115		ug/L		153936	153936.040
	Sn	120	**0.015**	ug/L	30.727	177	0.000
	Sb	121	**0.299**	ug/L	11.600	1160	0.005
	Sb	123		ug/L		925	0.004
	Ba	135		ug/L		36	0.000
	Ba	137	**0.003**	ug/L	91.016	59	0.000
	Ho	165		ug/L		36	-0.000
>	Lu	175		ug/L		220448	220447.776
	Tl	205	**0.114**	ug/L	19.269	1188	0.004
	Pb	208	**0.016**	ug/L	25.149	456	0.001
	Th	232	**0.035**	ug/L	13.702	510	0.001
	U	238	**0.013**	ug/L	92.431	2528	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.4		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			98.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			97.2		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.1		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 08, 2009 07:15:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 6.332

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.588**	ug/L	3.471	11077	0.017
	Be	9	**48.041**	ug/L	2.195	8016	0.012
	B	11	**94.211**	ug/L	0.917	10916	0.017
	Na	23	**4995.330**	ug/L	5.918	5337427	8.250
	Mg	24	**4597.256**	ug/L	1.217	3986240	6.172
	Al	27	**4840.126**	ug/L	6.271	6624120	10.253
	P	31	**4708.520**	ug/L	0.423	440228	0.678
	K	39	**4847.030**	ug/L	4.347	10919891	16.155
	Ca	43	**4775.382**	ug/L	0.277	22608	0.034
>	Sc	45		ug/L		645579	645578.868
	Ti	47	**48.013**	ug/L	0.518	11659	0.018
	V	51	**47.461**	ug/L	1.123	107733	0.178
	Cr	52	**48.780**	ug/L	1.869	123790	0.194
	Cr	53		ug/L		146225	-0.023
	Mn	55	**45.364**	ug/L	0.419	186198	0.287
	Fe	57	**4780.558**	ug/L	0.702	387965	0.592
	Co	59	**48.186**	ug/L	2.400	146919	0.227
	Ni	60	**49.000**	ug/L	0.635	31579	0.049
	Cu	63		ug/L		70041	0.108
	Cu	65	**45.895**	ug/L	2.482	33050	0.051
	Zn	66	**49.496**	ug/L	0.799	23330	0.101
	Zn	67		ug/L		8867	0.011
	Zn	68		ug/L		16511	0.069
>	Ge	74		ug/L		227467	227466.720
	As	75	**47.498**	ug/L	1.963	29309	0.128
	Se	77		ug/L		6983	0.002
	Se	82	**48.420**	ug/L	3.075	2297	0.010
	Kr	83		ug/L		83	0.000
	Sr	88	**49.519**	ug/L	0.343	319384	2.051
	Y	89		ug/L		65	0.000
	Zr	90	**48.885**	ug/L	2.731	179000	1.149
	Mo	98	**47.223**	ug/L	2.258	80075	0.514
	Ag	107	**48.523**	ug/L	2.235	136589	0.877
	Cd	111	**51.403**	ug/L	1.876	33607	0.216
	Cd	114		ug/L		80324	0.516
>	In	115		ug/L		155649	155649.209
	Sn	120	**47.920**	ug/L	2.222	138919	0.892
	Sb	121	**47.581**	ug/L	2.851	136178	0.873
	Sb	123		ug/L		107136	0.687
	Ba	135		ug/L		38038	0.172
	Ba	137	**48.269**	ug/L	2.312	66754	0.302
	Ho	165		ug/L		50	0.000
>	Lu	175		ug/L		220747	220746.622
	Tl	205	**46.455**	ug/L	1.264	331458	1.500
	Pb	208	**47.388**	ug/L	1.272	368103	1.666
	Th	232	**47.363**	ug/L	1.741	382976	1.734
	U	238	**49.363**	ug/L	2.214	389217	1.753

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	99.176				
	Be	9	96.083				
	B	11	94.211				
	Na	23	99.907				
	Mg	24	91.945				
	Al	27	95.844				
	P	31	94.170				
	K	39	96.941				
	Ca	43	95.508				
>	Sc	45		100.2			
	Ti	47	96.026				
	V	51	94.922				
	Cr	52	97.561				
	Cr	53					
	Mn	55	90.727				
	Fe	57	95.611				
	Co	59	96.372				
	Ni	60	98.000				
	Cu	63					
	Cu	65	91.789				
	Zn	66	98.992				
	Zn	67					
	Zn	68					
>	Ge	74		101.3			
	As	75	94.995				
	Se	77					
	Se	82	96.839				
	Kr	83					
	Sr	88	99.038				
	Y	89					
	Zr	90	97.770				
	Mo	98	94.447				
	Ag	107	97.046				
	Cd	111	102.806				
	Cd	114					
>	In	115		98.3			
	Sn	120	95.841				
	Sb	121	95.162				
	Sb	123					
	Ba	135					
	Ba	137	96.539				
	Ho	165					
>	Lu	175		99.2			
	Tl	205	92.910				
	Pb	208	94.777				
	Th	232	94.725				
	U	238	98.726				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 08, 2009 07:21:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 7.333

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.017**	ug/L	119.211	31	0.000
	Be	9	**-0.025**	ug/L	59.448	14	-0.000
	B	11	**1.384**	ug/L	26.731	389	0.000
	Na	23	**-1.675**	ug/L	192.627	11005	-0.003
	Mg	24	**1.878**	ug/L	68.399	3334	0.003
	Al	27	**-0.758**	ug/L	148.794	3667	-0.002
	P	31	**0.385**	ug/L	114.466	2634	0.000
	K	39	**-5.506**	ug/L	304.987	479948	-0.018
	Ca	43	**-15.994**	ug/L	30.333	349	-0.000
>	Sc	45		ug/L		650707	650706.750
	Ti	47	**0.042**	ug/L	182.411	181	0.000
	V	51	**-0.522**	ug/L	267.272	-8408	-0.002
	Cr	52	**0.272**	ug/L	27.488	-746	0.001
	Cr	53		ug/L		144431	-0.027
	Mn	55	**-0.025**	ug/L	71.441	1050	-0.000
	Fe	57	**-0.529**	ug/L	595.674	5683	-0.000
	Co	59	**0.004**	ug/L	19.408	154	0.000
	Ni	60	**-0.010**	ug/L	42.927	59	-0.000
	Cu	63		ug/L		149	-0.000
	Cu	65	**-0.010**	ug/L	103.316	79	-0.000
	Zn	66	**0.013**	ug/L	397.856	437	0.000
	Zn	67		ug/L		5530	-0.003
	Zn	68		ug/L		792	-0.000
>	Ge	74		ug/L		229834	229834.287
	As	75	**-0.437**	ug/L	172.640	16	-0.001
	Se	77		ug/L		6145	-0.002
	Se	82	**0.522**	ug/L	46.992	22	0.000
	Kr	83		ug/L		75	-0.000
	Sr	88	**0.007**	ug/L	31.948	257	0.000
	Y	89		ug/L		31	-0.000
	Zr	90	**0.047**	ug/L	10.360	333	0.001
	Mo	98	**0.023**	ug/L	70.811	136	0.000
	Ag	107	**0.002**	ug/L	16.337	59	0.000
	Cd	111	**0.015**	ug/L	34.611	19	0.000
	Cd	114		ug/L		49	0.000
>	In	115		ug/L		156537	156537.381
	Sn	120	**0.017**	ug/L	17.617	184	0.000
	Sb	121	**0.178**	ug/L	25.314	833	0.003
	Sb	123		ug/L		662	0.003
	Ba	135		ug/L		47	0.000
	Ba	137	**0.016**	ug/L	54.934	76	0.000
	Ho	165		ug/L		30	-0.000
>	Lu	175		ug/L		218715	218714.769
	Tl	205	**0.119**	ug/L	14.294	1211	0.004
	Pb	208	**0.014**	ug/L	16.542	438	0.001
	Th	232	**0.033**	ug/L	9.444	485	0.001
	U	238	**0.006**	ug/L	260.906	2451	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.3			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871724
Sample Date/Time: Wednesday, July 08, 2009 07:27:20
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881363|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\1201871724.334

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	-0.008	ug/L	226.421	25	-0.000
	Be	9	-0.033	ug/L	38.811	12	-0.000
	B	11	0.581	ug/L	26.569	290	0.000
	Na	23	-4.288	ug/L	2.208	8002	-0.007
	Mg	24	0.833	ug/L	359.305	2334	0.001
	Al	27	2.049	ug/L	172.490	7336	0.004
	P	31	17.687	ug/L	6.828	4155	0.003
	K	39	7.449	ug/L	199.751	496150	0.025
	Ca	43	-6.184	ug/L	77.995	385	-0.000
>	Sc	45		ug/L		635353	635353.478
	Ti	47	0.245	ug/L	50.084	225	0.000
	V	51	0.099	ug/L	1173.983	-6731	0.000
	Cr	52	0.915	ug/L	12.419	898	0.004
	Cr	53		ug/L		125257	-0.052
	Mn	55	0.259	ug/L	9.189	2166	0.002
	Fe	57	10.512	ug/L	4.510	6420	0.001
	Co	59	-0.004	ug/L	33.560	126	-0.000
	Ni	60	0.422	ug/L	5.465	331	0.000
	Cu	63		ug/L		1715	0.002
	Cu	65	1.055	ug/L	7.902	830	0.001
	Zn	66	-0.234	ug/L	23.437	307	-0.000
	Zn	67		ug/L		4902	-0.005
	Zn	68		ug/L		690	-0.000
>	Ge	74		ug/L		219119	219118.555
	As	75	-0.113	ug/L	394.589	200	-0.000
	Se	77		ug/L		4880	-0.006
	Se	82	0.364	ug/L	56.327	13	0.000
	Kr	83		ug/L		74	-0.000
	Sr	88	0.011	ug/L	31.601	279	0.000
	Y	89		ug/L		42	0.000
	Zr	90	0.131	ug/L	13.952	632	0.003
	Mo	98	-0.018	ug/L	16.014	66	-0.000
	Ag	107	-0.009	ug/L	1.907	27	-0.000
	Cd	111	0.022	ug/L	52.419	23	0.000
	Cd	114		ug/L		24	-0.000
>	In	115		ug/L		154286	154285.513
	Sn	120	0.147	ug/L	4.320	554	0.003
	Sb	121	0.000	ug/L	3845.868	318	0.000
	Sb	123		ug/L		256	0.000
	Ba	135		ug/L		61	0.000
	Ba	137	0.039	ug/L	22.610	107	0.000
	Ho	165		ug/L		35	-0.000
>	Lu	175		ug/L		216975	216975.143
	Tl	205	0.040	ug/L	21.191	651	0.001
	Pb	208	0.069	ug/L	2.721	852	0.002
	Th	232	0.012	ug/L	57.586	316	0.000
	U	238	-0.296	ug/L	0.313	103	-0.011

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.7		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			97.6		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			97.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.5		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	U	238	Sample is out of limits (<-PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201871725
Sample Date/Time: Wednesday, July 08, 2009 07:33:08
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881363|40|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\1201871725.335

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**1.940**	ug/L	0.283	461	0.001
	Be	9	**22.919**	ug/L	2.707	3850	0.006
	B	11	**34.993**	ug/L	4.638	4216	0.006
	Na	23	**160.651**	ug/L	18.416	184881	0.265
	Mg	24	**864.353**	ug/L	8.830	753076	1.160
	Al	27	**2126.449**	ug/L	8.205	2921098	4.504
	P	31	**198.745**	ug/L	3.169	21125	0.029
	K	39	**656.931**	ug/L	5.339	1908568	2.190
	Ca	43	**948.375**	ug/L	1.855	4845	0.007
>	Sc	45		ug/L		648065	648065.215
	Ti	47	**65.047**	ug/L	1.276	15795	0.024
	V	51	**35.650**	ug/L	1.324	79450	0.134
	Cr	52	**17.544**	ug/L	2.646	43757	0.070
	Cr	53		ug/L		141620	-0.031
	Mn	55	**91.947**	ug/L	2.382	377584	0.581
	Fe	57	**2684.032**	ug/L	2.807	221106	0.332
	Co	59	**21.090**	ug/L	4.231	64607	0.100
	Ni	60	**25.929**	ug/L	3.281	16800	0.026
	Cu	63		ug/L		37900	0.058
	Cu	65	**24.851**	ug/L	1.886	18003	0.028
	Zn	66	**53.536**	ug/L	2.856	24893	0.109
	Zn	67		ug/L		9520	0.015
	Zn	68		ug/L		18952	0.081
>	Ge	74		ug/L		224735	224735.226
	As	75	**64.249**	ug/L	1.627	39075	0.173
	Se	77		ug/L		7319	0.004
	Se	82	**47.831**	ug/L	1.145	2243	0.010
	Kr	83		ug/L		77	-0.000
	Sr	88	**42.780**	ug/L	1.310	278960	1.772
	Y	89		ug/L		23737	0.151
	Zr	90	**1.694**	ug/L	1.561	6423	0.040
	Mo	98	**20.671**	ug/L	1.302	35489	0.225
	Ag	107	**5.464**	ug/L	1.338	15598	0.099
	Cd	111	**31.466**	ug/L	1.022	20799	0.132
	Cd	114		ug/L		50335	0.320
>	In	115		ug/L		157332	157332.105
	Sn	120	**11.668**	ug/L	2.012	34294	0.217
	Sb	121	**6.317**	ug/L	1.680	18557	0.116
	Sb	123		ug/L		14593	0.091
	Ba	135		ug/L		97509	0.442
	Ba	137	**124.731**	ug/L	1.711	172150	0.781
	Ho	165		ug/L		1618	0.007
>	Lu	175		ug/L		220360	220360.124
	Tl	205	**51.074**	ug/L	0.720	363789	1.649
	Pb	208	**44.193**	ug/L	0.600	342745	1.554
	Th	232	**3.455**	ug/L	0.174	28100	0.127
	U	238	**0.157**	ug/L	2.991	3655	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
Sc	45		100.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
Ge	74		100.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
In	115		99.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
Lu	175		99.0			
Tl	205					
Pb	208					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232509001
Sample Date/Time: Wednesday, July 08, 2009 07:38:55
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881363|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\232509001.336

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**19.638**	ug/L	1.238	4312	0.007
	Be	9	**2.293**	ug/L	8.104	391	0.001
	B	11	**7.506**	ug/L	3.540	1058	0.001
	Na	23	**1520.625**	ug/L	7.229	1599686	2.512
	Mg	24	**2500.225**	ug/L	4.224	2124111	3.357
	Al	27	**18122.711**	ug/L	6.438	24289313	38.388
	P	31	**262.240**	ug/L	0.844	26395	0.038
	K	39	**3339.827**	ug/L	7.404	7511890	11.132
	Ca	43	**5533.691**	ug/L	0.591	25591	0.040
>	Sc	45		ug/L		632261	632261.138
	Ti	47	**394.767**	ug/L	1.190	92686	0.146
	V	51	**19.651**	ug/L	7.015	39652	0.074
	Cr	52	**32.196**	ug/L	1.240	79552	0.128
	Cr	53		ug/L		125597	-0.051
	Mn	55	**808.440**	ug/L	0.888	3230988	5.109
	Fe	57	**16979.757**	ug/L	1.847	1335217	2.103
	Co	59	**4.925**	ug/L	2.045	14828	0.023
	Ni	60	**14.359**	ug/L	1.715	9108	0.014
	Cu	63		ug/L		58378	0.092
	Cu	65	**38.754**	ug/L	0.748	27348	0.043
	Zn	66	**108.940**	ug/L	1.583	48211	0.222
	Zn	67		ug/L		12406	0.030
	Zn	68		ug/L		34249	0.155
>	Ge	74		ug/L		215731	215731.204
	As	75	**4.096**	ug/L	9.881	2637	0.011
	Se	77		ug/L		4497	-0.008
	Se	82	**1.398**	ug/L	11.024	60	0.000
	Kr	83		ug/L		133	0.000
	Sr	88	**32.701**	ug/L	2.583	204286	1.354
	Y	89		ug/L		497424	3.300
	Zr	90	**44.885**	ug/L	1.565	159198	1.055
	Mo	98	**13.767**	ug/L	1.616	22676	0.150
	Ag	107	**1.277**	ug/L	3.110	3532	0.023
	Cd	111	**0.961**	ug/L	5.988	616	0.004
	Cd	114		ug/L		992	0.006
>	In	115		ug/L		150740	150739.986
	Sn	120	**1.123**	ug/L	0.856	3280	0.021
	Sb	121	**0.137**	ug/L	10.391	688	0.003
	Sb	123		ug/L		541	0.002
	Ba	135		ug/L		84264	0.380
	Ba	137	**106.165**	ug/L	1.387	147466	0.665
	Ho	165		ug/L		31622	0.142
>	Lu	175		ug/L		221783	221783.019
	Tl	205	**0.865**	ug/L	1.231	6569	0.028
	Pb	208	**43.203**	ug/L	2.011	337185	1.519
	Th	232	**21.439**	ug/L	2.396	174299	0.785
	U	238	**6.372**	ug/L	1.176	52611	0.226

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.2		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			96.1		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			95.2		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.7		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)_

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871726
Sample Date/Time: Wednesday, July 08, 2009 07:44:43
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881363|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\1201871726.337

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**20.421**	ug/L	7.234	4343	0.007
	Be	9	**2.894**	ug/L	5.504	474	0.001
	B	11	**8.158**	ug/L	8.741	1096	0.001
	Na	23	**1683.866**	ug/L	12.197	1712352	2.781
	Mg	24	**2426.433**	ug/L	7.297	1998996	3.257
	Al	27	**18277.184**	ug/L	4.398	23787208	38.715
	P	31	**321.838**	ug/L	7.315	30837	0.046
	K	39	**3565.479**	ug/L	9.206	7747381	11.884
	Ca	43	**6204.216**	ug/L	6.301	27764	0.045
>	Sc	45		ug/L		614300	614300.455
	Ti	47	**465.603**	ug/L	4.662	105991	0.173
	V	51	**21.643**	ug/L	11.050	42893	0.081
	Cr	52	**34.387**	ug/L	8.194	82368	0.137
	Cr	53		ug/L		122832	-0.049
	Mn	55	**948.751**	ug/L	6.609	3674564	5.995
	Fe	57	**19355.845**	ug/L	6.947	1474292	2.398
	Co	59	**4.963**	ug/L	8.455	14473	0.023
	Ni	60	**15.396**	ug/L	6.286	9461	0.015
	Cu	63		ug/L		61517	0.100
	Cu	65	**42.428**	ug/L	5.859	29019	0.047
	Zn	66	**125.610**	ug/L	5.607	53905	0.256
	Zn	67		ug/L		12960	0.034
	Zn	68		ug/L		38002	0.178
>	Ge	74		ug/L		209817	209817.001
	As	75	**5.863**	ug/L	8.880	3552	0.016
	Se	77		ug/L		4355	-0.008
	Se	82	**1.331**	ug/L	25.349	56	0.000
	Kr	83		ug/L		153	0.000
	Sr	88	**36.627**	ug/L	7.378	223702	1.517
	Y	89		ug/L		598915	4.065
	Zr	90	**51.529**	ug/L	8.404	178567	1.211
	Mo	98	**14.990**	ug/L	8.963	24114	0.163
	Ag	107	**0.595**	ug/L	5.063	1638	0.011
	Cd	111	**0.761**	ug/L	0.333	481	0.003
	Cd	114		ug/L		548	0.003
>	In	115		ug/L		147890	147889.754
	Sn	120	**1.394**	ug/L	11.090	3942	0.026
	Sb	121	**0.125**	ug/L	20.990	639	0.002
	Sb	123		ug/L		527	0.002
	Ba	135		ug/L		95095	0.438
	Ba	137	**123.002**	ug/L	7.078	167007	0.770
	Ho	165		ug/L		38443	0.177
>	Lu	175		ug/L		217415	217414.603
	Tl	205	**0.867**	ug/L	7.818	6438	0.028
	Pb	208	**61.361**	ug/L	7.154	468018	2.158
	Th	232	**24.822**	ug/L	5.482	197383	0.909
	U	238	**7.135**	ug/L	7.619	57290	0.253

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			95.4		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			93.5		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			93.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.7		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)_

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871727
Sample Date/Time: Wednesday, July 08, 2009 07:50:31
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881363|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\1201871727.338

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**44.362**	**ug/L**	4.153	9709	0.015
	Be	9	**26.034**	**ug/L**	0.912	4264	0.007
	B	11	**55.122**	**ug/L**	3.595	6349	0.010
	Na	23	**2702.866**	**ug/L**	6.843	2836050	4.464
	Mg	24	**3631.202**	**ug/L**	2.926	3084713	4.875
	Al	27	**21984.611**	**ug/L**	1.708	29456807	46.569
	P	31	**1212.610**	**ug/L**	1.141	112949	0.175
	K	39	**4597.449**	**ug/L**	4.500	10168437	15.323
	Ca	43	**6440.980**	**ug/L**	1.449	29731	0.046
>	Sc	45		**ug/L**		632502	632501.797
	Ti	47	**545.473**	**ug/L**	1.963	128040	0.202
	V	51	**46.912**	**ug/L**	2.717	104227	0.176
	Cr	52	**57.112**	**ug/L**	2.400	142237	0.227
	Cr	53		**ug/L**		129822	-0.044
	Mn	55	**893.624**	**ug/L**	3.359	3572242	5.647
	Fe	57	**18376.262**	**ug/L**	0.674	1445300	2.276
	Co	59	**27.707**	**ug/L**	0.966	82838	0.131
	Ni	60	**38.846**	**ug/L**	2.547	24539	0.039
	Cu	63		**ug/L**		101032	0.160
	Cu	65	**66.784**	**ug/L**	1.487	47086	0.074
	Zn	66	**145.780**	**ug/L**	1.650	63875	0.297
	Zn	67		**ug/L**		14600	0.041
	Zn	68		**ug/L**		45427	0.209
>	Ge	74		**ug/L**		214073	214073.082
	As	75	**42.450**	**ug/L**	2.000	24674	0.114
	Se	77		**ug/L**		4765	-0.006
	Se	82	**10.314**	**ug/L**	3.151	458	0.002
	Kr	83		**ug/L**		134	0.000
	Sr	88	**59.783**	**ug/L**	0.066	368133	2.476
	Y	89		**ug/L**		534517	3.597
	Zr	90	**75.776**	**ug/L**	1.777	264891	1.782
	Mo	98	**39.479**	**ug/L**	1.955	63942	0.430
	Ag	107	**25.178**	**ug/L**	0.672	67714	0.455
	Cd	111	**5.705**	**ug/L**	2.493	3570	0.024
	Cd	114		**ug/L**		7982	0.053
>	In	115		**ug/L**		148616	148615.776
	Sn	120	**22.129**	**ug/L**	1.932	61326	0.412
	Sb	121	**57.644**	**ug/L**	1.194	157498	1.058
	Sb	123		**ug/L**		123363	0.829
	Ba	135		**ug/L**		115152	0.528
	Ba	137	**146.764**	**ug/L**	0.485	200387	0.919
	Ho	165		**ug/L**		34696	0.159
>	Lu	175		**ug/L**		218008	218008.485
	Tl	205	**46.628**	**ug/L**	0.887	328589	1.506
	Pb	208	**133.964**	**ug/L**	1.101	1027170	4.710
	Th	232	**48.077**	**ug/L**	1.181	383969	1.760
	U	238	**31.666**	**ug/L**	0.821	247484	1.124

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		98.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.0			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)_

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871729
Sample Date/Time: Wednesday, July 08, 2009 07:56:20
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 881363|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\1201871729.339

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**44.655**	**ug/L**	2.337	9827	0.015
	Be	9	**27.877**	**ug/L**	1.902	4589	0.007
	B	11	**59.451**	**ug/L**	2.525	6866	0.010
	Na	23	**2938.010**	**ug/L**	6.232	3096352	4.852
	Mg	24	**3848.756**	**ug/L**	3.760	3287621	5.167
	Al	27	**22738.246**	**ug/L**	4.470	30628385	48.165
	P	31	**1305.702**	**ug/L**	1.929	122038	0.188
	K	39	**4796.227**	**ug/L**	10.695	10644711	15.986
	Ca	43	**6982.429**	**ug/L**	2.241	32359	0.050
>	Sc	45		**ug/L**		635773	635773.473
	Ti	47	**563.426**	**ug/L**	0.888	132932	0.209
	V	51	**46.133**	**ug/L**	0.792	102919	0.173
	Cr	52	**60.646**	**ug/L**	1.162	151907	0.241
	Cr	53		**ug/L**		132222	-0.041
	Mn	55	**1906.523**	**ug/L**	1.110	7659794	12.047
	Fe	57	**18983.024**	**ug/L**	2.096	1500313	2.351
	Co	59	**30.467**	**ug/L**	1.746	91531	0.144
	Ni	60	**42.907**	**ug/L**	1.940	27236	0.043
	Cu	63		**ug/L**		102413	0.161
	Cu	65	**67.158**	**ug/L**	1.657	47591	0.075
	Zn	66	**173.663**	**ug/L**	2.154	73685	0.353
	Zn	67		**ug/L**		16237	0.051
	Zn	68		**ug/L**		51985	0.247
>	Ge	74		**ug/L**		207500	207499.937
	As	75	**44.291**	**ug/L**	1.203	24948	0.119
	Se	77		**ug/L**		4829	-0.005
	Se	82	**11.112**	**ug/L**	5.430	479	0.002
	Kr	83		**ug/L**		134	0.000
	Sr	88	**62.799**	**ug/L**	2.705	386289	2.601
	Y	89		**ug/L**		553543	3.728
	Zr	90	**76.930**	**ug/L**	5.482	268530	1.809
	Mo	98	**43.890**	**ug/L**	2.565	71010	0.478
	Ag	107	**26.324**	**ug/L**	3.360	70710	0.476
	Cd	111	**6.163**	**ug/L**	3.127	3851	0.026
	Cd	114		**ug/L**		8475	0.057
>	In	115		**ug/L**		148534	148534.485
	Sn	120	**23.065**	**ug/L**	3.319	63848	0.429
	Sb	121	**64.571**	**ug/L**	3.166	176196	1.185
	Sb	123		**ug/L**		137343	0.924
	Ba	135		**ug/L**		168891	0.778
	Ba	137	**217.447**	**ug/L**	1.538	295364	1.362
	Ho	165		**ug/L**		36765	0.169
>	Lu	175		**ug/L**		216917	216917.036
	Tl	205	**49.708**	**ug/L**	0.701	348519	1.605
	Pb	208	**141.766**	**ug/L**	0.386	1081585	4.985
	Th	232	**49.456**	**ug/L**	1.347	393004	1.811
	U	238	**33.884**	**ug/L**	1.004	263325	1.203

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.7		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			92.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			93.8		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.5		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201871728
Sample Date/Time: Wednesday, July 08, 2009 08:02:09
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881363|10|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\1201871728.340

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**3.876**	**ug/L**	2.268	890	0.001
	Be	9	**0.456**	**ug/L**	13.349	94	0.000
	B	11	**1.963**	**ug/L**	17.555	452	0.000
	Na	23	**318.870**	**ug/L**	6.679	352645	0.527
	Mg	24	**439.283**	**ug/L**	3.819	382391	0.590
	Al	27	**3209.769**	**ug/L**	5.075	4393416	6.799
	P	31	**52.735**	**ug/L**	5.268	7476	0.008
	K	39	**672.347**	**ug/L**	2.790	1934759	2.241
	Ca	43	**1046.706**	**ug/L**	1.379	5282	0.008
>	Sc	45		**ug/L**		645431	645430.991
	Ti	47	**75.773**	**ug/L**	1.769	18296	0.028
	V	51	**3.778**	**ug/L**	31.767	2053	0.014
	Cr	52	**6.294**	**ug/L**	2.667	14717	0.025
	Cr	53		**ug/L**		134656	-0.041
	Mn	55	**166.484**	**ug/L**	1.511	680089	1.052
	Fe	57	**3310.296**	**ug/L**	1.253	270324	0.410
	Co	59	**0.923**	**ug/L**	0.625	2949	0.004
	Ni	60	**2.879**	**ug/L**	1.999	1916	0.003
	Cu	63		**ug/L**		11717	0.018
	Cu	65	**7.578**	**ug/L**	1.403	5528	0.008
	Zn	66	**21.119**	**ug/L**	0.385	9827	0.043
	Zn	67		**ug/L**		6540	0.002
	Zn	68		**ug/L**		7305	0.030
>	Ge	74		**ug/L**		219164	219164.110
	As	75	**1.247**	**ug/L**	29.926	999	0.003
	Se	77		**ug/L**		5476	-0.004
	Se	82	**0.315**	**ug/L**	60.583	11	0.000
	Kr	83		**ug/L**		88	0.000
	Sr	88	**6.183**	**ug/L**	1.084	39795	0.256
	Y	89		**ug/L**		98150	0.635
	Zr	90	**8.472**	**ug/L**	2.672	30945	0.199
	Mo	98	**2.609**	**ug/L**	3.193	4485	0.028
	Ag	107	**0.236**	**ug/L**	4.899	712	0.004
	Cd	111	**0.185**	**ug/L**	7.829	129	0.001
	Cd	114		**ug/L**		196	0.001
>	In	115		**ug/L**		154629	154628.515
	Sn	120	**1.538**	**ug/L**	3.094	4558	0.029
	Sb	121	**0.015**	**ug/L**	29.408	361	0.000
	Sb	123		**ug/L**		288	0.000
	Ba	135		**ug/L**		16505	0.075
	Ba	137	**21.402**	**ug/L**	0.877	29394	0.134
	Ho	165		**ug/L**		6071	0.028
>	Lu	175		**ug/L**		218958	218958.172
	Tl	205	**0.175**	**ug/L**	1.709	1611	0.006
	Pb	208	**8.535**	**ug/L**	0.606	66038	0.300
	Th	232	**4.105**	**ug/L**	1.532	33133	0.150
	U	238	**0.966**	**ug/L**	1.288	9919	0.034

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.4			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 08, 2009 08:07:56
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 6.341

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**47.202**	ug/L	1.957	10470	0.016
	Be	9	**47.500**	ug/L	1.345	7869	0.012
	B	11	**93.520**	ug/L	4.920	10760	0.016
	Na	23	**5064.471**	ug/L	4.443	5374613	8.365
	Mg	24	**4721.390**	ug/L	6.007	4065862	6.338
	Al	27	**4496.857**	ug/L	9.124	6108940	9.525
	P	31	**4879.664**	ug/L	0.330	452845	0.703
	K	39	**5024.807**	ug/L	6.535	11224177	16.748
	Ca	43	**4732.822**	ug/L	2.051	22247	0.034
>	Sc	45		ug/L		640899	640898.886
	Ti	47	**48.608**	ug/L	2.518	11713	0.018
	V	51	**47.283**	ug/L	2.822	106498	0.177
	Cr	52	**47.344**	ug/L	2.283	119221	0.188
	Cr	53		ug/L		155562	-0.007
	Mn	55	**45.264**	ug/L	1.236	184433	0.286
	Fe	57	**4719.560**	ug/L	1.530	380287	0.585
	Co	59	**47.575**	ug/L	1.744	144004	0.225
	Ni	60	**48.558**	ug/L	1.266	31066	0.048
	Cu	63		ug/L		69063	0.108
	Cu	65	**45.316**	ug/L	2.789	32395	0.050
	Zn	66	**50.129**	ug/L	1.834	22925	0.102
	Zn	67		ug/L		9176	0.014
	Zn	68		ug/L		16355	0.070
>	Ge	74		ug/L		220739	220739.192
	As	75	**47.488**	ug/L	1.545	28437	0.128
	Se	77		ug/L		7225	0.004
	Se	82	**50.405**	ug/L	2.483	2322	0.011
	Kr	83		ug/L		81	0.000
	Sr	88	**49.162**	ug/L	0.620	314342	2.036
	Y	89		ug/L		63	0.000
	Zr	90	**47.678**	ug/L	3.344	173054	1.121
	Mo	98	**46.462**	ug/L	2.720	78101	0.506
	Ag	107	**48.438**	ug/L	2.220	135172	0.876
	Cd	111	**50.946**	ug/L	2.882	33016	0.214
	Cd	114		ug/L		80169	0.519
>	In	115		ug/L		154305	154305.023
	Sn	120	**47.823**	ug/L	2.088	137432	0.890
	Sb	121	**47.232**	ug/L	1.963	134024	0.867
	Sb	123		ug/L		105745	0.684
	Ba	135		ug/L		37668	0.173
	Ba	137	**48.378**	ug/L	1.220	65947	0.303
	Ho	165		ug/L		45	0.000
>	Lu	175		ug/L		217535	217535.034
	Tl	205	**46.454**	ug/L	1.165	326643	1.500
	Pb	208	**47.934**	ug/L	0.356	366972	1.685
	Th	232	**47.752**	ug/L	2.053	380549	1.749
	U	238	**49.661**	ug/L	1.815	385907	1.763

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	94.405				
	Be	9	95.001				
	B	11	93.520				
	Na	23	101.289				
	Mg	24	94.428				
	Al	27	89.047				
	P	31	97.593				
	K	39	100.496				
	Ca	43	94.656				
>	Sc	45		99.5			
	Ti	47	97.216				
	V	51	94.566				
	Cr	52	94.687				
	Cr	53					
	Mn	55	90.529				
	Fe	57	94.391				
	Co	59	95.149				
	Ni	60	97.115				
	Cu	63					
	Cu	65	90.632				
	Zn	66	100.258				
	Zn	67					
	Zn	68					
>	Ge	74		98.3			
	As	75	94.975				
	Se	77					
	Se	82	100.809				
	Kr	83					
	Sr	88	98.324				
	Y	89					
	Zr	90	95.356				
	Mo	98	92.923				
	Ag	107	96.877				
	Cd	111	101.892				
	Cd	114					
>	In	115		97.4			
	Sn	120	95.646				
	Sb	121	94.464				
	Sb	123					
	Ba	135					
	Ba	137	96.756				
	Ho	165					
>	Lu	175		97.8			
	Tl	205	92.907				
	Pb	208	95.869				
	Th	232	95.505				
	U	238	99.322				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Al	27CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 08, 2009 08:13:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 7.342

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.019**	ug/L	144.791	31	0.000
	Be	9	**-0.035**	ug/L	91.930	12	-0.000
	B	11	**1.198**	ug/L	17.827	366	0.000
	Na	23	**0.239**	ug/L	1787.487	13006	0.000
	Mg	24	**1.907**	ug/L	35.172	3334	0.003
	Al	27	**1.196**	ug/L	70.592	6335	0.003
	P	31	**1.171**	ug/L	56.611	2695	0.000
	K	39	**0.139**	ug/L	6746.801	490280	0.000
	Ca	43	**-10.959**	ug/L	59.795	371	-0.000
>	Sc	45		ug/L		647725	647725.358
	Ti	47	**0.118**	ug/L	48.455	199	0.000
	V	51	**-0.513**	ug/L	212.720	-8341	-0.002
	Cr	52	**0.100**	ug/L	134.016	-1187	0.000
	Cr	53		ug/L		148244	-0.021
	Mn	55	**-0.019**	ug/L	36.228	1072	-0.000
	Fe	57	**-0.445**	ug/L	477.502	5666	-0.000
	Co	59	**0.003**	ug/L	250.340	148	0.000
	Ni	60	**0.006**	ug/L	363.218	69	0.000
	Cu	63		ug/L		183	0.000
	Cu	65	**0.002**	ug/L	1162.229	87	0.000
	Zn	66	**-0.013**	ug/L	114.305	414	-0.000
	Zn	67		ug/L		5709	-0.002
	Zn	68		ug/L		832	0.000
>	Ge	74		ug/L		223732	223731.622
	As	75	**-0.423**	ug/L	54.750	19	-0.001
	Se	77		ug/L		5816	-0.003
	Se	82	**0.363**	ug/L	63.071	14	0.000
	Kr	83		ug/L		76	-0.000
	Sr	88	**0.004**	ug/L	154.341	239	0.000
	Y	89		ug/L		31	-0.000
	Zr	90	**0.039**	ug/L	6.032	301	0.001
	Mo	98	**0.030**	ug/L	27.922	147	0.000
	Ag	107	**0.003**	ug/L	227.289	61	0.000
	Cd	111	**0.009**	ug/L	197.462	15	0.000
	Cd	114		ug/L		50	0.000
>	In	115		ug/L		156714	156714.308
	Sn	120	**0.023**	ug/L	11.655	202	0.000
	Sb	121	**0.226**	ug/L	14.153	974	0.004
	Sb	123		ug/L		782	0.003
	Ba	135		ug/L		40	0.000
	Ba	137	**0.007**	ug/L	105.700	65	0.000
	Ho	165		ug/L		36	-0.000
>	Lu	175		ug/L		222526	222526.361
	Tl	205	**0.086**	ug/L	18.298	998	0.003
	Pb	208	**0.016**	ug/L	15.261	455	0.001
	Th	232	**0.035**	ug/L	3.237	514	0.001
	U	238	**-0.011**	ug/L	88.310	2362	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.6			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.0			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232509002
Sample Date/Time: Wednesday, July 08, 2009 08:19:29
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881363|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\232509002.343

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**32.374**	ug/L	2.101	7185	0.011
	Be	9	**1.954**	ug/L	3.639	340	0.001
	B	11	**8.240**	ug/L	5.046	1155	0.001
	Na	23	**436.147**	ug/L	1.535	474073	0.720
	Mg	24	**3202.649**	ug/L	1.368	2755951	4.300
	Al	27	**29604.909**	ug/L	7.953	40168373	62.710
	P	31	**374.881**	ug/L	2.094	37135	0.054
	K	39	**3966.811**	ug/L	4.102	8953940	13.221
	Ca	43	**4863.276**	ug/L	2.283	22839	0.035
>	Sc	45		ug/L		640591	640591.274
	Ti	47	**622.143**	ug/L	0.757	147886	0.231
	V	51	**27.610**	ug/L	5.701	59253	0.103
	Cr	52	**17.756**	ug/L	1.258	43807	0.071
	Cr	53		ug/L		130038	-0.046
	Mn	55	**650.959**	ug/L	1.218	2636124	4.113
	Fe	57	**21293.049**	ug/L	0.888	1695308	2.638
	Co	59	**6.529**	ug/L	0.941	19877	0.031
	Ni	60	**12.134**	ug/L	2.055	7809	0.012
	Cu	63		ug/L		24756	0.038
	Cu	65	**16.356**	ug/L	1.958	11744	0.018
	Zn	66	**115.471**	ug/L	4.763	50004	0.235
	Zn	67		ug/L		13061	0.034
	Zn	68		ug/L		35406	0.164
>	Ge	74		ug/L		211352	211352.029
	As	75	**4.890**	ug/L	13.882	3032	0.013
	Se	77		ug/L		4763	-0.006
	Se	82	**0.436**	ug/L	79.632	16	0.000
	Kr	83		ug/L		128	0.000
	Sr	88	**32.515**	ug/L	4.257	199286	1.346
	Y	89		ug/L		310453	2.100
	Zr	90	**45.346**	ug/L	4.230	157748	1.066
	Mo	98	**4.764**	ug/L	4.830	7755	0.052
	Ag	107	**0.184**	ug/L	8.652	542	0.003
	Cd	111	**0.533**	ug/L	12.682	339	0.002
	Cd	114		ug/L		365	0.002
>	In	115		ug/L		148025	148025.139
	Sn	120	**1.154**	ug/L	7.221	3300	0.021
	Sb	121	**0.175**	ug/L	8.086	782	0.003
	Sb	123		ug/L		629	0.003
	Ba	135		ug/L		131992	0.625
	Ba	137	**174.417**	ug/L	4.227	230717	1.092
	Ho	165		ug/L		19363	0.091
>	Lu	175		ug/L		211434	211433.653
	Tl	205	**0.362**	ug/L	3.920	2828	0.012
	Pb	208	**32.179**	ug/L	3.798	239329	1.131
	Th	232	**18.926**	ug/L	3.497	146614	0.693
	U	238	**2.970**	ug/L	3.871	24598	0.105

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			99.5		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			94.2		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			93.5		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			95.0		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)_

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232509003
Sample Date/Time: Wednesday, July 08, 2009 08:25:18
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881363|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\232509003.344

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**26.915**	ug/L	4.882	5955	0.009
	Be	9	**2.208**	ug/L	3.097	381	0.001
	B	11	**6.196**	ug/L	9.226	921	0.001
	Na	23	**462.512**	ug/L	8.417	500317	0.764
	Mg	24	**2908.665**	ug/L	6.944	2493968	3.905
	Al	27	**15457.682**	ug/L	5.884	20902722	32.743
	P	31	**381.488**	ug/L	1.317	37613	0.055
	K	39	**2949.325**	ug/L	8.821	6763083	9.830
	Ca	43	**3598.586**	ug/L	1.320	16951	0.026
>	Sc	45		ug/L		638458	638458.066
	Ti	47	**565.225**	ug/L	1.743	133910	0.210
	V	51	**23.463**	ug/L	3.173	49114	0.088
	Cr	52	**8.523**	ug/L	4.022	20209	0.034
	Cr	53		ug/L		123040	-0.057
	Mn	55	**667.116**	ug/L	3.944	2691608	4.216
	Fe	57	**17618.327**	ug/L	3.062	1398627	2.182
	Co	59	**3.675**	ug/L	2.078	11210	0.017
	Ni	60	**7.849**	ug/L	2.982	5056	0.008
	Cu	63		ug/L		15600	0.024
	Cu	65	**10.363**	ug/L	1.250	7447	0.012
	Zn	66	**108.844**	ug/L	5.118	47720	0.221
	Zn	67		ug/L		12309	0.030
	Zn	68		ug/L		33586	0.153
>	Ge	74		ug/L		213905	213905.076
	As	75	**3.753**	ug/L	10.166	2421	0.010
	Se	77		ug/L		4627	-0.007
	Se	82	**0.889**	ug/L	20.726	36	0.000
	Kr	83		ug/L		144	0.000
	Sr	88	**22.252**	ug/L	1.442	140791	0.922
	Y	89		ug/L		546668	3.583
	Zr	90	**37.839**	ug/L	1.876	135868	0.890
	Mo	98	**2.813**	ug/L	2.561	4765	0.031
	Ag	107	**0.147**	ug/L	8.757	458	0.003
	Cd	111	**0.544**	ug/L	11.896	357	0.002
	Cd	114		ug/L		261	0.001
>	In	115		ug/L		152570	152569.517
	Sn	120	**1.508**	ug/L	2.519	4412	0.028
	Sb	121	**0.079**	ug/L	13.592	534	0.001
	Sb	123		ug/L		420	0.001
	Ba	135		ug/L		80551	0.366
	Ba	137	**103.073**	ug/L	0.578	142116	0.645
	Ho	165		ug/L		33180	0.151
>	Lu	175		ug/L		220126	220125.552
	Tl	205	**0.185**	ug/L	2.163	1686	0.006
	Pb	208	**23.543**	ug/L	1.173	182551	0.828
	Th	232	**18.338**	ug/L	0.640	148033	0.671
	U	238	**1.716**	ug/L	0.491	15832	0.061

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			99.1		
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74			95.3		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			96.3		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			98.9		
Tl	205					
Pb	208					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)_

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232509004
Sample Date/Time: Wednesday, July 08, 2009 08:31:06
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881363|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\232509004.345

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**35.164**	ug/L	1.510	7924	0.012
	Be	9	**3.099**	ug/L	3.610	538	0.001
	B	11	**12.107**	ug/L	4.304	1615	0.002
	Na	23	**3060.240**	ug/L	7.167	3302114	5.054
	Mg	24	**5155.573**	ug/L	2.518	4505068	6.921
	Al	27	**40069.959**	ug/L	10.959	55231513	84.878
	P	31	**405.703**	ug/L	1.316	40608	0.058
	K	39	**6019.489**	ug/L	1.238	13547333	20.063
	Ca	43	**37086.977**	ug/L	1.532	174107	0.267
>	Sc	45		ug/L		650677	650677.443
	Ti	47	**742.631**	ug/L	1.307	179270	0.275
	V	51	**41.568**	ug/L	3.589	94226	0.156
	Cr	52	**35.749**	ug/L	1.174	91053	0.142
	Cr	53		ug/L		131534	-0.047
	Mn	55	**972.216**	ug/L	0.658	3998647	6.143
	Fe	57	**25971.589**	ug/L	1.995	2099111	3.217
	Co	59	**10.251**	ug/L	0.458	31616	0.048
	Ni	60	**23.430**	ug/L	2.308	15255	0.023
	Cu	63		ug/L		149812	0.230
	Cu	65	**98.513**	ug/L	1.510	71408	0.110
	Zn	66	**149.383**	ug/L	1.744	64808	0.304
	Zn	67		ug/L		15581	0.046
	Zn	68		ug/L		47200	0.219
>	Ge	74		ug/L		211996	211996.127
	As	75	**7.053**	ug/L	8.778	4276	0.019
	Se	77		ug/L		4813	-0.006
	Se	82	**1.630**	ug/L	25.495	69	0.000
	Kr	83		ug/L		158	0.000
	Sr	88	**82.916**	ug/L	0.448	519242	3.434
	Y	89		ug/L		708833	4.689
	Zr	90	**68.502**	ug/L	2.321	243555	1.610
	Mo	98	**3.217**	ug/L	2.711	5386	0.035
	Ag	107	**0.529**	ug/L	1.100	1496	0.010
	Cd	111	**1.042**	ug/L	5.466	670	0.004
	Cd	114		ug/L		759	0.005
>	In	115		ug/L		151161	151160.962
	Sn	120	**1.443**	ug/L	4.655	4187	0.027
	Sb	121	**0.107**	ug/L	8.909	608	0.002
	Sb	123		ug/L		472	0.002
	Ba	135		ug/L		216950	0.976
	Ba	137	**274.794**	ug/L	2.086	382423	1.721
	Ho	165		ug/L		45297	0.204
>	Lu	175		ug/L		222274	222274.057
	Tl	205	**1.328**	ug/L	2.979	9909	0.043
	Pb	208	**42.097**	ug/L	2.133	329267	1.480
	Th	232	**31.847**	ug/L	3.101	259339	1.166
	U	238	**4.277**	ug/L	1.865	36190	0.152

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)_

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232509005
Sample Date/Time: Wednesday, July 08, 2009 08:36:54
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881363|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\232509005.346

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.618**	**ug/L**	4.342	11737	0.018
	Be	9	**3.384**	**ug/L**	7.470	591	0.001
	B	11	**16.793**	**ug/L**	5.960	2173	0.003
	Na	23	**3043.600**	**ug/L**	17.237	3324426	5.027
	Mg	24	**8807.874**	**ug/L**	7.393	7777277	11.824
	Al	27	**54212.531**	**ug/L**	3.155	75483068	114.835
	P	31	**472.050**	**ug/L**	1.282	47309	0.068
	K	39	**7888.765**	**ug/L**	3.775	17794104	26.293
	Ca	43	**22265.760**	**ug/L**	2.471	105761	0.160
>	Sc	45		**ug/L**		657526	657526.133
	Ti	47	**1051.579**	**ug/L**	3.290	256350	0.390
	V	51	**73.426**	**ug/L**	3.718	173597	0.275
	Cr	52	**34.949**	**ug/L**	2.227	89898	0.139
	Cr	53		**ug/L**		131582	-0.049
	Mn	55	**936.507**	**ug/L**	3.149	3891352	5.918
	Fe	57	**36727.351**	**ug/L**	3.296	2996013	4.550
	Co	59	**14.971**	**ug/L**	3.174	46577	0.071
	Ni	60	**28.454**	**ug/L**	1.588	18702	0.028
	Cu	63		**ug/L**		84066	0.128
	Cu	65	**53.944**	**ug/L**	2.668	39546	0.060
	Zn	66	**143.209**	**ug/L**	1.845	62042	0.291
	Zn	67		**ug/L**		15708	0.047
	Zn	68		**ug/L**		46840	0.218
>	Ge	74		**ug/L**		211632	211632.299
	As	75	**8.462**	**ug/L**	4.827	5069	0.023
	Se	77		**ug/L**		4939	-0.005
	Se	82	**1.313**	**ug/L**	11.924	55	0.000
	Kr	83		**ug/L**		126	0.000
	Sr	88	**114.507**	**ug/L**	1.780	718961	4.742
	Y	89		**ug/L**		463070	3.055
	Zr	90	**78.496**	**ug/L**	3.246	279859	1.845
	Mo	98	**2.078**	**ug/L**	1.812	3522	0.023
	Ag	107	**0.501**	**ug/L**	1.998	1424	0.009
	Cd	111	**0.863**	**ug/L**	4.725	558	0.004
	Cd	114		**ug/L**		584	0.004
>	In	115		**ug/L**		151593	151593.138
	Sn	120	**1.034**	**ug/L**	3.629	3047	0.019
	Sb	121	**0.074**	**ug/L**	13.379	518	0.001
	Sb	123		**ug/L**		428	0.001
	Ba	135		**ug/L**		373389	1.715
	Ba	137	**473.621**	**ug/L**	1.830	645793	2.966
	Ho	165		**ug/L**		28964	0.133
>	Lu	175		**ug/L**		217786	217785.546
	Tl	205	**0.876**	**ug/L**	3.992	6528	0.028
	Pb	208	**60.810**	**ug/L**	2.189	465911	2.138
	Th	232	**29.492**	**ug/L**	2.301	235355	1.080
	U	238	**3.945**	**ug/L**	3.150	32893	0.140

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		102.1			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)_

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232509006
Sample Date/Time: Wednesday, July 08, 2009 08:42:43
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881363|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\232509006.347

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**43.712**	ug/L	2.680	9732	0.015
	Be	9	**1.883**	ug/L	4.911	330	0.000
	B	11	**8.039**	ug/L	10.186	1137	0.001
	Na	23	**436.070**	ug/L	12.303	475508	0.720
	Mg	24	**4008.662**	ug/L	6.112	3464844	5.382
	Al	27	**19889.653**	ug/L	2.455	27113652	42.131
	P	31	**412.284**	ug/L	2.306	40748	0.059
	K	39	**3959.747**	ug/L	1.055	8977754	13.198
	Ca	43	**4155.181**	ug/L	1.659	19655	0.030
>	Sc	45		ug/L		643315	643315.367
	Ti	47	**633.905**	ug/L	1.676	151300	0.235
	V	51	**37.343**	ug/L	4.253	82935	0.140
	Cr	52	**17.143**	ug/L	1.779	42418	0.068
	Cr	53		ug/L		126079	-0.053
	Mn	55	**1237.386**	ug/L	1.311	5030696	7.819
	Fe	57	**21333.497**	ug/L	0.799	1705594	2.643
	Co	59	**6.807**	ug/L	1.955	20800	0.032
	Ni	60	**12.108**	ug/L	1.255	7824	0.012
	Cu	63		ug/L		24859	0.038
	Cu	65	**16.302**	ug/L	0.953	11755	0.018
	Zn	66	**167.978**	ug/L	2.818	72619	0.342
	Zn	67		ug/L		16190	0.049
	Zn	68		ug/L		50851	0.237
>	Ge	74		ug/L		211427	211427.162
	As	75	**5.162**	ug/L	4.254	3191	0.014
	Se	77		ug/L		4476	-0.008
	Se	82	**0.655**	ug/L	55.947	26	0.000
	Kr	83		ug/L		128	0.000
	Sr	88	**28.334**	ug/L	1.277	175742	1.173
	Y	89		ug/L		394409	2.636
	Zr	90	**48.953**	ug/L	0.591	172338	1.151
	Mo	98	**7.048**	ug/L	1.743	11568	0.077
	Ag	107	**0.179**	ug/L	3.965	534	0.003
	Cd	111	**0.613**	ug/L	4.253	393	0.003
	Cd	114		ug/L		421	0.003
>	In	115		ug/L		149617	149617.112
	Sn	120	**2.010**	ug/L	3.293	5726	0.037
	Sb	121	**0.125**	ug/L	1.819	650	0.002
	Sb	123		ug/L		549	0.002
	Ba	135		ug/L		139125	0.651
	Ba	137	**182.767**	ug/L	1.521	244691	1.144
	Ho	165		ug/L		24805	0.116
>	Lu	175		ug/L		213801	213801.303
	Tl	205	**0.304**	ug/L	1.833	2464	0.010
	Pb	208	**45.696**	ug/L	2.290	343782	1.607
	Th	232	**17.820**	ug/L	2.229	139699	0.653
	U	238	**3.072**	ug/L	0.885	25666	0.109

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		99.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		96.1			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)_
	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 08, 2009 08:48:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 6.348

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**45.343**	**ug/L**	2.657	10363	0.016
	Be	9	**46.401**	**ug/L**	1.466	7921	0.012
	B	11	**92.856**	**ug/L**	2.950	11008	0.016
	Na	23	**4676.603**	**ug/L**	3.227	5114311	7.724
	Mg	24	**4471.939**	**ug/L**	3.653	3965692	6.004
	Al	27	**4562.313**	**ug/L**	7.781	6388759	9.664
	P	31	**4814.491**	**ug/L**	1.158	460402	0.693
	K	39	**4564.598**	**ug/L**	2.706	10546810	15.214
	Ca	43	**4574.983**	**ug/L**	0.364	22173	0.033
>	Sc	45		**ug/L**		660373	660372.997
	Ti	47	**46.719**	**ug/L**	1.795	11610	0.017
	V	51	**46.223**	**ug/L**	2.496	107125	0.173
	Cr	52	**46.592**	**ug/L**	2.530	120878	0.185
	Cr	53		**ug/L**		161115	-0.006
	Mn	55	**43.904**	**ug/L**	1.089	184370	0.277
	Fe	57	**4502.067**	**ug/L**	1.539	374068	0.558
	Co	59	**46.185**	**ug/L**	2.903	144054	0.218
	Ni	60	**47.137**	**ug/L**	0.995	31079	0.047
	Cu	63		**ug/L**		69114	0.104
	Cu	65	**44.329**	**ug/L**	0.243	32661	0.049
	Zn	66	**49.239**	**ug/L**	1.600	22730	0.100
	Zn	67		**ug/L**		9218	0.014
	Zn	68		**ug/L**		16211	0.069
>	Ge	74		**ug/L**		222751	222750.743
	As	75	**47.427**	**ug/L**	2.194	28659	0.127
	Se	77		**ug/L**		7600	0.005
	Se	82	**48.018**	**ug/L**	3.213	2232	0.010
	Kr	83		**ug/L**		75	-0.000
	Sr	88	**47.525**	**ug/L**	1.299	312186	1.968
	Y	89		**ug/L**		74	0.000
	Zr	90	**46.080**	**ug/L**	0.391	171892	1.083
	Mo	98	**45.352**	**ug/L**	0.881	78340	0.494
	Ag	107	**47.518**	**ug/L**	1.307	136260	0.859
	Cd	111	**49.410**	**ug/L**	2.013	32903	0.208
	Cd	114		**ug/L**		79954	0.504
>	In	115		**ug/L**		158517	158517.021
	Sn	120	**46.984**	**ug/L**	0.556	138741	0.874
	Sb	121	**45.876**	**ug/L**	2.198	133763	0.842
	Sb	123		**ug/L**		105054	0.661
	Ba	135		**ug/L**		37715	0.174
	Ba	137	**48.592**	**ug/L**	1.799	66081	0.304
	Ho	165		**ug/L**		53	0.000
>	Lu	175		**ug/L**		217050	217049.523
	Tl	205	**45.948**	**ug/L**	2.876	322296	1.484
	Pb	208	**47.272**	**ug/L**	1.330	361058	1.662
	Th	232	**47.096**	**ug/L**	0.407	374532	1.724
	U	238	**48.744**	**ug/L**	0.284	378003	1.731

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	90.686				
	Be	9	92.801				
	B	11	92.856				
	Na	23	93.532				
	Mg	24	89.439				
	Al	27	90.343				
	P	31	96.290				
	K	39	91.292				
	Ca	43	91.500				
>	Sc	45		102.5			
	Ti	47	93.439				
	V	51	92.447				
	Cr	52	93.185				
	Cr	53					
	Mn	55	87.807				
	Fe	57	90.041				
	Co	59	92.369				
	Ni	60	94.273				
	Cu	63					
	Cu	65	88.658				
	Zn	66	98.478				
	Zn	67					
	Zn	68					
>	Ge	74		99.2			
	As	75	94.853				
	Se	77					
	Se	82	96.035				
	Kr	83					
	Sr	88	95.050				
	Y	89					
	Zr	90	92.161				
	Mo	98	90.704				
	Ag	107	95.036				
	Cd	111	98.820				
	Cd	114					
>	In	115		100.1			
	Sn	120	93.968				
	Sb	121	91.751				
	Sb	123					
	Ba	135					
	Ba	137	97.183				
	Ho	165					
>	Lu	175		97.5			
	Tl	205	91.895				
	Pb	208	94.545				
	Th	232	94.192				
	U	238	97.488				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Mg	24CCV is out of limits (+/- 10%)
QC Std 6	Mn	55CCV is out of limits (+/- 10%)
QC Std 6	Cu	65CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 08, 2009 08:54:16
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090707\QC Std 7.349

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.040**	ug/L	62.302	36	0.000
	Be	9	**-0.006**	ug/L	729.447	17	-0.000
	B	11	**1.165**	ug/L	9.091	363	0.000
	Na	23	**-0.186**	ug/L	3190.772	12673	-0.000
	Mg	24	**1.985**	ug/L	195.963	3334	0.003
	Al	27	**1.452**	ug/L	120.655	6668	0.003
	P	31	**0.896**	ug/L	144.830	2672	0.000
	K	39	**-5.417**	ug/L	457.521	477892	-0.018
	Ca	43	**-7.417**	ug/L	162.968	387	-0.000
>	Sc	45		ug/L		648774	648773.746
	Ti	47	**0.137**	ug/L	69.137	204	0.000
	V	51	**0.956**	ug/L	142.111	-4846	0.004
	Cr	52	**-0.001**	ug/L	8551.825	-1455	-0.000
	Cr	53		ug/L		154172	-0.012
	Mn	55	**-0.004**	ug/L	511.164	1134	-0.000
	Fe	57	**-1.323**	ug/L	220.308	5600	-0.000
	Co	59	**0.006**	ug/L	127.423	159	0.000
	Ni	60	**-0.005**	ug/L	237.646	62	-0.000
	Cu	63		ug/L		168	0.000
	Cu	65	**-0.008**	ug/L	56.622	80	-0.000
	Zn	66	**-0.001**	ug/L	3292.973	419	-0.000
	Zn	67		ug/L		5856	-0.001
	Zn	68		ug/L		807	-0.000
>	Ge	74		ug/L		224188	224187.585
	As	75	**0.008**	ug/L	4861.354	284	0.000
	Se	77		ug/L		6185	-0.001
	Se	82	**0.331**	ug/L	47.707	12	0.000
	Kr	83		ug/L		82	0.000
	Sr	88	**0.005**	ug/L	10.136	240	0.000
	Y	89		ug/L		30	-0.000
	Zr	90	**0.041**	ug/L	11.533	309	0.001
	Mo	98	**0.025**	ug/L	25.280	138	0.000
	Ag	107	**0.004**	ug/L	101.984	65	0.000
	Cd	111	**0.019**	ug/L	23.584	21	0.000
	Cd	114		ug/L		52	0.000
>	In	115		ug/L		155418	155418.136
	Sn	120	**0.016**	ug/L	30.951	180	0.000
	Sb	121	**0.226**	ug/L	12.547	965	0.004
	Sb	123		ug/L		747	0.003
	Ba	135		ug/L		44	0.000
	Ba	137	**0.005**	ug/L	77.434	60	0.000
	Ho	165		ug/L		31	-0.000
>	Lu	175		ug/L		214908	214907.931
	Tl	205	**0.073**	ug/L	12.649	875	0.002
	Pb	208	**0.013**	ug/L	14.501	420	0.000
	Th	232	**0.033**	ug/L	6.002	480	0.001
	U	238	**0.006**	ug/L	89.530	2407	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	0.9999
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		96.6			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL
Method Description: 7471A, ILM04 ANALYST JXL1
Element: Hg

Date: 07/13/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 071309S1.SIF Results Data Set Name: 071309S2

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/13/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0026	0.0026	09:36:04	No
2			0.0025	0.0025	09:36:39	No
Mean:			0.0025			
SD :			0.0001			
%RSD:			2.0116			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/13/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0047	0.0072	09:38:01	No
2			0.0046	0.0071	09:38:35	No
Mean:			0.0046			
SD :			0.0001			
%RSD:			1.1672			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.02310
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/13/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0089	0.0114	09:39:58	No
2			0.0089	0.0115	09:40:33	No
Mean:			0.0089			
SD :			0.0001			
%RSD:			0.5682			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99055 Slope: 0.01750
Intercept : 0.00042

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/13/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0294	0.0320	09:41:58	No
2			0.0290	0.0315	09:42:33	No
Mean:			0.0292			
SD :			0.0003			
%RSD:			1.1424			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99775 Slope: 0.01416
Intercept : 0.00112

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/13/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0650	0.0676	09:43:58	No
2			0.0670	0.0695	09:44:32	No
Mean:			0.0660			
SD :			0.0014			
%RSD:			2.0933			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99895 Slope: 0.01299
Intercept : 0.00174

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/13/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1277	0.1302	09:45:59	No
2			0.1281	0.1306	09:46:33	No
Mean:			0.1279			
SD :			0.0003			
%RSD:			0.1987			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99964 Slope: 0.01265
Intercept : 0.00213

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0025	---	----	----	----
S0.2	0.0046	0.200	0.197	0.0001	1.2
S0.5	0.0089	0.500	0.535	0.0001	0.6
S2.0	0.0292	2.000	2.141	0.0003	1.1
S5.0	0.0660	5.000	5.051	0.0014	2.1
S10	0.1279	10.000	9.945	0.0003	0.2
Calib Blank	0.0025	---	----	----	----

Correlation Coefficient: 0.99964 Slope: 0.01265 Intercept: 0.0021

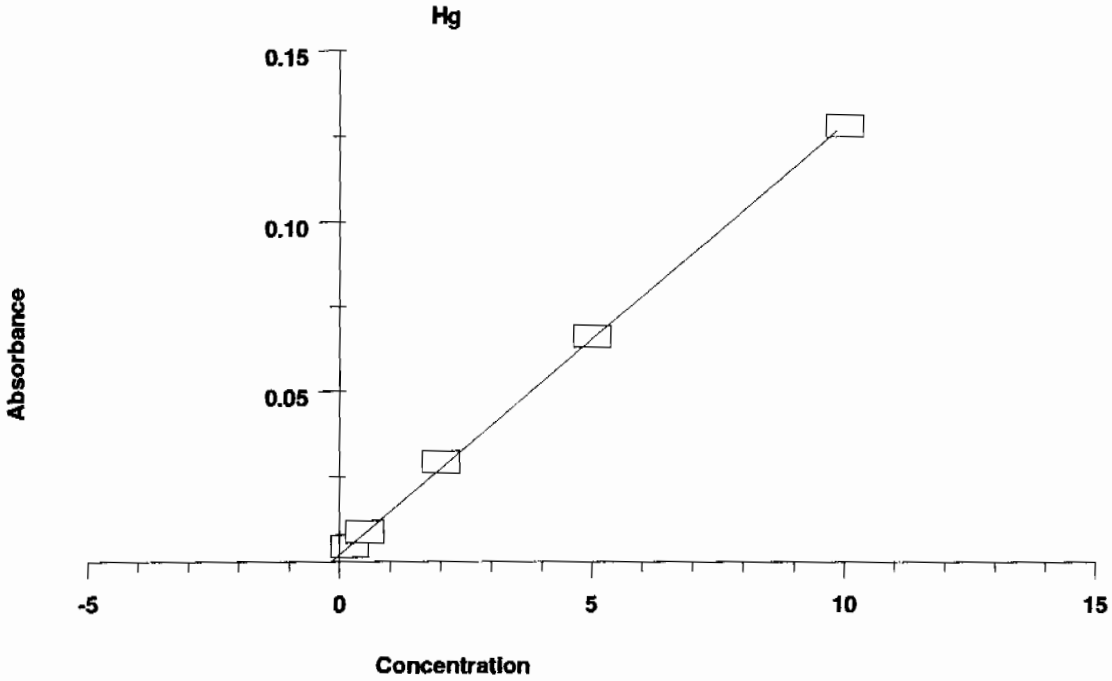

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/13/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.179	5.179	0.0676	0.0702	09:48:02	No
2	5.264	5.264	0.0687	0.0712	09:48:37	No
Mean:	5.221	5.221	0.0682			
SD :	0.0602	0.0602	0.0008			
%RSD:	1.2	1.2	1.1171			

QC value within specified limits.

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/13/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.117	-0.117	0.0007	0.0032	09:49:59	No
2	-0.126	-0.126	0.0005	0.0031	09:50:34	No
Mean:	-0.121	-0.121	0.0006			
SD :	0.0064	0.0064	0.0001			
%RSD:	5.3	5.3	13.7540			

QC value within specified limits.

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/13/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.156	0.156	0.0041	0.0066	09:51:56	No
2	0.135	0.135	0.0038	0.0064	09:52:31	No
Mean:	0.146	0.146	0.0040			
SD :	0.0146	0.0146	0.0002			
%RSD:	10.0	10.0	4.6526			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	09:53:56	No
2	5.219	5.219	0.0681	0.0707	09:54:31	No
Mean:	5.160	5.160	0.0674			
SD :	0.0831	0.0831	0.0011			
%RSD:	1.6	1.6	1.5602			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.014	0.014	0.0023	0.0048	09:55:59	No
2	0.023	0.023	0.0024	0.0050	09:56:34	No
Mean:	0.019	0.019	0.0024			
SD :	0.0063	0.0063	0.0001			
%RSD:	33.8	33.8	3.3712			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/13/2009
Sample ID: 1201870737|i||880997|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.145	-0.145	0.0003	0.0028	09:58:00	No
2	-0.154	-0.154	0.0002	0.0027	09:58:35	No
Mean:	-0.150	-0.150	0.0002			
SD :	0.0066	0.0066	0.0001			
%RSD:	4.4	4.4	35.8425			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/13/2009
Sample ID: 1201870738|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.783	3.783	0.0500	0.0525	10:00:01	No
2	3.816	3.816	0.0504	0.0529	10:00:35	No
Mean:	3.800	3.800	0.0502			
SD :	0.0230	0.0230	0.0003			
%RSD:	0.6	0.6	0.5806			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/13/2009
Sample ID: 232424001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.002	-0.002	0.0021	0.0046	10:02:01	No
2	-0.007	-0.007	0.0020	0.0046	10:02:35	No
Mean:	-0.005	-0.005	0.0021			
SD :	0.0040	0.0040	0.0001			
%RSD:	86.6	86.6	2.4535			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/13/2009
Sample ID: 232426001|i|||

%RSD: 1.7 1.7 1.5996

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Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/13/2009
Sample ID: 1201870745|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.025	0.025	0.0024	0.0050	10:15:50	No
2	-0.002	-0.002	0.0021	0.0046	10:16:25	No
Mean:	0.012	0.012	0.0023			
SD :	0.0185	0.0185	0.0002			
%RSD:	159.8	159.8	10.3056			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	10:17:50	No
2	4.942	4.942	0.0646	0.0672	10:18:24	No
Mean:	5.022	5.022	0.0656			
SD :	0.1122	0.1122	0.0014			
%RSD:	2.2	2.2	2.1625			

QC value within specified limits.

==========

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.043	-0.043	0.0016	0.0041	10:19:52	No
2	-0.052	-0.052	0.0015	0.0040	10:20:27	No
Mean:	-0.048	-0.048	0.0015			
SD :	0.0057	0.0057	0.0001			
%RSD:	11.9	11.9	4.7042			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/13/2009
Sample ID: 232429002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.240	0.240	0.0052	0.0077	10:21:52	No
2	0.235	0.235	0.0051	0.0076	10:22:27	No
Mean:	0.238	0.238	0.0051			
SD :	0.0035	0.0035	0.0000			
%RSD:	1.5	1.5	0.8527			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/13/2009
Sample ID: 232429003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.189	0.189	0.0045	0.0070	10:23:51	No
2	0.176	0.176	0.0044	0.0069	10:24:26	No
Mean:	0.183	0.183	0.0044			
SD :	0.0087	0.0087	0.0001			
%RSD:	4.8	4.8	2.4733			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/13/2009
Sample ID: 232429004|i|||

%RSD: 1.7 1.7 1.4172

==========

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/13/2009
Sample ID: 232429010|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.233	0.233	0.0051	0.0076	10:37:52	No
2	0.223	0.223	0.0049	0.0075	10:38:27	No
Mean:	0.228	0.228	0.0050			
SD :	0.0069	0.0069	0.0001			
%RSD:	3.0	3.0	1.7516			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/13/2009
Sample ID: 232429011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.044	0.044	0.0027	0.0052	10:39:54	No
2	0.039	0.039	0.0026	0.0052	10:40:28	No
Mean:	0.042	0.042	0.0027			
SD :	0.0041	0.0041	0.0001			
%RSD:	9.8	9.8	1.9407			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.042	5.042	0.0659	0.0684	10:41:55	No
2	5.045	5.045	0.0659	0.0685	10:42:29	No
Mean:	5.044	5.044	0.0659			
SD :	0.0015	0.0015	0.0000			
%RSD:						

QC value within specified limits.

==========

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.064	-0.064	0.0013	0.0039	10:43:58	No
2	-0.060	-0.060	0.0014	0.0039	10:44:32	No
Mean:	-0.062	-0.062	0.0013			
SD :	0.0028	0.0028	0.0000			
%RSD:	4.5	4.5	2.6158			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/13/2009
Sample ID: 232429012|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.371	0.371	0.0068	0.0093	10:45:57	No
2	0.372	0.372	0.0068	0.0094	10:46:32	No
Mean:	0.371	0.371	0.0068			
SD :	0.0010	0.0010	0.0000			
%RSD:	0.3	0.3	0.1822			

==========

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/13/2009
Sample ID: 232429013|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.093	0.093	0.0033	0.0058	10:47:52	No
2	0.091	0.091	0.0033	0.0058	10:48:27	No
Mean:	0.092	0.092	0.0033			
SD :	0.0018	0.0018	0.0000			
%RSD:	1.9	1.9	0.6877			

Element: Hg Seq. No.: 38 AS Loc.: 34 Date: 07/13/2009
Sample ID: 232429014|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.295	0.295	0.0059	0.0084	10:49:47	No
2	0.296	0.296	0.0059	0.0084	10:50:22	No
Mean:	0.296	0.296	0.0059			
SD :	0.0013	0.0013	0.0000			
%RSD:	0.4	0.4	0.2724			

Element: Hg Seq. No.: 39 AS Loc.: 35 Date: 07/13/2009
Sample ID: 232429015|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.250	0.250	0.0053	0.0078	10:51:43	No
2	0.239	0.239	0.0052	0.0077	10:52:18	No
Mean:	0.245	0.245	0.0052			
SD :	0.0073	0.0073	0.0001			
%RSD:	3.0	3.0	1.7687			

Element: Hg Seq. No.: 40 AS Loc.: 36 Date: 07/13/2009
Sample ID: 1201873031|i||881913|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.032	-0.032	0.0017	0.0043	10:53:40	No
2	-0.031	-0.031	0.0017	0.0043	10:54:15	No
Mean:	-0.031	-0.031	0.0017			
SD :	0.0010	0.0010	0.0000			
%RSD:	3.1	3.1	0.7150			

Element: Hg Seq. No.: 41 AS Loc.: 37 Date: 07/13/2009
Sample ID: 1201873032|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.475	3.475	0.0461	0.0486	10:55:38	No
2	3.365	3.365	0.0447	0.0472	10:56:13	No
Mean:	3.420	3.420	0.0454			
SD :	0.0778	0.0778	0.0010			
%RSD:	2.3	2.3	2.1674			

Element: Hg Seq. No.: 42 AS Loc.: 38 Date: 07/13/2009
Sample ID: 232504001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.116	0.116	0.0036	0.0061	10:57:35	No
2	0.112	0.112	0.0035	0.0061	10:58:09	No
Mean:	0.114	0.114	0.0036			
SD :	0.0025	0.0025	0.0000			

%RSD: 2.2 2.2 0.9016

==========

Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 07/13/2009
Sample ID: 232504002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.105	0.105	0.0035	0.0060	10:59:32	No
2	0.090	0.090	0.0033	0.0058	11:00:07	No
Mean:	0.097	0.097	0.0034			
SD :	0.0108	0.0108	0.0001			
%RSD:	11.0	11.0	4.0497			

==========

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 07/13/2009
Sample ID: 232504003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.390	0.390	0.0071	0.0096	11:01:30	No
2	0.372	0.372	0.0068	0.0094	11:02:05	No
Mean:	0.381	0.381	0.0069			
SD :	0.0123	0.0123	0.0002			
%RSD:	3.2	3.2	2.2337			

==========

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 07/13/2009
Sample ID: 232504004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.166	0.166	0.0042	0.0068	11:03:29	No
2	0.150	0.150	0.0040	0.0066	11:04:04	No
Mean:	0.158	0.158	0.0041			
SD :	0.0114	0.0114	0.0001			
%RSD:	7.2	7.2	3.4993			

==========

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.130	5.130	0.0670	0.0695	11:05:30	No
2	5.073	5.073	0.0663	0.0688	11:06:05	No
Mean:	5.101	5.101	0.0666			
SD :	0.0403	0.0403	0.0005			
%RSD:	0.8	0.8	0.7652			

QC value within specified limits.

==========

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.056	-0.056	0.0014	0.0040	11:07:33	No
2	-0.058	-0.058	0.0014	0.0039	11:08:08	No
Mean:	-0.057	-0.057	0.0014			
SD :	0.0014	0.0014	0.0000			
%RSD:	2.4	2.4	1.2413			

QC value within specified limits.

==========

Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 07/13/2009
Sample ID: 232504005|i|||

%RSD: 6.0 6.0 2.5541

==========

Element: Hg Seq. No.: 54 AS Loc.: 48 Date: 07/13/2009
Sample ID: 232504011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.022	-0.022	0.0019	0.0044	11:21:35	No
2	-0.036	-0.036	0.0017	0.0042	11:22:10	No
Mean:	-0.029	-0.029	0.0018			
SD :	0.0101	0.0101	0.0001			
%RSD:	35.2	35.2	7.2230			

==========

Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 07/13/2009
Sample ID: 232504012|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.073	0.073	0.0030	0.0056	11:23:30	No
2	0.069	0.069	0.0030	0.0055	11:24:05	No
Mean:	0.071	0.071	0.0030			
SD :	0.0030	0.0030	0.0000			
%RSD:	4.3	4.3	1.2653			

==========

Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 07/13/2009
Sample ID: 232504013|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.132	0.132	0.0038	0.0063	11:25:25	No
2	0.124	0.124	0.0037	0.0062	11:26:00	No
Mean:	0.128	0.128	0.0037			
SD :	0.0058	0.0058	0.0001			
%RSD:	4.5	4.5	1.9637			

==========

Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 07/13/2009
Sample ID: 232504014|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.072	-0.072	0.0012	0.0037	11:27:22	No
2	-0.079	-0.079	0.0011	0.0037	11:27:57	No
Mean:	-0.075	-0.075	0.0012			
SD :	0.0047	0.0047	0.0001			
%RSD:	6.2	6.2	5.0576			

==========

Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.976	4.976	0.0651	0.0676	11:29:22	No
2	5.108	5.108	0.0667	0.0693	11:29:57	No
Mean:	5.042	5.042	0.0659			
SD :	0.0927	0.0927	0.0012			
%RSD:	1.8	1.8	1.7799			

QC value within specified limits.

==========

Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	0.0015	0.0040	11:31:25	No
2	-0.046	-0.046	0.0015	0.0041	11:31:59	No
Mean:	-0.050	-0.050	0.0015			
SD :	0.0051	0.0051	0.0001			
%RSD:	10.2	10.2	4.2953			

QC value within specified limits.

==========

Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 07/13/2009
Sample ID: 232509001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.787	1.787	0.0247	0.0273	11:33:23	No
2	1.785	1.785	0.0247	0.0272	11:33:58	No
Mean:	1.786	1.786	0.0247			
SD :	0.0015	0.0015	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 07/13/2009
Sample ID: 1201873033|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.961	0.961	0.0143	0.0168	11:35:20	No
2	0.924	0.924	0.0138	0.0163	11:35:55	No
Mean:	0.942	0.942	0.0140			
SD :	0.0259	0.0259	0.0003			
%RSD:	2.8	2.8	2.3359			

==========

Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 07/13/2009
Sample ID: 1201873034|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.725	3.725	0.0492	0.0518	11:37:17	No
2	3.714	3.714	0.0491	0.0516	11:37:52	No
Mean:	3.720	3.720	0.0492			
SD :	0.0083	0.0083	0.0001			
%RSD:	0.2	0.2	0.2132			

==========

Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 07/13/2009
Sample ID: 1201873037|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.892	3.892	0.0514	0.0539	11:39:15	No
2	3.893	3.893	0.0514	0.0539	11:39:49	No
Mean:	3.893	3.893	0.0514			
SD :	0.0008	0.0008	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 07/13/2009
Sample ID: 1201873036|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.267	0.267	0.0055	0.0080	11:41:13	No
2	0.248	0.248	0.0053	0.0078	11:41:48	No
Mean:	0.258	0.258	0.0054			
SD :	0.0134	0.0134	0.0002			

%RSD:	5.2	5.2	3.1457

Element: Hg Seq. No.: 65 AS Loc.: 57 Date: 07/13/2009
Sample ID: 232509002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.313	0.313	0.0061	0.0086	11:43:12	No
2	0.292	0.292	0.0058	0.0084	11:43:47	No
Mean:	0.303	0.303	0.0060			
SD :	0.0145	0.0145	0.0002			
%RSD:	4.8	4.8	3.0720			

Element: Hg Seq. No.: 66 AS Loc.: 58 Date: 07/13/2009
Sample ID: 232509003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	0.0013	0.0038	11:45:11	No
2	-0.067	-0.067	0.0013	0.0038	11:45:46	No
Mean:	-0.067	-0.067	0.0013			
SD :	0.0003	0.0003	0.0000			
%RSD:	0.5	0.5	0.3351			

Element: Hg Seq. No.: 67 AS Loc.: 59 Date: 07/13/2009
Sample ID: 232509004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.344	1.344	0.0191	0.0217	11:47:11	No
2	1.328	1.328	0.0189	0.0215	11:47:45	No
Mean:	1.336	1.336	0.0190			
SD :	0.0116	0.0116	0.0001			
%RSD:	0.9	0.9	0.7745			

Element: Hg Seq. No.: 68 AS Loc.: 60 Date: 07/13/2009
Sample ID: 232509005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.566	0.566	0.0093	0.0118	11:49:10	No
2	0.563	0.563	0.0093	0.0118	11:49:45	No
Mean:	0.565	0.565	0.0093			
SD :	0.0016	0.0016	0.0000			
%RSD:	0.3	0.3	0.2214			

Element: Hg Seq. No.: 69 AS Loc.: 61 Date: 07/13/2009
Sample ID: 232509006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.184	0.184	0.0045	0.0070	11:51:12	No
2	0.171	0.171	0.0043	0.0068	11:51:47	No
Mean:	0.178	0.178	0.0044			
SD :	0.0089	0.0089	0.0001			
%RSD:	5.0	5.0	2.5778			

Element: Hg Seq. No.: 70 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	5.144	5.144	0.0672	0.0697	11:53:13	No
2	5.119	5.119	0.0669	0.0694	11:53:48	No
Mean:	5.131	5.131	0.0670			
SD :	0.0183	0.0183	0.0002			
%RSD:	0.4	0.4	0.3449			

QC value within specified limits.

==========

Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	0.0014	0.0039	11:55:16	No
2	-0.064	-0.064	0.0013	0.0038	11:55:51	No
Mean:	-0.061	-0.061	0.0014			
SD :	0.0051	0.0051	0.0001			
%RSD:	8.4	8.4	4.7284			

QC value within specified limits.

==========

Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 07/13/2009
Sample ID: 1201873038|i||881916|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.121	-0.121	0.0006	0.0031	11:57:18	No
2	-0.129	-0.129	0.0005	0.0030	11:57:53	No
Mean:	-0.125	-0.125	0.0006			
SD :	0.0055	0.0055	0.0001			
%RSD:	4.4	4.4	12.7065			

==========

Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 07/13/2009
Sample ID: 1201873039|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.532	3.532	0.0468	0.0493	11:59:16	No
2	3.416	3.416	0.0453	0.0479	11:59:50	No
Mean:	3.474	3.474	0.0461			
SD :	0.0817	0.0817	0.0010			
%RSD:	2.4	2.4	2.2434			

==========

Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 07/13/2009
Sample ID: 232582001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.170	0.170	0.0043	0.0068	12:01:10	No
2	0.157	0.157	0.0041	0.0066	12:01:46	No
Mean:	0.163	0.163	0.0042			
SD :	0.0090	0.0090	0.0001			
%RSD:	5.5	5.5	2.7076			

==========

Element: Hg Seq. No.: 75 AS Loc.: 65 Date: 07/13/2009
Sample ID: 232582002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.106	0.106	0.0035	0.0060	12:03:06	No
2	0.108	0.108	0.0035	0.0060	12:03:40	No
Mean:	0.107	0.107	0.0035			
SD :	0.0013	0.0013	0.0000			

Miscellaneous

Prep LogBook

Analyst: FGA Verified by:_____

Batch: 881346

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871695	UI652380	.508	g
MS	1201871697	UI090622-01	.25	mL
MS	1201871697	UI090622-06	.25	mL
MSD	1201871699	UI090622-01	.25	mL
MSD	1201871699	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871694		SW846 3050B	30-JUN-2009 14:00	0.522 g	50 mL	95.78544	SOIL
LCS	1201871695		SW846 3050B	30-JUN-2009 14:00	0.508 g	50 mL	98.4252	SOIL
SAMPLE	232509001		SW846 3050B	30-JUN-2009 14:00	0.5 g	50 mL	100	SOIL
DUP	1201871696	232509001	SW846 3050B	30-JUN-2009 14:00	0.508 g	50 mL	98.4252	SOIL
MS	1201871697	232509001	SW846 3050B	30-JUN-2009 14:00	0.506 g	50 mL	98.81423	SOIL
MSD	1201871699	232509001	SW846 3050B	30-JUN-2009 14:00	0.509 g	50 mL	98.23183	SOIL
SDILT	1201871698	232509001	SW846 3050B	30-JUN-2009 14:00	0.5 g	50 mL	100	SOIL
SAMPLE	232509002		SW846 3050B	30-JUN-2009 14:00	0.508 g	50 mL	98.4252	SOIL
SAMPLE	232509003		SW846 3050B	30-JUN-2009 14:00	0.502 g	50 mL	99.60159	SOIL
SAMPLE	232509004		SW846 3050B	30-JUN-2009 14:00	0.511 g	50 mL	97.84736	SOIL
SAMPLE	232509005		SW846 3050B	30-JUN-2009 14:00	0.519 g	50 mL	96.33911	SOIL
SAMPLE	232509006		SW846 3050B	30-JUN-2009 14:00	0.522 g	50 mL	95.78544	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments: Brown,moist,clumpy soil.

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881362

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871725	UI647733-01	.511	g
MS	1201871727	UI042709-A	.5	mL
MS	1201871727	UI042709-B	.5	mL
MSD	1201871729	UI042709-A	.5	mL
MSD	1201871729	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871724		SW846 3050B	06-JUL-2009 08:20	0.5 g	50 mL	100	SOIL
LCS	1201871725		SW846 3050B	06-JUL-2009 08:20	0.511 g	50 mL	97.84736	SOIL
SAMPLE	232509001		SW846 3050B	06-JUL-2009 08:20	0.5 g	50 mL	100	SOIL
DUP	1201871726	232509001	SW846 3050B	06-JUL-2009 08:20	0.525 g	50 mL	95.2381	SOIL
MS	1201871727	232509001	SW846 3050B	06-JUL-2009 08:20	0.505 g	50 mL	99.0099	SOIL
MSD	1201871729	232509001	SW846 3050B	06-JUL-2009 08:20	0.507 g	50 mL	98.61933	SOIL
SDILT	1201871728	232509001	SW846 3050B	06-JUL-2009 08:20	0.5 g	50 mL	100	SOIL
SAMPLE	232509002		SW846 3050B	06-JUL-2009 08:20	0.503 g	50 mL	99.40358	SOIL
SAMPLE	232509003		SW846 3050B	06-JUL-2009 08:20	0.508 g	50 mL	98.4252	SOIL
SAMPLE	232509004		SW846 3050B	06-JUL-2009 08:20	0.51 g	50 mL	98.03922	SOIL
SAMPLE	232509005		SW846 3050B	06-JUL-2009 08:20	0.505 g	50 mL	99.0099	SOIL
SAMPLE	232509006		SW846 3050B	06-JUL-2009 08:20	0.5 g	50 mL	100	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments: sample#232509001 is a brown, moist, and clumpy soil.

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881912

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873032	UI031809A	.201	g
MS	1201873034	WHG090710-14	.3	mL
MSD	1201873037	WHG090710-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873031		SW846 7471A Prep	10-JUL-2009 14:20	0.58 g	30 mL	51.72414	SOIL
LCS	1201873032		SW846 7471A Prep	10-JUL-2009 14:20	0.201 g	30 mL	149.25373	SOIL
SAMPLE	232504001		SW846 7471A Prep	10-JUL-2009 14:20	0.582 g	30 mL	51.54639	SOIL
SAMPLE	232504002		SW846 7471A Prep	10-JUL-2009 14:20	0.586 g	30 mL	51.19454	SOIL
SAMPLE	232504003		SW846 7471A Prep	10-JUL-2009 14:20	0.581 g	30 mL	51.63511	SOIL
SAMPLE	232504004		SW846 7471A Prep	10-JUL-2009 14:20	0.542 g	30 mL	55.35055	SOIL
SAMPLE	232504005		SW846 7471A Prep	10-JUL-2009 14:20	0.599 g	30 mL	50.08347	SOIL
SAMPLE	232504006		SW846 7471A Prep	10-JUL-2009 14:20	0.573 g	30 mL	52.35602	SOIL
SAMPLE	232504007		SW846 7471A Prep	10-JUL-2009 14:20	0.521 g	30 mL	57.58157	SOIL
SAMPLE	232504008		SW846 7471A Prep	10-JUL-2009 14:20	0.51 g	30 mL	58.82353	SOIL
SAMPLE	232504009		SW846 7471A Prep	10-JUL-2009 14:20	0.521 g	30 mL	57.58157	SOIL
SAMPLE	232504010		SW846 7471A Prep	10-JUL-2009 14:20	0.56 g	30 mL	53.57143	SOIL
SAMPLE	232504011		SW846 7471A Prep	10-JUL-2009 14:20	0.534 g	30 mL	56.17978	SOIL
SAMPLE	232504012		SW846 7471A Prep	10-JUL-2009 14:20	0.508 g	30 mL	59.05512	SOIL
SAMPLE	232504013		SW846 7471A Prep	10-JUL-2009 14:20	0.597 g	30 mL	50.25126	SOIL
SAMPLE	232504014		SW846 7471A Prep	10-JUL-2009 14:20	0.546 g	30 mL	54.94505	SOIL
SAMPLE	232509001		SW846 7471A Prep	10-JUL-2009 14:20	0.533 g	30 mL	56.28518	SOIL
DUP	1201873033	232509001	SW846 7471A Prep	10-JUL-2009 14:20	0.519 g	30 mL	57.80347	SOIL
MS	1201873034	232509001	SW846 7471A Prep	10-JUL-2009 14:20	0.561 g	30 mL	53.47594	SOIL
MSD	1201873037	232509001	SW846 7471A Prep	10-JUL-2009 14:20	0.535 g	30 mL	56.07477	SOIL
SDILT	1201873036	232509001	SW846 7471A Prep	10-JUL-2009 14:20	0.533 g	30 mL	56.28518	SOIL
SAMPLE	232509002		SW846 7471A Prep	10-JUL-2009 14:20	0.579 g	30 mL	51.81347	SOIL
SAMPLE	232509003		SW846 7471A Prep	10-JUL-2009 14:20	0.516 g	30 mL	58.13953	SOIL
SAMPLE	232509004		SW846 7471A Prep	10-JUL-2009 14:20	0.594 g	30 mL	50.50505	SOIL
SAMPLE	232509005		SW846 7471A Prep	10-JUL-2009 14:20	0.532 g	30 mL	56.39098	SOIL
SAMPLE	232509006		SW846 7471A Prep	10-JUL-2009 14:20	0.556 g	30 mL	53.95683	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution

Comments: Sample 232509001 consist of brown rocky, moist soil.
Digestion Start Date: 10-JUL-09 14:20
Digestion End Date: 10-JUL-09 14:50

Prep LogBook

1144356-C	2 mL	Hg reducing agent
WHG090710-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090710-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG090710-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090710-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090710-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090710-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 707930
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
03-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
881347	See Below		

Potentially affected work order(s)(SDG): 232509(09-2500)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for MS/MSD, or PS/PSD

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201871697MS 2. Failed RPD for MS/MSD, or PS/PSD: QC 1201871699MSD 3. Failed Recovery for MSD/PSD: QC 1201871699MSD	1. The matrix spike recovery failed outside of the control limits for aluminum,calcium,manganese and sodium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The matrix spike and matrix spike duplicate % RPD failed outside of the control limits for aluminum,calcium,iron and manganese due to possible matrix interferences and/or sample non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike duplicate recovery failed outside of the control limits for aluminum due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:
Helen Camello 03-JUL-09

Data Validator/Group Leader:
Louise Smith 06-JUL-09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 710801
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
13-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
MERCURY	SW846 7471A	Solid	LANL
Batch ID:	**Sample Numbers:**		
881913	See Below		

Potentially affected work order(s)(SDG): 232504(09-2498),232509(09-2500)

Application Issues:

Failed RPD for DUP

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed RPD for DUP: QC 1201873033DUP	1. The sample and sample duplicate % RPD failed outside the control limits for Hg due to possible sample non-homogeneity and/or matrix interference. Sample is a rocky, moist brown soil. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Jason Loy 13-JUL-09

Data Validator/Group Leader:

Eric Lawson 13-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Standard Logbook

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.13 **Opened:** 01-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 02-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090610-49.14 **Opened:** 02-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 03-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Standard Logbook

Serial ID: UI647733-01 **Opened:** 02-APR-07 **Amount :** 80 g
Name: ICPMSSOILSRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis
Supplier: ERA
Description: ICPMS Soil LCS (Reference)
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	8270 mg/kg	Antimony	55.8 mg/kg
Arsenic	255 mg/kg	Barium	469 mg/kg
Beryllium	86.4 mg/kg	Boron	138 mg/kg
Cadmium	119 mg/kg	Calcium	3760 mg/kg
Chromium	71.2 mg/kg	Cobalt	79.6 mg/kg
Copper	96.2 mg/kg	Iron	13200 mg/kg
Lead	169 mg/kg	Lithium	8.01 mg/kg
Magnesium	2990 mg/kg	Manganese	364 mg/kg
Mercury	4.18 mg/kg	Molybdenum	79.6 mg/kg
Nickel	101 mg/kg	Phosphorous	752 mg/kg
Potassium	2420 mg/kg	Selenium	171 mg/kg
Silver	116 mg/kg	Sodium	575 mg/kg
Strontium	144 mg/kg	Thallium	203 mg/kg
Thorium	17.2 mg/kg	Titanium	255 mg/kg
Uranium	2.12 mg/kg	Uranium-235	.0153 mg/kg
Uranium-238	2.105 mg/kg	Vanadium	134 mg/kg
Zinc	202 mg/kg	Zirconium	6.83 mg/kg

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Standard Logbook

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090710-01 **Opened:** 10-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 10-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090710-02 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 10-JUL-09
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090710-07 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Standard Logbook

Serial ID: WHG090710-08 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090710-09 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090710-10 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-11 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Standard Logbook

Serial ID: WHG090710-12 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-14 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090701-42 **Opened:** 01-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 02-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090701-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090701-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090701-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090701-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090701-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090701-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090701-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090701-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090701-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090701-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090701-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090701-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090701-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090701-43 **Opened:** 01-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 02-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090701-44 **Opened:** 01-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1143746

Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09

Type: Working **Expires:** 02-JUL-09

Employee: Helen Camello

Supplier: o2si

Description: Trace ICP Calibration Standard 1.0ppm

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090701-45 **Opened:** 01-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1143746
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 02-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090701-46 **Opened:** 01-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1143746
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 02-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090701-47 **Opened:** 01-JUL-09 **Solvent :** 3%HCL &1%HNO3-1143746
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 02-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WI090702-42 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090702-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090702-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090702-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090702-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090702-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090702-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090702-43 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746

Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09

Type: Working **Expires:** 03-JUL-09

Employee: Helen Camello

Supplier: GEL

Description: TRACE ICP 0.5/CCV CALIBRATION STD.

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090702-44 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1143746

Name: TRACE ICP SCAL 1.0 **Received:** 02-JUL-09

Type: Working **Expires:** 03-JUL-09

Employee: Helen Camello

Supplier: o2si

Description: Trace ICP Calibration Standard 1.0ppm

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090702-45 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1143746
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090702-46 **Opened:** 02-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1143746
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090702-47 **Opened:** 02-JUL-09 **Solvent :** 3%HCL &1%HNO3-1143746
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090707-04 **Opened:** 07-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 07-JUL-09 **Solvent :** 2%HNO3/1%HCl-1150055
Type: Working **Expires:** 08-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090707-04A **Opened:** 07-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1150055

Name: ICPMS Cal Standard 10 **Received:** 07-JUL-09

Type: Working **Expires:** 08-JUL-09

Employee: Paul Boyd

Supplier: GEL

Description: ICPMS Calibration Standard (10 ppb)

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090707-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090707-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090707-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090707-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090707-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090707-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090707-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090707-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090707-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090707-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090707-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090707-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090707-05 **Opened:** 07-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1150055
Name: ICPMS ICV **Received:** 07-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L

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Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090707-06 **Opened:** 07-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1150055
Name: ICPMS CRDL **Received:** 07-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L

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Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090707-07 **Opened:** 07-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 07-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1150055
Type: Working **Expires:** 08-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090707-08 **Opened:** 07-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1150055
Name: ICPMS ICSAB **Received:** 07-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L

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Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090707-70 **Opened:** 07-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1150055
Name: ICPMS LINEAR RANGE ST **Received:** 07-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%

Standard Logbook

Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1143746 **Opened:** 29-JUN-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JUN-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 05-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Standard Logbook

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1150055 **Opened:** 06-JUL-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 06-JUL-09
Type: Reagent/Solvent **Expires:** 13-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2500-1

Sample Analysis

Sample ID	Client ID
232510001	CAMO-09-6533
1201871706	Method Blank (MB) **ICP**
1201871707	Laboratory Control Sample (LCS)
1201871710	232510001(CAMO-09-6533L) Serial Dilution (SD)
1201871708	232510001(CAMO-09-6533D) Sample Duplicate (DUP)
1201871709	232510001(CAMO-09-6533S) Matrix Spike (MS)
1201871711	Method Blank (MB) **ICP-MS**
1201871712	Laboratory Control Sample (LCS)
1201871715	232370001(CAMO-09-6053L) Serial Dilution (SD)
1201871713	232370001(CAMO-09-6053D) Sample Duplicate (DUP)
1201871714	232370001(CAMO-09-6053S) Matrix Spike (MS)
1201871797	Method Blank (MB) **CVAA**
1201871798	Laboratory Control Sample (LCS)
1201871801	232510001(CAMO-09-6533L) Serial Dilution (SD)
1201871799	232510001(CAMO-09-6533D) Sample Duplicate (DUP)
1201871800	232510001(CAMO-09-6533S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Method/Analysis Information

Analytical Batch: 881354, 881357 and 881396

Prep Batch : 881353, 881356 and 881395

Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3005/6010B, SW846 3005/6020 and SW846 7470A
Prep Method :	SW846 3005A and SW846 7470A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232510001 (CAMO-09-6533)-ICP and CVAA and 232370001 (CAMO-09-6053)-ICP-MS.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of thallium, as indicated by the "N" qualifier.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 708200. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Pauson **Date:** 7/17/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2500-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232510001 **BASIS:** As Received **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-6533 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/04/09 02:51	090703-2	881357
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/04/09 02:51	090703-2	881357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/04/09 02:51	090703-2	881357
7440-70-2	Calcium	100	ug/L	U	30	100	100	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-47-3	Chromium	5	ug/L	U	2	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	06/30/09 19:34	063009-1	881354
7439-89-6	Iron	100	ug/L	U	25	100	100	1	P	HSC	06/30/09 19:34	063009-1	881354
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/04/09 02:51	090703-2	881357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	06/30/09 19:34	063009-1	881354
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/04/09 02:51	090703-2	881357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	ETL	07/02/09 11:04	070209W1-4	881396
7440-02-0	Nickel	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-09-7	Potassium	126	ug/L	J	50	150	150	1	P	HSC	06/30/09 19:34	063009-1	881354
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-23-5	Sodium	85.2	ug/L	J	45	150	150	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	PRB	07/04/09 15:26	090703-3	881357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:34	063009-1	881354
7440-66-6	Zinc	10	ug/L	U	2	10	10	1	P	HSC	06/30/09 19:34	063009-1	881354

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881354	881353	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881357	881356	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881396	881395	SW846 7470A Prep	20	mL	20	mL	07/01/09	TXB3

Quality Control Summary

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5320	ug/L	5000	ug/L	106.4	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Arsenic	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Barium	536	ug/L	500	ug/L	107.3	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Calcium	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Cobalt	480	ug/L	500	ug/L	96.1	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Copper	522	ug/L	500	ug/L	104.3	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Iron	5220	ug/L	5000	ug/L	104.4	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Magnesium	5500	ug/L	5000	ug/L	110	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Nickel	530	ug/L	500	ug/L	105.9	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Potassium	2480	ug/L	2500	ug/L	99.1	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Selenium	2630	ug/L	2500	ug/L	105.2	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Silver	256	ug/L	250	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Sodium	2650	ug/L	2500	ug/L	106.1	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Zinc	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30–JUN–09 08:32	063009–1
	Mercury	5.23	ug/L	5	ug/L	104.6	90.0 – 110.0	AV	02–JUL–09 08:19	070209W1–4
	Antimony	48.1	ug/L	50	ug/L	96.2	90.0 – 110.0	MS	04–JUL–09 01:07	090703–2
	Beryllium	51.6	ug/L	50	ug/L	103.2	90.0 – 110.0	MS	04–JUL–09 01:07	090703–2
	Cadmium	52.5	ug/L	50	ug/L	105	90.0 – 110.0	MS	04–JUL–09 01:07	090703–2
	Lead	51.3	ug/L	50	ug/L	102.6	90.0 – 110.0	MS	04–JUL–09 01:07	090703–2
	Manganese	48.7	ug/L	50	ug/L	97.4	90.0 – 110.0	MS	04–JUL–09 01:07	090703–2
	Thallium	49.7	ug/L	50	ug/L	99.4	90.0 – 110.0	MS	04–JUL–09 14:15	090703–3
CCV01										
	Aluminum	5240	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Arsenic	515	ug/L	500	ug/L	103.1	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Barium	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Chromium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Cobalt	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30–JUN–09 09:33	063009–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Copper	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Iron	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Magnesium	5250	ug/L	5000	ug/L	105.1	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Nickel	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Potassium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Selenium	535	ug/L	500	ug/L	107	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Silver	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Sodium	10200	ug/L	10000	ug/L	102.2	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Zinc	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Mercury	4.85	ug/L	5	ug/L	97	80.0 – 120.0	AV	02–JUL–09 08:25	070209W1–4
	Antimony	51.5	ug/L	50	ug/L	102.9	90.0 – 110.0	MS	04–JUL–09 01:31	090703–2
	Beryllium	53.8	ug/L	50	ug/L	107.6	90.0 – 110.0	MS	04–JUL–09 01:31	090703–2
	Cadmium	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	04–JUL–09 01:31	090703–2
	Lead	52.2	ug/L	50	ug/L	104.4	90.0 – 110.0	MS	04–JUL–09 01:31	090703–2
	Manganese	52.1	ug/L	50	ug/L	104.2	90.0 – 110.0	MS	04–JUL–09 01:31	090703–2
	Thallium	48.9	ug/L	50	ug/L	97.7	90.0 – 110.0	MS	04–JUL–09 14:33	090703–3
CCV02										
	Aluminum	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Arsenic	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Barium	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Calcium	5260	ug/L	5000	ug/L	105.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Chromium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Cobalt	500	ug/L	500	ug/L	100	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Copper	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Magnesium	5280	ug/L	5000	ug/L	105.6	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Nickel	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Potassium	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Selenium	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	30–JUN–09 09:54	063009–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Sodium	10300	ug/L	10000	ug/L	103.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Zinc	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Mercury	4.78	ug/L	5	ug/L	95.5	80.0 – 120.0	AV	02–JUL–09 08:49	070209W1–4
	Antimony	53.3	ug/L	50	ug/L	106.7	90.0 – 110.0	MS	04–JUL–09 01:45	090703–2
	Beryllium	52	ug/L	50	ug/L	104	90.0 – 110.0	MS	04–JUL–09 01:45	090703–2
	Cadmium	49.6	ug/L	50	ug/L	99.3	90.0 – 110.0	MS	04–JUL–09 01:45	090703–2
	Lead	53.2	ug/L	50	ug/L	106.3	90.0 – 110.0	MS	04–JUL–09 01:45	090703–2
	Manganese	50.1	ug/L	50	ug/L	100.2	90.0 – 110.0	MS	04–JUL–09 01:45	090703–2
	Thallium	48.5	ug/L	50	ug/L	96.9	90.0 – 110.0	MS	04–JUL–09 15:03	090703–3
CCV03										
	Aluminum	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Arsenic	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Barium	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Calcium	5150	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Chromium	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Cobalt	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Copper	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Iron	4940	ug/L	5000	ug/L	98.9	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Magnesium	5190	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Nickel	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Potassium	4790	ug/L	5000	ug/L	95.9	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Selenium	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Silver	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Zinc	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30–JUN–09 10:57	063009–1
	Mercury	4.76	ug/L	5	ug/L	95.3	80.0 – 120.0	AV	02–JUL–09 09:13	070209W1–4
	Antimony	50.6	ug/L	50	ug/L	101.1	90.0 – 110.0	MS	04–JUL–09 02:23	090703–2

METALS
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Initial and Continuing Calibration Verification

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	54.4	ug/L	50	ug/L	108.9	90.0 – 110.0	MS	04–JUL–09 02:23	090703–2
	Cadmium	49.2	ug/L	50	ug/L	98.4	90.0 – 110.0	MS	04–JUL–09 02:23	090703–2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	04–JUL–09 02:23	090703–2
	Manganese	52.9	ug/L	50	ug/L	105.8	90.0 – 110.0	MS	04–JUL–09 02:23	090703–2
	Thallium	47	ug/L	50	ug/L	94	90.0 – 110.0	MS	04–JUL–09 15:30	090703–3
CCV04										
	Aluminum	5210	ug/L	5000	ug/L	104.3	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Arsenic	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Barium	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Chromium	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Cobalt	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Copper	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Iron	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Nickel	500	ug/L	500	ug/L	100	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Potassium	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Selenium	526	ug/L	500	ug/L	105.3	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Silver	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Sodium	10200	ug/L	10000	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Zinc	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 11:52	063009–1
	Mercury	4.77	ug/L	5	ug/L	95.4	80.0 – 120.0	AV	02–JUL–09 09:36	070209W1–4
	Antimony	49.4	ug/L	50	ug/L	98.8	90.0 – 110.0	MS	04–JUL–09 02:56	090703–2
	Beryllium	55.1	ug/L	50	ug/L	110.3	90.0 – 110.0	MS	04–JUL–09 02:56	090703–2
	Cadmium	48.3	ug/L	50	ug/L	96.7	90.0 – 110.0	MS	04–JUL–09 02:56	090703–2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	04–JUL–09 02:56	090703–2
	Manganese	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	04–JUL–09 02:56	090703–2
CCV05										
	Aluminum	5340	ug/L	5000	ug/L	106.7	90.0 – 110.0	P	30–JUN–09 13:02	063009–1

METALS
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Initial and Continuing Calibration Verification

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Arsenic	520	ug/L	500	ug/L	103.9	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Barium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Calcium	5320	ug/L	5000	ug/L	106.3	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Chromium	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Cobalt	518	ug/L	500	ug/L	103.7	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Copper	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Iron	5100	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Magnesium	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Nickel	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Potassium	4990	ug/L	5000	ug/L	99.7	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Selenium	533	ug/L	500	ug/L	106.6	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Silver	515	ug/L	500	ug/L	103	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Sodium	10500	ug/L	10000	ug/L	104.8	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Vanadium	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Zinc	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30–JUN–09 13:02	063009–1
	Mercury	4.82	ug/L	5	ug/L	96.3	80.0 – 120.0	AV	02–JUL–09 10:00	070209W1–4
CCV06										
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Arsenic	525	ug/L	500	ug/L	104.9	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Barium	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Calcium	5280	ug/L	5000	ug/L	105.6	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Chromium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Cobalt	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Copper	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Iron	5080	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Magnesium	5300	ug/L	5000	ug/L	106	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Nickel	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Potassium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Selenium	539	ug/L	500	ug/L	107.7	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Silver	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 14:20	063009–1

METALS
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Initial and Continuing Calibration Verification

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	10600	ug/L	10000	ug/L	106	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Vanadium	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Zinc	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30–JUN–09 14:20	063009–1
	Mercury	4.8	ug/L	5	ug/L	96	80.0 – 120.0	AV	02–JUL–09 10:24	070209W1–4
CCV07										
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Arsenic	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Barium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Calcium	5340	ug/L	5000	ug/L	106.8	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Chromium	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Cobalt	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Copper	495	ug/L	500	ug/L	98.9	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Iron	5140	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Magnesium	5350	ug/L	5000	ug/L	107.1	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Nickel	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Potassium	5010	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Selenium	524	ug/L	500	ug/L	104.9	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Silver	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Sodium	10500	ug/L	10000	ug/L	105.4	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Vanadium	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	30–JUN–09 14:43	063009–1
	Mercury	4.82	ug/L	5	ug/L	96.5	80.0 – 120.0	AV	02–JUL–09 10:48	070209W1–4
CCV08										
	Aluminum	5290	ug/L	5000	ug/L	105.9	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Arsenic	520	ug/L	500	ug/L	104	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Barium	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Calcium	5180	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Cobalt	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Copper	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30–JUN–09 15:52	063009–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Iron	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Nickel	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Potassium	4840	ug/L	5000	ug/L	96.9	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Selenium	534	ug/L	500	ug/L	106.9	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Silver	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Sodium	10200	ug/L	10000	ug/L	102.5	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Zinc	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	30–JUN–09 15:52	063009–1
	Mercury	4.82	ug/L	5	ug/L	96.4	80.0 – 120.0	AV	02–JUL–09 11:11	070209W1–4
CCV09										
	Aluminum	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Arsenic	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Barium	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Calcium	5260	ug/L	5000	ug/L	105.2	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Chromium	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Cobalt	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Copper	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Iron	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Magnesium	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Nickel	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Potassium	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Selenium	531	ug/L	500	ug/L	106.3	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Silver	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Sodium	10400	ug/L	10000	ug/L	104.3	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Vanadium	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
	Zinc	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30–JUN–09 17:08	063009–1
CCV10										
	Aluminum	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Arsenic	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30–JUN–09 18:18	063009–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Barium	518	ug/L	500	ug/L	103.5	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Calcium	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Chromium	519	ug/L	500	ug/L	103.9	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Cobalt	521	ug/L	500	ug/L	104.3	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Copper	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Iron	5060	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Magnesium	5240	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Nickel	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Potassium	4970	ug/L	5000	ug/L	99.3	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Selenium	530	ug/L	500	ug/L	106	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Silver	520	ug/L	500	ug/L	104.1	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Sodium	10500	ug/L	10000	ug/L	104.9	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Vanadium	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
	Zinc	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	30–JUN–09 18:18	063009–1
CCV11										
	Aluminum	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Arsenic	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Barium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Calcium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Chromium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Cobalt	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Copper	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Iron	4920	ug/L	5000	ug/L	98.4	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Magnesium	5090	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Nickel	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Potassium	4890	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Selenium	529	ug/L	500	ug/L	105.8	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Silver	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Sodium	10400	ug/L	10000	ug/L	104	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
	Vanadium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30–JUN–09 19:13	063009–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Zinc	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 19:13	063009–1
CCV12										
	Aluminum	5290	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Arsenic	519	ug/L	500	ug/L	103.7	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Barium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Cobalt	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Copper	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Iron	4910	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Magnesium	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Nickel	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Potassium	4890	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Selenium	534	ug/L	500	ug/L	106.9	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Silver	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Sodium	10300	ug/L	10000	ug/L	103.4	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Vanadium	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	30–JUN–09 20:01	063009–1
	Zinc	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	30–JUN–09 20:01	063009–1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2500-1

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.228	ug/L	.2	ug/L	114	70.0 - 130.0	AV	02-JUL-09 08:23	070209W1-4
	Antimony	3.11	ug/L	3	ug/L	103.5	70.0 - 130.0	MS	04-JUL-09 01:16	090703-2
	Beryllium	.571	ug/L	.5	ug/L	114.2	70.0 - 130.0	MS	04-JUL-09 01:16	090703-2
	Lead	2.17	ug/L	2	ug/L	108.7	70.0 - 130.0	MS	04-JUL-09 01:16	090703-2
	Manganese	5.61	ug/L	5	ug/L	112.2	70.0 - 130.0	MS	04-JUL-09 01:16	090703-2
	Cadmium	1.01	ug/L	1	ug/L	100.5	70.0 - 130.0	MS	04-JUL-09 01:16	090703-2
	Thallium	.981	ug/L	1	ug/L	98.1	70.0 - 130.0	MS	04-JUL-09 14:22	090703-3
PQL01										
	Arsenic	18.2	ug/L	15	ug/L	121	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Barium	5.29	ug/L	5	ug/L	105.7	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Calcium	103	ug/L	100	ug/L	103.4	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Chromium	5.14	ug/L	5	ug/L	102.9	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Cobalt	5.22	ug/L	5	ug/L	104.4	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Copper	9.75	ug/L	10	ug/L	97.5	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Iron	114	ug/L	100	ug/L	114.1	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Magnesium	331	ug/L	300	ug/L	110.5	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Aluminum	208	ug/L	200	ug/L	104.1	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Nickel	5.6	ug/L	5	ug/L	111.9	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Potassium	153	ug/L	150	ug/L	102.1	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Selenium	16.6	ug/L	15	ug/L	110.5	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Silver	5.26	ug/L	5	ug/L	105.1	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Sodium	156	ug/L	150	ug/L	104.3	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Vanadium	5.17	ug/L	5	ug/L	103.5	70.0 - 130.0	P	30-JUN-09 08:45	063009-1
	Zinc	10.5	ug/L	10	ug/L	104.6	70.0 - 130.0	P	30-JUN-09 08:45	063009-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 08:39	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 08:39	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 08:39	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 08:39	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 08:39	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 08:39	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 08:39	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 08:39	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 08:39	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 08:39	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 08:39	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 08:21	070209W1–4
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	04–JUL–09 01:12	090703–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	04–JUL–09 01:12	090703–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	04–JUL–09 01:12	090703–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	04–JUL–09 01:12	090703–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	04–JUL–09 01:12	090703–2
	Thallium	0.3	+/–1	U	0.3	1.0	LIQ	MS	04–JUL–09 14:19	090703–3
CCB01										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 09:40	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 09:40	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 09:40	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 09:40	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 09:40	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 09:40	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 09:40	063009–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 09:40	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 09:40	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 09:40	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 09:40	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 09:40	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 09:40	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 09:40	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 09:40	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 09:40	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 08:27	070209W1–4
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	04–JUL–09 01:35	090703–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	04–JUL–09 01:35	090703–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	04–JUL–09 01:35	090703–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	04–JUL–09 01:35	090703–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	04–JUL–09 01:35	090703–2
	Thallium	0.3	+/–1	U	0.3	1.0	LIQ	MS	04–JUL–09 14:37	090703–3
CCB02										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 10:01	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 10:01	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 10:01	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 10:01	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 10:01	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 10:01	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 10:01	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 10:01	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 10:01	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 10:01	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 10:01	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 10:01	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 10:01	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 10:01	063009–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500–1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 10:01	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 10:01	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 08:51	070209W1–4
	Antimony	1.36	+/–3	J	1.0	3.0	LIQ	MS	04–JUL–09 01:50	090703–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	04–JUL–09 01:50	090703–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	04–JUL–09 01:50	090703–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	04–JUL–09 01:50	090703–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	04–JUL–09 01:50	090703–2
	Thallium	0.37	+/–1	J	0.3	1.0	LIQ	MS	04–JUL–09 15:07	090703–3
CCB03										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 11:04	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 11:04	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 11:04	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 11:04	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 11:04	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 11:04	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 11:04	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 11:04	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 11:04	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 11:04	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 11:04	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 09:15	070209W1–4
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	04–JUL–09 02:28	090703–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	04–JUL–09 02:28	090703–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	04–JUL–09 02:28	090703–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	04–JUL–09 02:28	090703–2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2500-1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 02:28	090703-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	04-JUL-09 15:34	090703-3
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 11:59	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 11:59	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 11:59	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 11:59	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 11:59	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 11:59	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 11:59	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 11:59	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 11:59	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 11:59	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 09:38	070209W1-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	04-JUL-09 03:01	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 03:01	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 03:01	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 03:01	090703-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 03:01	090703-2
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 13:09	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 13:09	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 13:09	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 13:09	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 13:09	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 13:09	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 13:09	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 13:09	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 13:09	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 13:09	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 13:09	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 13:09	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 13:09	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 13:09	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 10:02	070209W1–4
CCB06										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 14:26	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 14:26	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 14:26	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 14:26	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 14:26	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 14:26	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 14:26	063009–1
	Selenium	–5.83	+/–15	J	5.0	15.0	LIQ	P	30–JUN–09 14:26	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 14:26	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:26	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 14:26	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 10:26	070209W1–4

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB07										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 14:50	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 14:50	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 14:50	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 14:50	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 14:50	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 14:50	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 14:50	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 14:50	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 14:50	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 14:50	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 14:50	063009–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	02–JUL–09 10:50	070209W1–4
CCB08										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 15:59	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 15:59	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 15:59	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 15:59	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 15:59	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 15:59	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 15:59	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 15:59	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 15:59	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 15:59	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 15:59	063009–1
	Mercury	–0.074	+/–.2	J	0.066	0.2	LIQ	AV	02–JUL–09 11:13	070209W1–4
CCB09										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 17:15	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 17:15	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 17:15	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 17:15	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 17:15	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 17:15	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 17:15	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 17:15	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 17:15	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 17:15	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 17:15	063009–1
CCB10										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 18:25	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 18:25	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 18:25	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 18:25	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 18:25	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 18:25	063009–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 18:25	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 18:25	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 18:25	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 18:25	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 18:25	063009–1
CCB11										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 19:20	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 19:20	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 19:20	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 19:20	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 19:20	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 19:20	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 19:20	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 19:20	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 19:20	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 19:20	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 19:20	063009–1
CCB12										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	30–JUN–09 20:08	063009–1
	Arsenic	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 20:08	063009–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 20:08	063009–1
	Calcium	30.0	+/–100	U	30.0	100	LIQ	P	30–JUN–09 20:08	063009–1
	Chromium	2.0	+/–5	U	2.0	5.0	LIQ	P	30–JUN–09 20:08	063009–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 20:08	063009–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2500–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	30–JUN–09 20:08	063009–1
	Iron	25.0	+/–100	U	25.0	100	LIQ	P	30–JUN–09 20:08	063009–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	30–JUN–09 20:08	063009–1
	Nickel	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 20:08	063009–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	30–JUN–09 20:08	063009–1
	Selenium	5.0	+/–15	U	5.0	15.0	LIQ	P	30–JUN–09 20:08	063009–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 20:08	063009–1
	Sodium	45.0	+/–150	U	45.0	150	LIQ	P	30–JUN–09 20:08	063009–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	30–JUN–09 20:08	063009–1
	Zinc	2.0	+/–10	U	2.0	10.0	LIQ	P	30–JUN–09 20:08	063009–1

METALS
–3b–
PREPARATION BLANK SUMMARY

SDG NO. 09–2500–1

Contract: LANL01004

Matrix: WATER

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201871706								
	Zinc	2	ug/L	+/–10.0	U	P	2	10
	Aluminum	68	ug/L	+/–200	U	P	68	200
	Arsenic	5	ug/L	+/–15.0	U	P	5	15
	Calcium	30	ug/L	+/–100	U	P	30	100
	Copper	3	ug/L	+/–10.0	U	P	3	10
	Cobalt	1	ug/L	+/–5.0	U	P	1	5
	Chromium	2	ug/L	+/–5.0	U	P	2	5
	Barium	1	ug/L	+/–5.0	U	P	1	5
	Iron	25	ug/L	+/–100	U	P	25	100
	Vanadium	1	ug/L	+/–5.0	U	P	1	5
	Sodium	45	ug/L	+/–150	U	P	45	150
	Silver	1	ug/L	+/–5.0	U	P	1	5
	Selenium	5	ug/L	+/–15.0	U	P	5	15
	Potassium	50	ug/L	+/–150	U	P	50	150
	Nickel	1	ug/L	+/–5.0	U	P	1	5
	Magnesium	85	ug/L	+/–300	U	P	85	300
1201871711								
	Antimony	1.08	ug/L	+/–3.0	J	MS	1	3
	Beryllium	0.1	ug/L	+/–0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/–1.0	U	MS	0.11	1
	Lead	0.5	ug/L	+/–2.0	U	MS	0.5	2
	Manganese	1	ug/L	+/–5.0	U	MS	1	5
	Thallium	0.3	ug/L	+/–1.0	U	MS	0.3	1
1201871797								
	Mercury	–0.0839	ug/L	+/–0.2	J	AV	0.066	0.2

METALS
–4–
Interference Check Sample

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	521000	ug/L	500000	ug/L	104	80.0 – 120.0	30–JUN–09 08:52	063009–1
	Arsenic	12.1	ug/L					30–JUN–09 08:52	063009–1
	Barium	–4.95	ug/L					30–JUN–09 08:52	063009–1
	Calcium	479000	ug/L	500000	ug/L	95.8	80.0 – 120.0	30–JUN–09 08:52	063009–1
	Chromium	2.29	ug/L					30–JUN–09 08:52	063009–1
	Cobalt	–1.33	ug/L					30–JUN–09 08:52	063009–1
	Copper	1.81	ug/L					30–JUN–09 08:52	063009–1
	Iron	181000	ug/L	200000	ug/L	90.7	80.0 – 120.0	30–JUN–09 08:52	063009–1
	Magnesium	476000	ug/L	500000	ug/L	95.2	80.0 – 120.0	30–JUN–09 08:52	063009–1
	Nickel	5.0	ug/L					30–JUN–09 08:52	063009–1
	Potassium	–32.1	ug/L					30–JUN–09 08:52	063009–1
	Selenium	0.557	ug/L					30–JUN–09 08:52	063009–1
	Silver	–0.79	ug/L					30–JUN–09 08:52	063009–1
	Sodium	31.8	ug/L					30–JUN–09 08:52	063009–1
	Vanadium	–2.42	ug/L					30–JUN–09 08:52	063009–1
	Zinc	–6.97	ug/L					30–JUN–09 08:52	063009–1
ICSAB01									
	Aluminum	519000	ug/L	500000	ug/L	104	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Arsenic	532	ug/L	500	ug/L	106	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Barium	498	ug/L	500	ug/L	99.6	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Calcium	473000	ug/L	500000	ug/L	94.6	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Chromium	496	ug/L	500	ug/L	99.3	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Cobalt	467	ug/L	500	ug/L	93.4	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Copper	562	ug/L	500	ug/L	112	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Iron	179000	ug/L	200000	ug/L	89.6	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Magnesium	470000	ug/L	500000	ug/L	94.1	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Nickel	473	ug/L	500	ug/L	94.5	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Potassium	5110	ug/L	5000	ug/L	102	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Selenium	2610	ug/L	2500	ug/L	104	80.0 – 120.0	30–JUN–09 08:58	063009–1

METALS
–4–
Interference Check Sample

SDG No: 09--2500–1

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silver	282	ug/L	250	ug/L	113	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Sodium	5390	ug/L	5000	ug/L	108	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Vanadium	519	ug/L	500	ug/L	104	80.0 – 120.0	30–JUN–09 08:58	063009–1
	Zinc	495	ug/L	500	ug/L	99	80.0 – 120.0	30–JUN–09 08:58	063009–1

METALS
–4–
Interference Check Sample

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.278	ug/L					04–JUL–09 01:21	090703–2
	Beryllium	0.051	ug/L					04–JUL–09 01:21	090703–2
	Cadmium	0.292	ug/L					04–JUL–09 01:21	090703–2
	Lead	0.17	ug/L					04–JUL–09 01:21	090703–2
	Manganese	5.89	ug/L					04–JUL–09 01:21	090703–2
ICSAB01									
	Antimony	22.0	ug/L	20.1	ug/L	109	80.0 – 120.0	04–JUL–09 01:26	090703–2
	Beryllium	22.7	ug/L	20	ug/L	113	80.0 – 120.0	04–JUL–09 01:26	090703–2
	Cadmium	20.8	ug/L	20.4	ug/L	102	80.0 – 120.0	04–JUL–09 01:26	090703–2
	Lead	20.4	ug/L	20.5	ug/L	99.4	80.0 – 120.0	04–JUL–09 01:26	090703–2
	Manganese	26.2	ug/L	25.8	ug/L	102	80.0 – 120.0	04–JUL–09 01:26	090703–2

METALS
–4–
Interference Check Sample

SDG No: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Thallium	0.034	ug/L					04–JUL–09 14:26	090703–3
ICSAB01									
	Thallium	18.3	ug/L	20	ug/L	91.7	80.0 – 120.0	04–JUL–09 14:30	090703–3

METALS
–5a–
Matrix Spike Summary

SDG NO. 09–2500–1 **Client ID** CAMO–09–6533S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232510001 **Spike ID:** 1201871709

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75–125	5120		68	U	5000	102		P
Arsenic	ug/L	75–125	499		5	U	500	99.6		P
Barium	ug/L	75–125	506		1	U	500	101		P
Calcium	ug/L	75–125	5050		30	U	5000	101		P
Chromium	ug/L	75–125	496		2	U	500	99.1		P
Cobalt	ug/L	75–125	485		1	U	500	97		P
Copper	ug/L	75–125	500		3	U	500	100		P
Iron	ug/L	75–125	4770		25	U	5000	95.4		P
Magnesium	ug/L	75–125	4990		85	U	5000	99.5		P
Nickel	ug/L	75–125	494		1	U	500	98.7		P
Potassium	ug/L	75–125	5020		126	J	5000	97.8		P
Selenium	ug/L	75–125	501		5	U	500	100		P
Silver	ug/L	75–125	496		1	U	500	99.2		P
Sodium	ug/L	75–125	5280		85.2	J	5000	104		P
Vanadium	ug/L	75–125	505		1	U	500	101		P
Zinc	ug/L	75–125	483		2	U	500	96.4		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2500-1 **Client ID** CAMO-09-6053S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232370001 **Spike ID:** 1201871714

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Beryllium	ug/L	75-125	55.2		0.1	U	50	110		MS
Cadmium	ug/L	75-125	5.33		0.11	U	5	107		MS
Lead	ug/L	75-125	21.2		0.5	U	20	106		MS
Manganese	ug/L	75-125	53.3		1	U	50	106		MS
Thallium	ug/L	75-125	29.3		0.3	U	50	58.3	N	MS
Antimony	ug/L	75-125	106		1	U	100	105		MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2500-1 **Client ID** CAMO-09-6533S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232510001 **Spike ID:** 1201871800

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75-125	2.04		0.066	U	2	102		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO–09–6533D

Sample ID: 232510001 **Duplicate ID:** 1201871708 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68	U	68	U			P
Arsenic	ug/L		5	U	5	U			P
Barium	ug/L		1	U	1	U			P
Calcium	ug/L		30	U	30	U			P
Chromium	ug/L		2	U	2	U			P
Cobalt	ug/L		1	U	1	U			P
Copper	ug/L		3	U	3	U			P
Iron	ug/L		25	U	25	U			P
Magnesium	ug/L		85	U	85	U			P
Nickel	ug/L		1	U	1	U			P
Potassium	ug/L	+/–150	126	J	117	J	6.62		P
Selenium	ug/L		5	U	5	U			P
Silver	ug/L		1	U	1	U			P
Sodium	ug/L	+/–150	85.2	J	82.9	J	2.77		P
Vanadium	ug/L		1	U	1	U			P
Zinc	ug/L		2	U	2	U			P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO–09–6053D

Sample ID: 232370001 **Duplicate ID:** 1201871713 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		1	U	1	U			MS
Beryllium	ug/L		0.1	U	0.1	U			MS
Cadmium	ug/L		0.11	U	0.11	U			MS
Lead	ug/L		0.5	U	0.5	U			MS
Manganese	ug/L		1	U	1	U			MS
Thallium	ug/L		0.3	U	0.3	U			MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2500–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO–09–6533D

Sample ID: 232510001 **Duplicate ID:** 1201871799 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066	U	0.066	U			AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2500-1

Contract: LANL01004

Aqueous LCS Source:OS2I **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871707								
	Chromium	ug/L	500	499		99.9	80-120	P
	Cobalt	ug/L	500	487		97.5	80-120	P
	Copper	ug/L	500	502		100	80-120	P
	Iron	ug/L	5000	4950		98.9	80-120	P
	Magnesium	ug/L	5000	5150		103	80-120	P
	Nickel	ug/L	500	498		99.5	80-120	P
	Potassium	ug/L	5000	4920		98.4	80-120	P
	Selenium	ug/L	500	507		101	80-120	P
	Silver	ug/L	500	498		99.6	80-120	P
	Sodium	ug/L	5000	5220		104	80-120	P
	Vanadium	ug/L	500	508		102	80-120	P
	Zinc	ug/L	500	488		97.6	80-120	P
	Aluminum	ug/L	5000	5150		103	80-120	P
	Arsenic	ug/L	500	500		100	80-120	P
	Barium	ug/L	500	508		102	80-120	P
	Calcium	ug/L	5000	5050		101	80-120	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2500-1

Contract: LANL01004

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871712								
	Antimony	ug/L	50	54.2		108	80-120	MS
	Beryllium	ug/L	50	53.6		107	80-120	MS
	Cadmium	ug/L	50	51.5		103	80-120	MS
	Lead	ug/L	50	51.6		103	80-120	MS
	Manganese	ug/L	50	52.4		105	80-120	MS
	Thallium	ug/L	50	43		86	80-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2500-1

Contract: LANL01004

Aqueous LCS Source: GEL **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871798								
	Mercury	ug/L	2	1.99		99.6	80-120	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2500-1 **Client ID** CAMO-09-6533L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232510001 **Serial Dilution ID:** 1201871710

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Arsenic	5	U	25	U				P
Barium	1	U	5	U				P
Calcium	30	U	150	U				P
Chromium	2	U	10	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	25	U	125	U				P
Magnesium	85	U	425	U				P
Nickel	1	U	5	U				P
Potassium	126	J	250	U	100			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	85.2	J	225	U	100			P
Vanadium	1	U	5	U				P
Zinc	2	U	10	U				P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2500-1 **Client ID** CAMO-09-6053L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232370001 **Serial Dilution ID:** 1201871715

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	1	U	5	U				MS
Beryllium	.1	U	.5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	.5	U	2.5	U				MS
Manganese	1	U	5	U				MS
Thallium	.3	U	4.09	J				MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2500-1 **Client ID** CAMO-09-6533L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232510001 **Serial Dilution ID:** 1201871801

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

METALS
–13–
SAMPLE PREPARATION SUMMARY

SDG No: 09–2500–1 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881353						
1201871706	MB for batch 881353	MB	W	30–JUN–09	50mL	50mL	
1201871707	LCS for batch 881353	LCS	W	30–JUN–09	50mL	50mL	
1201871709	CAMO–09–6533S	MS	W	30–JUN–09	50mL	50mL	
1201871708	CAMO–09–6533D	DUP	W	30–JUN–09	50mL	50mL	
232510001	CAMO–09–6533	SAMPLE	W	30–JUN–09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2500-1 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881356						
1201871711	MB for batch 881356	MB	W	30-JUN-09	50mL	50mL	
1201871712	LCS for batch 881356	LCS	W	30-JUN-09	50mL	50mL	
1201871714	CAMO-09-6053S	MS	W	30-JUN-09	50mL	50mL	
1201871713	CAMO-09-6053D	DUP	W	30-JUN-09	50mL	50mL	
232510001	CAMO-09-6533	SAMPLE	W	30-JUN-09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2500-1 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881395						
1201871797	MB for batch 881395	MB	W	01-JUL-09	20mL	20mL	
1201871798	LCS for batch 881395	LCS	W	01-JUL-09	20mL	20mL	
1201871800	CAMO-09-6533S	MS	W	01-JUL-09	20mL	20mL	
1201871799	CAMO-09-6533D	DUP	W	01-JUL-09	20mL	20mL	
232510001	CAMO-09-6533	SAMPLE	W	01-JUL-09	20mL	20mL	

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 30–JUN–09 **End Date:** 30–JUN–09

Client Sdg: 09–2500–1
Method P
Data File: 063009–1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	08:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S0.1	1	08:06			X	X				X	X	X						X	X	X	X			X	X
S0.5	1	08:12	X		X	X			X	X	X	X			X			X	X	X	X			X	X
SCAL	1	08:19	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S10	1	08:26	X						X				X		X							X			
ICV01	1	08:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICB01	1	08:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
PQL01	1	08:45	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSA01	1	08:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSAB01	1	08:58	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR01	1	09:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR02	1	09:10	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	09:17																							
ZZZZZZ	1	09:24																							
CCV01	1	09:33	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB01	1	09:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR03	1	09:47	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV02	1	09:54	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB02	1	10:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	10:15																							
ZZZZZZ	1	10:22																							
ZZZZZZ	1	10:29																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:43																							
ZZZZZZ	5	10:50																							
CCV03	1	10:57	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB03	1	11:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	11:11																							
ZZZZZZ	5	11:18																							
ZZZZZZ	5	11:25																							
ZZZZZZ	5	11:32																							
ZZZZZZ	25	11:38																							
ZZZZZZ	5	11:45																							
CCV04	1	11:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB04	1	11:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	12:06																							
ZZZZZZ	2	12:13																							
ZZZZZZ	1	12:20																							
ZZZZZZ	1	12:27																							
ZZZZZZ	1	12:34																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	1	12:41																						
ZZZZZZ	1	12:48																						
ZZZZZZ	1	12:55																						
CCV05	1	13:02	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB05	1	13:09	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	13:16																						
ZZZZZZ	1	13:23																						
ZZZZZZ	1	13:30																						
ZZZZZZ	1	13:38																						
ZZZZZZ	1	13:45																						
ZZZZZZ	1	13:52																						
ZZZZZZ	5	13:59																						
ZZZZZZ	1	14:05																						
ZZZZZZ	1	14:13																						
CCV06	1	14:20	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB06	1	14:26	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV07	1	14:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB07	1	14:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	14:56																						
ZZZZZZ	2	15:03																						
ZZZZZZ	1	15:10																						
ZZZZZZ	1	15:17																						
ZZZZZZ	1	15:24																						
ZZZZZZ	1	15:31																						
ZZZZZZ	5	15:38																						
ZZZZZZ	1	15:45																						
CCV08	1	15:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB08	1	15:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	16:06																						
ZZZZZZ	2	16:12																						
ZZZZZZ	1	16:19																						
ZZZZZZ	1	16:26																						
ZZZZZZ	1	16:34																						
ZZZZZZ	1	16:40																						
ZZZZZZ	5	16:47																						
ZZZZZZ	1	16:54																						
ZZZZZZ	1	17:01																						
CCV09	1	17:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB09	1	17:15	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	17:22																						

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	17:29																							
ZZZZZZ	1	17:36																							
ZZZZZZ	1	17:43																							
ZZZZZZ	1	17:50																							
ZZZZZZ	1	17:57																							
ZZZZZZ	1	18:04																							
ZZZZZZ	1	18:11																							
CCV10	1	18:18	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB10	1	18:25	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871706	1	18:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871707	1	18:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	18:46																							
ZZZZZZ	1	18:53																							
ZZZZZZ	1	18:59																							
ZZZZZZ	1	19:06																							
CCV11	1	19:13	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB11	1	19:20	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	19:27																							
232510001	1	19:34	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871708	1	19:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871709	1	19:47	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871710	5	19:54	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV12	1	20:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB12	1	20:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 02–JUL–09 **End Date:** 02–JUL–09

Client Sdg: 09–2500–1
Method AV
Data File: 070209W1–4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	08:07															X								
S0.2	1	08:09															X								
S0.5	1	08:11															X								
S2.0	1	08:13															X								
S5.0	1	08:15															X								
S10	1	08:17															X								
ICV01	1	08:19															X								
ICB01	1	08:21															X								
CRDL01	1	08:23															X								
CCV01	1	08:25															X								
CCB01	1	08:27															X								
ZZZZZZ	1	08:29																							
ZZZZZZ	1	08:31																							
ZZZZZZ	1	08:33																							
ZZZZZZ	1	08:35																							
ZZZZZZ	1	08:37																							
ZZZZZZ	5	08:39																							
ZZZZZZ	1	08:41																							
ZZZZZZ	1	08:43																							
ZZZZZZ	1	08:45																							
ZZZZZZ	1	08:47																							
CCV02	1	08:49															X								
CCB02	1	08:51															X								
ZZZZZZ	1	08:53																							
ZZZZZZ	1	08:55																							
ZZZZZZ	1	08:57																							
ZZZZZZ	5	08:59																							
ZZZZZZ	1	09:01																							
ZZZZZZ	1	09:03																							
ZZZZZZ	1	09:05																							
ZZZZZZ	1	09:07																							
ZZZZZZ	1	09:09																							
ZZZZZZ	1	09:11																							
CCV03	1	09:13															X								
CCB03	1	09:15															X								
ZZZZZZ	1	09:17																							
ZZZZZZ	1	09:19																							
ZZZZZZ	1	09:21																							
ZZZZZZ	1	09:23																							
ZZZZZZ	1	09:25																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	1	09:26																						
ZZZZZZ	1	09:28																						
ZZZZZZ	1	09:30																						
ZZZZZZ	1	09:32																						
ZZZZZZ	1	09:34																						
CCV04	1	09:36													X									
CCB04	1	09:38													X									
ZZZZZZ	1	09:40																						
ZZZZZZ	1	09:42																						
ZZZZZZ	1	09:44																						
ZZZZZZ	1	09:47																						
ZZZZZZ	1	09:49																						
ZZZZZZ	1	09:51																						
ZZZZZZ	1	09:53																						
ZZZZZZ	5	09:54																						
ZZZZZZ	1	09:56																						
ZZZZZZ	1	09:58																						
CCV05	1	10:00													X									
CCB05	1	10:02													X									
ZZZZZZ	1	10:04																						
ZZZZZZ	1	10:06																						
ZZZZZZ	1	10:08																						
ZZZZZZ	1	10:10																						
ZZZZZZ	1	10:12																						
ZZZZZZ	1	10:14																						
ZZZZZZ	5	10:16																						
ZZZZZZ	1	10:18																						
ZZZZZZ	1	10:20																						
ZZZZZZ	1	10:22																						
CCV06	1	10:24													X									
CCB06	1	10:26													X									
ZZZZZZ	1	10:28																						
ZZZZZZ	1	10:30																						
ZZZZZZ	1	10:32																						
ZZZZZZ	1	10:34																						
ZZZZZZ	1	10:36																						
ZZZZZZ	1	10:38																						
ZZZZZZ	1	10:40																						
ZZZZZZ	1	10:42																						
ZZZZZZ	1	10:44																						

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	10:46																							
CCV07	1	10:48															X								
CCB07	1	10:50															X								
ZZZZZZ	5	10:52																							
1201871797	1	10:54															X								
1201871798	1	10:56															X								
ZZZZZZ	1	10:58																							
ZZZZZZ	1	11:00																							
ZZZZZZ	1	11:02																							
232510001	1	11:04															X								
1201871799	1	11:06															X								
1201871800	1	11:08															X								
1201871801	5	11:09															X								
CCV08	1	11:11															X								
CCB08	1	11:13															X								

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 04–JUL–09 **End Date:** 04–JUL–09

Client Sdg: 09–2500–1
Method MS
Data File: 090703–2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	00:53		X			X	X						X		X									
S10	1	00:58		X			X	X						X		X									
S100	1	01:02		X			X	X						X		X									
ICV01	1	01:07		X			X	X						X		X									
ICB01	1	01:12		X			X	X						X		X									
CRDL01	1	01:16		X			X	X						X		X									
ICSA01	1	01:21		X			X	X						X		X									
ICSAB01	1	01:26		X			X	X						X		X									
CCV01	1	01:31		X			X	X						X		X									
CCB01	1	01:35		X			X	X						X		X									
LR01	1	01:40		X			X	X						X		X									
CCV02	1	01:45		X			X	X						X		X									
CCB02	1	01:50		X			X	X						X		X									
1201871711	1	01:54		X			X	X						X		X									
1201871712	1	01:59		X			X	X						X		X									
ZZZZZZ	1	02:04																							
1201871713	1	02:08		X			X	X						X		X									
1201871714	1	02:13		X			X	X						X		X									
1201871715	5	02:18		X			X	X						X		X									
CCV03	1	02:23		X			X	X						X		X									
CCB03	1	02:28		X			X	X						X		X									
ZZZZZZ	1	02:32																							
ZZZZZZ	1	02:37																							
ZZZZZZ	1	02:42																							
ZZZZZZ	1	02:46																							
232510001	1	02:51		X			X	X						X		X									
CCV04	1	02:56		X			X	X						X		X									
CCB04	1	03:01		X			X	X						X		X									

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 04–JUL–09 **End Date:** 04–JUL–09

Client Sdg: 09–2500–1
Method MS
Data File: 090703–3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	14:04																					X		
S10	1	14:08																					X		
S100	1	14:11																					X		
ICV01	1	14:15																					X		
ICB01	1	14:19																					X		
CRDL01	1	14:22																					X		
ICSA01	1	14:26																					X		
ICSAB01	1	14:30																					X		
CCV01	1	14:33																					X		
CCB01	1	14:37																					X		
1201871711	1	14:41																					X		
1201871712	1	14:45																					X		
ZZZZZZ	1	14:48																							
1201871713	1	14:52																					X		
1201871714	1	14:56																					X		
1201871715	5	15:00																					X		
CCV02	1	15:03																					X		
CCB02	1	15:07																					X		
ZZZZZZ	1	15:11																							
ZZZZZZ	1	15:15																							
ZZZZZZ	1	15:19																							
ZZZZZZ	1	15:22																							
232510001	1	15:26																					X		
CCV03	1	15:30																					X		
CCB03	1	15:34																					X		

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2500-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		3.0	10
	Zinc		3.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2500-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
MERCURY				
LIQUID	Mercury		0.066	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2500-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 23-JUL-07

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	15
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	30.0	100
	Chromium	267.716	2.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	25.0	100
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.0	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	15
	Silver	328.068	1.0	5
	Sodium	589.592	45.0	150
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	2.0	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 09-2500-1
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-MAY-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2500-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
–11–
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09–2500–1
Effective Dates: 01–MAY–09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	–0.01812	0.00000	0.00000	0.00000	–20.8769
Arsenic	188.979	–0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	–0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	–2.64232
Copper	324.752	–0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	–2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	–20.2401
Manganese	257.61	–0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	–0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	–0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	–3.41808	0.00000	0.00000	0.00000	–1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	–0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	–4.64362	0.00000
Tin	189.927	–0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	–0.01660	0.00000	–12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2500-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2500-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2500-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
–12–
Linear Ranges

SDG NO. 09–2500–1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Antimony	20	10000	ug/L	01–MAY–09
Arsenic	20	10000	ug/L	01–MAY–09
Barium	20	15000	ug/L	01–MAY–09
Beryllium	20	3000	ug/L	01–MAY–09
Cadmium	20	10000	ug/L	01–MAY–09
Calcium	20	500000	ug/L	01–MAY–09
Chromium	20	25000	ug/L	01–MAY–09
Cobalt	20	10000	ug/L	01–MAY–09
Copper	20	20000	ug/L	01–MAY–09
Aluminum	20	500000	ug/L	01–MAY–09
Iron	20	500000	ug/L	01–MAY–09
Lead	20	25000	ug/L	01–MAY–09
Magnesium	20	500000	ug/L	01–MAY–09
Manganese	20	10000	ug/L	01–MAY–09
Nickel	20	10000	ug/L	01–MAY–09
Potassium	20	300000	ug/L	01–MAY–09
Selenium	20	10000	ug/L	01–MAY–09
Silver	20	1000	ug/L	01–MAY–09
Sodium	20	500000	ug/L	01–MAY–09
Thallium	20	10000	ug/L	01–MAY–09
Vanadium	20	10000	ug/L	01–MAY–09
Zinc	20	15000	ug/L	01–MAY–09

METALS
-12-
Linear Ranges

SDG NO. 09-2500-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

Raw Data

Method: Hg_ReAlign
Result: 070909

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

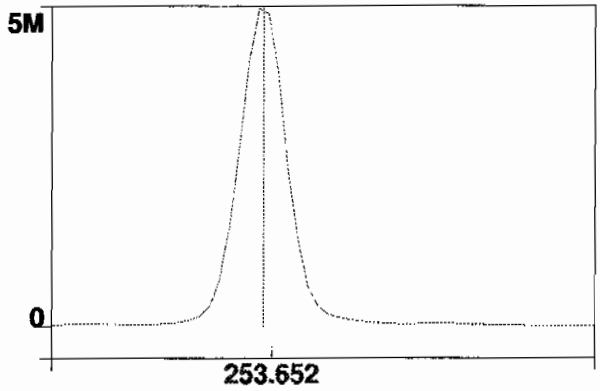

Intensity: 5431129.6 cps
Conc:

1

Start Time: 6/30/2009 08:00:09
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601

Plasma On Time: 6/29/2009 15:26:31
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: S0
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 08:00:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7332.9	7332.9	98.1	%	08:02:02
1	Y RADIAL	6768.4	6768.4	97.75	%	08:02:02
1	Al 396.153Radial†	-69.2	-70.5	[0.00]	ug/L	08:02:02
1	Ca 317.933Radial†	30.7	31.3	[0.00]	ug/L	08:02:22
1	Fe 238.204 Radial†	34.0	34.7	[0.00]	ug/L	08:02:22
1	K 766.490 Radial†	2350.8	2396.2	[0.00]	ug/L	08:02:02
1	Mg 279.077 IEC†	1.8	1.8	[0.00]	ug/L	08:02:22
1	Na 589.592 Radial†	-137.1	-139.7	[0.00]	ug/L	08:02:02
1	Sr 421.552†	-74.2	-75.6	[0.00]	ug/L	08:02:02
1	Sc 361.383	723693.7	723693.7	100.70	%	08:03:19
1	Y 371.029	565792.8	565792.8	100.67	%	08:03:19
1	Ag 328.068†	572.4	568.4	[0.00]	ug/L	08:03:19
1	As 188.979†	-46.3	-46.0	[0.00]	ug/L	08:03:39
1	B 249.677†	-1020.4	-1013.3	[0.00]	ug/L	08:03:19
1	Ba 233.527†	-1.7	-1.7	[0.00]	ug/L	08:03:39
1	Be 313.107†	-4879.3	-4845.6	[0.00]	ug/L	08:03:19
1	Cd 226.502†	-281.3	-279.4	[0.00]	ug/L	08:03:39
1	Co 228.616†	-99.0	-98.3	[0.00]	ug/L	08:03:39
1	Cr 267.716†	-47.5	-47.2	[0.00]	ug/L	08:03:19
1	Cu 324.752†	5579.8	5541.2	[0.00]	ug/L	08:03:19
1	Mn 257.610†	659.8	655.2	[0.00]	ug/L	08:03:19
1	Mo 202.031†	7.3	7.3	[0.00]	ug/L	08:03:39
1	Ni 231.604†	119.2	118.4	[0.00]	ug/L	08:03:39
1	P 214.914†	315.8	313.6	[0.00]	ug/L	08:03:39
1	Pb 220.353†	-12.1	-12.0	[0.00]	ug/L	08:03:39
1	S 181.975 Axial†	77.2	76.7	[0.00]	ug/L	08:03:39
1	Sb 206.836†	60.4	60.0	[0.00]	ug/L	08:03:39
1	Se 196.026†	-31.0	-30.8	[0.00]	ug/L	08:03:39
1	Si 251.611†	415.3	412.5	[0.00]	ug/L	08:03:39
1	Sn 189.927†	11.9	11.8	[0.00]	ug/L	08:03:39
1	Ti 334.940†	-1389.6	-1380.0	[0.00]	ug/L	08:03:19
1	Tl 190.801†	-57.8	-57.4	[0.00]	ug/L	08:03:39
1	U 409.014†	-4755.0	-4722.1	[0.00]	ug/L	08:03:19
1	V 292.402†	-1589.6	-1578.6	[0.00]	ug/L	08:03:19
1	Zn 213.857†	901.8	895.6	[0.00]	ug/L	08:03:39
1	SiO2†	429.1	426.2	[0.00]	ug/L	08:04:35
2	Sc Radial	7660.2	7660.2	102	%	08:02:27
2	Y RADIAL	7100.7	7100.7	102.5	%	08:02:27
2	Al 396.153Radial†	-86.3	-84.2	[0.00]	ug/L	08:02:27
2	Ca 317.933Radial†	21.4	20.9	[0.00]	ug/L	08:02:47
2	Fe 238.204 Radial†	36.8	35.9	[0.00]	ug/L	08:02:47
2	K 766.490 Radial†	2362.0	2304.8	[0.00]	ug/L	08:02:27
2	Mg 279.077 IEC†	5.1	5.0	[0.00]	ug/L	08:02:47
2	Na 589.592 Radial†	-283.4	-276.5	[0.00]	ug/L	08:02:27
2	Sr 421.552†	-46.7	-45.6	[0.00]	ug/L	08:02:27
2	Sc 361.383	713270.6	713270.6	99.246	%	08:03:44
2	Y 371.029	557882.4	557882.4	99.267	%	08:03:44
2	Ag 328.068†	711.7	717.1	[0.00]	ug/L	08:03:44
2	As 188.979†	-32.3	-32.5	[0.00]	ug/L	08:04:04
2	B 249.677†	-913.5	-920.4	[0.00]	ug/L	08:03:44

2	Ba 233.527†	-1.8	-1.8	[0.00]	ug/L	08:04:04
2	Be 313.107†	-4896.3	-4933.5	[0.00]	ug/L	08:03:44
2	Cd 226.502†	-295.8	-298.0	[0.00]	ug/L	08:04:04
2	Co 228.616†	-106.2	-107.0	[0.00]	ug/L	08:04:04
2	Cr 267.716†	-79.3	-79.9	[0.00]	ug/L	08:03:44
2	Cu 324.752†	5643.3	5686.2	[0.00]	ug/L	08:03:44
2	Mn 257.610†	692.3	697.5	[0.00]	ug/L	08:03:44
2	Mo 202.031†	19.0	19.2	[0.00]	ug/L	08:04:04
2	Ni 231.604†	121.8	122.7	[0.00]	ug/L	08:04:04
2	P 214.914†	309.8	312.1	[0.00]	ug/L	08:04:04
2	Pb 220.353†	-3.0	-3.0	[0.00]	ug/L	08:04:04
2	S 181.975 Axial†	69.7	70.3	[0.00]	ug/L	08:04:04
2	Sb 206.836†	54.7	55.1	[0.00]	ug/L	08:04:04
2	Se 196.026†	-23.1	-23.3	[0.00]	ug/L	08:04:04
2	Si 251.611†	423.6	426.8	[0.00]	ug/L	08:04:04
2	Sn 189.927†	7.3	7.3	[0.00]	ug/L	08:04:04
2	Ti 334.940†	-1312.1	-1322.1	[0.00]	ug/L	08:03:44
2	Tl 190.801†	-61.2	-61.7	[0.00]	ug/L	08:04:04
2	U 409.014†	-4836.8	-4873.6	[0.00]	ug/L	08:03:44
2	V 292.402†	-1570.5	-1582.4	[0.00]	ug/L	08:03:44
2	Zn 213.857†	928.6	935.7	[0.00]	ug/L	08:04:04
2	SiO2†	424.7	427.9	[0.00]	ug/L	08:04:40
3	Sc Radial	7430.7	7430.7	99.4	%	08:02:52
3	Y RADIAL	6903.8	6903.8	99.70	%	08:02:52
3	Al 396.153Radial†	-62.8	-63.2	[0.00]	ug/L	08:02:52
3	Ca 317.933Radial†	34.9	35.1	[0.00]	ug/L	08:03:12
3	Fe 238.204 Radial†	33.6	33.8	[0.00]	ug/L	08:03:12
3	K 766.490 Radial†	2505.8	2520.6	[0.00]	ug/L	08:02:52
3	Mg 279.077 IEC†	2.3	2.3	[0.00]	ug/L	08:03:12
3	Na 589.592 Radial†	9.5	9.6	[0.00]	ug/L	08:02:52
3	Sr 421.552†	-46.2	-46.4	[0.00]	ug/L	08:02:52
3	Sc 361.383	719103.6	719103.6	100.06	%	08:04:10
3	Y 371.029	562324.5	562324.5	100.06	%	08:04:10
3	Ag 328.068†	612.8	612.4	[0.00]	ug/L	08:04:10
3	As 188.979†	-27.8	-27.8	[0.00]	ug/L	08:04:30
3	B 249.677†	-886.6	-886.0	[0.00]	ug/L	08:04:10
3	Ba 233.527†	5.0	5.0	[0.00]	ug/L	08:04:30
3	Be 313.107†	-4868.9	-4866.1	[0.00]	ug/L	08:04:10
3	Cd 226.502†	-266.1	-265.9	[0.00]	ug/L	08:04:30
3	Co 228.616†	-93.0	-93.0	[0.00]	ug/L	08:04:30
3	Cr 267.716†	-105.1	-105.1	[0.00]	ug/L	08:04:10
3	Cu 324.752†	5691.2	5687.9	[0.00]	ug/L	08:04:10
3	Mn 257.610†	686.5	686.1	[0.00]	ug/L	08:04:10
3	Mo 202.031†	25.0	25.0	[0.00]	ug/L	08:04:30
3	Ni 231.604†	118.4	118.3	[0.00]	ug/L	08:04:30
3	P 214.914†	318.8	318.6	[0.00]	ug/L	08:04:30
3	Pb 220.353†	-24.8	-24.7	[0.00]	ug/L	08:04:30
3	S 181.975 Axial†	79.4	79.3	[0.00]	ug/L	08:04:30
3	Sb 206.836†	56.7	56.7	[0.00]	ug/L	08:04:30
3	Se 196.026†	-32.3	-32.3	[0.00]	ug/L	08:04:30
3	Si 251.611†	396.3	396.0	[0.00]	ug/L	08:04:30
3	Sn 189.927†	18.3	18.3	[0.00]	ug/L	08:04:30
3	Ti 334.940†	-1343.5	-1342.7	[0.00]	ug/L	08:04:10
3	Tl 190.801†	-63.3	-63.2	[0.00]	ug/L	08:04:30
3	U 409.014†	-4953.4	-4950.5	[0.00]	ug/L	08:04:10
3	V 292.402†	-1535.5	-1534.6	[0.00]	ug/L	08:04:10
3	Zn 213.857†	944.6	944.1	[0.00]	ug/L	08:04:30
3	SiO2†	456.8	456.5	[0.00]	ug/L	08:04:45

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	718689.3	5223.89	0.73%	100.00	%
Sc Radial	7474.6	167.97	2.25%	100	%
Y 371.029	561999.9	3965.18	0.71%	100.00	%
Y RADIAL	6924.3	167.10	2.41%	100.0	%
Ag 328.068†	632.6	76.36	12.07%	[0.00]	ug/L
Al 396.153Radial†	-72.6	10.68	14.70%	[0.00]	ug/L
As 188.979†	-35.4	9.45	26.67%	[0.00]	ug/L
B 249.677†	-939.9	65.84	7.01%	[0.00]	ug/L

Ba 233.527†	0.5	3.89	769.35%	[0.00]	ug/L
Be 313.107†	-4881.7	46.00	0.94%	[0.00]	ug/L
Ca 317.933Radial†	29.1	7.36	25.29%	[0.00]	ug/L
Cd 226.502†	-281.1	16.12	5.73%	[0.00]	ug/L
Co 228.616†	-99.4	7.08	7.12%	[0.00]	ug/L
Cr 267.716†	-77.4	29.04	37.52%	[0.00]	ug/L
Cu 324.752†	5638.4	84.19	1.49%	[0.00]	ug/L
Fe 238.204 Radial†	34.8	1.08	3.11%	[0.00]	ug/L
K 766.490 Radial†	2407.2	108.32	4.50%	[0.00]	ug/L
Mg 279.077 IEC†	3.0	1.67	54.91%	[0.00]	ug/L
Mn 257.610†	679.6	21.90	3.22%	[0.00]	ug/L
Mo 202.031†	17.1	9.03	52.69%	[0.00]	ug/L
Na 589.592 Radial†	-135.6	143.12	105.58%	[0.00]	ug/L
Ni 231.604†	119.8	2.51	2.09%	[0.00]	ug/L
P 214.914†	314.8	3.38	1.07%	[0.00]	ug/L
Pb 220.353†	-13.3	10.92	82.37%	[0.00]	ug/L
S 181.975 Axial†	75.4	4.65	6.16%	[0.00]	ug/L
Sb 206.836†	57.3	2.49	4.36%	[0.00]	ug/L
Se 196.026†	-28.8	4.81	16.71%	[0.00]	ug/L
Si 251.611†	411.8	15.40	3.74%	[0.00]	ug/L
Sn 189.927†	12.5	5.52	44.16%	[0.00]	ug/L
Sr 421.552†	-55.9	17.09	30.60%	[0.00]	ug/L
Ti 334.940†	-1348.3	29.36	2.18%	[0.00]	ug/L
Tl 190.801†	-60.8	3.03	4.98%	[0.00]	ug/L
U 409.014†	-4848.7	116.20	2.40%	[0.00]	ug/L
V 292.402†	-1565.2	26.55	1.70%	[0.00]	ug/L
Zn 213.857†	925.1	25.93	2.80%	[0.00]	ug/L
SiO2†	436.9	17.05	3.90%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 6/30/2009 08:06:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7536.7	7536.7	101	%	08:08:52
1	Y RADIAL	6939.1	6939.1	100.2	%	08:08:52
1	K 766.490 Radial†	7002.8	4537.9	[1000]	ug/L	08:08:47
1	Sr 421.552†	34034.9	33810.4	[100]	ug/L	08:08:47
1	Sc 361.383	734393.9	734393.9	102.19	%	08:09:19
1	Y 371.029	573053.1	573053.1	101.97	%	08:09:19
1	Ag 328.068†	18107.9	17088.1	[100]	ug/L	08:09:19
1	As 188.979†	245.2	275.4	[100]	ug/L	08:09:39
1	B 249.677†	3110.2	3983.6	[100]	ug/L	08:09:19
1	Ba 233.527†	14955.4	14635.1	[100]	ug/L	08:09:19
1	Be 313.107†	222292.2	222420.4	[100]	ug/L	08:09:19
1	Cd 226.502†	7806.4	7920.5	[100]	ug/L	08:09:39
1	Co 228.616†	5943.2	5915.6	[100]	ug/L	08:09:39
1	Cr 267.716†	7405.7	7324.8	[100]	ug/L	08:09:19
1	Cu 324.752†	34513.6	28137.2	[100]	ug/L	08:09:19
1	Mn 257.610†	97154.7	94397.5	[100]	ug/L	08:09:19
1	Mo 202.031†	1505.5	1456.1	[100]	ug/L	08:09:39
1	Ni 231.604†	3998.2	3792.9	[100]	ug/L	08:09:39
1	P 214.914†	1350.2	1006.6	[500]	ug/L	08:09:39
1	Pb 220.353†	890.6	884.8	[100]	ug/L	08:09:39
1	S 181.975 Axial†	232.7	152.3	[200]	ug/L	08:09:39
1	Sb 206.836†	401.3	335.5	[100]	ug/L	08:09:39
1	Se 196.026†	174.4	199.5	[100]	ug/L	08:09:39
1	Si 251.611†	17145.7	16367.3	[500]	ug/L	08:09:19
1	Sn 189.927†	597.0	571.7	[100]	ug/L	08:09:39
1	Ti 334.940†	55327.0	55492.2	[100]	ug/L	08:09:19
1	Tl 190.801†	353.4	406.6	[100]	ug/L	08:09:39
1	U 409.014†	-1643.9	3240.0	[100]	ug/L	08:09:19
1	V 292.402†	9828.0	11183.0	[100]	ug/L	08:09:19
1	Zn 213.857†	12345.3	11156.2	[100]	ug/L	08:09:19
1	SiO2†	16831.6	16034.7	[1069.5]	ug/L	08:10:36
2	Sc Radial	7396.9	7396.9	99.0	%	08:09:02
2	Y RADIAL	6800.1	6800.1	98.21	%	08:09:02
2	K 766.490 Radial†	6887.5	4552.7	[1000]	ug/L	08:08:57
2	Sr 421.552†	34356.2	34773.1	[100]	ug/L	08:08:57
2	Sc 361.383	729336.4	729336.4	101.48	%	08:09:45
2	Y 371.029	568343.4	568343.4	101.13	%	08:09:45
2	Ag 328.068†	18043.8	17147.7	[100]	ug/L	08:09:45
2	As 188.979†	267.9	299.4	[100]	ug/L	08:10:05
2	B 249.677†	2982.8	3879.2	[100]	ug/L	08:09:45
2	Ba 233.527†	14864.7	14647.2	[100]	ug/L	08:09:45
2	Be 313.107†	220607.8	222269.0	[100]	ug/L	08:09:45
2	Cd 226.502†	7778.0	7945.6	[100]	ug/L	08:10:05
2	Co 228.616†	5930.9	5943.8	[100]	ug/L	08:10:05
2	Cr 267.716†	7358.5	7328.4	[100]	ug/L	08:09:45
2	Cu 324.752†	34059.7	27924.1	[100]	ug/L	08:09:45
2	Mn 257.610†	96466.5	94378.6	[100]	ug/L	08:09:45
2	Mo 202.031†	1502.6	1463.6	[100]	ug/L	08:10:05
2	Ni 231.604†	3991.0	3813.0	[100]	ug/L	08:10:05
2	P 214.914†	1333.3	999.1	[500]	ug/L	08:10:05
2	Pb 220.353†	883.7	884.1	[100]	ug/L	08:10:05
2	S 181.975 Axial†	238.4	159.5	[200]	ug/L	08:10:05
2	Sb 206.836†	392.3	329.4	[100]	ug/L	08:10:05
2	Se 196.026†	178.3	204.5	[100]	ug/L	08:10:05
2	Si 251.611†	17027.5	16367.1	[500]	ug/L	08:09:45
2	Sn 189.927†	595.1	573.9	[100]	ug/L	08:10:05
2	Ti 334.940†	54903.8	55450.6	[100]	ug/L	08:09:45
2	Tl 190.801†	340.2	396.0	[100]	ug/L	08:10:05
2	U 409.014†	-1533.7	3337.4	[100]	ug/L	08:09:45

2	V 292.402†	9767.9	11190.5	[100]	ug/L	08:09:45
2	Zn 213.857†	12219.7	11116.2	[100]	ug/L	08:09:45
2	SiO2†	16580.2	15901.3	[1069.5]	ug/L	08:10:41
3	Sc Radial	7592.7	7592.7	102	%	08:09:12
3	Y RADIAL	7005.7	7005.7	101.2	%	08:09:12
3	K 766.490 Radial†	7071.4	4554.3	[1000]	ug/L	08:09:07
3	Sr 421.552†	34873.0	34386.5	[100]	ug/L	08:09:07
3	Sc 361.383	738752.0	738752.0	102.79	%	08:10:10
3	Y 371.029	576233.1	576233.1	102.53	%	08:10:10
3	Ag 328.068†	18197.8	17071.0	[100]	ug/L	08:10:10
3	As 188.979†	254.2	282.7	[100]	ug/L	08:10:30
3	B 249.677†	3118.6	3973.8	[100]	ug/L	08:10:10
3	Ba 233.527†	15063.6	14654.0	[100]	ug/L	08:10:10
3	Be 313.107†	223875.9	222677.8	[100]	ug/L	08:10:10
3	Cd 226.502†	7755.4	7825.9	[100]	ug/L	08:10:30
3	Co 228.616†	5940.8	5878.9	[100]	ug/L	08:10:30
3	Cr 267.716†	7475.5	7349.9	[100]	ug/L	08:10:10
3	Cu 324.752†	34750.0	28167.8	[100]	ug/L	08:10:10
3	Mn 257.610†	97657.0	94325.2	[100]	ug/L	08:10:10
3	Mo 202.031†	1495.8	1438.1	[100]	ug/L	08:10:30
3	Ni 231.604†	4016.8	3787.9	[100]	ug/L	08:10:30
3	P 214.914†	1333.5	982.5	[500]	ug/L	08:10:30
3	Pb 220.353†	877.8	867.2	[100]	ug/L	08:10:30
3	S 181.975 Axial†	222.6	141.1	[200]	ug/L	08:10:30
3	Sb 206.836†	398.6	330.5	[100]	ug/L	08:10:30
3	Se 196.026†	170.3	194.5	[100]	ug/L	08:10:30
3	Si 251.611†	17254.1	16373.7	[500]	ug/L	08:10:10
3	Sn 189.927†	587.6	559.2	[100]	ug/L	08:10:30
3	Ti 334.940†	55848.1	55679.6	[100]	ug/L	08:10:10
3	Tl 190.801†	343.9	395.3	[100]	ug/L	08:10:30
3	U 409.014†	-1621.5	3271.3	[100]	ug/L	08:10:10
3	V 292.402†	9943.5	11238.7	[100]	ug/L	08:10:10
3	Zn 213.857†	12396.5	11134.7	[100]	ug/L	08:10:10
3	SiO2†	16720.9	15829.9	[1069.5]	ug/L	08:10:46

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	734160.8	4712.12	0.64%	102.15	%
Sc Radial	7508.7	100.86	1.34%	100	%
Y 371.029	572543.2	3969.45	0.69%	101.88	%
Y RADIAL	6915.0	104.91	1.52%	99.86	%
Ag 328.068†	17102.3	40.29	0.24%	[100]	ug/L
As 188.979†	285.9	12.31	4.31%	[100]	ug/L
B 249.677†	3945.5	57.65	1.46%	[100]	ug/L
Ba 233.527†	14645.4	9.59	0.07%	[100]	ug/L
Be 313.107†	222455.7	206.65	0.09%	[100]	ug/L
Cd 226.502†	7897.3	63.13	0.80%	[100]	ug/L
Co 228.616†	5912.7	32.55	0.55%	[100]	ug/L
Cr 267.716†	7334.4	13.58	0.19%	[100]	ug/L
Cu 324.752†	28076.4	132.76	0.47%	[100]	ug/L
K 766.490 Radial†	4548.3	9.03	0.20%	[1000]	ug/L
Mn 257.610†	94367.1	37.47	0.04%	[100]	ug/L
Mo 202.031†	1452.6	13.10	0.90%	[100]	ug/L
Ni 231.604†	3797.9	13.28	0.35%	[100]	ug/L
P 214.914†	996.1	12.30	1.24%	[500]	ug/L
Pb 220.353†	878.7	9.94	1.13%	[100]	ug/L
S 181.975 Axial†	151.0	9.23	6.12%	[200]	ug/L
Sb 206.836†	331.8	3.25	0.98%	[100]	ug/L
Se 196.026†	199.5	5.01	2.51%	[100]	ug/L
Si 251.611†	16369.4	3.77	0.02%	[500]	ug/L
Sn 189.927†	568.3	7.94	1.40%	[100]	ug/L
Sr 421.552†	34323.3	484.48	1.41%	[100]	ug/L
Ti 334.940†	55540.8	122.03	0.22%	[100]	ug/L
Tl 190.801†	399.3	6.30	1.58%	[100]	ug/L
U 409.014†	3282.9	49.72	1.51%	[100]	ug/L
V 292.402†	11204.1	30.19	0.27%	[100]	ug/L
Zn 213.857†	11135.7	20.05	0.18%	[100]	ug/L
SiO2†	15922.0	103.97	0.65%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 6/30/2009 08:12:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7331.6	7331.6	98.1	%	08:14:48
1	Y RADIAL	6711.6	6711.6	96.93	%	08:14:48
1	Al 396.153Radial†	6146.5	6339.0	[5000]	ug/L	08:14:48
1	Ca 317.933Radial†	3679.6	3722.2	[5000]	ug/L	08:14:48
1	K 766.490 Radial†	24598.6	22671.0	[5000]	ug/L	08:14:48
1	Mg 279.077 IEC†	216.5	217.7	[5000]	ug/L	08:15:08
1	Sr 421.552†	169572.9	172935.1	[500]	ug/L	08:14:48
1	Sc 361.383	769868.5	769868.5	107.12	%	08:16:07
1	Y 371.029	593513.7	593513.7	105.61	%	08:16:07
1	Ag 328.068†	87541.8	81089.5	[500]	ug/L	08:16:07
1	As 188.979†	1409.8	1351.5	[500]	ug/L	08:16:27
1	B 249.677†	19467.3	19113.1	[500]	ug/L	08:16:07
1	Ba 233.527†	73932.8	69017.4	[500]	ug/L	08:16:07
1	Be 313.107†	1136680.0	1065997.8	[500]	ug/L	08:16:07
1	Cd 226.502†	39456.0	37114.2	[500]	ug/L	08:16:27
1	Co 228.616†	29402.6	27547.4	[500]	ug/L	08:16:27
1	Cr 267.716†	37090.5	34702.2	[500]	ug/L	08:16:07
1	Cu 324.752†	149279.1	133716.9	[500]	ug/L	08:16:07
1	Mn 257.610†	473775.8	441600.6	[500]	ug/L	08:16:07
1	Mo 202.031†	7403.7	6894.4	[500]	ug/L	08:16:27
1	Ni 231.604†	19288.8	17886.7	[500]	ug/L	08:16:27
1	P 214.914†	5408.5	4734.1	[2500]	ug/L	08:16:27
1	Pb 220.353†	4336.2	4061.2	[500]	ug/L	08:16:27
1	S 181.975 Axial†	819.7	689.8	[1000]	ug/L	08:16:27
1	Sb 206.836†	1784.5	1608.6	[500]	ug/L	08:16:27
1	Se 196.026†	996.6	959.1	[500]	ug/L	08:16:27
1	Si 251.611†	85511.7	79415.3	[2500]	ug/L	08:16:07
1	Sn 189.927†	2931.4	2724.0	[500]	ug/L	08:16:27
1	Ti 334.940†	282238.5	264824.2	[500]	ug/L	08:16:07
1	Tl 190.801†	1928.3	1860.8	[500]	ug/L	08:16:27
1	U 409.014†	10443.6	14598.1	[500]	ug/L	08:16:07
1	V 292.402†	55566.5	53437.8	[500]	ug/L	08:16:07
1	Zn 213.857†	57403.7	52662.5	[500]	ug/L	08:16:07
1	SiO2†	86466.0	80281.1	[5347.5]	ug/L	08:17:27
2	Sc Radial	7012.2	7012.2	93.8	%	08:15:13
2	Y RADIAL	6406.9	6406.9	92.53	%	08:15:13
2	Al 396.153Radial†	6199.2	6680.6	[5000]	ug/L	08:15:13
2	Ca 317.933Radial†	3669.6	3882.5	[5000]	ug/L	08:15:13
2	K 766.490 Radial†	24515.2	23724.5	[5000]	ug/L	08:15:13
2	Mg 279.077 IEC†	213.8	224.8	[5000]	ug/L	08:15:33
2	Sr 421.552†	170064.4	181333.7	[500]	ug/L	08:15:13
2	Sc 361.383	741530.7	741530.7	103.18	%	08:16:34
2	Y 371.029	572044.7	572044.7	101.79	%	08:16:34
2	Ag 328.068†	87246.2	83926.1	[500]	ug/L	08:16:34
2	As 188.979†	1416.7	1408.5	[500]	ug/L	08:16:54
2	B 249.677†	19479.9	19819.7	[500]	ug/L	08:16:34
2	Ba 233.527†	73805.8	71531.8	[500]	ug/L	08:16:34
2	Be 313.107†	1135032.3	1104951.6	[500]	ug/L	08:16:34
2	Cd 226.502†	39893.2	38945.5	[500]	ug/L	08:16:54
2	Co 228.616†	29720.4	28904.3	[500]	ug/L	08:16:54
2	Cr 267.716†	37001.7	35939.3	[500]	ug/L	08:16:34
2	Cu 324.752†	148954.2	138727.6	[500]	ug/L	08:16:34
2	Mn 257.610†	472845.3	457600.6	[500]	ug/L	08:16:34
2	Mo 202.031†	7472.5	7225.2	[500]	ug/L	08:16:54
2	Ni 231.604†	19486.5	18766.4	[500]	ug/L	08:16:54
2	P 214.914†	5446.9	4964.3	[2500]	ug/L	08:16:54
2	Pb 220.353†	4388.1	4266.1	[500]	ug/L	08:16:54
2	S 181.975 Axial†	832.2	731.2	[1000]	ug/L	08:16:54
2	Sb 206.836†	1819.4	1706.1	[500]	ug/L	08:16:54

2	Se 196.026†	994.2	992.4	[500]	ug/L	08:16:54
2	Si 251.611†	85264.0	82225.8	[2500]	ug/L	08:16:34
2	Sn 189.927†	2961.9	2858.2	[500]	ug/L	08:16:54
2	Ti 334.940†	282021.6	274682.7	[500]	ug/L	08:16:34
2	Tl 190.801†	1952.3	1953.0	[500]	ug/L	08:16:54
2	U 409.014†	10246.1	14779.2	[500]	ug/L	08:16:34
2	V 292.402†	55595.3	55448.0	[500]	ug/L	08:16:34
2	Zn 213.857†	57330.7	54639.6	[500]	ug/L	08:16:34
2	SiO2†	85458.1	82388.9	[5347.5]	ug/L	08:17:32
3	Sc Radial	7281.7	7281.7	97.4	%	08:15:38
3	Y RADIAL	6673.6	6673.6	96.38	%	08:15:38
3	Al 396.153Radial†	6002.9	6234.6	[5000]	ug/L	08:15:38
3	Ca 317.933Radial†	3580.6	3646.4	[5000]	ug/L	08:15:38
3	K 766.490 Radial†	24009.6	22238.6	[5000]	ug/L	08:15:38
3	Mg 279.077 IEC†	207.3	209.8	[5000]	ug/L	08:15:58
3	Sr 421.552†	165542.3	169984.4	[500]	ug/L	08:15:38
3	Sc 361.383	732297.7	732297.7	101.89	%	08:17:02
3	Y 371.029	565284.2	565284.2	100.58	%	08:17:02
3	Ag 328.068†	86631.1	84388.6	[500]	ug/L	08:17:02
3	As 188.979†	1413.7	1422.9	[500]	ug/L	08:17:22
3	B 249.677†	19357.3	19937.5	[500]	ug/L	08:17:02
3	Ba 233.527†	73252.9	71891.1	[500]	ug/L	08:17:02
3	Be 313.107†	1126344.5	1110295.2	[500]	ug/L	08:17:02
3	Cd 226.502†	39932.3	39471.3	[500]	ug/L	08:17:22
3	Co 228.616†	29714.9	29262.1	[500]	ug/L	08:17:22
3	Cr 267.716†	36694.0	36089.5	[500]	ug/L	08:17:02
3	Cu 324.752†	147084.2	138712.4	[500]	ug/L	08:17:02
3	Mn 257.610†	469176.5	459778.1	[500]	ug/L	08:17:02
3	Mo 202.031†	7457.0	7301.3	[500]	ug/L	08:17:22
3	Ni 231.604†	19533.9	19051.1	[500]	ug/L	08:17:22
3	P 214.914†	5449.9	5033.8	[2500]	ug/L	08:17:22
3	Pb 220.353†	4412.4	4343.7	[500]	ug/L	08:17:22
3	S 181.975 Axial†	840.6	749.6	[1000]	ug/L	08:17:22
3	Sb 206.836†	1816.0	1725.0	[500]	ug/L	08:17:22
3	Se 196.026†	1002.2	1012.3	[500]	ug/L	08:17:22
3	Si 251.611†	84453.6	82472.4	[2500]	ug/L	08:17:02
3	Sn 189.927†	2978.8	2910.9	[500]	ug/L	08:17:22
3	Ti 334.940†	278860.4	275026.5	[500]	ug/L	08:17:02
3	Tl 190.801†	1948.7	1973.3	[500]	ug/L	08:17:22
3	U 409.014†	9966.0	14629.5	[500]	ug/L	08:17:02
3	V 292.402†	54895.9	55441.0	[500]	ug/L	08:17:02
3	Zn 213.857†	56933.7	54950.6	[500]	ug/L	08:17:02
3	SiO2†	86700.3	84652.2	[5347.5]	ug/L	08:17:37

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	747899.0	19578.21	2.62%	104.06	%
Sc Radial	7208.5	171.81	2.38%	96.4	%
Y 371.029	576947.5	14739.54	2.55%	102.66	%
Y RADIAL	6597.4	166.02	2.52%	95.28	%
Ag 328.068†	83134.7	1786.23	2.15%	[500]	ug/L
Al 396.153Radial†	6418.0	233.28	3.63%	[5000]	ug/L
As 188.979†	1394.3	37.77	2.71%	[500]	ug/L
B 249.677†	19623.4	445.89	2.27%	[500]	ug/L
Ba 233.527†	70813.4	1565.76	2.21%	[500]	ug/L
Be 313.107†	1093748.2	24180.62	2.21%	[500]	ug/L
Ca 317.933Radial†	3750.4	120.53	3.21%	[5000]	ug/L
Cd 226.502†	38510.3	1237.37	3.21%	[500]	ug/L
Co 228.616†	28571.3	904.57	3.17%	[500]	ug/L
Cr 267.716†	35577.0	761.31	2.14%	[500]	ug/L
Cu 324.752†	137052.3	2888.55	2.11%	[500]	ug/L
K 766.490 Radial†	22878.0	764.29	3.34%	[5000]	ug/L
Mg 279.077 IEC†	217.4	7.53	3.46%	[5000]	ug/L
Mn 257.610†	452993.1	9926.07	2.19%	[500]	ug/L
Mo 202.031†	7140.3	216.36	3.03%	[500]	ug/L
Ni 231.604†	18568.1	607.02	3.27%	[500]	ug/L
P 214.914†	4910.7	156.86	3.19%	[2500]	ug/L
Pb 220.353†	4223.7	145.95	3.46%	[500]	ug/L
S 181.975 Axial†	723.5	30.63	4.23%	[1000]	ug/L

Sb 206.836†	1679.9	62.46	3.72%	[500]	ug/L
Se 196.026†	987.9	26.86	2.72%	[500]	ug/L
Si 251.611†	81371.2	1698.29	2.09%	[2500]	ug/L
Sn 189.927†	2831.0	96.35	3.40%	[500]	ug/L
Sr 421.552†	174751.0	5888.55	3.37%	[500]	ug/L
Ti 334.940†	271511.1	5793.62	2.13%	[500]	ug/L
Tl 190.801†	1929.0	59.92	3.11%	[500]	ug/L
U 409.014†	14668.9	96.79	0.66%	[500]	ug/L
V 292.402†	54775.6	1158.59	2.12%	[500]	ug/L
Zn 213.857†	54084.3	1241.03	2.29%	[500]	ug/L
SiO2†	82440.7	2186.02	2.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 6/30/2009 08:19:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7204.7	7204.7	96.4	%	08:22:02
1	Y RADIAL	7061.7	7061.7	102.0	%	08:21:42
1	Al 396.153Radial†	12196.2	12725.7	[10000]	ug/L	08:21:42
1	Ca 317.933Radial†	7147.7	7386.4	[10000]	ug/L	08:22:02
1	Fe 238.204 Radial†	2424.5	2480.5	[10000]	ug/L	08:22:02
1	K 766.490 Radial†	45808.2	45117.1	[10000]	ug/L	08:21:42
1	Mg 279.077 IEC†	418.3	431.0	[10000]	ug/L	08:22:02
1	Na 589.592 Radial†	161229.1	167404.7	[10000]	ug/L	08:21:42
1	Sr 421.552†	336493.3	349155.2	[1000]	ug/L	08:21:42
1	Sc 361.383	731644.6	731644.6	101.80	%	08:23:01
1	Y 371.029	562448.6	562448.6	100.08	%	08:23:01
1	Ag 328.068†	173528.7	169823.4	[1000]	ug/L	08:23:01
1	As 188.979†	2839.1	2824.3	[1000]	ug/L	08:23:21
1	B 249.677†	40015.0	40246.4	[1000]	ug/L	08:23:01
1	Ba 233.527†	146287.3	143696.5	[1000]	ug/L	08:23:01
1	Be 313.107†	2249343.7	2214396.2	[1000]	ug/L	08:23:01
1	Cd 226.502†	81183.1	80026.7	[1000]	ug/L	08:23:01
1	Co 228.616†	59665.4	58708.3	[1000]	ug/L	08:23:01
1	Cr 267.716†	73671.7	72444.6	[1000]	ug/L	08:23:01
1	Cu 324.752†	290566.6	279783.1	[1000]	ug/L	08:23:01
1	Mn 257.610†	937074.5	919802.1	[1000]	ug/L	08:23:01
1	Mo 202.031†	14767.8	14489.2	[1000]	ug/L	08:23:21
1	Ni 231.604†	38890.7	38082.2	[1000]	ug/L	08:23:01
1	P 214.914†	10479.1	9978.8	[5000]	ug/L	08:23:21
1	Pb 220.353†	8695.5	8554.8	[1000]	ug/L	08:23:21
1	S 181.975 Axial†	1600.3	1496.5	[2000]	ug/L	08:23:21
1	Sb 206.836†	3574.8	3454.3	[1000]	ug/L	08:23:21
1	Se 196.026†	2002.9	1996.2	[1000]	ug/L	08:23:21
1	Si 251.611†	167224.9	163852.0	[5000]	ug/L	08:23:01
1	Sn 189.927†	5879.4	5762.8	[1000]	ug/L	08:23:21
1	Ti 334.940†	562505.4	553893.3	[1000]	ug/L	08:23:01
1	Tl 190.801†	3903.4	3895.0	[1000]	ug/L	08:23:21
1	U 409.014†	25254.0	29655.6	[1000]	ug/L	08:23:01
1	V 292.402†	112154.0	111733.3	[1000]	ug/L	08:23:01
1	Zn 213.857†	113078.1	110150.7	[1000]	ug/L	08:23:01
1	SiO2†	166605.1	163218.1	[10695]	ug/L	08:24:22
2	Sc Radial	7030.2	7030.2	94.1	%	08:22:27
2	Y RADIAL	5925.9	5925.9	85.58	%	08:22:07
2	Al 396.153Radial†	12831.1	13714.8	[10000]	ug/L	08:22:07
2	Ca 317.933Radial†	7296.2	7728.2	[10000]	ug/L	08:22:27
2	Fe 238.204 Radial†	2474.3	2595.9	[10000]	ug/L	08:22:27
2	K 766.490 Radial†	47735.1	48345.1	[10000]	ug/L	08:22:07
2	Mg 279.077 IEC†	418.7	442.2	[10000]	ug/L	08:22:27
2	Na 589.592 Radial†	168332.5	179107.6	[10000]	ug/L	08:22:07
2	Sr 421.552†	352945.4	375309.4	[1000]	ug/L	08:22:07
2	Sc 361.383	736250.1	736250.1	102.44	%	08:23:29
2	Y 371.029	566550.5	566550.5	100.81	%	08:23:29
2	Ag 328.068†	173180.3	168417.0	[1000]	ug/L	08:23:29
2	As 188.979†	2763.2	2732.7	[1000]	ug/L	08:23:49
2	B 249.677†	39944.8	39932.0	[1000]	ug/L	08:23:29
2	Ba 233.527†	145645.5	142171.1	[1000]	ug/L	08:23:29
2	Be 313.107†	2241322.6	2192745.1	[1000]	ug/L	08:23:29
2	Cd 226.502†	80530.2	78890.5	[1000]	ug/L	08:23:29
2	Co 228.616†	59248.5	57934.7	[1000]	ug/L	08:23:29
2	Cr 267.716†	73330.1	71658.4	[1000]	ug/L	08:23:29
2	Cu 324.752†	290171.2	277611.7	[1000]	ug/L	08:23:29
2	Mn 257.610†	932429.5	909509.9	[1000]	ug/L	08:23:29
2	Mo 202.031†	14414.1	14053.2	[1000]	ug/L	08:23:49
2	Ni 231.604†	38630.1	37588.9	[1000]	ug/L	08:23:29

2	P 214.914†	10255.7	9696.3	[5000]	ug/L	08:23:49
2	Pb 220.353†	8495.4	8306.1	[1000]	ug/L	08:23:49
2	S 181.975 Axial†	1560.2	1447.6	[2000]	ug/L	08:23:49
2	Sb 206.836†	3479.3	3339.0	[1000]	ug/L	08:23:49
2	Se 196.026†	1946.5	1928.8	[1000]	ug/L	08:23:49
2	Si 251.611†	166585.8	162200.7	[5000]	ug/L	08:23:29
2	Sn 189.927†	5744.7	5595.1	[1000]	ug/L	08:23:49
2	Ti 334.940†	561361.9	549320.8	[1000]	ug/L	08:23:29
2	Tl 190.801†	3783.4	3753.9	[1000]	ug/L	08:23:49
2	U 409.014†	25427.8	29670.0	[1000]	ug/L	08:23:29
2	V 292.402†	111767.7	110667.1	[1000]	ug/L	08:23:29
2	Zn 213.857†	112281.5	108678.3	[1000]	ug/L	08:23:29
2	SiO2†	169107.1	164636.8	[10695]	ug/L	08:24:27
3	Sc Radial	7179.0	7179.0	96.0	%	08:22:52
3	Y RADIAL	6782.9	6782.9	97.96	%	08:22:32
3	Al 396.153Radial†	12455.1	13040.5	[10000]	ug/L	08:22:32
3	Ca 317.933Radial†	7211.3	7479.1	[10000]	ug/L	08:22:52
3	Fe 238.204 Radial†	2448.1	2514.1	[10000]	ug/L	08:22:52
3	K 766.490 Radial†	46541.4	46050.6	[10000]	ug/L	08:22:32
3	Mg 279.077 IEC†	421.5	435.8	[10000]	ug/L	08:22:52
3	Na 589.592 Radial†	163743.5	170621.2	[10000]	ug/L	08:22:32
3	Sr 421.552†	342328.1	356479.3	[1000]	ug/L	08:22:32
3	Sc 361.383	754192.3	754192.3	104.94	%	08:23:56
3	Y 371.029	580172.7	580172.7	103.23	%	08:23:56
3	Ag 328.068†	173481.6	164682.5	[1000]	ug/L	08:23:56
3	As 188.979†	2839.1	2740.9	[1000]	ug/L	08:24:16
3	B 249.677†	40141.4	39191.7	[1000]	ug/L	08:23:56
3	Ba 233.527†	146129.4	139249.9	[1000]	ug/L	08:23:56
3	Be 313.107†	2245004.3	2144204.4	[1000]	ug/L	08:23:56
3	Cd 226.502†	80829.2	77305.3	[1000]	ug/L	08:23:56
3	Co 228.616†	59391.2	56694.9	[1000]	ug/L	08:23:56
3	Cr 267.716†	73470.2	70089.1	[1000]	ug/L	08:23:56
3	Cu 324.752†	291067.4	271727.3	[1000]	ug/L	08:23:56
3	Mn 257.610†	935327.1	890617.8	[1000]	ug/L	08:23:56
3	Mo 202.031†	14715.4	14005.6	[1000]	ug/L	08:24:16
3	Ni 231.604†	38693.3	36752.0	[1000]	ug/L	08:23:56
3	P 214.914†	10487.0	9678.6	[5000]	ug/L	08:24:16
3	Pb 220.353†	8683.7	8288.1	[1000]	ug/L	08:24:16
3	S 181.975 Axial†	1594.1	1443.7	[2000]	ug/L	08:24:16
3	Sb 206.836†	3539.1	3315.3	[1000]	ug/L	08:24:16
3	Se 196.026†	2006.3	1940.6	[1000]	ug/L	08:24:16
3	Si 251.611†	167230.5	158946.5	[5000]	ug/L	08:23:56
3	Sn 189.927†	5871.1	5582.2	[1000]	ug/L	08:24:16
3	Ti 334.940†	562636.9	537499.6	[1000]	ug/L	08:23:56
3	Tl 190.801†	3902.1	3779.2	[1000]	ug/L	08:24:16
3	U 409.014†	25678.7	29318.6	[1000]	ug/L	08:23:56
3	V 292.402†	111958.9	108253.7	[1000]	ug/L	08:23:56
3	Zn 213.857†	112557.5	106333.8	[1000]	ug/L	08:23:56
3	SiO2†	166725.6	158440.2	[10695]	ug/L	08:24:32

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	740695.7	11913.08	1.61%	103.06	%
Sc Radial	7138.0	94.18	1.32%	95.5	%
Y 371.029	569723.9	9278.37	1.63%	101.37	%
Y RADIAL	6590.2	591.92	8.98%	95.17	%
Ag 328.068†	167641.0	2656.88	1.58%	[1000]	ug/L
Al 396.153Radial†	13160.3	505.29	3.84%	[10000]	ug/L
As 188.979†	2766.0	50.67	1.83%	[1000]	ug/L
B 249.677†	39790.0	541.48	1.36%	[1000]	ug/L
Ba 233.527†	141705.8	2259.47	1.59%	[1000]	ug/L
Be 313.107†	2183781.9	35944.05	1.65%	[1000]	ug/L
Ca 317.933Radial†	7531.2	176.79	2.35%	[10000]	ug/L
Cd 226.502†	78740.8	1366.83	1.74%	[1000]	ug/L
Co 228.616†	57779.3	1015.70	1.76%	[1000]	ug/L
Cr 267.716†	71397.4	1199.28	1.68%	[1000]	ug/L
Cu 324.752†	276374.0	4168.09	1.51%	[1000]	ug/L
Fe 238.204 Radial†	2530.2	59.32	2.34%	[10000]	ug/L
K 766.490 Radial†	46504.2	1661.12	3.57%	[10000]	ug/L

Mg 279.077 IEC†	436.3	5.61	1.29%	[10000]	ug/L
Mn 257.610†	906643.3	14801.82	1.63%	[1000]	ug/L
Mo 202.031†	14182.7	266.55	1.88%	[1000]	ug/L
Na 589.592 Radial†	172377.9	6045.95	3.51%	[10000]	ug/L
Ni 231.604†	37474.4	672.45	1.79%	[1000]	ug/L
P 214.914†	9784.6	168.42	1.72%	[5000]	ug/L
Pb 220.353†	8383.0	149.05	1.78%	[1000]	ug/L
S 181.975 Axial†	1462.6	29.43	2.01%	[2000]	ug/L
Sb 206.836†	3369.5	74.35	2.21%	[1000]	ug/L
Se 196.026†	1955.2	35.97	1.84%	[1000]	ug/L
Si 251.611†	161666.4	2496.06	1.54%	[5000]	ug/L
Sn 189.927†	5646.7	100.73	1.78%	[1000]	ug/L
Sr 421.552†	360314.6	13492.36	3.74%	[1000]	ug/L
Ti 334.940†	546904.5	8459.75	1.55%	[1000]	ug/L
Tl 190.801†	3809.4	75.25	1.98%	[1000]	ug/L
U 409.014†	29548.0	198.85	0.67%	[1000]	ug/L
V 292.402†	110218.0	1782.72	1.62%	[1000]	ug/L
Zn 213.857†	108387.6	1924.98	1.78%	[1000]	ug/L
SiO2†	162098.4	3246.49	2.00%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 6/30/2009 08:26:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7395.9	7395.9	98.9	%	08:28:57
1	Y RADIAL	6757.0	6757.0	97.58	%	08:28:57
1	Al 396.153Radial†	58979.0	59679.3	[50000]	ug/L	08:28:37
1	Ca 317.933Radial†	34828.4	35170.0	[50000]	ug/L	08:28:57
1	Fe 238.204 Radial†	4716.7	4732.1	[20000]	ug/L	08:28:57
1	Mg 279.077 IEC†	1974.9	1992.8	[50000]	ug/L	08:28:57
1	Na 589.592 Radial†	312800.4	316264.9	[20000]	ug/L	08:28:37
1	Sc 361.383	728229.0	728229.0	101.33	%	08:29:54
1	Y 371.029	558499.0	558499.0	99.377	%	08:29:54
2	Sc Radial	7352.7	7352.7	98.4	%	08:29:22
2	Y RADIAL	6711.0	6711.0	96.92	%	08:29:22
2	Al 396.153Radial†	59889.8	60955.7	[50000]	ug/L	08:29:02
2	Ca 317.933Radial†	34701.3	35247.7	[50000]	ug/L	08:29:22
2	Fe 238.204 Radial†	4700.8	4744.0	[20000]	ug/L	08:29:22
2	Mg 279.077 IEC†	1971.2	2000.9	[50000]	ug/L	08:29:22
2	Na 589.592 Radial†	318315.5	323730.2	[20000]	ug/L	08:29:02
2	Sc 361.383	719163.9	719163.9	100.07	%	08:30:00
2	Y 371.029	551632.9	551632.9	98.155	%	08:30:00
3	Sc Radial	7422.8	7422.8	99.3	%	08:29:47
3	Y RADIAL	6775.3	6775.3	97.85	%	08:29:47
3	Al 396.153Radial†	60312.5	60805.9	[50000]	ug/L	08:29:27
3	Ca 317.933Radial†	34904.4	35118.8	[50000]	ug/L	08:29:47
3	Fe 238.204 Radial†	4722.7	4720.8	[20000]	ug/L	08:29:47
3	Mg 279.077 IEC†	1986.0	1996.8	[50000]	ug/L	08:29:47
3	Na 589.592 Radial†	321104.6	323480.3	[20000]	ug/L	08:29:27
3	Sc 361.383	728485.1	728485.1	101.36	%	08:30:05
3	Y 371.029	558549.8	558549.8	99.386	%	08:30:05

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	725292.7	5309.24	0.73%	100.92	%
Sc Radial	7390.4	35.39	0.48%	98.9	%
Y 371.029	556227.2	3978.89	0.72%	98.973	%
Y RADIAL	6747.8	33.13	0.49%	97.45	%
Al 396.153Radial†	60480.3	697.72	1.15%	[50000]	ug/L
Ca 317.933Radial†	35178.8	64.92	0.18%	[50000]	ug/L
Fe 238.204 Radial†	4732.3	11.57	0.24%	[20000]	ug/L
Mg 279.077 IEC†	1996.9	4.02	0.20%	[50000]	ug/L
Na 589.592 Radial†	321158.5	4239.77	1.32%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	167.4	0.00000	0.999993	
Al 396.153Radial	3	Lin Thru 0	0.0	1.214	0.00000	0.999844	
As 188.979	3	Lin Thru 0	0.0	2.771	0.00000	0.999991	
B 249.677	3	Lin Thru 0	0.0	39.68	0.00000	0.999985	
Ba 233.527	3	Lin Thru 0	0.0	141.7	0.00000	0.999996	
Be 313.107	3	Lin Thru 0	0.0	2185	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.7059	0.00000	0.999891	
Cd 226.502	3	Lin Thru 0	0.0	78.40	0.00000	0.999962	
Co 228.616	3	Lin Thru 0	0.0	57.66	0.00000	0.999988	
Cr 267.716	3	Lin Thru 0	0.0	71.36	0.00000	0.999996	
Cu 324.752	3	Lin Thru 0	0.0	276.0	0.00000	0.999993	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.2399	0.00000	0.999626	
K 766.490 Radial	3	Lin Thru 0	0.0	4.635	0.00000	0.999978	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0401	0.00000	0.999811
Mn 257.610	3	Lin Thru 0	0.0	906.8	0.00000	0.999993
Mo 202.031	3	Lin Thru 0	0.0	14.20	0.00000	0.999994
Na 589.592 Radia	2	Lin Thru 0	0.0	16.29	0.00000	0.999581
Ni 231.604	3	Lin Thru 0	0.0	37.41	0.00000	0.999993
P 214.914	3	Lin Thru 0	0.0	1.959	0.00000	0.999998
Pb 220.353	3	Lin Thru 0	0.0	8.399	0.00000	0.999987
S 181.975 Axial	3	Lin Thru 0	0.0	0.7299	0.00000	0.999986
Sb 206.836	3	Lin Thru 0	0.0	3.367	0.00000	0.999998
Se 196.026	3	Lin Thru 0	0.0	1.960	0.00000	0.999990
Si 251.611	3	Lin Thru 0	0.0	32.38	0.00000	0.999996
Sn 189.927	3	Lin Thru 0	0.0	5.650	0.00000	0.999999
Sr 421.552	3	Lin Thru 0	0.0	358.0	0.00000	0.999921
Ti 334.940	3	Lin Thru 0	0.0	546.2	0.00000	0.999995
Tl 190.801	3	Lin Thru 0	0.0	3.820	0.00000	0.999979
U 409.014	3	Lin Thru 0	0.0	29.53	0.00000	0.999946
V 292.402	3	Lin Thru 0	0.0	110.1	0.00000	0.999996
Zn 213.857	3	Lin Thru 0	0.0	108.4	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	15.21	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 6/30/2009 08:32:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7311.1	7311.1	97.8	%			08:34:29
1	Y RADIAL	6721.5	6721.5	97.07	%			08:34:29
1	Al 396.153Radial†	6272.0	6484.9	5317.7	ug/L	5317.7	ppb	08:34:09
1	Ca 317.933Radial†	3582.0	3633.1	5146.7	ug/L	5146.7	ppb	08:34:29
1	Fe 238.204 Radial†	1260.1	1253.5	5240.1	ug/L	5240.1	ppb	08:34:29
1	K 766.490 Radial†	13670.6	11569.2	2483.4	ug/L	2483.4	ppb	08:34:09
1	Mg 279.077 IEC†	218.5	220.3	5498.7	ug/L	5498.7	ppb	08:34:29
1	Na 589.592 Radial†	42038.9	43114.8	2646.1	ug/L	2646.1	ppb	08:34:09
1	Sr 421.552†	169418.8	173264.0	483.88	ug/L	483.88	ppb	08:34:09
1	Sc 361.383	742145.3	742145.3	103.26	%			08:35:26
1	Y 371.029	574749.9	574749.9	102.27	%			08:35:26
1	Ag 328.068†	44211.4	42181.4	255.12	ug/L	255.12	ppb	08:35:26
1	As 188.979†	1339.9	1333.0	483.93	ug/L	483.93	ppb	08:35:46
1	B 249.677†	19594.8	19915.4	499.11	ug/L	499.11	ppb	08:35:26
1	Ba 233.527†	78271.1	75796.8	535.91	ug/L	535.91	ppb	08:35:26
1	Be 313.107†	582097.1	568581.3	261.42	ug/L	261.42	ppb	08:35:26
1	Cd 226.502†	39466.2	38500.0	490.79	ug/L	490.79	ppb	08:35:46
1	Co 228.616†	28280.5	27486.1	476.94	ug/L	476.94	ppb	08:35:46
1	Cr 267.716†	36963.9	35873.1	503.38	ug/L	503.38	ppb	08:35:26
1	Cu 324.752†	154059.0	143551.4	520.49	ug/L	520.49	ppb	08:35:26
1	Mn 257.610†	490018.2	473851.2	523.10	ug/L	523.10	ppb	08:35:26
1	Mo 202.031†	7718.1	7457.0	525.30	ug/L	525.30	ppb	08:35:46
1	Ni 231.604†	20442.3	19676.4	525.64	ug/L	525.64	ppb	08:35:46
1	P 214.914†	5439.5	4952.8	2430.0	ug/L	2430.0	ppb	08:35:46
1	Pb 220.353†	4408.1	4282.1	511.42	ug/L	511.42	ppb	08:35:46
1	S 181.975 Axial†	2049.7	1909.5	2614.9	ug/L	2614.9	ppb	08:35:46
1	Sb 206.836†	1869.3	1753.0	528.00	ug/L	528.00	ppb	08:35:46
1	Se 196.026†	5231.7	5095.1	2618.6	ug/L	2618.6	ppb	08:35:46
1	Si 251.611†	167612.2	161902.9	4983.0	ug/L	4983.0	ppb	08:35:26
1	Sn 189.927†	3142.3	3030.5	537.29	ug/L	537.29	ppb	08:35:46
1	Ti 334.940†	286278.1	278578.4	509.91	ug/L	509.91	ppb	08:35:26
1	Tl 190.801†	1924.1	1924.0	507.00	ug/L	507.00	ppb	08:35:46
1	U 409.014†	11414.2	15902.2	536.85	ug/L	536.85	ppb	08:35:26
1	V 292.402†	55390.3	55204.8	507.68	ug/L	507.68	ppb	08:35:26
1	Zn 213.857†	58307.0	55539.1	507.72	ug/L	507.72	ppb	08:35:26
1	SiO2†	167219.3	161497.4	10582	ug/L	10582	ppb	08:36:44
2	Sc Radial	7274.5	7274.5	97.3	%			08:34:54
2	Y RADIAL	6697.6	6697.6	96.73	%			08:34:54
2	Al 396.153Radial†	6255.2	6499.9	5329.7	ug/L	5329.7	ppb	08:34:34
2	Ca 317.933Radial†	3558.1	3626.9	5137.9	ug/L	5137.9	ppb	08:34:54
2	Fe 238.204 Radial†	1245.9	1245.3	5206.4	ug/L	5206.4	ppb	08:34:54
2	K 766.490 Radial†	13611.2	11578.5	2485.3	ug/L	2485.3	ppb	08:34:34
2	Mg 279.077 IEC†	219.7	222.7	5558.2	ug/L	5558.2	ppb	08:34:54
2	Na 589.592 Radial†	42036.0	43328.0	2659.2	ug/L	2659.2	ppb	08:34:34
2	Sr 421.552†	168803.2	173502.8	484.55	ug/L	484.55	ppb	08:34:34
2	Sc 361.383	733513.4	733513.4	102.06	%			08:35:52
2	Y 371.029	568212.8	568212.8	101.11	%			08:35:52
2	Ag 328.068†	43958.9	42437.9	256.64	ug/L	256.64	ppb	08:35:52
2	As 188.979†	1336.4	1344.8	488.20	ug/L	488.20	ppb	08:36:12
2	B 249.677†	19510.6	20056.2	502.63	ug/L	502.63	ppb	08:35:52
2	Ba 233.527†	77397.0	75832.3	536.16	ug/L	536.16	ppb	08:35:52
2	Be 313.107†	576054.7	569294.5	261.75	ug/L	261.75	ppb	08:35:52
2	Cd 226.502†	39397.2	38882.0	495.67	ug/L	495.67	ppb	08:36:12
2	Co 228.616†	28277.3	27805.3	482.49	ug/L	482.49	ppb	08:36:12
2	Cr 267.716†	36653.8	35990.4	505.02	ug/L	505.02	ppb	08:35:52
2	Cu 324.752†	152551.9	143830.4	521.50	ug/L	521.50	ppb	08:35:52
2	Mn 257.610†	485576.9	475083.9	524.45	ug/L	524.45	ppb	08:35:52
2	Mo 202.031†	7722.0	7548.8	531.76	ug/L	531.76	ppb	08:36:12
2	Ni 231.604†	20462.9	19929.6	532.41	ug/L	532.41	ppb	08:36:12

2	P 214.914†	5426.8	5002.3	2455.2 ug/L	2455.2 ppb	08:36:12
2	Pb 220.353†	4388.7	4313.2	515.16 ug/L	515.16 ppb	08:36:12
2	S 181.975 Axial†	2036.4	1919.9	2629.1 ug/L	2629.1 ppb	08:36:12
2	Sb 206.836†	1877.4	1782.2	536.82 ug/L	536.82 ppb	08:36:12
2	Se 196.026†	5200.7	5124.4	2633.4 ug/L	2633.4 ppb	08:36:12
2	Si 251.611†	165998.4	162231.9	4993.0 ug/L	4993.0 ppb	08:35:52
2	Sn 189.927†	3121.5	3045.9	540.00 ug/L	540.00 ppb	08:36:12
2	Ti 334.940†	283330.6	278952.8	510.60 ug/L	510.60 ppb	08:35:52
2	Tl 190.801†	1916.6	1938.6	510.80 ug/L	510.80 ppb	08:36:12
2	U 409.014†	11015.3	15641.4	528.02 ug/L	528.02 ppb	08:35:52
2	V 292.402†	54718.8	55178.2	507.51 ug/L	507.51 ppb	08:35:52
2	Zn 213.857†	57714.9	55623.4	508.45 ug/L	508.45 ppb	08:35:52
2	SiO2†	167334.4	163515.8	10715 ug/L	10715 ppb	08:36:49
3	Sc Radial	7288.8	7288.8	97.5 %		08:35:19
3	Y RADIAL	6706.2	6706.2	96.85 %		08:35:19
3	Al 396.153Radial†	6253.6	6485.7	5318.1 ug/L	5318.1 ppb	08:34:59
3	Ca 317.933Radial†	3567.3	3629.1	5141.1 ug/L	5141.1 ppb	08:35:19
3	Fe 238.204 Radial†	1249.8	1246.8	5212.6 ug/L	5212.6 ppb	08:35:19
3	K 766.490 Radial†	13537.7	11475.5	2463.1 ug/L	2463.1 ppb	08:34:59
3	Mg 279.077 IEC†	215.7	218.2	5446.1 ug/L	5446.1 ppb	08:35:19
3	Na 589.592 Radial†	41958.3	43163.3	2649.0 ug/L	2649.0 ppb	08:34:59
3	Sr 421.552†	169081.7	173447.1	484.39 ug/L	484.39 ppb	08:34:59
3	Sc 361.383	733570.0	733570.0	102.07 %		08:36:18
3	Y 371.029	568459.5	568459.5	101.15 %		08:36:18
3	Ag 328.068†	43827.3	42305.6	255.84 ug/L	255.84 ppb	08:36:18
3	As 188.979†	1326.6	1335.2	484.71 ug/L	484.71 ppb	08:36:38
3	B 249.677†	19479.8	20024.6	501.84 ug/L	501.84 ppb	08:36:18
3	Ba 233.527†	77507.0	75934.2	536.88 ug/L	536.88 ppb	08:36:18
3	Be 313.107†	575610.8	568816.2	261.53 ug/L	261.53 ppb	08:36:18
3	Cd 226.502†	39293.8	38777.8	494.34 ug/L	494.34 ppb	08:36:38
3	Co 228.616†	28220.0	27747.0	481.47 ug/L	481.47 ppb	08:36:38
3	Cr 267.716†	36597.3	35932.3	504.20 ug/L	504.20 ppb	08:36:18
3	Cu 324.752†	153006.8	144264.6	523.08 ug/L	523.08 ppb	08:36:18
3	Mn 257.610†	485201.7	474679.6	524.01 ug/L	524.01 ppb	08:36:18
3	Mo 202.031†	7703.1	7529.7	530.42 ug/L	530.42 ppb	08:36:38
3	Ni 231.604†	20403.2	19869.5	530.80 ug/L	530.80 ppb	08:36:38
3	P 214.914†	5408.5	4984.0	2445.5 ug/L	2445.5 ppb	08:36:38
3	Pb 220.353†	4351.6	4276.6	510.79 ug/L	510.79 ppb	08:36:38
3	S 181.975 Axial†	2025.2	1908.7	2613.8 ug/L	2613.8 ppb	08:36:38
3	Sb 206.836†	1863.8	1768.7	532.77 ug/L	532.77 ppb	08:36:38
3	Se 196.026†	5202.5	5125.8	2634.2 ug/L	2634.2 ppb	08:36:38
3	Si 251.611†	166092.4	162311.4	4995.5 ug/L	4995.5 ppb	08:36:18
3	Sn 189.927†	3112.8	3037.1	538.46 ug/L	538.46 ppb	08:36:38
3	Ti 334.940†	283620.0	279215.0	511.08 ug/L	511.08 ppb	08:36:18
3	Tl 190.801†	1917.3	1939.2	510.95 ug/L	510.95 ppb	08:36:38
3	U 409.014†	11453.0	16069.4	542.52 ug/L	542.52 ppb	08:36:18
3	V 292.402†	54718.6	55173.8	507.48 ug/L	507.48 ppb	08:36:18
3	Zn 213.857†	57781.1	55683.9	509.02 ug/L	509.02 ppb	08:36:18
3	SiO2†	166907.8	163085.1	10687 ug/L	10687 ppb	08:36:54

Mean Data: ICV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	736409.6	102.47	%	0.691				0.67%
Sc Radial	7291.5	97.5	%	0.25				0.25%
Y 371.029	570474.1	101.51	%	0.659				0.65%
Y RADIAL	6708.4	96.88	%	0.174				0.18%
Ag 328.068†	42308.3	255.87	ug/L	0.764	255.87	ppb	0.764	0.30%
QC value within limits for Ag 328.068 Recovery = 102.35%								
Al 396.153Radial†	6490.2	5321.8	ug/L	6.84	5321.8	ppb	6.84	0.13%
QC value within limits for Al 396.153Radial Recovery = 106.44%								
As 188.979†	1337.7	485.61	ug/L	2.269	485.61	ppb	2.269	0.47%
QC value within limits for As 188.979 Recovery = 97.12%								
B 249.677†	19998.8	501.19	ug/L	1.848	501.19	ppb	1.848	0.37%
QC value within limits for B 249.677 Recovery = 100.24%								
Ba 233.527†	75854.4	536.31	ug/L	0.503	536.31	ppb	0.503	0.09%
QC value within limits for Ba 233.527 Recovery = 107.26%								
Be 313.107†	568897.3	261.57	ug/L	0.167	261.57	ppb	0.167	0.06%
QC value within limits for Be 313.107 Recovery = 104.63%								
Ca 317.933Radial†	3629.7	5141.9	ug/L	4.41	5141.9	ppb	4.41	0.09%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.84%
Cd 226.502†            38720.0      493.60 ug/L        2.523      493.60 ppb        2.523   0.51%
   QC value within limits for Cd 226.502  Recovery = 98.72%
Co 228.616†            27679.5      480.30 ug/L        2.955      480.30 ppb        2.955   0.62%
   QC value within limits for Co 228.616  Recovery = 96.06%
Cr 267.716†            35931.9      504.20 ug/L        0.823      504.20 ppb        0.823   0.16%
   QC value within limits for Cr 267.716  Recovery = 100.84%
Cu 324.752†           143882.1      521.69 ug/L        1.302      521.69 ppb        1.302   0.25%
   QC value within limits for Cu 324.752  Recovery = 104.34%
Fe 238.204 Radial†      1248.5      5219.7 ug/L       17.92      5219.7 ppb        17.92   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.39%
K 766.490 Radial†      11541.1      2477.3 ug/L       12.30      2477.3 ppb        12.30   0.50%
   QC value within limits for K 766.490 Radial  Recovery = 99.09%
Mg 279.077 IEC†          220.4      5501.0 ug/L       56.09      5501.0 ppb        56.09   1.02%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 110.02%
Mn 257.610†           474538.3      523.86 ug/L        0.690      523.86 ppb        0.690   0.13%
   QC value within limits for Mn 257.610  Recovery = 104.77%
Mo 202.031†             7511.8      529.16 ug/L        3.409      529.16 ppb        3.409   0.64%
   QC value within limits for Mo 202.031  Recovery = 105.83%
Na 589.592 Radial†     43202.0      2651.4 ug/L         6.86      2651.4 ppb         6.86   0.26%
   QC value within limits for Na 589.592 Radial  Recovery = 106.06%
Ni 231.604†            19825.2      529.62 ug/L        3.534      529.62 ppb        3.534   0.67%
   QC value within limits for Ni 231.604  Recovery = 105.92%
P 214.914†              4979.7      2443.5 ug/L       12.68      2443.5 ppb        12.68   0.52%
   QC value within limits for P 214.914  Recovery = 97.74%
Pb 220.353†             4290.6      512.46 ug/L        2.360      512.46 ppb        2.360   0.46%
   QC value within limits for Pb 220.353  Recovery = 102.49%
S 181.975 Axial†        1912.7      2619.3 ug/L         8.53      2619.3 ppb         8.53   0.33%
   QC value within limits for S 181.975 Axial  Recovery = 104.77%
Sb 206.836†             1768.0      532.53 ug/L        4.414      532.53 ppb        4.414   0.83%
   QC value within limits for Sb 206.836  Recovery = 106.51%
Se 196.026†             5115.1      2628.7 ug/L         8.78      2628.7 ppb         8.78   0.33%
   QC value within limits for Se 196.026  Recovery = 105.15%
Si 251.611†           162148.7      4990.5 ug/L         6.62      4990.5 ppb         6.62   0.13%
   QC value within limits for Si 251.611  Recovery = 99.81%
Sn 189.927†             3037.8      538.58 ug/L        1.361      538.58 ppb        1.361   0.25%
   QC value within limits for Sn 189.927  Recovery = 107.72%
Sr 421.552†           173404.7      484.27 ug/L        0.349      484.27 ppb        0.349   0.07%
   QC value within limits for Sr 421.552  Recovery = 96.85%
Ti 334.940†           278915.4      510.53 ug/L        0.584      510.53 ppb        0.584   0.11%
   QC value within limits for Ti 334.940  Recovery = 102.11%
Tl 190.801†             1933.9      509.58 ug/L        2.243      509.58 ppb        2.243   0.44%
   QC value within limits for Tl 190.801  Recovery = 101.92%
U 409.014†             15871.0      535.80 ug/L        7.305      535.80 ppb        7.305   1.36%
   QC value within limits for U 409.014  Recovery = 107.16%
V 292.402†             55185.6      507.56 ug/L        0.110      507.56 ppb        0.110   0.02%
   QC value within limits for V 292.402  Recovery = 101.51%
Zn 213.857†            55615.4      508.40 ug/L        0.654      508.40 ppb        0.654   0.13%
   QC value within limits for Zn 213.857  Recovery = 101.68%
SiO2†                 162699.4       10661 ug/L         69.7       10661 ppb         69.7   0.65%
   QC value within limits for SiO2  Recovery = 99.69%
QC Failed.  Continue with analysis.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 6/30/2009 08:39:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7601.5	7601.5	102	%			08:40:58
1	Y RADIAL	7021.8	7021.8	101.4	%			08:40:58
1	Al 396.153Radial†	-76.5	-2.6	-2.1567	ug/L	-2.1567	ppb	08:40:58
1	Ca 317.933Radial†	33.4	3.8	5.3776	ug/L	5.3776	ppb	08:41:18
1	Fe 238.204 Radial†	37.6	2.2	9.2474	ug/L	9.2474	ppb	08:41:18
1	K 766.490 Radial†	2581.0	130.8	28.208	ug/L	28.208	ppb	08:40:58
1	Mg 279.077 IEC†	0.5	-2.6	-64.453	ug/L	-64.453	ppb	08:41:18
1	Na 589.592 Radial†	-143.1	-5.2	-0.3171	ug/L	-0.3171	ppb	08:40:58
1	Sr 421.552†	-51.1	5.6	0.0157	ug/L	0.0157	ppb	08:40:58
1	Sc 361.383	721142.6	721142.6	100.34	%			08:42:15
1	Y 371.029	564655.5	564655.5	100.47	%			08:42:15
1	Ag 328.068†	614.3	-20.5	-0.1160	ug/L	-0.1160	ppb	08:42:15
1	As 188.979†	-23.4	12.1	4.3570	ug/L	4.3570	ppb	08:42:35
1	B 249.677†	-582.3	359.6	9.0628	ug/L	9.0628	ppb	08:42:15
1	Ba 233.527†	20.3	19.7	0.1392	ug/L	0.1392	ppb	08:42:35
1	Be 313.107†	-4751.1	146.8	0.0669	ug/L	0.0669	ppb	08:42:15
1	Cd 226.502†	-282.9	-0.8	-0.0112	ug/L	-0.0112	ppb	08:42:35
1	Co 228.616†	-100.1	-0.3	-0.0047	ug/L	-0.0047	ppb	08:42:35
1	Cr 267.716†	-50.9	26.7	0.3755	ug/L	0.3755	ppb	08:42:15
1	Cu 324.752†	5612.3	-45.2	-0.1632	ug/L	-0.1632	ppb	08:42:15
1	Mn 257.610†	701.4	19.4	0.0238	ug/L	0.0238	ppb	08:42:35
1	Mo 202.031†	22.6	5.3	0.3767	ug/L	0.3767	ppb	08:42:35
1	Ni 231.604†	146.7	26.4	0.7070	ug/L	0.7070	ppb	08:42:35
1	P 214.914†	307.0	-8.8	-4.4889	ug/L	-4.4889	ppb	08:42:35
1	Pb 220.353†	-28.4	-15.0	-1.7872	ug/L	-1.7872	ppb	08:42:35
1	S 181.975 Axial†	75.0	-0.7	-0.9099	ug/L	-0.9099	ppb	08:42:35
1	Sb 206.836†	58.3	0.8	0.2323	ug/L	0.2323	ppb	08:42:35
1	Se 196.026†	-30.1	-1.2	-0.5968	ug/L	-0.5968	ppb	08:42:35
1	Si 251.611†	433.8	20.5	0.6297	ug/L	0.6297	ppb	08:42:35
1	Sn 189.927†	7.7	-4.9	-0.8615	ug/L	-0.8615	ppb	08:42:35
1	Ti 334.940†	-1422.8	-69.7	-0.1260	ug/L	-0.1260	ppb	08:42:15
1	Tl 190.801†	-44.6	16.3	4.2752	ug/L	4.2752	ppb	08:42:35
1	U 409.014†	-4967.7	-102.1	-3.4593	ug/L	-3.4593	ppb	08:42:15
1	V 292.402†	-1558.5	12.0	0.1047	ug/L	0.1047	ppb	08:42:15
1	Zn 213.857†	954.8	26.4	0.2410	ug/L	0.2410	ppb	08:42:35
1	SiO2†	430.2	-8.2	-0.5457	ug/L	-0.5457	ppb	08:43:31
2	Sc Radial	7362.4	7362.4	98.5	%			08:41:23
2	Y RADIAL	6811.5	6811.5	98.37	%			08:41:23
2	Al 396.153Radial†	-79.9	-8.5	-7.0111	ug/L	-7.0111	ppb	08:41:23
2	Ca 317.933Radial†	28.2	-0.4	-0.6266	ug/L	-0.6266	ppb	08:41:43
2	Fe 238.204 Radial†	33.9	-0.4	-1.6120	ug/L	-1.6120	ppb	08:41:43
2	K 766.490 Radial†	2372.6	1.6	0.3348	ug/L	0.3348	ppb	08:41:23
2	Mg 279.077 IEC†	2.7	-0.3	-6.6483	ug/L	-6.6483	ppb	08:41:43
2	Na 589.592 Radial†	-194.1	-61.5	-3.7725	ug/L	-3.7725	ppb	08:41:23
2	Sr 421.552†	-59.5	-4.6	-0.0127	ug/L	-0.0127	ppb	08:41:23
2	Sc 361.383	709208.7	709208.7	98.681	%			08:42:40
2	Y 371.029	555090.4	555090.4	98.771	%			08:42:40
2	Ag 328.068†	564.1	-61.0	-0.3641	ug/L	-0.3641	ppb	08:42:40
2	As 188.979†	-35.6	-0.6	-0.2289	ug/L	-0.2289	ppb	08:43:00
2	B 249.677†	-626.2	305.3	7.6930	ug/L	7.6930	ppb	08:42:40
2	Ba 233.527†	3.8	3.3	0.0236	ug/L	0.0236	ppb	08:43:00
2	Be 313.107†	-4739.3	79.1	0.0362	ug/L	0.0362	ppb	08:42:40
2	Cd 226.502†	-277.4	0.0	0.0008	ug/L	0.0008	ppb	08:43:00
2	Co 228.616†	-78.7	19.7	0.3421	ug/L	0.3421	ppb	08:43:00
2	Cr 267.716†	5.5	82.9	1.1624	ug/L	1.1624	ppb	08:42:40
2	Cu 324.752†	5692.5	130.2	0.4717	ug/L	0.4717	ppb	08:42:40
2	Mn 257.610†	663.0	-7.7	-0.0086	ug/L	-0.0086	ppb	08:43:00
2	Mo 202.031†	20.5	3.7	0.2595	ug/L	0.2595	ppb	08:43:00
2	Ni 231.604†	145.0	27.2	0.7260	ug/L	0.7260	ppb	08:43:00

2	P 214.914†	321.5	11.0	5.4982 ug/L	5.4982 ppb	08:43:00
2	Pb 220.353†	5.3	18.6	2.2131 ug/L	2.2131 ppb	08:43:00
2	S 181.975 Axial†	80.8	6.5	8.8568 ug/L	8.8568 ppb	08:43:00
2	Sb 206.836†	62.7	6.3	1.8523 ug/L	1.8523 ppb	08:43:00
2	Se 196.026†	-21.3	7.2	3.6577 ug/L	3.6577 ppb	08:43:00
2	Si 251.611†	440.4	34.5	1.0656 ug/L	1.0656 ppb	08:43:00
2	Sn 189.927†	10.4	-2.0	-0.3500 ug/L	-0.3500 ppb	08:43:00
2	Ti 334.940†	-1330.5	-0.0	0.0000 ug/L	0.0000 ppb	08:42:40
2	Tl 190.801†	-57.5	2.5	0.6582 ug/L	0.6582 ppb	08:43:00
2	U 409.014†	-4821.6	-37.3	-1.2666 ug/L	-1.2666 ppb	08:42:40
2	V 292.402†	-1545.3	-0.8	-0.0067 ug/L	-0.0067 ppb	08:42:40
2	Zn 213.857†	934.9	22.3	0.2010 ug/L	0.2010 ppb	08:43:00
2	SiO2†	467.2	36.6	2.4059 ug/L	2.4059 ppb	08:43:36
3	Sc Radial	7531.9	7531.9	101 %		08:41:48
3	Y RADIAL	6932.5	6932.5	100.1 %		08:41:48
3	Al 396.153Radial†	-64.4	8.8	7.2185 ug/L	7.2185 ppb	08:41:48
3	Ca 317.933Radial†	28.1	-1.2	-1.7339 ug/L	-1.7339 ppb	08:42:08
3	Fe 238.204 Radial†	34.0	-1.0	-4.2524 ug/L	-4.2524 ppb	08:42:08
3	K 766.490 Radial†	2517.4	91.0	19.640 ug/L	19.640 ppb	08:41:48
3	Mg 279.077 IEC†	4.8	1.7	42.633 ug/L	42.633 ppb	08:42:08
3	Na 589.592 Radial†	-181.8	-44.8	-2.7524 ug/L	-2.7524 ppb	08:41:48
3	Sr 421.552†	-7.9	48.0	0.1342 ug/L	0.1342 ppb	08:41:48
3	Sc 361.383	717543.5	717543.5	99.841 %		08:43:06
3	Y 371.029	562243.3	562243.3	100.04 %		08:43:06
3	Ag 328.068†	733.3	101.9	0.6059 ug/L	0.6059 ppb	08:43:06
3	As 188.979†	-22.7	12.7	4.5745 ug/L	4.5745 ppb	08:43:26
3	B 249.677†	-621.9	317.0	7.9909 ug/L	7.9909 ppb	08:43:06
3	Ba 233.527†	9.8	9.3	0.0660 ug/L	0.0660 ppb	08:43:26
3	Be 313.107†	-4668.4	205.9	0.0939 ug/L	0.0939 ppb	08:43:06
3	Cd 226.502†	-260.8	19.9	0.2548 ug/L	0.2548 ppb	08:43:26
3	Co 228.616†	-104.9	-5.6	-0.0962 ug/L	-0.0962 ppb	08:43:26
3	Cr 267.716†	-107.3	-30.0	-0.4214 ug/L	-0.4214 ppb	08:43:06
3	Cu 324.752†	5580.9	-48.6	-0.1764 ug/L	-0.1764 ppb	08:43:06
3	Mn 257.610†	660.2	-18.4	-0.0216 ug/L	-0.0216 ppb	08:43:26
3	Mo 202.031†	18.5	1.4	0.0960 ug/L	0.0960 ppb	08:43:26
3	Ni 231.604†	145.2	25.7	0.6864 ug/L	0.6864 ppb	08:43:26
3	P 214.914†	316.1	1.8	0.9886 ug/L	0.9886 ppb	08:43:26
3	Pb 220.353†	-18.2	-5.0	-0.5942 ug/L	-0.5942 ppb	08:43:26
3	S 181.975 Axial†	74.8	-0.5	-0.6830 ug/L	-0.6830 ppb	08:43:26
3	Sb 206.836†	45.9	-11.3	-3.3175 ug/L	-3.3175 ppb	08:43:26
3	Se 196.026†	-20.8	7.9	4.0410 ug/L	4.0410 ppb	08:43:26
3	Si 251.611†	442.8	31.7	0.9554 ug/L	0.9554 ppb	08:43:26
3	Sn 189.927†	18.7	6.3	1.1088 ug/L	1.1088 ppb	08:43:26
3	Ti 334.940†	-1425.7	-79.7	-0.1466 ug/L	-0.1466 ppb	08:43:06
3	Tl 190.801†	-50.9	9.8	2.5513 ug/L	2.5513 ppb	08:43:26
3	U 409.014†	-4789.5	51.6	1.7472 ug/L	1.7472 ppb	08:43:06
3	V 292.402†	-1556.1	6.6	0.0661 ug/L	0.0661 ppb	08:43:06
3	Zn 213.857†	957.3	33.7	0.3060 ug/L	0.3060 ppb	08:43:26
3	SiO2†	457.2	21.1	1.3325 ug/L	1.3325 ppb	08:43:41

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	715964.9	99.621	%	0.8518				0.86%
Sc Radial	7498.6	100	%	1.6				1.64%
Y 371.029	560663.1	99.762	%	0.8851				0.89%
Y RADIAL	6922.0	99.97	%	1.524				1.52%
Ag 328.068†	6.8	0.0419	ug/L	0.50392	0.0419	ppb	0.50392	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-0.8	-0.6498	ug/L	7.23350	-0.6498	ppb	7.23350	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	8.1	2.9008	ug/L	2.71265	2.9008	ppb	2.71265	93.51%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	327.3	8.2489	ug/L	0.72044	8.2489	ppb	0.72044	8.73%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.8	0.0763	ug/L	0.05850	0.0763	ppb	0.05850	76.71%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	143.9	0.0657	ug/L	0.02888	0.0657	ppb	0.02888	43.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.7	1.0057	ug/L	3.82643	1.0057	ppb	3.82643	380.47%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                6.4      0.0815 ug/L       0.15021      0.0815 ppb        0.15021 184.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.6      0.0804 ug/L       0.23125      0.0804 ppb        0.23125 287.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               26.5      0.3722 ug/L       0.79191      0.3722 ppb        0.79191 212.78%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               12.1      0.0440 ug/L       0.37040      0.0440 ppb        0.37040 841.44%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.3      1.1277 ug/L       7.15474      1.1277 ppb        7.15474 634.48%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         74.4     16.061 ug/L       14.2773     16.061 ppb        14.2773  88.89%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4     -9.4894 ug/L      53.59919     -9.4894 ppb       53.59919 564.83%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -2.2     -0.0022 ug/L       0.02340     -0.0022 ppb        0.02340 >999.9%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                3.5      0.2441 ug/L       0.14099      0.2441 ppb        0.14099  57.77%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -37.2     -2.2807 ug/L       1.77531     -2.2807 ppb        1.77531  77.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               26.4      0.7064 ug/L       0.01981      0.7064 ppb        0.01981   2.80%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 1.3      0.6660 ug/L       5.00137      0.6660 ppb        5.00137 750.97%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -0.5     -0.0561 ug/L       2.05369     -0.0561 ppb        2.05369 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           1.8      2.4213 ug/L       5.57447      2.4213 ppb        5.57447 230.23%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               -1.4     -0.4109 ug/L       2.64424     -0.4109 ppb        2.64424 643.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.6      2.3673 ug/L       2.57415      2.3673 ppb        2.57415 108.74%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               28.9      0.8836 ug/L       0.22666      0.8836 ppb        0.22666  25.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -0.2     -0.0342 ug/L       1.02240     -0.0342 ppb        1.02240 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               16.4      0.0457 ug/L       0.07791      0.0457 ppb        0.07791 170.38%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -49.8     -0.0909 ug/L       0.07939     -0.0909 ppb        0.07939  87.37%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                9.5      2.4949 ug/L       1.80916      2.4949 ppb        1.80916  72.52%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -29.3     -0.9929 ug/L       2.61405     -0.9929 ppb        2.61405 263.27%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 5.9      0.0547 ug/L       0.05658      0.0547 ppb        0.05658 103.45%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               27.5      0.2493 ug/L       0.05300      0.2493 ppb        0.05300  21.26%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     16.5      1.0642 ug/L       1.49397      1.0642 ppb        1.49397 140.38%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 6/30/2009 08:45:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7469.8	7469.8	99.9	%			08:47:44
1	Y RADIAL	6890.6	6890.6	99.51	%			08:47:44
1	Al 396.153Radial†	175.4	248.2	203.90	ug/L	203.90	ppb	08:47:44
1	Ca 317.933Radial†	103.5	74.5	105.52	ug/L	105.52	ppb	08:48:04
1	Fe 238.204 Radial†	63.0	28.3	117.94	ug/L	117.94	ppb	08:48:04
1	K 766.490 Radial†	3099.8	694.7	149.59	ug/L	149.59	ppb	08:47:44
1	Mg 279.077 IEC†	18.2	15.1	377.15	ug/L	377.15	ppb	08:48:04
1	Na 589.592 Radial†	2396.5	2533.6	155.49	ug/L	155.49	ppb	08:47:44
1	Sr 421.552†	1663.1	1720.0	4.8031	ug/L	4.8031	ppb	08:47:44
1	Sc 361.383	725321.6	725321.6	100.92	%			08:49:01
1	Y 371.029	567853.4	567853.4	101.04	%			08:49:01
1	Ag 328.068†	1530.3	883.7	5.2825	ug/L	5.2825	ppb	08:49:01
1	As 188.979†	12.1	47.4	17.111	ug/L	17.111	ppb	08:49:21
1	B 249.677†	1246.2	2174.8	54.774	ug/L	54.774	ppb	08:49:01
1	Ba 233.527†	767.7	760.2	5.3731	ug/L	5.3731	ppb	08:49:21
1	Be 313.107†	6713.9	11534.3	5.2910	ug/L	5.2910	ppb	08:49:01
1	Cd 226.502†	144.1	423.9	5.3963	ug/L	5.3963	ppb	08:49:21
1	Co 228.616†	193.0	290.7	5.0579	ug/L	5.0579	ppb	08:49:21
1	Cr 267.716†	317.5	392.0	5.4832	ug/L	5.4832	ppb	08:49:01
1	Cu 324.752†	8440.7	2725.1	9.8818	ug/L	9.8818	ppb	08:49:01
1	Mn 257.610†	10489.3	9713.8	10.720	ug/L	10.720	ppb	08:49:01
1	Mo 202.031†	172.5	153.8	10.834	ug/L	10.834	ppb	08:49:21
1	Ni 231.604†	340.9	218.0	5.8229	ug/L	5.8229	ppb	08:49:21
1	P 214.914†	620.8	300.4	151.53	ug/L	151.53	ppb	08:49:21
1	Pb 220.353†	78.8	91.3	10.926	ug/L	10.926	ppb	08:49:21
1	S 181.975 Axial†	179.1	102.0	139.75	ug/L	139.75	ppb	08:49:21
1	Sb 206.836†	84.0	25.9	7.9773	ug/L	7.9773	ppb	08:49:21
1	Se 196.026†	0.8	29.5	15.487	ug/L	15.487	ppb	08:49:21
1	Si 251.611†	3837.4	3390.5	104.32	ug/L	104.32	ppb	08:49:01
1	Sn 189.927†	78.5	65.3	11.575	ug/L	11.575	ppb	08:49:21
1	Ti 334.940†	1430.2	2765.4	5.0414	ug/L	5.0414	ppb	08:49:01
1	Tl 190.801†	24.6	85.1	22.333	ug/L	22.333	ppb	08:49:21
1	U 409.014†	-3151.4	1726.2	58.424	ug/L	58.424	ppb	08:49:01
1	V 292.402†	-1092.4	482.8	4.6171	ug/L	4.6171	ppb	08:49:01
1	Zn 213.857†	2104.5	1160.2	10.630	ug/L	10.630	ppb	08:49:21
1	SiO2†	3737.0	3266.0	213.91	ug/L	213.91	ppb	08:50:18
2	Sc Radial	7389.0	7389.0	98.9	%			08:48:09
2	Y RADIAL	6822.2	6822.2	98.53	%			08:48:09
2	Al 396.153Radial†	187.2	262.0	215.31	ug/L	215.31	ppb	08:48:09
2	Ca 317.933Radial†	104.7	76.8	108.86	ug/L	108.86	ppb	08:48:29
2	Fe 238.204 Radial†	62.6	28.5	119.06	ug/L	119.06	ppb	08:48:29
2	K 766.490 Radial†	3147.0	776.2	167.20	ug/L	167.20	ppb	08:48:09
2	Mg 279.077 IEC†	15.7	12.9	321.01	ug/L	321.01	ppb	08:48:29
2	Na 589.592 Radial†	2342.4	2505.1	153.74	ug/L	153.74	ppb	08:48:09
2	Sr 421.552†	1719.8	1795.5	5.0140	ug/L	5.0140	ppb	08:48:09
2	Sc 361.383	733226.2	733226.2	102.02	%			08:49:27
2	Y 371.029	573027.7	573027.7	101.96	%			08:49:27
2	Ag 328.068†	1568.7	904.9	5.4068	ug/L	5.4068	ppb	08:49:27
2	As 188.979†	19.6	54.7	19.748	ug/L	19.748	ppb	08:49:47
2	B 249.677†	1211.3	2127.2	53.574	ug/L	53.574	ppb	08:49:27
2	Ba 233.527†	742.7	727.5	5.1428	ug/L	5.1428	ppb	08:49:47
2	Be 313.107†	6763.7	11511.4	5.2808	ug/L	5.2808	ppb	08:49:27
2	Cd 226.502†	135.2	413.6	5.2649	ug/L	5.2649	ppb	08:49:47
2	Co 228.616†	208.3	303.6	5.2795	ug/L	5.2795	ppb	08:49:47
2	Cr 267.716†	250.3	322.7	4.5115	ug/L	4.5115	ppb	08:49:27
2	Cu 324.752†	8539.6	2731.8	9.9063	ug/L	9.9063	ppb	08:49:27
2	Mn 257.610†	10566.6	9677.5	10.681	ug/L	10.681	ppb	08:49:27
2	Mo 202.031†	166.3	145.9	10.280	ug/L	10.280	ppb	08:49:47
2	Ni 231.604†	323.5	197.3	5.2697	ug/L	5.2697	ppb	08:49:47

2	P 214.914†	614.1	287.1	144.74 ug/L	144.74 ppb	08:49:47
2	Pb 220.353†	84.8	96.4	11.526 ug/L	11.526 ppb	08:49:47
2	S 181.975 Axial†	160.4	81.8	112.05 ug/L	112.05 ppb	08:49:47
2	Sb 206.836†	89.6	30.6	9.3585 ug/L	9.3585 ppb	08:49:47
2	Se 196.026†	8.6	37.2	19.421 ug/L	19.421 ppb	08:49:47
2	Si 251.611†	3808.8	3321.5	102.20 ug/L	102.20 ppb	08:49:27
2	Sn 189.927†	77.2	63.1	11.195 ug/L	11.195 ppb	08:49:47
2	Ti 334.940†	1503.2	2821.7	5.1427 ug/L	5.1427 ppb	08:49:27
2	Tl 190.801†	30.6	90.8	23.822 ug/L	23.822 ppb	08:49:47
2	U 409.014†	-3028.0	1880.8	63.661 ug/L	63.661 ppb	08:49:27
2	V 292.402†	-1064.8	521.6	4.9718 ug/L	4.9718 ppb	08:49:27
2	Zn 213.857†	2100.2	1133.4	10.389 ug/L	10.389 ppb	08:49:47
2	SiO2†	3824.9	3312.2	216.97 ug/L	216.97 ppb	08:50:23
3	Sc Radial	7545.0	7545.0	101 %		08:48:34
3	Y RADIAL	6987.4	6987.4	100.9 %		08:48:34
3	Al 396.153Radial†	179.1	250.1	205.50 ug/L	205.50 ppb	08:48:34
3	Ca 317.933Radial†	97.6	67.6	95.785 ug/L	95.785 ppb	08:48:54
3	Fe 238.204 Radial†	60.5	25.2	105.16 ug/L	105.16 ppb	08:48:54
3	K 766.490 Radial†	3097.9	661.8	142.50 ug/L	142.50 ppb	08:48:34
3	Mg 279.077 IEC†	15.1	11.9	296.23 ug/L	296.23 ppb	08:48:54
3	Na 589.592 Radial†	2493.3	2605.6	159.91 ug/L	159.91 ppb	08:48:34
3	Sr 421.552†	1679.3	1719.5	4.8017 ug/L	4.8017 ppb	08:48:34
3	Sc 361.383	735021.6	735021.6	102.27 %		08:49:52
3	Y 371.029	575191.2	575191.2	102.35 %		08:49:52
3	Ag 328.068†	1514.9	848.6	5.0767 ug/L	5.0767 ppb	08:49:52
3	As 188.979†	13.6	48.8	17.600 ug/L	17.600 ppb	08:50:12
3	B 249.677†	1366.1	2275.7	57.317 ug/L	57.317 ppb	08:49:52
3	Ba 233.527†	773.0	755.3	5.3414 ug/L	5.3414 ppb	08:50:12
3	Be 313.107†	6813.5	11543.9	5.2957 ug/L	5.2957 ppb	08:49:52
3	Cd 226.502†	136.9	415.0	5.2844 ug/L	5.2844 ppb	08:50:12
3	Co 228.616†	211.0	305.8	5.3190 ug/L	5.3190 ppb	08:50:12
3	Cr 267.716†	318.4	388.7	5.4401 ug/L	5.4401 ppb	08:49:52
3	Cu 324.752†	8436.2	2610.3	9.4650 ug/L	9.4650 ppb	08:49:52
3	Mn 257.610†	10583.1	9668.4	10.669 ug/L	10.669 ppb	08:49:52
3	Mo 202.031†	172.2	151.2	10.654 ug/L	10.654 ppb	08:50:12
3	Ni 231.604†	340.6	213.2	5.6963 ug/L	5.6963 ppb	08:50:12
3	P 214.914†	625.1	296.4	149.59 ug/L	149.59 ppb	08:50:12
3	Pb 220.353†	81.2	92.7	11.086 ug/L	11.086 ppb	08:50:12
3	S 181.975 Axial†	161.5	82.5	113.02 ug/L	113.02 ppb	08:50:12
3	Sb 206.836†	96.1	36.7	11.181 ug/L	11.181 ppb	08:50:12
3	Se 196.026†	-0.5	28.3	14.812 ug/L	14.812 ppb	08:50:12
3	Si 251.611†	3835.0	3338.0	102.70 ug/L	102.70 ppb	08:49:52
3	Sn 189.927†	80.7	66.4	11.763 ug/L	11.763 ppb	08:50:12
3	Ti 334.940†	1516.6	2831.1	5.1624 ug/L	5.1624 ppb	08:49:52
3	Tl 190.801†	19.2	79.6	20.887 ug/L	20.887 ppb	08:50:12
3	U 409.014†	-3277.7	1643.9	55.640 ug/L	55.640 ppb	08:49:52
3	V 292.402†	-957.8	628.7	5.9348 ug/L	5.9348 ppb	08:49:52
3	Zn 213.857†	2101.3	1129.5	10.352 ug/L	10.352 ppb	08:50:12
3	SiO2†	3842.2	3319.9	217.46 ug/L	217.46 ppb	08:50:28

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	731189.8	101.74	%	0.718				0.71%
Sc Radial	7467.9	99.9	%	1.04				1.04%
Y 371.029	572024.1	101.78	%	0.671				0.66%
Y RADIAL	6900.1	99.65	%	1.199				1.20%
Ag 328.068†	879.1	5.2553	ug/L	0.16669	5.2553	ppb	0.16669	3.17%
QC value within limits for Ag 328.068 Recovery = 105.11%								
Al 396.153Radial†	253.4	208.24	ug/L	6.175	208.24	ppb	6.175	2.97%
QC value within limits for Al 396.153Radial Recovery = 104.12%								
As 188.979†	50.3	18.153	ug/L	1.4027	18.153	ppb	1.4027	7.73%
QC value within limits for As 188.979 Recovery = 121.02%								
B 249.677†	2192.5	55.222	ug/L	1.9115	55.222	ppb	1.9115	3.46%
QC value within limits for B 249.677 Recovery = 110.44%								
Ba 233.527†	747.6	5.2858	ug/L	0.12480	5.2858	ppb	0.12480	2.36%
QC value within limits for Ba 233.527 Recovery = 105.72%								
Be 313.107†	11529.8	5.2891	ug/L	0.00762	5.2891	ppb	0.00762	0.14%
QC value within limits for Be 313.107 Recovery = 105.78%								
Ca 317.933Radial†	73.0	103.39	ug/L	6.794	103.39	ppb	6.794	6.57%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.39%
Cd 226.502†              417.5      5.3152 ug/L       0.07090      5.3152 ppb        0.07090   1.33%
   QC value within limits for Cd 226.502  Recovery = 106.30%
Co 228.616†              300.0      5.2188 ug/L       0.14074      5.2188 ppb        0.14074   2.70%
   QC value within limits for Co 228.616  Recovery = 104.38%
Cr 267.716†              367.8      5.1449 ug/L       0.54900      5.1449 ppb        0.54900  10.67%
   QC value within limits for Cr 267.716  Recovery = 102.90%
Cu 324.752†             2689.1      9.7511 ug/L       0.24804      9.7511 ppb        0.24804   2.54%
   QC value within limits for Cu 324.752  Recovery = 97.51%
Fe 238.204 Radial†        27.3      114.05 ug/L         7.726      114.05 ppb          7.726   6.77%
   QC value within limits for Fe 238.204 Radial  Recovery = 114.05%
K 766.490 Radial†        710.9      153.10 ug/L        12.717      153.10 ppb         12.717   8.31%
   QC value within limits for K 766.490 Radial  Recovery = 102.07%
Mg 279.077 IEC†           13.3      331.46 ug/L        41.459      331.46 ppb         41.459  12.51%
   QC value within limits for Mg 279.077 IEC  Recovery = 110.49%
Mn 257.610†             9686.5      10.690 ug/L        0.0263      10.690 ppb         0.0263   0.25%
   QC value within limits for Mn 257.610  Recovery = 106.90%
Mo 202.031†              150.3      10.589 ug/L        0.2827      10.589 ppb         0.2827   2.67%
   QC value within limits for Mo 202.031  Recovery = 105.89%
Na 589.592 Radial†      2548.1      156.38 ug/L         3.178      156.38 ppb          3.178   2.03%
   QC value within limits for Na 589.592 Radial  Recovery = 104.25%
Ni 231.604†              209.5      5.5963 ug/L       0.28988      5.5963 ppb        0.28988   5.18%
   QC value within limits for Ni 231.604  Recovery = 111.93%
P 214.914†               294.6      148.62 ug/L         3.496      148.62 ppb          3.496   2.35%
   QC value within limits for P 214.914  Recovery = 99.08%
Pb 220.353†               93.5      11.179 ug/L        0.3107      11.179 ppb         0.3107   2.78%
   QC value within limits for Pb 220.353  Recovery = 111.79%
S 181.975 Axial†          88.8      121.61 ug/L        15.720      121.61 ppb         15.720  12.93%
   QC value within limits for S 181.975 Axial  Recovery = 121.61%
Sb 206.836†               31.1      9.5055 ug/L       1.60681      9.5055 ppb        1.60681  16.90%
   QC value within limits for Sb 206.836  Recovery = 95.06%
Se 196.026†               31.7      16.573 ug/L        2.4893      16.573 ppb         2.4893  15.02%
   QC value within limits for Se 196.026  Recovery = 110.49%
Si 251.611†             3350.0      103.07 ug/L         1.109      103.07 ppb          1.109   1.08%
   QC value within limits for Si 251.611  Recovery = 103.07%
Sn 189.927†               64.9      11.511 ug/L        0.2890      11.511 ppb         0.2890   2.51%
   QC value within limits for Sn 189.927  Recovery = 115.11%
Sr 421.552†             1745.0      4.8729 ug/L       0.12215      4.8729 ppb        0.12215   2.51%
   QC value within limits for Sr 421.552  Recovery = 97.46%
Ti 334.940†             2806.1      5.1155 ug/L       0.06491      5.1155 ppb        0.06491   1.27%
   QC value within limits for Ti 334.940  Recovery = 102.31%
Tl 190.801†               85.1      22.347 ug/L        1.4678      22.347 ppb         1.4678   6.57%
   QC value within limits for Tl 190.801  Recovery = 111.74%
U 409.014†              1750.3      59.242 ug/L        4.0728      59.242 ppb         4.0728   6.87%
   QC value within limits for U 409.014  Recovery = 118.48%
V 292.402†               544.3      5.1746 ug/L       0.68186      5.1746 ppb        0.68186  13.18%
   QC value within limits for V 292.402  Recovery = 103.49%
Zn 213.857†             1141.0      10.457 ug/L        0.1509      10.457 ppb         0.1509   1.44%
   QC value within limits for Zn 213.857  Recovery = 104.57%
SiO2†                   3299.4      216.11 ug/L         1.925      216.11 ppb          1.925   0.89%
   QC value within limits for SiO2  Recovery = 101.46%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 6/30/2009 08:52:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6850.8	6850.8	91.7	%			08:54:37
1	Y RADIAL	6235.8	6235.8	90.06	%			08:54:37
1	Al 396.153Radial†	583718.5	636936.7	524500	ug/L	524500	ppb	08:54:32
1	Ca 317.933Radial†	312430.1	340846.7	482850	ug/L	482850	ppb	08:54:32
1	Fe 238.204 Radial†	40162.7	43784.6	182510	ug/L	182510	ppb	08:54:37
1	K 766.490 Radial†	2341.7	147.7	-18.935	ug/L	-18.935	ppb	08:54:37
1	Mg 279.077 IEC†	17585.8	19183.9	478110	ug/L	478110	ppb	08:54:37
1	Na 589.592 Radial†	330.1	495.8	30.426	ug/L	30.426	ppb	08:54:37
1	Sr 421.552†	1325.2	1501.7	-0.5494	ug/L	-0.5494	ppb	08:54:37
1	Sc 361.383	638864.5	638864.5	88.893	%			08:55:04
1	Y 371.029	490311.2	490311.2	87.244	%			08:55:04
1	Ag 328.068†	-7196.6	-8728.4	-0.7953	ug/L	-0.7953	ppb	08:55:04
1	As 188.979†	-92.4	-68.5	11.625	ug/L	11.625	ppb	08:55:24
1	B 249.677†	-106.4	820.2	8.2059	ug/L	8.2059	ppb	08:55:04
1	Ba 233.527†	-509.4	-573.6	-4.8606	ug/L	-4.8606	ppb	08:55:24
1	Be 313.107†	-4943.1	-679.0	-0.3804	ug/L	-0.3804	ppb	08:55:04
1	Cd 226.502†	1055.1	1468.1	-2.5471	ug/L	-2.5471	ppb	08:55:24
1	Co 228.616†	-33.7	61.5	-1.5195	ug/L	-1.5195	ppb	08:55:24
1	Cr 267.716†	-157.6	-99.9	2.3562	ug/L	2.3562	ppb	08:55:24
1	Cu 324.752†	2925.6	-2347.3	2.0463	ug/L	2.0463	ppb	08:55:04
1	Mn 257.610†	56.7	-615.8	13.039	ug/L	13.039	ppb	08:55:04
1	Mo 202.031†	-211.7	-255.3	-6.0630	ug/L	-6.0630	ppb	08:55:24
1	Ni 231.604†	274.2	188.7	5.0434	ug/L	5.0434	ppb	08:55:24
1	P 214.914†	243.2	-41.2	10.354	ug/L	10.354	ppb	08:55:24
1	Pb 220.353†	-657.8	-726.7	-1.6856	ug/L	-1.6856	ppb	08:55:24
1	S 181.975 Axial†	106.7	44.7	-41.972	ug/L	-41.972	ppb	08:55:24
1	Sb 206.836†	107.0	63.1	8.2049	ug/L	8.2049	ppb	08:55:24
1	Se 196.026†	-1143.6	-1257.7	0.0601	ug/L	0.0601	ppb	08:55:24
1	Si 251.611†	-128.9	-556.8	-16.030	ug/L	-16.030	ppb	08:55:24
1	Sn 189.927†	-312.0	-363.4	-1.2012	ug/L	-1.2012	ppb	08:55:24
1	Ti 334.940†	-15732.9	-16350.4	-1.7855	ug/L	-1.7855	ppb	08:55:04
1	Tl 190.801†	-98.6	-50.2	-0.5835	ug/L	-0.5835	ppb	08:55:24
1	U 409.014†	-3610.2	787.5	4.2387	ug/L	4.2387	ppb	08:55:04
1	V 292.402†	68.5	1642.2	-2.7310	ug/L	-2.7310	ppb	08:55:24
1	Zn 213.857†	3606.0	3131.4	-6.7355	ug/L	-6.7355	ppb	08:55:24
1	SiO2†	-207.4	-670.2	-41.439	ug/L	-41.439	ppb	08:56:21
2	Sc Radial	6902.1	6902.1	92.3	%			08:54:48
2	Y RADIAL	6270.0	6270.0	90.55	%			08:54:48
2	Al 396.153Radial†	588201.4	637059.3	524600	ug/L	524600	ppb	08:54:43
2	Ca 317.933Radial†	313676.9	339664.1	481170	ug/L	481170	ppb	08:54:43
2	Fe 238.204 Radial†	40118.0	43410.6	180960	ug/L	180960	ppb	08:54:48
2	K 766.490 Radial†	2274.2	55.7	-39.051	ug/L	-39.051	ppb	08:54:48
2	Mg 279.077 IEC†	17568.0	19022.0	474070	ug/L	474070	ppb	08:54:48
2	Na 589.592 Radial†	396.1	564.6	34.648	ug/L	34.648	ppb	08:54:48
2	Sr 421.552†	1347.8	1515.4	-0.4946	ug/L	-0.4946	ppb	08:54:48
2	Sc 361.383	652326.9	652326.9	90.766	%			08:55:30
2	Y 371.029	500307.2	500307.2	89.023	%			08:55:30
2	Ag 328.068†	-7238.1	-8607.1	-0.5407	ug/L	-0.5407	ppb	08:55:30
2	As 188.979†	-93.3	-67.4	11.741	ug/L	11.741	ppb	08:55:50
2	B 249.677†	-18.8	919.2	10.806	ug/L	10.806	ppb	08:55:30
2	Ba 233.527†	-527.7	-581.9	-4.9115	ug/L	-4.9115	ppb	08:55:50
2	Be 313.107†	-4881.7	-496.6	-0.2943	ug/L	-0.2943	ppb	08:55:30
2	Cd 226.502†	1039.2	1426.0	-2.9018	ug/L	-2.9018	ppb	08:55:50
2	Co 228.616†	-27.1	69.6	-1.3609	ug/L	-1.3609	ppb	08:55:50
2	Cr 267.716†	-169.0	-108.8	2.2016	ug/L	2.2016	ppb	08:55:50
2	Cu 324.752†	2941.1	-2398.1	1.7719	ug/L	1.7719	ppb	08:55:30
2	Mn 257.610†	102.2	-567.0	12.975	ug/L	12.975	ppb	08:55:30
2	Mo 202.031†	-222.9	-262.7	-6.6896	ug/L	-6.6896	ppb	08:55:50
2	Ni 231.604†	294.4	204.6	5.4673	ug/L	5.4673	ppb	08:55:50

2	P 214.914†	245.8	-44.0	10.245 ug/L	10.245 ppb	08:55:50
2	Pb 220.353†	-685.3	-741.8	-3.3156 ug/L	-3.3156 ppb	08:55:50
2	S 181.975 Axial†	135.4	73.8	-2.1013 ug/L	-2.1013 ppb	08:55:50
2	Sb 206.836†	100.3	53.2	5.2286 ug/L	5.2286 ppb	08:55:50
2	Se 196.026†	-1149.2	-1237.4	5.2343 ug/L	5.2343 ppb	08:55:50
2	Si 251.611†	-174.6	-604.1	-17.479 ug/L	-17.479 ppb	08:55:50
2	Sn 189.927†	-317.5	-362.3	-1.2801 ug/L	-1.2801 ppb	08:55:50
2	Ti 334.940†	-15508.9	-15738.4	-0.7613 ug/L	-0.7613 ppb	08:55:30
2	Tl 190.801†	-102.2	-51.8	-0.9939 ug/L	-0.9939 ppb	08:55:50
2	U 409.014†	-3768.6	696.7	1.3570 ug/L	1.3570 ppb	08:55:30
2	V 292.402†	97.5	1672.6	-2.3186 ug/L	-2.3186 ppb	08:55:50
2	Zn 213.857†	3582.3	3021.6	-7.4489 ug/L	-7.4489 ppb	08:55:50
2	SiO2†	-193.6	-650.2	-40.093 ug/L	-40.093 ppb	08:56:26
3	Sc Radial	7020.0	7020.0	93.9 %		08:54:58
3	Y RADIAL	6403.5	6403.5	92.48 %		08:54:58
3	Al 396.153Radial†	587631.3	625753.0	515290 ug/L	515290 ppb	08:54:53
3	Ca 317.933Radial†	313618.8	333896.4	473000 ug/L	473000 ppb	08:54:53
3	Fe 238.204 Radial†	40809.0	43416.6	180980 ug/L	180980 ppb	08:54:58
3	K 766.490 Radial†	2309.7	52.0	-38.307 ug/L	-38.307 ppb	08:54:58
3	Mg 279.077 IEC†	17948.0	19107.1	476190 ug/L	476190 ppb	08:54:58
3	Na 589.592 Radial†	337.3	494.7	30.360 ug/L	30.360 ppb	08:54:58
3	Sr 421.552†	1390.4	1536.3	-0.3561 ug/L	-0.3561 ppb	08:54:58
3	Sc 361.383	643963.2	643963.2	89.602 %		08:55:55
3	Y 371.029	493367.8	493367.8	87.788 %		08:55:55
3	Ag 328.068†	-7239.8	-8712.5	-1.0341 ug/L	-1.0341 ppb	08:55:55
3	As 188.979†	-89.2	-64.1	12.933 ug/L	12.933 ppb	08:56:15
3	B 249.677†	-136.4	787.7	7.4900 ug/L	7.4900 ppb	08:55:55
3	Ba 233.527†	-542.4	-605.8	-5.0801 ug/L	-5.0801 ppb	08:56:15
3	Be 313.107†	-4938.6	-630.0	-0.3576 ug/L	-0.3576 ppb	08:55:55
3	Cd 226.502†	1053.5	1456.9	-2.5114 ug/L	-2.5114 ppb	08:56:15
3	Co 228.616†	-14.3	83.5	-1.1097 ug/L	-1.1097 ppb	08:56:15
3	Cr 267.716†	-159.7	-100.9	2.3163 ug/L	2.3163 ppb	08:56:15
3	Cu 324.752†	2865.6	-2440.4	1.6203 ug/L	1.6203 ppb	08:55:55
3	Mn 257.610†	344.3	-295.4	13.236 ug/L	13.236 ppb	08:55:55
3	Mo 202.031†	-176.1	-213.7	-3.2346 ug/L	-3.2346 ppb	08:56:15
3	Ni 231.604†	257.8	167.9	4.4876 ug/L	4.4876 ppb	08:56:15
3	P 214.914†	234.9	-52.6	2.7037 ug/L	2.7037 ppb	08:56:15
3	Pb 220.353†	-706.7	-775.4	-9.1286 ug/L	-9.1286 ppb	08:56:15
3	S 181.975 Axial†	131.0	70.8	-4.3212 ug/L	-4.3212 ppb	08:56:15
3	Sb 206.836†	92.7	46.2	3.4672 ug/L	3.4672 ppb	08:56:15
3	Se 196.026†	-1149.1	-1253.7	-3.6228 ug/L	-3.6228 ppb	08:56:15
3	Si 251.611†	-167.3	-598.5	-17.391 ug/L	-17.391 ppb	08:56:15
3	Sn 189.927†	-303.9	-351.6	-0.2390 ug/L	-0.2390 ppb	08:56:15
3	Ti 334.940†	-15801.5	-16286.9	-2.2375 ug/L	-2.2375 ppb	08:55:55
3	Tl 190.801†	-103.1	-54.4	-1.9044 ug/L	-1.9044 ppb	08:56:15
3	U 409.014†	-3992.1	393.4	-8.9157 ug/L	-8.9157 ppb	08:55:55
3	V 292.402†	102.0	1679.0	-2.2042 ug/L	-2.2042 ppb	08:56:15
3	Zn 213.857†	3614.0	3108.3	-6.7189 ug/L	-6.7189 ppb	08:56:15
3	SiO2†	-215.1	-677.0	-42.041 ug/L	-42.041 ppb	08:56:31

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	645051.5	89.754	%	0.9457				1.05%
Sc Radial	6924.3	92.6	%	1.16				1.25%
Y 371.029	494662.1	88.018	%	0.9114				1.04%
Y RADIAL	6303.1	91.03	%	1.280				1.41%
Ag 328.068†	-8682.7	-0.7900	ug/L	0.24674	-0.7900	ppb	0.24674	31.23%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	633249.7	521470	ug/L	5346.6	521470	ppb	5346.6	1.03%
QC value within limits for Al 396.153Radial Recovery = 104.29%								
As 188.979†	-66.7	12.100	ug/L	0.7241	12.100	ppb	0.7241	5.98%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	842.4	8.8340	ug/L	1.74505	8.8340	ppb	1.74505	19.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-587.1	-4.9508	ug/L	0.11490	-4.9508	ppb	0.11490	2.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-601.9	-0.3441	ug/L	0.04461	-0.3441	ppb	0.04461	12.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	338135.7	479010	ug/L	5267.9	479010	ppb	5267.9	1.10%

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   QC value within limits for Ca 317.933Radial  Recovery = 95.80%
Cd 226.502†            1450.3     -2.6535 ug/L       0.21582     -2.6535 ppb        0.21582   8.13%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              71.5     -1.3300 ug/L       0.20665     -1.3300 ppb        0.20665  15.54%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -103.2      2.2914 ug/L       0.08023      2.2914 ppb        0.08023   3.50%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -2395.2      1.8128 ug/L       0.21594      1.8128 ppb        0.21594  11.91%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    43537.2      181480 ug/L        893.0      181480 ppb         893.0   0.49%
   QC value within limits for Fe 238.204 Radial  Recovery = 90.74%
K 766.490 Radial†        85.1     -32.097 ug/L       11.4050     -32.097 ppb        11.4050  35.53%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       19104.3      476120 ug/L       2018.8      476120 ppb         2018.8   0.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 95.22%
Mn 257.610†            -492.7      13.083 ug/L       0.1364      13.083 ppb         0.1364   1.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -243.9     -5.3291 ug/L       1.84072     -5.3291 ppb        1.84072  34.54%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       518.3      31.811 ug/L       2.4568      31.811 ppb         2.4568   7.72%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              187.1      4.9994 ug/L       0.49137      4.9994 ppb        0.49137   9.83%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -45.9      7.7676 ug/L       4.38582      7.7676 ppb        4.38582  56.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -748.0     -4.7099 ug/L       3.91250     -4.7099 ppb        3.91250  83.07%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         63.1     -16.132 ug/L       22.4062     -16.132 ppb        22.4062 138.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              54.2      5.6336 ug/L       2.39467      5.6336 ppb        2.39467  42.51%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†           -1249.6      0.5572 ug/L       4.44942      0.5572 ppb        4.44942 798.53%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -586.5     -16.967 ug/L        0.8126     -16.967 ppb         0.8126   4.79%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -359.1     -0.9068 ug/L       0.57964     -0.9068 ppb        0.57964  63.92%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†            1517.8     -0.4667 ug/L       0.09963     -0.4667 ppb        0.09963  21.35%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†          -16125.2     -1.5947 ug/L       0.75634     -1.5947 ppb        0.75634  47.43%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -52.1     -1.1606 ug/L       0.67608     -1.1606 ppb        0.67608  58.25%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               625.9     -1.1067 ug/L       6.91461     -1.1067 ppb        6.91461 624.82%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†             1664.6     -2.4180 ug/L       0.27710     -2.4180 ppb        0.27710  11.46%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            3087.1     -6.9678 ug/L       0.41678     -6.9678 ppb        0.41678   5.98%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                  -665.8     -41.191 ug/L        0.9975     -41.191 ppb         0.9975   2.42%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 6/30/2009 08:58:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6855.2	6855.2	91.7	%			09:00:40
1	Y RADIAL	6208.8	6208.8	89.67	%			09:00:40
1	Al 396.153Radial†	587975.9	641176.3	527970	ug/L	527970	ppb	09:00:35
1	Ca 317.933Radial†	311516.7	339635.4	481130	ug/L	481130	ppb	09:00:35
1	Fe 238.204 Radial†	39507.6	43042.6	179440	ug/L	179440	ppb	09:00:40
1	K 766.490 Radial†	24540.8	24351.0	5189.4	ug/L	5189.4	ppb	09:00:35
1	Mg 279.077 IEC†	17320.4	18882.3	470600	ug/L	470600	ppb	09:00:40
1	Na 589.592 Radial†	81859.5	89391.6	5486.2	ug/L	5486.2	ppb	09:00:35
1	Sr 421.552†	160589.6	175155.9	484.49	ug/L	484.49	ppb	09:00:35
1	Sc 361.383	652496.2	652496.2	90.790	%			09:01:08
1	Y 371.029	498677.7	498677.7	88.733	%			09:01:08
1	Ag 328.068†	35600.4	38579.2	282.44	ug/L	282.44	ppb	09:01:08
1	As 188.979†	1196.4	1353.2	526.01	ug/L	526.01	ppb	09:01:13
1	B 249.677†	18992.0	21858.6	536.23	ug/L	536.23	ppb	09:01:08
1	Ba 233.527†	64009.1	70502.1	497.80	ug/L	497.80	ppb	09:01:08
1	Be 313.107†	497779.3	553158.8	254.33	ug/L	254.33	ppb	09:01:08
1	Cd 226.502†	35153.6	39000.9	476.84	ug/L	476.84	ppb	09:01:13
1	Co 228.616†	24397.7	26972.2	465.48	ug/L	465.48	ppb	09:01:13
1	Cr 267.716†	31670.4	34960.6	494.20	ug/L	494.20	ppb	09:01:13
1	Cu 324.752†	143721.4	152662.9	563.58	ug/L	563.58	ppb	09:01:08
1	Mn 257.610†	400655.3	440620.6	499.38	ug/L	499.38	ppb	09:01:08
1	Mo 202.031†	6383.3	7013.7	505.46	ug/L	505.46	ppb	09:01:13
1	Ni 231.604†	16114.7	17629.7	470.94	ug/L	470.94	ppb	09:01:13
1	P 214.914†	4855.3	5033.1	2499.9	ug/L	2499.9	ppb	09:01:13
1	Pb 220.353†	2927.1	3237.3	472.24	ug/L	472.24	ppb	09:01:13
1	S 181.975 Axial†	1913.5	2032.2	2680.3	ug/L	2680.3	ppb	09:01:13
1	Sb 206.836†	1774.0	1896.7	559.70	ug/L	559.70	ppb	09:01:13
1	Se 196.026†	3495.6	3879.0	2612.1	ug/L	2612.1	ppb	09:01:13
1	Si 251.611†	159246.7	174989.8	5388.0	ug/L	5388.0	ppb	09:01:08
1	Sn 189.927†	2332.9	2557.1	515.29	ug/L	515.29	ppb	09:01:13
1	Ti 334.940†	244564.5	270722.8	523.29	ug/L	523.29	ppb	09:01:08
1	Tl 190.801†	1581.3	1802.5	487.68	ug/L	487.68	ppb	09:01:13
1	U 409.014†	10317.9	16213.3	526.01	ug/L	526.01	ppb	09:01:08
1	V 292.402†	51266.1	58032.1	516.45	ug/L	516.45	ppb	09:01:13
1	Zn 213.857†	53333.6	57819.0	494.77	ug/L	494.77	ppb	09:01:13
1	SiO2†	156907.4	172388.1	11300	ug/L	11300	ppb	09:01:40
2	Sc Radial	6964.5	6964.5	93.2	%			09:00:51
2	Y RADIAL	6360.1	6360.1	91.85	%			09:00:51
2	Al 396.153Radial†	584733.7	627632.3	516820	ug/L	516820	ppb	09:00:45
2	Ca 317.933Radial†	310333.5	333033.2	471780	ug/L	471780	ppb	09:00:45
2	Fe 238.204 Radial†	40096.1	42997.9	179250	ug/L	179250	ppb	09:00:51
2	K 766.490 Radial†	24603.7	23998.5	5115.2	ug/L	5115.2	ppb	09:00:45
2	Mg 279.077 IEC†	17606.9	18893.4	470880	ug/L	470880	ppb	09:00:51
2	Na 589.592 Radial†	81588.7	87699.8	5382.4	ug/L	5382.4	ppb	09:00:45
2	Sr 421.552†	159721.7	171475.5	474.30	ug/L	474.30	ppb	09:00:45
2	Sc 361.383	640008.8	640008.8	89.052	%			09:01:19
2	Y 371.029	489123.1	489123.1	87.033	%			09:01:19
2	Ag 328.068†	34867.9	38521.8	282.23	ug/L	282.23	ppb	09:01:19
2	As 188.979†	1221.0	1406.6	545.22	ug/L	545.22	ppb	09:01:24
2	B 249.677†	18525.2	21742.5	533.29	ug/L	533.29	ppb	09:01:19
2	Ba 233.527†	62881.8	70611.7	498.59	ug/L	498.59	ppb	09:01:19
2	Be 313.107†	488771.8	553741.5	254.60	ug/L	254.60	ppb	09:01:19
2	Cd 226.502†	35071.1	39663.7	485.32	ug/L	485.32	ppb	09:01:24
2	Co 228.616†	24242.5	27322.3	471.56	ug/L	471.56	ppb	09:01:24
2	Cr 267.716†	31487.6	35436.0	500.88	ug/L	500.88	ppb	09:01:24
2	Cu 324.752†	140491.7	152124.9	561.62	ug/L	561.62	ppb	09:01:19
2	Mn 257.610†	393408.5	441093.3	499.87	ug/L	499.87	ppb	09:01:19
2	Mo 202.031†	6298.7	7055.9	508.42	ug/L	508.42	ppb	09:01:24
2	Ni 231.604†	16045.8	17898.6	478.12	ug/L	478.12	ppb	09:01:24

2	P 214.914†	4819.0	5096.7	2529.1	ug/L	2529.1 ppb	09:01:24
2	Pb 220.353†	2892.3	3261.1	472.94	ug/L	472.94 ppb	09:01:24
2	S 181.975 Axial†	1952.4	2117.1	2798.6	ug/L	2798.6 ppb	09:01:24
2	Sb 206.836†	1748.6	1906.3	562.68	ug/L	562.68 ppb	09:01:24
2	Se 196.026†	3502.5	3961.8	2652.9	ug/L	2652.9 ppb	09:01:24
2	Si 251.611†	155984.1	174748.5	5380.5	ug/L	5380.5 ppb	09:01:19
2	Sn 189.927†	2266.7	2532.8	510.03	ug/L	510.03 ppb	09:01:24
2	Ti 334.940†	239914.7	270757.3	522.82	ug/L	522.82 ppb	09:01:19
2	Tl 190.801†	1494.2	1738.7	470.66	ug/L	470.66 ppb	09:01:24
2	U 409.014†	9585.9	15613.1	505.69	ug/L	505.69 ppb	09:01:19
2	V 292.402†	51169.7	59025.5	525.50	ug/L	525.50 ppb	09:01:24
2	Zn 213.857†	52846.7	58418.3	500.27	ug/L	500.27 ppb	09:01:24
2	SiO2†	158025.2	177015.4	11605	ug/L	11605 ppb	09:01:45
3	Sc Radial	6904.4	6904.4	92.4	%		09:01:01
3	Y RADIAL	6308.2	6308.2	91.10	%		09:01:01
3	Al 396.153Radial†	574321.0	621827.5	512040	ug/L	512040 ppb	09:00:56
3	Ca 317.933Radial†	304252.1	329351.6	466560	ug/L	466560 ppb	09:00:56
3	Fe 238.204 Radial†	39631.2	42869.6	178720	ug/L	178720 ppb	09:01:01
3	K 766.490 Radial†	24062.9	23643.1	5039.3	ug/L	5039.3 ppb	09:00:56
3	Mg 279.077 IEC†	17393.5	18827.0	469220	ug/L	469220 ppb	09:01:01
3	Na 589.592 Radial†	79837.6	86567.1	5312.9	ug/L	5312.9 ppb	09:00:56
3	Sr 421.552†	156550.0	169535.4	468.93	ug/L	468.93 ppb	09:00:56
3	Sc 361.383	645704.5	645704.5	89.845	%		09:01:30
3	Y 371.029	493775.8	493775.8	87.860	%		09:01:30
3	Ag 328.068†	35088.0	38421.5	281.49	ug/L	281.49 ppb	09:01:30
3	As 188.979†	1180.9	1349.8	524.64	ug/L	524.64 ppb	09:01:35
3	B 249.677†	18741.7	21800.0	534.82	ug/L	534.82 ppb	09:01:30
3	Ba 233.527†	63400.4	70566.1	498.25	ug/L	498.25 ppb	09:01:30
3	Be 313.107†	493451.6	554108.9	254.77	ug/L	254.77 ppb	09:01:30
3	Cd 226.502†	34757.3	38967.1	476.49	ug/L	476.49 ppb	09:01:35
3	Co 228.616†	24041.0	26857.8	463.49	ug/L	463.49 ppb	09:01:35
3	Cr 267.716†	31321.8	34939.5	493.89	ug/L	493.89 ppb	09:01:35
3	Cu 324.752†	141805.9	152196.0	561.85	ug/L	561.85 ppb	09:01:30
3	Mn 257.610†	397141.2	441351.0	500.12	ug/L	500.12 ppb	09:01:30
3	Mo 202.031†	6256.8	6946.9	500.71	ug/L	500.71 ppb	09:01:35
3	Ni 231.604†	15872.8	17547.1	468.74	ug/L	468.74 ppb	09:01:35
3	P 214.914†	4818.5	5048.3	2503.0	ug/L	2503.0 ppb	09:01:35
3	Pb 220.353†	2896.5	3237.1	469.18	ug/L	469.18 ppb	09:01:35
3	S 181.975 Axial†	1916.4	2057.6	2718.1	ug/L	2718.1 ppb	09:01:35
3	Sb 206.836†	1759.5	1901.1	561.12	ug/L	561.12 ppb	09:01:35
3	Se 196.026†	3380.6	3791.5	2564.0	ug/L	2564.0 ppb	09:01:35
3	Si 251.611†	157500.7	174891.4	5385.2	ug/L	5385.2 ppb	09:01:30
3	Sn 189.927†	2251.2	2493.2	502.44	ug/L	502.44 ppb	09:01:35
3	Ti 334.940†	242241.8	270971.0	522.90	ug/L	522.90 ppb	09:01:30
3	Tl 190.801†	1495.1	1724.9	467.00	ug/L	467.00 ppb	09:01:35
3	U 409.014†	9825.0	15784.2	511.57	ug/L	511.57 ppb	09:01:30
3	V 292.402†	50585.3	57868.2	514.95	ug/L	514.95 ppb	09:01:35
3	Zn 213.857†	52327.3	57316.8	490.27	ug/L	490.27 ppb	09:01:35
3	SiO2†	157730.3	175121.9	11481	ug/L	11481 ppb	09:01:51

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	646069.8	89.896	%	0.8699				0.97%
Sc Radial	6908.0	92.4	%	0.73				0.79%
Y 371.029	493858.9	87.875	%	0.8501				0.97%
Y RADIAL	6292.4	90.87	%	1.110				1.22%
Ag 328.068†	38507.5	282.05	ug/L	0.500	282.05	ppb	0.500	0.18%
QC value within limits for Ag 328.068 Recovery = 112.82%								
Al 396.153Radial†	630212.0	518940	ug/L	8176.2	518940	ppb	8176.2	1.58%
QC value within limits for Al 396.153Radial Recovery = 103.79%								
As 188.979†	1369.9	531.96	ug/L	11.511	531.96	ppb	11.511	2.16%
QC value within limits for As 188.979 Recovery = 106.39%								
B 249.677†	21800.4	534.78	ug/L	1.473	534.78	ppb	1.473	0.28%
QC value within limits for B 249.677 Recovery = 106.96%								
Ba 233.527†	70560.0	498.22	ug/L	0.399	498.22	ppb	0.399	0.08%
QC value within limits for Ba 233.527 Recovery = 99.64%								
Be 313.107†	553669.7	254.57	ug/L	0.220	254.57	ppb	0.220	0.09%
QC value within limits for Be 313.107 Recovery = 101.83%								
Ca 317.933Radial†	334006.7	473160	ug/L	7381.4	473160	ppb	7381.4	1.56%

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   QC value within limits for Ca 317.933Radial  Recovery = 94.63%
Cd 226.502†            39210.6      479.55 ug/L         5.000      479.55 ppb          5.000   1.04%
   QC value within limits for Cd 226.502  Recovery = 95.91%
Co 228.616†            27050.7      466.84 ug/L         4.202      466.84 ppb          4.202   0.90%
   QC value within limits for Co 228.616  Recovery = 93.37%
Cr 267.716†            35112.0      496.32 ug/L         3.947      496.32 ppb          3.947   0.80%
   QC value within limits for Cr 267.716  Recovery = 99.26%
Cu 324.752†           152327.9      562.35 ug/L         1.072      562.35 ppb          1.072   0.19%
   QC value within limits for Cu 324.752  Recovery = 112.47%
Fe 238.204 Radial†     42970.0      179130 ug/L         374.5      179130 ppb          374.5   0.21%
   QC value within limits for Fe 238.204 Radial  Recovery = 89.57%
K 766.490 Radial†      23997.5      5114.6 ug/L         75.05      5114.6 ppb          75.05   1.47%
   QC value within limits for K 766.490 Radial  Recovery = 102.29%
Mg 279.077 IEC†        18867.5      470230 ug/L         887.1      470230 ppb          887.1   0.19%
   QC value within limits for Mg 279.077 IEC  Recovery = 94.05%
Mn 257.610†           441021.6      499.79 ug/L         0.377      499.79 ppb          0.377   0.08%
   QC value within limits for Mn 257.610  Recovery = 99.96%
Mo 202.031†             7005.5      504.86 ug/L         3.890      504.86 ppb          3.890   0.77%
   QC value within limits for Mo 202.031  Recovery = 100.97%
Na 589.592 Radial†     87886.2      5393.8 ug/L         87.24      5393.8 ppb          87.24   1.62%
   QC value within limits for Na 589.592 Radial  Recovery = 107.88%
Ni 231.604†            17691.8      472.60 ug/L         4.909      472.60 ppb          4.909   1.04%
   QC value within limits for Ni 231.604  Recovery = 94.52%
P 214.914†              5059.4      2510.7 ug/L         16.01      2510.7 ppb          16.01   0.64%
   QC value within limits for P 214.914  Recovery = 100.43%
Pb 220.353†             3245.2      471.45 ug/L         1.999      471.45 ppb          1.999   0.42%
   QC value within limits for Pb 220.353  Recovery = 94.29%
S 181.975 Axial†        2069.0      2732.3 ug/L         60.46      2732.3 ppb          60.46   2.21%
   QC value within limits for S 181.975 Axial  Recovery = 109.29%
Sb 206.836†             1901.4      561.17 ug/L         1.489      561.17 ppb          1.489   0.27%
   QC value within limits for Sb 206.836  Recovery = 112.23%
Se 196.026†             3877.5      2609.7 ug/L         44.55      2609.7 ppb          44.55   1.71%
   QC value within limits for Se 196.026  Recovery = 104.39%
Si 251.611†           174876.6      5384.6 ug/L          3.75      5384.6 ppb           3.75   0.07%
   QC value within limits for Si 251.611  Recovery = 107.69%
Sn 189.927†             2527.7      509.25 ug/L         6.461      509.25 ppb          6.461   1.27%
   QC value within limits for Sn 189.927  Recovery = 101.85%
Sr 421.552†           172055.6      475.91 ug/L         7.901      475.91 ppb          7.901   1.66%
   QC value within limits for Sr 421.552  Recovery = 95.18%
Ti 334.940†           270817.0      523.00 ug/L         0.253      523.00 ppb          0.253   0.05%
   QC value within limits for Ti 334.940  Recovery = 104.60%
Tl 190.801†             1755.3      475.11 ug/L        11.036      475.11 ppb         11.036   2.32%
   QC value within limits for Tl 190.801  Recovery = 95.02%
U 409.014†             15870.2      514.42 ug/L        10.453      514.42 ppb         10.453   2.03%
   QC value within limits for U 409.014  Recovery = 102.88%
V 292.402†             58308.6      518.97 ug/L         5.707      518.97 ppb          5.707   1.10%
   QC value within limits for V 292.402  Recovery = 103.79%
Zn 213.857†            57851.4      495.10 ug/L         5.004      495.10 ppb          5.004   1.01%
   QC value within limits for Zn 213.857  Recovery = 99.02%
SiO2†                 174841.8       11462 ug/L         153.1       11462 ppb          153.1   1.34%
   QC value within limits for SiO2  Recovery = 107.17%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 6/30/2009 09:04:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6672.9	6672.9	89.3	%			09:06:04
1	Y RADIAL	6066.4	6066.4	87.61	%			09:06:04
1	Al 396.153Radial†	588193.9	658933.3	542620	ug/L	542620	ppb	09:05:59
1	Ca 317.933Radial†	308456.8	345486.3	489420	ug/L	489420	ppb	09:05:59
1	Fe 238.204 Radial†	95333.1	106751.7	444990	ug/L	444990	ppb	09:05:59
1	K 766.490 Radial†	3042.4	1000.7	149.11	ug/L	149.11	ppb	09:06:04
1	Mg 279.077 IEC†	16910.7	18939.3	471780	ug/L	471780	ppb	09:06:04
1	Na 589.592 Radial†	7414295.7	8305199.0	509710	ug/L	509710	ppb	09:05:53
1	Sr 421.552†	1706.7	1967.6	0.6871	ug/L	0.6871	ppb	09:06:04
1	Sc 361.383	634303.9	634303.9	88.258	%			09:06:43
1	Y 371.029	486307.1	486307.1	86.532	%			09:06:43
1	Ag 328.068†	-17514.1	-20476.8	0.1770	ug/L	0.1770	ppb	09:06:43
1	As 188.979†	-218.8	-212.4	12.230	ug/L	12.230	ppb	09:07:03
1	B 249.677†	714.0	1748.9	13.664	ug/L	13.664	ppb	09:06:43
1	Ba 233.527†	-1455.2	-1649.3	-13.645	ug/L	-13.645	ppb	09:07:03
1	Be 313.107†	-9676.3	-6081.9	-2.8306	ug/L	-2.8306	ppb	09:06:43
1	Cd 226.502†	2949.9	3623.5	-5.6487	ug/L	-5.6487	ppb	09:07:03
1	Co 228.616†	229.2	359.1	-0.1629	ug/L	-0.1629	ppb	09:07:03
1	Cr 267.716†	-60.5	8.8	4.4697	ug/L	4.4697	ppb	09:07:03
1	Cu 324.752†	771.2	-4764.6	8.4617	ug/L	8.4617	ppb	09:06:43
1	Mn 257.610†	-24677.9	-28640.6	15.252	ug/L	15.252	ppb	09:06:43
1	Mo 202.031†	-390.1	-459.2	-3.2898	ug/L	-3.2898	ppb	09:06:43
1	Ni 231.604†	451.5	391.7	10.467	ug/L	10.467	ppb	09:07:03
1	P 214.914†	700.2	478.6	71.900	ug/L	71.900	ppb	09:07:03
1	Pb 220.353†	-433.0	-477.4	6.7025	ug/L	6.7025	ppb	09:07:03
1	S 181.975 Axial†	141.3	84.7	9.2496	ug/L	9.2496	ppb	09:07:03
1	Sb 206.836†	116.3	74.5	15.554	ug/L	15.554	ppb	09:07:03
1	Se 196.026†	-2719.4	-3052.4	-40.929	ug/L	-40.929	ppb	09:07:03
1	Si 251.611†	-1841.5	-2498.2	-75.766	ug/L	-75.766	ppb	09:07:03
1	Sn 189.927†	-322.1	-377.4	16.539	ug/L	16.539	ppb	09:07:03
1	Ti 334.940†	-10915.4	-11019.2	1.7610	ug/L	1.7610	ppb	09:06:43
1	Tl 190.801†	-137.4	-94.9	-11.963	ug/L	-11.963	ppb	09:07:03
1	U 409.014†	385912.9	442102.1	14915	ug/L	14915	ppb	09:06:43
1	V 292.402†	1135.5	2851.8	0.3848	ug/L	0.3848	ppb	09:07:03
1	Zn 213.857†	6547.8	6493.8	-2.8943	ug/L	-2.8943	ppb	09:07:03
1	SiO2†	-1901.7	-2591.6	-167.31	ug/L	-167.31	ppb	09:08:00
2	Sc Radial	6734.9	6734.9	90.1	%			09:06:20
2	Y RADIAL	6141.0	6141.0	88.69	%			09:06:20
2	Al 396.153Radial†	563254.8	625190.0	514830	ug/L	514830	ppb	09:06:15
2	Ca 317.933Radial†	294889.7	327248.4	463590	ug/L	463590	ppb	09:06:15
2	Fe 238.204 Radial†	91146.1	101121.9	421520	ug/L	421520	ppb	09:06:15
2	K 766.490 Radial†	2910.4	822.9	110.63	ug/L	110.63	ppb	09:06:20
2	Mg 279.077 IEC†	16879.2	18730.0	466580	ug/L	466580	ppb	09:06:20
2	Na 589.592 Radial†	7462964.3	8282760.6	508340	ug/L	508340	ppb	09:06:10
2	Sr 421.552†	1762.9	2012.4	1.0662	ug/L	1.0662	ppb	09:06:20
2	Sc 361.383	627079.1	627079.1	87.253	%			09:07:09
2	Y 371.029	480401.5	480401.5	85.481	%			09:07:09
2	Ag 328.068†	-17263.2	-20417.8	-6.6947	ug/L	-6.6947	ppb	09:07:09
2	As 188.979†	-216.4	-212.6	7.4911	ug/L	7.4911	ppb	09:07:29
2	B 249.677†	703.7	1746.5	15.208	ug/L	15.208	ppb	09:07:09
2	Ba 233.527†	-1544.3	-1770.4	-14.389	ug/L	-14.389	ppb	09:07:29
2	Be 313.107†	-9692.9	-6227.2	-2.8955	ug/L	-2.8955	ppb	09:07:09
2	Cd 226.502†	2948.1	3659.9	-2.4489	ug/L	-2.4489	ppb	09:07:29
2	Co 228.616†	210.3	340.4	-0.1617	ug/L	-0.1617	ppb	09:07:29
2	Cr 267.716†	24.0	104.9	5.2985	ug/L	5.2985	ppb	09:07:29
2	Cu 324.752†	682.2	-4856.6	6.7716	ug/L	6.7716	ppb	09:07:09
2	Mn 257.610†	-24380.0	-28621.3	12.424	ug/L	12.424	ppb	09:07:09
2	Mo 202.031†	-417.9	-496.1	-7.4217	ug/L	-7.4217	ppb	09:07:09
2	Ni 231.604†	402.0	340.9	9.1088	ug/L	9.1088	ppb	09:07:29

2	P 214.914†	696.9	484.0	84.249	ug/L	84.249 ppb	09:07:29
2	Pb 220.353†	-474.2	-530.2	-2.7882	ug/L	-2.7882 ppb	09:07:29
2	S 181.975 Axial†	145.2	91.0	23.403	ug/L	23.403 ppb	09:07:29
2	Sb 206.836†	101.7	59.3	11.195	ug/L	11.195 ppb	09:07:29
2	Se 196.026†	-2705.3	-3071.7	-130.71	ug/L	-130.71 ppb	09:07:29
2	Si 251.611†	-1871.8	-2557.0	-77.540	ug/L	-77.540 ppb	09:07:29
2	Sn 189.927†	-312.9	-371.1	13.268	ug/L	13.268 ppb	09:07:29
2	Ti 334.940†	-10467.4	-10648.3	0.8830	ug/L	0.8830 ppb	09:07:09
2	Tl 190.801†	-132.6	-91.2	-11.657	ug/L	-11.657 ppb	09:07:29
2	U 409.014†	384426.7	445436.5	15031	ug/L	15031 ppb	09:07:09
2	V 292.402†	1147.9	2880.8	4.0182	ug/L	4.0182 ppb	09:07:29
2	Zn 213.857†	6559.6	6592.8	0.6570	ug/L	0.6570 ppb	09:07:29
2	SiO2†	-2024.5	-2757.1	-178.11	ug/L	-178.11 ppb	09:08:05
3	Sc Radial	6767.1	6767.1	90.5	%		09:06:36
3	Y RADIAL	6211.2	6211.2	89.70	%		09:06:36
3	Al 396.153Radial†	575709.6	635976.0	523710	ug/L	523710 ppb	09:06:31
3	Ca 317.933Radial†	302452.6	334046.7	473220	ug/L	473220 ppb	09:06:31
3	Fe 238.204 Radial†	93273.8	102991.4	429320	ug/L	429320 ppb	09:06:31
3	K 766.490 Radial†	3023.0	931.8	134.94	ug/L	134.94 ppb	09:06:36
3	Mg 279.077 IEC†	16986.4	18759.4	467310	ug/L	467310 ppb	09:06:36
3	Na 589.592 Radial†	7426290.6	8202888.0	503430	ug/L	503430 ppb	09:06:26
3	Sr 421.552†	1779.2	2021.1	0.9958	ug/L	0.9958 ppb	09:06:36
3	Sc 361.383	633280.0	633280.0	88.116	%		09:07:34
3	Y 371.029	485991.6	485991.6	86.475	%		09:07:34
3	Ag 328.068†	-17711.5	-20732.8	-6.2775	ug/L	-6.2775 ppb	09:07:34
3	As 188.979†	-214.8	-208.3	10.577	ug/L	10.577 ppb	09:07:55
3	B 249.677†	734.1	1773.0	15.342	ug/L	15.342 ppb	09:07:34
3	Ba 233.527†	-1477.0	-1676.8	-13.768	ug/L	-13.768 ppb	09:07:55
3	Be 313.107†	-9808.8	-6249.9	-2.9076	ug/L	-2.9076 ppb	09:07:34
3	Cd 226.502†	2908.0	3581.3	-4.3598	ug/L	-4.3598 ppb	09:07:55
3	Co 228.616†	236.6	367.9	0.2042	ug/L	0.2042 ppb	09:07:55
3	Cr 267.716†	-40.2	31.8	4.4141	ug/L	4.4141 ppb	09:07:55
3	Cu 324.752†	877.3	-4642.8	7.9967	ug/L	7.9967 ppb	09:07:34
3	Mn 257.610†	-24695.8	-28706.0	13.296	ug/L	13.296 ppb	09:07:34
3	Mo 202.031†	-432.4	-507.9	-7.7409	ug/L	-7.7409 ppb	09:07:34
3	Ni 231.604†	439.3	378.8	10.121	ug/L	10.121 ppb	09:07:55
3	P 214.914†	689.5	467.7	72.429	ug/L	72.429 ppb	09:07:55
3	Pb 220.353†	-434.1	-479.4	4.2570	ug/L	4.2570 ppb	09:07:55
3	S 181.975 Axial†	133.6	76.2	1.3507	ug/L	1.3507 ppb	09:07:55
3	Sb 206.836†	101.8	58.3	10.743	ug/L	10.743 ppb	09:07:55
3	Se 196.026†	-2700.4	-3035.8	-85.863	ug/L	-85.863 ppb	09:07:55
3	Si 251.611†	-1854.9	-2516.9	-76.210	ug/L	-76.210 ppb	09:07:55
3	Sn 189.927†	-346.5	-405.7	8.7052	ug/L	8.7052 ppb	09:07:55
3	Ti 334.940†	-10916.1	-11040.1	0.7034	ug/L	0.7034 ppb	09:07:34
3	Tl 190.801†	-124.8	-80.9	-8.7461	ug/L	-8.7461 ppb	09:07:55
3	U 409.014†	389663.6	447065.6	15085	ug/L	15085 ppb	09:07:34
3	V 292.402†	1019.7	2722.5	1.6041	ug/L	1.6041 ppb	09:07:55
3	Zn 213.857†	6557.7	6517.1	-0.8875	ug/L	-0.8875 ppb	09:07:55
3	SiO2†	-1993.7	-2699.5	-174.12	ug/L	-174.12 ppb	09:08:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	631554.3	87.876	%	0.5440				0.62%
Sc Radial	6725.0	90.0	%	0.64				0.71%
Y 371.029	484233.4	86.163	%	0.5912				0.69%
Y RADIAL	6139.5	88.67	%	1.045				1.18%
Ag 328.068†	-20542.5	-4.2651	ug/L	3.85262	-4.2651	ppb	3.85262	90.33%
Al 396.153Radial†	640033.1	527050	ug/L	14191.4	527050	ppb	14191.4	2.69%
QC value within limits for Al 396.153Radial Recovery = 105.41%								
As 188.979†	-211.1	10.099	ug/L	2.4052	10.099	ppb	2.4052	23.82%
B 249.677†	1756.1	14.738	ug/L	0.9322	14.738	ppb	0.9322	6.33%
Ba 233.527†	-1698.8	-13.934	ug/L	0.3991	-13.934	ppb	0.3991	2.86%
Be 313.107†	-6186.4	-2.8779	ug/L	0.04141	-2.8779	ppb	0.04141	1.44%
Ca 317.933Radial†	335593.8	475410	ug/L	13056.7	475410	ppb	13056.7	2.75%
QC value within limits for Ca 317.933Radial Recovery = 95.08%								
Cd 226.502†	3621.5	-4.1525	ug/L	1.60991	-4.1525	ppb	1.60991	38.77%
Co 228.616†	355.8	-0.0401	ug/L	0.21157	-0.0401	ppb	0.21157	527.33%
Cr 267.716†	48.5	4.7274	ug/L	0.49533	4.7274	ppb	0.49533	10.48%
Cu 324.752†	-4754.7	7.7433	ug/L	0.87304	7.7433	ppb	0.87304	11.27%

Fe 238.204 Radial†	103621.7	431940 ug/L	11952.5	431940 ppb	11952.5	2.77%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 86.39%						
K 766.490 Radial†	918.5	131.56 ug/L	19.462	131.56 ppb	19.462	14.79%
Mg 279.077 IEC†	18809.6	468560 ug/L	2815.7	468560 ppb	2815.7	0.60%
QC value within limits for Mg 279.077 IEC Recovery = 93.71%						
Mn 257.610†	-28656.0	13.657 ug/L	1.4485	13.657 ppb	1.4485	10.61%
Mo 202.031†	-487.7	-6.1508 ug/L	2.48284	-6.1508 ppb	2.48284	40.37%
Na 589.592 Radial†	8263615.9	507160 ug/L	3300.3	507160 ppb	3300.3	0.65%
QC value within limits for Na 589.592 Radial Recovery = 101.43%						
Ni 231.604†	370.5	9.8988 ug/L	0.70582	9.8988 ppb	0.70582	7.13%
P 214.914†	476.7	76.193 ug/L	6.9820	76.193 ppb	6.9820	9.16%
Pb 220.353†	-495.7	2.7238 ug/L	4.92765	2.7238 ppb	4.92765	180.91%
S 181.975 Axial†	84.0	11.334 ug/L	11.1731	11.334 ppb	11.1731	98.58%
Sb 206.836†	64.1	12.497 ug/L	2.6567	12.497 ppb	2.6567	21.26%
Se 196.026†	-3053.3	-85.835 ug/L	44.8929	-85.835 ppb	44.8929	52.30%
Si 251.611†	-2524.0	-76.505 ug/L	0.9228	-76.505 ppb	0.9228	1.21%
Sn 189.927†	-384.7	12.837 ug/L	3.9344	12.837 ppb	3.9344	30.65%
Sr 421.552†	2000.3	0.9164 ug/L	0.20161	0.9164 ppb	0.20161	22.00%
Ti 334.940†	-10902.5	1.1158 ug/L	0.56593	1.1158 ppb	0.56593	50.72%
Tl 190.801†	-89.0	-10.789 ug/L	1.7755	-10.789 ppb	1.7755	16.46%
U 409.014†	444868.0	15011 ug/L	86.8	15011 ppb	86.8	0.58%
QC value within limits for U 409.014 Recovery = 100.07%						
V 292.402†	2818.3	2.0024 ug/L	1.84916	2.0024 ppb	1.84916	92.35%
Zn 213.857†	6534.5	-1.0416 ug/L	1.78067	-1.0416 ppb	1.78067	170.95%
SiO2†	-2682.7	-173.18 ug/L	5.457	-173.18 ppb	5.457	3.15%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 6/30/2009 09:10:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7422.4	7422.4	99.3	%			09:12:17
1	Y RADIAL	6803.8	6803.8	98.26	%			09:12:17
1	Al 396.153Radial†	486.3	562.3	36.776	ug/L	36.776	ppb	09:12:17
1	Ca 317.933Radial†	56.2	27.5	38.995	ug/L	38.995	ppb	09:12:37
1	Fe 238.204 Radial†	-27.3	-62.3	51.387	ug/L	51.387	ppb	09:12:37
1	K 766.490 Radial†	1284333.0	1290956.1	278300	ug/L	278300	ppb	09:12:12
1	Mg 279.077 IEC†	-12.1	-15.2	-176.89	ug/L	-176.89	ppb	09:12:37
1	Na 589.592 Radial†	3381.0	3540.3	217.28	ug/L	217.28	ppb	09:12:17
1	Sr 421.552†	3247986.4	3270879.2	9135.7	ug/L	9135.7	ppb	09:12:12
1	Sc 361.383	718051.7	718051.7	99.911	%			09:13:56
1	Y 371.029	548825.4	548825.4	97.656	%			09:13:56
1	Ag 328.068†	-5154.5	-5791.7	5.5336	ug/L	5.5336	ppb	09:14:01
1	As 188.979†	28412.9	28473.6	10329	ug/L	10329	ppb	09:14:01
1	B 249.677†	200225.0	201342.7	5023.7	ug/L	5023.7	ppb	09:13:56
1	Ba 233.527†	2013651.4	2015439.0	14243	ug/L	14243	ppb	09:13:56
1	Be 313.107†	6475018.7	6485650.3	2991.6	ug/L	2991.6	ppb	09:13:49
1	Cd 226.502†	801401.5	802394.2	10241	ug/L	10241	ppb	09:13:56
1	Co 228.616†	568003.8	568607.7	9862.7	ug/L	9862.7	ppb	09:13:56
1	Cr 267.716†	1753379.4	1755013.8	24608	ug/L	24608	ppb	09:13:56
1	Cu 324.752†	5633997.2	5633361.7	20414	ug/L	20414	ppb	09:13:49
1	Mn 257.610†	8719648.2	8726711.6	9623.5	ug/L	9623.5	ppb	09:13:49
1	Mo 202.031†	141325.9	141434.3	9956.8	ug/L	9956.8	ppb	09:14:01
1	Ni 231.604†	375246.3	375459.7	10030	ug/L	10030	ppb	09:13:56
1	P 214.914†	36848.1	36566.0	14746	ug/L	14746	ppb	09:14:01
1	Pb 220.353†	208794.7	208993.4	24898	ug/L	24898	ppb	09:14:01
1	S 181.975 Axial†	38281.0	38239.6	52387	ug/L	52387	ppb	09:14:01
1	Sb 206.836†	36376.8	36351.9	10574	ug/L	10574	ppb	09:14:01
1	Se 196.026†	20377.2	20424.1	10437	ug/L	10437	ppb	09:14:01
1	Si 251.611†	1574586.6	1575573.0	48252	ug/L	48252	ppb	09:13:56
1	Sn 189.927†	59738.9	59779.5	10580	ug/L	10580	ppb	09:14:01
1	Ti 334.940†	5433406.0	5439579.1	9950.3	ug/L	9950.3	ppb	09:13:49
1	Tl 190.801†	37513.8	37607.8	9901.1	ug/L	9901.1	ppb	09:14:01
1	U 409.014†	-3927.2	918.0	-16.385	ug/L	-16.385	ppb	09:14:01
1	V 292.402†	1111733.1	1114285.5	10226	ug/L	10226	ppb	09:13:56
1	Zn 213.857†	1578752.8	1579229.6	14482	ug/L	14482	ppb	09:13:56
1	SiO2†	1612167.7	1613162.5	105180	ug/L	105180	ppb	09:14:48
2	Sc Radial	7206.1	7206.1	96.4	%			09:12:48
2	Y RADIAL	6605.6	6605.6	95.40	%			09:12:48
2	Al 396.153Radial†	485.6	576.3	60.533	ug/L	60.533	ppb	09:12:48
2	Ca 317.933Radial†	45.1	17.7	25.032	ug/L	25.032	ppb	09:13:08
2	Fe 238.204 Radial†	-30.3	-66.2	35.518	ug/L	35.518	ppb	09:13:08
2	K 766.490 Radial†	1251869.1	1296097.9	279420	ug/L	279420	ppb	09:12:43
2	Mg 279.077 IEC†	-5.2	-8.5	-15.141	ug/L	-15.141	ppb	09:13:08
2	Na 589.592 Radial†	3117.0	3368.6	206.74	ug/L	206.74	ppb	09:12:48
2	Sr 421.552†	3168878.4	3286984.7	9180.7	ug/L	9180.7	ppb	09:12:43
2	Sc 361.383	735519.8	735519.8	102.34	%			09:14:16
2	Y 371.029	561414.9	561414.9	99.896	%			09:14:16
2	Ag 328.068†	-5183.2	-5697.2	6.1117	ug/L	6.1117	ppb	09:14:21
2	As 188.979†	28211.9	27601.8	10014	ug/L	10014	ppb	09:14:21
2	B 249.677†	206438.4	202654.5	5056.7	ug/L	5056.7	ppb	09:14:16
2	Ba 233.527†	2058610.8	2011504.3	14215	ug/L	14215	ppb	09:14:16
2	Be 313.107†	6582936.2	6437184.4	2969.3	ug/L	2969.3	ppb	09:14:09
2	Cd 226.502†	822941.6	804391.7	10266	ug/L	10266	ppb	09:14:16
2	Co 228.616†	582933.8	569694.3	9881.0	ug/L	9881.0	ppb	09:14:16
2	Cr 267.716†	1796035.7	1755015.5	24608	ug/L	24608	ppb	09:14:16
2	Cu 324.752†	5728920.0	5592190.0	20265	ug/L	20265	ppb	09:14:09
2	Mn 257.610†	8853284.4	8650020.1	9539.0	ug/L	9539.0	ppb	09:14:09
2	Mo 202.031†	140614.3	137379.6	9671.3	ug/L	9671.3	ppb	09:14:21
2	Ni 231.604†	385203.4	376269.2	10051	ug/L	10051	ppb	09:14:16

2	P 214.914†	36681.5	35527.3	14242	ug/L	14242 ppb	09:14:21
2	Pb 220.353†	208078.1	203330.0	24223	ug/L	24223 ppb	09:14:21
2	S 181.975 Axial†	38120.9	37173.1	50926	ug/L	50926 ppb	09:14:21
2	Sb 206.836†	36309.4	35421.3	10287	ug/L	10287 ppb	09:14:21
2	Se 196.026†	20351.7	19914.8	10177	ug/L	10177 ppb	09:14:21
2	Si 251.611†	1618495.9	1581049.0	48430	ug/L	48430 ppb	09:14:16
2	Sn 189.927†	59380.7	58009.4	10267	ug/L	10267 ppb	09:14:21
2	Ti 334.940†	5520991.7	5396006.2	9870.5	ug/L	9870.5 ppb	09:14:09
2	Tl 190.801†	37408.7	36613.5	9639.6	ug/L	9639.6 ppb	09:14:21
2	U 409.014†	-3870.5	1066.8	-11.345	ug/L	-11.345 ppb	09:14:21
2	V 292.402†	1139430.5	1114922.7	10228	ug/L	10228 ppb	09:14:16
2	Zn 213.857†	1616276.8	1578367.4	14474	ug/L	14474 ppb	09:14:16
2	SiO2†	1605287.1	1568117.4	102240	ug/L	102240 ppb	09:14:56
3	Sc Radial	7389.2	7389.2	98.9	%		09:13:19
3	Y RADIAL	6809.8	6809.8	98.35	%		09:13:19
3	Al 396.153Radial†	492.6	570.9	52.098	ug/L	52.098 ppb	09:13:19
3	Ca 317.933Radial†	52.2	23.7	33.632	ug/L	33.632 ppb	09:13:39
3	Fe 238.204 Radial†	-32.6	-67.8	28.576	ug/L	28.576 ppb	09:13:39
3	K 766.490 Radial†	1295433.0	1307991.1	281980	ug/L	281980 ppb	09:13:14
3	Mg 279.077 IEC†	-9.0	-12.1	-104.20	ug/L	-104.20 ppb	09:13:39
3	Na 589.592 Radial†	3056.6	3227.4	198.08	ug/L	198.08 ppb	09:13:19
3	Sr 421.552†	3283861.0	3321853.3	9278.0	ug/L	9278.0 ppb	09:13:14
3	Sc 361.383	730486.3	730486.3	101.64	%		09:14:36
3	Y 371.029	557699.4	557699.4	99.235	%		09:14:36
3	Ag 328.068†	-5279.5	-5826.9	5.3135	ug/L	5.3135 ppb	09:14:41
3	As 188.979†	28275.2	27854.1	10105	ug/L	10105 ppb	09:14:41
3	B 249.677†	204596.7	202232.5	5046.2	ug/L	5046.2 ppb	09:14:36
3	Ba 233.527†	2042687.3	2009698.5	14203	ug/L	14203 ppb	09:14:36
3	Be 313.107†	6531840.2	6431236.2	2966.5	ug/L	2966.5 ppb	09:14:29
3	Cd 226.502†	815548.9	802659.3	10244	ug/L	10244 ppb	09:14:36
3	Co 228.616†	577808.6	568576.8	9861.8	ug/L	9861.8 ppb	09:14:36
3	Cr 267.716†	1781881.5	1753182.4	24582	ug/L	24582 ppb	09:14:36
3	Cu 324.752†	5675359.2	5578066.8	20213	ug/L	20213 ppb	09:14:29
3	Mn 257.610†	8795863.8	8653135.7	9542.4	ug/L	9542.4 ppb	09:14:29
3	Mo 202.031†	140994.6	138700.4	9764.3	ug/L	9764.3 ppb	09:14:41
3	Ni 231.604†	381768.8	375483.6	10030	ug/L	10030 ppb	09:14:36
3	P 214.914†	36776.7	35868.0	14427	ug/L	14427 ppb	09:14:41
3	Pb 220.353†	208448.9	205095.8	24434	ug/L	24434 ppb	09:14:41
3	S 181.975 Axial†	38215.1	37522.6	51405	ug/L	51405 ppb	09:14:41
3	Sb 206.836†	36365.1	35720.6	10380	ug/L	10380 ppb	09:14:41
3	Se 196.026†	20296.9	19997.9	10219	ug/L	10219 ppb	09:14:41
3	Si 251.611†	1604788.1	1578459.9	48346	ug/L	48346 ppb	09:14:36
3	Sn 189.927†	59493.6	58520.3	10358	ug/L	10358 ppb	09:14:41
3	Ti 334.940†	5479942.6	5392792.7	9864.6	ug/L	9864.6 ppb	09:14:29
3	Tl 190.801†	37353.2	36810.7	9691.3	ug/L	9691.3 ppb	09:14:41
3	U 409.014†	-3711.6	1197.1	-6.8830	ug/L	-6.8830 ppb	09:14:41
3	V 292.402†	1131143.9	1114441.7	10225	ug/L	10225 ppb	09:14:36
3	Zn 213.857†	1603469.7	1576649.5	14458	ug/L	14458 ppb	09:14:36
3	SiO2†	1587412.8	1561340.0	101780	ug/L	101780 ppb	09:15:03

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	728019.3	101.30	%	1.251				1.24%
Sc Radial	7339.3	98.2	%	1.56				1.59%
Y 371.029	555979.9	98.929	%	1.1510				1.16%
Y RADIAL	6739.7	97.33	%	1.679				1.72%
Ag 328.068†	-5771.9	5.6529	ug/L	0.41226	5.6529	ppb	0.41226	7.29%
Al 396.153Radial†	569.9	49.803	ug/L	12.0435	49.803	ppb	12.0435	24.18%
As 188.979†	27976.5	10149	ug/L	161.9	10149	ppb	161.9	1.60%
QC value within limits for As 188.979 Recovery = 101.49%								
B 249.677†	202076.6	5042.2	ug/L	16.84	5042.2	ppb	16.84	0.33%
QC value within limits for B 249.677 Recovery = 100.84%								
Ba 233.527†	2012213.9	14220	ug/L	20.7	14220	ppb	20.7	0.15%
QC value within limits for Ba 233.527 Recovery = 94.80%								
Be 313.107†	6451357.0	2975.8	ug/L	13.77	2975.8	ppb	13.77	0.46%
QC value within limits for Be 313.107 Recovery = 99.19%								
Ca 317.933Radial†	23.0	32.553	ug/L	7.0439	32.553	ppb	7.0439	21.64%
Cd 226.502†	803148.4	10251	ug/L	13.8	10251	ppb	13.8	0.14%
QC value within limits for Cd 226.502 Recovery = 102.51%								

Co 228.616†	568959.6	9868.5 ug/L	10.79	9868.5 ppb	10.79	0.11%
QC value within limits for Co 228.616 Recovery = 98.69%						
Cr 267.716†	1754403.9	24599 ug/L	14.8	24599 ppb	14.8	0.06%
QC value within limits for Cr 267.716 Recovery = 98.40%						
Cu 324.752†	5601206.2	20297 ug/L	104.1	20297 ppb	104.1	0.51%
QC value within limits for Cu 324.752 Recovery = 101.49%						
Fe 238.204 Radial†	-65.4	38.494 ug/L	11.6927	38.494 ppb	11.6927	30.38%
K 766.490 Radial†	1298348.4	279900 ug/L	1886.5	279900 ppb	1886.5	0.67%
QC value within limits for K 766.490 Radial Recovery = 93.30%						
Mg 279.077 IEC†	-11.9	-98.743 ug/L	81.0101	-98.743 ppb	81.0101	82.04%
Mn 257.610†	8676622.5	9568.3 ug/L	47.87	9568.3 ppb	47.87	0.50%
QC value within limits for Mn 257.610 Recovery = 95.68%						
Mo 202.031†	139171.4	9797.5 ug/L	145.58	9797.5 ppb	145.58	1.49%
QC value within limits for Mo 202.031 Recovery = 97.97%						
Na 589.592 Radial†	3378.8	207.37 ug/L	9.617	207.37 ppb	9.617	4.64%
Ni 231.604†	375737.5	10037 ug/L	12.3	10037 ppb	12.3	0.12%
QC value within limits for Ni 231.604 Recovery = 100.37%						
P 214.914†	35987.1	14472 ug/L	255.4	14472 ppb	255.4	1.76%
QC value within limits for P 214.914 Recovery = 96.48%						
Pb 220.353†	205806.4	24519 ug/L	345.3	24519 ppb	345.3	1.41%
QC value within limits for Pb 220.353 Recovery = 98.07%						
S 181.975 Axial†	37645.1	51572 ug/L	744.8	51572 ppb	744.8	1.44%
QC value within limits for S 181.975 Axial Recovery = 103.14%						
Sb 206.836†	35831.3	10413 ug/L	146.6	10413 ppb	146.6	1.41%
QC value within limits for Sb 206.836 Recovery = 104.13%						
Se 196.026†	20112.3	10278 ug/L	139.7	10278 ppb	139.7	1.36%
QC value within limits for Se 196.026 Recovery = 102.78%						
Si 251.611†	1578360.6	48343 ug/L	89.0	48343 ppb	89.0	0.18%
QC value within limits for Si 251.611 Recovery = 96.69%						
Sn 189.927†	58769.7	10402 ug/L	161.2	10402 ppb	161.2	1.55%
QC value within limits for Sn 189.927 Recovery = 104.02%						
Sr 421.552†	3293239.0	9198.1 ug/L	72.78	9198.1 ppb	72.78	0.79%
QC value within limits for Sr 421.552 Recovery = 91.98%						
Ti 334.940†	5409459.3	9895.1 ug/L	47.85	9895.1 ppb	47.85	0.48%
QC value within limits for Ti 334.940 Recovery = 98.95%						
Tl 190.801†	37010.7	9744.0 ug/L	138.47	9744.0 ppb	138.47	1.42%
QC value within limits for Tl 190.801 Recovery = 97.44%						
U 409.014†	1060.7	-11.538 ug/L	4.7539	-11.538 ppb	4.7539	41.20%
V 292.402†	1114550.0	10226 ug/L	1.6	10226 ppb	1.6	0.02%
QC value within limits for V 292.402 Recovery = 102.26%						
Zn 213.857†	1578082.1	14471 ug/L	12.0	14471 ppb	12.0	0.08%
QC value within limits for Zn 213.857 Recovery = 96.47%						
SiO2†	1580873.3	103070 ug/L	1844.0	103070 ppb	1844.0	1.79%
QC value within limits for SiO2 Recovery = 96.32%						

All analyte(s) passed QC.

Analysis Begun

Start Time: 6/30/2009 09:33:27 **Plasma On Time:** 6/29/2009 15:26:31
Logged In Analyst: Optima3 **Technique:** ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601**Autosampler Model:** S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX **Method Last Saved:** 6/30/2009 07:55:59
IEC File: 040209.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 **Autosampler Location:** 7
Sample ID: CCV **Date Collected:** 6/30/2009 09:33:28
Analyst: **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7423.1	7423.1	99.3	%			09:35:25
1	Y RADIAL	6826.3	6826.3	98.58	%			09:35:25
1	Al 396.153Radial†	6345.6	6462.3	5299.9	ug/L	5299.9	ppb	09:35:25

1	Ca 317.933Radial†	3697.4	3693.9	5232.9 ug/L	5232.9 ppb	09:35:25
1	Fe 238.204 Radial†	1240.3	1214.1	5076.9 ug/L	5076.9 ppb	09:35:45
1	K 766.490 Radial†	24857.4	22622.8	4867.7 ug/L	4867.7 ppb	09:35:20
1	Mg 279.077 IEC†	213.4	211.8	5286.2 ug/L	5286.2 ppb	09:35:45
1	Na 589.592 Radial†	164426.0	165702.9	10170 ug/L	10170 ppb	09:35:20
1	Sr 421.552†	170615.6	171855.8	479.95 ug/L	479.95 ppb	09:35:20
1	Sc 361.383	749922.0	749922.0	104.35 %		09:36:53
1	Y 371.029	578377.8	578377.8	102.91 %		09:36:53
1	Ag 328.068†	88179.2	83874.1	504.14 ug/L	504.14 ppb	09:36:58
1	As 188.979†	1443.2	1418.5	514.68 ug/L	514.68 ppb	09:37:18
1	B 249.677†	20193.0	20291.9	508.46 ug/L	508.46 ppb	09:36:58
1	Ba 233.527†	74246.7	71154.0	503.15 ug/L	503.15 ppb	09:36:58
1	Be 313.107†	1148696.4	1105737.4	507.23 ug/L	507.23 ppb	09:36:53
1	Cd 226.502†	41055.7	39626.9	505.17 ug/L	505.17 ppb	09:36:58
1	Co 228.616†	30353.3	29188.6	506.44 ug/L	506.44 ppb	09:36:58
1	Cr 267.716†	37337.8	35860.2	503.20 ug/L	503.20 ppb	09:36:58
1	Cu 324.752†	149034.2	137188.8	497.43 ug/L	497.43 ppb	09:36:58
1	Mn 257.610†	478322.5	457721.8	505.30 ug/L	505.30 ppb	09:36:53
1	Mo 202.031†	7514.2	7184.1	506.08 ug/L	506.08 ppb	09:37:18
1	Ni 231.604†	19794.6	18850.4	503.55 ug/L	503.55 ppb	09:36:58
1	P 214.914†	5522.9	4978.1	2447.3 ug/L	2447.3 ppb	09:37:18
1	Pb 220.353†	4426.8	4255.7	508.26 ug/L	508.26 ppb	09:37:18
1	S 181.975 Axial†	852.5	741.5	1014.8 ug/L	1014.8 ppb	09:37:18
1	Sb 206.836†	1850.3	1716.0	516.26 ug/L	516.26 ppb	09:37:18
1	Se 196.026†	1028.0	1014.0	535.42 ug/L	535.42 ppb	09:37:18
1	Si 251.611†	86183.9	82182.8	2520.8 ug/L	2520.8 ppb	09:36:58
1	Sn 189.927†	3027.0	2888.4	512.14 ug/L	512.14 ppb	09:37:18
1	Ti 334.940†	276976.0	266788.8	488.34 ug/L	488.34 ppb	09:36:58
1	Tl 190.801†	1970.3	1949.0	513.11 ug/L	513.11 ppb	09:37:18
1	U 409.014†	10959.4	15351.7	518.23 ug/L	518.23 ppb	09:36:58
1	V 292.402†	55911.1	55147.7	506.93 ug/L	506.93 ppb	09:36:58
1	Zn 213.857†	57939.9	54601.7	499.26 ug/L	499.26 ppb	09:36:58
1	SiO2†	87174.2	83106.7	5426.9 ug/L	5426.9 ppb	09:38:25
2	Sc Radial	7525.2	7525.2	101 %		09:35:55
2	Y RADIAL	6923.0	6923.0	99.98 %		09:35:55
2	Al 396.153Radial†	6313.2	6343.4	5202.2 ug/L	5202.2 ppb	09:35:55
2	Ca 317.933Radial†	3695.1	3641.2	5158.2 ug/L	5158.2 ppb	09:35:55
2	Fe 238.204 Radial†	1235.4	1192.3	4986.0 ug/L	4986.0 ppb	09:36:15
2	K 766.490 Radial†	24952.7	22377.7	4814.9 ug/L	4814.9 ppb	09:35:50
2	Mg 279.077 IEC†	213.2	208.7	5209.3 ug/L	5209.3 ppb	09:36:15
2	Na 589.592 Radial†	166648.8	165663.7	10167 ug/L	10167 ppb	09:35:50
2	Sr 421.552†	172873.2	171766.5	479.70 ug/L	479.70 ppb	09:35:50
2	Sc 361.383	749726.7	749726.7	104.32 %		09:37:24
2	Y 371.029	577553.5	577553.5	102.77 %		09:37:24
2	Ag 328.068†	88437.2	84143.4	505.74 ug/L	505.74 ppb	09:37:29
2	As 188.979†	1424.9	1401.3	508.49 ug/L	508.49 ppb	09:37:49
2	B 249.677†	20283.9	20384.1	510.77 ug/L	510.77 ppb	09:37:29
2	Ba 233.527†	74577.0	71489.2	505.52 ug/L	505.52 ppb	09:37:29
2	Be 313.107†	1154468.4	1111557.2	509.90 ug/L	509.90 ppb	09:37:24
2	Cd 226.502†	41318.3	39888.9	508.52 ug/L	508.52 ppb	09:37:29
2	Co 228.616†	30503.1	29339.8	509.04 ug/L	509.04 ppb	09:37:29
2	Cr 267.716†	37503.7	36028.5	505.56 ug/L	505.56 ppb	09:37:29
2	Cu 324.752†	149487.6	137660.6	499.13 ug/L	499.13 ppb	09:37:29
2	Mn 257.610†	481180.8	460581.1	508.44 ug/L	508.44 ppb	09:37:24
2	Mo 202.031†	7416.3	7092.1	499.60 ug/L	499.60 ppb	09:37:49
2	Ni 231.604†	19877.2	18934.5	505.79 ug/L	505.79 ppb	09:37:29
2	P 214.914†	5449.0	4908.6	2411.4 ug/L	2411.4 ppb	09:37:49
2	Pb 220.353†	4369.2	4201.6	501.79 ug/L	501.79 ppb	09:37:49
2	S 181.975 Axial†	848.0	737.4	1009.2 ug/L	1009.2 ppb	09:37:49
2	Sb 206.836†	1820.4	1687.8	507.57 ug/L	507.57 ppb	09:37:49
2	Se 196.026†	1016.3	1003.0	529.49 ug/L	529.49 ppb	09:37:49
2	Si 251.611†	86487.8	82495.6	2530.7 ug/L	2530.7 ppb	09:37:29
2	Sn 189.927†	2979.1	2843.3	504.13 ug/L	504.13 ppb	09:37:49
2	Ti 334.940†	278487.2	268306.6	491.12 ug/L	491.12 ppb	09:37:29
2	Tl 190.801†	1949.7	1929.7	508.08 ug/L	508.08 ppb	09:37:49
2	U 409.014†	10728.8	15133.4	510.85 ug/L	510.85 ppb	09:37:29
2	V 292.402†	56273.5	55509.1	510.12 ug/L	510.12 ppb	09:37:29
2	Zn 213.857†	58249.1	54912.5	502.13 ug/L	502.13 ppb	09:37:29
2	SiO2†	86644.3	82620.5	5395.5 ug/L	5395.5 ppb	09:38:30
3	Sc Radial	7497.0	7497.0	100 %		09:36:26
3	Y RADIAL	6929.0	6929.0	100.1 %		09:36:26

3	Al 396.153Radial†	6295.9	6349.8	5207.0 ug/L	5207.0 ppb	09:36:26
3	Ca 317.933Radial†	3671.2	3631.1	5143.9 ug/L	5143.9 ppb	09:36:26
3	Fe 238.204 Radial†	1247.9	1209.4	5057.6 ug/L	5057.6 ppb	09:36:46
3	K 766.490 Radial†	25275.1	22792.3	4904.2 ug/L	4904.2 ppb	09:36:21
3	Mg 279.077 IEC†	214.6	210.9	5263.3 ug/L	5263.3 ppb	09:36:46
3	Na 589.592 Radial†	168542.7	168174.3	10321 ug/L	10321 ppb	09:36:21
3	Sr 421.552†	175020.0	174552.5	487.48 ug/L	487.48 ppb	09:36:21
3	Sc 361.383	742795.5	742795.5	103.35 %		09:37:55
3	Y 371.029	572707.4	572707.4	101.91 %		09:37:55
3	Ag 328.068†	89178.1	85651.4	514.80 ug/L	514.80 ppb	09:38:00
3	As 188.979†	1453.3	1441.6	523.06 ug/L	523.06 ppb	09:38:20
3	B 249.677†	20460.7	20736.6	519.61 ug/L	519.61 ppb	09:38:00
3	Ba 233.527†	75243.2	72800.8	514.80 ug/L	514.80 ppb	09:38:00
3	Be 313.107†	1144942.8	1112667.4	510.43 ug/L	510.43 ppb	09:37:55
3	Cd 226.502†	41580.1	40511.8	516.47 ug/L	516.47 ppb	09:38:00
3	Co 228.616†	30748.5	29850.0	517.90 ug/L	517.90 ppb	09:38:00
3	Cr 267.716†	37784.8	36635.9	514.08 ug/L	514.08 ppb	09:38:00
3	Cu 324.752†	150573.6	140048.6	507.79 ug/L	507.79 ppb	09:38:00
3	Mn 257.610†	477446.4	461272.1	509.21 ug/L	509.21 ppb	09:37:55
3	Mo 202.031†	7501.5	7240.9	510.08 ug/L	510.08 ppb	09:38:20
3	Ni 231.604†	20016.5	19247.1	514.14 ug/L	514.14 ppb	09:38:00
3	P 214.914†	5517.1	5023.3	2468.3 ug/L	2468.3 ppb	09:38:20
3	Pb 220.353†	4428.4	4297.9	513.28 ug/L	513.28 ppb	09:38:20
3	S 181.975 Axial†	853.9	750.8	1027.5 ug/L	1027.5 ppb	09:38:20
3	Sb 206.836†	1857.2	1739.7	523.18 ug/L	523.18 ppb	09:38:20
3	Se 196.026†	1026.5	1021.9	539.41 ug/L	539.41 ppb	09:38:20
3	Si 251.611†	87171.3	83930.5	2574.7 ug/L	2574.7 ppb	09:38:00
3	Sn 189.927†	3017.8	2907.3	515.47 ug/L	515.47 ppb	09:38:20
3	Ti 334.940†	280908.0	273139.9	499.96 ug/L	499.96 ppb	09:38:00
3	Tl 190.801†	1984.5	1980.8	521.47 ug/L	521.47 ppb	09:38:20
3	U 409.014†	11073.0	15562.3	525.35 ug/L	525.35 ppb	09:38:00
3	V 292.402†	56726.1	56450.4	518.81 ug/L	518.81 ppb	09:38:00
3	Zn 213.857†	58702.4	55872.2	510.91 ug/L	510.91 ppb	09:38:00
3	SiO2†	87234.6	83966.6	5483.2 ug/L	5483.2 ppb	09:38:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	747481.4	104.01	%	0.565				0.54%
Sc Radial	7481.8	100	%	0.7				0.71%
Y 371.029	576212.9	102.53	%	0.545				0.53%
Y RADIAL	6892.8	99.54	%	0.833				0.84%
Ag 328.068†	84556.3	508.23	ug/L	5.745	508.23	ppb	5.745	1.13%
QC value within limits for Ag 328.068 Recovery = 101.65%								
Al 396.153Radial†	6385.1	5236.4	ug/L	55.04	5236.4	ppb	55.04	1.05%
QC value within limits for Al 396.153Radial Recovery = 104.73%								
As 188.979†	1420.5	515.41	ug/L	7.313	515.41	ppb	7.313	1.42%
QC value within limits for As 188.979 Recovery = 103.08%								
B 249.677†	20470.9	512.95	ug/L	5.884	512.95	ppb	5.884	1.15%
QC value within limits for B 249.677 Recovery = 102.59%								
Ba 233.527†	71814.7	507.82	ug/L	6.155	507.82	ppb	6.155	1.21%
QC value within limits for Ba 233.527 Recovery = 101.56%								
Be 313.107†	1109987.3	509.19	ug/L	1.715	509.19	ppb	1.715	0.34%
QC value within limits for Be 313.107 Recovery = 101.84%								
Ca 317.933Radial†	3655.4	5178.3	ug/L	47.79	5178.3	ppb	47.79	0.92%
QC value within limits for Ca 317.933Radial Recovery = 103.57%								
Cd 226.502†	40009.2	510.05	ug/L	5.801	510.05	ppb	5.801	1.14%
QC value within limits for Cd 226.502 Recovery = 102.01%								
Co 228.616†	29459.5	511.13	ug/L	6.007	511.13	ppb	6.007	1.18%
QC value within limits for Co 228.616 Recovery = 102.23%								
Cr 267.716†	36174.9	507.61	ug/L	5.726	507.61	ppb	5.726	1.13%
QC value within limits for Cr 267.716 Recovery = 101.52%								
Cu 324.752†	138299.3	501.45	ug/L	5.556	501.45	ppb	5.556	1.11%
QC value within limits for Cu 324.752 Recovery = 100.29%								
Fe 238.204 Radial†	1205.3	5040.2	ug/L	47.87	5040.2	ppb	47.87	0.95%
QC value within limits for Fe 238.204 Radial Recovery = 100.80%								
K 766.490 Radial†	22597.6	4862.3	ug/L	44.91	4862.3	ppb	44.91	0.92%
QC value within limits for K 766.490 Radial Recovery = 97.25%								
Mg 279.077 IEC†	210.5	5252.9	ug/L	39.45	5252.9	ppb	39.45	0.75%
QC value within limits for Mg 279.077 IEC Recovery = 105.06%								

Mn 257.610†	459858.3	507.65 ug/L	2.073	507.65 ppb	2.073	0.41%
QC value within limits for Mn 257.610 Recovery = 101.53%						
Mo 202.031†	7172.4	505.25 ug/L	5.288	505.25 ppb	5.288	1.05%
QC value within limits for Mo 202.031 Recovery = 101.05%						
Na 589.592 Radial†	166513.6	10219 ug/L	88.3	10219 ppb	88.3	0.86%
QC value within limits for Na 589.592 Radial Recovery = 102.19%						
Ni 231.604†	19010.7	507.83 ug/L	5.584	507.83 ppb	5.584	1.10%
QC value within limits for Ni 231.604 Recovery = 101.57%						
P 214.914†	4970.0	2442.3 ug/L	28.79	2442.3 ppb	28.79	1.18%
QC value within limits for P 214.914 Recovery = 97.69%						
Pb 220.353†	4251.7	507.77 ug/L	5.758	507.77 ppb	5.758	1.13%
QC value within limits for Pb 220.353 Recovery = 101.55%						
S 181.975 Axial†	743.3	1017.2 ug/L	9.36	1017.2 ppb	9.36	0.92%
QC value within limits for S 181.975 Axial Recovery = 101.72%						
Sb 206.836†	1714.5	515.67 ug/L	7.821	515.67 ppb	7.821	1.52%
QC value within limits for Sb 206.836 Recovery = 103.13%						
Se 196.026†	1013.0	534.77 ug/L	4.996	534.77 ppb	4.996	0.93%
QC value within limits for Se 196.026 Recovery = 106.95%						
Si 251.611†	82869.6	2542.1 ug/L	28.66	2542.1 ppb	28.66	1.13%
QC value within limits for Si 251.611 Recovery = 101.68%						
Sn 189.927†	2879.7	510.58 ug/L	5.831	510.58 ppb	5.831	1.14%
QC value within limits for Sn 189.927 Recovery = 102.12%						
Sr 421.552†	172725.0	482.38 ug/L	4.423	482.38 ppb	4.423	0.92%
QC value within limits for Sr 421.552 Recovery = 96.48%						
Ti 334.940†	269411.7	493.14 ug/L	6.066	493.14 ppb	6.066	1.23%
QC value within limits for Ti 334.940 Recovery = 98.63%						
Tl 190.801†	1953.2	514.22 ug/L	6.763	514.22 ppb	6.763	1.32%
QC value within limits for Tl 190.801 Recovery = 102.84%						
U 409.014†	15349.1	518.14 ug/L	7.251	518.14 ppb	7.251	1.40%
QC value within limits for U 409.014 Recovery = 103.63%						
V 292.402†	55702.4	511.96 ug/L	6.148	511.96 ppb	6.148	1.20%
QC value within limits for V 292.402 Recovery = 102.39%						
Zn 213.857†	55128.8	504.10 ug/L	6.068	504.10 ppb	6.068	1.20%
QC value within limits for Zn 213.857 Recovery = 100.82%						
SiO2†	83231.3	5435.2 ug/L	44.44	5435.2 ppb	44.44	0.82%
QC value within limits for SiO2 Recovery = 101.64%						

All analyte(s) passed QC.

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 09:40:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6894.2	6894.2	92.2	%			09:42:38
1	Y RADIAL	6384.5	6384.5	92.20	%			09:42:38
1	Al 396.153Radial†	-102.5	-38.5	-31.712	ug/L	-31.712	ppb	09:42:38
1	Ca 317.933Radial†	29.5	2.9	4.0374	ug/L	4.0374	ppb	09:42:58
1	Fe 238.204 Radial†	36.5	4.8	20.033	ug/L	20.033	ppb	09:42:58
1	K 766.490 Radial†	2481.1	282.8	61.013	ug/L	61.013	ppb	09:42:38
1	Mg 279.077 IEC†	0.9	-2.0	-50.288	ug/L	-50.288	ppb	09:42:58
1	Na 589.592 Radial†	184.5	335.6	20.597	ug/L	20.597	ppb	09:42:38
1	Sr 421.552†	-9.0	46.1	0.1288	ug/L	0.1288	ppb	09:42:38
1	Sc 361.383	719880.5	719880.5	100.17	%			09:43:55
1	Y 371.029	563118.3	563118.3	100.20	%			09:43:55
1	Ag 328.068†	709.6	75.7	0.4618	ug/L	0.4618	ppb	09:43:55
1	As 188.979†	-34.9	0.6	0.2269	ug/L	0.2269	ppb	09:44:15
1	B 249.677†	-391.1	549.5	13.844	ug/L	13.844	ppb	09:43:55
1	Ba 233.527†	18.8	18.3	0.1286	ug/L	0.1286	ppb	09:44:15
1	Be 313.107†	-4691.2	198.3	0.0903	ug/L	0.0903	ppb	09:43:55
1	Cd 226.502†	-263.5	18.0	0.2283	ug/L	0.2283	ppb	09:44:15
1	Co 228.616†	-72.7	26.9	0.4673	ug/L	0.4673	ppb	09:44:15
1	Cr 267.716†	-53.4	24.1	0.3395	ug/L	0.3395	ppb	09:43:55
1	Cu 324.752†	5742.2	94.2	0.3426	ug/L	0.3426	ppb	09:43:55
1	Mn 257.610†	688.0	7.2	0.0115	ug/L	0.0115	ppb	09:43:55
1	Mo 202.031†	25.4	8.2	0.5818	ug/L	0.5818	ppb	09:44:15
1	Ni 231.604†	157.3	37.2	0.9947	ug/L	0.9947	ppb	09:44:15
1	P 214.914†	308.9	-6.4	-3.3577	ug/L	-3.3577	ppb	09:44:15
1	Pb 220.353†	9.0	22.2	2.6412	ug/L	2.6412	ppb	09:44:15
1	S 181.975 Axial†	78.3	2.7	3.7221	ug/L	3.7221	ppb	09:44:15
1	Sb 206.836†	56.2	-1.1	-0.3198	ug/L	-0.3198	ppb	09:44:15
1	Se 196.026†	-22.0	6.8	3.5212	ug/L	3.5212	ppb	09:44:15
1	Si 251.611†	507.8	95.2	2.9043	ug/L	2.9043	ppb	09:44:15
1	Sn 189.927†	14.6	2.0	0.3634	ug/L	0.3634	ppb	09:44:15
1	Ti 334.940†	-1464.0	-113.3	-0.2055	ug/L	-0.2055	ppb	09:43:55
1	Tl 190.801†	-49.5	11.3	2.9527	ug/L	2.9527	ppb	09:44:15
1	U 409.014†	-4984.1	-127.1	-4.3081	ug/L	-4.3081	ppb	09:43:55
1	V 292.402†	-1586.5	-18.7	-0.1745	ug/L	-0.1745	ppb	09:43:55
1	Zn 213.857†	1000.9	74.1	0.6768	ug/L	0.6768	ppb	09:44:15
1	SiO2†	526.1	88.4	5.7331	ug/L	5.7331	ppb	09:45:11
2	Sc Radial	7433.1	7433.1	99.4	%			09:43:03
2	Y RADIAL	6894.2	6894.2	99.57	%			09:43:03
2	Al 396.153Radial†	-54.3	18.0	14.812	ug/L	14.812	ppb	09:43:03
2	Ca 317.933Radial†	23.2	-5.7	-8.1219	ug/L	-8.1219	ppb	09:43:23
2	Fe 238.204 Radial†	40.9	6.3	26.394	ug/L	26.394	ppb	09:43:23
2	K 766.490 Radial†	2620.1	227.6	49.101	ug/L	49.101	ppb	09:43:03
2	Mg 279.077 IEC†	1.7	-1.3	-32.309	ug/L	-32.309	ppb	09:43:23
2	Na 589.592 Radial†	226.0	362.8	22.267	ug/L	22.267	ppb	09:43:03
2	Sr 421.552†	-22.1	33.7	0.0941	ug/L	0.0941	ppb	09:43:03
2	Sc 361.383	714110.1	714110.1	99.363	%			09:44:21
2	Y 371.029	559063.9	559063.9	99.478	%			09:44:21
2	Ag 328.068†	565.2	-63.8	-0.3693	ug/L	-0.3693	ppb	09:44:21
2	As 188.979†	-19.0	16.4	5.9022	ug/L	5.9022	ppb	09:44:41
2	B 249.677†	-386.0	551.5	13.897	ug/L	13.897	ppb	09:44:21
2	Ba 233.527†	21.6	21.2	0.1505	ug/L	0.1505	ppb	09:44:41
2	Be 313.107†	-4693.3	158.3	0.0722	ug/L	0.0722	ppb	09:44:21
2	Cd 226.502†	-258.1	21.4	0.2697	ug/L	0.2697	ppb	09:44:41
2	Co 228.616†	-103.6	-4.8	-0.0823	ug/L	-0.0823	ppb	09:44:41
2	Cr 267.716†	-79.8	-2.9	-0.0388	ug/L	-0.0388	ppb	09:44:21
2	Cu 324.752†	5568.8	-33.9	-0.1215	ug/L	-0.1215	ppb	09:44:21
2	Mn 257.610†	712.7	37.7	0.0455	ug/L	0.0455	ppb	09:44:21
2	Mo 202.031†	24.6	7.7	0.5407	ug/L	0.5407	ppb	09:44:41
2	Ni 231.604†	139.0	20.1	0.5377	ug/L	0.5377	ppb	09:44:41

2	P 214.914†	311.1	-1.7	-0.8331 ug/L	-0.8331 ppb	09:44:41
2	Pb 220.353†	5.5	18.8	2.2417 ug/L	2.2417 ppb	09:44:41
2	S 181.975 Axial†	76.0	1.1	1.4516 ug/L	1.4516 ppb	09:44:41
2	Sb 206.836†	61.5	4.7	1.4121 ug/L	1.4121 ppb	09:44:41
2	Se 196.026†	-35.8	-7.2	-3.6099 ug/L	-3.6099 ppb	09:44:41
2	Si 251.611†	492.7	84.1	2.5666 ug/L	2.5666 ppb	09:44:41
2	Sn 189.927†	14.8	2.4	0.4327 ug/L	0.4327 ppb	09:44:41
2	Ti 334.940†	-1394.0	-54.7	-0.0997 ug/L	-0.0997 ppb	09:44:21
2	Tl 190.801†	-53.5	6.9	1.8178 ug/L	1.8178 ppb	09:44:41
2	U 409.014†	-4881.1	-63.7	-2.1597 ug/L	-2.1597 ppb	09:44:21
2	V 292.402†	-1517.5	38.0	0.3435 ug/L	0.3435 ppb	09:44:21
2	Zn 213.857†	988.3	69.5	0.6366 ug/L	0.6366 ppb	09:44:41
2	SiO2†	496.6	62.9	4.0655 ug/L	4.0655 ppb	09:45:17
3	Sc Radial	7360.3	7360.3	98.5 %		09:43:28
3	Y RADIAL	6797.8	6797.8	98.17 %		09:43:28
3	Al 396.153Radial†	-90.0	-18.7	-15.460 ug/L	-15.460 ppb	09:43:28
3	Ca 317.933Radial†	32.4	3.8	5.4300 ug/L	5.4300 ppb	09:43:49
3	Fe 238.204 Radial†	35.1	0.9	3.5646 ug/L	3.5646 ppb	09:43:49
3	K 766.490 Radial†	2468.3	99.4	21.436 ug/L	21.436 ppb	09:43:28
3	Mg 279.077 IEC†	2.7	-0.3	-7.6229 ug/L	-7.6229 ppb	09:43:49
3	Na 589.592 Radial†	277.0	416.8	25.582 ug/L	25.582 ppb	09:43:28
3	Sr 421.552†	-56.3	-1.3	-0.0036 ug/L	-0.0036 ppb	09:43:28
3	Sc 361.383	722967.1	722967.1	100.60 %		09:44:46
3	Y 371.029	565613.4	565613.4	100.64 %		09:44:46
3	Ag 328.068†	639.5	3.1	0.0184 ug/L	0.0184 ppb	09:44:46
3	As 188.979†	-31.7	3.9	1.3987 ug/L	1.3987 ppb	09:45:06
3	B 249.677†	-390.2	552.0	13.909 ug/L	13.909 ppb	09:44:46
3	Ba 233.527†	39.7	39.0	0.2765 ug/L	0.2765 ppb	09:45:06
3	Be 313.107†	-4786.6	123.5	0.0567 ug/L	0.0567 ppb	09:44:46
3	Cd 226.502†	-275.3	7.4	0.0941 ug/L	0.0941 ppb	09:45:06
3	Co 228.616†	-79.1	20.8	0.3617 ug/L	0.3617 ppb	09:45:06
3	Cr 267.716†	-45.9	31.7	0.4442 ug/L	0.4442 ppb	09:44:46
3	Cu 324.752†	5639.4	-32.4	-0.1170 ug/L	-0.1170 ppb	09:44:46
3	Mn 257.610†	719.5	35.7	0.0399 ug/L	0.0399 ppb	09:44:46
3	Mo 202.031†	24.7	7.4	0.5208 ug/L	0.5208 ppb	09:45:06
3	Ni 231.604†	144.8	24.2	0.6462 ug/L	0.6462 ppb	09:45:06
3	P 214.914†	309.6	-7.0	-3.5366 ug/L	-3.5366 ppb	09:45:06
3	Pb 220.353†	-7.1	6.2	0.7392 ug/L	0.7392 ppb	09:45:06
3	S 181.975 Axial†	80.1	4.2	5.7096 ug/L	5.7096 ppb	09:45:06
3	Sb 206.836†	52.2	-5.4	-1.5761 ug/L	-1.5761 ppb	09:45:06
3	Se 196.026†	-16.0	12.9	6.5953 ug/L	6.5953 ppb	09:45:06
3	Si 251.611†	510.2	95.4	2.9083 ug/L	2.9083 ppb	09:45:06
3	Sn 189.927†	22.2	9.6	1.6974 ug/L	1.6974 ppb	09:45:06
3	Ti 334.940†	-1304.9	51.0	0.0916 ug/L	0.0916 ppb	09:44:46
3	Tl 190.801†	-58.8	2.3	0.6090 ug/L	0.6090 ppb	09:45:06
3	U 409.014†	-4742.7	134.1	4.5395 ug/L	4.5395 ppb	09:44:46
3	V 292.402†	-1494.0	80.0	0.7414 ug/L	0.7414 ppb	09:44:46
3	Zn 213.857†	990.5	59.5	0.5453 ug/L	0.5453 ppb	09:45:06
3	SiO2†	542.4	102.3	6.6406 ug/L	6.6406 ppb	09:45:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	718985.9	100.04	%	0.626				0.63%
Sc Radial	7229.2	96.7	%	3.91				4.04%
Y 371.029	562598.5	100.11	%	0.588				0.59%
Y RADIAL	6692.2	96.65	%	3.911				4.05%
Ag 328.068†	5.0	0.0370	ug/L	0.41585	0.0370	ppb	0.41585	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.1	-10.787	ug/L	23.6114	-10.787	ppb	23.6114	218.89%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.0	2.5093	ug/L	2.99621	2.5093	ppb	2.99621	119.40%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	551.0	13.883	ug/L	0.0344	13.883	ppb	0.0344	0.25%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.2	0.1852	ug/L	0.07981	0.1852	ppb	0.07981	43.10%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	160.1	0.0731	ug/L	0.01679	0.0731	ppb	0.01679	22.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.3	0.4485	ug/L	7.45476	0.4485	ppb	7.45476	>999.9%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                15.6      0.1974 ug/L       0.09179      0.1974 ppb        0.09179  46.51%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                14.3      0.2489 ug/L       0.29165      0.2489 ppb        0.29165 117.19%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.6      0.2483 ug/L       0.25408      0.2483 ppb        0.25408 102.32%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                 9.3      0.0347 ug/L       0.26665      0.0347 ppb        0.26665 768.84%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.0     16.664 ug/L       11.7815     16.664 ppb        11.7815  70.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         203.3     43.850 ug/L       20.3045     43.850 ppb        20.3045  46.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.2    -30.073 ug/L       21.4204    -30.073 ppb        21.4204  71.23%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                26.9      0.0323 ug/L       0.01826      0.0323 ppb        0.01826  56.53%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 7.8      0.5478 ug/L       0.03113      0.5478 ppb        0.03113   5.68%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        371.7     22.815 ug/L        2.5369     22.815 ppb         2.5369  11.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                27.2      0.7262 ug/L       0.23879      0.7262 ppb        0.23879  32.88%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -5.0     -2.5758 ug/L       1.51188     -2.5758 ppb        1.51188  58.70%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                15.8      1.8740 ug/L       1.00290      1.8740 ppb        1.00290  53.52%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            2.6      3.6278 ug/L       2.13055      3.6278 ppb        2.13055  58.73%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.6     -0.1613 ug/L       1.50040     -0.1613 ppb        1.50040 930.30%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 4.1      2.1689 ug/L       5.23531      2.1689 ppb        5.23531 241.38%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                91.6      2.7931 ug/L       0.19618      2.7931 ppb        0.19618   7.02%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 4.7      0.8312 ug/L       0.75095      0.8312 ppb        0.75095  90.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                26.2      0.0731 ug/L       0.06869      0.0731 ppb        0.06869  93.96%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -39.0     -0.0712 ug/L       0.15057     -0.0712 ppb        0.15057 211.53%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.7932 ug/L       1.17204      1.7932 ppb        1.17204  65.36%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -18.9     -0.6428 ug/L       4.61470     -0.6428 ppb        4.61470 717.96%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 33.1      0.3035 ug/L       0.45926      0.3035 ppb        0.45926 151.34%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                67.7      0.6196 ug/L       0.06739      0.6196 ppb        0.06739  10.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      84.5      5.4798 ug/L       1.30612      5.4798 ppb        1.30612  23.84%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: LR1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 6/30/2009 09:47:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7516.4	7516.4	101	%			09:49:26
1	Y RADIAL	6915.7	6915.7	99.88	%			09:49:26
1	Al 396.153Radial†	-98.8	-25.7	-20.086	ug/L	-20.086	ppb	09:49:26
1	Ca 317.933Radial†	37.1	7.8	11.041	ug/L	11.041	ppb	09:49:46
1	Fe 238.204 Radial†	87066.9	86547.6	360770	ug/L	360770	ppb	09:49:26
1	K 766.490 Radial†	2428.8	8.1	81.500	ug/L	81.500	ppb	09:49:26
1	Mg 279.077 IEC†	12.0	8.9	-88.405	ug/L	-88.405	ppb	09:49:46
1	Na 589.592 Radial†	397.1	530.5	32.556	ug/L	32.556	ppb	09:49:26
1	Sr 421.552†	117.9	173.1	0.4834	ug/L	0.4834	ppb	09:49:26
1	Sc 361.383	725108.3	725108.3	100.89	%			09:50:43
1	Y 371.029	563385.4	563385.4	100.25	%			09:50:43
1	Ag 328.068†	-18790.9	-19257.2	0.5238	ug/L	0.5238	ppb	09:50:43
1	As 188.979†	-260.5	-222.8	-8.2675	ug/L	-8.2675	ppb	09:51:03
1	B 249.677†	1152.5	2082.2	27.824	ug/L	27.824	ppb	09:50:43
1	Ba 233.527†	-1624.5	-1610.6	-12.915	ug/L	-12.915	ppb	09:51:03
1	Be 313.107†	-4636.8	286.0	0.1315	ug/L	0.1315	ppb	09:50:43
1	Cd 226.502†	2753.8	3010.5	-3.6531	ug/L	-3.6531	ppb	09:51:03
1	Co 228.616†	166.0	264.0	-0.6316	ug/L	-0.6316	ppb	09:51:03
1	Cr 267.716†	-640.8	-557.7	-0.3574	ug/L	-0.3574	ppb	09:51:03
1	Cu 324.752†	-525.4	-6159.2	-1.4610	ug/L	-1.4610	ppb	09:50:43
1	Mn 257.610†	-38240.2	-38581.3	2.8086	ug/L	2.8086	ppb	09:50:43
1	Mo 202.031†	-332.9	-347.1	-0.8931	ug/L	-0.8931	ppb	09:51:03
1	Ni 231.604†	309.3	186.8	4.9901	ug/L	4.9901	ppb	09:51:03
1	P 214.914†	895.5	572.8	5.9449	ug/L	5.9449	ppb	09:51:03
1	Pb 220.353†	275.4	286.2	-0.0517	ug/L	-0.0517	ppb	09:51:03
1	S 181.975 Axial†	104.1	27.7	37.997	ug/L	37.997	ppb	09:51:03
1	Sb 206.836†	39.7	-17.9	0.9970	ug/L	0.9970	ppb	09:51:03
1	Se 196.026†	-2351.1	-2301.5	26.401	ug/L	26.401	ppb	09:51:03
1	Si 251.611†	-1963.8	-2358.2	-72.361	ug/L	-72.361	ppb	09:51:03
1	Sn 189.927†	-6.1	-18.5	23.583	ug/L	23.583	ppb	09:51:03
1	Ti 334.940†	-1212.7	146.3	0.2396	ug/L	0.2396	ppb	09:51:03
1	Tl 190.801†	-59.6	1.7	0.1017	ug/L	0.1017	ppb	09:51:03
1	U 409.014†	-2758.9	2114.2	27.271	ug/L	27.271	ppb	09:50:43
1	V 292.402†	4514.8	6040.0	4.3981	ug/L	4.3981	ppb	09:51:03
1	Zn 213.857†	5026.5	4056.9	-0.1994	ug/L	-0.1994	ppb	09:51:03
1	SiO2†	-2098.2	-2516.5	-164.47	ug/L	-164.47	ppb	09:51:59
2	Sc Radial	7401.7	7401.7	99.0	%			09:49:51
2	Y RADIAL	6860.1	6860.1	99.07	%			09:49:51
2	Al 396.153Radial†	-68.9	3.0	3.4831	ug/L	3.4831	ppb	09:49:51
2	Ca 317.933Radial†	32.6	3.8	5.4514	ug/L	5.4514	ppb	09:50:11
2	Fe 238.204 Radial†	86091.0	86904.1	362260	ug/L	362260	ppb	09:49:51
2	K 766.490 Radial†	2280.1	-104.6	57.480	ug/L	57.480	ppb	09:49:51
2	Mg 279.077 IEC†	14.0	11.1	-34.289	ug/L	-34.289	ppb	09:50:11
2	Na 589.592 Radial†	370.6	509.8	31.289	ug/L	31.289	ppb	09:49:51
2	Sr 421.552†	114.6	171.6	0.4793	ug/L	0.4793	ppb	09:49:51
2	Sc 361.383	731404.0	731404.0	101.77	%			09:51:08
2	Y 371.029	568361.3	568361.3	101.13	%			09:51:08
2	Ag 328.068†	-18900.9	-19204.9	1.3021	ug/L	1.3021	ppb	09:51:08
2	As 188.979†	-252.9	-213.1	-4.4741	ug/L	-4.4741	ppb	09:51:28
2	B 249.677†	1176.0	2095.5	28.056	ug/L	28.056	ppb	09:51:08
2	Ba 233.527†	-1621.3	-1593.6	-12.806	ug/L	-12.806	ppb	09:51:28
2	Be 313.107†	-4754.1	210.3	0.0968	ug/L	0.0968	ppb	09:51:08
2	Cd 226.502†	2731.8	2965.4	-4.4011	ug/L	-4.4011	ppb	09:51:28
2	Co 228.616†	168.6	265.1	-0.6302	ug/L	-0.6302	ppb	09:51:28
2	Cr 267.716†	-644.5	-555.9	-0.3045	ug/L	-0.3045	ppb	09:51:28
2	Cu 324.752†	-590.7	-6218.9	-1.5916	ug/L	-1.5916	ppb	09:51:08
2	Mn 257.610†	-38621.6	-38629.8	2.9409	ug/L	2.9409	ppb	09:51:08
2	Mo 202.031†	-320.2	-331.8	0.2783	ug/L	0.2783	ppb	09:51:28
2	Ni 231.604†	288.4	163.5	4.3684	ug/L	4.3684	ppb	09:51:28

2	P 214.914†	902.1	571.6	4.1616	ug/L	4.1616	ppb	09:51:28
2	Pb 220.353†	269.2	277.8	-1.1874	ug/L	-1.1874	ppb	09:51:28
2	S 181.975 Axial†	109.6	32.2	44.179	ug/L	44.179	ppb	09:51:28
2	Sb 206.836†	47.8	-10.3	3.2563	ug/L	3.2563	ppb	09:51:28
2	Se 196.026†	-2354.5	-2284.8	39.892	ug/L	39.892	ppb	09:51:28
2	Si 251.611†	-2007.9	-2384.8	-73.149	ug/L	-73.149	ppb	09:51:28
2	Sn 189.927†	-24.3	-36.4	20.525	ug/L	20.525	ppb	09:51:28
2	Ti 334.940†	-1232.5	137.2	0.2210	ug/L	0.2210	ppb	09:51:28
2	Tl 190.801†	-76.8	-14.8	-4.1977	ug/L	-4.1977	ppb	09:51:28
2	U 409.014†	-2677.4	2217.9	30.599	ug/L	30.599	ppb	09:51:08
2	V 292.402†	4373.9	5863.1	2.6053	ug/L	2.6053	ppb	09:51:28
2	Zn 213.857†	5020.1	4007.7	-0.8055	ug/L	-0.8055	ppb	09:51:28
2	SiO2†	-2031.8	-2433.4	-158.93	ug/L	-158.93	ppb	09:52:05
3	Sc Radial	7410.2	7410.2	99.1	%			09:50:16
3	Y RADIAL	6847.3	6847.3	98.89	%			09:50:16
3	Al 396.153Radial†	-111.8	-40.1	-31.936	ug/L	-31.936	ppb	09:50:16
3	Ca 317.933Radial†	33.1	4.3	6.1250	ug/L	6.1250	ppb	09:50:36
3	Fe 238.204 Radial†	86398.0	87114.4	363130	ug/L	363130	ppb	09:50:16
3	K 766.490 Radial†	2431.6	45.5	90.097	ug/L	90.097	ppb	09:50:16
3	Mg 279.077 IEC†	13.0	10.1	-60.202	ug/L	-60.202	ppb	09:50:36
3	Na 589.592 Radial†	433.2	572.5	35.136	ug/L	35.136	ppb	09:50:16
3	Sr 421.552†	140.6	197.7	0.5521	ug/L	0.5521	ppb	09:50:16
3	Sc 361.383	728972.2	728972.2	101.43	%			09:51:34
3	Y 371.029	566673.6	566673.6	100.83	%			09:51:34
3	Ag 328.068†	-18859.5	-19226.1	1.4611	ug/L	1.4611	ppb	09:51:34
3	As 188.979†	-247.1	-208.1	-2.5135	ug/L	-2.5135	ppb	09:51:54
3	B 249.677†	1234.9	2157.4	29.557	ug/L	29.557	ppb	09:51:34
3	Ba 233.527†	-1639.4	-1616.8	-12.972	ug/L	-12.972	ppb	09:51:54
3	Be 313.107†	-4699.9	248.2	0.1140	ug/L	0.1140	ppb	09:51:34
3	Cd 226.502†	2783.8	3025.7	-3.7352	ug/L	-3.7352	ppb	09:51:54
3	Co 228.616†	174.3	271.3	-0.5400	ug/L	-0.5400	ppb	09:51:54
3	Cr 267.716†	-591.8	-506.0	0.4145	ug/L	0.4145	ppb	09:51:54
3	Cu 324.752†	-729.8	-6357.9	-2.0447	ug/L	-2.0447	ppb	09:51:34
3	Mn 257.610†	-38791.6	-38924.0	2.7271	ug/L	2.7271	ppb	09:51:34
3	Mo 202.031†	-344.1	-356.4	-1.3967	ug/L	-1.3967	ppb	09:51:54
3	Ni 231.604†	295.1	171.1	4.5706	ug/L	4.5706	ppb	09:51:54
3	P 214.914†	869.6	542.5	-11.288	ug/L	-11.288	ppb	09:51:54
3	Pb 220.353†	261.6	271.1	-2.0706	ug/L	-2.0706	ppb	09:51:54
3	S 181.975 Axial†	102.7	25.9	35.435	ug/L	35.435	ppb	09:51:54
3	Sb 206.836†	50.3	-7.7	4.0433	ug/L	4.0433	ppb	09:51:54
3	Se 196.026†	-2361.0	-2299.0	35.562	ug/L	35.562	ppb	09:51:54
3	Si 251.611†	-1975.7	-2359.6	-72.383	ug/L	-72.383	ppb	09:51:54
3	Sn 189.927†	-11.8	-24.1	22.763	ug/L	22.763	ppb	09:51:54
3	Ti 334.940†	-1278.1	88.2	0.1322	ug/L	0.1322	ppb	09:51:54
3	Tl 190.801†	-76.3	-14.5	-4.1245	ug/L	-4.1245	ppb	09:51:54
3	U 409.014†	-2741.1	2146.3	28.066	ug/L	28.066	ppb	09:51:34
3	V 292.402†	4447.8	5950.2	3.2477	ug/L	3.2477	ppb	09:51:54
3	Zn 213.857†	5010.6	4014.8	-0.8309	ug/L	-0.8309	ppb	09:51:54
3	SiO2†	-2036.2	-2444.4	-159.68	ug/L	-159.68	ppb	09:52:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	728494.8	101.36	%	0.442				0.44%
Sc Radial	7442.8	99.6	%	0.86				0.86%
Y 371.029	566140.1	100.74	%	0.450				0.45%
Y RADIAL	6874.4	99.28	%	0.525				0.53%
Ag 328.068†	-19229.4	1.0957	ug/L	0.50161	1.0957	ppb	0.50161	45.78%
Al 396.153Radial†	-20.9	-16.179	ug/L	18.0298	-16.179	ppb	18.0298	111.44%
As 188.979†	-214.7	-5.0850	ug/L	2.92523	-5.0850	ppb	2.92523	57.53%
B 249.677†	2111.7	28.479	ug/L	0.9406	28.479	ppb	0.9406	3.30%
Ba 233.527†	-1607.0	-12.898	ug/L	0.0845	-12.898	ppb	0.0845	0.66%
Be 313.107†	248.1	0.1141	ug/L	0.01735	0.1141	ppb	0.01735	15.21%
Ca 317.933Radial†	5.3	7.5390	ug/L	3.05107	7.5390	ppb	3.05107	40.47%
Cd 226.502†	3000.5	-3.9298	ug/L	0.41023	-3.9298	ppb	0.41023	10.44%
Co 228.616†	266.8	-0.6006	ug/L	0.05250	-0.6006	ppb	0.05250	8.74%
Cr 267.716†	-539.9	-0.0825	ug/L	0.43120	-0.0825	ppb	0.43120	522.91%
Cu 324.752†	-6245.3	-1.6991	ug/L	0.30636	-1.6991	ppb	0.30636	18.03%
Fe 238.204 Radial†	86855.3	362050	ug/L	1194.5	362050	ppb	1194.5	0.33%
K 766.490 Radial†	-17.0	76.359	ug/L	16.9055	76.359	ppb	16.9055	22.14%

Mg 279.077 IEC†	10.0	-60.965	ug/L	27.0664	-60.965	ppb	27.0664	44.40%
Mn 257.610†	-38711.7	2.8255	ug/L	0.10788	2.8255	ppb	0.10788	3.82%
Mo 202.031†	-345.1	-0.6705	ug/L	0.85941	-0.6705	ppb	0.85941	128.18%
Na 589.592 Radial†	537.6	32.994	ug/L	1.9608	32.994	ppb	1.9608	5.94%
Ni 231.604†	173.8	4.6430	ug/L	0.31712	4.6430	ppb	0.31712	6.83%
P 214.914†	562.3	-0.3937	ug/L	9.47646	-0.3937	ppb	9.47646	>999.9%
Pb 220.353†	278.4	-1.1032	ug/L	1.01205	-1.1032	ppb	1.01205	91.73%
S 181.975 Axial†	28.6	39.204	ug/L	4.4950	39.204	ppb	4.4950	11.47%
Sb 206.836†	-12.0	2.7655	ug/L	1.58134	2.7655	ppb	1.58134	57.18%
Se 196.026†	-2295.1	33.951	ug/L	6.8883	33.951	ppb	6.8883	20.29%
Si 251.611†	-2367.5	-72.631	ug/L	0.4490	-72.631	ppb	0.4490	0.62%
Sn 189.927†	-26.4	22.290	ug/L	1.5828	22.290	ppb	1.5828	7.10%
Sr 421.552†	180.8	0.5049	ug/L	0.04089	0.5049	ppb	0.04089	8.10%
Ti 334.940†	123.9	0.1976	ug/L	0.05741	0.1976	ppb	0.05741	29.06%
Tl 190.801†	-9.2	-2.7402	ug/L	2.46144	-2.7402	ppb	2.46144	89.83%
U 409.014†	2159.5	28.645	ug/L	1.7380	28.645	ppb	1.7380	6.07%
V 292.402†	5951.1	3.4170	ug/L	0.90831	3.4170	ppb	0.90831	26.58%
Zn 213.857†	4026.5	-0.6119	ug/L	0.35751	-0.6119	ppb	0.35751	58.42%
SiO2†	-2464.7	-161.03	ug/L	3.008	-161.03	ppb	3.008	1.87%

Sequence No.: 4
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 09:54:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7478.5	7478.5	100	%			09:56:33
1	Y RADIAL	6940.5	6940.5	100.2	%			09:56:13
1	Al 396.153Radial†	6252.6	6321.9	5184.7	ug/L	5184.7	ppb	09:56:13
1	Ca 317.933Radial†	3732.0	3701.0	5242.8	ug/L	5242.8	ppb	09:56:33
1	Fe 238.204 Radial†	1242.8	1207.3	5048.3	ug/L	5048.3	ppb	09:56:33
1	K 766.490 Radial†	24779.2	22359.0	4811.0	ug/L	4811.0	ppb	09:56:13
1	Mg 279.077 IEC†	213.1	209.9	5239.8	ug/L	5239.8	ppb	09:56:33
1	Na 589.592 Radial†	165729.6	165778.2	10174	ug/L	10174	ppb	09:56:13
1	Sr 421.552†	172347.0	172312.4	481.22	ug/L	481.22	ppb	09:56:13
1	Sc 361.383	755963.2	755963.2	105.19	%			09:57:32
1	Y 371.029	582662.1	582662.1	103.68	%			09:57:32
1	Ag 328.068†	87925.9	82958.0	498.66	ug/L	498.66	ppb	09:57:32
1	As 188.979†	1406.2	1372.3	498.06	ug/L	498.06	ppb	09:57:52
1	B 249.677†	19796.4	19760.2	495.13	ug/L	495.13	ppb	09:57:32
1	Ba 233.527†	74510.0	70835.7	500.89	ug/L	500.89	ppb	09:57:32
1	Be 313.107†	1145024.8	1093449.4	501.63	ug/L	501.63	ppb	09:57:32
1	Cd 226.502†	39856.8	38172.7	486.62	ug/L	486.62	ppb	09:57:52
1	Co 228.616†	29708.8	28343.4	491.74	ug/L	491.74	ppb	09:57:52
1	Cr 267.716†	37343.6	35579.8	499.27	ug/L	499.27	ppb	09:57:32
1	Cu 324.752†	150019.0	136983.6	496.68	ug/L	496.68	ppb	09:57:32
1	Mn 257.610†	477832.6	453592.8	500.74	ug/L	500.74	ppb	09:57:32
1	Mo 202.031†	7443.1	7058.9	497.27	ug/L	497.27	ppb	09:57:52
1	Ni 231.604†	19445.4	18366.8	490.63	ug/L	490.63	ppb	09:57:52
1	P 214.914†	5462.1	4878.0	2396.1	ug/L	2396.1	ppb	09:57:52
1	Pb 220.353†	4416.7	4212.2	503.04	ug/L	503.04	ppb	09:57:52
1	S 181.975 Axial†	837.4	720.7	986.32	ug/L	986.32	ppb	09:57:52
1	Sb 206.836†	1799.7	1653.7	497.42	ug/L	497.42	ppb	09:57:52
1	Se 196.026†	1002.5	981.8	518.88	ug/L	518.88	ppb	09:57:52
1	Si 251.611†	86227.0	81563.6	2502.1	ug/L	2502.1	ppb	09:57:32
1	Sn 189.927†	2970.3	2811.3	498.49	ug/L	498.49	ppb	09:57:52
1	Ti 334.940†	284289.1	271620.1	497.20	ug/L	497.20	ppb	09:57:32
1	Tl 190.801†	1943.0	1907.9	502.50	ug/L	502.50	ppb	09:57:52
1	U 409.014†	10464.7	14797.5	499.48	ug/L	499.48	ppb	09:57:32
1	V 292.402†	55893.3	54702.6	502.73	ug/L	502.73	ppb	09:57:32
1	Zn 213.857†	58022.0	54236.0	495.98	ug/L	495.98	ppb	09:57:32
1	SiO2†	85674.8	81013.6	5290.1	ug/L	5290.1	ppb	09:58:53
2	Sc Radial	7375.3	7375.3	98.7	%			09:56:59
2	Y RADIAL	6971.4	6971.4	100.7	%			09:56:39
2	Al 396.153Radial†	6237.3	6393.9	5243.3	ug/L	5243.3	ppb	09:56:39
2	Ca 317.933Radial†	3700.7	3721.4	5271.8	ug/L	5271.8	ppb	09:56:59
2	Fe 238.204 Radial†	1238.5	1220.4	5103.2	ug/L	5103.2	ppb	09:56:59
2	K 766.490 Radial†	24868.6	22796.1	4905.0	ug/L	4905.0	ppb	09:56:39
2	Mg 279.077 IEC†	212.1	211.9	5288.6	ug/L	5288.6	ppb	09:56:59
2	Na 589.592 Radial†	166224.2	168596.9	10347	ug/L	10347	ppb	09:56:39
2	Sr 421.552†	172525.7	174903.5	488.46	ug/L	488.46	ppb	09:56:39
2	Sc 361.383	741650.4	741650.4	103.19	%			09:58:00
2	Y 371.029	572297.5	572297.5	101.83	%			09:58:00
2	Ag 328.068†	87542.3	84199.4	506.12	ug/L	506.12	ppb	09:58:00
2	As 188.979†	1428.4	1419.6	515.15	ug/L	515.15	ppb	09:58:20
2	B 249.677†	19712.4	20042.0	502.16	ug/L	502.16	ppb	09:58:00
2	Ba 233.527†	74207.4	71909.5	508.48	ug/L	508.48	ppb	09:58:00
2	Be 313.107†	1140040.3	1109627.1	509.05	ug/L	509.05	ppb	09:58:00
2	Cd 226.502†	40268.6	39303.1	501.04	ug/L	501.04	ppb	09:58:20
2	Co 228.616†	29947.4	29119.7	505.23	ug/L	505.23	ppb	09:58:20
2	Cr 267.716†	37278.3	36201.6	507.99	ug/L	507.99	ppb	09:58:00
2	Cu 324.752†	148944.0	138694.3	502.89	ug/L	502.89	ppb	09:58:00
2	Mn 257.610†	475432.5	460033.8	507.85	ug/L	507.85	ppb	09:58:00
2	Mo 202.031†	7521.0	7271.0	512.20	ug/L	512.20	ppb	09:58:20
2	Ni 231.604†	19618.0	18890.8	504.63	ug/L	504.63	ppb	09:58:20

2	P 214.914†	5502.9	5017.8	2466.4 ug/L	2466.4 ppb	09:58:20
2	Pb 220.353†	4442.9	4318.6	515.75 ug/L	515.75 ppb	09:58:20
2	S 181.975 Axial†	845.3	743.7	1017.9 ug/L	1017.9 ppb	09:58:20
2	Sb 206.836†	1809.1	1695.8	510.22 ug/L	510.22 ppb	09:58:20
2	Se 196.026†	1003.1	1000.8	528.79 ug/L	528.79 ppb	09:58:20
2	Si 251.611†	85675.8	82611.5	2534.0 ug/L	2534.0 ppb	09:58:00
2	Sn 189.927†	2986.0	2881.1	510.85 ug/L	510.85 ppb	09:58:20
2	Ti 334.940†	282438.0	275042.2	503.46 ug/L	503.46 ppb	09:58:00
2	Tl 190.801†	1958.2	1958.3	515.69 ug/L	515.69 ppb	09:58:20
2	U 409.014†	10221.9	14754.2	497.99 ug/L	497.99 ppb	09:58:00
2	V 292.402†	55452.0	55300.4	508.33 ug/L	508.33 ppb	09:58:00
2	Zn 213.857†	57730.0	55017.6	503.09 ug/L	503.09 ppb	09:58:00
2	SiO2†	87267.4	84128.8	5493.9 ug/L	5493.9 ppb	09:58:58
3	Sc Radial	7411.0	7411.0	99.1 %		09:57:24
3	Y RADIAL	7040.6	7040.6	101.7 %		09:57:04
3	Al 396.153Radial†	6347.5	6474.6	5309.9 ug/L	5309.9 ppb	09:57:04
3	Ca 317.933Radial†	3721.8	3724.7	5276.5 ug/L	5276.5 ppb	09:57:24
3	Fe 238.204 Radial†	1240.8	1216.7	5087.6 ug/L	5087.6 ppb	09:57:24
3	K 766.490 Radial†	25163.8	22972.6	4943.1 ug/L	4943.1 ppb	09:57:04
3	Mg 279.077 IEC†	213.8	212.6	5307.0 ug/L	5307.0 ppb	09:57:24
3	Na 589.592 Radial†	168879.2	170464.6	10462 ug/L	10462 ppb	09:57:04
3	Sr 421.552†	175504.4	177067.0	494.50 ug/L	494.50 ppb	09:57:04
3	Sc 361.383	748842.8	748842.8	104.20 %		09:58:27
3	Y 371.029	577212.1	577212.1	102.71 %		09:58:27
3	Ag 328.068†	88600.2	84400.0	507.32 ug/L	507.32 ppb	09:58:27
3	As 188.979†	1449.4	1426.5	517.65 ug/L	517.65 ppb	09:58:47
3	B 249.677†	20105.2	20235.5	507.05 ug/L	507.05 ppb	09:58:27
3	Ba 233.527†	75265.7	72234.5	510.78 ug/L	510.78 ppb	09:58:27
3	Be 313.107†	1157683.3	1115948.9	511.94 ug/L	511.94 ppb	09:58:27
3	Cd 226.502†	40484.4	39135.4	498.90 ug/L	498.90 ppb	09:58:47
3	Co 228.616†	30123.4	29009.9	503.32 ug/L	503.32 ppb	09:58:47
3	Cr 267.716†	37752.9	36310.1	509.52 ug/L	509.52 ppb	09:58:27
3	Cu 324.752†	151098.8	139376.1	505.35 ug/L	505.35 ppb	09:58:27
3	Mn 257.610†	482278.8	462179.4	510.21 ug/L	510.21 ppb	09:58:27
3	Mo 202.031†	7551.9	7230.7	509.36 ug/L	509.36 ppb	09:58:47
3	Ni 231.604†	19742.2	18827.4	502.93 ug/L	502.93 ppb	09:58:47
3	P 214.914†	5533.5	4995.9	2454.7 ug/L	2454.7 ppb	09:58:47
3	Pb 220.353†	4475.9	4308.9	514.60 ug/L	514.60 ppb	09:58:47
3	S 181.975 Axial†	854.0	744.2	1018.4 ug/L	1018.4 ppb	09:58:47
3	Sb 206.836†	1825.2	1694.4	509.69 ug/L	509.69 ppb	09:58:47
3	Se 196.026†	1023.7	1011.2	534.06 ug/L	534.06 ppb	09:58:47
3	Si 251.611†	87051.0	83134.0	2550.2 ug/L	2550.2 ppb	09:58:27
3	Sn 189.927†	3008.4	2874.7	509.72 ug/L	509.72 ppb	09:58:47
3	Ti 334.940†	286275.1	276096.0	505.39 ug/L	505.39 ppb	09:58:27
3	Tl 190.801†	1979.1	1960.2	516.21 ug/L	516.21 ppb	09:58:47
3	U 409.014†	10307.6	14741.2	497.55 ug/L	497.55 ppb	09:58:27
3	V 292.402†	56401.2	55695.3	511.88 ug/L	511.88 ppb	09:58:27
3	Zn 213.857†	58544.6	55262.1	505.35 ug/L	505.35 ppb	09:58:27
3	SiO2†	87811.5	83838.7	5475.0 ug/L	5475.0 ppb	09:59:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	748818.8	104.19	%	0.996				0.96%
Sc Radial	7421.6	99.3	%	0.70				0.71%
Y 371.029	577390.6	102.74	%	0.923				0.90%
Y RADIAL	6984.2	100.9	%	0.74				0.73%
Ag 328.068†	83852.5	504.03	ug/L	4.692	504.03	ppb	4.692	0.93%
QC value within limits for Ag 328.068 Recovery = 100.81%								
Al 396.153Radial†	6396.8	5246.0	ug/L	62.65	5246.0	ppb	62.65	1.19%
QC value within limits for Al 396.153Radial Recovery = 104.92%								
As 188.979†	1406.1	510.29	ug/L	10.662	510.29	ppb	10.662	2.09%
QC value within limits for As 188.979 Recovery = 102.06%								
B 249.677†	20012.6	501.45	ug/L	5.991	501.45	ppb	5.991	1.19%
QC value within limits for B 249.677 Recovery = 100.29%								
Ba 233.527†	71659.9	506.72	ug/L	5.175	506.72	ppb	5.175	1.02%
QC value within limits for Ba 233.527 Recovery = 101.34%								
Be 313.107†	1106341.8	507.54	ug/L	5.321	507.54	ppb	5.321	1.05%
QC value within limits for Be 313.107 Recovery = 101.51%								
Ca 317.933Radial†	3715.7	5263.7	ug/L	18.21	5263.7	ppb	18.21	0.35%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.27%
Cd 226.502†            38870.4      495.52 ug/L         7.782      495.52 ppb          7.782   1.57%
   QC value within limits for Cd 226.502  Recovery = 99.10%
Co 228.616†            28824.3      500.10 ug/L         7.297      500.10 ppb          7.297   1.46%
   QC value within limits for Co 228.616  Recovery = 100.02%
Cr 267.716†            36030.5      505.59 ug/L         5.530      505.59 ppb          5.530   1.09%
   QC value within limits for Cr 267.716  Recovery = 101.12%
Cu 324.752†           138351.3      501.64 ug/L         4.468      501.64 ppb          4.468   0.89%
   QC value within limits for Cu 324.752  Recovery = 100.33%
Fe 238.204 Radial†      1214.8      5079.7 ug/L        28.29      5079.7 ppb          28.29   0.56%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.59%
K 766.490 Radial†      22709.2      4886.3 ug/L        68.00      4886.3 ppb          68.00   1.39%
   QC value within limits for K 766.490 Radial  Recovery = 97.73%
Mg 279.077 IEC†          211.5      5278.5 ug/L        34.76      5278.5 ppb          34.76   0.66%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.57%
Mn 257.610†           458602.0      506.27 ug/L         4.930      506.27 ppb          4.930   0.97%
   QC value within limits for Mn 257.610  Recovery = 101.25%
Mo 202.031†             7186.9      506.28 ug/L         7.930      506.28 ppb          7.930   1.57%
   QC value within limits for Mo 202.031  Recovery = 101.26%
Na 589.592 Radial†    168279.9       10328 ug/L       144.8       10328 ppb          144.8   1.40%
   QC value within limits for Na 589.592 Radial  Recovery = 103.28%
Ni 231.604†            18695.0      499.40 ug/L         7.640      499.40 ppb          7.640   1.53%
   QC value within limits for Ni 231.604  Recovery = 99.88%
P 214.914†              4963.9      2439.1 ug/L        37.67      2439.1 ppb          37.67   1.54%
   QC value within limits for P 214.914  Recovery = 97.56%
Pb 220.353†             4279.9      511.13 ug/L         7.030      511.13 ppb          7.030   1.38%
   QC value within limits for Pb 220.353  Recovery = 102.23%
S 181.975 Axial†         736.2      1007.5 ug/L        18.37      1007.5 ppb          18.37   1.82%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             1681.3      505.78 ug/L         7.243      505.78 ppb          7.243   1.43%
   QC value within limits for Sb 206.836  Recovery = 101.16%
Se 196.026†              998.0      527.24 ug/L         7.706      527.24 ppb          7.706   1.46%
   QC value within limits for Se 196.026  Recovery = 105.45%
Si 251.611†            82436.4      2528.7 ug/L        24.47      2528.7 ppb          24.47   0.97%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†             2855.7      506.35 ug/L         6.833      506.35 ppb          6.833   1.35%
   QC value within limits for Sn 189.927  Recovery = 101.27%
Sr 421.552†           174760.9      488.06 ug/L         6.649      488.06 ppb          6.649   1.36%
   QC value within limits for Sr 421.552  Recovery = 97.61%
Ti 334.940†           274252.7      502.02 ug/L         4.284      502.02 ppb          4.284   0.85%
   QC value within limits for Ti 334.940  Recovery = 100.40%
Tl 190.801†             1942.1      511.46 ug/L         7.769      511.46 ppb          7.769   1.52%
   QC value within limits for Tl 190.801  Recovery = 102.29%
U 409.014†             14764.3      498.34 ug/L         1.011      498.34 ppb          1.011   0.20%
   QC value within limits for U 409.014  Recovery = 99.67%
V 292.402†             55232.8      507.65 ug/L         4.612      507.65 ppb          4.612   0.91%
   QC value within limits for V 292.402  Recovery = 101.53%
Zn 213.857†            54838.6      501.47 ug/L         4.890      501.47 ppb          4.890   0.98%
   QC value within limits for Zn 213.857  Recovery = 100.29%
SiO2†                  82993.7      5419.7 ug/L       112.62      5419.7 ppb        112.62   2.08%
   QC value within limits for SiO2  Recovery = 101.35%
All analyte(s) passed QC.
```

Sequence No.: 5
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 10:01:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7523.2	7523.2	101	%			10:03:05
1	Y RADIAL	7002.2	7002.2	101.1	%			10:03:05
1	Al 396.153Radial†	-76.6	-3.4	-2.8352	ug/L	-2.8352	ppb	10:03:05
1	Ca 317.933Radial†	29.1	-0.2	-0.2986	ug/L	-0.2986	ppb	10:03:25
1	Fe 238.204 Radial†	35.7	0.7	2.9537	ug/L	2.9537	ppb	10:03:25
1	K 766.490 Radial†	2487.9	64.7	13.944	ug/L	13.944	ppb	10:03:05
1	Mg 279.077 IEC†	6.1	3.0	75.404	ug/L	75.404	ppb	10:03:25
1	Na 589.592 Radial†	81.7	216.7	13.301	ug/L	13.301	ppb	10:03:05
1	Sr 421.552†	-19.2	36.8	0.1029	ug/L	0.1029	ppb	10:03:05
1	Sc 361.383	722848.6	722848.6	100.58	%			10:04:22
1	Y 371.029	565709.7	565709.7	100.66	%			10:04:22
1	Ag 328.068†	713.2	76.4	0.4596	ug/L	0.4596	ppb	10:04:22
1	As 188.979†	-27.7	7.9	2.8303	ug/L	2.8303	ppb	10:04:42
1	B 249.677†	-657.8	285.9	7.2027	ug/L	7.2027	ppb	10:04:22
1	Ba 233.527†	32.1	31.4	0.2212	ug/L	0.2212	ppb	10:04:42
1	Be 313.107†	-4822.3	87.2	0.0396	ug/L	0.0396	ppb	10:04:22
1	Cd 226.502†	-263.1	19.5	0.2480	ug/L	0.2480	ppb	10:04:42
1	Co 228.616†	-67.3	32.6	0.5665	ug/L	0.5665	ppb	10:04:42
1	Cr 267.716†	-53.9	23.8	0.3341	ug/L	0.3341	ppb	10:04:22
1	Cu 324.752†	5612.3	-58.4	-0.2116	ug/L	-0.2116	ppb	10:04:22
1	Mn 257.610†	625.0	-58.2	-0.0652	ug/L	-0.0652	ppb	10:04:42
1	Mo 202.031†	24.0	6.7	0.4712	ug/L	0.4712	ppb	10:04:42
1	Ni 231.604†	124.8	4.3	0.1134	ug/L	0.1134	ppb	10:04:42
1	P 214.914†	314.4	-2.2	-1.0806	ug/L	-1.0806	ppb	10:04:42
1	Pb 220.353†	-6.9	6.4	0.7635	ug/L	0.7635	ppb	10:04:42
1	S 181.975 Axial†	79.8	3.9	5.3226	ug/L	5.3226	ppb	10:04:42
1	Sb 206.836†	60.4	2.8	0.8532	ug/L	0.8532	ppb	10:04:42
1	Se 196.026†	-27.6	1.4	0.7143	ug/L	0.7143	ppb	10:04:42
1	Si 251.611†	482.7	68.1	2.0772	ug/L	2.0772	ppb	10:04:42
1	Sn 189.927†	18.8	6.2	1.0938	ug/L	1.0938	ppb	10:04:42
1	Ti 334.940†	-1435.9	-79.4	-0.1442	ug/L	-0.1442	ppb	10:04:22
1	Tl 190.801†	-53.0	8.1	2.1110	ug/L	2.1110	ppb	10:04:42
1	U 409.014†	-4963.2	-85.9	-2.9104	ug/L	-2.9104	ppb	10:04:22
1	V 292.402†	-1585.9	-11.6	-0.1040	ug/L	-0.1040	ppb	10:04:22
1	Zn 213.857†	973.9	43.2	0.3953	ug/L	0.3953	ppb	10:04:42
1	SiO2†	517.3	77.4	5.0284	ug/L	5.0284	ppb	10:05:38
2	Sc Radial	7549.3	7549.3	101	%			10:03:30
2	Y RADIAL	6999.8	6999.8	101.1	%			10:03:30
2	Al 396.153Radial†	-68.7	4.6	3.7370	ug/L	3.7370	ppb	10:03:30
2	Ca 317.933Radial†	28.8	-0.6	-0.8039	ug/L	-0.8039	ppb	10:03:50
2	Fe 238.204 Radial†	38.7	3.5	14.687	ug/L	14.687	ppb	10:03:50
2	K 766.490 Radial†	2642.9	209.5	45.202	ug/L	45.202	ppb	10:03:30
2	Mg 279.077 IEC†	-0.6	-3.6	-90.505	ug/L	-90.505	ppb	10:03:50
2	Na 589.592 Radial†	76.5	211.3	12.970	ug/L	12.970	ppb	10:03:30
2	Sr 421.552†	29.1	84.7	0.2365	ug/L	0.2365	ppb	10:03:30
2	Sc 361.383	732900.9	732900.9	101.98	%			10:04:47
2	Y 371.029	573361.1	573361.1	102.02	%			10:04:47
2	Ag 328.068†	679.3	33.4	0.2003	ug/L	0.2003	ppb	10:04:47
2	As 188.979†	-34.5	1.6	0.5908	ug/L	0.5908	ppb	10:05:07
2	B 249.677†	-583.0	368.2	9.2784	ug/L	9.2784	ppb	10:04:47
2	Ba 233.527†	20.6	19.7	0.1389	ug/L	0.1389	ppb	10:05:07
2	Be 313.107†	-4829.5	145.9	0.0669	ug/L	0.0669	ppb	10:04:47
2	Cd 226.502†	-270.4	16.0	0.2023	ug/L	0.2023	ppb	10:05:07
2	Co 228.616†	-90.6	10.6	0.1862	ug/L	0.1862	ppb	10:05:07
2	Cr 267.716†	-58.4	20.1	0.2805	ug/L	0.2805	ppb	10:04:47
2	Cu 324.752†	5752.2	2.2	0.0090	ug/L	0.0090	ppb	10:04:47
2	Mn 257.610†	657.3	-35.1	-0.0351	ug/L	-0.0351	ppb	10:05:07
2	Mo 202.031†	28.8	11.1	0.7824	ug/L	0.7824	ppb	10:05:07
2	Ni 231.604†	141.7	19.2	0.5124	ug/L	0.5124	ppb	10:05:07

2	P 214.914†	297.2	-23.3	-11.906 ug/L	-11.906 ppb		10:05:07
2	Pb 220.353†	-9.9	3.5	0.4219 ug/L	0.4219 ppb		10:05:07
2	S 181.975 Axial†	80.3	3.3	4.5650 ug/L	4.5650 ppb		10:05:07
2	Sb 206.836†	74.9	16.2	4.8151 ug/L	4.8151 ppb		10:05:07
2	Se 196.026†	-31.1	-1.8	-0.8478 ug/L	-0.8478 ppb		10:05:07
2	Si 251.611†	459.2	38.5	1.1551 ug/L	1.1551 ppb		10:05:07
2	Sn 189.927†	15.2	2.4	0.4310 ug/L	0.4310 ppb		10:05:07
2	Ti 334.940†	-1349.9	24.5	0.0426 ug/L	0.0426 ppb		10:04:47
2	Tl 190.801†	-51.1	10.6	2.7838 ug/L	2.7838 ppb		10:05:07
2	U 409.014†	-4797.1	144.7	4.8967 ug/L	4.8967 ppb		10:04:47
2	V 292.402†	-1595.8	0.3	0.0187 ug/L	0.0187 ppb		10:04:47
2	Zn 213.857†	962.1	18.3	0.1675 ug/L	0.1675 ppb		10:05:07
2	SiO2†	487.2	40.8	2.6085 ug/L	2.6085 ppb		10:05:43
3	Sc Radial	7617.8	7617.8	102 %			10:03:55
3	Y RADIAL	7019.0	7019.0	101.4 %			10:03:55
3	Al 396.153Radial†	-52.2	21.5	17.674 ug/L	17.674 ppb		10:03:55
3	Ca 317.933Radial†	32.5	2.8	3.9509 ug/L	3.9509 ppb		10:04:15
3	Fe 238.204 Radial†	35.8	0.3	1.4002 ug/L	1.4002 ppb		10:04:15
3	K 766.490 Radial†	2517.2	62.7	13.516 ug/L	13.516 ppb		10:03:55
3	Mg 279.077 IEC†	4.6	1.4	35.985 ug/L	35.985 ppb		10:04:15
3	Na 589.592 Radial†	142.1	275.0	16.876 ug/L	16.876 ppb		10:03:55
3	Sr 421.552†	-5.0	50.9	0.1422 ug/L	0.1422 ppb		10:03:55
3	Sc 361.383	725063.9	725063.9	100.89 %			10:05:13
3	Y 371.029	567550.1	567550.1	100.99 %			10:05:13
3	Ag 328.068†	597.1	-40.8	-0.2368 ug/L	-0.2368 ppb		10:05:13
3	As 188.979†	-33.2	2.5	0.9038 ug/L	0.9038 ppb		10:05:33
3	B 249.677†	-630.7	314.8	7.9341 ug/L	7.9341 ppb		10:05:13
3	Ba 233.527†	24.9	24.2	0.1724 ug/L	0.1724 ppb		10:05:33
3	Be 313.107†	-4848.3	76.1	0.0351 ug/L	0.0351 ppb		10:05:13
3	Cd 226.502†	-279.6	4.0	0.0508 ug/L	0.0508 ppb		10:05:33
3	Co 228.616†	-108.0	-7.6	-0.1325 ug/L	-0.1325 ppb		10:05:33
3	Cr 267.716†	-50.7	27.1	0.3823 ug/L	0.3823 ppb		10:05:13
3	Cu 324.752†	5699.5	11.0	0.0399 ug/L	0.0399 ppb		10:05:13
3	Mn 257.610†	651.6	-33.8	-0.0378 ug/L	-0.0378 ppb		10:05:33
3	Mo 202.031†	15.3	-1.9	-0.1364 ug/L	-0.1364 ppb		10:05:33
3	Ni 231.604†	135.6	14.6	0.3914 ug/L	0.3914 ppb		10:05:33
3	P 214.914†	311.4	-6.1	-3.1113 ug/L	-3.1113 ppb		10:05:33
3	Pb 220.353†	-13.2	0.2	0.0218 ug/L	0.0218 ppb		10:05:33
3	S 181.975 Axial†	84.3	8.2	11.170 ug/L	11.170 ppb		10:05:33
3	Sb 206.836†	60.6	2.8	0.8387 ug/L	0.8387 ppb		10:05:33
3	Se 196.026†	-32.6	-3.6	-1.8077 ug/L	-1.8077 ppb		10:05:33
3	Si 251.611†	470.8	54.9	1.6774 ug/L	1.6774 ppb		10:05:33
3	Sn 189.927†	19.6	6.9	1.2305 ug/L	1.2305 ppb		10:05:33
3	Ti 334.940†	-1300.4	59.2	0.1106 ug/L	0.1106 ppb		10:05:13
3	Tl 190.801†	-51.4	9.8	2.5707 ug/L	2.5707 ppb		10:05:33
3	U 409.014†	-5032.0	-139.1	-4.7100 ug/L	-4.7100 ppb		10:05:13
3	V 292.402†	-1505.5	72.9	0.6516 ug/L	0.6516 ppb		10:05:13
3	Zn 213.857†	974.6	41.0	0.3740 ug/L	0.3740 ppb		10:05:33
3	SiO2†	505.5	64.2	4.1801 ug/L	4.1801 ppb		10:05:48

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	726937.8	101.15	%	0.735				0.73%
Sc Radial	7563.4	101	%	0.7				0.65%
Y 371.029	568873.6	101.22	%	0.711				0.70%
Y RADIAL	7007.0	101.2	%	0.15				0.15%
Ag 328.068†	23.0	0.1410	ug/L	0.35197	0.1410	ppb	0.35197	249.56%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	7.5	6.1919	ug/L	10.47268	6.1919	ppb	10.47268	169.13%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.0	1.4416	ug/L	1.21278	1.4416	ppb	1.21278	84.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	323.0	8.1384	ug/L	1.05284	8.1384	ppb	1.05284	12.94%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.1	0.1775	ug/L	0.04137	0.1775	ppb	0.04137	23.31%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	103.1	0.0472	ug/L	0.01721	0.0472	ppb	0.01721	36.48%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.7	0.9495	ug/L	2.61157	0.9495	ppb	2.61157	275.05%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.1      0.1670 ug/L       0.10326      0.1670 ppb        0.10326  61.82%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                11.9      0.2067 ug/L       0.34993      0.2067 ppb        0.34993 169.27%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                23.7      0.3323 ug/L       0.05096      0.3323 ppb        0.05096  15.33%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -15.1     -0.0542 ug/L       0.13715     -0.0542 ppb        0.13715 252.94%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.5      6.3469 ug/L       7.26416      6.3469 ppb        7.26416 114.45%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         112.3      24.221 ug/L       18.1718      24.221 ppb        18.1718  75.03%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.3      6.9612 ug/L      86.67921      6.9612 ppb       86.67921 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -42.3     -0.0460 ug/L       0.01669     -0.0460 ppb        0.01669  36.26%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 5.3      0.3724 ug/L       0.46732      0.3724 ppb        0.46732 125.49%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        234.3      14.382 ug/L        2.1662      14.382 ppb         2.1662  15.06%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                12.7      0.3391 ug/L       0.20457      0.3391 ppb        0.20457  60.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -10.6     -5.3660 ug/L       5.75414     -5.3660 ppb        5.75414 107.23%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 3.4      0.4024 ug/L       0.37122      0.4024 ppb        0.37122  92.26%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.1      7.0191 ug/L       3.61445      7.0191 ppb        3.61445  51.49%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 7.3      2.1690 ug/L       2.29159      2.1690 ppb        2.29159 105.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -1.3     -0.6470 ug/L       1.27291     -0.6470 ppb        1.27291 196.73%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                53.9      1.6366 ug/L       0.46242      1.6366 ppb        0.46242  28.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.2      0.9184 ug/L       0.42765      0.9184 ppb        0.42765  46.56%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                57.5      0.1605 ug/L       0.06866      0.1605 ppb        0.06866  42.77%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 1.5      0.0030 ug/L       0.13197      0.0030 ppb        0.13197 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 9.5      2.4885 ug/L       0.34386      2.4885 ppb        0.34386  13.82%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -26.8     -0.9079 ug/L       5.10685     -0.9079 ppb        5.10685 562.48%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 20.6      0.1888 ug/L       0.40548      0.1888 ppb        0.40548 214.78%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                34.2      0.3123 ug/L       0.12585      0.3123 ppb        0.12585  40.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      60.8      3.9390 ug/L       1.22783      3.9390 ppb        1.22783  31.17%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 10:57:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7562.8	7562.8	101	%			10:59:20
1	Y RADIAL	6962.9	6962.9	100.6	%			10:59:20
1	Al 396.153Radial†	6246.8	6246.6	5122.4	ug/L	5122.4	ppb	10:59:20
1	Ca 317.933Radial†	3649.3	3577.7	5068.2	ug/L	5068.2	ppb	10:59:20
1	Fe 238.204 Radial†	1210.3	1161.4	4857.7	ug/L	4857.7	ppb	10:59:40
1	K 766.490 Radial†	24506.8	21813.9	4693.3	ug/L	4693.3	ppb	10:59:15
1	Mg 279.077 IEC†	213.1	207.6	5181.7	ug/L	5181.7	ppb	10:59:40
1	Na 589.592 Radial†	163646.8	161874.2	9934.7	ug/L	9934.7	ppb	10:59:15
1	Sr 421.552†	170737.3	168802.3	471.42	ug/L	471.42	ppb	10:59:15
1	Sc 361.383	744688.2	744688.2	103.62	%			11:00:47
1	Y 371.029	574366.7	574366.7	102.20	%			11:00:47
1	Ag 328.068†	89936.9	86164.3	517.80	ug/L	517.80	ppb	11:00:53
1	As 188.979†	1426.8	1412.4	512.51	ug/L	512.51	ppb	11:01:13
1	B 249.677†	20280.2	20512.1	513.95	ug/L	513.95	ppb	11:00:53
1	Ba 233.527†	75895.8	73245.6	517.94	ug/L	517.94	ppb	11:00:53
1	Be 313.107†	1130809.6	1096212.0	502.90	ug/L	502.90	ppb	11:00:47
1	Cd 226.502†	41959.0	40775.2	519.85	ug/L	519.85	ppb	11:00:53
1	Co 228.616†	30995.3	30012.6	520.70	ug/L	520.70	ppb	11:00:53
1	Cr 267.716†	38126.3	36872.6	517.40	ug/L	517.40	ppb	11:00:53
1	Cu 324.752†	152100.8	141152.2	511.78	ug/L	511.78	ppb	11:00:53
1	Mn 257.610†	471556.1	454413.3	501.62	ug/L	501.62	ppb	11:00:47
1	Mo 202.031†	7425.7	7149.3	503.62	ug/L	503.62	ppb	11:01:13
1	Ni 231.604†	20201.5	19376.4	517.60	ug/L	517.60	ppb	11:00:53
1	P 214.914†	5455.1	4949.9	2430.1	ug/L	2430.1	ppb	11:01:13
1	Pb 220.353†	4376.8	4237.3	506.04	ug/L	506.04	ppb	11:01:13
1	S 181.975 Axial†	849.2	744.1	1018.4	ug/L	1018.4	ppb	11:01:13
1	Sb 206.836†	1844.4	1722.8	517.79	ug/L	517.79	ppb	11:01:13
1	Se 196.026†	1011.7	1005.1	530.14	ug/L	530.14	ppb	11:01:13
1	Si 251.611†	88149.6	84660.3	2597.5	ug/L	2597.5	ppb	11:00:53
1	Sn 189.927†	2975.9	2859.5	506.99	ug/L	506.99	ppb	11:01:13
1	Ti 334.940†	282974.0	274443.0	502.34	ug/L	502.34	ppb	11:00:53
1	Tl 190.801†	1970.9	1962.9	516.73	ug/L	516.73	ppb	11:01:13
1	U 409.014†	11173.4	15632.0	527.73	ug/L	527.73	ppb	11:00:53
1	V 292.402†	57110.2	56681.5	520.86	ug/L	520.86	ppb	11:00:53
1	Zn 213.857†	59267.2	56272.9	514.60	ug/L	514.60	ppb	11:00:53
1	SiO2†	86293.0	82843.4	5410.0	ug/L	5410.0	ppb	11:02:20
2	Sc Radial	7484.4	7484.4	100	%			10:59:50
2	Y RADIAL	6908.6	6908.6	99.77	%			10:59:50
2	Al 396.153Radial†	6320.9	6385.2	5236.3	ug/L	5236.3	ppb	10:59:50
2	Ca 317.933Radial†	3688.8	3654.8	5177.5	ug/L	5177.5	ppb	10:59:50
2	Fe 238.204 Radial†	1236.0	1199.6	5016.6	ug/L	5016.6	ppb	11:00:10
2	K 766.490 Radial†	24856.7	22416.9	4823.2	ug/L	4823.2	ppb	10:59:45
2	Mg 279.077 IEC†	209.9	206.6	5155.6	ug/L	5155.6	ppb	11:00:10
2	Na 589.592 Radial†	166232.1	166149.1	10197	ug/L	10197	ppb	10:59:45
2	Sr 421.552†	172573.7	172402.7	481.48	ug/L	481.48	ppb	10:59:45
2	Sc 361.383	736289.9	736289.9	102.45	%			11:01:18
2	Y 371.029	568354.7	568354.7	101.13	%			11:01:18
2	Ag 328.068†	87992.3	85256.3	512.41	ug/L	512.41	ppb	11:01:24
2	As 188.979†	1423.0	1424.4	516.86	ug/L	516.86	ppb	11:01:44
2	B 249.677†	19665.8	20135.6	504.48	ug/L	504.48	ppb	11:01:24
2	Ba 233.527†	74096.3	72324.5	511.43	ug/L	511.43	ppb	11:01:24
2	Be 313.107†	1132360.3	1110173.7	509.28	ug/L	509.28	ppb	11:01:18
2	Cd 226.502†	40924.6	40227.4	512.84	ug/L	512.84	ppb	11:01:24
2	Co 228.616†	30278.6	29654.3	514.51	ug/L	514.51	ppb	11:01:24
2	Cr 267.716†	37224.4	36412.0	510.94	ug/L	510.94	ppb	11:01:24
2	Cu 324.752†	148247.3	139065.1	504.22	ug/L	504.22	ppb	11:01:24
2	Mn 257.610†	472204.2	460236.9	508.07	ug/L	508.07	ppb	11:01:18
2	Mo 202.031†	7412.9	7218.6	508.50	ug/L	508.50	ppb	11:01:44
2	Ni 231.604†	19663.4	19073.6	509.51	ug/L	509.51	ppb	11:01:24

2	P 214.914†	5417.4	4973.1	2443.4 ug/L	2443.4 ppb	11:01:44
2	Pb 220.353†	4337.3	4246.9	507.21 ug/L	507.21 ppb	11:01:44
2	S 181.975 Axial†	840.2	744.7	1019.2 ug/L	1019.2 ppb	11:01:44
2	Sb 206.836†	1839.9	1738.7	522.83 ug/L	522.83 ppb	11:01:44
2	Se 196.026†	1010.9	1015.5	535.99 ug/L	535.99 ppb	11:01:44
2	Si 251.611†	85710.2	83249.6	2553.8 ug/L	2553.8 ppb	11:01:24
2	Sn 189.927†	2960.6	2877.3	510.16 ug/L	510.16 ppb	11:01:44
2	Ti 334.940†	276718.0	271451.5	496.87 ug/L	496.87 ppb	11:01:24
2	Tl 190.801†	1946.4	1960.6	516.18 ug/L	516.18 ppb	11:01:44
2	U 409.014†	10777.4	15368.5	518.79 ug/L	518.79 ppb	11:01:24
2	V 292.402†	55755.1	55987.6	514.58 ug/L	514.58 ppb	11:01:24
2	Zn 213.857†	57695.5	55391.2	506.51 ug/L	506.51 ppb	11:01:24
2	SiO2†	85916.0	83425.4	5447.9 ug/L	5447.9 ppb	11:02:25
3	Sc Radial	7491.8	7491.8	100 %		11:00:20
3	Y RADIAL	6880.3	6880.3	99.36 %		11:00:20
3	Al 396.153Radial†	6340.0	6398.1	5246.9 ug/L	5246.9 ppb	11:00:20
3	Ca 317.933Radial†	3701.1	3663.5	5189.8 ug/L	5189.8 ppb	11:00:20
3	Fe 238.204 Radial†	1222.5	1184.9	4955.6 ug/L	4955.6 ppb	11:00:40
3	K 766.490 Radial†	25054.1	22589.4	4860.4 ug/L	4860.4 ppb	11:00:15
3	Mg 279.077 IEC†	213.6	210.0	5242.5 ug/L	5242.5 ppb	11:00:40
3	Na 589.592 Radial†	167473.7	167224.7	10263 ug/L	10263 ppb	11:00:15
3	Sr 421.552†	174168.1	173824.1	485.45 ug/L	485.45 ppb	11:00:15
3	Sc 361.383	742591.9	742591.9	103.33 %		11:01:49
3	Y 371.029	573318.2	573318.2	102.01 %		11:01:49
3	Ag 328.068†	88554.5	85071.4	511.29 ug/L	511.29 ppb	11:01:55
3	As 188.979†	1436.9	1426.1	517.43 ug/L	517.43 ppb	11:02:15
3	B 249.677†	19971.5	20268.6	507.83 ug/L	507.83 ppb	11:01:55
3	Ba 233.527†	74813.9	72405.2	512.00 ug/L	512.00 ppb	11:01:55
3	Be 313.107†	1143597.4	1111669.0	509.96 ug/L	509.96 ppb	11:01:49
3	Cd 226.502†	41324.4	40275.3	513.46 ug/L	513.46 ppb	11:01:55
3	Co 228.616†	30570.8	29686.2	515.06 ug/L	515.06 ppb	11:01:55
3	Cr 267.716†	37594.3	36461.7	511.64 ug/L	511.64 ppb	11:01:55
3	Cu 324.752†	149668.9	139212.9	504.76 ug/L	504.76 ppb	11:01:55
3	Mn 257.610†	476911.1	460880.6	508.77 ug/L	508.77 ppb	11:01:49
3	Mo 202.031†	7473.8	7216.1	508.32 ug/L	508.32 ppb	11:02:15
3	Ni 231.604†	19910.2	19149.5	511.54 ug/L	511.54 ppb	11:01:55
3	P 214.914†	5449.8	4959.6	2436.4 ug/L	2436.4 ppb	11:02:15
3	Pb 220.353†	4381.3	4253.5	508.01 ug/L	508.01 ppb	11:02:15
3	S 181.975 Axial†	857.8	754.8	1033.0 ug/L	1033.0 ppb	11:02:15
3	Sb 206.836†	1854.8	1737.8	522.52 ug/L	522.52 ppb	11:02:15
3	Se 196.026†	1006.2	1002.5	529.17 ug/L	529.17 ppb	11:02:15
3	Si 251.611†	86609.1	83409.5	2558.7 ug/L	2558.7 ppb	11:01:55
3	Sn 189.927†	2974.4	2866.2	508.19 ug/L	508.19 ppb	11:02:15
3	Ti 334.940†	278364.8	270753.1	495.59 ug/L	495.59 ppb	11:01:55
3	Tl 190.801†	1953.6	1951.5	513.77 ug/L	513.77 ppb	11:02:15
3	U 409.014†	10927.4	15424.4	520.69 ug/L	520.69 ppb	11:01:55
3	V 292.402†	56335.4	56087.3	515.50 ug/L	515.50 ppb	11:01:55
3	Zn 213.857†	58236.1	55436.5	506.92 ug/L	506.92 ppb	11:01:55
3	SiO2†	88598.9	85310.2	5571.9 ug/L	5571.9 ppb	11:02:30

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	741190.0	103.13	%	0.608				0.59%
Sc Radial	7513.0	101	%	0.6				0.58%
Y 371.029	572013.2	101.78	%	0.571				0.56%
Y RADIAL	6917.3	99.90	%	0.606				0.61%
Ag 328.068†	85497.3	513.83	ug/L	3.483	513.83	ppb	3.483	0.68%
QC value within limits for Ag 328.068 Recovery = 102.77%								
Al 396.153Radial†	6343.3	5201.9	ug/L	69.03	5201.9	ppb	69.03	1.33%
QC value within limits for Al 396.153Radial Recovery = 104.04%								
As 188.979†	1421.0	515.60	ug/L	2.693	515.60	ppb	2.693	0.52%
QC value within limits for As 188.979 Recovery = 103.12%								
B 249.677†	20305.4	508.75	ug/L	4.800	508.75	ppb	4.800	0.94%
QC value within limits for B 249.677 Recovery = 101.75%								
Ba 233.527†	72658.4	513.79	ug/L	3.607	513.79	ppb	3.607	0.70%
QC value within limits for Ba 233.527 Recovery = 102.76%								
Be 313.107†	1106018.2	507.38	ug/L	3.894	507.38	ppb	3.894	0.77%
QC value within limits for Be 313.107 Recovery = 101.48%								
Ca 317.933Radial†	3632.0	5145.2	ug/L	66.93	5145.2	ppb	66.93	1.30%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.90%
Cd 226.502†            40426.0      515.38 ug/L         3.881      515.38 ppb          3.881   0.75%
   QC value within limits for Cd 226.502  Recovery = 103.08%
Co 228.616†            29784.3      516.76 ug/L         3.426      516.76 ppb          3.426   0.66%
   QC value within limits for Co 228.616  Recovery = 103.35%
Cr 267.716†            36582.1      513.32 ug/L         3.545      513.32 ppb          3.545   0.69%
   QC value within limits for Cr 267.716  Recovery = 102.66%
Cu 324.752†           139810.0      506.92 ug/L         4.216      506.92 ppb          4.216   0.83%
   QC value within limits for Cu 324.752  Recovery = 101.38%
Fe 238.204 Radial†      1182.0      4943.3 ug/L        80.13      4943.3 ppb         80.13   1.62%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.87%
K 766.490 Radial†      22273.4      4792.3 ug/L        87.75      4792.3 ppb         87.75   1.83%
   QC value within limits for K 766.490 Radial  Recovery = 95.85%
Mg 279.077 IEC†          208.1      5193.3 ug/L        44.55      5193.3 ppb         44.55   0.86%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.87%
Mn 257.610†           458510.3      506.15 ug/L         3.937      506.15 ppb         3.937   0.78%
   QC value within limits for Mn 257.610  Recovery = 101.23%
Mo 202.031†             7194.7      506.82 ug/L         2.770      506.82 ppb         2.770   0.55%
   QC value within limits for Mo 202.031  Recovery = 101.36%
Na 589.592 Radial†    165082.7       10132 ug/L       173.7         10132 ppb        173.7   1.71%
   QC value within limits for Na 589.592 Radial  Recovery = 101.32%
Ni 231.604†            19199.8      512.88 ug/L         4.209      512.88 ppb         4.209   0.82%
   QC value within limits for Ni 231.604  Recovery = 102.58%
P 214.914†              4960.9      2436.6 ug/L         6.66      2436.6 ppb          6.66   0.27%
   QC value within limits for P 214.914  Recovery = 97.47%
Pb 220.353†             4245.9      507.08 ug/L         0.988      507.08 ppb         0.988   0.19%
   QC value within limits for Pb 220.353  Recovery = 101.42%
S 181.975 Axial†         747.9      1023.5 ug/L         8.21      1023.5 ppb          8.21   0.80%
   QC value within limits for S 181.975 Axial  Recovery = 102.35%
Sb 206.836†             1733.1      521.05 ug/L         2.822      521.05 ppb         2.822   0.54%
   QC value within limits for Sb 206.836  Recovery = 104.21%
Se 196.026†             1007.7      531.77 ug/L         3.684      531.77 ppb         3.684   0.69%
   QC value within limits for Se 196.026  Recovery = 106.35%
Si 251.611†            83773.2      2570.0 ug/L        23.95      2570.0 ppb         23.95   0.93%
   QC value within limits for Si 251.611  Recovery = 102.80%
Sn 189.927†             2867.7      508.45 ug/L         1.600      508.45 ppb         1.600   0.31%
   QC value within limits for Sn 189.927  Recovery = 101.69%
Sr 421.552†           171676.4      479.45 ug/L         7.229      479.45 ppb         7.229   1.51%
   QC value within limits for Sr 421.552  Recovery = 95.89%
Ti 334.940†           272215.9      498.27 ug/L         3.582      498.27 ppb         3.582   0.72%
   QC value within limits for Ti 334.940  Recovery = 99.65%
Tl 190.801†             1958.3      515.56 ug/L         1.574      515.56 ppb         1.574   0.31%
   QC value within limits for Tl 190.801  Recovery = 103.11%
U 409.014†             15475.0      522.40 ug/L         4.706      522.40 ppb         4.706   0.90%
   QC value within limits for U 409.014  Recovery = 104.48%
V 292.402†             56252.1      516.98 ug/L         3.388      516.98 ppb         3.388   0.66%
   QC value within limits for V 292.402  Recovery = 103.40%
Zn 213.857†            55700.2      509.35 ug/L         4.558      509.35 ppb         4.558   0.89%
   QC value within limits for Zn 213.857  Recovery = 101.87%
SiO2†                  83859.6      5476.6 ug/L        84.67      5476.6 ppb         84.67   1.55%
   QC value within limits for SiO2  Recovery = 102.41%
All analyte(s) passed QC.
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Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 11:04:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7365.6	7365.6	98.5	%			11:06:33
1	Y RADIAL	6805.4	6805.4	98.28	%			11:06:33
1	Al 396.153Radial†	-89.3	-18.0	-14.782	ug/L	-14.782	ppb	11:06:33
1	Ca 317.933Radial†	32.9	4.3	6.0431	ug/L	6.0431	ppb	11:06:53
1	Fe 238.204 Radial†	33.1	-1.3	-5.2293	ug/L	-5.2293	ppb	11:06:53
1	K 766.490 Radial†	2548.1	178.7	38.547	ug/L	38.547	ppb	11:06:33
1	Mg 279.077 IEC†	2.9	-0.1	-2.5683	ug/L	-2.5683	ppb	11:06:53
1	Na 589.592 Radial†	-30.3	104.8	6.4324	ug/L	6.4324	ppb	11:06:33
1	Sr 421.552†	18.9	75.1	0.2096	ug/L	0.2096	ppb	11:06:33
1	Sc 361.383	728492.4	728492.4	101.36	%			11:07:50
1	Y 371.029	571035.3	571035.3	101.61	%			11:07:50
1	Ag 328.068†	631.7	-9.5	-0.0600	ug/L	-0.0600	ppb	11:07:50
1	As 188.979†	-28.4	7.4	2.6780	ug/L	2.6780	ppb	11:08:10
1	B 249.677†	-589.2	358.7	9.0389	ug/L	9.0389	ppb	11:07:50
1	Ba 233.527†	25.1	24.2	0.1721	ug/L	0.1721	ppb	11:08:10
1	Be 313.107†	-4679.9	264.8	0.1213	ug/L	0.1213	ppb	11:07:50
1	Cd 226.502†	-254.6	30.0	0.3830	ug/L	0.3830	ppb	11:08:10
1	Co 228.616†	-95.8	5.0	0.0862	ug/L	0.0862	ppb	11:08:10
1	Cr 267.716†	-52.7	25.4	0.3547	ug/L	0.3547	ppb	11:07:50
1	Cu 324.752†	5672.3	-42.5	-0.1541	ug/L	-0.1541	ppb	11:07:50
1	Mn 257.610†	704.2	15.1	0.0161	ug/L	0.0161	ppb	11:08:10
1	Mo 202.031†	17.3	-0.1	-0.0066	ug/L	-0.0066	ppb	11:08:10
1	Ni 231.604†	132.1	10.5	0.2808	ug/L	0.2808	ppb	11:08:10
1	P 214.914†	302.8	-16.1	-8.1629	ug/L	-8.1629	ppb	11:08:10
1	Pb 220.353†	-1.8	11.5	1.3675	ug/L	1.3675	ppb	11:08:10
1	S 181.975 Axial†	82.9	6.3	8.6662	ug/L	8.6662	ppb	11:08:10
1	Sb 206.836†	50.0	-7.9	-2.3383	ug/L	-2.3383	ppb	11:08:10
1	Se 196.026†	-25.7	3.4	1.7142	ug/L	1.7142	ppb	11:08:10
1	Si 251.611†	527.4	108.5	3.3159	ug/L	3.3159	ppb	11:08:10
1	Sn 189.927†	22.2	9.4	1.6619	ug/L	1.6619	ppb	11:08:10
1	Ti 334.940†	-1354.1	12.4	0.0209	ug/L	0.0209	ppb	11:07:50
1	Tl 190.801†	-56.7	4.8	1.2660	ug/L	1.2660	ppb	11:08:10
1	U 409.014†	-4780.0	133.1	4.5069	ug/L	4.5069	ppb	11:07:50
1	V 292.402†	-1529.6	56.2	0.5195	ug/L	0.5195	ppb	11:07:50
1	Zn 213.857†	994.4	55.9	0.5148	ug/L	0.5148	ppb	11:08:10
1	SiO2†	560.3	115.9	7.5403	ug/L	7.5403	ppb	11:09:06
2	Sc Radial	7520.6	7520.6	101	%			11:06:58
2	Y RADIAL	6922.2	6922.2	99.97	%			11:06:58
2	Al 396.153Radial†	-54.9	18.1	14.887	ug/L	14.887	ppb	11:06:58
2	Ca 317.933Radial†	32.4	3.1	4.4074	ug/L	4.4074	ppb	11:07:18
2	Fe 238.204 Radial†	40.1	5.0	20.992	ug/L	20.992	ppb	11:07:18
2	K 766.490 Radial†	2407.0	-14.9	-3.2266	ug/L	-3.2266	ppb	11:06:58
2	Mg 279.077 IEC†	1.5	-1.5	-38.623	ug/L	-38.623	ppb	11:07:18
2	Na 589.592 Radial†	-80.6	55.5	3.4061	ug/L	3.4061	ppb	11:06:58
2	Sr 421.552†	-47.4	8.7	0.0244	ug/L	0.0244	ppb	11:06:58
2	Sc 361.383	728647.1	728647.1	101.39	%			11:08:16
2	Y 371.029	570984.1	570984.1	101.60	%			11:08:16
2	Ag 328.068†	543.1	-96.9	-0.5685	ug/L	-0.5685	ppb	11:08:16
2	As 188.979†	-28.6	7.2	2.6118	ug/L	2.6118	ppb	11:08:36
2	B 249.677†	-764.1	186.3	4.6931	ug/L	4.6931	ppb	11:08:16
2	Ba 233.527†	3.2	2.6	0.0209	ug/L	0.0209	ppb	11:08:36
2	Be 313.107†	-4636.0	309.1	0.1414	ug/L	0.1414	ppb	11:08:16
2	Cd 226.502†	-290.4	-5.3	-0.0703	ug/L	-0.0703	ppb	11:08:36
2	Co 228.616†	-107.0	-6.1	-0.1039	ug/L	-0.1039	ppb	11:08:36
2	Cr 267.716†	-64.0	14.3	0.2021	ug/L	0.2021	ppb	11:08:16
2	Cu 324.752†	5705.6	-10.8	-0.0379	ug/L	-0.0379	ppb	11:08:16
2	Mn 257.610†	685.6	-3.4	-0.0004	ug/L	-0.0004	ppb	11:08:36
2	Mo 202.031†	25.6	8.1	0.5737	ug/L	0.5737	ppb	11:08:36
2	Ni 231.604†	130.2	8.6	0.2296	ug/L	0.2296	ppb	11:08:36

2	P 214.914†	323.9	4.7	2.3879	ug/L	2.3879 ppb	11:08:36
2	Pb 220.353†	-10.2	3.1	0.3766	ug/L	0.3766 ppb	11:08:36
2	S 181.975 Axial†	83.1	6.5	8.9582	ug/L	8.9582 ppb	11:08:36
2	Sb 206.836†	61.2	3.1	0.9360	ug/L	0.9360 ppb	11:08:36
2	Se 196.026†	-29.5	-0.3	-0.0928	ug/L	-0.0928 ppb	11:08:36
2	Si 251.611†	502.3	83.7	2.5823	ug/L	2.5823 ppb	11:08:36
2	Sn 189.927†	9.4	-3.2	-0.5694	ug/L	-0.5694 ppb	11:08:36
2	Ti 334.940†	-1385.2	-18.0	-0.0330	ug/L	-0.0330 ppb	11:08:16
2	Tl 190.801†	-57.5	4.0	1.0469	ug/L	1.0469 ppb	11:08:36
2	U 409.014†	-4900.3	15.4	0.5177	ug/L	0.5177 ppb	11:08:16
2	V 292.402†	-1462.9	122.3	1.1153	ug/L	1.1153 ppb	11:08:16
2	Zn 213.857†	990.6	52.0	0.4772	ug/L	0.4772 ppb	11:08:36
2	SiO2†	527.4	83.3	5.4746	ug/L	5.4746 ppb	11:09:11
3	Sc Radial	7467.1	7467.1	99.9	%		11:07:24
3	Y RADIAL	6890.2	6890.2	99.51	%		11:07:24
3	Al 396.153Radial†	-117.4	-44.9	-36.953	ug/L	-36.953 ppb	11:07:24
3	Ca 317.933Radial†	34.2	5.2	7.3018	ug/L	7.3018 ppb	11:07:44
3	Fe 238.204 Radial†	34.3	-0.4	-1.7725	ug/L	-1.7725 ppb	11:07:44
3	K 766.490 Radial†	2550.1	145.5	31.394	ug/L	31.394 ppb	11:07:24
3	Mg 279.077 IEC†	-0.5	-3.6	-88.784	ug/L	-88.784 ppb	11:07:44
3	Na 589.592 Radial†	-14.1	121.5	7.4542	ug/L	7.4542 ppb	11:07:24
3	Sr 421.552†	-10.5	45.3	0.1265	ug/L	0.1265 ppb	11:07:24
3	Sc 361.383	732992.4	732992.4	101.99	%		11:08:41
3	Y 371.029	573758.4	573758.4	102.09	%		11:08:41
3	Ag 328.068†	703.3	56.9	0.3346	ug/L	0.3346 ppb	11:08:41
3	As 188.979†	-29.2	6.8	2.4619	ug/L	2.4619 ppb	11:09:01
3	B 249.677†	-699.1	254.5	6.4135	ug/L	6.4135 ppb	11:08:41
3	Ba 233.527†	33.7	32.5	0.2297	ug/L	0.2297 ppb	11:09:01
3	Be 313.107†	-4724.9	249.0	0.1140	ug/L	0.1140 ppb	11:08:41
3	Cd 226.502†	-265.1	21.1	0.2695	ug/L	0.2695 ppb	11:09:01
3	Co 228.616†	-98.7	2.7	0.0445	ug/L	0.0445 ppb	11:09:01
3	Cr 267.716†	-56.2	22.3	0.3109	ug/L	0.3109 ppb	11:08:41
3	Cu 324.752†	5668.8	-80.3	-0.2910	ug/L	-0.2910 ppb	11:08:41
3	Mn 257.610†	700.1	6.8	0.0090	ug/L	0.0090 ppb	11:09:01
3	Mo 202.031†	8.1	-9.2	-0.6488	ug/L	-0.6488 ppb	11:09:01
3	Ni 231.604†	115.0	-7.0	-0.1876	ug/L	-0.1876 ppb	11:09:01
3	P 214.914†	312.0	-8.9	-4.4559	ug/L	-4.4559 ppb	11:09:01
3	Pb 220.353†	3.3	16.5	1.9544	ug/L	1.9544 ppb	11:09:01
3	S 181.975 Axial†	87.1	10.0	13.702	ug/L	13.702 ppb	11:09:01
3	Sb 206.836†	48.7	-9.5	-2.8044	ug/L	-2.8044 ppb	11:09:01
3	Se 196.026†	-31.7	-2.3	-1.1651	ug/L	-1.1651 ppb	11:09:01
3	Si 251.611†	504.6	83.0	2.5402	ug/L	2.5402 ppb	11:09:01
3	Sn 189.927†	22.8	9.8	1.7428	ug/L	1.7428 ppb	11:09:01
3	Ti 334.940†	-1368.8	6.2	0.0091	ug/L	0.0091 ppb	11:08:41
3	Tl 190.801†	-50.7	11.1	2.8932	ug/L	2.8932 ppb	11:09:01
3	U 409.014†	-4769.8	172.0	5.8227	ug/L	5.8227 ppb	11:08:41
3	V 292.402†	-1585.3	10.8	0.1001	ug/L	0.1001 ppb	11:08:41
3	Zn 213.857†	996.4	51.8	0.4830	ug/L	0.4830 ppb	11:09:01
3	SiO2†	547.1	99.5	6.4910	ug/L	6.4910 ppb	11:09:16

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	730044.0	101.58	%	0.355				0.35%
Sc Radial	7451.1	99.7	%	1.05				1.06%
Y 371.029	571925.9	101.77	%	0.282				0.28%
Y RADIAL	6872.6	99.25	%	0.871				0.88%
Ag 328.068†	-16.5	-0.0980	ug/L	0.45276	-0.0980	ppb	0.45276	462.07%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-14.9	-12.283	ug/L	26.0102	-12.283	ppb	26.0102	211.76%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.2	2.5839	ug/L	0.11071	2.5839	ppb	0.11071	4.28%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	266.5	6.7152	ug/L	2.18855	6.7152	ppb	2.18855	32.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	19.8	0.1409	ug/L	0.10782	0.1409	ppb	0.10782	76.53%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	274.3	0.1256	ug/L	0.01420	0.1256	ppb	0.01420	11.31%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.2	5.9174	ug/L	1.45127	5.9174	ppb	1.45127	24.53%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                15.3      0.1941 ug/L       0.23587      0.1941 ppb        0.23587 121.52%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 0.5      0.0089 ug/L       0.09992      0.0089 ppb        0.09992 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                20.7      0.2892 ug/L       0.07855      0.2892 ppb        0.07855  27.16%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -44.5     -0.1610 ug/L       0.12666     -0.1610 ppb        0.12666  78.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.1      4.6633 ug/L      14.24596      4.6633 ppb       14.24596 305.49%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         103.1     22.238 ug/L       22.3410     22.238 ppb        22.3410 100.46%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.7    -43.325 ug/L       43.2999    -43.325 ppb        43.2999  99.94%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                 6.2      0.0082 ug/L       0.00824      0.0082 ppb        0.00824 100.09%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.4     -0.0272 ug/L       0.61151     -0.0272 ppb        0.61151 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         93.9      5.7642 ug/L       2.10510      5.7642 ppb        2.10510  36.52%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 4.0      0.1076 ug/L       0.25693      0.1076 ppb        0.25693 238.78%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.8     -3.4103 ug/L       5.35253     -3.4103 ppb        5.35253 156.95%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                10.4      1.2328 ug/L       0.79748      1.2328 ppb        0.79748  64.69%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.6     10.442 ug/L        2.8268     10.442 ppb         2.8268  27.07%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -4.8     -1.4022 ug/L       2.03830     -1.4022 ppb        2.03830 145.36%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.3      0.1521 ug/L       1.45521      0.1521 ppb        1.45521 956.84%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                91.7      2.8128 ug/L       0.43618      2.8128 ppb        0.43618  15.51%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.3      0.9451 ug/L       1.31223      0.9451 ppb        1.31223 138.85%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                43.0      0.1202 ug/L       0.09280      0.1202 ppb        0.09280  77.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 0.2     -0.0010 ug/L       0.02834     -0.0010 ppb        0.02834 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.6      1.7354 ug/L       1.00868      1.7354 ppb        1.00868  58.12%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                106.8      3.6158 ug/L       2.76251      3.6158 ppb        2.76251  76.40%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 63.1      0.5783 ug/L       0.51014      0.5783 ppb        0.51014  88.22%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                53.2      0.4917 ug/L       0.02026      0.4917 ppb        0.02026   4.12%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      99.5      6.5020 ug/L       1.03286      6.5020 ppb        1.03286  15.89%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 11:52:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7651.7	7651.7	102	%			11:54:44
1	Y RADIAL	7137.7	7137.7	103.1	%			11:54:44
1	Al 396.153Radial†	6083.8	6015.6	4932.2	ug/L	4932.2	ppb	11:54:24
1	Ca 317.933Radial†	3595.9	3483.6	4934.9	ug/L	4934.9	ppb	11:54:44
1	Fe 238.204 Radial†	1199.3	1136.8	4754.3	ug/L	4754.3	ppb	11:54:44
1	K 766.490 Radial†	24321.8	21351.6	4593.5	ug/L	4593.5	ppb	11:54:24
1	Mg 279.077 IEC†	207.3	199.5	4979.2	ug/L	4979.2	ppb	11:54:44
1	Na 589.592 Radial†	161684.3	158077.3	9701.6	ug/L	9701.6	ppb	11:54:24
1	Sr 421.552†	167822.7	163993.9	457.99	ug/L	457.99	ppb	11:54:24
1	Sc 361.383	744388.0	744388.0	103.58	%			11:55:43
1	Y 371.029	574786.2	574786.2	102.28	%			11:55:43
1	Ag 328.068†	88348.0	84665.3	508.81	ug/L	508.81	ppb	11:55:43
1	As 188.979†	1410.9	1397.6	507.17	ug/L	507.17	ppb	11:56:03
1	B 249.677†	19853.2	20107.7	503.88	ug/L	503.88	ppb	11:55:43
1	Ba 233.527†	74986.6	72397.3	511.94	ug/L	511.94	ppb	11:55:43
1	Be 313.107†	1153787.7	1118837.0	513.27	ug/L	513.27	ppb	11:55:43
1	Cd 226.502†	39844.3	38749.9	494.02	ug/L	494.02	ppb	11:56:03
1	Co 228.616†	29656.2	28731.8	498.49	ug/L	498.49	ppb	11:56:03
1	Cr 267.716†	37552.8	36333.7	509.84	ug/L	509.84	ppb	11:55:43
1	Cu 324.752†	150414.6	139583.4	506.09	ug/L	506.09	ppb	11:55:43
1	Mn 257.610†	479727.5	462486.1	510.52	ug/L	510.52	ppb	11:55:43
1	Mo 202.031†	7428.6	7155.0	504.01	ug/L	504.01	ppb	11:56:03
1	Ni 231.604†	19436.9	18646.1	498.09	ug/L	498.09	ppb	11:56:03
1	P 214.914†	5441.6	4939.0	2425.6	ug/L	2425.6	ppb	11:56:03
1	Pb 220.353†	4406.2	4267.4	509.60	ug/L	509.60	ppb	11:56:03
1	S 181.975 Axial†	846.9	742.2	1015.8	ug/L	1015.8	ppb	11:56:03
1	Sb 206.836†	1803.7	1684.2	506.44	ug/L	506.44	ppb	11:56:03
1	Se 196.026†	997.3	991.6	522.92	ug/L	522.92	ppb	11:56:03
1	Si 251.611†	86686.8	83282.4	2555.0	ug/L	2555.0	ppb	11:55:43
1	Sn 189.927†	2954.3	2839.8	503.47	ug/L	503.47	ppb	11:56:03
1	Ti 334.940†	284554.5	276079.0	505.34	ug/L	505.34	ppb	11:55:43
1	Tl 190.801†	1952.6	1946.0	512.51	ug/L	512.51	ppb	11:56:03
1	U 409.014†	10428.5	14917.2	503.55	ug/L	503.55	ppb	11:55:43
1	V 292.402†	56156.7	55783.2	512.67	ug/L	512.67	ppb	11:55:43
1	Zn 213.857†	58255.7	55319.4	505.95	ug/L	505.95	ppb	11:55:43
1	SiO2†	85799.0	82400.1	5381.0	ug/L	5381.0	ppb	11:57:03
2	Sc Radial	7165.7	7165.7	95.9	%			11:55:10
2	Y RADIAL	6575.4	6575.4	94.96	%			11:55:10
2	Al 396.153Radial†	6218.8	6559.5	5380.0	ug/L	5380.0	ppb	11:54:50
2	Ca 317.933Radial†	3617.3	3744.1	5304.0	ug/L	5304.0	ppb	11:55:10
2	Fe 238.204 Radial†	1209.3	1226.6	5128.7	ug/L	5128.7	ppb	11:55:10
2	K 766.490 Radial†	24712.0	23370.0	5028.8	ug/L	5028.8	ppb	11:54:50
2	Mg 279.077 IEC†	203.6	209.3	5224.9	ug/L	5224.9	ppb	11:55:10
2	Na 589.592 Radial†	164743.4	171980.1	10555	ug/L	10555	ppb	11:54:50
2	Sr 421.552†	170948.2	178372.7	498.15	ug/L	498.15	ppb	11:54:50
2	Sc 361.383	749020.2	749020.2	104.22	%			11:56:11
2	Y 371.029	577772.1	577772.1	102.81	%			11:56:11
2	Ag 328.068†	88621.7	84400.4	507.33	ug/L	507.33	ppb	11:56:11
2	As 188.979†	1428.3	1405.9	510.25	ug/L	510.25	ppb	11:56:31
2	B 249.677†	19956.4	20088.2	503.36	ug/L	503.36	ppb	11:56:11
2	Ba 233.527†	75280.5	72231.6	510.76	ug/L	510.76	ppb	11:56:11
2	Be 313.107†	1159234.9	1117174.5	512.50	ug/L	512.50	ppb	11:56:11
2	Cd 226.502†	40076.5	38734.8	493.78	ug/L	493.78	ppb	11:56:31
2	Co 228.616†	29834.6	28725.9	498.38	ug/L	498.38	ppb	11:56:31
2	Cr 267.716†	37755.8	36304.3	509.43	ug/L	509.43	ppb	11:56:11
2	Cu 324.752†	150915.7	139166.1	504.60	ug/L	504.60	ppb	11:56:11
2	Mn 257.610†	482150.4	461946.5	509.96	ug/L	509.96	ppb	11:56:11
2	Mo 202.031†	7480.9	7160.8	504.45	ug/L	504.45	ppb	11:56:31
2	Ni 231.604†	19539.0	18628.0	497.61	ug/L	497.61	ppb	11:56:31

2	P 214.914†	5495.4	4958.1	2435.5	ug/L	2435.5 ppb	11:56:31
2	Pb 220.353†	4445.8	4279.0	511.04	ug/L	511.04 ppb	11:56:31
2	S 181.975 Axial†	848.2	738.4	1010.5	ug/L	1010.5 ppb	11:56:31
2	Sb 206.836†	1825.6	1694.4	509.48	ug/L	509.48 ppb	11:56:31
2	Se 196.026†	1003.1	991.2	523.98	ug/L	523.98 ppb	11:56:31
2	Si 251.611†	87228.1	83284.1	2554.9	ug/L	2554.9 ppb	11:56:11
2	Sn 189.927†	2974.6	2841.7	503.87	ug/L	503.87 ppb	11:56:31
2	Ti 334.940†	286071.2	275835.3	504.91	ug/L	504.91 ppb	11:56:11
2	Tl 190.801†	1932.4	1915.0	504.40	ug/L	504.40 ppb	11:56:31
2	U 409.014†	10523.2	14945.8	504.47	ug/L	504.47 ppb	11:56:11
2	V 292.402†	56362.2	55645.0	511.37	ug/L	511.37 ppb	11:56:11
2	Zn 213.857†	58590.5	55292.8	505.67	ug/L	505.67 ppb	11:56:11
2	SiO2†	86417.9	82481.6	5386.0	ug/L	5386.0 ppb	11:57:09
3	Sc Radial	7319.7	7319.7	97.9	%		11:55:35
3	Y RADIAL	6733.7	6733.7	97.25	%		11:55:35
3	Al 396.153Radial†	6287.9	6493.6	5325.5	ug/L	5325.5 ppb	11:55:15
3	Ca 317.933Radial†	3688.6	3737.5	5294.6	ug/L	5294.6 ppb	11:55:35
3	Fe 238.204 Radial†	1223.8	1214.9	5080.0	ug/L	5080.0 ppb	11:55:35
3	K 766.490 Radial†	24945.3	23066.0	4963.2	ug/L	4963.2 ppb	11:55:15
3	Mg 279.077 IEC†	211.0	212.4	5301.6	ug/L	5301.6 ppb	11:55:35
3	Na 589.592 Radial†	166850.6	170517.3	10465	ug/L	10465 ppb	11:55:15
3	Sr 421.552†	173511.1	177239.0	494.98	ug/L	494.98 ppb	11:55:15
3	Sc 361.383	740419.2	740419.2	103.02	%		11:56:38
3	Y 371.029	571986.6	571986.6	101.78	%		11:56:38
3	Ag 328.068†	87696.7	84490.4	507.86	ug/L	507.86 ppb	11:56:38
3	As 188.979†	1426.3	1419.9	515.26	ug/L	515.26 ppb	11:56:58
3	B 249.677†	19642.0	20005.5	501.25	ug/L	501.25 ppb	11:56:38
3	Ba 233.527†	74465.2	72279.3	511.10	ug/L	511.10 ppb	11:56:38
3	Be 313.107†	1144420.5	1115715.8	511.84	ug/L	511.84 ppb	11:56:38
3	Cd 226.502†	40084.3	39189.0	499.59	ug/L	499.59 ppb	11:56:58
3	Co 228.616†	29827.3	29051.3	504.04	ug/L	504.04 ppb	11:56:58
3	Cr 267.716†	37244.3	36228.7	508.38	ug/L	508.38 ppb	11:56:38
3	Cu 324.752†	148855.8	138848.8	503.44	ug/L	503.44 ppb	11:56:38
3	Mn 257.610†	476478.4	461815.1	509.81	ug/L	509.81 ppb	11:56:38
3	Mo 202.031†	7477.4	7240.9	510.08	ug/L	510.08 ppb	11:56:58
3	Ni 231.604†	19572.6	18878.4	504.30	ug/L	504.30 ppb	11:56:58
3	P 214.914†	5519.2	5042.4	2478.9	ug/L	2478.9 ppb	11:56:58
3	Pb 220.353†	4424.2	4307.6	514.45	ug/L	514.45 ppb	11:56:58
3	S 181.975 Axial†	849.9	749.5	1025.8	ug/L	1025.8 ppb	11:56:58
3	Sb 206.836†	1830.8	1719.8	517.30	ug/L	517.30 ppb	11:56:58
3	Se 196.026†	1007.9	1007.1	531.92	ug/L	531.92 ppb	11:56:58
3	Si 251.611†	85938.1	83004.2	2546.1	ug/L	2546.1 ppb	11:56:38
3	Sn 189.927†	2983.0	2882.9	511.17	ug/L	511.17 ppb	11:56:58
3	Ti 334.940†	282816.0	275864.2	504.97	ug/L	504.97 ppb	11:56:38
3	Tl 190.801†	1960.9	1964.1	517.24	ug/L	517.24 ppb	11:56:58
3	U 409.014†	10268.3	14815.7	500.07	ug/L	500.07 ppb	11:56:38
3	V 292.402†	55820.6	55747.6	512.37	ug/L	512.37 ppb	11:56:38
3	Zn 213.857†	57893.1	55268.9	505.41	ug/L	505.41 ppb	11:56:38
3	SiO2†	85553.5	82605.8	5393.8	ug/L	5393.8 ppb	11:57:14

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	744609.1	103.61	%	0.599				0.58%
Sc Radial	7379.0	98.7	%	3.32				3.37%
Y 371.029	574848.3	102.29	%	0.515				0.50%
Y RADIAL	6815.6	98.43	%	4.187				4.25%
Ag 328.068†	84518.7	508.00	ug/L	0.747	508.00	ppb	0.747	0.15%
QC value within limits for Ag 328.068 Recovery = 101.60%								
Al 396.153Radial†	6356.3	5212.6	ug/L	244.36	5212.6	ppb	244.36	4.69%
QC value within limits for Al 396.153Radial Recovery = 104.25%								
As 188.979†	1407.8	510.89	ug/L	4.082	510.89	ppb	4.082	0.80%
QC value within limits for As 188.979 Recovery = 102.18%								
B 249.677†	20067.1	502.83	ug/L	1.392	502.83	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.57%								
Ba 233.527†	72302.7	511.27	ug/L	0.604	511.27	ppb	0.604	0.12%
QC value within limits for Ba 233.527 Recovery = 102.25%								
Be 313.107†	1117242.4	512.53	ug/L	0.715	512.53	ppb	0.715	0.14%
QC value within limits for Be 313.107 Recovery = 102.51%								
Ca 317.933Radial†	3655.1	5177.8	ug/L	210.45	5177.8	ppb	210.45	4.06%

```
   QC value within limits for Ca 317.933Radial  Recovery = 103.56%
Cd 226.502†            38891.2      495.79 ug/L        3.285      495.79 ppb        3.285   0.66%
   QC value within limits for Cd 226.502  Recovery = 99.16%
Co 228.616†            28836.3      500.30 ug/L        3.237      500.30 ppb        3.237   0.65%
   QC value within limits for Co 228.616  Recovery = 100.06%
Cr 267.716†            36288.9      509.22 ug/L        0.756      509.22 ppb        0.756   0.15%
   QC value within limits for Cr 267.716  Recovery = 101.84%
Cu 324.752†           139199.4      504.71 ug/L        1.325      504.71 ppb        1.325   0.26%
   QC value within limits for Cu 324.752  Recovery = 100.94%
Fe 238.204 Radial†      1192.7      4987.7 ug/L       203.57      4987.7 ppb       203.57   4.08%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.75%
K 766.490 Radial†      22595.9      4861.8 ug/L       234.72      4861.8 ppb       234.72   4.83%
   QC value within limits for K 766.490 Radial  Recovery = 97.24%
Mg 279.077 IEC†         207.1      5168.6 ug/L       168.46      5168.6 ppb       168.46   3.26%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.37%
Mn 257.610†           462082.6      510.10 ug/L        0.371      510.10 ppb        0.371   0.07%
   QC value within limits for Mn 257.610  Recovery = 102.02%
Mo 202.031†             7185.6      506.18 ug/L        3.383      506.18 ppb        3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.24%
Na 589.592 Radial†    166858.3       10241 ug/L        468.9       10241 ppb        468.9   4.58%
   QC value within limits for Na 589.592 Radial  Recovery = 102.41%
Ni 231.604†            18717.5      500.00 ug/L        3.730      500.00 ppb        3.730   0.75%
   QC value within limits for Ni 231.604  Recovery = 100.00%
P 214.914†              4979.8      2446.7 ug/L       28.35      2446.7 ppb       28.35   1.16%
   QC value within limits for P 214.914  Recovery = 97.87%
Pb 220.353†             4284.6      511.70 ug/L        2.490      511.70 ppb        2.490   0.49%
   QC value within limits for Pb 220.353  Recovery = 102.34%
S 181.975 Axial†         743.4      1017.4 ug/L         7.74      1017.4 ppb         7.74   0.76%
   QC value within limits for S 181.975 Axial  Recovery = 101.74%
Sb 206.836†             1699.5      511.08 ug/L        5.604      511.08 ppb        5.604   1.10%
   QC value within limits for Sb 206.836  Recovery = 102.22%
Se 196.026†              996.7      526.27 ug/L        4.918      526.27 ppb        4.918   0.93%
   QC value within limits for Se 196.026  Recovery = 105.25%
Si 251.611†            83190.2      2552.0 ug/L         5.12      2552.0 ppb         5.12   0.20%
   QC value within limits for Si 251.611  Recovery = 102.08%
Sn 189.927†             2854.8      506.17 ug/L        4.333      506.17 ppb        4.333   0.86%
   QC value within limits for Sn 189.927  Recovery = 101.23%
Sr 421.552†           173201.9      483.71 ug/L       22.327      483.71 ppb       22.327   4.62%
   QC value within limits for Sr 421.552  Recovery = 96.74%
Ti 334.940†           275926.2      505.07 ug/L        0.231      505.07 ppb        0.231   0.05%
   QC value within limits for Ti 334.940  Recovery = 101.01%
Tl 190.801†             1941.7      511.38 ug/L        6.494      511.38 ppb        6.494   1.27%
   QC value within limits for Tl 190.801  Recovery = 102.28%
U 409.014†             14892.9      502.70 ug/L        2.319      502.70 ppb        2.319   0.46%
   QC value within limits for U 409.014  Recovery = 100.54%
V 292.402†             55725.3      512.14 ug/L        0.679      512.14 ppb        0.679   0.13%
   QC value within limits for V 292.402  Recovery = 102.43%
Zn 213.857†            55293.7      505.68 ug/L        0.274      505.68 ppb        0.274   0.05%
   QC value within limits for Zn 213.857  Recovery = 101.14%
SiO2†                  82495.8      5386.9 ug/L         6.44      5386.9 ppb         6.44   0.12%
   QC value within limits for SiO2  Recovery = 100.74%
All analyte(s) passed QC.
```

Sequence No.: 16
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 11:59:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6676.6	6676.6	89.3	%			12:01:16
1	Y RADIAL	6221.6	6221.6	89.85	%			12:01:16
1	Al 396.153Radial†	-74.0	-10.2	-8.3558	ug/L	-8.3558	ppb	12:01:16
1	Ca 317.933Radial†	31.1	5.8	8.1594	ug/L	8.1594	ppb	12:01:36
1	Fe 238.204 Radial†	36.5	6.1	25.452	ug/L	25.452	ppb	12:01:36
1	K 766.490 Radial†	2487.6	377.7	81.514	ug/L	81.514	ppb	12:01:16
1	Mg 279.077 IEC†	6.6	4.3	107.37	ug/L	107.37	ppb	12:01:36
1	Na 589.592 Radial†	-155.2	-38.2	-2.3449	ug/L	-2.3449	ppb	12:01:16
1	Sr 421.552†	-43.6	7.0	0.0196	ug/L	0.0196	ppb	12:01:16
1	Sc 361.383	722196.1	722196.1	100.49	%			12:02:33
1	Y 371.029	566873.9	566873.9	100.87	%			12:02:33
1	Ag 328.068†	661.5	25.6	0.1612	ug/L	0.1612	ppb	12:02:33
1	As 188.979†	-35.7	-0.0	-0.0121	ug/L	-0.0121	ppb	12:02:53
1	B 249.677†	-645.8	297.3	7.4909	ug/L	7.4909	ppb	12:02:33
1	Ba 233.527†	10.4	9.8	0.0698	ug/L	0.0698	ppb	12:02:53
1	Be 313.107†	-4667.2	237.2	0.1083	ug/L	0.1083	ppb	12:02:33
1	Cd 226.502†	-262.4	20.0	0.2521	ug/L	0.2521	ppb	12:02:53
1	Co 228.616†	-99.7	0.3	0.0031	ug/L	0.0031	ppb	12:02:53
1	Cr 267.716†	-90.0	-12.1	-0.1697	ug/L	-0.1697	ppb	12:02:33
1	Cu 324.752†	5702.3	36.2	0.1327	ug/L	0.1327	ppb	12:02:33
1	Mn 257.610†	713.1	30.1	0.0343	ug/L	0.0343	ppb	12:02:33
1	Mo 202.031†	9.5	-7.7	-0.5372	ug/L	-0.5372	ppb	12:02:53
1	Ni 231.604†	138.5	18.0	0.4814	ug/L	0.4814	ppb	12:02:53
1	P 214.914†	305.5	-10.8	-5.5324	ug/L	-5.5324	ppb	12:02:53
1	Pb 220.353†	12.8	26.0	3.0925	ug/L	3.0925	ppb	12:02:53
1	S 181.975 Axial†	84.6	8.8	12.017	ug/L	12.017	ppb	12:02:53
1	Sb 206.836†	59.4	1.9	0.5718	ug/L	0.5718	ppb	12:02:53
1	Se 196.026†	-32.6	-3.7	-1.8088	ug/L	-1.8088	ppb	12:02:53
1	Si 251.611†	471.3	57.2	1.7336	ug/L	1.7336	ppb	12:02:53
1	Sn 189.927†	18.9	6.3	1.1223	ug/L	1.1223	ppb	12:02:53
1	Ti 334.940†	-1417.4	-62.3	-0.1140	ug/L	-0.1140	ppb	12:02:33
1	Tl 190.801†	-48.4	12.6	3.2842	ug/L	3.2842	ppb	12:02:53
1	U 409.014†	-4843.9	28.3	0.9560	ug/L	0.9560	ppb	12:02:33
1	V 292.402†	-1549.3	23.4	0.2065	ug/L	0.2065	ppb	12:02:33
1	Zn 213.857†	997.4	67.5	0.6132	ug/L	0.6132	ppb	12:02:53
1	SiO2†	511.0	71.6	4.6352	ug/L	4.6352	ppb	12:03:49
2	Sc Radial	7850.3	7850.3	105	%			12:01:41
2	Y RADIAL	7299.1	7299.1	105.4	%			12:01:41
2	Al 396.153Radial†	-80.8	-4.3	-3.5266	ug/L	-3.5266	ppb	12:01:41
2	Ca 317.933Radial†	37.6	6.7	9.5130	ug/L	9.5130	ppb	12:02:01
2	Fe 238.204 Radial†	37.1	0.5	2.1865	ug/L	2.1865	ppb	12:02:01
2	K 766.490 Radial†	2543.6	14.7	3.1649	ug/L	3.1649	ppb	12:01:41
2	Mg 279.077 IEC†	5.2	1.9	46.597	ug/L	46.597	ppb	12:02:01
2	Na 589.592 Radial†	-97.8	42.4	2.6046	ug/L	2.6046	ppb	12:01:41
2	Sr 421.552†	-10.6	45.8	0.1278	ug/L	0.1278	ppb	12:01:41
2	Sc 361.383	738106.8	738106.8	102.70	%			12:02:58
2	Y 371.029	578058.3	578058.3	102.86	%			12:02:58
2	Ag 328.068†	702.7	51.6	0.3084	ug/L	0.3084	ppb	12:02:58
2	As 188.979†	-28.3	7.9	2.8321	ug/L	2.8321	ppb	12:03:18
2	B 249.677†	-737.6	221.8	5.5873	ug/L	5.5873	ppb	12:02:58
2	Ba 233.527†	34.1	32.7	0.2315	ug/L	0.2315	ppb	12:03:18
2	Be 313.107†	-4673.0	331.6	0.1518	ug/L	0.1518	ppb	12:02:58
2	Cd 226.502†	-270.9	17.3	0.2209	ug/L	0.2209	ppb	12:03:18
2	Co 228.616†	-85.3	16.4	0.2843	ug/L	0.2843	ppb	12:03:18
2	Cr 267.716†	-38.2	40.2	0.5638	ug/L	0.5638	ppb	12:02:58
2	Cu 324.752†	5712.8	-75.9	-0.2750	ug/L	-0.2750	ppb	12:02:58
2	Mn 257.610†	706.1	8.0	0.0082	ug/L	0.0082	ppb	12:02:58
2	Mo 202.031†	20.8	3.1	0.2205	ug/L	0.2205	ppb	12:03:18
2	Ni 231.604†	123.8	0.7	0.0186	ug/L	0.0186	ppb	12:03:18

2	P 214.914†	315.2	-7.9	-3.9885	ug/L	-3.9885 ppb	12:03:18
2	Pb 220.353†	-5.4	8.0	0.9477	ug/L	0.9477 ppb	12:03:18
2	S 181.975 Axial†	83.9	6.3	8.5731	ug/L	8.5731 ppb	12:03:18
2	Sb 206.836†	59.1	0.3	0.0711	ug/L	0.0711 ppb	12:03:18
2	Se 196.026†	-25.3	4.1	2.1232	ug/L	2.1232 ppb	12:03:18
2	Si 251.611†	478.4	54.0	1.6718	ug/L	1.6718 ppb	12:03:18
2	Sn 189.927†	9.6	-3.2	-0.5582	ug/L	-0.5582 ppb	12:03:18
2	Ti 334.940†	-1390.3	-5.5	-0.0105	ug/L	-0.0105 ppb	12:02:58
2	Tl 190.801†	-56.0	6.2	1.6193	ug/L	1.6193 ppb	12:03:18
2	U 409.014†	-4919.4	58.8	1.9895	ug/L	1.9895 ppb	12:02:58
2	V 292.402†	-1566.7	39.7	0.3675	ug/L	0.3675 ppb	12:02:58
2	Zn 213.857†	991.9	40.7	0.3737	ug/L	0.3737 ppb	12:03:18
2	SiO2†	510.4	60.1	3.9610	ug/L	3.9610 ppb	12:03:54
3	Sc Radial	7481.5	7481.5	100	%		12:02:06
3	Y RADIAL	6948.3	6948.3	100.3	%		12:02:06
3	Al 396.153Radial†	-66.5	6.2	5.1212	ug/L	5.1212 ppb	12:02:06
3	Ca 317.933Radial†	29.3	0.2	0.2331	ug/L	0.2331 ppb	12:02:26
3	Fe 238.204 Radial†	38.4	3.6	15.060	ug/L	15.060 ppb	12:02:26
3	K 766.490 Radial†	2403.8	-5.6	-1.2057	ug/L	-1.2057 ppb	12:02:06
3	Mg 279.077 IEC†	2.5	-0.6	-13.800	ug/L	-13.800 ppb	12:02:26
3	Na 589.592 Radial†	-192.8	-57.0	-3.4996	ug/L	-3.4996 ppb	12:02:06
3	Sr 421.552†	-56.4	-0.4	-0.0012	ug/L	-0.0012 ppb	12:02:06
3	Sc 361.383	737609.7	737609.7	102.63	%		12:03:24
3	Y 371.029	577833.9	577833.9	102.82	%		12:03:24
3	Ag 328.068†	559.5	-87.4	-0.5206	ug/L	-0.5206 ppb	12:03:24
3	As 188.979†	-28.1	8.1	2.9158	ug/L	2.9158 ppb	12:03:44
3	B 249.677†	-718.9	239.4	6.0314	ug/L	6.0314 ppb	12:03:24
3	Ba 233.527†	43.0	41.4	0.2924	ug/L	0.2924 ppb	12:03:44
3	Be 313.107†	-4699.2	303.1	0.1387	ug/L	0.1387 ppb	12:03:24
3	Cd 226.502†	-276.5	11.7	0.1475	ug/L	0.1475 ppb	12:03:44
3	Co 228.616†	-81.7	19.8	0.3442	ug/L	0.3442 ppb	12:03:44
3	Cr 267.716†	-60.4	18.5	0.2587	ug/L	0.2587 ppb	12:03:24
3	Cu 324.752†	5668.2	-115.6	-0.4180	ug/L	-0.4180 ppb	12:03:24
3	Mn 257.610†	759.7	60.6	0.0690	ug/L	0.0690 ppb	12:03:24
3	Mo 202.031†	21.7	4.0	0.2812	ug/L	0.2812 ppb	12:03:44
3	Ni 231.604†	123.3	0.3	0.0086	ug/L	0.0086 ppb	12:03:44
3	P 214.914†	328.6	5.3	2.8084	ug/L	2.8084 ppb	12:03:44
3	Pb 220.353†	-14.4	-0.8	-0.0937	ug/L	-0.0937 ppb	12:03:44
3	S 181.975 Axial†	79.6	2.2	2.9820	ug/L	2.9820 ppb	12:03:44
3	Sb 206.836†	63.1	4.2	1.2666	ug/L	1.2666 ppb	12:03:44
3	Se 196.026†	-26.7	2.7	1.4534	ug/L	1.4534 ppb	12:03:44
3	Si 251.611†	490.5	66.2	2.0309	ug/L	2.0309 ppb	12:03:44
3	Sn 189.927†	16.4	3.4	0.6087	ug/L	0.6087 ppb	12:03:44
3	Ti 334.940†	-1399.2	-15.1	-0.0297	ug/L	-0.0297 ppb	12:03:24
3	Tl 190.801†	-58.2	4.1	1.0626	ug/L	1.0626 ppb	12:03:44
3	U 409.014†	-4842.3	130.6	4.4214	ug/L	4.4214 ppb	12:03:24
3	V 292.402†	-1583.7	22.2	0.2111	ug/L	0.2111 ppb	12:03:24
3	Zn 213.857†	1000.5	49.7	0.4579	ug/L	0.4579 ppb	12:03:44
3	SiO2†	479.5	30.3	1.9621	ug/L	1.9621 ppb	12:03:59

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	732637.5	101.94	%	1.259				1.23%
Sc Radial	7336.1	98.1	%	8.03				8.18%
Y 371.029	574255.4	102.18	%	1.138				1.11%
Y RADIAL	6823.0	98.54	%	7.936				8.05%
Ag 328.068†	-3.4	-0.0170	ug/L	0.44227	-0.0170	ppb	0.44227	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-2.7	-2.2537	ug/L	6.82809	-2.2537	ppb	6.82809	302.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.3	1.9119	ug/L	1.66680	1.9119	ppb	1.66680	87.18%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	252.8	6.3699	ug/L	0.99589	6.3699	ppb	0.99589	15.63%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	28.0	0.1979	ug/L	0.11506	0.1979	ppb	0.11506	58.14%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	290.6	0.1329	ug/L	0.02230	0.1329	ppb	0.02230	16.78%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.2	5.9685	ug/L	5.01291	5.9685	ppb	5.01291	83.99%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                16.3      0.2069 ug/L       0.05370      0.2069 ppb        0.05370  25.96%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                12.1      0.2105 ug/L       0.18212      0.2105 ppb        0.18212  86.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                15.5      0.2176 ug/L       0.36845      0.2176 ppb        0.36845 169.30%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -51.8     -0.1868 ug/L       0.28574     -0.1868 ppb        0.28574 152.98%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4      14.233 ug/L       11.6546      14.233 ppb        11.6546  81.89%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         128.9      27.824 ug/L       46.5479      27.824 ppb        46.5479 167.29%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.9      46.722 ug/L       60.5843      46.722 ppb        60.5843 129.67%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                32.9      0.0372 ug/L       0.03054      0.0372 ppb        0.03054  82.18%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.2     -0.0118 ug/L       0.45599     -0.0118 ppb        0.45599 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -17.6     -1.0800 ug/L       3.24277     -1.0800 ppb        3.24277 300.27%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 6.3      0.1695 ug/L       0.27013      0.1695 ppb        0.27013 159.35%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -4.4     -2.2375 ug/L       4.43752     -2.2375 ppb        4.43752 198.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                11.1      1.3155 ug/L       1.62466      1.3155 ppb        1.62466 123.50%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.7      7.8573 ug/L       4.55971      7.8573 ppb        4.55971  58.03%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 2.1      0.6365 ug/L       0.60041      0.6365 ppb        0.60041  94.33%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 1.1      0.5893 ug/L       2.10363      0.5893 ppb        2.10363 356.99%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                59.1      1.8121 ug/L       0.19200      1.8121 ppb        0.19200  10.60%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 2.2      0.3909 ug/L       0.86112      0.3909 ppb        0.86112 220.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                17.5      0.0487 ug/L       0.06926      0.0487 ppb        0.06926 142.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -27.6     -0.0514 ug/L       0.05503     -0.0514 ppb        0.05503 107.08%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 7.6      1.9887 ug/L       1.15598      1.9887 ppb        1.15598  58.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 72.6      2.4556 ug/L       1.77912      2.4556 ppb        1.77912  72.45%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 28.4      0.2617 ug/L       0.09166      0.2617 ppb        0.09166  35.03%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                52.6      0.4816 ug/L       0.12146      0.4816 ppb        0.12146  25.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      54.0      3.5195 ug/L       1.39017      3.5195 ppb        1.39017  39.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 13:02:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7281.5	7281.5	97.4	%			13:05:06
1	Y RADIAL	6680.3	6680.3	96.48	%			13:05:06
1	Al 396.153Radial†	6299.3	6539.0	5362.9	ug/L	5362.9	ppb	13:04:46
1	Ca 317.933Radial†	3703.5	3772.6	5344.4	ug/L	5344.4	ppb	13:05:06
1	Fe 238.204 Radial†	1228.0	1225.8	5126.1	ug/L	5126.1	ppb	13:05:06
1	K 766.490 Radial†	24961.3	23216.1	4995.5	ug/L	4995.5	ppb	13:04:46
1	Mg 279.077 IEC†	211.7	214.2	5347.0	ug/L	5347.0	ppb	13:05:06
1	Na 589.592 Radial†	166781.0	171339.3	10516	ug/L	10516	ppb	13:04:46
1	Sr 421.552†	173274.8	177925.7	496.90	ug/L	496.90	ppb	13:04:46
1	Sc 361.383	741755.7	741755.7	103.21	%			13:06:04
1	Y 371.029	572432.8	572432.8	101.86	%			13:06:04
1	Ag 328.068†	89777.9	86353.5	519.02	ug/L	519.02	ppb	13:06:09
1	As 188.979†	1445.8	1436.2	521.17	ug/L	521.17	ppb	13:06:29
1	B 249.677†	20111.0	20425.5	511.73	ug/L	511.73	ppb	13:06:09
1	Ba 233.527†	75676.2	73322.4	518.48	ug/L	518.48	ppb	13:06:09
1	Be 313.107†	1161288.0	1130057.2	518.40	ug/L	518.40	ppb	13:06:04
1	Cd 226.502†	41966.5	40942.5	521.96	ug/L	521.96	ppb	13:06:09
1	Co 228.616†	31029.2	30163.8	523.33	ug/L	523.33	ppb	13:06:09
1	Cr 267.716†	38024.5	36919.4	518.06	ug/L	518.06	ppb	13:06:09
1	Cu 324.752†	151507.1	141157.3	511.81	ug/L	511.81	ppb	13:06:09
1	Mn 257.610†	483722.8	468000.8	516.64	ug/L	516.64	ppb	13:06:04
1	Mo 202.031†	7486.1	7236.2	509.75	ug/L	509.75	ppb	13:06:29
1	Ni 231.604†	20203.6	19455.5	519.71	ug/L	519.71	ppb	13:06:09
1	P 214.914†	5506.0	5020.0	2465.8	ug/L	2465.8	ppb	13:06:29
1	Pb 220.353†	4373.3	4250.6	507.66	ug/L	507.66	ppb	13:06:29
1	S 181.975 Axial†	861.0	758.8	1038.5	ug/L	1038.5	ppb	13:06:29
1	Sb 206.836†	1842.1	1727.5	519.43	ug/L	519.43	ppb	13:06:29
1	Se 196.026†	1015.3	1012.5	534.84	ug/L	534.84	ppb	13:06:29
1	Si 251.611†	87862.7	84718.7	2599.0	ug/L	2599.0	ppb	13:06:09
1	Sn 189.927†	3005.5	2899.5	514.11	ug/L	514.11	ppb	13:06:29
1	Ti 334.940†	282291.1	274861.0	503.12	ug/L	503.12	ppb	13:06:09
1	Tl 190.801†	1971.1	1970.5	518.80	ug/L	518.80	ppb	13:06:29
1	U 409.014†	11031.4	15537.1	524.48	ug/L	524.48	ppb	13:06:09
1	V 292.402†	57055.2	56846.2	522.39	ug/L	522.39	ppb	13:06:09
1	Zn 213.857†	58967.8	56209.0	513.97	ug/L	513.97	ppb	13:06:09
1	SiO2†	87498.0	84340.2	5507.8	ug/L	5507.8	ppb	13:07:37
2	Sc Radial	7294.7	7294.7	97.6	%			13:05:32
2	Y RADIAL	6695.2	6695.2	96.69	%			13:05:32
2	Al 396.153Radial†	6307.0	6535.2	5359.7	ug/L	5359.7	ppb	13:05:12
2	Ca 317.933Radial†	3668.9	3730.3	5284.4	ug/L	5284.4	ppb	13:05:32
2	Fe 238.204 Radial†	1215.4	1210.6	5062.6	ug/L	5062.6	ppb	13:05:32
2	K 766.490 Radial†	25174.2	23388.0	5032.6	ug/L	5032.6	ppb	13:05:12
2	Mg 279.077 IEC†	212.5	214.7	5359.2	ug/L	5359.2	ppb	13:05:32
2	Na 589.592 Radial†	167635.3	171905.9	10550	ug/L	10550	ppb	13:05:12
2	Sr 421.552†	173780.8	178123.3	497.45	ug/L	497.45	ppb	13:05:12
2	Sc 361.383	744205.0	744205.0	103.55	%			13:06:35
2	Y 371.029	574002.9	574002.9	102.14	%			13:06:35
2	Ag 328.068†	89345.2	85649.2	514.78	ug/L	514.78	ppb	13:06:40
2	As 188.979†	1454.7	1440.3	522.60	ug/L	522.60	ppb	13:07:00
2	B 249.677†	20044.2	20296.9	508.53	ug/L	508.53	ppb	13:06:40
2	Ba 233.527†	75470.1	72882.1	515.37	ug/L	515.37	ppb	13:06:40
2	Be 313.107†	1157004.1	1122217.0	514.80	ug/L	514.80	ppb	13:06:35
2	Cd 226.502†	41734.2	40584.4	517.39	ug/L	517.39	ppb	13:06:40
2	Co 228.616†	30787.2	29831.1	517.58	ug/L	517.58	ppb	13:06:40
2	Cr 267.716†	37890.1	36668.4	514.54	ug/L	514.54	ppb	13:06:40
2	Cu 324.752†	150966.9	140152.4	508.17	ug/L	508.17	ppb	13:06:40
2	Mn 257.610†	483147.7	465903.0	514.32	ug/L	514.32	ppb	13:06:35
2	Mo 202.031†	7534.1	7258.7	511.33	ug/L	511.33	ppb	13:07:00
2	Ni 231.604†	20097.6	19288.7	515.26	ug/L	515.26	ppb	13:06:40

2	P 214.914†	5532.6	5028.1	2470.8 ug/L	2470.8 ppb	13:07:00
2	Pb 220.353†	4435.0	4296.2	513.10 ug/L	513.10 ppb	13:07:00
2	S 181.975 Axial†	855.6	750.9	1027.6 ug/L	1027.6 ppb	13:07:00
2	Sb 206.836†	1849.1	1728.4	519.83 ug/L	519.83 ppb	13:07:00
2	Se 196.026†	1031.5	1024.9	540.96 ug/L	540.96 ppb	13:07:00
2	Si 251.611†	87511.3	84099.1	2579.8 ug/L	2579.8 ppb	13:06:40
2	Sn 189.927†	3021.0	2904.9	515.06 ug/L	515.06 ppb	13:07:00
2	Ti 334.940†	281132.5	272841.9	499.42 ug/L	499.42 ppb	13:06:40
2	Tl 190.801†	1993.9	1986.3	522.92 ug/L	522.92 ppb	13:07:00
2	U 409.014†	11073.6	15542.7	524.68 ug/L	524.68 ppb	13:06:40
2	V 292.402†	56696.5	56317.8	517.62 ug/L	517.62 ppb	13:06:40
2	Zn 213.857†	58743.5	55804.3	510.27 ug/L	510.27 ppb	13:06:40
2	SiO2†	86542.0	83137.9	5428.6 ug/L	5428.6 ppb	13:07:42
3	Sc Radial	7304.1	7304.1	97.7 %		13:05:57
3	Y RADIAL	6729.5	6729.5	97.19 %		13:05:57
3	Al 396.153Radial†	6230.7	6448.7	5288.8 ug/L	5288.8 ppb	13:05:37
3	Ca 317.933Radial†	3697.0	3754.2	5318.3 ug/L	5318.3 ppb	13:05:57
3	Fe 238.204 Radial†	1230.4	1224.3	5119.7 ug/L	5119.7 ppb	13:05:57
3	K 766.490 Radial†	24732.5	22902.6	4928.0 ug/L	4928.0 ppb	13:05:37
3	Mg 279.077 IEC†	214.6	216.5	5404.1 ug/L	5404.1 ppb	13:05:57
3	Na 589.592 Radial†	164955.2	168941.0	10368 ug/L	10368 ppb	13:05:37
3	Sr 421.552†	171454.6	175512.4	490.16 ug/L	490.16 ppb	13:05:37
3	Sc 361.383	749321.2	749321.2	104.26 %		13:07:06
3	Y 371.029	578032.5	578032.5	102.85 %		13:07:06
3	Ag 328.068†	89258.3	84976.8	510.78 ug/L	510.78 ppb	13:07:11
3	As 188.979†	1443.6	1420.0	515.27 ug/L	515.27 ppb	13:07:31
3	B 249.677†	19999.5	20121.8	504.13 ug/L	504.13 ppb	13:07:11
3	Ba 233.527†	75388.4	72306.1	511.30 ug/L	511.30 ppb	13:07:11
3	Be 313.107†	1168029.6	1125162.9	516.14 ug/L	516.14 ppb	13:07:06
3	Cd 226.502†	41658.4	40236.6	512.95 ug/L	512.95 ppb	13:07:11
3	Co 228.616†	30816.1	29655.8	514.53 ug/L	514.53 ppb	13:07:11
3	Cr 267.716†	37880.8	36409.6	510.91 ug/L	510.91 ppb	13:07:11
3	Cu 324.752†	150551.5	138758.6	503.12 ug/L	503.12 ppb	13:07:11
3	Mn 257.610†	486365.0	465803.0	514.21 ug/L	514.21 ppb	13:07:06
3	Mo 202.031†	7486.1	7162.9	504.59 ug/L	504.59 ppb	13:07:31
3	Ni 231.604†	20123.8	19181.4	512.39 ug/L	512.39 ppb	13:07:11
3	P 214.914†	5487.2	4948.1	2430.7 ug/L	2430.7 ppb	13:07:31
3	Pb 220.353†	4377.3	4211.6	503.00 ug/L	503.00 ppb	13:07:31
3	S 181.975 Axial†	855.2	744.9	1019.4 ug/L	1019.4 ppb	13:07:31
3	Sb 206.836†	1834.1	1701.9	511.79 ug/L	511.79 ppb	13:07:31
3	Se 196.026†	1001.4	989.2	522.93 ug/L	522.93 ppb	13:07:31
3	Si 251.611†	87420.1	83434.6	2559.6 ug/L	2559.6 ppb	13:07:11
3	Sn 189.927†	2997.8	2862.7	507.60 ug/L	507.60 ppb	13:07:31
3	Ti 334.940†	280603.6	270480.9	495.11 ug/L	495.11 ppb	13:07:11
3	Tl 190.801†	1970.7	1950.9	513.65 ug/L	513.65 ppb	13:07:31
3	U 409.014†	10813.4	15220.1	513.76 ug/L	513.76 ppb	13:07:11
3	V 292.402†	56734.7	55980.6	514.45 ug/L	514.45 ppb	13:07:11
3	Zn 213.857†	58697.7	55373.1	506.31 ug/L	506.31 ppb	13:07:11
3	SiO2†	86581.0	82604.7	5394.1 ug/L	5394.1 ppb	13:07:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	745094.0	103.67	%	0.537				0.52%
Sc Radial	7293.4	97.6	%	0.15				0.16%
Y 371.029	574822.7	102.28	%	0.514				0.50%
Y RADIAL	6701.6	96.78	%	0.364				0.38%
Ag 328.068†	85659.8	514.86	ug/L	4.124	514.86	ppb	4.124	0.80%
QC value within limits for Ag 328.068 Recovery = 102.97%								
Al 396.153Radial†	6507.6	5337.1	ug/L	41.89	5337.1	ppb	41.89	0.78%
QC value within limits for Al 396.153Radial Recovery = 106.74%								
As 188.979†	1432.2	519.68	ug/L	3.887	519.68	ppb	3.887	0.75%
QC value within limits for As 188.979 Recovery = 103.94%								
B 249.677†	20281.4	508.13	ug/L	3.820	508.13	ppb	3.820	0.75%
QC value within limits for B 249.677 Recovery = 101.63%								
Ba 233.527†	72836.9	515.05	ug/L	3.605	515.05	ppb	3.605	0.70%
QC value within limits for Ba 233.527 Recovery = 103.01%								
Be 313.107†	1125812.4	516.44	ug/L	1.818	516.44	ppb	1.818	0.35%
QC value within limits for Be 313.107 Recovery = 103.29%								
Ca 317.933Radial†	3752.4	5315.7	ug/L	30.06	5315.7	ppb	30.06	0.57%

QC value within limits for Ca 317.933Radial Recovery = 106.31%

Cd 226.502†	40587.8	517.43 ug/L	4.504	517.43 ppb	4.504	0.87%

QC value within limits for Cd 226.502 Recovery = 103.49%

Co 228.616†	29883.6	518.48 ug/L	4.472	518.48 ppb	4.472	0.86%

QC value within limits for Co 228.616 Recovery = 103.70%

Cr 267.716†	36665.8	514.50 ug/L	3.576	514.50 ppb	3.576	0.70%

QC value within limits for Cr 267.716 Recovery = 102.90%

Cu 324.752†	140022.8	507.70 ug/L	4.365	507.70 ppb	4.365	0.86%

QC value within limits for Cu 324.752 Recovery = 101.54%

Fe 238.204 Radial†	1220.2	5102.8 ug/L	34.97	5102.8 ppb	34.97	0.69%

QC value within limits for Fe 238.204 Radial Recovery = 102.06%

K 766.490 Radial†	23168.9	4985.3 ug/L	53.03	4985.3 ppb	53.03	1.06%

QC value within limits for K 766.490 Radial Recovery = 99.71%

Mg 279.077 IEC†	215.2	5370.1 ug/L	30.07	5370.1 ppb	30.07	0.56%

QC value within limits for Mg 279.077 IEC Recovery = 107.40%

Mn 257.610†	466569.0	515.05 ug/L	1.371	515.05 ppb	1.371	0.27%

QC value within limits for Mn 257.610 Recovery = 103.01%

Mo 202.031†	7219.3	508.56 ug/L	3.523	508.56 ppb	3.523	0.69%

QC value within limits for Mo 202.031 Recovery = 101.71%

Na 589.592 Radial†	170728.7	10478 ug/L	96.6	10478 ppb	96.6	0.92%

QC value within limits for Na 589.592 Radial Recovery = 104.78%

Ni 231.604†	19308.6	515.78 ug/L	3.690	515.78 ppb	3.690	0.72%

QC value within limits for Ni 231.604 Recovery = 103.16%

P 214.914†	4998.7	2455.8 ug/L	21.82	2455.8 ppb	21.82	0.89%

QC value within limits for P 214.914 Recovery = 98.23%

Pb 220.353†	4252.8	507.92 ug/L	5.056	507.92 ppb	5.056	1.00%

QC value within limits for Pb 220.353 Recovery = 101.58%

S 181.975 Axial†	751.5	1028.5 ug/L	9.59	1028.5 ppb	9.59	0.93%

QC value within limits for S 181.975 Axial Recovery = 102.85%

Sb 206.836†	1719.3	517.02 ug/L	4.533	517.02 ppb	4.533	0.88%

QC value within limits for Sb 206.836 Recovery = 103.40%

Se 196.026†	1008.9	532.91 ug/L	9.172	532.91 ppb	9.172	1.72%

QC value within limits for Se 196.026 Recovery = 106.58%

Si 251.611†	84084.2	2579.5 ug/L	19.73	2579.5 ppb	19.73	0.76%

QC value within limits for Si 251.611 Recovery = 103.18%

Sn 189.927†	2889.0	512.26 ug/L	4.062	512.26 ppb	4.062	0.79%

QC value within limits for Sn 189.927 Recovery = 102.45%

Sr 421.552†	177187.1	494.84 ug/L	4.060	494.84 ppb	4.060	0.82%

QC value within limits for Sr 421.552 Recovery = 98.97%

Ti 334.940†	272727.9	499.22 ug/L	4.011	499.22 ppb	4.011	0.80%

QC value within limits for Ti 334.940 Recovery = 99.84%

Tl 190.801†	1969.2	518.46 ug/L	4.648	518.46 ppb	4.648	0.90%

QC value within limits for Tl 190.801 Recovery = 103.69%

U 409.014†	15433.3	520.97 ug/L	6.249	520.97 ppb	6.249	1.20%

QC value within limits for U 409.014 Recovery = 104.19%

V 292.402†	56381.5	518.15 ug/L	3.994	518.15 ppb	3.994	0.77%

QC value within limits for V 292.402 Recovery = 103.63%

Zn 213.857†	55795.5	510.18 ug/L	3.829	510.18 ppb	3.829	0.75%

QC value within limits for Zn 213.857 Recovery = 102.04%

SiO2†	83360.9	5443.5 ug/L	58.29	5443.5 ppb	58.29	1.07%

QC value within limits for SiO2 Recovery = 101.79%

All analyte(s) passed QC.

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 13:09:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7339.6	7339.6	98.2	%			13:11:49
1	Y RADIAL	6824.4	6824.4	98.56	%			13:11:49
1	Al 396.153Radial†	-77.7	-6.5	-5.3397	ug/L	-5.3397	ppb	13:11:49
1	Ca 317.933Radial†	31.1	2.6	3.6605	ug/L	3.6605	ppb	13:12:09
1	Fe 238.204 Radial†	35.4	1.3	5.4250	ug/L	5.4250	ppb	13:12:09
1	K 766.490 Radial†	2410.9	48.1	10.371	ug/L	10.371	ppb	13:11:49
1	Mg 279.077 IEC†	2.6	-0.4	-9.7786	ug/L	-9.7786	ppb	13:12:09
1	Na 589.592 Radial†	-194.8	-62.8	-3.8556	ug/L	-3.8556	ppb	13:11:49
1	Sr 421.552†	-28.9	26.4	0.0738	ug/L	0.0738	ppb	13:11:49
1	Sc 361.383	735705.4	735705.4	102.37	%			13:13:06
1	Y 371.029	575918.7	575918.7	102.48	%			13:13:06
1	Ag 328.068†	609.8	-36.9	-0.2214	ug/L	-0.2214	ppb	13:13:06
1	As 188.979†	-29.2	6.9	2.4993	ug/L	2.4993	ppb	13:13:26
1	B 249.677†	-756.7	200.7	5.0583	ug/L	5.0583	ppb	13:13:06
1	Ba 233.527†	3.1	2.6	0.0191	ug/L	0.0191	ppb	13:13:26
1	Be 313.107†	-4761.6	230.3	0.1056	ug/L	0.1056	ppb	13:13:06
1	Cd 226.502†	-263.7	23.5	0.2992	ug/L	0.2992	ppb	13:13:26
1	Co 228.616†	-97.4	4.3	0.0754	ug/L	0.0754	ppb	13:13:26
1	Cr 267.716†	-49.2	29.3	0.4105	ug/L	0.4105	ppb	13:13:06
1	Cu 324.752†	5670.5	-99.0	-0.3586	ug/L	-0.3586	ppb	13:13:06
1	Mn 257.610†	756.0	58.9	0.0658	ug/L	0.0658	ppb	13:13:06
1	Mo 202.031†	20.7	3.1	0.2182	ug/L	0.2182	ppb	13:13:26
1	Ni 231.604†	145.5	22.3	0.5970	ug/L	0.5970	ppb	13:13:26
1	P 214.914†	298.1	-23.6	-11.955	ug/L	-11.955	ppb	13:13:26
1	Pb 220.353†	-12.3	1.3	0.1482	ug/L	0.1482	ppb	13:13:26
1	S 181.975 Axial†	87.8	10.4	14.208	ug/L	14.208	ppb	13:13:26
1	Sb 206.836†	53.6	-4.9	-1.4416	ug/L	-1.4416	ppb	13:13:26
1	Se 196.026†	-20.9	8.4	4.2944	ug/L	4.2944	ppb	13:13:26
1	Si 251.611†	501.3	77.9	2.3948	ug/L	2.3948	ppb	13:13:26
1	Sn 189.927†	14.5	1.7	0.2979	ug/L	0.2979	ppb	13:13:26
1	Ti 334.940†	-1320.2	58.6	0.1051	ug/L	0.1051	ppb	13:13:06
1	Tl 190.801†	-63.1	-0.9	-0.2409	ug/L	-0.2409	ppb	13:13:26
1	U 409.014†	-4805.0	154.9	5.2424	ug/L	5.2424	ppb	13:13:06
1	V 292.402†	-1545.0	56.0	0.5201	ug/L	0.5201	ppb	13:13:06
1	Zn 213.857†	1008.0	59.6	0.5466	ug/L	0.5466	ppb	13:13:26
1	SiO2†	537.4	88.1	5.7670	ug/L	5.7670	ppb	13:14:22
2	Sc Radial	7299.4	7299.4	97.7	%			13:12:14
2	Y RADIAL	6806.6	6806.6	98.30	%			13:12:14
2	Al 396.153Radial†	-64.9	6.2	5.1385	ug/L	5.1385	ppb	13:12:14
2	Ca 317.933Radial†	31.8	3.5	4.9128	ug/L	4.9128	ppb	13:12:34
2	Fe 238.204 Radial†	39.9	6.1	25.460	ug/L	25.460	ppb	13:12:34
2	K 766.490 Radial†	2496.6	149.3	32.227	ug/L	32.227	ppb	13:12:14
2	Mg 279.077 IEC†	1.3	-1.7	-42.568	ug/L	-42.568	ppb	13:12:34
2	Na 589.592 Radial†	-273.7	-144.7	-8.8794	ug/L	-8.8794	ppb	13:12:14
2	Sr 421.552†	4.5	60.4	0.1688	ug/L	0.1688	ppb	13:12:14
2	Sc 361.383	768724.4	768724.4	106.96	%			13:13:31
2	Y 371.029	602364.5	602364.5	107.18	%			13:13:31
2	Ag 328.068†	798.0	113.4	0.6792	ug/L	0.6792	ppb	13:13:31
2	As 188.979†	-36.8	1.1	0.3905	ug/L	0.3905	ppb	13:13:51
2	B 249.677†	-757.7	231.5	5.8327	ug/L	5.8327	ppb	13:13:31
2	Ba 233.527†	24.3	22.2	0.1574	ug/L	0.1574	ppb	13:13:51
2	Be 313.107†	-4731.8	458.0	0.2099	ug/L	0.2099	ppb	13:13:31
2	Cd 226.502†	-281.1	18.3	0.2310	ug/L	0.2310	ppb	13:13:51
2	Co 228.616†	-98.3	7.6	0.1297	ug/L	0.1297	ppb	13:13:51
2	Cr 267.716†	-37.2	42.6	0.5951	ug/L	0.5951	ppb	13:13:31
2	Cu 324.752†	5667.3	-340.0	-1.2308	ug/L	-1.2308	ppb	13:13:31
2	Mn 257.610†	765.8	36.3	0.0441	ug/L	0.0441	ppb	13:13:31
2	Mo 202.031†	12.7	-5.3	-0.3691	ug/L	-0.3691	ppb	13:13:51
2	Ni 231.604†	129.7	1.5	0.0392	ug/L	0.0392	ppb	13:13:51

2	P 214.914†	307.7	-27.1	-13.596	ug/L	-13.596 ppb	13:13:51
2	Pb 220.353†	-14.8	-0.6	-0.0732	ug/L	-0.0732 ppb	13:13:51
2	S 181.975 Axial†	78.9	-1.7	-2.3105	ug/L	-2.3105 ppb	13:13:51
2	Sb 206.836†	59.0	-2.1	-0.6442	ug/L	-0.6442 ppb	13:13:51
2	Se 196.026†	-24.1	6.3	3.2860	ug/L	3.2860 ppb	13:13:51
2	Si 251.611†	664.4	209.4	6.4638	ug/L	6.4638 ppb	13:13:51
2	Sn 189.927†	12.6	-0.7	-0.1213	ug/L	-0.1213 ppb	13:13:51
2	Ti 334.940†	-1365.3	71.8	0.1274	ug/L	0.1274 ppb	13:13:31
2	Tl 190.801†	-46.9	16.9	4.4161	ug/L	4.4161 ppb	13:13:51
2	U 409.014†	-4885.6	281.1	9.5138	ug/L	9.5138 ppb	13:13:31
2	V 292.402†	-1624.1	46.8	0.4340	ug/L	0.4340 ppb	13:13:31
2	Zn 213.857†	994.2	4.4	0.0406	ug/L	0.0406 ppb	13:13:51
2	SiO2†	527.4	56.1	3.6863	ug/L	3.6863 ppb	13:14:27
3	Sc Radial	7409.2	7409.2	99.1	%		13:12:39
3	Y RADIAL	6911.5	6911.5	99.82	%		13:12:39
3	Al 396.153Radial†	-54.6	17.5	14.385	ug/L	14.385 ppb	13:12:39
3	Ca 317.933Radial†	32.6	3.8	5.3612	ug/L	5.3612 ppb	13:12:59
3	Fe 238.204 Radial†	32.0	-2.5	-10.621	ug/L	-10.621 ppb	13:12:59
3	K 766.490 Radial†	2415.8	29.9	6.4454	ug/L	6.4454 ppb	13:12:39
3	Mg 279.077 IEC†	4.7	1.7	43.296	ug/L	43.296 ppb	13:12:59
3	Na 589.592 Radial†	-201.9	-68.2	-4.1837	ug/L	-4.1837 ppb	13:12:39
3	Sr 421.552†	-23.6	32.1	0.0896	ug/L	0.0896 ppb	13:12:39
3	Sc 361.383	732304.3	732304.3	101.89	%		13:13:57
3	Y 371.029	573568.0	573568.0	102.06	%		13:13:57
3	Ag 328.068†	701.6	55.9	0.3317	ug/L	0.3317 ppb	13:13:57
3	As 188.979†	-28.6	7.3	2.6374	ug/L	2.6374 ppb	13:14:17
3	B 249.677†	-724.4	229.0	5.7731	ug/L	5.7731 ppb	13:13:57
3	Ba 233.527†	26.2	25.3	0.1787	ug/L	0.1787 ppb	13:14:17
3	Be 313.107†	-4592.5	374.6	0.1718	ug/L	0.1718 ppb	13:13:57
3	Cd 226.502†	-278.3	8.0	0.1038	ug/L	0.1038 ppb	13:14:17
3	Co 228.616†	-103.0	-1.7	-0.0274	ug/L	-0.0274 ppb	13:14:17
3	Cr 267.716†	-65.7	12.9	0.1810	ug/L	0.1810 ppb	13:13:57
3	Cu 324.752†	5614.1	-128.7	-0.4670	ug/L	-0.4670 ppb	13:13:57
3	Mn 257.610†	731.2	38.0	0.0397	ug/L	0.0397 ppb	13:13:57
3	Mo 202.031†	27.9	10.2	0.7177	ug/L	0.7177 ppb	13:14:17
3	Ni 231.604†	139.4	17.0	0.4539	ug/L	0.4539 ppb	13:14:17
3	P 214.914†	328.4	7.5	3.9420	ug/L	3.9420 ppb	13:14:17
3	Pb 220.353†	0.7	14.0	1.6695	ug/L	1.6695 ppb	13:14:17
3	S 181.975 Axial†	89.7	12.7	17.328	ug/L	17.328 ppb	13:14:17
3	Sb 206.836†	58.2	-0.1	-0.0504	ug/L	-0.0504 ppb	13:14:17
3	Se 196.026†	-29.1	0.2	0.0784	ug/L	0.0784 ppb	13:14:17
3	Si 251.611†	486.7	65.9	2.0347	ug/L	2.0347 ppb	13:14:17
3	Sn 189.927†	6.7	-5.9	-1.0522	ug/L	-1.0522 ppb	13:14:17
3	Ti 334.940†	-1290.1	82.2	0.1510	ug/L	0.1510 ppb	13:13:57
3	Tl 190.801†	-68.9	-6.9	-1.7955	ug/L	-1.7955 ppb	13:14:17
3	U 409.014†	-4958.8	-17.9	-0.6055	ug/L	-0.6055 ppb	13:13:57
3	V 292.402†	-1571.6	22.8	0.2167	ug/L	0.2167 ppb	13:13:57
3	Zn 213.857†	1009.2	65.4	0.6006	ug/L	0.6006 ppb	13:14:17
3	SiO2†	470.1	24.5	1.6090	ug/L	1.6090 ppb	13:14:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	745578.0	103.74	%	2.799				2.70%
Sc Radial	7349.4	98.3	%	0.74				0.76%
Y 371.029	583950.4	103.91	%	2.845				2.74%
Y RADIAL	6847.5	98.89	%	0.811				0.82%
Ag 328.068†	44.1	0.2631	ug/L	0.45419	0.2631	ppb	0.45419	172.60%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.8	4.7278	ug/L	9.86858	4.7278	ppb	9.86858	208.74%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.1	1.8424	ug/L	1.25927	1.8424	ppb	1.25927	68.35%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	220.4	5.5547	ug/L	0.43092	5.5547	ppb	0.43092	7.76%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	16.7	0.1184	ug/L	0.08664	0.1184	ppb	0.08664	73.15%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	354.3	0.1625	ug/L	0.05276	0.1625	ppb	0.05276	32.47%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	3.3	4.6449	ug/L	0.88144	4.6449	ppb	0.88144	18.98%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                16.6      0.2113 ug/L       0.09916      0.2113 ppb        0.09916  46.92%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 3.4      0.0592 ug/L       0.07982      0.0592 ppb        0.07982 134.79%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                28.3      0.3955 ug/L       0.20743      0.3955 ppb        0.20743  52.45%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -189.3     -0.6855 ug/L       0.47536     -0.6855 ppb        0.47536  69.35%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.6      6.7546 ug/L      18.07716      6.7546 ppb       18.07716 267.63%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          75.8     16.348 ug/L       13.8911      16.348 ppb        13.8911  84.97%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.1     -3.0170 ug/L      43.32954     -3.0170 ppb       43.32954 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                44.4      0.0499 ug/L       0.01397      0.0499 ppb        0.01397  28.02%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.7      0.1889 ug/L       0.54399      0.1889 ppb        0.54399 287.92%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -91.9     -5.6396 ug/L       2.81058     -5.6396 ppb        2.81058  49.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                13.6      0.3634 ug/L       0.28971      0.3634 ppb        0.28971  79.73%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -14.4     -7.2029 ug/L       9.68661     -7.2029 ppb        9.68661 134.48%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 4.9      0.5815 ug/L       0.94872      0.5815 ppb        0.94872 163.15%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.1      9.7418 ug/L      10.55350      9.7418 ppb       10.55350 108.33%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.4     -0.7121 ug/L       0.69810     -0.7121 ppb        0.69810  98.04%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      2.5530 ug/L       2.20151      2.5530 ppb        2.20151  86.23%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               117.7      3.6311 ug/L       2.45976      3.6311 ppb        2.45976  67.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.7     -0.2919 ug/L       0.69099     -0.2919 ppb        0.69099 236.73%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                39.7      0.1107 ug/L       0.05087      0.1107 ppb        0.05087  45.94%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                70.9      0.1278 ug/L       0.02295      0.1278 ppb        0.02295  17.96%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.0      0.7933 ug/L       3.23236      0.7933 ppb        3.23236 407.48%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                139.3      4.7169 ug/L       5.08007      4.7169 ppb        5.08007 107.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 41.8      0.3903 ug/L       0.15636      0.3903 ppb        0.15636  40.06%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                43.1      0.3959 ug/L       0.30892      0.3959 ppb        0.30892  78.02%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      56.2      3.6874 ug/L       2.07903      3.6874 ppb        2.07903  56.38%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 20
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 14:20:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7268.9	7268.9	97.2	%			14:22:17
1	Y RADIAL	6682.9	6682.9	96.51	%			14:22:17
1	Al 396.153Radial†	6364.0	6616.7	5426.5	ug/L	5426.5	ppb	14:21:57
1	Ca 317.933Radial†	3675.0	3749.9	5312.2	ug/L	5312.2	ppb	14:22:17
1	Fe 238.204 Radial†	1220.9	1220.6	5104.3	ug/L	5104.3	ppb	14:22:17
1	K 766.490 Radial†	25405.0	23716.6	5103.4	ug/L	5103.4	ppb	14:21:57
1	Mg 279.077 IEC†	209.6	212.5	5304.3	ug/L	5304.3	ppb	14:22:17
1	Na 589.592 Radial†	169392.5	174320.7	10699	ug/L	10699	ppb	14:21:57
1	Sr 421.552†	175803.8	180833.6	505.02	ug/L	505.02	ppb	14:21:57
1	Sc 361.383	736145.7	736145.7	102.43	%			14:23:16
1	Y 371.029	568107.5	568107.5	101.09	%			14:23:16
1	Ag 328.068†	88288.3	85562.1	514.28	ug/L	514.28	ppb	14:23:16
1	As 188.979†	1443.8	1445.0	524.36	ug/L	524.36	ppb	14:23:36
1	B 249.677†	19754.4	20225.9	506.76	ug/L	506.76	ppb	14:23:16
1	Ba 233.527†	74705.4	72933.4	515.73	ug/L	515.73	ppb	14:23:16
1	Be 313.107†	1147152.8	1124832.0	516.02	ug/L	516.02	ppb	14:23:16
1	Cd 226.502†	40642.0	39959.4	509.41	ug/L	509.41	ppb	14:23:36
1	Co 228.616†	30160.4	29544.7	512.60	ug/L	512.60	ppb	14:23:36
1	Cr 267.716†	37385.8	36576.7	513.26	ug/L	513.26	ppb	14:23:16
1	Cu 324.752†	149905.1	140712.0	510.20	ug/L	510.20	ppb	14:23:16
1	Mn 257.610†	478523.4	466496.5	514.98	ug/L	514.98	ppb	14:23:16
1	Mo 202.031†	7561.8	7365.3	518.84	ug/L	518.84	ppb	14:23:36
1	Ni 231.604†	19787.9	19198.8	512.86	ug/L	512.86	ppb	14:23:36
1	P 214.914†	5569.3	5122.4	2518.5	ug/L	2518.5	ppb	14:23:36
1	Pb 220.353†	4461.9	4369.3	521.84	ug/L	521.84	ppb	14:23:36
1	S 181.975 Axial†	857.2	761.5	1042.1	ug/L	1042.1	ppb	14:23:36
1	Sb 206.836†	1836.0	1735.3	522.07	ug/L	522.07	ppb	14:23:36
1	Se 196.026†	1023.6	1028.1	542.76	ug/L	542.76	ppb	14:23:36
1	Si 251.611†	86539.5	84075.6	2578.9	ug/L	2578.9	ppb	14:23:16
1	Sn 189.927†	3007.9	2924.1	518.45	ug/L	518.45	ppb	14:23:36
1	Ti 334.940†	284645.0	279243.5	511.15	ug/L	511.15	ppb	14:23:16
1	Tl 190.801†	1978.3	1992.2	524.59	ug/L	524.59	ppb	14:23:36
1	U 409.014†	10517.9	15117.2	510.27	ug/L	510.27	ppb	14:23:16
1	V 292.402†	56077.6	56313.0	517.63	ug/L	517.63	ppb	14:23:16
1	Zn 213.857†	58084.8	55782.3	510.08	ug/L	510.08	ppb	14:23:16
1	SiO2†	87073.4	84571.7	5522.4	ug/L	5522.4	ppb	14:24:36
2	Sc Radial	7373.5	7373.5	98.6	%			14:22:42
2	Y RADIAL	6779.1	6779.1	97.90	%			14:22:42
2	Al 396.153Radial†	6208.6	6366.3	5220.5	ug/L	5220.5	ppb	14:22:22
2	Ca 317.933Radial†	3650.1	3671.1	5200.5	ug/L	5200.5	ppb	14:22:42
2	Fe 238.204 Radial†	1214.0	1195.9	5000.9	ug/L	5000.9	ppb	14:22:42
2	K 766.490 Radial†	24977.7	22912.9	4930.1	ug/L	4930.1	ppb	14:22:22
2	Mg 279.077 IEC†	212.9	212.8	5310.5	ug/L	5310.5	ppb	14:22:42
2	Na 589.592 Radial†	165853.5	168262.0	10327	ug/L	10327	ppb	14:22:22
2	Sr 421.552†	171817.1	174227.6	486.57	ug/L	486.57	ppb	14:22:22
2	Sc 361.383	745644.9	745644.9	103.75	%			14:23:43
2	Y 371.029	574518.9	574518.9	102.23	%			14:23:43
2	Ag 328.068†	88786.8	84944.5	510.56	ug/L	510.56	ppb	14:23:43
2	As 188.979†	1459.8	1442.5	523.43	ug/L	523.43	ppb	14:24:04
2	B 249.677†	19865.1	20086.9	503.28	ug/L	503.28	ppb	14:23:43
2	Ba 233.527†	75307.6	72584.7	513.26	ug/L	513.26	ppb	14:23:43
2	Be 313.107†	1157447.5	1120486.7	514.03	ug/L	514.03	ppb	14:23:43
2	Cd 226.502†	40807.8	39613.7	505.01	ug/L	505.01	ppb	14:24:04
2	Co 228.616†	30335.0	29337.9	509.01	ug/L	509.01	ppb	14:24:04
2	Cr 267.716†	37765.4	36477.5	511.86	ug/L	511.86	ppb	14:23:43
2	Cu 324.752†	151498.8	140383.5	509.00	ug/L	509.00	ppb	14:23:43
2	Mn 257.610†	483051.4	464909.1	513.21	ug/L	513.21	ppb	14:23:43
2	Mo 202.031†	7588.0	7296.6	513.99	ug/L	513.99	ppb	14:24:04
2	Ni 231.604†	19856.2	19018.6	508.04	ug/L	508.04	ppb	14:24:04

2	P 214.914†	5598.5	5081.3	2497.7 ug/L	2497.7 ppb	14:24:04
2	Pb 220.353†	4505.8	4356.1	520.22 ug/L	520.22 ppb	14:24:04
2	S 181.975 Axial†	872.9	765.9	1048.3 ug/L	1048.3 ppb	14:24:04
2	Sb 206.836†	1849.5	1725.4	518.94 ug/L	518.94 ppb	14:24:04
2	Se 196.026†	1016.7	1008.7	532.50 ug/L	532.50 ppb	14:24:04
2	Si 251.611†	87327.2	83758.4	2569.4 ug/L	2569.4 ppb	14:23:43
2	Sn 189.927†	2997.1	2876.2	509.97 ug/L	509.97 ppb	14:24:04
2	Ti 334.940†	287277.4	278240.4	509.31 ug/L	509.31 ppb	14:23:43
2	Tl 190.801†	1977.4	1966.6	517.91 ug/L	517.91 ppb	14:24:04
2	U 409.014†	10533.6	15001.5	506.37 ug/L	506.37 ppb	14:23:43
2	V 292.402†	56503.2	56025.7	514.97 ug/L	514.97 ppb	14:23:43
2	Zn 213.857†	58507.6	55467.4	507.22 ug/L	507.22 ppb	14:23:43
2	SiO2†	87741.9	84133.1	5494.2 ug/L	5494.2 ppb	14:24:41
3	Sc Radial	7240.3	7240.3	96.9 %		14:23:08
3	Y RADIAL	6661.5	6661.5	96.20 %		14:23:08
3	Al 396.153Radial†	6383.5	6662.7	5464.4 ug/L	5464.4 ppb	14:22:48
3	Ca 317.933Radial†	3673.9	3763.7	5331.7 ug/L	5331.7 ppb	14:23:08
3	Fe 238.204 Radial†	1226.4	1231.3	5148.8 ug/L	5148.8 ppb	14:23:08
3	K 766.490 Radial†	25214.2	23623.1	5083.2 ug/L	5083.2 ppb	14:22:48
3	Mg 279.077 IEC†	207.9	211.6	5281.7 ug/L	5281.7 ppb	14:23:08
3	Na 589.592 Radial†	169684.7	175312.2	10759 ug/L	10759 ppb	14:22:48
3	Sr 421.552†	175629.8	181370.1	506.52 ug/L	506.52 ppb	14:22:48
3	Sc 361.383	740782.9	740782.9	103.07 %		14:24:11
3	Y 371.029	571291.1	571291.1	101.65 %		14:24:11
3	Ag 328.068†	88278.7	85013.2	511.01 ug/L	511.01 ppb	14:24:11
3	As 188.979†	1458.3	1450.2	526.22 ug/L	526.22 ppb	14:24:31
3	B 249.677†	19775.7	20125.9	504.23 ug/L	504.23 ppb	14:24:11
3	Ba 233.527†	75004.4	72766.9	514.55 ug/L	514.55 ppb	14:24:11
3	Be 313.107†	1148487.1	1119115.7	513.40 ug/L	513.40 ppb	14:24:11
3	Cd 226.502†	40987.9	40046.6	510.52 ug/L	510.52 ppb	14:24:31
3	Co 228.616†	30462.5	29653.4	514.50 ug/L	514.50 ppb	14:24:31
3	Cr 267.716†	37490.7	36449.9	511.48 ug/L	511.48 ppb	14:24:11
3	Cu 324.752†	150206.8	140088.5	507.94 ug/L	507.94 ppb	14:24:11
3	Mn 257.610†	480485.2	465475.3	513.86 ug/L	513.86 ppb	14:24:11
3	Mo 202.031†	7621.7	7377.2	519.68 ug/L	519.68 ppb	14:24:31
3	Ni 231.604†	19909.6	19196.0	512.78 ug/L	512.78 ppb	14:24:31
3	P 214.914†	5597.5	5115.8	2515.6 ug/L	2515.6 ppb	14:24:31
3	Pb 220.353†	4520.4	4398.8	525.36 ug/L	525.36 ppb	14:24:31
3	S 181.975 Axial†	866.8	765.5	1047.6 ug/L	1047.6 ppb	14:24:31
3	Sb 206.836†	1868.9	1755.9	528.27 ug/L	528.27 ppb	14:24:31
3	Se 196.026†	1025.7	1023.9	540.74 ug/L	540.74 ppb	14:24:31
3	Si 251.611†	86940.6	83935.9	2574.6 ug/L	2574.6 ppb	14:24:11
3	Sn 189.927†	3032.5	2929.6	519.44 ug/L	519.44 ppb	14:24:31
3	Ti 334.940†	284896.7	277748.0	508.42 ug/L	508.42 ppb	14:24:11
3	Tl 190.801†	1987.7	1989.2	523.79 ug/L	523.79 ppb	14:24:31
3	U 409.014†	10425.0	14962.8	505.04 ug/L	505.04 ppb	14:24:11
3	V 292.402†	56204.3	56093.2	515.63 ug/L	515.63 ppb	14:24:11
3	Zn 213.857†	58249.3	55586.9	508.28 ug/L	508.28 ppb	14:24:11
3	SiO2†	87617.3	84567.3	5522.1 ug/L	5522.1 ppb	14:24:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	740857.8	103.08	%	0.661				0.64%
Sc Radial	7294.2	97.6	%	0.94				0.96%
Y 371.029	571305.8	101.66	%	0.570				0.56%
Y RADIAL	6707.8	96.87	%	0.904				0.93%
Ag 328.068†	85173.3	511.95	ug/L	2.033	511.95	ppb	2.033	0.40%
QC value within limits for Ag 328.068 Recovery = 102.39%								
Al 396.153Radial†	6548.6	5370.4	ug/L	131.23	5370.4	ppb	131.23	2.44%
QC value within limits for Al 396.153Radial Recovery = 107.41%								
As 188.979†	1445.9	524.67	ug/L	1.421	524.67	ppb	1.421	0.27%
QC value within limits for As 188.979 Recovery = 104.93%								
B 249.677†	20146.2	504.76	ug/L	1.799	504.76	ppb	1.799	0.36%
QC value within limits for B 249.677 Recovery = 100.95%								
Ba 233.527†	72761.7	514.51	ug/L	1.233	514.51	ppb	1.233	0.24%
QC value within limits for Ba 233.527 Recovery = 102.90%								
Be 313.107†	1121478.1	514.48	ug/L	1.369	514.48	ppb	1.369	0.27%
QC value within limits for Be 313.107 Recovery = 102.90%								
Ca 317.933Radial†	3728.2	5281.5	ug/L	70.82	5281.5	ppb	70.82	1.34%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.63%
Cd 226.502†            39873.2      508.32 ug/L         2.913      508.32 ppb          2.913   0.57%
   QC value within limits for Cd 226.502  Recovery = 101.66%
Co 228.616†            29512.0      512.04 ug/L         2.788      512.04 ppb          2.788   0.54%
   QC value within limits for Co 228.616  Recovery = 102.41%
Cr 267.716†            36501.4      512.20 ug/L         0.935      512.20 ppb          0.935   0.18%
   QC value within limits for Cr 267.716  Recovery = 102.44%
Cu 324.752†           140394.7      509.05 ug/L         1.129      509.05 ppb          1.129   0.22%
   QC value within limits for Cu 324.752  Recovery = 101.81%
Fe 238.204 Radial†      1215.9      5084.7 ug/L        75.87      5084.7 ppb         75.87   1.49%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.69%
K 766.490 Radial†      23417.5      5038.9 ug/L        94.75      5038.9 ppb         94.75   1.88%
   QC value within limits for K 766.490 Radial  Recovery = 100.78%
Mg 279.077 IEC†         212.3      5298.8 ug/L        15.20      5298.8 ppb         15.20   0.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.98%
Mn 257.610†           465627.0      514.01 ug/L         0.892      514.01 ppb          0.892   0.17%
   QC value within limits for Mn 257.610  Recovery = 102.80%
Mo 202.031†             7346.4      517.51 ug/L         3.070      517.51 ppb          3.070   0.59%
   QC value within limits for Mo 202.031  Recovery = 103.50%
Na 589.592 Radial†    172631.6       10595 ug/L       234.2       10595 ppb        234.2   2.21%
   QC value within limits for Na 589.592 Radial  Recovery = 105.95%
Ni 231.604†            19137.8      511.23 ug/L         2.759      511.23 ppb          2.759   0.54%
   QC value within limits for Ni 231.604  Recovery = 102.25%
P 214.914†              5106.5      2510.6 ug/L        11.29      2510.6 ppb         11.29   0.45%
   QC value within limits for P 214.914  Recovery = 100.42%
Pb 220.353†             4374.8      522.47 ug/L         2.623      522.47 ppb          2.623   0.50%
   QC value within limits for Pb 220.353  Recovery = 104.49%
S 181.975 Axial†         764.3      1046.0 ug/L         3.36      1046.0 ppb          3.36   0.32%
   QC value within limits for S 181.975 Axial  Recovery = 104.60%
Sb 206.836†             1738.8      523.09 ug/L         4.752      523.09 ppb          4.752   0.91%
   QC value within limits for Sb 206.836  Recovery = 104.62%
Se 196.026†             1020.3      538.67 ug/L         5.438      538.67 ppb          5.438   1.01%
   QC value within limits for Se 196.026  Recovery = 107.73%
Si 251.611†            83923.3      2574.3 ug/L         4.78      2574.3 ppb          4.78   0.19%
   QC value within limits for Si 251.611  Recovery = 102.97%
Sn 189.927†             2910.0      515.95 ug/L         5.205      515.95 ppb          5.205   1.01%
   QC value within limits for Sn 189.927  Recovery = 103.19%
Sr 421.552†           178810.5      499.37 ug/L        11.110      499.37 ppb         11.110   2.22%
   QC value within limits for Sr 421.552  Recovery = 99.87%
Ti 334.940†           278410.6      509.63 ug/L         1.394      509.63 ppb          1.394   0.27%
   QC value within limits for Ti 334.940  Recovery = 101.93%
Tl 190.801†             1982.7      522.10 ug/L         3.647      522.10 ppb          3.647   0.70%
   QC value within limits for Tl 190.801  Recovery = 104.42%
U 409.014†             15027.2      507.23 ug/L         2.718      507.23 ppb          2.718   0.54%
   QC value within limits for U 409.014  Recovery = 101.45%
V 292.402†             56144.0      516.07 ug/L         1.385      516.07 ppb          1.385   0.27%
   QC value within limits for V 292.402  Recovery = 103.21%
Zn 213.857†            55612.2      508.52 ug/L         1.448      508.52 ppb          1.448   0.28%
   QC value within limits for Zn 213.857  Recovery = 101.70%
SiO2†                  84424.0      5512.9 ug/L        16.23      5512.9 ppb         16.23   0.29%
   QC value within limits for SiO2  Recovery = 103.09%
All analyte(s) passed QC.
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Sequence No.: 21
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 14:26:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7357.7	7357.7	98.4	%			14:28:49
1	Y RADIAL	6806.0	6806.0	98.29	%			14:28:49
1	Al 396.153Radial†	-57.0	14.7	12.054	ug/L	12.054	ppb	14:28:49
1	Ca 317.933Radial†	30.0	1.3	1.8928	ug/L	1.8928	ppb	14:29:09
1	Fe 238.204 Radial†	35.7	1.5	6.3098	ug/L	6.3098	ppb	14:29:09
1	K 766.490 Radial†	2420.4	51.7	11.141	ug/L	11.141	ppb	14:28:49
1	Mg 279.077 IEC†	4.1	1.1	28.546	ug/L	28.546	ppb	14:29:09
1	Na 589.592 Radial†	-146.4	-13.1	-0.8054	ug/L	-0.8054	ppb	14:28:49
1	Sr 421.552†	-20.7	34.9	0.0973	ug/L	0.0973	ppb	14:28:49
1	Sc 361.383	720454.6	720454.6	100.25	%			14:30:06
1	Y 371.029	563412.7	563412.7	100.25	%			14:30:06
1	Ag 328.068†	662.0	27.8	0.1718	ug/L	0.1718	ppb	14:30:06
1	As 188.979†	-25.3	10.2	3.6748	ug/L	3.6748	ppb	14:30:26
1	B 249.677†	-672.7	268.9	6.7766	ug/L	6.7766	ppb	14:30:06
1	Ba 233.527†	42.7	42.1	0.2992	ug/L	0.2992	ppb	14:30:26
1	Be 313.107†	-4827.3	66.3	0.0302	ug/L	0.0302	ppb	14:30:06
1	Cd 226.502†	-275.4	6.3	0.0804	ug/L	0.0804	ppb	14:30:26
1	Co 228.616†	-102.0	-2.3	-0.0375	ug/L	-0.0375	ppb	14:30:26
1	Cr 267.716†	-61.4	16.2	0.2281	ug/L	0.2281	ppb	14:30:06
1	Cu 324.752†	5602.1	-50.0	-0.1809	ug/L	-0.1809	ppb	14:30:06
1	Mn 257.610†	762.0	80.5	0.0890	ug/L	0.0890	ppb	14:30:26
1	Mo 202.031†	29.0	11.8	0.8323	ug/L	0.8323	ppb	14:30:26
1	Ni 231.604†	149.4	29.2	0.7802	ug/L	0.7802	ppb	14:30:26
1	P 214.914†	320.3	4.7	2.4546	ug/L	2.4546	ppb	14:30:26
1	Pb 220.353†	-18.0	-4.7	-0.5563	ug/L	-0.5563	ppb	14:30:26
1	S 181.975 Axial†	71.6	-4.0	-5.4613	ug/L	-5.4613	ppb	14:30:26
1	Sb 206.836†	66.9	9.5	2.8349	ug/L	2.8349	ppb	14:30:26
1	Se 196.026†	-44.1	-15.2	-7.7493	ug/L	-7.7493	ppb	14:30:26
1	Si 251.611†	526.1	113.1	3.4662	ug/L	3.4662	ppb	14:30:26
1	Sn 189.927†	15.7	3.2	0.5611	ug/L	0.5611	ppb	14:30:26
1	Ti 334.940†	-1383.1	-31.5	-0.0578	ug/L	-0.0578	ppb	14:30:06
1	Tl 190.801†	-57.8	3.1	0.8061	ug/L	0.8061	ppb	14:30:26
1	U 409.014†	-4853.3	7.3	0.2454	ug/L	0.2454	ppb	14:30:06
1	V 292.402†	-1455.3	113.4	1.0408	ug/L	1.0408	ppb	14:30:06
1	Zn 213.857†	994.5	67.0	0.6118	ug/L	0.6118	ppb	14:30:26
1	SiO2†	566.6	128.3	8.3824	ug/L	8.3824	ppb	14:31:22
2	Sc Radial	7144.9	7144.9	95.6	%			14:29:14
2	Y RADIAL	6613.7	6613.7	95.51	%			14:29:14
2	Al 396.153Radial†	-62.5	7.2	5.9468	ug/L	5.9468	ppb	14:29:14
2	Ca 317.933Radial†	38.1	10.8	15.270	ug/L	15.270	ppb	14:29:34
2	Fe 238.204 Radial†	37.7	4.7	19.470	ug/L	19.470	ppb	14:29:34
2	K 766.490 Radial†	2432.2	137.3	29.614	ug/L	29.614	ppb	14:29:14
2	Mg 279.077 IEC†	2.0	-1.0	-24.813	ug/L	-24.813	ppb	14:29:34
2	Na 589.592 Radial†	-275.4	-152.5	-9.3607	ug/L	-9.3607	ppb	14:29:14
2	Sr 421.552†	-48.3	5.4	0.0148	ug/L	0.0148	ppb	14:29:14
2	Sc 361.383	710699.1	710699.1	98.888	%			14:30:31
2	Y 371.029	556084.3	556084.3	98.947	%			14:30:31
2	Ag 328.068†	587.2	-38.9	-0.2273	ug/L	-0.2273	ppb	14:30:31
2	As 188.979†	-30.4	4.7	1.6844	ug/L	1.6844	ppb	14:30:51
2	B 249.677†	-781.9	149.3	3.7592	ug/L	3.7592	ppb	14:30:31
2	Ba 233.527†	28.1	27.9	0.1965	ug/L	0.1965	ppb	14:30:51
2	Be 313.107†	-4635.1	194.5	0.0886	ug/L	0.0886	ppb	14:30:31
2	Cd 226.502†	-278.4	-0.5	-0.0082	ug/L	-0.0082	ppb	14:30:51
2	Co 228.616†	-86.4	12.1	0.2105	ug/L	0.2105	ppb	14:30:51
2	Cr 267.716†	-79.0	-2.5	-0.0353	ug/L	-0.0353	ppb	14:30:31
2	Cu 324.752†	5698.4	124.0	0.4504	ug/L	0.4504	ppb	14:30:31
2	Mn 257.610†	727.6	56.2	0.0649	ug/L	0.0649	ppb	14:30:51
2	Mo 202.031†	20.1	3.2	0.2260	ug/L	0.2260	ppb	14:30:51
2	Ni 231.604†	111.5	-7.0	-0.1876	ug/L	-0.1876	ppb	14:30:51

2	P 214.914†	312.0	0.7	0.2668 ug/L	0.2668 ppb	14:30:51
2	Pb 220.353†	1.4	14.6	1.7419 ug/L	1.7419 ppb	14:30:51
2	S 181.975 Axial†	89.1	14.7	20.125 ug/L	20.125 ppb	14:30:51
2	Sb 206.836†	61.8	5.2	1.5531 ug/L	1.5531 ppb	14:30:51
2	Se 196.026†	-34.4	-6.0	-2.9820 ug/L	-2.9820 ppb	14:30:51
2	Si 251.611†	523.9	118.1	3.6358 ug/L	3.6358 ppb	14:30:51
2	Sn 189.927†	11.0	-1.4	-0.2406 ug/L	-0.2406 ppb	14:30:51
2	Ti 334.940†	-1427.4	-95.1	-0.1739 ug/L	-0.1739 ppb	14:30:31
2	Tl 190.801†	-57.0	3.1	0.8020 ug/L	0.8020 ppb	14:30:51
2	U 409.014†	-4754.9	40.4	1.3643 ug/L	1.3643 ppb	14:30:31
2	V 292.402†	-1548.4	-0.6	-0.0029 ug/L	-0.0029 ppb	14:30:31
2	Zn 213.857†	1006.1	92.3	0.8516 ug/L	0.8516 ppb	14:30:51
2	SiO2†	567.5	137.0	8.9890 ug/L	8.9890 ppb	14:31:27
3	Sc Radial	7320.7	7320.7	97.9 %		14:29:39
3	Y RADIAL	6770.7	6770.7	97.78 %		14:29:39
3	Al 396.153Radial†	-80.2	-9.3	-7.6114 ug/L	-7.6114 ppb	14:29:39
3	Ca 317.933Radial†	32.7	4.3	6.0964 ug/L	6.0964 ppb	14:29:59
3	Fe 238.204 Radial†	38.0	4.0	16.490 ug/L	16.490 ppb	14:29:59
3	K 766.490 Radial†	2520.8	166.6	35.953 ug/L	35.953 ppb	14:29:39
3	Mg 279.077 IEC†	6.8	3.9	96.707 ug/L	96.707 ppb	14:29:59
3	Na 589.592 Radial†	-174.0	-42.1	-2.5864 ug/L	-2.5864 ppb	14:29:39
3	Sr 421.552†	-67.5	-13.0	-0.0364 ug/L	-0.0364 ppb	14:29:39
3	Sc 361.383	722799.3	722799.3	100.57 %		14:30:56
3	Y 371.029	564630.8	564630.8	100.47 %		14:30:56
3	Ag 328.068†	662.4	26.0	0.1590 ug/L	0.1590 ppb	14:30:56
3	As 188.979†	-38.2	-2.6	-0.9212 ug/L	-0.9212 ppb	14:31:16
3	B 249.677†	-733.3	210.8	5.3117 ug/L	5.3117 ppb	14:30:56
3	Ba 233.527†	34.8	34.1	0.2388 ug/L	0.2388 ppb	14:31:16
3	Be 313.107†	-4763.4	145.5	0.0666 ug/L	0.0666 ppb	14:30:56
3	Cd 226.502†	-294.8	-12.0	-0.1548 ug/L	-0.1548 ppb	14:31:16
3	Co 228.616†	-103.7	-3.7	-0.0657 ug/L	-0.0657 ppb	14:31:16
3	Cr 267.716†	-48.4	29.3	0.4098 ug/L	0.4098 ppb	14:30:56
3	Cu 324.752†	5673.0	2.3	0.0092 ug/L	0.0092 ppb	14:30:56
3	Mn 257.610†	724.2	40.5	0.0449 ug/L	0.0449 ppb	14:31:16
3	Mo 202.031†	10.6	-6.6	-0.4657 ug/L	-0.4657 ppb	14:31:16
3	Ni 231.604†	134.7	14.1	0.3771 ug/L	0.3771 ppb	14:31:16
3	P 214.914†	329.0	12.4	6.2915 ug/L	6.2915 ppb	14:31:16
3	Pb 220.353†	-18.4	-5.1	-0.6070 ug/L	-0.6070 ppb	14:31:16
3	S 181.975 Axial†	87.4	11.5	15.691 ug/L	15.691 ppb	14:31:16
3	Sb 206.836†	50.4	-7.1	-2.1543 ug/L	-2.1543 ppb	14:31:16
3	Se 196.026†	-42.4	-13.4	-6.7728 ug/L	-6.7728 ppb	14:31:16
3	Si 251.611†	525.2	110.5	3.4199 ug/L	3.4199 ppb	14:31:16
3	Sn 189.927†	7.4	-5.1	-0.9024 ug/L	-0.9024 ppb	14:31:16
3	Ti 334.940†	-1347.4	8.5	0.0163 ug/L	0.0163 ppb	14:30:56
3	Tl 190.801†	-65.9	-4.7	-1.2408 ug/L	-1.2408 ppb	14:31:16
3	U 409.014†	-4904.5	-27.9	-0.9480 ug/L	-0.9480 ppb	14:30:56
3	V 292.402†	-1643.2	-68.7	-0.6323 ug/L	-0.6323 ppb	14:30:56
3	Zn 213.857†	998.2	67.4	0.6142 ug/L	0.6142 ppb	14:31:16
3	SiO2†	536.0	96.1	6.3369 ug/L	6.3369 ppb	14:31:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	717984.4	99.902	%	0.8929				0.89%
Sc Radial	7274.4	97.3	%	1.52				1.56%
Y 371.029	561375.9	99.889	%	0.8226				0.82%
Y RADIAL	6730.1	97.20	%	1.479				1.52%
Ag 328.068†	5.0	0.0345	ug/L	0.22680	0.0345	ppb	0.22680	657.52%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	4.2	3.4631	ug/L	10.06512	3.4631	ppb	10.06512	290.64%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.1	1.4793	ug/L	2.30486	1.4793	ppb	2.30486	155.80%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	209.7	5.2825	ug/L	1.50894	5.2825	ppb	1.50894	28.56%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	34.7	0.2449	ug/L	0.05159	0.2449	ppb	0.05159	21.07%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	135.4	0.0618	ug/L	0.02952	0.0618	ppb	0.02952	47.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.5	7.7531	ug/L	6.84079	7.7531	ppb	6.84079	88.23%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -2.0     -0.0275 ug/L       0.11883     -0.0275 ppb        0.11883 431.73%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 2.0      0.0358 ug/L       0.15200      0.0358 ppb        0.15200 424.78%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.3      0.2009 ug/L       0.22380      0.2009 ppb        0.22380 111.41%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                25.4      0.0929 ug/L       0.32389      0.0929 ppb        0.32389 348.61%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4      14.090 ug/L        6.9006      14.090 ppb         6.9006  48.98%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         118.5      25.569 ug/L       12.8914      25.569 ppb        12.8914  50.42%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.3      33.480 ug/L       60.9101      33.480 ppb        60.9101 181.93%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                59.1       0.0663 ug/L       0.02210       0.0663 ppb        0.02210  33.35%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.8       0.1975 ug/L       0.64950       0.1975 ppb        0.64950 328.83%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -69.3      -4.2508 ug/L       4.51400      -4.2508 ppb        4.51400 106.19%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                12.1       0.3233 ug/L       0.48613       0.3233 ppb        0.48613 150.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  5.9       3.0043 ug/L       3.04972       3.0043 ppb        3.04972 101.51%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 1.6       0.1929 ug/L       1.34174       0.1929 ppb        1.34174 695.60%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.4      10.118 ug/L       13.6732      10.118 ppb        13.6732 135.13%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 2.5       0.7446 ug/L       2.59100       0.7446 ppb        2.59100 347.98%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -11.5      -5.8347 ug/L       2.51832      -5.8347 ppb        2.51832  43.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               113.9       3.5073 ug/L       0.11368       3.5073 ppb        0.11368   3.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.1      -0.1939 ug/L       0.73286      -0.1939 ppb        0.73286 377.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 9.1       0.0252 ug/L       0.06748       0.0252 ppb        0.06748 267.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -39.4      -0.0718 ug/L       0.09585      -0.0718 ppb        0.09585 133.50%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 0.5       0.1224 ug/L       1.18057       0.1224 ppb        1.18057 964.40%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                  6.6       0.2206 ug/L       1.15636       0.2206 ppb        1.15636 524.25%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 14.7       0.1352 ug/L       0.84504       0.1352 ppb        0.84504 625.07%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                75.6       0.6925 ug/L       0.13778       0.6925 ppb        0.13778  19.90%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     120.5       7.9028 ug/L       1.38958       7.9028 ppb        1.38958  17.58%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 6/30/2009 14:43:19
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601

Plasma On Time: 6/29/2009 15:26:31
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 14:43:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7137.2	7137.2	95.5	%			14:45:32
1	Y RADIAL	6564.5	6564.5	94.80	%			14:45:32
1	Al 396.153Radial†	6313.0	6684.1	5482.8	ug/L	5482.8	ppb	14:45:12
1	Ca 317.933Radial†	3719.0	3865.8	5476.3	ug/L	5476.3	ppb	14:45:32
1	Fe 238.204 Radial†	1240.3	1264.1	5285.0	ug/L	5285.0	ppb	14:45:32
1	K 766.490 Radial†	24931.6	23703.1	5101.0	ug/L	5101.0	ppb	14:45:12
1	Mg 279.077 IEC†	211.3	218.3	5447.3	ug/L	5447.3	ppb	14:45:32
1	Na 589.592 Radial†	167622.3	175682.6	10782	ug/L	10782	ppb	14:45:12
1	Sr 421.552†	174150.3	182439.6	509.51	ug/L	509.51	ppb	14:45:12
1	Sc 361.383	766538.4	766538.4	106.66	%			14:46:31
1	Y 371.029	591502.5	591502.5	105.25	%			14:46:31
1	Ag 328.068†	88049.0	81920.1	492.51	ug/L	492.51	ppb	14:46:31
1	As 188.979†	1426.3	1372.7	498.22	ug/L	498.22	ppb	14:46:51
1	B 249.677†	19721.2	19430.0	486.80	ug/L	486.80	ppb	14:46:31
1	Ba 233.527†	74223.1	69589.4	492.08	ug/L	492.08	ppb	14:46:31
1	Be 313.107†	1142807.9	1076352.9	493.78	ug/L	493.78	ppb	14:46:31
1	Cd 226.502†	40577.3	38325.4	488.54	ug/L	488.54	ppb	14:46:51
1	Co 228.616†	30101.9	28322.3	491.40	ug/L	491.40	ppb	14:46:51
1	Cr 267.716†	37316.8	35064.8	492.05	ug/L	492.05	ppb	14:46:31
1	Cu 324.752†	149803.2	134813.7	488.83	ug/L	488.83	ppb	14:46:31
1	Mn 257.610†	475710.6	445336.1	491.66	ug/L	491.66	ppb	14:46:31
1	Mo 202.031†	7571.2	7081.5	498.87	ug/L	498.87	ppb	14:46:51
1	Ni 231.604†	19779.8	18425.3	492.19	ug/L	492.19	ppb	14:46:51
1	P 214.914†	5537.1	4876.6	2396.9	ug/L	2396.9	ppb	14:46:51
1	Pb 220.353†	4488.4	4221.4	504.19	ug/L	504.19	ppb	14:46:51
1	S 181.975 Axial†	851.2	722.7	988.94	ug/L	988.94	ppb	14:46:51
1	Sb 206.836†	1827.8	1656.5	498.41	ug/L	498.41	ppb	14:46:51
1	Se 196.026†	1012.1	977.7	517.57	ug/L	517.57	ppb	14:46:51
1	Si 251.611†	86130.7	80342.5	2464.3	ug/L	2464.3	ppb	14:46:31
1	Sn 189.927†	2996.3	2796.8	495.96	ug/L	495.96	ppb	14:46:51
1	Ti 334.940†	283264.6	266930.9	488.63	ug/L	488.63	ppb	14:46:31
1	Tl 190.801†	1968.1	1906.0	501.90	ug/L	501.90	ppb	14:46:51
1	U 409.014†	10490.6	14684.5	495.64	ug/L	495.64	ppb	14:46:31
1	V 292.402†	55760.9	53845.4	494.94	ug/L	494.94	ppb	14:46:31
1	Zn 213.857†	57833.3	53298.1	487.29	ug/L	487.29	ppb	14:46:31
1	SiO2†	86560.6	80720.4	5270.6	ug/L	5270.6	ppb	14:47:51
2	Sc Radial	7255.2	7255.2	97.1	%			14:45:57
2	Y RADIAL	6649.7	6649.7	96.03	%			14:45:57
2	Al 396.153Radial†	6286.0	6548.7	5371.3	ug/L	5371.3	ppb	14:45:37
2	Ca 317.933Radial†	3699.9	3782.7	5358.6	ug/L	5358.6	ppb	14:45:57
2	Fe 238.204 Radial†	1225.9	1228.1	5135.0	ug/L	5135.0	ppb	14:45:57
2	K 766.490 Radial†	24915.7	23261.9	5005.8	ug/L	5005.8	ppb	14:45:37
2	Mg 279.077 IEC†	212.6	216.0	5391.2	ug/L	5391.2	ppb	14:45:57
2	Na 589.592 Radial†	165986.4	171140.5	10503	ug/L	10503	ppb	14:45:37
2	Sr 421.552†	172511.4	177783.0	496.50	ug/L	496.50	ppb	14:45:37
2	Sc 361.383	765905.4	765905.4	106.57	%			14:46:58
2	Y 371.029	590898.1	590898.1	105.14	%			14:46:58

2	Ag 328.068†	87867.8	81818.4	491.86 ug/L	491.86 ppb	14:46:58
2	As 188.979†	1444.7	1391.1	504.81 ug/L	504.81 ppb	14:47:18
2	B 249.677†	19805.4	19524.4	489.17 ug/L	489.17 ppb	14:46:58
2	Ba 233.527†	74361.4	69776.7	493.41 ug/L	493.41 ppb	14:46:58
2	Be 313.107†	1144475.3	1078803.1	494.90 ug/L	494.90 ppb	14:46:58
2	Cd 226.502†	40726.0	38496.4	490.74 ug/L	490.74 ppb	14:47:18
2	Co 228.616†	30228.7	28464.6	493.87 ug/L	493.87 ppb	14:47:18
2	Cr 267.716†	37299.4	35077.4	492.22 ug/L	492.22 ppb	14:46:58
2	Cu 324.752†	149550.1	134692.3	488.38 ug/L	488.38 ppb	14:46:58
2	Mn 257.610†	476621.3	446559.2	492.99 ug/L	492.99 ppb	14:46:58
2	Mo 202.031†	7579.4	7095.0	499.81 ug/L	499.81 ppb	14:47:18
2	Ni 231.604†	19793.6	18453.6	492.95 ug/L	492.95 ppb	14:47:18
2	P 214.914†	5556.7	4899.3	2408.7 ug/L	2408.7 ppb	14:47:18
2	Pb 220.353†	4502.6	4238.3	506.18 ug/L	506.18 ppb	14:47:18
2	S 181.975 Axial†	856.2	728.0	996.26 ug/L	996.26 ppb	14:47:18
2	Sb 206.836†	1827.7	1657.8	498.87 ug/L	498.87 ppb	14:47:18
2	Se 196.026†	1022.1	987.8	522.25 ug/L	522.25 ppb	14:47:18
2	Si 251.611†	86108.9	80388.7	2465.7 ug/L	2465.7 ppb	14:46:58
2	Sn 189.927†	3017.4	2818.9	499.84 ug/L	499.84 ppb	14:47:18
2	Ti 334.940†	283539.8	267408.6	489.50 ug/L	489.50 ppb	14:46:58
2	Tl 190.801†	1974.7	1913.7	503.91 ug/L	503.91 ppb	14:47:18
2	U 409.014†	10341.8	14553.0	491.20 ug/L	491.20 ppb	14:46:58
2	V 292.402†	55922.9	54040.6	496.74 ug/L	496.74 ppb	14:46:58
2	Zn 213.857†	57768.0	53281.6	487.15 ug/L	487.15 ppb	14:46:58
2	SiO2†	87933.2	82075.5	5359.6 ug/L	5359.6 ppb	14:47:56
3	Sc Radial	7426.8	7426.8	99.4 %		14:46:22
3	Y RADIAL	6805.9	6805.9	98.29 %		14:46:22
3	Al 396.153Radial†	6296.0	6409.2	5255.8 ug/L	5255.8 ppb	14:46:02
3	Ca 317.933Radial†	3666.3	3660.8	5185.9 ug/L	5185.9 ppb	14:46:22
3	Fe 238.204 Radial†	1224.8	1197.9	5009.4 ug/L	5009.4 ppb	14:46:22
3	K 766.490 Radial†	25058.1	22812.2	4908.4 ug/L	4908.4 ppb	14:46:02
3	Mg 279.077 IEC†	211.0	209.3	5224.6 ug/L	5224.6 ppb	14:46:22
3	Na 589.592 Radial†	167205.4	168417.2	10336 ug/L	10336 ppb	14:46:02
3	Sr 421.552†	173181.4	174351.9	486.92 ug/L	486.92 ppb	14:46:02
3	Sc 361.383	749065.5	749065.5	104.23 %		14:47:25
3	Y 371.029	577293.0	577293.0	102.72 %		14:47:25
3	Ag 328.068†	89173.2	84924.4	510.44 ug/L	510.44 ppb	14:47:25
3	As 188.979†	1436.8	1414.0	513.12 ug/L	513.12 ppb	14:47:45
3	B 249.677†	20007.2	20135.8	504.53 ug/L	504.53 ppb	14:47:25
3	Ba 233.527†	75493.4	72431.5	512.18 ug/L	512.18 ppb	14:47:25
3	Be 313.107†	1162013.9	1119773.6	513.70 ug/L	513.70 ppb	14:47:25
3	Cd 226.502†	40671.0	39302.8	501.05 ug/L	501.05 ppb	14:47:45
3	Co 228.616†	30234.1	29107.5	505.02 ug/L	505.02 ppb	14:47:45
3	Cr 267.716†	37870.8	36412.4	510.95 ug/L	510.95 ppb	14:47:25
3	Cu 324.752†	151474.5	139693.5	506.50 ug/L	506.50 ppb	14:47:25
3	Mn 257.610†	483656.1	463363.2	511.51 ug/L	511.51 ppb	14:47:25
3	Mo 202.031†	7607.2	7281.6	512.94 ug/L	512.94 ppb	14:47:45
3	Ni 231.604†	19846.1	18921.5	505.45 ug/L	505.45 ppb	14:47:45
3	P 214.914†	5543.9	5004.3	2458.8 ug/L	2458.8 ppb	14:47:45
3	Pb 220.353†	4505.4	4335.9	517.82 ug/L	517.82 ppb	14:47:45
3	S 181.975 Axial†	855.5	745.4	1020.1 ug/L	1020.1 ppb	14:47:45
3	Sb 206.836†	1838.2	1706.4	513.28 ug/L	513.28 ppb	14:47:45
3	Se 196.026†	1023.4	1010.6	533.50 ug/L	533.50 ppb	14:47:45
3	Si 251.611†	87271.9	83321.1	2555.9 ug/L	2555.9 ppb	14:47:25
3	Sn 189.927†	3001.6	2867.4	508.40 ug/L	508.40 ppb	14:47:45
3	Ti 334.940†	287210.2	276911.5	506.88 ug/L	506.88 ppb	14:47:25
3	Tl 190.801†	1981.5	1961.9	516.66 ug/L	516.66 ppb	14:47:45
3	U 409.014†	10450.5	14875.5	502.10 ug/L	502.10 ppb	14:47:25
3	V 292.402†	56735.2	55999.7	514.71 ug/L	514.71 ppb	14:47:25
3	Zn 213.857†	58731.8	55425.0	506.85 ug/L	506.85 ppb	14:47:25
3	SiO2†	87396.9	83415.8	5447.1 ug/L	5447.1 ppb	14:48:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	760503.1	105.82	%	1.379				1.30%
Sc Radial	7273.1	97.3	%	1.95				2.00%
Y 371.029	586564.5	104.37	%	1.430				1.37%
Y RADIAL	6673.4	96.38	%	1.768				1.83%
Ag 328.068†	82887.6	498.27	ug/L	10.545	498.27	ppb	10.545	2.12%

```
   QC value within limits for Ag 328.068  Recovery = 99.65%
Al 396.153Radial†       6547.3      5370.0 ug/L        113.49      5370.0 ppb         113.49   2.11%
   QC value within limits for Al 396.153Radial  Recovery = 107.40%
As 188.979†             1392.6      505.38 ug/L         7.465      505.38 ppb          7.465   1.48%
   QC value within limits for As 188.979  Recovery = 101.08%
B 249.677†             19696.7      493.50 ug/L         9.627      493.50 ppb          9.627   1.95%
   QC value within limits for B 249.677  Recovery = 98.70%
Ba 233.527†            70599.2      499.22 ug/L        11.240      499.22 ppb         11.240   2.25%
   QC value within limits for Ba 233.527  Recovery = 99.84%
Be 313.107†          1091643.2      500.79 ug/L        11.188      500.79 ppb         11.188   2.23%
   QC value within limits for Be 313.107  Recovery = 100.16%
Ca 317.933Radial†       3769.7      5340.3 ug/L       146.08      5340.3 ppb        146.08   2.74%
   QC value within limits for Ca 317.933Radial  Recovery = 106.81%
Cd 226.502†            38708.2      493.44 ug/L         6.677      493.44 ppb          6.677   1.35%
   QC value within limits for Cd 226.502  Recovery = 98.69%
Co 228.616†            28631.5      496.76 ug/L         7.257      496.76 ppb          7.257   1.46%
   QC value within limits for Co 228.616  Recovery = 99.35%
Cr 267.716†            35518.2      498.41 ug/L        10.865      498.41 ppb         10.865   2.18%
   QC value within limits for Cr 267.716  Recovery = 99.68%
Cu 324.752†           136399.8      494.57 ug/L        10.332      494.57 ppb         10.332   2.09%
   QC value within limits for Cu 324.752  Recovery = 98.91%
Fe 238.204 Radial†      1230.1      5143.1 ug/L       137.94      5143.1 ppb        137.94   2.68%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.86%
K 766.490 Radial†      23259.1      5005.1 ug/L        96.30      5005.1 ppb         96.30   1.92%
   QC value within limits for K 766.490 Radial  Recovery = 100.10%
Mg 279.077 IEC†          214.5      5354.4 ug/L       115.81      5354.4 ppb        115.81   2.16%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.09%
Mn 257.610†           451752.8      498.72 ug/L        11.096      498.72 ppb         11.096   2.22%
   QC value within limits for Mn 257.610  Recovery = 99.74%
Mo 202.031†             7152.7      503.87 ug/L         7.865      503.87 ppb          7.865   1.56%
   QC value within limits for Mo 202.031  Recovery = 100.77%
Na 589.592 Radial†    171746.7       10541 ug/L       225.3        10541 ppb        225.3   2.14%
   QC value within limits for Na 589.592 Radial  Recovery = 105.41%
Ni 231.604†            18600.1      496.86 ug/L         7.444      496.86 ppb          7.444   1.50%
   QC value within limits for Ni 231.604  Recovery = 99.37%
P 214.914†              4926.7      2421.5 ug/L        32.89      2421.5 ppb         32.89   1.36%
   QC value within limits for P 214.914  Recovery = 96.86%
Pb 220.353†             4265.2      509.40 ug/L         7.366      509.40 ppb          7.366   1.45%
   QC value within limits for Pb 220.353  Recovery = 101.88%
S 181.975 Axial†         732.0      1001.8 ug/L        16.31      1001.8 ppb         16.31   1.63%
   QC value within limits for S 181.975 Axial  Recovery = 100.18%
Sb 206.836†             1673.6      503.52 ug/L         8.451      503.52 ppb          8.451   1.68%
   QC value within limits for Sb 206.836  Recovery = 100.70%
Se 196.026†              992.0      524.44 ug/L         8.185      524.44 ppb          8.185   1.56%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†            81350.8      2495.3 ug/L        52.51      2495.3 ppb         52.51   2.10%
   QC value within limits for Si 251.611  Recovery = 99.81%
Sn 189.927†             2827.7      501.40 ug/L         6.367      501.40 ppb          6.367   1.27%
   QC value within limits for Sn 189.927  Recovery = 100.28%
Sr 421.552†           178191.5      497.64 ug/L        11.336      497.64 ppb         11.336   2.28%
   QC value within limits for Sr 421.552  Recovery = 99.53%
Ti 334.940†           270417.0      495.00 ug/L        10.293      495.00 ppb         10.293   2.08%
   QC value within limits for Ti 334.940  Recovery = 99.00%
Tl 190.801†             1927.2      507.49 ug/L         8.006      507.49 ppb          8.006   1.58%
   QC value within limits for Tl 190.801  Recovery = 101.50%
U 409.014†             14704.3      496.31 ug/L         5.481      496.31 ppb          5.481   1.10%
   QC value within limits for U 409.014  Recovery = 99.26%
V 292.402†             54628.6      502.13 ug/L        10.929      502.13 ppb         10.929   2.18%
   QC value within limits for V 292.402  Recovery = 100.43%
Zn 213.857†            54001.6      493.76 ug/L        11.331      493.76 ppb         11.331   2.29%
   QC value within limits for Zn 213.857  Recovery = 98.75%
SiO2†                  82070.6      5359.1 ug/L        88.25      5359.1 ppb         88.25   1.65%
   QC value within limits for SiO2  Recovery = 100.22%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 14:50:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7498.2	7498.2	100	%			14:52:03
1	Y RADIAL	6974.0	6974.0	100.7	%			14:52:03
1	Al 396.153Radial†	-76.4	-3.5	-2.8247	ug/L	-2.8247	ppb	14:52:03
1	Ca 317.933Radial†	27.2	-2.0	-2.8304	ug/L	-2.8304	ppb	14:52:23
1	Fe 238.204 Radial†	39.0	4.1	17.204	ug/L	17.204	ppb	14:52:23
1	K 766.490 Radial†	2478.1	63.1	13.619	ug/L	13.619	ppb	14:52:03
1	Mg 279.077 IEC†	4.6	1.5	37.389	ug/L	37.389	ppb	14:52:23
1	Na 589.592 Radial†	-154.1	-18.0	-1.1077	ug/L	-1.1077	ppb	14:52:03
1	Sr 421.552†	-23.5	32.4	0.0905	ug/L	0.0905	ppb	14:52:03
1	Sc 361.383	720920.1	720920.1	100.31	%			14:53:20
1	Y 371.029	564413.2	564413.2	100.43	%			14:53:20
1	Ag 328.068†	628.9	-5.6	-0.0297	ug/L	-0.0297	ppb	14:53:20
1	As 188.979†	-28.6	7.0	2.5106	ug/L	2.5106	ppb	14:53:40
1	B 249.677†	-707.3	234.8	5.9156	ug/L	5.9156	ppb	14:53:20
1	Ba 233.527†	42.1	41.5	0.2935	ug/L	0.2935	ppb	14:53:40
1	Be 313.107†	-4744.7	151.7	0.0693	ug/L	0.0693	ppb	14:53:20
1	Cd 226.502†	-268.2	13.7	0.1731	ug/L	0.1731	ppb	14:53:40
1	Co 228.616†	-96.0	3.7	0.0625	ug/L	0.0625	ppb	14:53:40
1	Cr 267.716†	-46.5	31.1	0.4351	ug/L	0.4351	ppb	14:53:20
1	Cu 324.752†	5622.5	-33.3	-0.1197	ug/L	-0.1197	ppb	14:53:20
1	Mn 257.610†	734.5	52.6	0.0594	ug/L	0.0594	ppb	14:53:20
1	Mo 202.031†	5.4	-11.8	-0.8283	ug/L	-0.8283	ppb	14:53:40
1	Ni 231.604†	134.8	14.5	0.3885	ug/L	0.3885	ppb	14:53:40
1	P 214.914†	299.8	-16.0	-8.1209	ug/L	-8.1209	ppb	14:53:40
1	Pb 220.353†	-10.0	3.3	0.3868	ug/L	0.3868	ppb	14:53:40
1	S 181.975 Axial†	85.0	9.4	12.814	ug/L	12.814	ppb	14:53:40
1	Sb 206.836†	64.7	7.2	2.1388	ug/L	2.1388	ppb	14:53:40
1	Se 196.026†	-28.6	0.3	0.1849	ug/L	0.1849	ppb	14:53:40
1	Si 251.611†	538.2	124.8	3.8488	ug/L	3.8488	ppb	14:53:40
1	Sn 189.927†	19.0	6.5	1.1461	ug/L	1.1461	ppb	14:53:40
1	Ti 334.940†	-1389.9	-37.3	-0.0703	ug/L	-0.0703	ppb	14:53:20
1	Tl 190.801†	-54.1	6.9	1.7974	ug/L	1.7974	ppb	14:53:40
1	U 409.014†	-4751.7	111.7	3.7797	ug/L	3.7797	ppb	14:53:20
1	V 292.402†	-1521.6	48.3	0.4341	ug/L	0.4341	ppb	14:53:20
1	Zn 213.857†	999.2	71.0	0.6499	ug/L	0.6499	ppb	14:53:40
1	SiO2†	483.8	45.4	2.9735	ug/L	2.9735	ppb	14:54:36
2	Sc Radial	7550.7	7550.7	101	%			14:52:28
2	Y RADIAL	6988.0	6988.0	100.9	%			14:52:28
2	Al 396.153Radial†	-84.3	-10.8	-8.8757	ug/L	-8.8757	ppb	14:52:28
2	Ca 317.933Radial†	32.6	3.2	4.5234	ug/L	4.5234	ppb	14:52:48
2	Fe 238.204 Radial†	37.3	2.1	8.6923	ug/L	8.6923	ppb	14:52:48
2	K 766.490 Radial†	2505.7	73.3	15.813	ug/L	15.813	ppb	14:52:28
2	Mg 279.077 IEC†	8.2	5.1	125.98	ug/L	125.98	ppb	14:52:48
2	Na 589.592 Radial†	-224.4	-86.6	-5.3161	ug/L	-5.3161	ppb	14:52:28
2	Sr 421.552†	35.9	91.4	0.2551	ug/L	0.2551	ppb	14:52:28
2	Sc 361.383	727136.0	727136.0	101.18	%			14:53:45
2	Y 371.029	568952.0	568952.0	101.24	%			14:53:45
2	Ag 328.068†	578.3	-61.1	-0.3614	ug/L	-0.3614	ppb	14:53:45
2	As 188.979†	-32.2	3.6	1.2893	ug/L	1.2893	ppb	14:54:05
2	B 249.677†	-725.3	223.1	5.6208	ug/L	5.6208	ppb	14:53:45
2	Ba 233.527†	38.1	37.2	0.2626	ug/L	0.2626	ppb	14:54:05
2	Be 313.107†	-4754.7	182.3	0.0838	ug/L	0.0838	ppb	14:53:45
2	Cd 226.502†	-270.9	13.3	0.1698	ug/L	0.1698	ppb	14:54:05
2	Co 228.616†	-89.7	10.8	0.1870	ug/L	0.1870	ppb	14:54:05
2	Cr 267.716†	-109.1	-30.5	-0.4262	ug/L	-0.4262	ppb	14:53:45
2	Cu 324.752†	5761.6	56.2	0.2042	ug/L	0.2042	ppb	14:53:45
2	Mn 257.610†	794.7	105.9	0.1154	ug/L	0.1154	ppb	14:53:45
2	Mo 202.031†	13.5	-3.8	-0.2662	ug/L	-0.2662	ppb	14:54:05
2	Ni 231.604†	156.2	34.6	0.9254	ug/L	0.9254	ppb	14:54:05

2	P 214.914†	326.2	7.6	3.8332 ug/L	3.8332 ppb	14:54:05
2	Pb 220.353†	-8.0	5.4	0.6349 ug/L	0.6349 ppb	14:54:05
2	S 181.975 Axial†	87.2	10.8	14.815 ug/L	14.815 ppb	14:54:05
2	Sb 206.836†	57.9	0.0	0.0225 ug/L	0.0225 ppb	14:54:05
2	Se 196.026†	-16.7	12.2	6.2667 ug/L	6.2667 ppb	14:54:05
2	Si 251.611†	507.4	89.7	2.7566 ug/L	2.7566 ppb	14:54:05
2	Sn 189.927†	18.2	5.5	0.9763 ug/L	0.9763 ppb	14:54:05
2	Ti 334.940†	-1283.3	79.9	0.1467 ug/L	0.1467 ppb	14:53:45
2	Tl 190.801†	-55.5	5.9	1.5495 ug/L	1.5495 ppb	14:54:05
2	U 409.014†	-4907.8	-2.0	-0.0694 ug/L	-0.0694 ppb	14:53:45
2	V 292.402†	-1560.6	22.7	0.2040 ug/L	0.2040 ppb	14:53:45
2	Zn 213.857†	995.5	58.8	0.5313 ug/L	0.5313 ppb	14:54:05
2	SiO2†	534.8	91.7	6.0009 ug/L	6.0009 ppb	14:54:41
3	Sc Radial	7378.8	7378.8	98.7 %		14:52:53
3	Y RADIAL	6834.8	6834.8	98.71 %		14:52:53
3	Al 396.153Radial†	-60.7	11.1	9.1352 ug/L	9.1352 ppb	14:52:53
3	Ca 317.933Radial†	23.7	-5.1	-7.1543 ug/L	-7.1543 ppb	14:53:13
3	Fe 238.204 Radial†	41.7	7.4	30.851 ug/L	30.851 ppb	14:53:13
3	K 766.490 Radial†	2380.1	3.8	0.8155 ug/L	0.8155 ppb	14:52:53
3	Mg 279.077 IEC†	6.1	3.1	76.957 ug/L	76.957 ppb	14:53:13
3	Na 589.592 Radial†	-60.8	73.9	4.5371 ug/L	4.5371 ppb	14:52:53
3	Sr 421.552†	-18.8	36.8	0.1030 ug/L	0.1030 ppb	14:52:53
3	Sc 361.383	722489.3	722489.3	100.53 %		14:54:11
3	Y 371.029	565343.4	565343.4	100.59 %		14:54:11
3	Ag 328.068†	586.2	-49.5	-0.2853 ug/L	-0.2853 ppb	14:54:11
3	As 188.979†	-28.8	6.8	2.4664 ug/L	2.4664 ppb	14:54:31
3	B 249.677†	-718.1	225.6	5.6844 ug/L	5.6844 ppb	14:54:11
3	Ba 233.527†	19.6	19.0	0.1349 ug/L	0.1349 ppb	14:54:31
3	Be 313.107†	-4696.3	210.1	0.0956 ug/L	0.0956 ppb	14:54:11
3	Cd 226.502†	-268.1	14.5	0.1810 ug/L	0.1810 ppb	14:54:31
3	Co 228.616†	-99.3	0.7	0.0120 ug/L	0.0120 ppb	14:54:31
3	Cr 267.716†	-101.0	-23.1	-0.3230 ug/L	-0.3230 ppb	14:54:11
3	Cu 324.752†	5636.0	-32.1	-0.1144 ug/L	-0.1144 ppb	14:54:11
3	Mn 257.610†	782.6	98.9	0.1114 ug/L	0.1114 ppb	14:54:11
3	Mo 202.031†	19.4	2.2	0.1564 ug/L	0.1564 ppb	14:54:31
3	Ni 231.604†	136.9	16.3	0.4366 ug/L	0.4366 ppb	14:54:31
3	P 214.914†	326.7	10.2	5.2465 ug/L	5.2465 ppb	14:54:31
3	Pb 220.353†	15.4	28.6	3.4017 ug/L	3.4017 ppb	14:54:31
3	S 181.975 Axial†	82.5	6.6	9.0567 ug/L	9.0567 ppb	14:54:31
3	Sb 206.836†	50.7	-6.8	-1.9961 ug/L	-1.9961 ppb	14:54:31
3	Se 196.026†	-29.7	-0.8	-0.2859 ug/L	-0.2859 ppb	14:54:31
3	Si 251.611†	496.8	82.4	2.5275 ug/L	2.5275 ppb	14:54:31
3	Sn 189.927†	18.9	6.3	1.1210 ug/L	1.1210 ppb	14:54:31
3	Ti 334.940†	-1487.1	-131.0	-0.2407 ug/L	-0.2407 ppb	14:54:11
3	Tl 190.801†	-50.3	10.7	2.8039 ug/L	2.8039 ppb	14:54:31
3	U 409.014†	-4837.8	36.3	1.2271 ug/L	1.2271 ppb	14:54:11
3	V 292.402†	-1527.7	45.5	0.4151 ug/L	0.4151 ppb	14:54:11
3	Zn 213.857†	1007.6	77.2	0.7040 ug/L	0.7040 ppb	14:54:31
3	SiO2†	483.3	43.9	2.8469 ug/L	2.8469 ppb	14:54:46

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	723515.1	100.67	%	0.450				0.45%
Sc Radial	7475.9	100	%	1.2				1.18%
Y 371.029	566236.2	100.75	%	0.427				0.42%
Y RADIAL	6932.3	100.1	%	1.22				1.22%
Ag 328.068†	-38.8	-0.2254	ug/L	0.17376	-0.2254	ppb	0.17376	77.08%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.1	-0.8551	ug/L	9.16556	-0.8551	ppb	9.16556	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.8	2.0888	ug/L	0.69274	2.0888	ppb	0.69274	33.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	227.8	5.7403	ug/L	0.15517	5.7403	ppb	0.15517	2.70%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.5	0.2303	ug/L	0.08411	0.2303	ppb	0.08411	36.51%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	181.4	0.0829	ug/L	0.01319	0.0829	ppb	0.01319	15.91%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.3	-1.8204	ug/L	5.90399	-1.8204	ppb	5.90399	324.32%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.8      0.1747 ug/L       0.00575      0.1747 ppb        0.00575   3.29%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 5.1      0.0872 ug/L       0.09006      0.0872 ppb        0.09006 103.29%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -7.5     -0.1047 ug/L       0.47033     -0.1047 ppb        0.47033 449.21%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -3.1     -0.0100 ug/L       0.18548     -0.0100 ppb        0.18548 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.5      18.916 ug/L      11.1783      18.916 ppb        11.1783  59.09%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          46.7      10.082 ug/L       8.1000      10.082 ppb         8.1000  80.34%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             3.2      80.108 ug/L      44.3783      80.108 ppb        44.3783  55.40%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                85.8       0.0954 ug/L       0.03124      0.0954 ppb        0.03124  32.74%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -4.5      -0.3127 ug/L       0.49396     -0.3127 ppb        0.49396 157.97%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -10.2      -0.6289 ug/L       4.94403     -0.6289 ppb        4.94403 786.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.8       0.5835 ug/L       0.29710      0.5835 ppb        0.29710  50.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  0.6       0.3196 ug/L       7.34373      0.3196 ppb        7.34373 >999.9%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                12.4       1.4745 ug/L       1.67362      1.4745 ppb        1.67362 113.51%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            8.9      12.229 ug/L        2.9233      12.229 ppb         2.9233  23.91%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 0.1       0.0551 ug/L       2.06766      0.0551 ppb        2.06766 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.9       2.0552 ug/L       3.65483      2.0552 ppb        3.65483 177.83%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                99.0       3.0443 ug/L       0.70605      3.0443 ppb        0.70605  23.19%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 6.1       1.0811 ug/L       0.09168      1.0811 ppb        0.09168   8.48%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                53.5       0.1495 ug/L       0.09166      0.1495 ppb        0.09166  61.29%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -29.5      -0.0548 ug/L       0.19418     -0.0548 ppb        0.19418 354.51%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 7.8       2.0503 ug/L       0.66435      2.0503 ppb        0.66435  32.40%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 48.7       1.6458 ug/L       1.95840      1.6458 ppb        1.95840 119.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 38.9       0.3510 ug/L       0.12772      0.3510 ppb        0.12772  36.38%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                69.0       0.6284 ug/L       0.08833      0.6284 ppb        0.08833  14.06%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      60.4       3.9404 ug/L       1.78552      3.9404 ppb        1.78552  45.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 15:52:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7392.6	7392.6	98.9	%			15:54:14
1	Y RADIAL	6831.1	6831.1	98.65	%			15:54:14
1	Al 396.153Radial†	6384.8	6528.2	5353.8	ug/L	5353.8	ppb	15:54:14
1	Ca 317.933Radial†	3686.9	3698.7	5239.7	ug/L	5239.7	ppb	15:54:14
1	Fe 238.204 Radial†	1233.5	1212.4	5070.0	ug/L	5070.0	ppb	15:54:34
1	K 766.490 Radial†	24999.4	22869.4	4920.7	ug/L	4920.7	ppb	15:54:09
1	Mg 279.077 IEC†	209.4	208.7	5208.0	ug/L	5208.0	ppb	15:54:34
1	Na 589.592 Radial†	167953.4	169950.9	10430	ug/L	10430	ppb	15:54:09
1	Sr 421.552†	173977.9	175962.5	491.42	ug/L	491.42	ppb	15:54:09
1	Sc 361.383	743690.7	743690.7	103.48	%			15:55:43
1	Y 371.029	574212.4	574212.4	102.17	%			15:55:43
1	Ag 328.068†	88739.6	85123.7	511.65	ug/L	511.65	ppb	15:55:43
1	As 188.979†	1447.8	1434.5	520.56	ug/L	520.56	ppb	15:56:03
1	B 249.677†	19920.6	20190.8	505.90	ug/L	505.90	ppb	15:55:43
1	Ba 233.527†	75114.0	72588.3	513.29	ug/L	513.29	ppb	15:55:43
1	Be 313.107†	1157668.5	1123631.7	515.47	ug/L	515.47	ppb	15:55:43
1	Cd 226.502†	40637.1	39552.0	504.22	ug/L	504.22	ppb	15:56:03
1	Co 228.616†	30224.8	29308.2	508.49	ug/L	508.49	ppb	15:56:03
1	Cr 267.716†	37736.9	36545.7	512.82	ug/L	512.82	ppb	15:55:43
1	Cu 324.752†	151200.3	140478.8	509.35	ug/L	509.35	ppb	15:55:43
1	Mn 257.610†	481419.3	464555.3	512.83	ug/L	512.83	ppb	15:55:43
1	Mo 202.031†	7567.4	7295.9	513.95	ug/L	513.95	ppb	15:56:03
1	Ni 231.604†	19802.2	19016.7	507.99	ug/L	507.99	ppb	15:56:03
1	P 214.914†	5532.0	5031.2	2472.1	ug/L	2472.1	ppb	15:56:03
1	Pb 220.353†	4494.8	4356.9	520.34	ug/L	520.34	ppb	15:56:03
1	S 181.975 Axial†	857.8	753.6	1031.3	ug/L	1031.3	ppb	15:56:03
1	Sb 206.836†	1837.2	1718.1	516.80	ug/L	516.80	ppb	15:56:03
1	Se 196.026†	1010.8	1005.5	531.10	ug/L	531.10	ppb	15:56:03
1	Si 251.611†	87008.6	83671.7	2566.7	ug/L	2566.7	ppb	15:55:43
1	Sn 189.927†	3003.5	2890.0	512.42	ug/L	512.42	ppb	15:56:03
1	Ti 334.940†	286554.6	278269.5	509.36	ug/L	509.36	ppb	15:55:43
1	Tl 190.801†	1965.3	1960.0	516.18	ug/L	516.18	ppb	15:56:03
1	U 409.014†	10786.1	15272.3	515.53	ug/L	515.53	ppb	15:55:43
1	V 292.402†	56589.2	56252.0	517.03	ug/L	517.03	ppb	15:55:43
1	Zn 213.857†	58438.7	55549.0	507.96	ug/L	507.96	ppb	15:55:43
1	SiO2†	85865.0	82541.5	5389.4	ug/L	5389.4	ppb	15:57:03
2	Sc Radial	7563.8	7563.8	101	%			15:54:44
2	Y RADIAL	6952.9	6952.9	100.4	%			15:54:44
2	Al 396.153Radial†	6473.5	6469.8	5305.5	ug/L	5305.5	ppb	15:54:44
2	Ca 317.933Radial†	3725.1	3652.1	5173.6	ug/L	5173.6	ppb	15:54:44
2	Fe 238.204 Radial†	1246.4	1196.9	5005.6	ug/L	5005.6	ppb	15:55:04
2	K 766.490 Radial†	25155.6	22451.7	4830.5	ug/L	4830.5	ppb	15:54:39
2	Mg 279.077 IEC†	215.7	210.1	5245.3	ug/L	5245.3	ppb	15:55:04
2	Na 589.592 Radial†	167405.4	165566.2	10161	ug/L	10161	ppb	15:54:39
2	Sr 421.552†	173610.7	171618.6	479.29	ug/L	479.29	ppb	15:54:39
2	Sc 361.383	736578.7	736578.7	102.49	%			15:56:10
2	Y 371.029	568582.4	568582.4	101.17	%			15:56:10
2	Ag 328.068†	87970.1	85200.9	512.10	ug/L	512.10	ppb	15:56:10
2	As 188.979†	1438.6	1439.1	522.18	ug/L	522.18	ppb	15:56:30
2	B 249.677†	19816.6	20275.2	508.01	ug/L	508.01	ppb	15:56:10
2	Ba 233.527†	74484.7	72675.2	513.91	ug/L	513.91	ppb	15:56:10
2	Be 313.107†	1146088.8	1123135.4	515.24	ug/L	515.24	ppb	15:56:10
2	Cd 226.502†	40673.3	39966.5	509.52	ug/L	509.52	ppb	15:56:30
2	Co 228.616†	30183.5	29549.9	512.70	ug/L	512.70	ppb	15:56:30
2	Cr 267.716†	37369.9	36539.7	512.74	ug/L	512.74	ppb	15:56:10
2	Cu 324.752†	149465.5	140197.0	508.32	ug/L	508.32	ppb	15:56:10
2	Mn 257.610†	477259.4	464988.6	513.30	ug/L	513.30	ppb	15:56:10
2	Mo 202.031†	7576.9	7375.8	519.57	ug/L	519.57	ppb	15:56:30
2	Ni 231.604†	19805.0	19204.2	513.00	ug/L	513.00	ppb	15:56:30

2	P 214.914†	5548.0	5098.5	2506.7 ug/L	2506.7 ppb	15:56:30
2	Pb 220.353†	4482.5	4386.9	523.92 ug/L	523.92 ppb	15:56:30
2	S 181.975 Axial†	856.1	759.9	1040.0 ug/L	1040.0 ppb	15:56:30
2	Sb 206.836†	1835.4	1733.5	521.56 ug/L	521.56 ppb	15:56:30
2	Se 196.026†	1007.5	1011.8	534.09 ug/L	534.09 ppb	15:56:30
2	Si 251.611†	86181.3	83676.4	2566.7 ug/L	2566.7 ppb	15:56:10
2	Sn 189.927†	3000.1	2914.7	516.77 ug/L	516.77 ppb	15:56:30
2	Ti 334.940†	283810.8	278266.1	509.35 ug/L	509.35 ppb	15:56:10
2	Tl 190.801†	1980.1	1992.7	524.72 ug/L	524.72 ppb	15:56:30
2	U 409.014†	10428.8	15024.2	507.14 ug/L	507.14 ppb	15:56:10
2	V 292.402†	56028.9	56233.3	516.92 ug/L	516.92 ppb	15:56:10
2	Zn 213.857†	57986.8	55653.4	508.90 ug/L	508.90 ppb	15:56:10
2	SiO2†	86048.5	83521.8	5453.6 ug/L	5453.6 ppb	15:57:08
3	Sc Radial	7629.1	7629.1	102 %		15:55:14
3	Y RADIAL	7031.2	7031.2	101.5 %		15:55:14
3	Al 396.153Radial†	6423.1	6365.7	5220.0 ug/L	5220.0 ppb	15:55:14
3	Ca 317.933Radial†	3714.0	3609.7	5113.6 ug/L	5113.6 ppb	15:55:14
3	Fe 238.204 Radial†	1236.5	1176.7	4920.8 ug/L	4920.8 ppb	15:55:35
3	K 766.490 Radial†	25116.6	22200.8	4776.4 ug/L	4776.4 ppb	15:55:09
3	Mg 279.077 IEC†	207.6	200.4	5001.5 ug/L	5001.5 ppb	15:55:35
3	Na 589.592 Radial†	168735.2	165453.6	10154 ug/L	10154 ppb	15:55:09
3	Sr 421.552†	174182.3	170710.7	476.75 ug/L	476.75 ppb	15:55:09
3	Sc 361.383	747076.8	747076.8	103.95 %		15:56:38
3	Y 371.029	576159.0	576159.0	102.52 %		15:56:38
3	Ag 328.068†	89375.6	85346.9	512.94 ug/L	512.94 ppb	15:56:38
3	As 188.979†	1443.8	1424.4	516.88 ug/L	516.88 ppb	15:56:58
3	B 249.677†	20109.7	20285.5	508.30 ug/L	508.30 ppb	15:56:38
3	Ba 233.527†	75729.9	72851.8	515.15 ug/L	515.15 ppb	15:56:38
3	Be 313.107†	1165222.4	1125828.0	516.48 ug/L	516.48 ppb	15:56:38
3	Cd 226.502†	40756.6	39489.0	503.43 ug/L	503.43 ppb	15:56:58
3	Co 228.616†	30278.2	29227.2	507.09 ug/L	507.09 ppb	15:56:58
3	Cr 267.716†	37926.9	36563.2	513.06 ug/L	513.06 ppb	15:56:38
3	Cu 324.752†	152097.2	140679.4	510.07 ug/L	510.07 ppb	15:56:38
3	Mn 257.610†	485326.4	466205.4	514.64 ug/L	514.64 ppb	15:56:38
3	Mo 202.031†	7598.8	7292.9	513.73 ug/L	513.73 ppb	15:56:58
3	Ni 231.604†	19847.3	18973.3	506.83 ug/L	506.83 ppb	15:56:58
3	P 214.914†	5569.7	5043.2	2478.1 ug/L	2478.1 ppb	15:56:58
3	Pb 220.353†	4504.7	4346.8	519.11 ug/L	519.11 ppb	15:56:58
3	S 181.975 Axial†	863.9	755.6	1034.2 ug/L	1034.2 ppb	15:56:58
3	Sb 206.836†	1832.0	1705.1	512.89 ug/L	512.89 ppb	15:56:58
3	Se 196.026†	1030.2	1019.9	537.90 ug/L	537.90 ppb	15:56:58
3	Si 251.611†	87713.4	83968.6	2575.9 ug/L	2575.9 ppb	15:56:38
3	Sn 189.927†	3007.4	2880.7	510.74 ug/L	510.74 ppb	15:56:58
3	Ti 334.940†	288512.1	278897.4	510.51 ug/L	510.51 ppb	15:56:38
3	Tl 190.801†	1973.1	1958.9	515.92 ug/L	515.92 ppb	15:56:58
3	U 409.014†	10473.8	14924.6	503.77 ug/L	503.77 ppb	15:56:38
3	V 292.402†	56778.9	56186.6	516.42 ug/L	516.42 ppb	15:56:38
3	Zn 213.857†	58897.4	55734.3	509.70 ug/L	509.70 ppb	15:56:38
3	SiO2†	86419.9	82699.2	5400.0 ug/L	5400.0 ppb	15:57:13

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	742448.7	103.31	%	0.746				0.72%
Sc Radial	7528.5	101	%	1.6				1.62%
Y 371.029	572984.6	101.95	%	0.700				0.69%
Y RADIAL	6938.4	100.2	%	1.46				1.45%
Ag 328.068†	85223.8	512.23	ug/L	0.658	512.23	ppb	0.658	0.13%
QC value within limits for Ag 328.068 Recovery = 102.45%								
Al 396.153Radial†	6454.6	5293.1	ug/L	67.75	5293.1	ppb	67.75	1.28%
QC value within limits for Al 396.153Radial Recovery = 105.86%								
As 188.979†	1432.7	519.87	ug/L	2.717	519.87	ppb	2.717	0.52%
QC value within limits for As 188.979 Recovery = 103.97%								
B 249.677†	20250.5	507.40	ug/L	1.311	507.40	ppb	1.311	0.26%
QC value within limits for B 249.677 Recovery = 101.48%								
Ba 233.527†	72705.1	514.12	ug/L	0.947	514.12	ppb	0.947	0.18%
QC value within limits for Ba 233.527 Recovery = 102.82%								
Be 313.107†	1124198.3	515.73	ug/L	0.657	515.73	ppb	0.657	0.13%
QC value within limits for Be 313.107 Recovery = 103.15%								
Ca 317.933Radial†	3653.5	5175.6	ug/L	63.05	5175.6	ppb	63.05	1.22%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.51%
Cd 226.502†            39669.2      505.72 ug/L         3.309      505.72 ppb          3.309   0.65%
   QC value within limits for Cd 226.502  Recovery = 101.14%
Co 228.616†            29361.7      509.43 ug/L         2.921      509.43 ppb          2.921   0.57%
   QC value within limits for Co 228.616  Recovery = 101.89%
Cr 267.716†            36549.5      512.87 ug/L         0.171      512.87 ppb          0.171   0.03%
   QC value within limits for Cr 267.716  Recovery = 102.57%
Cu 324.752†           140451.7      509.25 ug/L         0.876      509.25 ppb          0.876   0.17%
   QC value within limits for Cu 324.752  Recovery = 101.85%
Fe 238.204 Radial†      1195.3      4998.8 ug/L        74.81      4998.8 ppb         74.81   1.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.98%
K 766.490 Radial†      22507.3      4842.6 ug/L        72.87      4842.6 ppb         72.87   1.50%
   QC value within limits for K 766.490 Radial  Recovery = 96.85%
Mg 279.077 IEC†          206.4      5151.6 ug/L       131.28      5151.6 ppb        131.28   2.55%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.03%
Mn 257.610†           465249.7      513.59 ug/L         0.936      513.59 ppb          0.936   0.18%
   QC value within limits for Mn 257.610  Recovery = 102.72%
Mo 202.031†             7321.5      515.75 ug/L         3.310      515.75 ppb          3.310   0.64%
   QC value within limits for Mo 202.031  Recovery = 103.15%
Na 589.592 Radial†    166990.2       10249 ug/L       157.4        10249 ppb        157.4   1.54%
   QC value within limits for Na 589.592 Radial  Recovery = 102.49%
Ni 231.604†            19064.7      509.27 ug/L         3.278      509.27 ppb          3.278   0.64%
   QC value within limits for Ni 231.604  Recovery = 101.85%
P 214.914†              5057.7      2485.6 ug/L        18.51      2485.6 ppb         18.51   0.74%
   QC value within limits for P 214.914  Recovery = 99.43%
Pb 220.353†             4363.5      521.12 ug/L         2.496      521.12 ppb          2.496   0.48%
   QC value within limits for Pb 220.353  Recovery = 104.22%
S 181.975 Axial†         756.4      1035.1 ug/L         4.42      1035.1 ppb          4.42   0.43%
   QC value within limits for S 181.975 Axial  Recovery = 103.51%
Sb 206.836†             1718.9      517.08 ug/L         4.344      517.08 ppb          4.344   0.84%
   QC value within limits for Sb 206.836  Recovery = 103.42%
Se 196.026†             1012.4      534.36 ug/L         3.408      534.36 ppb          3.408   0.64%
   QC value within limits for Se 196.026  Recovery = 106.87%
Si 251.611†            83772.3      2569.7 ug/L         5.33      2569.7 ppb          5.33   0.21%
   QC value within limits for Si 251.611  Recovery = 102.79%
Sn 189.927†             2895.1      513.31 ug/L         3.114      513.31 ppb          3.114   0.61%
   QC value within limits for Sn 189.927  Recovery = 102.66%
Sr 421.552†           172763.9      482.48 ug/L         7.839      482.48 ppb          7.839   1.62%
   QC value within limits for Sr 421.552  Recovery = 96.50%
Ti 334.940†           278477.7      509.74 ug/L         0.664      509.74 ppb          0.664   0.13%
   QC value within limits for Ti 334.940  Recovery = 101.95%
Tl 190.801†             1970.6      518.94 ug/L         5.011      518.94 ppb          5.011   0.97%
   QC value within limits for Tl 190.801  Recovery = 103.79%
U 409.014†             15073.7      508.81 ug/L         6.054      508.81 ppb          6.054   1.19%
   QC value within limits for U 409.014  Recovery = 101.76%
V 292.402†             56224.0      516.79 ug/L         0.322      516.79 ppb          0.322   0.06%
   QC value within limits for V 292.402  Recovery = 103.36%
Zn 213.857†            55645.6      508.86 ug/L         0.871      508.86 ppb          0.871   0.17%
   QC value within limits for Zn 213.857  Recovery = 101.77%
SiO2†                  82920.8      5414.3 ug/L        34.42      5414.3 ppb         34.42   0.64%
   QC value within limits for SiO2  Recovery = 101.25%
All analyte(s) passed QC.
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Sequence No.: 12
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 15:59:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7369.9	7369.9	98.6	%			16:01:16
1	Y RADIAL	6844.4	6844.4	98.85	%			16:01:16
1	Al 396.153Radial†	-59.2	12.6	10.377	ug/L	10.377	ppb	16:01:16
1	Ca 317.933Radial†	33.2	4.6	6.5450	ug/L	6.5450	ppb	16:01:36
1	Fe 238.204 Radial†	37.0	2.7	11.352	ug/L	11.352	ppb	16:01:36
1	K 766.490 Radial†	2418.3	45.5	9.8141	ug/L	9.8141	ppb	16:01:16
1	Mg 279.077 IEC†	2.3	-0.8	-19.006	ug/L	-19.006	ppb	16:01:36
1	Na 589.592 Radial†	-198.6	-65.9	-4.0422	ug/L	-4.0422	ppb	16:01:16
1	Sr 421.552†	-79.9	-25.1	-0.0703	ug/L	-0.0703	ppb	16:01:16
1	Sc 361.383	726891.3	726891.3	101.14	%			16:02:33
1	Y 371.029	569168.5	569168.5	101.28	%			16:02:33
1	Ag 328.068†	697.4	56.9	0.3397	ug/L	0.3397	ppb	16:02:33
1	As 188.979†	-38.2	-2.3	-0.8482	ug/L	-0.8482	ppb	16:02:53
1	B 249.677†	-671.7	275.8	6.9498	ug/L	6.9498	ppb	16:02:33
1	Ba 233.527†	33.8	33.0	0.2312	ug/L	0.2312	ppb	16:02:53
1	Be 313.107†	-4696.0	238.7	0.1095	ug/L	0.1095	ppb	16:02:33
1	Cd 226.502†	-284.9	-0.6	-0.0089	ug/L	-0.0089	ppb	16:02:53
1	Co 228.616†	-86.0	14.4	0.2516	ug/L	0.2516	ppb	16:02:53
1	Cr 267.716†	-69.6	8.6	0.1188	ug/L	0.1188	ppb	16:02:33
1	Cu 324.752†	5760.4	57.0	0.2072	ug/L	0.2072	ppb	16:02:33
1	Mn 257.610†	807.8	119.1	0.1332	ug/L	0.1332	ppb	16:02:33
1	Mo 202.031†	25.5	8.1	0.5713	ug/L	0.5713	ppb	16:02:53
1	Ni 231.604†	141.8	20.4	0.5460	ug/L	0.5460	ppb	16:02:53
1	P 214.914†	314.2	-4.2	-2.1738	ug/L	-2.1738	ppb	16:02:53
1	Pb 220.353†	-13.6	-0.2	-0.0209	ug/L	-0.0209	ppb	16:02:53
1	S 181.975 Axial†	92.0	15.6	21.315	ug/L	21.315	ppb	16:02:53
1	Sb 206.836†	53.2	-4.6	-1.3693	ug/L	-1.3693	ppb	16:02:53
1	Se 196.026†	-33.1	-4.0	-1.9932	ug/L	-1.9932	ppb	16:02:53
1	Si 251.611†	527.7	110.0	3.3813	ug/L	3.3813	ppb	16:02:53
1	Sn 189.927†	13.3	0.6	0.1119	ug/L	0.1119	ppb	16:02:53
1	Ti 334.940†	-1299.6	63.3	0.1154	ug/L	0.1154	ppb	16:02:33
1	Tl 190.801†	-48.1	13.2	3.4495	ug/L	3.4495	ppb	16:02:53
1	U 409.014†	-4846.5	56.9	1.9255	ug/L	1.9255	ppb	16:02:33
1	V 292.402†	-1646.4	-62.6	-0.5598	ug/L	-0.5598	ppb	16:02:33
1	Zn 213.857†	1000.6	64.2	0.5878	ug/L	0.5878	ppb	16:02:53
1	SiO2†	506.6	64.0	4.1738	ug/L	4.1738	ppb	16:03:49
2	Sc Radial	7474.7	7474.7	100	%			16:01:41
2	Y RADIAL	6888.8	6888.8	99.49	%			16:01:41
2	Al 396.153Radial†	-87.5	-14.9	-12.233	ug/L	-12.233	ppb	16:01:41
2	Ca 317.933Radial†	26.4	-2.7	-3.8030	ug/L	-3.8030	ppb	16:02:01
2	Fe 238.204 Radial†	39.6	4.8	19.820	ug/L	19.820	ppb	16:02:01
2	K 766.490 Radial†	2372.9	-34.3	-7.3891	ug/L	-7.3891	ppb	16:01:41
2	Mg 279.077 IEC†	3.2	0.2	4.5260	ug/L	4.5260	ppb	16:02:01
2	Na 589.592 Radial†	-109.1	26.5	1.6262	ug/L	1.6262	ppb	16:01:41
2	Sr 421.552†	-82.0	-26.1	-0.0729	ug/L	-0.0729	ppb	16:01:41
2	Sc 361.383	727502.2	727502.2	101.23	%			16:02:58
2	Y 371.029	568746.1	568746.1	101.20	%			16:02:58
2	Ag 328.068†	721.7	80.3	0.4829	ug/L	0.4829	ppb	16:02:58
2	As 188.979†	-34.1	1.7	0.6198	ug/L	0.6198	ppb	16:03:19
2	B 249.677†	-686.8	261.4	6.5865	ug/L	6.5865	ppb	16:02:58
2	Ba 233.527†	47.1	46.0	0.3244	ug/L	0.3244	ppb	16:03:19
2	Be 313.107†	-4841.6	98.8	0.0452	ug/L	0.0452	ppb	16:02:58
2	Cd 226.502†	-268.2	16.1	0.2033	ug/L	0.2033	ppb	16:03:19
2	Co 228.616†	-87.4	13.1	0.2251	ug/L	0.2251	ppb	16:03:19
2	Cr 267.716†	-59.9	18.2	0.2544	ug/L	0.2544	ppb	16:02:58
2	Cu 324.752†	5579.9	-126.1	-0.4559	ug/L	-0.4559	ppb	16:02:58
2	Mn 257.610†	753.5	64.7	0.0738	ug/L	0.0738	ppb	16:02:58
2	Mo 202.031†	7.9	-9.3	-0.6544	ug/L	-0.6544	ppb	16:03:19
2	Ni 231.604†	136.5	15.0	0.4017	ug/L	0.4017	ppb	16:03:19

2	P 214.914†	304.8	-13.7	-6.9260	ug/L	-6.9260 ppb	16:03:19
2	Pb 220.353†	-6.8	6.5	0.7689	ug/L	0.7689 ppb	16:03:19
2	S 181.975 Axial†	94.8	18.2	24.961	ug/L	24.961 ppb	16:03:19
2	Sb 206.836†	53.9	-4.0	-1.2212	ug/L	-1.2212 ppb	16:03:19
2	Se 196.026†	-25.0	4.0	2.1270	ug/L	2.1270 ppb	16:03:19
2	Si 251.611†	485.0	67.3	2.0965	ug/L	2.0965 ppb	16:03:19
2	Sn 189.927†	11.3	-1.4	-0.2431	ug/L	-0.2431 ppb	16:03:19
2	Ti 334.940†	-1357.2	7.5	0.0117	ug/L	0.0117 ppb	16:02:58
2	Tl 190.801†	-54.0	7.4	1.9319	ug/L	1.9319 ppb	16:03:19
2	U 409.014†	-4788.7	118.1	3.9945	ug/L	3.9945 ppb	16:02:58
2	V 292.402†	-1579.9	4.4	0.0367	ug/L	0.0367 ppb	16:02:58
2	Zn 213.857†	1037.5	99.8	0.9166	ug/L	0.9166 ppb	16:03:19
2	SiO2†	486.4	43.6	2.9058	ug/L	2.9058 ppb	16:03:54
3	Sc Radial	7403.0	7403.0	99.0	%		16:02:06
3	Y RADIAL	6847.2	6847.2	98.89	%		16:02:06
3	Al 396.153Radial†	-54.0	18.1	14.884	ug/L	14.884 ppb	16:02:06
3	Ca 317.933Radial†	31.7	2.9	4.1275	ug/L	4.1275 ppb	16:02:26
3	Fe 238.204 Radial†	37.0	2.6	10.803	ug/L	10.803 ppb	16:02:26
3	K 766.490 Radial†	2437.2	53.6	11.551	ug/L	11.551 ppb	16:02:06
3	Mg 279.077 IEC†	2.8	-0.2	-4.3818	ug/L	-4.3818 ppb	16:02:26
3	Na 589.592 Radial†	-102.2	32.4	1.9864	ug/L	1.9864 ppb	16:02:06
3	Sr 421.552†	12.5	68.5	0.1913	ug/L	0.1913 ppb	16:02:06
3	Sc 361.383	724912.0	724912.0	100.87	%		16:03:24
3	Y 371.029	566560.2	566560.2	100.81	%		16:03:24
3	Ag 328.068†	611.5	-26.3	-0.1562	ug/L	-0.1562 ppb	16:03:24
3	As 188.979†	-25.8	9.9	3.5743	ug/L	3.5743 ppb	16:03:44
3	B 249.677†	-797.7	149.0	3.7569	ug/L	3.7569 ppb	16:03:24
3	Ba 233.527†	-2.1	-2.6	-0.0191	ug/L	-0.0191 ppb	16:03:44
3	Be 313.107†	-4783.9	138.9	0.0636	ug/L	0.0636 ppb	16:03:24
3	Cd 226.502†	-262.4	20.9	0.2656	ug/L	0.2656 ppb	16:03:44
3	Co 228.616†	-117.9	-17.5	-0.3023	ug/L	-0.3023 ppb	16:03:44
3	Cr 267.716†	-91.4	-13.2	-0.1862	ug/L	-0.1862 ppb	16:03:24
3	Cu 324.752†	5727.1	39.5	0.1438	ug/L	0.1438 ppb	16:03:24
3	Mn 257.610†	762.8	76.6	0.0860	ug/L	0.0860 ppb	16:03:24
3	Mo 202.031†	23.2	5.8	0.4125	ug/L	0.4125 ppb	16:03:44
3	Ni 231.604†	129.2	8.3	0.2223	ug/L	0.2223 ppb	16:03:44
3	P 214.914†	315.7	-1.8	-0.9448	ug/L	-0.9448 ppb	16:03:44
3	Pb 220.353†	-9.3	4.1	0.4857	ug/L	0.4857 ppb	16:03:44
3	S 181.975 Axial†	83.4	7.2	9.8891	ug/L	9.8891 ppb	16:03:44
3	Sb 206.836†	58.2	0.4	0.1393	ug/L	0.1393 ppb	16:03:44
3	Se 196.026†	-28.4	0.6	0.3462	ug/L	0.3462 ppb	16:03:44
3	Si 251.611†	508.5	92.3	2.8372	ug/L	2.8372 ppb	16:03:44
3	Sn 189.927†	13.9	1.3	0.2327	ug/L	0.2327 ppb	16:03:44
3	Ti 334.940†	-1350.6	9.3	0.0167	ug/L	0.0167 ppb	16:03:24
3	Tl 190.801†	-65.3	-3.9	-1.0304	ug/L	-1.0304 ppb	16:03:44
3	U 409.014†	-4846.3	44.0	1.4896	ug/L	1.4896 ppb	16:03:24
3	V 292.402†	-1605.2	-26.2	-0.2317	ug/L	-0.2317 ppb	16:03:24
3	Zn 213.857†	1020.7	86.8	0.7986	ug/L	0.7986 ppb	16:03:44
3	SiO2†	500.0	58.8	3.8345	ug/L	3.8345 ppb	16:03:59

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	726435.2	101.08	%	0.188				0.19%
Sc Radial	7415.8	99.2	%	0.72				0.72%
Y 371.029	568158.2	101.10	%	0.249				0.25%
Y RADIAL	6860.1	99.07	%	0.359				0.36%
Ag 328.068†	37.0	0.2221	ug/L	0.33539	0.2221	ppb	0.33539	150.99%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.3	4.3424	ug/L	14.53076	4.3424	ppb	14.53076	334.62%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.1	1.1153	ug/L	2.25251	1.1153	ppb	2.25251	201.97%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	228.8	5.7644	ug/L	1.74802	5.7644	ppb	1.74802	30.32%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.4	0.1788	ug/L	0.17762	0.1788	ppb	0.17762	99.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	158.8	0.0728	ug/L	0.03311	0.0728	ppb	0.03311	45.49%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.6	2.2898	ug/L	5.41322	2.2898	ppb	5.41322	236.40%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                12.1      0.1533 ug/L       0.14389      0.1533 ppb        0.14389  93.85%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 3.3      0.0581 ug/L       0.31243      0.0581 ppb        0.31243 537.72%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 4.5      0.0623 ug/L       0.22565      0.0623 ppb        0.22565 361.94%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -9.9     -0.0350 ug/L       0.36590     -0.0350 ppb        0.36590 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4      13.992 ug/L        5.0547      13.992 ppb         5.0547  36.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          21.6      4.6586 ug/L      10.46975      4.6586 ppb       10.46975 224.74%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -6.2873 ug/L      11.88120     -6.2873 ppb       11.88120 188.97%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                86.8      0.0976 ug/L       0.03136      0.0976 ppb        0.03136  32.12%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 1.5      0.1098 ug/L       0.66654      0.1098 ppb        0.66654 607.14%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -2.3     -0.1432 ug/L       3.38145     -0.1432 ppb        3.38145 >999.9%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.6      0.3900 ug/L       0.16215      0.3900 ppb        0.16215  41.58%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.6     -3.3482 ug/L       3.15883     -3.3482 ppb        3.15883  94.34%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 3.5      0.4112 ug/L       0.40015      0.4112 ppb        0.40015  97.30%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           13.7      18.722 ug/L        7.8634      18.722 ppb         7.8634  42.00%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.8     -0.8171 ug/L       0.83153     -0.8171 ppb        0.83153 101.77%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.2      0.1600 ug/L       2.06638      0.1600 ppb        2.06638 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                89.9      2.7717 ug/L       0.64491      2.7717 ppb        0.64491  23.27%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.2      0.0338 ug/L       0.24736      0.0338 ppb        0.24736 730.83%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 5.8      0.0161 ug/L       0.15179      0.0161 ppb        0.15179 944.43%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                26.7      0.0479 ug/L       0.05850      0.0479 ppb        0.05850 122.09%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.5      1.4503 ug/L       2.27843      1.4503 ppb        2.27843 157.10%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 73.0      2.4699 ug/L       1.33823      2.4699 ppb        1.33823  54.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -28.1     -0.2516 ug/L       0.29875     -0.2516 ppb        0.29875 118.75%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                83.6      0.7677 ug/L       0.16655      0.7677 ppb        0.16655  21.70%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      55.5      3.6380 ug/L       0.65642      3.6380 ppb        0.65642  18.04%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 22
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 17:08:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7355.2	7355.2	98.4	%			17:10:59
1	Y RADIAL	6761.2	6761.2	97.64	%			17:10:59
1	Al 396.153Radial†	6223.9	6397.5	5246.3	ug/L	5246.3	ppb	17:10:39
1	Ca 317.933Radial†	3673.7	3704.2	5247.5	ug/L	5247.5	ppb	17:10:59
1	Fe 238.204 Radial†	1224.8	1209.9	5059.2	ug/L	5059.2	ppb	17:10:59
1	K 766.490 Radial†	25156.0	23156.9	4982.8	ug/L	4982.8	ppb	17:10:39
1	Mg 279.077 IEC†	209.2	209.6	5230.9	ug/L	5230.9	ppb	17:10:59
1	Na 589.592 Radial†	167127.7	169975.0	10432	ug/L	10432	ppb	17:10:39
1	Sr 421.552†	173183.6	176049.5	491.66	ug/L	491.66	ppb	17:10:39
1	Sc 361.383	741120.8	741120.8	103.12	%			17:11:58
1	Y 371.029	572028.0	572028.0	101.78	%			17:11:58
1	Ag 328.068†	88301.1	84995.8	510.88	ug/L	510.88	ppb	17:11:58
1	As 188.979†	1419.5	1412.0	512.41	ug/L	512.41	ppb	17:12:18
1	B 249.677†	19772.0	20113.5	503.96	ug/L	503.96	ppb	17:11:58
1	Ba 233.527†	74712.4	72450.6	512.31	ug/L	512.31	ppb	17:11:58
1	Be 313.107†	1148778.6	1118890.4	513.29	ug/L	513.29	ppb	17:11:58
1	Cd 226.502†	40390.2	39448.9	502.90	ug/L	502.90	ppb	17:12:18
1	Co 228.616†	30009.5	29200.6	506.63	ug/L	506.63	ppb	17:12:18
1	Cr 267.716†	37484.1	36427.0	511.16	ug/L	511.16	ppb	17:11:58
1	Cu 324.752†	149844.6	139670.9	506.42	ug/L	506.42	ppb	17:11:58
1	Mn 257.610†	478419.7	463259.8	511.40	ug/L	511.40	ppb	17:11:58
1	Mo 202.031†	7522.9	7278.1	512.70	ug/L	512.70	ppb	17:12:18
1	Ni 231.604†	19647.4	18932.9	505.75	ug/L	505.75	ppb	17:12:18
1	P 214.914†	5504.7	5023.3	2468.5	ug/L	2468.5	ppb	17:12:18
1	Pb 220.353†	4456.9	4335.3	517.74	ug/L	517.74	ppb	17:12:18
1	S 181.975 Axial†	852.7	751.5	1028.4	ug/L	1028.4	ppb	17:12:18
1	Sb 206.836†	1816.2	1704.0	512.55	ug/L	512.55	ppb	17:12:18
1	Se 196.026†	997.4	995.9	526.15	ug/L	526.15	ppb	17:12:18
1	Si 251.611†	87163.1	84113.2	2580.3	ug/L	2580.3	ppb	17:11:58
1	Sn 189.927†	2974.4	2871.9	509.21	ug/L	509.21	ppb	17:12:18
1	Ti 334.940†	284487.2	277224.9	507.45	ug/L	507.45	ppb	17:11:58
1	Tl 190.801†	1946.4	1948.2	513.09	ug/L	513.09	ppb	17:12:18
1	U 409.014†	10382.3	14916.8	503.49	ug/L	503.49	ppb	17:11:58
1	V 292.402†	56045.4	55914.2	513.92	ug/L	513.92	ppb	17:11:58
1	Zn 213.857†	58130.4	55445.8	507.03	ug/L	507.03	ppb	17:11:58
1	SiO2†	87839.5	84744.0	5534.4	ug/L	5534.4	ppb	17:13:18
2	Sc Radial	7325.9	7325.9	98.0	%			17:11:24
2	Y RADIAL	6752.9	6752.9	97.52	%			17:11:24
2	Al 396.153Radial†	6231.0	6430.1	5273.1	ug/L	5273.1	ppb	17:11:04
2	Ca 317.933Radial†	3670.6	3716.0	5264.1	ug/L	5264.1	ppb	17:11:24
2	Fe 238.204 Radial†	1218.3	1208.3	5052.5	ug/L	5052.5	ppb	17:11:24
2	K 766.490 Radial†	25340.6	23447.7	5045.5	ug/L	5045.5	ppb	17:11:04
2	Mg 279.077 IEC†	208.2	209.4	5225.8	ug/L	5225.8	ppb	17:11:24
2	Na 589.592 Radial†	167131.7	170659.6	10474	ug/L	10474	ppb	17:11:04
2	Sr 421.552†	173419.2	176995.0	494.30	ug/L	494.30	ppb	17:11:04
2	Sc 361.383	739217.0	739217.0	102.86	%			17:12:25
2	Y 371.029	570105.1	570105.1	101.44	%			17:12:25
2	Ag 328.068†	87884.9	84811.8	509.78	ug/L	509.78	ppb	17:12:25
2	As 188.979†	1422.5	1418.5	514.76	ug/L	514.76	ppb	17:12:45
2	B 249.677†	19750.7	20142.2	504.69	ug/L	504.69	ppb	17:12:25
2	Ba 233.527†	74335.0	72270.3	511.04	ug/L	511.04	ppb	17:12:25
2	Be 313.107†	1143521.5	1116648.2	512.27	ug/L	512.27	ppb	17:12:25
2	Cd 226.502†	40177.9	39343.3	501.56	ug/L	501.56	ppb	17:12:45
2	Co 228.616†	29852.3	29122.8	505.28	ug/L	505.28	ppb	17:12:45
2	Cr 267.716†	37289.3	36331.2	509.81	ug/L	509.81	ppb	17:12:25
2	Cu 324.752†	149532.5	139741.6	506.68	ug/L	506.68	ppb	17:12:25
2	Mn 257.610†	476899.3	462976.5	511.09	ug/L	511.09	ppb	17:12:25
2	Mo 202.031†	7496.3	7271.0	512.20	ug/L	512.20	ppb	17:12:45
2	Ni 231.604†	19580.3	18916.7	505.32	ug/L	505.32	ppb	17:12:45

2	P 214.914†	5485.3	5018.2	2465.9 ug/L	2465.9 ppb	17:12:45
2	Pb 220.353†	4415.6	4306.2	514.28 ug/L	514.28 ppb	17:12:45
2	S 181.975 Axial†	848.0	749.0	1025.0 ug/L	1025.0 ppb	17:12:45
2	Sb 206.836†	1816.8	1709.1	514.09 ug/L	514.09 ppb	17:12:45
2	Se 196.026†	1003.6	1004.5	530.52 ug/L	530.52 ppb	17:12:45
2	Si 251.611†	86801.9	83979.7	2576.2 ug/L	2576.2 ppb	17:12:25
2	Sn 189.927†	2961.8	2867.1	508.36 ug/L	508.36 ppb	17:12:45
2	Ti 334.940†	283706.8	277176.6	507.37 ug/L	507.37 ppb	17:12:25
2	Tl 190.801†	1947.0	1953.6	514.51 ug/L	514.51 ppb	17:12:45
2	U 409.014†	10377.7	14938.2	504.22 ug/L	504.22 ppb	17:12:25
2	V 292.402†	55940.5	55952.3	514.27 ug/L	514.27 ppb	17:12:25
2	Zn 213.857†	57861.6	55329.7	505.96 ug/L	505.96 ppb	17:12:25
2	SiO2†	87366.6	84503.6	5518.6 ug/L	5518.6 ppb	17:13:23
3	Sc Radial	7318.8	7318.8	97.9 %		17:11:49
3	Y RADIAL	6734.8	6734.8	97.26 %		17:11:49
3	Al 396.153Radial†	6166.3	6370.2	5223.7 ug/L	5223.7 ppb	17:11:29
3	Ca 317.933Radial†	3664.6	3713.5	5260.6 ug/L	5260.6 ppb	17:11:49
3	Fe 238.204 Radial†	1215.9	1207.0	5047.4 ug/L	5047.4 ppb	17:11:49
3	K 766.490 Radial†	25093.8	23220.7	4996.6 ug/L	4996.6 ppb	17:11:29
3	Mg 279.077 IEC†	208.1	209.4	5227.5 ug/L	5227.5 ppb	17:11:49
3	Na 589.592 Radial†	165706.5	169369.3	10395 ug/L	10395 ppb	17:11:29
3	Sr 421.552†	171906.5	175621.7	490.47 ug/L	490.47 ppb	17:11:29
3	Sc 361.383	734212.8	734212.8	102.16 %		17:12:52
3	Y 371.029	566556.0	566556.0	100.81 %		17:12:52
3	Ag 328.068†	87293.3	84815.0	509.79 ug/L	509.79 ppb	17:12:52
3	As 188.979†	1427.4	1432.6	519.86 ug/L	519.86 ppb	17:13:12
3	B 249.677†	19543.9	20070.6	502.87 ug/L	502.87 ppb	17:12:52
3	Ba 233.527†	73660.1	72102.2	509.85 ug/L	509.85 ppb	17:12:52
3	Be 313.107†	1132526.8	1113463.4	510.81 ug/L	510.81 ppb	17:12:52
3	Cd 226.502†	40095.0	39528.3	503.92 ug/L	503.92 ppb	17:13:12
3	Co 228.616†	29800.1	29269.5	507.83 ug/L	507.83 ppb	17:13:12
3	Cr 267.716†	37069.1	36362.7	510.25 ug/L	510.25 ppb	17:12:52
3	Cu 324.752†	148278.3	139504.8	505.82 ug/L	505.82 ppb	17:12:52
3	Mn 257.610†	472366.2	461699.3	509.68 ug/L	509.68 ppb	17:12:52
3	Mo 202.031†	7470.0	7295.0	513.88 ug/L	513.88 ppb	17:13:12
3	Ni 231.604†	19500.0	18967.9	506.69 ug/L	506.69 ppb	17:13:12
3	P 214.914†	5484.0	5053.2	2483.9 ug/L	2483.9 ppb	17:13:12
3	Pb 220.353†	4417.4	4337.3	517.98 ug/L	517.98 ppb	17:13:12
3	S 181.975 Axial†	835.5	742.4	1016.1 ug/L	1016.1 ppb	17:13:12
3	Sb 206.836†	1812.6	1717.1	516.49 ug/L	516.49 ppb	17:13:12
3	Se 196.026†	1010.2	1017.6	537.19 ug/L	537.19 ppb	17:13:12
3	Si 251.611†	86011.1	83780.7	2570.0 ug/L	2570.0 ppb	17:12:52
3	Sn 189.927†	2947.7	2872.9	509.39 ug/L	509.39 ppb	17:13:12
3	Ti 334.940†	281343.0	276742.8	506.57 ug/L	506.57 ppb	17:12:52
3	Tl 190.801†	1949.3	1968.9	518.46 ug/L	518.46 ppb	17:13:12
3	U 409.014†	10333.0	14963.3	505.07 ug/L	505.07 ppb	17:12:52
3	V 292.402†	55374.7	55769.1	512.63 ug/L	512.63 ppb	17:12:52
3	Zn 213.857†	57333.5	55196.2	504.72 ug/L	504.72 ppb	17:12:52
3	SiO2†	86755.9	84484.7	5517.2 ug/L	5517.2 ppb	17:13:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	738183.5	102.71	%	0.496				0.48%
Sc Radial	7333.3	98.1	%	0.26				0.26%
Y 371.029	569563.0	101.35	%	0.494				0.49%
Y RADIAL	6749.7	97.48	%	0.195				0.20%
Ag 328.068†	84874.2	510.15	ug/L	0.633	510.15	ppb	0.633	0.12%
QC value within limits for Ag 328.068 Recovery = 102.03%								
Al 396.153Radial†	6399.3	5247.7	ug/L	24.76	5247.7	ppb	24.76	0.47%
QC value within limits for Al 396.153Radial Recovery = 104.95%								
As 188.979†	1421.0	515.68	ug/L	3.810	515.68	ppb	3.810	0.74%
QC value within limits for As 188.979 Recovery = 103.14%								
B 249.677†	20108.8	503.84	ug/L	0.914	503.84	ppb	0.914	0.18%
QC value within limits for B 249.677 Recovery = 100.77%								
Ba 233.527†	72274.4	511.07	ug/L	1.231	511.07	ppb	1.231	0.24%
QC value within limits for Ba 233.527 Recovery = 102.21%								
Be 313.107†	1116334.0	512.12	ug/L	1.249	512.12	ppb	1.249	0.24%
QC value within limits for Be 313.107 Recovery = 102.42%								
Ca 317.933Radial†	3711.3	5257.4	ug/L	8.77	5257.4	ppb	8.77	0.17%

```
   QC value within limits for Ca 317.933Radial  Recovery = 105.15%
Cd 226.502†            39440.2      502.79 ug/L         1.185      502.79 ppb          1.185   0.24%
   QC value within limits for Cd 226.502  Recovery = 100.56%
Co 228.616†            29197.6      506.58 ug/L         1.275      506.58 ppb          1.275   0.25%
   QC value within limits for Co 228.616  Recovery = 101.32%
Cr 267.716†            36373.6      510.41 ug/L         0.684      510.41 ppb          0.684   0.13%
   QC value within limits for Cr 267.716  Recovery = 102.08%
Cu 324.752†           139639.1      506.31 ug/L         0.441      506.31 ppb          0.441   0.09%
   QC value within limits for Cu 324.752  Recovery = 101.26%
Fe 238.204 Radial†      1208.4      5053.0 ug/L          5.94      5053.0 ppb           5.94   0.12%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.06%
K 766.490 Radial†      23275.1      5008.3 ug/L         32.97      5008.3 ppb          32.97   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 100.17%
Mg 279.077 IEC†          209.5      5228.1 ug/L          2.59      5228.1 ppb           2.59   0.05%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.56%
Mn 257.610†           462645.2      510.72 ug/L         0.917      510.72 ppb          0.917   0.18%
   QC value within limits for Mn 257.610  Recovery = 102.14%
Mo 202.031†             7281.4      512.93 ug/L         0.866      512.93 ppb          0.866   0.17%
   QC value within limits for Mo 202.031  Recovery = 102.59%
Na 589.592 Radial†    170001.3       10433 ug/L          39.6       10433 ppb           39.6   0.38%
   QC value within limits for Na 589.592 Radial  Recovery = 104.33%
Ni 231.604†            18939.2      505.92 ug/L         0.698      505.92 ppb          0.698   0.14%
   QC value within limits for Ni 231.604  Recovery = 101.18%
P 214.914†              5031.6      2472.8 ug/L          9.75      2472.8 ppb           9.75   0.39%
   QC value within limits for P 214.914  Recovery = 98.91%
Pb 220.353†             4326.3      516.67 ug/L         2.067      516.67 ppb          2.067   0.40%
   QC value within limits for Pb 220.353  Recovery = 103.33%
S 181.975 Axial†         747.6      1023.2 ug/L          6.38      1023.2 ppb           6.38   0.62%
   QC value within limits for S 181.975 Axial  Recovery = 102.32%
Sb 206.836†             1710.0      514.38 ug/L         1.985      514.38 ppb          1.985   0.39%
   QC value within limits for Sb 206.836  Recovery = 102.88%
Se 196.026†             1006.0      531.29 ug/L         5.557      531.29 ppb          5.557   1.05%
   QC value within limits for Se 196.026  Recovery = 106.26%
Si 251.611†            83957.9      2575.5 ug/L          5.18      2575.5 ppb           5.18   0.20%
   QC value within limits for Si 251.611  Recovery = 103.02%
Sn 189.927†             2870.6      508.98 ug/L         0.547      508.98 ppb          0.547   0.11%
   QC value within limits for Sn 189.927  Recovery = 101.80%
Sr 421.552†           176222.1      492.14 ug/L         1.963      492.14 ppb          1.963   0.40%
   QC value within limits for Sr 421.552  Recovery = 98.43%
Ti 334.940†           277048.1      507.13 ug/L         0.486      507.13 ppb          0.486   0.10%
   QC value within limits for Ti 334.940  Recovery = 101.43%
Tl 190.801†             1956.9      515.35 ug/L         2.787      515.35 ppb          2.787   0.54%
   QC value within limits for Tl 190.801  Recovery = 103.07%
U 409.014†             14939.4      504.26 ug/L         0.789      504.26 ppb          0.789   0.16%
   QC value within limits for U 409.014  Recovery = 100.85%
V 292.402†             55878.5      513.61 ug/L         0.865      513.61 ppb          0.865   0.17%
   QC value within limits for V 292.402  Recovery = 102.72%
Zn 213.857†            55323.9      505.91 ug/L         1.155      505.91 ppb          1.155   0.23%
   QC value within limits for Zn 213.857  Recovery = 101.18%
SiO2†                  84577.4      5523.4 ug/L          9.53      5523.4 ppb           9.53   0.17%
   QC value within limits for SiO2  Recovery = 103.29%
All analyte(s) passed QC.
```

Sequence No.: 23
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 17:15:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7383.1	7383.1	98.8	%			17:17:29
1	Y RADIAL	6829.3	6829.3	98.63	%			17:17:29
1	Al 396.153Radial†	-55.3	16.7	13.755	ug/L	13.755	ppb	17:17:29
1	Ca 317.933Radial†	22.6	-6.2	-8.8370	ug/L	-8.8370	ppb	17:17:49
1	Fe 238.204 Radial†	35.1	0.8	3.2274	ug/L	3.2274	ppb	17:17:49
1	K 766.490 Radial†	2425.1	48.0	10.354	ug/L	10.354	ppb	17:17:29
1	Mg 279.077 IEC†	6.3	3.3	82.931	ug/L	82.931	ppb	17:17:49
1	Na 589.592 Radial†	-137.4	-3.6	-0.2206	ug/L	-0.2206	ppb	17:17:29
1	Sr 421.552†	-31.9	23.5	0.0658	ug/L	0.0658	ppb	17:17:29
1	Sc 361.383	729651.1	729651.1	101.53	%			17:18:46
1	Y 371.029	571078.0	571078.0	101.62	%			17:18:46
1	Ag 328.068†	704.8	61.6	0.3645	ug/L	0.3645	ppb	17:18:46
1	As 188.979†	-33.9	2.1	0.7411	ug/L	0.7411	ppb	17:19:06
1	B 249.677†	-666.7	283.2	7.1376	ug/L	7.1376	ppb	17:18:46
1	Ba 233.527†	12.7	12.0	0.0865	ug/L	0.0865	ppb	17:19:06
1	Be 313.107†	-4888.7	66.5	0.0307	ug/L	0.0307	ppb	17:18:46
1	Cd 226.502†	-288.5	-3.0	-0.0388	ug/L	-0.0388	ppb	17:19:06
1	Co 228.616†	-98.7	2.2	0.0387	ug/L	0.0387	ppb	17:19:06
1	Cr 267.716†	-105.2	-26.2	-0.3687	ug/L	-0.3687	ppb	17:18:46
1	Cu 324.752†	5591.3	-131.1	-0.4750	ug/L	-0.4750	ppb	17:18:46
1	Mn 257.610†	767.2	76.0	0.0826	ug/L	0.0826	ppb	17:18:46
1	Mo 202.031†	17.0	-0.4	-0.0272	ug/L	-0.0272	ppb	17:19:06
1	Ni 231.604†	141.1	19.2	0.5126	ug/L	0.5126	ppb	17:19:06
1	P 214.914†	323.3	3.7	1.9606	ug/L	1.9606	ppb	17:19:06
1	Pb 220.353†	2.6	15.8	1.8861	ug/L	1.8861	ppb	17:19:06
1	S 181.975 Axial†	84.2	7.5	10.335	ug/L	10.335	ppb	17:19:06
1	Sb 206.836†	56.2	-1.9	-0.5435	ug/L	-0.5435	ppb	17:19:06
1	Se 196.026†	-23.3	5.8	2.9742	ug/L	2.9742	ppb	17:19:06
1	Si 251.611†	778.3	354.8	10.956	ug/L	10.956	ppb	17:19:06
1	Sn 189.927†	12.2	-0.5	-0.0805	ug/L	-0.0805	ppb	17:19:06
1	Ti 334.940†	-1301.1	66.7	0.1175	ug/L	0.1175	ppb	17:18:46
1	Tl 190.801†	-47.8	13.7	3.5830	ug/L	3.5830	ppb	17:19:06
1	U 409.014†	-4642.7	275.8	9.3385	ug/L	9.3385	ppb	17:18:46
1	V 292.402†	-1500.3	87.4	0.8126	ug/L	0.8126	ppb	17:18:46
1	Zn 213.857†	967.2	27.5	0.2483	ug/L	0.2483	ppb	17:19:06
1	SiO2†	761.7	313.4	20.603	ug/L	20.603	ppb	17:20:02
2	Sc Radial	7555.7	7555.7	101	%			17:17:54
2	Y RADIAL	7004.6	7004.6	101.2	%			17:17:54
2	Al 396.153Radial†	-70.3	3.1	2.5786	ug/L	2.5786	ppb	17:17:54
2	Ca 317.933Radial†	14.0	-15.3	-21.619	ug/L	-21.619	ppb	17:18:14
2	Fe 238.204 Radial†	38.2	3.0	12.580	ug/L	12.580	ppb	17:18:14
2	K 766.490 Radial†	2533.5	99.1	21.403	ug/L	21.403	ppb	17:17:54
2	Mg 279.077 IEC†	4.3	1.2	30.148	ug/L	30.148	ppb	17:18:14
2	Na 589.592 Radial†	-268.9	-130.5	-8.0088	ug/L	-8.0088	ppb	17:17:54
2	Sr 421.552†	-30.4	25.7	0.0721	ug/L	0.0721	ppb	17:17:54
2	Sc 361.383	716378.7	716378.7	99.678	%			17:19:11
2	Y 371.029	560732.4	560732.4	99.774	%			17:19:11
2	Ag 328.068†	618.9	-11.7	-0.0617	ug/L	-0.0617	ppb	17:19:11
2	As 188.979†	-24.0	11.3	4.0898	ug/L	4.0898	ppb	17:19:31
2	B 249.677†	-741.4	196.1	4.9415	ug/L	4.9415	ppb	17:19:11
2	Ba 233.527†	6.3	5.8	0.0414	ug/L	0.0414	ppb	17:19:31
2	Be 313.107†	-4782.5	83.8	0.0386	ug/L	0.0386	ppb	17:19:11
2	Cd 226.502†	-267.5	12.8	0.1616	ug/L	0.1616	ppb	17:19:31
2	Co 228.616†	-97.4	1.8	0.0286	ug/L	0.0286	ppb	17:19:31
2	Cr 267.716†	-27.4	49.9	0.7010	ug/L	0.7010	ppb	17:19:11
2	Cu 324.752†	5628.5	8.2	0.0304	ug/L	0.0304	ppb	17:19:11
2	Mn 257.610†	744.8	67.6	0.0755	ug/L	0.0755	ppb	17:19:11
2	Mo 202.031†	8.5	-8.6	-0.6049	ug/L	-0.6049	ppb	17:19:31
2	Ni 231.604†	136.4	17.1	0.4563	ug/L	0.4563	ppb	17:19:31

2	P 214.914†	342.5	28.8	14.695 ug/L	14.695 ppb		17:19:31
2	Pb 220.353†	2.1	15.4	1.8303 ug/L	1.8303 ppb		17:19:31
2	S 181.975 Axial†	79.4	4.3	5.8761 ug/L	5.8761 ppb		17:19:31
2	Sb 206.836†	54.6	-2.5	-0.7895 ug/L	-0.7895 ppb		17:19:31
2	Se 196.026†	-26.7	2.0	1.0415 ug/L	1.0415 ppb		17:19:31
2	Si 251.611†	745.8	336.4	10.409 ug/L	10.409 ppb		17:19:31
2	Sn 189.927†	6.2	-6.3	-1.1127 ug/L	-1.1127 ppb		17:19:31
2	Ti 334.940†	-1294.5	49.5	0.0909 ug/L	0.0909 ppb		17:19:11
2	Tl 190.801†	-53.8	6.8	1.7745 ug/L	1.7745 ppb		17:19:31
2	U 409.014†	-4950.8	-118.1	-4.0008 ug/L	-4.0008 ppb		17:19:11
2	V 292.402†	-1542.2	18.0	0.1466 ug/L	0.1466 ppb		17:19:11
2	Zn 213.857†	963.2	41.1	0.3744 ug/L	0.3744 ppb		17:19:31
2	SiO2†	776.6	342.3	22.549 ug/L	22.549 ppb		17:20:07
3	Sc Radial	7361.7	7361.7	98.5 %			17:18:19
3	Y RADIAL	6861.2	6861.2	99.09 %			17:18:19
3	Al 396.153Radial†	-72.8	-1.3	-1.0607 ug/L	-1.0607 ppb		17:18:19
3	Ca 317.933Radial†	31.6	3.0	4.2344 ug/L	4.2344 ppb		17:18:39
3	Fe 238.204 Radial†	36.7	2.5	10.477 ug/L	10.477 ppb		17:18:39
3	K 766.490 Radial†	2542.7	174.5	37.654 ug/L	37.654 ppb		17:18:19
3	Mg 279.077 IEC†	1.9	-1.1	-27.017 ug/L	-27.017 ppb		17:18:39
3	Na 589.592 Radial†	-207.9	-75.5	-4.6364 ug/L	-4.6364 ppb		17:18:19
3	Sr 421.552†	-71.0	-16.2	-0.0452 ug/L	-0.0452 ppb		17:18:19
3	Sc 361.383	722458.7	722458.7	100.52 %			17:19:37
3	Y 371.029	565036.5	565036.5	100.54 %			17:19:37
3	Ag 328.068†	564.6	-71.0	-0.4225 ug/L	-0.4225 ppb		17:19:37
3	As 188.979†	-40.8	-5.1	-1.8485 ug/L	-1.8485 ppb		17:19:57
3	B 249.677†	-804.1	140.0	3.5258 ug/L	3.5258 ppb		17:19:37
3	Ba 233.527†	3.1	2.6	0.0174 ug/L	0.0174 ppb		17:19:57
3	Be 313.107†	-4788.1	118.6	0.0543 ug/L	0.0543 ppb		17:19:37
3	Cd 226.502†	-270.0	12.5	0.1593 ug/L	0.1593 ppb		17:19:57
3	Co 228.616†	-82.6	17.3	0.3002 ug/L	0.3002 ppb		17:19:57
3	Cr 267.716†	-53.3	24.4	0.3415 ug/L	0.3415 ppb		17:19:37
3	Cu 324.752†	5622.5	-45.3	-0.1635 ug/L	-0.1635 ppb		17:19:37
3	Mn 257.610†	717.0	33.6	0.0389 ug/L	0.0389 ppb		17:19:37
3	Mo 202.031†	24.0	6.8	0.4785 ug/L	0.4785 ppb		17:19:57
3	Ni 231.604†	148.7	28.1	0.7516 ug/L	0.7516 ppb		17:19:57
3	P 214.914†	311.3	-5.1	-2.5655 ug/L	-2.5655 ppb		17:19:57
3	Pb 220.353†	-9.4	3.9	0.4590 ug/L	0.4590 ppb		17:19:57
3	S 181.975 Axial†	78.1	2.3	3.1219 ug/L	3.1219 ppb		17:19:57
3	Sb 206.836†	44.1	-13.4	-3.9514 ug/L	-3.9514 ppb		17:19:57
3	Se 196.026†	-21.7	7.1	3.6792 ug/L	3.6792 ppb		17:19:57
3	Si 251.611†	737.4	321.8	9.8971 ug/L	9.8971 ppb		17:19:57
3	Sn 189.927†	21.2	8.6	1.5176 ug/L	1.5176 ppb		17:19:57
3	Ti 334.940†	-1359.0	-3.7	-0.0066 ug/L	-0.0066 ppb		17:19:37
3	Tl 190.801†	-53.6	7.4	1.9366 ug/L	1.9366 ppb		17:19:57
3	U 409.014†	-4870.7	3.4	0.1132 ug/L	0.1132 ppb		17:19:37
3	V 292.402†	-1621.8	-48.1	-0.4327 ug/L	-0.4327 ppb		17:19:37
3	Zn 213.857†	957.3	27.2	0.2461 ug/L	0.2461 ppb		17:19:57
3	SiO2†	748.2	307.4	20.123 ug/L	20.123 ppb		17:20:12

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	722829.5	100.58	%	0.924				0.92%
Sc Radial	7433.5	99.5	%	1.42				1.43%
Y 371.029	565615.6	100.64	%	0.925				0.92%
Y RADIAL	6898.4	99.63	%	1.349				1.35%
Ag 328.068†	-7.0	-0.0399	ug/L	0.39393	-0.0399	ppb	0.39393	987.29%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	6.2	5.0908	ug/L	7.72056	5.0908	ppb	7.72056	151.66%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.8	0.9941	ug/L	2.97723	0.9941	ppb	2.97723	299.48%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	206.4	5.2017	ug/L	1.81989	5.2017	ppb	1.81989	34.99%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	6.8	0.0484	ug/L	0.03505	0.0484	ppb	0.03505	72.38%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	89.6	0.0412	ug/L	0.01198	0.0412	ppb	0.01198	29.10%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-6.2	-8.7407	ug/L	12.92716	-8.7407	ppb	12.92716	147.90%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 7.4      0.0941 ug/L       0.11506      0.0941 ppb        0.11506 122.32%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 7.1      0.1225 ug/L       0.15398      0.1225 ppb        0.15398 125.73%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                16.0      0.2246 ug/L       0.54437      0.2246 ppb        0.54437 242.37%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -56.1     -0.2027 ug/L       0.25498     -0.2027 ppb        0.25498 125.79%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          2.1      8.7613 ug/L       4.90648      8.7613 ppb        4.90648  56.00%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         107.2     23.137 ug/L       13.7321     23.137 ppb        13.7321  59.35%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.2     28.687 ug/L       54.9883     28.687 ppb        54.9883 191.68%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                59.1      0.0657 ug/L       0.02347      0.0657 ppb        0.02347  35.73%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.7     -0.0512 ug/L       0.54211     -0.0512 ppb        0.54211 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -69.9     -4.2886 ug/L       3.90572     -4.2886 ppb        3.90572  91.07%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.5      0.5735 ug/L       0.15675      0.5735 ppb        0.15675  27.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  9.1      4.6966 ug/L       8.94941      4.6966 ppb        8.94941 190.55%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                11.7      1.3918 ug/L       0.80833      1.3918 ppb        0.80833  58.08%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            4.7      6.4442 ug/L       3.63975      6.4442 ppb        3.63975  56.48%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -5.9     -1.7615 ug/L       1.90051     -1.7615 ppb        1.90051 107.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      2.5649 ug/L       1.36562      2.5649 ppb        1.36562  53.24%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               337.7     10.421 ug/L        0.5298     10.421 ppb         0.5298   5.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.6      0.1081 ug/L       1.32522      0.1081 ppb        1.32522 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                11.0      0.0309 ug/L       0.06601      0.0309 ppb        0.06601 213.73%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                37.5      0.0673 ug/L       0.06537      0.0673 ppb        0.06537  97.16%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 9.3      2.4314 ug/L       1.00061      2.4314 ppb        1.00061  41.15%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 53.7      1.8170 ug/L       6.83090      1.8170 ppb        6.83090 375.95%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 19.1      0.1755 ug/L       0.62311      0.1755 ppb        0.62311 355.08%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                32.0      0.2896 ug/L       0.07345      0.2896 ppb        0.07345  25.36%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     321.0     21.092 ug/L        1.2851     21.092 ppb         1.2851   6.09%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 32
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 18:18:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7366.9	7366.9	98.6	%			18:21:03
1	Y RADIAL	6789.6	6789.6	98.05	%			18:21:03
1	Al 396.153Radial†	6381.2	6547.1	5369.6	ug/L	5369.6	ppb	18:20:43
1	Ca 317.933Radial†	3683.4	3708.2	5253.1	ug/L	5253.1	ppb	18:21:03
1	Fe 238.204 Radial†	1228.3	1211.4	5066.0	ug/L	5066.0	ppb	18:21:03
1	K 766.490 Radial†	25571.7	23538.4	5065.1	ug/L	5065.1	ppb	18:20:43
1	Mg 279.077 IEC†	208.6	208.6	5205.9	ug/L	5205.9	ppb	18:21:03
1	Na 589.592 Radial†	171913.5	174562.7	10713	ug/L	10713	ppb	18:20:43
1	Sr 421.552†	178023.7	180682.5	504.60	ug/L	504.60	ppb	18:20:43
1	Sc 361.383	741979.7	741979.7	103.24	%			18:22:00
1	Y 371.029	481732.9	481732.9	85.718	%			18:22:05
1	Ag 328.068†	89407.2	85968.1	516.69	ug/L	516.69	ppb	18:22:05
1	As 188.979†	1424.3	1415.1	513.50	ug/L	513.50	ppb	18:22:25
1	B 249.677†	20010.2	20322.0	509.17	ug/L	509.17	ppb	18:22:05
1	Ba 233.527†	74975.3	72621.4	513.53	ug/L	513.53	ppb	18:22:05
1	Be 313.107†	1148144.2	1116986.4	512.41	ug/L	512.41	ppb	18:22:00
1	Cd 226.502†	41517.3	40495.1	516.25	ug/L	516.25	ppb	18:22:05
1	Co 228.616†	30576.8	29716.4	515.58	ug/L	515.58	ppb	18:22:05
1	Cr 267.716†	37878.9	36767.3	515.92	ug/L	515.92	ppb	18:22:05
1	Cu 324.752†	150859.2	140485.4	509.37	ug/L	509.37	ppb	18:22:05
1	Mn 257.610†	477837.9	462159.2	510.19	ug/L	510.19	ppb	18:22:00
1	Mo 202.031†	7481.2	7229.2	509.26	ug/L	509.26	ppb	18:22:25
1	Ni 231.604†	20046.2	19297.1	515.48	ug/L	515.48	ppb	18:22:05
1	P 214.914†	5493.4	5006.2	2459.3	ug/L	2459.3	ppb	18:22:25
1	Pb 220.353†	4396.0	4271.3	510.13	ug/L	510.13	ppb	18:22:25
1	S 181.975 Axial†	849.6	747.5	1023.0	ug/L	1023.0	ppb	18:22:25
1	Sb 206.836†	1829.4	1714.7	515.60	ug/L	515.60	ppb	18:22:25
1	Se 196.026†	1005.0	1002.3	529.41	ug/L	529.41	ppb	18:22:25
1	Si 251.611†	87322.6	84169.8	2582.1	ug/L	2582.1	ppb	18:22:05
1	Sn 189.927†	2980.6	2874.6	509.68	ug/L	509.68	ppb	18:22:25
1	Ti 334.940†	281193.2	273715.0	501.01	ug/L	501.01	ppb	18:22:05
1	Tl 190.801†	1949.3	1948.9	513.14	ug/L	513.14	ppb	18:22:25
1	U 409.014†	11260.3	15755.5	531.88	ug/L	531.88	ppb	18:22:05
1	V 292.402†	56741.6	56525.7	519.49	ug/L	519.49	ppb	18:22:05
1	Zn 213.857†	58482.3	55721.5	509.51	ug/L	509.51	ppb	18:22:05
1	SiO2†	86787.3	83626.2	5460.9	ug/L	5460.9	ppb	18:23:32
2	Sc Radial	7380.2	7380.2	98.7	%			18:21:28
2	Y RADIAL	6784.0	6784.0	97.97	%			18:21:28
2	Al 396.153Radial†	6225.4	6377.7	5230.5	ug/L	5230.5	ppb	18:21:08
2	Ca 317.933Radial†	3695.3	3713.4	5260.5	ug/L	5260.5	ppb	18:21:28
2	Fe 238.204 Radial†	1233.9	1214.9	5080.5	ug/L	5080.5	ppb	18:21:28
2	K 766.490 Radial†	24792.4	22702.4	4884.9	ug/L	4884.9	ppb	18:21:08
2	Mg 279.077 IEC†	211.8	211.4	5277.1	ug/L	5277.1	ppb	18:21:28
2	Na 589.592 Radial†	166312.9	168576.6	10346	ug/L	10346	ppb	18:21:08
2	Sr 421.552†	171966.4	174222.8	486.56	ug/L	486.56	ppb	18:21:08
2	Sc 361.383	756402.4	756402.4	105.25	%			18:22:31
2	Y 371.029	482492.8	482492.8	85.853	%			18:22:36
2	Ag 328.068†	91031.8	85860.5	516.05	ug/L	516.05	ppb	18:22:36
2	As 188.979†	1430.0	1394.1	505.95	ug/L	505.95	ppb	18:22:56
2	B 249.677†	20503.7	20421.3	511.66	ug/L	511.66	ppb	18:22:36
2	Ba 233.527†	76369.9	72561.7	513.11	ug/L	513.11	ppb	18:22:36
2	Be 313.107†	1172757.8	1119167.6	513.41	ug/L	513.41	ppb	18:22:31
2	Cd 226.502†	42375.2	40543.5	516.87	ug/L	516.87	ppb	18:22:36
2	Co 228.616†	31301.9	29840.7	517.71	ug/L	517.71	ppb	18:22:36
2	Cr 267.716†	38449.3	36609.7	513.72	ug/L	513.72	ppb	18:22:36
2	Cu 324.752†	153966.2	140651.2	509.98	ug/L	509.98	ppb	18:22:36
2	Mn 257.610†	487165.4	462196.5	510.23	ug/L	510.23	ppb	18:22:31
2	Mo 202.031†	7470.1	7080.6	498.79	ug/L	498.79	ppb	18:22:56
2	Ni 231.604†	20398.8	19261.9	514.54	ug/L	514.54	ppb	18:22:36

2	P 214.914†	5494.2	4905.5	2407.5 ug/L	2407.5 ppb	18:22:56
2	Pb 220.353†	4375.4	4170.5	498.08 ug/L	498.08 ppb	18:22:56
2	S 181.975 Axial†	845.8	728.2	996.63 ug/L	996.63 ppb	18:22:56
2	Sb 206.836†	1841.0	1692.0	508.54 ug/L	508.54 ppb	18:22:56
2	Se 196.026†	1005.5	984.1	520.17 ug/L	520.17 ppb	18:22:56
2	Si 251.611†	89109.8	84255.1	2585.1 ug/L	2585.1 ppb	18:22:36
2	Sn 189.927†	2986.1	2824.8	500.87 ug/L	500.87 ppb	18:22:56
2	Ti 334.940†	286481.9	273546.6	500.71 ug/L	500.71 ppb	18:22:36
2	Tl 190.801†	1954.4	1917.7	504.96 ug/L	504.96 ppb	18:22:56
2	U 409.014†	11416.3	15695.8	529.86 ug/L	529.86 ppb	18:22:36
2	V 292.402†	57831.1	56512.9	519.24 ug/L	519.24 ppb	18:22:36
2	Zn 213.857†	59611.9	55714.6	509.45 ug/L	509.45 ppb	18:22:36
2	SiO2†	88060.2	83232.8	5435.8 ug/L	5435.8 ppb	18:23:38
3	Sc Radial	7353.6	7353.6	98.4 %		18:21:53
3	Y RADIAL	6759.1	6759.1	97.61 %		18:21:53
3	Al 396.153Radial†	6191.3	6365.8	5219.8 ug/L	5219.8 ppb	18:21:33
3	Ca 317.933Radial†	3658.2	3689.3	5226.3 ug/L	5226.3 ppb	18:21:53
3	Fe 238.204 Radial†	1220.9	1206.2	5044.6 ug/L	5044.6 ppb	18:21:53
3	K 766.490 Radial†	24981.2	22985.2	4945.7 ug/L	4945.7 ppb	18:21:33
3	Mg 279.077 IEC†	209.0	209.4	5227.8 ug/L	5227.8 ppb	18:21:53
3	Na 589.592 Radial†	166943.5	169826.9	10423 ug/L	10423 ppb	18:21:33
3	Sr 421.552†	172581.9	175478.5	490.07 ug/L	490.07 ppb	18:21:33
3	Sc 361.383	727526.5	727526.5	101.23 %		18:23:02
3	Y 371.029	481127.2	481127.2	85.610 %		18:23:07
3	Ag 328.068†	89683.8	87961.8	528.63 ug/L	528.63 ppb	18:23:07
3	As 188.979†	1416.1	1434.3	520.49 ug/L	520.49 ppb	18:23:27
3	B 249.677†	20221.5	20915.8	524.06 ug/L	524.06 ppb	18:23:07
3	Ba 233.527†	75324.7	74409.3	526.17 ug/L	526.17 ppb	18:23:07
3	Be 313.107†	1125090.4	1116305.8	512.12 ug/L	512.12 ppb	18:23:02
3	Cd 226.502†	41808.2	41581.4	530.12 ug/L	530.12 ppb	18:23:07
3	Co 228.616†	30846.9	30571.7	530.41 ug/L	530.41 ppb	18:23:07
3	Cr 267.716†	38029.6	37645.0	528.24 ug/L	528.24 ppb	18:23:07
3	Cu 324.752†	151258.9	143783.1	521.32 ug/L	521.32 ppb	18:23:07
3	Mn 257.610†	468798.8	462424.7	510.48 ug/L	510.48 ppb	18:23:02
3	Mo 202.031†	7491.9	7383.7	520.13 ug/L	520.13 ppb	18:23:27
3	Ni 231.604†	20078.8	19715.1	526.64 ug/L	526.64 ppb	18:23:07
3	P 214.914†	5486.3	5104.9	2507.4 ug/L	2507.4 ppb	18:23:27
3	Pb 220.353†	4369.1	4329.3	517.04 ug/L	517.04 ppb	18:23:27
3	S 181.975 Axial†	852.1	766.4	1048.9 ug/L	1048.9 ppb	18:23:27
3	Sb 206.836†	1848.7	1769.0	531.80 ug/L	531.80 ppb	18:23:27
3	Se 196.026†	1008.5	1025.0	540.96 ug/L	540.96 ppb	18:23:27
3	Si 251.611†	87674.8	86198.1	2644.5 ug/L	2644.5 ppb	18:23:07
3	Sn 189.927†	2977.2	2928.5	519.23 ug/L	519.23 ppb	18:23:27
3	Ti 334.940†	282004.8	279927.6	512.38 ug/L	512.38 ppb	18:23:07
3	Tl 190.801†	1957.8	1994.7	525.13 ug/L	525.13 ppb	18:23:27
3	U 409.014†	11254.7	15966.7	539.01 ug/L	539.01 ppb	18:23:07
3	V 292.402†	57044.9	57917.2	532.27 ug/L	532.27 ppb	18:23:07
3	Zn 213.857†	58861.3	57221.2	523.26 ug/L	523.26 ppb	18:23:07
3	SiO2†	85896.9	84416.7	5512.3 ug/L	5512.3 ppb	18:23:43

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	741969.5	103.24	%	2.009				1.95%
Sc Radial	7366.9	98.6	%	0.18				0.18%
Y 371.029	481784.3	85.727	%	0.1217				0.14%
Y RADIAL	6777.6	97.88	%	0.234				0.24%
Ag 328.068†	86596.8	520.46	ug/L	7.089	520.46	ppb	7.089	1.36%
QC value within limits for Ag 328.068 Recovery = 104.09%								
Al 396.153Radial†	6430.2	5273.3	ug/L	83.55	5273.3	ppb	83.55	1.58%
QC value within limits for Al 396.153Radial Recovery = 105.47%								
As 188.979†	1414.5	513.31	ug/L	7.270	513.31	ppb	7.270	1.42%
QC value within limits for As 188.979 Recovery = 102.66%								
B 249.677†	20553.0	514.96	ug/L	7.976	514.96	ppb	7.976	1.55%
QC value within limits for B 249.677 Recovery = 102.99%								
Ba 233.527†	73197.5	517.61	ug/L	7.424	517.61	ppb	7.424	1.43%
QC value within limits for Ba 233.527 Recovery = 103.52%								
Be 313.107†	1117486.6	512.65	ug/L	0.674	512.65	ppb	0.674	0.13%
QC value within limits for Be 313.107 Recovery = 102.53%								
Ca 317.933Radial†	3703.7	5246.7	ug/L	17.98	5246.7	ppb	17.98	0.34%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.93%
Cd 226.502†            40873.4      521.08 ug/L         7.834      521.08 ppb          7.834   1.50%
   QC value within limits for Cd 226.502  Recovery = 104.22%
Co 228.616†            30042.9      521.23 ug/L         8.023      521.23 ppb          8.023   1.54%
   QC value within limits for Co 228.616  Recovery = 104.25%
Cr 267.716†            37007.3      519.29 ug/L         7.826      519.29 ppb          7.826   1.51%
   QC value within limits for Cr 267.716  Recovery = 103.86%
Cu 324.752†           141639.9      513.56 ug/L         6.732      513.56 ppb          6.732   1.31%
   QC value within limits for Cu 324.752  Recovery = 102.71%
Fe 238.204 Radial†      1210.8      5063.7 ug/L        18.05      5063.7 ppb         18.05   0.36%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.27%
K 766.490 Radial†      23075.4      4965.2 ug/L        91.67      4965.2 ppb         91.67   1.85%
   QC value within limits for K 766.490 Radial  Recovery = 99.30%
Mg 279.077 IEC†          209.8      5236.9 ug/L        36.47      5236.9 ppb         36.47   0.70%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.74%
Mn 257.610†           462260.1      510.30 ug/L         0.157      510.30 ppb         0.157   0.03%
   QC value within limits for Mn 257.610  Recovery = 102.06%
Mo 202.031†             7231.2      509.39 ug/L        10.671      509.39 ppb        10.671   2.09%
   QC value within limits for Mo 202.031  Recovery = 101.88%
Na 589.592 Radial†    170988.8       10494 ug/L        193.8       10494 ppb        193.8   1.85%
   QC value within limits for Na 589.592 Radial  Recovery = 104.94%
Ni 231.604†            19424.7      518.89 ug/L         6.733      518.89 ppb          6.733   1.30%
   QC value within limits for Ni 231.604  Recovery = 103.78%
P 214.914†              5005.5      2458.0 ug/L        49.92      2458.0 ppb         49.92   2.03%
   QC value within limits for P 214.914  Recovery = 98.32%
Pb 220.353†             4257.0      508.42 ug/L         9.594      508.42 ppb          9.594   1.89%
   QC value within limits for Pb 220.353  Recovery = 101.68%
S 181.975 Axial†         747.4      1022.8 ug/L        26.13      1022.8 ppb         26.13   2.55%
   QC value within limits for S 181.975 Axial  Recovery = 102.28%
Sb 206.836†             1725.2      518.65 ug/L        11.923      518.65 ppb        11.923   2.30%
   QC value within limits for Sb 206.836  Recovery = 103.73%
Se 196.026†             1003.8      530.18 ug/L        10.417      530.18 ppb        10.417   1.96%
   QC value within limits for Se 196.026  Recovery = 106.04%
Si 251.611†            84874.3      2603.9 ug/L        35.17      2603.9 ppb         35.17   1.35%
   QC value within limits for Si 251.611  Recovery = 104.16%
Sn 189.927†             2876.0      509.93 ug/L         9.184      509.93 ppb          9.184   1.80%
   QC value within limits for Sn 189.927  Recovery = 101.99%
Sr 421.552†           176794.6      493.74 ug/L         9.566      493.74 ppb          9.566   1.94%
   QC value within limits for Sr 421.552  Recovery = 98.75%
Ti 334.940†           275729.7      504.70 ug/L         6.652      504.70 ppb          6.652   1.32%
   QC value within limits for Ti 334.940  Recovery = 100.94%
Tl 190.801†             1953.8      514.41 ug/L        10.148      514.41 ppb        10.148   1.97%
   QC value within limits for Tl 190.801  Recovery = 102.88%
U 409.014†             15806.0      533.59 ug/L         4.806      533.59 ppb          4.806   0.90%
   QC value within limits for U 409.014  Recovery = 106.72%
V 292.402†             56985.3      523.67 ug/L         7.450      523.67 ppb          7.450   1.42%
   QC value within limits for V 292.402  Recovery = 104.73%
Zn 213.857†            56219.1      514.07 ug/L         7.959      514.07 ppb          7.959   1.55%
   QC value within limits for Zn 213.857  Recovery = 102.81%
SiO2†                  83758.5      5469.7 ug/L        38.97      5469.7 ppb         38.97   0.71%
   QC value within limits for SiO2  Recovery = 102.28%
All analyte(s) passed QC.
```

Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 18:25:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7284.7	7284.7	97.5	%			18:27:44
1	Y RADIAL	6752.1	6752.1	97.51	%			18:27:44
1	Al 396.153Radial†	-76.5	-5.9	-4.8707	ug/L	-4.8707	ppb	18:27:44
1	Ca 317.933Radial†	26.4	-2.0	-2.8920	ug/L	-2.8920	ppb	18:28:04
1	Fe 238.204 Radial†	36.0	2.1	8.7733	ug/L	8.7733	ppb	18:28:04
1	K 766.490 Radial†	2474.9	132.2	28.523	ug/L	28.523	ppb	18:27:44
1	Mg 279.077 IEC†	4.3	1.3	33.065	ug/L	33.065	ppb	18:28:04
1	Na 589.592 Radial†	-403.9	-278.9	-17.116	ug/L	-17.116	ppb	18:27:44
1	Sr 421.552†	-70.1	-16.1	-0.0448	ug/L	-0.0448	ppb	18:27:44
1	Sc 361.383	721634.9	721634.9	100.41	%			18:29:01
1	Y 371.029	565103.1	565103.1	100.55	%			18:29:01
1	Ag 328.068†	599.7	-35.4	-0.2134	ug/L	-0.2134	ppb	18:29:01
1	As 188.979†	-38.1	-2.5	-0.8990	ug/L	-0.8990	ppb	18:29:21
1	B 249.677†	-765.3	177.8	4.4803	ug/L	4.4803	ppb	18:29:01
1	Ba 233.527†	10.2	9.7	0.0674	ug/L	0.0674	ppb	18:29:21
1	Be 313.107†	-4778.8	122.5	0.0562	ug/L	0.0562	ppb	18:29:01
1	Cd 226.502†	-255.0	27.1	0.3447	ug/L	0.3447	ppb	18:29:21
1	Co 228.616†	-102.0	-2.1	-0.0361	ug/L	-0.0361	ppb	18:29:21
1	Cr 267.716†	-87.4	-9.6	-0.1366	ug/L	-0.1366	ppb	18:29:01
1	Cu 324.752†	5674.0	12.4	0.0456	ug/L	0.0456	ppb	18:29:01
1	Mn 257.610†	685.1	2.7	0.0035	ug/L	0.0035	ppb	18:29:21
1	Mo 202.031†	21.7	4.4	0.3133	ug/L	0.3133	ppb	18:29:21
1	Ni 231.604†	118.5	-1.8	-0.0474	ug/L	-0.0474	ppb	18:29:21
1	P 214.914†	298.8	-17.2	-8.8168	ug/L	-8.8168	ppb	18:29:21
1	Pb 220.353†	-13.5	-0.2	-0.0295	ug/L	-0.0295	ppb	18:29:21
1	S 181.975 Axial†	79.3	3.6	4.8842	ug/L	4.8842	ppb	18:29:21
1	Sb 206.836†	53.8	-3.7	-1.0934	ug/L	-1.0934	ppb	18:29:21
1	Se 196.026†	-38.4	-9.5	-4.8185	ug/L	-4.8185	ppb	18:29:21
1	Si 251.611†	557.5	143.4	4.4165	ug/L	4.4165	ppb	18:29:21
1	Sn 189.927†	11.7	-0.9	-0.1592	ug/L	-0.1592	ppb	18:29:21
1	Ti 334.940†	-1310.4	43.2	0.0772	ug/L	0.0772	ppb	18:29:01
1	Tl 190.801†	-48.7	12.2	3.2027	ug/L	3.2027	ppb	18:29:21
1	U 409.014†	-4756.3	111.8	3.7862	ug/L	3.7862	ppb	18:29:01
1	V 292.402†	-1611.3	-39.6	-0.3487	ug/L	-0.3487	ppb	18:29:01
1	Zn 213.857†	959.6	30.5	0.2799	ug/L	0.2799	ppb	18:29:21
1	SiO2†	620.6	181.2	11.888	ug/L	11.888	ppb	18:30:17
2	Sc Radial	7350.6	7350.6	98.3	%			18:28:09
2	Y RADIAL	6817.8	6817.8	98.46	%			18:28:09
2	Al 396.153Radial†	-89.6	-18.4	-15.159	ug/L	-15.159	ppb	18:28:09
2	Ca 317.933Radial†	33.2	4.6	6.5582	ug/L	6.5582	ppb	18:28:29
2	Fe 238.204 Radial†	38.1	4.0	16.509	ug/L	16.509	ppb	18:28:29
2	K 766.490 Radial†	2441.1	75.1	16.221	ug/L	16.221	ppb	18:28:09
2	Mg 279.077 IEC†	1.8	-1.2	-31.067	ug/L	-31.067	ppb	18:28:29
2	Na 589.592 Radial†	-285.1	-154.3	-9.4724	ug/L	-9.4724	ppb	18:28:09
2	Sr 421.552†	-40.7	14.4	0.0402	ug/L	0.0402	ppb	18:28:09
2	Sc 361.383	728244.2	728244.2	101.33	%			18:29:26
2	Y 371.029	570115.9	570115.9	101.44	%			18:29:26
2	Ag 328.068†	662.5	21.2	0.1259	ug/L	0.1259	ppb	18:29:26
2	As 188.979†	-32.5	3.4	1.2323	ug/L	1.2323	ppb	18:29:46
2	B 249.677†	-782.3	167.9	4.2312	ug/L	4.2312	ppb	18:29:26
2	Ba 233.527†	8.3	7.7	0.0545	ug/L	0.0545	ppb	18:29:46
2	Be 313.107†	-4851.6	93.8	0.0427	ug/L	0.0427	ppb	18:29:26
2	Cd 226.502†	-276.3	8.4	0.1052	ug/L	0.1052	ppb	18:29:46
2	Co 228.616†	-112.3	-11.4	-0.1991	ug/L	-0.1991	ppb	18:29:46
2	Cr 267.716†	-90.2	-11.6	-0.1645	ug/L	-0.1645	ppb	18:29:26
2	Cu 324.752†	5687.4	-25.6	-0.0919	ug/L	-0.0919	ppb	18:29:26
2	Mn 257.610†	669.5	-18.9	-0.0182	ug/L	-0.0182	ppb	18:29:46
2	Mo 202.031†	10.8	-6.5	-0.4550	ug/L	-0.4550	ppb	18:29:46
2	Ni 231.604†	135.3	13.7	0.3660	ug/L	0.3660	ppb	18:29:46

2	P 214.914†	316.8	-2.1	-1.0649	ug/L	-1.0649 ppb	18:29:46
2	Pb 220.353†	4.7	17.9	2.1207	ug/L	2.1207 ppb	18:29:46
2	S 181.975 Axial†	80.5	4.1	5.5884	ug/L	5.5884 ppb	18:29:46
2	Sb 206.836†	69.3	11.1	3.3194	ug/L	3.3194 ppb	18:29:46
2	Se 196.026†	-28.5	0.7	0.4013	ug/L	0.4013 ppb	18:29:46
2	Si 251.611†	536.1	117.3	3.6134	ug/L	3.6134 ppb	18:29:46
2	Sn 189.927†	17.6	4.9	0.8646	ug/L	0.8646 ppb	18:29:46
2	Ti 334.940†	-1410.3	-43.6	-0.0828	ug/L	-0.0828 ppb	18:29:26
2	Tl 190.801†	-55.9	5.6	1.4742	ug/L	1.4742 ppb	18:29:46
2	U 409.014†	-4679.1	231.0	7.8208	ug/L	7.8208 ppb	18:29:26
2	V 292.402†	-1557.6	28.1	0.2619	ug/L	0.2619 ppb	18:29:26
2	Zn 213.857†	958.3	20.6	0.1874	ug/L	0.1874 ppb	18:29:46
2	SiO2†	576.1	131.7	8.6371	ug/L	8.6371 ppb	18:30:22
3	Sc Radial	7382.0	7382.0	98.8	%		18:28:34
3	Y RADIAL	6824.7	6824.7	98.56	%		18:28:34
3	Al 396.153Radial†	-80.8	-9.2	-7.5951	ug/L	-7.5951 ppb	18:28:34
3	Ca 317.933Radial†	25.7	-3.0	-4.2807	ug/L	-4.2807 ppb	18:28:54
3	Fe 238.204 Radial†	34.9	0.5	2.1414	ug/L	2.1414 ppb	18:28:54
3	K 766.490 Radial†	2405.9	28.9	6.2193	ug/L	6.2193 ppb	18:28:34
3	Mg 279.077 IEC†	3.1	0.1	3.0843	ug/L	3.0843 ppb	18:28:54
3	Na 589.592 Radial†	-246.5	-114.0	-6.9971	ug/L	-6.9971 ppb	18:28:34
3	Sr 421.552†	-15.0	40.7	0.1137	ug/L	0.1137 ppb	18:28:34
3	Sc 361.383	724186.7	724186.7	100.76	%		18:29:51
3	Y 371.029	566691.6	566691.6	100.83	%		18:29:51
3	Ag 328.068†	571.7	-65.2	-0.3875	ug/L	-0.3875 ppb	18:29:51
3	As 188.979†	-20.8	14.8	5.3251	ug/L	5.3251 ppb	18:30:12
3	B 249.677†	-781.5	164.3	4.1420	ug/L	4.1420 ppb	18:29:51
3	Ba 233.527†	4.7	4.2	0.0305	ug/L	0.0305 ppb	18:30:12
3	Be 313.107†	-4880.0	38.8	0.0178	ug/L	0.0178 ppb	18:29:51
3	Cd 226.502†	-269.9	13.2	0.1685	ug/L	0.1685 ppb	18:30:12
3	Co 228.616†	-108.8	-8.5	-0.1459	ug/L	-0.1459 ppb	18:30:12
3	Cr 267.716†	-75.6	2.3	0.0333	ug/L	0.0333 ppb	18:29:51
3	Cu 324.752†	5626.2	-55.0	-0.1990	ug/L	-0.1990 ppb	18:29:51
3	Mn 257.610†	685.5	0.7	0.0010	ug/L	0.0010 ppb	18:30:12
3	Mo 202.031†	30.1	12.7	0.8936	ug/L	0.8936 ppb	18:30:12
3	Ni 231.604†	136.2	15.3	0.4102	ug/L	0.4102 ppb	18:30:12
3	P 214.914†	321.4	4.2	2.1530	ug/L	2.1530 ppb	18:30:12
3	Pb 220.353†	-34.7	-21.2	-2.5272	ug/L	-2.5272 ppb	18:30:12
3	S 181.975 Axial†	72.1	-3.9	-5.3248	ug/L	-5.3248 ppb	18:30:12
3	Sb 206.836†	49.5	-8.1	-2.3935	ug/L	-2.3935 ppb	18:30:12
3	Se 196.026†	-31.5	-2.5	-1.2567	ug/L	-1.2567 ppb	18:30:12
3	Si 251.611†	564.1	148.1	4.5578	ug/L	4.5578 ppb	18:30:12
3	Sn 189.927†	11.7	-0.9	-0.1668	ug/L	-0.1668 ppb	18:30:12
3	Ti 334.940†	-1337.9	20.5	0.0370	ug/L	0.0370 ppb	18:29:51
3	Tl 190.801†	-63.5	-2.2	-0.5887	ug/L	-0.5887 ppb	18:30:12
3	U 409.014†	-4871.3	14.4	0.4881	ug/L	0.4881 ppb	18:29:51
3	V 292.402†	-1523.9	52.9	0.4925	ug/L	0.4925 ppb	18:29:51
3	Zn 213.857†	967.0	34.6	0.3164	ug/L	0.3164 ppb	18:30:12
3	SiO2†	588.3	147.0	9.6312	ug/L	9.6312 ppb	18:30:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	724688.6	100.83	%	0.464				0.46%
Sc Radial	7339.1	98.2	%	0.66				0.68%
Y 371.029	567303.5	100.94	%	0.456				0.45%
Y RADIAL	6798.2	98.18	%	0.579				0.59%
Ag 328.068†	-26.5	-0.1583	ug/L	0.26109	-0.1583	ppb	0.26109	164.90%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-11.2	-9.2082	ug/L	5.33032	-9.2082	ppb	5.33032	57.89%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.2	1.8861	ug/L	3.16317	1.8861	ppb	3.16317	167.71%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	170.0	4.2845	ug/L	0.17536	4.2845	ppb	0.17536	4.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.2	0.0508	ug/L	0.01873	0.0508	ppb	0.01873	36.86%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	85.0	0.0389	ug/L	0.01948	0.0389	ppb	0.01948	50.02%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-0.1	-0.2048	ug/L	5.89796	-0.2048	ppb	5.89796	>999.9%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                16.2      0.2062 ug/L       0.12410      0.2062 ppb        0.12410  60.19%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -7.4     -0.1270 ug/L       0.08310     -0.1270 ppb        0.08310  65.41%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -6.3     -0.0893 ug/L       0.10707     -0.0893 ppb        0.10707 119.95%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -22.7     -0.0818 ug/L       0.12263     -0.0818 ppb        0.12263 149.92%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          2.2      9.1411 ug/L       7.19072      9.1411 ppb        7.19072  78.66%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          78.7      16.988 ug/L       11.1718      16.988 ppb        11.1718  65.76%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.1      1.6943 ug/L      32.08835      1.6943 ppb       32.08835 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -5.1     -0.0046 ug/L       0.01185     -0.0046 ppb        0.01185 260.18%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 3.6      0.2506 ug/L       0.67648      0.2506 ppb        0.67648 269.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -182.4     -11.195 ug/L        5.2747     -11.195 ppb         5.2747  47.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 9.1      0.2429 ug/L       0.25241      0.2429 ppb        0.25241 103.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -5.1     -2.5762 ug/L       5.63890     -2.5762 ppb        5.63890 218.88%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -1.2     -0.1453 ug/L       2.32613     -0.1453 ppb        2.32613 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            1.3      1.7159 ug/L       6.10762      1.7159 ppb        6.10762 355.93%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.2     -0.0558 ug/L       2.99448     -0.0558 ppb        2.99448 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -3.8     -1.8913 ug/L       2.66714     -1.8913 ppb        2.66714 141.02%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               136.3      4.1959 ug/L       0.50942      4.1959 ppb        0.50942  12.14%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.0      0.1796 ug/L       0.59332      0.1796 ppb        0.59332 330.44%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                13.0      0.0364 ug/L       0.07932      0.0364 ppb        0.07932 218.16%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 6.7      0.0105 ug/L       0.08325      0.0105 ppb        0.08325 794.40%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.2      1.3627 ug/L       1.89815      1.3627 ppb        1.89815 139.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                119.1      4.0317 ug/L       3.67251      4.0317 ppb        3.67251  91.09%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 13.8      0.1352 ug/L       0.43464      0.1352 ppb        0.43464 321.39%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                28.6      0.2612 ug/L       0.06651      0.2612 ppb        0.06651  25.46%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     153.3      10.052 ug/L        1.6656      10.052 ppb         1.6656  16.57%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 34
Sample ID: 1201871706|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 6/30/2009 18:32:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871706|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7511.8	7511.8	100	%			18:34:29
1	Y RADIAL	6950.7	6950.7	100.4	%			18:34:29
1	Al 396.153Radial†	-77.8	-4.8	-3.9731	ug/L	-3.9731	ppb	18:34:29
1	Ca 317.933Radial†	24.6	-4.7	-6.5948	ug/L	-6.5948	ppb	18:34:49
1	Fe 238.204 Radial†	38.5	3.5	14.778	ug/L	14.778	ppb	18:34:49
1	K 766.490 Radial†	2421.9	2.8	0.5996	ug/L	0.5996	ppb	18:34:29
1	Mg 279.077 IEC†	5.2	2.2	53.757	ug/L	53.757	ppb	18:34:49
1	Na 589.592 Radial†	-238.0	-101.3	-6.2164	ug/L	-6.2164	ppb	18:34:29
1	Sr 421.552†	-59.0	-2.8	-0.0079	ug/L	-0.0079	ppb	18:34:29
1	Sc 361.383	720917.4	720917.4	100.31	%			18:35:46
1	Y 371.029	564150.6	564150.6	100.38	%			18:35:46
1	Ag 328.068†	661.5	26.8	0.1666	ug/L	0.1666	ppb	18:35:46
1	As 188.979†	-32.6	2.9	1.0579	ug/L	1.0579	ppb	18:36:06
1	B 249.677†	-780.4	161.9	4.0801	ug/L	4.0801	ppb	18:35:46
1	Ba 233.527†	9.8	9.3	0.0651	ug/L	0.0651	ppb	18:36:06
1	Be 313.107†	-4769.6	126.9	0.0582	ug/L	0.0582	ppb	18:35:46
1	Cd 226.502†	-294.4	-12.4	-0.1587	ug/L	-0.1587	ppb	18:36:06
1	Co 228.616†	-113.8	-14.0	-0.2415	ug/L	-0.2415	ppb	18:36:06
1	Cr 267.716†	-81.7	-4.1	-0.0560	ug/L	-0.0560	ppb	18:35:46
1	Cu 324.752†	5503.3	-152.1	-0.5504	ug/L	-0.5504	ppb	18:35:46
1	Mn 257.610†	638.9	-42.7	-0.0462	ug/L	-0.0462	ppb	18:36:06
1	Mo 202.031†	22.4	5.2	0.3666	ug/L	0.3666	ppb	18:36:06
1	Ni 231.604†	158.6	38.3	1.0239	ug/L	1.0239	ppb	18:36:06
1	P 214.914†	333.3	17.4	9.0135	ug/L	9.0135	ppb	18:36:06
1	Pb 220.353†	-23.5	-10.2	-1.2162	ug/L	-1.2162	ppb	18:36:06
1	S 181.975 Axial†	78.6	3.0	4.0433	ug/L	4.0433	ppb	18:36:06
1	Sb 206.836†	56.2	-1.2	-0.3388	ug/L	-0.3388	ppb	18:36:06
1	Se 196.026†	-35.6	-6.8	-3.4019	ug/L	-3.4019	ppb	18:36:06
1	Si 251.611†	837.7	423.3	13.057	ug/L	13.057	ppb	18:36:06
1	Sn 189.927†	16.8	4.3	0.7595	ug/L	0.7595	ppb	18:36:06
1	Ti 334.940†	-1324.1	28.2	0.0524	ug/L	0.0524	ppb	18:35:46
1	Tl 190.801†	-59.4	1.5	0.4069	ug/L	0.4069	ppb	18:36:06
1	U 409.014†	-4938.2	-74.2	-2.5147	ug/L	-2.5147	ppb	18:35:46
1	V 292.402†	-1587.7	-17.6	-0.1612	ug/L	-0.1612	ppb	18:35:46
1	Zn 213.857†	997.9	69.8	0.6345	ug/L	0.6345	ppb	18:36:06
1	SiO2†	892.2	452.5	29.723	ug/L	29.723	ppb	18:37:02
2	Sc Radial	7634.5	7634.5	102	%			18:34:54
2	Y RADIAL	7043.7	7043.7	101.7	%			18:34:54
2	Al 396.153Radial†	-68.9	5.2	4.2486	ug/L	4.2486	ppb	18:34:54
2	Ca 317.933Radial†	29.6	-0.1	-0.1315	ug/L	-0.1315	ppb	18:35:14
2	Fe 238.204 Radial†	36.6	1.1	4.3988	ug/L	4.3988	ppb	18:35:14
2	K 766.490 Radial†	2376.2	-80.8	-17.424	ug/L	-17.424	ppb	18:34:54
2	Mg 279.077 IEC†	0.1	-3.0	-74.443	ug/L	-74.443	ppb	18:35:14
2	Na 589.592 Radial†	-116.0	21.9	1.3466	ug/L	1.3466	ppb	18:34:54
2	Sr 421.552†	-16.2	40.0	0.1116	ug/L	0.1116	ppb	18:34:54
2	Sc 361.383	736026.2	736026.2	102.41	%			18:36:11
2	Y 371.029	575819.9	575819.9	102.46	%			18:36:11
2	Ag 328.068†	600.6	-46.2	-0.2824	ug/L	-0.2824	ppb	18:36:11
2	As 188.979†	-31.8	4.3	1.5668	ug/L	1.5668	ppb	18:36:31
2	B 249.677†	-763.7	194.3	4.8956	ug/L	4.8956	ppb	18:36:11
2	Ba 233.527†	22.6	21.6	0.1546	ug/L	0.1546	ppb	18:36:31
2	Be 313.107†	-4965.0	33.7	0.0158	ug/L	0.0158	ppb	18:36:11
2	Cd 226.502†	-273.9	13.6	0.1736	ug/L	0.1736	ppb	18:36:31
2	Co 228.616†	-106.2	-4.3	-0.0747	ug/L	-0.0747	ppb	18:36:31
2	Cr 267.716†	-84.5	-5.1	-0.0744	ug/L	-0.0744	ppb	18:36:11
2	Cu 324.752†	5655.5	-116.1	-0.4205	ug/L	-0.4205	ppb	18:36:11
2	Mn 257.610†	684.6	-11.1	-0.0102	ug/L	-0.0102	ppb	18:36:31
2	Mo 202.031†	15.5	-2.0	-0.1373	ug/L	-0.1373	ppb	18:36:31
2	Ni 231.604†	148.2	24.9	0.6669	ug/L	0.6669	ppb	18:36:31

2	P 214.914†	342.9	20.1	10.328	ug/L	10.328 ppb	18:36:31
2	Pb 220.353†	-34.0	-20.0	-2.3801	ug/L	-2.3801 ppb	18:36:31
2	S 181.975 Axial†	79.3	2.0	2.7036	ug/L	2.7036 ppb	18:36:31
2	Sb 206.836†	60.1	1.5	0.4284	ug/L	0.4284 ppb	18:36:31
2	Se 196.026†	-16.0	13.1	6.7222	ug/L	6.7222 ppb	18:36:31
2	Si 251.611†	810.5	379.6	11.737	ug/L	11.737 ppb	18:36:31
2	Sn 189.927†	11.2	-1.6	-0.2770	ug/L	-0.2770 ppb	18:36:31
2	Ti 334.940†	-1294.4	84.4	0.1484	ug/L	0.1484 ppb	18:36:11
2	Tl 190.801†	-62.4	-0.2	-0.0463	ug/L	-0.0463 ppb	18:36:31
2	U 409.014†	-4547.3	408.6	13.834	ug/L	13.834 ppb	18:36:11
2	V 292.402†	-1488.4	111.9	1.0393	ug/L	1.0393 ppb	18:36:11
2	Zn 213.857†	1013.7	64.8	0.5960	ug/L	0.5960 ppb	18:36:31
2	SiO2†	851.5	394.5	25.973	ug/L	25.973 ppb	18:37:07
3	Sc Radial	7574.9	7574.9	101	%		18:35:19
3	Y RADIAL	7048.8	7048.8	101.8	%		18:35:19
3	Al 396.153Radial†	-43.4	29.9	24.564	ug/L	24.564 ppb	18:35:19
3	Ca 317.933Radial†	23.2	-6.2	-8.7615	ug/L	-8.7615 ppb	18:35:39
3	Fe 238.204 Radial†	34.2	-1.1	-4.5073	ug/L	-4.5073 ppb	18:35:39
3	K 766.490 Radial†	2426.9	-12.4	-2.6884	ug/L	-2.6884 ppb	18:35:19
3	Mg 279.077 IEC†	3.5	0.4	9.6412	ug/L	9.6412 ppb	18:35:39
3	Na 589.592 Radial†	-134.2	3.2	0.1954	ug/L	0.1954 ppb	18:35:19
3	Sr 421.552†	-23.5	32.6	0.0912	ug/L	0.0912 ppb	18:35:19
3	Sc 361.383	737077.2	737077.2	102.56	%		18:36:37
3	Y 371.029	576099.6	576099.6	102.51	%		18:36:37
3	Ag 328.068†	511.5	-133.9	-0.8106	ug/L	-0.8106 ppb	18:36:37
3	As 188.979†	-40.3	-3.8	-1.3914	ug/L	-1.3914 ppb	18:36:57
3	B 249.677†	-739.9	218.5	5.5053	ug/L	5.5053 ppb	18:36:37
3	Ba 233.527†	15.8	14.9	0.1061	ug/L	0.1061 ppb	18:36:57
3	Be 313.107†	-4980.5	25.5	0.0125	ug/L	0.0125 ppb	18:36:37
3	Cd 226.502†	-277.5	10.5	0.1348	ug/L	0.1348 ppb	18:36:57
3	Co 228.616†	-89.9	11.8	0.2054	ug/L	0.2054 ppb	18:36:57
3	Cr 267.716†	-61.6	17.3	0.2388	ug/L	0.2388 ppb	18:36:37
3	Cu 324.752†	5577.5	-200.1	-0.7252	ug/L	-0.7252 ppb	18:36:37
3	Mn 257.610†	676.1	-20.3	-0.0232	ug/L	-0.0232 ppb	18:36:57
3	Mo 202.031†	24.6	6.8	0.4811	ug/L	0.4811 ppb	18:36:57
3	Ni 231.604†	130.6	7.6	0.2023	ug/L	0.2023 ppb	18:36:57
3	P 214.914†	317.6	-5.1	-2.4776	ug/L	-2.4776 ppb	18:36:57
3	Pb 220.353†	-16.4	-2.7	-0.3144	ug/L	-0.3144 ppb	18:36:57
3	S 181.975 Axial†	82.1	4.7	6.4013	ug/L	6.4013 ppb	18:36:57
3	Sb 206.836†	67.9	9.0	2.6668	ug/L	2.6668 ppb	18:36:57
3	Se 196.026†	-29.5	-0.0	-0.0282	ug/L	-0.0282 ppb	18:36:57
3	Si 251.611†	803.8	371.9	11.487	ug/L	11.487 ppb	18:36:57
3	Sn 189.927†	9.7	-3.0	-0.5396	ug/L	-0.5396 ppb	18:36:57
3	Ti 334.940†	-1184.5	193.3	0.3479	ug/L	0.3479 ppb	18:36:37
3	Tl 190.801†	-49.9	12.1	3.1693	ug/L	3.1693 ppb	18:36:57
3	U 409.014†	-4599.0	364.4	12.340	ug/L	12.340 ppb	18:36:37
3	V 292.402†	-1570.4	34.0	0.3389	ug/L	0.3389 ppb	18:36:37
3	Zn 213.857†	1006.5	56.3	0.5196	ug/L	0.5196 ppb	18:36:57
3	SiO2†	855.6	397.4	26.135	ug/L	26.135 ppb	18:37:12

Mean Data: 1201871706|881354|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	731340.3	101.76	%	1.258				1.24%
Sc Radial	7573.7	101	%	0.8				0.81%
Y 371.029	572023.3	101.78	%	1.213				1.19%
Y RADIAL	7014.4	101.3	%	0.80				0.79%
Ag 328.068†	-51.1	-0.3088	ug/L	0.48913	-0.3088	ppb	0.48913	158.41%
Al 396.153Radial†	10.1	8.2797	ug/L	14.68934	8.2797	ppb	14.68934	177.41%
As 188.979†	1.1	0.4111	ug/L	1.58158	0.4111	ppb	1.58158	384.74%
B 249.677†	191.5	4.8270	ug/L	0.71509	4.8270	ppb	0.71509	14.81%
Ba 233.527†	15.3	0.1086	ug/L	0.04476	0.1086	ppb	0.04476	41.21%
Be 313.107†	62.0	0.0288	ug/L	0.02549	0.0288	ppb	0.02549	88.45%
Ca 317.933Radial†	-3.6	-5.1626	ug/L	4.48970	-5.1626	ppb	4.48970	86.97%
Cd 226.502†	3.9	0.0499	ug/L	0.18171	0.0499	ppb	0.18171	364.31%
Co 228.616†	-2.1	-0.0369	ug/L	0.22580	-0.0369	ppb	0.22580	611.55%
Cr 267.716†	2.7	0.0361	ug/L	0.17580	0.0361	ppb	0.17580	486.71%
Cu 324.752†	-156.1	-0.5654	ug/L	0.15291	-0.5654	ppb	0.15291	27.05%
Fe 238.204 Radial†	1.2	4.8899	ug/L	9.65206	4.8899	ppb	9.65206	197.39%
K 766.490 Radial†	-30.1	-6.5043	ug/L	9.59863	-6.5043	ppb	9.59863	147.57%

Mg 279.077 IEC†	-0.1	-3.6816 ug/L	65.12984	-3.6816 ppb	65.12984	>999.9%
Mn 257.610†	-24.7	-0.0266 ug/L	0.01823	-0.0266 ppb	0.01823	68.65%
Mo 202.031†	3.4	0.2368 ug/L	0.32901	0.2368 ppb	0.32901	138.94%
Na 589.592 Radial†	-25.4	-1.5582 ug/L	4.07500	-1.5582 ppb	4.07500	261.53%
Ni 231.604†	23.6	0.6310 ug/L	0.41197	0.6310 ppb	0.41197	65.29%
P 214.914†	10.8	5.6212 ug/L	7.04450	5.6212 ppb	7.04450	125.32%
Pb 220.353†	-11.0	-1.3036 ug/L	1.03564	-1.3036 ppb	1.03564	79.44%
S 181.975 Axial†	3.2	4.3827 ug/L	1.87207	4.3827 ppb	1.87207	42.71%
Sb 206.836†	3.1	0.9188 ug/L	1.56169	0.9188 ppb	1.56169	169.97%
Se 196.026†	2.1	1.0974 ug/L	5.15507	1.0974 ppb	5.15507	469.77%
Si 251.611†	391.6	12.093 ug/L	0.8437	12.093 ppb	0.8437	6.98%
Sn 189.927†	-0.1	-0.0190 ug/L	0.68690	-0.0190 ppb	0.68690	>999.9%
Sr 421.552†	23.2	0.0650 ug/L	0.06393	0.0650 ppb	0.06393	98.37%
Ti 334.940†	102.0	0.1829 ug/L	0.15072	0.1829 ppb	0.15072	82.41%
Tl 190.801†	4.5	1.1766 ug/L	1.74051	1.1766 ppb	1.74051	147.92%
U 409.014†	232.9	7.8865 ug/L	9.03860	7.8865 ppb	9.03860	114.61%
V 292.402†	42.8	0.4057 ug/L	0.60300	0.4057 ppb	0.60300	148.64%
Zn 213.857†	63.6	0.5834 ug/L	0.05846	0.5834 ppb	0.05846	10.02%
SiO2†	414.8	27.277 ug/L	2.1199	27.277 ppb	2.1199	7.77%

Sequence No.: 35
Sample ID: 1201871707|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 6/30/2009 18:39:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871707|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7570.2	7570.2	101	%			18:41:15
1	Y RADIAL	6946.8	6946.8	100.3	%			18:41:15
1	Al 396.153Radial†	6284.1	6277.3	5148.0	ug/L	5148.0	ppb	18:41:15
1	Ca 317.933Radial†	3613.8	3539.0	5013.4	ug/L	5013.4	ppb	18:41:35
1	Fe 238.204 Radial†	1228.8	1178.5	4928.1	ug/L	4928.1	ppb	18:41:35
1	K 766.490 Radial†	25587.0	22856.6	4919.0	ug/L	4919.0	ppb	18:41:15
1	Mg 279.077 IEC†	214.6	208.8	5211.3	ug/L	5211.3	ppb	18:41:35
1	Na 589.592 Radial†	86001.0	85050.3	5219.8	ug/L	5219.8	ppb	18:41:15
1	Sr 421.552†	175566.4	173404.7	484.28	ug/L	484.28	ppb	18:41:15
1	Sc 361.383	750645.2	750645.2	104.45	%			18:42:34
1	Y 371.029	579516.0	579516.0	103.12	%			18:42:34
1	Ag 328.068†	87134.6	82792.5	497.65	ug/L	497.65	ppb	18:42:34
1	As 188.979†	1415.1	1390.3	504.54	ug/L	504.54	ppb	18:42:54
1	B 249.677†	19358.9	19474.7	487.95	ug/L	487.95	ppb	18:42:34
1	Ba 233.527†	74836.8	71650.4	506.65	ug/L	506.65	ppb	18:42:34
1	Be 313.107†	1128674.5	1085507.2	498.00	ug/L	498.00	ppb	18:42:34
1	Cd 226.502†	40625.4	39177.0	499.45	ug/L	499.45	ppb	18:42:54
1	Co 228.616†	29452.2	28297.8	490.95	ug/L	490.95	ppb	18:42:54
1	Cr 267.716†	37070.9	35570.2	499.13	ug/L	499.13	ppb	18:42:34
1	Cu 324.752†	149925.0	137904.1	500.01	ug/L	500.01	ppb	18:42:34
1	Mn 257.610†	475642.8	454714.5	501.96	ug/L	501.96	ppb	18:42:34
1	Mo 202.031†	7373.9	7042.9	496.13	ug/L	496.13	ppb	18:42:54
1	Ni 231.604†	19708.6	18749.8	500.87	ug/L	500.87	ppb	18:42:54
1	P 214.914†	1512.0	1132.9	483.68	ug/L	483.68	ppb	18:42:54
1	Pb 220.353†	4447.0	4270.9	510.04	ug/L	510.04	ppb	18:42:54
1	S 181.975 Axial†	3922.3	3679.9	5040.3	ug/L	5040.3	ppb	18:42:54
1	Sb 206.836†	1845.4	1709.5	514.24	ug/L	514.24	ppb	18:42:54
1	Se 196.026†	974.8	962.1	508.42	ug/L	508.42	ppb	18:42:54
1	Si 251.611†	168646.9	161055.6	4956.9	ug/L	4956.9	ppb	18:42:34
1	Sn 189.927†	3041.1	2899.1	514.00	ug/L	514.00	ppb	18:42:54
1	Ti 334.940†	284109.0	273362.4	500.37	ug/L	500.37	ppb	18:42:34
1	Tl 190.801†	1934.8	1913.2	503.90	ug/L	503.90	ppb	18:42:54
1	U 409.014†	10796.5	15185.6	512.63	ug/L	512.63	ppb	18:42:34
1	V 292.402†	56083.3	55260.9	507.83	ug/L	507.83	ppb	18:42:34
1	Zn 213.857†	56679.0	53341.0	487.66	ug/L	487.66	ppb	18:42:34
1	SiO2†	168042.4	160451.8	10514	ug/L	10514	ppb	18:43:54
2	Sc Radial	7439.4	7439.4	99.5	%			18:41:40
2	Y RADIAL	6862.0	6862.0	99.10	%			18:41:40
2	Al 396.153Radial†	6208.3	6310.3	5175.4	ug/L	5175.4	ppb	18:41:40
2	Ca 317.933Radial†	3629.0	3617.1	5124.0	ug/L	5124.0	ppb	18:42:00
2	Fe 238.204 Radial†	1232.3	1203.3	5031.3	ug/L	5031.3	ppb	18:42:00
2	K 766.490 Radial†	25220.2	22932.3	4935.4	ug/L	4935.4	ppb	18:41:40
2	Mg 279.077 IEC†	211.4	209.3	5223.9	ug/L	5223.9	ppb	18:42:00
2	Na 589.592 Radial†	84626.5	85162.2	5226.6	ug/L	5226.6	ppb	18:41:40
2	Sr 421.552†	172041.3	172910.7	482.90	ug/L	482.90	ppb	18:41:40
2	Sc 361.383	757569.2	757569.2	105.41	%			18:43:01
2	Y 371.029	584063.8	584063.8	103.93	%			18:43:01
2	Ag 328.068†	88167.7	83010.2	498.97	ug/L	498.97	ppb	18:43:01
2	As 188.979†	1394.6	1358.5	493.11	ug/L	493.11	ppb	18:43:22
2	B 249.677†	19769.5	19694.8	493.53	ug/L	493.53	ppb	18:43:01
2	Ba 233.527†	75782.7	71892.9	508.36	ug/L	508.36	ppb	18:43:01
2	Be 313.107†	1140521.3	1086869.3	498.62	ug/L	498.62	ppb	18:43:01
2	Cd 226.502†	40451.5	38656.6	492.79	ug/L	492.79	ppb	18:43:22
2	Co 228.616†	29269.7	27866.9	483.46	ug/L	483.46	ppb	18:43:22
2	Cr 267.716†	37465.9	35620.5	499.84	ug/L	499.84	ppb	18:43:01
2	Cu 324.752†	152238.6	138787.0	503.22	ug/L	503.22	ppb	18:43:01
2	Mn 257.610†	480776.3	455422.4	502.76	ug/L	502.76	ppb	18:43:01
2	Mo 202.031†	7363.9	6968.8	490.92	ug/L	490.92	ppb	18:43:22
2	Ni 231.604†	19586.6	18461.6	493.17	ug/L	493.17	ppb	18:43:22

2	P 214.914†	1516.9	1124.3	478.51 ug/L	478.51 ppb	18:43:22
2	Pb 220.353†	4400.0	4187.4	500.07 ug/L	500.07 ppb	18:43:22
2	S 181.975 Axial†	3880.0	3605.5	4938.3 ug/L	4938.3 ppb	18:43:22
2	Sb 206.836†	1856.9	1704.3	512.48 ug/L	512.48 ppb	18:43:22
2	Se 196.026†	987.4	965.5	510.49 ug/L	510.49 ppb	18:43:22
2	Si 251.611†	170889.5	161707.4	4977.1 ug/L	4977.1 ppb	18:43:01
2	Sn 189.927†	3041.6	2873.0	509.40 ug/L	509.40 ppb	18:43:22
2	Ti 334.940†	287306.3	273909.4	501.38 ug/L	501.38 ppb	18:43:01
2	Tl 190.801†	1924.2	1886.2	496.90 ug/L	496.90 ppb	18:43:22
2	U 409.014†	11022.1	15305.1	516.67 ug/L	516.67 ppb	18:43:01
2	V 292.402†	56497.5	55163.1	506.87 ug/L	506.87 ppb	18:43:01
2	Zn 213.857†	57288.4	53423.1	488.45 ug/L	488.45 ppb	18:43:01
2	SiO2†	169845.2	160691.5	10530 ug/L	10530 ppb	18:44:00
3	Sc Radial	7536.8	7536.8	101 %		18:42:05
3	Y RADIAL	6953.1	6953.1	100.4 %		18:42:05
3	Al 396.153Radial†	6236.6	6257.7	5131.9 ug/L	5131.9 ppb	18:42:05
3	Ca 317.933Radial†	3588.2	3529.5	5000.0 ug/L	5000.0 ppb	18:42:26
3	Fe 238.204 Radial†	1212.1	1167.3	4881.1 ug/L	4881.1 ppb	18:42:26
3	K 766.490 Radial†	25431.4	22814.3	4909.9 ug/L	4909.9 ppb	18:42:05
3	Mg 279.077 IEC†	205.5	200.8	5011.9 ug/L	5011.9 ppb	18:42:26
3	Na 589.592 Radial†	85530.3	84959.7	5214.2 ug/L	5214.2 ppb	18:42:05
3	Sr 421.552†	174039.5	172658.6	482.19 ug/L	482.19 ppb	18:42:05
3	Sc 361.383	751772.5	751772.5	104.60 %		18:43:29
3	Y 371.029	579877.2	579877.2	103.18 %		18:43:29
3	Ag 328.068†	87290.5	82816.5	497.78 ug/L	497.78 ppb	18:43:29
3	As 188.979†	1410.1	1383.5	502.07 ug/L	502.07 ppb	18:43:49
3	B 249.677†	19537.5	19617.6	491.57 ug/L	491.57 ppb	18:43:29
3	Ba 233.527†	75167.6	71859.2	508.13 ug/L	508.13 ppb	18:43:29
3	Be 313.107†	1131025.9	1086134.6	498.29 ug/L	498.29 ppb	18:43:29
3	Cd 226.502†	40501.5	39000.3	497.20 ug/L	497.20 ppb	18:43:49
3	Co 228.616†	29306.9	28116.7	487.81 ug/L	487.81 ppb	18:43:49
3	Cr 267.716†	37100.7	35545.4	498.79 ug/L	498.79 ppb	18:43:29
3	Cu 324.752†	150548.4	138284.8	501.39 ug/L	501.39 ppb	18:43:29
3	Mn 257.610†	476366.5	454723.5	501.97 ug/L	501.97 ppb	18:43:29
3	Mo 202.031†	7374.8	7033.2	495.44 ug/L	495.44 ppb	18:43:49
3	Ni 231.604†	19657.8	18672.9	498.81 ug/L	498.81 ppb	18:43:49
3	P 214.914†	1510.9	1129.7	481.79 ug/L	481.79 ppb	18:43:49
3	Pb 220.353†	4412.3	4231.4	505.33 ug/L	505.33 ppb	18:43:49
3	S 181.975 Axial†	3892.9	3646.1	4994.1 ug/L	4994.1 ppb	18:43:49
3	Sb 206.836†	1834.5	1696.5	510.35 ug/L	510.35 ppb	18:43:49
3	Se 196.026†	965.2	951.5	502.85 ug/L	502.85 ppb	18:43:49
3	Si 251.611†	169144.0	161288.7	4964.1 ug/L	4964.1 ppb	18:43:29
3	Sn 189.927†	3041.6	2895.3	513.31 ug/L	513.31 ppb	18:43:49
3	Ti 334.940†	284685.2	273505.3	500.63 ug/L	500.63 ppb	18:43:29
3	Tl 190.801†	1932.6	1908.3	502.63 ug/L	502.63 ppb	18:43:49
3	U 409.014†	10812.0	15184.9	512.62 ug/L	512.62 ppb	18:43:29
3	V 292.402†	56201.7	55293.7	508.12 ug/L	508.12 ppb	18:43:29
3	Zn 213.857†	56807.7	53382.7	488.07 ug/L	488.07 ppb	18:43:29
3	SiO2†	170081.6	162159.9	10626 ug/L	10626 ppb	18:44:05

Mean Data: 1201871707|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	753329.0	104.82	%	0.517				0.49%
Sc Radial	7515.5	101	%	0.9				0.90%
Y 371.029	581152.3	103.41	%	0.450				0.43%
Y RADIAL	6920.7	99.95	%	0.734				0.73%
Ag 328.068†	82873.0	498.13	ug/L	0.730	498.13	ppb	0.730	0.15%
Al 396.153Radial†	6281.8	5151.7	ug/L	21.99	5151.7	ppb	21.99	0.43%
As 188.979†	1377.4	499.91	ug/L	6.017	499.91	ppb	6.017	1.20%
B 249.677†	19595.7	491.02	ug/L	2.831	491.02	ppb	2.831	0.58%
Ba 233.527†	71800.8	507.72	ug/L	0.926	507.72	ppb	0.926	0.18%
Be 313.107†	1086170.4	498.30	ug/L	0.313	498.30	ppb	0.313	0.06%
Ca 317.933Radial†	3561.9	5045.8	ug/L	68.04	5045.8	ppb	68.04	1.35%
Cd 226.502†	38944.6	496.48	ug/L	3.385	496.48	ppb	3.385	0.68%
Co 228.616†	28093.8	487.40	ug/L	3.760	487.40	ppb	3.760	0.77%
Cr 267.716†	35578.7	499.25	ug/L	0.536	499.25	ppb	0.536	0.11%
Cu 324.752†	138325.3	501.54	ug/L	1.608	501.54	ppb	1.608	0.32%
Fe 238.204 Radial†	1183.0	4946.8	ug/L	76.82	4946.8	ppb	76.82	1.55%
K 766.490 Radial†	22867.7	4921.4	ug/L	12.93	4921.4	ppb	12.93	0.26%

Mg 279.077 IEC†	206.3	5149.0 ug/L	118.91	5149.0 ppb	118.91	2.31%
Mn 257.610†	454953.4	502.23 ug/L	0.456	502.23 ppb	0.456	0.09%
Mo 202.031†	7015.0	494.17 ug/L	2.828	494.17 ppb	2.828	0.57%
Na 589.592 Radial†	85057.4	5220.2 ug/L	6.22	5220.2 ppb	6.22	0.12%
Ni 231.604†	18628.1	497.62 ug/L	3.987	497.62 ppb	3.987	0.80%
P 214.914†	1128.9	481.32 ug/L	2.615	481.32 ppb	2.615	0.54%
Pb 220.353†	4229.9	505.14 ug/L	4.986	505.14 ppb	4.986	0.99%
S 181.975 Axial†	3643.8	4990.9 ug/L	51.04	4990.9 ppb	51.04	1.02%
Sb 206.836†	1703.5	512.36 ug/L	1.947	512.36 ppb	1.947	0.38%
Se 196.026†	959.7	507.25 ug/L	3.954	507.25 ppb	3.954	0.78%
Si 251.611†	161350.5	4966.0 ug/L	10.28	4966.0 ppb	10.28	0.21%
Sn 189.927†	2889.1	512.23 ug/L	2.483	512.23 ppb	2.483	0.48%
Sr 421.552†	172991.3	483.12 ug/L	1.060	483.12 ppb	1.060	0.22%
Ti 334.940†	273592.4	500.79 ug/L	0.522	500.79 ppb	0.522	0.10%
Tl 190.801†	1902.6	501.14 ug/L	3.728	501.14 ppb	3.728	0.74%
U 409.014†	15225.2	513.97 ug/L	2.334	513.97 ppb	2.334	0.45%
V 292.402†	55239.2	507.61 ug/L	0.656	507.61 ppb	0.656	0.13%
Zn 213.857†	53382.2	488.06 ug/L	0.396	488.06 ppb	0.396	0.08%
SiO2†	161101.1	10557 ug/L	60.8	10557 ppb	60.8	0.58%

Sequence No.: 40
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 19:13:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7624.8	7624.8	102	%			19:15:19
1	Y RADIAL	7017.8	7017.8	101.4	%			19:15:19
1	Al 396.153Radial†	6388.3	6335.1	5195.6	ug/L	5195.6	ppb	19:15:19
1	Ca 317.933Radial†	3676.3	3574.7	5064.0	ug/L	5064.0	ppb	19:15:19
1	Fe 238.204 Radial†	1223.7	1164.8	4870.8	ug/L	4870.8	ppb	19:15:39
1	K 766.490 Radial†	25168.9	22265.7	4790.9	ug/L	4790.9	ppb	19:15:14
1	Mg 279.077 IEC†	212.4	205.2	5121.7	ug/L	5121.7	ppb	19:15:39
1	Na 589.592 Radial†	169779.8	166569.6	10223	ug/L	10223	ppb	19:15:14
1	Sr 421.552†	175689.9	172283.6	481.14	ug/L	481.14	ppb	19:15:14
1	Sc 361.383	768663.6	768663.6	106.95	%			19:16:48
1	Y 371.029	592644.8	592644.8	105.45	%			19:16:48
1	Ag 328.068†	88040.7	81684.2	490.97	ug/L	490.97	ppb	19:16:48
1	As 188.979†	1437.1	1379.1	500.45	ug/L	500.45	ppb	19:17:08
1	B 249.677†	19667.4	19328.6	484.28	ug/L	484.28	ppb	19:16:48
1	Ba 233.527†	74178.4	69355.2	490.43	ug/L	490.43	ppb	19:16:48
1	Be 313.107†	1145311.2	1075731.2	493.50	ug/L	493.50	ppb	19:16:48
1	Cd 226.502†	40488.8	38137.6	486.19	ug/L	486.19	ppb	19:17:08
1	Co 228.616†	30065.4	28210.2	489.45	ug/L	489.45	ppb	19:17:08
1	Cr 267.716†	37378.5	35025.8	491.49	ug/L	491.49	ppb	19:16:48
1	Cu 324.752†	149927.6	134541.7	487.82	ug/L	487.82	ppb	19:16:48
1	Mn 257.610†	476428.3	444773.9	491.00	ug/L	491.00	ppb	19:16:48
1	Mo 202.031†	7534.1	7027.2	495.02	ug/L	495.02	ppb	19:17:08
1	Ni 231.604†	19734.5	18331.7	489.69	ug/L	489.69	ppb	19:17:08
1	P 214.914†	5522.7	4848.8	2383.1	ug/L	2383.1	ppb	19:17:08
1	Pb 220.353†	4470.7	4193.3	500.81	ug/L	500.81	ppb	19:17:08
1	S 181.975 Axial†	841.5	711.4	973.60	ug/L	973.60	ppb	19:17:08
1	Sb 206.836†	1830.8	1654.5	497.69	ug/L	497.69	ppb	19:17:08
1	Se 196.026†	1012.3	975.3	514.95	ug/L	514.95	ppb	19:17:08
1	Si 251.611†	86043.3	80037.5	2455.1	ug/L	2455.1	ppb	19:16:48
1	Sn 189.927†	2979.0	2772.8	491.64	ug/L	491.64	ppb	19:17:08
1	Ti 334.940†	283813.9	266710.1	488.20	ug/L	488.20	ppb	19:16:48
1	Tl 190.801†	1926.6	1862.1	490.42	ug/L	490.42	ppb	19:17:08
1	U 409.014†	10499.7	14665.8	495.06	ug/L	495.06	ppb	19:16:48
1	V 292.402†	55901.1	53832.0	494.83	ug/L	494.83	ppb	19:16:48
1	Zn 213.857†	57858.7	53171.9	486.20	ug/L	486.20	ppb	19:16:48
1	SiO2†	85478.5	79484.3	5189.8	ug/L	5189.8	ppb	19:18:08
2	Sc Radial	7544.5	7544.5	101	%			19:15:49
2	Y RADIAL	6937.8	6937.8	100.2	%			19:15:49
2	Al 396.153Radial†	6375.5	6389.0	5239.3	ug/L	5239.3	ppb	19:15:49
2	Ca 317.933Radial†	3709.0	3645.6	5164.4	ug/L	5164.4	ppb	19:15:49
2	Fe 238.204 Radial†	1234.6	1188.3	4969.4	ug/L	4969.4	ppb	19:16:09
2	K 766.490 Radial†	25456.1	22812.9	4908.5	ug/L	4908.5	ppb	19:15:44
2	Mg 279.077 IEC†	208.8	203.9	5088.6	ug/L	5088.6	ppb	19:16:09
2	Na 589.592 Radial†	171290.6	169838.5	10423	ug/L	10423	ppb	19:15:44
2	Sr 421.552†	176920.7	175336.7	489.67	ug/L	489.67	ppb	19:15:44
2	Sc 361.383	739420.8	739420.8	102.88	%			19:17:15
2	Y 371.029	570351.5	570351.5	101.49	%			19:17:15
2	Ag 328.068†	89145.4	86013.3	516.95	ug/L	516.95	ppb	19:17:15
2	As 188.979†	1425.2	1420.7	515.58	ug/L	515.58	ppb	19:17:35
2	B 249.677†	20099.8	20476.2	513.11	ug/L	513.11	ppb	19:17:15
2	Ba 233.527†	75262.9	73152.2	517.28	ug/L	517.28	ppb	19:17:15
2	Be 313.107†	1163202.3	1135470.9	520.90	ug/L	520.90	ppb	19:17:15
2	Cd 226.502†	40416.2	39564.1	504.38	ug/L	504.38	ppb	19:17:35
2	Co 228.616†	29966.2	29225.4	507.04	ug/L	507.04	ppb	19:17:35
2	Cr 267.716†	37953.8	36967.1	518.73	ug/L	518.73	ppb	19:17:15
2	Cu 324.752†	151617.6	141728.2	513.87	ug/L	513.87	ppb	19:17:15
2	Mn 257.610†	483691.3	469450.3	518.22	ug/L	518.22	ppb	19:17:15
2	Mo 202.031†	7504.4	7276.8	512.60	ug/L	512.60	ppb	19:17:35
2	Ni 231.604†	19673.8	19002.4	507.61	ug/L	507.61	ppb	19:17:35

2	P 214.914†	5508.5	5039.3	2475.3 ug/L	2475.3 ppb	19:17:35
2	Pb 220.353†	4456.7	4345.0	518.90 ug/L	518.90 ppb	19:17:35
2	S 181.975 Axial†	846.6	747.5	1023.0 ug/L	1023.0 ppb	19:17:35
2	Sb 206.836†	1823.0	1714.6	515.60 ug/L	515.60 ppb	19:17:35
2	Se 196.026†	1008.5	1009.0	532.54 ug/L	532.54 ppb	19:17:35
2	Si 251.611†	87369.2	84507.9	2592.5 ug/L	2592.5 ppb	19:17:15
2	Sn 189.927†	2991.0	2894.6	513.22 ug/L	513.22 ppb	19:17:35
2	Ti 334.940†	287913.1	281189.0	514.70 ug/L	514.70 ppb	19:17:15
2	Tl 190.801†	1928.6	1935.3	509.77 ug/L	509.77 ppb	19:17:35
2	U 409.014†	10549.8	15102.7	509.79 ug/L	509.79 ppb	19:17:15
2	V 292.402†	56794.2	56767.0	521.68 ug/L	521.68 ppb	19:17:15
2	Zn 213.857†	58603.9	56035.7	512.47 ug/L	512.47 ppb	19:17:15
2	SiO2†	86477.1	83615.7	5460.1 ug/L	5460.1 ppb	19:18:13
3	Sc Radial	7531.2	7531.2	101 %		19:16:19
3	Y RADIAL	6899.9	6899.9	99.65 %		19:16:19
3	Al 396.153Radial†	6366.9	6391.6	5241.3 ug/L	5241.3 ppb	19:16:19
3	Ca 317.933Radial†	3664.6	3608.0	5111.1 ug/L	5111.1 ppb	19:16:19
3	Fe 238.204 Radial†	1221.5	1177.5	4924.4 ug/L	4924.4 ppb	19:16:39
3	K 766.490 Radial†	25737.9	23137.1	4978.4 ug/L	4978.4 ppb	19:16:14
3	Mg 279.077 IEC†	206.8	202.2	5047.9 ug/L	5047.9 ppb	19:16:39
3	Na 589.592 Radial†	173049.7	171883.5	10549 ug/L	10549 ppb	19:16:14
3	Sr 421.552†	178978.7	177688.1	496.24 ug/L	496.24 ppb	19:16:14
3	Sc 361.383	740672.0	740672.0	103.06 %		19:17:43
3	Y 371.029	571519.5	571519.5	101.69 %		19:17:43
3	Ag 328.068†	87920.0	84678.0	508.94 ug/L	508.94 ppb	19:17:43
3	As 188.979†	1448.4	1440.9	522.80 ug/L	522.80 ppb	19:18:03
3	B 249.677†	19705.1	20060.2	502.61 ug/L	502.61 ppb	19:17:43
3	Ba 233.527†	74275.9	72070.9	509.63 ug/L	509.63 ppb	19:17:43
3	Be 313.107†	1148041.0	1118849.7	513.27 ug/L	513.27 ppb	19:17:43
3	Cd 226.502†	40802.6	39872.7	508.33 ug/L	508.33 ppb	19:18:03
3	Co 228.616†	30206.7	29409.7	510.27 ug/L	510.27 ppb	19:18:03
3	Cr 267.716†	37413.1	36380.1	510.50 ug/L	510.50 ppb	19:17:43
3	Cu 324.752†	149436.4	139362.8	505.30 ug/L	505.30 ppb	19:17:43
3	Mn 257.610†	476929.6	462095.1	510.10 ug/L	510.10 ppb	19:17:43
3	Mo 202.031†	7565.6	7324.0	515.92 ug/L	515.92 ppb	19:18:03
3	Ni 231.604†	19891.1	19180.9	512.38 ug/L	512.38 ppb	19:18:03
3	P 214.914†	5557.6	5077.8	2496.8 ug/L	2496.8 ppb	19:18:03
3	Pb 220.353†	4503.6	4383.2	523.47 ug/L	523.47 ppb	19:18:03
3	S 181.975 Axial†	846.1	745.6	1020.4 ug/L	1020.4 ppb	19:18:03
3	Sb 206.836†	1857.8	1745.5	525.08 ug/L	525.08 ppb	19:18:03
3	Se 196.026†	1024.3	1022.6	539.33 ug/L	539.33 ppb	19:18:03
3	Si 251.611†	86072.0	83105.7	2549.1 ug/L	2549.1 ppb	19:17:43
3	Sn 189.927†	3015.7	2913.7	516.58 ug/L	516.58 ppb	19:18:03
3	Ti 334.940†	283942.2	276863.3	506.78 ug/L	506.78 ppb	19:17:43
3	Tl 190.801†	1956.9	1959.5	516.02 ug/L	516.02 ppb	19:18:03
3	U 409.014†	10363.0	14904.2	503.08 ug/L	503.08 ppb	19:17:43
3	V 292.402†	55972.0	55876.0	513.63 ug/L	513.63 ppb	19:17:43
3	Zn 213.857†	57980.4	55334.5	505.98 ug/L	505.98 ppb	19:17:43
3	SiO2†	87652.8	84614.4	5525.5 ug/L	5525.5 ppb	19:18:18

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	749585.4	104.30	%	2.301				2.21%
Sc Radial	7566.9	101	%	0.7				0.67%
Y 371.029	578171.9	102.88	%	2.233				2.17%
Y RADIAL	6951.8	100.4	%	0.87				0.87%
Ag 328.068†	84125.2	505.62	ug/L	13.306	505.62	ppb	13.306	2.63%
QC value within limits for Ag 328.068 Recovery = 101.12%								
Al 396.153Radial†	6371.9	5225.4	ug/L	25.81	5225.4	ppb	25.81	0.49%
QC value within limits for Al 396.153Radial Recovery = 104.51%								
As 188.979†	1413.6	512.94	ug/L	11.405	512.94	ppb	11.405	2.22%
QC value within limits for As 188.979 Recovery = 102.59%								
B 249.677†	19955.0	500.00	ug/L	14.588	500.00	ppb	14.588	2.92%
QC value within limits for B 249.677 Recovery = 100.00%								
Ba 233.527†	71526.1	505.78	ug/L	13.833	505.78	ppb	13.833	2.74%
QC value within limits for Ba 233.527 Recovery = 101.16%								
Be 313.107†	1110017.3	509.22	ug/L	14.144	509.22	ppb	14.144	2.78%
QC value within limits for Be 313.107 Recovery = 101.84%								
Ca 317.933Radial†	3609.4	5113.2	ug/L	50.20	5113.2	ppb	50.20	0.98%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.26%
Cd 226.502†            39191.5      499.63 ug/L        11.810      499.63 ppb        11.810   2.36%
   QC value within limits for Cd 226.502  Recovery = 99.93%
Co 228.616†            28948.4      502.25 ug/L        11.206      502.25 ppb        11.206   2.23%
   QC value within limits for Co 228.616  Recovery = 100.45%
Cr 267.716†            36124.3      506.91 ug/L        13.971      506.91 ppb        13.971   2.76%
   QC value within limits for Cr 267.716  Recovery = 101.38%
Cu 324.752†           138544.2      502.33 ug/L        13.275      502.33 ppb        13.275   2.64%
   QC value within limits for Cu 324.752  Recovery = 100.47%
Fe 238.204 Radial†      1176.9      4921.6 ug/L         49.35      4921.6 ppb         49.35   1.00%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.43%
K 766.490 Radial†      22738.6      4892.6 ug/L         94.74      4892.6 ppb         94.74   1.94%
   QC value within limits for K 766.490 Radial  Recovery = 97.85%
Mg 279.077 IEC†          203.8      5086.1 ug/L         36.96      5086.1 ppb         36.96   0.73%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.72%
Mn 257.610†           458773.1      506.44 ug/L        13.978      506.44 ppb        13.978   2.76%
   QC value within limits for Mn 257.610  Recovery = 101.29%
Mo 202.031†             7209.3      507.85 ug/L        11.231      507.85 ppb        11.231   2.21%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†    169430.5       10398 ug/L         164.5       10398 ppb         164.5   1.58%
   QC value within limits for Na 589.592 Radial  Recovery = 103.98%
Ni 231.604†            18838.3      503.23 ug/L        11.962      503.23 ppb        11.962   2.38%
   QC value within limits for Ni 231.604  Recovery = 100.65%
P 214.914†              4988.6      2451.7 ug/L         60.44      2451.7 ppb         60.44   2.47%
   QC value within limits for P 214.914  Recovery = 98.07%
Pb 220.353†             4307.2      514.39 ug/L        11.984      514.39 ppb        11.984   2.33%
   QC value within limits for Pb 220.353  Recovery = 102.88%
S 181.975 Axial†         734.8      1005.7 ug/L         27.80      1005.7 ppb         27.80   2.76%
   QC value within limits for S 181.975 Axial  Recovery = 100.57%
Sb 206.836†             1704.9      512.79 ug/L        13.907      512.79 ppb        13.907   2.71%
   QC value within limits for Sb 206.836  Recovery = 102.56%
Se 196.026†             1002.3      528.94 ug/L        12.583      528.94 ppb        12.583   2.38%
   QC value within limits for Se 196.026  Recovery = 105.79%
Si 251.611†            82550.3      2532.2 ug/L         70.25      2532.2 ppb         70.25   2.77%
   QC value within limits for Si 251.611  Recovery = 101.29%
Sn 189.927†             2860.4      507.15 ug/L        13.537      507.15 ppb        13.537   2.67%
   QC value within limits for Sn 189.927  Recovery = 101.43%
Sr 421.552†           175102.8      489.02 ug/L         7.568      489.02 ppb         7.568   1.55%
   QC value within limits for Sr 421.552  Recovery = 97.80%
Ti 334.940†           274920.8      503.23 ug/L        13.602      503.23 ppb        13.602   2.70%
   QC value within limits for Ti 334.940  Recovery = 100.65%
Tl 190.801†             1919.0      505.40 ug/L        13.346      505.40 ppb        13.346   2.64%
   QC value within limits for Tl 190.801  Recovery = 101.08%
U 409.014†             14890.9      502.64 ug/L         7.375      502.64 ppb         7.375   1.47%
   QC value within limits for U 409.014  Recovery = 100.53%
V 292.402†             55491.7      510.05 ug/L        13.782      510.05 ppb        13.782   2.70%
   QC value within limits for V 292.402  Recovery = 102.01%
Zn 213.857†            54847.4      501.55 ug/L        13.684      501.55 ppb        13.684   2.73%
   QC value within limits for Zn 213.857  Recovery = 100.31%
SiO2†                  82571.4      5391.8 ug/L        177.96      5391.8 ppb        177.96   3.30%
   QC value within limits for SiO2  Recovery = 100.83%
All analyte(s) passed QC.
```

Sequence No.: 41
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 19:20:29
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7503.2	7503.2	100	%			19:22:21
1	Y RADIAL	6942.1	6942.1	100.3	%			19:22:21
1	Al 396.153Radial†	-77.2	-4.3	-3.5081	ug/L	-3.5081	ppb	19:22:21
1	Ca 317.933Radial†	29.2	-0.1	-0.0742	ug/L	-0.0742	ppb	19:22:41
1	Fe 238.204 Radial†	33.7	-1.2	-5.1310	ug/L	-5.1310	ppb	19:22:41
1	K 766.490 Radial†	2474.2	57.6	12.430	ug/L	12.430	ppb	19:22:21
1	Mg 279.077 IEC†	3.7	0.6	15.906	ug/L	15.906	ppb	19:22:41
1	Na 589.592 Radial†	-232.6	-96.2	-5.9039	ug/L	-5.9039	ppb	19:22:21
1	Sr 421.552†	-55.5	0.6	0.0017	ug/L	0.0017	ppb	19:22:21
1	Sc 361.383	733564.8	733564.8	102.07	%			19:23:37
1	Y 371.029	574142.8	574142.8	102.16	%			19:23:37
1	Ag 328.068†	711.6	64.6	0.3807	ug/L	0.3807	ppb	19:23:37
1	As 188.979†	-31.3	4.7	1.7032	ug/L	1.7032	ppb	19:23:58
1	B 249.677†	-734.7	220.1	5.5477	ug/L	5.5477	ppb	19:23:37
1	Ba 233.527†	6.1	5.5	0.0396	ug/L	0.0396	ppb	19:23:58
1	Be 313.107†	-4820.2	159.3	0.0731	ug/L	0.0731	ppb	19:23:37
1	Cd 226.502†	-267.6	18.9	0.2422	ug/L	0.2422	ppb	19:23:58
1	Co 228.616†	-110.0	-8.3	-0.1445	ug/L	-0.1445	ppb	19:23:58
1	Cr 267.716†	-121.0	-41.2	-0.5781	ug/L	-0.5781	ppb	19:23:37
1	Cu 324.752†	5705.7	-48.4	-0.1757	ug/L	-0.1757	ppb	19:23:37
1	Mn 257.610†	747.5	52.7	0.0572	ug/L	0.0572	ppb	19:23:37
1	Mo 202.031†	14.6	-2.9	-0.2021	ug/L	-0.2021	ppb	19:23:58
1	Ni 231.604†	125.3	3.0	0.0803	ug/L	0.0803	ppb	19:23:58
1	P 214.914†	326.2	4.8	2.5214	ug/L	2.5214	ppb	19:23:58
1	Pb 220.353†	-26.5	-12.7	-1.5125	ug/L	-1.5125	ppb	19:23:58
1	S 181.975 Axial†	84.8	7.7	10.517	ug/L	10.517	ppb	19:23:58
1	Sb 206.836†	50.9	-7.4	-2.1646	ug/L	-2.1646	ppb	19:23:58
1	Se 196.026†	-19.3	9.9	5.0124	ug/L	5.0124	ppb	19:23:58
1	Si 251.611†	457.4	36.4	1.0998	ug/L	1.0998	ppb	19:23:58
1	Sn 189.927†	22.7	9.8	1.7290	ug/L	1.7290	ppb	19:23:58
1	Ti 334.940†	-1316.0	59.0	0.1058	ug/L	0.1058	ppb	19:23:37
1	Tl 190.801†	-44.8	16.8	4.4094	ug/L	4.4094	ppb	19:23:58
1	U 409.014†	-4789.3	156.6	5.3032	ug/L	5.3032	ppb	19:23:37
1	V 292.402†	-1564.9	32.0	0.2994	ug/L	0.2994	ppb	19:23:37
1	Zn 213.857†	956.9	12.4	0.1142	ug/L	0.1142	ppb	19:23:58
1	SiO2†	452.6	6.6	0.3761	ug/L	0.3761	ppb	19:24:54
2	Sc Radial	7446.1	7446.1	99.6	%			19:22:46
2	Y RADIAL	6863.2	6863.2	99.12	%			19:22:46
2	Al 396.153Radial†	-61.9	10.5	8.6366	ug/L	8.6366	ppb	19:22:46
2	Ca 317.933Radial†	27.9	-1.1	-1.4958	ug/L	-1.4958	ppb	19:23:06
2	Fe 238.204 Radial†	39.4	4.8	19.992	ug/L	19.992	ppb	19:23:06
2	K 766.490 Radial†	2526.6	129.0	27.851	ug/L	27.851	ppb	19:22:46
2	Mg 279.077 IEC†	1.8	-1.3	-31.935	ug/L	-31.935	ppb	19:23:06
2	Na 589.592 Radial†	-298.2	-163.8	-10.055	ug/L	-10.055	ppb	19:22:46
2	Sr 421.552†	-32.2	23.5	0.0657	ug/L	0.0657	ppb	19:22:46
2	Sc 361.383	724908.4	724908.4	100.87	%			19:24:03
2	Y 371.029	568012.1	568012.1	101.07	%			19:24:03
2	Ag 328.068†	650.9	12.7	0.0769	ug/L	0.0769	ppb	19:24:03
2	As 188.979†	-24.9	10.8	3.8911	ug/L	3.8911	ppb	19:24:23
2	B 249.677†	-714.3	231.8	5.8408	ug/L	5.8408	ppb	19:24:03
2	Ba 233.527†	13.0	12.3	0.0878	ug/L	0.0878	ppb	19:24:23
2	Be 313.107†	-4795.9	127.0	0.0581	ug/L	0.0581	ppb	19:24:03
2	Cd 226.502†	-265.1	18.2	0.2306	ug/L	0.2306	ppb	19:24:23
2	Co 228.616†	-114.9	-14.5	-0.2526	ug/L	-0.2526	ppb	19:24:23
2	Cr 267.716†	-46.1	31.7	0.4424	ug/L	0.4424	ppb	19:24:03
2	Cu 324.752†	5637.2	-49.6	-0.1787	ug/L	-0.1787	ppb	19:24:03
2	Mn 257.610†	726.0	40.2	0.0474	ug/L	0.0474	ppb	19:24:03
2	Mo 202.031†	11.8	-5.4	-0.3778	ug/L	-0.3778	ppb	19:24:23
2	Ni 231.604†	148.9	27.8	0.7438	ug/L	0.7438	ppb	19:24:23

2	P 214.914†	308.1	-9.3	-4.7005	ug/L	-4.7005	ppb	19:24:23
2	Pb 220.353†	-9.8	3.5	0.4190	ug/L	0.4190	ppb	19:24:23
2	S 181.975 Axial†	77.8	1.7	2.2949	ug/L	2.2949	ppb	19:24:23
2	Sb 206.836†	67.8	10.0	2.9668	ug/L	2.9668	ppb	19:24:23
2	Se 196.026†	-29.4	-0.4	-0.1143	ug/L	-0.1143	ppb	19:24:23
2	Si 251.611†	460.8	45.1	1.3740	ug/L	1.3740	ppb	19:24:23
2	Sn 189.927†	19.7	7.0	1.2412	ug/L	1.2412	ppb	19:24:23
2	Ti 334.940†	-1372.9	-12.8	-0.0272	ug/L	-0.0272	ppb	19:24:03
2	Tl 190.801†	-52.2	9.0	2.3613	ug/L	2.3613	ppb	19:24:23
2	U 409.014†	-4660.0	228.7	7.7397	ug/L	7.7397	ppb	19:24:03
2	V 292.402†	-1538.2	40.2	0.3722	ug/L	0.3722	ppb	19:24:03
2	Zn 213.857†	948.2	14.9	0.1323	ug/L	0.1323	ppb	19:24:23
2	SiO2†	435.2	-5.4	-0.4009	ug/L	-0.4009	ppb	19:24:59
3	Sc Radial	7395.5	7395.5	98.9	%			19:23:11
3	Y RADIAL	6866.3	6866.3	99.16	%			19:23:11
3	Al 396.153Radial†	-81.3	-9.5	-7.8152	ug/L	-7.8152	ppb	19:23:11
3	Ca 317.933Radial†	21.3	-7.6	-10.721	ug/L	-10.721	ppb	19:23:31
3	Fe 238.204 Radial†	33.0	-1.4	-6.0319	ug/L	-6.0319	ppb	19:23:31
3	K 766.490 Radial†	2473.3	92.6	19.979	ug/L	19.979	ppb	19:23:11
3	Mg 279.077 IEC†	1.7	-1.3	-31.980	ug/L	-31.980	ppb	19:23:31
3	Na 589.592 Radial†	-332.7	-200.7	-12.316	ug/L	-12.316	ppb	19:23:11
3	Sr 421.552†	-59.9	-4.7	-0.0129	ug/L	-0.0129	ppb	19:23:11
3	Sc 361.383	732958.1	732958.1	101.99	%			19:24:28
3	Y 371.029	573677.3	573677.3	102.08	%			19:24:28
3	Ag 328.068†	581.8	-62.2	-0.3768	ug/L	-0.3768	ppb	19:24:28
3	As 188.979†	-31.1	4.9	1.7798	ug/L	1.7798	ppb	19:24:48
3	B 249.677†	-687.3	266.0	6.7049	ug/L	6.7049	ppb	19:24:28
3	Ba 233.527†	18.1	17.2	0.1217	ug/L	0.1217	ppb	19:24:48
3	Be 313.107†	-4756.9	217.4	0.0996	ug/L	0.0996	ppb	19:24:28
3	Cd 226.502†	-284.8	1.9	0.0249	ug/L	0.0249	ppb	19:24:48
3	Co 228.616†	-110.9	-9.2	-0.1601	ug/L	-0.1601	ppb	19:24:48
3	Cr 267.716†	-69.2	9.5	0.1322	ug/L	0.1322	ppb	19:24:28
3	Cu 324.752†	5718.5	-31.3	-0.1137	ug/L	-0.1137	ppb	19:24:28
3	Mn 257.610†	735.5	41.6	0.0458	ug/L	0.0458	ppb	19:24:28
3	Mo 202.031†	18.6	1.1	0.0789	ug/L	0.0789	ppb	19:24:48
3	Ni 231.604†	138.1	15.6	0.4172	ug/L	0.4172	ppb	19:24:48
3	P 214.914†	319.1	-1.9	-0.9416	ug/L	-0.9416	ppb	19:24:48
3	Pb 220.353†	-8.3	5.2	0.6134	ug/L	0.6134	ppb	19:24:48
3	S 181.975 Axial†	83.2	6.2	8.4605	ug/L	8.4605	ppb	19:24:48
3	Sb 206.836†	60.5	2.0	0.6113	ug/L	0.6113	ppb	19:24:48
3	Se 196.026†	-23.7	5.6	2.8158	ug/L	2.8158	ppb	19:24:48
3	Si 251.611†	447.6	27.1	0.8193	ug/L	0.8193	ppb	19:24:48
3	Sn 189.927†	16.4	3.6	0.6306	ug/L	0.6306	ppb	19:24:48
3	Ti 334.940†	-1363.0	11.8	0.0188	ug/L	0.0188	ppb	19:24:28
3	Tl 190.801†	-47.6	14.1	3.6939	ug/L	3.6939	ppb	19:24:48
3	U 409.014†	-4805.4	136.9	4.6345	ug/L	4.6345	ppb	19:24:28
3	V 292.402†	-1580.9	15.1	0.1473	ug/L	0.1473	ppb	19:24:28
3	Zn 213.857†	959.8	16.0	0.1466	ug/L	0.1466	ppb	19:24:48
3	SiO2†	416.5	-28.5	-1.9131	ug/L	-1.9131	ppb	19:25:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	730477.1	101.64	%	0.672				0.66%
Sc Radial	7448.3	99.6	%	0.72				0.72%
Y 371.029	571944.0	101.77	%	0.607				0.60%
Y RADIAL	6890.5	99.51	%	0.646				0.65%
Ag 328.068†	5.0	0.0269	ug/L	0.38118	0.0269	ppb	0.38118	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.1	-0.8956	ug/L	8.53136	-0.8956	ppb	8.53136	952.59%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	6.8	2.4580	ug/L	1.24170	2.4580	ppb	1.24170	50.52%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	239.3	6.0311	ug/L	0.60163	6.0311	ppb	0.60163	9.98%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	11.7	0.0830	ug/L	0.04122	0.0830	ppb	0.04122	49.66%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	167.9	0.0769	ug/L	0.02100	0.0769	ppb	0.02100	27.30%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.9	-4.0971	ug/L	5.78053	-4.0971	ppb	5.78053	141.09%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.0      0.1659 ug/L       0.12227      0.1659 ppb        0.12227  73.70%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -10.7     -0.1857 ug/L       0.05844     -0.1857 ppb        0.05844  31.46%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 0.0     -0.0012 ug/L       0.52317     -0.0012 ppb        0.52317 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -43.1     -0.1560 ug/L       0.03671     -0.1560 ppb        0.03671  23.53%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.7      2.9430 ug/L      14.77161      2.9430 ppb       14.77161 501.92%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          93.1      20.087 ug/L        7.7111      20.087 ppb         7.7111  38.39%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.6     -16.003 ug/L       27.6339     -16.003 ppb        27.6339 172.68%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                44.8      0.0501 ug/L       0.00619      0.0501 ppb        0.00619  12.34%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -2.4     -0.1670 ug/L       0.23034     -0.1670 ppb        0.23034 137.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -153.6     -9.4250 ug/L       3.25231     -9.4250 ppb        3.25231  34.51%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                15.5      0.4138 ug/L       0.33178      0.4138 ppb        0.33178  80.18%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -2.1     -1.0402 ug/L       3.61197     -1.0402 ppb        3.61197 347.23%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -1.3     -0.1600 ug/L       1.17530     -0.1600 ppb        1.17530 734.38%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.2      7.0906 ug/L       4.27861      7.0906 ppb        4.27861  60.34%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 1.5      0.4712 ug/L       2.56853      0.4712 ppb        2.56853 545.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      2.5713 ug/L       2.57210      2.5713 ppb        2.57210 100.03%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                36.2      1.0977 ug/L       0.27738      1.0977 ppb        0.27738  25.27%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 6.8      1.2003 ug/L       0.55031      1.2003 ppb        0.55031  45.85%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 6.5      0.0182 ug/L       0.04183      0.0182 ppb        0.04183 230.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                19.3      0.0325 ug/L       0.06753      0.0325 ppb        0.06753 207.90%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                13.3      3.4882 ug/L       1.03945      3.4882 ppb        1.03945  29.80%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                174.0      5.8925 ug/L       1.63431      5.8925 ppb        1.63431  27.74%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 29.1      0.2730 ug/L       0.11478      0.2730 ppb        0.11478  42.05%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                14.4      0.1310 ug/L       0.01626      0.1310 ppb        0.01626  12.41%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      -9.1     -0.6460 ug/L       1.16412     -0.6460 ppb        1.16412 180.21%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 43
Sample ID: 232510001|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 70
Date Collected: 6/30/2009 19:34:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232510001|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7740.2	7740.2	104	%			19:35:53
1	Y RADIAL	7169.8	7169.8	103.5	%			19:35:53
1	Al 396.153Radial†	-81.8	-6.4	-5.2297	ug/L	-5.2297	ppb	19:35:53
1	Ca 317.933Radial†	38.9	8.5	12.065	ug/L	12.065	ppb	19:36:13
1	Fe 238.204 Radial†	36.9	0.8	3.5197	ug/L	3.5197	ppb	19:36:13
1	K 766.490 Radial†	3001.4	491.3	105.98	ug/L	105.98	ppb	19:35:53
1	Mg 279.077 IEC†	5.2	2.0	49.135	ug/L	49.135	ppb	19:36:13
1	Na 589.592 Radial†	1216.6	1310.5	80.426	ug/L	80.426	ppb	19:35:53
1	Sr 421.552†	-34.1	23.0	0.0640	ug/L	0.0640	ppb	19:35:53
1	Sc 361.383	741522.0	741522.0	103.18	%			19:37:10
1	Y 371.029	579612.1	579612.1	103.13	%			19:37:10
1	Ag 328.068†	583.5	-67.1	-0.4136	ug/L	-0.4136	ppb	19:37:10
1	As 188.979†	-36.5	0.0	0.0054	ug/L	0.0054	ppb	19:37:30
1	B 249.677†	209.8	1143.2	28.811	ug/L	28.811	ppb	19:37:10
1	Ba 233.527†	51.6	49.5	0.3498	ug/L	0.3498	ppb	19:37:30
1	Be 313.107†	-4906.7	126.1	0.0585	ug/L	0.0585	ppb	19:37:10
1	Cd 226.502†	-273.7	15.9	0.2025	ug/L	0.2025	ppb	19:37:30
1	Co 228.616†	-98.6	3.8	0.0651	ug/L	0.0651	ppb	19:37:30
1	Cr 267.716†	-20.2	57.8	0.8044	ug/L	0.8044	ppb	19:37:10
1	Cu 324.752†	5849.8	31.3	0.1136	ug/L	0.1136	ppb	19:37:10
1	Mn 257.610†	1131.6	417.1	0.4595	ug/L	0.4595	ppb	19:37:10
1	Mo 202.031†	14.5	-3.1	-0.2185	ug/L	-0.2185	ppb	19:37:30
1	Ni 231.604†	158.7	34.0	0.9091	ug/L	0.9091	ppb	19:37:30
1	P 214.914†	335.2	10.1	5.1298	ug/L	5.1298	ppb	19:37:30
1	Pb 220.353†	1.5	14.7	1.7473	ug/L	1.7473	ppb	19:37:30
1	S 181.975 Axial†	116.1	37.1	50.875	ug/L	50.875	ppb	19:37:30
1	Sb 206.836†	49.6	-9.1	-2.7444	ug/L	-2.7444	ppb	19:37:30
1	Se 196.026†	-38.4	-8.5	-4.3063	ug/L	-4.3063	ppb	19:37:30
1	Si 251.611†	54591.2	52498.5	1621.3	ug/L	1621.3	ppb	19:37:10
1	Sn 189.927†	11.3	-1.5	-0.2689	ug/L	-0.2689	ppb	19:37:30
1	Ti 334.940†	-1205.3	180.1	0.3226	ug/L	0.3226	ppb	19:37:10
1	Tl 190.801†	-66.8	-4.0	-1.0404	ug/L	-1.0404	ppb	19:37:30
1	U 409.014†	-4484.8	502.0	16.997	ug/L	16.997	ppb	19:37:10
1	V 292.402†	-1597.0	17.4	0.1880	ug/L	0.1880	ppb	19:37:10
1	Zn 213.857†	1059.0	101.2	0.9262	ug/L	0.9262	ppb	19:37:30
1	SiO2†	54301.4	52192.5	3432.3	ug/L	3432.3	ppb	19:38:26
2	Sc Radial	7647.7	7647.7	102	%			19:36:18
2	Y RADIAL	7059.3	7059.3	101.9	%			19:36:18
2	Al 396.153Radial†	-82.3	-7.8	-6.4265	ug/L	-6.4265	ppb	19:36:18
2	Ca 317.933Radial†	44.1	14.0	19.793	ug/L	19.793	ppb	19:36:38
2	Fe 238.204 Radial†	38.3	2.6	11.000	ug/L	11.000	ppb	19:36:38
2	K 766.490 Radial†	3085.9	608.9	131.36	ug/L	131.36	ppb	19:36:18
2	Mg 279.077 IEC†	6.1	2.9	72.716	ug/L	72.716	ppb	19:36:38
2	Na 589.592 Radial†	1251.5	1358.8	83.392	ug/L	83.392	ppb	19:36:18
2	Sr 421.552†	6.0	61.7	0.1722	ug/L	0.1722	ppb	19:36:18
2	Sc 361.383	745566.4	745566.4	103.74	%			19:37:36
2	Y 371.029	582963.1	582963.1	103.73	%			19:37:36
2	Ag 328.068†	596.4	-57.8	-0.3510	ug/L	-0.3510	ppb	19:37:36
2	As 188.979†	-29.4	7.1	2.5674	ug/L	2.5674	ppb	19:37:56
2	B 249.677†	112.1	1048.0	26.410	ug/L	26.410	ppb	19:37:36
2	Ba 233.527†	54.0	51.6	0.3647	ug/L	0.3647	ppb	19:37:56
2	Be 313.107†	-4951.6	108.7	0.0506	ug/L	0.0506	ppb	19:37:36
2	Cd 226.502†	-278.9	12.3	0.1555	ug/L	0.1555	ppb	19:37:56
2	Co 228.616†	-99.2	3.9	0.0661	ug/L	0.0661	ppb	19:37:56
2	Cr 267.716†	-44.4	34.6	0.4810	ug/L	0.4810	ppb	19:37:36
2	Cu 324.752†	5820.7	-27.5	-0.0992	ug/L	-0.0992	ppb	19:37:36
2	Mn 257.610†	1166.7	445.0	0.4908	ug/L	0.4908	ppb	19:37:36
2	Mo 202.031†	17.8	-0.0	-0.0003	ug/L	-0.0003	ppb	19:37:56
2	Ni 231.604†	124.5	0.3	0.0067	ug/L	0.0067	ppb	19:37:56

2	P 214.914†	331.4	4.6	2.3939	ug/L	2.3939 ppb	19:37:56
2	Pb 220.353†	-17.6	-3.7	-0.4395	ug/L	-0.4395 ppb	19:37:56
2	S 181.975 Axial†	101.6	22.6	30.901	ug/L	30.901 ppb	19:37:56
2	Sb 206.836†	71.1	11.3	3.3671	ug/L	3.3671 ppb	19:37:56
2	Se 196.026†	-33.5	-3.5	-1.7505	ug/L	-1.7505 ppb	19:37:56
2	Si 251.611†	54342.7	51971.9	1605.0	ug/L	1605.0 ppb	19:37:36
2	Sn 189.927†	23.4	10.1	1.7870	ug/L	1.7870 ppb	19:37:56
2	Ti 334.940†	-1180.8	210.0	0.3800	ug/L	0.3800 ppb	19:37:36
2	Tl 190.801†	-50.6	12.0	3.1516	ug/L	3.1516 ppb	19:37:56
2	U 409.014†	-4653.0	363.5	12.306	ug/L	12.306 ppb	19:37:36
2	V 292.402†	-1586.1	36.3	0.3523	ug/L	0.3523 ppb	19:37:36
2	Zn 213.857†	1044.0	81.2	0.7460	ug/L	0.7460 ppb	19:37:56
2	SiO2†	54478.1	52077.3	3424.6	ug/L	3424.6 ppb	19:38:32
3	Sc Radial	7543.1	7543.1	101	%		19:36:43
3	Y RADIAL	6971.3	6971.3	100.7	%		19:36:43
3	Al 396.153Radial†	-77.5	-4.1	-3.4219	ug/L	-3.4219 ppb	19:36:43
3	Ca 317.933Radial†	38.9	9.4	13.327	ug/L	13.327 ppb	19:37:03
3	Fe 238.204 Radial†	34.4	-0.7	-2.9996	ug/L	-2.9996 ppb	19:37:03
3	K 766.490 Radial†	3080.6	645.5	139.24	ug/L	139.24 ppb	19:36:43
3	Mg 279.077 IEC†	-0.5	-3.5	-87.276	ug/L	-87.276 ppb	19:37:03
3	Na 589.592 Radial†	1371.4	1494.5	91.719	ug/L	91.719 ppb	19:36:43
3	Sr 421.552†	-0.2	55.6	0.1552	ug/L	0.1552 ppb	19:36:43
3	Sc 361.383	744339.8	744339.8	103.57	%		19:38:01
3	Y 371.029	581887.5	581887.5	103.54	%		19:38:01
3	Ag 328.068†	677.9	21.9	0.1236	ug/L	0.1236 ppb	19:38:01
3	As 188.979†	-40.4	-3.6	-1.3044	ug/L	-1.3044 ppb	19:38:21
3	B 249.677†	187.8	1121.3	28.259	ug/L	28.259 ppb	19:38:01
3	Ba 233.527†	29.2	27.6	0.1960	ug/L	0.1960 ppb	19:38:21
3	Be 313.107†	-4922.9	128.5	0.0594	ug/L	0.0594 ppb	19:38:01
3	Cd 226.502†	-278.1	12.6	0.1610	ug/L	0.1610 ppb	19:38:21
3	Co 228.616†	-103.9	-0.9	-0.0141	ug/L	-0.0141 ppb	19:38:21
3	Cr 267.716†	-12.9	65.0	0.9083	ug/L	0.9083 ppb	19:38:01
3	Cu 324.752†	5784.2	-53.6	-0.1942	ug/L	-0.1942 ppb	19:38:01
3	Mn 257.610†	1131.0	412.4	0.4561	ug/L	0.4561 ppb	19:38:01
3	Mo 202.031†	28.1	10.0	0.7070	ug/L	0.7070 ppb	19:38:21
3	Ni 231.604†	128.9	4.7	0.1257	ug/L	0.1257 ppb	19:38:21
3	P 214.914†	334.7	8.4	4.3198	ug/L	4.3198 ppb	19:38:21
3	Pb 220.353†	-21.8	-7.8	-0.9298	ug/L	-0.9298 ppb	19:38:21
3	S 181.975 Axial†	106.7	27.6	37.821	ug/L	37.821 ppb	19:38:21
3	Sb 206.836†	56.9	-2.3	-0.6891	ug/L	-0.6891 ppb	19:38:21
3	Se 196.026†	-27.7	2.0	1.0349	ug/L	1.0349 ppb	19:38:21
3	Si 251.611†	54719.9	52422.5	1619.0	ug/L	1619.0 ppb	19:38:01
3	Sn 189.927†	12.6	-0.3	-0.0570	ug/L	-0.0570 ppb	19:38:21
3	Ti 334.940†	-1244.9	146.3	0.2642	ug/L	0.2642 ppb	19:38:01
3	Tl 190.801†	-52.1	10.4	2.7339	ug/L	2.7339 ppb	19:38:21
3	U 409.014†	-4744.8	267.4	9.0534	ug/L	9.0534 ppb	19:38:01
3	V 292.402†	-1575.3	44.2	0.4262	ug/L	0.4262 ppb	19:38:01
3	Zn 213.857†	1050.9	89.6	0.8295	ug/L	0.8295 ppb	19:38:21
3	SiO2†	54529.3	52213.3	3433.6	ug/L	3433.6 ppb	19:38:37

Mean Data: 232510001|881354|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	743809.4	103.50	%	0.289				0.28%
Sc Radial	7643.6	102	%	1.3				1.29%
Y 371.029	581487.6	103.47	%	0.304				0.29%
Y RADIAL	7066.8	102.1	%	1.44				1.41%
Ag 328.068†	-34.3	-0.2137	ug/L	0.29378	-0.2137	ppb	0.29378	137.49%
Al 396.153Radial†	-6.1	-5.0260	ug/L	1.51260	-5.0260	ppb	1.51260	30.10%
As 188.979†	1.2	0.4228	ug/L	1.96939	0.4228	ppb	1.96939	465.82%
B 249.677†	1104.2	27.826	ug/L	1.2578	27.826	ppb	1.2578	4.52%
Ba 233.527†	42.9	0.3035	ug/L	0.09341	0.3035	ppb	0.09341	30.78%
Be 313.107†	121.1	0.0562	ug/L	0.00484	0.0562	ppb	0.00484	8.62%
Ca 317.933Radial†	10.6	15.062	ug/L	4.1458	15.062	ppb	4.1458	27.53%
Cd 226.502†	13.6	0.1730	ug/L	0.02570	0.1730	ppb	0.02570	14.85%
Co 228.616†	2.3	0.0390	ug/L	0.04599	0.0390	ppb	0.04599	117.81%
Cr 267.716†	52.4	0.7312	ug/L	0.22280	0.7312	ppb	0.22280	30.47%
Cu 324.752†	-16.6	-0.0599	ug/L	0.15762	-0.0599	ppb	0.15762	262.95%
Fe 238.204 Radial†	0.9	3.8400	ug/L	7.00516	3.8400	ppb	7.00516	182.43%
K 766.490 Radial†	581.9	125.53	ug/L	17.377	125.53	ppb	17.377	13.84%

Mg 279.077 IEC†	0.5	11.525	ug/L	86.3727	11.525	ppb	86.3727 749.43%
Mn 257.610†	424.9	0.4688	ug/L	0.01909	0.4688	ppb	0.01909 4.07%
Mo 202.031†	2.3	0.1627	ug/L	0.48382	0.1627	ppb	0.48382 297.28%
Na 589.592 Radial†	1387.9	85.179	ug/L	5.8549	85.179	ppb	5.8549 6.87%
Ni 231.604†	13.0	0.3472	ug/L	0.49027	0.3472	ppb	0.49027 141.22%
P 214.914†	7.7	3.9478	ug/L	1.40538	3.9478	ppb	1.40538 35.60%
Pb 220.353†	1.1	0.1260	ug/L	1.42532	0.1260	ppb	1.42532 >999.9%
S 181.975 Axial†	29.1	39.865	ug/L	10.1426	39.865	ppb	10.1426 25.44%
Sb 206.836†	-0.1	-0.0221	ug/L	3.10990	-0.0221	ppb	3.10990 >999.9%
Se 196.026†	-3.3	-1.6739	ug/L	2.67143	-1.6739	ppb	2.67143 159.59%
Si 251.611†	52297.6	1615.1	ug/L	8.81	1615.1	ppb	8.81 0.55%
Sn 189.927†	2.7	0.4870	ug/L	1.13082	0.4870	ppb	1.13082 232.19%
Sr 421.552†	46.8	0.1305	ug/L	0.05819	0.1305	ppb	0.05819 44.59%
Ti 334.940†	178.8	0.3223	ug/L	0.05790	0.3223	ppb	0.05790 17.96%
Tl 190.801†	6.2	1.6150	ug/L	2.30914	1.6150	ppb	2.30914 142.98%
U 409.014†	377.6	12.786	ug/L	3.9934	12.786	ppb	3.9934 31.23%
V 292.402†	32.6	0.3222	ug/L	0.12196	0.3222	ppb	0.12196 37.85%
Zn 213.857†	90.7	0.8339	ug/L	0.09015	0.8339	ppb	0.09015 10.81%
SiO2†	52161.0	3430.2	ug/L	4.84	3430.2	ppb	4.84 0.14%

Sequence No.: 44
Sample ID: 1201871708|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 71
Date Collected: 6/30/2009 19:40:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871708|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7744.1	7744.1	104	%			19:42:40
1	Y RADIAL	7164.9	7164.9	103.5	%			19:42:40
1	Al 396.153Radial†	-60.7	14.1	11.570	ug/L	11.570	ppb	19:42:40
1	Ca 317.933Radial†	39.3	8.9	12.557	ug/L	12.557	ppb	19:43:00
1	Fe 238.204 Radial†	36.0	-0.0	-0.1785	ug/L	-0.1785	ppb	19:43:00
1	K 766.490 Radial†	2968.6	458.1	98.814	ug/L	98.814	ppb	19:42:40
1	Mg 279.077 IEC†	2.3	-0.8	-19.459	ug/L	-19.459	ppb	19:43:00
1	Na 589.592 Radial†	1188.2	1282.4	78.702	ug/L	78.702	ppb	19:42:40
1	Sr 421.552†	35.0	89.7	0.2503	ug/L	0.2503	ppb	19:42:40
1	Sc 361.383	746456.7	746456.7	103.86	%			19:43:57
1	Y 371.029	583514.3	583514.3	103.83	%			19:43:57
1	Ag 328.068†	715.3	56.1	0.3269	ug/L	0.3269	ppb	19:43:57
1	As 188.979†	-33.9	2.8	0.9956	ug/L	0.9956	ppb	19:44:17
1	B 249.677†	129.9	1065.0	26.841	ug/L	26.841	ppb	19:43:57
1	Ba 233.527†	40.9	38.9	0.2750	ug/L	0.2750	ppb	19:44:17
1	Be 313.107†	-4807.4	253.2	0.1160	ug/L	0.1160	ppb	19:43:57
1	Cd 226.502†	-262.6	28.2	0.3601	ug/L	0.3601	ppb	19:44:17
1	Co 228.616†	-112.2	-8.6	-0.1475	ug/L	-0.1475	ppb	19:44:17
1	Cr 267.716†	-65.3	14.5	0.2004	ug/L	0.2004	ppb	19:43:57
1	Cu 324.752†	5805.8	-48.6	-0.1763	ug/L	-0.1763	ppb	19:43:57
1	Mn 257.610†	1062.6	343.4	0.3791	ug/L	0.3791	ppb	19:44:17
1	Mo 202.031†	24.8	6.8	0.4777	ug/L	0.4777	ppb	19:44:17
1	Ni 231.604†	125.9	1.5	0.0390	ug/L	0.0390	ppb	19:44:17
1	P 214.914†	329.0	2.0	1.0244	ug/L	1.0244	ppb	19:44:17
1	Pb 220.353†	-2.6	10.7	1.2778	ug/L	1.2778	ppb	19:44:17
1	S 181.975 Axial†	102.7	23.4	32.116	ug/L	32.116	ppb	19:44:17
1	Sb 206.836†	66.6	6.8	2.0049	ug/L	2.0049	ppb	19:44:17
1	Se 196.026†	-24.8	4.9	2.4866	ug/L	2.4866	ppb	19:44:17
1	Si 251.611†	53887.6	51471.2	1589.6	ug/L	1589.6	ppb	19:43:57
1	Sn 189.927†	2.6	-10.0	-1.7773	ug/L	-1.7773	ppb	19:44:17
1	Ti 334.940†	-1373.2	26.2	0.0437	ug/L	0.0437	ppb	19:43:57
1	Tl 190.801†	-64.1	-0.9	-0.2362	ug/L	-0.2362	ppb	19:44:17
1	U 409.014†	-4699.1	324.4	10.985	ug/L	10.985	ppb	19:43:57
1	V 292.402†	-1580.5	43.5	0.4218	ug/L	0.4218	ppb	19:43:57
1	Zn 213.857†	1112.4	145.9	1.3474	ug/L	1.3474	ppb	19:44:17
1	SiO2†	53460.1	51034.5	3356.2	ug/L	3356.2	ppb	19:45:13
2	Sc Radial	7668.0	7668.0	103	%			19:43:05
2	Y RADIAL	7098.7	7098.7	102.5	%			19:43:05
2	Al 396.153Radial†	-79.7	-5.0	-4.1476	ug/L	-4.1476	ppb	19:43:05
2	Ca 317.933Radial†	39.3	9.2	13.011	ug/L	13.011	ppb	19:43:25
2	Fe 238.204 Radial†	36.9	1.2	5.0496	ug/L	5.0496	ppb	19:43:25
2	K 766.490 Radial†	3084.5	599.5	129.33	ug/L	129.33	ppb	19:43:05
2	Mg 279.077 IEC†	2.1	-1.0	-23.705	ug/L	-23.705	ppb	19:43:25
2	Na 589.592 Radial†	1279.2	1382.5	84.846	ug/L	84.846	ppb	19:43:05
2	Sr 421.552†	-15.1	41.2	0.1149	ug/L	0.1149	ppb	19:43:05
2	Sc 361.383	753828.8	753828.8	104.89	%			19:44:22
2	Y 371.029	589108.4	589108.4	104.82	%			19:44:22
2	Ag 328.068†	642.7	-19.9	-0.1290	ug/L	-0.1290	ppb	19:44:22
2	As 188.979†	-29.4	7.4	2.6523	ug/L	2.6523	ppb	19:44:42
2	B 249.677†	96.9	1032.3	26.015	ug/L	26.015	ppb	19:44:22
2	Ba 233.527†	46.6	44.0	0.3101	ug/L	0.3101	ppb	19:44:42
2	Be 313.107†	-4845.6	262.0	0.1203	ug/L	0.1203	ppb	19:44:22
2	Cd 226.502†	-292.8	2.0	0.0248	ug/L	0.0248	ppb	19:44:42
2	Co 228.616†	-96.7	7.3	0.1272	ug/L	0.1272	ppb	19:44:42
2	Cr 267.716†	4.1	81.3	1.1353	ug/L	1.1353	ppb	19:44:22
2	Cu 324.752†	5827.3	-82.8	-0.2997	ug/L	-0.2997	ppb	19:44:22
2	Mn 257.610†	1075.4	345.6	0.3823	ug/L	0.3823	ppb	19:44:42
2	Mo 202.031†	26.6	8.3	0.5823	ug/L	0.5823	ppb	19:44:42
2	Ni 231.604†	142.3	15.8	0.4231	ug/L	0.4231	ppb	19:44:42

2	P 214.914†	331.4	1.1	0.6272	ug/L	0.6272 ppb	19:44:42
2	Pb 220.353†	-4.6	8.9	1.0608	ug/L	1.0608 ppb	19:44:42
2	S 181.975 Axial†	102.4	22.2	30.457	ug/L	30.457 ppb	19:44:42
2	Sb 206.836†	58.4	-1.6	-0.4877	ug/L	-0.4877 ppb	19:44:42
2	Se 196.026†	-31.5	-1.3	-0.6380	ug/L	-0.6380 ppb	19:44:42
2	Si 251.611†	54608.0	51650.7	1595.1	ug/L	1595.1 ppb	19:44:22
2	Sn 189.927†	13.7	0.5	0.0970	ug/L	0.0970 ppb	19:44:42
2	Ti 334.940†	-1322.0	87.9	0.1555	ug/L	0.1555 ppb	19:44:22
2	Tl 190.801†	-66.4	-2.6	-0.6678	ug/L	-0.6678 ppb	19:44:42
2	U 409.014†	-4676.7	390.0	13.203	ug/L	13.203 ppb	19:44:22
2	V 292.402†	-1647.0	-5.0	-0.0145	ug/L	-0.0145 ppb	19:44:22
2	Zn 213.857†	1121.3	143.9	1.3258	ug/L	1.3258 ppb	19:44:42
2	SiO2†	53563.9	50630.2	3329.5	ug/L	3329.5 ppb	19:45:18
3	Sc Radial	7610.9	7610.9	102	%		19:43:30
3	Y RADIAL	7017.4	7017.4	101.3	%		19:43:30
3	Al 396.153Radial†	-49.4	24.1	19.929	ug/L	19.929 ppb	19:43:30
3	Ca 317.933Radial†	41.7	11.9	16.839	ug/L	16.839 ppb	19:43:50
3	Fe 238.204 Radial†	36.0	0.5	2.2499	ug/L	2.2499 ppb	19:43:50
3	K 766.490 Radial†	3037.8	576.2	124.31	ug/L	124.31 ppb	19:43:30
3	Mg 279.077 IEC†	1.0	-2.0	-50.857	ug/L	-50.857 ppb	19:43:50
3	Na 589.592 Radial†	1272.2	1385.0	85.002	ug/L	85.002 ppb	19:43:30
3	Sr 421.552†	9.1	64.8	0.1808	ug/L	0.1808 ppb	19:43:30
3	Sc 361.383	742155.8	742155.8	103.27	%		19:44:48
3	Y 371.029	580272.8	580272.8	103.25	%		19:44:48
3	Ag 328.068†	589.3	-61.9	-0.3821	ug/L	-0.3821 ppb	19:44:48
3	As 188.979†	-33.3	3.2	1.1501	ug/L	1.1501 ppb	19:45:08
3	B 249.677†	152.5	1087.6	27.411	ug/L	27.411 ppb	19:44:48
3	Ba 233.527†	33.9	32.3	0.2278	ug/L	0.2278 ppb	19:45:08
3	Be 313.107†	-4852.4	182.7	0.0845	ug/L	0.0845 ppb	19:44:48
3	Cd 226.502†	-271.4	18.3	0.2331	ug/L	0.2331 ppb	19:45:08
3	Co 228.616†	-111.9	-8.9	-0.1591	ug/L	-0.1591 ppb	19:45:08
3	Cr 267.716†	-19.1	58.9	0.8211	ug/L	0.8211 ppb	19:44:48
3	Cu 324.752†	5750.5	-69.7	-0.2526	ug/L	-0.2526 ppb	19:44:48
3	Mn 257.610†	1058.2	345.1	0.3819	ug/L	0.3819 ppb	19:45:08
3	Mo 202.031†	-1.2	-18.3	-1.2904	ug/L	-1.2904 ppb	19:45:08
3	Ni 231.604†	148.1	23.6	0.6309	ug/L	0.6309 ppb	19:45:08
3	P 214.914†	325.3	0.2	0.1660	ug/L	0.1660 ppb	19:45:08
3	Pb 220.353†	-18.4	-4.5	-0.5408	ug/L	-0.5408 ppb	19:45:08
3	S 181.975 Axial†	95.3	16.9	23.090	ug/L	23.090 ppb	19:45:08
3	Sb 206.836†	64.1	4.8	1.3771	ug/L	1.3771 ppb	19:45:08
3	Se 196.026†	-21.3	8.2	4.1830	ug/L	4.1830 ppb	19:45:08
3	Si 251.611†	53511.4	51407.6	1587.7	ug/L	1587.7 ppb	19:44:48
3	Sn 189.927†	13.4	0.5	0.0881	ug/L	0.0881 ppb	19:45:08
3	Ti 334.940†	-1191.4	194.5	0.3502	ug/L	0.3502 ppb	19:44:48
3	Tl 190.801†	-58.5	4.1	1.0780	ug/L	1.0780 ppb	19:45:08
3	U 409.014†	-4553.8	439.0	14.862	ug/L	14.862 ppb	19:44:48
3	V 292.402†	-1614.3	2.0	0.0285	ug/L	0.0285 ppb	19:44:48
3	Zn 213.857†	1138.9	177.8	1.6381	ug/L	1.6381 ppb	19:45:08
3	SiO2†	53594.0	51462.5	3384.3	ug/L	3384.3 ppb	19:45:23

Mean Data: 1201871708|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	747480.4	104.01	%	0.821				0.79%
Sc Radial	7674.3	103	%	0.9				0.87%
Y 371.029	584298.5	103.97	%	0.795				0.76%
Y RADIAL	7093.7	102.4	%	1.07				1.04%
Ag 328.068†	-8.6	-0.0614	ug/L	0.35929	-0.0614	ppb	0.35929	584.99%
Al 396.153Radial†	11.1	9.1172	ug/L	12.22422	9.1172	ppb	12.22422	134.08%
As 188.979†	4.5	1.5993	ug/L	0.91517	1.5993	ppb	0.91517	57.22%
B 249.677†	1061.6	26.755	ug/L	0.7018	26.755	ppb	0.7018	2.62%
Ba 233.527†	38.4	0.2710	ug/L	0.04125	0.2710	ppb	0.04125	15.22%
Be 313.107†	232.6	0.1069	ug/L	0.01957	0.1069	ppb	0.01957	18.30%
Ca 317.933Radial†	10.0	14.135	ug/L	2.3522	14.135	ppb	2.3522	16.64%
Cd 226.502†	16.2	0.2060	ug/L	0.16930	0.2060	ppb	0.16930	82.19%
Co 228.616†	-3.4	-0.0598	ug/L	0.16204	-0.0598	ppb	0.16204	271.01%
Cr 267.716†	51.6	0.7189	ug/L	0.47571	0.7189	ppb	0.47571	66.17%
Cu 324.752†	-67.1	-0.2428	ug/L	0.06227	-0.2428	ppb	0.06227	25.64%
Fe 238.204 Radial†	0.6	2.3737	ug/L	2.61624	2.3737	ppb	2.61624	110.22%
K 766.490 Radial†	544.6	117.49	ug/L	16.363	117.49	ppb	16.363	13.93%

Mg 279.077 IEC†	-1.3	-31.340 ug/L	17.0351	-31.340 ppb	17.0351	54.36%
Mn 257.610†	344.7	0.3811 ug/L	0.00172	0.3811 ppb	0.00172	0.45%
Mo 202.031†	-1.1	-0.0768 ug/L	1.05234	-0.0768 ppb	1.05234	>999.9%
Na 589.592 Radial†	1350.0	82.850 ug/L	3.5928	82.850 ppb	3.5928	4.34%
Ni 231.604†	13.6	0.3643 ug/L	0.30032	0.3643 ppb	0.30032	82.43%
P 214.914†	1.1	0.6059 ug/L	0.42960	0.6059 ppb	0.42960	70.90%
Pb 220.353†	5.0	0.5993 ug/L	0.99325	0.5993 ppb	0.99325	165.74%
S 181.975 Axial†	20.8	28.554 ug/L	4.8043	28.554 ppb	4.8043	16.83%
Sb 206.836†	3.3	0.9648 ug/L	1.29642	0.9648 ppb	1.29642	134.38%
Se 196.026†	3.9	2.0105 ug/L	2.44554	2.0105 ppb	2.44554	121.64%
Si 251.611†	51509.9	1590.8 ug/L	3.87	1590.8 ppb	3.87	0.24%
Sn 189.927†	-3.0	-0.5307 ug/L	1.07958	-0.5307 ppb	1.07958	203.41%
Sr 421.552†	65.2	0.1820 ug/L	0.06772	0.1820 ppb	0.06772	37.21%
Ti 334.940†	102.9	0.1831 ug/L	0.15511	0.1831 ppb	0.15511	84.70%
Tl 190.801†	0.2	0.0580 ug/L	0.90935	0.0580 ppb	0.90935	>999.9%
U 409.014†	384.5	13.017 ug/L	1.9450	13.017 ppb	1.9450	14.94%
V 292.402†	13.5	0.1453 ug/L	0.24043	0.1453 ppb	0.24043	165.51%
Zn 213.857†	155.9	1.4371 ug/L	0.17438	1.4371 ppb	0.17438	12.13%
SiO2†	51042.4	3356.7 ug/L	27.41	3356.7 ppb	27.41	0.82%

Sequence No.: 45
Sample ID: 1201871709|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 72
Date Collected: 6/30/2009 19:47:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871709|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7707.3	7707.3	103	%			19:49:28
1	Y RADIAL	7078.2	7078.2	102.2	%			19:49:28
1	Al 396.153Radial†	6342.7	6223.9	5104.0	ug/L	5104.0	ppb	19:49:28
1	Ca 317.933Radial†	3701.1	3560.3	5043.5	ug/L	5043.5	ppb	19:49:28
1	Fe 238.204 Radial†	1221.2	1149.5	4807.0	ug/L	4807.0	ppb	19:49:48
1	K 766.490 Radial†	26476.1	23269.5	5008.1	ug/L	5008.1	ppb	19:49:28
1	Mg 279.077 IEC†	207.8	198.5	4954.2	ug/L	4954.2	ppb	19:49:48
1	Na 589.592 Radial†	88419.6	85885.6	5271.0	ug/L	5271.0	ppb	19:49:28
1	Sr 421.552†	176922.3	171636.4	479.34	ug/L	479.34	ppb	19:49:28
1	Sc 361.383	748522.5	748522.5	104.15	%			19:50:46
1	Y 371.029	577845.3	577845.3	102.82	%			19:50:46
1	Ag 328.068†	86617.7	82532.9	496.04	ug/L	496.04	ppb	19:50:46
1	As 188.979†	1398.8	1378.4	500.22	ug/L	500.22	ppb	19:51:07
1	B 249.677†	20224.1	20357.9	510.24	ug/L	510.24	ppb	19:50:46
1	Ba 233.527†	74460.8	71492.6	505.53	ug/L	505.53	ppb	19:50:46
1	Be 313.107†	1125260.2	1085293.5	497.89	ug/L	497.89	ppb	19:50:46
1	Cd 226.502†	40175.3	38855.2	495.35	ug/L	495.35	ppb	19:51:07
1	Co 228.616†	29156.8	28094.2	487.42	ug/L	487.42	ppb	19:51:07
1	Cr 267.716†	36758.8	35371.2	496.34	ug/L	496.34	ppb	19:50:46
1	Cu 324.752†	149200.9	137615.9	498.96	ug/L	498.96	ppb	19:50:46
1	Mn 257.610†	471737.8	452256.6	499.24	ug/L	499.24	ppb	19:50:46
1	Mo 202.031†	7330.7	7021.4	494.61	ug/L	494.61	ppb	19:51:07
1	Ni 231.604†	19441.6	18547.0	495.45	ug/L	495.45	ppb	19:51:07
1	P 214.914†	1454.3	1081.5	457.71	ug/L	457.71	ppb	19:51:07
1	Pb 220.353†	4364.3	4203.6	502.02	ug/L	502.02	ppb	19:51:07
1	S 181.975 Axial†	3880.4	3650.4	4999.9	ug/L	4999.9	ppb	19:51:07
1	Sb 206.836†	1841.3	1710.6	514.56	ug/L	514.56	ppb	19:51:07
1	Se 196.026†	965.9	956.2	504.98	ug/L	504.98	ppb	19:51:07
1	Si 251.611†	220649.1	211443.1	6513.1	ug/L	6513.1	ppb	19:50:46
1	Sn 189.927†	3018.5	2885.7	511.61	ug/L	511.61	ppb	19:51:07
1	Ti 334.940†	281471.7	271601.6	497.15	ug/L	497.15	ppb	19:50:46
1	Tl 190.801†	1811.3	1799.8	474.22	ug/L	474.22	ppb	19:51:07
1	U 409.014†	10725.7	15147.0	511.35	ug/L	511.35	ppb	19:50:46
1	V 292.402†	55559.5	54910.3	504.64	ug/L	504.64	ppb	19:50:46
1	Zn 213.857†	55945.4	52790.5	482.64	ug/L	482.64	ppb	19:50:46
1	SiO2†	220542.1	211315.3	13859	ug/L	13859	ppb	19:52:07
2	Sc Radial	7731.2	7731.2	103	%			19:49:53
2	Y RADIAL	7162.5	7162.5	103.4	%			19:49:53
2	Al 396.153Radial†	6390.7	6251.2	5126.7	ug/L	5126.7	ppb	19:49:53
2	Ca 317.933Radial†	3730.5	3577.6	5068.1	ug/L	5068.1	ppb	19:49:53
2	Fe 238.204 Radial†	1210.3	1135.4	4748.0	ug/L	4748.0	ppb	19:50:13
2	K 766.490 Radial†	26570.0	23280.7	5010.6	ug/L	5010.6	ppb	19:49:53
2	Mg 279.077 IEC†	212.2	202.2	5045.6	ug/L	5045.6	ppb	19:50:13
2	Na 589.592 Radial†	88783.8	85972.0	5276.3	ug/L	5276.3	ppb	19:49:53
2	Sr 421.552†	178392.2	172525.9	481.82	ug/L	481.82	ppb	19:49:53
2	Sc 361.383	749577.0	749577.0	104.30	%			19:51:14
2	Y 371.029	578691.4	578691.4	102.97	%			19:51:14
2	Ag 328.068†	86774.5	82566.1	496.22	ug/L	496.22	ppb	19:51:14
2	As 188.979†	1404.3	1381.9	501.44	ug/L	501.44	ppb	19:51:34
2	B 249.677†	20263.0	20367.9	510.50	ug/L	510.50	ppb	19:51:14
2	Ba 233.527†	74574.7	71501.2	505.59	ug/L	505.59	ppb	19:51:14
2	Be 313.107†	1126888.8	1085335.2	497.91	ug/L	497.91	ppb	19:51:14
2	Cd 226.502†	40106.0	38734.5	493.82	ug/L	493.82	ppb	19:51:34
2	Co 228.616†	29102.9	28003.1	485.84	ug/L	485.84	ppb	19:51:34
2	Cr 267.716†	36809.7	35370.3	496.32	ug/L	496.32	ppb	19:51:14
2	Cu 324.752†	149739.4	137930.7	500.10	ug/L	500.10	ppb	19:51:14
2	Mn 257.610†	472755.7	452595.4	499.61	ug/L	499.61	ppb	19:51:14
2	Mo 202.031†	7298.3	6980.5	491.72	ug/L	491.72	ppb	19:51:34
2	Ni 231.604†	19423.1	18502.9	494.27	ug/L	494.27	ppb	19:51:34

2	P 214.914†	1477.4	1101.7	467.83 ug/L	467.83 ppb	19:51:34
2	Pb 220.353†	4362.5	4196.0	501.11 ug/L	501.11 ppb	19:51:34
2	S 181.975 Axial†	3871.4	3636.5	4980.8 ug/L	4980.8 ppb	19:51:34
2	Sb 206.836†	1826.0	1693.5	509.37 ug/L	509.37 ppb	19:51:34
2	Se 196.026†	963.9	953.0	503.14 ug/L	503.14 ppb	19:51:34
2	Si 251.611†	221172.6	211647.0	6519.4 ug/L	6519.4 ppb	19:51:14
2	Sn 189.927†	3012.2	2875.5	509.81 ug/L	509.81 ppb	19:51:34
2	Ti 334.940†	281724.5	271463.8	496.90 ug/L	496.90 ppb	19:51:14
2	Tl 190.801†	1809.2	1795.4	473.06 ug/L	473.06 ppb	19:51:34
2	U 409.014†	10813.8	15217.0	513.73 ug/L	513.73 ppb	19:51:14
2	V 292.402†	55567.9	54843.4	504.01 ug/L	504.01 ppb	19:51:14
2	Zn 213.857†	56125.1	52887.2	483.54 ug/L	483.54 ppb	19:51:14
2	SiO2†	221694.8	212122.6	13912 ug/L	13912 ppb	19:52:12
3	Sc Radial	7664.2	7664.2	103 %		19:50:18
3	Y RADIAL	7133.2	7133.2	103.0 %		19:50:18
3	Al 396.153Radial†	6345.1	6260.8	5134.7 ug/L	5134.7 ppb	19:50:18
3	Ca 317.933Radial†	3684.4	3564.1	5049.0 ug/L	5049.0 ppb	19:50:18
3	Fe 238.204 Radial†	1203.7	1139.1	4763.4 ug/L	4763.4 ppb	19:50:38
3	K 766.490 Radial†	26437.3	23376.1	5031.2 ug/L	5031.2 ppb	19:50:18
3	Mg 279.077 IEC†	206.8	198.7	4958.9 ug/L	4958.9 ppb	19:50:38
3	Na 589.592 Radial†	88332.5	86282.6	5295.4 ug/L	5295.4 ppb	19:50:18
3	Sr 421.552†	176751.3	172434.0	481.56 ug/L	481.56 ppb	19:50:18
3	Sc 361.383	753327.1	753327.1	104.82 %		19:51:41
3	Y 371.029	581538.1	581538.1	103.48 %		19:51:41
3	Ag 328.068†	87118.8	82480.5	495.71 ug/L	495.71 ppb	19:51:41
3	As 188.979†	1390.5	1362.0	494.29 ug/L	494.29 ppb	19:52:01
3	B 249.677†	20481.2	20479.4	513.33 ug/L	513.33 ppb	19:51:41
3	Ba 233.527†	75043.0	71592.0	506.24 ug/L	506.24 ppb	19:51:41
3	Be 313.107†	1132474.5	1085285.4	497.89 ug/L	497.89 ppb	19:51:41
3	Cd 226.502†	40014.2	38455.4	490.26 ug/L	490.26 ppb	19:52:01
3	Co 228.616†	29033.3	27797.8	482.26 ug/L	482.26 ppb	19:52:01
3	Cr 267.716†	36967.8	35345.5	495.98 ug/L	495.98 ppb	19:51:41
3	Cu 324.752†	150637.0	138072.3	500.61 ug/L	500.61 ppb	19:51:41
3	Mn 257.610†	474716.9	452209.9	499.19 ug/L	499.19 ppb	19:51:41
3	Mo 202.031†	7272.1	6920.6	487.51 ug/L	487.51 ppb	19:52:01
3	Ni 231.604†	19399.2	18387.4	491.19 ug/L	491.19 ppb	19:52:01
3	P 214.914†	1484.1	1101.0	467.32 ug/L	467.32 ppb	19:52:01
3	Pb 220.353†	4355.1	4168.1	497.78 ug/L	497.78 ppb	19:52:01
3	S 181.975 Axial†	3853.8	3601.2	4932.5 ug/L	4932.5 ppb	19:52:01
3	Sb 206.836†	1820.4	1679.4	505.04 ug/L	505.04 ppb	19:52:01
3	Se 196.026†	952.3	937.3	495.22 ug/L	495.22 ppb	19:52:01
3	Si 251.611†	222314.6	211680.9	6520.6 ug/L	6520.6 ppb	19:51:41
3	Sn 189.927†	3000.8	2850.3	505.35 ug/L	505.35 ppb	19:52:01
3	Ti 334.940†	283402.6	271720.1	497.36 ug/L	497.36 ppb	19:51:41
3	Tl 190.801†	1828.3	1805.0	475.59 ug/L	475.59 ppb	19:52:01
3	U 409.014†	10970.9	15315.2	517.05 ug/L	517.05 ppb	19:51:41
3	V 292.402†	55969.5	54961.2	505.03 ug/L	505.03 ppb	19:51:41
3	Zn 213.857†	56265.1	52752.9	482.32 ug/L	482.32 ppb	19:51:41
3	SiO2†	218646.9	208156.7	13651 ug/L	13651 ppb	19:52:17

Mean Data: 1201871709|881354|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	750475.5	104.42	%	0.351				0.34%
Sc Radial	7700.9	103	%	0.5				0.44%
Y 371.029	579358.3	103.09	%	0.344				0.33%
Y RADIAL	7124.6	102.9	%	0.62				0.60%
Ag 328.068†	82526.5	495.99	ug/L	0.256	495.99	ppb	0.256	0.05%
Al 396.153Radial†	6245.3	5121.8	ug/L	15.92	5121.8	ppb	15.92	0.31%
As 188.979†	1374.1	498.65	ug/L	3.829	498.65	ppb	3.829	0.77%
B 249.677†	20401.7	511.35	ug/L	1.713	511.35	ppb	1.713	0.34%
Ba 233.527†	71528.6	505.79	ug/L	0.390	505.79	ppb	0.390	0.08%
Be 313.107†	1085304.7	497.90	ug/L	0.012	497.90	ppb	0.012	0.00%
Ca 317.933Radial†	3567.3	5053.5	ug/L	12.90	5053.5	ppb	12.90	0.26%
Cd 226.502†	38681.7	493.14	ug/L	2.615	493.14	ppb	2.615	0.53%
Co 228.616†	27965.0	485.17	ug/L	2.642	485.17	ppb	2.642	0.54%
Cr 267.716†	35362.3	496.21	ug/L	0.205	496.21	ppb	0.205	0.04%
Cu 324.752†	137873.0	499.89	ug/L	0.845	499.89	ppb	0.845	0.17%
Fe 238.204 Radial†	1141.3	4772.8	ug/L	30.58	4772.8	ppb	30.58	0.64%
K 766.490 Radial†	23308.8	5016.6	ug/L	12.67	5016.6	ppb	12.67	0.25%

Mg 279.077 IEC†	199.8	4986.3 ug/L	51.47	4986.3 ppb	51.47	1.03%
Mn 257.610†	452354.0	499.34 ug/L	0.229	499.34 ppb	0.229	0.05%
Mo 202.031†	6974.1	491.28 ug/L	3.571	491.28 ppb	3.571	0.73%
Na 589.592 Radial†	86046.7	5280.9 ug/L	12.81	5280.9 ppb	12.81	0.24%
Ni 231.604†	18479.1	493.63 ug/L	2.201	493.63 ppb	2.201	0.45%
P 214.914†	1094.8	464.29 ug/L	5.700	464.29 ppb	5.700	1.23%
Pb 220.353†	4189.2	500.30 ug/L	2.231	500.30 ppb	2.231	0.45%
S 181.975 Axial†	3629.3	4971.1 ug/L	34.76	4971.1 ppb	34.76	0.70%
Sb 206.836†	1694.5	509.66 ug/L	4.767	509.66 ppb	4.767	0.94%
Se 196.026†	948.8	501.11 ug/L	5.188	501.11 ppb	5.188	1.04%
Si 251.611†	211590.3	6517.7 ug/L	4.06	6517.7 ppb	4.06	0.06%
Sn 189.927†	2870.5	508.92 ug/L	3.225	508.92 ppb	3.225	0.63%
Sr 421.552†	172198.8	480.91 ug/L	1.366	480.91 ppb	1.366	0.28%
Ti 334.940†	271595.2	497.14 ug/L	0.234	497.14 ppb	0.234	0.05%
Tl 190.801†	1800.1	474.29 ug/L	1.264	474.29 ppb	1.264	0.27%
U 409.014†	15226.4	514.04 ug/L	2.864	514.04 ppb	2.864	0.56%
V 292.402†	54905.0	504.56 ug/L	0.515	504.56 ppb	0.515	0.10%
Zn 213.857†	52810.2	482.84 ug/L	0.632	482.84 ppb	0.632	0.13%
SiO2†	210531.5	13807 ug/L	137.6	13807 ppb	137.6	1.00%

Sequence No.: 46
Sample ID: 1201871710|881354|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 73
Date Collected: 6/30/2009 19:54:29
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871710|881354|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7635.3	7635.3	102	%			19:56:22
1	Y RADIAL	7043.6	7043.6	101.7	%			19:56:22
1	Al 396.153Radial†	-64.2	9.8	8.0666	ug/L	8.0666	ppb	19:56:22
1	Ca 317.933Radial†	29.6	-0.1	-0.1384	ug/L	-0.1384	ppb	19:56:42
1	Fe 238.204 Radial†	39.2	3.5	14.712	ug/L	14.712	ppb	19:56:42
1	K 766.490 Radial†	2547.4	86.6	18.668	ug/L	18.668	ppb	19:56:22
1	Mg 279.077 IEC†	1.6	-1.5	-37.750	ug/L	-37.750	ppb	19:56:42
1	Na 589.592 Radial†	169.2	301.2	18.484	ug/L	18.484	ppb	19:56:22
1	Sr 421.552†	-34.6	22.0	0.0613	ug/L	0.0613	ppb	19:56:22
1	Sc 361.383	746613.0	746613.0	103.89	%			19:57:39
1	Y 371.029	583323.8	583323.8	103.79	%			19:57:39
1	Ag 328.068†	623.9	-32.1	-0.1945	ug/L	-0.1945	ppb	19:57:39
1	As 188.979†	-28.2	8.3	2.9911	ug/L	2.9911	ppb	19:57:59
1	B 249.677†	-585.5	376.3	9.4820	ug/L	9.4820	ppb	19:57:39
1	Ba 233.527†	13.5	12.5	0.0884	ug/L	0.0884	ppb	19:57:59
1	Be 313.107†	-4826.2	236.1	0.1081	ug/L	0.1081	ppb	19:57:39
1	Cd 226.502†	-269.4	21.8	0.2764	ug/L	0.2764	ppb	19:57:59
1	Co 228.616†	-103.6	-0.3	-0.0041	ug/L	-0.0041	ppb	19:57:59
1	Cr 267.716†	-63.3	16.4	0.2276	ug/L	0.2276	ppb	19:57:39
1	Cu 324.752†	5824.2	-32.1	-0.1153	ug/L	-0.1153	ppb	19:57:39
1	Mn 257.610†	778.3	69.6	0.0793	ug/L	0.0793	ppb	19:57:39
1	Mo 202.031†	27.1	9.0	0.6321	ug/L	0.6321	ppb	19:57:59
1	Ni 231.604†	127.7	3.1	0.0831	ug/L	0.0831	ppb	19:57:59
1	P 214.914†	320.3	-6.4	-3.2492	ug/L	-3.2492	ppb	19:57:59
1	Pb 220.353†	-16.8	-2.9	-0.3482	ug/L	-0.3482	ppb	19:57:59
1	S 181.975 Axial†	87.6	8.9	12.214	ug/L	12.214	ppb	19:57:59
1	Sb 206.836†	60.7	1.1	0.3722	ug/L	0.3722	ppb	19:57:59
1	Se 196.026†	-24.2	5.5	2.8361	ug/L	2.8361	ppb	19:57:59
1	Si 251.611†	11425.0	10585.9	326.90	ug/L	326.90	ppb	19:57:39
1	Sn 189.927†	22.0	8.7	1.5395	ug/L	1.5395	ppb	19:57:59
1	Ti 334.940†	-1381.5	18.4	0.0296	ug/L	0.0296	ppb	19:57:39
1	Tl 190.801†	-42.9	19.5	5.0984	ug/L	5.0984	ppb	19:57:59
1	U 409.014†	-4753.7	272.8	9.2359	ug/L	9.2359	ppb	19:57:39
1	V 292.402†	-1618.0	7.7	0.0933	ug/L	0.0933	ppb	19:57:39
1	Zn 213.857†	1007.2	44.4	0.4091	ug/L	0.4091	ppb	19:57:59
1	SiO2†	11002.8	10154.4	667.71	ug/L	667.71	ppb	19:58:56
2	Sc Radial	7463.0	7463.0	99.8	%			19:56:48
2	Y RADIAL	6902.2	6902.2	99.68	%			19:56:48
2	Al 396.153Radial†	-56.7	15.8	12.990	ug/L	12.990	ppb	19:56:48
2	Ca 317.933Radial†	33.5	4.5	6.3247	ug/L	6.3247	ppb	19:57:08
2	Fe 238.204 Radial†	34.7	-0.0	-0.1473	ug/L	-0.1473	ppb	19:57:08
2	K 766.490 Radial†	2513.5	110.2	23.773	ug/L	23.773	ppb	19:56:48
2	Mg 279.077 IEC†	3.7	0.6	16.008	ug/L	16.008	ppb	19:57:08
2	Na 589.592 Radial†	121.0	256.8	15.759	ug/L	15.759	ppb	19:56:48
2	Sr 421.552†	-34.6	21.2	0.0593	ug/L	0.0593	ppb	19:56:48
2	Sc 361.383	748378.6	748378.6	104.13	%			19:58:05
2	Y 371.029	584915.5	584915.5	104.08	%			19:58:05
2	Ag 328.068†	621.8	-35.5	-0.2219	ug/L	-0.2219	ppb	19:58:05
2	As 188.979†	-23.4	13.0	4.6826	ug/L	4.6826	ppb	19:58:25
2	B 249.677†	-562.2	400.1	10.082	ug/L	10.082	ppb	19:58:05
2	Ba 233.527†	29.7	28.0	0.1984	ug/L	0.1984	ppb	19:58:25
2	Be 313.107†	-4850.5	223.6	0.1026	ug/L	0.1026	ppb	19:58:05
2	Cd 226.502†	-280.1	12.1	0.1550	ug/L	0.1550	ppb	19:58:25
2	Co 228.616†	-101.8	1.6	0.0302	ug/L	0.0302	ppb	19:58:25
2	Cr 267.716†	-109.2	-27.5	-0.3885	ug/L	-0.3885	ppb	19:58:05
2	Cu 324.752†	5854.5	-16.2	-0.0588	ug/L	-0.0588	ppb	19:58:05
2	Mn 257.610†	800.9	89.5	0.0984	ug/L	0.0984	ppb	19:58:05
2	Mo 202.031†	26.8	8.6	0.6028	ug/L	0.6028	ppb	19:58:25
2	Ni 231.604†	131.9	6.9	0.1833	ug/L	0.1833	ppb	19:58:25

2	P 214.914†	309.7	-17.3	-8.8170	ug/L	-8.8170	ppb	19:58:25
2	Pb 220.353†	-10.5	3.2	0.3828	ug/L	0.3828	ppb	19:58:25
2	S 181.975 Axial†	90.3	11.3	15.486	ug/L	15.486	ppb	19:58:25
2	Sb 206.836†	70.2	10.2	3.0672	ug/L	3.0672	ppb	19:58:25
2	Se 196.026†	-31.5	-1.4	-0.7296	ug/L	-0.7296	ppb	19:58:25
2	Si 251.611†	11356.8	10494.5	324.08	ug/L	324.08	ppb	19:58:05
2	Sn 189.927†	20.3	7.0	1.2360	ug/L	1.2360	ppb	19:58:25
2	Ti 334.940†	-1350.9	51.0	0.0883	ug/L	0.0883	ppb	19:58:05
2	Tl 190.801†	-38.4	23.9	6.2625	ug/L	6.2625	ppb	19:58:25
2	U 409.014†	-4662.9	370.8	12.556	ug/L	12.556	ppb	19:58:05
2	V 292.402†	-1591.4	36.9	0.3677	ug/L	0.3677	ppb	19:58:05
2	Zn 213.857†	1021.7	56.1	0.5160	ug/L	0.5160	ppb	19:58:25
2	SiO2†	11258.2	10374.7	682.20	ug/L	682.20	ppb	19:59:01
3	Sc Radial	7504.6	7504.6	100	%			19:57:13
3	Y RADIAL	6956.8	6956.8	100.5	%			19:57:13
3	Al 396.153Radial†	-62.8	10.1	8.2733	ug/L	8.2733	ppb	19:57:13
3	Ca 317.933Radial†	36.6	7.3	10.375	ug/L	10.375	ppb	19:57:33
3	Fe 238.204 Radial†	32.8	-2.1	-8.8492	ug/L	-8.8492	ppb	19:57:33
3	K 766.490 Radial†	2625.2	207.5	44.752	ug/L	44.752	ppb	19:57:13
3	Mg 279.077 IEC†	1.6	-1.4	-35.740	ug/L	-35.740	ppb	19:57:33
3	Na 589.592 Radial†	25.4	160.9	9.8719	ug/L	9.8719	ppb	19:57:13
3	Sr 421.552†	-62.4	-6.2	-0.0175	ug/L	-0.0175	ppb	19:57:13
3	Sc 361.383	735151.3	735151.3	102.29	%			19:58:30
3	Y 371.029	575283.2	575283.2	102.36	%			19:58:30
3	Ag 328.068†	615.4	-31.0	-0.1934	ug/L	-0.1934	ppb	19:58:30
3	As 188.979†	-30.3	5.8	2.0933	ug/L	2.0933	ppb	19:58:50
3	B 249.677†	-528.2	423.5	10.674	ug/L	10.674	ppb	19:58:30
3	Ba 233.527†	21.7	20.7	0.1470	ug/L	0.1470	ppb	19:58:50
3	Be 313.107†	-4848.5	141.8	0.0648	ug/L	0.0648	ppb	19:58:30
3	Cd 226.502†	-279.9	7.4	0.0963	ug/L	0.0963	ppb	19:58:50
3	Co 228.616†	-93.1	8.5	0.1477	ug/L	0.1477	ppb	19:58:50
3	Cr 267.716†	-45.2	33.2	0.4626	ug/L	0.4626	ppb	19:58:30
3	Cu 324.752†	5738.6	-28.3	-0.1032	ug/L	-0.1032	ppb	19:58:30
3	Mn 257.610†	763.0	66.3	0.0727	ug/L	0.0727	ppb	19:58:30
3	Mo 202.031†	21.7	4.1	0.2848	ug/L	0.2848	ppb	19:58:50
3	Ni 231.604†	156.8	33.5	0.8951	ug/L	0.8951	ppb	19:58:50
3	P 214.914†	321.4	-0.6	-0.2736	ug/L	-0.2736	ppb	19:58:50
3	Pb 220.353†	-7.9	5.5	0.6617	ug/L	0.6617	ppb	19:58:50
3	S 181.975 Axial†	85.7	8.3	11.404	ug/L	11.404	ppb	19:58:50
3	Sb 206.836†	54.2	-4.3	-1.2678	ug/L	-1.2678	ppb	19:58:50
3	Se 196.026†	-24.9	4.4	2.2211	ug/L	2.2211	ppb	19:58:50
3	Si 251.611†	11107.7	10447.2	322.63	ug/L	322.63	ppb	19:58:30
3	Sn 189.927†	16.1	3.3	0.5784	ug/L	0.5784	ppb	19:58:50
3	Ti 334.940†	-1412.5	-32.6	-0.0630	ug/L	-0.0630	ppb	19:58:30
3	Tl 190.801†	-39.4	22.2	5.8122	ug/L	5.8122	ppb	19:58:50
3	U 409.014†	-4699.6	254.3	8.6126	ug/L	8.6126	ppb	19:58:30
3	V 292.402†	-1545.2	54.6	0.5170	ug/L	0.5170	ppb	19:58:30
3	Zn 213.857†	1012.6	64.8	0.5946	ug/L	0.5946	ppb	19:58:50
3	SiO2†	11294.7	10604.9	697.36	ug/L	697.36	ppb	19:59:06

Mean Data: 1201871710|881354|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	743381.0	103.44	%	0.999				0.97%
Sc Radial	7534.3	101	%	1.2				1.19%
Y 371.029	581174.1	103.41	%	0.919				0.89%
Y RADIAL	6967.5	100.6	%	1.03				1.02%
Ag 328.068†	-32.9	-0.2033	ug/L	0.01613	-0.2033	ppb	0.01613	7.94%
Al 396.153Radial†	11.9	9.7766	ug/L	2.78467	9.7766	ppb	2.78467	28.48%
As 188.979†	9.0	3.2557	ug/L	1.31478	3.2557	ppb	1.31478	40.38%
B 249.677†	400.0	10.079	ug/L	0.5958	10.079	ppb	0.5958	5.91%
Ba 233.527†	20.4	0.1446	ug/L	0.05504	0.1446	ppb	0.05504	38.06%
Be 313.107†	200.5	0.0918	ug/L	0.02358	0.0918	ppb	0.02358	25.68%
Ca 317.933Radial†	3.9	5.5205	ug/L	5.30264	5.5205	ppb	5.30264	96.05%
Cd 226.502†	13.8	0.1759	ug/L	0.09188	0.1759	ppb	0.09188	52.24%
Co 228.616†	3.3	0.0579	ug/L	0.07962	0.0579	ppb	0.07962	137.46%
Cr 267.716†	7.4	0.1006	ug/L	0.43955	0.1006	ppb	0.43955	437.06%
Cu 324.752†	-25.5	-0.0924	ug/L	0.02976	-0.0924	ppb	0.02976	32.19%
Fe 238.204 Radial†	0.5	1.9052	ug/L	11.91397	1.9052	ppb	11.91397	625.34%
K 766.490 Radial†	134.8	29.064	ug/L	13.8236	29.064	ppb	13.8236	47.56%

Mg 279.077 IEC†	-0.8	-19.161 ug/L	30.4732	-19.161 ppb	30.4732	159.04%
Mn 257.610†	75.1	0.0835 ug/L	0.01334	0.0835 ppb	0.01334	15.98%
Mo 202.031†	7.2	0.5065 ug/L	0.19263	0.5065 ppb	0.19263	38.03%
Na 589.592 Radial†	239.6	14.705 ug/L	4.4019	14.705 ppb	4.4019	29.93%
Ni 231.604†	14.5	0.3871 ug/L	0.44273	0.3871 ppb	0.44273	114.36%
P 214.914†	-8.1	-4.1132 ug/L	4.33675	-4.1132 ppb	4.33675	105.43%
Pb 220.353†	1.9	0.2321 ug/L	0.52150	0.2321 ppb	0.52150	224.70%
S 181.975 Axial†	9.5	13.034 ug/L	2.1609	13.034 ppb	2.1609	16.58%
Sb 206.836†	2.3	0.7239 ug/L	2.18875	0.7239 ppb	2.18875	302.36%
Se 196.026†	2.8	1.4425 ug/L	1.90606	1.4425 ppb	1.90606	132.13%
Si 251.611†	10509.2	324.53 ug/L	2.173	324.53 ppb	2.173	0.67%
Sn 189.927†	6.3	1.1179 ug/L	0.49130	1.1179 ppb	0.49130	43.95%
Sr 421.552†	12.3	0.0344 ug/L	0.04495	0.0344 ppb	0.04495	130.84%
Ti 334.940†	12.3	0.0183 ug/L	0.07629	0.0183 ppb	0.07629	417.17%
Tl 190.801†	21.9	5.7244 ug/L	0.58701	5.7244 ppb	0.58701	10.25%
U 409.014†	299.3	10.135 ug/L	2.1196	10.135 ppb	2.1196	20.91%
V 292.402†	33.1	0.3260 ug/L	0.21489	0.3260 ppb	0.21489	65.92%
Zn 213.857†	55.1	0.5066 ug/L	0.09314	0.5066 ppb	0.09314	18.38%
SiO2†	10378.0	682.42 ug/L	14.825	682.42 ppb	14.825	2.17%

Sequence No.: 47
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 20:01:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7378.2	7378.2	98.7	%			20:03:14
1	Y RADIAL	6796.8	6796.8	98.16	%			20:03:14
1	Al 396.153Radial†	6314.9	6470.1	5306.0	ug/L	5306.0	ppb	20:03:14
1	Ca 317.933Radial†	3572.8	3590.4	5086.2	ug/L	5086.2	ppb	20:03:34
1	Fe 238.204 Radial†	1207.5	1188.5	4970.4	ug/L	4970.4	ppb	20:03:34
1	K 766.490 Radial†	25097.1	23017.6	4952.7	ug/L	4952.7	ppb	20:03:09
1	Mg 279.077 IEC†	209.6	209.3	5224.5	ug/L	5224.5	ppb	20:03:34
1	Na 589.592 Radial†	168379.6	170714.0	10477	ug/L	10477	ppb	20:03:09
1	Sr 421.552†	173940.5	176267.9	492.27	ug/L	492.27	ppb	20:03:09
1	Sc 361.383	741283.4	741283.4	103.14	%			20:04:41
1	Y 371.029	571635.2	571635.2	101.71	%			20:04:41
1	Ag 328.068†	88388.3	85061.6	511.23	ug/L	511.23	ppb	20:04:47
1	As 188.979†	1434.6	1426.3	517.52	ug/L	517.52	ppb	20:05:07
1	B 249.677†	19762.9	20100.4	503.60	ug/L	503.60	ppb	20:04:47
1	Ba 233.527†	74323.3	72057.4	509.54	ug/L	509.54	ppb	20:04:47
1	Be 313.107†	1154700.8	1124387.7	515.78	ug/L	515.78	ppb	20:04:41
1	Cd 226.502†	41249.1	40273.0	513.43	ug/L	513.43	ppb	20:04:47
1	Co 228.616†	30415.8	29588.2	513.37	ug/L	513.37	ppb	20:04:47
1	Cr 267.716†	37625.3	36555.9	512.95	ug/L	512.95	ppb	20:04:47
1	Cu 324.752†	149212.0	139025.6	504.08	ug/L	504.08	ppb	20:04:47
1	Mn 257.610†	480271.6	464953.5	513.26	ug/L	513.26	ppb	20:04:41
1	Mo 202.031†	7505.4	7259.5	511.39	ug/L	511.39	ppb	20:05:07
1	Ni 231.604†	19915.7	19188.9	512.59	ug/L	512.59	ppb	20:04:47
1	P 214.914†	5511.4	5028.6	2471.9	ug/L	2471.9	ppb	20:05:07
1	Pb 220.353†	4407.9	4286.8	511.99	ug/L	511.99	ppb	20:05:07
1	S 181.975 Axial†	853.8	752.4	1029.7	ug/L	1029.7	ppb	20:05:07
1	Sb 206.836†	1832.4	1719.3	517.16	ug/L	517.16	ppb	20:05:07
1	Se 196.026†	1013.8	1011.6	533.87	ug/L	533.87	ppb	20:05:07
1	Si 251.611†	86257.7	83216.8	2552.6	ug/L	2552.6	ppb	20:04:47
1	Sn 189.927†	3010.9	2906.6	515.33	ug/L	515.33	ppb	20:05:07
1	Ti 334.940†	278147.4	271017.9	496.07	ug/L	496.07	ppb	20:04:47
1	Tl 190.801†	1940.4	1942.0	511.34	ug/L	511.34	ppb	20:05:07
1	U 409.014†	11021.7	15534.5	524.42	ug/L	524.42	ppb	20:04:47
1	V 292.402†	56206.8	56058.8	515.29	ug/L	515.29	ppb	20:04:47
1	Zn 213.857†	58090.0	55394.3	506.53	ug/L	506.53	ppb	20:04:47
1	SiO2†	87130.5	84037.9	5487.8	ug/L	5487.8	ppb	20:06:14
2	Sc Radial	7555.4	7555.4	101	%			20:03:44
2	Y RADIAL	6947.9	6947.9	100.3	%			20:03:44
2	Al 396.153Radial†	6431.6	6435.4	5277.8	ug/L	5277.8	ppb	20:03:44
2	Ca 317.933Radial†	3560.6	3493.4	4948.9	ug/L	4948.9	ppb	20:04:04
2	Fe 238.204 Radial†	1199.3	1151.6	4816.7	ug/L	4816.7	ppb	20:04:04
2	K 766.490 Radial†	25027.4	22352.5	4809.3	ug/L	4809.3	ppb	20:03:39
2	Mg 279.077 IEC†	203.9	198.7	4958.6	ug/L	4958.6	ppb	20:04:04
2	Na 589.592 Radial†	167823.9	166164.5	10198	ug/L	10198	ppb	20:03:39
2	Sr 421.552†	173176.3	171379.9	478.62	ug/L	478.62	ppb	20:03:39
2	Sc 361.383	746132.9	746132.9	103.82	%			20:05:12
2	Y 371.029	575395.9	575395.9	102.38	%			20:05:12
2	Ag 328.068†	89212.5	85298.6	512.61	ug/L	512.61	ppb	20:05:18
2	As 188.979†	1439.7	1422.1	516.00	ug/L	516.00	ppb	20:05:38
2	B 249.677†	20051.7	20254.1	507.49	ug/L	507.49	ppb	20:05:18
2	Ba 233.527†	74916.5	72160.5	510.28	ug/L	510.28	ppb	20:05:18
2	Be 313.107†	1161252.2	1123421.8	515.34	ug/L	515.34	ppb	20:05:12
2	Cd 226.502†	41519.8	40273.7	513.46	ug/L	513.46	ppb	20:05:18
2	Co 228.616†	30587.9	29562.3	512.91	ug/L	512.91	ppb	20:05:18
2	Cr 267.716†	37870.0	36554.5	512.93	ug/L	512.93	ppb	20:05:18
2	Cu 324.752†	150635.1	139456.1	505.63	ug/L	505.63	ppb	20:05:18
2	Mn 257.610†	482597.4	464167.3	512.38	ug/L	512.38	ppb	20:05:12
2	Mo 202.031†	7478.8	7186.5	506.24	ug/L	506.24	ppb	20:05:38
2	Ni 231.604†	20073.1	19215.0	513.29	ug/L	513.29	ppb	20:05:18

2	P 214.914†	5468.1	4952.2	2432.6 ug/L	2432.6 ppb	20:05:38
2	Pb 220.353†	4393.3	4244.9	506.99 ug/L	506.99 ppb	20:05:38
2	S 181.975 Axial†	849.1	742.4	1016.0 ug/L	1016.0 ppb	20:05:38
2	Sb 206.836†	1837.5	1712.7	514.99 ug/L	514.99 ppb	20:05:38
2	Se 196.026†	1024.7	1015.8	535.47 ug/L	535.47 ppb	20:05:38
2	Si 251.611†	86858.0	83251.5	2553.9 ug/L	2553.9 ppb	20:05:18
2	Sn 189.927†	2993.8	2871.1	509.03 ug/L	509.03 ppb	20:05:38
2	Ti 334.940†	280644.2	271670.1	497.26 ug/L	497.26 ppb	20:05:18
2	Tl 190.801†	1947.6	1936.7	509.95 ug/L	509.95 ppb	20:05:38
2	U 409.014†	11205.8	15642.4	528.09 ug/L	528.09 ppb	20:05:18
2	V 292.402†	56777.4	56254.3	517.02 ug/L	517.02 ppb	20:05:18
2	Zn 213.857†	58534.6	55456.5	507.12 ug/L	507.12 ppb	20:05:18
2	SiO2†	86418.9	82803.4	5407.1 ug/L	5407.1 ppb	20:06:19
3	Sc Radial	7474.1	7474.1	100.0 %		20:04:14
3	Y RADIAL	6870.0	6870.0	99.21 %		20:04:14
3	Al 396.153Radial†	6361.2	6434.3	5276.6 ug/L	5276.6 ppb	20:04:14
3	Ca 317.933Radial†	3559.7	3530.8	5001.8 ug/L	5001.8 ppb	20:04:34
3	Fe 238.204 Radial†	1214.0	1179.3	4932.1 ug/L	4932.1 ppb	20:04:34
3	K 766.490 Radial†	25250.4	22844.9	4915.4 ug/L	4915.4 ppb	20:04:09
3	Mg 279.077 IEC†	205.7	202.6	5058.0 ug/L	5058.0 ppb	20:04:34
3	Na 589.592 Radial†	168598.1	168745.0	10356 ug/L	10356 ppb	20:04:09
3	Sr 421.552†	174180.1	174247.7	486.63 ug/L	486.63 ppb	20:04:09
3	Sc 361.383	742105.5	742105.5	103.26 %		20:05:43
3	Y 371.029	572233.2	572233.2	101.82 %		20:05:43
3	Ag 328.068†	88837.8	85402.0	513.26 ug/L	513.26 ppb	20:05:49
3	As 188.979†	1450.6	1440.3	522.56 ug/L	522.56 ppb	20:06:09
3	B 249.677†	19901.8	20213.7	506.46 ug/L	506.46 ppb	20:05:49
3	Ba 233.527†	74531.4	72179.2	510.41 ug/L	510.41 ppb	20:05:49
3	Be 313.107†	1159905.5	1128188.0	517.53 ug/L	517.53 ppb	20:05:43
3	Cd 226.502†	41274.0	40252.7	513.18 ug/L	513.18 ppb	20:05:49
3	Co 228.616†	30494.5	29631.8	514.12 ug/L	514.12 ppb	20:05:49
3	Cr 267.716†	37686.2	36574.4	513.22 ug/L	513.22 ppb	20:05:49
3	Cu 324.752†	150133.2	139757.5	506.73 ug/L	506.73 ppb	20:05:49
3	Mn 257.610†	482050.4	466160.4	514.59 ug/L	514.59 ppb	20:05:43
3	Mo 202.031†	7504.7	7250.8	510.77 ug/L	510.77 ppb	20:06:09
3	Ni 231.604†	19957.2	19207.7	513.09 ug/L	513.09 ppb	20:05:49
3	P 214.914†	5514.8	5026.0	2470.0 ug/L	2470.0 ppb	20:06:09
3	Pb 220.353†	4410.5	4284.6	511.72 ug/L	511.72 ppb	20:06:09
3	S 181.975 Axial†	847.4	745.2	1019.9 ug/L	1019.9 ppb	20:06:09
3	Sb 206.836†	1863.6	1747.5	525.53 ug/L	525.53 ppb	20:06:09
3	Se 196.026†	1015.5	1012.2	534.03 ug/L	534.03 ppb	20:06:09
3	Si 251.611†	86572.7	83429.3	2559.2 ug/L	2559.2 ppb	20:05:49
3	Sn 189.927†	3015.1	2907.5	515.48 ug/L	515.48 ppb	20:06:09
3	Ti 334.940†	279441.6	271972.4	497.81 ug/L	497.81 ppb	20:05:49
3	Tl 190.801†	1955.3	1954.4	514.58 ug/L	514.58 ppb	20:06:09
3	U 409.014†	11053.8	15553.7	525.07 ug/L	525.07 ppb	20:05:49
3	V 292.402†	56412.3	56197.5	516.54 ug/L	516.54 ppb	20:05:49
3	Zn 213.857†	58279.6	55515.5	507.65 ug/L	507.65 ppb	20:05:49
3	SiO2†	87776.5	84569.9	5522.8 ug/L	5522.8 ppb	20:06:24

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	743173.9	103.41	%	0.361				0.35%
Sc Radial	7469.2	99.9	%	1.19				1.19%
Y 371.029	573088.1	101.97	%	0.360				0.35%
Y RADIAL	6871.5	99.24	%	1.091				1.10%
Ag 328.068†	85254.0	512.37	ug/L	1.035	512.37	ppb	1.035	0.20%
QC value within limits for Ag 328.068 Recovery = 102.47%								
Al 396.153Radial†	6446.6	5286.8	ug/L	16.67	5286.8	ppb	16.67	0.32%
QC value within limits for Al 396.153Radial Recovery = 105.74%								
As 188.979†	1429.6	518.69	ug/L	3.436	518.69	ppb	3.436	0.66%
QC value within limits for As 188.979 Recovery = 103.74%								
B 249.677†	20189.4	505.85	ug/L	2.013	505.85	ppb	2.013	0.40%
QC value within limits for B 249.677 Recovery = 101.17%								
Ba 233.527†	72132.4	510.07	ug/L	0.465	510.07	ppb	0.465	0.09%
QC value within limits for Ba 233.527 Recovery = 102.01%								
Be 313.107†	1125332.5	516.22	ug/L	1.154	516.22	ppb	1.154	0.22%
QC value within limits for Be 313.107 Recovery = 103.24%								
Ca 317.933Radial†	3538.2	5012.3	ug/L	69.28	5012.3	ppb	69.28	1.38%

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   QC value within limits for Ca 317.933Radial  Recovery = 100.25%
Cd 226.502†            40266.5      513.35 ug/L         0.155      513.35 ppb          0.155   0.03%
   QC value within limits for Cd 226.502  Recovery = 102.67%
Co 228.616†            29594.1      513.47 ug/L         0.613      513.47 ppb          0.613   0.12%
   QC value within limits for Co 228.616  Recovery = 102.69%
Cr 267.716†            36561.6      513.04 ug/L         0.157      513.04 ppb          0.157   0.03%
   QC value within limits for Cr 267.716  Recovery = 102.61%
Cu 324.752†           139413.1      505.48 ug/L         1.331      505.48 ppb          1.331   0.26%
   QC value within limits for Cu 324.752  Recovery = 101.10%
Fe 238.204 Radial†      1173.1      4906.4 ug/L        80.00      4906.4 ppb         80.00   1.63%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.13%
K 766.490 Radial†      22738.4      4892.5 ug/L        74.42      4892.5 ppb         74.42   1.52%
   QC value within limits for K 766.490 Radial  Recovery = 97.85%
Mg 279.077 IEC†          203.5      5080.4 ug/L       134.35      5080.4 ppb        134.35   2.64%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.61%
Mn 257.610†           465093.7      513.41 ug/L         1.113      513.41 ppb          1.113   0.22%
   QC value within limits for Mn 257.610  Recovery = 102.68%
Mo 202.031†             7232.3      509.46 ug/L         2.811      509.46 ppb          2.811   0.55%
   QC value within limits for Mo 202.031  Recovery = 101.89%
Na 589.592 Radial†    168541.2       10344 ug/L       140.0        10344 ppb        140.0   1.35%
   QC value within limits for Na 589.592 Radial  Recovery = 103.44%
Ni 231.604†            19203.8      512.99 ug/L         0.359      512.99 ppb          0.359   0.07%
   QC value within limits for Ni 231.604  Recovery = 102.60%
P 214.914†              5002.3      2458.2 ug/L        22.16      2458.2 ppb         22.16   0.90%
   QC value within limits for P 214.914  Recovery = 98.33%
Pb 220.353†             4272.1      510.23 ug/L         2.809      510.23 ppb          2.809   0.55%
   QC value within limits for Pb 220.353  Recovery = 102.05%
S 181.975 Axial†         746.7      1021.9 ug/L         7.04      1021.9 ppb          7.04   0.69%
   QC value within limits for S 181.975 Axial  Recovery = 102.19%
Sb 206.836†             1726.5      519.22 ug/L         5.564      519.22 ppb          5.564   1.07%
   QC value within limits for Sb 206.836  Recovery = 103.84%
Se 196.026†             1013.2      534.46 ug/L         0.882      534.46 ppb          0.882   0.16%
   QC value within limits for Se 196.026  Recovery = 106.89%
Si 251.611†            83299.2      2555.2 ug/L         3.49      2555.2 ppb          3.49   0.14%
   QC value within limits for Si 251.611  Recovery = 102.21%
Sn 189.927†             2895.1      513.28 ug/L         3.683      513.28 ppb          3.683   0.72%
   QC value within limits for Sn 189.927  Recovery = 102.66%
Sr 421.552†           173965.2      485.84 ug/L         6.860      485.84 ppb          6.860   1.41%
   QC value within limits for Sr 421.552  Recovery = 97.17%
Ti 334.940†           271553.4      497.05 ug/L         0.890      497.05 ppb          0.890   0.18%
   QC value within limits for Ti 334.940  Recovery = 99.41%
Tl 190.801†             1944.4      511.96 ug/L         2.378      511.96 ppb          2.378   0.46%
   QC value within limits for Tl 190.801  Recovery = 102.39%
U 409.014†             15576.9      525.86 ug/L         1.959      525.86 ppb          1.959   0.37%
   QC value within limits for U 409.014  Recovery = 105.17%
V 292.402†             56170.2      516.28 ug/L         0.895      516.28 ppb          0.895   0.17%
   QC value within limits for V 292.402  Recovery = 103.26%
Zn 213.857†            55455.5      507.10 ug/L         0.561      507.10 ppb          0.561   0.11%
   QC value within limits for Zn 213.857  Recovery = 101.42%
SiO2†                  83803.8      5472.6 ug/L        59.34      5472.6 ppb         59.34   1.08%
   QC value within limits for SiO2  Recovery = 102.34%
All analyte(s) passed QC.
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Sequence No.: 48
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 20:08:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7745.1	7745.1	104	%			20:10:26
1	Y RADIAL	7165.9	7165.9	103.5	%			20:10:26
1	Al 396.153Radial†	-43.2	30.9	25.431	ug/L	25.431	ppb	20:10:26
1	Ca 317.933Radial†	26.4	-3.6	-5.1697	ug/L	-5.1697	ppb	20:10:46
1	Fe 238.204 Radial†	32.9	-3.1	-12.766	ug/L	-12.766	ppb	20:10:46
1	K 766.490 Radial†	2421.3	-70.4	-15.210	ug/L	-15.210	ppb	20:10:26
1	Mg 279.077 IEC†	3.8	0.6	14.359	ug/L	14.359	ppb	20:10:46
1	Na 589.592 Radial†	-281.4	-136.1	-8.3500	ug/L	-8.3500	ppb	20:10:26
1	Sr 421.552†	-38.8	18.5	0.0516	ug/L	0.0516	ppb	20:10:26
1	Sc 361.383	723317.7	723317.7	100.64	%			20:11:43
1	Y 371.029	565880.7	565880.7	100.69	%			20:11:43
1	Ag 328.068†	637.0	0.3	-0.0052	ug/L	-0.0052	ppb	20:11:43
1	As 188.979†	-27.2	8.4	3.0242	ug/L	3.0242	ppb	20:12:03
1	B 249.677†	-662.5	281.6	7.0972	ug/L	7.0972	ppb	20:11:43
1	Ba 233.527†	19.1	18.5	0.1294	ug/L	0.1294	ppb	20:12:03
1	Be 313.107†	-4782.1	130.3	0.0596	ug/L	0.0596	ppb	20:11:43
1	Cd 226.502†	-265.6	17.2	0.2210	ug/L	0.2210	ppb	20:12:03
1	Co 228.616†	-83.7	16.3	0.2846	ug/L	0.2846	ppb	20:12:03
1	Cr 267.716†	-73.8	4.0	0.0549	ug/L	0.0549	ppb	20:11:43
1	Cu 324.752†	5541.3	-132.6	-0.4812	ug/L	-0.4812	ppb	20:11:43
1	Mn 257.610†	690.4	6.4	0.0052	ug/L	0.0052	ppb	20:12:03
1	Mo 202.031†	24.2	6.9	0.4836	ug/L	0.4836	ppb	20:12:03
1	Ni 231.604†	137.4	16.7	0.4467	ug/L	0.4467	ppb	20:12:03
1	P 214.914†	316.1	-0.7	-0.2411	ug/L	-0.2411	ppb	20:12:03
1	Pb 220.353†	-12.0	1.4	0.1706	ug/L	0.1706	ppb	20:12:03
1	S 181.975 Axial†	76.2	0.3	0.3663	ug/L	0.3663	ppb	20:12:03
1	Sb 206.836†	69.5	11.8	3.5051	ug/L	3.5051	ppb	20:12:03
1	Se 196.026†	-32.9	-4.0	-2.0603	ug/L	-2.0603	ppb	20:12:03
1	Si 251.611†	441.3	26.7	0.8354	ug/L	0.8354	ppb	20:12:03
1	Sn 189.927†	7.1	-5.5	-0.9672	ug/L	-0.9672	ppb	20:12:03
1	Ti 334.940†	-1352.5	4.5	0.0071	ug/L	0.0071	ppb	20:11:43
1	Tl 190.801†	-54.8	6.3	1.6475	ug/L	1.6475	ppb	20:12:03
1	U 409.014†	-4830.7	49.0	1.6596	ug/L	1.6596	ppb	20:11:43
1	V 292.402†	-1621.9	-46.3	-0.4092	ug/L	-0.4092	ppb	20:11:43
1	Zn 213.857†	977.1	45.7	0.4207	ug/L	0.4207	ppb	20:12:03
1	SiO2†	468.7	28.8	1.9199	ug/L	1.9199	ppb	20:12:59
2	Sc Radial	7288.6	7288.6	97.5	%			20:10:52
2	Y RADIAL	6772.5	6772.5	97.81	%			20:10:52
2	Al 396.153Radial†	-53.8	17.5	14.378	ug/L	14.378	ppb	20:10:52
2	Ca 317.933Radial†	26.6	-1.8	-2.5459	ug/L	-2.5459	ppb	20:11:12
2	Fe 238.204 Radial†	38.3	4.5	18.846	ug/L	18.846	ppb	20:11:12
2	K 766.490 Radial†	2432.1	86.9	18.756	ug/L	18.756	ppb	20:10:52
2	Mg 279.077 IEC†	1.8	-1.2	-28.925	ug/L	-28.925	ppb	20:11:12
2	Na 589.592 Radial†	-273.2	-144.6	-8.8775	ug/L	-8.8775	ppb	20:10:52
2	Sr 421.552†	-76.6	-22.7	-0.0635	ug/L	-0.0635	ppb	20:10:52
2	Sc 361.383	723248.4	723248.4	100.63	%			20:12:09
2	Y 371.029	566470.0	566470.0	100.80	%			20:12:09
2	Ag 328.068†	649.0	12.3	0.0724	ug/L	0.0724	ppb	20:12:09
2	As 188.979†	-32.7	3.0	1.0762	ug/L	1.0762	ppb	20:12:29
2	B 249.677†	-753.1	191.6	4.8255	ug/L	4.8255	ppb	20:12:09
2	Ba 233.527†	11.6	11.1	0.0793	ug/L	0.0793	ppb	20:12:29
2	Be 313.107†	-4747.3	164.4	0.0751	ug/L	0.0751	ppb	20:12:09
2	Cd 226.502†	-263.9	18.9	0.2389	ug/L	0.2389	ppb	20:12:29
2	Co 228.616†	-78.6	21.3	0.3697	ug/L	0.3697	ppb	20:12:29
2	Cr 267.716†	-78.3	-0.4	-0.0085	ug/L	-0.0085	ppb	20:12:09
2	Cu 324.752†	5597.5	-76.3	-0.2752	ug/L	-0.2752	ppb	20:12:09
2	Mn 257.610†	687.3	3.3	0.0066	ug/L	0.0066	ppb	20:12:29
2	Mo 202.031†	18.7	1.4	0.1027	ug/L	0.1027	ppb	20:12:29
2	Ni 231.604†	147.7	27.0	0.7213	ug/L	0.7213	ppb	20:12:29

2	P 214.914†	317.2	0.4	0.2422	ug/L	0.2422 ppb	20:12:29
2	Pb 220.353†	-16.3	-3.0	-0.3514	ug/L	-0.3514 ppb	20:12:29
2	S 181.975 Axial†	76.8	0.9	1.2742	ug/L	1.2742 ppb	20:12:29
2	Sb 206.836†	67.6	9.9	2.9631	ug/L	2.9631 ppb	20:12:29
2	Se 196.026†	-39.3	-10.3	-5.1697	ug/L	-5.1697 ppb	20:12:29
2	Si 251.611†	447.9	33.3	1.0147	ug/L	1.0147 ppb	20:12:29
2	Sn 189.927†	15.1	2.5	0.4381	ug/L	0.4381 ppb	20:12:29
2	Ti 334.940†	-1398.3	-41.2	-0.0804	ug/L	-0.0804 ppb	20:12:09
2	Tl 190.801†	-37.8	23.2	6.0785	ug/L	6.0785 ppb	20:12:29
2	U 409.014†	-4559.0	318.5	10.783	ug/L	10.783 ppb	20:12:09
2	V 292.402†	-1512.1	62.6	0.5882	ug/L	0.5882 ppb	20:12:09
2	Zn 213.857†	954.9	23.8	0.2141	ug/L	0.2141 ppb	20:12:29
2	SiO2†	458.1	18.4	1.1770	ug/L	1.1770 ppb	20:13:05
3	Sc Radial	7341.9	7341.9	98.2	%		20:11:17
3	Y RADIAL	6770.2	6770.2	97.77	%		20:11:17
3	Al 396.153Radial†	-102.2	-31.4	-25.871	ug/L	-25.871 ppb	20:11:17
3	Ca 317.933Radial†	28.1	-0.5	-0.6906	ug/L	-0.6906 ppb	20:11:37
3	Fe 238.204 Radial†	36.3	2.2	9.0365	ug/L	9.0365 ppb	20:11:37
3	K 766.490 Radial†	2372.7	8.4	1.8054	ug/L	1.8054 ppb	20:11:17
3	Mg 279.077 IEC†	1.3	-1.7	-43.540	ug/L	-43.540 ppb	20:11:37
3	Na 589.592 Radial†	-177.5	-45.1	-2.7699	ug/L	-2.7699 ppb	20:11:17
3	Sr 421.552†	-29.4	26.0	0.0726	ug/L	0.0726 ppb	20:11:17
3	Sc 361.383	722738.6	722738.6	100.56	%		20:12:34
3	Y 371.029	566076.7	566076.7	100.73	%		20:12:34
3	Ag 328.068†	701.5	64.9	0.3886	ug/L	0.3886 ppb	20:12:34
3	As 188.979†	-29.2	6.4	2.3054	ug/L	2.3054 ppb	20:12:54
3	B 249.677†	-702.5	241.4	6.0833	ug/L	6.0833 ppb	20:12:34
3	Ba 233.527†	16.4	15.8	0.1113	ug/L	0.1113 ppb	20:12:54
3	Be 313.107†	-4822.0	86.8	0.0395	ug/L	0.0395 ppb	20:12:34
3	Cd 226.502†	-263.4	19.2	0.2442	ug/L	0.2442 ppb	20:12:54
3	Co 228.616†	-102.7	-2.7	-0.0436	ug/L	-0.0436 ppb	20:12:54
3	Cr 267.716†	-64.1	13.7	0.1910	ug/L	0.1910 ppb	20:12:34
3	Cu 324.752†	5610.6	-59.2	-0.2141	ug/L	-0.2141 ppb	20:12:34
3	Mn 257.610†	673.6	-9.8	-0.0089	ug/L	-0.0089 ppb	20:12:54
3	Mo 202.031†	30.2	12.9	0.9069	ug/L	0.9069 ppb	20:12:54
3	Ni 231.604†	129.9	9.4	0.2507	ug/L	0.2507 ppb	20:12:54
3	P 214.914†	306.9	-9.6	-4.9046	ug/L	-4.9046 ppb	20:12:54
3	Pb 220.353†	-12.7	0.6	0.0650	ug/L	0.0650 ppb	20:12:54
3	S 181.975 Axial†	85.1	9.2	12.594	ug/L	12.594 ppb	20:12:54
3	Sb 206.836†	65.7	8.1	2.4071	ug/L	2.4071 ppb	20:12:54
3	Se 196.026†	-22.1	6.8	3.5138	ug/L	3.5138 ppb	20:12:54
3	Si 251.611†	440.9	26.7	0.8180	ug/L	0.8180 ppb	20:12:54
3	Sn 189.927†	8.2	-4.4	-0.7737	ug/L	-0.7737 ppb	20:12:54
3	Ti 334.940†	-1415.2	-59.0	-0.1088	ug/L	-0.1088 ppb	20:12:34
3	Tl 190.801†	-48.4	12.6	3.2974	ug/L	3.2974 ppb	20:12:54
3	U 409.014†	-4833.9	41.9	1.4186	ug/L	1.4186 ppb	20:12:34
3	V 292.402†	-1593.5	-19.4	-0.1640	ug/L	-0.1640 ppb	20:12:34
3	Zn 213.857†	968.9	38.4	0.3534	ug/L	0.3534 ppb	20:12:54
3	SiO2†	488.1	48.5	3.1748	ug/L	3.1748 ppb	20:13:10

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	723101.6	100.61	%	0.044				0.04%
Sc Radial	7458.5	99.8	%	3.34				3.35%
Y 371.029	566142.5	100.74	%	0.053				0.05%
Y RADIAL	6902.9	99.69	%	3.290				3.30%
Ag 328.068†	25.8	0.1519	ug/L	0.20864	0.1519	ppb	0.20864	137.33%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.7	4.6460	ug/L	27.00035	4.6460	ppb	27.00035	581.15%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.9	2.1353	ug/L	0.98508	2.1353	ppb	0.98508	46.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	238.2	6.0020	ug/L	1.13799	6.0020	ppb	1.13799	18.96%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	15.1	0.1067	ug/L	0.02537	0.1067	ppb	0.02537	23.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	127.1	0.0581	ug/L	0.01785	0.0581	ppb	0.01785	30.74%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.0	-2.8021	ug/L	2.25052	-2.8021	ppb	2.25052	80.32%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                18.4      0.2347 ug/L       0.01215      0.2347 ppb        0.01215   5.18%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                11.7      0.2035 ug/L       0.21825      0.2035 ppb        0.21825 107.22%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 5.7      0.0791 ug/L       0.10191      0.0791 ppb        0.10191 128.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -89.4     -0.3235 ug/L       0.13994     -0.3235 ppb        0.13994  43.26%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.2      5.0387 ug/L      16.18086      5.0387 ppb       16.18086 321.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†           8.3      1.7841 ug/L      16.98300      1.7841 ppb       16.98300 951.92%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.8    -19.369 ug/L       30.1092     -19.369 ppb        30.1092 155.45%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -0.0      0.0010 ug/L       0.00854      0.0010 ppb        0.00854 885.91%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 7.1      0.4977 ug/L       0.40228      0.4977 ppb        0.40228  80.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -108.6     -6.6658 ug/L       3.38420     -6.6658 ppb        3.38420  50.77%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                17.7      0.4729 ug/L       0.23635      0.4729 ppb        0.23635  49.98%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -3.3     -1.6345 ug/L       2.84225     -1.6345 ppb        2.84225 173.89%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -0.3     -0.0386 ug/L       0.27602     -0.0386 ppb        0.27602 715.17%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            3.5      4.7448 ug/L       6.81273      4.7448 ppb        6.81273 143.58%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                10.0      2.9584 ug/L       0.54904      2.9584 ppb        0.54904  18.56%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.5     -1.2387 ug/L       4.39970     -1.2387 ppb        4.39970 355.18%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                28.9      0.8894 ug/L       0.10887      0.8894 ppb        0.10887  12.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -2.5     -0.4343 ug/L       0.76167     -0.4343 ppb        0.76167 175.38%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 7.2      0.0202 ug/L       0.07323      0.0202 ppb        0.07323 361.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -31.9     -0.0607 ug/L       0.06042     -0.0607 ppb        0.06042  99.52%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                14.0      3.6744 ug/L       2.23945      3.6744 ppb        2.23945  60.95%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                136.5      4.6203 ug/L       5.33820      4.6203 ppb        5.33820 115.54%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 -1.0      0.0050 ug/L       0.51970      0.0050 ppb        0.51970 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                36.0      0.3294 ug/L       0.10536      0.3294 ppb        0.10536  31.99%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      31.9      2.0906 ug/L       1.00977      2.0906 ppb        1.00977  48.30%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Friday, July 03, 2009 10:25:37
Sample Description:
Method File: C:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.871
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1965.7	1965.735	62.027	3.2
	Mg	24.0	18263.7	18263.671	386.561	2.1
	Co	58.9	37400.9	37400.908	681.541	1.8
	Rh	102.9	79798.7	79798.678	939.041	1.2
	In	114.9	105201.2	105201.179	1277.023	1.2
	Pb	208.0	46766.0	46766.037	741.582	1.6
⌈>	Ba	137.9	96373.8	96373.753	1295.560	1.3
⌊	Ba++	69.0	2307.1	0.024	0.000	2.0
⌈>	Ce	139.9	123013.2	123013.181	920.861	0.7
⌊	CeO	155.9	1649.9	0.013	0.000	3.1
	Bkgd	220.0	11.1	11.100	2.584	23.3

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-2000.00	Analog Stage Voltage
1950.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	7.5	1634.1
Co	59	17	8.5	30653.5
In	115	17	9.5	114099.2

ICPMS#3 Instrument Tuning Report

File Name: 090703.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	578	2070	0.649
Be	9.0	9.0	2051	2070	0.624
Mg	24.0	24.0	5700	2120	0.561
Mg	25.0	25.0	5919	2050	0.619
Mg	26.0	25.9	6203	2130	0.680
Co	58.9	58.9	14191	2110	0.678
Rh	102.9	102.9	24896	2170	0.664
In	114.9	114.9	27823	2180	0.659
Ce	139.9	139.9	33909	2200	0.693
Pb	206.0	206.0	49992	2270	0.665
Pb	207.0	207.0	50281	2300	0.673
Pb	208.0	208.0	50486	2320	0.631
U	238.1	238.0	57844	2340	0.680

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Saturday, July 04, 2009 00:53:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Blank.944

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		14	
	Be	9		ug/L		15	
	B	11		ug/L		202	
	Na	23		ug/L		30366	
	Mg	24		ug/L		1667	
	Al	27		ug/L		6001	
	P	31		ug/L		3443	
	K	39		ug/L		431761	
	Ca	43		ug/L		685	
>	Sc	45		ug/L		259742	
	Ti	47		ug/L		218	
	V	51		ug/L		35273	
	Cr	52		ug/L		-2554	
	Cr	53		ug/L		211336	
	Mn	55		ug/L		1205	
	Fe	57		ug/L		5661	
	Co	59		ug/L		135	
	Ni	60		ug/L		77	
	Cu	63		ug/L		179	
	Cu	65		ug/L		69	
	Zn	66		ug/L		105	
	Zn	67		ug/L		9125	
	Zn	68		ug/L		695	
>	Ge	74		ug/L		194460	
	As	75		ug/L		335	
	Se	77		ug/L		8508	
	Se	82		ug/L		-10	
	Kr	83		ug/L		94	
	Sr	88		ug/L		172	
	Y	89		ug/L		29	
	Zr	90		ug/L		222	
	Mo	98		ug/L		76	
	Ag	107		ug/L		49	
	Cd	111		ug/L		24	
	Cd	114		ug/L		49	
>	In	115		ug/L		146234	
	Sn	120		ug/L		155	
	Sb	121		ug/L		424	
	Sb	123		ug/L		346	
	Ba	135		ug/L		38	
	Ba	137		ug/L		60	
	Ho	165		ug/L		34	
>	Lu	175		ug/L		198590	
	Tl	205		ug/L		915	
	Pb	208		ug/L		271	
	Th	232		ug/L		233	
	U	238		ug/L		191	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	0.9991
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 04, 2009 00:58:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Standard 1.945

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	10.000	ug/L	7.519	1457	0.005
	Be	9	10.000	ug/L	7.847	1321	0.005
	B	11	20.000	ug/L	6.026	2406	0.008
	Na	23	1000.000	ug/L	8.178	1069333	3.940
	Mg	24	1000.000	ug/L	4.819	804723	3.045
	Al	27	1000.000	ug/L	2.145	1312372	4.948
	P	31	1000.000	ug/L	2.624	95863	0.350
	K	39	1000.000	ug/L	7.537	2572982	8.078
	Ca	43	1000.000	ug/L	4.934	4873	0.016
>	Sc	45		ug/L		263905	263904.866
	Ti	47	10.000	ug/L	1.597	2490	0.009
	V	51	10.000	ug/L	13.856	52484	0.063
	Cr	52	10.000	ug/L	4.641	19790	0.085
	Cr	53		ug/L		202820	-0.045
	Mn	55	10.000	ug/L	1.726	36585	0.134
	Fe	57	1000.000	ug/L	1.565	75725	0.265
	Co	59	10.000	ug/L	1.901	27054	0.102
	Ni	60	10.000	ug/L	1.795	5757	0.022
	Cu	63		ug/L		13240	0.049
	Cu	65	10.000	ug/L	2.689	6161	0.023
	Zn	66	10.000	ug/L	3.735	4544	0.022
	Zn	67		ug/L		8999	-0.002
	Zn	68		ug/L		3754	0.015
>	Ge	74		ug/L		199081	199080.554
	As	75	10.000	ug/L	6.665	6514	0.031
	Se	77		ug/L		8302	-0.002
	Se	82	10.000	ug/L	10.344	409	0.002
	Kr	83		ug/L		98	0.000
	Sr	88	10.000	ug/L	2.495	60108	0.408
	Y	89		ug/L		28	-0.000
	Zr	90	10.000	ug/L	1.871	33966	0.229
	Mo	98	10.000	ug/L	2.578	15412	0.104
	Ag	107	10.000	ug/L	3.222	26596	0.181
	Cd	111	10.000	ug/L	2.659	6298	0.043
	Cd	114		ug/L		15241	0.103
>	In	115		ug/L		147096	147095.867
	Sn	120	10.000	ug/L	2.933	27452	0.186
	Sb	121	10.000	ug/L	2.322	26450	0.177
	Sb	123		ug/L		20447	0.137
	Ba	135		ug/L		7021	0.035
	Ba	137	10.000	ug/L	2.781	12320	0.061
	Ho	165		ug/L		30	-0.000
>	Lu	175		ug/L		200628	200628.478
	Tl	205	10.000	ug/L	1.278	67367	0.331
	Pb	208	10.000	ug/L	1.278	75019	0.373
	Th	232	10.000	ug/L	0.896	77142	0.383
	U	238	10.000	ug/L	1.220	75456	0.375

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 04, 2009 01:02:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Standard 2.946

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.010**	ug/L	4.027	14431	0.055
	Be	9	**100.005**	ug/L	3.253	13006	0.050
	B	11	**200.013**	ug/L	4.645	22099	0.084
	Na	23	**10002.784**	ug/L	4.871	10598164	40.535
	Mg	24	**10004.469**	ug/L	5.138	8315220	31.889
	Al	27	**9993.795**	ug/L	0.385	12150908	46.562
	P	31	**9997.252**	ug/L	2.736	891897	3.407
	K	39	**9986.078**	ug/L	10.888	18898396	70.813
	Ca	43	**9996.557**	ug/L	2.198	40580	0.153
>	Sc	45		ug/L		260837	260836.667
	Ti	47	**99.954**	ug/L	2.558	21644	0.082
	V	51	**100.225**	ug/L	3.929	248290	0.816
	Cr	52	**99.976**	ug/L	2.835	213555	0.829
	Cr	53		ug/L		208495	-0.015
	Mn	55	**99.975**	ug/L	1.181	342300	1.308
	Fe	57	**9996.513**	ug/L	1.191	673831	2.562
	Co	59	**99.961**	ug/L	2.465	256193	0.982
	Ni	60	**99.969**	ug/L	1.989	54527	0.209
	Cu	63		ug/L		126894	0.486
	Cu	65	**99.974**	ug/L	0.769	58770	0.225
	Zn	66	**99.968**	ug/L	2.005	41789	0.216
	Zn	67		ug/L		14058	0.026
	Zn	68		ug/L		30116	0.152
>	Ge	74		ug/L		193112	193111.608
	As	75	**99.878**	ug/L	2.794	53594	0.276
	Se	77		ug/L		9929	0.008
	Se	82	**100.012**	ug/L	2.475	4111	0.021
	Kr	83		ug/L		88	-0.000
	Sr	88	**99.970**	ug/L	0.693	568807	3.956
	Y	89		ug/L		75	0.000
	Zr	90	**99.990**	ug/L	1.012	326689	2.271
	Mo	98	**99.989**	ug/L	2.186	148371	1.032
	Ag	107	**99.975**	ug/L	2.365	253206	1.761
	Cd	111	**99.983**	ug/L	1.555	60300	0.419
	Cd	114		ug/L		146428	1.018
>	In	115		ug/L		143762	143762.480
	Sn	120	**99.990**	ug/L	0.665	264471	1.839
	Sb	121	**100.015**	ug/L	0.598	258829	1.798
	Sb	123		ug/L		200890	1.395
	Ba	135		ug/L		68281	0.342
	Ba	137	**99.974**	ug/L	1.923	118869	0.595
	Ho	165		ug/L		38	0.000
>	Lu	175		ug/L		199624	199623.846
	Tl	205	**99.961**	ug/L	2.459	636443	3.185
	Pb	208	**99.943**	ug/L	1.720	703220	3.523
	Th	232	**99.943**	ug/L	2.474	723504	3.625
	U	238	**99.925**	ug/L	3.026	695829	3.487

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
Lu	175					
Tl	205					
Pb	208					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 04, 2009 01:07:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 1.947

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.612**	ug/L	4.170	7452	0.029
	Be	9	**51.573**	ug/L	2.572	6712	0.026
	B	11	**104.599**	ug/L	4.736	11646	0.044
	Na	23	**4688.287**	ug/L	7.639	4979923	18.999
	Mg	24	**5204.936**	ug/L	9.478	4320123	16.591
	Al	27	**5254.327**	ug/L	5.411	6383388	24.480
	P	31	**5088.406**	ug/L	1.725	455495	1.734
	K	39	**5458.499**	ug/L	4.317	10532706	38.707
	Ca	43	**5129.546**	ug/L	0.779	21153	0.078
>	Sc	45		ug/L		260780	260780.029
	Ti	47	**49.899**	ug/L	0.559	10914	0.041
	V	51	**47.078**	ug/L	4.509	135374	0.383
	Cr	52	**51.333**	ug/L	2.248	108363	0.426
	Cr	53		ug/L		195537	-0.064
	Mn	55	**48.722**	ug/L	2.494	167343	0.637
	Fe	57	**5108.123**	ug/L	2.617	346893	1.309
	Co	59	**51.726**	ug/L	1.404	132591	0.508
	Ni	60	**52.199**	ug/L	2.660	28493	0.109
	Cu	63		ug/L		62811	0.240
	Cu	65	**50.130**	ug/L	3.272	29482	0.113
	Zn	66	**51.519**	ug/L	2.178	21736	0.111
	Zn	67		ug/L		10914	0.009
	Zn	68		ug/L		15831	0.078
>	Ge	74		ug/L		194444	194443.902
	As	75	**49.625**	ug/L	1.306	26989	0.137
	Se	77		ug/L		8731	0.001
	Se	82	**49.673**	ug/L	1.204	2050	0.011
	Kr	83		ug/L		90	-0.000
	Sr	88	**49.868**	ug/L	1.612	288993	1.973
	Y	89		ug/L		43	0.000
	Zr	90	**48.886**	ug/L	2.025	162740	1.110
	Mo	98	**48.820**	ug/L	1.950	73805	0.504
	Ag	107	**49.539**	ug/L	1.412	127807	0.873
	Cd	111	**52.489**	ug/L	2.178	32243	0.220
	Cd	114		ug/L		77209	0.527
>	In	115		ug/L		146390	146389.750
	Sn	120	**49.197**	ug/L	4.531	132532	0.905
	Sb	121	**48.109**	ug/L	3.664	126960	0.865
	Sb	123		ug/L		99421	0.677
	Ba	135		ug/L		33867	0.170
	Ba	137	**51.032**	ug/L	2.182	60618	0.304
	Ho	165		ug/L		50	0.000
>	Lu	175		ug/L		199286	199285.778
	Tl	205	**49.173**	ug/L	1.513	313157	1.567
	Pb	208	**51.274**	ug/L	1.773	360394	1.807
	Th	232	**51.015**	ug/L	1.722	368948	1.850
	U	238	**53.227**	ug/L	1.762	370284	1.857

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	103.223				
	Be	9	103.146				
	B	11	104.599				
	Na	23	93.766				
	Mg	24	104.099				
	Al	27	104.046				
	P	31	101.768				
	K	39	109.170				
	Ca	43	102.591				
>	Sc	45		100.4			
	Ti	47	99.798				
	V	51	94.156				
	Cr	52	102.667				
	Cr	53					
	Mn	55	97.444				
	Fe	57	102.162				
	Co	59	103.451				
	Ni	60	104.398				
	Cu	63					
	Cu	65	100.260				
	Zn	66	103.038				
	Zn	67					
	Zn	68					
>	Ge	74		100.0			
	As	75	99.250				
	Se	77					
	Se	82	99.346				
	Kr	83					
	Sr	88	99.735				
	Y	89					
	Zr	90	97.772				
	Mo	98	97.641				
	Ag	107	99.079				
	Cd	111	104.978				
	Cd	114					
>	In	115		100.1			
	Sn	120	98.395				
	Sb	121	96.218				
	Sb	123					
	Ba	135					
	Ba	137	102.064				
	Ho	165					
>	Lu	175		100.4			
	Tl	205	98.346				
	Pb	208	102.547				
	Th	232	102.029				
	U	238	106.453				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 04, 2009 01:12:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 2.948

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.091**	ug/L	33.031	27	0.000
	Be	9	**-0.007**	ug/L	318.475	14	-0.000
	B	11	**3.273**	ug/L	20.537	557	0.001
	Na	23	**1.373**	ug/L	337.989	31702	0.006
	Mg	24	**2.027**	ug/L	33.571	3334	0.006
	Al	27	**-0.817**	ug/L	303.666	5001	-0.004
	P	31	**-3.319**	ug/L	22.959	3137	-0.001
	K	39	**26.232**	ug/L	21.357	478209	0.186
	Ca	43	**-18.864**	ug/L	66.672	608	-0.000
>	Sc	45		ug/L		258709	258709.162
	Ti	47	**0.015**	ug/L	793.491	221	0.000
	V	51	**-2.335**	ug/L	60.770	30222	-0.019
	Cr	52	**0.446**	ug/L	27.498	-1588	0.004
	Cr	53		ug/L		192257	-0.071
	Mn	55	**-0.023**	ug/L	27.497	1121	-0.000
	Fe	57	**3.996**	ug/L	41.483	5904	0.001
	Co	59	**0.001**	ug/L	304.267	137	0.000
	Ni	60	**-0.015**	ug/L	201.405	68	-0.000
	Cu	63		ug/L		179	0.000
	Cu	65	**0.019**	ug/L	131.617	80	0.000
	Zn	66	**0.024**	ug/L	110.767	117	0.000
	Zn	67		ug/L		8089	-0.006
	Zn	68		ug/L		646	-0.000
>	Ge	74		ug/L		197285	197284.774
	As	75	**1.112**	ug/L	36.901	945	0.003
	Se	77		ug/L		8027	-0.003
	Se	82	**-0.105**	ug/L	471.784	-15	-0.000
	Kr	83		ug/L		101	0.000
	Sr	88	**0.005**	ug/L	15.375	199	0.000
	Y	89		ug/L		28	-0.000
	Zr	90	**0.123**	ug/L	22.963	621	0.003
	Mo	98	**0.080**	ug/L	19.618	193	0.001
	Ag	107	**0.008**	ug/L	47.454	68	0.000
	Cd	111	**-0.009**	ug/L	270.240	18	-0.000
	Cd	114		ug/L		57	0.000
>	In	115		ug/L		143922	143921.586
	Sn	120	**0.024**	ug/L	11.411	217	0.000
	Sb	121	**0.868**	ug/L	23.776	2662	0.016
	Sb	123		ug/L		2089	0.012
	Ba	135		ug/L		36	-0.000
	Ba	137	**0.008**	ug/L	132.971	68	0.000
	Ho	165		ug/L		29	-0.000
>	Lu	175		ug/L		192783	192782.652
	Tl	205	**0.511**	ug/L	24.227	4029	0.016
	Pb	208	**0.011**	ug/L	5.340	335	0.000
	Th	232	**0.109**	ug/L	39.306	985	0.004
	U	238	**0.021**	ug/L	13.006	326	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			99.6		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			101.5		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.1		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 04, 2009 01:16:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 3.949

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**11.263**	ug/L	3.123	1591	0.006
	Be	9	**0.571**	ug/L	4.231	86	0.000
	B	11	**17.097**	ug/L	2.984	2018	0.007
	Na	23	**236.090**	ug/L	7.652	272595	0.957
	Mg	24	**15.887**	ug/L	37.425	14341	0.051
	Al	27	**35.958**	ug/L	25.877	48419	0.168
	P	31	**46.399**	ug/L	7.997	7360	0.016
	K	39	**390.279**	ug/L	10.340	1121012	2.768
	Ca	43	**202.038**	ug/L	8.017	1451	0.003
>	Sc	45		ug/L		253462	253462.025
	Ti	47	**8.973**	ug/L	3.382	2081	0.007
	V	51	**6.413**	ug/L	24.897	47680	0.052
	Cr	52	**10.718**	ug/L	0.476	20026	0.089
	Cr	53		ug/L		194012	-0.047
	Mn	55	**5.608**	ug/L	3.809	19754	0.073
	Fe	57	**115.524**	ug/L	5.057	13019	0.030
	Co	59	**1.077**	ug/L	4.071	2811	0.011
	Ni	60	**2.199**	ug/L	6.973	1237	0.005
	Cu	63		ug/L		1627	0.006
	Cu	65	**1.216**	ug/L	3.217	762	0.003
	Zn	66	**10.554**	ug/L	2.251	4529	0.023
	Zn	67		ug/L		8625	-0.002
	Zn	68		ug/L		3615	0.015
>	Ge	74		ug/L		194083	194082.815
	As	75	**6.167**	ug/L	9.828	3641	0.017
	Se	77		ug/L		8036	-0.002
	Se	82	**5.196**	ug/L	11.268	205	0.001
	Kr	83		ug/L		102	0.000
	Sr	88	**10.583**	ug/L	1.572	60625	0.419
	Y	89		ug/L		24	-0.000
	Zr	90	**1.997**	ug/L	0.620	6769	0.045
	Mo	98	**0.542**	ug/L	1.799	882	0.006
	Ag	107	**1.061**	ug/L	2.993	2747	0.019
	Cd	111	**1.005**	ug/L	3.091	632	0.004
	Cd	114		ug/L		1536	0.010
>	In	115		ug/L		144379	144379.265
	Sn	120	**5.098**	ug/L	2.215	13688	0.094
	Sb	121	**3.106**	ug/L	1.790	8480	0.056
	Sb	123		ug/L		6572	0.043
	Ba	135		ug/L		1414	0.007
	Ba	137	**2.088**	ug/L	3.703	2452	0.012
	Ho	165		ug/L		35	0.000
>	Lu	175		ug/L		192559	192559.169
	Tl	205	**1.160**	ug/L	0.855	8006	0.037
	Pb	208	**2.174**	ug/L	3.041	15012	0.077
	Th	232	**1.080**	ug/L	2.738	7767	0.039
	U	238	**0.217**	ug/L	1.557	1641	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.630				
	Be	9	114.132				
	B	11	113.981				
	Na	23	94.436				
	Mg	24	105.916				
	Al	27	119.860				
	P	31	92.798				
	K	39	130.093				
	Ca	43	101.019				
>	Sc	45		97.6			
	Ti	47	89.725				
	V	51	64.132				
	Cr	52	107.181				
	Cr	53					
	Mn	55	112.160				
	Fe	57	115.524				
	Co	59	107.730				
	Ni	60	109.936				
	Cu	63					
	Cu	65	121.591				
	Zn	66	105.537				
	Zn	67					
	Zn	68					
>	Ge	74		99.8			
	As	75	123.336				
	Se	77					
	Se	82	103.929				
	Kr	83					
	Sr	88	105.828				
	Y	89					
	Zr	90	99.865				
	Mo	98	108.338				
	Ag	107	106.099				
	Cd	111	100.503				
	Cd	114					
>	In	115		98.7			
	Sn	120	101.969				
	Sb	121	103.548				
	Sb	123					
	Ba	135					
	Ba	137	104.392				
	Ho	165					
>	Lu	175		97.0			
	Tl	205	116.023				
	Pb	208	108.694				
	Th	232	108.005				
	U	238	108.362				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 3	K	39CRDL is out of limits
QC Std 3	V	51CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 04, 2009 01:21:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 4.950

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.147**	ug/L	27.599	33	0.000
	Be	9	**0.051**	ug/L	74.719	20	0.000
	B	11	**1.727**	ug/L	3.074	367	0.001
	Na	23	**105347.607**	ug/L	8.165	104363880	426.907
	Mg	24	**103491.822**	ug/L	7.556	80606174	329.878
	Al	27	**104460.384**	ug/L	0.629	118956833	486.692
	P	31	**99695.908**	ug/L	3.004	8305761	33.974
	K	39	**110305.143**	ug/L	6.532	191548543	782.190
	Ca	43	**100643.864**	ug/L	2.058	376994	1.540
>	Sc	45		ug/L		244404	244403.715
	Ti	47	**1832.225**	ug/L	1.505	368284	1.506
	V	51	**-4.862**	ug/L	11.323	23513	-0.040
	Cr	52	**3.246**	ug/L	6.051	4173	0.027
	Cr	53		ug/L		161729	-0.152
	Mn	55	**5.892**	ug/L	2.127	19969	0.077
	Fe	57	**99394.419**	ug/L	1.789	6230519	25.472
	Co	59	**0.216**	ug/L	3.988	645	0.002
	Ni	60	**2.537**	ug/L	3.495	1367	0.005
	Cu	63		ug/L		2556	0.010
	Cu	65	**2.444**	ug/L	7.986	1410	0.006
	Zn	66	**3.060**	ug/L	5.928	1322	0.007
	Zn	67		ug/L		7410	-0.007
	Zn	68		ug/L		892	0.001
>	Ge	74		ug/L		184938	184937.634
	As	75	**0.217**	ug/L	327.200	426	0.001
	Se	77		ug/L		6838	-0.007
	Se	82	**-0.862**	ug/L	38.289	-44	-0.000
	Kr	83		ug/L		149	0.000
	Sr	88	**1.115**	ug/L	1.863	6188	0.044
	Y	89		ug/L		172	0.001
	Zr	90	**0.541**	ug/L	38.934	1893	0.012
	Mo	98	**1965.314**	ug/L	2.237	2769408	20.279
	Ag	107	**0.047**	ug/L	8.821	160	0.001
	Cd	111	**0.292**	ug/L	21.591	189	0.001
	Cd	114		ug/L		3054	0.022
>	In	115		ug/L		136595	136595.465
	Sn	120	**0.171**	ug/L	10.093	574	0.003
	Sb	121	**0.278**	ug/L	18.762	1080	0.005
	Sb	123		ug/L		856	0.004
	Ba	135		ug/L		472	0.002
	Ba	137	**0.657**	ug/L	3.679	794	0.004
	Ho	165		ug/L		433	0.002
>	Lu	175		ug/L		188523	188523.020
	Tl	205	**0.054**	ug/L	17.839	1193	0.002
	Pb	208	**0.170**	ug/L	5.551	1387	0.006
	Th	232	**0.023**	ug/L	58.371	378	0.001
	U	238	**-0.015**	ug/L	6.023	83	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23	105.348				
	Mg	24	103.492				
	Al	27	104.460				
	P	31	99.696				
	K	39	110.305				
	Ca	43	100.644				
>	Sc	45			94.1		
	Ti	47	91.611				
	V	51					
	Cr	52	87.739				
	Cr	53					
	Mn	55	101.581				
	Fe	57	99.394				
	Co	59	86.377				
	Ni	60	93.963				
	Cu	63					
	Cu	65	84.271				
	Zn	66	84.991				
	Zn	67					
	Zn	68					
>	Ge	74			95.1		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	92.916				
	Y	89					
	Zr	90					
	Mo	98	98.266				
	Ag	107					
	Cd	111	73.051				
	Cd	114					
>	In	115			93.4		
	Sn	120					
	Sb	121	278.099				
	Sb	123					
	Ba	135					
	Ba	137	98.004				
	Ho	165					
>	Lu	175			94.9		
	Tl	205					
	Pb	208	85.081				
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 04, 2009 01:26:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 5.951

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**22.447**	ug/L	3.271	3071	0.012
	Be	9	**22.647**	ug/L	2.881	2793	0.011
	B	11	**22.317**	ug/L	5.531	2499	0.009
	Na	23	**97790.103**	ug/L	12.955	97417314	396.281
	Mg	24	**94023.155**	ug/L	1.742	73845656	299.697
	Al	27	**100200.703**	ug/L	1.664	115050788	466.846
	P	31	**99104.746**	ug/L	4.819	8317378	33.772
	K	39	**107503.666**	ug/L	3.504	188144032	762.325
	Ca	43	**101032.454**	ug/L	3.639	381309	1.546
>	Sc	45		ug/L		246444	246443.634
	Ti	47	**1816.977**	ug/L	2.476	368076	1.494
	V	51	**15.809**	ug/L	5.333	65189	0.129
	Cr	52	**23.148**	ug/L	4.012	44834	0.192
	Cr	53		ug/L		167329	-0.134
	Mn	55	**26.240**	ug/L	3.290	85676	0.343
	Fe	57	**99334.417**	ug/L	5.043	6273094	25.457
	Co	59	**20.577**	ug/L	4.415	49889	0.202
	Ni	60	**21.647**	ug/L	3.190	11207	0.045
	Cu	63		ug/L		26228	0.106
	Cu	65	**22.018**	ug/L	3.120	12273	0.050
	Zn	66	**22.501**	ug/L	1.787	9078	0.049
	Zn	67		ug/L		8340	-0.002
	Zn	68		ug/L		6338	0.031
>	Ge	74		ug/L		184781	184780.836
	As	75	**21.202**	ug/L	3.823	11137	0.059
	Se	77		ug/L		7594	-0.003
	Se	82	**20.519**	ug/L	5.601	798	0.004
	Kr	83		ug/L		141	0.000
	Sr	88	**21.915**	ug/L	1.246	116339	0.867
	Y	89		ug/L		196	0.001
	Zr	90	**21.287**	ug/L	0.765	64981	0.484
	Mo	98	**2062.342**	ug/L	0.845	2851028	21.280
	Ag	107	**20.448**	ug/L	2.176	48308	0.360
	Cd	111	**20.830**	ug/L	3.805	11724	0.087
	Cd	114		ug/L		30708	0.229
>	In	115		ug/L		133985	133985.483
	Sn	120	**20.800**	ug/L	1.418	51387	0.382
	Sb	121	**21.977**	ug/L	1.448	53305	0.395
	Sb	123		ug/L		41005	0.304
	Ba	135		ug/L		13238	0.070
	Ba	137	**21.011**	ug/L	2.102	23759	0.125
	Ho	165		ug/L		422	0.002
>	Lu	175		ug/L		189448	189448.368
	Tl	205	**18.980**	ug/L	0.849	115453	0.605
	Pb	208	**20.378**	ug/L	2.579	136285	0.718
	Th	232	**21.405**	ug/L	2.097	147266	0.776
	U	238	**21.954**	ug/L	0.738	145290	0.766

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.235				
	Be	9	113.233				
	B	11	111.585				
	Na	23	97.790				
	Mg	24	94.023				
	Al	27	100.201				
	P	31	99.105				
	K	39	107.504				
	Ca	43	101.032				
>	Sc	45		94.9			
	Ti	47	90.849				
	V	51	79.043				
	Cr	52	97.672				
	Cr	53					
	Mn	55	101.706				
	Fe	57	99.334				
	Co	59	101.614				
	Ni	60	95.360				
	Cu	63					
	Cu	65	96.147				
	Zn	66	95.343				
	Zn	67					
	Zn	68					
>	Ge	74		95.0			
	As	75	106.010				
	Se	77					
	Se	82	102.594				
	Kr	83					
	Sr	88	103.372				
	Y	89					
	Zr	90	106.433				
	Mo	98	103.117				
	Ag	107	102.238				
	Cd	111	102.110				
	Cd	114					
>	In	115		91.6			
	Sn	120	104.001				
	Sb	121	109.336				
	Sb	123					
	Ba	135					
	Ba	137	101.652				
	Ho	165					
>	Lu	175		95.4			
	Tl	205	94.900				
	Pb	208	100.881				
	Th	232	107.023				
	U	238	109.768				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 5	V	51ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 01:31:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.952

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.337**	ug/L	1.464	8073	0.030
	Be	9	**53.789**	ug/L	1.558	7203	0.027
	B	11	**105.199**	ug/L	2.113	12058	0.044
	Na	23	**4911.740**	ug/L	0.663	5370150	19.904
	Mg	24	**4932.779**	ug/L	3.513	4219907	15.723
	Al	27	**5374.446**	ug/L	7.180	6721838	25.040
	P	31	**5097.195**	ug/L	1.531	469431	1.737
	K	39	**5427.945**	ug/L	4.543	10770686	38.490
	Ca	43	**5149.006**	ug/L	3.385	21837	0.079
>	Sc	45		ug/L		268231	268230.838
	Ti	47	**51.234**	ug/L	0.201	11522	0.042
	V	51	**49.737**	ug/L	1.432	145104	0.405
	Cr	52	**51.215**	ug/L	1.722	111255	0.425
	Cr	53		ug/L		197093	-0.079
	Mn	55	**52.111**	ug/L	1.062	184087	0.682
	Fe	57	**5206.112**	ug/L	1.021	363700	1.334
	Co	59	**51.248**	ug/L	0.492	135155	0.503
	Ni	60	**51.248**	ug/L	1.311	28789	0.107
	Cu	63		ug/L		66874	0.249
	Cu	65	**51.848**	ug/L	0.957	31378	0.117
	Zn	66	**49.459**	ug/L	2.983	21940	0.107
	Zn	67		ug/L		10475	0.004
	Zn	68		ug/L		16420	0.077
>	Ge	74		ug/L		204522	204521.508
	As	75	**49.992**	ug/L	5.332	28546	0.138
	Se	77		ug/L		9312	0.002
	Se	82	**49.645**	ug/L	4.556	2152	0.011
	Kr	83		ug/L		92	-0.000
	Sr	88	**51.410**	ug/L	8.081	298222	2.034
	Y	89		ug/L		54	0.000
	Zr	90	**51.568**	ug/L	9.281	171738	1.171
	Mo	98	**52.756**	ug/L	10.131	79753	0.544
	Ag	107	**51.688**	ug/L	7.396	133540	0.911
	Cd	111	**51.746**	ug/L	9.002	31809	0.217
	Cd	114		ug/L		75266	0.513
>	In	115		ug/L		147088	147088.124
	Sn	120	**50.476**	ug/L	7.753	136172	0.928
	Sb	121	**51.458**	ug/L	8.458	135911	0.925
	Sb	123		ug/L		105824	0.720
	Ba	135		ug/L		34952	0.174
	Ba	137	**52.096**	ug/L	2.603	62134	0.310
	Ho	165		ug/L		33	-0.000
>	Lu	175		ug/L		200152	200152.217
	Tl	205	**50.761**	ug/L	3.284	324482	1.617
	Pb	208	**52.196**	ug/L	2.434	368344	1.840
	Th	232	**52.198**	ug/L	2.279	379033	1.893
	U	238	**52.946**	ug/L	1.999	369837	1.847

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	108.674				
	Be	9	107.577				
	B	11	105.199				
	Na	23	98.235				
	Mg	24	98.656				
	Al	27	106.425				
	P	31	101.944				
	K	39	108.559				
	Ca	43	102.980				
>	Sc	45		103.3			
	Ti	47	102.468				
	V	51	99.475				
	Cr	52	102.430				
	Cr	53					
	Mn	55	104.223				
	Fe	57	104.122				
	Co	59	102.495				
	Ni	60	102.496				
	Cu	63					
	Cu	65	103.696				
	Zn	66	98.917				
	Zn	67					
	Zn	68					
>	Ge	74		105.2			
	As	75	99.983				
	Se	77					
	Se	82	99.290				
	Kr	83					
	Sr	88	102.820				
	Y	89					
	Zr	90	103.136				
	Mo	98	105.512				
	Ag	107	103.376				
	Cd	111	103.492				
	Cd	114					
>	In	115		100.6			
	Sn	120	100.952				
	Sb	121	102.916				
	Sb	123					
	Ba	135					
	Ba	137	104.191				
	Ho	165					
>	Lu	175		100.8			
	Tl	205	101.521				
	Pb	208	104.391				
	Th	232	104.397				
	U	238	105.891				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 01:35:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.953

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.037**	ug/L	39.891	21	0.000
	Be	9	**0.017**	ug/L	94.918	18	0.000
	B	11	**2.422**	ug/L	37.849	489	0.001
	Na	23	**12.214**	ug/L	23.570	45406	0.049
	Mg	24	**1.425**	ug/L	77.306	3000	0.005
	Al	27	**1.070**	ug/L	113.547	7669	0.005
	P	31	**-4.038**	ug/L	50.835	3242	-0.001
	K	39	**11.979**	ug/L	62.909	477181	0.085
	Ca	43	**-22.224**	ug/L	32.146	627	-0.000
>	Sc	45		ug/L		273055	273055.341
	Ti	47	**0.071**	ug/L	136.716	245	0.000
	V	51	**-3.177**	ug/L	53.229	29981	-0.026
	Cr	52	**0.486**	ug/L	27.409	-1582	0.004
	Cr	53		ug/L		195659	-0.097
	Mn	55	**-0.024**	ug/L	77.299	1180	-0.000
	Fe	57	**8.438**	ug/L	57.317	6538	0.002
	Co	59	**-0.005**	ug/L	63.633	130	-0.000
	Ni	60	**-0.006**	ug/L	86.049	77	-0.000
	Cu	63		ug/L		161	-0.000
	Cu	65	**0.000**	ug/L	4059.776	73	0.000
	Zn	66	**0.014**	ug/L	140.150	118	0.000
	Zn	67		ug/L		7650	-0.010
	Zn	68		ug/L		558	-0.001
>	Ge	74		ug/L		206836	206836.307
	As	75	**0.560**	ug/L	24.869	675	0.002
	Se	77		ug/L		8687	-0.002
	Se	82	**0.159**	ug/L	149.844	-4	0.000
	Kr	83		ug/L		92	-0.000
	Sr	88	**0.002**	ug/L	160.611	186	0.000
	Y	89		ug/L		28	-0.000
	Zr	90	**0.021**	ug/L	37.313	299	0.000
	Mo	98	**0.170**	ug/L	24.053	340	0.002
	Ag	107	**0.007**	ug/L	15.247	69	0.000
	Cd	111	**-0.013**	ug/L	90.304	16	-0.000
	Cd	114		ug/L		49	-0.000
>	In	115		ug/L		149357	149356.811
	Sn	120	**0.006**	ug/L	24.610	175	0.000
	Sb	121	**0.236**	ug/L	22.137	1068	0.004
	Sb	123		ug/L		860	0.003
	Ba	135		ug/L		37	-0.000
	Ba	137	**-0.005**	ug/L	66.381	55	-0.000
	Ho	165		ug/L		39	0.000
>	Lu	175		ug/L		201112	201111.744
	Tl	205	**0.703**	ug/L	29.459	5427	0.022
	Pb	208	**0.009**	ug/L	62.197	341	0.000
	Th	232	**0.067**	ug/L	43.818	721	0.002
	U	238	**0.014**	ug/L	21.836	295	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		105.1			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		106.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		101.3			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Saturday, July 04, 2009 01:40:35
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 10.954

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**1099.862**	ug/L	1.353	152815	0.608
	Be	9	**1081.591**	ug/L	1.897	135415	0.539
	B	11	**1.100**	ug/L	19.996	312	0.000
	Na	23	**51774.825**	ug/L	2.364	52760820	209.811
	Mg	24	**53429.185**	ug/L	5.709	42816613	170.304
	Al	27	**52455.497**	ug/L	1.369	61431439	244.396
	P	31	**26054.920**	ug/L	1.116	2234600	8.879
	K	39	**55477.396**	ug/L	4.559	99268375	393.399
	Ca	43	**51573.570**	ug/L	0.294	198976	0.789
>	Sc	45		ug/L		251311	251310.569
	Ti	47	**29.799**	ug/L	3.169	6365	0.024
	V	51	**1017.116**	ug/L	3.308	2115936	8.285
	Cr	52	**968.886**	ug/L	4.740	2016487	8.032
	Cr	53		ug/L		418911	0.853
	Mn	55	**1027.813**	ug/L	1.873	3379654	13.445
	Fe	57	**51929.528**	ug/L	2.671	3349360	13.308
	Co	59	**988.104**	ug/L	1.800	2439108	9.705
	Ni	60	**973.808**	ug/L	2.344	511296	2.034
	Cu	63		ug/L		1173705	4.670
	Cu	65	**1000.270**	ug/L	1.674	566029	2.252
	Zn	66	**2308.684**	ug/L	2.159	975222	4.986
	Zn	67		ug/L		161208	0.777
	Zn	68		ug/L		696747	3.558
>	Ge	74		ug/L		195626	195626.080
	As	75	**919.724**	ug/L	0.712	497243	2.540
	Se	77		ug/L		20634	0.062
	Se	82	**473.085**	ug/L	2.457	19725	0.101
	Kr	83		ug/L		125	0.000
	Sr	88	**1011.810**	ug/L	1.310	5404052	40.035
	Y	89		ug/L		445	0.003
	Zr	90	**503.453**	ug/L	0.745	1543843	11.435
	Mo	98	**1005.809**	ug/L	1.132	1401015	10.378
	Ag	107	**248.353**	ug/L	1.307	590711	4.376
	Cd	111	**999.875**	ug/L	1.626	566111	4.194
	Cd	114		ug/L		1318894	9.770
>	In	115		ug/L		134984	134984.422
	Sn	120	**995.426**	ug/L	0.676	2470915	18.305
	Sb	121	**251.716**	ug/L	0.249	611090	4.524
	Sb	123		ug/L		477027	3.532
	Ba	135		ug/L		1487696	7.820
	Ba	137	**2403.132**	ug/L	0.849	2722519	14.311
	Ho	165		ug/L		197	0.001
>	Lu	175		ug/L		190246	190245.768
	Tl	205	**458.139**	ug/L	2.653	2777391	14.598
	Pb	208	**4789.372**	ug/L	1.721	32109501	168.804
	Th	232	**2371.066**	ug/L	4.111	16355640	85.997
	U	238	**5034.849**	ug/L	2.398	33414971	175.678

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	109.986				
Be	9	108.159				
B	11					
Na	23	103.550				
Mg	24	106.858				
Al	27	104.911				
P	31	104.220				
K	39	110.955				
Ca	43	103.147				
> Sc	45		96.8			
Ti	47					
V	51	101.712				
Cr	52	96.889				
Cr	53					
Mn	55	102.781				
Fe	57	103.859				
Co	59	98.810				
Ni	60	97.381				
Cu	63					
Cu	65	100.027				
Zn	66	92.347				
Zn	67					
Zn	68					
> Ge	74		100.6			
As	75	91.972				
Se	77					
Se	82	94.617				
Kr	83					
Sr	88	101.181				
Y	89					
Zr	90	100.691				
Mo	98	100.581				
Ag	107	99.341				
Cd	111	99.988				
Cd	114					
> In	115		92.3			
Sn	120	99.543				
Sb	121	100.686				
Sb	123					
Ba	135					
Ba	137	96.125				
Ho	165					
> Lu	175		95.8			
Tl	205	91.628				
Pb	208	95.787				
Th	232	94.843				
U	238	100.697				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 10	K	39LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Saturday, July 04, 2009 01:45:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 11.955

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.296**	ug/L	1.785	8225	0.031
	Be	9	**52.007**	ug/L	0.954	6972	0.026
	B	11	**102.366**	ug/L	1.049	11752	0.043
	Na	23	**5311.112**	ug/L	7.115	5809479	21.523
	Mg	24	**5118.306**	ug/L	6.832	4379710	16.315
	Al	27	**5333.428**	ug/L	4.038	6674677	24.849
	P	31	**4914.763**	ug/L	1.514	453178	1.675
	K	39	**5801.844**	ug/L	5.997	11487425	41.142
	Ca	43	**4981.100**	ug/L	1.543	21169	0.076
>	Sc	45		ug/L		268509	268509.315
	Ti	47	**48.487**	ug/L	4.413	10922	0.040
	V	51	**46.743**	ug/L	4.282	138653	0.381
	Cr	52	**50.104**	ug/L	2.809	108850	0.415
	Cr	53		ug/L		190467	-0.104
	Mn	55	**50.078**	ug/L	2.912	177090	0.655
	Fe	57	**5002.624**	ug/L	3.319	349946	1.282
	Co	59	**50.507**	ug/L	2.798	133297	0.496
	Ni	60	**49.131**	ug/L	1.808	27626	0.103
	Cu	63		ug/L		65812	0.244
	Cu	65	**50.723**	ug/L	2.433	30727	0.114
	Zn	66	**49.991**	ug/L	1.773	21818	0.108
	Zn	67		ug/L		10648	0.006
	Zn	68		ug/L		15940	0.076
>	Ge	74		ug/L		201082	201082.139
	As	75	**49.497**	ug/L	1.925	27838	0.137
	Se	77		ug/L		8481	-0.002
	Se	82	**48.554**	ug/L	1.638	2072	0.010
	Kr	83		ug/L		90	-0.000
	Sr	88	**49.968**	ug/L	1.094	286901	1.977
	Y	89		ug/L		59	0.000
	Zr	90	**51.146**	ug/L	4.056	168622	1.162
	Mo	98	**52.148**	ug/L	3.481	78085	0.538
	Ag	107	**50.064**	ug/L	2.808	127950	0.882
	Cd	111	**49.627**	ug/L	3.425	30199	0.208
	Cd	114		ug/L		73058	0.503
>	In	115		ug/L		145048	145047.817
	Sn	120	**50.231**	ug/L	4.750	134040	0.924
	Sb	121	**53.343**	ug/L	2.496	139433	0.959
	Sb	123		ug/L		107365	0.738
	Ba	135		ug/L		34471	0.177
	Ba	137	**52.488**	ug/L	2.467	60747	0.313
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194160	194160.148
	Tl	205	**51.283**	ug/L	0.432	318155	1.634
	Pb	208	**53.167**	ug/L	0.688	364096	1.874
	Th	232	**52.702**	ug/L	0.606	371362	1.911
	U	238	**53.496**	ug/L	1.568	362621	1.867

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	110.592				
	Be	9	104.013				
	B	11	102.366				
	Na	23	106.222				
	Mg	24	102.366				
	Al	27	105.612				
	P	31	98.295				
	K	39	116.037				
	Ca	43	99.622				
>	Sc	45		103.4			
	Ti	47	96.974				
	V	51	93.487				
	Cr	52	100.209				
	Cr	53					
	Mn	55	100.155				
	Fe	57	100.052				
	Co	59	101.014				
	Ni	60	98.263				
	Cu	63					
	Cu	65	101.446				
	Zn	66	99.982				
	Zn	67					
	Zn	68					
>	Ge	74		103.4			
	As	75	98.995				
	Se	77					
	Se	82	97.108				
	Kr	83					
	Sr	88	99.935				
	Y	89					
	Zr	90	102.291				
	Mo	98	104.297				
	Ag	107	100.128				
	Cd	111	99.254				
	Cd	114					
>	In	115		99.2			
	Sn	120	100.463				
	Sb	121	106.685				
	Sb	123					
	Ba	135					
	Ba	137	104.977				
	Ho	165					
>	Lu	175		97.8			
	Tl	205	102.566				
	Pb	208	106.335				
	Th	232	105.403				
	U	238	106.991				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Li	7	CCV is out of limits (+/- 10%)
QC Std 11	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Saturday, July 04, 2009 01:50:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 12.956

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.293**	ug/L	4.290	58	0.000
	Be	9	**0.017**	ug/L	293.712	17	0.000
	B	11	**2.235**	ug/L	19.071	458	0.001
	Na	23	**0.169**	ug/L	2773.444	31368	0.001
	Mg	24	**2.290**	ug/L	128.589	3667	0.007
	Al	27	**1.743**	ug/L	51.966	8336	0.008
	P	31	**-2.130**	ug/L	100.677	3344	-0.001
	K	39	**17.381**	ug/L	30.404	476485	0.123
	Ca	43	**-21.581**	ug/L	39.372	616	-0.000
>	Sc	45		ug/L		266861	266861.125
	Ti	47	**-0.061**	ug/L	47.344	211	-0.000
	V	51	**-3.375**	ug/L	33.299	28896	-0.027
	Cr	52	**0.623**	ug/L	14.099	-1247	0.005
	Cr	53		ug/L		188907	-0.106
	Mn	55	**0.050**	ug/L	157.186	1413	0.001
	Fe	57	**9.374**	ug/L	29.720	6457	0.002
	Co	59	**0.018**	ug/L	33.386	186	0.000
	Ni	60	**-0.004**	ug/L	755.901	76	-0.000
	Cu	63		ug/L		221	0.000
	Cu	65	**0.036**	ug/L	13.517	93	0.000
	Zn	66	**0.054**	ug/L	29.904	132	0.000
	Zn	67		ug/L		7579	-0.009
	Zn	68		ug/L		640	-0.000
>	Ge	74		ug/L		200384	200383.637
	As	75	**0.966**	ug/L	47.045	879	0.003
	Se	77		ug/L		7997	-0.004
	Se	82	**0.162**	ug/L	145.557	-3	0.000
	Kr	83		ug/L		92	-0.000
	Sr	88	**0.021**	ug/L	23.610	291	0.001
	Y	89		ug/L		28	-0.000
	Zr	90	**0.052**	ug/L	4.788	388	0.001
	Mo	98	**0.239**	ug/L	6.463	430	0.002
	Ag	107	**0.017**	ug/L	20.675	92	0.000
	Cd	111	**0.020**	ug/L	134.806	35	0.000
	Cd	114		ug/L		66	0.000
>	In	115		ug/L		144149	144149.228
	Sn	120	**0.063**	ug/L	13.426	321	0.001
	Sb	121	**1.358**	ug/L	15.857	3942	0.024
	Sb	123		ug/L		3066	0.019
	Ba	135		ug/L		61	0.000
	Ba	137	**0.045**	ug/L	35.699	111	0.000
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194396	194396.402
	Tl	205	**1.027**	ug/L	24.516	7247	0.033
	Pb	208	**0.087**	ug/L	30.499	860	0.003
	Th	232	**0.185**	ug/L	28.582	1531	0.007
	U	238	**0.207**	ug/L	20.207	1589	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		102.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		103.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.9			
Tl	205					
Pb	208					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 12	Tl	205CCB is out of limits (+/- PQL)
QC Std 12	U	238CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201871711
Sample Date/Time: Saturday, July 04, 2009 01:54:49
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871711.957

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.349**	ug/L	12.054	66	0.000
	Be	9	**-0.040**	ug/L	117.355	10	-0.000
	B	11	**0.983**	ug/L	34.872	316	0.000
	Na	23	**-18.342**	ug/L	5.113	11338	-0.074
	Mg	24	**-1.228**	ug/L	55.413	667	-0.004
	Al	27	**-2.282**	ug/L	106.587	3334	-0.011
	P	31	**-15.559**	ug/L	12.337	2115	-0.005
	K	39	**29.666**	ug/L	29.954	498212	0.210
	Ca	43	**35.746**	ug/L	21.250	847	0.001
>	Sc	45		ug/L		266073	266072.772
	Ti	47	**0.217**	ug/L	37.506	271	0.000
	V	51	**3.904**	ug/L	38.759	44613	0.032
	Cr	52	**0.747**	ug/L	26.771	-969	0.006
	Cr	53		ug/L		397084	0.679
	Mn	55	**0.177**	ug/L	5.710	1849	0.002
	Fe	57	**15.265**	ug/L	12.684	6839	0.004
	Co	59	**-0.013**	ug/L	24.159	104	-0.000
	Ni	60	**0.025**	ug/L	68.235	92	0.000
	Cu	63		ug/L		288	0.000
	Cu	65	**0.113**	ug/L	18.146	138	0.000
	Zn	66	**0.570**	ug/L	10.223	370	0.001
	Zn	67		ug/L		18527	0.042
	Zn	68		ug/L		1223	0.002
>	Ge	74		ug/L		208569	208569.397
	As	75	**3.847**	ug/L	17.694	2578	0.011
	Se	77		ug/L		23088	0.067
	Se	82	**-0.171**	ug/L	215.730	-18	-0.000
	Kr	83		ug/L		94	-0.000
	Sr	88	**0.012**	ug/L	22.862	248	0.000
	Y	89		ug/L		27	-0.000
	Zr	90	**0.021**	ug/L	12.113	299	0.000
	Mo	98	**0.049**	ug/L	8.592	155	0.001
	Ag	107	**-0.007**	ug/L	11.236	32	-0.000
	Cd	111	**-0.023**	ug/L	39.023	10	-0.000
	Cd	114		ug/L		32	-0.000
>	In	115		ug/L		150788	150788.156
	Sn	120	**0.136**	ug/L	2.729	537	0.002
	Sb	121	**1.083**	ug/L	12.628	3370	0.019
	Sb	123		ug/L		2593	0.015
	Ba	135		ug/L		66	0.000
	Ba	137	**0.032**	ug/L	25.655	98	0.000
	Ho	165		ug/L		31	-0.000
>	Lu	175		ug/L		198113	198112.901
	Tl	205	**0.236**	ug/L	6.775	2405	0.008
	Pb	208	**0.002**	ug/L	63.559	281	0.000
	Th	232	**0.024**	ug/L	14.991	404	0.001
	U	238	**0.024**	ug/L	12.845	358	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			102.4		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			107.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			103.1		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.8		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871712
Sample Date/Time: Saturday, July 04, 2009 01:59:32
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871712.958

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.273**	ug/L	1.638	7945	0.030
	Be	9	**53.569**	ug/L	1.838	7068	0.027
	B	11	**104.686**	ug/L	1.812	11823	0.044
	Na	23	**1908.098**	ug/L	6.519	2073707	7.732
	Mg	24	**1775.868**	ug/L	5.271	1498135	5.661
	Al	27	**2049.622**	ug/L	2.020	2530052	9.549
	P	31	**2023.215**	ug/L	2.607	185698	0.689
	K	39	**2152.249**	ug/L	4.537	4474020	15.262
	Ca	43	**2143.018**	ug/L	2.637	9363	0.033
>	Sc	45		ug/L		264298	264297.549
	Ti	47	**47.830**	ug/L	1.362	10612	0.039
	V	51	**53.478**	ug/L	6.380	150978	0.436
	Cr	52	**51.335**	ug/L	2.283	109861	0.426
	Cr	53		ug/L		436284	0.837
	Mn	55	**52.404**	ug/L	1.748	182396	0.686
	Fe	57	**2133.237**	ug/L	2.373	150231	0.547
	Co	59	**52.683**	ug/L	0.874	136893	0.517
	Ni	60	**52.727**	ug/L	1.577	29182	0.110
	Cu	63		ug/L		68572	0.259
	Cu	65	**54.072**	ug/L	1.342	32245	0.122
	Zn	66	**50.392**	ug/L	1.161	22825	0.109
	Zn	67		ug/L		23623	0.066
	Zn	68		ug/L		17081	0.078
>	Ge	74		ug/L		208692	208691.606
	As	75	**52.284**	ug/L	4.782	30480	0.144
	Se	77		ug/L		24814	0.075
	Se	82	**51.845**	ug/L	3.068	2297	0.011
	Kr	83		ug/L		95	-0.000
	Sr	88	**51.575**	ug/L	1.246	304501	2.041
	Y	89		ug/L		48	0.000
	Zr	90	**50.268**	ug/L	2.893	170459	1.142
	Mo	98	**51.012**	ug/L	0.933	78567	0.526
	Ag	107	**52.524**	ug/L	1.136	138058	0.925
	Cd	111	**51.482**	ug/L	0.545	32226	0.216
	Cd	114		ug/L		78134	0.524
>	In	115		ug/L		149131	149130.823
	Sn	120	**50.111**	ug/L	1.239	137564	0.921
	Sb	121	**54.163**	ug/L	1.919	145589	0.973
	Sb	123		ug/L		112226	0.750
	Ba	135		ug/L		35268	0.179
	Ba	137	**53.133**	ug/L	2.381	62194	0.316
	Ho	165		ug/L		42	0.000
>	Lu	175		ug/L		196395	196394.796
	Tl	205	**46.106**	ug/L	2.968	289413	1.469
	Pb	208	**51.633**	ug/L	1.089	357658	1.820
	Th	232	**51.230**	ug/L	0.600	365138	1.858
	U	238	**53.549**	ug/L	0.509	367155	1.868

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			101.8		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			107.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			102.0		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			98.9		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871713
Sample Date/Time: Saturday, July 04, 2009 02:08:59
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871713.960

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.413**	ug/L	18.005	74	0.000
	Be	9	**-0.014**	ug/L	87.231	13	-0.000
	B	11	**11.410**	ug/L	2.847	1456	0.005
	Na	23	**196.484**	ug/L	14.589	238664	0.796
	Mg	24	**6.768**	ug/L	35.565	7335	0.022
	Al	27	**-1.688**	ug/L	174.841	4001	-0.008
	P	31	**-13.511**	ug/L	16.344	2261	-0.005
	K	39	**478.992**	ug/L	12.415	1321593	3.397
	Ca	43	**103.560**	ug/L	12.526	1105	0.002
>	Sc	45		ug/L		261460	261460.293
	Ti	47	**0.374**	ug/L	21.523	300	0.000
	V	51	**0.875**	ug/L	499.196	37277	0.007
	Cr	52	**1.845**	ug/L	15.198	1428	0.015
	Cr	53		ug/L		452497	0.917
	Mn	55	**0.502**	ug/L	3.117	2928	0.007
	Fe	57	**17.241**	ug/L	9.341	6854	0.004
	Co	59	**-0.009**	ug/L	19.189	113	-0.000
	Ni	60	**0.085**	ug/L	16.854	124	0.000
	Cu	63		ug/L		1107	0.004
	Cu	65	**0.738**	ug/L	6.837	504	0.002
	Zn	66	**1.210**	ug/L	5.250	652	0.003
	Zn	67		ug/L		20874	0.054
	Zn	68		ug/L		1535	0.004
>	Ge	74		ug/L		206924	206924.438
	As	75	**1.463**	ug/L	82.957	1183	0.004
	Se	77		ug/L		26733	0.086
	Se	82	**-0.099**	ug/L	615.179	-15	-0.000
	Kr	83		ug/L		100	0.000
	Sr	88	**0.168**	ug/L	2.737	1191	0.007
	Y	89		ug/L		56	0.000
	Zr	90	**0.050**	ug/L	10.647	402	0.001
	Mo	98	**0.011**	ug/L	67.301	97	0.000
	Ag	107	**-0.009**	ug/L	19.044	27	-0.000
	Cd	111	**-0.016**	ug/L	80.178	14	-0.000
	Cd	114		ug/L		46	-0.000
>	In	115		ug/L		151802	151801.561
	Sn	120	**0.086**	ug/L	0.597	400	0.002
	Sb	121	**0.521**	ug/L	6.374	1860	0.009
	Sb	123		ug/L		1436	0.007
	Ba	135		ug/L		113	0.000
	Ba	137	**0.124**	ug/L	7.229	207	0.001
	Ho	165		ug/L		37	0.000
>	Lu	175		ug/L		198551	198551.077
	Tl	205	**0.204**	ug/L	11.977	2208	0.007
	Pb	208	**0.015**	ug/L	17.175	376	0.001
	Th	232	**0.001**	ug/L	154.516	237	0.000
	U	238	**-0.008**	ug/L	15.984	134	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			100.7		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			106.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			103.8		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			100.0		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871714
Sample Date/Time: Saturday, July 04, 2009 02:13:44
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871714.961

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.448**	ug/L	2.658	8179	0.031
	Be	9	**55.232**	ug/L	2.821	7213	0.028
	B	11	**117.193**	ug/L	1.771	13078	0.049
	Na	23	**2167.664**	ug/L	4.374	2328443	8.784
	Mg	24	**1952.516**	ug/L	5.882	1630192	6.224
	Al	27	**1972.369**	ug/L	8.743	2410762	9.189
	P	31	**2028.566**	ug/L	0.716	184335	0.691
	K	39	**2797.093**	ug/L	8.799	5621923	19.835
	Ca	43	**2253.076**	ug/L	1.605	9711	0.034
>	Sc	45		ug/L		261645	261644.667
	Ti	47	**47.681**	ug/L	1.944	10474	0.039
	V	51	**51.842**	ug/L	10.098	145979	0.422
	Cr	52	**54.622**	ug/L	1.563	115899	0.453
	Cr	53		ug/L		440248	0.869
	Mn	55	**53.277**	ug/L	1.534	183552	0.697
	Fe	57	**2218.633**	ug/L	0.848	154461	0.569
	Co	59	**53.851**	ug/L	1.484	138526	0.529
	Ni	60	**53.652**	ug/L	2.489	29393	0.112
	Cu	63		ug/L		69616	0.265
	Cu	65	**55.183**	ug/L	1.096	32573	0.124
	Zn	66	**50.032**	ug/L	2.769	22900	0.108
	Zn	67		ug/L		23549	0.065
	Zn	68		ug/L		17293	0.078
>	Ge	74		ug/L		210905	210905.483
	As	75	**41.306**	ug/L	2.621	24422	0.114
	Se	77		ug/L		24392	0.072
	Se	82	**9.933**	ug/L	4.122	436	0.002
	Kr	83		ug/L		96	-0.000
	Sr	88	**51.858**	ug/L	0.663	307646	2.052
	Y	89		ug/L		68	0.000
	Zr	90	**51.172**	ug/L	1.513	174385	1.162
	Mo	98	**51.989**	ug/L	2.091	80446	0.536
	Ag	107	**52.346**	ug/L	1.186	138236	0.922
	Cd	111	**5.327**	ug/L	0.768	3372	0.022
	Cd	114		ug/L		8006	0.053
>	In	115		ug/L		149857	149857.013
	Sn	120	**50.509**	ug/L	1.754	139323	0.929
	Sb	121	**105.709**	ug/L	2.256	285075	1.900
	Sb	123		ug/L		222758	1.484
	Ba	135		ug/L		36818	0.186
	Ba	137	**54.837**	ug/L	2.246	64492	0.327
	Ho	165		ug/L		39	0.000
>	Lu	175		ug/L		197325	197325.489
	Tl	205	**26.502**	ug/L	6.424	167594	0.844
	Pb	208	**21.162**	ug/L	1.991	147432	0.746
	Th	232	**52.364**	ug/L	1.471	374985	1.899
	U	238	**54.189**	ug/L	1.925	373266	1.891

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			100.7		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			108.5		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			102.5		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.4		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871715
Sample Date/Time: Saturday, July 04, 2009 02:18:29
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881357|5|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871715.962

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	0.088	ug/L	39.985	27	0.000
	Be	9	0.023	ug/L	127.973	18	0.000
	B	11	4.528	ug/L	10.542	696	0.002
	Na	23	29.250	ug/L	31.866	61133	0.119
	Mg	24	1.212	ug/L	59.518	2667	0.004
	Al	27	-4.134	ug/L	20.051	1000	-0.019
	P	31	-12.615	ug/L	6.674	2327	-0.004
	K	39	78.759	ug/L	16.307	576756	0.558
	Ca	43	-0.976	ug/L	1256.023	681	-0.000
>	Sc	45		ug/L		259742	259742.059
	Ti	47	0.039	ug/L	189.291	227	0.000
	V	51	-1.401	ug/L	130.042	32318	-0.011
	Cr	52	0.982	ug/L	22.200	-439	0.008
	Cr	53		ug/L		270763	0.229
	Mn	55	0.079	ug/L	21.046	1475	0.001
	Fe	57	6.706	ug/L	20.748	6108	0.002
	Co	59	-0.013	ug/L	57.943	102	-0.000
	Ni	60	-0.001	ug/L	4268.980	76	-0.000
	Cu	63		ug/L		339	0.001
	Cu	65	0.146	ug/L	16.136	155	0.000
	Zn	66	0.333	ug/L	13.487	254	0.001
	Zn	67		ug/L		10662	0.006
	Zn	68		ug/L		833	0.001
>	Ge	74		ug/L		201666	201666.144
	As	75	1.377	ug/L	30.651	1114	0.004
	Se	77		ug/L		13538	0.023
	Se	82	0.274	ug/L	53.351	1	0.000
	Kr	83		ug/L		85	-0.000
	Sr	88	0.030	ug/L	20.911	341	0.001
	Y	89		ug/L		28	-0.000
	Zr	90	0.020	ug/L	38.278	282	0.000
	Mo	98	0.023	ug/L	83.947	109	0.000
	Ag	107	-0.000	ug/L	1506.644	48	-0.000
	Cd	111	-0.033	ug/L	41.200	3	-0.000
	Cd	114		ug/L		31	-0.000
>	In	115		ug/L		144129	144129.045
	Sn	120	0.014	ug/L	19.877	190	0.000
	Sb	121	0.274	ug/L	10.329	1127	0.005
	Sb	123		ug/L		849	0.004
	Ba	135		ug/L		50	0.000
	Ba	137	0.016	ug/L	73.744	77	0.000
	Ho	165		ug/L		27	-0.000
>	Lu	175		ug/L		194491	194490.676
	Tl	205	3.217	ug/L	14.536	20848	0.102
	Pb	208	-0.005	ug/L	29.663	230	-0.000
	Th	232	0.005	ug/L	85.235	263	0.000
	U	238	-0.007	ug/L	22.726	142	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 02:23:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.963

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.081**	ug/L	1.442	7987	0.031
	Be	9	**54.436**	ug/L	0.560	6988	0.027
	B	11	**104.324**	ug/L	4.827	11451	0.044
	Na	23	**4926.997**	ug/L	2.768	5168576	19.966
	Mg	24	**5362.075**	ug/L	10.902	4385128	17.092
	Al	27	**5265.782**	ug/L	8.220	6302937	24.534
	P	31	**5025.347**	ug/L	3.237	443384	1.712
	K	39	**5388.561**	ug/L	1.542	10249930	38.211
	Ca	43	**5129.567**	ug/L	4.017	20844	0.078
>	Sc	45		ug/L		257159	257158.933
	Ti	47	**50.609**	ug/L	3.501	10905	0.042
	V	51	**49.608**	ug/L	5.804	138668	0.404
	Cr	52	**52.029**	ug/L	4.754	108237	0.431
	Cr	53		ug/L		202983	-0.023
	Mn	55	**52.908**	ug/L	4.659	178945	0.692
	Fe	57	**5322.415**	ug/L	5.120	355868	1.364
	Co	59	**53.194**	ug/L	5.432	134290	0.522
	Ni	60	**51.952**	ug/L	6.034	27935	0.109
	Cu	63		ug/L		64478	0.250
	Cu	65	**52.358**	ug/L	6.783	30322	0.118
	Zn	66	**49.901**	ug/L	2.860	21833	0.108
	Zn	67		ug/L		10838	0.007
	Zn	68		ug/L		15807	0.075
>	Ge	74		ug/L		201592	201592.470
	As	75	**49.186**	ug/L	1.832	27730	0.136
	Se	77		ug/L		9431	0.003
	Se	82	**48.809**	ug/L	1.748	2088	0.010
	Kr	83		ug/L		92	-0.000
	Sr	88	**49.646**	ug/L	2.006	285828	1.964
	Y	89		ug/L		57	0.000
	Zr	90	**49.336**	ug/L	0.747	163182	1.121
	Mo	98	**50.951**	ug/L	1.505	76522	0.526
	Ag	107	**49.791**	ug/L	0.576	127617	0.877
	Cd	111	**49.207**	ug/L	0.196	30034	0.206
	Cd	114		ug/L		72763	0.500
>	In	115		ug/L		145418	145418.478
	Sn	120	**49.271**	ug/L	0.151	131909	0.906
	Sb	121	**50.566**	ug/L	1.641	132580	0.909
	Sb	123		ug/L		103113	0.707
	Ba	135		ug/L		33700	0.171
	Ba	137	**50.903**	ug/L	1.829	59662	0.303
	Ho	165		ug/L		38	0.000
>	Lu	175		ug/L		196644	196643.927
	Tl	205	**42.489**	ug/L	4.160	267054	1.354
	Pb	208	**50.874**	ug/L	0.600	352853	1.793
	Th	232	**51.647**	ug/L	1.236	368573	1.873
	U	238	**52.693**	ug/L	3.568	361645	1.839

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.162				
	Be	9	108.873				
	B	11	104.324				
	Na	23	98.540				
	Mg	24	107.241				
	Al	27	104.273				
	P	31	100.507				
	K	39	107.771				
	Ca	43	102.591				
>	Sc	45		99.0			
	Ti	47	101.217				
	V	51	99.215				
	Cr	52	104.057				
	Cr	53					
	Mn	55	105.817				
	Fe	57	106.448				
	Co	59	106.389				
	Ni	60	103.904				
	Cu	63					
	Cu	65	104.716				
	Zn	66	99.802				
	Zn	67					
	Zn	68					
>	Ge	74		103.7			
	As	75	98.371				
	Se	77					
	Se	82	97.617				
	Kr	83					
	Sr	88	99.292				
	Y	89					
	Zr	90	98.671				
	Mo	98	101.903				
	Ag	107	99.582				
	Cd	111	98.413				
	Cd	114					
>	In	115		99.4			
	Sn	120	98.543				
	Sb	121	101.131				
	Sb	123					
	Ba	135					
	Ba	137	101.807				
	Ho	165					
>	Lu	175		99.0			
	Tl	205	84.978				
	Pb	208	101.749				
	Th	232	103.295				
	U	238	105.387				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits (+/- 10%)
QC Std 6	Tl	205CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 02:28:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.964

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.098**	ug/L	6.922	29	0.000
	Be	9	**0.032**	ug/L	106.556	19	0.000
	B	11	**2.828**	ug/L	19.314	514	0.001
	Na	23	**-3.016**	ug/L	195.199	27360	-0.012
	Mg	24	**0.777**	ug/L	82.791	2334	0.002
	Al	27	**-1.666**	ug/L	101.736	4001	-0.008
	P	31	**-4.392**	ug/L	6.083	3079	-0.001
	K	39	**2.178**	ug/L	438.900	438978	0.015
	Ca	43	**-34.431**	ug/L	10.354	553	-0.001
>	Sc	45		ug/L		261788	261788.050
	Ti	47	**0.052**	ug/L	344.563	231	0.000
	V	51	**-4.128**	ug/L	39.572	26703	-0.034
	Cr	52	**0.812**	ug/L	19.034	-810	0.007
	Cr	53		ug/L		189825	-0.088
	Mn	55	**-0.017**	ug/L	134.421	1154	-0.000
	Fe	57	**10.098**	ug/L	28.516	6381	0.003
	Co	59	**0.010**	ug/L	19.874	162	0.000
	Ni	60	**-0.030**	ug/L	43.534	61	-0.000
	Cu	63		ug/L		147	-0.000
	Cu	65	**0.023**	ug/L	79.367	83	0.000
	Zn	66	**0.004**	ug/L	363.200	112	0.000
	Zn	67		ug/L		7581	-0.010
	Zn	68		ug/L		573	-0.001
>	Ge	74		ug/L		203154	203153.747
	As	75	**1.191**	ug/L	93.365	1014	0.003
	Se	77		ug/L		8420	-0.002
	Se	82	**0.034**	ug/L	630.681	-9	0.000
	Kr	83		ug/L		86	-0.000
	Sr	88	**0.005**	ug/L	69.163	194	0.000
	Y	89		ug/L		27	-0.000
	Zr	90	**0.036**	ug/L	23.860	334	0.001
	Mo	98	**0.079**	ug/L	28.896	192	0.001
	Ag	107	**0.007**	ug/L	22.881	66	0.000
	Cd	111	**0.002**	ug/L	616.736	24	0.000
	Cd	114		ug/L		53	0.000
>	In	115		ug/L		143137	143137.440
	Sn	120	**0.015**	ug/L	61.493	191	0.000
	Sb	121	**0.328**	ug/L	16.068	1260	0.006
	Sb	123		ug/L		966	0.004
	Ba	135		ug/L		43	0.000
	Ba	137	**0.008**	ug/L	94.313	68	0.000
	Ho	165		ug/L		32	-0.000
>	Lu	175		ug/L		195393	195392.902
	Tl	205	**4.291**	ug/L	16.990	27625	0.137
	Pb	208	**0.022**	ug/L	18.893	419	0.001
	Th	232	**0.090**	ug/L	36.089	867	0.003
	U	238	**0.024**	ug/L	26.786	353	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		104.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.4			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232510001
Sample Date/Time: Saturday, July 04, 2009 02:51:42
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\232510001.969

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.163**	ug/L	11.287	37	0.000
	Be	9	**0.002**	ug/L	524.456	15	0.000
	B	11	**25.476**	ug/L	4.320	2922	0.011
	Na	23	**66.128**	ug/L	11.924	98003	0.268
	Mg	24	**1.273**	ug/L	56.110	2667	0.004
	Al	27	**-0.180**	ug/L	717.854	5668	-0.001
	P	31	**-14.055**	ug/L	11.125	2156	-0.005
	K	39	**153.500**	ug/L	2.113	700427	1.088
	Ca	43	**58.890**	ug/L	20.307	901	0.001
>	Sc	45		ug/L		254632	254631.789
	Ti	47	**0.325**	ug/L	34.376	282	0.000
	V	51	**-5.065**	ug/L	72.770	24081	-0.041
	Cr	52	**1.845**	ug/L	4.945	1391	0.015
	Cr	53		ug/L		470728	1.035
	Mn	55	**0.744**	ug/L	2.166	3659	0.010
	Fe	57	**24.887**	ug/L	3.307	7174	0.006
	Co	59	**-0.002**	ug/L	422.030	128	-0.000
	Ni	60	**0.025**	ug/L	122.939	88	0.000
	Cu	63		ug/L		789	0.002
	Cu	65	**0.529**	ug/L	4.187	371	0.001
	Zn	66	**1.073**	ug/L	7.827	617	0.002
	Zn	67		ug/L		20033	0.046
	Zn	68		ug/L		1404	0.003
>	Ge	74		ug/L		215996	215996.320
	As	75	**1.820**	ug/L	154.288	1466	0.005
	Se	77		ug/L		31970	0.104
	Se	82	**-0.199**	ug/L	184.038	-21	-0.000
	Kr	83		ug/L		98	-0.000
	Sr	88	**0.068**	ug/L	6.474	590	0.003
	Y	89		ug/L		68	0.000
	Zr	90	**-0.010**	ug/L	39.807	196	-0.000
	Mo	98	**0.000**	ug/L	13470.178	80	0.000
	Ag	107	**-0.009**	ug/L	21.760	26	-0.000
	Cd	111	**-0.029**	ug/L	48.035	6	-0.000
	Cd	114		ug/L		18	-0.000
>	In	115		ug/L		153105	153105.450
	Sn	120	**0.051**	ug/L	11.172	307	0.001
	Sb	121	**0.211**	ug/L	4.927	1023	0.004
	Sb	123		ug/L		785	0.003
	Ba	135		ug/L		179	0.001
	Ba	137	**0.213**	ug/L	14.544	318	0.001
	Ho	165		ug/L		38	0.000
>	Lu	175		ug/L		202181	202181.035
	Tl	205	**0.276**	ug/L	8.553	2713	0.009
	Pb	208	**0.002**	ug/L	42.468	291	0.000
	Th	232	**-0.018**	ug/L	3.775	105	-0.001
	U	238	**-0.021**	ug/L	8.500	48	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.0		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			111.1		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			104.7		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			101.8		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 02:56:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.970

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.801**	ug/L	5.445	8026	0.031
	Be	9	**55.134**	ug/L	3.125	7024	0.027
	B	11	**100.809**	ug/L	4.621	10999	0.042
	Na	23	**4771.226**	ug/L	10.775	4961833	19.335
	Mg	24	**4998.899**	ug/L	13.415	4065520	15.934
	Al	27	**5143.022**	ug/L	4.516	6119841	23.962
	P	31	**4748.563**	ug/L	2.077	416344	1.618
	K	39	**5216.401**	ug/L	2.018	9866363	36.990
	Ca	43	**4877.992**	ug/L	1.752	19722	0.075
>	Sc	45		ug/L		255243	255243.095
	Ti	47	**48.518**	ug/L	3.148	10392	0.040
	V	51	**47.433**	ug/L	3.919	133254	0.386
	Cr	52	**50.493**	ug/L	2.827	104310	0.419
	Cr	53		ug/L		218872	0.043
	Mn	55	**51.771**	ug/L	1.369	174026	0.677
	Fe	57	**5202.310**	ug/L	3.022	345792	1.333
	Co	59	**51.581**	ug/L	1.501	129440	0.507
	Ni	60	**51.253**	ug/L	0.670	27398	0.107
	Cu	63		ug/L		63800	0.249
	Cu	65	**51.488**	ug/L	1.217	29652	0.116
	Zn	66	**47.822**	ug/L	2.336	21139	0.103
	Zn	67		ug/L		11340	0.009
	Zn	68		ug/L		15422	0.072
>	Ge	74		ug/L		203620	203620.289
	As	75	**48.612**	ug/L	0.907	27689	0.134
	Se	77		ug/L		10143	0.006
	Se	82	**46.113**	ug/L	3.318	1992	0.010
	Kr	83		ug/L		79	-0.000
	Sr	88	**48.234**	ug/L	0.975	276276	1.909
	Y	89		ug/L		58	0.000
	Zr	90	**48.614**	ug/L	3.745	159937	1.104
	Mo	98	**50.109**	ug/L	1.089	74876	0.517
	Ag	107	**49.420**	ug/L	2.232	126001	0.871
	Cd	111	**48.338**	ug/L	1.110	29352	0.203
	Cd	114		ug/L		72102	0.498
>	In	115		ug/L		144688	144687.716
	Sn	120	**48.209**	ug/L	2.308	128383	0.887
	Sb	121	**49.415**	ug/L	1.210	128904	0.888
	Sb	123		ug/L		100068	0.689
	Ba	135		ug/L		33172	0.168
	Ba	137	**49.914**	ug/L	1.558	58763	0.297
	Ho	165		ug/L		42	0.000
>	Lu	175		ug/L		197513	197512.814
	Tl	205	**36.785**	ug/L	2.884	232363	1.172
	Pb	208	**50.881**	ug/L	0.794	354446	1.793
	Th	232	**51.850**	ug/L	2.051	371611	1.881
	U	238	**52.234**	ug/L	1.385	360129	1.823

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	113.601				
	Be	9	110.268				
	B	11	100.809				
	Na	23	95.425				
	Mg	24	99.978				
	Al	27	101.842				
	P	31	94.971				
	K	39	104.328				
	Ca	43	97.560				
>	Sc	45		98.3			
	Ti	47	97.036				
	V	51	94.865				
	Cr	52	100.987				
	Cr	53					
	Mn	55	103.541				
	Fe	57	104.046				
	Co	59	103.162				
	Ni	60	102.506				
	Cu	63					
	Cu	65	102.976				
	Zn	66	95.644				
	Zn	67					
	Zn	68					
>	Ge	74		104.7			
	As	75	97.223				
	Se	77					
	Se	82	92.226				
	Kr	83					
	Sr	88	96.468				
	Y	89					
	Zr	90	97.229				
	Mo	98	100.219				
	Ag	107	98.841				
	Cd	111	96.676				
	Cd	114					
>	In	115		98.9			
	Sn	120	96.419				
	Sb	121	98.829				
	Sb	123					
	Ba	135					
	Ba	137	99.827				
	Ho	165					
>	Lu	175		99.5			
	Tl	205	73.569				
	Pb	208	101.761				
	Th	232	103.701				
	U	238	104.469				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits (+/- 10%)
QC Std 6	Be	9CCV is out of limits (+/- 10%)
QC Std 6	Tl	205CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 03:01:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.971

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.051**	ug/L	25.397	21	0.000
	Be	9	**0.024**	ug/L	22.382	17	0.000
	B	11	**2.351**	ug/L	22.913	446	0.001
	Na	23	**-0.486**	ug/L	331.587	29030	-0.002
	Mg	24	**0.473**	ug/L	265.593	2000	0.002
	Al	27	**-2.975**	ug/L	43.946	2334	-0.014
	P	31	**-4.816**	ug/L	38.669	2934	-0.002
	K	39	**1.849**	ug/L	567.689	423187	0.013
	Ca	43	**-35.631**	ug/L	12.561	529	-0.001
>	Sc	45		ug/L		252553	252553.265
	Ti	47	**-0.021**	ug/L	843.142	208	-0.000
	V	51	**-2.920**	ug/L	60.984	28308	-0.024
	Cr	52	**0.724**	ug/L	16.144	-968	0.006
	Cr	53		ug/L		188018	-0.069
	Mn	55	**-0.013**	ug/L	36.906	1128	-0.000
	Fe	57	**9.704**	ug/L	46.525	6132	0.002
	Co	59	**0.005**	ug/L	139.610	144	0.000
	Ni	60	**-0.012**	ug/L	207.010	68	-0.000
	Cu	63		ug/L		137	-0.000
	Cu	65	**0.002**	ug/L	1045.413	69	0.000
	Zn	66	**0.019**	ug/L	205.630	117	0.000
	Zn	67		ug/L		7445	-0.010
	Zn	68		ug/L		571	-0.001
>	Ge	74		ug/L		199852	199851.899
	As	75	**1.252**	ug/L	41.240	1036	0.003
	Se	77		ug/L		8405	-0.002
	Se	82	**0.284**	ug/L	39.148	2	0.000
	Kr	83		ug/L		77	-0.000
	Sr	88	**0.005**	ug/L	49.749	195	0.000
	Y	89		ug/L		24	-0.000
	Zr	90	**0.033**	ug/L	25.328	320	0.001
	Mo	98	**0.070**	ug/L	37.724	177	0.001
	Ag	107	**0.009**	ug/L	55.596	71	0.000
	Cd	111	**0.005**	ug/L	160.410	26	0.000
	Cd	114		ug/L		60	0.000
>	In	115		ug/L		141761	141761.344
	Sn	120	**0.017**	ug/L	26.674	194	0.000
	Sb	121	**0.265**	ug/L	25.204	1088	0.005
	Sb	123		ug/L		856	0.004
	Ba	135		ug/L		40	0.000
	Ba	137	**0.006**	ug/L	47.761	67	0.000
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194922	194922.260
	Tl	205	**3.450**	ug/L	14.724	22357	0.110
	Pb	208	**0.018**	ug/L	26.405	386	0.001
	Th	232	**0.085**	ug/L	38.072	832	0.003
	U	238	**0.023**	ug/L	14.589	346	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		97.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.2			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Saturday, July 04, 2009 11:02:58
Sample Description:
Method File: C:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.1057
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1681.5	1681.499	43.815	2.6
	Mg	24.0	16793.5	16793.469	385.861	2.3
	Co	58.9	32721.8	32721.842	598.507	1.8
	Rh	102.9	71511.8	71511.777	1135.666	1.6
	In	114.9	91608.9	91608.866	1676.072	1.8
	Pb	208.0	41004.2	41004.167	382.874	0.9
⌈>	Ba	137.9	85130.0	85129.980	1041.796	1.2
⌊	Ba++	69.0	1858.6	0.022	0.000	1.9
⌈>	Ce	139.9	109273.8	109273.813	1682.715	1.5
⌊	CeO	155.9	1508.8	0.014	0.000	2.3
	Bkgd	220.0	10.1	10.100	1.673	16.6

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-2000.00	Analog Stage Voltage
1950.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	7.3	1853.1
Co	59	17	8.3	33908.2
In	115	17	9.3	120912.5

ICPMS#3 Instrument Tuning Report

File Name: 090704.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	582	2070	0.655
Be	9.0	9.0	2046	2070	0.628
Mg	24.0	24.0	5708	2120	0.577
Mg	25.0	25.0	5927	2050	0.652
Mg	26.0	26.0	6188	2130	0.633
Co	58.9	58.9	14199	2110	0.679
Rh	102.9	103.0	24906	2170	0.655
In	114.9	114.9	27822	2180	0.658
Ce	139.9	139.9	33907	2200	0.688
Pb	206.0	205.9	49980	2270	0.703
Pb	207.0	207.0	50269	2300	0.673
Pb	208.0	208.0	50486	2320	0.628
U	238.1	238.0	57832	2340	0.668

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Saturday, July 04, 2009 14:04:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Blank.1058

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		221755	
	Tl	205		ug/L		93	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Simple Linear	
Tl	205	Simple Linear	

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Lu	175					
Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 04, 2009 14:08:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Standard 1.1059

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		216188	216188.484
⌊	Tl	205	10.000	ug/L	0.595	78913	0.365

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Lu	175					
Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 04, 2009 14:11:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Standard 2.1060

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		208064	208064.435
	Tl	205	99.979	ug/L	1.276	742955	3.571

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175					
[	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 04, 2009 14:15:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 1.1061

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		205540	205540.181
	Tl	205	49.707	ug/L	0.765	364996	1.775

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175			92.7		
⌊	Tl	205	99.414				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 04, 2009 14:19:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 2.1062

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		212674	212673.926
⌊	Tl	205	0.047	ug/L	9.653	446	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		95.9			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 04, 2009 14:22:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 3.1063

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		211516	211516.206
	Tl	205	0.981	ug/L	0.855	7500	0.035

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			95.4		
	Tl	205	98.110				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 04, 2009 14:26:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 4.1064

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		203137	203136.803
	Tl	205	0.034	ug/L	1.253	332	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
> Lu	175		91.6			
Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 04, 2009 14:30:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 5.1065

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		200750	200749.728
	Tl	205	18.343	ug/L	1.086	131602	0.655

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			90.5		
	Tl	205	91.714				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 14:33:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1066

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		206829	206829.015
[	Tl	205	48.863	ug/L	1.236	361023	1.745

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			93.3		
	Tl	205	97.726				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 14:37:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1067

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		211763	211762.861
	Tl	205	0.054	ug/L	3.235	494	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		95.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871711
Sample Date/Time: Saturday, July 04, 2009 14:41:23
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871711.1068

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		211249	211249.053
[	Tl	205	0.016	ug/L	7.494	208	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		95.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871712
Sample Date/Time: Saturday, July 04, 2009 14:45:10
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871712.1069

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		212039	212039.147
	Tl	205	42.993	ug/L	0.441	325701	1.536

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		95.6			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871713
Sample Date/Time: Saturday, July 04, 2009 14:52:44
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871713.1071

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		213947	213947.221
[	Tl	205	0.039	ug/L	9.530	385	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		96.5			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871714
Sample Date/Time: Saturday, July 04, 2009 14:56:30
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871714.1072

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		209571	209570.521
	Tl	205	29.263	ug/L	0.556	219126	1.045

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		94.5			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871715
Sample Date/Time: Saturday, July 04, 2009 15:00:15
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881357|5|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871715.1073

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		208353	208352.504
	Tl	205	0.818	ug/L	1.503	6174	0.029

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		94.0			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 15:03:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1074

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		202248	202248.130
[	Tl	205	48.451	ug/L	1.527	350035	1.731

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		91.2			
	Tl	205	96.903				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 15:07:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1075

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		209532	209532.009
	Tl	205	0.370	ug/L	2.492	2860	0.013

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		94.5			
[	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232510001
Sample Date/Time: Saturday, July 04, 2009 15:26:36
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\232510001.1080

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		208607	208606.613
	Tl	205	0.051	ug/L	8.469	465	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		94.1			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 15:30:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1081

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		204551	204550.807
⌊	Tl	205	**46.976**	ug/L	1.330	343271	1.678

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			92.2		
	Tl	205	93.953				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 15:34:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1082

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		206366	206365.675
	Tl	205	0.205	ug/L	3.291	1600	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		93.1			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: WATER
Method Description: 7470A, 245.2, ILM04 ANALYST JXL1
Element: Hg

Date: 07/02/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 070209W1.SIF Results Data Set Name: 070209W1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/02/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0035	0.0035	08:06:52	No
2			0.0035	0.0035	08:07:27	No
Mean:			0.0035			
SD :			0.0000			
%RSD:						

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/02/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0024	0.0059	08:08:50	No
2			0.0024	0.0059	08:09:25	No
Mean:			0.0024			
SD :			0.0000			
%RSD:						

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.01208
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/02/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0065	0.0099	08:10:48	No
2			0.0062	0.0097	08:11:23	No
Mean:			0.0064			
SD :			0.0002			
%RSD:			2.3730			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99975 Slope: 0.01274
Intercept : -0.00005

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/02/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0263	0.0297	08:12:48	No
2			0.0260	0.0294	08:13:22	No
Mean:			0.0261			
SD :			0.0002			
%RSD:			0.8210			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99997 Slope: 0.01312
Intercept : -0.00013

==========

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/02/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0654	0.0689	08:14:47	No
2			0.0647	0.0682	08:15:22	No
Mean:			0.0651			
SD :			0.0005			
%RSD:			0.7186			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99999 Slope: 0.01304
Intercept : -0.00009

==========

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/02/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1313	0.1348	08:16:48	No
2			0.1307	0.1341	08:17:23	No
Mean:			0.1310			
SD :			0.0005			
%RSD:			0.3773			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 1.00000 Slope: 0.01310
Intercept : -0.00016

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0035	---	----	----	----
S0.2	0.0024	0.200	0.196	0.0000	----
S0.5	0.0064	0.500	0.497	0.0002	2.4
S2.0	0.0261	2.000	2.006	0.0002	0.8
S5.0	0.0651	5.000	4.979	0.0005	0.7
S10	0.1310	10.000	10.01	0.0005	0.4

Correlation Coefficient: 1.00000 Slope: 0.01310 Intercept: -0.0002

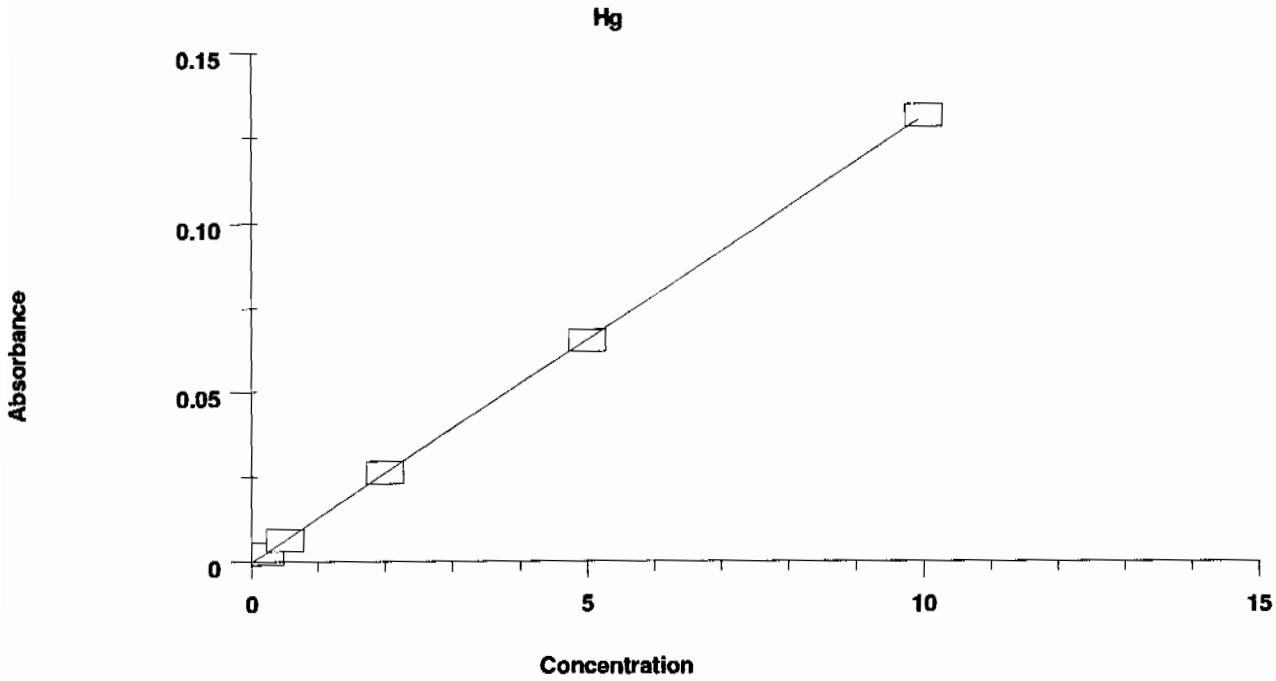

==========

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/02/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.225	5.225	0.0683	0.0718	08:18:51	No
2	5.236	5.236	0.0685	0.0719	08:19:27	No
Mean:	5.231	5.231	0.0684			
SD :	0.0077	0.0077	0.0001			
%RSD:	0.1	0.1	0.1470			

QC value within specified limits.

==========

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/02/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0004	0.0031	08:20:49	No
2	-0.021	-0.021	-0.0004	0.0030	08:21:24	No
Mean:	-0.019	-0.019	-0.0004			
SD :	0.0022	0.0022	0.0000			
%RSD:	11.5	11.5	7.0604			

QC value within specified limits.

==========

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/02/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.232	0.232	0.0029	0.0063	08:22:47	No
2	0.224	0.224	0.0028	0.0062	08:23:22	No
Mean:	0.228	0.228	0.0028			
SD :	0.0056	0.0056	0.0001			
%RSD:	2.4	2.4	2.5791			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.883	4.883	0.0638	0.0673	08:24:47	No
2	4.821	4.821	0.0630	0.0665	08:25:21	No
Mean:	4.852	4.852	0.0634			
SD :	0.0441	0.0441	0.0006			
%RSD:	0.9	0.9	0.9102			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.008	-0.008	-0.0003	0.0032	08:26:49	No
2	-0.012	-0.012	-0.0003	0.0031	08:27:24	No
Mean:	-0.010	-0.010	-0.0003			
SD :	0.0032	0.0032	0.0000			
%RSD:	31.8	31.8	14.4763			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/02/2009
Sample ID: 1201870347|i||880856|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.032	-0.032	-0.0006	0.0029	08:28:49	No
2	-0.048	-0.048	-0.0008	0.0027	08:29:25	No
Mean:	-0.040	-0.040	-0.0007			
SD :	0.0112	0.0112	0.0001			
%RSD:	28.3	28.3	21.6993			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/02/2009
Sample ID: 1201870348|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.008	2.008	0.0261	0.0296	08:30:49	No
2	1.976	1.976	0.0257	0.0292	08:31:24	No
Mean:	1.992	1.992	0.0259			
SD :	0.0223	0.0223	0.0003			
%RSD:	1.1	1.1	1.1248			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/02/2009
Sample ID: 232341001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.041	-0.041	-0.0007	0.0028	08:32:50	No
2	-0.057	-0.057	-0.0009	0.0026	08:33:24	No
Mean:	-0.049	-0.049	-0.0008			
SD :	0.0112	0.0112	0.0001			
%RSD:	23.1	23.1	18.5514			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/02/2009
Sample ID: 1201870349|i|||DUP

%RSD: 14.9 14.9 11.8685

==========

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/02/2009
Sample ID: 1201872353|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.963	1.963	0.0256	0.0290	08:46:39	No
2	1.968	1.968	0.0256	0.0291	08:47:13	No
Mean:	1.966	1.966	0.0256			
SD :	0.0033	0.0033	0.0000			
%RSD:	0.2	0.2	0.1702			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.785	4.785	0.0625	0.0660	08:48:37	No
2	4.766	4.766	0.0623	0.0657	08:49:11	No
Mean:	4.775	4.775	0.0624			
SD :	0.0139	0.0139	0.0002			
%RSD:	0.3	0.3	0.2925			

QC value within specified limits.

==========

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.031	-0.031	-0.0006	0.0029	08:50:39	No
2	-0.034	-0.034	-0.0006	0.0029	08:51:14	No
Mean:	-0.033	-0.033	-0.0006			
SD :	0.0018	0.0018	0.0000			
%RSD:	5.5	5.5	4.0500			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/02/2009
Sample ID: 231723001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	-0.0010	0.0024	08:52:40	No
2	-0.080	-0.080	-0.0012	0.0023	08:53:15	No
Mean:	-0.073	-0.073	-0.0011			
SD :	0.0091	0.0091	0.0001			
%RSD:	12.4	12.4	10.6120			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/02/2009
Sample ID: 1201871389|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.542	1.542	0.0201	0.0235	08:54:38	No
2	1.548	1.548	0.0201	0.0236	08:55:13	No
Mean:	1.545	1.545	0.0201			
SD :	0.0038	0.0038	0.0001			
%RSD:	0.2	0.2	0.2492			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/02/2009
Sample ID: 1201872354|i|||DUP

%RSD: 7.6 7.6 6.1821

==========

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/02/2009
Sample ID: 231723006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.063	-0.063	-0.0010	0.0025	09:08:39	No
2	-0.061	-0.061	-0.0010	0.0025	09:09:14	No
Mean:	-0.062	-0.062	-0.0010			
SD :	0.0011	0.0011	0.0000			
%RSD:	1.8	1.8	1.4924			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/02/2009
Sample ID: 231727001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.072	-0.072	-0.0011	0.0024	09:10:41	No
2	-0.070	-0.070	-0.0011	0.0024	09:11:16	No
Mean:	-0.071	-0.071	-0.0011			
SD :	0.0013	0.0013	0.0000			
%RSD:	1.8	1.8	1.5214			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.773	4.773	0.0624	0.0658	09:12:43	No
2	4.755	4.755	0.0622	0.0656	09:13:18	No
Mean:	4.764	4.764	0.0623			
SD :	0.0125	0.0125	0.0002			
%RSD:	0.3	0.3	0.2638			

QC value within specified limits.

==========

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.024	-0.024	-0.0005	0.0030	09:14:46	No
2	-0.036	-0.036	-0.0006	0.0028	09:15:21	No
Mean:	-0.030	-0.030	-0.0005			
SD :	0.0082	0.0082	0.0001			
%RSD:	27.4	27.4	19.5797			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/02/2009
Sample ID: 231727002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.016	-0.016	-0.0004	0.0031	09:16:46	No
2	-0.024	-0.024	-0.0005	0.0030	09:17:21	No
Mean:	-0.020	-0.020	-0.0004			
SD :	0.0057	0.0057	0.0001			
%RSD:	28.3	28.3	17.7366			

==========

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/02/2009
Sample ID: 231727003|i|||

%RSD: 44.5 44.5 14.3043

==========

Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 07/02/2009
Sample ID: 231732003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.006	-0.006	-0.0002	0.0032	09:30:20	No
2	-0.018	-0.018	-0.0004	0.0031	09:30:55	No
Mean:	-0.012	-0.012	-0.0003			
SD :	0.0085	0.0085	0.0001			
%RSD:	69.5	69.5	35.1341			

==========

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 07/02/2009
Sample ID: 231732004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0000	0.0034	09:32:19	No
2	-0.003	-0.003	-0.0002	0.0033	09:32:54	No
Mean:	0.003	0.003	-0.0001			
SD :	0.0084	0.0084	0.0001			
%RSD:	264.7	264.7	94.3912			

==========

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 07/02/2009
Sample ID: 231732005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	-0.0004	0.0030	09:34:18	No
2	-0.034	-0.034	-0.0006	0.0029	09:34:53	No
Mean:	-0.027	-0.027	-0.0005			
SD :	0.0103	0.0103	0.0001			
%RSD:	38.0	38.0	26.3442			

==========

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.761	4.761	0.0622	0.0657	09:36:18	No
2	4.778	4.778	0.0625	0.0659	09:36:53	No
Mean:	4.769	4.769	0.0623			
SD :	0.0124	0.0124	0.0002			
%RSD:	0.3	0.3	0.2608			

QC value within specified limits.

==========

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.023	-0.023	-0.0005	0.0030	09:38:22	No
2	-0.032	-0.032	-0.0006	0.0029	09:38:57	No
Mean:	-0.027	-0.027	-0.0005			
SD :	0.0068	0.0068	0.0001			
%RSD:	25.0	25.0	17.3712			

QC value within specified limits.

==========

Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 07/02/2009
Sample ID: 231732006|i|||

%RSD: 32.2 32.2 18.1163

==========

Element: Hg Seq. No.: 54 AS Loc.: 48 Date: 07/02/2009
Sample ID: 1201872366|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.024	2.024	0.0264	0.0298	09:52:27	No
2	2.014	2.014	0.0262	0.0297	09:53:02	No
Mean:	2.019	2.019	0.0263			
SD :	0.0072	0.0072	0.0001			
%RSD:	0.4	0.4	0.3580			

==========

Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 07/02/2009
Sample ID: 1201872367|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0012	0.0023	09:54:21	No
2	-0.082	-0.082	-0.0012	0.0022	09:54:56	No
Mean:	-0.079	-0.079	-0.0012			
SD :	0.0042	0.0042	0.0001			
%RSD:	5.3	5.3	4.6033			

==========

Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 07/02/2009
Sample ID: 232604003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.026	-0.026	-0.0005	0.0030	09:56:16	No
2	-0.025	-0.025	-0.0005	0.0030	09:56:51	No
Mean:	-0.025	-0.025	-0.0005			
SD :	0.0005	0.0005	0.0000			
%RSD:	2.0	2.0	1.3807			

==========

Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 07/02/2009
Sample ID: 232604004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.029	-0.029	-0.0005	0.0029	09:58:11	No
2	-0.034	-0.034	-0.0006	0.0029	09:58:46	No
Mean:	-0.032	-0.032	-0.0006			
SD :	0.0038	0.0038	0.0001			
%RSD:	12.1	12.1	8.7533			

==========

Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.824	4.824	0.0631	0.0665	10:00:10	No
2	4.809	4.809	0.0629	0.0663	10:00:45	No
Mean:	4.816	4.816	0.0630			
SD :	0.0111	0.0111	0.0001			
%RSD:	0.2	0.2	0.2305			

QC value within specified limits.

==========

Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.028	-0.028	-0.0005	0.0029	10:02:14	No
2	-0.033	-0.033	-0.0006	0.0029	10:02:49	No
Mean:	-0.030	-0.030	-0.0006			
SD :	0.0038	0.0038	0.0000			
%RSD:	12.4	12.4	8.9172			

QC value within specified limits.

==========

Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 07/02/2009
Sample ID: 232604005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.039	-0.039	-0.0007	0.0028	10:04:14	No
2	-0.045	-0.045	-0.0007	0.0027	10:04:49	No
Mean:	-0.042	-0.042	-0.0007			
SD :	0.0040	0.0040	0.0001			
%RSD:	9.5	9.5	7.4059			

==========

Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 07/02/2009
Sample ID: 1201872375|i||881662|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	-0.0004	0.0030	10:06:11	No
2	-0.029	-0.029	-0.0005	0.0029	10:06:46	No
Mean:	-0.025	-0.025	-0.0005			
SD :	0.0065	0.0065	0.0001			
%RSD:	26.6	26.6	17.8750			

==========

Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 07/02/2009
Sample ID: 1201872376|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.992	1.992	0.0259	0.0294	10:08:08	No
2	1.968	1.968	0.0256	0.0291	10:08:43	No
Mean:	1.980	1.980	0.0258			
SD :	0.0171	0.0171	0.0002			
%RSD:	0.9	0.9	0.8681			

==========

Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 07/02/2009
Sample ID: 231763001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.019	-0.019	-0.0004	0.0030	10:10:06	No
2	-0.045	-0.045	-0.0007	0.0027	10:10:41	No
Mean:	-0.032	-0.032	-0.0006			
SD :	0.0179	0.0179	0.0002			
%RSD:	55.8	55.8	40.5951			

==========

Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 07/02/2009
Sample ID: 1201872377|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.027	-0.027	-0.0005	0.0029	10:12:04	No
2	-0.034	-0.034	-0.0006	0.0029	10:12:38	No
Mean:	-0.030	-0.030	-0.0006			
SD :	0.0046	0.0046	0.0001			

%RSD: 15.1 15.1 10.8186

Element: Hg Seq. No.: 65 AS Loc.: 57 Date: 07/02/2009
Sample ID: 1201872378|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.136	2.136	0.0278	0.0313	10:14:03	No
2	2.111	2.111	0.0275	0.0310	10:14:37	No
Mean:	2.124	2.124	0.0277			
SD :	0.0179	0.0179	0.0002			
%RSD:	0.8	0.8	0.8466			

Element: Hg Seq. No.: 66 AS Loc.: 58 Date: 07/02/2009
Sample ID: 1201872379|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.093	-0.093	-0.0014	0.0021	10:16:01	No
2	-0.097	-0.097	-0.0014	0.0020	10:16:36	No
Mean:	-0.095	-0.095	-0.0014			
SD :	0.0030	0.0030	0.0000			
%RSD:	3.1	3.1	2.7945			

Element: Hg Seq. No.: 67 AS Loc.: 59 Date: 07/02/2009
Sample ID: 231763002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.003	0.003	-0.0001	0.0033	10:18:00	No
2	-0.010	-0.010	-0.0003	0.0032	10:18:35	No
Mean:	-0.004	-0.004	-0.0002			
SD :	0.0098	0.0098	0.0001			
%RSD:	277.5	277.5	63.0283			

Element: Hg Seq. No.: 68 AS Loc.: 60 Date: 07/02/2009
Sample ID: 231763003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0004	0.0031	10:20:00	No
2	-0.021	-0.021	-0.0004	0.0030	10:20:35	No
Mean:	-0.019	-0.019	-0.0004			
SD :	0.0021	0.0021	0.0000			
%RSD:	10.6	10.6	6.5449			

Element: Hg Seq. No.: 69 AS Loc.: 61 Date: 07/02/2009
Sample ID: 231763004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0000	0.0034	10:22:00	No
2	-0.038	-0.038	-0.0007	0.0028	10:22:35	No
Mean:	-0.015	-0.015	-0.0003			
SD :	0.0333	0.0333	0.0004			
%RSD:	229.6	229.6	125.6828			

Element: Hg Seq. No.: 70 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	4.826	4.826	0.0631	0.0665	10:24:01	No
2	4.773	4.773	0.0624	0.0658	10:24:37	No
Mean:	4.800	4.800	0.0627			
SD :	0.0374	0.0374	0.0005			
%RSD:	0.8	0.8	0.7802			

QC value within specified limits.

Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	-0.0009	0.0026	10:26:05	No
2	-0.049	-0.049	-0.0008	0.0027	10:26:40	No
Mean:	-0.051	-0.051	-0.0008			
SD :	0.0031	0.0031	0.0000			
%RSD:	6.1	6.1	4.9132			

QC value within specified limits.

Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 07/02/2009
Sample ID: 231763005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	-0.0010	0.0024	10:28:07	No
2	-0.068	-0.068	-0.0011	0.0024	10:28:42	No
Mean:	-0.068	-0.068	-0.0010			
SD :	0.0008	0.0008	0.0000			
%RSD:	1.1	1.1	0.9406			

Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 07/02/2009
Sample ID: 231763006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.061	-0.061	-0.0010	0.0025	10:30:05	No
2	-0.059	-0.059	-0.0009	0.0025	10:30:40	No
Mean:	-0.060	-0.060	-0.0009			
SD :	0.0015	0.0015	0.0000			
%RSD:	2.4	2.4	2.0349			

Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 07/02/2009
Sample ID: 231763007|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0012	0.0023	10:32:00	No
2	-0.077	-0.077	-0.0012	0.0023	10:32:35	No
Mean:	-0.076	-0.076	-0.0012			
SD :	0.0001	0.0001	0.0000			
%RSD:	0.1	0.1	0.1295			

Element: Hg Seq. No.: 75 AS Loc.: 65 Date: 07/02/2009
Sample ID: 231763008|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.064	-0.064	-0.0010	0.0025	10:33:55	No
2	-0.073	-0.073	-0.0011	0.0023	10:34:30	No
Mean:	-0.069	-0.069	-0.0011			
SD :	0.0062	0.0062	0.0001			

#	µg/L	µg/L	Signal	Height		Stored
1	2.016	2.016	0.0263	0.0297	10:45:33	No
2	1.985	1.985	0.0259	0.0293	10:46:08	No
Mean:	2.001	2.001	0.0261			
SD :	0.0217	0.0217	0.0003			
%RSD:	1.1	1.1	1.0889			

==========

Element: Hg Seq. No.: 82 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.826	4.826	0.0631	0.0665	10:47:34	No
2	4.823	4.823	0.0630	0.0665	10:48:09	No
Mean:	4.824	4.824	0.0631			
SD :	0.0018	0.0018	0.0000			
%RSD:						

QC value within specified limits.

==========

Element: Hg Seq. No.: 83 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	-0.0009	0.0026	10:49:37	No
2	-0.060	-0.060	-0.0009	0.0025	10:50:12	No
Mean:	-0.057	-0.057	-0.0009			
SD :	0.0048	0.0048	0.0001			
%RSD:	8.4	8.4	6.9349			

QC value within specified limits.

==========

Element: Hg Seq. No.: 84 AS Loc.: 72 Date: 07/02/2009
Sample ID: 1201871796|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.110	-0.110	-0.0016	0.0019	10:51:37	No
2	-0.117	-0.117	-0.0017	0.0018	10:52:12	No
Mean:	-0.113	-0.113	-0.0016			
SD :	0.0051	0.0051	0.0001			
%RSD:	4.5	4.5	4.0716			

==========

Element: Hg Seq. No.: 85 AS Loc.: 73 Date: 07/02/2009
Sample ID: 1201871797|i||881396|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.077	-0.077	-0.0012	0.0023	10:53:36	No
2	-0.090	-0.090	-0.0013	0.0021	10:54:11	No
Mean:	-0.084	-0.084	-0.0013			
SD :	0.0091	0.0091	0.0001			
%RSD:	10.8	10.8	9.4415			

==========

Element: Hg Seq. No.: 86 AS Loc.: 74 Date: 07/02/2009
Sample ID: 1201871798|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.001	2.001	0.0261	0.0295	10:55:36	No
2	1.982	1.982	0.0258	0.0293	10:56:11	No
Mean:	1.991	1.991	0.0259			
SD :	0.0132	0.0132	0.0002			

%RSD: 0.7 0.7 0.6679

==========

Element: Hg Seq. No.: 87 AS Loc.: 75 Date: 07/02/2009
Sample ID: 232432001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.048	-0.048	-0.0008	0.0027	10:57:36	No
2	-0.056	-0.056	-0.0009	0.0026	10:58:12	No
Mean:	-0.052	-0.052	-0.0008			
SD :	0.0052	0.0052	0.0001			
%RSD:	9.9	9.9	8.0619			

==========

Element: Hg Seq. No.: 88 AS Loc.: 76 Date: 07/02/2009
Sample ID: 232506001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.042	-0.042	-0.0007	0.0028	10:59:38	No
2	-0.051	-0.051	-0.0008	0.0026	11:00:13	No
Mean:	-0.046	-0.046	-0.0008			
SD :	0.0063	0.0063	0.0001			
%RSD:	13.6	13.6	10.7799			

==========

Element: Hg Seq. No.: 89 AS Loc.: 77 Date: 07/02/2009
Sample ID: 232506002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.061	-0.061	-0.0010	0.0025	11:01:39	No
2	-0.064	-0.064	-0.0010	0.0025	11:02:14	No
Mean:	-0.063	-0.063	-0.0010			
SD :	0.0018	0.0018	0.0000			
%RSD:	2.9	2.9	2.4024			

==========

Element: Hg Seq. No.: 90 AS Loc.: 78 Date: 07/02/2009
Sample ID: 232510001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.046	-0.046	-0.0008	0.0027	11:03:36	No
2	-0.073	-0.073	-0.0011	0.0023	11:04:11	No
Mean:	-0.060	-0.060	-0.0009			
SD :	0.0189	0.0189	0.0002			
%RSD:	31.7	31.7	26.3588			

==========

Element: Hg Seq. No.: 91 AS Loc.: 79 Date: 07/02/2009
Sample ID: 1201871799|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.082	-0.082	-0.0012	0.0022	11:05:31	No
2	-0.093	-0.093	-0.0014	0.0021	11:06:06	No
Mean:	-0.088	-0.088	-0.0013			
SD :	0.0079	0.0079	0.0001			
%RSD:	9.0	9.0	7.8881			

==========

Element: Hg Seq. No.: 92 AS Loc.: 80 Date: 07/02/2009
Sample ID: 1201871800|i|||MS

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	2.050	2.050	0.0267	0.0302	11:07:26	No
2	2.029	2.029	0.0264	0.0299	11:08:01	No
Mean:	2.040	2.040	0.0266			
SD :	0.0148	0.0148	0.0002			
%RSD:	0.7	0.7	0.7307			

==========

Element: Hg Seq. No.: 93 AS Loc.: 81 Date: 07/02/2009
Sample ID: 1201871801|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.126	-0.126	-0.0018	0.0017	11:09:21	No
2	-0.126	-0.126	-0.0018	0.0017	11:09:55	No
Mean:	-0.126	-0.126	-0.0018			
SD :	0.0004	0.0004	0.0000			
%RSD:	0.3	0.3	0.2773			

==========

Element: Hg Seq. No.: 94 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.813	4.813	0.0629	0.0664	11:11:19	No
2	4.826	4.826	0.0631	0.0665	11:11:55	No
Mean:	4.820	4.820	0.0630			
SD :	0.0094	0.0094	0.0001			
%RSD:	0.2	0.2	0.1953			

QC value within specified limits.

==========

Element: Hg Seq. No.: 95 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.070	-0.070	-0.0011	0.0024	11:13:23	No
2	-0.077	-0.077	-0.0012	0.0023	11:13:57	No
Mean:	-0.074	-0.074	-0.0011			
SD :	0.0049	0.0049	0.0001			
%RSD:	6.7	6.7	5.7719			

QC value within specified limits.

==========

Element: Hg Seq. No.: 96 AS Loc.: 82 Date: 07/02/2009
Sample ID: 1201871638|i||881660|TB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	-0.0009	0.0026	11:15:21	No
2	-0.070	-0.070	-0.0011	0.0024	11:15:56	No
Mean:	-0.064	-0.064	-0.0010			
SD :	0.0090	0.0090	0.0001			
%RSD:	14.2	14.2	11.9285			

==========

Element: Hg Seq. No.: 97 AS Loc.: 83 Date: 07/02/2009
Sample ID: 1201872368|i|||MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.079	-0.079	-0.0012	0.0023	11:17:17	No
2	-0.086	-0.086	-0.0013	0.0022	11:17:51	No
Mean:	-0.083	-0.083	-0.0012			
SD :	0.0048	0.0048	0.0001			

Miscellaneous

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881353

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871707	UI090622-01	.25	mL
LCS	1201871707	UI090622-06	.25	mL
MS	1201871709	UI090622-01	.25	mL
MS	1201871709	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871706		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
LCS	1201871707		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232370001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232425001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232432001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506002		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232510001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
DUP	1201871708	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
MS	1201871709	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SDILT	1201871710	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881356

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871712	UI090622-A	.5	mL
LCS	1201871712	UI090622-B	.5	mL
MS	1201871714	UI090612-A	.5	mL
MS	1201871714	UI090612-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871711		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
LCS	1201871712		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232370001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
DUP	1201871713	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
MS	1201871714	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SDILT	1201871715	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232425001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232432001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506002		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232510001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 881395

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871798	WHG090701-13	.2	mL
MS	1201871800	WHG090701-13	.2	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871797		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
LCS	1201871798		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232432001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232506001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232506002		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232510001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
DUP	1201871799	232510001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
MS	1201871800	232510001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SDILT	1201871801	232510001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143839	1 mL	Sulfuric Acid, Concentrated
1136798-1	.5 mL	NITRIC ACID
1125381-C	1.5 mL	5% Potassium Persulfate
1144332-C	3 mL	5% KMnO4 solution
1144356-C	1 mL	Hg reducing agent
WHG090701-06	500 uL	Mercury Working 2nd Source 5.0/ICV
WHG090701-01	20 uL	Mercury Working 1st Source CAL 0.2/CRA
WHG090701-02	50 uL	Mercury Working 1st Source CAL 0.5
WHG090701-05	1 mL	Mercury Working 1st Source CAL 10.0
WHG090701-03	200 uL	Mercury Working 1st Source CAL 2.0
WHG090701-04	500 uL	Mercury Working 1st Source CAL 5.0/CCV

Comments: Digestion Start Date: 01-JUL-09 11:35
Digestion End Date: 01-JUL-09 13:35

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
05-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3005/6020	Liquid	LANL
Batch ID:	**Sample Numbers:**		
881357	See Below		

Potentially affected work order(s)(SDG):232370(09-2452-1),232425(09-2473-1),232432(09-2478-1),232506(09-2498-1),232510(09-2500-1)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201871714MS	The matrix spike recovery failed outside of the control limits for Tl due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Paul Boyd 05-JUL-09

Data Validator/Group Leader:

Kristen Parson 17-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090121-40 **Opened:** 22-JAN-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 20-JAN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 22-JAN-10 **Lot Number :** 1014592
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	7.5 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	50 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	7.5 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	75 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L

Analyte	Concentration	Analyte	Concentration
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Standard Logbook

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-11 **Opened:** 10-JUN-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 10-JUN-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 10-JUN-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.12 **Opened:** 30-JUN-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 01-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090612-A **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE liquid Spike Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	4 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	.5 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L

Analyte	Concentration	Analyte	Concentration
Iron	200 mg/L	Lead	2 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	1 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	5 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090612-B **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE Liquid Spike Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L

Analyte	Concentration	Analyte	Concentration
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL

Analyte	Concentration	Analyte	Concentration
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090622-A **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090622-B **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Standard Logbook

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090701-01 **Opened:** 01-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 01-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 02-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L

Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090701-02 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 01-JUL-09
Type: Intermediate **Expires:** 02-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090701-01 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.2CRA **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

Serial ID: WHG090701-02 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.5 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG090701-03 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL2.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Serial ID: WHG090701-04 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL5.0CCV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090701-05 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL10.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG090701-06 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORK5.0ICV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090701-07 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090701-08 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090701-09 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090701-10 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090701-11 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090701-12 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090701-13 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGLIQLCSMSSPIKE **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury working intermediate standard for LCS/MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090630-42 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090630-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090630-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090630-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090630-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090630-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090630-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090630-43 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746

Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09

Type: Working **Expires:** 01-JUL-09

Employee: Helen Camello

Supplier: GEL

Description: TRACE ICP 0.5/CCV CALIBRATION STD.

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090630-44 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1 %HNO3 -1143746

Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09

Type: Working **Expires:** 01-JUL-09

Employee: Helen Camello

Supplier: o2si

Description: Trace ICP Calibration Standard 1.0ppm

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090630-45 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 -1143746
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090630-46 **Opened:** 30-JUN-09 **Solvent :** 3%HCL AND 1%HNO3 -1143746
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090630-47 **Opened:** 30-JUN-09 **Solvent :** 3%HCL &1%HNO3-1143746
Name: PQL Working Standard **Received:** 22-JAN-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090121-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090121-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Arsenic	7.5 mg/L	2 mL	1000 mL	15 ug/L
UI090121-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090121-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Calcium	50 mg/L	2 mL	1000 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090121-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090121-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Selenium	7.5 mg/L	2 mL	1000 mL	15 ug/L
UI090121-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Sodium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090121-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090121-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090703-04 **Opened:** 03-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl-1143705
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090703-04A **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705

Name: ICPMS Cal Standard 10 **Received:** 03-JUL-09

Type: Working **Expires:** 04-JUL-09

Employee: Paul Boyd

Supplier: GEL

Description: ICPMS Calibration Standard (10 ppb)

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090703-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090703-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090703-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090703-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090703-05 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090703-06 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090703-07 **Opened:** 03-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090703-08 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090703-70 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS LINEAR RANGE ST **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Standard Logbook

Serial ID: 1116812 **Opened:** 29-APR-09 **Lot Number :** E45475
Name: B-K2S2O8S-MER **Received:** 29-APR-09
Type: Reagent/Solvent **Expires:** 29-APR-10
Employee: Tara Griffin
Supplier: J.T BAKER
Description: Potassium Persulfate Concentrate.
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1125381-C **Opened:** 21-MAY-09
Name: B-K2S2O8-MER **Received:** 21-MAY-09
Type: Reagent/Solvent **Expires:** 21-NOV-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% Potassium Persulfate
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1116812	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1143705 **Opened:** 29-JUN-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 06-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1143746 **Opened:** 29-JUN-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JUN-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 05-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1143839 **Opened:** 29-JUN-09 **Lot Number :** G45010
Name: B-H2SO4-MER **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 29-JUN-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Sulfuric Acid, Concentrated
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL

Standard Logbook

Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2500

Method/Analysis Information

Product: pH

Analytical Batch: 881153 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232509001	CAMO-09-6519
232509002	CAMO-09-6518
232509003	CAMO-09-6527
232509004	CAMO-09-6529
232509005	CAMO-09-6528
232509006	CAMO-09-6531
1201871210	232509001(CAMO-09-6519) Sample Duplicate (DUP)
1201871211	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHecT LogR pH/ISE.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232509001 (CAMO-09-6519).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232509001 (CAMO-09-6519), 232509002 (CAMO-09-6518), 232509003 (CAMO-09-6527), 232509004 (CAMO-09-6529), 232509005 (CAMO-09-6528) and 232509006 (CAMO-09-6531).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881039 and 881270	**Method:**	SW846 9012A
Prep Batch :	881037 and 881268	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232509001	CAMO-09-6519
232509002	CAMO-09-6518
232509003	CAMO-09-6527
232509004	CAMO-09-6529
232509005	CAMO-09-6528
232509006	CAMO-09-6531
1201870890	Method Blank (MB)
1201870891	232429001(CAMO-09-6007) Sample Duplicate (DUP)
1201870892	232429002(CAMO-09-6006) Sample Duplicate (DUP)
1201870893	232429001(CAMO-09-6007) Matrix Spike (MS)
1201870894	232429002(CAMO-09-6006) Matrix Spike (MS)
1201870895	232429001(CAMO-09-6007) Matrix Spike Duplicate (MSD)
1201870896	232429002(CAMO-09-6006) Matrix Spike Duplicate (MSD)
1201870897	Laboratory Control Sample (LCS)
1201871532	Method Blank (MB)
1201871533	232509006(CAMO-09-6531) Sample Duplicate (DUP)
1201871534	232509006(CAMO-09-6531) Matrix Spike (MS)
1201871535	232509006(CAMO-09-6531) Matrix Spike Duplicate (MSD)
1201871536	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Designation

The following samples were selected for QC analysis: 232429001 (CAMO-09-6007), 232429002 (CAMO-09-6006)- Batch 881039 and 232509006 (CAMO-09-6531)- Batch 881270.

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201870891 (CAMO-09-6007) and 1201870892 (CAMO-09-6006)- Batch 881039.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times

All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Negative Bias
No Chlorinated Cyanide results exceed the Total Cyanide results by more than three times the PQL

Sample Dilutions
The following samples in this sample group were diluted due to high concentration: 1201870897 (LCS)- Batch 881039 and 1201871536 (LCS)- Batch 881270.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	881302	**Method:**	EPA 300.0
Prep Batch :	881301	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232509001	CAMO-09-6519
232509002	CAMO-09-6518
232509003	CAMO-09-6527
232509004	CAMO-09-6529
232509005	CAMO-09-6528
232509006	CAMO-09-6531
1201871608	Method Blank (MB)
1201871609	232509001(CAMO-09-6519) Sample Duplicate (DUP)
1201871610	232509001(CAMO-09-6519) Matrix Spike (MS)
1201871611	232509001(CAMO-09-6519) Matrix Spike Duplicate (MSD)
1201871612	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232509001 (CAMO-09-6519).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201871610 (CAMO-09-6519).

Matrix Spike Duplicate (MSD) Recovery Statement
The spike duplicate recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201871611 (CAMO-09-6519).

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232509001 (CAMO-09-6519), 232509002 (CAMO-09-6518), 232509003 (CAMO-09-6527), 232509004 (CAMO-09-6529), 232509005 (CAMO-09-6528) and 232509006 (CAMO-09-6531).

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 710468 1201871610 (CAMO-09-6519) and 1201871611 (CAMO-09-6519).

Manual Integrations
The following samples from this sample group had to be manually integrated due to errors in the instrument software peak integration: 232509002 (CAMO-09-6518) and 232509006 (CAMO-09-6531).

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 17July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2500 GEL Work Order: 232509

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6519	Project:	LANL01004
Sample ID:	232509001	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	20.8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.5C	H	6.72	0.010	0.100	SU	1	RXG2 06/29/09	1304	881153	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	179	82.5	303	ug/kg	1	AXC2 07/07/09	1157	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	42.0	0.379	1.26	mg/kg	1	MAR1 07/09/09	2118	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6518	Project:	LANL01004
Sample ID:	232509002	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	15.2%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.1C	H	7.24	0.010	0.100	SU	1	RXG2 06/29/09	1309	881153	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	151	78.6	289	ug/kg	1	AXC2 07/07/09	1158	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.31	0.354	1.18	mg/kg	1	MAR1 07/09/09	2313	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6527	Project:	LANL01004
Sample ID:	232509003	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	5.87%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.1C	H	7.14	0.010	0.100	SU	1	RXG2 06/29/09	1311	881153	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	118	68.2	251	ug/kg	1	AXC2 07/07/09	1159	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.319	1.06	mg/kg	1	MAR1 07/09/09	2342	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6529	Project:	LANL01004
Sample ID:	232509004	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.85%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.8C	H	8.86	0.010	0.100	SU	1	RXG2 06/29/09	1322	881153	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	70.1	258	ug/kg	1	AXC2 07/07/09	1200	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.315	1.05	mg/kg	1	MAR1 07/10/09	0011	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6528	Project:	LANL01004
Sample ID:	232509005	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	5.76%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 22.0C	H	8.67	0.010	0.100	SU	1	RXG2 06/29/09	1322	881153	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	64.4	237	ug/kg	1	AXC2 07/07/09	1201	881039	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.318	1.06	mg/kg	1	MAR1 07/10/09	0138	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0850	881037

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 13, 2009

Client SDG: 09-2500

Client Sample ID:	CAMO-09-6531	Project:	LANL01004
Sample ID:	232509006	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	15%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 21.7C	H	7.13	0.010	0.100	SU	1	RXG2 06/29/09	1327	881153	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	208	74.1	272	ug/kg	1	AXC2 07/02/09	0953	881270	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.27	0.353	1.18	mg/kg	1	MAR1 07/10/09	0207	881302	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	MAR1	07/09/09	0850	881301
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0852	881268

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 13, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232509

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis											
Batch 881153											
QC1201871210 232509001 DUP											
pH		H	6.72	H	6.76	SU	0.593		(0%-10%)	RXG2	06/29/09 13:07
QC1201871211 LCS											
pH	7.00				6.98	SU		99.7	(95%-105%)		06/29/09 13:04
Flow Injection Analysis											
Batch 881039											
QC1201870891 232429001 DUP											
Cyanide, Total		J	112	U	ND	ug/kg	N/A ^		(+/-256)	AXC2	07/07/09 10:55
QC1201870892 232429002 DUP											
Cyanide, Total		J	232	J	157	ug/kg	N/A ^		(+/-282)		07/07/09 10:59
QC1201870897 LCS											
Cyanide, Total	174000				167000	ug/kg		95.7	(46%-145%)		07/07/09 10:54
QC1201870890 MB											
Cyanide, Total				U	250	ug/kg					07/07/09 10:53
QC1201870893 232429001 MS											
Cyanide, Total	4750	J	112		4260	ug/kg		87.4	(50%-130%)		07/07/09 10:56
QC1201870894 232429002 MS											
Cyanide, Total	5130	J	232		4810	ug/kg		89.3	(50%-130%)		07/07/09 11:00
QC1201870895 232429001 MSD											
Cyanide, Total	5020	J	112		4650	ug/kg	8.57	90.3	(0%-30%)		07/07/09 10:57
QC1201870896 232429002 MSD											
Cyanide, Total	5130	J	232		4650	ug/kg	3.47	86.1	(0%-30%)		07/07/09 11:01
Batch 881270											
QC1201871533 232509006 DUP											
Cyanide, Total		J	208	J	212	ug/kg	N/A ^		(+/-263)	AXC2	07/02/09 09:54
QC1201871536 LCS											
Cyanide, Total	174000				175000	ug/kg		101	(46%-145%)		07/02/09 09:51
QC1201871532 MB											
Cyanide, Total				J	167	ug/kg					07/02/09 09:50
QC1201871534 232509006 MS											
Cyanide, Total	5350	J	208		5610	ug/kg		101	(50%-130%)		07/02/09 09:55
QC1201871535 232509006 MSD											
Cyanide, Total	5350	J	208		5300	ug/kg	5.68	95.3	(0%-30%)		07/02/09 09:59
Ion Chromatography											
Batch 881302											
QC1201871609 232509001 DUP											
Nitrate-N		Hh	42.0	Hh	42.0	mg/kg	0.003		(0%-20%)	MAR1	07/09/09 21:47
QC1201871612 LCS											
Nitrate-N	50.0				47.2	mg/kg		94.5	(90%-110%)		07/09/09 20:49
QC1201871608 MB											
Nitrate-N				U	1.00	mg/kg					07/09/09 20:20
QC1201871610 232509001 MS											

QC Summary

Workorder: 232509

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography											
Batch 881302											
Nitrate-N	63.1	Hh	42.0	Hh	96.7	mg/kg		86.6*	(90%-110%)		07/09/09 22:16
QC1201871611 232509001 MSD											
Nitrate-N	63.1	Hh	42.0	Hh	96.8	mg/kg	0.0887	86.8*	(0%-20%)	MAR1	07/09/09 22:45

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- h Preparation or preservation holding time was exceeded

QC Summary

Workorder: 232509

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 13-JUL-2009 09:59

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2500

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limi
ICV	**02-JUL-2009 09:29:22**	**OM_7-2-2009_09-19-36**	**143**	**150**	**95**	**(90%-110%)**	**Yes**
CCV	02-JUL-2009 09:43:39	OM_7-2-2009_09-19-36	95.6	100	96	(90%-110%)	Yes
CCV	02-JUL-2009 09:56:05	OM_7-2-2009_09-19-36	103	100	103	(90%-110%)	Yes
CCV	02-JUL-2009 10:08:28	OM_7-2-2009_09-19-36	102	100	102	(90%-110%)	Yes
ICV	**07-JUL-2009 10:47:46**	**OM_7-7-2009_10-38-00**	**151**	**150**	**101**	**(90%-110%)**	**Yes**
CCV	07-JUL-2009 11:02:04	OM_7-7-2009_10-38-00	90	100	90	(90%-110%)	Yes
CCV	07-JUL-2009 11:51:31	OM_7-7-2009_11-38-18	99.9	100	100	(90%-110%)	Yes
CCV	07-JUL-2009 12:03:53	OM_7-7-2009_11-38-18	102	100	102	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**02-JUL-2009 09:31:12**	**OM_7-2-2009_09-19-36**	**-1.5**	**5**	**Yes**
CCB	02-JUL-2009 09:45:29	OM_7-2-2009_09-19-36	-1.03	5	Yes
CCB	02-JUL-2009 09:57:55	OM_7-2-2009_09-19-36	-0.586	5	Yes
CCB	02-JUL-2009 10:10:18	OM_7-2-2009_09-19-36	-1.57	5	Yes
ICB	**07-JUL-2009 10:49:36**	**OM_7-7-2009_10-38-00**	**-1.33**	**5**	**Yes**
CCB	07-JUL-2009 11:03:54	OM_7-7-2009_10-38-00	-2.73	5	Yes
CCB	07-JUL-2009 11:53:21	OM_7-7-2009_11-38-18	-2.22	5	Yes
CCB	07-JUL-2009 12:05:44	OM_7-7-2009_11-38-18	-1.41	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 13-JUL-2009 09:59

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2500**

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limi
ICV	**09-JUL-2009 10:13:00**	**090709**	**4.7057**	**5**	**94**	**(90%-110%)**	**Yes**
CCV	09-JUL-2009 19:22:00	090709	4.7231	5	95	(90%-110%)	Yes
CCV	10-JUL-2009 00:40:00	090709	7.3342	7.5	98	(90%-110%)	Yes
CCV	10-JUL-2009 02:36:00	090709	4.7293	5	95	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**09-JUL-2009 10:42:00**	**090709**	**0**	**0.1**	**Yes**
CCB	09-JUL-2009 19:51:00	090709	0	0.1	Yes
CCB	10-JUL-2009 01:09:00	090709	0	0.1	Yes
CCB	10-JUL-2009 03:05:00	090709	0	0.1	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881268

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871536	URF071009-01	.25	g
MS	1201871534	URF1091135-02	.025	mL
MSD	1201871535	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871532		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	MISC SOLID
LCS	1201871536		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.25 g	25 mL	100	MISC SOLID
SAMPLE	232465001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	MISC SOLID
SAMPLE	232509006		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.54 g	25 mL	46.2963	SOIL
DUP	1201871533	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.56 g	25 mL	44.64286	SOIL
MS	1201871534	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.55 g	25 mL	45.45455	SOIL
MSD	1201871535	232509006	SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232582001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232582002		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232585001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232585002		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232585003		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232591001		SW846 9010B Prep	02-JUL-2009 08:52	> 12	0.56 g	25 mL	44.64286	SOIL

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090702-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments:

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881037

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870897	URF071009-01	.25	g
MS	1201870893	URF1091135-02	.025	mL
MS	1201870894	URF1091135-02	.025	mL
MSD	1201870895	URF1091135-02	.025	mL
MSD	1201870896	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870890		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.5 g	25 mL	50	SOIL
LCS	1201870897		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.25 g	25 mL	100	SOIL
SAMPLE	232429001		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.52 g	25 mL	48.07692	SOIL
DUP	1201870891	232429001	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
MS	1201870893	232429001	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.55 g	25 mL	45.45455	SOIL
MSD	1201870895	232429001	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232429002		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.52 g	25 mL	48.07692	SOIL
DUP	1201870892	232429002	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.5 g	25 mL	50	SOIL
MS	1201870894	232429002	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.55 g	25 mL	45.45455	SOIL
MSD	1201870896	232429002	SW846 9010B Prep	07-JUL-2009 08:50	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232429003		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232429004		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232429005		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232429006		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232429007		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	232429008		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232429009		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232429010		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232429011		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.5 g	25 mL	50	SOIL
SAMPLE	232429012		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232429013		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232429014		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232429015		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232509001		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232509002		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232509003		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232509004		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232509005		SW846 9010B Prep	07-JUL-2009 08:50	>12	0.56 g	25 mL	44.64286	SOIL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090707-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments:

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/2/2009 9:22:13	OM_7-2-2009_09-19-36
150 ppb		1	axc2	7/2/2009 9:23:04	OM_7-2-2009_09-19-36
100 ppb		1	axc2	7/2/2009 9:23:57	OM_7-2-2009_09-19-36
50 ppb		1	axc2	7/2/2009 9:24:50	OM_7-2-2009_09-19-36
10 ppb		1	axc2	7/2/2009 9:25:43	OM_7-2-2009_09-19-36
CRDL 5.0 ppb		1	axc2	7/2/2009 9:26:37	OM_7-2-2009_09-19-36
ICAL-00		1	axc2	7/2/2009 9:27:31	OM_7-2-2009_09-19-36
ICV		1	axc2	7/2/2009 9:29:22	OM_7-2-2009_09-19-36
ICB		1	axc2	7/2/2009 9:31:12	OM_7-2-2009_09-19-36
CRDL		1	axc2	7/2/2009 9:33:01	OM_7-2-2009_09-19-36
1201870882	881036	1	axc2	7/2/2009 9:34:51	OM_7-2-2009_09-19-36
1201870889	881036	1	axc2	7/2/2009 9:35:44	OM_7-2-2009_09-19-36
232341002	881036	1	axc2	7/2/2009 9:36:37	OM_7-2-2009_09-19-36
1201870884	881036	1	axc2	7/2/2009 9:37:31	OM_7-2-2009_09-19-36
1201870886	881036	1	axc2	7/2/2009 9:38:24	OM_7-2-2009_09-19-36
1201870888	881036	1	axc2	7/2/2009 9:39:17	OM_7-2-2009_09-19-36
232370001	881036	1	axc2	7/2/2009 9:40:09	OM_7-2-2009_09-19-36
1201870883	881036	1	axc2	7/2/2009 9:41:02	OM_7-2-2009_09-19-36
1201870885	881036	1	axc2	7/2/2009 9:41:55	OM_7-2-2009_09-19-36
1201870887	881036	1	axc2	7/2/2009 9:42:47	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:43:39	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:45:29	OM_7-2-2009_09-19-36
232425001	881036	1	axc2	7/2/2009 9:47:17	OM_7-2-2009_09-19-36
232432001	881036	1	axc2	7/2/2009 9:48:10	OM_7-2-2009_09-19-36
232482002	881036	1	axc2	7/2/2009 9:49:02	OM_7-2-2009_09-19-36
232510001	881036	1	axc2	7/2/2009 9:49:54	OM_7-2-2009_09-19-36
1201871532	881270	1	axc2	7/2/2009 9:50:45	OM_7-2-2009_09-19-36
1201871536	881270	50	axc2	7/2/2009 9:51:39	OM_7-2-2009_09-19-36
232465001	881270	1	axc2	7/2/2009 9:52:32	OM_7-2-2009_09-19-36
232509006	881270	1	axc2	7/2/2009 9:53:26	OM_7-2-2009_09-19-36
1201871533	881270	1	axc2	7/2/2009 9:54:19	OM_7-2-2009_09-19-36
1201871534	881270	1	axc2	7/2/2009 9:55:12	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:56:05	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:57:55	OM_7-2-2009_09-19-36
1201871535	881270	1	axc2	7/2/2009 9:59:45	OM_7-2-2009_09-19-36
232582001	881270	1	axc2	7/2/2009 10:00:37	OM_7-2-2009_09-19-36
232582002	881270	1	axc2	7/2/2009 10:01:30	OM_7-2-2009_09-19-36
232585001	881270	1	axc2	7/2/2009 10:02:23	OM_7-2-2009_09-19-36
232585002	881270	1	axc2	7/2/2009 10:03:15	OM_7-2-2009_09-19-36
232585003	881270	1	axc2	7/2/2009 10:04:07	OM_7-2-2009_09-19-36
232591001	881270	1	axc2	7/2/2009 10:05:00	OM_7-2-2009_09-19-36
1201871541	881272	1	axc2	7/2/2009 10:05:51	OM_7-2-2009_09-19-36
1201871543	881272	1	axc2	7/2/2009 10:06:44	OM_7-2-2009_09-19-36
232465001	881272	1	axc2	7/2/2009 10:07:35	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:08:28	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:10:18	OM_7-2-2009_09-19-36
1201871542	881272	1	axc2	7/2/2009 10:12:09	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:13:01	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:14:52	OM_7-2-2009_09-19-36

Author: axc2 Date : 7/2/2009

Original Run Filename: OM_7-2-2009_09-19-36.OMN created 7/2/2009 09:19:36
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-2-2009_09-19-36.OMN last modified 7/2/2009 10:15:57
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090702-01	1	S1	200	8.98	7/2/2009@09:22:13			200 ppb
WCN090702-02	1	S2	150	6.83	7/2/2009@09:23:04			150 ppb
WCN090702-03	1	S3	100	4.37	7/2/2009@09:23:57			100 ppb
WCN090702-04	1	S4	50.0	2.32	7/2/2009@09:24:50			50 ppb
WCN090702-05	1	S5	10.0	0.586	7/2/2009@09:25:43			10 ppb
WCN090702-06	1	S6	5.00	0.295	7/2/2009@09:26:37			CRDL 5.0 ppb
WCN090702-08	1	S7	0.00	0.0308	7/2/2009@09:27:31			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99974 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090702-07	1	S8	143	6.45	7/2/2009@09:29:22			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090702-08	1	S7	-1.50	-3.75e-4	7/2/2009@09:31:12			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.50 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.50 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090702-06	1	S6	5.03	0.291	7/2/2009@09:33:01			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	5.03 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	5.03 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870882|881036|MB	1	1	0.440	0.0860	7/2/2009@09:34:51			
1201870889||LCS	1	2	51.2	2.35	7/2/2009@09:35:44			
232341002	1	3	-0.350	0.0509	7/2/2009@09:36:37			
1201870884||DUP	1	4	0.739	0.0994	7/2/2009@09:37:31			
1201870886||MS	1	5	102	4.60	7/2/2009@09:38:24			
1201870888||MSD	1	6	106	4.80	7/2/2009@09:39:17			
232370001	1	7	0.145	0.0729	7/2/2009@09:40:09			
1201870883||DUP	1	8	-0.522	0.0432	7/2/2009@09:41:02			
1201870885||MS	1	9	103	4.66	7/2/2009@09:41:55			
1201870887||MSD	1	10	106	4.79	7/2/2009@09:42:47			
WCN090702-03	1	S3	95.6	4.32	7/2/2009@09:43:39			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-4.4 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.03	0.0204	7/2/2009@09:45:29			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.03 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.03 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232425001	1	11	2.25	0.167	7/2/2009@09:47:17			
232432001	1	12	0.839	0.104	7/2/2009@09:48:10			
232482002	1	13	3.65	0.229	7/2/2009@09:49:02			
232510001	1	14	-0.112	0.0615	7/2/2009@09:49:54			
1201871532|881270|MB	1	15	3.33	0.215	7/2/2009@09:50:45			
1201871536||LCS	1	16	35.0	1.62	7/2/2009@09:51:39		50.00	
232465001	1	17	7.81	0.414	7/2/2009@09:52:32			
232509006	1	18	3.82	0.237	7/2/2009@09:53:26			
1201871533||DUP	1	19	4.04	0.246	7/2/2009@09:54:19			
1201871534||MS	1	20	105	4.73	7/2/2009@09:55:12			
WCN090702-03	1	S3	103	4.64	7/2/2009@09:56:05			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-0.586	0.0403	7/2/2009@09:57:55			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.586 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.586 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201871535||MSD	1	21	99.2	4.49	7/2/2009@09:59:45			
232582001	1	22	0.545	0.0907	7/2/2009@10:00:37			
232582002	1	23	3.17	0.208	7/2/2009@10:01:30			
232585001	1	24	0.846	0.104	7/2/2009@10:02:23			
232585002	1	25	4.51	0.267	7/2/2009@10:03:15			
232585003	1	26	1.34	0.126	7/2/2009@10:04:07			
232591001	1	27	1.16	0.118	7/2/2009@10:05:00			
1201871541|881272|MB	1	28	-0.342	0.0512	7/2/2009@10:05:51			
1201871543||LCS	1	29	0.253	0.0777	7/2/2009@10:06:44			
232465001	1	30	27.3	1.28	7/2/2009@10:07:35			
WCN090702-03	1	S3	102	4.62	7/2/2009@10:08:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.57	-0.00337	7/2/2009@10:10:18			CCB
		Known Conc:	0.00					

DQM Test: > + Concentration Limit								
Result:			-1.57 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.57 > -5.00					
Message			CCB Passed					
Action			Continue					
1201871542||DUP	1	31	48.0	2.20	7/2/2009@10:12:09			
WCN090702-03	1	S3	108	4.87	7/2/2009@10:13:01			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			7.7 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			7.7 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN090702-08	1	S7	-0.342	0.0512	7/2/2009@10:14:52			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-0.342 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-0.342 > -5.00					
Message			CCB Passed					
Action			Continue					

Analyte Properties Table for OM_7-2-2009_09-19-36.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/2/2009

Channel 1: Current View

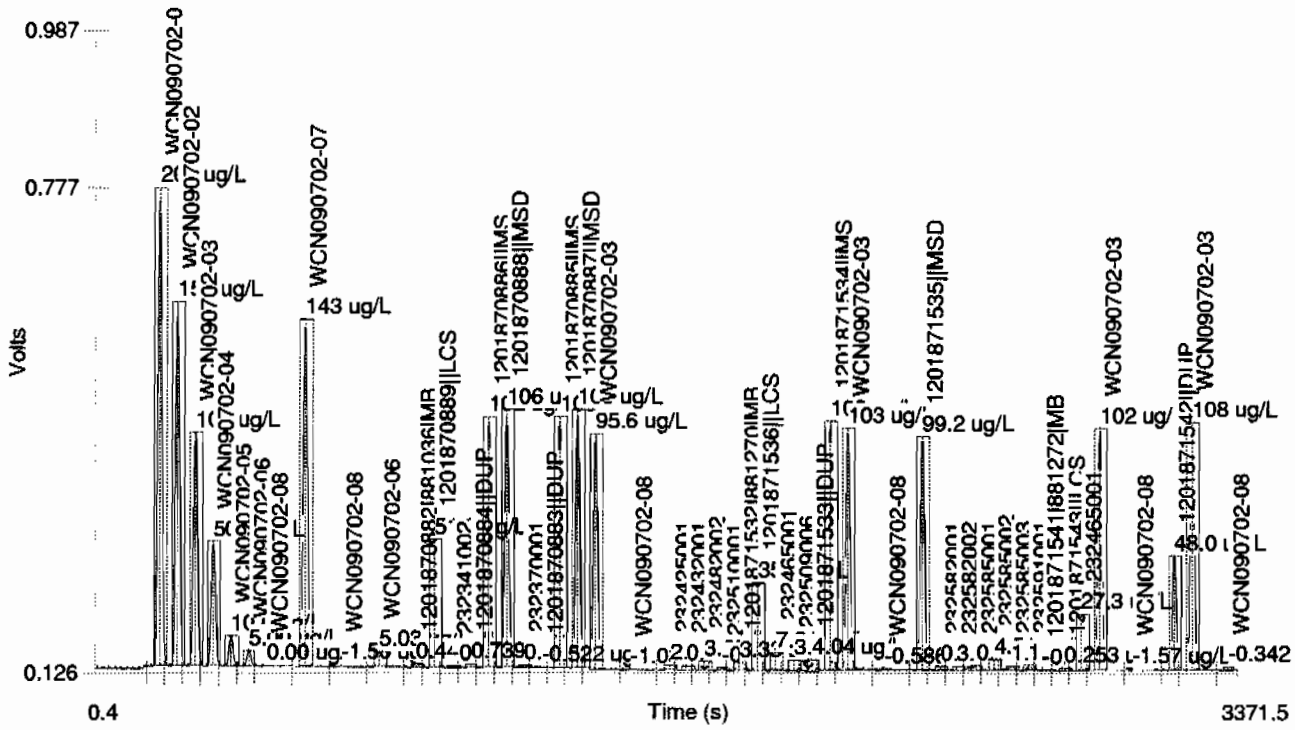

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.98	0.640	-0.0	7/2/2009	09:23:15
2	150	1	6.83	0.489	-1.3	7/2/2009	09:24:07
3	100	1	4.37	0.313	3.4	7/2/2009	09:25:00
4	50.0	1	2.32	0.165	-1.2	7/2/2009	09:25:53
5	10.0	1	0.586	0.0398	-14.0	7/2/2009	09:26:46
6	5.00	1	0.295	0.0201	-1.4	7/2/2009	09:27:40
7	0.00	1	0.0308	8.07e-4		7/2/2009	09:28:34

Figure 1: TCYANIDE

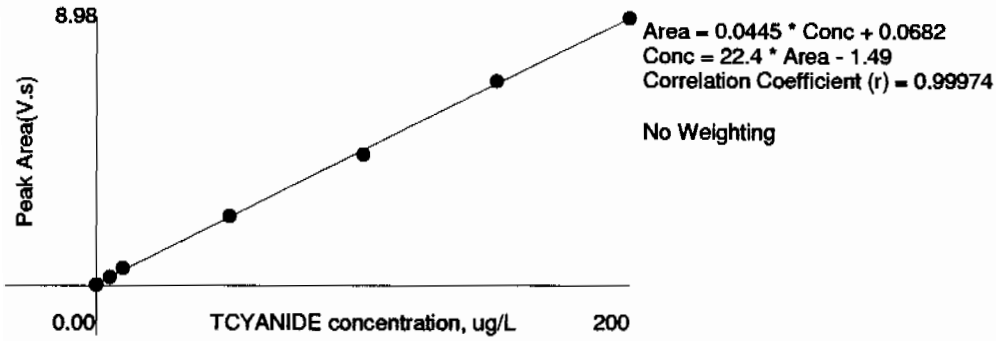

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/7/2009 10:40:37	OM_7-7-2009_10-38-00
150 ppb		1	axc2	7/7/2009 10:41:29	OM_7-7-2009_10-38-00
100 ppb		1	axc2	7/7/2009 10:42:22	OM_7-7-2009_10-38-00
50 ppb		1	axc2	7/7/2009 10:43:14	OM_7-7-2009_10-38-00
10 ppb		1	axc2	7/7/2009 10:44:07	OM_7-7-2009_10-38-00
CRDL 5.0 ppb		1	axc2	7/7/2009 10:45:01	OM_7-7-2009_10-38-00
ICAL-00		1	axc2	7/7/2009 10:45:55	OM_7-7-2009_10-38-00
ICV		1	axc2	7/7/2009 10:47:46	OM_7-7-2009_10-38-00
ICB		1	axc2	7/7/2009 10:49:36	OM_7-7-2009_10-38-00
CRDL		1	axc2	7/7/2009 10:51:26	OM_7-7-2009_10-38-00
1201870890	881039	1	axc2	7/7/2009 10:53:16	OM_7-7-2009_10-38-00
1201870897	881039	50	axc2	7/7/2009 10:54:09	OM_7-7-2009_10-38-00
232429001	881039	1	axc2	7/7/2009 10:55:02	OM_7-7-2009_10-38-00
1201870891	881039	1	axc2	7/7/2009 10:55:55	OM_7-7-2009_10-38-00
1201870893	881039	1	axc2	7/7/2009 10:56:48	OM_7-7-2009_10-38-00
1201870895	881039	1	axc2	7/7/2009 10:57:41	OM_7-7-2009_10-38-00
232429002	881039	1	axc2	7/7/2009 10:58:34	OM_7-7-2009_10-38-00
1201870892	881039	1	axc2	7/7/2009 10:59:26	OM_7-7-2009_10-38-00
1201870894	881039	1	axc2	7/7/2009 11:00:19	OM_7-7-2009_10-38-00
1201870896	881039	1	axc2	7/7/2009 11:01:11	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:02:04	OM_7-7-2009_10-38-00
CCB		1	axc2	7/7/2009 11:03:54	OM_7-7-2009_10-38-00
232429003*	881039	1	axc2	7/7/2009 11:05:42	OM_7-7-2009_10-38-00
232429004*	881039	1	axc2	7/7/2009 11:06:34	OM_7-7-2009_10-38-00
232429005*	881039	1	axc2	7/7/2009 11:07:26	OM_7-7-2009_10-38-00
232429006*	881039	1	axc2	7/7/2009 11:08:18	OM_7-7-2009_10-38-00
232429007*	881039	1	axc2	7/7/2009 11:09:09	OM_7-7-2009_10-38-00
232429008*	881039	1	axc2	7/7/2009 11:10:03	OM_7-7-2009_10-38-00
232429009*	881039	1	axc2	7/7/2009 11:10:57	OM_7-7-2009_10-38-00
232429010*	881039	1	axc2	7/7/2009 11:11:50	OM_7-7-2009_10-38-00
232429011*	881039	1	axc2	7/7/2009 11:12:43	OM_7-7-2009_10-38-00
232429012*	881039	1	axc2	7/7/2009 11:13:36	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:14:28	OM_7-7-2009_10-38-00

Author: axc2 Date : 7/7/2009

Original Run Filename: OM_7-7-2009_10-38-00.OMN created 7/7/2009 10:38:00
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_10-38-00.OMN last modified 7/7/2009 11:15:33
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-01	1	S1	200	8.66	7/7/2009@10:40:37			200 ppb
WCN090707-02	1	S2	150	6.58	7/7/2009@10:41:29			150 ppb
WCN090707-03	1	S3	100	4.25	7/7/2009@10:42:22			100 ppb
WCN090707-04	1	S4	50.0	2.32	7/7/2009@10:43:14			50 ppb
WCN090707-05	1	S5	10.0	0.530	7/7/2009@10:44:07			10 ppb
WCN090707-06	1	S6	5.00	0.393	7/7/2009@10:45:01			CRDL 5.0 ppb
WCN090707-08	1	S7	0.00	-0.00192	7/7/2009@10:45:55			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99969 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090707-07	1	S8	151	6.56	7/7/2009@10:47:46			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090707-08	1	S7	-1.33	0.0378	7/7/2009@10:49:36			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.33 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.33 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090707-06	1	S6	6.83	0.387	7/7/2009@10:51:26			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.83 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.83 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870890|881039|MB	1	1	0.258	0.106	7/7/2009@10:53:16			
1201870897||LCS	1	2	33.3	1.52	7/7/2009@10:54:09		50.00	
232429001	1	3	2.24	0.191	7/7/2009@10:55:02			
1201870891||DUP	1	4	1.10	0.142	7/7/2009@10:55:55			
1201870893||MS	1	5	89.8	3.94	7/7/2009@10:56:48			
1201870895||MSD	1	6	92.5	4.06	7/7/2009@10:57:41			
232429002	1	7	4.27	0.278	7/7/2009@10:58:34			
1201870892||DUP	1	8	2.79	0.214	7/7/2009@10:59:26			
1201870894||MS	1	9	93.8	4.12	7/7/2009@11:00:19			
1201870896||MSD	1	10	90.6	3.98	7/7/2009@11:01:11			
WCN090707-03	1	S3	90.0	3.95	7/7/2009@11:02:04			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-10.0 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-10.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-2.73	-0.0223	7/7/2009@11:03:54			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.73 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.73 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232429003	1	11	1.07	0.141	7/7/2009@11:05:42			
232429004	1	12	-2.99	-0.0332	7/7/2009@11:06:34			
232429005	1	13	2.06	0.183	7/7/2009@11:07:26			
232429006	1	14	-3.41	-0.0512	7/7/2009@11:08:18			
232429007	1	15	-3.40	-0.0507	7/7/2009@11:09:09			
232429008	1	16	1.30	0.151	7/7/2009@11:10:03			
232429009	1	17	3.29	0.236	7/7/2009@11:10:57			
232429010	1	18	2.25	0.191	7/7/2009@11:11:50			
232429011	1	19	-3.42	-0.0518	7/7/2009@11:12:43			
232429012	1	20	-4.64	-0.104	7/7/2009@11:13:36			
WCN090707-03	1	S3	40.7	1.84	7/7/2009@11:14:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-59.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-59.3 < 10.0					
		Message	CCV Failed					
		Action	Stop Run					

Analyte Properties Table for OM_7-7-2009_10-38-00.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2

Date : 7/7/2009

Channel 1: Current View

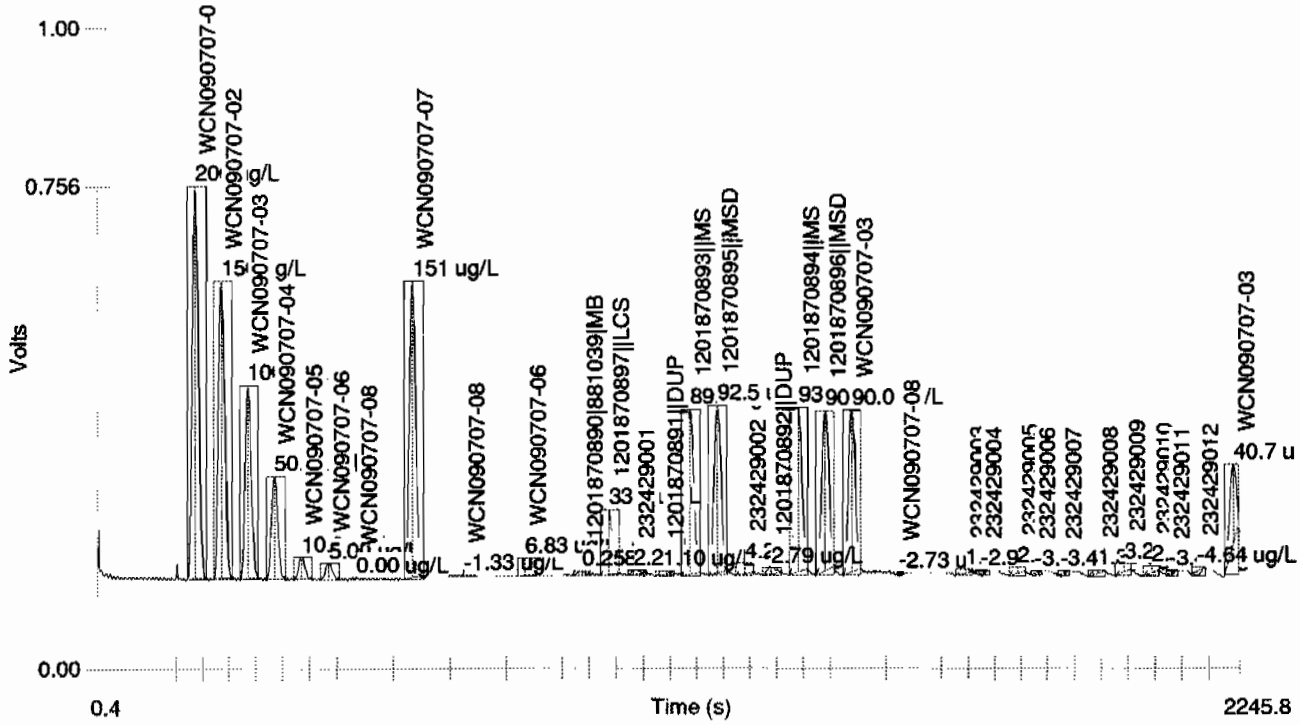

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

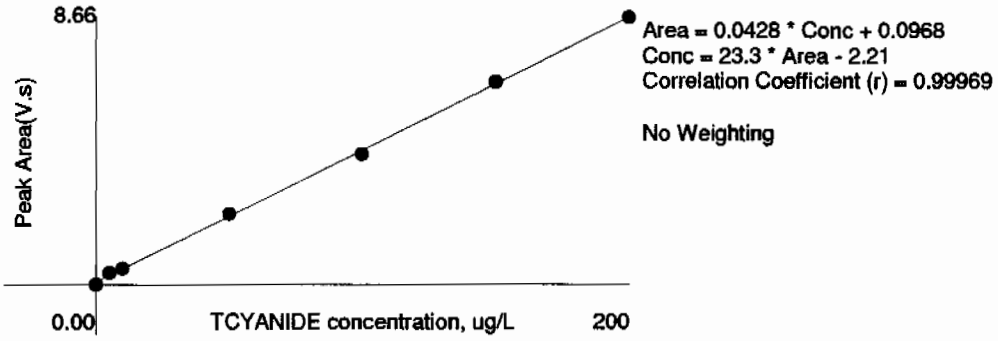

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	7/7/2009 11:39:05	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:40:56	OM_7-7-2009_11-38-18
232429003	881039	1	axc2	7/7/2009 11:42:44	OM_7-7-2009_11-38-18
232429004	881039	1	axc2	7/7/2009 11:43:36	OM_7-7-2009_11-38-18
232429005	881039	1	axc2	7/7/2009 11:44:28	OM_7-7-2009_11-38-18
232429006	881039	1	axc2	7/7/2009 11:45:20	OM_7-7-2009_11-38-18
232429007	881039	1	axc2	7/7/2009 11:46:12	OM_7-7-2009_11-38-18
232429008	881039	1	axc2	7/7/2009 11:47:05	OM_7-7-2009_11-38-18
232429009	881039	1	axc2	7/7/2009 11:47:59	OM_7-7-2009_11-38-18
232429010	881039	1	axc2	7/7/2009 11:48:53	OM_7-7-2009_11-38-18
232429011	881039	1	axc2	7/7/2009 11:49:46	OM_7-7-2009_11-38-18
232429012	881039	1	axc2	7/7/2009 11:50:39	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 11:51:31	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:53:21	OM_7-7-2009_11-38-18
232429013	881039	1	axc2	7/7/2009 11:55:10	OM_7-7-2009_11-38-18
232429014	881039	1	axc2	7/7/2009 11:56:03	OM_7-7-2009_11-38-18
232429015	881039	1	axc2	7/7/2009 11:56:56	OM_7-7-2009_11-38-18
232509001	881039	1	axc2	7/7/2009 11:57:49	OM_7-7-2009_11-38-18
232509002	881039	1	axc2	7/7/2009 11:58:41	OM_7-7-2009_11-38-18
232509003	881039	1	axc2	7/7/2009 11:59:34	OM_7-7-2009_11-38-18
232509004	881039	1	axc2	7/7/2009 12:00:25	OM_7-7-2009_11-38-18
232509005	881039	1	axc2	7/7/2009 12:01:18	OM_7-7-2009_11-38-18
1201873553	882139	1	axc2	7/7/2009 12:02:10	OM_7-7-2009_11-38-18
1201873557	882139	50	axc2	7/7/2009 12:03:01	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:03:53	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:05:44	OM_7-7-2009_11-38-18
232494013	882139	1	axc2	7/7/2009 12:07:35	OM_7-7-2009_11-38-18
232494014	882139	1	axc2	7/7/2009 12:08:28	OM_7-7-2009_11-38-18
232494015	882139	1	axc2	7/7/2009 12:09:22	OM_7-7-2009_11-38-18
232663001	882139	1	axc2	7/7/2009 12:10:15	OM_7-7-2009_11-38-18
1201873554	882139	1	axc2	7/7/2009 12:11:08	OM_7-7-2009_11-38-18
1201873555	882139	1	axc2	7/7/2009 12:12:02	OM_7-7-2009_11-38-18
1201873556	882139	1	axc2	7/7/2009 12:12:55	OM_7-7-2009_11-38-18
232663002	882139	1	axc2	7/7/2009 12:13:47	OM_7-7-2009_11-38-18
232663003	882139	1	axc2	7/7/2009 12:14:40	OM_7-7-2009_11-38-18
232663004	882139	1	axc2	7/7/2009 12:15:33	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:16:26	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:18:16	OM_7-7-2009_11-38-18
232663005	882139	1	axc2	7/7/2009 12:20:04	OM_7-7-2009_11-38-18
1201873558	882142	1	axc2	7/7/2009 12:20:57	OM_7-7-2009_11-38-18
1201873565	882142	1	axc2	7/7/2009 12:21:49	OM_7-7-2009_11-38-18
232662001	882142	1	axc2	7/7/2009 12:22:42	OM_7-7-2009_11-38-18
1201873559	882142	1	axc2	7/7/2009 12:23:33	OM_7-7-2009_11-38-18
1201873561	882142	1	axc2	7/7/2009 12:24:27	OM_7-7-2009_11-38-18
1201873563	882142	1	axc2	7/7/2009 12:25:22	OM_7-7-2009_11-38-18
232674001	882142	1	axc2	7/7/2009 12:26:16	OM_7-7-2009_11-38-18
232674002	882142	1	axc2	7/7/2009 12:27:10	OM_7-7-2009_11-38-18
232677001	882142	1	axc2	7/7/2009 12:28:03	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:28:55	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:30:45	OM_7-7-2009_11-38-18
1201873560	882142	1	axc2	7/7/2009 12:32:35	OM_7-7-2009_11-38-18
1201873562	882142	1	axc2	7/7/2009 12:33:29	OM_7-7-2009_11-38-18
1201873564	882142	1	axc2	7/7/2009 12:34:21	OM_7-7-2009_11-38-18
232703001	882142	1	axc2	7/7/2009 12:35:14	OM_7-7-2009_11-38-18
232728001	882142	1	axc2	7/7/2009 12:36:07	OM_7-7-2009_11-38-18
232728003	882142	1	axc2	7/7/2009 12:36:59	OM_7-7-2009_11-38-18
232742001	882142	1	axc2	7/7/2009 12:37:52	OM_7-7-2009_11-38-18
232753001	882142	1	axc2	7/7/2009 12:38:44	OM_7-7-2009_11-38-18

232755001	882142	1	axc2	7/7/2009	12:39:36	OM_7-7-2009_11-38-18
232759001	882142	1	axc2	7/7/2009	12:40:28	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:41:21	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:43:12	OM_7-7-2009_11-38-18
1201873547	882134	1	axc2	7/7/2009	12:45:02	OM_7-7-2009_11-38-18
1201873548	882134	1	axc2	7/7/2009	12:45:57	OM_7-7-2009_11-38-18
1201873549	882134	1	axc2	7/7/2009	12:46:51	OM_7-7-2009_11-38-18
232494013	882134	1	axc2	7/7/2009	12:47:44	OM_7-7-2009_11-38-18
232494014	882134	1	axc2	7/7/2009	12:48:38	OM_7-7-2009_11-38-18
232494015	882134	1	axc2	7/7/2009	12:49:31	OM_7-7-2009_11-38-18
1201873566	882146	1	axc2	7/7/2009	12:50:26	OM_7-7-2009_11-38-18
1201873568	882146	250	axc2	7/7/2009	12:51:18	OM_7-7-2009_11-38-18
232653001	882146	1	axc2	7/7/2009	12:52:11	OM_7-7-2009_11-38-18
1201873567	882146	1	axc2	7/7/2009	12:53:04	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:53:58	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:55:47	OM_7-7-2009_11-38-18
232657001	882146	1	axc2	7/7/2009	12:57:36	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:58:28	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	13:00:19	OM_7-7-2009_11-38-18

Author: axc2 Date : 7/7/2009

Original Run Filename: OM_7-7-2009_11-38-18.OMN created 7/7/2009 11:38:18
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_11-38-18.OMN last modified 7/7/2009 13:01:23
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-03	1	S3	98.3	4.31	7/7/2009@11:39:05			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
	Result:		-1.7 < 10.0					
	Message		CCV Passed					
	Action		Continue					
DQM Test: < - Percent Relative Difference								
	Result:		-1.7 < 10.0					
	Message		CCV Passed					
	Action		Continue					
WCN090707-08	1	S7	-1.68	0.0229	7/7/2009@11:40:56			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
	Result:		-1.68 < 5.00					
	Message		CCB Passed					
	Action		Continue					
DQM Test: < - Concentration Limit								
	Result:		-1.68 > -5.00					
	Message		CCB Passed					
	Action		Continue					
	Calibration:		Table/Fig. 1					
232429003|881039|	1	11	0.101	0.0991	7/7/2009@11:42:44			
232429004	1	12	-0.0267	0.0937	7/7/2009@11:43:36			
232429005	1	13	3.58	0.248	7/7/2009@11:44:28			
232429006	1	14	-0.107	0.0902	7/7/2009@11:45:20			
232429007	1	15	-0.282	0.0827	7/7/2009@11:46:12			
232429008	1	16	0.519	0.117	7/7/2009@11:47:05			
232429009	1	17	4.44	0.285	7/7/2009@11:47:59			
232429010	1	18	2.86	0.217	7/7/2009@11:48:53			
232429011	1	19	-0.0810	0.0913	7/7/2009@11:49:46			
232429012	1	20	2.81	0.215	7/7/2009@11:50:39			
WCN090707-03	1	S3	99.9	4.38	7/7/2009@11:51:31			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
	Result:		-0.1 < 10.0					
	Message		CCV Passed					
	Action		Continue					
DQM Test: < - Percent Relative Difference								
	Result:		-0.1 < 10.0					
	Message		CCV Passed					
	Action		Continue					
WCN090707-08	1	S7	-2.22	-3.66e-4	7/7/2009@11:53:21			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
	Result:		-2.22 < 5.00					
	Message		CCB Passed					
	Action		Continue					
DQM Test: < - Concentration Limit								
	Result:		-2.22 > -5.00					
	Message		CCB Passed					
	Action		Continue					
232429013	1	21	0.103	0.0992	7/7/2009@11:55:10			
232429014	1	22	2.62	0.207	7/7/2009@11:56:03			
232429015	1	23	1.61	0.164	7/7/2009@11:56:56			
232509001	1	24	2.95	0.221	7/7/2009@11:57:49			
232509002	1	25	2.61	0.207	7/7/2009@11:58:41			

232509003	1	26	2.35	0.195	7/7/2009@11:59:34			
232509004	1	27	0.637	0.122	7/7/2009@12:00:25			
232509005	1	28	1.34	0.152	7/7/2009@12:01:18			
1201873553|882139|MB	1	29	0.978	0.137	7/7/2009@12:02:10			
1201873557||LCS	1	30	34.2	1.56	7/7/2009@12:03:01		50.00	
WCN090707-03	1	S3	102	4.45	7/7/2009@12:03:53			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.41	0.0343	7/7/2009@12:05:44			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.41 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.41 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232494013	1	31	12.4	0.627	7/7/2009@12:07:35			
232494014	1	32	16.5	0.800	7/7/2009@12:08:28			
232494015	1	33	8.15	0.444	7/7/2009@12:09:22			
232663001	1	34	0.469	0.115	7/7/2009@12:10:15			
1201873554||DUP	1	35	0.919	0.134	7/7/2009@12:11:08			
1201873555||MS	1	36	100	4.39	7/7/2009@12:12:02			
1201873556||MSD	1	37	99.9	4.38	7/7/2009@12:12:55			
232663002	1	38	2.87	0.218	7/7/2009@12:13:47			
232663003	1	39	0.612	0.121	7/7/2009@12:14:40			
232663004	1	40	1.78	0.171	7/7/2009@12:15:33			
WCN090707-03	1	S3	103	4.51	7/7/2009@12:16:26			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	3.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	3.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.19	0.0436	7/7/2009@12:18:16			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.19 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.19 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232663005	1	41	3.51	0.245	7/7/2009@12:20:04			
1201873558|882142|MB	1	42	0.654	0.123	7/7/2009@12:20:57			
1201873565||LCS	1	43	52.4	2.34	7/7/2009@12:21:49			
232662001	1	44	-0.601	0.0690	7/7/2009@12:22:42			
1201873559||DUP	1	45	-0.744	0.0629	7/7/2009@12:23:33			
1201873561||MS	1	46	106	4.66	7/7/2009@12:24:27			
1201873563||MSD	1	47	107	4.68	7/7/2009@12:25:22			
232674001	1	48	2.16	0.187	7/7/2009@12:26:16			
232674002	1	49	0.310	0.108	7/7/2009@12:27:10			
232677001	1	50	-0.639	0.0674	7/7/2009@12:28:03			
WCN090707-03	1	S3	105	4.58	7/7/2009@12:28:55			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								

		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	4.02	0.267	7/7/2009@12:30:45			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	4.02 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	4.02 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873560||DUP	1	51	-0.895	0.0565	7/7/2009@12:32:35			
1201873562||MS	1	52	104	4.54	7/7/2009@12:33:29			
1201873564||MSD	1	53	105	4.61	7/7/2009@12:34:21			
232703001	1	54	5.73	0.340	7/7/2009@12:35:14			
232728001	1	55	-1.14	0.0458	7/7/2009@12:36:07			
232728003	1	56	-1.16	0.0449	7/7/2009@12:36:59			
232742001	1	57	-0.968	0.0533	7/7/2009@12:37:52			
232753001	1	58	0.512	0.117	7/7/2009@12:38:44			
232755001	1	59	-1.02	0.0510	7/7/2009@12:39:36			
232759001	1	60	-0.784	0.0612	7/7/2009@12:40:28			
WCN090707-03	1	S3	101	4.40	7/7/2009@12:41:21			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.381	0.0785	7/7/2009@12:43:12			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.381 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.381 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873547|882134|MB	1	61	-0.997	0.0521	7/7/2009@12:45:02			
1201873548||LCS	1	62	-1.28	0.0400	7/7/2009@12:45:57			
1201873549||LCSD	1	63	-0.406	0.0774	7/7/2009@12:46:51			
232494013	1	64	16.1	0.786	7/7/2009@12:47:44			
232494014	1	65	16.8	0.815	7/7/2009@12:48:38			
232494015	1	66	7.54	0.418	7/7/2009@12:49:31			
1201873566|882146|MB	1	67	-0.184	0.0869	7/7/2009@12:50:26			
1201873568||LCS	1	68	52.2	2.33	7/7/2009@12:51:18		250.00	
232653001	1	69	-0.792	0.0609	7/7/2009@12:52:11			
1201873567||DUP	1	70	-0.809	0.0602	7/7/2009@12:53:04			
WCN090707-03	1	S3	108	4.72	7/7/2009@12:53:58			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.41	0.0344	7/7/2009@12:55:47			CCB

		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.41 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.41 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232657001	1	71	2.86	0.217	7/7/2009@12:57:36			
WCN090707-03	1	S3	101	4.43	7/7/2009@12:58:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	1.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	1.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.0967	0.0907	7/7/2009@13:00:19			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.0967 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.0967 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_7-7-2009_11-38-18.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/7/2009

Channel 1: Current View

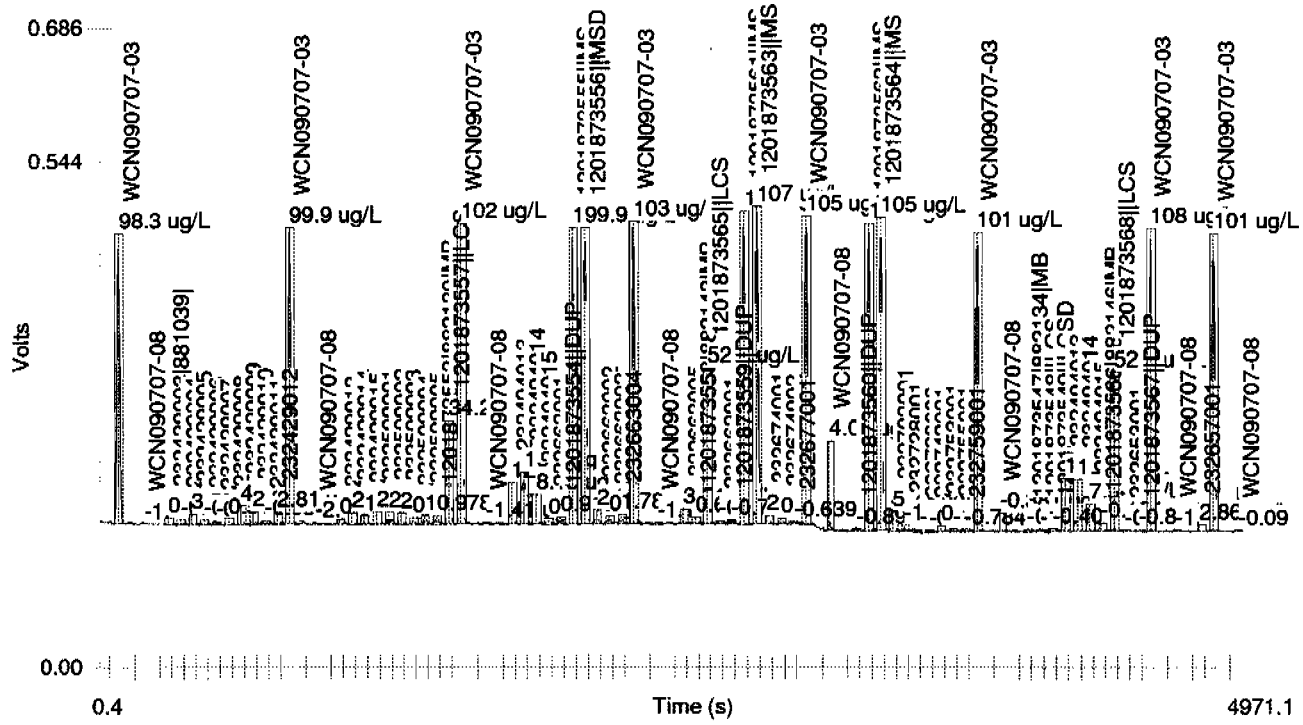

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

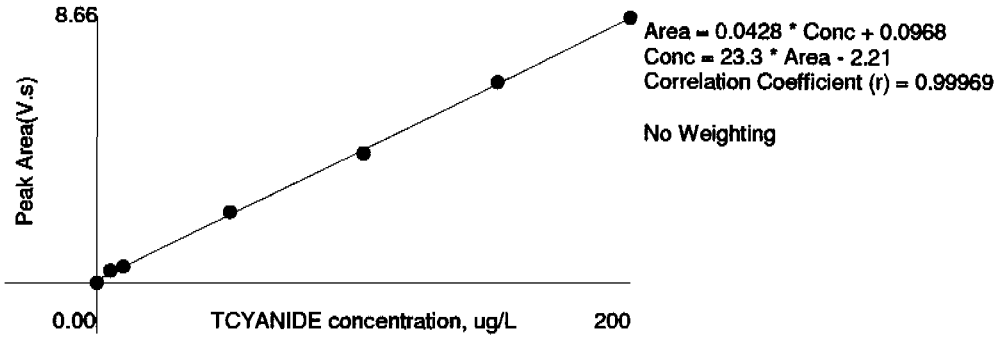

Ion Chromatography

Prep LogBook

Analyst: MAR1 Verified by:_____

Batch: 881301

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871612	UIC090627SPK	.8	mL
MS	1201871610	UIC090627SPK	.8	mL
MSD	1201871611	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871608		EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL
LCS	1201871612		EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232509001		EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL
DUP	1201871609	232509001	EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL
MS	1201871610	232509001	EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL
MSD	1201871611	232509001	EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232509002		EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232509003		EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232509004		EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232509005		EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL
SAMPLE	232509006		EPA 300.0 PREP	09-JUL-2009 08:50	4 g	40 mL	10	SOIL

Comments:

This is runlog for Sequence 090709.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	07/03/09 22:08		1	090709	MAR1
ICAL-06	07/03/09 22:41		1	090709	MAR1
ICAL-05	07/03/09 23:14		1	090709	MAR1
ICAL-04	07/03/09 23:47		1	090709	MAR1

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	*Analyst:*	MAR1
Run Time (min):	30.00	*Column:*	AS9HC-014108;GLGCE088;300;9058

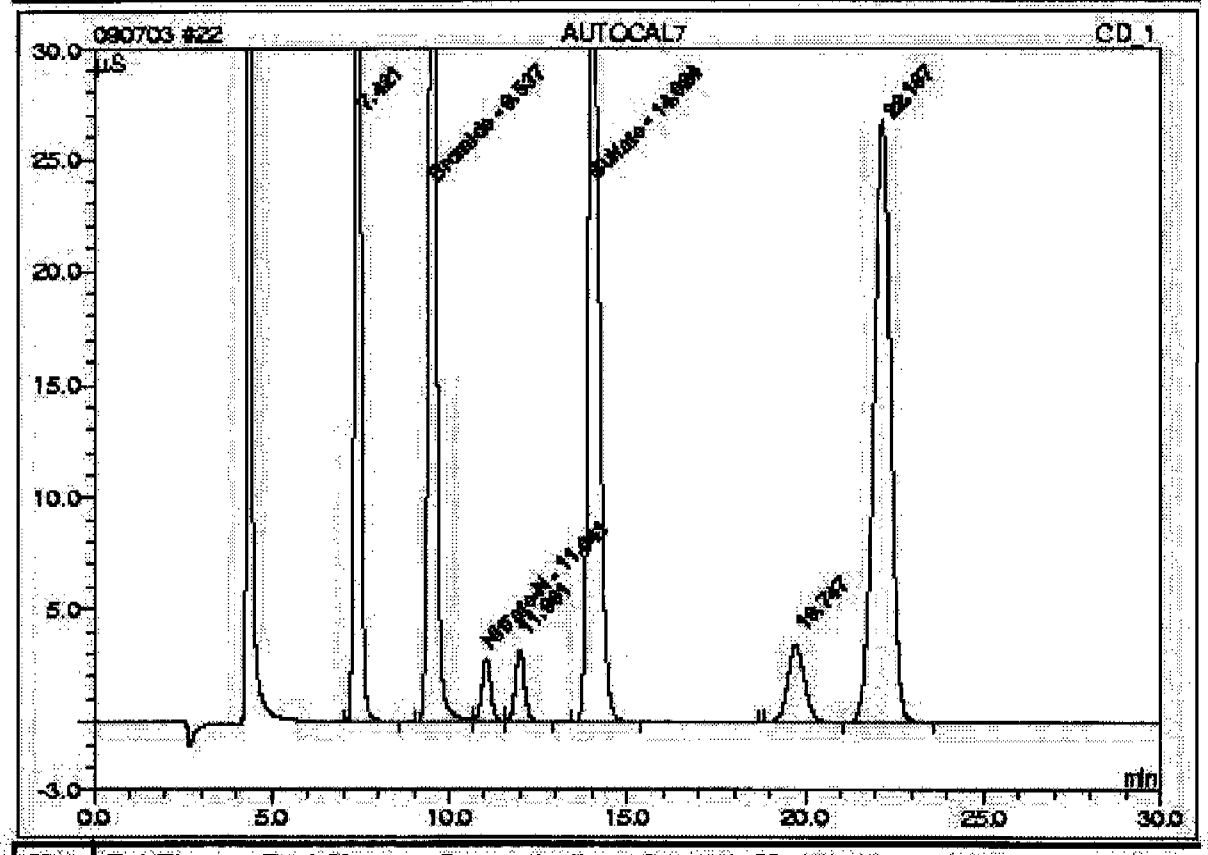

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	20.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	5.0000	n.a.	n.a.	n.a.	n.a.
2	9.54	Bromide	5.0000	5.0000		10.49619	20.17
n.a.	n.a.	Chlorate	5.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	10.0000	10.0000		0.81946	1.58
5	14.02	Sulfate	40.0000	40.0000		12.51803	24.06
Total:				55.0000	0.000	23.834	45.81

22 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	1.0
Vial Number:	15	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:08	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9055

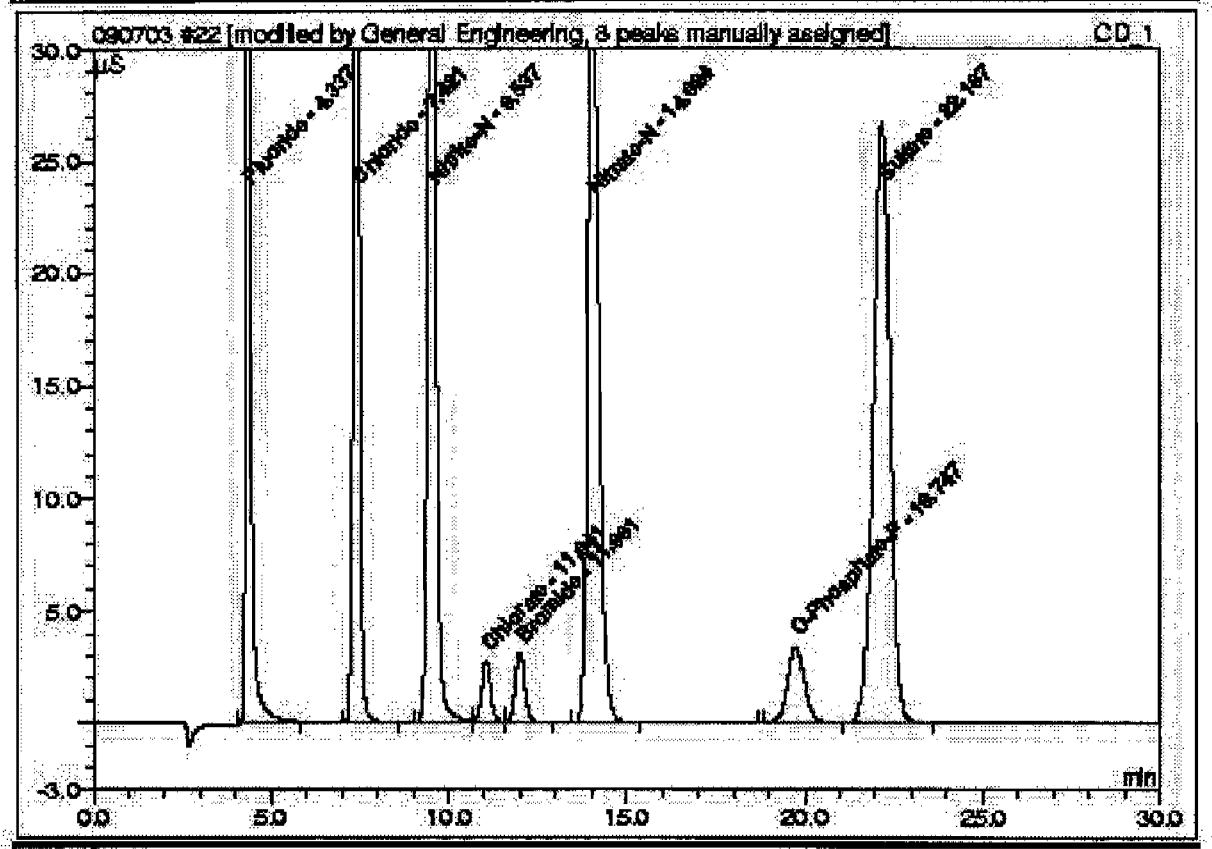

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	10.0000	10.0444	*	6.95356	11.79
2	7.42	Chloride	20.0000	20.3404		10.85875	18.41
3	9.54	Nitrite-N	10.0000	10.0541		10.49618	17.80
4	11.04	Chlorate	5.0000	4.9982		0.81946	1.39
5	11.99	Bromide	5.0000	5.0134		0.92946	1.57
6	14.02	Nitrate-N	10.0000	10.1573		12.51803	21.22
7	19.75	O-Phosphate-P	5.0000	5.0143		1.85201	3.14
8	22.19	Sulfate	40.0000	40.5382		14.55536	24.69
Total:				106.1605	0.000	58.982	100.00

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantit. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

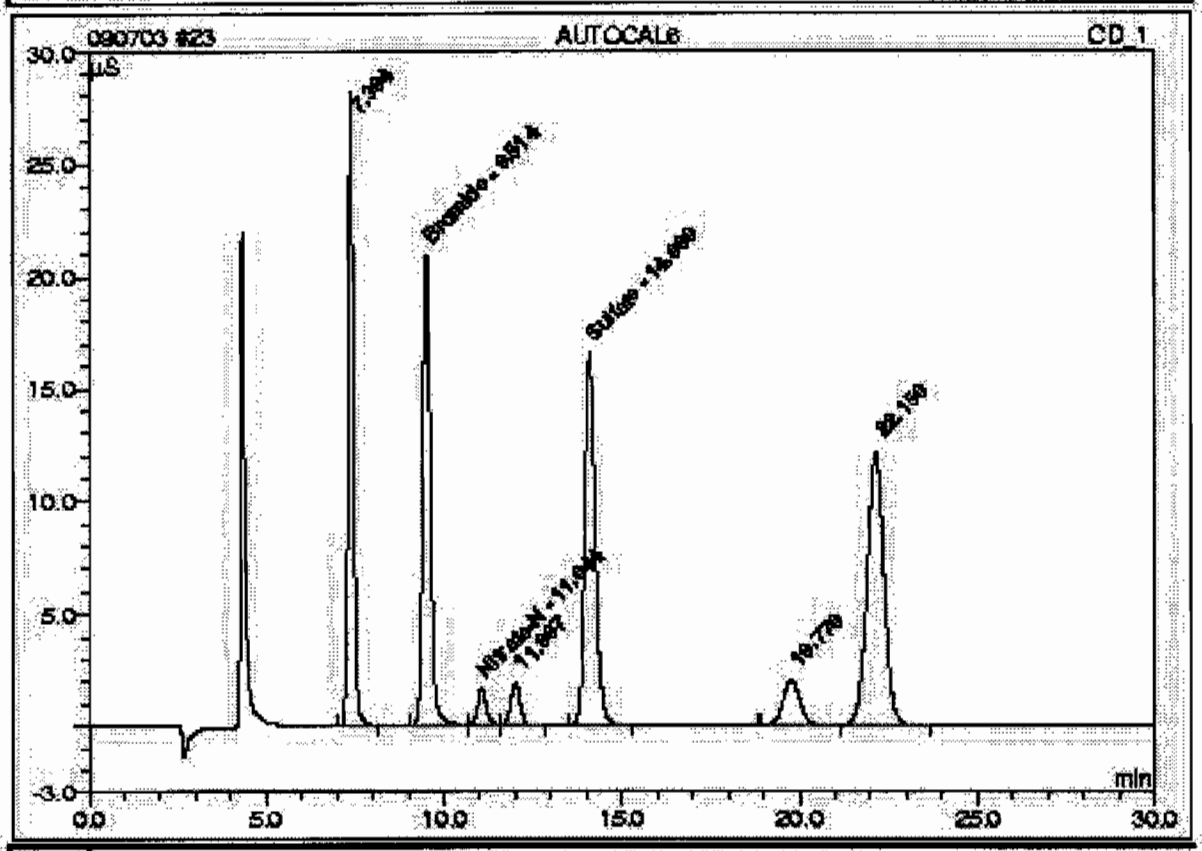

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	10.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	5.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	3.0000	n.a.	n.a.	n.a.	n.a.
2	9.51	Bromide	3.0000	2.6148		5.08735	20.64
n.a.	n.a.	Chlorate	3.0000	n.a.	n.a.	n.a.	n.a.
3	11.04	Nitrate-N	5.0000	5.6894		0.49447	2.01
5	14.09	Sulfate	20.0000	18.8591		5.72345	23.22
Total:				27.1634	0.000	11.305	45.87

23 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	1.0
Vial Number:	16	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 22:41	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9056

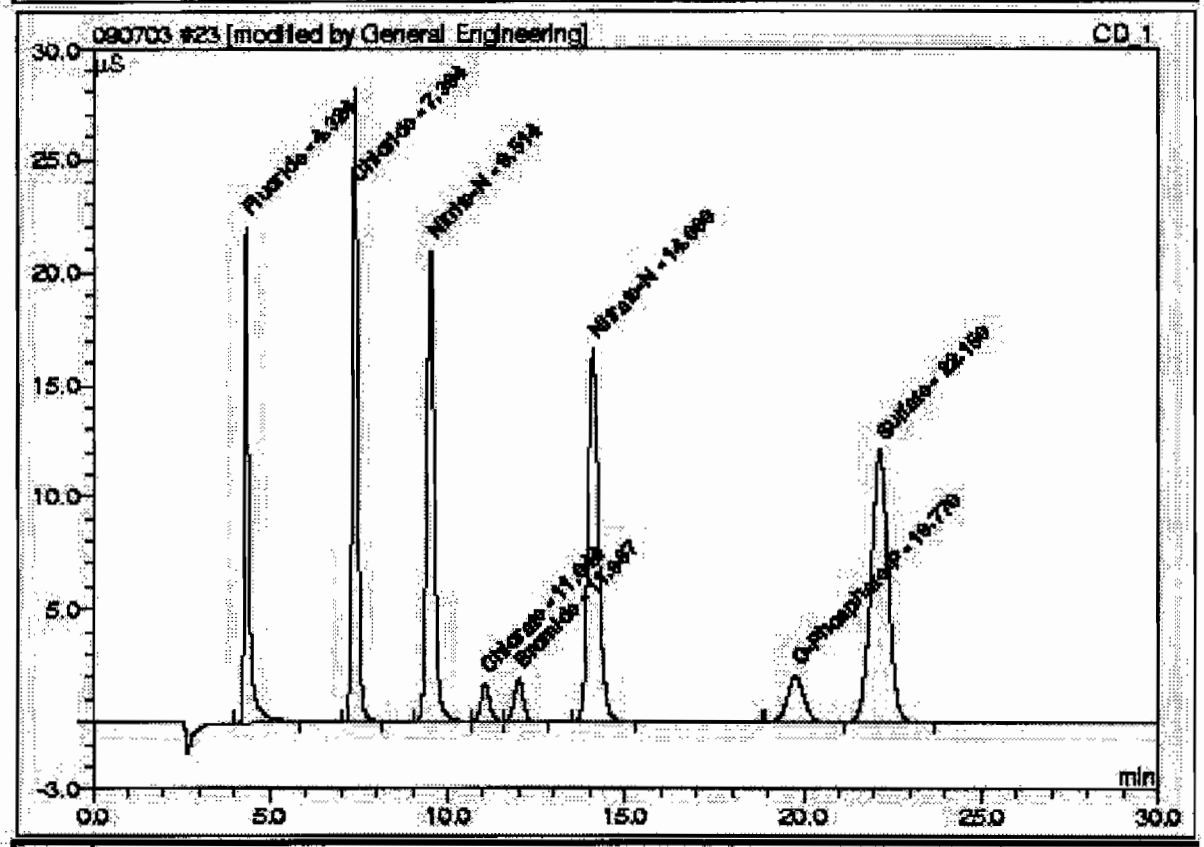

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	5.0000	4.9254	*	3.38643	12.08
2	7.39	Chloride	10.0000	9.3510		4.93051	17.59
3	9.51	Nitrite-N	5.0000	4.9036		5.09735	18.15
4	11.04	Chlorate	3.0000	3.0239		0.49447	1.76
5	11.99	Bromide	3.0000	3.0289		0.55878	1.99
6	14.08	Nitrate-N	5.0000	4.6989		5.72345	20.42
7	19.77	O-Phosphate-P	3.0000	3.0156		1.10727	3.95
8	22.15	Sulfate	20.0000	18.9609		6.74477	24.06
Total:				51.9078	0.000	28.033	100.00

24 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

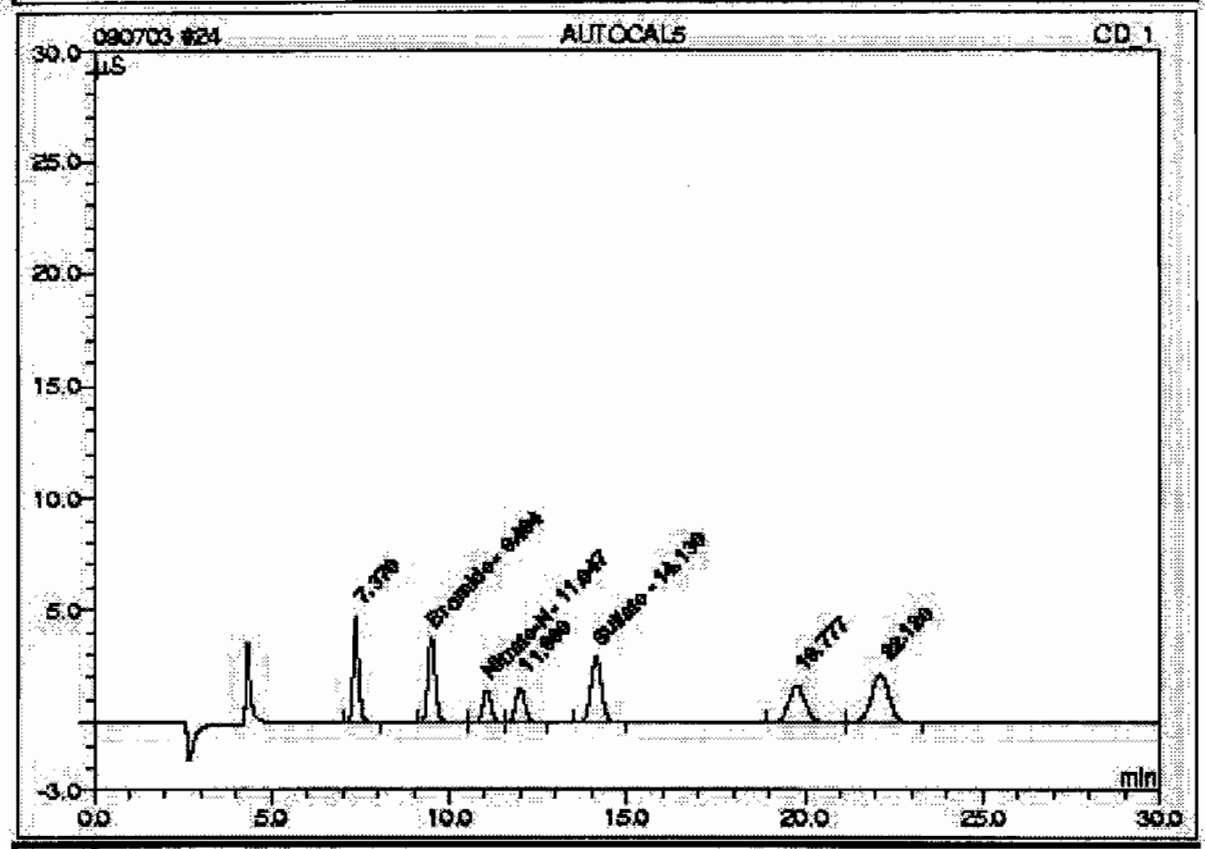

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	2.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	2.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	2.5000	1.1051		0.92663	15.98
n.a.	n.a.	Chlorate	2.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	1.0000	3.6480		0.40624	7.01
5	14.13	Sulfate	4.0000	3.8794		1.01074	17.44
Total:				8.6325	0.000	2.344	40.43

24 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	1.0
Vial Number:	17	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:14	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9055

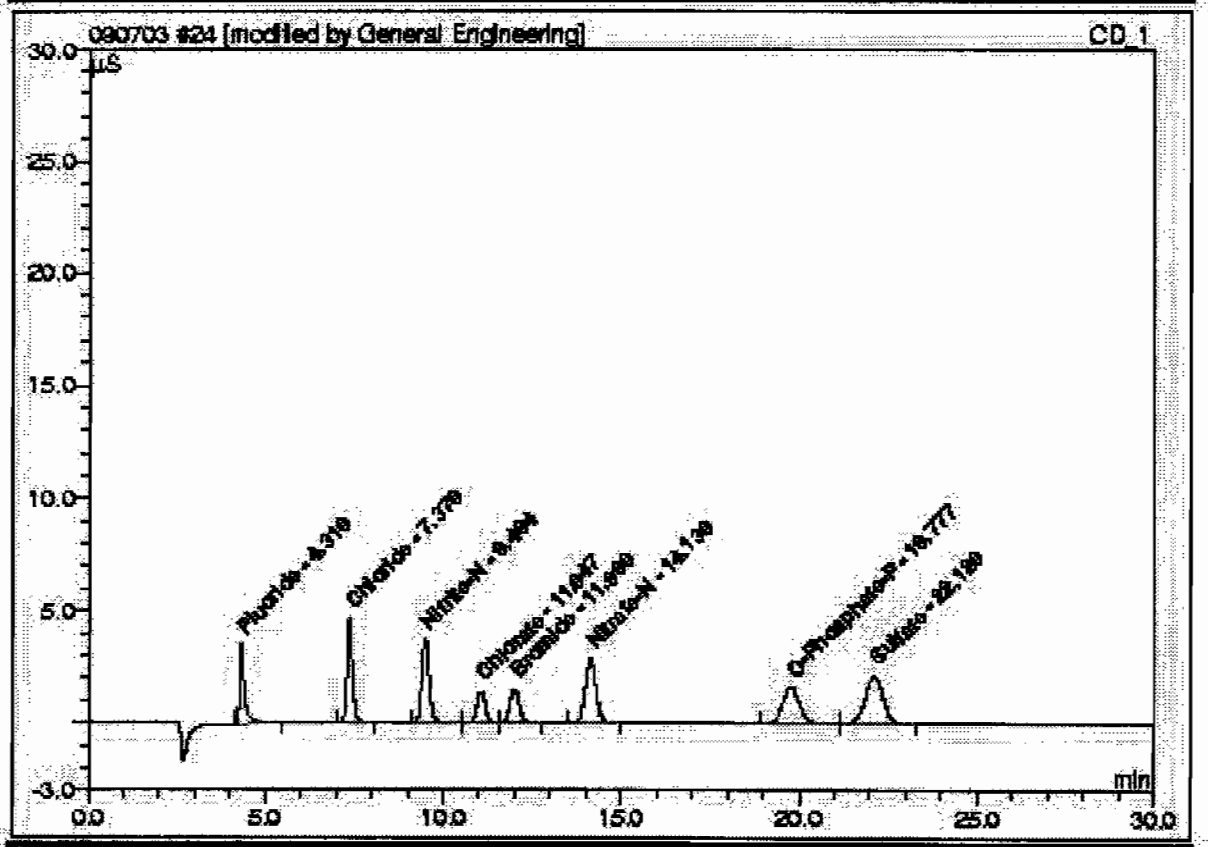

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	1.0000	0.9326		0.60409	9.44
2	7.37	Chloride	2.0000	1.7967		0.85540	13.36
3	9.49	Nitrite-N	1.0000	0.9416		0.92663	14.48
4	11.05	Chlorate	2.5000	2.4978		0.40624	6.35
5	11.99	Bromide	2.5000	2.4502		0.45103	7.05
6	14.13	Nitrate-N	1.0000	0.9129		1.01074	15.79
7	19.78	O-Phosphate-P	2.5000	2.4771		0.90660	14.16
8	22.12	Sulfate	4.0000	3.7545		1.24042	19.38
Total:				15.7534	0.000	6.401	100.00

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE085;300;9058

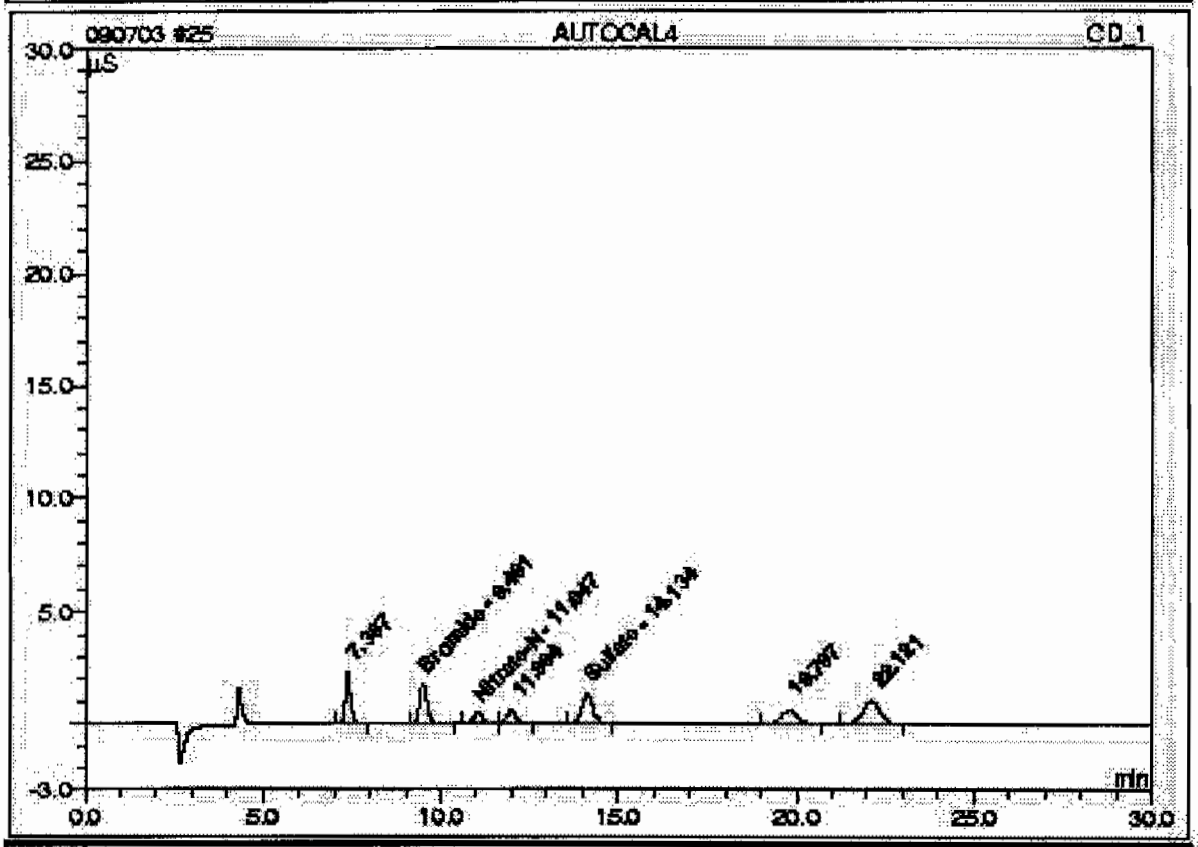

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	1.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	1.0000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	1.0000	0.9160		0.44459	16.96
n.a.	n.a.	Chlorate	1.0000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.5000	0.1298		0.15634	5.97
5	14.13	Sulfate	2.0000	2.1573		0.49242	18.79
Total:				3.2029	0.000	1.093	41.72

25 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	1.0
Vial Number:	18	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/3/09 23:47	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9056

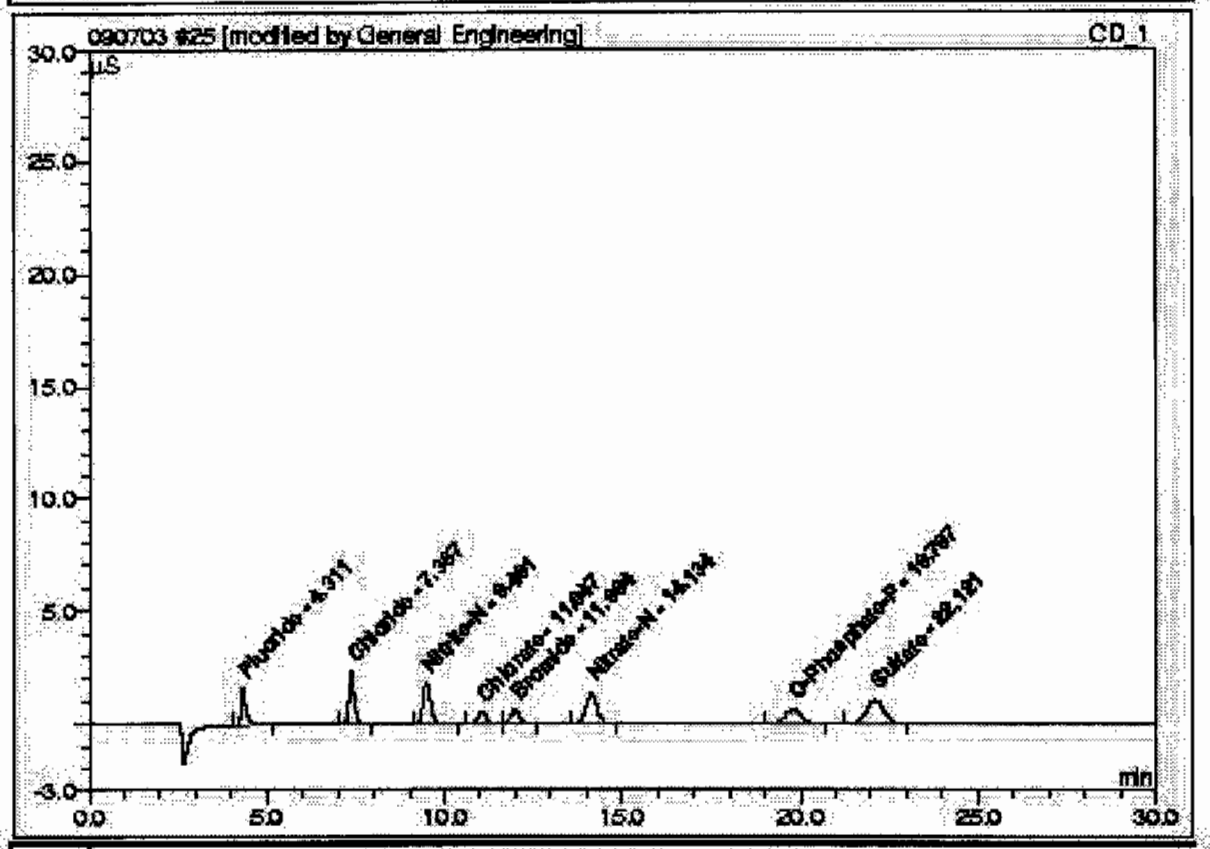

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.5000	0.4772	*	0.28671	9.86
2	7.37	Chloride	1.0000	0.9876		0.41893	14.41
3	9.49	Nitrite-N	0.5000	0.4826		0.44459	15.29
4	11.05	Chlorate	1.0000	0.9695		0.15634	5.38
5	11.99	Bromide	1.0000	0.9693		0.17517	6.02
6	14.13	Nitrate-N	0.5000	0.4966		0.49242	16.94
7	19.80	O-Phosphate-P	1.0000	0.9414		0.33440	11.50
8	22.12	Sulfate	2.0000	1.9824		0.59899	20.60
Total:				7.3065	0.000	2.908	100.00

This is runlog for Sequence 090703.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-03	07/04/09 00:20		1	090703	MAR1
ICAL-02	07/04/09 00:53		1	090703	MAR1
ICAL-01	07/04/09 01:26		1	090703	MAR1
ICV	07/04/09 01:59		1	090703	MAR1
ICB	07/04/09 02:32		1	090703	MAR1

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE085;300;9058

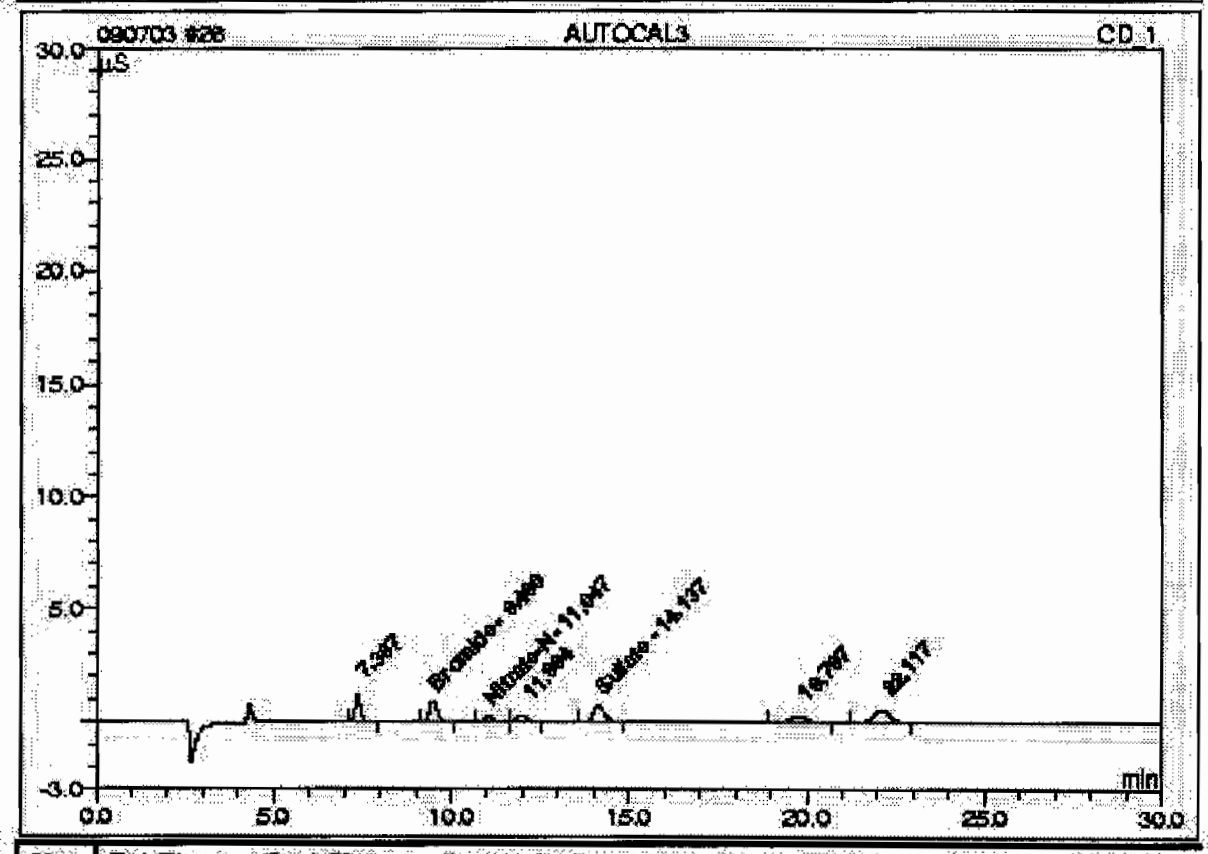

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.5000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.2500	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.5000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.5000	0.7242		0.21812	16.45
n.a.	n.a.	Chlorate	0.5000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.2500	-0.6565		0.07808	5.89
5	14.14	Sulfate	1.0000	1.2880		0.24968	18.83
Total:				1.3557	0.000	0.546	41.17

26 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	1.0
Vial Number:	19	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:20	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9058

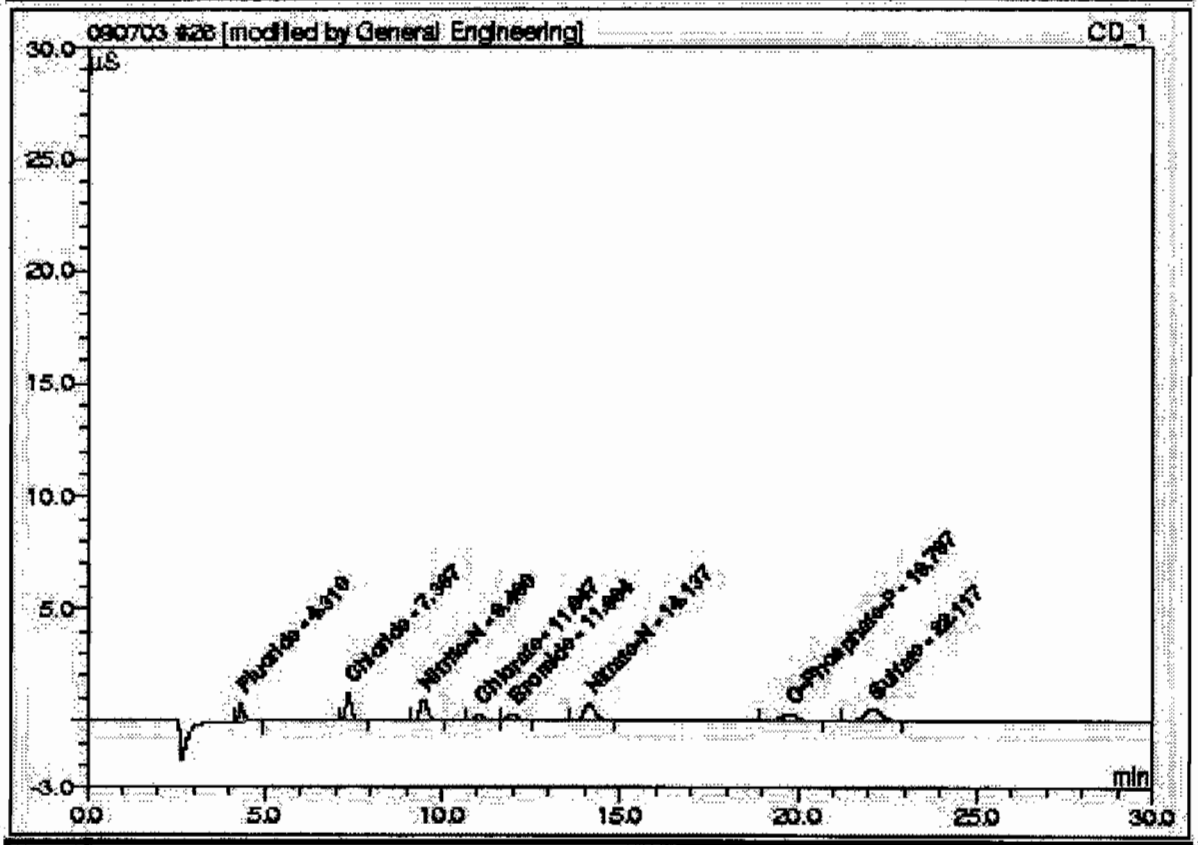

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.2500	0.2638	*	0.13800	9.43
2	7.37	Chloride	0.5000	0.6284		0.22515	15.38
3	9.49	Nitrite-N	0.2500	0.2669		0.21812	14.90
4	11.05	Chlorate	0.5000	0.4940		0.07808	5.33
5	11.99	Bromide	0.5000	0.4991		0.08759	5.98
6	14.14	Nitrate-N	0.2500	0.3016		0.24968	17.05
7	19.80	O-Phosphate-P	0.5000	0.4865		0.16491	11.26
8	22.12	Sulfate	1.0000	1.1634		0.30252	20.66
Total:				4.1037	0.000	1.464	100.00

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9058

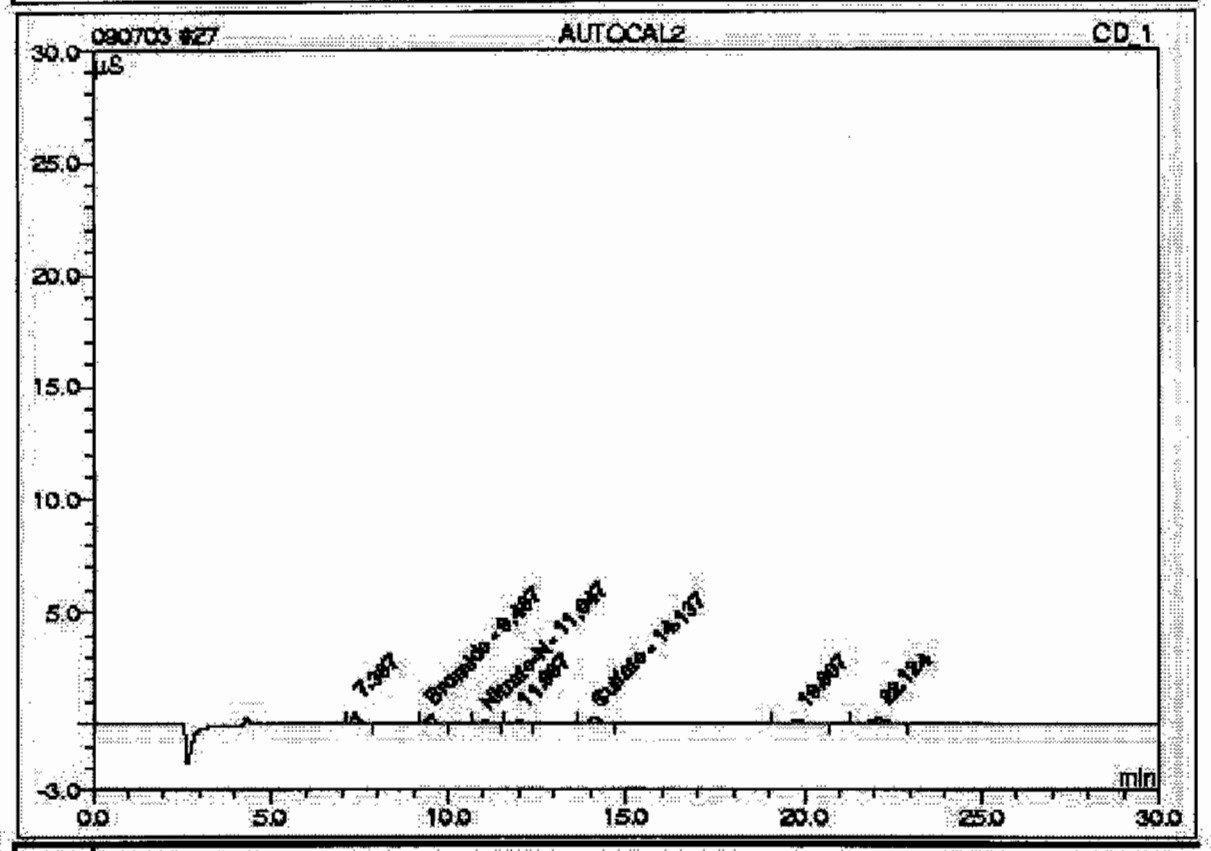

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.2000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.1000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.2000	n.a.	n.a.	n.a.	n.a.
2	9.49	Bromide	0.2000	0.5534		0.09703	16.21
n.a.	n.a.	Chlorate	0.2000	n.a.	n.a.	n.a.	n.a.
3	11.05	Nitrate-N	0.1000	-0.9832		0.03083	5.74
5	14.14	Sulfate	0.4000	0.7269		0.10053	18.72
Total:				0.2971	0.000	0.218	40.67

27 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	1.0
Vial Number:	20	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 0:53	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9056

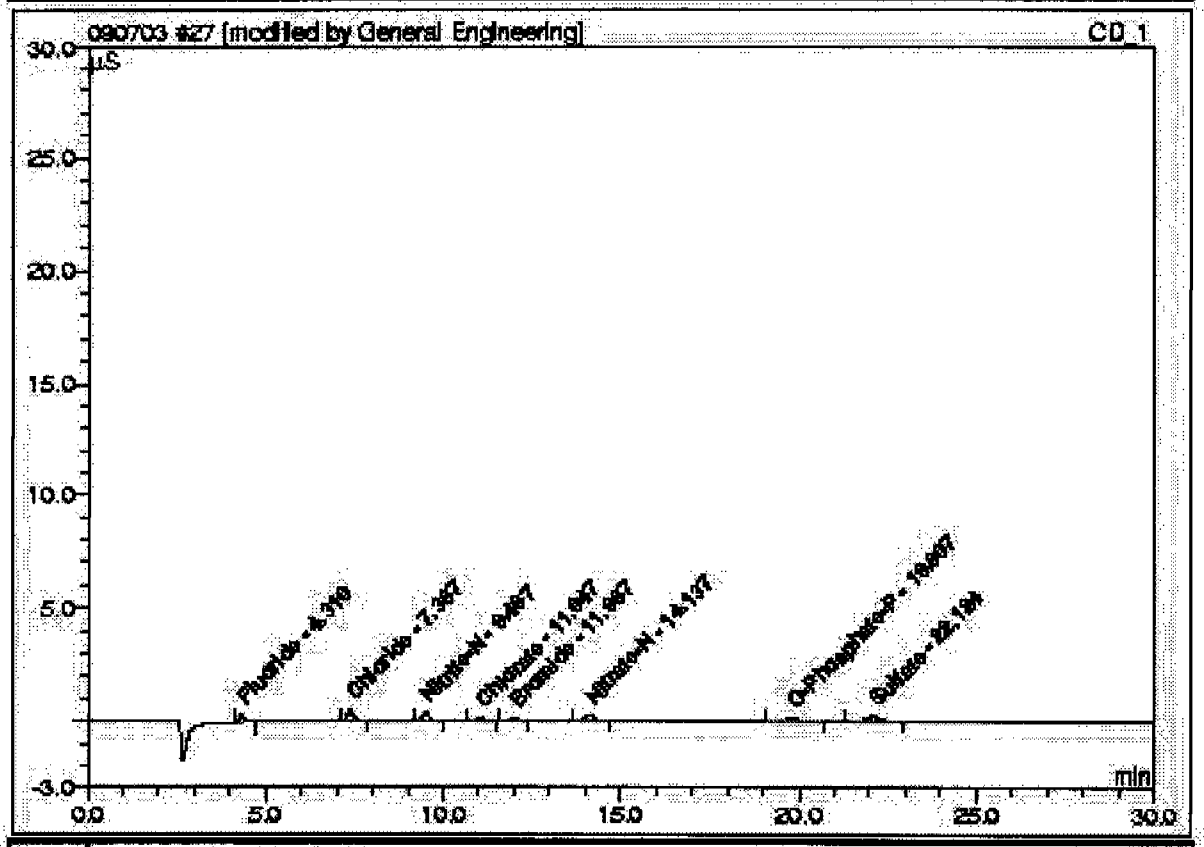

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	0.1000	0.1408	*	0.05234	9.88
2	7.37	Chloride	0.2000	0.3949		0.09372	15.91
3	9.49	Nitrite-N	0.1000	0.1421		0.08703	14.77
4	11.05	Chlorate	0.2000	0.2070		0.03093	5.23
5	11.99	Bromide	0.2000	0.2104		0.03382	5.74
6	14.14	Nitrate-N	0.1000	0.1817		0.10053	17.06
7	19.81	O-Phosphate-P	0.2000	0.2212		0.06603	11.21
8	22.12	Sulfate	0.4000	0.6729		0.12497	21.21
Total:				2.1609	0.000	0.589	100.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:28	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS9HC-014108;GLGCE088;300;9055

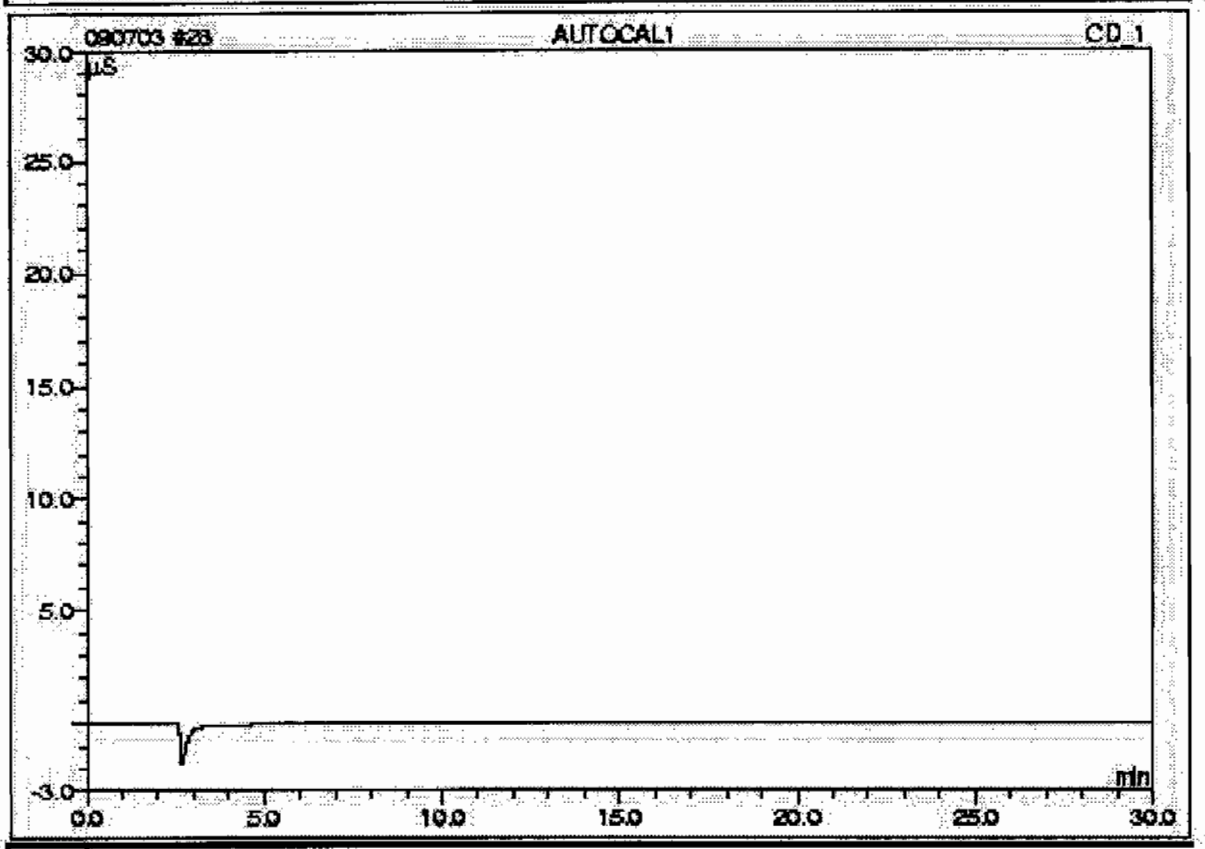

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantit. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:26	*Analyst:*	MAR1
Run Time (min):	30.00	Column:	AS9HC-015580;GLGCE085;300;9058

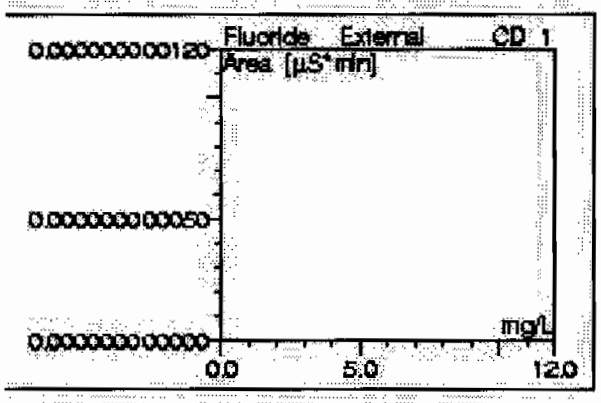

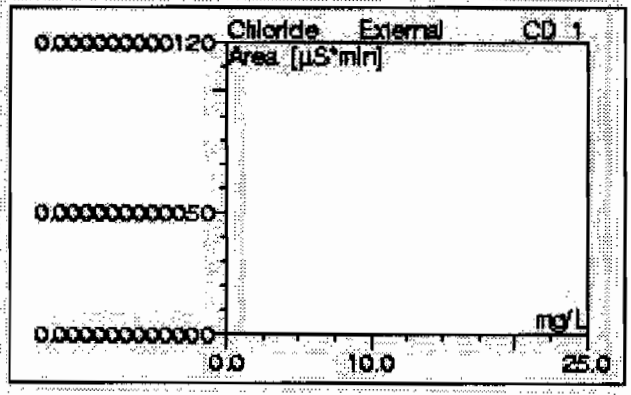

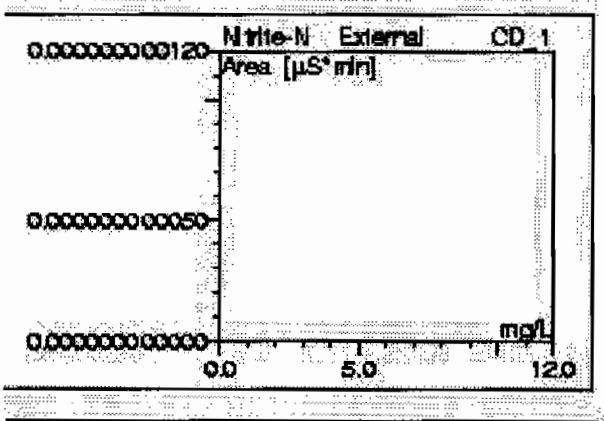

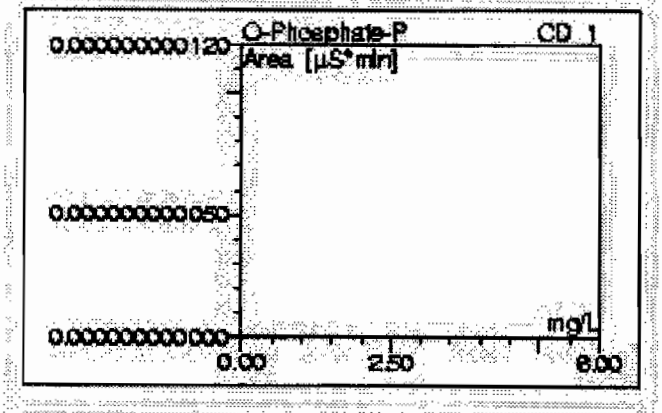

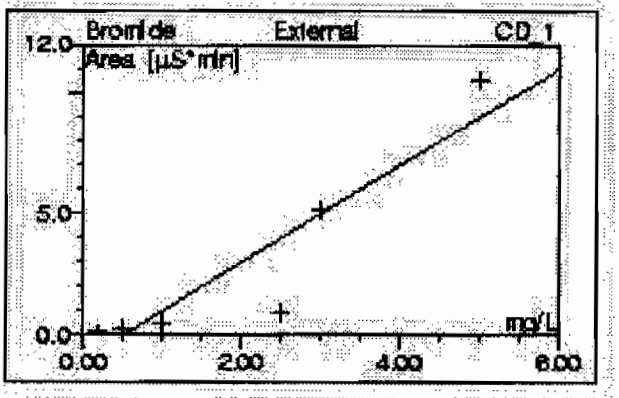

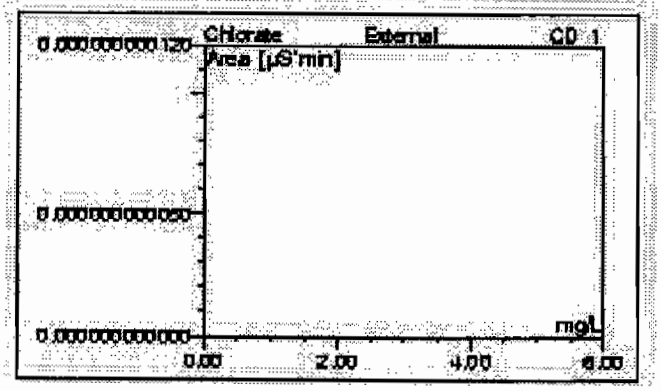

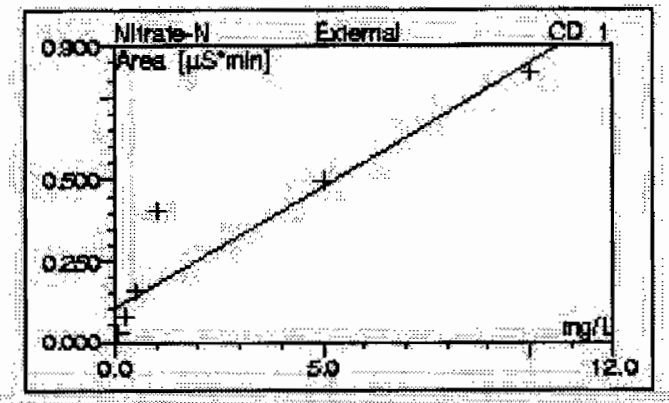

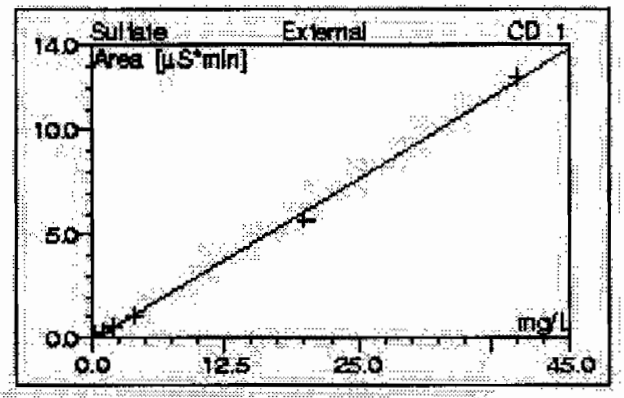

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Chloride	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrite-N	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Bromide	0LOff	85.7419	-1.0196	1.9997	0.0000
n.a.	n.a.	Chlorate	0LOff	n.a.	0.0000	0.0000	0.0000
n.a.	n.a.	Nitrate-N	0LOff	86.4468	0.1041	0.0746	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8340	-0.1257	0.3112	0.0000
Average:				90.6742	-0.1301	0.2982	0.0000

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:26	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9055

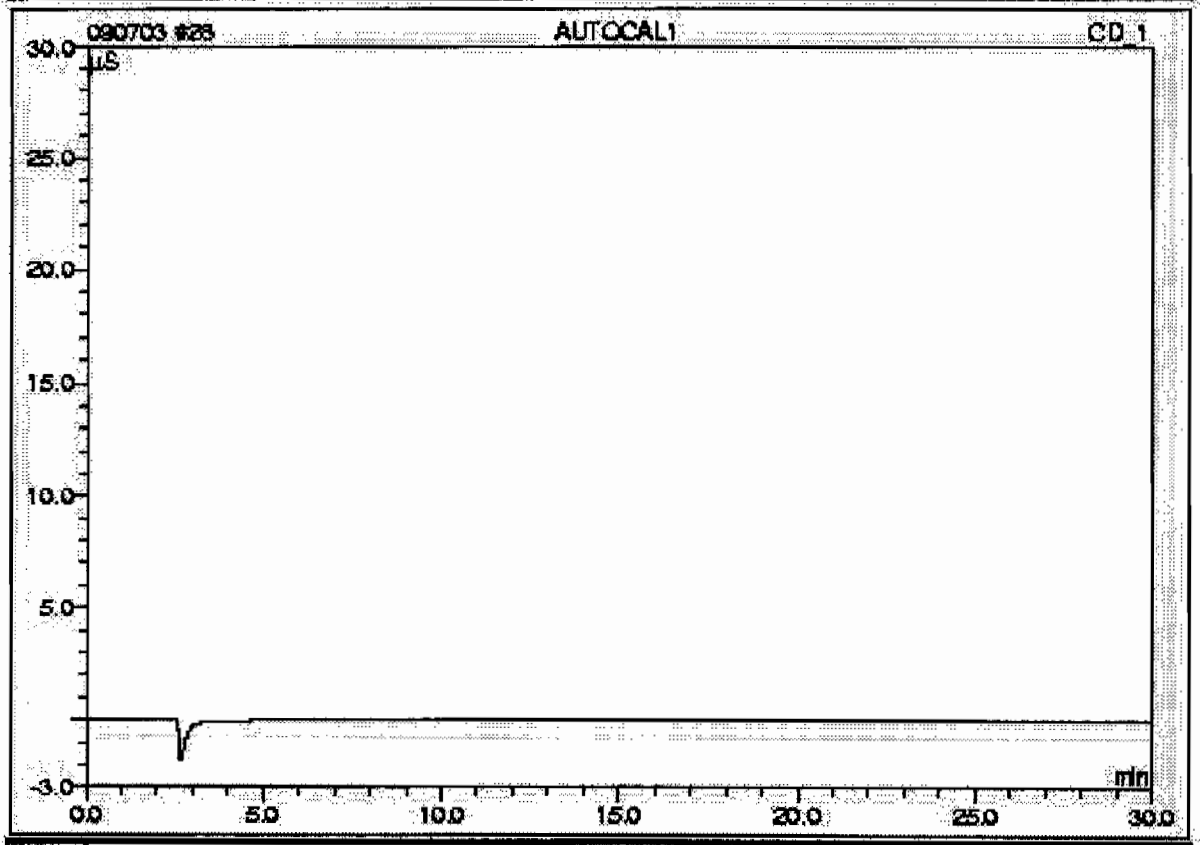

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/2009 1:25	*Analyst:*	MAR1
Run Time (min):	30.00	*Column:*	AS23-001528;GLGC:E085;300;9055

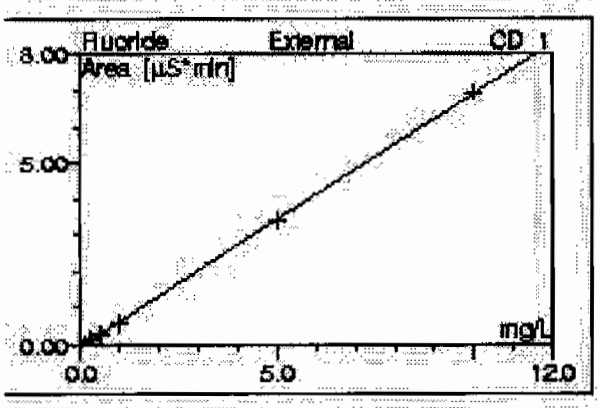

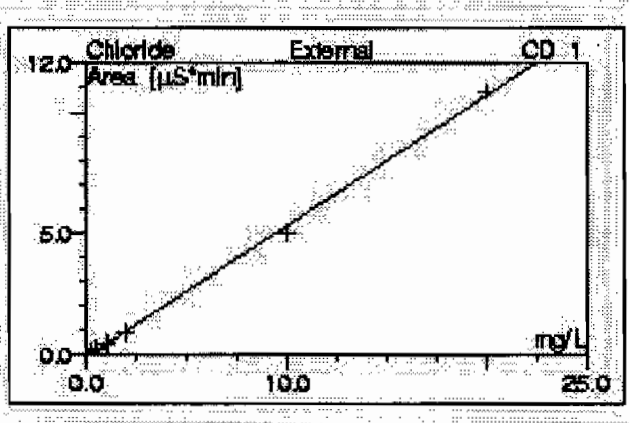

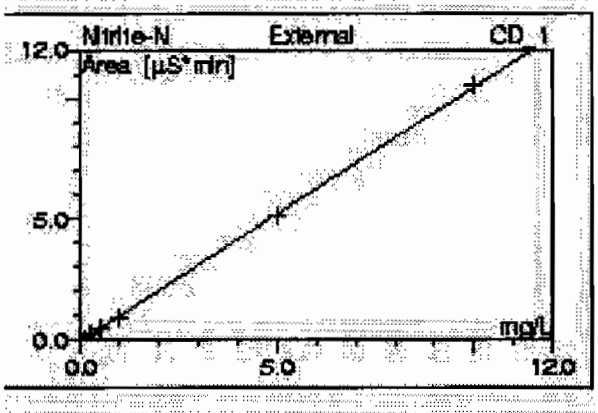

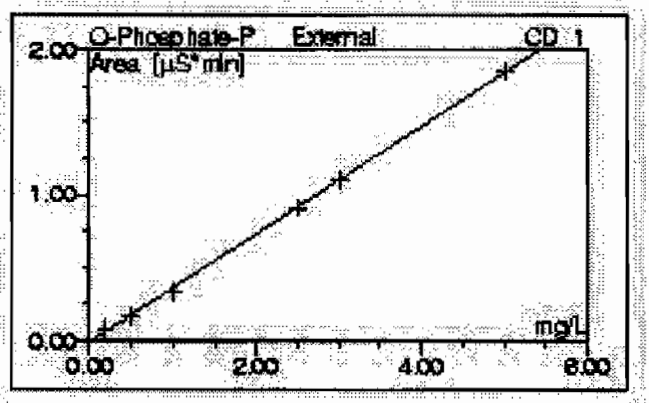

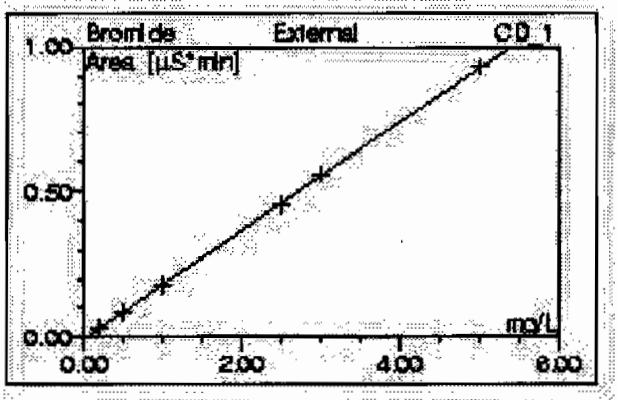

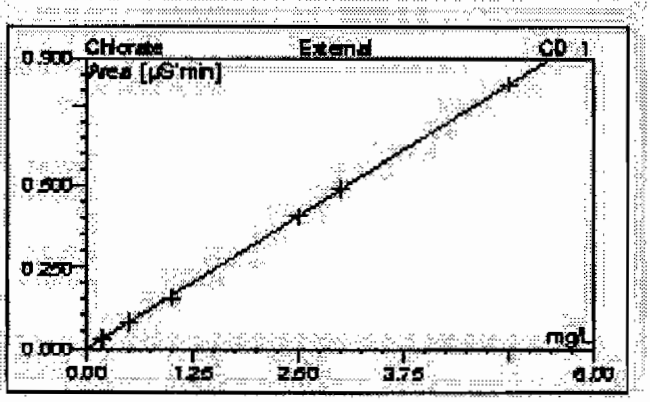

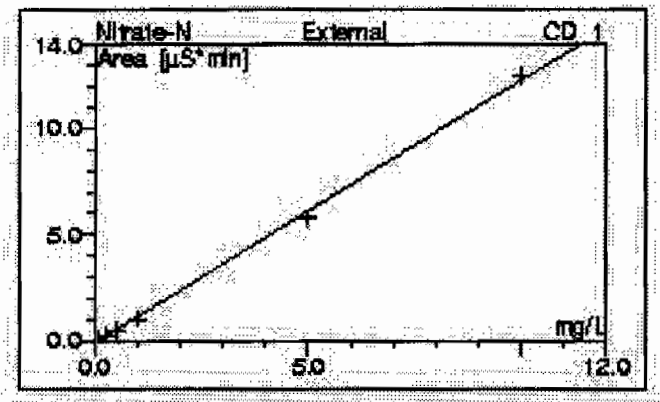

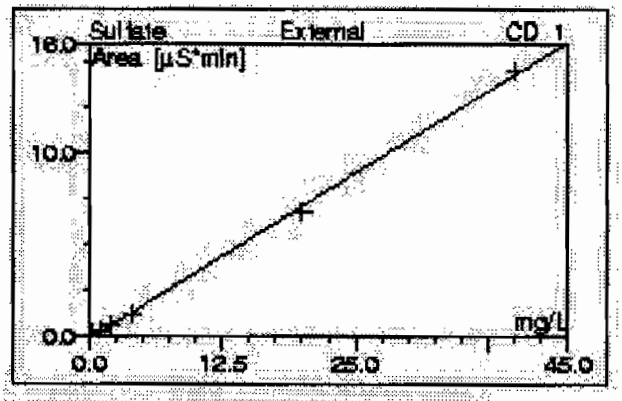

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9918	-0.0458	0.6968	0.0000
n.a.	n.a.	Chloride	0LOff	99.8028	-0.1138	0.5394	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9773	-0.0622	1.0502	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	99.9702	-0.0164	0.3726	0.0000
n.a.	n.a.	Bromide	0LOff	99.9731	-0.0054	0.1863	0.0000
n.a.	n.a.	Chlorate	0LOff	99.9997	-0.0032	0.1646	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.8340	-0.1257	1.2448	0.0000
n.a.	n.a.	Sulfate	0LOff	99.8797	-0.1186	0.3620	0.0000
Average:				99.9261	-0.0614	0.5771	0.0000

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	*Analyst:*	MAR1
Run Time (min):	30.00	*Column:*	AS9HC-014108;GLGCE085;300;9058

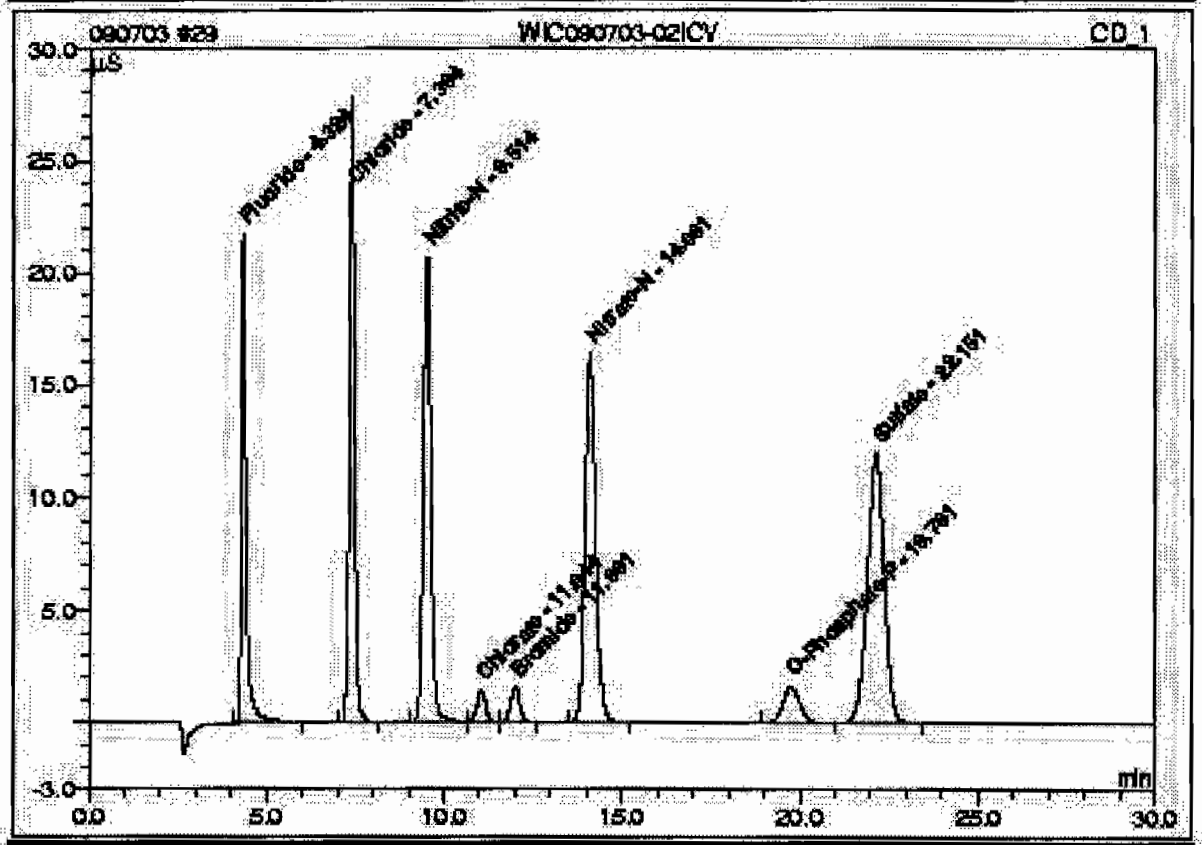

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8296		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.09	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65338	24.40
Total:				49.6694	0.000	27.271	100.00

29 WIC090703-02ICV

Sample Name:	WIC090703-02ICV	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 1:59	*Analyst:*	MAR1
Run Time (min):	30.00	*Column:*	AS23-001528;GLGCE085;300;9058

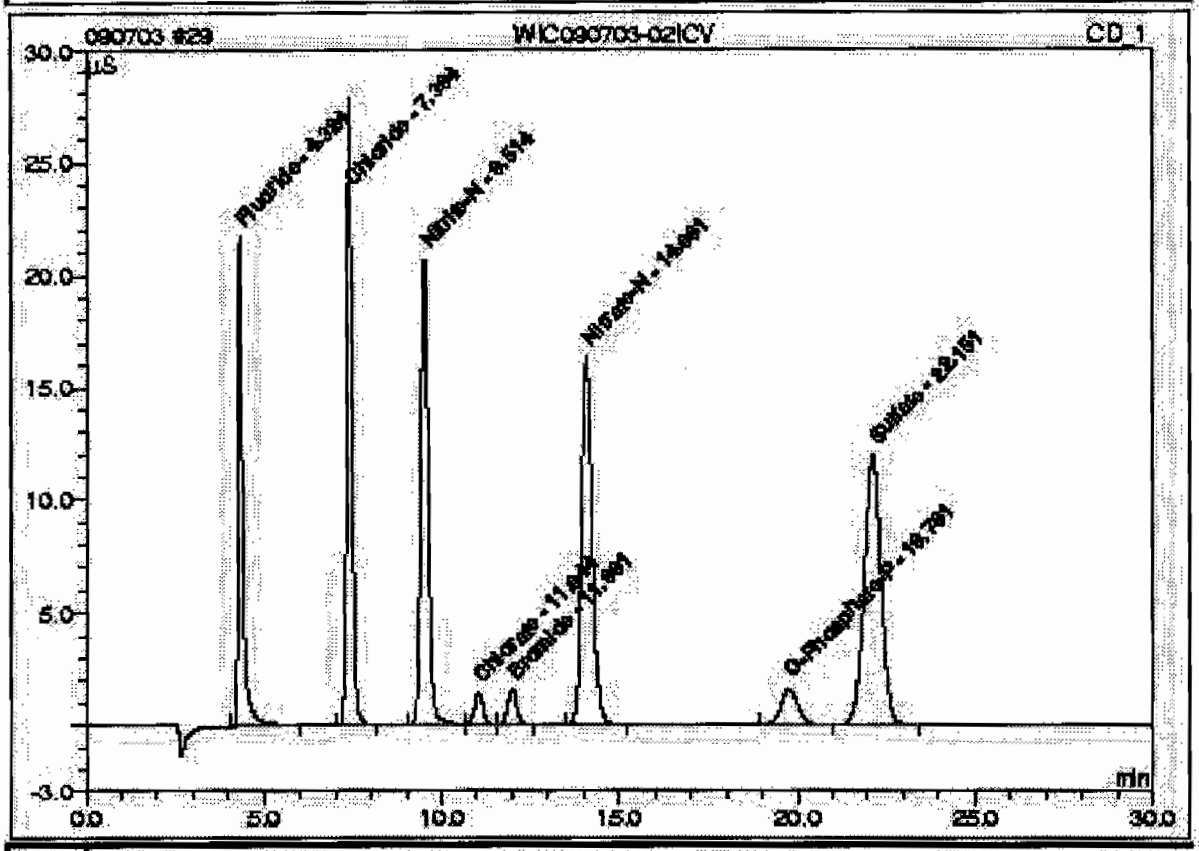

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.8721		3.34927	12.28
2	7.39	Chloride	n.a.	9.2292		4.86485	17.84
3	9.51	Nitrite-N	n.a.	4.8298		5.00964	18.37
4	11.04	Chlorate	n.a.	2.5041		0.40893	1.50
5	11.99	Bromide	n.a.	2.4457		0.45018	1.65
6	14.09	Nitrate-N	n.a.	4.6301		5.63782	20.67
7	19.76	O-Phosphate-P	n.a.	2.4503		0.89663	3.29
8	22.15	Sulfate	n.a.	18.7083		6.65398	24.40
Total:				49.6694	0.000	27.271	100.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	*Analyst:*	MAR1
Run Time (min):	30.00	*Column:*	AS9HC-014108;GLGCE088;300;9058

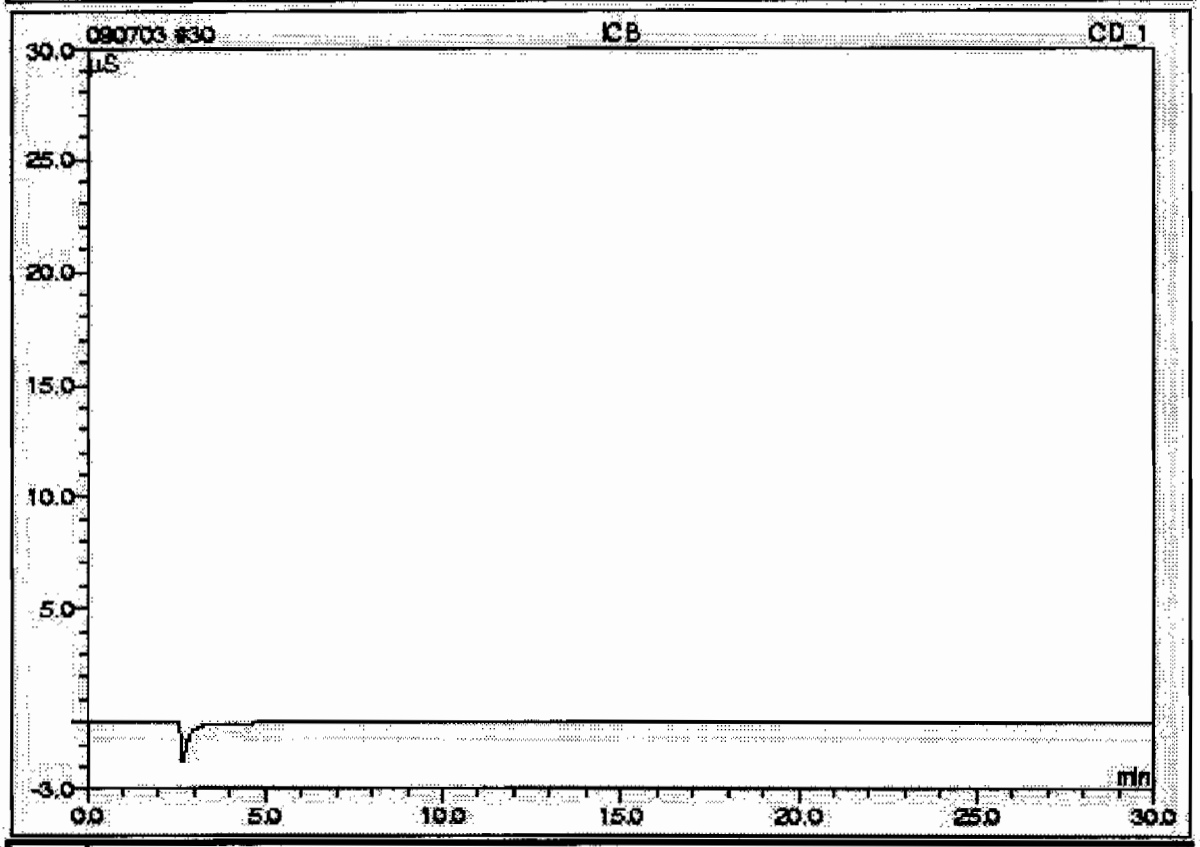

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

30 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23_HC	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/4/09 2:32	Analyst:	MAR1
Run Time (min):	30.00	Column:	AS23-001528;GLGCE085;300;9056

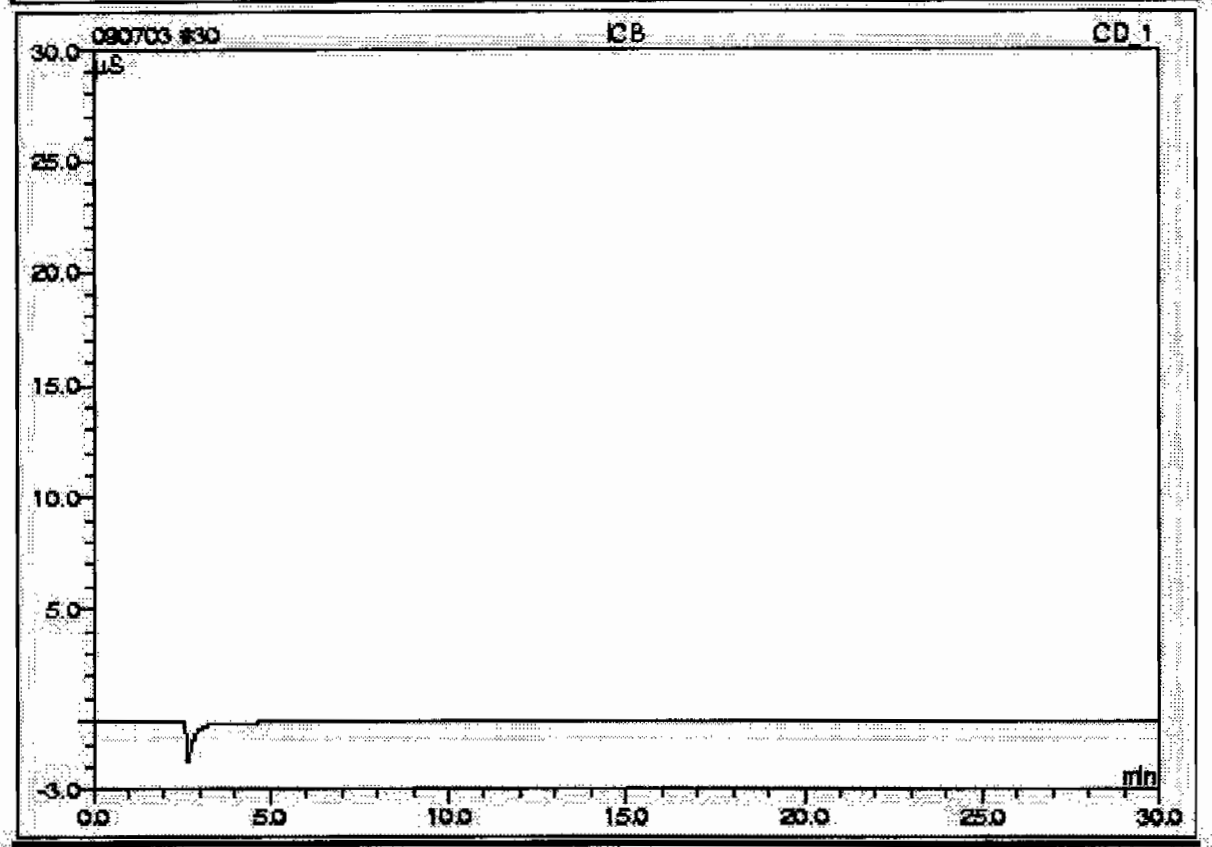

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

This is runlog for Sequence 090709.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/09/09 09:44		1	090709	MAR1
ICV	07/09/09 10:13		1	090709	MAR1
ICB	07/09/09 10:42		1	090709	MAR1
1201868385	07/09/09 11:11	879955	1	090709	MAR1
1201868389	07/09/09 11:40	879955	1	090709	MAR1
232076001	07/09/09 12:09	879955	1	090709	MAR1
1201868386	07/09/09 12:37	879955	1	090709	MAR1
1201868387	07/09/09 13:06	879955	1	090709	MAR1
1201868388	07/09/09 13:35	879955	1	090709	MAR1
232076002	07/09/09 14:04	879955	1	090709	MAR1
232076003	07/09/09 14:33	879955	1	090709	MAR1
CVH	07/09/09 15:02		1	090709	MAR1
CCB	07/09/09 15:31		1	090709	MAR1
232079001	07/09/09 16:00	879955	1	090709	MAR1
232079002	07/09/09 16:29	879955	1	090709	MAR1
232079003	07/09/09 16:58	879955	1	090709	MAR1
232079004	07/09/09 17:27	879955	1	090709	MAR1
232079005	07/09/09 17:55	879955	1	090709	MAR1
232357001	07/09/09 18:24	879955	1	090709	MAR1
232357002	07/09/09 18:53	879955	1	090709	MAR1
CCV	07/09/09 19:22		1	090709	MAR1
CCB	07/09/09 19:51		1	090709	MAR1
1201871608	07/09/09 20:20	881302	1	090709	MAR1
1201871612	07/09/09 20:49	881302	1	090709	MAR1
232509001	07/09/09 21:18	881302	1	090709	MAR1
1201871609	07/09/09 21:47	881302	1	090709	MAR1
1201871610	07/09/09 22:16	881302	1	090709	MAR1
1201871611	07/09/09 22:45	881302	1	090709	MAR1

232509002	07/09/09	23:13	881302	1	090709	MAR1
232509003	07/09/09	23:42	881302	1	090709	MAR1

9 WIC090709-02ICV

Sample Name:	WIC090709-02ICV	*Injection Volume:*	1.0
Vial Number:	2	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 10:13	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9055

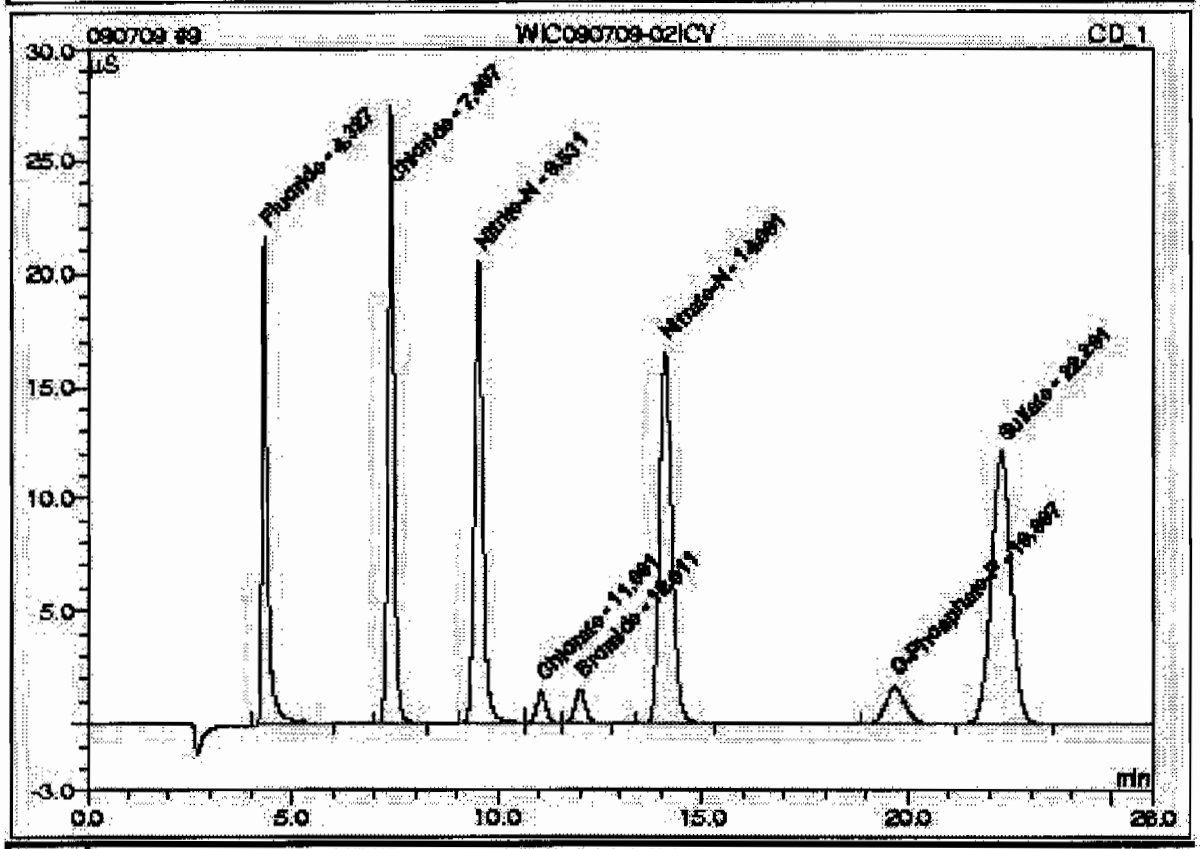

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.8959		3.36595	12.23
2	7.41	Chloride	n.a.	9.2383		4.86975	17.69
3	9.53	Nitrite-N	n.a.	4.8673		5.04924	18.35
4	11.06	Chlorate	n.a.	2.5659		0.41908	1.52
5	12.01	Bromide	n.a.	2.4471		0.45043	1.64
6	14.09	Nitrate-N	n.a.	4.7057		5.73197	20.83
7	19.70	O-Phosphate-P	n.a.	2.4685		0.90341	3.28
8	22.29	Sulfate	n.a.	18.9257		6.73209	24.46
Total:				50.1143	0.000	27.522	100.00

10 ICB

Sample Name:	ICB	*Injection Volume:*	1.0
Vial Number:	3	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 10:42	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE088;300;9058

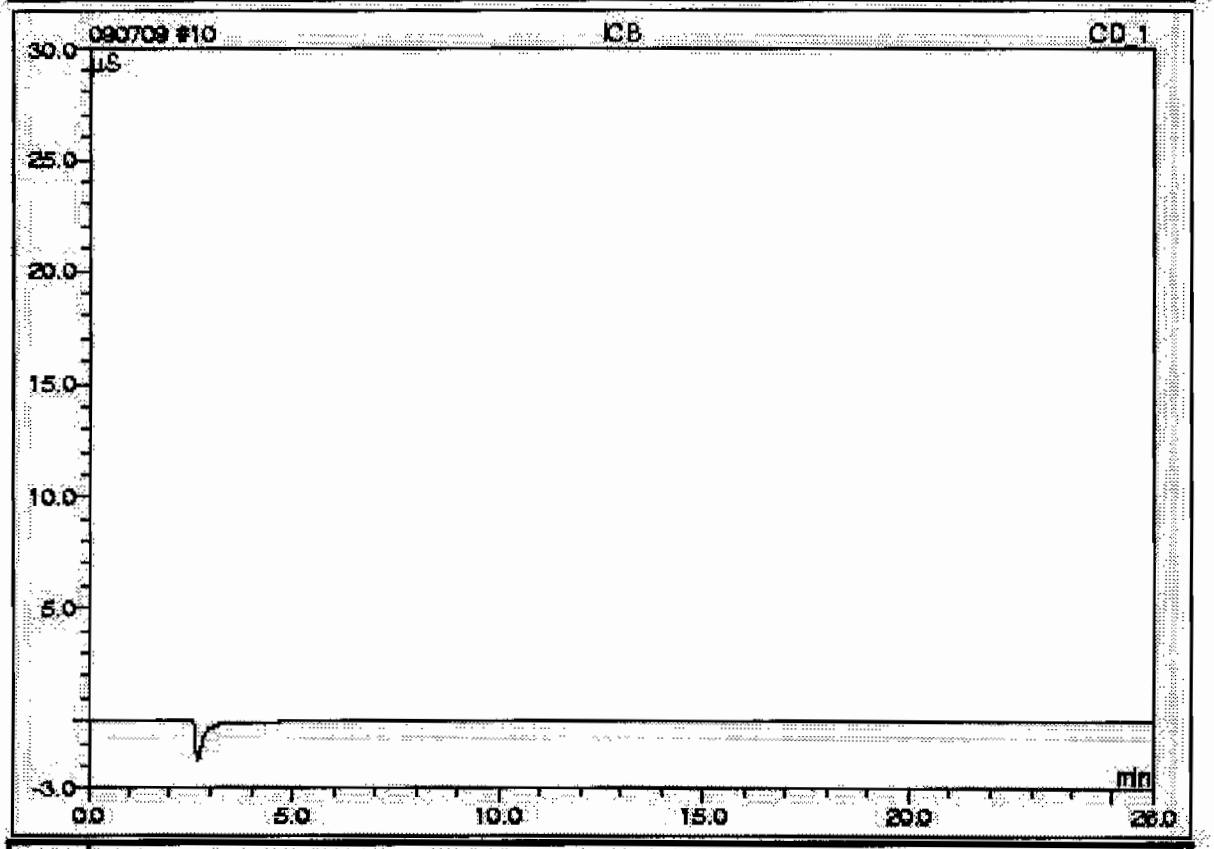

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

28 WIC090709-02CCV

Sample Name:	WIC090709-02CCV	*Injection Volume:*	1.0
Vial Number:	21	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 19:22	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9055

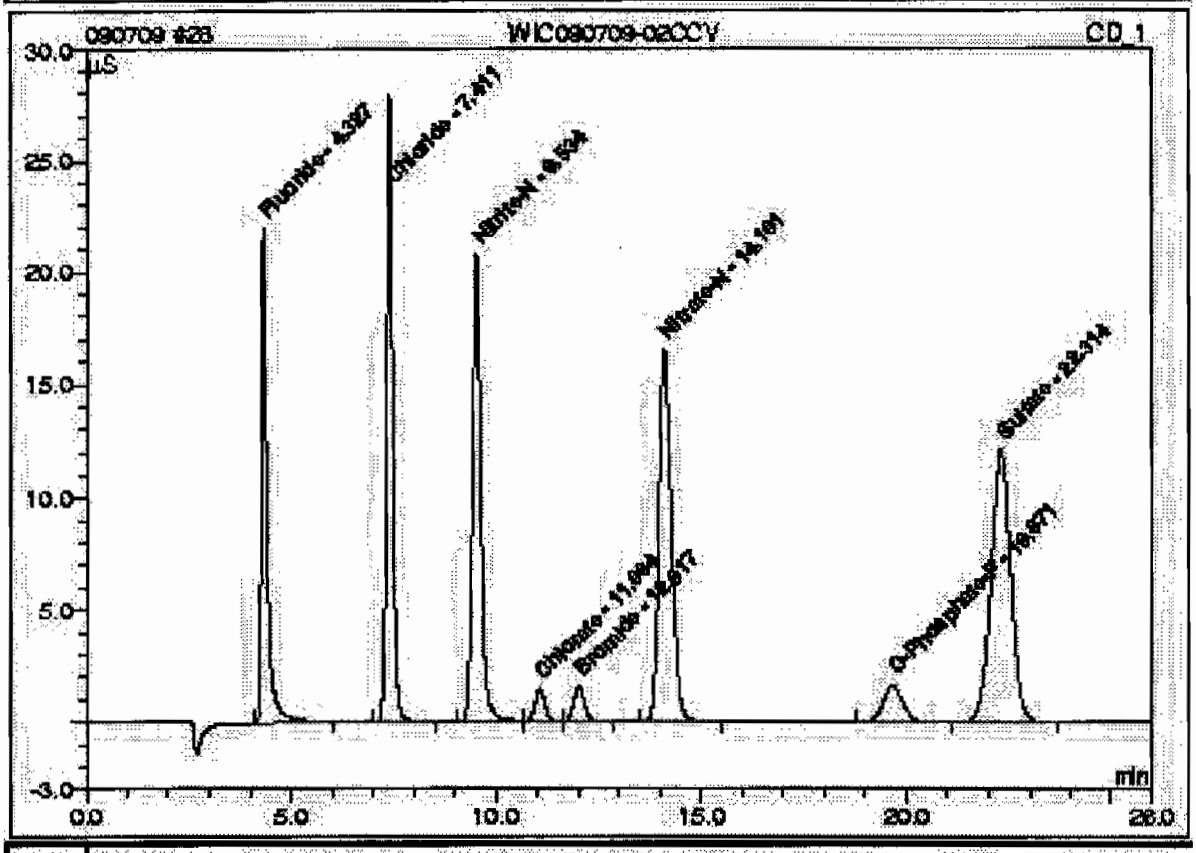

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.39	Fluoride	n.a.	4.9573		3.40865	12.28
2	7.41	Chloride	n.a.	9.4236		4.96972	17.90
3	9.53	Nitrite-N	n.a.	4.9050		5.08879	18.33
4	11.06	Chlorate	n.a.	2.5794		0.42132	1.52
5	12.02	Bromide	n.a.	2.4750		0.45564	1.64
6	14.10	Nitrate-N	n.a.	4.7231		5.75357	20.72
7	19.67	O-Phosphate-P	n.a.	2.4631		0.90140	3.25
8	22.31	Sulfate	n.a.	19.0142		6.76413	24.36
Total:				50.5407	0.000	27.763	100.00

29 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 19:51	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE088;300;9055

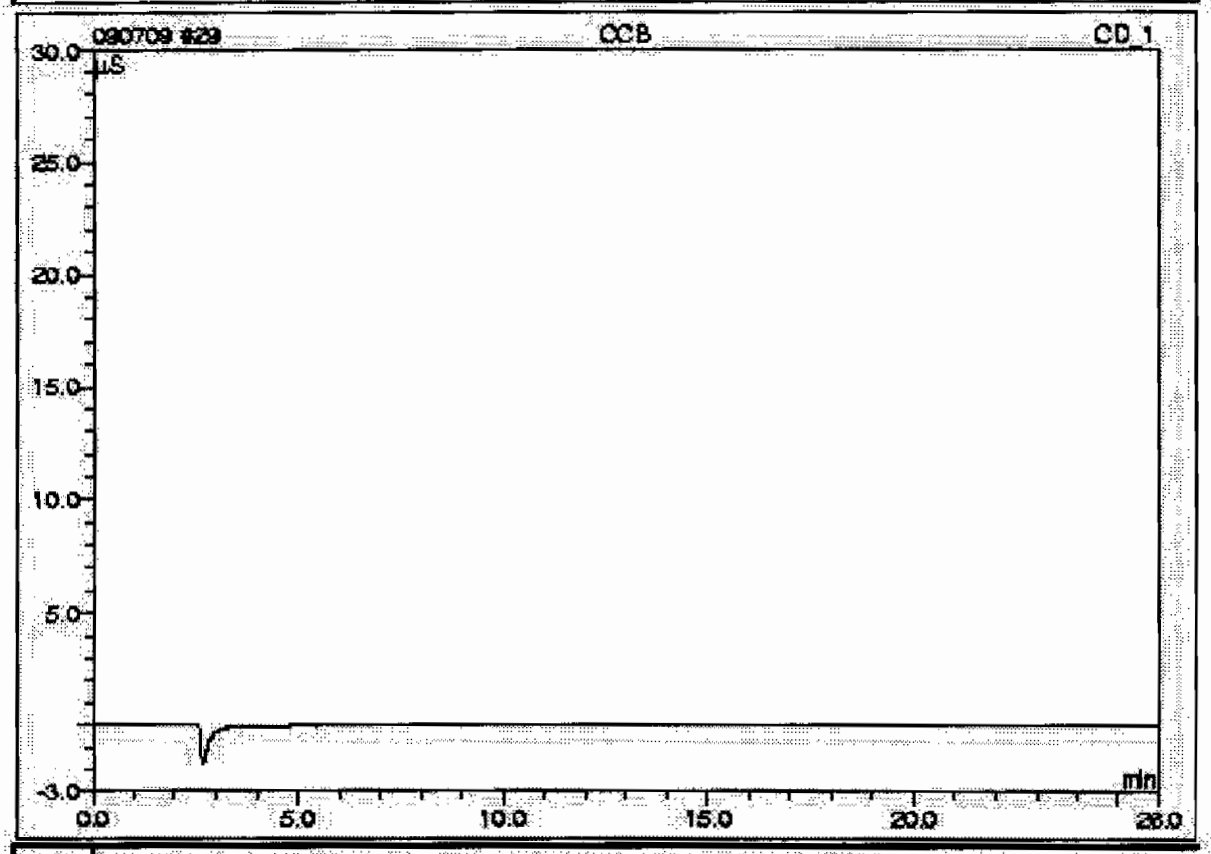

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

30 1201871608/881302/1/1/MB

Sample Name:	1201871608/881302/1/1/MB	*Injection Volume:*	1.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 20:20	*Analyst:*	MAR1
Run Time (min):	25.00	*Column:*	AS9HC-014108;GLGCE088;300;9058

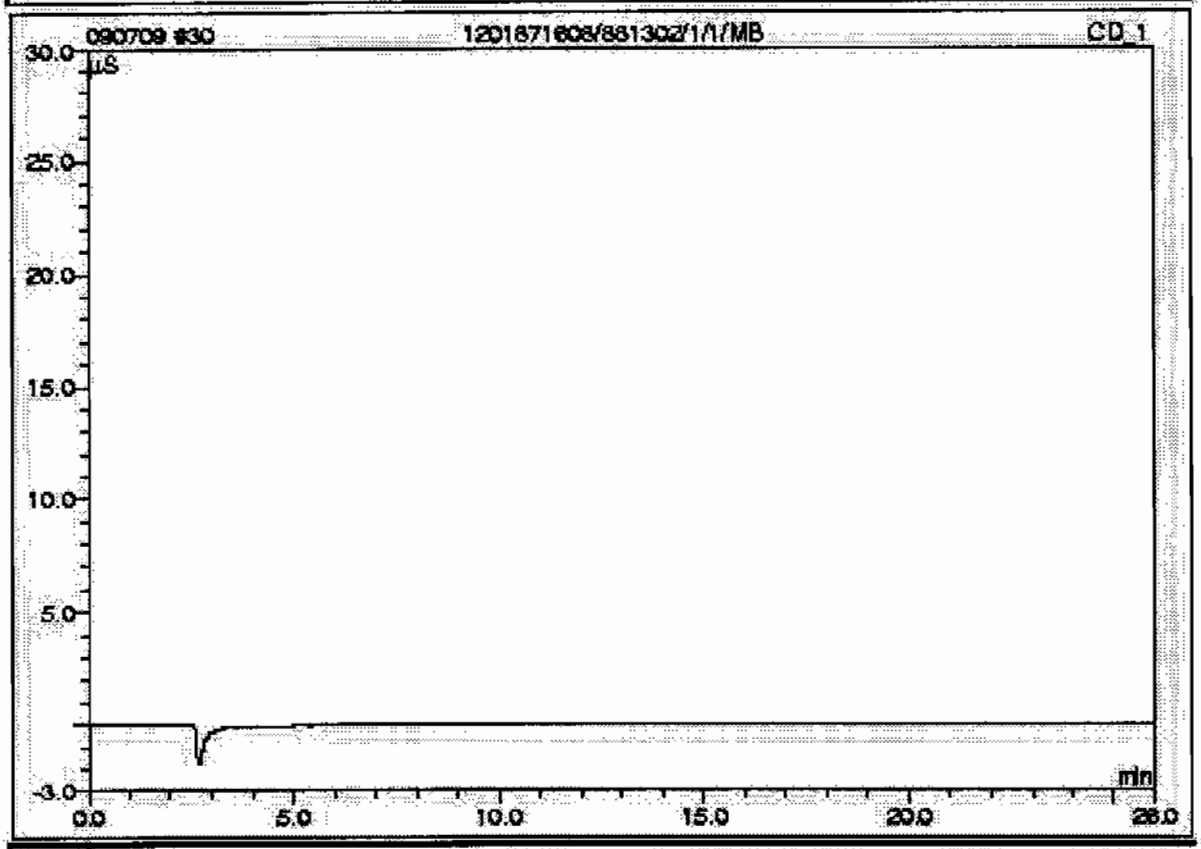

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

31 1201871612/881302/1/1/LCS

Sample Name:	1201871612/881302/1/1/LCS	Injection Volume:	1.0
Vial Number:	24	Channel:	CD_1
Sample Type:	unknown	Dilution Factor:	1.0000
Control Program:	AS23	Sample Weight:	1.0000
Quantif. Method:	090703an	Sample Amount:	1.0000
Recording Time:	7/9/09 20:49	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE088;300;9058

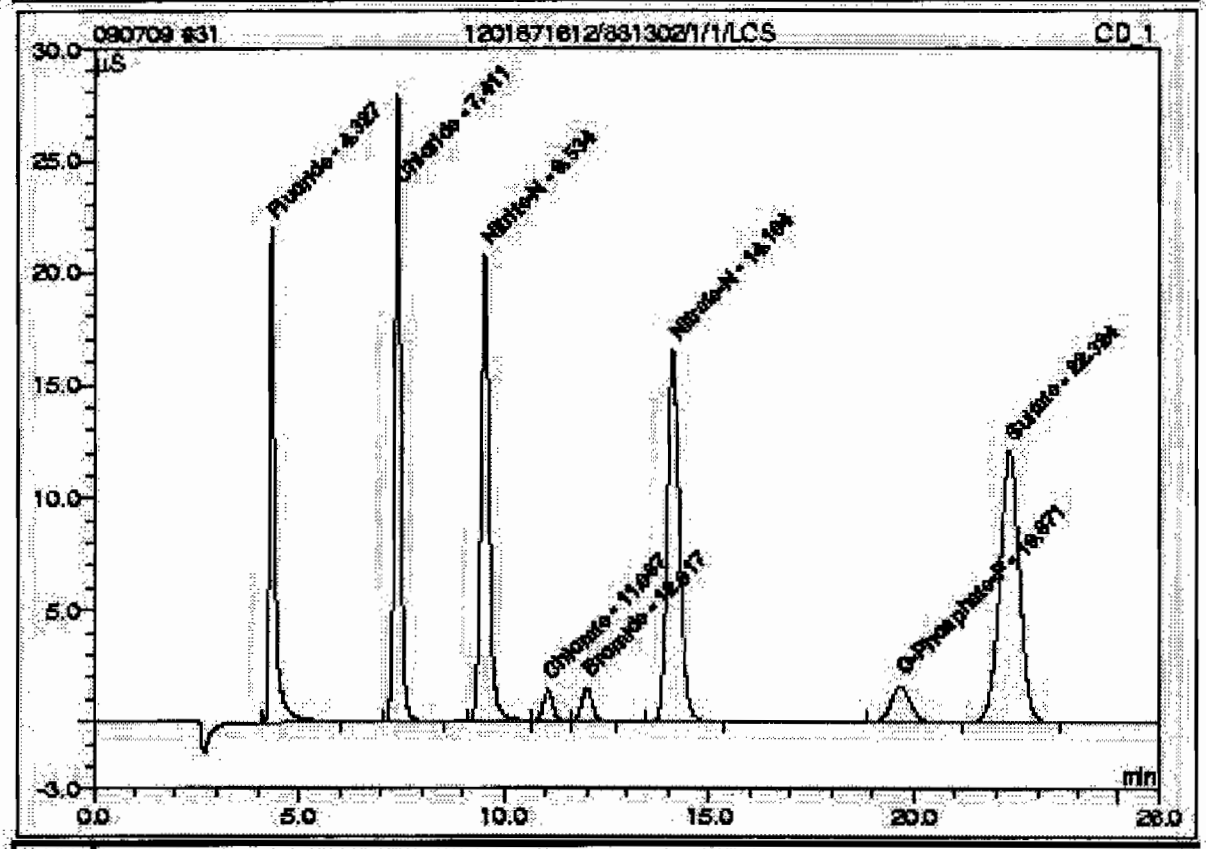

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9611		3.41132	12.29
2	7.41	Chloride	n.a.	9.4179		4.96663	17.89
3	9.53	Nitrite-N	n.a.	4.9032		5.08692	18.32
4	11.07	Chlorate	n.a.	2.5434		0.41539	1.50
5	12.02	Bromide	n.a.	2.4551		0.45193	1.63
6	14.10	Nitrate-N	n.a.	4.7245		5.75536	20.73
7	19.67	O-Phosphate-P	n.a.	2.4569		0.89908	3.24
8	22.32	Sulfate	n.a.	19.0393		6.77321	24.40
Total:				50.5014	0.000	27.760	100.00

32 232509001/881302/1/1/

Sample Name:	232509001/881302/1/1/	*Injection Volume:*	1.0
Vial Number:	25	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 21:18	*Analyst:*	MAR1
Run Time (min):	25.00	*Column:*	AS9HC-014108;GLGCE085;300;9055

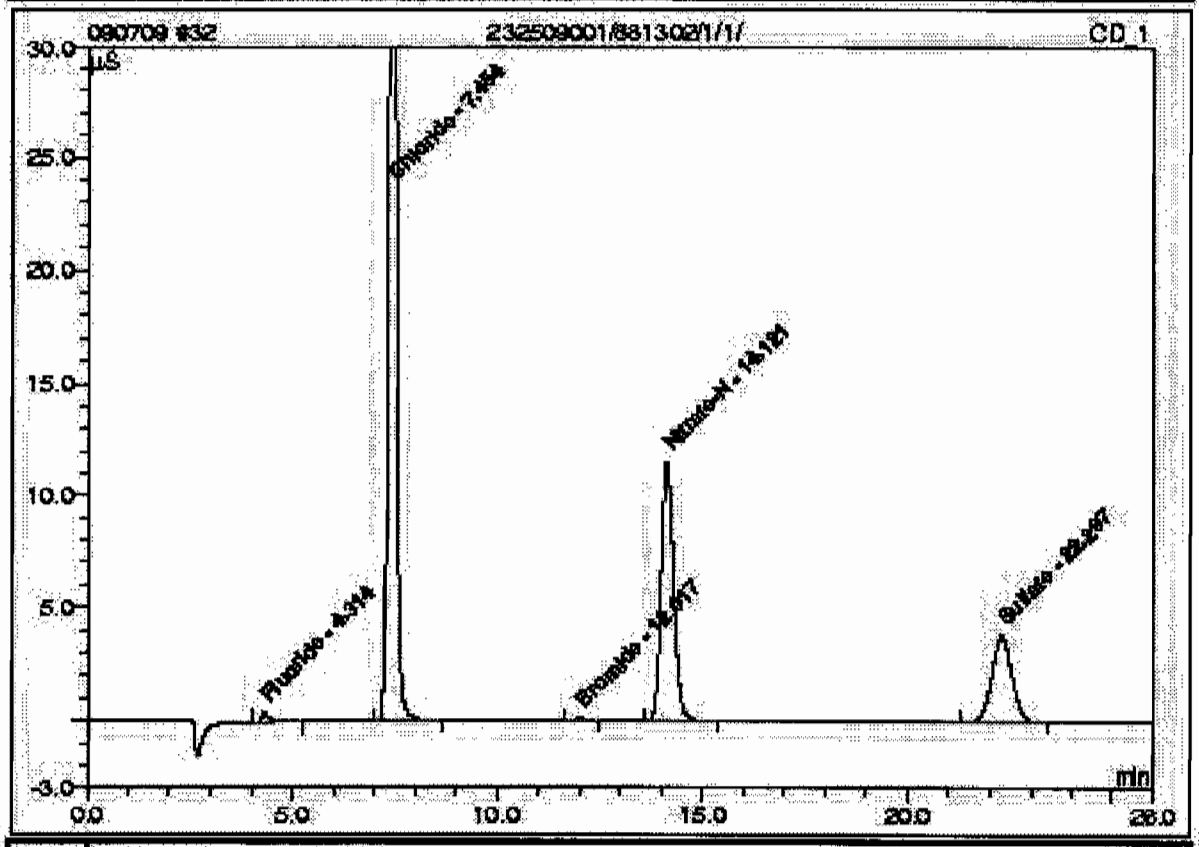

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.1864		0.08409	0.43
2	7.45	Chloride	n.a.	24.5465		13.12774	67.52
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	12.02	Bromide	n.a.	0.2092		0.03361	0.17
4	14.12	Nitrate-N	n.a.	3.3316		4.02147	20.68
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	22.30	Sulfate	n.a.	6.3410		2.17670	11.19
Total:				34.6148	0.000	19.444	100.00

33 1201871609/881302/1/1/DUP

Sample Name:	1201871609/881302/1/1/DUP	*Injection Volume:*	1.0
Vial Number:	26	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 21:47	*Analyst:*	MAR1
Run Time (min):	26.00	*Column:*	AS9HC-014108;GLGCE085;300;9058

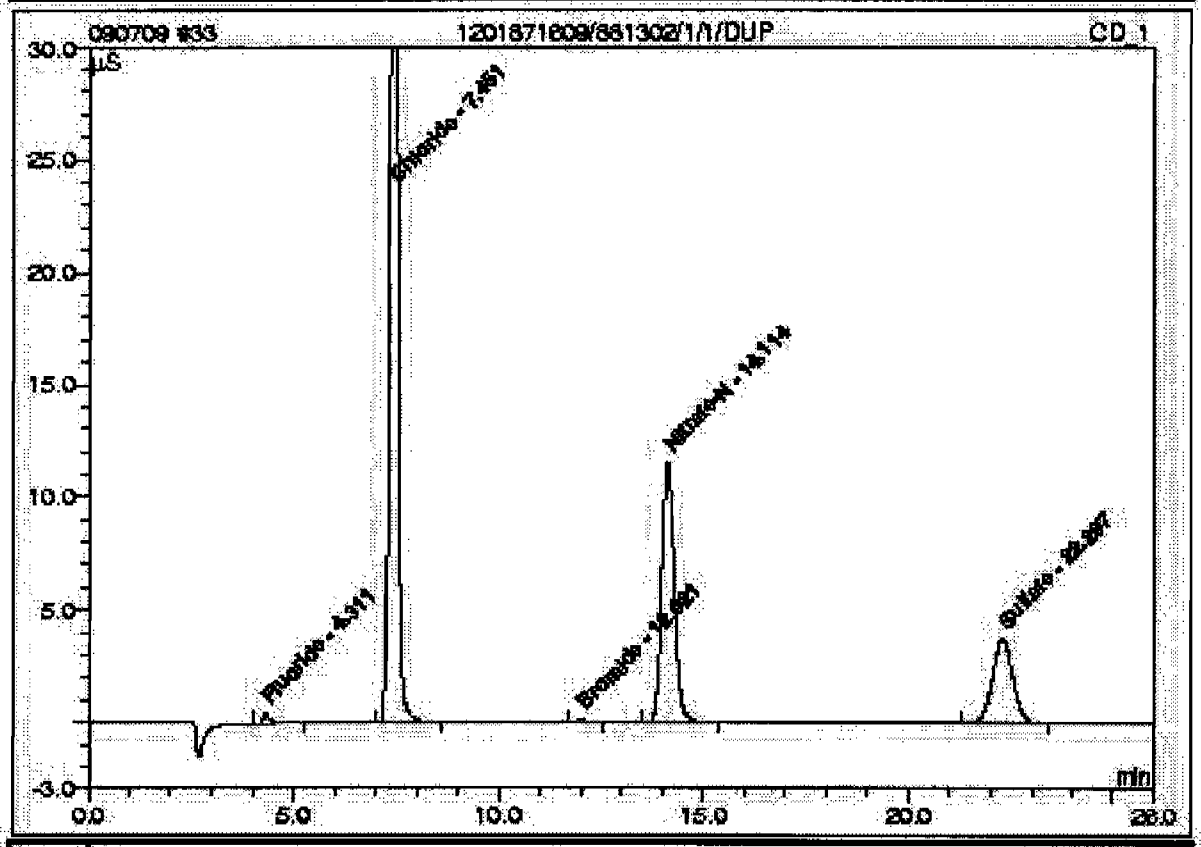

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.1852		0.08327	0.43
2	7.45	Chloride	n.a.	24.5093		13.10766	67.52
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	12.02	Bromide	n.a.	0.2058		0.03297	0.17
4	14.11	Nitrate-N	n.a.	3.3917		4.02154	20.72
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
5	22.30	Sulfate	n.a.	6.3146		2.16712	11.16
Total:				34.5466	0.000	19.413	100.00

34 1201871610/881302/1/1/MS

Sample Name:	1201871610/881302/1/1/MS	*Injection Volume:*	1.0
Vial Number:	27	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 22:18	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9058

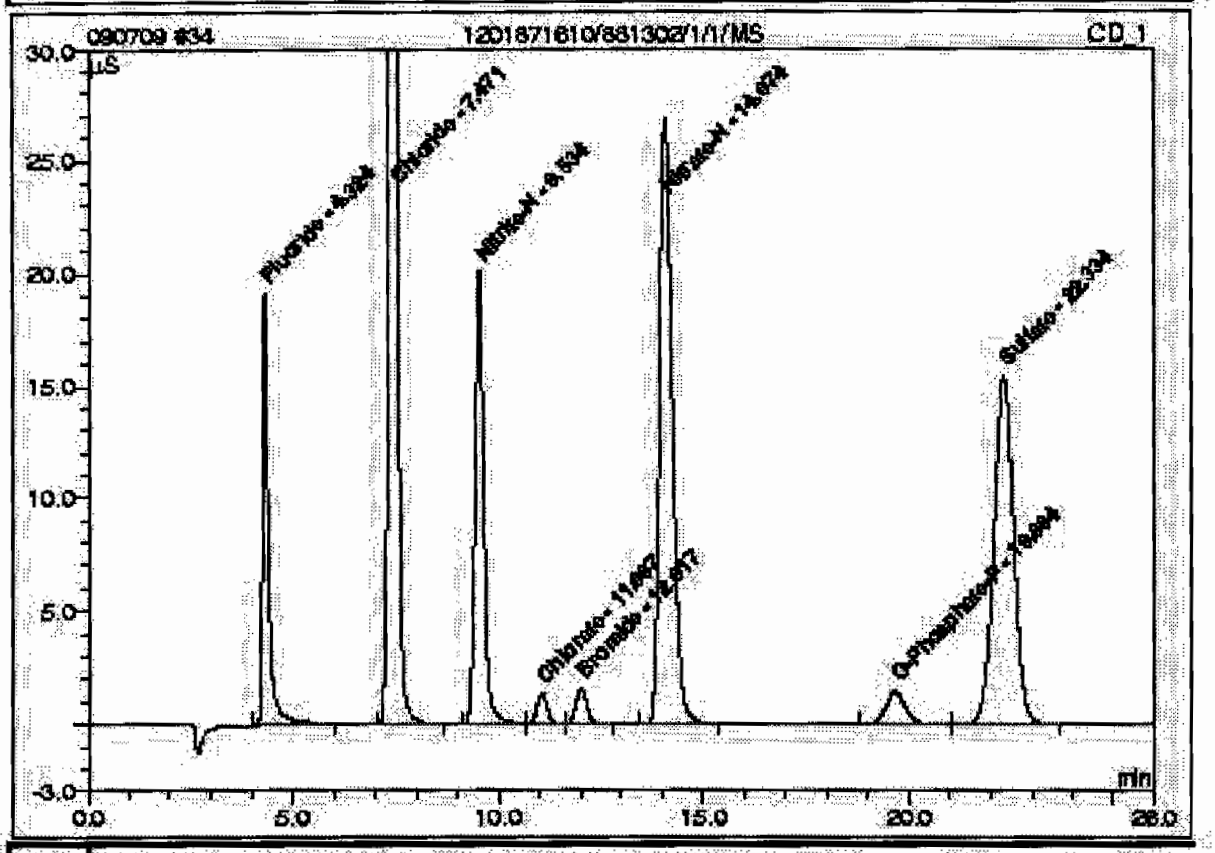

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.4285		3.04013	6.67
2	7.47	Chloride	n.a.	33.4731		17.94316	39.35
3	9.53	Nitrite-N	n.a.	4.7561		4.93248	10.82
4	11.07	Chlorate	n.a.	2.4788		0.40476	0.89
5	12.02	Bromide	n.a.	2.5496		0.46954	1.03
6	14.07	Nitrate-N	n.a.	7.6624		9.41243	20.64
7	19.66	O-Phosphate-P	n.a.	2.1855		0.79796	1.75
8	22.33	Sulfate	n.a.	24.9873		8.60047	18.86
Total:				81.6213	0.000	45.601	100.00

35 1201871611/881302/1/1/MSD

Sample Name:	1201871611/881302/1/1/MSD	*Injection Volume:*	1.0
Vial Number:	28	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 22:45	*Analyst:*	MAR1
Run Time (min):	25.00	*Column:*	AS9HC-014108;GLGCE085;300;9058

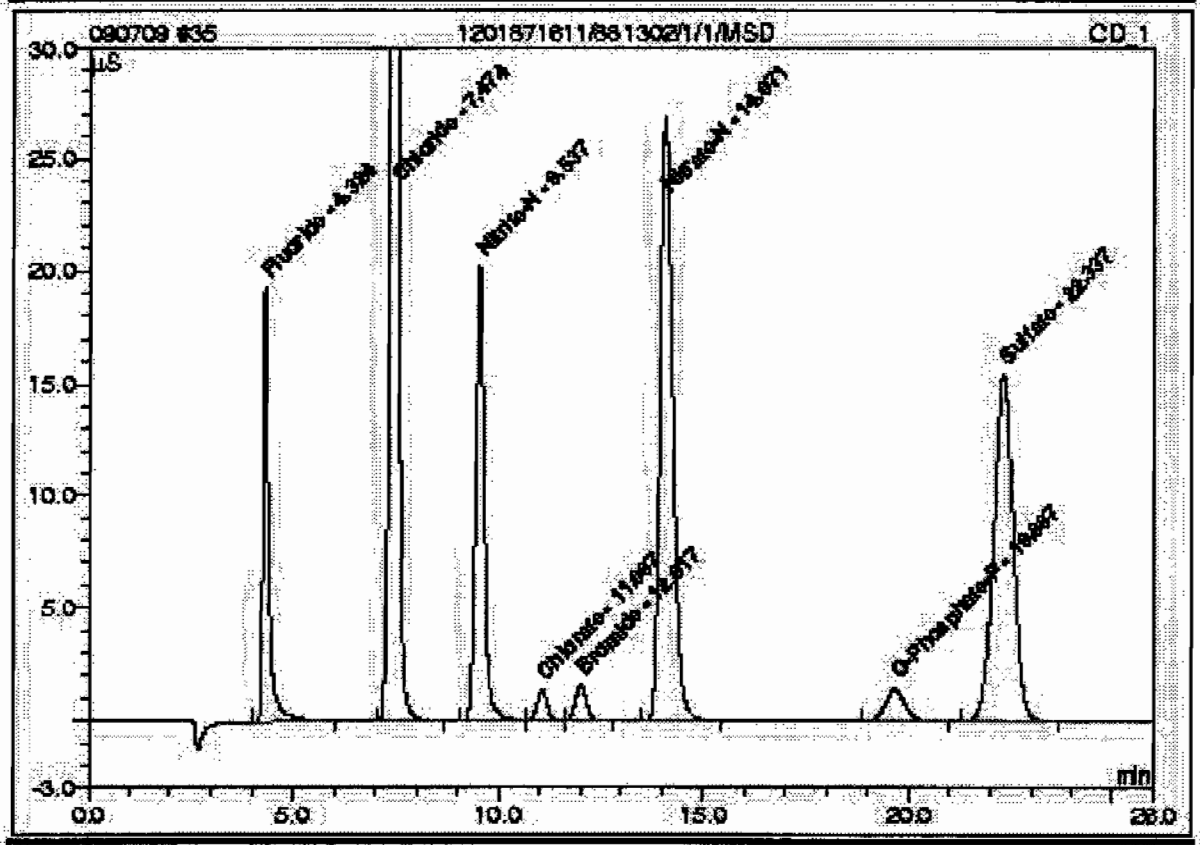

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	4.4350		3.04469	6.67
2	7.47	Chloride	n.a.	33.4932		17.95403	39.35
3	9.54	Nitrite-N	n.a.	4.7635		4.94029	10.83
4	11.07	Chlorate	n.a.	2.4759		0.40426	0.89
5	12.02	Bromide	n.a.	2.5505		0.46970	1.03
6	14.07	Nitrate-N	n.a.	7.6692		9.42091	20.65
7	19.67	O-Phosphate-P	n.a.	2.1791		0.79559	1.74
8	22.34	Sulfate	n.a.	24.0790		8.59746	18.84
Totals				81.6453	0.000	45.627	100.00

36 232509002/881302/1/1/

Sample Name:	232509002/881302/1/1/	*Injection Volume:*	1.0
Vial Number:	29	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 23:13	Analyst:	MAR1
Run Time (min):	26.00	Column:	AS9HC-014108;GLGCE085;300;9056

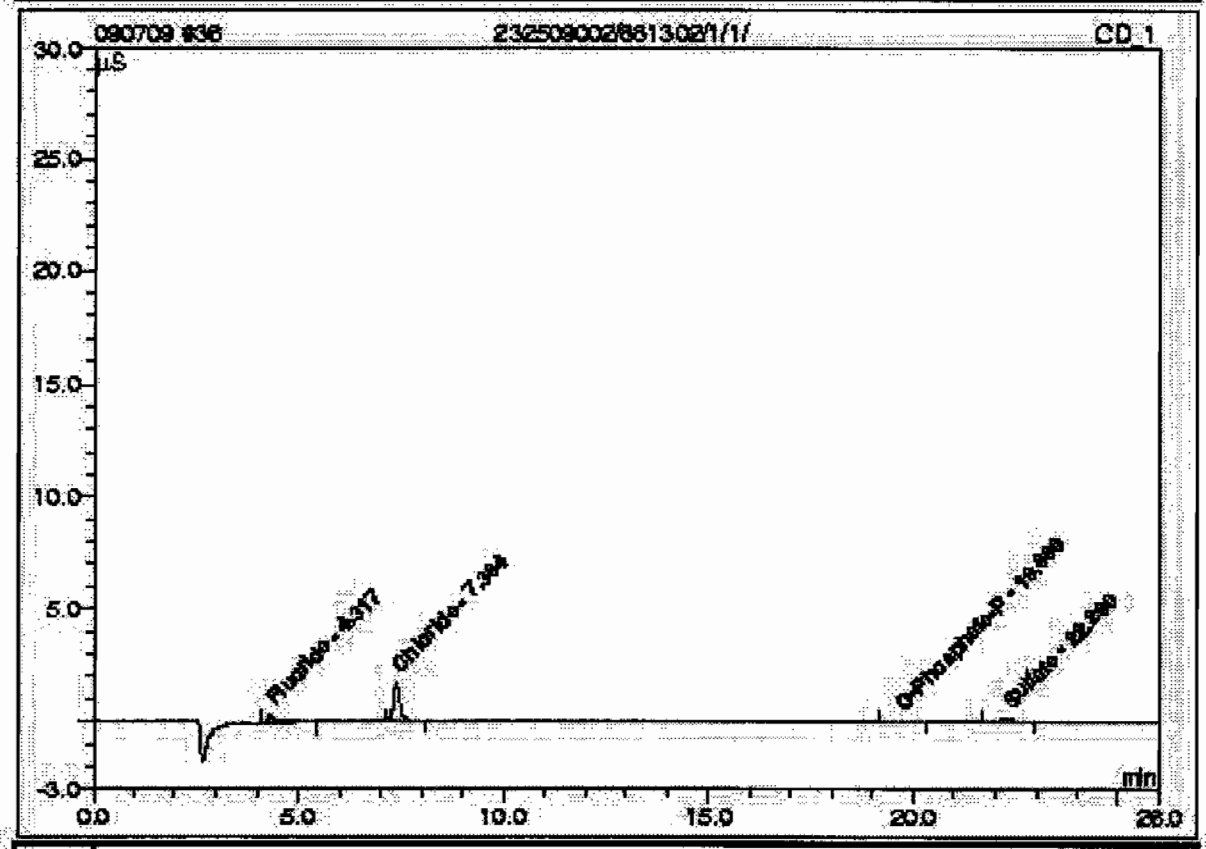

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.1619		0.06700	13.95
2	7.39	Chloride	n.a.	0.8125		0.32445	67.55
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	19.69	O-Phosphate-P	n.a.	0.1139		0.02583	5.38
4	22.29	Sulfate	n.a.	0.5018		0.06303	13.12
Total:				1.5995	0.000	0.480	100.00

36 232509002/881302/1/1/

Sample Name:	232509002/881302/1/1/	*Injection Volume:*	1.0
Vial Number:	29	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 23:13	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS23-001528;GLGCE085;300;9056

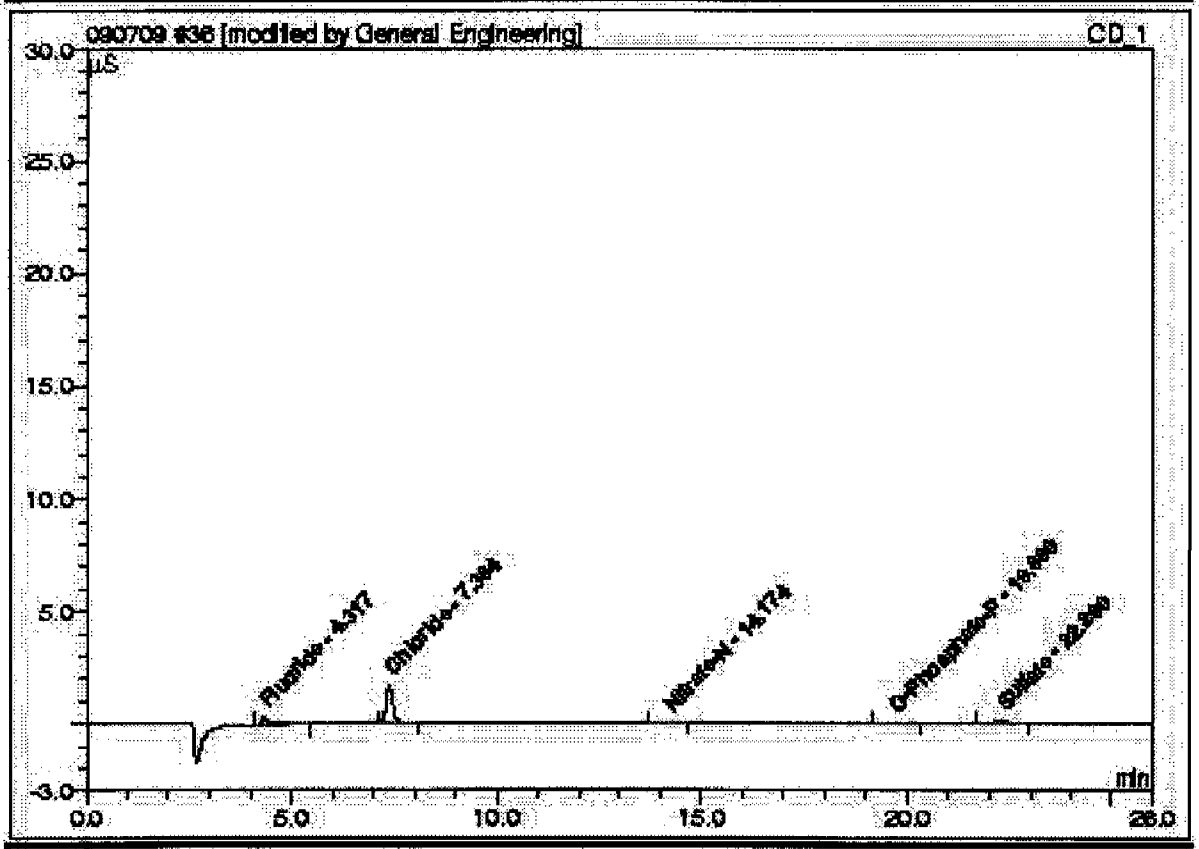

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.1619		0.06700	13.60
2	7.38	Chloride	n.a.	0.8125		0.32445	65.86
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.17	Nitrate-N	n.a.	0.1109	*	0.01234	2.50
4	19.68	O-Phosphate-P	n.a.	0.1139		0.02583	5.24
5	22.29	Sulfate	n.a.	0.5018		0.06303	12.79
Total:				1.7004	0.000	0.493	100.00

37 232509003/881302/1/1/

Sample Name:	232509003/881302/1/1/	*Injection Volume:*	1.0
Vial Number:	30	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/9/09 23:42	*Analyst:*	MAR1
Run Time (min):	26.00	*Column:*	AS9HC-014108;GLGCE085;300;9056

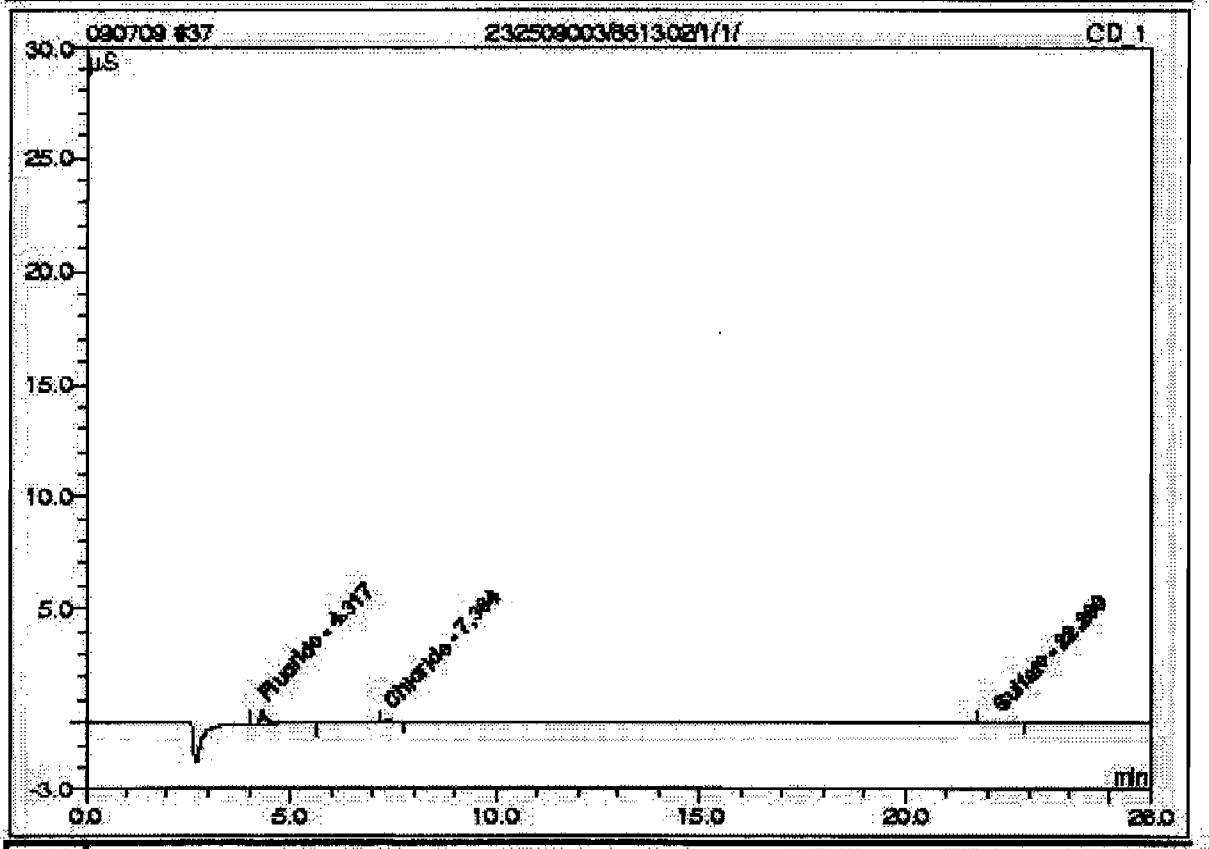

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.2225		0.10926	72.88
2	7.39	Chloride	n.a.	0.2551		0.02378	15.86
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.26	Sulfate	n.a.	0.3743		0.01687	11.25
Total:				0.8519	0.000	0.150	100.00

This is runlog for Sequence 090709.seq for IC6

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
232509004	07/10/09 00:11	881302	1	090709	MAR1
CVH	07/10/09 00:40		1	090709	MAR1
CCB	07/10/09 01:09		1	090709	MAR1
232509005	07/10/09 01:38	881302	1	090709	MAR1
232509006	07/10/09 02:07	881302	1	090709	MAR1
CCV	07/10/09 02:36		1	090709	MAR1
CCB	07/10/09 03:05		1	090709	MAR1
1201870668	07/10/09 03:34	880973	1	090709	MAR1
1201870672	07/10/09 04:03	880973	1	090709	MAR1
232424001	07/10/09 04:31	880973	1	090709	MAR1
232426001	07/10/09 05:00	880973	1	090709	MAR1
1201870669	07/10/09 05:29	880973	1	090709	MAR1
1201870670	07/10/09 05:58	880973	1	090709	MAR1
1201870671	07/10/09 06:27	880973	1	090709	MAR1
232426002	07/10/09 06:56	880973	1	090709	MAR1
CVH	07/10/09 07:25		1	090709	MAR1
CCB	07/10/09 07:54		1	090709	MAR1

38 232509004/881302/1/1/

Sample Name:	232509004/881302/1/1/	*Injection Volume:*	1.0
Vial Number:	31	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 0:11	*Analyst:*	MAR1
Run Time (min):	28.00	*Column:*	AS9HC-014108;GLGCE088;300;9058

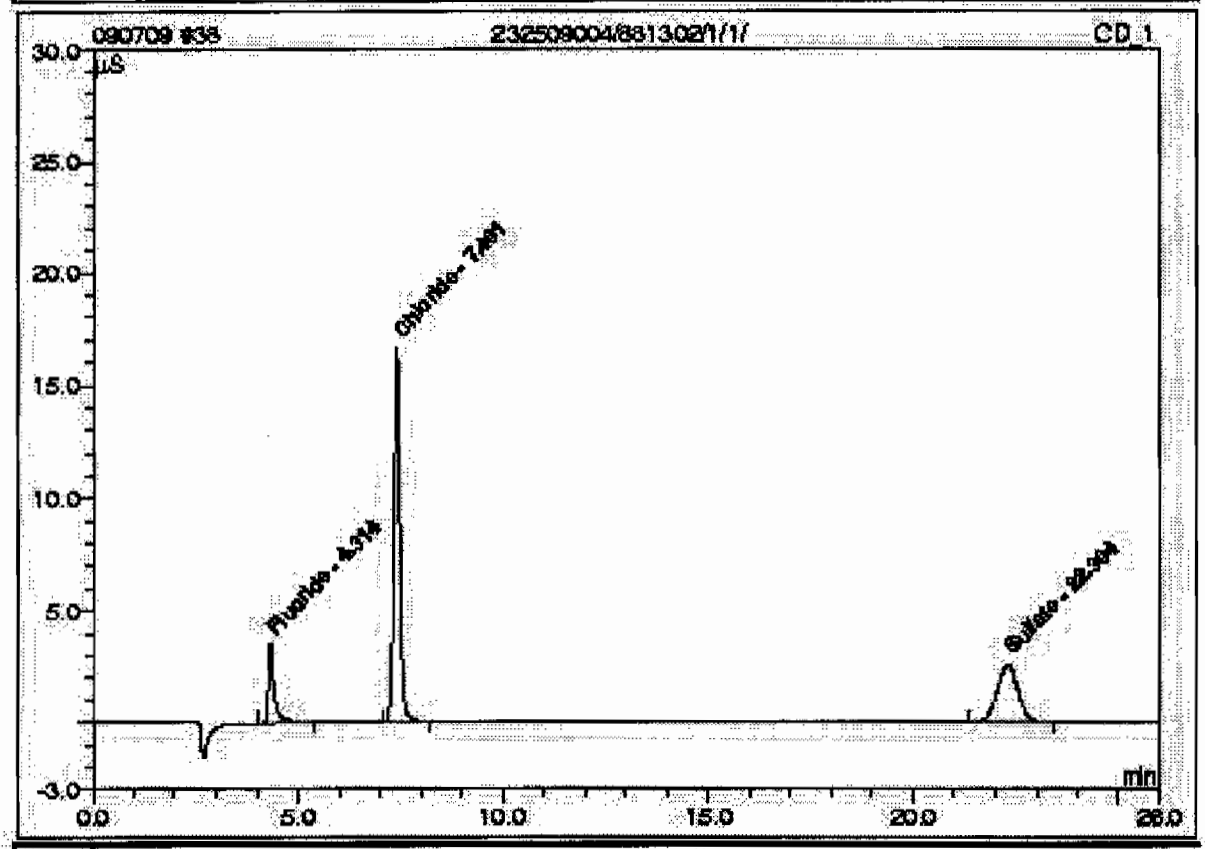

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.9327		0.60411	11.88
2	7.40	Chloride	n.a.	5.7535		2.99997	59.78
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.30	Sulfate	n.a.	4.4509		1.49250	29.34
Total:				11.1370	0.000	5.096	100.00

39 WIC090709-02CVH

Sample Name:	WIC090709-02CVH	*Injection Volume:*	1.0
Vial Number:	32	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 0:40	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9058

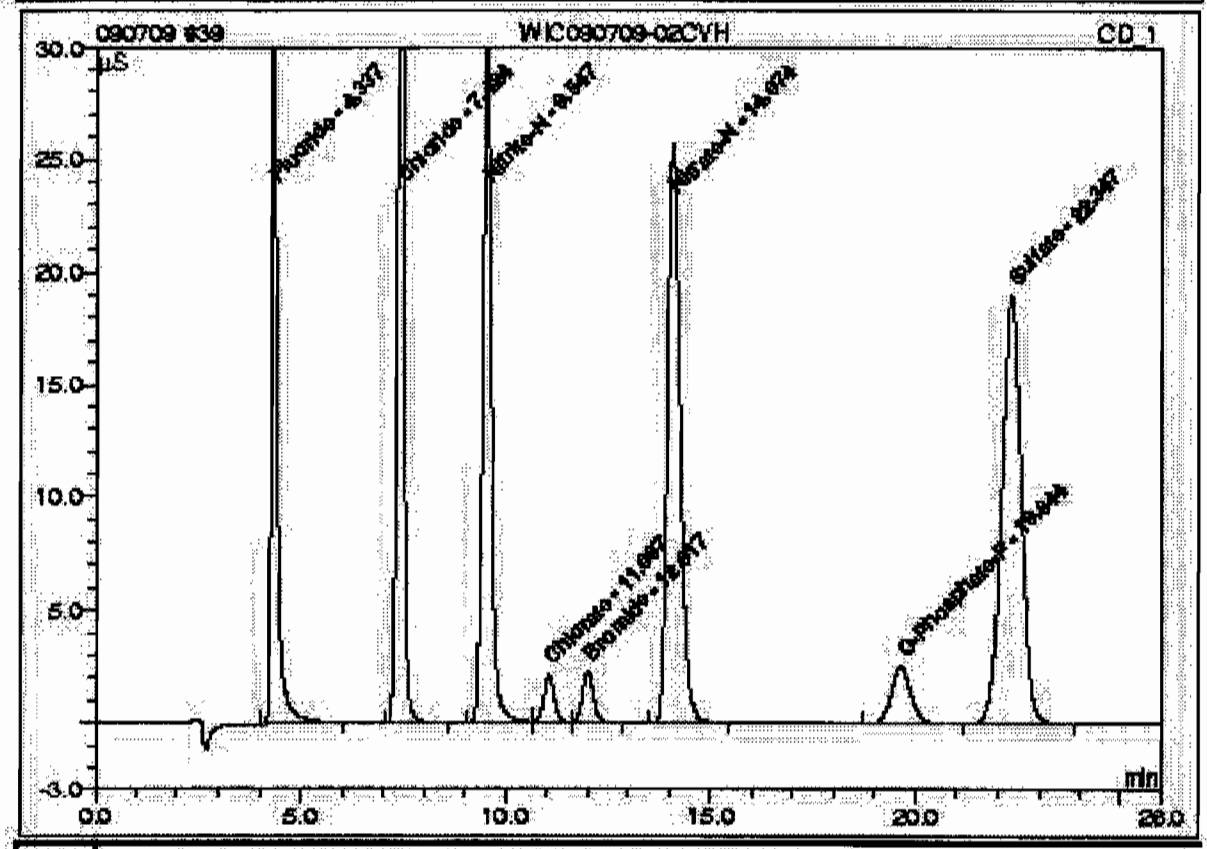

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.34	Fluoride	n.a.	7.5225		5.19619	12.08
2	7.42	Chloride	n.a.	14.7042		7.81829	18.17
3	9.55	Nitrite-N	n.a.	7.4516		7.76315	18.04
4	11.07	Chlorate	n.a.	3.8919		0.63736	1.48
5	12.02	Bromide	n.a.	3.7286		0.68914	1.60
6	14.07	Nitrate-N	n.a.	7.3942		9.00387	20.93
7	19.84	O-Phosphate-P	n.a.	3.7479		1.38013	3.21
8	22.35	Sulfate	n.a.	29.4393		10.53779	24.49
Total:				77.8202	0.000	43.026	100.00

40 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	33	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 1:09	Analyst:	MAR1
Run Time (min):	28.00	Column:	AS9HC-014108;GLGCE085;300;9058

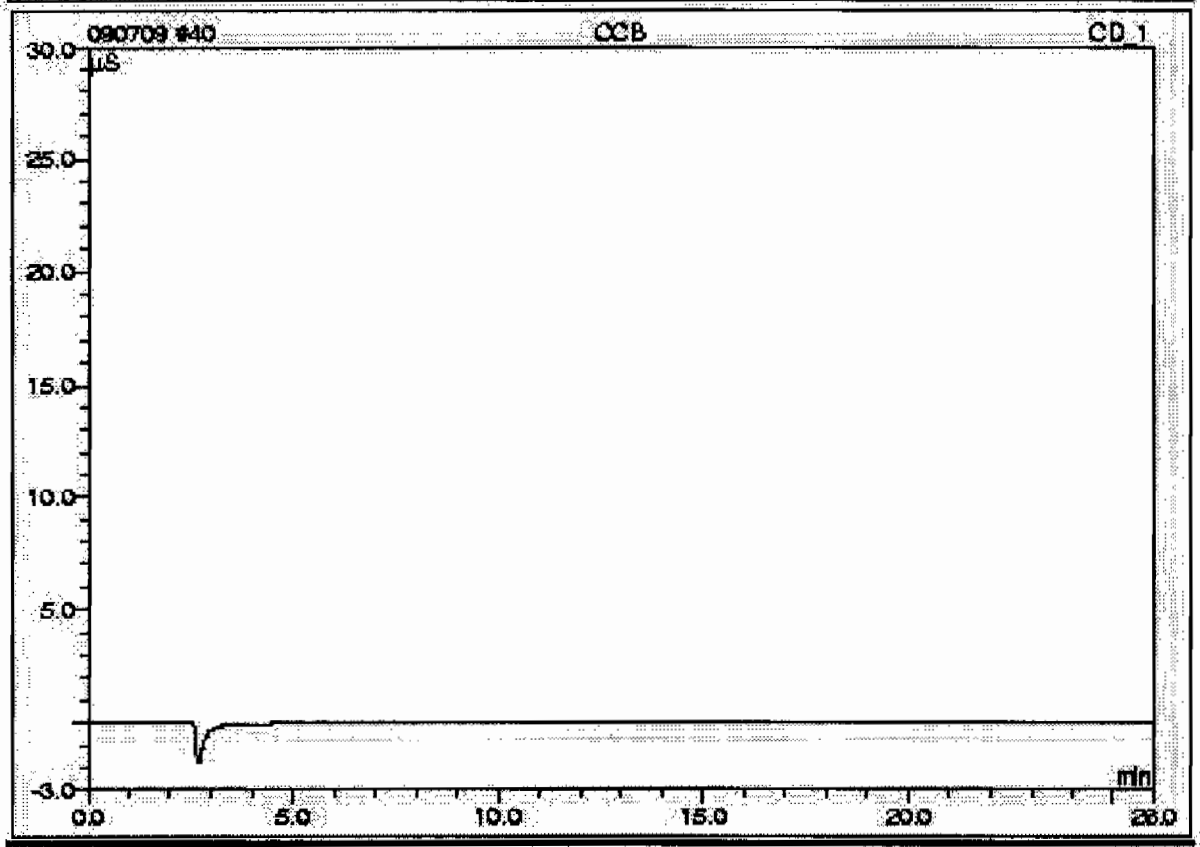

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

41 232509005/881302/1/1/

Sample Name:	232509005/881302/1/1/	*Injection Volume:*	1.0
Vial Number:	34	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 1:38	*Analyst:*	MAR1
Run Time (min):	25.00	*Column:*	AS9HC-014108;GLGCE088;300;9058

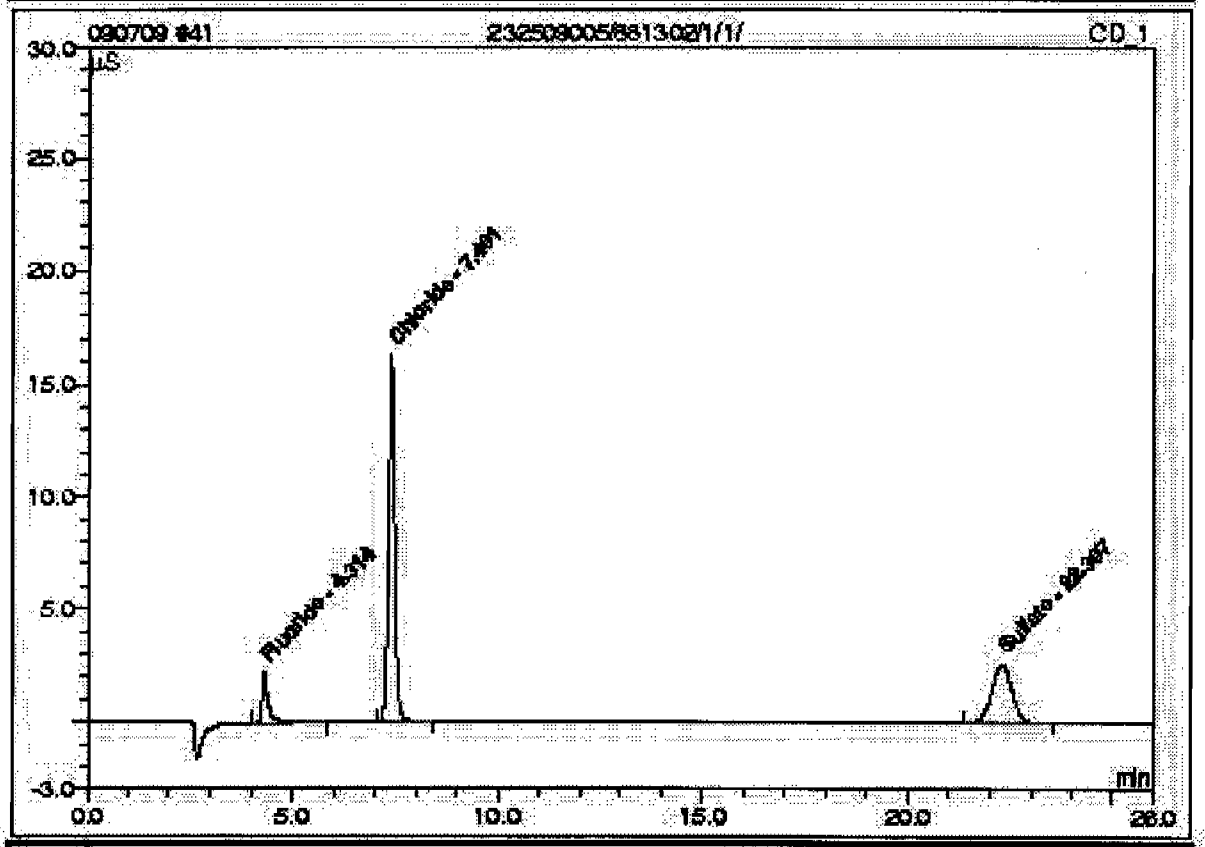

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.31	Fluoride	n.a.	0.6467		0.40495	8.40
2	7.40	Chloride	n.a.	5.6366		2.92682	60.70
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
3	22.31	Sulfate	n.a.	4.4436		1.48996	30.90
Total:				10.7269	0.000	4.822	100.00

42 232509006/881302/1/1/

Sample Name:	232509006/881302/1/1/	*Injection Volume:*	1.0
Vial Number:	35	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 2:07	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE065;300;9055

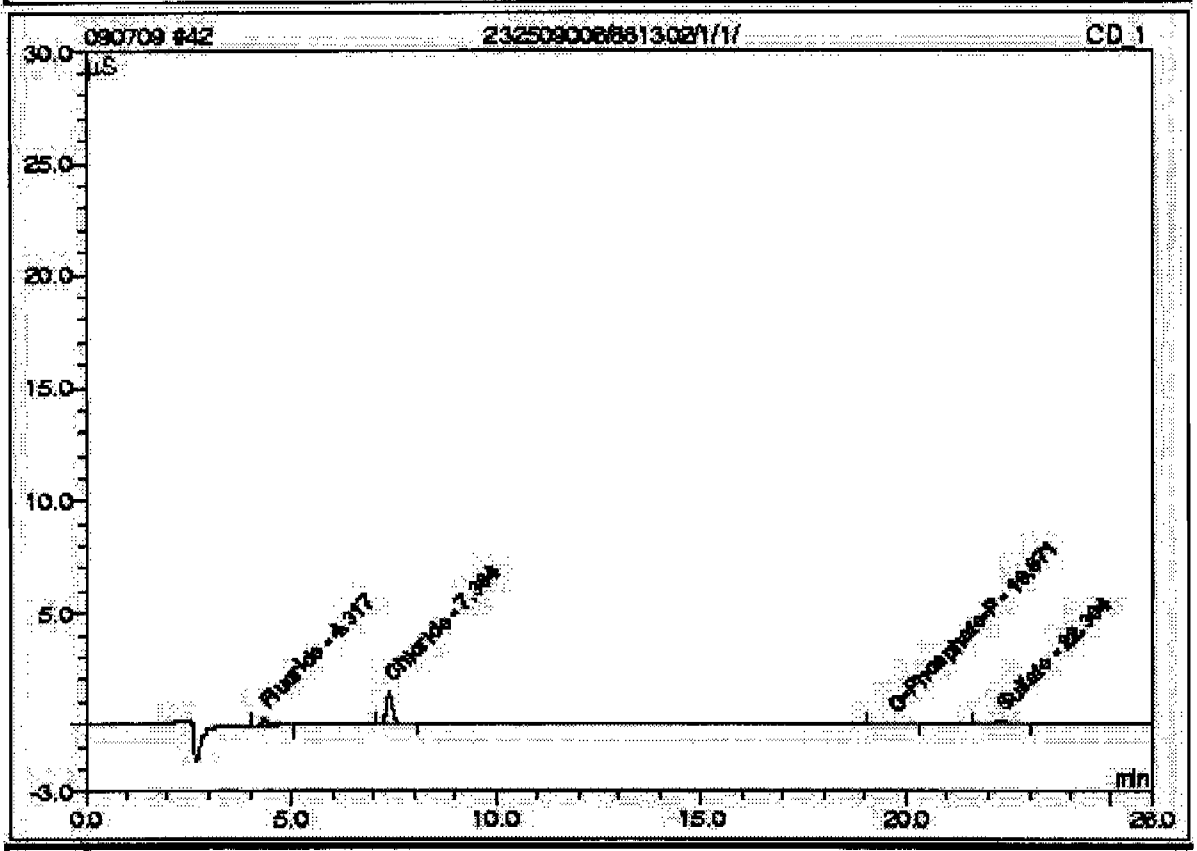

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.1380		0.05038	12.30
2	7.39	Chloride	n.a.	0.7097		0.26999	65.85
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	19.67	O-Phosphate-P	n.a.	0.1260		0.03057	7.46
4	22.30	Sulfate	n.a.	0.4929		0.05979	14.59
Total:				1.4666	0.000	0.410	100.00

42 232509006/881302/1/1/

Sample Name:	232509006/881302/1/1/	*Injection Volume:*	1.0
Vial Number:	35	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 2:07	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS23-001528;GLGCE085;300;9058

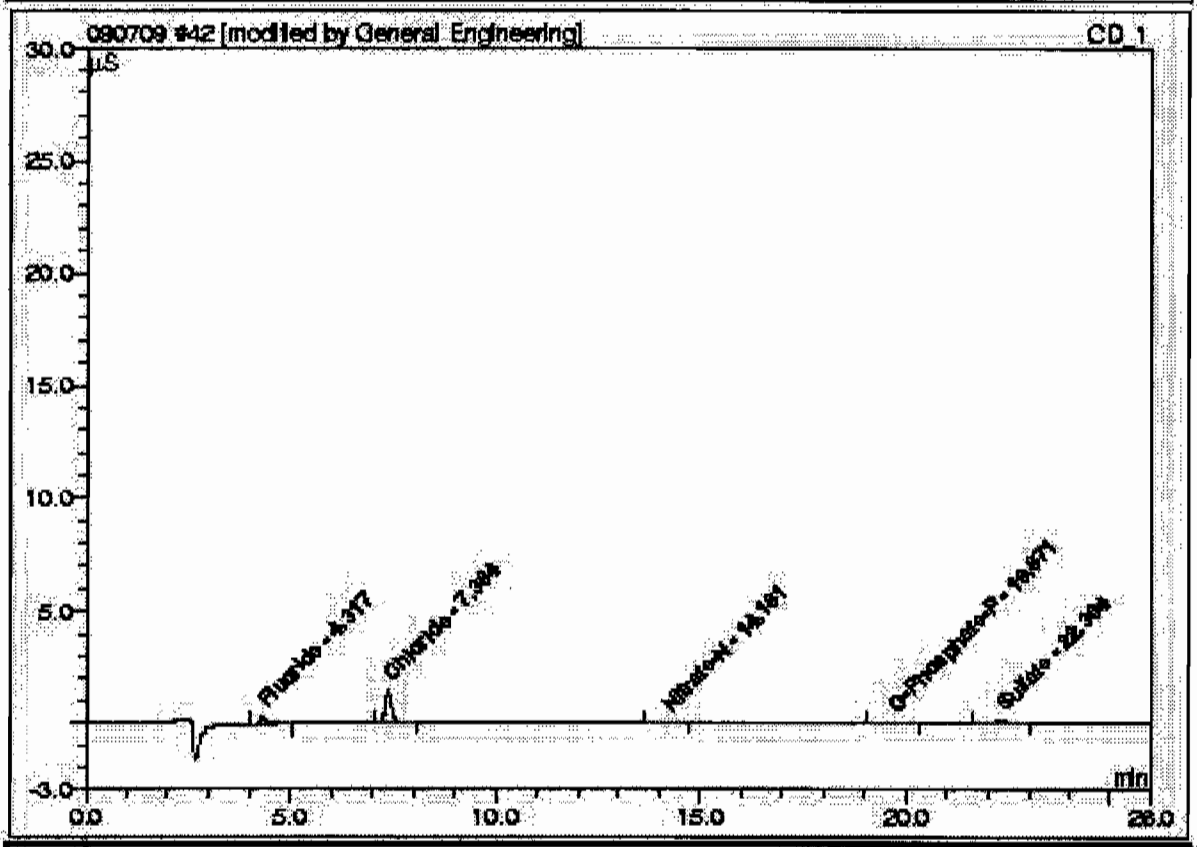

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.32	Fluoride	n.a.	0.1380		0.05038	12.03
2	7.38	Chloride	n.a.	0.7097		0.26899	64.24
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.16	Nitrate-N	n.a.	0.1082	*	0.00902	2.15
4	19.67	O-Phosphate-P	n.a.	0.1260		0.03057	7.30
5	22.30	Sulfate	n.a.	0.4929		0.05979	14.28
Total:				1.5748	0.000	0.419	100.00

43 WIC090709-02CCV

Sample Name:	WIC090709-02CCV	*Injection Volume:*	1.0
Vial Number:	38	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 2:38	*Analyst:*	MAR1
Run Time (min):	25.00	*Column:*	AS9HC-014108;GLGCE088;300;9058

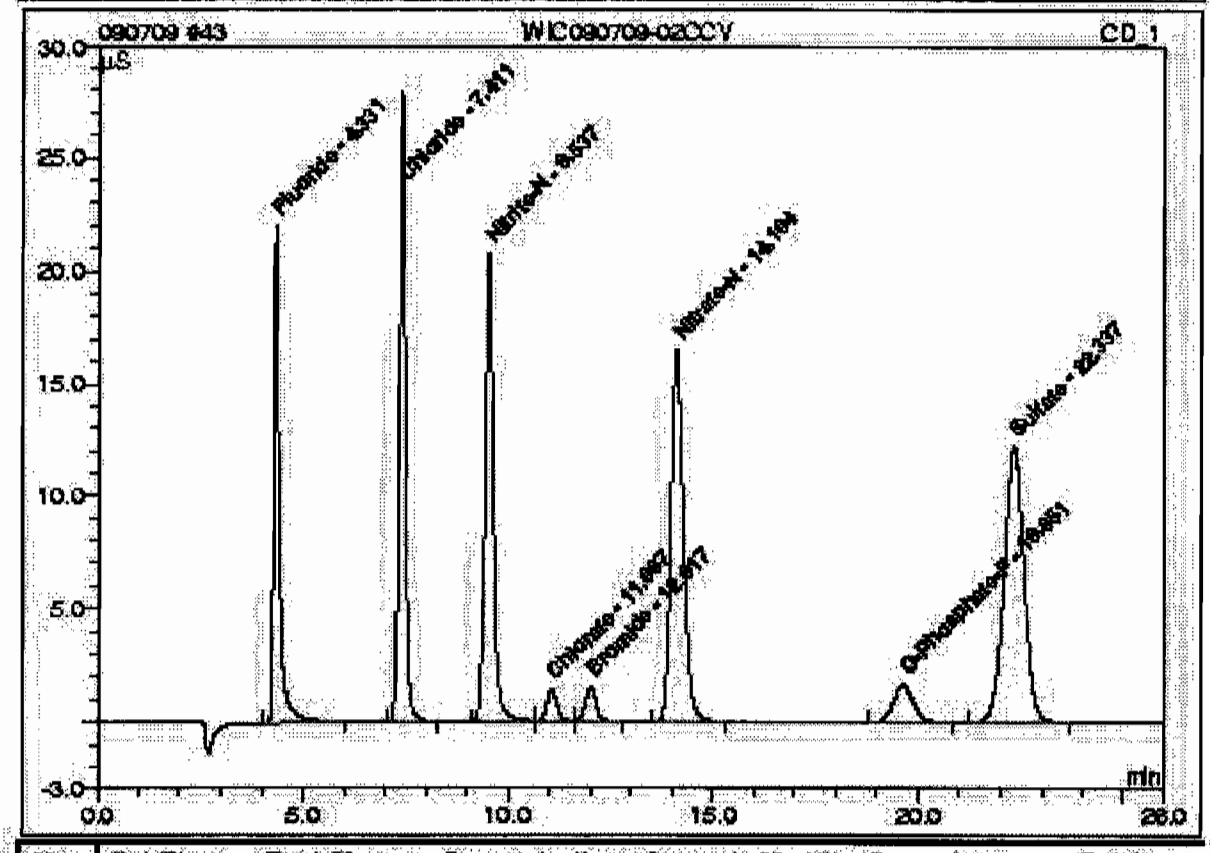

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	4.33	Fluoride	n.a.	4.9746		3.42070	12.30
2	7.41	Chloride	n.a.	9.4183		4.96695	17.86
3	9.54	Nitrite-N	n.a.	4.9139		5.09814	18.33
4	11.07	Chlorate	n.a.	2.5542		0.41717	1.50
5	12.02	Bromide	n.a.	2.4713		0.45494	1.64
6	14.10	Nitrate-N	n.a.	4.7293		5.76133	20.72
7	19.85	O-Phosphate-P	n.a.	2.4605		0.90045	3.24
8	22.34	Sulfate	n.a.	19.0784		6.78737	24.41
Total:				50.6005	0.000	27.807	100.00

44 CCB

Sample Name:	CCB	*Injection Volume:*	1.0
Vial Number:	37	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS23	*Sample Weight:*	1.0000
Quantif. Method:	090703an	*Sample Amount:*	1.0000
Recording Time:	7/10/09 3:05	Analyst:	MAR1
Run Time (min):	25.00	Column:	AS9HC-014108;GLGCE085;300;9058

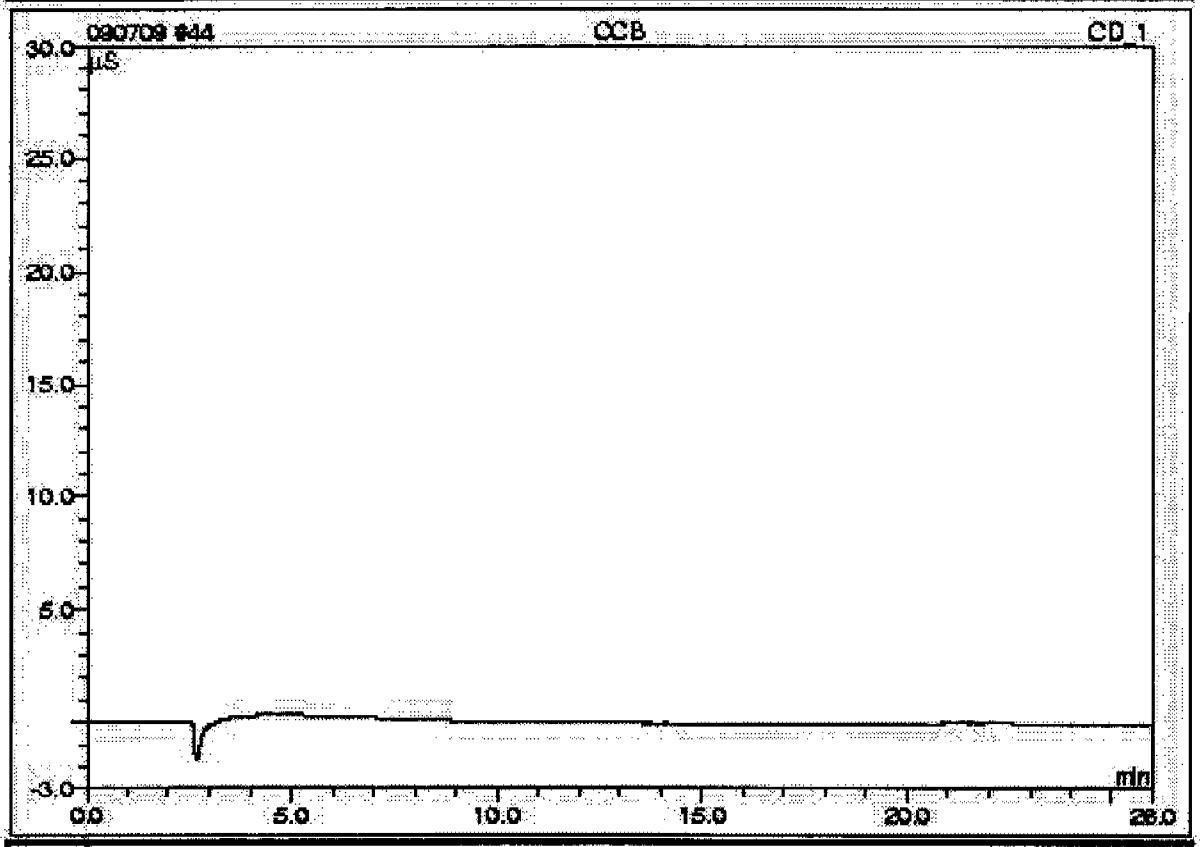

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

pH

pH / Corrosivity LogBook

Analyst: RXG2
Batch: 881153
Lab SOP: GL-GC-B-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201871211	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201871211 LCS		Soil	12:00	12:05	29-JUN-09 13:04	pH	20	20	6.98	21.7'C	7	99.714	
1201871211 LCS		Soil	12:00	12:05	29-JUN-09 13:04	pH 2	20	20	6.98	21.7'C	7	99.714	
232509001		Soil	12:00	12:05	29-JUN-09 13:04	pH	20	20	6.72	21.5'C			
232509001		Soil	12:00	12:05	29-JUN-09 13:04	pH 2	20	20	6.72	21.5'C			
1201871210 DUP	232509001	Soil	12:00	12:05	29-JUN-09 13:07	pH	20	20	6.76	21.2'C			.593
1201871210 DUP	232509001	Soil	12:00	12:05	29-JUN-09 13:07	pH 2	20	20	6.76	21.2'C			.593
232509002		Soil	12:00	12:05	29-JUN-09 13:09	pH	20	20	7.24	21.1'C			
232509002		Soil	12:00	12:05	29-JUN-09 13:09	pH 2	20	20	7.24	21.1'C			
232509003		Soil	12:00	12:05	29-JUN-09 13:11	pH	20	20	7.14	21.1'C			
232509003		Soil	12:00	12:05	29-JUN-09 13:11	pH 2	20	20	7.14	21.1'C			
CCV			12:00	12:05	29-JUN-09 13:12	pH	20	20	7.03	21.7'C	7	100.429	
CCV			12:00	12:05	29-JUN-09 13:12	pH 2	20	20	7.03	21.7'C	7	100.429	
232509004		Soil	12:00	12:05	29-JUN-09 13:22	pH	20	20	8.86	21.8'C			
232509004		Soil	12:00	12:05	29-JUN-09 13:22	pH 2	20	20	8.86	21.8'C			
232509005		Soil	12:00	12:05	29-JUN-09 13:22	pH	20	20	8.67	22.0'C			
232509005		Soil	12:00	12:05	29-JUN-09 13:22	pH 2	20	20	8.68	22.0'C			
232509006		Soil	12:00	12:05	29-JUN-09 13:27	pH	20	20	7.13	21.7'C			
232509006		Soil	12:00	12:05	29-JUN-09 13:27	pH 2	20	20	7.13	21.7'C			
CCV			12:00	12:05	29-JUN-09 13:29	pH	20	20	7.01	22.0'C	7	100.143	
CCV			12:00	12:05	29-JUN-09 13:29	pH 2	20	20	7.01	22.0'C	7	100.143	

Calibration Information:
Run Date: 29-JUN-09 12:11
Instrument: PHX742
Analyst: RXG2

Standard	Observed	Theoretical		C	%Recovery
IMM090629-PH1	4.01	4	SU	21.6	100.25
IMM090629-PH-	7.01	7	SU	21.7	100.14
UPH090629b3-2	10.02	10	SU	21.7	100.2
UPH090629-03e-	2.08	2	SU	21.5	104
090629F30-2	11.94	12	SU	21.5	99.5
IMM090629g3-2	7.01	7	SU	21.5	100.14

Comments:

Miscellaneous

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
10-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
IC	EPA 300.0	Solid	LANL
Batch ID:	**Sample Numbers:**		
881302	See Below		

Potentially affected work order(s)(SDG): 232509(09-2500)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/MSD: QC 1201871610MS, 1201871611MSD	1. The MS and MSD recoveries fall outside of the GEL acceptance limits but within the client specified limits.

Originator's Name:

Mary Sherwood 10-JUL-09

Data Validator/Group Leader:

Julia Hamilton 10-JUL-09

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2500-1

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	881036	**Method:**	SW846 9012A
Prep Batch :	881035	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232510001	CAMO-09-6533
1201870882	Method Blank (MB)
1201870883	232370001(CAMO-09-6053) Sample Duplicate (DUP)
1201870884	232341002(CAMO-09-10819) Sample Duplicate (DUP)
1201870885	232370001(CAMO-09-6053) Matrix Spike (MS)
1201870886	232341002(CAMO-09-10819) Matrix Spike (MS)
1201870887	232370001(CAMO-09-6053) Matrix Spike Duplicate (MSD)
1201870888	232341002(CAMO-09-10819) Matrix Spike Duplicate (MSD)
1201870889	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within

acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232341002 (CAMO-09-10819) and 232370001 (CAMO-09-6053).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201870883 (CAMO-09-6053) and 1201870884 (CAMO-09-10819).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis

The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation

An NCR was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product: **Nitrate Nitrite by Cadmium Reduction**

Analytical Batch: 881227 **Method:** EPA 353.2

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 353.2:

Sample ID	Client ID
232510001	CAMO-09-6533
1201871446	Method Blank (MB)
1201871447	232370001(CAMO-09-6053) Sample Duplicate (DUP)
1201871448	232370001(CAMO-09-6053) Post Spike (PS)
1201871449	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-128 REV# 5.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8500 Series.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232370001 (CAMO-09-6053).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recovery for this sample set was within the required acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following samples in this sample group were diluted due to matrix interference: 1201871447 (CAMO-09-6053), 1201871448 (CAMO-09-6053) and 232510001 (CAMO-09-6533).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 17July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2500-1 GEL Work Order: 232510

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2500-1

Client Sample ID:	CAMO-09-6533	Project:	LANL01004
Sample ID:	232510001	Client ID:	LANL010
Matrix:	W		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal										
SW9012A Cyanide, Total "As Received"										
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2 07/02/09	0949	881036	1
Nutrient Analysis										
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"										
Nitrogen, Nitrate/Nitrite	J	0.063	0.050	0.250	mg/L	5	AXH3 06/29/09	1455	881227	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/02/09	0847	881035

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 10, 2009
Page 1 of 2

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232510

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anist	Date Time
Flow Injection Analysis											
Batch 881036											
QC1201870883 232370001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)	AXC2	07/02/09 09:41
QC1201870884 232341002 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)		07/02/09 09:37
QC1201870889 LCS											
Cyanide, Total	50.0				51.2	ug/L		102	(90%-110%)		07/02/09 09:35
QC1201870882 MB											
Cyanide, Total				U	5.00	ug/L					07/02/09 09:34
QC1201870885 232370001 MS											
Cyanide, Total	100	U	ND		103	ug/L		103	(60%-127%)		07/02/09 09:41
QC1201870886 232341002 MS											
Cyanide, Total	100	U	ND		102	ug/L		102	(60%-127%)		07/02/09 09:38
QC1201870887 232370001 MSD											
Cyanide, Total	100	U	ND		106	ug/L	2.87	106	(0%-20%)		07/02/09 09:42
QC1201870888 232341002 MSD											
Cyanide, Total	100	U	ND		106	ug/L	3.85	106	(0%-20%)		07/02/09 09:39
Nutrient Analysis											
Batch 881227											
QC1201871447 232370001 DUP											
Nitrogen, Nitrate/Nitrite		J	0.059	J	0.0625	mg/L	N/A ^		(+/-0.250)	AXH3	06/29/09 14:45
QC1201871449 LCS											
Nitrogen, Nitrate/Nitrite	1.00				1.02	mg/L		102	(90%-110%)		06/29/09 14:43
QC1201871446 MB											
Nitrogen, Nitrate/Nitrite				J	0.0156	mg/L					06/29/09 14:42
QC1201871448 232370001 PS											
Nitrogen, Nitrate/Nitrite	1.00	J	0.0118		0.949	mg/L		93.7	(90%-110%)		06/29/09 14:47

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range

QC Summary

Workorder: 232510

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 10-JUL-2009 10:54

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2500-1

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limi
ICV	**02-JUL-2009 09:29:22**	**OM_7-2-2009_09-19-36**	**143**	**150**	**95**	**(90%-110%)**	**Yes**
CCV	02-JUL-2009 09:43:39	OM_7-2-2009_09-19-36	95.6	100	96	(90%-110%)	Yes
CCV	02-JUL-2009 09:56:05	OM_7-2-2009_09-19-36	103	100	103	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**02-JUL-2009 09:31:12**	**OM_7-2-2009_09-19-36**	**-1.5**	**5**	**Yes**
CCB	02-JUL-2009 09:45:29	OM_7-2-2009_09-19-36	-1.03	5	Yes
CCB	02-JUL-2009 09:57:55	OM_7-2-2009_09-19-36	-0.586	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 10-JUL-2009 10:54

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2500-1**

Nutrient Analysis

Method: EPA 353.2 Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8500 Series

Parmname: Nitrogen, Nitrate/Nitrite

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limi
ICV	**29-JUN-2009 13:53:21**	**OM_6-29-2009_13-43-51**	**0.987**	**1**	**99**	**(90%-110%)**	**Yes**
CCV	29-JUN-2009 14:31:35	OM_6-29-2009_13-43-51	1.06	1	106	(90%-110%)	Yes
CCV	29-JUN-2009 14:48:18	OM_6-29-2009_13-43-51	1.06	1	106	(90%-110%)	Yes
CCV	29-JUN-2009 14:57:47	OM_6-29-2009_13-43-51	1.06	1	106	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**29-JUN-2009 13:55:42**	**OM_6-29-2009_13-43-51**	**0.00502**	**0.05**	**Yes**
CCB	29-JUN-2009 14:33:56	OM_6-29-2009_13-43-51	0.00474	0.05	Yes
CCB	29-JUN-2009 14:50:40	OM_6-29-2009_13-43-51	0.00488	0.05	Yes
CCB	29-JUN-2009 15:00:09	OM_6-29-2009_13-43-51	0.00491	0.05	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 881035

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201870889	URF1091135-02	.0125	mL
MS	1201870885	URF1091135-02	.025	mL
MS	1201870886	URF1091135-02	.025	mL
MSD	1201870887	URF1091135-02	.025	mL
MSD	1201870888	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201870882		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
LCS	1201870889		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232341002		EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
DUP	1201870884	232341002	EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
MS	1201870886	232341002	EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
MSD	1201870888	232341002	EPA 335.3	02-JUL-2009 08:47	>12	25 mL	25 mL	1	GROUND WATER
SAMPLE	232370001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
DUP	1201870883	232370001	SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
MS	1201870885	232370001	SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
MSD	1201870887	232370001	SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232425001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232432001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER
SAMPLE	232482002		EPA 335.4	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232510001		SW846 9010B Prep	02-JUL-2009 08:47	>12	25 mL	25 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090702-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments:

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/2/2009 9:22:13	OM_7-2-2009_09-19-36
150 ppb		1	axc2	7/2/2009 9:23:04	OM_7-2-2009_09-19-36
100 ppb		1	axc2	7/2/2009 9:23:57	OM_7-2-2009_09-19-36
50 ppb		1	axc2	7/2/2009 9:24:50	OM_7-2-2009_09-19-36
10 ppb		1	axc2	7/2/2009 9:25:43	OM_7-2-2009_09-19-36
CRDL 5.0 ppb		1	axc2	7/2/2009 9:26:37	OM_7-2-2009_09-19-36
ICAL-00		1	axc2	7/2/2009 9:27:31	OM_7-2-2009_09-19-36
ICV		1	axc2	7/2/2009 9:29:22	OM_7-2-2009_09-19-36
ICB		1	axc2	7/2/2009 9:31:12	OM_7-2-2009_09-19-36
CRDL		1	axc2	7/2/2009 9:33:01	OM_7-2-2009_09-19-36
1201870882	881036	1	axc2	7/2/2009 9:34:51	OM_7-2-2009_09-19-36
1201870889	881036	1	axc2	7/2/2009 9:35:44	OM_7-2-2009_09-19-36
232341002	881036	1	axc2	7/2/2009 9:36:37	OM_7-2-2009_09-19-36
1201870884	881036	1	axc2	7/2/2009 9:37:31	OM_7-2-2009_09-19-36
1201870886	881036	1	axc2	7/2/2009 9:38:24	OM_7-2-2009_09-19-36
1201870888	881036	1	axc2	7/2/2009 9:39:17	OM_7-2-2009_09-19-36
232370001	881036	1	axc2	7/2/2009 9:40:09	OM_7-2-2009_09-19-36
1201870883	881036	1	axc2	7/2/2009 9:41:02	OM_7-2-2009_09-19-36
1201870885	881036	1	axc2	7/2/2009 9:41:55	OM_7-2-2009_09-19-36
1201870887	881036	1	axc2	7/2/2009 9:42:47	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:43:39	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:45:29	OM_7-2-2009_09-19-36
232425001	881036	1	axc2	7/2/2009 9:47:17	OM_7-2-2009_09-19-36
232432001	881036	1	axc2	7/2/2009 9:48:10	OM_7-2-2009_09-19-36
232482002	881036	1	axc2	7/2/2009 9:49:02	OM_7-2-2009_09-19-36
232510001	881036	1	axc2	7/2/2009 9:49:54	OM_7-2-2009_09-19-36
1201871532	881270	1	axc2	7/2/2009 9:50:45	OM_7-2-2009_09-19-36
1201871536	881270	50	axc2	7/2/2009 9:51:39	OM_7-2-2009_09-19-36
232465001	881270	1	axc2	7/2/2009 9:52:32	OM_7-2-2009_09-19-36
232509006	881270	1	axc2	7/2/2009 9:53:26	OM_7-2-2009_09-19-36
1201871533	881270	1	axc2	7/2/2009 9:54:19	OM_7-2-2009_09-19-36
1201871534	881270	1	axc2	7/2/2009 9:55:12	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 9:56:05	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 9:57:55	OM_7-2-2009_09-19-36
1201871535	881270	1	axc2	7/2/2009 9:59:45	OM_7-2-2009_09-19-36
232582001	881270	1	axc2	7/2/2009 10:00:37	OM_7-2-2009_09-19-36
232582002	881270	1	axc2	7/2/2009 10:01:30	OM_7-2-2009_09-19-36
232585001	881270	1	axc2	7/2/2009 10:02:23	OM_7-2-2009_09-19-36
232585002	881270	1	axc2	7/2/2009 10:03:15	OM_7-2-2009_09-19-36
232585003	881270	1	axc2	7/2/2009 10:04:07	OM_7-2-2009_09-19-36
232591001	881270	1	axc2	7/2/2009 10:05:00	OM_7-2-2009_09-19-36
1201871541	881272	1	axc2	7/2/2009 10:05:51	OM_7-2-2009_09-19-36
1201871543	881272	1	axc2	7/2/2009 10:06:44	OM_7-2-2009_09-19-36
232465001	881272	1	axc2	7/2/2009 10:07:35	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:08:28	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:10:18	OM_7-2-2009_09-19-36
1201871542	881272	1	axc2	7/2/2009 10:12:09	OM_7-2-2009_09-19-36
CCV		1	axc2	7/2/2009 10:13:01	OM_7-2-2009_09-19-36
CCB		1	axc2	7/2/2009 10:14:52	OM_7-2-2009_09-19-36

Author: axc2 Date : 7/2/2009

Original Run Filename: OM_7-2-2009_09-19-36.OMN created 7/2/2009 09:19:36
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-2-2009_09-19-36.OMN last modified 7/2/2009 10:15:57
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090702-01	1	S1	200	8.98	7/2/2009@09:22:13			200 ppb
WCN090702-02	1	S2	150	6.83	7/2/2009@09:23:04			150 ppb
WCN090702-03	1	S3	100	4.37	7/2/2009@09:23:57			100 ppb
WCN090702-04	1	S4	50.0	2.32	7/2/2009@09:24:50			50 ppb
WCN090702-05	1	S5	10.0	0.586	7/2/2009@09:25:43			10 ppb
WCN090702-06	1	S6	5.00	0.295	7/2/2009@09:26:37			CRDL 5.0 ppb
WCN090702-08	1	S7	0.00	0.0308	7/2/2009@09:27:31			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99974 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090702-07	1	S8	143	6.45	7/2/2009@09:29:22			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.5 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090702-08	1	S7	-1.50	-3.75e-4	7/2/2009@09:31:12			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.50 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.50 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090702-06	1	S6	5.03	0.291	7/2/2009@09:33:01			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	5.03 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	5.03 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870882|881036|MB	1	1	0.440	0.0860	7/2/2009@09:34:51			
1201870889||LCS	1	2	51.2	2.35	7/2/2009@09:35:44			
232341002	1	3	-0.350	0.0509	7/2/2009@09:36:37			
1201870884||DUP	1	4	0.739	0.0994	7/2/2009@09:37:31			
1201870886||MS	1	5	102	4.60	7/2/2009@09:38:24			
1201870888||MSD	1	6	106	4.80	7/2/2009@09:39:17			
232370001	1	7	0.145	0.0729	7/2/2009@09:40:09			
1201870883||DUP	1	8	-0.522	0.0432	7/2/2009@09:41:02			
1201870885||MS	1	9	103	4.66	7/2/2009@09:41:55			
1201870887||MSD	1	10	106	4.79	7/2/2009@09:42:47			
WCN090702-03	1	S3	95.6	4.32	7/2/2009@09:43:39			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-4.4 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.03	0.0204	7/2/2009@09:45:29			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.03 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.03 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232425001	1	11	2.25	0.167	7/2/2009@09:47:17			
232432001	1	12	0.839	0.104	7/2/2009@09:48:10			
232482002	1	13	3.65	0.229	7/2/2009@09:49:02			
232510001	1	14	-0.112	0.0615	7/2/2009@09:49:54			
1201871532|881270|MB	1	15	3.33	0.215	7/2/2009@09:50:45			
1201871536||LCS	1	16	35.0	1.62	7/2/2009@09:51:39		50.00	
232465001	1	17	7.81	0.414	7/2/2009@09:52:32			
232509006	1	18	3.82	0.237	7/2/2009@09:53:26			
1201871533||DUP	1	19	4.04	0.246	7/2/2009@09:54:19			
1201871534||MS	1	20	105	4.73	7/2/2009@09:55:12			
WCN090702-03	1	S3	103	4.64	7/2/2009@09:56:05			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-0.586	0.0403	7/2/2009@09:57:55			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.586 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.586 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201871535||MSD	1	21	99.2	4.49	7/2/2009@09:59:45			
232582001	1	22	0.545	0.0907	7/2/2009@10:00:37			
232582002	1	23	3.17	0.208	7/2/2009@10:01:30			
232585001	1	24	0.846	0.104	7/2/2009@10:02:23			
232585002	1	25	4.51	0.267	7/2/2009@10:03:15			
232585003	1	26	1.34	0.126	7/2/2009@10:04:07			
232591001	1	27	1.16	0.118	7/2/2009@10:05:00			
1201871541|881272|MB	1	28	-0.342	0.0512	7/2/2009@10:05:51			
1201871543||LCS	1	29	0.253	0.0777	7/2/2009@10:06:44			
232465001	1	30	27.3	1.28	7/2/2009@10:07:35			
WCN090702-03	1	S3	102	4.62	7/2/2009@10:08:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	2.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090702-08	1	S7	-1.57	-0.00337	7/2/2009@10:10:18			CCB
		Known Conc:	0.00					

DQM Test: > + Concentration Limit								
Result:			-1.57 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.57 > -5.00					
Message			CCB Passed					
Action			Continue					
1201871542||DUP	1	31	48.0	2.20	7/2/2009@10:12:09			
WCN090702-03	1	S3	108	4.87	7/2/2009@10:13:01			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			7.7 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			7.7 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN090702-08	1	S7	-0.342	0.0512	7/2/2009@10:14:52			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-0.342 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-0.342 > -5.00					
Message			CCB Passed					
Action			Continue					

Analyte Properties Table for OM_7-2-2009_09-19-36.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/2/2009

Channel 1: Current View

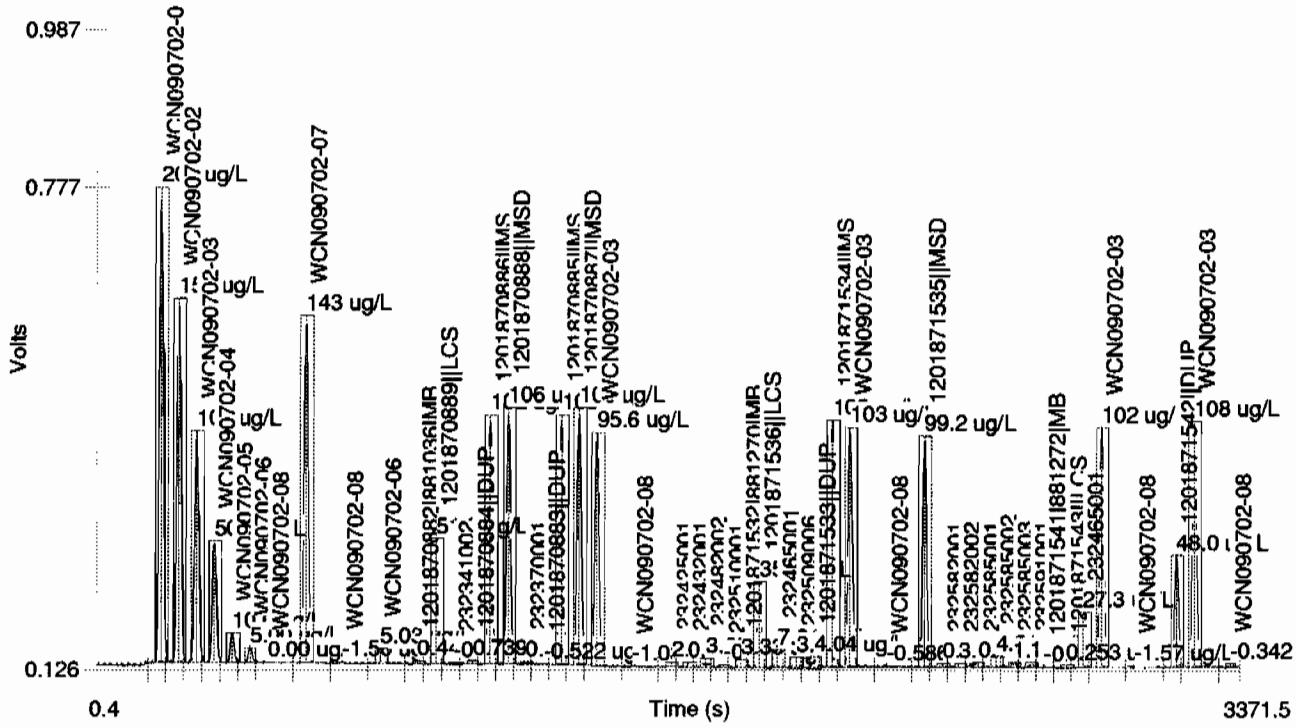

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.98	0.640	-0.0	7/2/2009	09:23:15
2	150	1	6.83	0.489	-1.3	7/2/2009	09:24:07
3	100	1	4.37	0.313	3.4	7/2/2009	09:25:00
4	50.0	1	2.32	0.165	-1.2	7/2/2009	09:25:53
5	10.0	1	0.586	0.0398	-14.0	7/2/2009	09:26:46
6	5.00	1	0.295	0.0201	-1.4	7/2/2009	09:27:40
7	0.00	1	0.0308	8.07e-4		7/2/2009	09:28:34

Figure 1: TCYANIDE

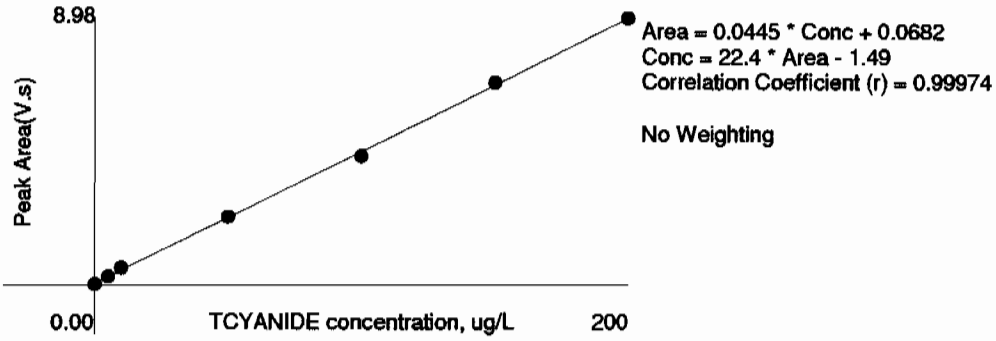

Nitrate Nitrite by Cadmium Reduction

This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
		1	axh3	6/29/2009 13:44:53	OM_6-29-2009_13-43-51
1.0 PPM		1	axh3	6/29/2009 13:46:05	OM_6-29-2009_13-43-51
0.5 ppm		1	axh3	6/29/2009 13:47:18	OM_6-29-2009_13-43-51
0.1 ppm		1	axh3	6/29/2009 13:48:31	OM_6-29-2009_13-43-51
0.05 ppm		1	axh3	6/29/2009 13:49:44	OM_6-29-2009_13-43-51
ICAL-00		1	axh3	6/29/2009 13:50:58	OM_6-29-2009_13-43-51
1.0 ppm ICV		1	axh3	6/29/2009 13:53:21	OM_6-29-2009_13-43-51
ICB		1	axh3	6/29/2009 13:55:42	OM_6-29-2009_13-43-51
Nitrate 1.0 ppm		1	axh3	6/29/2009 13:58:02	OM_6-29-2009_13-43-51
Nitrite 1.0 ppm		1	axh3	6/29/2009 14:00:22	OM_6-29-2009_13-43-51
1201870843	881024	1	axh3	6/29/2009 14:02:43	OM_6-29-2009_13-43-51
1201870852	881024	1	axh3	6/29/2009 14:03:56	OM_6-29-2009_13-43-51
231989001	881024	5	axh3	6/29/2009 14:05:09	OM_6-29-2009_13-43-51
1201870844	881024	5	axh3	6/29/2009 14:06:22	OM_6-29-2009_13-43-51
1201870848	881024	5	axh3	6/29/2009 14:07:34	OM_6-29-2009_13-43-51
231989002	881024	5	axh3	6/29/2009 14:08:47	OM_6-29-2009_13-43-51
231989003	881024	5	axh3	6/29/2009 14:09:59	OM_6-29-2009_13-43-51
231989004	881024	5	axh3	6/29/2009 14:11:12	OM_6-29-2009_13-43-51
231989005	881024	5	axh3	6/29/2009 14:12:24	OM_6-29-2009_13-43-51
231989006	881024	5	axh3	6/29/2009 14:13:37	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:14:49	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 14:17:10	OM_6-29-2009_13-43-51
231989007	881024	5	axh3	6/29/2009 14:19:30	OM_6-29-2009_13-43-51
231989008	881024	5	axh3	6/29/2009 14:20:43	OM_6-29-2009_13-43-51
232341002	881024	5	axh3	6/29/2009 14:21:54	OM_6-29-2009_13-43-51
232435002	881024	5	axh3	6/29/2009 14:23:06	OM_6-29-2009_13-43-51
1201870847	881024	5	axh3	6/29/2009 14:24:17	OM_6-29-2009_13-43-51
1201870851	881024	5	axh3	6/29/2009 14:25:30	OM_6-29-2009_13-43-51
232437001	881024	25	axh3	6/29/2009 14:26:44	OM_6-29-2009_13-43-51
1201870846	881024	25	axh3	6/29/2009 14:27:57	OM_6-29-2009_13-43-51
1201870850	881024	25	axh3	6/29/2009 14:29:10	OM_6-29-2009_13-43-51
232468001	881024	1	axh3	6/29/2009 14:30:22	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:31:35	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 14:33:56	OM_6-29-2009_13-43-51
232468002	881024	1	axh3	6/29/2009 14:36:17	OM_6-29-2009_13-43-51
232468003	881024	1	axh3	6/29/2009 14:37:29	OM_6-29-2009_13-43-51
232468004	881024	1	axh3	6/29/2009 14:38:42	OM_6-29-2009_13-43-51
232468005	881024	1	axh3	6/29/2009 14:39:54	OM_6-29-2009_13-43-51
232468006	881024	1	axh3	6/29/2009 14:41:06	OM_6-29-2009_13-43-51
1201871446	881227	1	axh3	6/29/2009 14:42:18	OM_6-29-2009_13-43-51
1201871449	881227	1	axh3	6/29/2009 14:43:30	OM_6-29-2009_13-43-51
232370001	881227	5	axh3	6/29/2009 14:44:43	OM_6-29-2009_13-43-51
1201871447	881227	5	axh3	6/29/2009 14:45:54	OM_6-29-2009_13-43-51
1201871448	881227	5	axh3	6/29/2009 14:47:06	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:48:18	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 14:50:40	OM_6-29-2009_13-43-51
232425001	881227	5	axh3	6/29/2009 14:53:01	OM_6-29-2009_13-43-51
232432001	881227	5	axh3	6/29/2009 14:54:14	OM_6-29-2009_13-43-51
232510001	881227	5	axh3	6/29/2009 14:55:27	OM_6-29-2009_13-43-51
1.0 ppm CCV		1	axh3	6/29/2009 14:57:47	OM_6-29-2009_13-43-51
CCB		1	axh3	6/29/2009 15:00:09	OM_6-29-2009_13-43-51

Author: lachat

Date : 6/29/2009

Original Run Filename: OM_6-29-2009_13-43-51.OMN created 6/29/2009 13:43:51
Original Run Author's Signature: [lachat]
Current Run Filename: OM_6-29-2009_13-43-51.OMN last modified 6/29/2009 15:01:31
Current Run Author's Signature: [lachat]
Description: EPA 353.2
Cadmium Colum 9057AAJ
LCS nominal 1.0 mg/L

Sample	Rep.	Cup No.	Channel 1 NO3 + NO2 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR090629-26	1	S9	1.50	16.4	6/29/2009@13:44:53			
WTR090629-25	1	S10	1.00	11.9	6/29/2009@13:46:05			1.0 PPM
WTR090629-24	1	S11	0.500	5.59	6/29/2009@13:47:18			0.5 ppm
WTR090629-23	1	S12	0.100	1.10	6/29/2009@13:48:31			0.1 ppm
WTR090629-21	1	S13	0.0500	0.203	6/29/2009@13:49:44			0.05 ppm
0.0ppm	1	S15	0.00	-0.0163	6/29/2009@13:50:58			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99837 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR090629-27 ICV	1	S16	0.987	11.1	6/29/2009@13:53:21			1.0 ppm ICV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.987 < 1.10					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.987 > 0.894					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
ICB	1	S15	0.00502	-0.0144	6/29/2009@13:55:42			ICB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00502 < 0.0500					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00502 > -0.0500					
		Message	ICB Passed					
		Action	Continue					
WTR090629-22	1	S1	0.987	11.1	6/29/2009@13:58:02			Nitrate 1.0 ppm
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.987 < 1.10					
		Message	Nitrate Standard Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.987 > 0.894					
		Message	Nitrate Standard Passed					
		Action	Continue					
WTR090629-28	1	S2	0.964	10.8	6/29/2009@14:00:22			Nitrite 1.0 ppm
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.964 < 1.10					
		Message	Nitrite Standard Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.964 > 0.894					
		Message	Nitrite Standard Passed					
		Action	Continue					
1201870843|881024|MB	1	1	0.0159	0.109	6/29/2009@14:02:43			
1201870852||LCS	1	2	1.02	11.4	6/29/2009@14:03:56			
231989001	1	3	0.141	1.53	6/29/2009@14:05:09		5.00	
1201870844||DUP	1	4	0.137	1.48	6/29/2009@14:06:22		5.00	
1201870848||PS	1	5	1.09	12.3	6/29/2009@14:07:34		5.00	

231989002	1	6	0.270	2.98	6/29/2009@14:08:47		5.00	
231989003	1	7	0.181	1.97	6/29/2009@14:09:59		5.00	
231989004	1	8	0.181	1.97	6/29/2009@14:11:12		5.00	
231989005	1	9	0.0120	0.0641	6/29/2009@14:12:24		5.00	
231989006	1	10	0.353	3.91	6/29/2009@14:13:37		5.00	
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:14:49			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	1.06 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.06 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00506	-0.0140	6/29/2009@14:17:10			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00506 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00506 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
231989007	1	11	0.390	4.33	6/29/2009@14:19:30		5.00	
231989008	1	12	0.181	1.98	6/29/2009@14:20:43		5.00	
232341002	1	13	0.0717	0.738	6/29/2009@14:21:54		5.00	
232435002	1	14	0.0893	0.937	6/29/2009@14:23:06		5.00	
1201870847||DUP	1	15	0.0862	0.902	6/29/2009@14:24:17		5.00	
1201870851||PS	1	16	1.04	11.7	6/29/2009@14:25:30		5.00	
232437001	1	17	0.554	6.18	6/29/2009@14:26:44		25.00	
1201870846||DUP	1	18	0.522	5.82	6/29/2009@14:27:57		25.00	
1201870850||PS	1	19	1.47	16.5	6/29/2009@14:29:10		25.00	
232468001	1	20	-0.0137	-0.226	6/29/2009@14:30:22			
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:31:35			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	1.06 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.06 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00474	-0.0176	6/29/2009@14:33:56			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00474 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00474 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
232468002	1	21	-0.0206	-0.304	6/29/2009@14:36:17			
232468003	1	22	-0.0214	-0.313	6/29/2009@14:37:29			
232468004	1	23	-0.0176	-0.270	6/29/2009@14:38:42			
232468005	1	24	0.0207	0.163	6/29/2009@14:39:54			
232468006	1	25	0.0212	0.169	6/29/2009@14:41:06			
1201871446|881227|MB	1	26	0.0156	0.105	6/29/2009@14:42:18			
1201871449||LCS	1	27	1.02	11.5	6/29/2009@14:43:30			
232370001	1	28	0.0118	0.0627	6/29/2009@14:44:43		5.00	
1201871447||DUP	1	29	0.0125	0.0700	6/29/2009@14:45:54		5.00	
1201871448||PS	1	30	0.949	10.6	6/29/2009@14:47:06		5.00	
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:48:18			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								

		Result:	1.06 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.06 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00488	-0.0160	6/29/2009@14:50:40			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00488 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00488 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
232425001	1	31	0.0155	0.104	6/29/2009@14:53:01		5.00	
232432001	1	32	0.0130	0.0755	6/29/2009@14:54:14		5.00	
232510001	1	33	0.0126	0.0714	6/29/2009@14:55:27		5.00	
WTR090629-25 CCV	1	S10	1.06	11.9	6/29/2009@14:57:47			1.0 ppm CCV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	1.06 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.06 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00491	-0.0157	6/29/2009@15:00:09			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00491 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00491 > -0.0500					
		Message	CCB Passed					
		Action	Continue					

Author: lachat

Date : 6/29/2009

Channel 1 (NO3 + NO2) : Current View

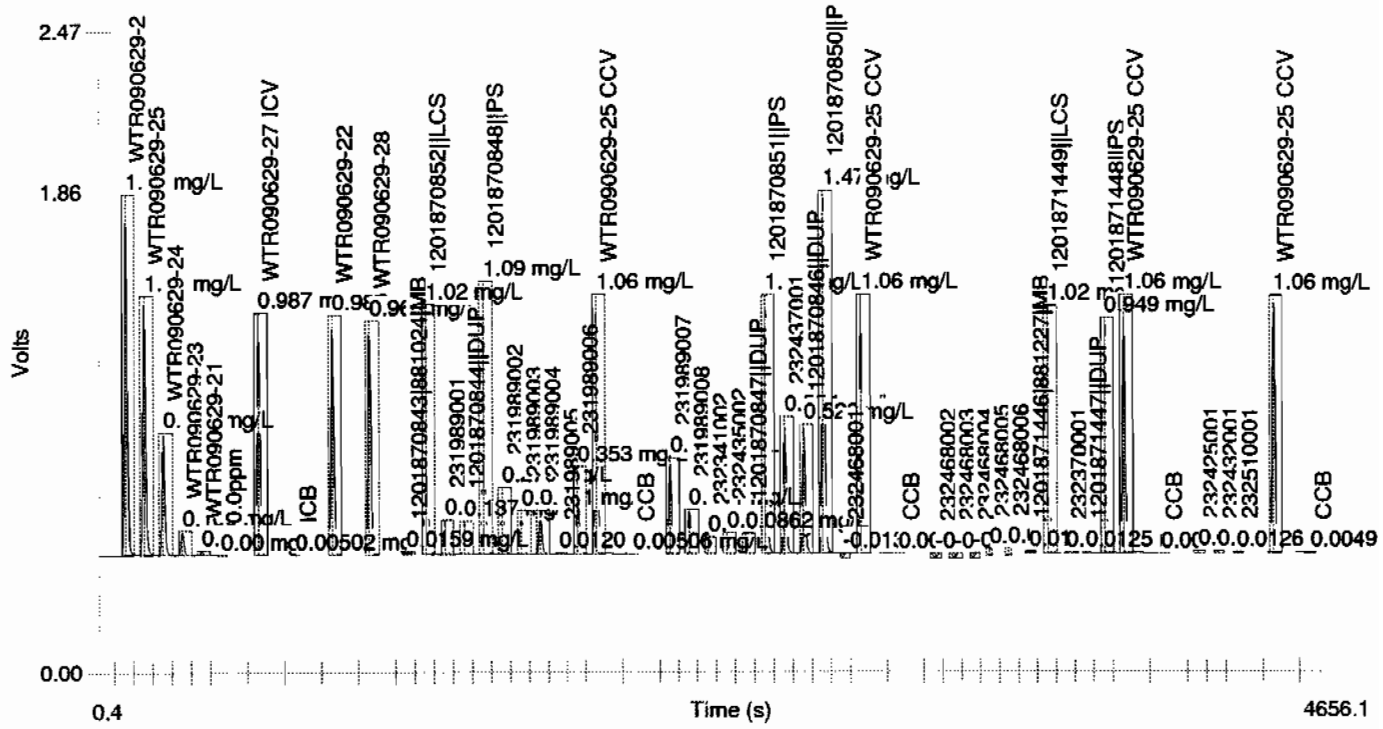

Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	16.4	1.39	2.7	6/29/2009	13:46:13
2	1.00	1	11.9	0.999	-6.1	6/29/2009	13:47:25
3	0.500	1	5.59	0.470	-0.2	6/29/2009	13:48:38
4	0.100	1	1.10	0.0923	-2.6	6/29/2009	13:49:51
5	0.0500	1	0.203	0.0169	60.2	6/29/2009	13:51:04
6	0.00	1	-0.0163	-0.00109		6/29/2009	13:52:18

Figure 1: NO3 + NO2

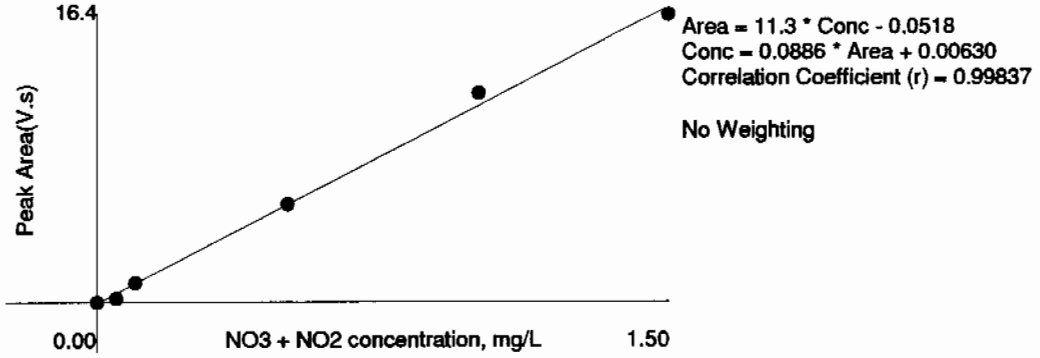

Friday, June 26, 2009

REQUEST NUMBER: 09-2499

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2499

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	SW-846:8260B	1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2499

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8260B	1	CAMO-09-6535	S	6/24/2009	
		2	CAMO-09-6535	S	6/24/2009	
	SW-846:8270C	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2499

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2499C

REQUEST NUMBER: 09-2499

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6519	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6518	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6527	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6529	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6529	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6528	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6528	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6531	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6535	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-6535	2	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
		6/26/09	3100				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6528

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	QBT2
TIME COLLECTED (HH:MM)		1320	SUB-MEDIA:	UA	ok
PRS ID:		AG 6.24.09 ~~50-100~~ 50-006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605088	ok	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	2.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Extremely weathered tan/white tuff, roots breaking thru tuff

SAMPLE COMMENTS: Interface @ ~~1.5~~ 1.5' bgs AG 6.24.09

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 23 dpm

β/γ ≤ 657 dpm

PID Ambient/Reading = 0.0/2.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.24.09	(Printed Name) Sherri Sherwood	6/24/09
(Signature) [signature]	1640	(Signature) Sherri Sherwood	4:57
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6531

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	ok
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	UNK	mo-605085	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~1~~		~~8260B~~	~~125 ML SEPTUM AMBER GLASS~~	~~Ice~~ AG 6.24.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-6518

Brown sediment sand → silt slightly moist

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d), below RLW outfall in main drainage of canyon

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 75 dpm

β/γ ≤ 905 dpm

PID Ambient / Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gorman

REVIEWED BY (PRINT) ~~A. Gorman~~ J.B 6/24/09 J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gorman	6.24.09	(Printed Name) Sherri Sherwood	6/24/09
(Signature) [signature]	1640	(Signature) Sherri Sherwood	4:57

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6527

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	Sed
TIME COLLECTED (HH:MM)		1305	SUB-MEDIA:	UA	ok
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605088	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.24.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
1	↓	GS+ISOPU+ISOU+SR90	1 LITER POLY	None	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	METALS-GEL	125 ML POLY	Ice	↓	
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Brown Sand → silt sediment over weathered tuff with some root material

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS:

α: 17 dpm

β/γ: 875 dpm

PID Ambient Reading = 0.0 / 1.3 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6533

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1420	SUB-MEDIA:	OTHER	
PRS ID:		50-006(d)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605085	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~2~~		~~8290~~	~~1 LITER AMBER GLASS~~	~~Ice~~ AG 3/31/09	N	
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-6518

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d)-06

FIELD SCREENING/MEASUREMENT RESULTS: None

COLLECTED BY (PRINT) J. Branch **REVIEWED BY (PRINT)** A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch (Signature) [signature]	6/24/09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6519

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	QBT2
TIME COLLECTED (HH:MM)		1600	SUB-MEDIA:	UA	OK
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605085	OK	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	J.B. 6/24/09 ~~2.0~~ 2.5	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Regular~~ 15-Day J.B. 6/24/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown/Grey, highly indurated, wet tuff

~~FR: CAMO-09-6533~~ J.B. 6/24/09

SAMPLE COMMENTS: Tuff interface @ 1.5' bgs. Power auger attempt did not advance in tuff. Cutrite auger and SS Breaker Bar used to collect adequate sample material.

LOCATION DESC: 50-006(d)-06

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 17$ dpm

$\beta/\gamma \leq 1624$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/24/09	(Printed Name) S. MARCIAN	6/24/09
(Signature)	1640	(Signature)	1640

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6518

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1410	SUB-MEDIA:	UA	ok
PRS ID:		50-006(d)	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605085	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1		8260B	125 ML SEPTUM AMBER GLASS	Ice AG 6.24.09	N	
1	15-Day	8270C+8082	250 ML AMBER GLASS	Ice	Y	
2	↓	8290	125 ML GLASS	Ice	↓	
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown sediment sand → silt slightly moist

FD: CAMO-09-6531 FR: CAMO-09-6533

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d) - 06, below RLW outfall in main canyon drainage

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 75 dpm

Bβ ≤ 705 dpm

PID Ambient/Reading : 0.0/0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6/24/09	(Printed Name) S. MARCZAK	6/24/09
(Signature) [signature]	1640	(Signature) [signature]	1660

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6529

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	QBT2
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	UA	ok
PRS ID:		50 - 006(d)	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605088	OK	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	3.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0 A4	~~4.0 3.75~~ 4.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+8082	250 ML AMBER GLASS	Ice		
1		GS+ISOPU+ISOU+SR90	1 LITER POLY	None		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Extremely indurated tan tuff

FTB: CAMO-09-6636

SAMPLE COMMENTS: Power auger refusal @ 3.5' bgs, used breaker bar & cutrite bucket to scrape enough sample TD @ 4.0, hand auger refusal @ 4.0' bgs

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 167 dpm → Allowed to decay for one hour

β/γ ≤ 3820 dpm

PID Ambient / Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas **REVIEWED BY (PRINT)** J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6/24/09	(Printed Name) S. MALCZAK	6/26/09
(Signature) [signature]	1640	(Signature) [signature]	1640
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 733 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03:SWMU 50-006 (d)

SAMPLE ID: CAMO-09-6535

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1400	SUB-MEDIA:	OTHER	
PRS ID:		50-006(d)	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605088	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:		NA
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~~2~~ 1	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of CAMO-09-6529

SAMPLE COMMENTS: None

LOCATION DESC: 50-006(d)-05

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARCZAK (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY** (Printed Name) (Signature)	**Date/Time**

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00075
Client Sample ID: CAMO-09-6518
Sample Collection Date: 06/24/09 14:10
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00075-015
Date Received: 06/25/09 00:00
Report Date: 06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDA	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.84	86.53	128.32	86.99	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	38.89	17.27	21.30	17.90		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.07	0.13	0.11	0.13	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	22.02	8.21	1.73	8.23		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	11.35	0.12	11.35	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.21	0.20	0.08	0.20	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	-0.31	-0.77	0.34	-0.77	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.48	0.40	0.13	0.40	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.51	0.84	0.16	0.84		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA 226	1.76	0.84	0.30	0.84		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	0.49	0.55	0.24	0.55		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	6.14	3.05	1.06	3.36		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	8.31	1.06	0.18	1.10		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 1.66

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00075
Client Sample ID: CAMO-09-6519
Sample Collection Date: 06/24/09 16:00
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00075-016
Date Received: 06/25/09 00:00
Report Date: 06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	277.41	143.53	133.72	147.59		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	96.51	23.13	20.15	25.96		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.07	0.14	0.11	0.14	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	-2.33	-38.06	4.04	-38.08	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO 60	0.07	0.14	0.12	0.14	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.33	0.29	0.09	0.29	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	48.31	2.94	0.07	3.50		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	2.44	1.37	0.40	1.38	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.67	0.66	0.28	0.66		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-226	2.18	0.86	0.34	0.87		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	1.55	1.38	0.50	1.38		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	5.34	6.13	2.37	6.25		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	4.92	1.06	0.31	1.07		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 2.73

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

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505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00075

Client Sample ID: CAMO-09-6527

Sample Collection Date: 06/24/09 13:05

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-09-00075-017

Date Received: 06/25/09 00:00

Report Date: 06/25/09 16:44

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	36.41	71.50	133.66	71.64	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	32.57	15.31	19.98	15.82		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	32.00	10.56	2.00	10.60		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	13.09	0.13	13.09	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	0.01	0.04	0.08	0.04	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.00	69.20	0.16	69.20	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.60	0.60	0.18	0.60		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-228	-0.15	203.80	0.46	203.80	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	1.56	1.11	0.37	1.11		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	3.33	4.11	1.80	4.18		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	0.03	0.16	0.09	0.16	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.67

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9834

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CAMO-09-6528	ARS Sample ID:	ARS2-09-00075-018
Sample Collection Date:	06/24/09 13:20	Date Received:	06/25/09 09:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:45

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	253.02	139.65	127.53	143.05		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	43.40	18.40	20.61	19.15		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	20.59	7.85	1.73	7.98		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	11.35	0.12	11.39	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.00	0.00	0.08	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	18.48	1.79	0.07	1.93		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.43	0.46	0.32	0.46	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.71	0.63	0.23	0.64		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-228	2.26	1.10	0.30	1.19		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	1.30	1.07	0.35	1.07		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	8.57	5.01	1.77	5.38		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	125.24	4.45	0.77	6.43		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.54

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87556

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CAMO-09-6529	ARS Sample ID:	ARS2-09-00075-019
Sample Collection Date:	06/24/09 14:00	Date Received:	06/25/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:45

Analysis Description	Analysis Results	Analysis Error +/- 2 A	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	1109.32	292.16	128.32	323.19		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	80.61	28.80	21.30	30.87		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	-1.61	-34.19	3.92	-34.19	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	9.56	0.10	9.56	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.30	0.23	0.07	0.23	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	86.60	3.13	0.06	4.07		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.50	0.50	0.30	0.50	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.61	0.65	0.28	0.65		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA 228	2.87	1.81	0.29	1.33		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	3.98	3.02	0.77	3.03		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	1.89	3.90	1.95	3.92	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	237.06	5.26	1.06	10.24		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 0.47

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00075	Request or PO Number:	
Client Sample ID:	CAMO-09-6531	ARS Sample ID:	ARS2-09-00075-020
Sample Collection Date:	06/24/09 14:10	Date Received:	06/25/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/25/09 16:45

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	28.66	67.08	133.72	67.15	U	pCi/g	EPA 900.0M	6/25/2009	LR	N/A
GROSS BETA	43.12	16.62	20.15	17.44		pCi/g	EPA 900.0M	6/25/2009	LR	N/A
NA-22	0.12	0.17	0.10	0.17	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
K-40	-1.30	-19.34	3.01	-19.34	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CO-60	0.00	10.25	0.10	10.25	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-134	0.00	0.00	0.08	0.00	U	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
CS-137	1.72	0.52	0.06	0.53		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
EU-152	0.41	0.41	0.14	0.41	SI	pCi/g	EPA 901.1M	6/25/2009	LR	N/A
PB-212	1.39	0.49	0.11	0.50		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
RA-226	1.97	0.09	0.27	0.85		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-235	2.05	1.10	0.36	1.10		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
U-238	1.27	2.10	1.11	2.12		pCi/g	EPA 901.1M	6/25/2009	LR	N/A
AM-241	4.80	0.85	0.21	0.86		pCi/g	EPA 901.1M	6/25/2009	LR	N/A

NOTES: % Moisture: 1.62

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2499 VALIDATION DATE: 08/02/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Maryann Jordan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): VOCs by GC/MS

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. Sample CAMO-09-6519 was diluted and re-analyzed due to an over-range detect for 4-isopropyltoluene in the original analysis, and both sets of results were reported. Thus, the undiluted results for this analyte was qualified R,V7. The acetone result in the diluted analysis was a detect and, thus, was qualified J,V88. The results for all other analytes except for 4-isopropyltoluene in the diluted analysis were NDs and, thus, were qualified UJ,V88.
2. Acetone was detected in the FTB, sample -6535, associated with samples -6528 and -6529. The acetone results in these samples were NDs and, thus, were not qualified.
3. The ICV and/or CCV %D for 1,2-dibromo-3-chloropropane was >20%. The associated sample results were NDs and, thus, were qualified UJ,V7c.
4. 1,1,2-Trichloro-1,2,2-trifluoroethane was not included in the MS/MSD. Since analysis of a MS/MSD pair is not a client requirement, no sample data were qualified.

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

5. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 8/4/09

VALIDATOR'S SIGNATURE: DATE: 08/02/09

Form 5114-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☒	☐	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☒	☐	☐	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☐	☒	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☐	☒	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☐	☒	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☒	☐	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☒	☐	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☒	☐	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☒	☐	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 12:46	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 10:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T212.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.26	ug/kg	0.429	1.26
74-87-3	Chloromethane	U	1.26	ug/kg	0.379	1.26
75-01-4	Vinyl chloride	U	1.26	ug/kg	0.379	1.26
74-83-9	Bromomethane	U	1.26	ug/kg	0.379	1.26
75-00-3	Chloroethane	U	1.26	ug/kg	0.379	1.26
75-69-4	Trichlorofluoromethane	U	1.26	ug/kg	0.719	1.26
67-64-1	Acetone		20.2	ug/kg	2.09	6.31
75-35-4	1,1-Dichloroethylene	U	1.26	ug/kg	0.379	1.26
74-88-4	Iodomethane	U	6.31	ug/kg	2.02	6.31
75-09-2	Methylene chloride	U	6.31	ug/kg	2.52	6.31
75-15-0	Carbon disulfide	U	6.31	ug/kg	1.58	6.31
156-60-5	trans-1,2-Dichloroethylene	U	1.26	ug/kg	0.379	1.26
75-34-3	1,1-Dichloroethane	U	1.26	ug/kg	0.379	1.26
78-93-3	2-Butanone	U	6.31	ug/kg	1.89	6.31
156-59-2	cis-1,2-Dichloroethylene	U	1.26	ug/kg	0.379	1.26
594-20-7	2,2-Dichloropropane	U	1.26	ug/kg	0.379	1.26
67-66-3	Chloroform	U	1.26	ug/kg	0.379	1.26
74-97-5	Bromochloromethane	U	1.26	ug/kg	0.416	1.26
71-55-6	1,1,1-Trichloroethane	U	1.26	ug/kg	0.379	1.26
563-58-6	1,1-Dichloropropene	U	1.26	ug/kg	0.379	1.26
56-23-5	Carbon tetrachloride	U	1.26	ug/kg	0.379	1.26
107-06-2	1,2-Dichloroethane	U	1.26	ug/kg	0.379	1.26
71-43-2	Benzene	U	1.26	ug/kg	0.379	1.26
79-01-6	Trichloroethylene	U	1.26	ug/kg	0.416	1.26
78-87-5	1,2-Dichloropropane	U	1.26	ug/kg	0.379	1.26
75-27-4	Bromodichloromethane	U	1.26	ug/kg	0.379	1.26
74-95-3	Dibromomethane	U	1.26	ug/kg	0.379	1.26
108-10-1	4-Methyl-2-pentanone	U	6.31	ug/kg	1.58	6.31
10061-01-5	cis-1,3-Dichloropropylene	U	1.26	ug/kg	0.379	1.26
108-88-3	Toluene		3.14	ug/kg	0.379	1.26
10061-02-6	trans-1,3-Dichloropropylene	U	1.26	ug/kg	0.379	1.26
79-00-5	1,1,2-Trichloroethane	U	1.26	ug/kg	0.379	1.26
591-78-6	2-Hexanone	U	6.31	ug/kg	1.89	6.31
142-28-9	1,3-Dichloropropane	U	1.26	ug/kg	0.379	1.26
127-18-4	Tetrachloroethylene	U	1.26	ug/kg	0.379	1.26
124-48-1	Dibromochloromethane	U	1.26	ug/kg	0.379	1.26
106-93-4	1,2-Dibromoethane	U	1.26	ug/kg	0.379	1.26
108-90-7	Chlorobenzene	U	1.26	ug/kg	0.379	1.26

MJ
08/02/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 12:46	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 10:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T212.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.26	ug/kg	0.379	1.26	
179601-23-1	m,p-Xylenes	U	2.52	ug/kg	0.379	2.52	
95-47-6	o-Xylene	U	1.26	ug/kg	0.379	1.26	
100-42-5	Styrene	U	1.26	ug/kg	0.379	1.26	
75-25-2	Bromoform	U	1.26	ug/kg	0.379	1.26	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.26	ug/kg	0.379	1.26	
96-18-4	1,2,3-Trichloropropane	U	1.26	ug/kg	0.379	1.26	
108-86-1	Bromobenzene	U	1.26	ug/kg	0.379	1.26	
103-65-1	n-Propylbenzene	U	1.26	ug/kg	0.379	1.26	
95-49-8	2-Chlorotoluene	U	1.26	ug/kg	0.379	1.26	
98-82-8	Isopropylbenzene	U	1.26	ug/kg	0.379	1.26	
108-67-8	1,3,5-Trimethylbenzene	U	1.26	ug/kg	0.379	1.26	
106-43-4	4-Chlorotoluene	U	1.26	ug/kg	0.379	1.26	
98-06-6	tert-Butylbenzene	U	1.26	ug/kg	0.379	1.26	
95-63-6	1,2,4-Trimethylbenzene	U	1.26	ug/kg	0.379	1.26	
135-98-8	sec-Butylbenzene	U	1.26	ug/kg	0.379	1.26	
99-87-6	4-Isopropyltoluene	E	291	ug/kg	0.379	1.26	R,V7
541-73-1	1,3-Dichlorobenzene	U	1.26	ug/kg	0.379	1.26	
106-46-7	1,4-Dichlorobenzene	U	1.26	ug/kg	0.379	1.26	
104-51-8	n-Butylbenzene	U	1.26	ug/kg	0.379	1.26	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.26	ug/kg	0.379	1.26	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.31	ug/kg	2.02	6.31	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.26	ug/kg	0.379	1.26	
95-50-1	1,2-Dichlorobenzene	U	1.26	ug/kg	0.379	1.26	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	Estimated RT	Units	Fit	Qual
	unknown	4.36	ug/kg	0	J
000111-84-2	Nonane	16.15	ug/kg	97	NJ
	unknown hydrocarbon	16.85	ug/kg	0	J
	unknown hydrocarbon	16.91	ug/kg	0	J
	unknown hydrocarbon	17.05	ug/kg	0	J
005794-04-7	Bicyclo[2.2.1]heptane, 2,2-dimethy	17.37	ug/kg	97	NJ
	unknown hydrocarbon	17.63	ug/kg	0	J
	unknown hydrocarbon	17.64	ug/kg	0	J
000127-91-3	.beta.-Pinene	17.79	ug/kg	94	NJ
	unknown hydrocarbon	18.11	ug/kg	0	J

MJ
08/02/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 12:46	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 10:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T212.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Flt	Qual
	unknown hydrocarbon	18.19	ug/kg	0	J
	unknown hydrocarbon	18.33	ug/kg	0	J
	unknown hydrocarbon	18.46	ug/kg	0	J
000099-85-4	1,4-Cyclohexadiene, 1-methyl-4-(1-	18.65	ug/kg	97	NJ
	unknown hydrocarbon	19.05	ug/kg	0	J
	unknown aromatic	19.23	ug/kg	0	J
015358-88-0	Bicyclo[3.1.1]heptan-3-one, 2,6,6-	20.89	ug/kg	92	NJ

MJ
08/02/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519RE	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 11:32	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:00	**Aliquot:**	1.2 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T311.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	5.26	ug/kg	1.79	5.26	UJ,V88
74-87-3	Chloromethane	U	5.26	ug/kg	1.58	5.26	
75-01-4	Vinyl chloride	U	5.26	ug/kg	1.58	5.26	
74-83-9	Bromomethane	U	5.26	ug/kg	1.58	5.26	
75-00-3	Chloroethane	U	5.26	ug/kg	1.58	5.26	
75-69-4	Trichlorofluoromethane	U	5.26	ug/kg	3.00	5.26	
67-64-1	Acetone	J	20.5	ug/kg	8.73	26.3	J,V88
75-35-4	1,1-Dichloroethylene	U	5.26	ug/kg	1.58	5.26	UJ,V88
74-88-4	Iodomethane	U	26.3	ug/kg	8.41	26.3	
75-09-2	Methylene chloride	U	26.3	ug/kg	10.5	26.3	
75-15-0	Carbon disulfide	U	26.3	ug/kg	6.57	26.3	
156-60-5	trans-1,2-Dichloroethylene	U	5.26	ug/kg	1.58	5.26	
75-34-3	1,1-Dichloroethane	U	5.26	ug/kg	1.58	5.26	
78-93-3	2-Butanone	U	26.3	ug/kg	7.89	26.3	
156-59-2	cis-1,2-Dichloroethylene	U	5.26	ug/kg	1.58	5.26	
594-20-7	2,2-Dichloropropane	U	5.26	ug/kg	1.58	5.26	
67-66-3	Chloroform	U	5.26	ug/kg	1.58	5.26	
74-97-5	Bromochloromethane	U	5.26	ug/kg	1.74	5.26	
71-55-6	1,1,1-Trichloroethane	U	5.26	ug/kg	1.58	5.26	
563-58-6	1,1-Dichloropropene	U	5.26	ug/kg	1.58	5.26	
56-23-5	Carbon tetrachloride	U	5.26	ug/kg	1.58	5.26	
107-06-2	1,2-Dichloroethane	U	5.26	ug/kg	1.58	5.26	
71-43-2	Benzene	U	5.26	ug/kg	1.58	5.26	
79-01-6	Trichloroethylene	U	5.26	ug/kg	1.74	5.26	
78-87-5	1,2-Dichloropropane	U	5.26	ug/kg	1.58	5.26	
75-27-4	Bromodichloromethane	U	5.26	ug/kg	1.58	5.26	
74-95-3	Dibromomethane	U	5.26	ug/kg	1.58	5.26	
108-10-1	4-Methyl-2-pentanone	U	26.3	ug/kg	6.57	26.3	
10061-01-5	cis-1,3-Dichloropropylene	U	5.26	ug/kg	1.58	5.26	
108-88-3	Toluene	U	5.26	ug/kg	1.58	5.26	
10061-02-6	trans-1,3-Dichloropropylene	U	5.26	ug/kg	1.58	5.26	
79-00-5	1,1,2-Trichloroethane	U	5.26	ug/kg	1.58	5.26	
591-78-6	2-Hexanone	U	26.3	ug/kg	7.89	26.3	
142-28-9	1,3-Dichloropropane	U	5.26	ug/kg	1.58	5.26	
127-18-4	Tetrachloroethylene	U	5.26	ug/kg	1.58	5.26	
124-48-1	Dibromochloromethane	U	5.26	ug/kg	1.58	5.26	
106-93-4	1,2-Dibromoethane	U	5.26	ug/kg	1.58	5.26	
108-90-7	Chlorobenzene	U	5.26	ug/kg	1.58	5.26	

MJ
08/02/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519RE	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 11:32	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:00	**Aliquot:**	1.2 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T311.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	5.26	ug/kg	1.58	5.26	UJ,V88
179601-23-1	m,p-Xylenes	U	10.5	ug/kg	1.58	10.5	
95-47-6	o-Xylene	U	5.26	ug/kg	1.58	5.26	
100-42-5	Styrene	U	5.26	ug/kg	1.58	5.26	
75-25-2	Bromoform	U	5.26	ug/kg	1.58	5.26	
79-34-5	1,1,2,2-Tetrachloroethane	U	5.26	ug/kg	1.58	5.26	
96-18-4	1,2,3-Trichloropropane	U	5.26	ug/kg	1.58	5.26	
108-86-1	Bromobenzene	U	5.26	ug/kg	1.58	5.26	
103-65-1	n-Propylbenzene	U	5.26	ug/kg	1.58	5.26	
95-49-8	2-Chlorotoluene	U	5.26	ug/kg	1.58	5.26	
98-82-8	Isopropylbenzene	U	5.26	ug/kg	1.58	5.26	
108-67-8	1,3,5-Trimethylbenzene	U	5.26	ug/kg	1.58	5.26	
106-43-4	4-Chlorotoluene	U	5.26	ug/kg	1.58	5.26	
98-06-6	tert-Butylbenzene	U	5.26	ug/kg	1.58	5.26	
95-63-6	1,2,4-Trimethylbenzene	U	5.26	ug/kg	1.58	5.26	
135-98-8	sec-Butylbenzene	U	5.26	ug/kg	1.58	5.26	
99-87-6	4-Isopropyltoluene		135	ug/kg	1.58	5.26	
541-73-1	1,3-Dichlorobenzene	U	5.26	ug/kg	1.58	5.26	UJ,V88
106-46-7	1,4-Dichlorobenzene	U	5.26	ug/kg	1.58	5.26	
104-51-8	n-Butylbenzene	U	5.26	ug/kg	1.58	5.26	
96-12-8	1,2-Dibromo-3-chloropropane	U	5.26	ug/kg	1.58	5.26	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	26.3	ug/kg	8.41	26.3	
630-20-6	1,1,1,2-Tetrachloroethane	U	5.26	ug/kg	1.58	5.26	
95-50-1	1,2-Dichlorobenzene	U	5.26	ug/kg	1.58	5.26	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	unknown	4.36	98.6	ug/kg	0	J
	unknown hydrocarbon	16.85	29.9	ug/kg	0	J
	unknown hydrocarbon	17.05	2450	ug/kg	0	J
	unknown hydrocarbon	17.37	53.7	ug/kg	0	J
	unknown hydrocarbon	17.63	64.4	ug/kg	0	J
	unknown hydrocarbon	17.77	1220	ug/kg	0	J
	unknown hydrocarbon	18.09	1120	ug/kg	0	J
	unknown hydrocarbon	18.19	30.3	ug/kg	0	J
	unknown hydrocarbon	18.33	453	ug/kg	0	J
	unknown hydrocarbon	19.05	112	ug/kg	0	J

MJ
08/02/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 10:06	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T308.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.357	1.05
74-87-3	Chloromethane	U	1.05	ug/kg	0.315	1.05
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.315	1.05
74-83-9	Bromomethane	U	1.05	ug/kg	0.315	1.05
75-00-3	Chloroethane	U	1.05	ug/kg	0.315	1.05
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.599	1.05
67-64-1	Acetone	U	5.26	ug/kg	1.74	5.26
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
74-88-4	Iodomethane	U	5.26	ug/kg	1.68	5.26
75-09-2	Methylene chloride	U	5.26	ug/kg	2.10	5.26
75-15-0	Carbon disulfide	U	5.26	ug/kg	1.31	5.26
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.315	1.05
78-93-3	2-Butanone	U	5.26	ug/kg	1.58	5.26
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05
67-66-3	Chloroform	U	1.05	ug/kg	0.315	1.05
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.347	1.05
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.315	1.05
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.315	1.05
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.315	1.05
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.315	1.05
71-43-2	Benzene	U	1.05	ug/kg	0.315	1.05
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.347	1.05
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.315	1.05
74-95-3	Dibromomethane	U	1.05	ug/kg	0.315	1.05
108-10-1	4-Methyl-2-pentanone	U	5.26	ug/kg	1.31	5.26
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05
108-88-3	Toluene	U	1.05	ug/kg	0.315	1.05
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.315	1.05
591-78-6	2-Hexanone	U	5.26	ug/kg	1.58	5.26
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.315	1.05
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.315	1.05
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.315	1.05
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.315	1.05
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.315	1.05

MJ
08/02/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 10:06	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T308.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.315	1.05	
179601-23-1	m,p-Xylenes	U	2.10	ug/kg	0.315	2.10	
95-47-6	o-Xylene	U	1.05	ug/kg	0.315	1.05	
100-42-5	Styrene	U	1.05	ug/kg	0.315	1.05	
75-25-2	Bromoform	U	1.05	ug/kg	0.315	1.05	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05	
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.315	1.05	
108-86-1	Bromobenzene	U	1.05	ug/kg	0.315	1.05	
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.315	1.05	
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.315	1.05	
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.315	1.05	
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05	
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.315	1.05	
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.315	1.05	
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05	
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.315	1.05	
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.315	1.05	
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05	
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05	
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.315	1.05	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.315	1.05	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.26	ug/kg	1.68	5.26	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05	
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	11.2	ug/kg	0	J
	unknown siloxane	19.15	49.6	ug/kg	0	J

MJ
08/02/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6528	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 10:34	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T309.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.06	ug/kg	0.361	1.06
74-87-3	Chloromethane	U	1.06	ug/kg	0.318	1.06
75-01-4	Vinyl chloride	U	1.06	ug/kg	0.318	1.06
74-83-9	Bromomethane	U	1.06	ug/kg	0.318	1.06
75-00-3	Chloroethane	U	1.06	ug/kg	0.318	1.06
75-69-4	Trichlorofluoromethane	U	1.06	ug/kg	0.605	1.06
67-64-1	Acetone	U	5.31	ug/kg	1.76	5.31
75-35-4	1,1-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
74-88-4	Iodomethane	U	5.31	ug/kg	1.70	5.31
75-09-2	Methylene chloride	U	5.31	ug/kg	2.12	5.31
75-15-0	Carbon disulfide	U	5.31	ug/kg	1.33	5.31
156-60-5	trans-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
75-34-3	1,1-Dichloroethane	U	1.06	ug/kg	0.318	1.06
78-93-3	2-Butanone	U	5.31	ug/kg	1.59	5.31
156-59-2	cis-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
594-20-7	2,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
67-66-3	Chloroform	U	1.06	ug/kg	0.318	1.06
74-97-5	Bromochloromethane	U	1.06	ug/kg	0.350	1.06
71-55-6	1,1,1-Trichloroethane	U	1.06	ug/kg	0.318	1.06
563-58-6	1,1-Dichloropropene	U	1.06	ug/kg	0.318	1.06
56-23-5	Carbon tetrachloride	U	1.06	ug/kg	0.318	1.06
107-06-2	1,2-Dichloroethane	U	1.06	ug/kg	0.318	1.06
71-43-2	Benzene	U	1.06	ug/kg	0.318	1.06
79-01-6	Trichloroethylene	U	1.06	ug/kg	0.350	1.06
78-87-5	1,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
75-27-4	Bromodichloromethane	U	1.06	ug/kg	0.318	1.06
74-95-3	Dibromomethane	U	1.06	ug/kg	0.318	1.06
108-10-1	4-Methyl-2-pentanone	U	5.31	ug/kg	1.33	5.31
10061-01-5	cis-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
108-88-3	Toluene	U	1.06	ug/kg	0.318	1.06
10061-02-6	trans-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
79-00-5	1,1,2-Trichloroethane	U	1.06	ug/kg	0.318	1.06
591-78-6	2-Hexanone	U	5.31	ug/kg	1.59	5.31
142-28-9	1,3-Dichloropropane	U	1.06	ug/kg	0.318	1.06
127-18-4	Tetrachloroethylene	U	1.06	ug/kg	0.318	1.06
124-48-1	Dibromochloromethane	U	1.06	ug/kg	0.318	1.06
106-93-4	1,2-Dibromoethane	U	1.06	ug/kg	0.318	1.06
108-90-7	Chlorobenzene	U	1.06	ug/kg	0.318	1.06

MJ
08/02/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6528	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 10:34	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T309.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.06	ug/kg	0.318	1.06	
179601-23-1	m,p-Xylenes	U	2.12	ug/kg	0.318	2.12	
95-47-6	o-Xylene	U	1.06	ug/kg	0.318	1.06	
100-42-5	Styrene	U	1.06	ug/kg	0.318	1.06	
75-25-2	Bromoform	U	1.06	ug/kg	0.318	1.06	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06	
96-18-4	1,2,3-Trichloropropane	U	1.06	ug/kg	0.318	1.06	
108-86-1	Bromobenzene	U	1.06	ug/kg	0.318	1.06	
103-65-1	n-Propylbenzene	U	1.06	ug/kg	0.318	1.06	
95-49-8	2-Chlorotoluene	U	1.06	ug/kg	0.318	1.06	
98-82-8	Isopropylbenzene	U	1.06	ug/kg	0.318	1.06	
108-67-8	1,3,5-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06	
106-43-4	4-Chlorotoluene	U	1.06	ug/kg	0.318	1.06	
98-06-6	tert-Butylbenzene	U	1.06	ug/kg	0.318	1.06	
95-63-6	1,2,4-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06	
135-98-8	sec-Butylbenzene	U	1.06	ug/kg	0.318	1.06	
99-87-6	4-Isopropyltoluene	U	1.06	ug/kg	0.318	1.06	
541-73-1	1,3-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06	
106-46-7	1,4-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06	
104-51-8	n-Butylbenzene	U	1.06	ug/kg	0.318	1.06	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.06	ug/kg	0.318	1.06	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.31	ug/kg	1.70	5.31	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06	
95-50-1	1,2-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	12.8	ug/kg	0	J
	unknown siloxane	17.2	161	ug/kg	0	J
	unknown siloxane	19.15	38.1	ug/kg	0	J

MJ
08/02/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/27/2009 12:00	**Matrix:**	S
Lab Sample ID:	232507007	**Date Received:**	06/27/2009 12:00		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6535	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 11:03	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:03	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T310.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	J	2.85	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

MJ
08/02/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/27/2009 12:00	**Matrix:**	S
Lab Sample ID:	232507007	**Date Received:**	06/27/2009 12:00		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6535	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 11:03	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:03	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T310.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00	
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00	
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00	
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00	
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00	
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00	
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00	
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00	
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00	
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00	UJ,V7c
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	18	ug/kg	0	J

MJ
08/02/09

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

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Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2499 VALIDATION DATE: 08/03/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Maryann Jordan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): SVOCS BY GC/MS

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The ICAL r^2 values were <0.995 for 2,4-dinitrophenol; 4-chloroaniline and hexachlorocyclopentadiene. The associated sample results were NDs and, thus, were qualified UJ,SV7a.
2. The ICV and/or CCV %Ds were >20% for 2,4-dinitrophenol; hexachlorocyclopentadiene and 2-methyl-4,6-dinitrophenol. The associated sample results were NDs and, thus, were qualified UJ,SV7c.
3. The area count for IS perylene-d12 was <50% but ≥10% in sample CAMO-09-6528 from the daily CCV IS area. All associated sample results were NDs and, thus, were qualified UJ,SV1b.
4. The LCS %Rs were > the laboratory UALs for 3-nitroaniline and 4-nitroaniline. Results for these compounds in all samples were NDs and, thus, were not qualified.
5. The MS and/or MSD %Rs were < the laboratory LAL but ≥10% for 3,3'-dichlorobenzidine and > the laboratory UAL

DATA VALIDATION COVER SHEET

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Data Validation Cover Sheet

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for 4-nitroaniline. The MS/ MSD RPDs were > the laboratory acceptance limits for 3,3'-dichlorobenzidine and 4-chloroaniline. Since analysis of a MS/MSD pair is not a client requirement, no sample data were qualified.

6. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 8/4/09

VALIDATOR'S SIGNATURE: DATE: 08/03/09

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☒	☐	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☒	☐	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☒	☐	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☒	☐	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☒	☐	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507002	Date Received:	06/27/2009 09:05	%Moisture:	15.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6518	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 10:41	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0109.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	392	ug/kg	78.5	392	
108-95-2	Phenol	U	392	ug/kg	78.5	392	
95-57-8	2-Chlorophenol	U	392	ug/kg	78.5	392	
106-46-7	1,4-Dichlorobenzene	U	392	ug/kg	78.5	392	
621-64-7	N-Nitrosodipropylamine	U	392	ug/kg	78.5	392	
59-50-7	4-Chloro-3-methylphenol	U	392	ug/kg	78.5	392	
83-32-9	Acenaphthene	U	39.2	ug/kg	13.0	39.2	
121-14-2	2,4-Dinitrotoluene	U	392	ug/kg	39.2	392	
100-02-7	4-Nitrophenol	U	392	ug/kg	130	392	
87-86-5	Pentachlorophenol	U	392	ug/kg	98.1	392	
129-00-0	Pyrene		421	ug/kg	11.8	39.2	
110-86-1	Pyridine	U	392	ug/kg	78.5	392	
62-53-3	Aniline	U	392	ug/kg	118	392	
111-44-4	bis(2-Chloroethyl) ether	U	392	ug/kg	78.5	392	
541-73-1	1,3-Dichlorobenzene	U	392	ug/kg	78.5	392	
100-51-6	Benzyl alcohol	U	392	ug/kg	118	392	
95-50-1	1,2-Dichlorobenzene	U	392	ug/kg	78.5	392	
108-60-1	bis(2-Chloroisopropyl)ether	U	392	ug/kg	78.5	392	
95-48-7	o-Cresol	U	392	ug/kg	78.5	392	
65794-96-9	m,p-Cresols	U	392	ug/kg	118	392	
67-72-1	Hexachloroethane	U	392	ug/kg	78.5	392	
98-95-3	Nitrobenzene	U	392	ug/kg	78.5	392	
78-59-1	Isophorone	U	392	ug/kg	78.5	392	
88-75-5	2-Nitrophenol	U	392	ug/kg	78.5	392	
105-67-9	2,4-Dimethylphenol	U	392	ug/kg	137	392	
111-91-1	bis(2-Chloroethoxy)methane	U	392	ug/kg	78.5	392	
120-83-2	2,4-Dichlorophenol	U	392	ug/kg	78.5	392	
65-85-0	Benzoic acid	U	785	ug/kg	196	785	
91-20-3	Naphthalene	U	39.2	ug/kg	11.8	39.2	
106-47-8	4-Chloroaniline	U	392	ug/kg	78.5	392	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	392	ug/kg	78.5	392	
91-57-6	2-Methylnaphthalene	U	39.2	ug/kg	7.85	39.2	
77-47-4	Hexachlorocyclopentadiene	U	392	ug/kg	78.5	392	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	392	ug/kg	78.5	392	
95-95-4	2,4,5-Trichlorophenol	U	392	ug/kg	78.5	392	
91-58-7	2-Chloronaphthalene	U	39.2	ug/kg	13.0	39.2	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	392	ug/kg	78.5	392	
99-09-2	3-Nitroaniline	U	392	ug/kg	78.5	392	

MJ
08/03/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507002	Date Received:	06/27/2009 09:05	%Moisture:	15.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6518	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 10:41	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0109.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	392	ug/kg	78.5	392	
606-20-2	2,6-Dinitrotoluene	U	392	ug/kg	39.2	392	
208-96-8	Acenaphthylene	U	39.2	ug/kg	11.8	39.2	
51-28-5	2,4-Dinitrophenol	U	785	ug/kg	149	785	UJ,SV7a
132-64-9	Dibenzofuran	U	392	ug/kg	78.5	392	
84-66-2	Diethylphthalate	U	392	ug/kg	78.5	392	
86-73-7	Fluorene	U	39.2	ug/kg	11.8	39.2	
7005-72-3	4-Chlorophenylphenylether	U	392	ug/kg	78.5	392	
534-52-1	2-Methyl-4,6-dinitrophenol	U	392	ug/kg	78.5	392	UJ,SV7c
100-01-6	4-Nitroaniline	U	392	ug/kg	118	392	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	392	ug/kg	78.5	392	
122-66-7	Azobenzene	U	392	ug/kg	78.5	392	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	392	ug/kg	78.5	392	
118-74-1	Hexachlorobenzene	U	392	ug/kg	78.5	392	
85-01-8	Phenanthrene		217	ug/kg	11.8	39.2	
120-12-7	Anthracene		44.1	ug/kg	7.85	39.2	
84-74-2	Di-n-butylphthalate	U	392	ug/kg	78.5	392	
206-44-0	Fluoranthene		450	ug/kg	11.8	39.2	
85-68-7	Butylbenzylphthalate	U	392	ug/kg	78.5	392	
56-55-3	Benzo(a)anthracene		170	ug/kg	11.8	39.2	
91-94-1	3,3'-Dichlorobenzidine	U	392	ug/kg	118	392	
218-01-9	Chrysene		215	ug/kg	11.8	39.2	
117-81-7	bis(2-Ethylhexyl)phthalate	U	392	ug/kg	78.5	392	
117-84-0	Di-n-octylphthalate	U	392	ug/kg	78.5	392	
205-99-2	Benzo(b)fluoranthene		316	ug/kg	11.8	39.2	
207-08-9	Benzo(k)fluoranthene		110	ug/kg	11.8	39.2	
50-32-8	Benzo(a)pyrene		210	ug/kg	11.8	39.2	
193-39-5	Indeno(1,2,3-cd)pyrene		110	ug/kg	11.8	39.2	
53-70-3	Dibenzo(a,h)anthracene	U	39.2	ug/kg	11.8	39.2	
191-24-2	Benzo(ghi)perylene		125	ug/kg	11.8	39.2	
120-82-1	1,2,4-Trichlorobenzene	U	392	ug/kg	78.5	392	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.05	220	ug/kg		JA
7785-70-8	1R-.alpha.-Pinene	3.6	171	ug/kg	97	NJ

MJ
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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6518	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 10:41	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0109.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
3387-41-5	Bicyclo[3.1.0]hexane, 4-methylene-1-(1-m	3.8	168	ug/kg	94	NJ
555-10-2	.beta.-Phellandrene	4.11	181	ug/kg	93	NJ
103-82-2	Benzeneacetic acid	5.02	169	ug/kg	91	NJ
25269-17-4	Thunbergol	8.23	185	ug/kg	83	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.19	183	ug/kg	97	NJ
	Unknown	9.46	344	ug/kg		J
	Unknown	9.54	524	ug/kg		J
54833-34-0	Cyclohexane, 1,1'-(2-ethyl-1,3-propanedi	12.13	1050	ug/kg	86	NJ
	Unknown	14.26	210	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507001	Date Received:	06/27/2009 09:05	%Moisture:	20.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6519	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 09:17	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0106.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	420	ug/kg	84.1	420	
108-95-2	Phenol	U	420	ug/kg	84.1	420	
95-57-8	2-Chlorophenol	U	420	ug/kg	84.1	420	
106-46-7	1,4-Dichlorobenzene	U	420	ug/kg	84.1	420	
621-64-7	N-Nitrosodipropylamine	U	420	ug/kg	84.1	420	
59-50-7	4-Chloro-3-methylphenol	U	420	ug/kg	84.1	420	
83-32-9	Acenaphthene	U	42.0	ug/kg	13.9	42.0	
121-14-2	2,4-Dinitrotoluene	U	420	ug/kg	42.0	420	
100-02-7	4-Nitrophenol	U	420	ug/kg	139	420	
87-86-5	Pentachlorophenol	U	420	ug/kg	105	420	
129-00-0	Pyrene	U	42.0	ug/kg	12.6	42.0	
110-86-1	Pyridine	U	420	ug/kg	84.1	420	
62-53-3	Aniline	U	420	ug/kg	126	420	
111-44-4	bis(2-Chloroethyl) ether	U	420	ug/kg	84.1	420	
541-73-1	1,3-Dichlorobenzene	U	420	ug/kg	84.1	420	
100-51-6	Benzyl alcohol	U	420	ug/kg	126	420	
95-50-1	1,2-Dichlorobenzene	U	420	ug/kg	84.1	420	
108-60-1	bis(2-Chloroisopropyl)ether	U	420	ug/kg	84.1	420	
95-48-7	o-Cresol	U	420	ug/kg	84.1	420	
65794-96-9	m,p-Cresols	U	420	ug/kg	126	420	
67-72-1	Hexachloroethane	U	420	ug/kg	84.1	420	
98-95-3	Nitrobenzene	U	420	ug/kg	84.1	420	
78-59-1	Isophorone	U	420	ug/kg	84.1	420	
88-75-5	2-Nitrophenol	U	420	ug/kg	84.1	420	
105-67-9	2,4-Dimethylphenol	U	420	ug/kg	147	420	
111-91-1	bis(2-Chloroethoxy)methane	U	420	ug/kg	84.1	420	
120-83-2	2,4-Dichlorophenol	U	420	ug/kg	84.1	420	
65-85-0	Benzoic acid	U	841	ug/kg	210	841	
91-20-3	Naphthalene	U	42.0	ug/kg	12.6	42.0	
106-47-8	4-Chloroaniline	U	420	ug/kg	84.1	420	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	420	ug/kg	84.1	420	
91-57-6	2-Methylnaphthalene	U	42.0	ug/kg	8.41	42.0	
77-47-4	Hexachlorocyclopentadiene	U	420	ug/kg	84.1	420	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	420	ug/kg	84.1	420	
95-95-4	2,4,5-Trichlorophenol	U	420	ug/kg	84.1	420	
91-58-7	2-Chloronaphthalene	U	42.0	ug/kg	13.9	42.0	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	420	ug/kg	84.1	420	
99-09-2	3-Nitroaniline	U	420	ug/kg	84.1	420	

MJ
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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507001	Date Received:	06/27/2009 09:05	%Moisture:	20.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6519	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 09:17	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0106.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	420	ug/kg	84.1	420	
606-20-2	2,6-Dinitrotoluene	U	420	ug/kg	42.0	420	
208-96-8	Acenaphthylene	U	42.0	ug/kg	12.6	42.0	
51-28-5	2,4-Dinitrophenol	U	841	ug/kg	160	841	UJ,SV7a
132-64-9	Dibenzofuran	U	420	ug/kg	84.1	420	
84-66-2	Diethylphthalate	U	420	ug/kg	84.1	420	
86-73-7	Fluorene	U	42.0	ug/kg	12.6	42.0	
7005-72-3	4-Chlorophenylphenylether	U	420	ug/kg	84.1	420	
534-52-1	2-Methyl-4,6-dinitrophenol	U	420	ug/kg	84.1	420	UJ,SV7c
100-01-6	4-Nitroaniline	U	420	ug/kg	126	420	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	420	ug/kg	84.1	420	
122-66-7	Azobenzene	U	420	ug/kg	84.1	420	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	420	ug/kg	84.1	420	
118-74-1	Hexachlorobenzene	U	420	ug/kg	84.1	420	
85-01-8	Phenanthrene	U	42.0	ug/kg	12.6	42.0	
120-12-7	Anthracene	U	42.0	ug/kg	8.41	42.0	
84-74-2	Di-n-butylphthalate	U	420	ug/kg	84.1	420	
206-44-0	Fluoranthene	U	42.0	ug/kg	12.6	42.0	
85-68-7	Butylbenzylphthalate	U	420	ug/kg	84.1	420	
56-55-3	Benzo(a)anthracene	U	42.0	ug/kg	12.6	42.0	
91-94-1	3,3'-Dichlorobenzidine	U	420	ug/kg	126	420	
218-01-9	Chrysene	U	42.0	ug/kg	12.6	42.0	
117-81-7	bis(2-Ethylhexyl)phthalate	U	420	ug/kg	84.1	420	
117-84-0	Di-n-octylphthalate	U	420	ug/kg	84.1	420	
205-99-2	Benzo(b)fluoranthene	U	42.0	ug/kg	12.6	42.0	
207-08-9	Benzo(k)fluoranthene	U	42.0	ug/kg	12.6	42.0	
50-32-8	Benzo(a)pyrene	U	42.0	ug/kg	12.6	42.0	
193-39-5	Indeno(1,2,3-cd)pyrene	U	42.0	ug/kg	12.6	42.0	
53-70-3	Dibenzo(a,h)anthracene	U	42.0	ug/kg	12.6	42.0	
191-24-2	Benzo(ghi)perylene	U	42.0	ug/kg	12.6	42.0	
120-82-1	1,2,4-Trichlorobenzene	U	420	ug/kg	84.1	420	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
7785-70-8	1R-.alpha.-Pinene	3.6	1550	ug/kg	97	NJ
13466-78-9	3-Carene	3.99	538	ug/kg	96	NJ

MJ
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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2499**	**Date Collected:**	**06/24/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232507001**	**Date Received:**	**06/27/2009 09:05**	**%Moisture:**	**20.8**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6519**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881442**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/01/2009 09:17**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 21:22**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0106.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1227-93-6	1H-Naphtho[2,1-b]pyran, 3-ethenyldodecah	8.09	332	ug/kg	87	NJ
1000197-14-1	4b,8-Dimethyl-2-isopropylphenanthrene, 4	8.13	288	ug/kg	93	NJ
	Unknown	8.92	316	ug/kg		J
	Unknown	9.11	372	ug/kg		J
	Unknown	9.19	273	ug/kg		J
	Unknown	9.22	379	ug/kg		J
	Unknown	9.25	421	ug/kg		J
	Unknown	9.45	1060	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.55	1560	ug/kg	99	NJ
514-10-3	Abietic acid	9.74	916	ug/kg	99	NJ
	Unknown	9.93	411	ug/kg		J
	Unknown	10.19	311	ug/kg		J
112-95-8	Eicosane	10.98	236	ug/kg	98	NJ
559-74-0	Friedelan-3-one	16.85	332	ug/kg	93	NJ
	Unknown	18.42	430	ug/kg		J
	Unknown	18.6	316	ug/kg		J
	Unknown	19.55	280	ug/kg		J

MJ
08/03/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507003	Date Received:	06/27/2009 09:05	%Moisture:	5.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6527	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:09	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0110.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	354	ug/kg	70.8	354	
108-95-2	Phenol	U	354	ug/kg	70.8	354	
95-57-8	2-Chlorophenol	U	354	ug/kg	70.8	354	
106-46-7	1,4-Dichlorobenzene	U	354	ug/kg	70.8	354	
621-64-7	N-Nitrosodipropylamine	U	354	ug/kg	70.8	354	
59-50-7	4-Chloro-3-methylphenol	U	354	ug/kg	70.8	354	
83-32-9	Acenaphthene	U	35.4	ug/kg	11.7	35.4	
121-14-2	2,4-Dinitrotoluene	U	354	ug/kg	35.4	354	
100-02-7	4-Nitrophenol	U	354	ug/kg	117	354	
87-86-5	Pentachlorophenol	U	354	ug/kg	88.4	354	
129-00-0	Pyrene	U	35.4	ug/kg	10.6	35.4	
110-86-1	Pyridine	U	354	ug/kg	70.8	354	
62-53-3	Aniline	U	354	ug/kg	106	354	
111-44-4	bis(2-Chloroethyl) ether	U	354	ug/kg	70.8	354	
541-73-1	1,3-Dichlorobenzene	U	354	ug/kg	70.8	354	
100-51-6	Benzyl alcohol	U	354	ug/kg	106	354	
95-50-1	1,2-Dichlorobenzene	U	354	ug/kg	70.8	354	
108-60-1	bis(2-Chloroisopropyl)ether	U	354	ug/kg	70.8	354	
95-48-7	o-Cresol	U	354	ug/kg	70.8	354	
65794-96-9	m,p-Cresols	U	354	ug/kg	106	354	
67-72-1	Hexachloroethane	U	354	ug/kg	70.8	354	
98-95-3	Nitrobenzene	U	354	ug/kg	70.8	354	
78-59-1	Isophorone	U	354	ug/kg	70.8	354	
88-75-5	2-Nitrophenol	U	354	ug/kg	70.8	354	
105-67-9	2,4-Dimethylphenol	U	354	ug/kg	124	354	
111-91-1	bis(2-Chloroethoxy)methane	U	354	ug/kg	70.8	354	
120-83-2	2,4-Dichlorophenol	U	354	ug/kg	70.8	354	
65-85-0	Benzoic acid	U	708	ug/kg	177	708	
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4	
106-47-8	4-Chloroaniline	U	354	ug/kg	70.8	354	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	354	ug/kg	70.8	354	
91-57-6	2-Methylnaphthalene	U	35.4	ug/kg	7.08	35.4	
77-47-4	Hexachlorocyclopentadiene	U	354	ug/kg	70.8	354	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	354	ug/kg	70.8	354	
95-95-4	2,4,5-Trichlorophenol	U	354	ug/kg	70.8	354	
91-58-7	2-Chloronaphthalene	U	35.4	ug/kg	11.7	35.4	
88-74-4	2-Nitroaniline	U	354	ug/kg	70.8	354	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	354	ug/kg	70.8	354	

MJ
08/03/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2499**	**Date Collected:**	**06/24/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232507003**	**Date Received:**	**06/27/2009 09:05**	**%Moisture:**	**5.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6527**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881442**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/01/2009 11:09**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 21:22**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0110.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	354	ug/kg	70.8	354	
606-20-2	2,6-Dinitrotoluene	U	354	ug/kg	35.4	354	
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4	
51-28-5	2,4-Dinitrophenol	U	708	ug/kg	134	708	UJ,SV7a
132-64-9	Dibenzofuran	U	354	ug/kg	70.8	354	
84-66-2	Diethylphthalate	U	354	ug/kg	70.8	354	
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4	
7005-72-3	4-Chlorophenylphenylether	U	354	ug/kg	70.8	354	
534-52-1	2-Methyl-4,6-dinitrophenol	U	354	ug/kg	70.8	354	UJ,SV7c
100-01-6	4-Nitroaniline	U	354	ug/kg	106	354	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	354	ug/kg	70.8	354	
122-66-7	Azobenzene	U	354	ug/kg	70.8	354	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	354	ug/kg	70.8	354	
118-74-1	Hexachlorobenzene	U	354	ug/kg	70.8	354	
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4	
120-12-7	Anthracene	U	35.4	ug/kg	7.08	35.4	
84-74-2	Di-n-butylphthalate	U	354	ug/kg	70.8	354	
206-44-0	Fluoranthene	U	35.4	ug/kg	10.6	35.4	
85-68-7	Butylbenzylphthalate	U	354	ug/kg	70.8	354	
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4	
91-94-1	3,3'-Dichlorobenzidine	U	354	ug/kg	106	354	
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4	
117-81-7	bis(2-Ethylhexyl)phthalate	U	354	ug/kg	70.8	354	
117-84-0	Di-n-octylphthalate	U	354	ug/kg	70.8	354	
205-99-2	Benzo(b)fluoranthene	U	35.4	ug/kg	10.6	35.4	
207-08-9	Benzo(k)fluoranthene	U	35.4	ug/kg	10.6	35.4	
50-32-8	Benzo(a)pyrene	U	35.4	ug/kg	10.6	35.4	
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4	ug/kg	10.6	35.4	
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4	
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4	
120-82-1	1,2,4-Trichlorobenzene	U	354	ug/kg	70.8	354	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown	2.12	7.54	ug/kg		J
	Unknown Aldol Condensate	3.05	6.03	ug/kg		JA

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507003	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6527	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 11:09	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0110.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
13466-78-9	3-Carene	3.98	5.58	ug/kg	97	NJ
	Unknown	8.22	7.16	ug/kg		J
	Unknown	8.92	5.59	ug/kg		J
112-95-8	Eicosane	12.01	4.84	ug/kg	97	NJ
	Unknown	15.53	4.24	ug/kg		J
	Unknown	18.78	17.9	ug/kg		J
	Unknown	19.56	10.1	ug/kg		J

MJ
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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6528	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 12:05	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0112.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	354	ug/kg	70.7	354	
108-95-2	Phenol	U	354	ug/kg	70.7	354	
95-57-8	2-Chlorophenol	U	354	ug/kg	70.7	354	
106-46-7	1,4-Dichlorobenzene	U	354	ug/kg	70.7	354	
621-64-7	N-Nitrosodipropylamine	U	354	ug/kg	70.7	354	
59-50-7	4-Chloro-3-methylphenol	U	354	ug/kg	70.7	354	
83-32-9	Acenaphthene	U	35.4	ug/kg	11.7	35.4	
121-14-2	2,4-Dinitrotoluene	U	354	ug/kg	35.4	354	
100-02-7	4-Nitrophenol	U	354	ug/kg	117	354	
87-86-5	Pentachlorophenol	U	354	ug/kg	88.4	354	
129-00-0	Pyrene	J	15.2	ug/kg	10.6	35.4	
110-86-1	Pyridine	U	354	ug/kg	70.7	354	
62-53-3	Aniline	U	354	ug/kg	106	354	
111-44-4	bis(2-Chloroethyl) ether	U	354	ug/kg	70.7	354	
541-73-1	1,3-Dichlorobenzene	U	354	ug/kg	70.7	354	
100-51-6	Benzyl alcohol	U	354	ug/kg	106	354	
95-50-1	1,2-Dichlorobenzene	U	354	ug/kg	70.7	354	
108-60-1	bis(2-Chloroisopropyl)ether	U	354	ug/kg	70.7	354	
95-48-7	o-Cresol	U	354	ug/kg	70.7	354	
65794-96-9	m,p-Cresols	U	354	ug/kg	106	354	
67-72-1	Hexachloroethane	U	354	ug/kg	70.7	354	
98-95-3	Nitrobenzene	U	354	ug/kg	70.7	354	
78-59-1	Isophorone	U	354	ug/kg	70.7	354	
88-75-5	2-Nitrophenol	U	354	ug/kg	70.7	354	
105-67-9	2,4-Dimethylphenol	U	354	ug/kg	124	354	
111-91-1	bis(2-Chloroethoxy)methane	U	354	ug/kg	70.7	354	
120-83-2	2,4-Dichlorophenol	U	354	ug/kg	70.7	354	
65-85-0	Benzoic acid	U	707	ug/kg	177	707	
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4	
106-47-8	4-Chloroaniline	U	354	ug/kg	70.7	354	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	354	ug/kg	70.7	354	
91-57-6	2-Methylnaphthalene	U	35.4	ug/kg	7.07	35.4	
77-47-4	Hexachlorocyclopentadiene	U	354	ug/kg	70.7	354	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	354	ug/kg	70.7	354	
95-95-4	2,4,5-Trichlorophenol	U	354	ug/kg	70.7	354	
91-58-7	2-Chloronaphthalene	U	35.4	ug/kg	11.7	35.4	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	354	ug/kg	70.7	354	
99-09-2	3-Nitroaniline	U	354	ug/kg	70.7	354	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6528	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 12:05	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0112.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	354	ug/kg	70.7	354	
606-20-2	2,6-Dinitrotoluene	U	354	ug/kg	35.4	354	
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4	
51-28-5	2,4-Dinitrophenol	U	707	ug/kg	134	707	UJ,SV7a
132-64-9	Dibenzofuran	U	354	ug/kg	70.7	354	
84-66-2	Diethylphthalate	U	354	ug/kg	70.7	354	
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4	
7005-72-3	4-Chlorophenylphenylether	U	354	ug/kg	70.7	354	
534-52-1	2-Methyl-4,6-dinitrophenol	U	354	ug/kg	70.7	354	UJ,SV7c
100-01-6	4-Nitroaniline	U	354	ug/kg	106	354	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	354	ug/kg	70.7	354	
122-66-7	Azobenzene	U	354	ug/kg	70.7	354	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	354	ug/kg	70.7	354	
118-74-1	Hexachlorobenzene	U	354	ug/kg	70.7	354	
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4	
120-12-7	Anthracene	U	35.4	ug/kg	7.07	35.4	
84-74-2	Di-n-butylphthalate	U	354	ug/kg	70.7	354	
206-44-0	Fluoranthene	J	15.3	ug/kg	10.6	35.4	
85-68-7	Butylbenzylphthalate	U	354	ug/kg	70.7	354	
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4	
91-94-1	3,3'-Dichlorobenzidine	U	354	ug/kg	106	354	
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4	
117-81-7	bis(2-Ethylhexyl)phthalate	U	354	ug/kg	70.7	354	
117-84-0	Di-n-octylphthalate	U	354	ug/kg	70.7	354	UJ,SV1b
205-99-2	Benzo(b)fluoranthene	U	35.4	ug/kg	10.6	35.4	
207-08-9	Benzo(k)fluoranthene	U	35.4	ug/kg	10.6	35.4	
50-32-8	Benzo(a)pyrene	U	35.4	ug/kg	10.6	35.4	
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4	ug/kg	10.6	35.4	
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4	
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4	
120-82-1	1,2,4-Trichlorobenzene	U	354	ug/kg	70.7	354	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	209	ug/kg		JA

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2499**	**Date Collected:**	**06/24/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232507004**	**Date Received:**	**06/27/2009 09:05**	**%Moisture:**	**4.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6529**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881442**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/01/2009 11:37**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 21:22**	**Aliquot:**	**30.02 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0111.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	350	ug/kg	70.0	350	
108-95-2	Phenol	U	350	ug/kg	70.0	350	
95-57-8	2-Chlorophenol	U	350	ug/kg	70.0	350	
106-46-7	1,4-Dichlorobenzene	U	350	ug/kg	70.0	350	
621-64-7	N-Nitrosodipropylamine	U	350	ug/kg	70.0	350	
59-50-7	4-Chloro-3-methylphenol	U	350	ug/kg	70.0	350	
83-32-9	Acenaphthene	U	35.0	ug/kg	11.6	35.0	
121-14-2	2,4-Dinitrotoluene	U	350	ug/kg	35.0	350	
100-02-7	4-Nitrophenol	U	350	ug/kg	116	350	
87-86-5	Pentachlorophenol	U	350	ug/kg	87.5	350	
129-00-0	Pyrene	U	35.0	ug/kg	10.5	35.0	
110-86-1	Pyridine	U	350	ug/kg	70.0	350	
62-53-3	Aniline	U	350	ug/kg	105	350	
111-44-4	bis(2-Chloroethyl) ether	U	350	ug/kg	70.0	350	
541-73-1	1,3-Dichlorobenzene	U	350	ug/kg	70.0	350	
100-51-6	Benzyl alcohol	U	350	ug/kg	105	350	
95-50-1	1,2-Dichlorobenzene	U	350	ug/kg	70.0	350	
108-60-1	bis(2-Chloroisopropyl)ether	U	350	ug/kg	70.0	350	
95-48-7	o-Cresol	U	350	ug/kg	70.0	350	
65794-96-9	m,p-Cresols	U	350	ug/kg	105	350	
67-72-1	Hexachloroethane	U	350	ug/kg	70.0	350	
98-95-3	Nitrobenzene	U	350	ug/kg	70.0	350	
78-59-1	Isophorone	U	350	ug/kg	70.0	350	
88-75-5	2-Nitrophenol	U	350	ug/kg	70.0	350	
105-67-9	2,4-Dimethylphenol	U	350	ug/kg	123	350	
111-91-1	bis(2-Chloroethoxy)methane	U	350	ug/kg	70.0	350	
120-83-2	2,4-Dichlorophenol	U	350	ug/kg	70.0	350	
65-85-0	Benzoic acid	U	700	ug/kg	175	700	
91-20-3	Naphthalene	U	35.0	ug/kg	10.5	35.0	
106-47-8	4-Chloroaniline	U	350	ug/kg	70.0	350	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	350	ug/kg	70.0	350	
91-57-6	2-Methylnaphthalene	U	35.0	ug/kg	7.00	35.0	
77-47-4	Hexachlorocyclopentadiene	U	350	ug/kg	70.0	350	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	350	ug/kg	70.0	350	
95-95-4	2,4,5-Trichlorophenol	U	350	ug/kg	70.0	350	
91-58-7	2-Chloronaphthalene	U	35.0	ug/kg	11.6	35.0	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	350	ug/kg	70.0	350	
99-09-2	3-Nitroaniline	U	350	ug/kg	70.0	350	

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2499**	**Date Collected:**	**06/24/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232507004**	**Date Received:**	**06/27/2009 09:05**	**%Moisture:**	**4.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6529**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**881442**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/01/2009 11:37**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**06/30/2009 21:22**	**Aliquot:**	**30.02 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0111.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	350	ug/kg	70.0	350	
606-20-2	2,6-Dinitrotoluene	U	350	ug/kg	35.0	350	
208-96-8	Acenaphthylene	U	35.0	ug/kg	10.5	35.0	
51-28-5	2,4-Dinitrophenol	U	700	ug/kg	133	700	UJ,SV7a
132-64-9	Dibenzofuran	U	350	ug/kg	70.0	350	
84-66-2	Diethylphthalate	U	350	ug/kg	70.0	350	
86-73-7	Fluorene	U	35.0	ug/kg	10.5	35.0	
7005-72-3	4-Chlorophenylphenylether	U	350	ug/kg	70.0	350	
534-52-1	2-Methyl-4,6-dinitrophenol	U	350	ug/kg	70.0	350	UJ,SV7c
100-01-6	4-Nitroaniline	U	350	ug/kg	105	350	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	350	ug/kg	70.0	350	
122-66-7	Azobenzene	U	350	ug/kg	70.0	350	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	350	ug/kg	70.0	350	
118-74-1	Hexachlorobenzene	U	350	ug/kg	70.0	350	
85-01-8	Phenanthrene	U	35.0	ug/kg	10.5	35.0	
120-12-7	Anthracene	U	35.0	ug/kg	7.00	35.0	
84-74-2	Di-n-butylphthalate	U	350	ug/kg	70.0	350	
206-44-0	Fluoranthene	U	35.0	ug/kg	10.5	35.0	
85-68-7	Butylbenzylphthalate	U	350	ug/kg	70.0	350	
56-55-3	Benzo(a)anthracene	U	35.0	ug/kg	10.5	35.0	
91-94-1	3,3'-Dichlorobenzidine	U	350	ug/kg	105	350	
218-01-9	Chrysene	U	35.0	ug/kg	10.5	35.0	
117-81-7	bis(2-Ethylhexyl)phthalate	U	350	ug/kg	70.0	350	
117-84-0	Di-n-octylphthalate	U	350	ug/kg	70.0	350	
205-99-2	Benzo(b)fluoranthene	U	35.0	ug/kg	10.5	35.0	
207-08-9	Benzo(k)fluoranthene	U	35.0	ug/kg	10.5	35.0	
50-32-8	Benzo(a)pyrene	U	35.0	ug/kg	10.5	35.0	
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.0	ug/kg	10.5	35.0	
53-70-3	Dibenzo(a,h)anthracene	U	35.0	ug/kg	10.5	35.0	
191-24-2	Benzo(ghi)perylene	U	35.0	ug/kg	10.5	35.0	
120-82-1	1,2,4-Trichlorobenzene	U	350	ug/kg	70.0	350	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	183	ug/kg		JA
	Unknown	13.59	195	ug/kg		J

MJ
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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507004	Date Received:	06/27/2009 09:05	%Moisture:	4.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6529	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:37	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0111.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	18.76	215	ug/kg		J
	Unknown	19.54	154	ug/kg		J

MJ
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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507006	Date Received:	06/27/2009 09:05	%Moisture:	15
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6531	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 12:33	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0113.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	392	ug/kg	78.3	392	
108-95-2	Phenol	U	392	ug/kg	78.3	392	
95-57-8	2-Chlorophenol	U	392	ug/kg	78.3	392	
106-46-7	1,4-Dichlorobenzene	U	392	ug/kg	78.3	392	
621-64-7	N-Nitrosodipropylamine	U	392	ug/kg	78.3	392	
59-50-7	4-Chloro-3-methylphenol	U	392	ug/kg	78.3	392	
83-32-9	Acenaphthene	U	39.2	ug/kg	12.9	39.2	
121-14-2	2,4-Dinitrotoluene	U	392	ug/kg	39.2	392	
100-02-7	4-Nitrophenol	U	392	ug/kg	129	392	
87-86-5	Pentachlorophenol	U	392	ug/kg	97.9	392	
129-00-0	Pyrene		81.6	ug/kg	11.7	39.2	
110-86-1	Pyridine	U	392	ug/kg	78.3	392	
62-53-3	Aniline	U	392	ug/kg	117	392	
111-44-4	bis(2-Chloroethyl) ether	U	392	ug/kg	78.3	392	
541-73-1	1,3-Dichlorobenzene	U	392	ug/kg	78.3	392	
100-51-6	Benzyl alcohol	U	392	ug/kg	117	392	
95-50-1	1,2-Dichlorobenzene	U	392	ug/kg	78.3	392	
108-60-1	bis(2-Chloroisopropyl)ether	U	392	ug/kg	78.3	392	
95-48-7	o-Cresol	U	392	ug/kg	78.3	392	
65794-96-9	m,p-Cresols	U	392	ug/kg	117	392	
67-72-1	Hexachloroethane	U	392	ug/kg	78.3	392	
98-95-3	Nitrobenzene	U	392	ug/kg	78.3	392	
78-59-1	Isophorone	U	392	ug/kg	78.3	392	
88-75-5	2-Nitrophenol	U	392	ug/kg	78.3	392	
105-67-9	2,4-Dimethylphenol	U	392	ug/kg	137	392	
111-91-1	bis(2-Chloroethoxy)methane	U	392	ug/kg	78.3	392	
120-83-2	2,4-Dichlorophenol	U	392	ug/kg	78.3	392	
65-85-0	Benzoic acid	U	783	ug/kg	196	783	
91-20-3	Naphthalene	U	39.2	ug/kg	11.7	39.2	
106-47-8	4-Chloroaniline	U	392	ug/kg	78.3	392	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	392	ug/kg	78.3	392	
91-57-6	2-Methylnaphthalene	U	39.2	ug/kg	7.83	39.2	
77-47-4	Hexachlorocyclopentadiene	U	392	ug/kg	78.3	392	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	392	ug/kg	78.3	392	
95-95-4	2,4,5-Trichlorophenol	U	392	ug/kg	78.3	392	
91-58-7	2-Chloronaphthalene	U	39.2	ug/kg	12.9	39.2	
88-74-4	2-Nitroaniline	U	392	ug/kg	78.3	392	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	392	ug/kg	78.3	392	

MJ
08/03/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507006	Date Received:	06/27/2009 09:05	%Moisture:	15
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6531	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 12:33	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0113.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	392	ug/kg	78.3	392	
606-20-2	2,6-Dinitrotoluene	U	392	ug/kg	39.2	392	
208-96-8	Acenaphthylene	U	39.2	ug/kg	11.7	39.2	
51-28-5	2,4-Dinitrophenol	U	783	ug/kg	149	783	UJ,SV7a
132-64-9	Dibenzofuran	U	392	ug/kg	78.3	392	
84-66-2	Diethylphthalate	U	392	ug/kg	78.3	392	
86-73-7	Fluorene	U	39.2	ug/kg	11.7	39.2	
7005-72-3	4-Chlorophenylphenylether	U	392	ug/kg	78.3	392	
534-52-1	2-Methyl-4,6-dinitrophenol	U	392	ug/kg	78.3	392	UJ,SV7c
100-01-6	4-Nitroaniline	U	392	ug/kg	117	392	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	392	ug/kg	78.3	392	
122-66-7	Azobenzene	U	392	ug/kg	78.3	392	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	392	ug/kg	78.3	392	
118-74-1	Hexachlorobenzene	U	392	ug/kg	78.3	392	
85-01-8	Phenanthrene	J	22.4	ug/kg	11.7	39.2	
120-12-7	Anthracene	U	39.2	ug/kg	7.83	39.2	
84-74-2	Di-n-butylphthalate	U	392	ug/kg	78.3	392	
206-44-0	Fluoranthene		86.7	ug/kg	11.7	39.2	
85-68-7	Butylbenzylphthalate	U	392	ug/kg	78.3	392	
56-55-3	Benzo(a)anthracene	J	31.0	ug/kg	11.7	39.2	
91-94-1	3,3'-Dichlorobenzidine	U	392	ug/kg	117	392	
218-01-9	Chrysene		58.2	ug/kg	11.7	39.2	
117-81-7	bis(2-Ethylhexyl)phthalate	J	130	ug/kg	78.3	392	
117-84-0	Di-n-octylphthalate	U	392	ug/kg	78.3	392	
205-99-2	Benzo(b)fluoranthene		103	ug/kg	11.7	39.2	
207-08-9	Benzo(k)fluoranthene	U	39.2	ug/kg	11.7	39.2	
50-32-8	Benzo(a)pyrene		49.3	ug/kg	11.7	39.2	
193-39-5	Indeno(1,2,3-cd)pyrene	J	36.3	ug/kg	11.7	39.2	
53-70-3	Dibenzo(a,h)anthracene	U	39.2	ug/kg	11.7	39.2	
191-24-2	Benzo(ghi)perylene		45.1	ug/kg	11.7	39.2	
120-82-1	1,2,4-Trichlorobenzene	U	392	ug/kg	78.3	392	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	196	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.89	240	ug/kg	99	NJ

MJ
08/03/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6531	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 12:33	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0113.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	6.89	264	ug/kg		J
	Unknown	6.93	182	ug/kg		J
	Unknown	7.02	166	ug/kg		J
38754-94-8	s-Indacen-1(2H)-one, 3,5,6,7-tetrahydro-	9.11	179	ug/kg	92	NJ
112-95-8	Eicosane	10.19	198	ug/kg	96	NJ
2883-08-1	Cyclohexane, 1,1'-(2-methyl-1,3-propaned	12.16	514	ug/kg	89	NJ

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08/03/09

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2499 VALIDATION DATE: 8/03/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Maryann Jordan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☒ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE): PCBs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. The MS/MSD analyses were performed on a LANL sample from another RN. No sample data was qualified as a result.

Reviewed by: JEJ Level: 1 Date: 8/4/09

VALIDATOR'S SIGNATURE:	DATE: 08/03/09
Form 5116-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, P9	J-, P9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, P9b	R, P9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, P7	J, P7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, P7a	J, P7a
☐	☒	☐	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, P7d	J, P7d
☐	☒	☐	8. The multicomponent standard was not analyzed within 72 hours of the initial analysis.	R, P7e	J, P7e
☐	☒	☐	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
☐	☐	☒	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	11. The breakdown criteria have been exceeded. This can cause high bias in the reported results and potential false positive results for the breakdown products Endrin ketone, Endrin aldehyde, DDD, and DDE.	UJ, P13a	J+, P13a
☐	☐	☒	12. The breakdown documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P13b	R, P13b
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, P4	N/A
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X.	N/A	J, P4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	UJ, P4b	N/A
☐	☐	☒	16. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, P4d	N/A
☐	☒	☐	17. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P4e	R, P4e
☐	☒	☐	18. The analyte RT shifted by more than 0.05 minutes from the mid-level standard of the initial calibration.	R, P0	J, P0
☐	☒	☐	19. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P0b	R, P0b
☐	☒	☐	20. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, P3	J-, P3

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, P3a	J-, P3a
☐	☒	☐	22. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P3b
☐	☒	☐	23. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, P3c	J, P3c
☐	☒	☐	24. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P3d	R, P3d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, P12	J-, P12
☐	☒	☐	26. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, P12a	J-, P12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P12c	R, P12c
☐	☒	☐	29. The analyte was not confirmed on a second dissimilar column.	N/A	R, P8
☐	☒	☐	30. The second dissimilar column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P8a	R, P8a
☐	☒	☐	31. Duplicate, Dilution, or reanalysis.	UJ, P88	J, P88

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2 Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, P15	R, P15
☒	☐	☐	33. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, P19	J, R, P19

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6518	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 17:12	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	028f2801.d	**Column:**	1 CLP1	**Level:**	LOW
	028b2801.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	19.6	ug/kg	6.54	19.6	1
11104-28-2	Aroclor-1221	U	19.6	ug/kg	6.54	19.6	1
11141-16-5	Aroclor-1232	U	19.6	ug/kg	6.54	19.6	1
53469-21-9	Aroclor-1242	U	19.6	ug/kg	6.54	19.6	1
12672-29-6	Aroclor-1248	U	19.6	ug/kg	6.54	19.6	1
11097-69-1	Aroclor-1254	U	19.6	ug/kg	6.54	19.6	1
11096-82-5	Aroclor-1260	U	19.6	ug/kg	6.54	19.6	1

MJ
08/03/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 16:56	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	027f2701.d	**Column:**	1 CLP1	**Level:**	LOW
	027b2701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.21	ug/kg	1.40	4.21	1
11104-28-2	Aroclor-1221	U	4.21	ug/kg	1.40	4.21	1
11141-16-5	Aroclor-1232	U	4.21	ug/kg	1.40	4.21	1
53469-21-9	Aroclor-1242	U	4.21	ug/kg	1.40	4.21	1
12672-29-6	Aroclor-1248	U	4.21	ug/kg	1.40	4.21	1
11097-69-1	Aroclor-1254		11.9	ug/kg	1.40	4.21	2
11096-82-5	Aroclor-1260		7.90	ug/kg	1.40	4.21	1

MJ
08/03/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507003	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6527	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 17:29	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	029f2901.d	**Column:**	1 CLP1	**Level:**	LOW
	029b2901.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.54	ug/kg	1.18	3.54	1
11104–28–2	Aroclor–1221	U	3.54	ug/kg	1.18	3.54	1
11141–16–5	Aroclor–1232	U	3.54	ug/kg	1.18	3.54	1
53469–21–9	Aroclor–1242	U	3.54	ug/kg	1.18	3.54	1
12672–29–6	Aroclor–1248	U	3.54	ug/kg	1.18	3.54	1
11097–69–1	Aroclor–1254	U	3.54	ug/kg	1.18	3.54	1
11096–82–5	Aroclor–1260	U	3.54	ug/kg	1.18	3.54	1

MJ
08/03/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6528	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 18:02	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	031f3101.d	**Column:**	1 CLP1	**Level:**	LOW
	031b3101.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	17.7	ug/kg	5.89	17.7	1
11104-28-2	Aroclor-1221	U	17.7	ug/kg	5.89	17.7	1
11141-16-5	Aroclor-1232	U	17.7	ug/kg	5.89	17.7	1
53469-21-9	Aroclor-1242	U	17.7	ug/kg	5.89	17.7	1
12672-29-6	Aroclor-1248	U	17.7	ug/kg	5.89	17.7	1
11097-69-1	Aroclor-1254	U	17.7	ug/kg	5.89	17.7	1
11096-82-5	Aroclor-1260	U	17.7	ug/kg	5.89	17.7	1

MJ
08/03/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 17:45	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	030f3001.d	**Column:**	1 CLP1	**Level:**	LOW
	030b3001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.50	ug/kg	1.17	3.50	1
11104-28-2	Aroclor-1221	U	3.50	ug/kg	1.17	3.50	1
11141-16-5	Aroclor-1232	U	3.50	ug/kg	1.17	3.50	1
53469-21-9	Aroclor-1242	U	3.50	ug/kg	1.17	3.50	1
12672-29-6	Aroclor-1248	U	3.50	ug/kg	1.17	3.50	1
11097-69-1	Aroclor-1254		4.70	ug/kg	1.17	3.50	1
11096-82-5	Aroclor-1260		3.90	ug/kg	1.17	3.50	1

MJ
08/03/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6531	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 18:18	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	032f3201.d	**Column:**	1 CLP1	**Level:**	LOW
	032b3201.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	19.6	ug/kg	6.51	19.6	1
11104–28–2	Aroclor–1221	U	19.6	ug/kg	6.51	19.6	1
11141–16–5	Aroclor–1232	U	19.6	ug/kg	6.51	19.6	1
53469–21–9	Aroclor–1242	U	19.6	ug/kg	6.51	19.6	1
12672–29–6	Aroclor–1248	U	19.6	ug/kg	6.51	19.6	1
11097–69–1	Aroclor–1254	U	19.6	ug/kg	6.51	19.6	1
11096–82–5	Aroclor–1260	U	19.6	ug/kg	6.51	19.6	1

MJ
08/03/09

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2499C

REQUEST NUMBER: 09-2499

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232507 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6519	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6518	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6527	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6529	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6529	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6528	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6528	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6531	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6535	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-6535	2	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
		6/26/09	3100	Patricia Dent	P. Dent	6/27/09	09:05
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Friday, June 26, 2009

REQUEST NUMBER: 09-2499

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2499
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 6/26/2009
TURNAROUND/REPORT DUE: 7/11/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	SW-846:8260B	1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	

6

Friday, June 26, 2009

REQUEST NUMBER: 09-2499

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8260B	1	CAMO-09-6535	S	6/24/2009	
		2	CAMO-09-6535	S	6/24/2009	
	SW-846:8270C	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2499

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 17, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232507
SDG: 09-2499

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 27, 2009, and analyzed for GC Semivolatile PCB, GC/MS Semivolatile and GC/MS Volatile. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2499 and
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232507
SDG: 09-2499

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232507
SDG # : 09-2499

July 17, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 27, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The lab received (1) 40ml vial 8260B for sample CAMO-09-6535 instead of (2) as listed on the COC. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232507001	CAMO-09-6519
232507002	CAMO-09-6518
232507003	CAMO-09-6527
232507004	CAMO-09-6529
232507005	CAMO-09-6528
232507006	CAMO-09-6531
232507007	CAMO-09-6535

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC Semivolatile PCB, GC/MS Semivolatile and GC/MS Volatile.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

List of current GEL Certifications as of 17 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88–0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH–0169
Dept. of Navy	NFESC 413
EPA Region 5	WG–15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C–SC–01
Kansas – NELAP	E–10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M–SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68–00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235–07B–TX
U.S. Dept. of Agriculture	S–52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2499C

REQUEST NUMBER: 09-2499

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232507 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6519	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6519	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6518	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6527	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6529	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6529	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6528	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6528	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6531	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-6535	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-6535	2	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S

Relinquished By:		Date	Time	Received By:		Date	Time
		6/26/09	3:00	Patricia Dent	P. Dent	6/27/09	09:05
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Friday, June 26, 2009

REQUEST NUMBER: 09-2499

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2499

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	
	SW-846:8260B	1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2499

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8260B	1	CAMO-09-6535	S	6/24/2009	
		2	CAMO-09-6535	S	6/24/2009	
	SW-846:8270C	1	CAMO-09-6518	R	6/24/2009	
		1	CAMO-09-6519	R	6/24/2009	
		1	CAMO-09-6527	R	6/24/2009	
		1	CAMO-09-6528	R	6/24/2009	
		1	CAMO-09-6529	R	6/24/2009	
		1	CAMO-09-6531	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2499

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2499**
Received By: Patricia Dent	**Date Received: JUNE 27, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **20 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,6,24C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?			X	Sample ID's affected: **CAMO-09-6535 For 8260B Chain indicates (2)-40ml vial Lab only received (1).**
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5723 6C
7209 7847 5701 2C
7209 7847 5712 24C
7209 7847 5734 2C

PM (or PMA) review: Initials PCL Date 27 JUN 09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 59.0 LB MAN
System#: 9014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: SB010AMR2A0512BGD0

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7209 7847 5723 Form 0201

Deliver By: 27JUN09

.29407 -SC-US X0 CHSA CHS A1

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 56.0 LB MAN
System#: 9014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: SB010AMR2A0512BGD0

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7209 7847 5701 Form 0201

Deliver By: 27JUN09

.29407 -SC-US X0 CHSA CHS A1

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-8968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA60 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 56.8 LB MAN
System#: 8814176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 68010AMR2A0512BGD0

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7209 7847 5712 Form 0201

Deliver By: 27JUN09

29407 -SC-US

CHS A1

X0 CHSA

156148-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-8968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA60 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 52.0 LB MAN
System#: 8814176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 68010AMR2A0512BGD0

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7209 7847 5734 Form 0201

Deliver By: 27JUN09

29407 -SC-US

CHS A1

X0 CHSA

156148-434 NRIT V3.04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

Case Narrative

ChemStation Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2499

Method/Analysis Information

Procedure: **Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**

Analytical Method: SW846 8260B

Prep Method: SW846 5030

Analytical Batch Number: 883080

Prep Batch Number: 883079

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232507001	CAMO-09-6519
232507004	CAMO-09-6529
232507005	CAMO-09-6528
232507007	CAMO-09-6535
1201875762	Method Blank (MB)
1201875765	Laboratory Control Sample (LCS)
1201875766	Laboratory Control Sample (LCS)
1201876839	Method Blank (MB)
1201876840	Laboratory Control Sample (LCS)
1201876841	Laboratory Control Sample (LCS)
1201875763	232507004(CAMO-09-6529) Post Spike (PS)
1201875764	232507004(CAMO-09-6529) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

Samples 232507 001, 004 and 005 in this SDG were analyzed on an "dry weight" basis. Sample 232507 007 in this SDG was analyzed on a "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Chemstation software package. False positives have been removed from the quantitation reports per standard operating procedures (SOP) section 19.1.2. False positive analytes are designated on the quantitation report with a 'd' qualifier.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232507004 (CAMO-09-6529) was designated for spike analysis in this SDG.

Matrix Spike (PS) Recovery Statement
The spike recoveries for this SDG were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate recoveries for this SDG were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
Sample 232507001 (CAMO-09-6519RE) was diluted because target analyte concentrations exceeded the calibration range.

Sample Re-extraction/Re-analysis
Samples 232507004 (CAMO-09-6529), 232507005 (CAMO-09-6528) and 232507007 (CAMO-09-6535) were re-analyzed due to possible hydrocarbon cross-contamination in the original analyses from a previously analyzed sample.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
A nonconformance report was not required for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may have required manual integrations due to software limitations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG. Please note that non-requested target analytes that are reported on the quantitation reports will not be present as TICS on the Form I. These detected analytes are included in the calibrated method and as a result cannot be reported on the TIC quantitation report.

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA2.I	Gas Chromatograph/Mass Spectrometer	HP7890N/HP5975C	DB-624	J&W, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2499 GEL Work Order: 232507

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

E Organics--Concentration of the target analyte exceeds the instrument calibration range

J Value is estimated

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this case narrative:

Signature: Erin Haubert **Name: Erin Haubert**

Date: 17 JUL 2009 **Title: Data Validator**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 12:46	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 10:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T212.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.26	ug/kg	0.429	1.26
74-87-3	Chloromethane	U	1.26	ug/kg	0.379	1.26
75-01-4	Vinyl chloride	U	1.26	ug/kg	0.379	1.26
74-83-9	Bromomethane	U	1.26	ug/kg	0.379	1.26
75-00-3	Chloroethane	U	1.26	ug/kg	0.379	1.26
75-69-4	Trichlorofluoromethane	U	1.26	ug/kg	0.719	1.26
67-64-1	Acetone		20.2	ug/kg	2.09	6.31
75-35-4	1,1-Dichloroethylene	U	1.26	ug/kg	0.379	1.26
74-88-4	Iodomethane	U	6.31	ug/kg	2.02	6.31
75-09-2	Methylene chloride	U	6.31	ug/kg	2.52	6.31
75-15-0	Carbon disulfide	U	6.31	ug/kg	1.58	6.31
156-60-5	trans-1,2-Dichloroethylene	U	1.26	ug/kg	0.379	1.26
75-34-3	1,1-Dichloroethane	U	1.26	ug/kg	0.379	1.26
78-93-3	2-Butanone	U	6.31	ug/kg	1.89	6.31
156-59-2	cis-1,2-Dichloroethylene	U	1.26	ug/kg	0.379	1.26
594-20-7	2,2-Dichloropropane	U	1.26	ug/kg	0.379	1.26
67-66-3	Chloroform	U	1.26	ug/kg	0.379	1.26
74-97-5	Bromochloromethane	U	1.26	ug/kg	0.416	1.26
71-55-6	1,1,1-Trichloroethane	U	1.26	ug/kg	0.379	1.26
563-58-6	1,1-Dichloropropene	U	1.26	ug/kg	0.379	1.26
56-23-5	Carbon tetrachloride	U	1.26	ug/kg	0.379	1.26
107-06-2	1,2-Dichloroethane	U	1.26	ug/kg	0.379	1.26
71-43-2	Benzene	U	1.26	ug/kg	0.379	1.26
79-01-6	Trichloroethylene	U	1.26	ug/kg	0.416	1.26
78-87-5	1,2-Dichloropropane	U	1.26	ug/kg	0.379	1.26
75-27-4	Bromodichloromethane	U	1.26	ug/kg	0.379	1.26
74-95-3	Dibromomethane	U	1.26	ug/kg	0.379	1.26
108-10-1	4-Methyl-2-pentanone	U	6.31	ug/kg	1.58	6.31
10061-01-5	cis-1,3-Dichloropropylene	U	1.26	ug/kg	0.379	1.26
108-88-3	Toluene		3.14	ug/kg	0.379	1.26
10061-02-6	trans-1,3-Dichloropropylene	U	1.26	ug/kg	0.379	1.26
79-00-5	1,1,2-Trichloroethane	U	1.26	ug/kg	0.379	1.26
591-78-6	2-Hexanone	U	6.31	ug/kg	1.89	6.31
142-28-9	1,3-Dichloropropane	U	1.26	ug/kg	0.379	1.26
127-18-4	Tetrachloroethylene	U	1.26	ug/kg	0.379	1.26
124-48-1	Dibromochloromethane	U	1.26	ug/kg	0.379	1.26
106-93-4	1,2-Dibromoethane	U	1.26	ug/kg	0.379	1.26
108-90-7	Chlorobenzene	U	1.26	ug/kg	0.379	1.26

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 12:46	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 10:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T212.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.26	ug/kg	0.379	1.26
179601-23-1	m,p-Xylenes	U	2.52	ug/kg	0.379	2.52
95-47-6	o-Xylene	U	1.26	ug/kg	0.379	1.26
100-42-5	Styrene	U	1.26	ug/kg	0.379	1.26
75-25-2	Bromoform	U	1.26	ug/kg	0.379	1.26
79-34-5	1,1,2,2-Tetrachloroethane	U	1.26	ug/kg	0.379	1.26
96-18-4	1,2,3-Trichloropropane	U	1.26	ug/kg	0.379	1.26
108-86-1	Bromobenzene	U	1.26	ug/kg	0.379	1.26
103-65-1	n-Propylbenzene	U	1.26	ug/kg	0.379	1.26
95-49-8	2-Chlorotoluene	U	1.26	ug/kg	0.379	1.26
98-82-8	Isopropylbenzene	U	1.26	ug/kg	0.379	1.26
108-67-8	1,3,5-Trimethylbenzene	U	1.26	ug/kg	0.379	1.26
106-43-4	4-Chlorotoluene	U	1.26	ug/kg	0.379	1.26
98-06-6	tert-Butylbenzene	U	1.26	ug/kg	0.379	1.26
95-63-6	1,2,4-Trimethylbenzene	U	1.26	ug/kg	0.379	1.26
135-98-8	sec-Butylbenzene	U	1.26	ug/kg	0.379	1.26
99-87-6	4-Isopropyltoluene	E	291	ug/kg	0.379	1.26
541-73-1	1,3-Dichlorobenzene	U	1.26	ug/kg	0.379	1.26
106-46-7	1,4-Dichlorobenzene	U	1.26	ug/kg	0.379	1.26
104-51-8	n-Butylbenzene	U	1.26	ug/kg	0.379	1.26
96-12-8	1,2-Dibromo-3-chloropropane	U	1.26	ug/kg	0.379	1.26
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.31	ug/kg	2.02	6.31
630-20-6	1,1,1,2-Tetrachloroethane	U	1.26	ug/kg	0.379	1.26
95-50-1	1,2-Dichlorobenzene	U	1.26	ug/kg	0.379	1.26

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	unknown	4.36	ug/kg	0	J
000111-84-2	Nonane	16.15	ug/kg	97	NJ
	unknown hydrocarbon	16.85	ug/kg	0	J
	unknown hydrocarbon	16.91	ug/kg	0	J
	unknown hydrocarbon	17.05	ug/kg	0	J
005794-04-7	Bicyclo[2.2.1]heptane, 2,2-dimethy	17.37	ug/kg	97	NJ
	unknown hydrocarbon	17.63	ug/kg	0	J
	unknown hydrocarbon	17.64	ug/kg	0	J
000127-91-3	.beta.-Pinene	17.79	ug/kg	94	NJ
	unknown hydrocarbon	18.11	ug/kg	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507001	Date Received:	06/27/2009 09:05	%Moisture:	20.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6519	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/07/2009 12:46	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/07/2009 10:00	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070709V2.b\2T212.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	unknown hydrocarbon	18.19	ug/kg	0	J
	unknown hydrocarbon	18.33	ug/kg	0	J
	unknown hydrocarbon	18.46	ug/kg	0	J
000099-85-4	1,4-Cyclohexadiene, 1-methyl-4-(1-	18.65	ug/kg	97	NJ
	unknown hydrocarbon	19.05	ug/kg	0	J
	unknown aromatic	19.23	ug/kg	0	J
015358-88-0	Bicyclo[3.1.1]heptan-3-one, 2,6,6-	20.89	ug/kg	92	NJ

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507001	Date Received:	06/27/2009 09:05	%Moisture:	20.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6519RE	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 11:32	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/08/2009 08:00	Aliquot:	1.2 g	Final Volume:	5 mL
Data File:	070809V2.b\2T311.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	5.26	ug/kg	1.79	5.26
74-87-3	Chloromethane	U	5.26	ug/kg	1.58	5.26
75-01-4	Vinyl chloride	U	5.26	ug/kg	1.58	5.26
74-83-9	Bromomethane	U	5.26	ug/kg	1.58	5.26
75-00-3	Chloroethane	U	5.26	ug/kg	1.58	5.26
75-69-4	Trichlorofluoromethane	U	5.26	ug/kg	3.00	5.26
67-64-1	Acetone	J	20.5	ug/kg	8.73	26.3
75-35-4	1,1-Dichloroethylene	U	5.26	ug/kg	1.58	5.26
74-88-4	Iodomethane	U	26.3	ug/kg	8.41	26.3
75-09-2	Methylene chloride	U	26.3	ug/kg	10.5	26.3
75-15-0	Carbon disulfide	U	26.3	ug/kg	6.57	26.3
156-60-5	trans-1,2-Dichloroethylene	U	5.26	ug/kg	1.58	5.26
75-34-3	1,1-Dichloroethane	U	5.26	ug/kg	1.58	5.26
78-93-3	2-Butanone	U	26.3	ug/kg	7.89	26.3
156-59-2	cis-1,2-Dichloroethylene	U	5.26	ug/kg	1.58	5.26
594-20-7	2,2-Dichloropropane	U	5.26	ug/kg	1.58	5.26
67-66-3	Chloroform	U	5.26	ug/kg	1.58	5.26
74-97-5	Bromochloromethane	U	5.26	ug/kg	1.74	5.26
71-55-6	1,1,1-Trichloroethane	U	5.26	ug/kg	1.58	5.26
563-58-6	1,1-Dichloropropene	U	5.26	ug/kg	1.58	5.26
56-23-5	Carbon tetrachloride	U	5.26	ug/kg	1.58	5.26
107-06-2	1,2-Dichloroethane	U	5.26	ug/kg	1.58	5.26
71-43-2	Benzene	U	5.26	ug/kg	1.58	5.26
79-01-6	Trichloroethylene	U	5.26	ug/kg	1.74	5.26
78-87-5	1,2-Dichloropropane	U	5.26	ug/kg	1.58	5.26
75-27-4	Bromodichloromethane	U	5.26	ug/kg	1.58	5.26
74-95-3	Dibromomethane	U	5.26	ug/kg	1.58	5.26
108-10-1	4-Methyl-2-pentanone	U	26.3	ug/kg	6.57	26.3
10061-01-5	cis-1,3-Dichloropropylene	U	5.26	ug/kg	1.58	5.26
108-88-3	Toluene	U	5.26	ug/kg	1.58	5.26
10061-02-6	trans-1,3-Dichloropropylene	U	5.26	ug/kg	1.58	5.26
79-00-5	1,1,2-Trichloroethane	U	5.26	ug/kg	1.58	5.26
591-78-6	2-Hexanone	U	26.3	ug/kg	7.89	26.3
142-28-9	1,3-Dichloropropane	U	5.26	ug/kg	1.58	5.26
127-18-4	Tetrachloroethylene	U	5.26	ug/kg	1.58	5.26
124-48-1	Dibromochloromethane	U	5.26	ug/kg	1.58	5.26
106-93-4	1,2-Dibromoethane	U	5.26	ug/kg	1.58	5.26
108-90-7	Chlorobenzene	U	5.26	ug/kg	1.58	5.26

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519RE	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 11:32	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:00	**Aliquot:**	1.2 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T311.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	5.26	ug/kg	1.58	5.26
179601-23-1	m,p-Xylenes	U	10.5	ug/kg	1.58	10.5
95-47-6	o-Xylene	U	5.26	ug/kg	1.58	5.26
100-42-5	Styrene	U	5.26	ug/kg	1.58	5.26
75-25-2	Bromoform	U	5.26	ug/kg	1.58	5.26
79-34-5	1,1,2,2-Tetrachloroethane	U	5.26	ug/kg	1.58	5.26
96-18-4	1,2,3-Trichloropropane	U	5.26	ug/kg	1.58	5.26
108-86-1	Bromobenzene	U	5.26	ug/kg	1.58	5.26
103-65-1	n-Propylbenzene	U	5.26	ug/kg	1.58	5.26
95-49-8	2-Chlorotoluene	U	5.26	ug/kg	1.58	5.26
98-82-8	Isopropylbenzene	U	5.26	ug/kg	1.58	5.26
108-67-8	1,3,5-Trimethylbenzene	U	5.26	ug/kg	1.58	5.26
106-43-4	4-Chlorotoluene	U	5.26	ug/kg	1.58	5.26
98-06-6	tert-Butylbenzene	U	5.26	ug/kg	1.58	5.26
95-63-6	1,2,4-Trimethylbenzene	U	5.26	ug/kg	1.58	5.26
135-98-8	sec-Butylbenzene	U	5.26	ug/kg	1.58	5.26
99-87-6	4-Isopropyltoluene		135	ug/kg	1.58	5.26
541-73-1	1,3-Dichlorobenzene	U	5.26	ug/kg	1.58	5.26
106-46-7	1,4-Dichlorobenzene	U	5.26	ug/kg	1.58	5.26
104-51-8	n-Butylbenzene	U	5.26	ug/kg	1.58	5.26
96-12-8	1,2-Dibromo-3-chloropropane	U	5.26	ug/kg	1.58	5.26
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	26.3	ug/kg	8.41	26.3
630-20-6	1,1,1,2-Tetrachloroethane	U	5.26	ug/kg	1.58	5.26
95-50-1	1,2-Dichlorobenzene	U	5.26	ug/kg	1.58	5.26

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.36	98.6	ug/kg	0	J
	unknown hydrocarbon	16.85	29.9	ug/kg	0	J
	unknown hydrocarbon	17.05	2450	ug/kg	0	J
	unknown hydrocarbon	17.37	53.7	ug/kg	0	J
	unknown hydrocarbon	17.63	64.4	ug/kg	0	J
	unknown hydrocarbon	17.77	1220	ug/kg	0	J
	unknown hydrocarbon	18.09	1120	ug/kg	0	J
	unknown hydrocarbon	18.19	30.3	ug/kg	0	J
	unknown hydrocarbon	18.33	453	ug/kg	0	J
	unknown hydrocarbon	19.05	112	ug/kg	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507004	Date Received:	06/27/2009 09:05	%Moisture:	4.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6529	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 10:06	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/08/2009 08:01	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070809V2.b\2T308.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.357	1.05
74-87-3	Chloromethane	U	1.05	ug/kg	0.315	1.05
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.315	1.05
74-83-9	Bromomethane	U	1.05	ug/kg	0.315	1.05
75-00-3	Chloroethane	U	1.05	ug/kg	0.315	1.05
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.599	1.05
67-64-1	Acetone	U	5.26	ug/kg	1.74	5.26
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
74-88-4	Iodomethane	U	5.26	ug/kg	1.68	5.26
75-09-2	Methylene chloride	U	5.26	ug/kg	2.10	5.26
75-15-0	Carbon disulfide	U	5.26	ug/kg	1.31	5.26
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.315	1.05
78-93-3	2-Butanone	U	5.26	ug/kg	1.58	5.26
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05
67-66-3	Chloroform	U	1.05	ug/kg	0.315	1.05
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.347	1.05
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.315	1.05
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.315	1.05
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.315	1.05
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.315	1.05
71-43-2	Benzene	U	1.05	ug/kg	0.315	1.05
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.347	1.05
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.315	1.05
74-95-3	Dibromomethane	U	1.05	ug/kg	0.315	1.05
108-10-1	4-Methyl-2-pentanone	U	5.26	ug/kg	1.31	5.26
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05
108-88-3	Toluene	U	1.05	ug/kg	0.315	1.05
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.315	1.05
591-78-6	2-Hexanone	U	5.26	ug/kg	1.58	5.26
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.315	1.05
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.315	1.05
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.315	1.05
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.315	1.05
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.315	1.05

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 10:06	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T308.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.315	1.05
179601-23-1	m,p-Xylenes	U	2.10	ug/kg	0.315	2.10
95-47-6	o-Xylene	U	1.05	ug/kg	0.315	1.05
100-42-5	Styrene	U	1.05	ug/kg	0.315	1.05
75-25-2	Bromoform	U	1.05	ug/kg	0.315	1.05
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.315	1.05
108-86-1	Bromobenzene	U	1.05	ug/kg	0.315	1.05
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.315	1.05
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.315	1.05
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.315	1.05
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.315	1.05
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.315	1.05
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.315	1.05
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.315	1.05
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.315	1.05
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.315	1.05
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.26	ug/kg	1.68	5.26
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	11.2	ug/kg	0	J
	unknown siloxane	19.15	49.6	ug/kg	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507005	Date Received:	06/27/2009 09:05	%Moisture:	5.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6528	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 10:34	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/07/2009 08:02	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070809V2.b\2T309.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.06	ug/kg	0.361	1.06
74-87-3	Chloromethane	U	1.06	ug/kg	0.318	1.06
75-01-4	Vinyl chloride	U	1.06	ug/kg	0.318	1.06
74-83-9	Bromomethane	U	1.06	ug/kg	0.318	1.06
75-00-3	Chloroethane	U	1.06	ug/kg	0.318	1.06
75-69-4	Trichlorofluoromethane	U	1.06	ug/kg	0.605	1.06
67-64-1	Acetone	U	5.31	ug/kg	1.76	5.31
75-35-4	1,1-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
74-88-4	Iodomethane	U	5.31	ug/kg	1.70	5.31
75-09-2	Methylene chloride	U	5.31	ug/kg	2.12	5.31
75-15-0	Carbon disulfide	U	5.31	ug/kg	1.33	5.31
156-60-5	trans-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
75-34-3	1,1-Dichloroethane	U	1.06	ug/kg	0.318	1.06
78-93-3	2-Butanone	U	5.31	ug/kg	1.59	5.31
156-59-2	cis-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
594-20-7	2,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
67-66-3	Chloroform	U	1.06	ug/kg	0.318	1.06
74-97-5	Bromochloromethane	U	1.06	ug/kg	0.350	1.06
71-55-6	1,1,1-Trichloroethane	U	1.06	ug/kg	0.318	1.06
563-58-6	1,1-Dichloropropene	U	1.06	ug/kg	0.318	1.06
56-23-5	Carbon tetrachloride	U	1.06	ug/kg	0.318	1.06
107-06-2	1,2-Dichloroethane	U	1.06	ug/kg	0.318	1.06
71-43-2	Benzene	U	1.06	ug/kg	0.318	1.06
79-01-6	Trichloroethylene	U	1.06	ug/kg	0.350	1.06
78-87-5	1,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
75-27-4	Bromodichloromethane	U	1.06	ug/kg	0.318	1.06
74-95-3	Dibromomethane	U	1.06	ug/kg	0.318	1.06
108-10-1	4-Methyl-2-pentanone	U	5.31	ug/kg	1.33	5.31
10061-01-5	cis-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
108-88-3	Toluene	U	1.06	ug/kg	0.318	1.06
10061-02-6	trans-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
79-00-5	1,1,2-Trichloroethane	U	1.06	ug/kg	0.318	1.06
591-78-6	2-Hexanone	U	5.31	ug/kg	1.59	5.31
142-28-9	1,3-Dichloropropane	U	1.06	ug/kg	0.318	1.06
127-18-4	Tetrachloroethylene	U	1.06	ug/kg	0.318	1.06
124-48-1	Dibromochloromethane	U	1.06	ug/kg	0.318	1.06
106-93-4	1,2-Dibromoethane	U	1.06	ug/kg	0.318	1.06
108-90-7	Chlorobenzene	U	1.06	ug/kg	0.318	1.06

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6528	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 10:34	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T309.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.06	ug/kg	0.318	1.06
179601-23-1	m,p-Xylenes	U	2.12	ug/kg	0.318	2.12
95-47-6	o-Xylene	U	1.06	ug/kg	0.318	1.06
100-42-5	Styrene	U	1.06	ug/kg	0.318	1.06
75-25-2	Bromoform	U	1.06	ug/kg	0.318	1.06
79-34-5	1,1,2,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06
96-18-4	1,2,3-Trichloropropane	U	1.06	ug/kg	0.318	1.06
108-86-1	Bromobenzene	U	1.06	ug/kg	0.318	1.06
103-65-1	n-Propylbenzene	U	1.06	ug/kg	0.318	1.06
95-49-8	2-Chlorotoluene	U	1.06	ug/kg	0.318	1.06
98-82-8	Isopropylbenzene	U	1.06	ug/kg	0.318	1.06
108-67-8	1,3,5-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06
106-43-4	4-Chlorotoluene	U	1.06	ug/kg	0.318	1.06
98-06-6	tert-Butylbenzene	U	1.06	ug/kg	0.318	1.06
95-63-6	1,2,4-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06
135-98-8	sec-Butylbenzene	U	1.06	ug/kg	0.318	1.06
99-87-6	4-Isopropyltoluene	U	1.06	ug/kg	0.318	1.06
541-73-1	1,3-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06
106-46-7	1,4-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06
104-51-8	n-Butylbenzene	U	1.06	ug/kg	0.318	1.06
96-12-8	1,2-Dibromo-3-chloropropane	U	1.06	ug/kg	0.318	1.06
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.31	ug/kg	1.70	5.31
630-20-6	1,1,1,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06
95-50-1	1,2-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	unknown	4.33	12.8	ug/kg	0	J
	unknown siloxane	17.2	161	ug/kg	0	J
	unknown siloxane	19.15	38.1	ug/kg	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/27/2009 12:00	Matrix:	S
Lab Sample ID:	232507007	Date Received:	06/27/2009 12:00		
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6535	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 11:03	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/08/2009 08:03	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070809V2.b\2T310.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	J	2.85	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/27/2009 12:00	Matrix:	S
Lab Sample ID:	232507007	Date Received:	06/27/2009 12:00		
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6535	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 11:03	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/08/2009 08:03	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070809V2.b\2T310.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	18	ug/kg	0	J

Quality Control Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2499

Matrix Type: SOLID

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201875765	LCS for batch 883079	99	96	98
1201875766	LCS for batch 883079	99	96	99
1201875762	MB for batch 883079	102	99	100
232507001	CAMO-09-6519	99	101	108
1201876840	LCS for batch 883079	99	97	99
1201876841	LCS for batch 883079	100	98	100
1201876839	MB for batch 883079	104	99	101
232507004	CAMO-09-6529	102	100	73
232507005	CAMO-09-6528	102	98	91
232507007	CAMO-09-6535	102	97	101
232507001	CAMO-09-6519RE	107	100	103
1201875763	CAMO-09-6529PS	100	98	93
1201875764	CAMO-09-6529PSD	100	100	74

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6529PS
Lab Sample ID: 1201875763
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 4.9
Analysis Date: 07/08/2009 12:01
Prep Batch ID: 883079
Batch ID: 883080
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	39.6	79	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	41.9	84	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	47.7	95	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	42.0	84	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	46.0	92	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	48.9	98	51-151
67-64-1	PS	Acetone	250	0.00	U	237	95	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	49.3	99	61-125
74-88-4	PS	Iodomethane	250	0.00	U	256	102	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	47.0	94	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	250	100	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	46.3	93	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	46.9	94	62-125
78-93-3	PS	2-Butanone	250	0.00	U	239	96	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	46.6	93	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	52.1	104	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	46.7	93	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	46.1	92	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	49.9	100	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	48.0	96	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	50.9	102	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	44.9	90	58-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6529PS
Lab Sample ID: 1201875763
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 4.9
Analysis Date: 07/08/2009 12:01
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	45.0	90	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	46.8	94	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	45.2	90	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	48.2	96	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	46.2	92	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	246	98	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	48.0	96	54-133
108-88-3	PS	Toluene	50.0	0.00	U	44.7	89	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	47.4	95	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	44.7	89	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	247	99	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	44.1	88	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	46.2	92	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	50.0	100	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	47.2	94	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	45.5	91	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	46.0	92	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	90.0	90	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	44.6	89	52-127
100-42-5	PS	Styrene	50.0	0.00	U	49.5	99	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	43.1	86	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	47.8	96	63-127

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6529PS
Lab Sample ID: 1201875763
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 4.9
Analysis Date: 07/08/2009 12:01
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	47.3	95	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	46.8	94	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	46.2	92	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	46.3	93	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	47.2	94	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	45.9	92	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	46.0	92	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	45.2	90	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	45.2	90	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	43.6	87	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	43.4	87	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	44.5	89	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	43.6	87	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	41.4	83	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	54.5	109	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	48.1	96	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	43.2	86	43-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6529PSD
Lab Sample ID: 1201875764
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 4.9
Analysis Date: 07/08/2009 12:30
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	39.5	79	25-149	0	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	42.4	85	39-140	1	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	44.9	90	47-129	6	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	40.3	81	31-135	4	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	45.0	90	53-128	2	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	44.5	89	51-151	9	0-25
67-64-1	PSD	Acetone	250	0.00	U	221	88	21-153	7	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	45.5	91	61-125	8	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	244	98	53-142	4	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	45.3	91	59-136	4	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	237	95	46-129	5	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	44.6	89	56-126	4	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	45.4	91	62-125	3	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	223	89	26-152	7	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	44.7	89	60-130	4	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	47.4	95	55-135	9	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	45.4	91	60-127	3	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	45.5	91	61-131	1	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	47.6	95	59-131	5	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	46.5	93	57-128	3	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	48.9	98	58-136	4	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	43.8	88	58-126	3	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6529PSD
Lab Sample ID: 1201875764
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 4.9
Analysis Date: 07/08/2009 12:30
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	43.8	88	56-123	3	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	46.0	92	51-137	2	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	44.6	89	60-126	1	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	47.5	95	55-138	1	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	45.1	90	60-132	2	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	231	92	58-136	7	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	46.4	93	54-133	3	0-25
108-88-3	PSD	Toluene	50.0	0.00	U	43.3	87	52-128	3	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	46.0	92	53-137	3	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	43.7	87	59-130	2	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	231	92	31-148	7	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	43.2	86	57-127	2	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	44.8	90	51-128	3	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	49.2	98	59-139	2	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	46.1	92	57-133	2	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	44.2	88	53-122	3	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	44.1	88	51-125	4	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	87.0	87	50-126	3	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	43.6	87	52-127	2	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	47.7	95	49-135	4	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	42.0	84	57-149	3	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	45.6	91	63-127	5	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6529PSD
Lab Sample ID: 1201875764
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 4.9
Analysis Date: 07/08/2009 12:30
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	45.7	91	57-149	3	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	45.5	91	49-131	3	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	44.4	89	40-136	4	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	44.1	88	44-135	5	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	45.1	90	44-140	4	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	44.5	89	42-140	3	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	43.8	88	44-132	5	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	44.1	88	42-142	2	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	43.5	87	43-137	4	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	42.8	86	39-139	2	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	40.9	82	38-145	6	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	43.0	86	43-129	4	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	42.0	84	44-125	4	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	40.2	80	36-141	3	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	54.0	108	47-151	1	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	47.2	94	59-131	2	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	42.0	84	43-129	3	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 883079
Lab Sample ID: 1201875765
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/07/2009 08:06
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	63.8	128	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	56.2	112	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	55.7	111	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	46.7	93	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	52.7	105	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	56.7	113	67-151
67-64-1	LCS	Acetone	250	0.0	129	51	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	52.1	104	70-125
74-88-4	LCS	Iodomethane	250	0.0	261	105	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	51.4	103	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	263	105	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	48.0	96	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	51.0	102	75-120
78-93-3	LCS	2-Butanone	250	0.0	150	60	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	51.8	104	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	52.9	106	74-135
67-66-3	LCS	Chloroform	50.0	0.0	51.1	102	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	52.2	104	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	53.5	107	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	53.0	106	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	54.7	109	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	49.6	99	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 883079
Lab Sample ID: 1201875765
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/07/2009 08:06
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	48.9	98	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	52.2	104	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	50.5	101	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	56.7	113	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	52.6	105	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	237	95	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	55.0	110	80-125
108-88-3	LCS	Toluene	50.0	0.0	48.6	97	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	54.6	109	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	51.4	103	76-120
591-78-6	LCS	2-Hexanone	250	0.0	237	95	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	49.6	99	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	51.4	103	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	56.4	113	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	54.1	108	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	50.5	101	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	49.2	98	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	99.3	99	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	50.7	101	74-120
100-42-5	LCS	Styrene	50.0	0.0	56.0	112	76-125
75-25-2	LCS	Bromoform	50.0	0.0	49.8	100	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	52.3	105	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 883079
Lab Sample ID: 1201875765
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/07/2009 08:06
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	57.3	115	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	50.7	101	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	48.9	98	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	50.0	100	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	43.9	88	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	50.7	101	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	49.8	100	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	51.5	103	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	50.2	100	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	51.4	103	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	53.7	107	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	52.1	104	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	50.0	100	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	51.3	103	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	68.3	137	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	54.2	108	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	51.1	102	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 883079
Lab Sample ID: 1201875766
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/07/2009 09:05
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	275	110	52-139

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 883079
Lab Sample ID: 1201876840
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/08/2009 07:36
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	41.4	83	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	42.8	86	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	50.4	101	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	43.0	86	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	46.0	92	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	45.7	91	67-151
67-64-1	LCS	Acetone	250	0.0	235	94	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	46.1	92	70-125
74-88-4	LCS	Iodomethane	250	0.0	254	102	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	49.6	99	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	245	98	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	45.6	91	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	46.8	94	75-120
78-93-3	LCS	2-Butanone	250	0.0	239	96	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	45.6	91	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	47.6	95	74-135
67-66-3	LCS	Chloroform	50.0	0.0	46.8	94	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	47.0	94	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	48.4	97	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	48.3	97	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	50.2	100	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	45.3	91	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 883079
Lab Sample ID: 1201876840
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/08/2009 07:36
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	45.3	91	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	47.2	94	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	46.0	92	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	49.3	99	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	47.0	94	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	243	97	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	49.9	100	80-125
108-88-3	LCS	Toluene	50.0	0.0	44.5	89	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	48.2	96	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	45.1	90	76-120
591-78-6	LCS	2-Hexanone	250	0.0	242	97	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	44.5	89	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	47.4	95	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	51.5	103	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	48.0	96	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	46.5	93	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	45.7	91	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	90.4	90	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	45.6	91	74-120
100-42-5	LCS	Styrene	50.0	0.0	50.6	101	76-125
75-25-2	LCS	Bromoform	50.0	0.0	43.6	87	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	46.5	93	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 883079
Lab Sample ID: 1201876840
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/08/2009 07:36
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	45.8	92	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	46.4	93	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	45.2	90	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	45.4	91	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	45.9	92	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	46.0	92	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	45.1	90	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	45.7	91	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	45.6	91	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	45.3	91	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	46.6	93	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	45.9	92	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	45.0	90	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	44.8	90	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	58.2	116	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	48.8	98	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	45.7	91	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 883079
Lab Sample ID: 1201876841
Instrument: VOA2.I
Analyst: CDS1
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/08/2009 08:39
Dilution: 1
Prep Batch ID: 883079
Batch ID: 883080

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	247	99	52-139

Method Blank Summary

SDG Number:	09-2499	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 883079	Instrument ID:	VOA2.I	Data File:	070709V2.b\2T208BS2.D
Lab Sample ID:	1201875762	Prep Date:	07/07/2009 06:00	Analyzed:	07/07/09 10:03
Column:	DB-624				

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 883079	1201875765	070709V2.b\2T204LS2.D	07/07/09	0806
02 LCS for batch 883079	1201875766	070709V2.b\2T206SLS2.D	07/07/09	0905

Method Blank Summary

SDG Number:	09-2499	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 883079	Instrument ID:	VOA2.I	Data File:	070709V2.b\2T208BS2.D
Lab Sample ID:	1201875762	Prep Date:	07/07/2009 06:00	Analyzed:	07/07/09 10:03
	DB-624				

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
03 CAMO-09-6519	232507001	070709V2.b\2T212.D	07/07/09	1246

Method Blank Summary

SDG Number:	09-2499	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 883079	Instrument ID:	VOA2.I	Data File:	070809V2.b\2T307BS1.D
Lab Sample ID:	1201876839	Prep Date:	07/08/2009 06:00	Analyzed:	07/08/09 09:37
Column:	DB-624				

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 883079	1201876840	070809V2.b\2T303LS1.D	07/08/09	0736
02 LCS for batch 883079	1201876841	070809V2.b\2T305SLS1.D	07/08/09	0839

Method Blank Summary

SDG Number:	09-2499	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 883079	Instrument ID:	VOA2.I	Data File:	070809V2.b\2T307BS1.D
Lab Sample ID:	1201876839	Prep Date:	07/08/2009 06:00	Analyzed:	07/08/09 09:37
	DB-624				

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
03 CAMO-09-6529	232507004	070809V2.b\2T308.D	07/08/09	1006
04 CAMO-09-6528	232507005	070809V2.b\2T309.D	07/08/09	1034
05 CAMO-09-6535	232507007	070809V2.b\2T310.D	07/08/09	1103
06 CAMO-09-6519RE	232507001	070809V2.b\2T311.D	07/08/09	1132
07 CAMO-09-6529PS	1201875763	070809V2.b\2T312.D	07/08/09	1201
08 CAMO-09-6529PSD	1201875764	070809V2.b\2T313.D	07/08/09	1230

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2499

Instrument ID: VOA2.I **Injection Date/Time:** 01-JUL-09 09:58

Column Description: DB-624 **Lab File ID** 070109V2.b\2S301.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	25.2
75	30.0 - 60.0% of mass 95	47.2
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.6
174	50.0 - 100.0% of mass 95	71.5
175	5.0 -9.0% of mass 174	7.6
176	95.0 - 101.0% of mass 174	100.6
177	5.0 - 9.0% of mass 176	6.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALVSTD001 5ML MIX [A]	W2VM090701-01	070109V2.b\2S303.D	01-JUL-09 10:53
ICALVSTD002 5ML MIX [A]	W2VM090701-02	070109V2.b\2S304.D	01-JUL-09 11:22
ICALVSTD005 5ML MIX [A]	W2VM090701-03	070109V2.b\2S305.D	01-JUL-09 11:51
ICALVSTD010 5ML MIX [A]	W2VM090701-04	070109V2.b\2S306.D	01-JUL-09 12:21
ICALVSTD020 5ML MIX [A]	W2VM090701-05	070109V2.b\2S307.D	01-JUL-09 12:50
ICALVSTD050 5ML MIX [A]	W2VM090701-06	070109V2.b\2S308.D	01-JUL-09 13:19
ICALVSTD100 5ML MIX [A]	W2VM090701-07	070109V2.b\2S309.D	01-JUL-09 13:48
ICALVSTD0005 5ML MIX [A]	W2VM090701-08	070109V2.b\2S311.D	01-JUL-09 14:45
ICVLCS 5ML MIX [A] ULTRA	W2VM090701-10	070109V2.b\2S313.D	01-JUL-09 15:44
ICALVSTD005S 5ML MIX [B]	W2VM090701-11	070109V2.b\2S315.D	01-JUL-09 16:41
ICALVSTD010S 5ML MIX [B]	W2VM090701-12	070109V2.b\2S316.D	01-JUL-09 17:10
ICALVSTD025S 5ML MIX [B]	W2VM090701-13	070109V2.b\2S317.D	01-JUL-09 17:39
ICALVSTD050S 5ML MIX [B]	W2VM090701-14	070109V2.b\2S318.D	01-JUL-09 18:08
ICALVSTD100S 5ML MIX [B]	W2VM090701-15	070109V2.b\2S319.D	01-JUL-09 18:37
ICALVSTD250S 5ML MIX [B]	W2VM090701-16	070109V2.b\2S320.D	01-JUL-09 19:07
ICALVSTD500S 5ML MIX [B]	W2VM090701-17	070109V2.b\2S321.D	01-JUL-09 19:36
ICVLCS 5ML MIX [B] 03	W2VM090701-18	070109V2.b\2S323.D	01-JUL-09 20:34

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2499

Instrument ID: VOA2.I **Injection Date/Time:** 07-JUL-09 06:41

Column Description: DB-624 **Lab File ID** 070709V2.b\2T201.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	25.7
75	30.0 - 60.0% of mass 95	50.2
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	71
175	5.0 -9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	100.5
177	5.0 - 9.0% of mass 176	6.3

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVMIX [A] UVM090617-07C+	W2VM090707-01	070709V2.b\2T202.D	07-JUL-09 07:08
BLK01LCS	1201875765	070709V2.b\2T204LS2.D	07-JUL-09 08:06
CCVVSTD250S LCS 5ML MIX	UVM090701-08A	070709V2.b\2T205.D	07-JUL-09 08:36
BLK01SLCS	1201875766	070709V2.b\2T206SLS2.D	07-JUL-09 09:05
BLK01	1201875762	070709V2.b\2T208BS2.D	07-JUL-09 10:03
CAMO-09-6519	232507001	070709V2.b\2T212.D	07-JUL-09 12:46

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2499

Instrument ID: VOA2.I **Injection Date/Time:** 08-JUL-09 06:40

Column Description: DB-624 **Lab File ID** 070809V2.b\2T301.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	25.7
75	30.0 - 60.0% of mass 95	52.9
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	8
173	Less than 2.0% of mass 174	0.9
174	50.0 - 100.0% of mass 95	70
175	5.0 -9.0% of mass 174	6.9
176	95.0 - 101.0% of mass 174	100.5
177	5.0 - 9.0% of mass 176	6.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCV5ML MIX [A] UVM090624-	W2VM090708-01	070809V2.b\2T302.D	08-JUL-09 07:07
BLK02LCS	1201876840	070809V2.b\2T303LS1.D	08-JUL-09 07:36
CCVVSTD250S LCS 5ML MIX	UVM090701-08A	070809V2.b\2T304.D	08-JUL-09 08:10
BLK02SLCS	1201876841	070809V2.b\2T305SLS1.D	08-JUL-09 08:39
BLK02	1201876839	070809V2.b\2T307BS1.D	08-JUL-09 09:37
CAMO-09-6529	232507004	070809V2.b\2T308.D	08-JUL-09 10:06
CAMO-09-6528	232507005	070809V2.b\2T309.D	08-JUL-09 10:34
CAMO-09-6535	232507007	070809V2.b\2T310.D	08-JUL-09 11:03
CAMO-09-6519RE	232507001	070809V2.b\2T311.D	08-JUL-09 11:32
CAMO-09-6529MS	1201875763	070809V2.b\2T312.D	08-JUL-09 12:01
CAMO-09-6529MSD	1201875764	070809V2.b\2T313.D	08-JUL-09 12:30

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA2.I

GC Column: DB-624

Client SDG: 09-2499

STD Analysis Time: 07-JUL-09 07:08

Data File: C:\msdchem\1\DATA\070709V2.b\2T202.D

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	1642832		12.4	1402598		16.0	878468		18.5
Upper Limit	3285664		12.9	2805196		16.5	1756936		19.0
Lower Limit	821416		11.9	701299		15.5	439234		18.0
Sample ID									
K01LCS	1683356		12.4	1455054		16.0	902441		18.5
K01SLCS	1713132		12.4	1479268		16.0	907740		18.5
K01	1640166		12.4	1393088		16.0	851929		18.5
MO-09-6519	1638137		12.4	1335200		16.0	752301		18.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 09-2499

Instrument: VOA2.I

STD Analysis Time: 08-JUL-09 07:07

GC Column: DB-624

Data File: C:\msdchem\1\DATA\070809V2.b\2T302.D

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	1586846		12.4	1375361		16.0	859439		18.5
Upper Limit	3173692		12.9	2750722		16.5	1718878		19.0
Lower Limit	793423		11.9	687681		15.5	429720		18.0
Sample ID									
K02LCS	1615704		12.4	1393107		16.0	869292		18.5
K02SLCS	1629590		12.4	1405853		16.0	882446		18.5
K02	1567926		12.4	1341767		16.0	819758		18.5
MO-09-6529	1547522		12.4	1292959		16.0	765884		18.5
MO-09-6528	1585749		12.4	1327358		16.0	775376		18.5
MO-09-6535	1585109		12.4	1343068		16.0	794835		18.5
MO-09-6519RE	1526499		12.4	1289764		16.0	803837		18.5
MO-09-6529MS	1444504		12.4	1220178		16.0	720275		18.5
MO-09-6529MSD	1599933		12.4	1363156		16.0	815966		18.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 12:46	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 10:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T212.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.26	ug/kg	0.429	1.26
74-87-3	Chloromethane	U	1.26	ug/kg	0.379	1.26
75-01-4	Vinyl chloride	U	1.26	ug/kg	0.379	1.26
74-83-9	Bromomethane	U	1.26	ug/kg	0.379	1.26
75-00-3	Chloroethane	U	1.26	ug/kg	0.379	1.26
75-69-4	Trichlorofluoromethane	U	1.26	ug/kg	0.719	1.26
67-64-1	Acetone		20.2	ug/kg	2.09	6.31
75-35-4	1,1-Dichloroethylene	U	1.26	ug/kg	0.379	1.26
74-88-4	Iodomethane	U	6.31	ug/kg	2.02	6.31
75-09-2	Methylene chloride	U	6.31	ug/kg	2.52	6.31
75-15-0	Carbon disulfide	U	6.31	ug/kg	1.58	6.31
156-60-5	trans-1,2-Dichloroethylene	U	1.26	ug/kg	0.379	1.26
75-34-3	1,1-Dichloroethane	U	1.26	ug/kg	0.379	1.26
78-93-3	2-Butanone	U	6.31	ug/kg	1.89	6.31
156-59-2	cis-1,2-Dichloroethylene	U	1.26	ug/kg	0.379	1.26
594-20-7	2,2-Dichloropropane	U	1.26	ug/kg	0.379	1.26
67-66-3	Chloroform	U	1.26	ug/kg	0.379	1.26
74-97-5	Bromochloromethane	U	1.26	ug/kg	0.416	1.26
71-55-6	1,1,1-Trichloroethane	U	1.26	ug/kg	0.379	1.26
563-58-6	1,1-Dichloropropene	U	1.26	ug/kg	0.379	1.26
56-23-5	Carbon tetrachloride	U	1.26	ug/kg	0.379	1.26
107-06-2	1,2-Dichloroethane	U	1.26	ug/kg	0.379	1.26
71-43-2	Benzene	U	1.26	ug/kg	0.379	1.26
79-01-6	Trichloroethylene	U	1.26	ug/kg	0.416	1.26
78-87-5	1,2-Dichloropropane	U	1.26	ug/kg	0.379	1.26
75-27-4	Bromodichloromethane	U	1.26	ug/kg	0.379	1.26
74-95-3	Dibromomethane	U	1.26	ug/kg	0.379	1.26
108-10-1	4-Methyl-2-pentanone	U	6.31	ug/kg	1.58	6.31
10061-01-5	cis-1,3-Dichloropropylene	U	1.26	ug/kg	0.379	1.26
108-88-3	Toluene		3.14	ug/kg	0.379	1.26
10061-02-6	trans-1,3-Dichloropropylene	U	1.26	ug/kg	0.379	1.26
79-00-5	1,1,2-Trichloroethane	U	1.26	ug/kg	0.379	1.26
591-78-6	2-Hexanone	U	6.31	ug/kg	1.89	6.31
142-28-9	1,3-Dichloropropane	U	1.26	ug/kg	0.379	1.26
127-18-4	Tetrachloroethylene	U	1.26	ug/kg	0.379	1.26
124-48-1	Dibromochloromethane	U	1.26	ug/kg	0.379	1.26
106-93-4	1,2-Dibromoethane	U	1.26	ug/kg	0.379	1.26
108-90-7	Chlorobenzene	U	1.26	ug/kg	0.379	1.26

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 12:46	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 10:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T212.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.26	ug/kg	0.379	1.26
179601-23-1	m,p-Xylenes	U	2.52	ug/kg	0.379	2.52
95-47-6	o-Xylene	U	1.26	ug/kg	0.379	1.26
100-42-5	Styrene	U	1.26	ug/kg	0.379	1.26
75-25-2	Bromoform	U	1.26	ug/kg	0.379	1.26
79-34-5	1,1,2,2-Tetrachloroethane	U	1.26	ug/kg	0.379	1.26
96-18-4	1,2,3-Trichloropropane	U	1.26	ug/kg	0.379	1.26
108-86-1	Bromobenzene	U	1.26	ug/kg	0.379	1.26
103-65-1	n-Propylbenzene	U	1.26	ug/kg	0.379	1.26
95-49-8	2-Chlorotoluene	U	1.26	ug/kg	0.379	1.26
98-82-8	Isopropylbenzene	U	1.26	ug/kg	0.379	1.26
108-67-8	1,3,5-Trimethylbenzene	U	1.26	ug/kg	0.379	1.26
106-43-4	4-Chlorotoluene	U	1.26	ug/kg	0.379	1.26
98-06-6	tert-Butylbenzene	U	1.26	ug/kg	0.379	1.26
95-63-6	1,2,4-Trimethylbenzene	U	1.26	ug/kg	0.379	1.26
135-98-8	sec-Butylbenzene	U	1.26	ug/kg	0.379	1.26
99-87-6	4-Isopropyltoluene	E	291	ug/kg	0.379	1.26
541-73-1	1,3-Dichlorobenzene	U	1.26	ug/kg	0.379	1.26
106-46-7	1,4-Dichlorobenzene	U	1.26	ug/kg	0.379	1.26
104-51-8	n-Butylbenzene	U	1.26	ug/kg	0.379	1.26
96-12-8	1,2-Dibromo-3-chloropropane	U	1.26	ug/kg	0.379	1.26
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.31	ug/kg	2.02	6.31
630-20-6	1,1,1,2-Tetrachloroethane	U	1.26	ug/kg	0.379	1.26
95-50-1	1,2-Dichlorobenzene	U	1.26	ug/kg	0.379	1.26

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	Estimated RT	Units	Fit	Qual
	unknown	4.36	ug/kg	0	J
000111-84-2	Nonane	16.15	ug/kg	97	NJ
	unknown hydrocarbon	16.85	ug/kg	0	J
	unknown hydrocarbon	16.91	ug/kg	0	J
	unknown hydrocarbon	17.05	ug/kg	0	J
005794-04-7	Bicyclo[2.2.1]heptane, 2,2-dimethy	17.37	ug/kg	97	NJ
	unknown hydrocarbon	17.63	ug/kg	0	J
	unknown hydrocarbon	17.64	ug/kg	0	J
000127-91-3	.beta.-Pinene	17.79	ug/kg	94	NJ
	unknown hydrocarbon	18.11	ug/kg	0	J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507001	Date Received:	06/27/2009 09:05	%Moisture:	20.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6519	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/07/2009 12:46	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/07/2009 10:00	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070709V2.b\2T212.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	unknown hydrocarbon	18.19	ug/kg	0	J
	unknown hydrocarbon	18.33	ug/kg	0	J
	unknown hydrocarbon	18.46	ug/kg	0	J
000099-85-4	1,4-Cyclohexadiene, 1-methyl-4-(1-	18.65	ug/kg	97	NJ
	unknown hydrocarbon	19.05	ug/kg	0	J
	unknown aromatic	19.23	ug/kg	0	J
015358-88-0	Bicyclo[3.1.1]heptan-3-one, 2,6,6-	20.89	ug/kg	92	NJ

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
InstName : VOA2
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 16 11:43:28 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1638137	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1335200	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	752301	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1638137	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1335200	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	752301	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	455265	49.56 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 99.12%		
43) Toluene-d8	14.310	98	1583731	50.48 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 100.96%		
61) Bromofluorobenzene	17.204	95	641376	54.22 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 108.44%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.266	62	300	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	7.373	59	144	N.D.	
9) Acetone	7.883	43	85931	16.01 ug/L	99
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.417	41	920	N.D.	
13) Methyl acetate	8.523	43	1316	N.D.	
14) Carbon disulfide	8.251	76	2141	N.D.	
15) Methylene chloride	8.689	84	17581	Below Cal	97
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	929	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	1222	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.927	62	253	N.D.	
31) Benzene	12.033	78	1014	N.D.	
32) Cyclohexene	12.354	67	2763	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
InstName : VOA2
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 16 11:43:28 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D. d	
44) Toluene	14.381	91	76071	2.49 ug/L	100
45) trans-1,3-Dichloroprop...	14.381	75	285	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.061	43	326	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	659	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.065	91	2124	N.D.	
55) m,p-Xylenes	16.196	106	1414	N.D.	
56) o-Xylene	16.635	106	692	N.D.	
57) Styrene	16.646	104	839	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	0.000		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	0.000		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.370	110	130	N.D.	
64) Bromobenzene	17.417	156	349	N.D.	
65) n-Propylbenzene	0.000		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	0.000		0m	N.D. d	
67) 2-Chlorotoluene	0.000		0m	N.D. d	
68) 4-Chlorotoluene	0.000		0m	N.D. d	
69) tert-Butylbenzene	0.000		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	0.000		0m	N.D. d	
71) sec-Butylbenzene	0.000		0m	N.D. d	
72) 4-Isopropyltoluene	18.366	119	6648888	230.79 ug/L	86 E
73) 1,3-Dichlorobenzene	18.401	146	963	N.D.	
74) 1,4-Dichlorobenzene	18.484	146	2221	N.D.	
75) n-Butylbenzene	0.000		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.900	146	605	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	724	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	3142	N.D.	
81) 1,2,3-Trichlorobenzene	21.342	180	482	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	8.168	45	3188	N.D.	
88) Allyl chloride	8.417	41	920	N.D.	
89) tert-Butyl Alcohol	8.879	59	1272	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.800	43	929	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
InstName : VOA2
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 16 11:43:28 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	0.000		0	N.D.	
96) Methacrylonitrile	11.215	41	948	N.D.	
97) Tetrahydrofuran	11.227	42	1649	N.D.	
98) Isobutyl alcohol	11.927	41	118	N.D.	
99) Methyl tert-amyl ether	0.000		0m	N.D.	d
100) Methyl methacrylate	0.000		0	N.D.	
101) 1,4-Dioxane	0.000		0	N.D.	
102) 2-Nitropropane	13.670	43	2424	N.D.	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	0.000		0m	N.D.	d
107) cis-1,4-Dichloro-2-butene	0.000		0m	N.D.	d
108) Cyclohexanone	0.000		0m	N.D.	d
109) trans-1,4-Dichloro-2-b...	0.000		0m	N.D.	d
110) Pentachloroethane	0.000		0	N.D.	
111) Benzyl chloride	0.000		0m	N.D.	d
112) bis(2-Chloroisopropyl)...	19.054	45	2989	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
InstName : VOA2
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 16 11:43:28 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

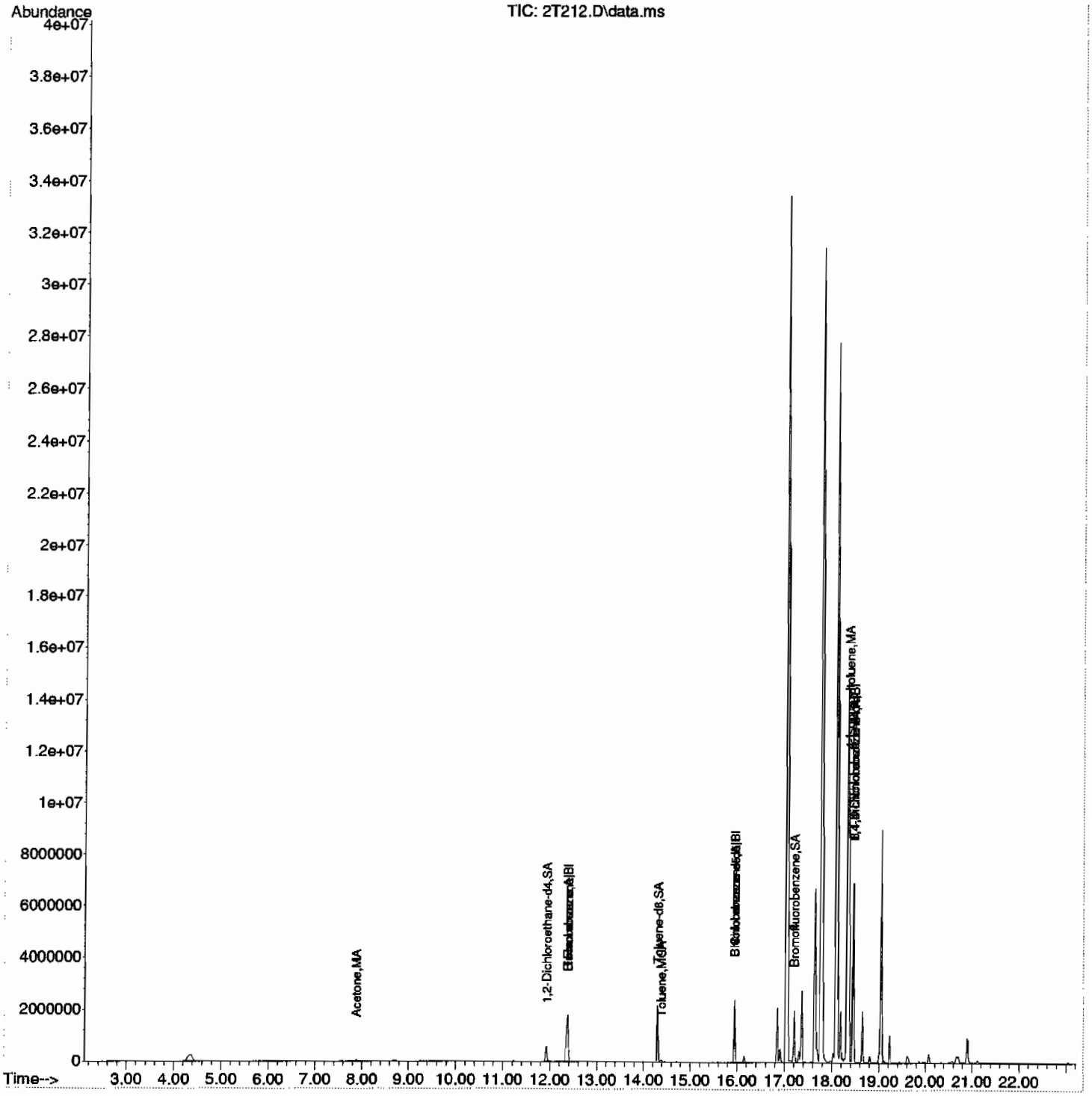

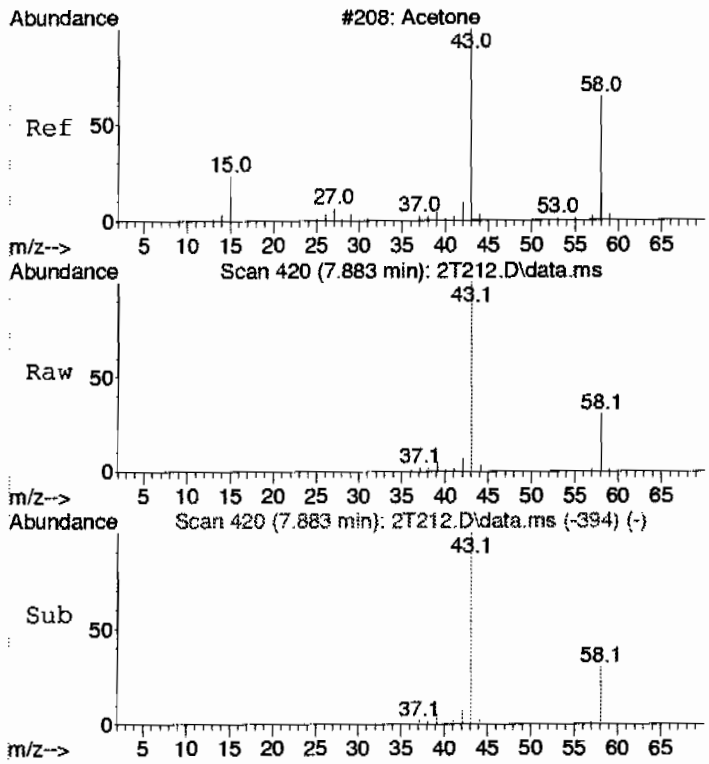

#9
Acetone
Concen: 16.01 ug/L
RT: 7.883 min Scan# 420
Delta R.T. 0.012 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 43 Resp: 85931

Ion	Ratio	Lower	Upper
43	100		
58	28.8	0.0	59.3

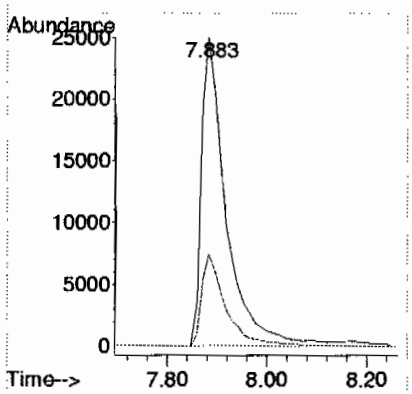

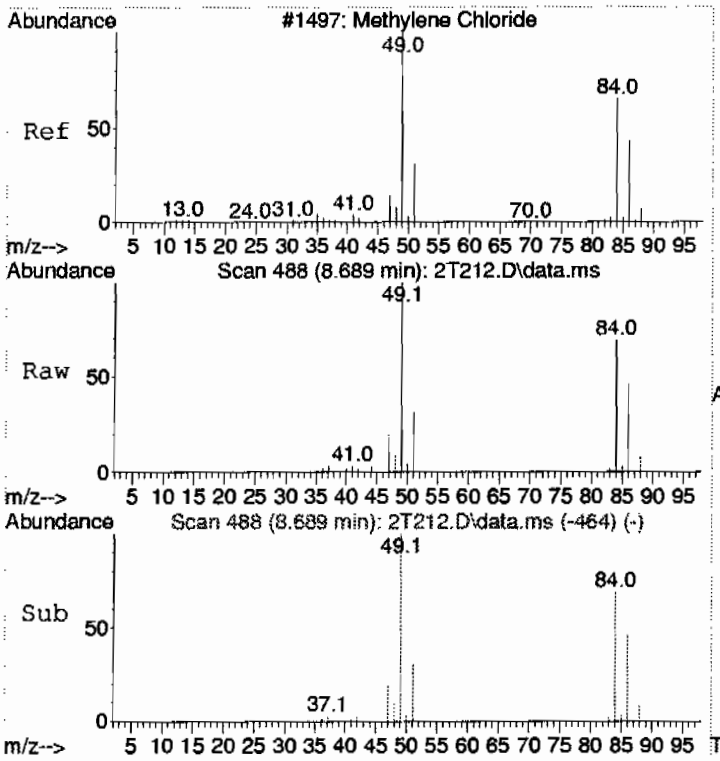

#15
Methylene chloride
Concen: Below Cal
RT: 8.689 min Scan# 488
Delta R.T. -0.012 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 84 Resp: 17581

Ion	Ratio	Lower	Upper
84	100		
86	63.5	33.8	93.8
49	140.7	105.0	165.0

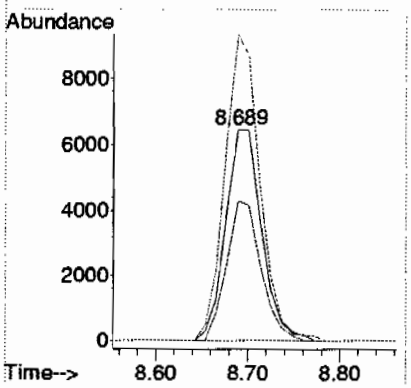

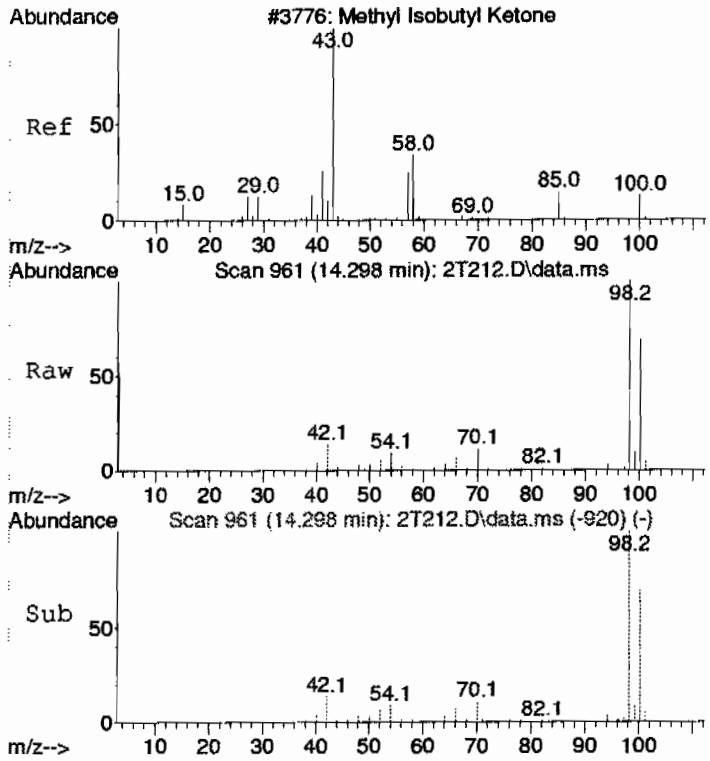

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.36 ug/L
RT: 14.298 min Scan# 961
Delta R.T. 0.189 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 58 Resp: 12740

Ion	Ratio	Lower	Upper
58	100		
43	60.9	245.2	305.2#
100	8528.5	7.2	67.2#

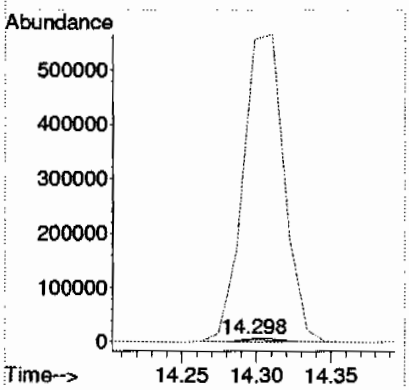

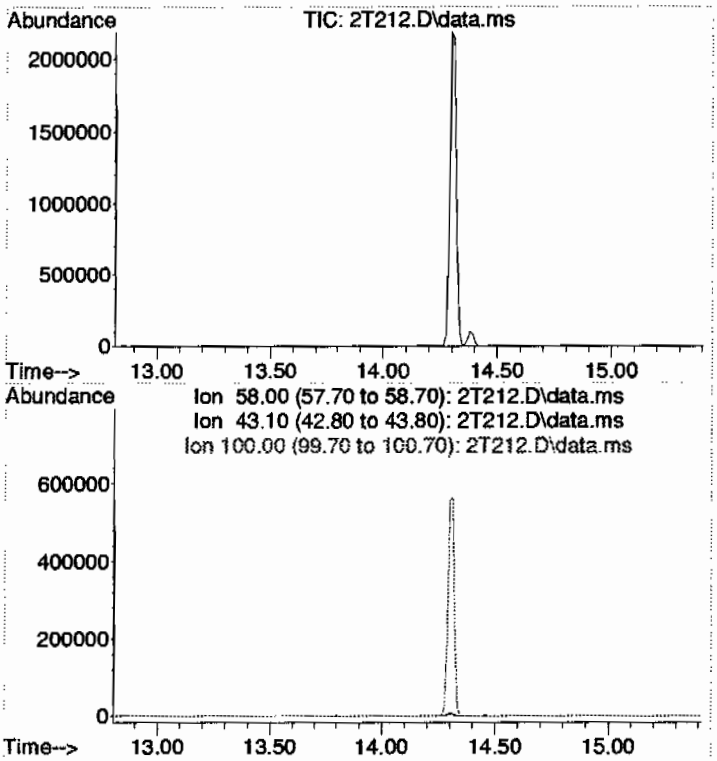

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

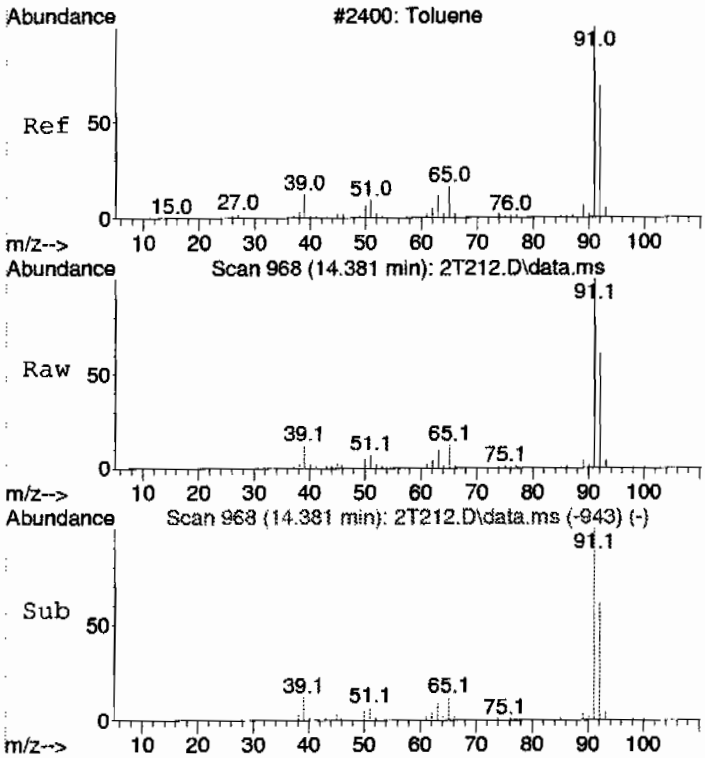

#44
Toluene
Concen: 2.49 ug/L
RT: 14.381 min Scan# 968
Delta R.T. 0.000 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91 Resp: 76071

Ion	Ratio	Lower	Upper
91	100		
92	59.9	30.1	90.1

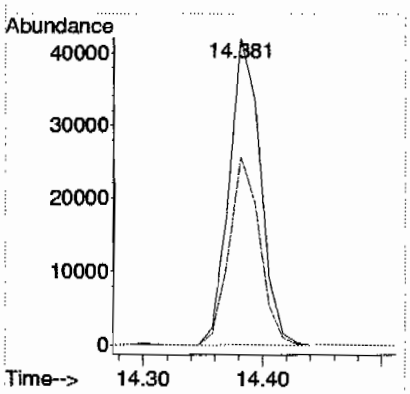

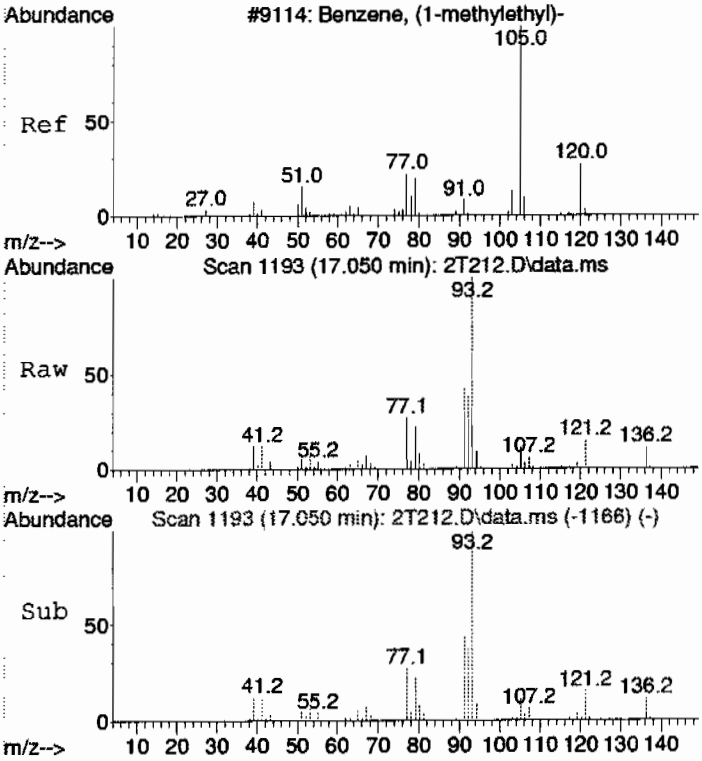

#60 BEFORE analyst integration
Isopropylbenzene
Concen: 76.03 ug/L
RT: 17.050 min Scan# 1193
Delta R.T. 0.024 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion:105 Resp: 2433637

Ion	Ratio	Lower	Upper
105	100		
120	4.3	0.0	57.9

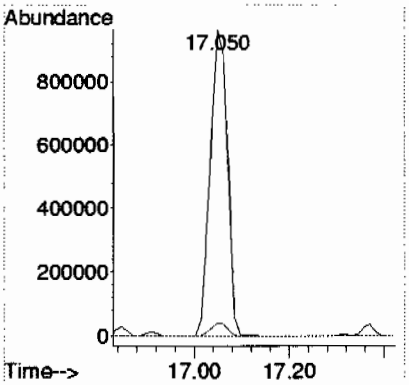

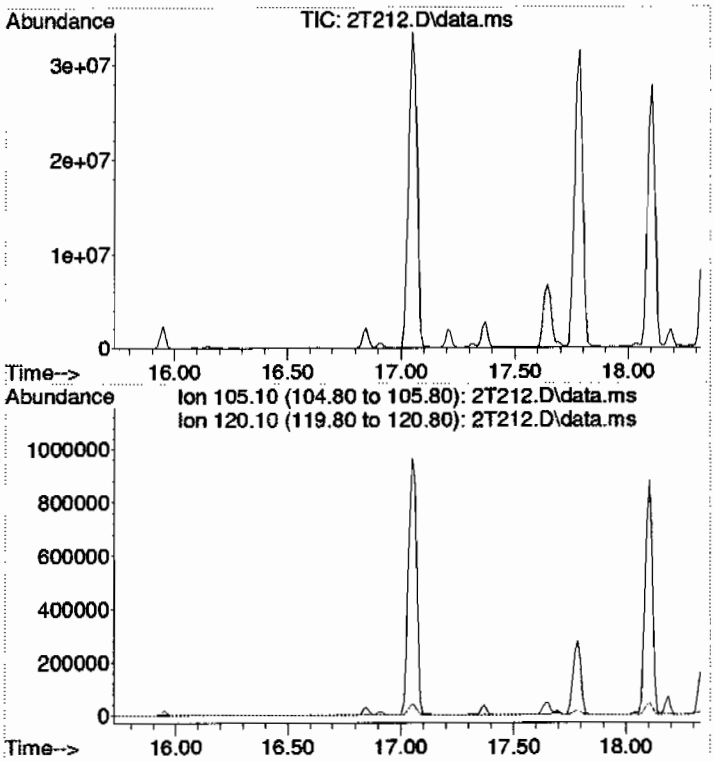

#60 AFTER analyst integration
Isopropylbenzene
Concen: N.D. DELETED
Expected RT: 17.03 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	27.9

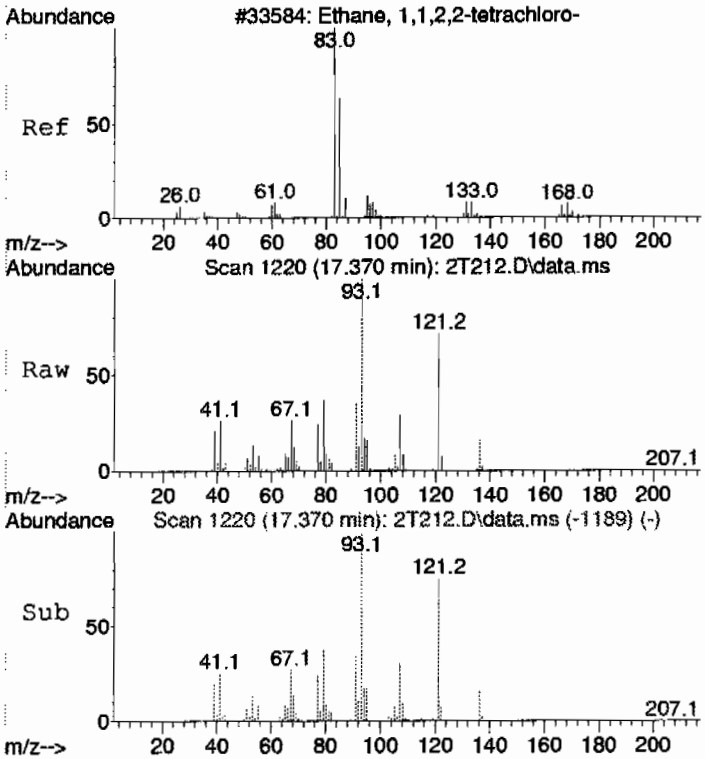

#62 BEFORE analyst integration
1,1,2,2-Tetrachloroethane
Concen: 0.45 ug/L
RT: 17.370 min Scan# 1220
Delta R.T. 0.071 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 83 Resp: 3358

Ion	Ratio	Lower	Upper
83	100		
85	0.0	33.9	93.9#

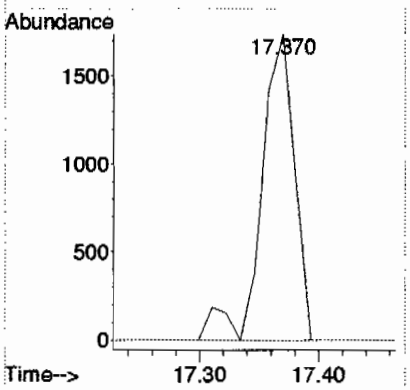

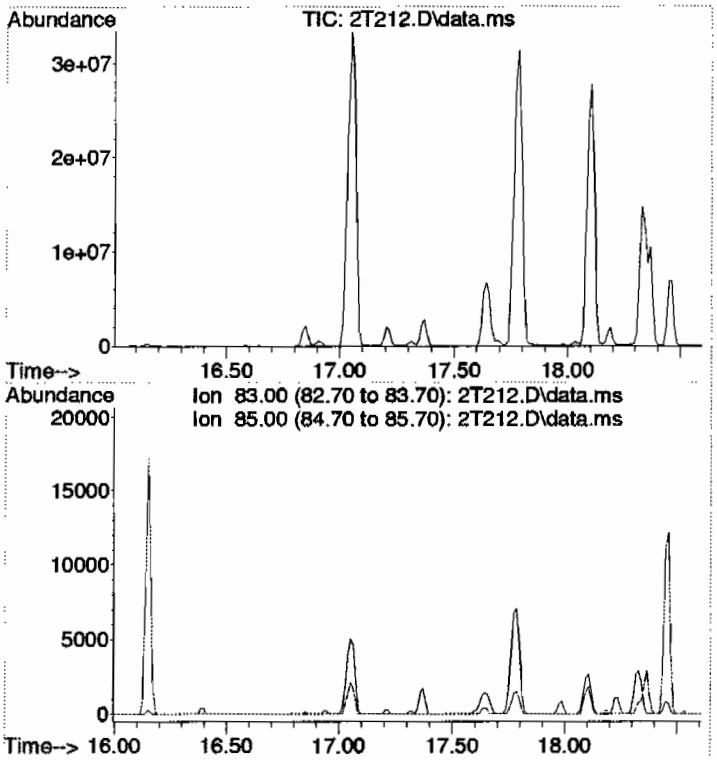

#62 AFTER analyst integration
1,1,2,2-Tetrachloroethane
Concen: N.D. DELETED
Expected RT: 17.30 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.9

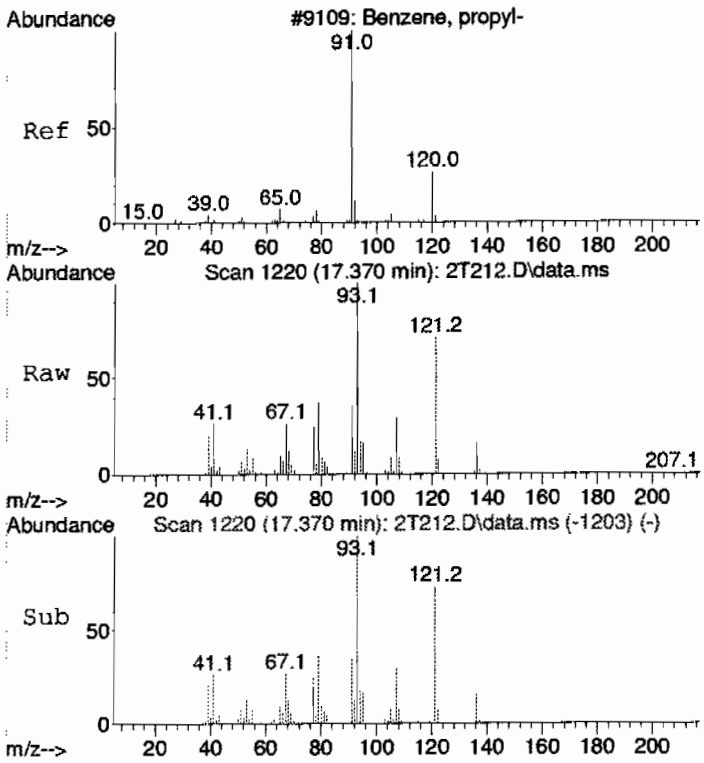

#65 BEFORE analyst integration
n-Propylbenzene
Concen: 7.75 ug/L
RT: 17.370 min Scan# 1220
Delta R.T. -0.095 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91 Resp: 292654

Ion	Ratio	Lower	Upper
91	100		
120	1.4	0.0	54.5

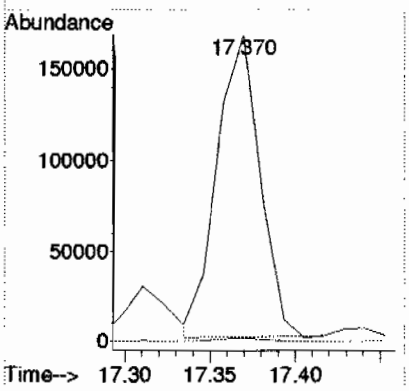

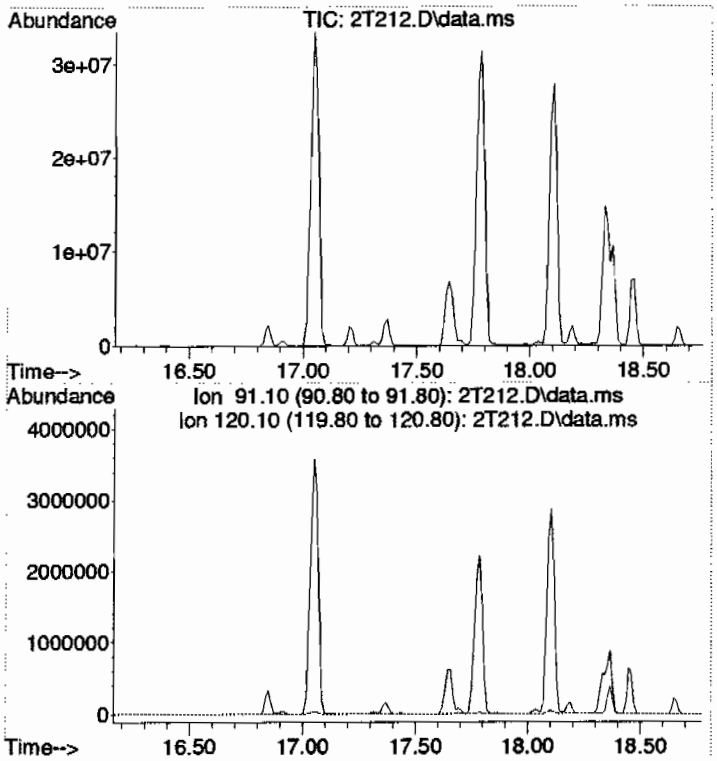

#65 AFTER analyst integration
n-Propylbenzene
Concen: N.D. DELETED
Expected RT: 17.47 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
120	24.5

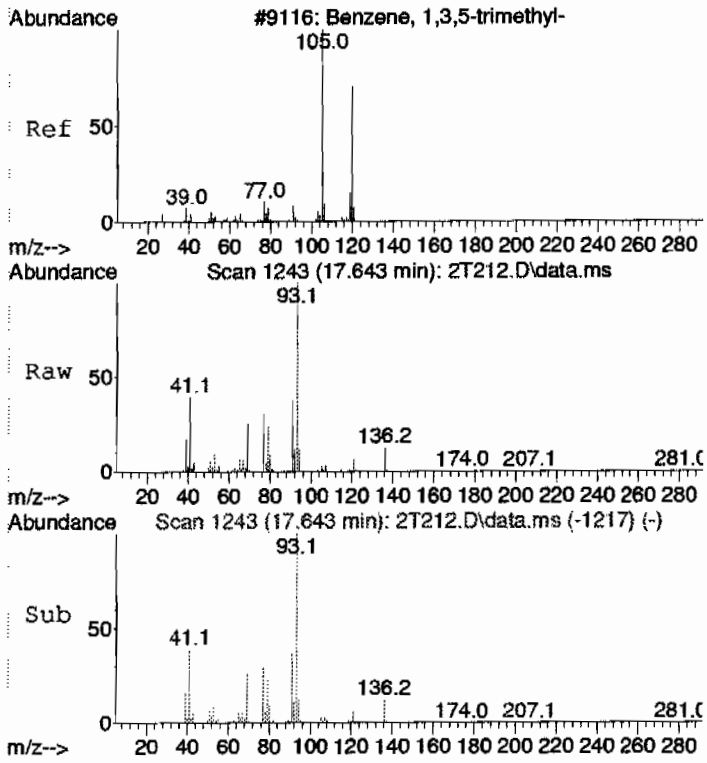

#66 BEFORE analyst integration
1,3,5-Trimethylbenzene
Concen: 4.78 ug/L
RT: 17.643 min Scan# 1243
Delta R.T. 0.012 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion:105 Resp: 126699

Ion	Ratio	Lower	Upper
105	100		
120	31.1	0.0	57.9

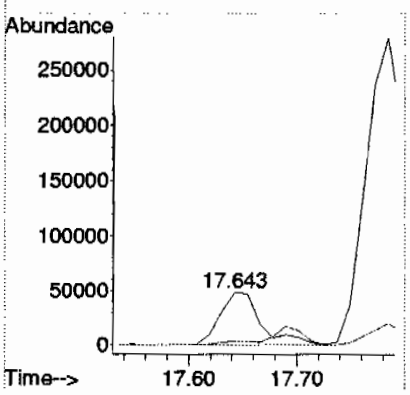

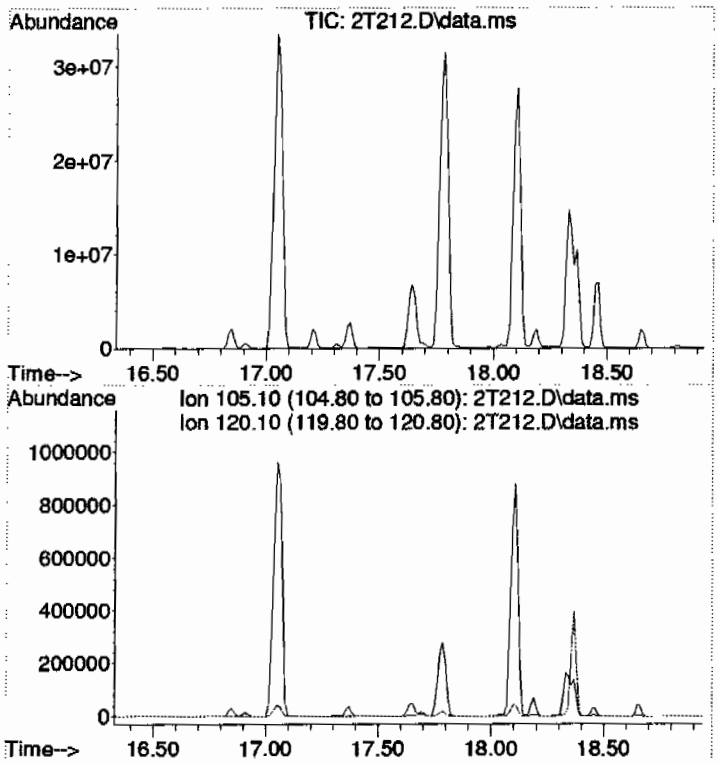

#66 AFTER analyst integration
1,3,5-Trimethylbenzene
Concen: N.D. DELETED
Expected RT: 17.63 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	27.9

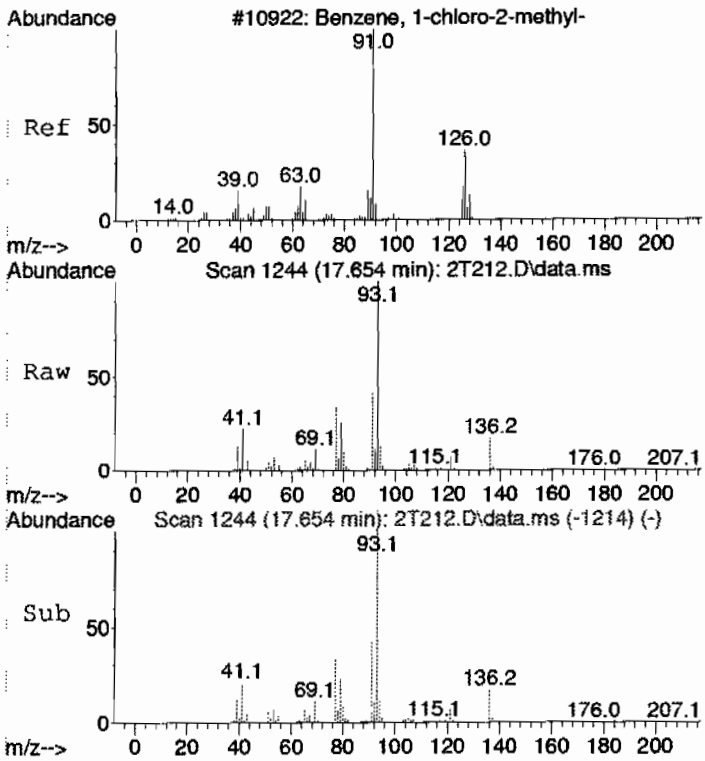

#67 BEFORE analyst integration
2-Chlorotoluene
Concen: 59.07 ug/L
RT: 17.654 min Scan# 1244
Delta R.T. 0.059 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91 Resp: 1515770

Ion	Ratio	Lower	Upper
91	100		
126	0.0	3.5	63.5#

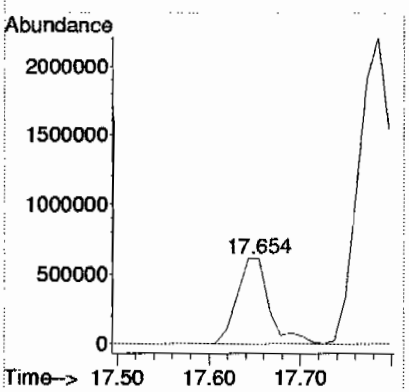

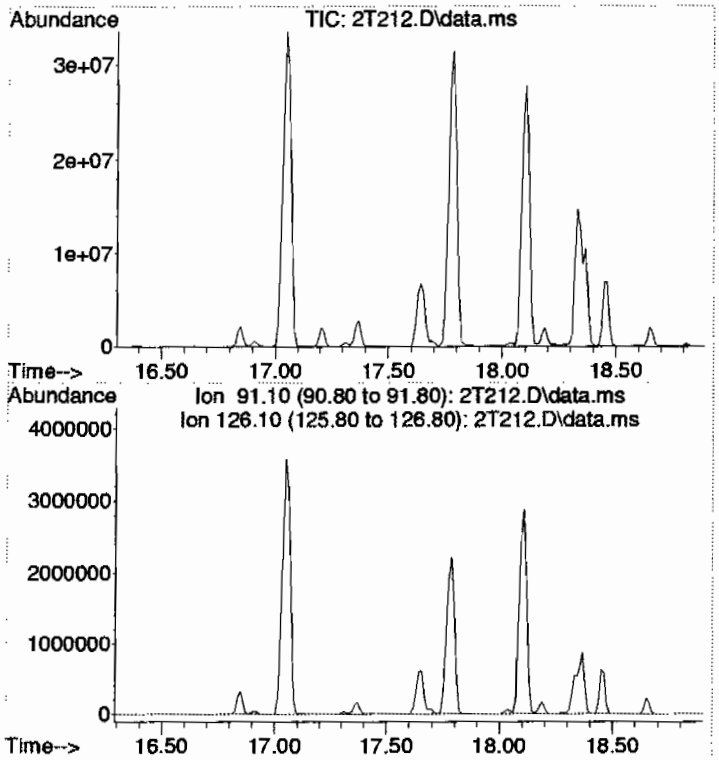

#67 AFTER analyst integration
2-Chlorotoluene
Concen: N.D. DELETED
Expected RT: 17.59 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	33.5

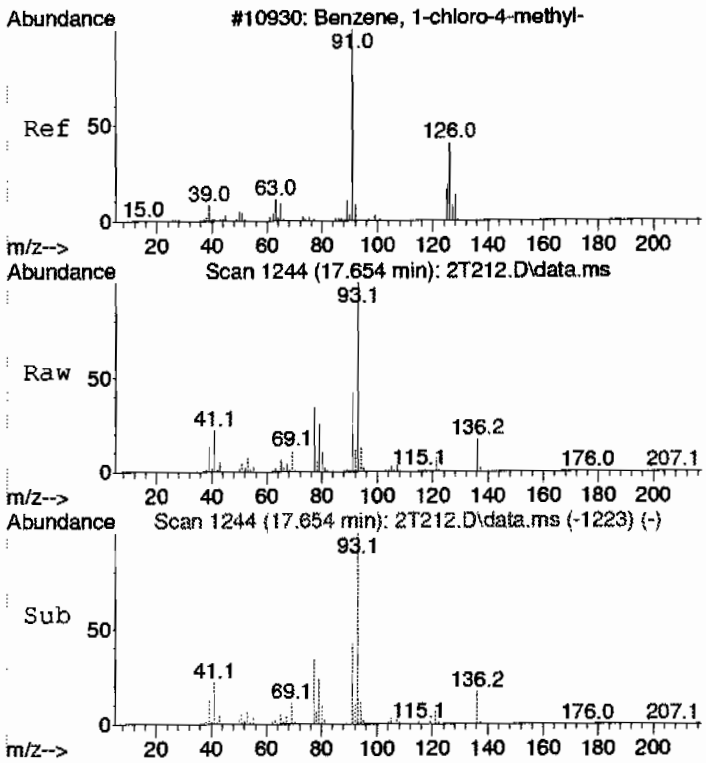

#68 BEFORE analyst integration
4-Chlorotoluene
Concen: 64.87 ug/L
RT: 17.654 min Scan# 1244
Delta R.T. -0.048 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91 Resp: 1515770

Ion	Ratio	Lower	Upper
91	100		
126	0.0	7.5	67.5#

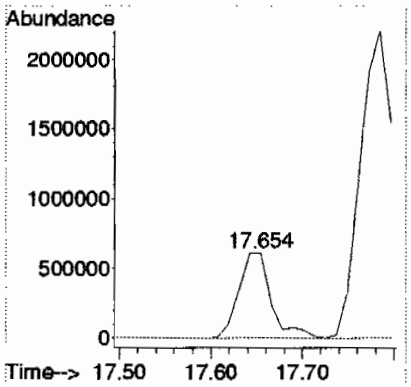

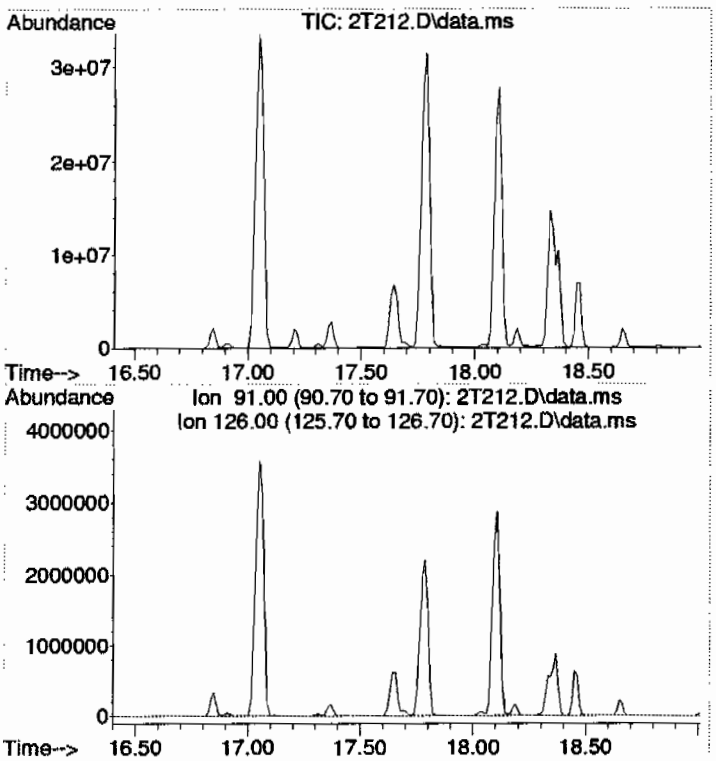

#68 AFTER analyst integration
4-Chlorotoluene
Concen: N.D. DELETED
Expected RT: 17.70 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	37.5

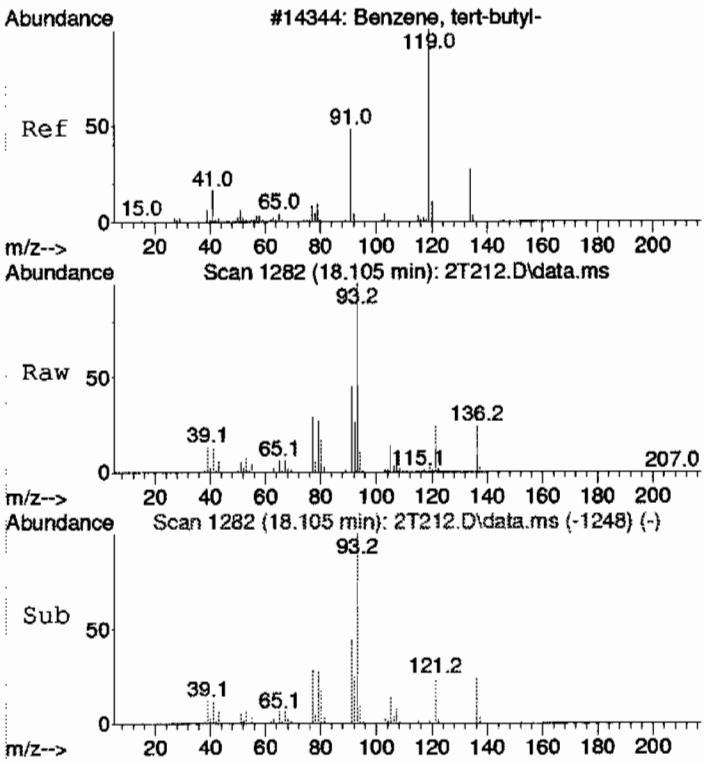

#69 BEFORE analyst integration
tert-Butylbenzene
Concen: 19.61 ug/L
RT: 18.105 min Scan# 1282
Delta R.T. 0.107 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion:119 Resp: 530339

Ion	Ratio	Lower	Upper
119	100		
91	1239.7	36.1	96.1#
134	0.0	0.0	53.2

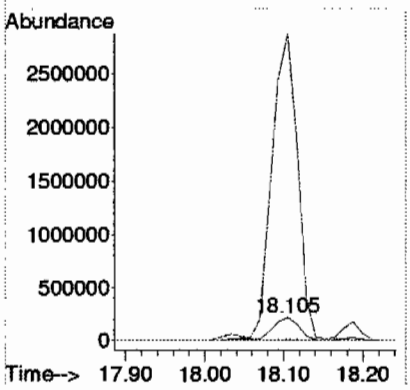

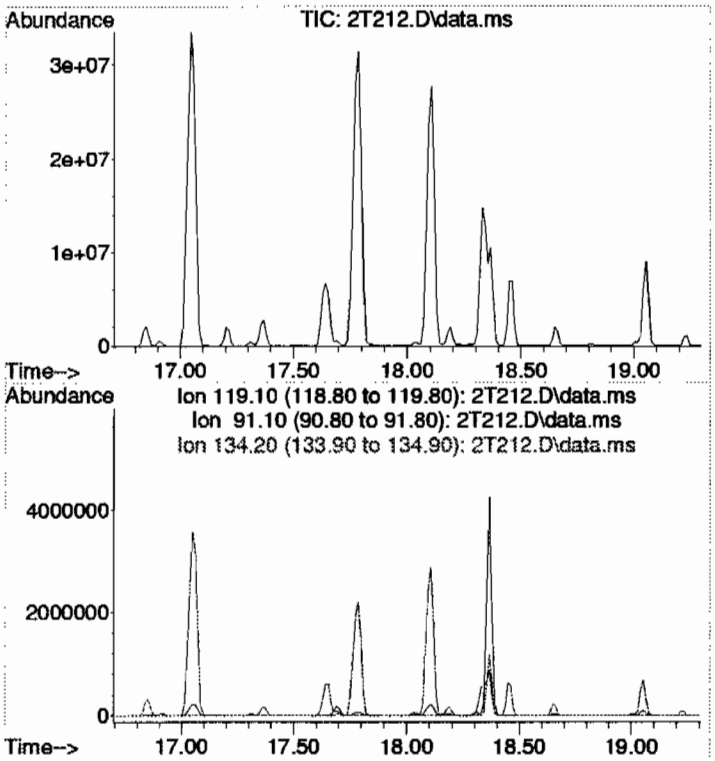

#69 AFTER analyst integration
tert-Butylbenzene
Concen: N.D. DELETED
Expected RT: 18.00 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 119

Sig	Exp Ratio
119	100
91	66.1
134	23.2

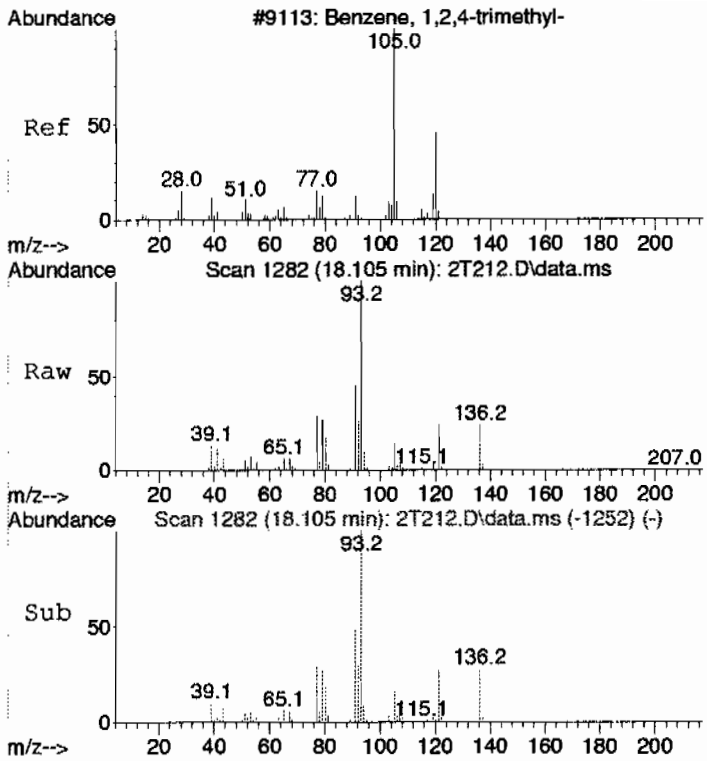

#70 BEFORE analyst integration
1,2,4-Trimethylbenzene
Concen: 71.12 ug/L
RT: 18.105 min Scan# 1282
Delta R.T. 0.059 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion:105 Resp: 1952502

Ion	Ratio	Lower	Upper
105	100		
120	5.4	26.4	86.4#

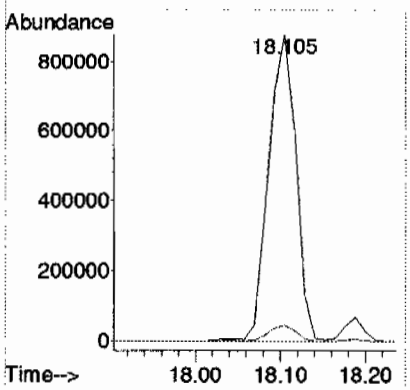

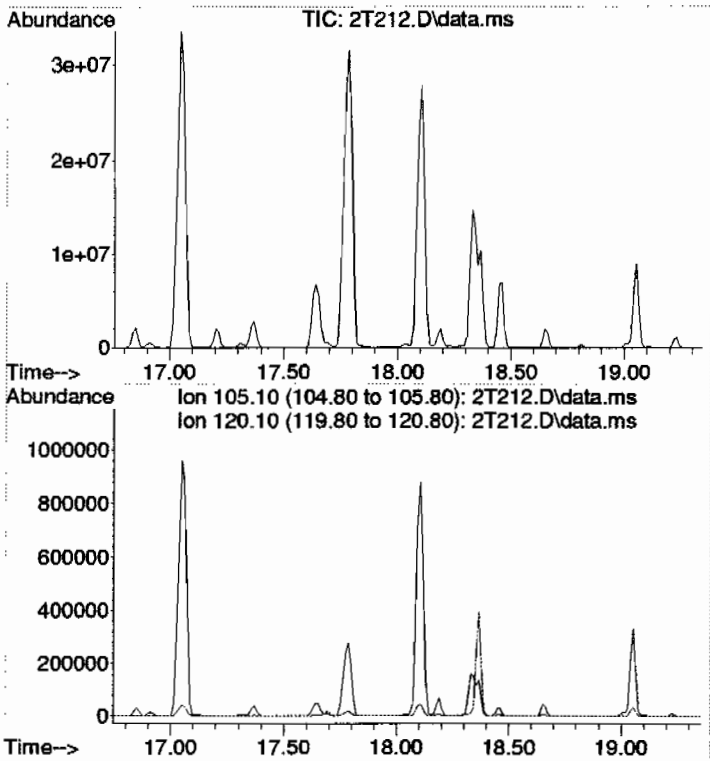

#70 AFTER analyst integration
1,2,4-Trimethylbenzene
Concen: N.D. DELETED
Expected RT: 18.05 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	56.4

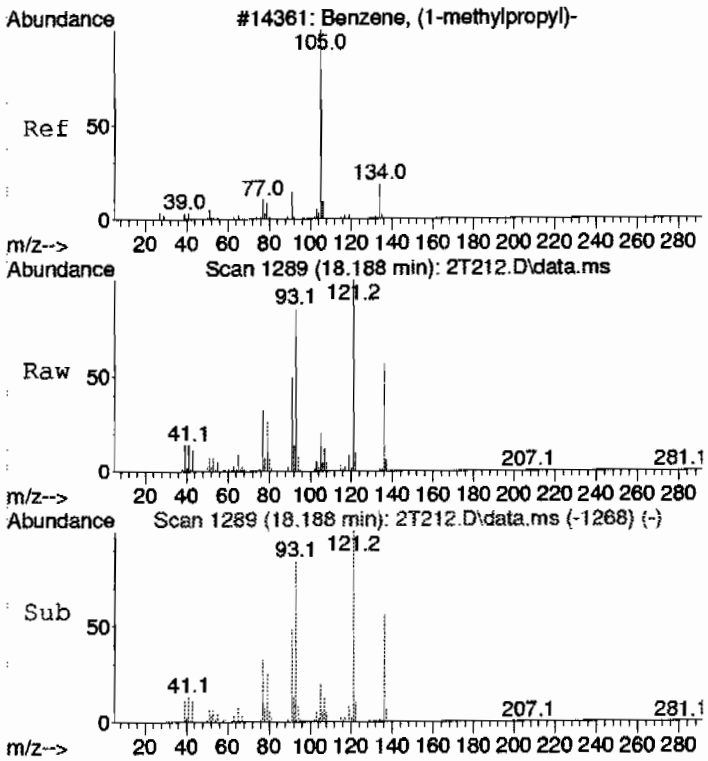

#71 BEFORE analyst integration
sec-Butylbenzene
Concen: 3.04 ug/L
RT: 18.188 min Scan# 1289
Delta R.T. -0.047 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion:105 Resp: 108631

Ion	Ratio	Lower	Upper
105	100		
134	7.3	0.0	51.8

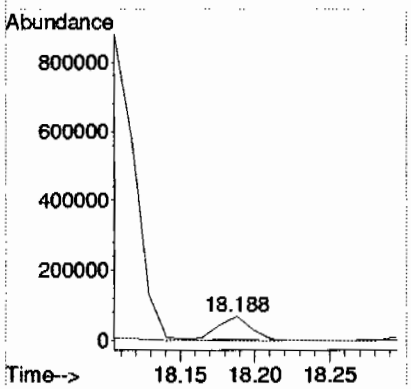

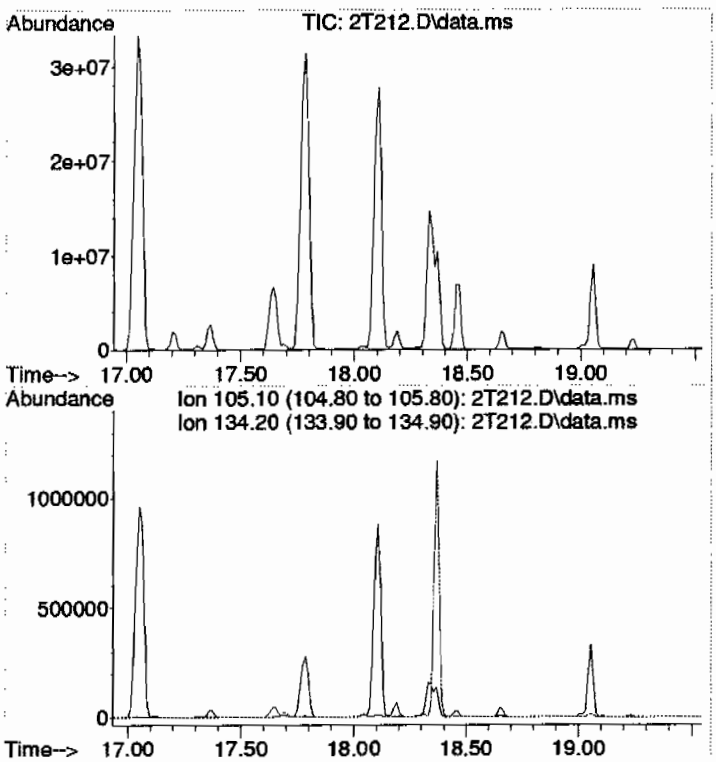

#71 AFTER analyst integration
sec-Butylbenzene
Concen: N.D. DELETED
Expected RT: 18.23 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
134	21.8

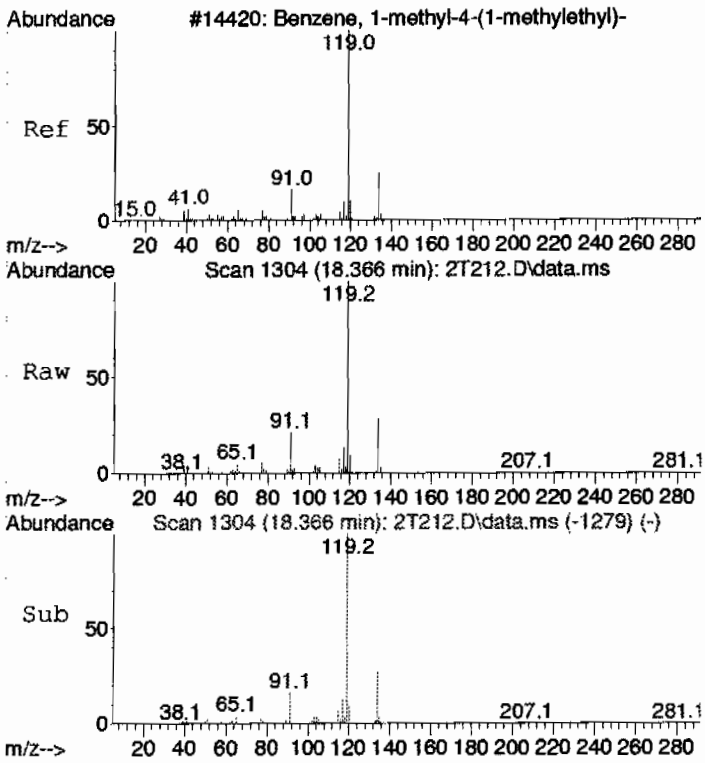

#72
4-Isopropyltoluene
Concen: 230.79 ug/L
RT: 18.366 min Scan# 1304
Delta R.T. -0.000 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion:119 Resp: 6648888

Ion	Ratio	Lower	Upper
119	100		
134	27.9	0.0	58.3
91	36.7	0.0	52.0

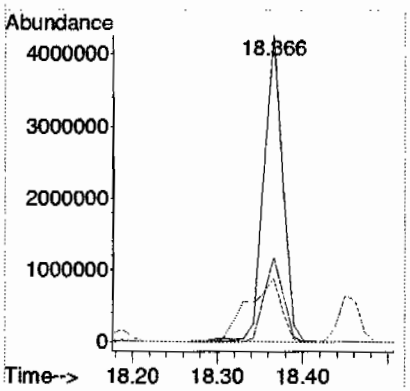

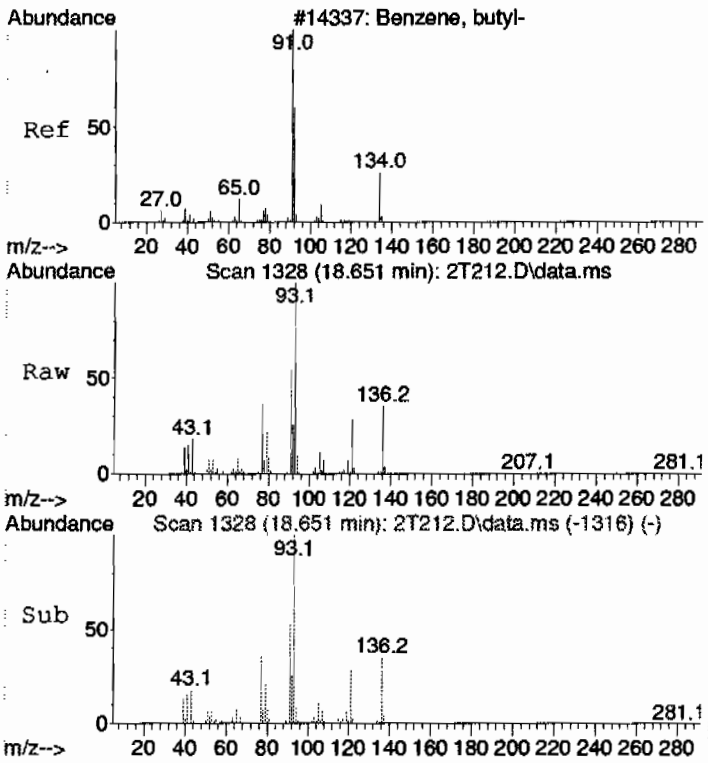

#75 BEFORE analyst integration
n-Butylbenzene
Concen: 13.48 ug/L
RT: 18.651 min Scan# 1328
Delta R.T. -0.154 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91 Resp: 369386

Ion	Ratio	Lower	Upper
91	100		
92	45.6	25.2	85.2
134	3.3	0.0	59.1

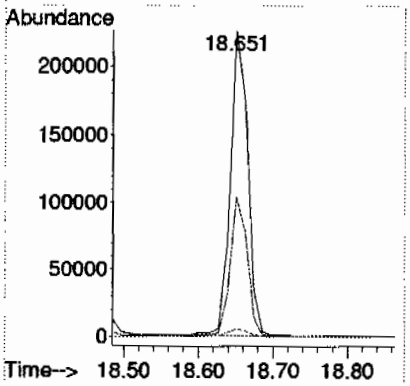

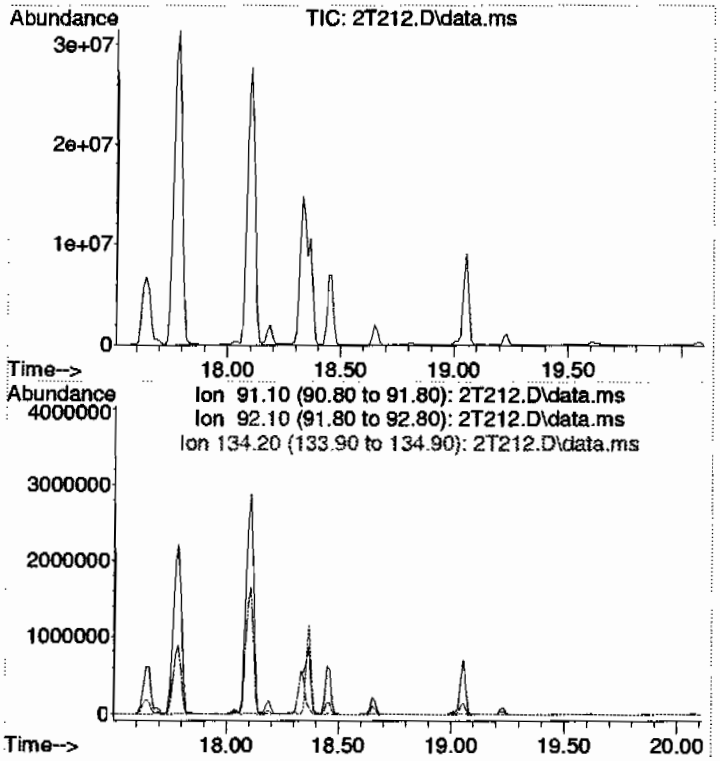

#75 AFTER analyst integration
n-Butylbenzene
Concen: N.D. DELETED
Expected RT: 18.81 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	55.2
134	29.1

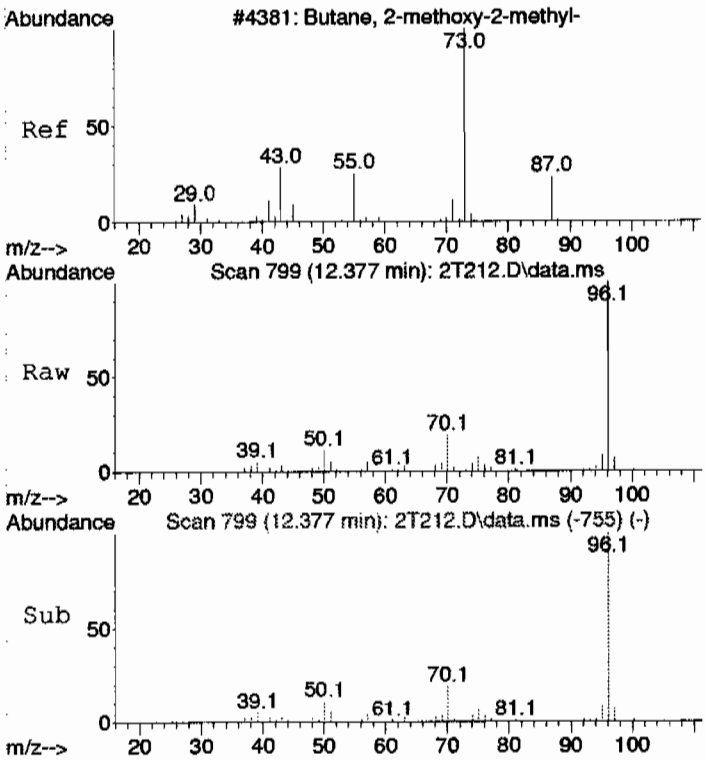

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 1.03 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 73 Resp: 18923

Ion	Ratio	Lower	Upper
73	100		
55	311.3	5.2	65.2#
87	0.0	0.0	54.7

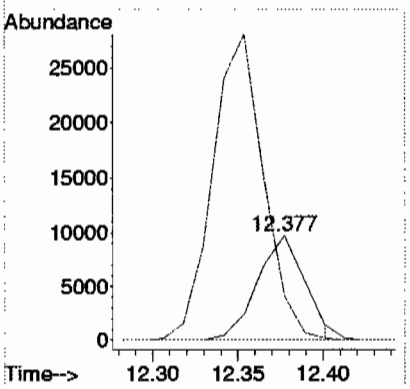

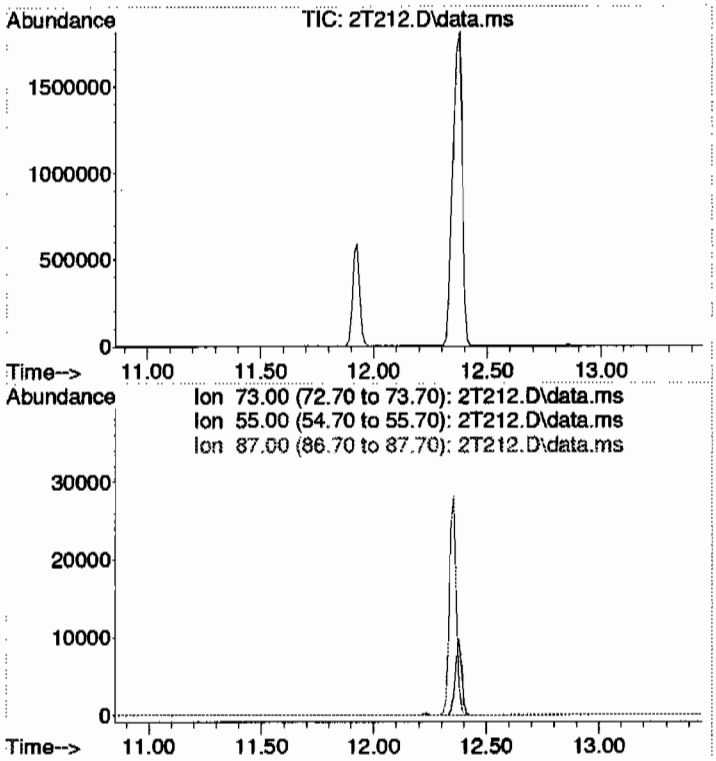

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

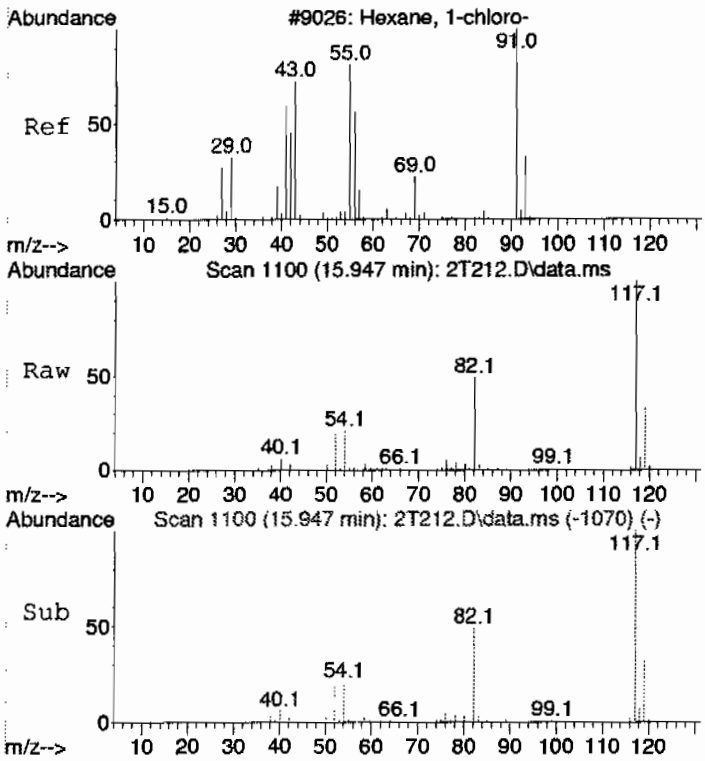

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 2.15 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 55 Resp: 12745

Ion	Ratio	Lower	Upper
55	100		
91	17.6	113.2	173.2#
56	57.4	30.3	90.3

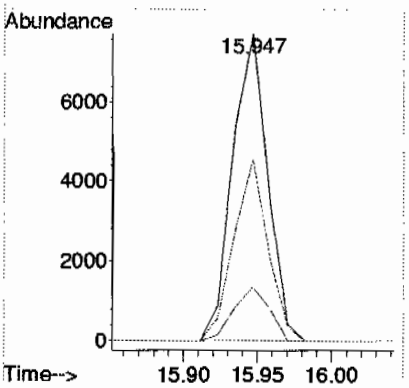

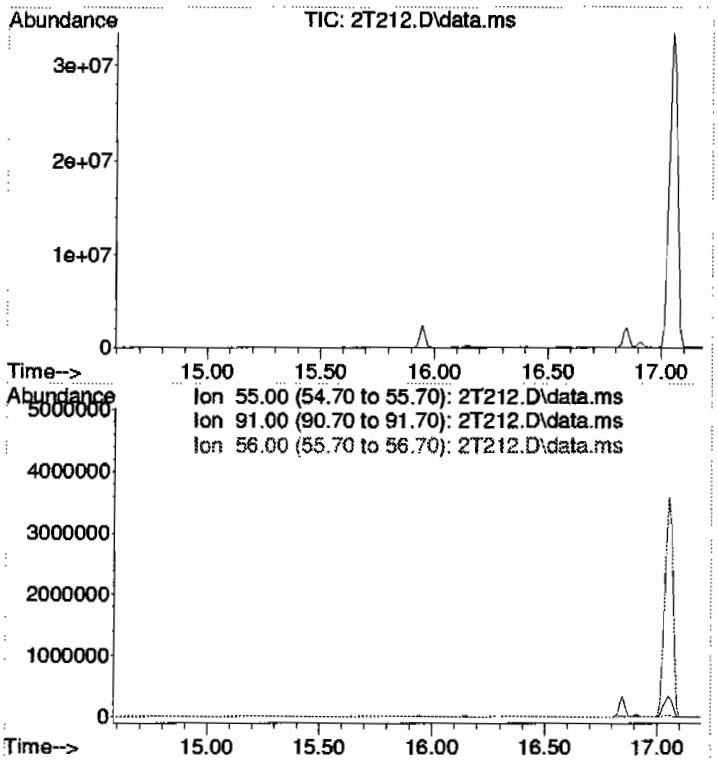

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

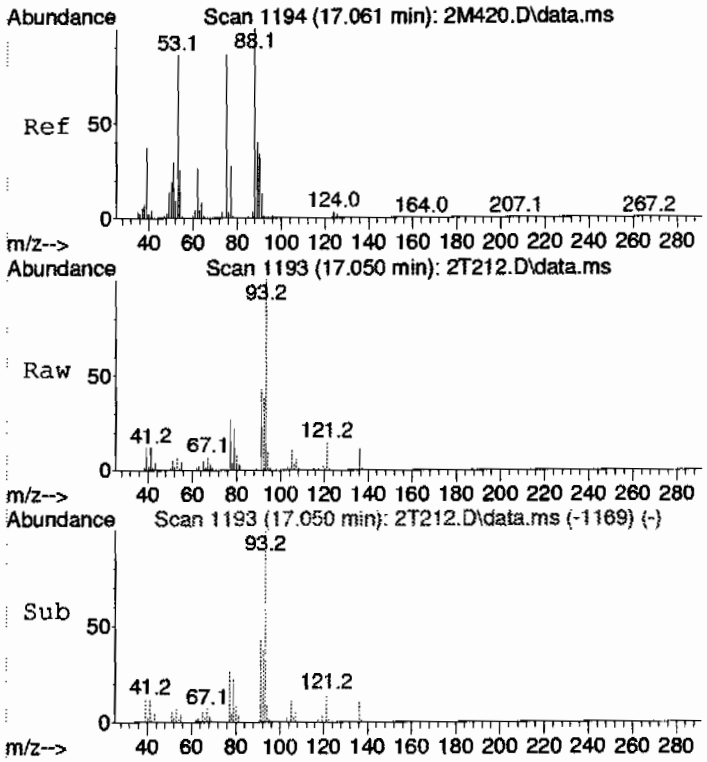

#107 BEFORE analyst integration
cis-1,4-Dichloro-2-butene
Concen: 663.26 ug/L
RT: 17.050 min Scan# 1193
Delta R.T. -0.012 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 53 Resp: 1571019

Ion	Ratio	Lower	Upper
53	100		
88	0.4	80.3	140.3#
77	365.7	1.2	61.2#

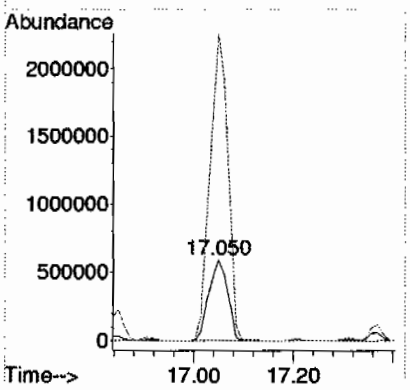

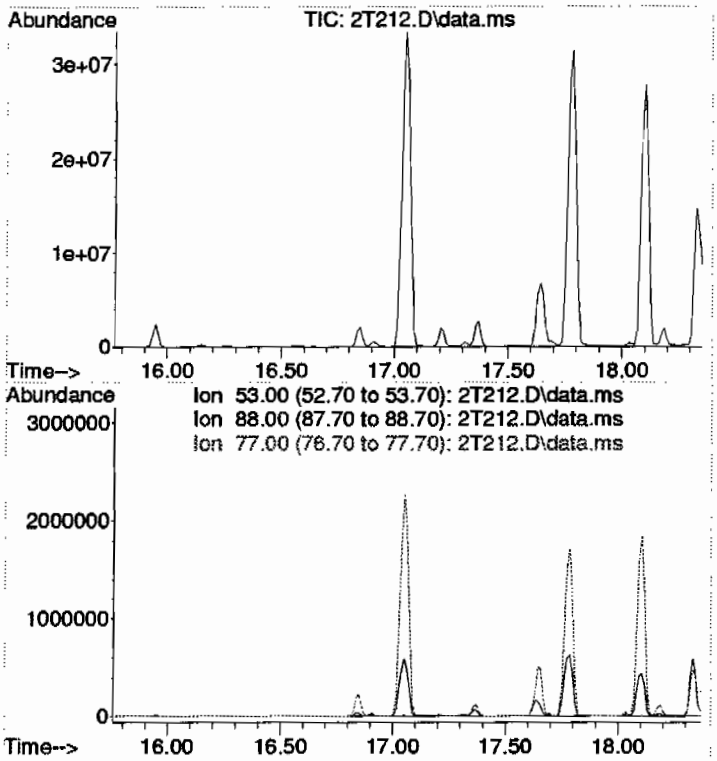

#107 AFTER analyst integration
cis-1,4-Dichloro-2-butene
Concen: N.D. DELETED
Expected RT: 17.06 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	110.3
77	31.2

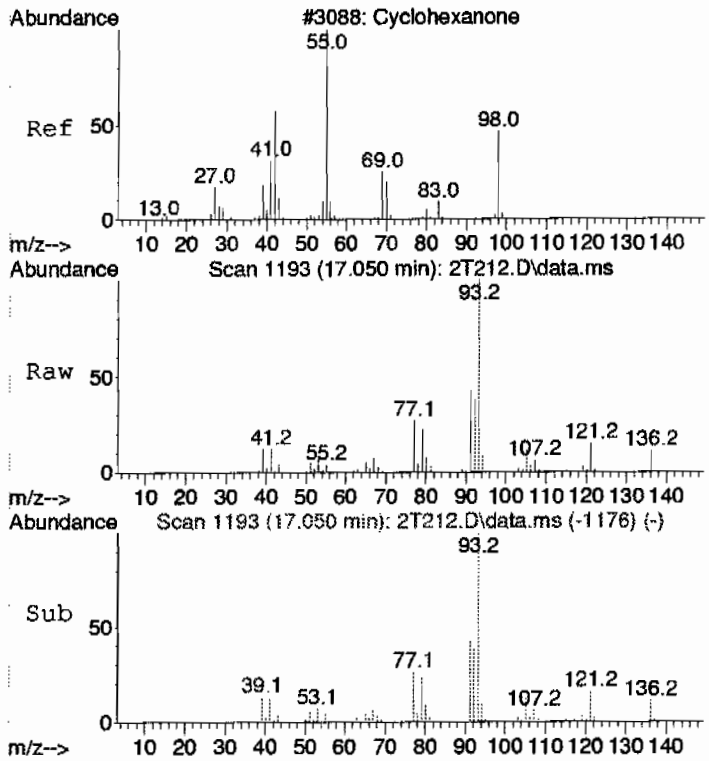

#108 BEFORE analyst integration
Cyclohexanone
Concen: 230.73 ug/L
RT: 17.050 min Scan# 1193
Delta R.T. -0.095 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 42 Resp: 206022

Ion	Ratio	Lower	Upper
42	100		
55	445.9	108.9	168.9#
98	2.2	33.1	93.1#

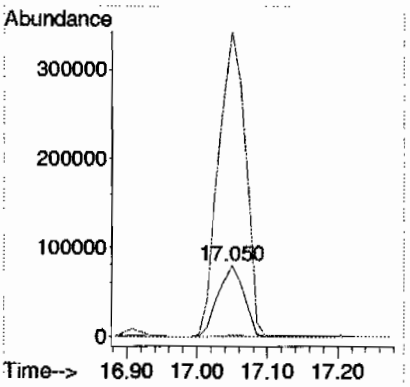

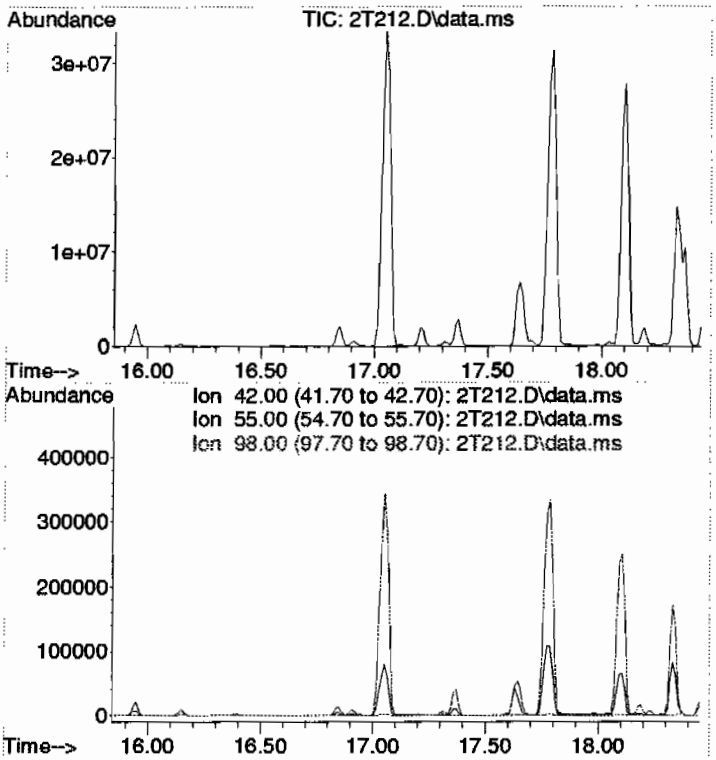

#108 AFTER analyst integration
Cyclohexanone
Concen: N.D. DELETED
Expected RT: 17.14 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 42

Sig	Exp Ratio
42	100
55	138.9
98	63.1

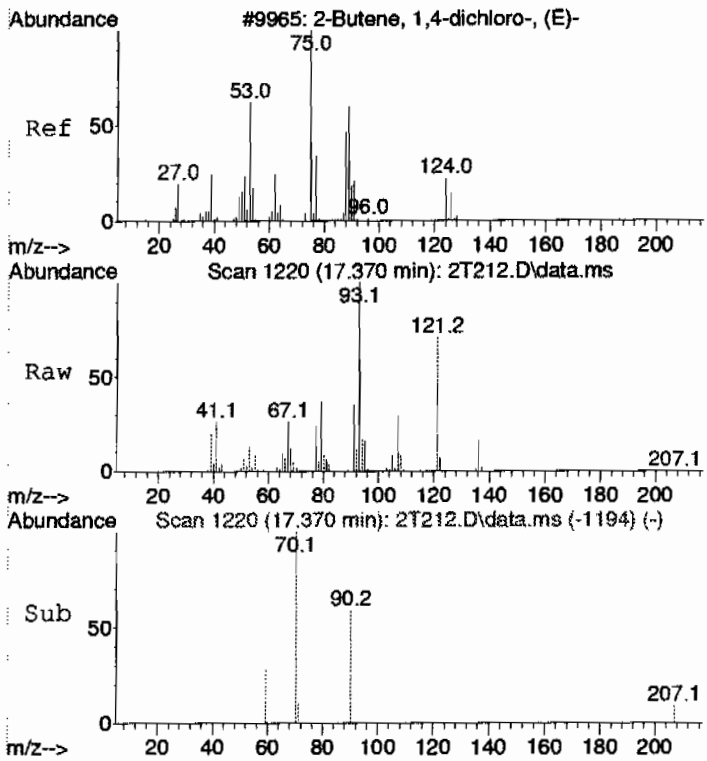

#109 BEFORE analyst integration
trans-1,4-Dichloro-2-butene
Concen: 51.12 ug/L
RT: 17.370 min Scan# 1220
Delta R.T. 0.012 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 53 Resp: 118123

Ion	Ratio	Lower	Upper
53	100		
88	0.2	21.1	81.1#
75	2.3	88.8	148.8#

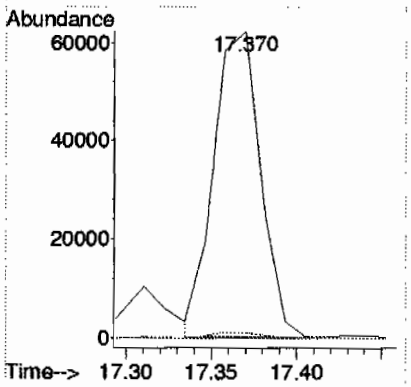

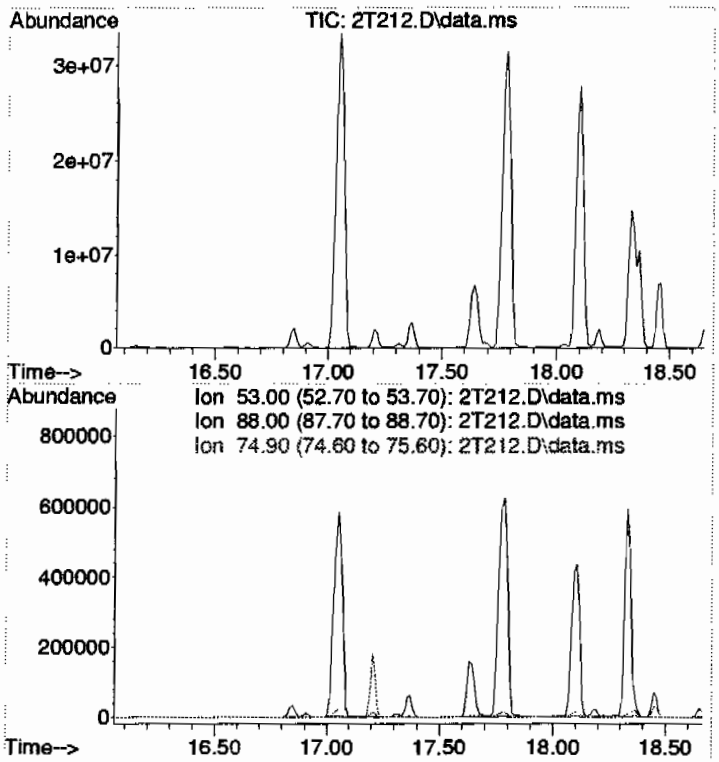

#109 AFTER analyst integration
trans-1,4-Dichloro-2-butene
Concen: N.D. DELETED
Expected RT: 17.36 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	51.1
75	118.8

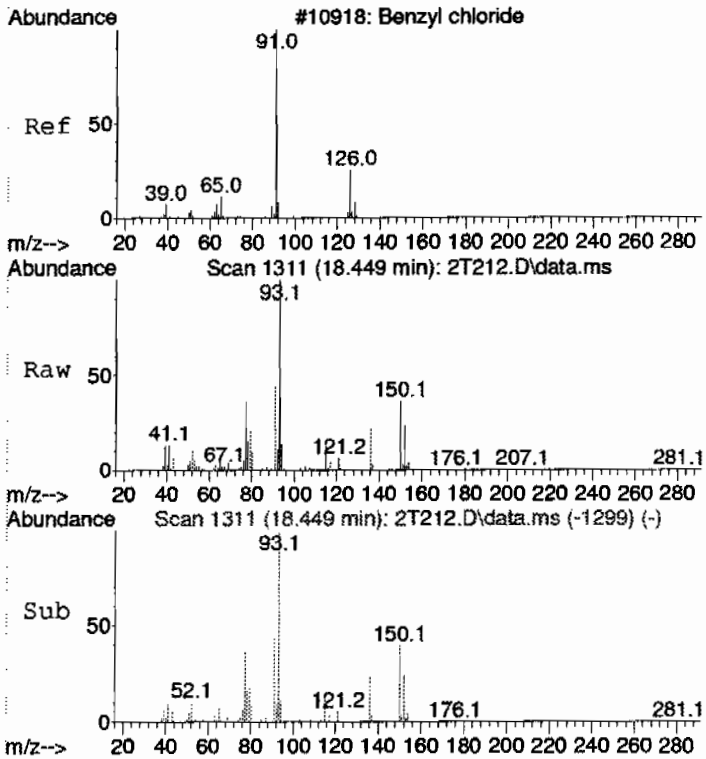

#111 BEFORE analyst integration
Benzyl chloride
Concen: 90.53 ug/L
RT: 18.449 min Scan# 1311
Delta R.T. -0.154 min
Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91 Resp: 1115861

Ion	Ratio	Lower	Upper
91	100		
126	0.0	0.0	53.5
65	17.1	0.0	41.0

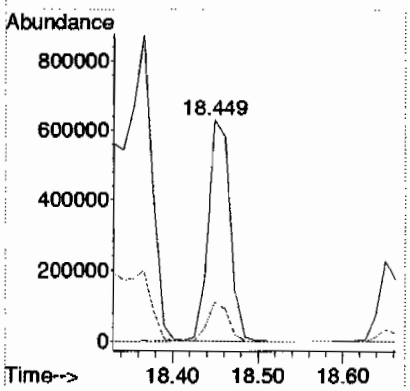

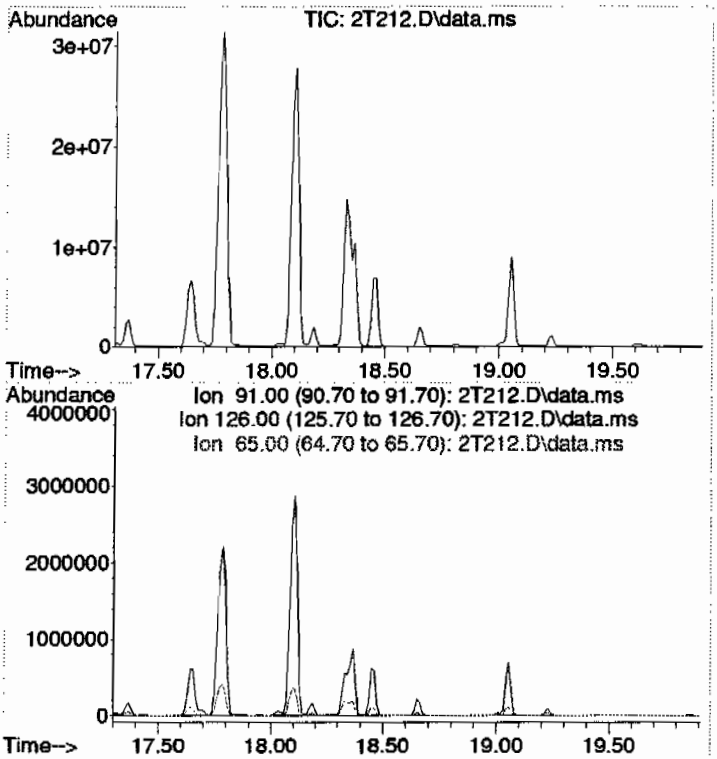

#111 AFTER analyst integration
Benzyl chloride
Concen: N.D. DELETED
Expected RT: 18.60 min

Lab File: 2T212.D
Acq: 7 Jul 2009 12:46 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	23.5
65	11.0

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T212.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.360	143	153	171	rBB	234452	1619906	1.92%	0.448%
2	4.687	172	175	178	rBB	270	599	0.00%	0.000%
3	5.029	190	198	210	rBV	206	3036	0.00%	0.001%
4	6.021	261	263	266	rBV	738	2225	0.00%	0.001%
5	6.934	336	340	348	rVB	1344	3625	0.00%	0.001%
6	7.883	415	420	439	rBV	38480	131559	0.16%	0.036%
7	8.689	484	488	501	rVB	28368	74536	0.09%	0.021%
8	8.879	501	504	512	rVB2	815	2351	0.00%	0.001%
9	9.674	568	571	581	rBV2	2821	7574	0.01%	0.002%
10	10.788	663	665	673	rBV2	463	1622	0.00%	0.000%
11	10.931	673	677	695	rVB	1043	3752	0.00%	0.001%
12	11.227	698	702	706	rBV	3026	6598	0.01%	0.002%
13	11.927	755	761	769	rBV	587777	1258903	1.49%	0.349%
14	12.223	784	786	790	rVB	1055	1951	0.00%	0.001%
15	12.377	790	799	817	rVB2	1809559	5162585	6.12%	1.429%
16	12.852	836	839	849	rBV	5485	11651	0.01%	0.003%
17	13.018	849	853	855	rBV	1193	2041	0.00%	0.001%
18	13.670	906	908	915	rBV	3511	6999	0.01%	0.002%
19	13.800	915	919	923	rVB	2985	4828	0.01%	0.001%
20	13.978	931	934	938	rBV2	3592	5337	0.01%	0.001%
21	14.298	955	961	966	rBV	2183255	4233540	5.02%	1.172%
22	14.381	966	968	973	rVB	103396	179191	0.21%	0.050%
23	14.713	992	996	1003	rVB	4319	8526	0.01%	0.002%
24	15.105	1027	1029	1032	rBV	975	1169	0.00%	0.000%
25	15.603	1068	1071	1077	rBV	2359	3404	0.00%	0.001%
26	15.947	1094	1100	1108	rBV	2404868	3823738	4.53%	1.059%
27	16.148	1108	1117	1123	rVV	236874	390703	0.46%	0.108%
28	16.267	1123	1127	1131	rVV	14370	27089	0.03%	0.007%
29	16.386	1133	1137	1144	rVB	9177	16608	0.02%	0.005%
30	16.563	1149	1152	1156	rVV3	18201	37243	0.04%	0.010%
31	16.635	1156	1158	1164	rVB2	3577	6395	0.01%	0.002%
32	16.848	1171	1176	1179	rBV	2118186	3763880	4.46%	1.042%
33	16.907	1179	1181	1187	rVB	533206	963644	1.14%	0.267%
34	17.050	1187	1193	1203	rBV	33443478	84409883	100.00%	23.370%
35	17.204	1203	1206	1212	rVB	2015381	3435503	4.07%	0.951%
36	17.311	1212	1215	1217	rBV	438972	793200	0.94%	0.220%
37	17.370	1217	1220	1224	rVB	2752735	4996513	5.92%	1.383%

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

38	17.536	1231	1234	1236	rBV	13017	21895	0.03%	0.006%
39	17.643	1237	1243	1250	rBV2	6704324	17112424	20.27%	4.738%
40	17.785	1250	1255	1266	rVB	31391580	78801869	93.36%	21.817%
41	18.105	1273	1282	1286	rBV	27710518	63149321	74.81%	17.483%
42	18.188	1286	1289	1295	rVV	1960778	3394147	4.02%	0.940%
43	18.330	1296	1301	1308	rVV2	14721320	44119389	52.27%	12.215%
44	18.461	1308	1312	1321	rVB	6920003	12890193	15.27%	3.569%
45	18.651	1325	1328	1337	rVB	1985900	3224475	3.82%	0.893%
46	18.805	1337	1341	1354	rVB	253037	422569	0.50%	0.117%
47	19.054	1354	1362	1373	rBV	9022357	15614791	18.50%	4.323%
48	19.232	1373	1377	1391	rVB	1071002	1745720	2.07%	0.483%
49	19.445	1392	1395	1403	rVB	38893	72985	0.09%	0.020%
50	19.611	1404	1409	1427	rBV2	279512	811760	0.96%	0.225%
51	19.860	1427	1430	1434	rBV	54561	103554	0.12%	0.029%
52	20.074	1444	1448	1466	rVB	349361	658189	0.78%	0.182%
53	20.666	1495	1498	1513	rBV3	260387	1155392	1.37%	0.320%
54	20.892	1514	1517	1530	rVV	964904	2148875	2.55%	0.595%
55	21.117	1534	1536	1562	rVB	106338	276360	0.33%	0.077%
56	23.050	1695	1699	1707	rBV	27686	69056	0.08%	0.019%

Sum of corrected areas: 361194871

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

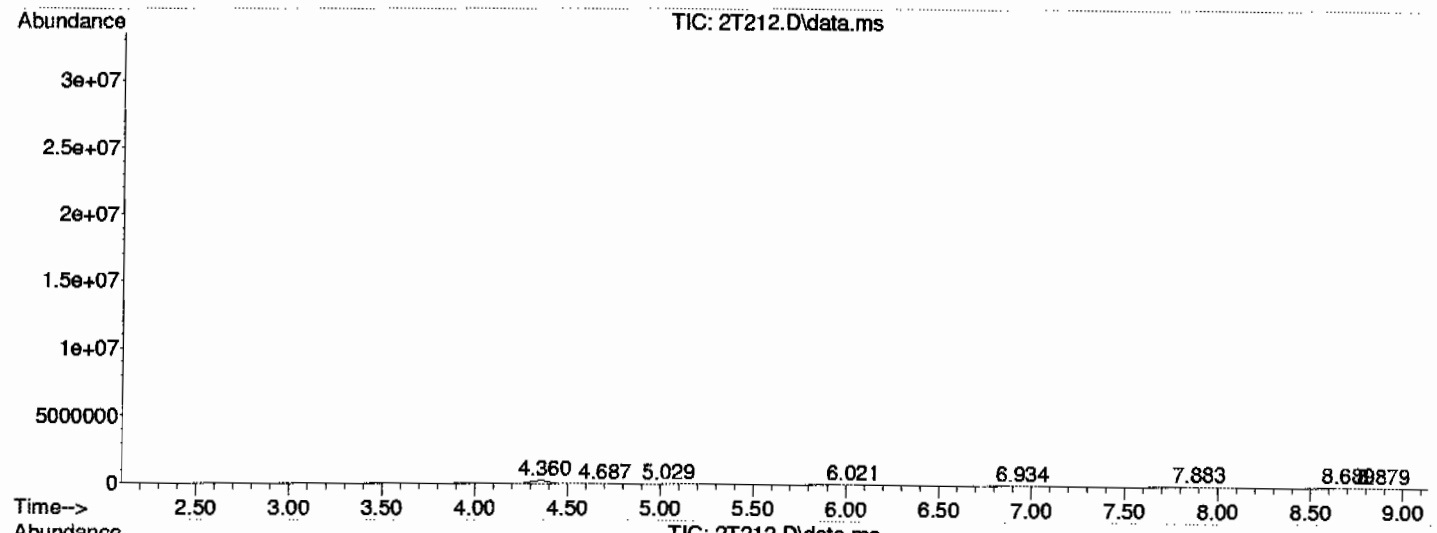

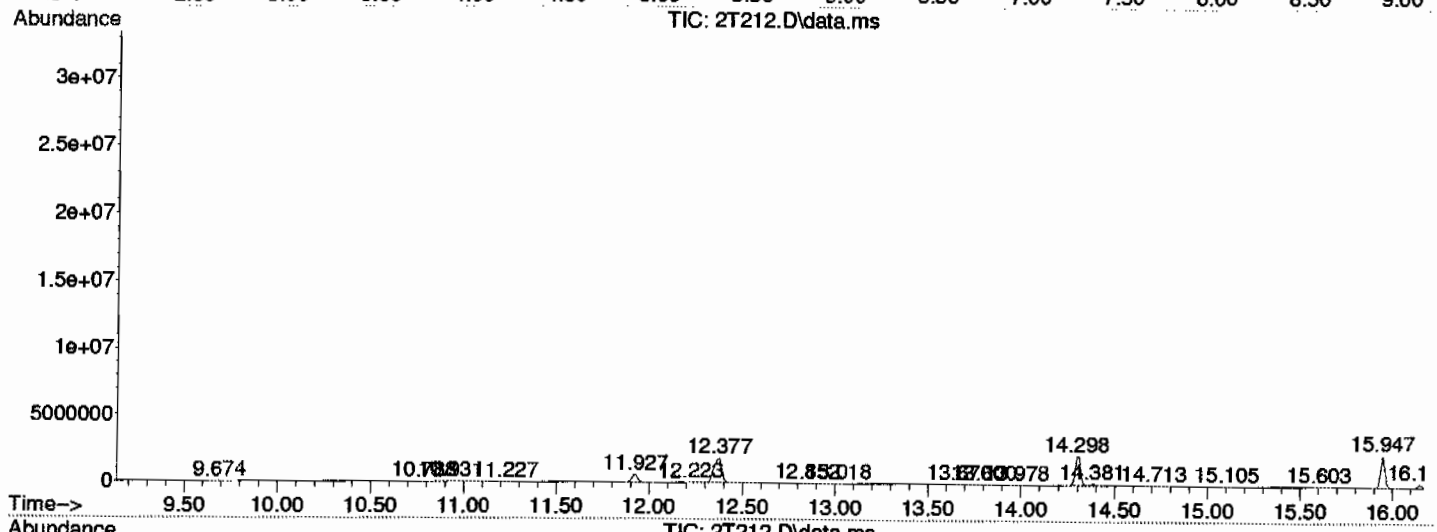

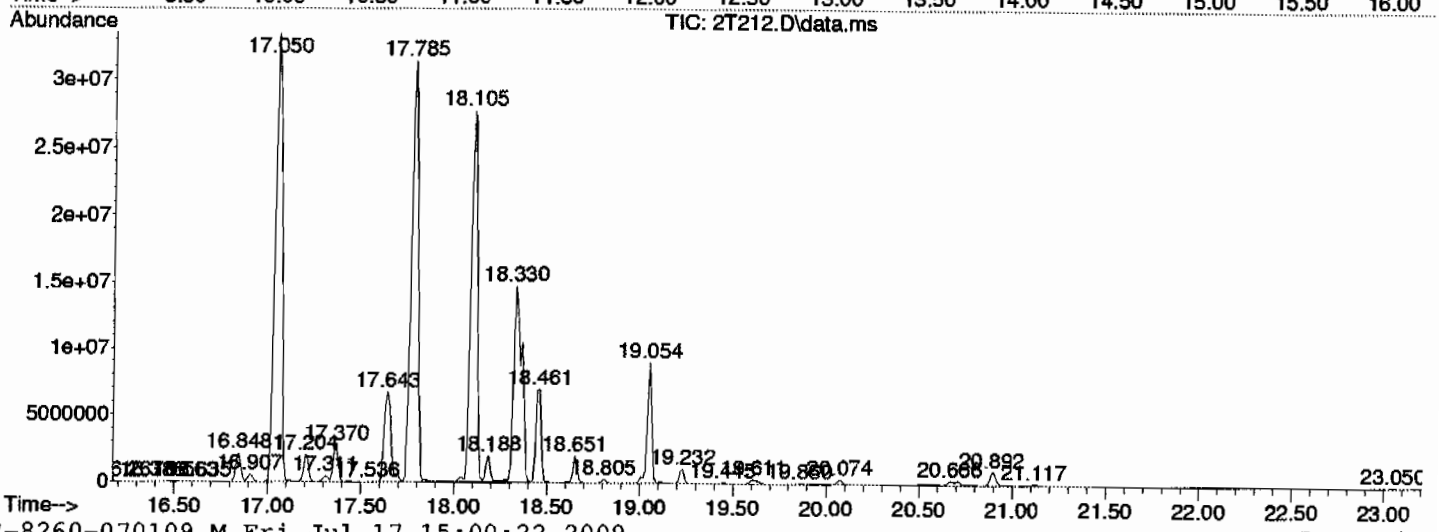

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.360	15.69 ug/L	1619910	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

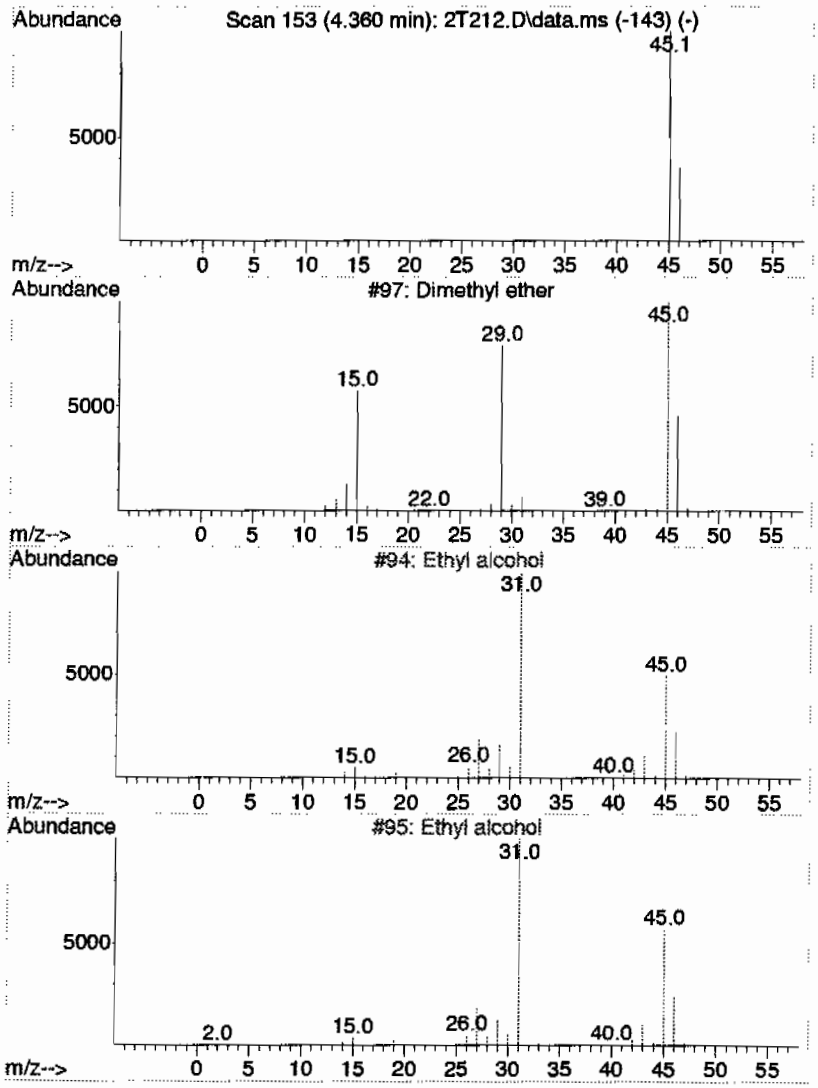

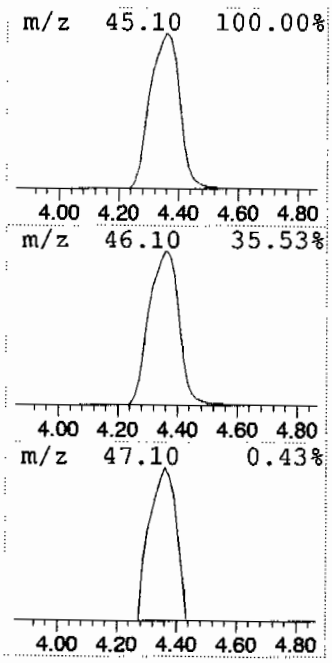

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 2 Nonane Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.148	5.11 ug/L	390703	B Chlorobenzene-d5	15.947

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonane	128	C9H20	000111-84-2	97
2	Nonane	128	C9H20	000111-84-2	94
3	Nonane	128	C9H20	000111-84-2	83
4	Decane	142	C10H22	000124-18-5	59
5	Octane	114	C8H18	000111-65-9	59

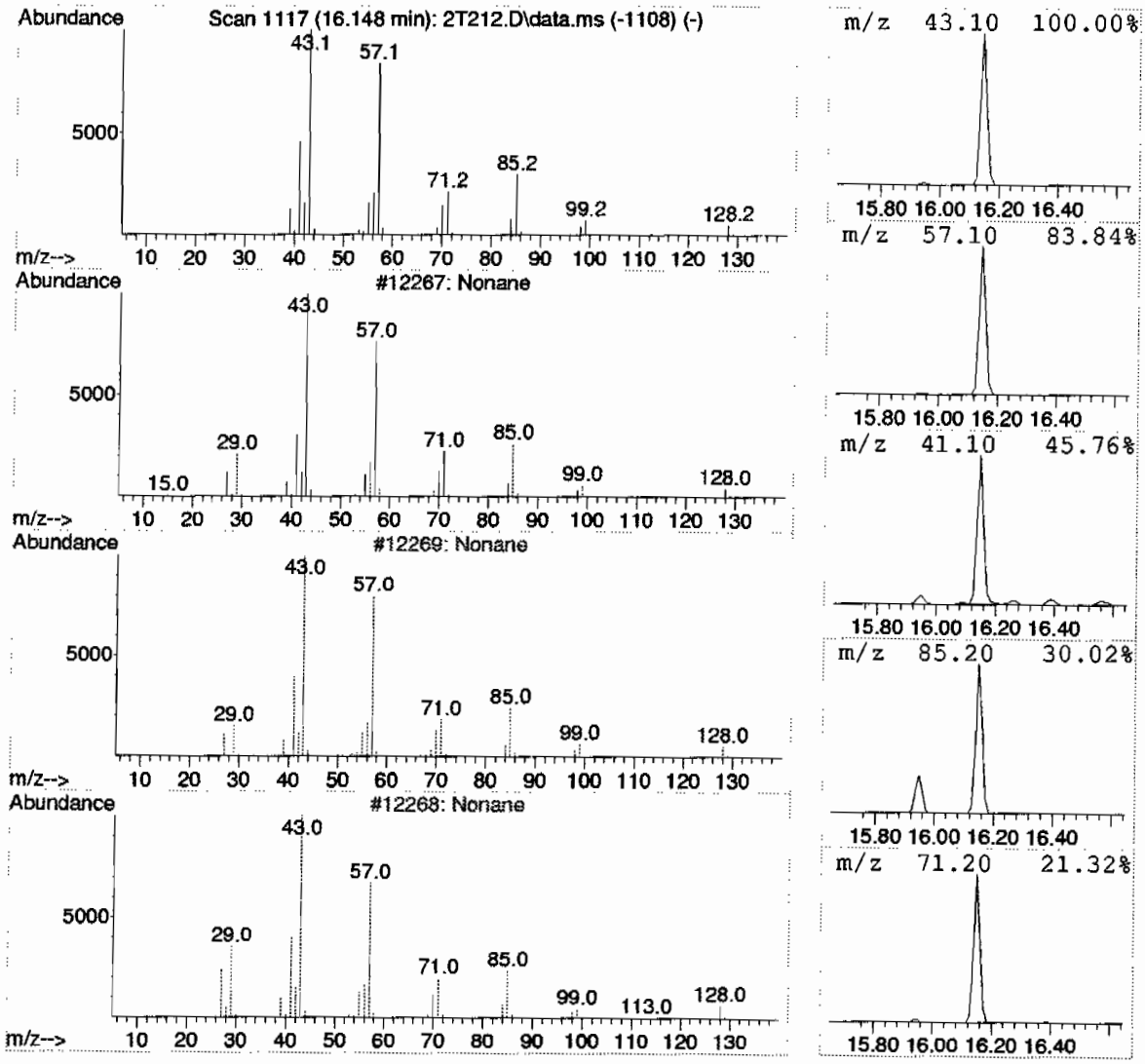

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 3 unknown hydrocarbon Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.848	49.22 ug/L	3763880	B Chlorobenzene-d5	15.947

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.0]hexane, 4-methyl-1...	136	C10H16	058037-87-9	94
2	Bicyclo[3.1.0]hex-2-ene, 2-methy...	136	C10H16	002867-05-2	91
3	Bicyclo[3.1.0]hex-2-ene, 2-methy...	136	C10H16	002867-05-2	91
4	.alpha.-Phellandrene	136	C10H16	000099-83-2	90
5	.alpha.-Phellandrene	136	C10H16	000099-83-2	83

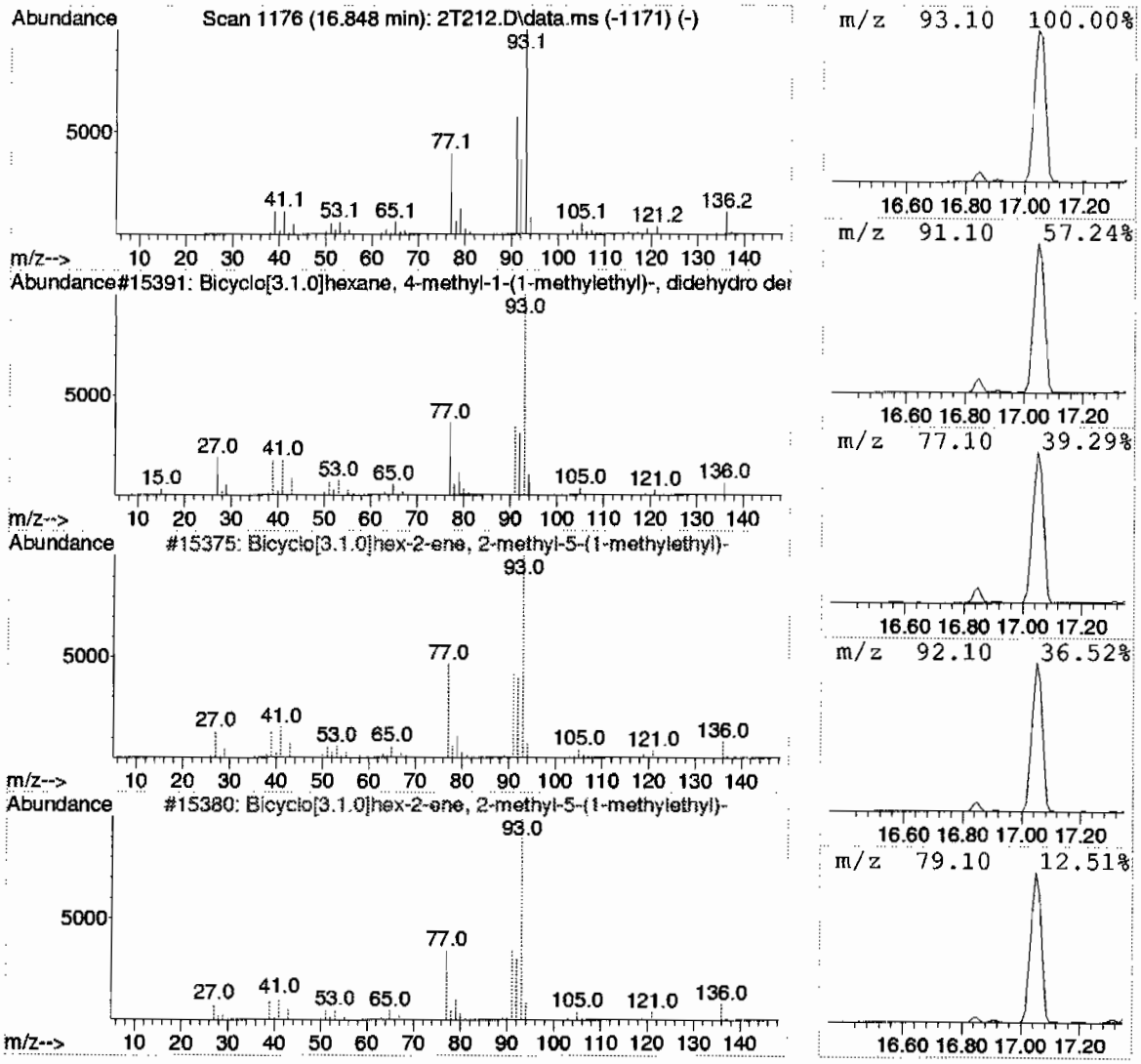

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 4 unknown hydrocarbon Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.907	12.60 ug/L	963644	B Chlorobenzene-d5	15.947

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tricyclo[2.2.1.0(2,6)]heptane, 1...	136	C10H16	000508-32-7	96
2	Tricyclo[2.2.1.0(2,6)]heptane, 1...	136	C10H16	000508-32-7	96
3	3-Carene	136	C10H16	013466-78-9	94
4	Tricyclo[2.2.1.0(2,6)]heptane, 1...	136	C10H16	000508-32-7	94
5	Bicyclo[4.1.0]hept-3-ene, 3,7,7-...	136	C10H16	000498-15-7	94

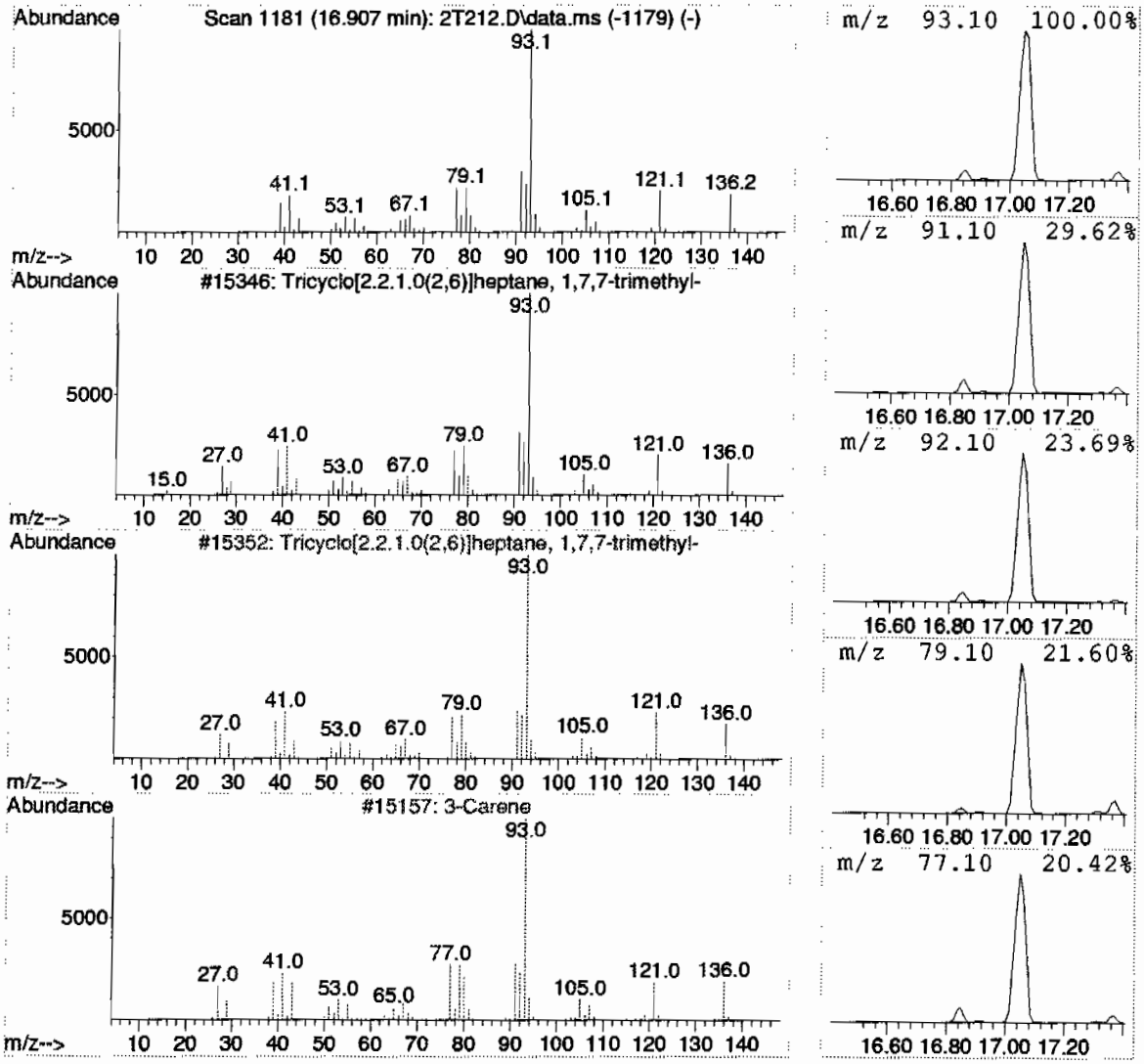

Library Search Compound Report
GEL Laboratories, LLC

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Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

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Peak Number 5 unknown hydrocarbon Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.050	1103.76 ug/L	84409900	B Chlorobenzene-d5	15.947

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1R-.alpha.-Pinene	136	C10H16	007785-70-8	96
2	1R-.alpha.-Pinene	136	C10H16	007785-70-8	95
3	Bicyclo[3.1.1]hept-2-ene, 3,6,6-...	136	C10H16	004889-83-2	94
4	Bicyclo[3.1.1]hept-2-ene, 2,6,6-...	136	C10H16	002437-95-8	94
5	.alpha.-Pinene	136	C10H16	000080-56-8	94

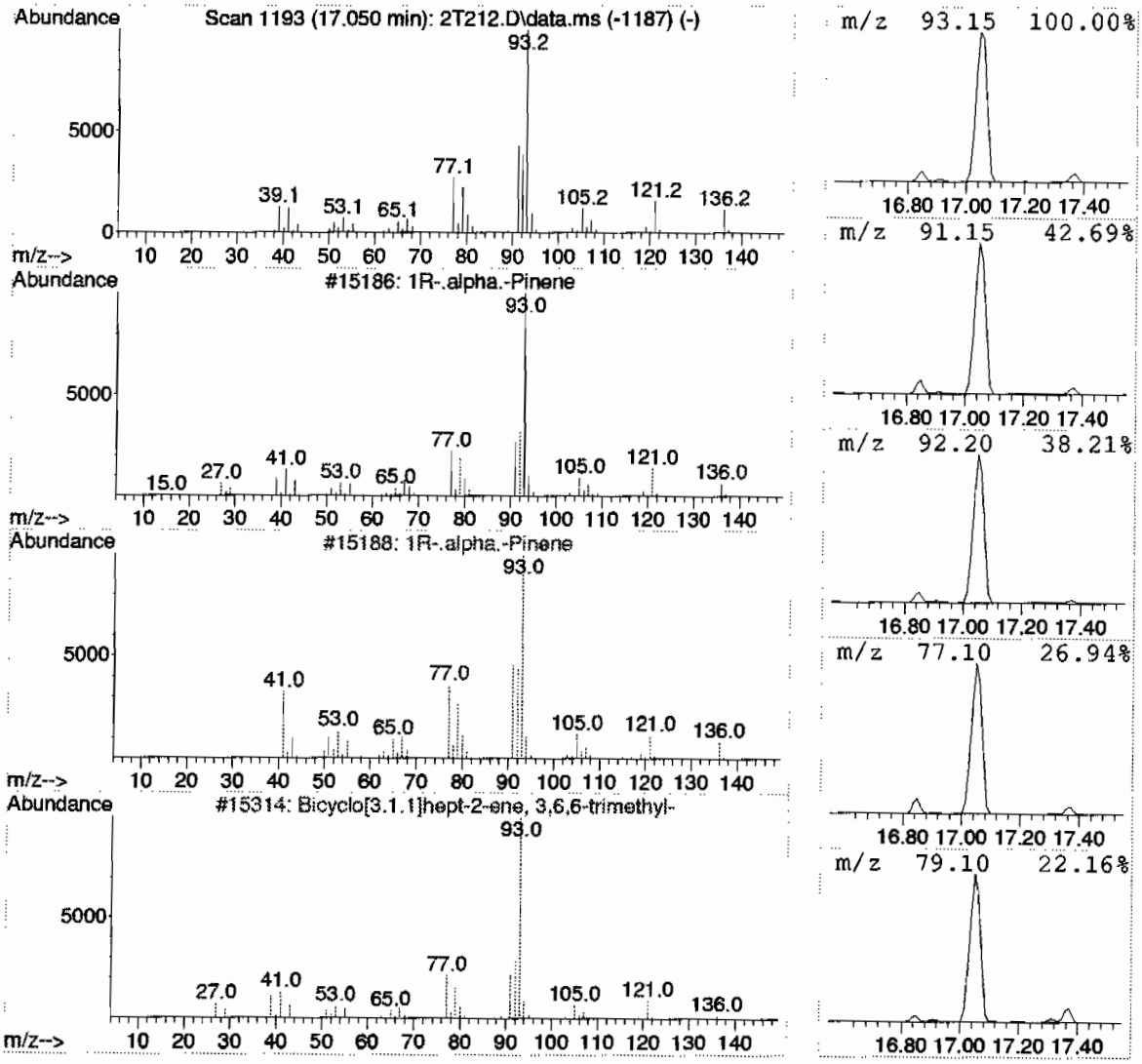

Library Search Compound Report
GEL Laboratories, LLC

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ALS Vial  : 12   Sample Multiplier: 1

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Quant Title  : Volatile Organics 8260B

TIC Library    : C:\Database\NIST05.L
TIC Integration Parameters: default.P
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Peak Number 6 Bicyclo[2.2.1]heptane, 2,2-... Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.370	19.38 ug/L	4996510	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]heptane, 2,2-dimet...	136	C10H16	005794-04-7	97
2	Camphene	136	C10H16	000079-92-5	97
3	Camphene	136	C10H16	000079-92-5	96
4	Camphene	136	C10H16	000079-92-5	96
5	Camphene	136	C10H16	000079-92-5	90

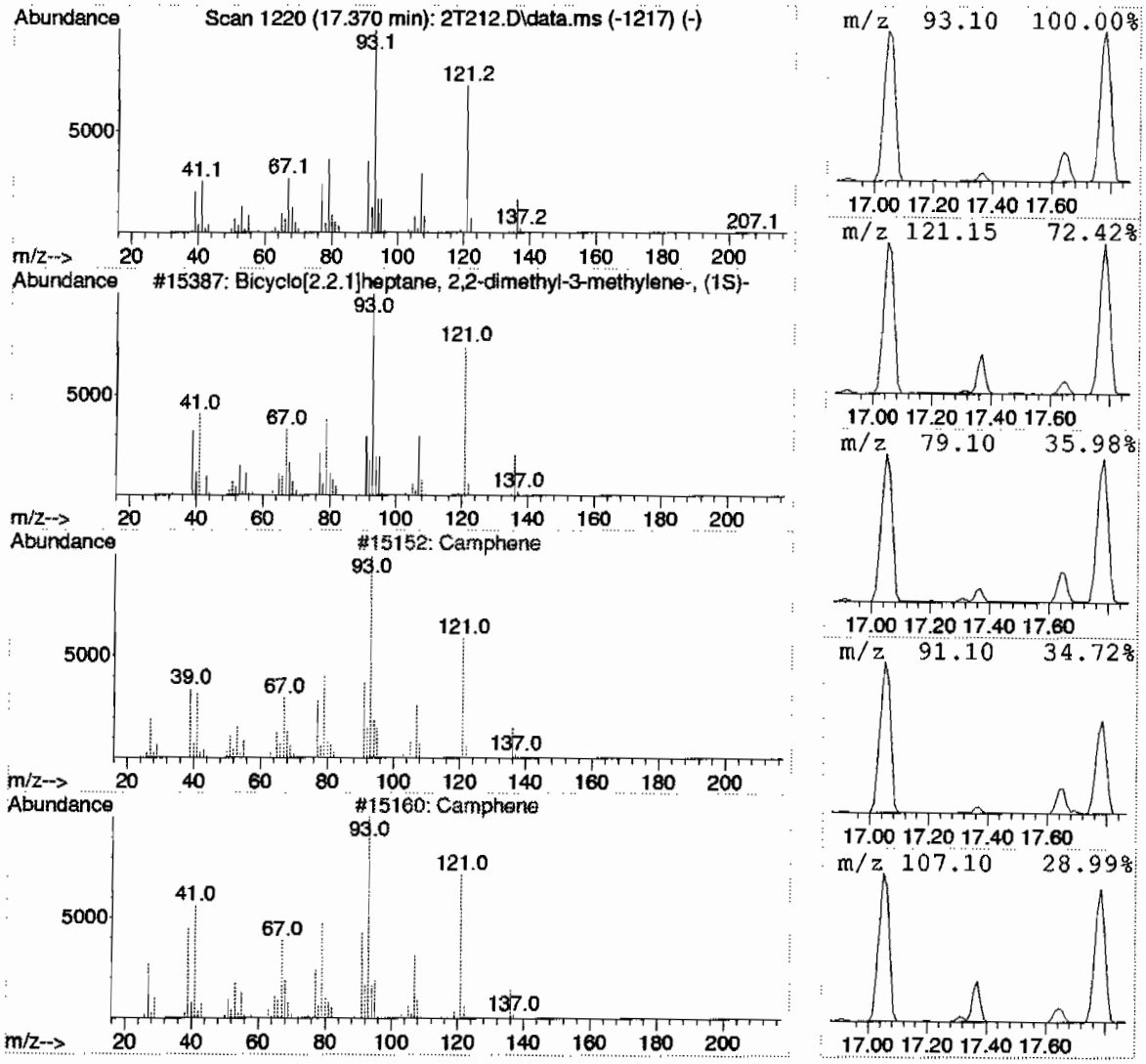

Library Search Compound Report
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ALS Vial : 12 Sample Multiplier: 1

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Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

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Peak Number 7 unknown hydrocarbon Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.631	23.80 ug/L	6135470	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.0]hexane, 4-methylen...	136	C10H16	003387-41-5	90
2	.beta.-Pinene	136	C10H16	000127-91-3	87
3	Bicyclo[3.1.0]hexane, 4-methylen...	136	C10H16	003387-41-5	87
4	Bicyclo[3.1.0]hex-2-ene, 4-methy...	136	C10H16	028634-89-1	80
5	.beta.-Phellandrene	136	C10H16	000555-10-2	72

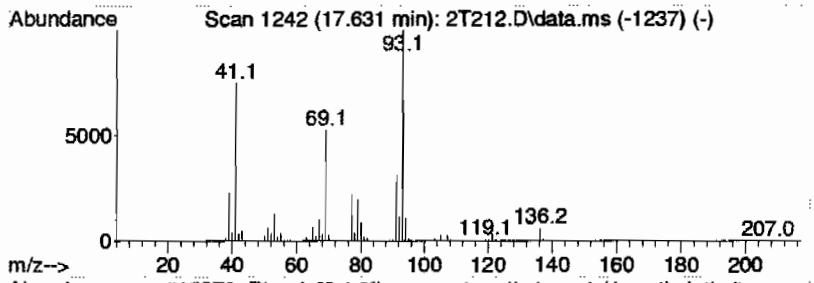

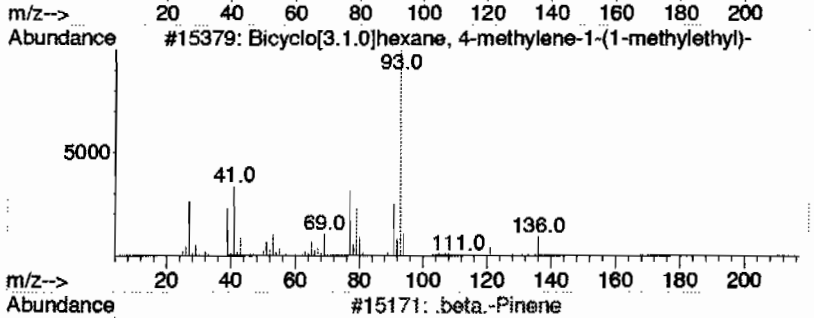

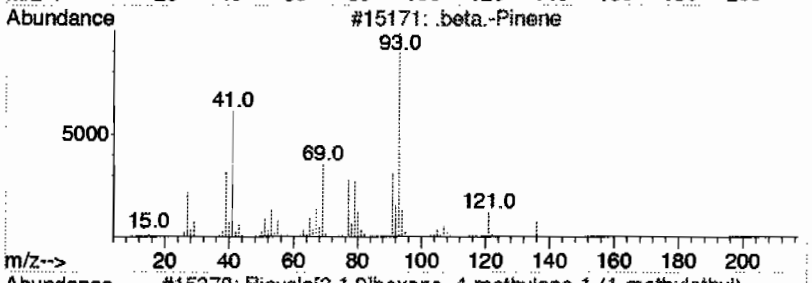

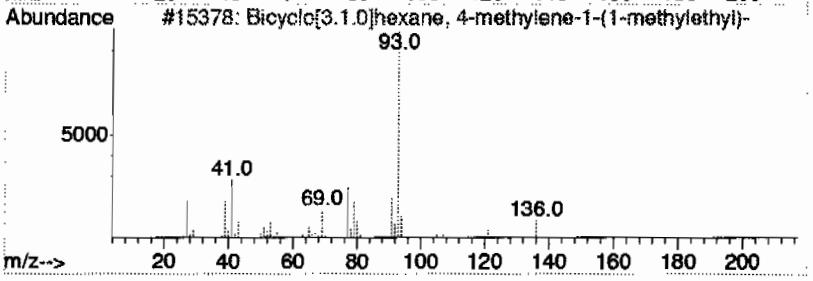

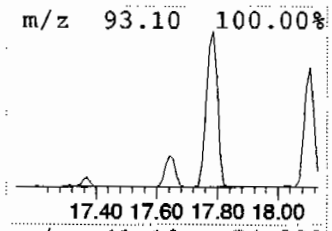

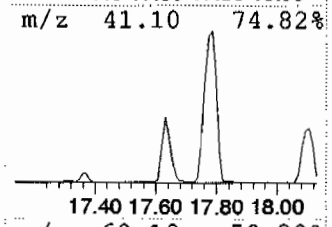

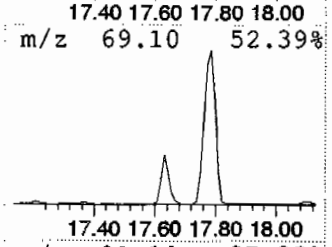

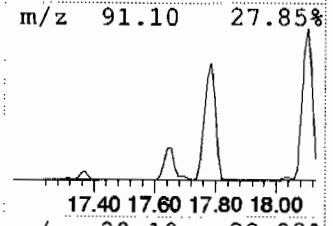

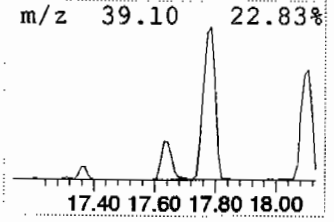

Library Search Compound Report
GEL Laboratories, LLC

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Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 8 unknown hydrocarbon Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.642	42.58 ug/L	10976900	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	.beta.-Phellandrene	136	C10H16	000555-10-2	91
2	Bicyclo[3.1.0]hexane, 4-methylen...	136	C10H16	003387-41-5	91
3	Bicyclo[3.1.0]hexane, 4-methylen...	136	C10H16	003387-41-5	91
4	Bicyclo[3.1.0]hex-2-ene, 4-methy...	136	C10H16	028634-89-1	90
5	Bicyclo[3.1.0]hexane, 4-methylen...	136	C10H16	003387-41-5	90

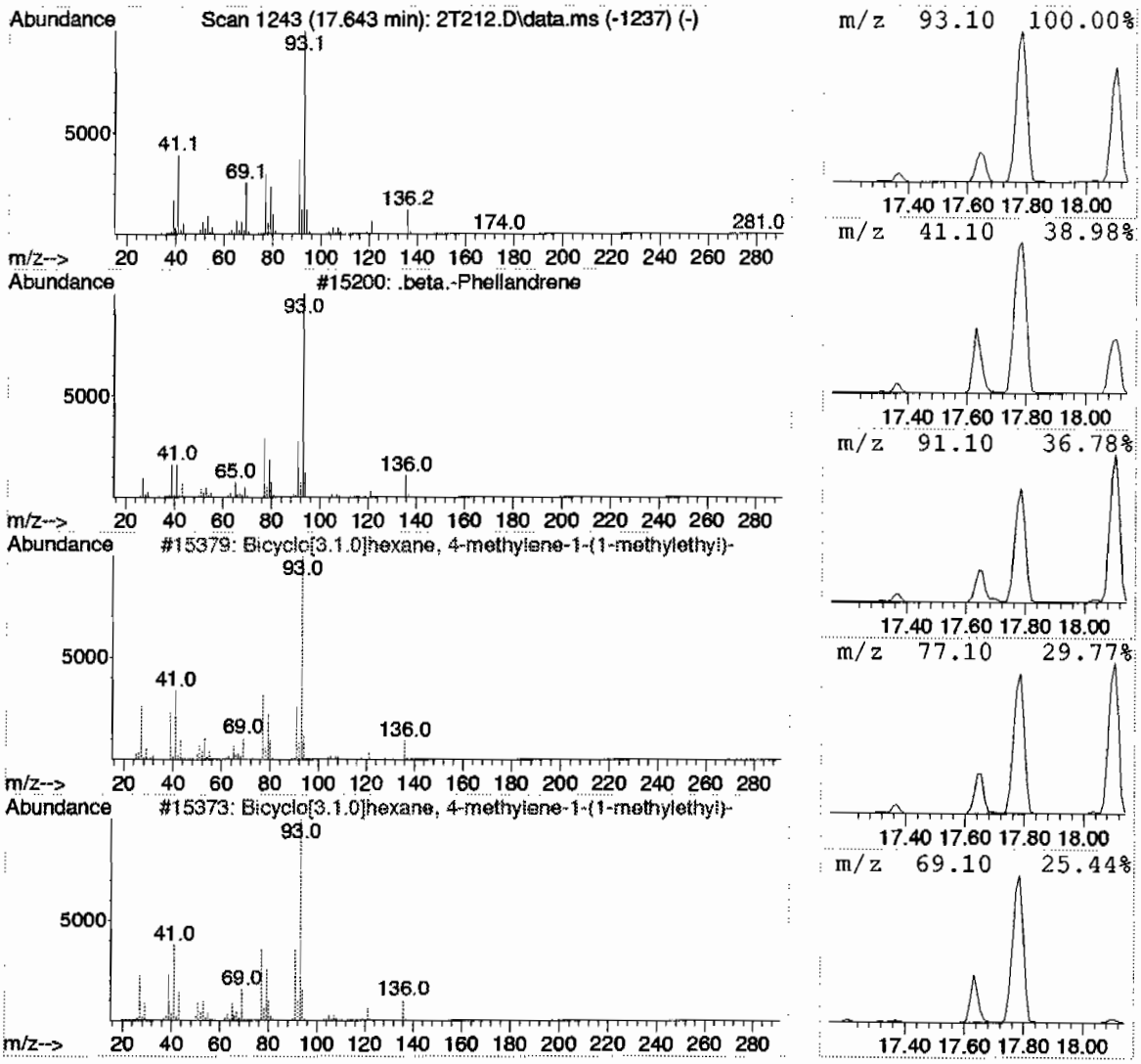

Library Search Compound Report
GEL Laboratories, LLC

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ALS Vial : 12 Sample Multiplier: 1

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Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 9 .beta.-Pinene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.785	305.67 ug/L	78801900	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	.beta.-Pinene	136	C10H16	000127-91-3	94
2	Bicyclo[3.1.1]heptane, 6,6-dimet...	136	C10H16	018172-67-3	91
3	Tricyclo[2.2.1.0(2,6)]heptane, 1...	136	C10H16	000508-32-7	91
4	.beta.-Pinene	136	C10H16	000127-91-3	91
5	.beta.-Pinene	136	C10H16	000127-91-3	91

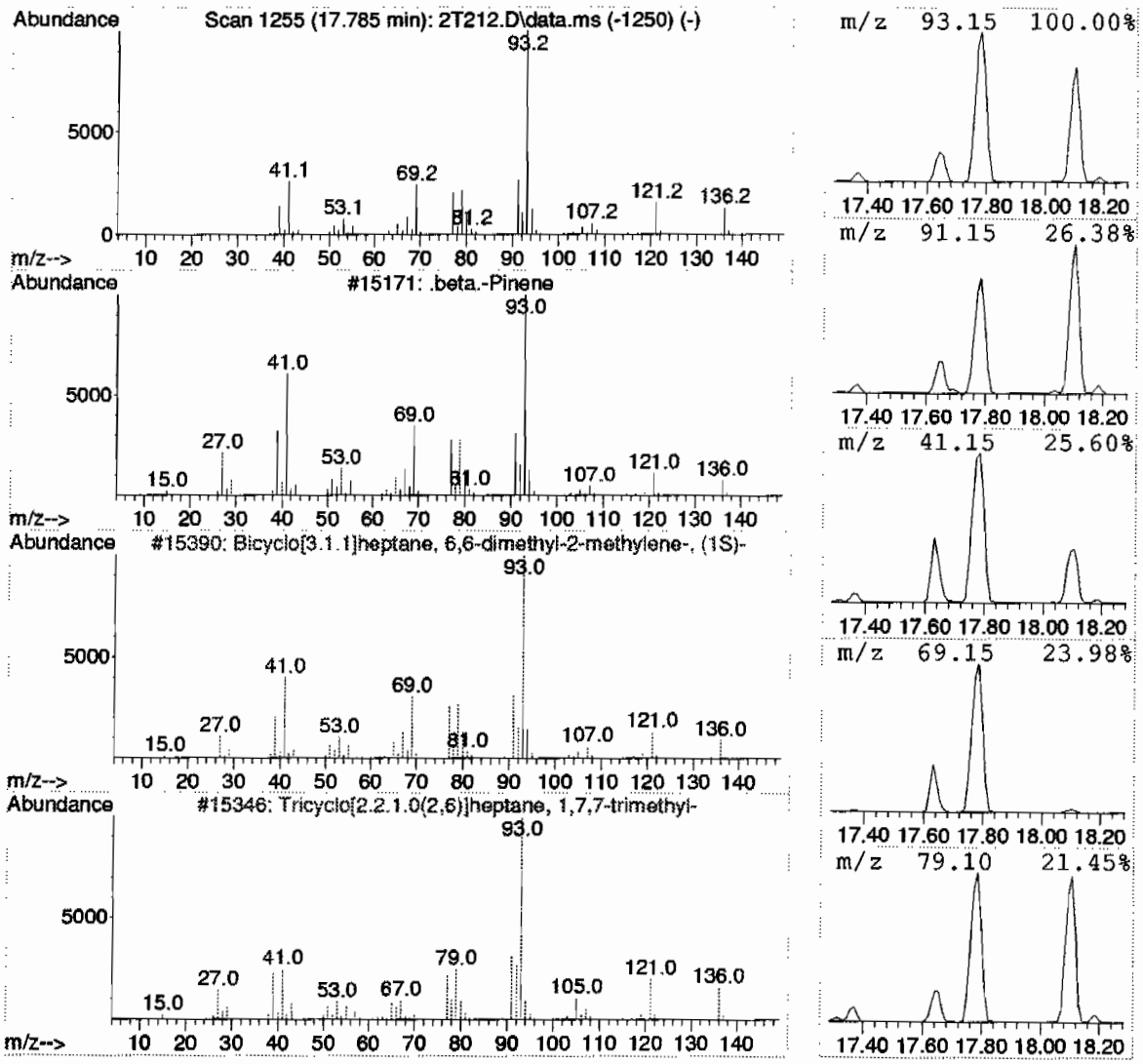

Library Search Compound Report
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Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

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Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 10 unknown hydrocarbon Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.105	244.95 ug/L	63149300	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[4.1.0]hept-3-ene, 3,7,7-...	136	C10H16	000498-15-7	97
2	1R-.alpha.-Pinene	136	C10H16	007785-70-8	96
3	3-Carene	136	C10H16	013466-78-9	94
4	3-Carene	136	C10H16	013466-78-9	94
5	1S-.alpha.-Pinene	136	C10H16	007785-26-4	94

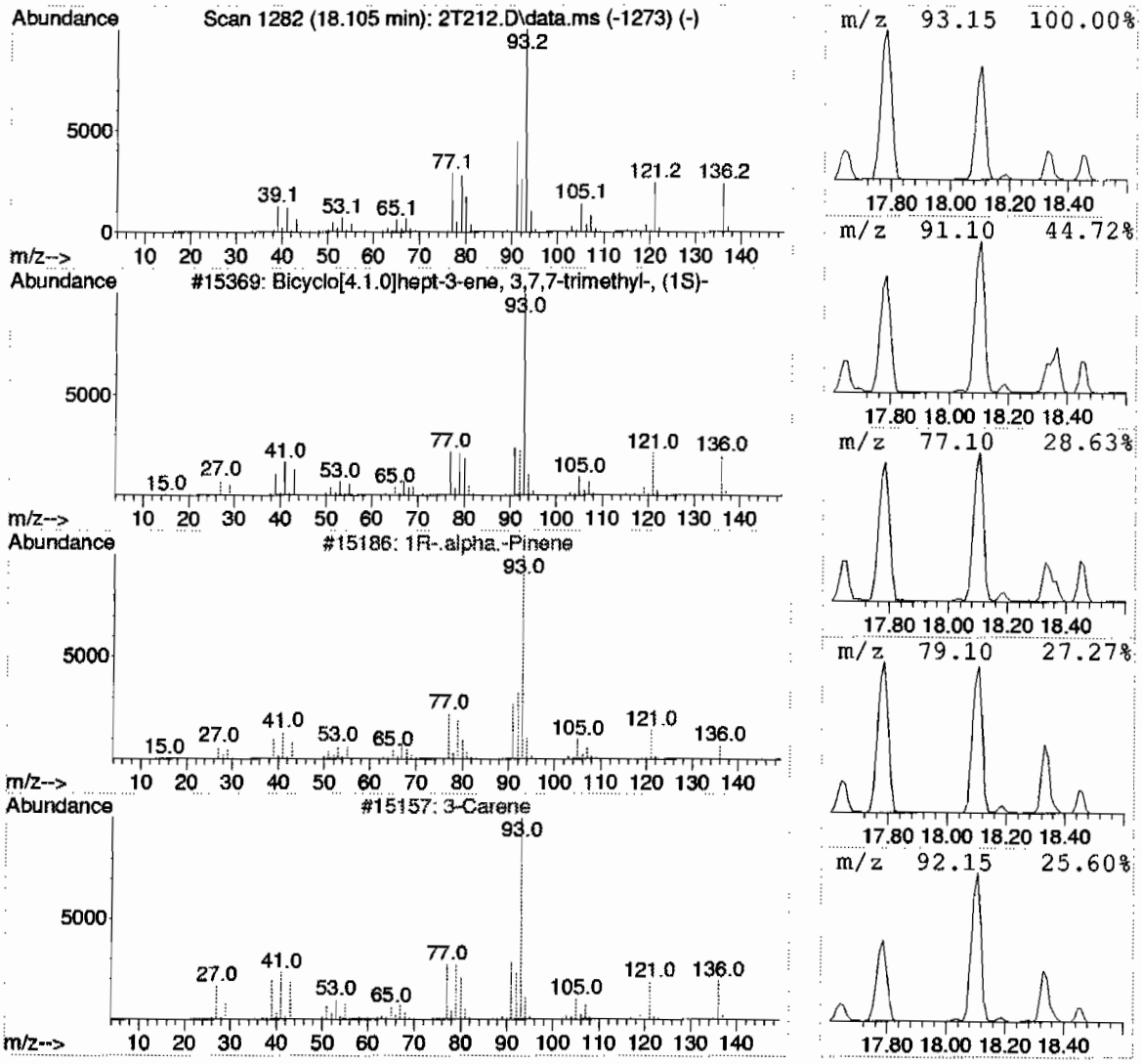

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ALS Vial : 12 Sample Multiplier: 1

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Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****
Peak Number 11 unknown hydrocarbon Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.188	13.17 ug/L	3394150	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[4.1.0]hept-2-ene, 3,7,7-...	136	C10H16	000554-61-0	96
2	1,3-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-86-5	95
3	(+)-4-Carene	136	C10H16	029050-33-7	95
4	Bicyclo[4.1.0]hept-2-ene, 3,7,7-...	136	C10H16	000554-61-0	95
5	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	95

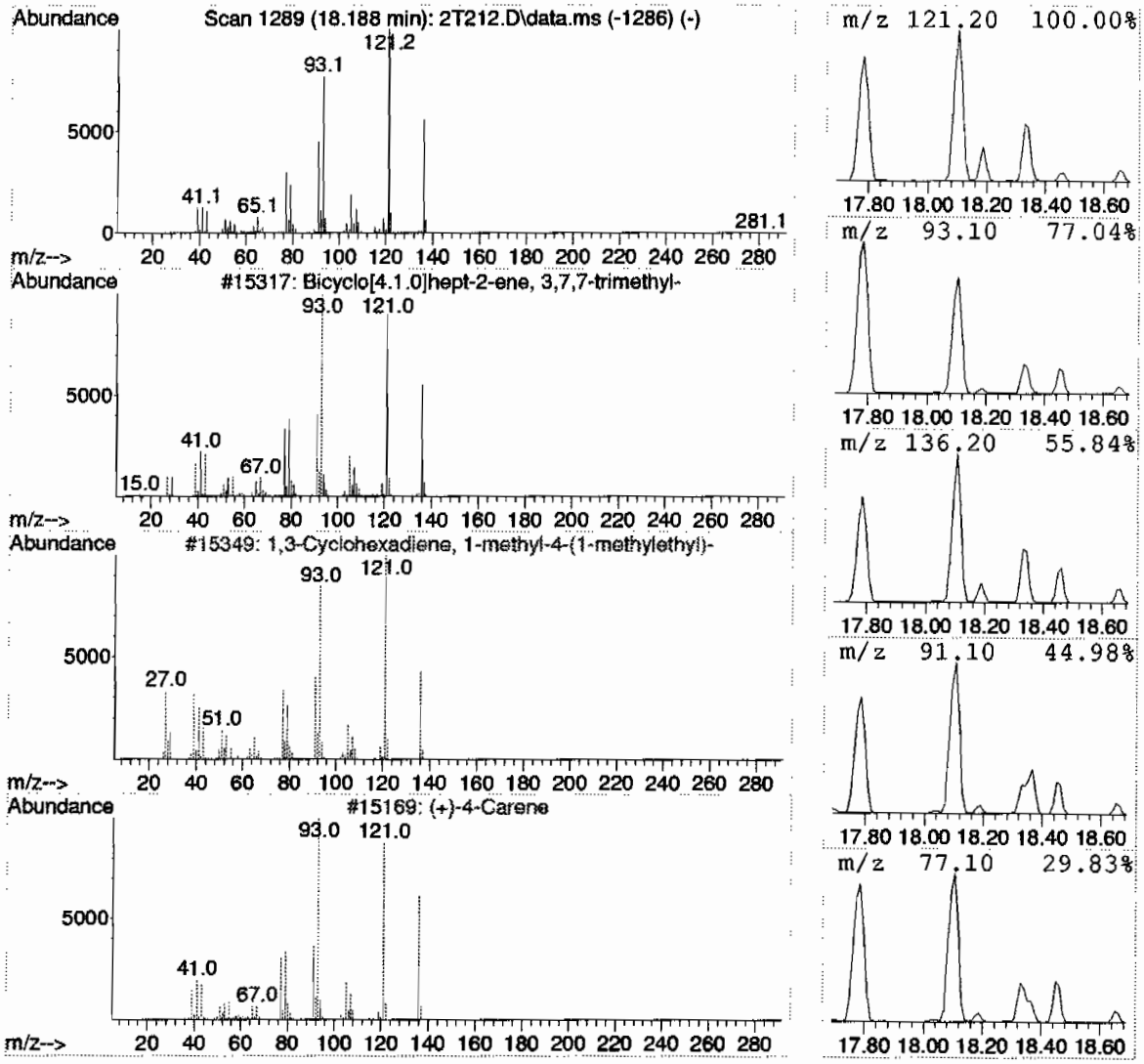

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Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****
Peak Number 12 1,4-Cyclohexadiene, 1-methy... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.651	12.51 ug/L	3224480	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,4-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-85-4	97
2	1,4-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-85-4	95
3	Bicyclo[4.1.0]hept-3-ene, 3,7,7-...	136	C10H16	000498-15-7	94
4	1,4-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-85-4	94
5	1,4-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-85-4	94

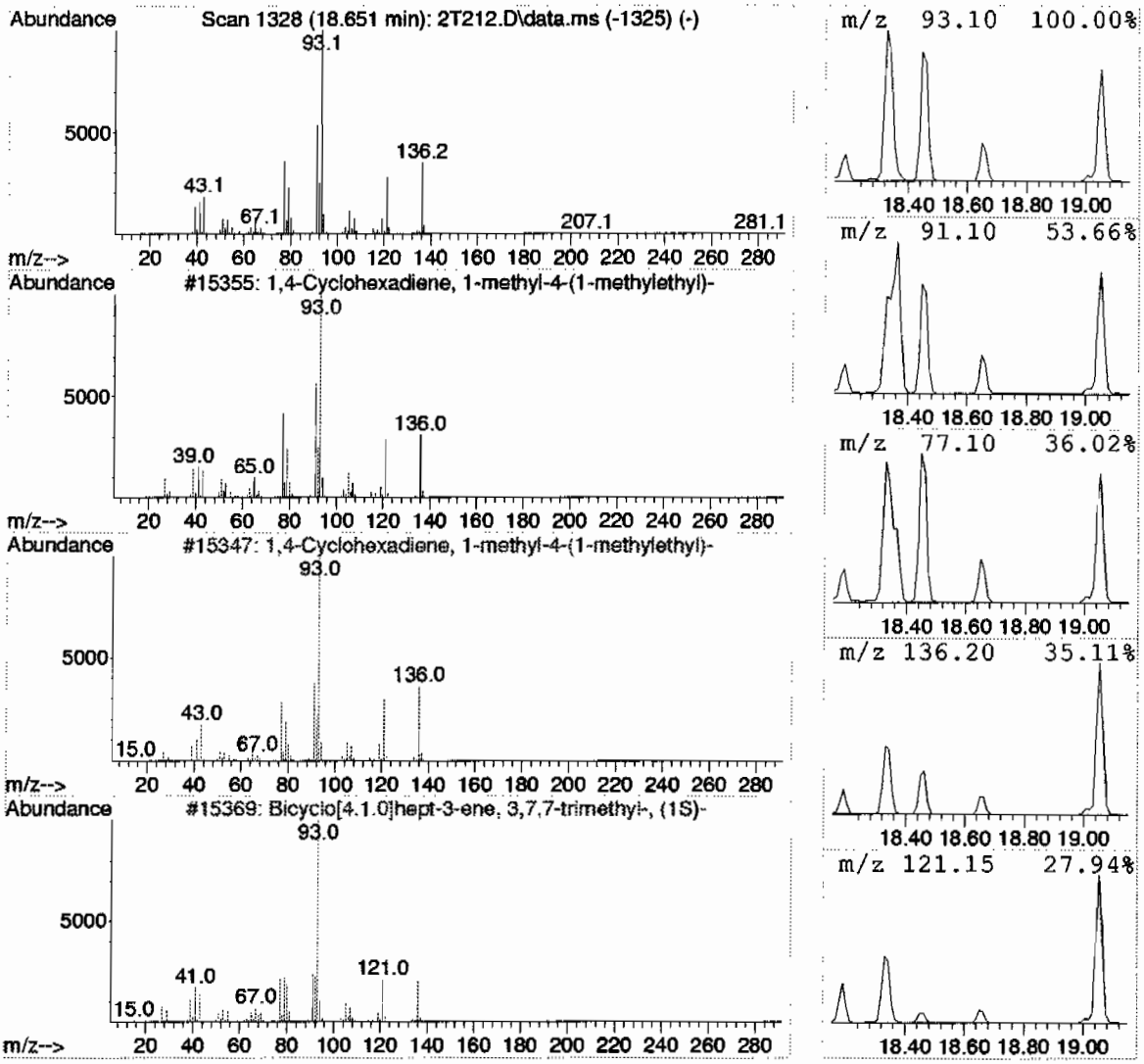

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Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 13 unknown hydrocarbon Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.054	60.57 ug/L	15614800	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	96
2	(+)-4-Carene	136	C10H16	029050-33-7	95
3	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	95
4	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	95
5	Bicyclo[4.1.0]hept-2-ene, 3,7,7-...	136	C10H16	000554-61-0	94

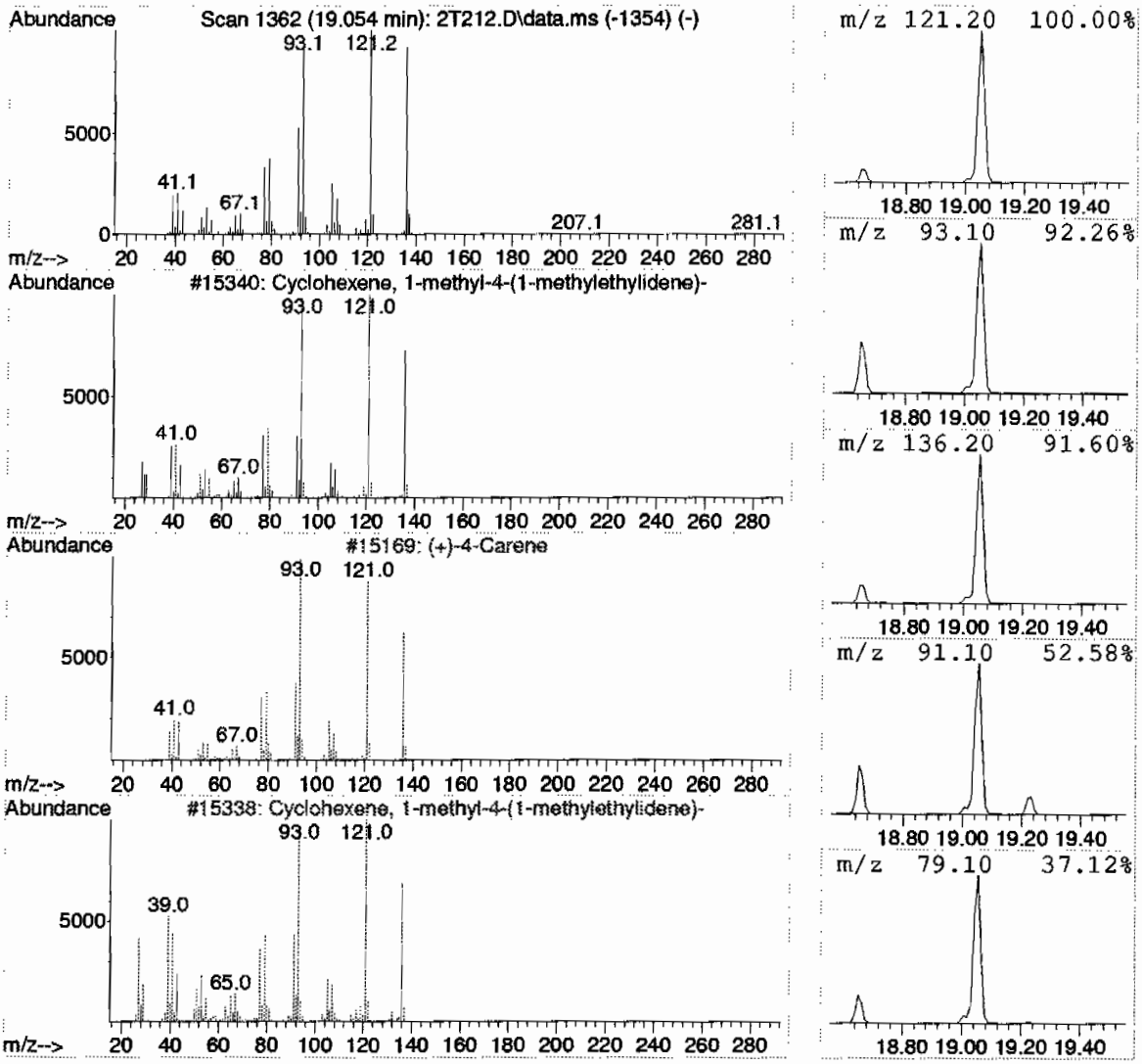

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ALS Vial : 12 Sample Multiplier: 1

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Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****
Peak Number 14 unknown aromatic Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.232	6.77 ug/L	1745720	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methyleth...	132	C10H12	001195-32-0	96
2	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	93
3	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	90
4	Benzene, 1-methyl-4-(1-methyleth...	132	C10H12	001195-32-0	90
5	Bicyclo[4.2.0]octa-1,3,5-triene,...	132	C10H12	028749-81-7	87

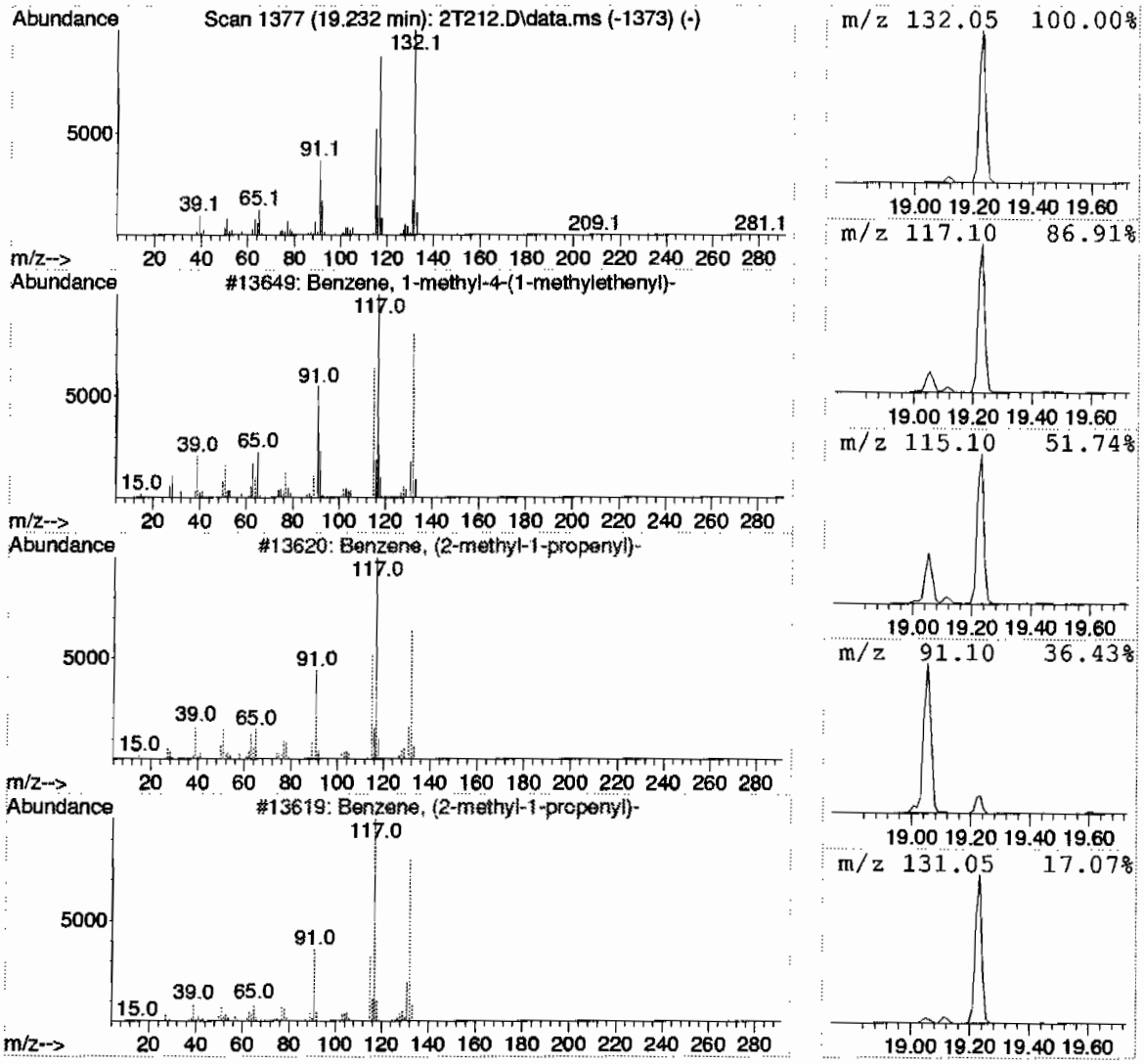

Library Search Compound Report
GEL Laboratories, LLC

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Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
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Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****
Peak Number 15 Bicyclo[3.1.1]heptan-3-one,... Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
20.892	8.34 ug/L	2148880	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.1]heptan-3-one, 2,6,...	152	C10H16O	015358-88-0	92
2	Bicyclo[3.1.1]heptan-3-one, 2,6,...	152	C10H16O	000547-60-4	78
3	Bicyclo[3.1.1]heptan-3-one, 2,6,...	152	C10H16O	015358-88-0	74
4	Benzene, 2-methoxy-4-methyl-1-(1...	164	C11H16O	001076-56-8	70
5	Bicyclo[3.1.1]heptan-3-one, 2,6,...	152	C10H16O	018358-53-7	64

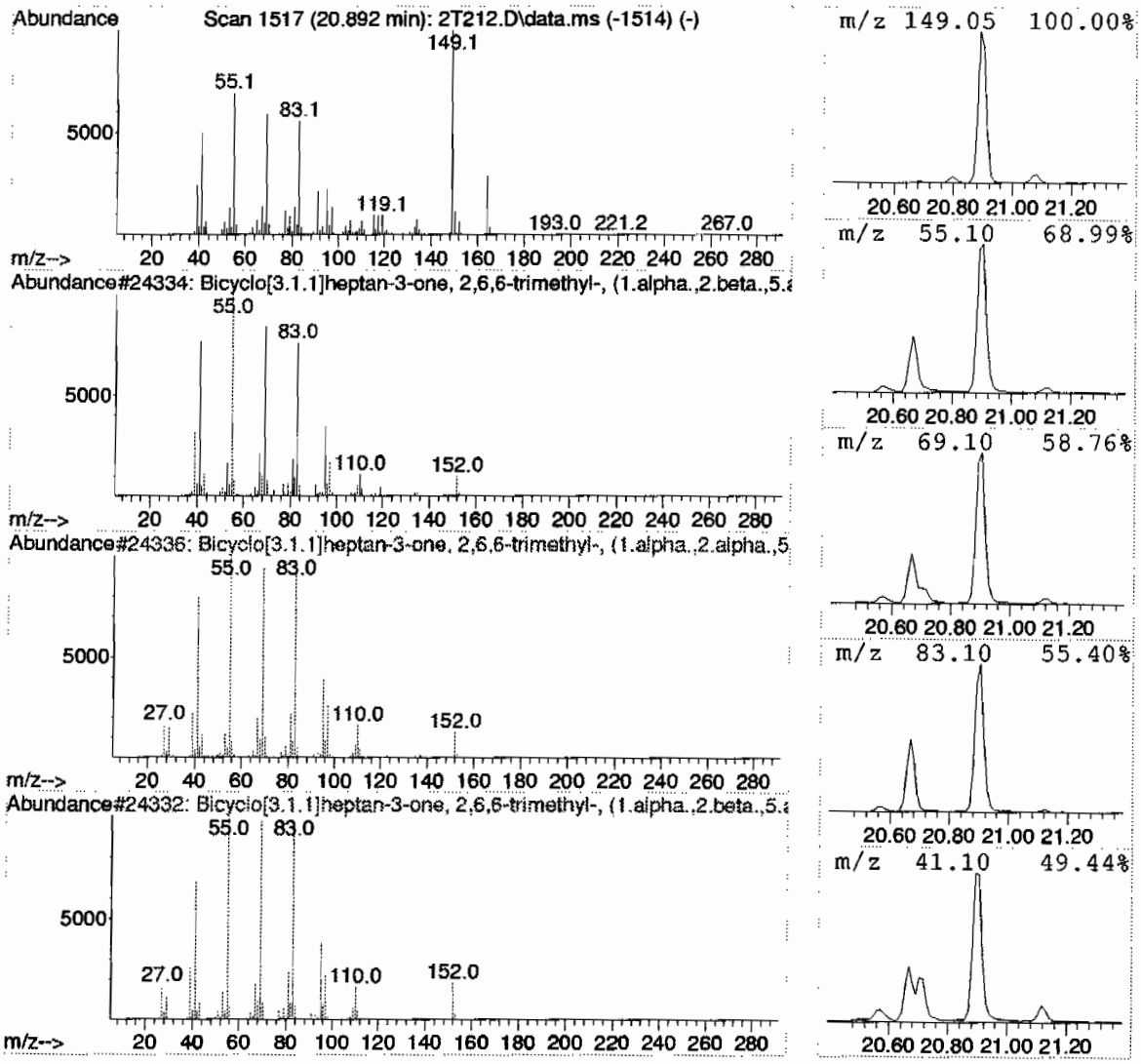

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 16 unknown hydrocarbon Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.330	171.13 ug/L	44119400	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Limonene	136	C10H16	000138-86-3	91
2	Limonene	136	C10H16	000138-86-3	91
3	D-Limonene	136	C10H16	005989-27-5	89
4	D-Limonene	136	C10H16	005989-27-5	89
5	D-Limonene	136	C10H16	005989-27-5	86

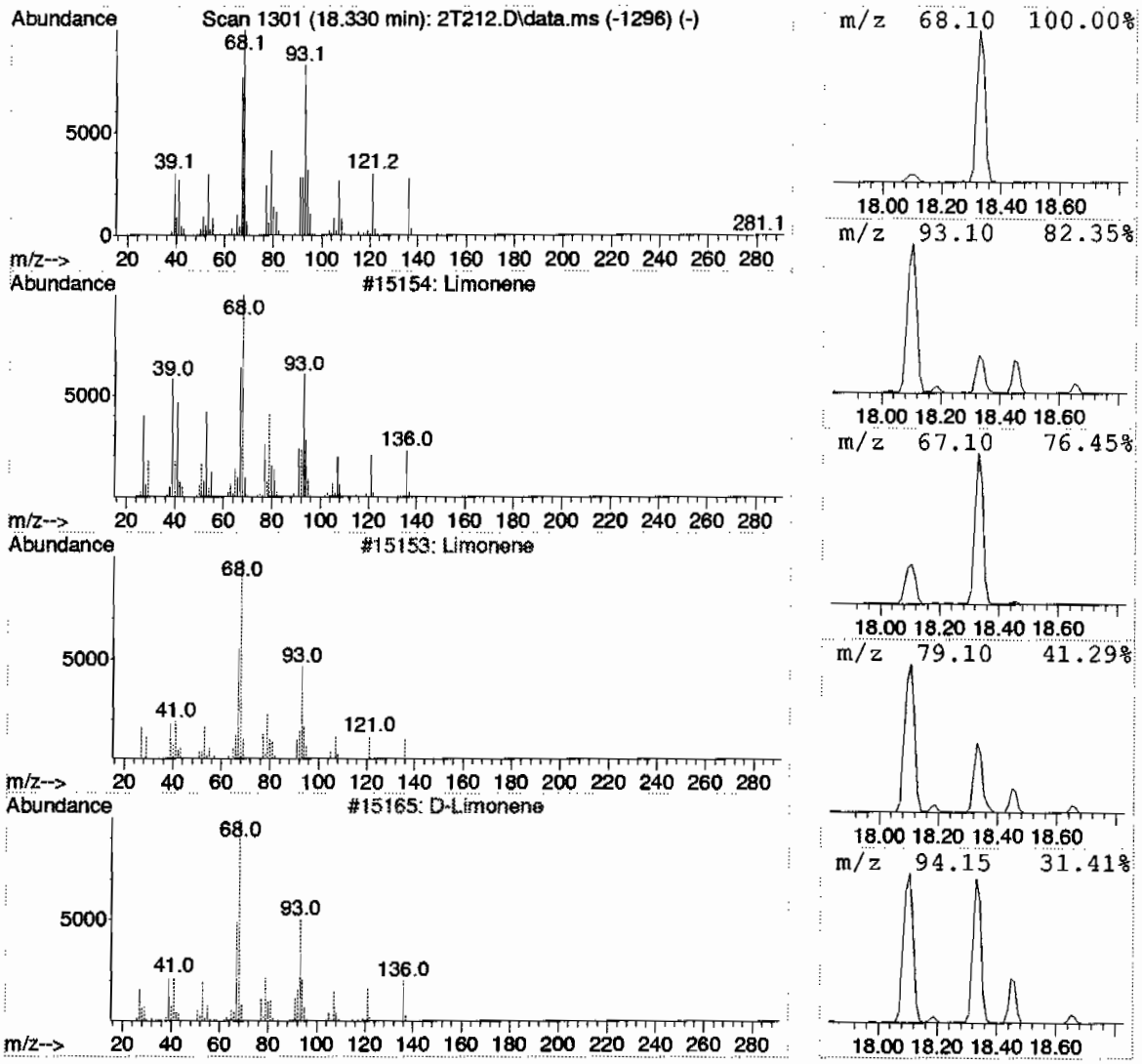

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 17 unknown hydrocarbon Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.461	50.00 ug/L	12890200	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	.beta.-Phellandrene	136	C10H16	000555-10-2	92
2	.beta.-Phellandrene	136	C10H16	000555-10-2	70
3	Bicyclo[3.1.0]hex-2-ene, 4-methy...	136	C10H16	028634-89-1	70
4	1,4-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-85-4	64
5	.beta.-Phellandrene	136	C10H16	000555-10-2	62

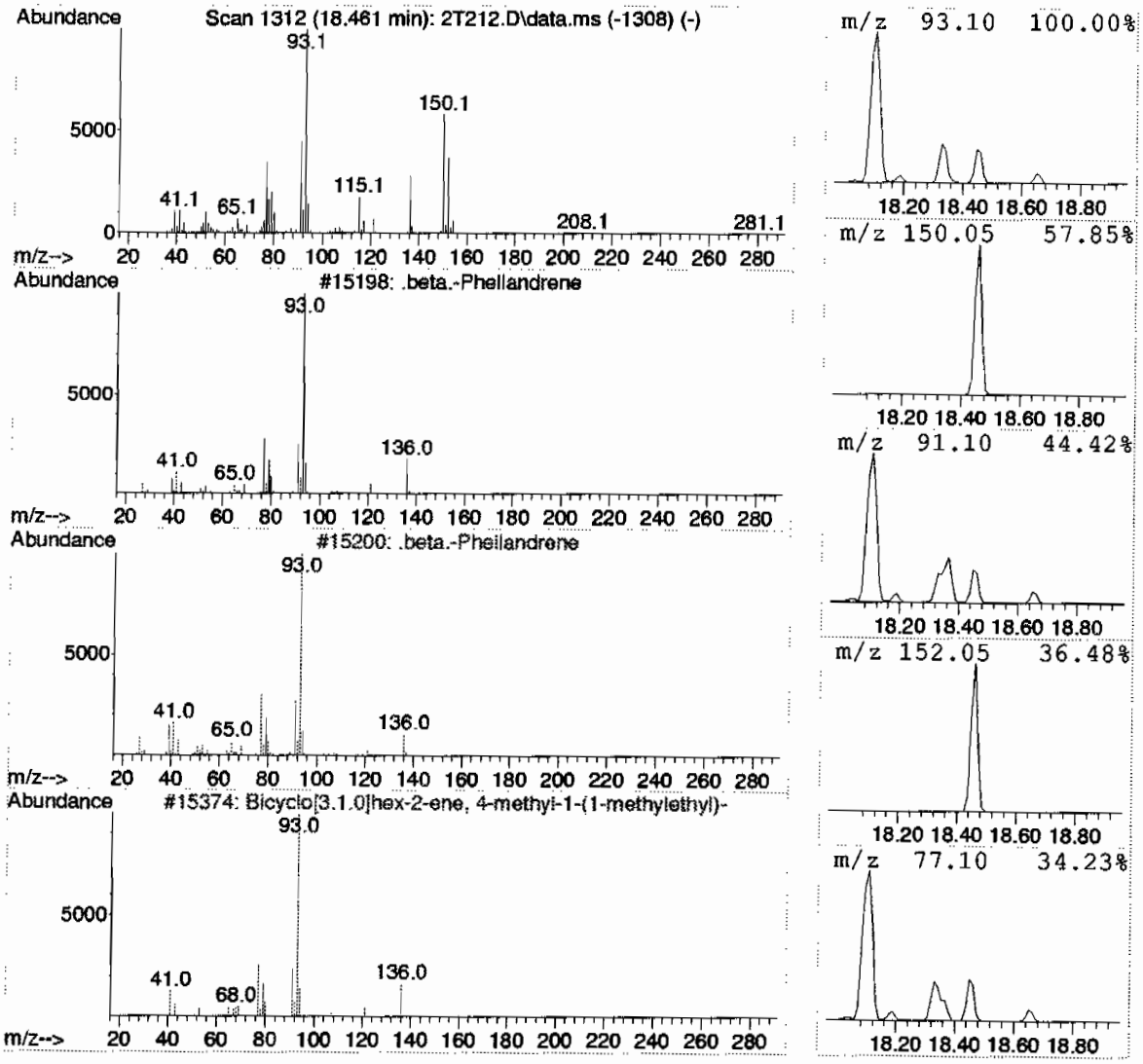

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T212.D
Acq On : 7 Jul 2009 12:46 pm
Operator : CDS1
Sample : |232507001|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	|--Internal Standard---| #	RT	Resp	Conc|
unknown	4.360	15.7	ug/L	1619910	1	12.377	5162590	50.0
Nonane	16.148	5.1	ug/L	390703	4	15.947	3823740	50.0
unknown hydroca...	16.848	49.2	ug/L	3763880	4	15.947	3823740	50.0
unknown hydroca...	16.907	12.6	ug/L	963644	4	15.947	3823740	50.0
unknown hydroca...	17.050	1103.8	ug/L	84409900	4	15.947	3823740	50.0
Bicyclo[2.2.1]h...	17.370	19.4	ug/L	4996510	5	18.461	12890200	50.0
unknown hydroca...	17.631	23.8	ug/L	6135470	5	18.461	12890200	50.0
unknown hydroca...	17.642	42.6	ug/L	10976900	5	18.461	12890200	50.0
.beta.-Pinene	17.785	305.7	ug/L	78801900	5	18.461	12890200	50.0
unknown hydroca...	18.105	244.9	ug/L	63149300	5	18.461	12890200	50.0
unknown hydroca...	18.188	13.2	ug/L	3394150	5	18.461	12890200	50.0
1,4-Cyclohexadi...	18.651	12.5	ug/L	3224480	6	18.461	12890200	50.0
unknown hydroca...	19.054	60.6	ug/L	15614800	6	18.461	12890200	50.0
unknown aromatic	19.232	6.8	ug/L	1745720	6	18.461	12890200	50.0
Bicyclo[3.1.1]h...	20.892	8.3	ug/L	2148880	6	18.461	12890200	50.0
unknown hydroca...	18.330	171.1	ug/L	44119400	5	18.461	12890200	50.0
unknown hydroca...	18.461	50.0	ug/L	12890200	5	18.461	12890200	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 10:06	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T308.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.05	ug/kg	0.357	1.05
74-87-3	Chloromethane	U	1.05	ug/kg	0.315	1.05
75-01-4	Vinyl chloride	U	1.05	ug/kg	0.315	1.05
74-83-9	Bromomethane	U	1.05	ug/kg	0.315	1.05
75-00-3	Chloroethane	U	1.05	ug/kg	0.315	1.05
75-69-4	Trichlorofluoromethane	U	1.05	ug/kg	0.599	1.05
67-64-1	Acetone	U	5.26	ug/kg	1.74	5.26
75-35-4	1,1-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
74-88-4	Iodomethane	U	5.26	ug/kg	1.68	5.26
75-09-2	Methylene chloride	U	5.26	ug/kg	2.10	5.26
75-15-0	Carbon disulfide	U	5.26	ug/kg	1.31	5.26
156-60-5	trans-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
75-34-3	1,1-Dichloroethane	U	1.05	ug/kg	0.315	1.05
78-93-3	2-Butanone	U	5.26	ug/kg	1.58	5.26
156-59-2	cis-1,2-Dichloroethylene	U	1.05	ug/kg	0.315	1.05
594-20-7	2,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05
67-66-3	Chloroform	U	1.05	ug/kg	0.315	1.05
74-97-5	Bromochloromethane	U	1.05	ug/kg	0.347	1.05
71-55-6	1,1,1-Trichloroethane	U	1.05	ug/kg	0.315	1.05
563-58-6	1,1-Dichloropropene	U	1.05	ug/kg	0.315	1.05
56-23-5	Carbon tetrachloride	U	1.05	ug/kg	0.315	1.05
107-06-2	1,2-Dichloroethane	U	1.05	ug/kg	0.315	1.05
71-43-2	Benzene	U	1.05	ug/kg	0.315	1.05
79-01-6	Trichloroethylene	U	1.05	ug/kg	0.347	1.05
78-87-5	1,2-Dichloropropane	U	1.05	ug/kg	0.315	1.05
75-27-4	Bromodichloromethane	U	1.05	ug/kg	0.315	1.05
74-95-3	Dibromomethane	U	1.05	ug/kg	0.315	1.05
108-10-1	4-Methyl-2-pentanone	U	5.26	ug/kg	1.31	5.26
10061-01-5	cis-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05
108-88-3	Toluene	U	1.05	ug/kg	0.315	1.05
10061-02-6	trans-1,3-Dichloropropylene	U	1.05	ug/kg	0.315	1.05
79-00-5	1,1,2-Trichloroethane	U	1.05	ug/kg	0.315	1.05
591-78-6	2-Hexanone	U	5.26	ug/kg	1.58	5.26
142-28-9	1,3-Dichloropropane	U	1.05	ug/kg	0.315	1.05
127-18-4	Tetrachloroethylene	U	1.05	ug/kg	0.315	1.05
124-48-1	Dibromochloromethane	U	1.05	ug/kg	0.315	1.05
106-93-4	1,2-Dibromoethane	U	1.05	ug/kg	0.315	1.05
108-90-7	Chlorobenzene	U	1.05	ug/kg	0.315	1.05

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 10:06	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T308.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.05	ug/kg	0.315	1.05
179601-23-1	m,p-Xylenes	U	2.10	ug/kg	0.315	2.10
95-47-6	o-Xylene	U	1.05	ug/kg	0.315	1.05
100-42-5	Styrene	U	1.05	ug/kg	0.315	1.05
75-25-2	Bromoform	U	1.05	ug/kg	0.315	1.05
79-34-5	1,1,2,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05
96-18-4	1,2,3-Trichloropropane	U	1.05	ug/kg	0.315	1.05
108-86-1	Bromobenzene	U	1.05	ug/kg	0.315	1.05
103-65-1	n-Propylbenzene	U	1.05	ug/kg	0.315	1.05
95-49-8	2-Chlorotoluene	U	1.05	ug/kg	0.315	1.05
98-82-8	Isopropylbenzene	U	1.05	ug/kg	0.315	1.05
108-67-8	1,3,5-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05
106-43-4	4-Chlorotoluene	U	1.05	ug/kg	0.315	1.05
98-06-6	tert-Butylbenzene	U	1.05	ug/kg	0.315	1.05
95-63-6	1,2,4-Trimethylbenzene	U	1.05	ug/kg	0.315	1.05
135-98-8	sec-Butylbenzene	U	1.05	ug/kg	0.315	1.05
99-87-6	4-Isopropyltoluene	U	1.05	ug/kg	0.315	1.05
541-73-1	1,3-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05
106-46-7	1,4-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05
104-51-8	n-Butylbenzene	U	1.05	ug/kg	0.315	1.05
96-12-8	1,2-Dibromo-3-chloropropane	U	1.05	ug/kg	0.315	1.05
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.26	ug/kg	1.68	5.26
630-20-6	1,1,1,2-Tetrachloroethane	U	1.05	ug/kg	0.315	1.05
95-50-1	1,2-Dichlorobenzene	U	1.05	ug/kg	0.315	1.05

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	11.2	ug/kg	0	J
	unknown siloxane	19.15	49.6	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T308.D
Acq On : 8 Jul 2009 10:06 am
Operator : CDS1
InstName : VOA2
Sample : |232507004|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 12:01:58 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1547522	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1292959	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	765884	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1547522	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1292959	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	765884	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	442134	50.95 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 101.90%		
43) Toluene-d8	14.310	98	1517975	49.97 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 99.94%		
61) Bromofluorobenzene	17.216	95	437401	36.32 ug/L	0.01
Spiked Amount 50.000	Range 68 - 133		Recovery = 72.64%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	0.000		0	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.942	43	4444	N.D.	
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.452	41	1012	N.D.	
13) Methyl acetate	8.547	43	300	N.D.	
14) Carbon disulfide	8.251	76	1162	N.D.	
15) Methylene chloride	8.701	84	10977	Below Cal	97
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	657	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	481	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	462	N.D.	
31) Benzene	12.045	78	433	N.D.	
32) Cyclohexene	12.377	67	315	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T308.D
Acq On : 8 Jul 2009 10:06 am
Operator : CDS1
InstName : VOA2
Sample : |232507004|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 12:01:58 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D.	d
44) Toluene	14.381	91	2288	N.D.	
45) trans-1,3-Dichloroprop...	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.049	43	745	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	524	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.077	91	1347	N.D.	
55) m,p-Xylenes	16.196	106	1298	N.D.	
56) o-Xylene	16.634	106	677	N.D.	
57) Styrene	16.646	104	533	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	0.000		0m	N.D.	d
62) 1,1,2,2-Tetrachloroethane	0.000		0m	N.D.	d
63) 1,2,3-Trichloropropane	0.000		0m	N.D.	d
64) Bromobenzene	17.405	156	281	N.D.	
65) n-Propylbenzene	17.465	91	620	N.D.	
66) 1,3,5-Trimethylbenzene	17.631	105	757	N.D.	
67) 2-Chlorotoluene	17.702	91	1091	N.D.	
68) 4-Chlorotoluene	17.702	91	1091	N.D.	
69) tert-Butylbenzene	18.093	119	721	N.D.	
70) 1,2,4-Trimethylbenzene	18.046	105	1516	N.D.	
71) sec-Butylbenzene	18.046	105	1516	N.D.	
72) 4-Isopropyltoluene	18.366	119	411	N.D.	
73) 1,3-Dichlorobenzene	18.401	146	672	N.D.	
74) 1,4-Dichlorobenzene	18.401	146	672	N.D.	
75) n-Butylbenzene	18.793	91	246	N.D.	
76) 1,2-Dichlorobenzene	18.899	146	430	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	603	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	2189	N.D.	
81) 1,2,3-Trichlorobenzene	21.342	180	283	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.452	41	1012	N.D.	
89) tert-Butyl Alcohol	8.879	59	1108	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.800	43	657	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T308.D
Acq On : 8 Jul 2009 10:06 am
Operator : CDS1
InstName : VOA2
Sample : |232507004|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 12:01:58 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	0.000		0	N.D.	
96) Methacrylonitrile	11.085	41	127	N.D.	
97) Tetrahydrofuran	11.239	42	432	N.D.	
98) Isobutyl alcohol	0.000		0	N.D.	
99) Methyl tert-amyl ether	0.000		0m	N.D.	d
100) Methyl methacrylate	0.000		0	N.D.	
101) 1,4-Dioxane	0.000		0	N.D.	
102) 2-Nitropropane	0.000		0	N.D.	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	0.000		0m	N.D.	d
107) cis-1,4-Dichloro-2-butene	17.038	53	1065	N.D.	
108) Cyclohexanone	17.192	42	860	N.D.	
109) trans-1,4-Dichloro-2-b...	17.358	53	386	N.D.	
110) Pentachloroethane	0.000		0	N.D.	
111) Benzyl chloride	18.603	91	1140	N.D.	
112) bis(2-Chloroisopropyl)...	0.000		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T308.D
Acq On : 8 Jul 2009 10:06 am
Operator : CDS1
InstName : VOA2
Sample : |232507004|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 12:01:58 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

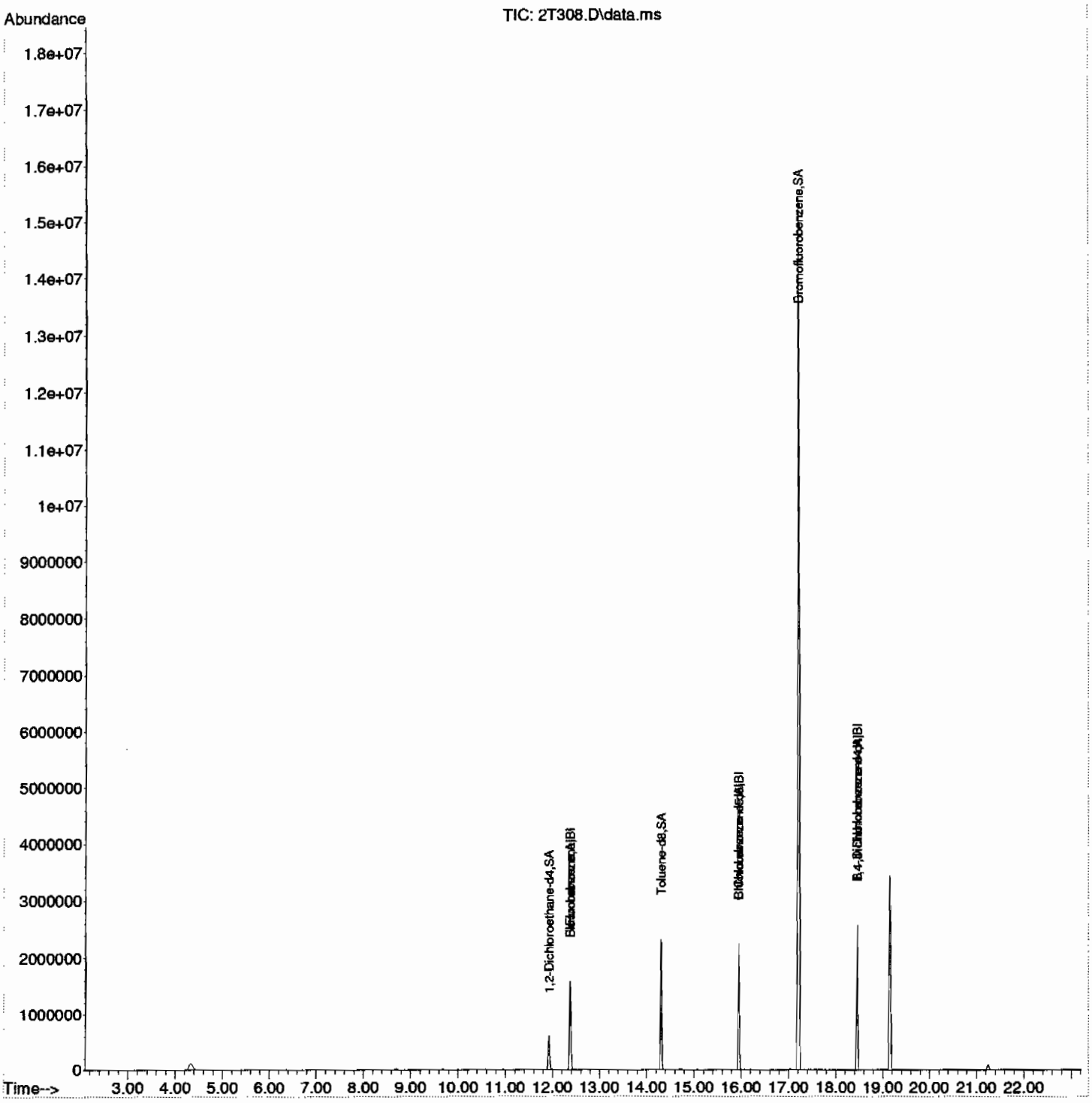

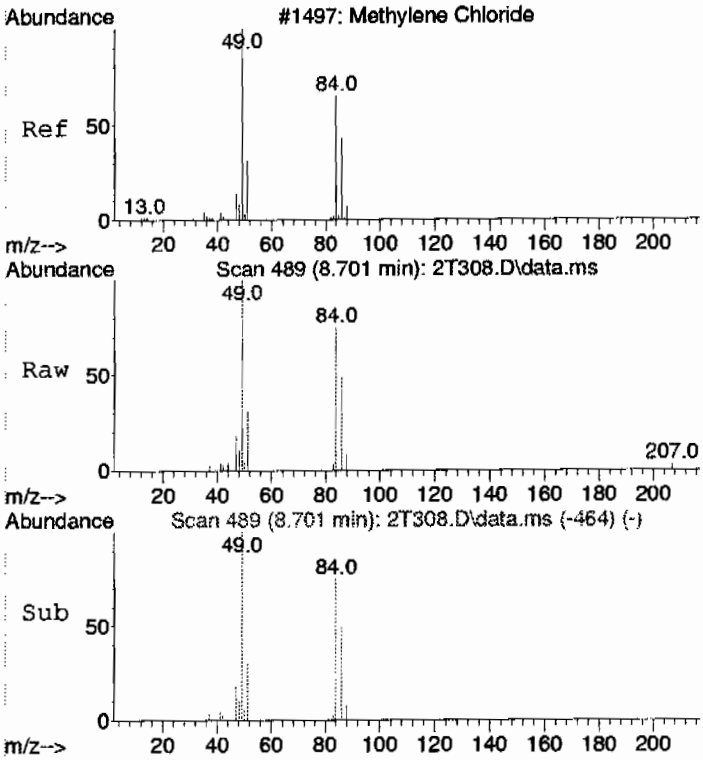

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 84 Resp: 10977

Ion	Ratio	Lower	Upper
84	100		
86	61.5	33.8	93.8
49	138.5	105.0	165.0

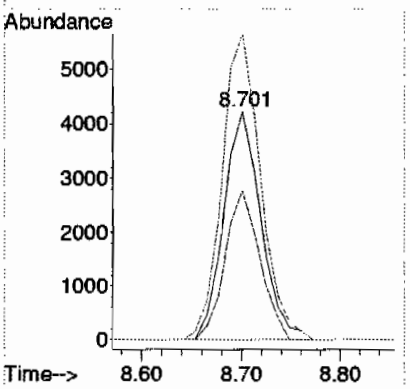

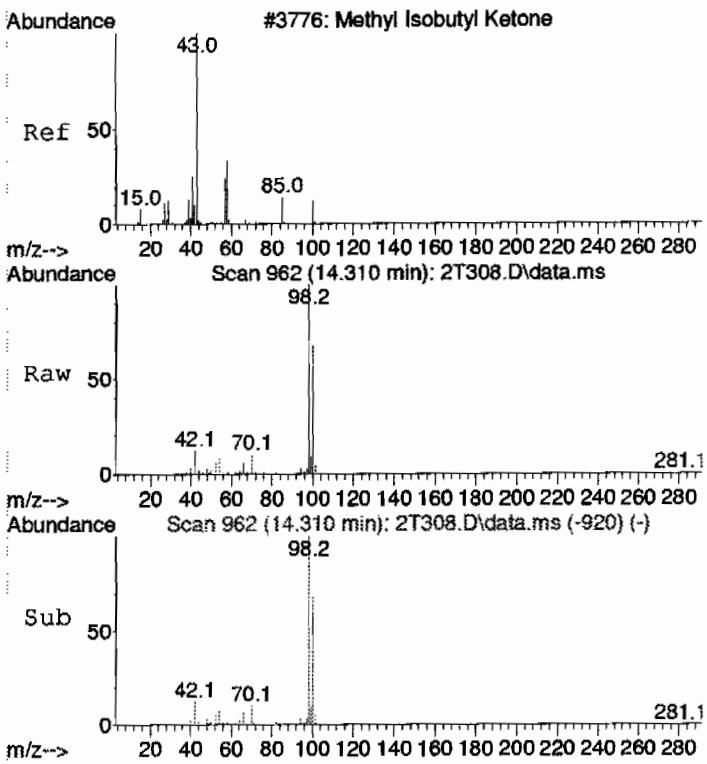

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.35 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 58 Resp: 12308

Ion	Ratio	Lower	Upper
58	100		
43	57.2	245.2	305.2#
100	8451.4	7.2	67.2#

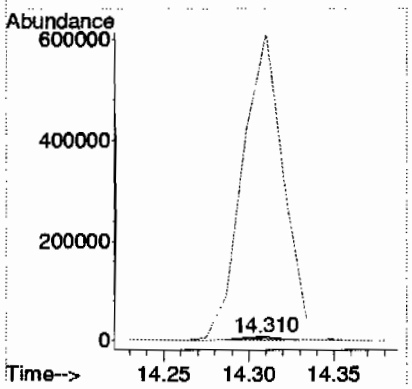

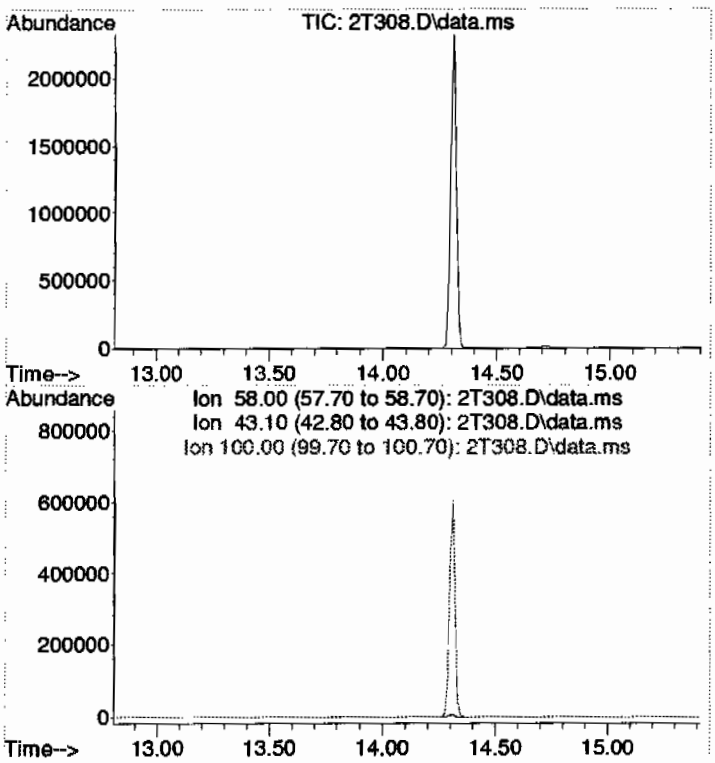

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

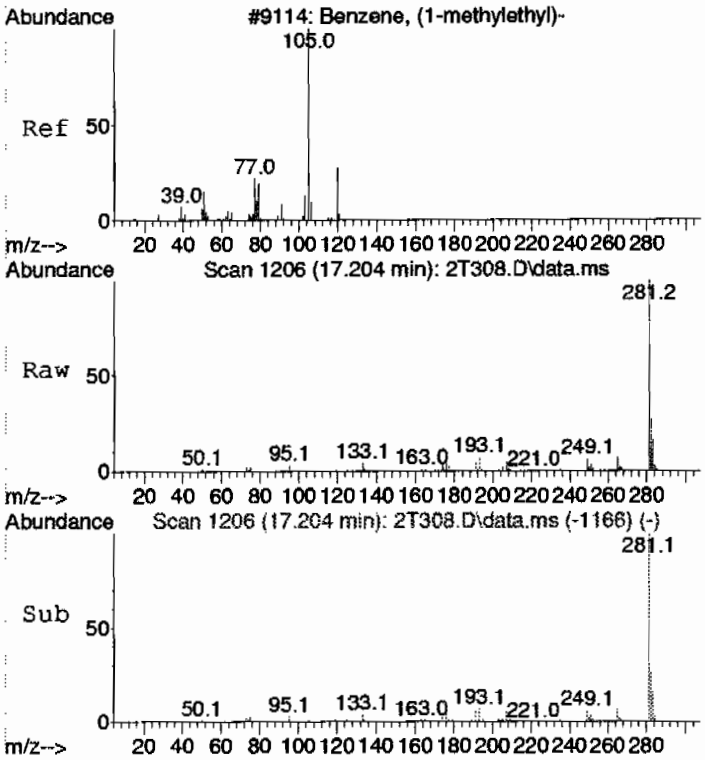

#60 BEFORE analyst integration
Isopropylbenzene
Concen: 0.63 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. 0.178 min
Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion:105 Resp: 20561

Ion	Ratio	Lower	Upper
105	100		
120	53.4	0.0	57.9

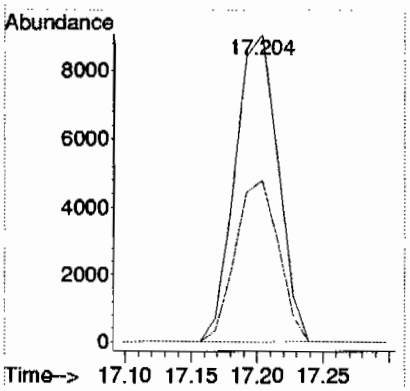

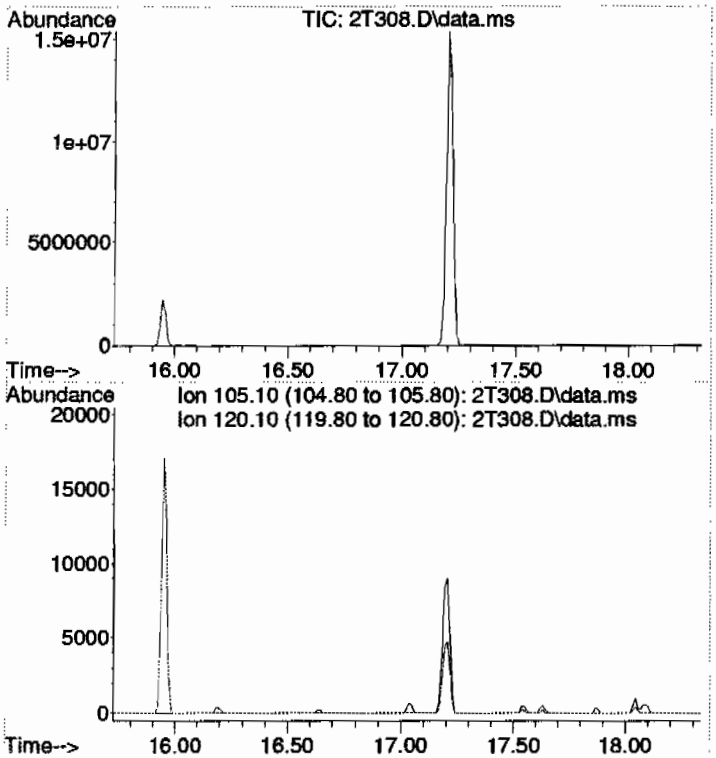

#60 AFTER analyst integration
Isopropylbenzene
Concen: N.D. DELETED
Expected RT: 17.03 min

Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	27.9

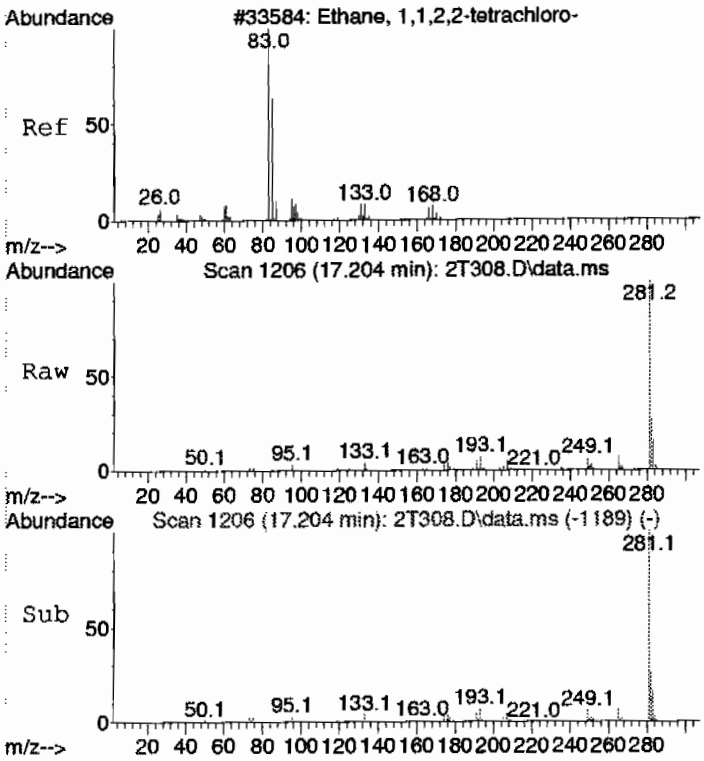

#62 BEFORE analyst integration
1,1,2,2-Tetrachloroethane
Concen: 0.32 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. -0.095 min
Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 83 Resp: 2430

Ion	Ratio	Lower	Upper
83	100		
85	308.1	33.9	93.9#

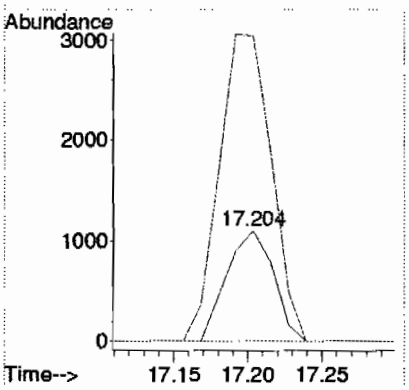

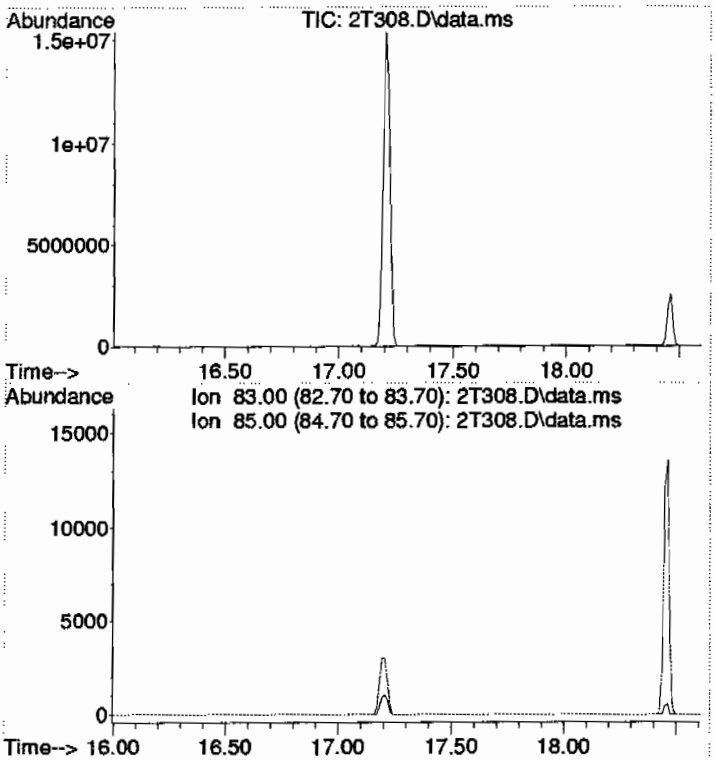

#62 AFTER analyst integration
1,1,2,2-Tetrachloroethane
Concen: N.D. DELETED
Expected RT: 17.30 min

Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.9

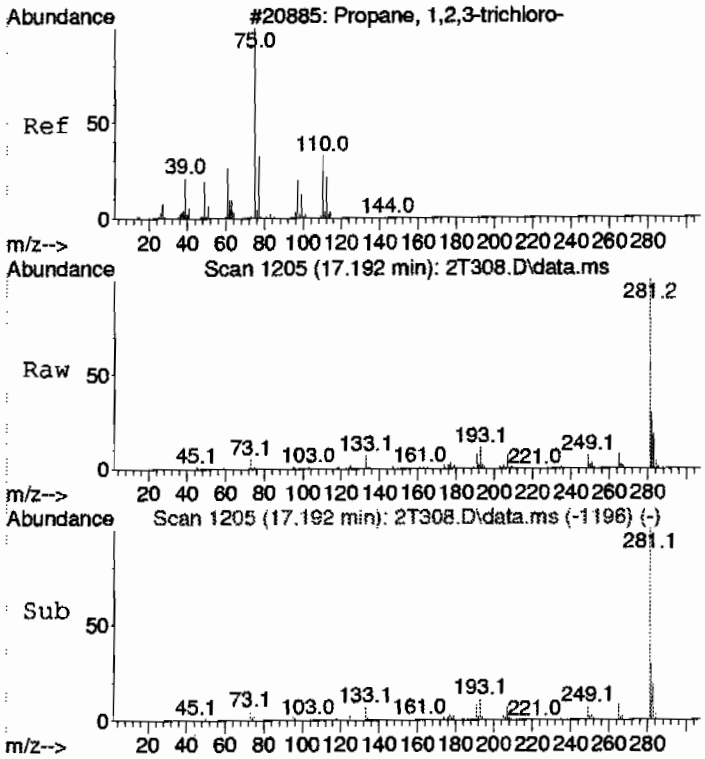

#63 BEFORE analyst integration
1,2,3-Trichloropropane
Concen: 9.84 ug/L
RT: 17.192 min Scan# 1205
Delta R.T. -0.190 min
Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion:110 Resp: 21631

Ion	Ratio	Lower	Upper
110	100		
75	1122.6	252.2	312.2#
77	22.6	629.3	689.3#

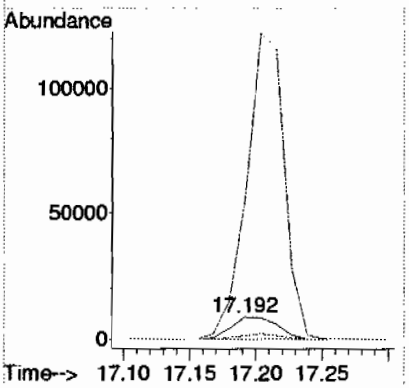

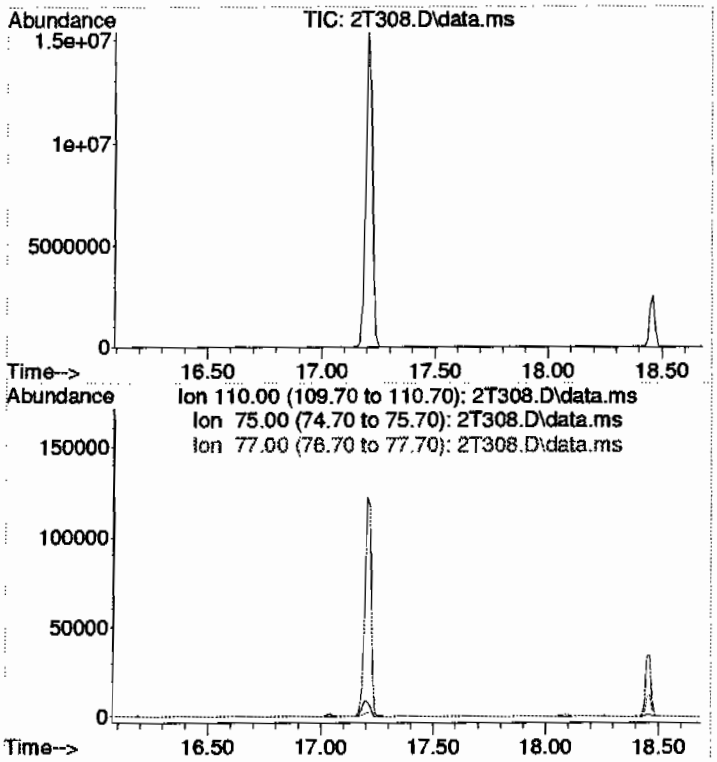

#63 AFTER analyst integration
1,2,3-Trichloropropane
Concen: N.D. DELETED
Expected RT: 17.38 min

Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 110

Sig	Exp Ratio
110	100
75	282.2
77	659.3

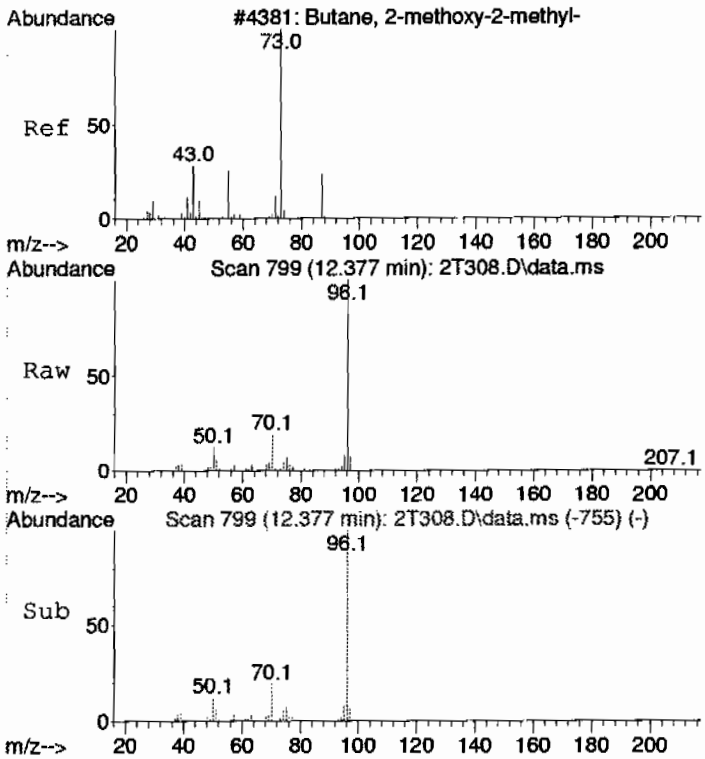

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.99 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 73 Resp: 17210

Ion	Ratio	Lower	Upper
73	100		
55	7.6	5.2	65.2
87	0.0	0.0	54.7

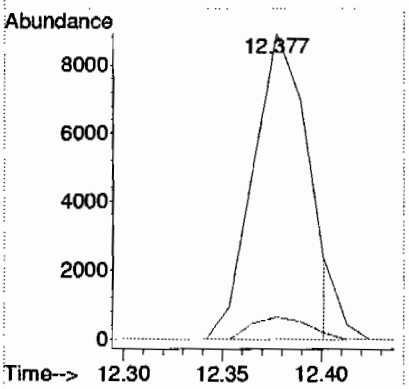

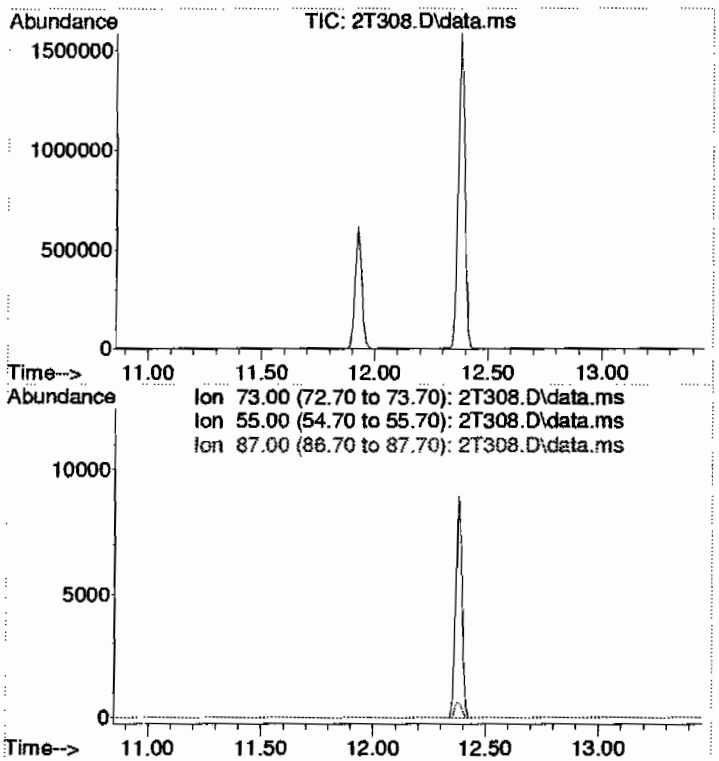

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

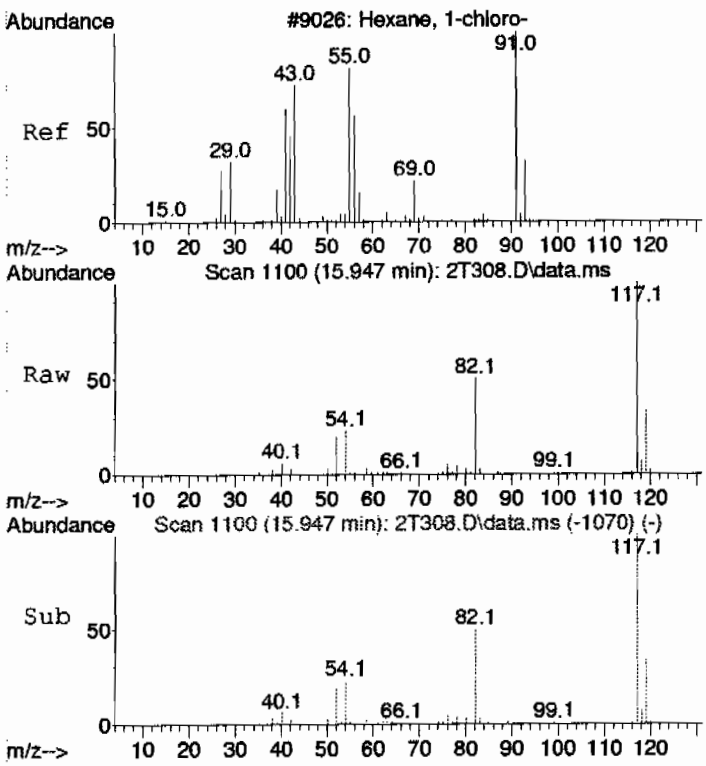

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 2.01 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 55 Resp: 12128

Ion	Ratio	Lower	Upper
55	100		
91	19.6	113.2	173.2#
56	59.4	30.3	90.3

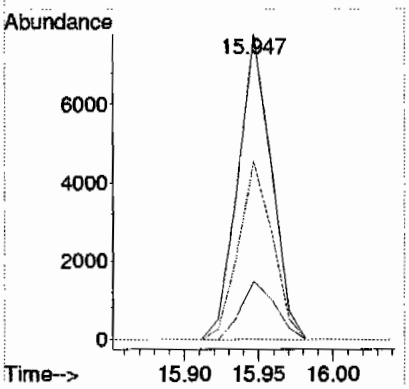

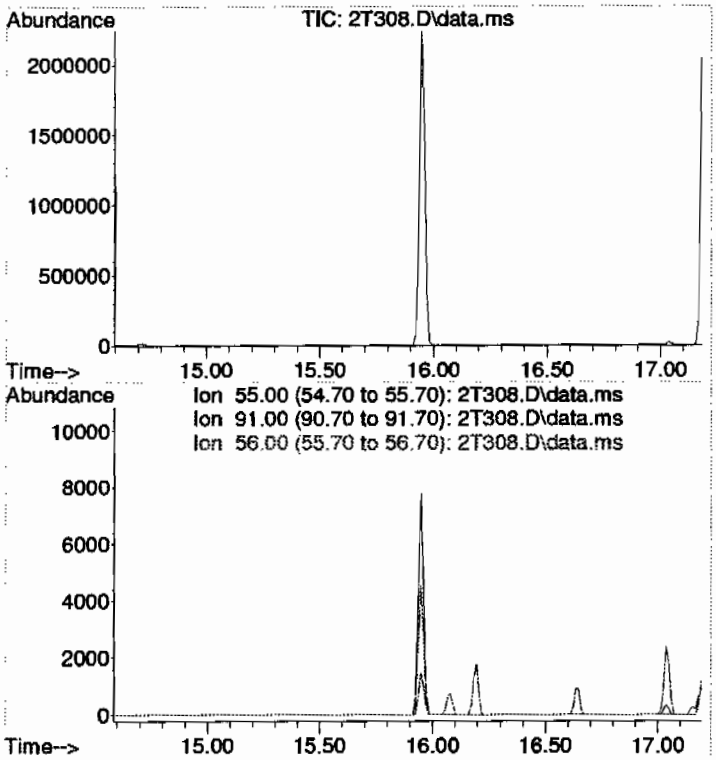

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

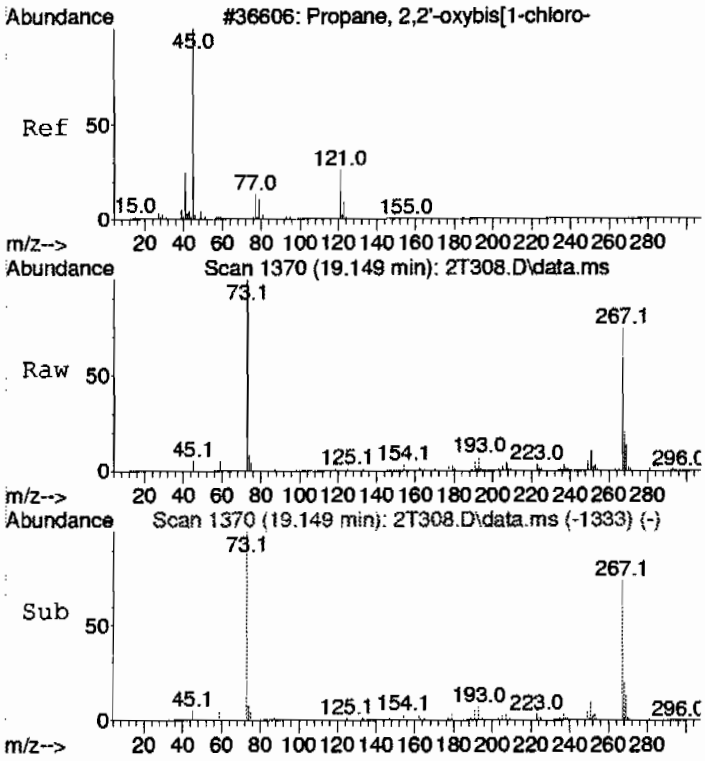

#112 BEFORE analyst integration
bis(2-Chloroisopropyl)ether
Concen: 28.18 ug/L
RT: 19.149 min Scan# 1370
Delta R.T. 0.142 min
Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 45 Resp: 115136

Ion	Ratio	Lower	Upper
45	100		
121	2.6	0.0	54.5

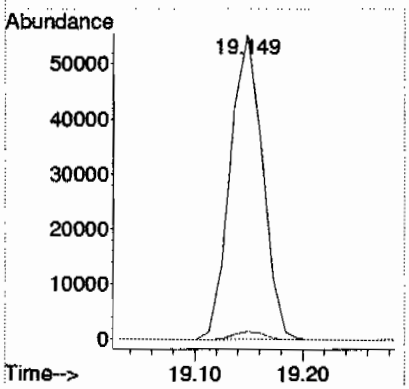

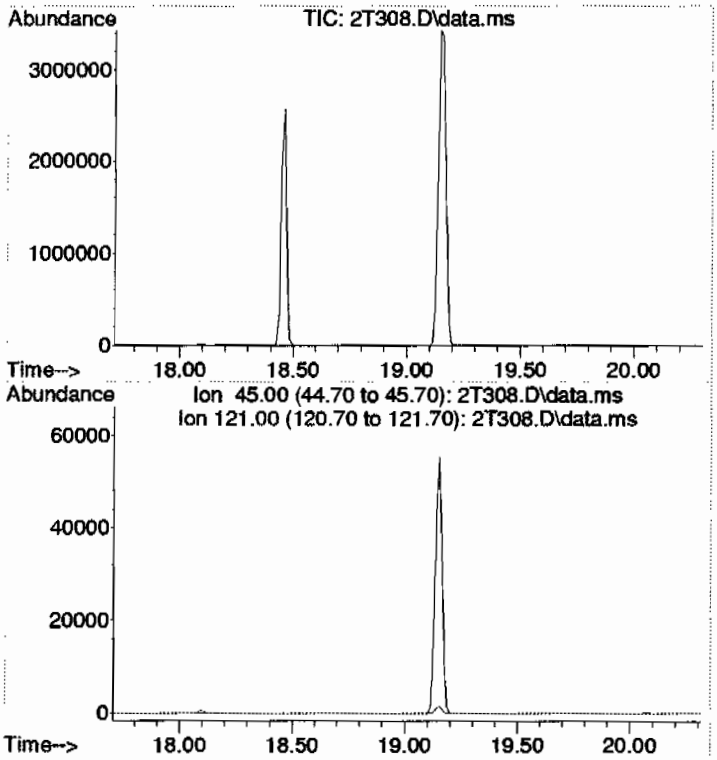

#112 AFTER analyst integration
bis(2-Chloroisopropyl)ether
Concen: N.D. DELETED
Expected RT: 19.01 min

Lab File: 2T308.D
Acq: 8 Jul 2009 10:06 am

Tgt Ion: 45

Sig	Exp Ratio
45	100
121	24.5

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T308.D
Acq On : 8 Jul 2009 10:06 am
Operator : CDS1
Sample : |232507004|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON
Sampling : 1
Start Thrs: 1
Stop Thrs : 0.3

Filtering: 5
Min Area: 100 Area counts
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T308.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.330	143	151	169	rBB	122136	680855	2.19%	1.214%
2	4.687	173	175	178	rBB	196	339	0.00%	0.001%
3	4.969	191	194	195	rBB	154	271	0.00%	0.000%
4	6.021	261	263	266	rBV	542	1839	0.01%	0.003%
5	6.365	289	292	301	rVB2	839	2622	0.01%	0.005%
6	7.930	422	424	437	rVB3	1458	7378	0.02%	0.013%
7	8.701	484	489	499	rBV	17476	44332	0.14%	0.079%
8	9.674	568	571	594	rBV3	2608	7682	0.02%	0.014%
9	11.927	755	761	792	rBV	611407	1232258	3.96%	2.198%
10	12.377	794	799	811	rVB	1585360	3192970	10.27%	5.696%
11	13.018	850	853	866	rVB3	1279	2443	0.01%	0.004%
12	14.049	939	940	943	rVB	1250	1405	0.00%	0.003%
13	14.310	957	962	982	rVB	2322607	4048200	13.02%	7.221%
14	14.713	991	996	1001	rVB	18072	38029	0.12%	0.068%
15	15.069	1023	1026	1038	rVB3	899	2905	0.01%	0.005%
16	15.947	1094	1100	1108	rBV	2243162	3686306	11.86%	6.575%
17	16.065	1108	1110	1113	rVB	1287	2308	0.01%	0.004%
18	16.196	1118	1121	1124	rVB	3989	6116	0.02%	0.011%
19	16.634	1156	1158	1162	rBV	3103	4871	0.02%	0.009%
20	17.038	1188	1192	1198	rVB	20722	36227	0.12%	0.065%
21	17.204	1199	1206	1217	rBV	15370935	31083828	100.00%	55.446%
22	17.654	1241	1244	1252	rVB4	4534	12537	0.04%	0.022%
23	17.773	1252	1254	1260	rVB3	2037	3724	0.01%	0.007%
24	18.093	1278	1281	1292	rVB	16255	25817	0.08%	0.046%
25	18.461	1307	1312	1321	rVB	2571128	4140374	13.32%	7.385%
26	19.149	1364	1370	1393	rBV2	3426114	7534825	24.24%	13.440%
27	21.247	1542	1547	1696	rBV	85159	260809	0.84%	0.465%

Sum of corrected areas: 56061270

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T308.D
Acq On : 8 Jul 2009 10:06 am
Operator : CDS1
Sample : |232507004|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

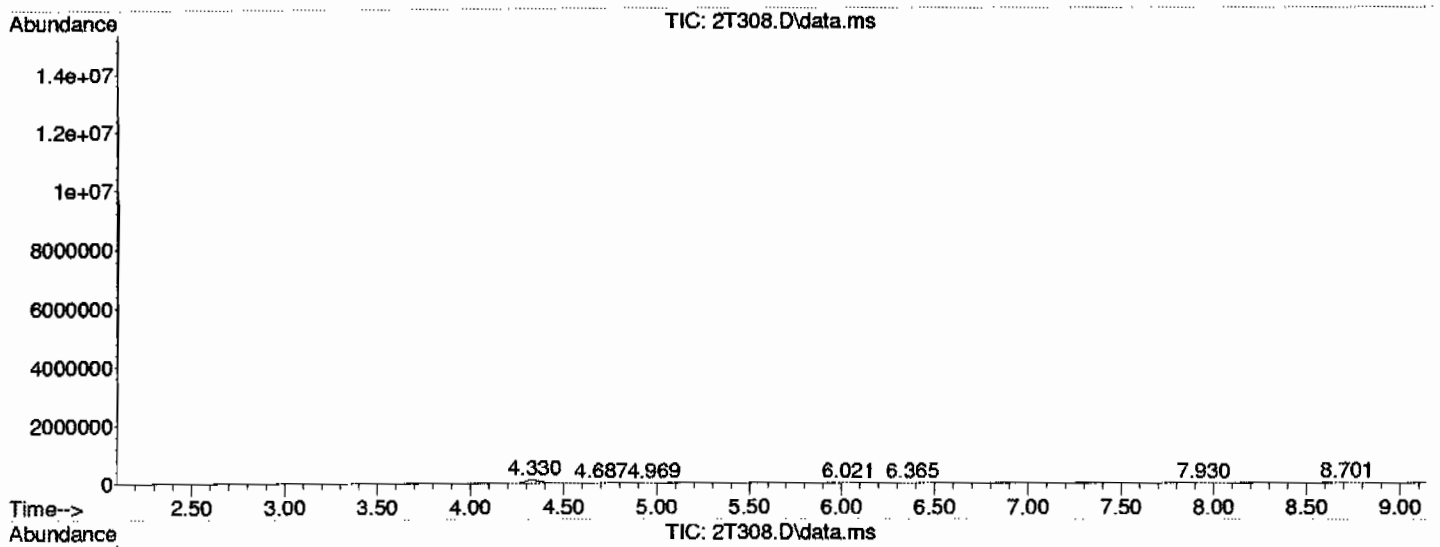

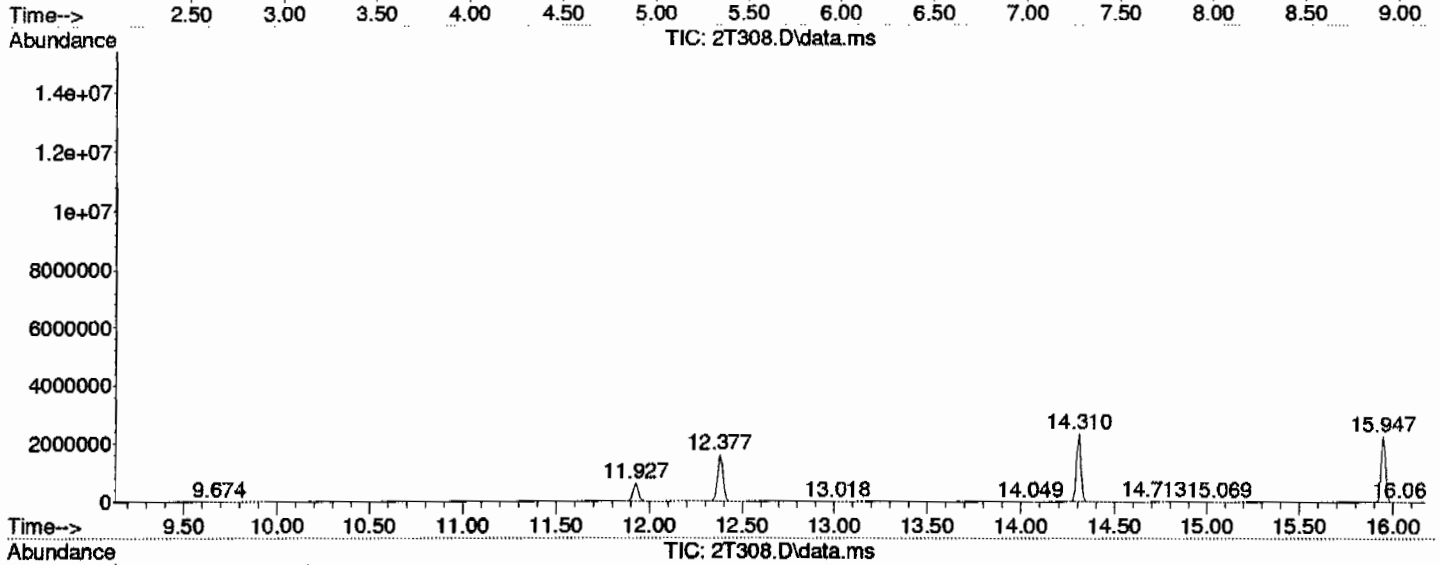

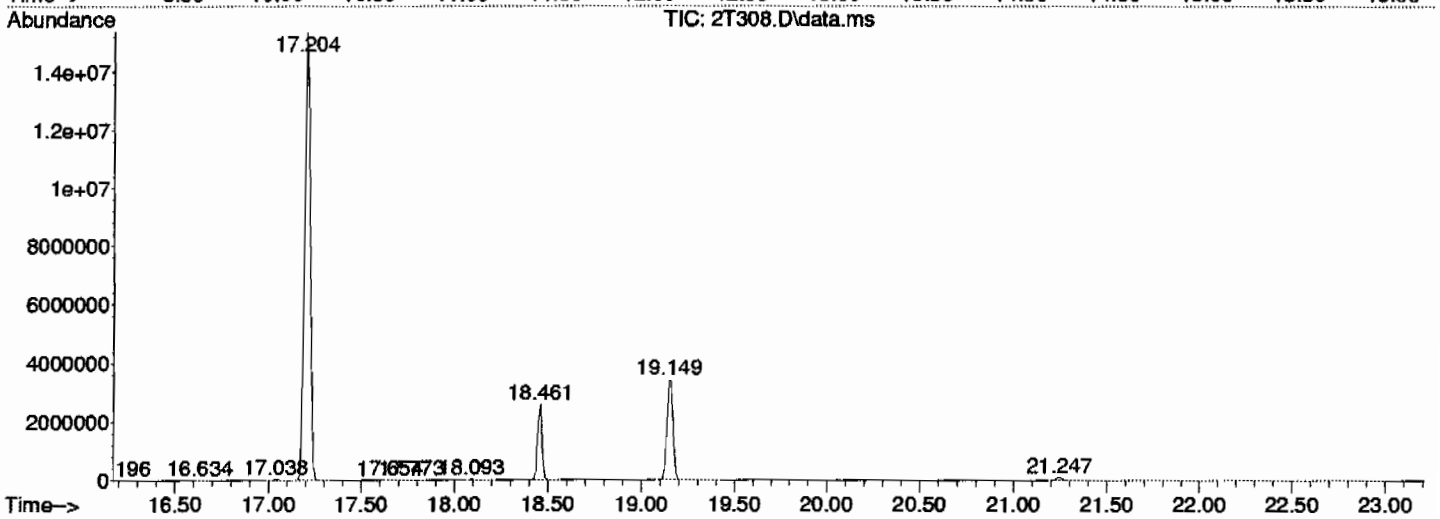

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T308.D
Acq On : 8 Jul 2009 10:06 am
Operator : CDS1
Sample : |232507004|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.330	10.66 ug/L	680855	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

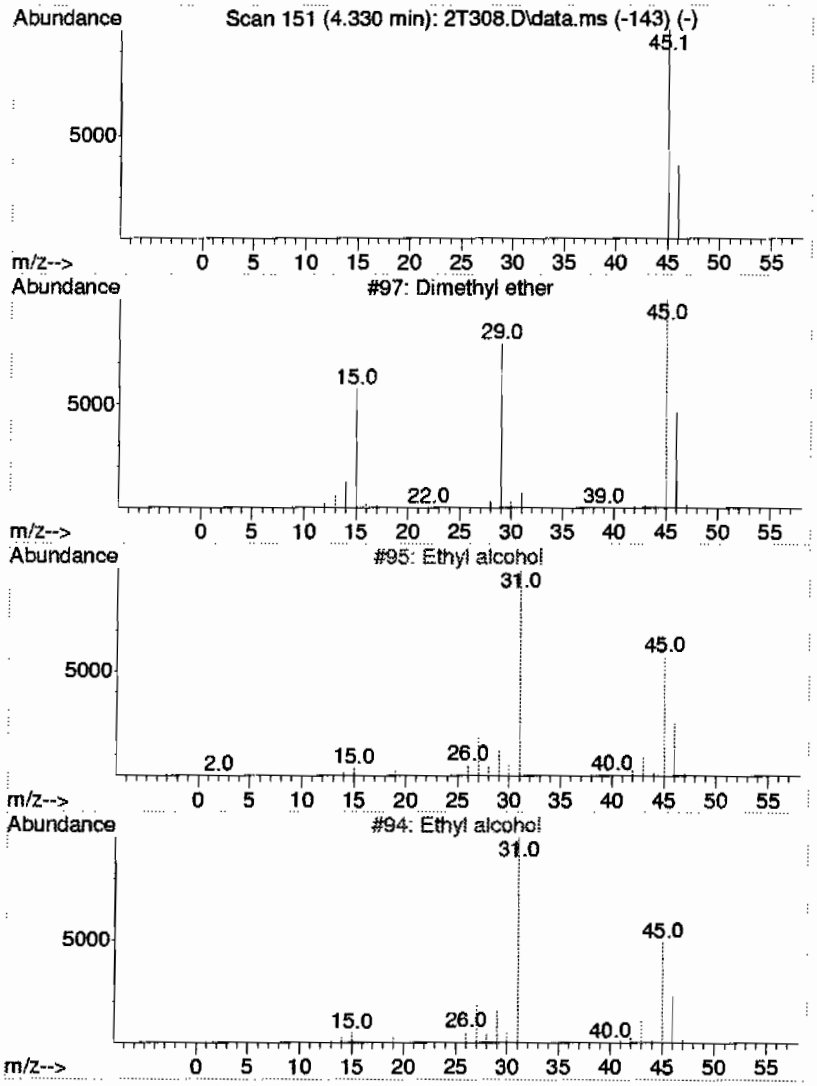

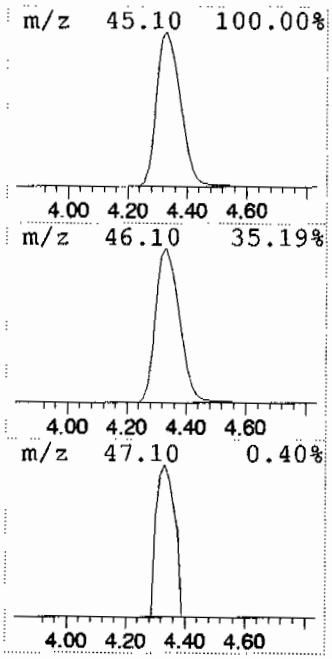

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T308.D
Acq On : 8 Jul 2009 10:06 am
Operator : CDS1
Sample : |232507004|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 2 unknown siloxane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.148	47.16 ug/L	3905120	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzaldehyde, 2,4-bis(trimethyls...	282	C13H22O3Si2	033617-38-8	72
2	Butanamide, 2,2,3,3,4,4,4-heptaf...	493	C18H26F7NO3Si2	055471-01-7	56
3	4-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-53-3	56
4	p-Trimethylsilyloxyphenyl-(trime...	398	C18H34O4Si3	1000079-05-1	50
5	3-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-88-9	42

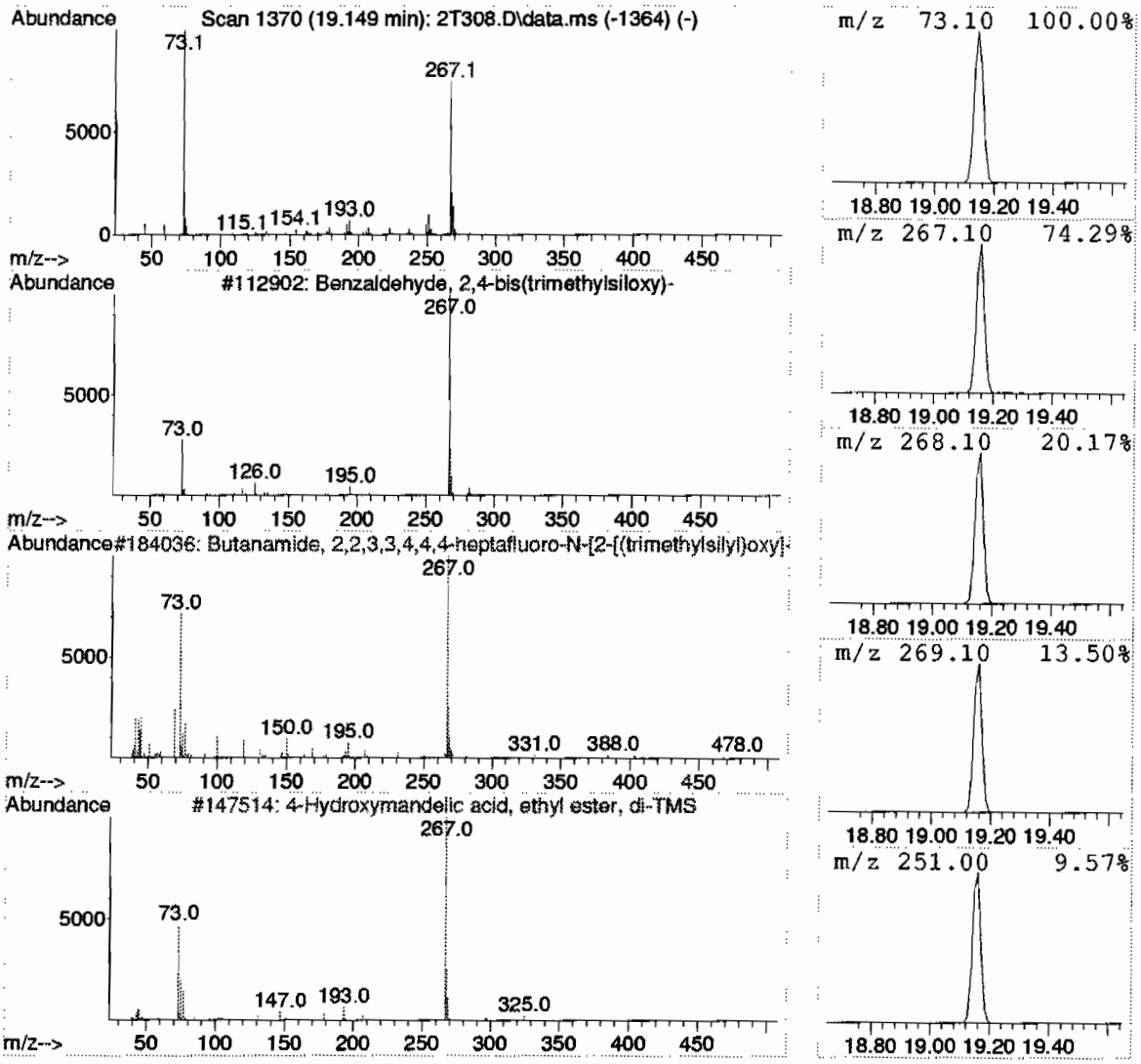

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T308.D
Acq On : 8 Jul 2009 10:06 am
Operator : CDS1
Sample : |232507004|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	|--Internal Standard---| |#	RT	Resp	Conc|
unknown	4.330	10.7	ug/L	680855	1	12.377	3192970	50.0
unknown siloxane	19.148	47.2	ug/L	3905120	6	18.461	4140370	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507005	Date Received:	06/27/2009 09:05	%Moisture:	5.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6528	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 10:34	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/07/2009 08:02	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070809V2.b\2T309.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.06	ug/kg	0.361	1.06
74-87-3	Chloromethane	U	1.06	ug/kg	0.318	1.06
75-01-4	Vinyl chloride	U	1.06	ug/kg	0.318	1.06
74-83-9	Bromomethane	U	1.06	ug/kg	0.318	1.06
75-00-3	Chloroethane	U	1.06	ug/kg	0.318	1.06
75-69-4	Trichlorofluoromethane	U	1.06	ug/kg	0.605	1.06
67-64-1	Acetone	U	5.31	ug/kg	1.76	5.31
75-35-4	1,1-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
74-88-4	Iodomethane	U	5.31	ug/kg	1.70	5.31
75-09-2	Methylene chloride	U	5.31	ug/kg	2.12	5.31
75-15-0	Carbon disulfide	U	5.31	ug/kg	1.33	5.31
156-60-5	trans-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
75-34-3	1,1-Dichloroethane	U	1.06	ug/kg	0.318	1.06
78-93-3	2-Butanone	U	5.31	ug/kg	1.59	5.31
156-59-2	cis-1,2-Dichloroethylene	U	1.06	ug/kg	0.318	1.06
594-20-7	2,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
67-66-3	Chloroform	U	1.06	ug/kg	0.318	1.06
74-97-5	Bromochloromethane	U	1.06	ug/kg	0.350	1.06
71-55-6	1,1,1-Trichloroethane	U	1.06	ug/kg	0.318	1.06
563-58-6	1,1-Dichloropropene	U	1.06	ug/kg	0.318	1.06
56-23-5	Carbon tetrachloride	U	1.06	ug/kg	0.318	1.06
107-06-2	1,2-Dichloroethane	U	1.06	ug/kg	0.318	1.06
71-43-2	Benzene	U	1.06	ug/kg	0.318	1.06
79-01-6	Trichloroethylene	U	1.06	ug/kg	0.350	1.06
78-87-5	1,2-Dichloropropane	U	1.06	ug/kg	0.318	1.06
75-27-4	Bromodichloromethane	U	1.06	ug/kg	0.318	1.06
74-95-3	Dibromomethane	U	1.06	ug/kg	0.318	1.06
108-10-1	4-Methyl-2-pentanone	U	5.31	ug/kg	1.33	5.31
10061-01-5	cis-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
108-88-3	Toluene	U	1.06	ug/kg	0.318	1.06
10061-02-6	trans-1,3-Dichloropropylene	U	1.06	ug/kg	0.318	1.06
79-00-5	1,1,2-Trichloroethane	U	1.06	ug/kg	0.318	1.06
591-78-6	2-Hexanone	U	5.31	ug/kg	1.59	5.31
142-28-9	1,3-Dichloropropane	U	1.06	ug/kg	0.318	1.06
127-18-4	Tetrachloroethylene	U	1.06	ug/kg	0.318	1.06
124-48-1	Dibromochloromethane	U	1.06	ug/kg	0.318	1.06
106-93-4	1,2-Dibromoethane	U	1.06	ug/kg	0.318	1.06
108-90-7	Chlorobenzene	U	1.06	ug/kg	0.318	1.06

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507005	Date Received:	06/27/2009 09:05	%Moisture:	5.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6528	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 10:34	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/07/2009 08:02	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070809V2.b\2T309.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.06	ug/kg	0.318	1.06
179601-23-1	m,p-Xylenes	U	2.12	ug/kg	0.318	2.12
95-47-6	o-Xylene	U	1.06	ug/kg	0.318	1.06
100-42-5	Styrene	U	1.06	ug/kg	0.318	1.06
75-25-2	Bromoform	U	1.06	ug/kg	0.318	1.06
79-34-5	1,1,2,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06
96-18-4	1,2,3-Trichloropropane	U	1.06	ug/kg	0.318	1.06
108-86-1	Bromobenzene	U	1.06	ug/kg	0.318	1.06
103-65-1	n-Propylbenzene	U	1.06	ug/kg	0.318	1.06
95-49-8	2-Chlorotoluene	U	1.06	ug/kg	0.318	1.06
98-82-8	Isopropylbenzene	U	1.06	ug/kg	0.318	1.06
108-67-8	1,3,5-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06
106-43-4	4-Chlorotoluene	U	1.06	ug/kg	0.318	1.06
98-06-6	tert-Butylbenzene	U	1.06	ug/kg	0.318	1.06
95-63-6	1,2,4-Trimethylbenzene	U	1.06	ug/kg	0.318	1.06
135-98-8	sec-Butylbenzene	U	1.06	ug/kg	0.318	1.06
99-87-6	4-Isopropyltoluene	U	1.06	ug/kg	0.318	1.06
541-73-1	1,3-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06
106-46-7	1,4-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06
104-51-8	n-Butylbenzene	U	1.06	ug/kg	0.318	1.06
96-12-8	1,2-Dibromo-3-chloropropane	U	1.06	ug/kg	0.318	1.06
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.31	ug/kg	1.70	5.31
630-20-6	1,1,1,2-Tetrachloroethane	U	1.06	ug/kg	0.318	1.06
95-50-1	1,2-Dichlorobenzene	U	1.06	ug/kg	0.318	1.06

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	12.8	ug/kg	0	J
	unknown siloxane	17.2	161	ug/kg	0	J
	unknown siloxane	19.15	38.1	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T309.D
Acq On : 8 Jul 2009 10:34 am
Operator : CDS1
InstName : VOA2
Sample : |232507005|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 16 12:03:23 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1585749	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1327358	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	775376	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1585749	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1327358	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	775376	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	454057	51.06 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 102.12%		
43) Toluene-d8	14.310	98	1527746	48.98 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 97.96%		
61) Bromofluorobenzene	17.204	95	557340	45.72 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 91.44%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	0.000		0	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.930	43	3503	N.D.	
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.440	41	235	N.D.	
13) Methyl acetate	8.547	43	278	N.D.	
14) Carbon disulfide	8.251	76	988	N.D.	
15) Methylene chloride	8.701	84	9094	Below Cal	99
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	363	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	435	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	256	N.D.	
31) Benzene	12.033	78	445	N.D.	
32) Cyclohexene	12.377	67	359	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T309.D
Acq On : 8 Jul 2009 10:34 am
Operator : CDS1
InstName : VOA2
Sample : |232507005|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 16 12:03:23 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D.	d
44) Toluene	14.393	91	2028	N.D.	
45) trans-1,3-Dichloroprop...	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.049	43	297	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	345	N.D.	
53) 1,1,1,2-Tetrachloroethane	16.160	131	1893	N.D.	
54) Ethylbenzene	0.000		0m	N.D.	d
55) m,p-Xylenes	0.000		0m	N.D.	d
56) o-Xylene	16.646	106	561	N.D.	
57) Styrene	16.646	104	331	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.204	105	9421	N.D.	
62) 1,1,2,2-Tetrachloroethane	17.204	83	1122	N.D.	
63) 1,2,3-Trichloropropane	0.000		0m	N.D.	d
64) Bromobenzene	17.405	156	230	N.D.	
65) n-Propylbenzene	17.465	91	340	N.D.	
66) 1,3,5-Trimethylbenzene	17.631	105	433	N.D.	
67) 2-Chlorotoluene	17.595	91	118	N.D.	
68) 4-Chlorotoluene	17.702	91	973	N.D.	
69) tert-Butylbenzene	18.093	119	951	N.D.	
70) 1,2,4-Trimethylbenzene	18.046	105	638	N.D.	
71) sec-Butylbenzene	18.093	105	1421	N.D.	
72) 4-Isopropyltoluene	18.366	119	511	N.D.	
73) 1,3-Dichlorobenzene	18.401	146	676	N.D.	
74) 1,4-Dichlorobenzene	18.401	146	676	N.D.	
75) n-Butylbenzene	18.805	91	142	N.D.	
76) 1,2-Dichlorobenzene	18.900	146	339	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	503	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	1693	N.D.	
81) 1,2,3-Trichlorobenzene	21.342	180	267	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.440	41	235	N.D.	
89) tert-Butyl Alcohol	8.891	59	504	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.871	43	134	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T309.D
Acq On : 8 Jul 2009 10:34 am
Operator : CDS1
InstName : VOA2
Sample : |232507005|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 16 12:03:23 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	0.000		0	N.D.	
96) Methacrylonitrile	11.239	41	117	N.D.	
97) Tetrahydrofuran	11.239	42	507	N.D.	
98) Isobutyl alcohol	0.000		0	N.D.	
99) Methyl tert-amyl ether	0.000		0m	N.D.	d
100) Methyl methacrylate	0.000		0	N.D.	
101) 1,4-Dioxane	0.000		0	N.D.	
102) 2-Nitropropane	0.000		0	N.D.	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	0.000		0m	N.D.	d
107) cis-1,4-Dichloro-2-butene	17.038	53	1320	N.D.	
108) Cyclohexanone	17.192	42	292	N.D.	
109) trans-1,4-Dichloro-2-b...	17.358	53	499	N.D.	
110) Pentachloroethane	0.000		0	N.D.	
111) Benzyl chloride	18.603	91	967	N.D.	
112) bis(2-Chloroisopropyl)...	0.000		0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T309.D
Acq On : 8 Jul 2009 10:34 am
Operator : CDS1
InstName : VOA2
Sample : |232507005|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 16 12:03:23 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

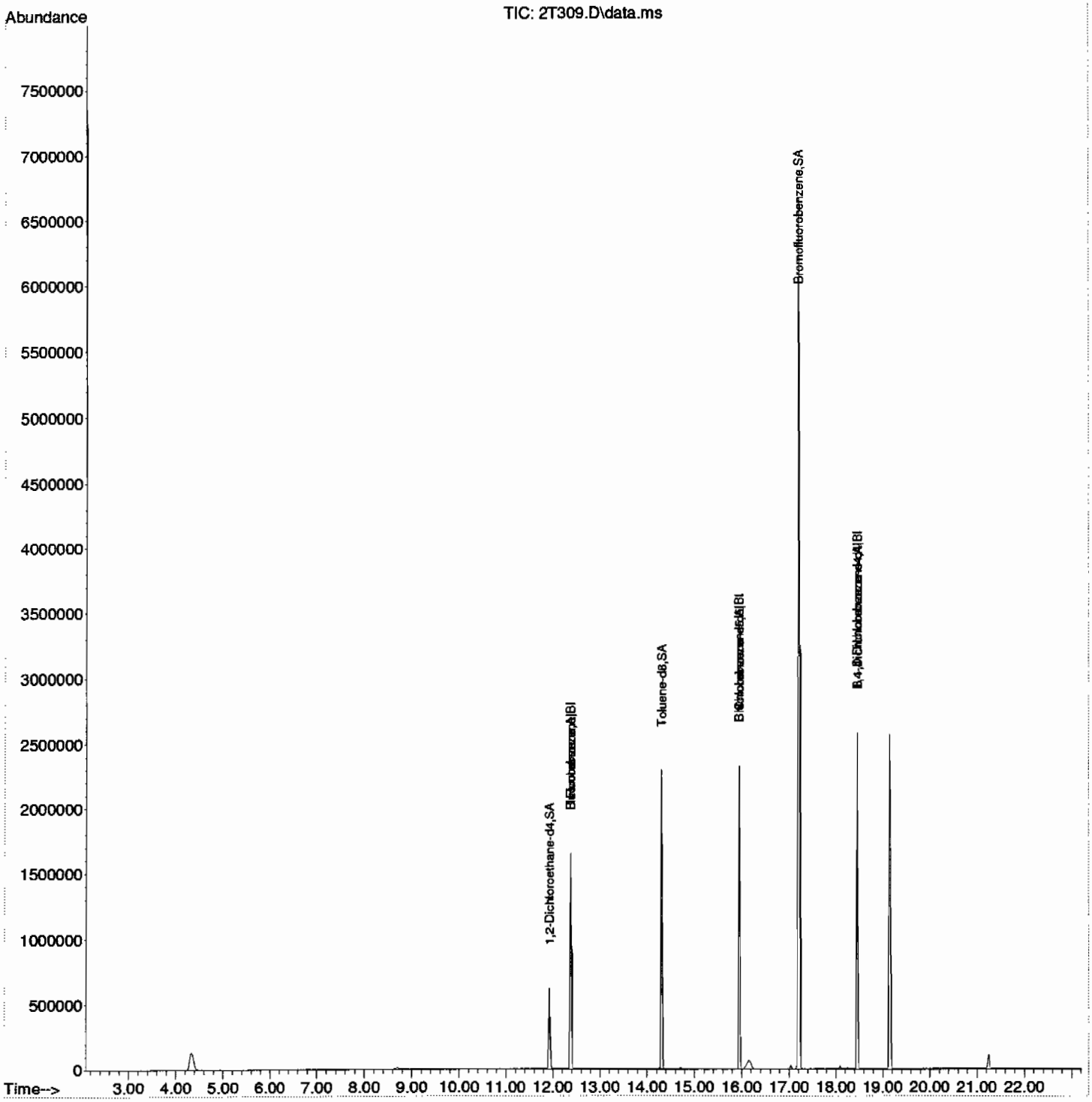

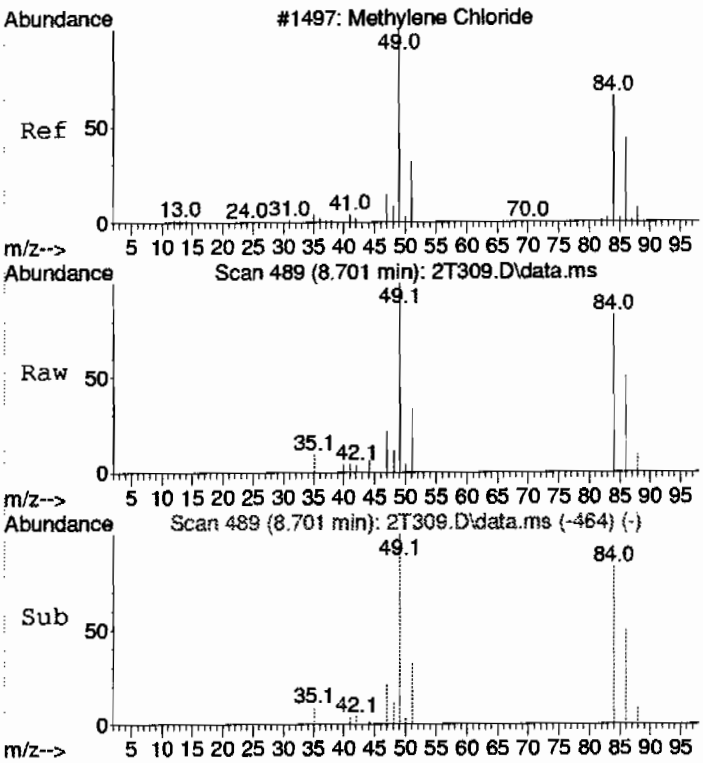

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 84 Resp: 9094

Ion	Ratio	Lower	Upper
84	100		
86	62.2	33.8	93.8
49	134.5	105.0	165.0

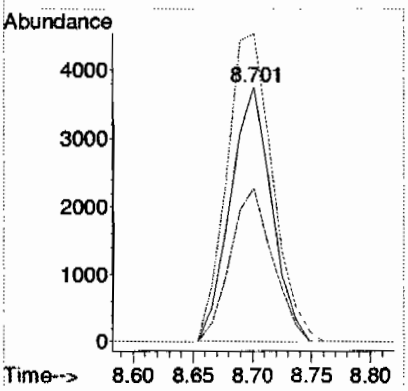

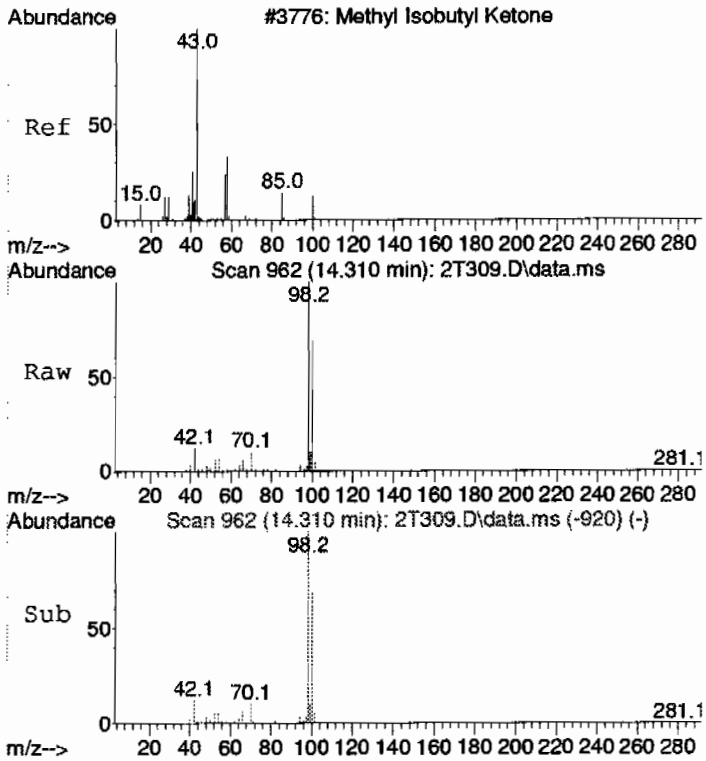

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.43 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 58 Resp: 12875

Ion	Ratio	Lower	Upper
58	100		
43	56.6	245.2	305.2#
100	8143.8	7.2	67.2#

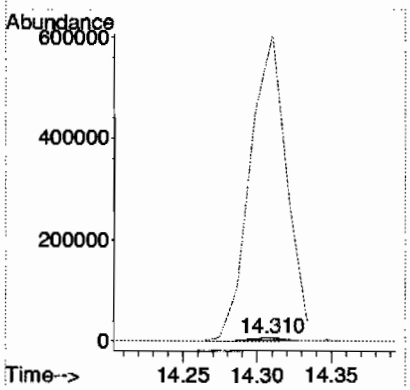

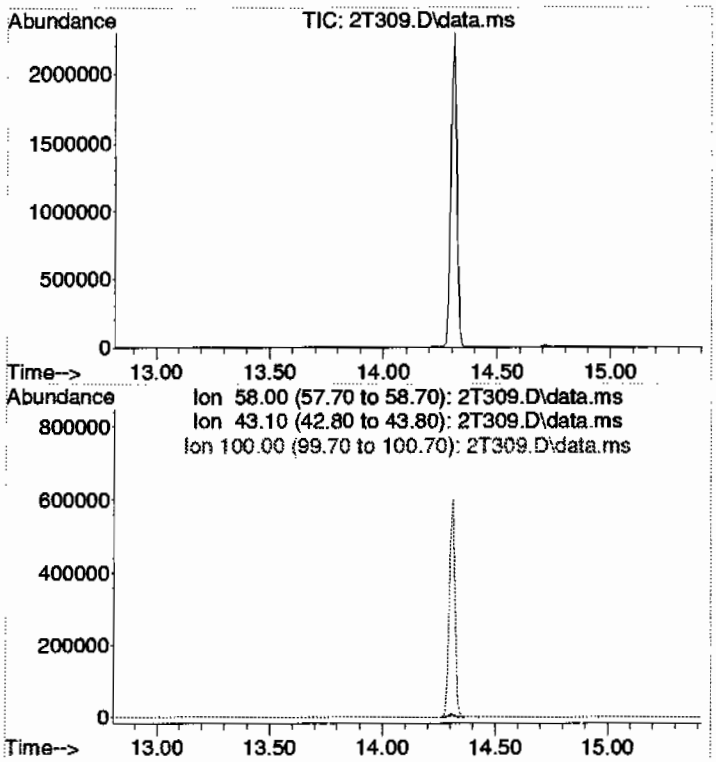

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

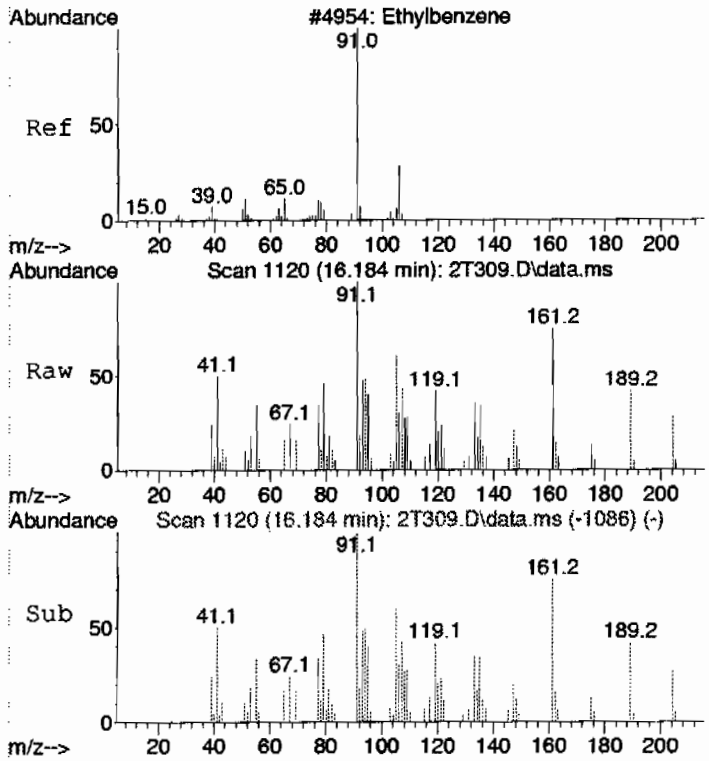

#54 BEFORE analyst integration
Ethylbenzene
Concen: 0.81 ug/L
RT: 16.184 min Scan# 1120
Delta R.T. 0.107 min
Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 91 Resp: 27719

Ion	Ratio	Lower	Upper
91	100		
106	29.2	3.1	63.1

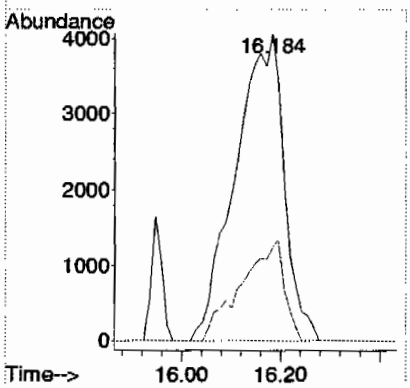

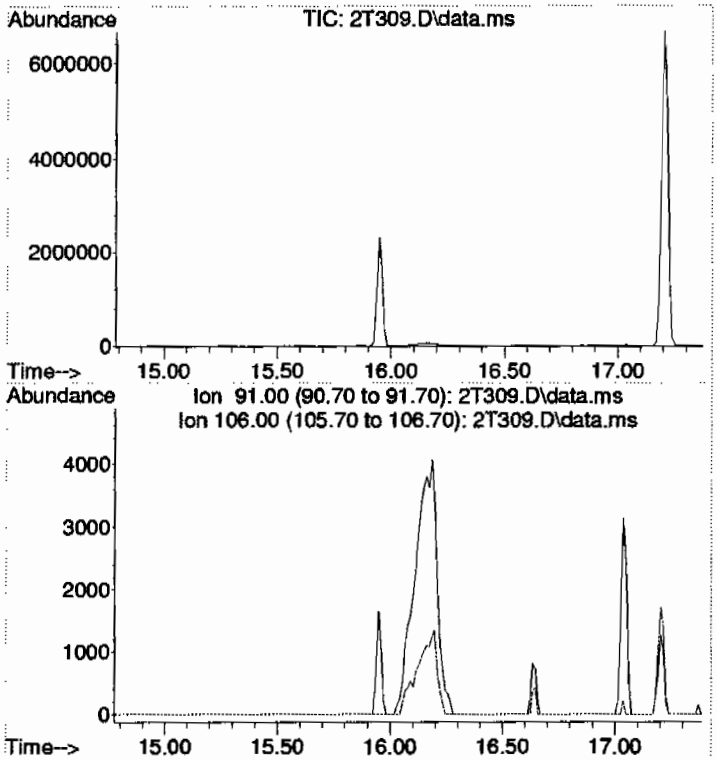

#54 AFTER analyst integration
Ethylbenzene
Concen: N.D. DELETED
Expected RT: 16.08 min

Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	33.1

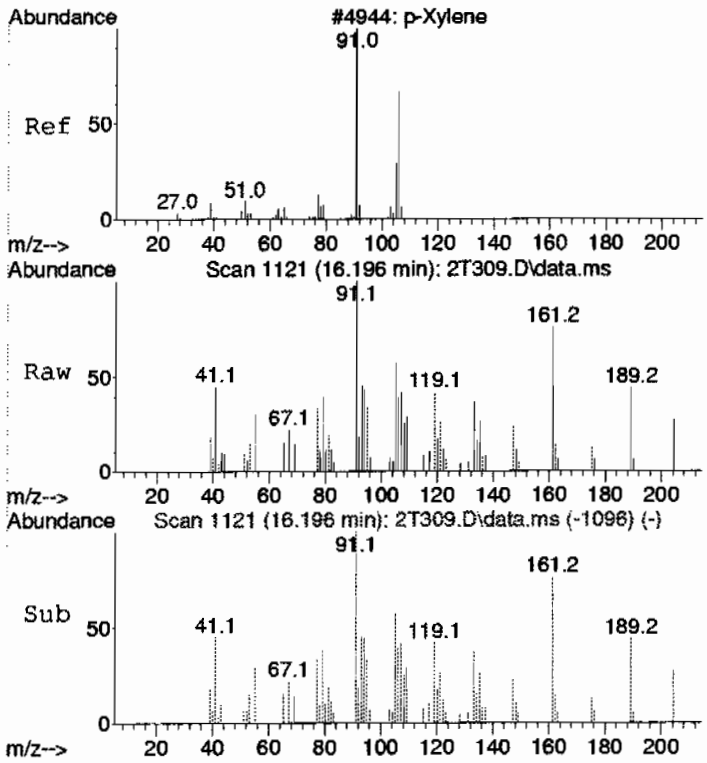

#55 BEFORE analyst integration
m,p-Xylenes
Concen: 0.59 ug/L
RT: 16.196 min Scan# 1121
Delta R.T. -0.000 min
Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion:106 Resp: 8084

Ion	Ratio	Lower	Upper
106	100		
91	342.9	161.2	221.2#

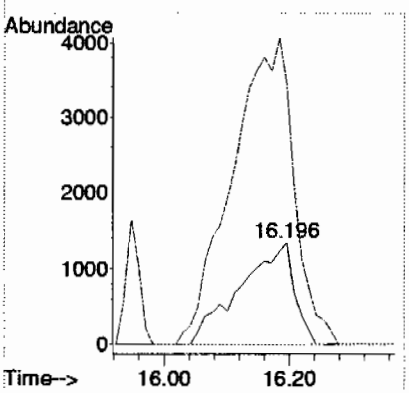

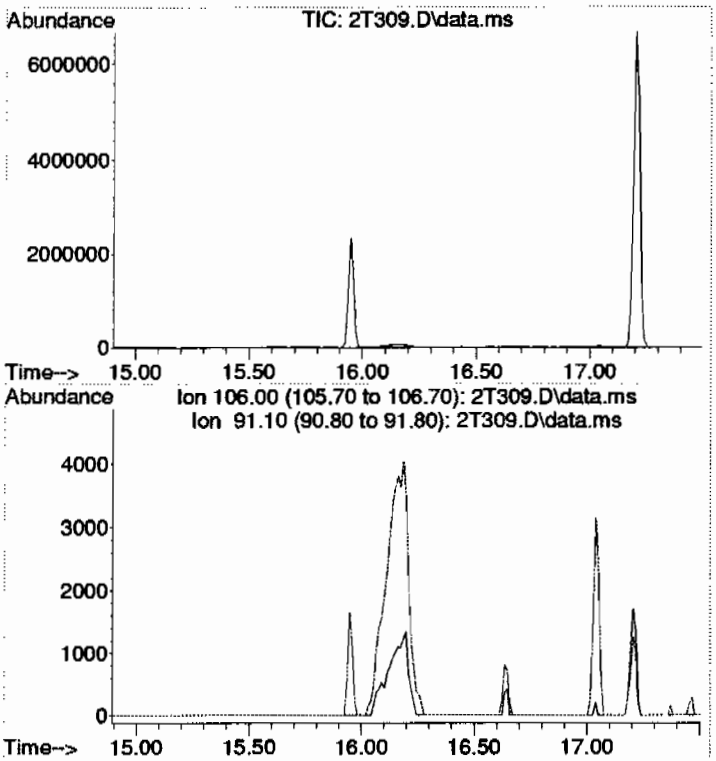

#55 AFTER analyst integration
m,p-Xylenes
Concen: N.D. DELETED
Expected RT: 16.20 min

Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 106

Sig	Exp Ratio
106	100
91	191.2

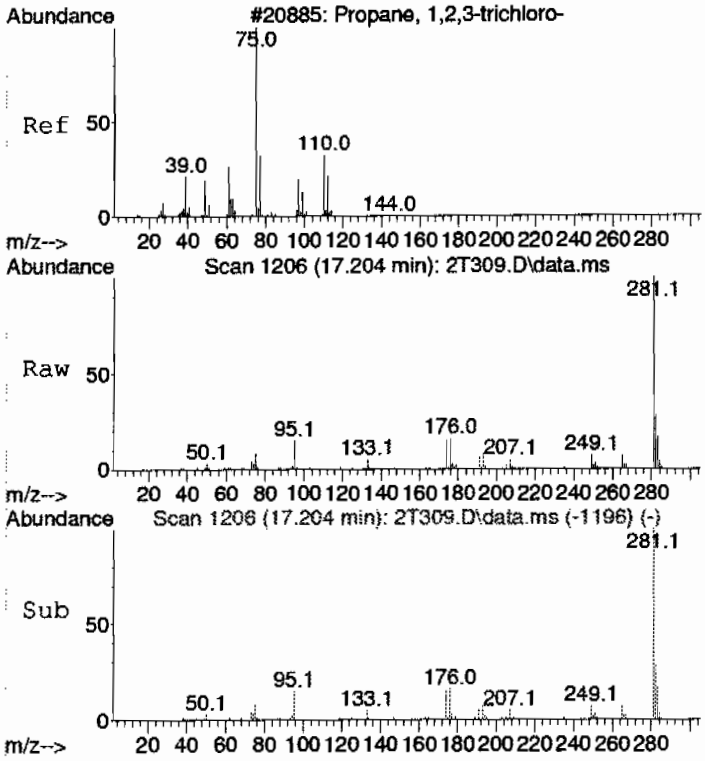

#63 BEFORE analyst integration
1,2,3-Trichloropropane
Concen: 4.33 ug/L
RT: 17.204 min Scan# 1206
Delta R.T. -0.178 min
Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion:110 Resp: 9639

Ion	Ratio	Lower	Upper
110	100		
75	2831.0	252.2	312.2#
77	42.2	629.3	689.3#

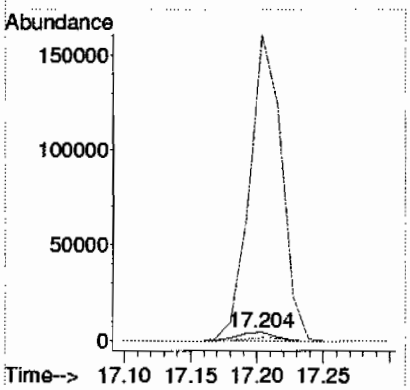

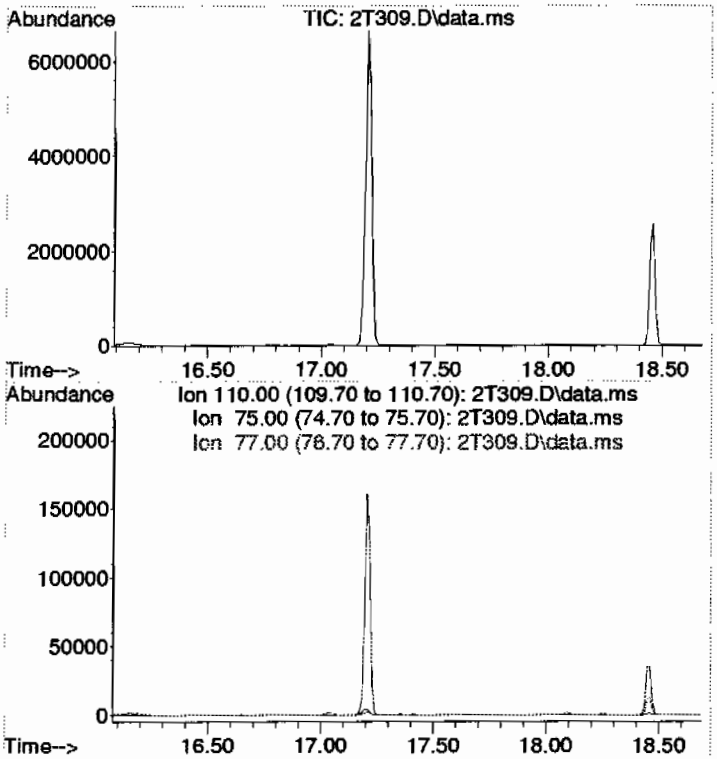

#63 AFTER analyst integration
1,2,3-Trichloropropane
Concen: N.D. DELETED
Expected RT: 17.38 min

Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 110

Sig	Exp Ratio
110	100
75	282.2
77	659.3

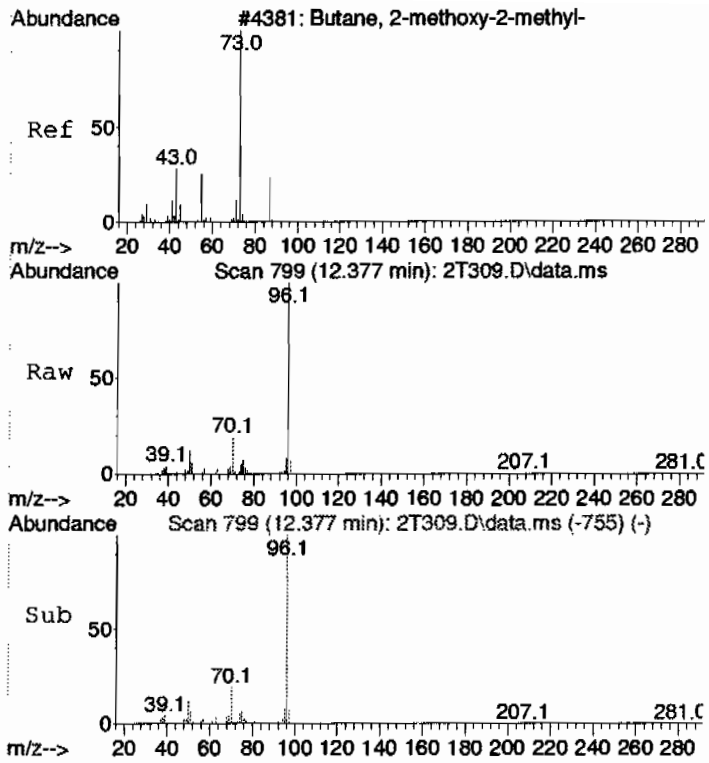

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 1.00 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 73 Resp: 17784

Ion	Ratio	Lower	Upper
73	100		
55	7.4	5.2	65.2
87	0.0	0.0	54.7

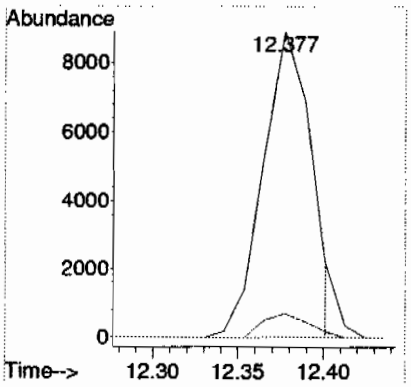

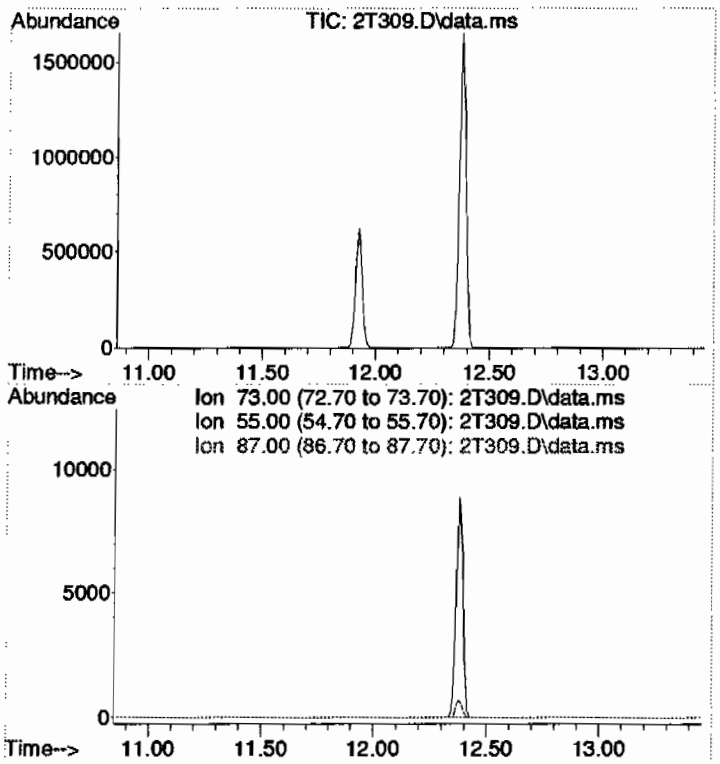

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

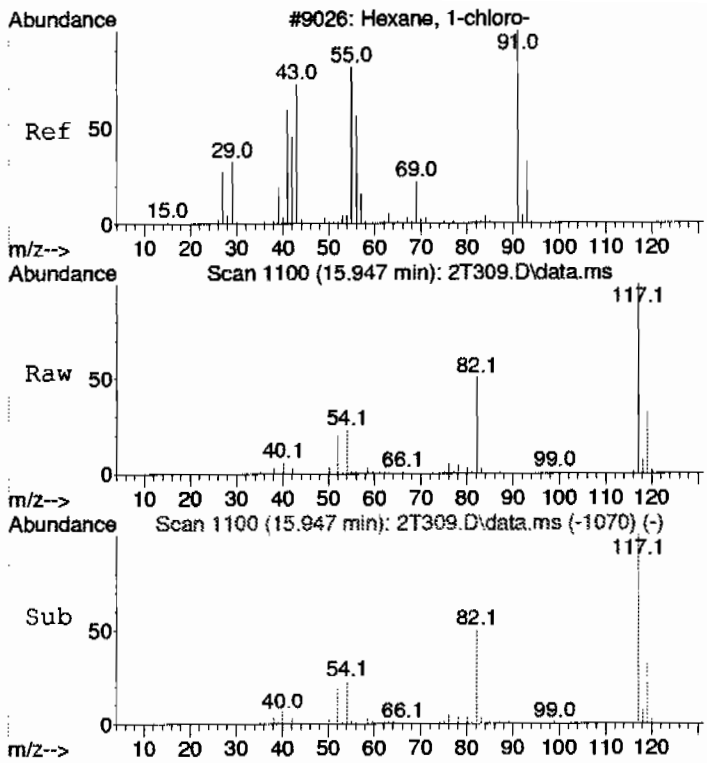

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 2.07 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 55 Resp: 12630

Ion	Ratio	Lower	Upper
55	100		
91	19.5	113.2	173.2#
56	58.9	30.3	90.3

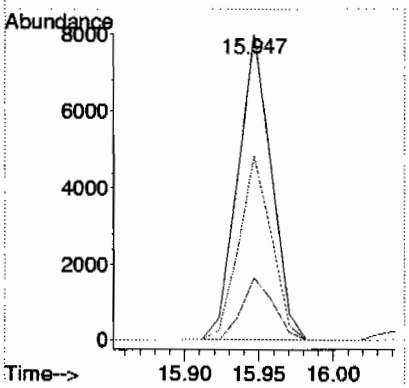

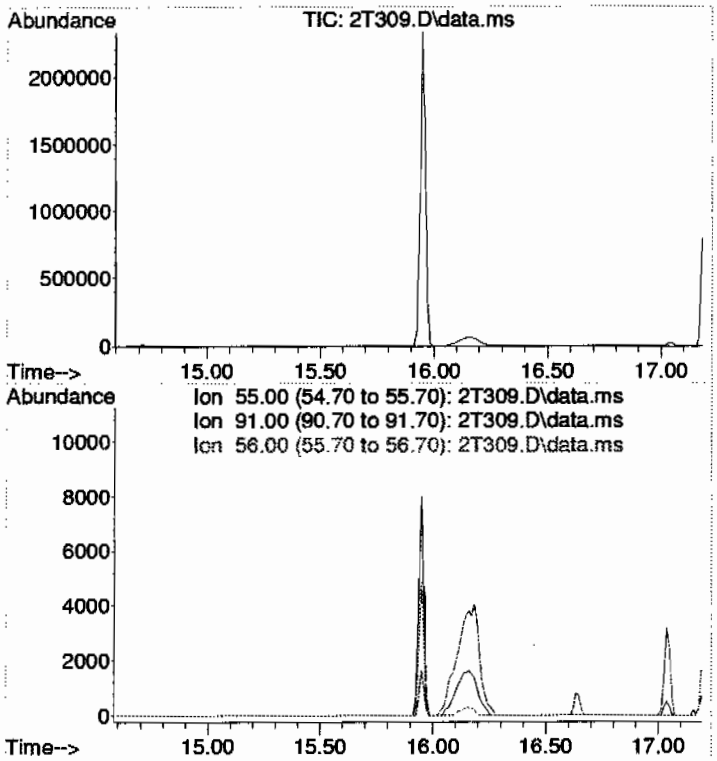

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

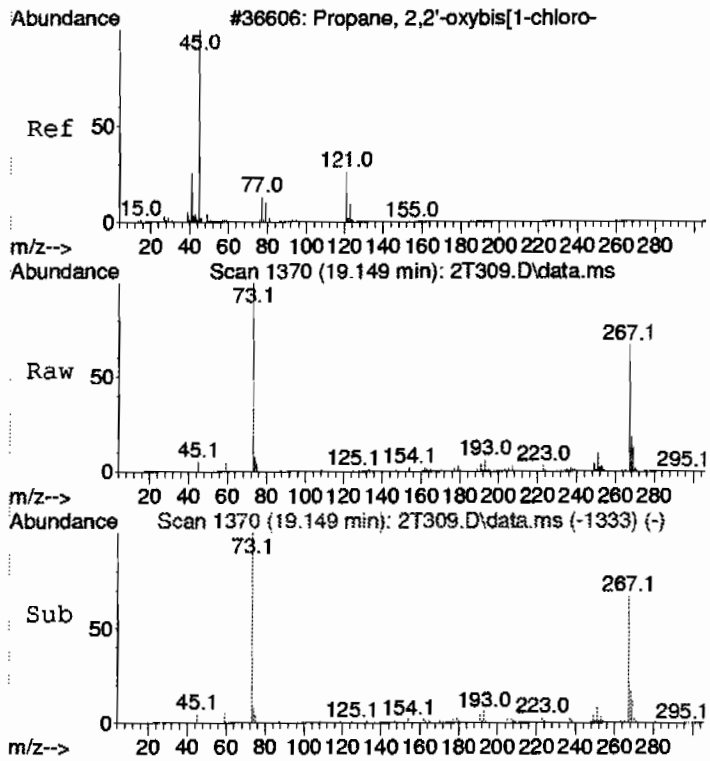

#112 BEFORE analyst integration
bis(2-Chloroisopropyl)ether
Concen: 21.63 ug/L
RT: 19.149 min Scan# 1370
Delta R.T. 0.142 min
Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 45 Resp: 89497

Ion	Ratio	Lower	Upper
45	100		
121	2.5	0.0	54.5

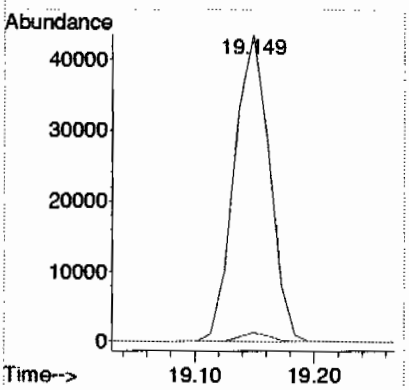

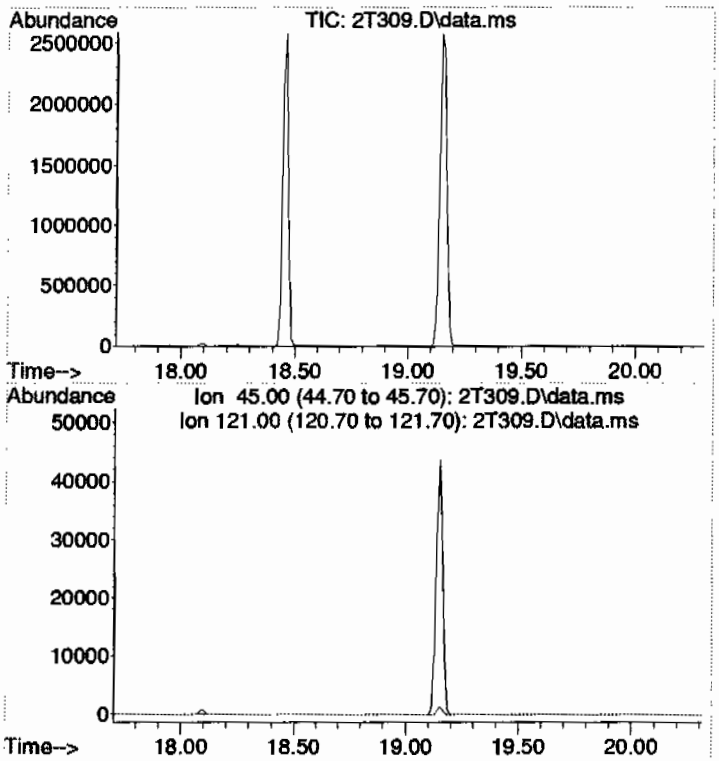

#112 AFTER analyst integration
bis(2-Chloroisopropyl)ether
Concen: N.D. DELETED
Expected RT: 19.01 min

Lab File: 2T309.D
Acq: 8 Jul 2009 10:34 am

Tgt Ion: 45

Sig	Exp Ratio
45	100
121	24.5

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T309.D
Acq On : 8 Jul 2009 10:34 am
Operator : CDS1
Sample : |232507005|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T309.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.330	143	151	171	rBB	136093	790359	6.16%	2.150%
2	4.687	173	175	177	rBB	172	153	0.00%	0.000%
3	4.940	190	192	193	rBB	310	276	0.00%	0.001%
4	6.045	261	265	273	rBV	694	4648	0.04%	0.013%
5	7.409	377	380	391	rVB2	706	1859	0.01%	0.005%
6	8.701	485	489	500	rVB	15068	38768	0.30%	0.105%
7	9.674	568	571	578	rVB3	2735	7910	0.06%	0.022%
8	11.927	755	761	774	rBV	620571	1264536	9.85%	3.440%
9	12.377	794	799	823	rBV	1651597	3263513	25.42%	8.878%
10	13.018	851	853	856	rVB	1701	2742	0.02%	0.007%
11	14.310	956	962	974	rBV	2296055	4085825	31.83%	11.115%
12	14.713	992	996	1010	rVB	12347	26671	0.21%	0.073%
13	15.947	1094	1100	1106	rBV	2330071	3794600	29.56%	10.323%
14	16.160	1106	1118	1136	rVB4	66291	417457	3.25%	1.136%
15	16.646	1156	1159	1163	rVB	2142	3423	0.03%	0.009%
16	17.038	1188	1192	1198	rVB	28244	49426	0.39%	0.134%
17	17.204	1200	1206	1217	rBV	6660852	12836004	100.00%	34.920%
18	17.654	1241	1244	1252	rVB3	5305	12139	0.09%	0.033%
19	17.773	1252	1254	1258	rBV	1925	3267	0.03%	0.009%
20	17.868	1260	1262	1265	rVB2	2141	2564	0.02%	0.007%
21	17.951	1265	1269	1275	rVB	6909	11072	0.09%	0.030%
22	18.093	1278	1281	1290	rVV	24115	38181	0.30%	0.104%
23	18.247	1290	1294	1303	rVV2	11786	21445	0.17%	0.058%
24	18.461	1306	1312	1347	rVB	2581803	4219805	32.87%	11.480%
25	19.149	1364	1370	1392	rBV2	2566183	5505083	42.89%	14.976%
26	21.247	1541	1547	1707	rBV	106025	356779	2.78%	0.971%

Sum of corrected areas: 36758505

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T309.D
Acq On : 8 Jul 2009 10:34 am
Operator : CDS1
Sample : |232507005|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

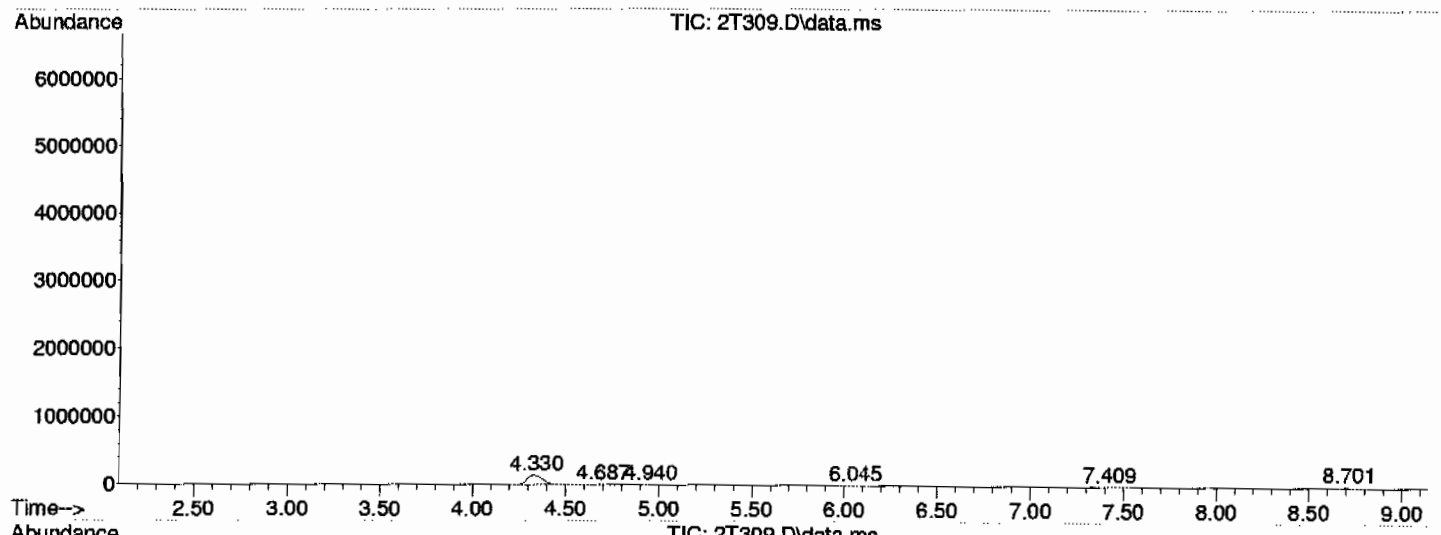

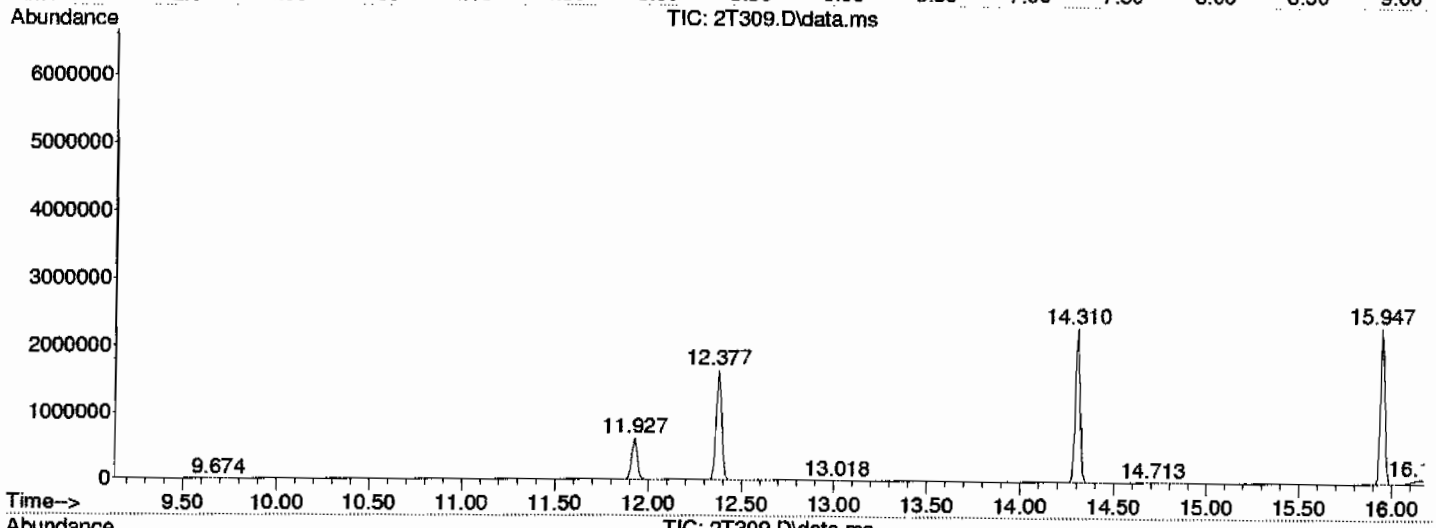

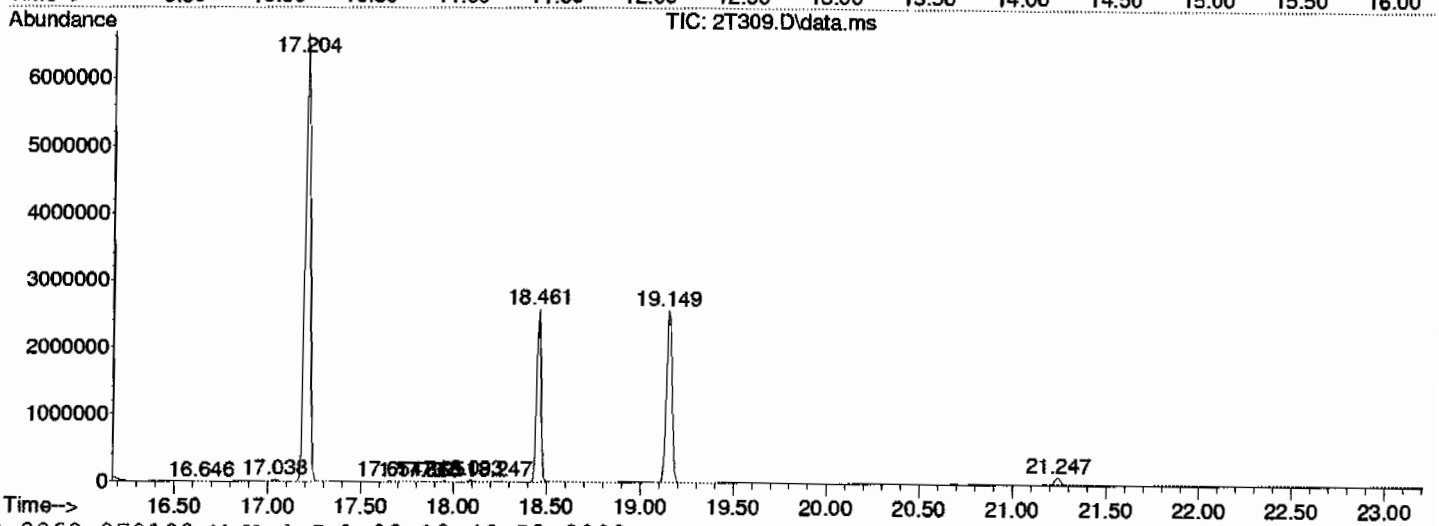

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T309.D
Acq On : 8 Jul 2009 10:34 am
Operator : CDS1
Sample : |232507005|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.330	12.11 ug/L	790359	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Dimethyl ether	46	C2H6O	000115-10-6	2

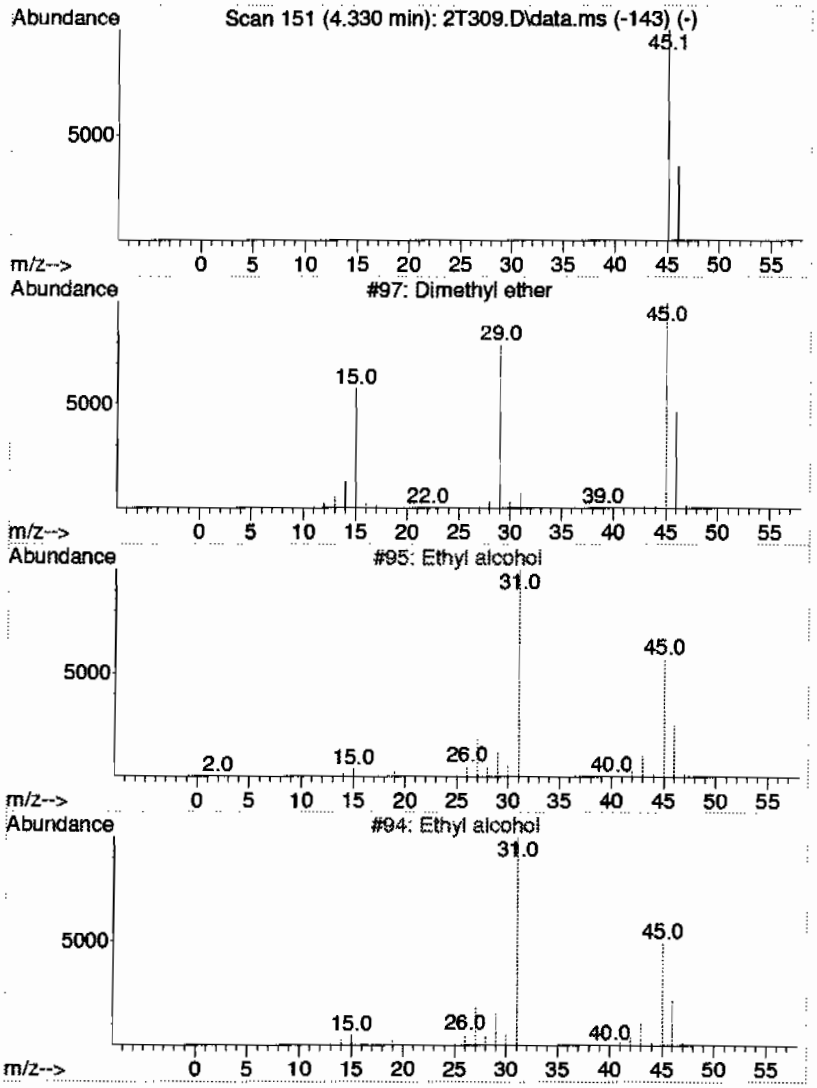

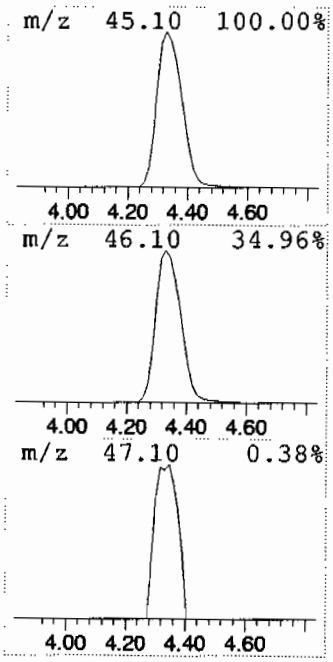

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T309.D
Acq On : 8 Jul 2009 10:34 am
Operator : CDS1
Sample : |232507005|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 2 unknown siloxane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.148	35.94 ug/L	3033450	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-53-3	56
2	3-Hydroxymandelic acid, ethyl es...	340	C16H28O4Si2	1000071-88-9	56
3	Benzaldehyde, 2,5-bis[(trimethyl...	282	C13H22O3Si2	056114-69-3	56
4	Butanamide, 2,2,3,3,4,4,4-heptaf...	493	C18H26F7NO3Si2	055471-01-7	50
5	Quinoline-3-carbonitrile, 5,6,7,...	267	C16H14FN3	329693-03-0	47

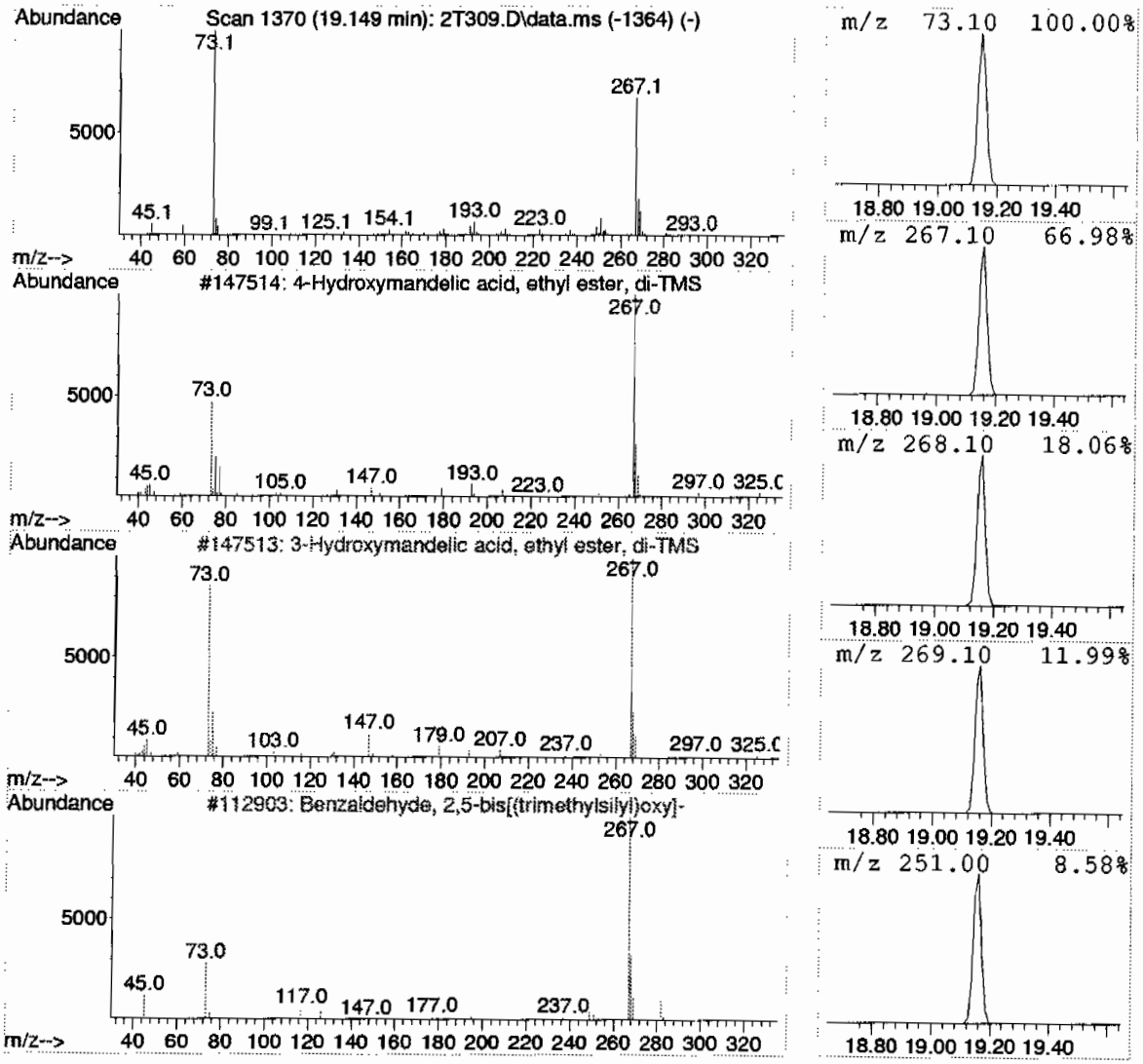

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T309.D
Acq On : 8 Jul 2009 10:34 am
Operator : CDS1
Sample : |232507005|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 4 unknown siloxane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.204	152.09 ug/L	12836000	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	68
2	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	59
3	trans-4-Dimethylamino-4'-methoxy...	281	C18H19NO2	052119-37-6	50
4	4H-1,2,4-Triazole-3-thiol, 4-all...	281	C16H15N3S	031803-13-1	47
5	7H-Dibenzo[b,g]carbazole, 7-methyl-	281	C21H15N	003557-49-1	47

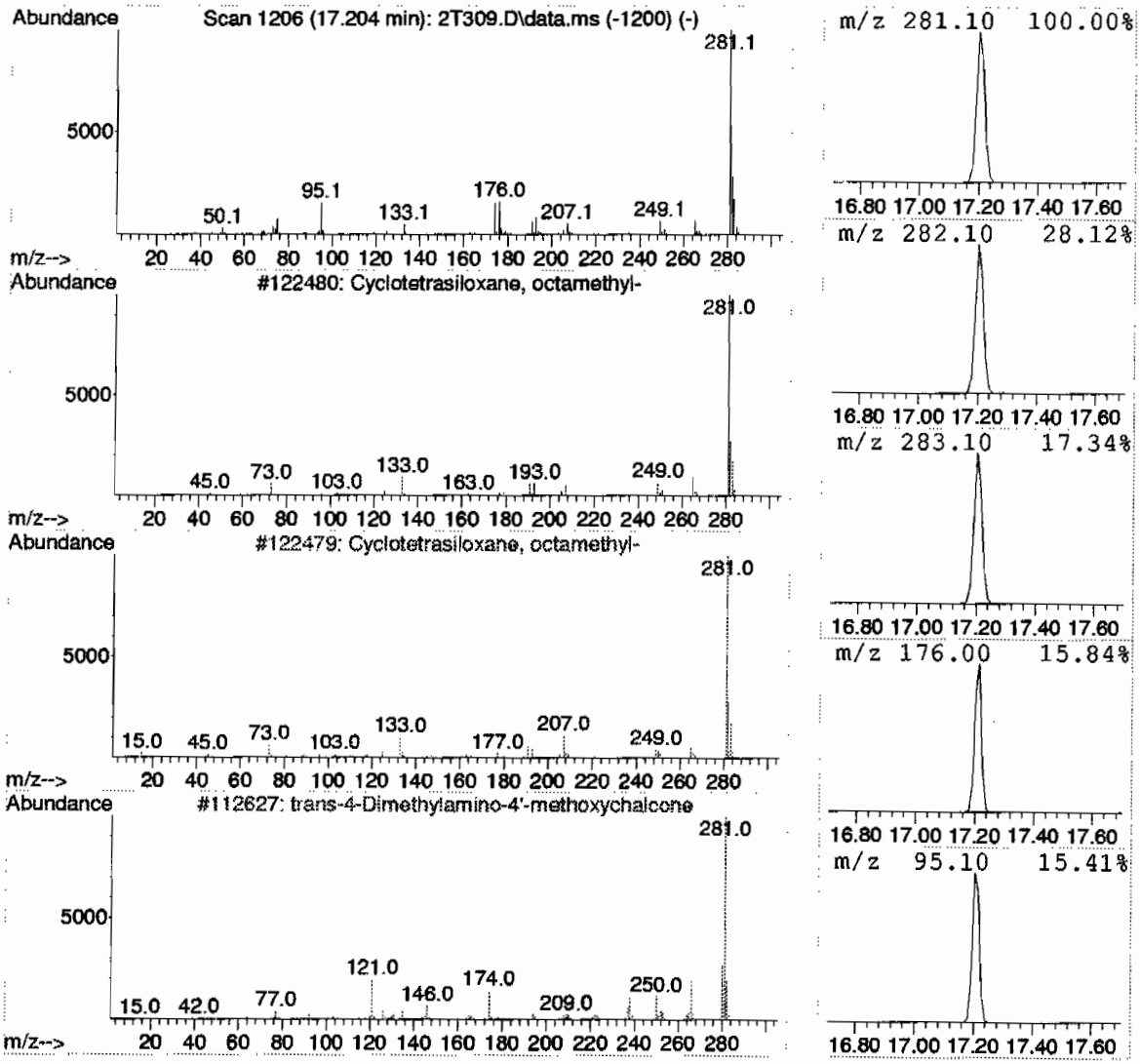

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T309.D
Acq On : 8 Jul 2009 10:34 am
Operator : CDS1
Sample : |232507005|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.330	12.1	ug/L	790359	1	12.377	3263510	50.0
unknown siloxane	19.148	35.9	ug/L	3033450	6	18.461	4219810	50.0
unknown siloxane	17.204	152.1	ug/L	12836000	5	18.461	4219810	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/27/2009 12:00	Matrix:	S
Lab Sample ID:	232507007	Date Received:	06/27/2009 12:00		
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6535	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 11:03	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/08/2009 08:03	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070809V2.b\2T310.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	J	2.85	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/27/2009 12:00	**Matrix:**	S
Lab Sample ID:	232507007	**Date Received:**	06/27/2009 12:00		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6535	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 11:03	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:03	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T310.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.33	18	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T310.D
Acq On : 8 Jul 2009 11:03 am
Operator : CDS1
InstName : VOA2
Sample : |232507007|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 12:03:55 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1585109	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1343068	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	794835	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1585109	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1343068	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	794835	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	452050	50.86 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 101.72%		
43) Toluene-d8	14.310	98	1532342	48.56 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 97.12%		
61) Bromofluorobenzene	17.204	95	630199	50.43 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 100.86%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	5.252	62	148	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.907	43	11269	2.85 ug/L	90
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.452	41	841	N.D.	
13) Methyl acetate	8.535	43	115	N.D.	
14) Carbon disulfide	8.239	76	899	N.D.	
15) Methylene chloride	8.701	84	14386	Below Cal	98
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	688	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	514	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.927	62	224	N.D.	
31) Benzene	12.033	78	1670	N.D.	
32) Cyclohexene	12.377	67	448	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T310.D
Acq On : 8 Jul 2009 11:03 am
Operator : CDS1
InstName : VOA2
Sample : |232507007|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 12:03:55 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	14.109	58	110	N.D.	
44) Toluene	14.381	91	3590	N.D.	
45) trans-1,3-Dichloroprop...	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.109	43	704	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	451	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.077	91	1405	N.D.	
55) m,p-Xylenes	16.196	106	801	N.D.	
56) o-Xylene	0.000		0	N.D.	
57) Styrene	16.646	104	166	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.204	105	625	N.D.	
62) 1,1,2,2-Tetrachloroethane	17.204	83	165	N.D.	
63) 1,2,3-Trichloropropane	17.204	110	277	N.D.	
64) Bromobenzene	17.405	156	130	N.D.	
65) n-Propylbenzene	17.465	91	348	N.D.	
66) 1,3,5-Trimethylbenzene	17.548	105	290	N.D.	
67) 2-Chlorotoluene	17.702	91	696	N.D.	
68) 4-Chlorotoluene	17.702	91	696	N.D.	
69) tert-Butylbenzene	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	18.046	105	666	N.D.	
71) sec-Butylbenzene	18.046	105	666	N.D.	
72) 4-Isopropyltoluene	18.366	119	381	N.D.	
73) 1,3-Dichlorobenzene	18.401	146	545	N.D.	
74) 1,4-Dichlorobenzene	18.484	146	1456	N.D.	
75) n-Butylbenzene	18.793	91	115	N.D.	
76) 1,2-Dichlorobenzene	18.900	146	199	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	511	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.034	128	1256	N.D.	
81) 1,2,3-Trichlorobenzene	21.342	180	112	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.452	41	841	N.D.	
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	0.000		0	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.800	43	688	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T310.D
Acq On : 8 Jul 2009 11:03 am
Operator : CDS1
InstName : VOA2
Sample : |232507007|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 12:03:55 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units Dev(Min)
95) Propionitrile	0.000		0	N.D.
96) Methacrylonitrile	0.000		0	N.D.
97) Tetrahydrofuran	11.227	42	435	N.D.
98) Isobutyl alcohol	11.915	41	224	N.D.
99) Methyl tert-amyl ether	0.000		0m	N.D. d
100) Methyl methacrylate	0.000		0	N.D.
101) 1,4-Dioxane	0.000		0	N.D.
102) 2-Nitropropane	0.000		0	N.D.
104) Ethyl methacrylate	0.000		0	N.D.
106) 1-Chlorohexane	0.000		0m	N.D. d
107) cis-1,4-Dichloro-2-butene	0.000		0	N.D.
108) Cyclohexanone	0.000		0	N.D.
109) trans-1,4-Dichloro-2-b...	17.358	53	144	N.D.
110) Pentachloroethane	0.000		0	N.D.
111) Benzyl chloride	18.603	91	784	N.D.
112) bis(2-Chloroisopropyl)...	19.149	45	622	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T310.D
Acq On : 8 Jul 2009 11:03 am
Operator : CDS1
InstName : VOA2
Sample : |232507007|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 12:03:55 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

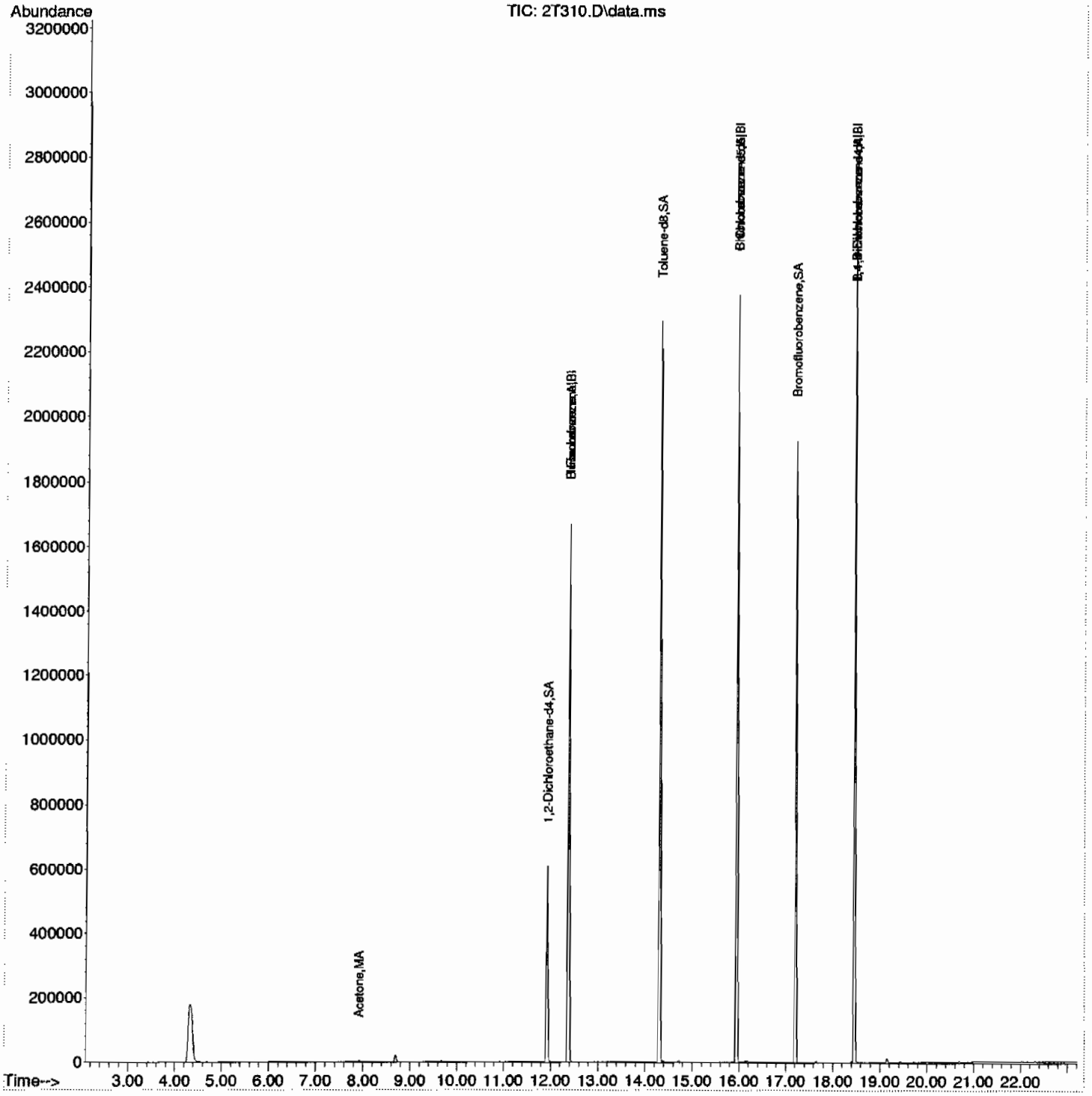

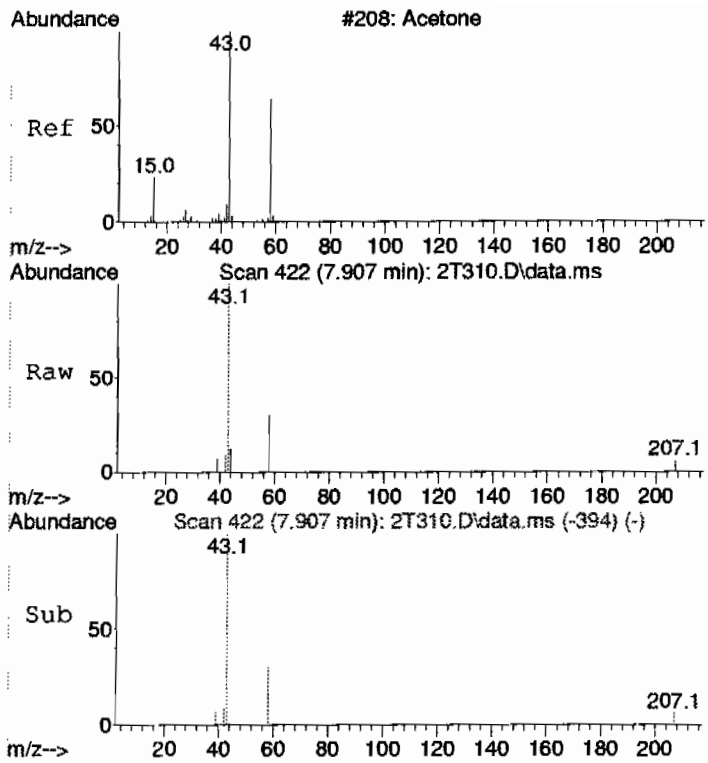

#9
Acetone
Concen: 2.85 ug/L
RT: 7.907 min Scan# 422
Delta R.T. 0.036 min
Lab File: 2T310.D
Acq: 8 Jul 2009 11:03 am

Tgt Ion: 43 Resp: 11269

Ion	Ratio	Lower	Upper
43	100		
58	23.9	0.0	59.3

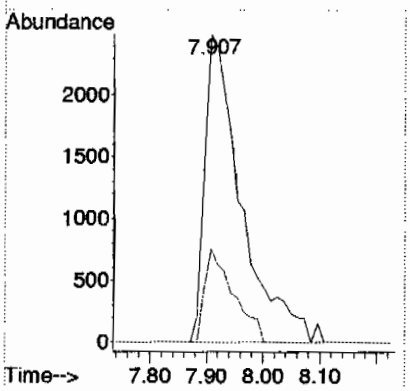

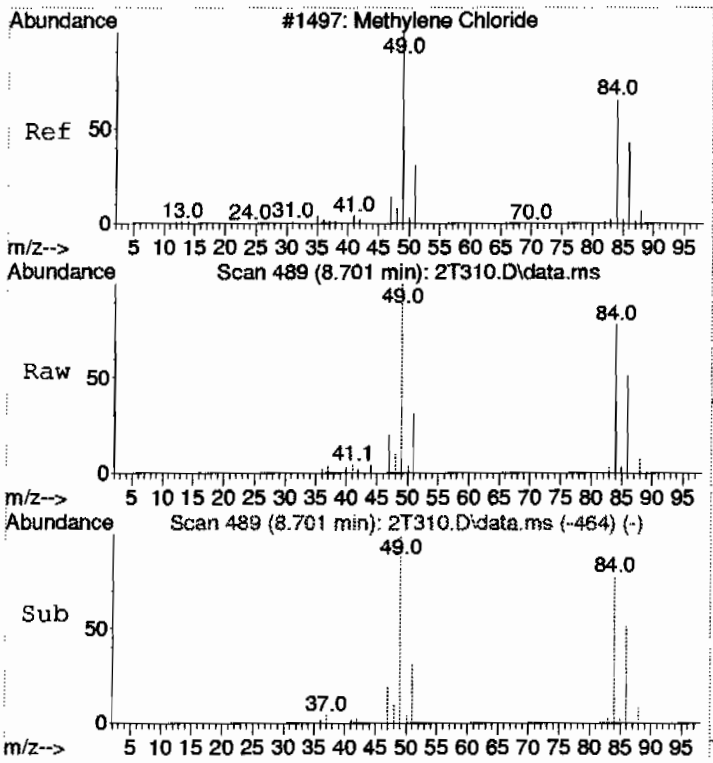

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T310.D
Acq: 8 Jul 2009 11:03 am

Tgt Ion: 84 Resp: 14386

Ion	Ratio	Lower	Upper
84	100		
86	64.5	33.8	93.8
49	138.3	105.0	165.0

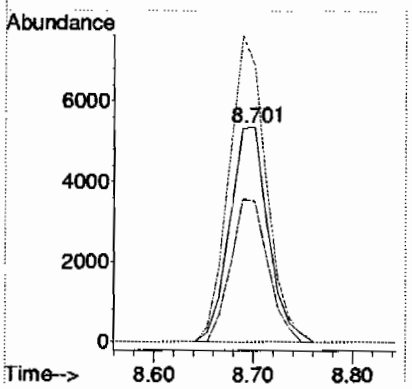

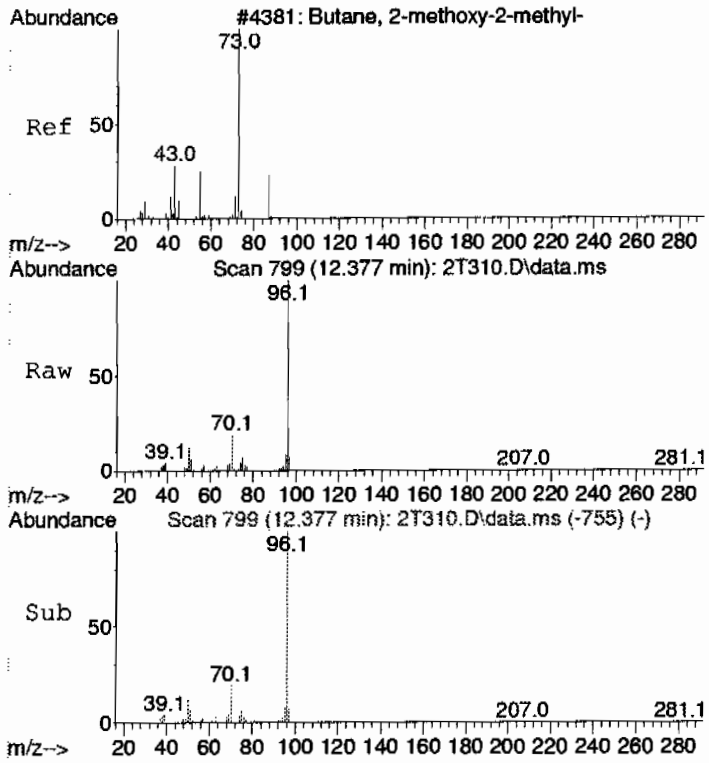

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 1.01 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T310.D
Acq: 8 Jul 2009 11:03 am

Tgt Ion: 73 Resp: 17870

Ion	Ratio	Lower	Upper
73	100		
55	6.6	5.2	65.2
87	0.0	0.0	54.7

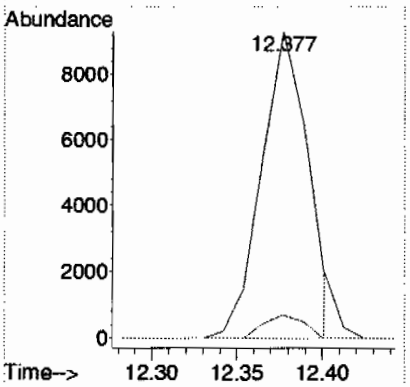

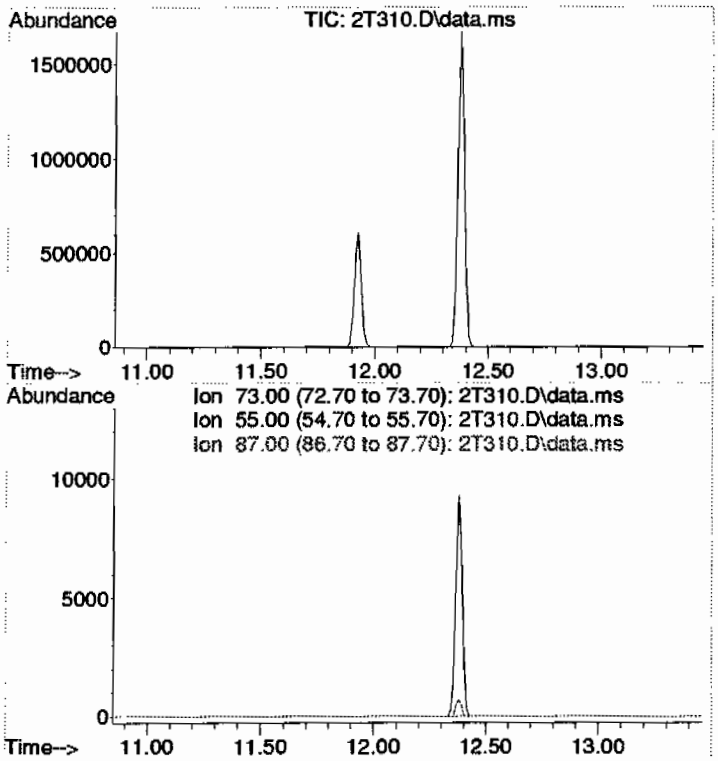

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T310.D
Acq: 8 Jul 2009 11:03 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

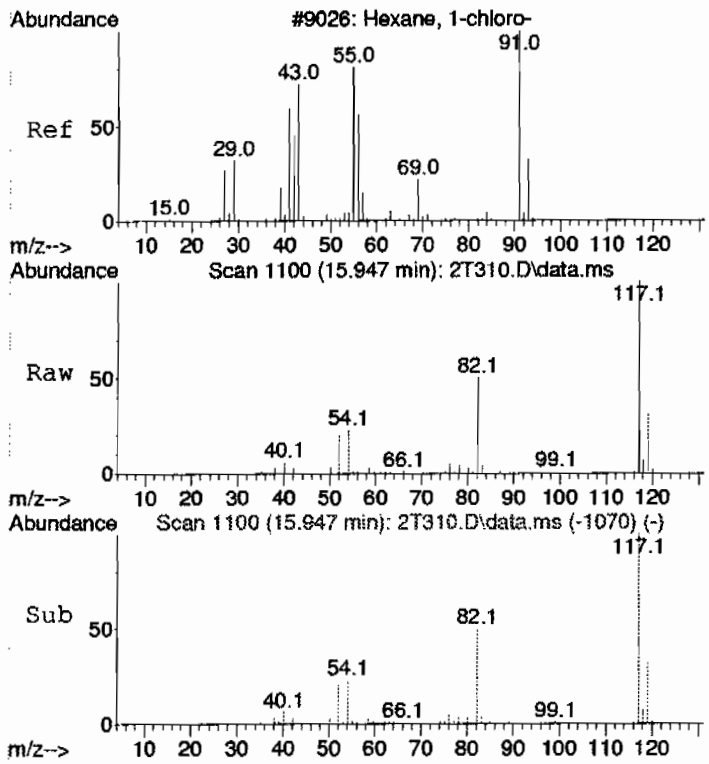

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 2.05 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T310.D
Acq: 8 Jul 2009 11:03 am

Tgt Ion: 55 Resp: 12801

Ion	Ratio	Lower	Upper
55	100		
91	19.0	113.2	173.2#
56	59.0	30.3	90.3

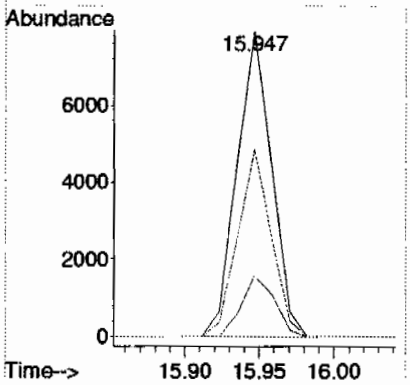

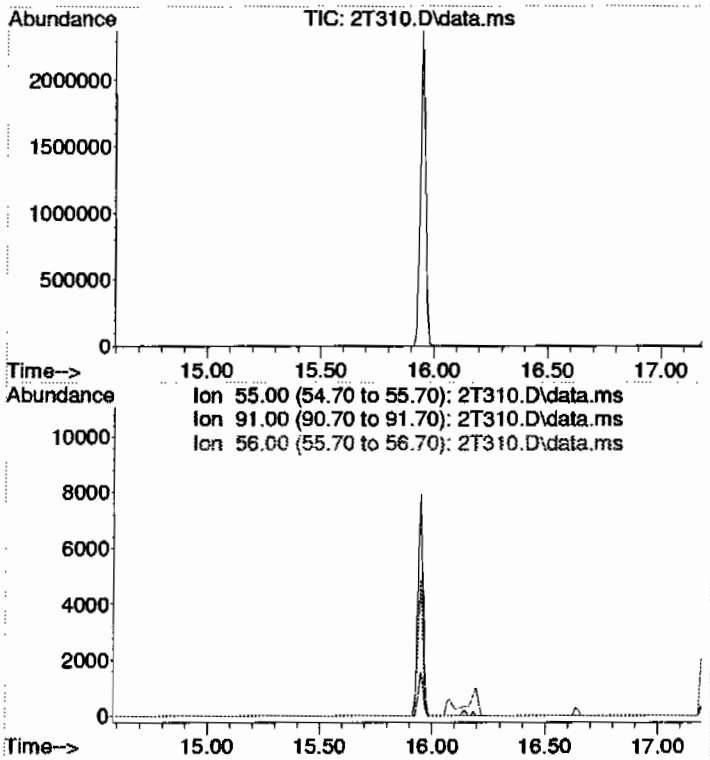

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T310.D
Acq: 8 Jul 2009 11:03 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T310.D
Acq On : 8 Jul 2009 11:03 am
Operator : CDS1
Sample : |232507007|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T310.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.330	142	151	169	rBB	180056	1175188	27.00%	5.491%
2	4.687	172	175	178	rBB	264	573	0.01%	0.003%
3	5.058	190	200	210	rBV	203	2777	0.06%	0.013%
4	6.033	261	264	266	rBV	643	2111	0.05%	0.010%
5	7.409	379	380	400	rVB	882	2112	0.05%	0.010%
6	7.907	418	422	440	rVB	3826	17414	0.40%	0.081%
7	8.689	484	488	495	rVB	23414	60623	1.39%	0.283%
8	9.674	568	571	591	rVB	3565	9399	0.22%	0.044%
9	11.227	699	702	710	rBV2	1020	2302	0.05%	0.011%
10	11.927	755	761	769	rBV	609511	1255741	28.85%	5.868%
11	12.377	794	799	812	rBV	1670644	3269033	75.09%	15.275%
12	13.006	850	852	862	rVB3	1381	4186	0.10%	0.020%
13	14.109	943	945	947	rBV	627	1024	0.02%	0.005%
14	14.310	957	962	967	rBV	2293662	4086200	93.87%	19.093%
15	14.713	993	996	1016	rVB	5562	13003	0.30%	0.061%
16	15.947	1094	1100	1109	rBV	2376882	3839606	88.20%	17.941%
17	17.204	1201	1206	1218	rBV	1925998	3268854	75.09%	15.274%
18	17.654	1242	1244	1250	rBV2	4853	7925	0.18%	0.037%
19	18.461	1306	1312	1322	rVB	2685857	4353239	100.00%	20.341%
20	19.149	1366	1370	1391	rBV2	12497	30183	0.69%	0.141%

Sum of corrected areas: 21401493

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T310.D
Acq On : 8 Jul 2009 11:03 am
Operator : CDS1
Sample : |232507007|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

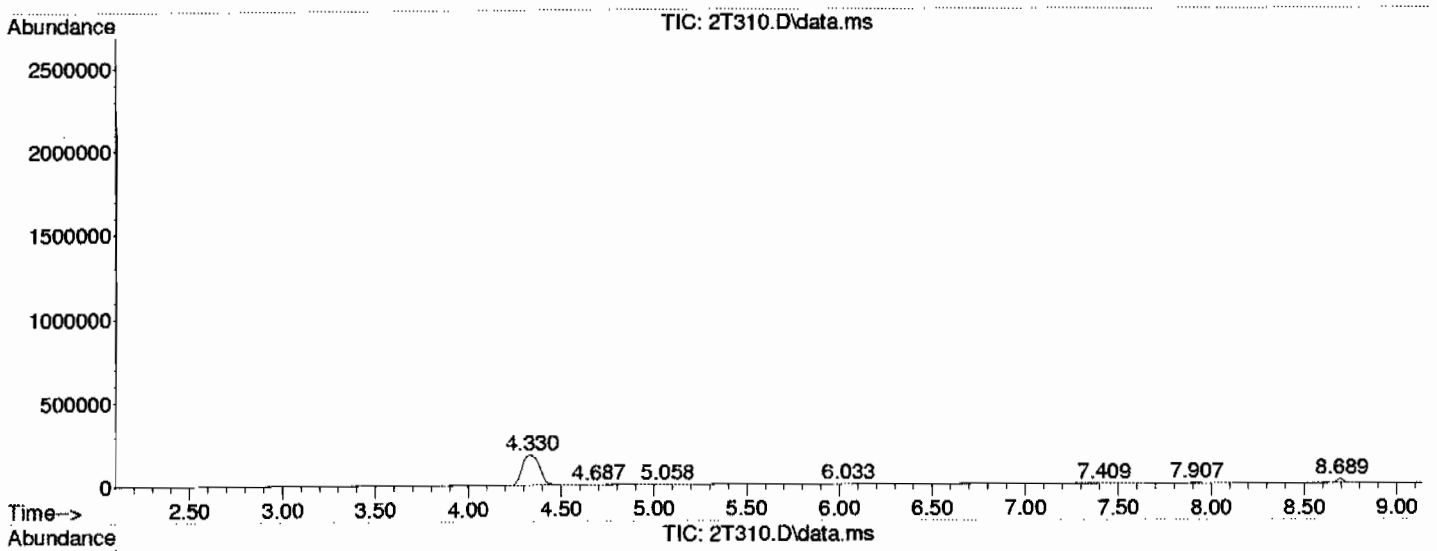

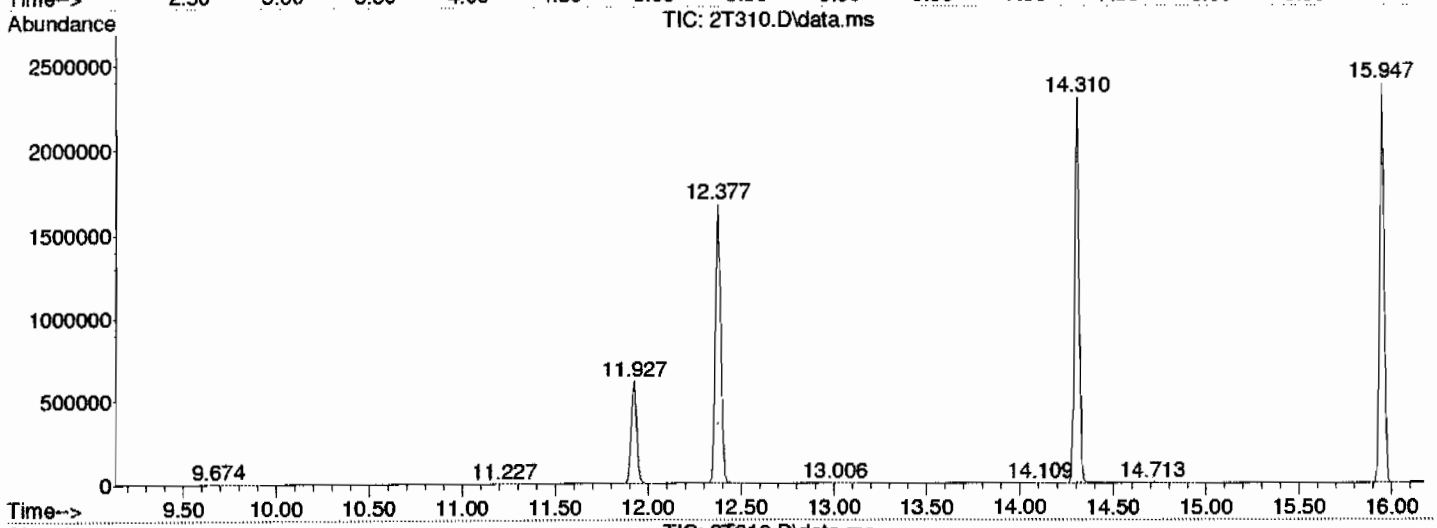

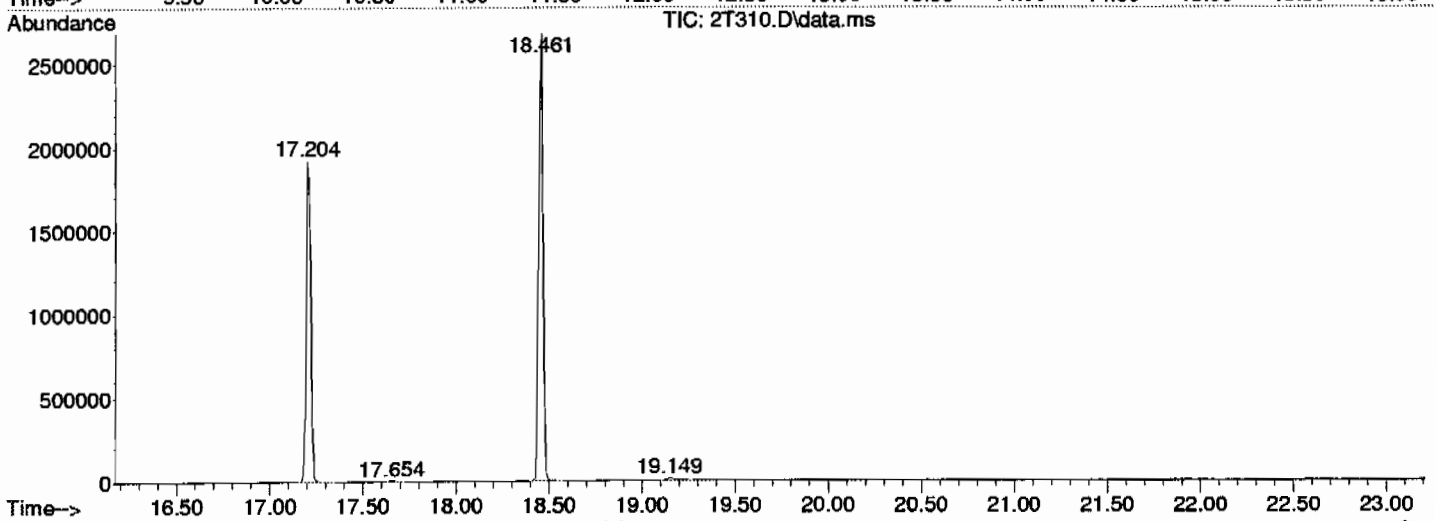

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T310.D
Acq On : 8 Jul 2009 11:03 am
Operator : CDS1
Sample : |232507007|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.330	17.97 ug/L	1175190	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

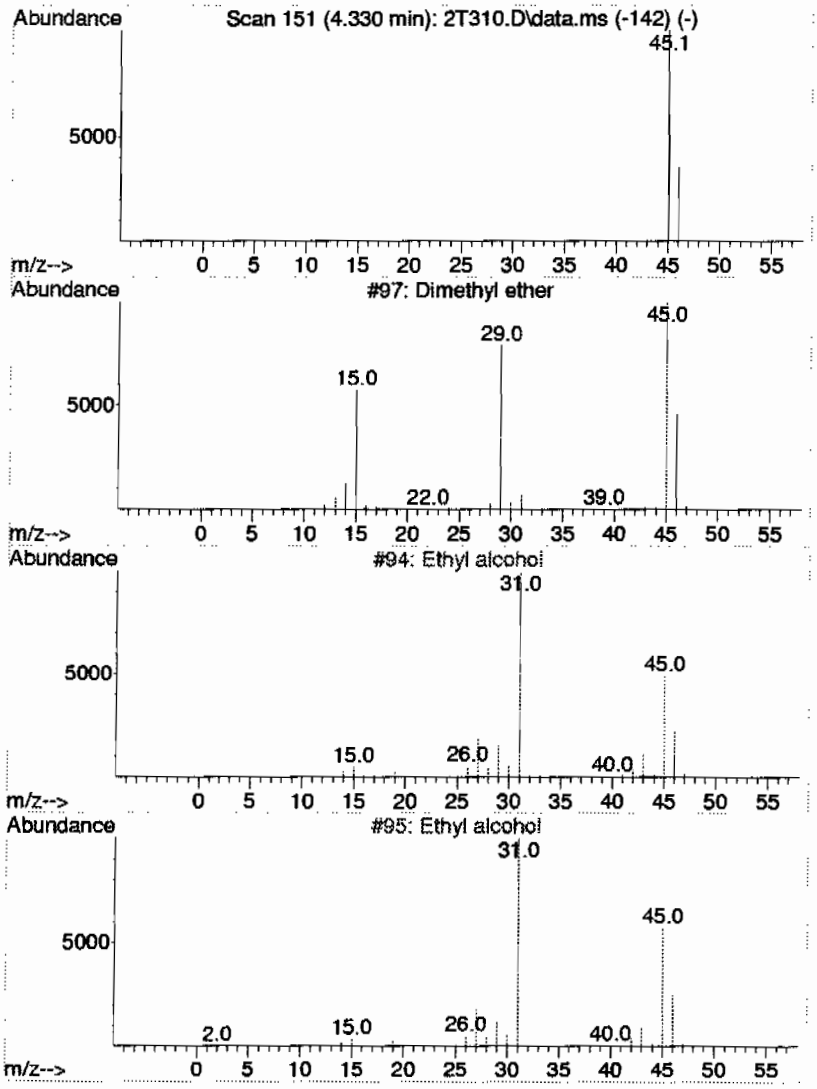

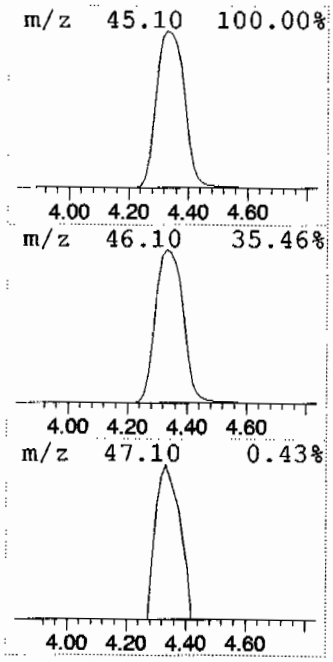

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T310.D
Acq On : 8 Jul 2009 11:03 am
Operator : CDS1
Sample : |232507007|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - SOIL
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.330	18.0	ug/L	1175190	1	12.377	3269030	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507001	Date Received:	06/27/2009 09:05	%Moisture:	20.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6519RE	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 11:32	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/08/2009 08:00	Aliquot:	1.2 g	Final Volume:	5 mL
Data File:	070809V2.b\2T311.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	5.26	ug/kg	1.79	5.26
74-87-3	Chloromethane	U	5.26	ug/kg	1.58	5.26
75-01-4	Vinyl chloride	U	5.26	ug/kg	1.58	5.26
74-83-9	Bromomethane	U	5.26	ug/kg	1.58	5.26
75-00-3	Chloroethane	U	5.26	ug/kg	1.58	5.26
75-69-4	Trichlorofluoromethane	U	5.26	ug/kg	3.00	5.26
67-64-1	Acetone	J	20.5	ug/kg	8.73	26.3
75-35-4	1,1-Dichloroethylene	U	5.26	ug/kg	1.58	5.26
74-88-4	Iodomethane	U	26.3	ug/kg	8.41	26.3
75-09-2	Methylene chloride	U	26.3	ug/kg	10.5	26.3
75-15-0	Carbon disulfide	U	26.3	ug/kg	6.57	26.3
156-60-5	trans-1,2-Dichloroethylene	U	5.26	ug/kg	1.58	5.26
75-34-3	1,1-Dichloroethane	U	5.26	ug/kg	1.58	5.26
78-93-3	2-Butanone	U	26.3	ug/kg	7.89	26.3
156-59-2	cis-1,2-Dichloroethylene	U	5.26	ug/kg	1.58	5.26
594-20-7	2,2-Dichloropropane	U	5.26	ug/kg	1.58	5.26
67-66-3	Chloroform	U	5.26	ug/kg	1.58	5.26
74-97-5	Bromochloromethane	U	5.26	ug/kg	1.74	5.26
71-55-6	1,1,1-Trichloroethane	U	5.26	ug/kg	1.58	5.26
563-58-6	1,1-Dichloropropene	U	5.26	ug/kg	1.58	5.26
56-23-5	Carbon tetrachloride	U	5.26	ug/kg	1.58	5.26
107-06-2	1,2-Dichloroethane	U	5.26	ug/kg	1.58	5.26
71-43-2	Benzene	U	5.26	ug/kg	1.58	5.26
79-01-6	Trichloroethylene	U	5.26	ug/kg	1.74	5.26
78-87-5	1,2-Dichloropropane	U	5.26	ug/kg	1.58	5.26
75-27-4	Bromodichloromethane	U	5.26	ug/kg	1.58	5.26
74-95-3	Dibromomethane	U	5.26	ug/kg	1.58	5.26
108-10-1	4-Methyl-2-pentanone	U	26.3	ug/kg	6.57	26.3
10061-01-5	cis-1,3-Dichloropropylene	U	5.26	ug/kg	1.58	5.26
108-88-3	Toluene	U	5.26	ug/kg	1.58	5.26
10061-02-6	trans-1,3-Dichloropropylene	U	5.26	ug/kg	1.58	5.26
79-00-5	1,1,2-Trichloroethane	U	5.26	ug/kg	1.58	5.26
591-78-6	2-Hexanone	U	26.3	ug/kg	7.89	26.3
142-28-9	1,3-Dichloropropane	U	5.26	ug/kg	1.58	5.26
127-18-4	Tetrachloroethylene	U	5.26	ug/kg	1.58	5.26
124-48-1	Dibromochloromethane	U	5.26	ug/kg	1.58	5.26
106-93-4	1,2-Dibromoethane	U	5.26	ug/kg	1.58	5.26
108-90-7	Chlorobenzene	U	5.26	ug/kg	1.58	5.26

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519RE	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 11:32	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:00	**Aliquot:**	1.2 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T311.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	5.26	ug/kg	1.58	5.26
179601-23-1	m,p-Xylenes	U	10.5	ug/kg	1.58	10.5
95-47-6	o-Xylene	U	5.26	ug/kg	1.58	5.26
100-42-5	Styrene	U	5.26	ug/kg	1.58	5.26
75-25-2	Bromoform	U	5.26	ug/kg	1.58	5.26
79-34-5	1,1,2,2-Tetrachloroethane	U	5.26	ug/kg	1.58	5.26
96-18-4	1,2,3-Trichloropropane	U	5.26	ug/kg	1.58	5.26
108-86-1	Bromobenzene	U	5.26	ug/kg	1.58	5.26
103-65-1	n-Propylbenzene	U	5.26	ug/kg	1.58	5.26
95-49-8	2-Chlorotoluene	U	5.26	ug/kg	1.58	5.26
98-82-8	Isopropylbenzene	U	5.26	ug/kg	1.58	5.26
108-67-8	1,3,5-Trimethylbenzene	U	5.26	ug/kg	1.58	5.26
106-43-4	4-Chlorotoluene	U	5.26	ug/kg	1.58	5.26
98-06-6	tert-Butylbenzene	U	5.26	ug/kg	1.58	5.26
95-63-6	1,2,4-Trimethylbenzene	U	5.26	ug/kg	1.58	5.26
135-98-8	sec-Butylbenzene	U	5.26	ug/kg	1.58	5.26
99-87-6	4-Isopropyltoluene		135	ug/kg	1.58	5.26
541-73-1	1,3-Dichlorobenzene	U	5.26	ug/kg	1.58	5.26
106-46-7	1,4-Dichlorobenzene	U	5.26	ug/kg	1.58	5.26
104-51-8	n-Butylbenzene	U	5.26	ug/kg	1.58	5.26
96-12-8	1,2-Dibromo-3-chloropropane	U	5.26	ug/kg	1.58	5.26
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	26.3	ug/kg	8.41	26.3
630-20-6	1,1,1,2-Tetrachloroethane	U	5.26	ug/kg	1.58	5.26
95-50-1	1,2-Dichlorobenzene	U	5.26	ug/kg	1.58	5.26

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	unknown	4.36	98.6	ug/kg	0	J
	unknown hydrocarbon	16.85	29.9	ug/kg	0	J
	unknown hydrocarbon	17.05	2450	ug/kg	0	J
	unknown hydrocarbon	17.37	53.7	ug/kg	0	J
	unknown hydrocarbon	17.63	64.4	ug/kg	0	J
	unknown hydrocarbon	17.77	1220	ug/kg	0	J
	unknown hydrocarbon	18.09	1120	ug/kg	0	J
	unknown hydrocarbon	18.19	30.3	ug/kg	0	J
	unknown hydrocarbon	18.33	453	ug/kg	0	J
	unknown hydrocarbon	19.05	112	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
InstName : VOA2
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 12:05:26 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1526499	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1289764	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	803837	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1526499	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1289764	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	803837	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	456338	53.31 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 106.62%		
43) Toluene-d8	14.310	98	1522124	50.23 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 100.46%		
61) Bromofluorobenzene	17.204	95	647739	51.25 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 102.50%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	0.000		0	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.907	43	16325	3.89 ug/L	92
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	0.000		0	N.D.	
12) Acetonitrile	8.440	41	604	N.D.	
13) Methyl acetate	8.535	43	243	N.D.	
14) Carbon disulfide	8.251	76	963	N.D.	
15) Methylene chloride	8.701	84	12520	Below Cal	96
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.788	43	546	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.227	83	407	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	372	N.D.	
31) Benzene	12.033	78	295	N.D.	
32) Cyclohexene	12.377	67	629	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
InstName : VOA2
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 12:05:26 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38)	Bromodichloromethane	0.000		0	N.D.	
39)	2-Chloroethylvinyl ether	0.000		0	N.D.	
40)	cis-1,3-Dichloropropylene	0.000		0	N.D.	
42)	4-Methyl-2-pentanone	0.000		0m	N.D. d	
44)	Toluene	14.381	91	7349	N.D.	
45)	trans-1,3-Dichloroprop...	0.000		0	N.D.	
46)	1,1,2-Trichloroethane	0.000		0	N.D.	
47)	2-Hexanone	14.109	43	115	N.D.	
48)	1,3-Dichloropropane	0.000		0	N.D.	
49)	Tetrachloroethylene	0.000		0	N.D.	
50)	Dibromochloromethane	0.000		0	N.D.	
51)	1,2-Dibromoethane	0.000		0	N.D.	
52)	Chlorobenzene	15.982	112	321	N.D.	
53)	1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54)	Ethylbenzene	16.077	91	496	N.D.	
55)	m,p-Xylenes	16.196	106	450	N.D.	
56)	o-Xylene	16.635	106	253	N.D.	
57)	Styrene	16.646	104	149	N.D.	
59)	Bromoform	0.000		0	N.D.	
60)	Isopropylbenzene	0.000		0m	N.D. d	
62)	1,1,2,2-Tetrachloroethane	17.370	83	698	N.D.	
63)	1,2,3-Trichloropropane	17.204	110	174	N.D.	
64)	Bromobenzene	17.417	156	228	N.D.	
65)	n-Propylbenzene	0.000		0m	N.D. d	
66)	1,3,5-Trimethylbenzene	0.000		0m	N.D. d	
67)	2-Chlorotoluene	0.000		0m	N.D. d	
68)	4-Chlorotoluene	0.000		0m	N.D. d	
69)	tert-Butylbenzene	17.951	119	439	N.D.	
70)	1,2,4-Trimethylbenzene	0.000		0m	N.D. d	
71)	sec-Butylbenzene	0.000		0m	N.D. d	
72)	4-Isopropyltoluene	18.366	119	790359	25.68 ug/L #	67
73)	1,3-Dichlorobenzene	18.401	146	660	N.D.	
74)	1,4-Dichlorobenzene	18.401	146	660	N.D.	
75)	n-Butylbenzene	0.000		0m	N.D. d	
76)	1,2-Dichlorobenzene	18.900	146	419	N.D.	
77)	1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78)	1,2,4-Trichlorobenzene	20.690	180	510	N.D.	
79)	Hexachlorobutadiene	0.000		0	N.D.	
80)	Naphthalene	21.022	128	1966	N.D.	
81)	1,2,3-Trichlorobenzene	21.342	180	120	N.D.	
83)	Chlorotrifluoroethylene	0.000		0	N.D.	
84)	2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85)	Acrolein	0.000		0	N.D.	
86)	Trichlorotrifluoroethane	0.000		0	N.D.	
87)	Isopropyl Alcohol	8.191	45	253	N.D.	
88)	Allyl chloride	8.440	41	604	N.D.	
89)	tert-Butyl Alcohol	8.891	59	456	N.D.	
90)	Acrylonitrile	0.000		0	N.D.	
91)	Isopropyl ether	0.000		0	N.D.	
92)	2-Chloro-1,3-butadiene	0.000		0	N.D.	
93)	Ethyl tert-butyl ether	0.000		0	N.D.	
94)	Ethyl acetate	10.788	43	546	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
InstName : VOA2
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 12:05:26 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units Dev(Min)
95) Propionitrile	0.000		0	N.D.
96) Methacrylonitrile	11.227	41	278	N.D.
97) Tetrahydrofuran	11.227	42	533	N.D.
98) Isobutyl alcohol	0.000		0	N.D.
99) Methyl tert-amyl ether	0.000		0m	N.D. d
100) Methyl methacrylate	0.000		0	N.D.
101) 1,4-Dioxane	0.000		0	N.D.
102) 2-Nitropropane	13.682	43	1123	N.D.
104) Ethyl methacrylate	0.000		0	N.D.
106) 1-Chlorohexane	0.000		0m	N.D. d
107) cis-1,4-Dichloro-2-butene	0.000		0m	N.D. d
108) Cyclohexanone	17.144	42	117	N.D.
109) trans-1,4-Dichloro-2-b...	0.000		0m	N.D. d
110) Pentachloroethane	0.000		0	N.D.
111) Benzyl chloride	0.000		0m	N.D. d
112) bis(2-Chloroisopropyl)...	19.054	45	409	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
InstName : VOA2
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 12:05:26 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

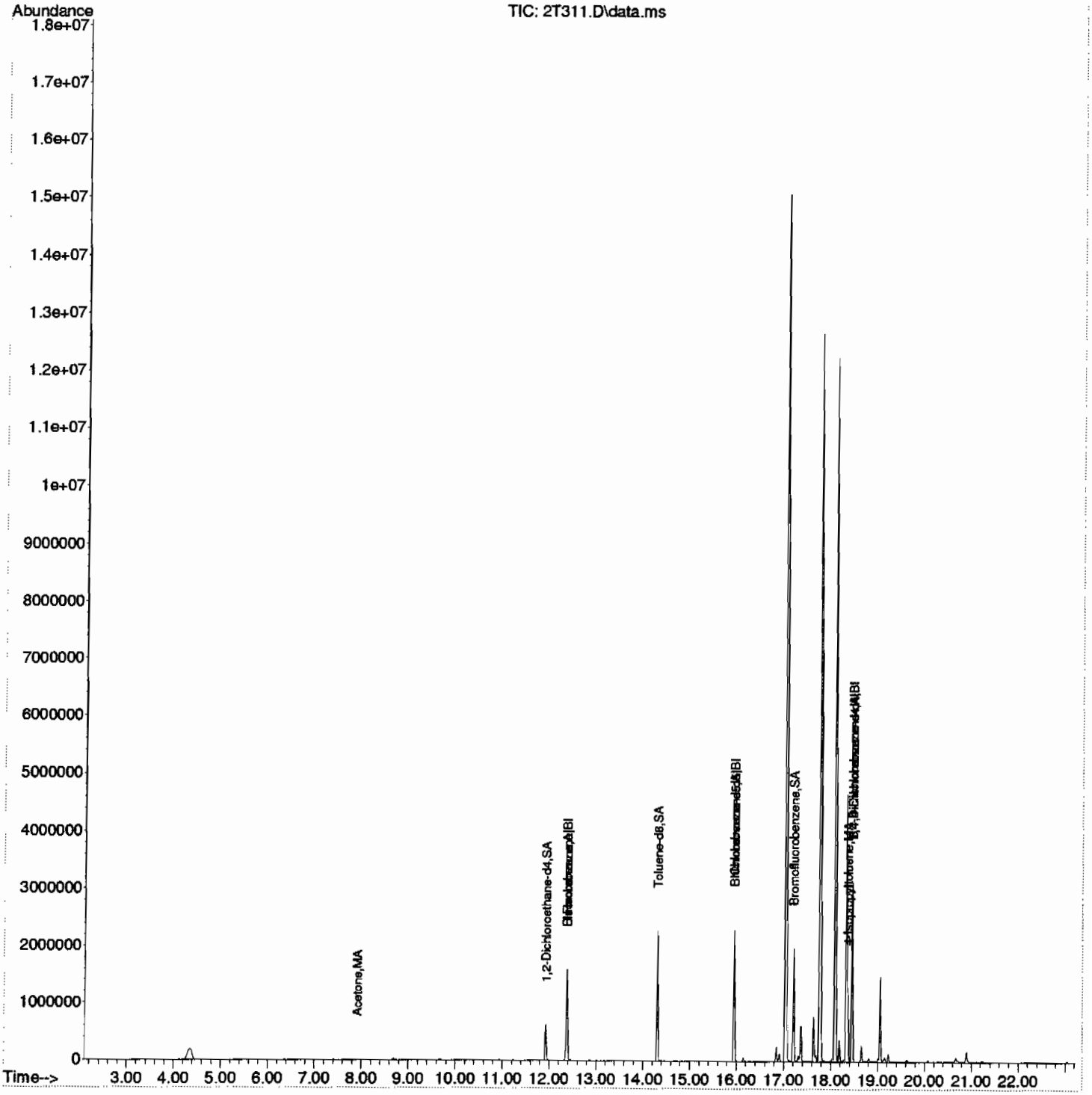

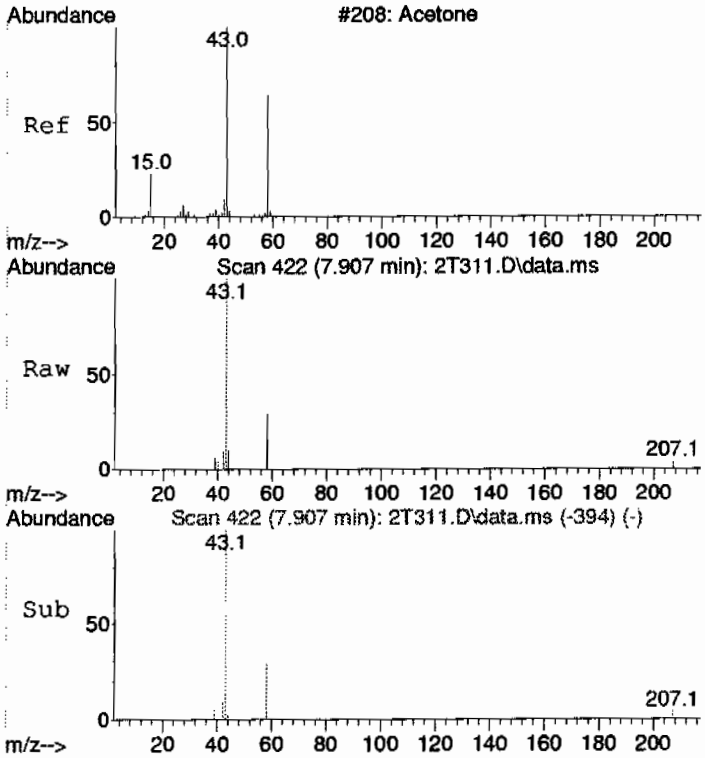

#9
Acetone
Concen: 3.89 ug/L
RT: 7.907 min Scan# 422
Delta R.T. 0.036 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 43 Resp: 16325

Ion	Ratio	Lower	Upper
43	100		
58	25.2	0.0	59.3

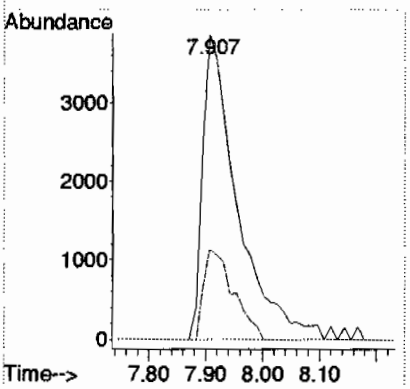

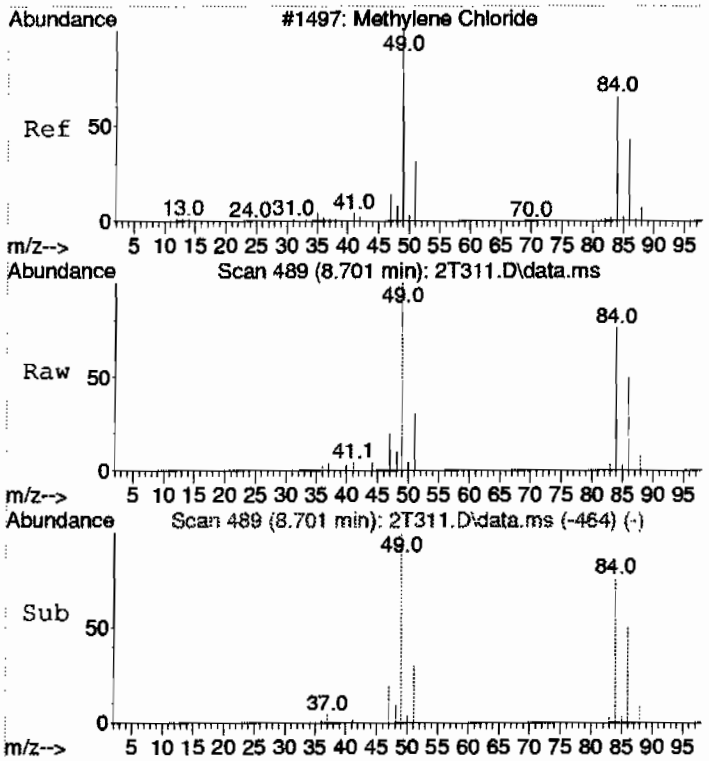

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 84 Resp: 12520

Ion	Ratio	Lower	Upper
84	100		
86	65.2	33.8	93.8
49	141.3	105.0	165.0

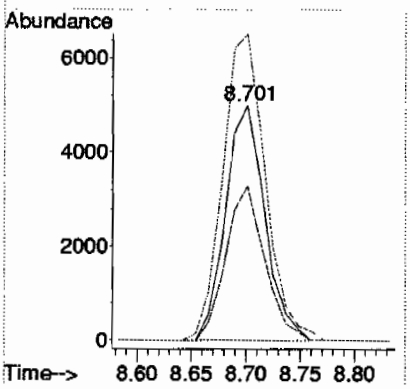

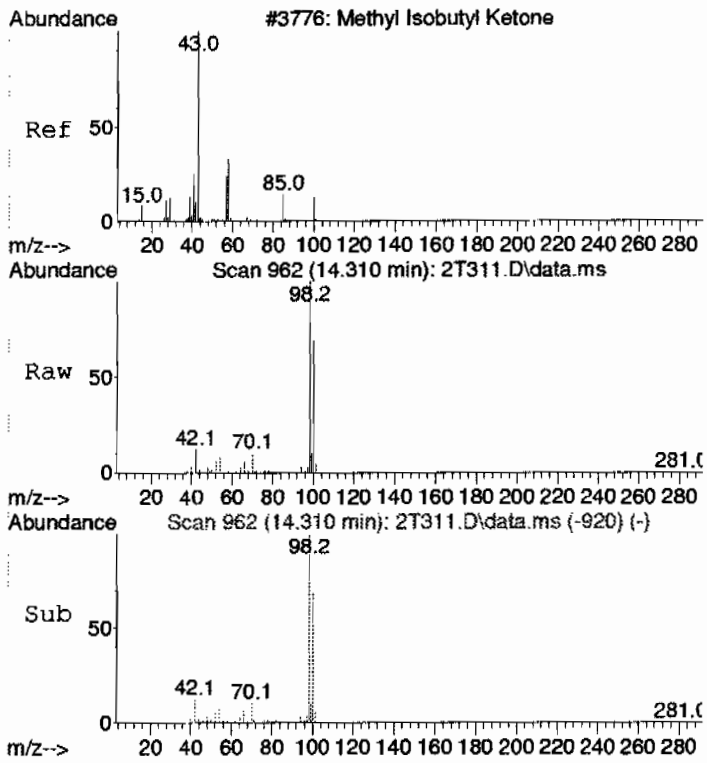

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.48 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 58 Resp: 12655

Ion	Ratio	Lower	Upper
58	100		
43	57.1	245.2	305.2#
100	8256.8	7.2	67.2#

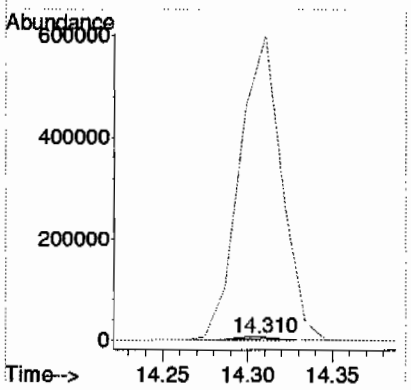

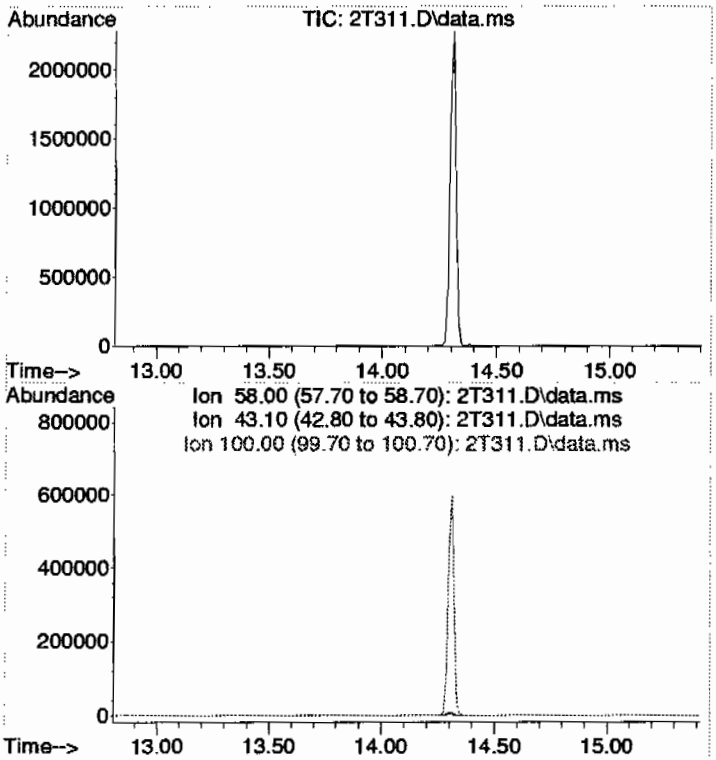

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

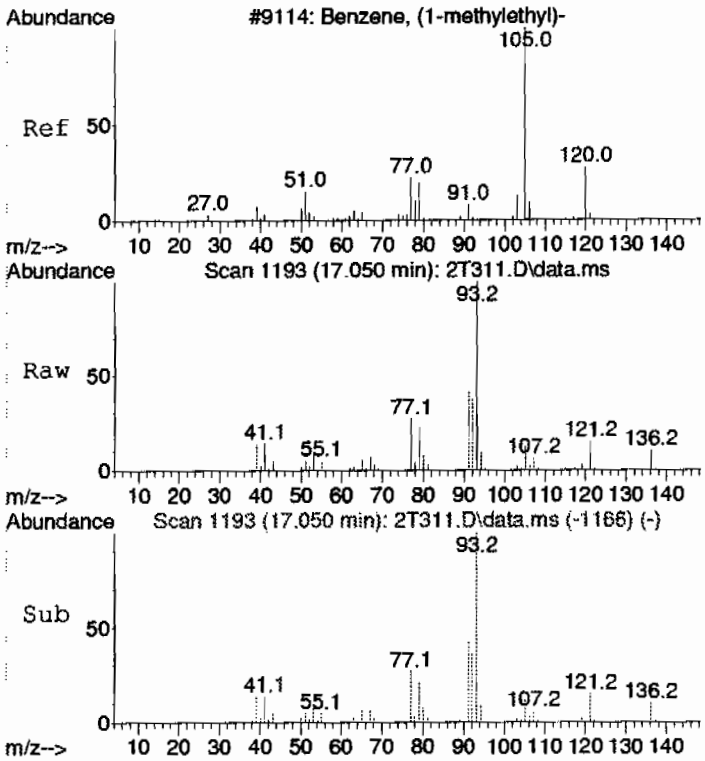

#60 BEFORE analyst integration
Isopropylbenzene
Concen: 28.31 ug/L
RT: 17.050 min Scan# 1193
Delta R.T. 0.024 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion:105 Resp: 968421

Ion	Ratio	Lower	Upper
105	100		
120	4.1	0.0	57.9

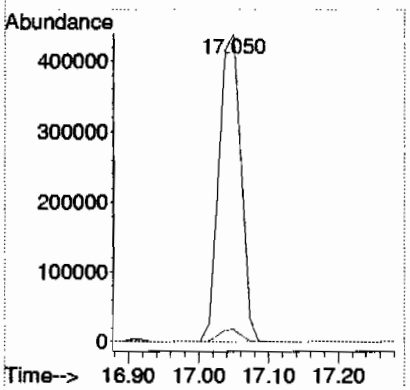

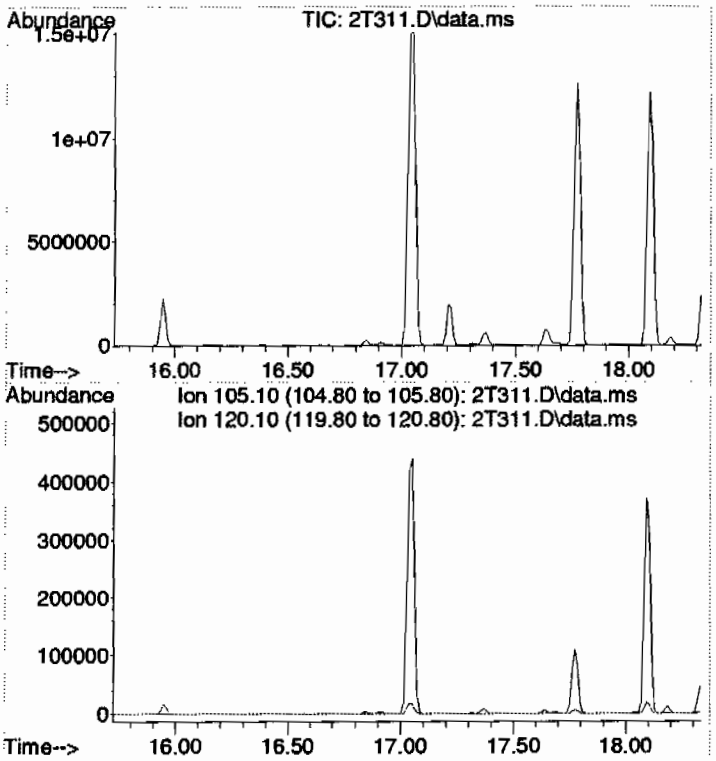

#60 AFTER analyst integration
Isopropylbenzene
Concen: N.D. DELETED
Expected RT: 17.03 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	27.9

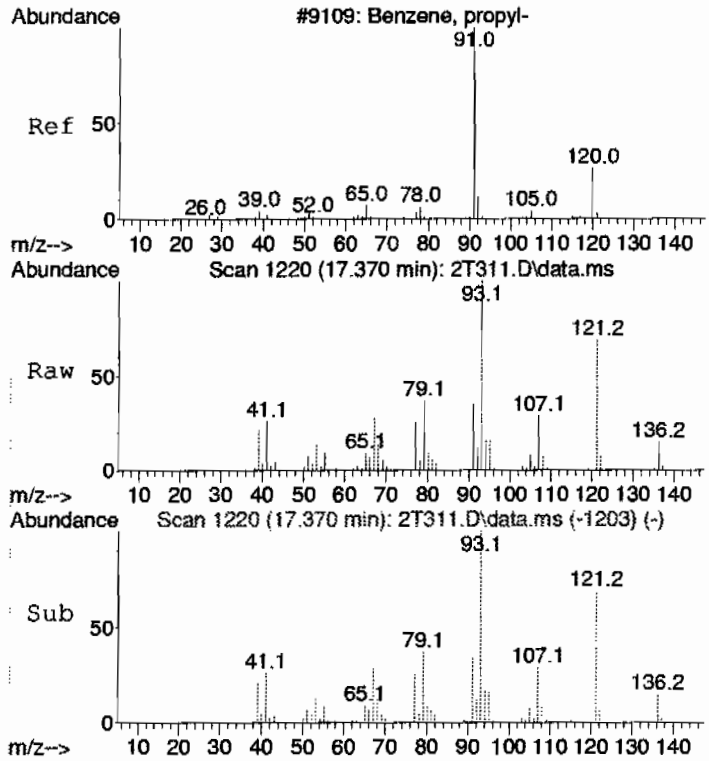

#65 BEFORE analyst integration
n-Propylbenzene
Concen: 1.59 ug/L
RT: 17.370 min Scan# 1220
Delta R.T. -0.095 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 91 Resp: 64382

Ion	Ratio	Lower	Upper
91	100		
120	1.1	0.0	54.5

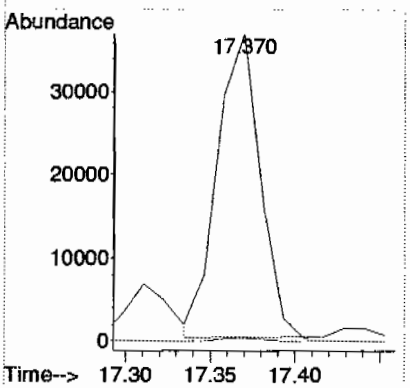

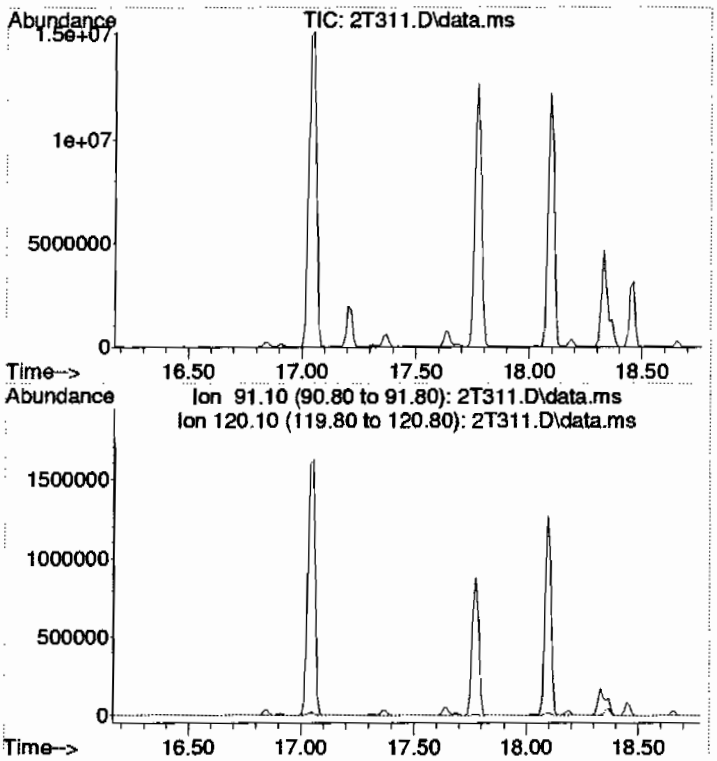

#65 AFTER analyst integration
n-Propylbenzene
Concen: N.D. DELETED
Expected RT: 17.47 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
120	24.5

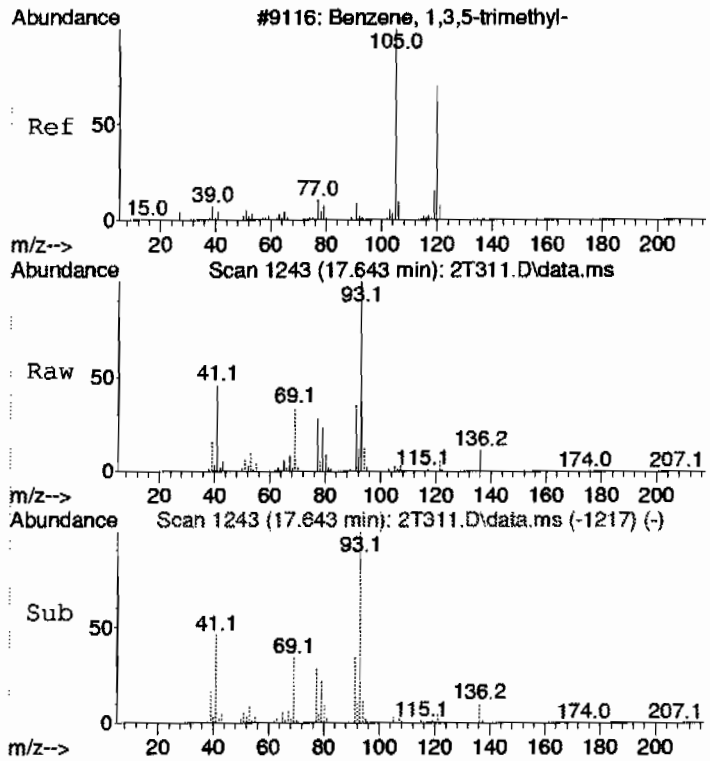

#66 BEFORE analyst integration
1,3,5-Trimethylbenzene
Concen: 0.47 ug/L
RT: 17.643 min Scan# 1243
Delta R.T. 0.012 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion:105 Resp: 13371

Ion	Ratio	Lower	Upper
105	100		
120	57.0	0.0	57.9

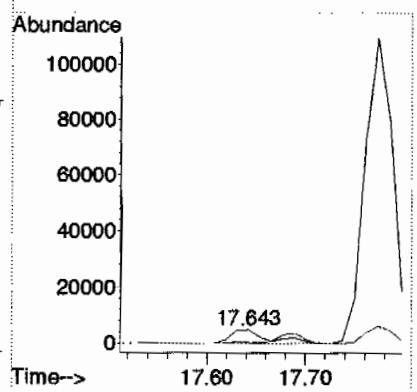

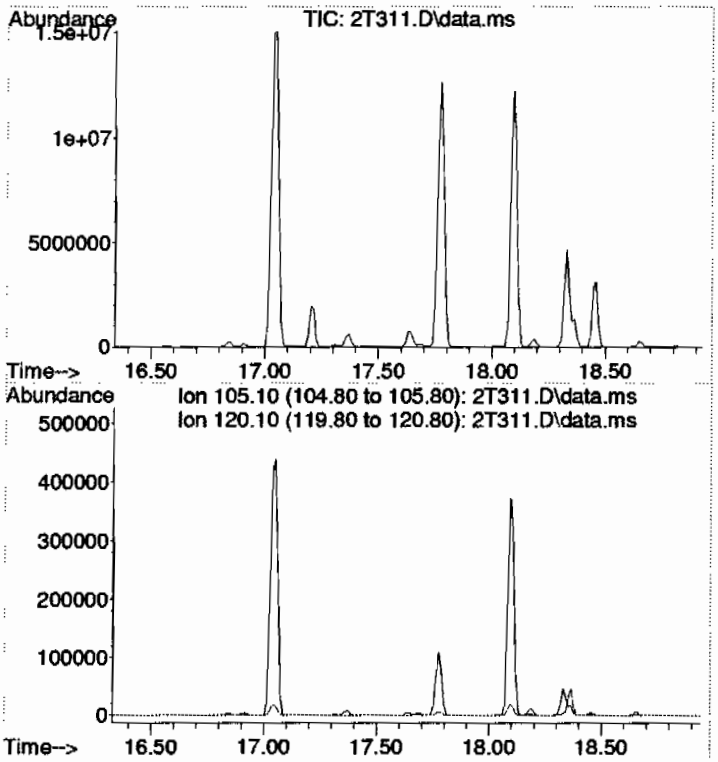

#66 AFTER analyst integration
1,3,5-Trimethylbenzene
Concen: N.D. DELETED
Expected RT: 17.63 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	27.9

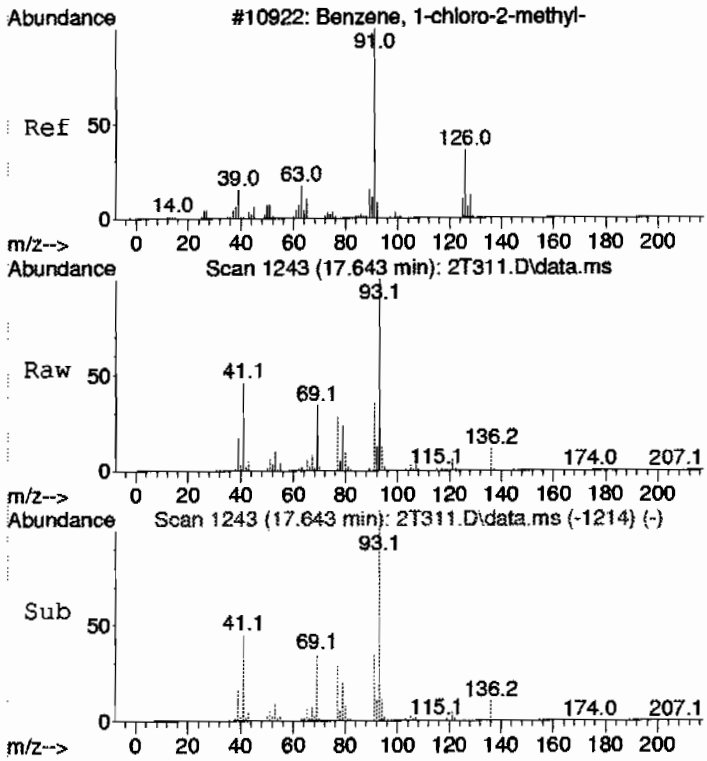

#67 BEFORE analyst integration
2-Chlorotoluene
Concen: 4.85 ug/L
RT: 17.643 min Scan# 1243
Delta R.T. 0.048 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 91 Resp: 132913

Ion	Ratio	Lower	Upper
91	100		
126	0.0	3.5	63.5#

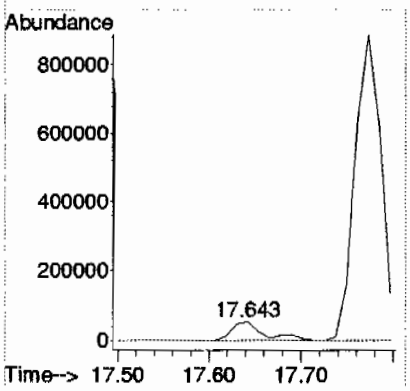

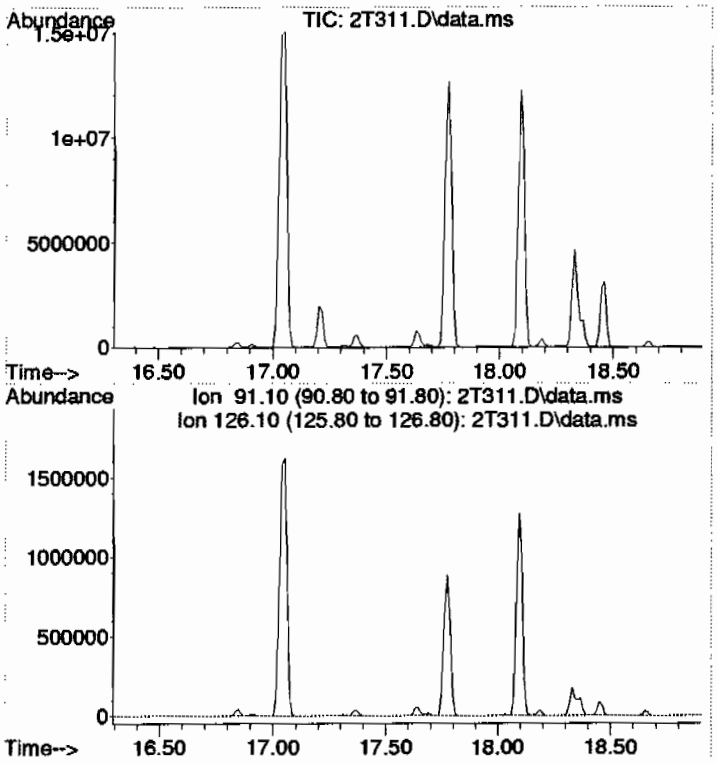

#67 AFTER analyst integration
2-Chlorotoluene
Concen: N.D. DELETED
Expected RT: 17.59 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	33.5

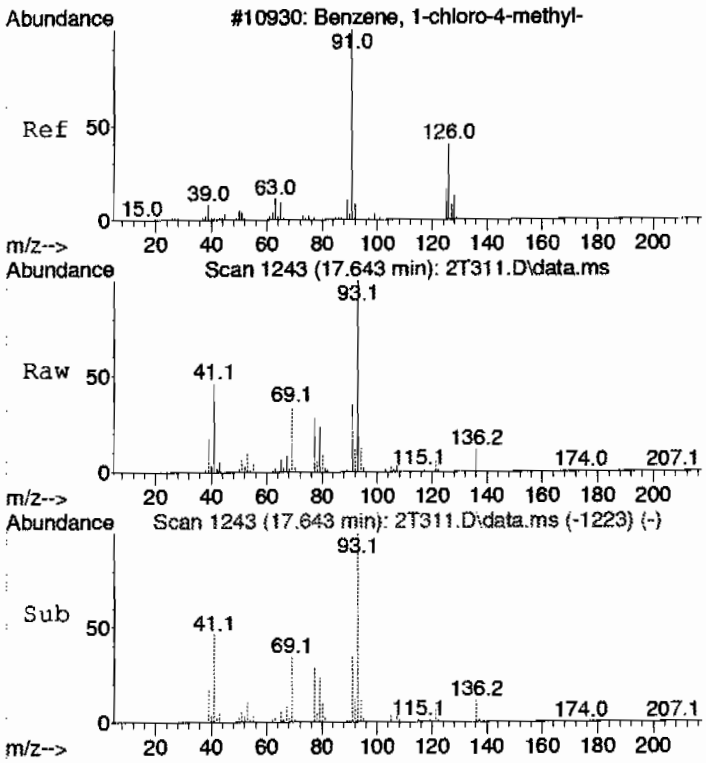

#68 BEFORE analyst integration
4-Chlorotoluene
Concen: 5.32 ug/L
RT: 17.643 min Scan# 1243
Delta R.T. -0.059 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 91 Resp: 132913

Ion	Ratio	Lower	Upper
91	100		
126	0.0	7.5	67.5#

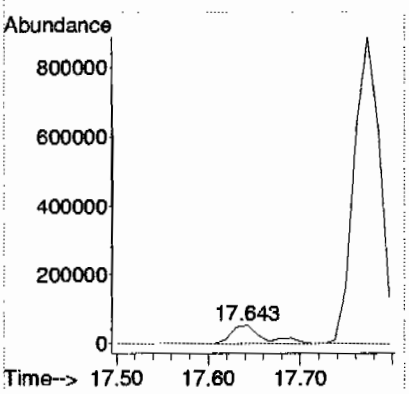

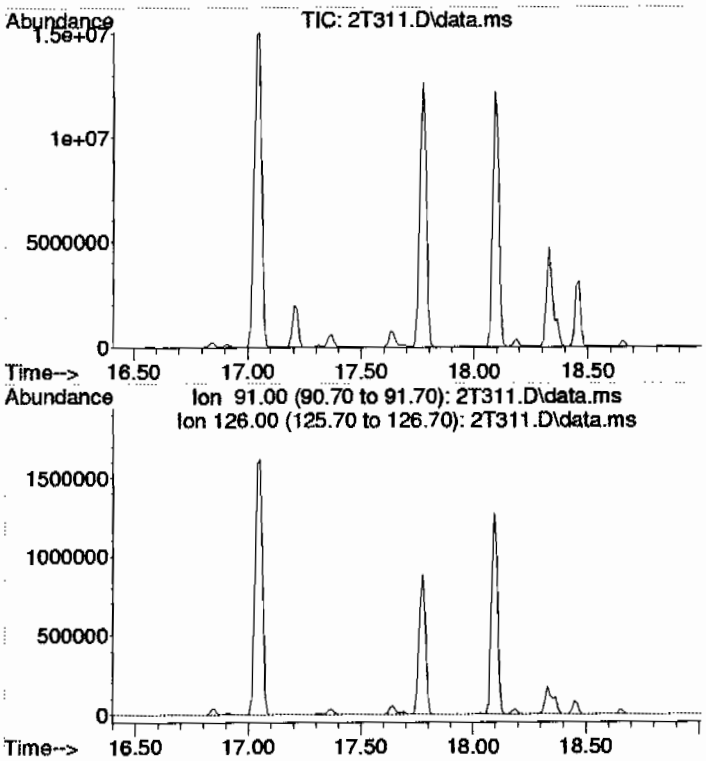

#68 AFTER analyst integration
4-Chlorotoluene
Concen: N.D. DELETED
Expected RT: 17.70 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	37.5

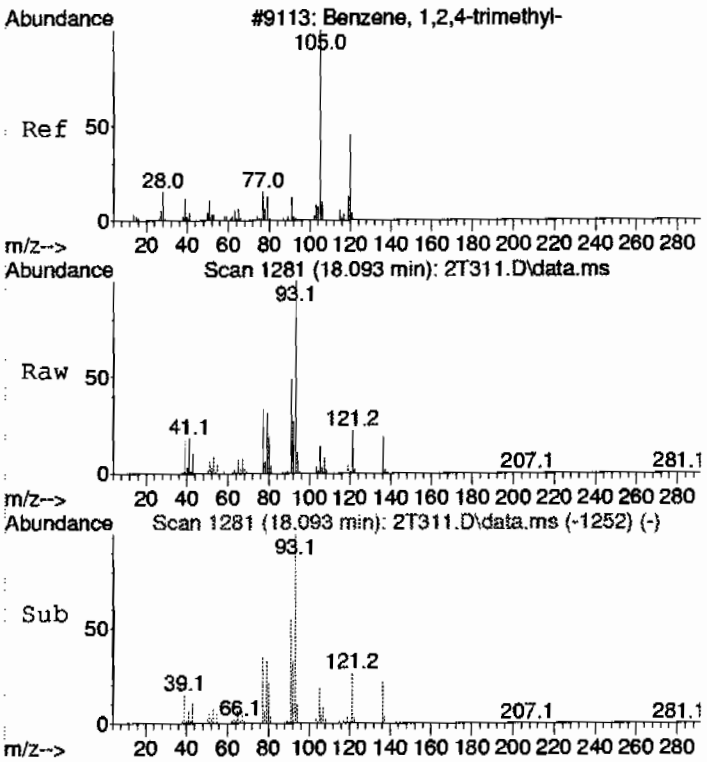

#70 BEFORE analyst integration
1,2,4-Trimethylbenzene
Concen: 23.80 ug/L
RT: 18.093 min Scan# 1281
Delta R.T. 0.047 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion:105 Resp: 698230

Ion	Ratio	Lower	Upper
105	100		
120	5.2	26.4	86.4#

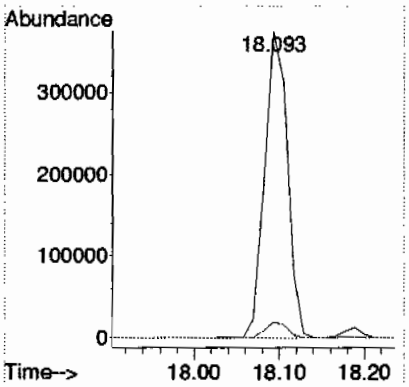

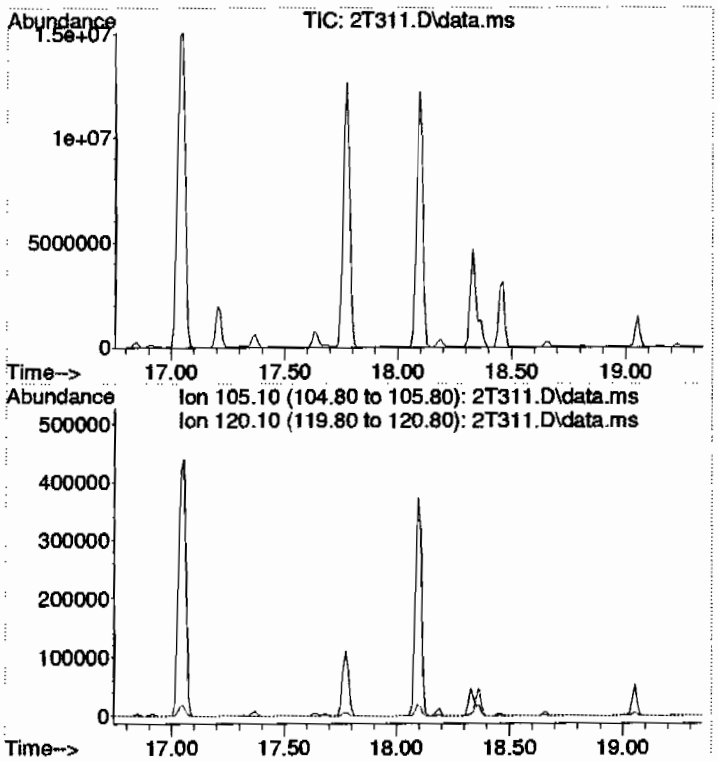

#70 AFTER analyst integration
1,2,4-Trimethylbenzene
Concen: N.D. DELETED
Expected RT: 18.05 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	56.4

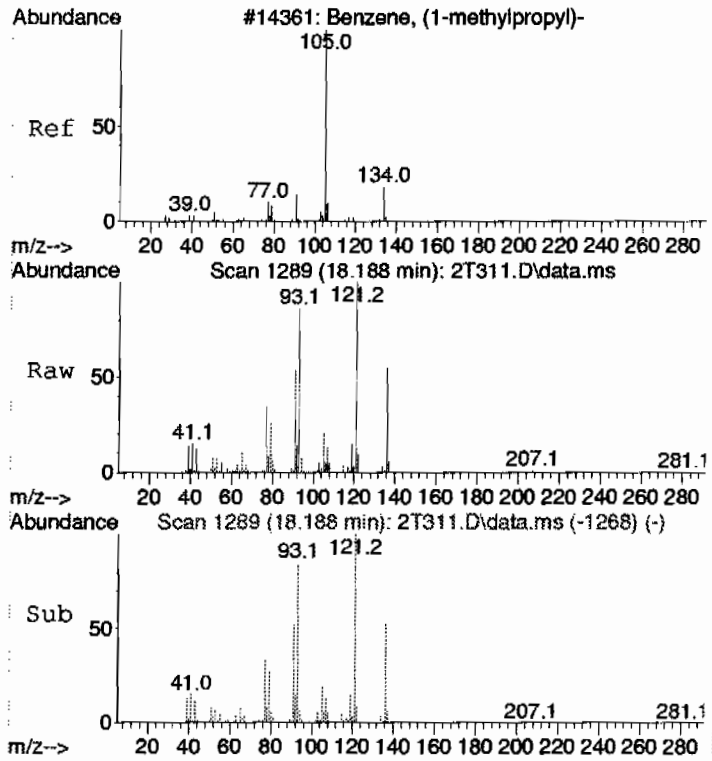

#71 BEFORE analyst integration
sec-Butylbenzene
Concen: 0.52 ug/L
RT: 18.188 min Scan# 1289
Delta R.T. -0.047 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion:105 Resp: 19943

Ion	Ratio	Lower	Upper
105	100		
134	21.4	0.0	51.8

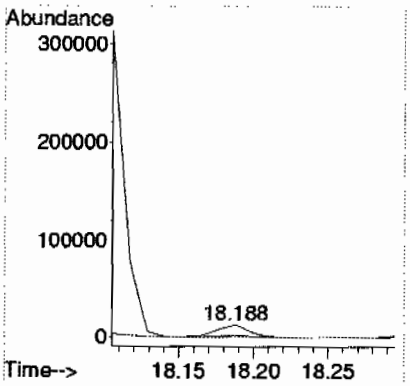

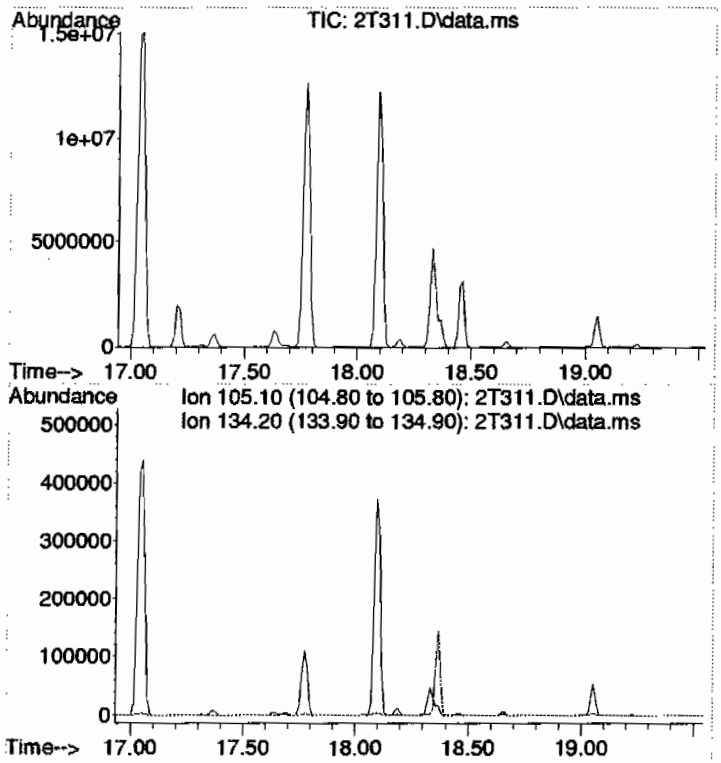

#71 AFTER analyst integration
sec-Butylbenzene
Concen: N.D. DELETED
Expected RT: 18.23 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
134	21.8

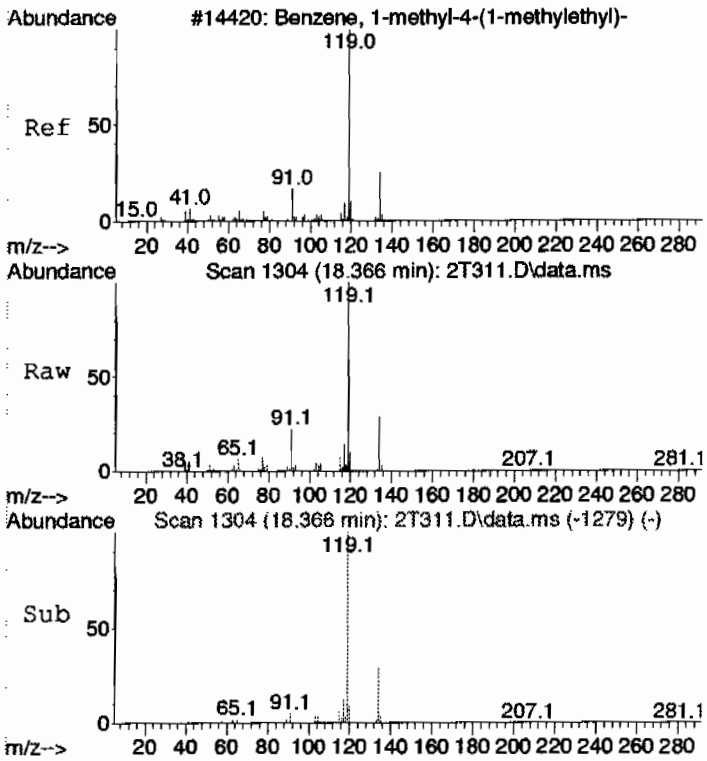

#72
4-Isopropyltoluene
Concen: 25.68 ug/L
RT: 18.366 min Scan# 1304
Delta R.T. -0.000 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion:119 Resp: 790359

Ion	Ratio	Lower	Upper
119	100		
134	28.0	0.0	58.3
91	57.2	0.0	52.0#

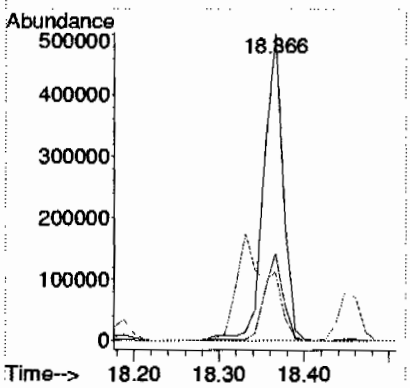

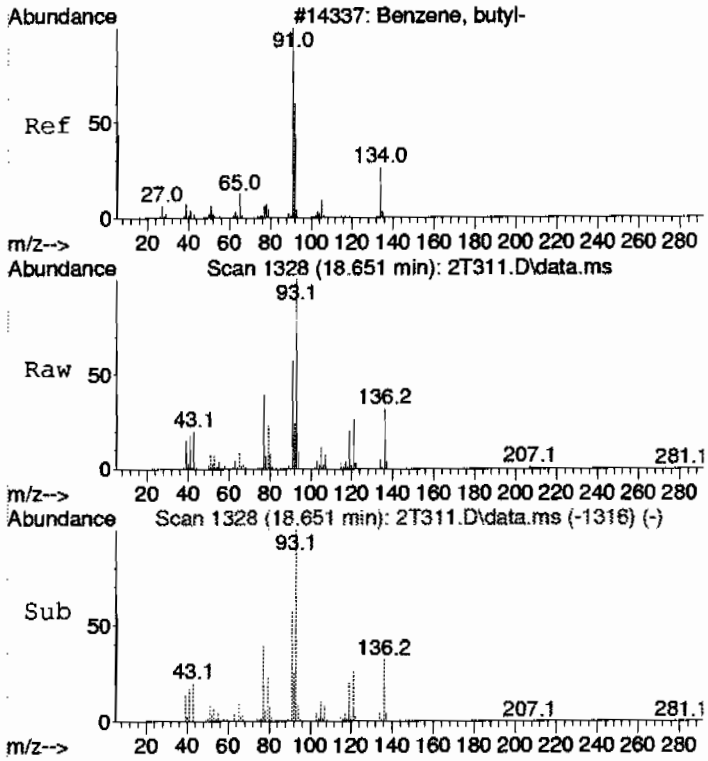

#75 BEFORE analyst integration
n-Butylbenzene
Concen: 1.69 ug/L
RT: 18.651 min Scan# 1328
Delta R.T. -0.154 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 91 Resp: 49434

Ion	Ratio	Lower	Upper
91	100		
92	43.7	25.2	85.2
134	9.1	0.0	59.1

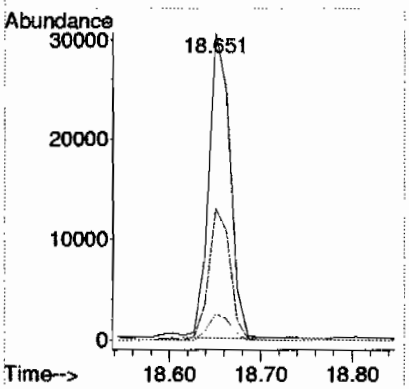

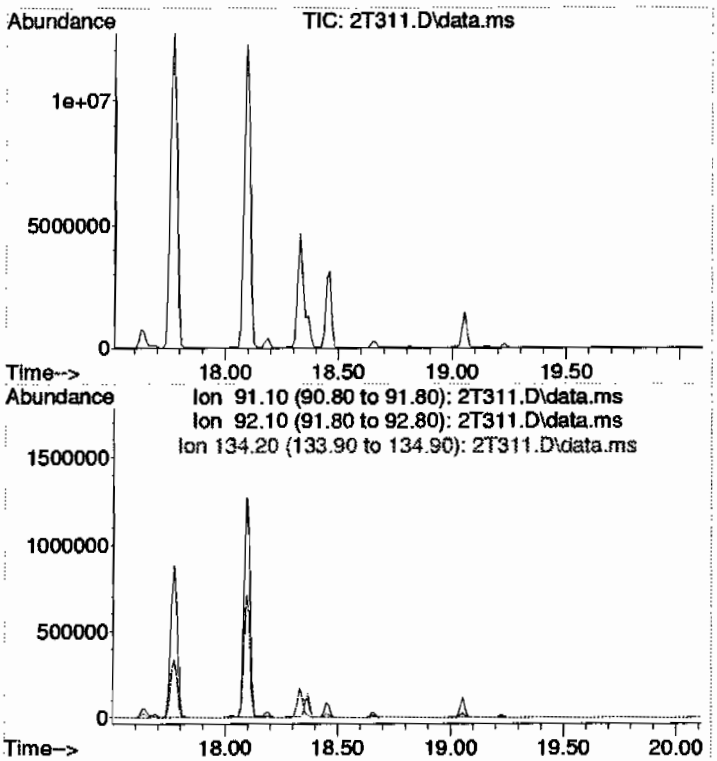

#75 AFTER analyst integration
n-Butylbenzene
Concen: N.D. DELETED
Expected RT: 18.81 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	55.2
134	29.1

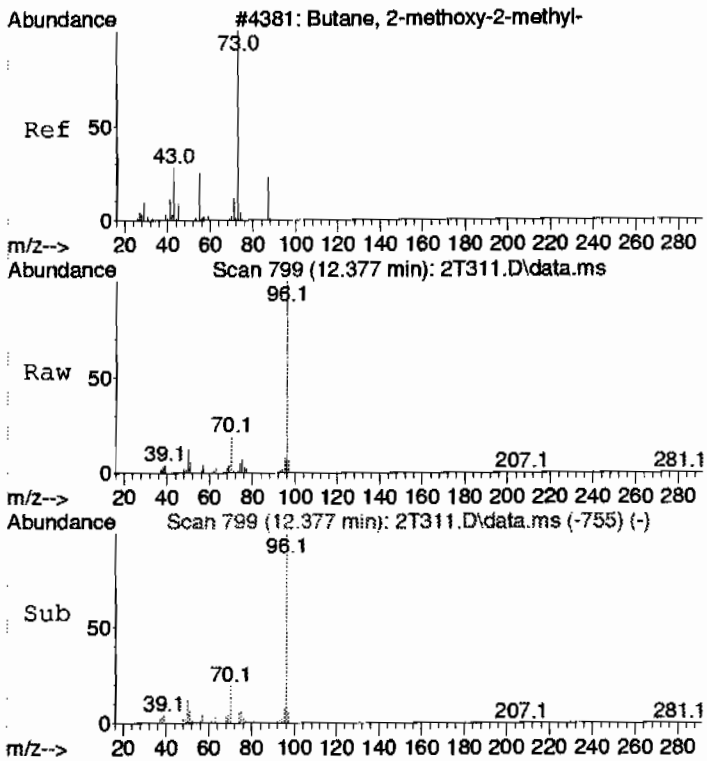

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 1.01 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 73 Resp: 17315

Ion	Ratio	Lower	Upper
73	100		
55	32.1	5.2	65.2
87	0.0	0.0	54.7

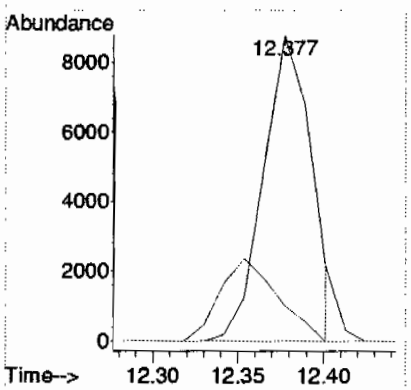

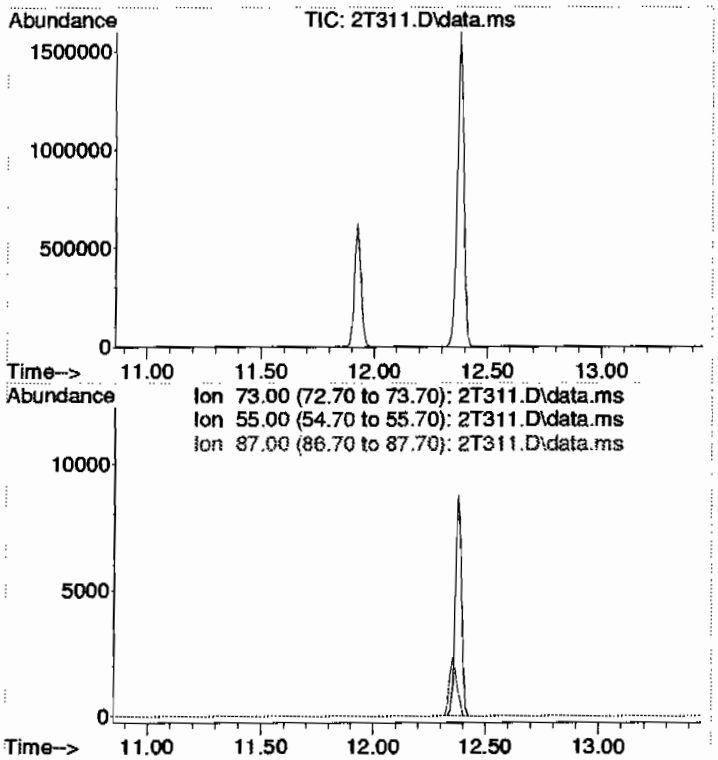

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

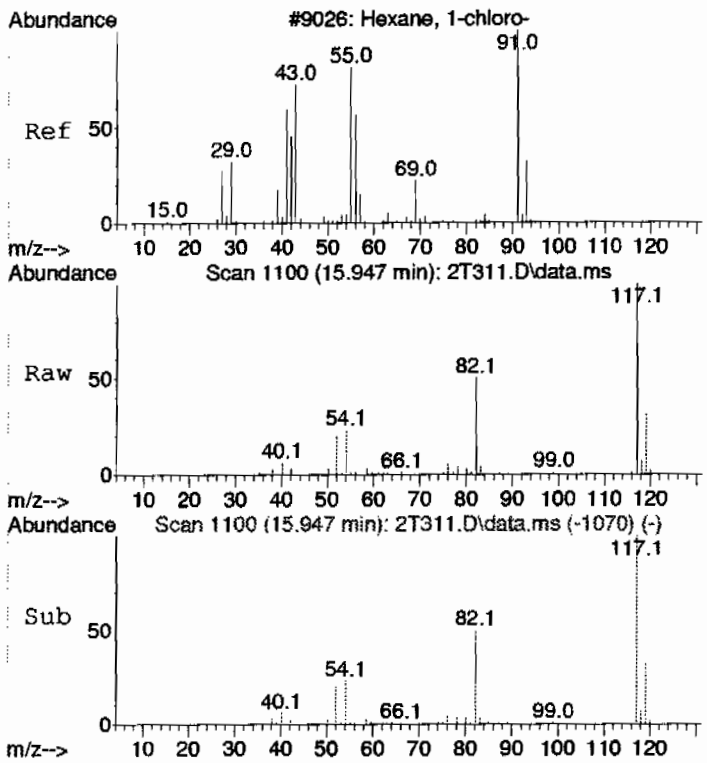

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 1.98 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 55 Resp: 12539

Ion	Ratio	Lower	Upper
55	100		
91	18.9	113.2	173.2#
56	57.0	30.3	90.3

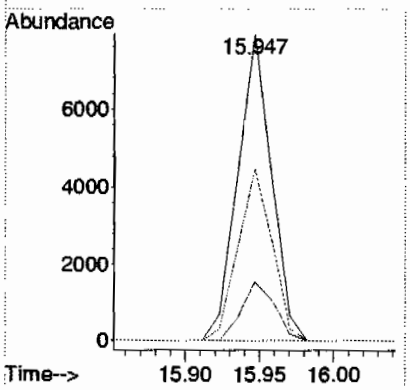

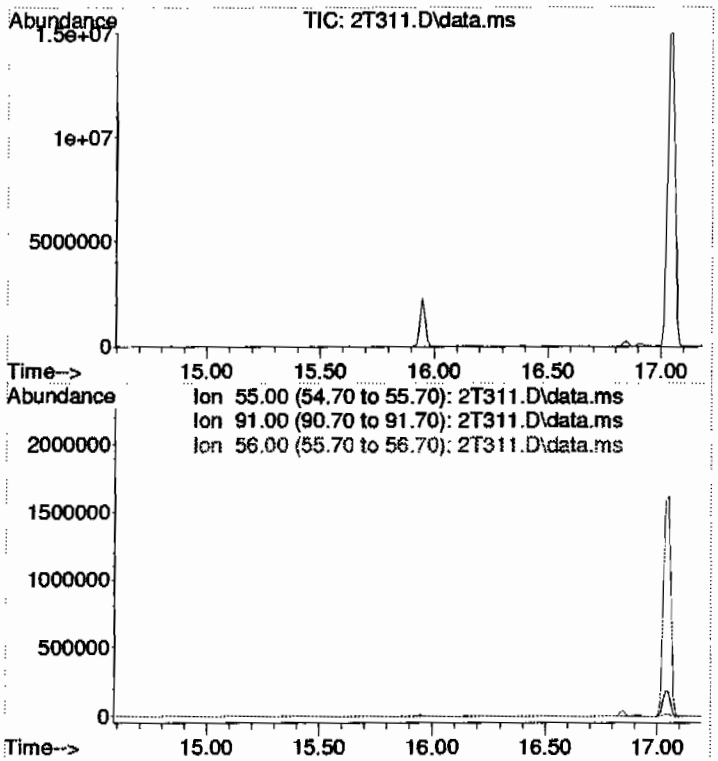

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

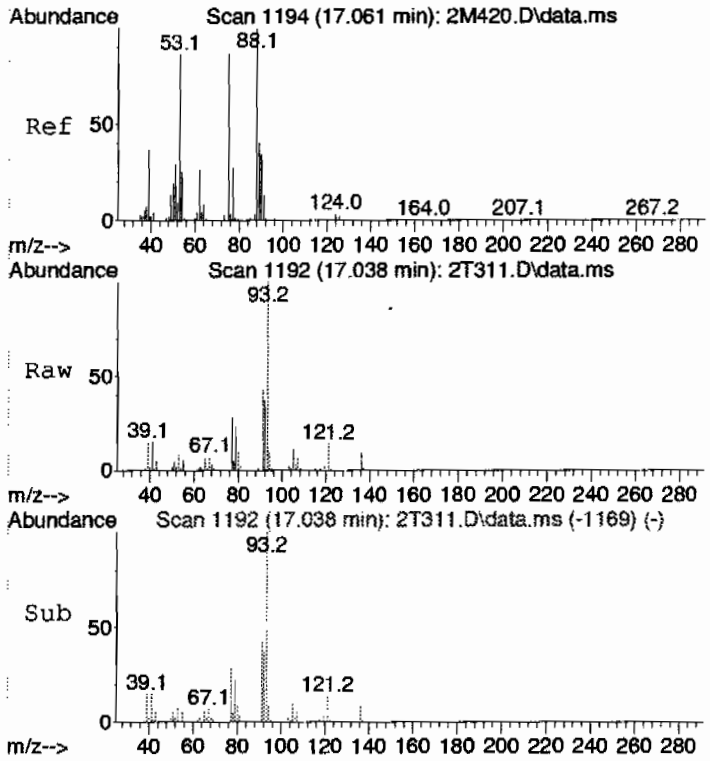

#107 BEFORE analyst integration
cis-1,4-Dichloro-2-butene
Concen: 287.10 ug/L
RT: 17.038 min Scan# 1192
Delta R.T. -0.024 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 53 Resp: 726627

Ion	Ratio	Lower	Upper
53	100		
88	0.4	80.3	140.3#
77	333.4	1.2	61.2#

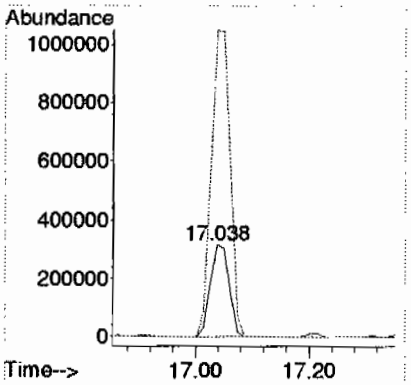

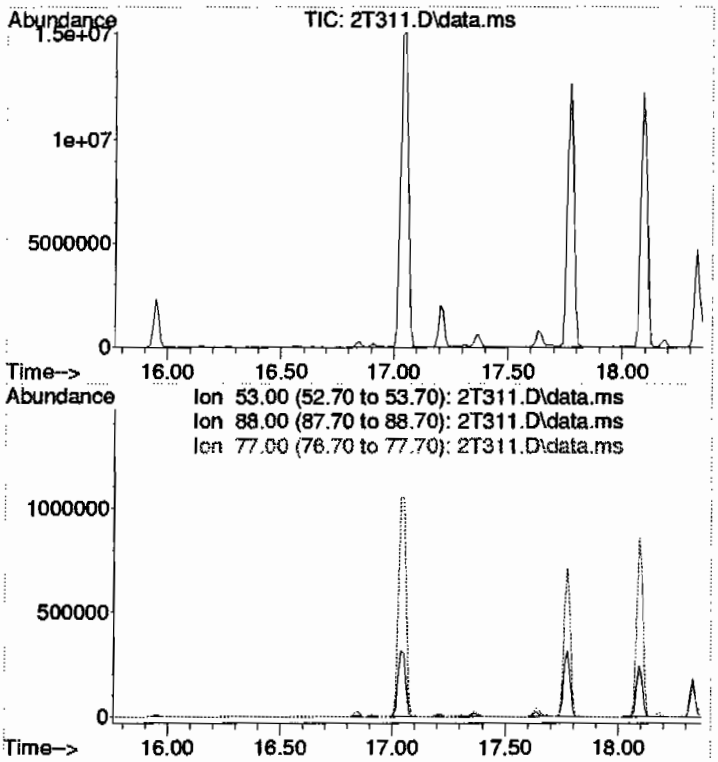

#107 AFTER analyst integration
cis-1,4-Dichloro-2-butene
Concen: N.D. DELETED
Expected RT: 17.06 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	110.3
77	31.2

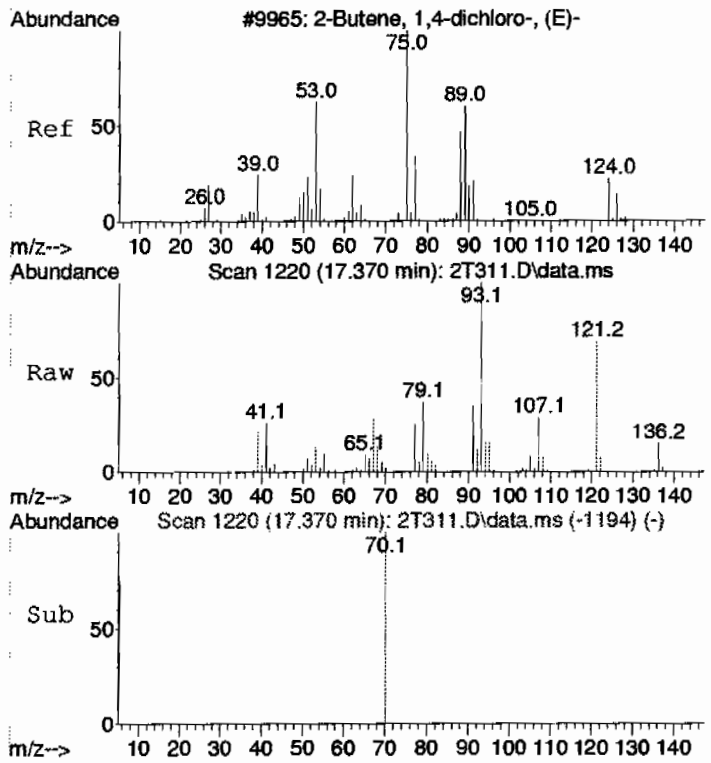

#109 BEFORE analyst integration
trans-1,4-Dichloro-2-butene
Concen: 10.93 ug/L
RT: 17.370 min Scan# 1220
Delta R.T. 0.012 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 53 Resp: 26994

Ion	Ratio	Lower	Upper
53	100		
88	0.0	21.1	81.1#
75	3.1	88.8	148.8#

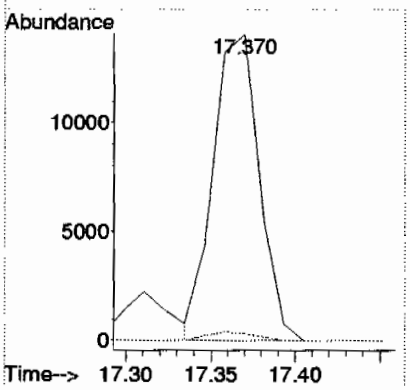

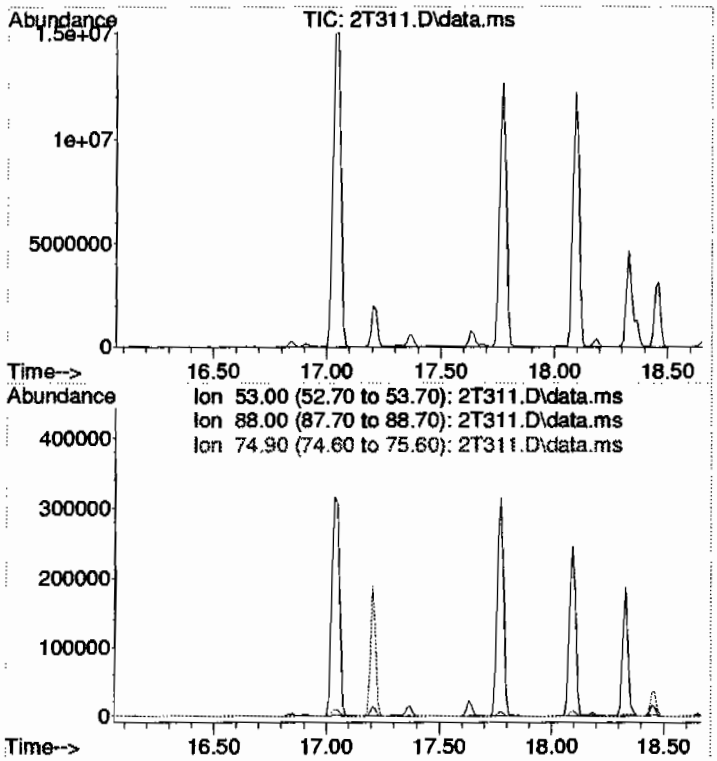

#109 AFTER analyst integration
trans-1,4-Dichloro-2-butene
Concen: N.D. DELETED
Expected RT: 17.36 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	51.1
75	118.8

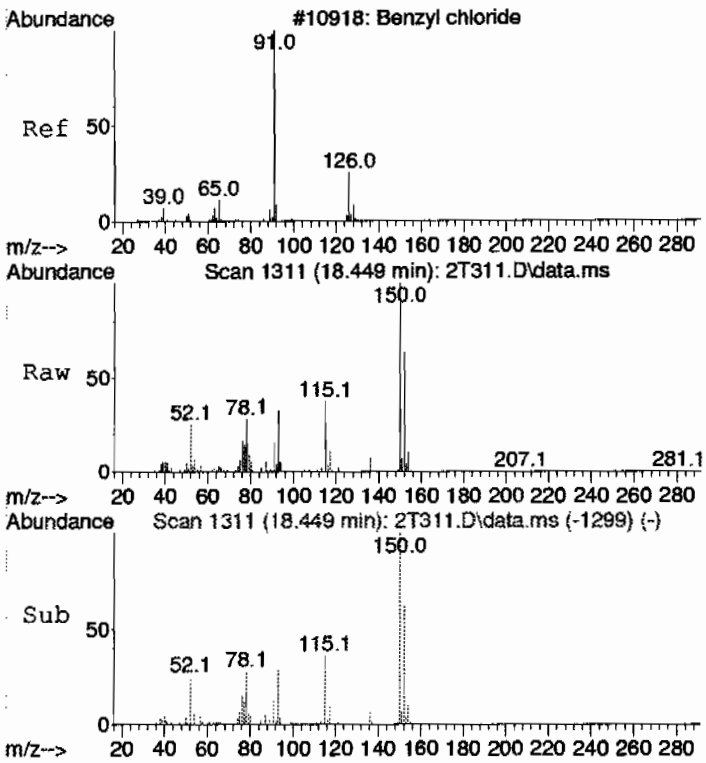

#111 BEFORE analyst integration
Benzyl chloride
Concen: 10.73 ug/L
RT: 18.449 min Scan# 1311
Delta R.T. -0.154 min
Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 91 Resp: 141252

Ion	Ratio	Lower	Upper
91	100		
126	0.1	0.0	53.5
65	20.1	0.0	41.0

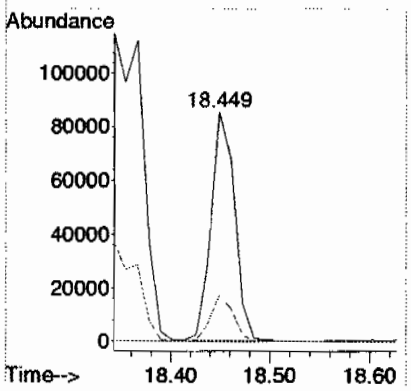

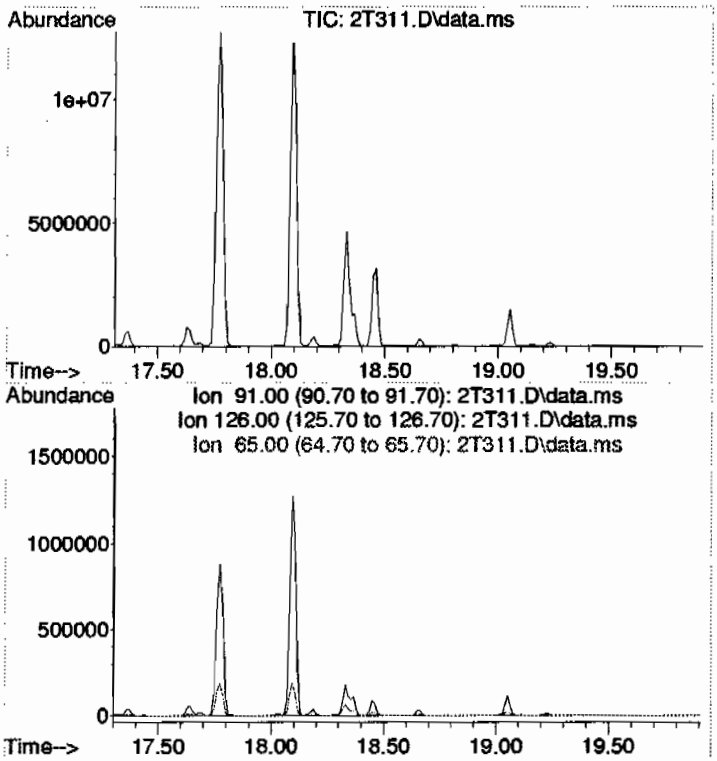

#111 AFTER analyst integration
Benzyl chloride
Concen: N.D. DELETED
Expected RT: 18.60 min

Lab File: 2T311.D
Acq: 8 Jul 2009 11:32 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
126	23.5
65	11.0

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T311.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.360	143	153	171	rBB	184775	1237502	3.58%	1.003%
2	4.687	173	175	178	rBB	218	331	0.00%	0.000%
3	4.954	191	193	194	rBB	161	144	0.00%	0.000%
4	5.222	201	211	219	rBB	201	2510	0.01%	0.002%
5	6.045	261	265	278	rBV	636	6664	0.02%	0.005%
6	6.946	337	341	344	rBV	759	1655	0.00%	0.001%
7	7.907	419	422	441	rVB	6055	26043	0.08%	0.021%
8	8.701	484	489	502	rBV	20681	55087	0.16%	0.045%
9	9.674	567	571	576	rVB	2813	6723	0.02%	0.005%
10	11.927	756	761	791	rBV	623210	1264767	3.66%	1.025%
11	12.377	793	799	819	rVB	1597427	3298518	9.55%	2.673%
12	12.864	837	840	850	rVB2	1341	3046	0.01%	0.002%
13	13.006	850	852	857	rVB4	1173	2224	0.01%	0.002%
14	13.682	905	909	915	rVB	2200	3888	0.01%	0.003%
15	14.310	956	962	967	rBV	2282477	4073752	11.79%	3.301%
16	14.713	992	996	1005	rVB	5250	11129	0.03%	0.009%
17	15.947	1095	1100	1113	rBV	2305707	3708652	10.74%	3.005%
18	16.148	1114	1117	1123	rVB	59814	94260	0.27%	0.076%
19	16.267	1124	1127	1133	rVV	2560	4343	0.01%	0.004%
20	16.386	1135	1137	1144	rVB	1727	3028	0.01%	0.002%
21	16.563	1149	1152	1156	rVB	2806	5105	0.01%	0.004%
22	16.646	1156	1159	1171	rVB2	1119	2539	0.01%	0.002%
23	16.848	1171	1176	1178	rBV	251668	421126	1.22%	0.341%
24	16.907	1178	1181	1186	rVB	144920	261805	0.76%	0.212%
25	17.050	1186	1193	1202	rBV	15065004	34546062	100.00%	27.990%
26	17.204	1202	1206	1212	rVV	1990353	3439671	9.96%	2.787%
27	17.311	1212	1215	1217	rVV	103282	187286	0.54%	0.152%
28	17.370	1217	1220	1231	rVB	612325	1115583	3.23%	0.904%
29	17.631	1237	1242	1249	rBV2	774733	1653189	4.79%	1.339%
30	17.773	1249	1254	1266	rVB	12666115	25342398	73.36%	20.533%
31	18.093	1273	1281	1286	rBV	12233731	23150570	67.01%	18.757%
32	18.188	1286	1289	1294	rVV	379172	628285	1.82%	0.509%
33	18.330	1296	1301	1308	rVV2	4671478	9392881	27.19%	7.610%
34	18.461	1308	1312	1322	rVB	3139317	5456957	15.80%	4.421%
35	18.651	1325	1328	1338	rVB	272564	440348	1.27%	0.357%
36	18.805	1338	1341	1354	rVB	54520	95961	0.28%	0.078%
37	19.054	1354	1362	1366	rBV	1488031	2334493	6.76%	1.891%

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

38	19.149	1367	1370	1374	rVV	71047	148754	0.43%	0.121%
39	19.232	1374	1377	1392	rVB	143227	223590	0.65%	0.181%
40	19.635	1405	1411	1428	rBV2	31450	101010	0.29%	0.082%
41	20.074	1444	1448	1486	rBV4	26824	67785	0.20%	0.055%
42	20.666	1494	1498	1513	rBV2	73495	220907	0.64%	0.179%
43	20.904	1513	1518	1530	rVV	175646	382302	1.11%	0.310%

Sum of corrected areas: 123422873

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

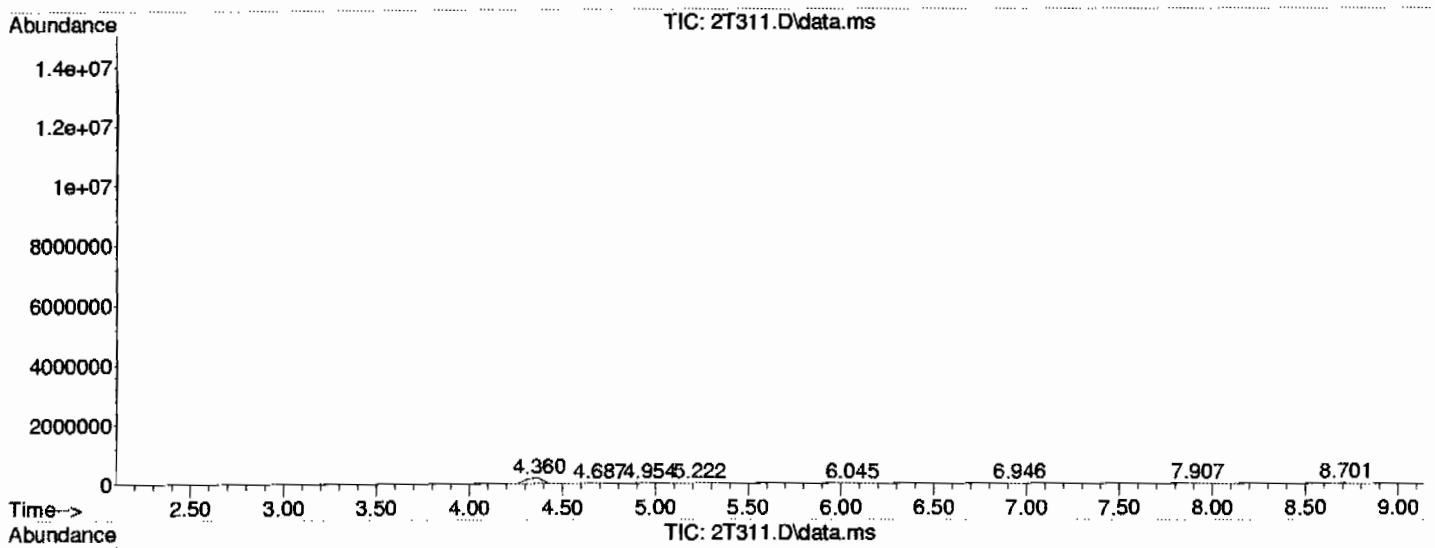

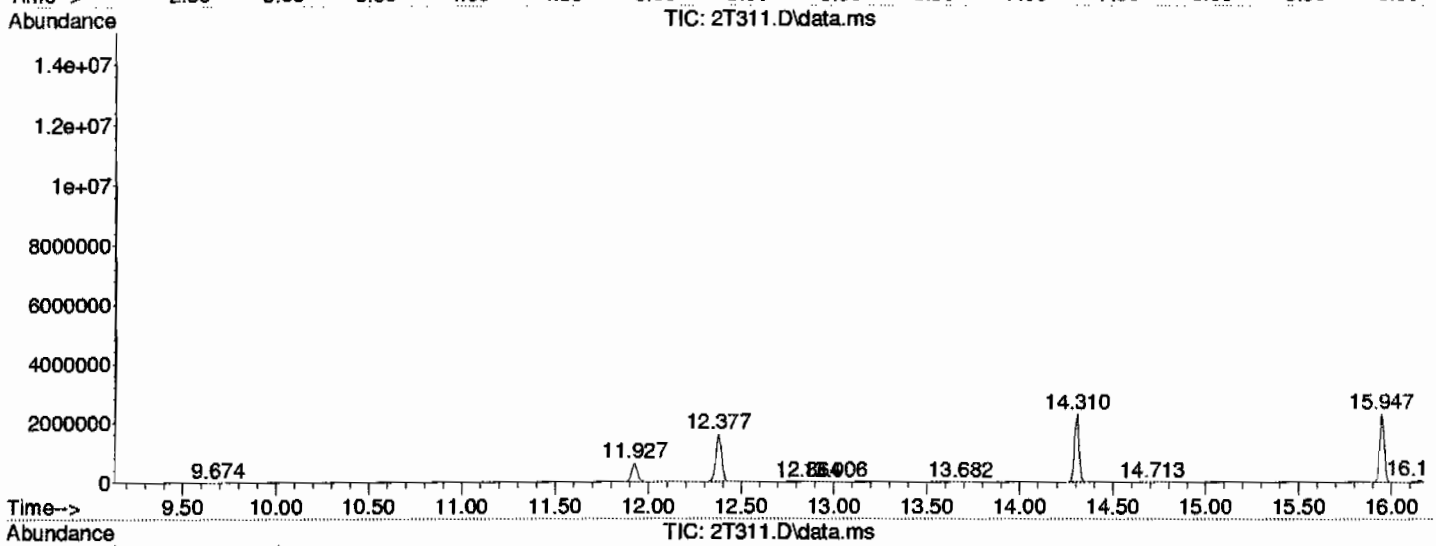

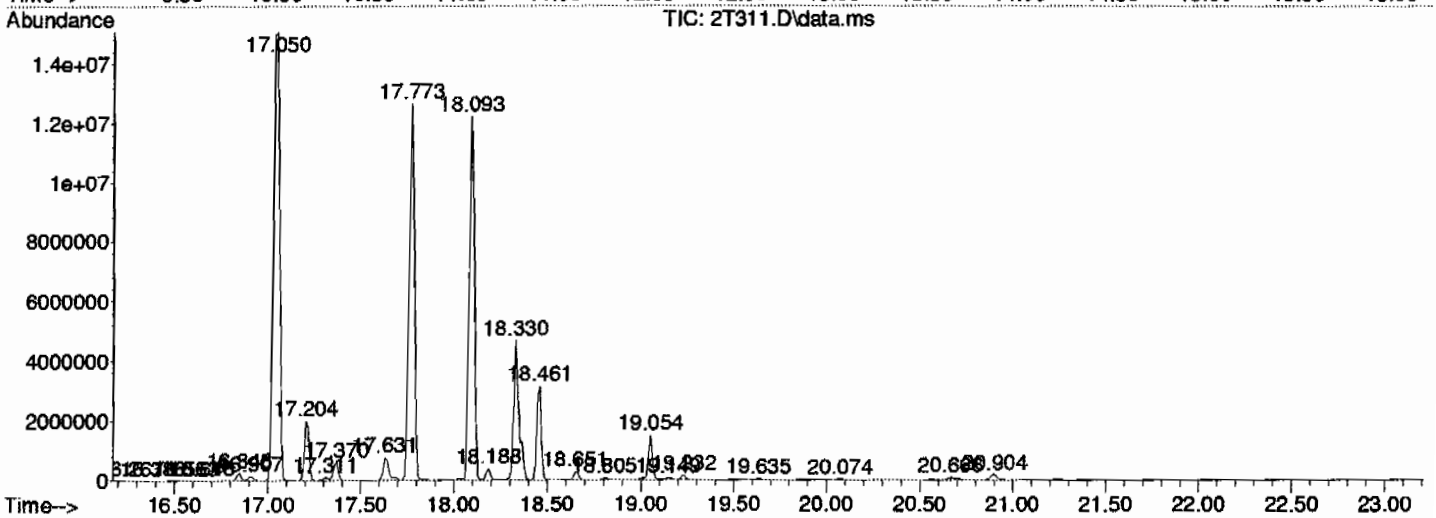

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.360	18.76 ug/L	1237500	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

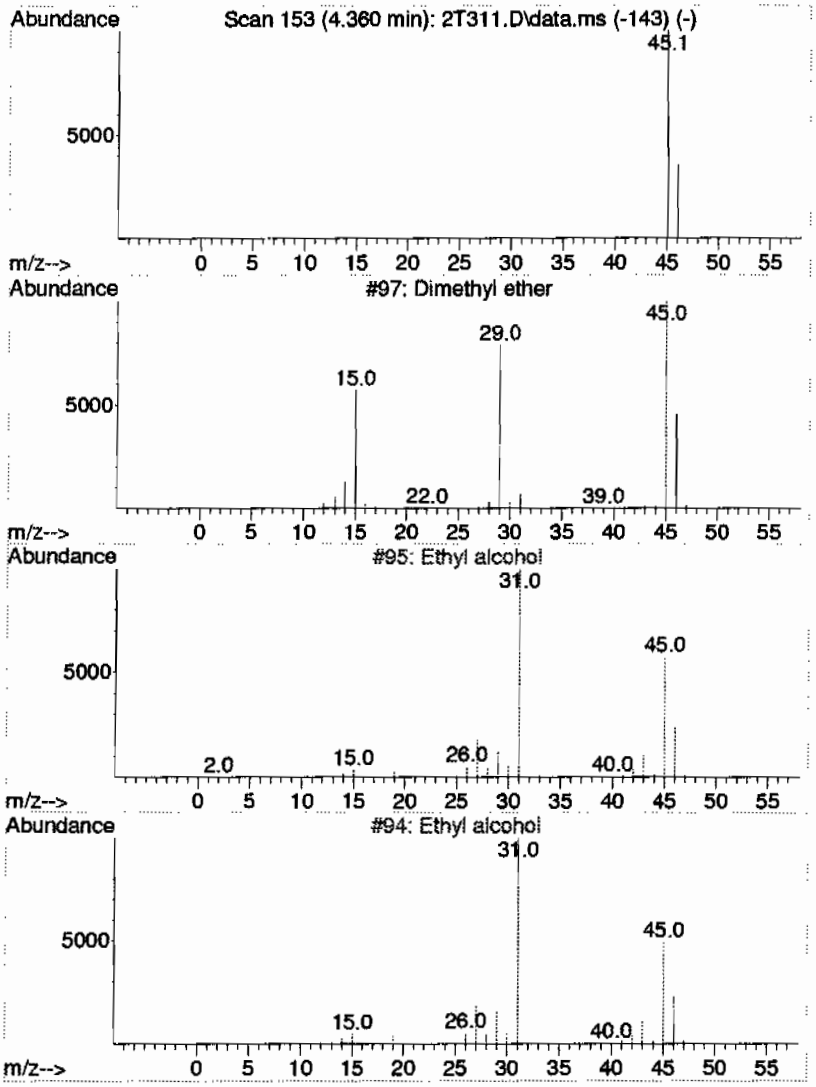

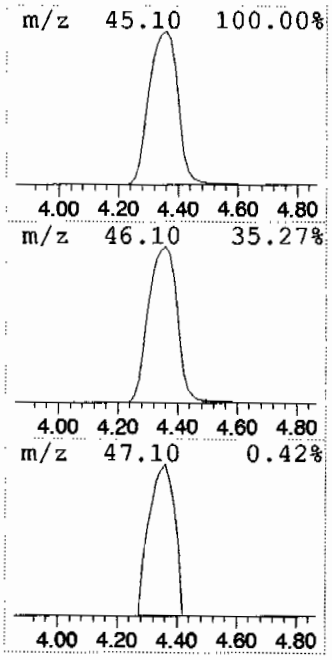

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 2 unknown hydrocarbon Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
16.848	5.68 ug/L	421126	B Chlorobenzene-d5	15.947

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.0]hexane, 4-methyl-1...	136	C10H16	058037-87-9	93
2	Bicyclo[3.1.0]hex-2-ene, 2-methy...	136	C10H16	002867-05-2	91
3	Bicyclo[3.1.0]hex-2-ene, 2-methy...	136	C10H16	002867-05-2	91
4	.alpha.-Phellandrene	136	C10H16	000099-83-2	83
5	.alpha.-Phellandrene	136	C10H16	000099-83-2	78

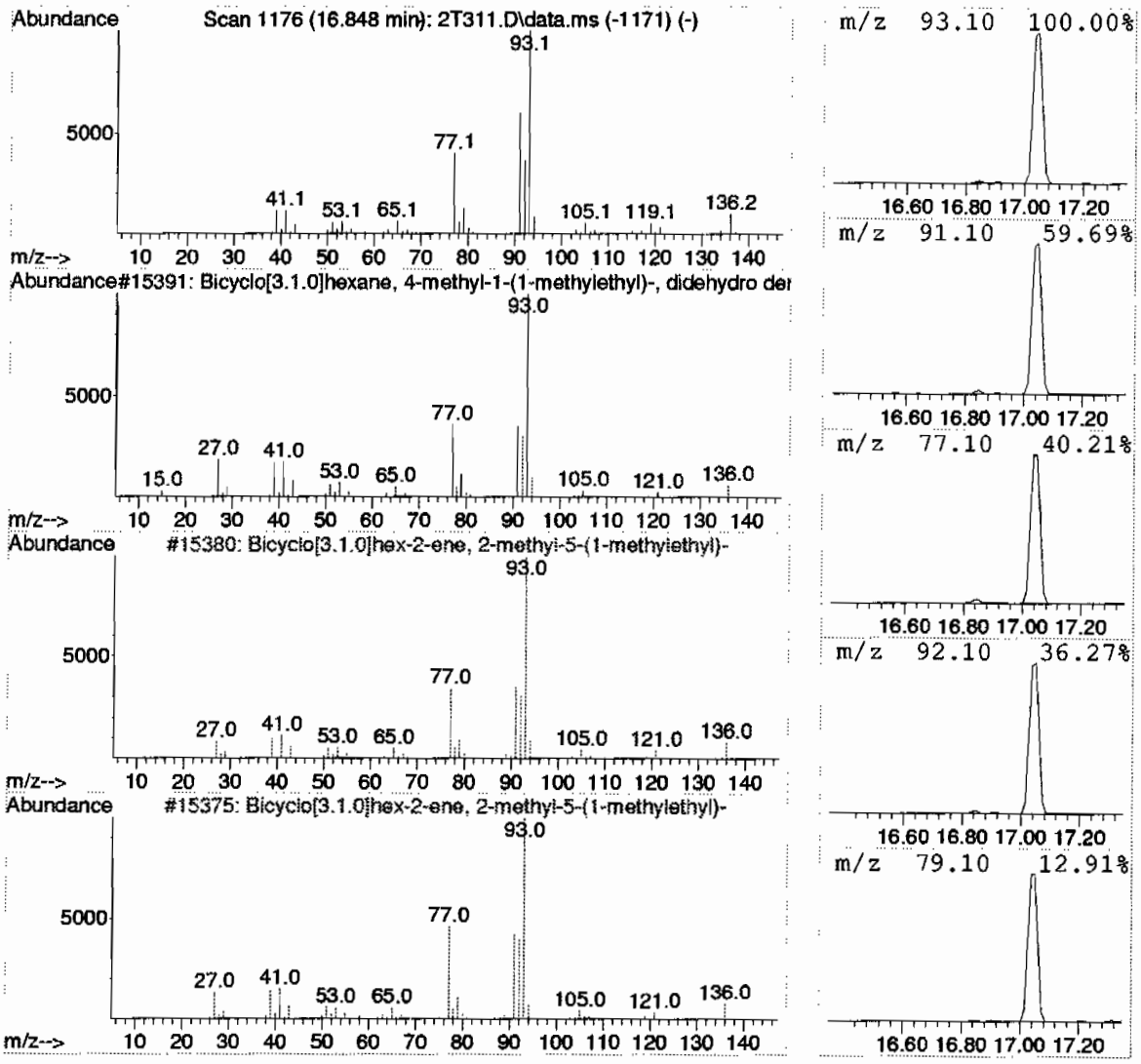

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 3 unknown hydrocarbon Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.050	465.75 ug/L	34546100	B Chlorobenzene-d5	15.947

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1S-.alpha.-Pinene	136	C10H16	007785-26-4	97
2	1R-.alpha.-Pinene	136	C10H16	007785-70-8	96
3	.alpha.-Pinene	136	C10H16	000080-56-8	96
4	1R-.alpha.-Pinene	136	C10H16	007785-70-8	95
5	Bicyclo[3.1.1]hept-2-ene, 2,6,6-...	136	C10H16	002437-95-8	94

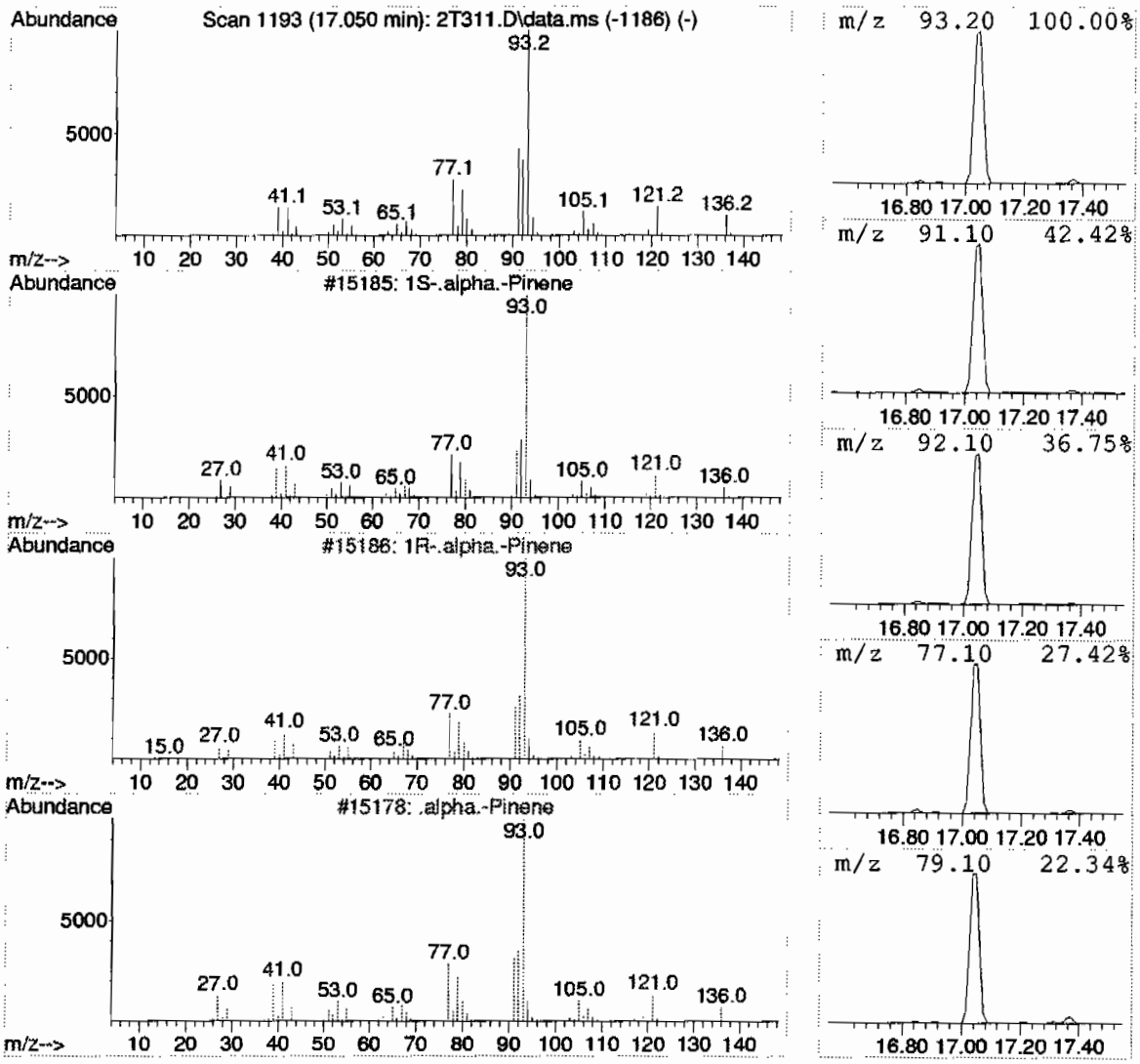

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 4 unknown hydrocarbon Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.370	10.22 ug/L	1115580	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Camphene	136	C10H16	000079-92-5	97
2	Bicyclo[2.2.1]heptane, 2,2-dimet...	136	C10H16	005794-04-7	97
3	Camphene	136	C10H16	000079-92-5	96
4	Camphene	136	C10H16	000079-92-5	91
5	Camphene	136	C10H16	000079-92-5	90

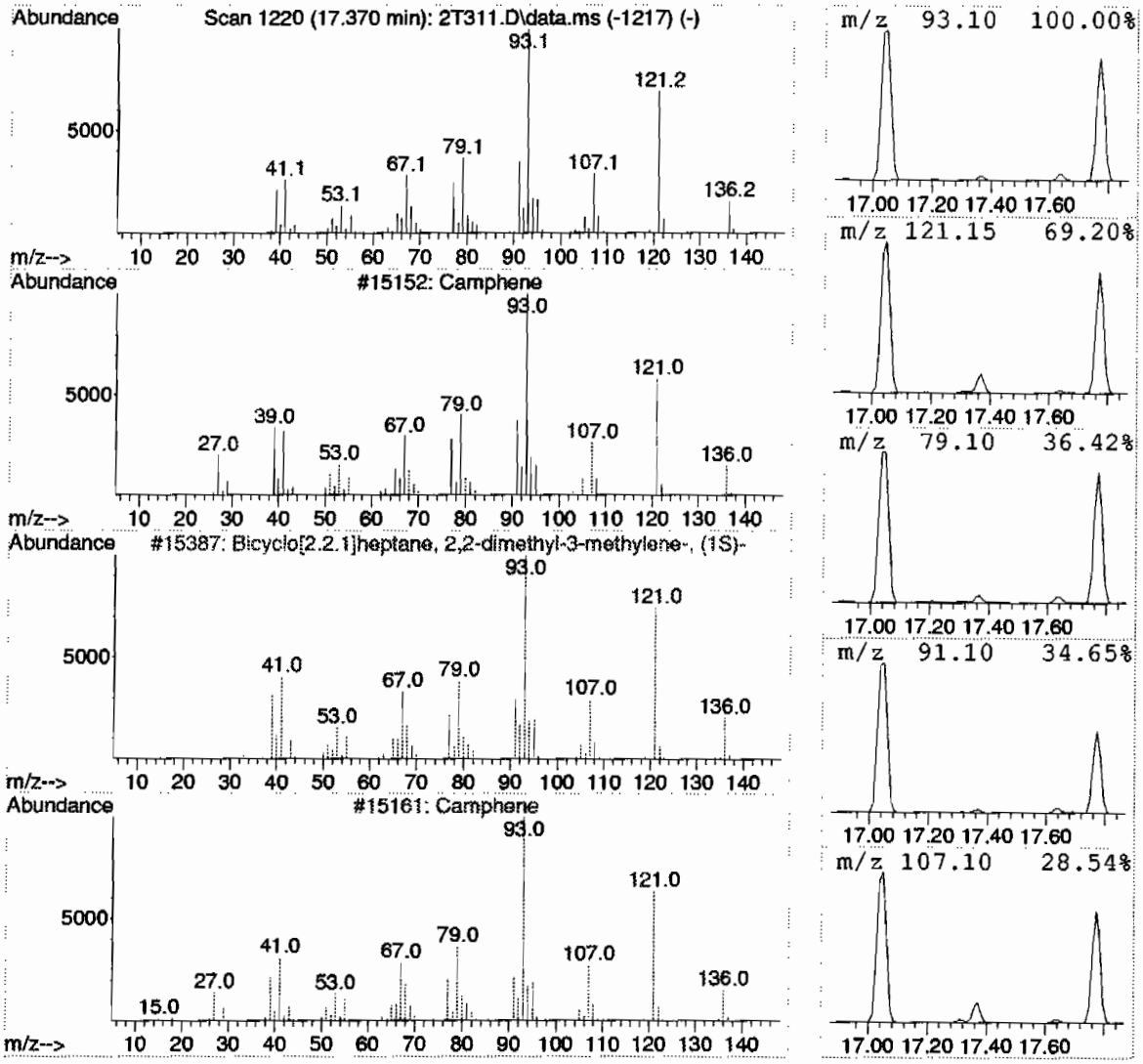

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

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Peak Number 5 unknown hydrocarbon Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.631	12.24 ug/L	1336410	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	.beta.-Pinene	136	C10H16	000127-91-3	87
2	Bicyclo[3.1.1]heptane, 6,6-dimet...	136	C10H16	018172-67-3	86
3	Bicyclo[3.1.0]hexane, 4-methylen...	136	C10H16	003387-41-5	83
4	Bicyclo[3.1.0]hexane, 4-methylen...	136	C10H16	003387-41-5	80
5	.beta.-Phellandrene	136	C10H16	000555-10-2	80

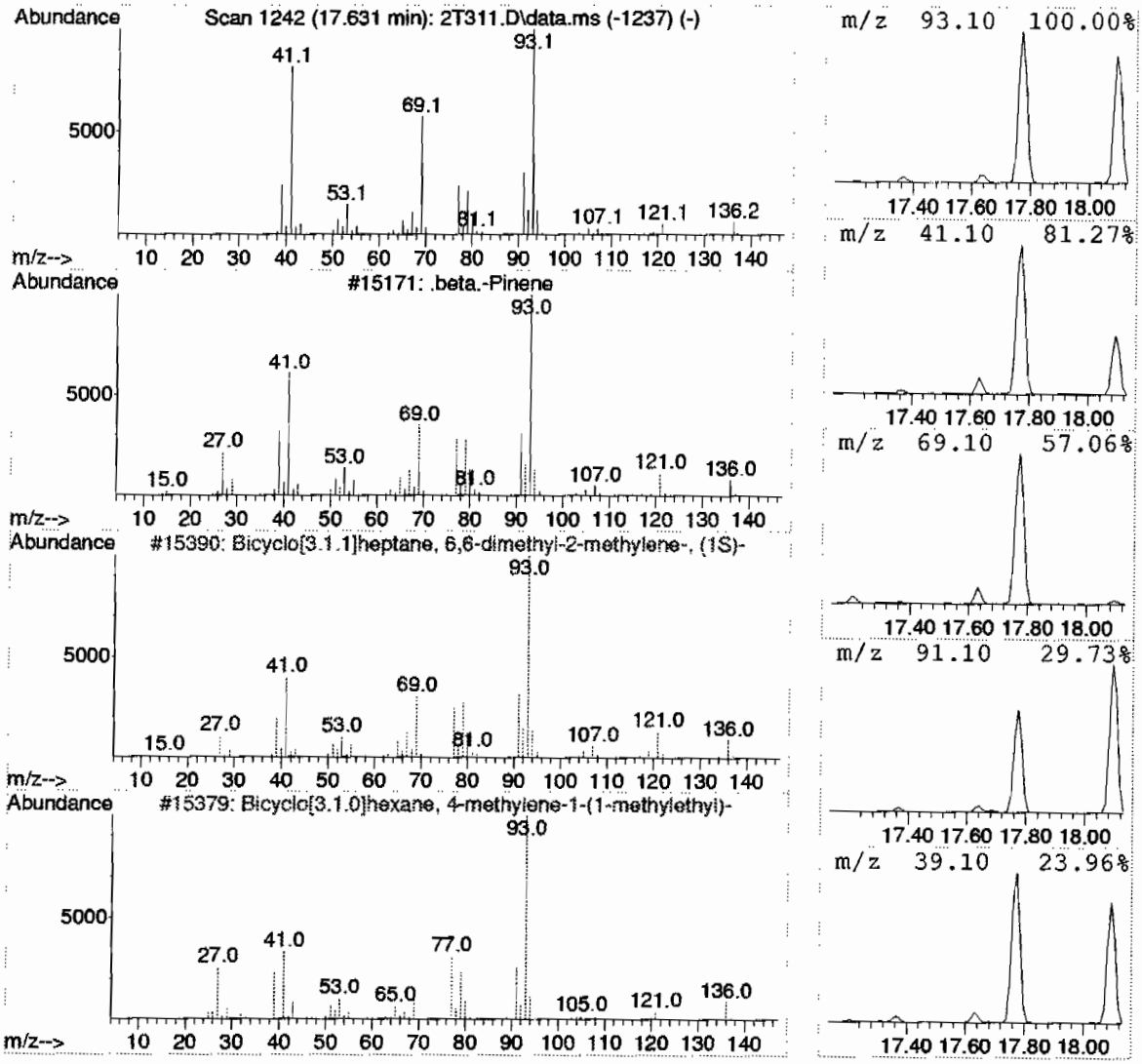

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

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Peak Number 6 unknown hydrocarbon Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.773	232.20 ug/L	25342400	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.1]heptane, 6,6-dimet...	136	C10H16	018172-67-3	97
2	.beta.-Pinene	136	C10H16	000127-91-3	96
3	.beta.-Pinene	136	C10H16	000127-91-3	94
4	.beta.-Pinene	136	C10H16	000127-91-3	94
5	Cyclohexene, 4-methylene-1-(1-me...	136	C10H16	000099-84-3	91

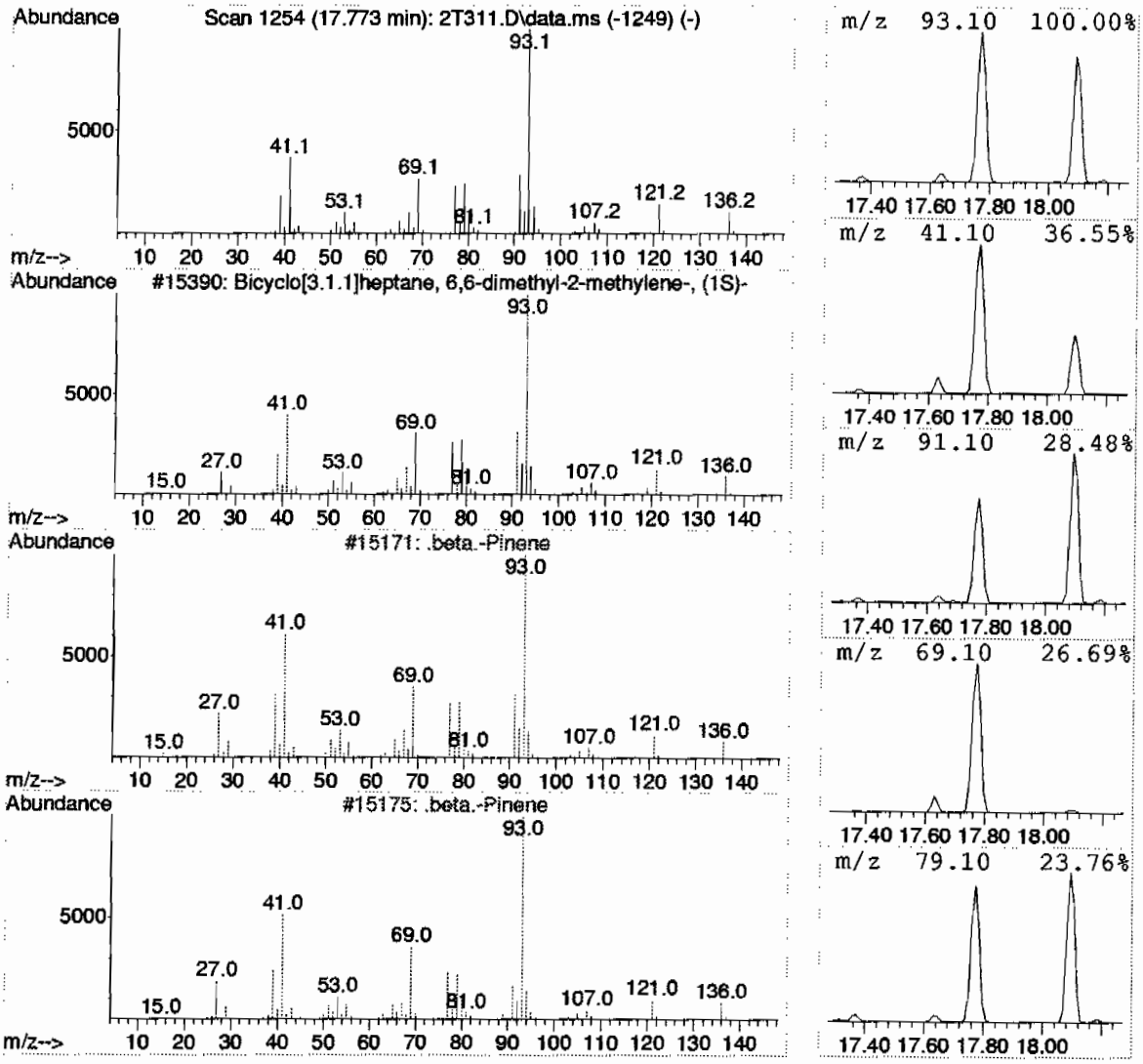

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

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Peak Number 7 unknown hydrocarbon Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.093	212.12 ug/L	23150600	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Carene	136	C10H16	013466-78-9	96
2	Cyclopropane, 1,1-dimethyl-2-(3-...	136	C10H16	068998-21-0	95
3	Bicyclo[4.1.0]hept-3-ene, 3,7,7-...	136	C10H16	000498-15-7	94
4	1S-.alpha.-Pinene	136	C10H16	007785-26-4	94
5	3-Carene	136	C10H16	013466-78-9	94

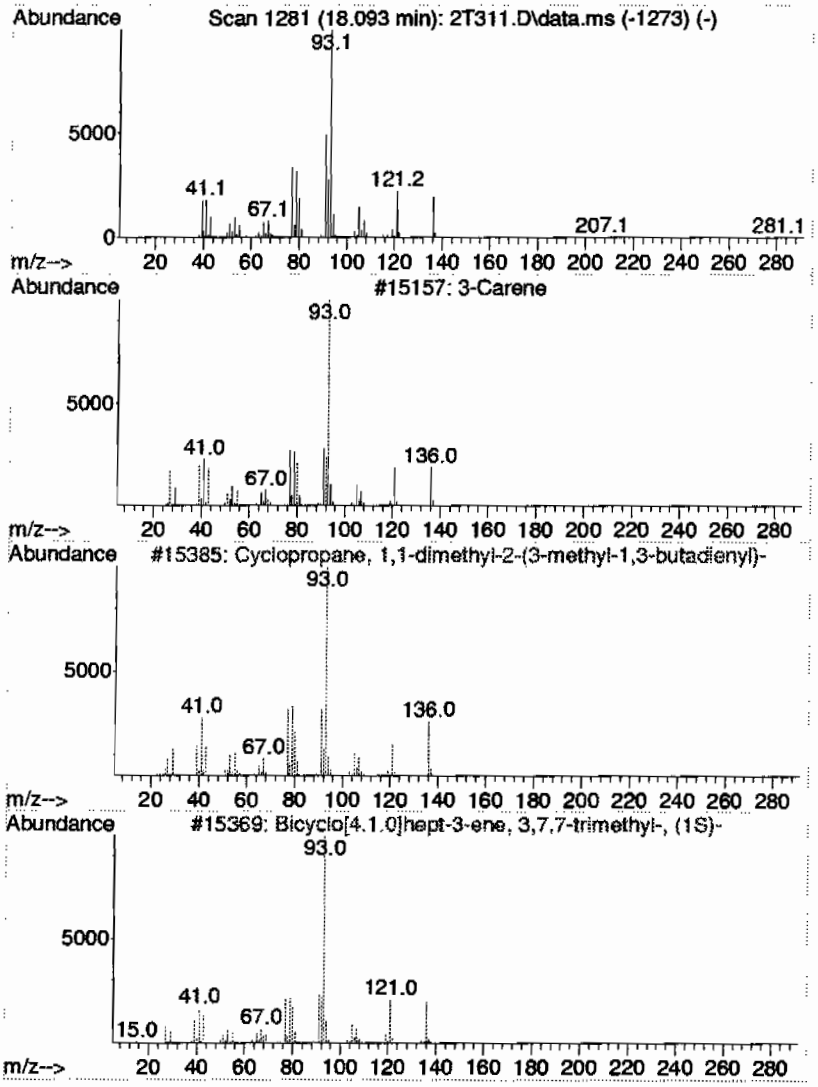

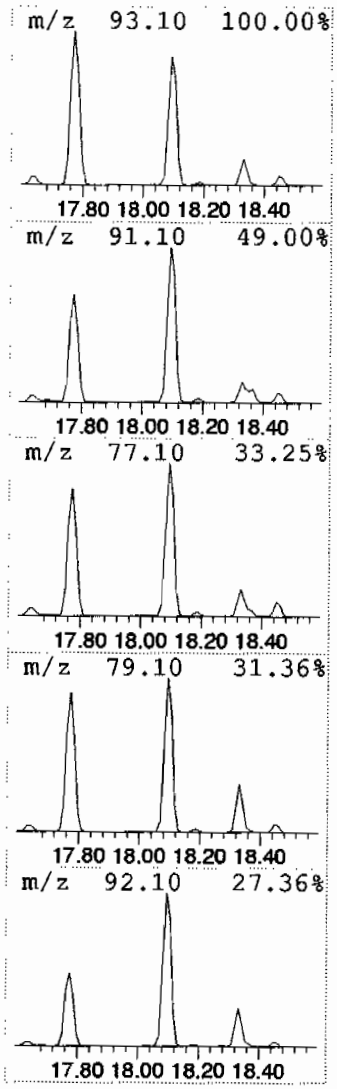

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

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Peak Number 8 unknown hydrocarbon Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.188	5.76 ug/L	628285	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,3-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-86-5	96
2	1,3-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-86-5	96
3	(+)-4-Carene	136	C10H16	029050-33-7	94
4	Bicyclo[4.1.0]hept-2-ene, 3,7,7-...	136	C10H16	000554-61-0	94
5	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	94

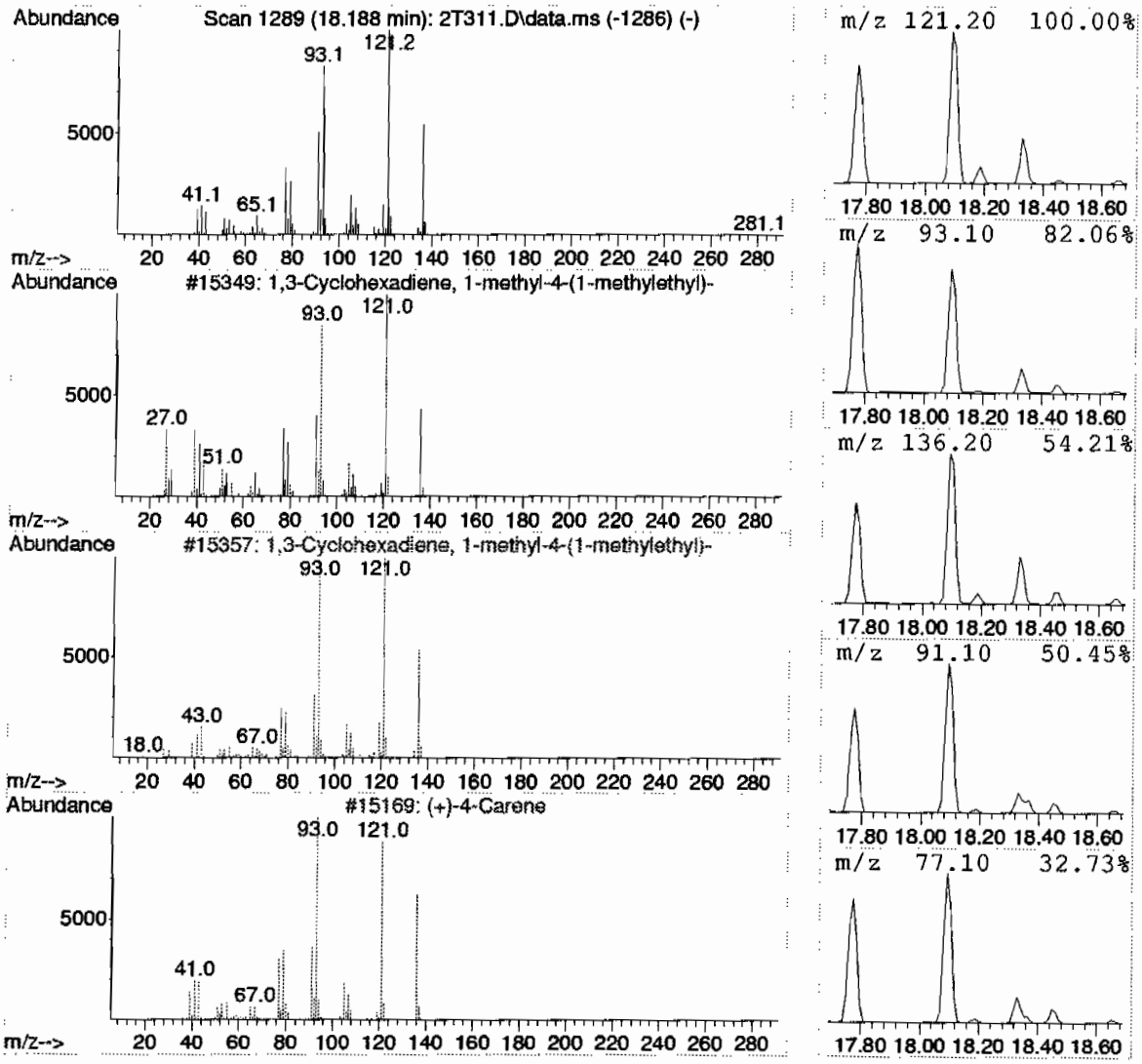

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

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Peak Number 9 unknown hydrocarbon Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.054	21.39 ug/L	2334490	B 1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	96
2	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	96
3	(+)-4-Carene	136	C10H16	029050-33-7	96
4	Bicyclo[4.1.0]hept-2-ene, 3,7,7-...	136	C10H16	000554-61-0	96
5	Cyclohexene, 1-methyl-4-(1-methy...	136	C10H16	000586-62-9	95

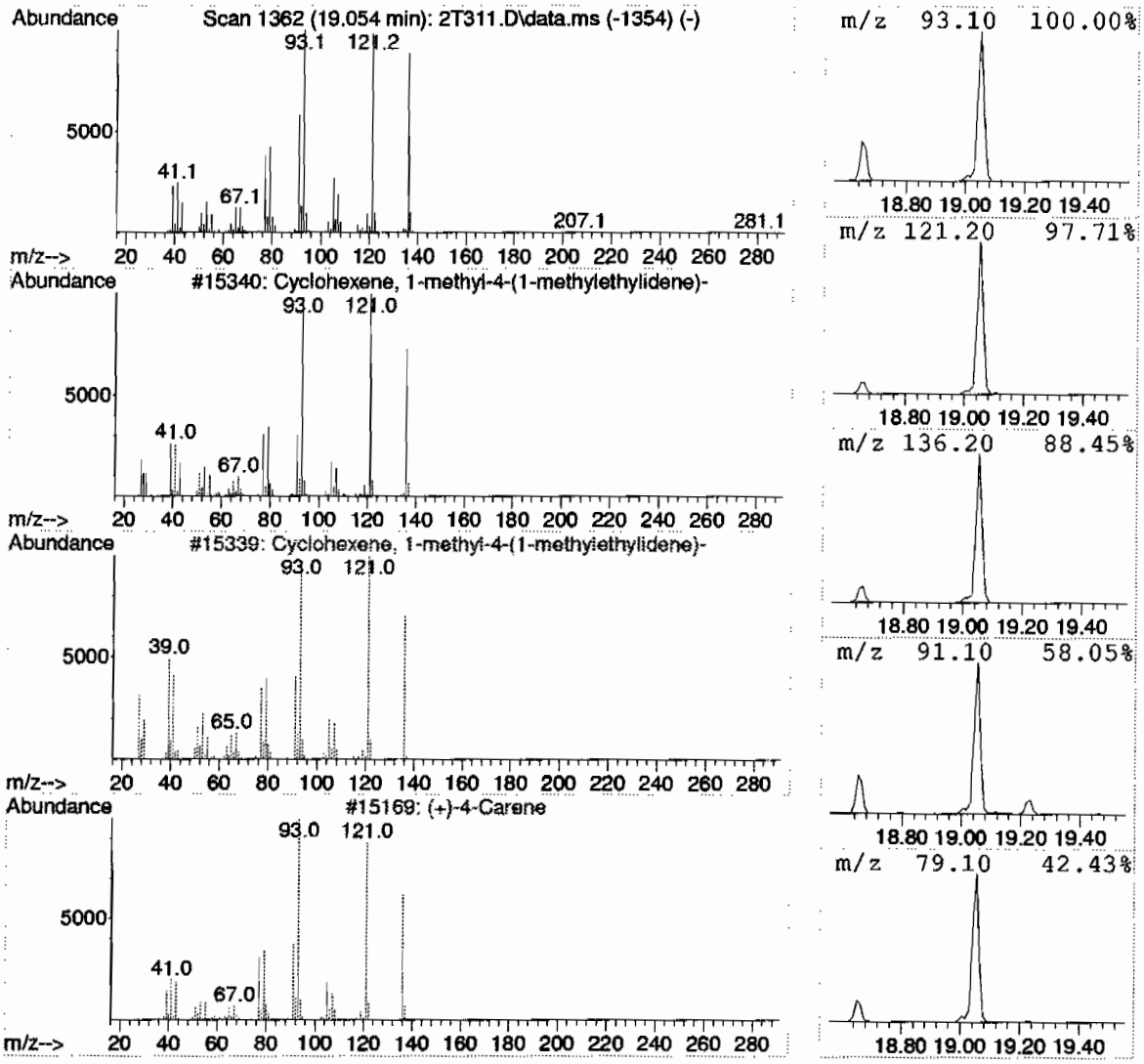

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 10 unknown hydrocarbon Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.330	86.06 ug/L	9392880	1,4-Dichlorobenzene-d4	18.461

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	D-Limonene	136	C10H16	005989-27-5	94
2	D-Limonene	136	C10H16	005989-27-5	94
3	Limonene	136	C10H16	000138-86-3	94
4	D-Limonene	136	C10H16	005989-27-5	93
5	Limonene	136	C10H16	000138-86-3	91

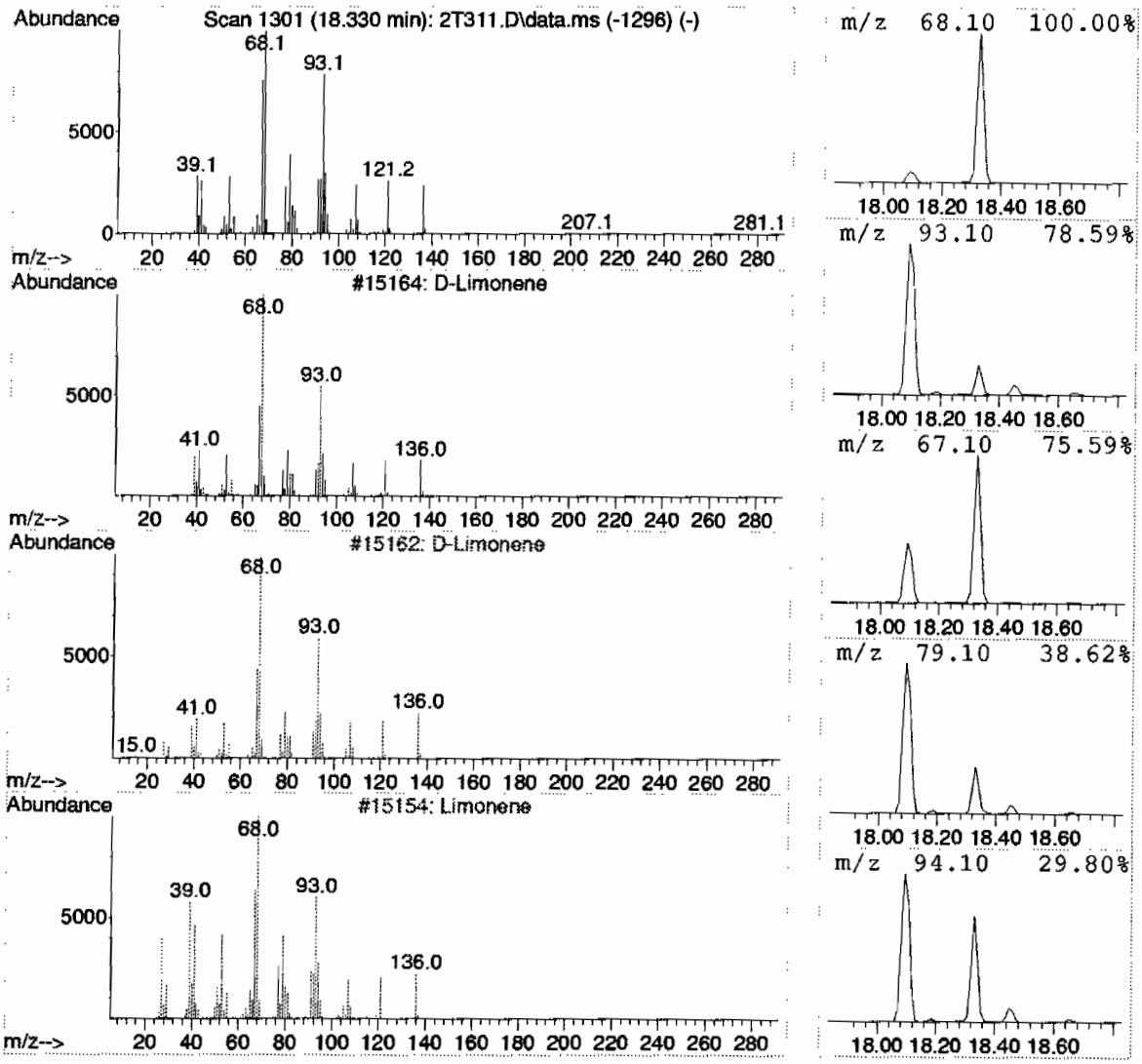

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T311.D
Acq On : 8 Jul 2009 11:32 am
Operator : CDS1
Sample : |232507001|883080|1|VOAF|2|VOA8260BSF|
Misc : LANL 1.2G - SOIL
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	|--Internal Standard---| #	RT	Resp	Conc|
unknown	4.360	18.8	ug/L	1237500	1	12.377	3298520	50.0
unknown hydroca...	16.848	5.7	ug/L	421126	4	15.947	3708650	50.0
unknown hydroca...	17.050	465.8	ug/L	34546100	4	15.947	3708650	50.0
unknown hydroca...	17.370	10.2	ug/L	1115580	5	18.461	5456960	50.0
unknown hydroca...	17.631	12.2	ug/L	1336410	5	18.461	5456960	50.0
unknown hydroca...	17.773	232.2	ug/L	25342400	5	18.461	5456960	50.0
unknown hydroca...	18.093	212.1	ug/L	23150600	5	18.461	5456960	50.0
unknown hydroca...	18.188	5.8	ug/L	628285	5	18.461	5456960	50.0
unknown hydroca...	19.054	21.4	ug/L	2334490	6	18.461	5456960	50.0
unknown hydroca...	18.330	86.1	ug/L	9392880	5	18.461	5456960	50.0

Standards

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624

Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
Fluorobenzene (IS)									
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Chlorobenzene-d5 (IS)									
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
1,4-Dichlorobenzene-d4 (IS)									
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Method	PQL	Concentration range
EPA 524.2	Level 1a	Levels 1a -> 7a
SW 846 8260B low level	Level 1a	Levels 1-> 7a
EPA 624	Level 2	Levels 2-> 7a
SW846 8260B	Level 2	Levels 2-> 7a

#: Indicates calibration verification concentration level used for low level analysis

!: Indicates calibration verification concentration level used for regular level analysis

Calibration History Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009 Response via : Initial Calibration
Integrator : (RTE Integrator)

Cal Lvl:8 Amt:-1 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S311.D

Injection Date	Mix	Calibration File
1 Jul 2009 2:45 pm	A	C:\msdchem\1\DATA\070109V2.b\2S311.D

Cal Lvl:1 Amt:1 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S315.D

Injection Date	Mix	Calibration File
1 Jul 2009 10:53 am	A	C:\msdchem\1\DATA\070109V2.b\2S303.D
1 Jul 2009 4:41 pm	B	C:\msdchem\1\DATA\070109V2.b\2S315.D

Cal Lvl:2 Amt:2 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S316.D

Injection Date	Mix	Calibration File
1 Jul 2009 11:22 am	A	C:\msdchem\1\DATA\070109V2.b\2S304.D
1 Jul 2009 5:10 pm	B	C:\msdchem\1\DATA\070109V2.b\2S316.D

Cal Lvl:3 Amt:5 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S317.D

Injection Date	Mix	Calibration File
1 Jul 2009 11:51 am	A	C:\msdchem\1\DATA\070109V2.b\2S305.D
1 Jul 2009 5:39 pm	B	C:\msdchem\1\DATA\070109V2.b\2S317.D

Cal Lvl:4 Amt:10 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S318.D

Injection Date	Mix	Calibration File
1 Jul 2009 12:21 pm	A	C:\msdchem\1\DATA\070109V2.b\2S306.D
1 Jul 2009 6:08 pm	B	C:\msdchem\1\DATA\070109V2.b\2S318.D

Cal Lvl:5 Amt:20 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S319.D

Injection Date	Mix	Calibration File
1 Jul 2009 12:50 pm	A	C:\msdchem\1\DATA\070109V2.b\2S307.D
1 Jul 2009 6:37 pm	B	C:\msdchem\1\DATA\070109V2.b\2S319.D

Cal Lvl:6 Amt:50 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S320.D

Injection Date	Mix	Calibration File
1 Jul 2009 1:19 pm	A	C:\msdchem\1\DATA\070109V2.b\2S308.D
1 Jul 2009 7:07 pm	B	C:\msdchem\1\DATA\070109V2.b\2S320.D

Cal Lvl:7 Amt:100 Last Updated with: C:\msdchem\1\DATA\070109V2.b\2S321.D

Injection Date	Mix	Calibration File
1 Jul 2009 1:48 pm	A	C:\msdchem\1\DATA\070109V2.b\2S309.D
1 Jul 2009 7:36 pm	B	C:\msdchem\1\DATA\070109V2.b\2S321.D

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\071309V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
2)MA Dichlorodifluoromethane		0.183	0.177	0.171	0.172	0.168				
	0.186	0.195					0.179	AVRG		5.4508
3)MPA Chloromethane		0.182	0.176	0.159	0.151	0.148				
	0.156	0.158					0.161	AVRG		7.8160
4)MCA Vinyl chloride		0.160	0.155	0.141	0.137	0.129				
	0.141	0.139					0.143	AVRG		7.4385
5)MA Bromomethane		0.151	0.168	0.153	0.157	0.135				
	0.124	0.120					0.144	AVRG		12.3745
6)MA Chloroethane		0.149	0.161	0.156	0.150	0.146				
	0.150	0.149					0.152	AVRG		3.3340
7)MA Trichlorofluoromethane		0.307	0.326	0.297	0.291	0.280				
	0.286	0.287					0.296	AVRG		5.2873
8)MA Ethyl ether		0.173	0.185	0.173	0.171	0.174				
	0.170	0.166					0.173	AVRG		3.4582
9)MA Acetone		0.252	0.195	0.174	0.168	0.169				
-0.0027 | 0.1723 | 0.00	0.165	0.174					0.185	LINR		0.9993
10)MCA 1,1-Dichloroethylene		0.314	0.293	0.315	0.306	0.296				
	0.284	0.296					0.301	AVRG		3.8444
11)MA Iodomethane		0.424	0.397	0.422	0.414	0.403				
	0.396	0.411					0.410	AVRG		2.7350
12)MA Acetonitrile		0.032	0.028	0.028	0.027	0.026				
	0.031	0.027					0.029	AVRG		7.6240
13)MA Methyl acetate		0.212	0.188	0.177	0.173	0.173				
	0.158	0.163					0.177	AVRG		10.1937
14)MA Carbon disulfide		0.735	0.683	0.712	0.693	0.659				
	0.623	0.624					0.676	AVRG		6.3069
15)MA Methylene chloride			0.638	0.456	0.261	0.270				
0.0167 | 0.2127 | 0.00	0.217	0.224					0.344	LINR		0.9974
16)MA tert-Butyl methyl ether		0.602	0.617	0.563	0.588	0.528				
	0.519	0.543					0.566	AVRG		6.6778
17)MA trans-1,2-Dichloroethyle		0.341	0.320	0.324	0.315	0.297				
	0.283	0.283					0.309	AVRG		7.0757
18)MA Vinyl acetate		0.298	0.391	0.379	0.388	0.362				
	0.396	0.377					0.370	AVRG		9.1248
19)MPA 1,1-Dichloroethane		0.414	0.389	0.403	0.390	0.371				
	0.361	0.371					0.386	AVRG		4.8799
20)MA 2-Butanone		0.222	0.207	0.198	0.198	0.210				
	0.205	0.209					0.207	AVRG		3.9501
21)MA cis-1,2-Dichloroethylene		0.380	0.357	0.364	0.347	0.330				
	0.309	0.305					0.342	AVRG		8.3485
22)MA 2,2-Dichloropropane		0.308	0.279	0.283	0.276	0.268				

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\071309V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
	0.253	0.267					0.276	AVRG		6.2651
23)MA Bromochloromethane		0.134	0.125	0.129	0.127	0.121				
	0.122	0.130					0.127	AVRG		3.6616
24)MCA Chloroform		0.430	0.400	0.405	0.399	0.376				
	0.371	0.383					0.395	AVRG		5.0591
25)MA 1,1,1-Trichloroethane		0.361	0.334	0.345	0.337	0.332				
	0.325	0.342					0.339	AVRG		3.3499
26)MA Cyclohexane		0.392	0.359	0.373	0.360	0.349				
	0.327	0.330					0.356	AVRG		6.4366
27)MA 1,1-Dichloropropene		0.302	0.283	0.291	0.285	0.275				
	0.263	0.265					0.281	AVRG		4.9125
28)MA Carbon tetrachloride		0.312	0.289	0.311	0.305	0.302				
	0.301	0.317					0.306	AVRG		3.0123
29)SA 1,2-Dichloroethane-d4		0.281	0.286	0.283	0.281	0.283				
	0.276	0.273					0.280	AVRG		1.6885
30)MA 1,2-Dichloroethane		0.337	0.305	0.311	0.305	0.284				
	0.277	0.279					0.300	AVRG		7.2456
31)MA Benzene	0.917	0.965	0.898	0.905	0.888	0.833				
	0.795	0.794					0.874	AVRG		6.9909
32)MA Cyclohexene		0.445	0.453	0.467	0.440	0.443				
	0.412	0.416					0.439	AVRG		4.4961
33)MA n-Butyl alcohol	0.005	0.005	0.005	0.006	0.006	0.006				
	0.006	0.006					0.006	AVRG	#	8.5391
34)MA Trichloroethylene		0.258	0.235	0.249	0.241	0.228				
	0.222	0.231					0.238	AVRG		5.1899
35)MCA 1,2-Dichloropropane		0.237	0.226	0.230	0.228	0.215				
	0.203	0.198					0.219	AVRG		6.6362
36)MA Methylcyclohexane		0.418	0.388	0.400	0.397	0.378				
	0.359	0.354					0.385	AVRG		5.9080
37)MA Dibromomethane		0.143	0.130	0.136	0.134	0.132				
	0.132	0.139					0.135	AVRG		3.3912
38)MA Bromodichloromethane		0.272	0.264	0.278	0.281	0.280				
	0.286	0.301					0.280	AVRG		4.1368
39)MA 2-Chloroethylvinyl ether		0.092	0.106	0.130	0.111	0.112				
	0.109	0.100					0.109	AVRG		10.9581
40)MA cis-1,3-Dichloropropylen		0.328	0.307	0.334	0.333	0.324				
	0.327	0.339					0.327	AVRG		3.1689
42)MA 4-Methyl-2-pentanone		0.109	0.106	0.108	0.114	0.113				
	0.108	0.108					0.109	AVRG		2.6106
43)SA Toluene-d8		1.175	1.190	1.179	1.188	1.178				
	1.157	1.157					1.175	AVRG		1.1311

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\071309V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
44)MCA Toluene		1.301	1.184	1.190	1.149	1.076				
	1.048	1.053					1.143	AVRG		8.0216
45)MA trans-1,3-Dichloropropyl		0.340	0.330	0.357	0.372	0.353				
	0.361	0.373					0.355	AVRG		4.4458
46)MA 1,1,2-Trichloroethane		0.215	0.192	0.198	0.198	0.187				
	0.185	0.190					0.195	AVRG		5.3262
47)MA 2-Hexanone		0.296	0.291	0.298	0.313	0.306				
	0.296	0.296					0.300	AVRG		2.4725
48)MA 1,3-Dichloropropane		0.424	0.402	0.407	0.407	0.373				
	0.365	0.365					0.392	AVRG		6.0583
49)MA Tetrachloroethylene		0.323	0.302	0.306	0.296	0.283				
	0.277	0.275					0.295	AVRG		5.8638
50)MA Dibromochloromethane		0.236	0.228	0.250	0.268	0.269				
	0.289	0.316					0.265	AVRG		11.5426
51)MA 1,2-Dibromoethane		0.224	0.233	0.243	0.247	0.238				
	0.242	0.257					0.241	AVRG		4.3479
52)MPA Chlorobenzene		0.874	0.822	0.817	0.799	0.751				
	0.736	0.768					0.795	AVRG		5.9751
53)MA 1,1,1,2-Tetrachloroethan		0.280	0.273	0.289	0.297	0.286				
	0.291	0.310					0.289	AVRG		4.1463
54)MCA Ethylbenzene		1.386	1.309	1.349	1.326	1.243				
	1.209	1.214					1.291	AVRG		5.3918
55)MA m,p-Xylenes		0.560	0.529	0.548	0.538	0.504				
	0.483	0.470					0.519	AVRG		6.5331
56)MA o-Xylene		0.538	0.518	0.537	0.531	0.501				
	0.483	0.462					0.510	AVRG		5.7656
57)MA Styrene		0.669	0.659	0.747	0.799	0.795				
	0.801	0.791					0.752	AVRG		8.3323
59)MPA Bromoform -0.0193 | 0.4250 | 0.00		0.258	0.255	0.287	0.319	0.331				
	0.372	0.425					0.321	LINR		0.9960
60)MA Isopropylbenzene		2.237	2.089	2.196	2.185	2.094				
	2.033	2.058					2.127	AVRG		3.6665
61)SA Bromofluorobenzene		0.794	0.789	0.797	0.794	0.790				
	0.772	0.766					0.786	AVRG		1.5297
62)MPA 1,1,2,2-Tetrachloroethan		0.517	0.481	0.511	0.511	0.490				
	0.485	0.508					0.500	AVRG		2.8921
63)MA 1,2,3-Trichloropropane		0.155	0.143	0.140	0.147	0.138				
	0.137	0.145					0.143	AVRG		4.3388
64)MA Bromobenzene		0.711	0.618	0.646	0.638	0.602				
	0.602	0.636					0.636	AVRG		5.8687
65)MA n-Propylbenzene		2.665	2.494	2.631	2.593	2.446				
	2.370	2.378					2.511	AVRG		4.7881

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\071309V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b m1 m2	6	7								
66)MA 1,3,5-Trimethylbenzene		1.774	1.731	1.837	1.832	1.751				
	1.698	1.713					1.762	AVRG		3.1311
67)MA 2-Chlorotoluene		1.876	1.723	1.790	1.755	1.645				
	1.573	1.577					1.706	AVRG		6.6254
68)MA 4-Chlorotoluene		1.718	1.574	1.622	1.587	1.488				
	1.441	1.441					1.553	AVRG		6.5898
69)MA tert-Butylbenzene		1.885	1.755	1.853	1.839	1.759				
	1.729	1.762					1.797	AVRG		3.3595
70)MA 1,2,4-Trimethylbenzene		1.903	1.776	1.910	1.894	1.786				
	1.742	1.761					1.825	AVRG		4.0567
71)MA sec-Butylbenzene		2.433	2.320	2.481	2.467	2.344				
	2.306	2.300					2.379	AVRG		3.3159
72)MA 4-Isopropyltoluene		1.886	1.840	1.981	1.993	1.907				
	1.886	1.911					1.915	AVRG		2.8469
73)MA 1,3-Dichlorobenzene		1.303	1.209	1.227	1.203	1.134				
	1.122	1.168					1.195	AVRG		5.1366
74)MA 1,4-Dichlorobenzene		1.395	1.299	1.272	1.226	1.157				
	1.142	1.184					1.239	AVRG		7.2379
75)MA n-Butylbenzene		1.881	1.764	1.907	1.917	1.809				
	1.750	1.717					1.821	AVRG		4.4542
76)MA 1,2-Dichlorobenzene		1.240	1.140	1.180	1.154	1.088				
	1.077	1.135					1.145	AVRG		4.8342
77)MA 1,2-Dibromo-3-chloroprop		0.084	0.087	0.093	0.104	0.105				
	0.119						0.099	AVRG		13.4369
78)MA 1,2,4-Trichlorobenzene		0.949	0.864	0.877	0.882	0.822				
	0.832	0.876					0.872	AVRG		4.7419
79)MA Hexachlorobutadiene		0.566	0.510	0.529	0.536	0.514				
	0.531	0.552					0.534	AVRG		3.7074
80)MA Naphthalene		1.834	1.730	1.803	1.853	1.788				
	1.826	1.940					1.825	AVRG		3.5381
81)MA 1,2,3-Trichlorobenzene		0.850	0.772	0.812	0.811	0.759				
	0.773	0.817					0.799	AVRG		4.0158
83)B Chlorotrifluoroethylene		0.157	0.133	0.162	0.138	0.160				
	0.195	0.186					0.162	AVRG		13.9956
84)B 2-Chloro-1,1,1-trifluoro		0.275	0.246	0.258	0.243	0.248				
	0.265	0.246					0.254	AVRG		4.7615
85)B Acrolein		0.030	0.031	0.032	0.033	0.035				
	0.040	0.040					0.034	AVRG		11.6625
86)B Trichlorotrifluoroethane		0.065	0.063	0.062	0.062	0.063				
	0.067	0.058					0.063	AVRG		4.4089
87)B Isopropyl Alcohol		0.014	0.013	0.015	0.013	0.014				

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\071309V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b | m1 | m2	6	7								
	0.014	0.015					0.014	AVRG		4.7550
88)B Allyl chloride		0.365	0.356	0.351	0.360	0.352				
	0.342	0.319					0.349	AVRG		4.3977
89)B tert-Butyl Alcohol		0.024	0.022	0.023	0.021	0.022				
	0.022	0.022					0.022	AVRG		4.1724
90)B Acrylonitrile		0.067	0.070	0.069	0.070	0.071				
	0.072	0.073					0.070	AVRG		3.0598
91)B Isopropyl ether		0.780	0.720	0.761	0.717	0.733				
	0.762	0.699					0.739	AVRG		3.9713
92)B 2-Chloro-1,3-butadiene		0.257	0.263	0.268	0.292	0.302				
	0.316	0.320					0.288	AVRG		9.0081
93)B Ethyl tert-butyl ether		0.663	0.613	0.659	0.631	0.650				
	0.668	0.621					0.644	AVRG		3.4033
94)B Ethyl acetate		0.206	0.215	0.209	0.206	0.205				
	0.206	0.205					0.208	AVRG		1.7815
95)B Propionitrile		0.028	0.029	0.028	0.029	0.028				
	0.028	0.028					0.028	AVRG		1.1052
96)B Methacrylonitrile		0.114	0.124	0.126	0.128	0.129				
	0.127	0.126					0.125	AVRG		4.1089
97)B Tetrahydrofuran		0.068	0.070	0.067	0.065	0.065				
	0.065	0.066					0.067	AVRG		2.8567
98)B Isobutyl alcohol		0.007	0.007	0.007	0.007	0.008				
	0.008	0.008					0.007	AVRG	#	2.9321
99)B Methyl tert-amyl ether		0.574	0.543	0.577	0.552	0.566				
	0.577	0.536					0.561	AVRG		3.0128
100)B Methyl methacrylate		0.105	0.113	0.122	0.128	0.132				
	0.129	0.123					0.122	AVRG		8.0488
101)B 1,4-Dioxane		0.001	0.002	0.002	0.002	0.002				
	0.002	0.002					0.002	AVRG	#	9.9647
102)B 2-Nitropropane		0.048	0.050	0.056	0.060	0.064				
	0.068						0.058	AVRG		13.8687
104)B Ethyl methacrylate		0.229	0.256	0.282	0.303	0.305				
	0.292	0.265					0.276	AVRG		10.0550
106)B 1-Chlorohexane		0.394	0.389	0.403	0.382	0.398				
	0.417	0.369					0.393	AVRG		3.9090
107)B cis-1,4-Dichloro-2-buten		0.135	0.150	0.158	0.164	0.169				
	0.167	0.159					0.157	AVRG		7.3579
108)B Cyclohexanone		0.048	0.056	0.062	0.060	0.062				
	0.069	0.059					0.059	AVRG		10.8542
109)B trans-1,4-Dichloro-2-but		0.138	0.152	0.158	0.159	0.161				
	0.157	0.149					0.154	AVRG		5.1007

Response Factor Report VOA2
GEL Laboratories, LLC

Method File : C:\msdchem\1\DATA\071309V2.b\VOA2-8260-070109.M
Last Update : Wed Jul 15 12:20:01 2009
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: y = concentration ratio, x = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r^2
b m1 m2	6	7								
110)B Pentachloroethane		0.123	0.132	0.137	0.143	0.171				
-0.0071 0.1758 0.00	0.189	0.172					0.152	LINR		0.9970
111)B Benzyl chloride		0.698	0.785	0.823	0.865	0.878				
	0.862	0.823					0.819	AVRG		7.6038
112)B bis(2-Chloroisopropyl)et		0.248	0.261	0.268	0.264	0.275				
	0.273	0.278					0.267	AVRG		3.8659

(#) = Out of Range

Continuing Calibration Summary

Client SDG: 09-2499

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.2804	0.269		.01		-4.06562	60		Averaged	
S	Toluene-d8	1.1749	1.151		.01		-2.03422	60		Averaged	
S	Bromofluorobenzene	0.7862	0.765		.01		-2.69651	60		Averaged	
	Dichlorodifluoromethane	0.179	0.161		.01		-10.05587	60		Averaged	
	Chloromethane	0.1614	0.148		.1		-8.30235	60		Averaged	spcc
	Vinyl chloride	0.1433	0.135		.01		-5.79204	20		Averaged	ccc
	Bromomethane	0.1441	0.126		.01		-12.56072	60		Averaged	
	Chloroethane	0.1518	0.143		.01		-5.7971	60		Averaged	
	Trichlorofluoromethane	0.2964	0.287		.01		-3.17139	60		Averaged	
	Ethyl ether	0.1732	0.163		.01		-5.88915	60		Averaged	
	1,1-Dichloroethylene	0.3007	0.286		.01		-4.88859	20		Averaged	ccc
	Acetone	250	216.96	250			-13.216	60		Linear	
	Iodomethane	0.4096	0.432		.01		5.46875	60		Averaged	
	Carbon disulfide	0.6756	0.674		.01		-0.23683	60		Averaged	
	Acetonitrile	0.0286	0.032		.01		11.88811	60		Averaged	
	Methyl acetate	0.1775	0.214		.01		20.56338	60		Averaged	
	Methylene chloride	50	48.37	50			-3.26	60		Linear	
	trans-1,2-Dichloroethylene	0.3091	0.282		.01		-8.76739	60		Averaged	
	tert-Butyl methyl ether	0.5656	0.52		.01		-8.06223	60		Averaged	
	1,1-Dichloroethane	0.3855	0.367		.1		-4.79896	60		Averaged	spcc
	Vinyl acetate	0.3702	0.203		.01		-45.16478	60		Averaged	
	2-Butanone	0.207	0.172		.01		-16.90821	60		Averaged	
	cis-1,2-Dichloroethylene	0.3417	0.318		.01		-6.93591	60		Averaged	
	2,2-Dichloropropane	0.276	0.269		.01		-2.53623	60		Averaged	
	Bromochloromethane	0.1267	0.124		.01		-2.13102	60		Averaged	
	Chloroform	0.3949	0.375		.01		-5.03925	20		Averaged	ccc
	1,1,1-Trichloroethane	0.3395	0.335		.01		-1.32548	60		Averaged	
	Cyclohexane	0.3556	0.337		.01		-5.2306	60		Averaged	
	1,1-Dichloropropene	0.2806	0.269		.01		-4.134	60		Averaged	
	Carbon tetrachloride	0.3055	0.308		.01		0.81833	60		Averaged	
	1,2-Dichloroethane	0.2997	0.277		.01		-7.57424	60		Averaged	
	Benzene	0.8742	0.802		.01		-8.25898	60		Averaged	
	Cyclohexene	0.4394	0.403		.01		-8.28402	60		Averaged	
	n-Butyl alcohol	0.0058	0.006		.01		3.44828	60		Averaged	
	Trichloroethylene	0.2376	0.231		.01		-2.77778	60		Averaged	
	1,2-Dichloropropane	0.2194	0.206		.01		-6.10757	20		Averaged	ccc
	Methylcyclohexane	0.385	0.37		.01		-3.8961	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.1351	0.132		.01		-2.2946	60		Averaged	
Bromodichloromethane	0.2802	0.283		.01		0.99929	60		Averaged	
2-Chloroethylvinyl ether	0.1086	0.11		.01		1.28913	60		Averaged	
cis-1,3-Dichloropropylene	0.3273	0.333		.01		1.74152	60		Averaged	
4-Methyl-2-pentanone	0.1094	0.101		.01		-7.67824	60		Averaged	
2-Hexanone	0.2996	0.275		.01		-8.21095	60		Averaged	
Toluene	1.1428	1.047		.01		-8.38292	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.3552	0.358		.01		0.78829	60		Averaged	
1,1,2-Trichloroethane	0.1949	0.185		.01		-5.07953	60		Averaged	
1,3-Dichloropropane	0.3918	0.365		.01		-6.84022	60		Averaged	
Tetrachloroethylene	0.2946	0.289		.01		-1.90088	60		Averaged	
Dibromochloromethane	0.265	0.291		.01		9.81132	60		Averaged	
1,2-Dibromoethane	0.2408	0.244		.01		1.3289	60		Averaged	
Chlorobenzene	0.7955	0.772		.3		-2.95412	60		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.2894	0.299		.01		3.31721	60		Averaged	
Ethylbenzene	1.2909	1.221		.01		-5.41483	20		Averaged	ccc
m,p-Xylenes	0.5189	0.487		.01		-6.14762	60		Averaged	
o-Xylene	0.51	0.483		.01		-5.29412	60		Averaged	
Styrene	0.7515	0.8		.01		6.45376	60		Averaged	
Bromoform	50	46.79	50			-6.42	60		Linear	spcc
Isopropylbenzene	2.1274	2.052		.01		-3.54423	60		Averaged	
1,1,2,2-Tetrachloroethane	0.5005	0.481		.3		-3.8961	60		Averaged	spcc
1,2,3-Trichloropropane	0.1435	0.138		.01		-3.83275	60		Averaged	
Bromobenzene	0.6362	0.631		.01		-0.81735	60		Averaged	
n-Propylbenzene	2.5112	2.384		.01		-5.06531	60		Averaged	
2-Chlorotoluene	1.7056	1.621		.01		-4.96013	60		Averaged	
1,3,5-Trimethylbenzene	1.7622	1.713		.01		-2.79196	60		Averaged	
4-Chlorotoluene	1.5531	1.472		.01		-5.22181	60		Averaged	
tert-Butylbenzene	1.7973	1.762		.01		-1.96406	60		Averaged	
1,2,4-Trimethylbenzene	1.8246	1.756		.01		-3.75973	60		Averaged	
sec-Butylbenzene	2.3786	2.335		.01		-1.83301	60		Averaged	
4-Isopropyltoluene	1.9148	1.91		.01		-0.25068	60		Averaged	
1,3-Dichlorobenzene	1.1952	1.173		.01		-1.85743	60		Averaged	
1,4-Dichlorobenzene	1.2391	1.19		.01		-3.96255	60		Averaged	
n-Butylbenzene	1.8207	1.766		.01		-3.00434	60		Averaged	
1,2-Dichlorobenzene	1.1449	1.124		.01		-1.82549	60		Averaged	
1,2-Dibromo-3-chloropropane	0.0988	0.124		.01		25.50607	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Dat** 01-JUL-09 15:44

Data File: 070109V2.b\2S313.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090701-10 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	0.8718	0.857		.01		-1.69764	60		Averaged
Hexachlorobutadiene	0.5338	0.551		.01		3.22218	60		Averaged
Naphthalene	1.8249	1.829		.01		0.22467	60		Averaged
1,2,3-Trichlorobenzene	0.799	0.828		.01		3.62954	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1816013	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1540251	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	956988	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1816013	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1540251	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	956988	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	488579	47.98 ug/L	0.00
43) Toluene-d8	14.310	98	1773476	49.00 ug/L	0.00
61) Bromofluorobenzene	17.204	95	731905	48.64 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	4.672	85	292436	44.98 ug/L	100
3) Chloromethane	5.014	50	269572	46.00 ug/L	100
4) Vinyl chloride	5.252	62	245602	47.18 ug/L	100
5) Bromomethane	5.980	94	227963	43.56 ug/L	100
6) Chloroethane	6.199	64	259835	47.12 ug/L	99
7) Trichlorofluoromethane	6.756	101	521083	48.40 ug/L	100
8) Ethyl ether	7.349	59	296707	47.18 ug/L	100
9) Acetone	7.871	43	1352631	216.96 ug/L	100
10) 1,1-Dichloroethylene	7.812	61	518775	47.49 ug/L	98
11) Iodomethane	8.096	142	3920148	263.52 ug/L	100
12) Acetonitrile	8.381	41	1151204	1107.72 ug/L	99
13) Methyl acetate	8.500	43	1941955	301.24 ug/L	100
14) Carbon disulfide	8.251	76	6121756	249.48 ug/L	100
15) Methylene chloride	8.701	84	404082	48.37 ug/L	99
16) tert-Butyl methyl ether	9.199	73	944502	45.98 ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	511649	45.58 ug/L	99
18) Vinyl acetate	9.935	43	1842087	137.02 ug/L	96
19) 1,1-Dichloroethane	9.887	63	665904	47.55 ug/L	100
20) 2-Butanone	10.765	43	1561738	207.76 ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	578319	46.60 ug/L	98
22) 2,2-Dichloropropane	10.800	77	488266	48.70 ug/L	100
23) Bromochloromethane	11.132	128	226027	49.12 ug/L	99
24) Chloroform	11.227	83	680521	47.44 ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	607548	49.27 ug/L	100
26) Cyclohexane	11.642	56	612261	47.41 ug/L	99
27) 1,1-Dichloropropene	11.749	75	488823	47.97 ug/L	100
28) Carbon tetrachloride	11.784	117	560221	50.49 ug/L	100
30) 1,2-Dichloroethane	12.033	62	502499	46.17 ug/L	100
31) Benzene	12.033	78	1455629	45.84 ug/L	100
32) Cyclohexene	12.188	67	732745	45.91 ug/L	99
33) n-Butyl alcohol	12.650	56	1121237	5342.87 ug/L	100
34) Trichloroethylene	12.852	95	419699	48.63 ug/L	99
35) 1,2-Dichloropropane	13.124	63	374518	47.00 ug/L	99
36) Methylcyclohexane	13.136	83	671359	48.01 ug/L	99
37) Dibromomethane	13.267	93	240040	48.92 ug/L	98
38) Bromodichloromethane	13.445	83	513660	50.47 ug/L	100
39) 2-Chloroethylvinyl ether	13.753	63	996561	252.57 ug/L	100
40) cis-1,3-Dichloropropylene	13.966	75	604045	50.81 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
42) 4-Methyl-2-pentanone	14.109	58	776007	230.18 ug/L	99	
44) Toluene	14.381	91	1612719	45.81 ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	552027	50.45 ug/L	100	
46) 1,1,2-Trichloroethane	14.808	83	285261	47.50 ug/L	99	
47) 2-Hexanone	14.109	43	2119224	229.66 ug/L	99	
48) 1,3-Dichloropropane	15.010	76	562287	46.59 ug/L	94	
49) Tetrachloroethylene	15.034	164	444818	49.01 ug/L	99	
50) Dibromochloromethane	15.295	129	447970	54.87 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	375747	50.66 ug/L	100	
52) Chlorobenzene	15.982	112	1188626	48.51 ug/L	99	
53) 1,1,1,2-Tetrachloroethane	16.054	131	460563	51.66 ug/L	100	
54) Ethylbenzene	16.077	91	1881100	47.31 ug/L	99	
55) m,p-Xylenes	16.196	106	1500055	93.84 ug/L	99	
56) o-Xylene	16.635	106	744228	47.37 ug/L	100	
57) Styrene	16.646	104	1232341	53.23 ug/L	99	
59) Bromoform	16.884	173	362113	46.79 ug/L	100	
60) Isopropylbenzene	17.026	105	1963566	48.22 ug/L	99	
62) 1,1,2,2-Tetrachloroethane	17.299	83	459904	48.01 ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	132333	48.18 ug/L	98	
64) Bromobenzene	17.417	156	603554	49.57 ug/L	95	
65) n-Propylbenzene	17.465	91	2281803	47.47 ug/L	99	
66) 1,3,5-Trimethylbenzene	17.631	105	1639584	48.61 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1551197	47.52 ug/L	98	
68) 4-Chlorotoluene	17.702	91	1408248	47.38 ug/L	99	
69) tert-Butylbenzene	17.998	119	1686280	49.02 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1680321	48.12 ug/L	99	
71) sec-Butylbenzene	18.235	105	2234304	49.08 ug/L	99	
72) 4-Isopropyltoluene	18.366	119	1827510	49.87 ug/L	100	
73) 1,3-Dichlorobenzene	18.401	146	1122218	49.06 ug/L	99	
74) 1,4-Dichlorobenzene	18.485	146	1139216	48.03 ug/L	99	
75) n-Butylbenzene	18.805	91	1690481	48.51 ug/L	99	
76) 1,2-Dichlorobenzene	18.900	146	1075319	49.07 ug/L	99	
77) 1,2-Dibromo-3-chloropr...	19.706	157	118302	62.56 ug/L	98	E
78) 1,2,4-Trichlorobenzene	20.690	180	820135	49.15 ug/L	100	
79) Hexachlorobutadiene	20.868	225	527406	51.62 ug/L	100	
80) Naphthalene	21.022	128	1750176	50.11 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	791976	51.79 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.539		0m	N.D. d		
86) Trichlorotrifluoroethane	0.000		0	N.D.		
87) Isopropyl Alcohol	8.239		0m	N.D. d		
88) Allyl chloride	8.381		0m	N.D. d		
89) tert-Butyl Alcohol	8.903		0m	N.D. d		
90) Acrylonitrile	9.199		0m	N.D. d		
91) Isopropyl ether	10.053		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.148		0m	N.D. d		
93) Ethyl tert-butyl ether	10.788		0m	N.D. d		
94) Ethyl acetate	10.765		0m	N.D. d		
95) Propionitrile	10.765		0m	N.D. d		
96) Methacrylonitrile	11.061		0m	N.D. d		
97) Tetrahydrofuran	11.227		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
98)	Isobutyl alcohol	11.927		0m	N.D.	d	
99)	Methyl tert-amyl ether	12.188		0m	N.D.	d	
100)	Methyl methacrylate	13.136		0m	N.D.	d	
101)	1,4-Dioxane	13.279		0m	N.D.	d	
102)	2-Nitropropane	13.753		0m	N.D.	d	
104)	Ethyl methacrylate	0.000		0	N.D.		
106)	1-Chlorohexane	15.947		0m	N.D.	d	
107)	cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108)	Cyclohexanone	17.026		0m	N.D.	d	
109)	trans-1,4-Dichloro-2-b...	17.465		0m	N.D.	d	
110)	Pentachloroethane	18.058		0m	N.D.	d	
111)	Benzyl chloride	18.805		0m	N.D.	d	
112)	bis(2-Chloroisopropyl)...	19.149		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S313.D
Acq On : 1 Jul 2009 3:44 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-10|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [A] ULTRA
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 15 12:22:05 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

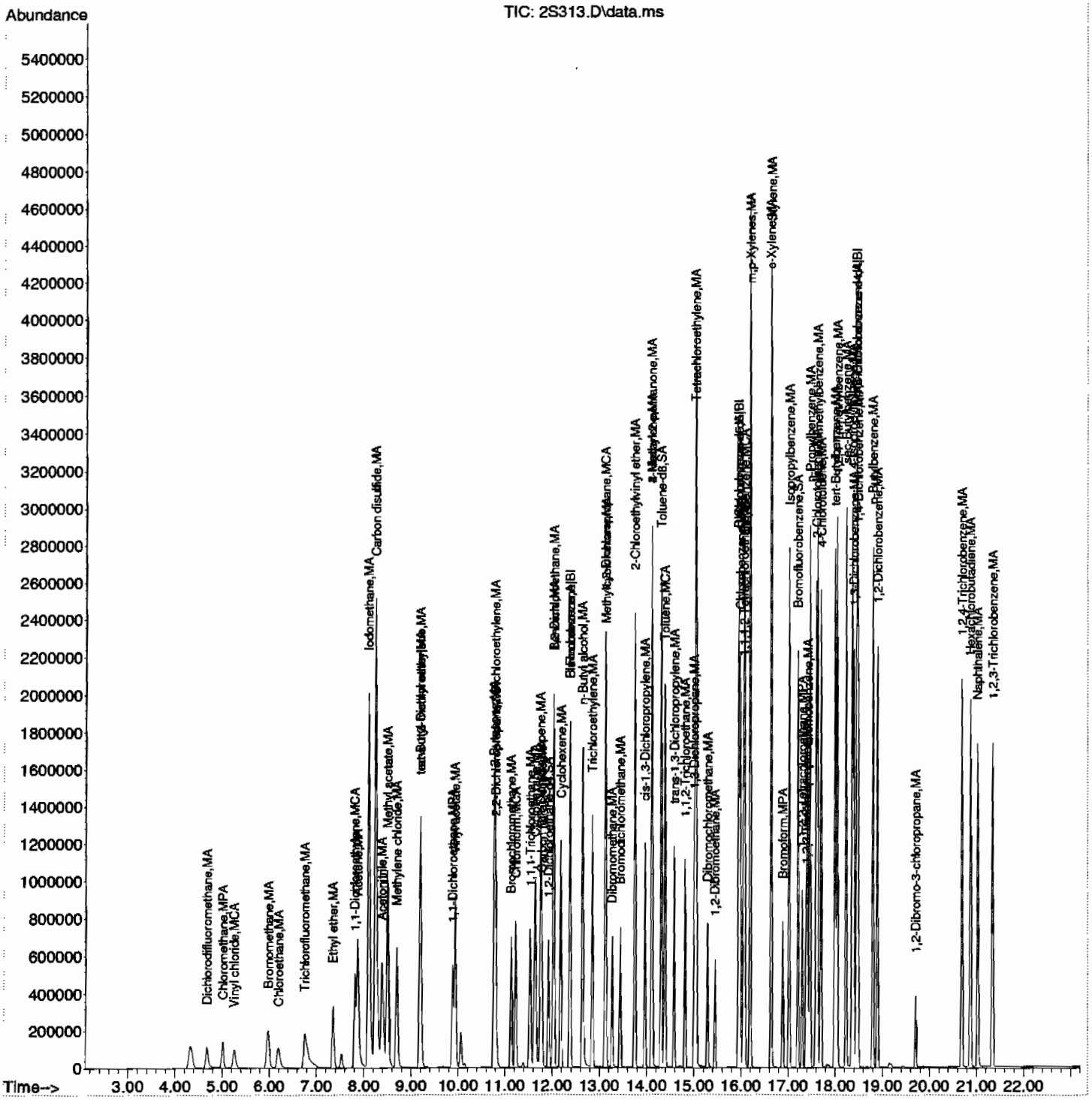

Continuing Calibration Summary

Client SDG: 09-2499

Instrument ID: VOA2.I **Injection Date** 01-JUL-09 20:34

Data File: 070109V2.b\2S323.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090701-18 **Quant Type** ISTD **Method:** 070609V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.2804	0.272		.01		-2.99572	60		Averaged
S	Toluene-d8	1.1749	1.154		.01		-1.77887	60		Averaged
S	Bromofluorobenzene	0.7862	0.785		.01		-0.15263	60		Averaged
	Chlorotrifluoroethylene	0.1616	0.157		.01		-2.84653	60		Averaged
	2-Chloro-1,1,1-trifluoroethane	0.2543	0.26		.01		2.24145	60		Averaged
	Acrolein	0.0345	0.041		.01		18.84058	60		Averaged
	Trichlorotrifluoroethane	0.0628	0.066		.01		5.09554	60		Averaged
	Isopropyl Alcohol	0.0139	0.016		.01		15.10791	60		Averaged
	Allyl chloride	0.3493	0.311		.01		-10.96479	60		Averaged
	tert-Butyl Alcohol	0.022	0.024		.01		9.09091	60		Averaged
	Acrylonitrile	0.0703	0.077		.01		9.53058	60		Averaged
	Isopropyl ether	0.739	0.747		.01		1.08254	60		Averaged
	2-Chloro-1,3-butadiene	0.2881	0.33		.01		14.54356	60		Averaged
	Ethyl tert-butyl ether	0.6436	0.641		.01		-0.40398	60		Averaged
	Propionitrile	0.0284	0.031		.01		9.15493	60		Averaged
	Ethyl acetate	0.2075	0.22		.01		6.0241	60		Averaged
	Methacrylonitrile	0.1249	0.137		.01		9.68775	60		Averaged
	Tetrahydrofuran	0.0668	0.073		.01		9.28144	60		Averaged
	Isobutyl alcohol	0.0074	0.009		.01		21.62162	60		Averaged
	Methyl tert-amyl ether	0.5609	0.564		.01		0.55268	60		Averaged
	Methyl methacrylate	0.1218	0.139		.01		14.12151	60		Averaged
	1,4-Dioxane	0.0017	0.002		.01		17.64706	60		Averaged
	2-Nitropropane	0.0578	0.074		.01		28.02768	60		Averaged
	Ethyl methacrylate	0.2758	0.298		.01		8.04931	60		Averaged
	1-Chlorohexane	0.3931	0.426		.01		8.36937	60		Averaged
	cis-1,4-Dichloro-2-butene	0.1574	0.174		.01		10.54638	60		Averaged
	Cyclohexanone	0.0593	0.076		.01		28.16189	60		Averaged
	trans-1,4-Dichloro-2-butene	0.1536	0.166		.01		8.07292	60		Averaged
	Pentachloroethane	250	183.53	250			-26.588	60		Linear
	Benzyl chloride	0.8192	0.828		.01		1.07422	60		Averaged
	bis(2-Chloroisopropyl)ether	0.2668	0.3		.01		12.44378	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1776961	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1492904	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	910409	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1776961	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1492904	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	910409	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	483555	48.53 ug/L	0.00
43) Toluene-d8	14.310	98	1723019	49.12 ug/L	0.00
61) Bromofluorobenzene	17.204	95	714881	49.94 ug/L	0.00

Target Compounds				Qvalue
2) Dichlorodifluoromethane	4.613	0m	N.D. d	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.252	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	0.000	0	N.D.	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.859	0m	N.D. d	
10) 1,1-Dichloroethylene	7.871	0m	N.D. d	
11) Iodomethane	0.000	0	N.D.	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.251	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.211	0m	N.D. d	
17) trans-1,2-Dichloroethy...	0.000	0	N.D.	
18) Vinyl acetate	9.994	0m	N.D. d	
19) 1,1-Dichloroethane	10.053	0m	N.D. d	
20) 2-Butanone	10.777	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.860	0m	N.D. d	
22) 2,2-Dichloropropane	0.000	0	N.D.	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.239	0m	N.D. d	
25) 1,1,1-Trichloroethane	0.000	0	N.D.	
26) Cyclohexane	11.654	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	0.000	0	N.D.	
30) 1,2-Dichloroethane	11.939	0m	N.D. d	
31) Benzene	12.034	0m	N.D. d	
32) Cyclohexene	12.152	0m	N.D. d	
33) n-Butyl alcohol	12.662	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	0.000	0	N.D.	
36) Methylcyclohexane	13.196	0m	N.D. d	
37) Dibromomethane	0.000	0	N.D.	
38) Bromodichloromethane	13.196	0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000	0	N.D.	
40) cis-1,3-Dichloropropylene	13.966	0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) 4-Methyl-2-pentanone	14.310		0m	N.D.	d	
44) Toluene	14.382		0m	N.D.	d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D.	d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D.	d	
47) 2-Hexanone	14.073		0m	N.D.	d	
48) 1,3-Dichloropropane	15.057		0m	N.D.	d	
49) Tetrachloroethylene	15.034		0m	N.D.	d	
50) Dibromochloromethane	0.000		0	N.D.		
51) 1,2-Dibromoethane	15.449		0m	N.D.	d	
52) Chlorobenzene	15.982		0m	N.D.	d	
53) 1,1,1,2-Tetrachloroethane	16.054		0m	N.D.	d	
54) Ethylbenzene	16.196		0m	N.D.	d	
55) m,p-Xylenes	16.196		0m	N.D.	d	
56) o-Xylene	0.000		0	N.D.		
57) Styrene	16.646		0m	N.D.	d	
59) Bromoform	0.000		0	N.D.		
60) Isopropylbenzene	17.026		0m	N.D.	d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D.	d	
63) 1,2,3-Trichloropropane	17.204		0m	N.D.	d	
64) Bromobenzene	17.405		0m	N.D.	d	
65) n-Propylbenzene	17.595		0m	N.D.	d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D.	d	
67) 2-Chlorotoluene	17.595		0m	N.D.	d	
68) 4-Chlorotoluene	17.702		0m	N.D.	d	
69) tert-Butylbenzene	18.046		0m	N.D.	d	
70) 1,2,4-Trimethylbenzene	18.070		0m	N.D.	d	
71) sec-Butylbenzene	18.236		0m	N.D.	d	
72) 4-Isopropyltoluene	18.366		0m	N.D.	d	
73) 1,3-Dichlorobenzene	18.402		0m	N.D.	d	
74) 1,4-Dichlorobenzene	18.402		0m	N.D.	d	
75) n-Butylbenzene	18.603		0m	N.D.	d	
76) 1,2-Dichlorobenzene	18.900		0m	N.D.	d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D.	d	
79) Hexachlorobutadiene	20.868		0m	N.D.	d	
80) Naphthalene	21.022		0m	N.D.	d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D.	d	
83) Chlorotrifluoroethylene	4.613	116	839045	146.12	ug/L	100
84) 2-Chloro-1,1,1-trifluo...	5.475	118	1386207	153.41	ug/L	100
85) Acrolein	7.575	56	360031	293.76	ug/L	98
86) Trichlorotrifluoroethane	7.859	85	586254	262.49	ug/L	100
87) Isopropyl Alcohol	8.120	45	1408561	2847.02	ug/L	99
88) Allyl chloride	8.488	41	2760549	222.37	ug/L	99
89) tert-Butyl Alcohol	8.867	59	2117465	2710.98	ug/L	100
90) Acrylonitrile	9.093	53	679988	272.29	ug/L	100
91) Isopropyl ether	9.994	45	1327071	50.53	ug/L	100
92) 2-Chloro-1,3-butadiene	10.053	53	586086	57.25	ug/L	100
93) Ethyl tert-butyl ether	10.563	59	1138335	49.77	ug/L	100
94) Ethyl acetate	10.860	43	1951361	264.60	ug/L	100
95) Propionitrile	10.848	54	273857	271.63	ug/L	100
96) Methacrylonitrile	11.085	41	1215595	273.80	ug/L	100
97) Tetrahydrofuran	11.203	42	651169	274.34	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
98) Isobutyl alcohol	11.796	41	765122	2899.44	ug/L	100	
99) Methyl tert-amyl ether	12.152	73	1002023	50.27	ug/L	94	
100) Methyl methacrylate	13.196	69	1233037	284.92	ug/L	99	
101) 1,4-Dioxane	13.267	88	177152	3018.22	ug/L	99	
102) 2-Nitropropane	13.682	43	659876	321.25	ug/L	100	E
104) Ethyl methacrylate	14.642	69	2224510	270.12	ug/L	100	
106) 1-Chlorohexane	15.888	55	387744	54.17	ug/L	100	
107) cis-1,4-Dichloro-2-butene	17.062	53	793463	276.81	ug/L	99	
108) Cyclohexanone	17.145	42	1719806	1591.54	ug/L	98	
109) trans-1,4-Dichloro-2-b...	17.358	53	757123	270.77	ug/L	99	
110) Pentachloroethane	18.058	167	581071	183.53	ug/L	100	
111) Benzyl chloride	18.603	91	3770433	252.77	ug/L	100	
112) bis(2-Chloroisopropyl)...	19.006	45	1363411	280.70	ug/L	99	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S323.D
Acq On : 1 Jul 2009 8:34 pm
Operator : CDS1
InstName : VOA2
Sample : |W2VM090701-18|ICV|1|VOAF|1|
Misc : LCS 5ML MIX [B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 15 12:24:49 2009
Quant Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

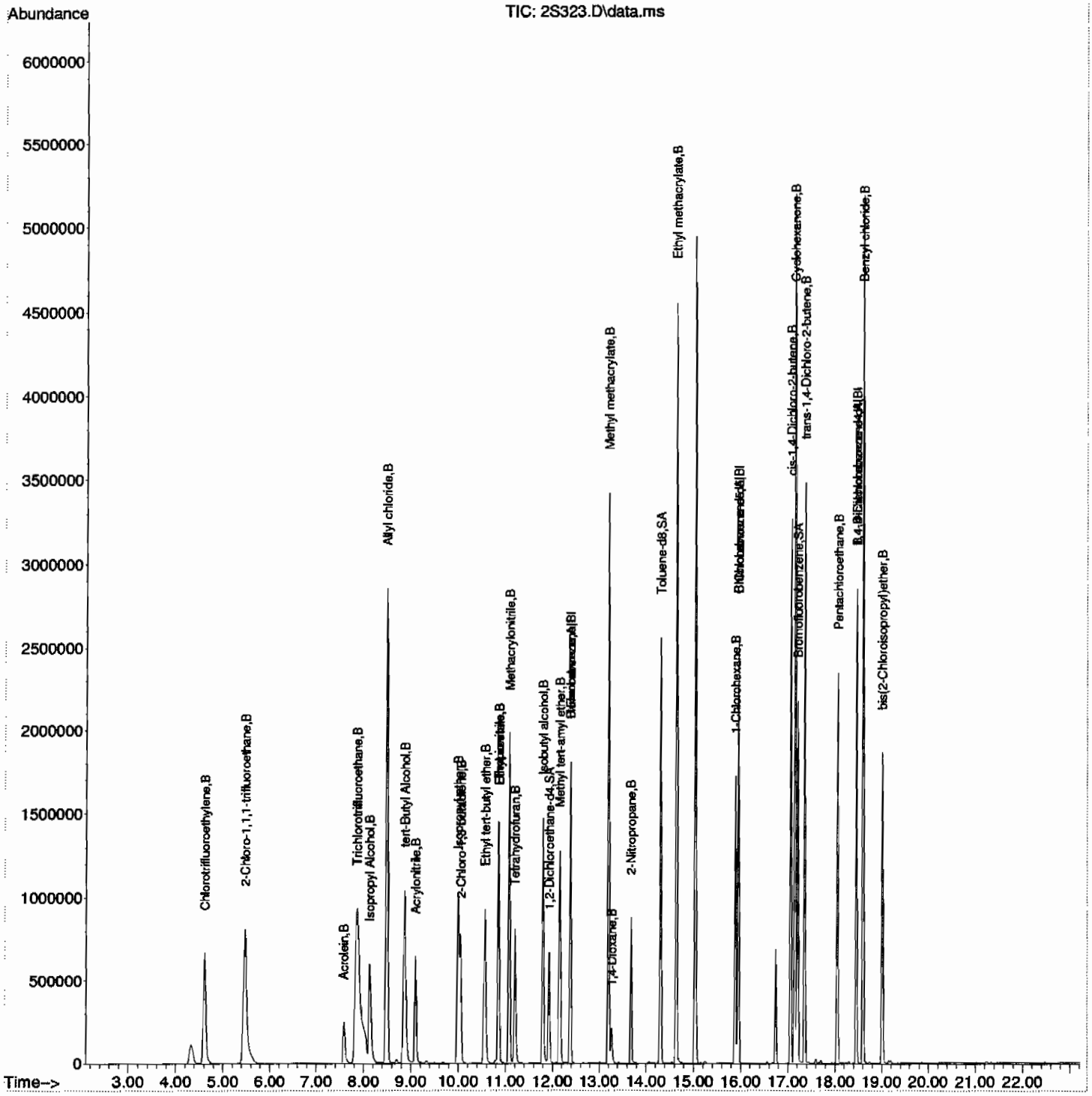

Continuing Calibration Summary

Client SDG: 09-2499

Instrument ID: VOA2.I **Injection Date** 07-JUL-09 07:08

Data File: 070709V2.b\2T202.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090707-01 **Quant Type** ISTD **Method:** 070709V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.2804	0.285		.01		1.64051	60		Averaged	
S	Toluene-d8	1.1749	1.181		.01		0.51919	60		Averaged	
S	Bromofluorobenzene	0.7862	0.789		.01		0.35614	60		Averaged	
	Dichlorodifluoromethane	0.179	0.157		.01		-12.2905	60		Averaged	
	Chloromethane	0.1614	0.145		.1		-10.16109	60		Averaged	spcc
	Vinyl chloride	0.1433	0.138		.01		-3.69853	20		Averaged	ccc
	Bromomethane	0.1441	0.132		.01		-8.39695	60		Averaged	
	Chloroethane	0.1518	0.152		.01		0.13175	60		Averaged	
	Trichlorofluoromethane	0.2964	0.294		.01		-0.80972	60		Averaged	
	Ethyl ether	0.1732	0.176		.01		1.61663	60		Averaged	
	1,1-Dichloroethylene	0.3007	0.332		.01		10.40905	20		Averaged	ccc
	Acetone	250	259.61	250			3.844	60		Linear	
	Iodomethane	0.4096	0.454		.01		10.83984	60		Averaged	
	Carbon disulfide	0.6756	0.725		.01		7.31202	60		Averaged	
	Acetonitrile	0.0286	0.036		.01		25.87413	60		Averaged	
	Methyl acetate	0.1775	0.171		.01		-3.66197	60		Averaged	
	Methylene chloride	50	55.4	50			10.8	60		Linear	
	trans-1,2-Dichloroethylene	0.3091	0.331		.01		7.08509	60		Averaged	
	tert-Butyl methyl ether	0.5656	0.58		.01		2.54597	60		Averaged	
	1,1-Dichloroethane	0.3855	0.419		.1		8.69001	60		Averaged	spcc
	Vinyl acetate	0.3702	0.454		.01		22.63641	60		Averaged	
	2-Butanone	0.207	0.219		.01		5.7971	60		Averaged	
	cis-1,2-Dichloroethylene	0.3417	0.359		.01		5.06292	60		Averaged	
	2,2-Dichloropropane	0.276	0.307		.01		11.23188	60		Averaged	
	Bromochloromethane	0.1267	0.137		.01		8.12944	60		Averaged	
	Chloroform	0.3949	0.428		.01		8.38187	20		Averaged	ccc
	1,1,1-Trichloroethane	0.3395	0.379		.01		11.63476	60		Averaged	
	Cyclohexane	0.3556	0.375		.01		5.45557	60		Averaged	
	1,1-Dichloropropene	0.2806	0.31		.01		10.47755	60		Averaged	
	Carbon tetrachloride	0.3055	0.355		.01		16.20295	60		Averaged	
	1,2-Dichloroethane	0.2997	0.315		.01		5.10511	60		Averaged	
	Benzene	0.8742	0.916		.01		4.78151	60		Averaged	
	Cyclohexene	0.4394	0.481		.01		9.46746	60		Averaged	
	n-Butyl alcohol	0.0058	0.007		.01		20.68966	60		Averaged	
	Trichloroethylene	0.2376	0.255		.01		7.32323	60		Averaged	
	1,2-Dichloropropane	0.2194	0.231		.01		5.28715	20		Averaged	ccc
	Methylcyclohexane	0.385	0.418		.01		8.57143	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 07-JUL-09 07:08

Data File: 070709V2.b\2T202.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090707-01 **Quant Type** ISTD **Method:** 070709V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.1351	0.147		.01		8.80829	60		Averaged	
Bromodichloromethane	0.2802	0.326		.01		16.34547	60		Averaged	
2-Chloroethylvinyl ether	0.1086	0.119		.01		9.57643	60		Averaged	
cis-1,3-Dichloropropylene	0.3273	0.371		.01		13.35167	60		Averaged	
4-Methyl-2-pentanone	0.1094	0.122		.01		11.51737	60		Averaged	
2-Hexanone	0.2996	0.335		.01		11.81575	60		Averaged	
Toluene	1.1428	1.198		.01		4.83024	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.3552	0.404		.01		13.73874	60		Averaged	
1,1,2-Trichloroethane	0.1949	0.202		.01		3.64289	60		Averaged	
1,3-Dichloropropane	0.3918	0.4		.01		2.0929	60		Averaged	
Tetrachloroethylene	0.2946	0.32		.01		8.62186	60		Averaged	
Dibromochloromethane	0.265	0.319		.01		20.37736	60		Averaged	
1,2-Dibromoethane	0.2408	0.263		.01		9.21927	60		Averaged	
Chlorobenzene	0.7955	0.842		.3		5.84538	60		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.2894	0.33		.01		14.02903	60		Averaged	
Ethylbenzene	1.2909	1.39		.01		7.67681	20		Averaged	ccc
m,p-Xylenes	0.5189	0.552		.01		6.37888	60		Averaged	
o-Xylene	0.51	0.543		.01		6.47059	60		Averaged	
Styrene	0.7515	0.901		.01		19.89355	60		Averaged	
Bromoform	50	49.51	50			-0.98	60		Linear	spcc
Isopropylbenzene	2.1274	2.334		.01		9.71138	60		Averaged	
1,1,2,2-Tetrachloroethane	0.5005	0.532		.3		6.29371	60		Averaged	spcc
1,2,3-Trichloropropane	0.1435	0.147		.01		2.43902	60		Averaged	
Bromobenzene	0.6362	0.669		.01		5.15561	60		Averaged	
n-Propylbenzene	2.5112	2.736		.01		8.9519	60		Averaged	
2-Chlorotoluene	1.7056	1.789		.01		4.88977	60		Averaged	
1,3,5-Trimethylbenzene	1.7622	1.938		.01		9.97617	60		Averaged	
4-Chlorotoluene	1.5531	1.643		.01		5.78842	60		Averaged	
tert-Butylbenzene	1.7973	1.968		.01		9.49758	60		Averaged	
1,2,4-Trimethylbenzene	1.8246	1.999		.01		9.55826	60		Averaged	
sec-Butylbenzene	2.3786	2.635		.01		10.77945	60		Averaged	
4-Isopropyltoluene	1.9148	2.195		.01		14.63338	60		Averaged	
1,3-Dichlorobenzene	1.1952	1.282		.01		7.26238	60		Averaged	
1,4-Dichlorobenzene	1.2391	1.298		.01		4.75345	60		Averaged	
n-Butylbenzene	1.8207	2.043		.01		12.20959	60		Averaged	
1,2-Dichlorobenzene	1.1449	1.214		.01		6.03546	60		Averaged	
1,2-Dibromo-3-chloropropane	0.0988	0.124		.01		25.50607	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 07-JUL-09 07:08

Data File: 070709V2.b\2T202.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090707-01 **Quant Type** ISTD **Method:** 070709V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	0.8718	0.963		.01		10.46111	60		Averaged
Hexachlorobutadiene	0.5338	0.608		.01		13.90034	60		Averaged
Naphthalene	1.8249	1.915		.01		4.93726	60		Averaged
1,2,3-Trichlorobenzene	0.799	0.855		.01		7.00876	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T202.D
Acq On : 7 Jul 2009 7:08 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090707-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : MIX [A] UVM090617-07C+UVM090603-07B
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:07:18 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1642832	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1402598	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	878468	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1642832	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1402598	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	878468	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	468240	50.83	ug/L	0.00
43) Toluene-d8	14.310	98	1656227	50.25	ug/L	0.00
61) Bromofluorobenzene	17.204	95	693112	50.18	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	257462	43.78	ug/L	100
3) Chloromethane	5.014	50	238618	45.01	ug/L	100
4) Vinyl chloride	5.251	62	227421	48.30	ug/L	100
5) Bromomethane	5.979	94	217082	45.86	ug/L	99
6) Chloroethane	6.199	64	249312	49.98	ug/L	99
7) Trichlorofluoromethane	6.756	101	483339	49.63	ug/L	99
8) Ethyl ether	7.349	59	289565	50.89	ug/L	100
9) Acetone	7.859	43	1465061	259.61	ug/L	99
10) 1,1-Dichloroethylene	7.812	61	545546	55.21	ug/L	100
11) Iodomethane	8.096	142	3725947	276.87	ug/L	99
12) Acetonitrile	8.369	41	1181272	1256.47	ug/L	99
13) Methyl acetate	8.499	43	1403379	240.64	ug/L	99
14) Carbon disulfide	8.239	76	5954125	268.23	ug/L	100
15) Methylene chloride	8.689	84	414628	55.40	ug/L	99
16) tert-Butyl methyl ether	9.199	73	953163	51.29	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	544025	53.57	ug/L	99
18) Vinyl acetate	9.934	43	3732439	306.89	ug/L	97
19) 1,1-Dichloroethane	9.887	63	687615	54.28	ug/L	100
20) 2-Butanone	10.764	43	1796773	264.22	ug/L	99
21) cis-1,2-Dichloroethylene	10.776	61	590363	52.59	ug/L	100
22) 2,2-Dichloropropane	10.800	77	505010	55.68	ug/L	98
23) Bromochloromethane	11.132	128	225571	54.19	ug/L	99
24) Chloroform	11.227	83	703866	54.24	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	622865	55.84	ug/L	99
26) Cyclohexane	11.642	56	616428	52.76	ug/L	100
27) 1,1-Dichloropropene	11.749	75	509064	55.22	ug/L	99
28) Carbon tetrachloride	11.772	117	583484	58.13	ug/L	100
30) 1,2-Dichloroethane	12.021	62	516873	52.50	ug/L	100
31) Benzene	12.033	78	1504944	52.39	ug/L	100
32) Cyclohexene	12.176	67	789933	54.71	ug/L	99
33) n-Butyl alcohol	12.638	56	1092326	5753.81	ug/L	99
34) Trichloroethylene	12.852	95	419684	53.76	ug/L	99
35) 1,2-Dichloropropane	13.124	63	378712	52.54	ug/L	99
36) Methylcyclohexane	13.124	83	686124	54.24	ug/L	99
37) Dibromomethane	13.267	93	242292	54.59	ug/L	99
38) Bromodichloromethane	13.433	83	535842	58.20	ug/L	100
39) 2-Chloroethylvinyl ether	13.753	63	974002	272.87	ug/L	100
40) cis-1,3-Dichloropropylene	13.966	75	609362	56.66	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T202.D
Acq On : 7 Jul 2009 7:08 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090707-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : MIX [A] UVM090617-07C+UVM090603-07B
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:07:18 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
42) 4-Methyl-2-pentanone	14.109	58	856644	279.04 ug/L	99	
44) Toluene	14.381	91	1679855	52.40 ug/L	100	
45) trans-1,3-Dichloroprop...	14.583	75	566898	56.89 ug/L	99	
46) 1,1,2-Trichloroethane	14.808	83	283837	51.91 ug/L	100	
47) 2-Hexanone	14.109	43	2347896	279.41 ug/L	100	
48) 1,3-Dichloropropane	15.010	76	561657	51.11 ug/L	95	
49) Tetrachloroethylene	15.033	164	448893	54.31 ug/L	100	
50) Dibromochloromethane	15.283	129	446896	60.11 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	369202	54.66 ug/L	100	
52) Chlorobenzene	15.982	112	1180622	52.91 ug/L	100	
53) 1,1,1,2-Tetrachloroethane	16.053	131	462796	57.00 ug/L	99	
54) Ethylbenzene	16.077	91	1949996	53.85 ug/L	100	
55) m,p-Xylenes	16.196	106	1547934	106.34 ug/L	100	
56) o-Xylene	16.634	106	761753	53.24 ug/L	100	
57) Styrene	16.646	104	1263377	59.93 ug/L	99	
59) Bromoform	16.883	173	352739	49.51 ug/L	100	
60) Isopropylbenzene	17.026	105	2050534	54.86 ug/L	100	
62) 1,1,2,2-Tetrachloroethane	17.298	83	466960	53.11 ug/L	99	
63) 1,2,3-Trichloropropane	17.381	110	128776	51.08 ug/L	98	
64) Bromobenzene	17.405	156	587319	52.54 ug/L	97	
65) n-Propylbenzene	17.464	91	2403926	54.49 ug/L	100	
66) 1,3,5-Trimethylbenzene	17.630	105	1702487	54.99 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1571223	52.43 ug/L	100	
68) 4-Chlorotoluene	17.702	91	1442968	52.88 ug/L	100	
69) tert-Butylbenzene	17.998	119	1728877	54.75 ug/L	100	
70) 1,2,4-Trimethylbenzene	18.046	105	1756389	54.79 ug/L	100	
71) sec-Butylbenzene	18.235	105	2314760	55.39 ug/L	100	
72) 4-Isopropyltoluene	18.366	119	1928361	57.32 ug/L	100	
73) 1,3-Dichlorobenzene	18.401	146	1126189	53.63 ug/L	99	
74) 1,4-Dichlorobenzene	18.484	146	1139904	52.36 ug/L	100	
75) n-Butylbenzene	18.804	91	1794285	56.09 ug/L	100	
76) 1,2-Dichlorobenzene	18.899	146	1066447	53.02 ug/L	100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	109193	62.91 ug/L	99	E
78) 1,2,4-Trichlorobenzene	20.690	180	846085	55.24 ug/L	100	
79) Hexachlorobutadiene	20.868	225	534007	56.94 ug/L	99	
80) Naphthalene	21.022	128	1682214	52.47 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	750914	53.49 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.515		0m	N.D. d		
86) Trichlorotrifluoroethane	0.000		0	N.D.		
87) Isopropyl Alcohol	8.239		0m	N.D. d		
88) Allyl chloride	8.369		0m	N.D. d		
89) tert-Butyl Alcohol	8.926		0m	N.D. d		
90) Acrylonitrile	9.199		0m	N.D. d		
91) Isopropyl ether	9.934		0m	N.D. d		
92) 2-Chloro-1,3-butadiene	10.136		0m	N.D. d		
93) Ethyl tert-butyl ether	10.776		0m	N.D. d		
94) Ethyl acetate	10.764		0m	N.D. d		
95) Propionitrile	10.764		0m	N.D. d		
96) Methacrylonitrile	11.227		0m	N.D. d		
97) Tetrahydrofuran	11.227		0m	N.D. d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T202.D
Acq On : 7 Jul 2009 7:08 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090707-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : MIX [A] UVM090617-07C+UVM090603-07B
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:07:18 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
98)	Isobutyl alcohol	11.915		0m	N.D. d	
99)	Methyl tert-amyl ether	12.176		0m	N.D. d	
100)	Methyl methacrylate	13.124		0m	N.D. d	
101)	1,4-Dioxane	13.267		0m	N.D. d	
102)	2-Nitropropane	13.753		0m	N.D. d	
104)	Ethyl methacrylate	0.000		0	N.D.	
106)	1-Chlorohexane	15.947		0m	N.D. d	
107)	cis-1,4-Dichloro-2-butene	17.026		0m	N.D. d	
108)	Cyclohexanone	17.014		0m	N.D. d	
109)	trans-1,4-Dichloro-2-b...	17.464		0m	N.D. d	
110)	Pentachloroethane	18.057		0m	N.D. d	
111)	Benzyl chloride	18.804		0m	N.D. d	
112)	bis(2-Chloroisopropyl)...	19.148		0m	N.D. d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T202.D
Acq On : 7 Jul 2009 7:08 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090707-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : MIX [A] UVM090617-07C+UVM090603-07B
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:07:18 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

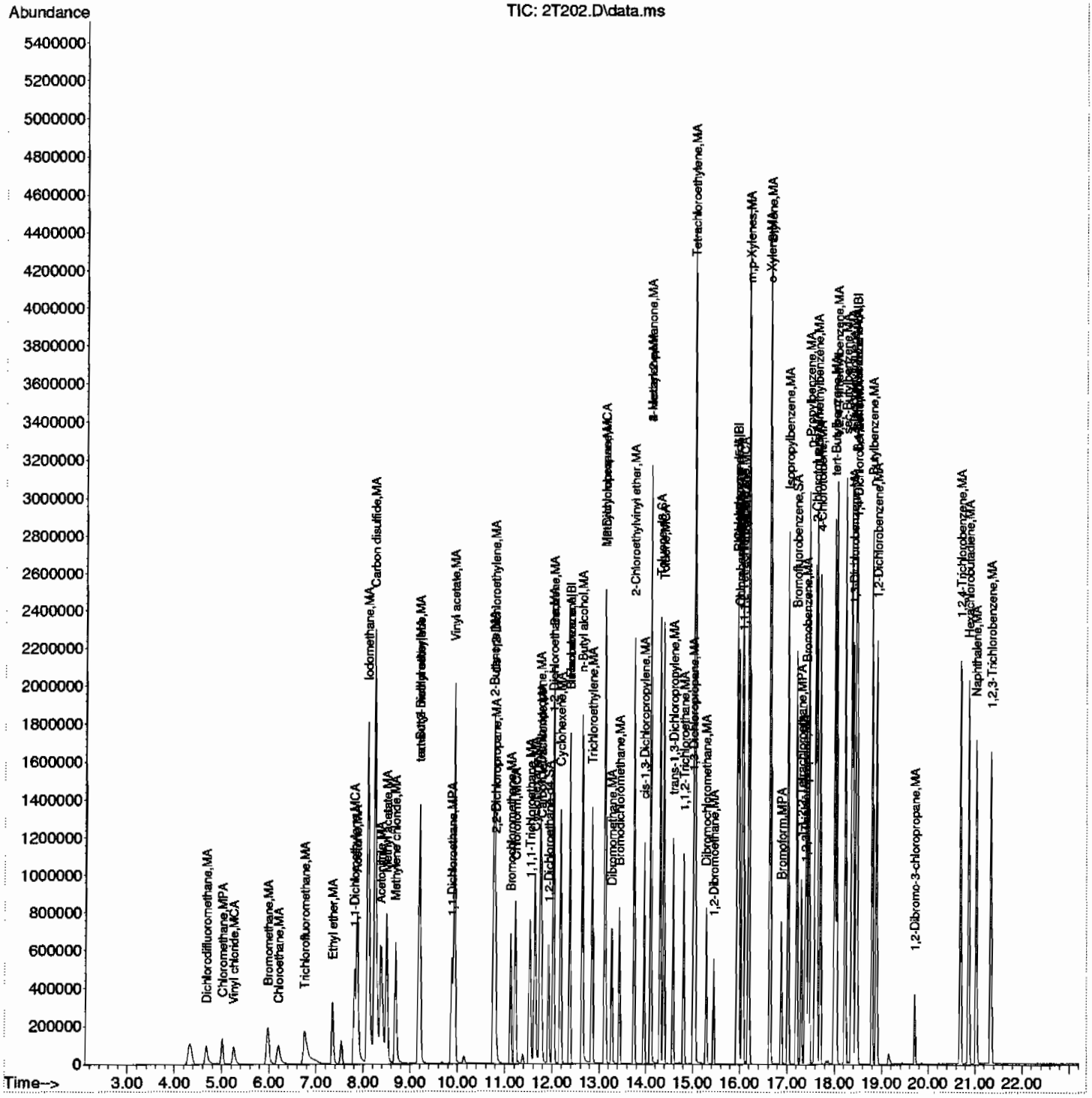

Continuing Calibration Summary

Client SDG: 09-2499

Instrument ID: VOA2.I **Injection Date** 07-JUL-09 08:36

Data File: 070709V2.b\2T205.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID UVM090701-08A **Quant Type** ISTD **Method:** 070709V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.2804	0.278		.01		-0.85592	60		Averaged
S	Toluene-d8	1.1749	1.145		.01		-2.5449	60		Averaged
S	Bromofluorobenzene	0.7862	0.784		.01		-0.27983	60		Averaged
	Acrolein	0.0345	0.038		.01		10.14493	60		Averaged
	Trichlorotrifluoroethane	0.0628	0.066		.01		5.09554	60		Averaged
	Allyl chloride	0.3493	0.315		.01		-9.81964	60		Averaged
	Acrylonitrile	0.0703	0.07		.01		-0.42674	60		Averaged
	2-Chloro-1,3-butadiene	0.2881	0.332		.01		15.23776	60		Averaged
	Propionitrile	0.0284	0.028		.01		-1.40845	60		Averaged
	Ethyl acetate	0.2075	0.203		.01		-2.16867	60		Averaged
	Methacrylonitrile	0.1249	0.126		.01		0.8807	60		Averaged
	Tetrahydrofuran	0.0668	0.066		.01		-1.1976	60		Averaged
	Isobutyl alcohol	0.0074	0.008		.01		8.10811	60		Averaged
	Methyl methacrylate	0.1218	0.131		.01		7.55337	60		Averaged
	1,4-Dioxane	0.0017	0.002		.01		17.64706	60		Averaged
	2-Nitropropane	0.0578	0.07		.01		21.10727	60		Averaged
	Ethyl methacrylate	0.2758	0.28		.01		1.52284	60		Averaged
	cis-1,4-Dichloro-2-butene	0.1574	0.169		.01		7.36976	60		Averaged
	Cyclohexanone	0.0593	0.073		.01		23.10287	60		Averaged
	trans-1,4-Dichloro-2-butene	0.1536	0.161		.01		4.81771	60		Averaged
	Pentachloroethane	250	423.74	250			69.496	60	*	Linear
	Benzyl chloride	0.8192	1.007		.01		22.9248	60		Averaged
	bis(2-Chloroisopropyl)ether	0.2668	0.26		.01		-2.54873	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T205.D
Acq On : 7 Jul 2009 8:36 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 11:16:16 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1700350	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1463045	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	908470	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1700350	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1463045	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	908470	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	471870	49.49 ug/L	0.00
43) Toluene-d8	14.310	98	1675182	48.73 ug/L	0.00
61) Bromofluorobenzene	17.204	95	712286	49.87 ug/L	0.00

Target Compounds				Qvalue
2) Dichlorodifluoromethane	0.000	0	N.D.	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.266	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	0.000	0	N.D.	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.859	0m	N.D. d	
10) 1,1-Dichloroethylene	7.812	0m	N.D. d	
11) Iodomethane	8.108	0m	N.D. d	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.251	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.211	0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.199	0m	N.D. d	
18) Vinyl acetate	9.946	0m	N.D. d	
19) 1,1-Dichloroethane	9.887	0m	N.D. d	
20) 2-Butanone	10.860	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.860	0m	N.D. d	
22) 2,2-Dichloropropane	10.800	0m	N.D. d	
23) Bromochloromethane	11.144	0m	N.D. d	
24) Chloroform	11.239	0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535	0m	N.D. d	
26) Cyclohexane	11.654	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	11.784	0m	N.D. d	
30) 1,2-Dichloroethane	12.033	0m	N.D. d	
31) Benzene	12.045	0m	N.D. d	
32) Cyclohexene	12.176	0m	N.D. d	
33) n-Butyl alcohol	12.650	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	13.124	0m	N.D. d	
36) Methylcyclohexane	13.136	0m	N.D. d	
37) Dibromomethane	13.267	0m	N.D. d	
38) Bromodichloromethane	13.445	0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000	0	N.D.	
40) cis-1,3-Dichloropropylene	13.966	0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T205.D
Acq On : 7 Jul 2009 8:36 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 11:16:16 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 4-Methyl-2-pentanone	14.109		0m	N.D. d	
44) Toluene	14.393		0m	N.D. d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D. d	
46) 1,1,2-Trichloroethane	14.808		0m	N.D. d	
47) 2-Hexanone	14.109		0m	N.D. d	
48) 1,3-Dichloropropane	15.010		0m	N.D. d	
49) Tetrachloroethylene	15.034		0m	N.D. d	
50) Dibromochloromethane	15.283		0m	N.D. d	
51) 1,2-Dibromoethane	15.449		0m	N.D. d	
52) Chlorobenzene	15.982		0m	N.D. d	
53) 1,1,1,2-Tetrachloroethane	16.054		0m	N.D. d	
54) Ethylbenzene	16.077		0m	N.D. d	
55) m,p-Xylenes	16.196		0m	N.D. d	
56) o-Xylene	16.635		0m	N.D. d	
57) Styrene	16.646		0m	N.D. d	
59) Bromoform	16.884		0m	N.D. d	
60) Isopropylbenzene	17.026		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.382		0m	N.D. d	
64) Bromobenzene	17.417		0m	N.D. d	
65) n-Propylbenzene	17.465		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D. d	
67) 2-Chlorotoluene	17.595		0m	N.D. d	
68) 4-Chlorotoluene	17.702		0m	N.D. d	
69) tert-Butylbenzene	18.058		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	18.081		0m	N.D. d	
71) sec-Butylbenzene	18.235		0m	N.D. d	
72) 4-Isopropyltoluene	18.366		0m	N.D. d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D. d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D. d	
75) n-Butylbenzene	18.805		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.900		0m	N.D. d	
77) 1,2-Dibromo-3-chloropr...	19.718		0m	N.D. d	
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D. d	
79) Hexachlorobutadiene	20.868		0m	N.D. d	
80) Naphthalene	21.022		0m	N.D. d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D. d	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	7.587	56	320143	272.98 ug/L	100
86) Trichlorotrifluoroethane	7.859	85	561314	262.65 ug/L	99
87) Isopropyl Alcohol	0.000		0m	N.D. d	
88) Allyl chloride	8.488	41	2680043	225.62 ug/L	99
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	9.093	53	592414	247.91 ug/L	100
91) Isopropyl ether	10.053	45	406	N.D.	
92) 2-Chloro-1,3-butadiene	10.053	53	565225	57.70 ug/L	96
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.860	43	1728373	244.93 ug/L	100
95) Propionitrile	10.848	54	235802	244.42 ug/L	100
96) Methacrylonitrile	11.085	41	1072705	252.50 ug/L	100
97) Tetrahydrofuran	11.203	42	560426	246.75 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T205.D
Acq On : 7 Jul 2009 8:36 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 11:16:16 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
98)	Isobutyl alcohol	11.796	41	655883	2597.46	ug/L	100	
99)	Methyl tert-amyl ether	12.164	73	1368	N.D.			
100)	Methyl methacrylate	13.196	69	1112550	268.66	ug/L	99	
101)	1,4-Dioxane	13.267	88	180754	3218.34	ug/L	100	
102)	2-Nitropropane	13.682	43	593959	302.19	ug/L	99	E
104)	Ethyl methacrylate	14.642	69	2047507	253.70	ug/L	99	
106)	1-Chlorohexane	0.000		0m	N.D.	d		
107)	cis-1,4-Dichloro-2-butene	17.061	53	765955	267.79	ug/L	99	
108)	Cyclohexanone	17.145	42	1659672	1539.17	ug/L	98	
109)	trans-1,4-Dichloro-2-b...	17.358	53	731445	262.15	ug/L	99	
110)	Pentachloroethane	18.058	167	1347201	423.74	ug/L	97	
111)	Benzyl chloride	18.603	91	4572648	307.21	ug/L	99	
112)	bis(2-Chloroisopropyl)...	19.006	45	1181230	243.72	ug/L	98	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T205.D
Acq On : 7 Jul 2009 8:36 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 11:16:16 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

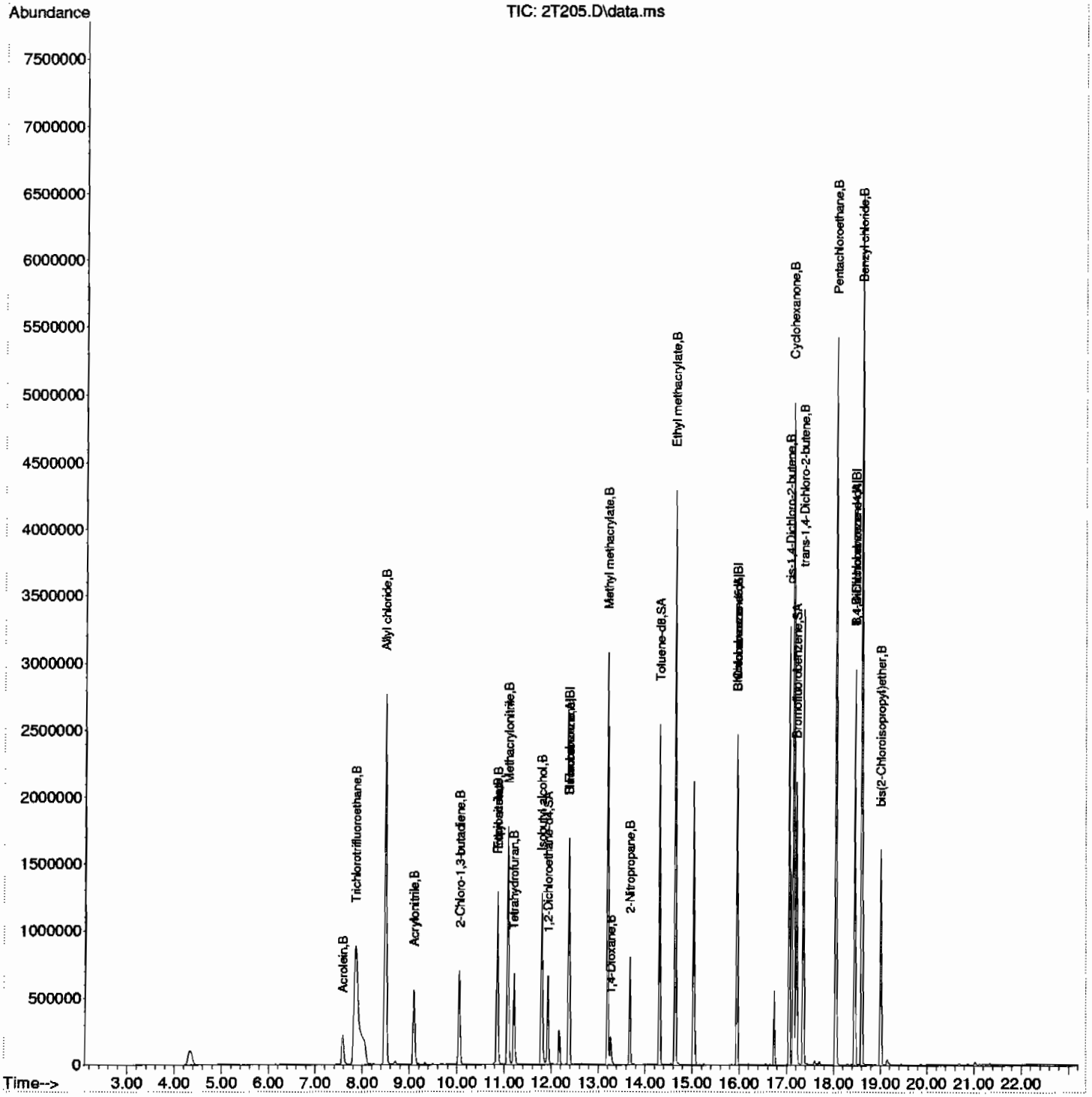

Continuing Calibration Summary

Client SDG: 09-2499

Instrument ID: VOA2.I **Injection Date** 08-JUL-09 07:07

Data File: 070809V2.b\2T302.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID W2VM090708-01 **Quant Type** ISTD **Method:** 070809V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
S	1,2-Dichloroethane-d4	0.2804	0.289		.01		3.06705	60		Averaged	
S	Toluene-d8	1.1749	1.185		.01		0.85965	60		Averaged	
S	Bromofluorobenzene	0.7862	0.794		.01		0.99211	60		Averaged	
	Dichlorodifluoromethane	0.179	0.163		.01		-8.93855	60		Averaged	
	Chloromethane	0.1614	0.151		.1		-6.44362	60		Averaged	spcc
	Vinyl chloride	0.1433	0.149		.01		3.97767	20		Averaged	ccc
	Bromomethane	0.1441	0.125		.01		-13.25468	60		Averaged	
	Chloroethane	0.1518	0.152		.01		0.13175	60		Averaged	
	Trichlorofluoromethane	0.2964	0.294		.01		-0.80972	60		Averaged	
	Ethyl ether	0.1732	0.171		.01		-1.27021	60		Averaged	
	1,1-Dichloroethylene	0.3007	0.303		.01		0.76488	20		Averaged	ccc
	Acetone	250	244.5	250			-2.2	60		Linear	
	Iodomethane	0.4096	0.447		.01		9.13086	60		Averaged	
	Carbon disulfide	0.6756	0.719		.01		6.42392	60		Averaged	
	Acetonitrile	0.0286	0.033		.01		15.38462	60		Averaged	
	Methyl acetate	0.1775	0.223		.01		25.6338	60		Averaged	
	Methylene chloride	50	52.07	50			4.14	60		Linear	
	trans-1,2-Dichloroethylene	0.3091	0.308		.01		-0.35587	60		Averaged	
	tert-Butyl methyl ether	0.5656	0.532		.01		-5.94059	60		Averaged	
	1,1-Dichloroethane	0.3855	0.393		.1		1.94553	60		Averaged	spcc
	Vinyl acetate	0.3702	0.237		.01		-35.98055	60		Averaged	
	2-Butanone	0.207	0.206		.01		-0.48309	60		Averaged	
	cis-1,2-Dichloroethylene	0.3417	0.342		.01		0.0878	60		Averaged	
	2,2-Dichloropropane	0.276	0.286		.01		3.62319	60		Averaged	
	Bromochloromethane	0.1267	0.128		.01		1.02605	60		Averaged	
	Chloroform	0.3949	0.402		.01		1.79792	20		Averaged	ccc
	1,1,1-Trichloroethane	0.3395	0.357		.01		5.15464	60		Averaged	
	Cyclohexane	0.3556	0.352		.01		-1.01237	60		Averaged	
	1,1-Dichloropropene	0.2806	0.296		.01		5.48824	60		Averaged	
	Carbon tetrachloride	0.3055	0.331		.01		8.34697	60		Averaged	
	1,2-Dichloroethane	0.2997	0.297		.01		-0.9009	60		Averaged	
	Benzene	0.8742	0.85		.01		-2.76825	60		Averaged	
	Cyclohexene	0.4394	0.444		.01		1.04688	60		Averaged	
	n-Butyl alcohol	0.0058	0.006		.01		3.44828	60		Averaged	
	Trichloroethylene	0.2376	0.241		.01		1.43098	60		Averaged	
	1,2-Dichloropropane	0.2194	0.219		.01		-0.18232	20		Averaged	ccc
	Methylcyclohexane	0.385	0.397		.01		3.11688	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 08-JUL-09 07:07

Data File: 070809V2.b\2T302.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090708-01 **Quant Type** ISTD **Method:** 070809V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type	
Dibromomethane	0.1351	0.137		.01		1.40637	60		Averaged	
Bromodichloromethane	0.2802	0.301		.01		7.42327	60		Averaged	
2-Chloroethylvinyl ether	0.1086	0.1		.01		-7.91897	60		Averaged	
cis-1,3-Dichloropropylene	0.3273	0.355		.01		8.46318	60		Averaged	
4-Methyl-2-pentanone	0.1094	0.111		.01		1.46252	60		Averaged	
2-Hexanone	0.2996	0.304		.01		1.46862	60		Averaged	
Toluene	1.1428	1.097		.01		-4.0077	20		Averaged	ccc
trans-1,3-Dichloropropylene	0.3552	0.372		.01		4.72973	60		Averaged	
1,1,2-Trichloroethane	0.1949	0.187		.01		-4.05336	60		Averaged	
1,3-Dichloropropane	0.3918	0.372		.01		-5.0536	60		Averaged	
Tetrachloroethylene	0.2946	0.302		.01		2.51188	60		Averaged	
Dibromochloromethane	0.265	0.293		.01		10.56604	60		Averaged	
1,2-Dibromoethane	0.2408	0.245		.01		1.74419	60		Averaged	
Chlorobenzene	0.7955	0.795		.3		-0.06285	60		Averaged	spcc
1,1,1,2-Tetrachloroethane	0.2894	0.306		.01		5.73601	60		Averaged	
Ethylbenzene	1.2909	1.284		.01		-0.53451	20		Averaged	ccc
m,p-Xylenes	0.5189	0.514		.01		-0.94431	60		Averaged	
o-Xylene	0.51	0.505		.01		-0.98039	60		Averaged	
Styrene	0.7515	0.833		.01		10.84498	60		Averaged	
Bromoform	50	45.63	50			-8.74	60		Linear	spcc
Isopropylbenzene	2.1274	2.179		.01		2.4255	60		Averaged	
1,1,2,2-Tetrachloroethane	0.5005	0.493		.3		-1.4985	60		Averaged	spcc
1,2,3-Trichloropropane	0.1435	0.137		.01		-4.52962	60		Averaged	
Bromobenzene	0.6362	0.636		.01		-0.03144	60		Averaged	
n-Propylbenzene	2.5112	2.55		.01		1.54508	60		Averaged	
2-Chlorotoluene	1.7056	1.712		.01		0.37523	60		Averaged	
1,3,5-Trimethylbenzene	1.7622	1.828		.01		3.73397	60		Averaged	
4-Chlorotoluene	1.5531	1.555		.01		0.12234	60		Averaged	
tert-Butylbenzene	1.7973	1.853		.01		3.09909	60		Averaged	
1,2,4-Trimethylbenzene	1.8246	1.87		.01		2.48822	60		Averaged	
sec-Butylbenzene	2.3786	2.475		.01		4.0528	60		Averaged	
4-Isopropyltoluene	1.9148	2.043		.01		6.69522	60		Averaged	
1,3-Dichlorobenzene	1.1952	1.227		.01		2.66064	60		Averaged	
1,4-Dichlorobenzene	1.2391	1.247		.01		0.63756	60		Averaged	
n-Butylbenzene	1.8207	1.931		.01		6.05811	60		Averaged	
1,2-Dichlorobenzene	1.1449	1.167		.01		1.9303	60		Averaged	
1,2-Dibromo-3-chloropropane	0.0988	0.118		.01		19.4332	60		Averaged	

Continuing Calibration Summary

Instrument ID: VOA2.I **Injection Date** 08-JUL-09 07:07

Data File: 070809V2.b\2T302.D **Init. Cal. Date(s)** 01-JUL-09 10:53 01-JUL-09 19:36

Lab Sample ID W2VM090708-01 **Quant Type** ISTD **Method:** 070809V2.b\VOA2-8260-070109.M

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
1,2,4-Trichlorobenzene	0.8718	0.922		.01		5.7582	60		Averaged
Hexachlorobutadiene	0.5338	0.582		.01		9.0296	60		Averaged
Naphthalene	1.8249	1.776		.01		-2.6796	60		Averaged
1,2,3-Trichlorobenzene	0.799	0.844		.01		5.63204	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T302.D
Acq On : 8 Jul 2009 7:07 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090708-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : 5ML MIX [A] UVM090624-01A+IVM090630-01
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:53:19 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1586846	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1375361	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	859439	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1586846	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1375361	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	859439	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	458862	51.57	ug/L	0.00
43) Toluene-d8	14.310	98	1630335	50.45	ug/L	0.00
61) Bromofluorobenzene	17.204	95	682568	50.51	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.687	85	258039	45.43	ug/L	100
3) Chloromethane	5.014	50	240022	46.87	ug/L	100
4) Vinyl chloride	5.267	62	236994	52.11	ug/L	100
5) Bromomethane	5.980	94	198177	43.34	ug/L	99
6) Chloroethane	6.211	64	241726	50.17	ug/L	100
7) Trichlorofluoromethane	6.757	101	466132	49.55	ug/L	100
8) Ethyl ether	7.349	59	271483	49.40	ug/L	100
9) Acetone	7.871	43	1332478	244.50	ug/L	100
10) 1,1-Dichloroethylene	7.812	61	480177	50.31	ug/L	100
11) Iodomethane	8.097	142	3548968	273.03	ug/L	99
12) Acetonitrile	8.381	41	1037545	1142.53	ug/L	99
13) Methyl acetate	8.500	43	1769200	314.08	ug/L	99
14) Carbon disulfide	8.251	76	5707249	266.17	ug/L	100
15) Methylene chloride	8.701	84	378030	52.07	ug/L	100
16) tert-Butyl methyl ether	9.199	73	844362	47.04	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	488570	49.81	ug/L	100
18) Vinyl acetate	9.935	43	1882123	160.21	ug/L	95
19) 1,1-Dichloroethane	9.887	63	623004	50.92	ug/L	100
20) 2-Butanone	10.765	43	1630730	248.26	ug/L	99
21) cis-1,2-Dichloroethylene	10.777	61	542635	50.04	ug/L	100
22) 2,2-Dichloropropane	10.800	77	454128	51.84	ug/L	97
23) Bromochloromethane	11.132	128	202958	50.47	ug/L	99
24) Chloroform	11.227	83	637793	50.89	ug/L	100
25) 1,1,1-Trichloroethane	11.536	97	565883	52.52	ug/L	100
26) Cyclohexane	11.642	56	558964	49.53	ug/L	100
27) 1,1-Dichloropropene	11.749	75	469581	52.73	ug/L	99
28) Carbon tetrachloride	11.773	117	524821	54.13	ug/L	100
30) 1,2-Dichloroethane	12.022	62	470738	49.50	ug/L	99
31) Benzene	12.034	78	1349020	48.62	ug/L	99
32) Cyclohexene	12.176	67	703971	50.48	ug/L	100
33) n-Butyl alcohol	12.638	56	987031	5382.60	ug/L	99
34) Trichloroethylene	12.852	95	382094	50.67	ug/L	99
35) 1,2-Dichloropropane	13.125	63	346730	49.80	ug/L	100
36) Methylcyclohexane	13.125	83	629980	51.56	ug/L	99
37) Dibromomethane	13.267	93	217456	50.72	ug/L	99
38) Bromodichloromethane	13.433	83	476857	53.62	ug/L	100
39) 2-Chloroethylvinyl ether	13.753	63	793306	230.09	ug/L	99
40) cis-1,3-Dichloropropylene	13.967	75	563529	54.25	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T302.D
Acq On : 8 Jul 2009 7:07 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090708-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : 5ML MIX [A] UVM090624-01A+IVM090630-01
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:53:19 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)	
42) 4-Methyl-2-pentanone	14.109	58	760256	252.54 ug/L		100	
44) Toluene	14.382	91	1508521	47.99 ug/L		99	
45) trans-1,3-Dichloroprop...	14.583	75	512197	52.42 ug/L		100	
46) 1,1,2-Trichloroethane	14.808	83	257638	48.05 ug/L		100	
47) 2-Hexanone	14.109	43	2087207	253.31 ug/L		100	
48) 1,3-Dichloropropane	15.010	76	511850	47.50 ug/L	#	56	
49) Tetrachloroethylene	15.034	164	414719	51.17 ug/L		100	
50) Dibromochloromethane	15.283	129	402887	55.26 ug/L		100	
51) 1,2-Dibromoethane	15.449	107	337584	50.97 ug/L		100	
52) Chlorobenzene	15.982	112	1093470	49.97 ug/L		100	
53) 1,1,1,2-Tetrachloroethane	16.054	131	421243	52.91 ug/L		100	
54) Ethylbenzene	16.065	91	1766460	49.75 ug/L		100	
55) m,p-Xylenes	16.196	106	1413073	99.00 ug/L		100	
56) o-Xylene	16.635	106	693962	49.47 ug/L		99	
57) Styrene	16.647	104	1145324	55.40 ug/L		100	
59) Bromoform	16.884	173	316738	45.63 ug/L		99	
60) Isopropylbenzene	17.026	105	1872329	51.20 ug/L		100	
62) 1,1,2,2-Tetrachloroethane	17.299	83	423386	49.22 ug/L		100	
63) 1,2,3-Trichloropropane	17.382	110	117556	47.66 ug/L		95	
64) Bromobenzene	17.405	156	546959	50.02 ug/L		97	
65) n-Propylbenzene	17.465	91	2191622	50.77 ug/L		99	
66) 1,3,5-Trimethylbenzene	17.631	105	1571289	51.88 ug/L		55	
67) 2-Chlorotoluene	17.595	91	1471684	50.20 ug/L		100	
68) 4-Chlorotoluene	17.702	91	1336645	50.07 ug/L		99	
69) tert-Butylbenzene	17.998	119	1592810	51.56 ug/L		100	
70) 1,2,4-Trimethylbenzene	18.046	105	1607246	51.25 ug/L		100	
71) sec-Butylbenzene	18.236	105	2127476	52.04 ug/L		100	
72) 4-Isopropyltoluene	18.366	119	1755672	53.34 ug/L		100	
73) 1,3-Dichlorobenzene	18.402	146	1054180	51.31 ug/L		100	
74) 1,4-Dichlorobenzene	18.485	146	1071292	50.30 ug/L		100	
75) n-Butylbenzene	18.793	91	1659820	53.04 ug/L		100	
76) 1,2-Dichlorobenzene	18.900	146	1002563	50.95 ug/L		100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	101305	59.66 ug/L		99	E
78) 1,2,4-Trichlorobenzene	20.690	180	792420	52.88 ug/L		100	
79) Hexachlorobutadiene	20.868	225	500221	54.52 ug/L		100	
80) Naphthalene	21.022	128	1526096	48.65 ug/L		100	
81) 1,2,3-Trichlorobenzene	21.343	180	725695	52.84 ug/L		100	
83) Chlorotrifluoroethylene	0.000		0	N.D.			
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.			
85) Acrolein	7.610		0m	N.D.	d		
86) Trichlorotrifluoroethane	7.848		0m	N.D.	d		
87) Isopropyl Alcohol	8.251		0m	N.D.	d		
88) Allyl chloride	8.381		0m	N.D.	d		
89) tert-Butyl Alcohol	8.903		0m	N.D.	d		
90) Acrylonitrile	9.105		0m	N.D.	d		
91) Isopropyl ether	10.053		0m	N.D.	d		
92) 2-Chloro-1,3-butadiene	10.041		0m	N.D.	d		
93) Ethyl tert-butyl ether	10.777		0m	N.D.	d		
94) Ethyl acetate	10.765		0m	N.D.	d		
95) Propionitrile	10.848		0m	N.D.	d		
96) Methacrylonitrile	11.073		0m	N.D.	d		
97) Tetrahydrofuran	11.215		0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T302.D
Acq On : 8 Jul 2009 7:07 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090708-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : 5ML MIX [A] UVM090624-01A+IVM090630-01
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:53:19 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
98) Isobutyl alcohol	11.927		0m	N.D. d	
99) Methyl tert-amyl ether	12.176		0m	N.D. d	
100) Methyl methacrylate	13.125		0m	N.D. d	
101) 1,4-Dioxane	13.267		0m	N.D. d	
102) 2-Nitropropane	13.753		0m	N.D. d	
104) Ethyl methacrylate	14.642		0m	N.D. d	
106) 1-Chlorohexane	15.947		0m	N.D. d	
107) cis-1,4-Dichloro-2-butene	17.014		0m	N.D. d	
108) Cyclohexanone	17.145		0m	N.D. d	
109) trans-1,4-Dichloro-2-b...	17.358		0m	N.D. d	
110) Pentachloroethane	18.058		0m	N.D. d	
111) Benzyl chloride	18.603		0m	N.D. d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D. d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T302.D
Acq On : 8 Jul 2009 7:07 am
Operator : CDS1
InstName : VOA2
Sample : |W2VM090708-01|CCV|1|VOAF|1|VOA8260BLF|
Misc : 5ML MIX [A] UVM090624-01A+IVM090630-01
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 11:53:19 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

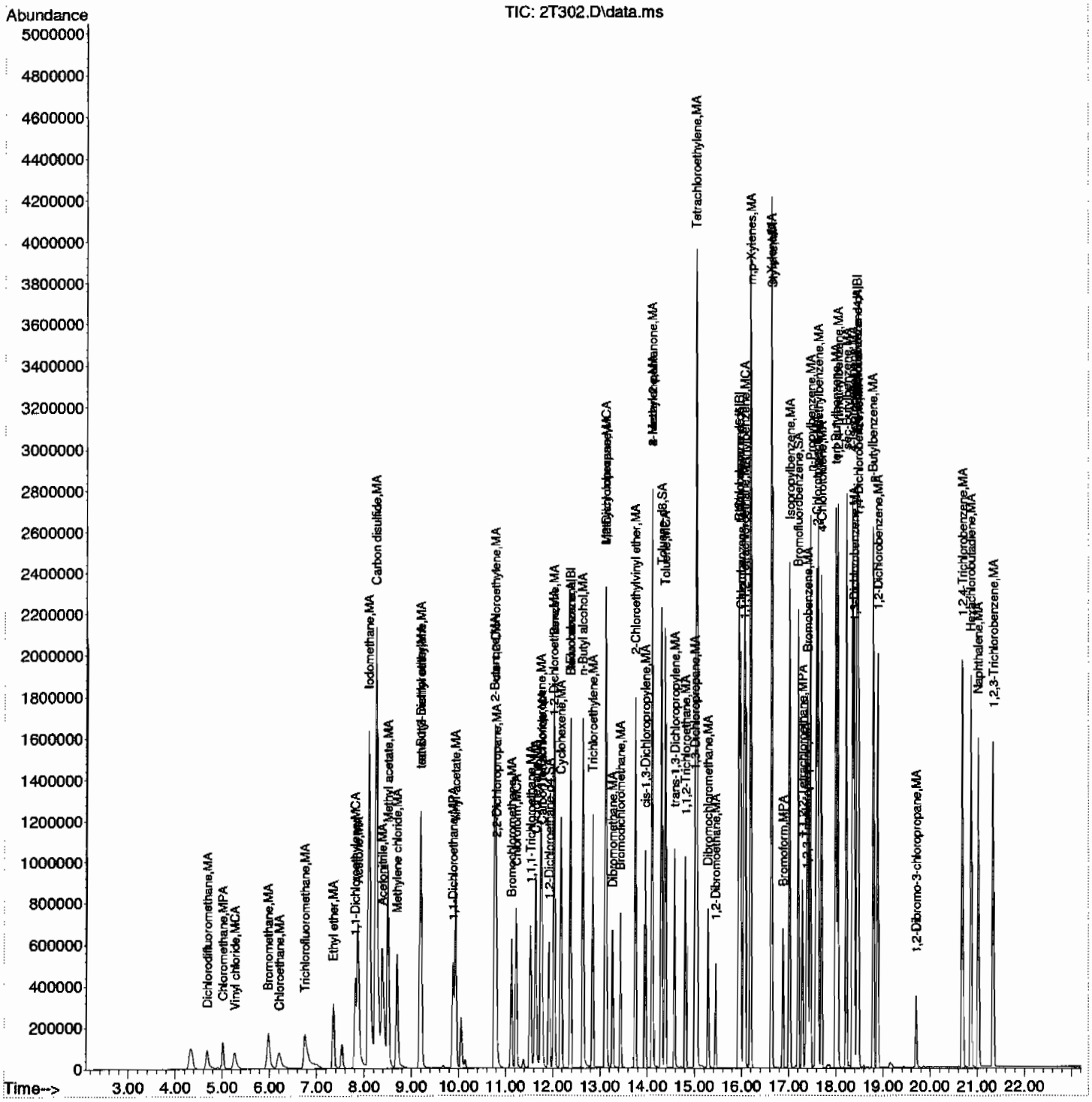

Continuing Calibration Summary

Client SDG: 09-2499

Instrument ID: VOA2.I **Injection Date** 08-JUL-09 08:10

Data File: 070809V2.b\2T304.D **Init. Cal. Date(s)** 01-JUL-09 10:53 - 01-JUL-09 19:36

Lab Sample ID UVM090701-08A **Quant Type** ISTD **Method:** 070809V2.b\VOA2-8260-070109.M

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.2804	0.285		.01		1.64051	60		Averaged
S	Toluene-d8	1.1749	1.172		.01		-0.24683	60		Averaged
S	Bromofluorobenzene	0.7862	0.813		.01		3.4088	60		Averaged
	Acrolein	0.0345	0.039		.01		13.04348	60		Averaged
	Trichlorotrifluoroethane	0.0628	0.061		.01		-2.86624	60		Averaged
	Allyl chloride	0.3493	0.311		.01		-10.96479	60		Averaged
	Acrylonitrile	0.0703	0.069		.01		-1.84922	60		Averaged
	2-Chloro-1,3-butadiene	0.2881	0.328		.01		13.84936	60		Averaged
	Propionitrile	0.0284	0.028		.01		-1.40845	60		Averaged
	Ethyl acetate	0.2075	0.205		.01		-1.20482	60		Averaged
	Methacrylonitrile	0.1249	0.127		.01		1.68135	60		Averaged
	Tetrahydrofuran	0.0668	0.066		.01		-1.1976	60		Averaged
	Isobutyl alcohol	0.0074	0.008		.01		8.10811	60		Averaged
	Methyl methacrylate	0.1218	0.132		.01		8.37438	60		Averaged
	1,4-Dioxane	0.0017	0.002		.01		17.64706	60		Averaged
	2-Nitropropane	0.0578	0.07		.01		21.10727	60		Averaged
	Ethyl methacrylate	0.2758	0.285		.01		3.33575	60		Averaged
	cis-1,4-Dichloro-2-butene	0.1574	0.173		.01		9.91105	60		Averaged
	Cyclohexanone	0.0593	0.073		.01		23.10287	60		Averaged
	trans-1,4-Dichloro-2-butene	0.1536	0.164		.01		6.77083	60		Averaged
	Pentachloroethane	250	441.05	250			76.42	60	*	Linear
	Benzyl chloride	0.8192	1.036		.01		26.46484	60		Averaged
	bis(2-Chloroisopropyl)ether	0.2668	0.268		.01		0.44978	60		Averaged

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T304.D
Acq On : 8 Jul 2009 8:10 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 11:56:55 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1615950	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1393144	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	857567	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1615950	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1393144	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	857567	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	460101	50.78 ug/L	0.00
43) Toluene-d8	14.310	98	1633401	49.90 ug/L	0.00
61) Bromofluorobenzene	17.204	95	697007	51.69 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	4.672		0m	N.D. d	
3) Chloromethane	4.999		0m	N.D. d	
4) Vinyl chloride	5.281		0m	N.D. d	
5) Bromomethane	5.980		0m	N.D. d	
6) Chloroethane	6.199		0m	N.D. d	
7) Trichlorofluoromethane	6.745		0m	N.D. d	
8) Ethyl ether	7.373		0m	N.D. d	
9) Acetone	7.835		0m	N.D. d	
10) 1,1-Dichloroethylene	7.824		0m	N.D. d	
11) Iodomethane	8.096		0m	N.D. d	
12) Acetonitrile	8.488		0m	N.D. d	
13) Methyl acetate	8.511		0m	N.D. d	
14) Carbon disulfide	8.239		0m	N.D. d	
15) Methylene chloride	8.701		0m	N.D. d	
16) tert-Butyl methyl ether	9.211		0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.199		0m	N.D. d	
18) Vinyl acetate	9.946		0m	N.D. d	
19) 1,1-Dichloroethane	9.875		0m	N.D. d	
20) 2-Butanone	10.848		0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.848		0m	N.D. d	
22) 2,2-Dichloropropane	10.800		0m	N.D. d	
23) Bromochloromethane	11.132		0m	N.D. d	
24) Chloroform	11.227		0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535		0m	N.D. d	
26) Cyclohexane	11.642		0m	N.D. d	
27) 1,1-Dichloropropene	11.796		0m	N.D. d	
28) Carbon tetrachloride	11.773		0m	N.D. d	
30) 1,2-Dichloroethane	12.022		0m	N.D. d	
31) Benzene	12.033		0m	N.D. d	
32) Cyclohexene	12.176		0m	N.D. d	
33) n-Butyl alcohol	12.650		0m	N.D. d	
34) Trichloroethylene	12.852		0m	N.D. d	
35) 1,2-Dichloropropane	13.124		0m	N.D. d	
36) Methylcyclohexane	13.124		0m	N.D. d	
37) Dibromomethane	13.267		0m	N.D. d	
38) Bromodichloromethane	13.433		0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	13.966		0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T304.D
Acq On : 8 Jul 2009 8:10 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 11:56:55 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 4-Methyl-2-pentanone	14.109		0m	N.D. d	
44) Toluene	14.381		0m	N.D. d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D. d	
46) 1,1,2-Trichloroethane	14.808		0m	N.D. d	
47) 2-Hexanone	14.109		0m	N.D. d	
48) 1,3-Dichloropropane	15.010		0m	N.D. d	
49) Tetrachloroethylene	15.034		0m	N.D. d	
50) Dibromochloromethane	15.283		0m	N.D. d	
51) 1,2-Dibromoethane	15.449		0m	N.D. d	
52) Chlorobenzene	15.982		0m	N.D. d	
53) 1,1,1,2-Tetrachloroethane	16.053		0m	N.D. d	
54) Ethylbenzene	16.065		0m	N.D. d	
55) m,p-Xylenes	16.196		0m	N.D. d	
56) o-Xylene	16.635		0m	N.D. d	
57) Styrene	16.646		0m	N.D. d	
59) Bromoform	16.884		0m	N.D. d	
60) Isopropylbenzene	17.026		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.299		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.382		0m	N.D. d	
64) Bromobenzene	17.405		0m	N.D. d	
65) n-Propylbenzene	17.465		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D. d	
67) 2-Chlorotoluene	17.595		0m	N.D. d	
68) 4-Chlorotoluene	17.702		0m	N.D. d	
69) tert-Butylbenzene	18.058		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	18.046		0m	N.D. d	
71) sec-Butylbenzene	18.235		0m	N.D. d	
72) 4-Isopropyltoluene	18.366		0m	N.D. d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D. d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D. d	
75) n-Butylbenzene	18.805		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.899		0m	N.D. d	
77) 1,2-Dibromo-3-chloropr...	19.706		0m	N.D. d	
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D. d	
79) Hexachlorobutadiene	20.868		0m	N.D. d	
80) Naphthalene	21.022		0m	N.D. d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D. d	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	7.575	56	312343	280.24 ug/L	99
86) Trichlorotrifluoroethane	7.847	85	490415	241.46 ug/L	100
87) Isopropyl Alcohol	0.000		0m	N.D. d	
88) Allyl chloride	8.488	41	2515121	222.79 ug/L	99
89) tert-Butyl Alcohol	8.879	59	132	N.D.	
90) Acrylonitrile	9.092	53	560958	247.01 ug/L	99
91) Isopropyl ether	10.041	45	157	N.D.	
92) 2-Chloro-1,3-butadiene	10.041	53	530600	56.99 ug/L	96
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.848	43	1652481	246.40 ug/L	100
95) Propionitrile	10.836	54	224723	245.11 ug/L	100
96) Methacrylonitrile	11.073	41	1027848	254.58 ug/L	100
97) Tetrahydrofuran	11.203	42	534408	247.58 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T304.D
Acq On : 8 Jul 2009 8:10 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 11:56:55 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
98)	Isobutyl alcohol	11.796	41	640019	2667.02 ug/L	99	
99)	Methyl tert-amyl ether	12.164	73	962	N.D.		
100)	Methyl methacrylate	13.196	69	1063201	270.16 ug/L	100	
101)	1,4-Dioxane	13.255	88	152471	2856.55 ug/L	99	
102)	2-Nitropropane	13.682	43	568781	304.49 ug/L	100	E
104)	Ethyl methacrylate	14.642	69	1983535	258.10 ug/L	100	
106)	1-Chlorohexane	0.000		0m	N.D. d		
107)	cis-1,4-Dichloro-2-butene	17.050	53	743295	275.29 ug/L	99	
108)	Cyclohexanone	17.144	42	1557109	1529.77 ug/L	98	
109)	trans-1,4-Dichloro-2-b...	17.358	53	704034	267.30 ug/L	99	
110)	Pentachloroethane	18.058	167	1323913	441.05 ug/L	97	
111)	Benzyl chloride	18.603	91	4442431	316.17 ug/L	99	
112)	bis(2-Chloroisopropyl)...	19.006	45	1150923	251.56 ug/L	98	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T304.D
Acq On : 8 Jul 2009 8:10 am
Operator : CDS1
InstName : VOA2
Sample : |UVM090701-08A|CCV|1|VOAF|1|VOA8260BLF|
Misc : VSTD250S LCS 5ML MIX [B]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 11:56:55 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

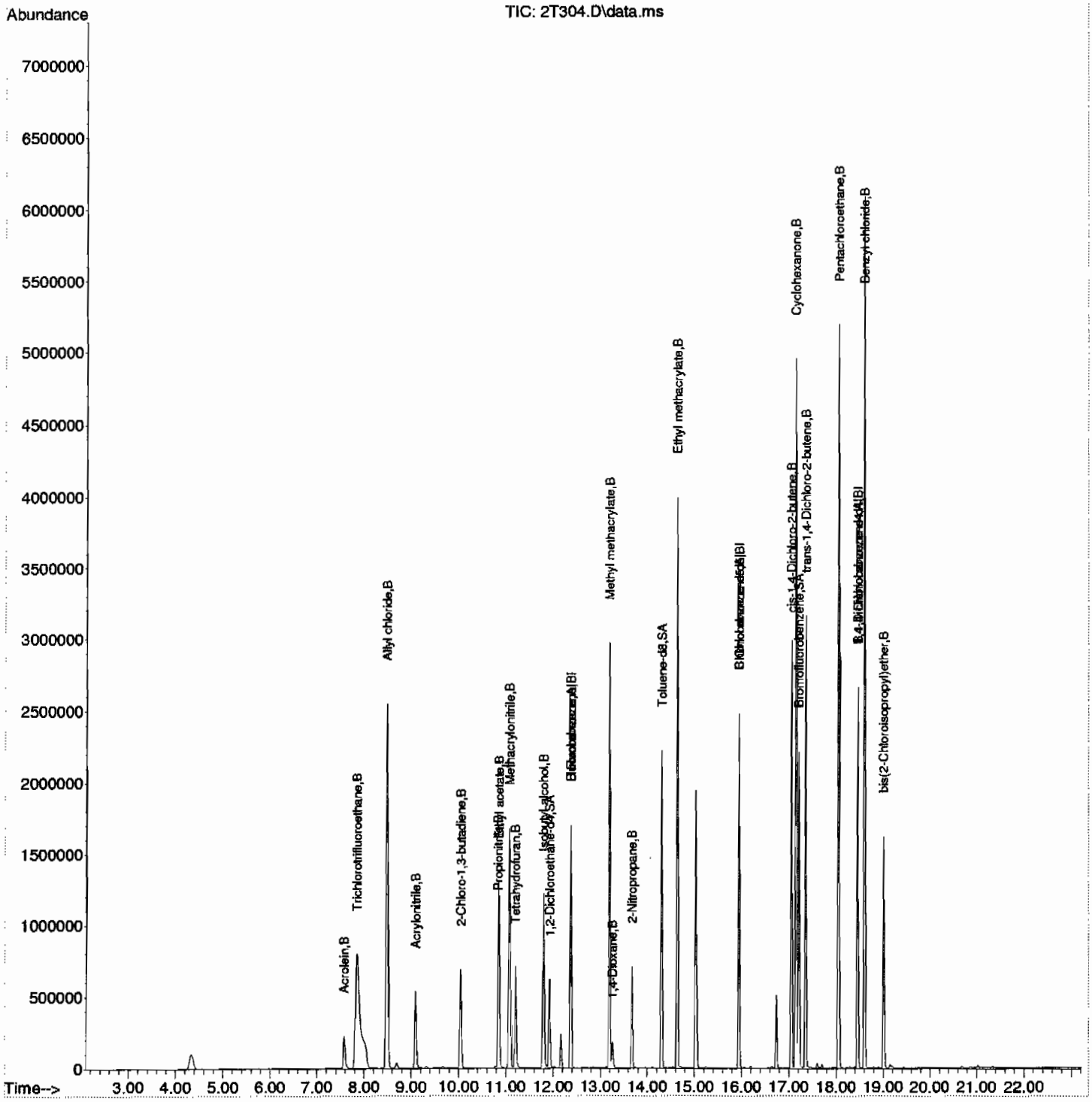

Quality Control Data

Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070109V2.b\
Data File : 2S301.D
Acq On : 1 Jul 2009 9:58 am
Operator : CDS1
Sample : |UVM090604-02|BFB|1|VOAF|1|
Misc : BFB01
ALS Vial : 1 Sample Multiplier: 1

Integration File: default.P

Method : C:\msdchem\1\DATA\070109V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B
Last Update : Tue Jul 14 15:00:31 2009

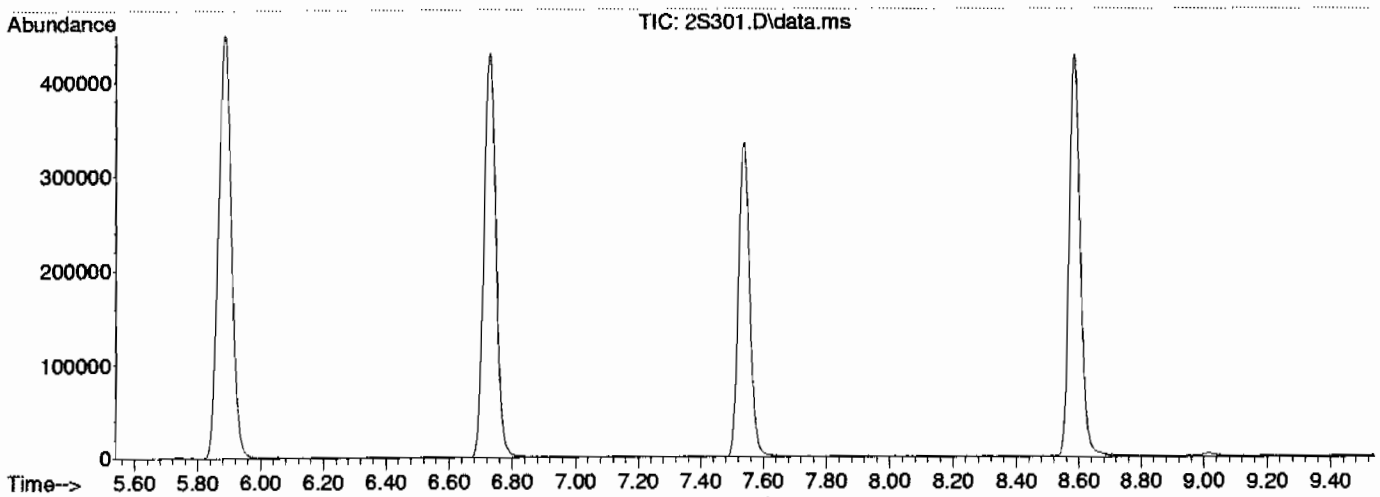

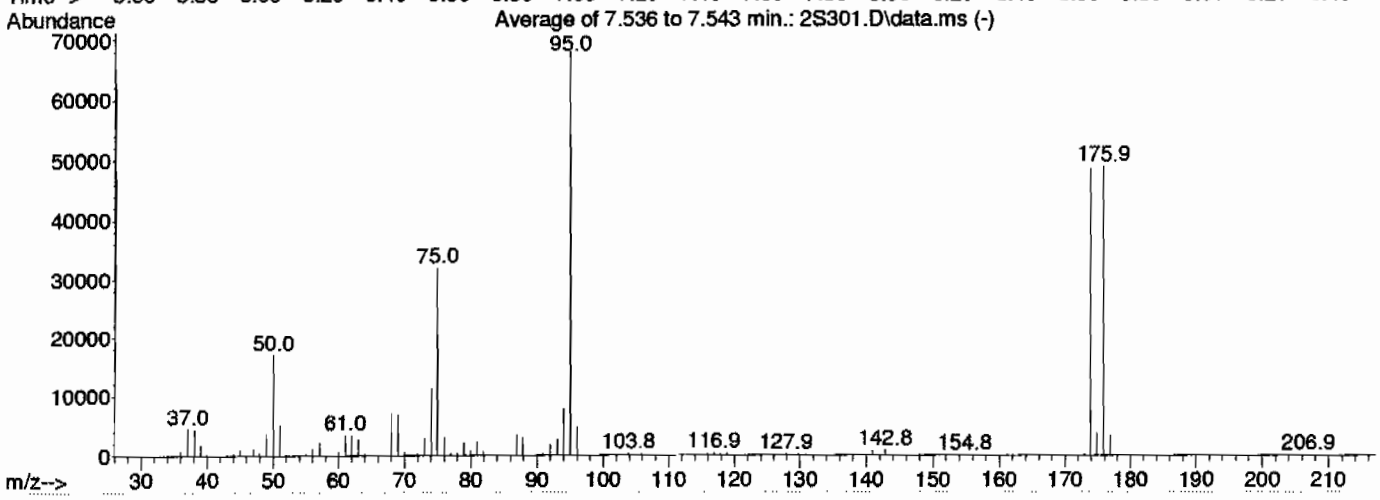

Spectrum Information: Average of 7.536 to 7.543 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.2	17106	PASS
75	95	30	60	47.2	32032	PASS
95	95	100	100	100.0	67893	PASS
96	95	5	9	7.0	4730	PASS
173	174	0.00	2	0.6	275	PASS
174	95	50	100	71.5	48512	PASS
175	174	5	9	7.6	3684	PASS
176	174	95	101	100.6	48792	PASS
177	176	5	9	6.8	3312	PASS

Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T201.D
Acq On : 7 Jul 2009 6:41 am
Operator : CDS1
Sample : |UVM090604-02|BFB|1|VOAF|1|
Misc : BFB01
ALS Vial : 1 Sample Multiplier: 1

Integration File: default.P

Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B
Last Update : Thu Jul 02 10:08:36 2009

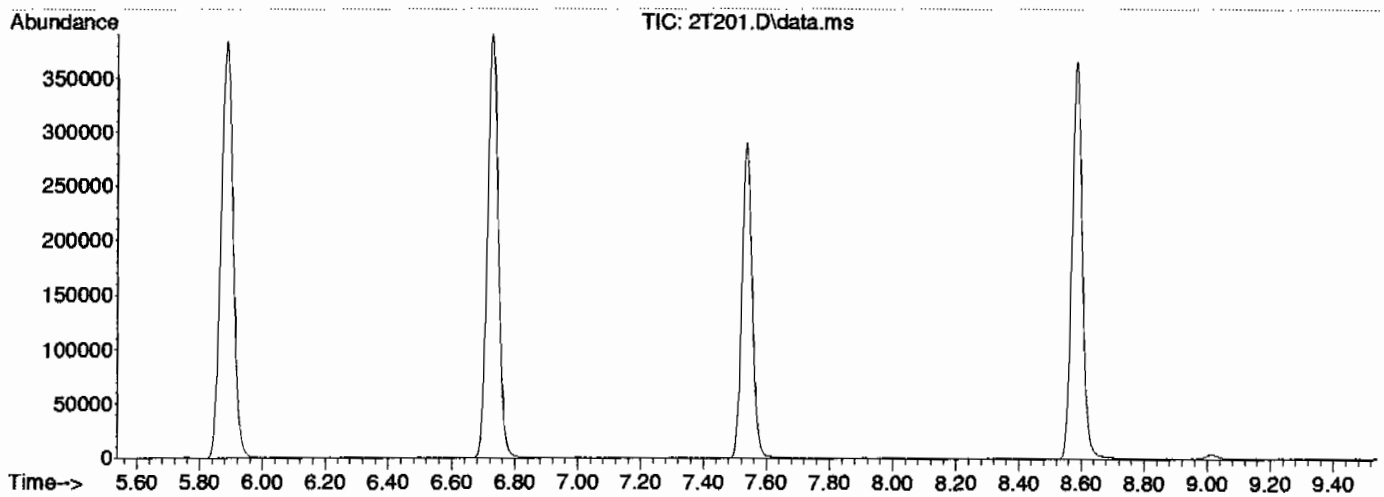

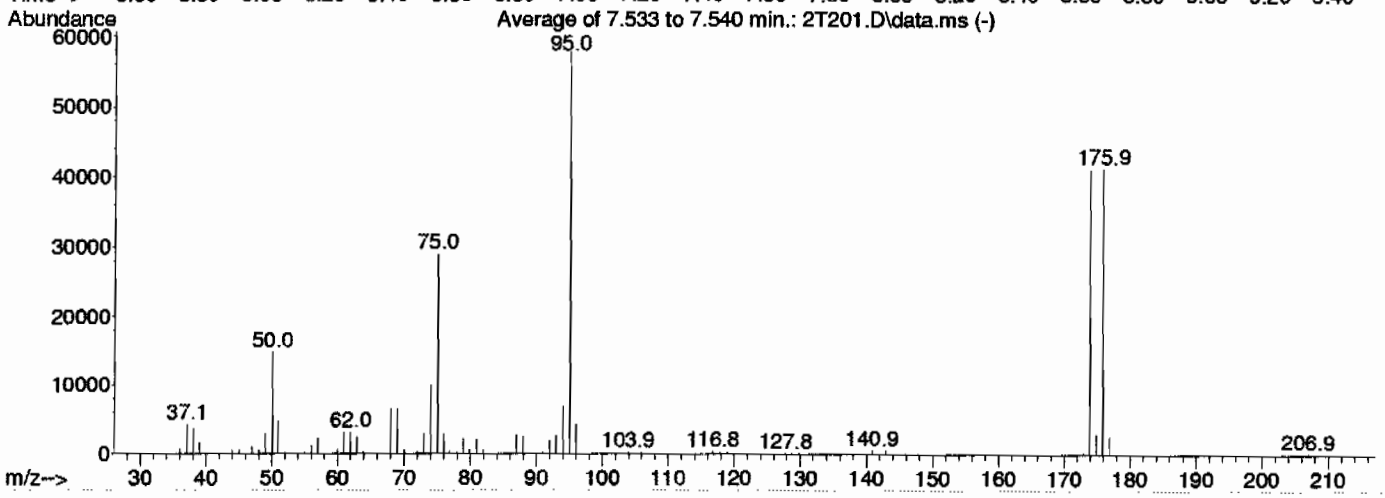

Spectrum Information: Average of 7.533 to 7.540 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.7	14882	PASS
75	95	30	60	50.2	29019	PASS
95	95	100	100	100.0	57832	PASS
96	95	5	9	7.3	4223	PASS
173	174	0.00	2	0.7	288	PASS
174	95	50	100	71.0	41037	PASS
175	174	5	9	7.2	2960	PASS
176	174	95	101	100.5	41253	PASS
177	176	5	9	6.3	2591	PASS

Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T301.D
Acq On : 8 Jul 2009 6:40 am
Operator : CDS1
Sample : |UVM090604-02|BFB|1|VOAF|1|
Misc : BFB01
ALS Vial : 1 Sample Multiplier: 1

Integration File: default.P

Method : C:\msdchem\1\DATA\070609V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B
Last Update : Thu Jul 02 10:08:36 2009

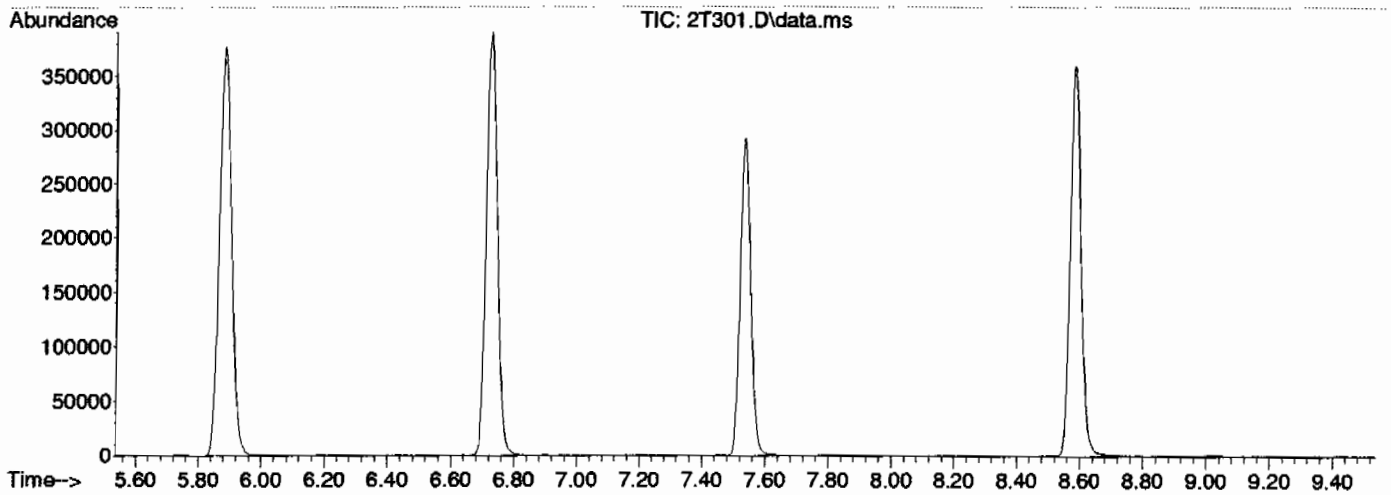

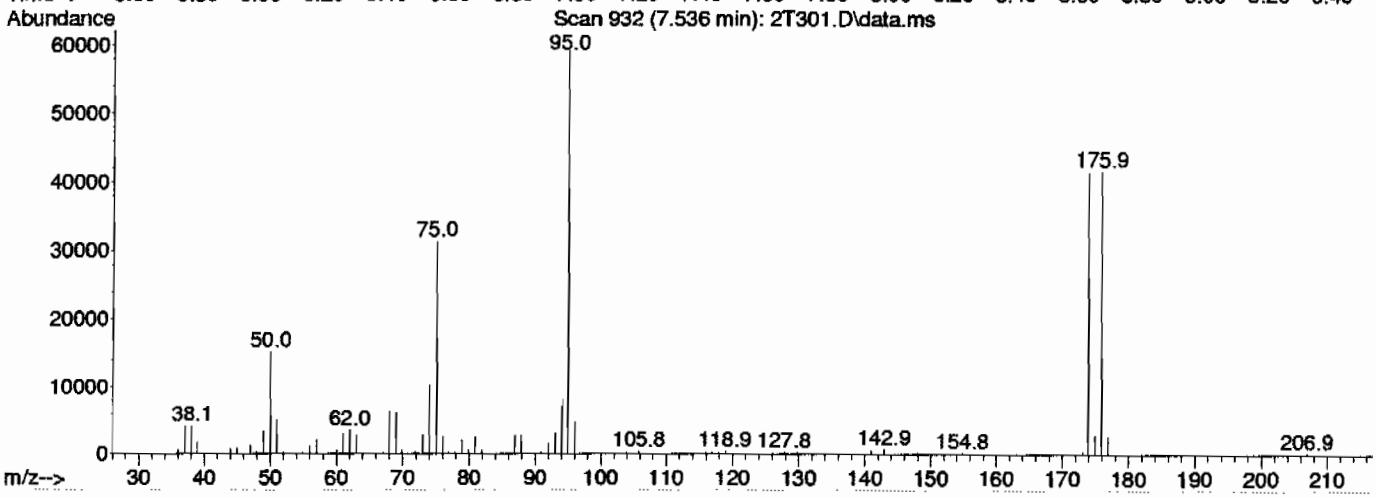

Spectrum Information: Scan 932

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.7	15214	PASS
75	95	30	60	52.9	31328	PASS
95	95	100	100	100.0	59176	PASS
96	95	5	9	8.0	4729	PASS
173	174	0.00	2	0.9	371	PASS
174	95	50	100	70.0	41400	PASS
175	174	5	9	6.9	2868	PASS
176	174	95	101	100.5	41624	PASS
177	176	5	9	6.6	2752	PASS

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			**Matrix:**	SOIL
Lab Sample ID:	1201875762				
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 883079	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 10:03	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T208BS2.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			**Matrix:**	SOIL
Lab Sample ID:	1201875762				
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 883079	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 10:03	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T208BS2.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	4.33	10	ug/kg		J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS2.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
InstName : VOA2
Sample : |1201875762|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 11:20:19 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.389	96	1640166	50.00 ug/L	0.01
41) Chlorobenzene-d5	15.947	117	1393088	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	851929	50.00 ug/L	0.00
82) B Fluorobenzene	12.389	96	1640166	50.00 ug/L	0.01
103) B Chlorobenzene-d5	15.947	117	1393088	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	851929	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	468957	50.99 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 101.98%		
43) Toluene-d8	14.310	98	1613891	49.30 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 98.60%		
61) Bromofluorobenzene	17.204	95	671161	50.11 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 100.22%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	0.000		0	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.954	43	3589	N.D.	
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	8.096	142	327	N.D.	
12) Acetonitrile	8.452	41	1866	N.D.	
13) Methyl acetate	8.535	43	403	N.D.	
14) Carbon disulfide	8.251	76	2143	N.D.	
15) Methylene chloride	8.701	84	13837	Below Cal	98
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	9.958	43	502	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	1016	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.239	83	561	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.950	62	295	N.D.	
31) Benzene	12.045	78	662	N.D.	
32) Cyclohexene	12.389	67	292	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	0.000		0	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS2.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
InstName : VOA2
Sample : |1201875762|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 11:20:19 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	0.000		0	N.D.	
42) 4-Methyl-2-pentanone	0.000		0m	N.D.	d
44) Toluene	14.393	91	1389	N.D.	
45) trans-1,3-Dichloroprop...	0.000		0	N.D.	
46) 1,1,2-Trichloroethane	0.000		0	N.D.	
47) 2-Hexanone	14.310	43	7372	N.D.	
48) 1,3-Dichloropropane	0.000		0	N.D.	
49) Tetrachloroethylene	0.000		0	N.D.	
50) Dibromochloromethane	0.000		0	N.D.	
51) 1,2-Dibromoethane	0.000		0	N.D.	
52) Chlorobenzene	15.982	112	818	N.D.	
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	
54) Ethylbenzene	16.196	91	952	N.D.	
55) m,p-Xylenes	16.196	106	394	N.D.	
56) o-Xylene	0.000		0	N.D.	
57) Styrene	16.646	104	441	N.D.	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.026	105	110	N.D.	
62) 1,1,2,2-Tetrachloroethane	17.204	83	243	N.D.	
63) 1,2,3-Trichloropropane	17.204	110	238	N.D.	
64) Bromobenzene	17.417	156	431	N.D.	
65) n-Propylbenzene	17.465	91	361	N.D.	
66) 1,3,5-Trimethylbenzene	0.000		0	N.D.	
67) 2-Chlorotoluene	17.702	91	1209	N.D.	
68) 4-Chlorotoluene	17.702	91	1209	N.D.	
69) tert-Butylbenzene	0.000		0	N.D.	
70) 1,2,4-Trimethylbenzene	18.081	105	550	N.D.	
71) sec-Butylbenzene	18.081	105	550	N.D.	
72) 4-Isopropyltoluene	18.366	119	246	N.D.	
73) 1,3-Dichlorobenzene	18.401	146	1027	N.D.	
74) 1,4-Dichlorobenzene	18.401	146	1027	N.D.	
75) n-Butylbenzene	18.793	91	389	N.D.	
76) 1,2-Dichlorobenzene	18.900	146	698	N.D.	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690	180	773	N.D.	
79) Hexachlorobutadiene	0.000		0	N.D.	
80) Naphthalene	21.022	128	2259	N.D.	
81) 1,2,3-Trichlorobenzene	21.342	180	568	N.D.	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	0.000		0	N.D.	
86) Trichlorotrifluoroethane	0.000		0	N.D.	
87) Isopropyl Alcohol	0.000		0	N.D.	
88) Allyl chloride	8.452	41	1866	N.D.	
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	9.116	53	264	N.D.	
91) Isopropyl ether	0.000		0	N.D.	
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.	
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.871	43	490	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS2.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
InstName : VOA2
Sample : |1201875762|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 11:20:19 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units Dev(Min)
95) Propionitrile	0.000		0	N.D.
96) Methacrylonitrile	11.085	41	609	N.D.
97) Tetrahydrofuran	11.239	42	1451	N.D.
98) Isobutyl alcohol	11.927	41	110	N.D.
99) Methyl tert-amyl ether	0.000		0m	N.D. d
100) Methyl methacrylate	0.000		0	N.D.
101) 1,4-Dioxane	0.000		0	N.D.
102) 2-Nitropropane	0.000		0	N.D.
104) Ethyl methacrylate	0.000		0	N.D.
106) 1-Chlorohexane	0.000		0m	N.D. d
107) cis-1,4-Dichloro-2-butene	17.050	53	357	N.D.
108) Cyclohexanone	17.144	42	340	N.D.
109) trans-1,4-Dichloro-2-b...	17.358	53	709	N.D.
110) Pentachloroethane	0.000		0	N.D.
111) Benzyl chloride	18.603	91	1969	N.D.
112) bis(2-Chloroisopropyl)...	19.006	45	313	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS2.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
InstName : VOA2
Sample : |1201875762|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 11:20:19 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

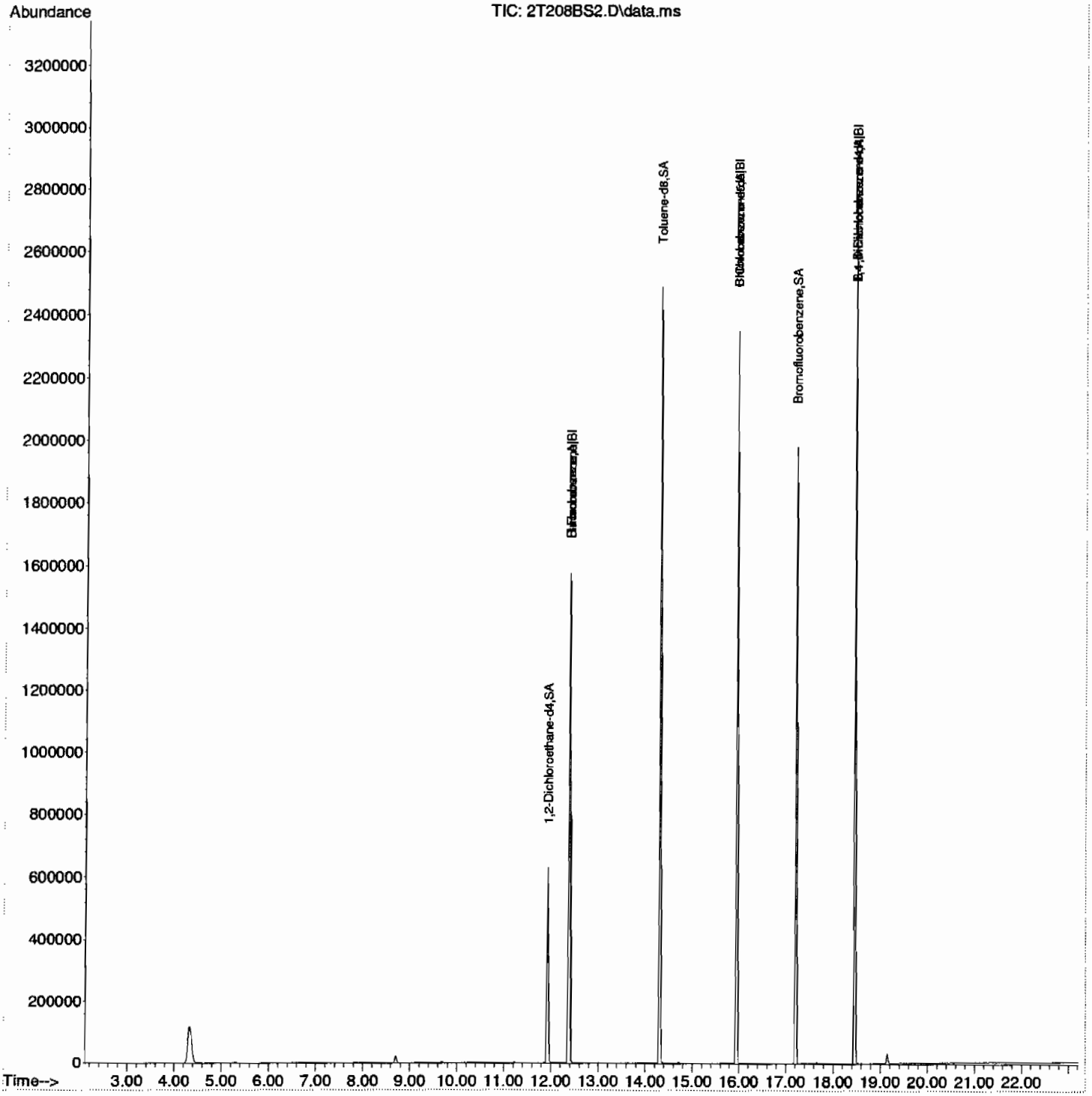

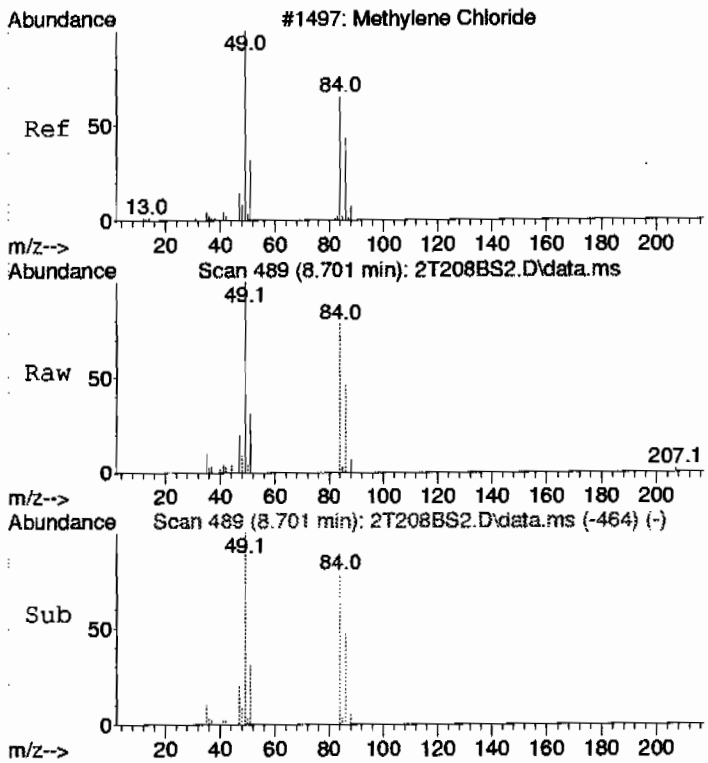

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T208BS2.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 84 Resp: 13837

Ion	Ratio	Lower	Upper
84	100		
86	64.3	33.8	93.8
49	138.1	105.0	165.0

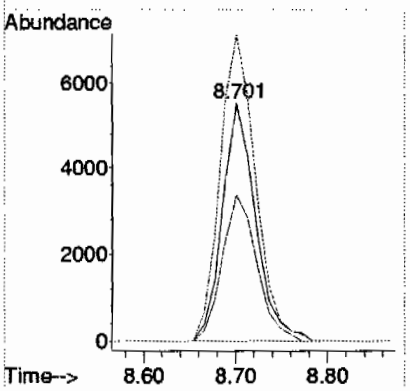

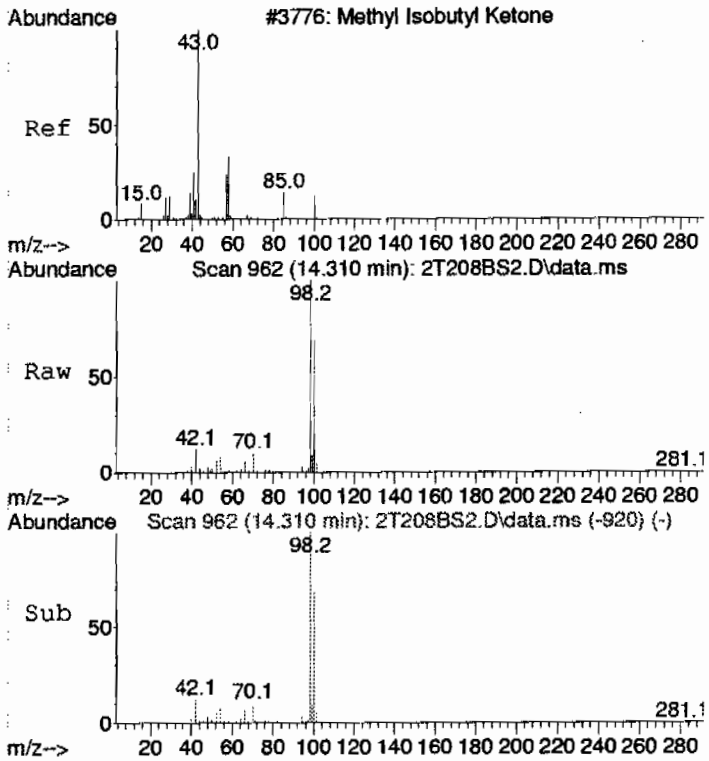

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.24 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T208BS2.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 58 Resp: 12919

Ion	Ratio	Lower	Upper
58	100		
43	57.1	245.2	305.2#
100	8561.9	7.2	67.2#

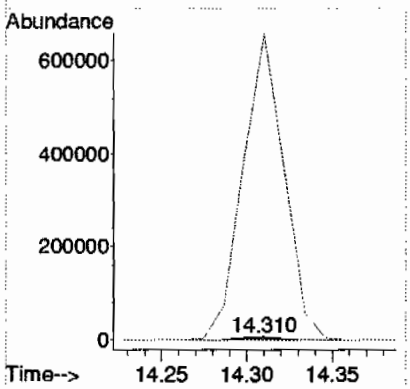

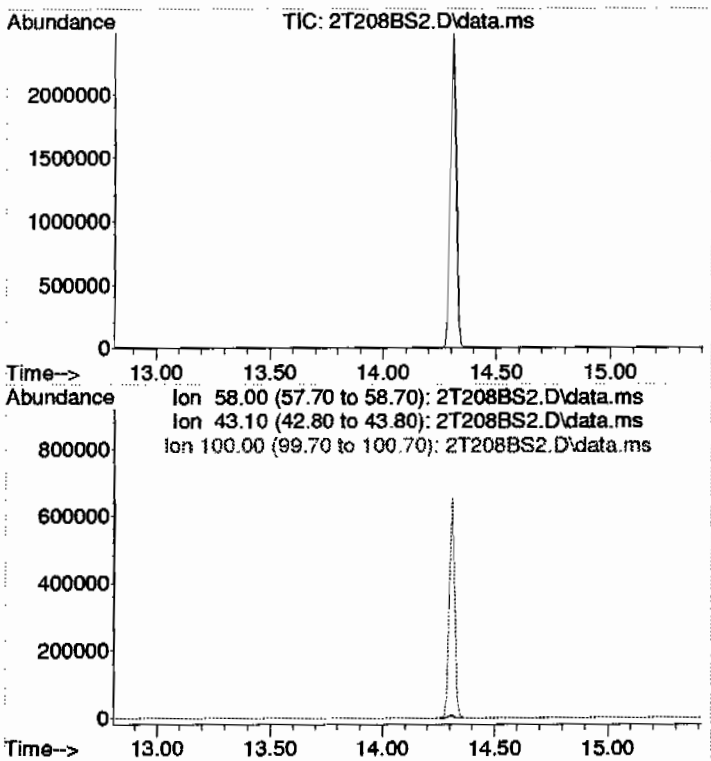

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T208BS2.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

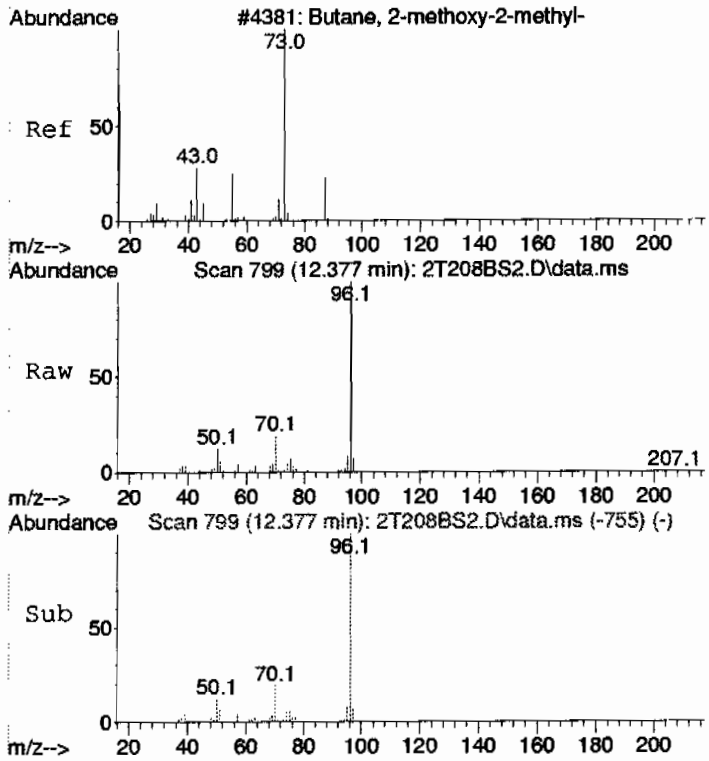

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.97 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T208BS2.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 73 Resp: 17847

Ion	Ratio	Lower	Upper
73	100		
55	7.0	5.2	65.2
87	0.0	0.0	54.7

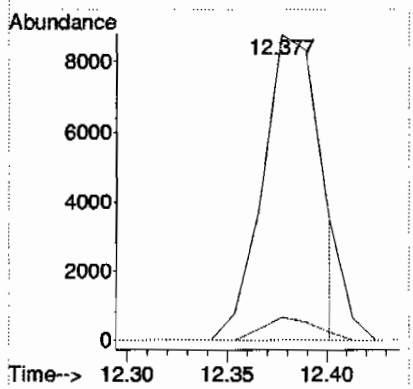

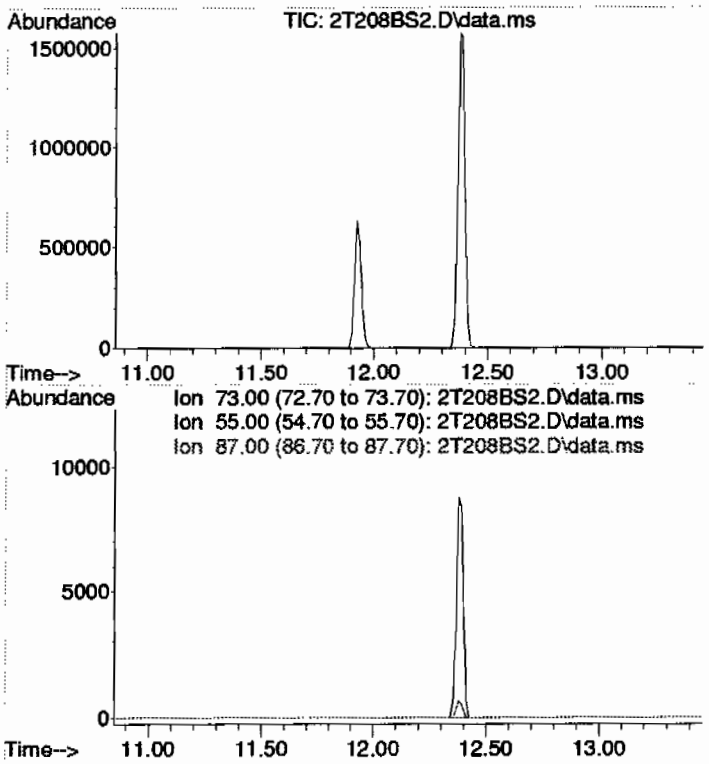

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T208BS2.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

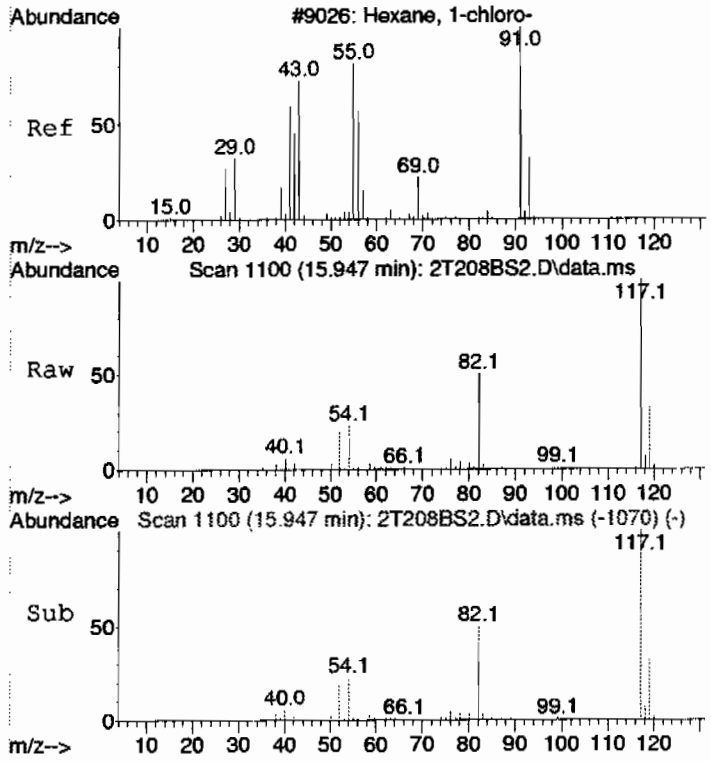

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 1.90 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T208BS2.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 55 Resp: 12735

Ion	Ratio	Lower	Upper
55	100		
91	19.8	113.2	173.2#
56	59.4	30.3	90.3

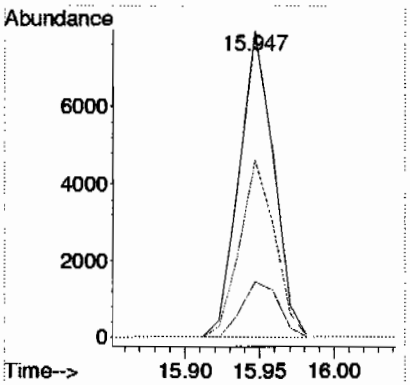

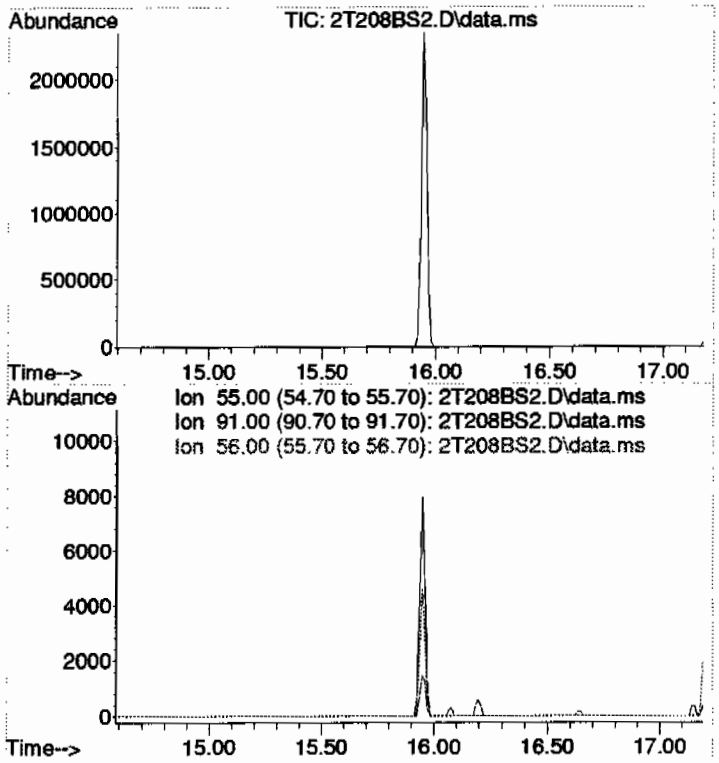

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T208BS2.D
Acq: 7 Jul 2009 10:03 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS2.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
Sample : |1201875762|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T208.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.330	143	151	170	rBB	117885	674333	14.65%	3.084%
2	4.687	172	175	178	rBB	250	589	0.01%	0.003%
3	5.103	191	203	205	rBV	192	2004	0.04%	0.009%
4	6.021	261	263	271	rBV2	827	5113	0.11%	0.023%
5	6.365	289	292	299	rBV3	896	3088	0.07%	0.014%
6	7.954	421	426	438	rBV3	1097	6799	0.15%	0.031%
7	8.251	448	451	457	rVB2	1090	3019	0.07%	0.014%
8	8.701	484	489	504	rVB	23280	60768	1.32%	0.278%
9	9.674	568	571	576	rVB	4261	11274	0.24%	0.052%
10	11.239	699	703	718	rBV3	2380	6631	0.14%	0.030%
11	11.927	756	761	780	rVB	630831	1305694	28.37%	5.971%
12	12.377	793	799	815	rVB	1574733	3359422	73.00%	15.362%
13	13.018	851	853	857	rVB2	1449	2506	0.05%	0.011%
14	14.310	957	962	976	rVB	2487723	4289081	93.20%	19.613%
15	14.713	992	996	1005	rVB	5208	11751	0.26%	0.054%
16	15.947	1096	1100	1113	rVB	2349633	3950196	85.84%	18.063%
17	16.196	1119	1121	1128	rVB	934	2081	0.05%	0.010%
18	16.646	1156	1159	1168	rBV	1076	2110	0.05%	0.010%
19	17.061	1191	1194	1199	rVB	1172	2078	0.05%	0.010%
20	17.204	1199	1206	1217	rBV	1979477	3481355	75.65%	15.919%
21	17.358	1217	1219	1222	rVV	2526	3152	0.07%	0.014%
22	17.405	1222	1223	1226	rVB	1482	1851	0.04%	0.008%
23	17.654	1241	1244	1247	rBV	5579	7821	0.17%	0.036%
24	18.461	1306	1312	1321	rVB	2783615	4601993	100.00%	21.044%
25	19.149	1367	1370	1390	rBV2	32897	73823	1.60%	0.338%

Sum of corrected areas: 21868532

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS2.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
Sample : |1201875762|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

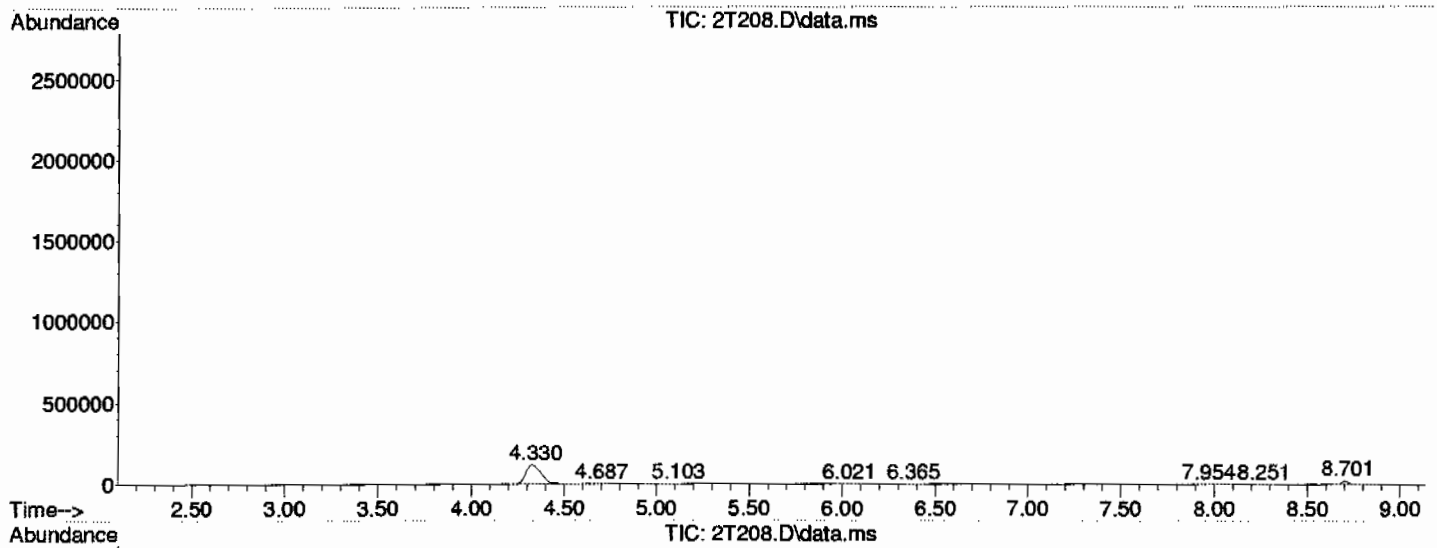

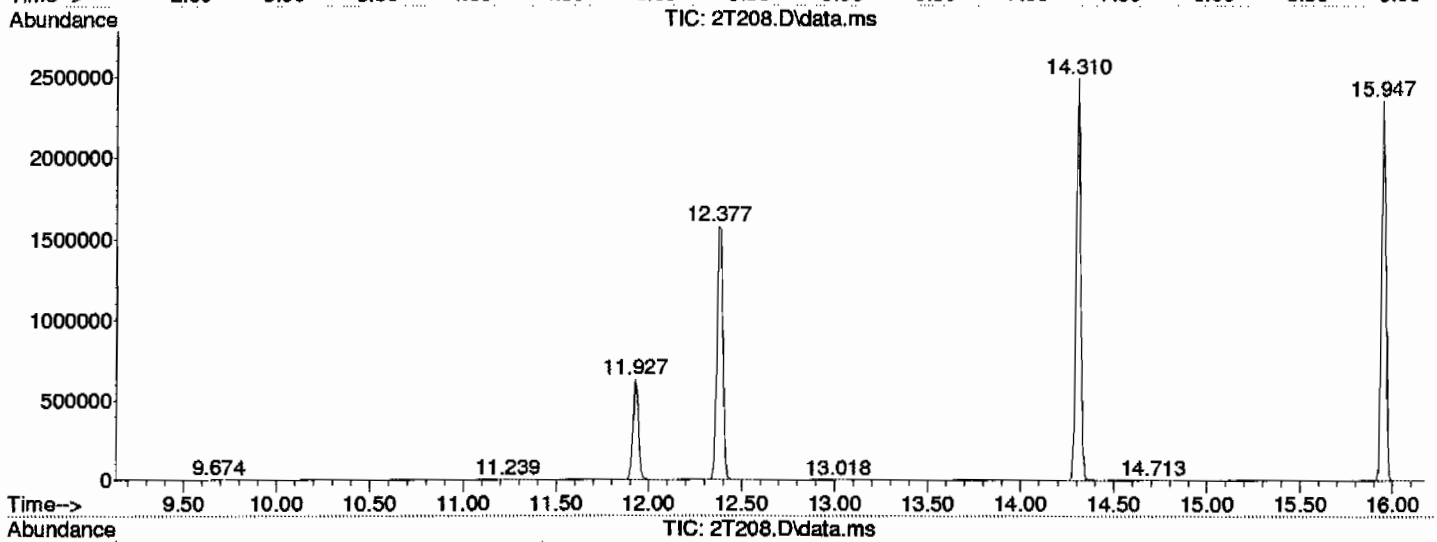

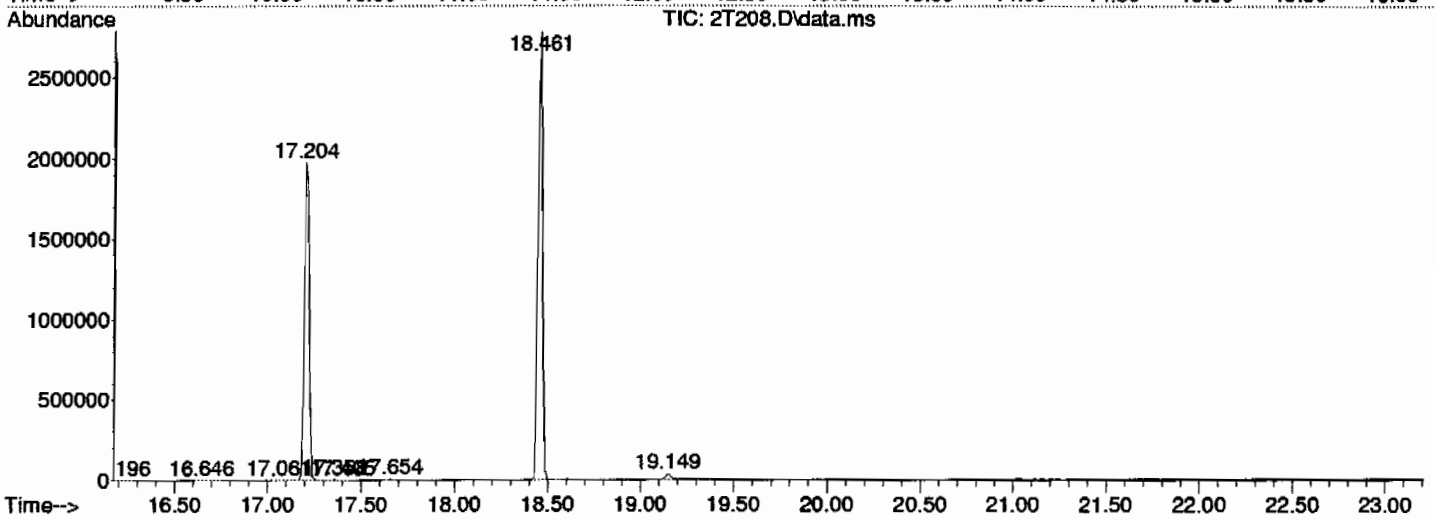

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS2.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
Sample : |1201875762|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 Unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.330	10.04 ug/L	674333	Fluorobenzene	12.389

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Formic acid	46	CH2O2	000064-18-6	3

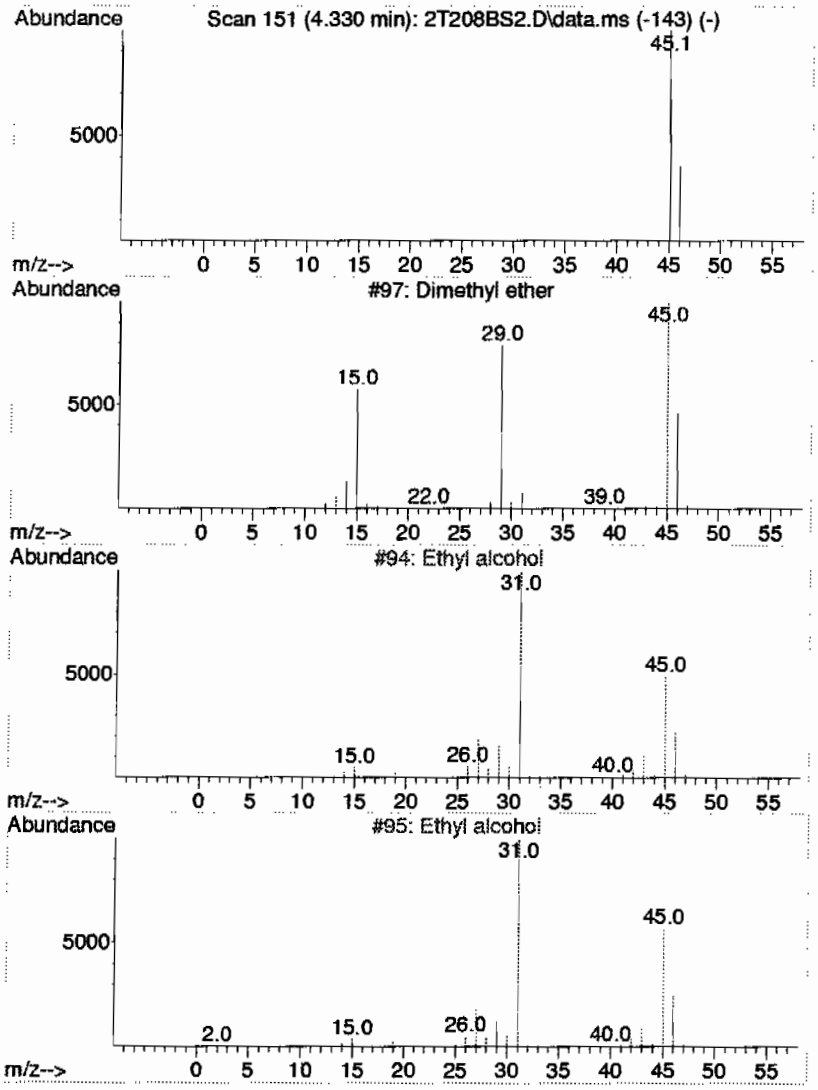

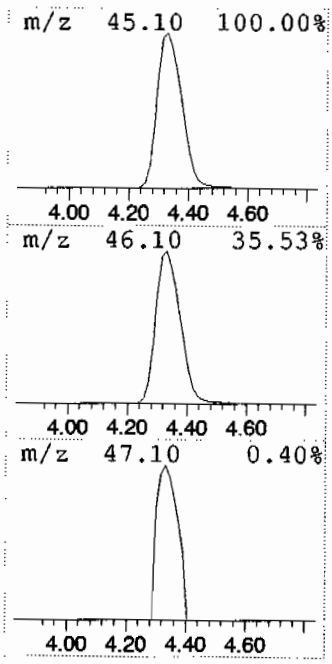

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T208BS2.D
Acq On : 7 Jul 2009 10:03 am
Operator : CDS1
Sample : |1201875762|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	|--Internal Standard---| #	RT	Resp	Conc|
Jnknown	4.330	10.0	ug/L	674333	1	12.389	3359420	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			Matrix:	SOIL
Lab Sample ID:	1201876839				
Client Sample:	QC for batch 883079	Client:	LANL010	Project:	QC
Client ID:	MB for batch 883079	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 09:37	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/08/2009 06:00	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070809V2.b\2T307BS1.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			**Matrix:**	SOIL
Lab Sample ID:	1201876839				
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 883079	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 09:37	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T307BS1.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	unknown	4.33	ug/kg	0	J

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T307BS1.D
Acq On : 8 Jul 2009 9:37 am
Operator : CDS1
InstName : VOA2
Sample : |1201876839|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 12:01:09 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorobenzene	12.377	96	1567926	50.00 ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1341767	50.00 ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	819758	50.00 ug/L	0.00
82) B Fluorobenzene	12.377	96	1567926	50.00 ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1341767	50.00 ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	819758	50.00 ug/L	0.00
System Monitoring Compounds					
29) 1,2-Dichloroethane-d4	11.927	65	456508	51.92 ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 103.84%		
43) Toluene-d8	14.310	98	1552732	49.25 ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 98.50%		
61) Bromofluorobenzene	17.204	95	647636	50.25 ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 100.50%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	0.000		0	N.D.	
4) Vinyl chloride	0.000		0	N.D.	
5) Bromomethane	0.000		0	N.D.	
6) Chloroethane	0.000		0	N.D.	
7) Trichlorofluoromethane	0.000		0	N.D.	
8) Ethyl ether	0.000		0	N.D.	
9) Acetone	7.930	43	4335	N.D.	
10) 1,1-Dichloroethylene	0.000		0	N.D.	
11) Iodomethane	8.108	142	610	N.D.	
12) Acetonitrile	8.452	41	1214	N.D.	
13) Methyl acetate	8.559	43	107	N.D.	
14) Carbon disulfide	8.251	76	1604	N.D.	
15) Methylene chloride	8.701	84	16923	Below Cal	99
16) tert-Butyl methyl ether	0.000		0	N.D.	
17) trans-1,2-Dichloroethy...	0.000		0	N.D.	
18) Vinyl acetate	0.000		0	N.D.	
19) 1,1-Dichloroethane	0.000		0	N.D.	
20) 2-Butanone	10.800	43	889	N.D.	
21) cis-1,2-Dichloroethylene	0.000		0	N.D.	
22) 2,2-Dichloropropane	0.000		0	N.D.	
23) Bromochloromethane	0.000		0	N.D.	
24) Chloroform	11.239	83	390	N.D.	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	
26) Cyclohexane	0.000		0	N.D.	
27) 1,1-Dichloropropene	0.000		0	N.D.	
28) Carbon tetrachloride	0.000		0	N.D.	
30) 1,2-Dichloroethane	11.939	62	371	N.D.	
31) Benzene	12.045	78	349	N.D.	
32) Cyclohexene	12.377	67	323	N.D.	
33) n-Butyl alcohol	0.000		0	N.D.	
34) Trichloroethylene	0.000		0	N.D.	
35) 1,2-Dichloropropane	0.000		0	N.D.	
36) Methylcyclohexane	13.018	83	112	N.D.	
37) Dibromomethane	0.000		0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T307BS1.D
Acq On : 8 Jul 2009 9:37 am
Operator : CDS1
InstName : VOA2
Sample : |1201876839|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 12:01:09 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units Dev(Min)
38) Bromodichloromethane	0.000		0	N.D.
39) 2-Chloroethylvinyl ether	0.000		0	N.D.
40) cis-1,3-Dichloropropylene	0.000		0	N.D.
42) 4-Methyl-2-pentanone	0.000		0m	N.D. d
44) Toluene	14.381	91	1179	N.D.
45) trans-1,3-Dichloroprop...	0.000		0	N.D.
46) 1,1,2-Trichloroethane	0.000		0	N.D.
47) 2-Hexanone	14.310	43	7180	N.D.
48) 1,3-Dichloropropane	0.000		0	N.D.
49) Tetrachloroethylene	15.034	164	118	N.D.
50) Dibromochloromethane	0.000		0	N.D.
51) 1,2-Dibromoethane	0.000		0	N.D.
52) Chlorobenzene	15.982	112	593	N.D.
53) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.
54) Ethylbenzene	16.196	91	756	N.D.
55) m,p-Xylenes	16.184	106	320	N.D.
56) o-Xylene	0.000		0	N.D.
57) Styrene	16.646	104	307	N.D.
59) Bromoform	0.000		0	N.D.
60) Isopropylbenzene	17.204	105	687	N.D.
62) 1,1,2,2-Tetrachloroethane	17.204	83	131	N.D.
63) 1,2,3-Trichloropropane	17.216	110	115	N.D.
64) Bromobenzene	17.417	156	300	N.D.
65) n-Propylbenzene	17.465	91	153	N.D.
66) 1,3,5-Trimethylbenzene	0.000		0	N.D.
67) 2-Chlorotoluene	17.702	91	755	N.D.
68) 4-Chlorotoluene	17.702	91	755	N.D.
69) tert-Butylbenzene	0.000		0	N.D.
70) 1,2,4-Trimethylbenzene	18.069	105	431	N.D.
71) sec-Butylbenzene	18.069	105	431	N.D.
72) 4-Isopropyltoluene	18.366	119	123	N.D.
73) 1,3-Dichlorobenzene	18.401	146	830	N.D.
74) 1,4-Dichlorobenzene	18.484	146	1683	N.D.
75) n-Butylbenzene	18.805	91	244	N.D.
76) 1,2-Dichlorobenzene	18.899	146	549	N.D.
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.
78) 1,2,4-Trichlorobenzene	20.690	180	644	N.D.
79) Hexachlorobutadiene	0.000		0	N.D.
80) Naphthalene	21.022	128	1741	N.D.
81) 1,2,3-Trichlorobenzene	21.342	180	453	N.D.
83) Chlorotrifluoroethylene	0.000		0	N.D.
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.
85) Acrolein	0.000		0	N.D.
86) Trichlorotrifluoroethane	0.000		0	N.D.
87) Isopropyl Alcohol	0.000		0	N.D.
88) Allyl chloride	8.452	41	1214	N.D.
89) tert-Butyl Alcohol	0.000		0	N.D.
90) Acrylonitrile	9.116	53	235	N.D.
91) Isopropyl ether	0.000		0	N.D.
92) 2-Chloro-1,3-butadiene	0.000		0	N.D.
93) Ethyl tert-butyl ether	0.000		0	N.D.
94) Ethyl acetate	10.871	43	470	N.D.

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T307BS1.D
Acq On : 8 Jul 2009 9:37 am
Operator : CDS1
InstName : VOA2
Sample : |1201876839|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 12:01:09 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units Dev(Min)
95) Propionitrile	0.000		0	N.D.
96) Methacrylonitrile	11.097	41	317	N.D.
97) Tetrahydrofuran	11.239	42	863	N.D.
98) Isobutyl alcohol	0.000		0	N.D.
99) Methyl tert-amyl ether	0.000		0m	N.D. d
100) Methyl methacrylate	13.196	69	115	N.D.
101) 1,4-Dioxane	0.000		0	N.D.
102) 2-Nitropropane	0.000		0	N.D.
104) Ethyl methacrylate	0.000		0	N.D.
106) 1-Chlorohexane	0.000		0m	N.D. d
107) cis-1,4-Dichloro-2-butene	17.061	53	433	N.D.
108) Cyclohexanone	17.144	42	365	N.D.
109) trans-1,4-Dichloro-2-b...	17.358	53	671	N.D.
110) Pentachloroethane	0.000		0	N.D.
111) Benzyl chloride	18.603	91	1822	N.D.
112) bis(2-Chloroisopropyl)...	19.018	45	132	N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T307BS1.D
Acq On : 8 Jul 2009 9:37 am
Operator : CDS1
InstName : VOA2
Sample : |1201876839|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 12:01:09 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

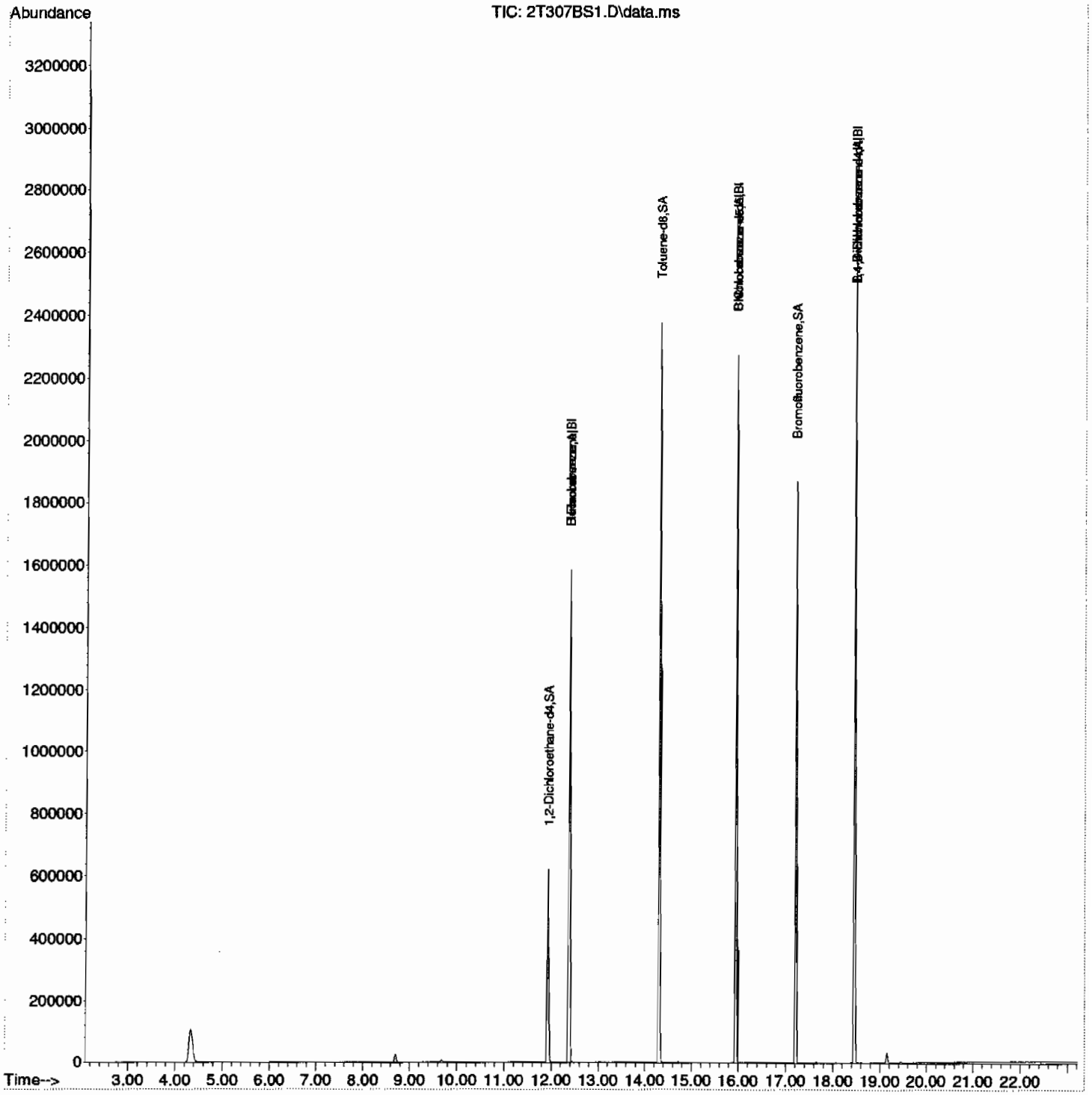

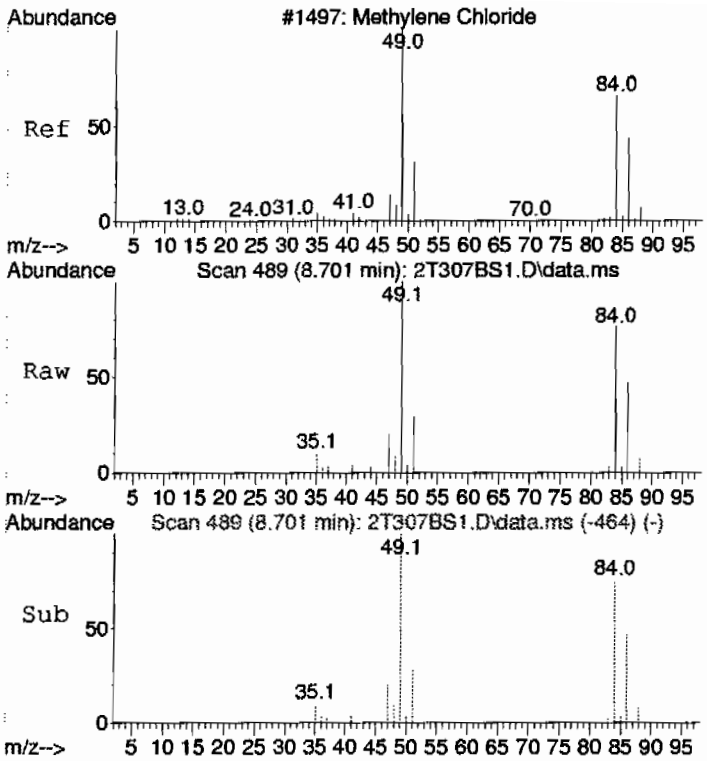

#15
Methylene chloride
Concen: Below Cal
RT: 8.701 min Scan# 489
Delta R.T. 0.000 min
Lab File: 2T307BS1.D
Acq: 8 Jul 2009 9:37 am

Tgt Ion: 84 Resp: 16923

Ion	Ratio	Lower	Upper
84	100		
86	62.3	33.8	93.8
49	136.2	105.0	165.0

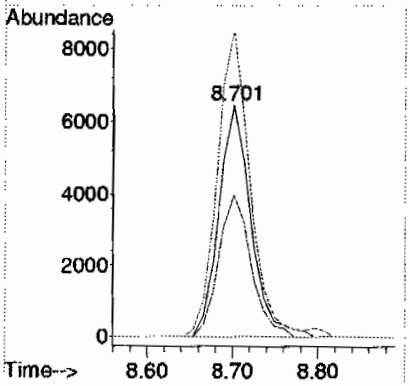

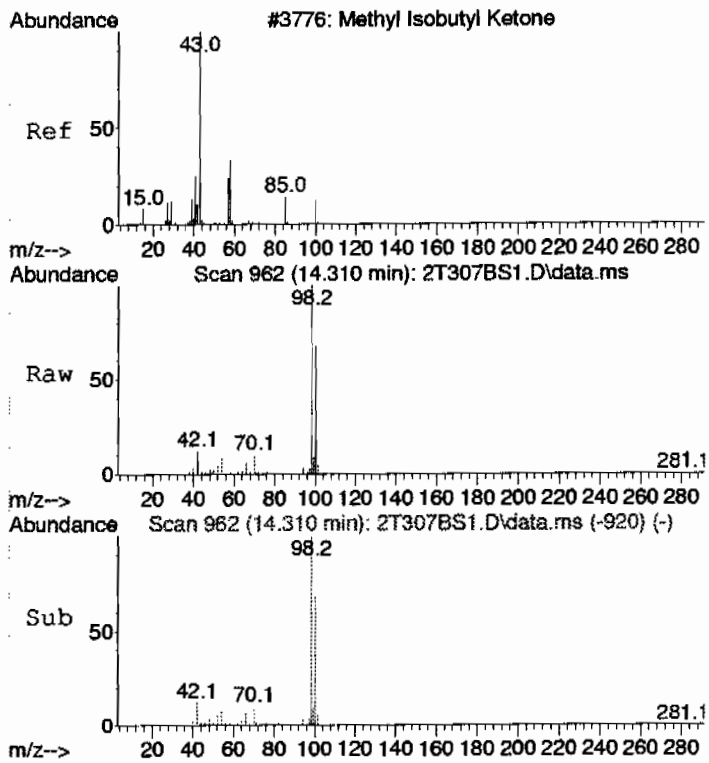

#42 BEFORE analyst integration
4-Methyl-2-pentanone
Concen: 4.29 ug/L
RT: 14.310 min Scan# 962
Delta R.T. 0.201 min
Lab File: 2T307BS1.D
Acq: 8 Jul 2009 9:37 am

Tgt Ion: 58 Resp: 12591

Ion	Ratio	Lower	Upper
58	100		
43	57.0	245.2	305.2#
100	8453.5	7.2	67.2#

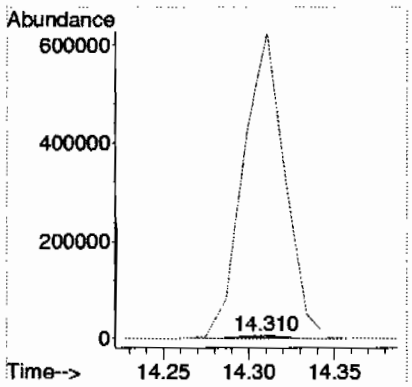

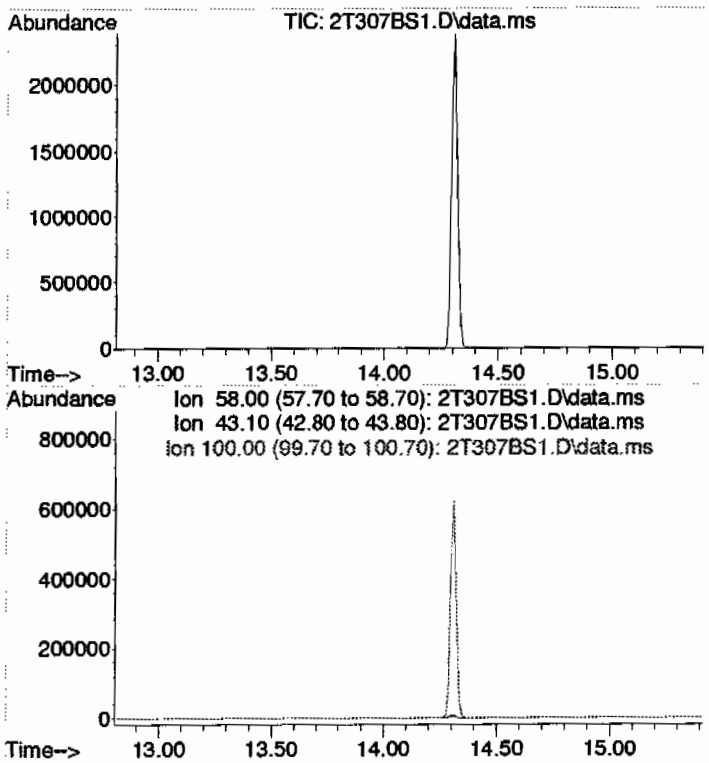

#42 AFTER analyst integration
4-Methyl-2-pentanone
Concen: N.D. DELETED
Expected RT: 14.11 min

Lab File: 2T307BS1.D
Acq: 8 Jul 2009 9:37 am

Tgt Ion: 58

Sig	Exp Ratio
58	100
43	275.2
100	37.2

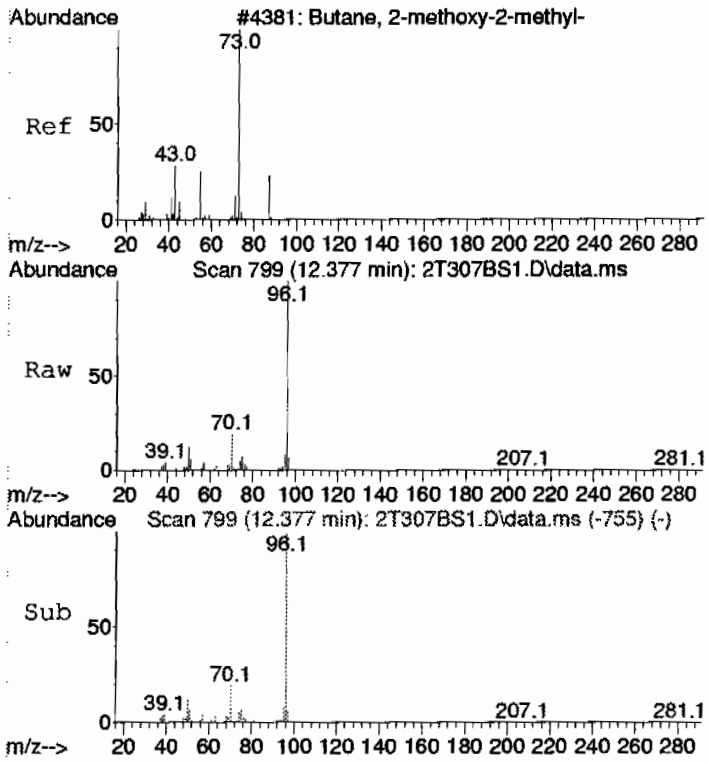

#99 BEFORE analyst integration
Methyl tert-amyl ether
Concen: 0.97 ug/L
RT: 12.377 min Scan# 799
Delta R.T. 0.225 min
Lab File: 2T307BS1.D
Acq: 8 Jul 2009 9:37 am

Tgt Ion: 73 Resp: 17048

Ion	Ratio	Lower	Upper
73	100		
55	7.0	5.2	65.2
87	0.0	0.0	54.7

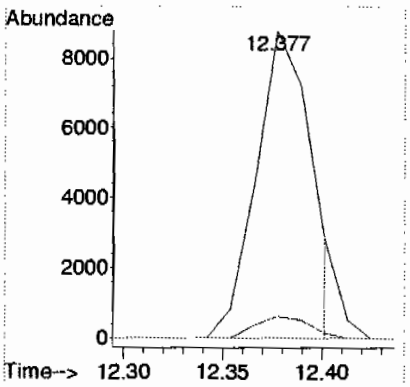

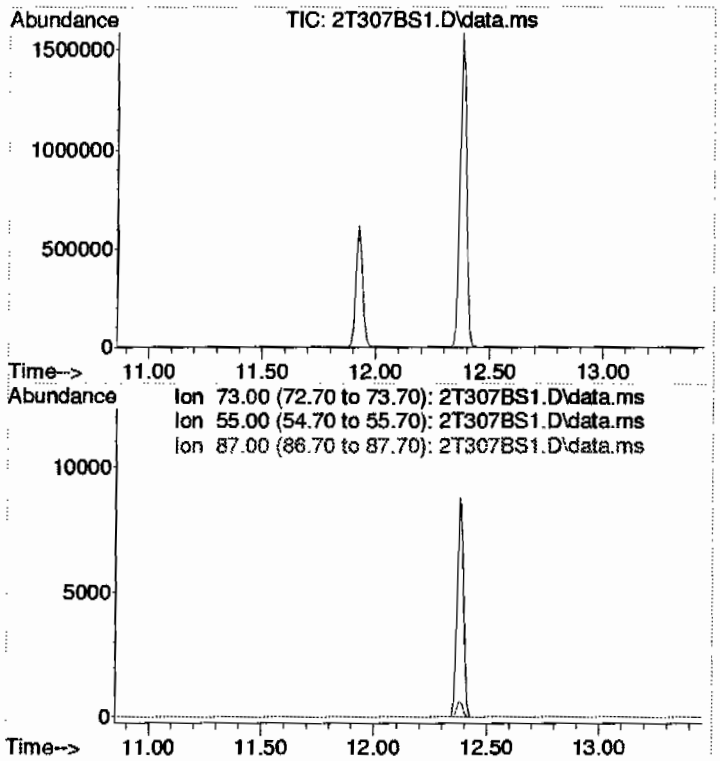

#99 AFTER analyst integration
Methyl tert-amyl ether
Concen: N.D. DELETED
Expected RT: 12.15 min

Lab File: 2T307BS1.D
Acq: 8 Jul 2009 9:37 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
55	35.2
87	24.7

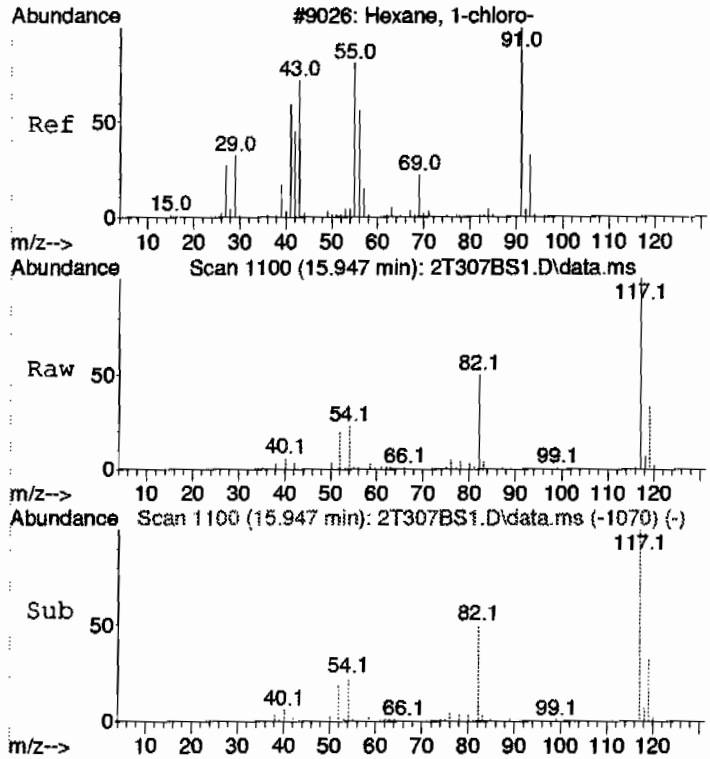

#106 BEFORE analyst integration
1-Chlorohexane
Concen: 1.90 ug/L
RT: 15.947 min Scan# 1100
Delta R.T. 0.059 min
Lab File: 2T307BS1.D
Acq: 8 Jul 2009 9:37 am

Tgt Ion: 55 Resp: 12268

Ion	Ratio	Lower	Upper
55	100		
91	20.0	113.2	173.2#
56	59.7	30.3	90.3

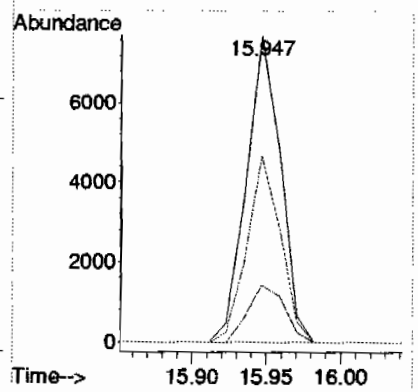

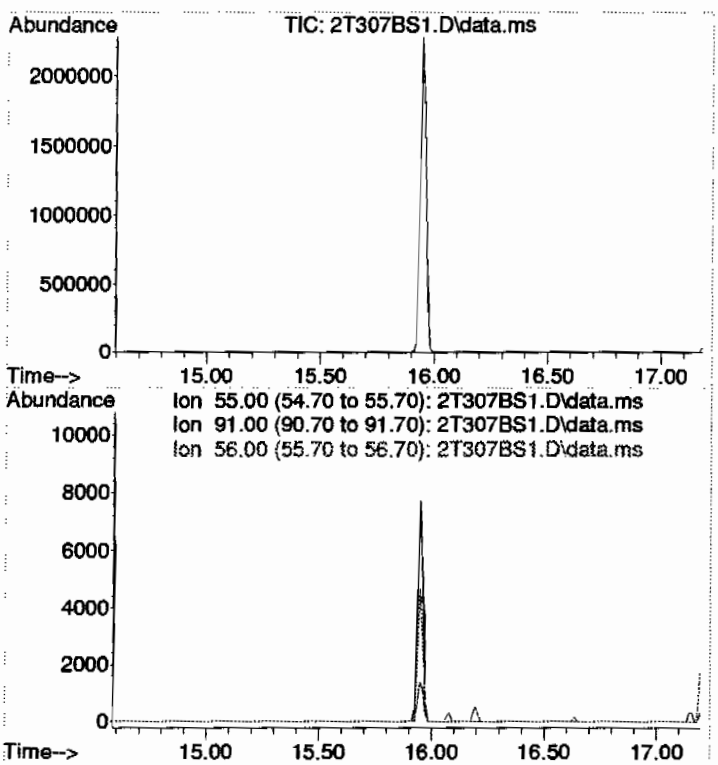

#106 AFTER analyst integration
1-Chlorohexane
Concen: N.D. DELETED
Expected RT: 15.89 min

Lab File: 2T307BS1.D
Acq: 8 Jul 2009 9:37 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
91	143.2
56	60.3

LSC Area Percent Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T307BS1.D
Acq On : 8 Jul 2009 9:37 am
Operator : CDS1
Sample : |1201876839|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: default.P
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 100 Area counts
Start Thrs: 1 Max Peaks: 100
Stop Thrs : 0.3 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Title : Volatile Organics 8260B

Signal : TIC: 2T307.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.330	143	151	170	rBB	106748	599161	13.54%	2.851%
2	4.702	173	176	178	rBB	230	385	0.01%	0.002%
3	4.954	191	193	206	rBV	310	2290	0.05%	0.011%
4	6.033	261	264	266	rBV	708	2413	0.05%	0.011%
5	7.930	421	424	435	rBV	1030	5371	0.12%	0.026%
6	8.251	448	451	455	rBV	799	1956	0.04%	0.009%
7	8.701	484	489	502	rVB	27109	73314	1.66%	0.349%
8	9.685	568	572	584	rBV	6656	18056	0.41%	0.086%
9	11.239	700	703	714	rBV2	1270	2786	0.06%	0.013%
10	11.927	755	761	780	rVB	622564	1269789	28.69%	6.043%
11	12.377	793	799	813	rVB	1585596	3208748	72.50%	15.270%
12	14.310	956	962	974	rBV	2378849	4124664	93.19%	19.628%
13	14.713	992	996	1002	rBV	4200	9595	0.22%	0.046%
14	15.947	1095	1100	1116	rVB	2276575	3801221	85.88%	18.089%
15	16.196	1119	1121	1134	rVB2	918	2704	0.06%	0.013%
16	17.050	1191	1193	1199	rBV	1354	2306	0.05%	0.011%
17	17.204	1200	1206	1217	rBV	1871550	3372602	76.20%	16.049%
18	17.358	1217	1219	1221	rBV	2371	3375	0.08%	0.016%
19	17.654	1241	1244	1252	rBV2	4350	7912	0.18%	0.038%
20	18.461	1306	1312	1321	rVB	2781371	4426021	100.00%	21.062%
21	19.148	1366	1370	1392	rBV2	33631	79418	1.79%	0.378%

Sum of corrected areas: 21014087

LSC Report - Integrated Chromatogram
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T307BS1.D
Acq On : 8 Jul 2009 9:37 am
Operator : CDS1
Sample : |1201876839|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

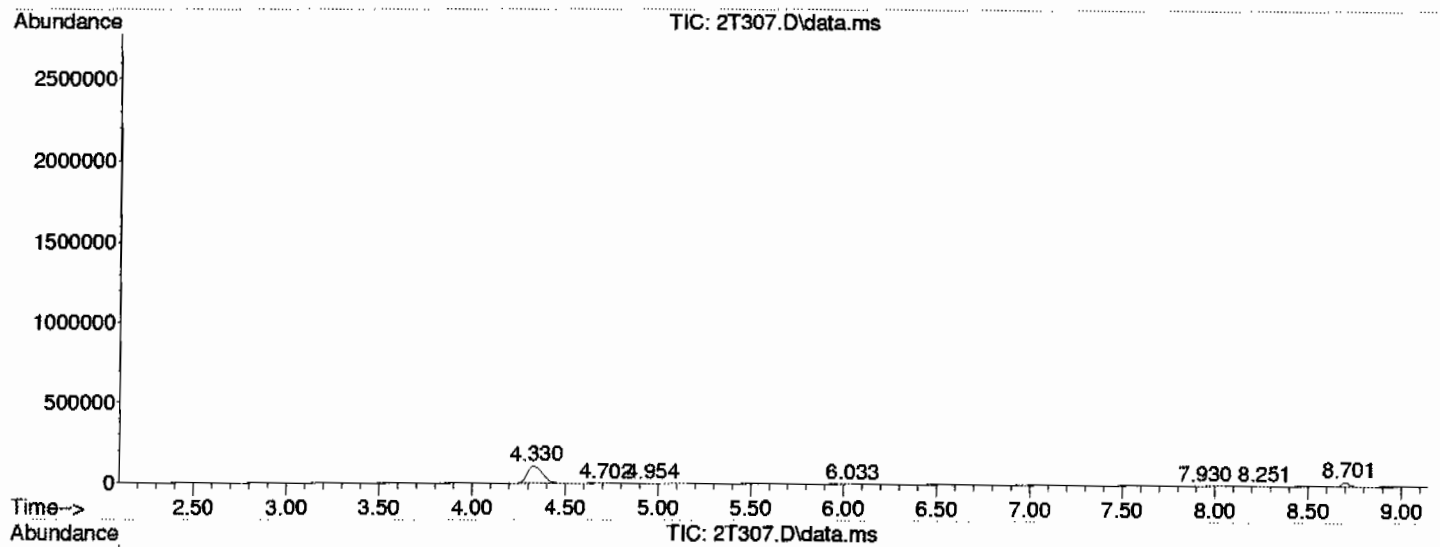

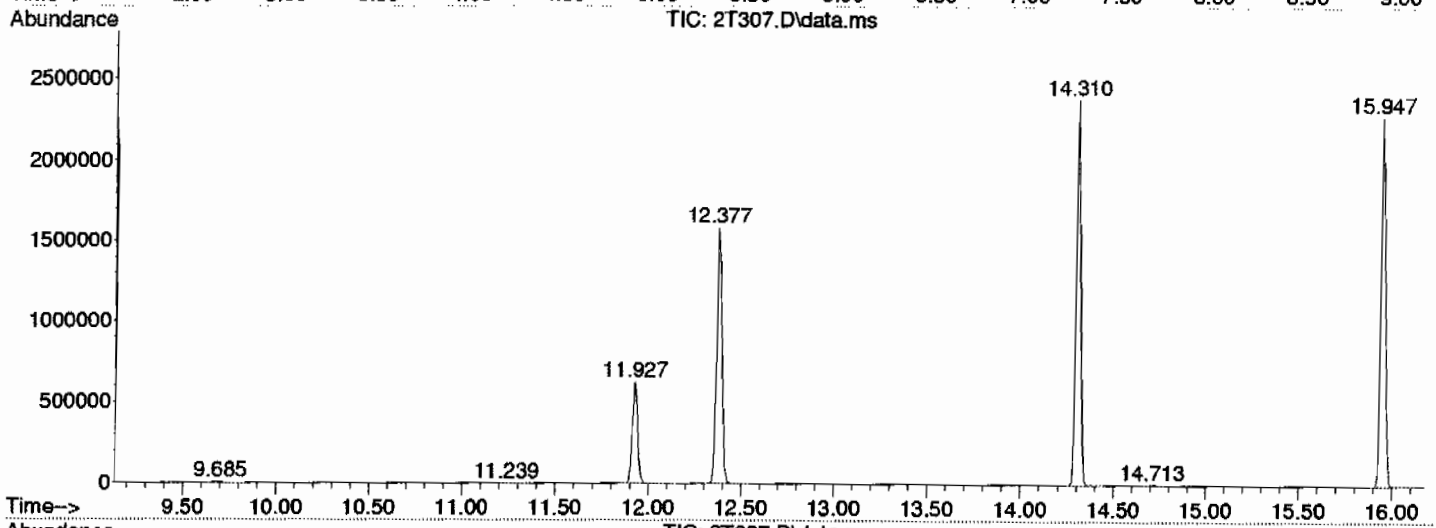

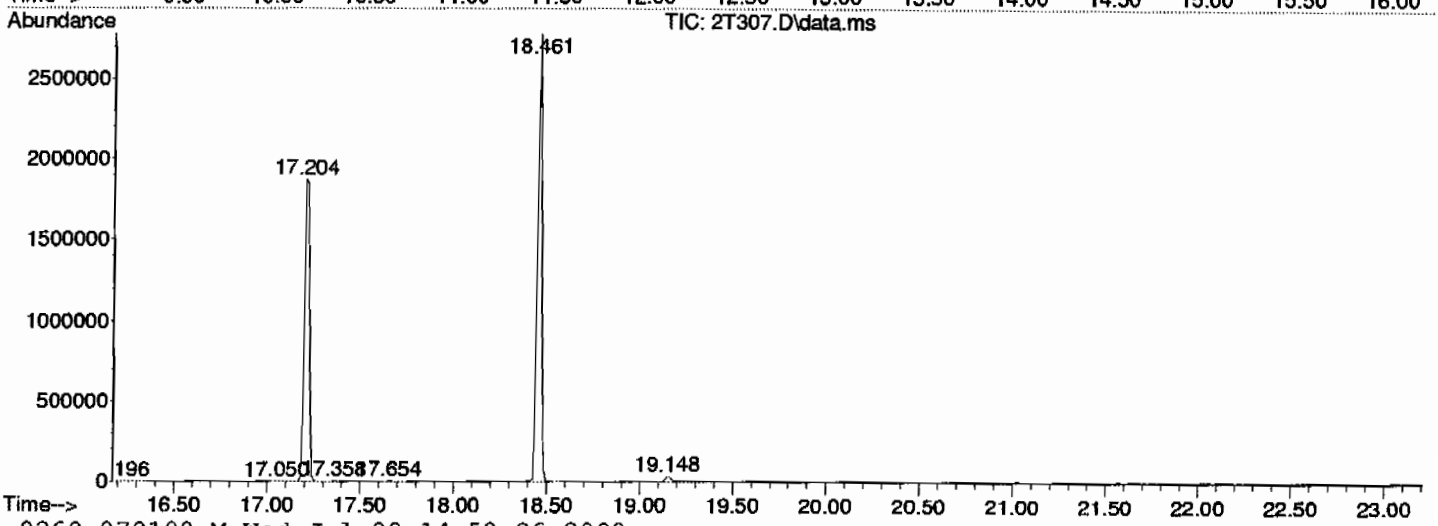

Library Search Compound Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T307BS1.D
Acq On : 8 Jul 2009 9:37 am
Operator : CDS1
Sample : |1201876839|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

****

Peak Number 1 unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.330	9.34 ug/L	599161	Fluorobenzene	12.377

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Dimethyl ether	46	C2H6O	000115-10-6	5
2	Ethyl alcohol	46	C2H6O	000064-17-5	4
3	Ethyl alcohol	46	C2H6O	000064-17-5	4
4	Ethyl alcohol	46	C2H6O	000064-17-5	4
5	Dimethyl ether	46	C2H6O	000115-10-6	2

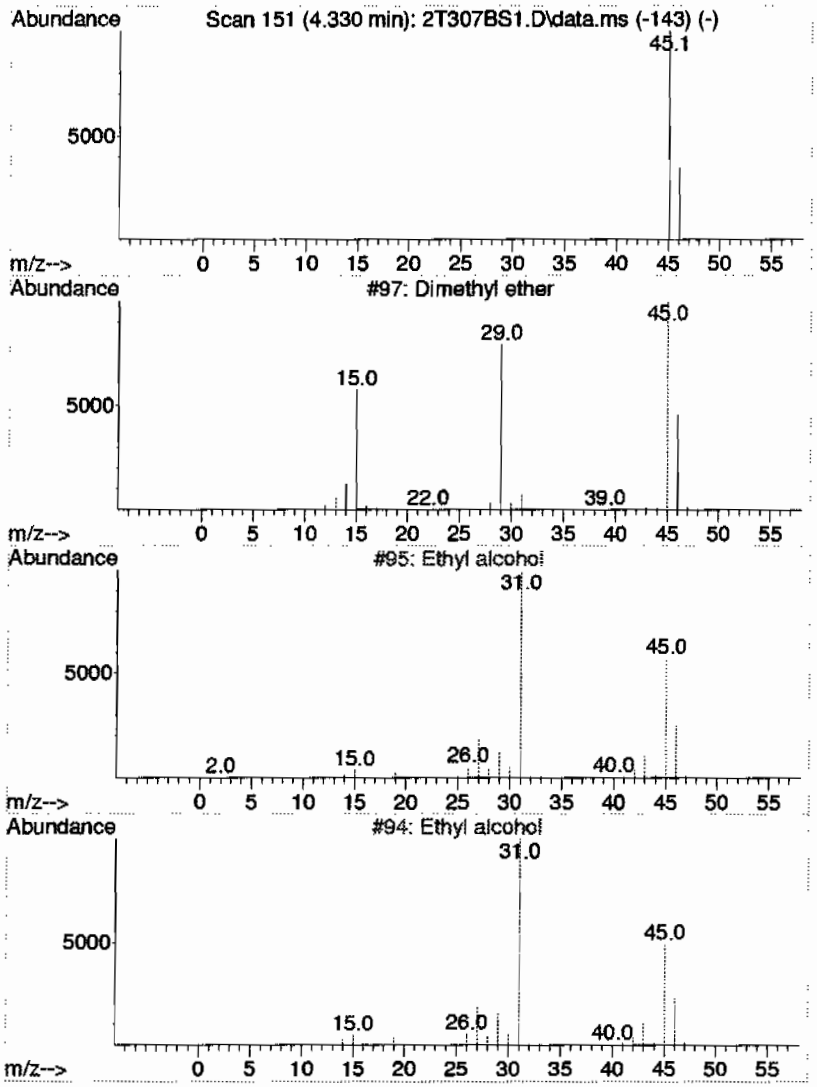

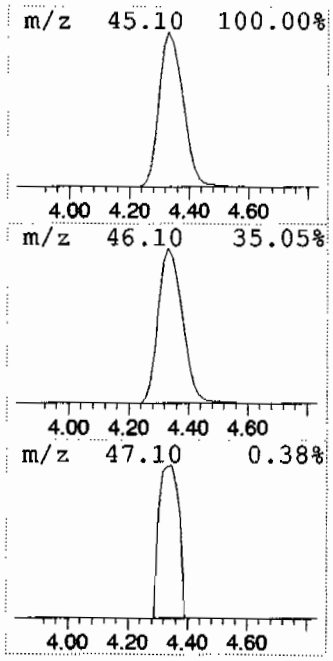

Tentatively Identified Compound (LSC) summary
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T307BS1.D
Acq On : 8 Jul 2009 9:37 am
Operator : CDS1
Sample : |1201876839|883080|1|VOAF|1|VOA8260BSF|
Misc : BLANK 5G SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B

TIC Library : C:\Database\NIST05.L
TIC Integration Parameters: default.P

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
unknown	4.330	9.3	ug/L	599161	1	12.377	3208750	50.0

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			**Matrix:**	SOIL
Lab Sample ID:	1201875765				
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883079	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 08:06	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T204LS2.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		63.8	ug/kg	0.340	1.00
74-87-3	Chloromethane		56.2	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		55.7	ug/kg	0.300	1.00
74-83-9	Bromomethane		46.7	ug/kg	0.300	1.00
75-00-3	Chloroethane		52.7	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		56.7	ug/kg	0.570	1.00
67-64-1	Acetone		129	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		52.1	ug/kg	0.300	1.00
74-88-4	Iodomethane		261	ug/kg	1.60	5.00
75-09-2	Methylene chloride		51.4	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		263	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		48.0	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		51.0	ug/kg	0.300	1.00
78-93-3	2-Butanone		150	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		51.8	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		52.9	ug/kg	0.300	1.00
67-66-3	Chloroform		51.1	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		52.2	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		53.5	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		53.0	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		54.7	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		49.6	ug/kg	0.300	1.00
71-43-2	Benzene		48.9	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		52.2	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		50.5	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		56.7	ug/kg	0.300	1.00
74-95-3	Dibromomethane		52.6	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		237	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		55.0	ug/kg	0.300	1.00
108-88-3	Toluene		48.6	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		54.6	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		51.4	ug/kg	0.300	1.00
591-78-6	2-Hexanone		237	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		49.6	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		51.4	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		56.4	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		54.1	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		50.5	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			**Matrix:**	SOIL
Lab Sample ID:	1201875765				
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883079	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 08:06	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T204LS2.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		49.2	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		99.3	ug/kg	0.300	2.00
95-47-6	o-Xylene		50.7	ug/kg	0.300	1.00
100-42-5	Styrene		56.0	ug/kg	0.300	1.00
75-25-2	Bromoform		49.8	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		52.3	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		57.3	ug/kg	0.300	1.00
108-86-1	Bromobenzene		50.7	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		48.9	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		50.0	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		43.9	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		50.7	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		49.8	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		51.5	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		50.2	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		51.4	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		53.7	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		52.1	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		50.0	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		51.3	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	E	68.3	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		54.2	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		51.1	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T204LS2.D
Acq On : 7 Jul 2009 8:06 am
Operator : CDS1
InstName : VOA2
Sample : |1201875765|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 11:11:38 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1683356	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1455054	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	902441	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1683356	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1455054	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	902441	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	469130	49.70	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 99.40%			
43) Toluene-d8	14.310	98	1648568	48.22	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 96.44%			
61) Bromofluorobenzene	17.204	95	691899	48.76	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 97.52%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	384282	63.77	ug/L	100
3) Chloromethane	5.014	50	305213	56.18	ug/L	100
4) Vinyl chloride	5.252	62	268658	55.68	ug/L	100
5) Bromomethane	5.980	94	226590	46.71	ug/L	100
6) Chloroethane	6.211	64	269334	52.69	ug/L	100
7) Trichlorofluoromethane	6.756	101	565621	56.68	ug/L	100
8) Ethyl ether	7.349	59	314342	53.92	ug/L	100
9) Acetone	7.871	43	741335	128.60	ug/L	100
10) 1,1-Dichloroethylene	7.812	61	526997	52.05	ug/L	99
11) Iodomethane	8.096	142	3604618	261.41	ug/L	100
12) Acetonitrile	8.381	41	1255528	1303.31	ug/L	100
13) Methyl acetate	8.500	43	1489686	249.29	ug/L	100
14) Carbon disulfide	8.251	76	5979831	262.90	ug/L	100
15) Methylene chloride	8.701	84	395904	51.35	ug/L	100
16) tert-Butyl methyl ether	9.199	73	940137	49.37	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	499494	48.00	ug/L	99
18) Vinyl acetate	9.946	43	3511820	281.80	ug/L	97
19) 1,1-Dichloroethane	9.887	63	662216	51.02	ug/L	100
20) 2-Butanone	10.765	43	1046994	150.26	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	595508	51.77	ug/L	98
22) 2,2-Dichloropropane	10.800	77	491546	52.89	ug/L	98
23) Bromochloromethane	11.132	128	222735	52.22	ug/L	98
24) Chloroform	11.239	83	678736	51.05	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	611910	53.54	ug/L	100
26) Cyclohexane	11.642	56	602686	50.34	ug/L	100
27) 1,1-Dichloropropene	11.761	75	500505	52.98	ug/L	99
28) Carbon tetrachloride	11.784	117	562526	54.69	ug/L	99
30) 1,2-Dichloroethane	12.034	62	500758	49.64	ug/L	100
31) Benzene	12.034	78	1438054	48.86	ug/L	100
32) Cyclohexene	12.188	67	783744	52.98	ug/L	99
33) n-Butyl alcohol	12.650	56	1198776	6162.52	ug/L	99
34) Trichloroethylene	12.852	95	417366	52.17	ug/L	99
35) 1,2-Dichloropropane	13.124	63	372892	50.49	ug/L	100
36) Methylcyclohexane	13.136	83	672887	51.91	ug/L	99
37) Dibromomethane	13.279	93	239178	52.59	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T204LS2.D
Acq On : 7 Jul 2009 8:06 am
Operator : CDS1
InstName : VOA2
Sample : |1201875765|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 11:11:38 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)	
38)	Bromodichloromethane	13.445	83	535097	56.72	ug/L		100	
39)	2-Chloroethylvinyl ether	13.753	63	865392	236.61	ug/L		100	
40)	cis-1,3-Dichloropropylene	13.966	75	606158	55.01	ug/L		99	
42)	4-Methyl-2-pentanone	14.109	58	755104	237.09	ug/L		99	
44)	Toluene	14.393	91	1616321	48.60	ug/L		100	
45)	trans-1,3-Dichloroprop...	14.583	75	564002	54.56	ug/L		100	
46)	1,1,2-Trichloroethane	14.808	83	291347	51.36	ug/L		100	
47)	2-Hexanone	14.109	43	2062893	236.64	ug/L		99	
48)	1,3-Dichloropropane	15.010	76	564903	49.55	ug/L		86	
49)	Tetrachloroethylene	15.034	164	440983	51.43	ug/L		100	
50)	Dibromochloromethane	15.295	129	435178	56.42	ug/L		100	
51)	1,2-Dibromoethane	15.449	107	379218	54.12	ug/L		100	
52)	Chlorobenzene	15.982	112	1169357	50.51	ug/L		99	
53)	1,1,1,2-Tetrachloroethane	16.054	131	456353	54.18	ug/L		100	
54)	Ethylbenzene	16.077	91	1848066	49.20	ug/L		99	
55)	m,p-Xylenes	16.196	106	1498948	99.27	ug/L		100	
56)	o-Xylene	16.635	106	752301	50.69	ug/L		100	
57)	Styrene	16.646	104	1225548	56.04	ug/L		100	
59)	Bromoform	16.884	173	364267	49.76	ug/L		100	
60)	Isopropylbenzene	17.026	105	1684522	43.87	ug/L		100	
62)	1,1,2,2-Tetrachloroethane	17.299	83	471956	52.25	ug/L		100	
63)	1,2,3-Trichloropropane	17.382	110	148339	57.28	ug/L	#	81	
64)	Bromobenzene	17.417	156	582011	50.69	ug/L		97	
65)	n-Propylbenzene	17.465	91	2216980	48.91	ug/L		99	
66)	1,3,5-Trimethylbenzene	17.631	105	1612980	50.71	ug/L		54	
67)	2-Chlorotoluene	17.595	91	1538122	49.97	ug/L		99	
68)	4-Chlorotoluene	17.702	91	1397115	49.84	ug/L		99	
69)	tert-Butylbenzene	17.998	119	1670313	51.49	ug/L		99	
70)	1,2,4-Trimethylbenzene	18.046	105	1653129	50.20	ug/L		100	
71)	sec-Butylbenzene	18.235	105	2205966	51.38	ug/L		100	
72)	4-Isopropyltoluene	18.366	119	1854653	53.67	ug/L		100	
73)	1,3-Dichlorobenzene	18.402	146	1123325	52.07	ug/L		99	
74)	1,4-Dichlorobenzene	18.485	146	1118500	50.01	ug/L		99	
75)	n-Butylbenzene	18.805	91	1686997	51.34	ug/L		100	
76)	1,2-Dichlorobenzene	18.900	146	1055998	51.10	ug/L		99	
77)	1,2-Dibromo-3-chloropr...	19.706	157	121803	68.31	ug/L		98	E
78)	1,2,4-Trichlorobenzene	20.690	180	798901	50.77	ug/L		100	
79)	Hexachlorobutadiene	20.868	225	484437	50.28	ug/L		100	
80)	Naphthalene	21.022	128	1702251	51.68	ug/L		100	
81)	1,2,3-Trichlorobenzene	21.342	180	757209	52.51	ug/L		99	
83)	Chlorotrifluoroethylene	0.000		0	N.D.				
84)	2-Chloro-1,1,1-trifluo...	0.000		0	N.D.				
85)	Acrolein	7.610		0m	N.D.	d			
86)	Trichlorotrifluoroethane	7.847		0m	N.D.	d			
87)	Isopropyl Alcohol	8.239		0m	N.D.	d			
88)	Allyl chloride	8.381		0m	N.D.	d			
89)	tert-Butyl Alcohol	8.915		0m	N.D.	d			
90)	Acrylonitrile	9.104		0m	N.D.	d			
91)	Isopropyl ether	9.946		0m	N.D.	d			
92)	2-Chloro-1,3-butadiene	10.041		0m	N.D.	d			
93)	Ethyl tert-butyl ether	10.788		0m	N.D.	d			
94)	Ethyl acetate	10.765		0m	N.D.	d			

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T204LS2.D
Acq On : 7 Jul 2009 8:06 am
Operator : CDS1
InstName : VOA2
Sample : |1201875765|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 11:11:38 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Propionitrile	10.848		0m	N.D.	d	
96) Methacrylonitrile	11.085		0m	N.D.	d	
97) Tetrahydrofuran	11.227		0m	N.D.	d	
98) Isobutyl alcohol	11.927		0m	N.D.	d	
99) Methyl tert-amyl ether	12.188		0m	N.D.	d	
100) Methyl methacrylate	13.136		0m	N.D.	d	
101) 1,4-Dioxane	13.279		0m	N.D.	d	
102) 2-Nitropropane	13.611		0m	N.D.	d	
104) Ethyl methacrylate	14.642		0m	N.D.	d	
106) 1-Chlorohexane	15.947		0m	N.D.	d	
107) cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108) Cyclohexanone	17.145		0m	N.D.	d	
109) trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110) Pentachloroethane	18.058		0m	N.D.	d	
111) Benzyl chloride	18.603		0m	N.D.	d	
112) bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T204LS2.D
Acq On : 7 Jul 2009 8:06 am
Operator : CDS1
InstName : VOA2
Sample : |1201875765|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 11:11:38 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

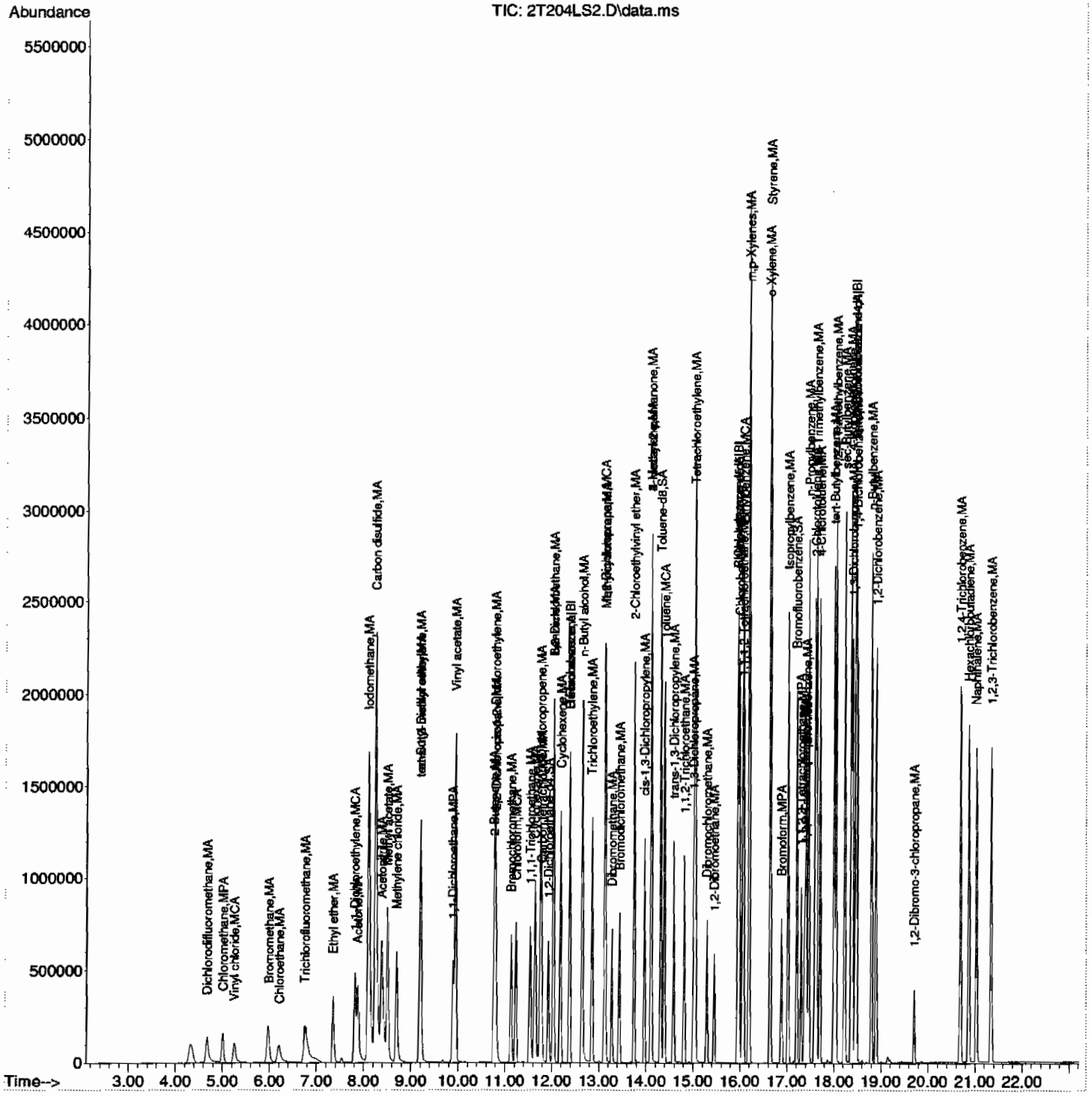

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			Matrix:	SOIL
Lab Sample ID:	1201875766				
Client Sample:	QC for batch 883079	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 883079	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/07/2009 09:05	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/07/2009 06:00	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070709V2.b\2T206SLS2.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			**Matrix:**	SOIL
Lab Sample ID:	1201875766				
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883079	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/07/2009 09:05	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070709V2.b\2T206SLS2.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		275	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T206SLS2.D
Acq On : 7 Jul 2009 9:05 am
Operator : CDS1
InstName : VOA2
Sample : |1201875766|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 11:22:12 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1713132	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1479268	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	907740	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1713132	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1479268	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	907740	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	477379	49.69	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 99.38%			
43) Toluene-d8	14.310	98	1661887	47.81	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 95.62%			
61) Bromofluorobenzene	17.204	95	705853	49.46	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 98.92%			

Target Compounds				Qvalue
2) Dichlorodifluoromethane	0.000	0	N.D.	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.266	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	0.000	0	N.D.	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.847	0m	N.D. d	
10) 1,1-Dichloroethylene	7.847	0m	N.D. d	
11) Iodomethane	8.096	0m	N.D. d	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.250	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.211	0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.199	0m	N.D. d	
18) Vinyl acetate	10.065	0m	N.D. d	
19) 1,1-Dichloroethane	10.053	0m	N.D. d	
20) 2-Butanone	10.859	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.859	0m	N.D. d	
22) 2,2-Dichloropropane	0.000	0	N.D.	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.239	0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535	0m	N.D. d	
26) Cyclohexane	11.796	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	0.000	0	N.D.	
30) 1,2-Dichloroethane	12.021	0m	N.D. d	
31) Benzene	12.033	0m	N.D. d	
32) Cyclohexene	12.389	0m	N.D. d	
33) n-Butyl alcohol	12.662	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	0.000	0	N.D.	
36) Methylcyclohexane	13.195	0m	N.D. d	
37) Dibromomethane	13.267	0m	N.D. d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T206SLS2.D
Acq On : 7 Jul 2009 9:05 am
Operator : CDS1
InstName : VOA2
Sample : |1201875766|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 11:22:12 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	13.444		0m	N.D. d	
39) 2-Chloroethylvinyl ether	0.000		0	N.D.	
40) cis-1,3-Dichloropropylene	13.966		0m	N.D. d	
42) 4-Methyl-2-pentanone	14.109		0m	N.D. d	
44) Toluene	14.381		0m	N.D. d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D. d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D. d	
47) 2-Hexanone	14.298		0m	N.D. d	
48) 1,3-Dichloropropane	15.010		0m	N.D. d	
49) Tetrachloroethylene	15.034		0m	N.D. d	
50) Dibromochloromethane	15.294		0m	N.D. d	
51) 1,2-Dibromoethane	15.449		0m	N.D. d	
52) Chlorobenzene	15.982		0m	N.D. d	
53) 1,1,1,2-Tetrachloroethane	16.053		0m	N.D. d	
54) Ethylbenzene	16.077		0m	N.D. d	
55) m,p-Xylenes	16.196		0m	N.D. d	
56) o-Xylene	16.634		0m	N.D. d	
57) Styrene	16.646		0m	N.D. d	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.026		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.215		0m	N.D. d	
64) Bromobenzene	17.417		0m	N.D. d	
65) n-Propylbenzene	17.464		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D. d	
67) 2-Chlorotoluene	17.595		0m	N.D. d	
68) 4-Chlorotoluene	17.702		0m	N.D. d	
69) tert-Butylbenzene	18.057		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	18.069		0m	N.D. d	
71) sec-Butylbenzene	18.235		0m	N.D. d	
72) 4-Isopropyltoluene	18.366		0m	N.D. d	
73) 1,3-Dichlorobenzene	18.401		0m	N.D. d	
74) 1,4-Dichlorobenzene	18.401		0m	N.D. d	
75) n-Butylbenzene	18.603		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.899		0m	N.D. d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D. d	
79) Hexachlorobutadiene	20.868		0m	N.D. d	
80) Naphthalene	21.022		0m	N.D. d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D. d	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	7.574	56	347112	293.77 ug/L	100
86) Trichlorotrifluoroethane	7.859	85	591981	274.93 ug/L	99
87) Isopropyl Alcohol	0.000		0m	N.D. d	
88) Allyl chloride	8.488	41	2665306	222.70 ug/L	99
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	9.092	53	639016	265.42 ug/L	100
91) Isopropyl ether	10.053	45	445	N.D.	
92) 2-Chloro-1,3-butadiene	10.041	53	573500	58.11 ug/L	95
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.859	43	1835912	258.22 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T206SLS2.D
Acq On : 7 Jul 2009 9:05 am
Operator : CDS1
InstName : VOA2
Sample : |1201875766|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 11:22:12 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
95)	Propionitrile	10.847	54	256689	264.09	ug/L	100	
96)	Methacrylonitrile	11.085	41	1137650	265.79	ug/L	100	
97)	Tetrahydrofuran	11.203	42	612332	267.59	ug/L	100	
98)	Isobutyl alcohol	11.796	41	706062	2775.32	ug/L	99	
99)	Methyl tert-amyl ether	12.164	73	1340	N.D.			
100)	Methyl methacrylate	13.195	69	1155214	276.88	ug/L	100	
101)	1,4-Dioxane	13.267	88	158255	2796.72	ug/L	99	
102)	2-Nitropropane	13.682	43	632202	319.24	ug/L	100	E
104)	Ethyl methacrylate	14.642	69	2085643	255.59	ug/L	100	
106)	1-Chlorohexane	0.000		0m	N.D.	d		
107)	cis-1,4-Dichloro-2-butene	17.061	53	787987	275.71	ug/L	99	
108)	Cyclohexanone	17.144	42	1663417	1543.89	ug/L	97	
109)	trans-1,4-Dichloro-2-b...	17.358	53	751069	269.39	ug/L	99	
110)	Pentachloroethane	18.057	167	1166944	367.61	ug/L	97	
111)	Benzyl chloride	18.603	91	4533972	304.85	ug/L	99	
112)	bis(2-Chloroisopropyl)...	19.006	45	1273749	263.02	ug/L	99	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070709V2.b\
Data File : 2T206SLS2.D
Acq On : 7 Jul 2009 9:05 am
Operator : CDS1
InstName : VOA2
Sample : |1201875766|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 11:22:12 2009
Quant Method : C:\msdchem\1\DATA\070709V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

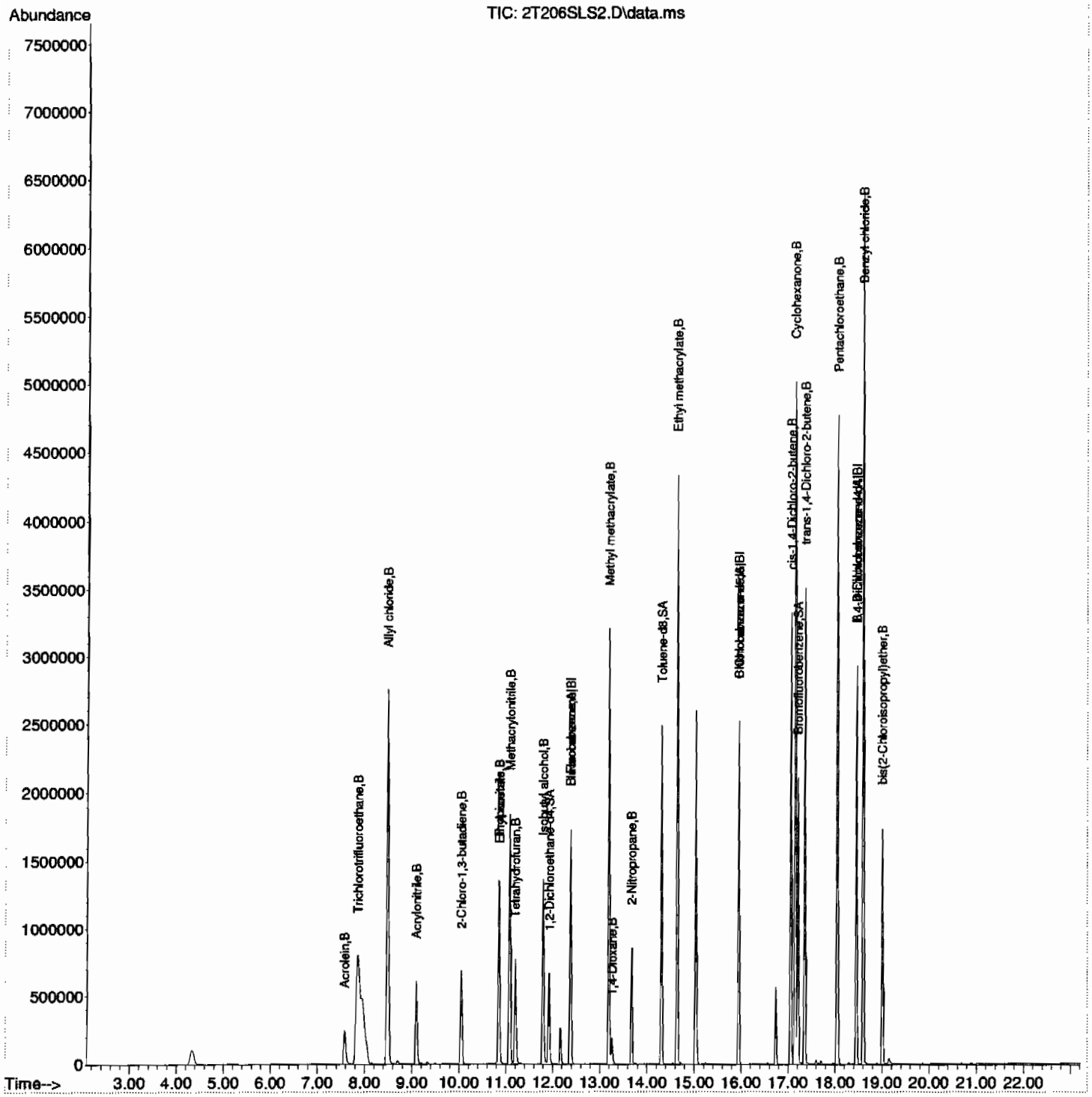

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			Matrix:	SOIL
Lab Sample ID:	1201876840				
Client Sample:	QC for batch 883079	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 883079	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 07:36	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/08/2009 06:00	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070809V2.b\2T303LS1.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		41.4	ug/kg	0.340	1.00
74-87-3	Chloromethane		42.8	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		50.4	ug/kg	0.300	1.00
74-83-9	Bromomethane		43.0	ug/kg	0.300	1.00
75-00-3	Chloroethane		46.0	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		45.7	ug/kg	0.570	1.00
67-64-1	Acetone		235	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		46.1	ug/kg	0.300	1.00
74-88-4	Iodomethane		254	ug/kg	1.60	5.00
75-09-2	Methylene chloride		49.6	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		245	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		45.6	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		46.8	ug/kg	0.300	1.00
78-93-3	2-Butanone		239	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		45.6	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		47.6	ug/kg	0.300	1.00
67-66-3	Chloroform		46.8	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		47.0	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		48.4	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		48.3	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		50.2	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		45.3	ug/kg	0.300	1.00
71-43-2	Benzene		45.3	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		47.2	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		46.0	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		49.3	ug/kg	0.300	1.00
74-95-3	Dibromomethane		47.0	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		243	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		49.9	ug/kg	0.300	1.00
108-88-3	Toluene		44.5	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		48.2	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		45.1	ug/kg	0.300	1.00
591-78-6	2-Hexanone		242	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		44.5	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		47.4	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		51.5	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		48.0	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		46.5	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			**Matrix:**	SOIL
Lab Sample ID:	1201876840				
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883079	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 07:36	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T303LS1.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		45.7	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		90.4	ug/kg	0.300	2.00
95-47-6	o-Xylene		45.6	ug/kg	0.300	1.00
100-42-5	Styrene		50.6	ug/kg	0.300	1.00
75-25-2	Bromoform		43.6	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		46.5	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		45.8	ug/kg	0.300	1.00
108-86-1	Bromobenzene		46.4	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		45.2	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		45.4	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		45.9	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		46.0	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		45.1	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		45.7	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		45.6	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		45.3	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		46.6	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		45.9	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		45.0	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		44.8	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	E	58.2	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		48.8	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		45.7	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T303LS1.D
Acq On : 8 Jul 2009 7:36 am
Operator : CDS1
InstName : VOA2
Sample : |1201876840|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 16 11:55:17 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1615704	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1393107	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	869292	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1615704	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1393107	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	869292	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	450157	49.69	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 99.38%			
43) Toluene-d8	14.310	98	1590020	48.57	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 97.14%			
61) Bromofluorobenzene	17.204	95	674035	49.31	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 98.62%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.672	85	239152	41.35	ug/L	100
3) Chloromethane	5.014	50	223380	42.84	ug/L	100
4) Vinyl chloride	5.266	62	233512	50.42	ug/L	100
5) Bromomethane	5.979	94	200057	42.97	ug/L	99
6) Chloroethane	6.211	64	225838	46.03	ug/L	99
7) Trichlorofluoromethane	6.756	101	437838	45.71	ug/L	99
8) Ethyl ether	7.349	59	256720	45.88	ug/L	100
9) Acetone	7.859	43	1301979	234.66	ug/L	100
10) 1,1-Dichloroethylene	7.812	61	447593	46.06	ug/L	99
11) Iodomethane	8.096	142	3359391	253.83	ug/L	99
12) Acetonitrile	8.381	41	1037860	1122.47	ug/L	99
13) Methyl acetate	8.499	43	1734126	302.35	ug/L	99
14) Carbon disulfide	8.250	76	5359087	245.47	ug/L	100
15) Methylene chloride	8.701	84	367599	49.55	ug/L	100
16) tert-Butyl methyl ether	9.199	73	786430	43.03	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	455772	45.63	ug/L	99
18) Vinyl acetate	9.934	43	1743334	145.75	ug/L	96
19) 1,1-Dichloroethane	9.887	63	583027	46.80	ug/L	100
20) 2-Butanone	10.764	43	1599069	239.10	ug/L	99
21) cis-1,2-Dichloroethylene	10.776	61	502979	45.55	ug/L	98
22) 2,2-Dichloropropane	10.800	77	424292	47.57	ug/L	98
23) Bromochloromethane	11.132	128	192594	47.04	ug/L	99
24) Chloroform	11.227	83	597807	46.84	ug/L	100
25) 1,1,1-Trichloroethane	11.535	97	531224	48.42	ug/L	100
26) Cyclohexane	11.642	56	517447	45.03	ug/L	99
27) 1,1-Dichloropropene	11.749	75	437560	48.26	ug/L	99
28) Carbon tetrachloride	11.772	117	495113	50.15	ug/L	100
30) 1,2-Dichloroethane	12.021	62	438625	45.30	ug/L	100
31) Benzene	12.033	78	1278439	45.25	ug/L	100
32) Cyclohexene	12.176	67	660155	46.49	ug/L	100
33) n-Butyl alcohol	12.638	56	972164	5206.84	ug/L	98
34) Trichloroethylene	12.852	95	362732	47.24	ug/L	99
35) 1,2-Dichloropropane	13.124	63	326068	46.00	ug/L	99
36) Methylcyclohexane	13.124	83	577661	46.43	ug/L	100
37) Dibromomethane	13.267	93	204971	46.95	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T303LS1.D
Acq On : 8 Jul 2009 7:36 am
Operator : CDS1
InstName : VOA2
Sample : |1201876840|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 16 11:55:17 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
38) Bromodichloromethane	13.433	83	446491	49.31	ug/L	99	
39) 2-Chloroethylvinyl ether	13.753	63	814718	232.08	ug/L	100	
40) cis-1,3-Dichloropropylene	13.966	75	527497	49.87	ug/L	100	
42) 4-Methyl-2-pentanone	14.109	58	740911	242.98	ug/L	99	
44) Toluene	14.381	91	1415919	44.47	ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	476559	48.15	ug/L	99	
46) 1,1,2-Trichloroethane	14.808	83	244664	45.05	ug/L	99	
47) 2-Hexanone	14.109	43	2021183	242.17	ug/L	99	
48) 1,3-Dichloropropane	15.010	76	486081	44.53	ug/L	95	
49) Tetrachloroethylene	15.034	164	389079	47.40	ug/L	100	
50) Dibromochloromethane	15.283	129	380251	51.50	ug/L	100	
51) 1,2-Dibromoethane	15.449	107	322247	48.03	ug/L	100	
52) Chlorobenzene	15.982	112	1030530	46.50	ug/L	99	
53) 1,1,1,2-Tetrachloroethane	16.053	131	393452	48.79	ug/L	99	
54) Ethylbenzene	16.077	91	1643851	45.71	ug/L	100	
55) m,p-Xylenes	16.196	106	1307515	90.44	ug/L	100	
56) o-Xylene	16.634	106	647643	45.58	ug/L	99	
57) Styrene	16.646	104	1059596	50.60	ug/L	100	
59) Bromoform	16.883	173	305535	43.62	ug/L	99	
60) Isopropylbenzene	17.026	105	1697888	45.90	ug/L	100	
62) 1,1,2,2-Tetrachloroethane	17.299	83	404844	46.53	ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	114181	45.77	ug/L	98	
64) Bromobenzene	17.405	156	512775	46.36	ug/L	97	
65) n-Propylbenzene	17.465	91	1974057	45.22	ug/L	100	
66) 1,3,5-Trimethylbenzene	17.631	105	1410182	46.03	ug/L	55	
67) 2-Chlorotoluene	17.595	91	1344890	45.35	ug/L	99	
68) 4-Chlorotoluene	17.702	91	1218691	45.13	ug/L	99	
69) tert-Butylbenzene	17.998	119	1426777	45.66	ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1445072	45.55	ug/L	100	
71) sec-Butylbenzene	18.235	105	1873318	45.30	ug/L	100	
72) 4-Isopropyltoluene	18.366	119	1550462	46.57	ug/L	100	
73) 1,3-Dichlorobenzene	18.401	146	953906	45.91	ug/L	100	
74) 1,4-Dichlorobenzene	18.484	146	968364	44.95	ug/L	100	
75) n-Butylbenzene	18.805	91	1417415	44.78	ug/L	100	
76) 1,2-Dichlorobenzene	18.899	146	910473	45.74	ug/L	100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	99940	58.19	ug/L	98	E
78) 1,2,4-Trichlorobenzene	20.690	180	701077	46.25	ug/L	99	
79) Hexachlorobutadiene	20.868	225	395501	42.62	ug/L	99	
80) Naphthalene	21.022	128	1462402	46.09	ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	657822	47.35	ug/L	100	
83) Chlorotrifluoroethylene	0.000		0	N.D.			
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.			
85) Acrolein	7.598		0m	N.D.	d		
86) Trichlorotrifluoroethane	7.847		0m	N.D.	d		
87) Isopropyl Alcohol	8.239		0m	N.D.	d		
88) Allyl chloride	8.381		0m	N.D.	d		
89) tert-Butyl Alcohol	8.903		0m	N.D.	d		
90) Acrylonitrile	9.104		0m	N.D.	d		
91) Isopropyl ether	10.053		0m	N.D.	d		
92) 2-Chloro-1,3-butadiene	10.041		0m	N.D.	d		
93) Ethyl tert-butyl ether	10.776		0m	N.D.	d		
94) Ethyl acetate	10.764		0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T303LS1.D
Acq On : 8 Jul 2009 7:36 am
Operator : CDS1
InstName : VOA2
Sample : |1201876840|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 16 11:55:17 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
95)	Propionitrile	10.836		0m	N.D.	d	
96)	Methacrylonitrile	11.085		0m	N.D.	d	
97)	Tetrahydrofuran	11.227		0m	N.D.	d	
98)	Isobutyl alcohol	11.915		0m	N.D.	d	
99)	Methyl tert-amyl ether	12.176		0m	N.D.	d	
100)	Methyl methacrylate	13.124		0m	N.D.	d	
101)	1,4-Dioxane	13.278		0m	N.D.	d	
102)	2-Nitropropane	13.753		0m	N.D.	d	
104)	Ethyl methacrylate	14.642		0m	N.D.	d	
106)	1-Chlorohexane	15.947		0m	N.D.	d	
107)	cis-1,4-Dichloro-2-butene	17.026		0m	N.D.	d	
108)	Cyclohexanone	17.144		0m	N.D.	d	
109)	trans-1,4-Dichloro-2-b...	17.358		0m	N.D.	d	
110)	Pentachloroethane	18.057		0m	N.D.	d	
111)	Benzyl chloride	18.603		0m	N.D.	d	
112)	bis(2-Chloroisopropyl)...	19.006		0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T303LS1.D
Acq On : 8 Jul 2009 7:36 am
Operator : CDS1
InstName : VOA2
Sample : |1201876840|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [A] SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 16 11:55:17 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

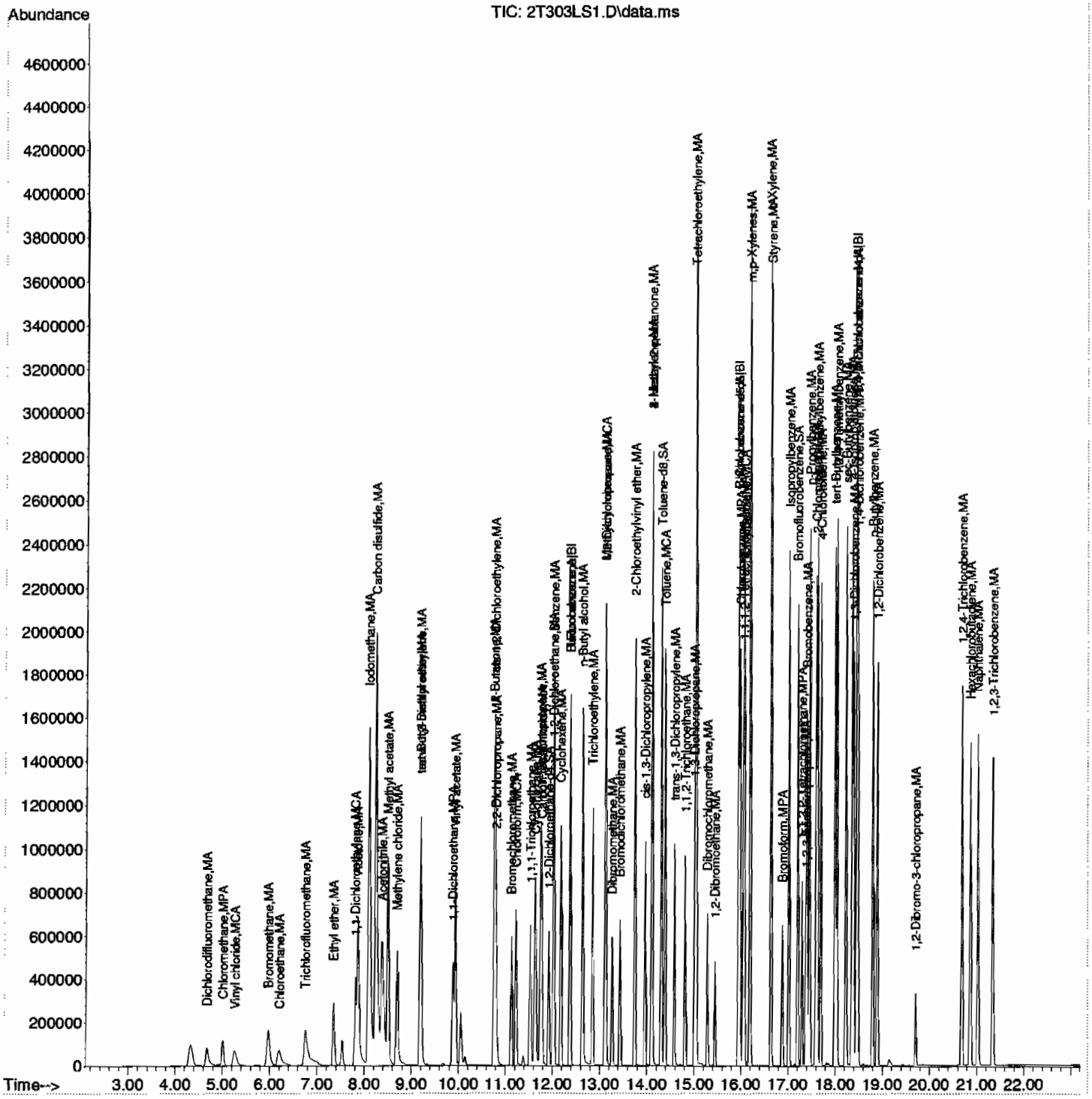

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			**Matrix:**	SOIL
Lab Sample ID:	1201876841				
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883079	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 08:39	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T305SLS1.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			**Matrix:**	SOIL
Lab Sample ID:	1201876841				
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883079	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 08:39	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 06:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T305SLS1.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		247	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T305SLS1.D
Acq On : 8 Jul 2009 8:39 am
Operator : CDS1
InstName : VOA2
Sample : |1201876841|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 14:24:48 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1629590	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1405853	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	882446	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1629590	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1405853	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	882446	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	458415	50.17	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 100.34%			
43) Toluene-d8	14.310	98	1614456	48.87	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 97.74%			
61) Bromofluorobenzene	17.204	95	694638	50.06	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 100.12%			

Target Compounds				Qvalue
2) Dichlorodifluoromethane	4.672	0m	N.D. d	
3) Chloromethane	4.999	0m	N.D. d	
4) Vinyl chloride	5.252	0m	N.D. d	
5) Bromomethane	0.000	0	N.D.	
6) Chloroethane	0.000	0	N.D.	
7) Trichlorofluoromethane	6.768	0m	N.D. d	
8) Ethyl ether	0.000	0	N.D.	
9) Acetone	7.847	0m	N.D. d	
10) 1,1-Dichloroethylene	7.824	0m	N.D. d	
11) Iodomethane	8.097	0m	N.D. d	
12) Acetonitrile	8.488	0m	N.D. d	
13) Methyl acetate	8.523	0m	N.D. d	
14) Carbon disulfide	8.239	0m	N.D. d	
15) Methylene chloride	8.701	0m	N.D. d	
16) tert-Butyl methyl ether	9.199	0m	N.D. d	
17) trans-1,2-Dichloroethy...	9.187	0m	N.D. d	
18) Vinyl acetate	10.065	0m	N.D. d	
19) 1,1-Dichloroethane	9.875	0m	N.D. d	
20) 2-Butanone	10.848	0m	N.D. d	
21) cis-1,2-Dichloroethylene	10.848	0m	N.D. d	
22) 2,2-Dichloropropane	10.800	0m	N.D. d	
23) Bromochloromethane	0.000	0	N.D.	
24) Chloroform	11.227	0m	N.D. d	
25) 1,1,1-Trichloroethane	11.535	0m	N.D. d	
26) Cyclohexane	11.642	0m	N.D. d	
27) 1,1-Dichloropropene	11.796	0m	N.D. d	
28) Carbon tetrachloride	11.773	0m	N.D. d	
30) 1,2-Dichloroethane	12.022	0m	N.D. d	
31) Benzene	12.034	0m	N.D. d	
32) Cyclohexene	12.188	0m	N.D. d	
33) n-Butyl alcohol	12.650	0m	N.D. d	
34) Trichloroethylene	12.852	0m	N.D. d	
35) 1,2-Dichloropropane	13.124	0m	N.D. d	
36) Methylcyclohexane	13.124	0m	N.D. d	
37) Dibromomethane	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T305SLS1.D
Acq On : 8 Jul 2009 8:39 am
Operator : CDS1
InstName : VOA2
Sample : |1201876841|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 14:24:48 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
38) Bromodichloromethane	13.433		0m	N.D. d	
39) 2-Chloroethylvinyl ether	13.741		0m	N.D. d	
40) cis-1,3-Dichloropropylene	13.966		0m	N.D. d	
42) 4-Methyl-2-pentanone	14.109		0m	N.D. d	
44) Toluene	14.382		0m	N.D. d	
45) trans-1,3-Dichloroprop...	14.583		0m	N.D. d	
46) 1,1,2-Trichloroethane	14.642		0m	N.D. d	
47) 2-Hexanone	14.109		0m	N.D. d	
48) 1,3-Dichloropropane	15.010		0m	N.D. d	
49) Tetrachloroethylene	15.034		0m	N.D. d	
50) Dibromochloromethane	15.283		0m	N.D. d	
51) 1,2-Dibromoethane	15.449		0m	N.D. d	
52) Chlorobenzene	15.982		0m	N.D. d	
53) 1,1,1,2-Tetrachloroethane	16.054		0m	N.D. d	
54) Ethylbenzene	16.077		0m	N.D. d	
55) m,p-Xylenes	16.196		0m	N.D. d	
56) o-Xylene	16.635		0m	N.D. d	
57) Styrene	16.646		0m	N.D. d	
59) Bromoform	0.000		0	N.D.	
60) Isopropylbenzene	17.026		0m	N.D. d	
62) 1,1,2,2-Tetrachloroethane	17.358		0m	N.D. d	
63) 1,2,3-Trichloropropane	17.204		0m	N.D. d	
64) Bromobenzene	17.405		0m	N.D. d	
65) n-Propylbenzene	17.465		0m	N.D. d	
66) 1,3,5-Trimethylbenzene	17.631		0m	N.D. d	
67) 2-Chlorotoluene	17.595		0m	N.D. d	
68) 4-Chlorotoluene	17.702		0m	N.D. d	
69) tert-Butylbenzene	18.058		0m	N.D. d	
70) 1,2,4-Trimethylbenzene	18.046		0m	N.D. d	
71) sec-Butylbenzene	18.236		0m	N.D. d	
72) 4-Isopropyltoluene	18.366		0m	N.D. d	
73) 1,3-Dichlorobenzene	18.402		0m	N.D. d	
74) 1,4-Dichlorobenzene	18.402		0m	N.D. d	
75) n-Butylbenzene	18.805		0m	N.D. d	
76) 1,2-Dichlorobenzene	18.900		0m	N.D. d	
77) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
78) 1,2,4-Trichlorobenzene	20.690		0m	N.D. d	
79) Hexachlorobutadiene	20.868		0m	N.D. d	
80) Naphthalene	21.022		0m	N.D. d	
81) 1,2,3-Trichlorobenzene	21.342		0m	N.D. d	
83) Chlorotrifluoroethylene	0.000		0	N.D.	
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.	
85) Acrolein	7.575	56	321296	285.86 ug/L	100
86) Trichlorotrifluoroethane	7.847	85	506656	247.37 ug/L	99
87) Isopropyl Alcohol	0.000		0m	N.D. d	
88) Allyl chloride	8.488	41	2604005	228.73 ug/L	99
89) tert-Butyl Alcohol	0.000		0	N.D.	
90) Acrylonitrile	9.093	53	601231	262.52 ug/L	99
91) Isopropyl ether	10.029	45	408	N.D.	
92) 2-Chloro-1,3-butadiene	10.041	53	561125	59.77 ug/L	95
93) Ethyl tert-butyl ether	0.000		0	N.D.	
94) Ethyl acetate	10.848	43	1756153	259.67 ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T305SLS1.D
Acq On : 8 Jul 2009 8:39 am
Operator : CDS1
InstName : VOA2
Sample : |1201876841|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 14:24:48 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
95) Propionitrile	10.836	54	243034	262.86 ug/L	100	
96) Methacrylonitrile	11.073	41	1094308	268.77 ug/L	100	
97) Tetrahydrofuran	11.203	42	580998	266.91 ug/L	100	
98) Isobutyl alcohol	11.796	41	685587	2832.99 ug/L	99	
99) Methyl tert-amyl ether	12.164	73	1495	N.D.		
100) Methyl methacrylate	13.196	69	1129906	284.70 ug/L	99	
101) 1,4-Dioxane	13.267	88	181808	3377.67 ug/L	99	
102) 2-Nitropropane	13.682	43	612393	325.09 ug/L	100	E
104) Ethyl methacrylate	14.642	69	2078576	268.03 ug/L	100	
106) 1-Chlorohexane	0.000		0m	N.D. d		
107) cis-1,4-Dichloro-2-butene	17.062	53	788980	283.97 ug/L	99	
108) Cyclohexanone	17.145	42	1762756	1682.98 ug/L	97	
109) trans-1,4-Dichloro-2-b...	17.358	53	748445	276.15 ug/L	99	
110) Pentachloroethane	18.058	167	1136244	368.19 ug/L	97	
111) Benzyl chloride	18.603	91	4654707	321.94 ug/L	100	
112) bis(2-Chloroisopropyl)...	19.006	45	1263341	268.34 ug/L	98	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T305SLS1.D
Acq On : 8 Jul 2009 8:39 am
Operator : CDS1
InstName : VOA2
Sample : |1201876841|883080|1|VOAF|1|VOA8260BSF|
Misc : LCS 5G MIX [B] SOIL
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 14:24:48 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

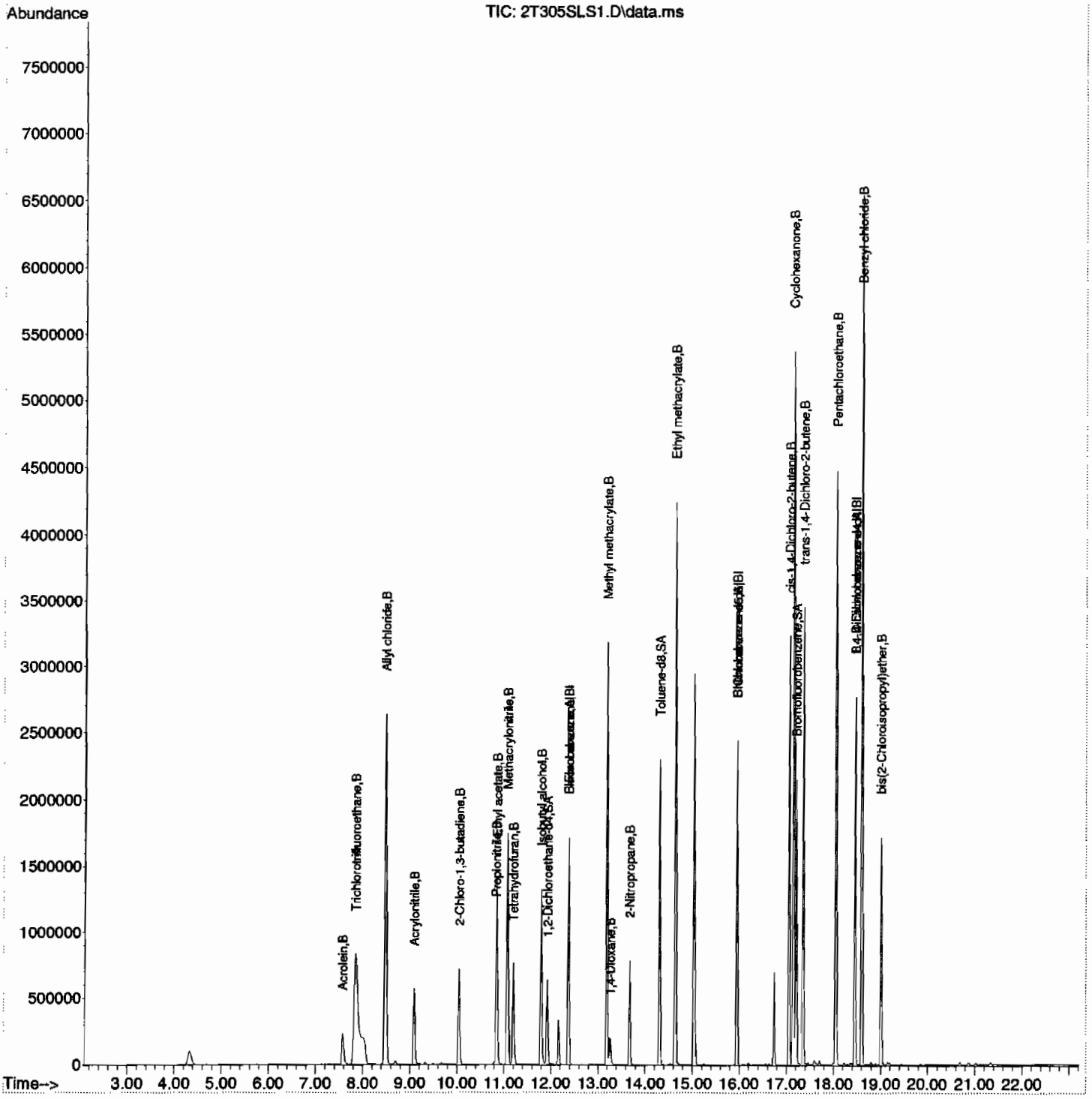

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201875763	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-6529PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 12:01	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:04	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T312.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		41.7	ug/kg	0.357	1.05
74-87-3	Chloromethane		44.1	ug/kg	0.315	1.05
75-01-4	Vinyl chloride		50.2	ug/kg	0.315	1.05
74-83-9	Bromomethane		44.1	ug/kg	0.315	1.05
75-00-3	Chloroethane		48.4	ug/kg	0.315	1.05
75-69-4	Trichlorofluoromethane		51.4	ug/kg	0.599	1.05
67-64-1	Acetone		249	ug/kg	1.74	5.26
75-35-4	1,1-Dichloroethylene		51.9	ug/kg	0.315	1.05
74-88-4	Iodomethane		269	ug/kg	1.68	5.26
75-09-2	Methylene chloride		49.4	ug/kg	2.10	5.26
75-15-0	Carbon disulfide		263	ug/kg	1.31	5.26
156-60-5	trans-1,2-Dichloroethylene		48.6	ug/kg	0.315	1.05
75-34-3	1,1-Dichloroethane		49.3	ug/kg	0.315	1.05
78-93-3	2-Butanone		251	ug/kg	1.58	5.26
156-59-2	cis-1,2-Dichloroethylene		49.0	ug/kg	0.315	1.05
594-20-7	2,2-Dichloropropane		54.8	ug/kg	0.315	1.05
67-66-3	Chloroform		49.1	ug/kg	0.315	1.05
74-97-5	Bromochloromethane		48.4	ug/kg	0.347	1.05
71-55-6	1,1,1-Trichloroethane		52.5	ug/kg	0.315	1.05
563-58-6	1,1-Dichloropropene		50.4	ug/kg	0.315	1.05
56-23-5	Carbon tetrachloride		53.5	ug/kg	0.315	1.05
107-06-2	1,2-Dichloroethane		47.2	ug/kg	0.315	1.05
71-43-2	Benzene		47.3	ug/kg	0.315	1.05
79-01-6	Trichloroethylene		49.2	ug/kg	0.347	1.05
78-87-5	1,2-Dichloropropane		47.5	ug/kg	0.315	1.05
75-27-4	Bromodichloromethane		50.6	ug/kg	0.315	1.05
74-95-3	Dibromomethane		48.5	ug/kg	0.315	1.05
108-10-1	4-Methyl-2-pentanone		259	ug/kg	1.31	5.26
10061-01-5	cis-1,3-Dichloropropylene		50.5	ug/kg	0.315	1.05
108-88-3	Toluene		47.0	ug/kg	0.315	1.05
10061-02-6	trans-1,3-Dichloropropylene		49.8	ug/kg	0.315	1.05
79-00-5	1,1,2-Trichloroethane		47.0	ug/kg	0.315	1.05
591-78-6	2-Hexanone		259	ug/kg	1.58	5.26
142-28-9	1,3-Dichloropropane		46.4	ug/kg	0.315	1.05
127-18-4	Tetrachloroethylene		48.5	ug/kg	0.315	1.05
124-48-1	Dibromochloromethane		52.5	ug/kg	0.315	1.05
106-93-4	1,2-Dibromoethane		49.6	ug/kg	0.315	1.05
108-90-7	Chlorobenzene		47.8	ug/kg	0.315	1.05

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201875763	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-6529PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 12:01	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:04	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T312.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		48.4	ug/kg	0.315	1.05
179601-23-1	m,p-Xylenes		94.6	ug/kg	0.315	2.10
95-47-6	o-Xylene		46.9	ug/kg	0.315	1.05
100-42-5	Styrene		52.0	ug/kg	0.315	1.05
75-25-2	Bromoform		45.3	ug/kg	0.315	1.05
79-34-5	1,1,2,2-Tetrachloroethane		50.2	ug/kg	0.315	1.05
96-18-4	1,2,3-Trichloropropane		49.7	ug/kg	0.315	1.05
108-86-1	Bromobenzene		49.2	ug/kg	0.315	1.05
103-65-1	n-Propylbenzene		48.5	ug/kg	0.315	1.05
95-49-8	2-Chlorotoluene		48.7	ug/kg	0.315	1.05
98-82-8	Isopropylbenzene		49.6	ug/kg	0.315	1.05
108-67-8	1,3,5-Trimethylbenzene		48.3	ug/kg	0.315	1.05
106-43-4	4-Chlorotoluene		48.3	ug/kg	0.315	1.05
98-06-6	tert-Butylbenzene		47.5	ug/kg	0.315	1.05
95-63-6	1,2,4-Trimethylbenzene		47.5	ug/kg	0.315	1.05
135-98-8	sec-Butylbenzene		45.9	ug/kg	0.315	1.05
99-87-6	4-Isopropyltoluene		45.6	ug/kg	0.315	1.05
541-73-1	1,3-Dichlorobenzene		46.8	ug/kg	0.315	1.05
106-46-7	1,4-Dichlorobenzene		45.8	ug/kg	0.315	1.05
104-51-8	n-Butylbenzene		43.5	ug/kg	0.315	1.05
96-12-8	1,2-Dibromo-3-chloropropane	E	57.3	ug/kg	0.315	1.05
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.26	ug/kg	1.68	5.26
630-20-6	1,1,1,2-Tetrachloroethane		50.5	ug/kg	0.315	1.05
95-50-1	1,2-Dichlorobenzene		45.4	ug/kg	0.315	1.05

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T312.D
Acq On : 8 Jul 2009 12:01 pm
Operator : CDS1
InstName : VOA2
Sample : |1201875763|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - ms 232507004 SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 16 12:05:46 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1444504	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1220178	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	720275	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1444504	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1220178	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	720275	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	403810	49.85	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 99.70%			
43) Toluene-d8	14.310	98	1407632	49.10	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 98.20%			
61) Bromofluorobenzene	17.204	95	529333	46.74	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 93.48%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.687	85	204923	39.63	ug/L	100
3) Chloromethane	5.014	50	195485	41.93	ug/L	100
4) Vinyl chloride	5.266	62	197637	47.74	ug/L	100
5) Bromomethane	5.980	94	174780	41.99	ug/L	100
6) Chloroethane	6.199	64	201864	46.02	ug/L	100
7) Trichlorofluoromethane	6.756	101	418833	48.91	ug/L	100
8) Ethyl ether	7.349	59	225268	45.03	ug/L	100
9) Acetone	7.871	43	1177130	237.30	ug/L	99
10) 1,1-Dichloroethylene	7.812	61	428674	49.34	ug/L	99
11) Iodomethane	8.096	142	3025146	255.66	ug/L	99
12) Acetonitrile	8.381	41	943230	1141.03	ug/L	99
13) Methyl acetate	8.500	43	1690874	329.75	ug/L	99
14) Carbon disulfide	8.251	76	4886271	250.34	ug/L	100
15) Methylene chloride	8.701	84	313012	47.01	ug/L	100
16) tert-Butyl methyl ether	9.199	73	691942	42.35	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	412999	46.25	ug/L	100
18) Vinyl acetate	9.946	43	403749	37.76	ug/L	93
19) 1,1-Dichloroethane	9.887	63	522358	46.90	ug/L	100
20) 2-Butanone	10.765	43	1427968	238.82	ug/L	99
21) cis-1,2-Dichloroethylene	10.776	61	460410	46.64	ug/L	100
22) 2,2-Dichloropropane	10.800	77	415441	52.10	ug/L	98
23) Bromochloromethane	11.132	128	168554	46.05	ug/L	100
24) Chloroform	11.227	83	532662	46.69	ug/L	99
25) 1,1,1-Trichloroethane	11.535	97	489771	49.94	ug/L	100
26) Cyclohexane	11.642	56	491090	47.81	ug/L	100
27) 1,1-Dichloropropene	11.749	75	388862	47.97	ug/L	99
28) Carbon tetrachloride	11.773	117	449322	50.91	ug/L	99
30) 1,2-Dichloroethane	12.022	62	388939	44.93	ug/L	100
31) Benzene	12.033	78	1136328	44.99	ug/L	100
32) Cyclohexene	12.188	67	580753	45.75	ug/L	99
33) n-Butyl alcohol	12.638	56	874421	5238.40	ug/L	98
34) Trichloroethylene	12.852	95	321159	46.78	ug/L	100
35) 1,2-Dichloropropane	13.124	63	286705	45.24	ug/L	100
36) Methylcyclohexane	13.136	83	494120	44.43	ug/L	99
37) Dibromomethane	13.267	93	180238	46.18	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T312.D
Acq On : 8 Jul 2009 12:01 pm
Operator : CDS1
InstName : VOA2
Sample : |1201875763|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - ms 232507004 SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 16 12:05:46 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
38) Bromodichloromethane	13.433	83	389808	48.15 ug/L	99	
39) 2-Chloroethylvinyl ether	13.753	63	797318	254.04 ug/L	100	
40) cis-1,3-Dichloropropylene	13.966	75	454074	48.02 ug/L	99	
42) 4-Methyl-2-pentanone	14.109	58	657282	246.10 ug/L	100	
44) Toluene	14.381	91	1246818	44.71 ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	411122	47.43 ug/L	100	
46) 1,1,2-Trichloroethane	14.808	83	212613	44.69 ug/L	100	
47) 2-Hexanone	14.109	43	1804784	246.89 ug/L	100	
48) 1,3-Dichloropropane	15.010	76	422004	44.14 ug/L	92	
49) Tetrachloroethylene	15.034	164	332069	46.18 ug/L	100	
50) Dibromochloromethane	15.295	129	323189	49.97 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	277464	47.22 ug/L	99	
52) Chlorobenzene	15.982	112	882582	45.46 ug/L	100	
53) 1,1,1,2-Tetrachloroethane	16.054	131	339342	48.05 ug/L	99	
54) Ethylbenzene	16.077	91	1450303	46.04 ug/L	100	
55) m,p-Xylenes	16.196	106	1139895	90.02 ug/L	98	
56) o-Xylene	16.635	106	555146	44.60 ug/L	99	
57) Styrene	16.646	104	907338	49.47 ug/L	98	
59) Bromoform	16.884	173	249738	43.06 ug/L	99	
60) Isopropylbenzene	17.026	105	1445737	47.17 ug/L	100	
62) 1,1,2,2-Tetrachloroethane	17.299	83	344409	47.77 ug/L	100	
63) 1,2,3-Trichloropropane	17.382	110	97762	47.29 ug/L	97	
64) Bromobenzene	17.417	156	428661	46.77 ug/L	98	
65) n-Propylbenzene	17.465	91	1670482	46.18 ug/L	100	
66) 1,3,5-Trimethylbenzene	17.631	105	1165683	45.92 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1137466	46.30 ug/L	100	
68) 4-Chlorotoluene	17.702	91	1028027	45.95 ug/L	100	
69) tert-Butylbenzene	17.998	119	1169996	45.19 ug/L	99	
70) 1,2,4-Trimethylbenzene	18.046	105	1188092	45.20 ug/L	100	
71) sec-Butylbenzene	18.235	105	1494863	43.63 ug/L	100	
72) 4-Isopropyltoluene	18.366	119	1197004	43.40 ug/L	99	
73) 1,3-Dichlorobenzene	18.401	146	765926	44.49 ug/L	99	
74) 1,4-Dichlorobenzene	18.485	146	777631	43.56 ug/L	100	
75) n-Butylbenzene	18.805	91	1085161	41.37 ug/L	100	
76) 1,2-Dichlorobenzene	18.900	146	712949	43.23 ug/L	100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	77563	54.50 ug/L	99	E
78) 1,2,4-Trichlorobenzene	20.690	180	465721	37.08 ug/L	100	
79) Hexachlorobutadiene	20.868	225	234768	30.53 ug/L	99	
80) Naphthalene	21.022	128	1005651	38.26 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	414025	35.97 ug/L	100	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.527	56	613	N.D.		
86) Trichlorotrifluoroethane	0.000		0	N.D.		
87) Isopropyl Alcohol	8.239	45	13482	33.52 ug/L #	58	
88) Allyl chloride	8.381	41	943823	93.53 ug/L #	42	
89) tert-Butyl Alcohol	8.891	59	1742	N.D.		
90) Acrylonitrile	9.199	53	7482	3.69 ug/L #	24	
91) Isopropyl ether	10.053	45	4381	N.D.		
92) 2-Chloro-1,3-butadiene	10.148	53	2019	N.D.		
93) Ethyl tert-butyl ether	10.776	59	10127	0.54 ug/L #	1	
94) Ethyl acetate	10.765	43	1430611	238.64 ug/L	61	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T312.D
Acq On : 8 Jul 2009 12:01 pm
Operator : CDS1
InstName : VOA2
Sample : |1201875763|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - ms 232507004 SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 16 12:05:46 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	10.765	54	2883	3.52 ug/L #	1
96) Methacrylonitrile	11.286	41	1393	N.D.	
97) Tetrahydrofuran	11.227	42	1745	N.D.	
98) Isobutyl alcohol	11.939	41	127	N.D.	
99) Methyl tert-amyl ether	12.188	73	1499	N.D.	
100) Methyl methacrylate	13.136	69	96886	27.54 ug/L #	1
101) 1,4-Dioxane	13.267	88	716	N.D.	
102) 2-Nitropropane	13.753	43	634441	379.95 ug/L #	14 E
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	15.947	55	13330	2.35 ug/L #	1
107) cis-1,4-Dichloro-2-butene	17.026	53	17244	7.60 ug/L #	1
108) Cyclohexanone	17.145	42	126	N.D.	
109) trans-1,4-Dichloro-2-b...	17.358	53	283	N.D.	
110) Pentachloroethane	18.058	167	2129	2.87 ug/L	76
111) Benzyl chloride	18.805	91	1084949	91.94 ug/L	67
112) bis(2-Chloroisopropyl)...	19.149	45	57699	15.02 ug/L	58

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T312.D
Acq On : 8 Jul 2009 12:01 pm
Operator : CDS1
InstName : VOA2
Sample : |1201875763|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - ms 232507004 SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 16 12:05:46 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

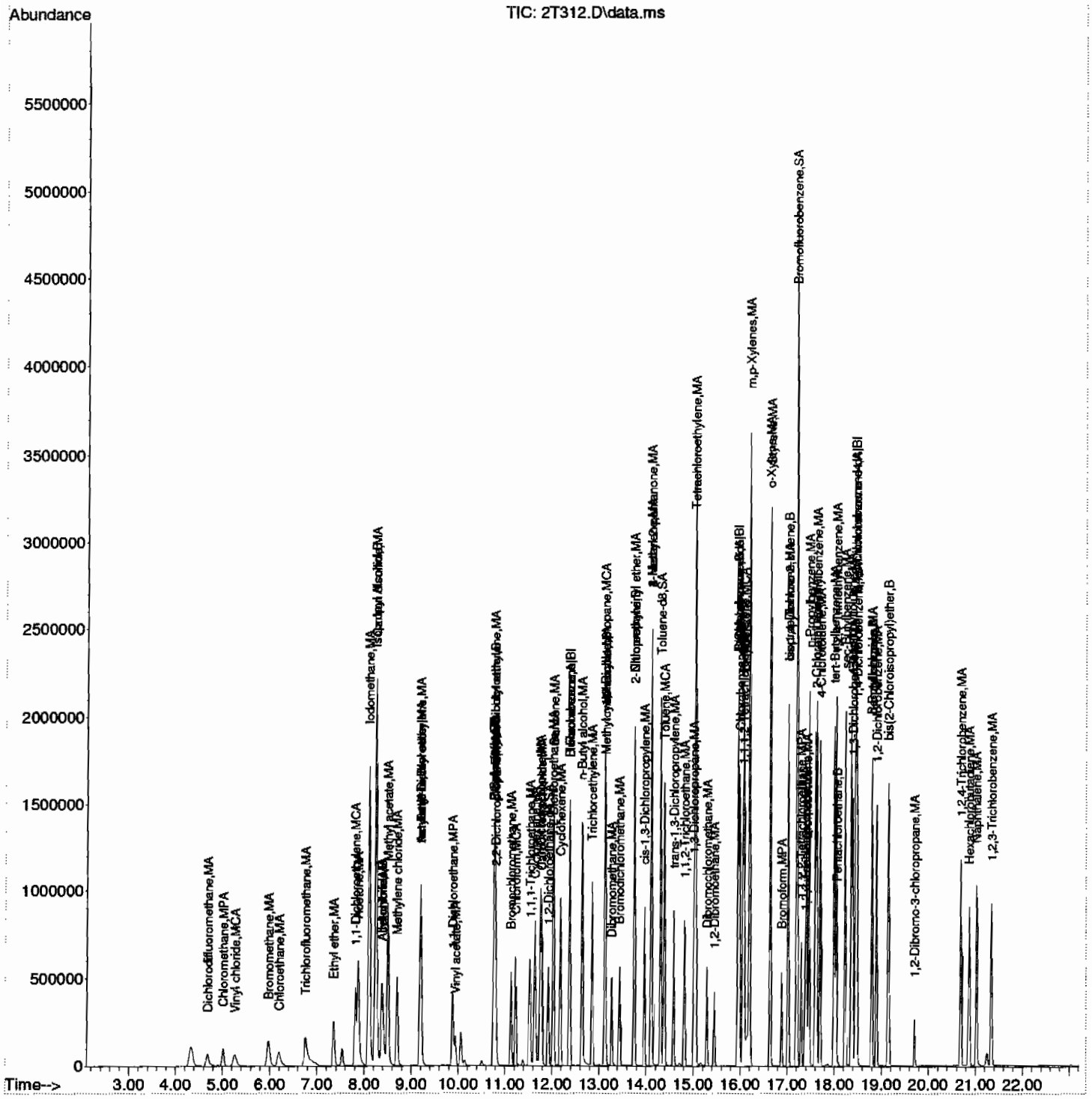

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	1201875764	Date Received:	06/27/2009 09:05	%Moisture:	4.9
Client Sample:	QC for batch 883079	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-6529PSD	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883080	Inst:	VOA2.I	Dilution:	1
Run Date:	07/08/2009 12:30	Analyst:	CDS1	Purge Vol:	5 mL
Prep Date:	07/08/2009 08:05	Aliquot:	5 g	Final Volume:	5 mL
Data File:	070809V2.b\2T313.D	Column:	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		41.5	ug/kg	0.357	1.05
74-87-3	Chloromethane		44.5	ug/kg	0.315	1.05
75-01-4	Vinyl chloride		47.2	ug/kg	0.315	1.05
74-83-9	Bromomethane		42.3	ug/kg	0.315	1.05
75-00-3	Chloroethane		47.3	ug/kg	0.315	1.05
75-69-4	Trichlorofluoromethane		46.8	ug/kg	0.599	1.05
67-64-1	Acetone		232	ug/kg	1.74	5.26
75-35-4	1,1-Dichloroethylene		47.8	ug/kg	0.315	1.05
74-88-4	Iodomethane		257	ug/kg	1.68	5.26
75-09-2	Methylene chloride		47.6	ug/kg	2.10	5.26
75-15-0	Carbon disulfide		249	ug/kg	1.31	5.26
156-60-5	trans-1,2-Dichloroethylene		46.9	ug/kg	0.315	1.05
75-34-3	1,1-Dichloroethane		47.7	ug/kg	0.315	1.05
78-93-3	2-Butanone		235	ug/kg	1.58	5.26
156-59-2	cis-1,2-Dichloroethylene		47.0	ug/kg	0.315	1.05
594-20-7	2,2-Dichloropropane		49.8	ug/kg	0.315	1.05
67-66-3	Chloroform		47.7	ug/kg	0.315	1.05
74-97-5	Bromochloromethane		47.8	ug/kg	0.347	1.05
71-55-6	1,1,1-Trichloroethane		50.1	ug/kg	0.315	1.05
563-58-6	1,1-Dichloropropene		48.9	ug/kg	0.315	1.05
56-23-5	Carbon tetrachloride		51.4	ug/kg	0.315	1.05
107-06-2	1,2-Dichloroethane		46.0	ug/kg	0.315	1.05
71-43-2	Benzene		46.0	ug/kg	0.315	1.05
79-01-6	Trichloroethylene		48.3	ug/kg	0.347	1.05
78-87-5	1,2-Dichloropropane		46.8	ug/kg	0.315	1.05
75-27-4	Bromodichloromethane		49.9	ug/kg	0.315	1.05
74-95-3	Dibromomethane		47.4	ug/kg	0.315	1.05
108-10-1	4-Methyl-2-pentanone		242	ug/kg	1.31	5.26
10061-01-5	cis-1,3-Dichloropropylene		48.8	ug/kg	0.315	1.05
108-88-3	Toluene		45.5	ug/kg	0.315	1.05
10061-02-6	trans-1,3-Dichloropropylene		48.4	ug/kg	0.315	1.05
79-00-5	1,1,2-Trichloroethane		45.9	ug/kg	0.315	1.05
591-78-6	2-Hexanone		242	ug/kg	1.58	5.26
142-28-9	1,3-Dichloropropane		45.4	ug/kg	0.315	1.05
127-18-4	Tetrachloroethylene		47.0	ug/kg	0.315	1.05
124-48-1	Dibromochloromethane		51.7	ug/kg	0.315	1.05
106-93-4	1,2-Dibromoethane		48.4	ug/kg	0.315	1.05
108-90-7	Chlorobenzene		46.5	ug/kg	0.315	1.05

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201875764	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
Client Sample:	QC for batch 883079	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-6529PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883080	**Inst:**	VOA2.I	**Dilution:**	1
Run Date:	07/08/2009 12:30	**Analyst:**	CDS1	**Purge Vol:**	5 mL
Prep Date:	07/08/2009 08:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	070809V2.b\2T313.D	**Column:**	DB-624		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		46.3	ug/kg	0.315	1.05
179601-23-1	m,p-Xylenes		91.5	ug/kg	0.315	2.10
95-47-6	o-Xylene		45.8	ug/kg	0.315	1.05
100-42-5	Styrene		50.1	ug/kg	0.315	1.05
75-25-2	Bromoform		44.1	ug/kg	0.315	1.05
79-34-5	1,1,2,2-Tetrachloroethane		48.0	ug/kg	0.315	1.05
96-18-4	1,2,3-Trichloropropane		48.0	ug/kg	0.315	1.05
108-86-1	Bromobenzene		47.8	ug/kg	0.315	1.05
103-65-1	n-Propylbenzene		46.6	ug/kg	0.315	1.05
95-49-8	2-Chlorotoluene		46.4	ug/kg	0.315	1.05
98-82-8	Isopropylbenzene		47.4	ug/kg	0.315	1.05
108-67-8	1,3,5-Trimethylbenzene		46.8	ug/kg	0.315	1.05
106-43-4	4-Chlorotoluene		46.0	ug/kg	0.315	1.05
98-06-6	tert-Butylbenzene		46.4	ug/kg	0.315	1.05
95-63-6	1,2,4-Trimethylbenzene		45.7	ug/kg	0.315	1.05
135-98-8	sec-Butylbenzene		44.9	ug/kg	0.315	1.05
99-87-6	4-Isopropyltoluene		43.0	ug/kg	0.315	1.05
541-73-1	1,3-Dichlorobenzene		45.1	ug/kg	0.315	1.05
106-46-7	1,4-Dichlorobenzene		44.2	ug/kg	0.315	1.05
104-51-8	n-Butylbenzene		42.2	ug/kg	0.315	1.05
96-12-8	1,2-Dibromo-3-chloropropane	E	56.7	ug/kg	0.315	1.05
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.26	ug/kg	1.68	5.26
630-20-6	1,1,1,2-Tetrachloroethane		49.6	ug/kg	0.315	1.05
95-50-1	1,2-Dichlorobenzene		44.1	ug/kg	0.315	1.05

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T313.D
Acq On : 8 Jul 2009 12:30 pm
Operator : CDS1
InstName : VOA2
Sample : |1201875764|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - msd 232507004 SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 16 12:06:10 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorobenzene	12.377	96	1599933	50.00	ug/L	0.00
41) Chlorobenzene-d5	15.947	117	1363156	50.00	ug/L	0.00
58) 1,4-Dichlorobenzene-d4	18.461	152	815966	50.00	ug/L	0.00
82) B Fluorobenzene	12.377	96	1599933	50.00	ug/L	0.00
103) B Chlorobenzene-d5	15.947	117	1363156	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	18.461	152	815966	50.00	ug/L	0.00
System Monitoring Compounds						
29) 1,2-Dichloroethane-d4	11.927	65	448199	49.96	ug/L	0.00
Spiked Amount 50.000	Range 68 - 131		Recovery = 99.92%			
43) Toluene-d8	14.310	98	1596170	49.83	ug/L	0.00
Spiked Amount 50.000	Range 75 - 129		Recovery = 99.66%			
61) Bromofluorobenzene	17.204	95	473251	36.89	ug/L	0.00
Spiked Amount 50.000	Range 68 - 133		Recovery = 73.78%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.687	85	226025	39.46	ug/L	100
3) Chloromethane	5.014	50	218842	42.38	ug/L	100
4) Vinyl chloride	5.266	62	206098	44.94	ug/L	100
5) Bromomethane	5.980	94	185549	40.25	ug/L	100
6) Chloroethane	6.211	64	218707	45.02	ug/L	100
7) Trichlorofluoromethane	6.756	101	421970	44.49	ug/L	100
8) Ethyl ether	7.349	59	243519	43.95	ug/L	100
9) Acetone	7.871	43	1214783	221.15	ug/L	100
10) 1,1-Dichloroethylene	7.812	61	437605	45.47	ug/L	100
11) Iodomethane	8.096	142	3203959	244.47	ug/L	99
12) Acetonitrile	8.381	41	983472	1074.13	ug/L	100
13) Methyl acetate	8.500	43	1750506	308.21	ug/L	100
14) Carbon disulfide	8.251	76	5125385	237.08	ug/L	99
15) Methylene chloride	8.701	84	334874	45.27	ug/L	100
16) tert-Butyl methyl ether	9.199	73	755543	41.75	ug/L	100
17) trans-1,2-Dichloroethy...	9.199	61	440866	44.58	ug/L	100
18) Vinyl acetate	9.946	43	160763	13.57	ug/L	86
19) 1,1-Dichloroethane	9.887	63	559544	45.36	ug/L	100
20) 2-Butanone	10.765	43	1479821	223.45	ug/L	100
21) cis-1,2-Dichloroethylene	10.788	61	488876	44.71	ug/L	99
22) 2,2-Dichloropropane	10.800	77	418744	47.41	ug/L	98
23) Bromochloromethane	11.132	128	184375	45.48	ug/L	99
24) Chloroform	11.227	83	574083	45.43	ug/L	99
25) 1,1,1-Trichloroethane	11.535	97	517507	47.64	ug/L	99
26) Cyclohexane	11.642	56	496332	43.62	ug/L	99
27) 1,1-Dichloropropene	11.749	75	417343	46.48	ug/L	99
28) Carbon tetrachloride	11.784	117	477859	48.88	ug/L	99
30) 1,2-Dichloroethane	12.033	62	419929	43.79	ug/L	100
31) Benzene	12.033	78	1225568	43.81	ug/L	100
32) Cyclohexene	12.188	67	622216	44.25	ug/L	99
33) n-Butyl alcohol	12.650	56	927842	5018.44	ug/L	99
34) Trichloroethylene	12.852	95	349435	45.96	ug/L	100
35) 1,2-Dichloropropane	13.124	63	312860	44.57	ug/L	99
36) Methylcyclohexane	13.136	83	521914	42.37	ug/L	99
37) Dibromomethane	13.267	93	194994	45.11	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T313.D
Acq On : 8 Jul 2009 12:30 pm
Operator : CDS1
InstName : VOA2
Sample : |1201875764|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - msd 232507004 SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 16 12:06:10 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
38) Bromodichloromethane	13.445	83	425543	47.46 ug/L	100	
39) 2-Chloroethylvinyl ether	13.753	63	844629	242.97 ug/L	100	
40) cis-1,3-Dichloropropylene	13.966	75	486404	46.44 ug/L	99	
42) 4-Methyl-2-pentanone	14.109	58	687802	230.52 ug/L	99	
44) Toluene	14.381	91	1347397	43.25 ug/L	99	
45) trans-1,3-Dichloroprop...	14.583	75	445612	46.01 ug/L	100	
46) 1,1,2-Trichloroethane	14.808	83	231985	43.65 ug/L	100	
47) 2-Hexanone	14.109	43	1882576	230.52 ug/L	100	
48) 1,3-Dichloropropane	15.010	76	461522	43.21 ug/L	96	
49) Tetrachloroethylene	15.034	164	359485	44.75 ug/L	100	
50) Dibromochloromethane	15.294	129	355652	49.22 ug/L	100	
51) 1,2-Dibromoethane	15.449	107	302330	46.06 ug/L	100	
52) Chlorobenzene	15.982	112	959282	44.23 ug/L	99	
53) 1,1,1,2-Tetrachloroethane	16.053	131	372664	47.23 ug/L	96	
54) Ethylbenzene	16.077	91	1551814	44.09 ug/L	99	
55) m,p-Xylenes	16.196	106	1231302	87.04 ug/L	100	
56) o-Xylene	16.634	106	606036	43.59 ug/L	100	
57) Styrene	16.646	104	976891	47.68 ug/L	99	
59) Bromoform	16.884	173	275183	41.95 ug/L	99	
60) Isopropylbenzene	17.026	105	1566224	45.11 ug/L	100	
62) 1,1,2,2-Tetrachloroethane	17.299	83	372742	45.64 ug/L	99	
63) 1,2,3-Trichloropropane	17.382	110	107052	45.71 ug/L	96	
64) Bromobenzene	17.405	156	472019	45.46 ug/L	97	
65) n-Propylbenzene	17.465	91	1817470	44.35 ug/L	99	
66) 1,3,5-Trimethylbenzene	17.631	105	1280891	44.54 ug/L	55	
67) 2-Chlorotoluene	17.595	91	1227742	44.11 ug/L	99	
68) 4-Chlorotoluene	17.702	91	1110046	43.80 ug/L	99	
69) tert-Butylbenzene	17.998	119	1294050	44.12 ug/L	100	
70) 1,2,4-Trimethylbenzene	18.046	105	1295574	43.51 ug/L	100	
71) sec-Butylbenzene	18.235	105	1659503	42.75 ug/L	100	
72) 4-Isopropyltoluene	18.366	119	1278386	40.91 ug/L	100	
73) 1,3-Dichlorobenzene	18.401	146	837709	42.95 ug/L	99	
74) 1,4-Dichlorobenzene	18.484	146	849927	42.03 ug/L	99	
75) n-Butylbenzene	18.805	91	1192961	40.15 ug/L	100	
76) 1,2-Dichlorobenzene	18.899	146	784348	41.98 ug/L	100	
77) 1,2-Dibromo-3-chloropr...	19.706	157	87003	53.96 ug/L	98	E
78) 1,2,4-Trichlorobenzene	20.690	180	496274	34.88 ug/L	100	
79) Hexachlorobutadiene	20.868	225	256887	29.49 ug/L	99	
80) Naphthalene	21.022	128	1062848	35.69 ug/L	100	
81) 1,2,3-Trichlorobenzene	21.342	180	436799	33.50 ug/L	99	
83) Chlorotrifluoroethylene	0.000		0	N.D.		
84) 2-Chloro-1,1,1-trifluo...	0.000		0	N.D.		
85) Acrolein	7.539	56	663	N.D.		
86) Trichlorotrifluoroethane	0.000		0	N.D.		
87) Isopropyl Alcohol	8.239	45	14138	N.D.		
88) Allyl chloride	8.381	41	985045	88.13 ug/L #	42	
89) tert-Butyl Alcohol	8.903	59	2908	N.D.		
90) Acrylonitrile	9.199	53	7963	3.54 ug/L #	26	
91) Isopropyl ether	10.065	45	4981	N.D.		
92) 2-Chloro-1,3-butadiene	10.136	53	2406	N.D.		
93) Ethyl tert-butyl ether	10.788	59	10575	0.51 ug/L #	1	
94) Ethyl acetate	10.765	43	1482392	223.25 ug/L	60	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T313.D
Acq On : 8 Jul 2009 12:30 pm
Operator : CDS1
InstName : VOA2
Sample : |1201875764|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - msd 232507004 SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 16 12:06:10 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Propionitrile	10.765	54	2938	3.24 ug/L #	1
96) Methacrylonitrile	11.073	41	250	N.D.	
97) Tetrahydrofuran	11.227	42	2795	N.D.	
98) Isobutyl alcohol	11.927	41	236	N.D.	
99) Methyl tert-amyl ether	12.188	73	1644	N.D.	
100) Methyl methacrylate	13.136	69	102963	26.42 ug/L #	1
101) 1,4-Dioxane	13.279	88	958	18.13 ug/L #	14
102) 2-Nitropropane	13.611	43	149	N.D.	
104) Ethyl methacrylate	0.000		0	N.D.	
106) 1-Chlorohexane	15.947	55	14618	2.28 ug/L #	1
107) cis-1,4-Dichloro-2-butene	17.026	53	18712	7.28 ug/L #	1
108) Cyclohexanone	17.204	42	988	N.D.	
109) trans-1,4-Dichloro-2-b...	17.358	53	230	N.D.	
110) Pentachloroethane	18.058	167	1887	2.68 ug/L	69
111) Benzyl chloride	18.805	91	1191086	89.09 ug/L	67
112) bis(2-Chloroisopropyl)...	19.148	45	76853	17.65 ug/L	58

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(E) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\DATA\070809V2.b\
Data File : 2T313.D
Acq On : 8 Jul 2009 12:30 pm
Operator : CDS1
InstName : VOA2
Sample : |1201875764|883080|1|VOAF|1|VOA8260BSF|
Misc : LANL 5G - msd 232507004 SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 16 12:06:10 2009
Quant Method : C:\msdchem\1\DATA\070809V2.b\VOA2-8260-070109.M
Quant Title : Volatile Organics 8260B
QLast Update : Wed Jul 15 12:20:01 2009
Response via : Initial Calibration
Integrator: RTE

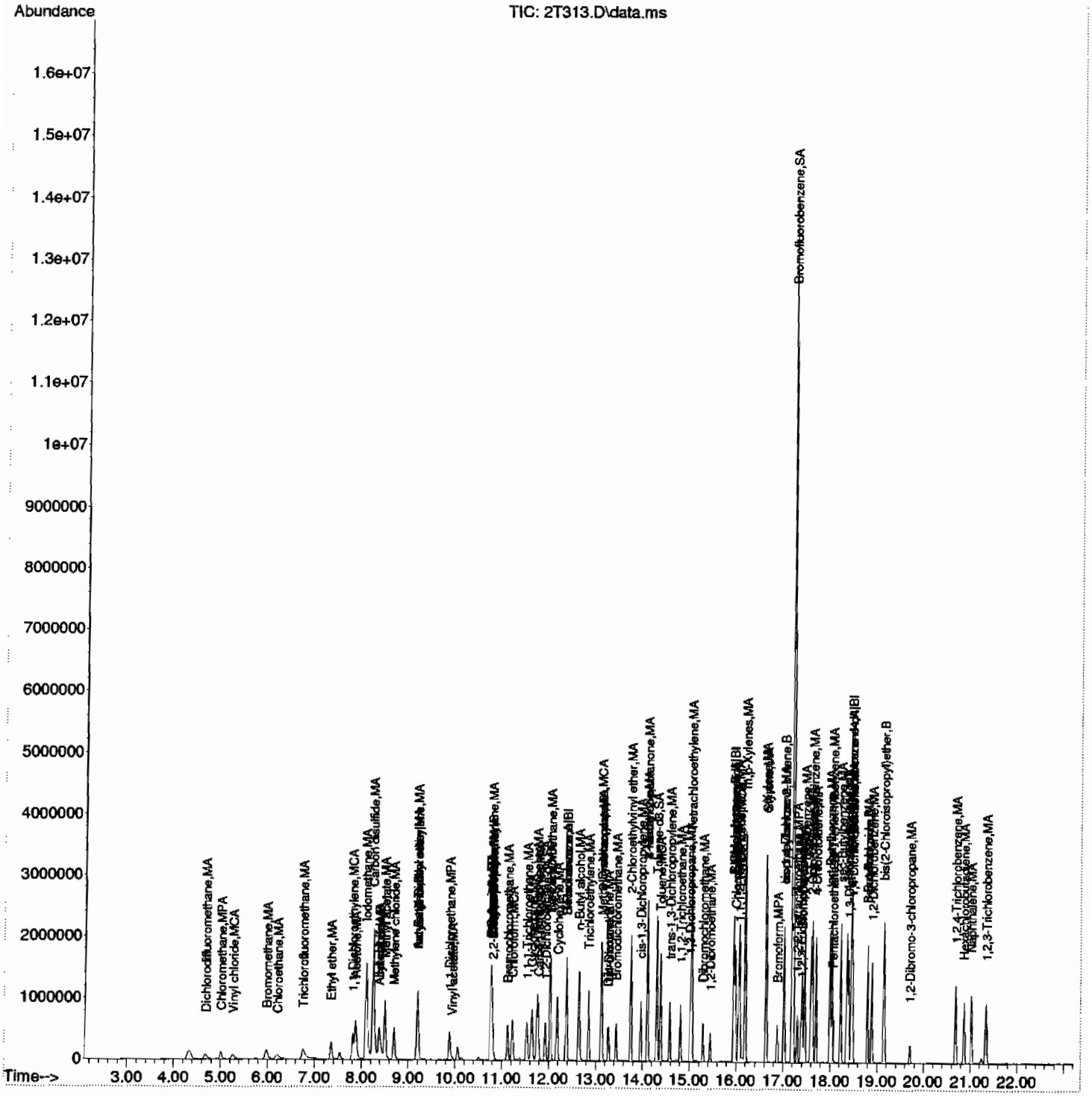

Miscellaneous

Prep LogBook

Analyst: CDS1 Verified by:_____

Batch: 883079

Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201875762		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
MB	1201876839		SW846 5030	08-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201875765		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201875766		SW846 5030	07-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201876840		SW846 5030	08-JUL-2009 06:00	5 g	5 mL	1	SOIL
LCS	1201876841		SW846 5030	08-JUL-2009 06:00	5 g	5 mL	1	SOIL
SAMPLE	232507001		SW846 5030	07-JUL-2009 10:00	5 g	5 mL	1	SOIL
SAMPLE	232507001		SW846 5030	08-JUL-2009 08:00	1.2 g	5 mL	4.16667	SOIL
SAMPLE	232507004		SW846 5030	08-JUL-2009 08:01	5 g	5 mL	1	SOIL
PS	1201875763	232507004	SW846 5030	08-JUL-2009 08:04	5 g	5 mL	1	SOIL
PSD	1201875764	232507004	SW846 5030	08-JUL-2009 08:05	5 g	5 mL	1	SOIL
SAMPLE	232507005		SW846 5030	07-JUL-2009 08:02	5 g	5 mL	1	SOIL
SAMPLE	232507007		SW846 5030	08-JUL-2009 08:03	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/1/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: _____

(See pg. _____ for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 070109V2

	Daily Standard Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
Long ICV	W2VM090701-10			5+5	
BFB	UVM090604-02				1
Short ICV	W2VM090701-18			5+5	

Purge Amount	
5	Water Purge Vol:
	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
1 Jul 2009 09:58	2S301.D	UVM090604-02	--------	BFB	5ML	1	N/A	1	w	CDS1	N/A	O	
1 Jul 2009 10:25	2S302.D	120189------	--------	BLANK	5ML	1	N/A	2	w	CDS1	N/A	X	instrument blank
1 Jul 2009 10:53	2S303.D	W2VM090701-01	VSTD001	ICAL	5uL ea.	1	N/A	3	w	CDS1	N/A	O	UVM090603-02B+UVM090617-02C
1 Jul 2009 11:22	2S304.D	W2VM090701-02	VSTD002	ICAL	5uL ea.	1	N/A	4	w	CDS1	N/A	O	UVM090603-03B+UVM090617-03C
1 Jul 2009 11:51	2S305.D	W2VM090701-03	VSTD005	ICAL	5uL ea.	1	N/A	5	w	CDS1	N/A	O	UVM090603-04B+UVM090617-04C
1 Jul 2009 12:21	2S306.D	W2VM090701-04	VSTD010	ICAL	5uL ea.	1	N/A	6	w	CDS1	N/A	O	UVM090603-05B+UVM090617-05C
1 Jul 2009 12:50	2S307.D	W2VM090701-05	VSTD020	ICAL	5uL ea.	1	N/A	6	w	CDS1	N/A	O	UVM090603-06B+UVM090617-06C
1 Jul 2009 13:19	2S308.D	W2VM090701-06	VSTD050	ICAL	5uL ea.	1	N/A	7	w	CDS1	N/A	O	UVM090603-07B+UVM090617-07C
1 Jul 2009 13:48	2S309.D	W2VM090701-07	VSTD100	ICAL	5uL ea.	1	N/A	8	w	CDS1	N/A	O	UVM090603-07B+UVM090617-08C
1 Jul 2009 14:17	2S310.D	120146------	--------	BLANK	5ML	1	N/A	9	w	CDS1	N/A	X	instrument blank
1 Jul 2009 14:45	2S311.D	W2VM090701-08	VSTD0005	ICAL	5uL ea.	1	N/A	10	w	CDS1	N/A	O	UVM090603-01B+UVM090617-01C
1 Jul 2009 15:15	2S312.D	W2VM090701-09	LCS	ICV	5uL ea.	1	N/A	11	w	CDS1	N/A	X	UVM090605-01D+IVM090630-01 passes but see 2S313 for ICV
1 Jul 2009 15:44	2S313.D	W2VM090701-10	LCS	ICV	5uL ea.	1	N/A	12	w	CDS1	N/A	O	UVM090527-01E+IVM090630-01
1 Jul 2009 16:12	2S314.D	120146------	--------	BLANK	5ML	1	N/A	13	w	CDS1	N/A	X	instrument blank
1 Jul 2009 16:41	2S315.D	W2VM090701-11	VSTD005S	ICAL	5uL ea.	1	N/A	14	w	CDS1	N/A	O	UVM090701-01+UVM090625-01A
1 Jul 2009 17:10	2S316.D	W2VM090701-12	VSTD010S	ICAL	5uL ea.	1	N/A	15	w	CDS1	N/A	O	UVM090701-02+UVM090625-02A
1 Jul 2009 17:39	2S317.D	W2VM090701-13	VSTD025S	ICAL	5uL ea.	1	N/A	16	w	CDS1	N/A	O	UVM090701-03+UVM090625-03A
1 Jul 2009 18:08	2S318.D	W2VM090701-14	VSTD050S	ICAL	5uL ea.	1	N/A	17	w	CDS1	N/A	O	UVM090701-04+UVM090625-04A
1 Jul 2009 18:37	2S319.D	W2VM090701-15	VSTD100S	ICAL	5uL ea.	1	N/A	18	w	CDS1	N/A	O	UVM090701-05+UVM090625-05A
1 Jul 2009 19:07	2S320.D	W2VM090701-16	VSTD250S	ICAL	5uL ea.	1	N/A	19	w	CDS1	N/A	O	UVM090701-06+UVM090625-06A
1 Jul 2009 19:36	2S321.D	W2VM090701-17	VSTD500S	ICAL	5uL ea.	1	N/A	20	w	CDS1	N/A	O	UVM090701-07+UVM090625-07A
1 Jul 2009 20:05	2S322.D	120146-----	-------	BLANK	5ML	1	N/A	21	w	CDS1	N/A	X	instrument blank
1 Jul 2009 20:34	2S323.D	W2VM090701-18	LCS	ICV	5uL ea.	1	N/A	22	w	CDS1	N/A	O	UVM090701-08A+UVM090624-02A

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/7/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 25 for ICAL Std. Scl. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 070709V2

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W2VM090707-01		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
LCS/MS	W2VM090707-02/03			5+5	
BFB	UVM090604-02				1
SHORT	UVM090701-08A		5	5	

Purge Amount

5	Water Purge Vol:
varied	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
7 Jul 2009 06:41	2T201.D	UVM090604-02	-------	BFB	5mL	1	N/A	1	w	CDS1	N/A	O	
7 Jul 2009 07:08	2T202.D	W2VM090707-01	-------	CCV	5mL	1	N/A	2	w	CDS1	N/A	O	UVM090617-07C+UVM090603-07B
7 Jul 2009 07:37	2T203.D	W2VM090707-02	-------	LCS	5mL	1	N/A	3	w	CDS1	N/A	O	UVM090605-01E+IVM090630-01
7 Jul 2009 08:06	2T204.D	W2VM090707-03	-------	LCS	5g	1	N/A	4	s	CDS1	N/A	O	UVM090605-01E+IVM090630-01
7 Jul 2009 08:36	2T205.D	UVM090701-08A	-------	CCV/LCS	5mL	1	N/A	5	w	CDS1	N/A	O	
7 Jul 2009 09:05	2T206.D	UVM090701-08A	-------	LCS	5g	1	N/A	6	s	CDS1	N/A	O	
7 Jul 2009 09:34	2T207.D	120182----	-------	BLANK	5mL	1	N/A	7	w	CDS1	N/A	O	
7 Jul 2009 10:03	2T208.D	120182----	-------	BLANK	5g	1	N/A	8	s	CDS1	N/A	O	
7 Jul 2009 10:31	2T209.D	232582002	LANL	882632	5G	1	N/A	9	s	CDS1	N/A	X	SS low--conf. of 2T115
7 Jul 2009 11:00	2T210.D	232585004	LANL	882632	5G	1	N/A	10	s	CDS1	N/A	O	
7 Jul 2009 11:29	2T211.D	232585003	LANL	882632	2G	1	N/A	11	s	CDS1	N/A	O	w/ 2T117
7 Jul 2009 12:46	2T212.D	232507001	LANL	883080	5G	1	N/A	12	s	CDS1	N/A	O	
7 Jul 2009 13:16	2T213.D	232507004	LANL	883080	5G	1	N/A	13	s	CDS1	N/A	O	
7 Jul 2009 13:45	2T214.D	232507005	LANL	883080	5G	1	N/A	14	s	CDS1	N/A	O	
7 Jul 2009 14:13	2T215.D	232507007	LANL	883080	5G	1	N/A	15	s	CDS1	N/A	O	

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA2

Date: 7/8/2009 Method 8260/624 Operator: CDS1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 1

Daily Instrument Readings:
Multiplier Voltage: 1188

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 25 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 81710

Sequence Number: 070809V2

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W2VM090708-01		5+5		
IS	UVM090604-01	1	1	1	
SS	UVM090604-02	1	1	1	
LCS/MS	W2VM090708-01/02			5+5	
BFB	UVM090604-02				1
SHORT	UVM090701-08A		5	5	

Purge Amount

5	Water Purge Vol:
varied	Soil Purge Wt.
	Mid level ext. MeOH Vol:
	ul
	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable(O/X)	Comments
8 Jul 2009	06:40	2T301.D	UVM090604-02	-------	BFB	5mL	1	N/A	1	w	CDS1	N/A	O	
8 Jul 2009	07:07	2T302.D	W2VM090708-01	-------	CCV/LCS	5mL	1	N/A	2	w	CDS1	N/A	O	UVM090624-01A+IVM090708-01 passes as CCV & LCS
8 Jul 2009	07:36	2T303.D	W2VM090708-02	-------	LCS	5g	1	N/A	3	s	CDS1	N/A	O	UVM090624-01A+IVM090708-01
8 Jul 2009	08:10	2T304.D	UVM090701-08A	-------	CCV	5mL	1	N/A	4	w	CDS1	N/A	O	
8 Jul 2009	08:39	2T305.D	UVM090701-08A	-------	LCS	5g	1	N/A	5	s	CDS1	N/A	O	
8 Jul 2009	09:08	2T306.D	120182----	-------	BLANK	5mL	1	N/A	6	w	CDS1	N/A	O	
8 Jul 2009	09:37	2T307.D	120182-----	-------	BLANK	5g	1	N/A	7	s	CDS1	N/A	O	
8 Jul 2009	10:06	2T308.D	232507004	LANL	883080	5G	1	N/A	8	s	CDS1	N/A	O	
8 Jul 2009	10:34	2T309.D	232507005	LANL	883080	5G	1	N/A	9	s	CDS1	N/A	O	
8 Jul 2009	11:03	2T310.D	232507007	LANL	883080	5G	1	N/A	10	s	CDS1	N/A	O	
8 Jul 2009	11:32	2T311.D	232507001	LANL	883080	1.2G	1	N/A	11	s	CDS1	N/A	O	w/ 2T212
8 Jul 2009	12:01	2T312.D	1201875763	LANL	883080	5G	1	N/A	12	s	CDS1	N/A	O	ms 232507004 SOIL
8 Jul 2009	12:30	2T313.D	1201875764	LANL	883080	5G	1	N/A	13	s	CDS1	N/A	O	msd 232507004 SOIL
8 Jul 2009	12:59	2T314.D	232916001	BJCO	883467	5ML	1	PH2	14	w	CDS1	N	X	624 sample-- see 2T416 confirmation
8 Jul 2009	13:28	2T315.D	1201876732	BJCO	883467	5ML	1	PH2	15	w	CDS1	N	O	DUP 232916001 624 sample
8 Jul 2009	13:57	2T316.D	232916003	BJCO	883467	5ML	1	PH2	16	w	CDS1	N	O	624 sample
8 Jul 2009	14:26	2T317.D	232925001	ORNL	883465	5ML	1	PH6	17	w	CDS1	N	O	
8 Jul 2009	14:55	2T318.D	232925008	ORNL	883465	5ML	1	PH6	18	w	CDS1	N	O	
8 Jul 2009	16:05	2T319.D	1201876728	ORNL	883465	5ML	1	PH6	19	w	CDS1	N	O	ms 232925001
8 Jul 2009	16:33	2T320.D	1201876729	ORNL	883465	5ML	1	PH6	20	w	CDS1	N	O	msd 232925001
8 Jul 2009	17:01	2T321.D	1201876733	BJCO	883467	5ML	1	PH2	21	w	CDS1	N	O	MS 232916001 624 sample

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GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2499

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	881442
Prep Batch Number:	881441

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232507001	CAMO-09-6519
232507002	CAMO-09-6518
232507003	CAMO-09-6527
232507004	CAMO-09-6529
232507005	CAMO-09-6528
232507006	CAMO-09-6531
1201871880	Method Blank (MB)
1201871881	Laboratory Control Sample (LCS)
1201871882	232507001(CAMO-09-6519) Matrix Spike (MS)
1201871883	232507001(CAMO-09-6519) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various

calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS (1201871881) did not meet recovery acceptance criteria. Please see the spike recovery report for the specific failures. The failures arepresented less than 5% of the requested spike analyte list. That satisfied the clients acceptance criteria and the data were reported.

QC Sample Designation
Sample 232507001 (CAMO-09-6519) was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike (MS) Recovery Statement
The MS (1201871882) recovered 3,3'-Dichlorobenzidine at 26% (limits: 35%-106%). Because the MSD displayed a similar recovery for that analyte, the failure was attributed to sample matrix interference.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD (1201871883) recovered 4-Nitroaniline at 145% (limits: 35%-139%). Because the MS displayed a similar recovery for that analyte, the failure was attributed to sample matrix interference.

MS/MSD Relative Percent Difference (RPD) Statement
The MS (1201871882)/MSD (1201871883) RPD value for 4-Chloroanaline was 35% (limit: 30%) and for 3,3'-Dichlorobenzidine was 41% (limit: 30%). Because the individual MS and MSD recoveries for 4-

Chloroanaline were acceptable, the data were reported un-qualified for the RPD value failure for that analyte. The RPD failure for 3,3'-Dichlorobenzidine was attributed to sample matrix interference (the MS recovery statement above).

Internal Standard (ISTD) Acceptance
The internal standard responses were outside of the acceptance criteria for the following sample: 232507005 (CAMO-09-6528). The sample was re-analyzed and the failures were confirmed. The first analysis data are reported. The re-analysis raw data are in the Miscellaneous Section.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
This sample was re-analyzed due to internal standard failure.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 707728. It is located in the Miscellaneous Section of the data report.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration
The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD5.I	HP Mass Spectrometer	HP6890/HP5973	DB-5MS	25m x 0.2mm, 0.33um (5% Phenylmethylpolysiloxane)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: [illegible] **Date:** 7-17-09

Roadmap for LANL 09-2499 SVOA

This roadmap was analyzed by rmb on 07-02-2009, 14:23.
This roadmap was reviewed by rmb on 07-02-2009, 14:35.
This roadmap was reviewed by dan01134 on 07-03-2009, 08:09.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD5.i/s070109.b/s5g0106.d	232507001	01-JUL-2009	09:17	09-2499.sub	CAMO-09-6519	1	881442	
☐	N	/chem/MSD5.i/s070109.b/s5g0109.d	232507002	01-JUL-2009	10:41	09-2499.sub	CAMO-09-6518	1	881442	
☐	N	/chem/MSD5.i/s070109.b/s5g0110.d	232507003	01-JUL-2009	11:09	09-2499.sub	CAMO-09-6527	1	881442	
☐	N	/chem/MSD5.i/s070109.b/s5g0111.d	232507004	01-JUL-2009	11:37	09-2499.sub	CAMO-09-6529	1	881442	
☐	N	/chem/MSD5.i/s070109.b/s5g0112.d	232507005	01-JUL-2009	12:05	09-2499.sub	CAMO-09-6528	1	881442	fail IS - confirmed by s5g0114
☐	N	/chem/MSD5.i/s070109.b/s5g0113.d	232507006	01-JUL-2009	12:33	09-2499.sub	CAMO-09-6531	1	881442	
■	N	/chem/MSD5.i/s070109.b/s5g0114.d	232507005	01-JUL-2009	13:21	09-2499.sub	CAMO-09-6528	1	881442	DUSE - fail IS - confirms s5g0112

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	Y	/chem/MSD5.i/s070109.b/s5g0104.d	1201871880	mb	01-JUL-2009	08:22	09-2499.sub	SBLK01	1.00000	881442	
☐	Y	/chem/MSD5.i/s070109.b/s5g0105.d	1201871881	lcs	01-JUL-2009	08:50	09-2499.sub	SBLK01LCS	1.00000	881442	
☐	Y	/chem/MSD5.i/s070109.b/s5g0107.d	1201871882	ms	01-JUL-2009	09:45	09-2499.sub	CAMO-09-6519MS	1.00000	881442	
☐	Y	/chem/MSD5.i/s070109.b/s5g0108.d	1201871883	msd	01-JUL-2009	10:13	09-2499.sub	CAMO-09-6519MSD	1.00000	881442	

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507002	Date Received:	06/27/2009 09:05	%Moisture:	15.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6518	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 10:41	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0109.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	392	ug/kg	78.5	392
108-95-2	Phenol	U	392	ug/kg	78.5	392
95-57-8	2-Chlorophenol	U	392	ug/kg	78.5	392
106-46-7	1,4-Dichlorobenzene	U	392	ug/kg	78.5	392
621-64-7	N-Nitrosodipropylamine	U	392	ug/kg	78.5	392
59-50-7	4-Chloro-3-methylphenol	U	392	ug/kg	78.5	392
83-32-9	Acenaphthene	U	39.2	ug/kg	13.0	39.2
121-14-2	2,4-Dinitrotoluene	U	392	ug/kg	39.2	392
100-02-7	4-Nitrophenol	U	392	ug/kg	130	392
87-86-5	Pentachlorophenol	U	392	ug/kg	98.1	392
129-00-0	Pyrene		421	ug/kg	11.8	39.2
110-86-1	Pyridine	U	392	ug/kg	78.5	392
62-53-3	Aniline	U	392	ug/kg	118	392
111-44-4	bis(2-Chloroethyl) ether	U	392	ug/kg	78.5	392
541-73-1	1,3-Dichlorobenzene	U	392	ug/kg	78.5	392
100-51-6	Benzyl alcohol	U	392	ug/kg	118	392
95-50-1	1,2-Dichlorobenzene	U	392	ug/kg	78.5	392
108-60-1	bis(2-Chloroisopropyl)ether	U	392	ug/kg	78.5	392
95-48-7	o-Cresol	U	392	ug/kg	78.5	392
65794-96-9	m,p-Cresols	U	392	ug/kg	118	392
67-72-1	Hexachloroethane	U	392	ug/kg	78.5	392
98-95-3	Nitrobenzene	U	392	ug/kg	78.5	392
78-59-1	Isophorone	U	392	ug/kg	78.5	392
88-75-5	2-Nitrophenol	U	392	ug/kg	78.5	392
105-67-9	2,4-Dimethylphenol	U	392	ug/kg	137	392
111-91-1	bis(2-Chloroethoxy)methane	U	392	ug/kg	78.5	392
120-83-2	2,4-Dichlorophenol	U	392	ug/kg	78.5	392
65-85-0	Benzoic acid	U	785	ug/kg	196	785
91-20-3	Naphthalene	U	39.2	ug/kg	11.8	39.2
106-47-8	4-Chloroaniline	U	392	ug/kg	78.5	392
87-68-3	Hexachlorobutadiene	U	392	ug/kg	78.5	392
91-57-6	2-Methylnaphthalene	U	39.2	ug/kg	7.85	39.2
77-47-4	Hexachlorocyclopentadiene	U	392	ug/kg	78.5	392
88-06-2	2,4,6-Trichlorophenol	U	392	ug/kg	78.5	392
95-95-4	2,4,5-Trichlorophenol	U	392	ug/kg	78.5	392
91-58-7	2-Chloronaphthalene	U	39.2	ug/kg	13.0	39.2
88-74-4	2-Nitroaniline	U	392	ug/kg	78.5	392
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	392	ug/kg	78.5	392

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6518	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 10:41	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0109.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	392	ug/kg	78.5	392
606-20-2	2,6-Dinitrotoluene	U	392	ug/kg	39.2	392
208-96-8	Acenaphthylene	U	39.2	ug/kg	11.8	39.2
51-28-5	2,4-Dinitrophenol	U	785	ug/kg	149	785
132-64-9	Dibenzofuran	U	392	ug/kg	78.5	392
84-66-2	Diethylphthalate	U	392	ug/kg	78.5	392
86-73-7	Fluorene	U	39.2	ug/kg	11.8	39.2
7005-72-3	4-Chlorophenylphenylether	U	392	ug/kg	78.5	392
534-52-1	2-Methyl-4,6-dinitrophenol	U	392	ug/kg	78.5	392
100-01-6	4-Nitroaniline	U	392	ug/kg	118	392
	p-Nitroaniline					
122-39-4	Diphenylamine	U	392	ug/kg	78.5	392
122-66-7	Azobenzene	U	392	ug/kg	78.5	392
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	392	ug/kg	78.5	392
118-74-1	Hexachlorobenzene	U	392	ug/kg	78.5	392
85-01-8	Phenanthrene		217	ug/kg	11.8	39.2
120-12-7	Anthracene		44.1	ug/kg	7.85	39.2
84-74-2	Di-n-butylphthalate	U	392	ug/kg	78.5	392
206-44-0	Fluoranthene		450	ug/kg	11.8	39.2
85-68-7	Butylbenzylphthalate	U	392	ug/kg	78.5	392
56-55-3	Benzo(a)anthracene		170	ug/kg	11.8	39.2
91-94-1	3,3'-Dichlorobenzidine	U	392	ug/kg	118	392
218-01-9	Chrysene		215	ug/kg	11.8	39.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	392	ug/kg	78.5	392
117-84-0	Di-n-octylphthalate	U	392	ug/kg	78.5	392
205-99-2	Benzo(b)fluoranthene		316	ug/kg	11.8	39.2
207-08-9	Benzo(k)fluoranthene		110	ug/kg	11.8	39.2
50-32-8	Benzo(a)pyrene		210	ug/kg	11.8	39.2
193-39-5	Indeno(1,2,3-cd)pyrene		110	ug/kg	11.8	39.2
53-70-3	Dibenzo(a,h)anthracene	U	39.2	ug/kg	11.8	39.2
191-24-2	Benzo(ghi)perylene		125	ug/kg	11.8	39.2
120-82-1	1,2,4-Trichlorobenzene	U	392	ug/kg	78.5	392

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.05	220	ug/kg		JA
7785-70-8	1R-.alpha.-Pinene	3.6	171	ug/kg	97	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6518	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 10:41	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0109.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
3387-41-5	Bicyclo[3.1.0]hexane, 4-methylene-1-(1-m	3.8	168	ug/kg	94	NJ
555-10-2	.beta.-Phellandrene	4.11	181	ug/kg	93	NJ
103-82-2	Benzeneacetic acid	5.02	169	ug/kg	91	NJ
25269-17-4	Thunbergol	8.23	185	ug/kg	83	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.19	183	ug/kg	97	NJ
	Unknown	9.46	344	ug/kg		J
	Unknown	9.54	524	ug/kg		J
54833-34-0	Cyclohexane, 1,1'-(2-ethyl-1,3-propanedi	12.13	1050	ug/kg	86	NJ
	Unknown	14.26	210	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507001	Date Received:	06/27/2009 09:05	%Moisture:	20.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6519	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 09:17	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0106.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	420	ug/kg	84.1	420
108-95-2	Phenol	U	420	ug/kg	84.1	420
95-57-8	2-Chlorophenol	U	420	ug/kg	84.1	420
106-46-7	1,4-Dichlorobenzene	U	420	ug/kg	84.1	420
621-64-7	N-Nitrosodipropylamine	U	420	ug/kg	84.1	420
59-50-7	4-Chloro-3-methylphenol	U	420	ug/kg	84.1	420
83-32-9	Acenaphthene	U	42.0	ug/kg	13.9	42.0
121-14-2	2,4-Dinitrotoluene	U	420	ug/kg	42.0	420
100-02-7	4-Nitrophenol	U	420	ug/kg	139	420
87-86-5	Pentachlorophenol	U	420	ug/kg	105	420
129-00-0	Pyrene	U	42.0	ug/kg	12.6	42.0
110-86-1	Pyridine	U	420	ug/kg	84.1	420
62-53-3	Aniline	U	420	ug/kg	126	420
111-44-4	bis(2-Chloroethyl) ether	U	420	ug/kg	84.1	420
541-73-1	1,3-Dichlorobenzene	U	420	ug/kg	84.1	420
100-51-6	Benzyl alcohol	U	420	ug/kg	126	420
95-50-1	1,2-Dichlorobenzene	U	420	ug/kg	84.1	420
108-60-1	bis(2-Chloroisopropyl)ether	U	420	ug/kg	84.1	420
95-48-7	o-Cresol	U	420	ug/kg	84.1	420
65794-96-9	m,p-Cresols	U	420	ug/kg	126	420
67-72-1	Hexachloroethane	U	420	ug/kg	84.1	420
98-95-3	Nitrobenzene	U	420	ug/kg	84.1	420
78-59-1	Isophorone	U	420	ug/kg	84.1	420
88-75-5	2-Nitrophenol	U	420	ug/kg	84.1	420
105-67-9	2,4-Dimethylphenol	U	420	ug/kg	147	420
111-91-1	bis(2-Chloroethoxy)methane	U	420	ug/kg	84.1	420
120-83-2	2,4-Dichlorophenol	U	420	ug/kg	84.1	420
65-85-0	Benzoic acid	U	841	ug/kg	210	841
91-20-3	Naphthalene	U	42.0	ug/kg	12.6	42.0
106-47-8	4-Chloroaniline	U	420	ug/kg	84.1	420
87-68-3	Hexachlorobutadiene	U	420	ug/kg	84.1	420
91-57-6	2-Methylnaphthalene	U	42.0	ug/kg	8.41	42.0
77-47-4	Hexachlorocyclopentadiene	U	420	ug/kg	84.1	420
88-06-2	2,4,6-Trichlorophenol	U	420	ug/kg	84.1	420
95-95-4	2,4,5-Trichlorophenol	U	420	ug/kg	84.1	420
91-58-7	2-Chloronaphthalene	U	42.0	ug/kg	13.9	42.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	420	ug/kg	84.1	420
99-09-2	3-Nitroaniline	U	420	ug/kg	84.1	420

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 09:17	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0106.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	420	ug/kg	84.1	420
606-20-2	2,6-Dinitrotoluene	U	420	ug/kg	42.0	420
208-96-8	Acenaphthylene	U	42.0	ug/kg	12.6	42.0
51-28-5	2,4-Dinitrophenol	U	841	ug/kg	160	841
132-64-9	Dibenzofuran	U	420	ug/kg	84.1	420
84-66-2	Diethylphthalate	U	420	ug/kg	84.1	420
86-73-7	Fluorene	U	42.0	ug/kg	12.6	42.0
7005-72-3	4-Chlorophenylphenylether	U	420	ug/kg	84.1	420
534-52-1	2-Methyl-4,6-dinitrophenol	U	420	ug/kg	84.1	420
100-01-6	4-Nitroaniline	U	420	ug/kg	126	420
	p-Nitroaniline					
122-39-4	Diphenylamine	U	420	ug/kg	84.1	420
122-66-7	Azobenzene	U	420	ug/kg	84.1	420
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	420	ug/kg	84.1	420
118-74-1	Hexachlorobenzene	U	420	ug/kg	84.1	420
85-01-8	Phenanthrene	U	42.0	ug/kg	12.6	42.0
120-12-7	Anthracene	U	42.0	ug/kg	8.41	42.0
84-74-2	Di-n-butylphthalate	U	420	ug/kg	84.1	420
206-44-0	Fluoranthene	U	42.0	ug/kg	12.6	42.0
85-68-7	Butylbenzylphthalate	U	420	ug/kg	84.1	420
56-55-3	Benzo(a)anthracene	U	42.0	ug/kg	12.6	42.0
91-94-1	3,3'-Dichlorobenzidine	U	420	ug/kg	126	420
218-01-9	Chrysene	U	42.0	ug/kg	12.6	42.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	420	ug/kg	84.1	420
117-84-0	Di-n-octylphthalate	U	420	ug/kg	84.1	420
205-99-2	Benzo(b)fluoranthene	U	42.0	ug/kg	12.6	42.0
207-08-9	Benzo(k)fluoranthene	U	42.0	ug/kg	12.6	42.0
50-32-8	Benzo(a)pyrene	U	42.0	ug/kg	12.6	42.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	42.0	ug/kg	12.6	42.0
53-70-3	Dibenzo(a,h)anthracene	U	42.0	ug/kg	12.6	42.0
191-24-2	Benzo(ghi)perylene	U	42.0	ug/kg	12.6	42.0
120-82-1	1,2,4-Trichlorobenzene	U	420	ug/kg	84.1	420

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
7785-70-8	1R-.alpha.-Pinene	3.6	1550	ug/kg	97	NJ
13466-78-9	3-Carene	3.99	538	ug/kg	96	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 09:17	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0106.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1227-93-6	1H-Naphtho[2,1-b]pyran, 3-ethenyldodecah	8.09	332	ug/kg	87	NJ
1000197-14-1	4b,8-Dimethyl-2-isopropylphenanthrene, 4	8.13	288	ug/kg	93	NJ
	Unknown	8.92	316	ug/kg		J
	Unknown	9.11	372	ug/kg		J
	Unknown	9.19	273	ug/kg		J
	Unknown	9.22	379	ug/kg		J
	Unknown	9.25	421	ug/kg		J
	Unknown	9.45	1060	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.55	1560	ug/kg	99	NJ
514-10-3	Abietic acid	9.74	916	ug/kg	99	NJ
	Unknown	9.93	411	ug/kg		J
	Unknown	10.19	311	ug/kg		J
112-95-8	Eicosane	10.98	236	ug/kg	98	NJ
559-74-0	Friedelan-3-one	16.85	332	ug/kg	93	NJ
	Unknown	18.42	430	ug/kg		J
	Unknown	18.6	316	ug/kg		J
	Unknown	19.55	280	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507003	Date Received:	06/27/2009 09:05	%Moisture:	5.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6527	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:09	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0110.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	354	ug/kg	70.8	354
108-95-2	Phenol	U	354	ug/kg	70.8	354
95-57-8	2-Chlorophenol	U	354	ug/kg	70.8	354
106-46-7	1,4-Dichlorobenzene	U	354	ug/kg	70.8	354
621-64-7	N-Nitrosodipropylamine	U	354	ug/kg	70.8	354
59-50-7	4-Chloro-3-methylphenol	U	354	ug/kg	70.8	354
83-32-9	Acenaphthene	U	35.4	ug/kg	11.7	35.4
121-14-2	2,4-Dinitrotoluene	U	354	ug/kg	35.4	354
100-02-7	4-Nitrophenol	U	354	ug/kg	117	354
87-86-5	Pentachlorophenol	U	354	ug/kg	88.4	354
129-00-0	Pyrene	U	35.4	ug/kg	10.6	35.4
110-86-1	Pyridine	U	354	ug/kg	70.8	354
62-53-3	Aniline	U	354	ug/kg	106	354
111-44-4	bis(2-Chloroethyl) ether	U	354	ug/kg	70.8	354
541-73-1	1,3-Dichlorobenzene	U	354	ug/kg	70.8	354
100-51-6	Benzyl alcohol	U	354	ug/kg	106	354
95-50-1	1,2-Dichlorobenzene	U	354	ug/kg	70.8	354
108-60-1	bis(2-Chloroisopropyl)ether	U	354	ug/kg	70.8	354
95-48-7	o-Cresol	U	354	ug/kg	70.8	354
65794-96-9	m,p-Cresols	U	354	ug/kg	106	354
67-72-1	Hexachloroethane	U	354	ug/kg	70.8	354
98-95-3	Nitrobenzene	U	354	ug/kg	70.8	354
78-59-1	Isophorone	U	354	ug/kg	70.8	354
88-75-5	2-Nitrophenol	U	354	ug/kg	70.8	354
105-67-9	2,4-Dimethylphenol	U	354	ug/kg	124	354
111-91-1	bis(2-Chloroethoxy)methane	U	354	ug/kg	70.8	354
120-83-2	2,4-Dichlorophenol	U	354	ug/kg	70.8	354
65-85-0	Benzoic acid	U	708	ug/kg	177	708
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4
106-47-8	4-Chloroaniline	U	354	ug/kg	70.8	354
87-68-3	Hexachlorobutadiene	U	354	ug/kg	70.8	354
91-57-6	2-Methylnaphthalene	U	35.4	ug/kg	7.08	35.4
77-47-4	Hexachlorocyclopentadiene	U	354	ug/kg	70.8	354
88-06-2	2,4,6-Trichlorophenol	U	354	ug/kg	70.8	354
95-95-4	2,4,5-Trichlorophenol	U	354	ug/kg	70.8	354
91-58-7	2-Chloronaphthalene	U	35.4	ug/kg	11.7	35.4
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	354	ug/kg	70.8	354
99-09-2	3-Nitroaniline	U	354	ug/kg	70.8	354

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507003	Date Received:	06/27/2009 09:05	%Moisture:	5.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6527	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:09	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0110.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	354	ug/kg	70.8	354
606-20-2	2,6-Dinitrotoluene	U	354	ug/kg	35.4	354
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4
51-28-5	2,4-Dinitrophenol	U	708	ug/kg	134	708
132-64-9	Dibenzofuran	U	354	ug/kg	70.8	354
84-66-2	Diethylphthalate	U	354	ug/kg	70.8	354
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4
7005-72-3	4-Chlorophenylphenylether	U	354	ug/kg	70.8	354
534-52-1	2-Methyl-4,6-dinitrophenol	U	354	ug/kg	70.8	354
100-01-6	4-Nitroaniline	U	354	ug/kg	106	354
	p-Nitroaniline					
122-39-4	Diphenylamine	U	354	ug/kg	70.8	354
122-66-7	Azobenzene	U	354	ug/kg	70.8	354
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	354	ug/kg	70.8	354
118-74-1	Hexachlorobenzene	U	354	ug/kg	70.8	354
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4
120-12-7	Anthracene	U	35.4	ug/kg	7.08	35.4
84-74-2	Di-n-butylphthalate	U	354	ug/kg	70.8	354
206-44-0	Fluoranthene	U	35.4	ug/kg	10.6	35.4
85-68-7	Butylbenzylphthalate	U	354	ug/kg	70.8	354
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4
91-94-1	3,3'-Dichlorobenzidine	U	354	ug/kg	106	354
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	354	ug/kg	70.8	354
117-84-0	Di-n-octylphthalate	U	354	ug/kg	70.8	354
205-99-2	Benzo(b)fluoranthene	U	35.4	ug/kg	10.6	35.4
207-08-9	Benzo(k)fluoranthene	U	35.4	ug/kg	10.6	35.4
50-32-8	Benzo(a)pyrene	U	35.4	ug/kg	10.6	35.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4	ug/kg	10.6	35.4
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4
120-82-1	1,2,4-Trichlorobenzene	U	354	ug/kg	70.8	354

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.12	7.54	ug/kg		J
	Unknown Aldol Condensate	3.05	6.03	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507003	Date Received:	06/27/2009 09:05	%Moisture:	5.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6527	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:09	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0110.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
13466-78-9	3-Carene	3.98	5.58	ug/kg	97	NJ
	Unknown	8.22	7.16	ug/kg		J
	Unknown	8.92	5.59	ug/kg		J
112-95-8	Eicosane	12.01	4.84	ug/kg	97	NJ
	Unknown	15.53	4.24	ug/kg		J
	Unknown	18.78	17.9	ug/kg		J
	Unknown	19.56	10.1	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6528	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 12:05	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0112.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	354	ug/kg	70.7	354
108-95-2	Phenol	U	354	ug/kg	70.7	354
95-57-8	2-Chlorophenol	U	354	ug/kg	70.7	354
106-46-7	1,4-Dichlorobenzene	U	354	ug/kg	70.7	354
621-64-7	N-Nitrosodipropylamine	U	354	ug/kg	70.7	354
59-50-7	4-Chloro-3-methylphenol	U	354	ug/kg	70.7	354
83-32-9	Acenaphthene	U	35.4	ug/kg	11.7	35.4
121-14-2	2,4-Dinitrotoluene	U	354	ug/kg	35.4	354
100-02-7	4-Nitrophenol	U	354	ug/kg	117	354
87-86-5	Pentachlorophenol	U	354	ug/kg	88.4	354
129-00-0	Pyrene	J	15.2	ug/kg	10.6	35.4
110-86-1	Pyridine	U	354	ug/kg	70.7	354
62-53-3	Aniline	U	354	ug/kg	106	354
111-44-4	bis(2-Chloroethyl) ether	U	354	ug/kg	70.7	354
541-73-1	1,3-Dichlorobenzene	U	354	ug/kg	70.7	354
100-51-6	Benzyl alcohol	U	354	ug/kg	106	354
95-50-1	1,2-Dichlorobenzene	U	354	ug/kg	70.7	354
108-60-1	bis(2-Chloroisopropyl)ether	U	354	ug/kg	70.7	354
95-48-7	o-Cresol	U	354	ug/kg	70.7	354
65794-96-9	m,p-Cresols	U	354	ug/kg	106	354
67-72-1	Hexachloroethane	U	354	ug/kg	70.7	354
98-95-3	Nitrobenzene	U	354	ug/kg	70.7	354
78-59-1	Isophorone	U	354	ug/kg	70.7	354
88-75-5	2-Nitrophenol	U	354	ug/kg	70.7	354
105-67-9	2,4-Dimethylphenol	U	354	ug/kg	124	354
111-91-1	bis(2-Chloroethoxy)methane	U	354	ug/kg	70.7	354
120-83-2	2,4-Dichlorophenol	U	354	ug/kg	70.7	354
65-85-0	Benzoic acid	U	707	ug/kg	177	707
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4
106-47-8	4-Chloroaniline	U	354	ug/kg	70.7	354
87-68-3	Hexachlorobutadiene	U	354	ug/kg	70.7	354
91-57-6	2-Methylnaphthalene	U	35.4	ug/kg	7.07	35.4
77-47-4	Hexachlorocyclopentadiene	U	354	ug/kg	70.7	354
88-06-2	2,4,6-Trichlorophenol	U	354	ug/kg	70.7	354
95-95-4	2,4,5-Trichlorophenol	U	354	ug/kg	70.7	354
91-58-7	2-Chloronaphthalene	U	35.4	ug/kg	11.7	35.4
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	354	ug/kg	70.7	354
99-09-2	3-Nitroaniline	U	354	ug/kg	70.7	354

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6528	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 12:05	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0112.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	354	ug/kg	70.7	354
606-20-2	2,6-Dinitrotoluene	U	354	ug/kg	35.4	354
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4
51-28-5	2,4-Dinitrophenol	U	707	ug/kg	134	707
132-64-9	Dibenzofuran	U	354	ug/kg	70.7	354
84-66-2	Diethylphthalate	U	354	ug/kg	70.7	354
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4
7005-72-3	4-Chlorophenylphenylether	U	354	ug/kg	70.7	354
534-52-1	2-Methyl-4,6-dinitrophenol	U	354	ug/kg	70.7	354
100-01-6	4-Nitroaniline	U	354	ug/kg	106	354
	p-Nitroaniline					
122-39-4	Diphenylamine	U	354	ug/kg	70.7	354
122-66-7	Azobenzene	U	354	ug/kg	70.7	354
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	354	ug/kg	70.7	354
118-74-1	Hexachlorobenzene	U	354	ug/kg	70.7	354
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4
120-12-7	Anthracene	U	35.4	ug/kg	7.07	35.4
84-74-2	Di-n-butylphthalate	U	354	ug/kg	70.7	354
206-44-0	Fluoranthene	J	15.3	ug/kg	10.6	35.4
85-68-7	Butylbenzylphthalate	U	354	ug/kg	70.7	354
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4
91-94-1	3,3'-Dichlorobenzidine	U	354	ug/kg	106	354
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	354	ug/kg	70.7	354
117-84-0	Di-n-octylphthalate	U	354	ug/kg	70.7	354
205-99-2	Benzo(b)fluoranthene	U	35.4	ug/kg	10.6	35.4
207-08-9	Benzo(k)fluoranthene	U	35.4	ug/kg	10.6	35.4
50-32-8	Benzo(a)pyrene	U	35.4	ug/kg	10.6	35.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4	ug/kg	10.6	35.4
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4
120-82-1	1,2,4-Trichlorobenzene	U	354	ug/kg	70.7	354

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	209	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 11:37	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0111.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	350	ug/kg	70.0	350
108-95-2	Phenol	U	350	ug/kg	70.0	350
95-57-8	2-Chlorophenol	U	350	ug/kg	70.0	350
106-46-7	1,4-Dichlorobenzene	U	350	ug/kg	70.0	350
621-64-7	N-Nitrosodipropylamine	U	350	ug/kg	70.0	350
59-50-7	4-Chloro-3-methylphenol	U	350	ug/kg	70.0	350
83-32-9	Acenaphthene	U	35.0	ug/kg	11.6	35.0
121-14-2	2,4-Dinitrotoluene	U	350	ug/kg	35.0	350
100-02-7	4-Nitrophenol	U	350	ug/kg	116	350
87-86-5	Pentachlorophenol	U	350	ug/kg	87.5	350
129-00-0	Pyrene	U	35.0	ug/kg	10.5	35.0
110-86-1	Pyridine	U	350	ug/kg	70.0	350
62-53-3	Aniline	U	350	ug/kg	105	350
111-44-4	bis(2-Chloroethyl) ether	U	350	ug/kg	70.0	350
541-73-1	1,3-Dichlorobenzene	U	350	ug/kg	70.0	350
100-51-6	Benzyl alcohol	U	350	ug/kg	105	350
95-50-1	1,2-Dichlorobenzene	U	350	ug/kg	70.0	350
108-60-1	bis(2-Chloroisopropyl)ether	U	350	ug/kg	70.0	350
95-48-7	o-Cresol	U	350	ug/kg	70.0	350
65794-96-9	m,p-Cresols	U	350	ug/kg	105	350
67-72-1	Hexachloroethane	U	350	ug/kg	70.0	350
98-95-3	Nitrobenzene	U	350	ug/kg	70.0	350
78-59-1	Isophorone	U	350	ug/kg	70.0	350
88-75-5	2-Nitrophenol	U	350	ug/kg	70.0	350
105-67-9	2,4-Dimethylphenol	U	350	ug/kg	123	350
111-91-1	bis(2-Chloroethoxy)methane	U	350	ug/kg	70.0	350
120-83-2	2,4-Dichlorophenol	U	350	ug/kg	70.0	350
65-85-0	Benzoic acid	U	700	ug/kg	175	700
91-20-3	Naphthalene	U	35.0	ug/kg	10.5	35.0
106-47-8	4-Chloroaniline	U	350	ug/kg	70.0	350
87-68-3	Hexachlorobutadiene	U	350	ug/kg	70.0	350
91-57-6	2-Methylnaphthalene	U	35.0	ug/kg	7.00	35.0
77-47-4	Hexachlorocyclopentadiene	U	350	ug/kg	70.0	350
88-06-2	2,4,6-Trichlorophenol	U	350	ug/kg	70.0	350
95-95-4	2,4,5-Trichlorophenol	U	350	ug/kg	70.0	350
91-58-7	2-Chloronaphthalene	U	35.0	ug/kg	11.6	35.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	350	ug/kg	70.0	350
99-09-2	3-Nitroaniline	U	350	ug/kg	70.0	350

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 11:37	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0111.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	350	ug/kg	70.0	350
606-20-2	2,6-Dinitrotoluene	U	350	ug/kg	35.0	350
208-96-8	Acenaphthylene	U	35.0	ug/kg	10.5	35.0
51-28-5	2,4-Dinitrophenol	U	700	ug/kg	133	700
132-64-9	Dibenzofuran	U	350	ug/kg	70.0	350
84-66-2	Diethylphthalate	U	350	ug/kg	70.0	350
86-73-7	Fluorene	U	35.0	ug/kg	10.5	35.0
7005-72-3	4-Chlorophenylphenylether	U	350	ug/kg	70.0	350
534-52-1	2-Methyl-4,6-dinitrophenol	U	350	ug/kg	70.0	350
100-01-6	4-Nitroaniline	U	350	ug/kg	105	350
	p-Nitroaniline					
122-39-4	Diphenylamine	U	350	ug/kg	70.0	350
122-66-7	Azobenzene	U	350	ug/kg	70.0	350
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	350	ug/kg	70.0	350
118-74-1	Hexachlorobenzene	U	350	ug/kg	70.0	350
85-01-8	Phenanthrene	U	35.0	ug/kg	10.5	35.0
120-12-7	Anthracene	U	35.0	ug/kg	7.00	35.0
84-74-2	Di-n-butylphthalate	U	350	ug/kg	70.0	350
206-44-0	Fluoranthene	U	35.0	ug/kg	10.5	35.0
85-68-7	Butylbenzylphthalate	U	350	ug/kg	70.0	350
56-55-3	Benzo(a)anthracene	U	35.0	ug/kg	10.5	35.0
91-94-1	3,3'-Dichlorobenzidine	U	350	ug/kg	105	350
218-01-9	Chrysene	U	35.0	ug/kg	10.5	35.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	350	ug/kg	70.0	350
117-84-0	Di-n-octylphthalate	U	350	ug/kg	70.0	350
205-99-2	Benzo(b)fluoranthene	U	35.0	ug/kg	10.5	35.0
207-08-9	Benzo(k)fluoranthene	U	35.0	ug/kg	10.5	35.0
50-32-8	Benzo(a)pyrene	U	35.0	ug/kg	10.5	35.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.0	ug/kg	10.5	35.0
53-70-3	Dibenzo(a,h)anthracene	U	35.0	ug/kg	10.5	35.0
191-24-2	Benzo(ghi)perylene	U	35.0	ug/kg	10.5	35.0
120-82-1	1,2,4-Trichlorobenzene	U	350	ug/kg	70.0	350

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	183	ug/kg		JA
	Unknown	13.59	195	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 11:37	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0111.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	18.76	215	ug/kg		J
	Unknown	19.54	154	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6531	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 12:33	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0113.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	392	ug/kg	78.3	392
108-95-2	Phenol	U	392	ug/kg	78.3	392
95-57-8	2-Chlorophenol	U	392	ug/kg	78.3	392
106-46-7	1,4-Dichlorobenzene	U	392	ug/kg	78.3	392
621-64-7	N-Nitrosodipropylamine	U	392	ug/kg	78.3	392
59-50-7	4-Chloro-3-methylphenol	U	392	ug/kg	78.3	392
83-32-9	Acenaphthene	U	39.2	ug/kg	12.9	39.2
121-14-2	2,4-Dinitrotoluene	U	392	ug/kg	39.2	392
100-02-7	4-Nitrophenol	U	392	ug/kg	129	392
87-86-5	Pentachlorophenol	U	392	ug/kg	97.9	392
129-00-0	Pyrene		81.6	ug/kg	11.7	39.2
110-86-1	Pyridine	U	392	ug/kg	78.3	392
62-53-3	Aniline	U	392	ug/kg	117	392
111-44-4	bis(2-Chloroethyl) ether	U	392	ug/kg	78.3	392
541-73-1	1,3-Dichlorobenzene	U	392	ug/kg	78.3	392
100-51-6	Benzyl alcohol	U	392	ug/kg	117	392
95-50-1	1,2-Dichlorobenzene	U	392	ug/kg	78.3	392
108-60-1	bis(2-Chloroisopropyl)ether	U	392	ug/kg	78.3	392
95-48-7	o-Cresol	U	392	ug/kg	78.3	392
65794-96-9	m,p-Cresols	U	392	ug/kg	117	392
67-72-1	Hexachloroethane	U	392	ug/kg	78.3	392
98-95-3	Nitrobenzene	U	392	ug/kg	78.3	392
78-59-1	Isophorone	U	392	ug/kg	78.3	392
88-75-5	2-Nitrophenol	U	392	ug/kg	78.3	392
105-67-9	2,4-Dimethylphenol	U	392	ug/kg	137	392
111-91-1	bis(2-Chloroethoxy)methane	U	392	ug/kg	78.3	392
120-83-2	2,4-Dichlorophenol	U	392	ug/kg	78.3	392
65-85-0	Benzoic acid	U	783	ug/kg	196	783
91-20-3	Naphthalene	U	39.2	ug/kg	11.7	39.2
106-47-8	4-Chloroaniline	U	392	ug/kg	78.3	392
87-68-3	Hexachlorobutadiene	U	392	ug/kg	78.3	392
91-57-6	2-Methylnaphthalene	U	39.2	ug/kg	7.83	39.2
77-47-4	Hexachlorocyclopentadiene	U	392	ug/kg	78.3	392
88-06-2	2,4,6-Trichlorophenol	U	392	ug/kg	78.3	392
95-95-4	2,4,5-Trichlorophenol	U	392	ug/kg	78.3	392
91-58-7	2-Chloronaphthalene	U	39.2	ug/kg	12.9	39.2
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	392	ug/kg	78.3	392
99-09-2	3-Nitroaniline	U	392	ug/kg	78.3	392

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507006	Date Received:	06/27/2009 09:05	%Moisture:	15
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6531	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 12:33	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0113.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	392	ug/kg	78.3	392
606-20-2	2,6-Dinitrotoluene	U	392	ug/kg	39.2	392
208-96-8	Acenaphthylene	U	39.2	ug/kg	11.7	39.2
51-28-5	2,4-Dinitrophenol	U	783	ug/kg	149	783
132-64-9	Dibenzofuran	U	392	ug/kg	78.3	392
84-66-2	Diethylphthalate	U	392	ug/kg	78.3	392
86-73-7	Fluorene	U	39.2	ug/kg	11.7	39.2
7005-72-3	4-Chlorophenylphenylether	U	392	ug/kg	78.3	392
534-52-1	2-Methyl-4,6-dinitrophenol	U	392	ug/kg	78.3	392
100-01-6	4-Nitroaniline	U	392	ug/kg	117	392
	p-Nitroaniline					
122-39-4	Diphenylamine	U	392	ug/kg	78.3	392
122-66-7	Azobenzene	U	392	ug/kg	78.3	392
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	392	ug/kg	78.3	392
118-74-1	Hexachlorobenzene	U	392	ug/kg	78.3	392
85-01-8	Phenanthrene	J	22.4	ug/kg	11.7	39.2
120-12-7	Anthracene	U	39.2	ug/kg	7.83	39.2
84-74-2	Di-n-butylphthalate	U	392	ug/kg	78.3	392
206-44-0	Fluoranthene		86.7	ug/kg	11.7	39.2
85-68-7	Butylbenzylphthalate	U	392	ug/kg	78.3	392
56-55-3	Benzo(a)anthracene	J	31.0	ug/kg	11.7	39.2
91-94-1	3,3'-Dichlorobenzidine	U	392	ug/kg	117	392
218-01-9	Chrysene		58.2	ug/kg	11.7	39.2
117-81-7	bis(2-Ethylhexyl)phthalate	J	130	ug/kg	78.3	392
117-84-0	Di-n-octylphthalate	U	392	ug/kg	78.3	392
205-99-2	Benzo(b)fluoranthene		103	ug/kg	11.7	39.2
207-08-9	Benzo(k)fluoranthene	U	39.2	ug/kg	11.7	39.2
50-32-8	Benzo(a)pyrene		49.3	ug/kg	11.7	39.2
193-39-5	Indeno(1,2,3-cd)pyrene	J	36.3	ug/kg	11.7	39.2
53-70-3	Dibenzo(a,h)anthracene	U	39.2	ug/kg	11.7	39.2
191-24-2	Benzo(ghi)perylene		45.1	ug/kg	11.7	39.2
120-82-1	1,2,4-Trichlorobenzene	U	392	ug/kg	78.3	392

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	196	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.89	240	ug/kg	99	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6531	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 12:33	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0113.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	6.89	264	ug/kg		J
	Unknown	6.93	182	ug/kg		J
	Unknown	7.02	166	ug/kg		J
38754-94-8	s-Indacen-1(2H)-one, 3,5,6,7-tetrahydro-	9.11	179	ug/kg	92	NJ
112-95-8	Eicosane	10.19	198	ug/kg	96	NJ
2883-08-1	Cyclohexane, 1,1'-(2-methyl-1,3-propaned	12.16	514	ug/kg	89	NJ

QC Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 09-2499

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201871880	MB for batch 881441	78	74	78	80	81	97
1201871881	LCS for batch 881441	75	72	81	80	91	101
232507001	CAMO-09-6519	66	62	63	65	67	77
1201871882	CAMO-09-6519MS	62	61	64	66	74	97
1201871883	CAMO-09-6519MSD	66	63	67	67	78	93
232507002	CAMO-09-6518	62	58	62	64	68	79
232507003	CAMO-09-6527	70	67	72	77	89	101
232507004	CAMO-09-6529	65	62	68	70	77	88
232507005	CAMO-09-6528	65	65	67	72	80	107
232507006	CAMO-09-6531	50	52	50	56	71	89

Surrogate		Acceptance Limits
2FP	= 2-Fluorophenol	(35%-96%)
PHL	= Phenol-d5	(36%-96%)
NBZ	= Nitrobenzene-d5	(34%-104%)
FBP	= 2-Fluorobiphenyl	(36%-100%)
TBP	= 2,4,6-Tribromophenol	(37%-106%)
TPH	= p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 881441
Lab Sample ID: 1201871881
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/01/2009 08:50
Dilution: 1
Prep Batch ID: 881441
Batch ID: 881442

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1280	77	31-95
108-95-2	LCS	Phenol	1670	0.0	1280	77	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1300	78	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	1190	71	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1440	86	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1530	92	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1380	83	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1570	94	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1320	79	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	1670	100	38-116
129-00-0	LCS	Pyrene	1670	0.0	1500	90	43-108
110-86-1	LCS	Pyridine	1670	0.0	1290	77	13-129
62-53-3	LCS	Aniline	1670	0.0	1530	92	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1220	73	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	1200	72	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	959	58	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	1240	75	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1270	76	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1370	82	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1440	87	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	1220	73	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1330	80	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 881441
Lab Sample ID: 1201871881
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/01/2009 08:50
Dilution: 1
Prep Batch ID: 881441
Batch ID: 881442

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1370	82	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1350	81	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1370	82	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1310	78	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1420	85	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	1250	75	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1190	71	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1380	83	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1330	80	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1440	87	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1810	108	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1360	82	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1650	99	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1400	84	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1550	93	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	2020	121 *	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1480	89	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1500	90	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1460	88	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	1730	104	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1480	89	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1540	92	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 881441
Lab Sample ID: 1201871881
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/01/2009 08:50
Dilution: 1
Prep Batch ID: 881441
Batch ID: 881442

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1420	85	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1470	88	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	1780	107	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	2840	171 *	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1720	103	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1520	91	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1450	87	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1520	91	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1470	88	45-107
120-12-7	LCS	Anthracene	1670	0.0	1520	91	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1570	94	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1610	97	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1590	96	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1580	95	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1340	80	45-98
218-01-9	LCS	Chrysene	1670	0.0	1580	95	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1730	104	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1570	94	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1660	99	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1620	97	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1680	101	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1650	99	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 881441
Lab Sample ID: 1201871881
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/01/2009 08:50
Dilution: 1
Prep Batch ID: 881441
Batch ID: 881442

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1690	102	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1590	95	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1300	78	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6519MS
Lab Sample ID: 1201871882
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 20.8
Analysis Date: 07/01/2009 09:45
Dilution: 1
Prep Batch ID: 881441
Batch ID: 881442

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	2100	0.00	U	1320	63	32-90
108-95-2	MS	Phenol	2100	0.00	U	1400	66	32-105
95-57-8	MS	2-Chlorophenol	2100	0.00	U	1410	67	33-106
106-46-7	MS	1,4-Dichlorobenzene	2100	0.00	U	1170	55	33-95
621-64-7	MS	N-Nitrosodipropylamine	2100	0.00	U	1510	72	31-109
59-50-7	MS	4-Chloro-3-methylphenol	2100	0.00	U	1690	80	38-119
83-32-9	MS	Acenaphthene	2100	0.00	U	1450	69	39-100
121-14-2	MS	2,4-Dinitrotoluene	2100	0.00	U	1550	74	42-107
100-02-7	MS	4-Nitrophenol	2100	0.00	U	1540	73	24-120
87-86-5	MS	Pentachlorophenol	2100	0.00	U	1860	88	26-121
129-00-0	MS	Pyrene	2100	0.00	U	1840	88	34-120
110-86-1	MS	Pyridine	2100	0.00	U	1320	63	30-95
62-53-3	MS	Aniline	2100	0.00	U	1410	67	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	2100	0.00	U	1260	60	34-101
541-73-1	MS	1,3-Dichlorobenzene	2100	0.00	U	1170	55	31-97
100-51-6	MS	Benzyl alcohol	2100	0.00	U	1010	48	17-120
95-50-1	MS	1,2-Dichlorobenzene	2100	0.00	U	1240	59	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	2100	0.00	U	1320	63	32-113
95-48-7	MS	o-Cresol	2100	0.00	U	1620	77	31-119
65794-96-9	MS	m,p-Cresols	2100	0.00	U	1570	74	35-125
67-72-1	MS	Hexachloroethane	2100	0.00	U	1220	58	30-100
98-95-3	MS	Nitrobenzene	2100	0.00	U	1380	66	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6519MS
Lab Sample ID: 1201871882
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 20.8
Analysis Date: 07/01/2009 09:45
Prep Batch ID: 881441
Batch ID: 881442
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	2100	0.00	U	1490	71	34-110
88-75-5	MS	2-Nitrophenol	2100	0.00	U	1430	68	32-108
105-67-9	MS	2,4-Dimethylphenol	2100	0.00	U	1560	74	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	2100	0.00	U	1390	66	35-108
120-83-2	MS	2,4-Dichlorophenol	2100	0.00	U	1570	75	38-110
65-85-0	MS	Benzoic acid	2100	0.00	U	2200	104	18-134
91-20-3	MS	Naphthalene	2100	0.00	U	1250	60	31-105
106-47-8	MS	4-Chloroaniline	2100	0.00	U	1310	63	29-123
87-68-3	MS	Hexachlorobutadiene	2100	0.00	U	1350	64	31-109
91-57-6	MS	2-Methylnaphthalene	2100	0.00	U	1550	74	32-110
77-47-4	MS	Hexachlorocyclopentadiene	2100	0.00	U	1530	73	21-122
88-06-2	MS	2,4,6-Trichlorophenol	2100	0.00	U	1600	76	37-108
95-95-4	MS	2,4,5-Trichlorophenol	2100	0.00	U	1790	85	37-116
91-58-7	MS	2-Chloronaphthalene	2100	0.00	U	1510	72	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	2100	0.00	U	1610	77	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	2100	0.00	U	1930	92	39-117
131-11-3	MS	Dimethylphthalate	2100	0.00	U	1500	71	41-105
606-20-2	MS	2,6-Dinitrotoluene	2100	0.00	U	1530	73	41-103
208-96-8	MS	Acenaphthylene	2100	0.00	U	1560	74	41-103
51-28-5	MS	2,4-Dinitrophenol	2100	0.00	U	1610	77	25-104
132-64-9	MS	Dibenzofuran	2100	0.00	U	1590	76	40-114
84-66-2	MS	Diethylphthalate	2100	0.00	U	1590	76	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6519MS
Lab Sample ID: 1201871882
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 20.8
Analysis Date: 07/01/2009 09:45
Dilution: 1
Prep Batch ID: 881441
Batch ID: 881442

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	2100	0.00	U	1500	71	48-99
7005-72-3	MS	4-Chlorophenylphenylether	2100	0.00	U	1550	74	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	2100	0.00	U	1580	75	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	2100	0.00	U	2450	117	35-139
122-39-4	MS	Diphenylamine	2100	0.00	U	1800	86	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	2100	0.00	U	1630	78	37-118
101-55-3	MS	4-Bromophenylphenylether	2100	0.00	U	1520	72	39-112
118-74-1	MS	Hexachlorobenzene	2100	0.00	U	1550	74	38-113
85-01-8	MS	Phenanthrene	2100	0.00	U	1530	73	38-110
120-12-7	MS	Anthracene	2100	0.00	U	1580	75	38-112
84-74-2	MS	Di-n-butylphthalate	2100	0.00	U	1600	76	42-119
206-44-0	MS	Fluoranthene	2100	0.00	U	1540	73	38-119
85-68-7	MS	Butylbenzylphthalate	2100	0.00	U	1810	86	39-126
56-55-3	MS	Benzo(a)anthracene	2100	0.00	U	1560	74	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	2100	0.00	U	550	26 *	35-106
218-01-9	MS	Chrysene	2100	0.00	U	1630	78	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	2100	0.00	U	1900	91	40-125
117-84-0	MS	Di-n-octylphthalate	2100	0.00	U	2350	112	30-147
205-99-2	MS	Benzo(b)fluoranthene	2100	0.00	U	1730	82	38-117
207-08-9	MS	Benzo(k)fluoranthene	2100	0.00	U	1860	88	39-120
50-32-8	MS	Benzo(a)pyrene	2100	0.00	U	1680	80	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	2100	0.00	U	1200	57	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6519MS
Lab Sample ID: 1201871882
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 20.8
Analysis Date: 07/01/2009 09:45
Prep Batch ID: 881441
Batch ID: 881442
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	2100	0.00	U	1280	61	32-124
191-24-2	MS	Benzo(ghi)perylene	2100	0.00	U	1100	52	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	2100	0.00	U	1350	64	31-105

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6519MSD
Lab Sample ID: 1201871883
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 20.8
Analysis Date: 07/01/2009 10:13
Dilution: 1
Prep Batch ID: 881441
Batch ID: 881442

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD N-Methyl-N-nitrosomethylam	2100	0.00	U	1470	70	32-90	11	0-30
108-95-2	MSD Phenol	2100	0.00	U	1480	70	32-105	6	0-30
95-57-8	MSD 2-Chlorophenol	2100	0.00	U	1500	71	33-106	6	0-30
106-46-7	MSD 1,4-Dichlorobenzene	2100	0.00	U	1250	59	33-95	7	0-30
621-64-7	MSD N-Nitrosodipropylamine	2100	0.00	U	1600	76	31-109	5	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	2100	0.00	U	1840	87	38-119	9	0-30
83-32-9	MSD Acenaphthene	2100	0.00	U	1480	70	39-100	2	0-30
121-14-2	MSD 2,4-Dinitrotoluene	2100	0.00	U	1650	78	42-107	6	0-30
100-02-7	MSD 4-Nitrophenol	2100	0.00	U	1750	83	24-120	13	0-30
87-86-5	MSD Pentachlorophenol	2100	0.00	U	2020	96	26-121	9	0-30
129-00-0	MSD Pyrene	2100	0.00	U	1740	83	34-120	6	0-30
110-86-1	MSD Pyridine	2100	0.00	U	1490	71	30-95	12	0-30
62-53-3	MSD Aniline	2100	0.00	U	1620	77	34-111	14	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	2100	0.00	U	1370	65	34-101	8	0-30
541-73-1	MSD 1,3-Dichlorobenzene	2100	0.00	U	1230	59	31-97	6	0-30
100-51-6	MSD Benzyl alcohol	2100	0.00	U	1160	55	17-120	14	0-30
95-50-1	MSD 1,2-Dichlorobenzene	2100	0.00	U	1330	63	32-102	7	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	2100	0.00	U	1370	65	32-113	4	0-30
95-48-7	MSD o-Cresol	2100	0.00	U	1630	77	31-119	0	0-30
65794-96-9	MSD m,p-Cresols	2100	0.00	U	1730	82	35-125	10	0-30
67-72-1	MSD Hexachloroethane	2100	0.00	U	1240	59	30-100	1	0-30
98-95-3	MSD Nitrobenzene	2100	0.00	U	1480	70	33-108	6	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6519MSD
Lab Sample ID: 1201871883
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 20.8
Analysis Date: 07/01/2009 10:13
Dilution: 1
Prep Batch ID: 881441
Batch ID: 881442

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD Isophorone	2100	0.00	U	1550	74	34-110	4	0-30
88-75-5	MSD 2-Nitrophenol	2100	0.00	U	1540	73	32-108	7	0-30
105-67-9	MSD 2,4-Dimethylphenol	2100	0.00	U	1630	78	32-115	5	0-30
111-91-1	MSD bis(2-Chloroethoxy)methane	2100	0.00	U	1510	72	35-108	8	0-30
120-83-2	MSD 2,4-Dichlorophenol	2100	0.00	U	1640	78	38-110	4	0-30
65-85-0	MSD Benzoic acid	2100	0.00	U	1800	86	18-134	20	0-30
91-20-3	MSD Naphthalene	2100	0.00	U	1300	62	31-105	4	0-30
106-47-8	MSD 4-Chloroaniline	2100	0.00	U	1870	89	29-123	35 *	0-30
87-68-3	MSD Hexachlorobutadiene	2100	0.00	U	1390	66	31-109	3	0-30
91-57-6	MSD 2-Methylnaphthalene	2100	0.00	U	1580	75	32-110	2	0-30
77-47-4	MSD Hexachlorocyclopentadiene	2100	0.00	U	1380	66	21-122	11	0-30
88-06-2	MSD 2,4,6-Trichlorophenol	2100	0.00	U	1660	79	37-108	4	0-30
95-95-4	MSD 2,4,5-Trichlorophenol	2100	0.00	U	1840	87	37-116	2	0-30
91-58-7	MSD 2-Chloronaphthalene	2100	0.00	U	1530	73	37-103	1	0-30
88-74-4	MSD 2-Nitroaniline *o-Nitroaniline*	2100	0.00	U	1740	83	36-115	7	0-30
99-09-2	MSD 3-Nitroaniline *m-Nitroaniline*	2100	0.00	U	2210	105	39-117	14	0-30
131-11-3	MSD Dimethylphthalate	2100	0.00	U	1620	77	41-105	8	0-30
606-20-2	MSD 2,6-Dinitrotoluene	2100	0.00	U	1620	77	41-103	6	0-30
208-96-8	MSD Acenaphthylene	2100	0.00	U	1600	76	41-103	2	0-30
51-28-5	MSD 2,4-Dinitrophenol	2100	0.00	U	1570	75	25-104	2	0-30
132-64-9	MSD Dibenzofuran	2100	0.00	U	1640	78	40-114	3	0-30
84-66-2	MSD Diethylphthalate	2100	0.00	U	1660	79	43-110	4	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6519MSD
Lab Sample ID: 1201871883
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 20.8
Analysis Date: 07/01/2009 10:13
Dilution: 1
Prep Batch ID: 881441
Batch ID: 881442

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD Fluorene	2100	0.00	U	1550	74	48-99	3	0-30
7005-72-3	MSD 4-Chlorophenylphenylether	2100	0.00	U	1570	75	42-111	2	0-30
534-52-1	MSD 2-Methyl-4,6-dinitrophenol	2100	0.00	U	1580	75	19-118	0	0-30
100-01-6	MSD 4-Nitroaniline *p-Nitroaniline*	2100	0.00	U	3040	145 *	35-139	22	0-30
122-39-4	MSD Diphenylamine	2100	0.00	U	1870	89	41-112	4	0-30
122-66-7	MSD Azobenzene *1,2-Diphenylhydrazine*	2100	0.00	U	1670	79	37-118	2	0-30
101-55-3	MSD 4-Bromophenylphenylether	2100	0.00	U	1540	73	39-112	2	0-30
118-74-1	MSD Hexachlorobenzene	2100	0.00	U	1640	78	38-113	6	0-30
85-01-8	MSD Phenanthrene	2100	0.00	U	1580	75	38-110	3	0-30
120-12-7	MSD Anthracene	2100	0.00	U	1680	80	38-112	6	0-30
84-74-2	MSD Di-n-butylphthalate	2100	0.00	U	1630	78	42-119	2	0-30
206-44-0	MSD Fluoranthene	2100	0.00	U	1670	79	38-119	8	0-30
85-68-7	MSD Butylbenzylphthalate	2100	0.00	U	1730	82	39-126	5	0-30
56-55-3	MSD Benzo(a)anthracene	2100	0.00	U	1630	78	39-110	4	0-30
91-94-1	MSD 3,3'-Dichlorobenzidine	2100	0.00	U	833	40	35-106	41 *	0-30
218-01-9	MSD Chrysene	2100	0.00	U	1660	79	39-109	2	0-30
117-81-7	MSD bis(2-Ethylhexyl)phthalate	2100	0.00	U	1800	85	40-125	6	0-30
117-84-0	MSD Di-n-octylphthalate	2100	0.00	U	2110	100	30-147	11	0-30
205-99-2	MSD Benzo(b)fluoranthene	2100	0.00	U	1790	85	38-117	3	0-30
207-08-9	MSD Benzo(k)fluoranthene	2100	0.00	U	1930	92	39-120	4	0-30
50-32-8	MSD Benzo(a)pyrene	2100	0.00	U	1780	85	40-115	6	0-30
193-39-5	MSD Indeno(1,2,3-cd)pyrene	2100	0.00	U	1380	66	32-120	14	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: CAMO-09-6519MSD
Lab Sample ID: 1201871883
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 20.8
Analysis Date: 07/01/2009 10:13
Dilution: 1
Prep Batch ID: 881441
Batch ID: 881442

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD	Dibenzo(a,h)anthracene	2100	0.00	U	1450	69	32-124	13	0-30
191-24-2	MSD	Benzo(ghi)perylene	2100	0.00	U	1260	60	28-119	14	0-30
120-82-1	MSD	1,2,4-Trichlorobenzene	2100	0.00	U	1420	67	31-105	5	0-30

Method Blank Summary

SDG Number:	09-2499	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881441	Instrument ID:	MSD5.I	Data File:	s5g0104.d
Lab Sample ID:	1201871880	Prep Date:	06/30/2009 21:22	Analyzed:	07/01/09 08:22
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 881441	1201871881	s5g0105.d	07/01/09	0850
02	CAMO-09-6519	232507001	s5g0106.d	07/01/09	0917
03	CAMO-09-6519MS	1201871882	s5g0107.d	07/01/09	0945
04	CAMO-09-6519MSD	1201871883	s5g0108.d	07/01/09	1013
05	CAMO-09-6518	232507002	s5g0109.d	07/01/09	1041
06	CAMO-09-6527	232507003	s5g0110.d	07/01/09	1109
07	CAMO-09-6529	232507004	s5g0111.d	07/01/09	1137
08	CAMO-09-6528	232507005	s5g0112.d	07/01/09	1205
09	CAMO-09-6531	232507006	s5g0113.d	07/01/09	1233

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2499

Instrument ID: MSD5.I **Injection Date/Time:** 01-JUL-09 07:18

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s070109.b/s5g0101.d

m/e	Ion Abundance Criteria	% Relative Abundance
51	30 - 60% of mass 198	41.7
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	36.4
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	42.3
197	0 - 1% of mass 198	0.4
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	28.2
365	Greater than 1% of mass 198	3.5
441	Present, but less than mass 443	75.8
442	Greater than 40% of mass 198	93.4
443	17 - 23% of mass 442	19.2
198	Base Peak, 100% Relative Abundance	100

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090617-02.4	/chem/MSD5.i/s070109.b/s5g010	01-JUL-09 07:32
AP12CVS	WBN090619-01.4	/chem/MSD5.i/s070109.b/s5g010	01-JUL-09 07:59
SBLK01	1201871880	/chem/MSD5.i/s070109.b/s5g010	01-JUL-09 08:22
SBLK01LCS	1201871881	/chem/MSD5.i/s070109.b/s5g010	01-JUL-09 08:50
CAMO-09-6519	232507001	/chem/MSD5.i/s070109.b/s5g010	01-JUL-09 09:17
CAMO-09-6519MS	1201871882	/chem/MSD5.i/s070109.b/s5g010	01-JUL-09 09:45
CAMO-09-6519MSD	1201871883	/chem/MSD5.i/s070109.b/s5g010	01-JUL-09 10:13
CAMO-09-6518	232507002	/chem/MSD5.i/s070109.b/s5g010	01-JUL-09 10:41
CAMO-09-6527	232507003	/chem/MSD5.i/s070109.b/s5g011	01-JUL-09 11:09
CAMO-09-6529	232507004	/chem/MSD5.i/s070109.b/s5g011	01-JUL-09 11:37
CAMO-09-6528	232507005	/chem/MSD5.i/s070109.b/s5g011	01-JUL-09 12:05
CAMO-09-6531	232507006	/chem/MSD5.i/s070109.b/s5g011	01-JUL-09 12:33

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2499

Instrument ID: MSD5.I **Injection Date/Time:** 25-JUN-09 14:07

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s062509.b/s5f2510.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40.6
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	37.2
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	42.2
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.7
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	72.4
442	Greater than 40% of mass 198	88.9
443	17 - 23% of mass 442	20

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICAL001	WBN090602-08	/chem/MSD5.i/s062509.b/s5f2511	25-JUN-09 14:42
MEGAICAL010	WBN090602-07	/chem/MSD5.i/s062509.b/s5f2513	25-JUN-09 15:10
MEGAICAL020	WBN090602-06	/chem/MSD5.i/s062509.b/s5f2514	25-JUN-09 15:38
MEGAICAL040	WBN090602-05.1	/chem/MSD5.i/s062509.b/s5f2515	25-JUN-09 16:05
MEGAICAL050	WBN090602-04	/chem/MSD5.i/s062509.b/s5f2516	25-JUN-09 16:33
MEGAICAL080	WBN090602-03	/chem/MSD5.i/s062509.b/s5f2517	25-JUN-09 17:02
MEGAICAL100	WBN090602-02	/chem/MSD5.i/s062509.b/s5f2518	25-JUN-09 17:29
MEGAICAL120	WBN090602-01	/chem/MSD5.i/s062509.b/s5f2519	25-JUN-09 17:57
AP12ICAL010	WBN090528-07	/chem/MSD5.i/s062509.b/s5f2522	25-JUN-09 19:10
AP12ICAL020	WBN090528-06	/chem/MSD5.i/s062509.b/s5f2523	25-JUN-09 19:32
AP12ICAL040	WBN090528-05.1	/chem/MSD5.i/s062509.b/s5f2524	25-JUN-09 19:55
AP12ICAL050	WBN090528-04	/chem/MSD5.i/s062509.b/s5f2525	25-JUN-09 20:18
AP12ICAL080	WBN090528-03	/chem/MSD5.i/s062509.b/s5f2526	25-JUN-09 20:41
AP12ICAL100	WBN090528-02	/chem/MSD5.i/s062509.b/s5f2527	25-JUN-09 21:03
AP12ICAL120	WBN090528-01	/chem/MSD5.i/s062509.b/s5f2528	25-JUN-09 21:25
AP12ICV	WBN090528-08.5	/chem/MSD5.i/s062509.b/s5f2530	25-JUN-09 22:11

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2499

Instrument ID: MSD5.I **Injection Date/Time:** 26-JUN-09 08:28

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s062509.b/s5f2531.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	42.2
68	Less than 2% of mass 69	1.5
69	Mass 69 Relative Abundance	38.3
70	Less than 2% of mass 69	0.4
127	40 - 60% of mass 198	42.2
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.7
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	77.7
442	Greater than 40% of mass 198	87.4
443	17 - 23% of mass 442	18.9

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICV	WBN090602-09.1	/chem/MSD5.i/s062509.b/s5f2533	26-JUN-09 09:03

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 09-2499

Instrument: MSD5.I

STD Analysis Time: 01-JUL-09 07:32

GC Column: J&W DB-5MS

Data File: s5g0102.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	524067		4.03	1946122		4.9	1194301		6.16	2318945		7.34	2422872		9.77	2182236		11.5
Upper Limit	1048134		4.53	3892244		5.4	2388602		6.66	4637890		7.84	4845744		10.3	4364472		12.0
Lower Limit	262034		3.53	973061		4.4	597151		5.66	1159473		6.84	1211436		9.27	1091118		11.0
Sample ID																		
K01	524476		4.03	1819994		4.9	1170283		6.16	2260315		7.34	2424155		9.76	2217194		11.5
K01LCS	500896		4.03	1862727		4.9	1149128		6.16	2259675		7.34	2429154		9.77	2279799		11.5
MO-09-6519	504494		4.03	1776397		4.9	1134918		6.16	2217131		7.34	2315031		9.77	2100620		11.5
MO-09-6519MS	497533		4.03	1883167		4.9	1160205		6.16	2254155		7.34	1874060		9.77	1121707		11.5
MO-09-6519MSD	512428		4.03	1937193		4.9	1197601		6.16	2345647		7.34	2264067		9.78	1627035		11.5
MO-09-6518	530013		4.03	1856620		4.9	1210842		6.16	2345926		7.34	2112080		9.77	1327915		11.5
MO-09-6527	529467		4.03	1845453		4.9	1194899		6.16	2343896		7.34	2244075		9.77	1494482		11.5
MO-09-6529	513129		4.03	1772127		4.9	1148451		6.16	2269857		7.34	2198054		9.77	1539751		11.5
MO-09-6528	520651		4.03	1818007		4.9	1174139		6.16	2256725		7.34	1857762		9.77	1065380	*	11.5
MO-09-6531	521497		4.03	1797241		4.9	1170032		6.16	2239139		7.34	1871526		9.77	1094654		11.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6518	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 10:41	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0109.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	392	ug/kg	78.5	392
108-95-2	Phenol	U	392	ug/kg	78.5	392
95-57-8	2-Chlorophenol	U	392	ug/kg	78.5	392
106-46-7	1,4-Dichlorobenzene	U	392	ug/kg	78.5	392
621-64-7	N-Nitrosodipropylamine	U	392	ug/kg	78.5	392
59-50-7	4-Chloro-3-methylphenol	U	392	ug/kg	78.5	392
83-32-9	Acenaphthene	U	39.2	ug/kg	13.0	39.2
121-14-2	2,4-Dinitrotoluene	U	392	ug/kg	39.2	392
100-02-7	4-Nitrophenol	U	392	ug/kg	130	392
87-86-5	Pentachlorophenol	U	392	ug/kg	98.1	392
129-00-0	Pyrene		421	ug/kg	11.8	39.2
110-86-1	Pyridine	U	392	ug/kg	78.5	392
62-53-3	Aniline	U	392	ug/kg	118	392
111-44-4	bis(2-Chloroethyl) ether	U	392	ug/kg	78.5	392
541-73-1	1,3-Dichlorobenzene	U	392	ug/kg	78.5	392
100-51-6	Benzyl alcohol	U	392	ug/kg	118	392
95-50-1	1,2-Dichlorobenzene	U	392	ug/kg	78.5	392
108-60-1	bis(2-Chloroisopropyl)ether	U	392	ug/kg	78.5	392
95-48-7	o-Cresol	U	392	ug/kg	78.5	392
65794-96-9	m,p-Cresols	U	392	ug/kg	118	392
67-72-1	Hexachloroethane	U	392	ug/kg	78.5	392
98-95-3	Nitrobenzene	U	392	ug/kg	78.5	392
78-59-1	Isophorone	U	392	ug/kg	78.5	392
88-75-5	2-Nitrophenol	U	392	ug/kg	78.5	392
105-67-9	2,4-Dimethylphenol	U	392	ug/kg	137	392
111-91-1	bis(2-Chloroethoxy)methane	U	392	ug/kg	78.5	392
120-83-2	2,4-Dichlorophenol	U	392	ug/kg	78.5	392
65-85-0	Benzoic acid	U	785	ug/kg	196	785
91-20-3	Naphthalene	U	39.2	ug/kg	11.8	39.2
106-47-8	4-Chloroaniline	U	392	ug/kg	78.5	392
87-68-3	Hexachlorobutadiene	U	392	ug/kg	78.5	392
91-57-6	2-Methylnaphthalene	U	39.2	ug/kg	7.85	39.2
77-47-4	Hexachlorocyclopentadiene	U	392	ug/kg	78.5	392
88-06-2	2,4,6-Trichlorophenol	U	392	ug/kg	78.5	392
95-95-4	2,4,5-Trichlorophenol	U	392	ug/kg	78.5	392
91-58-7	2-Chloronaphthalene	U	39.2	ug/kg	13.0	39.2
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	392	ug/kg	78.5	392
99-09-2	3-Nitroaniline	U	392	ug/kg	78.5	392

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6518	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 10:41	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0109.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	392	ug/kg	78.5	392
606-20-2	2,6-Dinitrotoluene	U	392	ug/kg	39.2	392
208-96-8	Acenaphthylene	U	39.2	ug/kg	11.8	39.2
51-28-5	2,4-Dinitrophenol	U	785	ug/kg	149	785
132-64-9	Dibenzofuran	U	392	ug/kg	78.5	392
84-66-2	Diethylphthalate	U	392	ug/kg	78.5	392
86-73-7	Fluorene	U	39.2	ug/kg	11.8	39.2
7005-72-3	4-Chlorophenylphenylether	U	392	ug/kg	78.5	392
534-52-1	2-Methyl-4,6-dinitrophenol	U	392	ug/kg	78.5	392
100-01-6	4-Nitroaniline	U	392	ug/kg	118	392
	p-Nitroaniline					
122-39-4	Diphenylamine	U	392	ug/kg	78.5	392
122-66-7	Azobenzene	U	392	ug/kg	78.5	392
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	392	ug/kg	78.5	392
118-74-1	Hexachlorobenzene	U	392	ug/kg	78.5	392
85-01-8	Phenanthrene		217	ug/kg	11.8	39.2
120-12-7	Anthracene		44.1	ug/kg	7.85	39.2
84-74-2	Di-n-butylphthalate	U	392	ug/kg	78.5	392
206-44-0	Fluoranthene		450	ug/kg	11.8	39.2
85-68-7	Butylbenzylphthalate	U	392	ug/kg	78.5	392
56-55-3	Benzo(a)anthracene		170	ug/kg	11.8	39.2
91-94-1	3,3'-Dichlorobenzidine	U	392	ug/kg	118	392
218-01-9	Chrysene		215	ug/kg	11.8	39.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	392	ug/kg	78.5	392
117-84-0	Di-n-octylphthalate	U	392	ug/kg	78.5	392
205-99-2	Benzo(b)fluoranthene		316	ug/kg	11.8	39.2
207-08-9	Benzo(k)fluoranthene		110	ug/kg	11.8	39.2
50-32-8	Benzo(a)pyrene		210	ug/kg	11.8	39.2
193-39-5	Indeno(1,2,3-cd)pyrene		110	ug/kg	11.8	39.2
53-70-3	Dibenzo(a,h)anthracene	U	39.2	ug/kg	11.8	39.2
191-24-2	Benzo(ghi)perylene		125	ug/kg	11.8	39.2
120-82-1	1,2,4-Trichlorobenzene	U	392	ug/kg	78.5	392

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.05	220	ug/kg		JA
7785-70-8	1R-.alpha.-Pinene	3.6	171	ug/kg	97	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6518	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 10:41	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0109.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
3387-41-5	Bicyclo[3.1.0]hexane, 4-methylene-1-(1-m	3.8	168	ug/kg	94	NJ
555-10-2	.beta.-Phellandrene	4.11	181	ug/kg	93	NJ
103-82-2	Benzeneacetic acid	5.02	169	ug/kg	91	NJ
25269-17-4	Thunbergol	8.23	185	ug/kg	83	NJ
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.19	183	ug/kg	97	NJ
	Unknown	9.46	344	ug/kg		J
	Unknown	9.54	524	ug/kg		J
54833-34-0	Cyclohexane, 1,1'-(2-ethyl-1,3-propanedi	12.13	1050	ug/kg	86	NJ
	Unknown	14.26	210	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0109.d
Lab Smp Id: 232507002 Client Smp ID: CAMO-09-6518
Inj Date : 01-JUL-2009 10:41
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507002|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.04000	weight of sample
M	15.17000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.027	4.032	(1.000)	530013	40.0000	
* 29 Naphthalene-d8	136	4.898	4.903	(1.000)	1856620	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1210842	40.0000	
* 67 Phenanthrene-d10	188	7.344	7.345	(1.000)	2345926	40.0000	
* 91 Chrysene-d12	240	9.766	9.771	(1.000)	2112080	40.0000	
* 98 Perylene-d12	264	11.529	11.534	(1.000)	1327915	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.208	(0.798)	724437	62.2509	2440
$ 5 Phenol-d5	99	3.743	3.743	(0.929)	890367	58.0268	2280
$ 20 Nitrobenzene-d5	82	4.393	4.398	(0.897)	428589	31.1528	1220
$ 39 2-Fluorobiphenyl	172	5.640	5.645	(0.916)	1000332	31.9441	1250
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	333942	67.5933	2650
$ 81 p-Terphenyl-d14	244	8.726	8.727	(0.894)	1280944	39.6293	1560

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.625	8.630	(0.883)	494236	10.7266	421
68 Phenanthrene	178	7.364	7.364	(1.003)	243233	5.53470	217
69 Anthracene	178	7.407	7.407	(1.009)	48732	1.12348	44.1
76 Fluoranthene	202	8.409	8.414	(1.145)	574358	11.4728	450
89 Benzo(a)anthracene	228	9.757	9.757	(0.999)	195945	4.32372	170
92 Chrysene	228	9.791	9.796	(1.002)	227228	5.47354	215
95 Benzo(b)fluoranthene	252	10.980	10.985	(0.952)	236341	8.05880	316
96 Benzo(k)fluoranthene	252	11.009	11.023	(0.955)	80592	2.79763	110
97 Benzo(a)pyrene	252	11.442	11.452	(0.992)	138898	5.35025	210
99 Indeno(1,2,3-cd)pyrene	276	13.388	13.407	(1.161)	72919	2.79514	110
101 Benzo(ghi)perylene	276	13.965	13.980	(1.211)	70721	3.17981	125

ION RATIO REPORT

SV REPORT

Data file: s5g0109.d
Report Date: 07/01/2009 11:00
Lab. ID: 232507002 SampleType: SAMPLE
Injection Date: 01-JUL-2009 10:41
Operator: RMB Instrument: MSD5.i
Sample Info: |232507002|881442|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2499
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	54474	3.74	3.81	80-120	100	(T)
93	13343	3.70	3.81	175-235	24	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	61814	4.39	4.27	80-120	100	(T)
42	41193	4.39	4.27	58-118	67	(T)
22 Isophorone		CAS#: 78-59-1				
82	423387	4.39	4.56	80-120	100	(T)
138	121	4.46	4.56	0- 49	0	(T)
27 Benzoic acid		CAS#: 65-85-0				
105	3505	4.70	4.68	80-120	100	( )
122	2161	4.71	4.68	53-113	62	( )
77	8127	4.70	4.68	49-109	232	(Q)
31 4-Chloroaniline		CAS#: 106-47-8				
127	166	4.93	4.93	80-120	100	( )
65	4935	4.90	4.93	2- 62	2960	(Q)
41 m-Nitroaniline		CAS#: 99-09-2				
138	350	6.16	6.11	80-120	100	( )
92	8369	6.16	6.11	83-143	2389	(Q)
108	26416	6.16	6.11	0- 41	7542	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
43 Dimethylphthalate			CAS#: 131-11-3			
163	264071	6.16	5.92	80-120	100	(T)
164	1210842	6.16	5.92	0- 40	459	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	164545	6.16	5.98	80-120	100	(T)
63	2493	6.16	5.97	56-116	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	164123	6.16	6.28	80-120	100	(T)
89	2599	6.16	6.28	39- 99	2	(QT)
63	2486	6.16	6.28	21- 81	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	14120	6.76	6.58	80-120	100	(T)
165	13288	6.76	6.58	61-121	94	(T)
167	4523	6.76	6.58	0- 44	32	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1215	6.76	6.59	80-120	100	(T)
105	2889	6.76	6.59	4- 64	238	(QT)
51	2119	6.76	6.59	39- 99	174	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	23282	6.77	6.94	80-120	100	(T)
141	117803	6.76	6.94	35- 95	506	(QT)
250	45686	6.76	6.94	69-129	196	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	243233	7.36	7.36	80-120	100	( )
179	38296	7.36	7.36	0- 46	16	( )
176	44908	7.36	7.36	0- 49	18	( )
69 Anthracene			CAS#: 120-12-7			
178	48732	7.41	7.41	80-120	100	( )
179	9631	7.41	7.41	0- 46	20	( )
176	8374	7.41	7.41	0- 49	17	( )
76 Fluoranthene			CAS#: 206-44-0			
202	574358	8.41	8.41	80-120	100	( )
203	97224	8.41	8.41	0- 48	17	( )
101	48685	8.41	8.41	0- 39	8	( )
79 Pyrene			CAS#: 129-00-0			
202	494236	8.63	8.63	80-120	100	( )
200	97939	8.63	8.63	0- 51	20	( )
101	48301	8.63	8.63	0- 41	10	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	195945	9.76	9.76	80-120	100	( )
226	52731	9.75	9.76	0- 57	27	( )
229	47926	9.76	9.76	0- 51	24	( )
92 Chrysene			CAS#: 218-01-9			
228	227228	9.79	9.80	80-120	100	( )
229	55238	9.79	9.80	0- 50	24	( )
226	66502	9.79	9.80	0- 59	29	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	236341	10.98	10.98	80-120	100	( )
253	56273	10.98	10.98	0- 52	24	( )
125	22104	10.98	10.98	0- 38	9	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	80592	11.01	11.02	80-120	100	( )
253	14802	11.01	11.02	0- 53	18	( )
125	6421	11.01	11.02	0- 38	8	( )
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	138898	11.44	11.45	80-120	100	( )
253	32610	11.44	11.45	0- 52	23	( )
125	13247	11.44	11.45	0- 30	10	( )
99 Indeno(1,2,3-cd)pyrene			CAS#: 193-39-5			
276	72919	13.39	13.41	80-120	100	( )
138	13769	13.39	13.41	0- 51	19	( )
100 Dibenzo(a,h)anthracene			CAS#: 53-70-3			
278	15094	13.40	13.42	80-120	100	( )
139	3132	13.40	13.42	0- 30	21	( )
101 Benzo(ghi)perylene			CAS#: 191-24-2			
276	70721	13.97	13.98	80-120	100	( )
138	15441	13.97	13.98	0- 30	22	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0109.d
Lab Smp Id: 232507002 Client Smp ID: CAMO-09-6518
Inj Date : 01-JUL-2009 10:41
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507002|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.04000	weight of sample
M	15.17000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.027	3448764	40.000
* 29 Naphthalene-d8	4.898	4130843	40.000
* 67 Phenanthrene-d10	7.344	6021282	40.000
* 91 Chrysene-d12	9.766	6497583	40.000
* 98 Perylene-d12	11.529	3235740	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.049	483796	5.61124049	220	0		0	10
1R-.alpha.-Pinene					CAS #: 7785-70-8		
3.598	374747	4.34645374	170	97	NIST05.L	15188	10
Bicyclo[3.1.0]hexane, 4-methylene-1-(1-m					CAS #: 3387-41-5		
3.795	369762	4.28863738	168	94	NIST05.L	15379	10
.beta.-Phellandrene					CAS #: 555-10-2		
4.108	397103	4.60573793	181	93	NIST05.L	15198	10
Benzeneacetic acid					CAS #: 103-82-2		
5.023	443950	4.29887668	169	91	NIST05.L	15740	29
Thunbergol					CAS #: 25269-17-4		
8.230	710003	4.71662206	185	83	NIST05.L	118732	67
1-Phenanthrenecarboxylic acid, 1,2,3,4,4					CAS #: 1235-74-1		
9.193	759149	4.67342188	183	97	NIST05.L	133618	91
Unknown					CAS #:		
9.458	1422203	8.75527222	344	0		0	91
Unknown					CAS #:		
9.540	2170195	13.3600110	524	0		0	91
Cyclohexane, 1,1'-(2-ethyl-1,3-propanedi					CAS #: 54833-34-0		
12.131	2166760	26.7853385	1050	86	NIST05.L	82661	98
Unknown					CAS #:		
14.264	433482	5.35867108	210	0		0	98

Data File: /chem/MSD5.i/s070109.b/s5g0109.d
Date : 01-JUL-2009 10:41
Client ID: CAWO-09-6518
Sample Info: 1232507002|881442|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

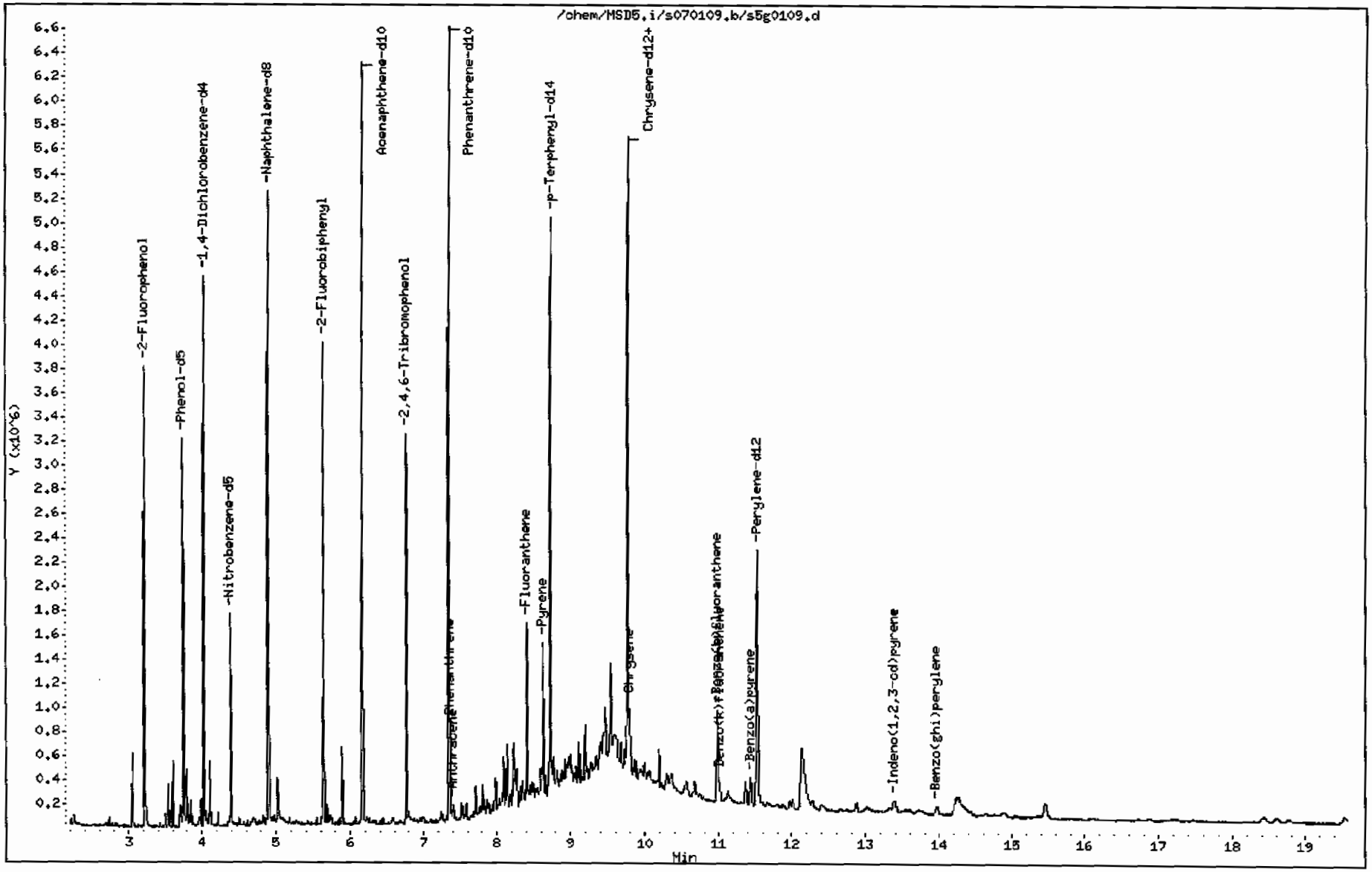

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518

Instrument: MSD5.i

Sample Info: 1232507002188144211SVMF11LANL

Volume Injected (uL): 0.5

Operator: RHB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 421 ug/Kg

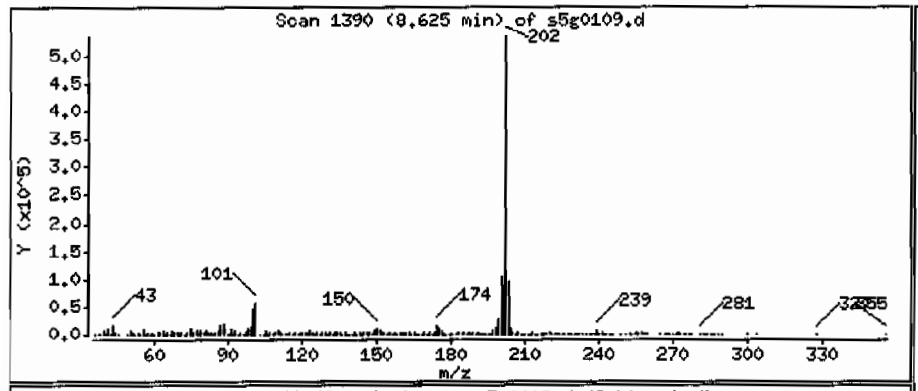

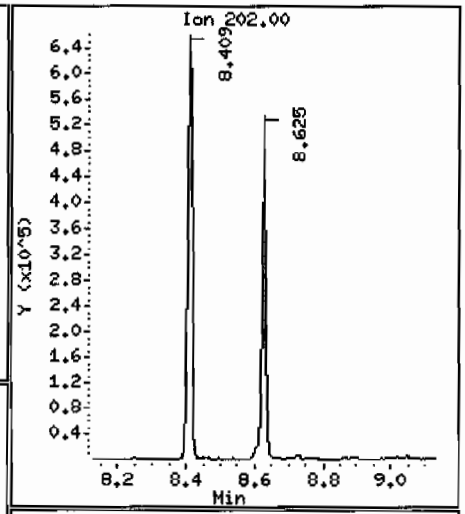

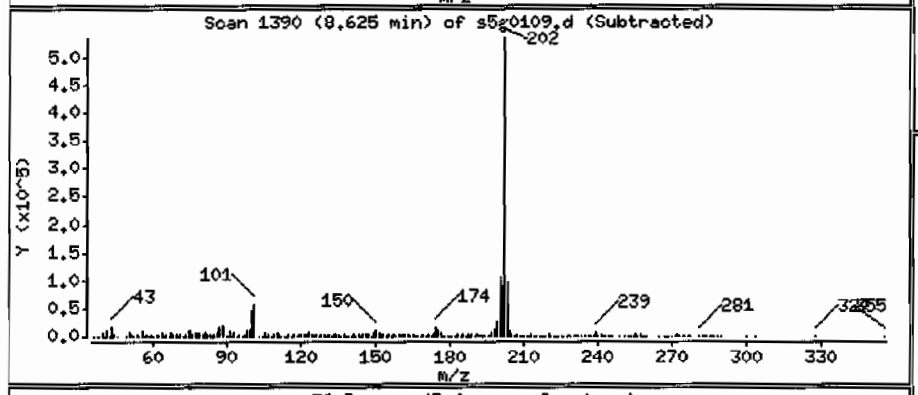

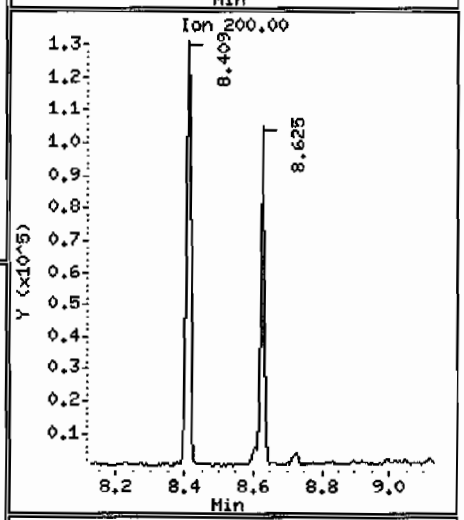

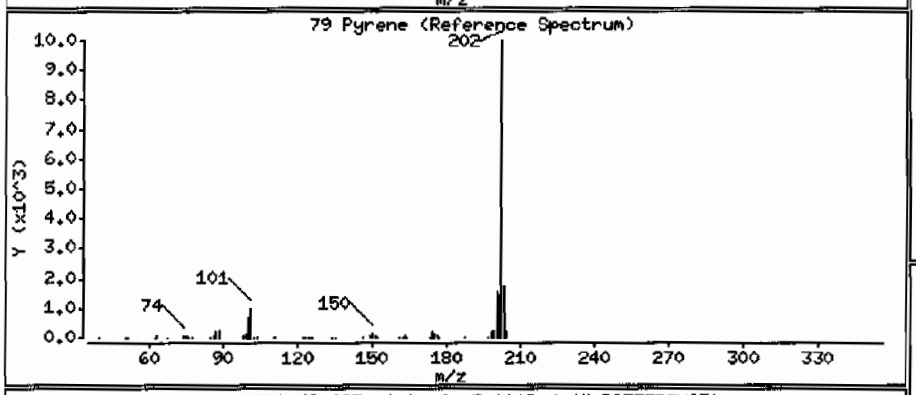

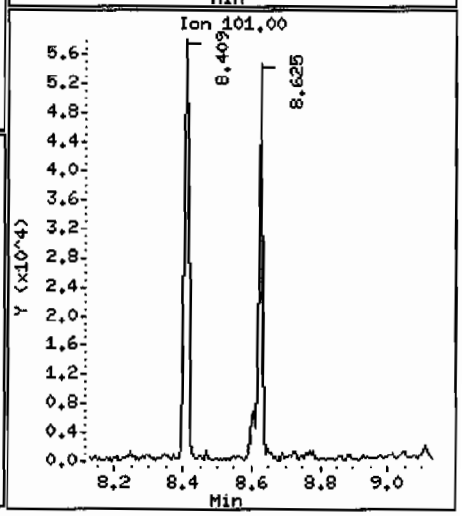

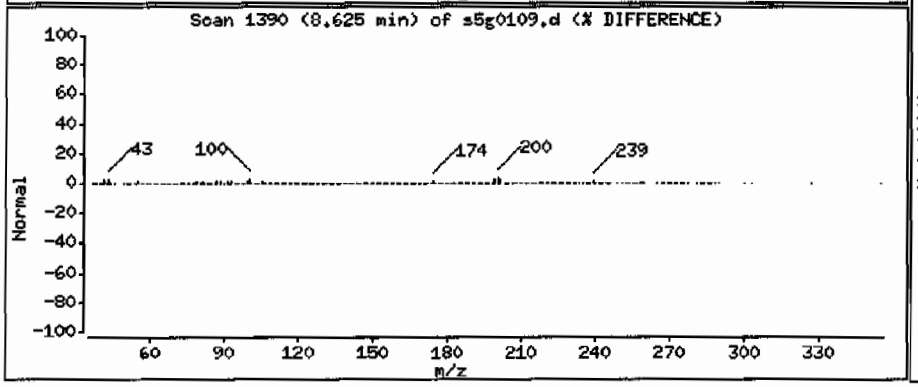

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518

Instrument: MSD5.i

Sample Info: |2325070021881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RHB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 217 ug/Kg

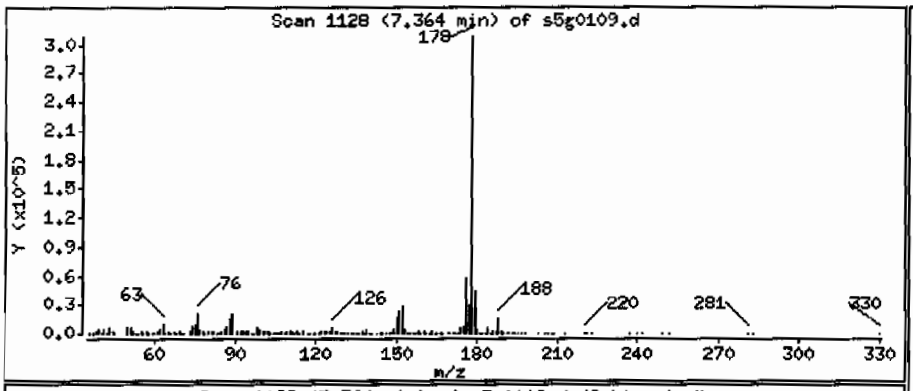

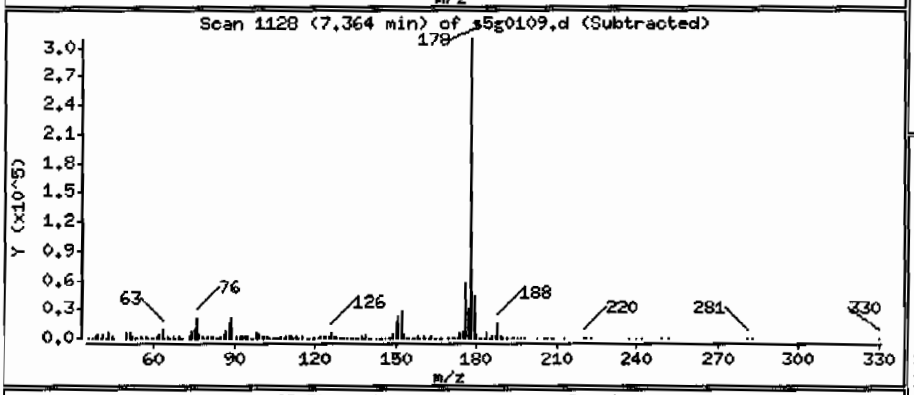

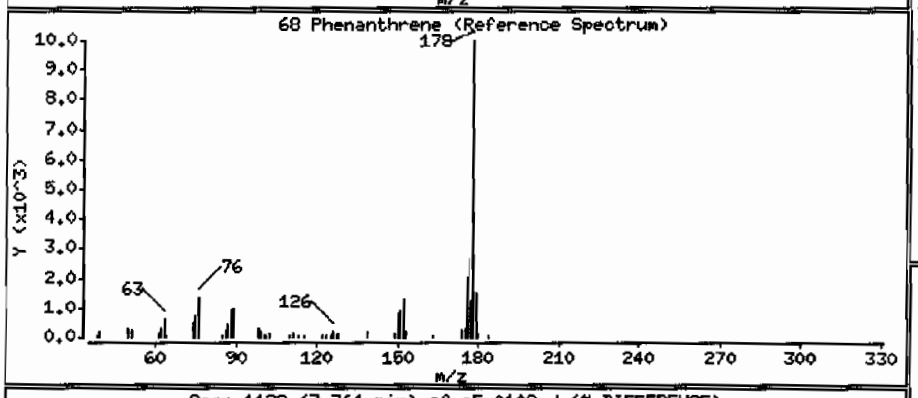

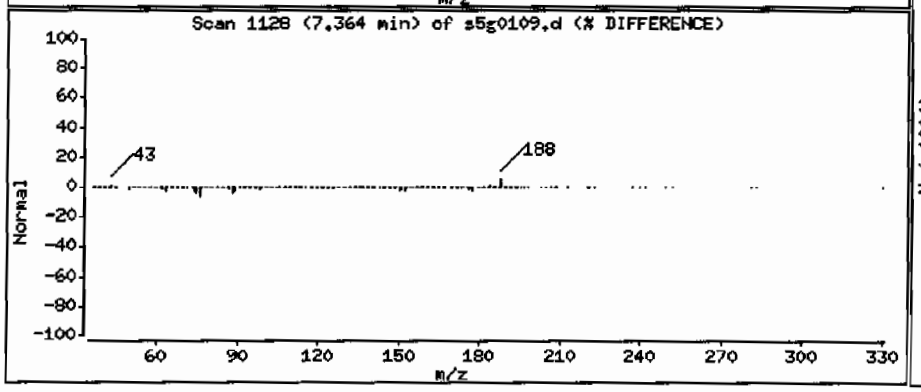

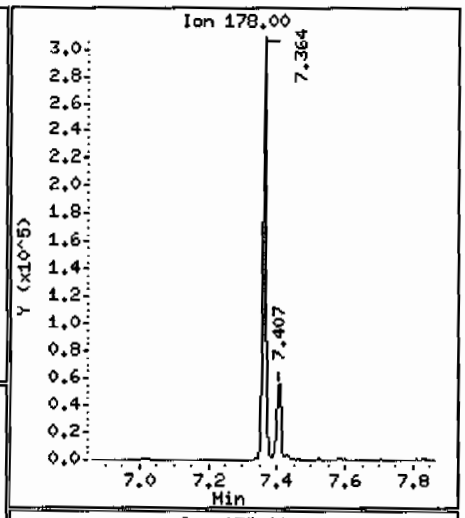

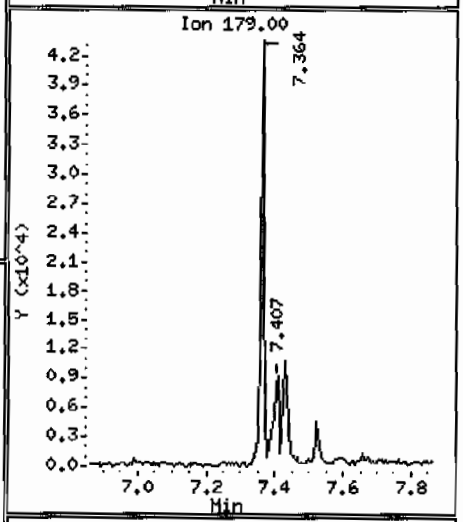

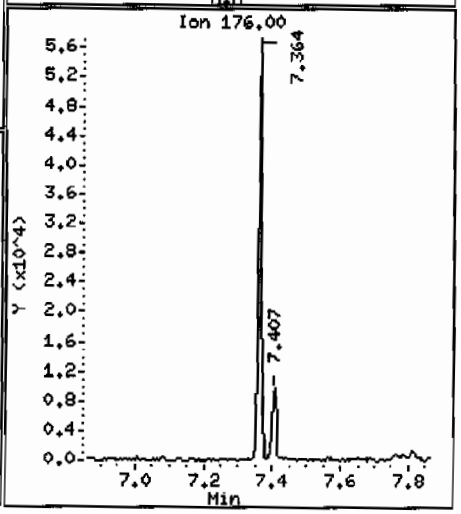

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518

Instrument: MSD5.i

Sample Info: |2325070021881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

69 Anthracene

Concentration: 44.1 ug/Kg

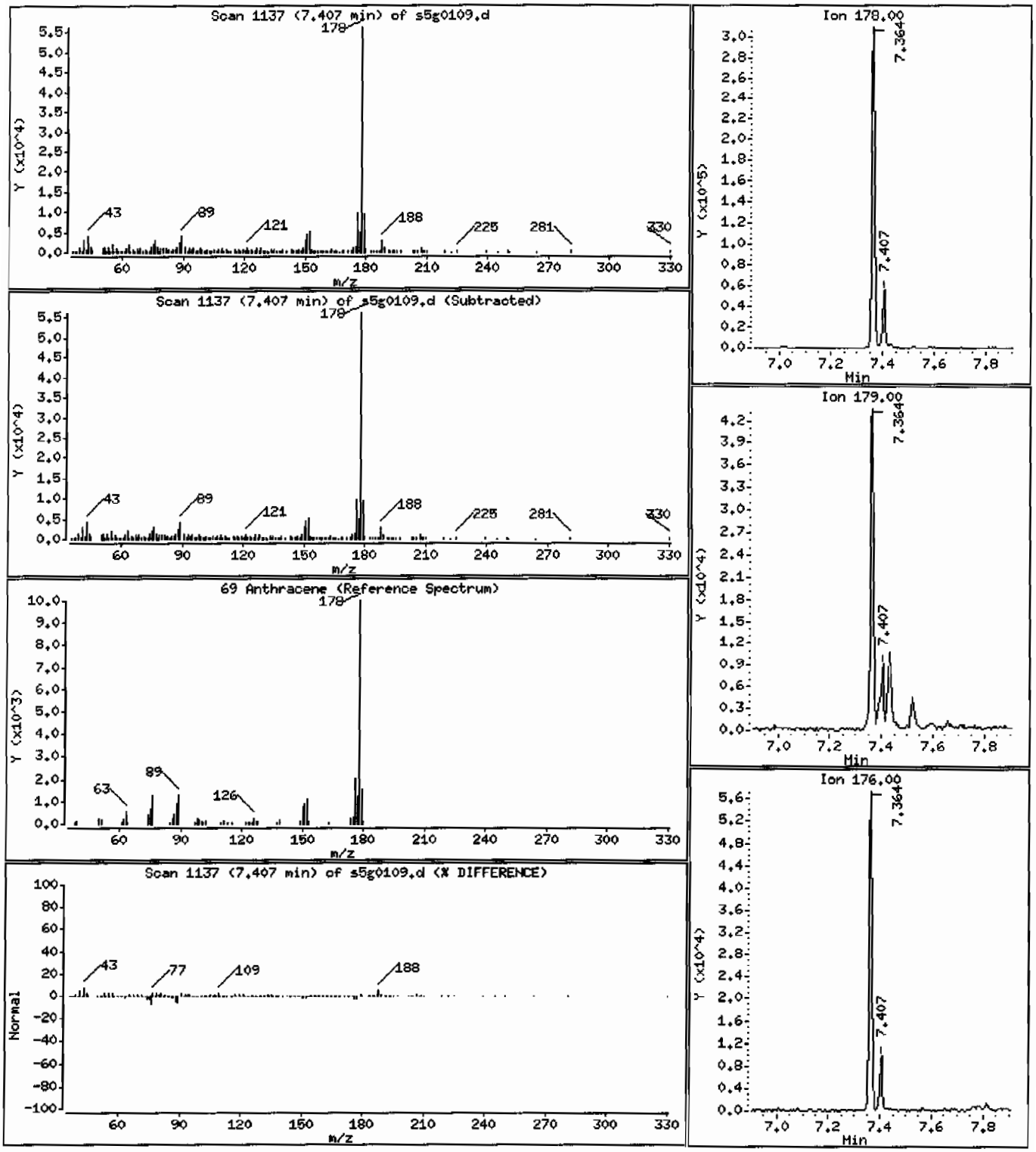

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518

Instrument: MSD5.i

Sample Info: 1232507002188144211SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 450 ug/Kg

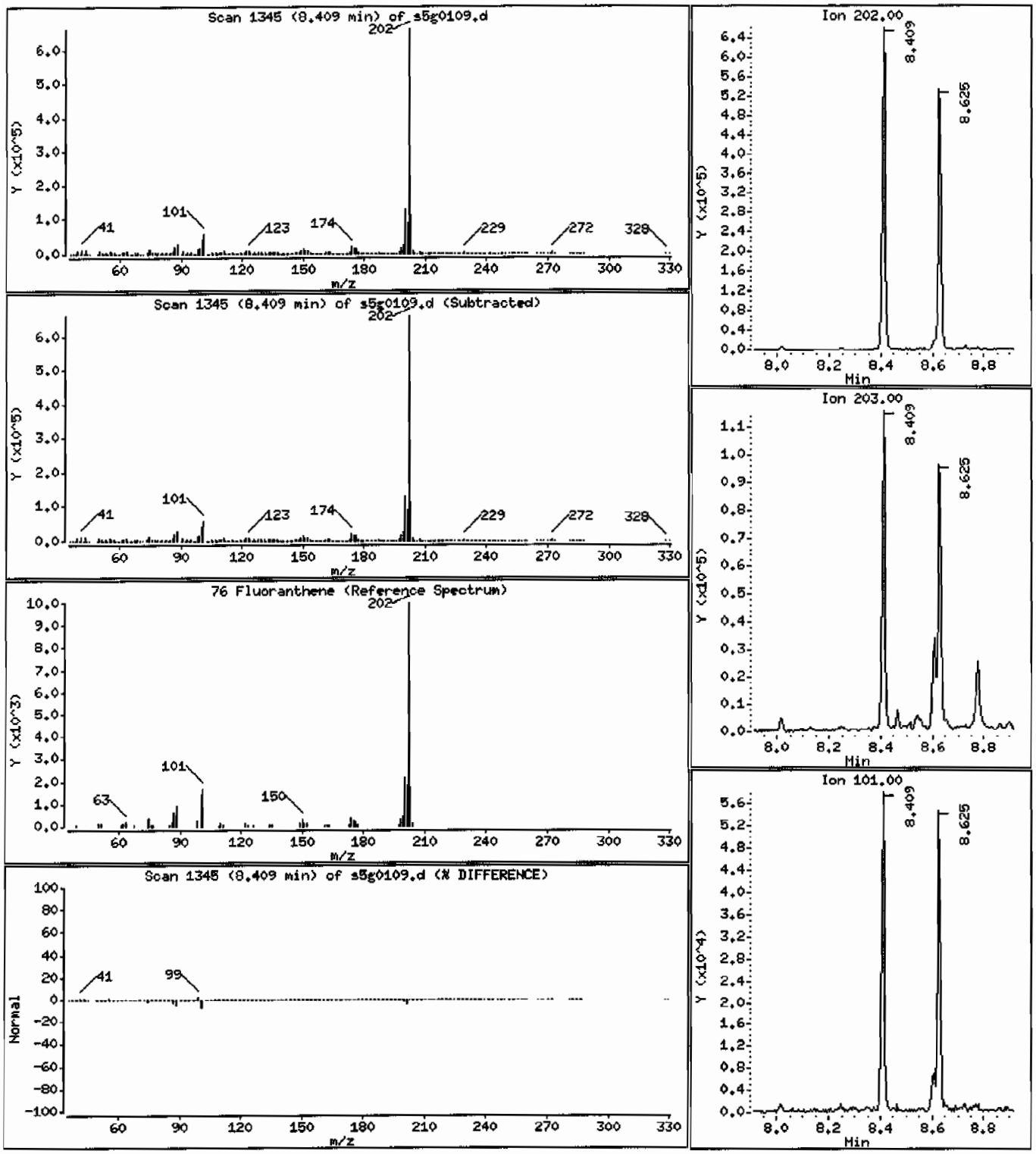

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518

Instrument: MSD5.i

Sample Info: 1232507002188144211SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 170 ug/Kg

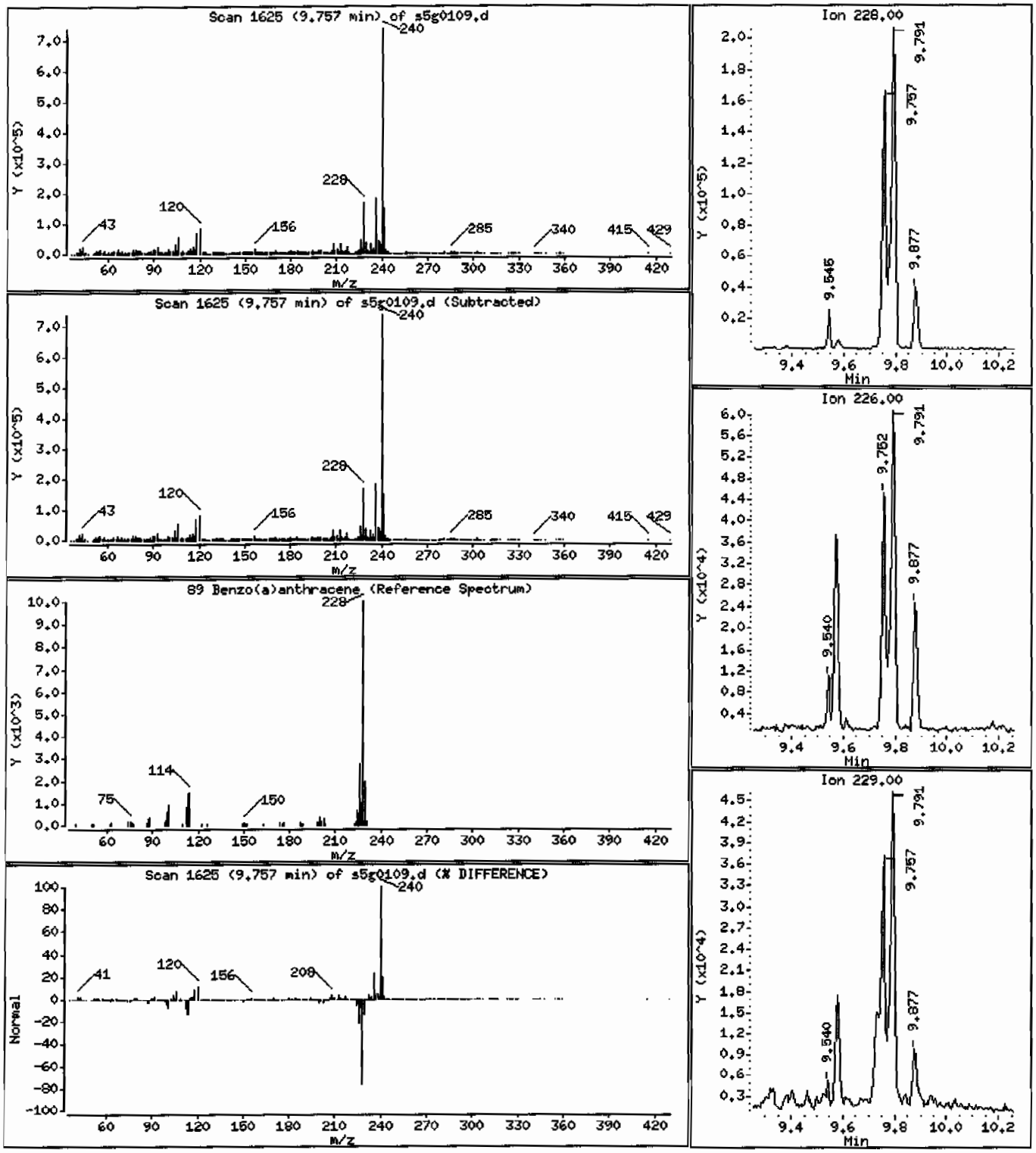

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518

Instrument: MSD5.i

Sample Info: 1232507002|881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 215 ug/Kg

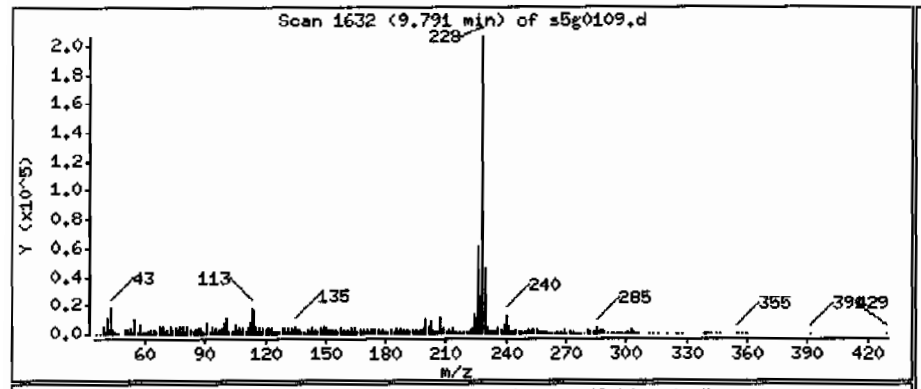

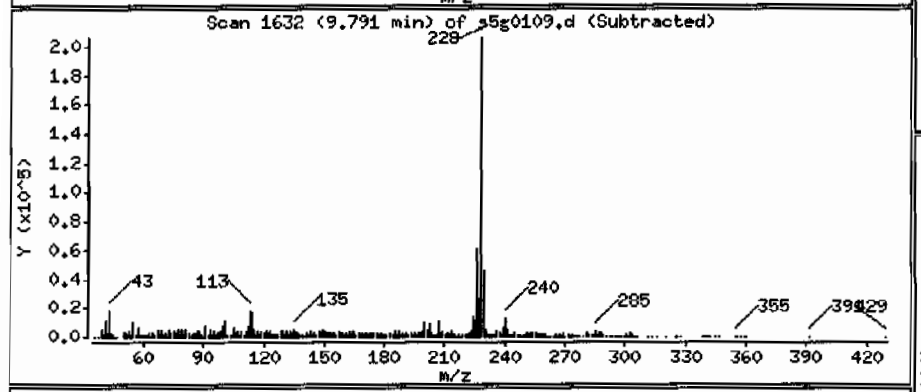

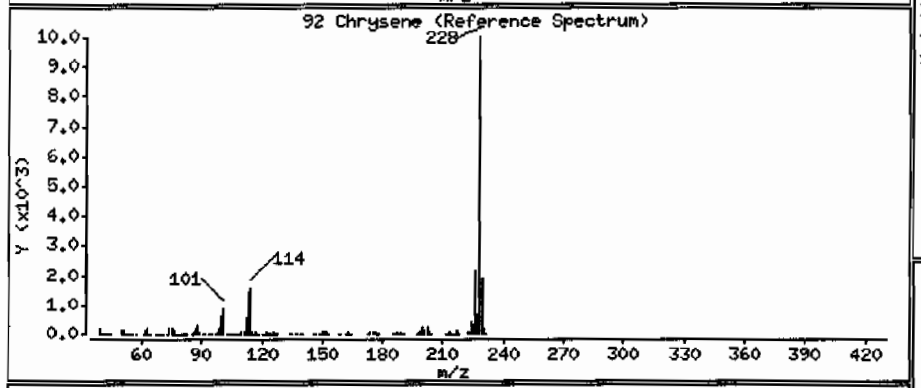

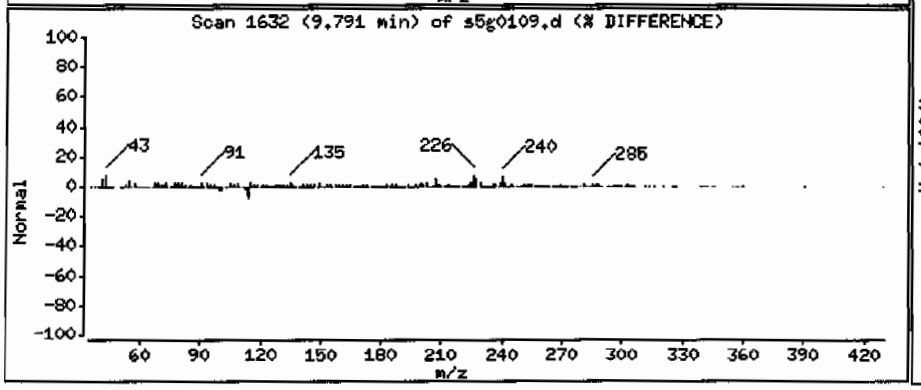

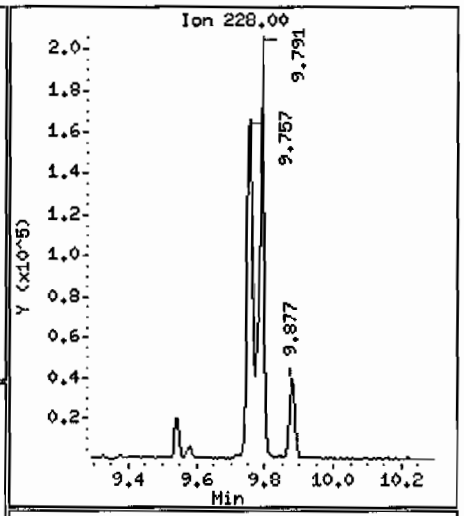

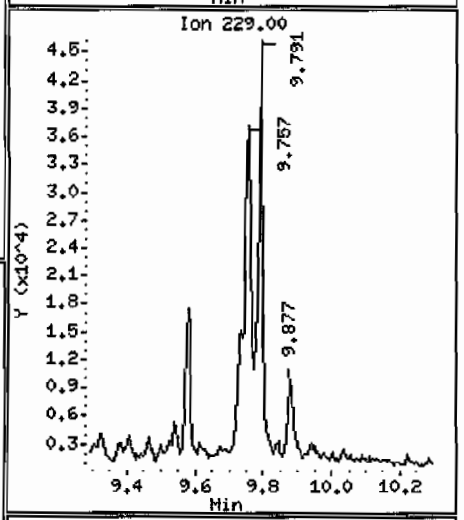

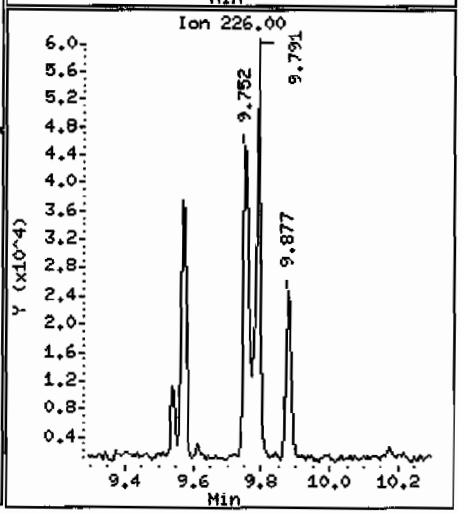

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6618

Instrument: MSD5.i

Sample Info: |2325070021881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 316 ug/Kg

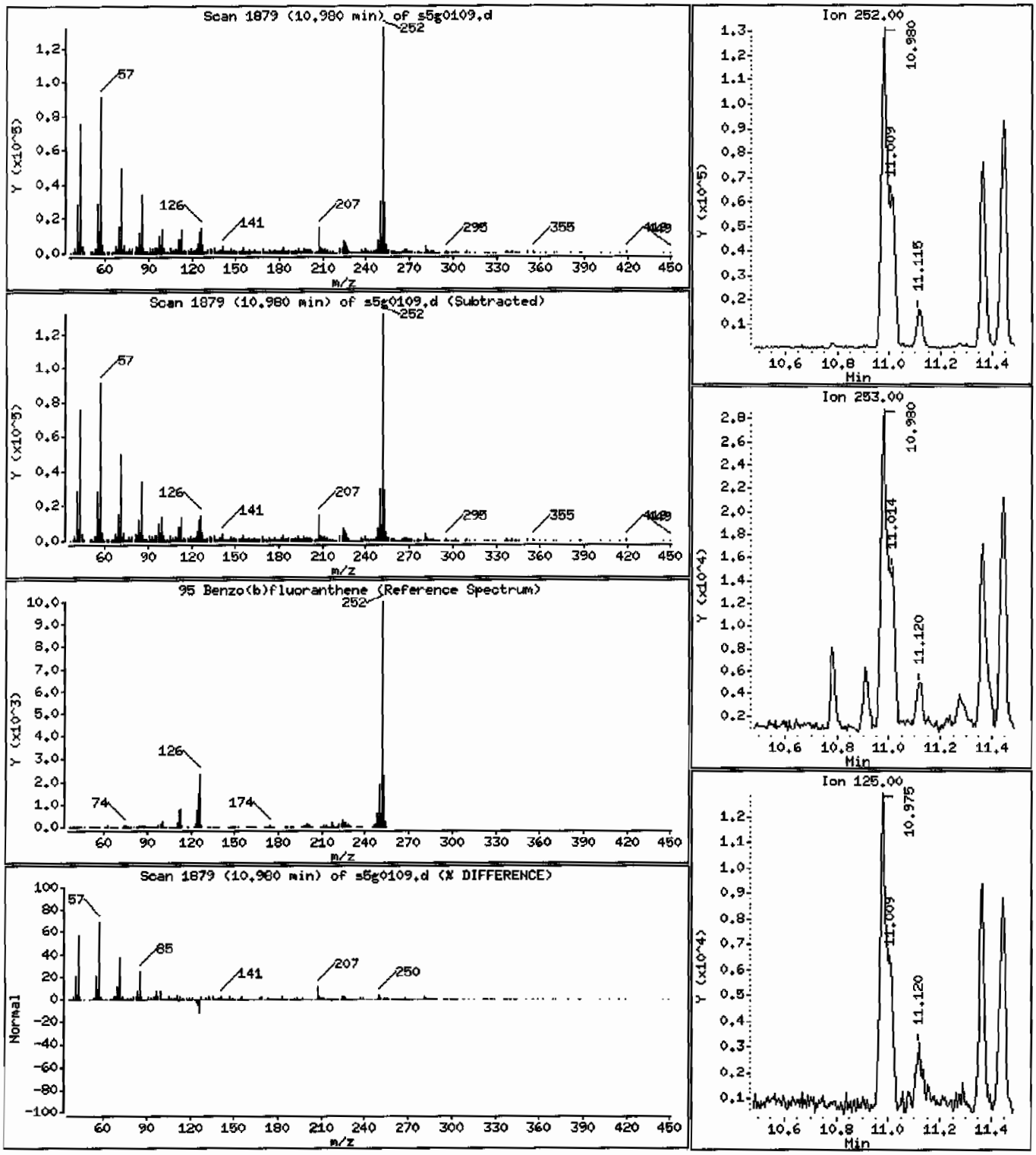

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518

Instrument: MSD5.i

Sample Info: |2325070021881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

96 Benzo(k)fluoranthene

Concentration: 110 ug/Kg

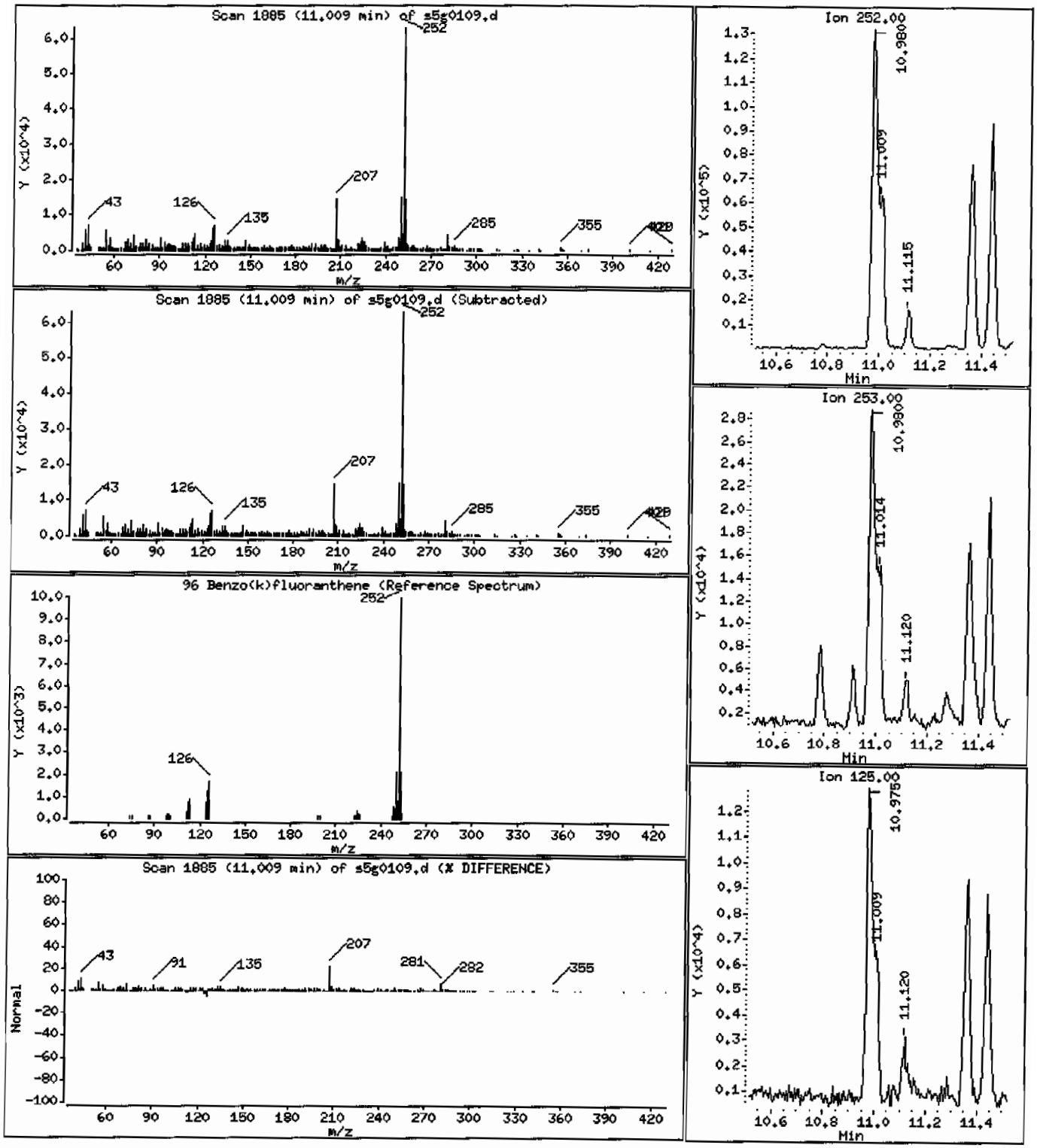

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAHO-09-6518

Instrument: MSD5.i

Sample Info: 1232507002188144211SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 210 ug/Kg

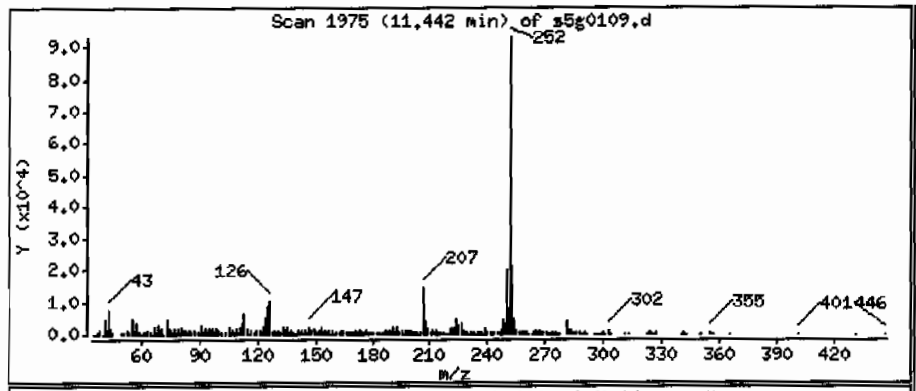

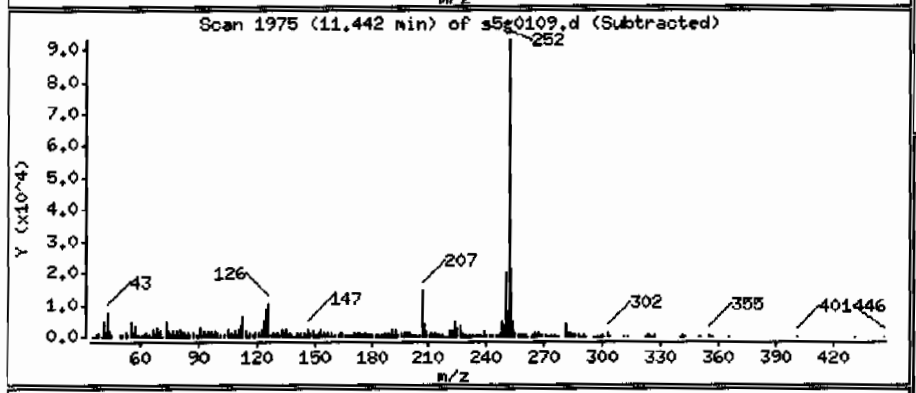

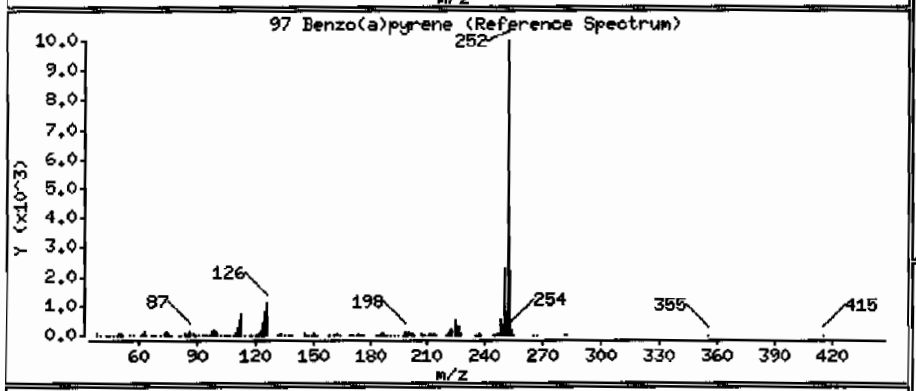

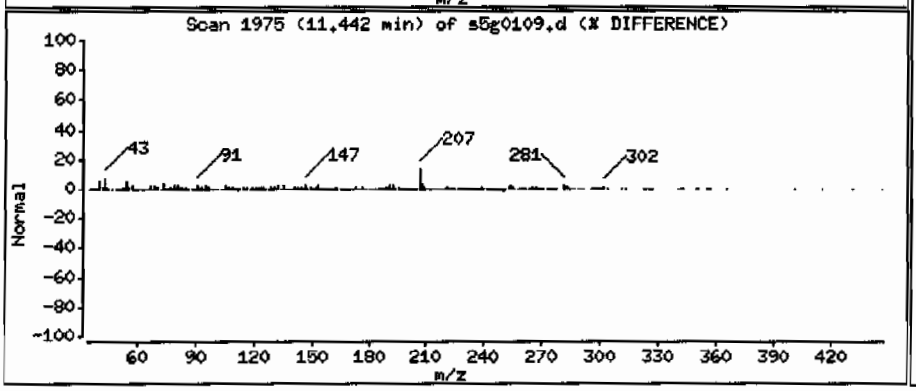

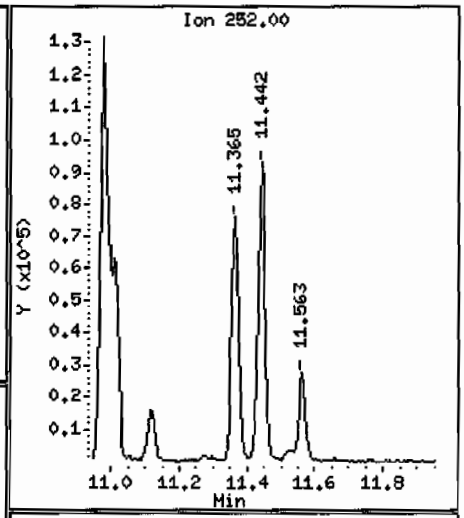

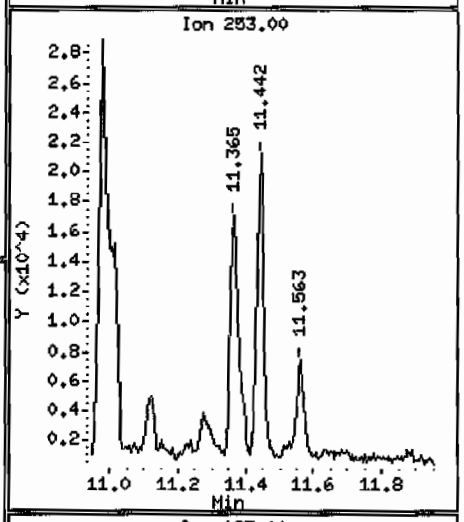

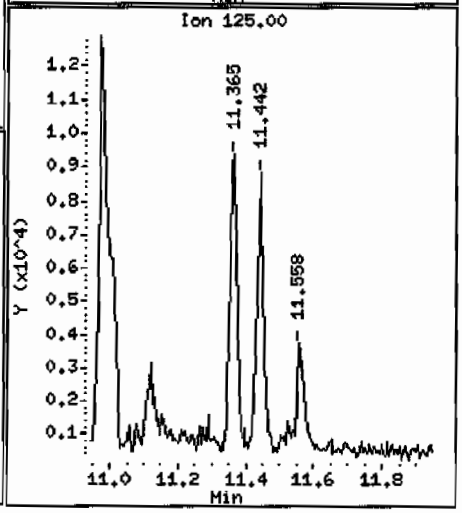

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518

Instrument: MSD5.i

Sample Info: |2325070021881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 110 ug/Kg

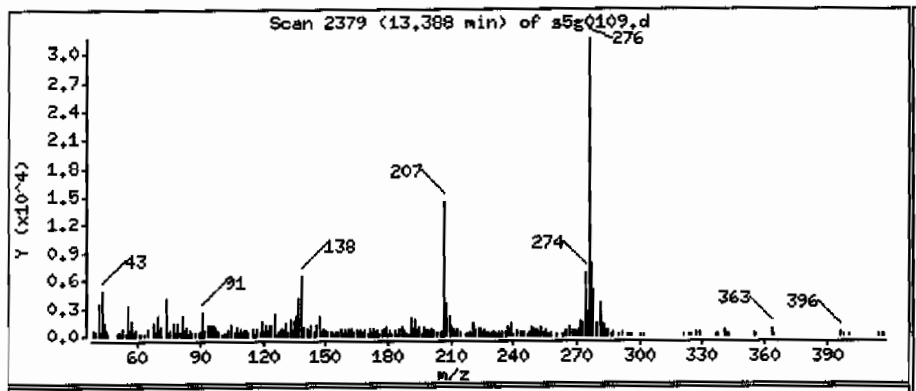

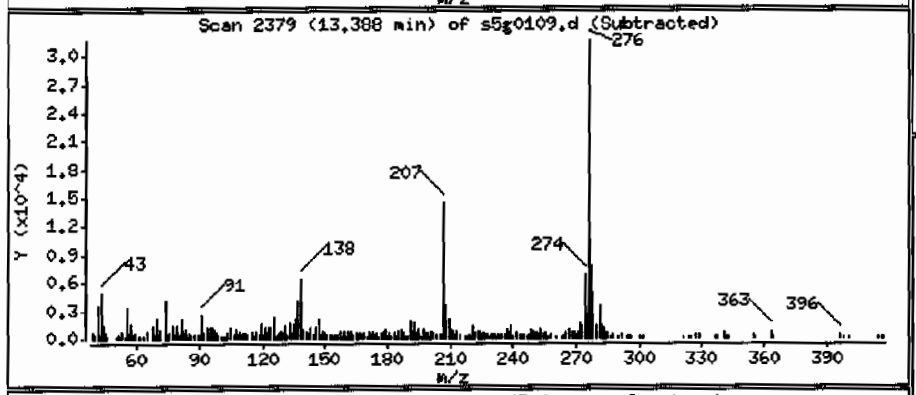

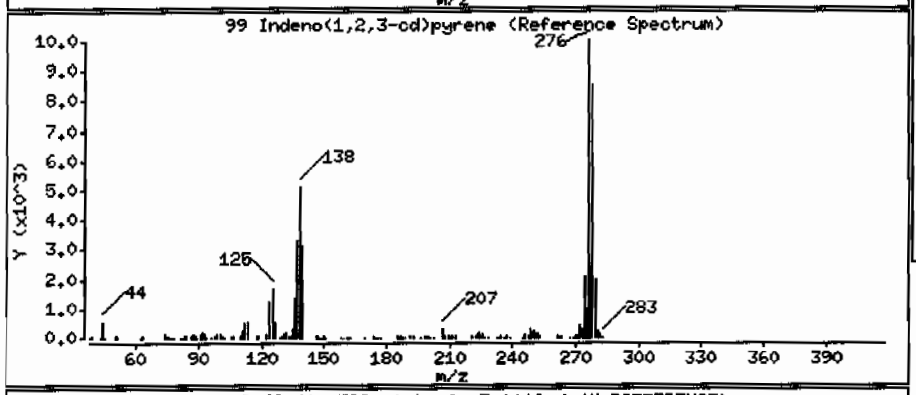

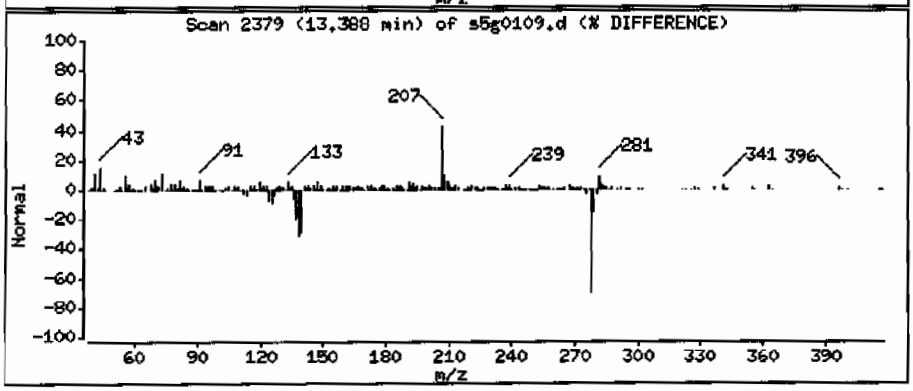

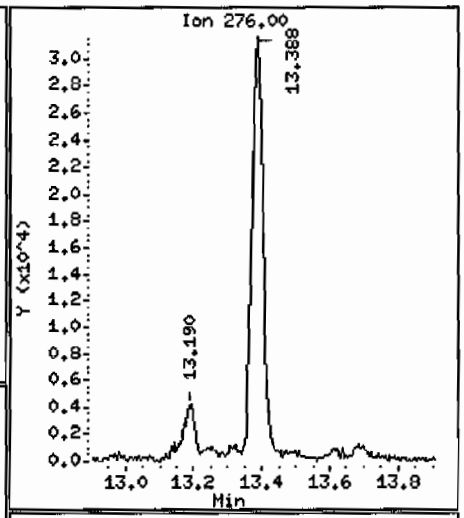

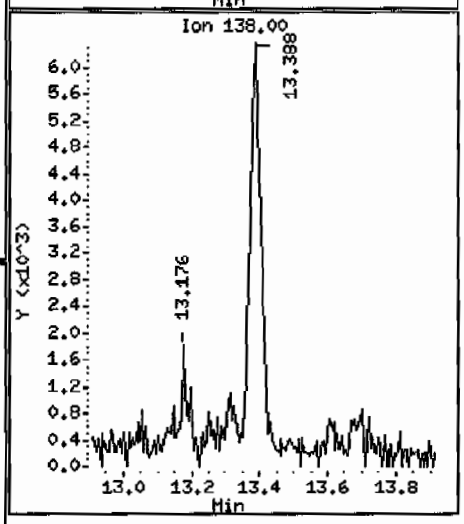

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMD-09-6518

Instrument: MSD5.i

Sample Info: |23250700218814421|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 125 ug/Kg

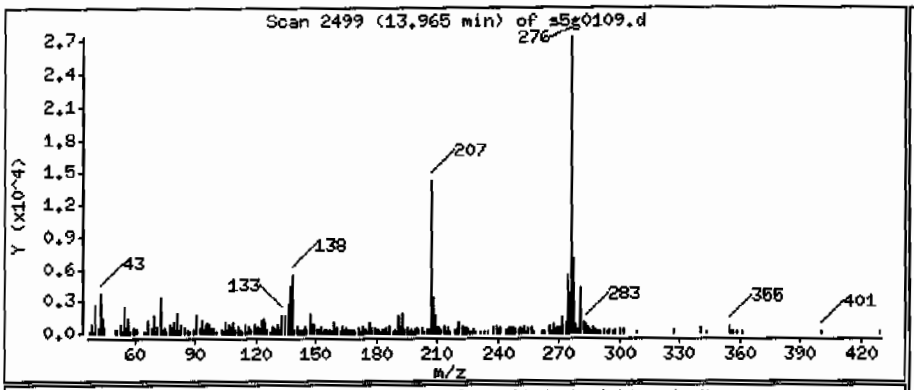

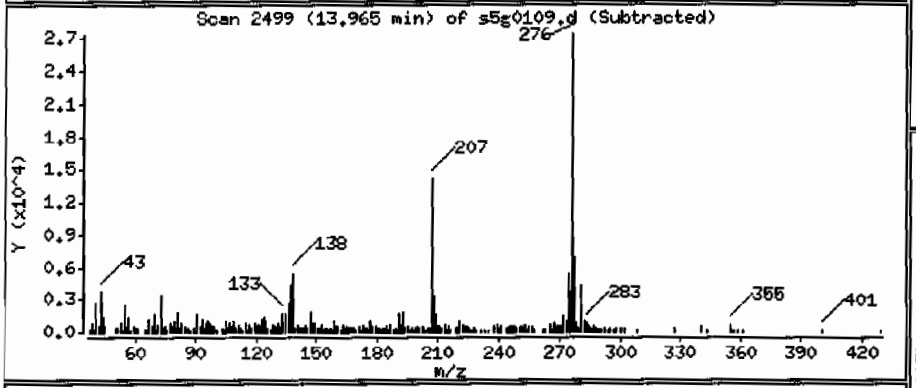

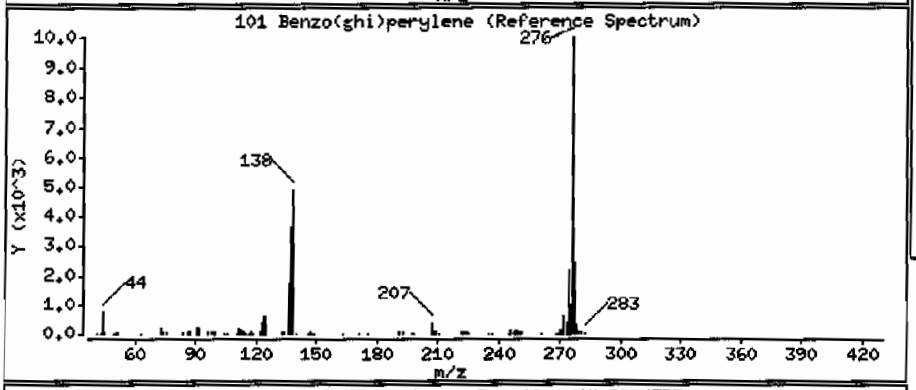

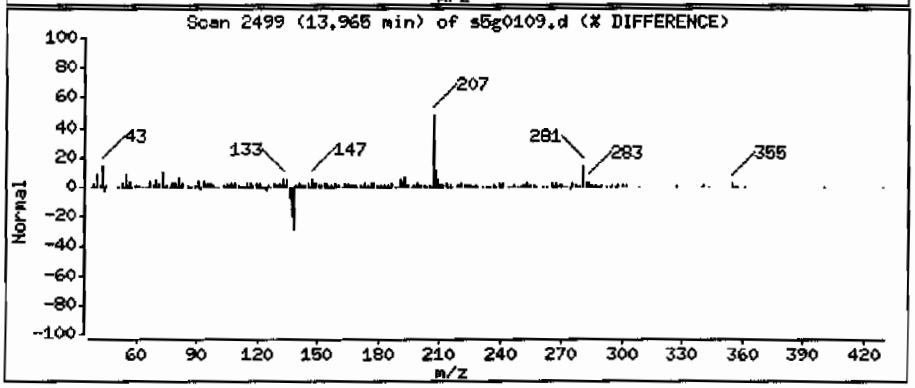

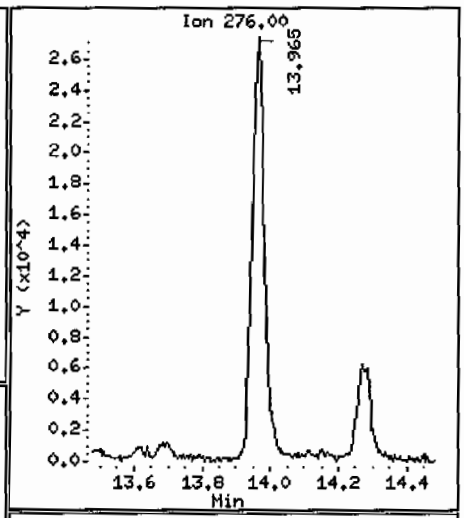

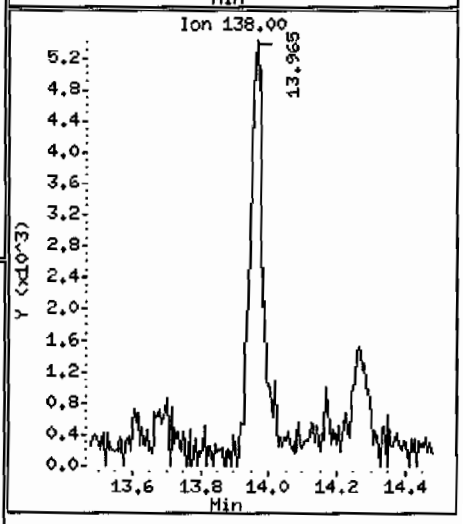

Data File: /chem/MSD5.1/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518

Instrument: MSD5.i

Sample Info: 1232507002188144211SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	38	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	28	C6H12O2	116

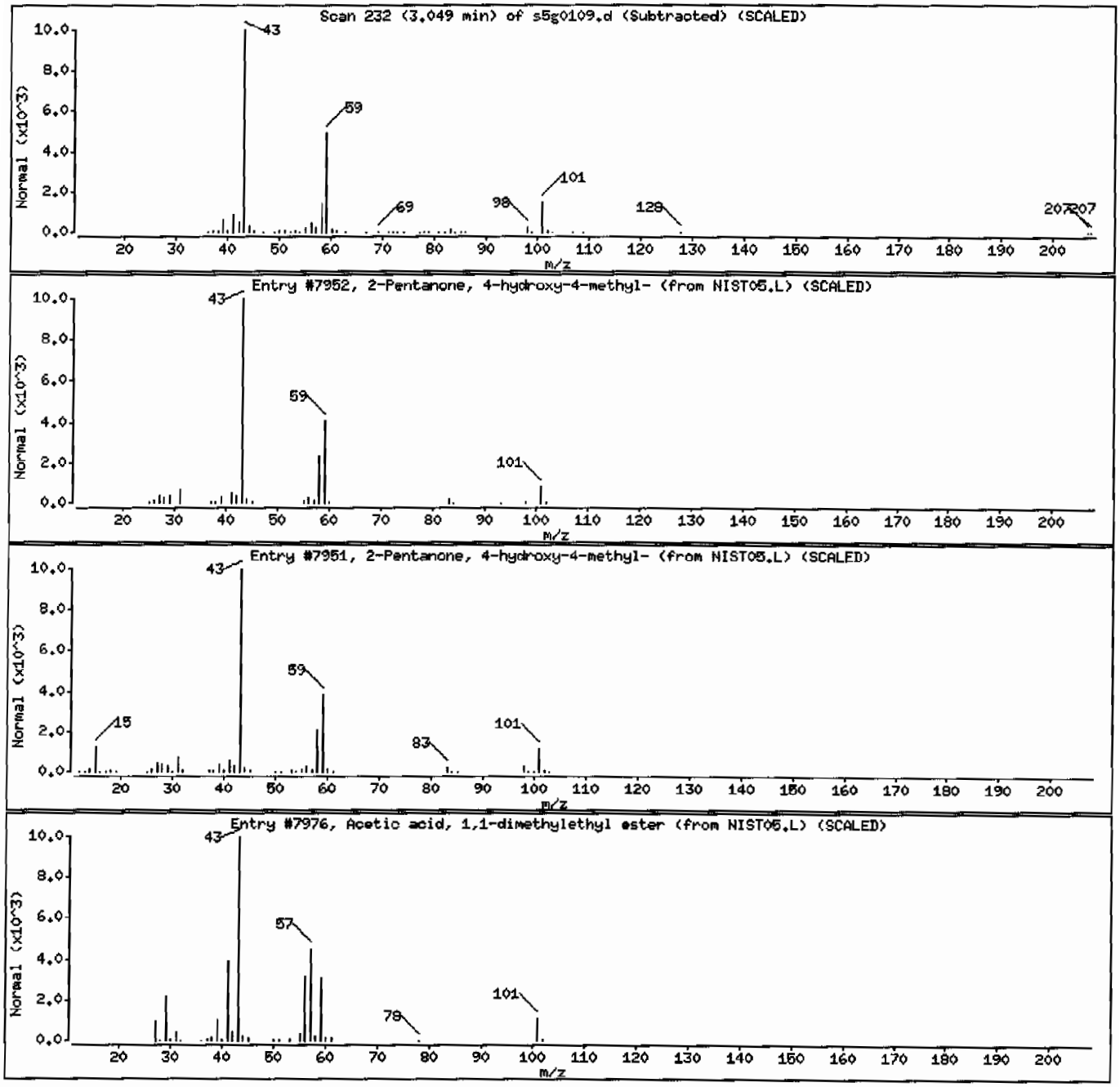

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518 Instrument: MSD5.i

Sample Info: |2325070021881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1R-.alpha.-Pinene	7785-70-8	NIST05.L	15188	97	C10H16	136
Bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethy	2437-95-8	NIST05.L	15376	96	C10H16	136
1R-.alpha.-Pinene	7785-70-8	NIST05.L	15186	96	C10H16	136

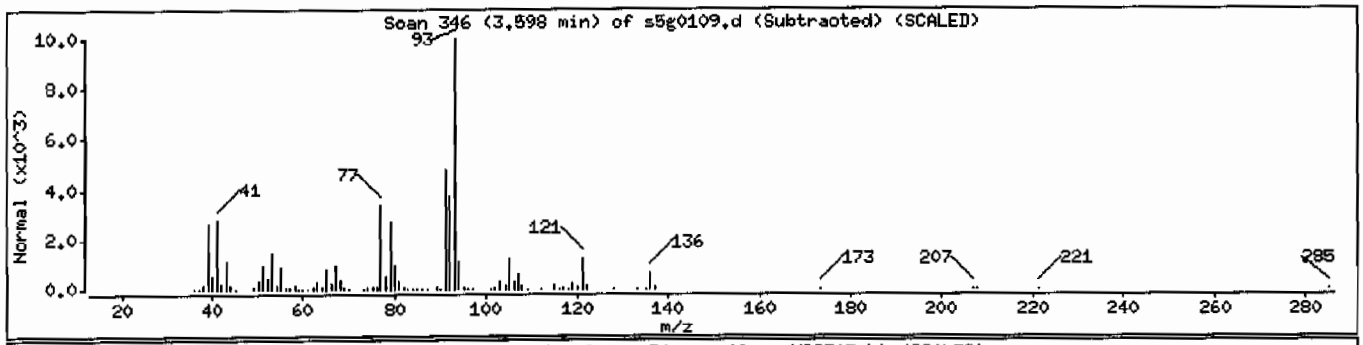

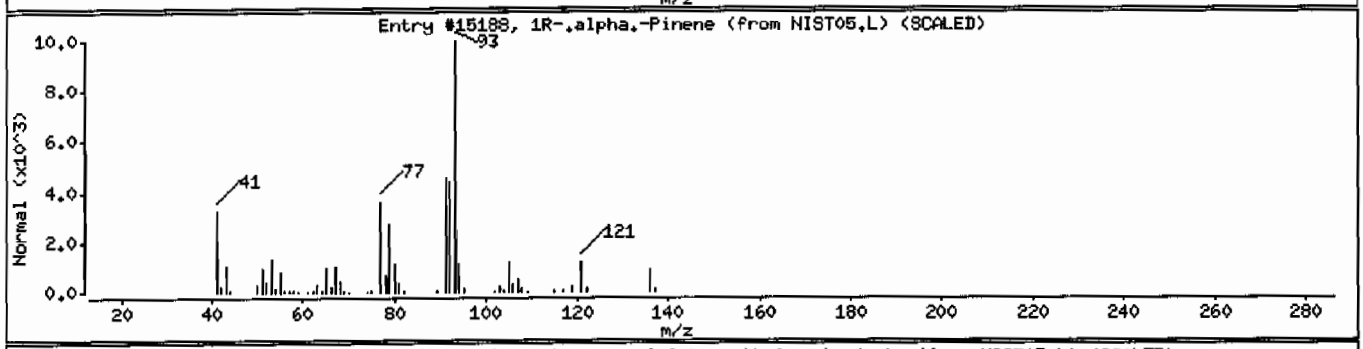

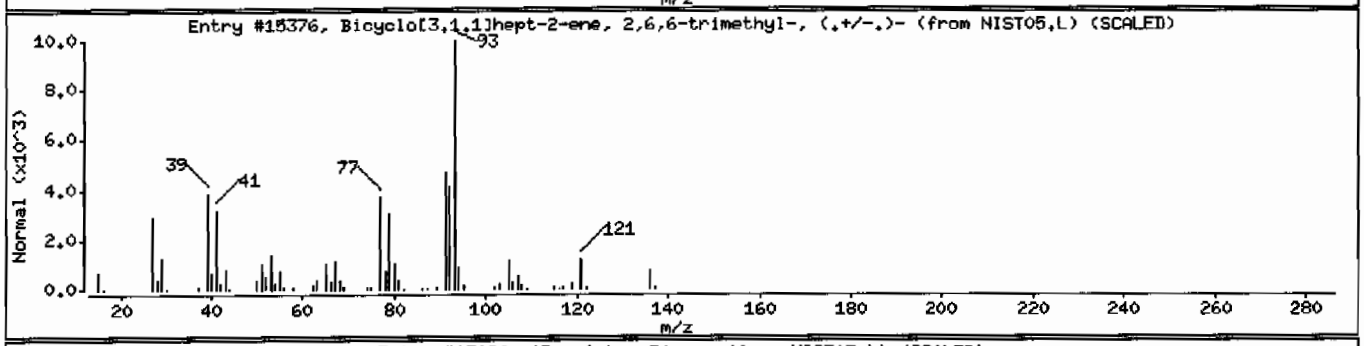

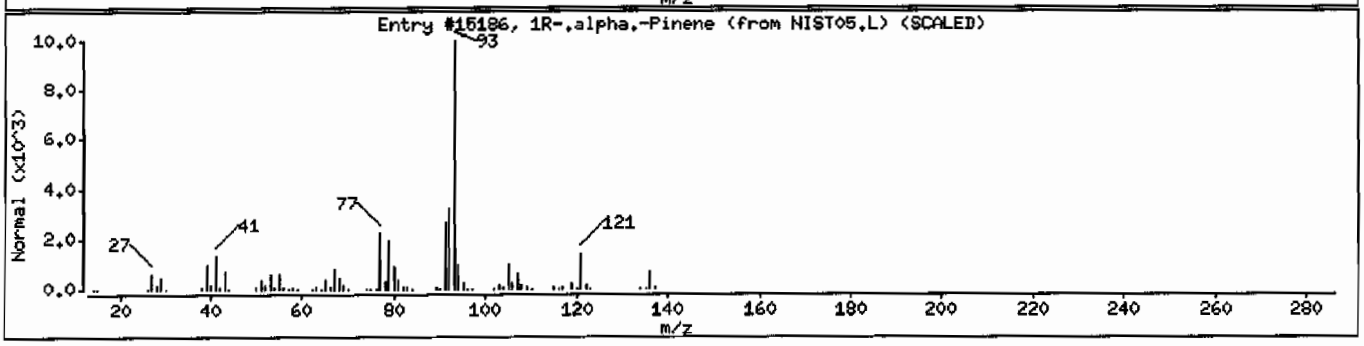

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518 Instrument: MSD5.i

Sample Info: |2325070021881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Bicyclo[3.1.0]hexane, 4-methylene-1-(1-m	3387-41-5	NIST05.L	15379	94	C10H16	136
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	NIST05.L	15324	91	C10H16	136
.beta.-Phellandrene	555-10-2	NIST05.L	15198	91	C10H16	136

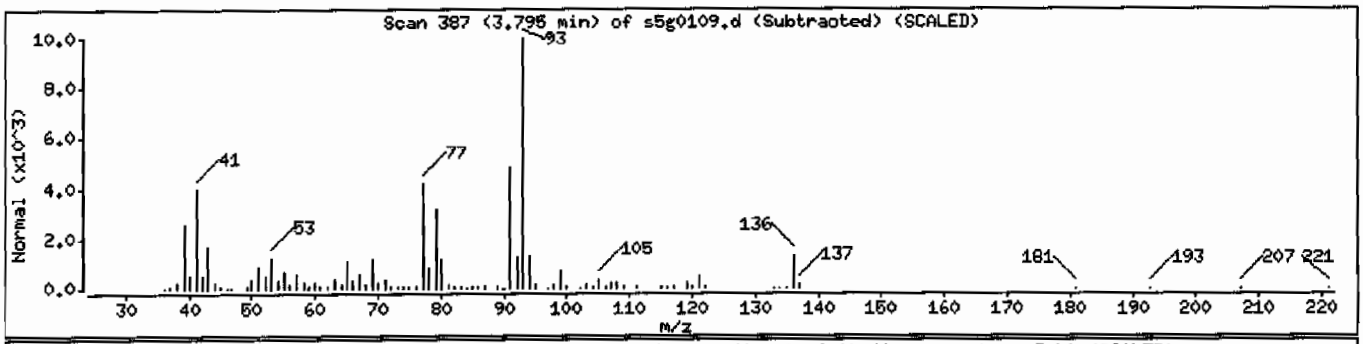

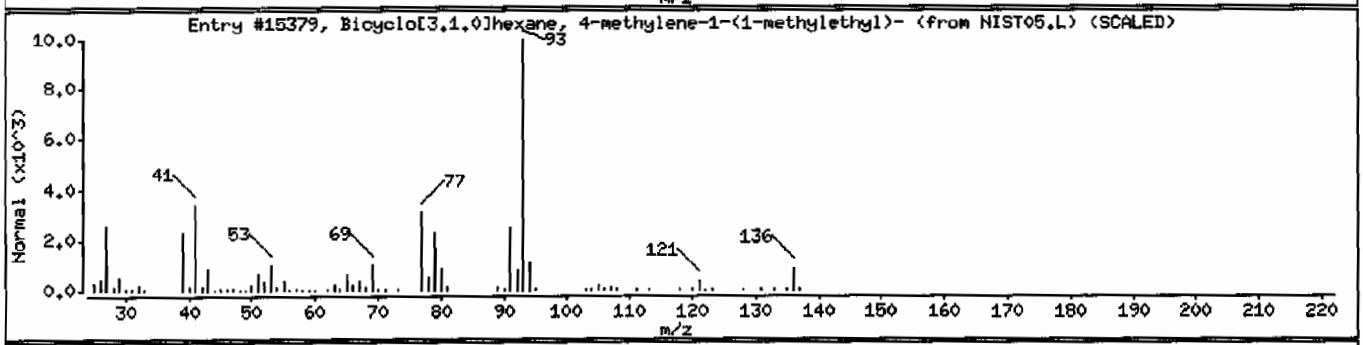

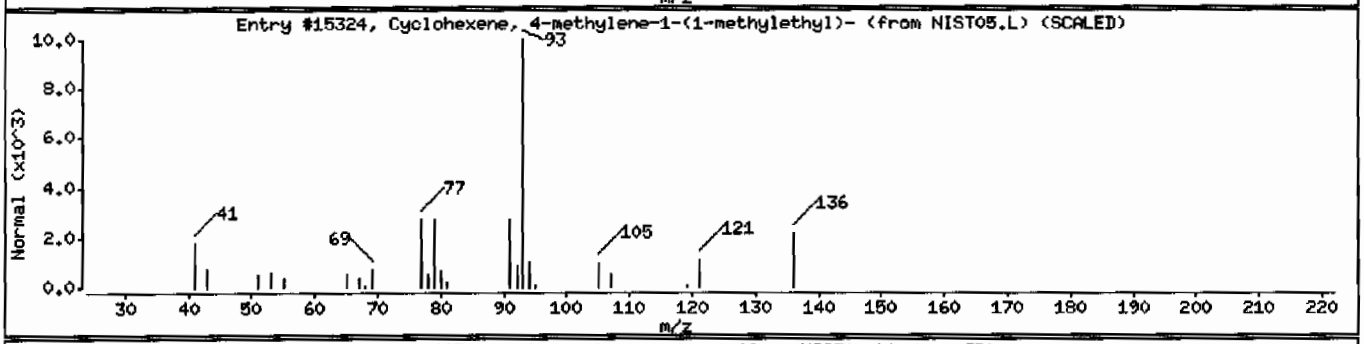

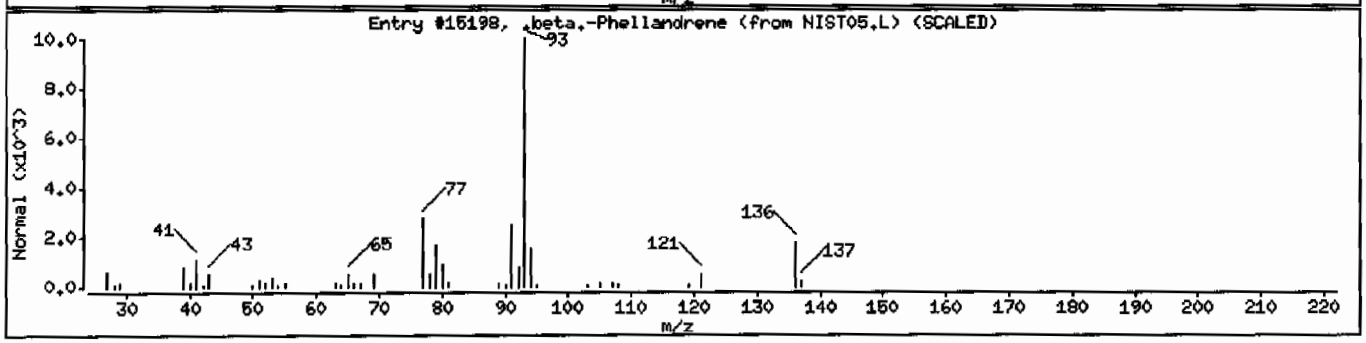

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518 Instrument: MSD5.i

Sample Info: 1232507002|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
.beta.-Phellandrene	555-10-2	NIST05.L	15198	93	C10H16	136
Bicyclo[3.1.0]hex-2-ene, 4-methyl-1-(1-m	28634-89-1	NIST05.L	15374	91	C10H16	136
.beta.-Phellandrene	555-10-2	NIST05.L	15201	90	C10H16	136

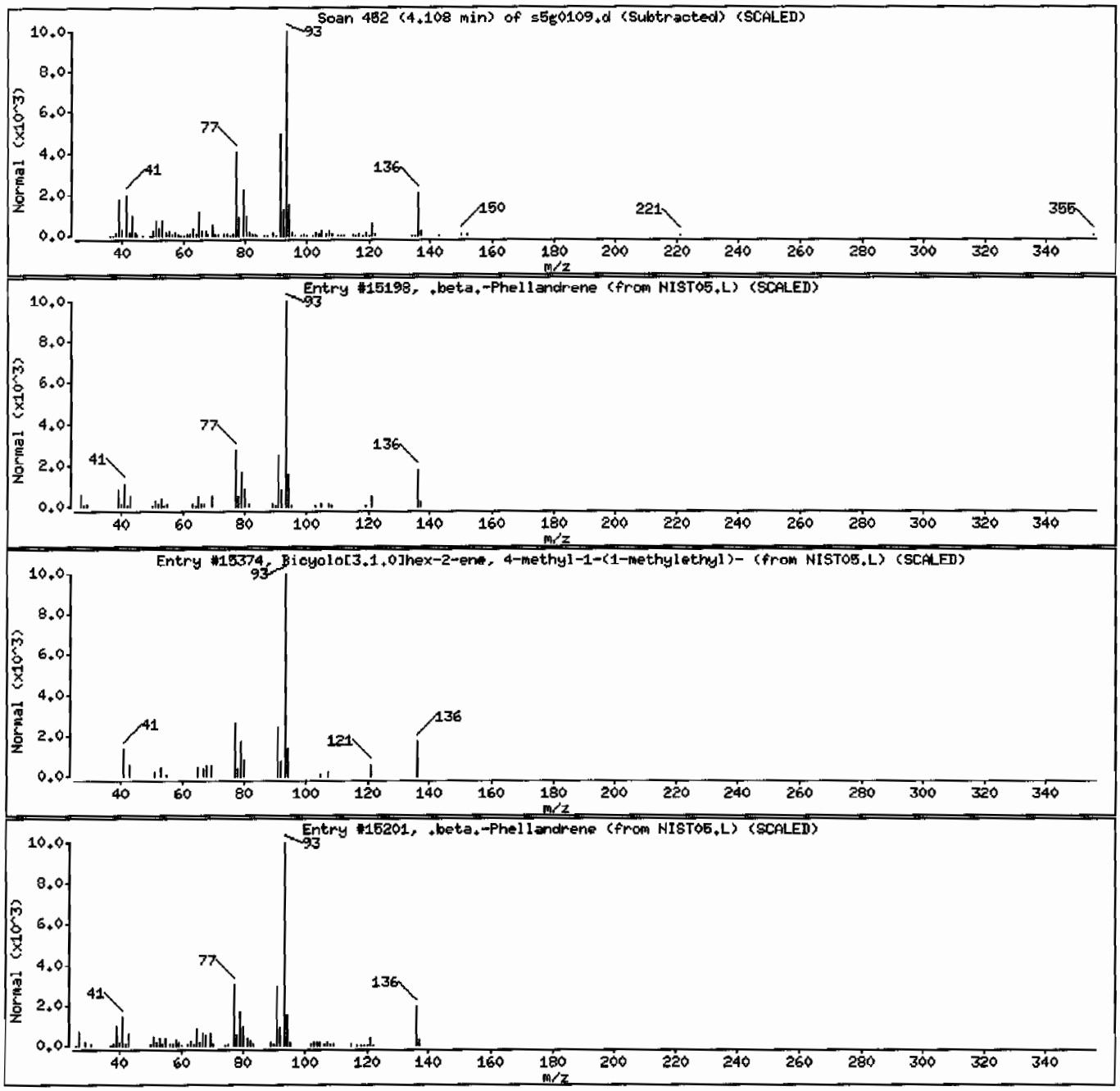

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518 Instrument: MSD5.i

Sample Info: 1232507002|88144211|SVMF11|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzeneacetic acid	103-82-2	NIST05.L	15740	91	C8H8O2	136
Propanedioic acid, phenyl-	2613-89-0	NIST05.L	43675	90	C9H8O4	180
Benzeneacetic acid	103-82-2	NIST05.L	15739	87	C8H8O2	136

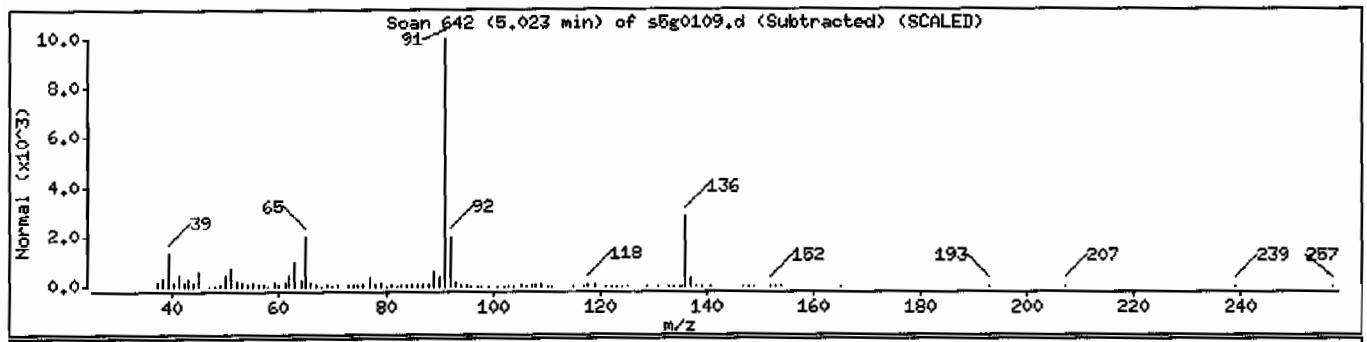

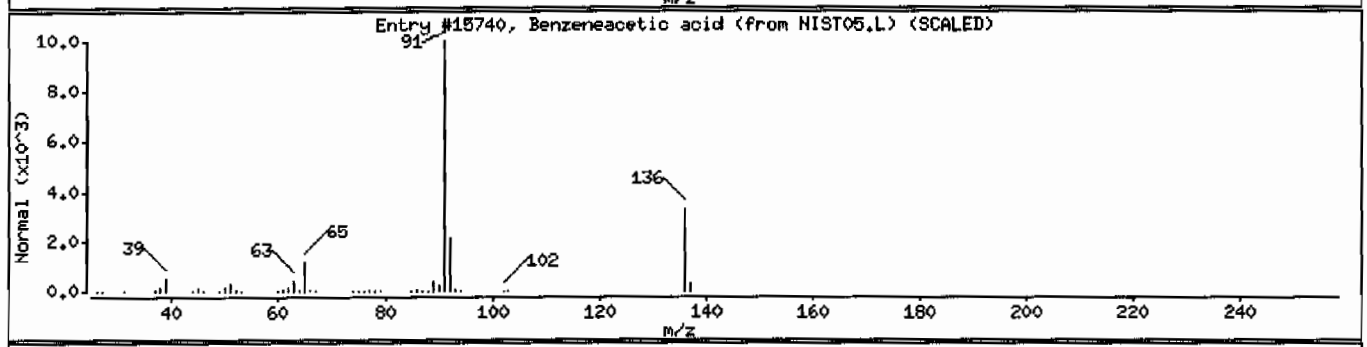

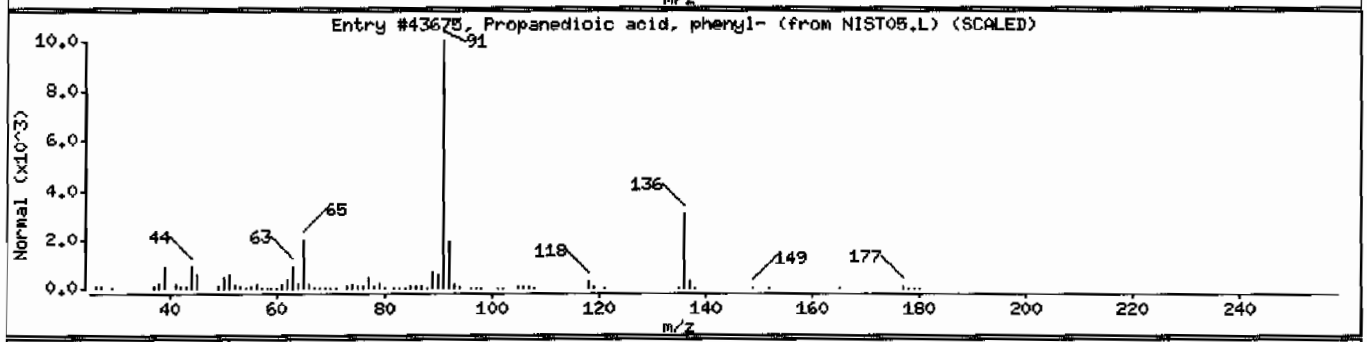

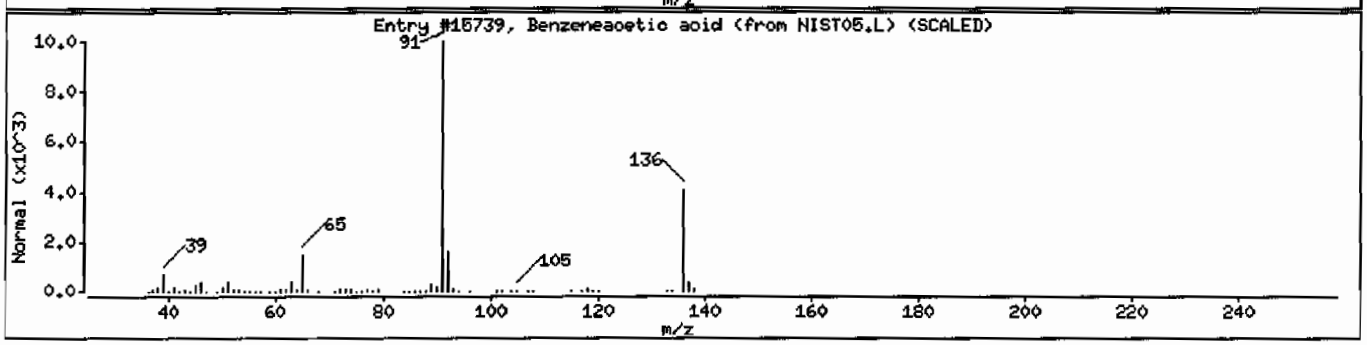

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6618

Instrument: MSD5.i

Sample Info: |2325070021881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Thunbergol	25269-17-4	NIST05.L	118732	83	C20H340	290
3-buten-2-one, 4-(5,5-dimethyl-1-oxaspir	1000196-66-5	NIST05.L	62842	58	C13H2002	208
7-Oxabicyclo[4.1.0]heptane, 1-methyl-4-(	96-08-2	NIST05.L	34750	50	C10H1602	168

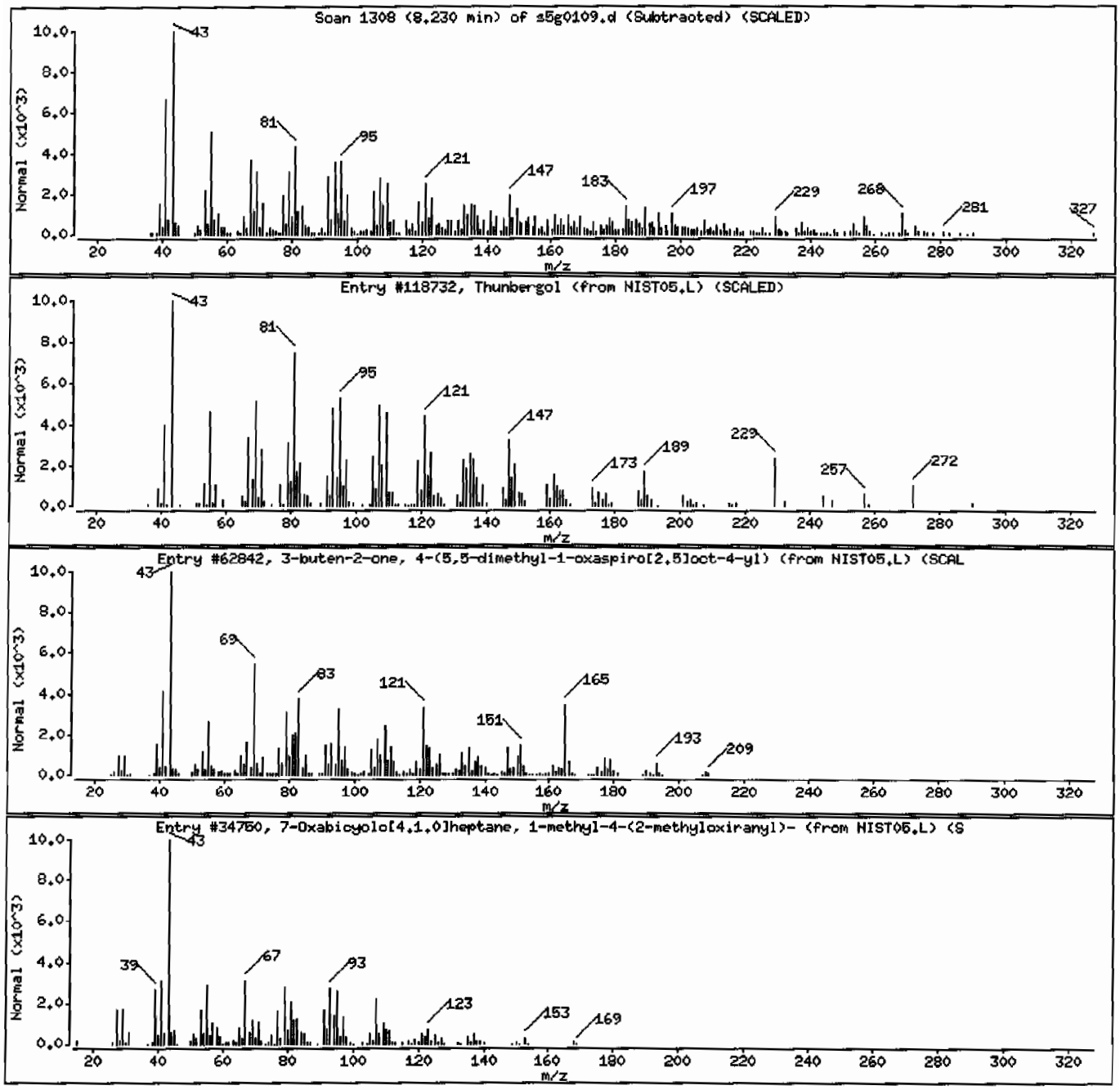

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6618 Instrument: MSD5.i

Sample Info: 1232507002188144211SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	97	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133620	96	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	24035-60-7	NIST05.L	133619	49	C21H3002	314

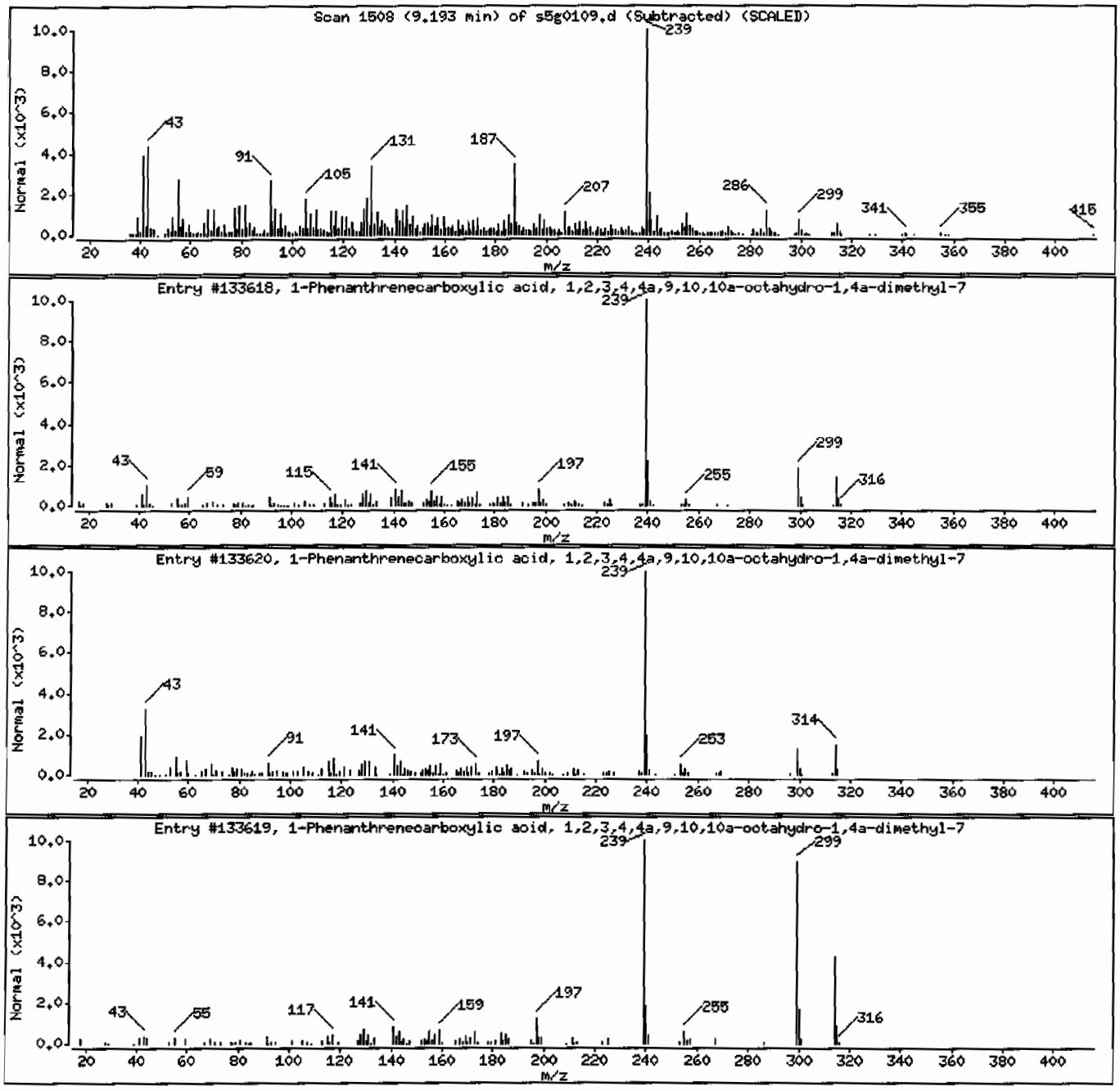

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518 Instrument: MSD5.i

Sample Info: |2325070021881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Phenol, 2,4-bis(1-phenylethyl)-	2769-94-0	NIST05.L	126238	46	C22H22O	302
4,5-Dihydrobenzo[d]isoxazole, 3-methyl-4	1000303-42-3	NIST05.L	116745	45	C20H17NO	287
6,9-Octadecadiynoic acid, methyl ester	56847-03-1	NIST05.L	118643	30	C19H30O2	290

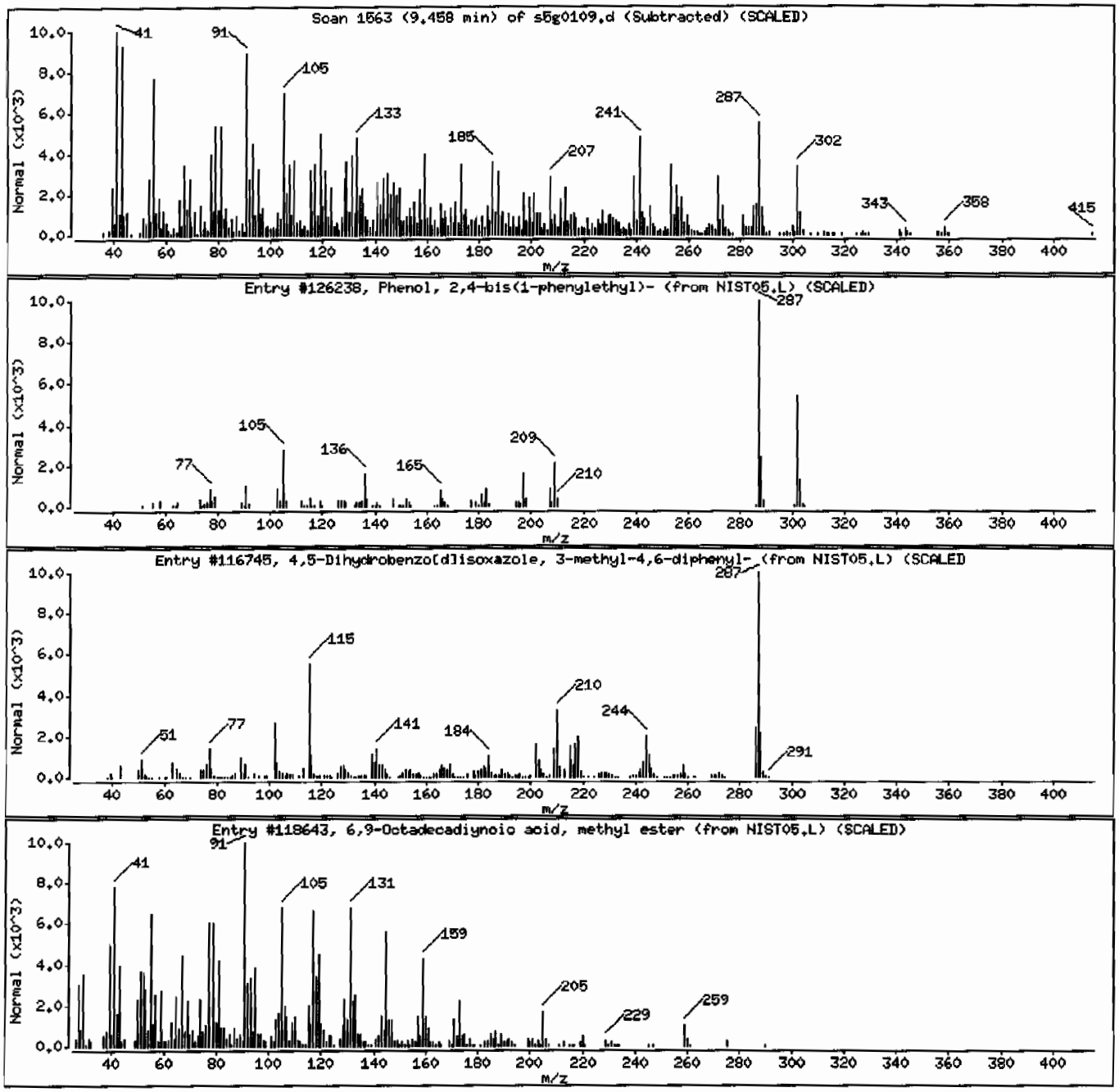

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518 Instrument: MSD5.i

Sample Info: |2325070021881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5HS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	91	C20H28O2	300
Butanoic acid, 2-(cyano)(2,4,6-trimethyl	1000267-71-7	NIST05.L	124759	81	C17H20N2O3	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125036	60	C20H28O2	300

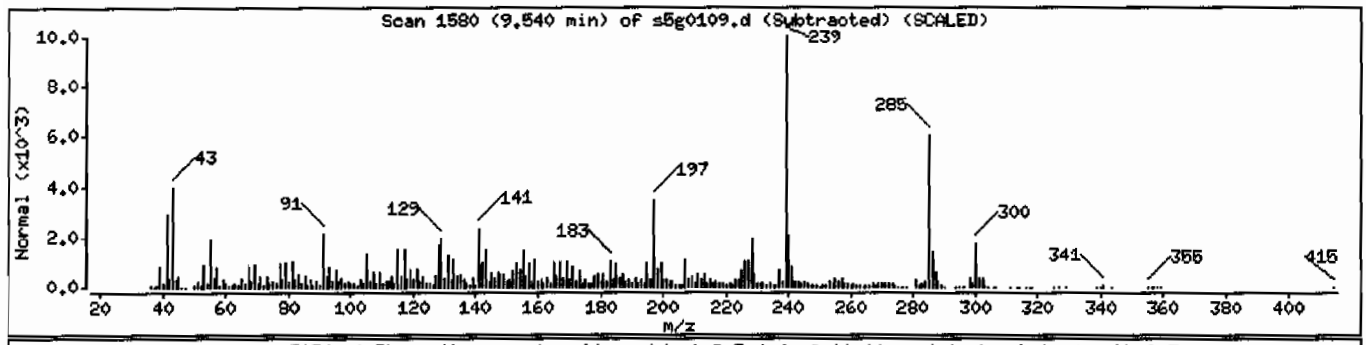

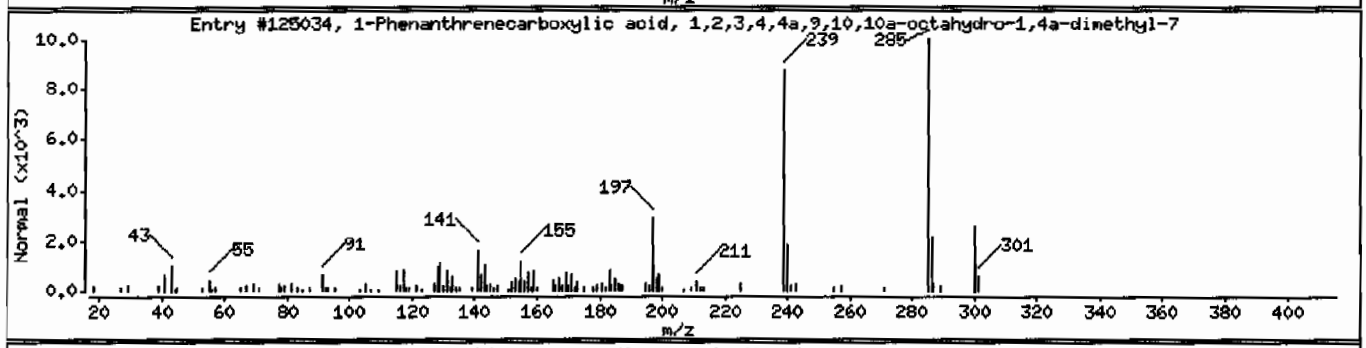

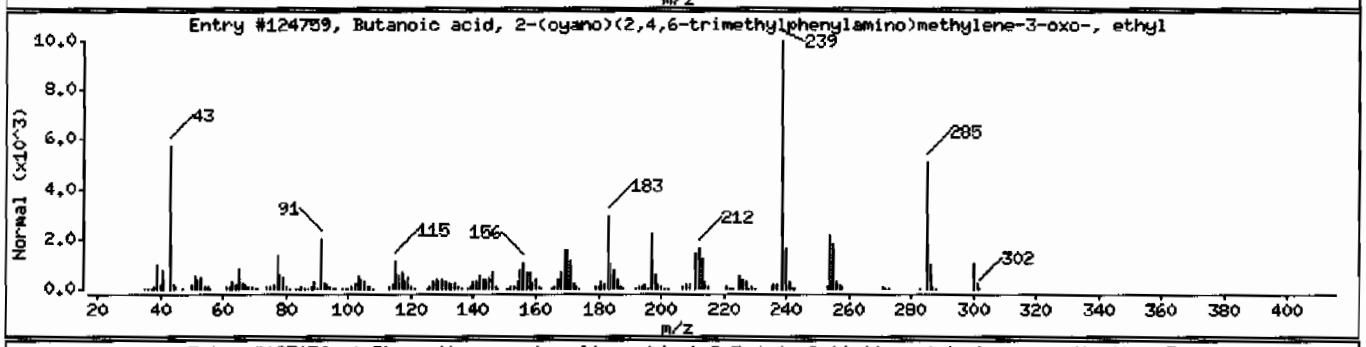

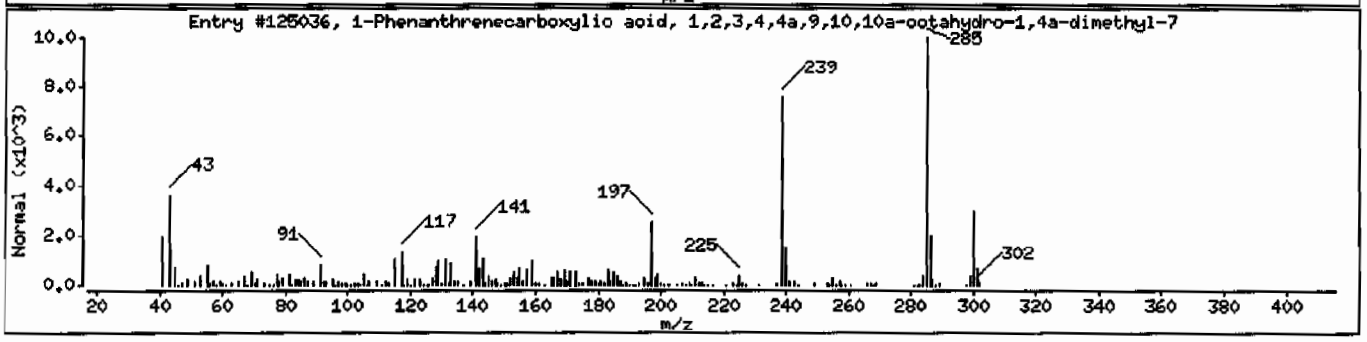

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6618 Instrument: MSD5.i

Sample Info: 1232507002188144211SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclohexane, 1,1'-(2-ethyl-1,3-propanedi	54833-34-0	NIST05.L	82661	86	C17H32	236
Cyclohexane, 1,1'-(2-methyl-1,3-propaned	2883-08-1	NIST05.L	73082	78	C16H30	222
Cyclohexane, 1,1'-(2-propyl-1,3-propaned	55030-21-2	NIST05.L	92245	70	C18H34	250

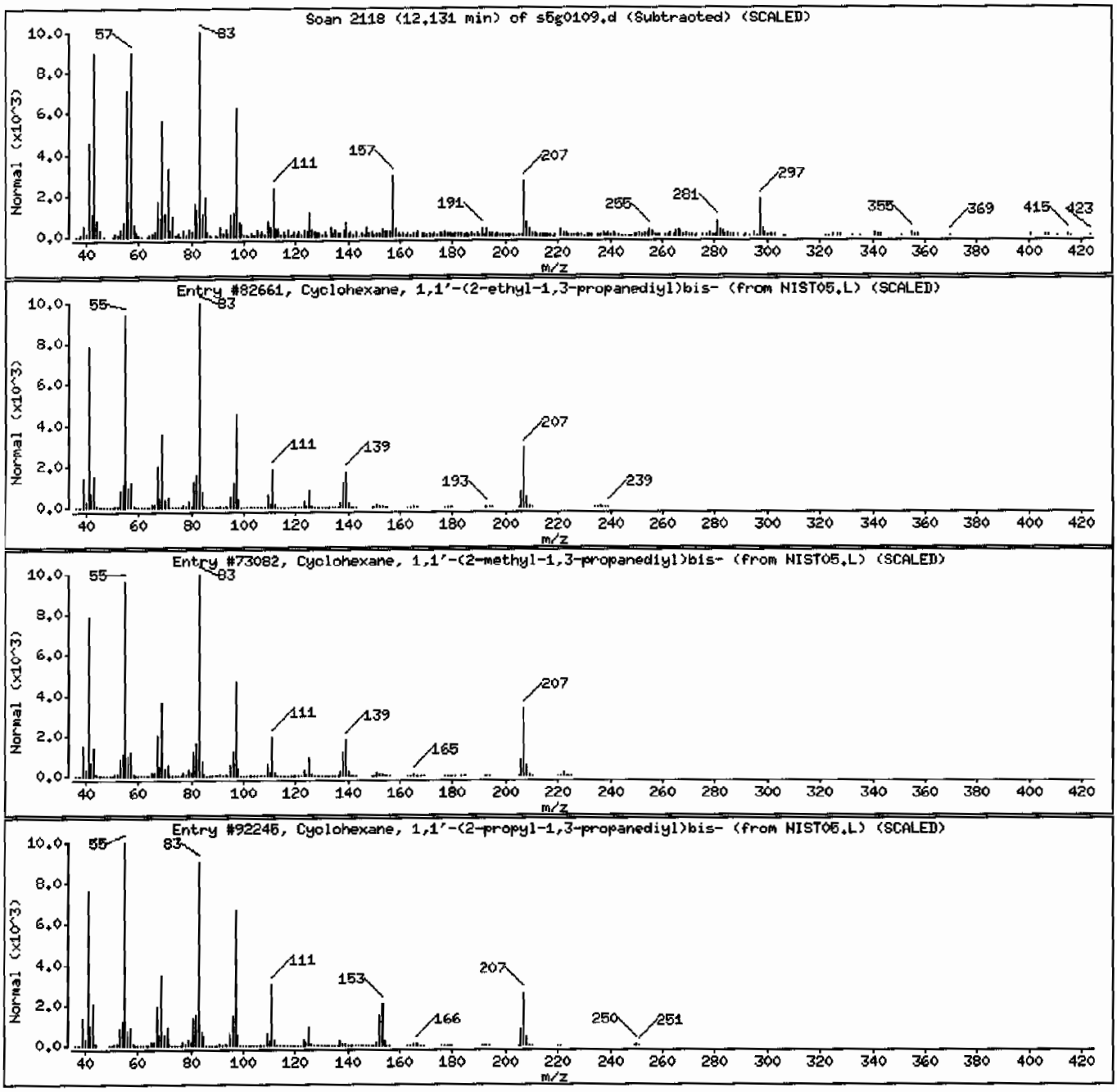

Data File: /chem/MSD5.i/s070109.b/s5g0109.d

Date : 01-JUL-2009 10:41

Client ID: CAMO-09-6518 Instrument: MSD5.i

Sample Info: |23250700218814421|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Ethanone, 2-(2-benzothiazolylthio)-1-(3,	155670-84-1	NIST05.L	126423	55	C14H13N3OS2	303
Benzo[h]quinoline, 2,4-dimethyl-	605-67-4	NIST05.L	62243	45	C15H13N	207
9,10-Methanoanthracen-11-ol, 9,10-dihydr	126615-74-5	NIST05.L	92233	43	C18H18O	250

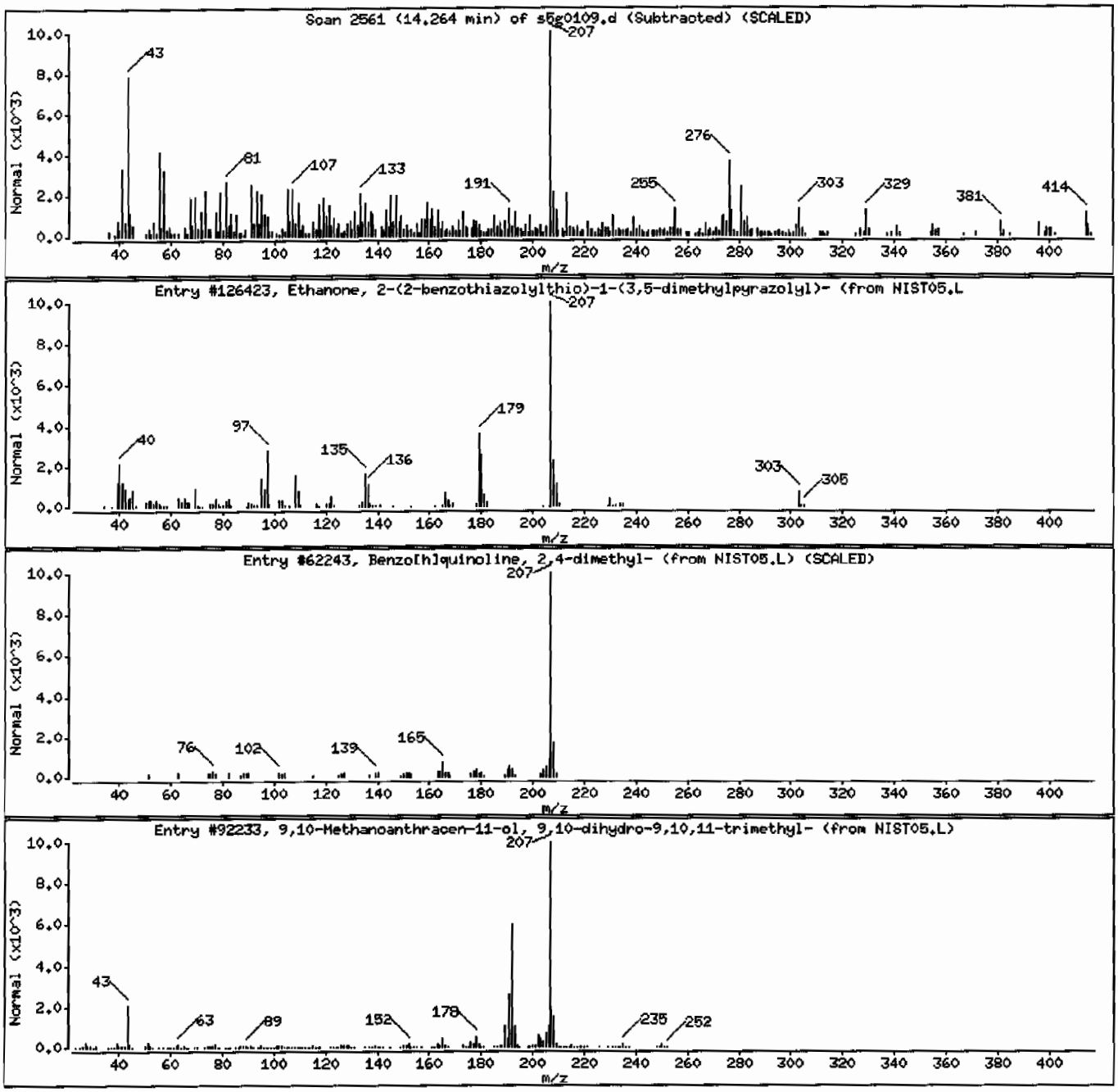

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507001	Date Received:	06/27/2009 09:05	%Moisture:	20.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6519	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 09:17	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0106.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	420	ug/kg	84.1	420
108-95-2	Phenol	U	420	ug/kg	84.1	420
95-57-8	2-Chlorophenol	U	420	ug/kg	84.1	420
106-46-7	1,4-Dichlorobenzene	U	420	ug/kg	84.1	420
621-64-7	N-Nitrosodipropylamine	U	420	ug/kg	84.1	420
59-50-7	4-Chloro-3-methylphenol	U	420	ug/kg	84.1	420
83-32-9	Acenaphthene	U	42.0	ug/kg	13.9	42.0
121-14-2	2,4-Dinitrotoluene	U	420	ug/kg	42.0	420
100-02-7	4-Nitrophenol	U	420	ug/kg	139	420
87-86-5	Pentachlorophenol	U	420	ug/kg	105	420
129-00-0	Pyrene	U	42.0	ug/kg	12.6	42.0
110-86-1	Pyridine	U	420	ug/kg	84.1	420
62-53-3	Aniline	U	420	ug/kg	126	420
111-44-4	bis(2-Chloroethyl) ether	U	420	ug/kg	84.1	420
541-73-1	1,3-Dichlorobenzene	U	420	ug/kg	84.1	420
100-51-6	Benzyl alcohol	U	420	ug/kg	126	420
95-50-1	1,2-Dichlorobenzene	U	420	ug/kg	84.1	420
108-60-1	bis(2-Chloroisopropyl)ether	U	420	ug/kg	84.1	420
95-48-7	o-Cresol	U	420	ug/kg	84.1	420
65794-96-9	m,p-Cresols	U	420	ug/kg	126	420
67-72-1	Hexachloroethane	U	420	ug/kg	84.1	420
98-95-3	Nitrobenzene	U	420	ug/kg	84.1	420
78-59-1	Isophorone	U	420	ug/kg	84.1	420
88-75-5	2-Nitrophenol	U	420	ug/kg	84.1	420
105-67-9	2,4-Dimethylphenol	U	420	ug/kg	147	420
111-91-1	bis(2-Chloroethoxy)methane	U	420	ug/kg	84.1	420
120-83-2	2,4-Dichlorophenol	U	420	ug/kg	84.1	420
65-85-0	Benzoic acid	U	841	ug/kg	210	841
91-20-3	Naphthalene	U	42.0	ug/kg	12.6	42.0
106-47-8	4-Chloroaniline	U	420	ug/kg	84.1	420
87-68-3	Hexachlorobutadiene	U	420	ug/kg	84.1	420
91-57-6	2-Methylnaphthalene	U	42.0	ug/kg	8.41	42.0
77-47-4	Hexachlorocyclopentadiene	U	420	ug/kg	84.1	420
88-06-2	2,4,6-Trichlorophenol	U	420	ug/kg	84.1	420
95-95-4	2,4,5-Trichlorophenol	U	420	ug/kg	84.1	420
91-58-7	2-Chloronaphthalene	U	42.0	ug/kg	13.9	42.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	420	ug/kg	84.1	420
99-09-2	3-Nitroaniline	U	420	ug/kg	84.1	420

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507001	Date Received:	06/27/2009 09:05	%Moisture:	20.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6519	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 09:17	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0106.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	420	ug/kg	84.1	420
606-20-2	2,6-Dinitrotoluene	U	420	ug/kg	42.0	420
208-96-8	Acenaphthylene	U	42.0	ug/kg	12.6	42.0
51-28-5	2,4-Dinitrophenol	U	841	ug/kg	160	841
132-64-9	Dibenzofuran	U	420	ug/kg	84.1	420
84-66-2	Diethylphthalate	U	420	ug/kg	84.1	420
86-73-7	Fluorene	U	42.0	ug/kg	12.6	42.0
7005-72-3	4-Chlorophenylphenylether	U	420	ug/kg	84.1	420
534-52-1	2-Methyl-4,6-dinitrophenol	U	420	ug/kg	84.1	420
100-01-6	4-Nitroaniline	U	420	ug/kg	126	420
	p-Nitroaniline					
122-39-4	Diphenylamine	U	420	ug/kg	84.1	420
122-66-7	Azobenzene	U	420	ug/kg	84.1	420
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	420	ug/kg	84.1	420
118-74-1	Hexachlorobenzene	U	420	ug/kg	84.1	420
85-01-8	Phenanthrene	U	42.0	ug/kg	12.6	42.0
120-12-7	Anthracene	U	42.0	ug/kg	8.41	42.0
84-74-2	Di-n-butylphthalate	U	420	ug/kg	84.1	420
206-44-0	Fluoranthene	U	42.0	ug/kg	12.6	42.0
85-68-7	Butylbenzylphthalate	U	420	ug/kg	84.1	420
56-55-3	Benzo(a)anthracene	U	42.0	ug/kg	12.6	42.0
91-94-1	3,3'-Dichlorobenzidine	U	420	ug/kg	126	420
218-01-9	Chrysene	U	42.0	ug/kg	12.6	42.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	420	ug/kg	84.1	420
117-84-0	Di-n-octylphthalate	U	420	ug/kg	84.1	420
205-99-2	Benzo(b)fluoranthene	U	42.0	ug/kg	12.6	42.0
207-08-9	Benzo(k)fluoranthene	U	42.0	ug/kg	12.6	42.0
50-32-8	Benzo(a)pyrene	U	42.0	ug/kg	12.6	42.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	42.0	ug/kg	12.6	42.0
53-70-3	Dibenzo(a,h)anthracene	U	42.0	ug/kg	12.6	42.0
191-24-2	Benzo(ghi)perylene	U	42.0	ug/kg	12.6	42.0
120-82-1	1,2,4-Trichlorobenzene	U	420	ug/kg	84.1	420

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
7785-70-8	1R-.alpha.-Pinene	3.6	1550	ug/kg	97	NJ
13466-78-9	3-Carene	3.99	538	ug/kg	96	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507001	Date Received:	06/27/2009 09:05	%Moisture:	20.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6519	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 09:17	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0106.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1227-93-6	1H-Naphtho[2,1-b]pyran, 3-ethenyldodecah	8.09	332	ug/kg	87	NJ
1000197-14-1	4b,8-Dimethyl-2-isopropylphenanthrene, 4	8.13	288	ug/kg	93	NJ
	Unknown	8.92	316	ug/kg		J
	Unknown	9.11	372	ug/kg		J
	Unknown	9.19	273	ug/kg		J
	Unknown	9.22	379	ug/kg		J
	Unknown	9.25	421	ug/kg		J
	Unknown	9.45	1060	ug/kg		J
1740-19-8	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.55	1560	ug/kg	99	NJ
514-10-3	Abietic acid	9.74	916	ug/kg	99	NJ
	Unknown	9.93	411	ug/kg		J
	Unknown	10.19	311	ug/kg		J
112-95-8	Eicosane	10.98	236	ug/kg	98	NJ
559-74-0	Friedelan-3-one	16.85	332	ug/kg	93	NJ
	Unknown	18.42	430	ug/kg		J
	Unknown	18.6	316	ug/kg		J
	Unknown	19.55	280	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0106.d
Lab Smp Id: 232507001 Client Smp ID: CAMO-09-6519
Inj Date : 01-JUL-2009 09:17
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507001|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	20.76000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.027	4.032	(1.000)	504494	40.0000	
* 29 Naphthalene-d8	136	4.898	4.903	(1.000)	1776397	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1134918	40.0000	
* 67 Phenanthrene-d10	188	7.340	7.345	(1.000)	2217131	40.0000	
* 91 Chrysene-d12	240	9.767	9.771	(1.000)	2315031	40.0000	
* 98 Perylene-d12	264	11.534	11.534	(1.000)	2100620	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.208	(0.798)	731909	66.0743	2780
$ 5 Phenol-d5	99	3.738	3.743	(0.928)	906960	62.0981	2610
$ 20 Nitrobenzene-d5	82	4.388	4.398	(0.896)	415335	31.5527	1320
$ 39 2-Fluorobiphenyl	172	5.640	5.645	(0.916)	957737	32.6299	1370
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	312376	67.4580	2830
$ 81 p-Terphenyl-d14	244	8.722	8.727	(0.893)	1362467	38.4562	1620

ION RATIO REPORT

SV REPORT

Data file: s5g0106.d
Report Date: 07/01/2009 09:36
Lab. ID: 232507001 SampleType: SAMPLE
Injection Date: 01-JUL-2009 09:17
Operator: RMB Instrument: MSD5.i
Sample Info: |232507001|881442|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2499
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	56177	3.74	3.81	80-120	100	(T)
93	119909	3.80	3.81	175-235	213	( )
6 Phenol		CAS#: 108-95-2				
94	44783	3.85	3.75	80-120	100	(T)
66	9265	3.85	3.75	23- 83	21	(QT)
65	28179	3.85	3.75	0- 30	63	(QT)
15 o-Cresol		CAS#: 95-48-7				
107	42222	4.08	4.15	80-120	100	(T)
108	12463	4.08	4.15	89-149	30	(QT)
77	49652	4.08	4.15	26- 86	118	(QT)
17 N-Nitrosodipropylamine		CAS#: 621-64-7				
70	60746	4.39	4.27	80-120	100	(T)
42	41193	4.39	4.27	58-118	68	(T)
22 Isophorone		CAS#: 78-59-1				
82	410936	4.39	4.56	80-120	100	(T)
138	320	4.60	4.56	0- 49	0	( )
27 Benzoic acid		CAS#: 65-85-0				
105	1434	4.77	4.68	80-120	100	(T)
122	2509	4.77	4.68	53-113	175	(QT)
77	4561	4.77	4.68	49-109	318	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
31 4-Chloroaniline			CAS#: 106-47-8			
127	121	4.94	4.93	80-120	100	( )
65	1138	4.92	4.93	2- 62	938	(Q)
40 2-Chloronaphthalene			CAS#: 91-58-7			
162	23152	5.89	5.76	80-120	100	(T)
164	1307	5.89	5.76	4- 64	6	(T)
127	2339	5.89	5.76	8- 68	10	(T)
42 o-Nitroaniline			CAS#: 88-74-4			
65	29357	5.89	5.81	80-120	100	(T)
92	33137	5.89	5.81	31- 91	113	(QT)
138	1828	5.89	5.81	66-126	6	(QT)
41 m-Nitroaniline			CAS#: 99-09-2			
138	543	6.16	6.11	80-120	100	( )
92	5938	6.16	6.11	83-143	1093	(Q)
108	26825	6.16	6.11	0- 41	4937	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	248649	6.16	5.92	80-120	100	(T)
164	1134918	6.16	5.92	0- 40	456	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	153461	6.16	5.98	80-120	100	(T)
63	2866	6.16	5.97	56-116	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	153461	6.16	6.28	80-120	100	(T)
89	2673	6.16	6.28	39- 99	2	(QT)
63	2866	6.16	6.28	21- 81	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	12997	6.76	6.58	80-120	100	(T)
165	12594	6.76	6.58	61-121	97	(T)
167	4530	6.76	6.58	0- 44	35	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1001	6.76	6.59	80-120	100	(T)
105	2323	6.76	6.59	4- 64	232	(QT)
51	1745	6.77	6.59	39- 99	174	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	21020	6.76	6.94	80-120	100	(T)
141	112995	6.76	6.94	35- 95	538	(QT)
250	43024	6.76	6.94	69-129	205	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
93 bis(2-Ethylhexyl)phthalate				CAS#: 117-81-7		
149	69673	9.47	9.68	80-120	100	(T)
167	17126	9.48	9.68	4- 64	25	(T)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0106.d
Lab Smp Id: 232507001 Client Smp ID: CAMO-09-6519
Inj Date : 01-JUL-2009 09:17
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507001|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	20.76000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.027	3375016	40.000
* 67 Phenanthrene-d10	7.340	5522489	40.000
* 91 Chrysene-d12	9.767	8328485	40.000
* 98 Perylene-d12	11.534	5193770	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
1R-.alpha.-Pinene					CAS #: 7785-70-8		
3.598	3108851	36.8454599	1550	97	NIST05.L	15188	10
3-Carene					CAS #: 13466-78-9		
3.988	1079543	12.7945229	538	96	NIST05.L	15156	10
1H-Naphtho[2,1-b]pyran, 3-ethenyldodecah					CAS #: 1227-93-6		
8.091	1091315	7.90451228	332	87	NIST05.L	118755	67
4b,8-Dimethyl-2-isopropylphenanthrene, 4					CAS #: 1000197-14-1		
8.134	945908	6.85131552	288	93	NIST05.L	96373	67
Unknown					CAS #:		
8.924	1566446	7.52331561	316	0		0	91
Unknown					CAS #:		
9.107	1841941	8.84646388	372	0		0	91
Unknown					CAS #:		
9.194	1353008	6.49821894	273	0		0	91
Unknown					CAS #:		
9.222	1877006	9.01487193	379	0		0	91
Unknown					CAS #:		
9.251	2085887	10.0180866	421	0		0	91
Unknown					CAS #:		
9.454	5251564	25.2221765	1060	0		0	91
1-Phenanthrenecarboxylic acid, 1,2,3,4,4					CAS #: 1740-19-8		
9.555	7720470	37.0798257	1560	99	NIST05.L	125034	91
Abietic acid					CAS #: 514-10-3		
9.738	4539982	21.8045959	916	99	NIST05.L	126141	91
Unknown					CAS #:		
9.930	2034943	9.77341358	411	0		0	91
Unknown					CAS #:		
10.185	1542702	7.40927898	311	0		0	91
Eicosane					CAS #: 112-95-8		
10.980	728853	5.61328657	236	98	NIST05.L	113490	98

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Friedelan-3-one				CAS #: 559-74-0			
16.855	1025147	7.89520435	332	93	NIST05.L	176566	98
Unknown				CAS #:			
18.424	1329242	10.2372034	430	0		0	98
Unknown				CAS #:			
18.598	974834	7.50771864	316	0		0	98
Unknown				CAS #:			
19.546	864637	6.65903102	280	0		0	98

Data File: /chem/MSD5.i/s070109.b/s5g0106.d
Date : 01-JUL-2009 09:17
Client ID: CAHO-09-6519
Sample Info: 1232507001|881442|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

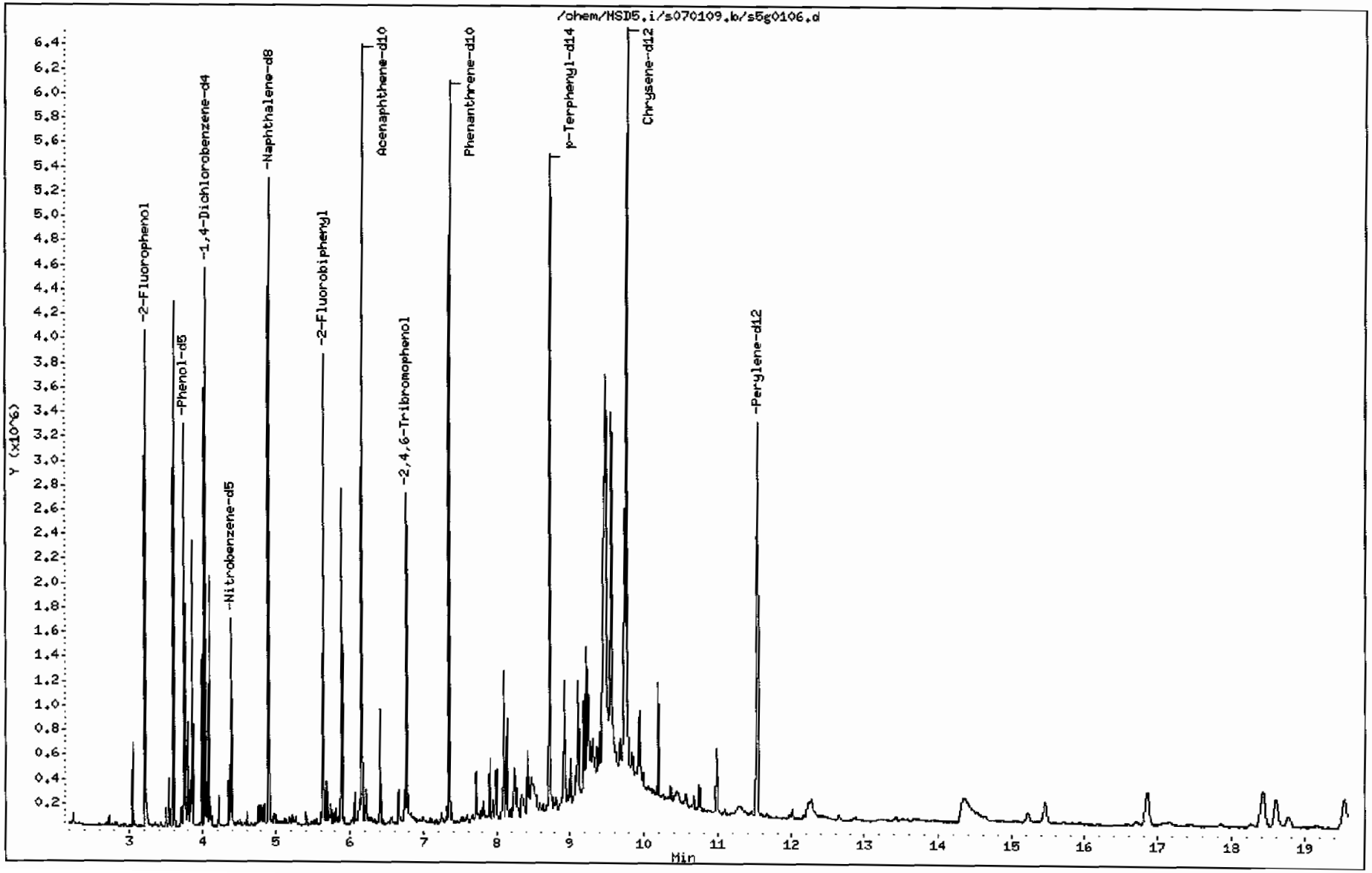

402

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519

Instrument: MSD5.i

Sample Info: |232507001|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1R-.alpha.-Pinene	7785-70-8	NIST05.L	15188	97	C10H16	136
1R-.alpha.-Pinene	7785-70-8	NIST05.L	15186	96	C10H16	136
.alpha.-Pinene	80-56-8	NIST05.L	15178	96	C10H16	136

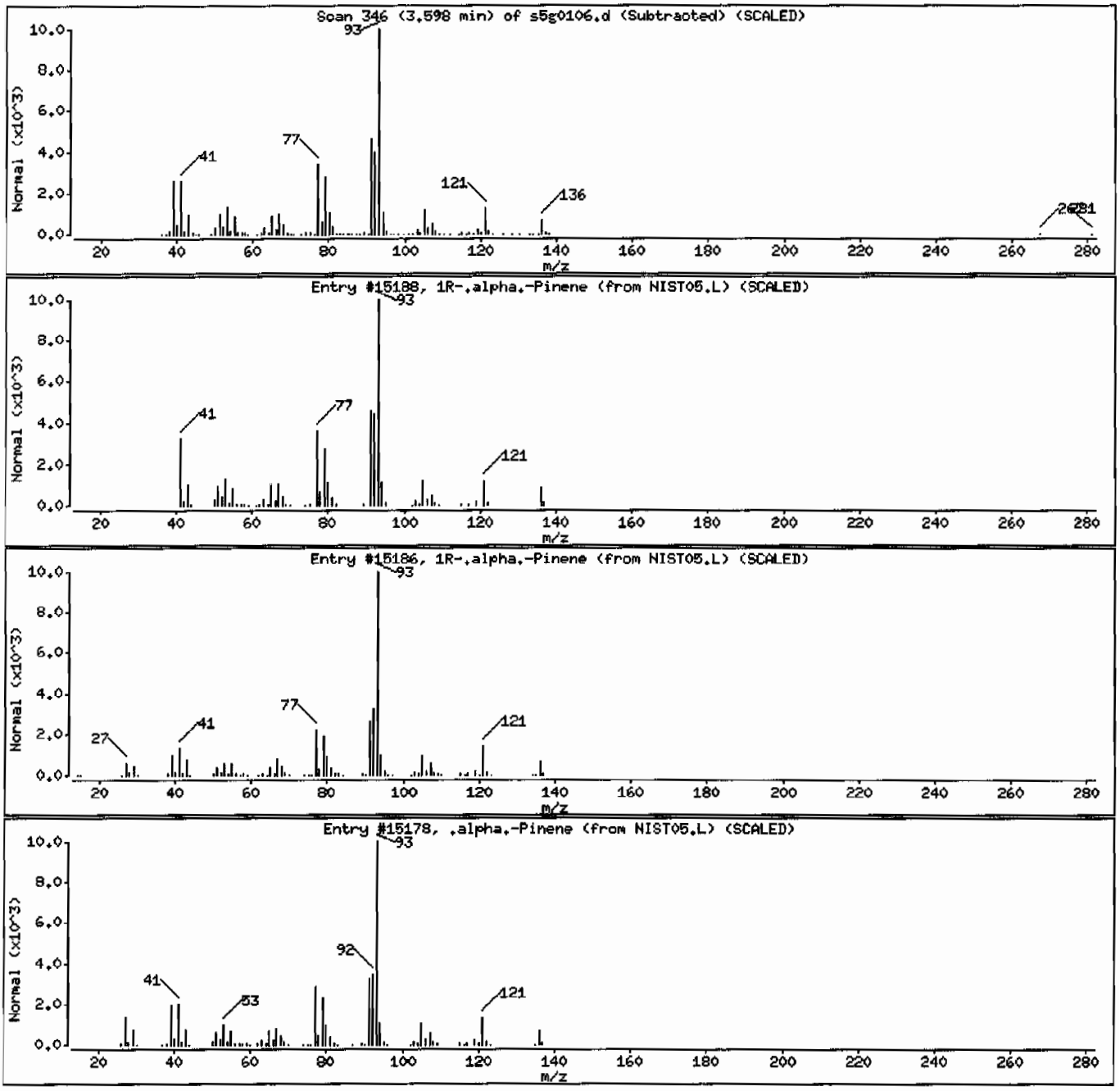

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519

Instrument: MSD5.i

Sample Info: 1232507001|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
3-Carene	13466-78-9	NIST05.L	15156	96	C10H16	136
3-Carene	13466-78-9	NIST05.L	15157	95	C10H16	136
1R-.alpha.-Pinene	7785-70-8	NIST05.L	15186	94	C10H16	136

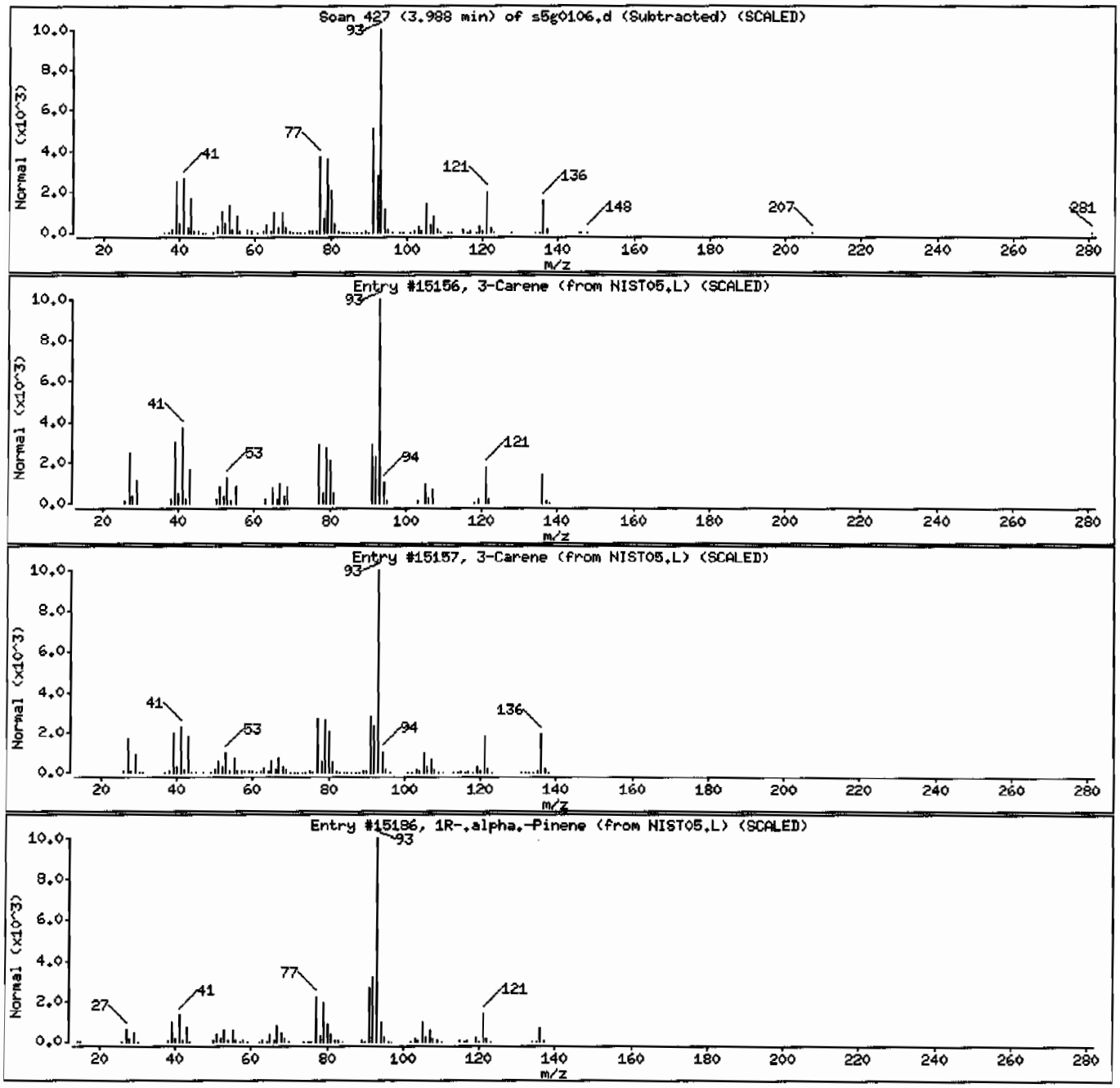

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Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519

Instrument: MSD5.i

Sample Info: 1232507001|881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1H-Naphtho[2,1-b]pyran, 3-ethenyldodecah	1227-93-6	NIST05.L	118755	87	C20H340	290
1H-Naphtho[2,1-b]pyran, 3-ethenyldodecah	596-84-9	NIST05.L	118754	76	C20H340	290
4H-1-Benzopyran-4-one, 2,3-dihydro-7-hyd	17771-33-4	NIST05.L	50990	25	C11H12O3	192

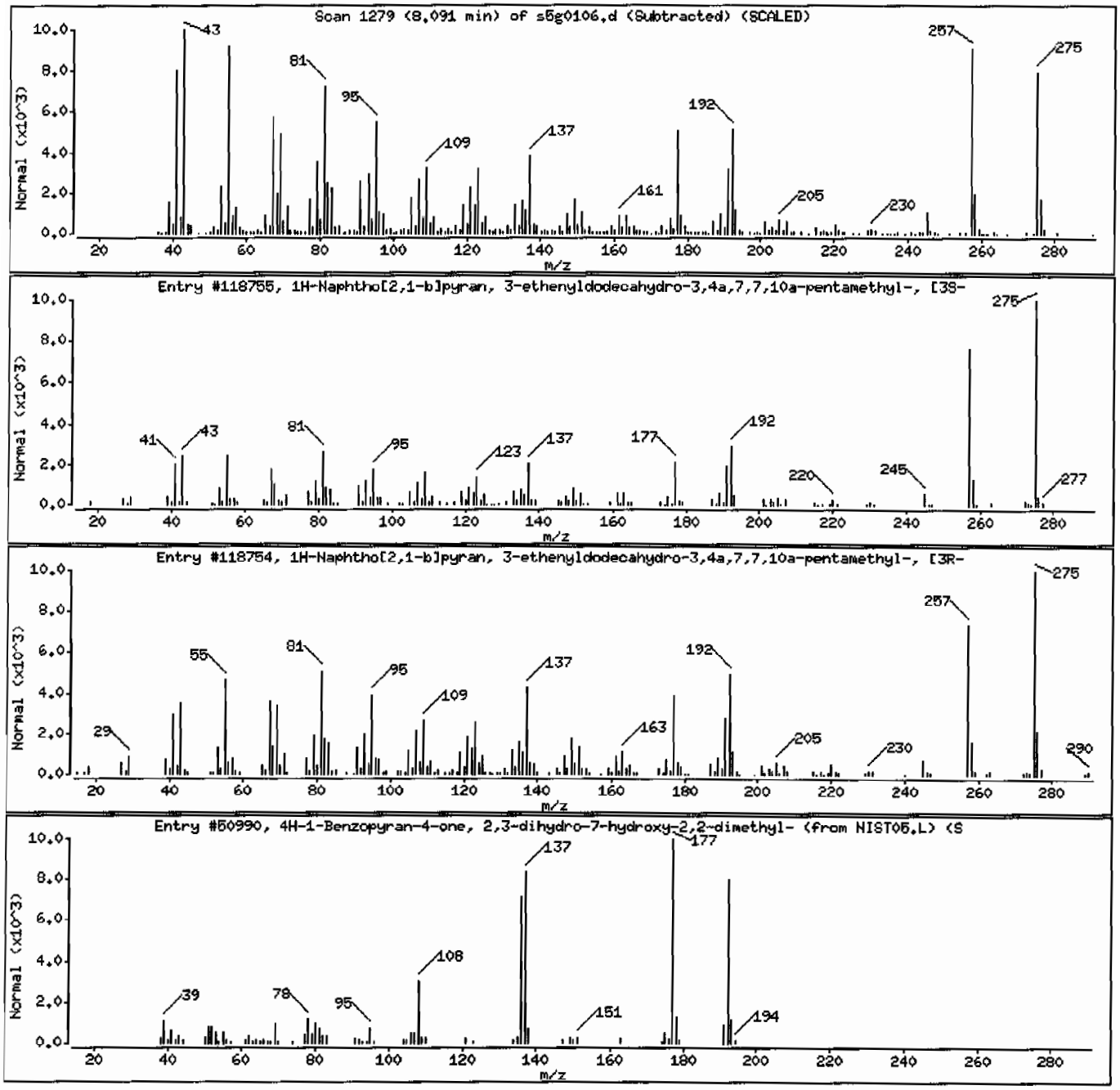

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Date : 01-JUL-2009 09:17

Client ID: CAHO-09-6519 Instrument: MSD5.i

Sample Info: 1232507001|88144211|SVHF11|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
4b,8-Dimethyl-2-isopropylphenanthrene, 4	1000197-14-1	NIST05.L	96373	93	C19H28	256
2,3,4-Trifluorobenzoic acid, hex-4-yn-3-	1000292-55-4	NIST05.L	95774	43	C13H11F3O2	256
s-Indacen-1(2H)-one, 3,5,6,7-tetrahydro-	38754-94-8	NIST05.L	96361	41	C18H24O	256

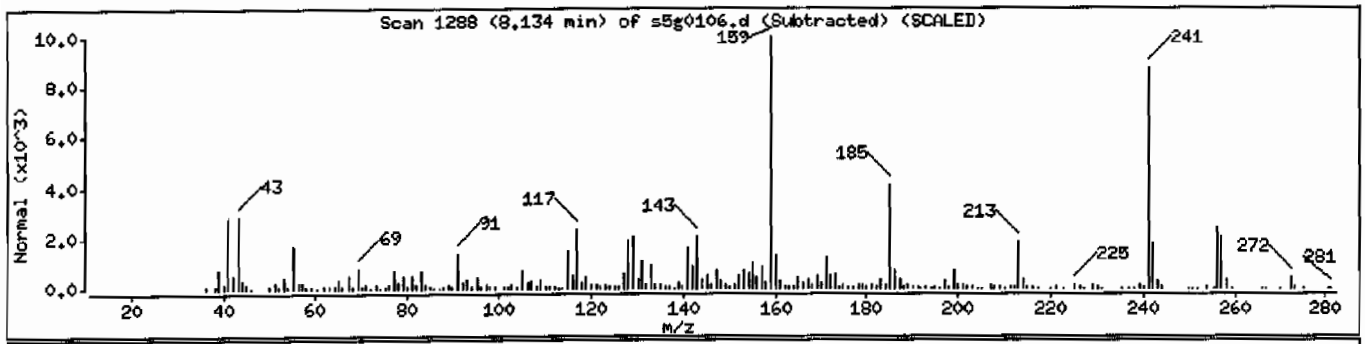

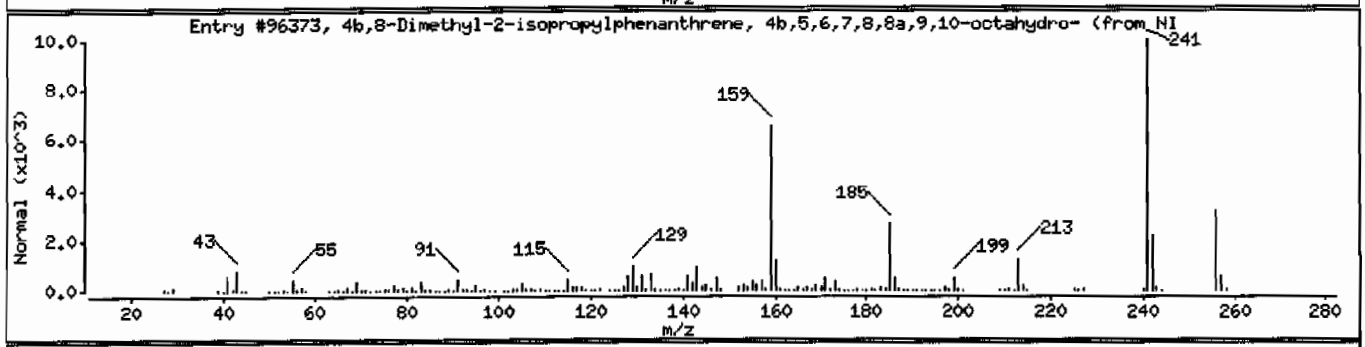

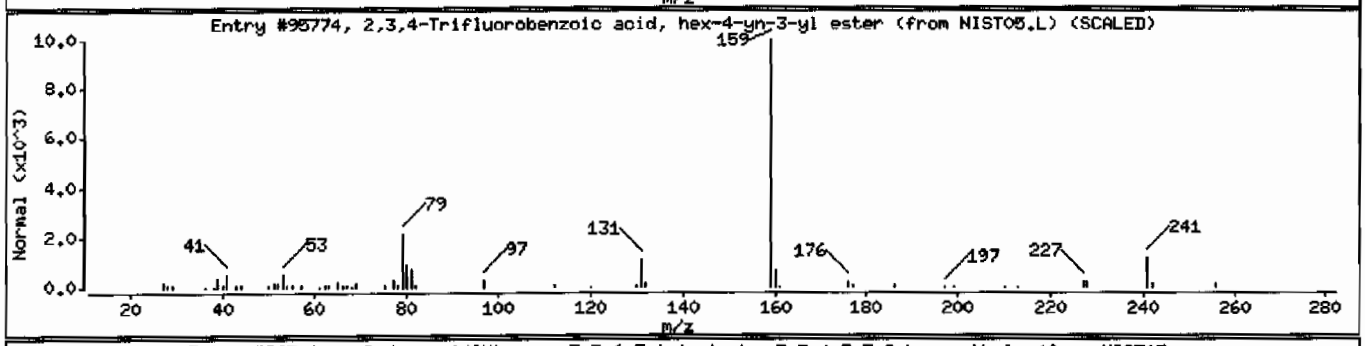

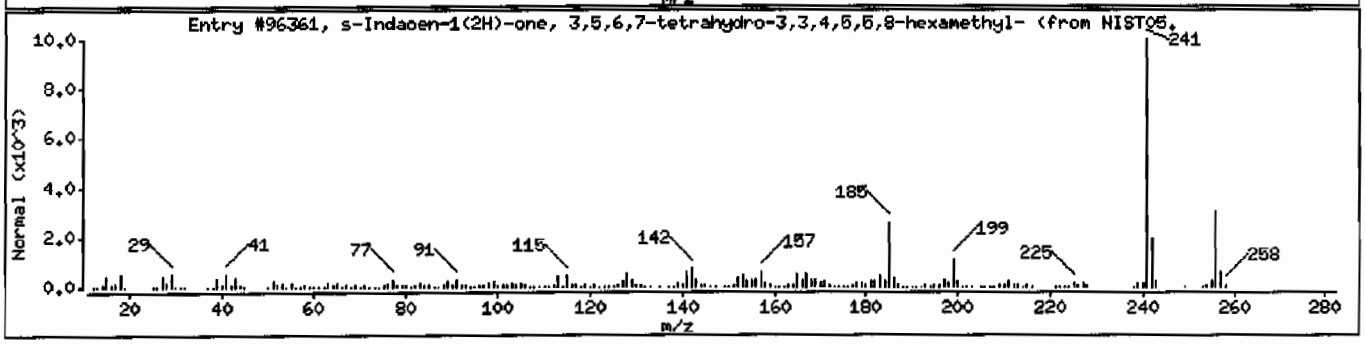

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519 Instrument: MSD5.i

Sample Info: |232507001|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
[1,1'-Biphenyl]-4-amine, 4'-fluoro-	324-93-6	NIST05.L	48074	42	C12H10FN	187
2-Phenyl-2-cyclohexen-1-one oxime	56923-15-0	NIST05.L	48090	25	C12H13NO	187
Indan, 2-butyl-5-hexyl-	25446-32-6	NIST05.L	97633	25	C19H30	258

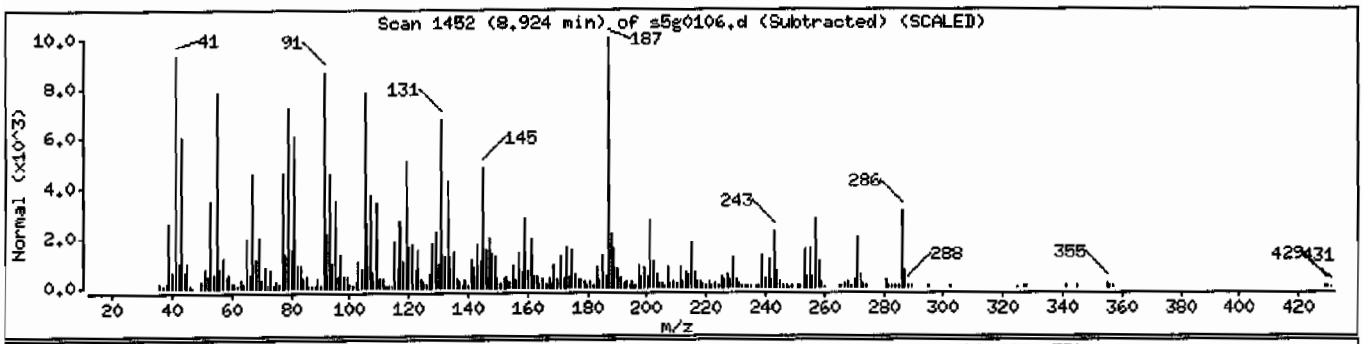

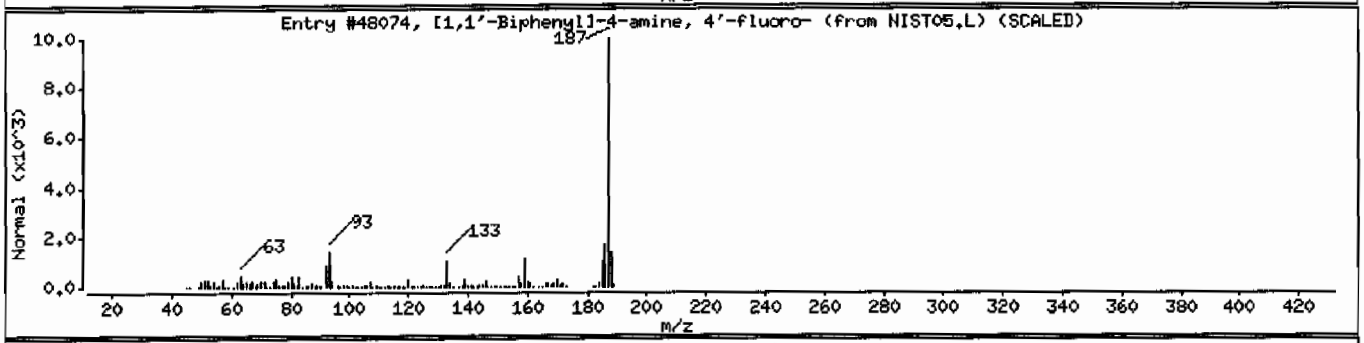

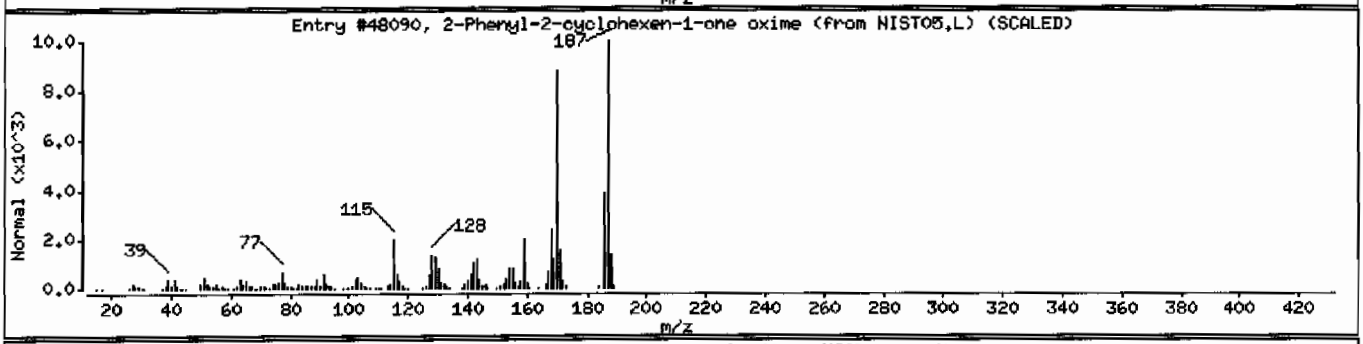

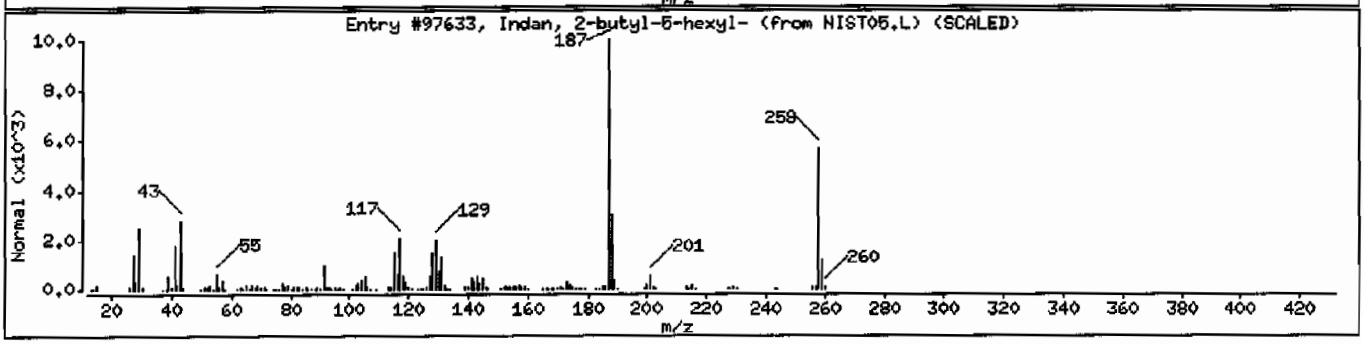

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519

Instrument: MSD5.i

Sample Info: 1232507001|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-[4-(4-Fluoro-benzyloxy)-phenyl]-thiazo	342412-55-9	NIST05.L	144070	50	C17H16FNO3S	333
1,2,4,4-Tetramethylcyclopentene	65378-76-9	NIST05.L	10374	47	C9H16	124
Phenol, 3-amino-	591-27-5	NIST05.L	5403	47	C6H7NO	109

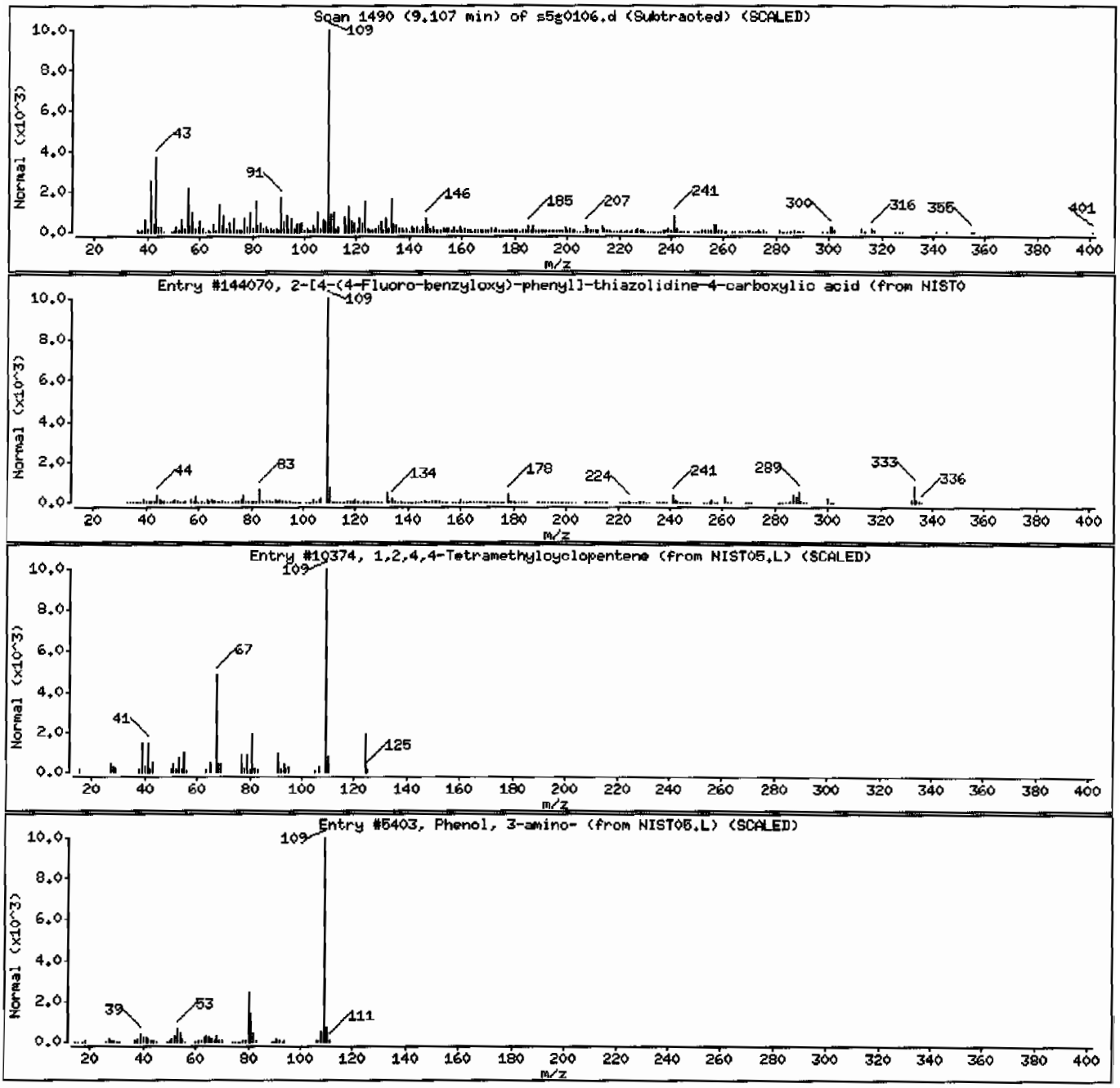

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMD-09-6519 Instrument: MSD5.i

Sample Info: |2325070011881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133620	93	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	91	C21H3002	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	24035-60-7	NIST05.L	133619	38	C21H3002	314

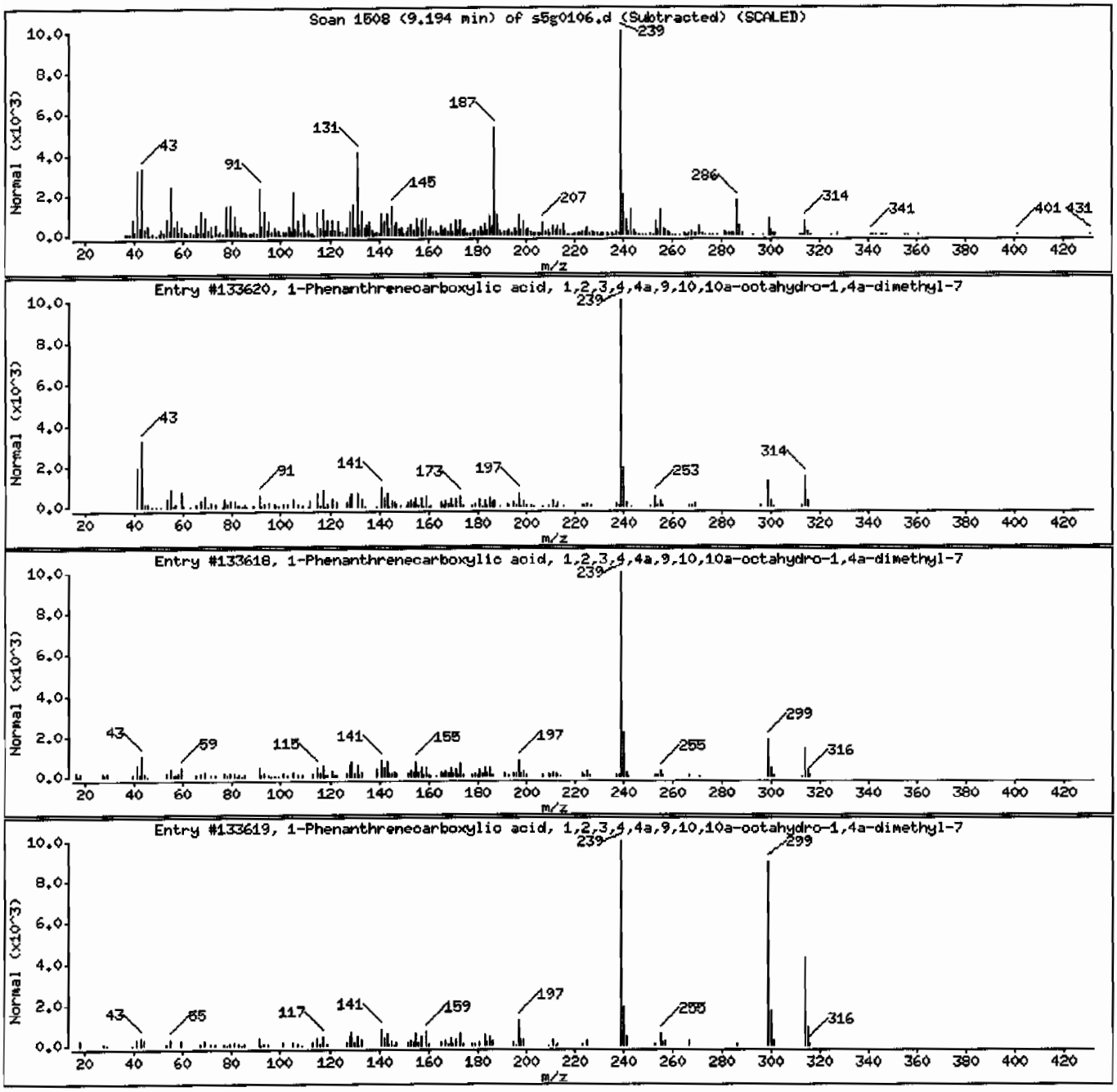

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519 Instrument: MSD6.i

Sample Info: |232507001|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Pentenoic acid, 5-(decahydro-5,5,8a-tr	24470-48-2	NIST05.L	127462	70	C20H32O2	304
2,6,10-Dodecatrien-1-ol, 3,7,11-trimethy	4602-84-0	NIST05.L	72931	53	C15H26O	222
2-Cyclohexene-1-carboxaldehyde, 2,6-dime	56772-07-7	NIST05.L	71436	51	C15H24O	220

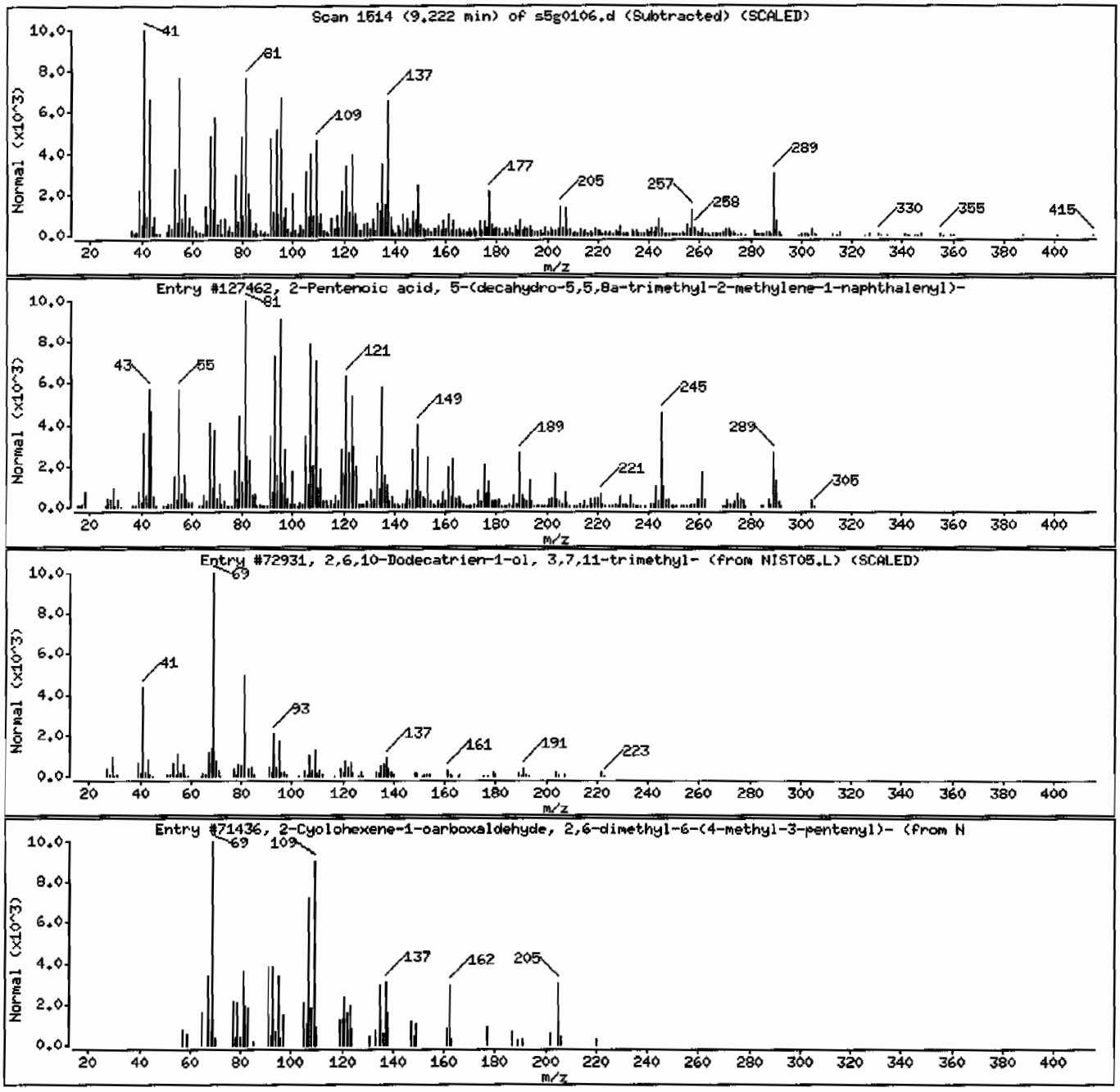

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Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519 Instrument: MSD5.i

Sample Info: 1232507001|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Hydroxy-6-(3-isopropenyl-cycloprop-1-e	1000189-14-9	NIST05.L	72783	46	C14H2202	222
Oxalamide, N-(3-hydroxyphenyl)-N'-(pyrid	1000310-99-6	NIST05.L	96642	38	C13H11N303	257
Urea, 1-(2,6-dimethyl)phenyl-3-(N-methyl	1000300-51-6	NIST05.L	70875	25	C11H16N40	220

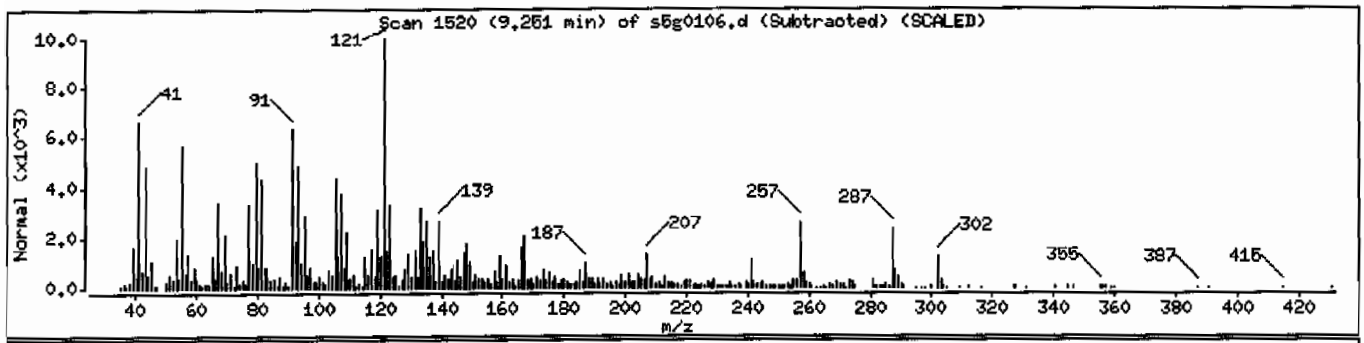

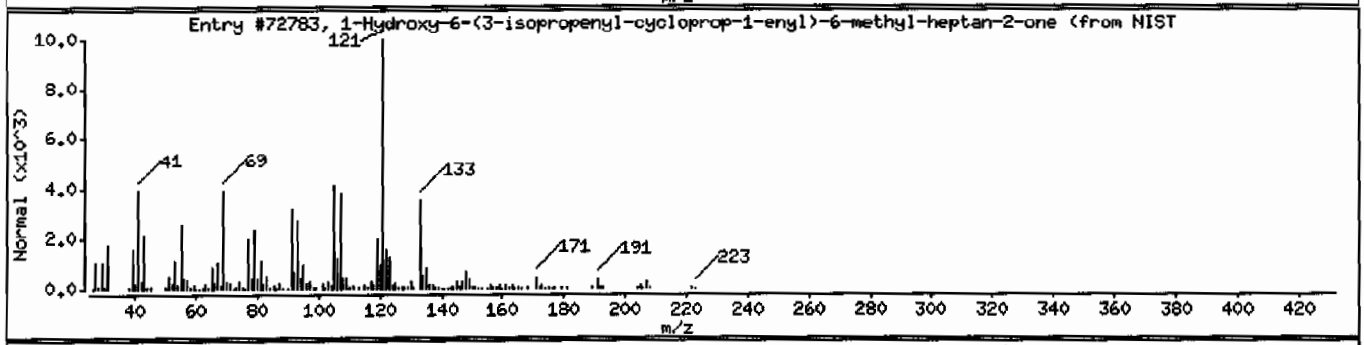

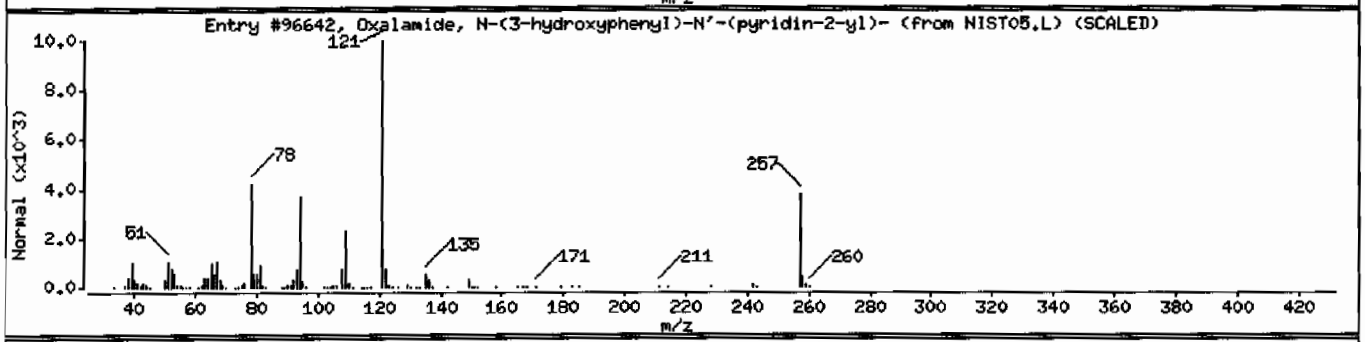

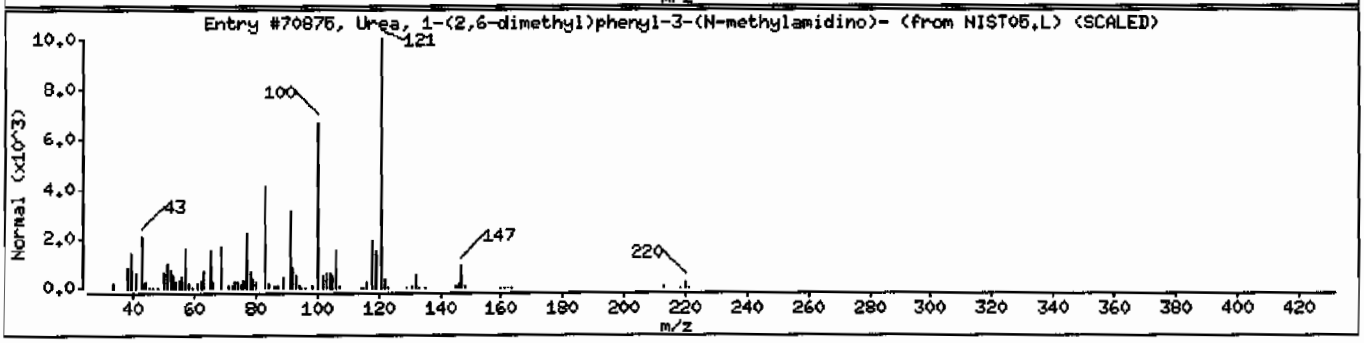

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519

Instrument: MSD5.i

Sample Info: 1232507001|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Phenol, 2,4-bis(1-phenylethyl)-	2769-94-0	NIST05.L	126238	70	C22H22O	302
Silane, trimethyl([1,1':3',1''-terphenyl	128388-53-4	NIST05.L	126205	37	C21H22Si	302
1-(4-Chloro-2-fluoro-benzyl)-3,7-dimethy	317324-02-0	NIST05.L	137651	35	C14H12ClFN4O2	322

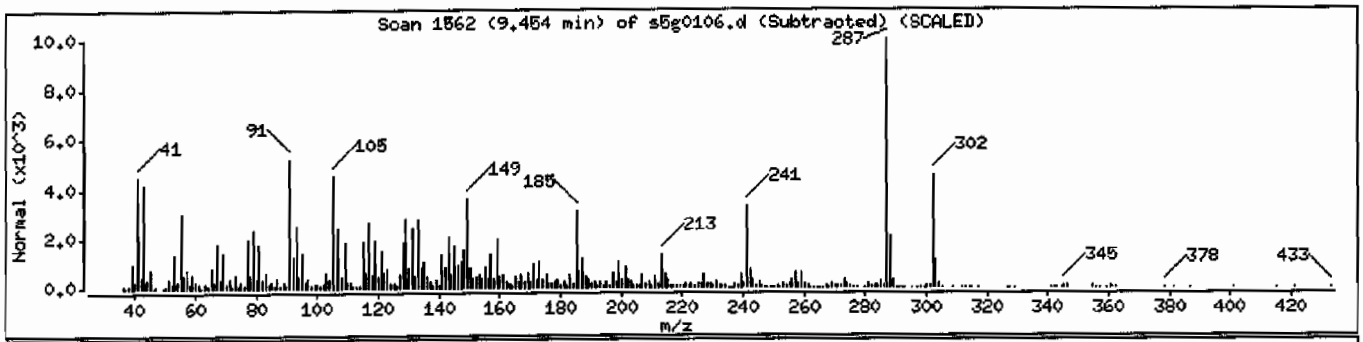

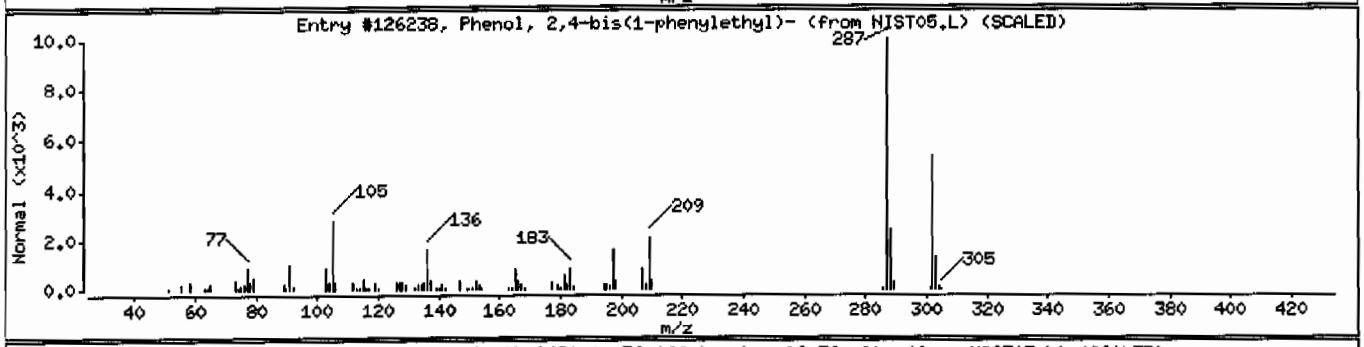

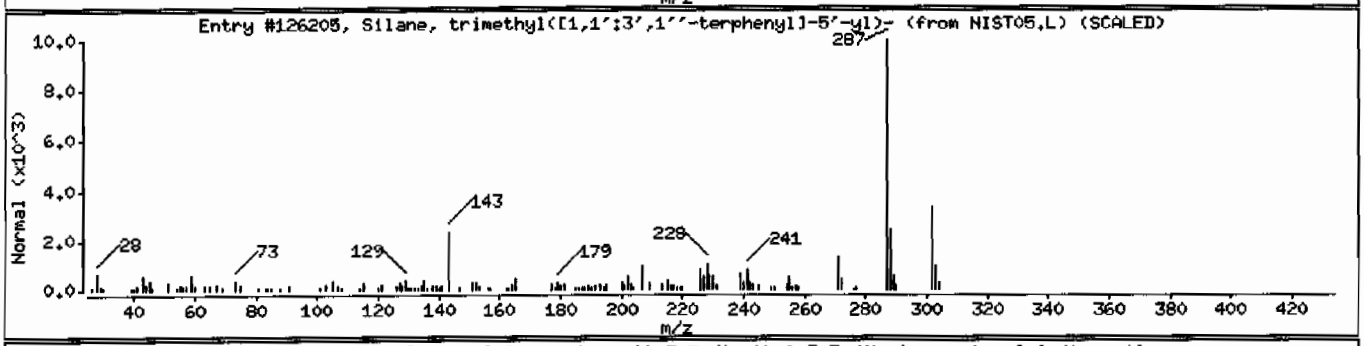

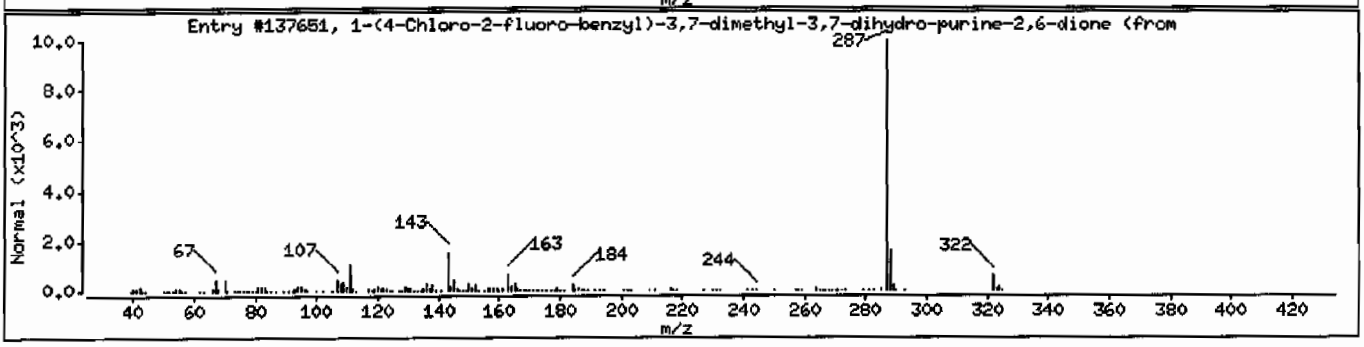

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519

Instrument: MSD5.i

Sample Info: 1232507001188144211SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125034	99	C20H28O2	300
Butanoic acid, 2-(cyano)(2,4,6-trimethyl	1000267-71-7	NIST05.L	124759	81	C17H20N2O3	300
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1740-19-8	NIST05.L	125036	60	C20H28O2	300

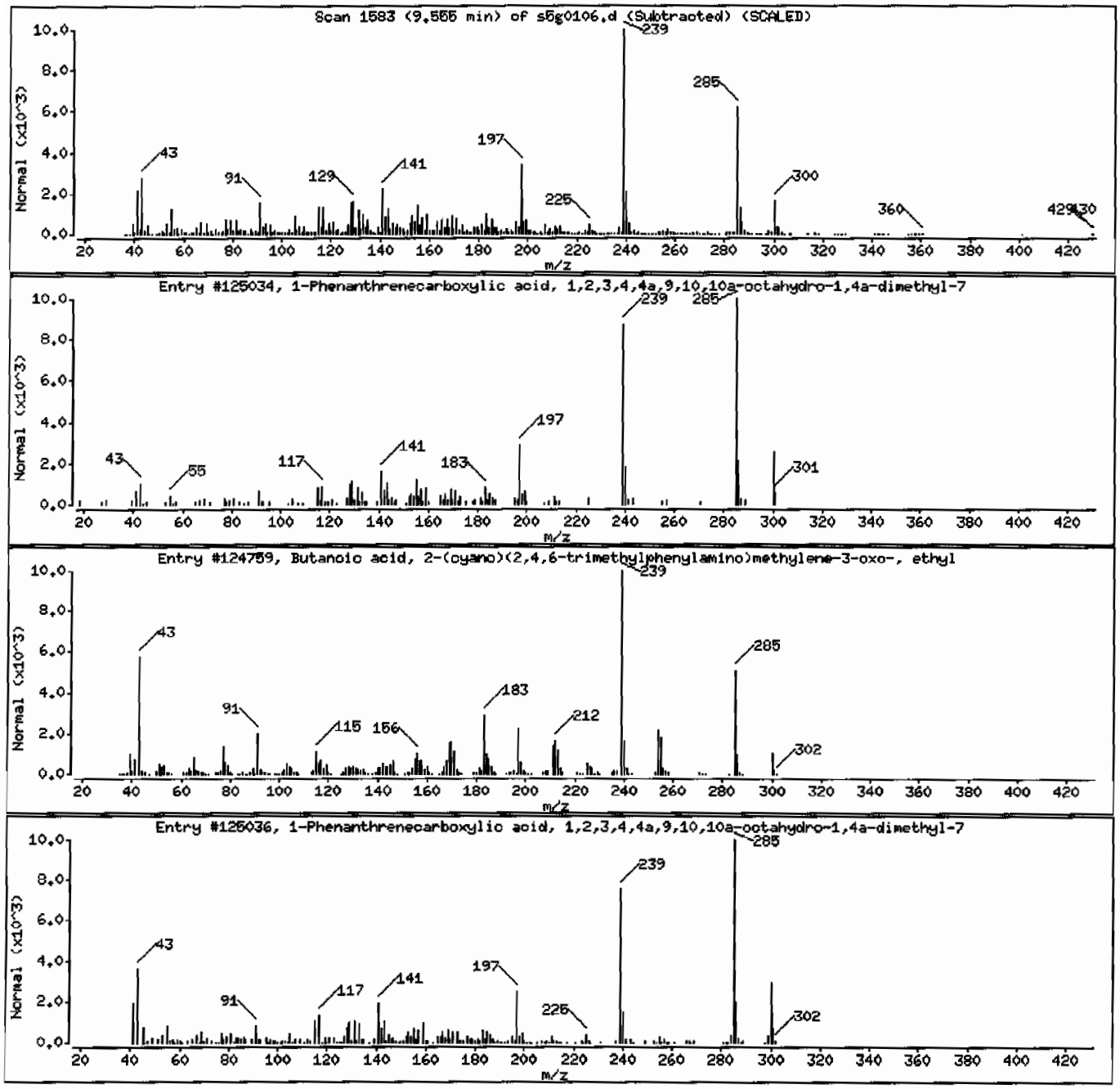

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519

Instrument: MSD5.i

Sample Info: |2325070011881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Abietic acid	514-10-3	NIST05.L	126141	99	C20H30O2	302
Abietic acid	514-10-3	NIST05.L	126143	94	C20H30O2	302
Palustric acid	1945-53-5	NIST05.L	126144	52	C20H30O2	302

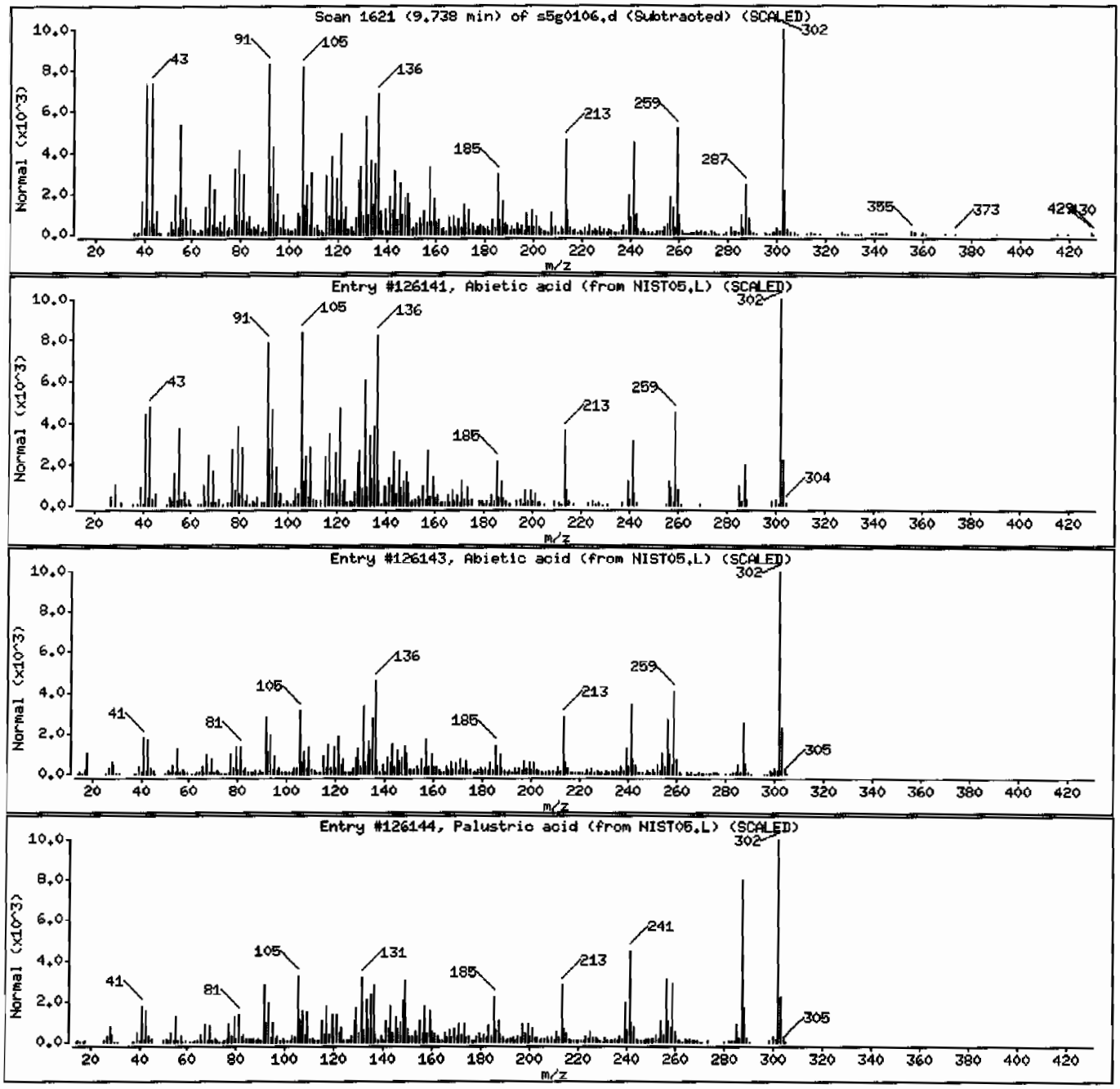

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519 Instrument: MSD5.i

Sample Info: 1232507001|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	471-77-2	NIST05.L	126183	93	C20H3002	302
m-Anisic acid, 1-adamantylmethyl ester	1000292-25-3	NIST05.L	124943	55	C19H2403	300
1-Adamantanecarboxylic acid, 2-methylphe	1000293-75-3	NIST05.L	105702	50	C18H2202	270

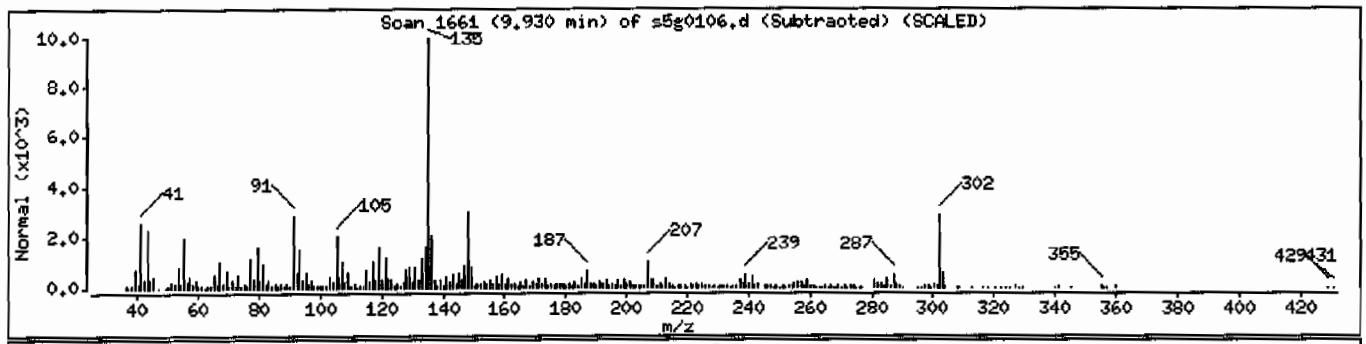

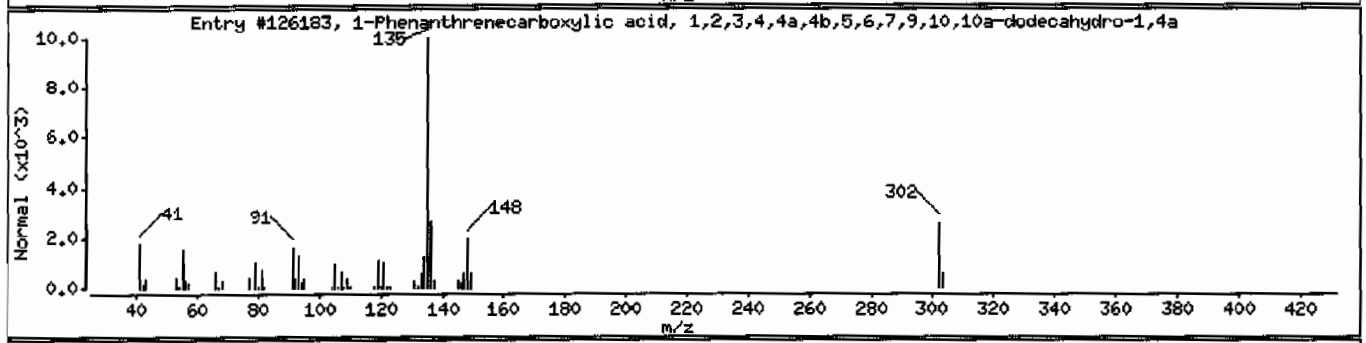

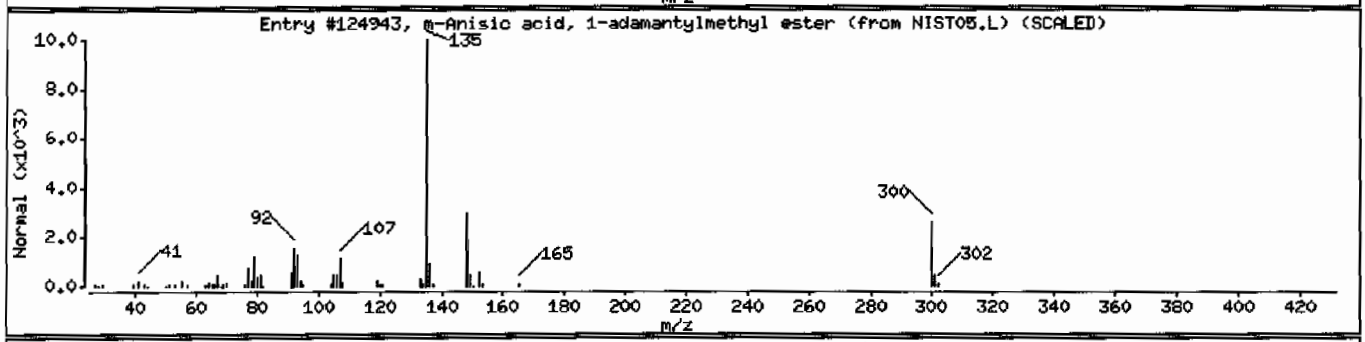

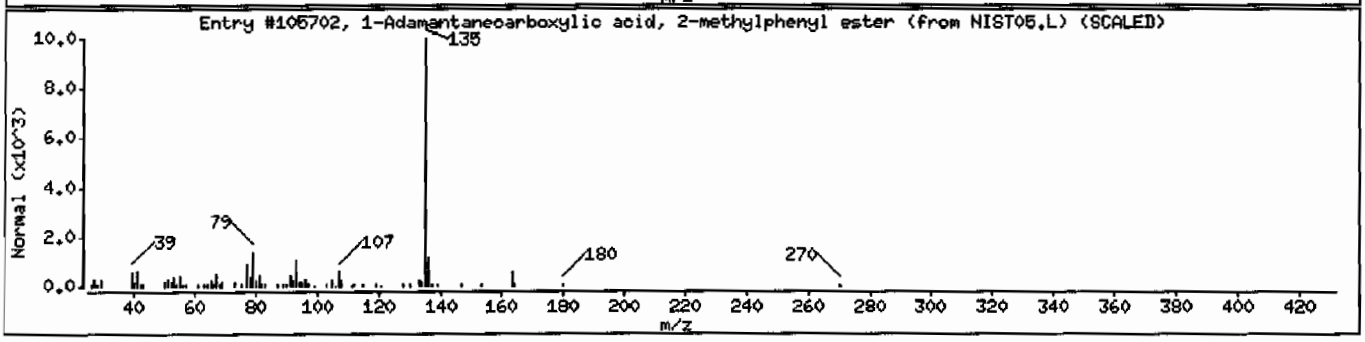

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519 Instrument: MSD5.i

Sample Info: 1232507001|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Eicosane	112-95-8	NIST05.L	113490	90	C20H42	282
Eicosane, 10-methyl-	54833-23-7	NIST05.L	122441	86	C21H44	296
Pentadecane, 8-hexyl-	13475-76-7	NIST05.L	122443	64	C21H44	296

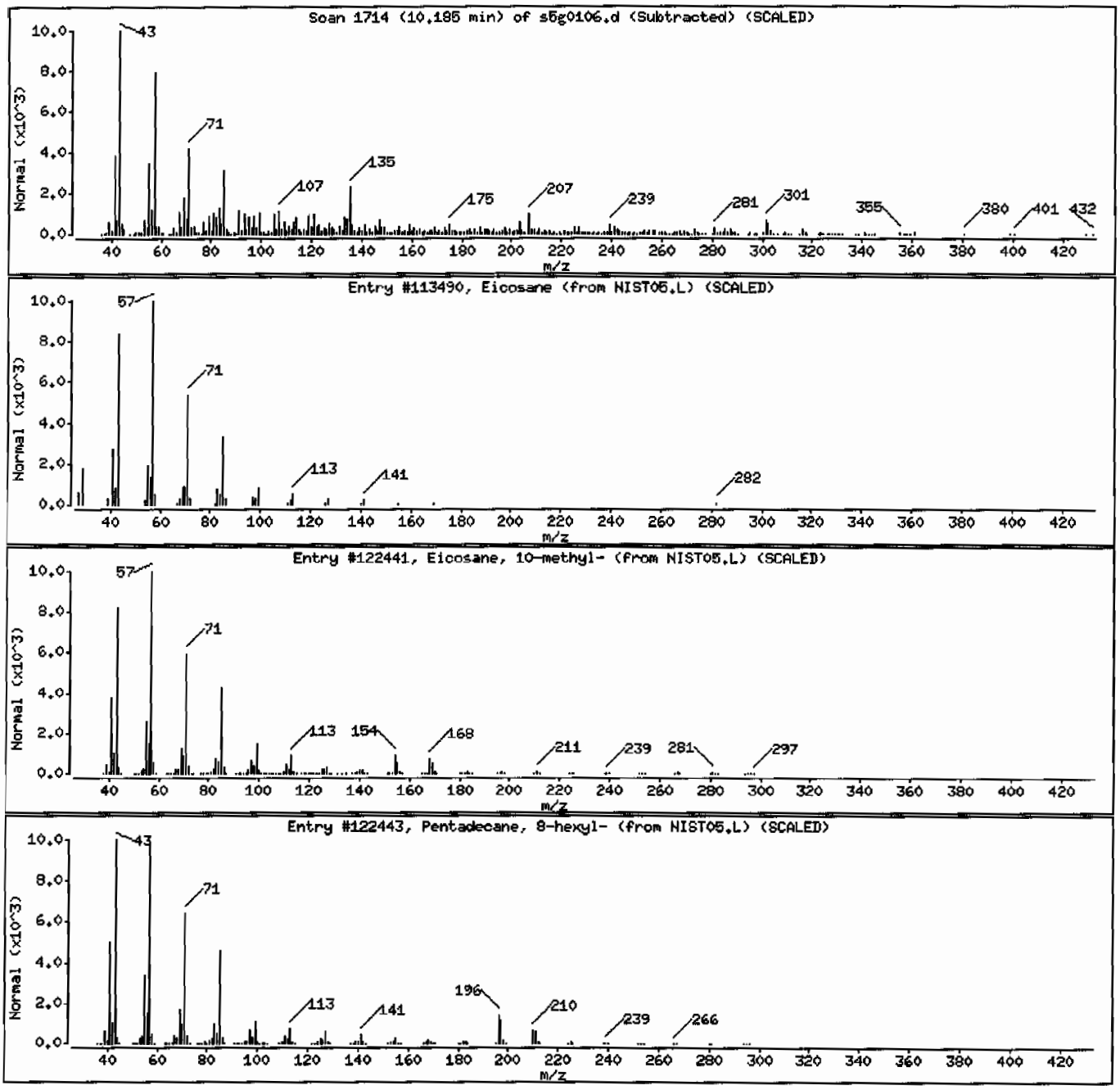

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519 Instrument: MSD5.i

Sample Info: |2325070011881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosane	112-95-8	NIST05.L	113490	98	C20H42	282
Octadecane, 2-methyl-	1560-88-9	NIST05.L	104280	93	C19H40	268
Eicosane, 3-methyl-	6418-46-8	NIST05.L	122437	90	C21H44	296

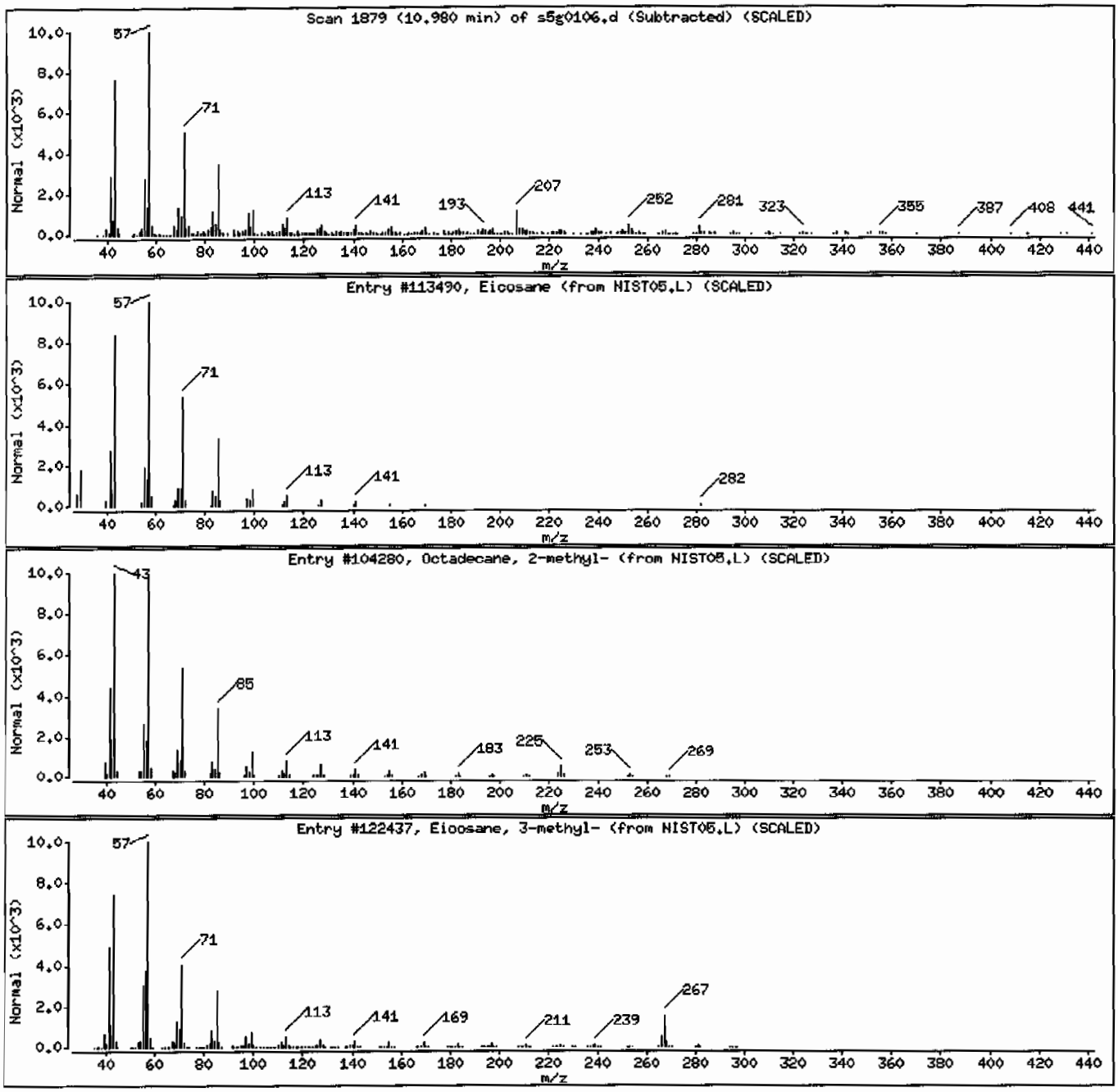

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519 Instrument: MSD5.i

Sample Info: |2325070011881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Friedelan-3-one	559-74-0	NIST05.L	176566	93	C30H500	426
2,2,6-Trimethyl-1-(2-methyl-cyclobut-2-e	1000188-72-8	NIST05.L	69963	55	C15H220	218
Taraxasterol	1059-14-9	NIST05.L	176561	50	C30H500	426

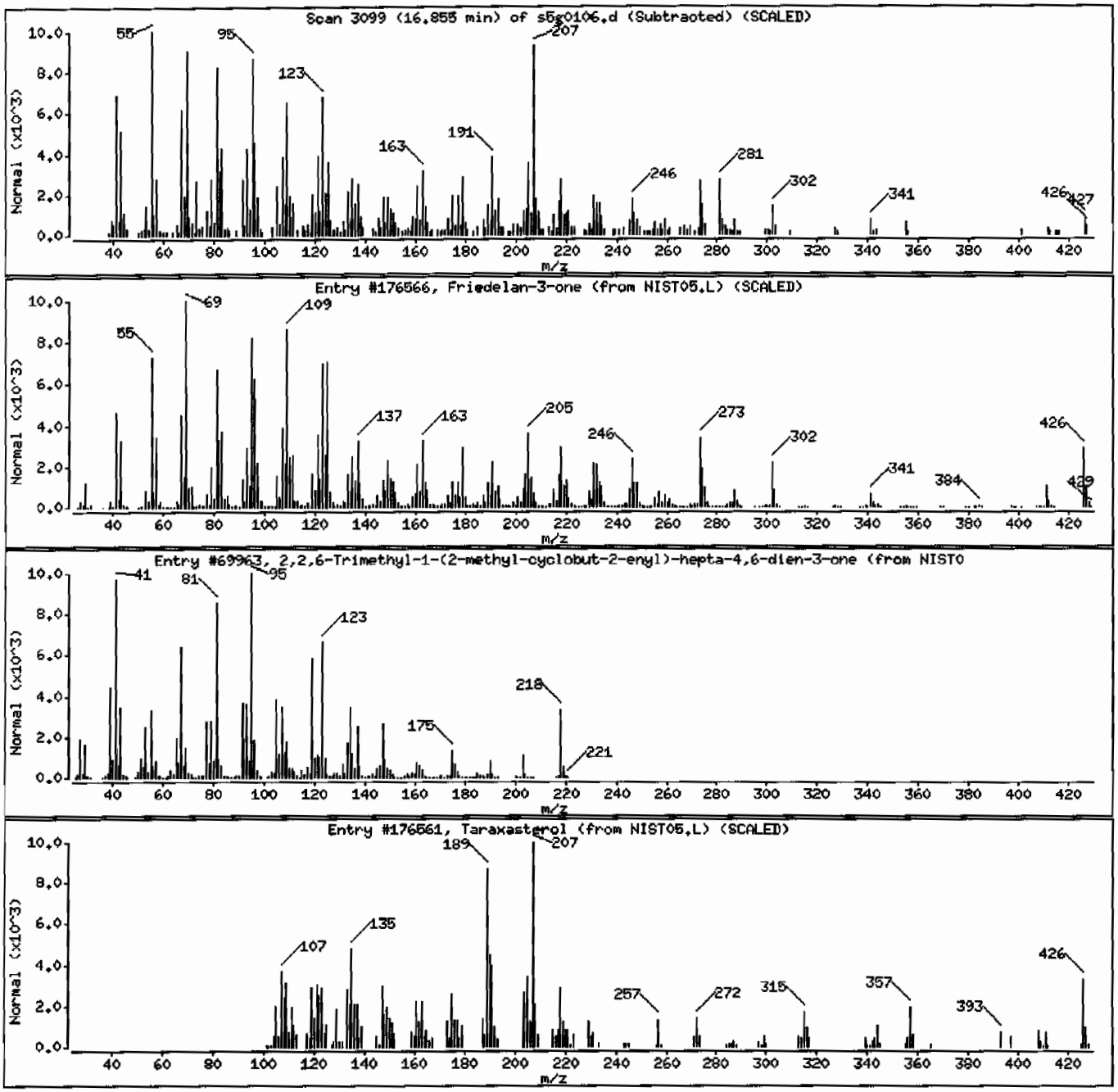

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519

Instrument: MSD5.i

Sample Info: |2325070011881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
3a,7-Methano-3aH-cyclopentacyclooctene,	469-92-1	NIST05.L	60085	15	C15H24	204
1H-Indene, 2,3-dihydro-1,1,3-trimethyl-3	3910-35-8	NIST05.L	82680	15	C18H20	236
Heptanoic acid (4,7-dimethyl-2-oxo-2H-ch	1000297-16-3	NIST05.L	125484	11	C18H23NO3	301

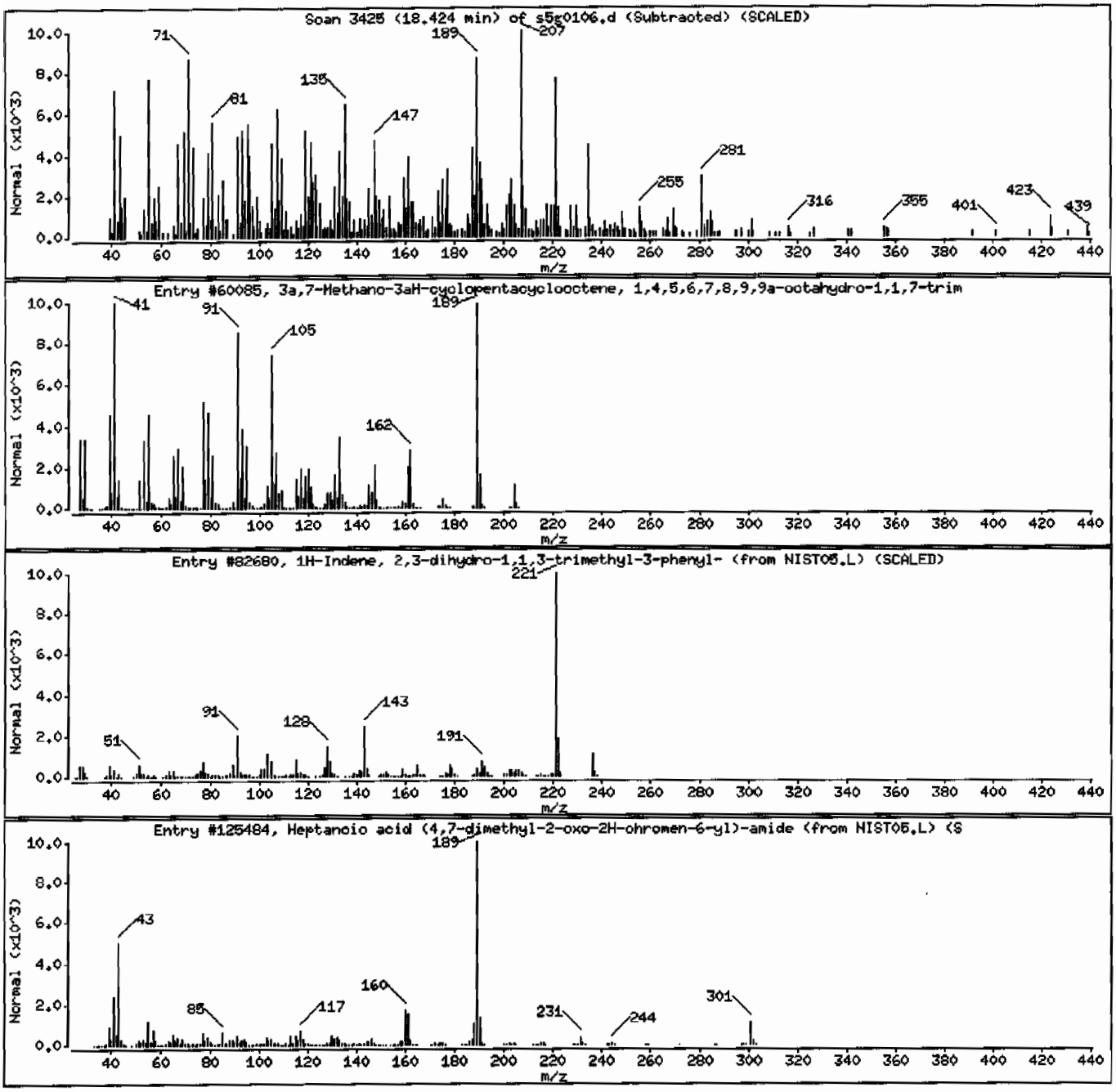

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519 Instrument: MSD5.i

Sample Info: |232507001|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,3a-Ethano-3aH-indene, 1,2,3,6,7,7a-hex	4545-68-0	NIST05.L	60037	45	C15H24	204
1,3a-Ethano-3aH-indene, 1,2,3,6,7,7a-hex	4545-68-0	NIST05.L	60039	45	C15H24	204
3-Amino-4,6-dimethylthieno[2,3-b]pyridin	67795-42-0	NIST05.L	71697	38	C10H11N3OS	221

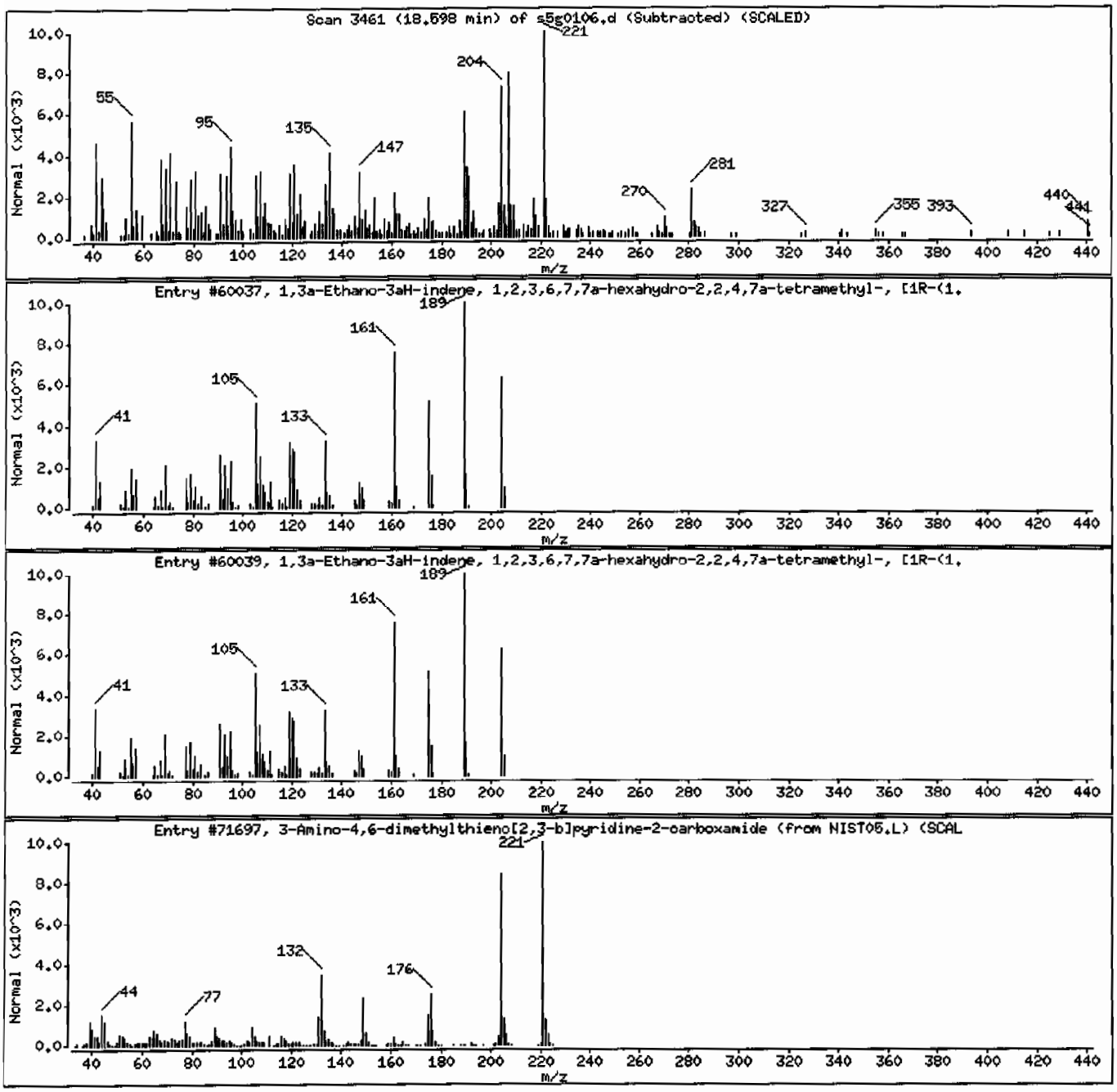

Data File: /chem/MSD5.i/s070109.b/s5g0106.d

Date : 01-JUL-2009 09:17

Client ID: CAMO-09-6519 Instrument: MSD5.i

Sample Info: |2325070011|881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2H-Cyclopropa[a]naphthalen-2-one, 1,1a,4	6831-17-0	NIST05.L	69993	44	C15H22O	218
(1S,6R,9S)-5,5,9,10-Tetramethyltricyclo[	1000298-97-8	NIST05.L	70028	42	C16H26	218
3-Methoxymethyl-2,5,5,8a-tetramethyl-6,7	64201-73-6	NIST05.L	82517	38	C15H24O2	236

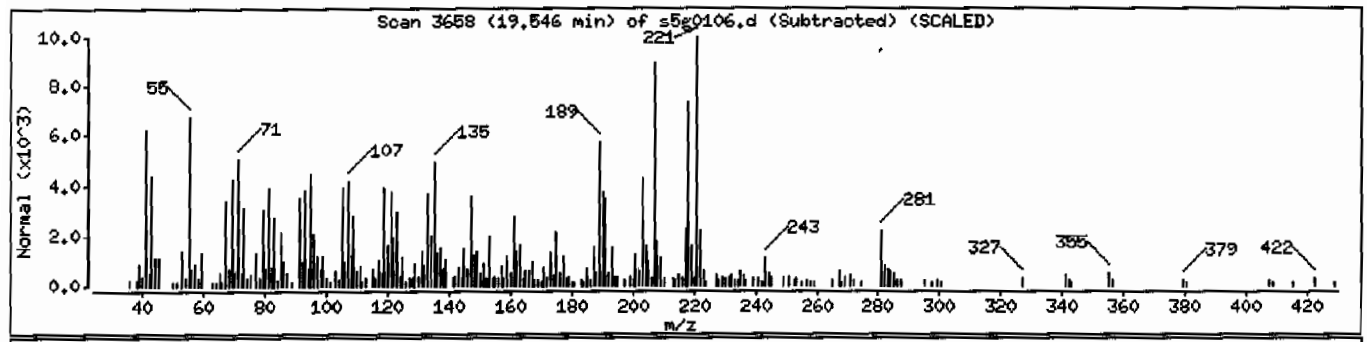

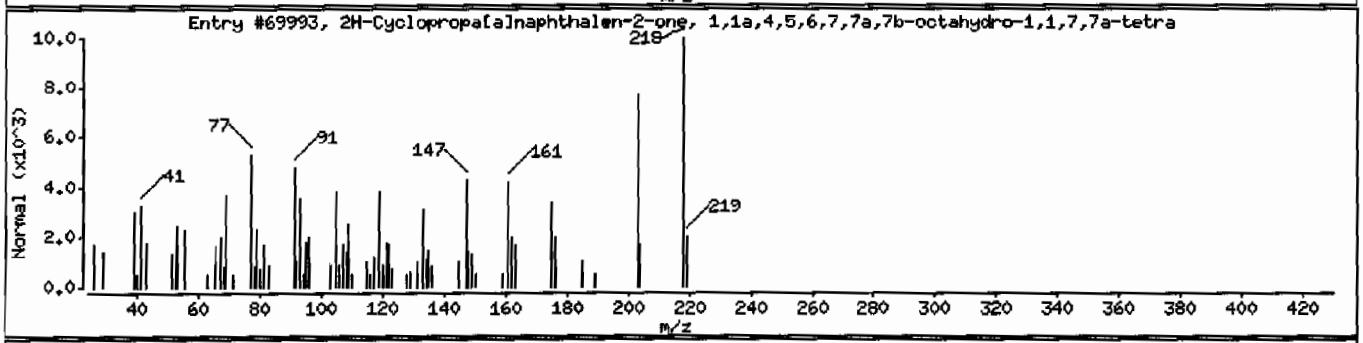

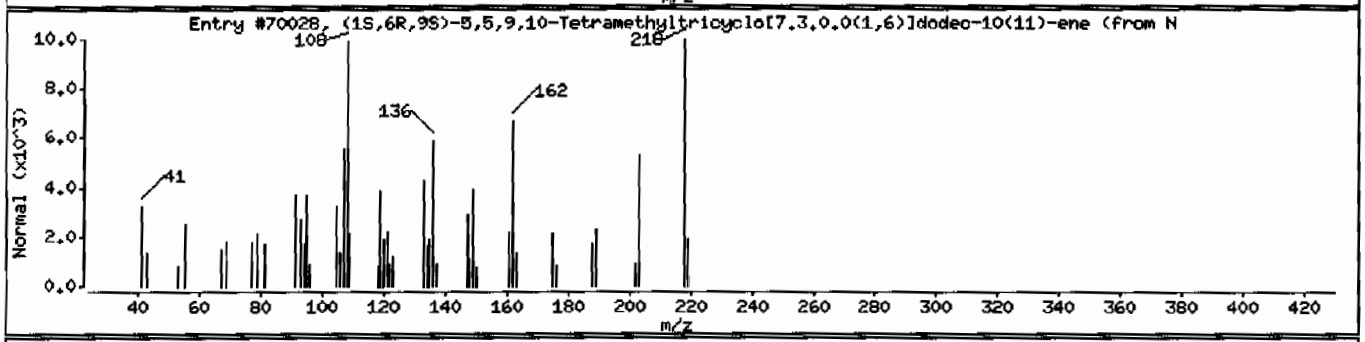

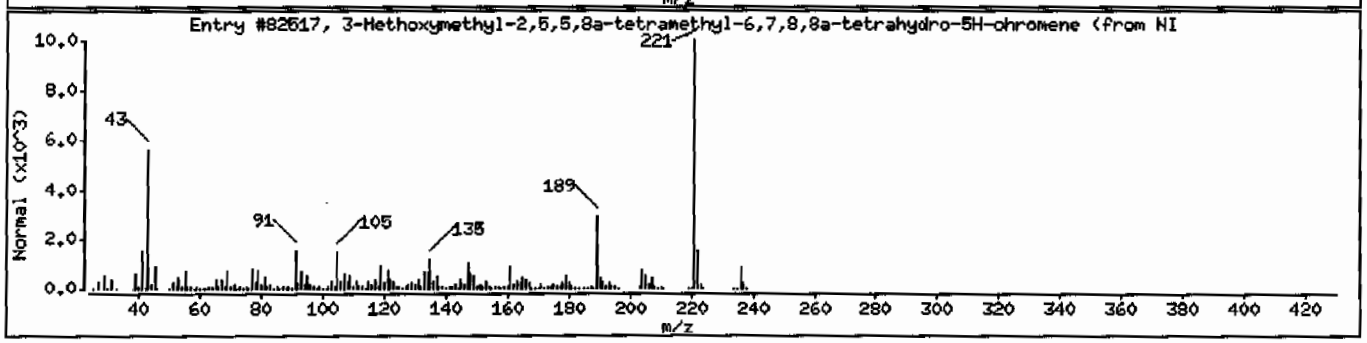

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507003	Date Received:	06/27/2009 09:05	%Moisture:	5.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6527	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:09	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0110.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	354	ug/kg	70.8	354
108-95-2	Phenol	U	354	ug/kg	70.8	354
95-57-8	2-Chlorophenol	U	354	ug/kg	70.8	354
106-46-7	1,4-Dichlorobenzene	U	354	ug/kg	70.8	354
621-64-7	N-Nitrosodipropylamine	U	354	ug/kg	70.8	354
59-50-7	4-Chloro-3-methylphenol	U	354	ug/kg	70.8	354
83-32-9	Acenaphthene	U	35.4	ug/kg	11.7	35.4
121-14-2	2,4-Dinitrotoluene	U	354	ug/kg	35.4	354
100-02-7	4-Nitrophenol	U	354	ug/kg	117	354
87-86-5	Pentachlorophenol	U	354	ug/kg	88.4	354
129-00-0	Pyrene	U	35.4	ug/kg	10.6	35.4
110-86-1	Pyridine	U	354	ug/kg	70.8	354
62-53-3	Aniline	U	354	ug/kg	106	354
111-44-4	bis(2-Chloroethyl) ether	U	354	ug/kg	70.8	354
541-73-1	1,3-Dichlorobenzene	U	354	ug/kg	70.8	354
100-51-6	Benzyl alcohol	U	354	ug/kg	106	354
95-50-1	1,2-Dichlorobenzene	U	354	ug/kg	70.8	354
108-60-1	bis(2-Chloroisopropyl)ether	U	354	ug/kg	70.8	354
95-48-7	o-Cresol	U	354	ug/kg	70.8	354
65794-96-9	m,p-Cresols	U	354	ug/kg	106	354
67-72-1	Hexachloroethane	U	354	ug/kg	70.8	354
98-95-3	Nitrobenzene	U	354	ug/kg	70.8	354
78-59-1	Isophorone	U	354	ug/kg	70.8	354
88-75-5	2-Nitrophenol	U	354	ug/kg	70.8	354
105-67-9	2,4-Dimethylphenol	U	354	ug/kg	124	354
111-91-1	bis(2-Chloroethoxy)methane	U	354	ug/kg	70.8	354
120-83-2	2,4-Dichlorophenol	U	354	ug/kg	70.8	354
65-85-0	Benzoic acid	U	708	ug/kg	177	708
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4
106-47-8	4-Chloroaniline	U	354	ug/kg	70.8	354
87-68-3	Hexachlorobutadiene	U	354	ug/kg	70.8	354
91-57-6	2-Methylnaphthalene	U	35.4	ug/kg	7.08	35.4
77-47-4	Hexachlorocyclopentadiene	U	354	ug/kg	70.8	354
88-06-2	2,4,6-Trichlorophenol	U	354	ug/kg	70.8	354
95-95-4	2,4,5-Trichlorophenol	U	354	ug/kg	70.8	354
91-58-7	2-Chloronaphthalene	U	35.4	ug/kg	11.7	35.4
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	354	ug/kg	70.8	354
99-09-2	3-Nitroaniline	U	354	ug/kg	70.8	354

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507003	Date Received:	06/27/2009 09:05	%Moisture:	5.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6527	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:09	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0110.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	354	ug/kg	70.8	354
606-20-2	2,6-Dinitrotoluene	U	354	ug/kg	35.4	354
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4
51-28-5	2,4-Dinitrophenol	U	708	ug/kg	134	708
132-64-9	Dibenzofuran	U	354	ug/kg	70.8	354
84-66-2	Diethylphthalate	U	354	ug/kg	70.8	354
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4
7005-72-3	4-Chlorophenylphenylether	U	354	ug/kg	70.8	354
534-52-1	2-Methyl-4,6-dinitrophenol	U	354	ug/kg	70.8	354
100-01-6	4-Nitroaniline	U	354	ug/kg	106	354
	p-Nitroaniline					
122-39-4	Diphenylamine	U	354	ug/kg	70.8	354
122-66-7	Azobenzene	U	354	ug/kg	70.8	354
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	354	ug/kg	70.8	354
118-74-1	Hexachlorobenzene	U	354	ug/kg	70.8	354
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4
120-12-7	Anthracene	U	35.4	ug/kg	7.08	35.4
84-74-2	Di-n-butylphthalate	U	354	ug/kg	70.8	354
206-44-0	Fluoranthene	U	35.4	ug/kg	10.6	35.4
85-68-7	Butylbenzylphthalate	U	354	ug/kg	70.8	354
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4
91-94-1	3,3'-Dichlorobenzidine	U	354	ug/kg	106	354
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	354	ug/kg	70.8	354
117-84-0	Di-n-octylphthalate	U	354	ug/kg	70.8	354
205-99-2	Benzo(b)fluoranthene	U	35.4	ug/kg	10.6	35.4
207-08-9	Benzo(k)fluoranthene	U	35.4	ug/kg	10.6	35.4
50-32-8	Benzo(a)pyrene	U	35.4	ug/kg	10.6	35.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4	ug/kg	10.6	35.4
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4
120-82-1	1,2,4-Trichlorobenzene	U	354	ug/kg	70.8	354

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.12	7.54	ug/kg		J
	Unknown Aldol Condensate	3.05	6.03	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507003	Date Received:	06/27/2009 09:05	%Moisture:	5.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6527	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:09	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0110.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
13466-78-9	3-Carene	3.98	5.58	ug/kg	97	NJ
	Unknown	8.22	7.16	ug/kg		J
	Unknown	8.92	5.59	ug/kg		J
112-95-8	Eicosane	12.01	4.84	ug/kg	97	NJ
	Unknown	15.53	4.24	ug/kg		J
	Unknown	18.78	17.9	ug/kg		J
	Unknown	19.56	10.1	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0110.d
Lab Smp Id: 232507003 Client Smp ID: CAMO-09-6527
Inj Date : 01-JUL-2009 11:09
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507003|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	5.87000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.027	4.032	(1.000)	529467	40.0000	
* 29 Naphthalene-d8	136	4.898	4.903	(1.000)	1845453	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1194899	40.0000	
* 67 Phenanthrene-d10	188	7.344	7.345	(1.000)	2343896	40.0000	
* 91 Chrysene-d12	240	9.767	9.771	(1.000)	2244075	40.0000	
* 98 Perylene-d12	264	11.524	11.534	(1.000)	1494482	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.208	(0.798)	809253	69.6109	2460
$ 5 Phenol-d5	99	3.743	3.743	(0.929)	1032103	67.3333	2380
$ 20 Nitrobenzene-d5	82	4.393	4.398	(0.897)	492486	36.0138	1270
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	1182079	38.2515	1350
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	433703	88.9573	3150
$ 81 p-Terphenyl-d14	244	8.726	8.727	(0.894)	1738652	50.6258	1790

ION RATIO REPORT

SV REPORT

Data file: s5g0110.d
Report Date: 07/01/2009 11:28
Lab. ID: 232507003 SampleType: SAMPLE
Injection Date: 01-JUL-2009 11:09
Operator: RMB Instrument: MSD5.i
Sample Info: |232507003|881442|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2499
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	62498	3.74	3.81	80-120	100	(T)
93	767	3.70	3.81	175-235	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	71048	4.39	4.27	80-120	100	(T)
42	47152	4.39	4.27	58-118	66	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	619	4.78	4.68	80-120	100	(T)
122	164	4.79	4.68	53-113	27	(QT)
77	757	4.85	4.68	49-109	122	(QT)
31 4-Chloroaniline			CAS#: 106-47-8			
127	468	4.94	4.93	80-120	100	( )
65	254	4.95	4.93	2- 62	54	( )
40 2-Chloronaphthalene			CAS#: 91-58-7			
162	10162	5.89	5.76	80-120	100	(T)
164	607	5.89	5.76	4- 64	6	(T)
127	905	5.89	5.76	8- 68	9	(T)
41 m-Nitroaniline			CAS#: 99-09-2			
138	247	6.16	6.11	80-120	100	( )
92	6901	6.16	6.11	83-143	2789	(Q)
108	25272	6.16	6.11	0- 41	10213	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
43 Dimethylphthalate			CAS#: 131-11-3			
163	261673	6.16	5.92	80-120	100	(T)
164	1194899	6.16	5.92	0- 40	457	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	157105	6.16	5.98	80-120	100	(T)
63	2796	6.16	5.97	56-116	2	(QT)
48 2,4-Dinitrophenol			CAS#: 51-28-5			
184	277	6.24	6.18	80-120	100	( )
154	226	6.18	6.19	630-690	82	(Q)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	157017	6.16	6.28	80-120	100	(T)
89	2751	6.16	6.28	39- 99	2	(QT)
63	2796	6.16	6.28	21- 81	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	18220	6.76	6.58	80-120	100	(T)
165	18038	6.76	6.58	61-121	99	(T)
167	6557	6.76	6.58	0- 44	36	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1421	6.76	6.59	80-120	100	(T)
105	2601	6.76	6.59	4- 64	183	(QT)
51	2925	6.76	6.59	39- 99	206	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	30799	6.77	6.94	80-120	100	(T)
141	152967	6.76	6.94	35- 95	497	(QT)
250	61823	6.77	6.94	69-129	201	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0110.d
Lab Smp Id: 232507003 Client Smp ID: CAMO-09-6527
Inj Date : 01-JUL-2009 11:09
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507003|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	5.87000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.027	3399784	40.000
* 67 Phenanthrene-d10	7.344	5787973	40.000
* 91 Chrysene-d12	9.767	6015587	40.000
* 98 Perylene-d12	11.524	3706338	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.120	640685	7.53794971	267	0		0	10
Unknown Aldol Condensate				CAS #:			
3.049	512604	6.03102072	213	0		0	10
3-Carene				CAS #: 13466-78-9			
3.983	474653	5.58450077	198	97	NIST05.L	15156	10
Unknown				CAS #:			
8.221	1035950	7.15932966	253	0		0	67
Unknown				CAS #:			
8.924	840879	5.59133254	198	0		0	91
Eicosane				CAS #: 112-95-8			
12.010	448430	4.83960328	171	97	NIST05.L	113488	98
Unknown				CAS #:			
15.526	392436	4.23529977	150	0		0	98
Unknown				CAS #:			
18.776	1657202	17.8850557	633	0		0	98
Unknown				CAS #:			
19.561	938602	10.1296934	358	0		0	98

Data File: /chem/MSD5.i/s070109.b/s5g0110.d
Date : 01-JUL-2009 11:09
Client ID: CAMO-09-6527
Sample Info: 1232507003188144211SVMFI1ILANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

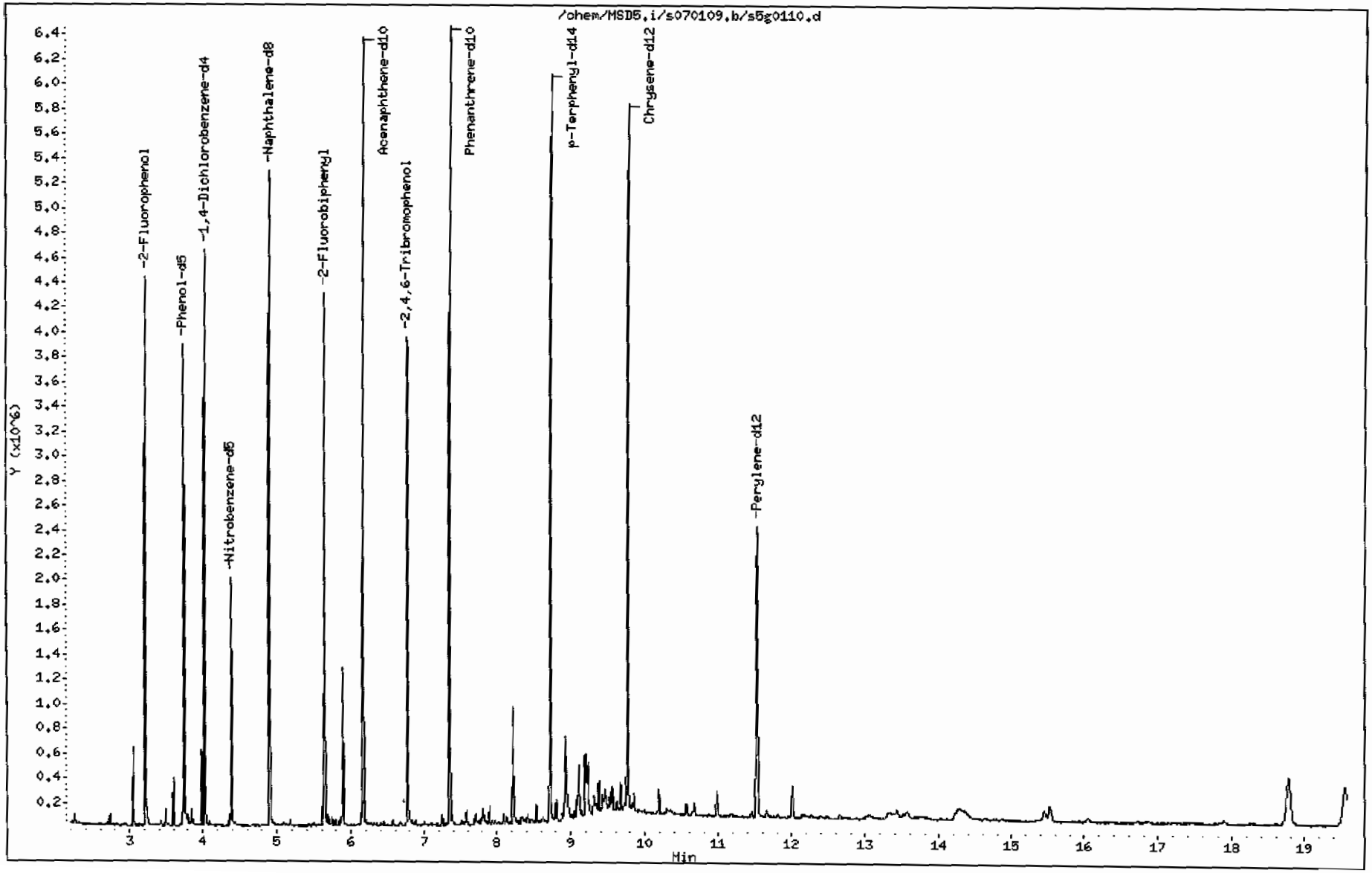

Data File: /chem/MSD5.i/s070109.b/s5g0110.d

Date : 01-JUL-2009 11:09

Client ID: CAMD-09-6527

Instrument: MSD5.i

Sample Info: |2325070031881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	50	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	36	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4658	33	C5H12O2	104

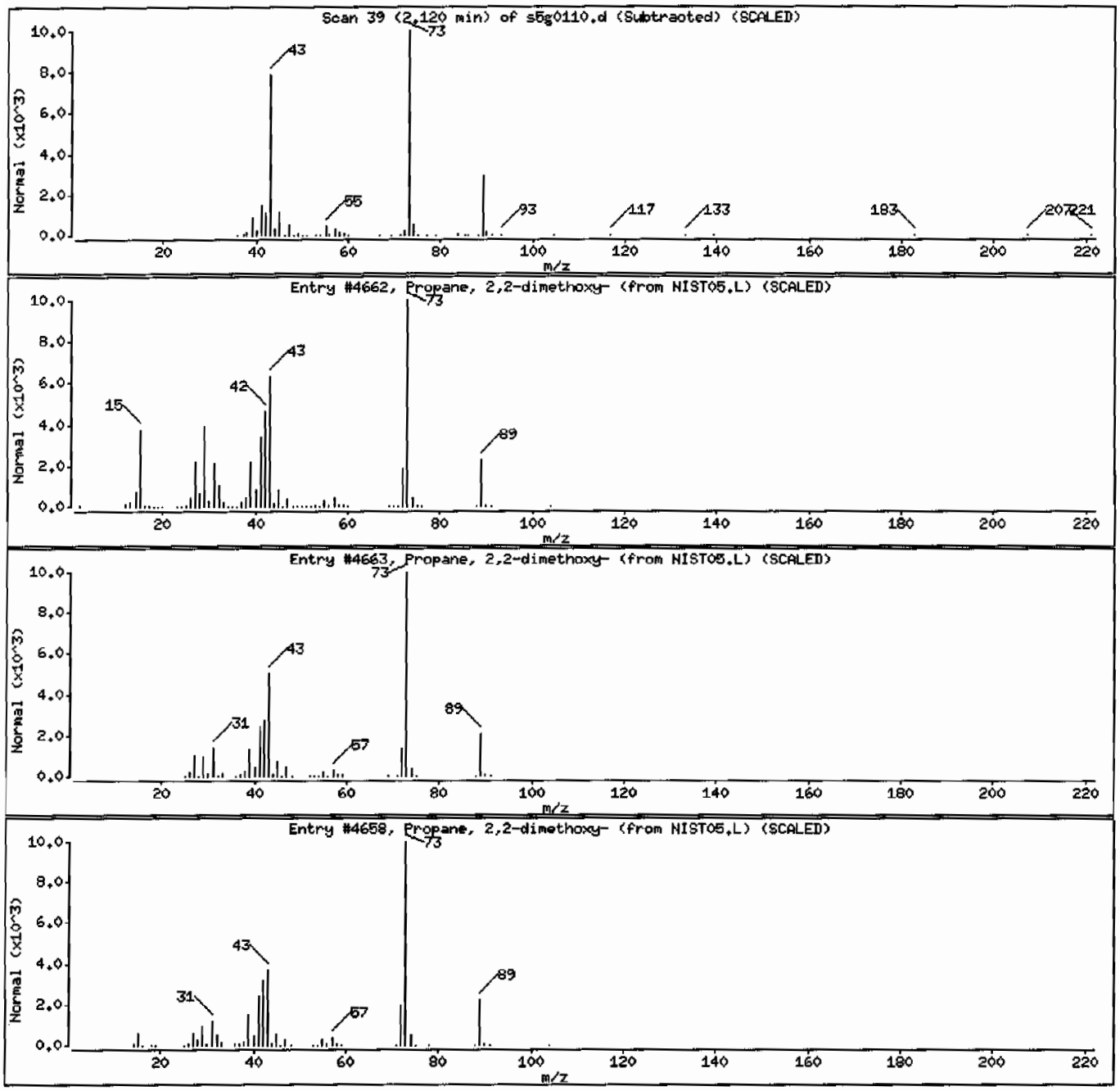

Data File: /chem/MSD5.i/s070109.b/s5g0110.d

Date : 01-JUL-2009 11:09

Client ID: CAMO-09-6527

Instrument: MSD5.i

Sample Info: |2325070031881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7977	38	C6H12O2	116

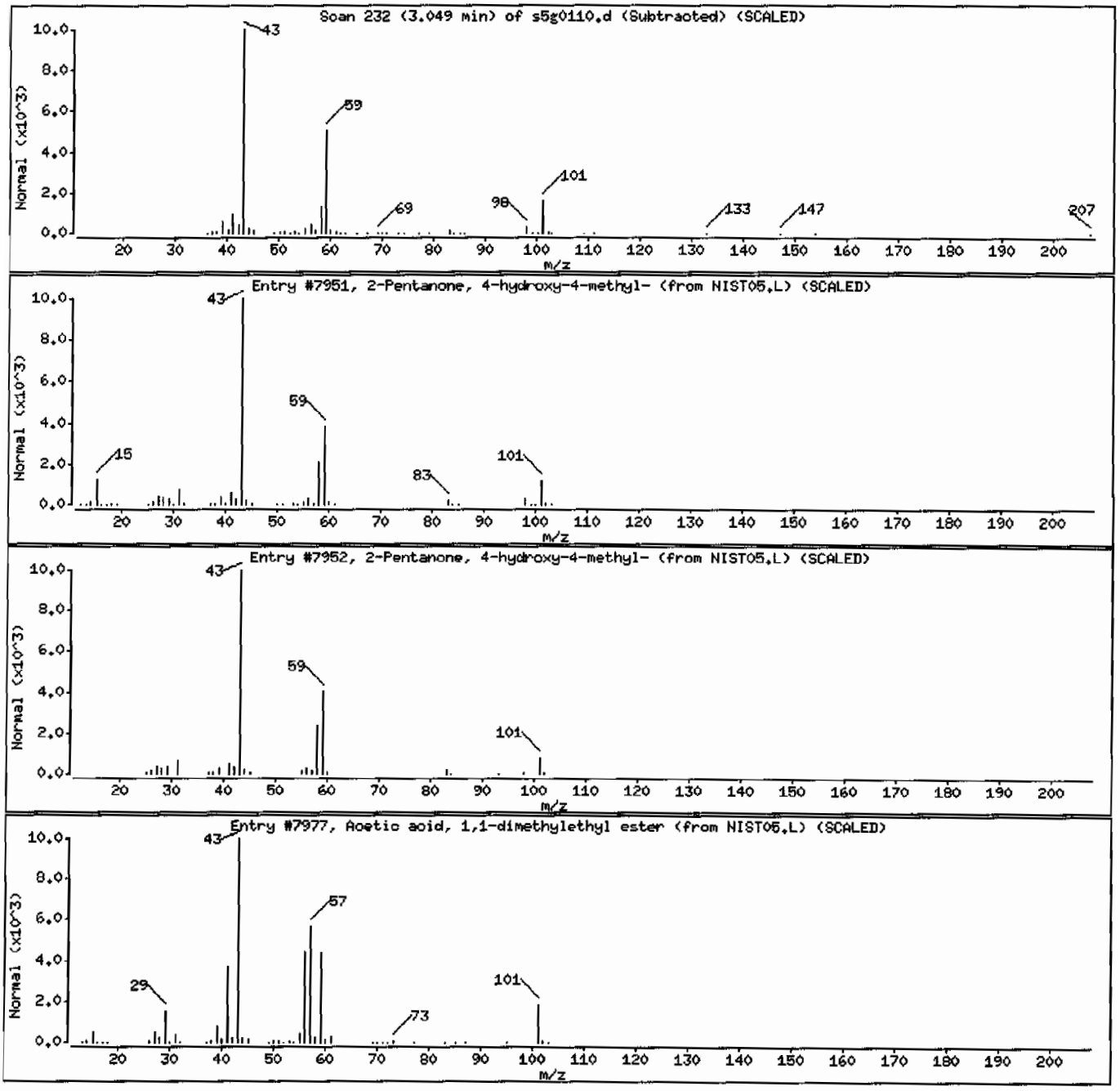

Data File: /chem/MSD5.i/s070109.b/s5g0110.d

Date : 01-JUL-2009 11:09

Client ID: CAMO-09-6527 Instrument: MSD5.i

Sample Info: |232507003|881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
3-Carene	13466-78-9	NIST05.L	15156	97	C10H16	136
3-Carene	13466-78-9	NIST05.L	15157	95	C10H16	136
1R-.alpha.-Pinene	7785-70-8	NIST05.L	15186	95	C10H16	136

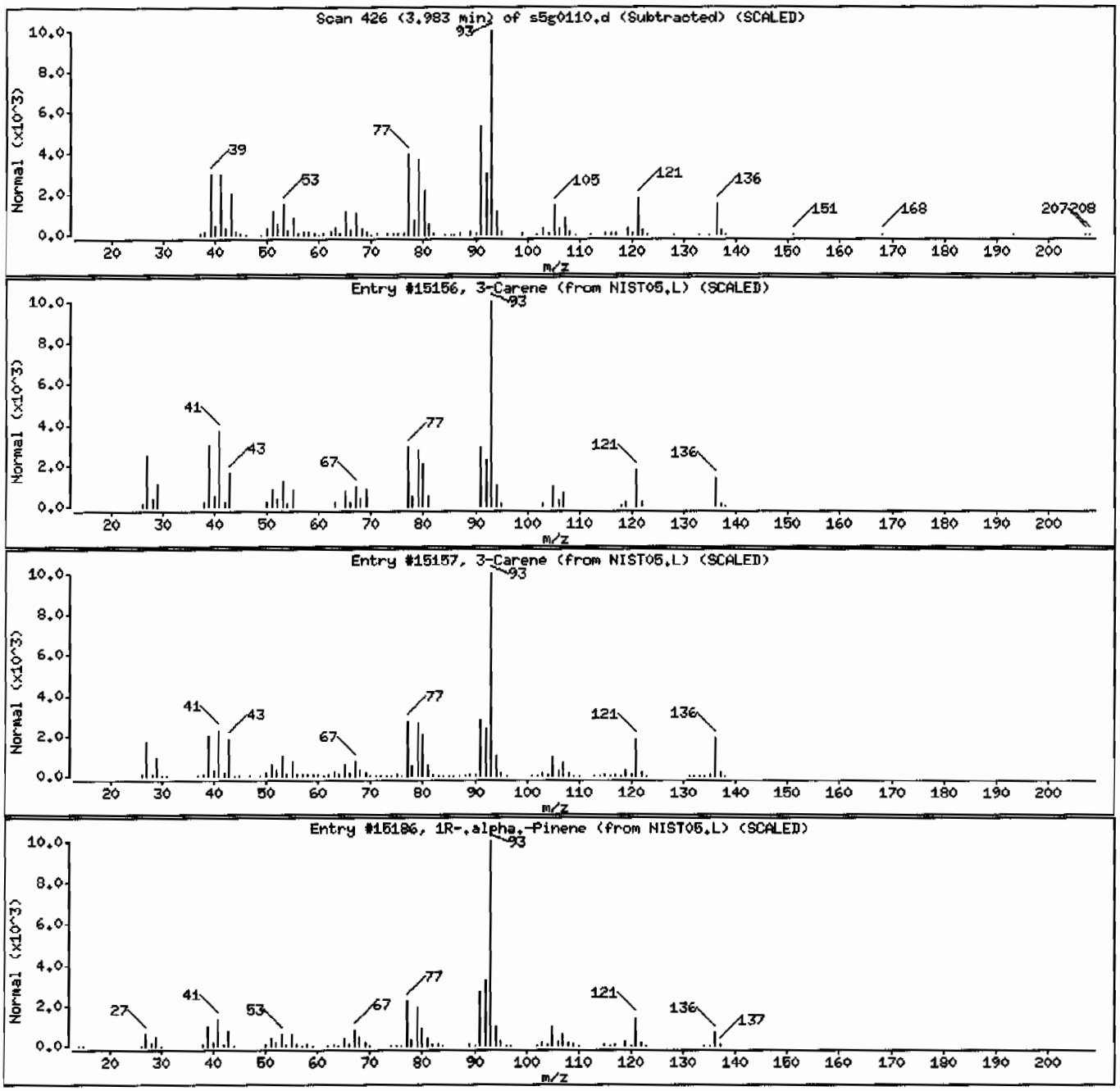

Data File: /chem/MSD5.i/s070109.b/s5g0110.d

Date : 01-JUL-2009 11:09

Client ID: CAMO-09-6527 Instrument: MSD5.i

Sample Info: |2325070031881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Kaur-16-ene, (8.beta.,13.beta.)-	20070-61-5	NIST05.L	107067	53	C20H32	272
5.alpha.-Pregnan-20-one, 12.beta.-hydrox	5618-22-4	NIST05.L	135956	50	C21H3402	318
5.alpha.,17.alpha.-Pregnan-20-one, 12.be	5618-23-5	NIST05.L	135970	50	C21H3402	318

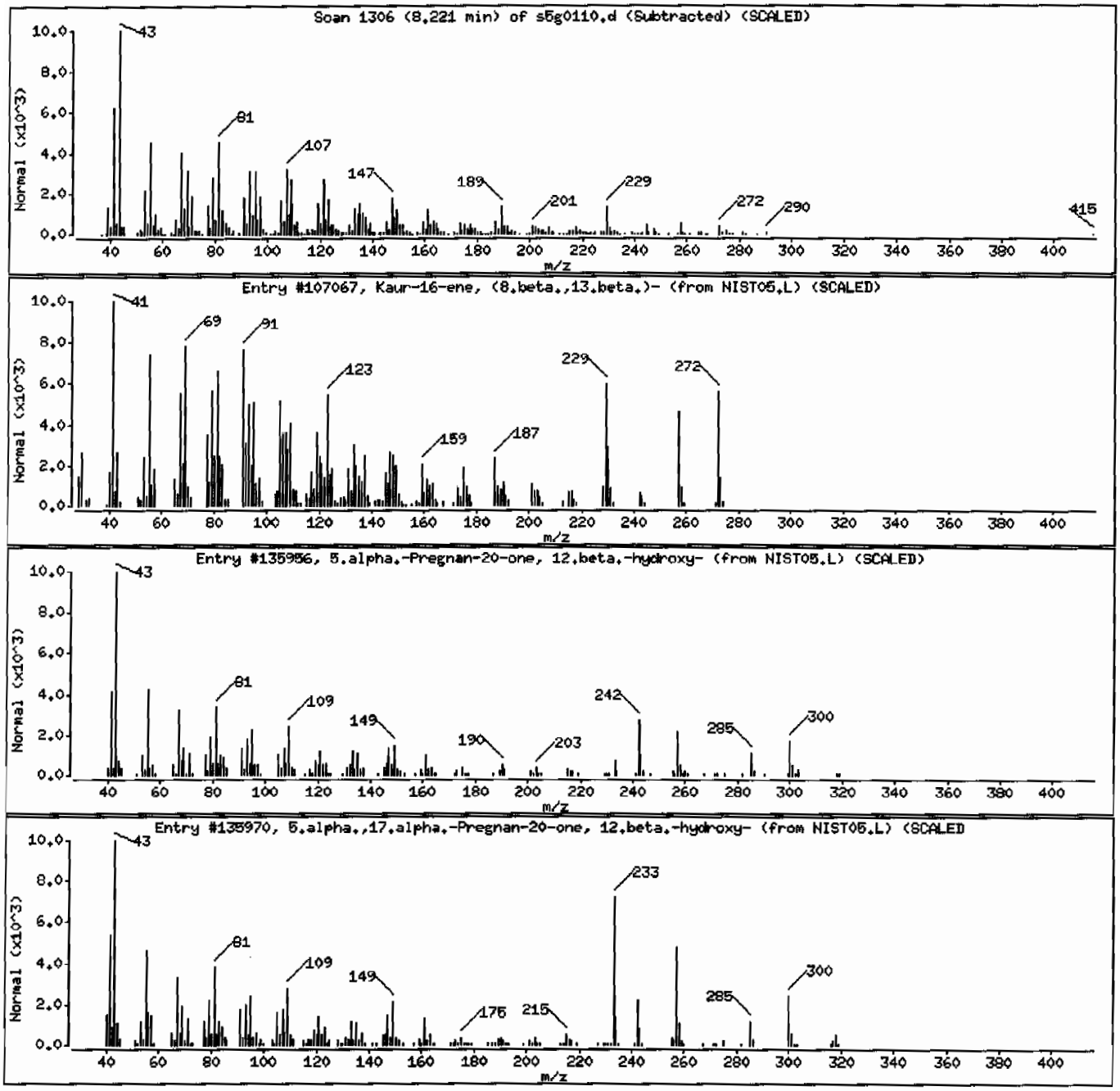

Data File: /chem/MSD5.i/s070109.b/s5g0110.d

Date : 01-JUL-2009 11:09

Client ID: CAMO-09-6527 Instrument: MSD5.i

Sample Info: |2325070031881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclopentaneacetaldehyde, 2-formyl-3-met	5951-57-5	NIST05.L	33324	30	C10H14O2	166
Benzene, 1-(5,5-dimethyl-1-cyclopenten-1	39877-93-5	NIST05.L	58502	22	C14H18O	202
Methanol, tris(methylenecyclopropyl)-	1000152-74-7	NIST05.L	48714	22	C13H16O	188

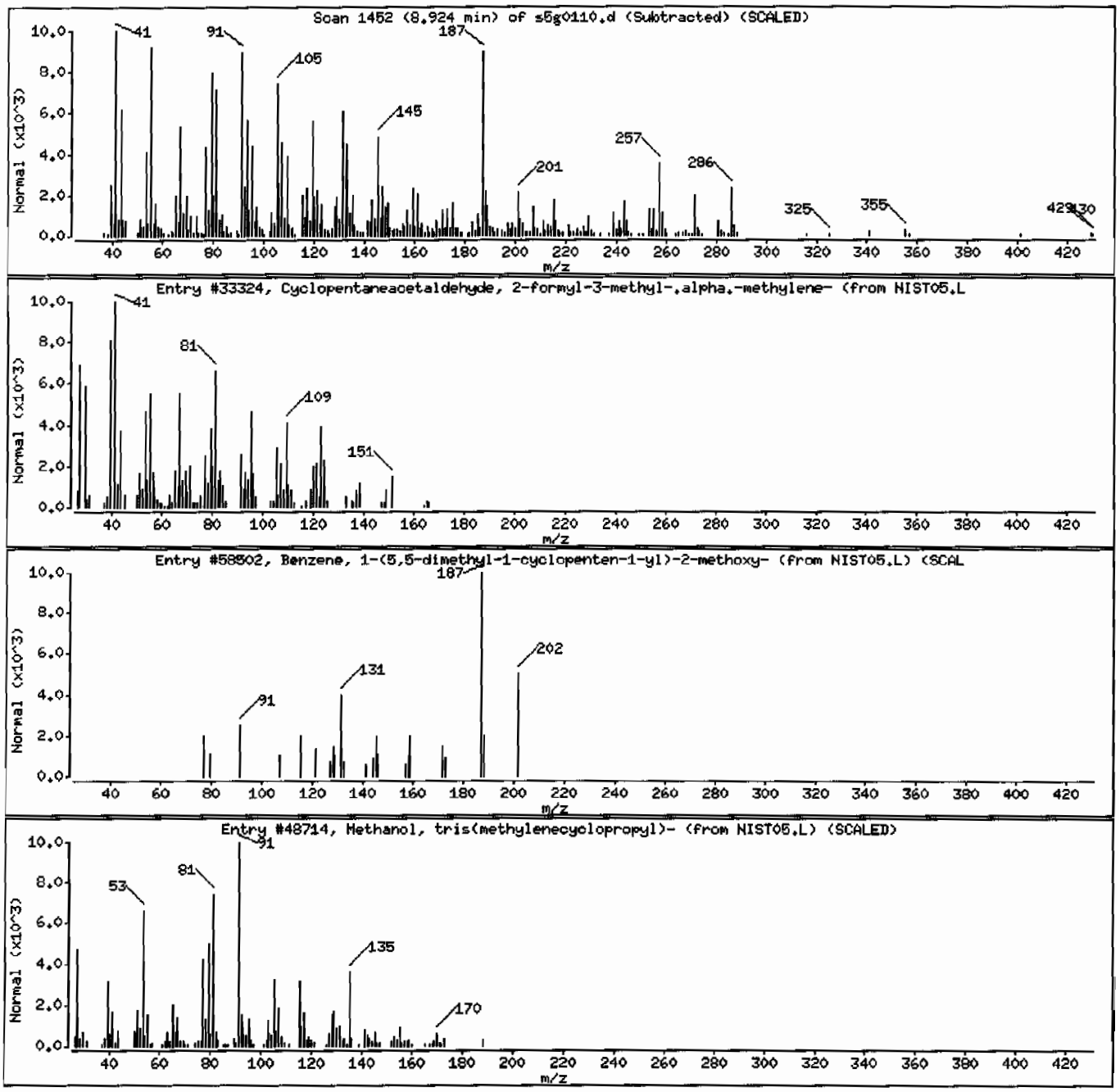

Data File: /chem/MSD5.i/s070109.b/s5g0110.d

Date : 01-JUL-2009 11:09

Client ID: CAMO-09-6527 Instrument: MSD5.i

Sample Info: |2325070031881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosane	112-95-8	NIST05.L	113488	97	C20H42	282
Eicosane	112-95-8	NIST05.L	113492	96	C20H42	282
Eicosane	112-95-8	NIST05.L	113489	95	C20H42	282

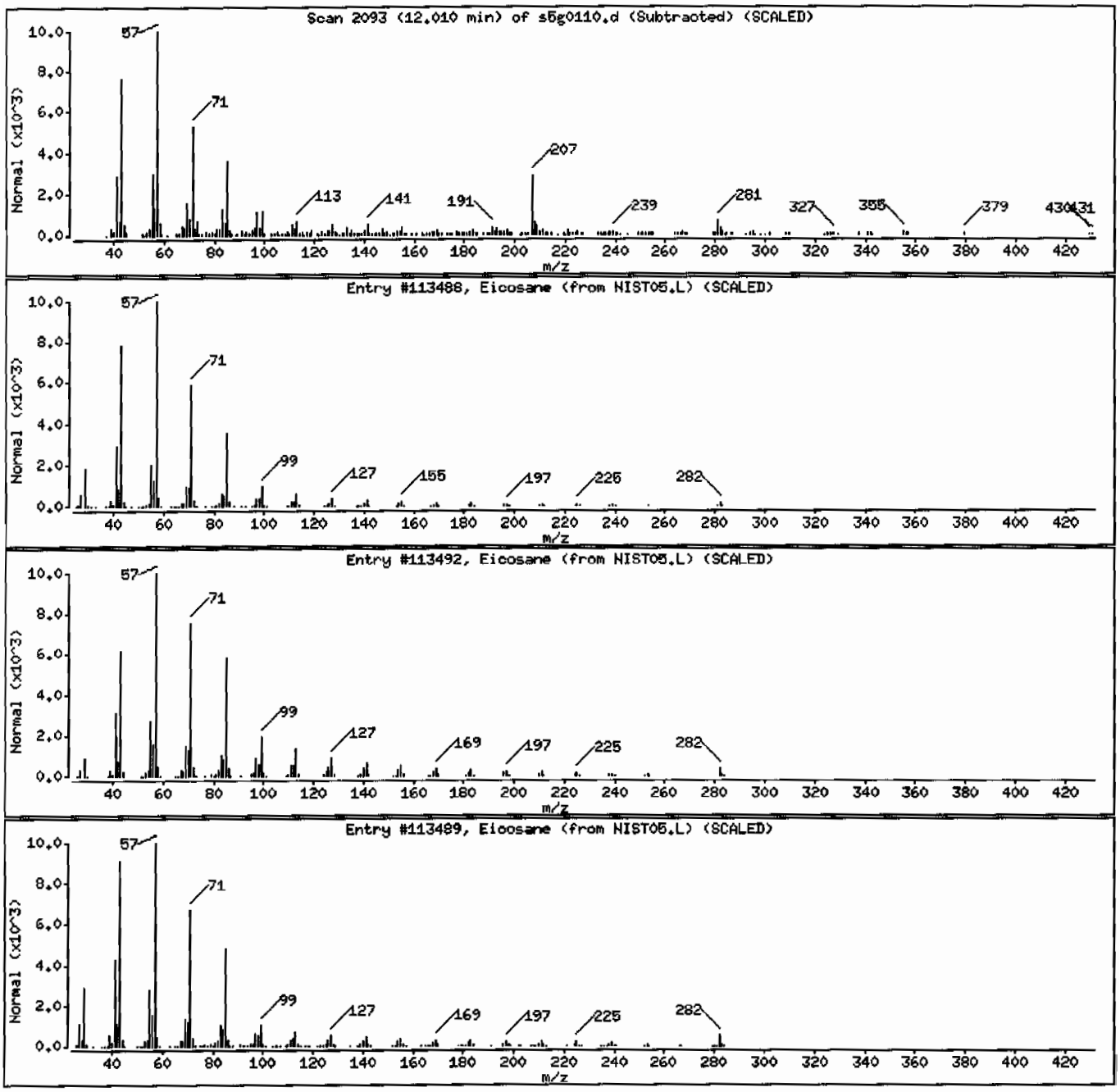

Data File: /chem/MSD5.i/s070109.b/s5g0110.d

Date : 01-JUL-2009 11:09

Client ID: CAMO-09-6527 Instrument: MSD5.i

Sample Info: |2325070031881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Pyrene, hexadecahydro-	2435-85-0	NIST05.L	70007	60	C16H26	218
8-Amino-6,7-dimethoxy-4-methylquinoline	1000213-07-2	NIST05.L	69664	47	C12H14N2O2	218
Pyrrolo[2,3-b]indole, 1,2,3,3a,8,8a-hexa	46479-70-3	NIST05.L	69789	46	C13H18N2O	218

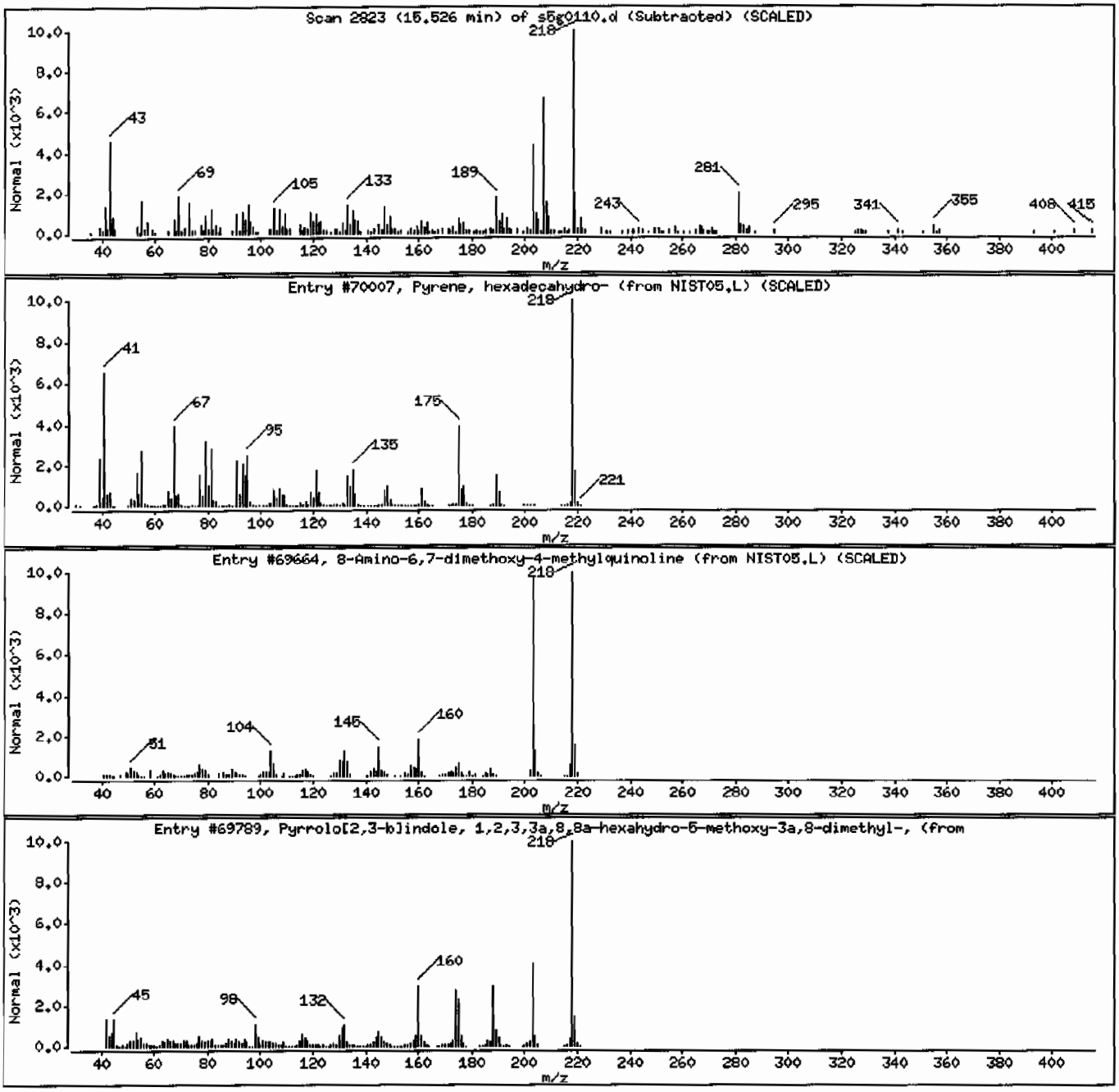

Data File: /chem/MSD5.i/s070109.b/s5g0110.d

Date : 01-JUL-2009 11:09

Client ID: CAMO-09-6527 Instrument: MSD5.i

Sample Info: |232507003|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Hydroxy-5-morpholinomethyl-2,4,6-cyclo	1000242-00-2	NIST05.L	71880	38	C12H15NO3	221
1,3-Benzodioxole, 5-[3-acetaminopropyl]-	1000124-33-0	NIST05.L	71846	27	C12H15NO3	221
3,5-di-tert-Butyl-4-hydroxybenzyl alcoho	88-26-6	NIST05.L	82483	27	C15H24O2	236

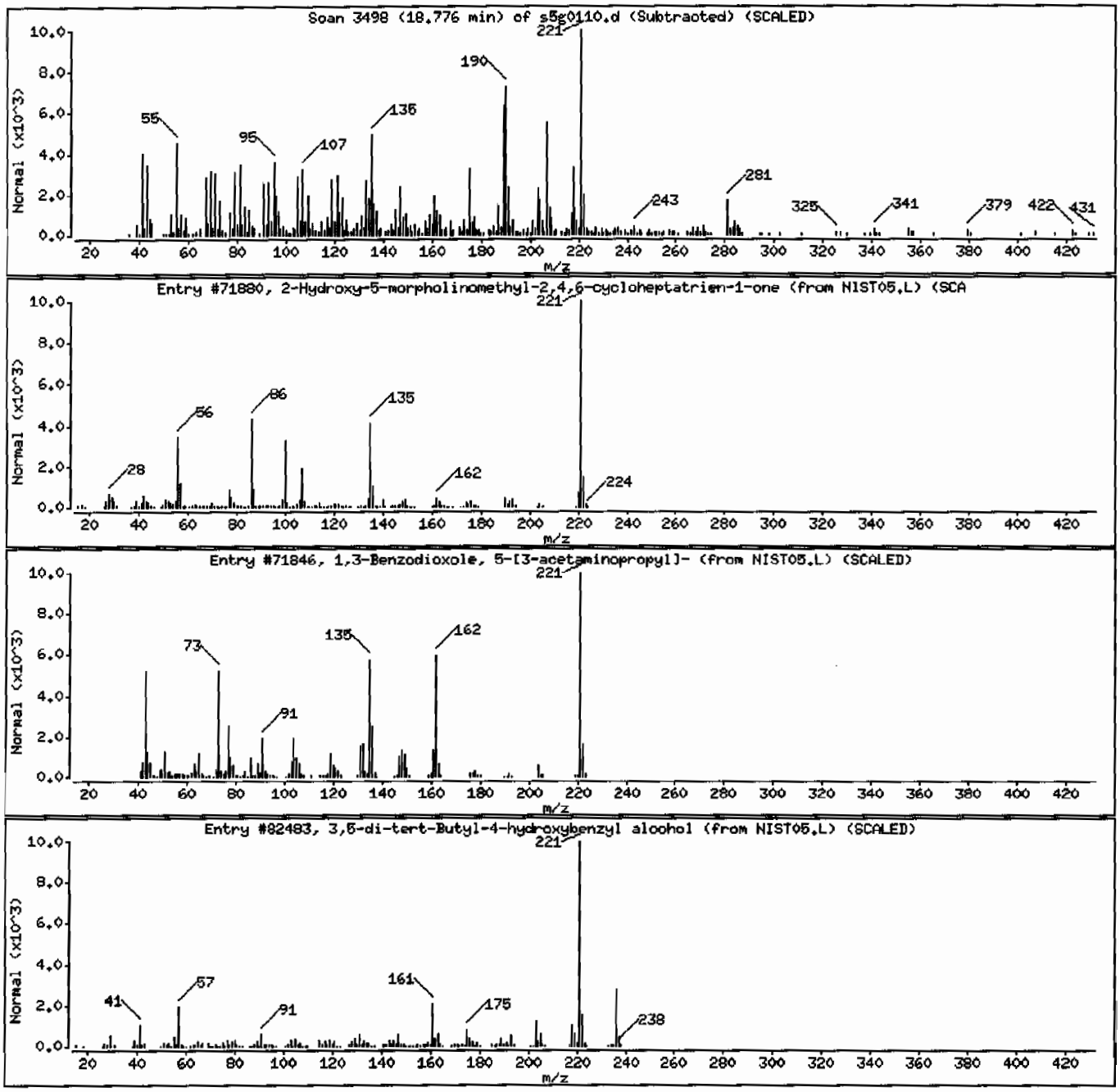

Data File: /chem/MSD5.i/s070109.b/s5g0110.d

Date : 01-JUL-2009 11:09

Client ID: CAMO-09-6527 Instrument: MSD5.i

Sample Info: 1232507003188144211SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
3-Methoxymethyl-2,5,5,8a-tetramethyl-6,7	64201-73-6	NIST05.L	82517	35	C15H2402	236
3,3,7,11-Tetramethyltricyclo[5.4.0.0(4,1	117591-80-7	NIST05.L	72963	30	C15H260	222
1,3-Benzodioxole, 5-[3-aoetaminopropyl]-	1000124-33-0	NIST05.L	71846	25	C12H15NO3	221

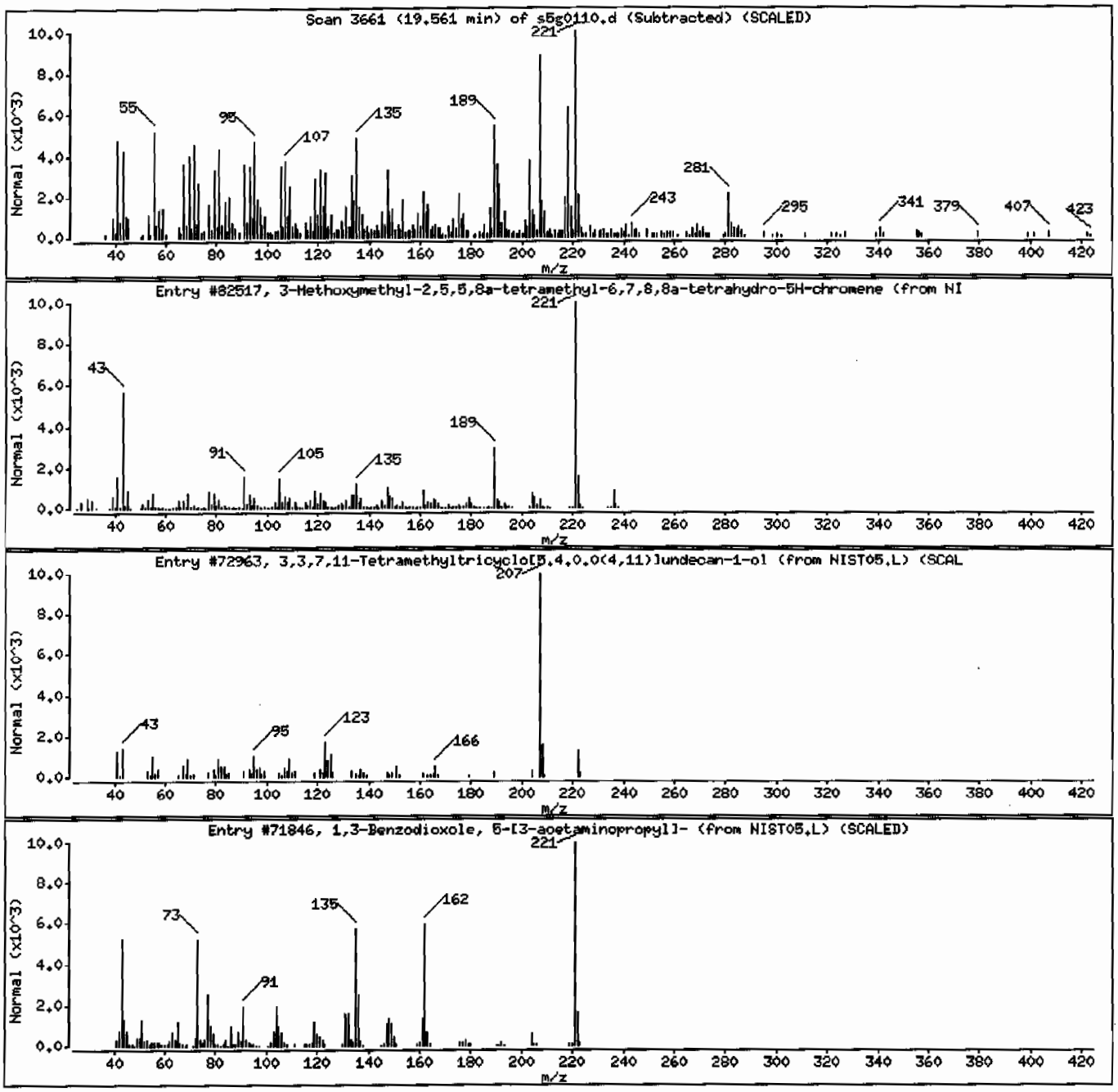

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507005	Date Received:	06/27/2009 09:05	%Moisture:	5.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6528	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 12:05	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0112.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	354	ug/kg	70.7	354
108-95-2	Phenol	U	354	ug/kg	70.7	354
95-57-8	2-Chlorophenol	U	354	ug/kg	70.7	354
106-46-7	1,4-Dichlorobenzene	U	354	ug/kg	70.7	354
621-64-7	N-Nitrosodipropylamine	U	354	ug/kg	70.7	354
59-50-7	4-Chloro-3-methylphenol	U	354	ug/kg	70.7	354
83-32-9	Acenaphthene	U	35.4	ug/kg	11.7	35.4
121-14-2	2,4-Dinitrotoluene	U	354	ug/kg	35.4	354
100-02-7	4-Nitrophenol	U	354	ug/kg	117	354
87-86-5	Pentachlorophenol	U	354	ug/kg	88.4	354
129-00-0	Pyrene	J	15.2	ug/kg	10.6	35.4
110-86-1	Pyridine	U	354	ug/kg	70.7	354
62-53-3	Aniline	U	354	ug/kg	106	354
111-44-4	bis(2-Chloroethyl) ether	U	354	ug/kg	70.7	354
541-73-1	1,3-Dichlorobenzene	U	354	ug/kg	70.7	354
100-51-6	Benzyl alcohol	U	354	ug/kg	106	354
95-50-1	1,2-Dichlorobenzene	U	354	ug/kg	70.7	354
108-60-1	bis(2-Chloroisopropyl)ether	U	354	ug/kg	70.7	354
95-48-7	o-Cresol	U	354	ug/kg	70.7	354
65794-96-9	m,p-Cresols	U	354	ug/kg	106	354
67-72-1	Hexachloroethane	U	354	ug/kg	70.7	354
98-95-3	Nitrobenzene	U	354	ug/kg	70.7	354
78-59-1	Isophorone	U	354	ug/kg	70.7	354
88-75-5	2-Nitrophenol	U	354	ug/kg	70.7	354
105-67-9	2,4-Dimethylphenol	U	354	ug/kg	124	354
111-91-1	bis(2-Chloroethoxy)methane	U	354	ug/kg	70.7	354
120-83-2	2,4-Dichlorophenol	U	354	ug/kg	70.7	354
65-85-0	Benzoic acid	U	707	ug/kg	177	707
91-20-3	Naphthalene	U	35.4	ug/kg	10.6	35.4
106-47-8	4-Chloroaniline	U	354	ug/kg	70.7	354
87-68-3	Hexachlorobutadiene	U	354	ug/kg	70.7	354
91-57-6	2-Methylnaphthalene	U	35.4	ug/kg	7.07	35.4
77-47-4	Hexachlorocyclopentadiene	U	354	ug/kg	70.7	354
88-06-2	2,4,6-Trichlorophenol	U	354	ug/kg	70.7	354
95-95-4	2,4,5-Trichlorophenol	U	354	ug/kg	70.7	354
91-58-7	2-Chloronaphthalene	U	35.4	ug/kg	11.7	35.4
88-74-4	2-Nitroaniline	U	354	ug/kg	70.7	354
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	354	ug/kg	70.7	354

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6528	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 12:05	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0112.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	354	ug/kg	70.7	354
606-20-2	2,6-Dinitrotoluene	U	354	ug/kg	35.4	354
208-96-8	Acenaphthylene	U	35.4	ug/kg	10.6	35.4
51-28-5	2,4-Dinitrophenol	U	707	ug/kg	134	707
132-64-9	Dibenzofuran	U	354	ug/kg	70.7	354
84-66-2	Diethylphthalate	U	354	ug/kg	70.7	354
86-73-7	Fluorene	U	35.4	ug/kg	10.6	35.4
7005-72-3	4-Chlorophenylphenylether	U	354	ug/kg	70.7	354
534-52-1	2-Methyl-4,6-dinitrophenol	U	354	ug/kg	70.7	354
100-01-6	4-Nitroaniline	U	354	ug/kg	106	354
	p-Nitroaniline					
122-39-4	Diphenylamine	U	354	ug/kg	70.7	354
122-66-7	Azobenzene	U	354	ug/kg	70.7	354
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	354	ug/kg	70.7	354
118-74-1	Hexachlorobenzene	U	354	ug/kg	70.7	354
85-01-8	Phenanthrene	U	35.4	ug/kg	10.6	35.4
120-12-7	Anthracene	U	35.4	ug/kg	7.07	35.4
84-74-2	Di-n-butylphthalate	U	354	ug/kg	70.7	354
206-44-0	Fluoranthene	J	15.3	ug/kg	10.6	35.4
85-68-7	Butylbenzylphthalate	U	354	ug/kg	70.7	354
56-55-3	Benzo(a)anthracene	U	35.4	ug/kg	10.6	35.4
91-94-1	3,3'-Dichlorobenzidine	U	354	ug/kg	106	354
218-01-9	Chrysene	U	35.4	ug/kg	10.6	35.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	354	ug/kg	70.7	354
117-84-0	Di-n-octylphthalate	U	354	ug/kg	70.7	354
205-99-2	Benzo(b)fluoranthene	U	35.4	ug/kg	10.6	35.4
207-08-9	Benzo(k)fluoranthene	U	35.4	ug/kg	10.6	35.4
50-32-8	Benzo(a)pyrene	U	35.4	ug/kg	10.6	35.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.4	ug/kg	10.6	35.4
53-70-3	Dibenzo(a,h)anthracene	U	35.4	ug/kg	10.6	35.4
191-24-2	Benzo(ghi)perylene	U	35.4	ug/kg	10.6	35.4
120-82-1	1,2,4-Trichlorobenzene	U	354	ug/kg	70.7	354

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	209	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0112.d
Lab Smp Id: 232507005 Client Smp ID: CAMO-09-6528
Inj Date : 01-JUL-2009 12:05
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507005|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	5.76000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.027	4.032	(1.000)	520651	40.0000	
* 29 Naphthalene-d8	136	4.898	4.903	(1.000)	1818007	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1174139	40.0000	
* 67 Phenanthrene-d10	188	7.344	7.345	(1.000)	2256725	40.0000	
* 91 Chrysene-d12	240	9.767	9.771	(1.000)	1857762	40.0000	
* 98 Perylene-d12	264	11.524	11.534	(1.000)	1065380	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.208	(0.798)	747187	65.3603	2310
$ 5 Phenol-d5	99	3.743	3.743	(0.929)	980986	65.0822	2300
$ 20 Nitrobenzene-d5	82	4.393	4.398	(0.897)	449737	33.3842	1180
$ 39 2-Fluorobiphenyl	172	5.640	5.645	(0.916)	1094196	36.0337	1270
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	383403	80.0307	2830
$ 81 p-Terphenyl-d14	244	8.726	8.727	(0.894)	1523272	53.5777	1900

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.625	8.630	(0.883)	17428	0.43003	15.2(a)
76 Fluoranthene	202	8.409	8.414	(1.145)	20892	0.43381	15.3(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0112.d
Report Date: 07/01/2009 13:05
Lab. ID: 232507005 SampleType: SAMPLE
Injection Date: 01-JUL-2009 12:05
Operator: RMB Instrument: MSD5.i
Sample Info: |232507005|881442|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2499
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	59927	3.74	3.81	80-120	100	(T)
93	3364	3.80	3.81	175-235	6	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	65155	4.39	4.27	80-120	100	(T)
42	45177	4.39	4.27	58-118	69	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	247	4.75	4.68	80-120	100	(T)
122	705	4.90	4.68	53-113	285	(QT)
77	664	4.77	4.68	49-109	268	(QT)
31 4-Chloroaniline			CAS#: 106-47-8			
127	197	4.93	4.93	80-120	100	( )
65	348	4.93	4.93	2- 62	177	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	303	6.16	6.11	80-120	100	( )
92	6611	6.16	6.11	83-143	2179	(Q)
108	24784	6.16	6.11	0- 41	8168	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	254416	6.16	5.92	80-120	100	(T)
164	1174139	6.16	5.92	0- 40	462	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	157192	6.16	5.98	80-120	100	(T)
63	2433	6.16	5.97	56-116	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	157192	6.16	6.28	80-120	100	(T)
89	2516	6.16	6.28	39- 99	2	(QT)
63	2433	6.16	6.28	21- 81	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	16107	6.76	6.58	80-120	100	(T)
165	16202	6.76	6.58	61-121	101	(T)
167	6315	6.76	6.58	0- 44	39	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1304	6.76	6.59	80-120	100	(T)
105	2566	6.77	6.59	4- 64	197	(QT)
51	2357	6.76	6.59	39- 99	181	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	27298	6.76	6.94	80-120	100	(T)
141	137080	6.76	6.94	35- 95	502	(QT)
250	55867	6.76	6.94	69-129	205	(QT)
76 Fluoranthene			CAS#: 206-44-0			
202	20892	8.41	8.41	80-120	100	( )
203	4130	8.41	8.41	0- 48	20	( )
101	1817	8.41	8.41	0- 39	9	( )
79 Pyrene			CAS#: 129-00-0			
202	17428	8.63	8.63	80-120	100	( )
200	4740	8.63	8.63	0- 51	27	( )
101	2008	8.63	8.63	0- 41	12	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	16883	9.75	9.76	80-120	100	( )
226	2796	9.75	9.76	0- 57	17	( )
229	4523	9.76	9.76	0- 51	27	( )
92 Chrysene			CAS#: 218-01-9			
228	16883	9.75	9.80	80-120	100	( )
229	4883	9.76	9.80	0- 50	29	( )
226	2796	9.75	9.80	0- 59	17	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	9695	10.98	10.98	80-120	100	( )
253	1530	10.98	10.98	0- 52	16	( )
125	1149	10.98	10.98	0- 38	12	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	9695	10.98	11.02	80-120	100	( )
253	1673	10.98	11.02	0- 53	17	( )
125	1180	10.98	11.02	0- 38	12	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	7508	11.44	11.45	80-120	100	( )
253	1817	11.43	11.45	0- 52	24	( )
125	590	11.44	11.45	0- 30	8	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0112.d
Lab Smp Id: 232507005 Client Smp ID: CAMO-09-6528
Inj Date : 01-JUL-2009 12:05
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507005|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	5.76000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.027	3301544	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.044	487887	5.91101036	209	0		0	10

Data File: /chem/MSD5.i/s070109.b/s5g0112.d
Date : 01-JUL-2009 12:05
Client ID: CAMO-09-6528
Sample Info: 1232507005188144211SVMF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

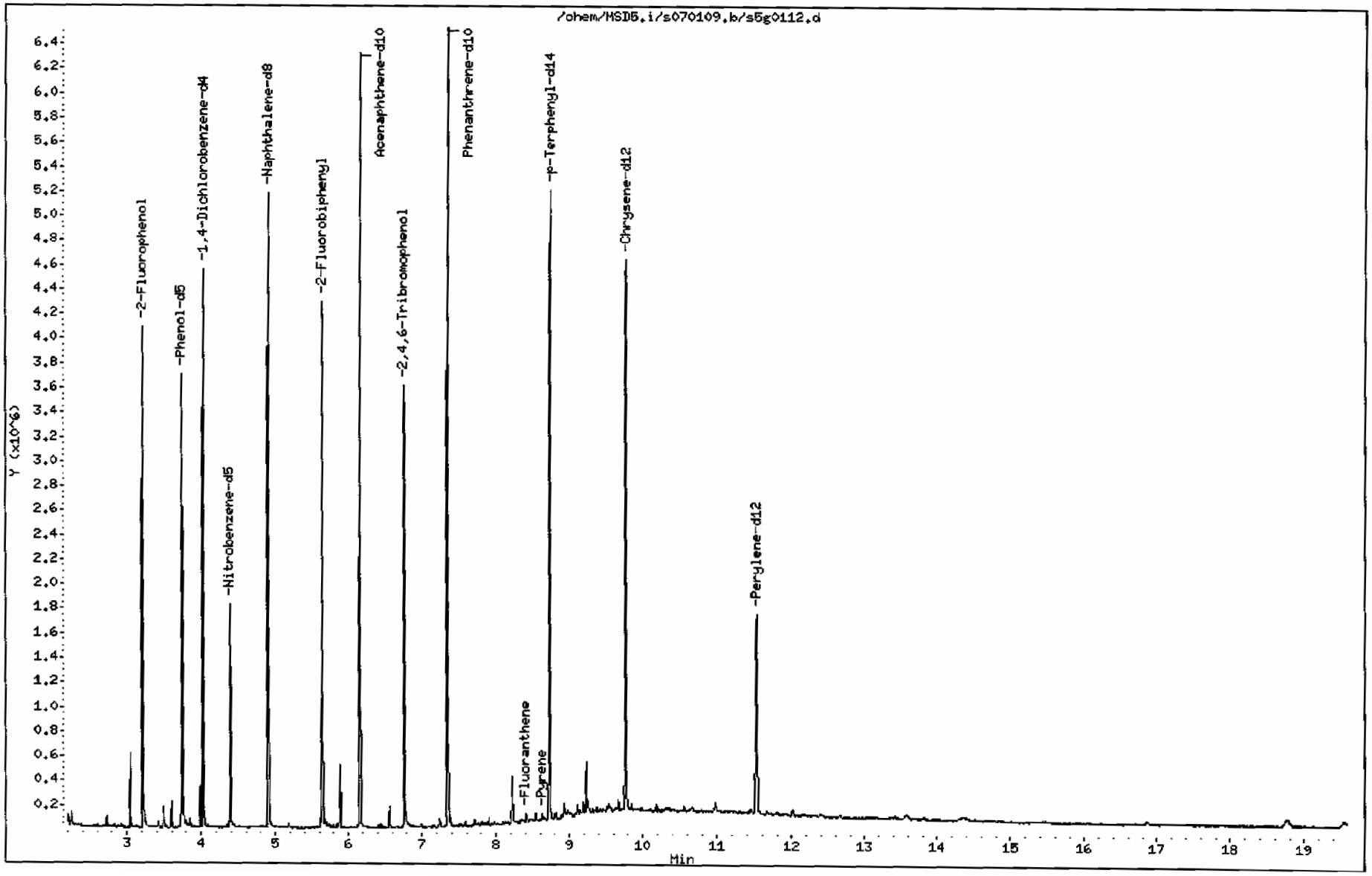

Data File: /chem/MSD5.i/s070109.b/s5g0112.d

Date : 01-JUL-2009 12:05

Client ID: CAMO-09-6528

Instrument: MSD5.i

Sample Info: |232507005|881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 15.2 ug/Kg

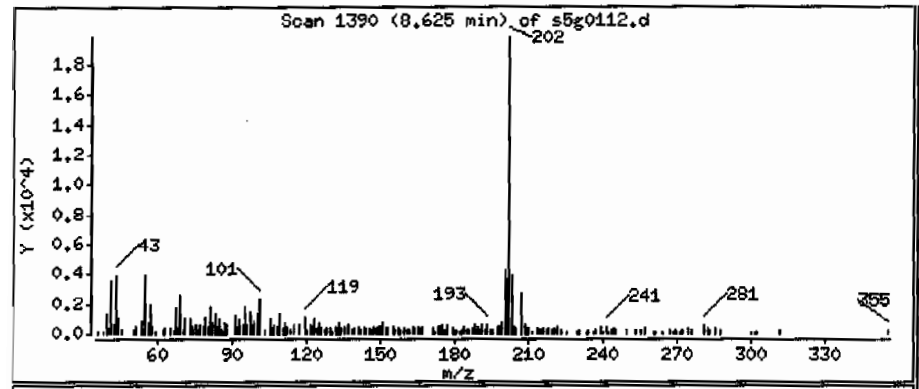

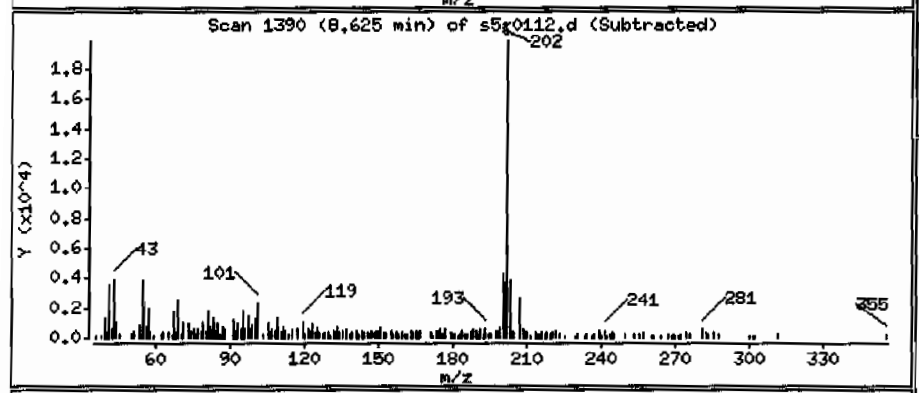

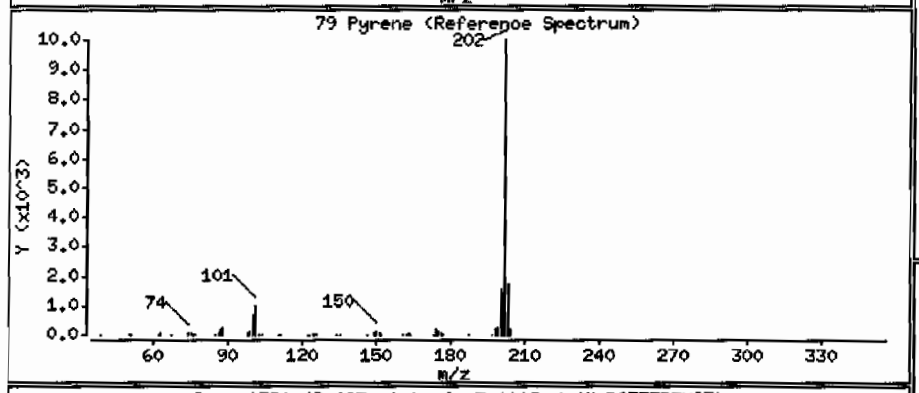

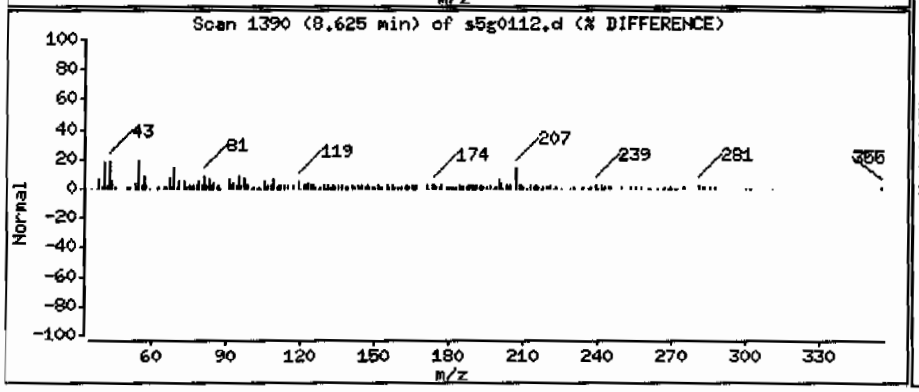

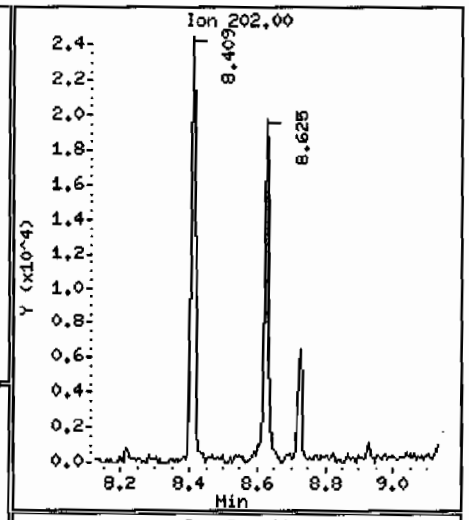

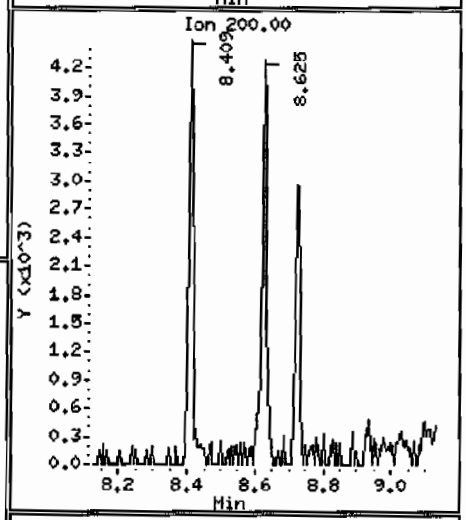

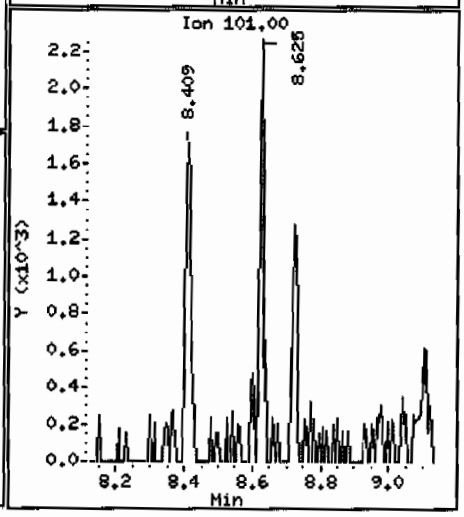

Data File: /chem/MSD5.i/s070109.b/s5g0112.d

Date : 01-JUL-2009 12:05

Client ID: CAMO-09-6528

Instrument: MSD5.i

Sample Info: 1232507005188144211ISVMFI1ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 15.3 ug/Kg

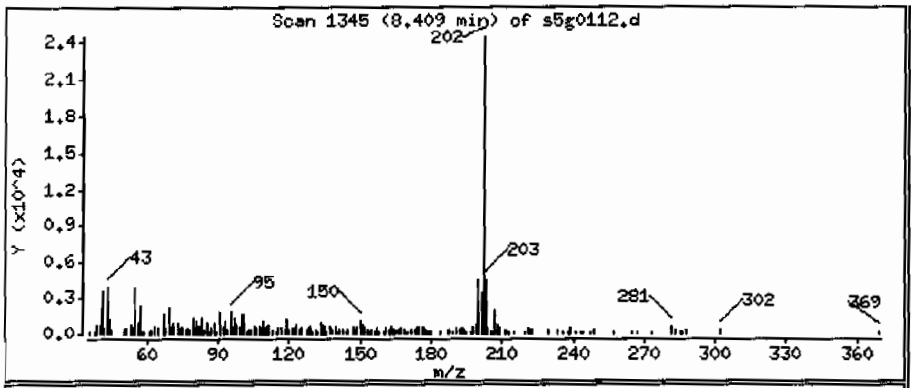

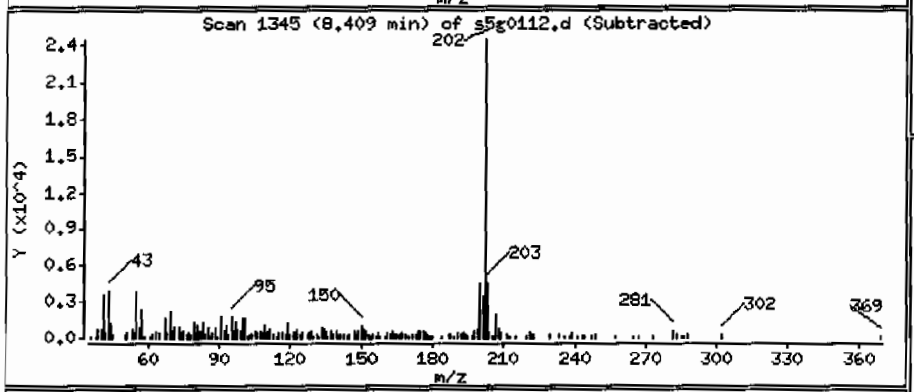

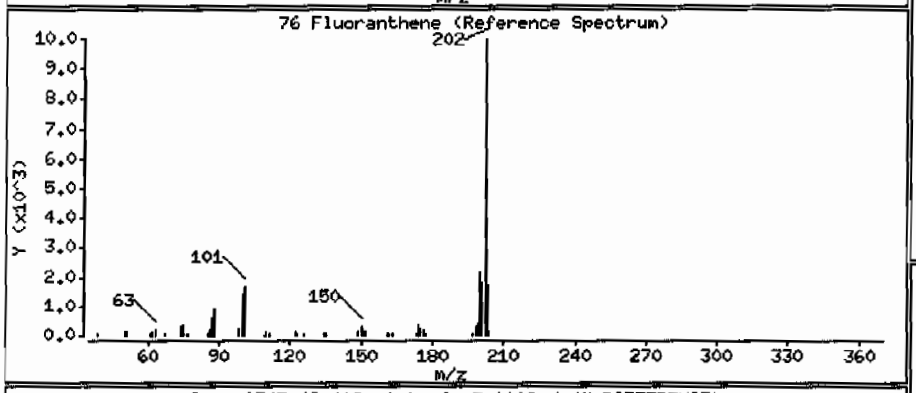

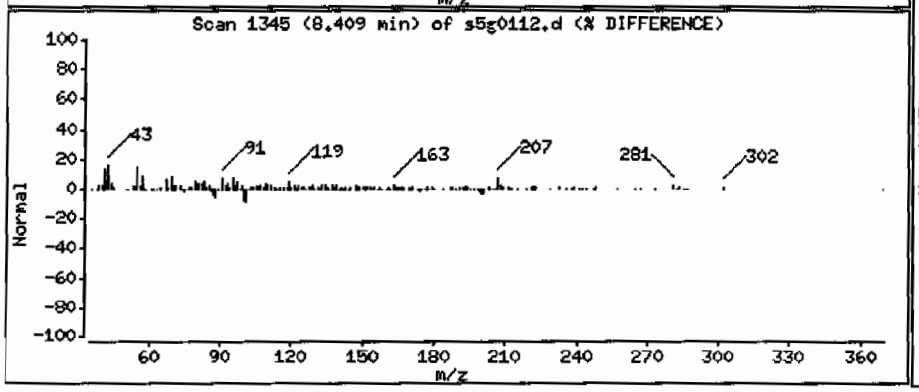

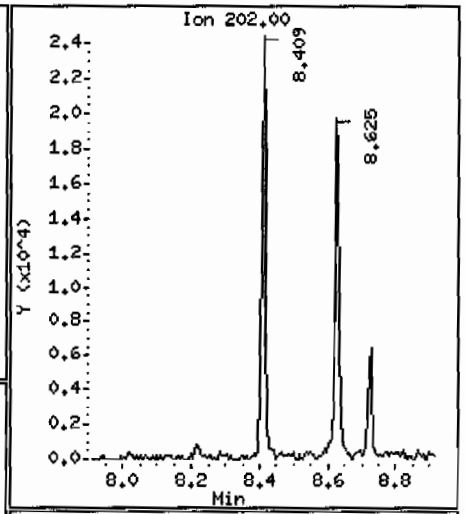

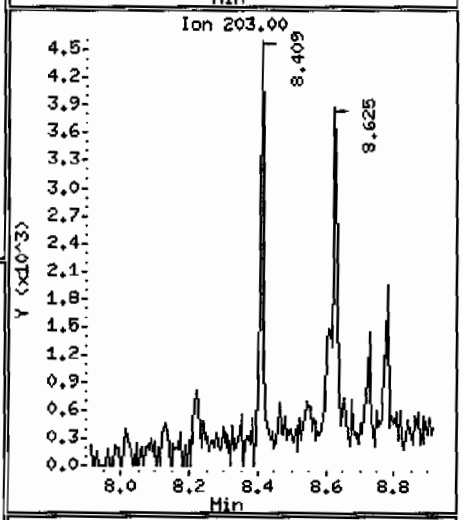

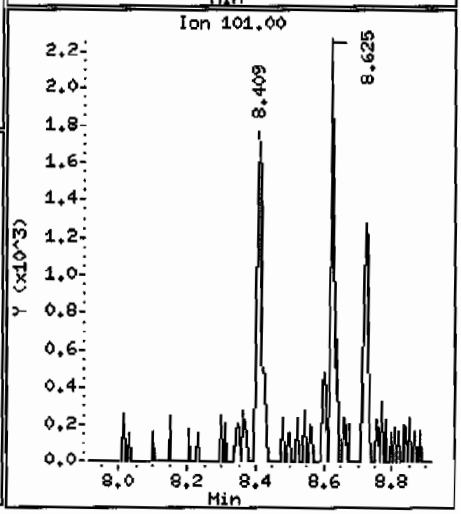

Data File: /chem/MSD5.i/s070109.b/s5g0112.d

Date : 01-JUL-2009 12:05

Client ID: CAMO-09-6528 Instrument: MSD5.i

Sample Info: |2325070051881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	45	C6H12O2	116

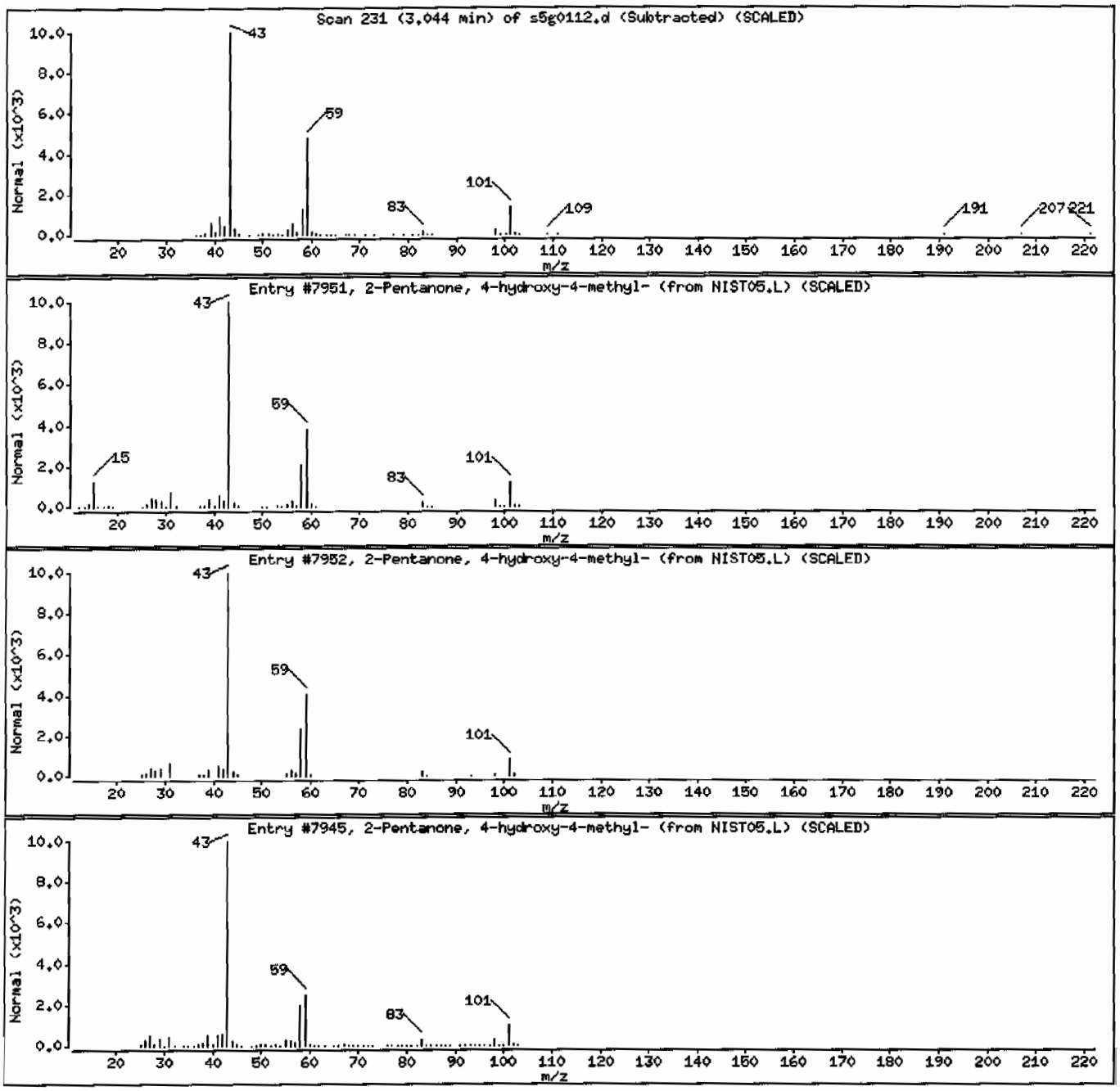

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507004	Date Received:	06/27/2009 09:05	%Moisture:	4.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6529	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:37	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0111.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	350	ug/kg	70.0	350
108-95-2	Phenol	U	350	ug/kg	70.0	350
95-57-8	2-Chlorophenol	U	350	ug/kg	70.0	350
106-46-7	1,4-Dichlorobenzene	U	350	ug/kg	70.0	350
621-64-7	N-Nitrosodipropylamine	U	350	ug/kg	70.0	350
59-50-7	4-Chloro-3-methylphenol	U	350	ug/kg	70.0	350
83-32-9	Acenaphthene	U	35.0	ug/kg	11.6	35.0
121-14-2	2,4-Dinitrotoluene	U	350	ug/kg	35.0	350
100-02-7	4-Nitrophenol	U	350	ug/kg	116	350
87-86-5	Pentachlorophenol	U	350	ug/kg	87.5	350
129-00-0	Pyrene	U	35.0	ug/kg	10.5	35.0
110-86-1	Pyridine	U	350	ug/kg	70.0	350
62-53-3	Aniline	U	350	ug/kg	105	350
111-44-4	bis(2-Chloroethyl) ether	U	350	ug/kg	70.0	350
541-73-1	1,3-Dichlorobenzene	U	350	ug/kg	70.0	350
100-51-6	Benzyl alcohol	U	350	ug/kg	105	350
95-50-1	1,2-Dichlorobenzene	U	350	ug/kg	70.0	350
108-60-1	bis(2-Chloroisopropyl)ether	U	350	ug/kg	70.0	350
95-48-7	o-Cresol	U	350	ug/kg	70.0	350
65794-96-9	m,p-Cresols	U	350	ug/kg	105	350
67-72-1	Hexachloroethane	U	350	ug/kg	70.0	350
98-95-3	Nitrobenzene	U	350	ug/kg	70.0	350
78-59-1	Isophorone	U	350	ug/kg	70.0	350
88-75-5	2-Nitrophenol	U	350	ug/kg	70.0	350
105-67-9	2,4-Dimethylphenol	U	350	ug/kg	123	350
111-91-1	bis(2-Chloroethoxy)methane	U	350	ug/kg	70.0	350
120-83-2	2,4-Dichlorophenol	U	350	ug/kg	70.0	350
65-85-0	Benzoic acid	U	700	ug/kg	175	700
91-20-3	Naphthalene	U	35.0	ug/kg	10.5	35.0
106-47-8	4-Chloroaniline	U	350	ug/kg	70.0	350
87-68-3	Hexachlorobutadiene	U	350	ug/kg	70.0	350
91-57-6	2-Methylnaphthalene	U	35.0	ug/kg	7.00	35.0
77-47-4	Hexachlorocyclopentadiene	U	350	ug/kg	70.0	350
88-06-2	2,4,6-Trichlorophenol	U	350	ug/kg	70.0	350
95-95-4	2,4,5-Trichlorophenol	U	350	ug/kg	70.0	350
91-58-7	2-Chloronaphthalene	U	35.0	ug/kg	11.6	35.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	350	ug/kg	70.0	350
99-09-2	3-Nitroaniline	U	350	ug/kg	70.0	350

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507004	Date Received:	06/27/2009 09:05	%Moisture:	4.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6529	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:37	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0111.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	350	ug/kg	70.0	350
606-20-2	2,6-Dinitrotoluene	U	350	ug/kg	35.0	350
208-96-8	Acenaphthylene	U	35.0	ug/kg	10.5	35.0
51-28-5	2,4-Dinitrophenol	U	700	ug/kg	133	700
132-64-9	Dibenzofuran	U	350	ug/kg	70.0	350
84-66-2	Diethylphthalate	U	350	ug/kg	70.0	350
86-73-7	Fluorene	U	35.0	ug/kg	10.5	35.0
7005-72-3	4-Chlorophenylphenylether	U	350	ug/kg	70.0	350
534-52-1	2-Methyl-4,6-dinitrophenol	U	350	ug/kg	70.0	350
100-01-6	4-Nitroaniline	U	350	ug/kg	105	350
	p-Nitroaniline					
122-39-4	Diphenylamine	U	350	ug/kg	70.0	350
122-66-7	Azobenzene	U	350	ug/kg	70.0	350
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	350	ug/kg	70.0	350
118-74-1	Hexachlorobenzene	U	350	ug/kg	70.0	350
85-01-8	Phenanthrene	U	35.0	ug/kg	10.5	35.0
120-12-7	Anthracene	U	35.0	ug/kg	7.00	35.0
84-74-2	Di-n-butylphthalate	U	350	ug/kg	70.0	350
206-44-0	Fluoranthene	U	35.0	ug/kg	10.5	35.0
85-68-7	Butylbenzylphthalate	U	350	ug/kg	70.0	350
56-55-3	Benzo(a)anthracene	U	35.0	ug/kg	10.5	35.0
91-94-1	3,3'-Dichlorobenzidine	U	350	ug/kg	105	350
218-01-9	Chrysene	U	35.0	ug/kg	10.5	35.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	350	ug/kg	70.0	350
117-84-0	Di-n-octylphthalate	U	350	ug/kg	70.0	350
205-99-2	Benzo(b)fluoranthene	U	35.0	ug/kg	10.5	35.0
207-08-9	Benzo(k)fluoranthene	U	35.0	ug/kg	10.5	35.0
50-32-8	Benzo(a)pyrene	U	35.0	ug/kg	10.5	35.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.0	ug/kg	10.5	35.0
53-70-3	Dibenzo(a,h)anthracene	U	35.0	ug/kg	10.5	35.0
191-24-2	Benzo(ghi)perylene	U	35.0	ug/kg	10.5	35.0
120-82-1	1,2,4-Trichlorobenzene	U	350	ug/kg	70.0	350

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	183	ug/kg		JA
	Unknown	13.59	195	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507004	Date Received:	06/27/2009 09:05	%Moisture:	4.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6529	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 11:37	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0111.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	18.76	215	ug/kg		J
	Unknown	19.54	154	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0111.d
Lab Smp Id: 232507004 Client Smp ID: CAMO-09-6529
Inj Date : 01-JUL-2009 11:37
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507004|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	4.85000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.027	4.032	(1.000)	513129	40.0000	
* 29 Naphthalene-d8	136	4.898	4.903	(1.000)	1772127	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1148451	40.0000	
* 67 Phenanthrene-d10	188	7.345	7.345	(1.000)	2269857	40.0000	
* 91 Chrysene-d12	240	9.767	9.771	(1.000)	2198054	40.0000	
* 98 Perylene-d12	264	11.524	11.534	(1.000)	1539751	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.208	(0.798)	735284	65.2620	2280
$ 5 Phenol-d5	99	3.743	3.743	(0.929)	922058	62.0694	2170
$ 20 Nitrobenzene-d5	82	4.393	4.398	(0.897)	445758	33.9455	1190
$ 39 2-Fluorobiphenyl	172	5.640	5.645	(0.916)	1038917	34.9786	1220
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	362640	77.3898	2710
$ 81 p-Terphenyl-d14	244	8.727	8.727	(0.894)	1480955	44.0251	1540

ION RATIO REPORT

SV REPORT

Data file: s5g0111.d
Report Date: 07/01/2009 11:56
Lab. ID: 232507004 SampleType: SAMPLE
Injection Date: 01-JUL-2009 11:37
Operator: RMB Instrument: MSD5.i
Sample Info: |232507004|881442|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2499
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	54808	3.74	3.81	80-120	100	(T)
93	332	3.70	3.81	175-235	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	65586	4.39	4.27	80-120	100	(T)
42	43329	4.39	4.27	58-118	66	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	125	4.64	4.68	80-120	100	( )
122	709	4.90	4.68	53-113	567	(QT)
77	699	4.68	4.68	49-109	560	(Q)
31 4-Chloroaniline			CAS#: 106-47-8			
127	101	4.94	4.93	80-120	100	( )
65	550	4.94	4.93	2- 62	544	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	152	6.16	6.11	80-120	100	( )
92	6499	6.16	6.11	83-143	4268	(Q)
108	24427	6.16	6.11	0- 41	16039	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	253032	6.16	5.92	80-120	100	(T)
164	1148451	6.16	5.92	0- 40	454	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	153035	6.16	5.98	80-120	100	(T)
63	2165	6.16	5.97	56-116	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	153035	6.16	6.28	80-120	100	(T)
89	2501	6.16	6.28	39- 99	2	(QT)
63	2165	6.16	6.28	21- 81	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	13904	6.76	6.58	80-120	100	(T)
165	15128	6.76	6.58	61-121	109	(T)
167	4726	6.76	6.58	0- 44	34	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1478	6.76	6.59	80-120	100	(T)
105	2326	6.76	6.59	4- 64	157	(QT)
51	2470	6.76	6.59	39- 99	167	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	24253	6.76	6.94	80-120	100	(T)
141	130379	6.76	6.94	35- 95	538	(QT)
250	50649	6.76	6.94	69-129	209	(QT)
92 Chrysene			CAS#: 218-01-9			
228	13214	9.77	9.80	80-120	100	( )
229	2341	9.77	9.80	0- 50	18	( )
226	2484	9.75	9.80	0- 59	19	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0111.d
Lab Smp Id: 232507004 Client Smp ID: CAMO-09-6529
Inj Date : 01-JUL-2009 11:37
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507004|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	4.85000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.027	3303077	40.000
* 98 Perylene-d12	11.524	3799878	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.044	432161	5.23343703	183	0		0	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown					CAS #:		
13.595	529307	5.57183357	195	0		0	98
Unknown					CAS #:		
18.762	584326	6.15100095	215	0		0	98
Unknown					CAS #:		
19.542	417327	4.39305455	154	0		0	98

Data File: /chem/MSD5.i/s070109.b/s5g0111.d
Date : 01-JUL-2009 11:37
Client ID: CAMO-09-6529
Sample Info: 1232507004188144211SVMF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

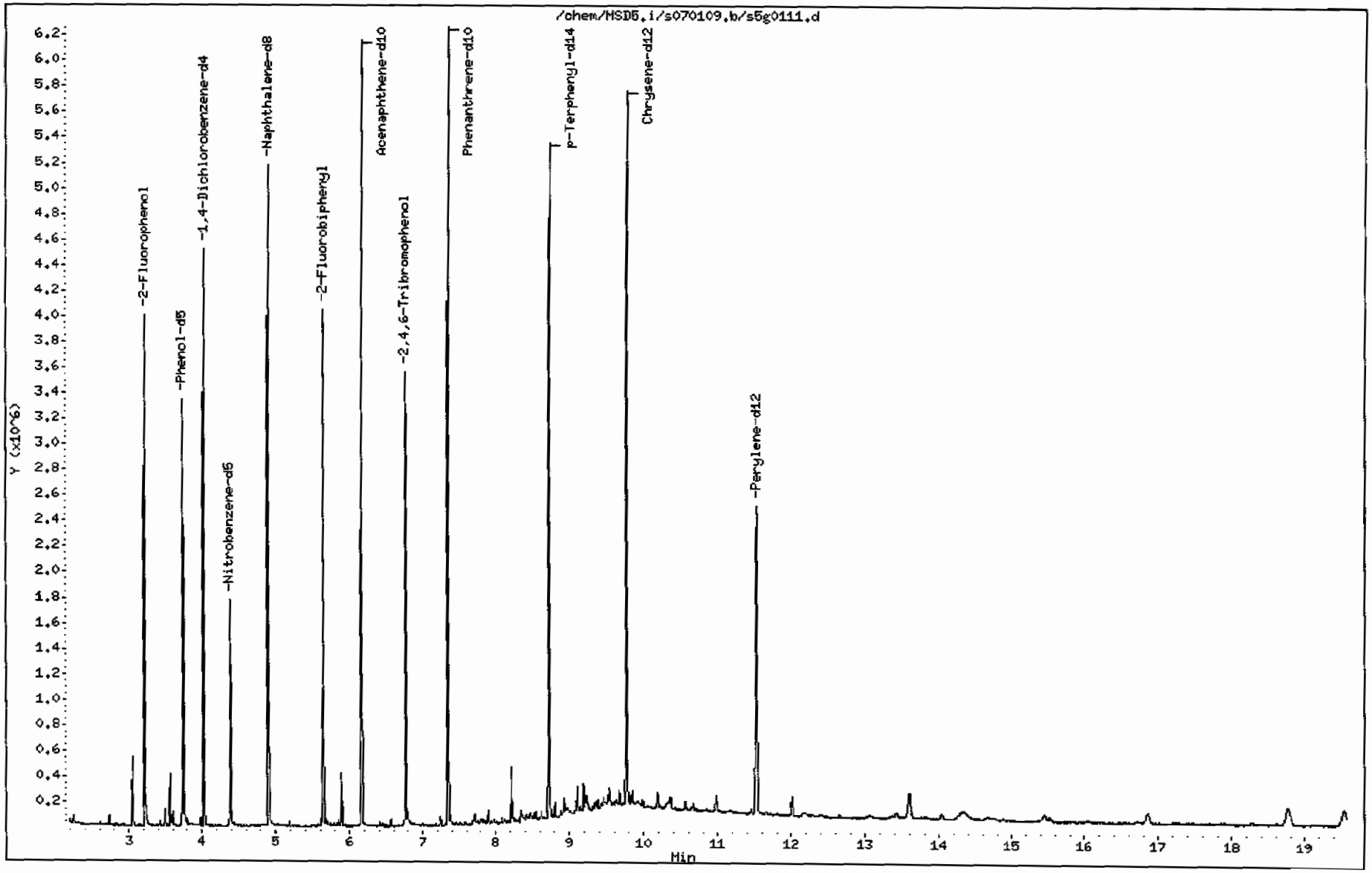

Data File: /chem/MSD5.i/s070109.b/s5g0111.d

Date : 01-JUL-2009 11:37

Client ID: CAMO-09-6529

Instrument: MSD5.i

Sample Info: |232507004|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116

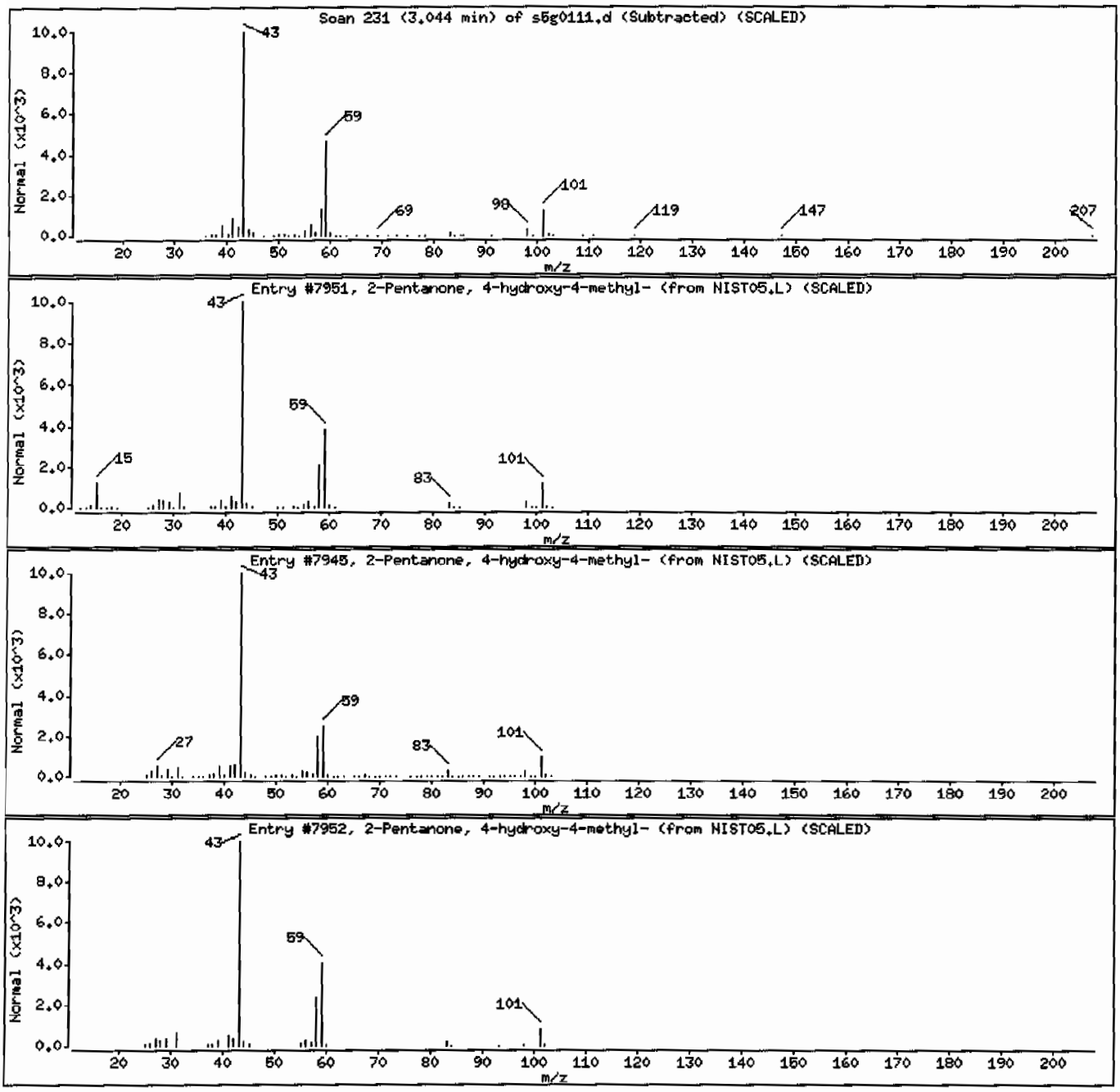

Data File: /chem/MSD5.i/s070109.b/s5g0111.d

Date : 01-JUL-2009 11:37

Client ID: CAMD-09-6629 Instrument: MSD5.i

Sample Info: 1232507004|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Benzazirene-1-carboxylic acid, 2,2,5a-	1000197-90-8	NIST05.L	101889	25	C15H23NO3	265
1H-Cyclopropl[e]azulene, 1a,2,3,4,4a,5,6,	489-40-7	NIST05.L	60083	20	C15H24	204
Phenol, 6-methyl-2-[(4-morpholinyl)methy	60460-71-1	NIST05.L	62115	20	C12H17NO2	207

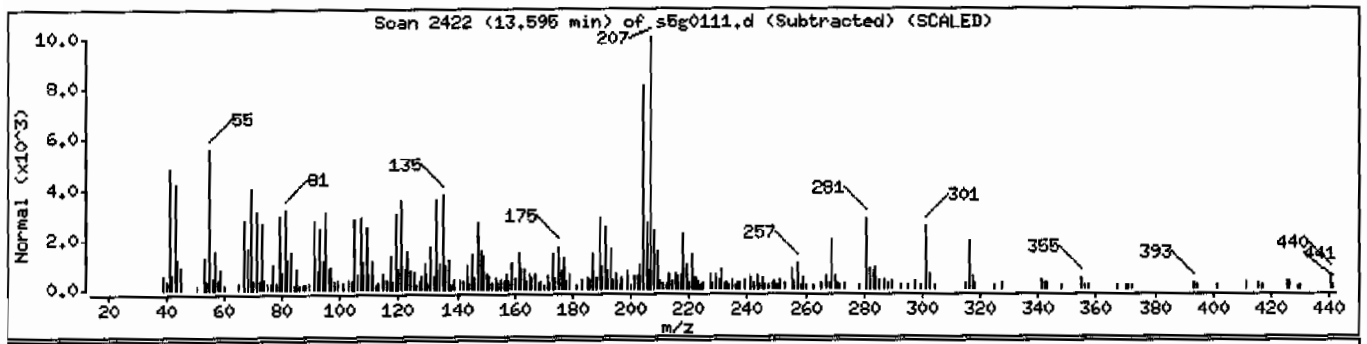

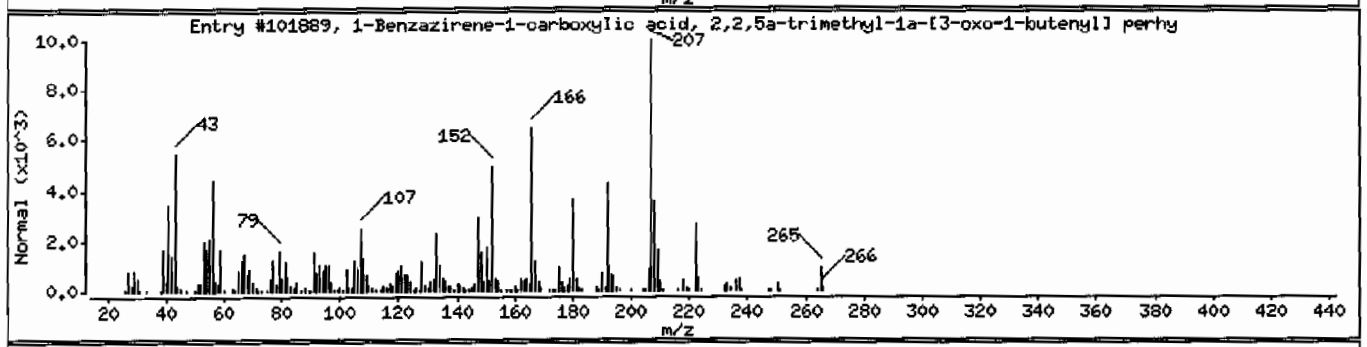

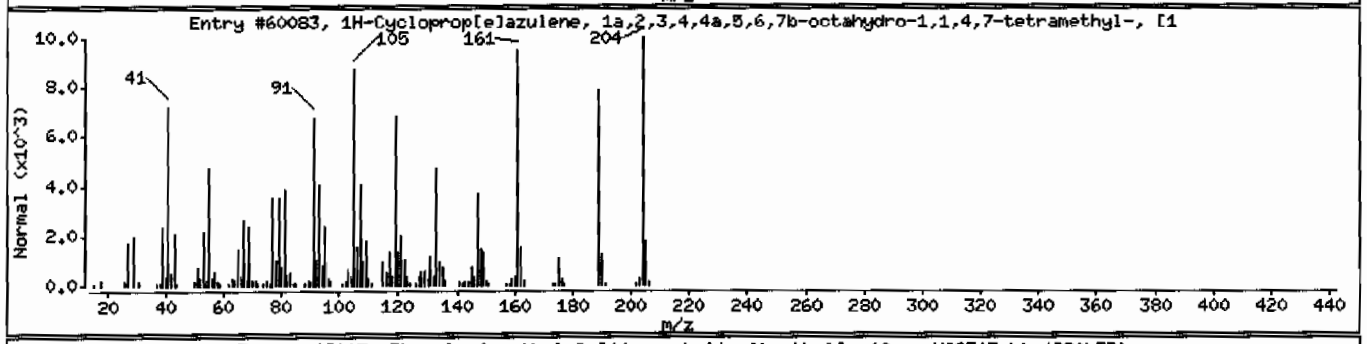

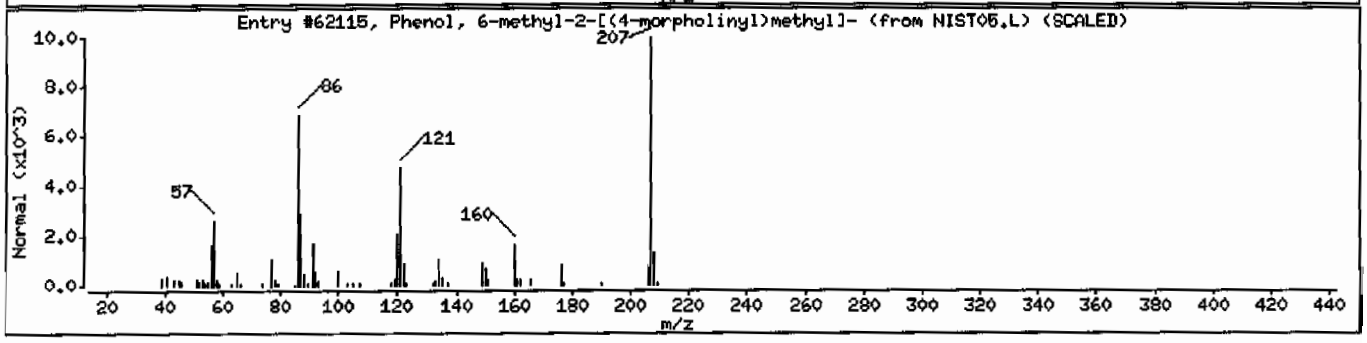

Data File: /chem/MSD5.i/s070109.b/s5g0111.d

Date : 01-JUL-2009 11:37

Client ID: CAMO-09-6529 Instrument: MSD5.i

Sample Info: |2325070041881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
4H-Pyrido[1,2-a]pyrimidine-3-carboxamide	64399-29-7	NIST05.L	71792	53	C11H15N3O2	221
N,N-Dimethyl-4-nitroso-3-(trimethylsilyl	17993-84-9	NIST05.L	72386	38	C11H18N2OSi	222
Acetic acid, [4-(1,1-dimethylethyl)pheno	88530-52-3	NIST05.L	72620	30	C13H18O3	222

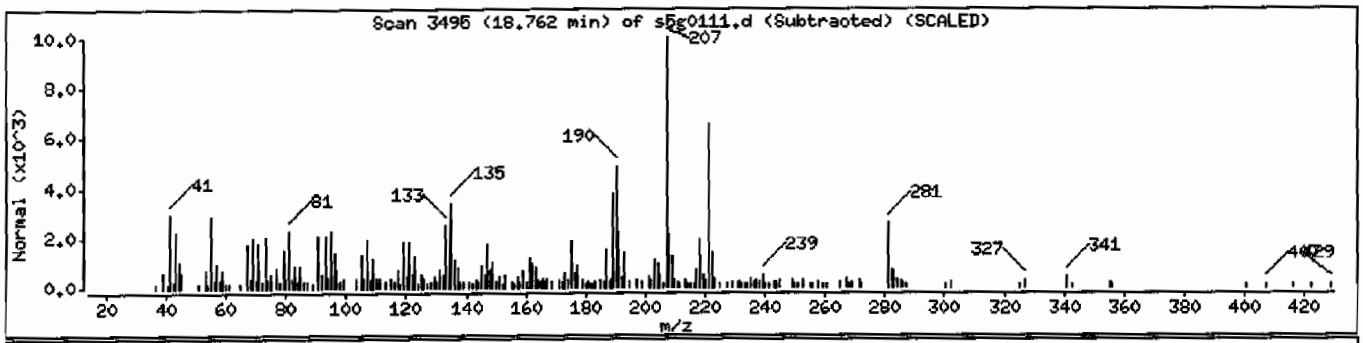

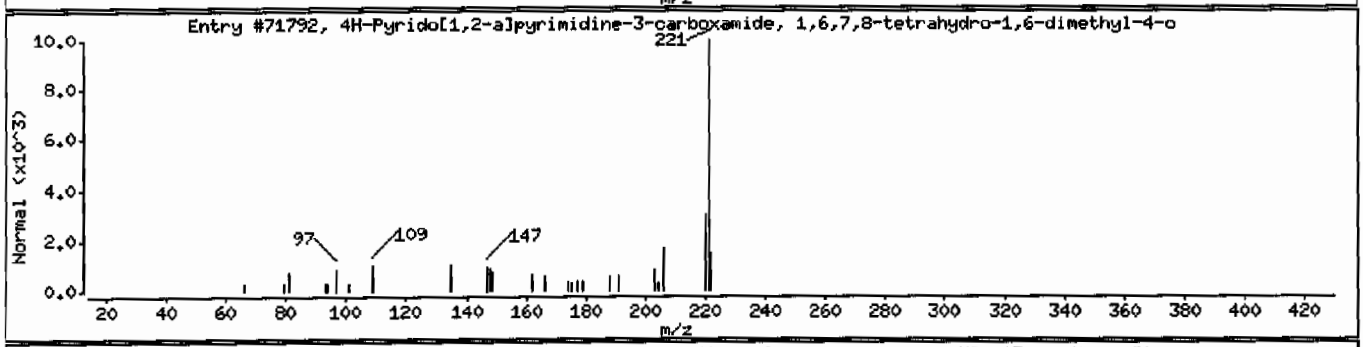

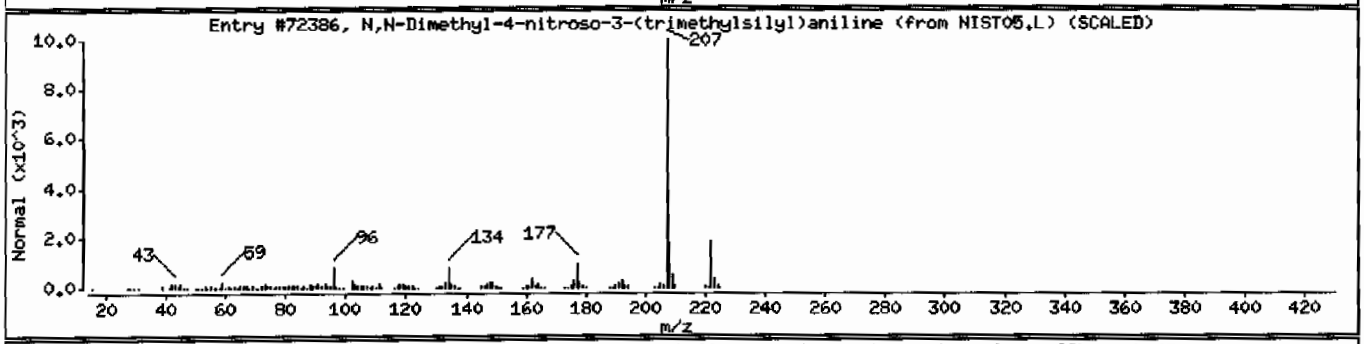

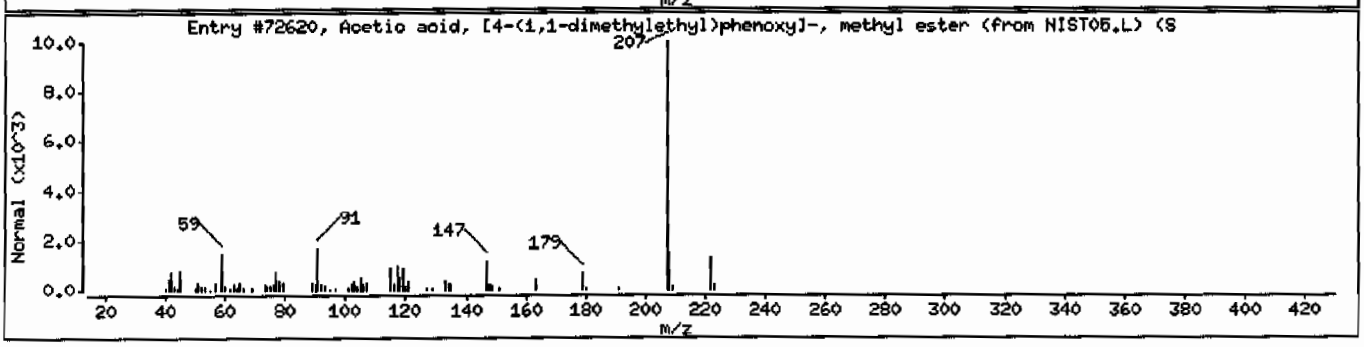

Data File: /chem/MSD5.i/s070109.b/s5g0111.d

Date : 01-JUL-2009 11:37

Client ID: CAMO-09-6529 Instrument: MSD5.i

Sample Info: |2325070041881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Silane, trimethyl[5-methyl-2-(1-methylet	55012-80-1	NIST05.L	72681	46	C13H22OSi	222
1,2-Benzenediol, 3,5-bis(1,1-dimethyleth	1020-31-1	NIST05.L	72749	41	C14H22O2	222
9,10-Methanoanthracen-11-ol, 9,10-dihydr	126615-74-5	NIST05.L	92233	38	C18H18O	250

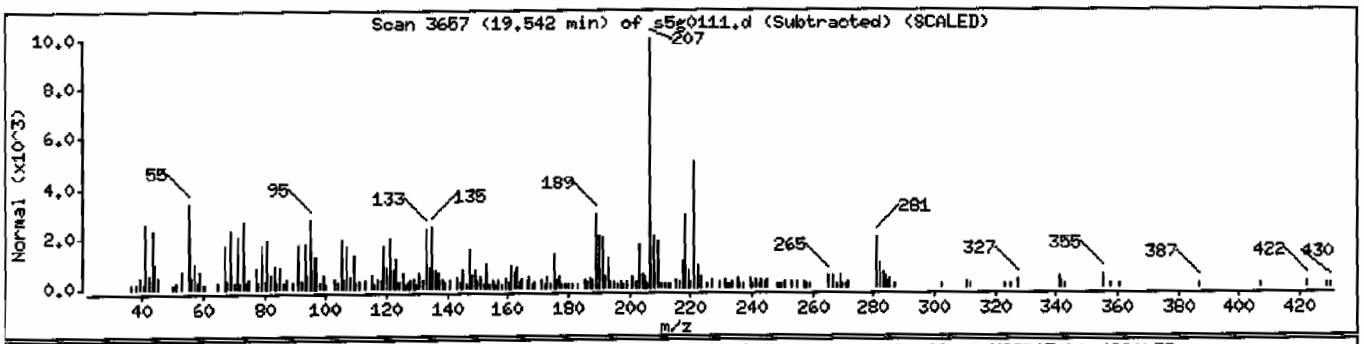

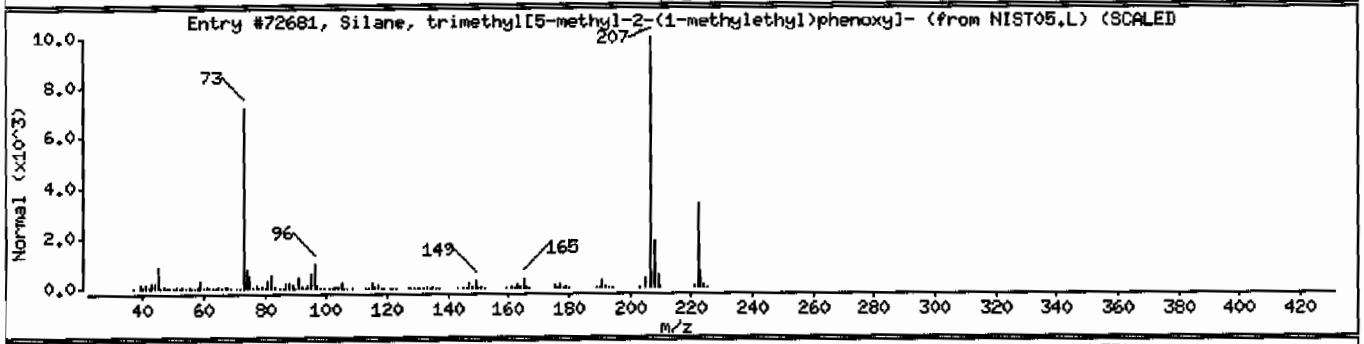

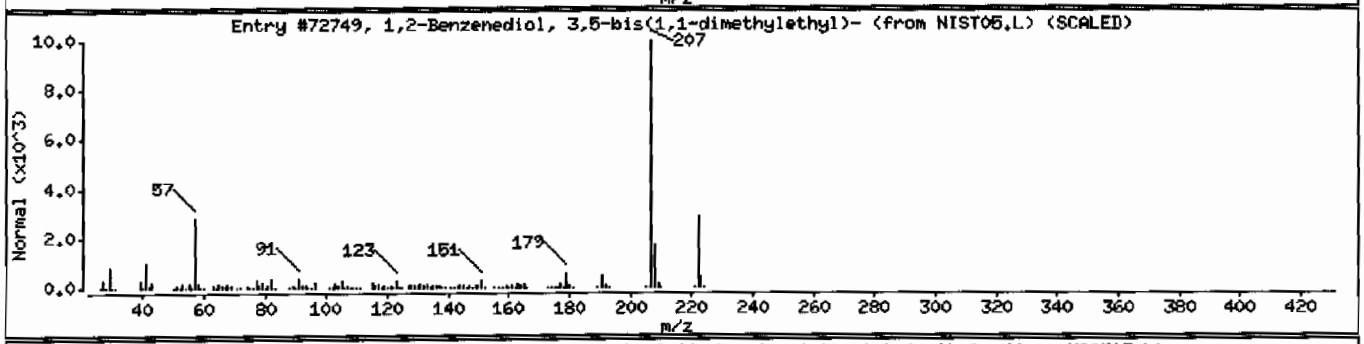

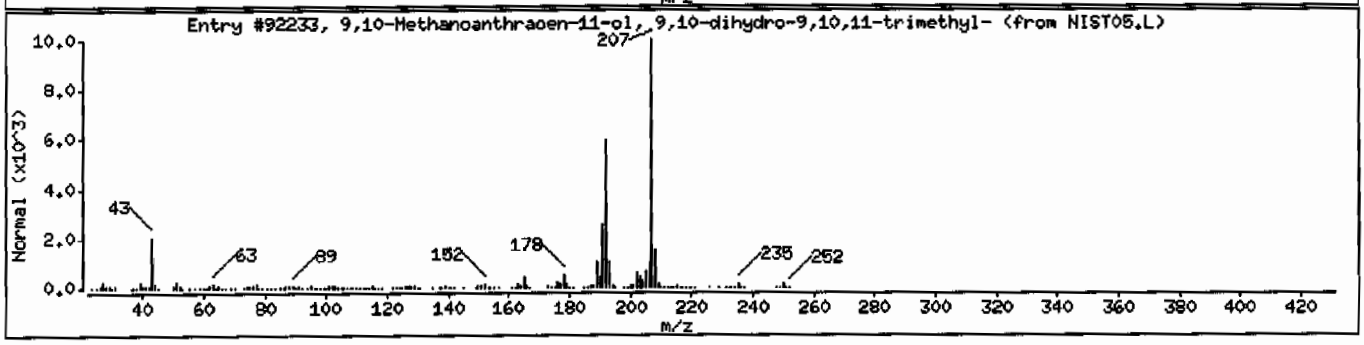

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6531	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 12:33	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0113.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	392	ug/kg	78.3	392
108-95-2	Phenol	U	392	ug/kg	78.3	392
95-57-8	2-Chlorophenol	U	392	ug/kg	78.3	392
106-46-7	1,4-Dichlorobenzene	U	392	ug/kg	78.3	392
621-64-7	N-Nitrosodipropylamine	U	392	ug/kg	78.3	392
59-50-7	4-Chloro-3-methylphenol	U	392	ug/kg	78.3	392
83-32-9	Acenaphthene	U	39.2	ug/kg	12.9	39.2
121-14-2	2,4-Dinitrotoluene	U	392	ug/kg	39.2	392
100-02-7	4-Nitrophenol	U	392	ug/kg	129	392
87-86-5	Pentachlorophenol	U	392	ug/kg	97.9	392
129-00-0	Pyrene		81.6	ug/kg	11.7	39.2
110-86-1	Pyridine	U	392	ug/kg	78.3	392
62-53-3	Aniline	U	392	ug/kg	117	392
111-44-4	bis(2-Chloroethyl) ether	U	392	ug/kg	78.3	392
541-73-1	1,3-Dichlorobenzene	U	392	ug/kg	78.3	392
100-51-6	Benzyl alcohol	U	392	ug/kg	117	392
95-50-1	1,2-Dichlorobenzene	U	392	ug/kg	78.3	392
108-60-1	bis(2-Chloroisopropyl)ether	U	392	ug/kg	78.3	392
95-48-7	o-Cresol	U	392	ug/kg	78.3	392
65794-96-9	m,p-Cresols	U	392	ug/kg	117	392
67-72-1	Hexachloroethane	U	392	ug/kg	78.3	392
98-95-3	Nitrobenzene	U	392	ug/kg	78.3	392
78-59-1	Isophorone	U	392	ug/kg	78.3	392
88-75-5	2-Nitrophenol	U	392	ug/kg	78.3	392
105-67-9	2,4-Dimethylphenol	U	392	ug/kg	137	392
111-91-1	bis(2-Chloroethoxy)methane	U	392	ug/kg	78.3	392
120-83-2	2,4-Dichlorophenol	U	392	ug/kg	78.3	392
65-85-0	Benzoic acid	U	783	ug/kg	196	783
91-20-3	Naphthalene	U	39.2	ug/kg	11.7	39.2
106-47-8	4-Chloroaniline	U	392	ug/kg	78.3	392
87-68-3	Hexachlorobutadiene	U	392	ug/kg	78.3	392
91-57-6	2-Methylnaphthalene	U	39.2	ug/kg	7.83	39.2
77-47-4	Hexachlorocyclopentadiene	U	392	ug/kg	78.3	392
88-06-2	2,4,6-Trichlorophenol	U	392	ug/kg	78.3	392
95-95-4	2,4,5-Trichlorophenol	U	392	ug/kg	78.3	392
91-58-7	2-Chloronaphthalene	U	39.2	ug/kg	12.9	39.2
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	392	ug/kg	78.3	392
99-09-2	3-Nitroaniline	U	392	ug/kg	78.3	392

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6531	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	881442	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/01/2009 12:33	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	06/30/2009 21:22	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	s5g0113.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	392	ug/kg	78.3	392
606-20-2	2,6-Dinitrotoluene	U	392	ug/kg	39.2	392
208-96-8	Acenaphthylene	U	39.2	ug/kg	11.7	39.2
51-28-5	2,4-Dinitrophenol	U	783	ug/kg	149	783
132-64-9	Dibenzofuran	U	392	ug/kg	78.3	392
84-66-2	Diethylphthalate	U	392	ug/kg	78.3	392
86-73-7	Fluorene	U	39.2	ug/kg	11.7	39.2
7005-72-3	4-Chlorophenylphenylether	U	392	ug/kg	78.3	392
534-52-1	2-Methyl-4,6-dinitrophenol	U	392	ug/kg	78.3	392
100-01-6	4-Nitroaniline	U	392	ug/kg	117	392
	p-Nitroaniline					
122-39-4	Diphenylamine	U	392	ug/kg	78.3	392
122-66-7	Azobenzene	U	392	ug/kg	78.3	392
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	392	ug/kg	78.3	392
118-74-1	Hexachlorobenzene	U	392	ug/kg	78.3	392
85-01-8	Phenanthrene	J	22.4	ug/kg	11.7	39.2
120-12-7	Anthracene	U	39.2	ug/kg	7.83	39.2
84-74-2	Di-n-butylphthalate	U	392	ug/kg	78.3	392
206-44-0	Fluoranthene		86.7	ug/kg	11.7	39.2
85-68-7	Butylbenzylphthalate	U	392	ug/kg	78.3	392
56-55-3	Benzo(a)anthracene	J	31.0	ug/kg	11.7	39.2
91-94-1	3,3'-Dichlorobenzidine	U	392	ug/kg	117	392
218-01-9	Chrysene		58.2	ug/kg	11.7	39.2
117-81-7	bis(2-Ethylhexyl)phthalate	J	130	ug/kg	78.3	392
117-84-0	Di-n-octylphthalate	U	392	ug/kg	78.3	392
205-99-2	Benzo(b)fluoranthene		103	ug/kg	11.7	39.2
207-08-9	Benzo(k)fluoranthene	U	39.2	ug/kg	11.7	39.2
50-32-8	Benzo(a)pyrene		49.3	ug/kg	11.7	39.2
193-39-5	Indeno(1,2,3-cd)pyrene	J	36.3	ug/kg	11.7	39.2
53-70-3	Dibenzo(a,h)anthracene	U	39.2	ug/kg	11.7	39.2
191-24-2	Benzo(ghi)perylene		45.1	ug/kg	11.7	39.2
120-82-1	1,2,4-Trichlorobenzene	U	392	ug/kg	78.3	392

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.04	196	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.89	240	ug/kg	99	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	232507006	Date Received:	06/27/2009 09:05	%Moisture:	15
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6531	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 12:33	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.04 g	Final Volume:	1 mL
Data File:	s5g0113.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	6.89	264	ug/kg		J
	Unknown	6.93	182	ug/kg		J
	Unknown	7.02	166	ug/kg		J
38754-94-8	s-Indacen-1(2H)-one, 3,5,6,7-tetrahydro-	9.11	179	ug/kg	92	NJ
112-95-8	Eicosane	10.19	198	ug/kg	96	NJ
2883-08-1	Cyclohexane, 1,1'-(2-methyl-1,3-propaned	12.16	514	ug/kg	89	NJ

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0113.d
Lab Smp Id: 232507006 Client Smp ID: CAMO-09-6531
Inj Date : 01-JUL-2009 12:33
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507006|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.04000	weight of sample
M	14.98000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.027	4.032	(1.000)	521497	40.0000	
* 29 Naphthalene-d8	136	4.898	4.903	(1.000)	1797241	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1170032	40.0000	
* 67 Phenanthrene-d10	188	7.344	7.345	(1.000)	2239139	40.0000	
* 91 Chrysene-d12	240	9.767	9.771	(1.000)	1871526	40.0000	
* 98 Perylene-d12	264	11.524	11.534	(1.000)	1094654	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.208	(0.798)	576523	50.3496	1970
$ 5 Phenol-d5	99	3.743	3.743	(0.929)	788755	52.2440	2040
$ 20 Nitrobenzene-d5	82	4.393	4.398	(0.897)	335423	25.1863	986
$ 39 2-Fluorobiphenyl	172	5.640	5.645	(0.916)	849364	28.0692	1100
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	339744	71.1663	2790
$ 81 p-Terphenyl-d14	244	8.726	8.727	(0.894)	1279693	44.6793	1750

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.625	8.630	(0.883)	85056	2.08327	81.6
68 Phenanthrene	178	7.364	7.364	(1.003)	24010	0.57240	22.4(a)
76 Fluoranthene	202	8.409	8.414	(1.145)	105862	2.21545	86.7
89 Benzo(a)anthracene	228	9.752	9.757	(0.999)	31787	0.79157	31.0(a)
92 Chrysene	228	9.791	9.796	(1.002)	54641	1.48539	58.2
93 bis(2-Ethylhexyl)phthalate	149	9.675	9.675	(0.991)	79470	3.30933	130(a)
95 Benzo(b)fluoranthene	252	10.980	10.985	(0.953)	63482	2.62588	103
97 Benzo(a)pyrene	252	11.437	11.452	(0.992)	26934	1.25855	49.3
99 Indeno(1,2,3-cd)pyrene	276	13.388	13.407	(1.162)	19911	0.92587	36.2(a)
101 Benzo(ghi)perylene	276	13.961	13.980	(1.211)	21117	1.15180	45.1

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0113.d
Report Date: 07/01/2009 13:05
Lab. ID: 232507006 SampleType: SAMPLE
Injection Date: 01-JUL-2009 12:33
Operator: RMB Instrument: MSD5.i
Sample Info: |232507006|881442|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2499
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	47377	3.74	3.81	80-120	100	(T)
93	9511	3.70	3.81	175-235	20	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	47938	4.39	4.27	80-120	100	(T)
42	32753	4.39	4.27	58-118	68	(T)
22 Isophorone		CAS#: 78-59-1				
82	327697	4.39	4.56	80-120	100	(T)
138	236	4.59	4.56	0- 49	0	( )
27 Benzoic acid		CAS#: 65-85-0				
105	2232	4.70	4.68	80-120	100	( )
122	964	4.72	4.68	53-113	43	(Q)
77	4398	4.69	4.68	49-109	197	(Q)
31 4-Chloroaniline		CAS#: 106-47-8				
127	254	4.94	4.93	80-120	100	( )
65	5299	4.90	4.93	2- 62	2081	(Q)
41 m-Nitroaniline		CAS#: 99-09-2				
138	277	6.16	6.11	80-120	100	( )
92	7892	6.16	6.11	83-143	2842	(Q)
108	25551	6.16	6.11	0- 41	9200	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
43 Dimethylphthalate			CAS#: 131-11-3			
163	250565	6.16	5.92	80-120	100	(T)
164	1170032	6.16	5.92	0- 40	467	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	154222	6.16	5.98	80-120	100	(T)
63	2663	6.16	5.97	56-116	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	154222	6.16	6.28	80-120	100	(T)
89	2808	6.16	6.28	39- 99	2	(QT)
63	2663	6.16	6.28	21- 81	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	14333	6.76	6.58	80-120	100	(T)
165	14003	6.76	6.58	61-121	98	(T)
167	5238	6.76	6.58	0- 44	37	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	865	6.77	6.59	80-120	100	(T)
105	2266	6.77	6.59	4- 64	262	(QT)
51	2148	6.76	6.59	39- 99	248	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	24102	6.76	6.94	80-120	100	(T)
141	120616	6.76	6.94	35- 95	500	(QT)
250	47415	6.76	6.94	69-129	197	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	24010	7.36	7.36	80-120	100	( )
179	4164	7.36	7.36	0- 46	17	( )
176	4828	7.36	7.36	0- 49	20	( )
69 Anthracene			CAS#: 120-12-7			
178	24010	7.36	7.41	80-120	100	( )
179	4119	7.36	7.41	0- 46	17	( )
176	4828	7.36	7.41	0- 49	20	( )
76 Fluoranthene			CAS#: 206-44-0			
202	105862	8.41	8.41	80-120	100	( )
203	17976	8.41	8.41	0- 48	17	( )
101	9637	8.41	8.41	0- 39	9	( )
79 Pyrene			CAS#: 129-00-0			
202	85056	8.63	8.63	80-120	100	( )
200	19148	8.63	8.63	0- 51	23	( )
101	9425	8.63	8.63	0- 41	11	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	31787	9.75	9.76	80-120	100	( )
226	8523	9.76	9.76	0- 57	27	( )
229	7373	9.75	9.76	0- 51	23	( )
92 Chrysene			CAS#: 218-01-9			
228	54641	9.79	9.80	80-120	100	( )
229	11318	9.79	9.80	0- 50	21	( )
226	13536	9.79	9.80	0- 59	25	( )
93 bis(2-Ethylhexyl)phthalate			CAS#: 117-81-7			
149	79470	9.68	9.68	80-120	100	( )
167	25622	9.68	9.68	4- 64	32	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	63482	10.98	10.98	80-120	100	( )
253	13843	10.98	10.98	0- 52	22	( )
125	10869	10.98	10.98	0- 38	17	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	20047	11.01	11.02	80-120	100	( )
253	2420	11.00	11.02	0- 53	12	( )
125	11149	10.98	11.02	0- 38	56	(Q)
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	26934	11.44	11.45	80-120	100	( )
253	6937	11.44	11.45	0- 52	26	( )
125	2780	11.44	11.45	0- 30	10	( )
99 Indeno(1,2,3-cd)pyrene			CAS#: 193-39-5			
276	19911	13.39	13.41	80-120	100	( )
138	4547	13.39	13.41	0- 51	23	( )
101 Benzo(ghi)perylene			CAS#: 191-24-2			
276	21117	13.96	13.98	80-120	100	( )
138	5230	13.96	13.98	0- 30	25	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0113.d
Lab Smp Id: 232507006 Client Smp ID: CAMO-09-6531
Inj Date : 01-JUL-2009 12:33
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507006|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.04000	weight of sample
M	14.98000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.027	3389096	40.000
* 46 Acenaphthene-d10	6.160	5061694	40.000
* 67 Phenanthrene-d10	7.344	5636383	40.000
* 91 Chrysene-d12	9.767	4822218	40.000
* 98 Perylene-d12	11.524	3112017	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.044	423166	4.99443686	196	0		0	10
1,4-Methanoazulene, decahydro-4,8,8-trim				CAS #: 475-20-7			
5.885	775801	6.13076025	240	99	NIST05.L	60020	46
Unknown				CAS #:			
6.892	951484	6.75244085	264	0		0	67
Unknown				CAS #:			
6.925	655316	4.65061488	182	0		0	67
Unknown				CAS #:			
7.022	597142	4.23776495	166	0		0	67
s-Indacen-1(2H)-one, 3,5,6,7-tetrahydro-				CAS #: 38754-94-8			
9.107	549853	4.56100018	178	92	NIST05.L	96361	91
Eicosane				CAS #: 112-95-8			
10.185	608843	5.05031111	198	96	NIST05.L	113490	91
Cyclohexane, 1,1'-(2-methyl-1,3-propaned				CAS #: 2883-08-1			
12.160	1021808	13.1336997	514	89	NIST05.L	73082	98

Data File: /chem/MSD5.i/s070109.b/s5g0113.d
Date : 01-JUL-2009 12:33
Client ID: CAMO-09-6531
Sample Info: 1232507006188144211SVMF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

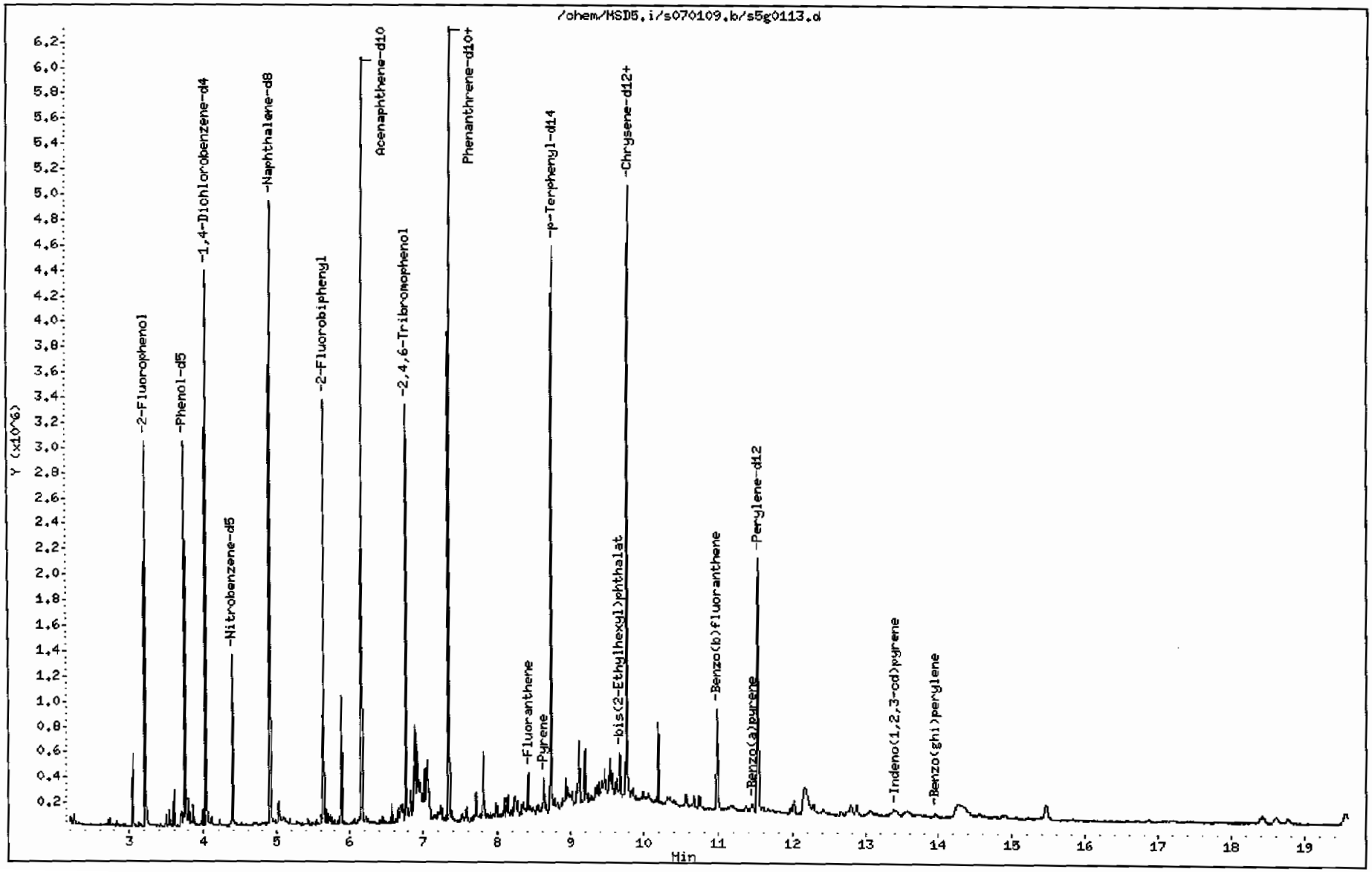

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6631

Instrument: MSD5.i

Sample Info: |2325070061881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 81.6 ug/Kg

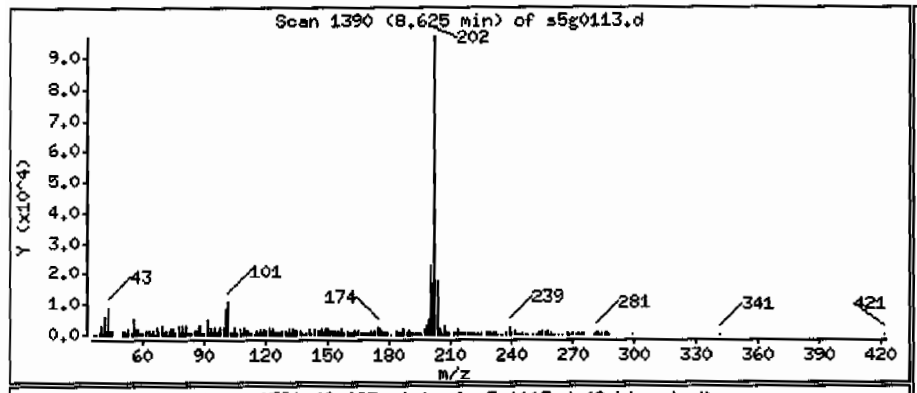

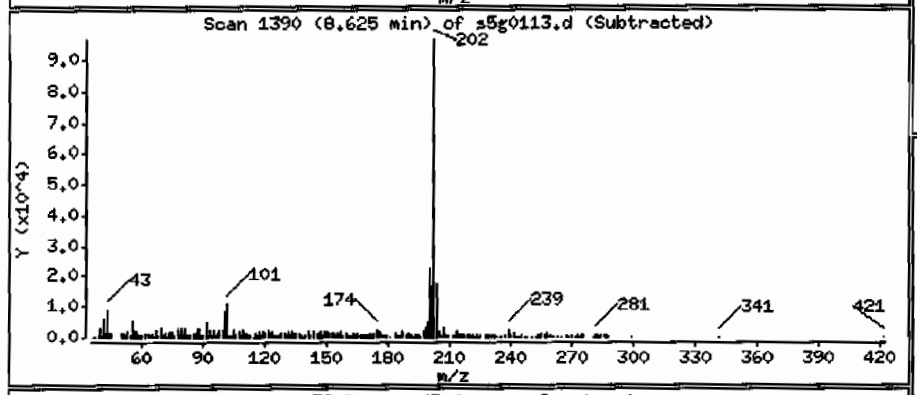

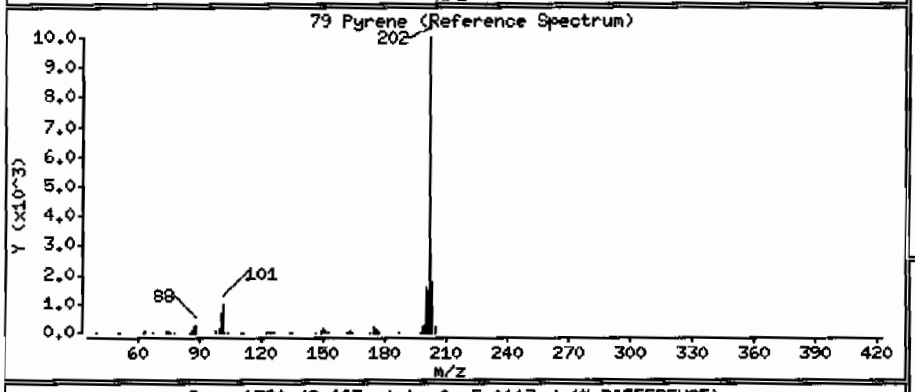

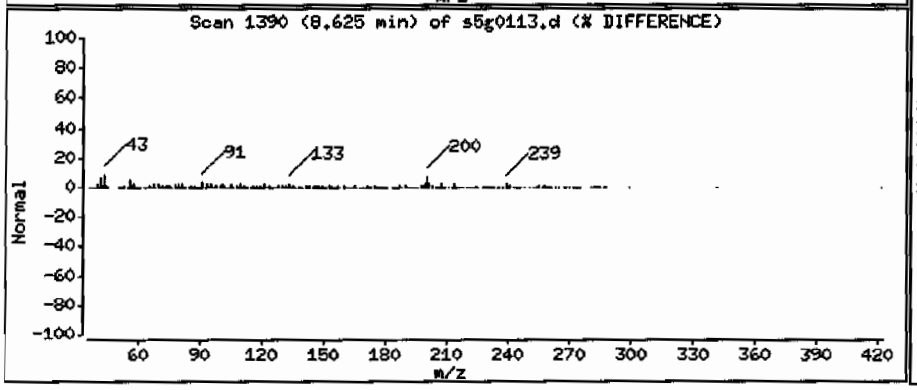

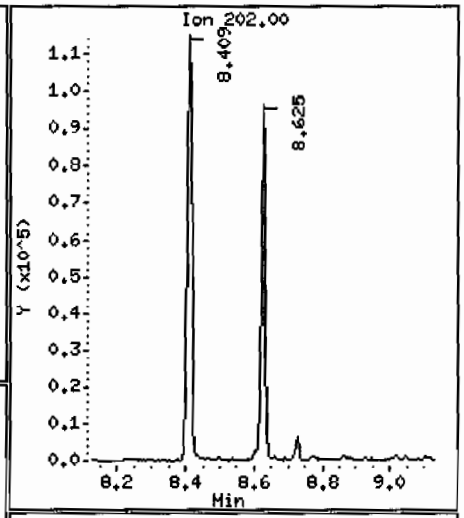

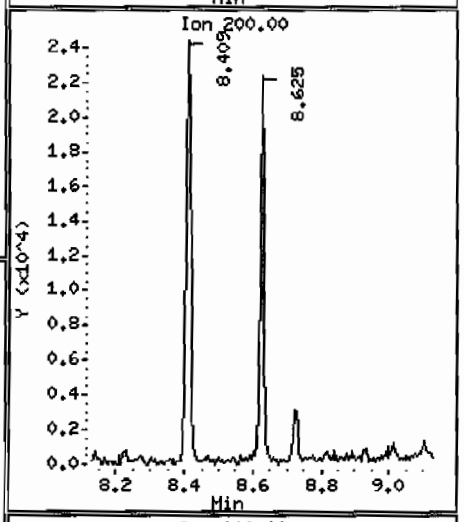

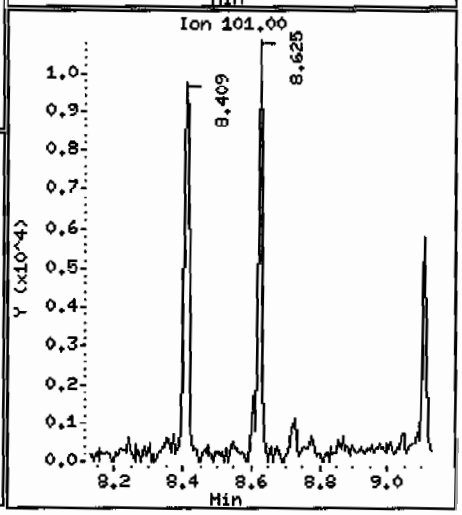

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6631

Instrument: MSD5.i

Sample Info: 1232507006188144211SVHF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 22.4 ug/Kg

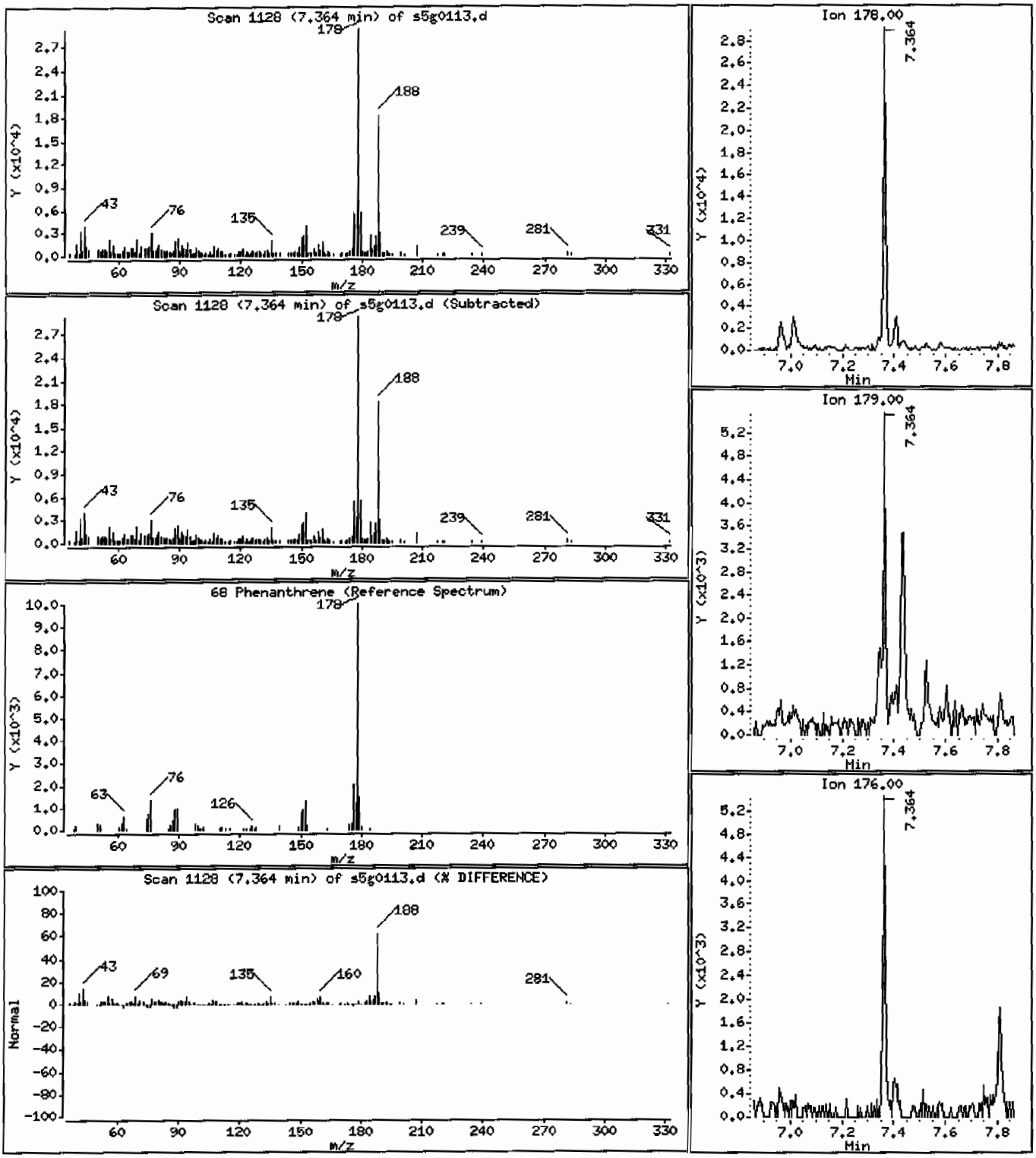

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531

Instrument: MSD5.i

Sample Info: 1232507006188144211SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 86.7 ug/Kg

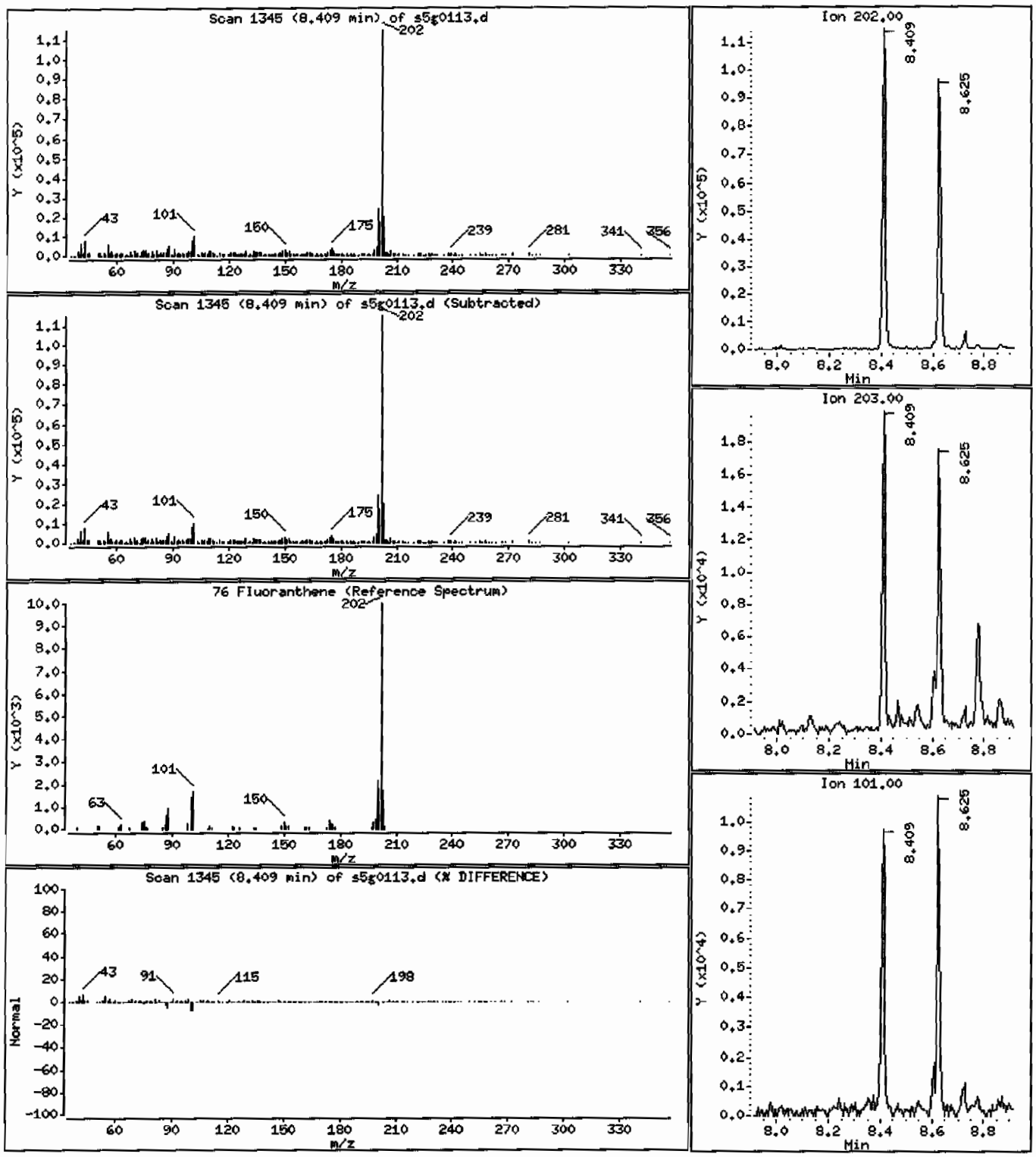

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531

Instrument: MSD5.i

Sample Info: 1232507006188144211SVMFI1ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 31.0 ug/Kg

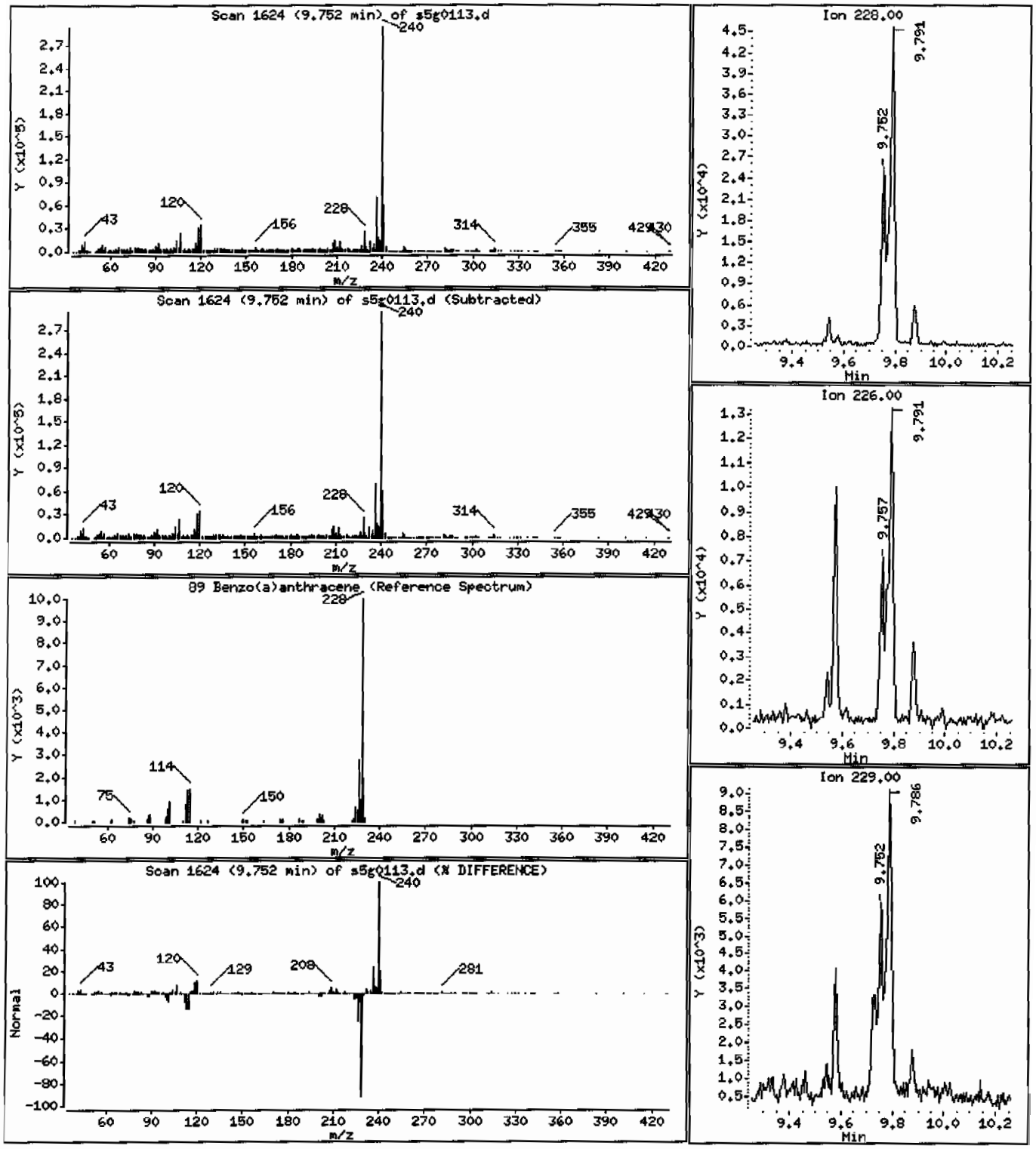

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531

Instrument: MSD5.i

Sample Info: |2325070061881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 58.2 ug/Kg

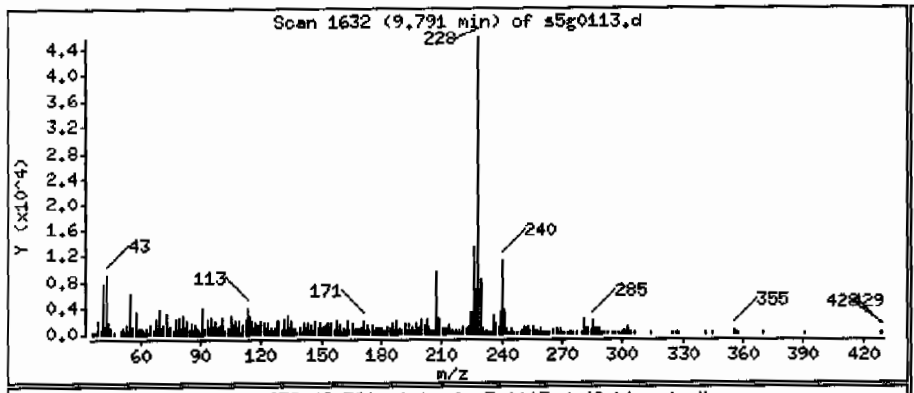

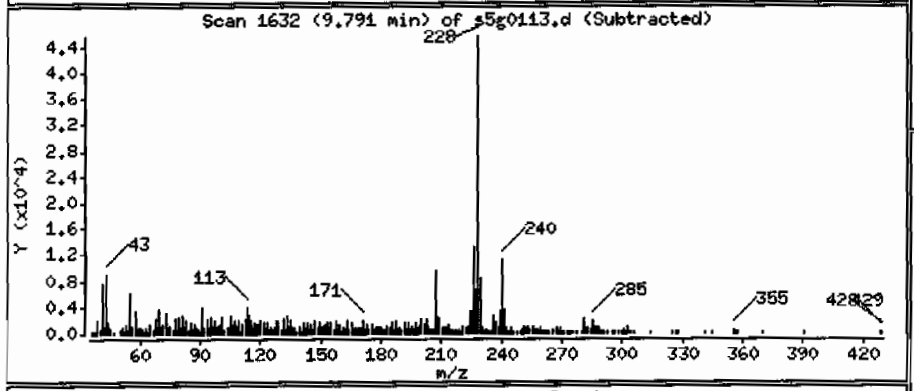

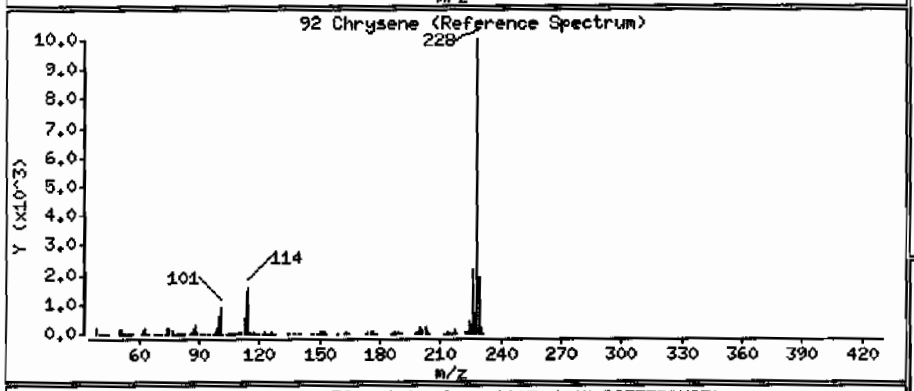

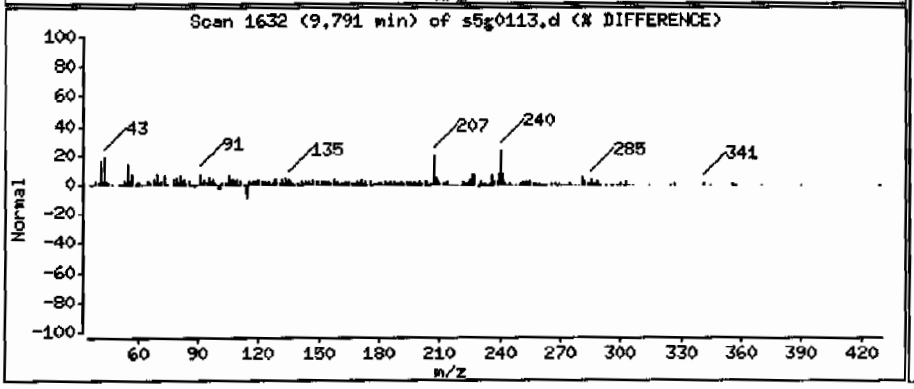

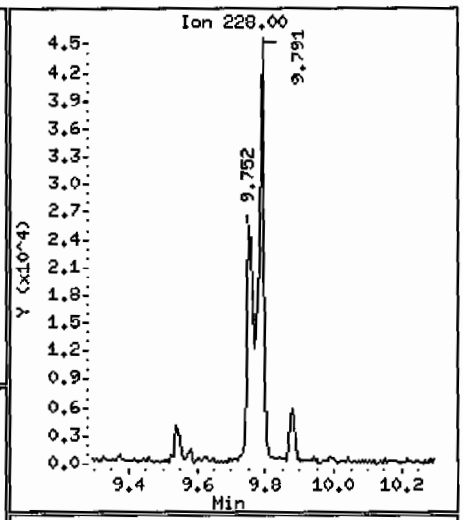

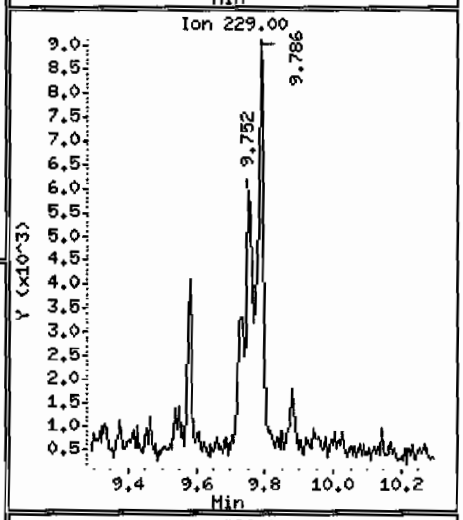

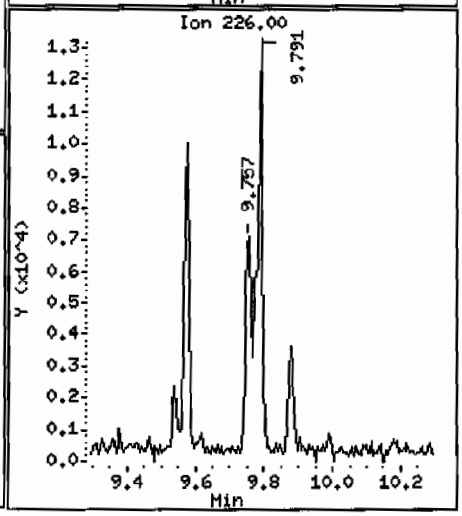

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531

Instrument: MSD5.i

Sample Info: |2325070061881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

93 bis(2-Ethylhexyl)phthalate

Concentration: 130 ug/Kg

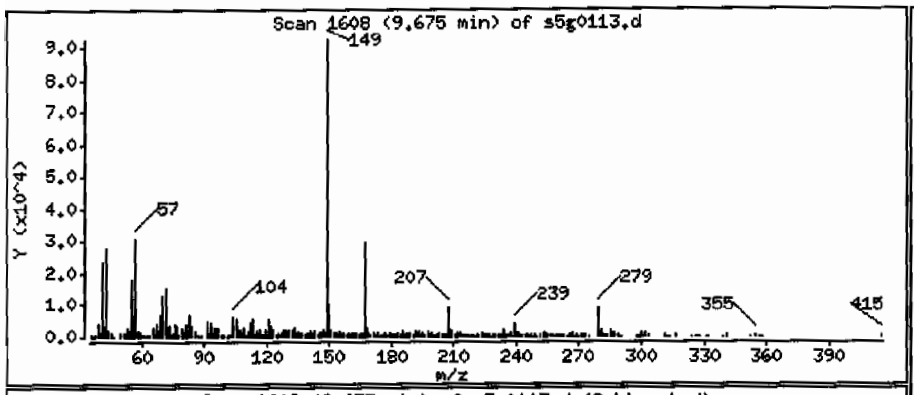

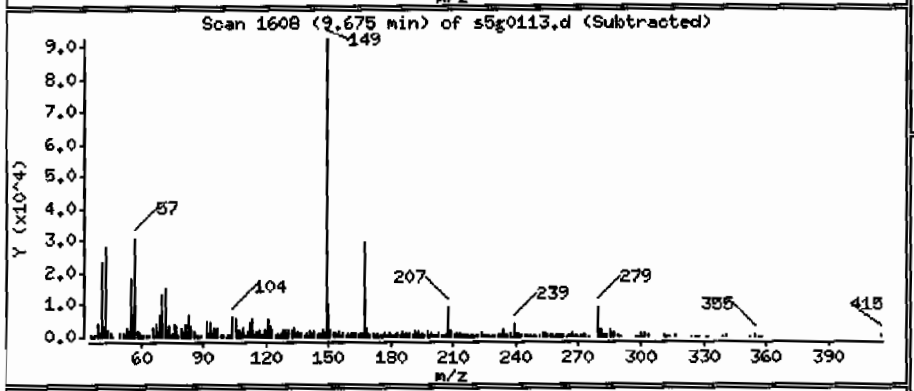

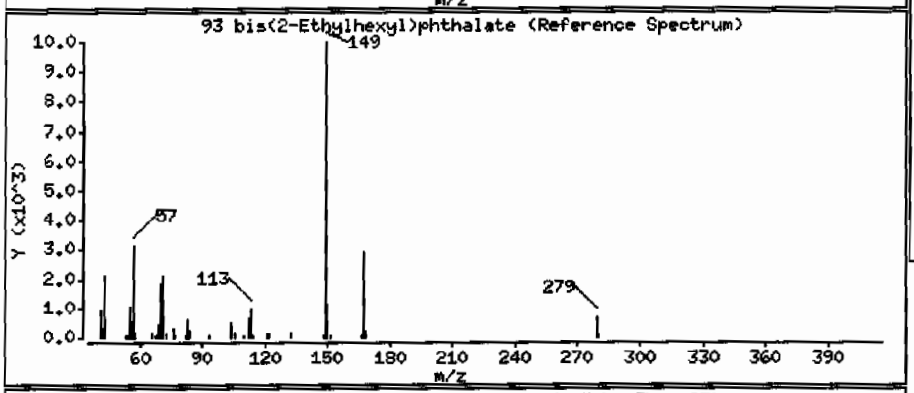

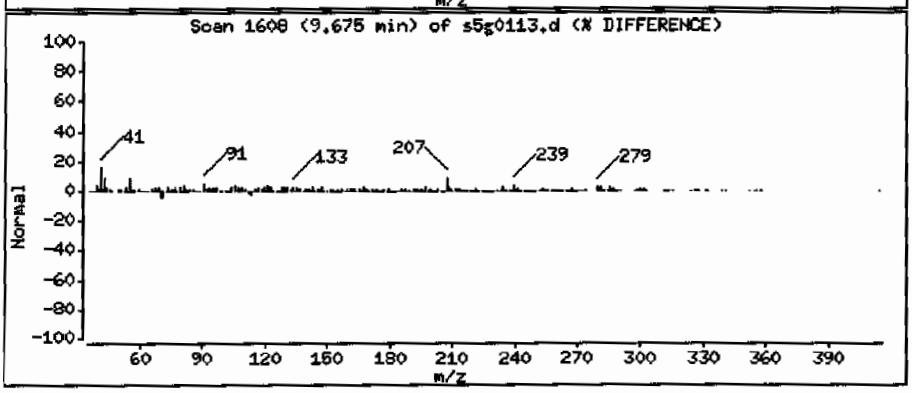

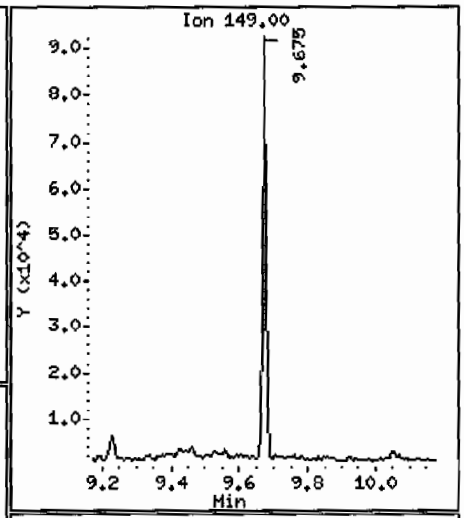

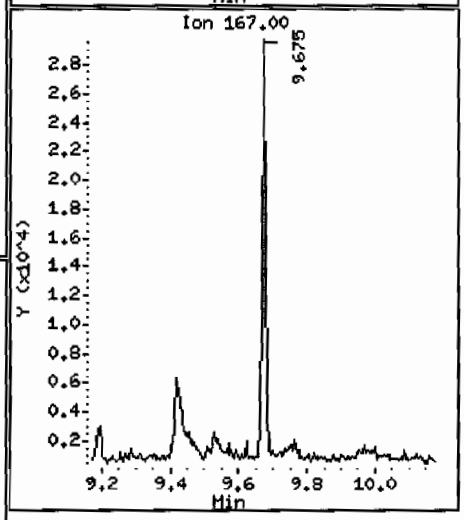

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531

Instrument: MSD5.i

Sample Info: 1232507006188144211SVHF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 103 ug/Kg

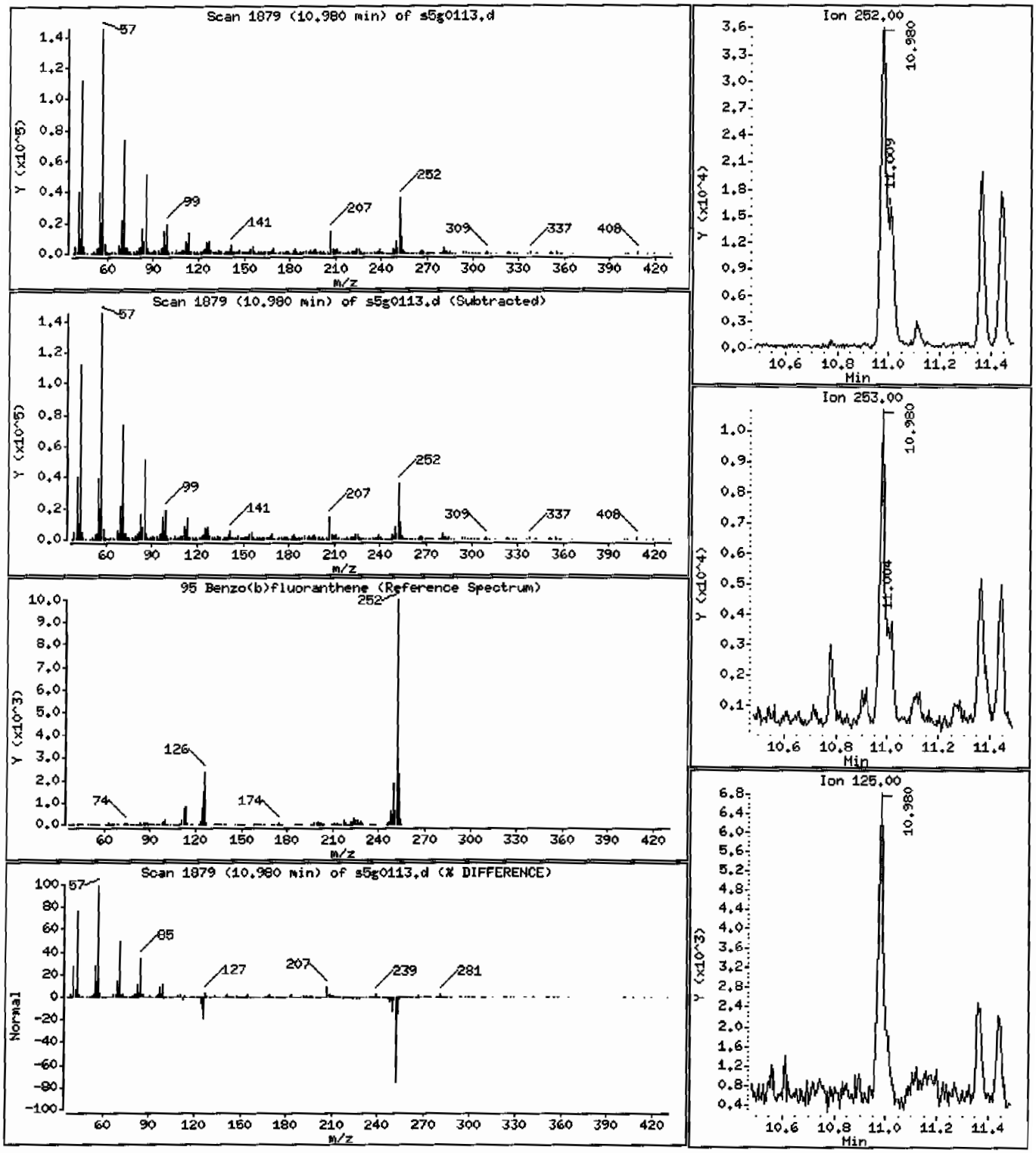

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531

Instrument: MSD5.i

Sample Info: |2325070061881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 49.3 ug/Kg

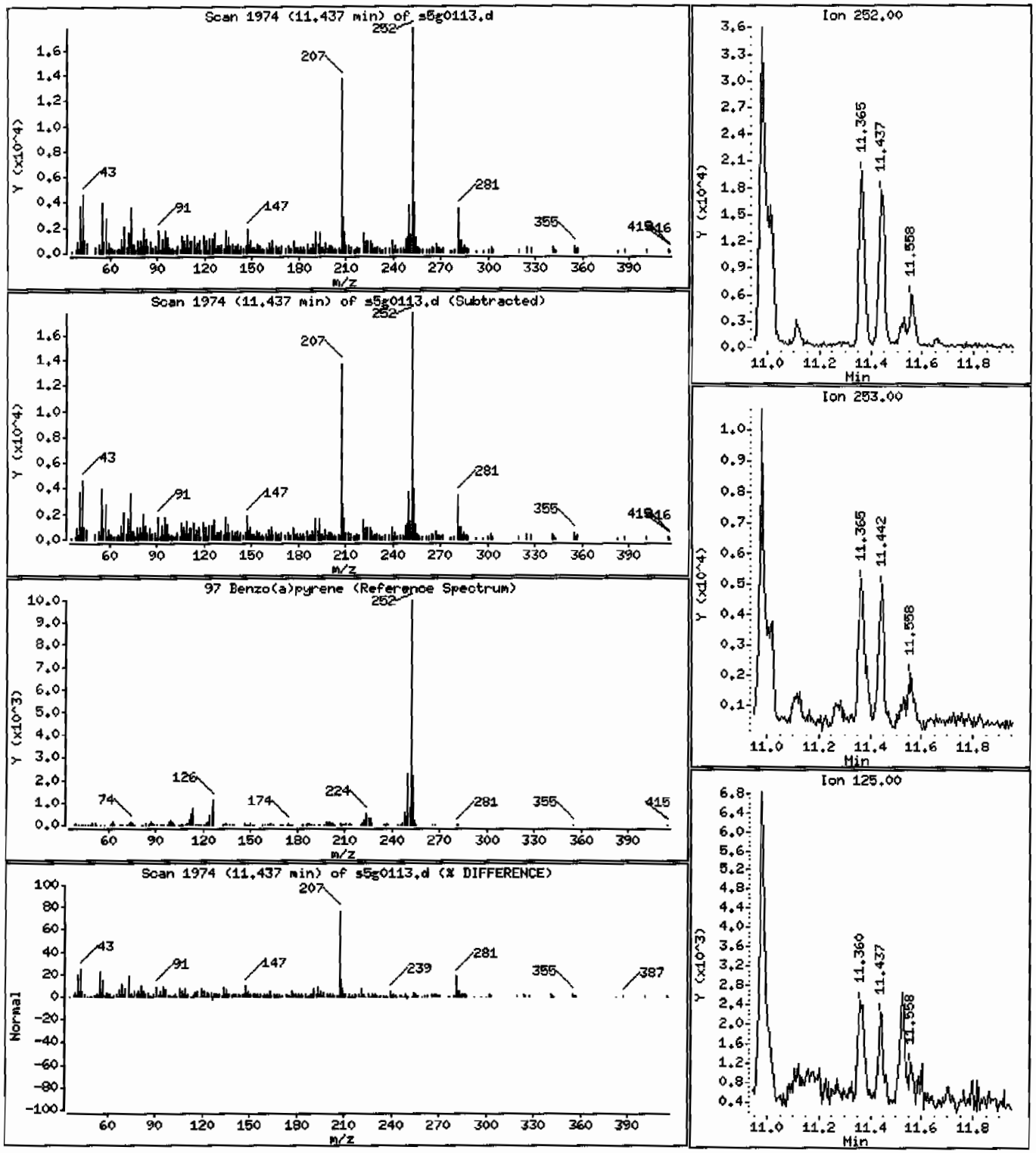

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531

Instrument: MSD5.i

Sample Info: 1232507006|881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 36.2 ug/Kg

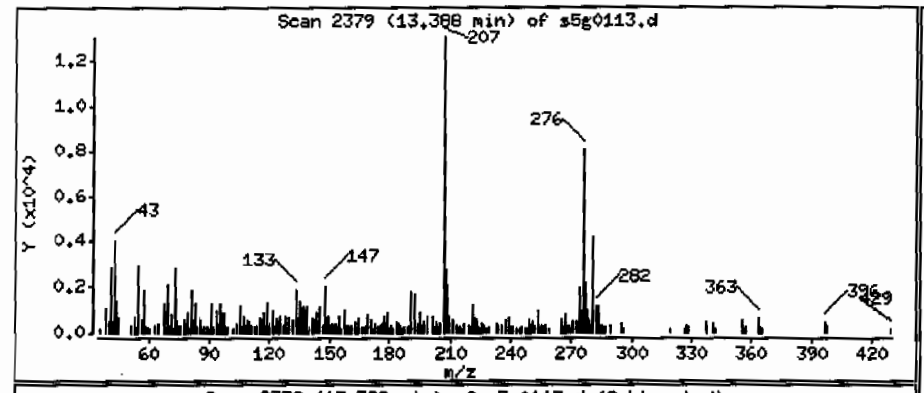

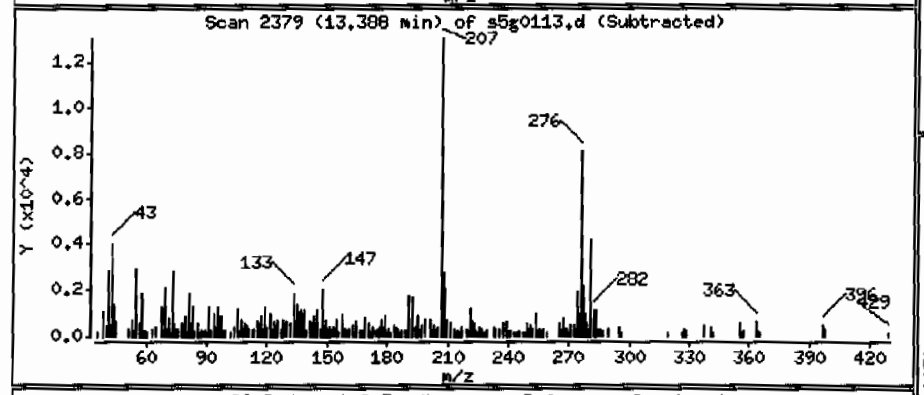

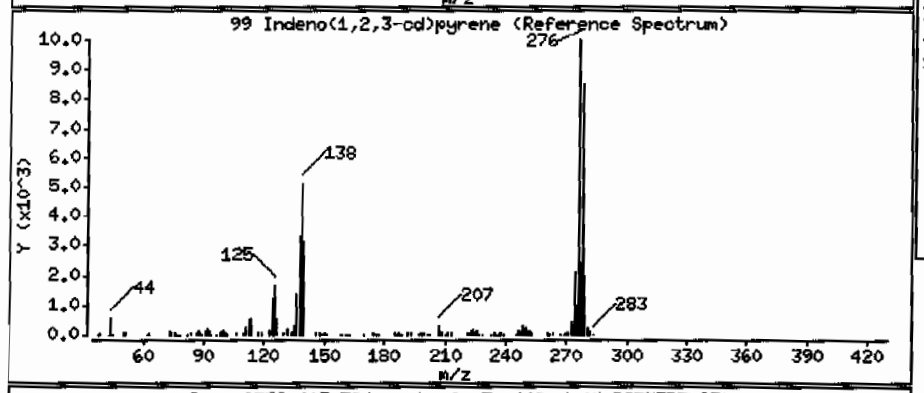

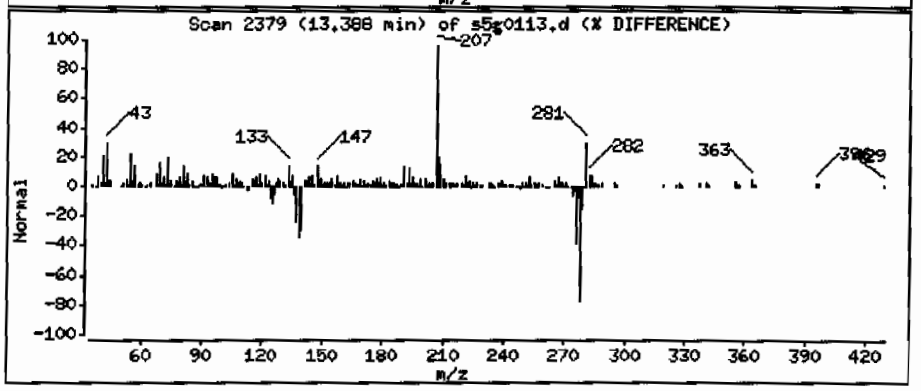

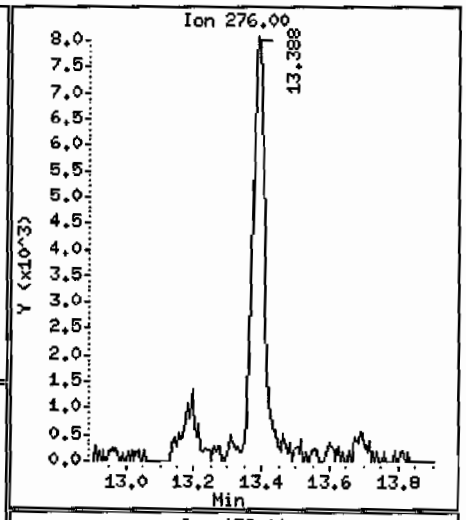

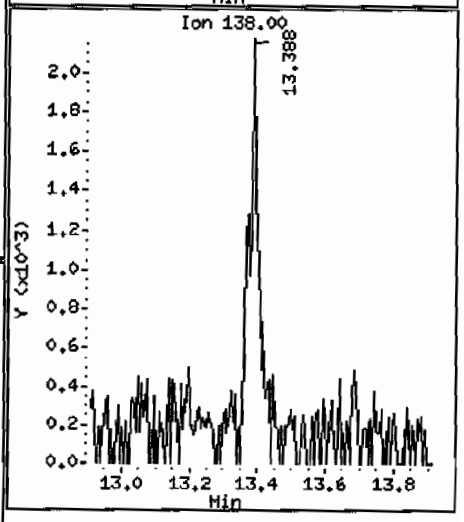

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531

Instrument: MSD5.i

Sample Info: |2325070061881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RHB

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 45.1 ug/Kg

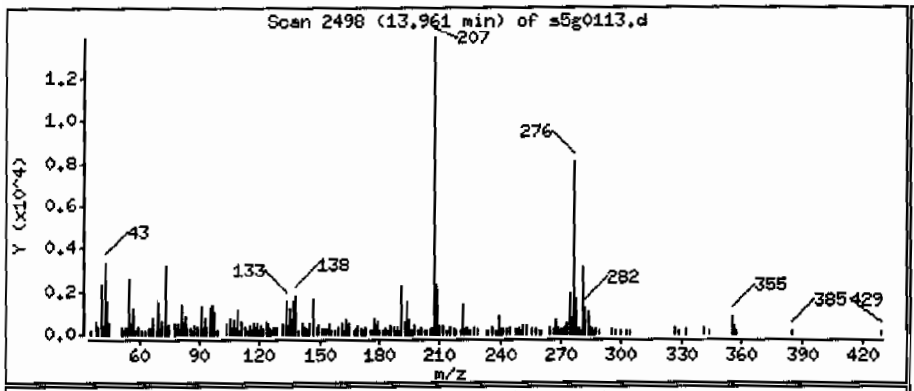

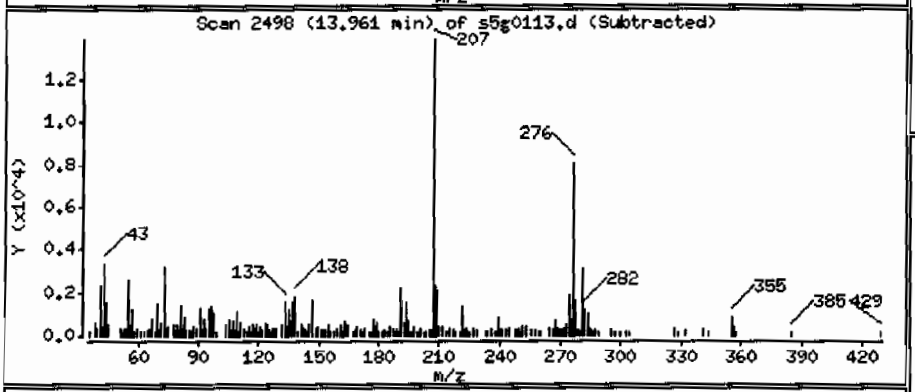

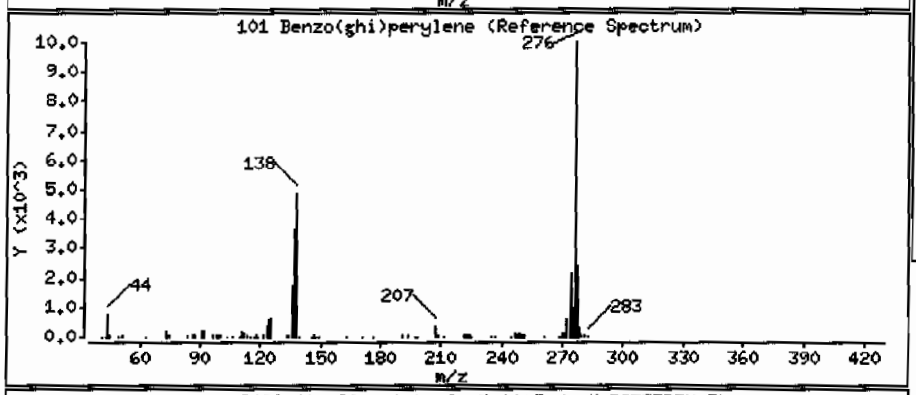

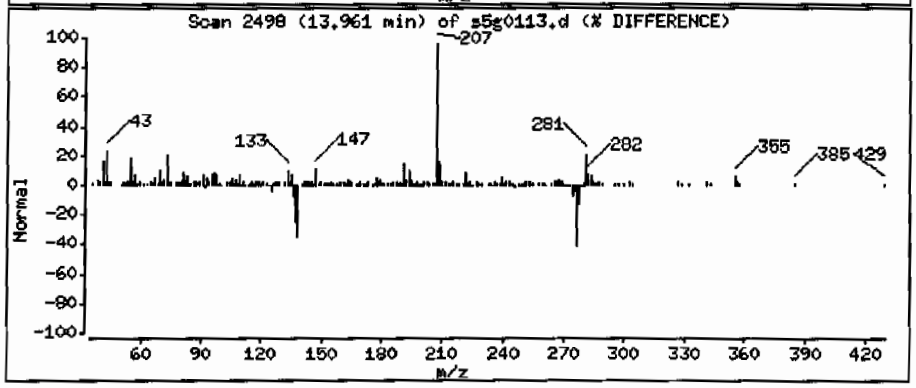

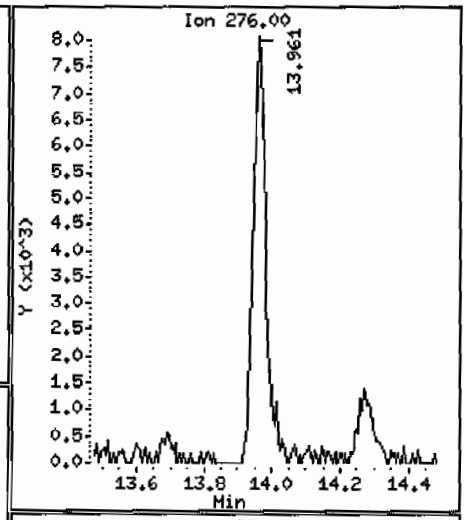

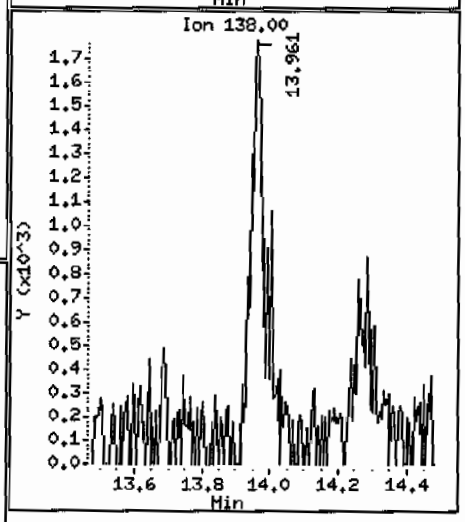

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531 Instrument: MSD5.i

Sample Info: 1232507006188144211|SVMF11|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7950	23	C6H12O2	116

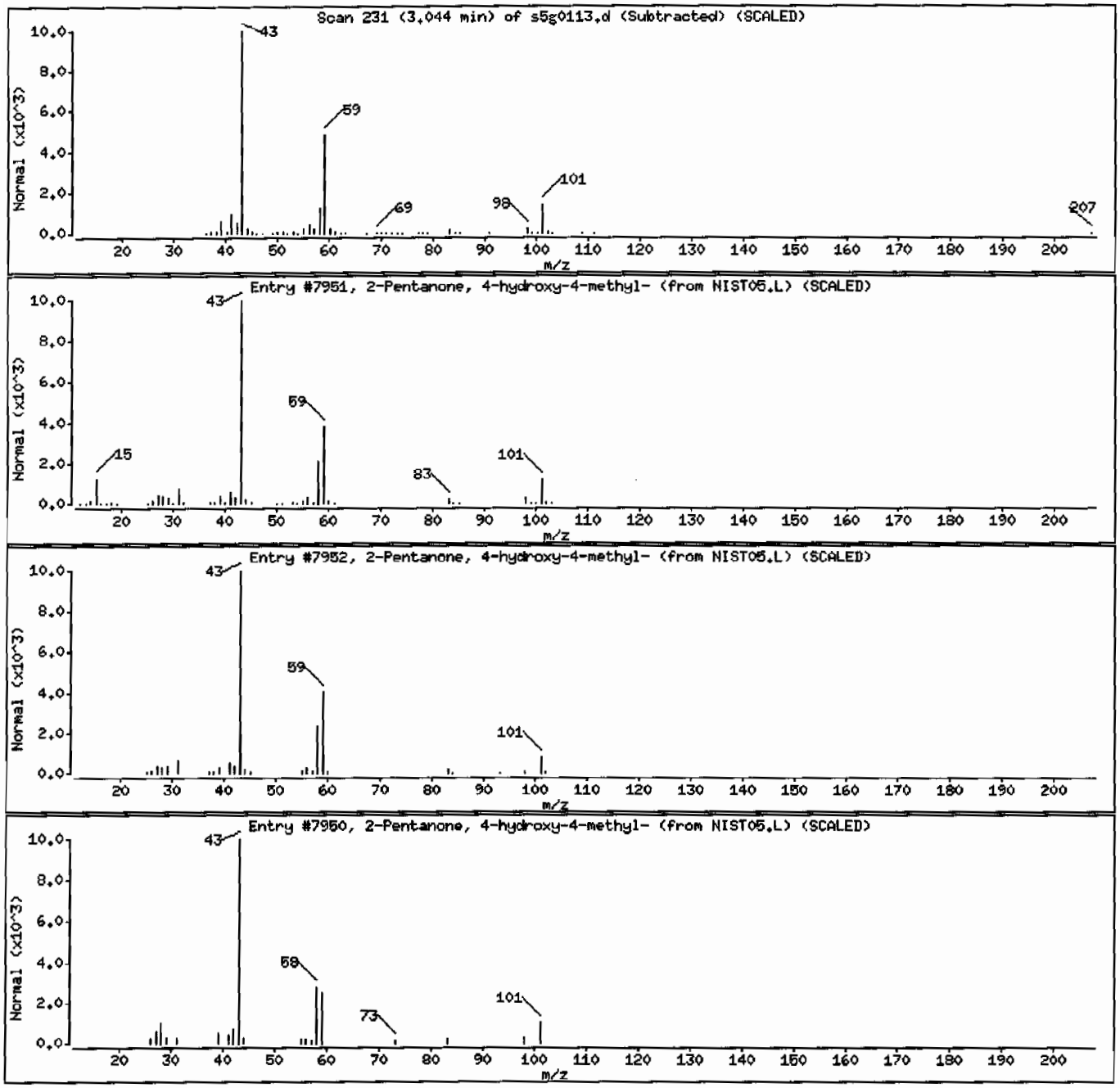

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531

Instrument: MSD5.i

Sample Info: |2325070061881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60020	99	C15H24	204
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60024	99	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60047	98	C15H24	204

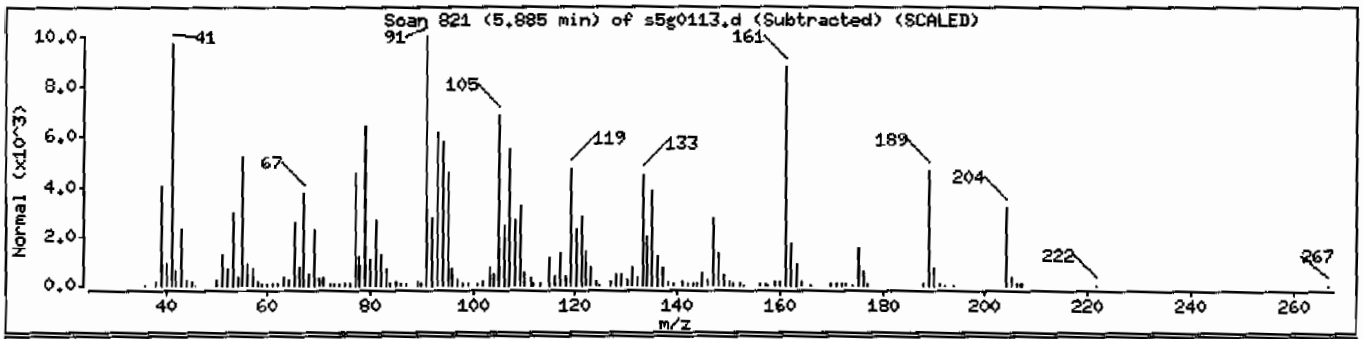

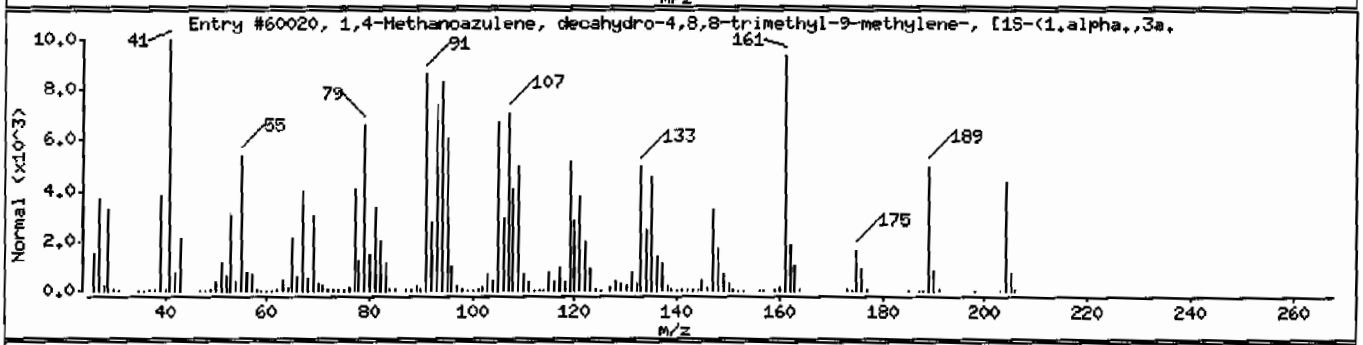

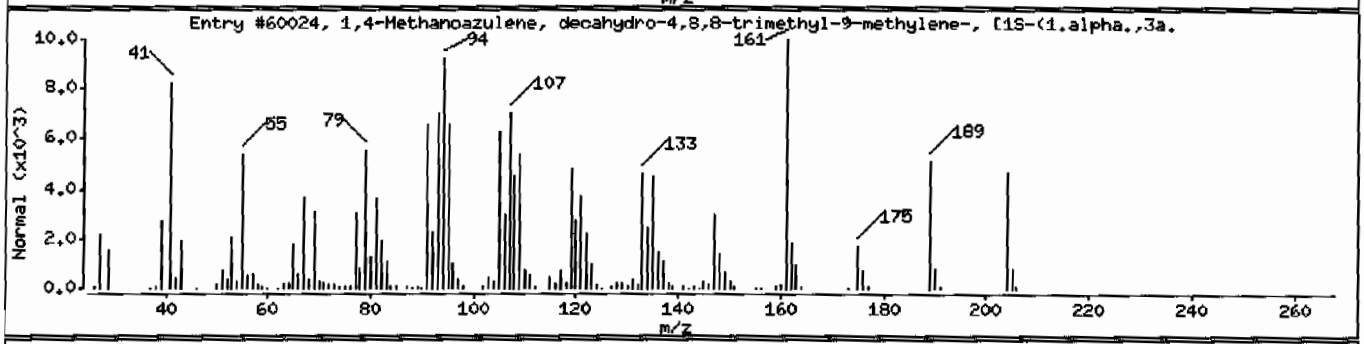

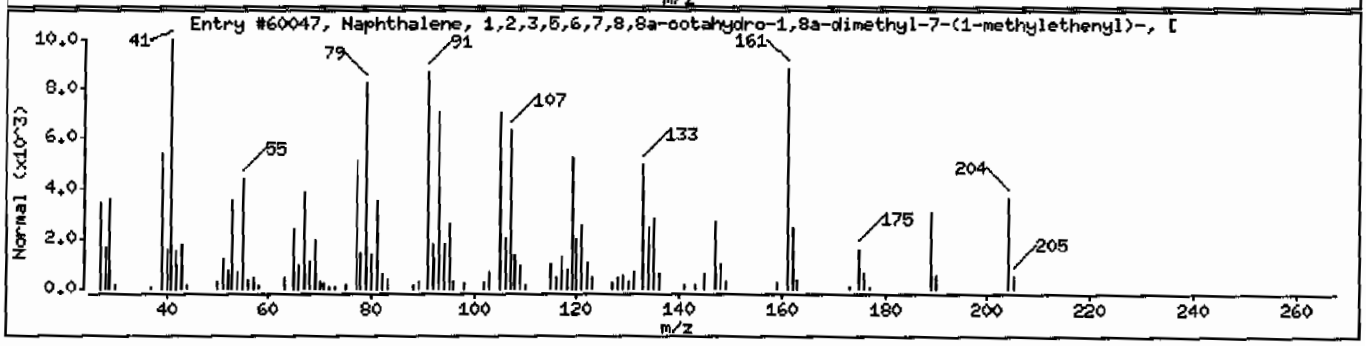

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531 Instrument: MSD5.i

Sample Info: |232507006|881442|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Phenol, 2-(1,1-dimethylethyl)-	88-18-6	NIST05.L	22780	55	C10H14O	150
Acetamide, N-(3-methylphenyl)-	537-92-8	NIST05.L	22663	50	C9H11NO	149
2,5-Cyclohexadiene, 1,4-diethyl-1,4-dime	1000150-21-6	NIST05.L	32221	43	C12H20	164

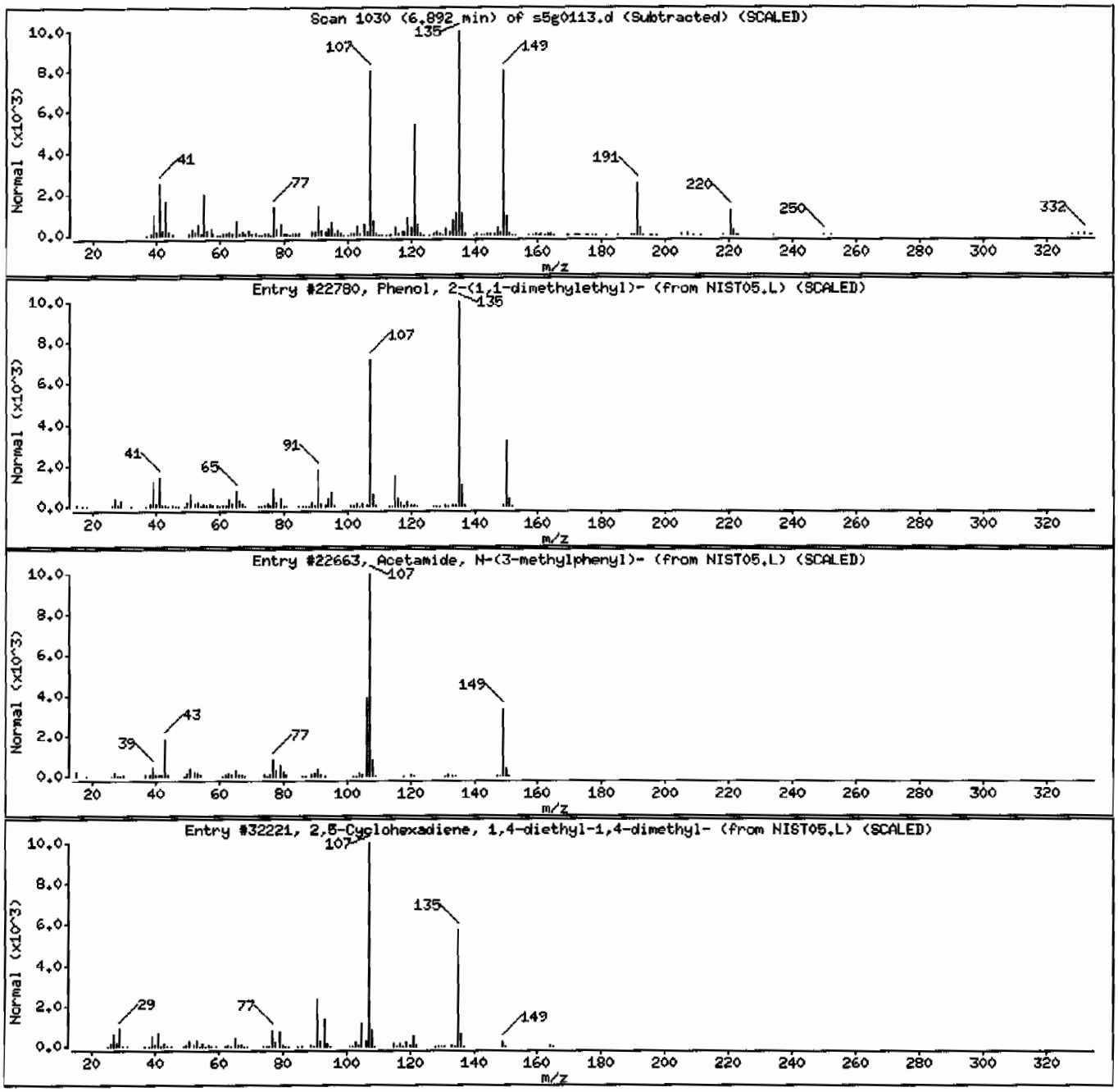

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531 Instrument: MSD5.i

Sample Info: |2325070061881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Phenol, m-tert-butyl-	585-34-2	NIST05.L	22734	58	C10H14O	150
Hexestrol	5635-50-7	NIST05.L	105678	50	C18H22O2	270
Phenol, m-tert-butyl-	585-34-2	NIST05.L	22728	47	C10H14O	150

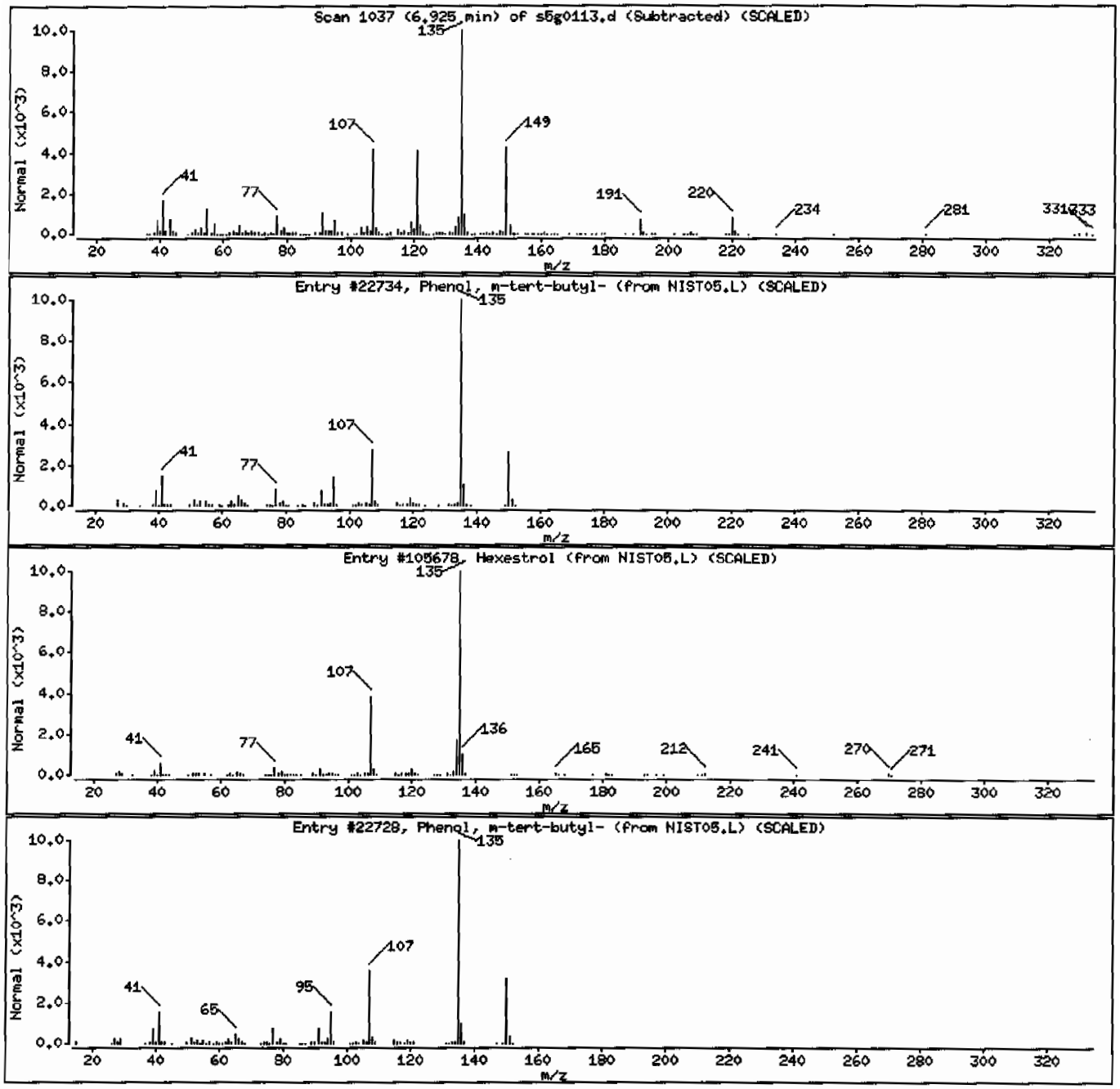

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Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531 Instrument: MSD5.i

Sample Info: 1232507006188144211SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Phenol, 2-(1,1-dimethylethyl)-5-methyl-	88-60-8	NIST05.L	32076	38	C11H16O	164
4-Ethoxybenzhydrazide	58586-81-5	NIST05.L	43598	35	C9H12N2O2	180
Tricyclo[3.1.0.0(2,4)]hexane, 3,6-diethy	1000150-21-2	NIST05.L	32239	25	C12H20	164

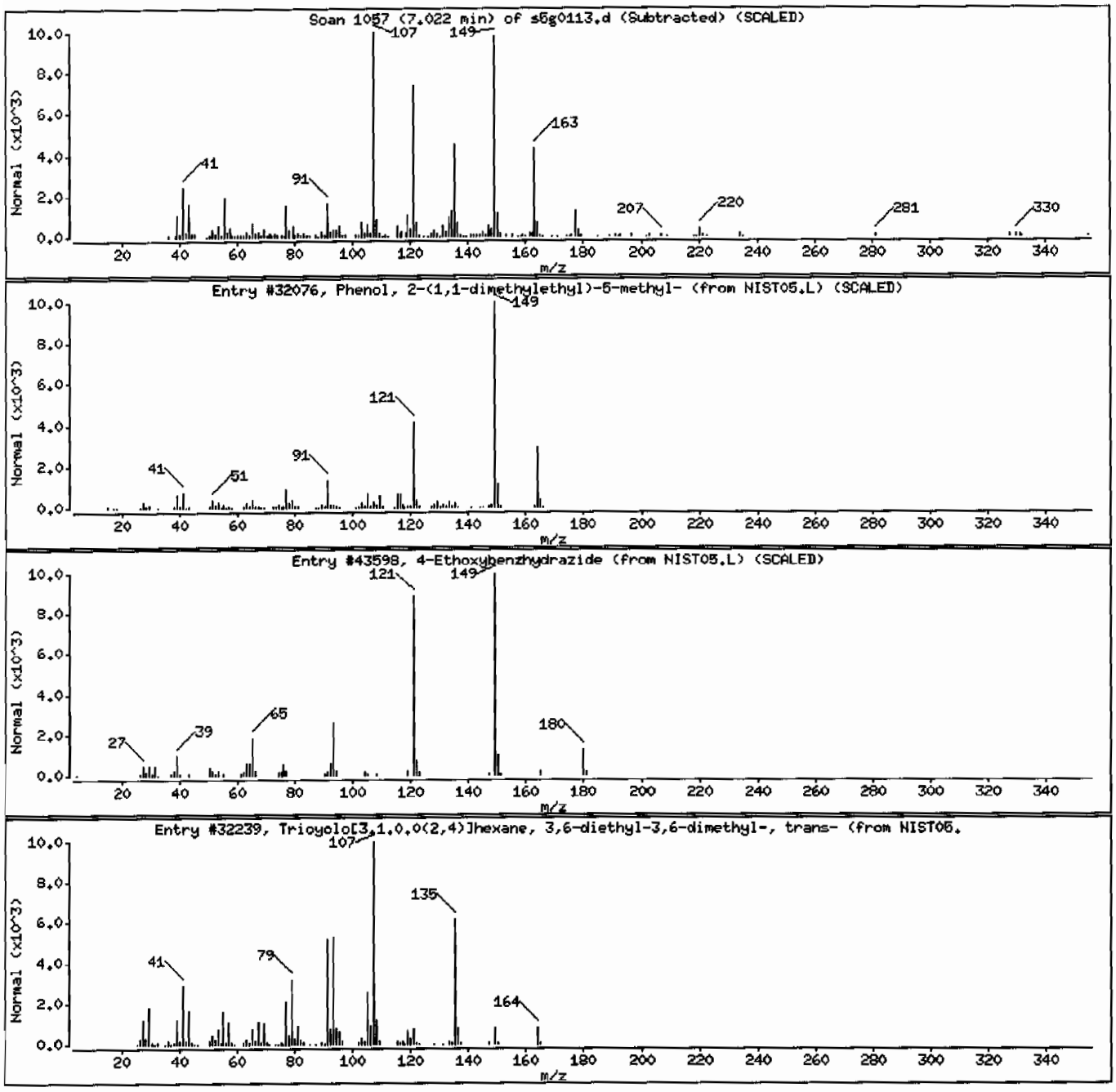

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531 Instrument: MSD5.i

Sample Info: 1232507006188144211SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
s-Indacen-1(2H)-one, 3,5,6,7-tetrahydro-	38754-94-8	NIST05.L	96361	92	C18H24O	256
1-Phenanthrenecarboxylic acid, 7-ethenyl	3582-26-1	NIST05.L	134775	50	C21H32O2	316
1H-Benz[de]isoquinoline-1,3(2H)-dione, 6	3271-05-4	NIST05.L	85926	48	C14H11NO3	241

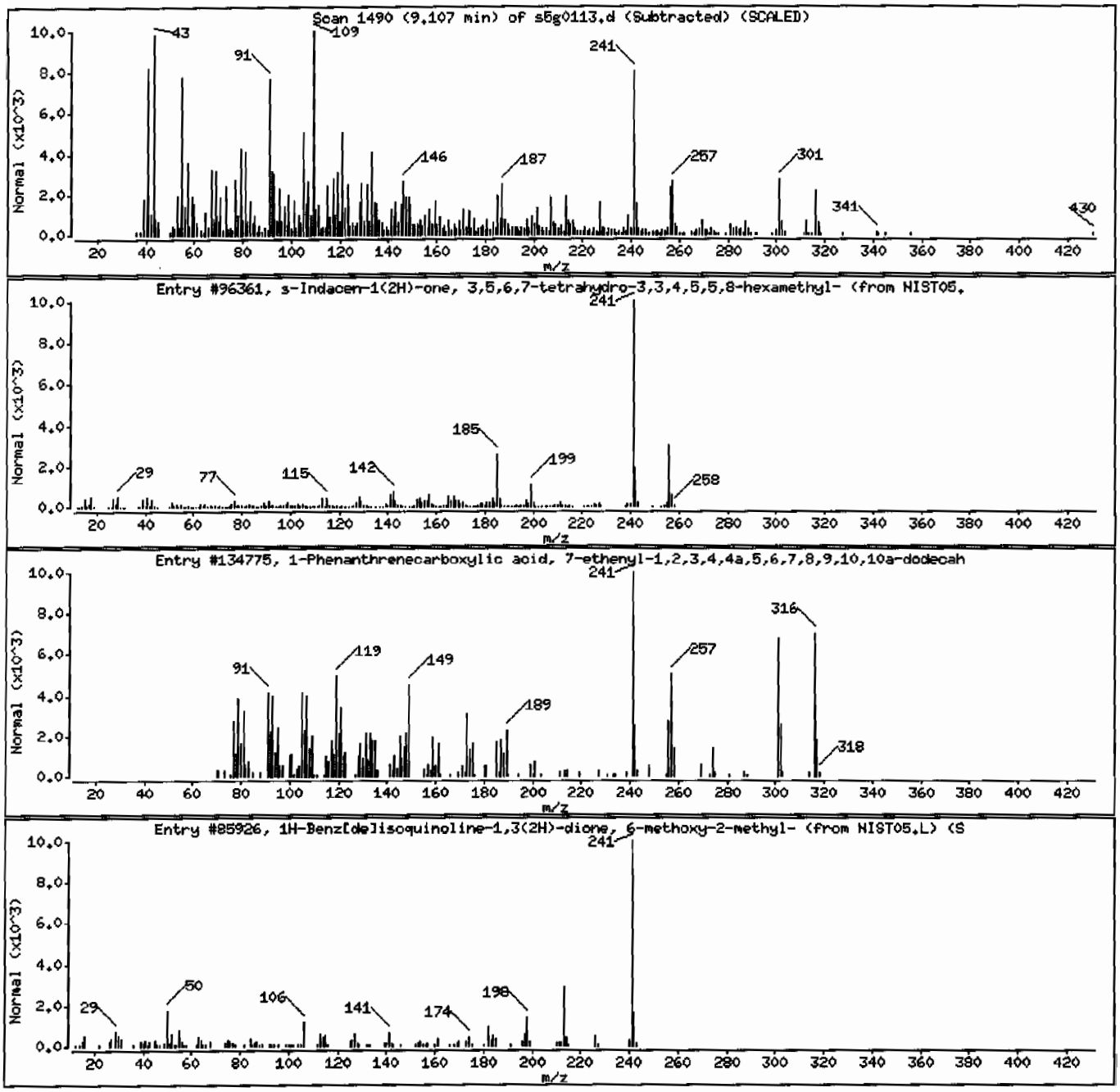

Data File: /chem/MSD5.i/s070109.b/s5g0113.d

Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531 Instrument: MSD5.i

Sample Info: |2325070061881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosane	112-95-8	NIST05.L	113490	96	C20H42	282
Eicosane	112-95-8	NIST05.L	113489	94	C20H42	282
Hexadecane	544-76-3	NIST05.L	76090	94	C16H34	226

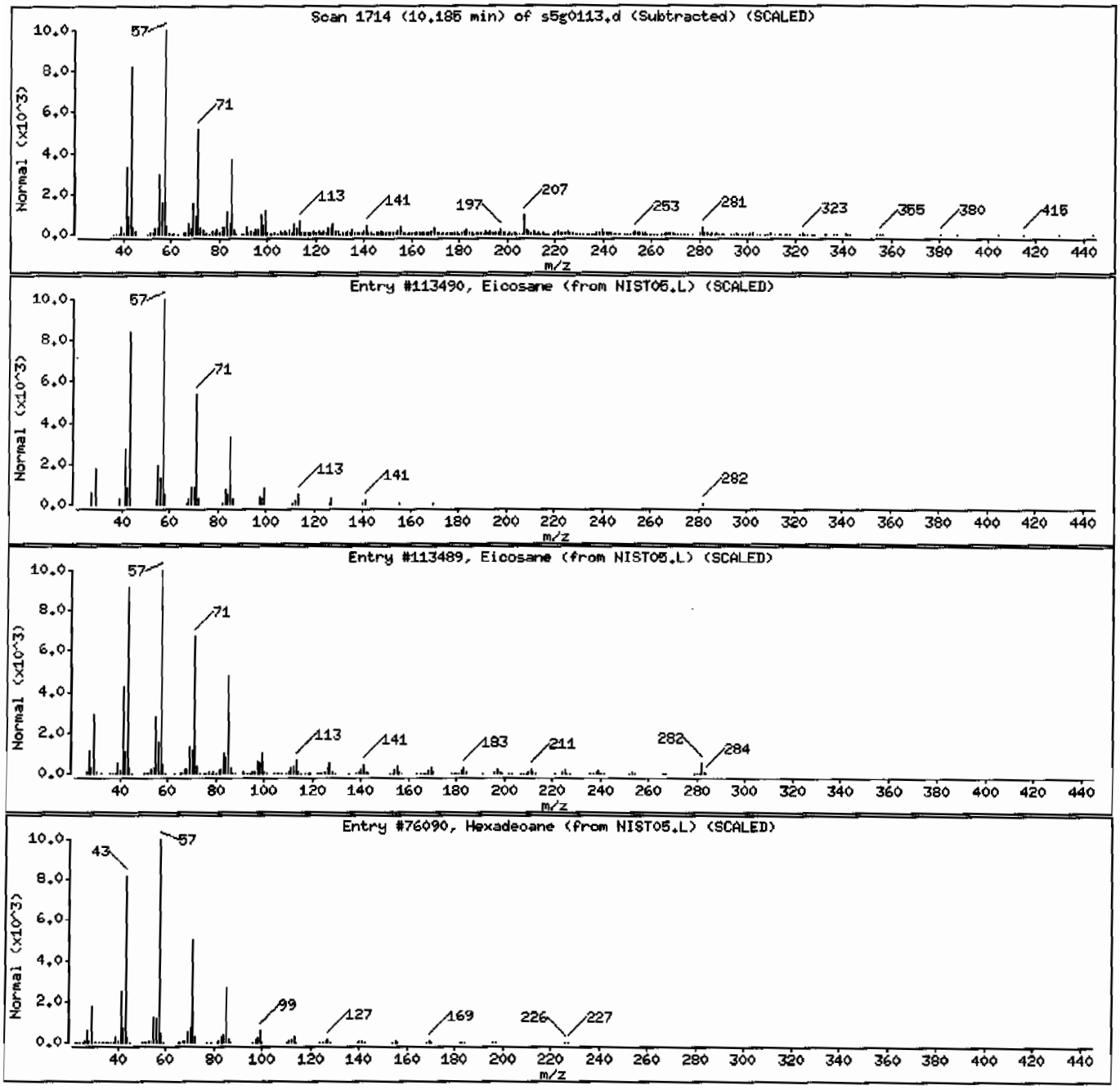

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Date : 01-JUL-2009 12:33

Client ID: CAMO-09-6531 Instrument: MSD5.i

Sample Info: |232507006|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclohexane, 1,1'-(2-methyl-1,3-propaned	2883-08-1	NIST05.L	73082	89	C16H30	222
Cyclohexane, 1,1'-(2-propyl-1,3-propaned	55030-21-2	NIST05.L	92245	64	C18H34	250
Decane, 5,6-bis(2,2-dimethylpropylidene)	73002-85-4	NIST05.L	110863	45	C20H38	278

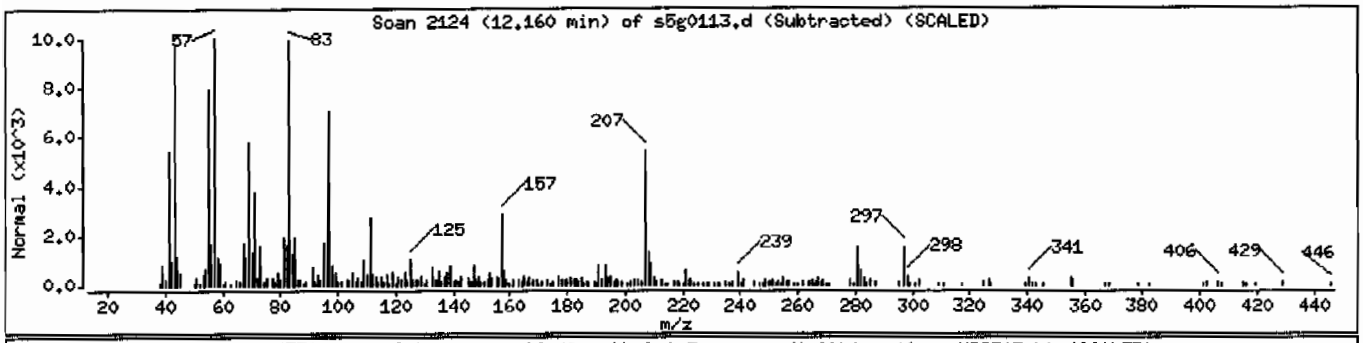

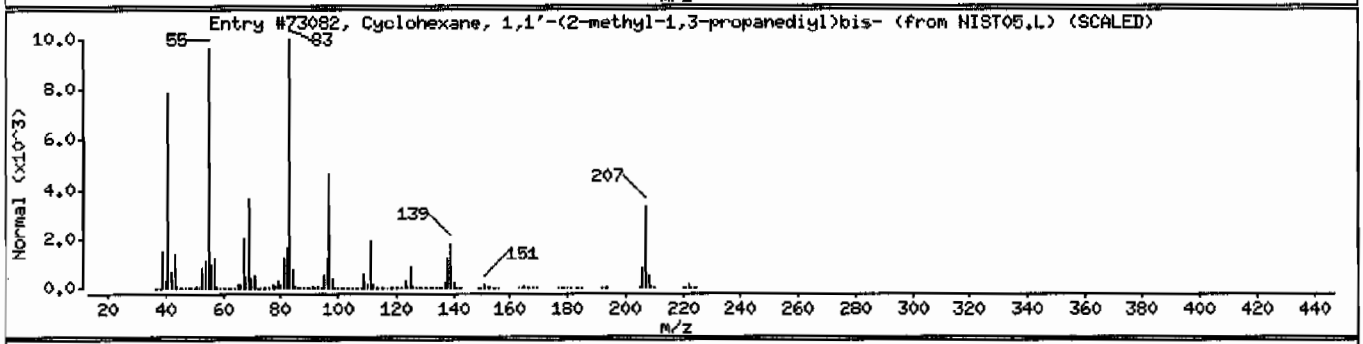

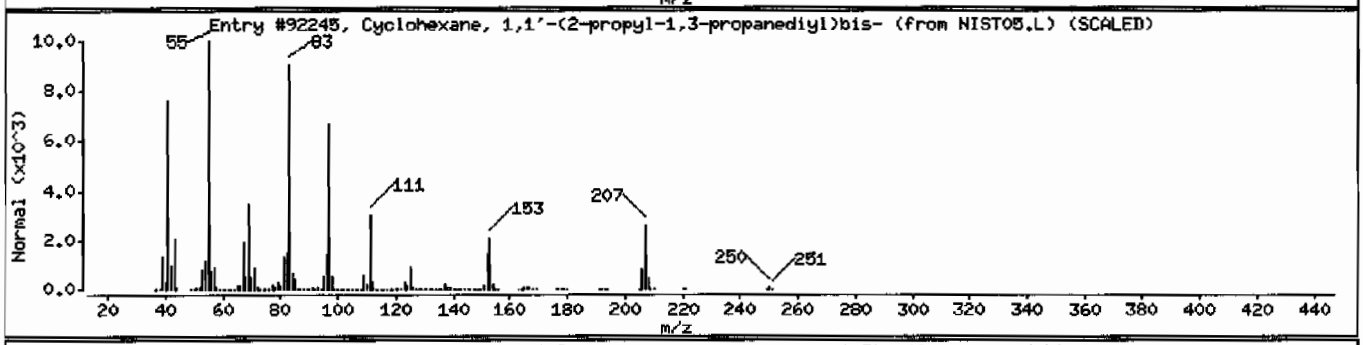

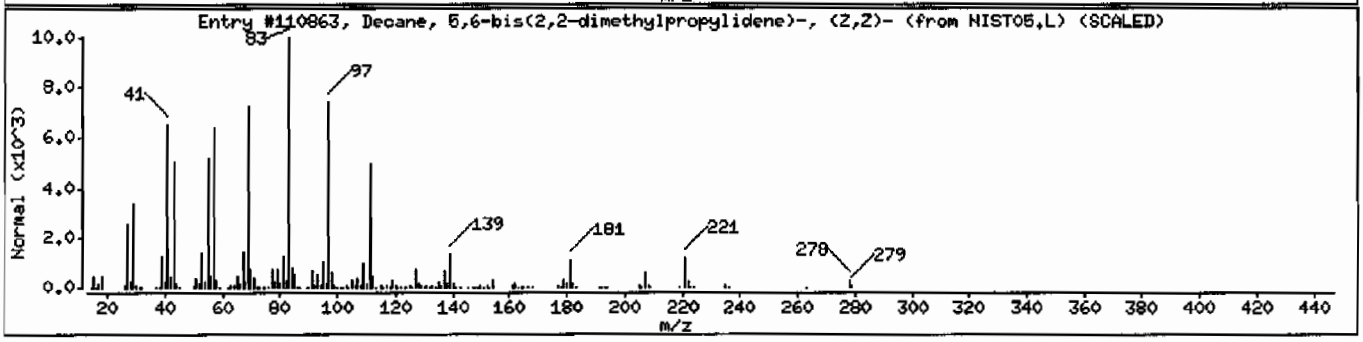

Standard Data

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

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Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

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Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

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Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

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Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 01-Jul-2009 07:52

Calibration History

Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Start Cal Date: 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
25-JUN-2009 14:42	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2512.d
Cal Level: 2 , Cal Amount: 10.00000		
26-JUN-2009 15:54	nev	/chem/MSD5.i/s062509.b/s5f2551.d
26-JUN-2009 12:32	hex	/chem/MSD5.i/s062509.b/s5f2542.d
26-JUN-2009 09:31	pest	/chem/MSD5.i/s062509.b/s5f2534.d
25-JUN-2009 19:10	ap12	/chem/MSD5.i/s062509.b/s5f2522.d
25-JUN-2009 15:10	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2513.d
Cal Level: 3 , Cal Amount: 20.00000		
26-JUN-2009 16:17	nev	/chem/MSD5.i/s062509.b/s5f2552.d
26-JUN-2009 12:55	hex	/chem/MSD5.i/s062509.b/s5f2543.d
26-JUN-2009 09:53	pest	/chem/MSD5.i/s062509.b/s5f2535.d
25-JUN-2009 19:32	ap12	/chem/MSD5.i/s062509.b/s5f2523.d
25-JUN-2009 15:38	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2514.d
Cal Level: 4 , Cal Amount: 40.00000		
26-JUN-2009 16:39	nev	/chem/MSD5.i/s062509.b/s5f2553.d
26-JUN-2009 13:17	hex	/chem/MSD5.i/s062509.b/s5f2544.d
26-JUN-2009 10:16	pest	/chem/MSD5.i/s062509.b/s5f2536.d
25-JUN-2009 19:55	ap12	/chem/MSD5.i/s062509.b/s5f2524.d
25-JUN-2009 16:05	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2515.d
Cal Level: 5 , Cal Amount: 50.00000		
26-JUN-2009 17:01	nev	/chem/MSD5.i/s062509.b/s5f2554.d
26-JUN-2009 13:40	hex	/chem/MSD5.i/s062509.b/s5f2545.d
26-JUN-2009 10:39	pest	/chem/MSD5.i/s062509.b/s5f2537.d
25-JUN-2009 20:18	ap12	/chem/MSD5.i/s062509.b/s5f2525.d
25-JUN-2009 16:33	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2516.d
Cal Level: 6 , Cal Amount: 80.00000		
26-JUN-2009 17:24	nev	/chem/MSD5.i/s062509.b/s5f2555.d
26-JUN-2009 14:02	hex	/chem/MSD5.i/s062509.b/s5f2546.d
26-JUN-2009 11:02	pest	/chem/MSD5.i/s062509.b/s5f2538.d
25-JUN-2009 20:41	ap12	/chem/MSD5.i/s062509.b/s5f2526.d
25-JUN-2009 17:02	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2517.d
Cal Level: 7 , Cal Amount: 100.00000		

26-JUN-2009 14:25	hex	/chem/MSD5.i/s062509.b/s5f2547.d
26-JUN-2009 11:25	pest	/chem/MSD5.i/s062509.b/s5f2539.d
25-JUN-2009 21:03	ap12	/chem/MSD5.i/s062509.b/s5f2527.d
25-JUN-2009 17:29	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2518.d

Cal Level: 8 , Cal Amount: 120.00000		
26-JUN-2009 18:09	nev	/chem/MSD5.i/s062509.b/s5f2557.d
26-JUN-2009 11:47	pest	/chem/MSD5.i/s062509.b/s5f2540.d
25-JUN-2009 21:25	ap12	/chem/MSD5.i/s062509.b/s5f2528.d
25-JUN-2009 17:57	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2519.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
01-JUL-2009 07:32	MEGAIICARE	/chem/MSD5.i/s070109.b/s5g0102.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Cal Date : 01-Jul-2009 07:50 rmb

Calibration File Names:
Level 1: /chem/MSD5.i/s062509.b/s5f2512.d
Level 2: /chem/MSD5.i/s062509.b/s5f2551.d
Level 3: /chem/MSD5.i/s062509.b/s5f2552.d
Level 4: /chem/MSD5.i/s062509.b/s5f2553.d
Level 5: /chem/MSD5.i/s062509.b/s5f2554.d
Level 6: /chem/MSD5.i/s062509.b/s5f2555.d
Level 7: /chem/MSD5.i/s062509.b/s5f2556.d
Level 8: /chem/MSD5.i/s062509.b/s5f2557.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.44023	0.49064	0.47716	0.46210	0.46052					
	0.47841	0.46192					AVRG		0.46728		3.49500
2 Pyridine	+++++	0.69279	0.75514	0.74169	0.59556	0.56835					
	0.76016	0.72634					AVRG		0.69143		11.33716
4 Aniline	+++++	0.44415	0.52170	0.51663	0.49970	0.50458					
	0.52141	0.50721					AVRG		0.50220		5.37034
209 Benzaldehyde	+++++	0.85159	0.89015	0.81871	0.79990	0.75839					
	0.74985	0.70918					AVRG		0.79683		7.86449
6 Phenol	+++++	1.14962	1.24888	1.18550	1.14101	1.11147					
	1.12731	1.08172					AVRG		1.14936		4.73589

GEL Laboratories LLC

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Cal Date : 01-Jul-2009 07:50 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	0.90051	0.90959	0.96460	0.91224	0.88038	0.84926					
	0.85216	0.81790					AVRG		0.88583		5.19026
8 2-Chlorophenol	+++++	0.95967	1.04338	0.98839	0.94752	0.92897					
	0.94964	0.90735					AVRG		0.96070		4.60720
203 n-Decane	+++++	1.76533	1.83008	1.65405	1.57800	1.43467					
	1.36362	1.28290					AVRG		1.55838		13.23692
9 1,3-Dichlorobenzene	+++++	1.19264	1.28772	1.18603	1.14421	1.08989					
	1.09658	1.05091					AVRG		1.14971		6.95854
11 1,4-Dichlorobenzene	+++++	1.20398	1.26798	1.17125	1.13840	1.08879					
	1.09132	1.04491					AVRG		1.14381		6.71389
12 Benzyl alcohol	+++++	0.56979	0.63670	0.62573	0.60396	0.60465					
	0.61546	0.58777					AVRG		0.60629		3.73063
13 1,2-Dichlorobenzene	+++++	1.15580	1.17968	1.08323	1.05201	0.99640					
	1.00595	0.96590					AVRG		1.06271		7.67104
14 bis(2-Chloroisopropyl)ether	+++++	2.22903	2.36787	2.18504	2.06888	1.93644					
	1.87607	1.76841					AVRG		2.06168		10.34954
15 o-Cresol	+++++	0.73909	0.77770	0.73149	0.71184	0.68497					
	0.69315	0.66420					AVRG		0.71463		5.34449

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
16 Acetophenone	+++++	1.11152	1.14047	1.10567	1.07838	1.07242					
	1.04402	1.04190					AVRG		1.08491		3.35447
17 N-Nitrosodipropylamine	0.53750	0.60668	0.67952	0.64418	0.62140	0.62312					
	0.64069	0.59864					AVRG		0.61897		6.68884
18 m,p-Cresols	+++++	0.95993	1.03790	0.98085	0.94779	0.92236					
	0.94191	0.89906					AVRG		0.95569		4.67544
19 Hexachloroethane	+++++	0.41401	0.45409	0.43628	0.42388	0.41362					
	0.42132	0.40627					AVRG		0.42421		3.83148
21 Nitrobenzene	+++++	0.30294	0.32276	0.28522	0.28127	0.25509					
	0.25224	0.23551					AVRG		0.27643		11.11561
22 Isophorone	+++++	0.54758	0.58414	0.54133	0.51835	0.48143					
	0.47395	0.43472					AVRG		0.51164		10.00571
23 2-Nitrophenol	+++++	0.14529	0.15968	0.13060	0.12565	0.11851					
	0.11804	0.11062					AVRG		0.12977		13.28936
24 2,4-Dimethylphenol	+++++	0.24006	0.26073	0.23521	0.22763	0.20780					
	0.20628	0.19018					AVRG		0.22398		10.73144
25 bis(2-Chloroethoxy)methane	+++++	0.32945	0.33889	0.30691	0.29506	0.26818					
	0.26319	0.24472					AVRG		0.29234		12.06634

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
26 2,4-Dichlorophenol	+++++	0.23679	0.25509	0.23664	0.22756	0.21060					
	0.20430	0.18739					AVRG		0.22262		10.36895
27 Benzoic acid	+++++	+++++	51071	179236	222805	415300					
	636355	696809					LINR	0.30650	0.14372		0.99499
28 1,2,4-Trichlorobenzene	+++++	0.31579	0.32696	0.29301	0.27810	0.25284					
	0.24524	0.22654					AVRG		0.27693		13.50910
30 Naphthalene	0.92630	0.81441	0.84437	0.74175	0.71375	0.63501					
	+++++	+++++					AVRG		0.77927		13.28698
204 alpha-Terpineol	+++++	0.27539	0.29587	0.27412	0.26160	0.23729					
	0.22709	0.21031					AVRG		0.25452		11.98565
31 4-Chloroaniline	+++++	49594	132620	425679	656127	1107368					
	1404474	+++++					LINR	0.18534	0.32589		0.99103
189 Caprolactam	+++++	0.07040	0.08077	0.07795	0.07939	0.08243					
	0.08208	0.08270					AVRG		0.07939		5.44768
32 Hexachlorobutadiene	+++++	0.22957	0.23375	0.21257	0.20237	0.18593					
	0.18127	0.16955					AVRG		0.20215		12.15251
33 4-Chloro-3-methylphenol	+++++	0.22052	0.23942	0.22592	0.22085	0.20102					
	0.19961	0.18500					AVRG		0.21319		8.75387

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.54547	0.51742	0.53737	0.48509	0.46571	0.42309					
	0.40601	0.37515					AVRG		0.46942		13.47765
35 1-Methylnaphthalene	0.61675	0.54291	0.56151	0.50018	0.48099	0.43377					
	0.41494	+++++					AVRG		0.50729		14.13879
36 Hexachlorocyclopentadiene	+++++	27986	82848	201022	230899	383354					
	546120	529744					LINR	0.06768	0.19504		0.99133
208 1,1'-Biphenyl	+++++	1.15705	1.15621	1.07607	1.06999	0.99440					
	0.93860	0.92132					AVRG		1.04481		9.22094
205 2,3-Dichloroaniline	+++++	0.43038	0.47856	0.47126	0.45828	0.43340					
	0.43590	0.41815					AVRG		0.44656		5.11263
37 2,4,6-Trichlorophenol	+++++	0.28676	0.32859	0.32419	0.31870	0.30788					
	0.30664	0.29394					AVRG		0.30953		4.99573
38 2,4,5-Trichlorophenol	+++++	0.31119	0.35383	0.35359	0.34899	0.32750					
	0.32118	0.30897					AVRG		0.33218		5.93452
40 2-Chloronaphthalene	0.90782	0.88976	0.95381	0.88628	0.86190	0.79283					
	0.77800	0.73919					AVRG		0.85120		8.64193
42 o-Nitroaniline	+++++	0.22990	0.27677	0.28660	0.28311	0.27222					
	0.27973	0.26622					AVRG		0.27065		7.09467

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
41 m-Nitroaniline	+++++	13390	28329	139268	173437	345778					
	493724	513131					LINR	0.29884	0.19829		0.99453
43 Dimethylphthalate	+++++	1.04940	1.13308	1.04947	1.03679	0.97403					
	0.95746	0.91235					AVRG		1.01609		7.22171
44 2,6-Dinitrotoluene	+++++	0.23053	0.26215	0.25119	0.24633	0.23672					
	0.23773	0.22882					AVRG		0.24192		4.95083
45 Acenaphthylene	1.32250	1.32839	1.43067	1.30894	1.28012	1.15975					
	1.12592	1.07678					AVRG		1.25413		9.61726
47 Acenaphthene	0.86434	0.82293	0.89161	0.84103	0.82730	0.77871					
	0.77201	0.74002					AVRG		0.81724		6.19484
48 2,4-Dinitrophenol	+++++	+++++	27401	92512	114873	206533					
	316209	327495					LINR	0.31618	0.12695		0.99276
49 Dibenzofuran	+++++	1.22775	1.32738	1.22440	1.19116	1.08140					
	1.04556	1.00480					AVRG		1.15749		10.04078
50 2,4-Dinitrotoluene	+++++	0.28811	0.33236	0.33277	0.32207	0.31602					
	0.32001	0.30435					AVRG		0.31653		5.01775
51 Diethylphthalate	+++++	1.02375	1.11667	1.04486	1.01847	0.95382					
	0.93049	0.87854					AVRG		0.99523		8.00568

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
52 4-Nitrophenol	+++++	0.10237	0.13339	0.15027	0.14627	0.15044					
	0.15471	0.15539					AVRG		0.14183		13.32361
53 Fluorene	1.08263	1.02003	1.09222	1.03146	1.00049	0.93401					
	0.91950	0.87726					AVRG		0.99470		7.82414
54 4-Chlorophenylphenylether	+++++	0.58767	0.63875	0.60550	0.58889	0.55750					
	0.55283	0.52876					AVRG		0.57998		6.33880
55 2-Methyl-4,6-dinitrophenol	+++++	21239	62983	165240	200894	364502					
	508544	531313					LINR	0.16218	0.10002		0.99855
56 p-Nitroaniline	+++++	0.10363	0.09786	0.10787	0.10361	0.11040					
	+++++	+++++					AVRG		0.10468		4.57223
133 Diphenylamine	+++++	0.42588	0.42331	0.39385	0.39040	0.38179					
	0.39613	0.37595					AVRG		0.39819		4.85853
58 1,2-Diphenylhydrazine	+++++	0.52955	0.56955	0.53115	0.51761	0.47792					
	0.46451	0.44849					AVRG		0.50554		8.53737
59 Tributylphosphate	+++++	1.00806	1.18622	1.23669	1.16465	1.10392					
	1.07665	0.99822					AVRG		1.11063		8.12668
61 4-Bromophenylphenylether	+++++	0.19446	0.21087	0.19593	0.19164	0.18443					
	0.18455	0.17645					AVRG		0.19119		5.76073

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	100 Level 7	120 Level 8										
63 Hexachlorobenzene	+++++	0.20663	0.22068	0.20559	0.20389	0.19450						
	0.19301	0.18516					AVRG		0.20135		5.75118	
207 Atrazine	+++++	0.03899	0.03935	0.03659	0.03414	0.02579						
	0.02506	0.01147					AVRG		0.03020		33.49708	<-
65 Pentachlorophenol	+++++	29080	74972	189390	229767	418008						
	576136	593432					LINR	0.13477	0.11155		0.99815	
206 n-Octadecane	+++++	0.47475	0.50082	0.45712	0.43884	0.39852						
	0.38292	0.36185					AVRG		0.43069		11.86963	
68 Phenanthrene	0.88355	0.80072	0.83106	0.77370	0.74248	0.67864						
	0.65899	0.62552					AVRG		0.74933		11.98568	
69 Anthracene	0.80079	0.78389	0.83647	0.77814	0.74916	0.68231						
	0.65679	0.62923					AVRG		0.73960		10.09070	
72 Di-n-butylphthalate	+++++	0.92678	1.00428	0.92303	0.88168	0.79411						
	0.73607	0.69755					AVRG		0.85193		13.15447	
76 Fluoranthene	0.87967	0.89588	0.95145	0.91545	0.88662	0.80387						
	0.76584	0.73008					AVRG		0.85361		9.11643	
77 Benzidine	+++++	0.19760	0.17186	0.13560	0.15750	0.17176						
	+++++	+++++					AVRG		0.16686		13.59632	

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
79 Pyrene	0.91265	0.94419	1.00845	0.90726	0.87106	0.79690					
	0.79234	0.74808					AVRG		0.87262		10.07157
85 Butylbenzylphthalate	+++++	0.35330	0.41644	0.38432	0.37612	0.36818					
	0.36866	0.35103					AVRG		0.37401		5.90957
89 Benzo(a)anthracene	0.93687	0.86506	0.93282	0.88495	0.85327	0.81322					
	0.79963	0.78038					AVRG		0.85828		6.82989
90 3,3'-Dichlorobenzidine	+++++	0.27335	0.29372	0.28527	0.28392	0.28609					
	0.29172	0.29334					AVRG		0.28677		2.49370
92 Chrysene	0.89108	0.82456	0.87830	0.80396	0.77658	0.72635					
	0.71171	0.67721					AVRG		0.78622		9.89559
93 bis(2-Ethylhexyl)phthalate	0.36763	0.54183	0.61773	0.55490	0.53303	0.51324					
	0.50377	0.47385					AVRG		0.51325		14.10892
94 Di-n-octylphthalate	+++++	0.87264	1.03338	0.94180	0.92021	0.86905					
	0.90617	0.85721					AVRG		0.91435		6.63445
95 Benzo(b)fluoranthene	0.83575	0.83776	0.94486	0.89597	0.89706	0.88345					
	0.87605	0.89631					AVRG		0.88340		3.99003
96 Benzo(k)fluoranthene	0.83667	0.88573	0.95144	0.92402	0.88042	0.80919					
	0.87047	0.78400					AVRG		0.86774		6.47091

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INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Cal Date : 01-Jul-2009 07:50 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	0.68279	0.75497	0.84574	0.83044	0.81295	0.78346					
	0.78610	0.75963					AVRG		0.78201		6.56659
99 Indeno(1,2,3-cd)pyrene	0.68768	0.76122	0.82731	0.85825	0.80224	0.83562					
	0.77091	0.74337					AVRG		0.78583		7.13057
100 Dibenzo(a,h)anthracene	0.55928	0.62675	0.66243	0.69649	0.65909	0.67837					
	0.63358	0.60851					AVRG		0.64056		6.79267
101 Benzo(ghi)perylene	0.62928	0.66607	0.71083	0.72801	0.67267	0.69867					
	0.63897	0.61503					AVRG		0.66994		6.05494
102 1,4-Dioxane	+++++	0.27310	0.33649	0.31633	0.31586	0.30752					
	0.30760	0.30009					AVRG		0.30814		6.24756
103 Methyl methacrylate	+++++	0.16571	0.14464	0.16919	0.16853	0.13461					
	0.14912	0.14745					AVRG		0.15418		8.81814
104 Ethyl methacrylate	+++++	0.71311	0.75791	0.73095	0.72426	0.71167					
	0.71385	0.70503					AVRG		0.72240		2.47238
105 2-Picoline	+++++	1.11548	1.17142	1.11300	1.10983	1.09598					
	1.08845	1.07485					AVRG		1.10986		2.77913
106 N-Nitrosomethylethylamine	+++++	0.39956	0.41468	0.41346	0.41221	0.41623					
	0.42662	0.42599					AVRG		0.41554		2.20553

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.47558	0.50132	0.48450	0.48273	0.46970					
	0.48198	0.46348					AVRG		0.47990		2.52987
108 N-Nitrosodiethylamine	+++++	0.39546	0.40809	0.41357	0.41074	0.41897					
	0.41660	0.42103					AVRG		0.41207		2.08747
109 Ethyl Methanesulfonate	+++++	0.55498	0.59813	0.57386	0.57552	0.57488					
	0.58581	0.57709					AVRG		0.57718		2.26529
110 Pentachloroethane	+++++	0.32980	0.34246	0.32767	0.32795	0.32606					
	0.31926	0.32166					AVRG		0.32784		2.27134
111 N-Nitrosopyrrolidine	+++++	0.36971	0.39411	0.42033	0.41585	0.42732					
	0.42989	0.42616					AVRG		0.41191		5.38141
113 N-Nitrosomorpholine	+++++	0.64474	0.66018	0.67778	0.67210	0.67246					
	0.66541	0.65964					AVRG		0.66462		1.66103
114 o-Toluidine	+++++	1.61381	1.49415	1.47472	1.43016	1.39203					
	1.34155	1.32892					AVRG		1.43933		6.87634
115 N-Nitrosopiperidine	+++++	0.12839	0.13413	0.13516	0.13244	0.13401					
	0.13430	0.13333					AVRG		0.13311		1.68824
116 a,a-Dimethylphenethylamine	+++++	0.63521	0.68983	0.83773	0.84651	0.86822					
	0.88737	0.88928					AVRG		0.80774		12.65773

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
117 Triethylphosphorothioate	+++++	0.19064	0.20260	0.20099	0.19502	0.19185					
	0.18753	0.18646					AVRG		0.19358		3.24858
118 2,6-Dichlorophenol	+++++	0.22516	0.23849	0.23337	0.23367	0.23208					
	0.23139	0.22767					AVRG		0.23169		1.86464
119 Hexachloropropene	+++++	0.11814	0.13192	0.13900	0.13353	0.14270					
	0.15051	0.15068					AVRG		0.13807		8.32008
120 p-Phenylenediamine	+++++	43977	99414	308611	373494	696188					
	963689	995859					LINR	0.12820	0.20874		0.99126
121 N-Nitrosodi-n-butylamine	+++++	0.17823	0.17723	0.18484	0.17833	0.17974					
	0.18115	0.17847					AVRG		0.17971		1.43983
122 Safrole	+++++	0.21837	0.22703	0.21735	0.21549	0.21160					
	0.20575	0.20421					AVRG		0.21426		3.67215
123 1,2,4,5-Tetrachlorobenzene	+++++	0.54138	0.55353	0.51470	0.51225	0.49714					
	0.48155	0.47070					AVRG		0.51018		5.89454
124 Isosafrole	+++++	0.32966	0.34665	0.33144	0.33467	0.32864					
	0.32331	0.32007					AVRG		0.33063		2.60072
125 1,4-Naphthoquinone	+++++	0.31987	0.36331	0.33039	0.32211	0.26630					
	+++++	+++++					AVRG		0.32039		10.89181

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
126 m-Dinitrobenzene	+++++	0.14698	0.17243	0.17441	0.16744	0.16475					
	0.17068	0.16207					AVRG		0.16554		5.58667
127 Pentachlorobenzene	+++++	0.50210	0.51268	0.47854	0.47885	0.46376					
	0.45302	0.44508					AVRG		0.47629		5.19583
128 1-Naphthylamine	+++++	0.71576	0.74676	0.71478	0.73564	0.70096					
	0.70170	0.66704					AVRG		0.71181		3.64479
129 2-Naphthylamine	+++++	0.65048	0.67212	0.63289	0.62367	0.60738					
	0.67547	0.62734					AVRG		0.64134		3.98982
130 2,3,4,6-Tetrachlorophenol	+++++	0.26896	0.31335	0.32826	0.31414	0.31017					
	0.32221	0.30193					AVRG		0.30843		6.26838
131 5-Nitro-o-toluidine	+++++	0.22244	0.25484	0.25927	0.26491	0.26382					
	0.26232	0.26458					AVRG		0.25602		5.95016
132 Thionazin	+++++	0.13992	0.16083	0.16656	0.16351	0.16350					
	0.15944	0.15655					AVRG		0.15862		5.58077
134 Sulfotepp	+++++	0.11001	0.12298	0.12668	0.11604	0.11569					
	0.11568	0.11405					AVRG		0.11730		4.80512
135 Phorate	+++++	0.29230	0.33975	0.34982	0.32693	0.31677					
	0.31242	0.30198					AVRG		0.32000		6.36308

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Cal Date : 01-Jul-2009 07:50 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
136 1,3,5-Trinitrobenzene	+++++	0.07807	0.09604	0.10968	0.11316	0.11642					
	0.12063	0.11865					AVRG		0.10752		14.26247
137 Phenacetin	+++++	0.20290	0.22171	0.22556	0.22545	0.22049					
	0.22407	0.22896					AVRG		0.22131		3.87405
138 Diallate	+++++	0.21704	0.21096	0.20865	0.20571	0.20547					
	0.19847	0.19919					AVRG		0.20650		3.15687
139 Dimethoate	+++++	0.14997	0.18004	0.19018	0.19006	0.19876					
	0.19392	0.19159					AVRG		0.18493		8.87531
140 4-Aminobiphenyl	+++++	0.39954	0.37157	0.34033	0.38960	0.38731					
	0.37146	0.32708					AVRG		0.36955		7.22857
141 Pentachloronitrobenzene	+++++	0.09293	0.09496	0.09184	0.09009	0.08786					
	0.08371	0.08367					AVRG		0.08929		4.95202
142 Pronamide	+++++	0.27271	0.27709	0.26759	0.26568	0.25326					
	0.24278	0.24492					AVRG		0.26058		5.22110
143 Dinoseb	+++++	31988	96506	256390	323328	575312					
	818250	840863					LINR	0.17281	0.15992		0.99762
144 Disulfoton	+++++	0.24425	0.29551	0.29849	0.27680	0.27235					
	0.26633	0.25788					AVRG		0.27309		7.12374

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Cal Date : 01-Jul-2009 07:50 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
145 Methyl parathion	+++++	0.10770	0.14875	0.15826	0.16106	0.16736						
	0.16426	0.16189					AVRG		0.15275		13.56103	
146 4-Nitroquinoline-1-oxide	+++++	0.01141	0.01322	0.01133	0.01062	0.00818						
	0.00868	0.00809					AVRG		0.01022		19.09653	<-
147 Methapyrilene	+++++	0.42026	0.44488	0.43856	0.43377	0.40715						
	0.40099	0.37457					AVRG		0.41717		5.94225	
148 Isodrin	+++++	0.10571	0.10794	0.10433	0.10601	0.10397						
	0.10008	0.10248					AVRG		0.10436		2.45344	
149 Aramite	+++++	0.04905	0.05045	0.05167	0.05357	0.05214						
	0.04972	0.04968					AVRG		0.05090		3.18460	
150 Kepone	+++++	0.04990	0.06374	0.06858	0.06953	0.07010						
	0.07444	0.07444					AVRG		0.06725		12.61524	
151 p-(Dimethylamino)azobenzene	+++++	0.20254	0.21029	0.20667	0.20747	0.19714						
	0.19688	0.19360					AVRG		0.20208		3.13600	
152 Chlorobenzilate	+++++	0.29145	0.30146	0.29895	0.30236	0.30552						
	0.29673	0.30007					AVRG		0.29951		1.50134	
153 3,3'-Dimethylbenzidine	+++++	0.46677	0.47630	0.42302	0.43278	0.41562						
	0.43046	0.43922					AVRG		0.44059		5.12372	

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	100 Level 7	120 Level 8									
154 Famphur	+++++	0.28070	0.34471	0.37738	0.35216	0.35407					
	0.35151	0.34312					AVRG		0.34338		8.69120
155 2-Acetylaminofluorene	+++++	0.21740	0.26283	0.27987	0.28264	0.28876					
	0.29539	0.30354					AVRG		0.27578		10.43001
157 7,12Dimethylbenz(a)anthracene	+++++	0.45233	0.47142	0.46173	0.47665	0.44445					
	0.44076	0.43541					AVRG		0.45468		3.46334
158 3-Methylcholanthrene	+++++	0.38164	0.42107	0.41321	0.41394	0.40883					
	0.41065	0.41489					AVRG		0.40918		3.11363
26 Phthalic anhydride	+++++	34490	64897	175190	219706	434516					
	592574	638483					LINR	0.15802	0.12664		0.99629
173 Carbazole	30520	150845	307142	743993	923267	1782076					
	2604833	2666301					LINR	0.13905	0.49388		0.99084
174 Hexachlorophene	+++++	480806	2278613	3488755	6057217	7167289					
	+++++	+++++					LINR	10.43537	0.08980		0.99073
179 Dibenzo(a,e)pyrene	+++++	0.38443	0.37707	0.43058	0.39017	0.45492					
	0.38756	0.34953					AVRG		0.39632		8.87511
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-

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	100 Level 7	120 Level 8									
184 p-Benzoquinone	+++++	6354	22229	56493	80248	134257					
	176805	204907					LINR	0.21207	0.17005		0.99849
191 Parathion	+++++	0.06241	0.08380	0.09228	0.08665	0.09019					
	0.08792	0.08819					AVRG		0.08449		11.94545
192 Methoxychlor	+++++	0.47987	0.56846	0.54978	0.51458	0.52157					
	0.47918	0.44390					AVRG		0.50819		8.56166
210 m-Toluidine	+++++	82014	176998	423487	569165	1017485					
	1470841	1569700					LINR	0.22355	1.33578		0.99386
211 p-Toluidine	+++++	48655	120805	272230	351988	651296					
	846340	873954					LINR	0.14365	0.74877		0.99481
212 Cis Diallate	+++++	0.19980	0.20241	0.21284	0.20964	0.21416					
	0.21304	0.21632					AVRG		0.20975		2.98917
213 Trans Diallate	+++++	0.25534	0.24819	0.24547	0.24201	0.24173					
	0.23350	0.23435					AVRG		0.24294		3.15687
214 1,4-Dinitrobenzene	+++++	0.17121	0.20381	0.18645	0.17549	0.17568					
	0.18326	0.17442					AVRG		0.18147		6.16594
215 2-Ethoxyethanol	+++++	0.42738	0.64231	0.63531	0.62447	0.60898					
	0.63642	0.61711					AVRG		0.59885		12.77596

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	100 Level 7	120 Level 8									
216 Methylenebis(2-chloroaniline)	+++++	0.08449	0.09509	0.10697	0.10796	0.12155					
	0.12865	0.12373					AVRG		0.10978		14.66692
229 2,2'-Dichlorobenzil	+++++	0.43514	0.47184	0.44898	0.45185	0.43856					
	0.44140	0.43749					AVRG		0.44646		2.85679
230 4-Chlorothioanisole	+++++	0.26856	0.27242	0.26616	0.27394	0.26615					
	0.26741	0.26488					AVRG		0.26850		1.27497
231 4-Chlorothiophenol	+++++	41768	132011	275353	382851	635600					
	848320	930133					LINR	0.16594	0.21026		0.99850
232 bis(p-Chlorophenyl)sulfone	+++++	0.31542	0.31724	0.29112	0.29450	0.28313					
	0.28387	0.28770					AVRG		0.29614		4.84670
233 bis(p-Chlorophenyl)disulfide	+++++	0.08882	0.09796	0.10629	0.09493	0.09841					
	0.10107	0.10018					AVRG		0.09824		5.52014
234 Diphenyl disulfide	+++++	0.17514	0.18495	0.17946	0.18101	0.17947					
	0.17997	0.17866					AVRG		0.17981		1.62468
235 Diphenyl sulfide	+++++	0.85058	0.85814	0.81105	0.81875	0.77524					
	0.75190	0.74816					AVRG		0.80197		5.57629
236 Phenyl sulfone	+++++	0.36602	0.35985	0.34325	0.35342	0.33956					
	0.33842	0.33797					AVRG		0.34836		3.27307

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Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
237 Hydroxymethyl phthalimide	+++++	0.13574	0.15119	0.15892	0.13998	0.12536						
	0.12935	0.12316					AVRG		0.13767		9.72353	
238 Phthalic acid	+++++	0.06939	0.07287	0.08292	0.11566	0.12455						
	0.14463	0.15090					AVRG		0.10870		31.11787	<-
239 Thiophenol	+++++	0.60742	0.77250	0.81805	0.90219	0.94227						
	0.93729	0.94386					AVRG		0.84623		14.74711	
240 bis(Chloromethyl)ether	+++++	0.85590	0.85616	0.81409	0.81889	0.83526						
	0.80381	0.79901					AVRG		0.82616		2.83945	
241 Octachlorostyrene	+++++	0.10243	0.10326	0.09498	0.09677	0.09556						
	0.09562	0.09577					AVRG		0.09777		3.59684	
M 225 Trichlorophenols	+++++	0.29897	0.34121	0.33889	0.33385	0.31769						
	0.31391	0.30146					AVRG		0.32085		5.43035	
M 226 Tetrachlorophenols	+++++	0.26896	0.31335	0.32826	0.31414	0.31017						
	0.32221	0.30193					AVRG		0.30843		6.26838	
M 227 Benzo(b,k)fluoranthene	0.83621	0.86175	0.94815	0.91000	0.88874	0.84632						
	0.87326	0.84016					AVRG		0.87557		4.41963	
M 228 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Cal Date : 01-Jul-2009 07:50 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
$ 3 2-Fluorophenol	+++++	0.84209	0.92035	0.89559	0.87122	0.86709						
	0.89027	0.86129					AVRG		0.87827		2.93514	
$ 5 Phenol-d5	+++++	1.12824	1.23711	1.20172	1.15464	1.13363						
	1.14808	1.10269					AVRG		1.15801		3.99148	
$ 187 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 20 Nitrobenzene-d5	+++++	0.32326	0.35849	0.32302	0.30818	0.26119						
	0.25859	0.24209					AVRG		0.29640		14.47409	
$ 39 2-Fluorobiphenyl	+++++	1.12044	1.19637	1.09339	1.05081	0.95786						
	0.92784	0.89472					AVRG		1.03449		10.74330	
$ 60 2,4,6-Tribromophenol	+++++	0.13461	0.16754	0.16952	0.16904	0.16702						
	0.17089	0.16383					AVRG		0.16321		7.84797	
$ 81 p-Terphenyl-d14	+++++	0.64272	0.69513	0.63531	0.60706	0.57674						
	0.57751	0.55064					AVRG		0.61216		8.06339	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Cal Date : 01-Jul-2009 07:50 rmb

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

Data File: /chem/MSD5.i/s062509.b/s5f2530.d
Report Date: 26-Jun-2009 10:43

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2530.d
Analysis Type: WATER
Lab Sample ID: WBN090528-08.5
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 25-JUN-2009 22:11
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 10:16
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.79683	0.68969	0.68969	0.000	-13.44538	60.00000	Averaged
16 Acetophenone	1.08491	1.09337	1.09337	0.000	0.78008	60.00000	Averaged
189 Caprolactam	0.07939	0.08623	0.08623	0.000	8.62020	60.00000	Averaged
208 1,1'-Biphenyl	1.04481	1.10113	1.10113	0.000	5.39117	60.00000	Averaged
207 Atrazine	0.03020	0.02623	0.02623	0.000	-13.14245	60.00000	Averaged
77 Benzidine	0.16686	0.16548	0.16548	0.000	-0.82680	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28677	0.30900	0.30900	0.000	7.75178	60.00000	Averaged
102 1,4-Dioxane	0.30814	0.37821	0.37821	0.000	22.74029	60.00000	Averaged
103 Methyl methacrylate	0.15418	0.20577	0.20577	0.000	33.46578	60.00000	Averaged
104 Ethyl methacrylate	0.72240	0.86947	0.86947	0.000	20.35908	60.00000	Averaged
105 2-Picoline	1.10986	1.11145	1.11145	0.000	0.14364	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.41554	0.43916	0.43916	0.000	5.68448	60.00000	Averaged
107 Methyl methanesulfonate	0.47990	0.53510	0.53510	0.000	11.50234	60.00000	Averaged
108 N-Nitrosodiethylamine	0.41207	0.42418	0.42418	0.000	2.93858	60.00000	Averaged
109 Ethyl Methanesulfonate	0.57718	0.71921	0.71921	0.000	24.60806	60.00000	Averaged
110 Pentachloroethane	0.32784	0.45184	0.45184	0.000	37.82372	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.41191	0.43254	0.43254	0.000	5.00958	60.00000	Averaged
113 N-Nitrosomorpholine	0.66462	0.70098	0.70098	0.000	5.47224	60.00000	Averaged
114 o-Toluidine	1.43933	1.46147	1.46147	0.000	1.53771	60.00000	Averaged
115 N-Nitrosopiperidine	0.13311	0.13919	0.13919	0.000	4.57041	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.80774	0.88284	0.88284	0.000	9.29822	60.00000	Averaged
118 2,6-Dichlorophenol	0.23169	0.24346	0.24346	0.000	5.07768	60.00000	Averaged
119 Hexachloropropene	0.13807	0.22200	0.22200	0.000	60.78426	60.00000	Averaged <-
120 p-Phenylenediamine	41.67913	40.00000	0.19074	0.000	4.19784	60.00000	Linear
121 N-Nitrosodi-n-butylamine	0.17971	0.18978	0.18978	0.000	5.59950	60.00000	Averaged
122 Safrole	0.21426	0.25431	0.25431	0.000	18.69392	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.51018	0.55414	0.55414	0.000	8.61659	60.00000	Averaged
124 Isosafrole	0.33063	0.45825	0.45825	0.000	38.59723	60.00000	Averaged
125 1,4-Naphthoquinone	0.32039	0.31743	0.31743	0.000	-0.92461	60.00000	Averaged
127 Pentachlorobenzene	0.47629	0.49731	0.49731	0.000	4.41334	60.00000	Averaged
128 1-Naphthylamine	0.71181	0.74533	0.74533	0.000	4.70975	60.00000	Averaged
129 2-Naphthylamine	0.64134	0.57650	0.57650	0.000	-10.10953	60.00000	Averaged
131 5-Nitro-o-toluidine	0.25602	0.27374	0.27374	0.000	6.92121	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.10752	0.13454	0.13454	0.000	25.12508	60.00000	Averaged
137 Phenacetin	0.22131	0.23937	0.23937	0.000	8.16340	60.00000	Averaged
138 Diallate	0.20650	0.20770	0.20770	0.000	0.58296	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 25-JUN-2009 22:11
Lab File ID: s5f2530.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 10:16
Lab Sample ID: WBN090528-08.5 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20975	0.22776	0.22776	0.000	8.58954	60.00000	Averaged
213 Trans Diallate	0.24294	0.24436	0.24436	0.000	0.58296	60.00000	Averaged
140 4-Aminobiphenyl	0.36955	0.40991	0.40991	0.000	10.91902	60.00000	Averaged
141 Pentachloronitrobenzene	0.08929	0.09331	0.09331	0.000	4.50272	60.00000	Averaged
142 Pronamide	0.26058	0.26773	0.26773	0.000	2.74451	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01022	0.01223	0.01223	0.000	19.62918	60.00000	Averaged
147 Methapyrilene	0.41717	0.44149	0.44149	0.000	5.82947	60.00000	Averaged
148 Isodrin	0.10436	0.10072	0.10072	0.000	-3.48541	60.00000	Averaged
149 Aramite	0.05090	0.04734	0.04734	0.000	-6.97764	60.00000	Averaged
150 Kepone	0.06725	0.06505	0.06505	0.000	-3.27279	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.20208	0.21351	0.21351	0.000	5.65511	60.00000	Averaged
152 Chlorobenzilate	0.29951	0.30883	0.30883	0.000	3.11302	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.44059	0.46027	0.46027	0.000	4.46551	60.00000	Averaged
155 2-Acetylaminofluorene	0.27578	0.31027	0.31027	0.000	12.50985	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.45468	0.42550	0.42550	0.000	-6.41815	60.00000	Averaged
158 3-Methylcholanthrene	0.40918	0.41886	0.41886	0.000	2.36719	60.00000	Averaged

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Data file : /chem/MSD5.i/s062509.b/s5f2530.d
Lab Smp Id: WBN090528-08.5 Client Smp ID: AP12ICV
Inj Date : 25-JUN-2009 22:11
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090528-08.5|40 PPM|1|SVM|1|AP12ICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m
Meth Date : 26-Jun-2009 10:43 hnm Quant Type: ISTD
Cal Date : 25-JUN-2009 21:25 Cal File: s5f2528.d
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.031	4.031	(1.000)	513917	40.0000	
* 29 Naphthalene-d8	136	4.901	4.901	(1.000)	1759940	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.160	(1.000)	1124731	40.0000	
* 67 Phenanthrene-d10	188	7.342	7.342	(1.000)	2155121	40.0000	
* 91 Chrysene-d12	240	9.766	9.766	(1.000)	2326057	40.0000	
* 98 Perylene-d12	264	11.524	11.524	(1.000)	2206835	40.0000	
209 Benzaldehyde	77	3.754	3.754	(0.931)	354443	40.0000	34.6
16 Acetophenone	105	4.278	4.278	(1.061)	561903	40.0000	40.3
189 Caprolactam	113	5.172	5.172	(1.055)	151764	40.0000	43.4
208 1,1'-Biphenyl	154	5.719	5.719	(0.928)	1238478	40.0000	42.2
207 Atrazine	173	7.031	7.031	(0.958)	56529	40.0000	34.7
77 Benzidine	184	8.495	8.495	(0.870)	384927	40.0000	39.7
90 3,3'-Dichlorobenzidine	252	9.689	9.689	(0.992)	718760	40.0000	43.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
102 1,4-Dioxane	88	2.337	2.337	(0.580)	194371	40.0000	49.1
103 Methyl methacrylate	100	2.331	2.331	(0.578)	105751	40.0000	53.4
104 Ethyl methacrylate	69	2.713	2.713	(0.673)	446835	40.0000	48.1
105 2-Picoline	93	2.913	2.913	(0.723)	571194	40.0000	40.0
106 N-Nitrosomethylethylamine	88	2.960	2.960	(0.734)	225690	40.0000	42.3
107 Methyl methanesulfonate	80	3.119	3.119	(0.774)	274996	40.0000	44.6
108 N-Nitrosodiethylamine	102	3.354	3.354	(0.832)	217991	40.0000	41.2
109 Ethyl Methanesulfonate	79	3.507	3.507	(0.870)	369616	40.0000	49.8
110 Pentachloroethane	167	3.854	3.854	(0.956)	232206	40.0000	55.1
111 N-Nitrosopyrrolidine	100	4.266	4.266	(1.058)	222292	40.0000	42.0(Q)
113 N-Nitrosomorpholine	56	4.290	4.290	(1.064)	360248	40.0000	42.2
114 o-Toluidine	106	4.307	4.307	(1.069)	751073	40.0000	40.6
115 N-Nitrosopiperidine	114	4.507	4.507	(0.920)	244971	40.0000	41.8
116 a,a-Dimethylphenethylamine	58	4.772	4.772	(0.974)	1553746	40.0000	43.7
118 2,6-Dichlorophenol	162	4.943	4.943	(1.008)	428468	40.0000	42.0
119 Hexachloropropene	213	4.972	4.972	(1.014)	390700	40.0000	64.3
120 p-Phenylenediamine	108	5.178	5.178	(1.056)	335699	40.0000	41.7
121 N-Nitrosodi-n-butylamine	84	5.137	5.137	(1.048)	333995	40.0000	42.2(T)
122 Safrole	162	5.307	5.307	(1.083)	447572	40.0000	47.5
123 1,2,4,5-Tetrachlorobenzene	216	5.513	5.513	(0.895)	623256	40.0000	43.4
124 Isosafrole	162	5.678	5.678	(0.922)	515408	40.0000	55.4
125 1,4-Naphthoquinone	158	5.872	5.872	(0.953)	357026	40.0000	39.6
127 Pentachlorobenzene	250	6.278	6.278	(1.019)	559342	40.0000	41.8
128 1-Naphthylamine	143	6.366	6.366	(1.033)	838296	40.0000	41.9
129 2-Naphthylamine	143	6.425	6.425	(1.043)	648408	40.0000	36.0
131 5-Nitro-o-toluidine	152	6.566	6.566	(1.066)	307889	40.0000	42.8
136 1,3,5-Trinitrobenzene	75	6.819	6.819	(0.929)	289941	40.0000	50.0
137 Phenacetin	108	6.860	6.860	(0.934)	515877	40.0000	43.3(Q)
138 Diallate	86	6.842	6.842	(0.932)	447626	40.0000	40.2
212 Cis Diallate	86	6.925	6.925	(0.943)	73628	6.00000	6.5(a)
213 Trans Diallate	86	6.842	6.842	(0.932)	447626	34.0000	34.2
140 4-Aminobiphenyl	169	7.154	7.154	(0.974)	883396	40.0000	44.4
141 Pentachloronitrobenzene	237	7.178	7.178	(0.978)	201104	40.0000	41.8(Q)
142 Pronamide	173	7.166	7.166	(0.976)	576989	40.0000	41.1
146 4-Nitroquinoline-1-oxide	101	8.013	8.013	(1.091)	26348	40.0000	47.8
147 Methapyrilene	58	8.042	8.042	(1.095)	951461	40.0000	42.3
148 Isodrin	193	8.272	8.272	(1.127)	217072	40.0000	38.6
149 Aramite	185	8.666	8.666	(1.180)	102033	40.0000	37.2
150 Kepone	272	9.260	9.260	(1.261)	140182	40.0000	38.7
151 p-(Dimethylamino)azobenzene	120	8.848	8.848	(0.906)	496641	40.0000	42.3
152 Chlorobenzilate	251	8.878	8.878	(0.909)	718358	40.0000	41.2
153 3,3'-Dimethylbenzidine	212	9.166	9.166	(0.939)	1070613	40.0000	41.8
155 2-Acetylaminofluorene	181	9.413	9.413	(0.964)	721716	40.0000	45.0
157 7,12Dimethylbenz(a)anthracene	256	10.948	10.948	(0.950)	938999	40.0000	37.4
158 3-Methylcholanthrene	268	11.954	11.954	(1.037)	924361	40.0000	40.9(Q)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s062509.b/s5f2530.d
Date : 25-JUN-2009 22:11
Client ID: AP12ICV
Sample Info: IWBN090528-08.5140 PPM!1!SVMI1!AP12ICV
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

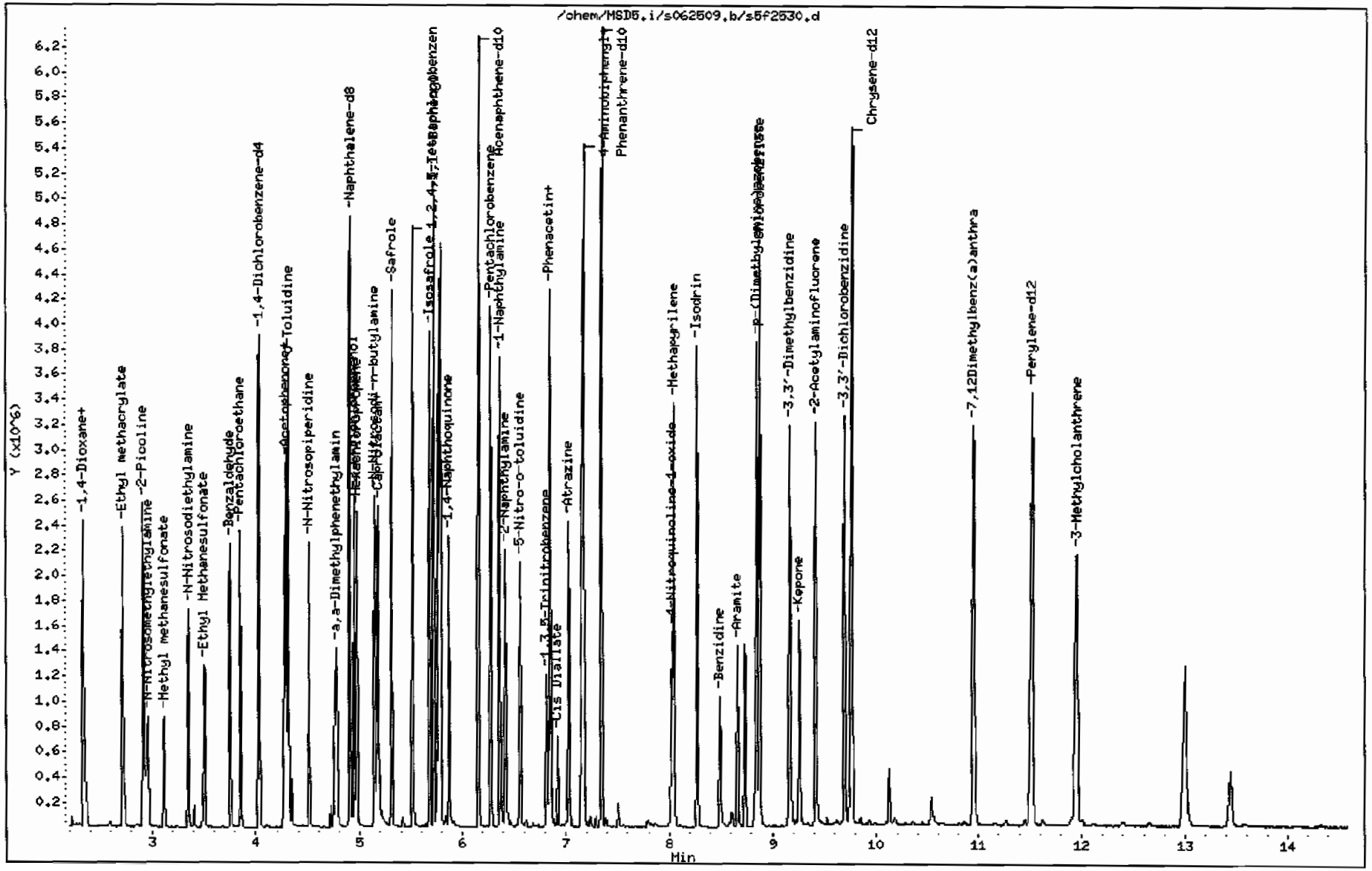

Data File: /chem/MSD5.i/s062509.b/s5f2533.d
Report Date: 26-Jun-2009 09:26

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2533.d
Analysis Type: WATER
Lab Sample ID: WBN090602-09.1
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 26-JUN-2009 09:03
Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Init. Cal. Times: 14:42 21:25
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 3 2-Fluorophenol	0.87827	0.92425	0.92425	0.000	5.23547	60.00000	Averaged
$ 5 Phenol-d5	1.15801	1.18114	1.18114	0.000	1.99696	60.00000	Averaged
$ 20 Nitrobenzene-d5	0.29640	0.32886	0.32886	0.000	10.95026	60.00000	Averaged
$ 39 2-Fluorobiphenyl	1.03449	1.12238	1.12238	0.000	8.49584	60.00000	Averaged
$ 60 2,4,6-Tribromophenol	0.16321	0.16963	0.16963	0.000	3.93360	60.00000	Averaged
$ 81 p-Terphenyl-d14	0.61216	0.71476	0.71476	0.000	16.76084	60.00000	Averaged
1 N-Methyl-N-nitrosomethylami	0.46728	0.54505	0.54505	0.000	16.64238	60.00000	Averaged
2 Pyridine	0.69143	0.70995	0.70995	0.000	2.67819	60.00000	Averaged
4 Aniline	0.50220	0.53118	0.53118	0.000	5.77120	60.00000	Averaged
6 Phenol	1.14936	1.18675	1.18675	0.001	3.25298	20.00000	Averaged ccc
7 bis(2-Chloroethyl) ether	0.88583	0.90830	0.90830	0.000	2.53655	60.00000	Averaged
8 2-Chlorophenol	0.96070	1.02584	1.02584	0.000	6.78060	60.00000	Averaged
203 n-Decane	1.55838	1.69824	1.69824	0.000	8.97494	60.00000	Averaged
9 1,3-Dichlorobenzene	1.14971	1.22756	1.22756	0.000	6.77092	60.00000	Averaged
11 1,4-Dichlorobenzene	1.14381	1.19501	1.19501	0.001	4.47626	20.00000	Averaged ccc
13 1,2-Dichlorobenzene	1.06271	1.08794	1.08794	0.000	2.37401	60.00000	Averaged
14 bis(2-Chloroisopropyl)ether	2.06168	2.20216	2.20216	0.000	6.81386	60.00000	Averaged
12 Benzyl alcohol	0.60629	0.63280	0.63280	0.000	4.37103	60.00000	Averaged
15 o-Cresol	0.71463	0.71377	0.71377	0.000	-0.12043	60.00000	Averaged
18 m,p-Cresols	0.95569	0.97996	0.97996	0.000	2.54026	60.00000	Averaged
17 N-Nitrosodipropylamine	0.61897	0.66847	0.66847	0.050	7.99822	60.00000	Averaged spcc
19 Hexachloroethane	0.42421	0.45290	0.45290	0.000	6.76415	60.00000	Averaged
21 Nitrobenzene	0.27643	0.32316	0.32316	0.000	16.90510	60.00000	Averaged
22 Isophorone	0.51164	0.58577	0.58577	0.000	14.48914	60.00000	Averaged
23 2-Nitrophenol	0.12977	0.13565	0.13565	0.001	4.53272	20.00000	Averaged ccc
24 2,4-Dimethylphenol	0.22398	0.23682	0.23682	0.000	5.73150	60.00000	Averaged
25 bis(2-Chloroethoxy)methane	0.29234	0.30563	0.30563	0.000	4.54679	60.00000	Averaged
26 2,4-Dichlorophenol	0.22262	0.23707	0.23707	0.001	6.49090	20.00000	Averaged ccc
27 Benzoic acid	49.71978	40.00000	0.13459	0.000	24.29945	60.00000	Linear
28 1,2,4-Trichlorobenzene	0.27693	0.28464	0.28464	0.000	2.78700	60.00000	Averaged
30 Naphthalene	0.77927	0.75380	0.75380	0.000	-3.26722	60.00000	Averaged
204 alpha-Terpineol	0.25452	0.26630	0.26630	0.000	4.62601	60.00000	Averaged
31 4-Chloroaniline	47.43792	40.00000	0.32609	0.000	18.59479	60.00000	Linear
32 Hexachlorobutadiene	0.20215	0.20705	0.20705	0.001	2.42592	20.00000	Averaged ccc
33 4-Chloro-3-methylphenol	0.21319	0.22983	0.22983	0.001	7.80207	20.00000	Averaged ccc
34 2-Methylnaphthalene	0.46942	0.52808	0.52808	0.000	12.49823	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 26-JUN-2009 09:03
Lab File ID: s5f2533.d Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 21:25
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	0.50729	0.49555	0.49555	0.000	-2.31520	60.00000	Averaged
36 Hexachlorocyclopentadiene	39.64221	40.00000	0.18009	0.050	-0.89448	60.00000	Linear spcc
205 2,3-Dichloroaniline	0.44656	0.49099	0.49099	0.000	9.94845	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.30953	0.32810	0.32810	0.001	6.00118	20.00000	Averaged ccc
38 2,4,5-Trichlorophenol	0.33218	0.36608	0.36608	0.000	10.20698	60.00000	Averaged
40 2-Chloronaphthalene	0.85120	0.90066	0.90066	0.000	5.81012	60.00000	Averaged
42 o-Nitroaniline	0.27065	0.28553	0.28553	0.000	5.49930	60.00000	Averaged
41 m-Nitroaniline	38.41712	40.00000	0.13119	0.000	-3.95720	60.00000	Linear
43 Dimethylphthalate	1.01609	1.07110	1.07110	0.000	5.41428	60.00000	Averaged
44 2,6-Dinitrotoluene	0.24192	0.27930	0.27930	0.000	15.44876	60.00000	Averaged
50 2,4-Dinitrotoluene	0.31653	0.36215	0.36215	0.000	14.41426	60.00000	Averaged
45 Acenaphthylene	1.25413	1.36304	1.36304	0.000	8.68388	60.00000	Averaged
47 Acenaphthene	0.81724	0.84415	0.84415	0.001	3.29259	20.00000	Averaged ccc
48 2,4-Dinitrophenol	41.95216	40.00000	0.09301	0.050	4.88039	60.00000	Linear spcc
49 Dibenzofuran	1.15749	1.23802	1.23802	0.000	6.95699	60.00000	Averaged
51 Diethylphthalate	0.99523	1.06353	1.06353	0.000	6.86293	60.00000	Averaged
52 4-Nitrophenol	0.14183	0.13849	0.13849	0.050	-2.35609	60.00000	Averaged spcc
53 Fluorene	0.99470	1.03686	1.03686	0.000	4.23858	60.00000	Averaged
54 4-Chlorophenylphenylether	0.57998	0.61529	0.61529	0.000	6.08785	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	55.17976	40.00000	0.12176	0.000	37.94939	60.00000	Linear
56 p-Nitroaniline	0.10468	0.10711	0.10711	0.000	2.32364	60.00000	Averaged
133 Diphenylamine	0.39819	0.42143	0.42143	0.001	5.83632	20.00000	Averaged ccc
58 1,2-Diphenylhydrazine	0.50554	0.55423	0.55423	0.000	9.63098	60.00000	Averaged
61 4-Bromophenylphenylether	0.19119	0.20218	0.20218	0.000	5.74963	60.00000	Averaged
63 Hexachlorobenzene	0.20135	0.21304	0.21304	0.000	5.80172	60.00000	Averaged
65 Pentachlorophenol	42.93985	40.00000	0.10471	0.001	7.34962	20.00000	Linear ccc
206 n-Octadecane	0.43069	0.46656	0.46656	0.000	8.32965	60.00000	Averaged
68 Phenanthrene	0.74933	0.76655	0.76655	0.000	2.29763	60.00000	Averaged
69 Anthracene	0.73960	0.78221	0.78221	0.000	5.76128	60.00000	Averaged
72 Di-n-butylphthalate	0.85193	0.94952	0.94952	0.000	11.45527	60.00000	Averaged
76 Fluoranthene	0.85361	0.92888	0.92888	0.001	8.81843	20.00000	Averaged ccc
79 Pyrene	0.87262	0.93192	0.93192	0.000	6.79628	60.00000	Averaged
85 Butylbenzylphthalate	0.37401	0.41884	0.41884	0.000	11.98745	60.00000	Averaged
89 Benzo(a)anthracene	0.85828	0.89070	0.89070	0.000	3.77758	60.00000	Averaged
92 Chrysene	0.78622	0.81917	0.81917	0.000	4.19176	60.00000	Averaged
93 bis(2-Ethylhexyl)phthalate	0.51325	0.58454	0.58454	0.000	13.89072	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 26-JUN-2009 09:03
Lab File ID: s5f2533.d Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 21:25
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
94 Di-n-octylphthalate	0.91435	1.00400	1.00400	0.001	9.80457	20.00000	Averaged	ccc
95 Benzo(b)fluoranthene	0.88340	0.92115	0.92115	0.000	4.27302	60.00000	Averaged	
96 Benzo(k)fluoranthene	0.86774	0.92327	0.92327	0.000	6.39833	60.00000	Averaged	
97 Benzo(a)pyrene	0.78201	0.83388	0.83388	0.001	6.63286	20.00000	Averaged	ccc
99 Indeno(1,2,3-cd)pyrene	0.78583	0.79439	0.79439	0.000	1.09020	60.00000	Averaged	
100 Dibenzo(a,h)anthracene	0.64056	0.66834	0.66834	0.000	4.33609	60.00000	Averaged	
101 Benzo(ghi)perylene	0.66994	0.67440	0.67440	0.000	0.66555	60.00000	Averaged	
126 m-Dinitrobenzene	0.16554	0.17075	0.17075	0.000	3.14663	60.00000	Averaged	
130 2,3,4,6-Tetrachlorophenol	0.30843	0.31127	0.31127	0.000	0.91990	60.00000	Averaged	
143 Dinoseb	44.22962	40.00000	0.14919	0.000	10.57406	60.00000	Linear	
173 Carbazole	41.25747	40.00000	0.44073	0.000	3.14368	60.00000	Linear	
184 p-Benzoquinone	23.92059	40.00000	0.06563	0.000	-40.19852	60.00000	Linear	
192 Methoxychlor	0.50819	0.59122	0.59122	0.000	16.33706	60.00000	Averaged	
211 p-Toluidine	43.31403	40.00000	0.70324	0.000	8.28508	60.00000	Linear	
210 m-Toluidine	41.09601	40.00000	1.07377	0.000	2.74002	60.00000	Linear	
26 Phthalic anhydride	43.89917	40.00000	0.11898	0.000	9.74792	60.00000	Linear	
179 Dibenzo(a,e)pyrene	0.39632	0.23471	0.23471	0.000	-40.77708	60.00000	Averaged	
214 1,4-Dinitrobenzene	0.18147	0.18811	0.18811	0.000	3.65351	60.00000	Averaged	
215 2-Ethoxyethanol	0.59885	0.70005	0.70005	0.000	16.89800	60.00000	Averaged	
216 Methylenebis(2-chloroanilin	0.10978	0.11539	0.11539	0.000	5.11341	60.00000	Averaged	
M 225 Trichlorophenols	0.32085	0.34709	0.34709	0.000	8.17820	60.00000	Averaged	
M 226 Tetrachlorophenols	0.30843	0.31127	0.31127	0.000	0.91990	60.00000	Averaged	
M 227 Benzo(b,k)fluoranthene	0.87557	0.92221	0.92221	0.000	5.32615	60.00000	Averaged	

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Data file : /chem/MSD5.i/s062509.b/s5f2533.d
Lab Smp Id: WBN090602-09.1 Client Smp ID: MEGAICV
Inj Date : 26-JUN-2009 09:03
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090602-09.1|40 PPM|1|SVM|1|MEGAICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m
Meth Date : 26-Jun-2009 09:26 rmb Quant Type: ISTD
Cal Date : 25-JUN-2009 19:55 Cal File: s5f2524.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.032	4.032	(1.000)	451724	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1704563	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1006448	40.0000	
* 67 Phenanthrene-d10	188	7.345	7.345	(1.000)	1867078	40.0000	
* 91 Chrysene-d12	240	9.767	9.767	(1.000)	1916495	40.0000	
* 98 Perylene-d12	264	11.529	11.529	(1.000)	1772024	40.0000	
$ 3 2-Fluorophenol	112	3.208	3.208	(0.796)	417507	40.0000	42.1
$ 5 Phenol-d5	99	3.743	3.743	(0.928)	533549	40.0000	40.8
$ 20 Nitrobenzene-d5	82	4.398	4.398	(0.897)	560561	40.0000	44.4
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	1129616	40.0000	43.4
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	170721	40.0000	41.6
$ 81 p-Terphenyl-d14	244	8.727	8.727	(0.894)	1369835	40.0000	46.7
1 N-Methyl-N-nitrosomethylamine	74	2.505	2.505	(0.621)	246213	40.0000	46.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
2 Pyridine	79	2.539	2.539	(0.630)	320702	40.0000	41.1
4 Aniline	66	3.815	3.815	(0.946)	239947	40.0000	42.3
6 Phenol	94	3.752	3.752	(0.931)	536083	40.0000	41.3(Q)
7 bis(2-Chloroethyl) ether	63	3.829	3.829	(0.950)	410301	40.0000	41.0
8 2-Chlorophenol	128	3.897	3.897	(0.967)	463398	40.0000	42.7
203 n-Decane	43	3.878	3.878	(0.962)	767136	40.0000	43.6
9 1,3-Dichlorobenzene	146	3.998	3.998	(0.992)	554517	40.0000	42.7
11 1,4-Dichlorobenzene	146	4.046	4.046	(1.004)	539813	40.0000	41.8
13 1,2-Dichlorobenzene	146	4.147	4.147	(1.029)	491448	40.0000	40.9
14 bis(2-Chloroisopropyl)ether	45	4.176	4.176	(1.036)	994767	40.0000	42.7
12 Benzyl alcohol	108	4.099	4.099	(1.017)	285849	40.0000	41.7
15 o-Cresol	107	4.147	4.147	(1.029)	322429	40.0000	40.0
18 m,p-Cresols	107	4.248	4.248	(1.054)	442673	40.0000	41.0
17 N-Nitrosodipropylamine	70	4.268	4.268	(1.059)	301966	40.0000	43.2
19 Hexachloroethane	117	4.378	4.378	(1.086)	204587	40.0000	42.7
21 Nitrobenzene	77	4.412	4.412	(0.900)	550854	40.0000	46.8
22 Isophorone	82	4.561	4.561	(0.930)	998489	40.0000	45.8
23 2-Nitrophenol	139	4.624	4.624	(0.943)	231229	40.0000	41.8
24 2,4-Dimethylphenol	122	4.614	4.614	(0.941)	403677	40.0000	42.3
25 bis(2-Chloroethoxy)methane	93	4.682	4.682	(0.955)	520973	40.0000	41.8
26 2,4-Dichlorophenol	162	4.788	4.788	(0.976)	404106	40.0000	42.6
27 Benzoic acid	105	4.677	4.677	(0.954)	229416	40.0000	49.7
28 1,2,4-Trichlorobenzene	180	4.850	4.850	(0.989)	485193	40.0000	41.1
30 Naphthalene	128	4.918	4.918	(1.003)	1284908	40.0000	38.7(Q)
204 alpha-Terpineol	59	4.889	4.889	(0.997)	453924	40.0000	41.8
31 4-Chloroaniline	127	4.932	4.932	(1.006)	555837	40.0000	47.4
32 Hexachlorobutadiene	225	4.980	4.980	(1.016)	352928	40.0000	41.0
33 4-Chloro-3-methylphenol	107	5.245	5.245	(1.070)	391753	40.0000	43.1
34 2-Methylnaphthalene	142	5.399	5.399	(1.101)	900153	40.0000	45.0
35 1-Methylnaphthalene	142	5.471	5.471	(1.116)	844693	40.0000	39.1
36 Hexachlorocyclopentadiene	237	5.505	5.505	(0.893)	181254	40.0000	39.6
205 2,3-Dichloroaniline	161	5.597	5.597	(0.908)	494154	40.0000	44.0
37 2,4,6-Trichlorophenol	196	5.587	5.587	(0.906)	330218	40.0000	42.4
38 2,4,5-Trichlorophenol	196	5.616	5.616	(0.911)	368445	40.0000	44.1
40 2-Chloronaphthalene	162	5.755	5.755	(0.934)	906463	40.0000	42.3
42 o-Nitroaniline	65	5.808	5.808	(0.942)	287375	40.0000	42.2
41 m-Nitroaniline	138	6.112	6.112	(0.991)	132031	40.0000	38.4
43 Dimethylphthalate	163	5.919	5.919	(0.960)	1078006	40.0000	42.2
44 2,6-Dinitrotoluene	165	5.977	5.977	(0.970)	281098	40.0000	46.2
50 2,4-Dinitrotoluene	165	6.276	6.276	(1.018)	364487	40.0000	45.8
45 Acenaphthylene	152	6.064	6.064	(0.984)	1371830	40.0000	43.5
47 Acenaphthene	154	6.189	6.189	(1.004)	849596	40.0000	41.3
48 2,4-Dinitrophenol	184	6.184	6.184	(1.003)	93607	40.0000	42.0
49 Dibenzofuran	168	6.314	6.314	(1.024)	1246000	40.0000	42.8
51 Diethylphthalate	149	6.430	6.430	(1.043)	1070389	40.0000	42.7
52 4-Nitrophenol	139	6.203	6.203	(1.006)	139386	40.0000	39.0
53 Fluorene	166	6.579	6.579	(1.067)	1043548	40.0000	41.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
54 4-Chlorophenylphenylether	204	6.550	6.550	(1.062)	619261	40.0000	42.4
55 2-Methyl-4,6-dinitrophenol	198	6.593	6.593	(0.898)	227338	40.0000	55.2
56 p-Nitroaniline	138	6.574	6.574	(1.066)	107798	40.0000	40.9
133 Diphenylamine	169	6.641	6.641	(0.904)	786838	40.0000	42.3
58 1,2-Diphenylhydrazine	77	6.675	6.675	(0.909)	1034789	40.0000	43.8
61 4-Bromophenylphenylether	248	6.945	6.945	(0.946)	377491	40.0000	42.3
63 Hexachlorobenzene	284	7.017	7.017	(0.955)	397753	40.0000	42.3
65 Pentachlorophenol	266	7.166	7.166	(0.976)	195510	40.0000	42.9
206 n-Octadecane	57	7.147	7.147	(0.973)	871112	40.0000	43.3
68 Phenanthrene	178	7.364	7.364	(1.003)	1431207	40.0000	40.9
69 Anthracene	178	7.407	7.407	(1.009)	1460442	40.0000	42.3
72 Di-n-butylphthalate	149	7.759	7.759	(1.056)	1772829	40.0000	44.6
76 Fluoranthene	202	8.414	8.414	(1.146)	1734295	40.0000	43.5
79 Pyrene	202	8.630	8.630	(0.884)	1786021	40.0000	42.7
85 Butylbenzylphthalate	149	9.150	9.150	(0.937)	802710	40.0000	44.8
89 Benzo(a)anthracene	228	9.752	9.752	(0.999)	1707017	40.0000	41.5
92 Chrysene	228	9.796	9.796	(1.003)	1569944	40.0000	41.7
93 bis(2-Ethylhexyl)phthalate	149	9.675	9.675	(0.991)	1120270	40.0000	45.6
94 Di-n-octylphthalate	149	10.354	10.354	(0.898)	1779108	40.0000	43.9
95 Benzo(b)fluoranthene	252	10.985	10.985	(0.953)	1632300	40.0000	41.7
96 Benzo(k)fluoranthene	252	11.019	11.019	(0.956)	1636049	40.0000	42.6
97 Benzo(a)pyrene	252	11.447	11.447	(0.993)	1477653	40.0000	42.6
99 Indeno(1,2,3-cd)pyrene	276	13.402	13.402	(1.162)	1407684	40.0000	40.4
100 Dibenzo(a,h)anthracene	278	13.412	13.412	(1.163)	1184313	40.0000	41.7
101 Benzo(ghi)perylene	276	13.975	13.975	(1.212)	1195053	40.0000	40.3
126 m-Dinitrobenzene	168	5.963	5.963	(0.967)	171847	40.0000	41.2
130 2,3,4,6-Tetrachlorophenol	232	6.396	6.396	(1.037)	313275	40.0000	40.4
143 Dinoseb	211	7.287	7.287	(0.992)	278552	40.0000	44.2
173 Carbazole	167	7.523	7.523	(1.024)	822880	40.0000	41.2
184 p-Benzoquinone	54	3.516	3.516	(0.872)	29647	40.0000	23.9
192 Methoxychlor	227	9.627	9.627	(0.986)	1133064	40.0000	46.5
211 p-Toluidine	106	4.306	4.306	(1.068)	317671	40.0000	43.3
210 m-Toluidine	106	4.330	4.330	(1.074)	485048	40.0000	41.1
26 Phthalic anhydride	104	5.433	5.433	(1.108)	202802	40.0000	43.9
179 Dibenzo(a,e)pyrene	302	18.343	18.343	(1.591)	415918	40.0000	23.7
214 1,4-Dinitrobenzene	75	5.900	5.900	(0.957)	189318	40.0000	41.5
215 2-Ethoxyethanol	59	2.341	2.341	(0.581)	316229	40.0000	46.8
216 Methylenebis(2-chloroaniline)	231	9.690	9.690	(0.992)	221148	40.0000	42.0(Q)
M 225 Trichlorophenols	196				698663	80.0000	86.5
M 226 Tetrachlorophenols	232				313275	40.0000	40.4
M 227 Benzo(b,k)fluoranthene	252				3268349	80.0000	84.3

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s062509.b/s5f2533.d
Date : 26-JUN-2009 09:03
Client ID: MEGAICV
Sample Info: IWBN090602-09.1|40 PPM|1|SVM|1|MEGAICV
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

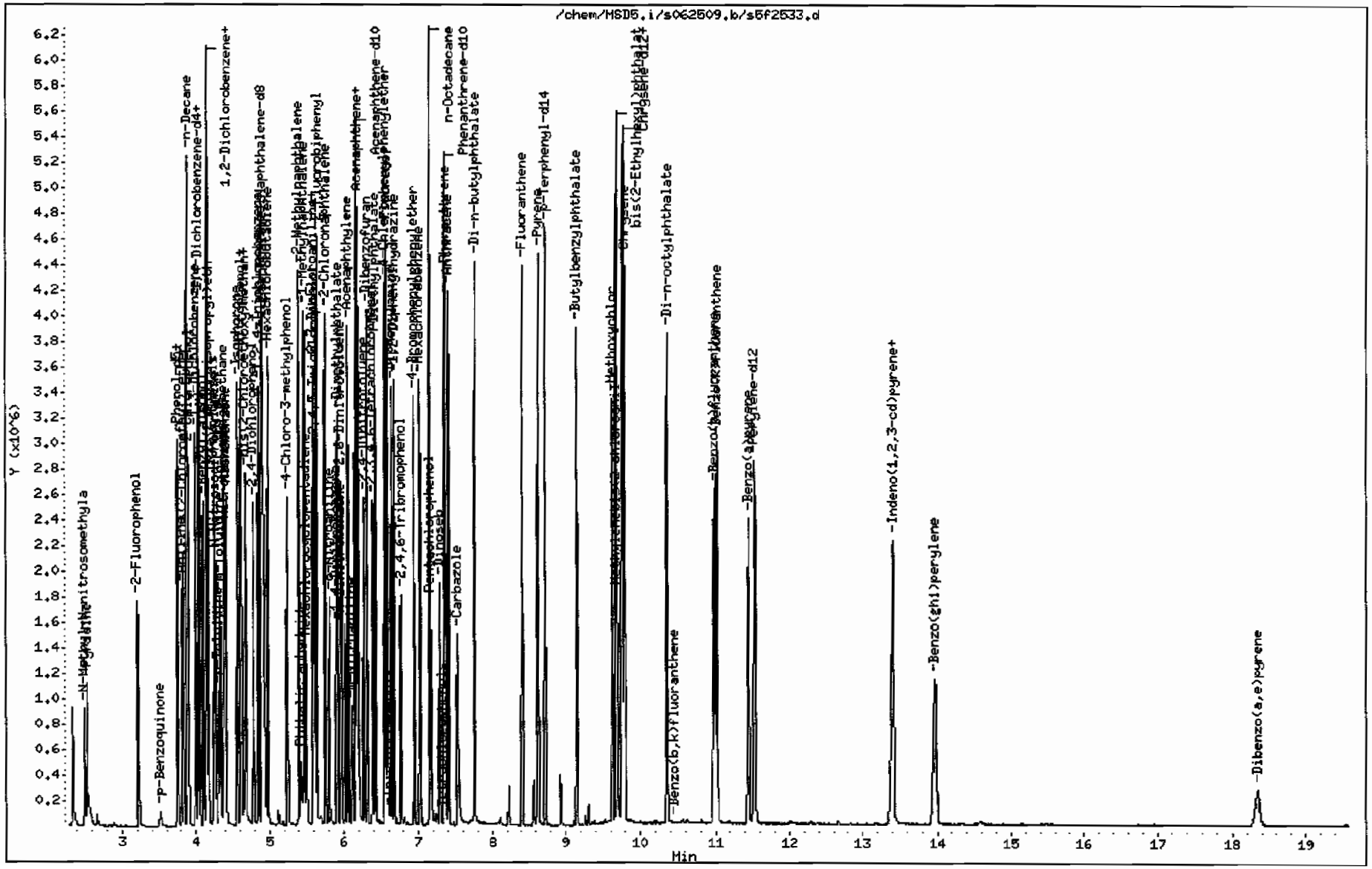

Data File: /chem/MSD5.i/s070109.b/s5g0102.d
Report Date: 01-Jul-2009 08:14

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5g0102.d
Analysis Type: WATER
Lab Sample ID: WBN090617-02.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m

Injection Date: 01-JUL-2009 07:32
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
|$ 3	2-Fluorophenol	0.87827	0.88341	0.88341	0.000	0.58514	60.00000	Averaged
|$ 5	Phenol-d5	1.15801	1.15535	1.15535	0.000	-0.22988	60.00000	Averaged
|$ 20	Nitrobenzene-d5	0.29640	0.32143	0.32143	0.000	8.44368	60.00000	Averaged
|$ 39	2-Fluorobiphenyl	1.03449	1.05252	1.05252	0.000	1.74329	60.00000	Averaged
|$ 60	2,4,6-Tribromophenol	0.16321	0.16913	0.16913	0.000	3.62835	60.00000	Averaged
|$ 81	p-Terphenyl-d14	0.61216	0.62092	0.62092	0.000	1.43058	60.00000	Averaged
| 1	N-Methyl-N-nitrosomethylami	0.46728	0.48622	0.48622	0.000	4.05228	60.00000	Averaged
| 2	Pyridine	0.69143	0.63907	0.63907	0.000	-7.57357	60.00000	Averaged
| 4	Aniline	0.50220	0.53078	0.53078	0.000	5.69057	60.00000	Averaged
| 6	Phenol	1.14936	1.12992	1.12992	0.001	-1.69139	20.00000	Averaged|ccc
| 7	bis(2-Chloroethyl) ether	0.88583	0.89926	0.89926	0.000	1.51570	60.00000	Averaged
| 8	2-Chlorophenol	0.96070	0.97933	0.97933	0.000	1.93930	60.00000	Averaged
| 203	n-Decane	1.55838	1.62260	1.62260	0.000	4.12113	60.00000	Averaged
| 9	1,3-Dichlorobenzene	1.14971	1.16753	1.16753	0.000	1.54987	60.00000	Averaged
| 11	1,4-Dichlorobenzene	1.14381	1.15599	1.15599	0.001	1.06497	20.00000	Averaged|ccc
| 13	1,2-Dichlorobenzene	1.06271	1.07863	1.07863	0.000	1.49800	60.00000	Averaged
| 14	bis(2-Chloroisopropyl)ether	2.06168	2.13567	2.13567	0.000	3.58888	60.00000	Averaged
| 12	Benzyl alcohol	0.60629	0.56071	0.56071	0.000	-7.51903	60.00000	Averaged
| 15	o-Cresol	0.71463	0.72762	0.72762	0.000	1.81765	60.00000	Averaged
| 18	m,p-Cresols	0.95569	0.94395	0.94395	0.000	-1.22828	60.00000	Averaged
| 17	N-Nitrosodipropylamine	0.61897	0.68318	0.68318	0.050	10.37430	60.00000	Averaged|spcc
| 19	Hexachloroethane	0.42421	0.45407	0.45407	0.000	7.03839	60.00000	Averaged
| 21	Nitrobenzene	0.27643	0.28616	0.28616	0.000	3.51700	60.00000	Averaged
| 22	Isophorone	0.51164	0.54494	0.54494	0.000	6.50846	60.00000	Averaged
| 23	2-Nitrophenol	0.12977	0.13936	0.13936	0.001	7.38555	20.00000	Averaged|ccc
| 24	2,4-Dimethylphenol	0.22398	0.24014	0.24014	0.000	7.21479	60.00000	Averaged
| 25	bis(2-Chloroethoxy)methane	0.29234	0.30675	0.30675	0.000	4.92773	60.00000	Averaged
| 26	2,4-Dichlorophenol	0.22262	0.23948	0.23948	0.001	7.57361	20.00000	Averaged|ccc
| 27	Benzoic acid	51.92577	40.00000	0.14252	0.000	29.81442	60.00000	Linear
| 28	1,2,4-Trichlorobenzene	0.27693	0.29241	0.29241	0.000	5.59010	60.00000	Averaged
| 30	Naphthalene	0.77927	0.74709	0.74709	0.000	-4.12887	60.00000	Averaged
| 204	alpha-Terpineol	0.25452	0.27996	0.27996	0.000	9.99267	60.00000	Averaged
| 31	4-Chloroaniline	39.00225	40.00000	0.25736	0.000	-2.49437	60.00000	Linear
| 32	Hexachlorobutadiene	0.20215	0.21413	0.21413	0.001	5.92986	20.00000	Averaged|ccc
| 33	4-Chloro-3-methylphenol	0.21319	0.23306	0.23306	0.001	9.32086	20.00000	Averaged|ccc
| 34	2-Methylnaphthalene	0.46942	0.49102	0.49102	0.000	4.60241	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 01-JUL-2009 07:32
Lab File ID: s5g0102.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090617-02.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35	1-Methylnaphthalene	0.50729	0.50542	0.50542	0.000	-0.36931	60.00000	Averaged	
36	Hexachlorocyclopentadiene	53.98103	40.00000	0.25001	0.050	34.95258	60.00000	Linear	spcc
205	2,3-Dichloroaniline	0.44656	0.47574	0.47574	0.000	6.53319	60.00000	Averaged	
37	2,4,6-Trichlorophenol	0.30953	0.31125	0.31125	0.001	0.55576	20.00000	Averaged	ccc
38	2,4,5-Trichlorophenol	0.33218	0.36141	0.36141	0.000	8.79942	60.00000	Averaged	
40	2-Chloronaphthalene	0.85120	0.86482	0.86482	0.000	1.60027	60.00000	Averaged	
42	o-Nitroaniline	0.27065	0.28394	0.28394	0.000	4.91137	60.00000	Averaged	
41	m-Nitroaniline	38.23748	40.00000	0.13029	0.000	-4.40629	60.00000	Linear	
43	Dimethylphthalate	1.01609	1.04355	1.04355	0.000	2.70320	60.00000	Averaged	
44	2,6-Dinitrotoluene	0.24192	0.24940	0.24940	0.000	3.08904	60.00000	Averaged	
50	2,4-Dinitrotoluene	0.31653	0.32880	0.32880	0.000	3.87608	60.00000	Averaged	
45	Acenaphthylene	1.25413	1.31642	1.31642	0.000	4.96650	60.00000	Averaged	
47	Acenaphthene	0.81724	0.83964	0.83964	0.001	2.74060	20.00000	Averaged	ccc
48	2,4-Dinitrophenol	52.67679	40.00000	0.12705	0.050	31.69196	60.00000	Linear	spcc
49	Dibenzofuran	1.15749	1.19807	1.19807	0.000	3.50557	60.00000	Averaged	
51	Diethylphthalate	0.99523	1.02075	1.02075	0.000	2.56422	60.00000	Averaged	
52	4-Nitrophenol	0.14183	0.14981	0.14981	0.050	5.62219	60.00000	Averaged	spcc
53	Fluorene	0.99470	1.01644	1.01644	0.000	2.18561	60.00000	Averaged	
54	4-Chlorophenylphenylether	0.57998	0.58648	0.58648	0.000	1.12006	60.00000	Averaged	
55	2-Methyl-4,6-dinitrophenol	49.40910	40.00000	0.10733	0.000	23.52275	60.00000	Linear	
56	p-Nitroaniline	0.10468	0.11152	0.11152	0.000	6.53643	60.00000	Averaged	
133	Diphenylamine	0.39819	0.42739	0.42739	0.001	7.33320	20.00000	Averaged	ccc
58	1,2-Diphenylhydrazine	0.50554	0.51466	0.51466	0.000	1.80345	60.00000	Averaged	
61	4-Bromophenylphenylether	0.19119	0.18966	0.18966	0.000	-0.80188	60.00000	Averaged	
63	Hexachlorobenzene	0.20135	0.20127	0.20127	0.000	-0.04042	60.00000	Averaged	
65	Pentachlorophenol	42.04730	40.00000	0.10223	0.001	5.11826	20.00000	Linear	ccc
206	n-Octadecane	0.43069	0.43344	0.43344	0.000	0.63760	60.00000	Averaged	
68	Phenanthrene	0.74933	0.74614	0.74614	0.000	-0.42593	60.00000	Averaged	
69	Anthracene	0.73960	0.75186	0.75186	0.000	1.65742	60.00000	Averaged	
72	Di-n-butylphthalate	0.85193	0.87052	0.87052	0.000	2.18244	60.00000	Averaged	
76	Fluoranthene	0.85361	0.88481	0.88481	0.001	3.65553	20.00000	Averaged	ccc
79	Pyrene	0.87262	0.90045	0.90045	0.000	3.18939	60.00000	Averaged	
85	Butylbenzylphthalate	0.37401	0.38512	0.38512	0.000	2.97094	60.00000	Averaged	
89	Benzo(a)anthracene	0.85828	0.87810	0.87810	0.000	2.30936	60.00000	Averaged	
92	Chrysene	0.78622	0.81155	0.81155	0.000	3.22189	60.00000	Averaged	
93	bis(2-Ethylhexyl)phthalate	0.51325	0.52494	0.52494	0.000	2.27758	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 01-JUL-2009 07:32
Lab File ID: s5g0102.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090617-02.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	0.91435	0.93695	0.93695	0.001	2.47209	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.88340	0.89146	0.89146	0.000	0.91255	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.86774	0.94807	0.94807	0.000	9.25641	60.00000	Averaged	
	97 Benzo(a)pyrene	0.78201	0.83617	0.83617	0.001	6.92580	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78583	0.77874	0.77874	0.000	-0.90237	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	0.64056	0.64692	0.64692	0.000	0.99271	60.00000	Averaged	
	101 Benzo(ghi)perylene	0.66994	0.63315	0.63315	0.000	-5.49121	60.00000	Averaged	
	126 m-Dinitrobenzene	0.16554	0.17208	0.17208	0.000	3.95181	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30843	0.33628	0.33628	0.000	9.02840	60.00000	Averaged	
	143 Dinoseb	50.45717	40.00000	0.17409	0.000	26.14293	60.00000	Linear	
	173 Carbazole	36.75851	40.00000	0.38518	0.000	-8.10373	60.00000	Linear	
	184 p-Benzoquinone	31.17075	40.00000	0.09645	0.000	-22.07313	60.00000	Linear	
	192 Methoxychlor	0.50819	0.56074	0.56074	0.000	10.34076	60.00000	Averaged	
	211 p-Toluidine	47.27847	40.00000	0.77745	0.000	18.19617	60.00000	Linear	
	210 m-Toluidine	43.62747	40.00000	1.15831	0.000	9.06868	60.00000	Linear	
	26 Phthalic anhydride	46.88821	40.00000	0.12844	0.000	17.22053	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	0.39632	0.32821	0.32821	0.000	-17.18706	60.00000	Averaged	
	214 1,4-Dinitrobenzene	0.18147	0.18330	0.18330	0.000	1.00831	60.00000	Averaged	
	215 2-Ethoxyethanol	0.59885	0.59442	0.59442	0.000	-0.73986	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.10978	0.07956	0.07956	0.000	-27.52554	60.00000	Averaged	
M	225 Trichlorophenols	0.32085	0.33633	0.33633	0.000	4.82298	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30843	0.33628	0.33628	0.000	9.02840	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.87557	0.91977	0.91977	0.000	5.04716	60.00000	Averaged	

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Data file : /chem/MSD5.i/s070109.b/s5g0102.d
Lab Smp Id: WBN090617-02.4 Client Smp ID: MEGACVS
Inj Date : 01-JUL-2009 07:32
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090617-02.4|40 PPM|1|SVM|1|MEGACVS
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.032	4.032	(1.000)	524067	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1946122	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1194301	40.0000	
* 67 Phenanthrene-d10	188	7.345	7.345	(1.000)	2318945	40.0000	
* 91 Chrysene-d12	240	9.771	9.771	(1.000)	2422872	40.0000	
* 98 Perylene-d12	264	11.534	11.534	(1.000)	2182236	40.0000	
$ 3 2-Fluorophenol	112	3.208	3.208	(0.796)	462966	40.0000	40.2
$ 5 Phenol-d5	99	3.743	3.743	(0.928)	605482	40.0000	39.9
$ 20 Nitrobenzene-d5	82	4.398	4.398	(0.897)	625541	40.0000	43.4
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	1257031	40.0000	40.7
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	201991	40.0000	41.4
$ 81 p-Terphenyl-d14	244	8.727	8.727	(0.893)	1504398	40.0000	40.6
1 N-Methyl-N-nitrosomethylamine	74	2.505	2.505	(0.621)	254812	40.0000	41.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
2 Pyridine	79	2.539	2.539	(0.630)	334914	40.0000	37.0
4 Aniline	66	3.815	3.815	(0.946)	278162	40.0000	42.3
6 Phenol	94	3.752	3.752	(0.931)	592154	40.0000	39.3(Q)
7 bis(2-Chloroethyl) ether	63	3.829	3.829	(0.950)	471271	40.0000	40.6
8 2-Chlorophenol	128	3.897	3.897	(0.967)	513236	40.0000	40.8
203 n-Decane	43	3.878	3.878	(0.962)	850351	40.0000	41.6
9 1,3-Dichlorobenzene	146	3.998	3.998	(0.992)	611864	40.0000	40.6
11 1,4-Dichlorobenzene	146	4.041	4.041	(1.002)	605815	40.0000	40.4
13 1,2-Dichlorobenzene	146	4.147	4.147	(1.029)	565274	40.0000	40.6
14 bis(2-Chloroisopropyl)ether	45	4.171	4.171	(1.035)	1119233	40.0000	41.4
12 Benzyl alcohol	108	4.099	4.099	(1.017)	293848	40.0000	37.0
15 o-Cresol	107	4.147	4.147	(1.029)	381324	40.0000	40.7
18 m,p-Cresols	107	4.248	4.248	(1.054)	494692	40.0000	39.5
17 N-Nitrosodipropylamine	70	4.268	4.268	(1.059)	358033	40.0000	44.1
19 Hexachloroethane	117	4.378	4.378	(1.086)	237961	40.0000	42.8
21 Nitrobenzene	77	4.412	4.412	(0.900)	556893	40.0000	41.4
22 Isophorone	82	4.561	4.561	(0.930)	1060523	40.0000	42.6
23 2-Nitrophenol	139	4.624	4.624	(0.943)	271202	40.0000	43.0
24 2,4-Dimethylphenol	122	4.614	4.614	(0.941)	467349	40.0000	42.9
25 bis(2-Chloroethoxy)methane	93	4.682	4.682	(0.955)	596969	40.0000	42.0
26 2,4-Dichlorophenol	162	4.788	4.788	(0.976)	466064	40.0000	43.0
27 Benzoic acid	105	4.677	4.677	(0.954)	277352	40.0000	51.9
28 1,2,4-Trichlorobenzene	180	4.850	4.850	(0.989)	569058	40.0000	42.2
30 Naphthalene	128	4.918	4.918	(1.003)	1453929	40.0000	38.3
204 alpha-Terpineol	59	4.894	4.894	(0.998)	544834	40.0000	44.0
31 4-Chloroaniline	127	4.932	4.932	(1.006)	500854	40.0000	39.0
32 Hexachlorobutadiene	225	4.980	4.980	(1.016)	416727	40.0000	42.4
33 4-Chloro-3-methylphenol	107	5.245	5.245	(1.070)	453571	40.0000	43.7
34 2-Methylnaphthalene	142	5.399	5.399	(1.101)	955585	40.0000	41.8
35 1-Methylnaphthalene	142	5.476	5.476	(1.117)	983608	40.0000	39.8
36 Hexachlorocyclopentadiene	237	5.505	5.505	(0.893)	298585	40.0000	54.0
205 2,3-Dichloroaniline	161	5.597	5.597	(0.908)	568173	40.0000	42.6
37 2,4,6-Trichlorophenol	196	5.587	5.587	(0.906)	371723	40.0000	40.2
38 2,4,5-Trichlorophenol	196	5.616	5.616	(0.911)	431631	40.0000	43.5
40 2-Chloronaphthalene	162	5.755	5.755	(0.934)	1032857	40.0000	40.6
42 o-Nitroaniline	65	5.813	5.813	(0.943)	339113	40.0000	42.0
41 m-Nitroaniline	138	6.112	6.112	(0.991)	155611	40.0000	38.2
43 Dimethylphthalate	163	5.919	5.919	(0.960)	1246316	40.0000	41.1
44 2,6-Dinitrotoluene	165	5.977	5.977	(0.970)	297854	40.0000	41.2
50 2,4-Dinitrotoluene	165	6.276	6.276	(1.018)	392681	40.0000	41.6
45 Acenaphthylene	152	6.064	6.064	(0.984)	1572202	40.0000	42.0
47 Acenaphthene	154	6.189	6.189	(1.004)	1002785	40.0000	41.1
48 2,4-Dinitrophenol	184	6.184	6.184	(1.003)	151730	40.0000	52.7
49 Dibenzofuran	168	6.314	6.314	(1.024)	1430853	40.0000	41.4
51 Diethylphthalate	149	6.430	6.430	(1.043)	1219082	40.0000	41.0
52 4-Nitrophenol	139	6.203	6.203	(1.006)	178917	40.0000	42.2
53 Fluorene	166	6.579	6.579	(1.067)	1213937	40.0000	40.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
54 4-Chlorophenylphenylether	204	6.550	6.550	(1.062)	700435	40.0000	40.4
55 2-Methyl-4,6-dinitrophenol	198	6.593	6.593	(0.898)	248895	40.0000	49.4
56 p-Nitroaniline	138	6.579	6.579	(1.067)	133185	40.0000	42.6
133 Diphenylamine	169	6.642	6.642	(0.904)	991089	40.0000	42.9
58 1,2-Diphenylhydrazine	77	6.675	6.675	(0.909)	1193463	40.0000	40.7
61 4-Bromophenylphenylether	248	6.945	6.945	(0.946)	439804	40.0000	39.7
63 Hexachlorobenzene	284	7.017	7.017	(0.955)	466738	40.0000	40.0
65 Pentachlorophenol	266	7.171	7.171	(0.976)	237055	40.0000	42.0
206 n-Octadecane	57	7.147	7.147	(0.973)	1005113	40.0000	40.2
68 Phenanthrene	178	7.364	7.364	(1.003)	1730259	40.0000	39.8
69 Anthracene	178	7.407	7.407	(1.009)	1743511	40.0000	40.7
72 Di-n-butylphthalate	149	7.759	7.759	(1.056)	2018694	40.0000	40.9
76 Fluoranthene	202	8.414	8.414	(1.146)	2051828	40.0000	41.5
79 Pyrene	202	8.630	8.630	(0.883)	2181666	40.0000	41.3
85 Butylbenzylphthalate	149	9.155	9.155	(0.937)	933097	40.0000	41.2
89 Benzo(a)anthracene	228	9.757	9.757	(0.999)	2127514	40.0000	40.9
92 Chrysene	228	9.796	9.796	(1.002)	1966280	40.0000	41.3
93 bis(2-Ethylhexyl)phthalate	149	9.675	9.675	(0.990)	1271855	40.0000	40.9
94 Di-n-octylphthalate	149	10.354	10.354	(0.898)	2044653	40.0000	41.0
95 Benzo(b)fluoranthene	252	10.985	10.985	(0.952)	1945384	40.0000	40.4
96 Benzo(k)fluoranthene	252	11.023	11.023	(0.956)	2068905	40.0000	43.7
97 Benzo(a)pyrene	252	11.452	11.452	(0.993)	1824719	40.0000	42.8
99 Indeno(1,2,3-cd)pyrene	276	13.407	13.407	(1.162)	1699384	40.0000	39.6
100 Dibenzo(a,h)anthracene	278	13.421	13.421	(1.164)	1411738	40.0000	40.4
101 Benzo(ghi)perylene	276	13.980	13.980	(1.212)	1381690	40.0000	37.8
126 m-Dinitrobenzene	168	5.963	5.963	(0.967)	205514	40.0000	41.6
130 2,3,4,6-Tetrachlorophenol	232	6.396	6.396	(1.037)	401616	40.0000	43.6
143 Dinoseb	211	7.287	7.287	(0.992)	403702	40.0000	50.4
173 Carbazole	167	7.528	7.528	(1.025)	893218	40.0000	36.8
184 p-Benzoquinone	54	3.516	3.516	(0.872)	50548	40.0000	31.2
192 Methoxychlor	227	9.627	9.627	(0.985)	1358611	40.0000	44.1
211 p-Toluidine	106	4.306	4.306	(1.068)	407437	40.0000	47.3
210 m-Toluidine	106	4.330	4.330	(1.074)	607031	40.0000	43.6
26 Phthalic anhydride	104	5.438	5.438	(1.109)	249959	40.0000	46.9
179 Dibenzo(a,e)pyrene	302	18.367	18.367	(1.592)	716223	40.0000	33.1
214 1,4-Dinitrobenzene	75	5.900	5.900	(0.957)	218921	40.0000	40.4
215 2-Ethoxyethanol	59	2.346	2.346	(0.582)	311518	40.0000	39.7
216 Methylenebis(2-chloroaniline)	231	9.694	9.694	(0.992)	192767	40.0000	29.0(Q)
M 225 Trichlorophenols	196				803354	80.0000	83.8
M 226 Tetrachlorophenols	232				401616	40.0000	43.6
M 227 Benzo(b,k)fluoranthene	252				4014289	80.0000	84.0

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070109.b/s5g0102.d

Date : 01-JUL-2009 07:32

Client ID: MEGACVS

Sample Info: !WBN090617-02,4140 PPM!1!SVM!1!MEGACVS

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

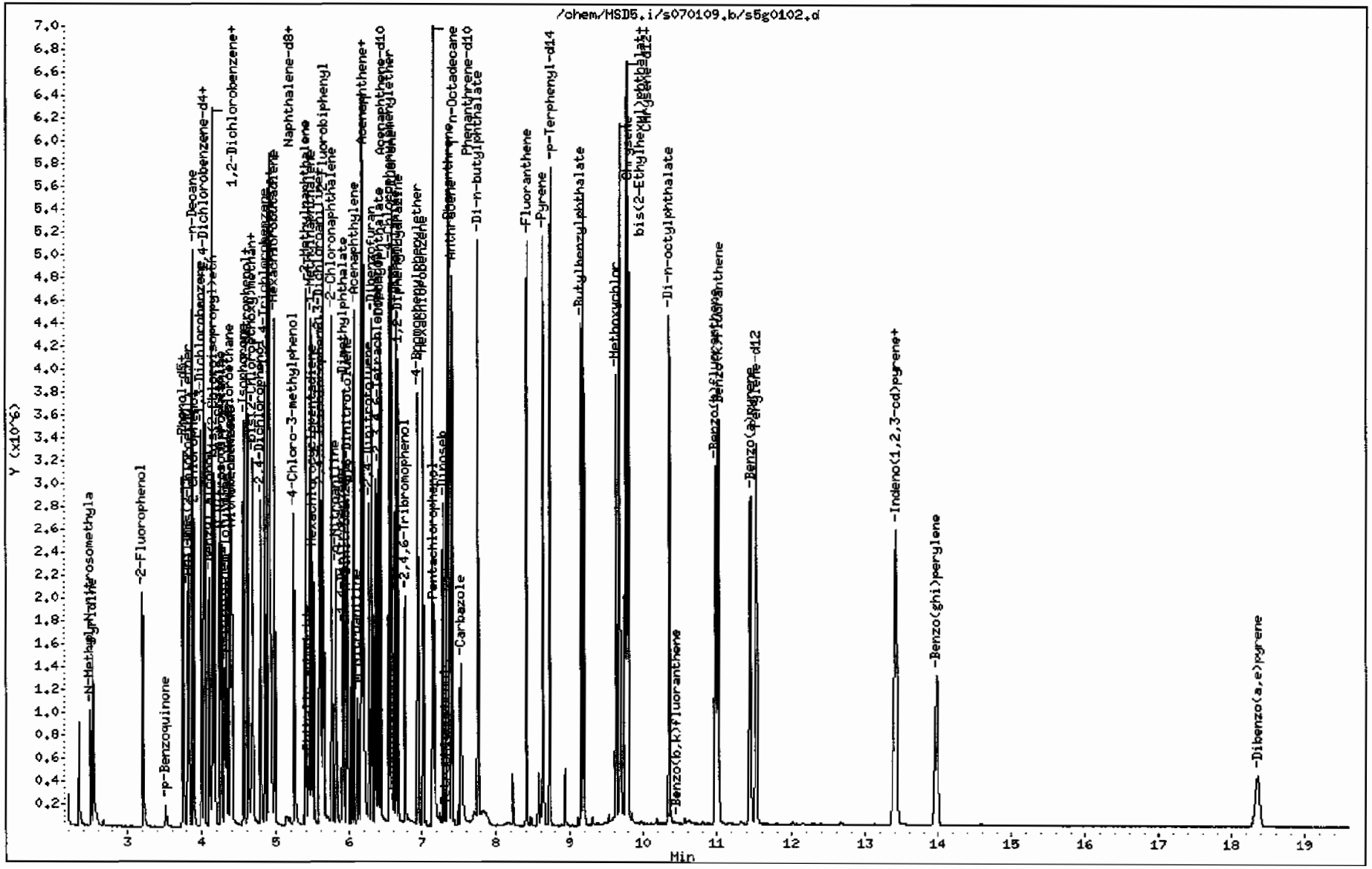

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 01-JUL-2009 07:59
Lab File ID: s5g0103.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090619-01.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.79683	0.84143	0.84143	0.000	5.59794	60.00000	Averaged
16 Acetophenone	1.08491	1.10033	1.10033	0.000	1.42171	60.00000	Averaged
189 Caprolactam	0.07939	0.08077	0.08077	0.000	1.74148	60.00000	Averaged
208 1,1'-Biphenyl	1.04481	1.11378	1.11378	0.000	6.60201	60.00000	Averaged
207 Atrazine	0.03020	0.04196	0.04196	0.000	38.93424	60.00000	Averaged
77 Benzidine	0.16686	0.10201	0.10201	0.000	-38.86936	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28677	0.29095	0.29095	0.000	1.45523	60.00000	Averaged
102 1,4-Dioxane	0.30814	0.33219	0.33219	0.000	7.80487	60.00000	Averaged
103 Methyl methacrylate	0.15418	0.17435	0.17435	0.000	13.08233	60.00000	Averaged
104 Ethyl methacrylate	0.72240	0.75696	0.75696	0.000	4.78431	60.00000	Averaged
105 2-Picoline	1.10986	1.13395	1.13395	0.000	2.17051	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.41554	0.42049	0.42049	0.000	1.19296	60.00000	Averaged
107 Methyl methanesulfonate	0.47990	0.52566	0.52566	0.000	9.53551	60.00000	Averaged
108 N-Nitrosodiethylamine	0.41207	0.42636	0.42636	0.000	3.46764	60.00000	Averaged
109 Ethyl Methanesulfonate	0.57718	0.60551	0.60551	0.000	4.90789	60.00000	Averaged
110 Pentachloroethane	0.32784	0.35703	0.35703	0.000	8.90547	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.41191	0.41547	0.41547	0.000	0.86342	60.00000	Averaged
113 N-Nitrosomorpholine	0.66462	0.69330	0.69330	0.000	4.31650	60.00000	Averaged
114 o-Toluidine	1.43933	1.43631	1.43631	0.000	-0.21038	60.00000	Averaged
115 N-Nitrosopiperidine	0.13311	0.13623	0.13623	0.000	2.34154	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.80774	0.85598	0.85598	0.000	5.97273	60.00000	Averaged
118 2,6-Dichlorophenol	0.23169	0.23661	0.23661	0.000	2.12486	60.00000	Averaged
119 Hexachloropropene	0.13807	0.18165	0.18165	0.000	31.56324	60.00000	Averaged
120 p-Phenylenediamine	30.17961	40.00000	0.13073	0.000	-24.55098	60.00000	Linear
121 N-Nitrosodi-n-butylamine	0.17971	0.18845	0.18845	0.000	4.86074	60.00000	Averaged
122 Safrole	0.21426	0.22196	0.22196	0.000	3.59359	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.51018	0.54737	0.54737	0.000	7.29006	60.00000	Averaged
124 Isosafrole	0.33063	0.33940	0.33940	0.000	2.64981	60.00000	Averaged
125 1,4-Naphthoquinone	0.32039	0.36669	0.36669	0.000	14.45019	60.00000	Averaged
127 Pentachlorobenzene	0.47629	0.50750	0.50750	0.000	6.55274	60.00000	Averaged
128 1-Naphthylamine	0.71181	0.72417	0.72417	0.000	1.73688	60.00000	Averaged
129 2-Naphthylamine	0.64134	0.76702	0.76702	0.000	19.59689	60.00000	Averaged
131 5-Nitro-o-toluidine	0.25602	0.25134	0.25134	0.000	-1.82998	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.10752	0.12107	0.12107	0.000	12.59899	60.00000	Averaged
137 Phenacetin	0.22131	0.21478	0.21478	0.000	-2.95127	60.00000	Averaged
138 Diallate	0.20650	0.21236	0.21236	0.000	2.83982	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 01-JUL-2009 07:59
Lab File ID: s5g0103.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090619-01.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20975	0.21889	0.21889	0.000	4.35832	60.00000	Averaged
213 Trans Diallate	0.24294	0.24984	0.24984	0.000	2.83982	60.00000	Averaged
140 4-Aminobiphenyl	0.36955	0.34749	0.34749	0.000	-5.96962	60.00000	Averaged
141 Pentachloronitrobenzene	0.08929	0.09421	0.09421	0.000	5.50346	60.00000	Averaged
142 Pronamide	0.26058	0.27686	0.27686	0.000	6.24755	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01022	0.01443	0.01443	0.000	41.23138	60.00000	Averaged
147 Methapyrilene	0.41717	0.43637	0.43637	0.000	4.60294	60.00000	Averaged
148 Isodrin	0.10436	0.10969	0.10969	0.000	5.10712	60.00000	Averaged
149 Aramite	0.05090	0.05428	0.05428	0.000	6.64059	60.00000	Averaged
150 Kepone	0.06725	0.08864	0.08864	0.000	31.81733	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.20208	0.21514	0.21514	0.000	6.45862	60.00000	Averaged
152 Chlorobenzilate	0.29951	0.31581	0.31581	0.000	5.44421	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.44059	0.35768	0.35768	0.000	-18.81961	60.00000	Averaged
155 2-Acetylaminofluorene	0.27578	0.29259	0.29259	0.000	6.09568	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.45468	0.48740	0.48740	0.000	7.19602	60.00000	Averaged
158 3-Methylcholanthrene	0.40918	0.40858	0.40858	0.000	-0.14560	60.00000	Averaged

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Data file : /chem/MSD5.i/s070109.b/s5g0103.d
Lab Smp Id: WBN090619-01.4 Client Smp ID: AP12CVS
Inj Date : 01-JUL-2009 07:59
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090619-01.4|40 PPM|1|SVM|1|AP12CVS
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:13 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.025	4.025	(1.000)	492390	40.0000	
* 29 Naphthalene-d8	136	4.896	4.896	(1.000)	1683219	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.160	(1.000)	1071608	40.0000	
* 67 Phenanthrene-d10	188	7.343	7.343	(1.000)	2056790	40.0000	
* 91 Chrysene-d12	240	9.760	9.760	(1.000)	2101249	40.0000	
* 98 Perylene-d12	264	11.519	11.519	(1.000)	1854290	40.0000	
209 Benzaldehyde	77	3.749	3.749	(0.931)	414313	40.0000	42.2
16 Acetophenone	105	4.278	4.278	(1.063)	541794	40.0000	40.6
189 Caprolactam	113	5.172	5.172	(1.056)	135956	40.0000	40.7
208 1,1'-Biphenyl	154	5.719	5.719	(0.928)	1193540	40.0000	42.6
207 Atrazine	173	7.031	7.031	(0.958)	86296	40.0000	55.6
77 Benzidine	184	8.495	8.495	(0.870)	214338	40.0000	24.4
90 3,3'-Dichlorobenzidine	252	9.689	9.689	(0.993)	611351	40.0000	40.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
102 1,4-Dioxane	88	2.343	2.343	(0.582)	163568	40.0000	43.1
103 Methyl methacrylate	100	2.337	2.337	(0.581)	85847	40.0000	45.2
104 Ethyl methacrylate	69	2.713	2.713	(0.674)	372719	40.0000	41.9
105 2-Picoline	93	2.913	2.913	(0.724)	558345	40.0000	40.9
106 N-Nitrosomethylethylamine	88	2.960	2.960	(0.735)	207046	40.0000	40.5
107 Methyl methanesulfonate	80	3.113	3.113	(0.773)	258829	40.0000	43.8
108 N-Nitrosodiethylamine	102	3.349	3.349	(0.832)	209933	40.0000	41.4
109 Ethyl Methanesulfonate	79	3.507	3.507	(0.871)	298146	40.0000	42.0
110 Pentachloroethane	167	3.849	3.849	(0.956)	175798	40.0000	43.6
111 N-Nitrosopyrrolidine	100	4.266	4.266	(1.060)	204571	40.0000	40.3(Q)
113 N-Nitrosomorpholine	56	4.284	4.284	(1.064)	341376	40.0000	41.7
114 o-Toluidine	106	4.307	4.307	(1.070)	707224	40.0000	39.9
115 N-Nitrosopiperidine	114	4.507	4.507	(0.921)	229298	40.0000	40.9
116 a,a-Dimethylphenethylamine	58	4.749	4.749	(0.970)	1440800	40.0000	42.4
118 2,6-Dichlorophenol	162	4.937	4.937	(1.008)	398274	40.0000	40.8
119 Hexachloropropene	213	4.966	4.966	(1.014)	305757	40.0000	52.6
120 p-Phenylenediamine	108	5.178	5.178	(1.058)	220053	40.0000	30.2
121 N-Nitrosodi-n-butylamine	84	5.137	5.137	(1.049)	317200	40.0000	41.9(T)
122 Safrole	162	5.307	5.307	(1.084)	373602	40.0000	41.4
123 1,2,4,5-Tetrachlorobenzene	216	5.513	5.513	(0.895)	586566	40.0000	42.9
124 Isosafrole	162	5.678	5.678	(0.922)	363699	40.0000	41.0
125 1,4-Naphthoquinone	158	5.866	5.866	(0.952)	392950	40.0000	45.8
127 Pentachlorobenzene	250	6.278	6.278	(1.019)	543843	40.0000	42.6
128 1-Naphthylamine	143	6.366	6.366	(1.033)	776026	40.0000	40.7
129 2-Naphthylamine	143	6.425	6.425	(1.043)	821943	40.0000	47.8
131 5-Nitro-o-toluidine	152	6.560	6.560	(1.065)	269337	40.0000	39.3
136 1,3,5-Trinitrobenzene	75	6.813	6.813	(0.928)	249010	40.0000	45.0
137 Phenacetin	108	6.854	6.854	(0.934)	441747	40.0000	38.8(Q)
138 Diallate	86	6.843	6.843	(0.932)	436787	40.0000	41.1
212 Cis Diallate	86	6.925	6.925	(0.943)	67530	6.00000	6.3(a)
213 Trans Diallate	86	6.843	6.843	(0.932)	436787	34.0000	35.0
140 4-Aminobiphenyl	169	7.154	7.154	(0.974)	714720	40.0000	37.6
141 Pentachloronitrobenzene	237	7.172	7.172	(0.977)	193766	40.0000	42.2(Q)
142 Pronamide	173	7.166	7.166	(0.976)	569437	40.0000	42.5
146 4-Nitroquinoline-1-oxide	101	8.013	8.013	(1.091)	29686	40.0000	56.5
147 Methapyrilene	58	8.042	8.042	(1.095)	897525	40.0000	41.8
148 Isodrin	193	8.272	8.272	(1.127)	225611	40.0000	42.0
149 Aramite	185	8.666	8.666	(1.180)	111633	40.0000	42.6
150 Kepone	272	9.260	9.260	(1.261)	182320	40.0000	52.7
151 p-(Dimethylamino)azobenzene	120	8.848	8.848	(0.907)	452053	40.0000	42.6
152 Chlorobenzilate	251	8.878	8.878	(0.910)	663601	40.0000	42.2
153 3,3'-Dimethylbenzidine	212	9.160	9.160	(0.939)	751567	40.0000	32.5
155 2-Acetylaminofluorene	181	9.413	9.413	(0.964)	614795	40.0000	42.4
157 7,12Dimethylbenz(a)anthracene	256	10.948	10.948	(0.950)	903774	40.0000	42.9
158 3-Methylcholanthrene	268	11.948	11.948	(1.037)	757627	40.0000	39.9(Q)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070109.b/s5g0103.d
Date : 01-JUL-2009 07:59
Client ID: AP12CVS
Sample Info: IWBN090619-01,4140 PPM11SVM11AP12CVS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

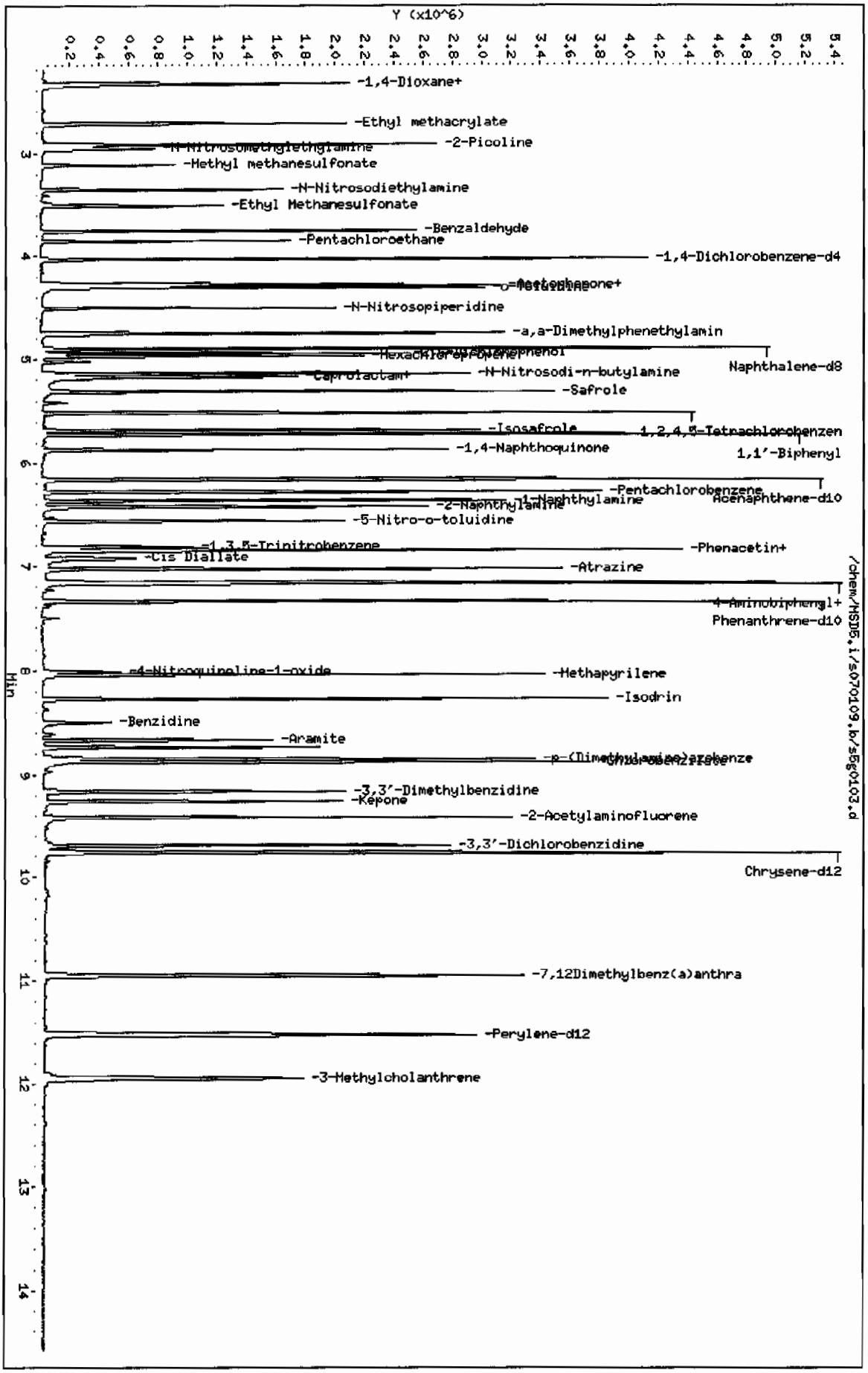

Page 1

QC Data

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

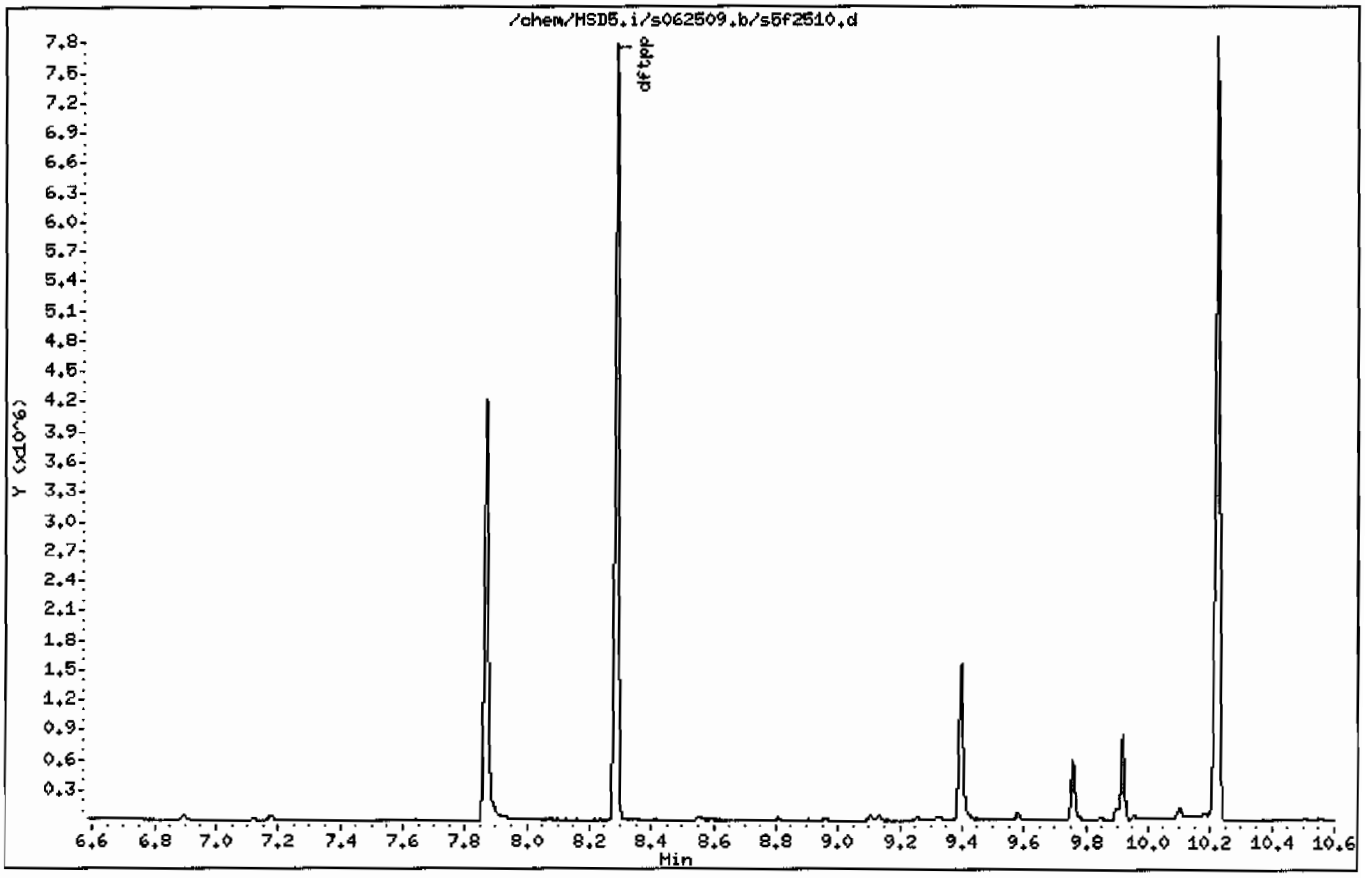

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

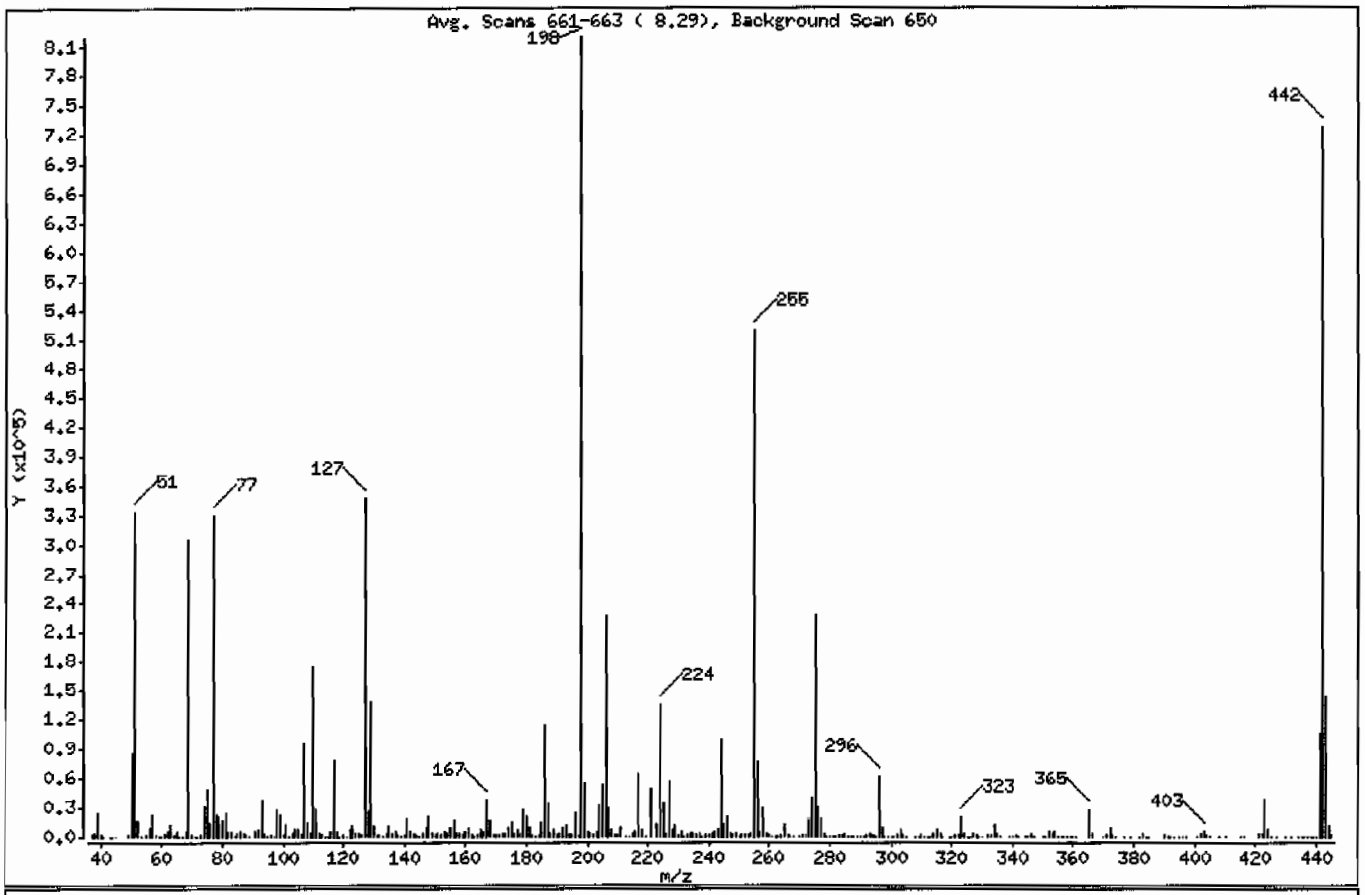

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.61
68	Less than 2.00% of mass 69	0.65 (1.74)
69	Mass 69 relative abundance	37.21
70	Less than 2.00% of mass 69	0.22 (0.59)
127	40.00 - 60.00% of mass 198	42.23
197	Less than 1.00% of mass 198	0.20
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 30.00% of mass 198	27.74
365	Greater than 1.00% of mass 198	3.39
441	Present, but less than mass 443	12.90
442	Greater than 40.00% of mass 198	88.92
443	17.00 - 23.00% of mass 442	17.81 (20.03)

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d
Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1138	132.00	1206	224.00	135680	316.00	4346
38.00	4283	133.00	226	225.00	33672	317.00	724
39.00	24376	134.00	3902	226.00	3982	319.00	199
40.00	1095	135.00	10990	227.00	56520	320.00	278
41.00	377	136.00	4516	228.00	8381	321.00	1904
43.00	83	137.00	5167	229.00	11198	322.00	1049
44.00	53	138.00	1139	230.00	1508	323.00	20544
45.00	651	139.00	686	231.00	4747	324.00	3833
49.00	1842	140.00	2033	232.00	906	325.00	443
50.00	85864	141.00	18056	233.00	1144	326.00	441
51.00	332416	142.00	5920	234.00	3535	327.00	3582
52.00	16009	143.00	3898	235.00	4352	328.00	1881
53.00	680	144.00	1153	236.00	2596	329.00	411
55.00	1744	145.00	796	237.00	4493	330.00	67
56.00	10124	146.00	3833	238.00	149	332.00	1501
57.00	22896	147.00	8537	239.00	2028	333.00	2044
58.00	1220	148.00	20240	240.00	1558	334.00	12375
59.00	387	149.00	3724	241.00	3207	335.00	3249
60.00	170	150.00	975	242.00	6476	336.00	306
61.00	4094	151.00	2947	243.00	7666	339.00	390
62.00	4868	152.00	1120	244.00	100592	340.00	156
63.00	13455	153.00	5976	245.00	12760	341.00	2032
64.00	2223	154.00	4578	246.00	19808	342.00	558
65.00	6554	155.00	9784	247.00	4078	344.00	42
66.00	399	156.00	16170	248.00	1014	345.00	49
67.00	136	157.00	3266	249.00	3682	346.00	3814
68.00	5300	158.00	3502	250.00	900	347.00	894
69.00	304576	159.00	2575	251.00	988	350.00	113
70.00	1791	160.00	6522	252.00	1107	351.00	234
71.00	141	161.00	8738	253.00	2216	352.00	6066
72.00	193	162.00	2332	254.00	3272	353.00	3622
73.00	2630	163.00	733	255.00	519616	354.00	5630
74.00	32008	164.00	965	256.00	76312	355.00	936
75.00	49176	165.00	7434	257.00	5701	356.00	159
76.00	15003	166.00	5583	258.00	30480	357.00	134

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d
Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	329536	167.00	37360	259.00	4688	358.00	50
78.00	21848	168.00	16760	260.00	1050	359.00	514
79.00	21520	169.00	2806	261.00	818	360.00	90
80.00	17208	170.00	1585	262.00	281	361.00	66
81.00	24696	171.00	1950	263.00	357	365.00	27752
82.00	5995	172.00	3353	264.00	1198	366.00	3838
83.00	5784	173.00	4618	265.00	12254	370.00	420
84.00	731	174.00	9069	266.00	2093	371.00	1264
85.00	4077	175.00	15586	267.00	419	372.00	10324
86.00	6050	176.00	4443	268.00	101	373.00	2774
87.00	2825	177.00	6975	270.00	767	374.00	88
88.00	1193	178.00	2852	271.00	964	377.00	347
89.00	527	179.00	28744	272.00	1488	379.00	53
91.00	5217	180.00	20024	273.00	16303	382.00	46
92.00	6689	181.00	9747	274.00	39584	383.00	2936
93.00	36944	182.00	1277	275.00	227072	384.00	811
94.00	3121	183.00	633	276.00	30592	385.00	279
95.00	410	184.00	2511	277.00	19040	390.00	1527
96.00	1703	185.00	14675	278.00	3536	391.00	836
97.00	405	186.00	114752	279.00	847	392.00	606
98.00	27784	187.00	33024	280.00	137	393.00	78
99.00	23016	188.00	3270	281.00	305	395.00	178
100.00	1807	189.00	7565	282.00	573	396.00	60
101.00	12467	190.00	1456	283.00	2171	397.00	44
102.00	633	191.00	3531	284.00	1562	401.00	502
103.00	3694	192.00	9327	285.00	3393	402.00	3711
104.00	8033	193.00	10576	286.00	586	403.00	5371
105.00	8061	194.00	2381	287.00	70	404.00	2149
106.00	2335	195.00	1583	288.00	178	405.00	328
107.00	96840	196.00	24512	289.00	728	408.00	44
108.00	15060	197.00	1668	290.00	735	410.00	195
109.00	3168	198.00	818496	291.00	471	415.00	117
110.00	175616	199.00	55264	292.00	1011	416.00	64
111.00	27672	200.00	4870	293.00	4463	421.00	4380
112.00	3394	201.00	4357	294.00	950	422.00	4373

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d

Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650

Location of Maximum: 198.00

Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	1009	202.00	2129	295.00	722	423.00	37104
114.00	389	203.00	6231	296.00	62712	424.00	6752
115.00	427	204.00	31184	297.00	9287	425.00	610
116.00	5229	205.00	52096	298.00	618	427.00	44
117.00	79808	206.00	227136	299.00	244	430.00	41
118.00	5242	207.00	30208	300.00	51	432.00	68
119.00	641	208.00	7259	301.00	781	434.00	57
120.00	1537	209.00	2346	302.00	1183	435.00	42
121.00	459	210.00	2765	303.00	7108	436.00	46
122.00	6606	211.00	9606	304.00	2260	437.00	88
123.00	11016	213.00	938	305.00	253	438.00	260
124.00	4477	214.00	263	308.00	883	439.00	169
125.00	4654	215.00	2833	309.00	636	440.00	115
126.00	1781	216.00	5142	310.00	1042	441.00	105616
127.00	345664	217.00	63232	311.00	221	442.00	727808
128.00	25848	218.00	7687	312.00	209	443.00	145792
129.00	139648	219.00	590	313.00	595	444.00	12170
130.00	11462	221.00	48472	314.00	3436	445.00	968
131.00	2254	223.00	13920	315.00	7722		

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

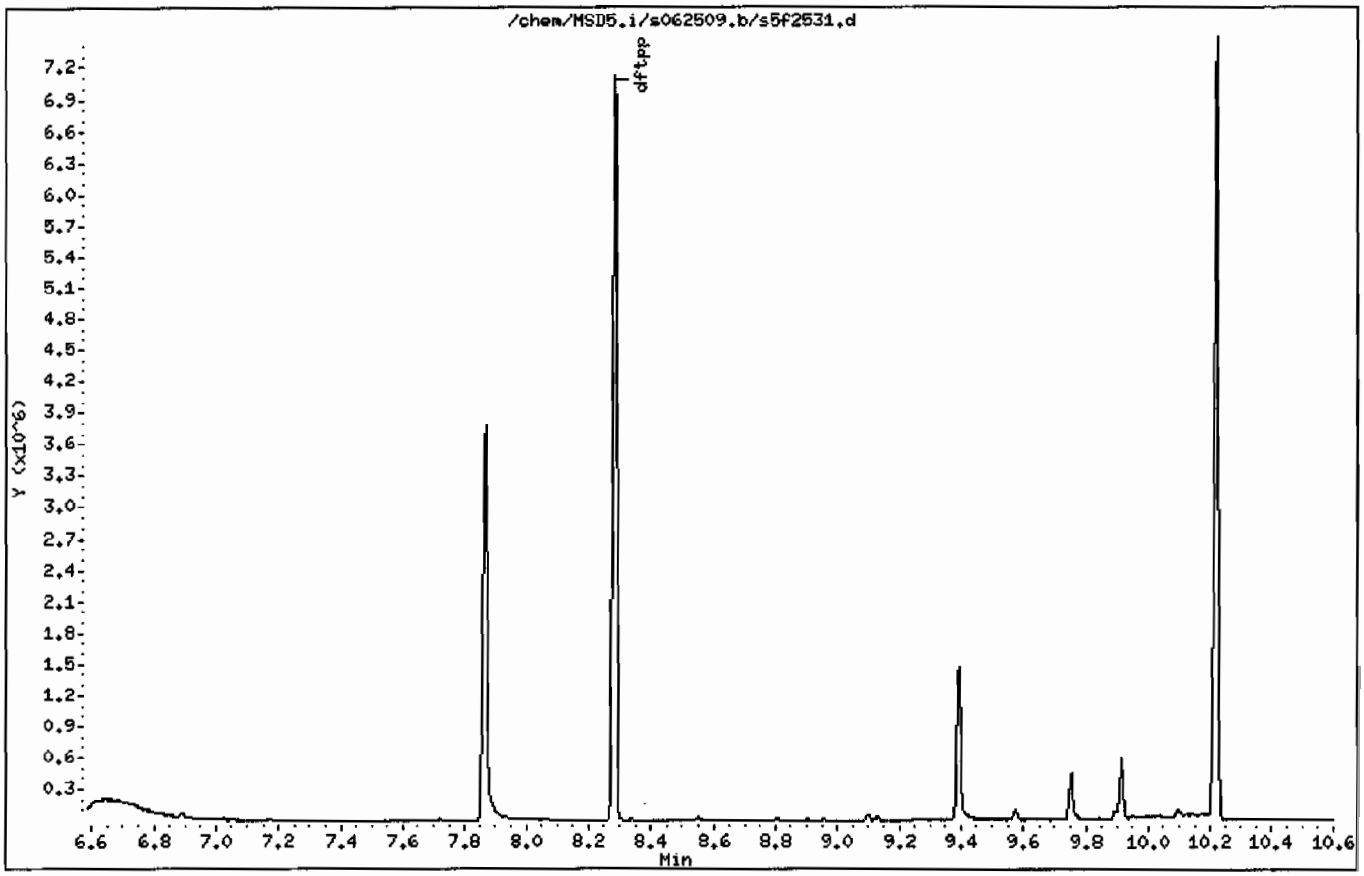

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

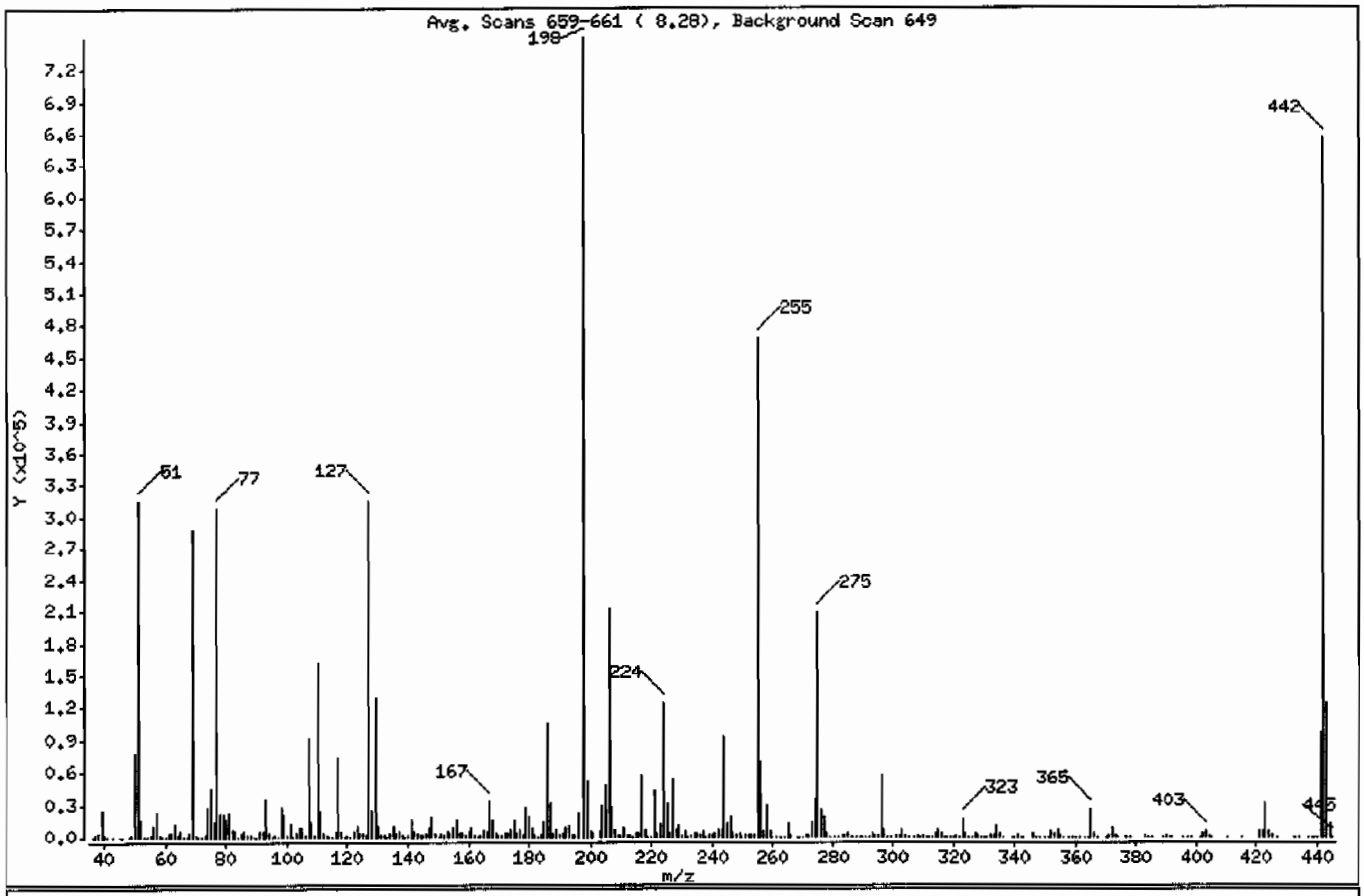

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.16
68	Less than 2.00% of mass 69	0.57 (1.48)
69	Mass 69 relative abundance	38.30
70	Less than 2.00% of mass 69	0.14 (0.37)
127	40.00 - 60.00% of mass 198	42.18
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.81
275	10.00 - 30.00% of mass 198	27.72
365	Greater than 1.00% of mass 198	3.36
441	Present, but less than mass 443	12.82
442	Greater than 40.00% of mass 198	87.41
443	17.00 - 23.00% of mass 442	16.50 (18.88)

Data File: /ohem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.1

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d

Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649

Location of Maximum: 198.00

Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	130	129.00	129144	221.00	43352	315.00	6757
37.00	963	130.00	10379	222.00	3421	316.00	3304
38.00	4111	131.00	2243	223.00	12803	317.00	505
39.00	23600	132.00	1255	224.00	124544	318.00	89
40.00	1272	133.00	555	225.00	30704	319.00	68
41.00	492	134.00	3635	226.00	3391	320.00	212
43.00	105	135.00	10704	227.00	52696	321.00	2199
45.00	749	136.00	4146	228.00	7219	322.00	768
46.00	78	137.00	5330	229.00	10175	323.00	17872
48.00	68	138.00	1404	230.00	1430	324.00	3180
49.00	2390	139.00	748	231.00	4406	325.00	325
50.00	77896	140.00	1839	232.00	746	326.00	448
51.00	316032	141.00	15758	233.00	1331	327.00	3348
52.00	15853	142.00	5118	234.00	3163	328.00	1586
53.00	697	143.00	3702	235.00	3412	329.00	430
54.00	44	144.00	1161	236.00	2372	330.00	62
55.00	1475	145.00	866	237.00	4445	331.00	102
56.00	9953	146.00	3158	238.00	456	332.00	1465
57.00	23072	147.00	8024	239.00	2101	333.00	1384
58.00	898	148.00	18984	240.00	1609	334.00	11134
59.00	336	149.00	3739	241.00	3164	335.00	3143
60.00	225	150.00	774	242.00	6733	336.00	405
61.00	3752	151.00	3382	243.00	6226	339.00	142
62.00	4243	152.00	1243	244.00	92688	340.00	159
63.00	11328	153.00	5283	245.00	12475	341.00	2110
64.00	1836	154.00	3943	246.00	19736	342.00	653
65.00	5514	155.00	9153	247.00	3761	343.00	43
66.00	395	156.00	15309	248.00	881	346.00	4090
67.00	365	157.00	3021	249.00	3370	347.00	606
68.00	4238	158.00	3692	250.00	704	348.00	61
69.00	287104	159.00	2450	251.00	990	350.00	163
70.00	1055	160.00	5815	252.00	1128	351.00	312
71.00	62	161.00	8439	253.00	2364	352.00	5888
72.00	71	162.00	2487	254.00	2478	353.00	3580
73.00	2346	163.00	529	255.00	467136	354.00	6153

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVHF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d

Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649

Location of Maximum: 198.00

Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	27560	164.00	872	256.00	68464	355.00	1155
75.00	45608	165.00	7480	257.00	5362	356.00	47
76.00	14580	166.00	4923	258.00	28784	358.00	84
77.00	307648	167.00	33168	259.00	4672	359.00	471
78.00	20952	168.00	15532	260.00	577	360.00	108
79.00	20168	169.00	3430	261.00	840	361.00	199
80.00	15037	170.00	1365	262.00	192	363.00	41
81.00	22200	171.00	1541	263.00	518	364.00	46
82.00	6183	172.00	3329	264.00	441	365.00	25200
83.00	5317	173.00	3966	265.00	11328	366.00	3575
84.00	652	174.00	7529	266.00	1690	367.00	168
85.00	3481	175.00	14827	268.00	443	370.00	679
86.00	5823	176.00	3632	269.00	245	371.00	1446
87.00	2522	177.00	6522	270.00	550	372.00	8793
88.00	1077	178.00	2348	271.00	1149	373.00	1961
89.00	639	179.00	27592	272.00	1211	374.00	221
90.00	270	180.00	18360	273.00	14446	376.00	42
91.00	5249	181.00	8854	274.00	34480	377.00	208
92.00	5425	182.00	1836	275.00	207744	378.00	45
93.00	34864	183.00	697	276.00	26632	383.00	2261
94.00	2727	184.00	2248	277.00	18216	384.00	695
95.00	519	185.00	13594	278.00	2938	385.00	153
96.00	1793	186.00	105608	279.00	721	389.00	48
97.00	255	187.00	30760	281.00	239	390.00	895
98.00	27192	188.00	3410	282.00	488	391.00	683
99.00	20512	189.00	6590	283.00	2542	392.00	588
100.00	1368	190.00	891	284.00	1204	395.00	63
101.00	11329	191.00	3357	285.00	3197	397.00	89
102.00	651	192.00	9407	286.00	509	398.00	57
103.00	4207	193.00	9901	287.00	81	401.00	639
104.00	8219	194.00	2267	288.00	186	402.00	3069
105.00	7766	195.00	1341	289.00	847	403.00	4596
106.00	2422	196.00	23040	290.00	595	404.00	1548
107.00	90816	198.00	749568	291.00	454	405.00	250
108.00	14415	199.00	51080	292.00	743	410.00	207

Data File: /chem/MSD5.i/s062609.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
109.00	2528	200.00	4574	293.00	4058	415.00	154
110.00	161600	201.00	3697	294.00	966	421.00	4311
111.00	23872	203.00	5056	295.00	1275	422.00	4609
112.00	3017	204.00	29384	296.00	57624	423.00	31232
113.00	1030	205.00	48440	297.00	7723	424.00	5999
114.00	259	206.00	211840	298.00	524	425.00	887
115.00	204	207.00	27712	299.00	72	427.00	53
116.00	5076	208.00	7647	301.00	883	432.00	79
117.00	74856	209.00	2440	302.00	1121	433.00	51
118.00	5416	210.00	2546	303.00	6834	434.00	102
119.00	663	211.00	8250	304.00	2045	437.00	63
120.00	1188	212.00	1226	305.00	210	438.00	98
121.00	285	213.00	887	307.00	150	439.00	269
122.00	5954	214.00	230	308.00	912	440.00	46
123.00	9965	215.00	2724	309.00	557	441.00	96112
124.00	4154	216.00	3200	310.00	896	442.00	655168
125.00	3951	217.00	57056	311.00	325	443.00	123696
126.00	1734	218.00	6740	312.00	245	444.00	11497
127.00	316160	219.00	408	313.00	389	445.00	757
128.00	23760	220.00	754	314.00	2901		

Data File: /chem/MSD5.i/s070109.b/s5g0101.d

Date : 01-JUL-2009 07:18

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

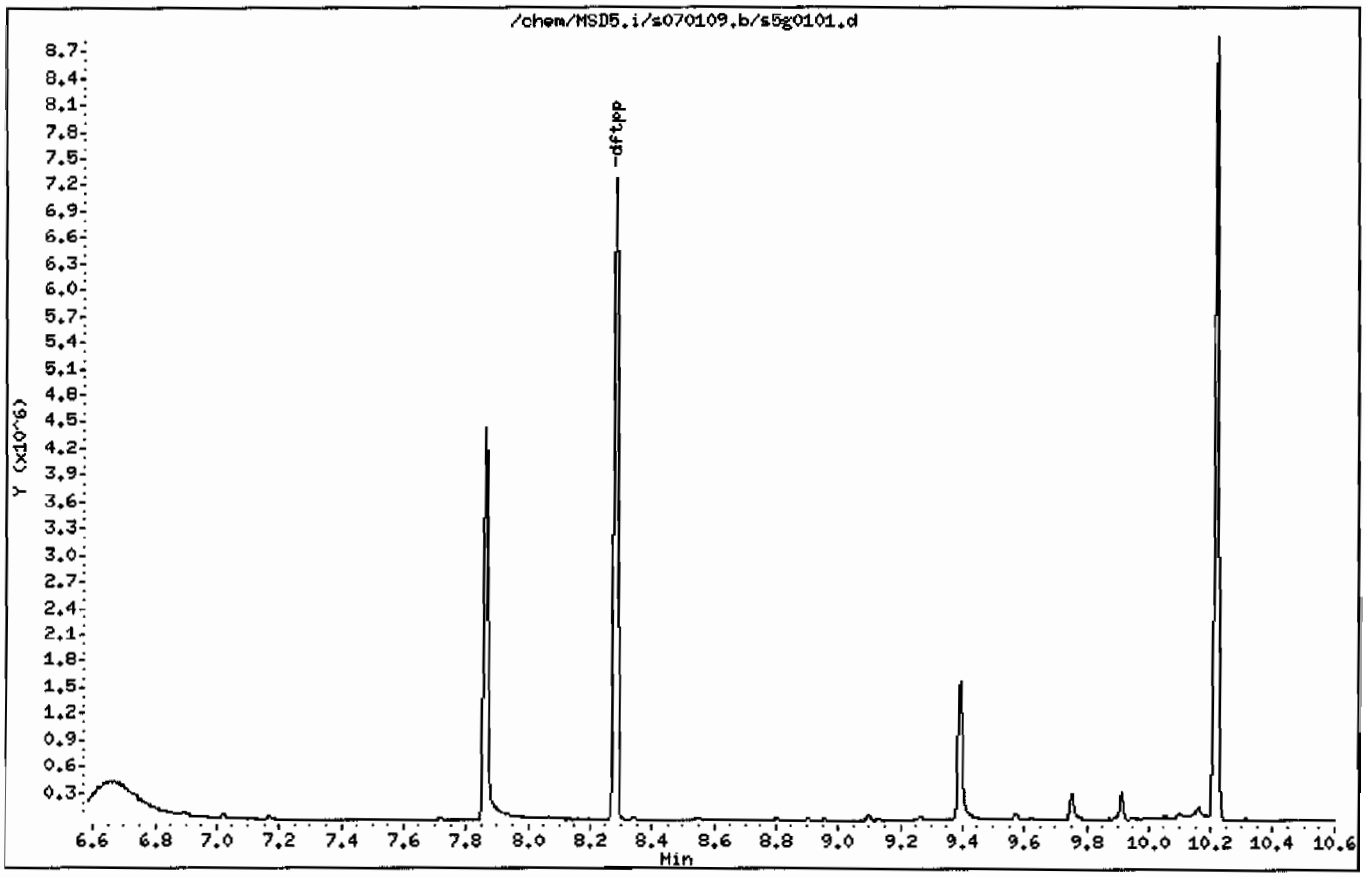

Data File: /ohem/MSD5.i/s070109.b/s5g0101.d

Date : 01-JUL-2009 07:18

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

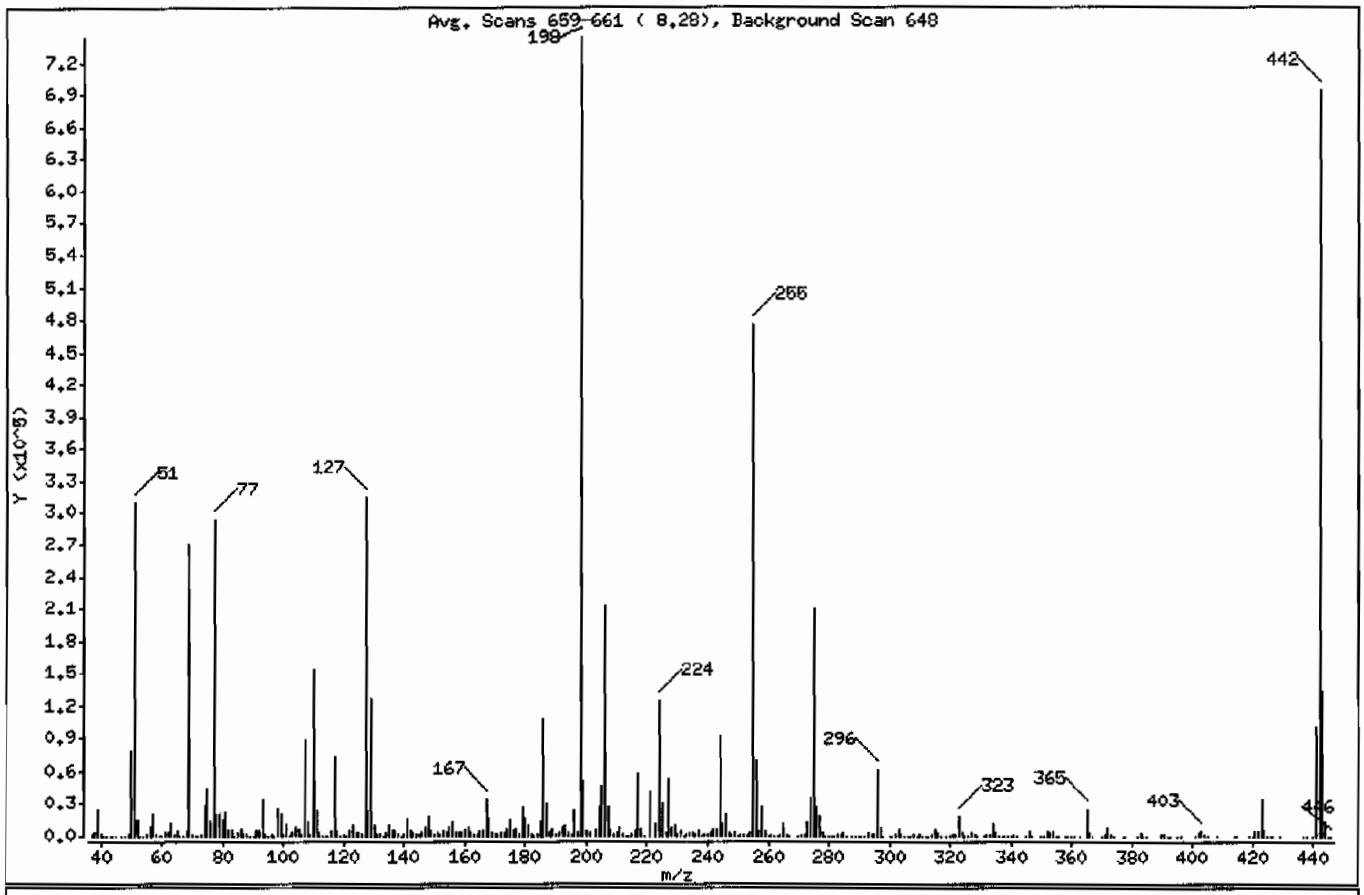

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	41.66
68	Less than 2.00% of mass 69	0.64 (1.77)
69	Mass 69 relative abundance	36.38
70	Less than 2.00% of mass 69	0.16 (0.45)
127	40.00 - 60.00% of mass 198	42.29
197	Less than 1.00% of mass 198	0.44
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 30.00% of mass 198	28.17
365	Greater than 1.00% of mass 198	3.49
441	Present, but less than mass 443	13.58
442	Greater than 40.00% of mass 198	93.37
443	17.00 - 23.00% of mass 442	17.91 (19.18)

Data File: /chem/MSD5.i/s070109.b/s5g0101.d

Date : 01-JUL-2009 07:18

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVHF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0101.d

Spectrum: Avg. Scans 659-661 (8.28), Background Scan 648

Location of Maximum: 198.00

Number of points: 358

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1152	128.00	24152	219.00	760	315.00	7000
38.00	3672	129.00	126512	221.00	41360	316.00	3851
39.00	23832	130.00	10107	223.00	12391	317.00	584
40.00	1491	131.00	1847	224.00	124376	319.00	100
41.00	412	132.00	1177	225.00	30320	320.00	211
42.00	70	133.00	288	226.00	3586	321.00	1759
43.00	99	134.00	3353	227.00	53160	322.00	966
44.00	170	135.00	9997	228.00	7846	323.00	18352
45.00	365	136.00	4413	229.00	11021	324.00	3313
47.00	54	137.00	5320	230.00	1757	325.00	253
48.00	85	138.00	1330	231.00	4759	326.00	369
49.00	2226	139.00	672	232.00	802	327.00	3584
50.00	78360	140.00	1983	233.00	1086	328.00	2007
51.00	309696	141.00	16416	234.00	3640	329.00	344
52.00	14963	142.00	5112	235.00	3452	331.00	93
53.00	811	143.00	3171	236.00	2371	332.00	1666
54.00	68	144.00	1337	237.00	4534	333.00	1938
55.00	1728	145.00	965	238.00	555	334.00	11874
56.00	8968	146.00	3386	239.00	1977	335.00	3036
57.00	21344	147.00	8501	240.00	1789	336.00	351
58.00	1004	148.00	19568	241.00	2811	337.00	47
59.00	132	149.00	4289	242.00	6369	338.00	96
60.00	54	150.00	1171	243.00	6575	339.00	315
61.00	3665	151.00	2863	244.00	91552	340.00	298
62.00	3516	152.00	876	245.00	12179	341.00	1904
63.00	12090	153.00	5078	246.00	19752	342.00	689
64.00	1452	154.00	4185	247.00	3897	345.00	122
65.00	5783	155.00	9146	248.00	881	346.00	4484
66.00	465	156.00	14058	249.00	3453	347.00	837
67.00	425	157.00	3058	250.00	747	350.00	202
68.00	4783	158.00	3320	251.00	1040	351.00	153
69.00	270464	159.00	2780	252.00	1115	352.00	5477
70.00	1224	160.00	6027	253.00	2064	353.00	3590
71.00	102	161.00	7802	254.00	2899	354.00	5633
72.00	62	162.00	2649	255.00	475008	355.00	782

Data File: /chem/MSD5.i/s070109.b/s5g0101.d

Date : 01-JUL-2009 07:18

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVHF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0101.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 648
Location of Maximum: 198.00
Number of points: 358

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	2074	163.00	905	256.00	69504	356.00	47
74.00	28760	164.00	949	257.00	5048	358.00	50
75.00	43696	165.00	5722	258.00	28056	359.00	384
76.00	13777	166.00	5225	259.00	4370	360.00	42
77.00	293440	167.00	34480	260.00	707	361.00	84
78.00	20352	168.00	16384	261.00	878	363.00	142
79.00	20336	169.00	3563	262.00	240	365.00	25952
80.00	14577	170.00	1377	263.00	298	366.00	3457
81.00	21776	171.00	1614	264.00	892	367.00	130
82.00	5239	172.00	3497	265.00	12605	370.00	498
83.00	4861	173.00	4121	266.00	964	371.00	1302
84.00	349	174.00	7644	267.00	86	372.00	9390
85.00	3848	175.00	14766	270.00	691	373.00	2456
86.00	6070	176.00	4291	271.00	880	374.00	440
87.00	2445	177.00	6627	272.00	1330	377.00	242
88.00	1117	178.00	2026	273.00	14176	378.00	51
89.00	451	179.00	27040	274.00	36544	382.00	69
90.00	104	180.00	17640	275.00	209408	383.00	2743
91.00	4835	181.00	9479	276.00	28104	384.00	808
92.00	5854	182.00	1678	277.00	18264	385.00	168
93.00	34632	183.00	826	278.00	2999	390.00	1232
94.00	2170	184.00	2207	279.00	732	391.00	962
95.00	93	185.00	14127	280.00	60	392.00	690
96.00	1899	186.00	107208	281.00	78	393.00	44
97.00	483	187.00	30176	282.00	657	395.00	60
98.00	26048	188.00	3011	283.00	2059	396.00	149
99.00	20384	189.00	6769	284.00	1472	401.00	674
100.00	1439	190.00	1522	285.00	3533	402.00	3290
101.00	11467	191.00	3378	286.00	512	403.00	5089
102.00	635	192.00	8737	288.00	474	404.00	1502
103.00	4019	193.00	10404	289.00	701	405.00	210
104.00	8699	194.00	2669	290.00	707	408.00	54
105.00	7276	195.00	1376	291.00	527	414.00	71
106.00	2456	196.00	23480	292.00	672	415.00	346
107.00	89584	197.00	3286	293.00	3876	419.00	47

Data File: /chem/MSD5.i/s070109.b/s5g0101.d

Date : 01-JUL-2009 07:18

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0101.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 648
Location of Maximum: 198.00
Number of points: 358

m/z	Y	m/z	Y	m/z	Y	m/z	Y
108.00	14340	198.00	743360	294.00	1366	420.00	74
109.00	2232	199.00	50816	295.00	1263	421.00	4472
110.00	154432	200.00	4304	296.00	62032	422.00	4641
111.00	23800	201.00	3785	297.00	8539	423.00	34120
112.00	3303	203.00	6677	298.00	630	424.00	6499
113.00	800	204.00	27720	300.00	66	425.00	804
114.00	340	205.00	46784	301.00	630	426.00	53
115.00	230	206.00	211328	302.00	1049	427.00	47
116.00	5491	207.00	27088	303.00	7216	429.00	98
117.00	73952	208.00	7265	304.00	2020	437.00	292
118.00	5363	209.00	2368	305.00	201	438.00	133
119.00	638	210.00	2686	306.00	59	440.00	144
120.00	1318	211.00	9248	307.00	107	441.00	100912
121.00	323	212.00	1430	308.00	952	442.00	694080
122.00	5603	213.00	426	309.00	570	443.00	133120
123.00	9744	214.00	219	310.00	950	444.00	12903
124.00	4015	215.00	2495	311.00	156	445.00	589
125.00	3817	216.00	4811	312.00	318	446.00	59
126.00	1570	217.00	57256	313.00	424		
127.00	314368	218.00	7187	314.00	2394		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			Matrix:	SOIL
Lab Sample ID:	1201871880				
Client Sample:	QC for batch 881441	Client:	LANL010	Project:	QC
Client ID:	MB for batch 881441	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 08:22	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0104.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	66.7	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	110	333
87-86-5	Pentachlorophenol	U	333	ug/kg	83.3	333
129-00-0	Pyrene	U	33.3	ug/kg	10.0	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	100	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	333	ug/kg	66.7	333
99-09-2	3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			Matrix:	SOIL
Lab Sample ID:	1201871880				
Client Sample:	QC for batch 881441	Client:	LANL010	Project:	QC
Client ID:	MB for batch 881441	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 08:22	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0104.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	66.7	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	66.7	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.12	606	ug/kg		J
	Unknown Aldol Condensate	3.05	251	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0104.d
Lab Smp Id: 1201871880 Client Smp ID: SBLK01
Inj Date : 01-JUL-2009 08:22
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201871880|881442|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.027	4.032	(1.000)	524476	40.0000	
* 29 Naphthalene-d8	136	4.898	4.903	(1.000)	1819994	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.165	(1.000)	1170283	40.0000	
* 67 Phenanthrene-d10	188	7.340	7.345	(1.000)	2260315	40.0000	
* 91 Chrysene-d12	240	9.762	9.771	(1.000)	2424155	40.0000	
* 98 Perylene-d12	264	11.529	11.534	(1.000)	2217194	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.208	(0.798)	894575	77.6824	2590
$ 5 Phenol-d5	99	3.738	3.743	(0.928)	1125255	74.1091	2470
$ 20 Nitrobenzene-d5	82	4.388	4.398	(0.896)	522934	38.7753	1290
$ 39 2-Fluorobiphenyl	172	5.640	5.645	(0.916)	1209561	39.9641	1330
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	386026	80.8437	2690
$ 81 p-Terphenyl-d14	244	8.726	8.727	(0.894)	1797479	48.4507	1620

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0104.d
Lab Smp Id: 1201871880 Client Smp ID: SBLK01
Inj Date : 01-JUL-2009 08:22
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201871880|881442|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.027	3373693	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.125	1534026	18.1880916	606	0		0	10
Unknown Aldol Condensate				CAS #:			
3.049	634899	7.52764783	251	0		0	10

Data File: /chem/MSD5.i/s070109.b/s5g0104.d
Date : 01-JUL-2009 08:22
Client ID: SBLK01
Sample Info: |120187188018814421|SVMF|1|SBLK01
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

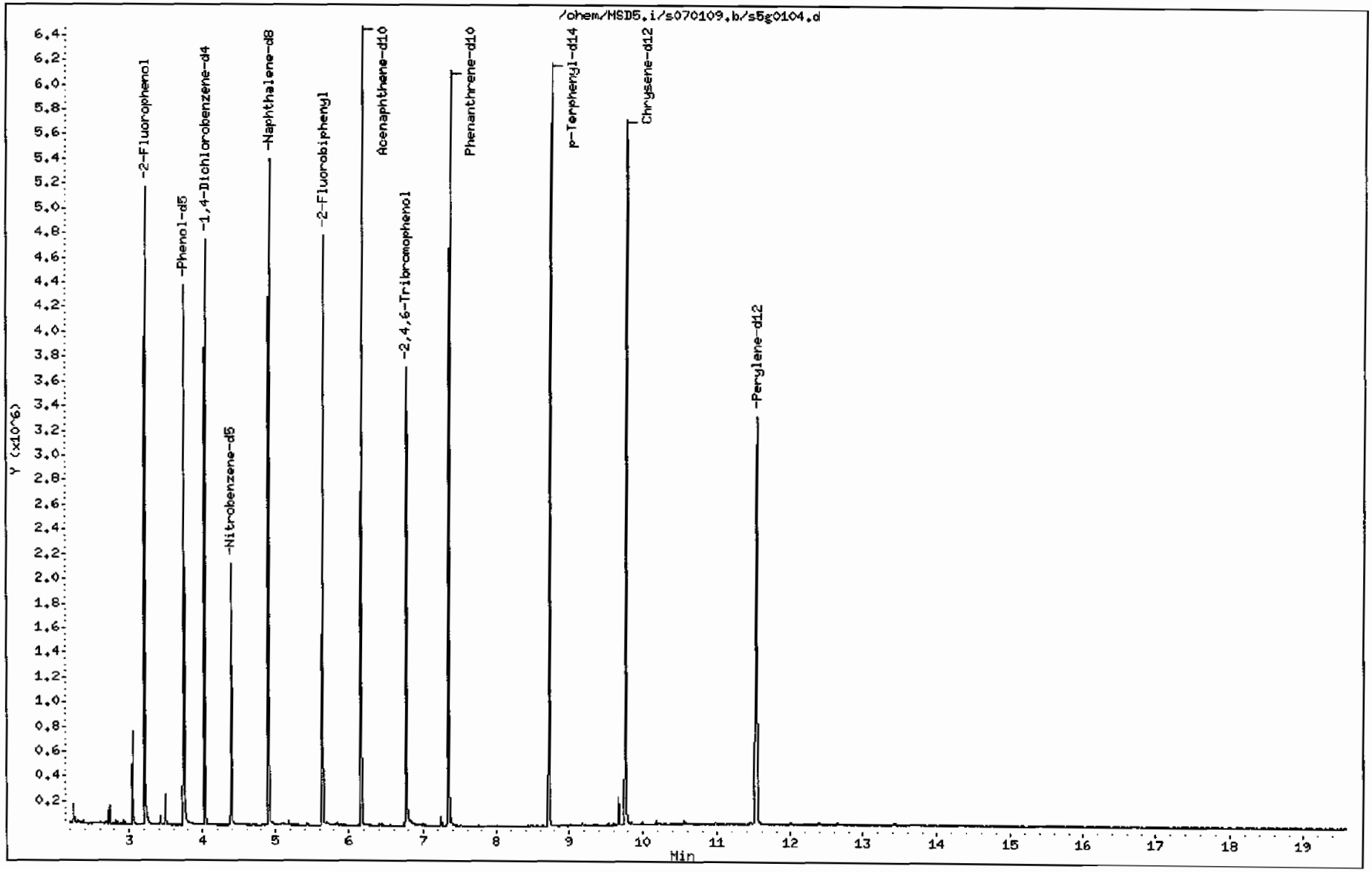

Data File: /chem/MSD5.i/s070109.b/s5g0104.d

Date : 01-JUL-2009 08:22

Client ID: SBLK01 | Instrument: MSD5.i

Sample Info: 1120187188018814421 1|SVMF1 1|SBLK01

Volume Injected (uL): 0.5 | Operator: RMB

Column phase: J&W DB-5MS | Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	42	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	25	C5H12O2	104
Propanoic acid, 2-methyl-, propyl ester	644-49-5	NIST05.L	13119	17	C7H14O2	130

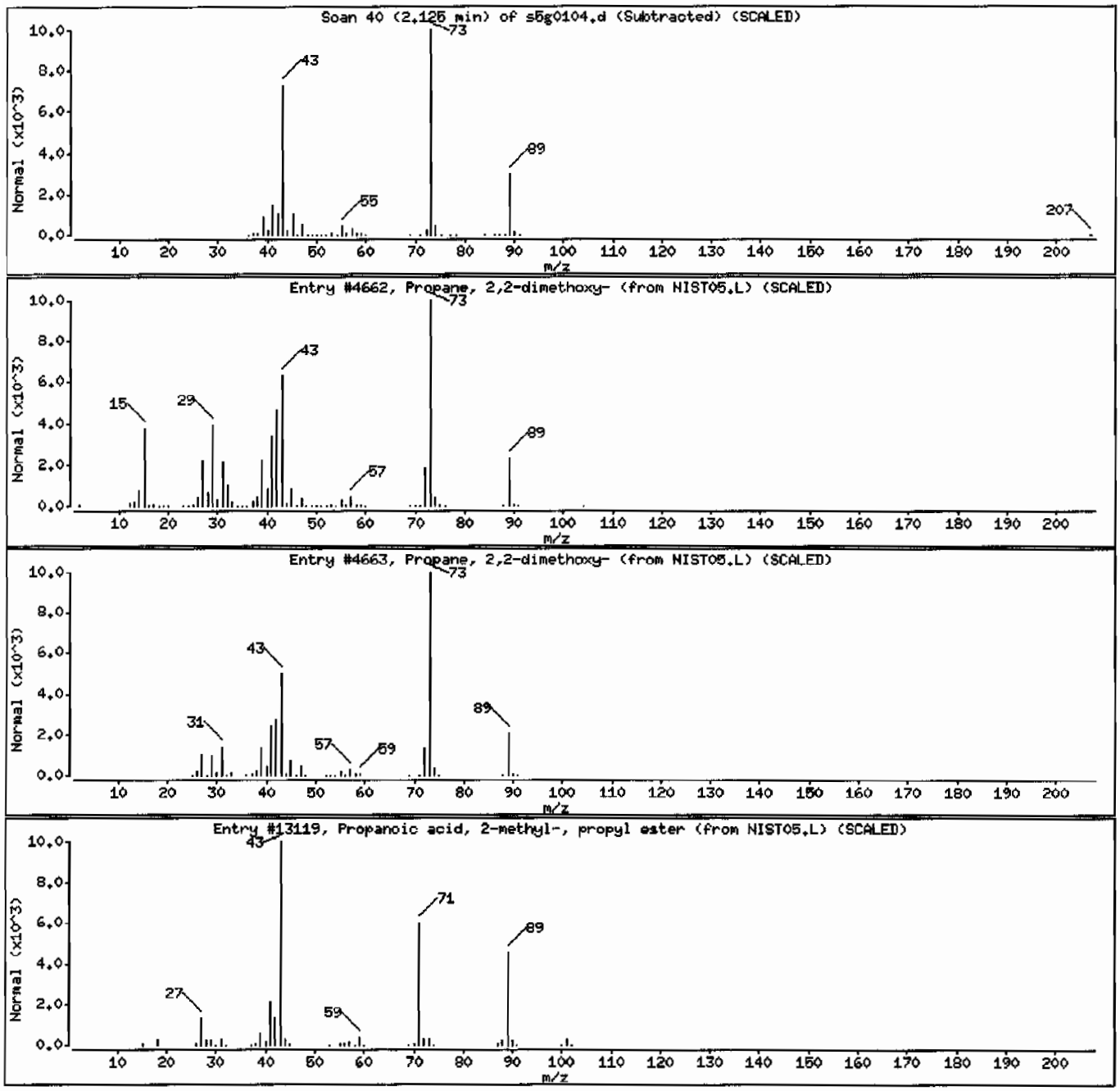

Data File: /chem/MSD5.i/s070109.b/s5g0104.d

Date : 01-JUL-2009 08:22

Client ID: SBLK01

Instrument: MSD5.i

Sample Info: |120187188018814421|SVMF|1|SBLK01

Volume Injected (uL): 0.5

Operator: RHB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, cyano-, 1,1-dimethylethyl e	1116-98-9	NIST05.L	18291	25	C7H11NO2	141

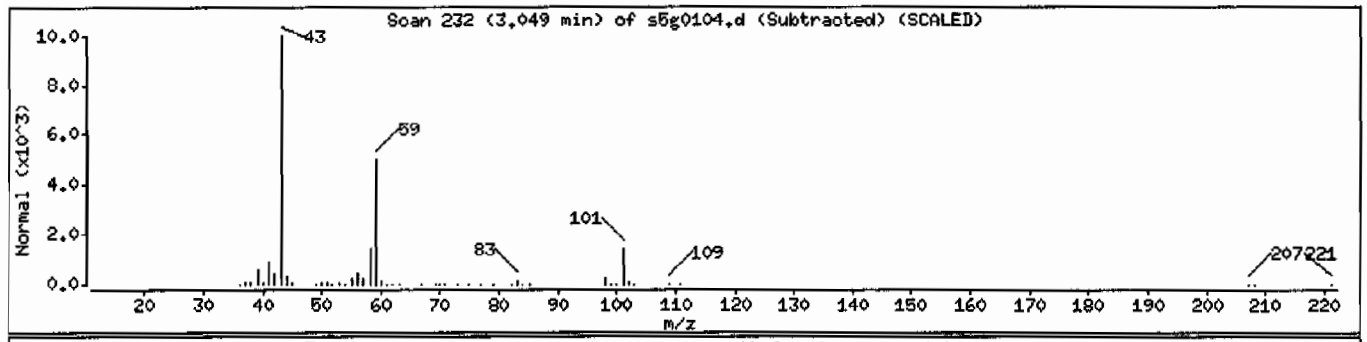

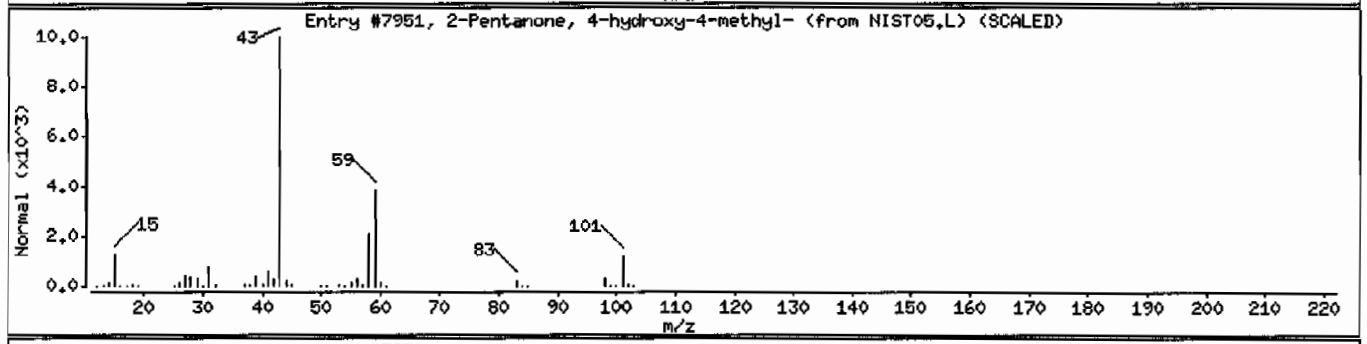

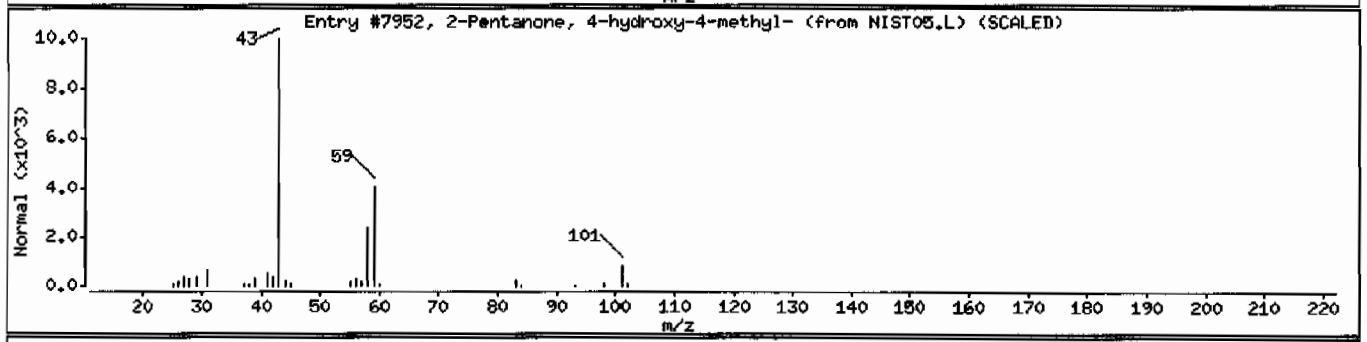

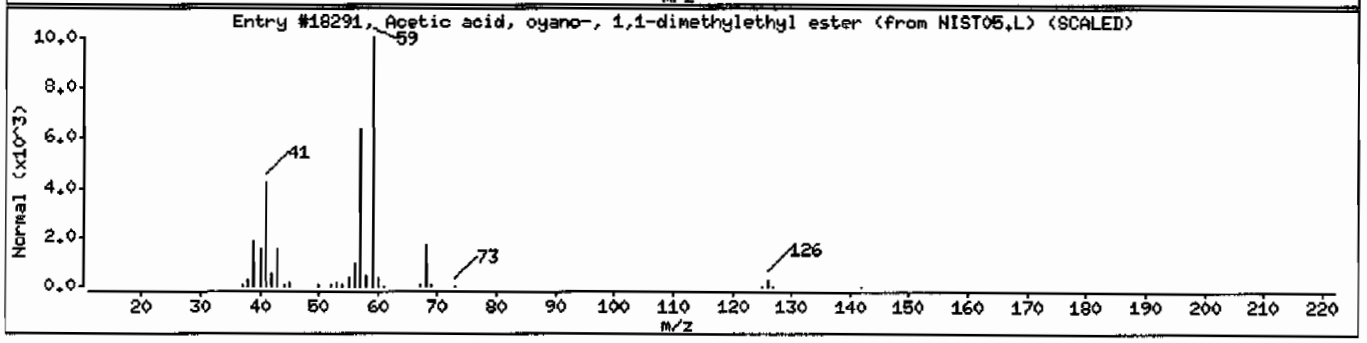

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			Matrix:	SOIL
Lab Sample ID:	1201871881				
Client Sample:	QC for batch 881441	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 881441	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 08:50	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0105.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1280	ug/kg	66.7	333
108-95-2	Phenol		1280	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1300	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1190	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1440	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1530	ug/kg	66.7	333
83-32-9	Acenaphthene		1380	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene		1570	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1320	ug/kg	110	333
87-86-5	Pentachlorophenol		1670	ug/kg	83.3	333
129-00-0	Pyrene		1500	ug/kg	10.0	33.3
110-86-1	Pyridine		1290	ug/kg	66.7	333
62-53-3	Aniline		1530	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether		1220	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1200	ug/kg	66.7	333
100-51-6	Benzyl alcohol		959	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1240	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1270	ug/kg	66.7	333
95-48-7	o-Cresol		1370	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1440	ug/kg	100	333
67-72-1	Hexachloroethane		1220	ug/kg	66.7	333
98-95-3	Nitrobenzene		1330	ug/kg	66.7	333
78-59-1	Isophorone		1370	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1350	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol		1370	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane		1310	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1420	ug/kg	66.7	333
65-85-0	Benzoic acid		1250	ug/kg	167	667
91-20-3	Naphthalene		1190	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1380	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1330	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1440	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1810	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1360	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1650	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1400	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*		1550	ug/kg	66.7	333
99-09-2	3-Nitroaniline		2020	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			Matrix:	SOIL
Lab Sample ID:	1201871881				
Client Sample:	QC for batch 881441	Client:	LANL010	Project:	QC
Client ID:	LCS for batch 881441	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 08:50	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0105.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1480	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1500	ug/kg	33.3	333
208-96-8	Acenaphthylene		1460	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		1730	ug/kg	127	667
132-64-9	Dibenzofuran		1480	ug/kg	66.7	333
84-66-2	Diethylphthalate		1540	ug/kg	66.7	333
86-73-7	Fluorene		1420	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1470	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol		1780	ug/kg	66.7	333
100-01-6	4-Nitroaniline	E	2840	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1720	ug/kg	66.7	333
122-66-7	Azobenzene		1520	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1450	ug/kg	66.7	333
118-74-1	Hexachlorobenzene		1520	ug/kg	66.7	333
85-01-8	Phenanthrene		1470	ug/kg	10.0	33.3
120-12-7	Anthracene		1520	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1570	ug/kg	66.7	333
206-44-0	Fluoranthene		1610	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1590	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1580	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1340	ug/kg	100	333
218-01-9	Chrysene		1580	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1730	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1570	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1660	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1620	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1680	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1650	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1690	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1590	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1300	ug/kg	66.7	333

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0105.d
Lab Smp Id: 1201871881 Client Smp ID: SBLK01LCS
Inj Date : 01-JUL-2009 08:50
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201871881|881442|1|SVMF|1|SBLK01LCS
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.027	4.032	(1.000)	500896	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1862727	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1149128	40.0000	
* 67 Phenanthrene-d10	188	7.344	7.345	(1.000)	2259675	40.0000	
* 91 Chrysene-d12	240	9.771	9.771	(1.000)	2429154	40.0000	
* 98 Perylene-d12	264	11.534	11.534	(1.000)	2279799	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.208	(0.798)	829921	75.4606	2520
$ 5 Phenol-d5	99	3.743	3.743	(0.929)	1043430	71.9551	2400
$ 20 Nitrobenzene-d5	82	4.393	4.398	(0.896)	555877	40.2725	1340
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	1185021	39.8741	1330
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	425299	90.7082	3020
$ 81 p-Terphenyl-d14	244	8.726	8.727	(0.893)	1881612	50.6141	1690

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.752	3.752	(0.932)	550814	38.2702	1280(Q)
8 2-Chlorophenol	128	3.897	3.897	(0.968)	469136	38.9962	1300
11 1,4-Dichlorobenzene	146	4.041	4.041	(1.004)	510877	35.6677	1190
17 N-Nitrosodipropylamine	70	4.263	4.268	(1.059)	333686	43.0509	1440(Q)
28 1,2,4-Trichlorobenzene	180	4.850	4.850	(0.989)	502291	38.9496	1300
33 4-Chloro-3-methylphenol	107	5.255	5.245	(1.072)	456843	46.0157	1530
47 Acenaphthene	154	6.189	6.189	(1.004)	969654	41.3006	1380
50 2,4-Dinitrotoluene	165	6.275	6.276	(1.018)	428789	47.1547	1570
52 4-Nitrophenol	139	6.213	6.203	(1.008)	161526	39.6418	1320
65 Pentachlorophenol	266	7.176	7.171	(0.977)	281931	50.1301	1670
79 Pyrene	202	8.630	8.630	(0.883)	2385749	45.0201	1500
2 Pyridine	79	2.558	2.539	(0.635)	334574	38.6416	1290
4 Aniline	66	3.810	3.815	(0.946)	288021	45.7997	1530
7 bis(2-Chloroethyl) ether	63	3.824	3.829	(0.950)	406081	36.6079	1220
9 1,3-Dichlorobenzene	146	3.998	3.998	(0.993)	516816	35.8971	1200
12 Benzyl alcohol	108	4.099	4.099	(1.018)	218419	28.7687	959
13 1,2-Dichlorobenzene	146	4.142	4.147	(1.029)	496453	37.3057	1240
14 bis(2-Chloroisopropyl)ether	45	4.171	4.171	(1.036)	984998	38.1528	1270
15 o-Cresol	107	4.152	4.147	(1.031)	369016	41.2357	1370
18 m,p-Cresols	107	4.248	4.248	(1.055)	517861	43.2723	1440
19 Hexachloroethane	117	4.373	4.378	(1.086)	194723	36.6565	1220
21 Nitrobenzene	77	4.407	4.412	(0.899)	512306	39.7970	1330
22 Isophorone	82	4.561	4.561	(0.930)	980494	41.1519	1370
23 2-Nitrophenol	139	4.624	4.624	(0.943)	245570	40.6359	1350
24 2,4-Dimethylphenol	122	4.614	4.614	(0.941)	427580	40.9932	1370
25 bis(2-Chloroethoxy)methane	93	4.677	4.682	(0.954)	533878	39.2158	1310
26 2,4-Dichlorophenol	162	4.788	4.788	(0.976)	442573	42.6900	1420
27 Benzoic acid	105	4.672	4.677	(0.953)	169304	37.5572	1250(Q)
30 Naphthalene	128	4.918	4.918	(1.003)	1291466	35.5884	1190
31 4-Chloroaniline	127	4.932	4.932	(1.006)	516770	41.4653	1380
32 Hexachlorobutadiene	225	4.980	4.980	(1.016)	376819	40.0296	1330
34 2-Methylnaphthalene	142	5.399	5.399	(1.101)	945750	43.2643	1440
36 Hexachlorocyclopentadiene	237	5.500	5.505	(0.892)	288580	54.2110	1810
37 2,4,6-Trichlorophenol	196	5.592	5.587	(0.907)	363560	40.8855	1360
38 2,4,5-Trichlorophenol	196	5.625	5.616	(0.912)	471495	49.4079	1650
40 2-Chloronaphthalene	162	5.755	5.755	(0.934)	1027396	42.0144	1400
42 o-Nitroaniline	65	5.808	5.813	(0.942)	362383	46.6070	1550
41 m-Nitroaniline	138	6.112	6.112	(0.991)	277084	60.5952	2020(R)
43 Dimethylphthalate	163	5.914	5.919	(0.959)	1297863	44.4621	1480
44 2,6-Dinitrotoluene	165	5.972	5.977	(0.969)	312402	44.9499	1500
45 Acenaphthylene	152	6.064	6.064	(0.984)	1581040	43.8824	1460
48 2,4-Dinitrophenol	184	6.184	6.184	(1.003)	143055	51.8719	1730
49 Dibenzofuran	168	6.314	6.314	(1.024)	1478353	44.4582	1480
51 Diethylphthalate	149	6.430	6.430	(1.043)	1322031	46.2392	1540
53 Fluorene	166	6.579	6.579	(1.067)	1219269	42.6676	1420
54 4-Chlorophenylphenylether	204	6.550	6.550	(1.062)	734622	44.0899	1470
55 2-Methyl-4,6-dinitrophenol	198	6.593	6.593	(0.898)	265359	53.4487	1780

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.579	6.579	(1.067)	256533	85.3084	2840(AR)
133 Diphenylamine	169	6.641	6.642	(0.904)	1160234	51.5788	1720
58 1,2-Diphenylhydrazine	77	6.675	6.675	(0.909)	1298844	45.4794	1520
61 4-Bromophenylphenylether	248	6.945	6.945	(0.946)	468781	43.4029	1450
63 Hexachlorobenzene	284	7.017	7.017	(0.955)	519886	45.7051	1520
68 Phenanthrene	178	7.364	7.364	(1.003)	1863132	44.0132	1470
69 Anthracene	178	7.407	7.407	(1.009)	1903240	45.5525	1520
72 Di-n-butylphthalate	149	7.759	7.759	(1.056)	2264733	47.0573	1570
76 Fluoranthene	202	8.413	8.414	(1.146)	2333211	48.3849	1610
85 Butylbenzylphthalate	149	9.150	9.155	(0.936)	1084861	47.7637	1590
89 Benzo(a)anthracene	228	9.757	9.757	(0.999)	2478064	47.5435	1580
90 3,3'-Dichlorobenzidine	252	9.699	9.689	(0.993)	699060	40.1403	1340
92 Chrysene	228	9.795	9.796	(1.002)	2267100	47.4824	1580
93 bis(2-Ethylhexyl)phthalate	149	9.675	9.675	(0.990)	1613845	51.7774	1720
94 Di-n-octylphthalate	149	10.354	10.354	(0.898)	2451648	47.0445	1570
95 Benzo(b)fluoranthene	252	10.985	10.985	(0.952)	2500056	49.6541	1660
96 Benzo(k)fluoranthene	252	11.023	11.023	(0.956)	2396380	48.4537	1620
97 Benzo(a)pyrene	252	11.452	11.452	(0.993)	2246481	50.4028	1680
99 Indeno(1,2,3-cd)pyrene	276	13.412	13.407	(1.163)	2214114	49.4353	1650
100 Dibenzo(a,h)anthracene	278	13.426	13.421	(1.164)	1854445	50.7943	1690
101 Benzo(ghi)perylene	276	13.985	13.980	(1.212)	1821631	47.7076	1590
1 N-Methyl-N-nitrosomethylamine	74	2.515	2.505	(0.624)	224050	38.2892	1280

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD5.i/s070109.b/s5g0105.d

Date : 01-JUL-2009 08:50

Client ID: SBLK01LCS

Sample Info: |120187188118814421|SVMF11|SBLK01LCS

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

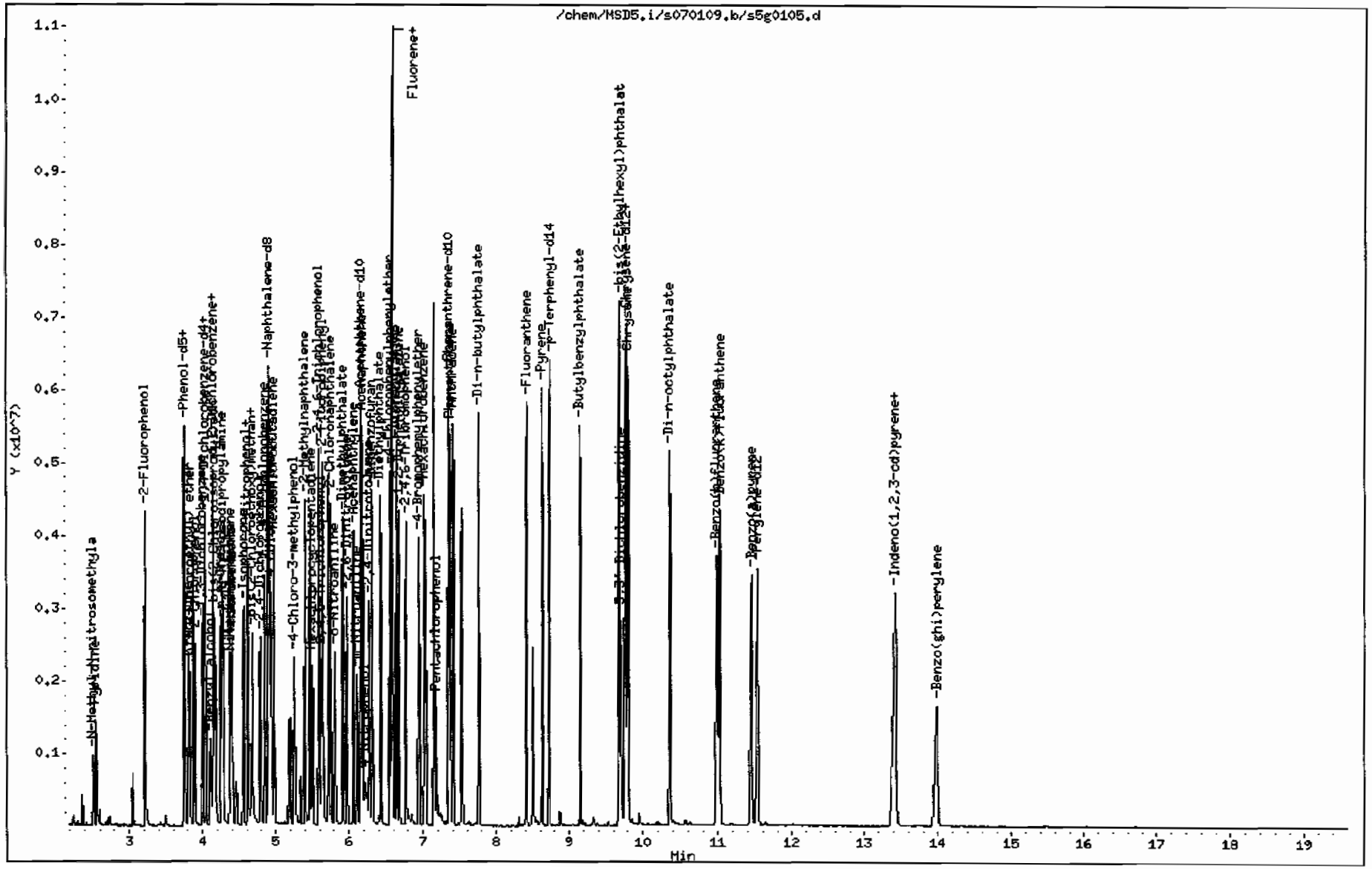

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	1201871882	Date Received:	06/27/2009 09:05	%Moisture:	20.8
Client Sample:	QC for batch 881441	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-6519MS	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 09:45	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0107.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1320	ug/kg	84.1	420
108-95-2	Phenol		1400	ug/kg	84.1	420
95-57-8	2-Chlorophenol		1410	ug/kg	84.1	420
106-46-7	1,4-Dichlorobenzene		1170	ug/kg	84.1	420
621-64-7	N-Nitrosodipropylamine		1510	ug/kg	84.1	420
59-50-7	4-Chloro-3-methylphenol		1690	ug/kg	84.1	420
83-32-9	Acenaphthene		1450	ug/kg	13.9	42.0
121-14-2	2,4-Dinitrotoluene		1550	ug/kg	42.0	420
100-02-7	4-Nitrophenol		1540	ug/kg	139	420
87-86-5	Pentachlorophenol		1860	ug/kg	105	420
129-00-0	Pyrene		1840	ug/kg	12.6	42.0
110-86-1	Pyridine		1320	ug/kg	84.1	420
62-53-3	Aniline		1410	ug/kg	126	420
111-44-4	bis(2-Chloroethyl) ether		1260	ug/kg	84.1	420
541-73-1	1,3-Dichlorobenzene		1170	ug/kg	84.1	420
100-51-6	Benzyl alcohol		1010	ug/kg	126	420
95-50-1	1,2-Dichlorobenzene		1240	ug/kg	84.1	420
108-60-1	bis(2-Chloroisopropyl)ether		1320	ug/kg	84.1	420
95-48-7	o-Cresol		1620	ug/kg	84.1	420
65794-96-9	m,p-Cresols		1570	ug/kg	126	420
67-72-1	Hexachloroethane		1220	ug/kg	84.1	420
98-95-3	Nitrobenzene		1380	ug/kg	84.1	420
78-59-1	Isophorone		1490	ug/kg	84.1	420
88-75-5	2-Nitrophenol		1430	ug/kg	84.1	420
105-67-9	2,4-Dimethylphenol		1560	ug/kg	147	420
111-91-1	bis(2-Chloroethoxy)methane		1390	ug/kg	84.1	420
120-83-2	2,4-Dichlorophenol		1570	ug/kg	84.1	420
65-85-0	Benzoic acid		2200	ug/kg	210	841
91-20-3	Naphthalene		1250	ug/kg	12.6	42.0
106-47-8	4-Chloroaniline		1310	ug/kg	84.1	420
87-68-3	Hexachlorobutadiene		1350	ug/kg	84.1	420
91-57-6	2-Methylnaphthalene		1550	ug/kg	8.41	42.0
77-47-4	Hexachlorocyclopentadiene		1530	ug/kg	84.1	420
88-06-2	2,4,6-Trichlorophenol		1600	ug/kg	84.1	420
95-95-4	2,4,5-Trichlorophenol		1790	ug/kg	84.1	420
91-58-7	2-Chloronaphthalene		1510	ug/kg	13.9	42.0
88-74-4	2-Nitroaniline		1610	ug/kg	84.1	420
	o-Nitroaniline					
99-09-2	3-Nitroaniline		1930	ug/kg	84.1	420

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	1201871882	Date Received:	06/27/2009 09:05	%Moisture:	20.8
Client Sample:	QC for batch 881441	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-6519MS	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 09:45	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0107.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1500	ug/kg	84.1	420
606-20-2	2,6-Dinitrotoluene		1530	ug/kg	42.0	420
208-96-8	Acenaphthylene		1560	ug/kg	12.6	42.0
51-28-5	2,4-Dinitrophenol		1610	ug/kg	160	841
132-64-9	Dibenzofuran		1590	ug/kg	84.1	420
84-66-2	Diethylphthalate		1590	ug/kg	84.1	420
86-73-7	Fluorene		1500	ug/kg	12.6	42.0
7005-72-3	4-Chlorophenylphenylether		1550	ug/kg	84.1	420
534-52-1	2-Methyl-4,6-dinitrophenol		1580	ug/kg	84.1	420
100-01-6	4-Nitroaniline		2450	ug/kg	126	420
	p-Nitroaniline					
122-39-4	Diphenylamine		1800	ug/kg	84.1	420
122-66-7	Azobenzene		1630	ug/kg	84.1	420
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1520	ug/kg	84.1	420
118-74-1	Hexachlorobenzene		1550	ug/kg	84.1	420
85-01-8	Phenanthrene		1530	ug/kg	12.6	42.0
120-12-7	Anthracene		1580	ug/kg	8.41	42.0
84-74-2	Di-n-butylphthalate		1600	ug/kg	84.1	420
206-44-0	Fluoranthene		1540	ug/kg	12.6	42.0
85-68-7	Butylbenzylphthalate		1810	ug/kg	84.1	420
56-55-3	Benzo(a)anthracene		1560	ug/kg	12.6	42.0
91-94-1	3,3'-Dichlorobenzidine		550	ug/kg	126	420
218-01-9	Chrysene		1630	ug/kg	12.6	42.0
117-81-7	bis(2-Ethylhexyl)phthalate		1900	ug/kg	84.1	420
117-84-0	Di-n-octylphthalate		2350	ug/kg	84.1	420
205-99-2	Benzo(b)fluoranthene		1730	ug/kg	12.6	42.0
207-08-9	Benzo(k)fluoranthene		1860	ug/kg	12.6	42.0
50-32-8	Benzo(a)pyrene		1680	ug/kg	12.6	42.0
193-39-5	Indeno(1,2,3-cd)pyrene		1200	ug/kg	12.6	42.0
53-70-3	Dibenzo(a,h)anthracene		1280	ug/kg	12.6	42.0
191-24-2	Benzo(ghi)perylene		1100	ug/kg	12.6	42.0
120-82-1	1,2,4-Trichlorobenzene		1350	ug/kg	84.1	420

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0107.d
Lab Smp Id: 1201871882 Client Smp ID: CAMO-09-6519MS
Inj Date : 01-JUL-2009 09:45
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201871882|881442|1|SVMF|1|LANL07001MS
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 7 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	20.76000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.027	4.032	(1.000)	497533	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1883167	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1160205	40.0000	
* 67 Phenanthrene-d10	188	7.344	7.345	(1.000)	2254155	40.0000	
* 91 Chrysene-d12	240	9.771	9.771	(1.000)	1874060	40.0000	
* 98 Perylene-d12	264	11.529	11.534	(1.000)	1121707	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.208	(0.798)	674861	61.7766	2600
$ 5 Phenol-d5	99	3.743	3.743	(0.929)	873970	60.6765	2550
$ 20 Nitrobenzene-d5	82	4.393	4.398	(0.896)	449911	32.2416	1360
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	988906	32.9575	1380
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	352109	74.3811	3130
$ 81 p-Terphenyl-d14	244	8.726	8.727	(0.893)	1387474	48.3769	2030

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	CONCENTRATIONS FINAL (ug/Kg)
6 Phenol	94	3.752	3.752	(0.932)	474988	33.2250	1400(Q)
8 2-Chlorophenol	128	3.897	3.897	(0.968)	400500	33.5160	1410
11 1,4-Dichlorobenzene	146	4.041	4.041	(1.004)	394541	27.7318	1160
17 N-Nitrosodipropylamine	70	4.263	4.268	(1.059)	276494	35.9133	1510(Q)
28 1,2,4-Trichlorobenzene	180	4.850	4.850	(0.989)	419255	32.1578	1350
33 4-Chloro-3-methylphenol	107	5.250	5.245	(1.071)	403261	40.1777	1690
47 Acenaphthene	154	6.189	6.189	(1.004)	815023	34.3830	1440
50 2,4-Dinitrotoluene	165	6.275	6.276	(1.018)	338411	36.8603	1550
52 4-Nitrophenol	139	6.213	6.203	(1.008)	150844	36.6666	1540
65 Pentachlorophenol	266	7.171	7.171	(0.976)	243567	44.1368	1860
79 Pyrene	202	8.630	8.630	(0.883)	1792300	43.8394	1840
2 Pyridine	79	2.558	2.539	(0.635)	269288	31.3116	1320
4 Aniline	66	3.810	3.815	(0.946)	209307	33.5079	1410
7 bis(2-Chloroethyl) ether	63	3.824	3.829	(0.950)	330915	30.0334	1260
9 1,3-Dichlorobenzene	146	3.998	3.998	(0.993)	396587	27.7324	1160
12 Benzyl alcohol	108	4.099	4.099	(1.018)	181279	24.0382	1010
13 1,2-Dichlorobenzene	146	4.142	4.147	(1.029)	389780	29.4878	1240
14 bis(2-Chloroisopropyl)ether	45	4.171	4.171	(1.036)	802203	31.2825	1320
15 o-Cresol	107	4.152	4.147	(1.031)	342535	38.5353	1620
18 m,p-Cresols	107	4.248	4.248	(1.055)	442534	37.2280	1560
19 Hexachloroethane	117	4.373	4.378	(1.086)	153669	29.1236	1220
21 Nitrobenzene	77	4.407	4.412	(0.899)	428734	32.9435	1380
22 Isophorone	82	4.556	4.561	(0.929)	856461	35.5560	1490
23 2-Nitrophenol	139	4.624	4.624	(0.943)	208241	34.0848	1430
24 2,4-Dimethylphenol	122	4.614	4.614	(0.941)	390993	37.0786	1560
25 bis(2-Chloroethoxy)methane	93	4.677	4.682	(0.954)	456623	33.1770	1390
26 2,4-Dichlorophenol	162	4.787	4.788	(0.976)	391785	37.3809	1570
27 Benzoic acid	105	4.672	4.677	(0.953)	270358	52.2181	2200
30 Naphthalene	128	4.917	4.918	(1.003)	1091563	29.7533	1250
31 4-Chloroaniline	127	4.932	4.932	(1.006)	365831	31.2578	1310
32 Hexachlorobutadiene	225	4.980	4.980	(1.016)	306639	32.2207	1350
34 2-Methylnaphthalene	142	5.399	5.399	(1.101)	815614	36.9061	1550
36 Hexachlorocyclopentadiene	237	5.500	5.505	(0.892)	191074	36.4833	1530
37 2,4,6-Trichlorophenol	196	5.587	5.587	(0.906)	340783	37.9581	1600
38 2,4,5-Trichlorophenol	196	5.621	5.616	(0.912)	410512	42.6068	1790
40 2-Chloronaphthalene	162	5.755	5.755	(0.934)	887207	35.9351	1510
42 o-Nitroaniline	65	5.808	5.813	(0.942)	301325	38.3842	1610
41 m-Nitroaniline	138	6.107	6.112	(0.991)	194907	45.8424	1930
43 Dimethylphthalate	163	5.914	5.919	(0.959)	1051874	35.6910	1500
44 2,6-Dinitrotoluene	165	5.972	5.977	(0.969)	254635	36.2883	1520
45 Acenaphthylene	152	6.059	6.064	(0.983)	1349079	37.0868	1560
48 2,4-Dinitrophenol	184	6.184	6.184	(1.003)	94376	38.2774	1610(Q)
49 Dibenzofuran	168	6.314	6.314	(1.024)	1270322	37.8374	1590
51 Diethylphthalate	149	6.429	6.430	(1.043)	1093330	37.8751	1590
53 Fluorene	166	6.579	6.579	(1.067)	1029685	35.6892	1500
54 4-Chlorophenylphenylether	204	6.550	6.550	(1.062)	620140	36.8636	1550
55 2-Methyl-4,6-dinitrophenol	198	6.593	6.593	(0.898)	175184	37.5660	1580

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.574	6.579	(1.066)	177164	58.3522	2450
133 Diphenylamine	169	6.641	6.642	(0.904)	961257	42.8378	1800
58 1,2-Diphenylhydrazine	77	6.675	6.675	(0.909)	1105041	38.7881	1630
61 4-Bromophenylphenylether	248	6.945	6.945	(0.946)	389533	36.1539	1520
63 Hexachlorobenzene	284	7.017	7.017	(0.955)	417318	36.7777	1550
68 Phenanthrene	178	7.364	7.364	(1.003)	1540170	36.4729	1530
69 Anthracene	178	7.407	7.407	(1.009)	1566027	37.5734	1580
72 Di-n-butylphthalate	149	7.759	7.759	(1.056)	1830954	38.1373	1600
76 Fluoranthene	202	8.413	8.414	(1.146)	1761389	36.6162	1540
85 Butylbenzylphthalate	149	9.155	9.155	(0.937)	756189	43.1544	1810
89 Benzo(a)anthracene	228	9.757	9.757	(0.999)	1493181	37.1332	1560
90 3,3'-Dichlorobenzidine	252	9.699	9.689	(0.993)	175819	13.0859	550(R)
92 Chrysene	228	9.795	9.796	(1.002)	1429762	38.8148	1630
93 bis(2-Ethylhexyl)phthalate	149	9.675	9.675	(0.990)	1088160	45.2525	1900
94 Di-n-octylphthalate	149	10.354	10.354	(0.898)	1435443	55.9827	2350
95 Benzo(b)fluoranthene	252	10.985	10.985	(0.953)	1019526	41.1548	1730
96 Benzo(k)fluoranthene	252	11.018	11.023	(0.956)	1075909	44.2144	1860
97 Benzo(a)pyrene	252	11.447	11.452	(0.993)	874359	39.8711	1680
99 Indeno(1,2,3-cd)pyrene	276	13.392	13.407	(1.162)	630345	28.6044	1200
100 Dibenzo(a,h)anthracene	278	13.407	13.421	(1.163)	548316	30.5245	1280
101 Benzo(ghi)perylene	276	13.965	13.980	(1.211)	489684	26.0651	1100
1 N-Methyl-N-nitrosomethylamine	74	2.515	2.505	(0.624)	182028	31.3181	1320

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD5.i/s070109.b/s5g0107.d

Date : 01-JUL-2009 09:45

Client ID: CAMO-09-6519MS

Sample Info: |120187188218814421|SVMF11|LANL07001MS

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

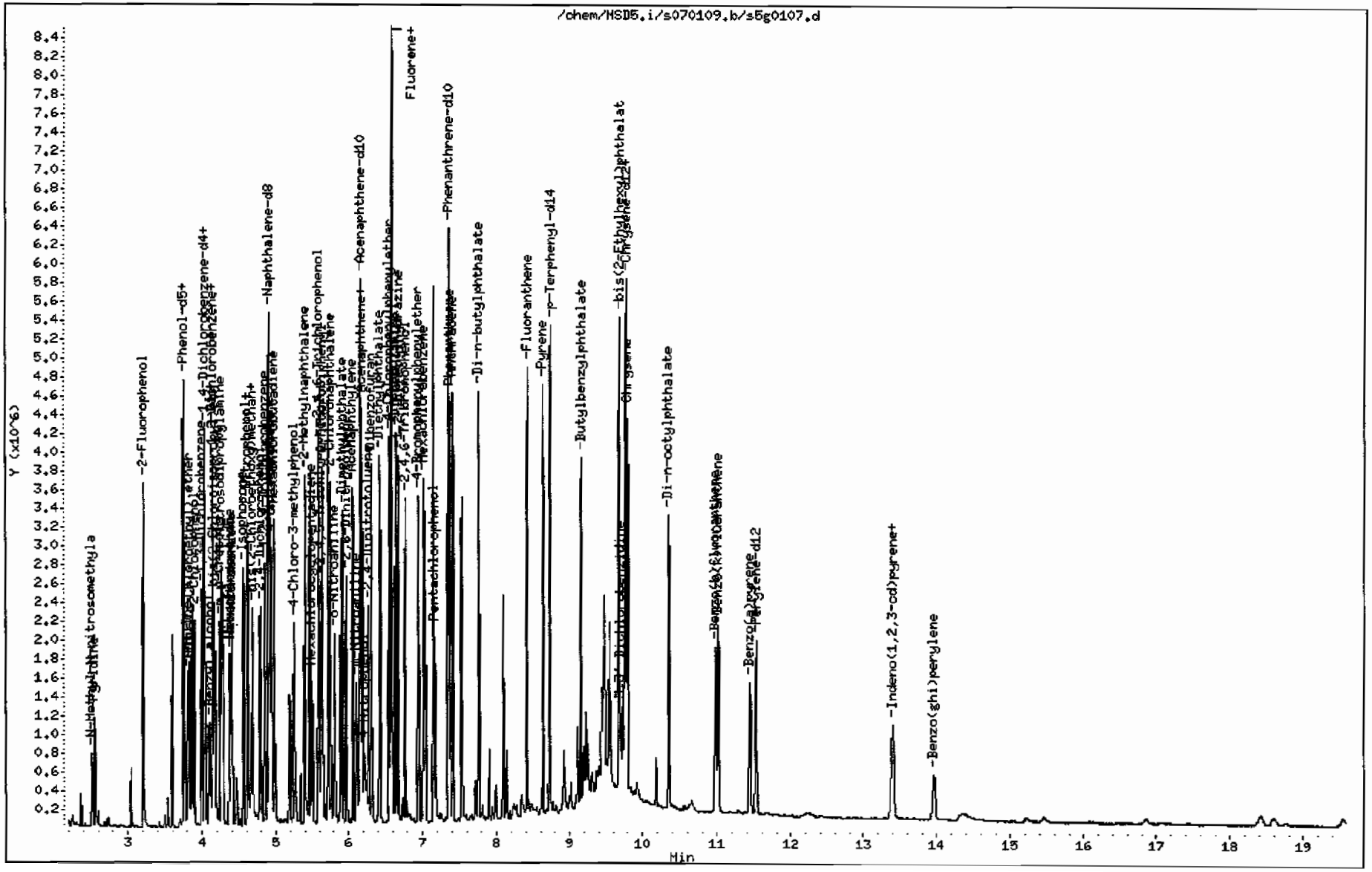

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	1201871883	Date Received:	06/27/2009 09:05	%Moisture:	20.8
Client Sample:	QC for batch 881441	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-6519MSD	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 10:13	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0108.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1470	ug/kg	84.1	421
108-95-2	Phenol		1480	ug/kg	84.1	421
95-57-8	2-Chlorophenol		1500	ug/kg	84.1	421
106-46-7	1,4-Dichlorobenzene		1250	ug/kg	84.1	421
621-64-7	N-Nitrosodipropylamine		1600	ug/kg	84.1	421
59-50-7	4-Chloro-3-methylphenol		1840	ug/kg	84.1	421
83-32-9	Acenaphthene		1480	ug/kg	13.9	42.1
121-14-2	2,4-Dinitrotoluene		1650	ug/kg	42.1	421
100-02-7	4-Nitrophenol		1750	ug/kg	139	421
87-86-5	Pentachlorophenol		2020	ug/kg	105	421
129-00-0	Pyrene		1740	ug/kg	12.6	42.1
110-86-1	Pyridine		1490	ug/kg	84.1	421
62-53-3	Aniline		1620	ug/kg	126	421
111-44-4	bis(2-Chloroethyl) ether		1370	ug/kg	84.1	421
541-73-1	1,3-Dichlorobenzene		1230	ug/kg	84.1	421
100-51-6	Benzyl alcohol		1160	ug/kg	126	421
95-50-1	1,2-Dichlorobenzene		1330	ug/kg	84.1	421
108-60-1	bis(2-Chloroisopropyl)ether		1370	ug/kg	84.1	421
95-48-7	o-Cresol		1630	ug/kg	84.1	421
65794-96-9	m,p-Cresols		1730	ug/kg	126	421
67-72-1	Hexachloroethane		1240	ug/kg	84.1	421
98-95-3	Nitrobenzene		1480	ug/kg	84.1	421
78-59-1	Isophorone		1550	ug/kg	84.1	421
88-75-5	2-Nitrophenol		1540	ug/kg	84.1	421
105-67-9	2,4-Dimethylphenol		1630	ug/kg	147	421
111-91-1	bis(2-Chloroethoxy)methane		1510	ug/kg	84.1	421
120-83-2	2,4-Dichlorophenol		1640	ug/kg	84.1	421
65-85-0	Benzoic acid		1800	ug/kg	210	841
91-20-3	Naphthalene		1300	ug/kg	12.6	42.1
106-47-8	4-Chloroaniline		1870	ug/kg	84.1	421
87-68-3	Hexachlorobutadiene		1390	ug/kg	84.1	421
91-57-6	2-Methylnaphthalene		1580	ug/kg	8.41	42.1
77-47-4	Hexachlorocyclopentadiene		1380	ug/kg	84.1	421
88-06-2	2,4,6-Trichlorophenol		1660	ug/kg	84.1	421
95-95-4	2,4,5-Trichlorophenol		1840	ug/kg	84.1	421
91-58-7	2-Chloronaphthalene		1530	ug/kg	13.9	42.1
88-74-4	2-Nitroaniline		1740	ug/kg	84.1	421
	o-Nitroaniline					
99-09-2	3-Nitroaniline		2210	ug/kg	84.1	421

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	Date Collected:	06/24/2009 12:00	Matrix:	R
Lab Sample ID:	1201871883	Date Received:	06/27/2009 09:05	%Moisture:	20.8
Client Sample:	QC for batch 881441	Client:	LANL010	Project:	QC
Client ID:	CAMO-09-6519MSD	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	881442	Inst:	MSD5.I	Dilution:	1
Run Date:	07/01/2009 10:13	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	06/30/2009 21:22	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0108.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1620	ug/kg	84.1	421
606-20-2	2,6-Dinitrotoluene		1620	ug/kg	42.1	421
208-96-8	Acenaphthylene		1600	ug/kg	12.6	42.1
51-28-5	2,4-Dinitrophenol		1570	ug/kg	160	841
132-64-9	Dibenzofuran		1640	ug/kg	84.1	421
84-66-2	Diethylphthalate		1660	ug/kg	84.1	421
86-73-7	Fluorene		1550	ug/kg	12.6	42.1
7005-72-3	4-Chlorophenylphenylether		1570	ug/kg	84.1	421
534-52-1	2-Methyl-4,6-dinitrophenol		1580	ug/kg	84.1	421
100-01-6	4-Nitroaniline		3040	ug/kg	126	421
	p-Nitroaniline					
122-39-4	Diphenylamine		1870	ug/kg	84.1	421
122-66-7	Azobenzene		1670	ug/kg	84.1	421
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1540	ug/kg	84.1	421
118-74-1	Hexachlorobenzene		1640	ug/kg	84.1	421
85-01-8	Phenanthrene		1580	ug/kg	12.6	42.1
120-12-7	Anthracene		1680	ug/kg	8.41	42.1
84-74-2	Di-n-butylphthalate		1630	ug/kg	84.1	421
206-44-0	Fluoranthene		1670	ug/kg	12.6	42.1
85-68-7	Butylbenzylphthalate		1730	ug/kg	84.1	421
56-55-3	Benzo(a)anthracene		1630	ug/kg	12.6	42.1
91-94-1	3,3'-Dichlorobenzidine		833	ug/kg	126	421
218-01-9	Chrysene		1660	ug/kg	12.6	42.1
117-81-7	bis(2-Ethylhexyl)phthalate		1800	ug/kg	84.1	421
117-84-0	Di-n-octylphthalate		2110	ug/kg	84.1	421
205-99-2	Benzo(b)fluoranthene		1790	ug/kg	12.6	42.1
207-08-9	Benzo(k)fluoranthene		1930	ug/kg	12.6	42.1
50-32-8	Benzo(a)pyrene		1780	ug/kg	12.6	42.1
193-39-5	Indeno(1,2,3-cd)pyrene		1380	ug/kg	12.6	42.1
53-70-3	Dibenzo(a,h)anthracene		1450	ug/kg	12.6	42.1
191-24-2	Benzo(ghi)perylene		1260	ug/kg	12.6	42.1
120-82-1	1,2,4-Trichlorobenzene		1420	ug/kg	84.1	421

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0108.d
Lab Smp Id: 1201871883 Client Smp ID: CAMO-09-6519MSD
Inj Date : 01-JUL-2009 10:13
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201871883|881442|1|SVMF|1|LANL07001MSD
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 8 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	20.76000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.027	4.032	(1.000)	512428	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1937193	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1197601	40.0000	
* 67 Phenanthrene-d10	188	7.345	7.345	(1.000)	2345647	40.0000	
* 91 Chrysene-d12	240	9.776	9.771	(1.000)	2264067	40.0000	
* 98 Perylene-d12	264	11.534	11.534	(1.000)	1627035	40.0000	
$ 3 2-Fluorophenol	112	3.218	3.208	(0.799)	738075	65.5993	2760
$ 5 Phenol-d5	99	3.743	3.743	(0.929)	927486	62.5202	2630
$ 20 Nitrobenzene-d5	82	4.393	4.398	(0.896)	480270	33.4573	1410
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	1030221	33.2623	1400
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	382517	78.2815	3290
$ 81 p-Terphenyl-d14	244	8.727	8.727	(0.893)	1604303	46.3014	1950

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.752	3.752	(0.932)	517990	35.1797	1480(Q)
8 2-Chlorophenol	128	3.897	3.897	(0.968)	438707	35.6462	1500
11 1,4-Dichlorobenzene	146	4.041	4.041	(1.004)	433948	29.6150	1240
17 N-Nitrosodipropylamine	70	4.263	4.268	(1.059)	300657	37.9167	1600(Q)
28 1,2,4-Trichlorobenzene	180	4.850	4.850	(0.989)	451947	33.6986	1420
33 4-Chloro-3-methylphenol	107	5.255	5.245	(1.072)	451462	43.7256	1840
47 Acenaphthene	154	6.189	6.189	(1.004)	860031	35.1488	1480
50 2,4-Dinitrotoluene	165	6.276	6.276	(1.018)	371470	39.1977	1650
52 4-Nitrophenol	139	6.213	6.203	(1.008)	176377	41.5343	1750
65 Pentachlorophenol	266	7.171	7.171	(0.976)	278949	48.0345	2020
79 Pyrene	202	8.630	8.630	(0.883)	2043817	41.3800	1740
2 Pyridine	79	2.563	2.539	(0.636)	312715	35.3041	1480
4 Aniline	66	3.810	3.815	(0.946)	248319	38.5978	1620
7 bis(2-Chloroethyl) ether	63	3.825	3.829	(0.950)	369071	32.5227	1370
9 1,3-Dichlorobenzene	146	3.998	3.998	(0.993)	432120	29.3388	1230
12 Benzyl alcohol	108	4.099	4.099	(1.018)	213985	27.5503	1160
13 1,2-Dichlorobenzene	146	4.142	4.147	(1.029)	429348	31.5371	1330
14 bis(2-Chloroisopropyl)ether	45	4.171	4.171	(1.036)	863093	32.6787	1370
15 o-Cresol	107	4.152	4.147	(1.031)	354038	38.6717	1630
18 m,p-Cresols	107	4.248	4.248	(1.055)	504224	41.1846	1730
19 Hexachloroethane	117	4.374	4.378	(1.086)	160154	29.4704	1240
21 Nitrobenzene	77	4.407	4.412	(0.899)	469450	35.0660	1480
22 Isophorone	82	4.561	4.561	(0.930)	913227	36.8553	1550
23 2-Nitrophenol	139	4.624	4.624	(0.943)	229682	36.5458	1540
24 2,4-Dimethylphenol	122	4.614	4.614	(0.941)	421577	38.8640	1630
25 bis(2-Chloroethoxy)methane	93	4.677	4.682	(0.954)	507809	35.8671	1510
26 2,4-Dichlorophenol	162	4.788	4.788	(0.976)	421271	39.0732	1640
27 Benzoic acid	105	4.672	4.677	(0.953)	213007	42.8638	1800(Q)
30 Naphthalene	128	4.918	4.918	(1.003)	1166693	30.9142	1300(Q)
31 4-Chloroaniline	127	4.932	4.932	(1.006)	586299	44.5616	1870
32 Hexachlorobutadiene	225	4.980	4.980	(1.016)	323475	33.0419	1390
34 2-Methylnaphthalene	142	5.399	5.399	(1.101)	855745	37.6421	1580
36 Hexachlorocyclopentadiene	237	5.500	5.505	(0.892)	175457	32.7542	1380
37 2,4,6-Trichlorophenol	196	5.587	5.587	(0.906)	366246	39.5205	1660
38 2,4,5-Trichlorophenol	196	5.625	5.616	(0.913)	434114	43.6495	1840
40 2-Chloronaphthalene	162	5.755	5.755	(0.934)	927854	36.4079	1530
42 o-Nitroaniline	65	5.813	5.813	(0.943)	334463	41.2751	1740
41 m-Nitroaniline	138	6.112	6.112	(0.991)	240226	52.4179	2200
43 Dimethylphthalate	163	5.914	5.919	(0.959)	1173728	38.5820	1620
44 2,6-Dinitrotoluene	165	5.972	5.977	(0.969)	279605	38.6025	1620
45 Acenaphthylene	152	6.064	6.064	(0.984)	1425906	37.9747	1600
48 2,4-Dinitrophenol	184	6.184	6.184	(1.003)	94104	37.4055	1570(Q)
49 Dibenzofuran	168	6.314	6.314	(1.024)	1350089	38.9576	1640
51 Diethylphthalate	149	6.430	6.430	(1.043)	1175757	39.4586	1660
53 Fluorene	166	6.579	6.579	(1.067)	1095566	36.7870	1550
54 4-Chlorophenylphenylether	204	6.550	6.550	(1.062)	649667	37.4129	1570
55 2-Methyl-4,6-dinitrophenol	198	6.593	6.593	(0.898)	181734	37.4705	1580

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.579	6.579	(1.067)	226792	72.3656	3040(R)
133 Diphenylamine	169	6.642	6.642	(0.904)	1036942	44.4083	1870
58 1,2-Diphenylhydrazine	77	6.675	6.675	(0.909)	1175081	39.6378	1670
61 4-Bromophenylphenylether	248	6.945	6.945	(0.946)	411230	36.6789	1540
63 Hexachlorobenzene	284	7.017	7.017	(0.955)	461309	39.0689	1640
68 Phenanthrene	178	7.364	7.364	(1.003)	1655395	37.6725	1580
69 Anthracene	178	7.407	7.407	(1.009)	1735214	40.0088	1680
72 Di-n-butylphthalate	149	7.759	7.759	(1.056)	1937248	38.7774	1630
76 Fluoranthene	202	8.414	8.414	(1.146)	1985680	39.6688	1670
85 Butylbenzylphthalate	149	9.155	9.155	(0.936)	872013	41.1919	1730
89 Benzo(a)anthracene	228	9.762	9.757	(0.999)	1885196	38.8062	1630
90 3,3'-Dichlorobenzidine	252	9.704	9.689	(0.993)	321370	19.7987	833
92 Chrysene	228	9.800	9.796	(1.002)	1760404	39.5585	1660
93 bis(2-Ethylhexyl)phthalate	149	9.680	9.675	(0.990)	1241169	42.7243	1800
94 Di-n-octylphthalate	149	10.359	10.354	(0.898)	1867910	50.2235	2110
95 Benzo(b)fluoranthene	252	10.990	10.985	(0.953)	1528275	42.5311	1790
96 Benzo(k)fluoranthene	252	11.028	11.023	(0.956)	1617521	45.8270	1930
97 Benzo(a)pyrene	252	11.452	11.452	(0.993)	1348328	42.3884	1780
99 Indeno(1,2,3-cd)pyrene	276	13.402	13.407	(1.162)	1050209	32.8558	1380
100 Dibenzo(a,h)anthracene	278	13.417	13.421	(1.163)	900955	34.5783	1450
101 Benzo(ghi)perylene	276	13.975	13.980	(1.212)	813376	29.8482	1260
1 N-Methyl-N-nitrosomethylamine	74	2.520	2.505	(0.626)	209233	34.9523	1470

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/MSD5.i/s070109.b/s5g0108.d

Date : 01-JUL-2009 10:13

Client ID: CAMO-09-6519MSD

Sample Info: 1120187188318814421 1|SVMF|1|LANL07001MSD

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

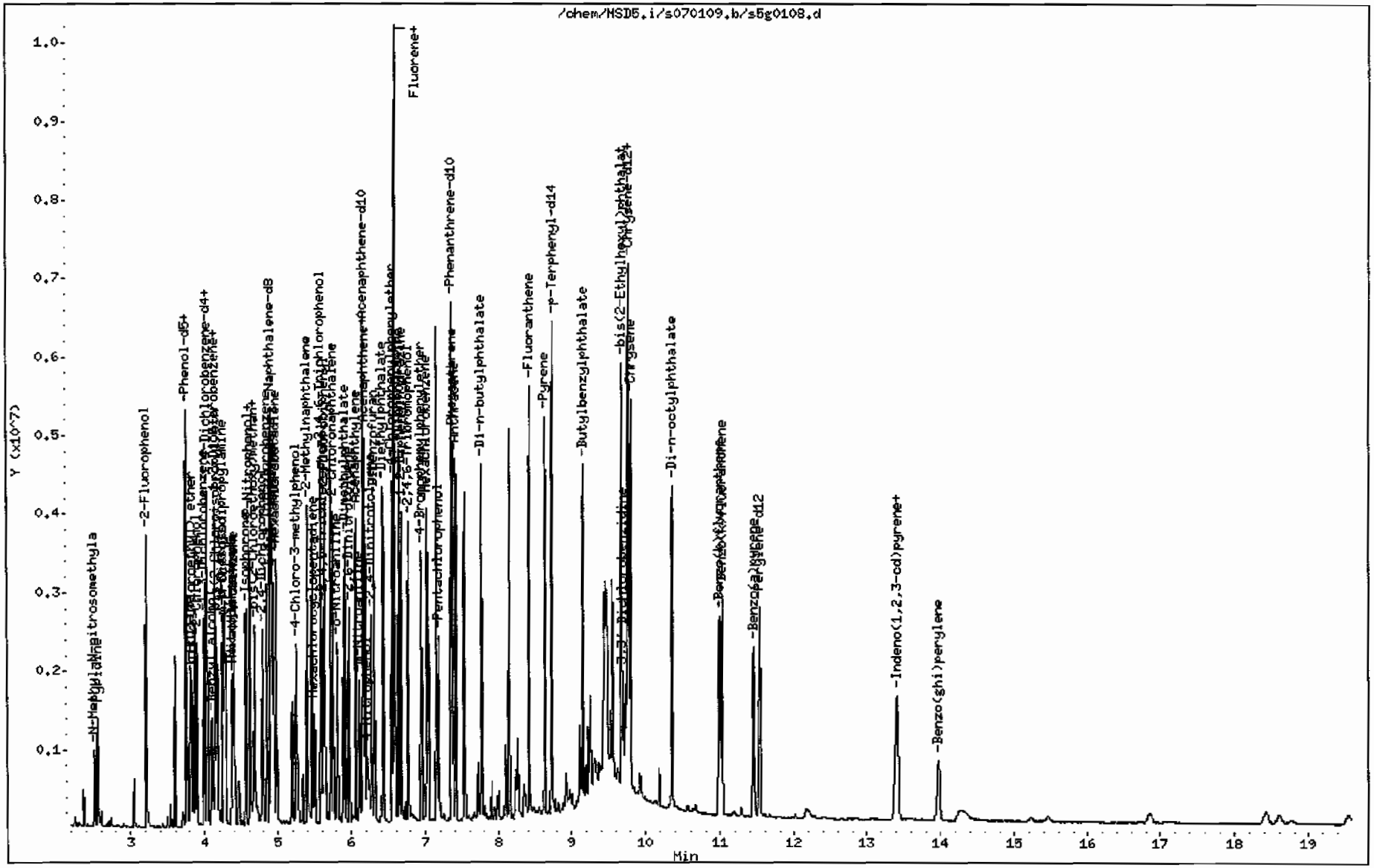

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Miscellaneous Data

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 881441 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201871880 MB	30-JUN-2009 21:22:35	30	1	0.03333
1201871881 LCS	30-JUN-2009 21:22:35	30	1	0.03333
232507001	30-JUN-2009 21:22:35	30.03	1	0.0333
1201871882 MS (232507001)	30-JUN-2009 21:22:35	30.02	1	0.03331
1201871883 MSD (232507001)	30-JUN-2009 21:22:35	30	1	0.03333
232507002	30-JUN-2009 21:22:35	30.04	1	0.03329
232507003	30-JUN-2009 21:22:35	30.03	1	0.0333
232507004	30-JUN-2009 21:22:35	30.02	1	0.03331
232507005	30-JUN-2009 21:22:35	30	1	0.03333
232507006	30-JUN-2009 21:22:35	30.04	1	0.03329

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201871881	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
LCS	1201871881	BENZIDINE LCS	UE090622-18	1	mL
MS	1201871882	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MS	1201871882	BENZIDINE LCS	UE090622-18	1	mL
MSD	1201871883	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MSD	1201871883	BENZIDINE LCS	UE090622-18	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1143854-D	150	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Verified By: AAW

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD5

DATE: 07/01/2009 METHOD:8270C MSD5-DFTPPx.m OPERATOR:rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1424 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD5.i/s070109.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s5g0101.d	WBN090624-01	rmb	01-JUL-2009 07:18	50PPM	s070109	1.0	DFTPP	
s5g0102.d	WBN090617-02.4	RMB	01-JUL-2009 07:32	40 PPM	s070109	1.0	MEGACVS	524067
s5g0103.d	WBN090619-01.4	RMB	01-JUL-2009 07:59	40 PPM	s070109	1.0	AP12CVS	
s5g0104.d	1201871880	RMB	01-JUL-2009 08:22	881442	09-2499	1.0	SBLK01	
s5g0105.d	1201871881	RMB	01-JUL-2009 08:50	881442	09-2499	1.0	SBLK01LCS	
s5g0106.d	232507001	RMB	01-JUL-2009 09:17	881442	09-2499	1.0	LANL	
s5g0107.d	1201871882	RMB	01-JUL-2009 09:45	881442	09-2499	1.0	LANL07001MS	
s5g0108.d	1201871883	RMB	01-JUL-2009 10:13	881442	09-2499	1.0	LANL07001MSD	
s5g0109.d	232507002	RMB	01-JUL-2009 10:41	881442	09-2499	1.0	LANL	
s5g0110.d	232507003	RMB	01-JUL-2009 11:09	881442	09-2499	1.0	LANL	
s5g0111.d	232507004	RMB	01-JUL-2009 11:37	881442	09-2499	1.0	LANL	
s5g0112.d	232507005	RMB	01-JUL-2009 12:05	881442	09-2499	1.0	LANL	Fail IS - confirmed by s5g0114
s5g0113.d	232507006	RMB	01-JUL-2009 12:33	881442	09-2499	1.0	LANL	
s5g0114.d	232507005	RMB	01-JUL-2009 13:21	881442	09-2499	1.0	LANL	DUSE - fail IS - confirms s5g0112

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD5

DATE: 06/25/2009 METHOD:8270C MSD5-DFTPPx.m OPERATOR:rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1424 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD5.i/s062509.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s5f2501.d	WBN090624-01	rmb	25-JUN-2009 07:16	50PPM	s062509	1.0	DFTPP	DUSE
s5f2502.d	WBN090617-02.4	RMB	25-JUN-2009 07:29	40 PPM	s062509	1.0	MEGACVS	DUSE - fail
s5f2503.d	WBN090617-02.4	RMB	25-JUN-2009 08:12	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - cut column
s5f2504.d	WBN090624-01	rmb	25-JUN-2009 09:17	50PPM	s062509	1.0	DFTPP	DUSE
s5f2505.d	WBN090617-02.4	RMB	25-JUN-2009 09:30	40 PPM	s062509	1.0	MEGACVS	DUSE - fail
s5f2506.d	WBN090619-01.4	RMB	25-JUN-2009 09:58	40 PPM	s062509	1.0	AP12CVS	DUSE
s5f2507.d	WBN090617-02.4	RMB	25-JUN-2009 10:36	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - clean IP
s5f2508.d	WBN090624-01	rmb	25-JUN-2009 12:55	50PPM	s062509	1.0	DFTPP	DUSE
s5f2509.d	WBN090617-02.4	RMB	25-JUN-2009 13:09	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - run ICAL
s5f2510-D.d	WBN090624-01	rmb	25-JUN-2009 14:07	50PPM	s062509	1.0	DFTPP	
s5f2510.d	WBN090624-01	rmb	25-JUN-2009 14:07	50PPM	s062509	1.0	DFTPP	
s5f2511.d	instrument blank	RMB	25-JUN-2009 14:20		s062509	1.0		
s5f2512.d	WBN090602-08	RMB	25-JUN-2009 14:42	1 PPM	s062509	1.0	MEGAICAL001	
s5f2513.d	WBN090602-07	RMB	25-JUN-2009 15:10	10 PPM	s062509	1.0	MEGAICAL010	
s5f2514.d	WBN090602-06	RMB	25-JUN-2009 15:38	20 PPM	s062509	1.0	MEGAICAL020	
s5f2515.d	WBN090602-05.1	RMB	25-JUN-2009 16:05	40 PPM	s062509	1.0	MEGAICAL040	
s5f2516.d	WBN090602-04	RMB	25-JUN-2009 16:33	50 PPM	s062509	1.0	MEGAICAL050	
s5f2517.d	WBN090602-03	RMB	25-JUN-2009 17:02	80 PPM	s062509	1.0	MEGAICAL080	
s5f2518.d	WBN090602-02	RMB	25-JUN-2009 17:29	100 PPM	s062509	1.0	MEGAICAL100	

s5f2519.d	WBN090602-01	RMB	25-JUN-2009 17:57	120 PPM	s062509	1.0	MEGAICAL120	
s5f2520.d	instrument blank	RMB	25-JUN-2009 18:25		s062509	1.0		
s5f2521.d	WBN090602-09.1	RMB	25-JUN-2009 18:48	40 PPM	s062509	1.0	MEGAICV	DUSE - fail
s5f2522.d	WBN090528-07	RMB	25-JUN-2009 19:10	10 PPM	s062509	1.0	AP12ICAL010	
s5f2523.d	WBN090528-06	RMB	25-JUN-2009 19:32	20 PPM	s062509	1.0	AP12ICAL020	
s5f2524.d	WBN090528-05.1	RMB	25-JUN-2009 19:55	40 PPM	s062509	1.0	AP12ICAL040	
s5f2525.d	WBN090528-04	RMB	25-JUN-2009 20:18	50 PPM	s062509	1.0	AP12ICAL050	
s5f2526.d	WBN090528-03	RMB	25-JUN-2009 20:41	80 PPM	s062509	1.0	AP12ICAL080	
s5f2527.d	WBN090528-02	RMB	25-JUN-2009 21:03	100 PPM	s062509	1.0	AP12ICAL100	
s5f2528.d	WBN090528-01	RMB	25-JUN-2009 21:25	120 PPM	s062509	1.0	AP12ICAL120	
s5f2529.d	instrument blank	RMB	25-JUN-2009 21:48		s062509	1.0		
s5f2530-625.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 625 - 062509
s5f2530-D.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 8270D - 062509
s5f2530.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 8270C - 062509
s5f2531-D.d	WBN090624-01	rmb	26-JUN-2009 08:28	50PPM	s062509	1.0	DFTPP	
s5f2531.d	WBN090624-01	rmb	26-JUN-2009 08:28	50PPM	s062509	1.0	DFTPP	
s5f2532.d	instrument blank	RMB	26-JUN-2009 08:41		s062509	1.0		
s5f2533-625.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 625 - 062509
s5f2533-BOE.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - BOE - 062509
s5f2533-D.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 8270D - 062509
s5f2533.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 8270C - 062509
s5f2534.d	WBN090609-24	RMB	26-JUN-2009 09:31	10 PPM	s062509	1.0	PESTICAL010	
s5f2535.d	WBN090609-23	RMB	26-JUN-2009 09:53	20 PPM	s062509	1.0	PESTICAL020	
s5f2536.d	WBN090609-22.1	RMB	26-JUN-2009 10:16	40 PPM	s062509	1.0	PESTICAL040	
s5f2537.d	WBN090609-21	RMB	26-JUN-2009 10:39	50 PPM	s062509	1.0	PESTICAL050	
s5f2538.d	WBN090609-20	RMB	26-JUN-2009 11:02	80 PPM	s062509	1.0	PESTICAL080	
s5f2539.d	WBN090609-19	RMB	26-JUN-2009 11:25	100 PPM	s062509	1.0	PESTICAL100	

s5f2540.d	WBN090609-18	RMB	26-JUN-2009 11:47	120 PPM	s062509	1.0	PESTICAL120	
s5f2541.d	instrument blank	RMB	26-JUN-2009 12:10		s062509	1.0		
s5f2542.d	WBN090624-16	RMB	26-JUN-2009 12:32	500 PPM	s062509	1.0	HEXICAL500	
s5f2543.d	WBN090624-15	RMB	26-JUN-2009 12:55	1000 PPM	s062509	1.0	HEXICAL1000	
s5f2544.d	WBN090624-14	RMB	26-JUN-2009 13:17	1250 PPM	s062509	1.0	HEXICAL1250	
s5f2545.d	WBN090624-13	RMB	26-JUN-2009 13:40	1500 PPM	s062509	1.0	HEXICAL1500	
s5f2546.d	WBN090624-12	RMB	26-JUN-2009 14:02	1750 PPM	s062509	1.0	HEXICAL1750	
s5f2547.d	UBN090317-02.6	RMB	26-JUN-2009 14:25	2000 PPM	s062509	1.0	HEXICAL2000	
s5f2548.d	instrument blank	RMB	26-JUN-2009 14:47		s062509	1.0		
s5f2549-D.d	WBN090609-25.1	RMB	26-JUN-2009 15:10	40 PPM	s062509	1.0	PESTICV	PESTICV - 8270D - 062509
s5f2549.d	WBN090609-25.1	RMB	26-JUN-2009 15:10	40 PPM	s062509	1.0	PESTICV	PESTICV - 8270C - 062509
s5f2550-D.d	WBN090624-10.1	RMB	26-JUN-2009 15:32	1250 PPM	s062509	1.0	HEXICV	HEXICV - 8270D - 062509
s5f2550.d	WBN090624-10.1	RMB	26-JUN-2009 15:32	1250 PPM	s062509	1.0	HEXICV	HEXICV - 8270C - 062509
s5f2551.d	UBN090428-01	RMB	26-JUN-2009 15:54	10 PPM	s062509	1.0	NEVADAICAL010	
s5f2552.d	UBN090428-02	RMB	26-JUN-2009 16:17	20 PPM	s062509	1.0	NEVADAICAL020	
s5f2553.d	UBN090428-03	RMB	26-JUN-2009 16:39	40 PPM	s062509	1.0	NEVADAICAL040	
s5f2554.d	UBN090428-04	RMB	26-JUN-2009 17:01	50 PPM	s062509	1.0	NEVADAICAL050	
s5f2555.d	UBN090428-05	RMB	26-JUN-2009 17:24	80 PPM	s062509	1.0	NEVADAICAL080	
s5f2556.d	UBN090428-06	RMB	26-JUN-2009 17:47	100 PPM	s062509	1.0	NEVADAICAL100	
s5f2557.d	UBN090428-07	RMB	26-JUN-2009 18:09	120 PPM	s062509	1.0	NEVADAICAL120	

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
02-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
SEMIVOA GC/MS	SW846 8270C	Solid	LANL
Batch ID:	**Sample Numbers:**		
881442	See Below		

Potentially affected work order(s)(SDG): 232507(09-2499)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for MS/MSD, or PS/PSD

Failed Recovery for LCS/LCSD

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The LCS (1201871881) did not meet recovery acceptance criteria. Please see the spike recovery report for the specific failures.	1. The failures arepresented less than 5% of the requested spike analyte list. That satisfied the clients acceptance criteria and the data were reported.
2. The MS (1201871882) recovered 3,3'-Dichlorobenzidine at 26% (limits: 35%-106%). The MSD (1201871883) recovered 4-Nitroaniline at 145% (limits: 35%-139%).	2. Because the MS and MSD displayed similar recoveries for those analytes, the failures were attributed to sample matrix interference.
3. The MS (1201871882)/MSD (1201871883) RPD value for 4-Chloroanaline was 35% (limit: 30%) and for 3,3'-Dichlorobenzidine was 41% (limit: 30%).	3. Because the individual MS and MSD recoveries for 4-Chloroanaline were acceptable, the data were reported un-qualified for the RPD value failure for that analyte. The RPD failure for 3,3'-Dichlorobenzidine was attributed to sample matrix interference (see item #2 of this NCR).

Originator's Name:

Richard Bomar 02-JUL-09

Data Validator/Group Leader:

Daniel Beacham 17-JUL-09

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0114.d
Lab Smp Id: 232507005 Client Smp ID: CAMO-09-6528
Inj Date : 01-JUL-2009 13:21
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507005|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	5.76000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.031	4.032	(1.000)	476746	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1694000	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1078231	40.0000	
* 67 Phenanthrene-d10	188	7.344	7.345	(1.000)	2115175	40.0000	
* 91 Chrysene-d12	240	9.771	9.771	(1.000)	1850388	40.0000	
* 98 Perylene-d12	264	11.529	11.534	(1.000)	1067704	40.0000	
$ 3 2-Fluorophenol	112	3.213	3.208	(0.797)	699286	66.8035	2360
$ 5 Phenol-d5	99	3.743	3.743	(0.928)	905700	65.6211	2320
$ 20 Nitrobenzene-d5	82	4.393	4.398	(0.896)	409113	32.5918	1150
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	1024927	36.7549	1300
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	358966	81.5947	2890
$ 81 p-Terphenyl-d14	244	8.731	8.727	(0.894)	1454033	51.3462	1820

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.630	8.630	(0.883)	18486	0.45795	16.2(a)
76 Fluoranthene	202	8.413	8.414	(1.146)	20447	0.45299	16.0(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0114.d
Report Date: 07/01/2009 13:40
Lab. ID: 232507005 SampleType: SAMPLE
Injection Date: 01-JUL-2009 13:21
Operator: RMB Instrument: MSD5.i
Sample Info: |232507005|881442|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090607-01
Comment:
Method used: /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2499
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	54959	3.74	3.81	80-120	100	(T)
93	505	3.71	3.81	175-235	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	58843	4.39	4.27	80-120	100	(T)
42	40546	4.39	4.27	58-118	69	(T)
27 Benzoic acid		CAS#: 65-85-0				
105	249	4.76	4.68	80-120	100	(T)
122	276	4.82	4.68	53-113	111	(T)
77	666	4.73	4.68	49-109	267	(Q)
31 4-Chloroaniline		CAS#: 106-47-8				
127	176	4.94	4.93	80-120	100	( )
65	318	4.94	4.93	2- 62	180	(Q)
41 m-Nitroaniline		CAS#: 99-09-2				
138	106	6.16	6.11	80-120	100	( )
92	5667	6.16	6.11	83-143	5301	(Q)
108	22975	6.16	6.11	0- 41	21487	(Q)
43 Dimethylphthalate		CAS#: 131-11-3				
163	234977	6.16	5.92	80-120	100	(T)
164	1078231	6.16	5.92	0- 40	459	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	144331	6.16	5.98	80-120	100	(T)
63	1976	6.16	5.97	56-116	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	144331	6.16	6.28	80-120	100	(T)
89	2156	6.16	6.28	39- 99	1	(QT)
63	1976	6.16	6.28	21- 81	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	14081	6.77	6.58	80-120	100	(T)
165	15722	6.77	6.58	61-121	112	(T)
167	5140	6.77	6.58	0- 44	37	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1245	6.77	6.59	80-120	100	(T)
105	1914	6.77	6.59	4- 64	154	(QT)
51	2599	6.77	6.59	39- 99	209	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	25214	6.77	6.94	80-120	100	(T)
141	126650	6.77	6.94	35- 95	502	(QT)
250	50322	6.77	6.94	69-129	200	(QT)
76 Fluoranthene			CAS#: 206-44-0			
202	20447	8.41	8.41	80-120	100	( )
203	2876	8.41	8.41	0- 48	14	( )
101	1905	8.41	8.41	0- 39	9	( )
79 Pyrene			CAS#: 129-00-0			
202	18486	8.63	8.63	80-120	100	( )
200	3859	8.63	8.63	0- 51	21	( )
101	2237	8.63	8.63	0- 41	12	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	12127	9.76	9.76	80-120	100	( )
226	3570	9.76	9.76	0- 57	29	( )
229	3945	9.76	9.76	0- 51	33	( )
92 Chrysene			CAS#: 218-01-9			
228	12134	9.76	9.80	80-120	100	( )
229	3945	9.76	9.80	0- 50	33	( )
226	3570	9.76	9.80	0- 59	29	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	9737	10.98	10.98	80-120	100	( )
253	2710	10.98	10.98	0- 52	28	( )
125	805	10.98	10.98	0- 38	8	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	9737	10.98	11.02	80-120	100	( )
253	2749	10.98	11.02	0- 53	28	( )
125	786	10.98	11.02	0- 38	8	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	6297	11.45	11.45	80-120	100	( )
253	1280	11.45	11.45	0- 52	20	( )
125	561	11.45	11.45	0- 30	9	( )

Q qualifier indicates ion failed ratio requirement
T qualifier indicates RT outside 0.06 minute window of expected RT

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070109.b/s5g0114.d
Lab Smp Id: 232507005 Client Smp ID: CAMO-09-6528
Inj Date : 01-JUL-2009 13:21
Operator : RMB Inst ID: MSD5.i
Smp Info : |232507005|881442|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070109.b/MSD5-M8270C-062509.m
Meth Date : 01-Jul-2009 08:14 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2499.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	5.76000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.031	3040824	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.044	442731	5.82383134	206	0		0	10

Data File: /chem/MSD5.i/s070109.b/s5g0114.d
Date : 01-JUL-2009 13:21
Client ID: CAMO-09-6528
Sample Info: 1232507005188144211SVMFI1LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

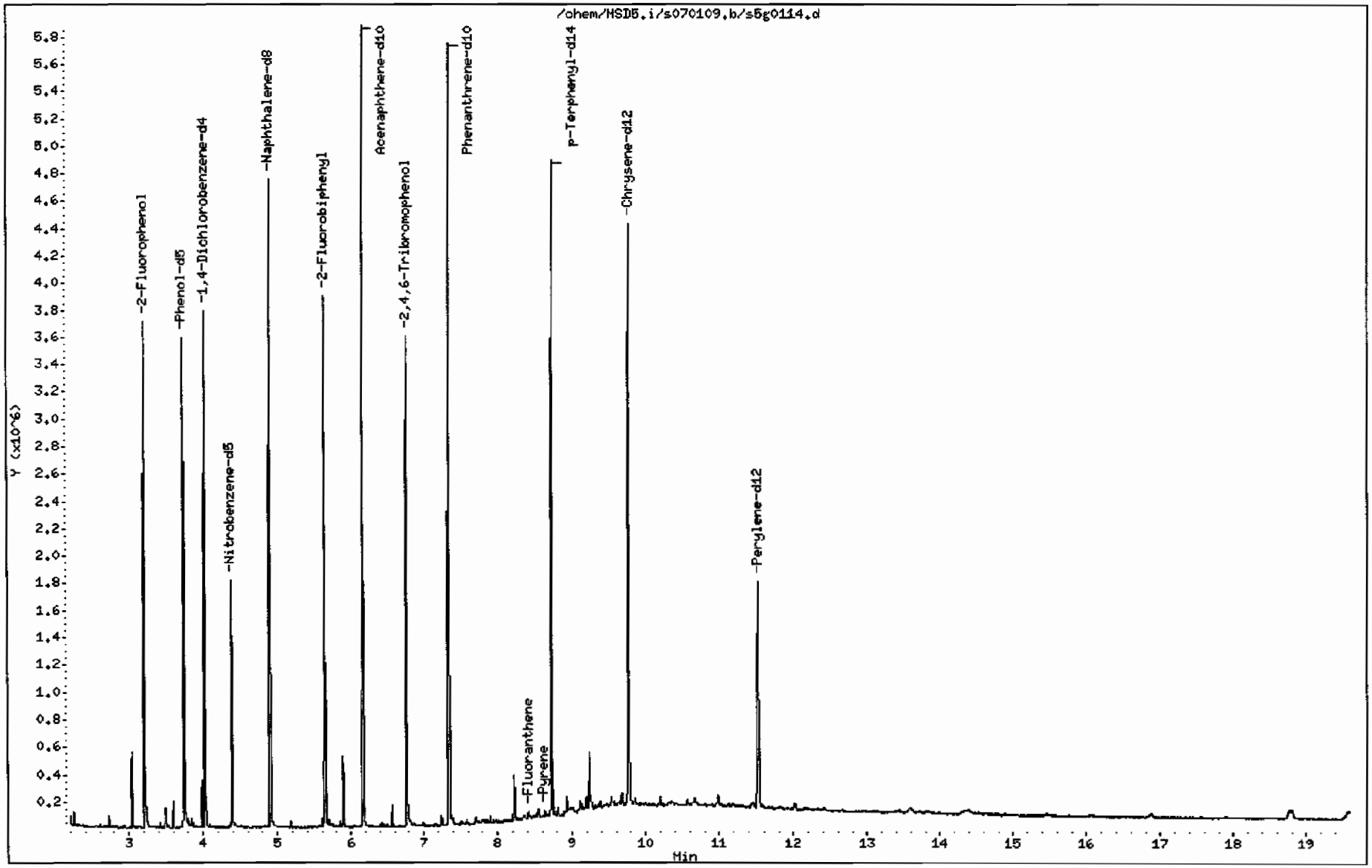

602

Data File: /chem/MSD5.i/s070109.b/s5g0114.d

Date : 01-JUL-2009 13:21

Client ID: CAHO-09-6528

Instrument: MSD5.i

Sample Info: 1232507005|881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 16.2 ug/Kg

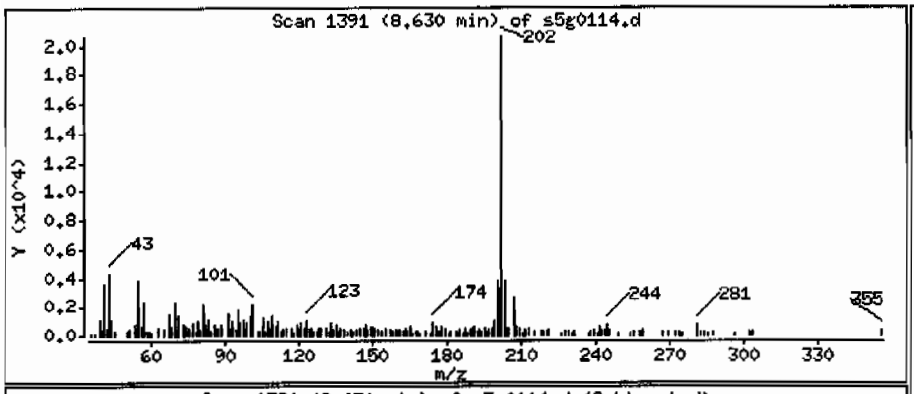

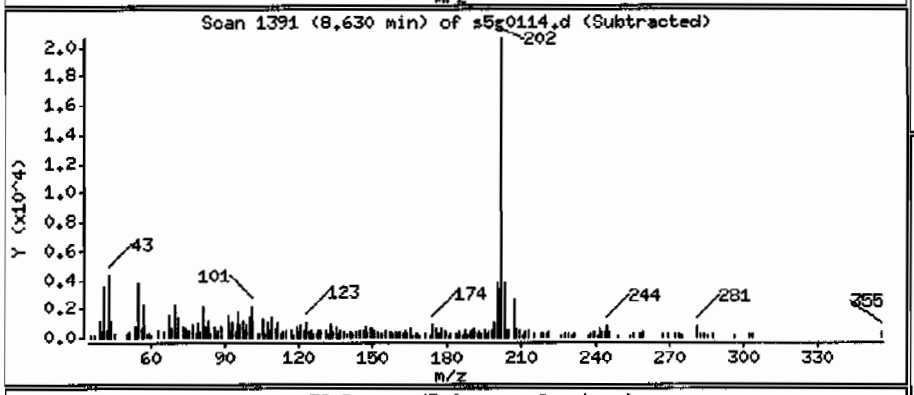

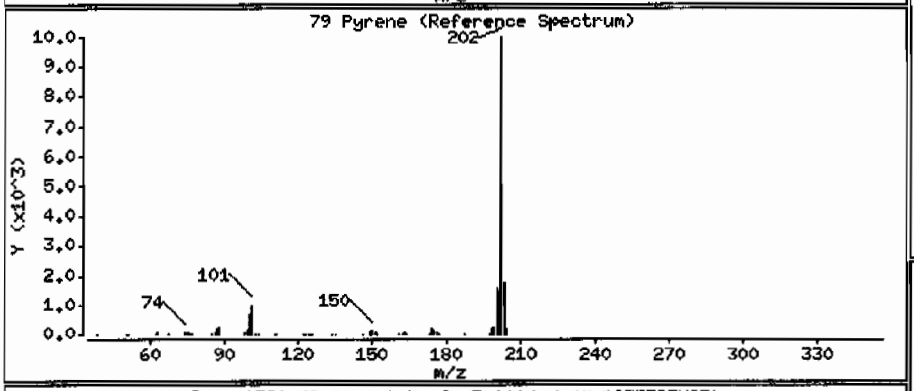

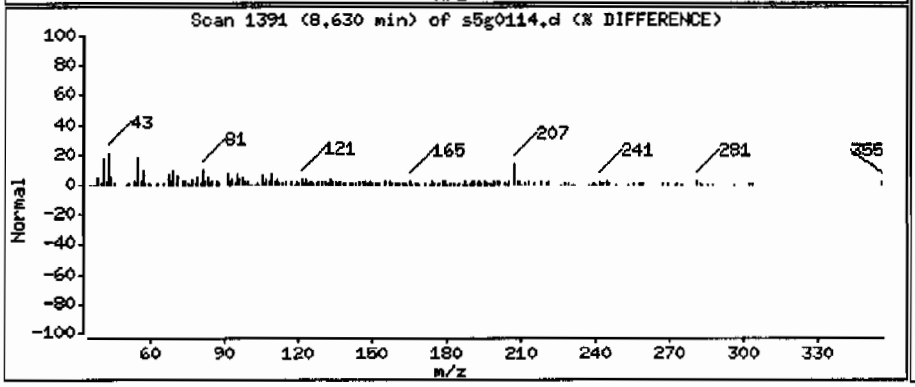

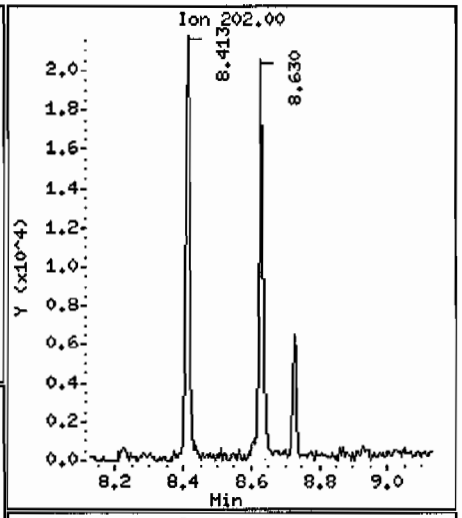

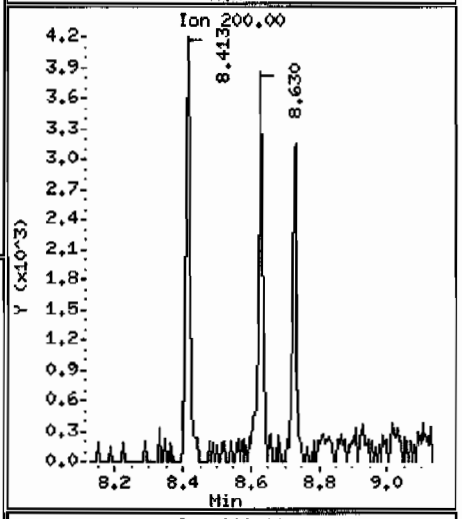

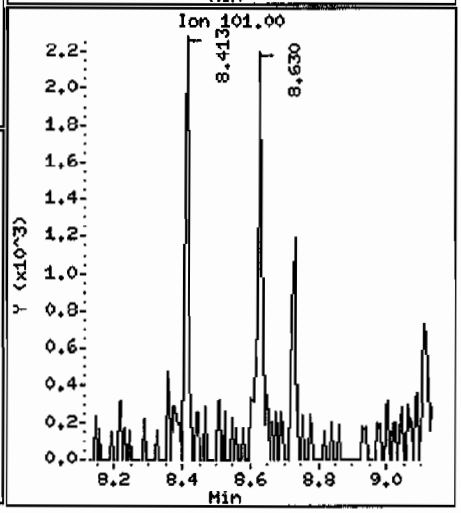

Data File: /chem/MSD5.i/s070109.b/s5g0114.d

Date : 01-JUL-2009 13:21

Client ID: CAMO-09-6628

Instrument: MSD5.i

Sample Info: 1232507005188144211ISVMFI1ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 16.0 ug/Kg

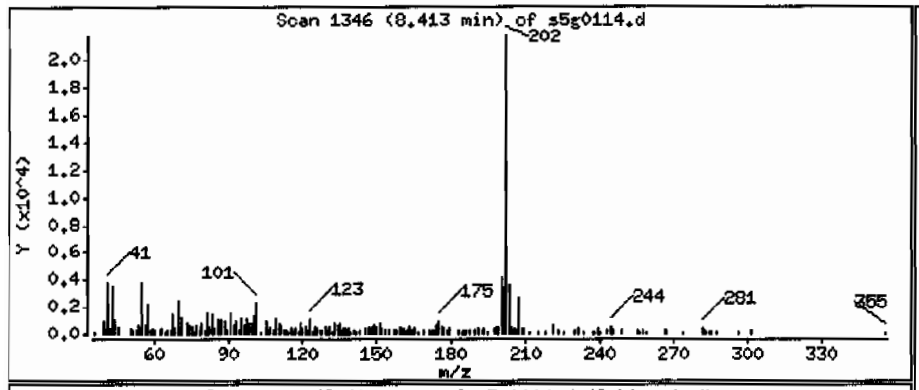

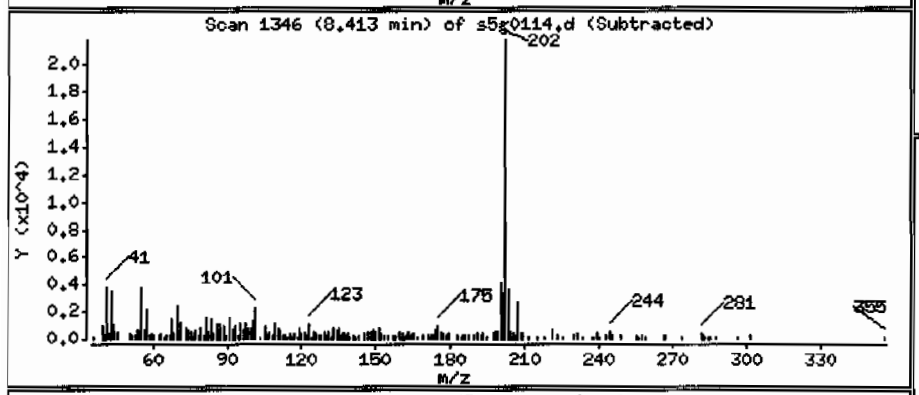

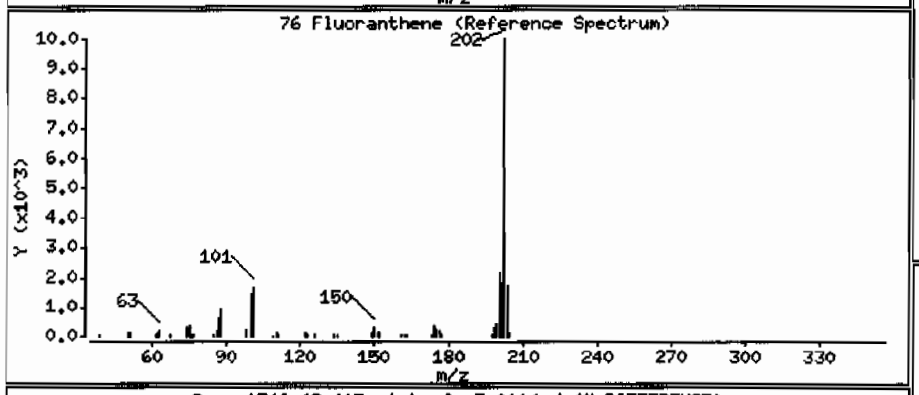

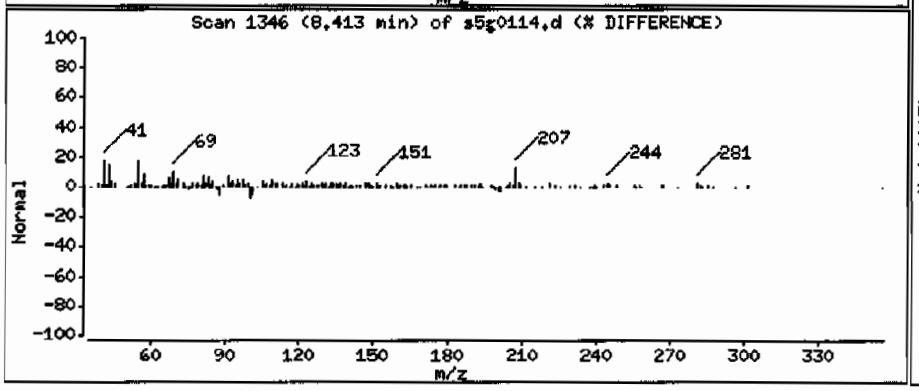

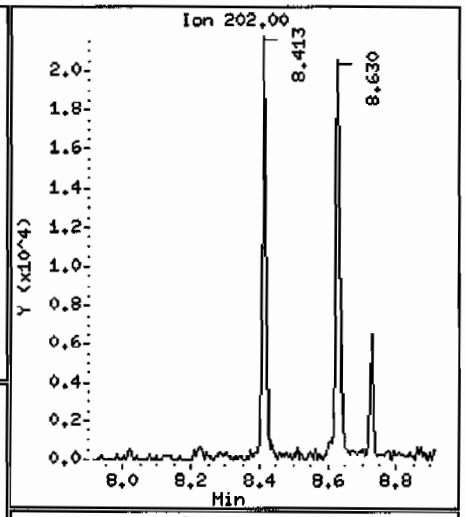

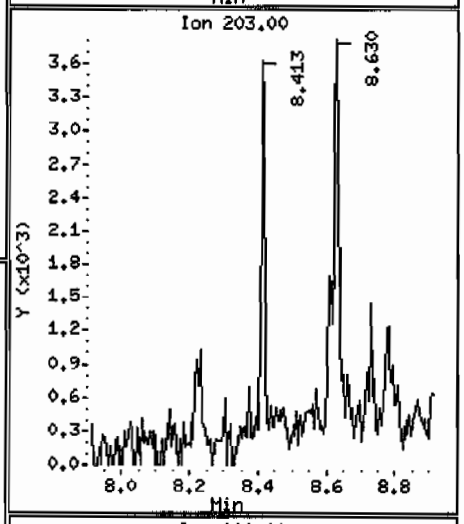

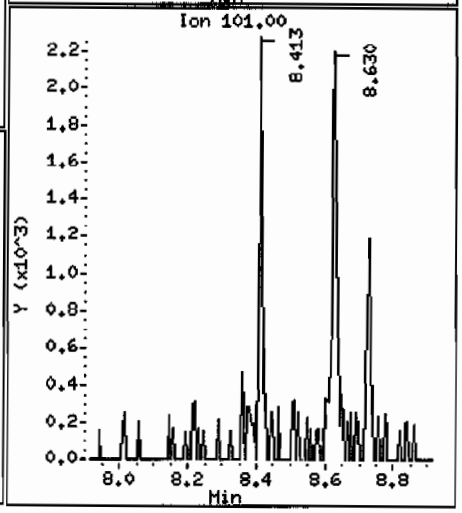

Data File: /chem/MSD5.i/s070109.b/s5g0114.d

Date : 01-JUL-2009 13:21

Client ID: CAMO-09-6528

Instrument: MSD5.i

Sample Info: |2325070051881442|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	23	C6H12O2	116

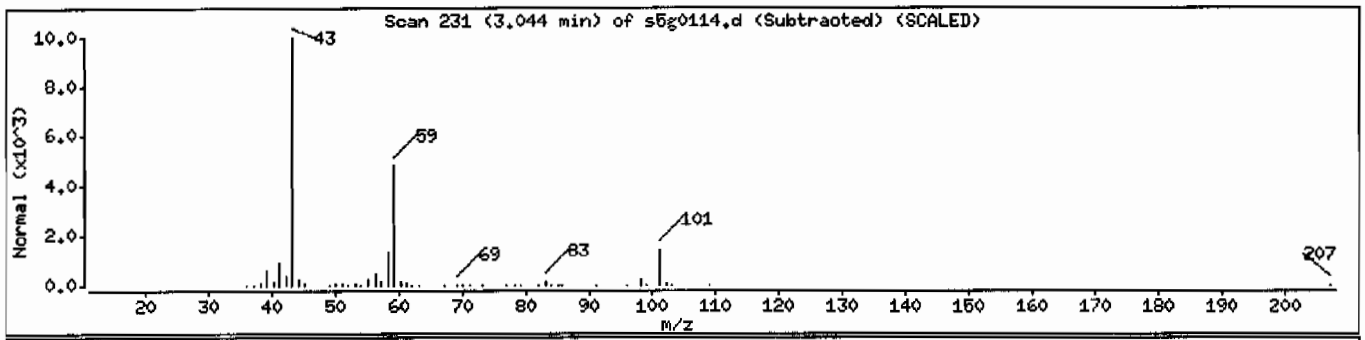

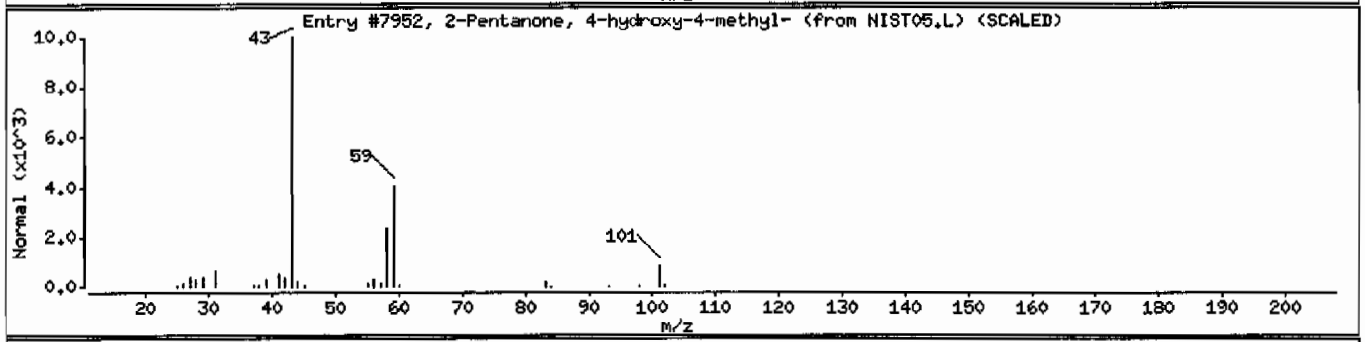

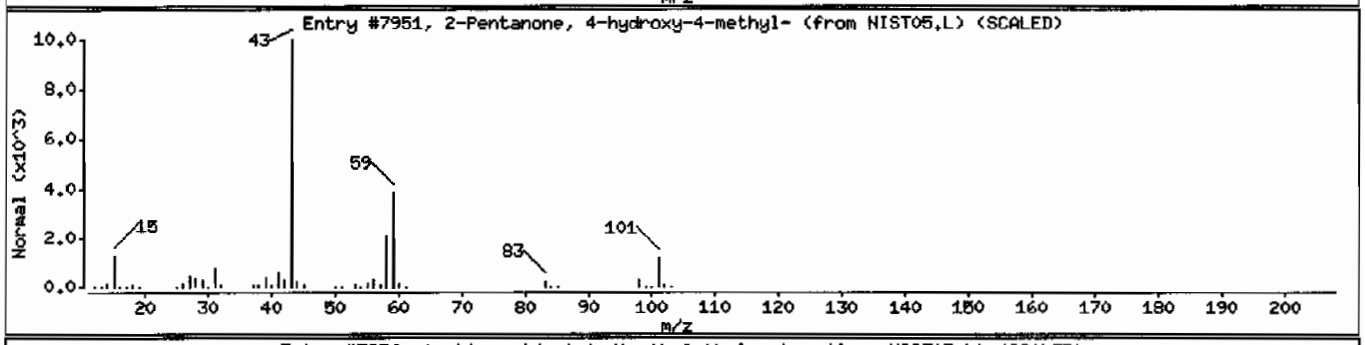

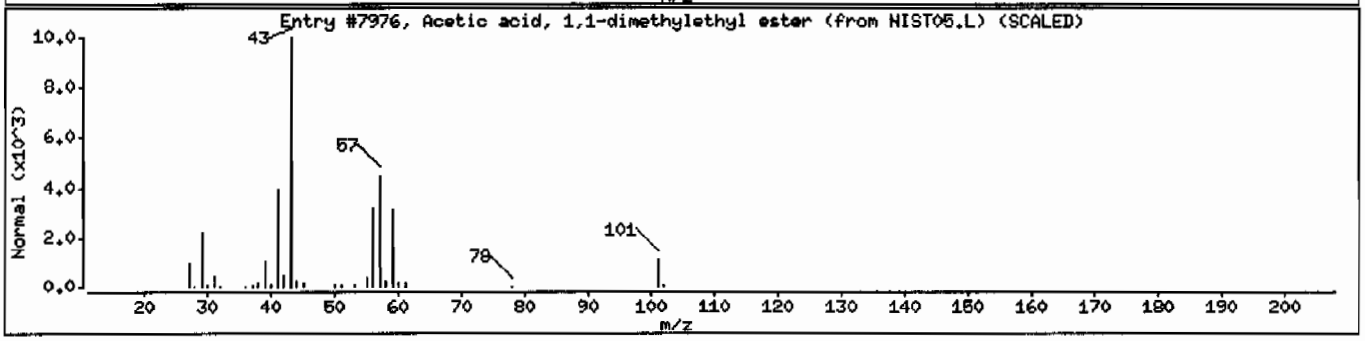

GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2499

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3550B
Analytical Batch Number:	881260
Prep Batch Number:	881259

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
232507001	CAMO-09-6519
232507002	CAMO-09-6518
232507003	CAMO-09-6527
232507004	CAMO-09-6529
232507005	CAMO-09-6528
232507006	CAMO-09-6531
1201871515	Method Blank (MB)
1201871516	Laboratory Control Sample (LCS)
1201871517	232064001(CAMO-09-10142) Matrix Spike (MS)
1201871518	232064001(CAMO-09-10142) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 13.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent

calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
A LANL sample of similar matrix associated with another SDG (#09-2403) was selected for the matrix spike and matrix spike duplicate analysis. A Form III and QC raw data are included in the package summarizing the results.

Matrix Spike (MS) Recovery Statement
The MS recoveries for this SDG were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this SDG were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina.

Sample Dilutions
Samples 232507002 (CAMO-09-6518), 232507005 (CAMO-09-6528) and 232507006 (CAMO-09-6531) were diluted at 1:5 due to the oily matrix of the extracts.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are for documentation of any procedural anomalies that may deviate from referenced SOP or contractual document. A NCR was not required for this SDG.

Manual Integrations
Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD8A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide I)
ECD8A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticide II)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Andy Whitlock Date: 7-17-2009

Roadmap for LANL 09-2499 PCB

This roadmap was analyzed by jen01212 on 07-01-2009, 14:31.
This roadmap was reviewed by jim01140 on 07-02-2009, 09:46.
This roadmap was packaged by yml on 07-17-2009, 08:40.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/027f2701.d	232507001	sample	30-JUN-2009	16:56	09-2499.sub	CAMO-09-6519	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/028f2801.d	232507002	sample	30-JUN-2009	17:12	09-2499.sub	CAMO-09-6518	5.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/029f2901.d	232507003	sample	30-JUN-2009	17:29	09-2499.sub	CAMO-09-6527	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/030f3001.d	232507004	sample	30-JUN-2009	17:45	09-2499.sub	CAMO-09-6529	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/031f3101.d	232507005	sample	30-JUN-2009	18:02	09-2499.sub	CAMO-09-6528	5.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/032f3201.d	232507006	sample	30-JUN-2009	18:18	09-2499.sub	CAMO-09-6531	5.00000	881260	UPLOAD BOTH, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/027b2701.d	232507001	sample	30-JUN-2009	16:56	09-2499.sub	CAMO-09-6519	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/028b2801.d	232507002	sample	30-JUN-2009	17:12	09-2499.sub	CAMO-09-6518	5.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/029b2901.d	232507003	sample	30-JUN-2009	17:29	09-2499.sub	CAMO-09-6527	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/030b3001.d	232507004	sample	30-JUN-2009	17:45	09-2499.sub	CAMO-09-6529	1.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/031b3101.d	232507005	sample	30-JUN-2009	18:02	09-2499.sub	CAMO-09-6528	5.00000	881260	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd8a.i/063009.b/032b3201.d	232507006	sample	30-JUN-2009	18:18	09-2499.sub	CAMO-09-6531	5.00000	881260	UPLOAD BOTH, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/012f1201-3.d	1201871515	mb	30-JUN-2009	13:05	09-2499.sub	PBLK01	1.00000	881260	
☐	N	/chem/ecd8a.i/063009.b/013f1301-3.d	1201871516	lcs	30-JUN-2009	13:18	09-2499.sub	PBLK01LCS	1.00000	881260	

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd8a.i/063009.b/012b1201-3.d	1201871515	mb	30-JUN-2009	13:05	09-2499.sub	PBLK01	1.00000	881260	
☐	N	/chem/ecd8a.i/063009.b/013b1301-3.d	1201871516	lcs	30-JUN-2009	13:18	09-2499.sub	PBLK01LCS	1.00000	881260	

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6518	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 17:12	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	028f2801.d	**Column:**	1 CLP1	**Level:**	LOW
	028b2801.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	19.6	ug/kg	6.54	19.6	1
11104-28-2	Aroclor-1221	U	19.6	ug/kg	6.54	19.6	1
11141-16-5	Aroclor-1232	U	19.6	ug/kg	6.54	19.6	1
53469-21-9	Aroclor-1242	U	19.6	ug/kg	6.54	19.6	1
12672-29-6	Aroclor-1248	U	19.6	ug/kg	6.54	19.6	1
11097-69-1	Aroclor-1254	U	19.6	ug/kg	6.54	19.6	1
11096-82-5	Aroclor-1260	U	19.6	ug/kg	6.54	19.6	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6519	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 16:56	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	027f2701.d	**Column:**	1 CLP1	**Level:**	LOW
	027b2701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	4.21	ug/kg	1.40	4.21	1
11104–28–2	Aroclor–1221	U	4.21	ug/kg	1.40	4.21	1
11141–16–5	Aroclor–1232	U	4.21	ug/kg	1.40	4.21	1
53469–21–9	Aroclor–1242	U	4.21	ug/kg	1.40	4.21	1
12672–29–6	Aroclor–1248	U	4.21	ug/kg	1.40	4.21	1
11097–69–1	Aroclor–1254		11.9	ug/kg	1.40	4.21	2
11096–82–5	Aroclor–1260		7.90	ug/kg	1.40	4.21	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507003	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6527	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 17:29	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	029f2901.d	**Column:**	1 CLP1	**Level:**	LOW
	029b2901.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.54	ug/kg	1.18	3.54	1
11104-28-2	Aroclor-1221	U	3.54	ug/kg	1.18	3.54	1
11141-16-5	Aroclor-1232	U	3.54	ug/kg	1.18	3.54	1
53469-21-9	Aroclor-1242	U	3.54	ug/kg	1.18	3.54	1
12672-29-6	Aroclor-1248	U	3.54	ug/kg	1.18	3.54	1
11097-69-1	Aroclor-1254	U	3.54	ug/kg	1.18	3.54	1
11096-82-5	Aroclor-1260	U	3.54	ug/kg	1.18	3.54	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6528	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 18:02	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	031f3101.d	**Column:**	1 CLP1	**Level:**	LOW
	031b3101.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	17.7	ug/kg	5.89	17.7	1
11104–28–2	Aroclor–1221	U	17.7	ug/kg	5.89	17.7	1
11141–16–5	Aroclor–1232	U	17.7	ug/kg	5.89	17.7	1
53469–21–9	Aroclor–1242	U	17.7	ug/kg	5.89	17.7	1
12672–29–6	Aroclor–1248	U	17.7	ug/kg	5.89	17.7	1
11097–69–1	Aroclor–1254	U	17.7	ug/kg	5.89	17.7	1
11096–82–5	Aroclor–1260	U	17.7	ug/kg	5.89	17.7	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 17:45	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	030f3001.d	**Column:**	1 CLP1	**Level:**	LOW
	030b3001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.50	ug/kg	1.17	3.50	1
11104-28-2	Aroclor-1221	U	3.50	ug/kg	1.17	3.50	1
11141-16-5	Aroclor-1232	U	3.50	ug/kg	1.17	3.50	1
53469-21-9	Aroclor-1242	U	3.50	ug/kg	1.17	3.50	1
12672-29-6	Aroclor-1248	U	3.50	ug/kg	1.17	3.50	1
11097-69-1	Aroclor-1254		4.70	ug/kg	1.17	3.50	1
11096-82-5	Aroclor-1260		3.90	ug/kg	1.17	3.50	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6531	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 18:18	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	032f3201.d	**Column:**	1 CLP1	**Level:**	LOW
	032b3201.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	19.6	ug/kg	6.51	19.6	1
11104-28-2	Aroclor-1221	U	19.6	ug/kg	6.51	19.6	1
11141-16-5	Aroclor-1232	U	19.6	ug/kg	6.51	19.6	1
53469-21-9	Aroclor-1242	U	19.6	ug/kg	6.51	19.6	1
12672-29-6	Aroclor-1248	U	19.6	ug/kg	6.51	19.6	1
11097-69-1	Aroclor-1254	U	19.6	ug/kg	6.51	19.6	1
11096-82-5	Aroclor-1260	U	19.6	ug/kg	6.51	19.6	1

QUALITY CONTROL SUMMARY

PCB

Surrogate Recovery Report

SDG Number: 09–2499

Matrix Type: SOLID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1201871515	MB for batch 881259	76	71	85	77
1201871516	LCS for batch 881259	80	74	83	76
232507001	CAMO–09–6519	57	53	57	55
232507002	CAMO–09–6518	70 D	61 D	59 D	60 D
232507003	CAMO–09–6527	52	48	55	49
232507004	CAMO–09–6529	41	38	39	39
232507005	CAMO–09–6528	52 D	46 D	53 D	48 D
232507006	CAMO–09–6531	65 D	58 D	56 D	57 D

Surrogate	Acceptance Limits
4CMX = 4cmx	(34%–105%)
DCB = Decachlorobiphenyl	(33%–115%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2499
Client ID: LCS for batch 881259
Lab Sample ID: 1201871516
Instrument: ECD8A.I
Analyst: JAOC
Inj. Vol: 1 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 06/30/2009 13:18
Dilution: 1
Prep Batch ID: 881259
Batch ID: 881260

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	LCS	Aroclor-1016	33.3	0.0	24.1	72	41-110
11096-82-5	LCS	Aroclor-1260	33.3	0.0	32.0	96	48-110

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09–2403
Client ID: CAMO–09–10142MS
Lab Sample ID: 1201871517
Instrument: ECD8A.I
Analyst: JAOC
Inj. Vol: 1 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 5.6
Analysis Date: 06/30/2009 13:46
Prep Batch ID: 881259
Batch ID: 881260

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674–11–2	MS	Aroclor–1016	35.3	0.00	U	18.7	53	23–117
11096–82–5	MS	Aroclor–1260	35.3	0.00	U	25.7	73	27–116

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2403
Client ID: CAMO-09-10142MSD
Lab Sample ID: 1201871518
Instrument: ECD8A.I
Analyst: JAOC
Inj. Vol: 1 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 5.6
Analysis Date: 06/30/2009 14:03
Dilution: 1
Prep Batch ID: 881259
Batch ID: 881260

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674-11-2	MSD Aroclor-1016	35.3	0.00	U	18.9	54	23-117	1	0-30
11096-82-5	MSD Aroclor-1260	35.3	0.00	U	27.9	79	27-116	8	0-30

Method Blank Summary

SDG Number:	09-2499	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 881259	Instrument ID:	ECD8A.I_2 ECD8A.I_1	Data File:	012b1201-1.d 012f1201-1.d
Lab Sample ID:	1201871515				
Column:	CLP2 CLP1	Prep Date:	06/29/2009 23:24	Analyzed:	06/30/09 13:05
		Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 881259	1201871516	013f1301-1.d 013b1301-1.d	06/30/09	1318
04 CAMO-09-6519	232507001	027f2701.d 027b2701.d	06/30/09	1656
05 CAMO-09-6518	232507002	028f2801.d 028b2801.d	06/30/09	1712
06 CAMO-09-6527	232507003	029f2901.d 029b2901.d	06/30/09	1729
07 CAMO-09-6529	232507004	030f3001.d 030b3001.d	06/30/09	1745
08 CAMO-09-6528	232507005	031f3101.d 031b3101.d	06/30/09	1802
09 CAMO-09-6531	232507006	032f3201.d 032b3201.d	06/30/09	1818

SAMPLE DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507002	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6518	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 17:12	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	028f2801.d	**Column:**	1 CLP1	**Level:**	LOW
	028b2801.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	19.6	ug/kg	6.54	19.6	1
11104–28–2	Aroclor–1221	U	19.6	ug/kg	6.54	19.6	1
11141–16–5	Aroclor–1232	U	19.6	ug/kg	6.54	19.6	1
53469–21–9	Aroclor–1242	U	19.6	ug/kg	6.54	19.6	1
12672–29–6	Aroclor–1248	U	19.6	ug/kg	6.54	19.6	1
11097–69–1	Aroclor–1254	U	19.6	ug/kg	6.54	19.6	1
11096–82–5	Aroclor–1260	U	19.6	ug/kg	6.54	19.6	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/028f2801.d
Lab Smp Id: 232507002 Client Smp ID: CAMO-09-6518
Inj Date : 30-JUN-2009 17:12
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507002|5|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6518|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 28
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	15.17240	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	4495821	28.0911	5.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	3971720	23.6518	4.6	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/028f2801.d
Date : 30-JUN-2009 17:12
Client ID: CAHO-09-6518
Sample Info: 1232507002|5|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

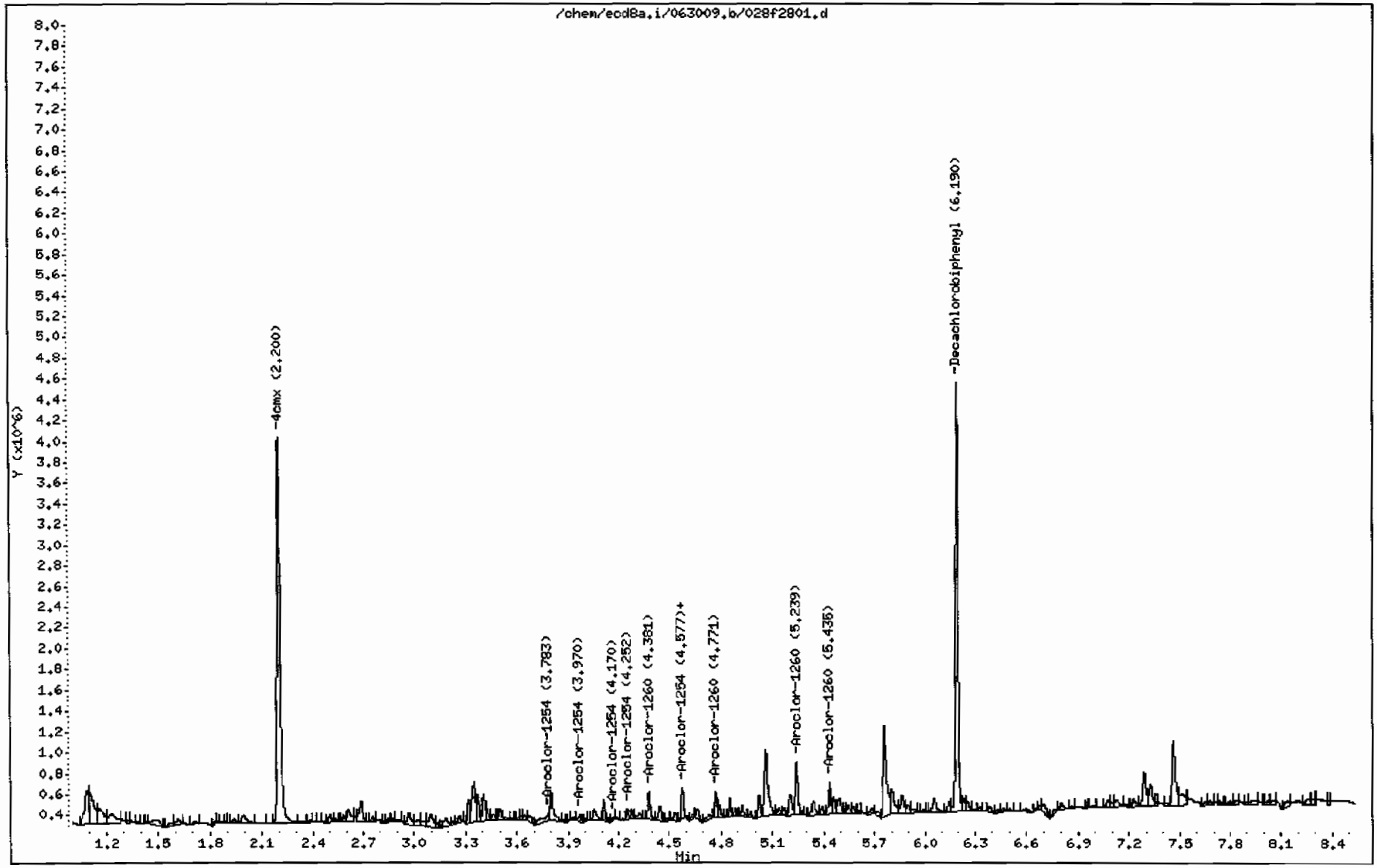

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/028b2801.d
Lab Smp Id: 232507002 Client Smp ID: CAMO-09-6518
Inj Date : 30-JUN-2009 17:12
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507002|5|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6518|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 28
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	15.17240	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	1411864	24.4754	4.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	1348428	23.9409	4.7	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/028b2801.d
Date : 30-JUN-2009 17:12
Client ID: CAMO-09-6518
Sample Info: 1232507002151
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

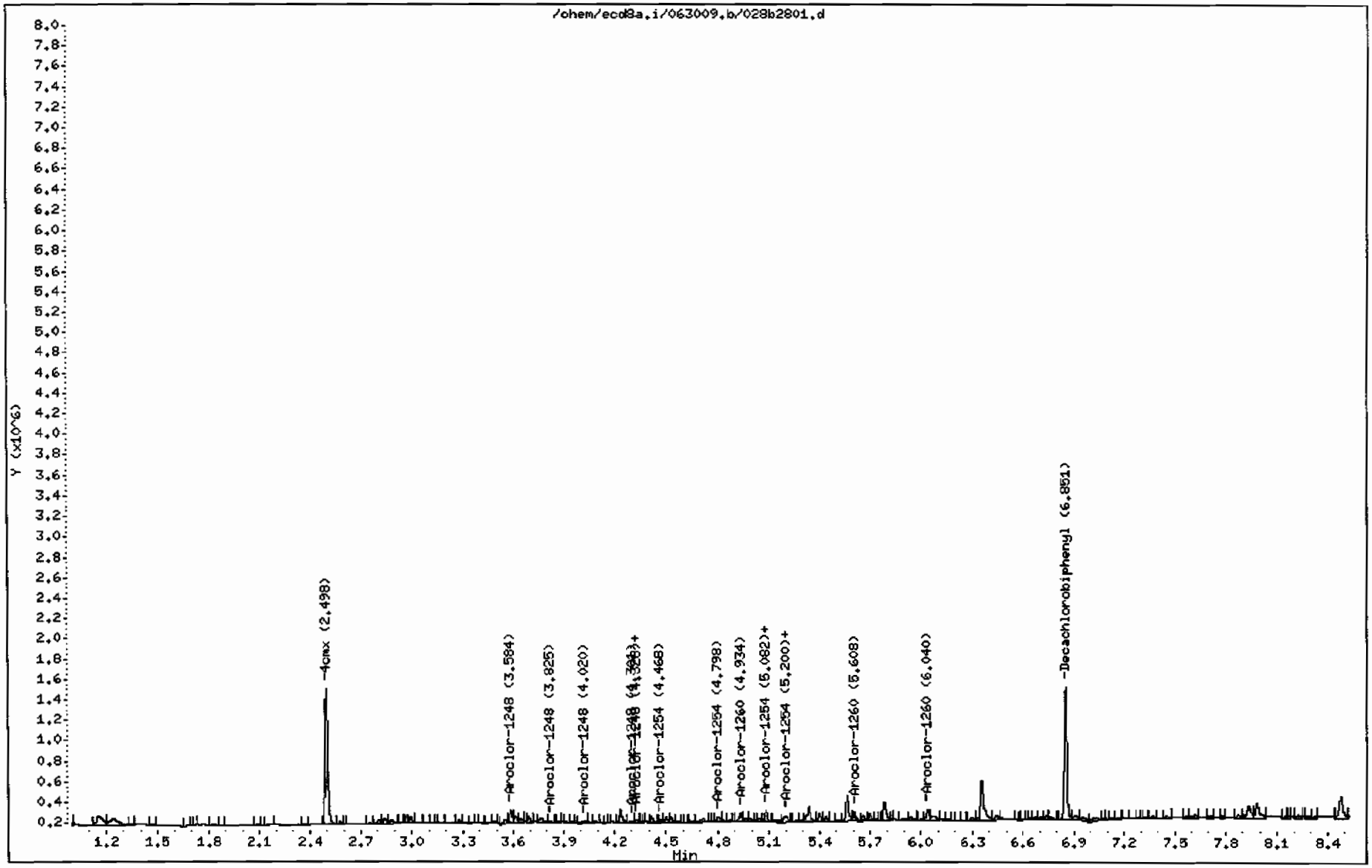

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507001	**Date Received:**	06/27/2009 09:05	**%Moisture:**	20.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6519	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 16:56	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	027f2701.d	**Column:**	1 CLP1	**Level:**	LOW
	027b2701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.21	ug/kg	1.40	4.21	1
11104-28-2	Aroclor-1221	U	4.21	ug/kg	1.40	4.21	1
11141-16-5	Aroclor-1232	U	4.21	ug/kg	1.40	4.21	1
53469-21-9	Aroclor-1242	U	4.21	ug/kg	1.40	4.21	1
12672-29-6	Aroclor-1248	U	4.21	ug/kg	1.40	4.21	1
11097-69-1	Aroclor-1254		11.9	ug/kg	1.40	4.21	2
11096-82-5	Aroclor-1260		7.90	ug/kg	1.40	4.21	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/027f2701.d
Lab Smp Id: 232507001 Client Smp ID: CAMO-09-6519
Inj Date : 30-JUN-2009 16:56
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507001|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6519|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	20.76340	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	18382284	114.858	4.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	19257872	114.682	4.8	80.00- 120.00	100.00(M)
6 Aroclor-1254					CAS #: 11097-69-1		
3.784	3.786	-0.002	1204370	249.649	10.5	80.00- 120.00	100.00(M)
3.970	3.972	-0.002	1338970	213.604	9.0	111.24- 151.24	111.18
4.166	4.168	-0.002	1150531	241.710	10.2	78.96- 118.96	95.53
4.252	4.254	-0.002	1762806	221.925	9.3	142.62- 182.62	146.37
4.577	4.581	-0.004	2043869	301.164	12.7	126.45- 166.45	169.70
Average of Peak Concentrations =					10.3		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.380	4.383	-0.003	1776189	249.173	10.5	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	2043869	202.594	8.5	122.43- 162.43	115.07
4.772	4.774	-0.002	2085403	181.622	7.6	138.51- 178.51	117.41
5.239	5.242	-0.003	1745256	130.287	5.5	171.28- 211.28	98.26
5.435	5.437	-0.002	1175430	179.408	7.5	73.47- 113.47	66.18
			Average of Peak Concentrations =		7.9		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/027f2701.d
Date : 30-JUN-2009 16:56
Client ID: CAMO-09-6519
Sample Info: 1232507001|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

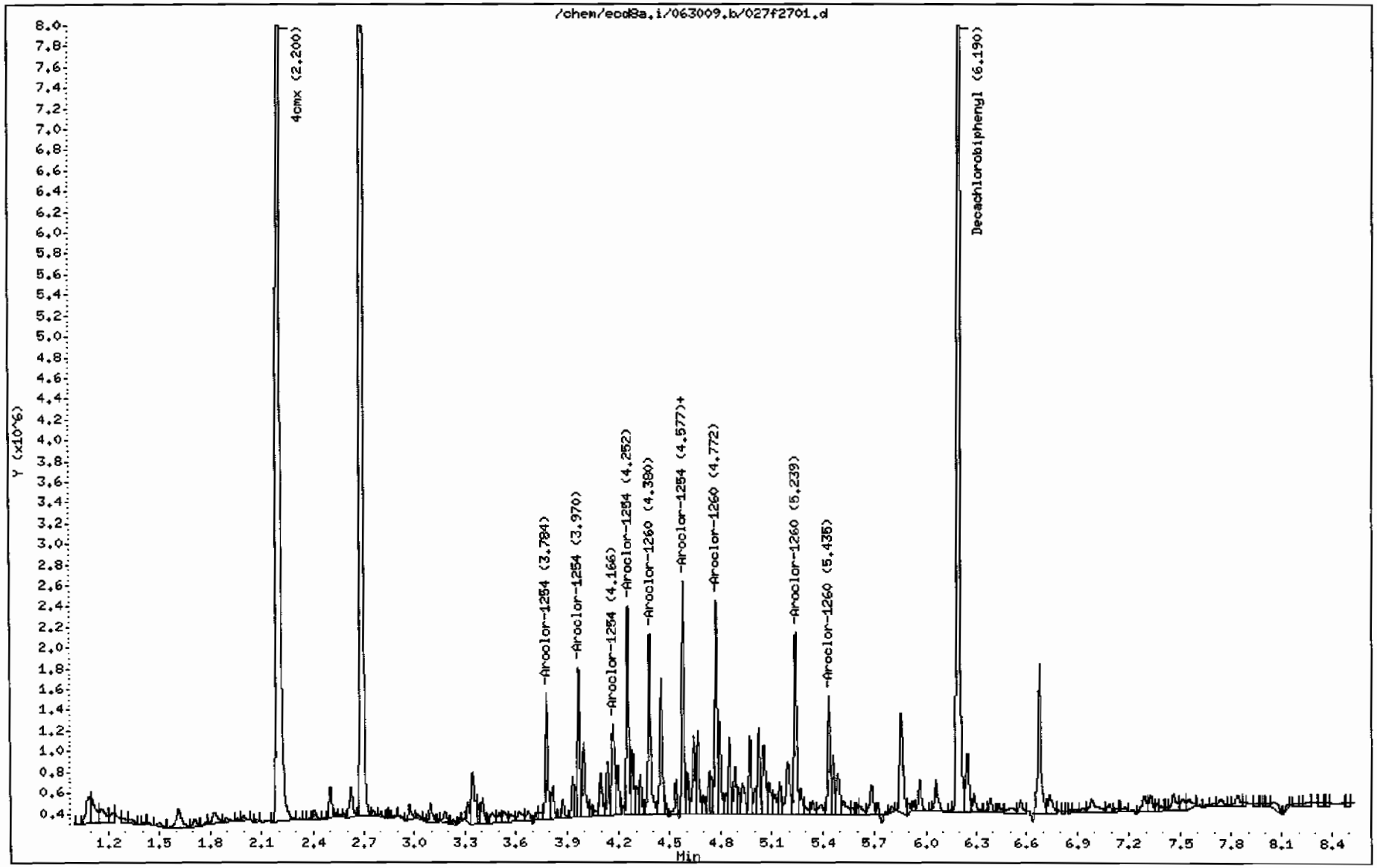

Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/027f2701.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:56
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6519

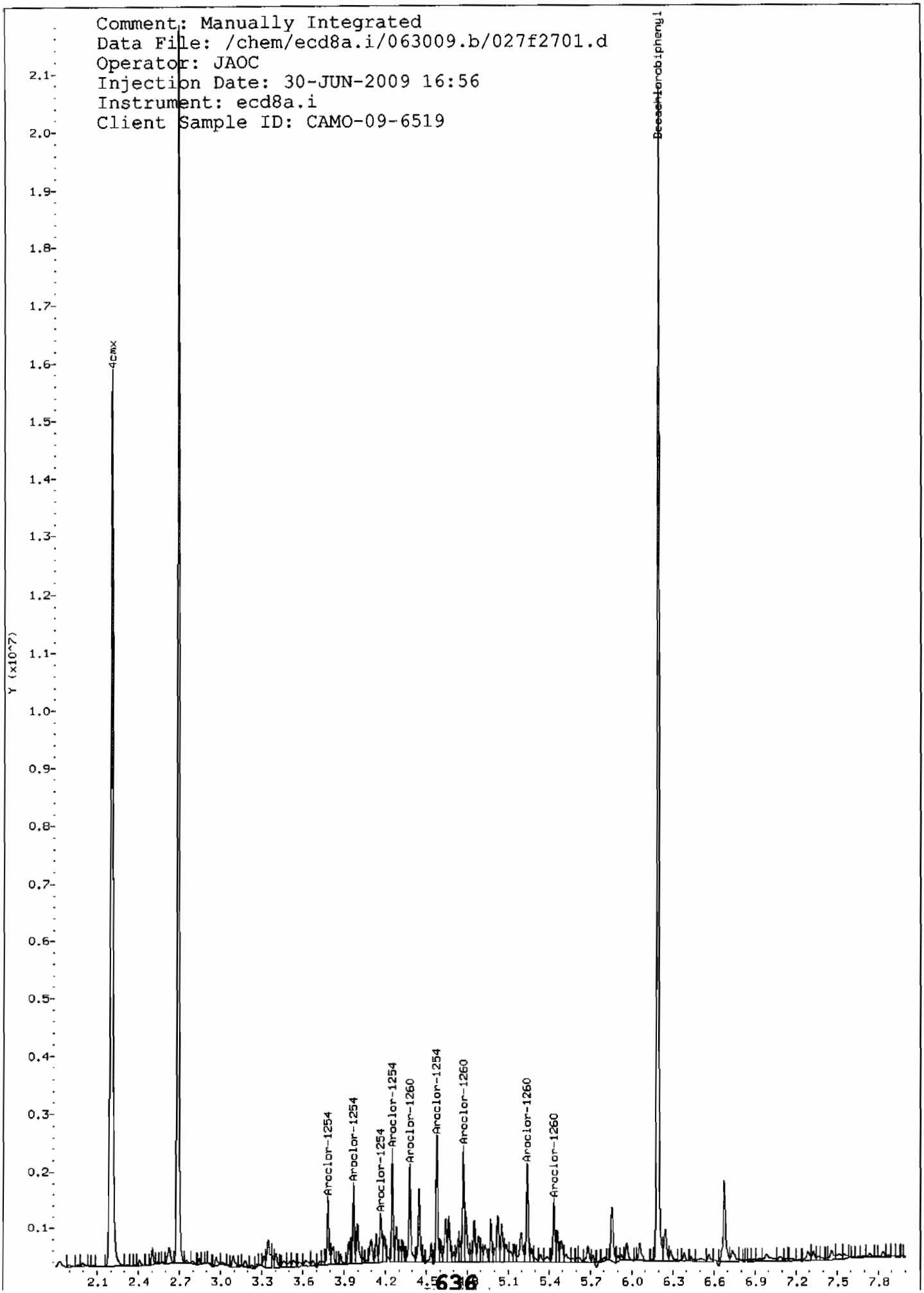

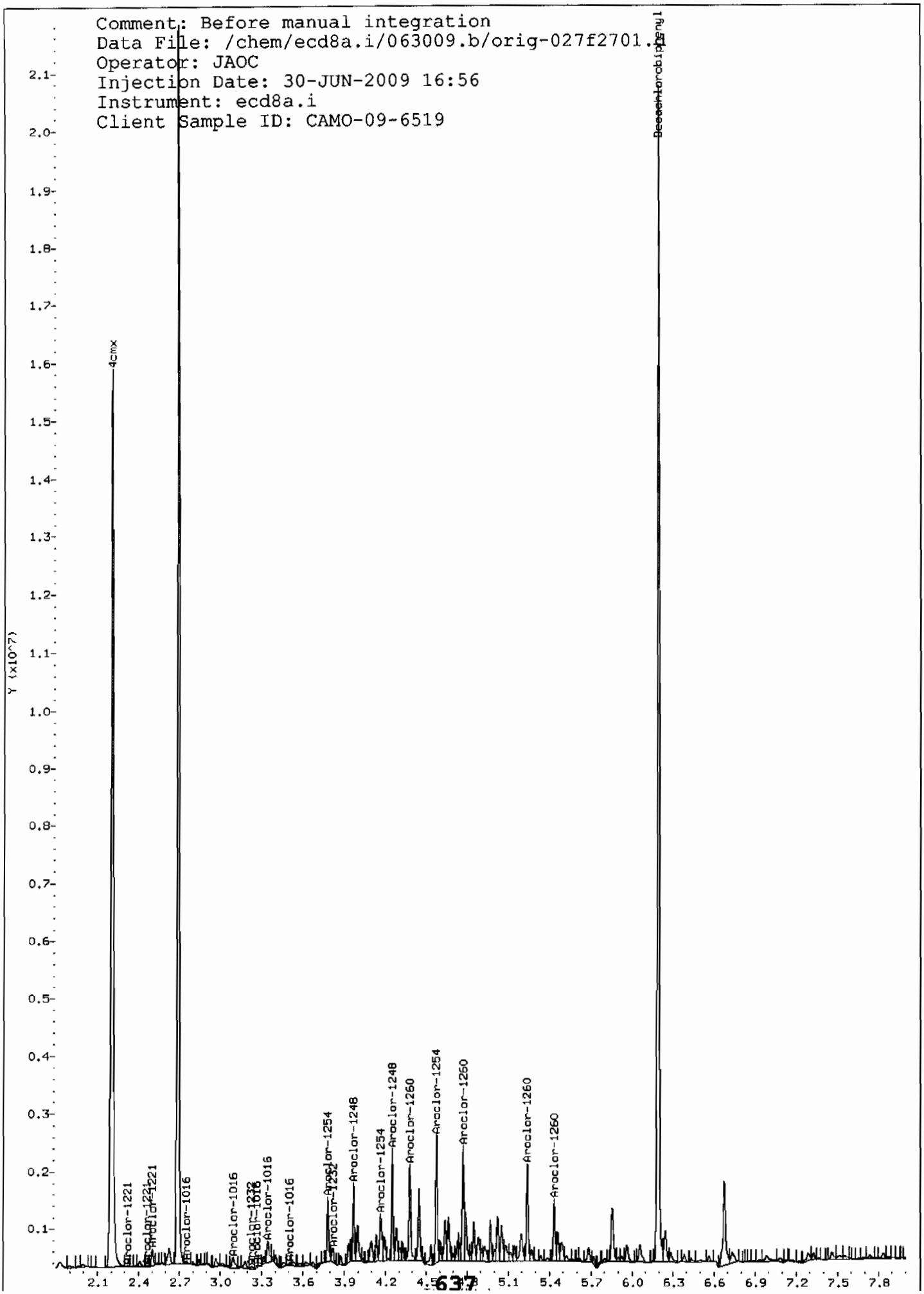
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-027f2701.
Operator: JAOC
Injection Date: 30-JUN-2009 16:56
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6519
Y (x10^7)
4cmx
Aroclor-1221
Aroclor-1016
Aroclor-1254
Aroclor-1248
Aroclor-1260
Decachlorobiphenyl

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/027b2701.d
Lab Smp Id: 232507001 Client Smp ID: CAMO-09-6519
Inj Date : 30-JUN-2009 16:56
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507001|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6519|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	20.76340	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	6165309	106.879	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	6232302	110.653	4.6	80.00- 120.00	100.00(M)
6 Aroclor-1254					CAS #: 11097-69-1		
4.329	4.331	-0.002	347606	165.730	7.0	80.00- 120.00	100.00(M)
4.466	4.468	-0.002	502783	217.717	9.2	88.71- 128.71	144.64
4.796	4.798	-0.002	708441	228.441	9.6	126.32- 166.32	203.81
5.082	5.084	-0.002	677044	418.800	17.6	61.65- 101.65	194.77
5.203	5.206	-0.003	720659	388.736	16.4	70.78- 110.78	207.32
			Average of Peak Concentrations =		11.9		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.934	4.936	-0.002	564117	195.735	8.2	80.00- 120.00	100.00(M)
5.082	5.083	-0.001	677044	195.863	8.2	104.06- 144.06	120.02
5.203	5.199	0.004	720659	228.162	9.6	91.97- 131.97	127.75
5.608	5.608	0.000	309735	130.796	5.5	64.43- 104.43	54.91
6.039	6.041	-0.002	455232	120.741	5.1	116.83- 156.83	80.70
Average of Peak Concentrations =					7.3		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/027b2701.d
Date : 30-JUN-2009 16:56
Client ID: CAMD-09-6519
Sample Info: |23250700|1|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i

Operator: JADC
Column diameter: 0.25

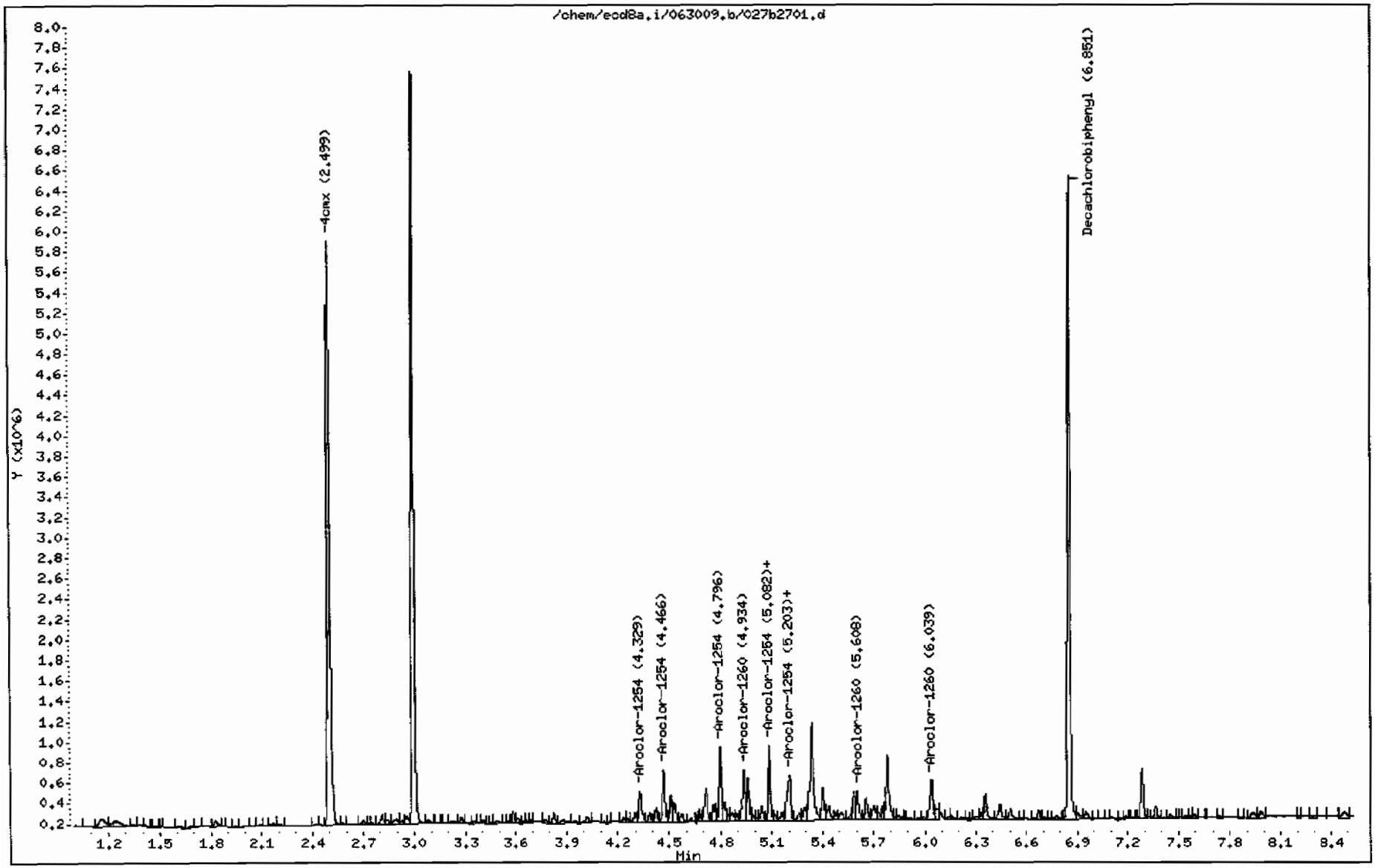

Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/027b2701.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:56
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6519

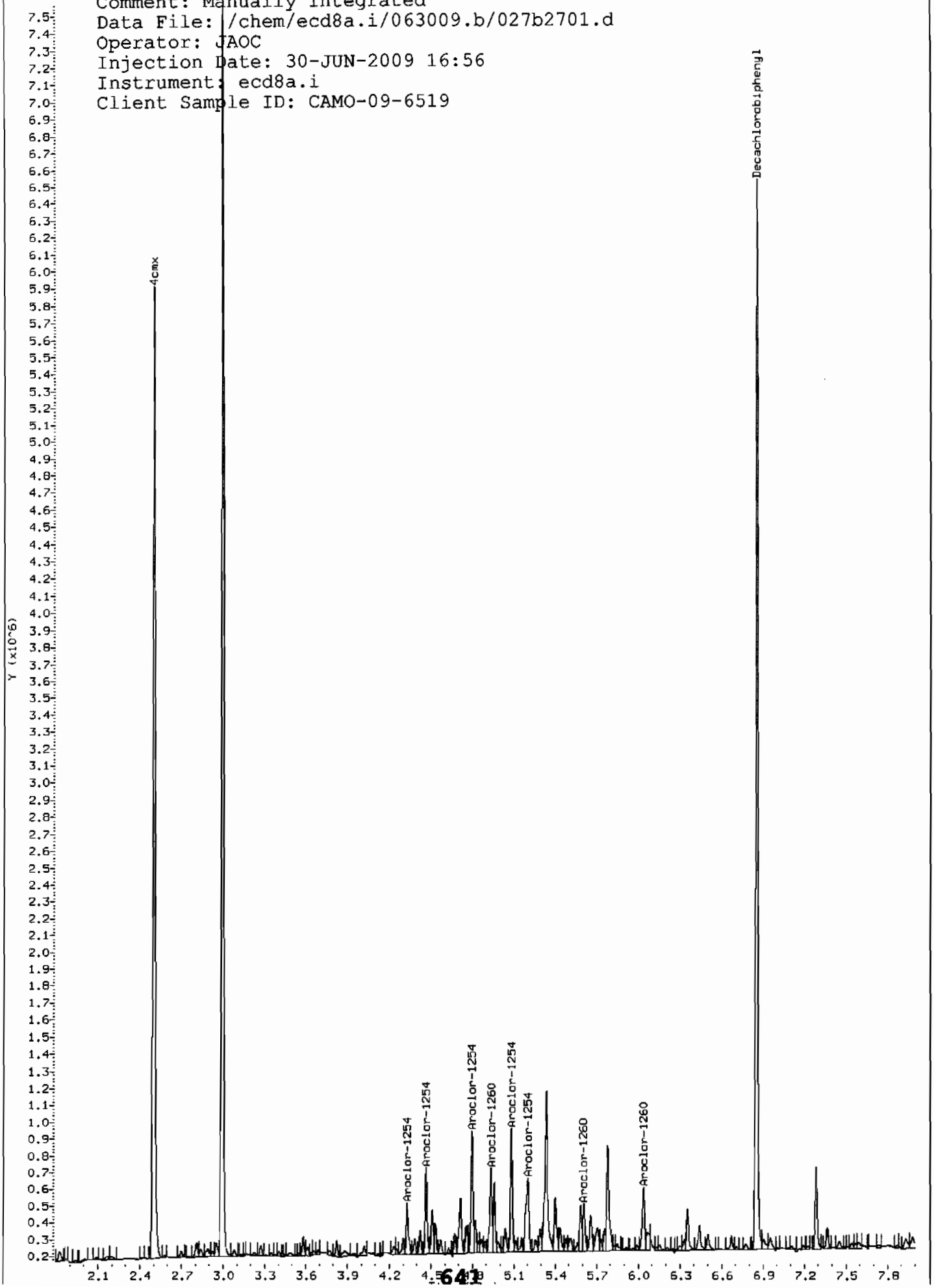

Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-027b2701.d
Operator: JAOC
Injection Date: 30-JUN-2009 16:56
Instrument: ecd8a.i
Client Sample ID: CAMO-09-6519

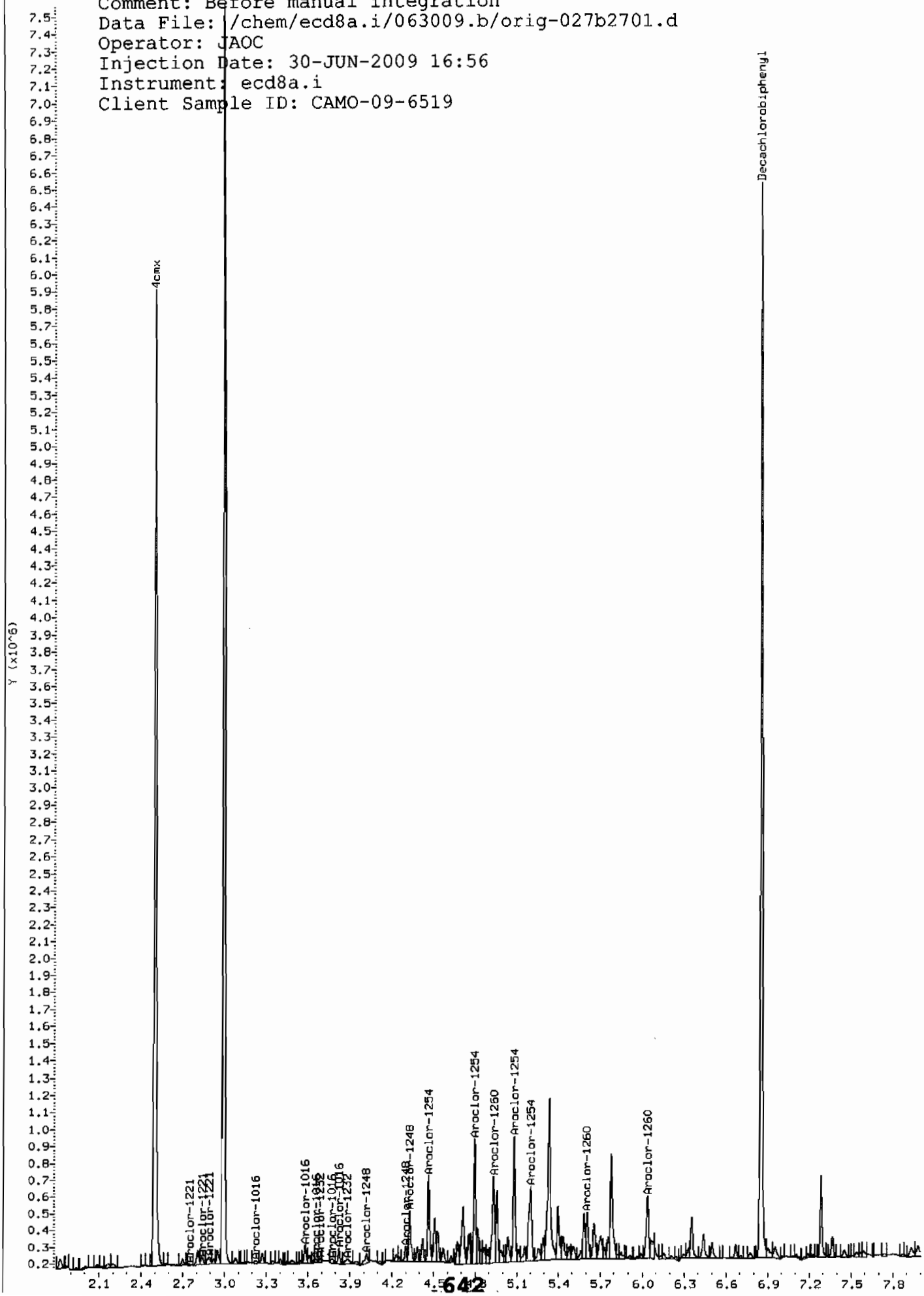

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507003	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6527	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 17:29	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.04 g	**Final Volume:**	1 mL
Data File:	029f2901.d	**Column:**	1 CLP1	**Level:**	LOW
	029b2901.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.54	ug/kg	1.18	3.54	1
11104–28–2	Aroclor–1221	U	3.54	ug/kg	1.18	3.54	1
11141–16–5	Aroclor–1232	U	3.54	ug/kg	1.18	3.54	1
53469–21–9	Aroclor–1242	U	3.54	ug/kg	1.18	3.54	1
12672–29–6	Aroclor–1248	U	3.54	ug/kg	1.18	3.54	1
11097–69–1	Aroclor–1254	U	3.54	ug/kg	1.18	3.54	1
11096–82–5	Aroclor–1260	U	3.54	ug/kg	1.18	3.54	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/029f2901.d
Lab Smp Id: 232507003 Client Smp ID: CAMO-09-6527
Inj Date : 30-JUN-2009 17:29
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507003|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6527|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 29
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.04000	Weight of sample extracted (g)
M	5.87300	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	16591982	103.671	3.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	18316750	109.077	3.8	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/029f2901.d
Date : 30-JUN-2009 17:29
Client ID: CAHO-09-6527
Sample Info: |232507003|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/029b2901.d
Lab Smp Id: 232507003 Client Smp ID: CAMO-09-6527
Inj Date : 30-JUN-2009 17:29
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507003|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6527|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 29
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.04000	Weight of sample extracted (g)
M	5.87300	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5532271	95.9047	3.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	5567901	98.8563	3.5	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/029b2901.d
Date : 30-JUN-2009 17:29
Client ID: CAMD-09-6527
Sample Info: 1232507003|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

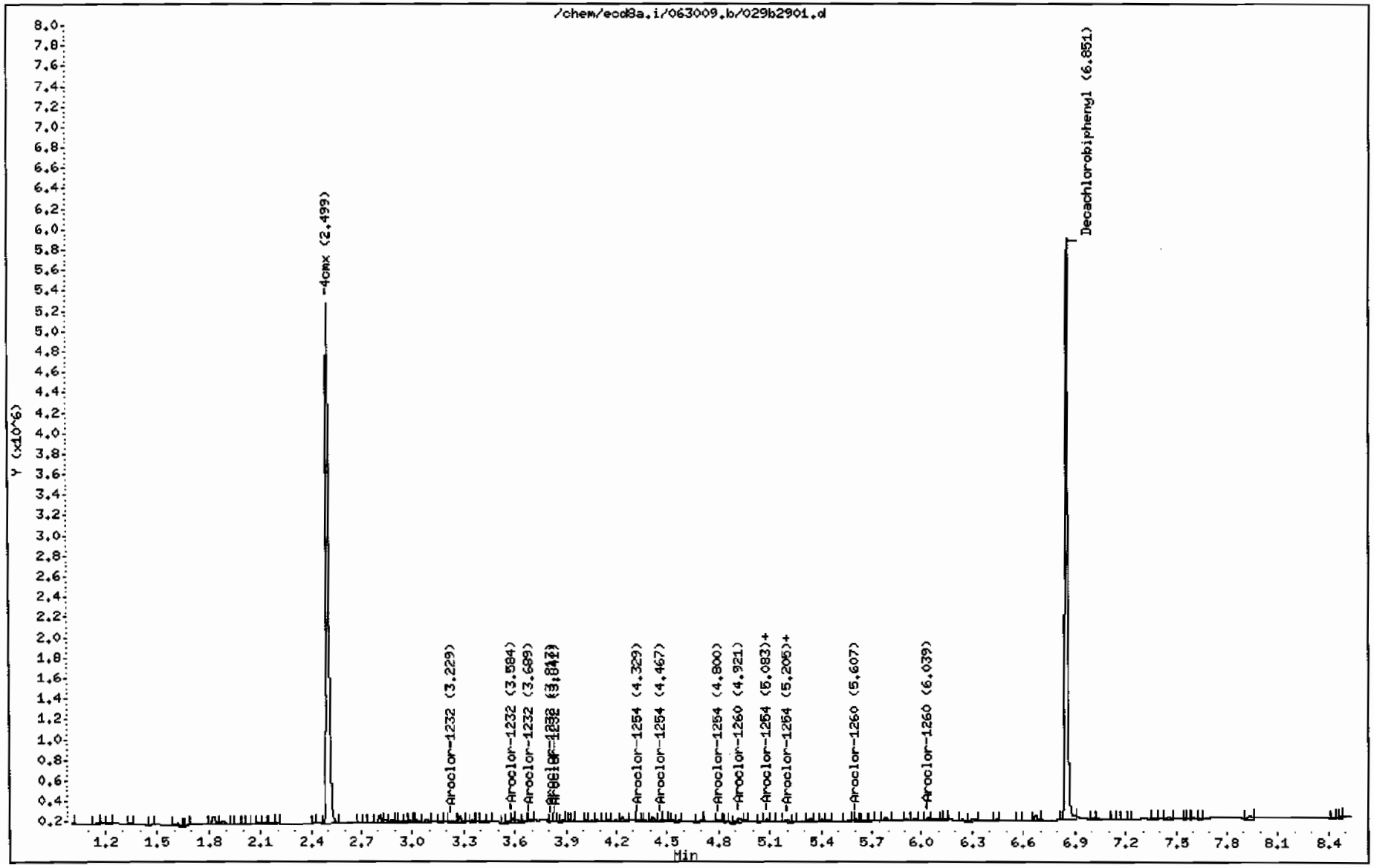

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507005	**Date Received:**	06/27/2009 09:05	**%Moisture:**	5.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO–09–6528	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 18:02	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	031f3101.d	**Column:**	1 CLP1	**Level:**	LOW
	031b3101.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	17.7	ug/kg	5.89	17.7	1
11104–28–2	Aroclor–1221	U	17.7	ug/kg	5.89	17.7	1
11141–16–5	Aroclor–1232	U	17.7	ug/kg	5.89	17.7	1
53469–21–9	Aroclor–1242	U	17.7	ug/kg	5.89	17.7	1
12672–29–6	Aroclor–1248	U	17.7	ug/kg	5.89	17.7	1
11097–69–1	Aroclor–1254	U	17.7	ug/kg	5.89	17.7	1
11096–82–5	Aroclor–1260	U	17.7	ug/kg	5.89	17.7	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/031f3101.d
Lab Smp Id: 232507005 Client Smp ID: CAMO-09-6528
Inj Date : 30-JUN-2009 18:02
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507005|5|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6528|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 31
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	5.75860	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	3316014	20.7194	3.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.191	6.193	-0.002	3581983	21.3309	3.8	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/031f3101.d
Date : 30-JUN-2009 18:02
Client ID: CAHO-09-6528
Sample Info: 12325070051SI
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

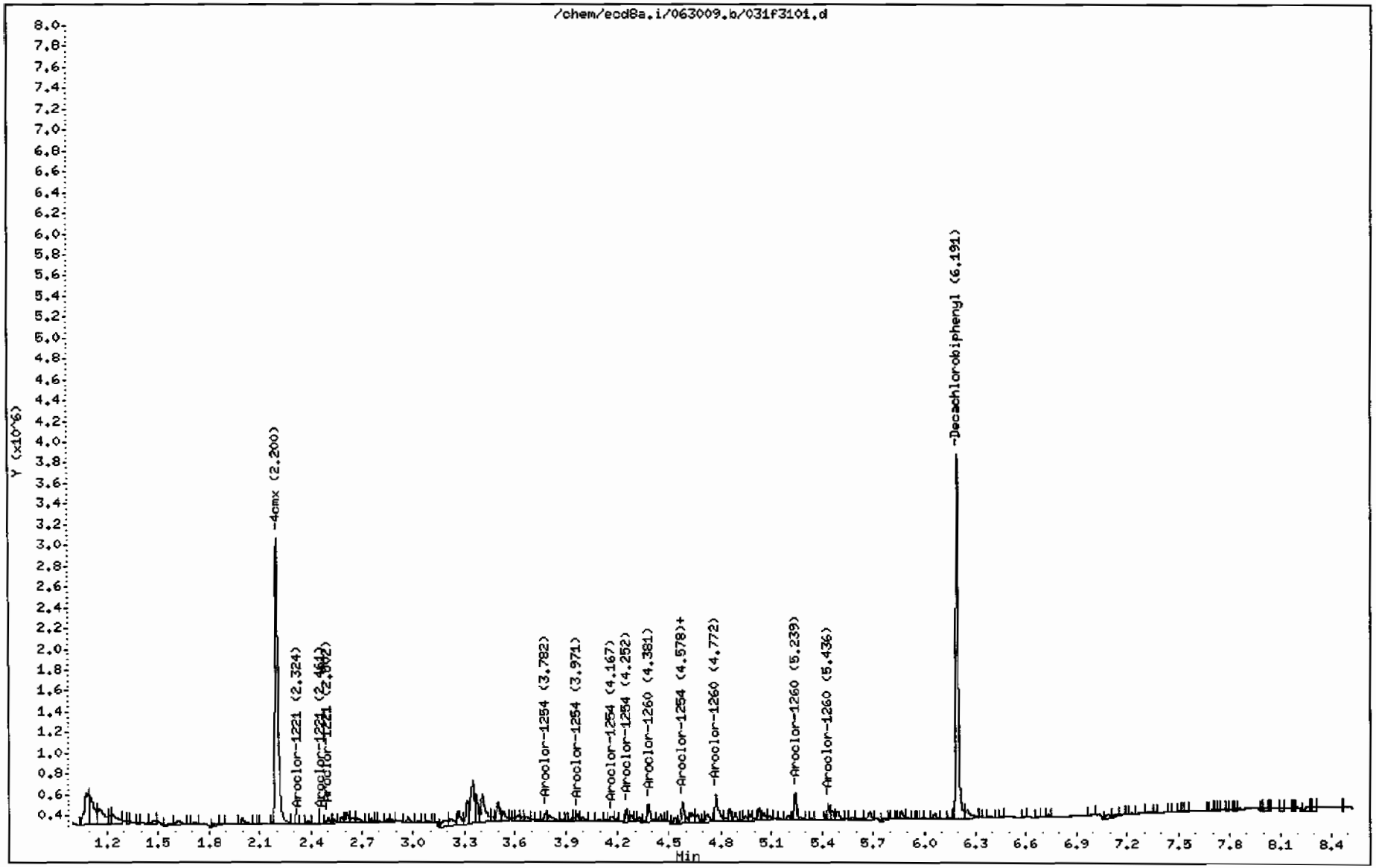

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/031b3101.d
Lab Smp Id: 232507005 Client Smp ID: CAMO-09-6528
Inj Date : 30-JUN-2009 18:02
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507005|5|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6528|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 31
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.01000	Weight of sample extracted (g)
M	5.75860	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	1065839	18.4769	3.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	1089926	19.3513	3.4	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/031b3101.d
Date : 30-JUN-2009 18:02
Client ID: CAMO-09-6528
Sample Info: 1232507005151
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

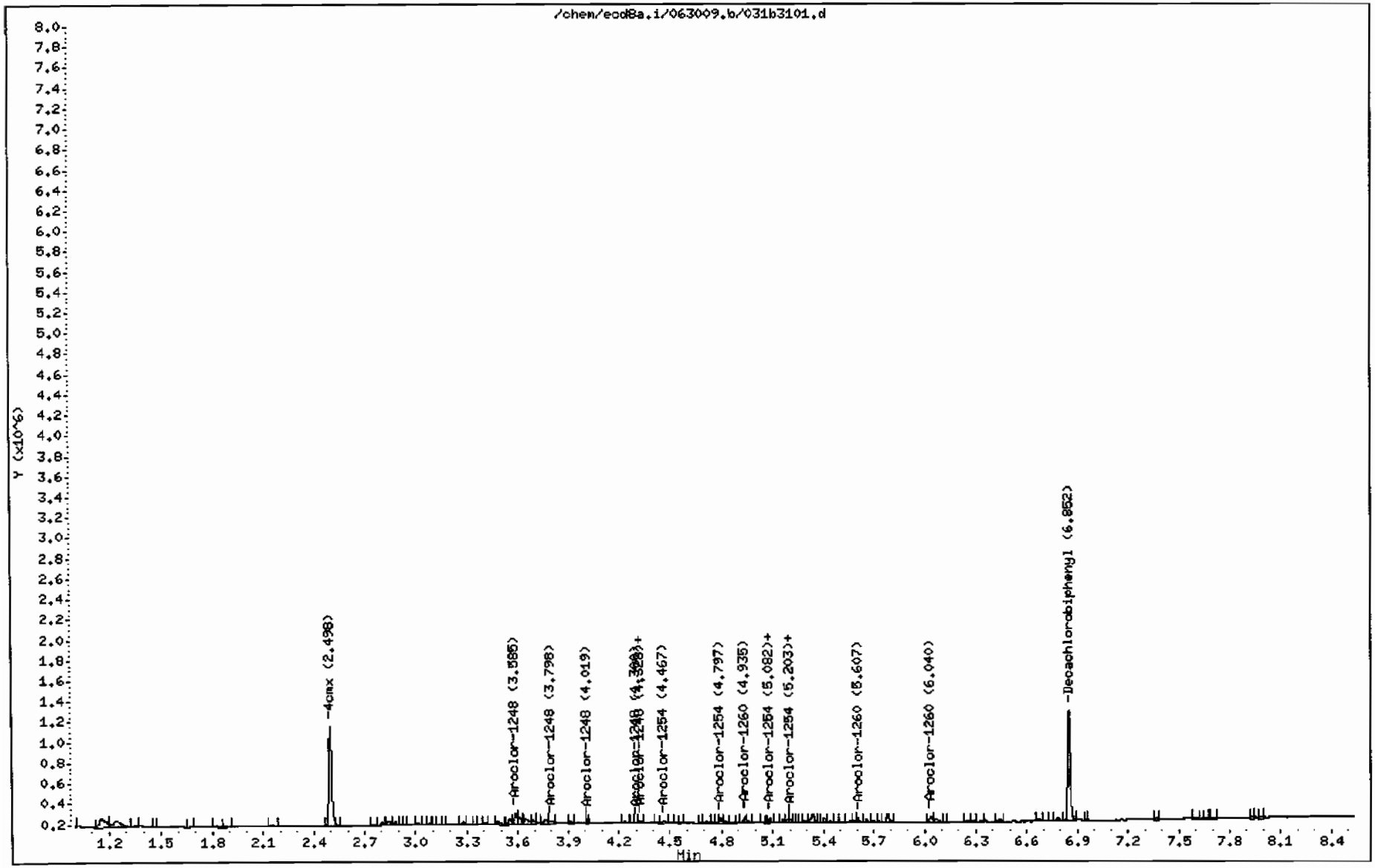

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507004	**Date Received:**	06/27/2009 09:05	**%Moisture:**	4.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6529	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 17:45	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	030f3001.d	**Column:**	1 CLP1	**Level:**	LOW
	030b3001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.50	ug/kg	1.17	3.50	1
11104-28-2	Aroclor-1221	U	3.50	ug/kg	1.17	3.50	1
11141-16-5	Aroclor-1232	U	3.50	ug/kg	1.17	3.50	1
53469-21-9	Aroclor-1242	U	3.50	ug/kg	1.17	3.50	1
12672-29-6	Aroclor-1248	U	3.50	ug/kg	1.17	3.50	1
11097-69-1	Aroclor-1254		4.70	ug/kg	1.17	3.50	1
11096-82-5	Aroclor-1260		3.90	ug/kg	1.17	3.50	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/030f3001.d
Lab Smp Id: 232507004 Client Smp ID: CAMO-09-6529
Inj Date : 30-JUN-2009 17:45
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507004|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6529|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 30
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	4.85390	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	13274795	82.9446	2.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.189	6.193	-0.004	12944296	77.0841	2.7	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.784	3.786	-0.002	669264	138.729	4.9	80.00- 120.00	100.00
3.970	3.972	-0.002	695042	110.879	3.9	111.24- 151.24	103.85
4.167	4.168	-0.001	630644	132.489	4.6	78.96- 118.96	94.23
4.252	4.254	-0.002	978978	123.246	4.3	142.62- 182.62	146.28
4.578	4.581	-0.003	1140737	168.088	5.9	126.45- 166.45	170.45
Average of Peak Concentrations =					4.7		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.380	4.383	-0.003	786970	110.400	3.9	80.00- 120.00	100.00
4.578	4.579	-0.001	1140737	113.073	4.0	122.43- 162.43	144.95
4.771	4.774	-0.003	1921532	167.350	5.9	138.51- 178.51	244.17
5.238	5.242	-0.004	933913	69.7188	2.4	171.28- 211.28	118.67
5.434	5.437	-0.003	572719	87.4154	3.1	73.47- 113.47	72.78
Average of Peak Concentrations =					3.9		

Data File: /chem/ecd8a.i/063009.b/030f3001.d
Date : 30-JUN-2009 17:46
Client ID: CAMD-09-6529
Sample Info: 1232507004111
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

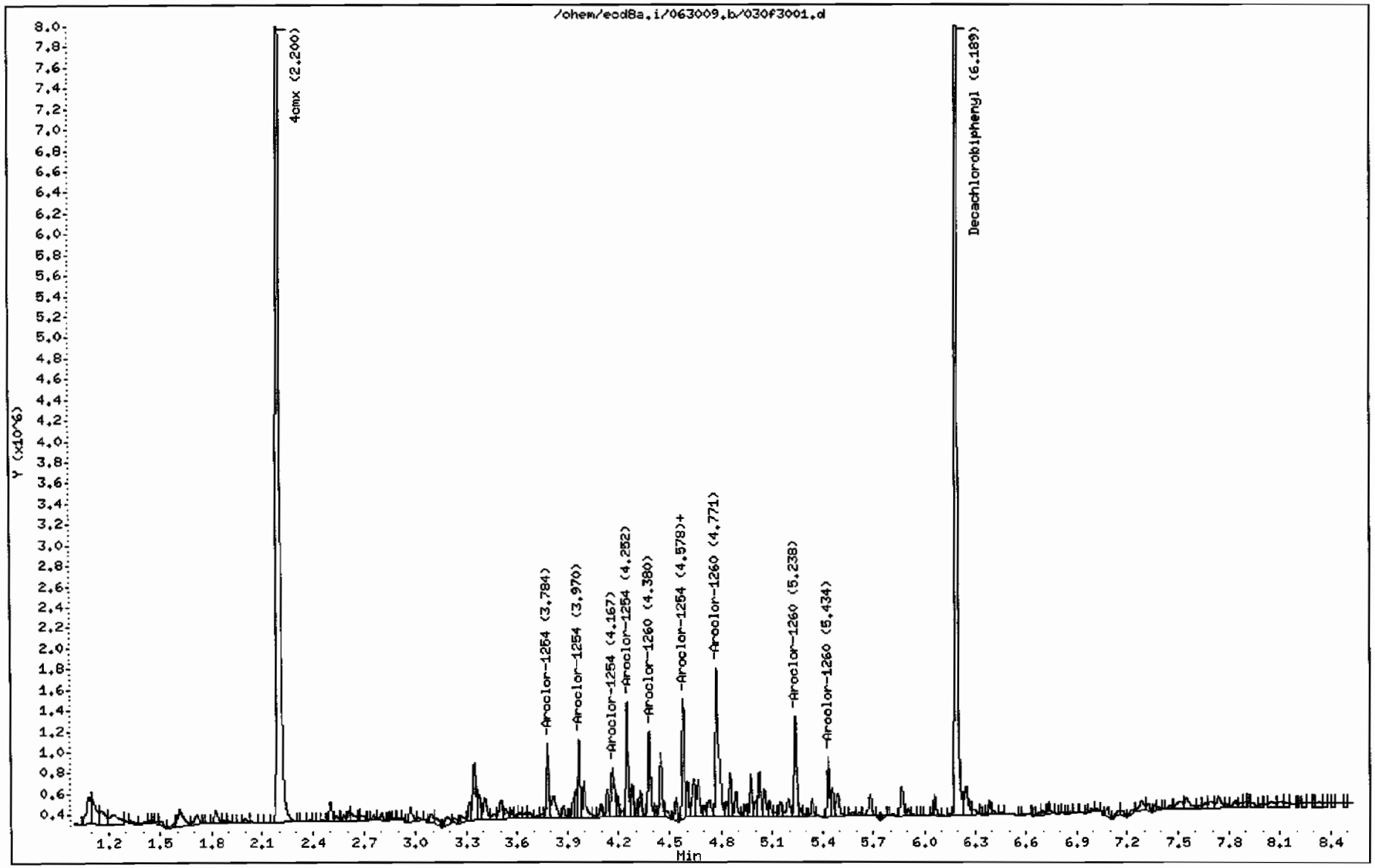

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/030b3001.d
Lab Smp Id: 232507004 Client Smp ID: CAMO-09-6529
Inj Date : 30-JUN-2009 17:45
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507004|1|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6529|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 30
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	4.85390	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	4424587	76.7024	2.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.850	6.853	-0.003	4348013	77.1976	2.7	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.328	4.331	-0.003	265920	126.784	4.4	80.00- 120.00	100.00
4.466	4.468	-0.002	253065	109.583	3.8	88.71- 128.71	95.17
4.796	4.798	-0.002	362660	116.942	4.1	126.32- 166.32	136.38
5.082	5.084	-0.002	275711	170.547	6.0	61.65- 101.65	103.68
5.203	5.206	-0.003	244322	131.791	4.6	70.78- 110.78	91.88
Average of Peak Concentrations =					4.6		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.934	4.936	-0.002	292619	101.532	3.6	80.00- 120.00	100.00(a)
5.082	5.083	-0.001	275711	79.7606	2.8	104.06- 144.06	94.22
5.203	5.199	0.004	244322	77.3530	2.7	91.97- 131.97	83.49
5.606	5.608	-0.002	139683	58.9857	2.1	64.43- 104.43	47.74
6.039	6.041	-0.002	231714	61.4573	2.2	116.83- 156.83	79.19
			Average of Peak Concentrations =		2.7		

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/ecd8a.i/063009.b/030b3001.d
Date : 30-JUN-2009 17:45
Client ID: CAMO-09-6529
Sample Info: |232507004|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

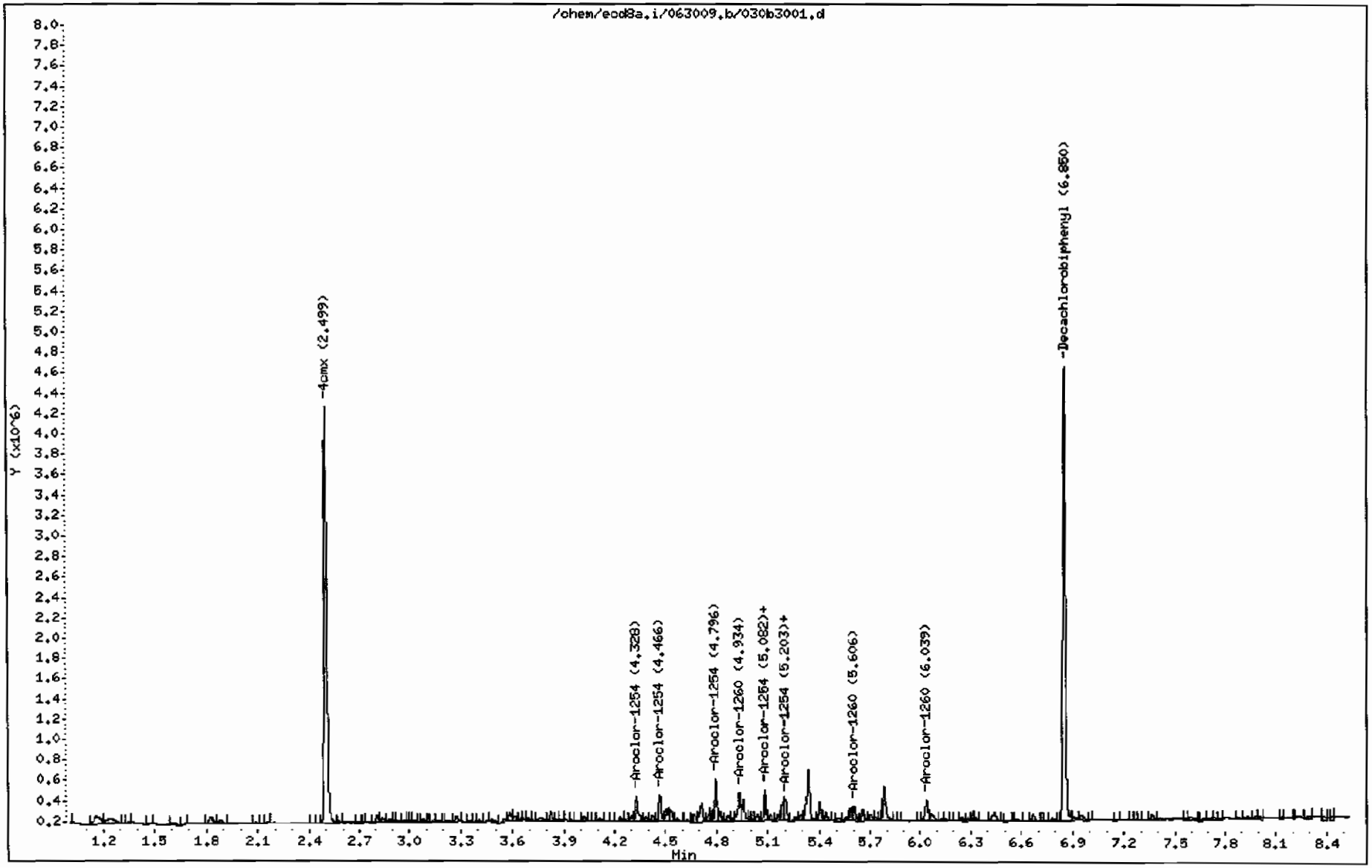

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499	**Date Collected:**	06/24/2009 12:00	**Matrix:**	R
Lab Sample ID:	232507006	**Date Received:**	06/27/2009 09:05	**%Moisture:**	15
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6531	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	5
Run Date:	06/30/2009 18:18	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	032f3201.d	**Column:**	1 CLP1	**Level:**	LOW
	032b3201.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	19.6	ug/kg	6.51	19.6	1
11104-28-2	Aroclor-1221	U	19.6	ug/kg	6.51	19.6	1
11141-16-5	Aroclor-1232	U	19.6	ug/kg	6.51	19.6	1
53469-21-9	Aroclor-1242	U	19.6	ug/kg	6.51	19.6	1
12672-29-6	Aroclor-1248	U	19.6	ug/kg	6.51	19.6	1
11097-69-1	Aroclor-1254	U	19.6	ug/kg	6.51	19.6	1
11096-82-5	Aroclor-1260	U	19.6	ug/kg	6.51	19.6	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/032f3201.d
Lab Smp Id: 232507006 Client Smp ID: CAMO-09-6531
Inj Date : 30-JUN-2009 18:18
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507006|5|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6531|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 32
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.08000	Weight of sample extracted (g)
M	14.98450	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	4177453	26.1019	5.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	3772285	22.4642	4.4	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/032f3201.d
Date : 30-JUN-2009 18:18
Client ID: CAMO-09-6531
Sample Info: |232507006151
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

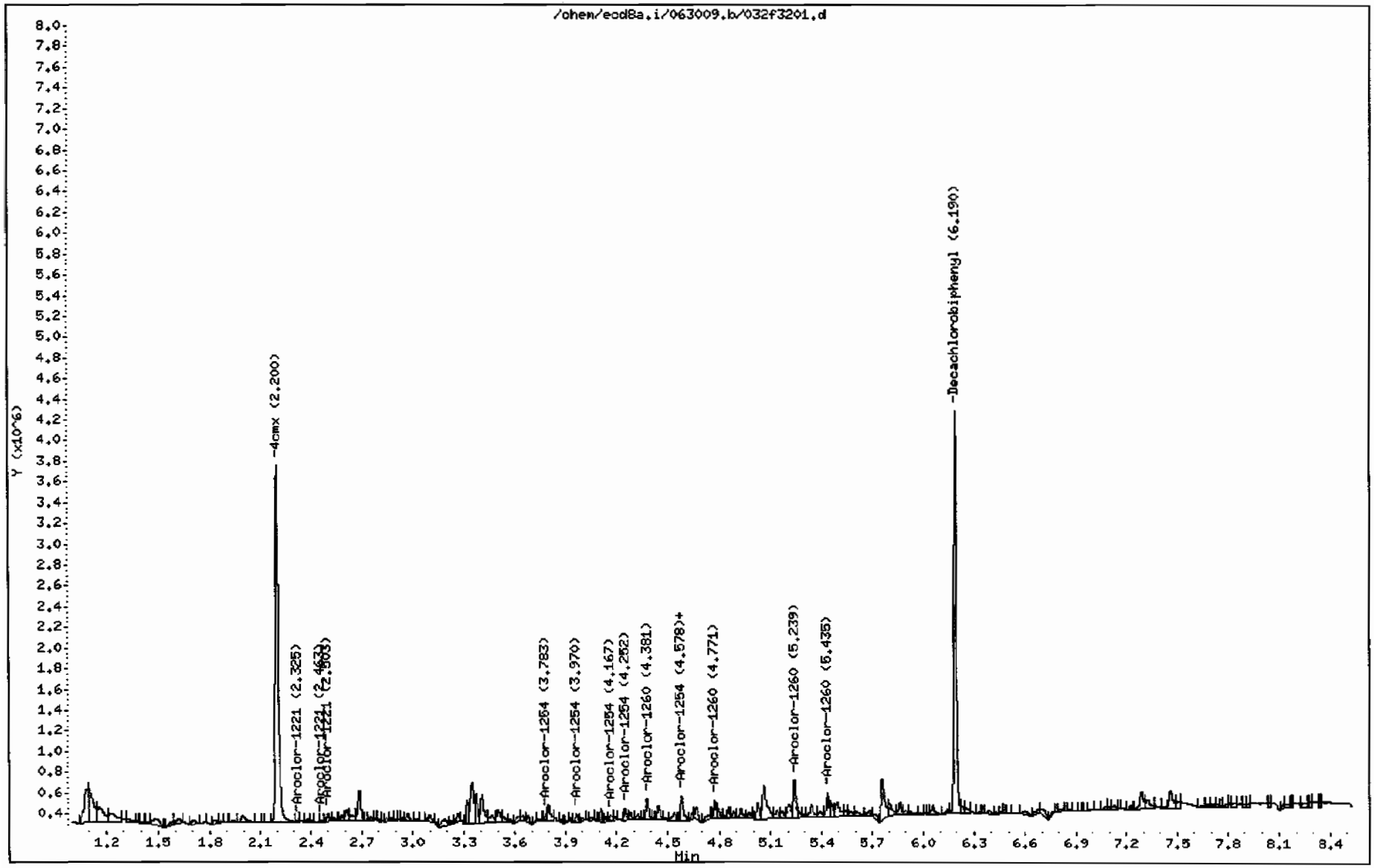

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/032b3201.d
Lab Smp Id: 232507006 Client Smp ID: CAMO-09-6531
Inj Date : 30-JUN-2009 18:18
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |232507006|5|
Misc Info : |ECD82P_1SF|881260|SVAF|LANL|SOIL|CAMO-09-6531|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 32
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.08000	Weight of sample extracted (g)
M	14.98450	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	1330369	23.0626	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	1277384	22.6796	4.4	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/032b3201.d

Date : 30-JUN-2009 18:18

Client ID: CAMO-09-6531

Sample Info: 1232507006151

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

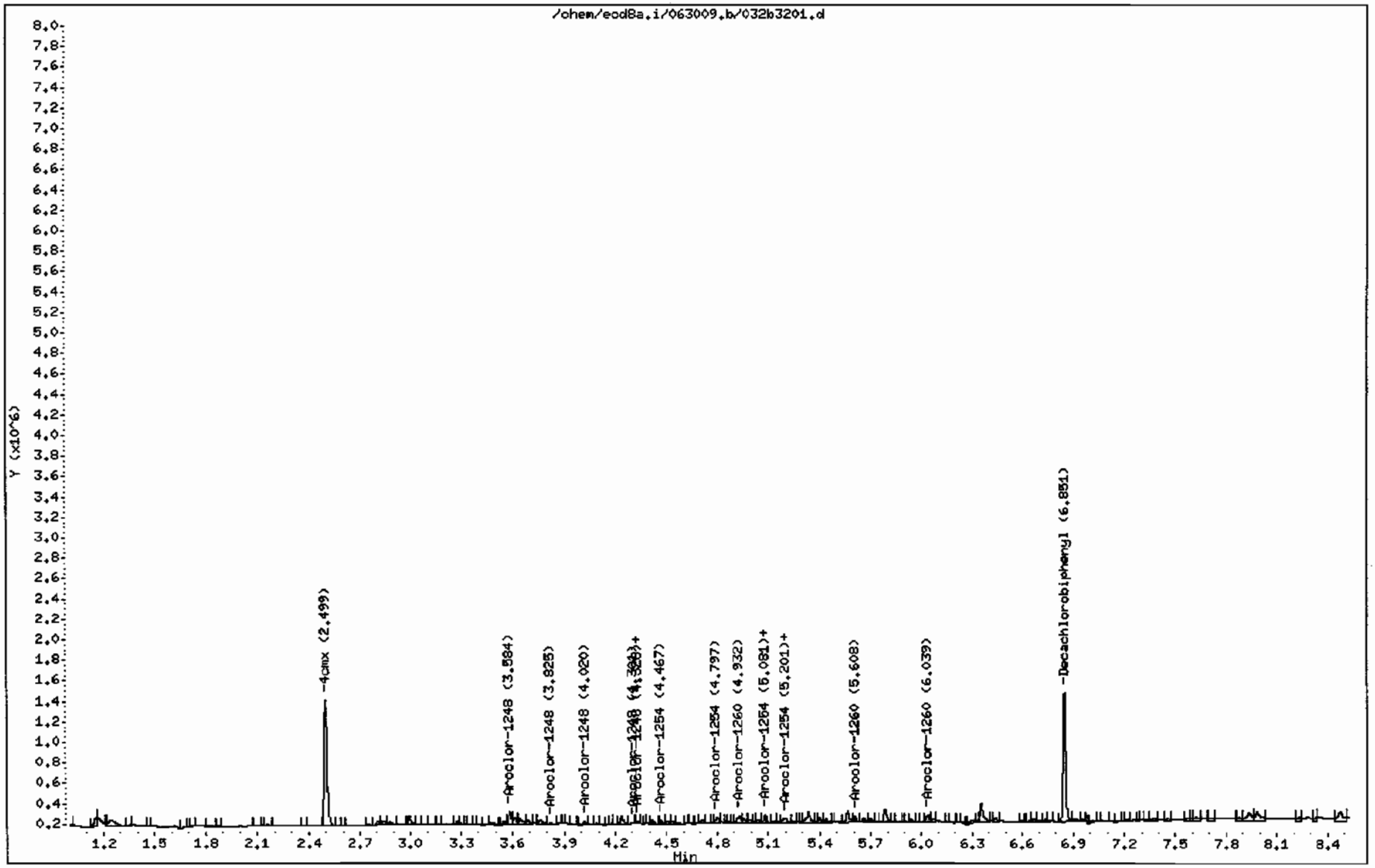

STANDARDS DATA

Report Date: 30-Jun-2009 14:24

Calibration History

Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Start Cal Date: 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
18-JUN-2009 11:27	AR1248	/chem/ecd8a.i/061809.b/014f1401.d
01-JUN-2009 14:05	AR1242	/chem/ecd8a.i/060109a.b/018f1801.d
18-JUN-2009 10:12	AR1254	/chem/ecd8a.i/061809.b/008f0801.d
16-JUN-2009 09:56	AR1660	/chem/ecd8a.i/061609.b/008f0801.d
Cal Level: 2 , Cal Amount: 250.00000		
18-JUN-2009 11:39	AR1248	/chem/ecd8a.i/061809.b/015f1501.d
01-JUN-2009 14:17	AR1242	/chem/ecd8a.i/060109a.b/019f1901.d
18-JUN-2009 10:25	AR1254	/chem/ecd8a.i/061809.b/009f0901.d
16-JUN-2009 10:09	AR1660	/chem/ecd8a.i/061609.b/009f0901.d
Cal Level: 3 , Cal Amount: 500.00000		
18-JUN-2009 11:51	AR1248	/chem/ecd8a.i/061809.b/016f1601.d
01-JUN-2009 14:30	AR1242	/chem/ecd8a.i/060109a.b/020f2001.d
18-JUN-2009 10:37	AR1254	/chem/ecd8a.i/061809.b/010f1001.d
16-JUN-2009 10:21	AR1660	/chem/ecd8a.i/061609.b/010f1001.d
Cal Level: 4 , Cal Amount: 1000.00000		
01-JUN-2009 19:51	DDT	/chem/ecd8a.i/060109a.b/046f4601.d
01-JUN-2009 19:39	AR1268	/chem/ecd8a.i/060109a.b/045f4501.d
01-JUN-2009 19:26	AR1262	/chem/ecd8a.i/060109a.b/044f4401.d
01-JUN-2009 19:14	AR1221	/chem/ecd8a.i/060109a.b/043f4301.d
01-JUN-2009 19:02	AR1232	/chem/ecd8a.i/060109a.b/042f4201.d
18-JUN-2009 12:04	AR1248	/chem/ecd8a.i/061809.b/017f1701.d
01-JUN-2009 14:42	AR1242	/chem/ecd8a.i/060109a.b/021f2101.d
18-JUN-2009 10:50	AR1254	/chem/ecd8a.i/061809.b/011f1101.d
16-JUN-2009 10:33	AR1660	/chem/ecd8a.i/061609.b/011f1101.d
Cal Level: 5 , Cal Amount: 4000.00000		
18-JUN-2009 12:16	AR1248	/chem/ecd8a.i/061809.b/018f1801.d
01-JUN-2009 14:54	AR1242	/chem/ecd8a.i/060109a.b/022f2201.d
18-JUN-2009 11:02	AR1254	/chem/ecd8a.i/061809.b/012f1201.d
16-JUN-2009 10:46	AR1660	/chem/ecd8a.i/061609.b/012f1201.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:28	AR1268	/chem/ecd8a.i/063009.b/009f0901.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:16	AR1262	/chem/ecd8a.i/063009.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:03	AR1221	/chem/ecd8a.i/063009.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:48	AR1232	/chem/ecd8a.i/063009.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:36	AR1248	/chem/ecd8a.i/063009.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:24	AR1242	/chem/ecd8a.i/063009.b/004f0401.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:11	AR1254	/chem/ecd8a.i/063009.b/003f0301.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 10:59	AR1660	/chem/ecd8a.i/063009.b/002f0201.d

Report Date: 30-Jun-2009 14:24

Calibration History

Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Start Cal Date: 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
18-JUN-2009 11:27	AR1248	/chem/ecd8a.i/061809.b/014b1401.d
01-JUN-2009 14:05	AR1242	/chem/ecd8a.i/060109a.b/018b1801.d
18-JUN-2009 10:12	AR1254	/chem/ecd8a.i/061809.b/008b0801.d
16-JUN-2009 09:56	AR1660	/chem/ecd8a.i/061609.b/008b0801.d
Cal Level: 2 , Cal Amount: 250.00000		
18-JUN-2009 11:39	AR1248	/chem/ecd8a.i/061809.b/015b1501.d
01-JUN-2009 14:17	AR1242	/chem/ecd8a.i/060109a.b/019b1901.d
18-JUN-2009 10:25	AR1254	/chem/ecd8a.i/061809.b/009b0901.d
16-JUN-2009 10:09	AR1660	/chem/ecd8a.i/061609.b/009b0901.d
Cal Level: 3 , Cal Amount: 500.00000		
18-JUN-2009 11:51	AR1248	/chem/ecd8a.i/061809.b/016b1601.d
01-JUN-2009 14:30	AR1242	/chem/ecd8a.i/060109a.b/020b2001.d
18-JUN-2009 10:37	AR1254	/chem/ecd8a.i/061809.b/010b1001.d
16-JUN-2009 10:21	AR1660	/chem/ecd8a.i/061609.b/010b1001.d
Cal Level: 4 , Cal Amount: 1000.00000		
01-JUN-2009 19:51	DDT	/chem/ecd8a.i/060109a.b/046b4601.d
01-JUN-2009 19:39	AR1268	/chem/ecd8a.i/060109a.b/045b4501.d
01-JUN-2009 19:26	AR1262	/chem/ecd8a.i/060109a.b/044b4401.d
01-JUN-2009 19:14	AR1221	/chem/ecd8a.i/060109a.b/043b4301.d
01-JUN-2009 19:02	AR1232	/chem/ecd8a.i/060109a.b/042b4201.d
18-JUN-2009 12:04	AR1248	/chem/ecd8a.i/061809.b/017b1701.d
01-JUN-2009 14:42	AR1242	/chem/ecd8a.i/060109a.b/021b2101.d
18-JUN-2009 10:50	AR1254	/chem/ecd8a.i/061809.b/011b1101.d
16-JUN-2009 10:33	AR1660	/chem/ecd8a.i/061609.b/011b1101.d
Cal Level: 5 , Cal Amount: 4000.00000		
18-JUN-2009 12:16	AR1248	/chem/ecd8a.i/061809.b/018b1801.d
01-JUN-2009 14:54	AR1242	/chem/ecd8a.i/060109a.b/022b2201.d
18-JUN-2009 11:02	AR1254	/chem/ecd8a.i/061809.b/012b1201.d
16-JUN-2009 10:46	AR1660	/chem/ecd8a.i/061609.b/012b1201.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:28	AR1268	/chem/ecd8a.i/063009.b/009b0901.d

30-JUN-2009 12:16	AR1262	/chem/ecd8a.i/063009.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 12:03	AR1221	/chem/ecd8a.i/063009.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:48	AR1232	/chem/ecd8a.i/063009.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:36	AR1248	/chem/ecd8a.i/063009.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:24	AR1242	/chem/ecd8a.i/063009.b/004b0401.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 11:11	AR1254	/chem/ecd8a.i/063009.b/003b0301.d
Ccal Level: 4 , Ccal Amount: 1000		
30-JUN-2009 10:59	AR1660	/chem/ecd8a.i/063009.b/002b0201.d

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 30-Jun-2009 14:15 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	758.000000
Initial:End Threshold	379.000000
Initial:Area Threshold	734.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	1.500000
6.500:Bunch Factor	2.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.762	2.732-2.792	5.767e+03
	3.112	3.082-3.142	7.225e+03
	3.256	3.226-3.286	2.909e+03
	3.365	3.335-3.395	2.753e+03
	3.510	3.480-3.540	3.629e+03
2 Aroclor-1221	2.347	2.317-2.377	1.552e+03
	2.461	2.431-2.491	8.835e+02
	2.493	2.463-2.523	3.730e+03
3 Aroclor-1232	2.762	2.732-2.792	2.534e+03
	3.113	3.083-3.143	3.242e+03
	3.210	3.180-3.240	2.139e+03
	3.511	3.481-3.541	1.547e+03
	3.817	3.787-3.847	1.317e+03
4 Aroclor-1242	2.762	2.732-2.792	4.058e+03
	3.113	3.083-3.143	4.963e+03
	3.257	3.227-3.287	1.993e+03
	3.349	3.319-3.379	1.776e+03
	3.511	3.481-3.541	2.575e+03
5 Aroclor-1248	3.112	3.082-3.142	3.101e+03
	3.348	3.318-3.378	3.691e+03
	3.511	3.481-3.541	4.716e+03
	3.975	3.945-4.005	4.121e+03
	4.255	4.225-4.285	3.182e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	3.786	3.756-3.816	4.824e+03
		3.972	3.942-4.002	6.268e+03
		4.168	4.138-4.198	4.760e+03
		4.254	4.224-4.284	7.943e+03
		4.581	4.551-4.611	6.787e+03
	7 Aroclor-1260	4.383	4.353-4.413	7.128e+03
		4.579	4.549-4.609	1.009e+04
		4.774	4.744-4.804	1.148e+04
		5.242	5.212-5.272	1.340e+04
		5.437	5.407-5.467	6.552e+03
	8 Aroclor-1262	4.384	4.354-4.414	4.497e+03
		4.580	4.550-4.610	7.643e+03
		4.855	4.825-4.885	1.033e+04
		5.026	4.996-5.056	6.240e+03
		5.242	5.212-5.272	2.010e+04
	9 Aroclor-1268	5.461	5.431-5.491	2.021e+04
		5.489	5.459-5.519	2.299e+04
		5.621	5.591-5.651	1.696e+04
		5.868	5.838-5.898	8.529e+03
		6.064	6.034-6.094	5.465e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	2.202	2.172-2.232	1.600e+05
$	12 Decachlorobiphenyl	6.193	6.163-6.223	1.679e+05
	13 4,4'-DDT	4.803	4.783-4.823	5.953e+04
	14 4,4'-DDD	4.610	4.590-4.630	1.238e+05
	15 4,4'-DDE	4.186	4.166-4.206	1.600e+05

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 30-Jun-2009 14:15 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	733.000000
Initial:End Threshold	366.500000
Initial:Area Threshold	522.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	2.000000
9.000:Bunch Factor	2.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	3.222	3.192-3.252	2.206e+03
	3.575	3.545-3.605	2.931e+03
	3.675	3.645-3.705	1.739e+03
	3.752	3.722-3.782	1.038e+03
	3.826	3.796-3.856	1.070e+03
2 Aroclor-1221	2.743	2.713-2.773	6.391e+02
	2.856	2.826-2.886	4.078e+02
	2.905	2.875-2.935	1.496e+03
3 Aroclor-1232	3.223	3.193-3.253	1.122e+03
	3.575	3.545-3.605	1.421e+03
	3.676	3.646-3.706	8.476e+02
	3.826	3.796-3.856	4.658e+02
	3.858	3.828-3.888	4.814e+02
4 Aroclor-1242	3.223	3.193-3.253	1.708e+03
	3.576	3.546-3.606	2.110e+03
	3.677	3.647-3.707	1.298e+03
	3.752	3.723-3.783	7.735e+02
	3.827	3.797-3.857	7.883e+02
5 Aroclor-1248	3.575	3.545-3.605	1.180e+03
	3.826	3.796-3.856	1.431e+03
	4.023	3.993-4.053	1.766e+03
	4.301	4.271-4.331	2.015e+03
	4.333	4.303-4.363	2.294e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	4.331	4.301-4.361	2.097e+03
		4.468	4.438-4.498	2.309e+03
		4.798	4.768-4.828	3.101e+03
		5.084	5.054-5.114	1.617e+03
		5.206	5.176-5.236	1.854e+03
	7 Aroclor-1260	4.936	4.906-4.966	2.882e+03
		5.083	5.053-5.113	3.457e+03
		5.199	5.169-5.229	3.159e+03
		5.608	5.578-5.638	2.368e+03
		6.041	6.011-6.071	3.770e+03
	8 Aroclor-1262	5.085	5.055-5.115	2.887e+03
		5.401	5.371-5.431	4.337e+03
		5.609	5.579-5.639	3.796e+03
		5.783	5.753-5.813	7.857e+03
		6.036	6.006-6.066	5.567e+03
	9 Aroclor-1268	6.035	6.005-6.065	8.266e+03
		6.068	6.038-6.098	8.012e+03
		6.246	6.216-6.276	6.337e+03
		6.443	6.413-6.473	2.993e+03
		6.672	6.642-6.702	1.951e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	2.499	2.469-2.529	5.769e+04
$	12 Decachlorobiphenyl	6.853	6.823-6.883	5.632e+04
	13 4,4'-DDT	5.344	5.324-5.364	1.533e+04
	14 4,4'-DDD	5.123	5.103-5.143	3.856e+04
	15 4,4'-DDE	4.712	4.691-4.731	5.854e+04

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd8a.i/061809.b/014f1401.d
Level 2: /chem/ecd8a.i/061809.b/015f1501.d
Level 3: /chem/ecd8a.i/061809.b/016f1601.d
Level 4: /chem/ecd8a.i/060109a.b/046f4601.d
Level 5: /chem/ecd8a.i/061809.b/018f1801.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	6382	6153	5903	5546	4852	5767	10.374
(2)	7612	7575	7256	6956	6725	7225	5.338
(3)	3028	3020	2943	2834	2722	2909	4.488
(4)	2996	2866	2782	2620	2501	2753	7.133
(5)	3855	3765	3658	3505	3360	3629	5.480
2 Aroclor-1221(1)	+++++	+++++	+++++	1552	+++++	1552	0.000
(2)	+++++	+++++	+++++	884	+++++	884	0.000
(3)	+++++	+++++	+++++	3730	+++++	3730	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	2534	+++++	2534	0.000
(2)	+++++	+++++	+++++	3242	+++++	3242	0.000
(3)	+++++	+++++	+++++	2139	+++++	2139	0.000
(4)	+++++	+++++	+++++	1547	+++++	1547	0.000
(5)	+++++	+++++	+++++	1317	+++++	1317	0.000
4 Aroclor-1242(1)	4799	4285	4051	3858	3298	4058	13.594
(2)	5376	5128	4935	4800	4573	4963	6.185
(3)	2187	2024	1984	1943	1830	1993	6.529
(4)	2101	1847	1735	1702	1495	1776	12.478
(5)	2954	2634	2536	2479	2273	2575	9.692
5 Aroclor-1248(1)	3403	3130	3072	3011	2890	3101	6.153
(2)	4054	3812	3643	3587	3362	3691	7.009
(3)	5032	4832	4709	4603	4406	4716	5.000
(4)	4199	4050	4133	4131	4094	4121	1.335
(5)	3259	3184	3247	3209	3012	3182	3.141
6 Aroclor-1254(1)	5068	4958	4838	4712	4546	4824	4.241
(2)	6310	6357	6231	6251	6194	6268	1.032
(3)	4574	4878	4790	4787	4770	4760	2.358
(4)	7476	7977	8002	8044	8218	7943	3.496
(5)	6713	7019	6939	6720	6541	6787	2.829

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
7 Aroclor-1260(1)	7252	7304	7236	7087	6763	7128	3.081
(2)	9666	10056	10152	10213	10356	10089	2.580
(3)	11208	11407	11564	11701	11531	11482	1.618
(4)	12350	13410	13592	13776	13850	13395	4.547
(5)	6187	6485	6648	6623	6815	6552	3.591
8 Aroclor-1262(1)	+++++	+++++	+++++	4497	+++++	4497	0.000
(2)	+++++	+++++	+++++	7643	+++++	7643	0.000
(3)	+++++	+++++	+++++	10334	+++++	10334	0.000
(4)	+++++	+++++	+++++	6240	+++++	6240	0.000
(5)	+++++	+++++	+++++	20101	+++++	20101	0.000
9 Aroclor-1268(1)	+++++	+++++	+++++	20211	+++++	20211	0.000
(2)	+++++	+++++	+++++	22988	+++++	22988	0.000
(3)	+++++	+++++	+++++	16959	+++++	16959	0.000
(4)	+++++	+++++	+++++	8529	+++++	8529	0.000
(5)	+++++	+++++	+++++	54649	+++++	54649	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 4,4'-DDT	+++++	+++++	+++++	59530	+++++	59530	0.000
14 4,4'-DDD	+++++	+++++	+++++	123779	+++++	123779	0.000
15 4,4'-DDE	+++++	+++++	+++++	160030	+++++	160030	0.000
$ 11 4cmx	163405	164186	162254	160617	149759	160044	3.689
$ 12 Decachlorobiphenyl	174419	173170	169471	166850	155711	167924	4.441

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd8a.i/061809.b/014b1401.d
Level 2: /chem/ecd8a.i/061809.b/015b1501.d
Level 3: /chem/ecd8a.i/061809.b/016b1601.d
Level 4: /chem/ecd8a.i/060109a.b/046b4601.d
Level 5: /chem/ecd8a.i/061809.b/018b1801.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	2354	2322	2239	2171	1943	2206	7.412
(2)	3013	3033	2968	2921	2719	2931	4.294
(3)	1838	1803	1751	1708	1595	1739	5.443
(4)	1076	1070	1043	1024	979	1038	3.769
(5)	1162	1111	1072	1038	970	1070	6.800
2 Aroclor-1221(1)	+++++	+++++	+++++	639	+++++	639	0.000
(2)	+++++	+++++	+++++	408	+++++	408	0.000
(3)	+++++	+++++	+++++	1496	+++++	1496	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	1122	+++++	1122	0.000
(2)	+++++	+++++	+++++	1421	+++++	1421	0.000
(3)	+++++	+++++	+++++	848	+++++	848	0.000
(4)	+++++	+++++	+++++	466	+++++	466	0.000
(5)	+++++	+++++	+++++	481	+++++	481	0.000
4 Aroclor-1242(1)	1987	1787	1698	1633	1432	1708	11.929
(2)	2309	2114	2133	2071	1921	2110	6.580
(3)	1488	1344	1282	1241	1137	1298	10.005
(4)	874	795	763	743	693	773	8.699
(5)	939	822	770	740	670	788	12.760
5 Aroclor-1248(1)	1246	1157	1192	1172	1136	1180	3.537
(2)	1568	1470	1429	1391	1295	1431	7.045
(3)	1893	1797	1762	1741	1635	1766	5.301
(4)	2119	2014	2009	2000	1931	2015	3.348
(5)	2414	2303	2295	2284	2171	2294	3.762
6 Aroclor-1254(1)	2236	2169	2093	2062	1927	2097	5.573
(2)	2413	2365	2312	2282	2175	2309	3.907
(3)	3072	3129	3135	3148	3022	3101	1.715
(4)	1650	1607	1604	1634	1588	1617	1.541
(5)	1860	1846	1817	1867	1880	1854	1.298

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2009 11:37
End Cal Date : 18-JUN-2009 12:16
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Cal Date : 30-Jun-2009 14:15 jen01212
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
7 Aroclor-1260(1)	2897	2953	2955	2898	2707	2882	3.531
(2)	3393	3515	3573	3519	3285	3457	3.374
(3)	3105	3221	3225	3197	3045	3159	2.529
(4)	2359	2409	2408	2394	2270	2368	2.471
(5)	3607	3812	3867	3865	3701	3770	3.008
8 Aroclor-1262(1)	+++++	+++++	+++++	2887	+++++	2887	0.000
(2)	+++++	+++++	+++++	4337	+++++	4337	0.000
(3)	+++++	+++++	+++++	3796	+++++	3796	0.000
(4)	+++++	+++++	+++++	7857	+++++	7857	0.000
(5)	+++++	+++++	+++++	5567	+++++	5567	0.000
9 Aroclor-1268(1)	+++++	+++++	+++++	8266	+++++	8266	0.000
(2)	+++++	+++++	+++++	8012	+++++	8012	0.000
(3)	+++++	+++++	+++++	6337	+++++	6337	0.000
(4)	+++++	+++++	+++++	2993	+++++	2993	0.000
(5)	+++++	+++++	+++++	19507	+++++	19507	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 4,4'-DDT	+++++	+++++	+++++	15331	+++++	15331	0.000
14 4,4'-DDD	+++++	+++++	+++++	38559	+++++	38559	0.000
15 4,4'-DDE	+++++	+++++	+++++	58538	+++++	58538	0.000
$ 11 4cmx	55520	58797	59142	59406	55559	57685	3.415
$ 12 Decachlorobiphenyl	58551	58238	56883	56068	51876	56323	4.763

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1059

Lab File ID: 002F0201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6330.009	0.01	9.8	15.0
(2)	7224.724	7760.134	0.01	7.4	15.0
(3)	2909.461	3163.944	0.01	8.7	15.0
(4)	2752.769	2944.428	0.01	7.0	15.0
(5)	3628.674	3972.822	0.01	9.5	15.0
Aroclor-1260	7128.341	7537.503	0.01	5.7	15.0
(2)	10088.517	10760.077	0.01	6.6	15.0
(3)	11482.117	12267.009	0.01	6.8	15.0
(4)	13395.429	14219.270	0.01	6.2	15.0
(5)	6551.697	6850.457	0.01	4.6	15.0
4cmx	160044.04	157059.35	0.01	-1.9	15.0
Decachlorobiphenyl	167924.32	162129.64	0.01	-3.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1059

Lab File ID: 002B0201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2205.647	0.01	-0.0	15.0
(2)	2930.861	2901.199	0.01	-1.0	15.0
(3)	1739.079	1721.686	0.01	-1.0	15.0
(4)	1038.126	1037.560	0.01	-0.0	15.0
(5)	1070.250	1054.433	0.01	-1.5	15.0
Aroclor-1260	2882.050	2835.211	0.01	-1.6	15.0
(2)	3456.730	3472.058	0.01	0.4	15.0
(3)	3158.535	3145.666	0.01	-0.4	15.0
(4)	2368.081	2347.820	0.01	-0.8	15.0
(5)	3770.327	3768.651	0.01	-0.0	15.0
4cmx	57685.085	51468.730	0.01	-10.8	15.0
Decachlorobiphenyl	56323.158	49750.070	0.01	-11.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1111

Lab File ID: 003F0301 Init. Calib. Date(s): 06/18/09 06/18/09

Heated Purge: (Y/N) N Init. Calib. Times: 1012 1102

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1254	4824.261	4958.152	0.01	2.8	15.0
(2)	6268.469	6507.071	0.01	3.8	15.0
(3)	4759.959	4906.754	0.01	3.1	15.0
(4)	7943.267	8062.990	0.01	1.5	15.0
(5)	6786.566	7261.142	0.01	7.0	15.0
4cmx	160044.04	167764.49	0.01	4.8	15.0
Decachlorobiphenyl	167924.32	179960.48	0.01	7.2	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1111

Lab File ID: 003B0301 Init. Calib. Date(s): 06/18/09 06/18/09

Heated Purge: (Y/N) N Init. Calib. Times: 1012 1102

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1254	2097.425	2080.742	0.01	-0.8	15.0
(2)	2309.345	2261.890	0.01	-2.0	15.0
(3)	3101.194	3044.551	0.01	-1.8	15.0
(4)	1616.630	1698.880	0.01	5.1	15.0
(5)	1853.853	1888.935	0.01	1.9	15.0
4cmx	57685.085	55441.240	0.01	-3.9	15.0
Decachlorobiphenyl	56323.158	54468.920	0.01	-3.3	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1542

Lab File ID: 022F2201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6288.333	0.01	9.0	15.0
(2)	7224.724	7938.191	0.01	9.9	15.0
(3)	2909.461	3295.660	0.01	13.3	15.0
(4)	2752.769	2994.907	0.01	8.8	15.0
(5)	3628.674	3994.031	0.01	10.1	15.0
Aroclor-1260	7128.341	7712.097	0.01	8.2	15.0
(2)	10088.517	10992.438	0.01	9.0	15.0
(3)	11482.117	12204.910	0.01	6.3	15.0
(4)	13395.429	14742.255	0.01	10.0	15.0
(5)	6551.697	7255.615	0.01	10.7	15.0
4cmx	160044.04	155593.99	0.01	-2.8	15.0
Decachlorobiphenyl	167924.32	165058.59	0.01	-1.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1542

Lab File ID: 022B2201 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2220.681	0.01	0.7	15.0
(2)	2930.861	2994.458	0.01	2.2	15.0
(3)	1739.079	1766.379	0.01	1.6	15.0
(4)	1038.126	1063.855	0.01	2.5	15.0
(5)	1070.250	1076.468	0.01	0.6	15.0
Aroclor-1260	2882.050	2885.170	0.01	0.1	15.0
(2)	3456.730	3545.820	0.01	2.6	15.0
(3)	3158.535	3200.191	0.01	1.3	15.0
(4)	2368.081	2398.901	0.01	1.3	15.0
(5)	3770.327	3868.799	0.01	2.6	15.0
4cmx	57685.085	51351.210	0.01	-11.0	15.0
Decachlorobiphenyl	56323.158	50351.420	0.01	-10.6	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1835

Lab File ID: 033F3301 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5767.200	6222.594	0.01	7.9	15.0
(2)	7224.724	7909.896	0.01	9.5	15.0
(3)	2909.461	3197.458	0.01	9.9	15.0
(4)	2752.769	2899.955	0.01	5.3	15.0
(5)	3628.674	3898.569	0.01	7.4	15.0
Aroclor-1260	7128.341	7627.002	0.01	7.0	15.0
(2)	10088.517	10853.926	0.01	7.6	15.0
(3)	11482.117	12192.523	0.01	6.2	15.0
(4)	13395.429	14602.143	0.01	9.0	15.0
(5)	6551.697	7015.943	0.01	7.1	15.0
4cmx	160044.04	153639.80	0.01	-4.0	15.0
Decachlorobiphenyl	167924.32	165542.67	0.01	-1.4	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

Instrument ID: ECD8A Calibration Date: 06/30/09 Time: 1835

Lab File ID: 033B3301 Init. Calib. Date(s): 06/16/09 06/16/09

Heated Purge: (Y/N) N Init. Calib. Times: 0956 1046

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2205.751	2198.374	0.01	-0.3	15.0
(2)	2930.861	3024.556	0.01	3.2	15.0
(3)	1739.079	1743.998	0.01	0.3	15.0
(4)	1038.126	1055.236	0.01	1.6	15.0
(5)	1070.250	1063.993	0.01	-0.6	15.0
Aroclor-1260	2882.050	2880.731	0.01	-0.0	15.0
(2)	3456.730	3559.181	0.01	3.0	15.0
(3)	3158.535	3207.590	0.01	1.6	15.0
(4)	2368.081	2405.333	0.01	1.6	15.0
(5)	3770.327	3902.843	0.01	3.5	15.0
4cmx	57685.085	50702.800	0.01	-12.1	15.0
Decachlorobiphenyl	56323.158	51373.510	0.01	-8.8	15.0

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/002f0201.d
Lab Smp Id: WAR090629-04601 Client Smp ID: AR166001
Inj Date : 30-JUN-2009 10:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04601
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	15705935	100.000	98.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	16212964	100.000	96.5	80.00- 120.00	100.00(M)
1 Aroclor-1016					CAS #: 12674-11-2		
2.762	2.762	0.000	6330009	1000.00	1100	80.00- 120.00	100.00
3.112	3.112	0.000	7760134	1000.00	1070	102.59- 142.59	122.59
3.256	3.256	0.000	3163944	1000.00	1090	29.98- 69.98	49.98
3.365	3.365	0.000	2944428	1000.00	1070	26.52- 66.52	46.52
3.510	3.510	0.000	3972822	1000.00	1090	42.76- 82.76	62.76
Average of Peak Amounts =				1.08e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.383	4.383	0.000	7537503	1000.00	1060	80.00- 120.00	100.00(M)
4.579	4.579	0.000	10760077	1000.00	1070	122.75- 162.75	142.75
4.774	4.774	0.000	12267009	1000.00	1070	142.75- 182.75	162.75
5.242	5.242	0.000	14219270	1000.00	1060	168.65- 208.65	188.65
5.437	5.437	0.000	6850457	1000.00	1040	70.88- 110.88	90.88
Average of Peak Amounts =				1.06e+03			

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/002f0201.d
Date : 30-JUN-2009 10:59
Client ID: AR166001
Sample Info: IWAR090629-04601

Column phase: CLP1

Instrument: ecd8a.i

Operator: JADC
Column diameter: 0.25

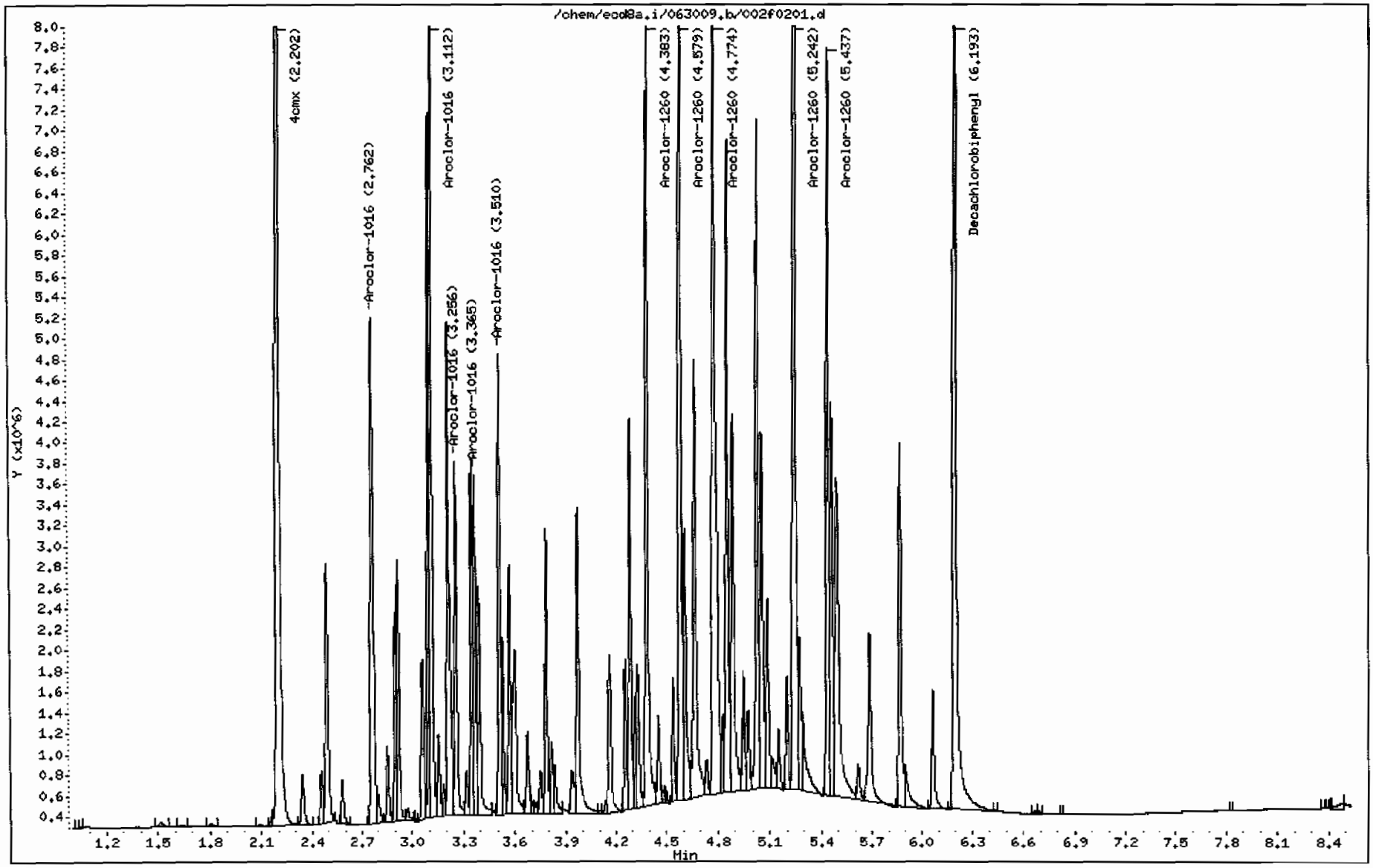

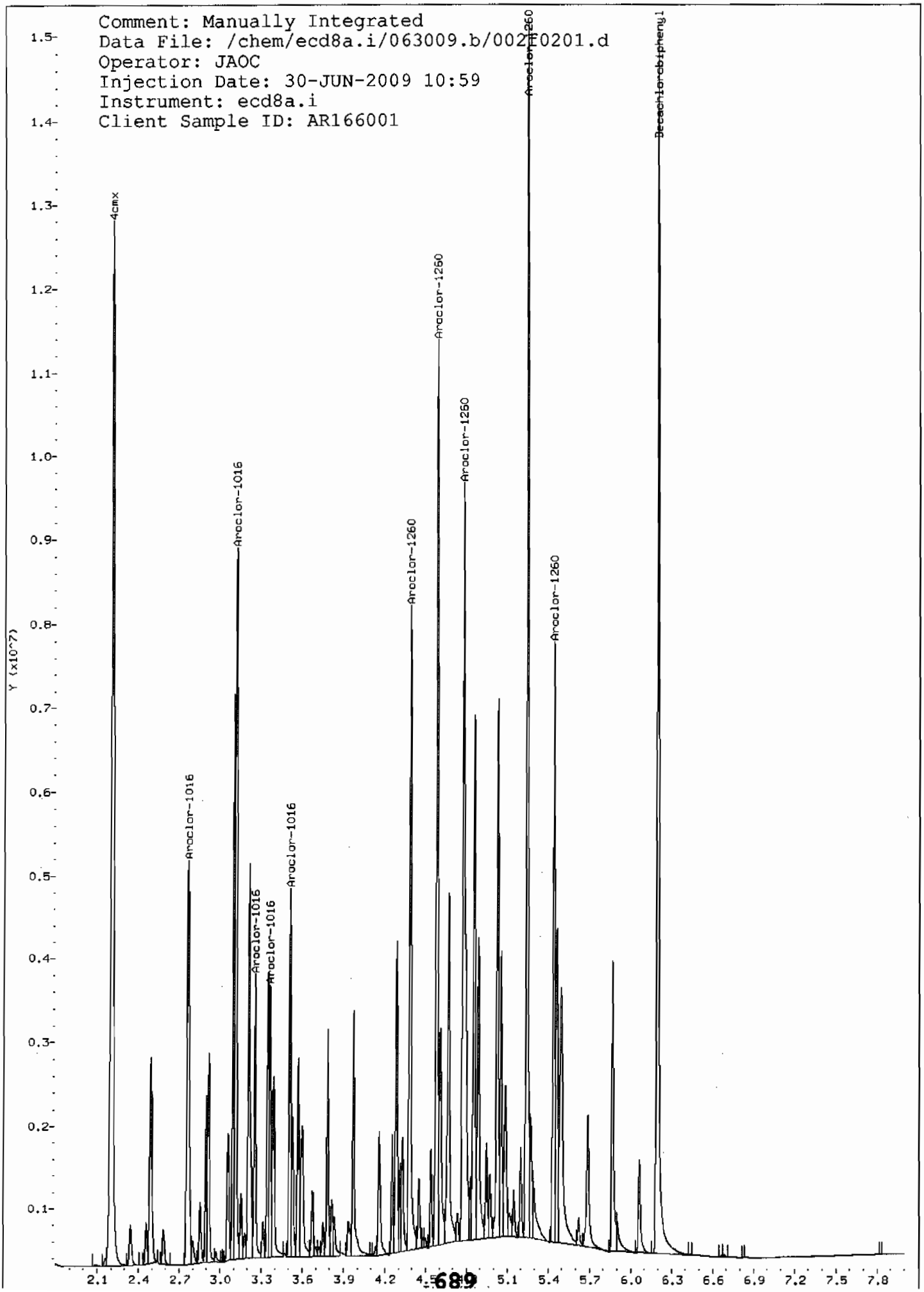
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/002F0201.d
Operator: JAOC
Injection Date: 30-JUN-2009 10:59
Instrument: ecd8a.i
Client Sample ID: AR166001
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
5.1
5.4
5.7
6.0
6.3
6.6
6.9
7.2
7.5
7.8

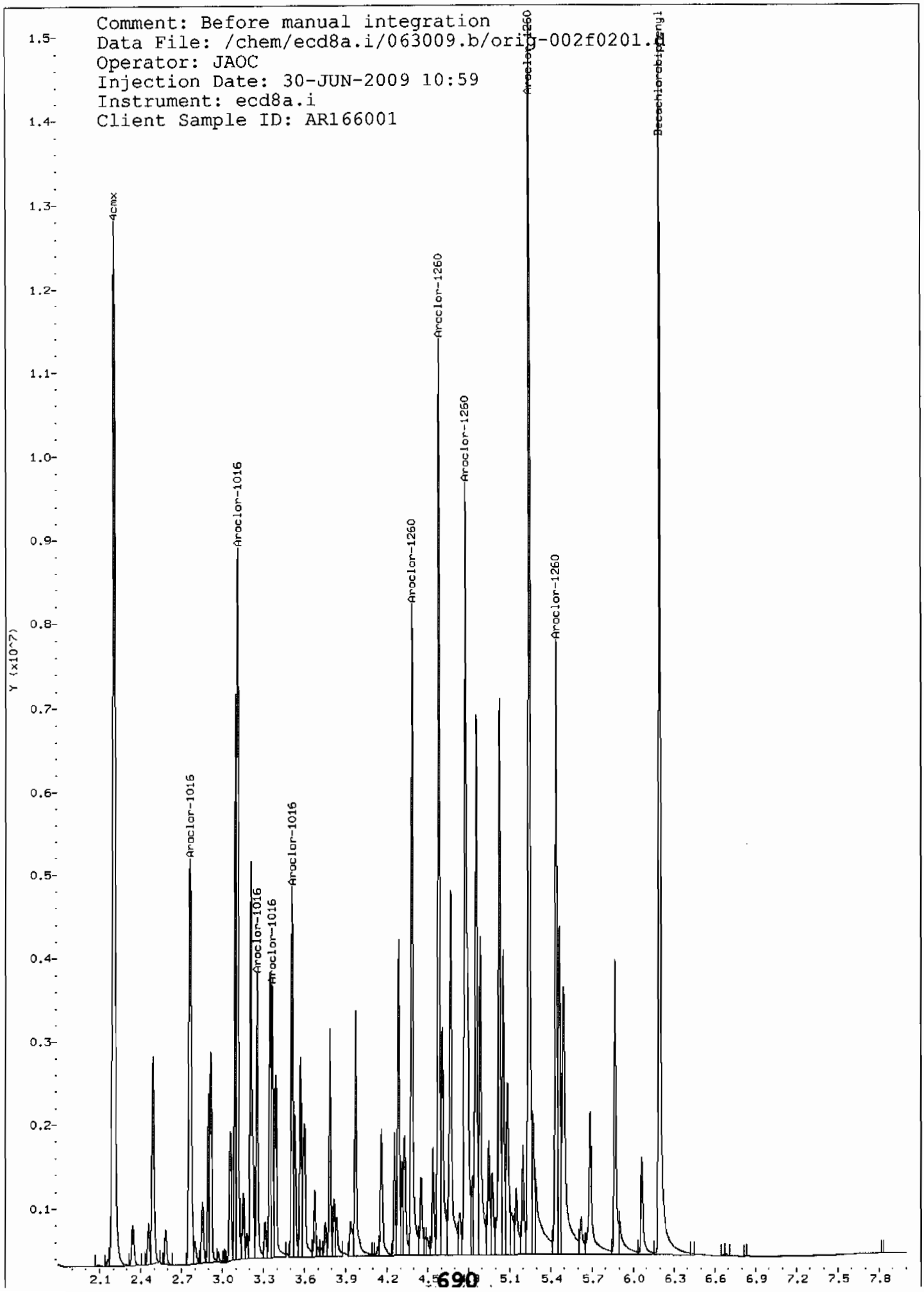
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-002f0201.d
Operator: JAOC
Injection Date: 30-JUN-2009 10:59
Instrument: ecd8a.i
Client Sample ID: AR166001
Y (x10^7)
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/002b0201.d
Lab Smp Id: WAR090629-04601 Client Smp ID: AR166001
Inj Date : 30-JUN-2009 10:59
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04601
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5146873	100.000	89.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	4975007	100.000	88.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	2205647	1000.00	1000	80.00- 120.00	100.00
3.575	3.575	0.000	2901198	1000.00	990	111.54- 151.54	131.54
3.675	3.675	0.000	1721686	1000.00	990	58.06- 98.06	78.06
3.752	3.752	0.000	1037559	1000.00	999	27.04- 67.04	47.04
3.826	3.826	0.000	1054433	1000.00	985	27.81- 67.81	47.81
Average of Peak Amounts =					993		
7 Aroclor-1260					CAS #: 11096-82-5		
4.936	4.936	0.000	2835210	1000.00	984	80.00- 120.00	100.00
5.083	5.083	0.000	3472058	1000.00	1000	102.46- 142.46	122.46
5.199	5.199	0.000	3145666	1000.00	996	90.95- 130.95	110.95
5.608	5.608	0.000	2347819	1000.00	991	62.81- 102.81	82.81
6.041	6.041	0.000	3768651	1000.00	1000	112.92- 152.92	132.92
Average of Peak Amounts =					995		

Data File: /chem/ecd8a.i/063009.b/002b0201.d
Date : 30-JUN-2009 10:59
Client ID: AR166001
Sample Info: IWAR090629-04601

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

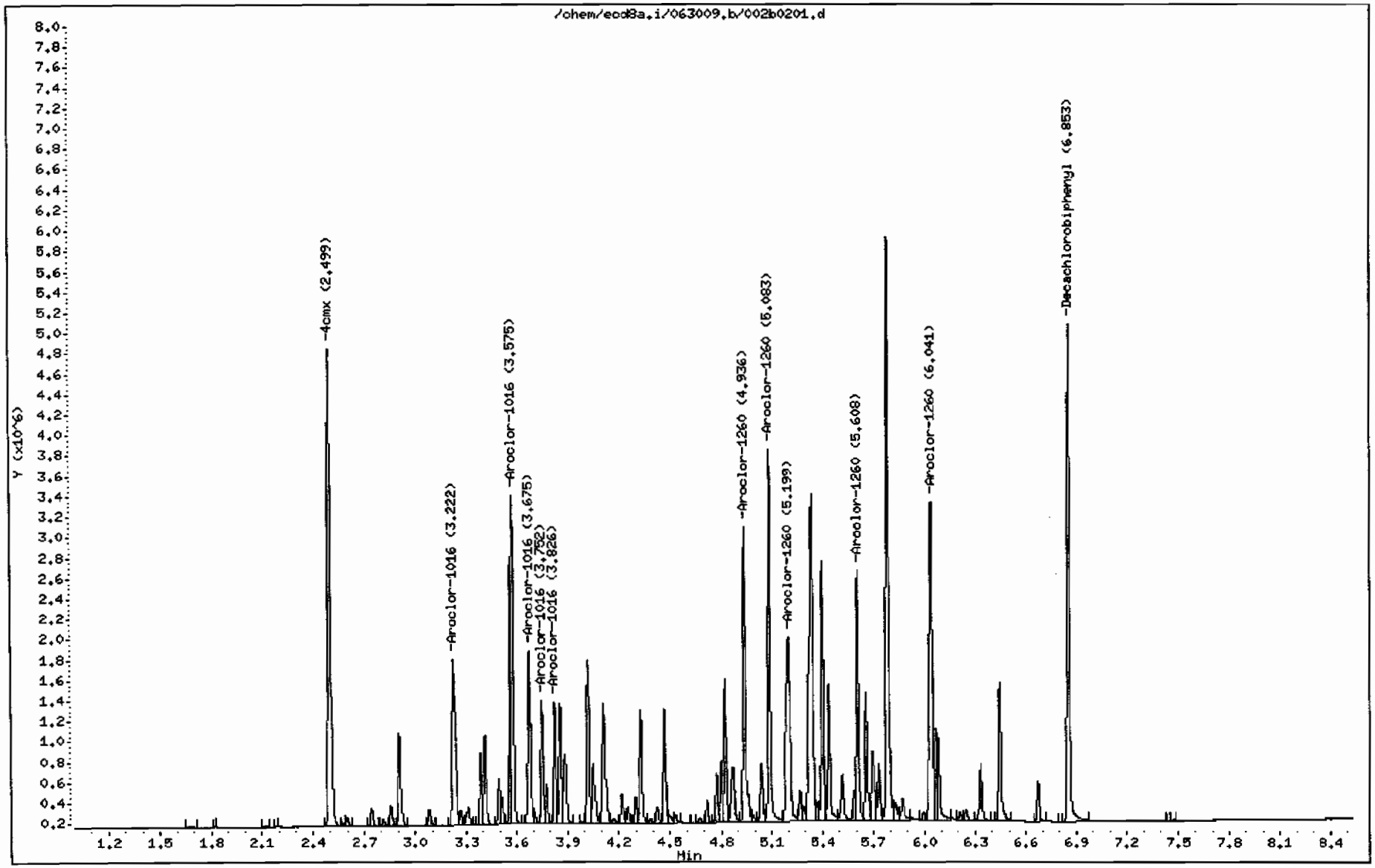

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/003f0301.d
Lab Smp Id: WAR090302-54 Client Smp ID: AR125401
Inj Date : 30-JUN-2009 11:11
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090302-54
Misc Info : |1254
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	16776449	100.000	105	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	17996048	100.000	107	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.786	3.786	0.000	4958151	1000.00	1030	80.00- 120.00	100.00
3.972	3.972	0.000	6507071	1000.00	1040	111.24- 151.24	131.24
4.168	4.168	0.000	4906754	1000.00	1030	78.96- 118.96	98.96
4.254	4.254	0.000	8062990	1000.00	1020	142.62- 182.62	162.62
4.581	4.581	0.000	7261142	1000.00	1070	126.45- 166.45	146.45

Average of Peak Amounts = 1.04e+03

Data File: /chem/ecd8a.i/063009.b/003f0301.d
Date : 30-JUN-2009 11:11
Client ID: AR125401
Sample Info: IWAR090302-54

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

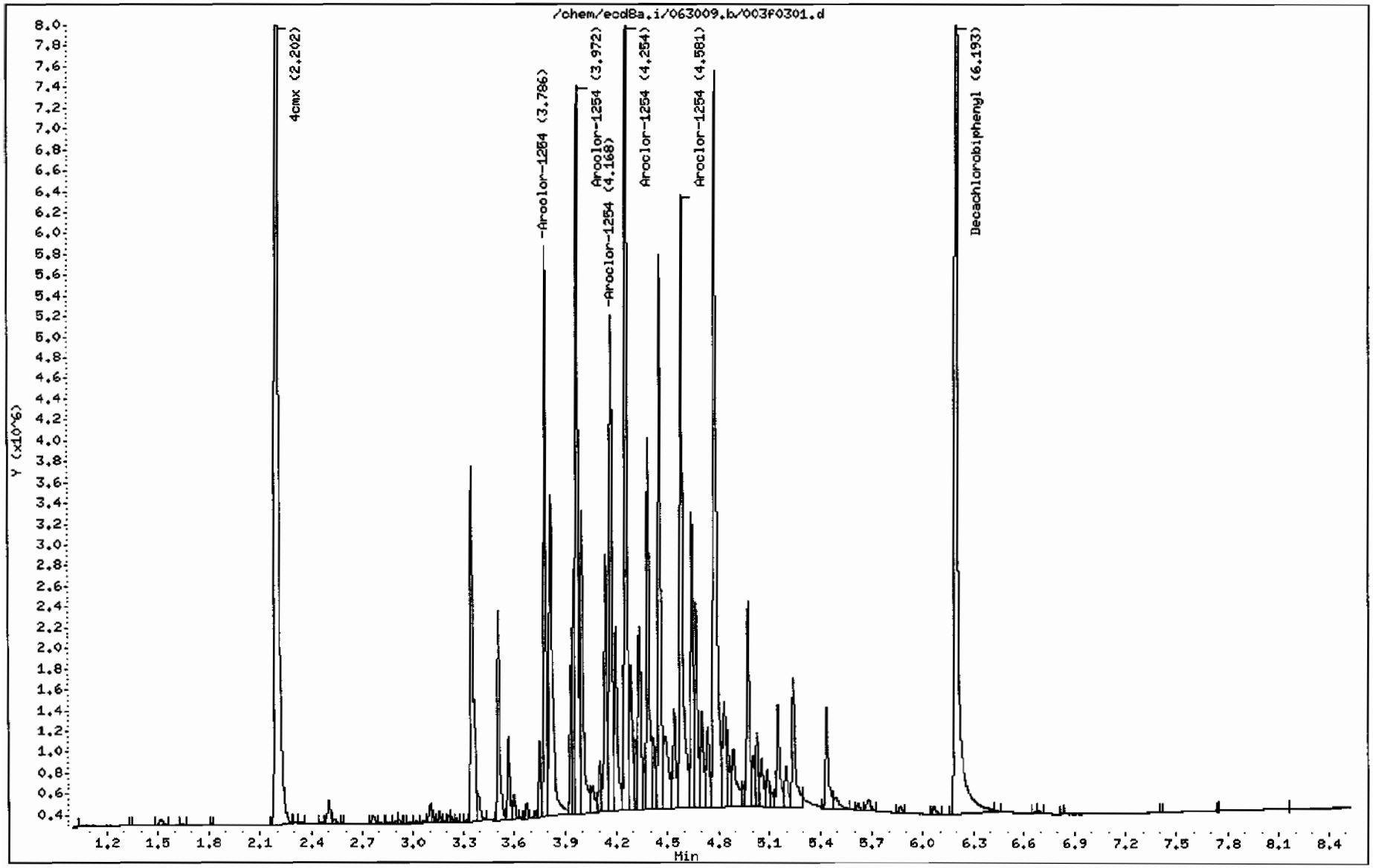

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/003b0301.d
Lab Smp Id: WAR090302-54 Client Smp ID: AR125401
Inj Date : 30-JUN-2009 11:11
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090302-54
Misc Info : |1254
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5544124	100.000	96.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5446892	100.000	96.7	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.331	4.331	0.000	2080742	1000.00	992	80.00- 120.00	100.00
4.468	4.468	0.000	2261889	1000.00	979	88.71- 128.71	108.71
4.798	4.798	0.000	3044551	1000.00	982	126.32- 166.32	146.32
5.084	5.084	0.000	1698880	1000.00	1050	61.65- 101.65	81.65
5.206	5.206	0.000	1888934	1000.00	1020	70.78- 110.78	90.78
Average of Peak Amounts =					1e+03		

Data File: /chem/ecd8a.i/063009.b/003b0301.d
Date : 30-JUN-2009 11:11
Client ID: AR125401
Sample Info: IWAR090302-54

Column phase: CLP2

Instrument: ecd8a.i

Operator: JADC
Column diameter: 0.25

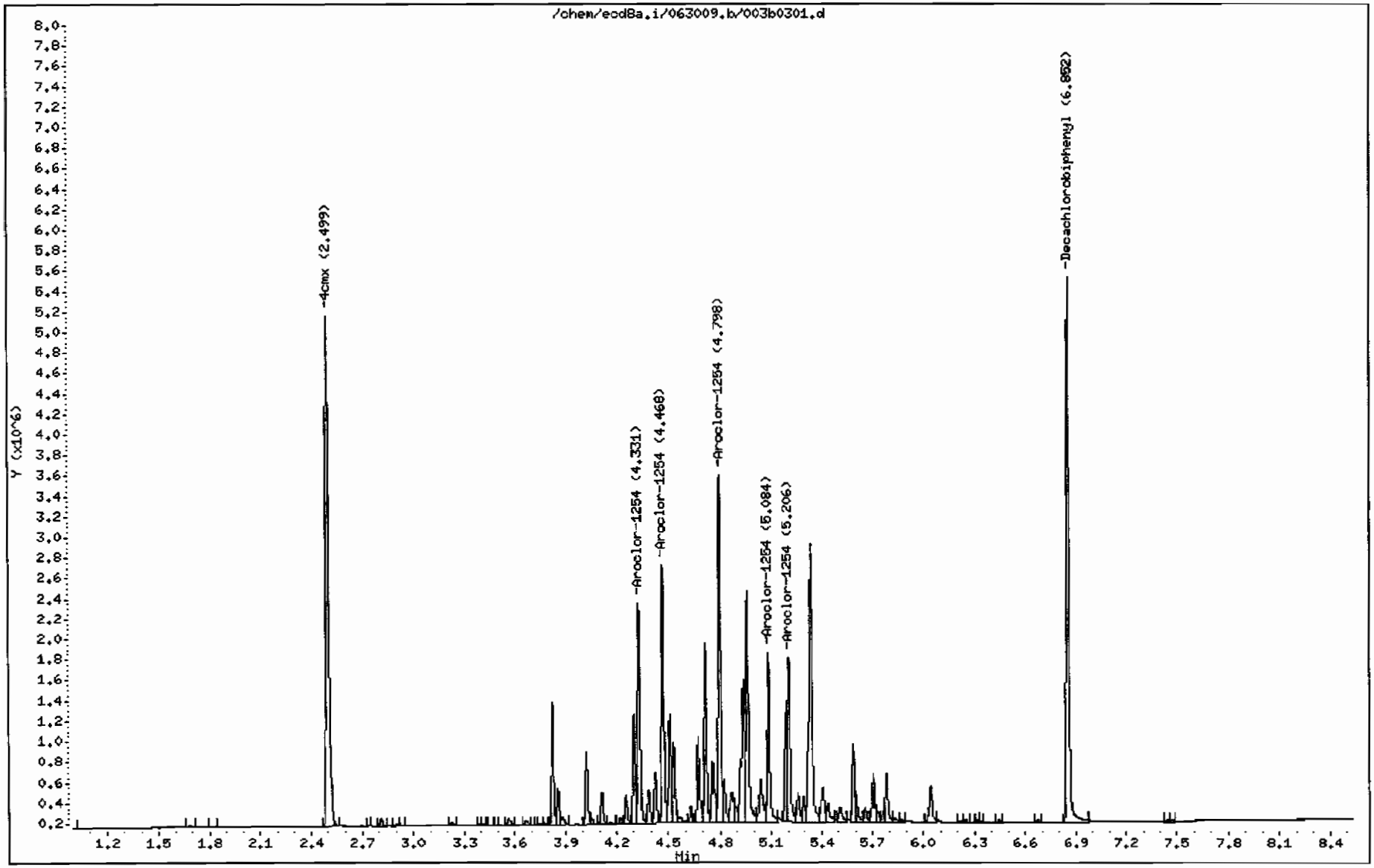

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/004f0401.d
Lab Smp Id: WAR090519-42 Client Smp ID: AR124201
Inj Date : 30-JUN-2009 11:24
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090519-42
Misc Info : |1242
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.203	2.202	0.001	17183284	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	17244477	100.000	103	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.762	2.762	0.000	4458179	1000.00	1100	80.00- 120.00	100.00(M)
3.113	3.113	0.000	5547736	1000.00	1120	104.44- 144.44	124.44
3.257	3.257	0.000	2191510	1000.00	1100	29.16- 69.16	49.16
3.349	3.349	0.000	1903092	1000.00	1070	22.69- 62.69	42.69
3.511	3.511	0.000	2802433	1000.00	1090	42.86- 82.86	62.86
Average of Peak Amounts =					1.1e+03		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/004f0401.d

Date : 30-JUN-2009 11:24

Client ID: AR124201

Sample Info: IWAR090519-42

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

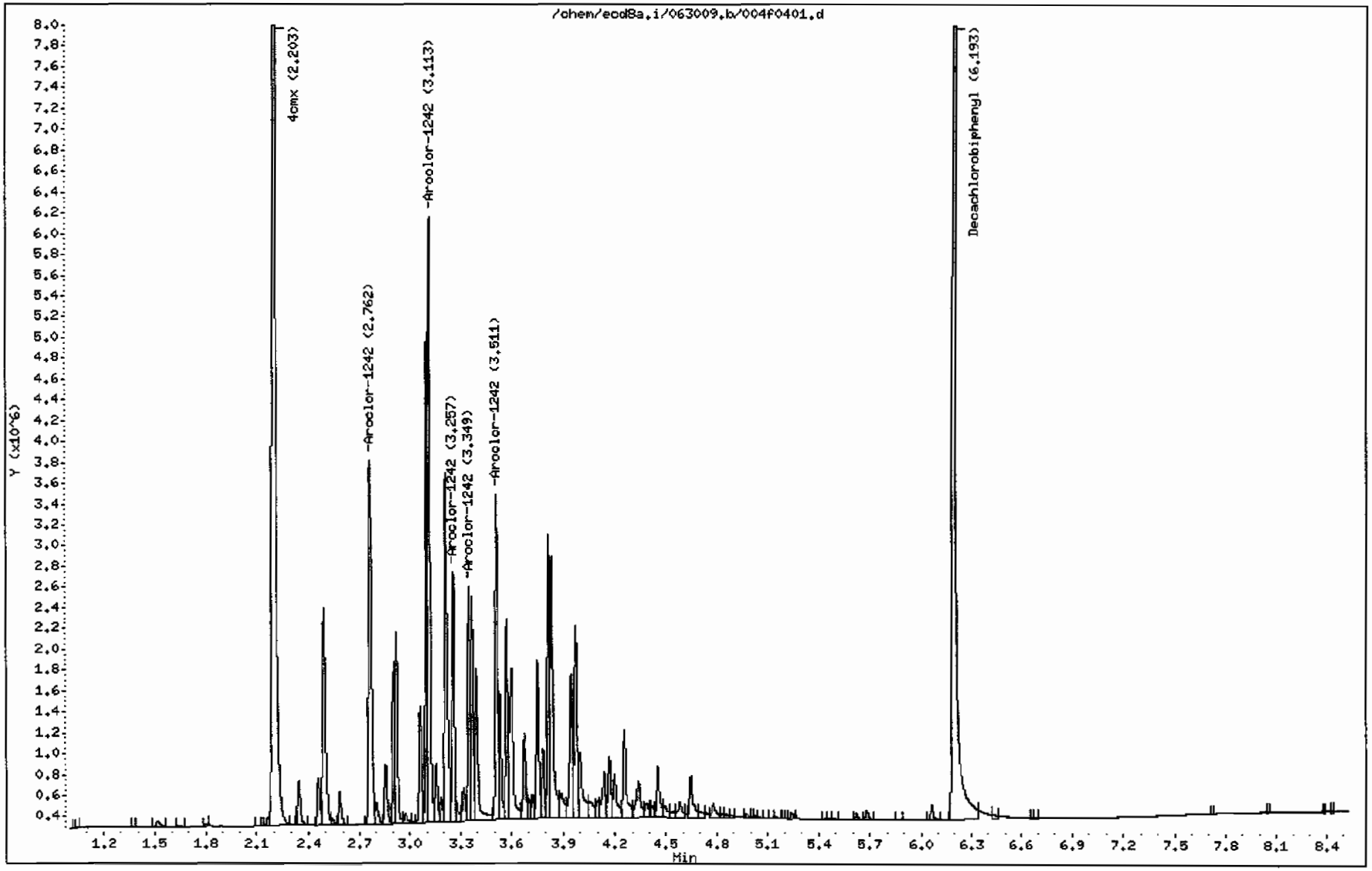

Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/004f0401.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:24
Instrument: ecd8a.i
Client Sample ID: AR124201

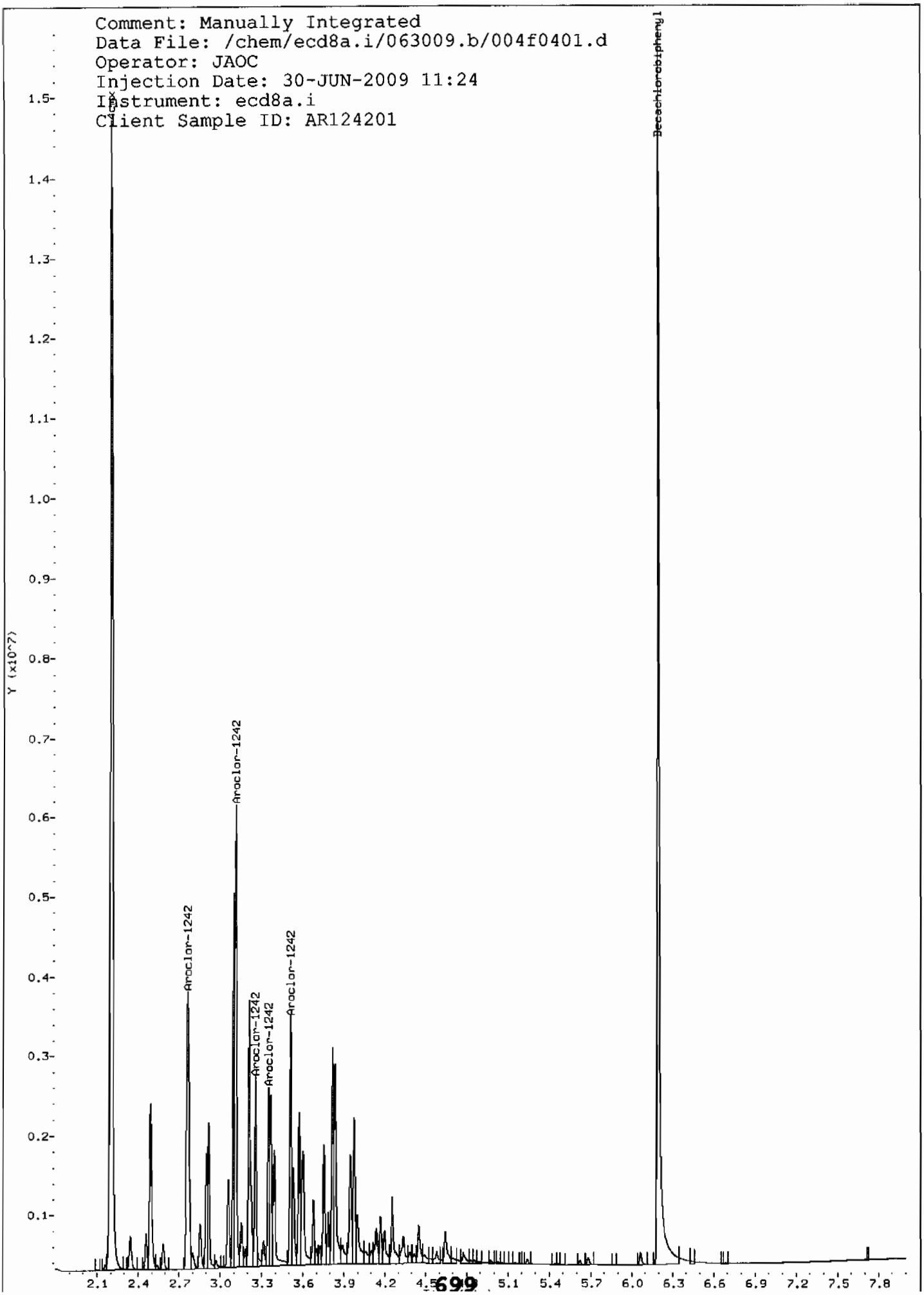

Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-004f0401.D
Operator: JAOC
Injection Date: 30-JUN-2009 11:24
Instrument: ecd8a.i
Client Sample ID: AR124201

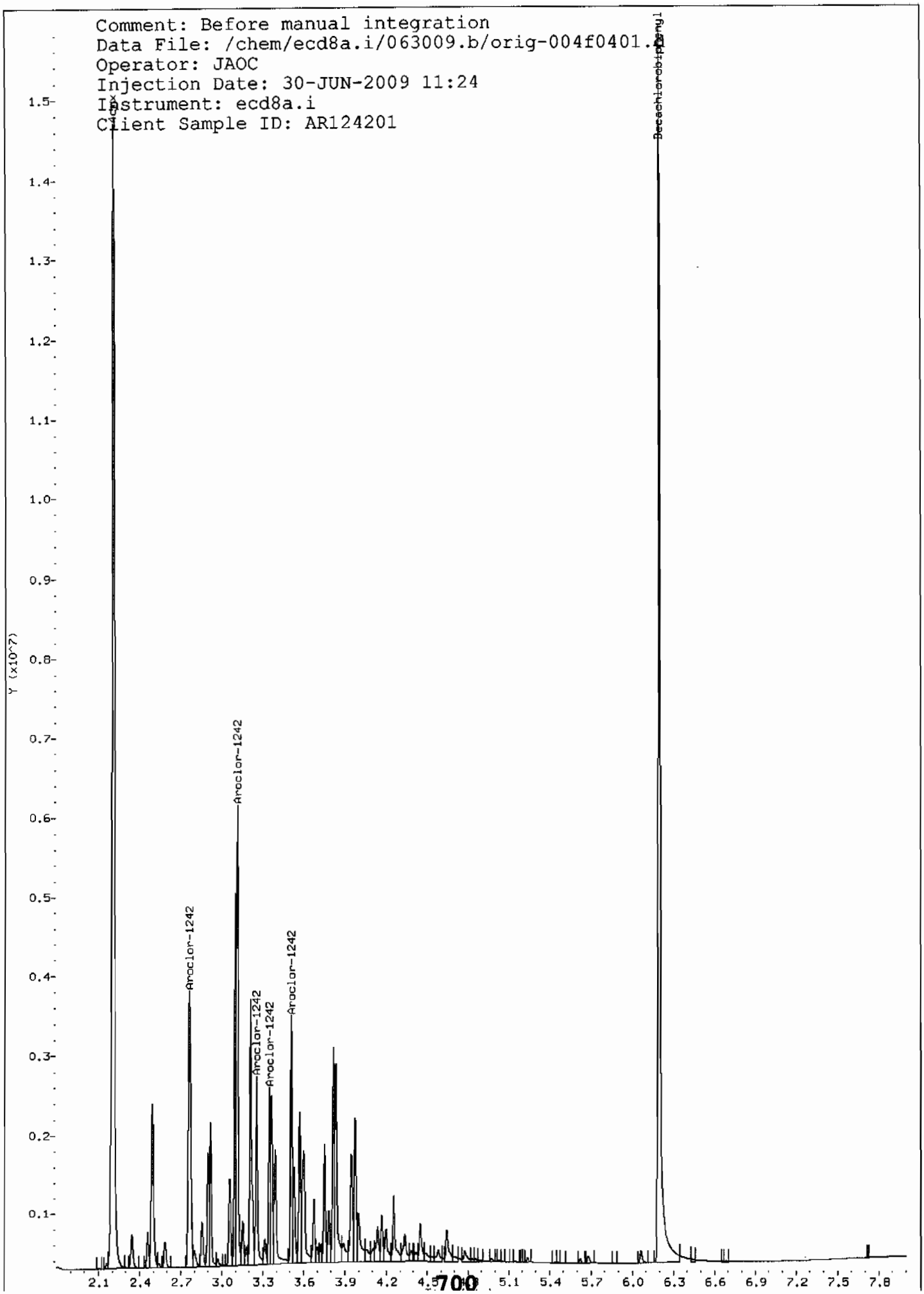

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/004b0401.d
Lab Smp Id: WAR090519-42 Client Smp ID: AR124201
Inj Date : 30-JUN-2009 11:24
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090519-42
Misc Info : |1242
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5701783	100.000	98.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	5284675	100.000	93.8	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
3.223	3.223	0.000	1548150	1000.00	907	80.00- 120.00	100.00
3.576	3.576	0.000	1999336	1000.00	948	109.14- 149.14	129.14
3.677	3.677	0.000	1202620	1000.00	926	57.68- 97.68	77.68
3.752	3.752	0.000	731324	1000.00	945	27.24- 67.24	47.24
3.827	3.827	0.000	689725	1000.00	875	24.55- 64.55	44.55
Average of Peak Amounts =					920		

Data File: /chem/ecd8a.i/063009.b/004b0401.d

Date : 30-JUN-2009 11:24

Client ID: AR124201

Sample Info: IWAR090519-42

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

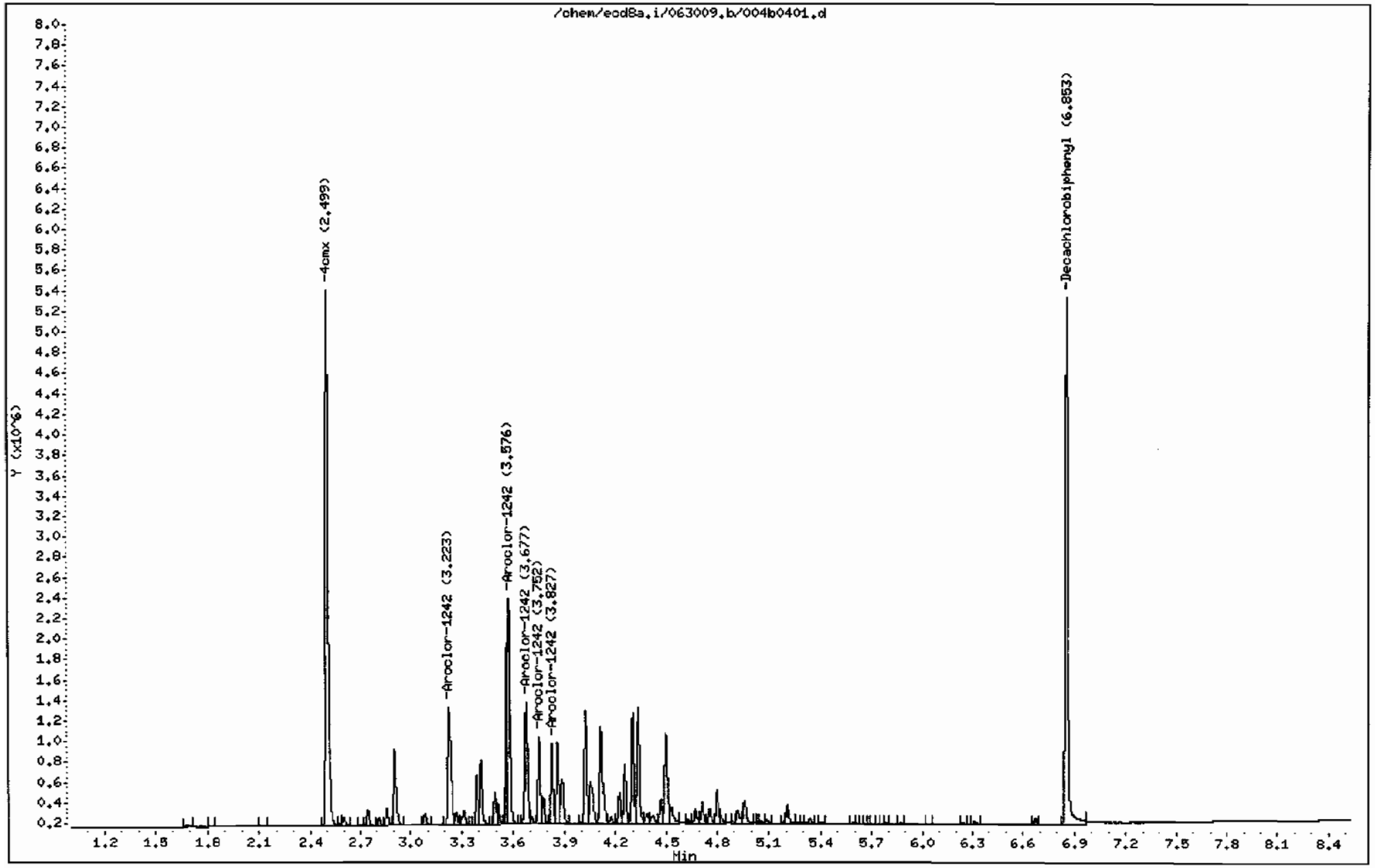

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GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/005f0501.d
Lab Smp Id: WAR090521-48 Client Smp ID: AR124801
Inj Date : 30-JUN-2009 11:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090521-48
Misc Info : |1248
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	18145027	100.000	113	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.192	6.193	-0.001	18386391	100.000	109	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.112	3.112	0.000	3486586	1000.00	1120	80.00- 120.00	100.00(M)
3.348	3.348	0.000	4009703	1000.00	1090	95.00- 135.00	115.00
3.511	3.511	0.000	5160786	1000.00	1090	128.02- 168.02	148.02
3.975	3.975	0.000	4377940	1000.00	1060	105.57- 145.57	125.57
4.255	4.255	0.000	3273014	1000.00	1030	73.87- 113.87	93.87

Average of Peak Amounts = 1.08e+03

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/005f0501.d
Date : 30-JUN-2009 11:36
Client ID: AR124801
Sample Info: IWAR090521-48

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

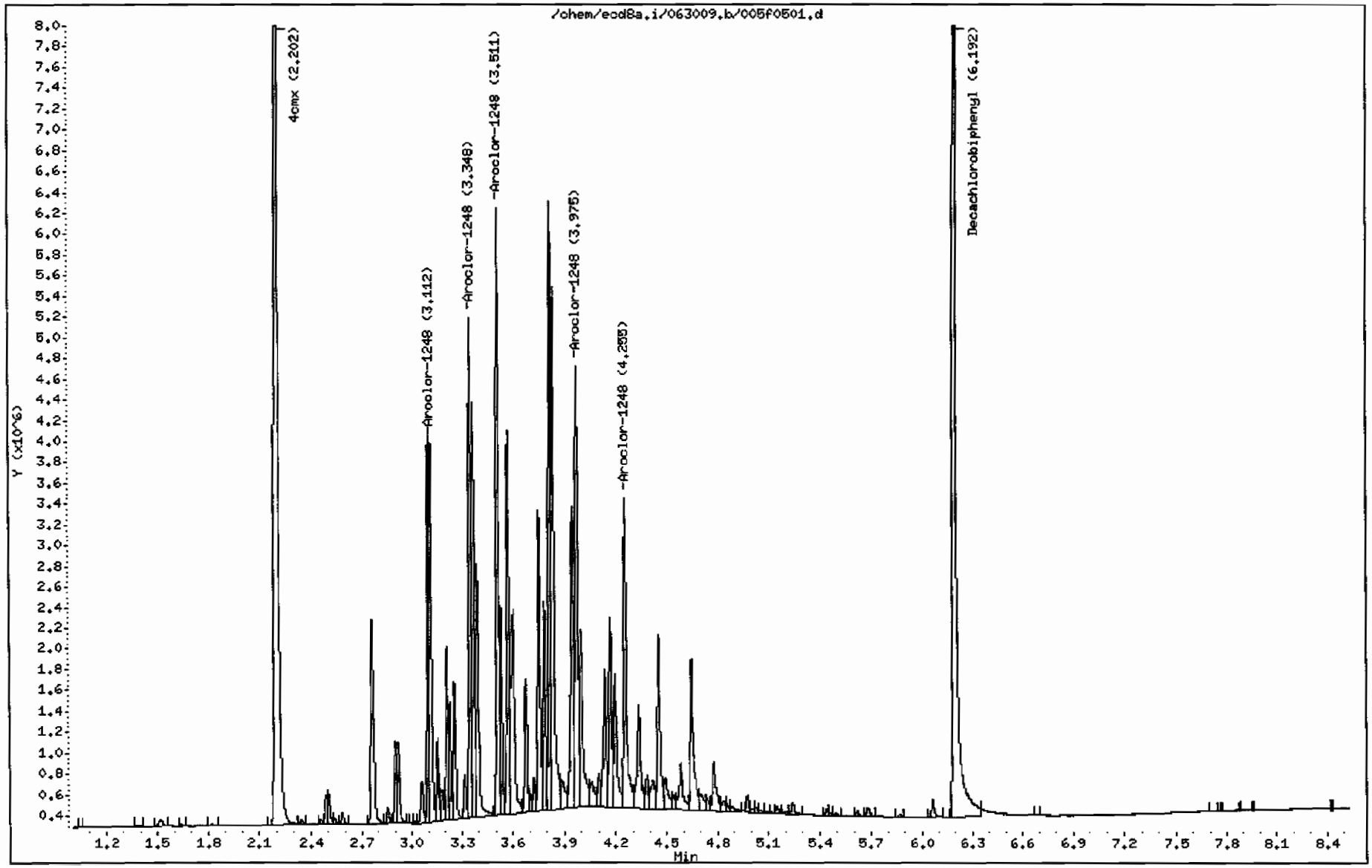

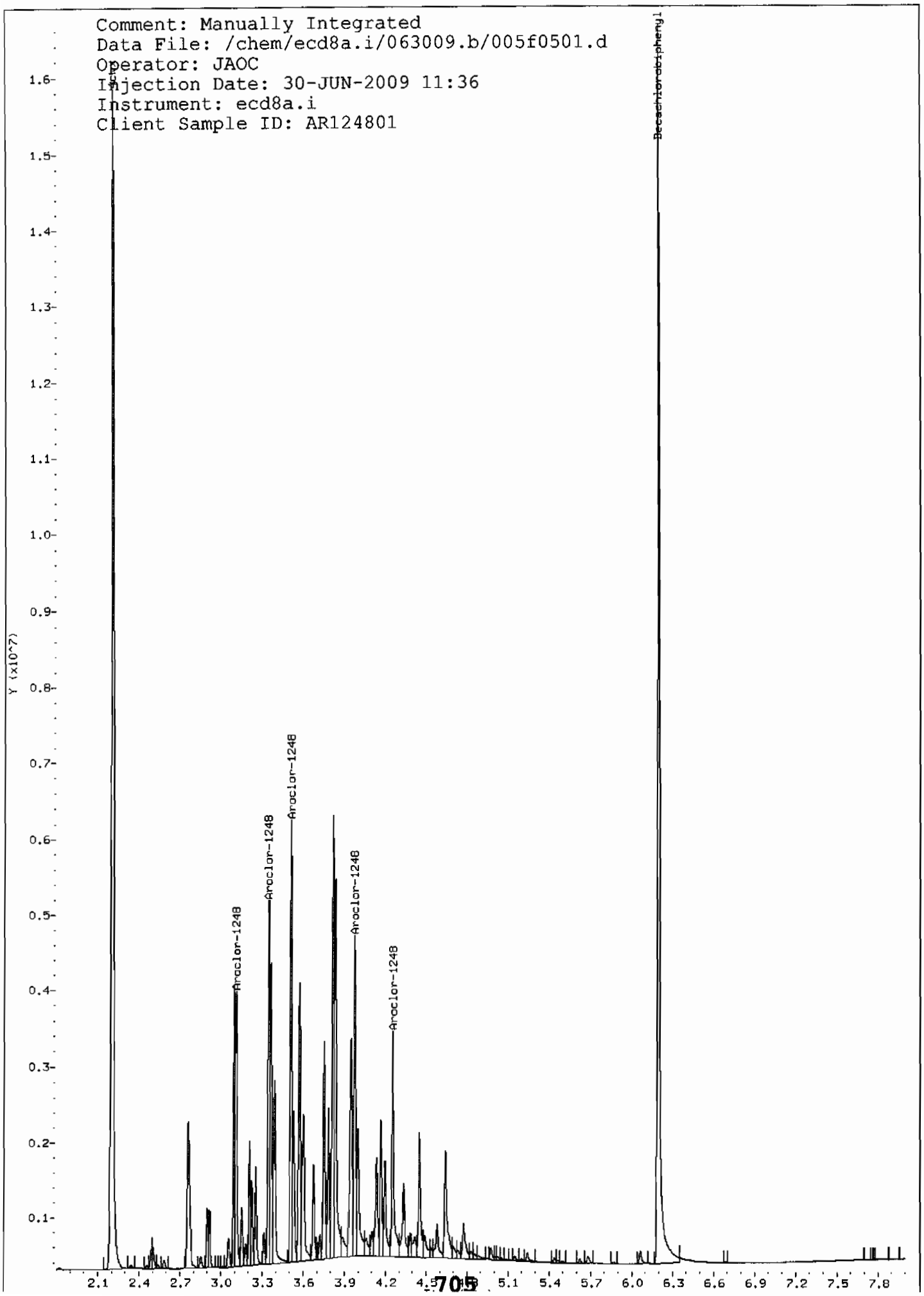
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/005f0501.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:36
Instrument: ecd8a.i
Client Sample ID: AR124801
Decachlorobiphenyl
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Y (x10^7)
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
5.1
5.4
5.7
6.0
6.3
6.6
6.9
7.2
7.5
7.8

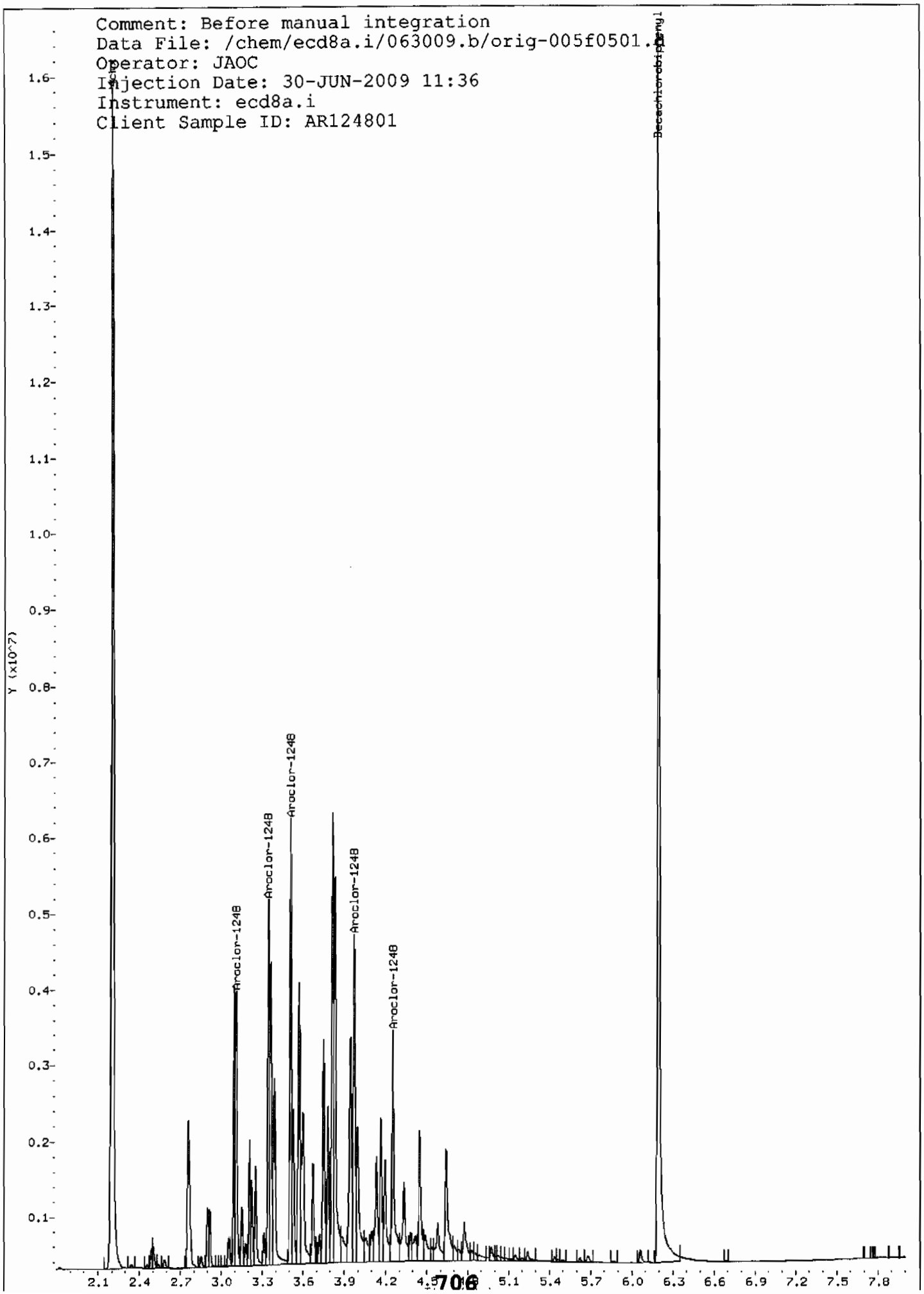
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-005f0501.d
Operator: JAOC
Injection Date: 30-JUN-2009 11:36
Instrument: ecd8a.i
Client Sample ID: AR124801
Decachlorobiphenyl
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Y (x10^7)
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
5.1
5.4
5.7
6.0
6.3
6.6
6.9
7.2
7.5
7.8

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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/005b0501.d
Lab Smp Id: WAR090521-48 Client Smp ID: AR124801
Inj Date : 30-JUN-2009 11:36
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090521-48
Misc Info : |1248
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	6000575	100.000	104	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5603679	100.000	99.5	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.575	3.575	0.000	1178184	1000.00	998	80.00- 120.00	100.00
3.826	3.826	0.000	1472761	1000.00	1030	105.00- 145.00	125.00
4.023	4.023	0.000	1847626	1000.00	1050	136.82- 176.82	156.82
4.301	4.301	0.000	2075080	1000.00	1030	156.13- 196.13	176.13
4.333	4.333	0.000	2380793	1000.00	1040	182.07- 222.07	202.07

Average of Peak Amounts = 1.03e+03

Data File: /chem/ecd8a.i/063009.b/005b0501.d
Date : 30-JUN-2009 11:36
Client ID: AR124801
Sample Info: IWAR090521-48

Column phase: CLP2

Instrument: ecd8a.i

Operator: JADC
Column diameter: 0.25

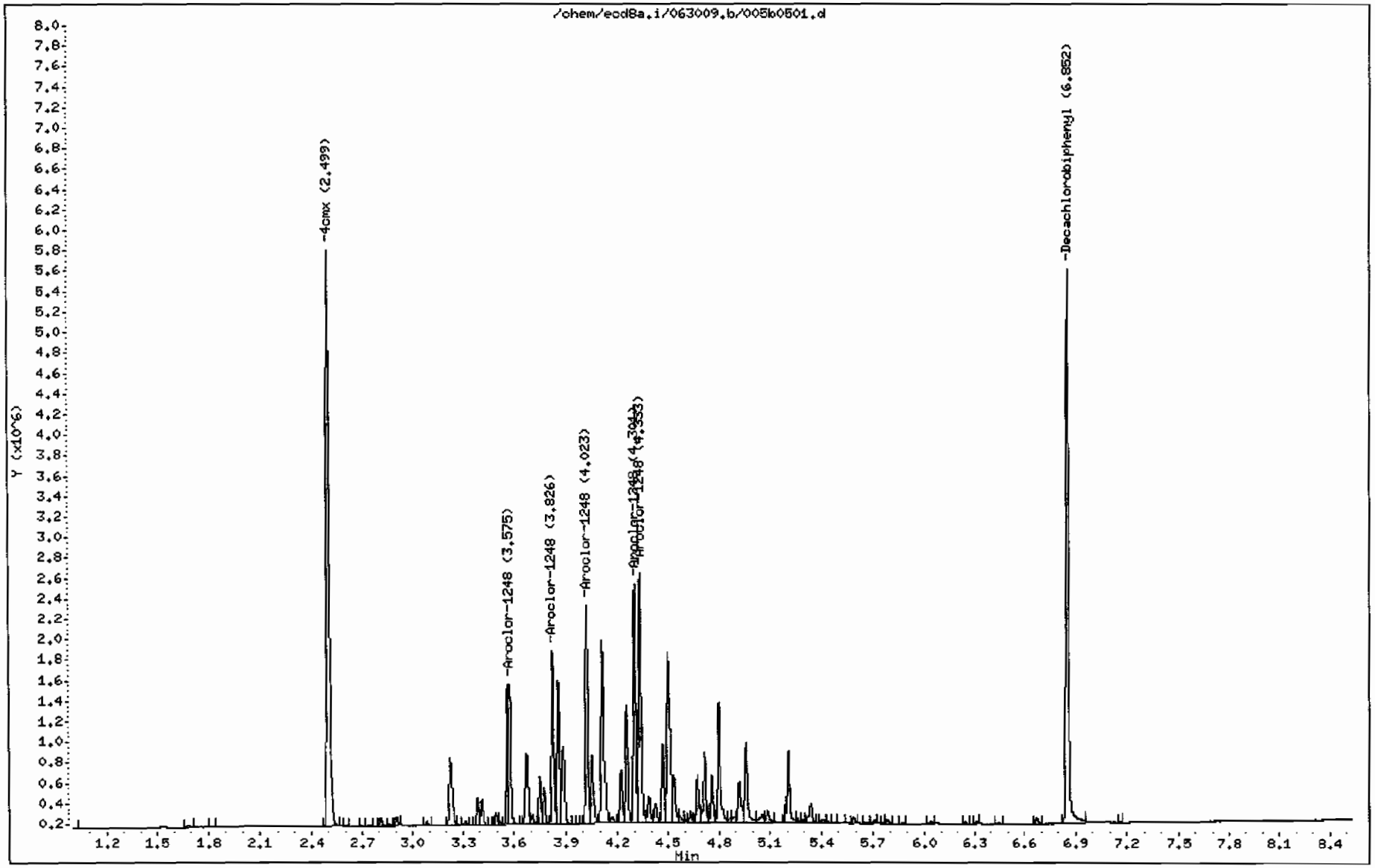

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/006f0601.d
Lab Smp Id: WAR090618-32 Client Smp ID: AR123201
Inj Date : 30-JUN-2009 11:48
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-32
Misc Info : |1232
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.203	2.202	0.001	16957655	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	18604315	100.000	111	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.762	2.762	0.000	2793110	1000.00	1100	80.00- 120.00	100.00
3.113	3.113	0.000	3336296	1000.00	1030	99.45- 139.45	119.45
3.210	3.210	0.000	2216909	1000.00	1040	59.37- 99.37	79.37
3.511	3.511	0.000	1562795	1000.00	1010	35.95- 75.95	55.95
3.817	3.817	0.000	1289064	1000.00	979	26.15- 66.15	46.15

Average of Peak Amounts = 1.03e+03

Data File: /chem/ecd8a.i/063009.b/006f0601.d
Date : 30-JUN-2009 11:48
Client ID: AR123201
Sample Info: IWAR090618-32

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

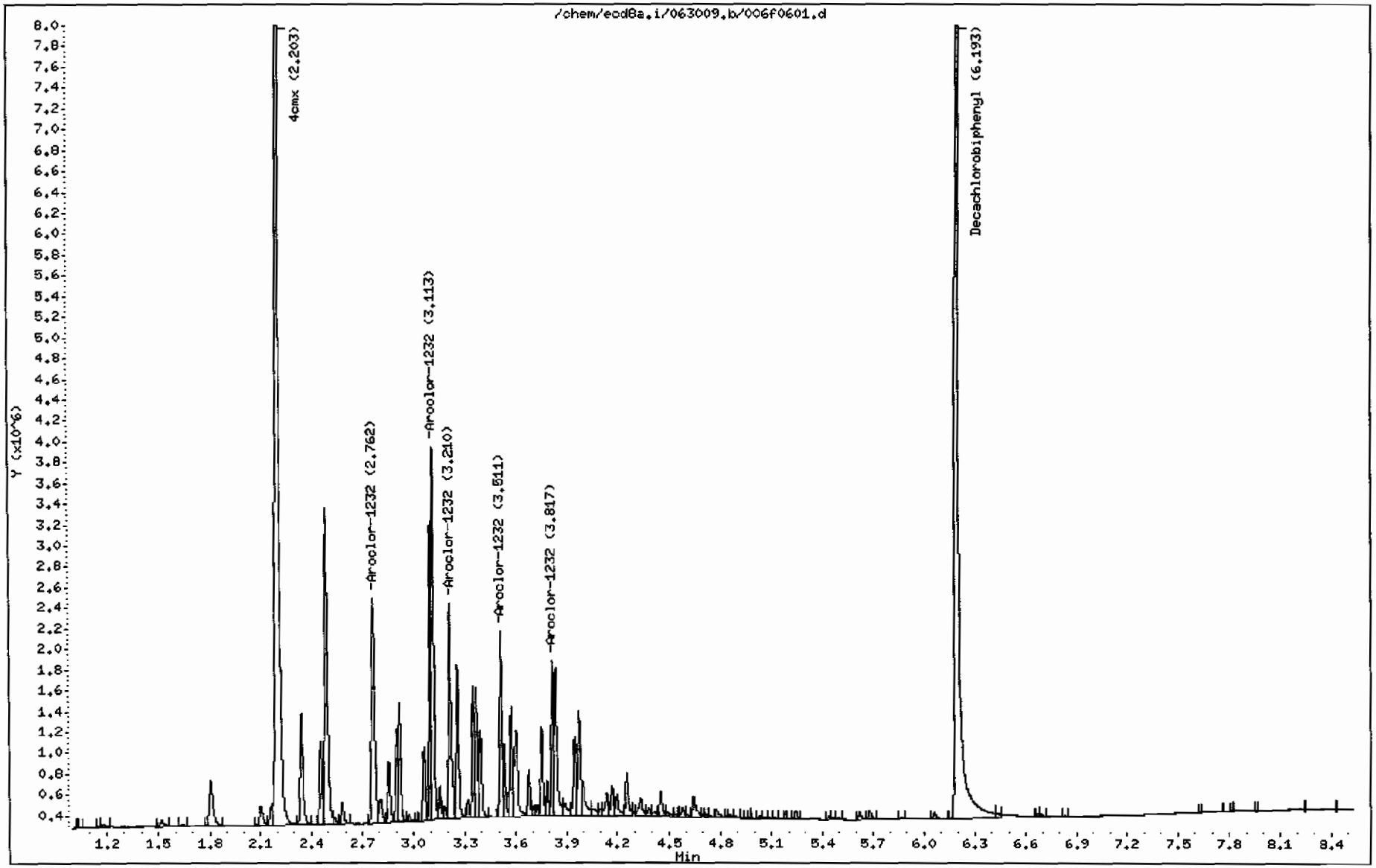

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/006b0601.d
Lab Smp Id: WAR090618-32 Client Smp ID: AR123201
Inj Date : 30-JUN-2009 11:48
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-32
Misc Info : |1232
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5607633	100.000	97.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	5526124	100.000	98.1	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
3.223	3.223	0.000	1015720	1000.00	905	80.00- 120.00	100.00
3.575	3.575	0.000	1258025	1000.00	885	103.86- 143.86	123.86
3.676	3.676	0.000	751147	1000.00	886	53.95- 93.95	73.95
3.826	3.826	0.000	397929	1000.00	854	19.18- 59.18	39.18
3.858	3.858	0.000	422363	1000.00	877	21.58- 61.58	41.58
Average of Peak Amounts =					882		

Data File: /chem/ecd8a.i/063009.b/006b0601.d

Date : 30-JUN-2009 11:48

Client ID: AR123201

Sample Info: IWAR090618-32

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

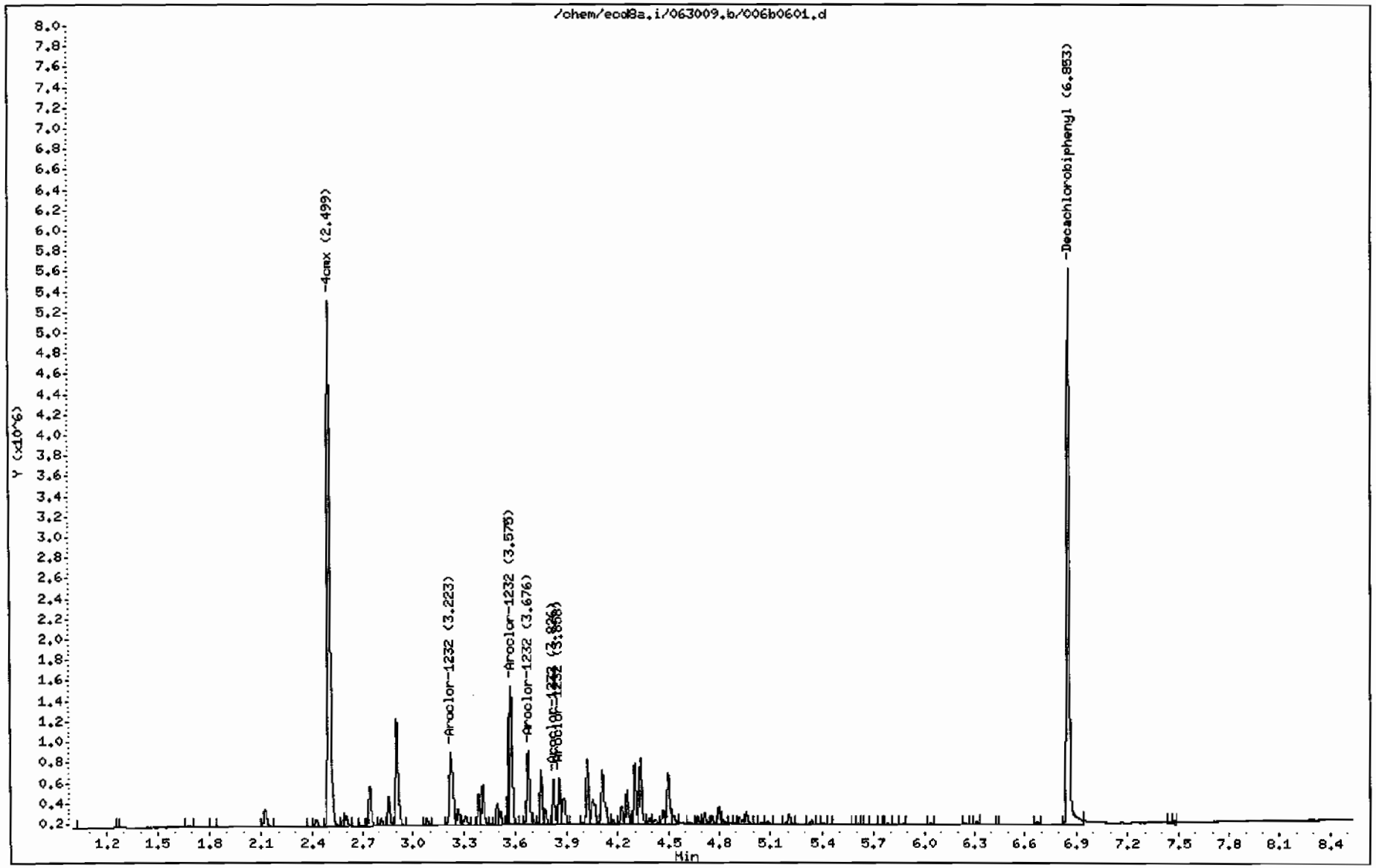

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/007f0701.d
Lab Smp Id: WAR090618-21 Client Smp ID: AR122101
Inj Date : 30-JUN-2009 12:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-21
Misc Info : |1221
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 13:25 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.205	2.202	0.003	16979532	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.196	6.193	0.003	19246506	100.000	115	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.347	2.347	0.000	1731266	1000.00	1120	80.00- 120.00	100.00
2.461	2.461	0.000	1014846	1000.00	1150	38.62- 78.62	58.62
2.493	2.493	0.000	4111480	1000.00	1100	217.48- 257.48	237.48

Average of Peak Amounts = 1.12e+03

Data File: /chem/ecd8a.i/063009.b/007f0701.d
Date : 30-JUN-2009 12:03
Client ID: AR122101
Sample Info: IWAR090618-21

Column phase: CLP1

Instrument: ecd8a.i

Operator: JADC
Column diameter: 0.25

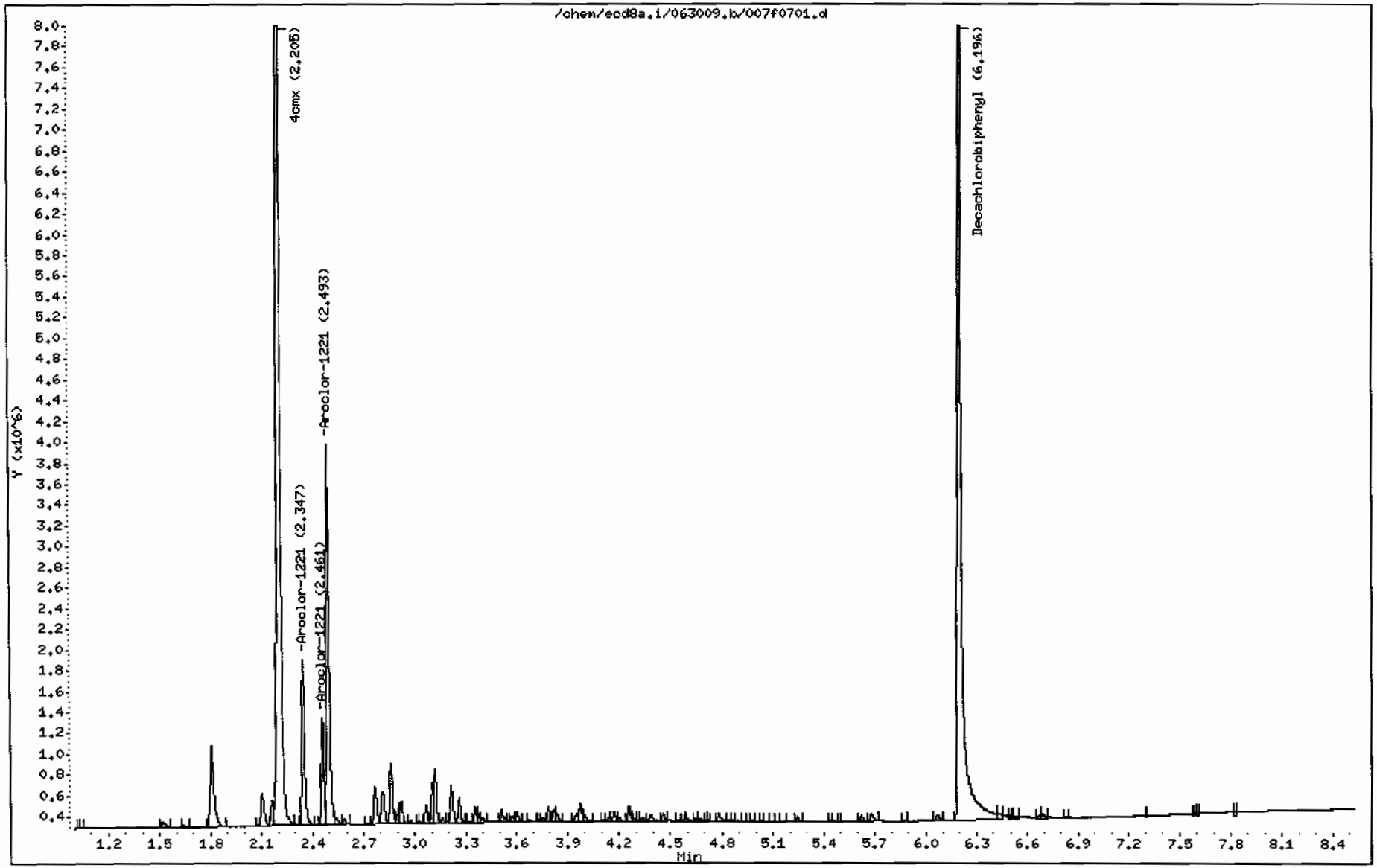

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/007b0701.d
Lab Smp Id: WAR090618-21 Client Smp ID: AR122101
Inj Date : 30-JUN-2009 12:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090618-21
Misc Info : |1221
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 13:23 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.500	2.499	0.001	5572682	100.000	96.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.855	6.853	0.002	5741006	100.000	102	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.743	2.743	0.000	570806	1000.00	893	80.00- 120.00	100.00
2.856	2.856	0.000	360134	1000.00	883	43.09- 83.09	63.09
2.905	2.905	0.000	1331894	1000.00	890	213.34- 253.34	233.34
Average of Peak Amounts =					889		

Data File: /chem/ecd8a.i/063009.b/007b0701.d
Date : 30-JUN-2009 12:03
Client ID: AR122101
Sample Info: IWAR090618-21

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

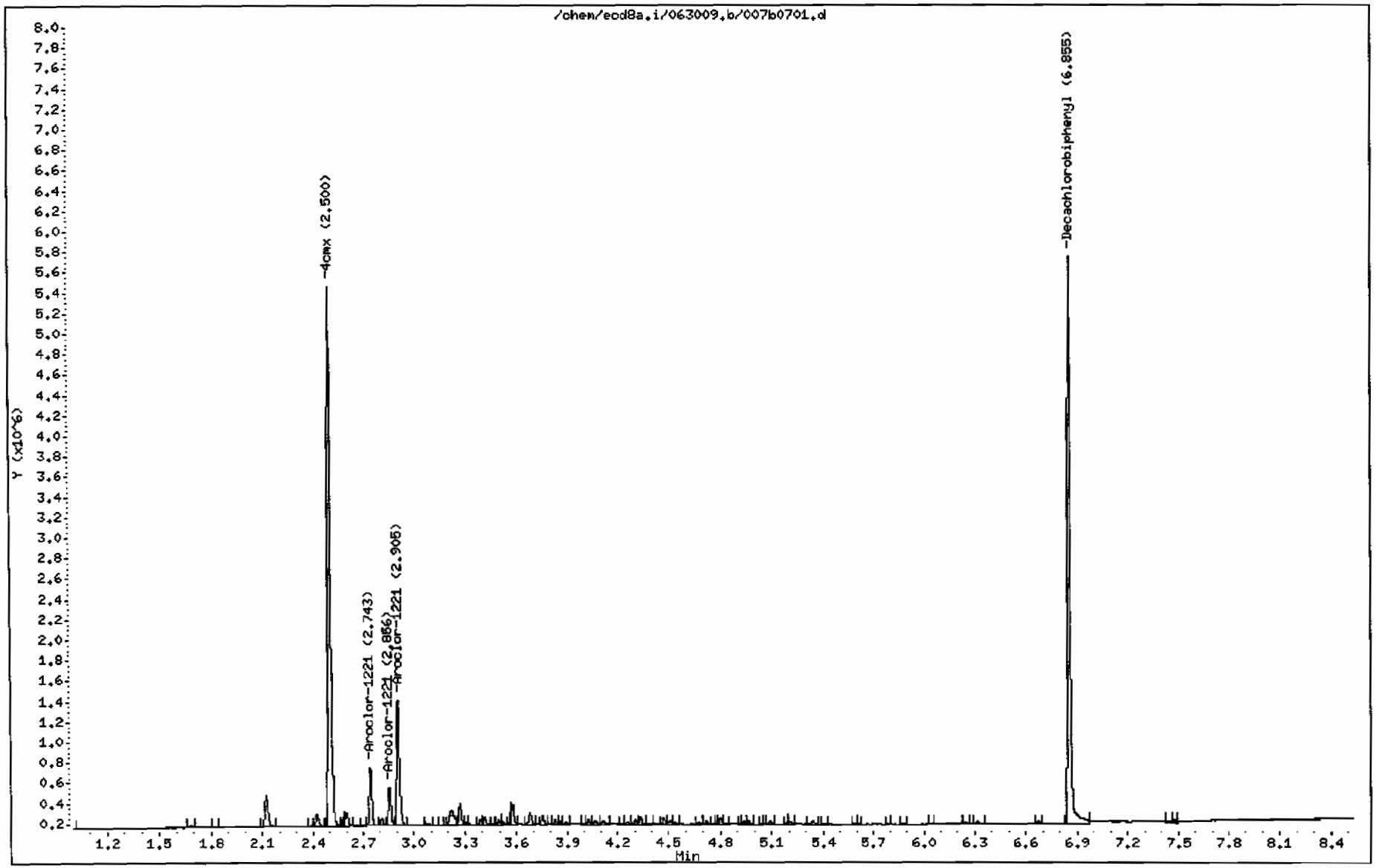

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/022f2201.d
Lab Smp Id: WAR090629-04602 Client Smp ID: AR166002
Inj Date : 30-JUN-2009 15:42
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04602
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.201	2.202	-0.001	15559399	100.000	97.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.191	6.193	-0.002	16505859	100.000	98.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.760	2.762	-0.002	6288333	1000.00	1090	80.00- 120.00	100.00
3.111	3.112	-0.001	7938191	1000.00	1100	106.24- 146.24	126.24
3.254	3.256	-0.002	3295660	1000.00	1130	32.41- 72.41	52.41
3.363	3.365	-0.002	2994907	1000.00	1090	27.63- 67.63	47.63
3.508	3.510	-0.002	3994031	1000.00	1100	43.51- 83.51	63.51
Average of Peak Amounts =					1.1e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	7712097	1000.00	1080	80.00- 120.00	100.00(M)
4.577	4.579	-0.002	10992438	1000.00	1090	122.54- 162.54	142.54
4.772	4.774	-0.002	12204910	1000.00	1060	138.26- 178.26	158.26
5.240	5.242	-0.002	14742255	1000.00	1100	171.16- 211.16	191.16
5.436	5.437	-0.001	7255615	1000.00	1110	74.08- 114.08	94.08
Average of Peak Amounts =					1.09e+03		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/022f2201.d
Date : 30-JUN-2009 15:42
Client ID: AR166002
Sample Info: IWAR090629-04602

Column phase: CLP1

Instrument: ecd8a.i

Operator: JADC
Column diameter: 0.25

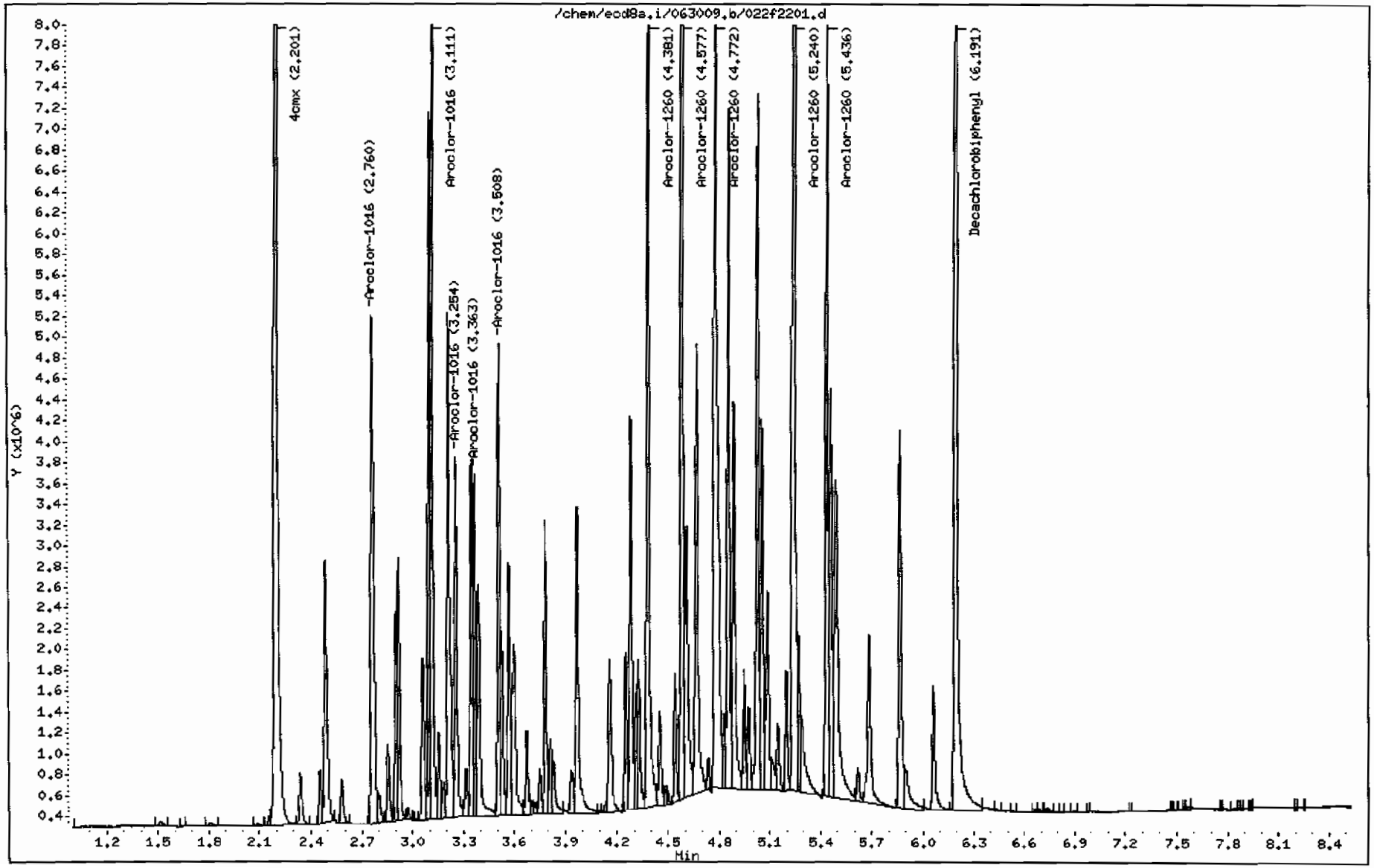

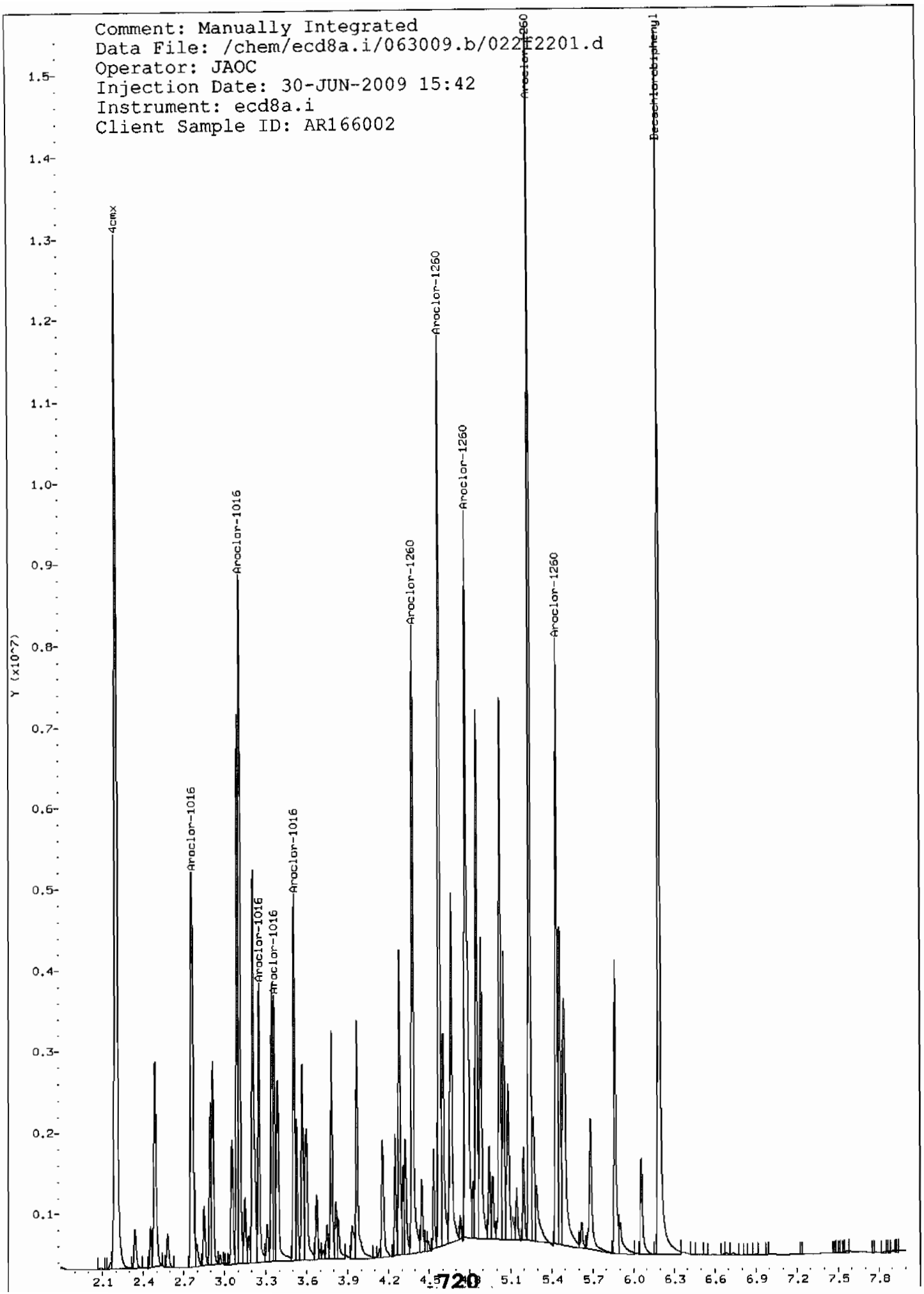
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/022F2201.d
Operator: JAOC
Injection Date: 30-JUN-2009 15:42
Instrument: ecd8a.i
Client Sample ID: AR166002
Y (x10^7)
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl

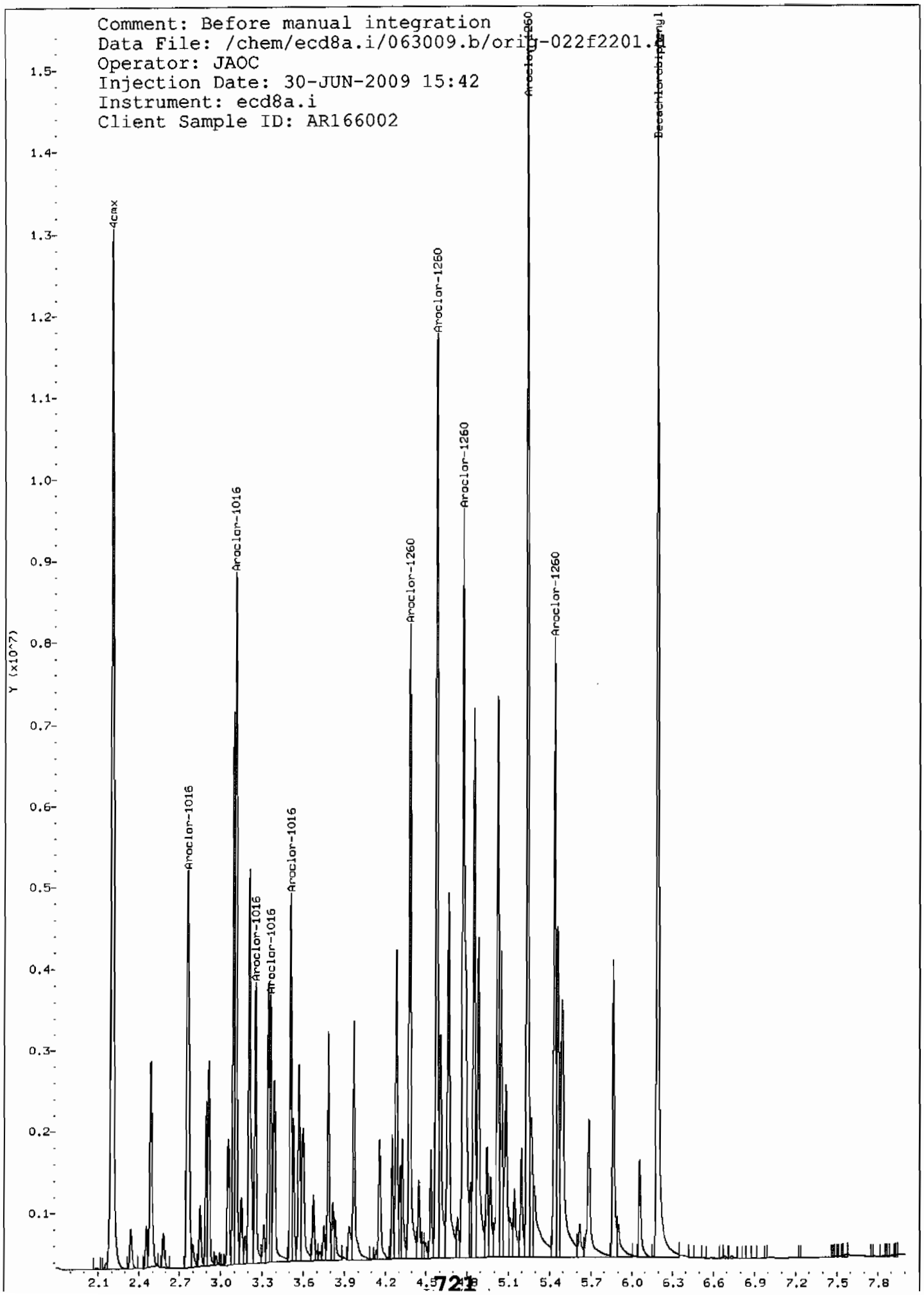
Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-022f2201.
Operator: JAOC
Injection Date: 30-JUN-2009 15:42
Instrument: ecd8a.i
Client Sample ID: AR166002
Y (x10^7)
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/022b2201.d
Lab Smp Id: WAR090629-04602 Client Smp ID: AR166002
Inj Date : 30-JUN-2009 15:42
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04602
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	5135121	100.000	89.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	5035142	100.000	89.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.221	3.222	-0.001	2220681	1000.00	1010	80.00- 120.00	100.00
3.574	3.575	-0.001	2994458	1000.00	1020	114.84- 154.84	134.84
3.675	3.675	0.000	1766378	1000.00	1020	59.54- 99.54	79.54
3.751	3.752	-0.001	1063854	1000.00	1020	27.91- 67.91	47.91
3.825	3.826	-0.001	1076468	1000.00	1000	28.47- 68.47	48.47
Average of Peak Amounts =					1.01e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	2885170	1000.00	1000	80.00- 120.00	100.00
5.083	5.083	0.000	3545820	1000.00	1020	102.90- 142.90	122.90
5.198	5.199	-0.001	3200191	1000.00	1010	90.92- 130.92	110.92
5.607	5.608	-0.001	2398900	1000.00	1010	63.15- 103.15	83.15
6.040	6.041	-0.001	3868799	1000.00	1030	114.09- 154.09	134.09
Average of Peak Amounts =					1.02e+03		

Data File: /chem/ecd8a.i/063009.b/022b2201.d
Date : 30-JUN-2009 15:42
Client ID: AR166002
Sample Info: IWAR090629-04602

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

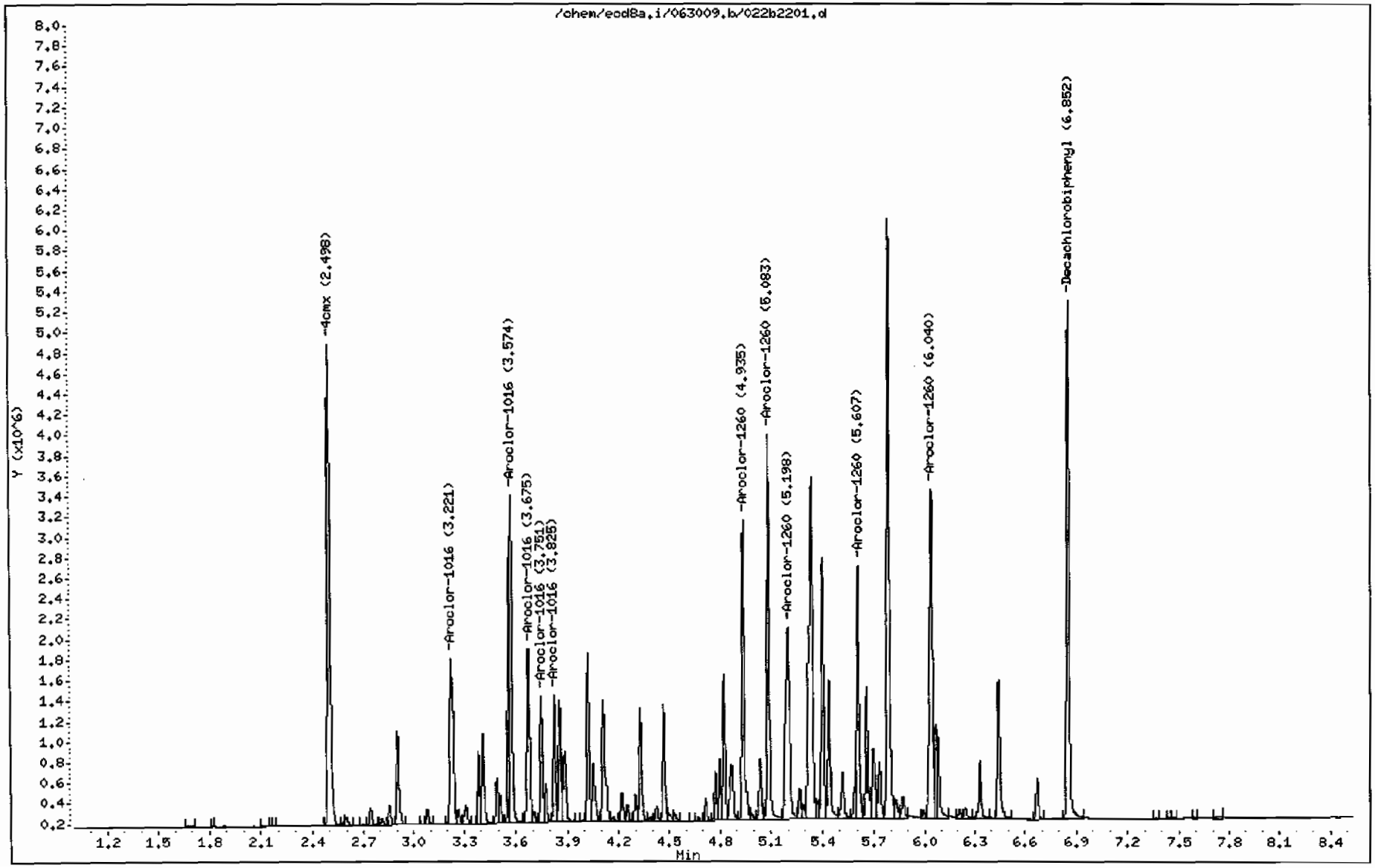

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/033f3301.d
Lab Smp Id: WAR090629-04603 Client Smp ID: AR166003
Inj Date : 30-JUN-2009 18:35
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04603
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 01-Jul-2009 07:56 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	15363980	100.000	96.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	16554267	100.000	98.6	80.00- 120.00	100.00(M)
1 Aroclor-1016					CAS #: 12674-11-2		
2.760	2.762	-0.002	6222594	1000.00	1080	80.00- 120.00	100.00
3.110	3.112	-0.002	7909896	1000.00	1090	104.26- 144.26	127.12
3.254	3.256	-0.002	3197458	1000.00	1100	31.13- 71.13	51.38
3.364	3.365	-0.001	2899955	1000.00	1050	27.14- 67.14	46.60
3.508	3.510	-0.002	3898569	1000.00	1070	42.84- 82.84	62.65
Average of Peak Amounts =					1.08e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	7627002	1000.00	1070	80.00- 120.00	100.00(M)
4.578	4.579	-0.001	10853926	1000.00	1080	122.43- 162.43	142.31
4.772	4.774	-0.002	12192523	1000.00	1060	138.51- 178.51	159.86
5.240	5.242	-0.002	14602143	1000.00	1090	171.28- 211.28	191.45
5.435	5.437	-0.002	7015943	1000.00	1070	73.47- 113.47	91.99
Average of Peak Amounts =					1.07e+03		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/033f3301.d
Date : 30-JUN-2009 18:35
Client ID: AR166003
Sample Info: IWAR090629-04603

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

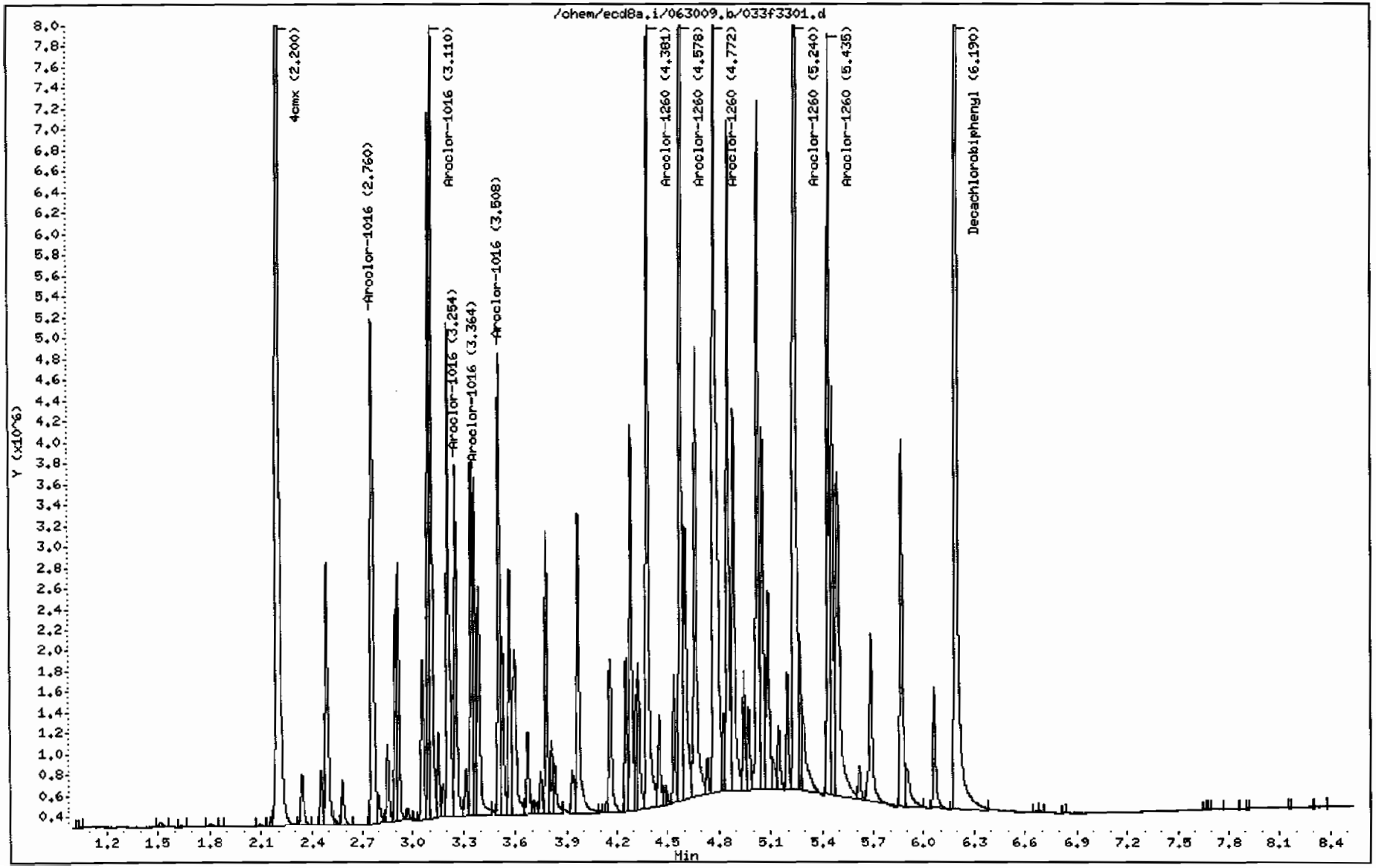

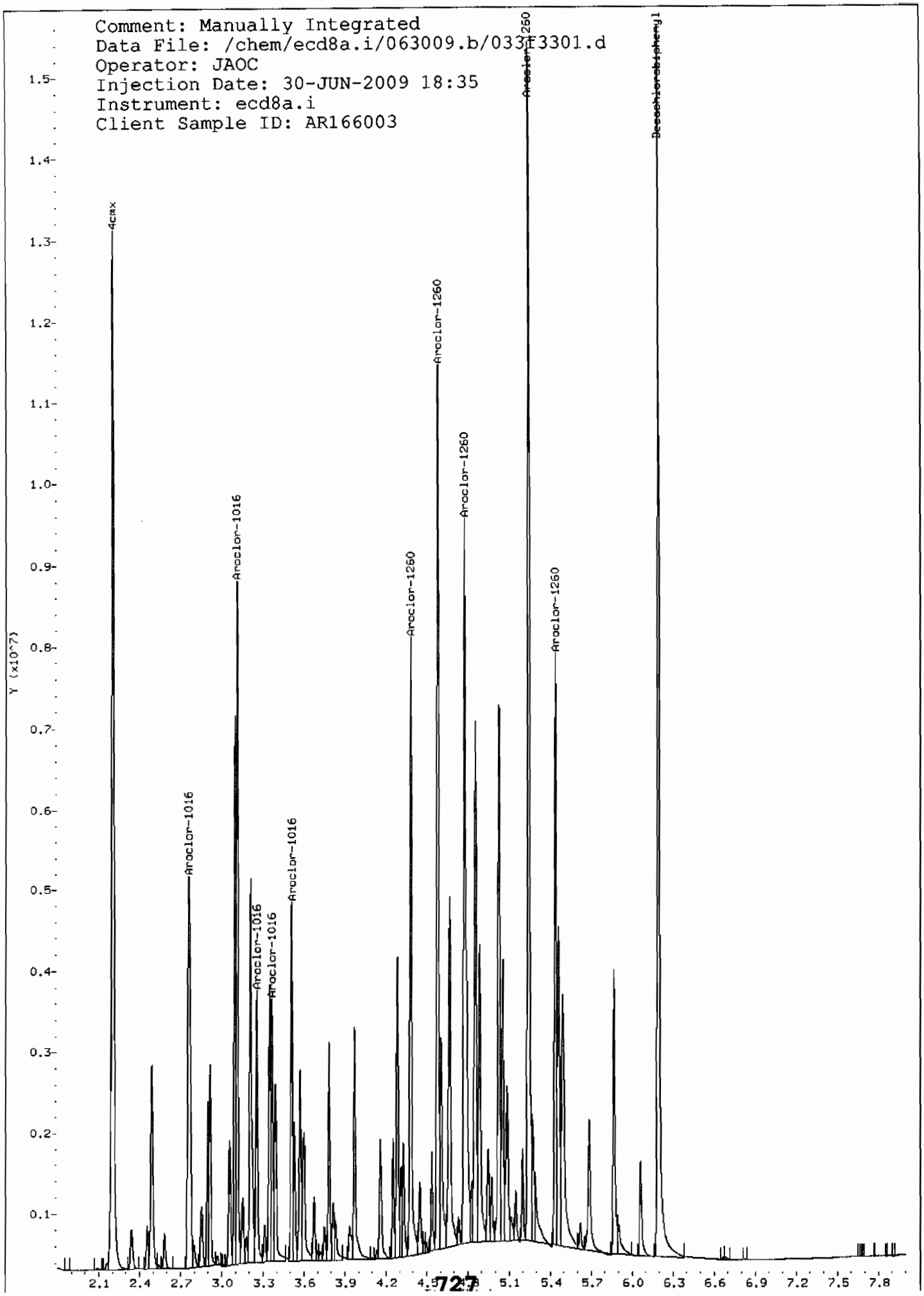
Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/033F3301.d
Operator: JAOC
Injection Date: 30-JUN-2009 18:35
Instrument: ecd8a.i
Client Sample ID: AR166003
4CMX
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
Y (x10^7)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
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6.6
6.9
7.2
7.5
7.8

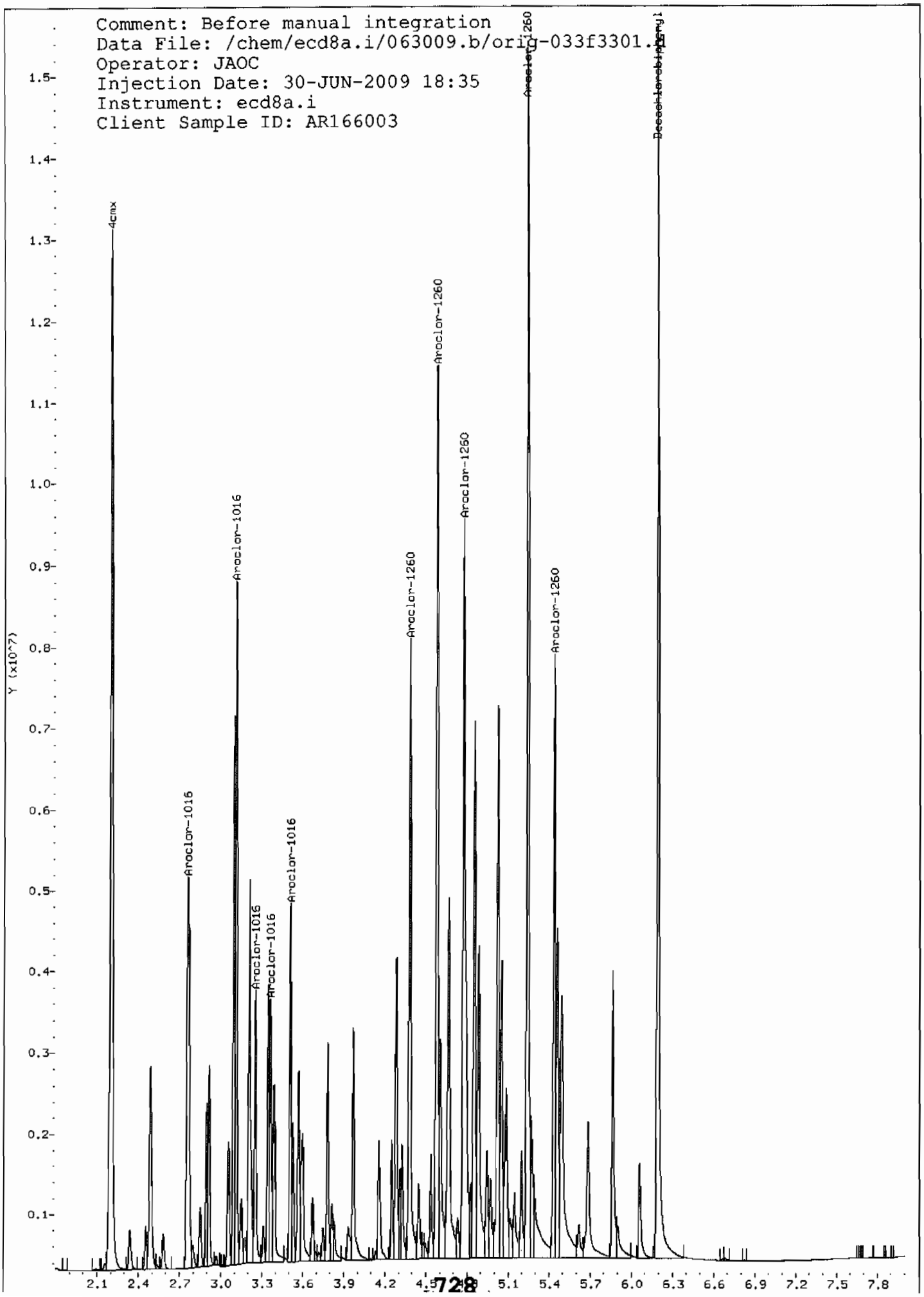
Comment: Before manual integration
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Operator: JAOC
Injection Date: 30-JUN-2009 18:35
Instrument: ecd8a.i
Client Sample ID: AR166003
Y (x10^7)
4cmx
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/033b3301.d
Lab Smp Id: WAR090629-04603 Client Smp ID: AR166003
Inj Date : 30-JUN-2009 18:35
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |WAR090629-04603
Misc Info : |1660
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 01-Jul-2009 07:26 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5070280	100.000	87.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	5137351	100.000	91.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	2198374	1000.00	997	80.00- 120.00	100.00
3.575	3.575	0.000	3024555	1000.00	1030	118.74- 158.74	137.58
3.675	3.675	0.000	1743998	1000.00	1000	60.26- 100.26	79.33
3.751	3.752	-0.001	1055236	1000.00	1020	28.23- 68.23	48.00
3.825	3.826	-0.001	1063993	1000.00	994	28.70- 68.70	48.40
Average of Peak Amounts =				1.01e+03			
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	2880730	1000.00	1000	80.00- 120.00	100.00
5.083	5.083	0.000	3559181	1000.00	1030	104.06- 144.06	123.55
5.198	5.199	-0.001	3207589	1000.00	1020	91.97- 131.97	111.35
5.607	5.608	-0.001	2405333	1000.00	1020	64.43- 104.43	83.50
6.040	6.041	-0.001	3902843	1000.00	1040	116.83- 156.83	135.48
Average of Peak Amounts =				1.02e+03			

Data File: /chem/ecd8a.i/063009.b/033b3301.d
Date : 30-JUN-2009 18:35
Client ID: AR166003
Sample Info: IWAR090629-04603

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC
Column diameter: 0.25

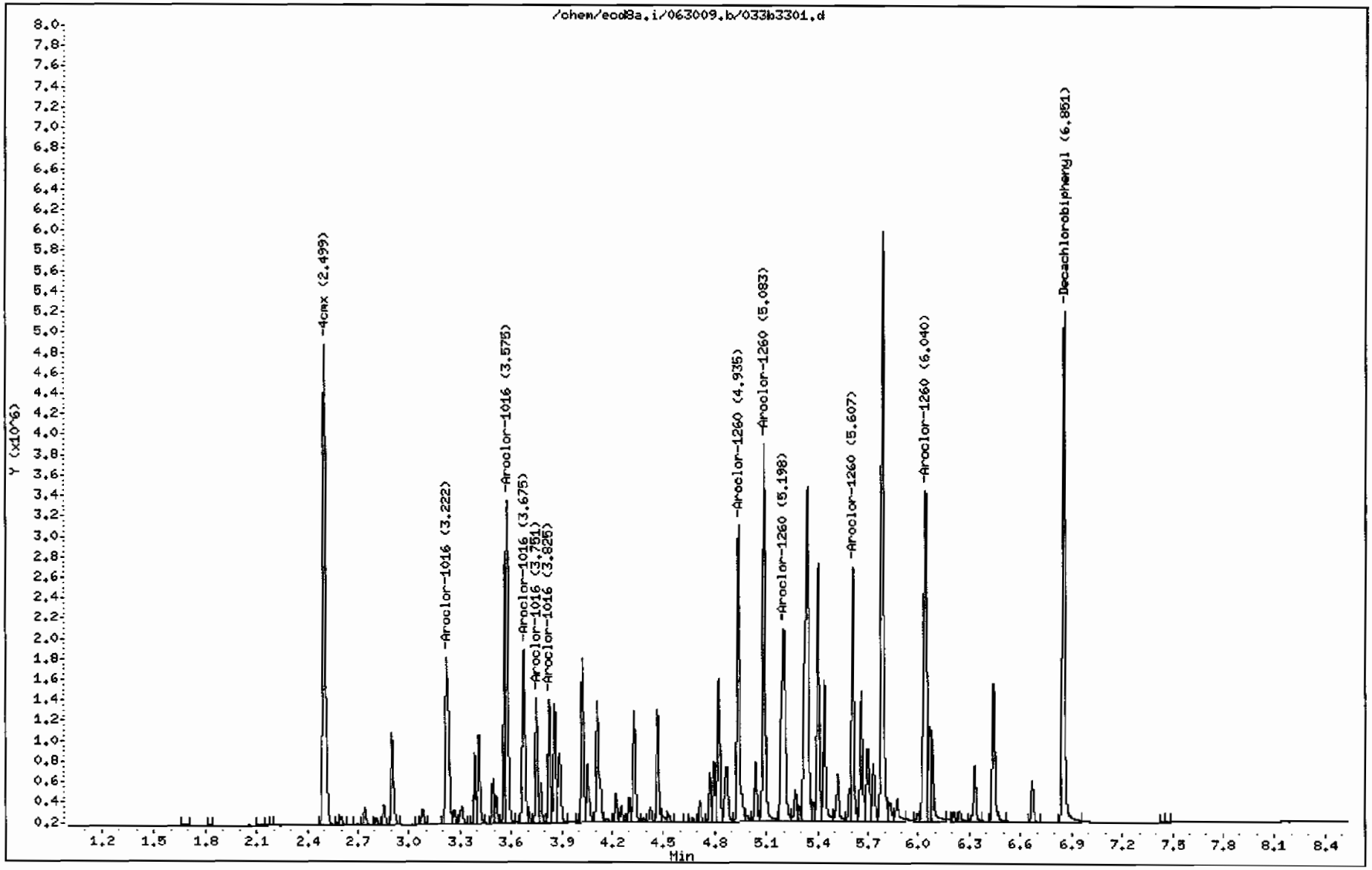

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/16/09	0823	2.20	6.19
02	ZZZZZ	ZZZZZ	06/16/09	0836	2.20	6.19
03	AR125401	WAR090302-54	06/16/09	0848	2.20	6.19
04	AR124201	WAR090519-42	06/16/09	0901	2.20	6.19
05	ZZZZZ	ZZZZZ	06/16/09	0913	2.20	6.19
06	ZZZZZ	ZZZZZ	06/16/09	0925	2.20	6.19
07	AR124801	WAR090521-48	06/16/09	0943	2.21	6.20
08	AR166001	WAR090616-01	06/16/09	0956	2.21	6.20
09	AR166002	WAR090616-02	06/16/09	1009	2.20	6.19
10	AR166003	WAR090616-03	06/16/09	1021	2.20	6.19
11	AR166004	WAR090616-04	06/16/09	1033	2.20	6.19
12	AR166005	IAR090601-01	06/16/09	1046	2.20	6.19
13	AR166001	WAR090616-60	06/16/09	1058	2.20	6.19
14	AR123201	WAR090326-32	06/16/09	1110	2.20	6.19
15	AR122101	WAR090320-21	06/16/09	1123	2.20	6.19
16	AR126201	WAR090608-62	06/16/09	1135	2.20	6.19
17	AR126801	WAR090424-68	06/16/09	1147	2.20	6.19
18	DDTANALOGSTD	WAR090416-DD	06/16/09	1200	2.20	6.20
19	PIBLK02	WAR090519-99	06/16/09	1212	2.20	6.19
20	ZZZZZ	ZZZZZ	06/16/09	1224	2.20	6.19
21	ZZZZZ	ZZZZZ	06/16/09	1241	2.20	6.19
22	ZZZZZ	ZZZZZ	06/16/09	1253	2.20	6.19
23	ZZZZZ	ZZZZZ	06/16/09	1306	2.20	6.19
24	ZZZZZ	ZZZZZ	06/16/09	1322	2.20	6.19
25	ZZZZZ	ZZZZZ	06/16/09	1339	2.20	6.19
26	ZZZZZ	ZZZZZ	06/16/09	1355	2.20	6.19
27	ZZZZZ	ZZZZZ	06/16/09	1412	2.20	6.19
28	ZZZZZ	ZZZZZ	06/16/09	1428	2.20	6.19
29	AR166002	WAR090616-60	06/16/09	1445	2.20	6.19
30	PIBLK03	WAR090519-99	06/16/09	1457	2.20	6.19
31	ZZZZZ	ZZZZZ	06/16/09	1509	2.20	6.19
32	ZZZZZ	ZZZZZ	06/16/09	1526	2.20	6.19

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/16/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.86

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/16/09	0823	2.50	6.85
02	ZZZZZ	ZZZZZ	06/16/09	0836	2.50	6.86
03	AR125401	WAR090302-54	06/16/09	0848	2.50	6.86
04	AR124201	WAR090519-42	06/16/09	0901	2.50	6.86
05	ZZZZZ	ZZZZZ	06/16/09	0913	2.50	6.86
06	ZZZZZ	ZZZZZ	06/16/09	0925	2.50	6.86
07	AR124801	WAR090521-48	06/16/09	0943	2.50	6.86
08	AR166001	WAR090616-01	06/16/09	0956	2.50	6.86
09	AR166002	WAR090616-02	06/16/09	1009	2.50	6.86
10	AR166003	WAR090616-03	06/16/09	1021	2.50	6.86
11	AR166004	WAR090616-04	06/16/09	1033	2.50	6.86
12	AR166005	IAR090601-01	06/16/09	1046	2.50	6.86
13	AR166001	WAR090616-60	06/16/09	1058	2.50	6.86
14	AR123201	WAR090326-32	06/16/09	1110	2.50	6.86
15	AR122101	WAR090320-21	06/16/09	1123	2.50	6.86
16	AR126201	WAR090608-62	06/16/09	1135	2.50	6.86
17	AR126801	WAR090424-68	06/16/09	1147	2.50	6.86
18	DDTANALOGSTD	WAR090416-DD	06/16/09	1200	2.50	6.86
19	PIBLK02	WAR090519-99	06/16/09	1212	2.50	6.86
20	ZZZZZ	ZZZZZ	06/16/09	1224	2.50	6.86
21	ZZZZZ	ZZZZZ	06/16/09	1241	2.50	6.86
22	ZZZZZ	ZZZZZ	06/16/09	1253	2.50	6.86
23	ZZZZZ	ZZZZZ	06/16/09	1306	2.50	6.86
24	ZZZZZ	ZZZZZ	06/16/09	1322	2.50	6.86
25	ZZZZZ	ZZZZZ	06/16/09	1339	2.50	6.85
26	ZZZZZ	ZZZZZ	06/16/09	1355	2.50	6.85
27	ZZZZZ	ZZZZZ	06/16/09	1412	2.50	6.85
28	ZZZZZ	ZZZZZ	06/16/09	1428	2.50	6.85
29	AR166002	WAR090616-60	06/16/09	1445	2.50	6.86
30	PIBLK03	WAR090519-99	06/16/09	1457	2.50	6.86
31	ZZZZZ	ZZZZZ	06/16/09	1509	2.50	6.86
32	ZZZZZ	ZZZZZ	06/16/09	1526	2.50	6.85

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

page 1 of 1

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/18/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/18/09	0842	2.20	6.19
02	AR166001	WAR090616-60	06/18/09	0854	2.20	6.19
03	ZZZZZ	ZZZZZ	06/18/09	0907	2.20	6.19
04	AR124201	WAR090519-42	06/18/09	0919	2.20	6.19
05	ZZZZZ	ZZZZZ	06/18/09	0931	2.20	6.19
06	ZZZZZ	ZZZZZ	06/18/09	0945	2.20	6.20
07	ZZZZZ	ZZZZZ	06/18/09	0958	2.20	6.19
08	AR125401	WAR090618-01	06/18/09	1012	2.21	6.20
09	AR125402	WAR090618-02	06/18/09	1025	2.20	6.19
10	AR125403	WAR090618-03	06/18/09	1037	2.20	6.19
11	AR125404	WAR090618-04	06/18/09	1050	2.20	6.19
12	AR125405	IAR090505-01	06/18/09	1102	2.20	6.19
13	AR125401	WAR090302-54	06/18/09	1114	2.20	6.19
14	AR124801	WAR090618-05	06/18/09	1127	2.20	6.19
15	AR124802	WAR090618-06	06/18/09	1139	2.20	6.19
16	AR124803	WAR090618-07	06/18/09	1151	2.20	6.19
17	AR124804	WAR090618-08	06/18/09	1204	2.20	6.19
18	AR124805	IAR090601-02	06/18/09	1216	2.20	6.19
19	AR124801	WAR090521-48	06/18/09	1232	2.21	6.20
20	AR123201	WAR090618-32	06/18/09	1245	2.20	6.19
21	AR122101	WAR090618-21	06/18/09	1257	2.20	6.19
22	AR126201	WAR090608-62	06/18/09	1310	2.20	6.19
23	AR126801	WAR090424-68	06/18/09	1322	2.20	6.19
24	DDTANALOGSTD	WAR090416-DD	06/18/09	1334	2.18	6.19
25	PIBLK02	WAR090519-99	06/18/09	1347	2.20	6.19
26	ZZZZZ	ZZZZZ	06/18/09	1359	2.20	6.19
27	ZZZZZ	ZZZZZ	06/18/09	1411	2.20	6.19
28	ZZZZZ	ZZZZZ	06/18/09	1424	2.21	6.20
29	ZZZZZ	ZZZZZ	06/18/09	1440	2.20	6.19
30	ZZZZZ	ZZZZZ	06/18/09	1457	2.20	6.19
31	ZZZZZ	ZZZZZ	06/18/09	1513	2.20	6.19
32	ZZZZZ	ZZZZZ	06/18/09	1530	2.20	6.19

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/18/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.86

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/18/09	0842	2.50	6.85
02	AR166001	WAR090616-60	06/18/09	0854	2.50	6.85
03	ZZZZZ	ZZZZZ	06/18/09	0907	2.50	6.86
04	AR124201	WAR090519-42	06/18/09	0919	2.50	6.86
05	ZZZZZ	ZZZZZ	06/18/09	0931	2.50	6.86
06	ZZZZZ	ZZZZZ	06/18/09	0945	2.50	6.86
07	ZZZZZ	ZZZZZ	06/18/09	0958	2.50	6.86
08	AR125401	WAR090618-01	06/18/09	1012	2.50	6.86
09	AR125402	WAR090618-02	06/18/09	1025	2.50	6.85
10	AR125403	WAR090618-03	06/18/09	1037	2.50	6.86
11	AR125404	WAR090618-04	06/18/09	1050	2.50	6.86
12	AR125405	IAR090505-01	06/18/09	1102	2.50	6.86
13	AR125401	WAR090302-54	06/18/09	1114	2.50	6.86
14	AR124801	WAR090618-05	06/18/09	1127	2.50	6.86
15	AR124802	WAR090618-06	06/18/09	1139	2.50	6.86
16	AR124803	WAR090618-07	06/18/09	1151	2.50	6.86
17	AR124804	WAR090618-08	06/18/09	1204	2.50	6.86
18	AR124805	IAR090601-02	06/18/09	1216	2.50	6.86
19	AR124801	WAR090521-48	06/18/09	1232	2.50	6.86
20	AR123201	WAR090618-32	06/18/09	1245	2.50	6.86
21	AR122101	WAR090618-21	06/18/09	1257	2.50	6.86
22	AR126201	WAR090608-62	06/18/09	1310	2.50	6.85
23	AR126801	WAR090424-68	06/18/09	1322	2.50	6.86
24	DDTANALOGSTD	WAR090416-DD	06/18/09	1334		6.86
25	PIBLK02	WAR090519-99	06/18/09	1347	2.50	6.86
26	ZZZZZ	ZZZZZ	06/18/09	1359	2.50	6.86
27	ZZZZZ	ZZZZZ	06/18/09	1411	2.50	6.86
28	ZZZZZ	ZZZZZ	06/18/09	1424	2.51	6.86
29	ZZZZZ	ZZZZZ	06/18/09	1440	2.50	6.86
30	ZZZZZ	ZZZZZ	06/18/09	1457	2.50	6.86
31	ZZZZZ	ZZZZZ	06/18/09	1513	2.50	6.86
32	ZZZZZ	ZZZZZ	06/18/09	1530	2.50	6.85

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/30/09	1046	2.20	6.19
02	AR166001	WAR090629-04	06/30/09	1059	2.20	6.19
03	AR125401	WAR090302-54	06/30/09	1111	2.20	6.19
04	AR124201	WAR090519-42	06/30/09	1124	2.20	6.19
05	AR124801	WAR090521-48	06/30/09	1136	2.20	6.19
06	AR123201	WAR090618-32	06/30/09	1148	2.20	6.19
07	AR122101	WAR090618-21	06/30/09	1203	2.20	6.20
08	AR126201	WAR090608-62	06/30/09	1216	2.20	6.19
09	AR126801	WAR090424-68	06/30/09	1228	2.20	6.19
10	DDTANALOGSTD	WAR090618-DD	06/30/09	1240	2.20	6.19
11	PIBLK02	WAR090519-99	06/30/09	1253	2.20	6.19
12	PBLK01	1201871515	06/30/09	1305	2.20	6.19
13	PBLK01LCS	1201871516	06/30/09	1318	2.20	6.19
14	ZZZZZ	ZZZZZ	06/30/09	1330	2.20	6.19
15	ZZZZZ	ZZZZZ	06/30/09	1346	2.20	6.19
16	ZZZZZ	ZZZZZ	06/30/09	1403	2.20	6.19
17	ZZZZZ	ZZZZZ	06/30/09	1419	2.20	6.19
18	ZZZZZ	ZZZZZ	06/30/09	1436	2.20	6.19
19	ZZZZZ	ZZZZZ	06/30/09	1452	2.20	6.19
20	ZZZZZ	ZZZZZ	06/30/09	1509	2.20	6.19
21	ZZZZZ	ZZZZZ	06/30/09	1525	2.20	6.19
22	AR166002	WAR090629-04	06/30/09	1542	2.20	6.19
23	PIBLK03	WAR090519-99	06/30/09	1554	2.20	6.19
24	ZZZZZ	ZZZZZ	06/30/09	1606	2.20	6.19
25	ZZZZZ	ZZZZZ	06/30/09	1623	2.20	6.19
26	ZZZZZ	ZZZZZ	06/30/09	1639	2.20	6.19
27	CAMO-09-6519	232507001	06/30/09	1656	2.20	6.19
28	CAMO-09-6518	232507002	06/30/09	1712	2.20	6.19
29	CAMO-09-6527	232507003	06/30/09	1729	2.20	6.19
30	CAMO-09-6529	232507004	06/30/09	1745	2.20	6.19
31	CAMO-09-6528	232507005	06/30/09	1802	2.20	6.19
32	CAMO-09-6531	232507006	06/30/09	1818	2.20	6.19

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.20 DCB: 6.19

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR166003	WAR090629-04	06/30/09	1835	2.20	6.19
02	PIBLK04	WAR090519-99	06/30/09	1847	2.20	6.19
03	ZZZZZ	ZZZZZ	06/30/09	1859	2.20	6.19
04	ZZZZZ	ZZZZZ	06/30/09	1912	2.20	6.19
05	ZZZZZ	ZZZZZ	06/30/09	1924	2.20	6.19
06	ZZZZZ	ZZZZZ	06/30/09	1941	2.20	6.19
07	ZZZZZ	ZZZZZ	06/30/09	1957	2.20	6.19
08	ZZZZZ	ZZZZZ	06/30/09	2014	2.20	6.19
09	ZZZZZ	ZZZZZ	06/30/09	2030	2.20	6.19
10	ZZZZZ	ZZZZZ	06/30/09	2047	2.20	6.19
11	ZZZZZ	ZZZZZ	06/30/09	2103	2.20	6.19
12	ZZZZZ	ZZZZZ	06/30/09	2120	2.20	6.19
13	AR166004	WAR090629-04	06/30/09	2136	2.20	6.19
14	PIBLK05	WAR090519-99	06/30/09	2148	2.20	6.19
15	ZZZZZ	ZZZZZ	06/30/09	2201	2.20	6.19
16	ZZZZZ	ZZZZZ	06/30/09	2213	2.21	6.19
17	ZZZZZ	ZZZZZ	06/30/09	2226	2.21	6.19
18	ZZZZZ	ZZZZZ	06/30/09	2242	2.20	6.19
19	ZZZZZ	ZZZZZ	06/30/09	2259	2.20	6.19
20	ZZZZZ	ZZZZZ	06/30/09	2315	2.20	6.19
21	AR166005	WAR090629-04	06/30/09	2331	2.20	6.19
22	PIBLK06	WAR090519-99	06/30/09	2344	2.20	6.19
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.85

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/30/09	1046	2.50	6.85
02	AR166001	WAR090629-04	06/30/09	1059	2.50	6.85
03	AR125401	WAR090302-54	06/30/09	1111	2.50	6.85
04	AR124201	WAR090519-42	06/30/09	1124	2.50	6.85
05	AR124801	WAR090521-48	06/30/09	1136	2.50	6.85
06	AR123201	WAR090618-32	06/30/09	1148	2.50	6.85
07	AR122101	WAR090618-21	06/30/09	1203	2.50	6.85
08	AR126201	WAR090608-62	06/30/09	1216	2.50	6.85
09	AR126801	WAR090424-68	06/30/09	1228	2.50	6.85
10	DDTANALOGSTD	WAR090618-DD	06/30/09	1240	2.50	6.85
11	PIBLK02	WAR090519-99	06/30/09	1253	2.50	6.85
12	PBLK01	1201871515	06/30/09	1305	2.50	6.85
13	PBLK01LCS	1201871516	06/30/09	1318	2.50	6.85
14	ZZZZZ	ZZZZZ	06/30/09	1330	2.50	6.85
15	ZZZZZ	ZZZZZ	06/30/09	1346	2.50	6.85
16	ZZZZZ	ZZZZZ	06/30/09	1403	2.50	6.85
17	ZZZZZ	ZZZZZ	06/30/09	1419	2.50	6.85
18	ZZZZZ	ZZZZZ	06/30/09	1436	2.50	6.85
19	ZZZZZ	ZZZZZ	06/30/09	1452	2.50	6.85
20	ZZZZZ	ZZZZZ	06/30/09	1509	2.50	6.85
21	ZZZZZ	ZZZZZ	06/30/09	1525	2.50	6.85
22	AR166002	WAR090629-04	06/30/09	1542	2.50	6.85
23	PIBLK03	WAR090519-99	06/30/09	1554	2.50	6.85
24	ZZZZZ	ZZZZZ	06/30/09	1606	2.50	6.85
25	ZZZZZ	ZZZZZ	06/30/09	1623	2.50	6.85
26	ZZZZZ	ZZZZZ	06/30/09	1639	2.50	6.85
27	CAMO-09-6519	232507001	06/30/09	1656	2.50	6.85
28	CAMO-09-6518	232507002	06/30/09	1712	2.50	6.85
29	CAMO-09-6527	232507003	06/30/09	1729	2.50	6.85
30	CAMO-09-6529	232507004	06/30/09	1745	2.50	6.85
31	CAMO-09-6528	232507005	06/30/09	1802	2.50	6.85
32	CAMO-09-6531	232507006	06/30/09	1818	2.50	6.85

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2499

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/16/09 06/18/09

Instrument ID: ECD8A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.50 DCB: 6.85

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	AR166003	WAR090629-04	06/30/09	1835	2.50	6.85
02	PIBLK04	WAR090519-99	06/30/09	1847	2.50	6.85
03	ZZZZZ	ZZZZZ	06/30/09	1859	2.50	6.85
04	ZZZZZ	ZZZZZ	06/30/09	1912	2.50	6.85
05	ZZZZZ	ZZZZZ	06/30/09	1924	2.50	6.85
06	ZZZZZ	ZZZZZ	06/30/09	1941	2.50	6.85
07	ZZZZZ	ZZZZZ	06/30/09	1957	2.50	6.85
08	ZZZZZ	ZZZZZ	06/30/09	2014	2.50	6.85
09	ZZZZZ	ZZZZZ	06/30/09	2030	2.50	6.85
10	ZZZZZ	ZZZZZ	06/30/09	2047	2.50	6.85
11	ZZZZZ	ZZZZZ	06/30/09	2103	2.50	6.85
12	ZZZZZ	ZZZZZ	06/30/09	2120	2.50	6.85
13	AR166004	WAR090629-04	06/30/09	2136	2.50	6.85
14	PIBLK05	WAR090519-99	06/30/09	2148	2.50	6.85
15	ZZZZZ	ZZZZZ	06/30/09	2201	2.50	6.85
16	ZZZZZ	ZZZZZ	06/30/09	2213	2.50	6.85
17	ZZZZZ	ZZZZZ	06/30/09	2226	2.50	6.85
18	ZZZZZ	ZZZZZ	06/30/09	2242	2.50	6.85
19	ZZZZZ	ZZZZZ	06/30/09	2259	2.50	6.85
20	ZZZZZ	ZZZZZ	06/30/09	2315	2.50	6.85
21	AR166005	WAR090629-04	06/30/09	2331	2.50	6.85
22	PIBLK06	WAR090519-99	06/30/09	2344	2.50	6.85
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Identification Summary

SDG Number: 09–2499 **Client ID:** CAMO–09–6519

Lab Sample ID: 232507001

Data File:	027f2701.d	**Data File:**	027b2701.d
Inst:	ECD8A.I_1	**Inst:**	ECD8A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	30–JUN–09 16:56	**Analyzed:**	30–JUN–09 16:56

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor–1254							14.5
Column 1	1	3.78	3.76 – 3.82	10.5		ug/kg	
	2	3.97	3.94 – 4	8.99		ug/kg	
	3	4.17	4.14 – 4.2	10.2		ug/kg	
	4	4.25	4.22 – 4.28	9.34		ug/kg	
	5	4.58	4.55 – 4.61	12.7		ug/kg	
					10.3		
Column 2	1	4.33	4.3 – 4.36	6.97		ug/kg	
	2	4.47	4.44 – 4.5	9.16		ug/kg	
	3	4.8	4.77 – 4.83	9.61		ug/kg	
	4	5.08	5.05 – 5.11	17.6		ug/kg	
	5	5.2	5.18 – 5.24	16.4		ug/kg	
					11.9		
Aroclor–1260							7.91
Column 1	1	4.38	4.35 – 4.41	10.5		ug/kg	
	2	4.58	4.55 – 4.61	8.52		ug/kg	
	3	4.77	4.74 – 4.8	7.64		ug/kg	
	4	5.24	5.21 – 5.27	5.48		ug/kg	
	5	5.44	5.41 – 5.47	7.55		ug/kg	
					7.93		
Column 2	1	4.93	4.91 – 4.97	8.23		ug/kg	
	2	5.08	5.05 – 5.11	8.24		ug/kg	
	3	5.2	5.17 – 5.23	9.6		ug/kg	
	4	5.61	5.58 – 5.64	5.5		ug/kg	
	5	6.04	6.01 – 6.07	5.08		ug/kg	
					7.33		

Identification Summary

SDG Number: 09–2499 **Client ID:** CAMO–09–6529

Lab Sample ID: 232507004

Data File: 030f3001.d **Data File:** 030b3001.d

Inst: ECD8A.I_1 **Inst:** ECD8A.I_2

Column: CLP1 **Column:** CLP2

Analyzed: 30–JUN–09 17:45 **Analyzed:** 30–JUN–09 17:45

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor–1254							2.68
Column 1	1	3.78	3.76 – 3.82	4.86		ug/kg	
	2	3.97	3.94 – 4	3.88		ug/kg	
	3	4.17	4.14 – 4.2	4.64		ug/kg	
	4	4.25	4.22 – 4.28	4.32		ug/kg	
	5	4.58	4.55 – 4.61	5.89		ug/kg	
					4.72		
Column 2	1	4.33	4.3 – 4.36	4.44		ug/kg	
	2	4.47	4.44 – 4.5	3.84		ug/kg	
	3	4.8	4.77 – 4.83	4.1		ug/kg	
	4	5.08	5.05 – 5.11	5.97		ug/kg	
	5	5.2	5.18 – 5.24	4.62		ug/kg	
					4.59		
Aroclor–1260							36.4
Column 1	1	4.38	4.35 – 4.41	3.87		ug/kg	
	2	4.58	4.55 – 4.61	3.96		ug/kg	
	3	4.77	4.74 – 4.8	5.86		ug/kg	
	4	5.24	5.21 – 5.27	2.44		ug/kg	
	5	5.43	5.41 – 5.47	3.06		ug/kg	
					3.84		
Column 2	1	4.93	4.91 – 4.97	3.56		ug/kg	
	2	5.08	5.05 – 5.11	2.79		ug/kg	
	3	5.2	5.17 – 5.23	2.71		ug/kg	
	4	5.61	5.58 – 5.64	2.07		ug/kg	
	5	6.04	6.01 – 6.07	2.15		ug/kg	
					2.66		

Identification Summary

SDG Number: 09-2499 **Client ID:** LCS for batch 881259

Lab Sample ID: 1201871516

Data File: 013f1301.d **Data File:** 013b1301.d

Inst: ECD8A.I_1 **Inst:** ECD8A.I_2

Column: CLP1 **Column:** CLP2

Analyzed: 30-JUN-09 13:18 **Analyzed:** 30-JUN-09 13:18

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							10.3
Column 1	1	2.76	2.73 – 2.79	22.9		ug/kg	
	2	3.11	3.08 – 3.14	23.2		ug/kg	
	3	3.26	3.23 – 3.29	24.4		ug/kg	
	4	3.37	3.33 – 3.39	24.8		ug/kg	
	5	3.51	3.48 – 3.54	25.3		ug/kg	
					24.1		
Column 2	1	3.22	3.19 – 3.25	20.8		ug/kg	
	2	3.58	3.54 – 3.6	22.5		ug/kg	
	3	3.68	3.64 – 3.7	22		ug/kg	
	4	3.75	3.72 – 3.78	21.9		ug/kg	
	5	3.83	3.8 – 3.86	21.5		ug/kg	
					21.7		
Aroclor-1260							10.4
Column 1	1	4.38	4.35 – 4.41	29.1		ug/kg	
	2	4.58	4.55 – 4.61	30.3		ug/kg	
	3	4.77	4.74 – 4.8	29.3		ug/kg	
	4	5.24	5.21 – 5.27	36.7		ug/kg	
	5	5.44	5.41 – 5.47	34.4		ug/kg	
					32		
Column 2	1	4.94	4.91 – 4.97	26.7		ug/kg	
	2	5.08	5.05 – 5.11	27.8		ug/kg	
	3	5.2	5.17 – 5.23	26.9		ug/kg	
	4	5.61	5.58 – 5.64	31.1		ug/kg	
	5	6.04	6.01 – 6.07	31.5		ug/kg	
					28.8		

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2499			**Matrix:**	SOIL
Lab Sample ID:	1201871515				
Client Sample:	QC for batch 881259	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 881259	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 13:05	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	012f1201-1.d	**Column:**	1 CLP1	**Level:**	LOW
	012b1201-1.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.33	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/012f1201-3.d
Lab Smp Id: 1201871515 Client Smp ID: PBLK01
Inj Date : 30-JUN-2009 13:05
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871515|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 12 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	24253194	151.541	5.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.193	6.193	0.000	28646493	170.592	5.7	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/012f1201-3.d
Date : 30-JUN-2009 13:05
Client ID: PBLK01
Sample Info: |120187151511|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

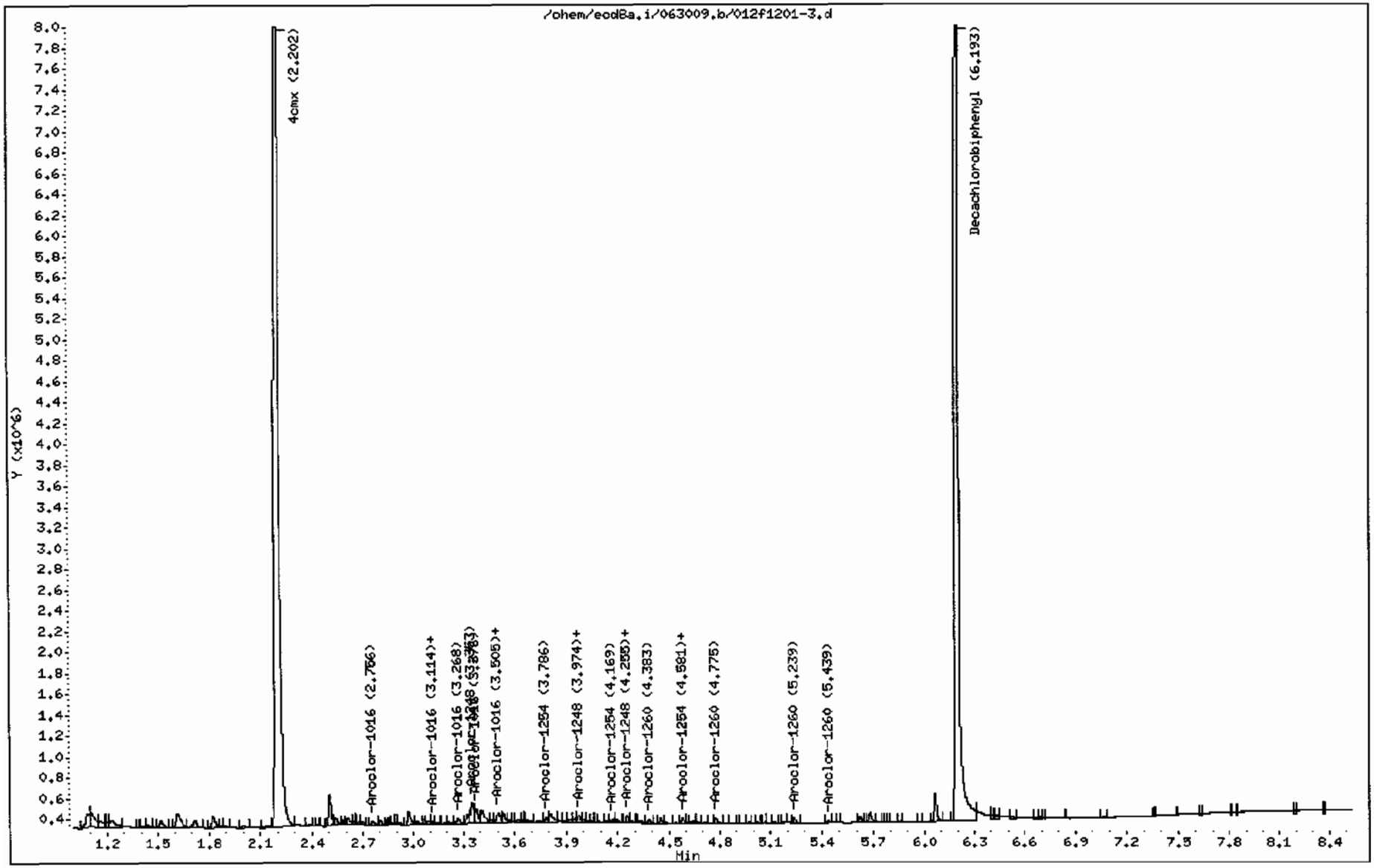

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/012b1201-3.d
Lab Smp Id: 1201871515 Client Smp ID: PBLK01
Inj Date : 30-JUN-2009 13:05
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871515|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 12 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	8145955	141.214	4.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.853	6.853	0.000	8718177	154.788	5.2	80.00- 120.00	100.00

Data File: /chem/ecd8a.i/063009.b/012b1201-3.d
Date : 30-JUN-2009 13:05
Client ID: PBLK01
Sample Info: |120187151511|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

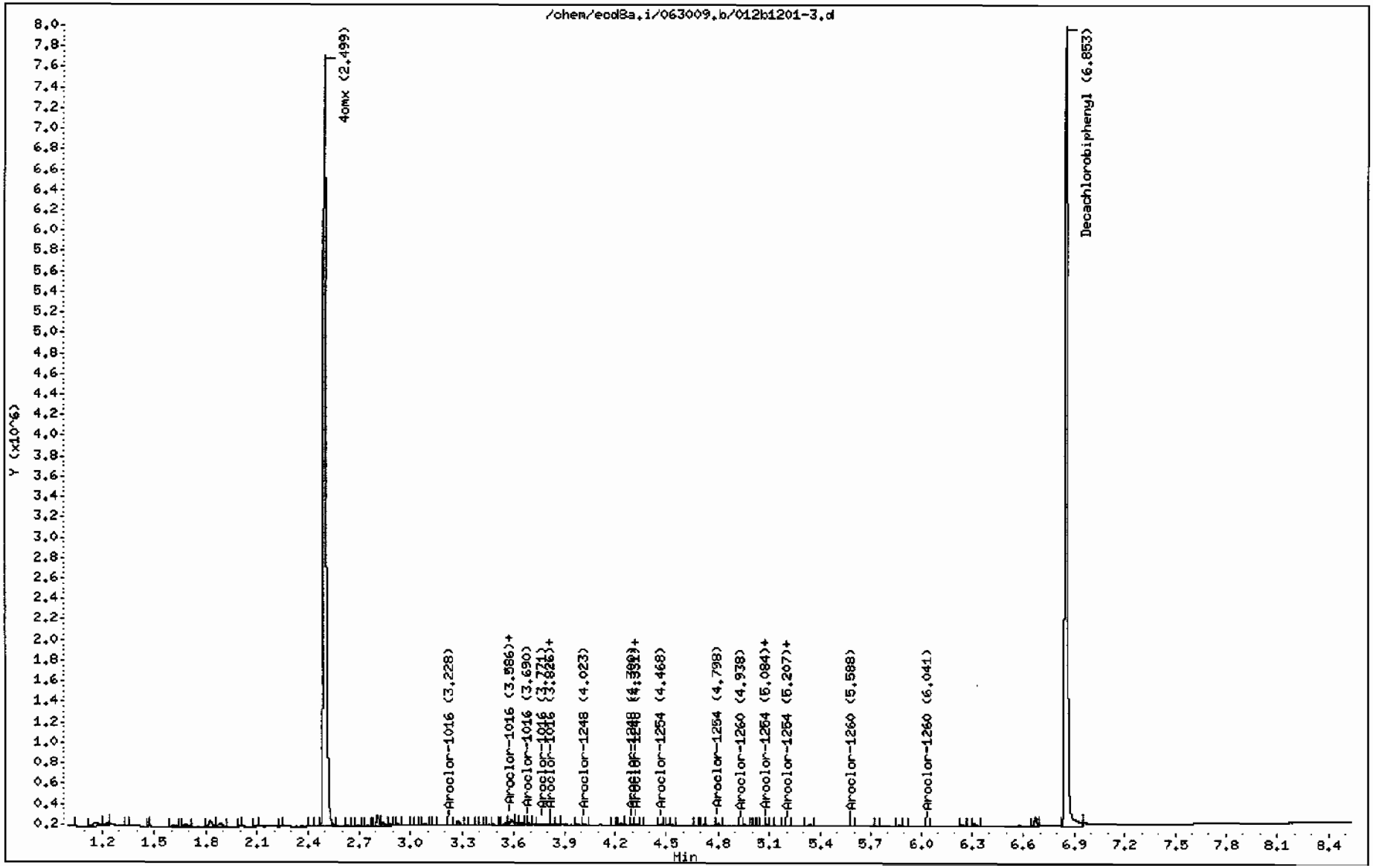

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2499			**Matrix:**	SOIL
Lab Sample ID:	1201871516				
Client Sample:	QC for batch 881259	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 881259	**Method:**	SW846 8082	**SOP Ref:**	GL–OA–E–040
Batch ID:	881260	**Inst:**	ECD8A.I	**Dilution:**	1
Run Date:	06/30/2009 13:18	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	06/29/2009 23:24	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	013f1301–1.d	**Column:**	1 CLP1	**Level:**	LOW
	013b1301–1.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016		24.1	ug/kg	1.11	3.33	1
11104–28–2	Aroclor–1221	U	3.33	ug/kg	1.11	3.33	1
11141–16–5	Aroclor–1232	U	3.33	ug/kg	1.11	3.33	1
53469–21–9	Aroclor–1242	U	3.33	ug/kg	1.11	3.33	1
12672–29–6	Aroclor–1248	U	3.33	ug/kg	1.11	3.33	1
11097–69–1	Aroclor–1254	U	3.33	ug/kg	1.11	3.33	1
11096–82–5	Aroclor–1260		32.0	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/013f1301-3.d
Lab Smp Id: 1201871516 Client Smp ID: PBLK01LCS
Inj Date : 30-JUN-2009 13:18
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871516|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 13 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.202	2.202	0.000	25618046	160.069	5.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.192	6.193	-0.001	27956102	166.480	5.5	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.762	2.762	0.000	3956290	685.998	22.9	80.00- 120.00	100.00
3.112	3.112	0.000	5037423	697.248	23.2	106.24- 146.24	127.33
3.256	3.256	0.000	2128399	731.544	24.4	32.41- 72.41	53.80
3.366	3.365	0.001	2048256	744.071	24.8	27.63- 67.63	51.77

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.511	3.510	0.001	2749706	757.772	25.2	43.51- 83.51	69.50
Average of Peak Concentrations =					24.1		
7 Aroclor-1260					CAS #: 11096-82-5		
4.383	4.383	0.000	6228030	873.700	29.1	80.00- 120.00	100.00(M)
4.579	4.579	0.000	9160566	908.019	30.3	122.54- 162.54	147.09
4.774	4.774	0.000	10107215	880.257	29.3	138.26- 178.26	162.29
5.241	5.242	-0.001	14734767	1099.98	36.7	171.16- 211.16	236.59
5.437	5.437	0.000	6758663	1031.59	34.4	74.08- 114.08	108.52
Average of Peak Concentrations =					32.0		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/013f1301-3.d

Date : 30-JUN-2009 13:18

Client ID: PBLK01LCS

Sample Info: |120187151611|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

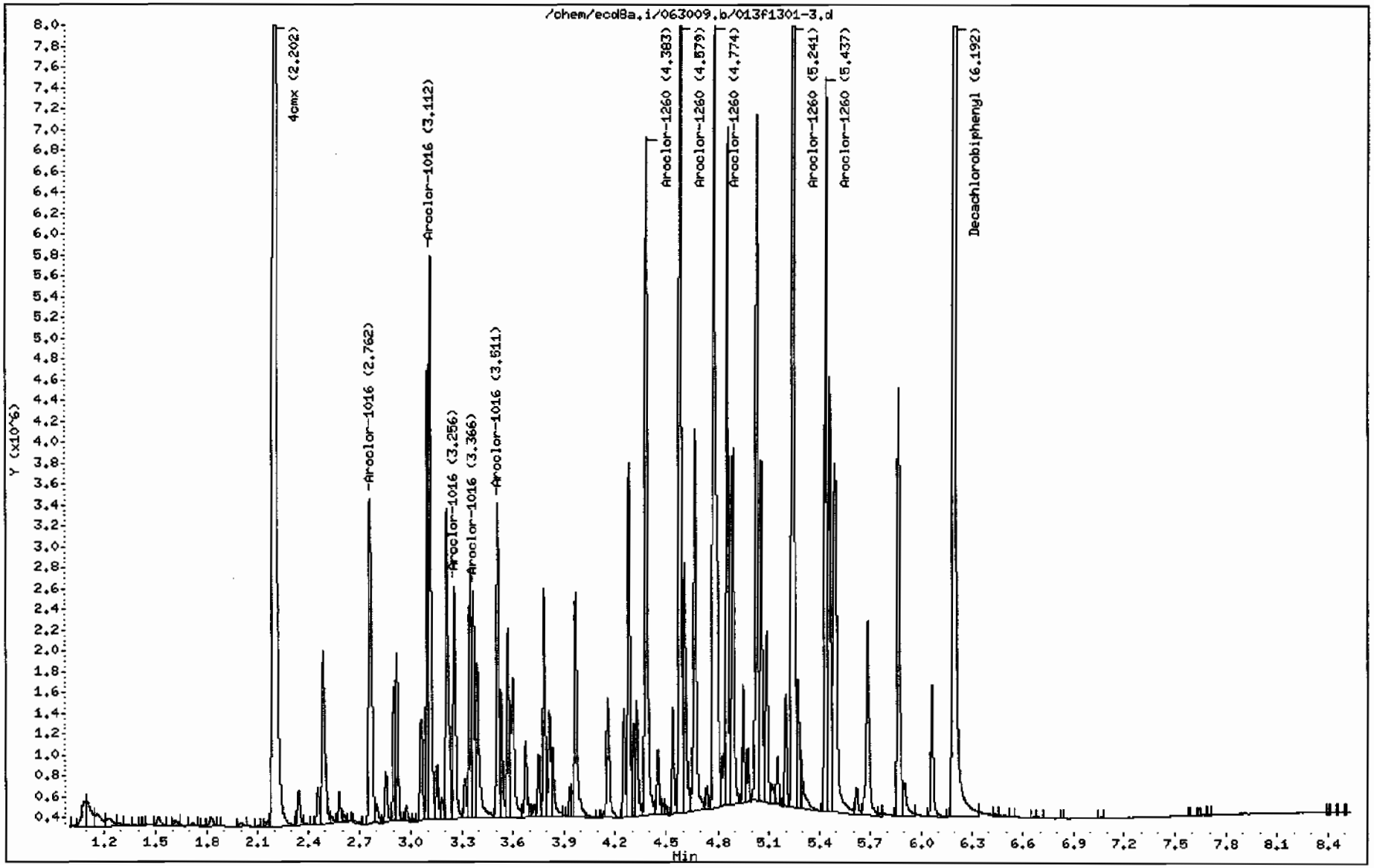

Comment: Manually Integrated
Data File: /chem/ecd8a.i/063009.b/013f1301-3.d
Operator: JAOC
Injection Date: 30-JUN-2009 13:18
Instrument: ecd8a.i
Client Sample ID: PBLK01LCS

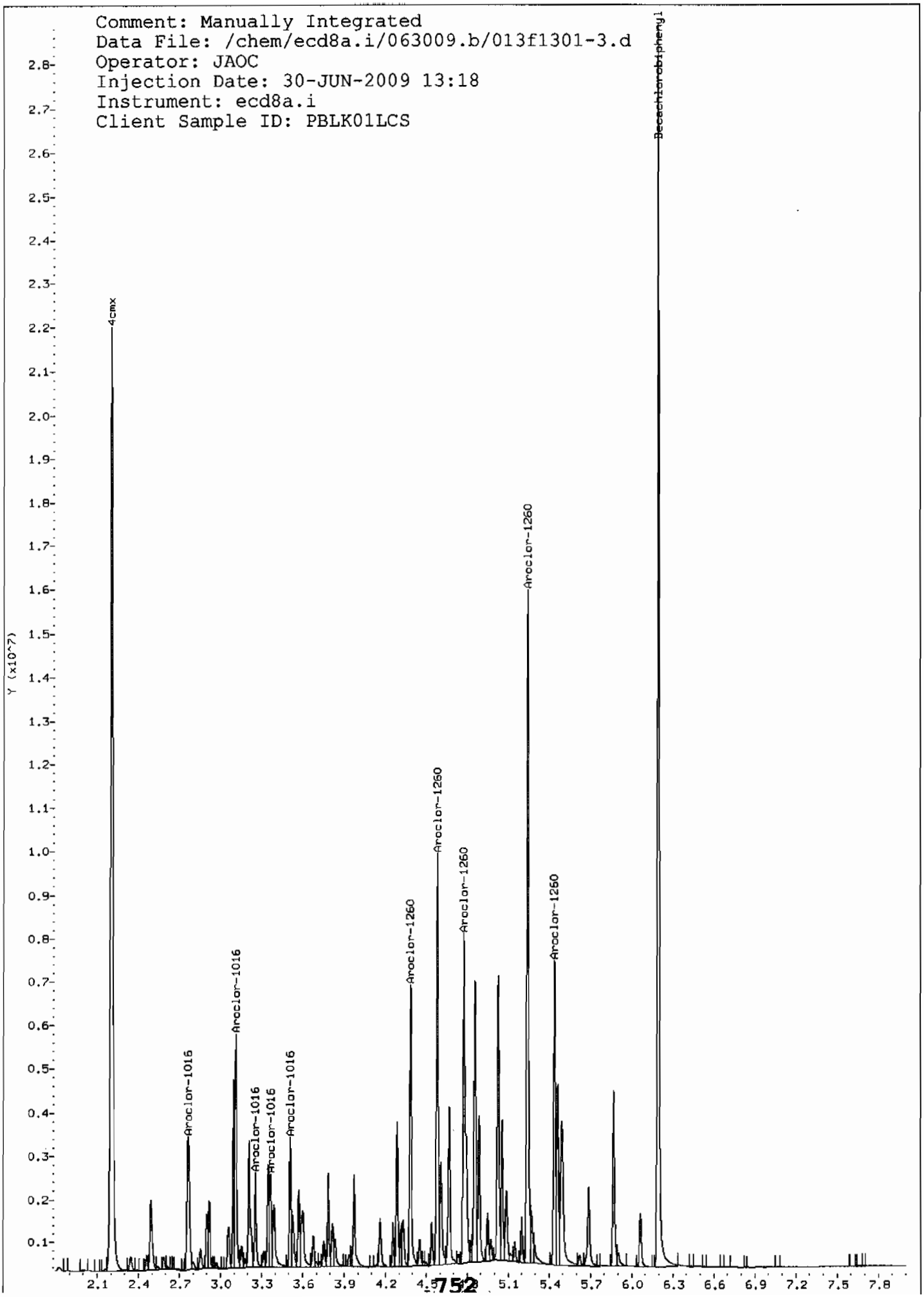

Comment: Before manual integration
Data File: /chem/ecd8a.i/063009.b/orig-013f1301-[illegible].d
Operator: JAOC
Injection Date: 30-JUN-2009 13:18
Instrument: ecd8a.i
Client Sample ID: PBLK01LCS

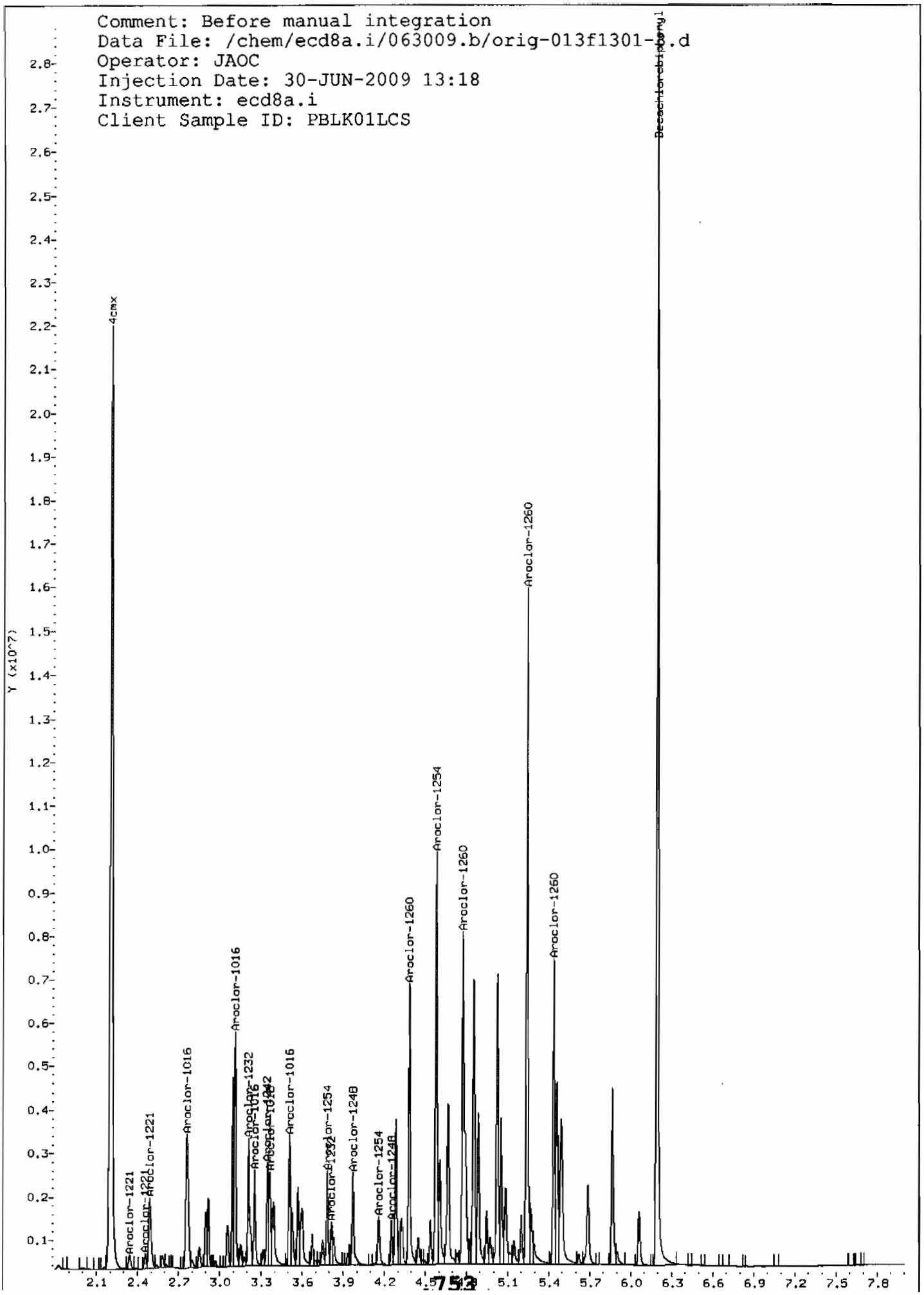

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/013b1301-3.d
Lab Smp Id: 1201871516 Client Smp ID: PBLK01LCS
Inj Date : 30-JUN-2009 13:18
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871516|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 13 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2499.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.500	2.499	0.001	8579893	148.737	5.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	8601144	152.711	5.1	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	1374418	623.106	20.8	80.00- 120.00	100.00
3.576	3.575	0.001	1981694	676.147	22.5	114.84- 154.84	144.18
3.676	3.675	0.001	1148306	660.295	22.0	59.54- 99.54	83.55
3.752	3.752	0.000	683582	658.477	21.9	27.91- 67.91	49.74

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.826	3.826	0.000	690070	644.775	21.5	28.47- 68.47	50.21
Average of Peak Concentrations =					21.8		
7 Aroclor-1260					CAS #: 11096-82-5		
4.937	4.936	0.001	2306368	800.252	26.7	80.00- 120.00	100.00
5.084	5.083	0.001	2879524	833.020	27.8	102.90- 142.90	124.85
5.199	5.199	0.000	2552639	808.172	26.9	90.92- 130.92	110.68
5.609	5.608	0.001	2212322	934.226	31.1	63.15- 103.15	95.92
6.040	6.041	-0.001	3562824	944.964	31.5	114.09- 154.09	154.48
Average of Peak Concentrations =					28.8		

Data File: /chem/ecd8a.i/063009.b/013b1301-3.d
Date : 30-JUN-2009 13:18
Client ID: PBLK01LCS
Sample Info: 1120187415161!
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd8a.i
Operator: JADC
Column diameter: 0.25

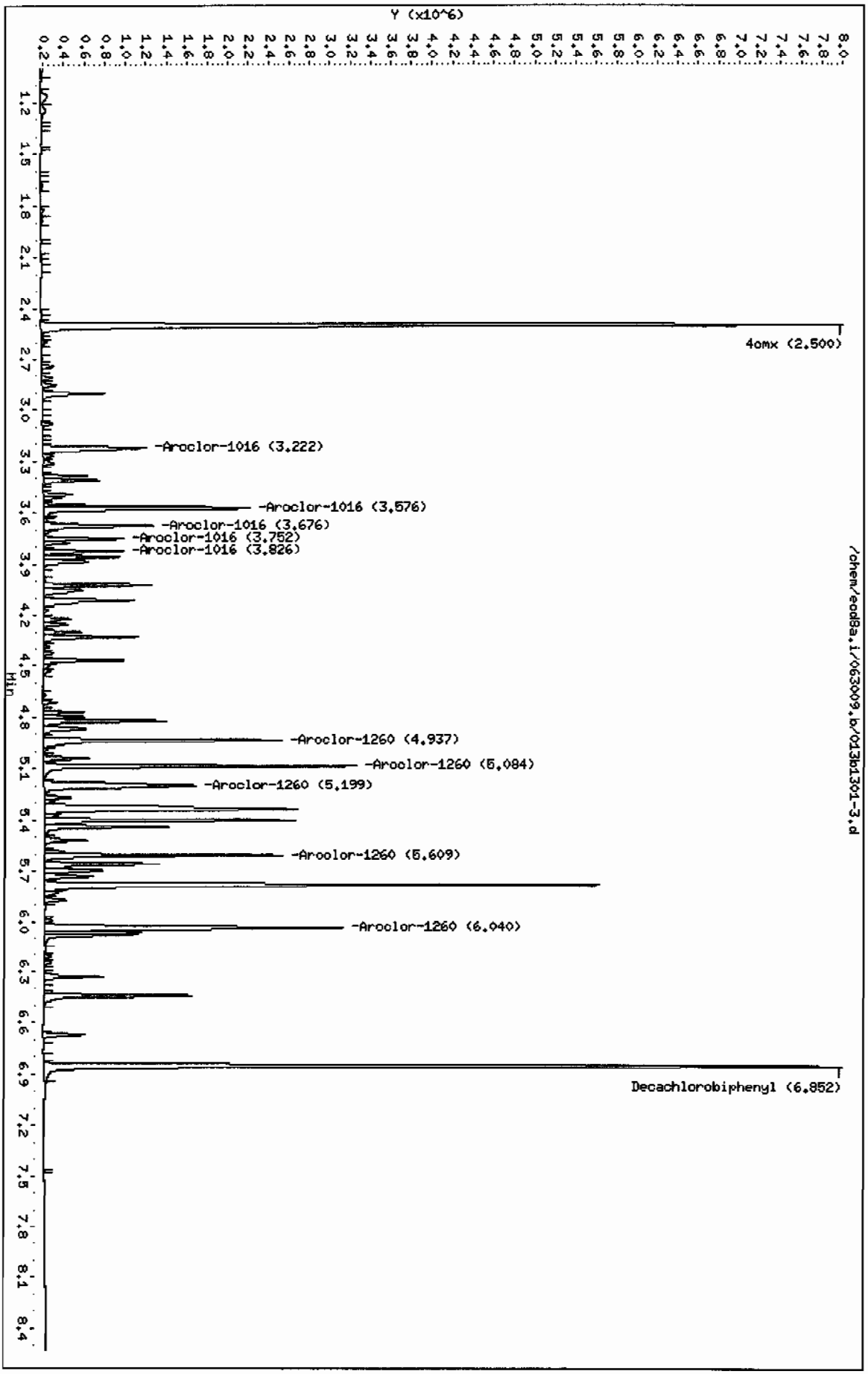

Page 1

MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD8

DATE: 06/17/2009 METHOD: ECD8-F-8082-060109.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT CY613
ALUMINA LOT 090409-A
COPPER LOT 090324-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: /chem/ecd8a.i/061609.b Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99 1	JAOC	16-JUN-2009 08:23		061609	1.0		CLEAN
002f0201.d	WAR090522-60 1	JAOC	16-JUN-2009 08:36		061609	1.0		DUSE
003f0301.d	WAR090302-54	JAOC	16-JUN-2009 08:48		061609	1.0		PASSES AVG
004f0401.d	WAR090519-42	JAOC	16-JUN-2009 09:01		061609	1.0		PASSES AVG
005f0501.d	WAR090521-48	JAOC	16-JUN-2009 09:13		061609	1.0		DUSE
006f0601.d	WAR090522-60 1	JAOC	16-JUN-2009 09:25		061609	1.0		DUSE
007f0701.d	WAR090521-48	JAOC	16-JUN-2009 09:43		061609	1.0		PASSES AVG
008f0801.d	WAR090616-01 60	JAOC	16-JUN-2009 09:56		061609	1.0		1660 LEVEL 1
009f0901.d	WAR090616-02 60	JAOC	16-JUN-2009 10:09		061609	1.0		1660 LEVEL 2
010f1001.d	WAR090616-03 60	JAOC	16-JUN-2009 10:21		061609	1.0		1660 LEVEL 3
011f1101.d	WAR090616-04 60	JAOC	16-JUN-2009 10:33		061609	1.0		1660 LEVEL 4
012f1201.d	IAR090601-01 60	JAOC	16-JUN-2009 10:46		061609	1.0		1660 LEVEL 5
013f1301.d	WAR090616-60 1	JAOC	16-JUN-2009 10:58		061609	1.0		PASSES BOTH COLUMNS
014f1401.d	WAR090326-32	JAOC	16-JUN-2009 11:10		061609	1.0		PATTERN ONLY
015f1501.d	WAR090320-21	JAOC	16-JUN-2009 11:23		061609	1.0		PATTERN ONLY

Instrument Batch: /chem/ecd8a.i/061609.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	WAR090608-62	JAOC	16-JUN-2009 11:35		061609	1.0		PATTERN ONLY
017f1701.d	WAR090424-68	JAOC	16-JUN-2009 11:47		061609	1.0		PATTERN ONLY

018f1801.d	WAR090416-DDT	JAOC	16-JUN-2009 12:00		061609		1.0		DDT
019f1901.d	WAR090519-99 2	JAOC	16-JUN-2009 12:12		061609		1.0		CLEAN
020f2001.d	231401001	JAOC	16-JUN-2009 12:24	875581	09-2220		50.0	LANL	UPLOAD BOTH, USE HIGHER
021f2101.d	1201861052	JAOC	16-JUN-2009 12:41	876831	09-2210		1.0	QC A	UPLOAD BOTH, USE HIGHER
022f2201.d	1201861053	JAOC	16-JUN-2009 12:53	876831	09-2210		1.0	QC A	UPLOAD BOTH, USE HIGHER
023f2301.d	231313016	JAOC	16-JUN-2009 13:06	876831	09-2210		10.0	LANL	UPLOAD BOTH, USE HIGHER
024f2401.d	1201861054	JAOC	16-JUN-2009 13:22	876831	09-2210		10.0	QC A	UPLOAD BOTH, USE HIGHER
025f2501.d	1201861055	JAOC	16-JUN-2009 13:39	876831	09-2210		10.0	QC A	UPLOAD BOTH, USE HIGHER
026f2601.d	231401009	JAOC	16-JUN-2009 13:55	876831	09-2220		5.0	LANL	UPLOAD BOTH, USE HIGHER
027f2701.d	231483001	JAOC	16-JUN-2009 14:12	876831	09-2245		1.0	LANL	UPLOAD BOTH, USE HIGHER
028f2801.d	231483002	JAOC	16-JUN-2009 14:28	876831	09-2245		1.0	LANL	UPLOAD BOTH, USE HIGHER
029f2901.d	WAR090616-60 2	JAOC	16-JUN-2009 14:45		061609		1.0		PASSES AVG
030f3001.d	WAR090519-99 3	JAOC	16-JUN-2009 14:57		061609		1.0		CLEAN
031f3101.d	231488001	JAOC	16-JUN-2009 15:09	876831	09-2247		5.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	231488002	JAOC	16-JUN-2009 15:26	876831	09-2247		1.0	LANL	UPLOAD BOTH, USE HIGHER
033f3301.d	231488003	JAOC	16-JUN-2009 15:42	876831	09-2247		1.0	LANL	UPLOAD BOTH, USE HIGHER
034f3401.d	231494001	JAOC	16-JUN-2009 15:59	876831	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER
035f3501.d	231494002	JAOC	16-JUN-2009 16:15	876831	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/061609.b Page: 2

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	231494003	JAOC	16-JUN-2009 16:32	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
037f3701.d	231494004	JAOC	16-JUN-2009 16:48	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
038f3801.d	231494006	JAOC	16-JUN-2009 17:05	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
039f3901.d	231494007	JAOC	16-JUN-2009 17:21	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
040f4001.d	231494010	JAOC	16-JUN-2009 17:38	876831	09-2252	1.0	LANL	UPLOAD BOTH, USE HIGHER
041f4101.d	WAR090616-60 3	JAOC	16-JUN-2009 17:54		061609	1.0		PASSES AVG, DCB LOW

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD8

DATE: 06/19/2009 METHOD: ECD8-F-8082-060109.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT CY613
ALUMINA LOT 090409-A
COPPER LOT 090324-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: /chem/ecd8a.i/061809.b Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99 1	JAOC	18-JUN-2009 08:42		061809	1.0		CLEAN
002f0201.d	WAR090616-60 1	JAOC	18-JUN-2009 08:54		061809	1.0		PASSES BOTH COLUMNS
003f0301.d	WAR090302-54	JAOC	18-JUN-2009 09:07		061809	1.0		DUSE
004f0401.d	WAR090519-42	JAOC	18-JUN-2009 09:19		061809	1.0		PASSES BOTH COLUMNS
005f0501.d	WAR090521-48	JAOC	18-JUN-2009 09:31		061809	1.0		DUSE
006f0601.d	WAR090302-54	JAOC	18-JUN-2009 09:45		061809	1.0		DUSE
007f0701.d	WAR090521-48	JAOC	18-JUN-2009 09:58		061809	1.0		DUSE
008f0801.d	WAR090618-01 54	JAOC	18-JUN-2009 10:12		061809	1.0		1254 LEVEL 1
009f0901.d	WAR090618-02 54	JAOC	18-JUN-2009 10:25		061809	1.0		1254 LEVEL 2
010f1001.d	WAR090618-03 54	JAOC	18-JUN-2009 10:37		061809	1.0		1254 LEVEL 3
011f1101.d	WAR090618-04 54	JAOC	18-JUN-2009 10:50		061809	1.0		1254 LEVEL 4
012f1201.d	IAR090505-01 54	JAOC	18-JUN-2009 11:02		061809	1.0		1254 LEVEL 5
013f1301.d	WAR090302-54	JAOC	18-JUN-2009 11:14		061809	1.0		PASSES BOTH COLUMNS
014f1401.d	WAR090618-05 48	JAOC	18-JUN-2009 11:27		061809	1.0		1248 LEVEL 1
015f1501.d	WAR090618-06 48	JAOC	18-JUN-2009 11:39		061809	1.0		1248 LEVEL 2

Instrument Batch: /chem/ecd8a.i/061809.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	WAR090618-07 48	JAOC	18-JUN-2009 11:51		061809	1.0		1248 LEVEL 3
017f1701.d	WAR090618-08 48	JAOC	18-JUN-2009 12:04		061809	1.0		1248 LEVEL 4

018f1801.d	IAR090601-02 48	JAOC	18-JUN-2009 12:16		061809		1.0		1248 LEVEL 5
019f1901.d	WAR090521-48	JAOC	18-JUN-2009 12:32		061809		1.0		PASSES BOTH COLUMNS
020f2001.d	WAR090618-32	JAOC	18-JUN-2009 12:45		061809		1.0		PATTERN ONLY
021f2101.d	WAR090618-21	JAOC	18-JUN-2009 12:57		061809		1.0		PATTERN ONLY
022f2201.d	WAR090608-62	JAOC	18-JUN-2009 13:10		061809		1.0		PATTERN ONLY
023f2301.d	WAR090424-68	JAOC	18-JUN-2009 13:22		061809		1.0		PATTERN ONLY
024f2401.d	WAR090416-DDT	JAOC	18-JUN-2009 13:34		061809		1.0		DDT
025f2501.d	WAR090519-99 2	JAOC	18-JUN-2009 13:47		061809		1.0		CLEAN
026f2601.d	1201859275	JAOC	18-JUN-2009 13:59	876127	09-2252		1.0	QC A	UPLOAD BOTH, USE HIGHER
027f2701.d	1201859276	JAOC	18-JUN-2009 14:11	876127	09-2252		1.0	QC A	UPLOAD BOTH, USE HIGHER
028f2801.d	231494005	JAOC	18-JUN-2009 14:24	876127	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER
029f2901.d	231494008	JAOC	18-JUN-2009 14:40	876127	09-2252		1.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER
030f3001.d	231494009	JAOC	18-JUN-2009 14:57	876127	09-2252		1.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER
031f3101.d	231494011	JAOC	18-JUN-2009 15:13	876127	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	231494012	JAOC	18-JUN-2009 15:30	876127	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER
033f3301.d	231494013	JAOC	18-JUN-2009 15:46	876127	09-2252		1.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER
034f3401.d	231494014	JAOC	18-JUN-2009 16:02	876127	09-2252		1.0	LANL	UPLOAD BOTH, USE HIGHER
035f3501.d	WAR090616-60 2	JAOC	18-JUN-2009 16:19		061809		1.0		PASSES BOTH COLUMNS

Instrument Batch: /chem/ecd8a.i/061809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	WAR090519-99 3	JAOC	18-JUN-2009 16:31		061809	1.0		CLEAN
037f3701.d	231495005	JAOC	18-JUN-2009 16:43	876127	09-2253	1.0	LANL	UPLOAD BOTH, USE HIGHER
038f3801.d	1201859277	JAOC	18-JUN-2009 17:00	876127	09-2253	5.0	QC A	UPLOAD BOTH, USE HIGHER
039f3901.d	1201859278	JAOC	18-JUN-2009 17:16	876127	09-2253	5.0	QC A	UPLOAD BOTH, USE HIGHER
040f4001.d	231495006	JAOC	18-JUN-2009 17:33	876127	09-2253	5.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER
041f4101.d	231495007	JAOC	18-JUN-2009 17:49	876127	09-2253	1.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER

042f4201.d	231495008	JAOC	18-JUN-2009 18:06	876127	09-2253	5.0	LANL	UPLOAD BOTH, SENT FOR RE, IF CONFIRMS USE HIGHER
043f4301.d	GPC BLANK	JAOC	18-JUN-2009 18:22		09-2252	1.0		CLEAN
044f4401.d	WAR090616-60 3	JAOC	18-JUN-2009 18:39		061809	1.0		PASSES BOTH COLUMNS
045f4501.d	WAR090519-99 4	JAOC	18-JUN-2009 18:51		061809	1.0		CLEAN
046f4601.d	1201862201	JAOC	18-JUN-2009 19:03	877322	09-2253	1.0	QC A	UPLOAD BOTH, USE HIGHER
047f4701.d	1201862202	JAOC	18-JUN-2009 19:20	877322	09-2253	1.0	QC A	UPLOAD BOTH, USE HIGHER
048f4801.d	231495001	JAOC	18-JUN-2009 19:36	877322	09-2253	1.0	LANL	UPLOAD BOTH, USE HIGHER
049f4901.d	231495002	JAOC	18-JUN-2009 19:53	877322	09-2253	1.0	LANL	UPLOAD BOTH, USE HIGHER
050f5001.d	231495003	JAOC	18-JUN-2009 20:09	877322	09-2253	1.0	LANL	UPLOAD BOTH, USE HIGHER
051f5101.d	231495004	JAOC	18-JUN-2009 20:26	877322	09-2253	1.0	LANL	UPLOAD BOTH, USE HIGHER
052f5201.d	231561001	JAOC	18-JUN-2009 20:42	877322	09-2265	1.0	LANL	UPLOAD BOTH, USE HIGHER
053f5301.d	231561002	JAOC	18-JUN-2009 20:59	877322	09-2265	1.0	LANL	UPLOAD BOTH, USE HIGHER
054f5401.d	231561003	JAOC	18-JUN-2009 21:15	877322	09-2265	1.0	LANL	UPLOAD BOTH, USE HIGHER
055f5501.d	231561004	JAOC	18-JUN-2009 21:32	877322	09-2265	1.0	LANL	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/061809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
056f5601.d	WAR090616-60 4	JAOC	18-JUN-2009 21:48		061809	1.0		PASSES BOTH COLUMNS
057f5701.d	WAR090519-99 5	JAOC	18-JUN-2009 22:01		061809	1.0		CLEAN
058f5801.d	231567005	JAOC	18-JUN-2009 22:13	877322	09-2269	1.0	LANL	DUSE, PARENT AND MS/MSD DO NOT MATCH
059f5901.d	1201862203	JAOC	18-JUN-2009 22:29	877322	09-2269	1.0	QC A	DUSE, PARENT AND MS/MSD DO NOT MATCH
060f6001.d	1201862204	JAOC	18-JUN-2009 22:46	877322	09-2269	1.0	QC A	DUSE, PARENT AND MS/MSD DO NOT MATCH
061f6101.d	231567006	JAOC	18-JUN-2009 23:02	877322	09-2269	1.0	LANL	UPLOAD BOTH, USE HIGHER
062f6201.d	231567007	JAOC	18-JUN-2009 23:19	877322	09-2269	1.0	LANL	UPLOAD BOTH, USE HIGHER
063f6301.d	231567008	JAOC	18-JUN-2009 23:35	877322	09-2269	1.0	LANL	UPLOAD BOTH, USE HIGHER
064f6401.d	WAR090616-60 5	JAOC	18-JUN-2009 23:52		061809	1.0		PASSES BOTH COLUMNS
065f6501.d	WAR090519-99 6	JAOC	19-JUN-2009 00:04		061809	1.0		CLEAN
066f6601.d	1201862759	JAOC	19-JUN-2009 00:17	877528	09-2292	1.0	QC A	UPLOAD BOTH, USE HIGHER

067f6701.d	1201862760	JAOC	19-JUN-2009 00:29	877528	09-2292		1.0	QC A	UPLOAD BOTH, USE HIGHER
068f6801.d	231655001	JAOC	19-JUN-2009 00:41	877528	09-2292		1.0	LANL	UPLOAD BOTH, USE HIGHER
069f6901.d	231655002	JAOC	19-JUN-2009 00:58	877528	09-2292		1.0	LANL	UPLOAD BOTH, USE HIGHER
070f7001.d	231655003	JAOC	19-JUN-2009 01:14	877528	09-2292		1.0	LANL	UPLOAD BOTH, USE HIGHER
071f7101.d	231655004	JAOC	19-JUN-2009 01:31	877528	09-2292		1.0	LANL	UPLOAD BOTH, USE HIGHER
072f7201.d	231655005	JAOC	19-JUN-2009 01:47	877528	09-2292		1.0	LANL	UPLOAD BOTH, USE HIGHER
073f7301.d	231655006	JAOC	19-JUN-2009 02:04	877528	09-2292		1.0	LANL	DUSE, RE-RUN AT 20X
074f7401.d	231655007	JAOC	19-JUN-2009 02:20	877528	09-2292		1.0	LANL	UPLOAD BOTH, USE HIGHER (NO HITS)
075f7501.d	231655008	JAOC	19-JUN-2009 02:37	877528	09-2292		1.0	LANL	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/061809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
076f7601.d	WAR090616-60 6	JAOC	19-JUN-2009 02:53		061809	1.0		PASSES BOTH COLUMNS
077f7701.d	WAR090519-99 7	JAOC	19-JUN-2009 03:06		061809	1.0		CLEAN
078f7801.d	231671002	JAOC	19-JUN-2009 03:18	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER
079f7901.d	231671003	JAOC	19-JUN-2009 03:35	877528	09-2287	5.0	LANL	UPLOAD BOTH, USE HIGHER
080f8001.d	231671004	JAOC	19-JUN-2009 03:51	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER
081f8101.d	231671005	JAOC	19-JUN-2009 04:08	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER
082f8201.d	231671006	JAOC	19-JUN-2009 04:24	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER
083f8301.d	231671007	JAOC	19-JUN-2009 04:41	877528	09-2287	5.0	LANL	UPLOAD BOTH, USE HIGHER
084f8401.d	231671008	JAOC	19-JUN-2009 04:57	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER
085f8501.d	231671009	JAOC	19-JUN-2009 05:14	877528	09-2287	1.0	LANL	DUSE, RE-RUN AT 20X
086f8601.d	231671010	JAOC	19-JUN-2009 05:30	877528	09-2287	1.0	LANL	UPLOAD BOTH, USE HIGHER (NO HITS
087f8701.d	WAR090616-60 7	JAOC	19-JUN-2009 05:47		061809	1.0		PASSES BOTH COLUMNS
088f8801.d	WAR090519-99 8	JAOC	19-JUN-2009 05:59		061809	1.0		CLEAN
089f8901.d	231739001	JAOC	19-JUN-2009 06:11	877528	09-2307	1.0	LANL	UPLOAD BOTH, USE HIGHER
090f9001.d	1201862761	JAOC	19-JUN-2009 06:28	877528	09-2307	1.0	QC A	UPLOAD BOTH, USE HIGHER

091f9101.d	1201862762	JAOC	19-JUN-2009 06:44	877528	09-2307		1.0	QC A	UPLOAD BOTH, USE HIGHER
092f9201.d	231739002	JAOC	19-JUN-2009 07:01	877528	09-2307		5.0	LANL	UPLOAD BOTH, USE HIGHER
093f9301.d	WAR090616-60 8	JAOC	19-JUN-2009 07:13		061809		1.0		PASSES BOTH COLUMNS, DCB LOW
094f9401.d	WAR090519-99 9	JAOC	19-JUN-2009 07:26		061809		1.0		CLEAN

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD8

DATE: 07/01/2009 METHOD: ECD8-F-8082-060109.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT CY264
ALUMINA LOT 1134110-A
COPPER LOT 090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: /chem/ecd8a.i/063009.b Injection Volume: 1.0 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99 1	JAOC	30-JUN-2009 10:46		063009	1.0		CLEAN
002f0201.d	WAR090629-04601	JAOC	30-JUN-2009 10:59		063009	1.0		PASSES BOTH COLUMNS
003f0301.d	WAR090302-54	JAOC	30-JUN-2009 11:11		063009	1.0		PASSES BOTH COLUMNS
004f0401.d	WAR090519-42	JAOC	30-JUN-2009 11:24		063009	1.0		PASSES BOTH COLUMNS
005f0501.d	WAR090521-48	JAOC	30-JUN-2009 11:36		063009	1.0		PASSES BOTH COLUMNS
006f0601.d	WAR090618-32	JAOC	30-JUN-2009 11:48		063009	1.0		PATTERN ONLY
007f0701.d	WAR090618-21	JAOC	30-JUN-2009 12:03		063009	1.0		PATTERN ONLY
008f0801.d	WAR090608-62	JAOC	30-JUN-2009 12:16		063009	1.0		PATTERN ONLY
009f0901.d	WAR090424-68	JAOC	30-JUN-2009 12:28		063009	1.0		PATTERN ONLY
010f1001.d	WAR090618-DDT	JAOC	30-JUN-2009 12:40		063009	1.0		DDT
011f1101.d	WAR090519-99 2	JAOC	30-JUN-2009 12:53		063009	1.0		CLEAN
012f1201.d	1201871515	JAOC	30-JUN-2009 13:05	881260	09-2475	1.0	QC A	UPLOAD BOTH, USE HIGHER
013f1301.d	1201871516	JAOC	30-JUN-2009 13:18	881260	09-2475	1.0	QC A	UPLOAD BOTH, USE HIGHER
014f1401.d	232064001	JAOC	30-JUN-2009 13:30	881260	09-2403	1.0	LANL	UPLOAD BOTH, USE HIGHER
015f1501.d	1201871517	JAOC	30-JUN-2009 13:46	881260	09-2403	1.0	QC A	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/063009.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	1201871518	JAOC	30-JUN-2009 14:03	881260	09-2403	1.0	QC A	UPLOAD BOTH, USE HIGHER
017f1701.d	232426001	JAOC	30-JUN-2009 14:19	881260	09-2475	5.0	LANL	UPLOAD BOTH, USE HIGHER

018f1801.d	232426002	JAOC	30-JUN-2009 14:36	881260	09-2475		5.0	LANL	UPLOAD BOTH, USE HIGHER
019f1901.d	232428001	JAOC	30-JUN-2009 14:52	881260	09-2477		1.0	LANL	UPLOAD BOTH, USE HIGHER
020f2001.d	232428002	JAOC	30-JUN-2009 15:09	881260	09-2477		1.0	LANL	UPLOAD BOTH, USE HIGHER
021f2101.d	232428003	JAOC	30-JUN-2009 15:25	881260	09-2477		1.0	LANL	UPLOAD BOTH, USE HIGHER
022f2201.d	WAR090629-04602	JAOC	30-JUN-2009 15:42		063009		1.0		PASSES BOTH COLUMNS
023f2301.d	WAR090519-99 3	JAOC	30-JUN-2009 15:54		063009		1.0		CLEAN
024f2401.d	232428004	JAOC	30-JUN-2009 16:06	881260	09-2477		1.0	LANL	UPLOAD BOTH, USE HIGHER
025f2501.d	232428012	JAOC	30-JUN-2009 16:23	881260	09-2477		5.0	LANL	UPLOAD BOTH, USE HIGHER
026f2601.d	232428015	JAOC	30-JUN-2009 16:39	881260	09-2477		1.0	LANL	UPLOAD BOTH, USE HIGHER
027f2701.d	232507001	JAOC	30-JUN-2009 16:56	881260	09-2499		1.0	LANL	UPLOAD BOTH, USE HIGHER
028f2801.d	232507002	JAOC	30-JUN-2009 17:12	881260	09-2499		5.0	LANL	UPLOAD BOTH, USE HIGHER
029f2901.d	232507003	JAOC	30-JUN-2009 17:29	881260	09-2499		1.0	LANL	UPLOAD BOTH, USE HIGHER
030f3001.d	232507004	JAOC	30-JUN-2009 17:45	881260	09-2499		1.0	LANL	UPLOAD BOTH, USE HIGHER
031f3101.d	232507005	JAOC	30-JUN-2009 18:02	881260	09-2499		5.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	232507006	JAOC	30-JUN-2009 18:18	881260	09-2499		5.0	LANL	UPLOAD BOTH, USE HIGHER
033f3301.d	WAR090629-04603	JAOC	30-JUN-2009 18:35		063009		1.0		PASSES BOTH COLUMNS
034f3401.d	WAR090519-99 4	JAOC	30-JUN-2009 18:47		063009		1.0		CLEAN
035f3501.d	1201870209	JAOC	30-JUN-2009 18:59	880783	09-2457		1.0	QC A	UPLOAD BOTH, USE HIGHER

Instrument Batch: /chem/ecd8a.i/063009.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	1201870210	JAOC	30-JUN-2009 19:12	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
037f3701.d	232348004	JAOC	30-JUN-2009 19:24	880783	09-2457	1.0	LANL	UPLOAD BOTH, USE HIGHER
038f3801.d	1201870211	JAOC	30-JUN-2009 19:41	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
039f3901.d	1201870212	JAOC	30-JUN-2009 19:57	880783	09-2457	1.0	QC A	UPLOAD BOTH, USE HIGHER
040f4001.d	232357001	JAOC	30-JUN-2009 20:14	880783	09-2455	1.0	LANL	UPLOAD BOTH, USE HIGHER
041f4101.d	232357002	JAOC	30-JUN-2009 20:30	880783	09-2455	1.0	LANL	UPLOAD BOTH, USE HIGHER

042f4201.d	232363001	JAOC	30-JUN-2009 20:47	880783	09-2451		1.0	LANL	UPLOAD BOTH, USE HIGHER
043f4301.d	232363010	JAOC	30-JUN-2009 21:03	880783	09-2451		1.0	LANL	UPLOAD BOTH, USE HIGHER
044f4401.d	232363011	JAOC	30-JUN-2009 21:20	880783	09-2451		1.0	LANL	UPLOAD BOTH, USE HIGHER
045f4501.d	WAR090629-04604	JAOC	30-JUN-2009 21:36		063009		1.0		PASSES BOTH COLUMNS
046f4601.d	WAR090519-99 5	JAOC	30-JUN-2009 21:48		063009		1.0		CLEAN
047f4701.d	1201871656	JAOC	30-JUN-2009 22:01	881324	EUI-7181		1.0	QC A	UPLOAD BOTH, USE HIGHER
048f4801.d	1201871657	JAOC	30-JUN-2009 22:13	881324	EUI-7181		1.0	QC A	UPLOAD BOTH, USE HIGHER
049f4901.d	232126001	JAOC	30-JUN-2009 22:26	881324	EUI-7181		1.0	CARE	SENT FOR RE, DCB LOW, UPLOAD BOTH, USE HIGHER
050f5001.d	232141009	JAOC	30-JUN-2009 22:42	881324	232141		1.0	WASP	UPLOAD BOTH, USE HIGHER (MS/MSD CONFIRM LOW DCB)
051f5101.d	1201871658	JAOC	30-JUN-2009 22:59	881324	232141		1.0	QC A	UPLOAD BOTH, USE HIGHER
052f5201.d	1201871659	JAOC	30-JUN-2009 23:15	881324	232141		1.0	QC A	UPLOAD BOTH, USE HIGHER
053f5301.d	WAR090629-04605	JAOC	30-JUN-2009 23:31		063009		1.0		PASSES BOTH COLUMNS
054f5401.d	WAR090519-99 6	JAOC	30-JUN-2009 23:44		063009		1.0		CLEAN

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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/015b1501.d
Lab Smp Id: 1201871517 Client Smp ID: CAMO-09-10142MS
Inj Date : 30-JUN-2009 13:46
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871517|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 15 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2403.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	5.60660	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.498	2.499	-0.001	5432932	94.1826	3.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.851	6.853	-0.002	6142182	109.053	3.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	988853	448.307	15.8	80.00- 120.00	100.00(M)
3.575	3.575	0.000	1440601	491.528	17.3	114.84- 154.84	145.68
3.675	3.675	0.000	848362	487.822	17.2	59.54- 99.54	85.79
3.751	3.752	-0.001	510827	492.066	17.4	27.91- 67.91	51.66
3.825	3.826	-0.001	509880	476.412	16.8	28.47- 68.47	51.56
Average of Peak Concentrations =					16.9		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.935	4.936	-0.001	1699538	589.698	20.8	80.00- 120.00	100.00(M)
5.083	5.083	0.000	2146322	620.911	21.9	102.90- 142.90	126.29
5.198	5.199	-0.001	1875547	593.803	20.9	90.92- 130.92	110.36
5.607	5.608	-0.001	1659011	700.572	24.7	63.15- 103.15	97.62
6.038	6.041	-0.003	2701932	716.631	25.3	114.09- 154.09	158.98
			Average of Peak Concentrations =		22.7		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd8a.i/063009.b/015b1501.d

Date : 30-JUN-2009 13:46

Client ID: CAMD-09-10142MS

Sample Info: |120187151711|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

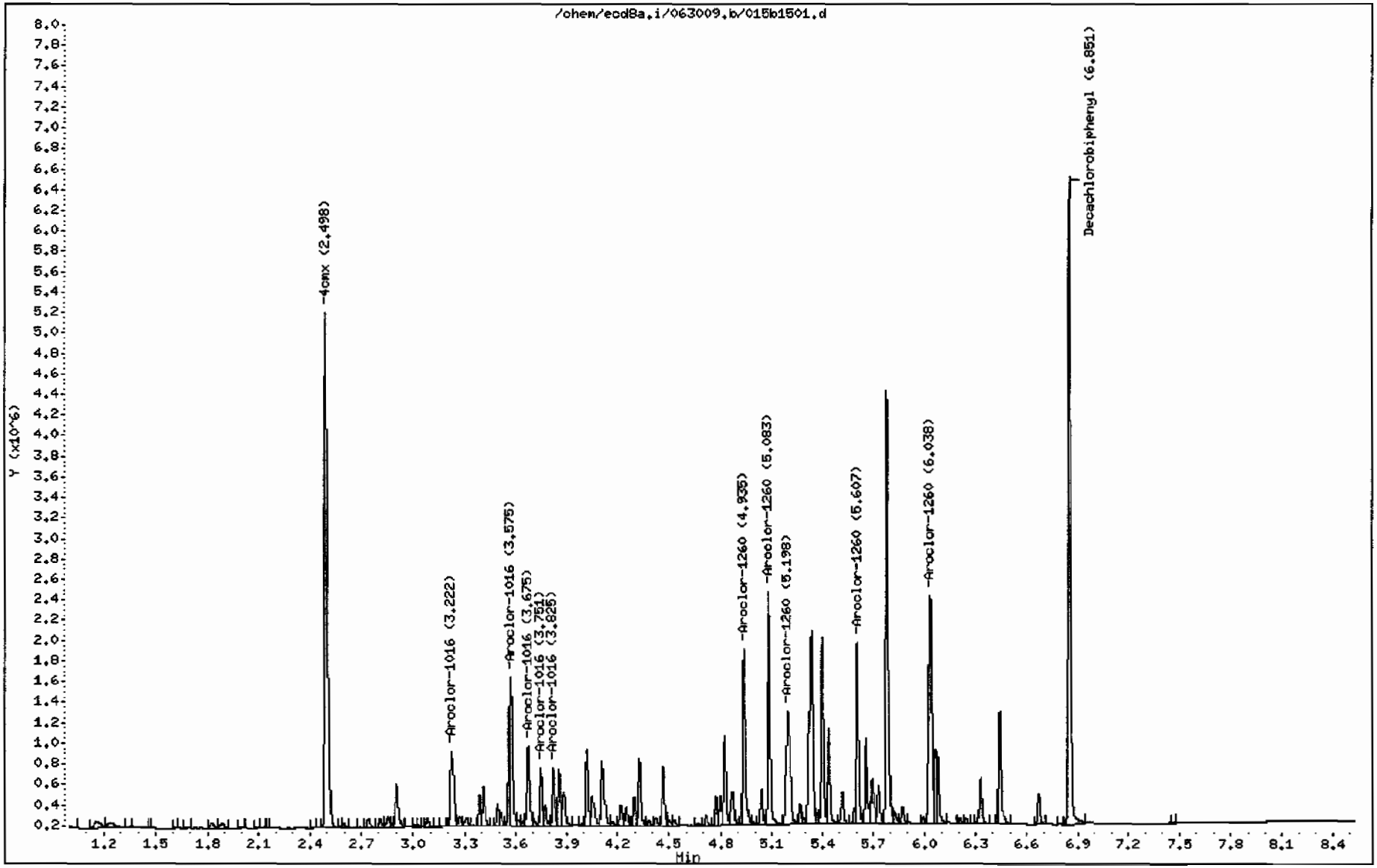

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/015f1501.d
Lab Smp Id: 1201871517 Client Smp ID: CAMO-09-10142MS
Inj Date : 30-JUN-2009 13:46
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871517|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 15 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2403.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	5.60660	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	16167504	101.019	3.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.191	6.193	-0.002	19881810	118.397	4.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.760	2.762	-0.002	2839774	492.401	17.4	80.00- 120.00	100.00
3.111	3.112	-0.001	3579332	495.428	17.5	106.24- 146.24	126.04
3.254	3.256	-0.002	1580922	543.373	19.2	32.41- 72.41	55.67
3.364	3.365	-0.001	1535604	557.840	19.7	27.63- 67.63	54.07
3.508	3.510	-0.002	2022416	557.343	19.7	43.51- 83.51	71.22
			Average of Peak Concentrations =		18.7		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.382	4.383	-0.001	4691649	658.168	23.2	80.00- 120.00	100.00
4.578	4.579	-0.001	6941552	688.065	24.3	122.54- 162.54	147.96
4.773	4.774	-0.001	7792548	678.668	23.9	138.26- 178.26	166.09
5.238	5.242	-0.004	11289471	842.785	29.7	171.16- 211.16	240.63
5.435	5.437	-0.002	5124782	782.207	27.6	74.08- 114.08	109.23
			Average of Peak Concentrations =		25.7		

Data File: /chem/ecd8a.i/063009.b/015f1501.d

Date : 30-JUN-2009 13:46

Client ID: CAMO-09-10142MS

Sample Info: |120187151711|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

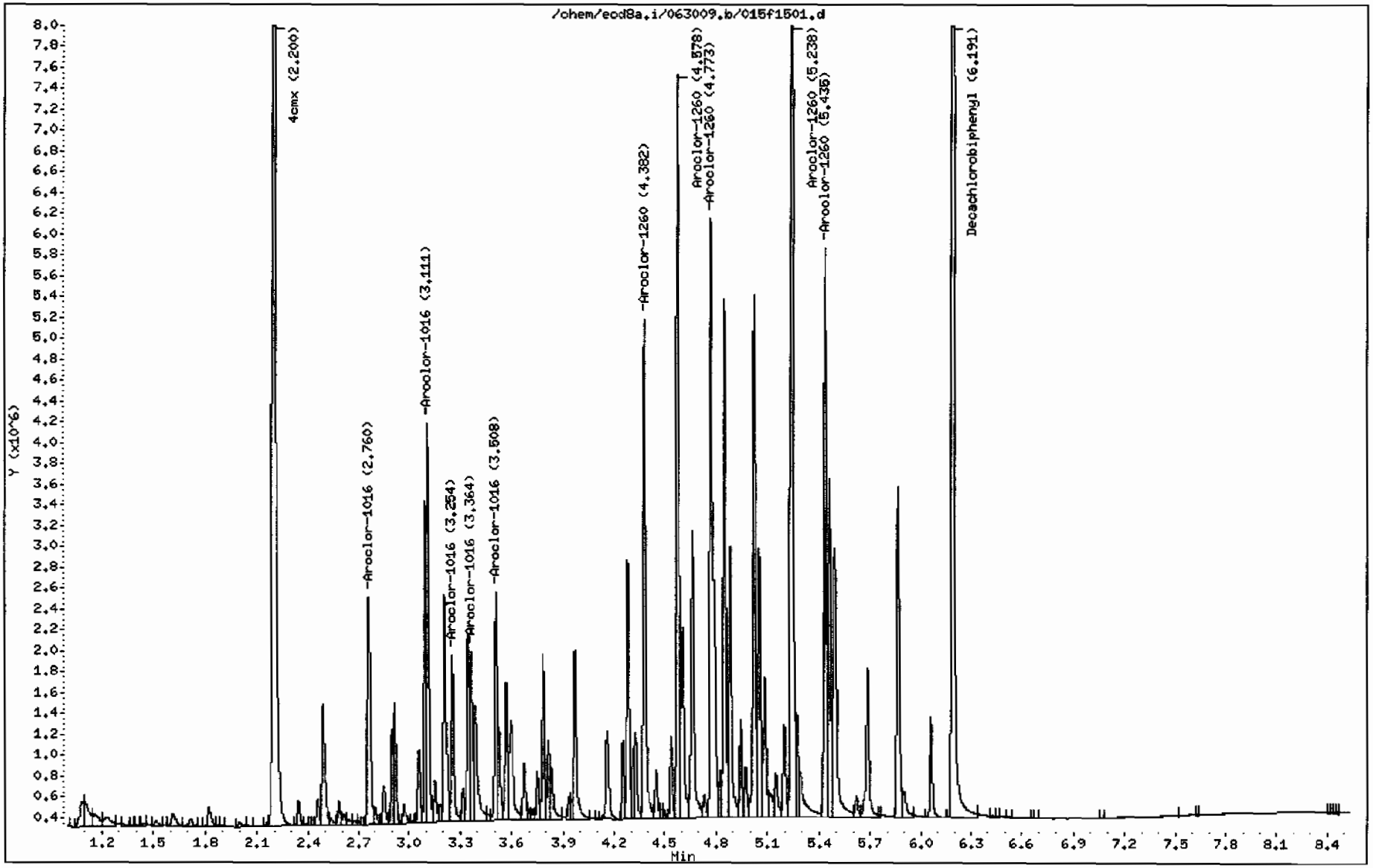

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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/016b1601.d
Lab Smp Id: 1201871518 Client Smp ID: CAMO-09-10142MSD
Inj Date : 30-JUN-2009 14:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871518|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-B-8082-060109.m
Meth Date : 30-Jun-2009 15:50 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018b1801.d
Als bottle: 16 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2403.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	5.60660	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.499	2.499	0.000	5441689	94.3344	3.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.852	6.853	-0.001	6980861	123.943	4.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.222	3.222	0.000	937354	424.959	15.0	80.00- 120.00	100.00
3.575	3.575	0.000	1401090	478.047	16.9	114.84- 154.84	149.47
3.674	3.675	-0.001	845408	486.124	17.1	59.54- 99.54	90.19
3.751	3.752	-0.001	508733	490.049	17.3	27.91- 67.91	54.27
3.825	3.826	-0.001	521315	487.096	17.2	28.47- 68.47	55.62
			Average of Peak Concentrations =		16.7		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.934	4.936	-0.002	1825368	633.357	22.3	80.00- 120.00	100.00
5.083	5.083	0.000	2322925	672.001	23.7	102.90- 142.90	127.26
5.198	5.199	-0.001	2038951	645.537	22.8	90.92- 130.92	111.70
5.607	5.608	-0.001	1767285	746.294	26.3	63.15- 103.15	96.82
6.039	6.041	-0.002	2859463	758.412	26.8	114.09- 154.09	156.65
		Average of Peak Concentrations =			24.4		

Data File: /chem/ecd8a.i/063009.b/016b1601.d

Date : 30-JUN-2009 14:03

Client ID: CAMO-09-10142MSD

Sample Info: |120187151811|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd8a.i

Operator: JAOC

Column diameter: 0.25

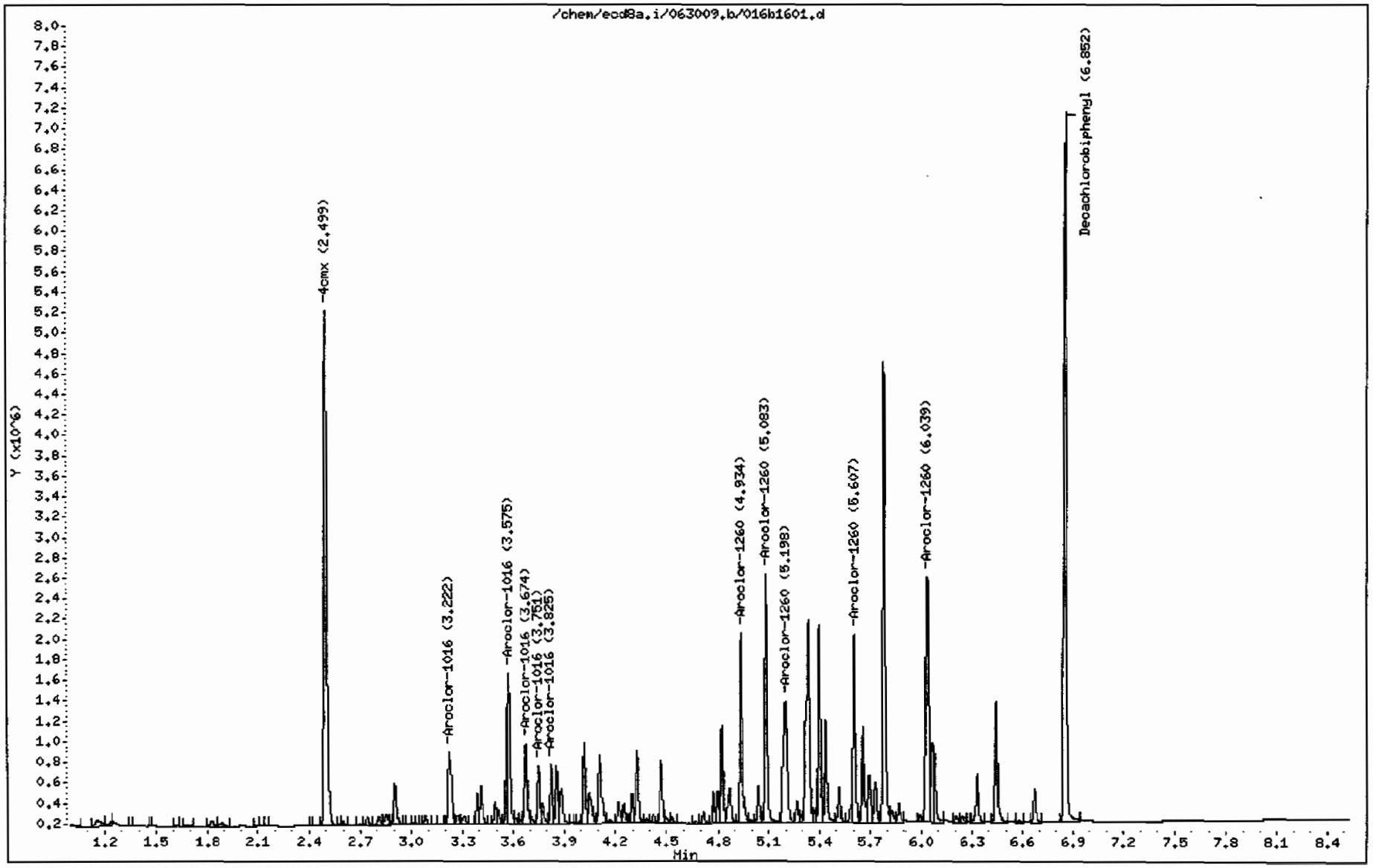

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd8a.i/063009.b/016f1601.d
Lab Smp Id: 1201871518 Client Smp ID: CAMO-09-10142MSD
Inj Date : 30-JUN-2009 14:03
Operator : JAOC Inst ID: ecd8a.i
Smp Info : |1201871518|1|
Misc Info : |ECD82P_1SF|881260|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd8a.i/063009.b/ECD8-F-8082-060109.m
Meth Date : 30-Jun-2009 15:51 jen01212 Quant Type: ESTD
Cal Date : 18-JUN-2009 12:16 Cal File: 018f1801.d
Als bottle: 16 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2403.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.03000	Weight of sample extracted (g)
M	5.60660	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.200	2.202	-0.002	16214220	101.311	3.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.190	6.193	-0.003	22534617	134.195	4.7	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.760	2.762	-0.002	2713575	470.519	16.6	80.00- 120.00	100.00
3.111	3.112	-0.001	3706272	512.998	18.1	106.24- 146.24	136.58
3.254	3.256	-0.002	1599576	549.784	19.4	32.41- 72.41	58.95
3.364	3.365	-0.001	1600981	581.589	20.5	27.63- 67.63	59.00
3.509	3.510	-0.001	2067805	569.851	20.1	43.51- 83.51	76.20
			Average of Peak Concentrations =		18.9		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.381	4.383	-0.002	5053538	708.936	25.0	80.00- 120.00	100.00
4.578	4.579	-0.001	7615154	754.834	26.6	122.54- 162.54	150.69
4.772	4.774	-0.002	8429600	734.150	25.9	138.26- 178.26	166.81
5.239	5.242	-0.003	12220582	912.295	32.2	171.16- 211.16	241.82
5.434	5.437	-0.003	5504637	840.185	29.6	74.08- 114.08	108.93
			Average of Peak Concentrations =		27.9		

Data File: /chem/ecd8a.i/063009.b/016f1601.d
Date : 30-JUN-2009 14:03
Client ID: CAMO-09-10142MSD
Sample Info: |120187151811|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd8a.i
Operator: JAOC
Column diameter: 0.25

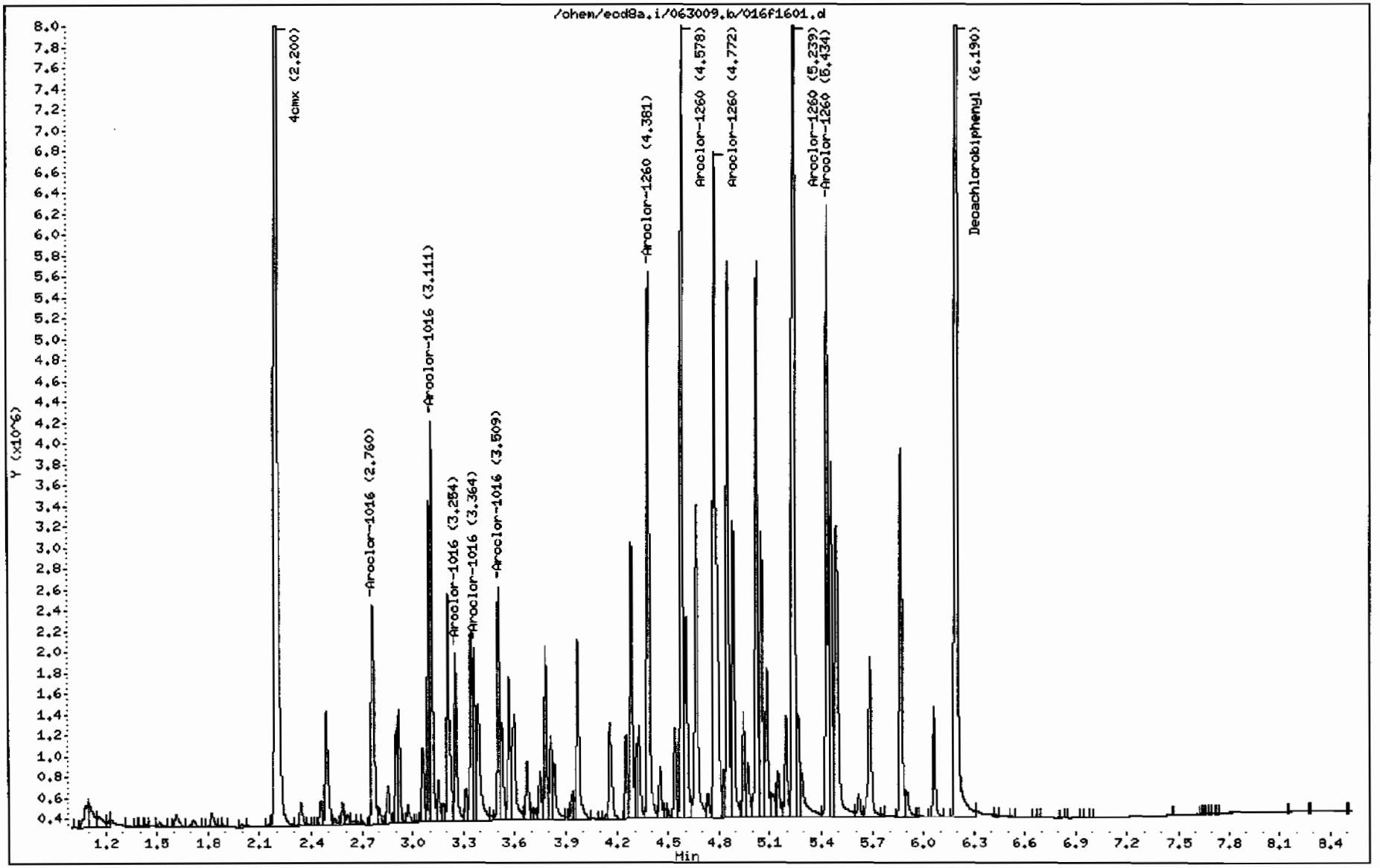

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 881259 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL–OA–E–010 REV# 18

Instrument: Semi–Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201871515 MB	29–JUN–2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
1201871516 LCS	29–JUN–2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
232064001 – 2	29–JUN–2009 23:24:27	30.08	H2SO4/KMn2		2	9	1	0.03324
1201871517 – 2 MS (232064001)	29–JUN–2009 23:24:27	30.03	H2SO4/KMn2		2	9	1	0.0333
1201871518 – 2 MSD (232064001)	29–JUN–2009 23:24:27	30.03	H2SO4/KMn2		2	9	1	0.0333
232426001	29–JUN–2009 23:24:27	30.04	H2SO4/KMn2		2	9	1	0.03329
232426002	29–JUN–2009 23:24:27	30.04	H2SO4/KMn2		2	9	1	0.03329
232428001	29–JUN–2009 23:24:27	30.03	H2SO4/KMn2		2	9	1	0.0333
232428002	29–JUN–2009 23:24:27	30.05	H2SO4/KMn2		2	9	1	0.03328
232428003	29–JUN–2009 23:24:27	30.08	H2SO4/KMn2		2	9	1	0.03324
232428004	29–JUN–2009 23:24:27	30.05	H2SO4/KMn2		2	9	1	0.03328
232428012	29–JUN–2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
232428015	29–JUN–2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
232507001	29–JUN–2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
232507002	29–JUN–2009 23:24:27	30.01	H2SO4/KMn2		2	9	1	0.03332
232507003	29–JUN–2009 23:24:27	30.04	H2SO4/KMn2		2	9	1	0.03329
232507004	29–JUN–2009 23:24:27	30	H2SO4/KMn2		2	9	1	0.03333
232507005	29–JUN–2009 23:24:27	30.01	H2SO4/KMn2		2	9	1	0.03332
232507006	29–JUN–2009 23:24:27	30.08	H2SO4/KMn2		2	9	1	0.03324

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201871516	PCB Laboratory Control	WE090610–07	1	mL
MS	1201871517	PCB Laboratory Control	WE090610–07	1	mL
MSD	1201871518	PCB Laboratory Control	WE090610–07	1	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE090619–14	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	1:1 sulfuric acid	1133264a	5	mL
REGNT	All	Hexane	1135278–B2	150	mL
REGNT	All	5% Potassium Permanganate	B1133159–F	5	mL
SOURC	All	SODIUM SULFATE	1114730	30	g

Comments:

Clean up Date: 06/29/09

Clean up Initials: NBP

Verified By: AAW

Final Solvent: Hexane

Clean Up SOP: GL–OA–E–037

Friday, June 26, 2009

REQUEST NUMBER: 09-2498

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2498

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	
		1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2498

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	
	SW-846:6010B	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	
		1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	
		1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	
		1	CAMO-09-10380	W	6/24/2009	
		1	CAMO-09-10381	W	6/24/2009	
	SW-846:6020	1	CAMO-09-10380	W	6/24/2009	
		1	CAMO-09-10381	W	6/24/2009	
	SW-846:7196A	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2498

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7196A	1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	
		1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2498

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2498C

REQUEST NUMBER: 09-2498

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10375	1	POLY	7196A	Ice	R
CAMO-09-10375	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10375	1	POLY	H3	Ice	R
CAMO-09-10376	1	POLY	7196A	Ice	R
CAMO-09-10376	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10376	1	POLY	H3	Ice	R
CAMO-09-10373	1	POLY	7196A	Ice	R
CAMO-09-10373	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10373	1	POLY	H3	Ice	R
CAMO-09-10367	1	POLY	7196A	Ice	R
CAMO-09-10367	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10367	1	POLY	H3	Ice	R
CAMO-09-10377	1	POLY	7196A	Ice	R
CAMO-09-10377	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10377	1	POLY	H3	Ice	R
CAMO-09-10370	1	POLY	7196A	Ice	R
CAMO-09-10370	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10370	1	POLY	H3	Ice	R
CAMO-09-10374	1	POLY	7196A	Ice	R
CAMO-09-10374	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10374	1	POLY	H3	Ice	R
CAMO-09-10371	1	POLY	7196A	Ice	R
CAMO-09-10371	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10371	1	POLY	H3	Ice	R
CAMO-09-10368	1	POLY	7196A	Ice	R
CAMO-09-10368	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10368	1	POLY	H3	Ice	R
CAMO-09-10369	1	POLY	7196A	Ice	R
CAMO-09-10369	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10369	1	POLY	H3	Ice	R
CAMO-09-10366	1	POLY	7196A	Ice	R
CAMO-09-10366	1	POLY	GS+TAL Metals	Ice	R

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2498C

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10366	1	POLY	H3	Ice	R
CAMO-09-10372	1	POLY	7196A	Ice	R
CAMO-09-10372	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10372	1	POLY	H3	Ice	R
CAMO-09-10378	1	POLY	7196A	Ice	R
CAMO-09-10378	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10378	1	POLY	H3	Ice	R
CAMO-09-10379	1	POLY	7196A	Ice	R
CAMO-09-10379	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10379	1	POLY	H3	Ice	R
CAMO-09-10381	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10380	1	POLY	METALS-GEL	Nitric Acid	W

Relinquished By: **Date** **Time** **Received By:** **Date** **Time**

6/26/09 3:00

Printed Name Signature Printed Name Signature

Printed Name Signature Printed Name Signature

Printed Name Signature Printed Name Signature

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10367

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2007	MEDIA:	OBT4	Qbt 3
TIME COLLECTED (HH:MM)		1130	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605515		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Highly indurated pink/gray tuff, moist

FR: ~~FR~~: CAMO-09-10380 AG 6.24.09

SAMPLE COMMENTS: Interface @ 0.5' bgs

LOCATION DESC: 35-016(h) - 05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

β/γ ≤ 228 dpm

PID Ambient/Reading = 0.0/1.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) [signature]	6/24/09 4:51
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10368

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1142	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605516	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sand → silt, with some cobbles, dry/moist sediment

FR: CAMO-09-10381

SAMPLE COMMENTS: None

LOCATION DESC: 35-016(h) 06

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm
β/γ ≤ 3 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) A. Goumas	6.24.09 1640	(Printed Name) Sheryl Sherwood (Signature) Sheryl Sherwood	6/24/09 4:57
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10380

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1210	SUB-MEDIA:	OTHER	
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605515	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	

SAMPLE DESC: QC Sample of CAMO-09-10367

SAMPLE COMMENTS: None

LOCATION DESC: 016(h)-05

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10381

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1220	SUB-MEDIA:	OTHER	
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605516	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:		NA
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	

SAMPLE DESC: QC Sample of CAMO-09-10368

SAMPLE COMMENTS: None

LOCATION DESC: 35-016(h)-06

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 4:51
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10374

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		0910	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605519	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sand → silt dry sediment w/ cobbles & some organics

SAMPLE COMMENTS: None

LOCATION DESC: AG 6.24.09 ~~03-01~~ 35-016(h) 09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 854 dpm

PID ambient / Reading = 0.0 / 1.3 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) [signature]	6/24/09 4:51
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10375

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	gbt2
TIME COLLECTED (HH:MM)		0917	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	OK	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605519		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	J.B. 6/24/09 ~~0.5~~ 1.5 ~~2.5~~ 2.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown/Tan highly indurated tuff

FD: CAMO-09-10378

SAMPLE COMMENTS: Interface @ ~~0.5~~ 1.5' bgs

LOCATION DESC: 35-016(h)-09

FIELD SCREENING/MEASUREMENT RESULTS:

<≤ 11 dpm

Bgs 1215 dpm

PID Ambient Reading = 0.0 / 2.0 ppm

COLLECTED BY (PRINT) A. Gowans

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowans (Signature) [signature]	6.24.09 1640	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/24/09 1645
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10372

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1020	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605518		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sand → silt sediment

SAMPLE COMMENTS: In drainage below road cut & culvert of unknown origin

LOCATION DESC: 35-016(h) - 08

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 548 dpm

PID Ambient/Reading = 0.0/0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature)	6.24.09 1640	(Printed Name) S. MARQUAN (Signature)	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10379

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	NG 6.27.09 ~~QBT3~~ Sed
TIME COLLECTED (HH:MM)		1010	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	UNK	MO-605517	FIELD QC TYPE:	FD	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	AG 6/24/09 ~~ok~~ Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1 ~~Rush~~ 15 Day	7196A	250 ML POLY	Ice	Y	
1	8270C	250 ML AMBER GLASS	Ice		
1	GS+TAL Metals	1 LITER POLY	Ice		
1	H3	500 ML POLY	Ice		
1	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-10370
Sand → silt sediment

SAMPLE COMMENTS: Moved due to poor location (N) 3'. Drainage off of road cut & below culvert of unknown origin

LOCATION DESC: 35-016(h)-07

FIELD SCREENING/MEASUREMENT RESULTS:

α: 28 dpm
β/γ: 534 dpm

PID Ambient / Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch (Signature)	6/24/09 1640	(Printed Name) S. MARCZAK (Signature)	6/24/09 1650
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10369

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	qbt 3
TIME COLLECTED (HH:MM)		1155	SUB-MEDIA:	UA	OK
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605516		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Moist purple/gray tuff, indurated

SAMPLE COMMENTS: In drainage below parking lot

LOCATION DESC: 35-016(h) 06 (N) of parking between building 213 (TA-55)

FIELD SCREENING/MEASUREMENT RESULTS:

α: 17 dpm
β/γ: 105 dpm

PID Ambient Reading: 0.0 / 1.2 ppm

COLLECTED BY (PRINT) A. Gomez **REVIEWED BY (PRINT)** J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature)	6.24.09 1640	(Printed Name) S. MARCRAY (Signature)	6/24/09 1640
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10371

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Qbt 3
TIME COLLECTED (HH:MM)		1025	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605517		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	2.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	3.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: moist weathered purple/pink tuff w/ some pumice

SAMPLE COMMENTS: Interface @ 2.0' bgs

LOCATION DESC: 35 - 016(h) - 07

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 575 dpm

PID Ambient / Reading = 0.0 / 0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature)	6.24.09 1640	(Printed Name) S. MARCZAK (Signature)	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10370

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1010	SUB-MEDIA:	UA	OK
PRS ID:	35-016(h)	OK	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605517	↓	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sand → Silt sediment

FD:CAMO-09-10379

SAMPLE COMMENTS: Moved due to poor location moved (N) 3'. Drainage off of Road cut & below culvert from unknown source

LOCATION DESC: 35-016(h) - 07

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 28 dpm

β/γ ≤ 534 dpm

PID Ambient / Reading : 0.0 / 0.0

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature)	6.24.09 1640	(Printed Name) S. MARCIAN (Signature)	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10378

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	OBT4	Qbt2
TIME COLLECTED (HH:MM)		0917	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	UNK	MO-605519	FIELD QC TYPE:	FD	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0	1.5	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	2.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: QC Sample of CAMO-09-10375

Bronco/Tau highly indurated tuff

SAMPLE COMMENTS: Interface @ 1.5' bgs

LOCATION DESC: 35-016(h)-09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 11 dpm

β/γ ≤ 1215 dpm

PID Ambient Reading: 0.0 / 7.0 ppm

COLLECTED BY (PRINT) A. Gurmao

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gurmao (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARCAN (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10373

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	qbt3
TIME COLLECTED (HH:MM)		1028	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605518		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Pink/gray indurated tuff

SAMPLE COMMENTS: In drainage below road cut & culvert of unknown origin Interface @ 0.5'bgs

LOCATION DESC: 35-016(h) - 08

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 17 dpm

β/γ ≤ 745 dpm

PID Ambient/Reading = 0.0/0.0 ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARCZAK (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10377

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	QbT2
TIME COLLECTED (HH:MM)		0910	SUB-MEDIA:	UA	ok
PES ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	MO-605520		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1		8270C	250 ML AMBER GLASS	Ice		
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: highly Indurated tuff

SAMPLE COMMENTS: Interface @ 0.5' bgs, cutrite bucket required w/ breaker bar

LOCATION DESC: 35-016(h)-10

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ AG 6.24.09 23 dpm

β/γ ≤ AG 6.24.09 ~~1215~~ 1215 dpm

PID Ambient Reading: 0.0 / 11.3 ppm

COLLECTED BY (PRINT) A. Gomez REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature)	6.24.09 1640	(Printed Name) S. MARCHAN (Signature)	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qrtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10376

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		0905	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605520	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1	↓	GS+TAL Metals	1 LITER POLY	Ice	↓	
1	↓	H3	500 ML POLY	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Brown dry/moist sand → silt, w/ organics

SAMPLE COMMENTS: None

LOCATION DESC: 35-016(h) – 10

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 34 dpm

β/γ ≤ 950 dpm

PID Ambient Reading = 0.0 / 0.8 ppm

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature) [signature]	6.24.09 1640	(Printed Name) S. MARQUEZ (Signature) [signature]	6/24/09 1640
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 878 **EVENT NAME:** 3rd Qtr. FY09, AOC 03-004(c), Mortandad Cyn, TA-03, AOC 35-016 (h)

SAMPLE ID: CAMO-09-10366

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/24/2009	MEDIA:	QBT4	Sed
TIME COLLECTED (HH:MM)		1120	SUB-MEDIA:	UA	ok
PRS ID:	35-016(h)	ok	SAMPLE TECH CODE:	HA	SS
LOCATION ID:	MO-605515	↓	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	7196A	250 ML POLY	Ice	Y	
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
1		GS+TAL Metals	1 LITER POLY	Ice		
1		H3	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Sand → silt sediment w/ some small cobbles

SAMPLE COMMENTS: In drainage below parking lot

LOCATION DESC: 35-016(h) - 05

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 0 dpm

β/γ ≤ 30 dpm

PID Ambient/Reading = 0.0/0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) Estevan Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.24.09 1640	(Printed Name) S. MARCIAL	6/24/09 1640
(Signature)		(Signature)	
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2498 VALIDATION DATE: 7/22/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☒ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the solid MB, Fe was detected. The associated sample results were detects >50X the MB concentration and, thus, were not qualified based on professional judgment. In the aqueous MB, Sb was detected. The associated sample results were NDs and, thus, were not qualified.
2. In the solid and aqueous ICBs and CCBs, Tl was detected. The associated results in solid samples CAMO-09-10371, -10372, and -10375 were detects ≤5X the greatest blank concentrations and, thus, were qualified U,I4b. All other associated sample results were NDs and, thus were not qualified.
3. In the FR blanks, samples -10380 and -10381, associated with all solid samples, Ca, K, and Na were detected. The results for Na in samples -10366, -10368, -10370, -10372, -10374 – -10379 were detects ≤5X the FR blank concentrations and, thus, were qualified U,I4d. All other associated sample results were detects >5X the FR blank concentrations and, thus, were not qualified.

DATA VALIDATION COVER SHEET

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Los Alamos NATIONAL LABORATORY

Data Validation Cover Sheet

4. In the solid MS, the %R was < the laboratory's LAL but ≥10% for Se. The associated sample results were NDs and, thus, were qualified UJ,I6a. In the solid MS, the %Rs were > the laboratory's UAL for Mg and K. The associated sample results were detects and, thus, were qualified J+,I6b. In the solid MS, the %Rs were also < the laboratory's LAL but ≥10% for Mn and > the laboratory's UAL for Al and Fe. However, the associated parent sample results were >4X the spike concentrations and, thus, no sample results were qualified, based on professional judgment. In the aqueous MS, the %R was < the laboratory's LAL but ≥10% for Tl. The associated sample results were NDs and, thus, were qualified UJ,I6a.
5. The solid duplicate RPD was >35% for Hg, and both the duplicate and parent sample results were ≥5X the PQL. The associated results in samples -10366, -10368, -10370, -10371, -10374, and -10379 were NDs and, thus, were qualified UJ,I10a. All other associated sample results were detects and, thus, were qualified J,I10a.
6. Results > the MDLs but < the PQLs were "J" flagged by the laboratory and, thus, were not further qualified J,I1.
7. It should be noted that the aqueous matrix QC parent samples were from other LANL RNs. It should also be noted that the solid aqueous matrix QC parent sample for CVAA was from another LANL RN. No sample data were qualified as a result.

Reviewed by: JEJ Level: I Date: 7/23/09

VALIDATOR'S SIGNATURE: DATE: 7/22/09

Form 5118-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

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Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☒	☐	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☒	☐	☐	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST

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Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☒	☐	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST

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Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504001 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10375 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 96.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2370000	ug/Kg		6880	20200	20200	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-36-0	Antimony	1010	ug/Kg	U	334	1010	1010	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-38-2	Arsenic	1290	ug/kg		199	997	997	2	MS	BAJ	07/06/09 00:40	090705-2	881360
7440-39-3	Barium	21900	ug/Kg	*N	101	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-41-7	Beryllium	483	ug/kg		19.9	99.7	99.7	2	MS	BAJ	07/06/09 00:40	090705-2	881360
7440-43-9	Cadmium	506	ug/Kg	U	101	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-70-2	Calcium	819000	ug/Kg	N	8100	25300	25300	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-47-3	Chromium	6180	ug/Kg		152	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-48-4	Cobalt	886	ug/Kg		152	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-50-8	Copper	2570	ug/Kg		304	1010	1010	1	P	HSC	07/02/09 14:36	070209-1	881343
7439-89-6	Iron	8610000	ug/Kg		8100	25300	25300	1	P	HSC	07/02/09 14:36	070209-1	881343
7439-92-1	Lead	5170	ug/Kg		253	1010	1010	1	P	HSC	07/02/09 14:36	070209-1	881343
7439-95-4	Magnesium J+,I6b	366000	ug/Kg	N	8600	30400	30400	1	P	HSC	07/02/09 14:36	070209-1	881343
7439-96-5	Manganese	229000	ug/Kg	*	202	1010	1010	1	P	HSC	07/02/09 14:36	070209-1	881343
7439-97-6	Mercury J,I10a	6.09	ug/kg	J	3.63	10.7	10.7	1	AV	IXL1	07/13/09 10:58	071309S2-3	881913
7440-02-0	Nickel	2510	ug/kg		99.7	399	399	2	MS	BAJ	07/06/09 00:40	090705-2	881360
7440-09-7	Potassium J+,I6b	288000	ug/Kg	N	6480	25300	25300	1	P	HSC	07/02/09 14:36	070209-1	881343
7782-49-2	Selenium UJ,I6a	997	ug/kg	UN	498	997	997	2	MS	BAJ	07/06/09 00:40	090705-2	881360
7440-22-4	Silver	436	ug/Kg	J	101	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-23-5	Sodium U,I4d	70700	ug/Kg		7090	25300	25300	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-28-0	Thallium U,I4b	98.5	ug/kg	J	59.8	199	199	2	MS	BAJ	07/06/09 00:40	090705-2	881360
7440-62-2	Vanadium	5770	ug/Kg		101	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-66-6	Zinc	39300	ug/Kg		334	1010	1010	1	P	HSC	07/02/09 14:36	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.511	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.519	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.582	g	30	mL	07/10/09	AXG2

LMF
7/22/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504002 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10376 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2730000	ug/Kg		6880	20200	20200	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-36-0	Antimony	1010	ug/Kg	U	334	1010	1010	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-38-2	Arsenic	1300	ug/kg		209	1050	1050	2	MS	BAJ	07/06/09 01:23	090705-2	881360
7440-39-3	Barium	32500	ug/Kg	*N	101	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-41-7	Beryllium	319	ug/kg		20.9	105	105	2	MS	BAJ	07/06/09 01:23	090705-2	881360
7440-43-9	Cadmium	506	ug/Kg	U	101	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-70-2	Calcium	998000	ug/Kg	N	8090	25300	25300	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-47-3	Chromium	3220	ug/Kg		152	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-48-4	Cobalt	1520	ug/Kg		152	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-50-8	Copper	5070	ug/Kg		303	1010	1010	1	P	HSC	07/02/09 15:24	070209-1	881343
7439-89-6	Iron	8870000	ug/Kg		8090	25300	25300	1	P	HSC	07/02/09 15:24	070209-1	881343
7439-92-1	Lead	7390	ug/Kg		253	1010	1010	1	P	HSC	07/02/09 15:24	070209-1	881343
7439-95-4	Magnesium J+,I6b	597000	ug/Kg	N	8590	30300	30300	1	P	HSC	07/02/09 15:24	070209-1	881343
7439-96-5	Manganese	221000	ug/Kg	*	202	1010	1010	1	P	HSC	07/02/09 15:24	070209-1	881343
7439-97-6	Mercury J,I10a	5.22	ug/kg	J	3.65	10.7	10.7	1	AV	JXL1	07/13/09 11:00	071309S2-3	881913
7440-02-0	Nickel	3840	ug/kg		105	418	418	2	MS	BAJ	07/06/09 01:23	090705-2	881360
7440-09-7	Potassium J+,I6b	444000	ug/Kg	N	6470	25300	25300	1	P	HSC	07/02/09 15:24	070209-1	881343
7782-49-2	Selenium UJ,I6a	1050	ug/kg	UN	523	1050	1050	2	MS	BAJ	07/06/09 01:23	090705-2	881360
7440-22-4	Silver	513	ug/Kg		101	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-23-5	Sodium U,I4d	41600	ug/Kg		7080	25300	25300	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-28-0	Thallium	209	ug/kg	U	62.7	209	209	2	MS	BAJ	07/06/09 01:23	090705-2	881360
7440-62-2	Vanadium	8510	ug/Kg		101	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-66-6	Zinc	38400	ug/Kg		334	1010	1010	1	P	HSC	07/02/09 15:24	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.518	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.501	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.586	g	30	mL	07/10/09	AXG2

LMF
7/22/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504003 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10373 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2740000	ug/Kg		7670	22600	22600	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-36-0	Antimony	1130	ug/Kg	U	372	1130	1130	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-38-2	Arsenic	1210	ug/kg		217	1080	1080	2	MS	BAJ	07/06/09 01:29	090705-2	881360
7440-39-3	Barium	23600	ug/Kg	*N	113	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-41-7	Beryllium	867	ug/kg		21.7	108	108	2	MS	BAJ	07/06/09 01:29	090705-2	881360
7440-43-9	Cadmium	564	ug/Kg	U	113	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-70-2	Calcium	809000	ug/Kg	N	9030	28200	28200	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-47-3	Chromium	17200	ug/Kg		169	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-48-4	Cobalt	918	ug/Kg		169	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-50-8	Copper	3420	ug/Kg		339	1130	1130	1	P	HSC	07/02/09 15:31	070209-1	881343
7439-89-6	Iron	7800000	ug/Kg		9030	28200	28200	1	P	HSC	07/02/09 15:31	070209-1	881343
7439-92-1	Lead	6520	ug/Kg		282	1130	1130	1	P	HSC	07/02/09 15:31	070209-1	881343
7439-95-4	Magnesium J+,I6b	392000	ug/Kg	N	9590	33900	33900	1	P	HSC	07/02/09 15:31	070209-1	881343
7439-96-5	Manganese	254000	ug/Kg	*	226	1130	1130	1	P	HSC	07/02/09 15:31	070209-1	881343
7439-97-6	Mercury J,I10a	22.2	ug/kg		3.96	11.7	11.7	1	AV	JXL1	07/13/09 11:02	071309S2-3	881913
7440-02-0	Nickel	3200	ug/kg		108	433	433	2	MS	BAJ	07/06/09 01:29	090705-2	881360
7440-09-7	Potassium J+,I6b	316000	ug/Kg	N	7220	28200	28200	1	P	HSC	07/02/09 15:31	070209-1	881343
7782-49-2	Selenium UJ,I6a	1080	ug/kg	UN	541	1080	1080	2	MS	BAJ	07/06/09 01:29	090705-2	881360
7440-22-4	Silver	443	ug/Kg	J	113	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-23-5	Sodium	161000	ug/Kg		7900	28200	28200	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-28-0	Thallium	217	ug/kg	U	65	217	217	2	MS	BAJ	07/06/09 01:29	090705-2	881360
7440-62-2	Vanadium	5310	ug/Kg		113	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-66-6	Zinc	35000	ug/Kg		372	1130	1130	1	P	HSC	07/02/09 15:31	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.521	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.581	g	30	mL	07/10/09	AXG2

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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504004 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10367 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 85

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1470000	ug/Kg		7970	23400	23400	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-36-0	Antimony	1170	ug/Kg	U	387	1170	1170	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-38-2	Arsenic	685	ug/kg	J	225	1120	1120	2	MS	BAJ	07/06/09 01:36	090705-2	881360
7440-39-3	Barium	16700	ug/Kg	*N	117	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-41-7	Beryllium	321	ug/kg		22.5	112	112	2	MS	BAJ	07/06/09 01:36	090705-2	881360
7440-43-9	Cadmium	586	ug/Kg	U	117	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-70-2	Calcium	270000	ug/Kg	N	9370	29300	29300	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-47-3	Chromium	14100	ug/Kg		176	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-48-4	Cobalt	726	ug/Kg		176	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-50-8	Copper	5220	ug/Kg		351	1170	1170	1	P	HSC	07/02/09 15:39	070209-1	881343
7439-89-6	Iron	7770000	ug/Kg		9370	29300	29300	1	P	HSC	07/02/09 15:39	070209-1	881343
7439-92-1	Lead	6130	ug/Kg		293	1170	1170	1	P	HSC	07/02/09 15:39	070209-1	881343
7439-95-4	Magnesium J+,I6b	261000	ug/Kg	N	9960	35100	35100	1	P	HSC	07/02/09 15:39	070209-1	881343
7439-96-5	Manganese	304000	ug/Kg	*	234	1170	1170	1	P	HSC	07/02/09 15:39	070209-1	881343
7439-97-6	Mercury J,I10a	10.2	ug/kg	J	4.41	13	13	1	AV	JXL1	07/13/09 11:04	071309S2-3	881913
7440-02-0	Nickel	1750	ug/kg		112	450	450	2	MS	BAJ	07/06/09 01:36	090705-2	881360
7440-09-7	Potassium J+,I6b	268000	ug/Kg	N	7500	29300	29300	1	P	HSC	07/02/09 15:39	070209-1	881343
7782-49-2	Selenium UJ,I6a	1120	ug/kg	UN	562	1120	1120	2	MS	BAJ	07/06/09 01:36	090705-2	881360
7440-22-4	Silver	454	ug/Kg	J	117	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-23-5	Sodium	168000	ug/Kg		8200	29300	29300	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-28-0	Thallium	225	ug/kg	U	67.4	225	225	2	MS	BAJ	07/06/09 01:36	090705-2	881360
7440-62-2	Vanadium	4010	ug/Kg		117	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-66-6	Zinc	42900	ug/Kg		387	1170	1170	1	P	HSC	07/02/09 15:39	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.521	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.542	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504005 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10377 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 93.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3520000	ug/Kg		7280	21400	21400	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-36-0	Antimony	1070	ug/Kg	U	353	1070	1070	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-38-2	Arsenic	957	ug/kg	J	207	1030	1030	2	MS	BAJ	07/06/09 01:42	090705-2	881360
7440-39-3	Barium	35300	ug/Kg	*N	107	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-41-7	Beryllium	811	ug/kg		20.7	103	103	2	MS	BAJ	07/06/09 01:42	090705-2	881360
7440-43-9	Cadmium	535	ug/Kg	U	107	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-70-2	Calcium	618000	ug/Kg	N	8560	26700	26700	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-47-3	Chromium	29600	ug/Kg		160	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-48-4	Cobalt	1010	ug/Kg		160	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-50-8	Copper	4500	ug/Kg		321	1070	1070	1	P	HSC	07/02/09 15:46	070209-1	881343
7439-89-6	Iron	9760000	ug/Kg		8560	26700	26700	1	P	HSC	07/02/09 15:46	070209-1	881343
7439-92-1	Lead	7480	ug/Kg		267	1070	1070	1	P	HSC	07/02/09 15:46	070209-1	881343
7439-95-4	Magnesium J+,I6b	630000	ug/Kg	N	9090	32100	32100	1	P	HSC	07/02/09 15:46	070209-1	881343
7439-96-5	Manganese	388000	ug/Kg	*	214	1070	1070	1	P	HSC	07/02/09 15:46	070209-1	881343
7439-97-6	Mercury J,I10a	10.4	ug/kg	J	3.64	10.7	10.7	1	AV	JXL1	07/13/09 11:10	071309S2-3	881913
7440-02-0	Nickel	4010	ug/kg		103	413	413	2	MS	BAJ	07/06/09 01:42	090705-2	881360
7440-09-7	Potassium J+,I6b	482000	ug/Kg	N	6850	26700	26700	1	P	HSC	07/02/09 15:46	070209-1	881343
7782-49-2	Selenium UJ,I6a	1030	ug/kg	UN	516	1030	1030	2	MS	BAJ	07/06/09 01:42	090705-2	881360
7440-22-4	Silver	566	ug/Kg		107	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-23-5	Sodium U,I4d	97300	ug/Kg		7490	26700	26700	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-28-0	Thallium	207	ug/kg	U	62	207	207	2	MS	BAJ	07/06/09 01:42	090705-2	881360
7440-62-2	Vanadium	6620	ug/Kg		107	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-66-6	Zinc	54100	ug/Kg		353	1070	1070	1	P	HSC	07/02/09 15:46	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.518	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.599	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504006 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10370 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.9

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2080000	ug/Kg		6990	20600	20600	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-36-0	Antimony	1030	ug/Kg	U	339	1030	1030	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-38-2	Arsenic	745	ug/kg	J	203	1020	1020	2	MS	BAJ	07/06/09 01:48	090705-2	881360
7440-39-3	Barium	39400	ug/Kg	*N	103	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-41-7	Beryllium	195	ug/kg		20.3	102	102	2	MS	BAJ	07/06/09 01:48	090705-2	881360
7440-43-9	Cadmium	452	ug/Kg	J	103	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-70-2	Calcium	2780000	ug/Kg	N	8230	25700	25700	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-47-3	Chromium	5000	ug/Kg		154	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-48-4	Cobalt	1760	ug/Kg		154	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-50-8	Copper	15100	ug/Kg		308	1030	1030	1	P	HSC	07/02/09 15:53	070209-1	881343
7439-89-6	Iron	8730000	ug/Kg		8230	25700	25700	1	P	HSC	07/02/09 15:53	070209-1	881343
7439-92-1	Lead	5350	ug/Kg		257	1030	1030	1	P	HSC	07/02/09 15:53	070209-1	881343
7439-95-4	Magnesium J+,I6b	881000	ug/Kg	N	8740	30800	30800	1	P	HSC	07/02/09 15:53	070209-1	881343
7439-96-5	Manganese	146000	ug/Kg	*	206	1030	1030	1	P	HSC	07/02/09 15:53	070209-1	881343
7439-97-6	Mercury UJ,I10a	10.9	ug/kg	U	3.71	10.9	10.9	1	AV	JXL1	07/13/09 11:12	071309S2-3	881913
7440-02-0	Nickel	2900	ug/kg		102	407	407	2	MS	BAJ	07/06/09 01:48	090705-2	881360
7440-09-7	Potassium J+,I6b	546000	ug/Kg	N	6580	25700	25700	1	P	HSC	07/02/09 15:53	070209-1	881343
7782-49-2	Selenium UJ,I6a	1020	ug/kg	UN	508	1020	1020	2	MS	BAJ	07/06/09 01:48	090705-2	881360
7440-22-4	Silver	458	ug/Kg	J	103	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-23-5	Sodium U,I4d	90200	ug/Kg		7200	25700	25700	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-28-0	Thallium	203	ug/kg	U	61	203	203	2	MS	BAJ	07/06/09 01:48	090705-2	881360
7440-62-2	Vanadium	12000	ug/Kg		103	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-66-6	Zinc	126000	ug/Kg		339	1030	1030	1	P	HSC	07/02/09 15:53	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.507	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.513	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.573	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504007 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10374 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 96.4

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2600000	ug/Kg		6920	20300	20300	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-36-0	Antimony	1020	ug/Kg	U	336	1020	1020	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-38-2	Arsenic	862	ug/kg	J	198	990	990	2	MS	BAJ	07/06/09 01:54	090705-2	881360
7440-39-3	Barium	59900	ug/Kg	*N	102	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-41-7	Beryllium	241	ug/kg		19.8	99	99	2	MS	BAJ	07/06/09 01:54	090705-2	881360
7440-43-9	Cadmium	509	ug/Kg	U	102	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-70-2	Calcium	1280000	ug/Kg	N	8140	25400	25400	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-47-3	Chromium	4420	ug/Kg		153	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-48-4	Cobalt	2100	ug/Kg		153	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-50-8	Copper	6050	ug/Kg		305	1020	1020	1	P	HSC	07/02/09 16:00	070209-1	881343
7439-89-6	Iron	7580000	ug/Kg		8140	25400	25400	1	P	HSC	07/02/09 16:00	070209-1	881343
7439-92-1	Lead	6370	ug/Kg		254	1020	1020	1	P	HSC	07/02/09 16:00	070209-1	881343
7439-95-4	Magnesium J+,I6b	746000	ug/Kg	N	8650	30500	30500	1	P	HSC	07/02/09 16:00	070209-1	881343
7439-96-5	Manganese	176000	ug/Kg	*	203	1020	1020	1	P	HSC	07/02/09 16:00	070209-1	881343
7439-97-6	Mercury UJ,I10a	11.9	ug/kg	U	4.06	11.9	11.9	1	AV	JXL1	07/13/09 11:14	071309S2-3	881913
7440-02-0	Nickel	2790	ug/kg		99	396	396	2	MS	BAJ	07/06/09 01:54	090705-2	881360
7440-09-7	Potassium J+,I6b	478000	ug/Kg	N	6510	25400	25400	1	P	HSC	07/02/09 16:00	070209-1	881343
7782-49-2	Selenium UJ,I6a	990	ug/kg	UN	495	990	990	2	MS	BAJ	07/06/09 01:54	090705-2	881360
7440-22-4	Silver	390	ug/Kg	J	102	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-23-5	Sodium U,I4d	61100	ug/Kg		7120	25400	25400	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-28-0	Thallium	198	ug/kg	U	59.4	198	198	2	MS	BAJ	07/06/09 01:54	090705-2	881360
7440-62-2	Vanadium	9880	ug/Kg		102	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-66-6	Zinc	27800	ug/Kg		336	1020	1020	1	P	HSC	07/02/09 16:00	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.51	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.524	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.521	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504008 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10371 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 86

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3250000	ug/Kg		7790	22900	22900	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-36-0	Antimony	1150	ug/Kg	U	378	1150	1150	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-38-2	Arsenic	1710	ug/kg		232	1160	1160	2	MS	BAJ	07/06/09 02:00	090705-2	881360
7440-39-3	Barium	38300	ug/Kg	*N	115	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-41-7	Beryllium	402	ug/kg		23.2	116	116	2	MS	BAJ	07/06/09 02:00	090705-2	881360
7440-43-9	Cadmium	573	ug/Kg	U	115	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-70-2	Calcium	6770000	ug/Kg	N	9170	28600	28600	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-47-3	Chromium	11900	ug/Kg		172	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-48-4	Cobalt	1380	ug/Kg		172	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-50-8	Copper	7620	ug/Kg		344	1150	1150	1	P	HSC	07/02/09 16:07	070209-1	881343
7439-89-6	Iron	7900000	ug/Kg		9170	28600	28600	1	P	HSC	07/02/09 16:07	070209-1	881343
7439-92-1	Lead	8160	ug/Kg		286	1150	1150	1	P	HSC	07/02/09 16:07	070209-1	881343
7439-95-4	Magnesium J+,I6b	921000	ug/Kg	N	9740	34400	34400	1	P	HSC	07/02/09 16:07	070209-1	881343
7439-96-5	Manganese	201000	ug/Kg	*	229	1150	1150	1	P	HSC	07/02/09 16:07	070209-1	881343
7439-97-6	Mercury UJ,I10a	13.7	ug/kg	U	4.66	13.7	13.7	1	AV	JXL1	07/13/09 11:16	071309S2-3	881913
7440-02-0	Nickel	5470	ug/kg		116	465	465	2	MS	BAJ	07/06/09 02:00	090705-2	881360
7440-09-7	Potassium J+,I6b	499000	ug/Kg	N	7330	28600	28600	1	P	HSC	07/02/09 16:07	070209-1	881343
7782-49-2	Selenium UJ,I6a	1160	ug/kg	UN	581	1160	1160	2	MS	BAJ	07/06/09 02:00	090705-2	881360
7440-22-4	Silver	357	ug/Kg	J	115	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-23-5	Sodium	189000	ug/Kg		8020	28600	28600	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-28-0	Thallium U,I4b	142	ug/kg	J	69.7	232	232	2	MS	BAJ	07/06/09 02:00	090705-2	881360
7440-62-2	Vanadium	8090	ug/Kg		115	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-66-6	Zinc	45100	ug/Kg		378	1150	1150	1	P	HSC	07/02/09 16:07	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.508	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.501	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.51	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504009 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10368 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 94.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1440000	ug/Kg		6940	20400	20400	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-36-0	Antimony	1020	ug/Kg	U	337	1020	1020	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-38-2	Arsenic	738	ug/kg	J	208	1040	1040	2	MS	BAJ	07/06/09 02:19	090705-2	881360
7440-39-3	Barium	23600	ug/Kg	*N	102	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-41-7	Beryllium	234	ug/kg		20.8	104	104	2	MS	BAJ	07/06/09 02:19	090705-2	881360
7440-43-9	Cadmium	511	ug/Kg	U	102	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-70-2	Calcium	596000	ug/Kg	N	8170	25500	25500	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-47-3	Chromium	3020	ug/Kg		153	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-48-4	Cobalt	2000	ug/Kg		153	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-50-8	Copper	1860	ug/Kg		306	1020	1020	1	P	HSC	07/02/09 16:27	070209-1	881343
7439-89-6	Iron	9320000	ug/Kg		8170	25500	25500	1	P	HSC	07/02/09 16:27	070209-1	881343
7439-92-1	Lead	4730	ug/Kg		255	1020	1020	1	P	HSC	07/02/09 16:27	070209-1	881343
7439-95-4	Magnesium J+,I6b	385000	ug/Kg	N	8680	30600	30600	1	P	HSC	07/02/09 16:27	070209-1	881343
7439-96-5	Manganese	235000	ug/Kg	*	204	1020	1020	1	P	HSC	07/02/09 16:27	070209-1	881343
7439-97-6	Mercury UJ,I10a	12.2	ug/kg	U	4.14	12.2	12.2	1	AV	JXL1	07/13/09 11:18	071309S2-3	881913
7440-02-0	Nickel	1850	ug/kg		104	416	416	2	MS	BAJ	07/06/09 02:19	090705-2	881360
7440-09-7	Potassium J+,I6b	304000	ug/Kg	N	6540	25500	25500	1	P	HSC	07/02/09 16:27	070209-1	881343
7782-49-2	Selenium UJ,I6a	1040	ug/kg	UN	520	1040	1040	2	MS	BAJ	07/06/09 02:19	090705-2	881360
7440-22-4	Silver	564	ug/Kg		102	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-23-5	Sodium U,I4d	77200	ug/Kg		7150	25500	25500	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-28-0	Thallium	208	ug/kg	U	62.4	208	208	2	MS	BAJ	07/06/09 02:19	090705-2	881360
7440-62-2	Vanadium	7260	ug/Kg		102	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-66-6	Zinc	54200	ug/Kg		337	1020	1020	1	P	HSC	07/02/09 16:27	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.518	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.509	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.521	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09–2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504010 **BASIS:** Dry Weight **DATE COLLECTED** 24–JUN–09

CLIENT ID: CAMO–09–10369 **LEVEL:** Low **DATE RECEIVED** 27–JUN–09

MATRIX: SOIL **%SOLIDS:** 88

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429–90–5	Aluminum	2780000	ug/Kg		7570	22300	22300	1	P	HSC	07/02/09 16:34	070209–1	881343
7440–36–0	Antimony	1110	ug/Kg	U	367	1110	1110	1	P	HSC	07/02/09 16:34	070209–1	881343
7440–38–2	Arsenic	1470	ug/kg		226	1130	1130	2	MS	BAJ	07/06/09 02:25	090705–2	881360
7440–39–3	Barium	21000	ug/Kg	*N	111	556	556	1	P	HSC	07/02/09 16:34	070209–1	881343
7440–41–7	Beryllium	316	ug/kg		22.6	113	113	2	MS	BAJ	07/06/09 02:25	090705–2	881360
7440–43–9	Cadmium	556	ug/Kg	U	111	556	556	1	P	HSC	07/02/09 16:34	070209–1	881343
7440–70–2	Calcium	496000	ug/Kg	N	8900	27800	27800	1	P	HSC	07/02/09 16:34	070209–1	881343
7440–47–3	Chromium	13800	ug/Kg		167	556	556	1	P	HSC	07/02/09 16:34	070209–1	881343
7440–48–4	Cobalt	1600	ug/Kg		167	556	556	1	P	HSC	07/02/09 16:34	070209–1	881343
7440–50–8	Copper	4100	ug/Kg		334	1110	1110	1	P	HSC	07/02/09 16:34	070209–1	881343
7439–89–6	Iron	8840000	ug/Kg		8900	27800	27800	1	P	HSC	07/02/09 16:34	070209–1	881343
7439–92–1	Lead	6250	ug/Kg		278	1110	1110	1	P	HSC	07/02/09 16:34	070209–1	881343
7439–95–4	Magnesium J+,I6b	259000	ug/Kg	N	9460	33400	33400	1	P	HSC	07/02/09 16:34	070209–1	881343
7439–96–5	Manganese	198000	ug/Kg	*	223	1110	1110	1	P	HSC	07/02/09 16:34	070209–1	881343
7439–97–6	Mercury J,I10a	7.51	ug/kg	J	4.12	12.1	12.1	1	AV	JXL1	07/13/09 11:20	071309S2–3	881913
7440–02–0	Nickel	3270	ug/kg		113	452	452	2	MS	BAJ	07/06/09 02:25	090705–2	881360
7440–09–7	Potassium J+,I6b	409000	ug/Kg	N	7120	27800	27800	1	P	HSC	07/02/09 16:34	070209–1	881343
7782–49–2	Selenium UJ,I6a	1130	ug/kg	UN	565	1130	1130	2	MS	BAJ	07/06/09 02:25	090705–2	881360
7440–22–4	Silver	804	ug/Kg		111	556	556	1	P	HSC	07/02/09 16:34	070209–1	881343
7440–23–5	Sodium	196000	ug/Kg		7790	27800	27800	1	P	HSC	07/02/09 16:34	070209–1	881343
7440–28–0	Thallium	226	ug/kg	U	67.8	226	226	2	MS	BAJ	07/06/09 02:25	090705–2	881360
7440–62–2	Vanadium	7470	ug/Kg		111	556	556	1	P	HSC	07/02/09 16:34	070209–1	881343
7440–66–6	Zinc	60200	ug/Kg		367	1110	1110	1	P	HSC	07/02/09 16:34	070209–1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.508	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.5	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.56	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504011 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10366 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 91.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1610000	ug/Kg		7290	21400	21400	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-36-0	Antimony	1070	ug/Kg	U	354	1070	1070	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-38-2	Arsenic	654	ug/kg	J	214	1070	1070	2	MS	BAJ	07/06/09 02:31	090705-2	881360
7440-39-3	Barium	25500	ug/Kg	*N	107	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-41-7	Beryllium	210	ug/kg		21.4	107	107	2	MS	BAJ	07/06/09 02:31	090705-2	881360
7440-43-9	Cadmium	536	ug/Kg	U	107	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-70-2	Calcium	842000	ug/Kg	N	8580	26800	26800	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-47-3	Chromium	3380	ug/Kg		161	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-48-4	Cobalt	1150	ug/Kg		161	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-50-8	Copper	2250	ug/Kg		322	1070	1070	1	P	HSC	07/02/09 16:41	070209-1	881343
7439-89-6	Iron	7260000	ug/Kg		8580	26800	26800	1	P	HSC	07/02/09 16:41	070209-1	881343
7439-92-1	Lead	5200	ug/Kg		268	1070	1070	1	P	HSC	07/02/09 16:41	070209-1	881343
7439-95-4	Magnesium J+,I6b	526000	ug/Kg	N	9120	32200	32200	1	P	HSC	07/02/09 16:41	070209-1	881343
7439-96-5	Manganese	215000	ug/Kg	*	214	1070	1070	1	P	HSC	07/02/09 16:41	070209-1	881343
7439-97-6	Mercury UJ,I10a	12.3	ug/kg	U	4.17	12.3	12.3	1	AV	JXL1	07/13/09 11:22	071309S2-3	881913
7440-02-0	Nickel	2030	ug/kg		107	427	427	2	MS	BAJ	07/06/09 02:31	090705-2	881360
7440-09-7	Potassium J+,I6b	418000	ug/Kg	N	6860	26800	26800	1	P	HSC	07/02/09 16:41	070209-1	881343
7782-49-2	Selenium UJ,I6a	1070	ug/kg	UN	534	1070	1070	2	MS	BAJ	07/06/09 02:31	090705-2	881360
7440-22-4	Silver	338	ug/Kg	J	107	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-23-5	Sodium U,I4d	93300	ug/Kg		7510	26800	26800	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-28-0	Thallium	214	ug/kg	U	64.1	214	214	2	MS	BAJ	07/06/09 02:31	090705-2	881360
7440-62-2	Vanadium	7970	ug/Kg		107	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-66-6	Zinc	57300	ug/Kg		354	1070	1070	1	P	HSC	07/02/09 16:41	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.509	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.511	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.534	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504012 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10372 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 90.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3660000	ug/Kg		7290	21500	21500	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-36-0	Antimony	1070	ug/Kg	U	354	1070	1070	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-38-2	Arsenic	1350	ug/kg		218	1090	1090	2	MS	BAJ	07/06/09 02:37	090705-2	881360
7440-39-3	Barium	56000	ug/Kg	*N	107	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-41-7	Beryllium	424	ug/kg		21.8	109	109	2	MS	BAJ	07/06/09 02:37	090705-2	881360
7440-43-9	Cadmium	536	ug/Kg	U	107	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-70-2	Calcium	24300000	ug/Kg	N	8580	26800	26800	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-47-3	Chromium	3940	ug/Kg		161	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-48-4	Cobalt	1820	ug/Kg		161	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-50-8	Copper	11500	ug/Kg		322	1070	1070	1	P	HSC	07/02/09 16:48	070209-1	881343
7439-89-6	Iron	7350000	ug/Kg		8580	26800	26800	1	P	HSC	07/02/09 16:48	070209-1	881343
7439-92-1	Lead	8220	ug/Kg		268	1070	1070	1	P	HSC	07/02/09 16:48	070209-1	881343
7439-95-4	Magnesium J+,I6b	1120000	ug/Kg	N	9120	32200	32200	1	P	HSC	07/02/09 16:48	070209-1	881343
7439-96-5	Manganese	219000	ug/Kg	*	215	1070	1070	1	P	HSC	07/02/09 16:48	070209-1	881343
7439-97-6	Mercury J,I10a	4.63	ug/kg	J	4.45	13.1	13.1	1	AV	JXL1	07/13/09 11:24	071309S2-3	881913
7440-02-0	Nickel	4050	ug/kg		109	436	436	2	MS	BAJ	07/06/09 02:37	090705-2	881360
7440-09-7	Potassium J+,I6b	676000	ug/Kg	N	6860	26800	26800	1	P	HSC	07/02/09 16:48	070209-1	881343
7782-49-2	Selenium UJ,I6a	1090	ug/kg	UN	545	1090	1090	2	MS	BAJ	07/06/09 02:37	090705-2	881360
7440-22-4	Silver	237	ug/Kg	J	107	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-23-5	Sodium U,I4d	89900	ug/Kg		7510	26800	26800	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-28-0	Thallium U,I4b	95.2	ug/kg	J	65.4	218	218	2	MS	BAJ	07/06/09 02:37	090705-2	881360
7440-62-2	Vanadium	10400	ug/Kg		107	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-66-6	Zinc	30300	ug/Kg		354	1070	1070	1	P	HSC	07/02/09 16:48	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.517	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.509	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.508	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504013 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10378 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 96.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2520000	ug/Kg		6700	19700	19700	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-36-0	Antimony	985	ug/Kg	U	325	985	985	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-38-2	Arsenic	1150	ug/kg		207	1030	1030	2	MS	BAJ	07/06/09 02:43	090705-2	881360
7440-39-3	Barium	23800	ug/Kg	*N	98.5	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-41-7	Beryllium	481	ug/kg		20.7	103	103	2	MS	BAJ	07/06/09 02:43	090705-2	881360
7440-43-9	Cadmium	492	ug/Kg	U	98.5	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-70-2	Calcium	871000	ug/Kg	N	7880	24600	24600	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-47-3	Chromium	6200	ug/Kg		148	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-48-4	Cobalt	984	ug/Kg		148	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-50-8	Copper	2760	ug/Kg		295	985	985	1	P	HSC	07/02/09 16:55	070209-1	881343
7439-89-6	Iron	8770000	ug/Kg		7880	24600	24600	1	P	HSC	07/02/09 16:55	070209-1	881343
7439-92-1	Lead	5800	ug/Kg		246	985	985	1	P	HSC	07/02/09 16:55	070209-1	881343
7439-95-4	Magnesium J+,I6b	397000	ug/Kg	N	8370	29500	29500	1	P	HSC	07/02/09 16:55	070209-1	881343
7439-96-5	Manganese	247000	ug/Kg	*	197	985	985	1	P	HSC	07/02/09 16:55	070209-1	881343
7439-97-6	Mercury J,I10a	6.65	ug/kg	J	3.53	10.4	10.4	1	AV	JXL1	07/13/09 11:26	071309S2-3	881913
7440-02-0	Nickel	2550	ug/kg		103	414	414	2	MS	BAJ	07/06/09 02:43	090705-2	881360
7440-09-7	Potassium J+,I6b	302000	ug/Kg	N	6300	24600	24600	1	P	HSC	07/02/09 16:55	070209-1	881343
7782-49-2	Selenium UJ,I6a	1030	ug/kg	UN	517	1030	1030	2	MS	BAJ	07/06/09 02:43	090705-2	881360
7440-22-4	Silver	396	ug/Kg	J	98.5	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-23-5	Sodium U,I4d	67500	ug/Kg		6890	24600	24600	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-28-0	Thallium	207	ug/kg	U	62	207	207	2	MS	BAJ	07/06/09 02:43	090705-2	881360
7440-62-2	Vanadium	6420	ug/Kg		98.5	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-66-6	Zinc	38800	ug/Kg		325	985	985	1	P	HSC	07/02/09 16:55	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.525	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.5	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.597	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504014 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10379 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2080000	ug/Kg		7090	20900	20900	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-36-0	Antimony	1040	ug/Kg	U	344	1040	1040	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-38-2	Arsenic	695	ug/kg	J	201	1000	1000	2	MS	BAJ	07/06/09 02:50	090705-2	881360
7440-39-3	Barium	30700	ug/Kg	*N	104	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-41-7	Beryllium	175	ug/kg		20.1	100	100	2	MS	BAJ	07/06/09 02:50	090705-2	881360
7440-43-9	Cadmium	522	ug/Kg	U	104	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-70-2	Calcium	2910000	ug/Kg	N	8350	26100	26100	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-47-3	Chromium	4760	ug/Kg		156	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-48-4	Cobalt	1870	ug/Kg		156	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-50-8	Copper	11100	ug/Kg		313	1040	1040	1	P	HSC	07/02/09 17:02	070209-1	881343
7439-89-6	Iron	6750000	ug/Kg		8350	26100	26100	1	P	HSC	07/02/09 17:02	070209-1	881343
7439-92-1	Lead	6240	ug/Kg		261	1040	1040	1	P	HSC	07/02/09 17:02	070209-1	881343
7439-95-4	Magnesium J+,I6b	911000	ug/Kg	N	8870	31300	31300	1	P	HSC	07/02/09 17:02	070209-1	881343
7439-96-5	Manganese	153000	ug/Kg	*	209	1040	1040	1	P	HSC	07/02/09 17:02	070209-1	881343
7439-97-6	Mercury UJ,I10a	11.5	ug/kg	U	3.91	11.5	11.5	1	AV	JXL1	07/13/09 11:27	071309S2-3	881913
7440-02-0	Nickel	3730	ug/kg		100	401	401	2	MS	BAJ	07/06/09 02:50	090705-2	881360
7440-09-7	Potassium J+,I6b	568000	ug/Kg	N	6680	26100	26100	1	P	HSC	07/02/09 17:02	070209-1	881343
7782-49-2	Selenium UJ,I6a	1000	ug/kg	UN	502	1000	1000	2	MS	BAJ	07/06/09 02:50	090705-2	881360
7440-22-4	Silver	359	ug/Kg	J	104	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-23-5	Sodium U,I4d	88800	ug/Kg		7300	26100	26100	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-28-0	Thallium	201	ug/kg	U	60.2	201	201	2	MS	BAJ	07/06/09 02:50	090705-2	881360
7440-62-2	Vanadium	12000	ug/Kg		104	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-66-6	Zinc	21000	ug/Kg		344	1040	1040	1	P	HSC	07/02/09 17:02	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.501	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.521	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.546	g	30	mL	07/10/09	AXG2

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232506001 **BASIS:** As Received **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10381 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/04/09 02:42	090703-2	881357
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/04/09 02:42	090703-2	881357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/04/09 02:42	090703-2	881357
7440-70-2	Calcium	42.9	ug/L	J	30	100	100	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-47-3	Chromium	5	ug/L	U	2	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	06/30/09 19:06	063009-1	881354
7439-89-6	Iron	100	ug/L	U	25	100	100	1	P	HSC	06/30/09 19:06	063009-1	881354
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/04/09 02:42	090703-2	881357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	06/30/09 19:06	063009-1	881354
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/04/09 02:42	090703-2	881357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	ETL	07/02/09 11:00	070209W1-4	881396
7440-02-0	Nickel	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-09-7	Potassium	367	ug/L		50	150	150	1	P	HSC	06/30/09 19:06	063009-1	881354
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-23-5	Sodium	202	ug/L		45	150	150	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-28-0	Thallium UJ,I6a	1	ug/L	U	0.3	1	1	1	MS	PRB	07/04/09 15:19	090703-3	881357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-66-6	Zinc	10	ug/L	U	2	10	10	1	P	HSC	06/30/09 19:06	063009-1	881354

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881354	881353	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881357	881356	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881396	881395	SW846 7470A Prep	20	mL	20	mL	07/01/09	TXB3

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7/22/09

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232506002 **BASIS:** As Received **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10380 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/04/09 02:46	090703-2	881357
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/04/09 02:46	090703-2	881357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/04/09 02:46	090703-2	881357
7440-70-2	Calcium	34.8	ug/L	J	30	100	100	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-47-3	Chromium	5	ug/L	U	2	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	06/30/09 19:27	063009-1	881354
7439-89-6	Iron	100	ug/L	U	25	100	100	1	P	HSC	06/30/09 19:27	063009-1	881354
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/04/09 02:46	090703-2	881357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	06/30/09 19:27	063009-1	881354
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/04/09 02:46	090703-2	881357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	ETL	07/02/09 11:02	070209W1-4	881396
7440-02-0	Nickel	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-09-7	Potassium	355	ug/L		50	150	150	1	P	HSC	06/30/09 19:27	063009-1	881354
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-23-5	Sodium	253	ug/L		45	150	150	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-28-0	Thallium UJ,I6a	1	ug/L	U	0.3	1	1	1	MS	PRB	07/04/09 15:22	090703-3	881357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-66-6	Zinc	10	ug/L	U	2	10	10	1	P	HSC	06/30/09 19:27	063009-1	881354

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881354	881353	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881357	881356	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881396	881395	SW846 7470A Prep	20	mL	20	mL	07/01/09	TXB3

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DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2498 VALIDATION DATE: 7/22/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☒ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE): Hexavalent chromium

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

None.

Reviewed by: JEJ Level: I Date: 7/23/09

VALIDATOR'S SIGNATURE: DATE: 7/22/09

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 **General Chemistry Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☐	☒	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☐	☒	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 **General Chemistry Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10375	Project:	LANL01004
Sample ID:	232504001	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.34%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.244	0.812	mg/kg	2	RXG2 07/09/09	1318	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10376	Project:	LANL01004
Sample ID:	232504002	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.53%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.249	0.830	mg/kg	2	RXG2 07/09/09	1321	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10373	Project:	LANL01004
Sample ID:	232504003	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	11.4%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	J	0.157	0.132	0.439	mg/kg	1	RXG2 07/09/09	1323	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10367	Project:	LANL01004
Sample ID:	232504004	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	14.6%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	J	0.206	0.137	0.456	mg/kg	1	RXG2 07/09/09	1323	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10377	Project:	LANL01004
Sample ID:	232504005	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	6.54%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.128	0.428	mg/kg	1	RXG2 07/09/09	1324	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10370	Project:	LANL01004
Sample ID:	232504006	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.09%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.124	0.412	mg/kg	1	RXG2 07/09/09	1326	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10374	Project:	LANL01004
Sample ID:	232504007	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.61%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.124	0.412	mg/kg	1	RXG2 07/09/09	1326	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10371	Project:	LANL01004
Sample ID:	232504008	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	14.1%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.138	0.459	mg/kg	1	RXG2 07/09/09	1327	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10368	Project:	LANL01004
Sample ID:	232504009	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	5.47%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.124	0.414	mg/kg	1	RXG2 07/09/09	1327	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10369	Project:	LANL01004
Sample ID:	232504010	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	11.5%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.130	0.433	mg/kg	1	RXG2 07/09/09	1328	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10366	Project:	LANL01004
Sample ID:	232504011	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	8.4%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	J	0.154	0.129	0.430	mg/kg	1	RXG2 07/09/09	1330	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10372	Project:	LANL01004
Sample ID:	232504012	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	9.83%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.262	0.873	mg/kg	2	RXG2 07/09/09	1330	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10378	Project:	LANL01004
Sample ID:	232504013	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.27%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.122	0.406	mg/kg	1	RXG2 07/09/09	1330	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10379	Project:	LANL01004
Sample ID:	232504014	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.33%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.122	0.408	mg/kg	1	RXG2 07/09/09	1331	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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7/22/09

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2498 VALIDATION DATE: 7/23/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☒ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. All gamma spec sample results that were rejected by the laboratory due to interference, low abundance, or lack of a valid peak were qualified R,R5a. In the duplicate sample, the laboratory also rejected several results. No sample data were qualified as a result.
2. All reported sample results that were ≤ the MDCs were qualified U,R5.
3. It should be noted that an MS was not analyzed for tritium. However, an LCS was analyzed and passed and, thus, no sample data were qualified.
4. It should be noted that the matrix QC parent sample was from another LANL RN for both analyses. No sample data were qualified as a result.

Reviewed by: JEJ Level: I Date: 7/23/09

VALIDATOR'S SIGNATURE:	DATE: 7/23/09
Form 5119-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☐	☒	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☐	☒	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☐	☒	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☐	☒	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 **Rad Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10375	Project:	LANL01004
Sample ID:	232504001	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.34%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.0437	U,R5	0.360	+/-0.100	0.200	pCi/g		MXR1	07/07/09	0839	881220	2
Bismuth-211	UI	4.83	R,R5a	0.373	+/-0.302		pCi/g						
Bismuth-214		1.42		0.136	+/-0.106	0.200	pCi/g						
Cadmium-109	UI	3.92	R,R5a	1.59	+/-0.593		pCi/g						
Cerium-139	U	0.0127	U,R5	0.0599	+/-0.0172	0.050	pCi/g						
Cesium-134	UI	0.151	R,R5a	0.107	+/-0.0464	0.100	pCi/g						
Cesium-137	U	0.00424	U,R5	0.0777	+/-0.0233	0.100	pCi/g						
Cobalt-60	U	0.0519		0.0835	+/-0.0228	0.100	pCi/g						
Europium-152	U	-0.0319		0.183	+/-0.0707	0.200	pCi/g						
Lanthanum-140	U	-0.058		0.126	+/-0.0502		pCi/g						
Lead-212		2.08		0.109	+/-0.0986	0.100	pCi/g						
Lead-214		1.68		0.130	+/-0.114	0.100	pCi/g						
Mercury-203	U	0.0556	U,R5	0.0825	+/-0.0223	0.100	pCi/g						
Potassium-40		31.7		0.677	+/-1.42	1.00	pCi/g						
Radium-223	U	-0.941	U,R5	1.37	+/-0.420		pCi/g						
Radium-224	UI	5.39	R,R5a	1.24	+/-0.829		pCi/g						
Radium-226		1.42		0.136	+/-0.106		pCi/g						
Radium-228		2.25		0.229	+/-0.190	0.500	pCi/g						
Ruthenium-106	U	0.131	U,R5	0.619	+/-0.181	0.800	pCi/g						
Sodium-22	U	-0.0343		0.0766	+/-0.0251	0.080	pCi/g						
Strontium-85	U	0.062		0.0767	+/-0.0237		pCi/g						
Thallium-208		0.670		0.0675	+/-0.0511	0.080	pCi/g						
Thorium-227	U	0.135	U,R5	0.777	+/-0.229		pCi/g						
Thorium-231	U	-0.941		1.37	+/-0.420		pCi/g						
Thorium-234	U	0.683		3.10	+/-0.853	2.00	pCi/g						
Tin-113	U	-0.033		0.0843	+/-0.0254	0.100	pCi/g						
Uranium-235	U	-0.00157		0.427	+/-0.125	0.500	pCi/g						
Yttrium-88	U	0.00421		0.0553	+/-0.0163	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	74.9	U,R5	187	+/-56.6	250	pCi/L		KXK2	07/13/09	2310	883018	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10376	Project:	LANL01004
Sample ID:	232504002	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.53%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.00349	U,R5	0.310	+/-0.087	0.200	pCi/g		MXR1	07/07/09	0843	881220	2
Bismuth-211	UI	3.50	R,R5a	0.342	+/-0.260		pCi/g						
Bismuth-214		1.06		0.108	+/-0.0862	0.200	pCi/g						
Cadmium-109	UI	2.51	R,R5a	1.35	+/-0.462		pCi/g						
Cerium-139	U	-0.0135	U,R5	0.047	+/-0.0133	0.050	pCi/g						
Cesium-134	U	0.0853	U,R5	0.0887	+/-0.0262	0.100	pCi/g						
Cesium-137		0.131		0.0543	+/-0.0352	0.100	pCi/g						
Cobalt-60	U	-0.0346	U,R5	0.0611	+/-0.020	0.100	pCi/g						
Europium-152	U	-0.0416		0.154	+/-0.0502	0.200	pCi/g						
Lanthanum-140	U	-0.0593		0.119	+/-0.0403		pCi/g						
Lead-212		1.82		0.0853	+/-0.087	0.100	pCi/g						
Lead-214		1.22		0.119	+/-0.096	0.100	pCi/g						
Mercury-203	U	0.0512	U,R5	0.0684	+/-0.0208	0.100	pCi/g						
Potassium-40		26.4		0.464	+/-1.39	1.00	pCi/g						
Radium-223	U	0.131	U,R5	1.06	+/-0.347		pCi/g						
Radium-224	UI	4.79	R,R5a	0.970	+/-0.574		pCi/g						
Radium-226		1.06		0.108	+/-0.0862		pCi/g						
Radium-228		1.86		0.184	+/-0.195	0.500	pCi/g						
Ruthenium-106	U	-0.103	U,R5	0.459	+/-0.137	0.800	pCi/g						
Sodium-22	U	-0.0061	U,R5	0.0709	+/-0.0213	0.080	pCi/g						
Strontium-85	UI	0.0658	R,R5a	0.062	+/-0.0185		pCi/g						
Thallium-208		0.554		0.0548	+/-0.0434	0.080	pCi/g						
Thorium-227	U	-0.112	U,R5	0.632	+/-0.184		pCi/g						
Thorium-231	U	0.131		1.06	+/-0.347		pCi/g						
Thorium-234	U	0.141		2.56	+/-0.727	2.00	pCi/g						
Tin-113	U	-0.0234		0.068	+/-0.0209	0.100	pCi/g						
Uranium-235	U	0.0847		0.356	+/-0.104	0.500	pCi/g						
Yttrium-88	U	0.014		0.0575	+/-0.0164	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	94.6	U,R5	166	+/-51.1	250	pCi/L		KXK2	07/14/09	0114	883018	3

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Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10373	Project:	LANL01004
Sample ID:	232504003	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	11.4%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0207	U,R5	0.219	+/-0.069	0.200	pCi/g		MXR1	07/07/09	0848	881220	2
Bismuth-211	UI	4.08	R,R5a	0.321	+/-0.256		pCi/g						
Bismuth-214		1.42		0.105	+/-0.0935	0.200	pCi/g						
Cadmium-109	UI	3.91	R,R5a	1.19	+/-0.468		pCi/g						
Cerium-139	U	-0.0142	U,R5	0.0502	+/-0.015	0.050	pCi/g						
Cesium-134	UI	0.123	R,R5a	0.0882	+/-0.0357	0.100	pCi/g						
Cesium-137	U	-0.0206	U,R5	0.0593	+/-0.0187	0.100	pCi/g						
Cobalt-60	U	-0.000933		0.069	+/-0.0212	0.100	pCi/g						
Europium-152	U	-0.126		0.146	+/-0.0509	0.200	pCi/g						
Lanthanum-140	U	-0.0462		0.0981	+/-0.0328		pCi/g						
Lead-212		1.82		0.0916	+/-0.0898	0.100	pCi/g						
Lead-214		1.42		0.105	+/-0.0964	0.100	pCi/g						
Mercury-203	U	0.0165	U,R5	0.066	+/-0.0214	0.100	pCi/g						
Potassium-40		36.0		0.478	+/-1.50	1.00	pCi/g						
Radium-223	U	-0.24	U,R5	1.06	+/-0.359		pCi/g						
Radium-224	UI	4.72	R,R5a	1.04	+/-0.720		pCi/g						
Radium-226		1.42		0.105	+/-0.0935		pCi/g						
Radium-228		1.51		0.209	+/-0.163	0.500	pCi/g						
Ruthenium-106	U	0.251	U,R5	0.546	+/-0.156	0.800	pCi/g						
Sodium-22	U	-0.0144		0.071	+/-0.0223	0.080	pCi/g						
Strontium-85	U	0.0405		0.0591	+/-0.0186		pCi/g						
Thallium-208		0.590		0.056	+/-0.0464	0.080	pCi/g						
Thorium-227	U	-0.358	U,R5	0.598	+/-0.191		pCi/g						
Thorium-231	U	-0.24		1.06	+/-0.359		pCi/g						
Thorium-234	U	1.00		1.97	+/-0.789	2.00	pCi/g						
Tin-113	U	-0.0237		0.0684	+/-0.0207	0.100	pCi/g						
Uranium-235	U	0.258		0.369	+/-0.106	0.500	pCi/g						
Yttrium-88	U	-0.0294		0.0387	+/-0.0148	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	2.14	U,R5	180	+/-52.7	250	pCi/L		KXK2	07/14/09	0546	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10367	Project:	LANL01004
Sample ID:	232504004	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	14.6%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.211	U,R5	0.287	+/-0.0852	0.200	pCi/g		MXR1	07/07/09	0849	881220	2
Bismuth-211	UI	4.40	R,R5a	0.332	+/-0.287		pCi/g						
Bismuth-214		1.26		0.111	+/-0.100	0.200	pCi/g						
Cadmium-109	UI	2.10	R,R5a	1.61	+/-0.665		pCi/g						
Cerium-139	U	0.0245	U,R5	0.0506	+/-0.0147	0.050	pCi/g						
Cesium-134	UI	0.114	R,R5a	0.107	+/-0.0338	0.100	pCi/g						
Cesium-137	U	-0.0196	U,R5	0.0632	+/-0.0196	0.100	pCi/g						
Cobalt-60	U	-4.14E-05		0.0682	+/-0.0208	0.100	pCi/g						
Europium-152	U	-0.0277		0.160	+/-0.0552	0.200	pCi/g						
Lanthanum-140	U	-0.0685		0.119	+/-0.0405		pCi/g						
Lead-212		1.77		0.0907	+/-0.0845	0.100	pCi/g						
Lead-214		1.53		0.116	+/-0.108	0.100	pCi/g						
Mercury-203	U	-0.0132	U,R5	0.0673	+/-0.0203	0.100	pCi/g						
Potassium-40		38.2		0.449	+/-1.68	1.00	pCi/g						
Radium-223	U	-0.827	U,R5	1.04	+/-0.390		pCi/g						
Radium-224	UI	4.95	R,R5a	1.03	+/-0.763		pCi/g						
Radium-226		1.26		0.111	+/-0.100		pCi/g						
Radium-228		1.59		0.207	+/-0.196	0.500	pCi/g						
Ruthenium-106	U	0.0724	U,R5	0.561	+/-0.163	0.800	pCi/g						
Sodium-22	U	-0.00962		0.088	+/-0.0271	0.080	pCi/g						
Strontium-85	U	0.0602		0.0728	+/-0.0231		pCi/g						
Thallium-208		0.542		0.0647	+/-0.0479	0.080	pCi/g						
Thorium-227	U	0.129	U,R5	0.667	+/-0.191		pCi/g						
Thorium-231	U	-0.827		1.04	+/-0.390		pCi/g						
Thorium-234	U	0.788		2.28	+/-0.989	2.00	pCi/g						
Tin-113	U	-0.0491		0.069	+/-0.0224	0.100	pCi/g						
Uranium-235	U	0.072		0.370	+/-0.110	0.500	pCi/g						
Yttrium-88	U	0.0183		0.0625	+/-0.0173	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	110	U,R5	233	+/-70.7	250	pCi/L		KXK2	07/14/09	0754	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10377	Project:	LANL01004
Sample ID:	232504005	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	6.54%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0254	U,R5	0.114	+/-0.0344	0.200	pCi/g		MXR1	07/07/09	0850	881220	2
Bismuth-211	UI	4.83	R,R5a	0.435	+/-0.340		pCi/g						
Bismuth-214		1.43		0.155	+/-0.132	0.200	pCi/g						
Cadmium-109	UI	3.93	R,R5a	1.13	+/-0.467		pCi/g						
Cerium-139	U	-0.0083	U,R5	0.0567	+/-0.0171	0.050	pCi/g						
Cesium-134	U	0.111		0.119	+/-0.032	0.100	pCi/g						
Cesium-137	U	-0.0424		0.0868	+/-0.0276	0.100	pCi/g						
Cobalt-60	U	0.0462		0.0939	+/-0.0269	0.100	pCi/g						
Europium-152	U	-0.13		0.188	+/-0.0688	0.200	pCi/g						
Lanthanum-140	U	-0.0334		0.174	+/-0.0555		pCi/g						
Lead-212		2.15		0.106	+/-0.117	0.100	pCi/g						
Lead-214		1.68		0.152	+/-0.126	0.100	pCi/g						
Mercury-203	UI	0.0975	R,R5a	0.0782	+/-0.0301	0.100	pCi/g						
Potassium-40		33.4		0.678	+/-1.42	1.00	pCi/g						
Radium-223	U	-0.297	U,R5	1.31	+/-0.453		pCi/g						
Radium-224	UI	6.07	R,R5a	1.20	+/-0.744		pCi/g						
Radium-226		1.43		0.155	+/-0.132		pCi/g						
Radium-228		2.07		0.316	+/-0.237	0.500	pCi/g						
Ruthenium-106	U	-0.0439	U,R5	0.686	+/-0.207	0.800	pCi/g						
Sodium-22	U	0.00864	U,R5	0.102	+/-0.0302	0.080	pCi/g						
Strontium-85	UI	0.148	R,R5a	0.0941	+/-0.0273		pCi/g						
Thallium-208		0.669		0.0834	+/-0.0534	0.080	pCi/g						
Thorium-227	U	-0.0669	U,R5	0.759	+/-0.221		pCi/g						
Thorium-231	U	-0.297	U,R5	1.31	+/-0.453		pCi/g						
Thorium-234		1.98		1.15	+/-0.575	2.00	pCi/g						
Tin-113	U	0.0136	U,R5	0.0919	+/-0.0274	0.100	pCi/g						
Uranium-235	U	0.0871		0.420	+/-0.124	0.500	pCi/g						
Yttrium-88	U	-0.00785		0.0654	+/-0.0204	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	44.6	U,R5	241	+/-70.4	250	pCi/L		KXK2	07/14/09	0841	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10370	Project:	LANL01004
Sample ID:	232504006	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.09%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0654	U,R5	0.392	+/-0.123	0.200	pCi/g		MXR1	07/07/09 0850	881220	2
Bismuth-211	UI	2.33	R,R5a	0.330	+/-0.212		pCi/g					
Bismuth-214		0.916		0.0911	+/-0.0791	0.200	pCi/g					
Cadmium-109	U	0.363	U,R5	1.51	+/-0.687		pCi/g					
Cerium-139	U	-0.00452	U,R5	0.0466	+/-0.0135	0.050	pCi/g					
Cesium-134	UI	0.121	R,R5a	0.0844	+/-0.0272	0.100	pCi/g					
Cesium-137	U	-0.00737	U,R5	0.0554	+/-0.017	0.100	pCi/g					
Cobalt-60	U	0.018		0.0583	+/-0.0166	0.100	pCi/g					
Europium-152	U	-0.00128		0.153	+/-0.048	0.200	pCi/g					
Lanthanum-140	U	-0.00394		0.108	+/-0.0325		pCi/g					
Lead-212		0.898		0.0971	+/-0.0614	0.100	pCi/g					
Lead-214		0.811		0.107	+/-0.0768	0.100	pCi/g					
Mercury-203	U	0.0559	U,R5	0.0709	+/-0.0188	0.100	pCi/g					
Potassium-40		24.0		0.474	+/-1.18	1.00	pCi/g					
Radium-223	U	0.413	U,R5	1.09	+/-0.340		pCi/g					
Radium-224	UI	2.95	R,R5a	1.10	+/-0.694		pCi/g					
Radium-226		0.916		0.0911	+/-0.0791		pCi/g					
Radium-228		1.05		0.176	+/-0.152	0.500	pCi/g					
Ruthenium-106	U	-0.0104	U,R5	0.494	+/-0.148	0.800	pCi/g					
Sodium-22	U	-0.00435	U,R5	0.0639	+/-0.0197	0.080	pCi/g					
Strontium-85	UI	0.0769	R,R5a	0.067	+/-0.0195		pCi/g					
Thallium-208		0.325		0.0531	+/-0.037	0.080	pCi/g					
Thorium-227	U	0.187	U,R5	0.659	+/-0.181		pCi/g					
Thorium-231	U	0.413		1.09	+/-0.340		pCi/g					
Thorium-234	U	0.690		3.07	+/-0.924	2.00	pCi/g					
Tin-113	U	-0.0125		0.0717	+/-0.021	0.100	pCi/g					
Uranium-235	U	0.141		0.359	+/-0.102	0.500	pCi/g					
Yttrium-88	U	0.0116		0.043	+/-0.0117	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	-38.8	U,R5	233	+/-65.1	250	pCi/L		KXK2	07/14/09 0928	883018	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10374	Project:	LANL01004
Sample ID:	232504007	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.61%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0248	U,R5	0.252	+/-0.069	0.200	pCi/g		MXR1	07/07/09 0851	881220	2
Bismuth-211	UI	2.64	R,R5a	0.257	+/-0.180		pCi/g					
Bismuth-214		0.776		0.0903	+/-0.0632	0.200	pCi/g					
Cadmium-109	UI	1.94	R,R5a	1.05	+/-0.308		pCi/g					
Cerium-139	U	0.0132	U,R5	0.0422	+/-0.0119	0.050	pCi/g					
Cesium-134	U	0.0584	U,R5	0.071	+/-0.0188	0.100	pCi/g					
Cesium-137		0.0747		0.0584	+/-0.0226	0.100	pCi/g					
Cobalt-60	U	-0.0123	U,R5	0.0495	+/-0.0158	0.100	pCi/g					
Europium-152	U	0.0458		0.139	+/-0.044	0.200	pCi/g					
Lanthanum-140	U	0.0438		0.0884	+/-0.0251		pCi/g					
Lead-212		1.25		0.0751	+/-0.0601	0.100	pCi/g					
Lead-214		0.917		0.0844	+/-0.0671	0.100	pCi/g					
Mercury-203	U	0.00812	U,R5	0.0596	+/-0.0168	0.100	pCi/g					
Potassium-40		25.5		0.511	+/-1.30	1.00	pCi/g					
Radium-223	U	-0.21	U,R5	0.832	+/-0.280		pCi/g					
Radium-224	UI	3.58	R,R5a	0.854	+/-0.502		pCi/g					
Radium-226		0.776		0.0903	+/-0.0632		pCi/g					
Radium-228		1.09		0.168	+/-0.129	0.500	pCi/g					
Ruthenium-106	U	-0.0688	U,R5	0.439	+/-0.133	0.800	pCi/g					
Sodium-22	U	-0.0244	U,R5	0.052	+/-0.0171	0.080	pCi/g					
Strontium-85	UI	0.0739	R,R5a	0.0535	+/-0.0149		pCi/g					
Thallium-208		0.334		0.0474	+/-0.0334	0.080	pCi/g					
Thorium-227	U	0.0231	U,R5	0.536	+/-0.158		pCi/g					
Thorium-231	U	-0.21		0.832	+/-0.280		pCi/g					
Thorium-234	U	0.429		2.14	+/-0.571	2.00	pCi/g					
Tin-113	U	0.00599		0.0623	+/-0.0178	0.100	pCi/g					
Uranium-235	U	0.0482		0.315	+/-0.0898	0.500	pCi/g					
Yttrium-88	U	-0.0208		0.0339	+/-0.0125	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	78.1	U,R5	234	+/-69.8	250	pCi/L		KXK2	07/14/09 1015	883018	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10371	Project:	LANL01004
Sample ID:	232504008	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	14.1%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0562	U,R5	0.121	+/-0.0392	0.200	pCi/g		MXR1	07/07/09	0851	881220	2
Bismuth-211	UI	4.13	R,R5a	0.423	+/-0.283		pCi/g						
Bismuth-214		1.25		0.153	+/-0.118	0.200	pCi/g						
Cadmium-109	UI	2.31	R,R5a	1.31	+/-0.457		pCi/g						
Cerium-139	U	0.00798	U,R5	0.0546	+/-0.0155	0.050	pCi/g						
Cesium-134	U	0.119		0.132	+/-0.0352	0.100	pCi/g						
Cesium-137	U	-0.0083		0.0919	+/-0.0274	0.100	pCi/g						
Cobalt-60	U	-0.0415		0.0877	+/-0.0299	0.100	pCi/g						
Europium-152	U	-0.0612		0.195	+/-0.0693	0.200	pCi/g						
Lanthanum-140	U	0.0191		0.192	+/-0.0562		pCi/g						
Lead-212		1.87		0.104	+/-0.0955	0.100	pCi/g						
Lead-214		1.44		0.147	+/-0.105	0.100	pCi/g						
Mercury-203	U	0.0386	U,R5	0.0805	+/-0.0259	0.100	pCi/g						
Potassium-40		30.6		0.893	+/-1.50	1.00	pCi/g						
Radium-223	U	0.584	U,R5	1.38	+/-0.451		pCi/g						
Radium-224	UI	5.86	R,R5a	1.18	+/-0.737		pCi/g						
Radium-226		1.25		0.153	+/-0.118		pCi/g						
Radium-228		2.03		0.304	+/-0.224	0.500	pCi/g						
Ruthenium-106	U	-0.0569	U,R5	0.674	+/-0.217	0.800	pCi/g						
Sodium-22	U	-0.0616	U,R5	0.103	+/-0.0351	0.080	pCi/g						
Strontium-85	UI	0.142	R,R5a	0.0984	+/-0.0258		pCi/g						
Thallium-208		0.614		0.0736	+/-0.0541	0.080	pCi/g						
Thorium-227	U	0.290	U,R5	0.794	+/-0.227		pCi/g						
Thorium-231	U	0.584		1.38	+/-0.451		pCi/g						
Thorium-234	U	0.892		1.12	+/-0.467	2.00	pCi/g						
Tin-113	U	-0.071		0.086	+/-0.0281	0.100	pCi/g						
Uranium-235	U	-0.0532		0.383	+/-0.118	0.500	pCi/g						
Yttrium-88	U	0.000923		0.091	+/-0.0275	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	53.9	U,R5	233	+/-68.5	250	pCi/L		KXK2	07/14/09	1102	883018	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10368
Sample ID: 232504009
Matrix: R
Collect Date: 24-JUN-09
Receive Date: 27-JUN-09
Collector: Client
Moisture: 5.47%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0227	U,R5	0.269	+/-0.0835	0.200	pCi/g		MXR1	07/07/09 0912	881220	2
Bismuth-211	UI	3.32	R,R5a	0.257	+/-0.186		pCi/g					
Bismuth-214		0.972		0.0839	+/-0.0704	0.200	pCi/g					
Cadmium-109	UI	2.30	R,R5a	1.11	+/-0.462		pCi/g					
Cerium-139	U	0.0027	U,R5	0.0398	+/-0.0111	0.050	pCi/g					
Cesium-134	UI	0.130	R,R5a	0.0712	+/-0.0238	0.100	pCi/g					
Cesium-137	U	-0.011	U,R5	0.047	+/-0.014	0.100	pCi/g					
Cobalt-60	U	0.00072		0.0428	+/-0.013	0.100	pCi/g					
Europium-152	U	-0.026		0.114	+/-0.0403	0.200	pCi/g					
Lanthanum-140	U	-0.0243		0.0706	+/-0.0273		pCi/g					
Lead-212		1.23		0.0888	+/-0.0642	0.100	pCi/g					
Lead-214		1.16		0.0893	+/-0.0713	0.100	pCi/g					
Mercury-203	UI	0.0615	R,R5a	0.0502	+/-0.0291	0.100	pCi/g					
Potassium-40		29.4		0.354	+/-1.29	1.00	pCi/g					
Radium-223	U	-0.229	U,R5	0.814	+/-0.287		pCi/g					
Radium-224	UI	1.95	R,R5a	1.15	+/-0.329		pCi/g					
Radium-226		0.972		0.0839	+/-0.0704		pCi/g					
Radium-228		1.42		0.172	+/-0.154	0.500	pCi/g					
Ruthenium-106	U	0.0869	U,R5	0.417	+/-0.123	0.800	pCi/g					
Sodium-22	U	0.00331	U,R5	0.0545	+/-0.0163	0.080	pCi/g					
Strontium-85	UI	0.120	R,R5a	0.0575	+/-0.0162		pCi/g					
Thallium-208		0.451		0.0402	+/-0.0355	0.080	pCi/g					
Thorium-227	U	-0.108	U,R5	0.490	+/-0.146		pCi/g					
Thorium-231	U	-0.229	U,R5	0.814	+/-0.287		pCi/g					
Thorium-234	UI	2.17	R,R5a	2.12	+/-0.965	2.00	pCi/g					
Tin-113	U	-0.0136	U,R5	0.0552	+/-0.0162	0.100	pCi/g					
Uranium-235	U	0.0894		0.304	+/-0.0898	0.500	pCi/g					
Yttrium-88	U	-0.00881		0.0336	+/-0.011	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	96.7	U,R5	232	+/-70.0	250	pCi/L		KXK2	07/14/09 1149	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10369	Project:	LANL01004
Sample ID:	232504010	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	11.5%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0293	U,R5	0.221	+/-0.0733	0.200	pCi/g		MXR1	07/07/09 0912	881220	2
Bismuth-211	UI	4.55	R,R5a	0.307	+/-0.236		pCi/g					
Bismuth-214		1.33		0.0974	+/-0.0908	0.200	pCi/g					
Cadmium-109	UI	4.42	R,R5a	1.23	+/-0.477		pCi/g					
Cerium-139	U	-0.0311	U,R5	0.0446	+/-0.0138	0.050	pCi/g					
Cesium-134	UI	0.131	R,R5a	0.0757	+/-0.0339	0.100	pCi/g					
Cesium-137	U	0.0272	U,R5	0.0571	+/-0.0165	0.100	pCi/g					
Cobalt-60	U	-0.00438		0.054	+/-0.0164	0.100	pCi/g					
Europium-152	U	-0.0134		0.139	+/-0.0553	0.200	pCi/g					
Lanthanum-140	U	-0.0881		0.0998	+/-0.0353		pCi/g					
Lead-212		1.93		0.084	+/-0.0858	0.100	pCi/g					
Lead-214		1.58		0.102	+/-0.092	0.100	pCi/g					
Mercury-203	U	0.0532	U,R5	0.0587	+/-0.0277	0.100	pCi/g					
Potassium-40		38.0		0.445	+/-1.54	1.00	pCi/g					
Radium-223	U	0.103	U,R5	0.962	+/-0.325		pCi/g					
Radium-224	UI	5.45	R,R5a	0.954	+/-0.529		pCi/g					
Radium-226		1.33		0.0974	+/-0.0908		pCi/g					
Radium-228		2.01		0.194	+/-0.176	0.500	pCi/g					
Ruthenium-106	U	0.0219	U,R5	0.452	+/-0.135	0.800	pCi/g					
Sodium-22	U	-0.00182	U,R5	0.0673	+/-0.0202	0.080	pCi/g					
Strontium-85	UI	0.182	R,R5a	0.0717	+/-0.0204		pCi/g					
Thallium-208		0.567		0.0495	+/-0.0454	0.080	pCi/g					
Thorium-227	U	0.0553	U,R5	0.585	+/-0.169		pCi/g					
Thorium-231	U	0.103		0.962	+/-0.325		pCi/g					
Thorium-234	U	1.74		1.84	+/-0.803	2.00	pCi/g					
Tin-113	U	-0.0103		0.063	+/-0.0192	0.100	pCi/g					
Uranium-235	U	0.0608		0.351	+/-0.103	0.500	pCi/g					
Yttrium-88	U	0.0035		0.0354	+/-0.0104	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		366		234	+/-82.9	250	pCi/L		KXK2	07/14/09 1236	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10366	Project:	LANL01004
Sample ID:	232504011	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	8.4%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.0475	U,R5	0.237	+/-0.0749	0.200	pCi/g		MXR1	07/07/09	0913	881220	2
Bismuth-211	UI	3.48	R,R5a	0.298	+/-0.245		pCi/g						
Bismuth-214		1.06		0.123	+/-0.0886	0.200	pCi/g						
Cadmium-109	UI	3.12	R,R5a	1.14	+/-0.461		pCi/g						
Cerium-139	U	-0.0221	U,R5	0.0415	+/-0.0124	0.050	pCi/g						
Cesium-134	U	0.0301		0.0893	+/-0.0259	0.100	pCi/g						
Cesium-137	U	0.00184		0.0649	+/-0.0191	0.100	pCi/g						
Cobalt-60	U	0.042		0.0767	+/-0.0207	0.100	pCi/g						
Europium-152	U	0.0204		0.150	+/-0.0427	0.200	pCi/g						
Lanthanum-140	U	-0.0231		0.131	+/-0.0417		pCi/g						
Lead-212		1.54		0.0805	+/-0.0756	0.100	pCi/g						
Lead-214		1.21		0.104	+/-0.091	0.100	pCi/g						
Mercury-203	UI	0.0796	R,R5a	0.0593	+/-0.0262	0.100	pCi/g						
Potassium-40		29.1		0.622	+/-1.45	1.00	pCi/g						
Radium-223	U	0.071	U,R5	1.01	+/-0.327		pCi/g						
Radium-224	UI	4.84	R,R5a	0.917	+/-0.550		pCi/g						
Radium-226		1.06		0.123	+/-0.0886		pCi/g						
Radium-228		1.70		0.232	+/-0.170	0.500	pCi/g						
Ruthenium-106	U	-0.195	U,R5	0.496	+/-0.153	0.800	pCi/g						
Sodium-22	U	-0.0309	U,R5	0.0826	+/-0.0269	0.080	pCi/g						
Strontium-85	UI	0.0683	R,R5a	0.066	+/-0.0197		pCi/g						
Thallium-208		0.470		0.0627	+/-0.0447	0.080	pCi/g						
Thorium-227	U	-0.0793	U,R5	0.575	+/-0.175		pCi/g						
Thorium-231	U	0.071		1.01	+/-0.327		pCi/g						
Thorium-234	U	1.48		2.01	+/-1.06	2.00	pCi/g						
Tin-113	U	-0.0152		0.068	+/-0.0204	0.100	pCi/g						
Uranium-235	U	0.140		0.325	+/-0.0898	0.500	pCi/g						
Yttrium-88	U	0.00986		0.0597	+/-0.0171	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	101	U,R5	232	+/-70.1	250	pCi/L		KXK2	07/14/09	1323	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10372	Project:	LANL01004
Sample ID:	232504012	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	9.83%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0336	U,R5	0.277	+/-0.0839	0.200	pCi/g		MXR1	07/07/09 0943	881220	2
Bismuth-211	UI	3.61	R,R5a	0.286	+/-0.248		pCi/g					
Bismuth-214		1.04		0.0989	+/-0.0857	0.200	pCi/g					
Cadmium-109	UI	1.87	R,R5a	1.48	+/-0.536		pCi/g					
Cerium-139	U	0.00426	U,R5	0.0443	+/-0.0127	0.050	pCi/g					
Cesium-134	U	0.0341	U,R5	0.0816	+/-0.0307	0.100	pCi/g					
Cesium-137		0.453		0.0583	+/-0.0356	0.100	pCi/g					
Cobalt-60	U	0.00855	U,R5	0.0657	+/-0.0197	0.100	pCi/g					
Europium-152	U	0.00283		0.140	+/-0.0428	0.200	pCi/g					
Lanthanum-140	U	-0.0769		0.103	+/-0.0378		pCi/g					
Lead-212		1.48		0.0859	+/-0.075	0.100	pCi/g					
Lead-214		1.26		0.0995	+/-0.0922	0.100	pCi/g					
Mercury-203	U	0.012	U,R5	0.0627	+/-0.0186	0.100	pCi/g					
Potassium-40		27.3		0.556	+/-1.31	1.00	pCi/g					
Radium-223	U	-0.332	U,R5	0.965	+/-0.348		pCi/g					
Radium-224	UI	3.99	R,R5a	0.977	+/-0.622		pCi/g					
Radium-226		1.04		0.0989	+/-0.0857		pCi/g					
Radium-228		1.76		0.183	+/-0.163	0.500	pCi/g					
Ruthenium-106	U	0.234	U,R5	0.533	+/-0.152	0.800	pCi/g					
Sodium-22	U	0.041		0.0652	+/-0.0176	0.080	pCi/g					
Strontium-85	U	0.00525		0.0579	+/-0.0193		pCi/g					
Thallium-208		0.440		0.0546	+/-0.046	0.080	pCi/g					
Thorium-227	U	0.0507	U,R5	0.553	+/-0.164		pCi/g					
Thorium-231	U	-0.332		0.965	+/-0.348		pCi/g					
Thorium-234	U	0.964		2.15	+/-0.911	2.00	pCi/g					
Tin-113	U	-0.015		0.0621	+/-0.0184	0.100	pCi/g					
Uranium-235	U	0.0396		0.333	+/-0.0967	0.500	pCi/g					
Yttrium-88	U	0.00627		0.0376	+/-0.0106	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	53.7	U,R5	232	+/-68.2	250	pCi/L		KXK2	07/14/09 1410	883018	3

LMF
7/23/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10378	Project:	LANL01004
Sample ID:	232504013	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.27%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.132	U,R5	0.229	+/-0.0706	0.200	pCi/g		MXR1	07/07/09 0944	881220	2
Bismuth-211	UI	5.01	R,R5a	0.323	+/-0.275		pCi/g					
Bismuth-214		1.61		0.110	+/-0.108	0.200	pCi/g					
Cadmium-109	UI	3.69	R,R5a	1.36	+/-0.478		pCi/g					
Cerium-139	U	-0.00595	U,R5	0.051	+/-0.015	0.050	pCi/g					
Cesium-134	UI	0.130	R,R5a	0.0932	+/-0.0292	0.100	pCi/g					
Cesium-137	U	0.000704	U,R5	0.0704	+/-0.0212	0.100	pCi/g					
Cobalt-60	U	-0.0314		0.0576	+/-0.0193	0.100	pCi/g					
Europium-152	U	-0.021		0.158	+/-0.0675	0.200	pCi/g					
Lanthanum-140	U	-0.0705		0.117	+/-0.0408		pCi/g					
Lead-212		2.15		0.0917	+/-0.0976	0.100	pCi/g					
Lead-214		1.74		0.113	+/-0.106	0.100	pCi/g					
Mercury-203	U	0.0376	U,R5	0.0697	+/-0.0218	0.100	pCi/g					
Potassium-40		33.7		0.549	+/-1.49	1.00	pCi/g					
Radium-223	U	-0.455	U,R5	1.04	+/-0.359		pCi/g					
Radium-224	UI	5.73	R,R5a	1.04	+/-0.625		pCi/g					
Radium-226		1.61		0.110	+/-0.108		pCi/g					
Radium-228		2.31		0.217	+/-0.218	0.500	pCi/g					
Ruthenium-106	U	0.215	U,R5	0.566	+/-0.163	0.800	pCi/g					
Sodium-22	U	0.012		0.0743	+/-0.0219	0.080	pCi/g					
Strontium-85	U	0.0329		0.0628	+/-0.0202		pCi/g					
Thallium-208		0.647		0.0584	+/-0.0482	0.080	pCi/g					
Thorium-227	U	0.163	U,R5	0.649	+/-0.182		pCi/g					
Thorium-231	U	-0.455	U,R5	1.04	+/-0.359		pCi/g					
Thorium-234		2.37		1.90	+/-0.773	2.00	pCi/g					
Tin-113	U	0.0371	U,R5	0.0776	+/-0.0217	0.100	pCi/g					
Uranium-235	U	0.129		0.387	+/-0.112	0.500	pCi/g					
Yttrium-88	U	0.00457		0.0603	+/-0.0178	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	102	U,R5	234	+/-70.5	250	pCi/L		KXK2	07/14/09 1457	883018	3

LMF
7/23/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10379	Project:	LANL01004
Sample ID:	232504014	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.33%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.00368	U,R5	0.286	+/-0.0859	0.200	pCi/g		MXR1	07/07/09 0947	881220	2
Bismuth-211	UI	2.18	R,R5a	0.246	+/-0.185		pCi/g					
Bismuth-214		0.808		0.0771	+/-0.0633	0.200	pCi/g					
Cadmium-109	UI	1.35	R,R5a	1.19	+/-0.412		pCi/g					
Cerium-139	U	-0.00146	U,R5	0.037	+/-0.0108	0.050	pCi/g					
Cesium-134	U	0.0295		0.0629	+/-0.0173	0.100	pCi/g					
Cesium-137	U	-0.0046		0.046	+/-0.0135	0.100	pCi/g					
Cobalt-60	U	0.0167		0.0555	+/-0.0156	0.100	pCi/g					
Europium-152	U	0.00808		0.123	+/-0.0399	0.200	pCi/g					
Lanthanum-140	U	-0.0275		0.0956	+/-0.0312		pCi/g					
Lead-212		0.770		0.0672	+/-0.0472	0.100	pCi/g					
Lead-214		0.757		0.0857	+/-0.0674	0.100	pCi/g					
Mercury-203	U	0.0222	U,R5	0.052	+/-0.0143	0.100	pCi/g					
Potassium-40		24.5		0.420	+/-1.27	1.00	pCi/g					
Radium-223	U	0.0485	U,R5	0.785	+/-0.252		pCi/g					
Radium-224	UI	3.44	R,R5a	0.765	+/-0.410		pCi/g					
Radium-226		0.808		0.0771	+/-0.0633		pCi/g					
Radium-228		0.885		0.150	+/-0.118	0.500	pCi/g					
Ruthenium-106	U	0.124	U,R5	0.384	+/-0.105	0.800	pCi/g					
Sodium-22	U	0.0284		0.062	+/-0.017	0.080	pCi/g					
Strontium-85	U	0.0355		0.0477	+/-0.0145		pCi/g					
Thallium-208		0.281		0.0428	+/-0.0253	0.080	pCi/g					
Thorium-227	U	-0.00911	U,R5	0.473	+/-0.132		pCi/g					
Thorium-231	U	0.0485		0.785	+/-0.252		pCi/g					
Thorium-234	U	1.99		2.24	+/-0.886	2.00	pCi/g					
Tin-113	U	-0.0339		0.048	+/-0.0152	0.100	pCi/g					
Uranium-235	U	-0.0049		0.265	+/-0.0773	0.500	pCi/g					
Yttrium-88	U	-0.00401		0.0384	+/-0.0123	0.100	pCi/g					
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	215	U,R5	233	+/-75.3	250	pCi/L		KXK2	07/14/09 1544	883018	3

LMF
7/23/09

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2498C

REQUEST NUMBER: 09-2498

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC,

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232504, 232506 '/.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10375	1	POLY	7196A	Ice	R
CAMO-09-10375	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10375	1	POLY	H3	Ice	R
CAMO-09-10376	1	POLY	7196A	Ice	R
CAMO-09-10376	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10376	1	POLY	H3	Ice	R
CAMO-09-10373	1	POLY	7196A	Ice	R
CAMO-09-10373	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10373	1	POLY	H3	Ice	R
CAMO-09-10367	1	POLY	7196A	Ice	R
CAMO-09-10367	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10367	1	POLY	H3	Ice	R
CAMO-09-10377	1	POLY	7196A	Ice	R
CAMO-09-10377	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10377	1	POLY	H3	Ice	R
CAMO-09-10370	1	POLY	7196A	Ice	R
CAMO-09-10370	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10370	1	POLY	H3	Ice	R
CAMO-09-10374	1	POLY	7196A	Ice	R
CAMO-09-10374	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10374	1	POLY	H3	Ice	R
CAMO-09-10371	1	POLY	7196A	Ice	R
CAMO-09-10371	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10371	1	POLY	H3	Ice	R
CAMO-09-10368	1	POLY	7196A	Ice	R
CAMO-09-10368	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10368	1	POLY	H3	Ice	R
CAMO-09-10369	1	POLY	7196A	Ice	R
CAMO-09-10369	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10369	1	POLY	H3	Ice	R
CAMO-09-10366	1	POLY	7196A	Ice	R
CAMO-09-10366	1	POLY	GS+TAL Metals	Ice	R

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2498C

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10366	1	POLY	H3	Ice	R
CAMO-09-10372	1	POLY	7196A	Ice	R
CAMO-09-10372	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10372	1	POLY	H3	Ice	R
CAMO-09-10378	1	POLY	7196A	Ice	R
CAMO-09-10378	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10378	1	POLY	H3	Ice	R
CAMO-09-10379	1	POLY	7196A	Ice	R
CAMO-09-10379	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10379	1	POLY	H3	Ice	R
CAMO-09-10381	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10380	1	POLY	METALS-GEL	Nitric Acid	W

Relinquished By:		Date	Time	Received By:		Date	Time
		6/26/09	3:00	Patricia Dent	P. Dent	6/27/09	09:05
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

Friday, June 26, 2009

REQUEST NUMBER: 09-2498

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2498

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	
		1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2498

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	
	SW-846:6010B	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	
		1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	
		1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	
		1	CAMO-09-10380	W	6/24/2009	
		1	CAMO-09-10381	W	6/24/2009	
	SW-846:6020	1	CAMO-09-10380	W	6/24/2009	
		1	CAMO-09-10381	W	6/24/2009	
	SW-846:7196A	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2498

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7196A	1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	
		1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2498

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

June 29, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Orders: 232504 232506
SDG: 09-2498

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on June 27, 2009, and analyzed for General Chemistry, Metals and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2498
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232504 and 232506
SDG: 09-2498

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General Chemistry Analysis **805**
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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232504 and 232506
SDG # : 09-2498

June 29, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on June 27, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232504001	CAMO-09-10375
232504002	CAMO-09-10376
232504003	CAMO-09-10373
232504004	CAMO-09-10367
232504005	CAMO-09-10377
232504006	CAMO-09-10370
232504007	CAMO-09-10374
232504008	CAMO-09-10371
232504009	CAMO-09-10368
232504010	CAMO-09-10369
232504011	CAMO-09-10366
232504012	CAMO-09-10372
232504013	CAMO-09-10378
232504014	CAMO-09-10379
232506001	CAMO-09-10381
232506002	CAMO-09-10380

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry, Metals and Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for

Valerie Davis

Project Manager

List of current GEL Certifications as of 29 June 2009

State	Certification
Arizona	AZ0668
Arkansas	88–0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH–0169
Dept. of Navy	NFESC 413
EPA Region 5	WG–15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C–SC–01
Kansas – NELAP	E–10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M–SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68–00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235–07B–TX
U.S. Dept. of Agriculture	S–52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2498C

REQUEST NUMBER: 09-2498

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232504, 232506 °/.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10375	1	POLY	7196A	Ice	R
CAMO-09-10375	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10375	1	POLY	H3	Ice	R
CAMO-09-10376	1	POLY	7196A	Ice	R
CAMO-09-10376	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10376	1	POLY	H3	Ice	R
CAMO-09-10373	1	POLY	7196A	Ice	R
CAMO-09-10373	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10373	1	POLY	H3	Ice	R
CAMO-09-10367	1	POLY	7196A	Ice	R
CAMO-09-10367	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10367	1	POLY	H3	Ice	R
CAMO-09-10377	1	POLY	7196A	Ice	R
CAMO-09-10377	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10377	1	POLY	H3	Ice	R
CAMO-09-10370	1	POLY	7196A	Ice	R
CAMO-09-10370	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10370	1	POLY	H3	Ice	R
CAMO-09-10374	1	POLY	7196A	Ice	R
CAMO-09-10374	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10374	1	POLY	H3	Ice	R
CAMO-09-10371	1	POLY	7196A	Ice	R
CAMO-09-10371	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10371	1	POLY	H3	Ice	R
CAMO-09-10368	1	POLY	7196A	Ice	R
CAMO-09-10368	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10368	1	POLY	H3	Ice	R
CAMO-09-10369	1	POLY	7196A	Ice	R
CAMO-09-10369	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10369	1	POLY	H3	Ice	R
CAMO-09-10366	1	POLY	7196A	Ice	R
CAMO-09-10366	1	POLY	GS+TAL Metals	Ice	R

Friday, June 26, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2498C

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10366	1	POLY	H3	Ice	R
CAMO-09-10372	1	POLY	7196A	Ice	R
CAMO-09-10372	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10372	1	POLY	H3	Ice	R
CAMO-09-10378	1	POLY	7196A	Ice	R
CAMO-09-10378	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10378	1	POLY	H3	Ice	R
CAMO-09-10379	1	POLY	7196A	Ice	R
CAMO-09-10379	1	POLY	GS+TAL Metals	Ice	R
CAMO-09-10379	1	POLY	H3	Ice	R
CAMO-09-10381	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10380	1	POLY	METALS-GEL	Nitric Acid	W

Relinquished By:		Date	Time	Received By:		Date	Time
		6/26/09	3:00	Patricia Dent	P. Dent	6/27/09	09:05
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Friday, June 26, 2009

REQUEST NUMBER: 09-2498

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2498

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/26/2009

TURNAROUND/REPORT DUE: 7/11/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	
		1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2498

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	
	SW-846:6010B	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	
		1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	
		1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	
		1	CAMO-09-10380	W	6/24/2009	
		1	CAMO-09-10381	W	6/24/2009	
	SW-846:6020	1	CAMO-09-10380	W	6/24/2009	
		1	CAMO-09-10381	W	6/24/2009	
	SW-846:7196A	1	CAMO-09-10366	R	6/24/2009	
		1	CAMO-09-10367	R	6/24/2009	
		1	CAMO-09-10368	R	6/24/2009	
		1	CAMO-09-10369	R	6/24/2009	
		1	CAMO-09-10370	R	6/24/2009	

Friday, June 26, 2009

REQUEST NUMBER: 09-2498

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:7196A	1	CAMO-09-10371	R	6/24/2009	
		1	CAMO-09-10372	R	6/24/2009	
		1	CAMO-09-10373	R	6/24/2009	
		1	CAMO-09-10374	R	6/24/2009	
		1	CAMO-09-10375	R	6/24/2009	
		1	CAMO-09-10376	R	6/24/2009	
		1	CAMO-09-10377	R	6/24/2009	
		1	CAMO-09-10378	R	6/24/2009	
		1	CAMO-09-10379	R	6/24/2009	

Final Page of REQUEST NUMBER 09-2498

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2498**
Received By: Patricia Dent	**Date Received: JUNE 27, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **20 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,6,24C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5723 6C
7209 7847 5701 2C
7209 7847 5712 24C
7209 7847 5734 2C

PM (or PMA) review: Initials MC Date 27JUN09

ORIGIN ID: SAFA (505) 665-9068
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 58.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 68018AWR2A8512BGD0

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7289 7647 5723 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

Part # 156148-434 NRT V3.04.09

ORIGIN ID: SAFA (505) 665-9068
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 56.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 68018AWR2A8512BGD0

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7289 7647 5791 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

Part # 156148-434 NRT V3.04.09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA03 BLDG 1257 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 50.0 LB MAN
System#: 8814176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B010MR2R5128GD0

[redacted]

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7288 7847 5712 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

156145-434 NRIT V3.04-06

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA03 BLDG 1257 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 26JUN09
ActWgt: 52.0 LB MAN
System#: 8814176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6B010MR2R5128GD0

[redacted]

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY SATURDAY

TRK# 7288 7847 5734 Form 0201

Deliver By: 27JUN09

CHS A1

29407 -SC-US X0 CHSA

156145-434 NRIT V3.04-06

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2498

Sample Analysis

Sample ID	Client ID
232504001	CAMO-09-10375
232504002	CAMO-09-10376
232504003	CAMO-09-10373
232504004	CAMO-09-10367
232504005	CAMO-09-10377
232504006	CAMO-09-10370
232504007	CAMO-09-10374
232504008	CAMO-09-10371
232504009	CAMO-09-10368
232504010	CAMO-09-10369
232504011	CAMO-09-10366
232504012	CAMO-09-10372
232504013	CAMO-09-10378
232504014	CAMO-09-10379
1201871688	Method Blank (MB) **ICP**
1201871689	Laboratory Control Sample (LCS)
1201871692	232504001(CAMO-09-10375L) Serial Dilution (SD)
1201871690	232504001(CAMO-09-10375D) Sample Duplicate (DUP)
1201871691	232504001(CAMO-09-10375S) Matrix Spike (MS)
1201871693	232504001(CAMO-09-10375SD) Matrix Spike Duplicate (MSD)
1201871718	Method Blank (MB) **ICP-MS**
1201871719	Laboratory Control Sample (LCS)
1201871722	232504001(CAMO-09-10375L) Serial Dilution (SD)
1201871720	232504001(CAMO-09-10375D) Sample Duplicate (DUP)
1201871721	232504001(CAMO-09-10375S) Matrix Spike (MS)
1201871723	232504001(CAMO-09-10375SD) Matrix Spike Duplicate (MSD)
1201873031	Method Blank (MB) **CVAA**
1201873032	Laboratory Control Sample (LCS)
1201873036	232509001(CAMO-09-6519L) Serial Dilution (SD)

1201873033	232509001(CAMO-09-6519D) Sample Duplicate (DUP)
1201873034	232509001(CAMO-09-6519S) Matrix Spike (MS)
1201873037	232509001(CAMO-09-6519SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	881343, 881360 and 881913
Prep Batch :	881342, 881359 and 881912
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 3607 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm.

Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232504001 (CAMO-09-10375)-ICP and ICP-MS and 232509001 (CAMO-09-6519)-CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exception of magnesium, selenium, and potassium, as indicated by the "N" qualifiers.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The

MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exception of barium, calcium, magnesium, selenium, and potassium, as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated matrix spike duplicate (MSD) is evaluated based on acceptance criteria of 20%. The RPD between qualifying elements results in the MS and MSD were within the acceptance limits of 20%, with the exception of barium and manganese, as indicated by the "*" qualifiers.

Duplicate Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of RL is used to evaluate the DUP results. All applicable analytes met meet these requirements, with the exception of mercury, as indicated by the "*" qualifiers.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D), with the exception of mercury, as indicated by the "E" qualifiers.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCRs were generated for this SDG. NCR 707928, NCR 708404, and NCR 710801. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: _____ **Date:** 7/17/09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2498 GEL Work Order: 232504

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/17/09

Reviewed by

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504001 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10375 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 96.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2370000	ug/Kg		6880	20200	20200	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-36-0	Antimony	1010	ug/Kg	U	334	1010	1010	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-38-2	Arsenic	1290	ug/kg		199	997	997	2	MS	BAJ	07/06/09 00:40	090705-2	881360
7440-39-3	Barium	21900	ug/Kg	*N	101	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-41-7	Beryllium	483	ug/kg		19.9	99.7	99.7	2	MS	BAJ	07/06/09 00:40	090705-2	881360
7440-43-9	Cadmium	506	ug/Kg	U	101	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-70-2	Calcium	819000	ug/Kg	N	8100	25300	25300	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-47-3	Chromium	6180	ug/Kg		152	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-48-4	Cobalt	886	ug/Kg		152	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-50-8	Copper	2570	ug/Kg		304	1010	1010	1	P	HSC	07/02/09 14:36	070209-1	881343
7439-89-6	Iron	8610000	ug/Kg		8100	25300	25300	1	P	HSC	07/02/09 14:36	070209-1	881343
7439-92-1	Lead	5170	ug/Kg		253	1010	1010	1	P	HSC	07/02/09 14:36	070209-1	881343
7439-95-4	Magnesium	366000	ug/Kg	N	8600	30400	30400	1	P	HSC	07/02/09 14:36	070209-1	881343
7439-96-5	Manganese	229000	ug/Kg	*	202	1010	1010	1	P	HSC	07/02/09 14:36	070209-1	881343
7439-97-6	Mercury	6.09	ug/kg	J	3.63	10.7	10.7	1	AV	JXL1	07/13/09 10:58	071309S2-3	881913
7440-02-0	Nickel	2510	ug/kg		99.7	399	399	2	MS	BAJ	07/06/09 00:40	090705-2	881360
7440-09-7	Potassium	288000	ug/Kg	N	6480	25300	25300	1	P	HSC	07/02/09 14:36	070209-1	881343
7782-49-2	Selenium	997	ug/kg	UN	498	997	997	2	MS	BAJ	07/06/09 00:40	090705-2	881360
7440-22-4	Silver	436	ug/Kg	J	101	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-23-5	Sodium	70700	ug/Kg		7090	25300	25300	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-28-0	Thallium	98.5	ug/kg	J	59.8	199	199	2	MS	BAJ	07/06/09 00:40	090705-2	881360
7440-62-2	Vanadium	5770	ug/Kg		101	506	506	1	P	HSC	07/02/09 14:36	070209-1	881343
7440-66-6	Zinc	39300	ug/Kg		334	1010	1010	1	P	HSC	07/02/09 14:36	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.511	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.519	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.582	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504002 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10376 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2730000	ug/Kg		6880	20200	20200	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-36-0	Antimony	1010	ug/Kg	U	334	1010	1010	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-38-2	Arsenic	1300	ug/kg		209	1050	1050	2	MS	BAJ	07/06/09 01:23	090705-2	881360
7440-39-3	Barium	32500	ug/Kg	*N	101	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-41-7	Beryllium	319	ug/kg		20.9	105	105	2	MS	BAJ	07/06/09 01:23	090705-2	881360
7440-43-9	Cadmium	506	ug/Kg	U	101	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-70-2	Calcium	998000	ug/Kg	N	8090	25300	25300	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-47-3	Chromium	3220	ug/Kg		152	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-48-4	Cobalt	1520	ug/Kg		152	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-50-8	Copper	5070	ug/Kg		303	1010	1010	1	P	HSC	07/02/09 15:24	070209-1	881343
7439-89-6	Iron	8870000	ug/Kg		8090	25300	25300	1	P	HSC	07/02/09 15:24	070209-1	881343
7439-92-1	Lead	7390	ug/Kg		253	1010	1010	1	P	HSC	07/02/09 15:24	070209-1	881343
7439-95-4	Magnesium	597000	ug/Kg	N	8590	30300	30300	1	P	HSC	07/02/09 15:24	070209-1	881343
7439-96-5	Manganese	221000	ug/Kg	*	202	1010	1010	1	P	HSC	07/02/09 15:24	070209-1	881343
7439-97-6	Mercury	5.22	ug/kg	J	3.65	10.7	10.7	1	AV	JXL1	07/13/09 11:00	071309S2-3	881913
7440-02-0	Nickel	3840	ug/kg		105	418	418	2	MS	BAJ	07/06/09 01:23	090705-2	881360
7440-09-7	Potassium	444000	ug/Kg	N	6470	25300	25300	1	P	HSC	07/02/09 15:24	070209-1	881343
7782-49-2	Selenium	1050	ug/kg	UN	523	1050	1050	2	MS	BAJ	07/06/09 01:23	090705-2	881360
7440-22-4	Silver	513	ug/Kg		101	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-23-5	Sodium	41600	ug/Kg		7080	25300	25300	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-28-0	Thallium	209	ug/kg	U	62.7	209	209	2	MS	BAJ	07/06/09 01:23	090705-2	881360
7440-62-2	Vanadium	8510	ug/Kg		101	506	506	1	P	HSC	07/02/09 15:24	070209-1	881343
7440-66-6	Zinc	38400	ug/Kg		334	1010	1010	1	P	HSC	07/02/09 15:24	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.518	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.501	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.586	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504003 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10373 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2740000	ug/Kg		7670	22600	22600	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-36-0	Antimony	1130	ug/Kg	U	372	1130	1130	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-38-2	Arsenic	1210	ug/kg		217	1080	1080	2	MS	BAJ	07/06/09 01:29	090705-2	881360
7440-39-3	Barium	23600	ug/Kg	*N	113	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-41-7	Beryllium	867	ug/kg		21.7	108	108	2	MS	BAJ	07/06/09 01:29	090705-2	881360
7440-43-9	Cadmium	564	ug/Kg	U	113	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-70-2	Calcium	809000	ug/Kg	N	9030	28200	28200	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-47-3	Chromium	17200	ug/Kg		169	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-48-4	Cobalt	918	ug/Kg		169	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-50-8	Copper	3420	ug/Kg		339	1130	1130	1	P	HSC	07/02/09 15:31	070209-1	881343
7439-89-6	Iron	7800000	ug/Kg		9030	28200	28200	1	P	HSC	07/02/09 15:31	070209-1	881343
7439-92-1	Lead	6520	ug/Kg		282	1130	1130	1	P	HSC	07/02/09 15:31	070209-1	881343
7439-95-4	Magnesium	392000	ug/Kg	N	9590	33900	33900	1	P	HSC	07/02/09 15:31	070209-1	881343
7439-96-5	Manganese	254000	ug/Kg	*	226	1130	1130	1	P	HSC	07/02/09 15:31	070209-1	881343
7439-97-6	Mercury	22.2	ug/kg		3.96	11.7	11.7	1	AV	JXL1	07/13/09 11:02	071309S2-3	881913
7440-02-0	Nickel	3200	ug/kg		108	433	433	2	MS	BAJ	07/06/09 01:29	090705-2	881360
7440-09-7	Potassium	316000	ug/Kg	N	7220	28200	28200	1	P	HSC	07/02/09 15:31	070209-1	881343
7782-49-2	Selenium	1080	ug/kg	UN	541	1080	1080	2	MS	BAJ	07/06/09 01:29	090705-2	881360
7440-22-4	Silver	443	ug/Kg	J	113	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-23-5	Sodium	161000	ug/Kg		7900	28200	28200	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-28-0	Thallium	217	ug/kg	U	65	217	217	2	MS	BAJ	07/06/09 01:29	090705-2	881360
7440-62-2	Vanadium	5310	ug/Kg		113	564	564	1	P	HSC	07/02/09 15:31	070209-1	881343
7440-66-6	Zinc	35000	ug/Kg		372	1130	1130	1	P	HSC	07/02/09 15:31	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.521	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.581	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504004 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10367 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 85

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1470000	ug/Kg		7970	23400	23400	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-36-0	Antimony	1170	ug/Kg	U	387	1170	1170	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-38-2	Arsenic	685	ug/kg	J	225	1120	1120	2	MS	BAJ	07/06/09 01:36	090705-2	881360
7440-39-3	Barium	16700	ug/Kg	*N	117	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-41-7	Beryllium	321	ug/kg		22.5	112	112	2	MS	BAJ	07/06/09 01:36	090705-2	881360
7440-43-9	Cadmium	586	ug/Kg	U	117	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-70-2	Calcium	270000	ug/Kg	N	9370	29300	29300	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-47-3	Chromium	14100	ug/Kg		176	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-48-4	Cobalt	726	ug/Kg		176	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-50-8	Copper	5220	ug/Kg		351	1170	1170	1	P	HSC	07/02/09 15:39	070209-1	881343
7439-89-6	Iron	7770000	ug/Kg		9370	29300	29300	1	P	HSC	07/02/09 15:39	070209-1	881343
7439-92-1	Lead	6130	ug/Kg		293	1170	1170	1	P	HSC	07/02/09 15:39	070209-1	881343
7439-95-4	Magnesium	261000	ug/Kg	N	9960	35100	35100	1	P	HSC	07/02/09 15:39	070209-1	881343
7439-96-5	Manganese	304000	ug/Kg	*	234	1170	1170	1	P	HSC	07/02/09 15:39	070209-1	881343
7439-97-6	Mercury	10.2	ug/kg	J	4.41	13	13	1	AV	JXL1	07/13/09 11:04	071309S2-3	881913
7440-02-0	Nickel	1750	ug/kg		112	450	450	2	MS	BAJ	07/06/09 01:36	090705-2	881360
7440-09-7	Potassium	268000	ug/Kg	N	7500	29300	29300	1	P	HSC	07/02/09 15:39	070209-1	881343
7782-49-2	Selenium	1120	ug/kg	UN	562	1120	1120	2	MS	BAJ	07/06/09 01:36	090705-2	881360
7440-22-4	Silver	454	ug/Kg	J	117	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-23-5	Sodium	168000	ug/Kg		8200	29300	29300	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-28-0	Thallium	225	ug/kg	U	67.4	225	225	2	MS	BAJ	07/06/09 01:36	090705-2	881360
7440-62-2	Vanadium	4010	ug/Kg		117	586	586	1	P	HSC	07/02/09 15:39	070209-1	881343
7440-66-6	Zinc	42900	ug/Kg		387	1170	1170	1	P	HSC	07/02/09 15:39	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.521	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.542	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504005 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10377 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 93.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3520000	ug/Kg		7280	21400	21400	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-36-0	Antimony	1070	ug/Kg	U	353	1070	1070	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-38-2	Arsenic	957	ug/kg	J	207	1030	1030	2	MS	BAJ	07/06/09 01:42	090705-2	881360
7440-39-3	Barium	35300	ug/Kg	*N	107	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-41-7	Beryllium	811	ug/kg		20.7	103	103	2	MS	BAJ	07/06/09 01:42	090705-2	881360
7440-43-9	Cadmium	535	ug/Kg	U	107	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-70-2	Calcium	618000	ug/Kg	N	8560	26700	26700	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-47-3	Chromium	29600	ug/Kg		160	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-48-4	Cobalt	1010	ug/Kg		160	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-50-8	Copper	4500	ug/Kg		321	1070	1070	1	P	HSC	07/02/09 15:46	070209-1	881343
7439-89-6	Iron	9760000	ug/Kg		8560	26700	26700	1	P	HSC	07/02/09 15:46	070209-1	881343
7439-92-1	Lead	7480	ug/Kg		267	1070	1070	1	P	HSC	07/02/09 15:46	070209-1	881343
7439-95-4	Magnesium	630000	ug/Kg	N	9090	32100	32100	1	P	HSC	07/02/09 15:46	070209-1	881343
7439-96-5	Manganese	388000	ug/Kg	*	214	1070	1070	1	P	HSC	07/02/09 15:46	070209-1	881343
7439-97-6	Mercury	10.4	ug/kg	J	3.64	10.7	10.7	1	AV	JXL1	07/13/09 11:10	071309S2-3	881913
7440-02-0	Nickel	4010	ug/kg		103	413	413	2	MS	BAJ	07/06/09 01:42	090705-2	881360
7440-09-7	Potassium	482000	ug/Kg	N	6850	26700	26700	1	P	HSC	07/02/09 15:46	070209-1	881343
7782-49-2	Selenium	1030	ug/kg	UN	516	1030	1030	2	MS	BAJ	07/06/09 01:42	090705-2	881360
7440-22-4	Silver	566	ug/Kg		107	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-23-5	Sodium	97300	ug/Kg		7490	26700	26700	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-28-0	Thallium	207	ug/kg	U	62	207	207	2	MS	BAJ	07/06/09 01:42	090705-2	881360
7440-62-2	Vanadium	6620	ug/Kg		107	535	535	1	P	HSC	07/02/09 15:46	070209-1	881343
7440-66-6	Zinc	54100	ug/Kg		353	1070	1070	1	P	HSC	07/02/09 15:46	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.5	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.518	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.599	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504006 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10370 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.9

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2080000	ug/Kg		6990	20600	20600	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-36-0	Antimony	1030	ug/Kg	U	339	1030	1030	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-38-2	Arsenic	745	ug/kg	J	203	1020	1020	2	MS	BAJ	07/06/09 01:48	090705-2	881360
7440-39-3	Barium	39400	ug/Kg	*N	103	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-41-7	Beryllium	195	ug/kg		20.3	102	102	2	MS	BAJ	07/06/09 01:48	090705-2	881360
7440-43-9	Cadmium	452	ug/Kg	J	103	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-70-2	Calcium	2780000	ug/Kg	N	8230	25700	25700	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-47-3	Chromium	5000	ug/Kg		154	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-48-4	Cobalt	1760	ug/Kg		154	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-50-8	Copper	15100	ug/Kg		308	1030	1030	1	P	HSC	07/02/09 15:53	070209-1	881343
7439-89-6	Iron	8730000	ug/Kg		8230	25700	25700	1	P	HSC	07/02/09 15:53	070209-1	881343
7439-92-1	Lead	5350	ug/Kg		257	1030	1030	1	P	HSC	07/02/09 15:53	070209-1	881343
7439-95-4	Magnesium	881000	ug/Kg	N	8740	30800	30800	1	P	HSC	07/02/09 15:53	070209-1	881343
7439-96-5	Manganese	146000	ug/Kg	*	206	1030	1030	1	P	HSC	07/02/09 15:53	070209-1	881343
7439-97-6	Mercury	10.9	ug/kg	U	3.71	10.9	10.9	1	AV	JXL1	07/13/09 11:12	071309S2-3	881913
7440-02-0	Nickel	2900	ug/kg		102	407	407	2	MS	BAJ	07/06/09 01:48	090705-2	881360
7440-09-7	Potassium	546000	ug/Kg	N	6580	25700	25700	1	P	HSC	07/02/09 15:53	070209-1	881343
7782-49-2	Selenium	1020	ug/kg	UN	508	1020	1020	2	MS	BAJ	07/06/09 01:48	090705-2	881360
7440-22-4	Silver	458	ug/Kg	J	103	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-23-5	Sodium	90200	ug/Kg		7200	25700	25700	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-28-0	Thallium	203	ug/kg	U	61	203	203	2	MS	BAJ	07/06/09 01:48	090705-2	881360
7440-62-2	Vanadium	12000	ug/Kg		103	514	514	1	P	HSC	07/02/09 15:53	070209-1	881343
7440-66-6	Zinc	126000	ug/Kg		339	1030	1030	1	P	HSC	07/02/09 15:53	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.507	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.513	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.573	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504007 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10374 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 96.4

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2600000	ug/Kg		6920	20300	20300	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-36-0	Antimony	1020	ug/Kg	U	336	1020	1020	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-38-2	Arsenic	862	ug/kg	J	198	990	990	2	MS	BAJ	07/06/09 01:54	090705-2	881360
7440-39-3	Barium	59900	ug/Kg	*N	102	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-41-7	Beryllium	241	ug/kg		19.8	99	99	2	MS	BAJ	07/06/09 01:54	090705-2	881360
7440-43-9	Cadmium	509	ug/Kg	U	102	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-70-2	Calcium	1280000	ug/Kg	N	8140	25400	25400	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-47-3	Chromium	4420	ug/Kg		153	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-48-4	Cobalt	2100	ug/Kg		153	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-50-8	Copper	6050	ug/Kg		305	1020	1020	1	P	HSC	07/02/09 16:00	070209-1	881343
7439-89-6	Iron	7580000	ug/Kg		8140	25400	25400	1	P	HSC	07/02/09 16:00	070209-1	881343
7439-92-1	Lead	6370	ug/Kg		254	1020	1020	1	P	HSC	07/02/09 16:00	070209-1	881343
7439-95-4	Magnesium	746000	ug/Kg	N	8650	30500	30500	1	P	HSC	07/02/09 16:00	070209-1	881343
7439-96-5	Manganese	176000	ug/Kg	*	203	1020	1020	1	P	HSC	07/02/09 16:00	070209-1	881343
7439-97-6	Mercury	11.9	ug/kg	U	4.06	11.9	11.9	1	AV	JXL1	07/13/09 11:14	071309S2-3	881913
7440-02-0	Nickel	2790	ug/kg		99	396	396	2	MS	BAJ	07/06/09 01:54	090705-2	881360
7440-09-7	Potassium	478000	ug/Kg	N	6510	25400	25400	1	P	HSC	07/02/09 16:00	070209-1	881343
7782-49-2	Selenium	990	ug/kg	UN	495	990	990	2	MS	BAJ	07/06/09 01:54	090705-2	881360
7440-22-4	Silver	390	ug/Kg	J	102	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-23-5	Sodium	61100	ug/Kg		7120	25400	25400	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-28-0	Thallium	198	ug/kg	U	59.4	198	198	2	MS	BAJ	07/06/09 01:54	090705-2	881360
7440-62-2	Vanadium	9880	ug/Kg		102	509	509	1	P	HSC	07/02/09 16:00	070209-1	881343
7440-66-6	Zinc	27800	ug/Kg		336	1020	1020	1	P	HSC	07/02/09 16:00	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.51	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.524	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.521	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504008 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10371 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 86

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3250000	ug/Kg		7790	22900	22900	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-36-0	Antimony	1150	ug/Kg	U	378	1150	1150	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-38-2	Arsenic	1710	ug/kg		232	1160	1160	2	MS	BAJ	07/06/09 02:00	090705-2	881360
7440-39-3	Barium	38300	ug/Kg	*N	115	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-41-7	Beryllium	402	ug/kg		23.2	116	116	2	MS	BAJ	07/06/09 02:00	090705-2	881360
7440-43-9	Cadmium	573	ug/Kg	U	115	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-70-2	Calcium	6770000	ug/Kg	N	9170	28600	28600	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-47-3	Chromium	11900	ug/Kg		172	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-48-4	Cobalt	1380	ug/Kg		172	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-50-8	Copper	7620	ug/Kg		344	1150	1150	1	P	HSC	07/02/09 16:07	070209-1	881343
7439-89-6	Iron	7900000	ug/Kg		9170	28600	28600	1	P	HSC	07/02/09 16:07	070209-1	881343
7439-92-1	Lead	8160	ug/Kg		286	1150	1150	1	P	HSC	07/02/09 16:07	070209-1	881343
7439-95-4	Magnesium	921000	ug/Kg	N	9740	34400	34400	1	P	HSC	07/02/09 16:07	070209-1	881343
7439-96-5	Manganese	201000	ug/Kg	*	229	1150	1150	1	P	HSC	07/02/09 16:07	070209-1	881343
7439-97-6	Mercury	13.7	ug/kg	U	4.66	13.7	13.7	1	AV	JXLI	07/13/09 11:16	071309S2-3	881913
7440-02-0	Nickel	5470	ug/kg		116	465	465	2	MS	BAJ	07/06/09 02:00	090705-2	881360
7440-09-7	Potassium	499000	ug/Kg	N	7330	28600	28600	1	P	HSC	07/02/09 16:07	070209-1	881343
7782-49-2	Selenium	1160	ug/kg	UN	581	1160	1160	2	MS	BAJ	07/06/09 02:00	090705-2	881360
7440-22-4	Silver	357	ug/Kg	J	115	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-23-5	Sodium	189000	ug/Kg		8020	28600	28600	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-28-0	Thallium	142	ug/kg	J	69.7	232	232	2	MS	BAJ	07/06/09 02:00	090705-2	881360
7440-62-2	Vanadium	8090	ug/Kg		115	573	573	1	P	HSC	07/02/09 16:07	070209-1	881343
7440-66-6	Zinc	45100	ug/Kg		378	1150	1150	1	P	HSC	07/02/09 16:07	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.508	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.501	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.51	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504009 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10368 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 94.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1440000	ug/Kg		6940	20400	20400	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-36-0	Antimony	1020	ug/Kg	U	337	1020	1020	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-38-2	Arsenic	738	ug/kg	J	208	1040	1040	2	MS	BAJ	07/06/09 02:19	090705-2	881360
7440-39-3	Barium	23600	ug/Kg	*N	102	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-41-7	Beryllium	234	ug/kg		20.8	104	104	2	MS	BAJ	07/06/09 02:19	090705-2	881360
7440-43-9	Cadmium	511	ug/Kg	U	102	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-70-2	Calcium	596000	ug/Kg	N	8170	25500	25500	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-47-3	Chromium	3020	ug/Kg		153	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-48-4	Cobalt	2000	ug/Kg		153	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-50-8	Copper	1860	ug/Kg		306	1020	1020	1	P	HSC	07/02/09 16:27	070209-1	881343
7439-89-6	Iron	9320000	ug/Kg		8170	25500	25500	1	P	HSC	07/02/09 16:27	070209-1	881343
7439-92-1	Lead	4730	ug/Kg		255	1020	1020	1	P	HSC	07/02/09 16:27	070209-1	881343
7439-95-4	Magnesium	385000	ug/Kg	N	8680	30600	30600	1	P	HSC	07/02/09 16:27	070209-1	881343
7439-96-5	Manganese	235000	ug/Kg	*	204	1020	1020	1	P	HSC	07/02/09 16:27	070209-1	881343
7439-97-6	Mercury	12.2	ug/kg	U	4.14	12.2	12.2	1	AV	JXL1	07/13/09 11:18	071309S2-3	881913
7440-02-0	Nickel	1850	ug/kg		104	416	416	2	MS	BAJ	07/06/09 02:19	090705-2	881360
7440-09-7	Potassium	304000	ug/Kg	N	6540	25500	25500	1	P	HSC	07/02/09 16:27	070209-1	881343
7782-49-2	Selenium	1040	ug/kg	UN	520	1040	1040	2	MS	BAJ	07/06/09 02:19	090705-2	881360
7440-22-4	Silver	564	ug/Kg		102	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-23-5	Sodium	77200	ug/Kg		7150	25500	25500	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-28-0	Thallium	208	ug/kg	U	62.4	208	208	2	MS	BAJ	07/06/09 02:19	090705-2	881360
7440-62-2	Vanadium	7260	ug/Kg		102	511	511	1	P	HSC	07/02/09 16:27	070209-1	881343
7440-66-6	Zinc	54200	ug/Kg		337	1020	1020	1	P	HSC	07/02/09 16:27	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.518	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.509	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.521	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504010 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10369 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 88

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2780000	ug/Kg		7570	22300	22300	1	P	HSC	07/02/09 16:34	070209-1	881343
7440-36-0	Antimony	1110	ug/Kg	U	367	1110	1110	1	P	HSC	07/02/09 16:34	070209-1	881343
7440-38-2	Arsenic	1470	ug/kg		226	1130	1130	2	MS	BAJ	07/06/09 02:25	090705-2	881360
7440-39-3	Barium	21000	ug/Kg	*N	111	556	556	1	P	HSC	07/02/09 16:34	070209-1	881343
7440-41-7	Beryllium	316	ug/kg		22.6	113	113	2	MS	BAJ	07/06/09 02:25	090705-2	881360
7440-43-9	Cadmium	556	ug/Kg	U	111	556	556	1	P	HSC	07/02/09 16:34	070209-1	881343
7440-70-2	Calcium	496000	ug/Kg	N	8900	27800	27800	1	P	HSC	07/02/09 16:34	070209-1	881343
7440-47-3	Chromium	13800	ug/Kg		167	556	556	1	P	HSC	07/02/09 16:34	070209-1	881343
7440-48-4	Cobalt	1600	ug/Kg		167	556	556	1	P	HSC	07/02/09 16:34	070209-1	881343
7440-50-8	Copper	4100	ug/Kg		334	1110	1110	1	P	HSC	07/02/09 16:34	070209-1	881343
7439-89-6	Iron	8840000	ug/Kg		8900	27800	27800	1	P	HSC	07/02/09 16:34	070209-1	881343
7439-92-1	Lead	6250	ug/Kg		278	1110	1110	1	P	HSC	07/02/09 16:34	070209-1	881343
7439-95-4	Magnesium	259000	ug/Kg	N	9460	33400	33400	1	P	HSC	07/02/09 16:34	070209-1	881343
7439-96-5	Manganese	198000	ug/Kg	*	223	1110	1110	1	P	HSC	07/02/09 16:34	070209-1	881343
7439-97-6	Mercury	7.51	ug/kg	J	4.12	12.1	12.1	1	AV	JXL1	07/13/09 11:20	071309S2-3	881913
7440-02-0	Nickel	3270	ug/kg		113	452	452	2	MS	BAJ	07/06/09 02:25	090705-2	881360
7440-09-7	Potassium	409000	ug/Kg	N	7120	27800	27800	1	P	HSC	07/02/09 16:34	070209-1	881343
7782-49-2	Selenium	1130	ug/kg	UN	565	1130	1130	2	MS	BAJ	07/06/09 02:25	090705-2	881360
7440-22-4	Silver	804	ug/Kg		111	556	556	1	P	HSC	07/02/09 16:34	070209-1	881343
7440-23-5	Sodium	196000	ug/Kg		7790	27800	27800	1	P	HSC	07/02/09 16:34	070209-1	881343
7440-28-0	Thallium	226	ug/kg	U	67.8	226	226	2	MS	BAJ	07/06/09 02:25	090705-2	881360
7440-62-2	Vanadium	7470	ug/Kg		111	556	556	1	P	HSC	07/02/09 16:34	070209-1	881343
7440-66-6	Zinc	60200	ug/Kg		367	1110	1110	1	P	HSC	07/02/09 16:34	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.508	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.5	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.56	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504011 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10366 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 91.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1610000	ug/Kg		7290	21400	21400	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-36-0	Antimony	1070	ug/Kg	U	354	1070	1070	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-38-2	Arsenic	654	ug/kg	J	214	1070	1070	2	MS	BAJ	07/06/09 02:31	090705-2	881360
7440-39-3	Barium	25500	ug/Kg	*N	107	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-41-7	Beryllium	210	ug/kg		21.4	107	107	2	MS	BAJ	07/06/09 02:31	090705-2	881360
7440-43-9	Cadmium	536	ug/Kg	U	107	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-70-2	Calcium	842000	ug/Kg	N	8580	26800	26800	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-47-3	Chromium	3380	ug/Kg		161	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-48-4	Cobalt	1150	ug/Kg		161	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-50-8	Copper	2250	ug/Kg		322	1070	1070	1	P	HSC	07/02/09 16:41	070209-1	881343
7439-89-6	Iron	7260000	ug/Kg		8580	26800	26800	1	P	HSC	07/02/09 16:41	070209-1	881343
7439-92-1	Lead	5200	ug/Kg		268	1070	1070	1	P	HSC	07/02/09 16:41	070209-1	881343
7439-95-4	Magnesium	526000	ug/Kg	N	9120	32200	32200	1	P	HSC	07/02/09 16:41	070209-1	881343
7439-96-5	Manganese	215000	ug/Kg	*	214	1070	1070	1	P	HSC	07/02/09 16:41	070209-1	881343
7439-97-6	Mercury	12.3	ug/kg	U	4.17	12.3	12.3	1	AV	JXL1	07/13/09 11:22	071309S2-3	881913
7440-02-0	Nickel	2030	ug/kg		107	427	427	2	MS	BAJ	07/06/09 02:31	090705-2	881360
7440-09-7	Potassium	418000	ug/Kg	N	6860	26800	26800	1	P	HSC	07/02/09 16:41	070209-1	881343
7782-49-2	Selenium	1070	ug/kg	UN	534	1070	1070	2	MS	BAJ	07/06/09 02:31	090705-2	881360
7440-22-4	Silver	338	ug/Kg	J	107	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-23-5	Sodium	93300	ug/Kg		7510	26800	26800	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-28-0	Thallium	214	ug/kg	U	64.1	214	214	2	MS	BAJ	07/06/09 02:31	090705-2	881360
7440-62-2	Vanadium	7970	ug/Kg		107	536	536	1	P	HSC	07/02/09 16:41	070209-1	881343
7440-66-6	Zinc	57300	ug/Kg		354	1070	1070	1	P	HSC	07/02/09 16:41	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.509	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.511	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.534	g	30	mL	07/10/09	AXG2

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504012 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10372 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 90.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3660000	ug/Kg		7290	21500	21500	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-36-0	Antimony	1070	ug/Kg	U	354	1070	1070	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-38-2	Arsenic	1350	ug/kg		218	1090	1090	2	MS	BAJ	07/06/09 02:37	090705-2	881360
7440-39-3	Barium	56000	ug/Kg	*N	107	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-41-7	Beryllium	424	ug/kg		21.8	109	109	2	MS	BAJ	07/06/09 02:37	090705-2	881360
7440-43-9	Cadmium	536	ug/Kg	U	107	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-70-2	Calcium	24300000	ug/Kg	N	8580	26800	26800	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-47-3	Chromium	3940	ug/Kg		161	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-48-4	Cobalt	1820	ug/Kg		161	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-50-8	Copper	11500	ug/Kg		322	1070	1070	1	P	HSC	07/02/09 16:48	070209-1	881343
7439-89-6	Iron	7350000	ug/Kg		8580	26800	26800	1	P	HSC	07/02/09 16:48	070209-1	881343
7439-92-1	Lead	8220	ug/Kg		268	1070	1070	1	P	HSC	07/02/09 16:48	070209-1	881343
7439-95-4	Magnesium	1120000	ug/Kg	N	9120	32200	32200	1	P	HSC	07/02/09 16:48	070209-1	881343
7439-96-5	Manganese	219000	ug/Kg	*	215	1070	1070	1	P	HSC	07/02/09 16:48	070209-1	881343
7439-97-6	Mercury	4.63	ug/kg	J	4.45	13.1	13.1	1	AV	JXL1	07/13/09 11:24	071309S2-3	881913
7440-02-0	Nickel	4050	ug/kg		109	436	436	2	MS	BAJ	07/06/09 02:37	090705-2	881360
7440-09-7	Potassium	676000	ug/Kg	N	6860	26800	26800	1	P	HSC	07/02/09 16:48	070209-1	881343
7782-49-2	Selenium	1090	ug/kg	UN	545	1090	1090	2	MS	BAJ	07/06/09 02:37	090705-2	881360
7440-22-4	Silver	237	ug/Kg	J	107	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-23-5	Sodium	89900	ug/Kg		7510	26800	26800	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-28-0	Thallium	95.2	ug/kg	J	65.4	218	218	2	MS	BAJ	07/06/09 02:37	090705-2	881360
7440-62-2	Vanadium	10400	ug/Kg		107	536	536	1	P	HSC	07/02/09 16:48	070209-1	881343
7440-66-6	Zinc	30300	ug/Kg		354	1070	1070	1	P	HSC	07/02/09 16:48	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.517	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.509	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.508	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504013 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10378 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 96.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2520000	ug/Kg		6700	19700	19700	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-36-0	Antimony	985	ug/Kg	U	325	985	985	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-38-2	Arsenic	1150	ug/kg		207	1030	1030	2	MS	BAJ	07/06/09 02:43	090705-2	881360
7440-39-3	Barium	23800	ug/Kg	*N	98.5	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-41-7	Beryllium	481	ug/kg		20.7	103	103	2	MS	BAJ	07/06/09 02:43	090705-2	881360
7440-43-9	Cadmium	492	ug/Kg	U	98.5	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-70-2	Calcium	871000	ug/Kg	N	7880	24600	24600	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-47-3	Chromium	6200	ug/Kg		148	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-48-4	Cobalt	984	ug/Kg		148	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-50-8	Copper	2760	ug/Kg		295	985	985	1	P	HSC	07/02/09 16:55	070209-1	881343
7439-89-6	Iron	8770000	ug/Kg		7880	24600	24600	1	P	HSC	07/02/09 16:55	070209-1	881343
7439-92-1	Lead	5800	ug/Kg		246	985	985	1	P	HSC	07/02/09 16:55	070209-1	881343
7439-95-4	Magnesium	397000	ug/Kg	N	8370	29500	29500	1	P	HSC	07/02/09 16:55	070209-1	881343
7439-96-5	Manganese	247000	ug/Kg	*	197	985	985	1	P	HSC	07/02/09 16:55	070209-1	881343
7439-97-6	Mercury	6.65	ug/kg	J	3.53	10.4	10.4	1	AV	JXL1	07/13/09 11:26	071309S2-3	881913
7440-02-0	Nickel	2550	ug/kg		103	414	414	2	MS	BAJ	07/06/09 02:43	090705-2	881360
7440-09-7	Potassium	302000	ug/Kg	N	6300	24600	24600	1	P	HSC	07/02/09 16:55	070209-1	881343
7782-49-2	Selenium	1030	ug/kg	UN	517	1030	1030	2	MS	BAJ	07/06/09 02:43	090705-2	881360
7440-22-4	Silver	396	ug/Kg	J	98.5	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-23-5	Sodium	67500	ug/Kg		6890	24600	24600	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-28-0	Thallium	207	ug/kg	U	62	207	207	2	MS	BAJ	07/06/09 02:43	090705-2	881360
7440-62-2	Vanadium	6420	ug/Kg		98.5	492	492	1	P	HSC	07/02/09 16:55	070209-1	881343
7440-66-6	Zinc	38800	ug/Kg		325	985	985	1	P	HSC	07/02/09 16:55	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.525	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.5	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.597	g	30	mL	07/10/09	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232504014 **BASIS:** Dry Weight **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10379 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: SOIL **%SOLIDS:** 95.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2080000	ug/Kg		7090	20900	20900	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-36-0	Antimony	1040	ug/Kg	U	344	1040	1040	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-38-2	Arsenic	695	ug/kg	J	201	1000	1000	2	MS	BAJ	07/06/09 02:50	090705-2	881360
7440-39-3	Barium	30700	ug/Kg	*N	104	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-41-7	Beryllium	175	ug/kg		20.1	100	100	2	MS	BAJ	07/06/09 02:50	090705-2	881360
7440-43-9	Cadmium	522	ug/Kg	U	104	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-70-2	Calcium	2910000	ug/Kg	N	8350	26100	26100	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-47-3	Chromium	4760	ug/Kg		156	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-48-4	Cobalt	1870	ug/Kg		156	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-50-8	Copper	11100	ug/Kg		313	1040	1040	1	P	HSC	07/02/09 17:02	070209-1	881343
7439-89-6	Iron	6750000	ug/Kg		8350	26100	26100	1	P	HSC	07/02/09 17:02	070209-1	881343
7439-92-1	Lead	6240	ug/Kg		261	1040	1040	1	P	HSC	07/02/09 17:02	070209-1	881343
7439-95-4	Magnesium	911000	ug/Kg	N	8870	31300	31300	1	P	HSC	07/02/09 17:02	070209-1	881343
7439-96-5	Manganese	153000	ug/Kg	*	209	1040	1040	1	P	HSC	07/02/09 17:02	070209-1	881343
7439-97-6	Mercury	11.5	ug/kg	U	3.91	11.5	11.5	1	AV	JXL1	07/13/09 11:27	071309S2-3	881913
7440-02-0	Nickel	3730	ug/kg		100	401	401	2	MS	BAJ	07/06/09 02:50	090705-2	881360
7440-09-7	Potassium	568000	ug/Kg	N	6680	26100	26100	1	P	HSC	07/02/09 17:02	070209-1	881343
7782-49-2	Selenium	1000	ug/kg	UN	502	1000	1000	2	MS	BAJ	07/06/09 02:50	090705-2	881360
7440-22-4	Silver	359	ug/Kg	J	104	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-23-5	Sodium	88800	ug/Kg		7300	26100	26100	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-28-0	Thallium	201	ug/kg	U	60.2	201	201	2	MS	BAJ	07/06/09 02:50	090705-2	881360
7440-62-2	Vanadium	12000	ug/Kg		104	522	522	1	P	HSC	07/02/09 17:02	070209-1	881343
7440-66-6	Zinc	21000	ug/Kg		344	1040	1040	1	P	HSC	07/02/09 17:02	070209-1	881343

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881343	881342	SW846 3050B	0.501	g	50	mL	06/30/09	FGA
881360	881359	SW846 3050B	0.521	g	50	mL	07/01/09	CXS3
881913	881912	SW846 7471A Prep	0.546	g	30	mL	07/10/09	AXG2

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Antimony	514	ug/L	500	ug/L	102.9	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Barium	520	ug/L	500	ug/L	104	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Cadmium	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Calcium	4880	ug/L	5000	ug/L	97.6	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Chromium	488	ug/L	500	ug/L	97.5	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Cobalt	464	ug/L	500	ug/L	92.7	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Copper	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Iron	5050	ug/L	5000	ug/L	101	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Lead	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Magnesium	5330	ug/L	5000	ug/L	106.6	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Manganese	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Potassium	2390	ug/L	2500	ug/L	95.5	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Silver	247	ug/L	250	ug/L	98.7	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Sodium	2530	ug/L	2500	ug/L	101.1	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Vanadium	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	02-JUL-09 11:09	070209-1
	Arsenic	49.4	ug/L	50	ug/L	98.8	90.0 – 110.0	MS	05-JUL-09 23:27	090705-2
	Beryllium	50.2	ug/L	50	ug/L	100.4	90.0 – 110.0	MS	05-JUL-09 23:27	090705-2
	Nickel	51.6	ug/L	50	ug/L	103.2	90.0 – 110.0	MS	05-JUL-09 23:27	090705-2
	Selenium	49.1	ug/L	50	ug/L	98.1	90.0 – 110.0	MS	05-JUL-09 23:27	090705-2
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 – 110.0	MS	05-JUL-09 23:27	090705-2
	Mercury	5.22	ug/L	5	ug/L	104.4	90.0 – 110.0	AV	13-JUL-09 09:48	071309S2-3
CCV01										
	Aluminum	5080	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	02-JUL-09 11:53	070209-1
	Antimony	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	02-JUL-09 11:53	070209-1
	Barium	488	ug/L	500	ug/L	97.5	90.0 – 110.0	P	02-JUL-09 11:53	070209-1
	Cadmium	473	ug/L	500	ug/L	94.7	90.0 – 110.0	P	02-JUL-09 11:53	070209-1
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	02-JUL-09 11:53	070209-1
	Chromium	485	ug/L	500	ug/L	97	90.0 – 110.0	P	02-JUL-09 11:53	070209-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2498

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	477	ug/L	500	ug/L	95.5	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Copper	487	ug/L	500	ug/L	97.3	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Iron	5080	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Lead	490	ug/L	500	ug/L	98	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Magnesium	5160	ug/L	5000	ug/L	103.2	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Manganese	487	ug/L	500	ug/L	97.5	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Potassium	4960	ug/L	5000	ug/L	99.2	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Silver	490	ug/L	500	ug/L	98	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Sodium	9830	ug/L	10000	ug/L	98.3	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Vanadium	490	ug/L	500	ug/L	97.9	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Zinc	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	02–JUL–09 11:53	070209–1
	Arsenic	49.1	ug/L	50	ug/L	98.3	90.0 – 110.0	MS	05–JUL–09 23:57	090705–2
	Beryllium	50.5	ug/L	50	ug/L	101.1	90.0 – 110.0	MS	05–JUL–09 23:57	090705–2
	Nickel	51.8	ug/L	50	ug/L	103.6	90.0 – 110.0	MS	05–JUL–09 23:57	090705–2
	Selenium	50.2	ug/L	50	ug/L	100.4	90.0 – 110.0	MS	05–JUL–09 23:57	090705–2
	Thallium	49.5	ug/L	50	ug/L	99	90.0 – 110.0	MS	05–JUL–09 23:57	090705–2
	Mercury	5.16	ug/L	5	ug/L	103.2	80.0 – 120.0	AV	13–JUL–09 09:54	071309S2–3
CCV02										
	Aluminum	5070	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Antimony	505	ug/L	500	ug/L	101	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Barium	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Cadmium	485	ug/L	500	ug/L	97	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Calcium	5070	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Chromium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Cobalt	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Copper	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Iron	5030	ug/L	5000	ug/L	100.5	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Lead	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Magnesium	5030	ug/L	5000	ug/L	100.6	90.0 – 110.0	P	02–JUL–09 12:23	070209–1
	Manganese	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	02–JUL–09 12:23	070209–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	4700	ug/L	5000	ug/L	94.1	90.0 - 110.0	P	02-JUL-09 12:23	070209-1
	Silver	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	02-JUL-09 12:23	070209-1
	Sodium	9620	ug/L	10000	ug/L	96.2	90.0 - 110.0	P	02-JUL-09 12:23	070209-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	02-JUL-09 12:23	070209-1
	Zinc	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	02-JUL-09 12:23	070209-1
	Arsenic	48.4	ug/L	50	ug/L	96.8	90.0 - 110.0	MS	06-JUL-09 00:15	090705-2
	Beryllium	49.7	ug/L	50	ug/L	99.3	90.0 - 110.0	MS	06-JUL-09 00:15	090705-2
	Nickel	50.7	ug/L	50	ug/L	101.4	90.0 - 110.0	MS	06-JUL-09 00:15	090705-2
	Selenium	48.7	ug/L	50	ug/L	97.4	90.0 - 110.0	MS	06-JUL-09 00:15	090705-2
	Thallium	51.4	ug/L	50	ug/L	102.7	90.0 - 110.0	MS	06-JUL-09 00:15	090705-2
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 - 120.0	AV	13-JUL-09 10:18	071309S2-3
CCV03										
	Aluminum	5080	ug/L	5000	ug/L	101.6	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Antimony	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Barium	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Cadmium	482	ug/L	500	ug/L	96.5	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Calcium	5080	ug/L	5000	ug/L	101.7	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Chromium	490	ug/L	500	ug/L	98	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Cobalt	486	ug/L	500	ug/L	97.1	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Copper	492	ug/L	500	ug/L	98.5	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Iron	5240	ug/L	5000	ug/L	104.8	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Lead	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Magnesium	5220	ug/L	5000	ug/L	104.5	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Manganese	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Potassium	4900	ug/L	5000	ug/L	98.1	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Silver	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Sodium	9890	ug/L	10000	ug/L	98.9	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Vanadium	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Zinc	488	ug/L	500	ug/L	97.5	90.0 - 110.0	P	02-JUL-09 13:42	070209-1
	Arsenic	49.3	ug/L	50	ug/L	98.5	90.0 - 110.0	MS	06-JUL-09 01:11	090705-2

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	51.3	ug/L	50	ug/L	102.6	90.0 - 110.0	MS	06-JUL-09 01:11	090705-2
	Nickel	52.7	ug/L	50	ug/L	105.3	90.0 - 110.0	MS	06-JUL-09 01:11	090705-2
	Selenium	50.1	ug/L	50	ug/L	100.2	90.0 - 110.0	MS	06-JUL-09 01:11	090705-2
	Thallium	52.1	ug/L	50	ug/L	104.2	90.0 - 110.0	MS	06-JUL-09 01:11	090705-2
	Mercury	5.04	ug/L	5	ug/L	100.9	80.0 - 120.0	AV	13-JUL-09 10:42	071309S2-3
CCV04										
	Aluminum	5160	ug/L	5000	ug/L	103.1	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Antimony	507	ug/L	500	ug/L	101.5	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Barium	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Cadmium	485	ug/L	500	ug/L	97	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Calcium	5190	ug/L	5000	ug/L	103.7	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Chromium	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Cobalt	489	ug/L	500	ug/L	97.7	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Copper	491	ug/L	500	ug/L	98.3	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Iron	5250	ug/L	5000	ug/L	105	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Lead	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Magnesium	5220	ug/L	5000	ug/L	104.4	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Manganese	492	ug/L	500	ug/L	98.3	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Potassium	4920	ug/L	5000	ug/L	98.5	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Silver	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Sodium	10100	ug/L	10000	ug/L	100.6	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Vanadium	495	ug/L	500	ug/L	99	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Zinc	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	02-JUL-09 14:09	070209-1
	Arsenic	49.6	ug/L	50	ug/L	99.2	90.0 - 110.0	MS	06-JUL-09 02:06	090705-2
	Beryllium	50.2	ug/L	50	ug/L	100.3	90.0 - 110.0	MS	06-JUL-09 02:06	090705-2
	Nickel	52	ug/L	50	ug/L	104	90.0 - 110.0	MS	06-JUL-09 02:06	090705-2
	Selenium	49.3	ug/L	50	ug/L	98.7	90.0 - 110.0	MS	06-JUL-09 02:06	090705-2
	Thallium	51.7	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	06-JUL-09 02:06	090705-2
	Mercury	5.1	ug/L	5	ug/L	102	80.0 - 120.0	AV	13-JUL-09 11:06	071309S2-3

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV05										
	Aluminum	5060	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Antimony	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Barium	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Cadmium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Calcium	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Chromium	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Cobalt	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Copper	492	ug/L	500	ug/L	98.5	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Iron	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Lead	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Magnesium	5130	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Manganese	492	ug/L	500	ug/L	98.3	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Potassium	4790	ug/L	5000	ug/L	95.7	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Silver	495	ug/L	500	ug/L	99	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Sodium	9800	ug/L	10000	ug/L	98	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Vanadium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Zinc	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	02-JUL-09 15:11	070209-1
	Arsenic	49.1	ug/L	50	ug/L	98.2	90.0 – 110.0	MS	06-JUL-09 02:56	090705-2
	Beryllium	48.8	ug/L	50	ug/L	97.6	90.0 – 110.0	MS	06-JUL-09 02:56	090705-2
	Nickel	51.1	ug/L	50	ug/L	102.2	90.0 – 110.0	MS	06-JUL-09 02:56	090705-2
	Selenium	47.7	ug/L	50	ug/L	95.3	90.0 – 110.0	MS	06-JUL-09 02:56	090705-2
	Thallium	50.3	ug/L	50	ug/L	100.6	90.0 – 110.0	MS	06-JUL-09 02:56	090705-2
	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 – 120.0	AV	13-JUL-09 11:29	071309S2-3
CCV06										
	Aluminum	5210	ug/L	5000	ug/L	104.3	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Antimony	500	ug/L	500	ug/L	100	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Barium	491	ug/L	500	ug/L	98.3	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Cadmium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Calcium	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Chromium	491	ug/L	500	ug/L	98.3	90.0 – 110.0	P	02-JUL-09 16:14	070209-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS5,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Iron	5380	ug/L	5000	ug/L	107.5	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Lead	495	ug/L	500	ug/L	98.9	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Magnesium	5300	ug/L	5000	ug/L	105.9	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Manganese	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Potassium	4950	ug/L	5000	ug/L	98.9	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Silver	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Sodium	10100	ug/L	10000	ug/L	101.2	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Vanadium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Zinc	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	02-JUL-09 16:14	070209-1
	Mercury	5.13	ug/L	5	ug/L	102.6	80.0 – 120.0	AV	13-JUL-09 11:53	071309S2-3
CCV07										
	Aluminum	5140	ug/L	5000	ug/L	102.8	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Antimony	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Barium	490	ug/L	500	ug/L	97.9	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Cadmium	478	ug/L	500	ug/L	95.6	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Calcium	5220	ug/L	5000	ug/L	104.3	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Chromium	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Cobalt	480	ug/L	500	ug/L	96.1	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Iron	5390	ug/L	5000	ug/L	107.8	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Lead	490	ug/L	500	ug/L	97.9	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Magnesium	5260	ug/L	5000	ug/L	105.2	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Manganese	491	ug/L	500	ug/L	98.3	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Potassium	4770	ug/L	5000	ug/L	95.4	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Silver	495	ug/L	500	ug/L	99	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Sodium	9930	ug/L	10000	ug/L	99.3	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Vanadium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	02-JUL-09 17:09	070209-1
	Zinc	488	ug/L	500	ug/L	97.5	90.0 – 110.0	P	02-JUL-09 17:09	070209-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2498

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS5,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Arsenic	5.41	ug/L	5	ug/L	108.3	70.0 – 130.0	MS	05-JUL-09 23:39	090705-2
	Beryllium	.491	ug/L	.5	ug/L	98.2	70.0 – 130.0	MS	05-JUL-09 23:39	090705-2
	Nickel	2.12	ug/L	2	ug/L	106	70.0 – 130.0	MS	05-JUL-09 23:39	090705-2
	Selenium	5.16	ug/L	5	ug/L	103.3	70.0 – 130.0	MS	05-JUL-09 23:39	090705-2
	Thallium	1.16	ug/L	1	ug/L	115.6	70.0 – 130.0	MS	05-JUL-09 23:39	090705-2
	Mercury	.146	ug/L	.2	ug/L	72.8	70.0 – 130.0	AV	13-JUL-09 09:52	071309S2-3
PQL01										
	Antimony	8.31	ug/L	10	ug/L	83.1	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Aluminum	225	ug/L	200	ug/L	112.6	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Barium	5.46	ug/L	5	ug/L	109.1	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Cadmium	5	ug/L	5	ug/L	100.1	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Calcium	214	ug/L	200	ug/L	107	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Chromium	5.23	ug/L	5	ug/L	104.6	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Cobalt	5.16	ug/L	5	ug/L	103.2	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Copper	10.2	ug/L	10	ug/L	101.9	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Iron	110	ug/L	100	ug/L	110.2	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Lead	11.1	ug/L	10	ug/L	111.3	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Magnesium	306	ug/L	300	ug/L	101.9	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Manganese	11.2	ug/L	10	ug/L	112.2	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Potassium	151	ug/L	150	ug/L	100.4	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Silver	5.47	ug/L	5	ug/L	109.3	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Sodium	301	ug/L	300	ug/L	100.5	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Vanadium	5.08	ug/L	5	ug/L	101.5	70.0 – 130.0	P	02-JUL-09 11:22	070209-1
	Zinc	11.8	ug/L	10	ug/L	118.1	70.0 – 130.0	P	02-JUL-09 11:22	070209-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 11:15	070209-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 11:15	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:15	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:15	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 11:15	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 11:15	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 11:15	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 11:15	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 11:15	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 11:15	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 11:15	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 11:15	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 11:15	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:15	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 11:15	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 11:15	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 11:15	070209-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	05-JUL-09 23:33	090705-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	05-JUL-09 23:33	090705-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	05-JUL-09 23:33	090705-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	05-JUL-09 23:33	090705-2
	Thallium	0.347	+/-1	J	0.3	1.0	SOL	MS	05-JUL-09 23:33	090705-2
	Mercury	-0.121	+/-.2	J	0.068	0.2	SOL	AV	13-JUL-09 09:50	071309S2-3
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 12:01	070209-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 12:01	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 12:01	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 12:01	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 12:01	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 12:01	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 12:01	070209-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 12:01	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 12:01	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 12:01	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 12:01	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 12:01	070209-1
	Potassium	91.92	+/-250	J	64.0	250	SOL	P	02-JUL-09 12:01	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 12:01	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 12:01	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 12:01	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 12:01	070209-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	06-JUL-09 00:03	090705-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	06-JUL-09 00:03	090705-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	06-JUL-09 00:03	090705-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	06-JUL-09 00:03	090705-2
	Thallium	0.322	+/-1	J	0.3	1.0	SOL	MS	06-JUL-09 00:03	090705-2
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 09:56	071309S2-3
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 12:30	070209-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 12:30	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 12:30	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 12:30	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 12:30	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 12:30	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 12:30	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 12:30	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 12:30	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 12:30	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 12:30	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 12:30	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 12:30	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 12:30	070209-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 12:30	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 12:30	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 12:30	070209-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	06-JUL-09 00:22	090705-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	06-JUL-09 00:22	090705-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	06-JUL-09 00:22	090705-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	06-JUL-09 00:22	090705-2
	Thallium	0.564	+/-1	J	0.3	1.0	SOL	MS	06-JUL-09 00:22	090705-2
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:20	071309S2-3
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 13:49	070209-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 13:49	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 13:49	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 13:49	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 13:49	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 13:49	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 13:49	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 13:49	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 13:49	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 13:49	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 13:49	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 13:49	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 13:49	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 13:49	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 13:49	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 13:49	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 13:49	070209-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	06-JUL-09 01:17	090705-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	06-JUL-09 01:17	090705-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	06-JUL-09 01:17	090705-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	06-JUL-09 01:17	090705-2

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	06-JUL-09 01:17	090705-2
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 10:44	071309S2-3
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 14:16	070209-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 14:16	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 14:16	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 14:16	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 14:16	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 14:16	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 14:16	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 14:16	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 14:16	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 14:16	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 14:16	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 14:16	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 14:16	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 14:16	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 14:16	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 14:16	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 14:16	070209-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	06-JUL-09 02:13	090705-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	06-JUL-09 02:13	090705-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	06-JUL-09 02:13	090705-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	06-JUL-09 02:13	090705-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	06-JUL-09 02:13	090705-2
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:08	071309S2-3
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 15:18	070209-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 15:18	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 15:18	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 15:18	070209-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2498

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	02–JUL–09 15:18	070209–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	02–JUL–09 15:18	070209–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	02–JUL–09 15:18	070209–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	02–JUL–09 15:18	070209–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	02–JUL–09 15:18	070209–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	02–JUL–09 15:18	070209–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	02–JUL–09 15:18	070209–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	02–JUL–09 15:18	070209–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	02–JUL–09 15:18	070209–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 15:18	070209–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	02–JUL–09 15:18	070209–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 15:18	070209–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	02–JUL–09 15:18	070209–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	06–JUL–09 03:02	090705–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	06–JUL–09 03:02	090705–2
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	06–JUL–09 03:02	090705–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	06–JUL–09 03:02	090705–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	06–JUL–09 03:02	090705–2
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	13–JUL–09 11:31	071309S2–3
CCB06										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	02–JUL–09 16:20	070209–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	02–JUL–09 16:20	070209–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 16:20	070209–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	02–JUL–09 16:20	070209–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	02–JUL–09 16:20	070209–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	02–JUL–09 16:20	070209–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	02–JUL–09 16:20	070209–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	02–JUL–09 16:20	070209–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	02–JUL–09 16:20	070209–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	02–JUL–09 16:20	070209–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	02–JUL–09 16:20	070209–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 16:20	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 16:20	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 16:20	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 16:20	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 16:20	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 16:20	070209-1
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	13-JUL-09 11:55	071309S2-3
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-JUL-09 17:16	070209-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 17:16	070209-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 17:16	070209-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 17:16	070209-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 17:16	070209-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 17:16	070209-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-JUL-09 17:16	070209-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-JUL-09 17:16	070209-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-JUL-09 17:16	070209-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-JUL-09 17:16	070209-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-JUL-09 17:16	070209-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-JUL-09 17:16	070209-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-JUL-09 17:16	070209-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 17:16	070209-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-JUL-09 17:16	070209-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-JUL-09 17:16	070209-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-JUL-09 17:16	070209-1

METALS
–3b–
PREPARATION BLANK SUMMARY

SDG NO. 09–2498

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201871688								
	Aluminum	6530	ug/Kg	+/–19193.858	U	P	6530	19200
	Antimony	317	ug/Kg	+/–959.693	U	P	317	960
	Barium	96	ug/Kg	+/–479.846	U	P	96	480
	Cadmium	96	ug/Kg	+/–479.846	U	P	96	480
	Calcium	7680	ug/Kg	+/–23992.322	U	P	7680	24000
	Chromium	144	ug/Kg	+/–479.846	U	P	144	480
	Cobalt	144	ug/Kg	+/–479.846	U	P	144	480
	Copper	288	ug/Kg	+/–959.693	U	P	288	960
	Iron	9160	ug/Kg	+/–23992.322	J	P	7680	24000
	Lead	240	ug/Kg	+/–959.693	U	P	240	960
	Magnesium	8160	ug/Kg	+/–28790.787	U	P	8160	28800
	Manganese	192	ug/Kg	+/–959.693	U	P	192	960
	Potassium	6140	ug/Kg	+/–23992.322	U	P	6140	24000
	Silver	96	ug/Kg	+/–479.846	U	P	96	480
	Sodium	6720	ug/Kg	+/–23992.322	U	P	6720	24000
	Vanadium	96	ug/Kg	+/–479.846	U	P	96	480
	Zinc	317	ug/Kg	+/–959.693	U	P	317	960
1201871718								
	Arsenic	195	ug/kg	+/–976.563	U	MS	195	977
	Beryllium	19.5	ug/kg	+/–97.656	U	MS	19.5	97.7
	Nickel	97.7	ug/kg	+/–390.625	U	MS	97.7	391
	Selenium	488	ug/kg	+/–976.563	U	MS	488	977
	Thallium	58.6	ug/kg	+/–195.313	U	MS	58.6	195
1201873031								
	Mercury	3.52	ug/kg	+/–10.345	U	AV	3.52	10.3

METALS
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Interference Check Sample

SDG No: 09-2498

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	511000	ug/L	500000	ug/L	102	80.0 - 120.0	02-JUL-09 11:29	070209-1
	Antimony	8.24	ug/L					02-JUL-09 11:29	070209-1
	Barium	-6.06	ug/L					02-JUL-09 11:29	070209-1
	Cadmium	-4.22	ug/L					02-JUL-09 11:29	070209-1
	Calcium	483000	ug/L	500000	ug/L	96.7	80.0 - 120.0	02-JUL-09 11:29	070209-1
	Chromium	2.19	ug/L					02-JUL-09 11:29	070209-1
	Cobalt	-1.58	ug/L					02-JUL-09 11:29	070209-1
	Copper	0.183	ug/L					02-JUL-09 11:29	070209-1
	Iron	185000	ug/L	200000	ug/L	92.3	80.0 - 120.0	02-JUL-09 11:29	070209-1
	Lead	-14.1	ug/L					02-JUL-09 11:29	070209-1
	Magnesium	480000	ug/L	500000	ug/L	95.9	80.0 - 120.0	02-JUL-09 11:29	070209-1
	Manganese	11.6	ug/L					02-JUL-09 11:29	070209-1
	Potassium	-134.0	ug/L					02-JUL-09 11:29	070209-1
	Silver	0.151	ug/L					02-JUL-09 11:29	070209-1
	Sodium	43.2	ug/L					02-JUL-09 11:29	070209-1
	Vanadium	-5.3	ug/L					02-JUL-09 11:29	070209-1
	Zinc	-7.8	ug/L					02-JUL-09 11:29	070209-1
ICSAB01									
	Aluminum	501000	ug/L	500000	ug/L	100	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Antimony	561	ug/L	500	ug/L	112	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Barium	502	ug/L	500	ug/L	100	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Cadmium	481	ug/L	500	ug/L	96.2	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Calcium	468000	ug/L	500000	ug/L	93.7	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Chromium	498	ug/L	500	ug/L	99.6	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Cobalt	470	ug/L	500	ug/L	94.1	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Copper	569	ug/L	500	ug/L	114	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Iron	182000	ug/L	200000	ug/L	91.1	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Lead	470	ug/L	500	ug/L	94	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Magnesium	471000	ug/L	500000	ug/L	94.2	80.0 - 120.0	02-JUL-09 11:35	070209-1

METALS
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Interference Check Sample

SDG No: 09-2498

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	504	ug/L	500	ug/L	101	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Potassium	5170	ug/L	5000	ug/L	103	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Silver	285	ug/L	250	ug/L	114	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Sodium	5250	ug/L	5000	ug/L	105	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Vanadium	530	ug/L	500	ug/L	106	80.0 - 120.0	02-JUL-09 11:35	070209-1
	Zinc	498	ug/L	500	ug/L	99.7	80.0 - 120.0	02-JUL-09 11:35	070209-1

METALS
–4–
Interference Check Sample

SDG No: 09–2498

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	0.918	ug/L					05–JUL–09 23:45	090705–2
	Beryllium	0.066	ug/L					05–JUL–09 23:45	090705–2
	Nickel	2.94	ug/L					05–JUL–09 23:45	090705–2
	Selenium	–1.04	ug/L					05–JUL–09 23:45	090705–2
	Thallium	0.033	ug/L					05–JUL–09 23:45	090705–2
ICSAB01									
	Arsenic	20.2	ug/L	20	ug/L	101	80.0 – 120.0	05–JUL–09 23:51	090705–2
	Beryllium	19.2	ug/L	20	ug/L	96	80.0 – 120.0	05–JUL–09 23:51	090705–2
	Nickel	21.9	ug/L	22.7	ug/L	96.3	80.0 – 120.0	05–JUL–09 23:51	090705–2
	Selenium	19.2	ug/L	20	ug/L	95.9	80.0 – 120.0	05–JUL–09 23:51	090705–2
	Thallium	20.6	ug/L	20	ug/L	103	80.0 – 120.0	05–JUL–09 23:51	090705–2

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2498 **Client ID** CAMO-09-10375S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 96.7

Sample ID: 232504001 **Spike ID:** 1201871691

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		5410000		2370000		503000	603	N/A	P
Antimony	ug/Kg	75-125	45600		334	U	50300	90.6		P
Barium	ug/Kg	75-125	70900		21900		50300	97.4		P
Cadmium	ug/Kg	75-125	47200		101	U	50300	93.9		P
Calcium	ug/Kg	75-125	1390000		819000		503000	113		P
Chromium	ug/Kg	75-125	53800		6180		50300	94.7		P
Cobalt	ug/Kg	75-125	46100		886		50300	89.8		P
Copper	ug/Kg	75-125	52900		2570		50300	100		P
Iron	ug/Kg		10900000		8610000		503000	459	N/A	P
Lead	ug/Kg	75-125	52600		5170		50300	94.2		P
Magnesium	ug/Kg	75-125	1140000		366000		503000	155	N	P
Manganese	ug/Kg		264000		229000		50300	70.4	N/A	P
Potassium	ug/Kg	75-125	926000		288000		503000	127	N	P
Silver	ug/Kg	75-125	48400		436	J	50300	95.3		P
Sodium	ug/Kg	75-125	550000		70700		503000	95.3		P
Vanadium	ug/Kg	75-125	54000		5770		50300	95.8		P
Zinc	ug/Kg	75-125	92100		39300		50300	105		P

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2498 **Client ID** CAMO-09-10375SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 96.7

Sample ID: 232504001 **Spike ID:** 1201871693

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		5920000		2370000		512000	693	N/A	P
Antimony	ug/Kg	75-125	46700		334	U	51200	91.2		P
Barium	ug/Kg	75-125	88500		21900		51200	130	N	P
Cadmium	ug/Kg	75-125	49100		101	U	51200	95.9		P
Calcium	ug/Kg	75-125	1580000		819000		512000	148	N	P
Chromium	ug/Kg	75-125	55600		6180		51200	96.5		P
Cobalt	ug/Kg	75-125	48600		886		51200	93.2		P
Copper	ug/Kg	75-125	56000		2570		51200	104		P
Iron	ug/Kg		11900000		8610000		512000	641	N/A	P
Lead	ug/Kg	75-125	56200		5170		51200	99.7		P
Magnesium	ug/Kg	75-125	1340000		366000		512000	189	N	P
Manganese	ug/Kg		583000		229000		51200	692	N/A	P
Potassium	ug/Kg	75-125	938000		288000		512000	127	N	P
Silver	ug/Kg	75-125	50700		436	J	51200	98.2		P
Sodium	ug/Kg	75-125	575000		70700		512000	98.4		P
Vanadium	ug/Kg	75-125	59000		5770		51200	104		P
Zinc	ug/Kg	75-125	96700		39300		51200	112		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2498 **Client ID** CAMO-09-10375S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 96.7

Sample ID: 232504001 **Spike ID:** 1201871721

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	7690		1290		8000	80		MS
Beryllium	ug/kg	75-125	4690		483		5000	84.1		MS
Nickel	ug/kg	75-125	6780		2510		5000	85.3		MS
Selenium	ug/kg	75-125	1640		498	U	2000	66.3	N	MS
Thallium	ug/kg	75-125	8930		98.5	J	10000	88.3		MS

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2498 **Client ID** CAMO--09-10375SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 96.7

Sample ID: 232504001 **Spike ID:** 1201871723

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	7840		1290		8050	81.4		MS
Beryllium	ug/kg	75-125	4730		483		5030	84.4		MS
Nickel	ug/kg	75-125	6570		2510		5030	80.8		MS
Selenium	ug/kg	75-125	1670		498	U	2010	67.4	N	MS
Thallium	ug/kg	75-125	8810		98.5	J	10100	86.6		MS

METALS
-5a-

Matrix Spike Summary

SDG NO. 09-2498 **Client ID** CAMO-09-6519S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 79

Sample ID: 232509001 **Spike ID:** 1201873034

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	251		127		135	92		AV

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO.	09-2498	**Client ID**	CAMO-09-6519SD
Contract:	LANL01004	**Level:**	Low
Matrix:	SOIL	**% Solids:**	79
Sample ID:	232509001	**Spike ID:**	1201873037

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	275		127		142	105		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2498

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10375D

Sample ID: 232504001 **Duplicate ID:** 1201871690 **Percent Solids for Dup:** 96.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	2370000		2310000		2.68		P
Antimony	ug/Kg		334	U	333	U			P
Barium	ug/Kg	+/–20%	21900		24200		9.97		P
Cadmium	ug/Kg		101	U	101	U			P
Calcium	ug/Kg	+/–20%	819000		951000		14.9		P
Chromium	ug/Kg	+/–20%	6180		6250		1.06		P
Cobalt	ug/Kg	+/–505	886		870		1.75		P
Copper	ug/Kg	+/–1010	2570		3090		18.1		P
Iron	ug/Kg	+/–20%	8610000		10000000		15.3		P
Lead	ug/Kg	+/–20%	5170		5130		.769		P
Magnesium	ug/Kg	+/–20%	366000		365000		.287		P
Manganese	ug/Kg	+/–20%	229000		246000		7.33		P
Potassium	ug/Kg	+/–20%	288000		286000		.735		P
Silver	ug/Kg	+/–505	436	J	413	J	5.43		P
Sodium	ug/Kg	+/–25300	70700		68900		2.65		P
Vanadium	ug/Kg	+/–20%	5770		6730		15.5		P
Zinc	ug/Kg	+/–20%	39300		42000		6.59		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2498

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10375SD

Sample ID: 1201871691 **Duplicate ID:** 1201871693 **Percent Solids for Dup:** 96.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	5410000		5920000		9.09		P
Antimony	ug/Kg	+/–20	45600		46700		2.43		P
Barium	ug/Kg	+/–20	70900		88500		22.1	*	P
Cadmium	ug/Kg	+/–20	47200		49100		3.95		P
Calcium	ug/Kg	+/–20	1390000		1580000		12.8		P
Chromium	ug/Kg	+/–20	53800		55600		3.31		P
Cobalt	ug/Kg	+/–20	46100		48600		5.38		P
Copper	ug/Kg	+/–20	52900		56000		5.69		P
Iron	ug/Kg	+/–20	10900000		11900000		8.53		P
Lead	ug/Kg	+/–20	52600		56200		6.71		P
Magnesium	ug/Kg	+/–20	1140000		1340000		15.4		P
Manganese	ug/Kg	+/–20	264000		583000		75.3	*	P
Potassium	ug/Kg	+/–20	926000		938000		1.37		P
Silver	ug/Kg	+/–20	48400		50700		4.76		P
Sodium	ug/Kg	+/–20	550000		575000		4.3		P
Vanadium	ug/Kg	+/–20	54000		59000		8.92		P
Zinc	ug/Kg	+/–20	92100		96700		4.88		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2498

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-10375D

Sample ID: 232504001 **Duplicate ID:** 1201871720 **Percent Solids for Dup:** 96.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-1000	1290		1190		7.79		MS
Beryllium	ug/kg	+/-100	483		494		2.39		MS
Nickel	ug/kg	+/-20%	2510		2490		.557		MS
Selenium	ug/kg		498	U	500	U			MS
Thallium	ug/kg		98.5	J	60	U	200		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2498

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–10375SD

Sample ID: 1201871721 **Duplicate ID:** 1201871723 **Percent Solids for Dup:** 96.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/–20	7690		7840		1.9		MS
Beryllium	ug/kg	+/–20	4690		4730		.816		MS
Nickel	ug/kg	+/–20	6780		6570		3.07		MS
Selenium	ug/kg	+/–20	1640		1670		1.86		MS
Thallium	ug/kg	+/–20	8930		8810		1.39		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2498

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-6519D

Sample ID: 232509001 **Duplicate ID:** 1201873033 **Percent Solids for Dup:** 79

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20%	127		68.7		59.5	*	AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2498

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–6519SD

Sample ID: 1201873034 **Duplicate ID:** 1201873037 **Percent Solids for Dup:** 79

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/–20	251		275		9.29		AV

METALS
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Laboratory Control Sample Summary

SDG NO. 09-2498

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871689								
	Aluminum	ug/Kg	7290000	6650000		91.2	63.5-118	P
	Antimony	ug/Kg	121000	102000		84.3	39.1-132.1	P
	Barium	ug/Kg	475000	455000		95.7	82-110.6	P
	Cadmium	ug/Kg	116000	110000		94.5	77.9-115.2	P
	Calcium	ug/Kg	3720000	3510000		94.5	77.4-111.7	P
	Chromium	ug/Kg	84000	73300		87.2	66.6-116.5	P
	Cobalt	ug/Kg	83000	78800		95	79-113.9	P
	Copper	ug/Kg	105000	99900		95.1	77.6-112	P
	Iron	ug/Kg	20000000	19300000		96.7	51.5-145.5	P
	Lead	ug/Kg	161000	161000		100	83.1-114.7	P
	Magnesium	ug/Kg	2980000	2920000		98	81-114.3	P
	Manganese	ug/Kg	398000	358000		89.9	76.6-106.6	P
	Potassium	ug/Kg	2390000	2140000		89.8	72.2-111.1	P
	Silver	ug/Kg	133000	128000		96.3	81.7-115.7	P
	Sodium	ug/Kg	614000	564000		91.9	71.5-109.3	P
	Vanadium	ug/Kg	166000	144000		86.8	65-118.6	P
	Zinc	ug/Kg	195000	190000		97.7	82.8-111.9	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2498

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871719								
	Arsenic	ug/kg	255000	256000		100	83-120	MS
	Beryllium	ug/kg	86400	89800		104	81.2-126.8	MS
	Nickel	ug/kg	101000	102000		101	83.3-121.4	MS
	Selenium	ug/kg	171000	184000		107	80.2-125.9	MS
	Thallium	ug/kg	203000	225000		111	78-123.2	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2498

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873032								
	Mercury	ug/kg	5150	5110		99.1	71.6-128.3	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2498 **Client ID** CAMO-09-10375L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232504001 **Serial Dilution ID:** 1201871692

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	23500		24100		2.34		10	P
Antimony	3.3	U	16.5	U				P
Barium	216		219		1.16		10	P
Cadmium	1	U	5	U				P
Calcium	8090		8400		3.83		10	P
Chromium	61.1		67		9.66			P
Cobalt	8.75		10.8	J	23.4			P
Copper	25.4		23.6	J	7.28			P
Iron	85100		90000		5.76		10	P
Lead	51.1		52		1.76			P
Magnesium	3610		3580		.831			P
Manganese	2260		2380		5.31		10	P
Potassium	2840		2780		2.11			P
Silver	4.3	J	5	U	100			P
Sodium	699		715	J	2.29			P
Vanadium	57		61.5		7.89		10	P
Zinc	388		403		3.87		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2498 **Client ID** CAMO-09-10375L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232504001 **Serial Dilution ID:** 1201871722

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	6.45		7.95	J	23.3			MS
Beryllium	2.42		2.42	J	0			MS
Nickel	12.6		13.3		5.16			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.494	J	1.5	U	100			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2498 **Client ID** CAMO-09-6519L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232509001 **Serial Dilution ID:** 1201873036

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	1.79		1.29		27.9	E	10	AV

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09–2498 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881342						
1201871688	MB for batch 881342	MB	S	30–JUN–09	.521g	50mL	
1201871689	LCS for batch 881342	LCS	S	30–JUN–09	.503g	50mL	
1201871691	CAMO–09–10375S	MS	S	30–JUN–09	.514g	50mL	
1201871693	CAMO–09–10375SD	MSD	S	30–JUN–09	.505g	50mL	
1201871690	CAMO–09–10375D	DUP	S	30–JUN–09	.512g	50mL	
232504001	CAMO–09–10375	SAMPLE	S	30–JUN–09	.511g	50mL	
232504002	CAMO–09–10376	SAMPLE	S	30–JUN–09	.518g	50mL	
232504003	CAMO–09–10373	SAMPLE	S	30–JUN–09	.5g	50mL	
232504004	CAMO–09–10367	SAMPLE	S	30–JUN–09	.5g	50mL	
232504005	CAMO–09–10377	SAMPLE	S	30–JUN–09	.5g	50mL	
232504006	CAMO–09–10370	SAMPLE	S	30–JUN–09	.507g	50mL	
232504007	CAMO–09–10374	SAMPLE	S	30–JUN–09	.51g	50mL	
232504008	CAMO–09–10371	SAMPLE	S	30–JUN–09	.508g	50mL	
232504009	CAMO–09–10368	SAMPLE	S	30–JUN–09	.518g	50mL	
232504010	CAMO–09–10369	SAMPLE	S	30–JUN–09	.508g	50mL	
232504011	CAMO–09–10366	SAMPLE	S	30–JUN–09	.509g	50mL	
232504012	CAMO–09–10372	SAMPLE	S	30–JUN–09	.517g	50mL	
232504013	CAMO–09–10378	SAMPLE	S	30–JUN–09	.525g	50mL	
232504014	CAMO–09–10379	SAMPLE	S	30–JUN–09	.501g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2498 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881359						
1201871718	MB for batch 881359	MB	S	01-JUL-09	.512g	50mL	
1201871719	LCS for batch 881359	LCS	S	01-JUL-09	.509g	50mL	
1201871721	CAMO-09-10375S	MS	S	01-JUL-09	.517g	50mL	
1201871723	CAMO-09-10375SD	MSD	S	01-JUL-09	.514g	50mL	
1201871720	CAMO-09-10375D	DUP	S	01-JUL-09	.517g	50mL	
232504001	CAMO-09-10375	SAMPLE	S	01-JUL-09	.519g	50mL	
232504002	CAMO-09-10376	SAMPLE	S	01-JUL-09	.501g	50mL	
232504003	CAMO-09-10373	SAMPLE	S	01-JUL-09	.521g	50mL	
232504004	CAMO-09-10367	SAMPLE	S	01-JUL-09	.521g	50mL	
232504005	CAMO-09-10377	SAMPLE	S	01-JUL-09	.518g	50mL	
232504006	CAMO-09-10370	SAMPLE	S	01-JUL-09	.513g	50mL	
232504007	CAMO-09-10374	SAMPLE	S	01-JUL-09	.524g	50mL	
232504008	CAMO-09-10371	SAMPLE	S	01-JUL-09	.501g	50mL	
232504009	CAMO-09-10368	SAMPLE	S	01-JUL-09	.509g	50mL	
232504010	CAMO-09-10369	SAMPLE	S	01-JUL-09	.5g	50mL	
232504011	CAMO-09-10366	SAMPLE	S	01-JUL-09	.511g	50mL	
232504012	CAMO-09-10372	SAMPLE	S	01-JUL-09	.509g	50mL	
232504013	CAMO-09-10378	SAMPLE	S	01-JUL-09	.5g	50mL	
232504014	CAMO-09-10379	SAMPLE	S	01-JUL-09	.521g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2498 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881912						
1201873031	MB for batch 881912	MB	S	10-JUL-09	.58g	30mL	
1201873032	LCS for batch 881912	LCS	S	10-JUL-09	.201g	30mL	
1201873034	CAMO-09-6519S	MS	S	10-JUL-09	.561g	30mL	
1201873037	CAMO-09-6519SD	MSD	S	10-JUL-09	.535g	30mL	
1201873033	CAMO-09-6519D	DUP	S	10-JUL-09	.519g	30mL	
232504001	CAMO-09-10375	SAMPLE	S	10-JUL-09	.582g	30mL	
232504002	CAMO-09-10376	SAMPLE	S	10-JUL-09	.586g	30mL	
232504003	CAMO-09-10373	SAMPLE	S	10-JUL-09	.581g	30mL	
232504004	CAMO-09-10367	SAMPLE	S	10-JUL-09	.542g	30mL	
232504005	CAMO-09-10377	SAMPLE	S	10-JUL-09	.599g	30mL	
232504006	CAMO-09-10370	SAMPLE	S	10-JUL-09	.573g	30mL	
232504007	CAMO-09-10374	SAMPLE	S	10-JUL-09	.521g	30mL	
232504008	CAMO-09-10371	SAMPLE	S	10-JUL-09	.51g	30mL	
232504009	CAMO-09-10368	SAMPLE	S	10-JUL-09	.521g	30mL	
232504010	CAMO-09-10369	SAMPLE	S	10-JUL-09	.56g	30mL	
232504011	CAMO-09-10366	SAMPLE	S	10-JUL-09	.534g	30mL	
232504012	CAMO-09-10372	SAMPLE	S	10-JUL-09	.508g	30mL	
232504013	CAMO-09-10378	SAMPLE	S	10-JUL-09	.597g	30mL	
232504014	CAMO-09-10379	SAMPLE	S	10-JUL-09	.546g	30mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 05-JUL-09 **End Date:** 06-JUL-09

Client Sdg: 09-2498
Method MS
Data File: 090705-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	23:09			X		X											X		X			X		
S10	1	23:15			X		X											X		X			X		
S100	1	23:21			X		X											X		X			X		
ICV01	1	23:27			X		X											X		X			X		
ICB01	1	23:33			X		X											X		X			X		
CRDL01	1	23:39			X		X											X		X			X		
ICSA01	1	23:45			X		X											X		X			X		
ICSAB01	1	23:51			X		X											X		X			X		
CCV01	1	23:57			X		X											X		X			X		
CCB01	1	00:03			X		X											X		X			X		
LR01	1	00:09			X		X											X		X			X		
CCV02	1	00:15			X		X											X		X			X		
CCB02	1	00:22			X		X											X		X			X		
1201871718	2	00:28			X		X											X		X			X		
1201871719	40	00:34			X		X											X		X			X		
232504001	2	00:40			X		X											X		X			X		
1201871720	2	00:46			X		X											X		X			X		
1201871721	2	00:52			X		X											X		X			X		
1201871723	2	00:59			X		X											X		X			X		
1201871722	10	01:05			X		X											X		X			X		
CCV03	1	01:11			X		X											X		X			X		
CCB03	1	01:17			X		X											X		X			X		
232504002	2	01:23			X		X											X		X			X		
232504003	2	01:29			X		X											X		X			X		
232504004	2	01:36			X		X											X		X			X		
232504005	2	01:42			X		X											X		X			X		
232504006	2	01:48			X		X											X		X			X		
232504007	2	01:54			X		X											X		X			X		
232504008	2	02:00			X		X											X		X			X		
CCV04	1	02:06			X		X											X		X			X		
CCB04	1	02:13			X		X											X		X			X		
232504009	2	02:19			X		X											X		X			X		
232504010	2	02:25			X		X											X		X			X		
232504011	2	02:31			X		X											X		X			X		
232504012	2	02:37			X		X											X		X			X		
232504013	2	02:43			X		X											X		X			X		
232504014	2	02:50			X		X											X		X			X		
CCV05	1	02:56			X		X											X		X			X		
CCB05	1	03:02			X		X											X		X			X		

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 02–JUL–09 **End Date:** 02–JUL–09

Client Sdg: 09–2498
Method P
Data File: 070209–1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	10:36	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	10:43		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	10:49	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	10:56	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	11:03	X						X				X		X							X			
ICV01	1	11:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	11:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	11:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	11:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	11:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	11:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	11:47	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV01	1	11:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	12:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR03	1	12:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR04	1	12:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV02	1	12:23	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	12:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	12:40																							
ZZZZZZ	1	12:47																							
ZZZZZZ	1	12:54																							
ZZZZZZ	1	13:01																							
ZZZZZZ	1	13:08																							
ZZZZZZ	1	13:14																							
ZZZZZZ	1	13:21																							
ZZZZZZ	1	13:28																							
ZZZZZZ	5	13:35																							
CCV03	1	13:42	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	13:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV04	1	14:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	14:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201871688	1	14:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201871689	2	14:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504001	1	14:36	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201871690	1	14:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201871691	1	14:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201871693	1	14:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201871692	5	15:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV05	1	15:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	15:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
232504002	1	15:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504003	1	15:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504004	1	15:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504005	1	15:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504006	1	15:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504007	1	16:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504008	1	16:07	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV06	1	16:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	16:20	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504009	1	16:27	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504010	1	16:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504011	1	16:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504012	1	16:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504013	1	16:55	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232504014	1	17:02	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV07	1	17:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	17:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 13-JUL-09 **End Date:** 13-JUL-09

Client Sdg: 09-2498
Method AV
Data File: 071309S2-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:36															X								
S0.2	1	09:38															X								
S0.5	1	09:40															X								
S2.0	1	09:42															X								
S5.0	1	09:44															X								
S10	1	09:46															X								
ICV01	1	09:48															X								
ICB01	1	09:50															X								
CRDL01	1	09:52															X								
CCV01	1	09:54															X								
CCB01	1	09:56															X								
ZZZZZZ	1	09:58																							
ZZZZZZ	10	10:00																							
ZZZZZZ	1	10:02																							
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
ZZZZZZ	1	10:08																							
ZZZZZZ	1	10:10																							
ZZZZZZ	1	10:12																							
ZZZZZZ	1	10:14																							
ZZZZZZ	5	10:16																							
CCV02	1	10:18															X								
CCB02	1	10:20															X								
ZZZZZZ	1	10:22																							
ZZZZZZ	1	10:24																							
ZZZZZZ	1	10:26																							
ZZZZZZ	1	10:28																							
ZZZZZZ	1	10:30																							
ZZZZZZ	1	10:32																							
ZZZZZZ	1	10:34																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:38																							
ZZZZZZ	1	10:40																							
CCV03	1	10:42															X								
CCB03	1	10:44															X								
ZZZZZZ	1	10:46																							
ZZZZZZ	1	10:48																							
ZZZZZZ	1	10:50																							
ZZZZZZ	1	10:52																							
1201873031	1	10:54															X								

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																							
1201873032	10	10:56														X									
232504001	1	10:58														X									
232504002	1	11:00														X									
232504003	1	11:02														X									
232504004	1	11:04														X									
CCV04	1	11:06														X									
CCB04	1	11:08														X									
232504005	1	11:10														X									
232504006	1	11:12														X									
232504007	1	11:14														X									
232504008	1	11:16														X									
232504009	1	11:18														X									
232504010	1	11:20														X									
232504011	1	11:22														X									
232504012	1	11:24														X									
232504013	1	11:26														X									
232504014	1	11:27														X									
CCV05	1	11:29														X									
CCB05	1	11:31														X									
ZZZZZZ	1	11:33																							
1201873033	1	11:35														X									
1201873034	1	11:37														X									
1201873037	1	11:39														X									
1201873036	5	11:41														X									
ZZZZZZ	1	11:43																							
ZZZZZZ	1	11:45																							
ZZZZZZ	1	11:47																							
ZZZZZZ	1	11:49																							
ZZZZZZ	1	11:51																							
CCV06	1	11:53														X									
CCB06	1	11:55														X									

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2498

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
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Instrument Detection Limits

SDG NO. 09–2498

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15–JUN–09

	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
MERCURY				
SOLID	Mercury		0.068	.2

METALS
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Instrument Detection Limits

SDG NO. 09-2498

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2498

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS5

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2498

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

Raw Data

Spectra

Method: Hg_ReAlign
Result: 071409

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

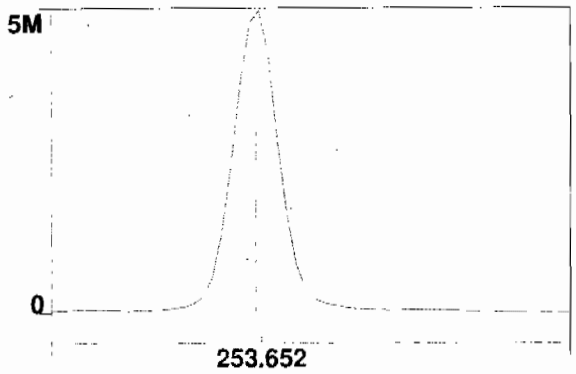

Intensity: 5172900.3 cps
Conc:

1

7/2/2009 10:35:46 Hg ReAlign... Actual peak offset (nm): -0.009
Drift (nm): 0.000 Slit adjustment: 0

Analysis Begun

Start Time: 7/2/2009 10:36:43 **Plasma On Time:** 6/29/2009 15:26:31
Logged In Analyst: Optima3 **Technique:** ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601**Autosampler Model:** S10

Sample Information File: C:\pe\Optima3\Sample Information\070209.sif
Batch ID:
Results Data Set: 070209
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX **Method Last Saved:** 7/1/2009 10:29:21
IEC File: 040209.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 **Autosampler Location:** 8
Sample ID: S0 **Date Collected:** 7/2/2009 10:36:44
Analyst: **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

	Net	Corrected	Calib.	Analysis

Repl#	Analyte	Intensity	Intensity	Conc.	Units	Time
1	Sc Radial	6897.7	6897.7	99.4	%	10:38:37
1	Y RADIAL	6336.8	6336.8	99.65	%	10:38:37
1	Al 396.153Radial†	-70.1	-70.5	[0.00]	ug/L	10:38:37
1	Ca 317.933Radial†	27.5	27.6	[0.00]	ug/L	10:38:57
1	Fe 238.204 Radial†	38.1	38.4	[0.00]	ug/L	10:38:57
1	K 766.490 Radial†	2778.7	2795.2	[0.00]	ug/L	10:38:37
1	Mg 279.077 IEC†	5.0	5.0	[0.00]	ug/L	10:38:57
1	Na 589.592 Radial†	-296.7	-298.5	[0.00]	ug/L	10:38:37
1	Sr 421.552†	-110.8	-111.4	[0.00]	ug/L	10:38:37
1	Sc 361.383	746324.2	746324.2	100.22	%	10:39:54
1	Y 371.029	582929.7	582929.7	100.26	%	10:39:54
1	Ag 328.068†	687.7	686.1	[0.00]	ug/L	10:39:54
1	As 188.979†	-39.0	-38.9	[0.00]	ug/L	10:40:14
1	B 249.677†	-918.1	-916.0	[0.00]	ug/L	10:39:54
1	Ba 233.527†	19.9	19.8	[0.00]	ug/L	10:40:14
1	Be 313.107†	-4762.1	-4751.5	[0.00]	ug/L	10:39:54
1	Cd 226.502†	-302.3	-301.7	[0.00]	ug/L	10:40:14
1	Co 228.616†	-94.3	-94.1	[0.00]	ug/L	10:40:14
1	Cr 267.716†	-117.8	-117.5	[0.00]	ug/L	10:39:54
1	Cu 324.752†	5753.0	5740.1	[0.00]	ug/L	10:39:54
1	Mn 257.610†	707.5	705.9	[0.00]	ug/L	10:39:54
1	Mo 202.031†	9.3	9.3	[0.00]	ug/L	10:40:14
1	Ni 231.604†	154.4	154.1	[0.00]	ug/L	10:40:14
1	P 214.914†	303.4	302.8	[0.00]	ug/L	10:40:14
1	Pb 220.353†	-13.5	-13.5	[0.00]	ug/L	10:40:14
1	S 181.975 Axial†	138.0	137.7	[0.00]	ug/L	10:40:14
1	Sb 206.836†	59.0	58.8	[0.00]	ug/L	10:40:14
1	Se 196.026†	-37.4	-37.4	[0.00]	ug/L	10:40:14
1	Si 251.611†	456.5	455.5	[0.00]	ug/L	10:40:14
1	Sn 189.927†	17.5	17.5	[0.00]	ug/L	10:40:14
1	Ti 334.940†	-1556.2	-1552.7	[0.00]	ug/L	10:39:54
1	Tl 190.801†	-61.1	-61.0	[0.00]	ug/L	10:40:14
1	U 409.014†	-5280.3	-5268.4	[0.00]	ug/L	10:39:54
1	V 292.402†	-1593.6	-1590.0	[0.00]	ug/L	10:39:54
1	Zn 213.857†	968.0	965.9	[0.00]	ug/L	10:40:14
1	SiO2†	490.0	488.9	[0.00]	ug/L	10:41:10
2	Sc Radial	6906.7	6906.7	99.5	%	10:39:02
2	Y RADIAL	6310.5	6310.5	99.24	%	10:39:02
2	Al 396.153Radial†	-63.5	-63.8	[0.00]	ug/L	10:39:02
2	Ca 317.933Radial†	26.6	26.7	[0.00]	ug/L	10:39:22
2	Fe 238.204 Radial†	39.1	39.2	[0.00]	ug/L	10:39:22
2	K 766.490 Radial†	2751.4	2764.2	[0.00]	ug/L	10:39:02
2	Mg 279.077 IEC†	3.6	3.7	[0.00]	ug/L	10:39:22
2	Na 589.592 Radial†	-284.4	-285.8	[0.00]	ug/L	10:39:02
2	Sr 421.552†	-12.3	-12.4	[0.00]	ug/L	10:39:02
2	Sc 361.383	740241.2	740241.2	99.407	%	10:40:20
2	Y 371.029	578063.6	578063.6	99.426	%	10:40:20
2	Ag 328.068†	700.7	704.9	[0.00]	ug/L	10:40:20
2	As 188.979†	-35.9	-36.1	[0.00]	ug/L	10:40:40
2	B 249.677†	-824.5	-829.4	[0.00]	ug/L	10:40:20
2	Ba 233.527†	25.2	25.3	[0.00]	ug/L	10:40:40
2	Be 313.107†	-4766.0	-4794.5	[0.00]	ug/L	10:40:20
2	Cd 226.502†	-304.1	-305.9	[0.00]	ug/L	10:40:40
2	Co 228.616†	-114.1	-114.8	[0.00]	ug/L	10:40:40
2	Cr 267.716†	-59.6	-59.9	[0.00]	ug/L	10:40:20
2	Cu 324.752†	5725.4	5759.6	[0.00]	ug/L	10:40:20
2	Mn 257.610†	715.3	719.6	[0.00]	ug/L	10:40:20
2	Mo 202.031†	3.2	3.2	[0.00]	ug/L	10:40:40
2	Ni 231.604†	125.8	126.5	[0.00]	ug/L	10:40:40
2	P 214.914†	292.6	294.4	[0.00]	ug/L	10:40:40
2	Pb 220.353†	-0.3	-0.3	[0.00]	ug/L	10:40:40
2	S 181.975 Axial†	136.1	136.9	[0.00]	ug/L	10:40:40
2	Sb 206.836†	53.5	53.9	[0.00]	ug/L	10:40:40
2	Se 196.026†	-38.0	-38.2	[0.00]	ug/L	10:40:40
2	Si 251.611†	441.8	444.5	[0.00]	ug/L	10:40:40
2	Sn 189.927†	15.1	15.1	[0.00]	ug/L	10:40:40
2	Ti 334.940†	-1539.2	-1548.4	[0.00]	ug/L	10:40:20
2	Tl 190.801†	-52.4	-52.7	[0.00]	ug/L	10:40:40
2	U 409.014†	-5264.8	-5296.2	[0.00]	ug/L	10:40:20
2	V 292.402†	-1730.2	-1740.5	[0.00]	ug/L	10:40:20

2	Zn 213.857†	981.5	987.4	[0.00]	ug/L	10:40:40
2	SiO2†	479.0	481.8	[0.00]	ug/L	10:41:15
3	Sc Radial	7012.1	7012.1	101	%	10:39:27
3	Y RADIAL	6430.0	6430.0	101.1	%	10:39:27
3	Al 396.153Radial†	-78.3	-77.5	[0.00]	ug/L	10:39:27
3	Ca 317.933Radial†	25.1	24.8	[0.00]	ug/L	10:39:47
3	Fe 238.204 Radial†	39.7	39.2	[0.00]	ug/L	10:39:47
3	K 766.490 Radial†	2830.1	2800.5	[0.00]	ug/L	10:39:27
3	Mg 279.077 IEC†	3.2	3.2	[0.00]	ug/L	10:39:47
3	Na 589.592 Radial†	-413.6	-409.3	[0.00]	ug/L	10:39:27
3	Sr 421.552†	-63.7	-63.1	[0.00]	ug/L	10:39:27
3	Sc 361.383	747397.6	747397.6	100.37	%	10:40:45
3	Y 371.029	583214.8	583214.8	100.31	%	10:40:45
3	Ag 328.068†	729.3	726.7	[0.00]	ug/L	10:40:45
3	As 188.979†	-28.0	-27.9	[0.00]	ug/L	10:41:05
3	B 249.677†	-901.8	-898.5	[0.00]	ug/L	10:40:45
3	Ba 233.527†	22.2	22.1	[0.00]	ug/L	10:41:05
3	Be 313.107†	-4826.0	-4808.3	[0.00]	ug/L	10:40:45
3	Cd 226.502†	-273.2	-272.2	[0.00]	ug/L	10:41:05
3	Co 228.616†	-92.9	-92.6	[0.00]	ug/L	10:41:05
3	Cr 267.716†	-116.9	-116.5	[0.00]	ug/L	10:40:45
3	Cu 324.752†	5894.5	5872.9	[0.00]	ug/L	10:40:45
3	Mn 257.610†	730.8	728.1	[0.00]	ug/L	10:40:45
3	Mo 202.031†	0.8	0.8	[0.00]	ug/L	10:41:05
3	Ni 231.604†	129.8	129.3	[0.00]	ug/L	10:41:05
3	P 214.914†	284.5	283.5	[0.00]	ug/L	10:41:05
3	Pb 220.353†	-39.9	-39.7	[0.00]	ug/L	10:41:05
3	S 181.975 Axial†	133.8	133.3	[0.00]	ug/L	10:41:05
3	Sb 206.836†	45.2	45.1	[0.00]	ug/L	10:41:05
3	Se 196.026†	-29.1	-29.0	[0.00]	ug/L	10:41:05
3	Si 251.611†	447.9	446.3	[0.00]	ug/L	10:41:05
3	Sn 189.927†	6.3	6.3	[0.00]	ug/L	10:41:05
3	Ti 334.940†	-1484.8	-1479.3	[0.00]	ug/L	10:40:45
3	Tl 190.801†	-70.0	-69.8	[0.00]	ug/L	10:41:05
3	U 409.014†	-5248.2	-5228.9	[0.00]	ug/L	10:40:45
3	V 292.402†	-1754.5	-1748.0	[0.00]	ug/L	10:40:45
3	Zn 213.857†	1003.6	999.9	[0.00]	ug/L	10:41:05
3	SiO2†	457.5	455.8	[0.00]	ug/L	10:41:21

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	744654.3	3859.36	0.52%	100.00	%
Sc Radial	6938.8	63.61	0.92%	100	%
Y 371.029	581402.7	2895.24	0.50%	100.00	%
Y RADIAL	6359.1	62.76	0.99%	100.0	%
Ag 328.068†	705.9	20.29	2.87%	[0.00]	ug/L
Al 396.153Radial†	-70.6	6.85	9.70%	[0.00]	ug/L
As 188.979†	-34.3	5.69	16.57%	[0.00]	ug/L
B 249.677†	-881.3	45.80	5.20%	[0.00]	ug/L
Ba 233.527†	22.4	2.76	12.29%	[0.00]	ug/L
Be 313.107†	-4784.7	29.64	0.62%	[0.00]	ug/L
Ca 317.933Radial†	26.4	1.42	5.38%	[0.00]	ug/L
Cd 226.502†	-293.2	18.37	6.26%	[0.00]	ug/L
Co 228.616†	-100.5	12.40	12.34%	[0.00]	ug/L
Cr 267.716†	-98.0	32.97	33.65%	[0.00]	ug/L
Cu 324.752†	5790.9	71.69	1.24%	[0.00]	ug/L
Fe 238.204 Radial†	38.9	0.50	1.29%	[0.00]	ug/L
K 766.490 Radial†	2786.7	19.61	0.70%	[0.00]	ug/L
Mg 279.077 IEC†	3.9	0.94	23.84%	[0.00]	ug/L
Mn 257.610†	717.9	11.21	1.56%	[0.00]	ug/L
Mo 202.031†	4.4	4.37	98.78%	[0.00]	ug/L
Na 589.592 Radial†	-331.2	67.95	20.52%	[0.00]	ug/L
Ni 231.604†	136.6	15.19	11.12%	[0.00]	ug/L
P 214.914†	293.5	9.68	3.30%	[0.00]	ug/L
Pb 220.353†	-17.8	20.08	112.62%	[0.00]	ug/L
S 181.975 Axial†	136.0	2.36	1.74%	[0.00]	ug/L
Sb 206.836†	52.6	6.97	13.25%	[0.00]	ug/L
Se 196.026†	-34.8	5.11	14.66%	[0.00]	ug/L
Si 251.611†	448.8	5.92	1.32%	[0.00]	ug/L

Sn 189.927†	13.0	5.90	45.38%	[0.00]	ug/L
Sr 421.552†	-62.3	49.52	79.48%	[0.00]	ug/L
Ti 334.940†	-1526.8	41.18	2.70%	[0.00]	ug/L
Tl 190.801†	-61.2	8.53	13.95%	[0.00]	ug/L
U 409.014†	-5264.5	33.82	0.64%	[0.00]	ug/L
V 292.402†	-1692.9	89.17	5.27%	[0.00]	ug/L
Zn 213.857†	984.4	17.22	1.75%	[0.00]	ug/L
SiO2†	475.5	17.43	3.66%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/2/2009 10:43:31
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7086.2	7086.2	102	%	10:45:28
1	Y RADIAL	6441.4	6441.4	101.3	%	10:45:28
1	K 766.490 Radial†	7537.3	4593.9	[1000]	ug/L	10:45:23
1	Sr 421.552†	32268.5	31659.8	[100]	ug/L	10:45:28
1	Sc 361.383	753276.1	753276.1	101.16	%	10:45:55
1	Y 371.029	586704.3	586704.3	100.91	%	10:45:55
1	Ag 328.068†	19174.2	18248.8	[100]	ug/L	10:45:55
1	As 188.979†	286.6	317.6	[100]	ug/L	10:46:15
1	B 249.677†	3497.7	4339.0	[100]	ug/L	10:45:55
1	Ba 233.527†	15908.8	15704.3	[100]	ug/L	10:45:55
1	Be 313.107†	245384.6	247360.7	[100]	ug/L	10:45:55
1	Cd 226.502†	8632.8	8827.2	[100]	ug/L	10:46:15
1	Co 228.616†	6389.3	6416.7	[100]	ug/L	10:46:15
1	Cr 267.716†	8059.6	8065.4	[100]	ug/L	10:45:55
1	Cu 324.752†	35650.5	29451.6	[100]	ug/L	10:45:55
1	Mn 257.610†	103220.4	101321.1	[100]	ug/L	10:45:55
1	Mo 202.031†	1615.0	1592.1	[100]	ug/L	10:46:15
1	Ni 231.604†	4372.9	4186.2	[100]	ug/L	10:46:15
1	P 214.914†	1427.9	1118.0	[500]	ug/L	10:46:15
1	Pb 220.353†	948.9	955.9	[100]	ug/L	10:46:15
1	S 181.975 Axial†	300.7	161.3	[200]	ug/L	10:46:15
1	Sb 206.836†	424.3	366.8	[100]	ug/L	10:46:15
1	Se 196.026†	191.1	223.7	[100]	ug/L	10:46:15
1	Si 251.611†	18242.3	17584.7	[500]	ug/L	10:45:55
1	Sn 189.927†	669.4	648.7	[100]	ug/L	10:46:15
1	Ti 334.940†	58004.7	58867.6	[100]	ug/L	10:45:55
1	Tl 190.801†	374.5	431.4	[100]	ug/L	10:46:15
1	U 409.014†	-2006.2	3281.3	[100]	ug/L	10:45:55
1	V 292.402†	10423.9	11997.5	[100]	ug/L	10:45:55
1	Zn 213.857†	13350.6	12213.4	[100]	ug/L	10:45:55
1	SiO2†	18128.9	17445.9	[1069.5]	ug/L	10:47:12
2	Sc Radial	7057.7	7057.7	102	%	10:45:38
2	Y RADIAL	6446.8	6446.8	101.4	%	10:45:38
2	K 766.490 Radial†	7556.9	4642.9	[1000]	ug/L	10:45:33
2	Sr 421.552†	32038.7	31561.1	[100]	ug/L	10:45:38
2	Sc 361.383	758233.9	758233.9	101.82	%	10:46:21
2	Y 371.029	590763.7	590763.7	101.61	%	10:46:21
2	Ag 328.068†	19300.5	18249.0	[100]	ug/L	10:46:21
2	As 188.979†	286.2	315.4	[100]	ug/L	10:46:41
2	B 249.677†	3549.5	4367.2	[100]	ug/L	10:46:21
2	Ba 233.527†	15881.4	15574.6	[100]	ug/L	10:46:21
2	Be 313.107†	246067.9	246445.7	[100]	ug/L	10:46:21
2	Cd 226.502†	8539.5	8679.8	[100]	ug/L	10:46:41
2	Co 228.616†	6336.2	6323.3	[100]	ug/L	10:46:41
2	Cr 267.716†	8047.6	8001.4	[100]	ug/L	10:46:21
2	Cu 324.752†	35854.5	29421.5	[100]	ug/L	10:46:21
2	Mn 257.610†	103690.3	101115.4	[100]	ug/L	10:46:21
2	Mo 202.031†	1608.7	1575.5	[100]	ug/L	10:46:41
2	Ni 231.604†	4372.8	4157.9	[100]	ug/L	10:46:41
2	P 214.914†	1406.4	1087.7	[500]	ug/L	10:46:41
2	Pb 220.353†	938.9	939.9	[100]	ug/L	10:46:41
2	S 181.975 Axial†	294.8	153.6	[200]	ug/L	10:46:41
2	Sb 206.836†	430.2	369.9	[100]	ug/L	10:46:41
2	Se 196.026†	190.4	221.9	[100]	ug/L	10:46:41
2	Si 251.611†	18291.3	17514.9	[500]	ug/L	10:46:21
2	Sn 189.927†	653.1	628.4	[100]	ug/L	10:46:41
2	Ti 334.940†	58252.2	58735.7	[100]	ug/L	10:46:21
2	Tl 190.801†	360.7	415.4	[100]	ug/L	10:46:41
2	U 409.014†	-2084.0	3217.8	[100]	ug/L	10:46:21

2	V 292.402†	10429.6	11935.7	[100]	ug/L	10:46:21
2	Zn 213.857†	13335.2	12112.0	[100]	ug/L	10:46:21
2	SiO2†	18069.7	17270.5	[1069.5]	ug/L	10:47:17
3	Sc Radial	7141.8	7141.8	103	%	10:45:48
3	Y RADIAL	6529.1	6529.1	102.7	%	10:45:48
3	K 766.490 Radial†	7576.2	4574.2	[1000]	ug/L	10:45:43
3	Sr 421.552†	32361.4	31504.0	[100]	ug/L	10:45:48
3	Sc 361.383	758172.3	758172.3	101.82	%	10:46:46
3	Y 371.029	590755.2	590755.2	101.61	%	10:46:46
3	Ag 328.068†	19333.0	18282.4	[100]	ug/L	10:46:46
3	As 188.979†	296.2	325.3	[100]	ug/L	10:47:06
3	B 249.677†	3520.9	4339.4	[100]	ug/L	10:46:46
3	Ba 233.527†	16016.4	15708.4	[100]	ug/L	10:46:46
3	Be 313.107†	247177.8	247555.4	[100]	ug/L	10:46:46
3	Cd 226.502†	8583.2	8723.4	[100]	ug/L	10:47:06
3	Co 228.616†	6363.4	6350.5	[100]	ug/L	10:47:06
3	Cr 267.716†	8091.1	8044.8	[100]	ug/L	10:46:46
3	Cu 324.752†	35864.0	29433.7	[100]	ug/L	10:46:46
3	Mn 257.610†	104029.9	101457.1	[100]	ug/L	10:46:46
3	Mo 202.031†	1613.8	1580.6	[100]	ug/L	10:47:06
3	Ni 231.604†	4365.9	4151.5	[100]	ug/L	10:47:06
3	P 214.914†	1408.3	1089.6	[500]	ug/L	10:47:06
3	Pb 220.353†	959.0	959.7	[100]	ug/L	10:47:06
3	S 181.975 Axial†	304.7	163.2	[200]	ug/L	10:47:06
3	Sb 206.836†	420.1	360.0	[100]	ug/L	10:47:06
3	Se 196.026†	198.9	230.1	[100]	ug/L	10:47:06
3	Si 251.611†	18278.1	17503.4	[500]	ug/L	10:46:46
3	Sn 189.927†	666.1	641.3	[100]	ug/L	10:47:06
3	Ti 334.940†	58585.8	59068.1	[100]	ug/L	10:46:46
3	Tl 190.801†	390.6	444.8	[100]	ug/L	10:47:06
3	U 409.014†	-1954.5	3344.9	[100]	ug/L	10:46:46
3	V 292.402†	10573.1	12077.5	[100]	ug/L	10:46:46
3	Zn 213.857†	13433.8	12209.9	[100]	ug/L	10:46:46
3	SiO2†	18205.9	17405.8	[1069.5]	ug/L	10:47:22

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	756560.8	2844.75	0.38%	101.60	%
Sc Radial	7095.2	42.76	0.60%	102	%
Y 371.029	589407.7	2341.22	0.40%	101.38	%
Y RADIAL	6472.4	49.17	0.76%	101.8	%
Ag 328.068†	18260.1	19.36	0.11%	[100]	ug/L
As 188.979†	319.4	5.16	1.62%	[100]	ug/L
B 249.677†	4348.5	16.16	0.37%	[100]	ug/L
Ba 233.527†	15662.4	76.11	0.49%	[100]	ug/L
Be 313.107†	247120.6	592.55	0.24%	[100]	ug/L
Cd 226.502†	8743.5	75.74	0.87%	[100]	ug/L
Co 228.616†	6363.5	48.04	0.75%	[100]	ug/L
Cr 267.716†	8037.2	32.63	0.41%	[100]	ug/L
Cu 324.752†	29435.6	15.12	0.05%	[100]	ug/L
K 766.490 Radial†	4603.7	35.39	0.77%	[1000]	ug/L
Mn 257.610†	101297.9	172.04	0.17%	[100]	ug/L
Mo 202.031†	1582.7	8.52	0.54%	[100]	ug/L
Ni 231.604†	4165.2	18.47	0.44%	[100]	ug/L
P 214.914†	1098.4	16.99	1.55%	[500]	ug/L
Pb 220.353†	951.8	10.49	1.10%	[100]	ug/L
S 181.975 Axial†	159.4	5.12	3.21%	[200]	ug/L
Sb 206.836†	365.6	5.06	1.38%	[100]	ug/L
Se 196.026†	225.2	4.35	1.93%	[100]	ug/L
Si 251.611†	17534.4	43.98	0.25%	[500]	ug/L
Sn 189.927†	639.5	10.29	1.61%	[100]	ug/L
Sr 421.552†	31575.0	78.82	0.25%	[100]	ug/L
Ti 334.940†	58890.5	167.35	0.28%	[100]	ug/L
Tl 190.801†	430.5	14.70	3.42%	[100]	ug/L
U 409.014†	3281.3	63.53	1.94%	[100]	ug/L
V 292.402†	12003.5	71.09	0.59%	[100]	ug/L
Zn 213.857†	12178.4	57.57	0.47%	[100]	ug/L
SiO2†	17374.1	91.87	0.53%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/2/2009 10:49:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	6735.9	6735.9	97.1	%	10:51:44
1	Y RADIAL	6115.7	6115.7	96.17	%	10:51:44
1	Al 396.153Radial†	6019.8	6271.7	[5000]	ug/L	10:51:24
1	Ca 317.933Radial†	3520.3	3599.9	[5000]	ug/L	10:51:44
1	K 766.490 Radial†	26797.8	24818.5	[5000]	ug/L	10:51:24
1	Mg 279.077 IEC†	203.9	206.0	[5000]	ug/L	10:51:44
1	Sr 421.552†	159251.2	164111.3	[500]	ug/L	10:51:24
1	Sc 361.383	770749.0	770749.0	103.50	%	10:52:43
1	Y 371.029	593963.5	593963.5	102.16	%	10:52:43
1	Ag 328.068†	93344.0	89477.8	[500]	ug/L	10:52:43
1	As 188.979†	1562.2	1543.7	[500]	ug/L	10:53:03
1	B 249.677†	21023.9	21193.4	[500]	ug/L	10:52:43
1	Ba 233.527†	78218.6	75548.0	[500]	ug/L	10:52:43
1	Be 313.107†	1251172.0	1213596.7	[500]	ug/L	10:52:43
1	Cd 226.502†	44782.7	43559.7	[500]	ug/L	10:52:43
1	Co 228.616†	31450.8	30486.5	[500]	ug/L	10:53:03
1	Cr 267.716†	40162.0	38900.3	[500]	ug/L	10:52:43
1	Cu 324.752†	156097.8	145022.1	[500]	ug/L	10:52:43
1	Mn 257.610†	504436.9	486640.7	[500]	ug/L	10:52:43
1	Mo 202.031†	8060.0	7782.7	[500]	ug/L	10:53:03
1	Ni 231.604†	21072.9	20222.8	[500]	ug/L	10:53:03
1	P 214.914†	5897.9	5404.7	[2500]	ug/L	10:53:03
1	Pb 220.353†	4803.7	4658.9	[500]	ug/L	10:53:03
1	S 181.975 Axial†	962.3	793.7	[1000]	ug/L	10:53:03
1	Sb 206.836†	1922.8	1805.1	[500]	ug/L	10:53:03
1	Se 196.026†	1090.3	1088.2	[500]	ug/L	10:53:03
1	Si 251.611†	91524.0	87976.6	[2500]	ug/L	10:52:43
1	Sn 189.927†	3236.3	3113.7	[500]	ug/L	10:53:03
1	Ti 334.940†	299159.0	290557.4	[500]	ug/L	10:52:43
1	Tl 190.801†	2060.5	2051.9	[500]	ug/L	10:53:03
1	U 409.014†	10162.4	15082.9	[500]	ug/L	10:52:43
1	V 292.402†	59620.4	59294.7	[500]	ug/L	10:52:43
1	Zn 213.857†	62312.3	59218.2	[500]	ug/L	10:52:43
1	SiO2†	92253.6	88654.7	[5347.5]	ug/L	10:54:03
2	Sc Radial	6842.6	6842.6	98.6	%	10:52:09
2	Y RADIAL	6229.1	6229.1	97.96	%	10:52:09
2	Al 396.153Radial†	5900.7	6054.2	[5000]	ug/L	10:51:49
2	Ca 317.933Radial†	3552.9	3576.4	[5000]	ug/L	10:52:09
2	K 766.490 Radial†	26603.5	24190.7	[5000]	ug/L	10:51:49
2	Mg 279.077 IEC†	206.8	205.8	[5000]	ug/L	10:52:09
2	Sr 421.552†	155865.5	158118.4	[500]	ug/L	10:51:49
2	Sc 361.383	767356.4	767356.4	103.05	%	10:53:10
2	Y 371.029	591702.4	591702.4	101.77	%	10:53:10
2	Ag 328.068†	93090.3	89630.4	[500]	ug/L	10:53:10
2	As 188.979†	1558.9	1547.1	[500]	ug/L	10:53:31
2	B 249.677†	20918.3	21180.7	[500]	ug/L	10:53:10
2	Ba 233.527†	78103.2	75770.1	[500]	ug/L	10:53:10
2	Be 313.107†	1249921.2	1217727.4	[500]	ug/L	10:53:10
2	Cd 226.502†	44659.7	43631.7	[500]	ug/L	10:53:10
2	Co 228.616†	31432.9	30603.5	[500]	ug/L	10:53:31
2	Cr 267.716†	40153.3	39063.4	[500]	ug/L	10:53:10
2	Cu 324.752†	156025.7	145618.9	[500]	ug/L	10:53:10
2	Mn 257.610†	503431.3	487819.5	[500]	ug/L	10:53:10
2	Mo 202.031†	8061.8	7818.8	[500]	ug/L	10:53:31
2	Ni 231.604†	21075.3	20315.2	[500]	ug/L	10:53:31
2	P 214.914†	5906.0	5437.7	[2500]	ug/L	10:53:31
2	Pb 220.353†	4809.9	4685.4	[500]	ug/L	10:53:31
2	S 181.975 Axial†	955.5	791.2	[1000]	ug/L	10:53:31
2	Sb 206.836†	1898.3	1789.5	[500]	ug/L	10:53:31

2	Se 196.026†	1081.7	1084.6	[500]	ug/L	10:53:31
2	Si 251.611†	91442.4	88288.3	[2500]	ug/L	10:53:10
2	Sn 189.927†	3248.5	3139.4	[500]	ug/L	10:53:31
2	Ti 334.940†	298927.7	291610.8	[500]	ug/L	10:53:10
2	Tl 190.801†	2085.2	2084.7	[500]	ug/L	10:53:31
2	U 409.014†	10103.2	15068.9	[500]	ug/L	10:53:10
2	V 292.402†	59647.3	59575.5	[500]	ug/L	10:53:10
2	Zn 213.857†	62013.4	59194.4	[500]	ug/L	10:53:10
2	SiO2†	91818.2	88626.3	[5347.5]	ug/L	10:54:09
3	Sc Radial	6901.4	6901.4	99.5	%	10:52:34
3	Y RADIAL	6261.1	6261.1	98.46	%	10:52:34
3	Al 396.153Radial†	5952.5	6055.3	[5000]	ug/L	10:52:14
3	Ca 317.933Radial†	3574.2	3567.2	[5000]	ug/L	10:52:34
3	K 766.490 Radial†	26717.5	24075.5	[5000]	ug/L	10:52:14
3	Mg 279.077 IEC†	208.4	205.6	[5000]	ug/L	10:52:34
3	Sr 421.552†	157614.5	158530.3	[500]	ug/L	10:52:14
3	Sc 361.383	770738.6	770738.6	103.50	%	10:53:38
3	Y 371.029	594096.0	594096.0	102.18	%	10:53:38
3	Ag 328.068†	93411.3	89544.1	[500]	ug/L	10:53:38
3	As 188.979†	1552.7	1534.4	[500]	ug/L	10:53:58
3	B 249.677†	20971.3	21142.8	[500]	ug/L	10:53:38
3	Ba 233.527†	78413.5	75737.3	[500]	ug/L	10:53:38
3	Be 313.107†	1253781.2	1216134.0	[500]	ug/L	10:53:38
3	Cd 226.502†	44858.6	43633.7	[500]	ug/L	10:53:38
3	Co 228.616†	31524.1	30557.7	[500]	ug/L	10:53:58
3	Cr 267.716†	40301.2	39035.3	[500]	ug/L	10:53:38
3	Cu 324.752†	156347.9	145265.7	[500]	ug/L	10:53:38
3	Mn 257.610†	505407.2	487584.7	[500]	ug/L	10:53:38
3	Mo 202.031†	8075.1	7797.3	[500]	ug/L	10:53:58
3	Ni 231.604†	21129.3	20277.6	[500]	ug/L	10:53:58
3	P 214.914†	5915.8	5422.0	[2500]	ug/L	10:53:58
3	Pb 220.353†	4805.4	4660.6	[500]	ug/L	10:53:58
3	S 181.975 Axial†	966.4	797.8	[1000]	ug/L	10:53:58
3	Sb 206.836†	1924.2	1806.5	[500]	ug/L	10:53:58
3	Se 196.026†	1092.9	1090.8	[500]	ug/L	10:53:58
3	Si 251.611†	91745.8	88192.1	[2500]	ug/L	10:53:38
3	Sn 189.927†	3250.4	3127.4	[500]	ug/L	10:53:58
3	Ti 334.940†	299773.7	291155.2	[500]	ug/L	10:53:38
3	Tl 190.801†	2080.3	2071.1	[500]	ug/L	10:53:58
3	U 409.014†	10132.2	15053.8	[500]	ug/L	10:53:38
3	V 292.402†	59838.5	59506.2	[500]	ug/L	10:53:38
3	Zn 213.857†	62326.6	59232.9	[500]	ug/L	10:53:38
3	SiO2†	90323.0	86790.7	[5347.5]	ug/L	10:54:14

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	769614.6	1955.73	0.25%	103.35	%
Sc Radial	6826.7	83.93	1.23%	98.4	%
Y 371.029	593254.0	1345.31	0.23%	102.04	%
Y RADIAL	6202.0	76.42	1.23%	97.53	%
Ag 328.068†	89550.8	76.48	0.09%	[500]	ug/L
Al 396.153Radial†	6127.1	125.28	2.04%	[5000]	ug/L
As 188.979†	1541.7	6.54	0.42%	[500]	ug/L
B 249.677†	21172.3	26.30	0.12%	[500]	ug/L
Ba 233.527†	75685.1	119.89	0.16%	[500]	ug/L
Be 313.107†	1215819.4	2083.21	0.17%	[500]	ug/L
Ca 317.933Radial†	3581.2	16.88	0.47%	[5000]	ug/L
Cd 226.502†	43608.4	42.15	0.10%	[500]	ug/L
Co 228.616†	30549.2	58.97	0.19%	[500]	ug/L
Cr 267.716†	38999.6	87.19	0.22%	[500]	ug/L
Cu 324.752†	145302.2	300.07	0.21%	[500]	ug/L
K 766.490 Radial†	24361.6	399.88	1.64%	[5000]	ug/L
Mg 279.077 IEC†	205.8	0.22	0.11%	[5000]	ug/L
Mn 257.610†	487348.3	623.96	0.13%	[500]	ug/L
Mo 202.031†	7799.6	18.20	0.23%	[500]	ug/L
Ni 231.604†	20271.9	46.44	0.23%	[500]	ug/L
P 214.914†	5421.5	16.54	0.31%	[2500]	ug/L
Pb 220.353†	4668.3	14.83	0.32%	[500]	ug/L
S 181.975 Axial†	794.2	3.28	0.41%	[1000]	ug/L

Sb 206.836†	1800.4	9.41	0.52%	[500]	ug/L
Se 196.026†	1087.9	3.12	0.29%	[500]	ug/L
Si 251.611†	88152.3	159.63	0.18%	[2500]	ug/L
Sn 189.927†	3126.9	12.85	0.41%	[500]	ug/L
Sr 421.552†	160253.3	3347.41	2.09%	[500]	ug/L
Ti 334.940†	291107.8	528.30	0.18%	[500]	ug/L
Tl 190.801†	2069.2	16.48	0.80%	[500]	ug/L
U 409.014†	15068.5	14.55	0.10%	[500]	ug/L
V 292.402†	59458.8	146.27	0.25%	[500]	ug/L
Zn 213.857†	59215.2	19.46	0.03%	[500]	ug/L
SiO2†	88023.9	1068.11	1.21%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/2/2009 10:56:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	6725.9	6725.9	96.9	%	10:58:37
1	Y RADIAL	6095.2	6095.2	95.85	%	10:58:37
1	Al 396.153Radial†	12156.3	12611.8	[10000]	ug/L	10:58:17
1	Ca 317.933Radial†	6975.7	7170.1	[10000]	ug/L	10:58:37
1	Fe 238.204 Radial†	2300.7	2334.6	[10000]	ug/L	10:58:37
1	K 766.490 Radial†	51222.1	50057.1	[10000]	ug/L	10:58:17
1	Mg 279.077 IEC†	412.0	421.1	[10000]	ug/L	10:58:37
1	Na 589.592 Radial†	165257.0	170820.1	[10000]	ug/L	10:58:17
1	Sr 421.552†	323221.1	333516.5	[1000]	ug/L	10:58:17
1	Sc 361.383	749608.5	749608.5	100.67	%	10:59:40
1	Y 371.029	581962.6	581962.6	100.10	%	10:59:40
1	Ag 328.068†	184873.0	182945.3	[1000]	ug/L	10:59:40
1	As 188.979†	3131.3	3144.9	[1000]	ug/L	11:00:01
1	B 249.677†	43188.4	43784.2	[1000]	ug/L	10:59:40
1	Ba 233.527†	155000.6	153953.8	[1000]	ug/L	10:59:40
1	Be 313.107†	2493125.7	2481433.3	[1000]	ug/L	10:59:35
1	Cd 226.502†	88972.1	88677.3	[1000]	ug/L	10:59:40
1	Co 228.616†	63724.7	63404.1	[1000]	ug/L	10:59:40
1	Cr 267.716†	80249.3	79816.9	[1000]	ug/L	10:59:40
1	Cu 324.752†	305796.3	297984.5	[1000]	ug/L	10:59:40
1	Mn 257.610†	998499.0	991182.0	[1000]	ug/L	10:59:35
1	Mo 202.031†	15761.4	15652.8	[1000]	ug/L	11:00:01
1	Ni 231.604†	42285.0	41869.0	[1000]	ug/L	10:59:40
1	P 214.914†	11433.5	11064.4	[5000]	ug/L	11:00:01
1	Pb 220.353†	9465.6	9420.9	[1000]	ug/L	11:00:01
1	S 181.975 Axial†	1797.6	1649.7	[2000]	ug/L	11:00:01
1	Sb 206.836†	3741.0	3663.7	[1000]	ug/L	11:00:01
1	Se 196.026†	2171.8	2192.3	[1000]	ug/L	11:00:01
1	Si 251.611†	177918.7	176294.1	[5000]	ug/L	10:59:40
1	Sn 189.927†	6407.2	6351.9	[1000]	ug/L	11:00:01
1	Ti 334.940†	582641.6	580317.7	[1000]	ug/L	10:59:40
1	Tl 190.801†	4166.2	4199.8	[1000]	ug/L	11:00:01
1	U 409.014†	26675.6	31763.8	[1000]	ug/L	10:59:40
1	V 292.402†	121191.1	122083.0	[1000]	ug/L	10:59:40
1	Zn 213.857†	122511.4	120717.4	[1000]	ug/L	10:59:40
1	SiO2†	178218.2	176564.8	[10695]	ug/L	11:01:09
2	Sc Radial	6913.4	6913.4	99.6	%	10:59:03
2	Y RADIAL	6291.8	6291.8	98.94	%	10:59:03
2	Al 396.153Radial†	11841.1	11955.2	[10000]	ug/L	10:58:42
2	Ca 317.933Radial†	7091.8	7091.4	[10000]	ug/L	10:59:03
2	Fe 238.204 Radial†	2342.9	2312.5	[10000]	ug/L	10:59:03
2	K 766.490 Radial†	50052.7	47450.0	[10000]	ug/L	10:58:42
2	Mg 279.077 IEC†	417.3	414.9	[10000]	ug/L	10:59:03
2	Na 589.592 Radial†	160796.6	161718.9	[10000]	ug/L	10:58:42
2	Sr 421.552†	314001.9	315218.4	[1000]	ug/L	10:58:42
2	Sc 361.383	744093.5	744093.5	99.925	%	11:00:12
2	Y 371.029	576331.7	576331.7	99.128	%	11:00:12
2	Ag 328.068†	184785.7	184219.1	[1000]	ug/L	11:00:12
2	As 188.979†	3151.9	3188.5	[1000]	ug/L	11:00:32
2	B 249.677†	43365.4	44279.4	[1000]	ug/L	11:00:12
2	Ba 233.527†	155455.1	155549.9	[1000]	ug/L	11:00:12
2	Be 313.107†	2510431.4	2517108.4	[1000]	ug/L	11:00:07
2	Cd 226.502†	89280.3	89640.9	[1000]	ug/L	11:00:12
2	Co 228.616†	63974.1	64122.8	[1000]	ug/L	11:00:12
2	Cr 267.716†	80488.0	80646.6	[1000]	ug/L	11:00:12
2	Cu 324.752†	305537.8	299977.3	[1000]	ug/L	11:00:12
2	Mn 257.610†	1005336.7	1005376.6	[1000]	ug/L	11:00:07
2	Mo 202.031†	15917.6	15925.1	[1000]	ug/L	11:00:32
2	Ni 231.604†	42421.8	42317.2	[1000]	ug/L	11:00:12

2	P 214.914†	11535.9	11251.1	[5000]	ug/L	11:00:32
2	Pb 220.353†	9527.3	9552.3	[1000]	ug/L	11:00:32
2	S 181.975 Axial†	1844.6	1710.1	[2000]	ug/L	11:00:32
2	Sb 206.836†	3795.0	3745.3	[1000]	ug/L	11:00:32
2	Se 196.026†	2195.6	2232.1	[1000]	ug/L	11:00:32
2	Si 251.611†	178199.3	177884.9	[5000]	ug/L	11:00:12
2	Sn 189.927†	6477.2	6469.1	[1000]	ug/L	11:00:32
2	Ti 334.940†	583846.6	585813.5	[1000]	ug/L	11:00:12
2	Tl 190.801†	4180.2	4244.5	[1000]	ug/L	11:00:32
2	U 409.014†	26906.3	32191.1	[1000]	ug/L	11:00:12
2	V 292.402†	121424.9	123209.3	[1000]	ug/L	11:00:12
2	Zn 213.857†	122905.1	122013.3	[1000]	ug/L	11:00:12
2	SiO2†	176839.1	176496.9	[10695]	ug/L	11:01:14
3	Sc Radial	6865.0	6865.0	98.9	%	10:59:28
3	Y RADIAL	6212.6	6212.6	97.70	%	10:59:28
3	Al 396.153Radial†	11799.3	11996.8	[10000]	ug/L	10:59:08
3	Ca 317.933Radial†	7011.9	7060.9	[10000]	ug/L	10:59:28
3	Fe 238.204 Radial†	2318.1	2304.1	[10000]	ug/L	10:59:28
3	K 766.490 Radial†	49779.1	47527.8	[10000]	ug/L	10:59:08
3	Mg 279.077 IEC†	415.7	416.2	[10000]	ug/L	10:59:28
3	Na 589.592 Radial†	160670.4	162729.3	[10000]	ug/L	10:59:08
3	Sr 421.552†	313429.5	316862.1	[1000]	ug/L	10:59:08
3	Sc 361.383	744648.9	744648.9	99.999	%	11:00:43
3	Y 371.029	576781.2	576781.2	99.205	%	11:00:43
3	Ag 328.068†	184377.4	183672.8	[1000]	ug/L	11:00:43
3	As 188.979†	3151.3	3185.6	[1000]	ug/L	11:01:04
3	B 249.677†	43274.3	44155.9	[1000]	ug/L	11:00:43
3	Ba 233.527†	155009.3	154988.0	[1000]	ug/L	11:00:43
3	Be 313.107†	2487138.9	2491941.7	[1000]	ug/L	11:00:38
3	Cd 226.502†	89082.1	89376.0	[1000]	ug/L	11:00:43
3	Co 228.616†	63686.5	63787.5	[1000]	ug/L	11:00:43
3	Cr 267.716†	80190.7	80289.3	[1000]	ug/L	11:00:43
3	Cu 324.752†	304596.4	298807.8	[1000]	ug/L	11:00:43
3	Mn 257.610†	996108.4	995397.7	[1000]	ug/L	11:00:38
3	Mo 202.031†	15866.4	15862.1	[1000]	ug/L	11:01:04
3	Ni 231.604†	42308.0	42171.7	[1000]	ug/L	11:00:43
3	P 214.914†	11488.5	11195.0	[5000]	ug/L	11:01:04
3	Pb 220.353†	9502.4	9520.3	[1000]	ug/L	11:01:04
3	S 181.975 Axial†	1806.7	1670.7	[2000]	ug/L	11:01:04
3	Sb 206.836†	3760.7	3708.1	[1000]	ug/L	11:01:04
3	Se 196.026†	2194.4	2229.3	[1000]	ug/L	11:01:04
3	Si 251.611†	177595.4	177147.9	[5000]	ug/L	11:00:43
3	Sn 189.927†	6447.3	6434.3	[1000]	ug/L	11:01:04
3	Ti 334.940†	581021.9	582552.9	[1000]	ug/L	11:00:43
3	Tl 190.801†	4168.9	4230.1	[1000]	ug/L	11:01:04
3	U 409.014†	26782.4	32047.1	[1000]	ug/L	11:00:43
3	V 292.402†	121045.1	122738.9	[1000]	ug/L	11:00:43
3	Zn 213.857†	122548.4	121564.9	[1000]	ug/L	11:00:43
3	SiO2†	179337.2	178863.0	[10695]	ug/L	11:01:20

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	746117.0	3036.50	0.41%	100.20	%
Sc Radial	6834.8	97.35	1.42%	98.5	%
Y 371.029	578358.5	3129.32	0.54%	99.476	%
Y RADIAL	6199.9	98.96	1.60%	97.50	%
Ag 328.068†	183612.4	639.05	0.35%	[1000]	ug/L
Al 396.153Radial†	12187.9	367.65	3.02%	[10000]	ug/L
As 188.979†	3173.0	24.41	0.77%	[1000]	ug/L
B 249.677†	44073.2	257.75	0.58%	[1000]	ug/L
Ba 233.527†	154830.6	809.61	0.52%	[1000]	ug/L
Be 313.107†	2496827.8	18332.60	0.73%	[1000]	ug/L
Ca 317.933Radial†	7107.5	56.35	0.79%	[10000]	ug/L
Cd 226.502†	89231.4	497.78	0.56%	[1000]	ug/L
Co 228.616†	63771.4	359.63	0.56%	[1000]	ug/L
Cr 267.716†	80250.9	416.17	0.52%	[1000]	ug/L
Cu 324.752†	298923.2	1001.40	0.34%	[1000]	ug/L
Fe 238.204 Radial†	2317.1	15.74	0.68%	[10000]	ug/L
K 766.490 Radial†	48345.0	1483.31	3.07%	[10000]	ug/L

Mg 279.077 IEC†	417.4	3.29	0.79%	[10000]	ug/L
Mn 257.610†	997318.8	7289.69	0.73%	[1000]	ug/L
Mo 202.031†	15813.4	142.54	0.90%	[1000]	ug/L
Na 589.592 Radial†	165089.4	4988.59	3.02%	[10000]	ug/L
Ni 231.604†	42119.3	228.67	0.54%	[1000]	ug/L
P 214.914†	11170.2	95.78	0.86%	[5000]	ug/L
Pb 220.353†	9497.8	68.53	0.72%	[1000]	ug/L
S 181.975 Axial†	1676.8	30.63	1.83%	[2000]	ug/L
Sb 206.836†	3705.7	40.84	1.10%	[1000]	ug/L
Se 196.026†	2217.9	22.23	1.00%	[1000]	ug/L
Si 251.611†	177109.0	796.13	0.45%	[5000]	ug/L
Sn 189.927†	6418.5	60.20	0.94%	[1000]	ug/L
Sr 421.552†	321865.7	10123.32	3.15%	[1000]	ug/L
Ti 334.940†	582894.7	2763.80	0.47%	[1000]	ug/L
Tl 190.801†	4224.8	22.83	0.54%	[1000]	ug/L
U 409.014†	32000.7	217.41	0.68%	[1000]	ug/L
V 292.402†	122677.1	565.69	0.46%	[1000]	ug/L
Zn 213.857†	121431.9	658.14	0.54%	[1000]	ug/L
SiO2†	177308.2	1346.91	0.76%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/2/2009 11:03:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	6795.0	6795.0	97.9	%	11:05:44
1	Y RADIAL	6160.4	6160.4	96.88	%	11:05:44
1	Al 396.153Radial†	57833.0	59127.7	[50000]	ug/L	11:05:24
1	Ca 317.933Radial†	33247.0	33924.3	[50000]	ug/L	11:05:44
1	Fe 238.204 Radial†	4389.3	4443.3	[20000]	ug/L	11:05:44
1	Mg 279.077 IEC†	1921.3	1958.0	[50000]	ug/L	11:05:44
1	Na 589.592 Radial†	315791.6	322806.8	[20000]	ug/L	11:05:24
1	Sc 361.383	748166.4	748166.4	100.47	%	11:06:41
1	Y 371.029	574525.0	574525.0	98.817	%	11:06:41
2	Sc Radial	6742.2	6742.2	97.2	%	11:06:09
2	Y RADIAL	6104.6	6104.6	96.00	%	11:06:09
2	Al 396.153Radial†	57597.6	59347.9	[50000]	ug/L	11:05:49
2	Ca 317.933Radial†	32953.5	33888.1	[50000]	ug/L	11:06:09
2	Fe 238.204 Radial†	4351.5	4439.5	[20000]	ug/L	11:06:09
2	Mg 279.077 IEC†	1903.1	1954.6	[50000]	ug/L	11:06:09
2	Na 589.592 Radial†	315523.8	325056.7	[20000]	ug/L	11:05:49
2	Sc 361.383	757860.1	757860.1	101.77	%	11:06:47
2	Y 371.029	580783.2	580783.2	99.893	%	11:06:47
3	Sc Radial	6848.0	6848.0	98.7	%	11:06:34
3	Y RADIAL	6213.3	6213.3	97.71	%	11:06:34
3	Al 396.153Radial†	58158.2	59000.3	[50000]	ug/L	11:06:14
3	Ca 317.933Radial†	33297.9	33713.3	[50000]	ug/L	11:06:34
3	Fe 238.204 Radial†	4403.6	4423.0	[20000]	ug/L	11:06:34
3	Mg 279.077 IEC†	1911.2	1932.6	[50000]	ug/L	11:06:34
3	Na 589.592 Radial†	318827.5	323388.5	[20000]	ug/L	11:06:14
3	Sc 361.383	743126.3	743126.3	99.795	%	11:06:52
3	Y 371.029	570580.5	570580.5	98.139	%	11:06:52

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	749717.6	7488.35	1.00%	100.68	%
Sc Radial	6795.0	52.89	0.78%	97.9	%
Y 371.029	575296.3	5144.89	0.89%	98.950	%
Y RADIAL	6159.4	54.37	0.88%	96.86	%
Al 396.153Radial†	59158.7	175.87	0.30%	[50000]	ug/L
Ca 317.933Radial†	33841.9	112.85	0.33%	[50000]	ug/L
Fe 238.204 Radial†	4435.3	10.76	0.24%	[20000]	ug/L
Mg 279.077 IEC†	1948.4	13.78	0.71%	[50000]	ug/L
Na 589.592 Radial†	323750.7	1167.83	0.36%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	182.7	0.00000	0.999952	
Al 396.153Radial	3	Lin Thru 0	0.0	1.185	0.00000	0.999978	
As 188.979	3	Lin Thru 0	0.0	3.155	0.00000	0.999935	
B 249.677	3	Lin Thru 0	0.0	43.73	0.00000	0.999876	
Ba 233.527	3	Lin Thru 0	0.0	154.2	0.00000	0.999959	
Be 313.107	3	Lin Thru 0	0.0	2484	0.00000	0.999945	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.6785	0.00000	0.999939	
Cd 226.502	3	Lin Thru 0	0.0	88.82	0.00000	0.999958	
Co 228.616	3	Lin Thru 0	0.0	63.24	0.00000	0.999858	
Cr 267.716	3	Lin Thru 0	0.0	79.81	0.00000	0.999937	
Cu 324.752	3	Lin Thru 0	0.0	297.2	0.00000	0.999937	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.2238	0.00000	0.999842	
K 766.490 Radial	3	Lin Thru 0	0.0	4.840	0.00000	0.999986	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0391	0.00000	0.999894
Mn 257.610	3	Lin Thru 0	0.0	993.0	0.00000	0.999957
Mo 202.031	3	Lin Thru 0	0.0	15.77	0.00000	0.999985
Na 589.592 Radia	2	Lin Thru 0	0.0	16.25	0.00000	0.999969
Ni 231.604	3	Lin Thru 0	0.0	41.80	0.00000	0.999887
P 214.914	3	Lin Thru 0	0.0	2.221	0.00000	0.999931
Pb 220.353	3	Lin Thru 0	0.0	9.466	0.00000	0.999977
S 181.975 Axial	3	Lin Thru 0	0.0	0.8293	0.00000	0.999769
Sb 206.836	3	Lin Thru 0	0.0	3.684	0.00000	0.999935
Se 196.026	3	Lin Thru 0	0.0	2.210	0.00000	0.999970
Si 251.611	3	Lin Thru 0	0.0	35.39	0.00000	0.999998
Sn 189.927	3	Lin Thru 0	0.0	6.386	0.00000	0.999947
Sr 421.552	3	Lin Thru 0	0.0	321.5	0.00000	0.999997
Ti 334.940	3	Lin Thru 0	0.0	582.8	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	4.208	0.00000	0.999964
U 409.014	3	Lin Thru 0	0.0	31.64	0.00000	0.999719
V 292.402	3	Lin Thru 0	0.0	121.9	0.00000	0.999924
Zn 213.857	3	Lin Thru 0	0.0	120.8	0.00000	0.999951
SiO2	3	Lin Thru 0	0.0	16.55	0.00000	0.999995

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/2/2009 11:09:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7288.6	7288.6	105	%			11:10:56
1	Y RADIAL	6617.5	6617.5	104.1	%			11:10:56
1	Al 396.153Radial†	6204.2	5977.1	5022.3	ug/L	5022.3	ppb	11:10:56
1	Ca 317.933Radial†	3459.2	3266.8	4814.7	ug/L	4814.7	ppb	11:11:16
1	Fe 238.204 Radial†	1207.5	1110.6	4978.1	ug/L	4978.1	ppb	11:11:16
1	K 766.490 Radial†	15039.0	11530.7	2369.9	ug/L	2369.9	ppb	11:10:56
1	Mg 279.077 IEC†	220.0	205.5	5261.4	ug/L	5261.4	ppb	11:11:16
1	Na 589.592 Radial†	42971.3	41240.5	2537.6	ug/L	2537.6	ppb	11:10:56
1	Sr 421.552†	162883.0	155129.1	482.40	ug/L	482.40	ppb	11:10:56
1	Sc 361.383	766818.9	766818.9	102.98	%			11:12:14
1	Y 371.029	593177.9	593177.9	102.03	%			11:12:14
1	Ag 328.068†	46626.2	44572.6	246.97	ug/L	246.97	ppb	11:12:14
1	As 188.979†	1495.0	1486.1	473.80	ug/L	473.80	ppb	11:12:34
1	B 249.677†	20815.0	21094.7	479.71	ug/L	479.71	ppb	11:12:14
1	Ba 233.527†	82535.9	80127.8	520.84	ug/L	520.84	ppb	11:12:14
1	Be 313.107†	635004.7	621434.9	251.37	ug/L	251.37	ppb	11:12:14
1	Cd 226.502†	43507.0	42542.7	478.74	ug/L	478.74	ppb	11:12:34
1	Co 228.616†	30232.2	29458.9	466.09	ug/L	466.09	ppb	11:12:34
1	Cr 267.716†	39925.6	38869.5	487.74	ug/L	487.74	ppb	11:12:14
1	Cu 324.752†	160043.5	149626.7	503.68	ug/L	503.68	ppb	11:12:14
1	Mn 257.610†	518067.7	502375.3	506.46	ug/L	506.46	ppb	11:12:14
1	Mo 202.031†	8347.2	8101.5	514.02	ug/L	514.02	ppb	11:12:34
1	Ni 231.604†	22294.8	21513.8	514.35	ug/L	514.35	ppb	11:12:34
1	P 214.914†	5950.8	5485.2	2374.5	ug/L	2374.5	ppb	11:12:34
1	Pb 220.353†	4814.9	4693.6	497.38	ug/L	497.38	ppb	11:12:34
1	S 181.975 Axial†	2292.4	2090.2	2519.4	ug/L	2519.4	ppb	11:12:34
1	Sb 206.836†	2000.9	1890.4	520.30	ug/L	520.30	ppb	11:12:34
1	Se 196.026†	5758.3	5626.7	2563.9	ug/L	2563.9	ppb	11:12:34
1	Si 251.611†	175649.6	170123.7	4790.8	ug/L	4790.8	ppb	11:12:14
1	Sn 189.927†	3417.8	3306.1	518.60	ug/L	518.60	ppb	11:12:34
1	Ti 334.940†	298464.6	291364.4	499.82	ug/L	499.82	ppb	11:12:14
1	Tl 190.801†	2061.7	2063.2	493.58	ug/L	493.58	ppb	11:12:34
1	U 409.014†	10824.4	15776.0	497.10	ug/L	497.10	ppb	11:12:14
1	V 292.402†	59068.2	59053.7	490.51	ug/L	490.51	ppb	11:12:14
1	Zn 213.857†	62752.6	59954.4	491.49	ug/L	491.49	ppb	11:12:14
1	SiO2†	177952.8	172333.6	10374	ug/L	10374	ppb	11:13:31
2	Sc Radial	7031.3	7031.3	101	%			11:11:21
2	Y RADIAL	6380.4	6380.4	100.3	%			11:11:21
2	Al 396.153Radial†	6016.1	6007.6	5048.1	ug/L	5048.1	ppb	11:11:21
2	Ca 317.933Radial†	3430.5	3358.9	4950.5	ug/L	4950.5	ppb	11:11:41
2	Fe 238.204 Radial†	1196.1	1141.4	5115.9	ug/L	5115.9	ppb	11:11:41
2	K 766.490 Radial†	14697.7	11717.8	2408.6	ug/L	2408.6	ppb	11:11:21
2	Mg 279.077 IEC†	216.8	210.0	5376.7	ug/L	5376.7	ppb	11:11:41
2	Na 589.592 Radial†	41259.9	41048.4	2525.8	ug/L	2525.8	ppb	11:11:21
2	Sr 421.552†	156141.3	154150.2	479.35	ug/L	479.35	ppb	11:11:21
2	Sc 361.383	769420.4	769420.4	103.33	%			11:12:40
2	Y 371.029	595382.0	595382.0	102.40	%			11:12:40
2	Ag 328.068†	46699.1	44490.0	246.56	ug/L	246.56	ppb	11:12:40
2	As 188.979†	1496.5	1482.7	472.75	ug/L	472.75	ppb	11:13:00
2	B 249.677†	21116.0	21317.7	484.81	ug/L	484.81	ppb	11:12:40
2	Ba 233.527†	82654.6	79971.7	519.83	ug/L	519.83	ppb	11:12:40
2	Be 313.107†	637334.5	621604.7	251.44	ug/L	251.44	ppb	11:12:40
2	Cd 226.502†	43442.4	42337.3	476.41	ug/L	476.41	ppb	11:13:00
2	Co 228.616†	30215.5	29343.4	464.26	ug/L	464.26	ppb	11:13:00
2	Cr 267.716†	40096.7	38904.0	488.17	ug/L	488.17	ppb	11:12:40
2	Cu 324.752†	161022.7	150048.9	505.11	ug/L	505.11	ppb	11:12:40
2	Mn 257.610†	519421.7	501984.7	506.08	ug/L	506.08	ppb	11:12:40
2	Mo 202.031†	8339.7	8066.9	511.83	ug/L	511.83	ppb	11:13:00
2	Ni 231.604†	22295.5	21441.3	512.62	ug/L	512.62	ppb	11:13:00

2	P 214.914†	5956.3	5471.0	2367.8	ug/L	2367.8 ppb	11:13:00
2	Pb 220.353†	4805.8	4668.9	494.76	ug/L	494.76 ppb	11:13:00
2	S 181.975 Axial†	2287.2	2077.6	2504.2	ug/L	2504.2 ppb	11:13:00
2	Sb 206.836†	1974.4	1858.3	511.54	ug/L	511.54 ppb	11:13:00
2	Se 196.026†	5726.2	5576.7	2541.7	ug/L	2541.7 ppb	11:13:00
2	Si 251.611†	176287.0	170164.0	4792.0	ug/L	4792.0 ppb	11:12:40
2	Sn 189.927†	3439.1	3315.4	520.08	ug/L	520.08 ppb	11:13:00
2	Ti 334.940†	299775.2	291652.8	500.32	ug/L	500.32 ppb	11:12:40
2	Tl 190.801†	2064.3	2059.0	492.60	ug/L	492.60 ppb	11:13:00
2	U 409.014†	10966.6	15878.1	500.31	ug/L	500.31 ppb	11:12:40
2	V 292.402†	59285.5	59070.1	490.61	ug/L	490.61 ppb	11:12:40
2	Zn 213.857†	62894.5	59885.7	490.92	ug/L	490.92 ppb	11:12:40
2	SiO2†	176101.8	169957.9	10231	ug/L	10231 ppb	11:13:36
3	Sc Radial	7109.2	7109.2	102	%		11:11:46
3	Y RADIAL	6504.7	6504.7	102.3	%		11:11:46
3	Al 396.153Radial†	6075.1	6000.0	5041.9	ug/L	5041.9 ppb	11:11:46
3	Ca 317.933Radial†	3419.7	3311.3	4880.4	ug/L	4880.4 ppb	11:12:06
3	Fe 238.204 Radial†	1197.0	1129.3	5061.7	ug/L	5061.7 ppb	11:12:06
3	K 766.490 Radial†	14752.2	11611.9	2386.8	ug/L	2386.8 ppb	11:11:46
3	Mg 279.077 IEC†	218.2	209.1	5353.7	ug/L	5353.7 ppb	11:12:06
3	Na 589.592 Radial†	41572.4	40907.2	2517.1	ug/L	2517.1 ppb	11:11:46
3	Sr 421.552†	158115.5	154388.0	480.09	ug/L	480.09 ppb	11:11:46
3	Sc 361.383	773182.2	773182.2	103.83	%		11:13:06
3	Y 371.029	598559.7	598559.7	102.95	%		11:13:06
3	Ag 328.068†	46968.3	44529.4	246.75	ug/L	246.75 ppb	11:13:06
3	As 188.979†	1487.5	1466.9	467.74	ug/L	467.74 ppb	11:13:26
3	B 249.677†	21137.9	21239.3	483.04	ug/L	483.04 ppb	11:13:06
3	Ba 233.527†	83001.6	79916.7	519.47	ug/L	519.47 ppb	11:13:06
3	Be 313.107†	641212.5	622338.7	251.73	ug/L	251.73 ppb	11:13:06
3	Cd 226.502†	43276.2	41972.7	472.31	ug/L	472.31 ppb	11:13:26
3	Co 228.616†	30102.4	29092.2	460.28	ug/L	460.28 ppb	11:13:26
3	Cr 267.716†	40179.2	38794.7	486.80	ug/L	486.80 ppb	11:13:06
3	Cu 324.752†	161747.0	149988.2	504.90	ug/L	504.90 ppb	11:13:06
3	Mn 257.610†	521733.8	501765.6	505.86	ug/L	505.86 ppb	11:13:06
3	Mo 202.031†	8318.0	8006.7	508.02	ug/L	508.02 ppb	11:13:26
3	Ni 231.604†	22187.1	21231.8	507.61	ug/L	507.61 ppb	11:13:26
3	P 214.914†	5932.5	5420.0	2344.8	ug/L	2344.8 ppb	11:13:26
3	Pb 220.353†	4772.0	4613.8	488.92	ug/L	488.92 ppb	11:13:26
3	S 181.975 Axial†	2294.9	2074.2	2500.1	ug/L	2500.1 ppb	11:13:26
3	Sb 206.836†	1982.9	1857.2	511.07	ug/L	511.07 ppb	11:13:26
3	Se 196.026†	5716.5	5540.5	2525.1	ug/L	2525.1 ppb	11:13:26
3	Si 251.611†	177178.6	170192.6	4792.9	ug/L	4792.9 ppb	11:13:06
3	Sn 189.927†	3405.6	3267.0	512.50	ug/L	512.50 ppb	11:13:26
3	Ti 334.940†	301095.0	291512.4	500.07	ug/L	500.07 ppb	11:13:06
3	Tl 190.801†	2058.4	2043.6	488.95	ug/L	488.95 ppb	11:13:26
3	U 409.014†	11347.7	16193.5	510.29	ug/L	510.29 ppb	11:13:06
3	V 292.402†	59603.9	59097.6	490.81	ug/L	490.81 ppb	11:13:06
3	Zn 213.857†	63143.9	59829.7	490.49	ug/L	490.49 ppb	11:13:06
3	SiO2†	174289.5	167383.3	10076	ug/L	10076 ppb	11:13:42

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	769807.2	103.38	%	0.430				0.42%
Sc Radial	7143.0	103	%	1.9				1.85%
Y 371.029	595706.5	102.46	%	0.465				0.45%
Y RADIAL	6500.8	102.2	%	1.87				1.82%
Ag 328.068†	44530.7	246.76	ug/L	0.206	246.76	ppb	0.206	0.08%
QC value within limits for Ag 328.068 Recovery = 98.70%								
Al 396.153Radial†	5994.9	5037.4	ug/L	13.48	5037.4	ppb	13.48	0.27%
QC value within limits for Al 396.153Radial Recovery = 100.75%								
As 188.979†	1478.6	471.43	ug/L	3.234	471.43	ppb	3.234	0.69%
QC value within limits for As 188.979 Recovery = 94.29%								
B 249.677†	21217.2	482.52	ug/L	2.589	482.52	ppb	2.589	0.54%
QC value within limits for B 249.677 Recovery = 96.50%								
Ba 233.527†	80005.4	520.05	ug/L	0.710	520.05	ppb	0.710	0.14%
QC value within limits for Ba 233.527 Recovery = 104.01%								
Be 313.107†	621792.8	251.51	ug/L	0.193	251.51	ppb	0.193	0.08%
QC value within limits for Be 313.107 Recovery = 100.61%								
Ca 317.933Radial†	3312.4	4881.9	ug/L	67.90	4881.9	ppb	67.90	1.39%

```
   QC value within limits for Ca 317.933Radial  Recovery = 97.64%
Cd 226.502†            42284.2      475.82 ug/L         3.257      475.82 ppb          3.257   0.68%
   QC value within limits for Cd 226.502  Recovery = 95.16%
Co 228.616†            29298.2      463.54 ug/L         2.973      463.54 ppb          2.973   0.64%
   QC value within limits for Co 228.616  Recovery = 92.71%
Cr 267.716†            38856.1      487.57 ug/L         0.702      487.57 ppb          0.702   0.14%
   QC value within limits for Cr 267.716  Recovery = 97.51%
Cu 324.752†           149887.9      504.56 ug/L         0.772      504.56 ppb          0.772   0.15%
   QC value within limits for Cu 324.752  Recovery = 100.91%
Fe 238.204 Radial†      1127.1      5051.9 ug/L        69.42      5051.9 ppb          69.42   1.37%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.04%
K 766.490 Radial†      11620.1      2388.4 ug/L        19.40      2388.4 ppb          19.40   0.81%
   QC value within limits for K 766.490 Radial  Recovery = 95.54%
Mg 279.077 IEC†          208.2      5330.6 ug/L        61.05      5330.6 ppb          61.05   1.15%
   QC value within limits for Mg 279.077 IEC  Recovery = 106.61%
Mn 257.610†           502041.9      506.13 ug/L         0.306      506.13 ppb          0.306   0.06%
   QC value within limits for Mn 257.610  Recovery = 101.23%
Mo 202.031†             8058.4      511.29 ug/L         3.039      511.29 ppb          3.039   0.59%
   QC value within limits for Mo 202.031  Recovery = 102.26%
Na 589.592 Radial†     41065.4      2526.8 ug/L        10.29      2526.8 ppb          10.29   0.41%
   QC value within limits for Na 589.592 Radial  Recovery = 101.07%
Ni 231.604†            21395.6      511.52 ug/L         3.501      511.52 ppb          3.501   0.68%
   QC value within limits for Ni 231.604  Recovery = 102.30%
P 214.914†              5458.8      2362.4 ug/L        15.59      2362.4 ppb          15.59   0.66%
   QC value within limits for P 214.914  Recovery = 94.49%
Pb 220.353†             4658.8      493.69 ug/L         4.327      493.69 ppb          4.327   0.88%
   QC value within limits for Pb 220.353  Recovery = 98.74%
S 181.975 Axial†        2080.7      2507.9 ug/L        10.14      2507.9 ppb          10.14   0.40%
   QC value within limits for S 181.975 Axial  Recovery = 100.32%
Sb 206.836†             1868.6      514.30 ug/L         5.199      514.30 ppb          5.199   1.01%
   QC value within limits for Sb 206.836  Recovery = 102.86%
Se 196.026†             5581.3      2543.6 ug/L        19.44      2543.6 ppb          19.44   0.76%
   QC value within limits for Se 196.026  Recovery = 101.74%
Si 251.611†           170160.1      4791.9 ug/L         1.06      4791.9 ppb           1.06   0.02%
   QC value within limits for Si 251.611  Recovery = 95.84%
Sn 189.927†             3296.1      517.06 ug/L         4.021      517.06 ppb          4.021   0.78%
   QC value within limits for Sn 189.927  Recovery = 103.41%
Sr 421.552†           154555.7      480.61 ug/L         1.588      480.61 ppb          1.588   0.33%
   QC value within limits for Sr 421.552  Recovery = 96.12%
Ti 334.940†           291509.9      500.07 ug/L         0.251      500.07 ppb          0.251   0.05%
   QC value within limits for Ti 334.940  Recovery = 100.01%
Tl 190.801†             2055.3      491.71 ug/L         2.442      491.71 ppb          2.442   0.50%
   QC value within limits for Tl 190.801  Recovery = 98.34%
U 409.014†             15949.2      502.57 ug/L         6.877      502.57 ppb          6.877   1.37%
   QC value within limits for U 409.014  Recovery = 100.51%
V 292.402†             59073.8      490.64 ug/L         0.153      490.64 ppb          0.153   0.03%
   QC value within limits for V 292.402  Recovery = 98.13%
Zn 213.857†            59889.9      490.97 ug/L         0.503      490.97 ppb          0.503   0.10%
   QC value within limits for Zn 213.857  Recovery = 98.19%
SiO2†                 169891.6       10227 ug/L         149.4       10227 ppb          149.4   1.46%
   QC value within limits for SiO2  Recovery = 95.62%
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/2/2009 11:15:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7056.6	7056.6	102	%			11:17:45
1	Y RADIAL	6475.6	6475.6	101.8	%			11:17:45
1	Al 396.153Radial†	-78.7	-6.8	-5.7883	ug/L	-5.7883	ppb	11:17:45
1	Ca 317.933Radial†	22.5	-4.3	-6.3326	ug/L	-6.3326	ppb	11:18:05
1	Fe 238.204 Radial†	40.1	0.5	2.3722	ug/L	2.3722	ppb	11:18:05
1	K 766.490 Radial†	2788.2	-45.0	-9.3108	ug/L	-9.3108	ppb	11:17:45
1	Mg 279.077 IEC†	2.0	-2.0	-50.955	ug/L	-50.955	ppb	11:18:05
1	Na 589.592 Radial†	-192.8	141.6	8.7154	ug/L	8.7154	ppb	11:17:45
1	Sr 421.552†	-50.6	12.6	0.0392	ug/L	0.0392	ppb	11:17:45
1	Sc 361.383	757185.1	757185.1	101.68	%			11:19:02
1	Y 371.029	591251.2	591251.2	101.69	%			11:19:02
1	Ag 328.068†	701.8	-15.7	-0.0843	ug/L	-0.0843	ppb	11:19:02
1	As 188.979†	-34.3	0.6	0.1746	ug/L	0.1746	ppb	11:19:22
1	B 249.677†	-569.2	321.6	7.3539	ug/L	7.3539	ppb	11:19:02
1	Ba 233.527†	29.6	6.7	0.0454	ug/L	0.0454	ppb	11:19:22
1	Be 313.107†	-4783.7	80.2	0.0324	ug/L	0.0324	ppb	11:19:02
1	Cd 226.502†	-293.0	5.1	0.0572	ug/L	0.0572	ppb	11:19:22
1	Co 228.616†	-100.8	1.4	0.0253	ug/L	0.0253	ppb	11:19:22
1	Cr 267.716†	-130.6	-30.5	-0.3817	ug/L	-0.3817	ppb	11:19:02
1	Cu 324.752†	5885.8	-2.4	-0.0081	ug/L	-0.0081	ppb	11:19:02
1	Mn 257.610†	711.4	-18.2	-0.0171	ug/L	-0.0171	ppb	11:19:02
1	Mo 202.031†	24.4	19.6	1.2406	ug/L	1.2406	ppb	11:19:22
1	Ni 231.604†	159.0	19.7	0.4716	ug/L	0.4716	ppb	11:19:22
1	P 214.914†	291.3	-7.1	-3.1841	ug/L	-3.1841	ppb	11:19:22
1	Pb 220.353†	-21.9	-3.7	-0.3880	ug/L	-0.3880	ppb	11:19:22
1	S 181.975 Axial†	126.7	-11.4	-13.704	ug/L	-13.704	ppb	11:19:22
1	Sb 206.836†	47.9	-5.5	-1.4444	ug/L	-1.4444	ppb	11:19:22
1	Se 196.026†	-31.2	4.1	1.8742	ug/L	1.8742	ppb	11:19:22
1	Si 251.611†	486.0	29.2	0.8089	ug/L	0.8089	ppb	11:19:22
1	Sn 189.927†	12.7	-0.5	-0.0827	ug/L	-0.0827	ppb	11:19:22
1	Ti 334.940†	-1517.7	34.2	0.0570	ug/L	0.0570	ppb	11:19:02
1	Tl 190.801†	-54.7	7.4	1.7575	ug/L	1.7575	ppb	11:19:22
1	U 409.014†	-5245.0	106.3	3.3618	ug/L	3.3618	ppb	11:19:02
1	V 292.402†	-1609.4	110.1	0.9244	ug/L	0.9244	ppb	11:19:02
1	Zn 213.857†	1014.8	13.6	0.1113	ug/L	0.1113	ppb	11:19:22
1	SiO2†	542.8	58.3	3.4827	ug/L	3.4827	ppb	11:20:18
2	Sc Radial	6905.1	6905.1	99.5	%			11:18:10
2	Y RADIAL	6350.3	6350.3	99.86	%			11:18:10
2	Al 396.153Radial†	-67.8	2.5	2.0782	ug/L	2.0782	ppb	11:18:10
2	Ca 317.933Radial†	29.0	2.8	4.0668	ug/L	4.0668	ppb	11:18:30
2	Fe 238.204 Radial†	35.3	-3.5	-15.670	ug/L	-15.670	ppb	11:18:30
2	K 766.490 Radial†	2694.7	-78.9	-16.307	ug/L	-16.307	ppb	11:18:10
2	Mg 279.077 IEC†	4.7	0.7	18.933	ug/L	18.933	ppb	11:18:30
2	Na 589.592 Radial†	-302.2	27.6	1.6960	ug/L	1.6960	ppb	11:18:10
2	Sr 421.552†	-55.9	6.2	0.0192	ug/L	0.0192	ppb	11:18:10
2	Sc 361.383	748845.2	748845.2	100.56	%			11:19:27
2	Y 371.029	585353.2	585353.2	100.68	%			11:19:27
2	Ag 328.068†	680.8	-28.9	-0.1694	ug/L	-0.1694	ppb	11:19:27
2	As 188.979†	-35.4	-0.9	-0.2861	ug/L	-0.2861	ppb	11:19:47
2	B 249.677†	-569.9	314.6	7.1947	ug/L	7.1947	ppb	11:19:27
2	Ba 233.527†	7.3	-15.2	-0.0986	ug/L	-0.0986	ppb	11:19:47
2	Be 313.107†	-4800.0	11.6	0.0051	ug/L	0.0051	ppb	11:19:27
2	Cd 226.502†	-288.2	6.6	0.0766	ug/L	0.0766	ppb	11:19:47
2	Co 228.616†	-92.0	9.0	0.1438	ug/L	0.1438	ppb	11:19:47
2	Cr 267.716†	-99.7	-1.1	-0.0169	ug/L	-0.0169	ppb	11:19:27
2	Cu 324.752†	5844.1	20.5	0.0681	ug/L	0.0681	ppb	11:19:27
2	Mn 257.610†	694.9	-26.8	-0.0294	ug/L	-0.0294	ppb	11:19:27
2	Mo 202.031†	18.8	14.3	0.9056	ug/L	0.9056	ppb	11:19:47
2	Ni 231.604†	155.7	18.2	0.4354	ug/L	0.4354	ppb	11:19:47

2	P 214.914†	299.3	4.1	1.8786	ug/L	1.8786 ppb	11:19:47
2	Pb 220.353†	-28.8	-10.8	-1.1359	ug/L	-1.1359 ppb	11:19:47
2	S 181.975 Axial†	115.7	-20.9	-25.216	ug/L	-25.216 ppb	11:19:47
2	Sb 206.836†	56.1	3.2	0.9022	ug/L	0.9022 ppb	11:19:47
2	Se 196.026†	-34.9	0.1	0.0151	ug/L	0.0151 ppb	11:19:47
2	Si 251.611†	477.4	26.0	0.7049	ug/L	0.7049 ppb	11:19:47
2	Sn 189.927†	22.3	9.1	1.4317	ug/L	1.4317 ppb	11:19:47
2	Ti 334.940†	-1430.7	104.1	0.1758	ug/L	0.1758 ppb	11:19:27
2	Tl 190.801†	-56.9	4.6	1.0962	ug/L	1.0962 ppb	11:19:47
2	U 409.014†	-5072.5	220.4	6.9697	ug/L	6.9697 ppb	11:19:27
2	V 292.402†	-1707.9	-5.4	-0.0174	ug/L	-0.0174 ppb	11:19:27
2	Zn 213.857†	1015.9	25.8	0.2120	ug/L	0.2120 ppb	11:19:47
2	SiO2†	556.9	78.3	4.6652	ug/L	4.6652 ppb	11:20:23
3	Sc Radial	6801.0	6801.0	98.0	%		11:18:35
3	Y RADIAL	6242.7	6242.7	98.17	%		11:18:35
3	Al 396.153Radial†	-80.4	-11.4	-9.7067	ug/L	-9.7067 ppb	11:18:35
3	Ca 317.933Radial†	25.9	-0.0	-0.0332	ug/L	-0.0332 ppb	11:18:55
3	Fe 238.204 Radial†	42.9	4.8	21.419	ug/L	21.419 ppb	11:18:55
3	K 766.490 Radial†	2837.0	107.8	22.258	ug/L	22.258 ppb	11:18:35
3	Mg 279.077 IEC†	4.5	0.6	15.170	ug/L	15.170 ppb	11:18:55
3	Na 589.592 Radial†	-336.2	-11.8	-0.7291	ug/L	-0.7291 ppb	11:18:35
3	Sr 421.552†	-25.0	36.8	0.1144	ug/L	0.1144 ppb	11:18:35
3	Sc 361.383	759986.2	759986.2	102.06	%		11:19:53
3	Y 371.029	594423.9	594423.9	102.24	%		11:19:53
3	Ag 328.068†	656.5	-62.6	-0.3407	ug/L	-0.3407 ppb	11:19:53
3	As 188.979†	-27.3	7.6	2.3986	ug/L	2.3986 ppb	11:20:13
3	B 249.677†	-580.8	312.3	7.1385	ug/L	7.1385 ppb	11:19:53
3	Ba 233.527†	31.8	8.7	0.0560	ug/L	0.0560 ppb	11:20:13
3	Be 313.107†	-4738.4	141.9	0.0574	ug/L	0.0574 ppb	11:19:53
3	Cd 226.502†	-296.9	2.4	0.0243	ug/L	0.0243 ppb	11:20:13
3	Co 228.616†	-84.5	17.7	0.2830	ug/L	0.2830 ppb	11:20:13
3	Cr 267.716†	-128.0	-27.5	-0.3459	ug/L	-0.3459 ppb	11:19:53
3	Cu 324.752†	5868.1	-41.1	-0.1371	ug/L	-0.1371 ppb	11:19:53
3	Mn 257.610†	697.5	-34.5	-0.0323	ug/L	-0.0323 ppb	11:19:53
3	Mo 202.031†	23.8	18.9	1.2005	ug/L	1.2005 ppb	11:20:13
3	Ni 231.604†	157.7	17.9	0.4280	ug/L	0.4280 ppb	11:20:13
3	P 214.914†	285.9	-13.4	-5.9863	ug/L	-5.9863 ppb	11:20:13
3	Pb 220.353†	-55.8	-36.9	-3.8977	ug/L	-3.8977 ppb	11:20:13
3	S 181.975 Axial†	125.9	-12.6	-15.189	ug/L	-15.189 ppb	11:20:13
3	Sb 206.836†	58.1	4.4	1.2522	ug/L	1.2522 ppb	11:20:13
3	Se 196.026†	-29.1	6.3	2.9221	ug/L	2.9221 ppb	11:20:13
3	Si 251.611†	480.4	22.0	0.5682	ug/L	0.5682 ppb	11:20:13
3	Sn 189.927†	25.2	11.7	1.8379	ug/L	1.8379 ppb	11:20:13
3	Ti 334.940†	-1497.3	59.7	0.1004	ug/L	0.1004 ppb	11:19:53
3	Tl 190.801†	-58.5	3.9	0.9217	ug/L	0.9217 ppb	11:20:13
3	U 409.014†	-5211.4	158.3	5.0012	ug/L	5.0012 ppb	11:19:53
3	V 292.402†	-1748.0	-19.9	-0.1408	ug/L	-0.1408 ppb	11:19:53
3	Zn 213.857†	995.9	-8.5	-0.0760	ug/L	-0.0760 ppb	11:20:13
3	SiO2†	491.3	5.8	0.2349	ug/L	0.2349 ppb	11:20:28

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	755338.8	101.43	%	0.778				0.77%
Sc Radial	6920.9	99.7	%	1.85				1.86%
Y 371.029	590342.8	101.54	%	0.792				0.78%
Y RADIAL	6356.2	99.96	%	1.833				1.83%
Ag 328.068†	-35.7	-0.1982	ug/L	0.13061	-0.1982	ppb	0.13061	65.91%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-5.2	-4.4723	ug/L	6.00168	-4.4723	ppb	6.00168	134.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.4	0.7623	ug/L	1.43562	0.7623	ppb	1.43562	188.32%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	316.1	7.2291	ug/L	0.11172	7.2291	ppb	0.11172	1.55%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	0.1	0.0009	ug/L	0.08637	0.0009	ppb	0.08637	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	77.9	0.0316	ug/L	0.02616	0.0316	ppb	0.02616	82.73%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-0.5	-0.7663	ug/L	5.23834	-0.7663	ppb	5.23834	683.55%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 4.7      0.0527 ug/L       0.02642      0.0527 ppb        0.02642  50.13%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 9.4      0.1507 ug/L       0.12900      0.1507 ppb        0.12900  85.58%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -19.7     -0.2482 ug/L       0.20111     -0.2482 ppb        0.20111  81.04%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -7.7     -0.0257 ug/L       0.10372     -0.0257 ppb        0.10372 403.98%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.6      2.7072 ug/L      18.54669      2.7072 ppb       18.54669 685.08%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          -5.4     -1.1200 ug/L      20.54623     -1.1200 ppb       20.54623 >999.9%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.2     -5.6175 ug/L      39.30854     -5.6175 ppb       39.30854 699.75%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -26.5     -0.0263 ug/L       0.00807     -0.0263 ppb        0.00807  30.74%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                17.6      1.1155 ug/L       0.18291      1.1155 ppb        0.18291  16.40%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         52.5      3.2275 ug/L       4.90497      3.2275 ppb        4.90497 151.98%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                18.6      0.4450 ug/L       0.02334      0.4450 ppb        0.02334   5.24%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -5.4     -2.4306 ug/L       3.98622     -2.4306 ppb        3.98622 164.00%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -17.1     -1.8072 ug/L       1.84863     -1.8072 ppb        1.84863 102.29%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -15.0     -18.036 ug/L        6.2616     -18.036 ppb         6.2616  34.72%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 0.7      0.2367 ug/L       1.46634      0.2367 ppb        1.46634 619.58%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.5      1.6038 ug/L       1.47221      1.6038 ppb        1.47221  91.79%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                25.7      0.6940 ug/L       0.12073      0.6940 ppb        0.12073  17.40%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 6.8      1.0623 ug/L       1.01218      1.0623 ppb        1.01218  95.28%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                18.5      0.0576 ug/L       0.05024      0.0576 ppb        0.05024  87.23%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                66.0      0.1111 ug/L       0.06014      0.1111 ppb        0.06014  54.14%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.3      1.2585 ug/L       0.44086      1.2585 ppb        0.44086  35.03%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                161.7      5.1109 ug/L       1.80648      5.1109 ppb        1.80648  35.35%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 28.3      0.2554 ug/L       0.58263      0.2554 ppb        0.58263 228.12%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                10.3      0.0824 ug/L       0.14614      0.0824 ppb        0.14614 177.33%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      47.5      2.7943 ug/L       2.29398      2.7943 ppb        2.29398  82.10%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/2/2009 11:22:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6958.1	6958.1	100	%			11:24:34
1	Y RADIAL	6358.8	6358.8	100.00	%			11:24:34
1	Al 396.153Radial†	188.5	258.6	217.76	ug/L	217.76	ppb	11:24:34
1	Ca 317.933Radial†	172.4	145.5	214.50	ug/L	214.50	ppb	11:24:54
1	Fe 238.204 Radial†	63.5	24.4	109.18	ug/L	109.18	ppb	11:24:54
1	K 766.490 Radial†	3526.7	730.2	150.55	ug/L	150.55	ppb	11:24:34
1	Mg 279.077 IEC†	14.8	10.9	277.88	ug/L	277.88	ppb	11:24:54
1	Na 589.592 Radial†	4523.4	4842.0	297.94	ug/L	297.94	ppb	11:24:34
1	Sr 421.552†	1490.0	1548.2	4.8127	ug/L	4.8127	ppb	11:24:34
1	Sc 361.383	749590.0	749590.0	100.66	%			11:25:50
1	Y 371.029	585835.5	585835.5	100.76	%			11:25:50
1	Ag 328.068†	1805.9	1088.1	5.9620	ug/L	5.9620	ppb	11:25:50
1	As 188.979†	61.3	95.2	30.167	ug/L	30.167	ppb	11:26:11
1	B 249.677†	1496.0	2367.4	54.110	ug/L	54.110	ppb	11:26:11
1	Ba 233.527†	875.6	847.4	5.5067	ug/L	5.5067	ppb	11:26:11
1	Be 313.107†	7752.4	12486.1	5.0394	ug/L	5.0394	ppb	11:25:50
1	Cd 226.502†	154.3	446.5	5.0184	ug/L	5.0184	ppb	11:26:11
1	Co 228.616†	216.4	315.5	5.0052	ug/L	5.0052	ppb	11:26:11
1	Cr 267.716†	341.7	437.4	5.4743	ug/L	5.4743	ppb	11:26:11
1	Cu 324.752†	8931.6	3082.0	10.375	ug/L	10.375	ppb	11:25:50
1	Mn 257.610†	11933.8	11137.3	11.225	ug/L	11.225	ppb	11:25:50
1	Mo 202.031†	178.3	172.7	10.959	ug/L	10.959	ppb	11:26:11
1	Ni 231.604†	379.3	240.1	5.7410	ug/L	5.7410	ppb	11:26:11
1	P 214.914†	618.3	320.7	142.49	ug/L	142.49	ppb	11:26:11
1	Pb 220.353†	79.5	96.8	10.283	ug/L	10.283	ppb	11:26:11
1	S 181.975 Axial†	215.5	78.1	94.177	ug/L	94.177	ppb	11:26:11
1	Sb 206.836†	93.2	40.0	11.109	ug/L	11.109	ppb	11:26:11
1	Se 196.026†	40.2	74.8	34.256	ug/L	34.256	ppb	11:26:11
1	Si 251.611†	4025.9	3550.6	99.953	ug/L	99.953	ppb	11:26:11
1	Sn 189.927†	81.3	67.8	10.643	ug/L	10.643	ppb	11:26:11
1	Ti 334.940†	1530.5	3047.2	5.2168	ug/L	5.2168	ppb	11:25:50
1	Tl 190.801†	21.4	82.5	19.662	ug/L	19.662	ppb	11:26:11
1	U 409.014†	-3696.5	1592.4	50.307	ug/L	50.307	ppb	11:25:50
1	V 292.402†	-1156.3	544.2	4.6813	ug/L	4.6813	ppb	11:25:50
1	Zn 213.857†	2447.6	1447.1	11.904	ug/L	11.904	ppb	11:26:11
1	SiO2†	4102.2	3599.6	216.61	ug/L	216.61	ppb	11:27:07
2	Sc Radial	7037.8	7037.8	101	%			11:24:59
2	Y RADIAL	6415.7	6415.7	100.9	%			11:24:59
2	Al 396.153Radial†	208.7	276.4	232.81	ug/L	232.81	ppb	11:24:59
2	Ca 317.933Radial†	173.6	144.7	213.32	ug/L	213.32	ppb	11:25:19
2	Fe 238.204 Radial†	65.7	25.8	115.62	ug/L	115.62	ppb	11:25:19
2	K 766.490 Radial†	3482.0	646.4	133.23	ug/L	133.23	ppb	11:24:59
2	Mg 279.077 IEC†	15.6	11.4	292.31	ug/L	292.31	ppb	11:25:19
2	Na 589.592 Radial†	4653.5	4919.2	302.69	ug/L	302.69	ppb	11:24:59
2	Sr 421.552†	1521.6	1562.5	4.8572	ug/L	4.8572	ppb	11:24:59
2	Sc 361.383	757072.8	757072.8	101.67	%			11:26:16
2	Y 371.029	592158.9	592158.9	101.85	%			11:26:16
2	Ag 328.068†	1759.0	1024.2	5.6120	ug/L	5.6120	ppb	11:26:16
2	As 188.979†	62.5	95.8	30.360	ug/L	30.360	ppb	11:26:36
2	B 249.677†	1509.4	2366.0	54.075	ug/L	54.075	ppb	11:26:36
2	Ba 233.527†	872.1	835.4	5.4298	ug/L	5.4298	ppb	11:26:36
2	Be 313.107†	7807.5	12464.2	5.0305	ug/L	5.0305	ppb	11:26:16
2	Cd 226.502†	152.0	442.7	4.9746	ug/L	4.9746	ppb	11:26:36
2	Co 228.616†	232.3	329.0	5.2181	ug/L	5.2181	ppb	11:26:36
2	Cr 267.716†	319.2	411.9	5.1536	ug/L	5.1536	ppb	11:26:36
2	Cu 324.752†	8928.0	2990.7	10.068	ug/L	10.068	ppb	11:26:16
2	Mn 257.610†	11997.5	11082.8	11.170	ug/L	11.170	ppb	11:26:16
2	Mo 202.031†	174.7	167.4	10.625	ug/L	10.625	ppb	11:26:36
2	Ni 231.604†	378.0	235.1	5.6215	ug/L	5.6215	ppb	11:26:36

2	P 214.914†	622.8	319.1	141.80	ug/L	141.80 ppb	11:26:36
2	Pb 220.353†	88.0	104.4	11.081	ug/L	11.081 ppb	11:26:36
2	S 181.975 Axial†	204.2	64.9	78.218	ug/L	78.218 ppb	11:26:36
2	Sb 206.836†	72.8	19.0	5.4247	ug/L	5.4247 ppb	11:26:36
2	Se 196.026†	35.6	69.9	32.044	ug/L	32.044 ppb	11:26:36
2	Si 251.611†	4012.0	3497.5	98.470	ug/L	98.470 ppb	11:26:36
2	Sn 189.927†	78.5	64.3	10.096	ug/L	10.096 ppb	11:26:36
2	Ti 334.940†	1526.4	3028.2	5.1818	ug/L	5.1818 ppb	11:26:16
2	Tl 190.801†	27.9	88.6	21.119	ug/L	21.119 ppb	11:26:36
2	U 409.014†	-3549.4	1773.3	56.028	ug/L	56.028 ppb	11:26:16
2	V 292.402†	-1092.4	618.3	5.2960	ug/L	5.2960 ppb	11:26:16
2	Zn 213.857†	2444.4	1419.9	11.679	ug/L	11.679 ppb	11:26:36
2	SiO2†	4172.5	3628.6	218.40	ug/L	218.40 ppb	11:27:12
3	Sc Radial	7012.7	7012.7	101	%		11:25:24
3	Y RADIAL	6392.3	6392.3	100.5	%		11:25:24
3	Al 396.153Radial†	198.7	267.2	224.97	ug/L	224.97 ppb	11:25:24
3	Ca 317.933Radial†	173.6	145.3	214.17	ug/L	214.17 ppb	11:25:44
3	Fe 238.204 Radial†	63.2	23.6	105.80	ug/L	105.80 ppb	11:25:44
3	K 766.490 Radial†	3640.0	815.0	168.05	ug/L	168.05 ppb	11:25:24
3	Mg 279.077 IEC†	17.7	13.6	347.05	ug/L	347.05 ppb	11:25:44
3	Na 589.592 Radial†	4649.7	4931.9	303.47	ug/L	303.47 ppb	11:25:24
3	Sr 421.552†	1589.3	1634.9	5.0823	ug/L	5.0823 ppb	11:25:24
3	Sc 361.383	749539.9	749539.9	100.66	%		11:26:41
3	Y 371.029	586372.7	586372.7	100.85	%		11:26:41
3	Ag 328.068†	1597.0	880.7	4.8272	ug/L	4.8272 ppb	11:26:41
3	As 188.979†	65.7	99.5	31.550	ug/L	31.550 ppb	11:27:01
3	B 249.677†	1493.5	2365.1	54.055	ug/L	54.055 ppb	11:27:01
3	Ba 233.527†	864.2	836.1	5.4344	ug/L	5.4344 ppb	11:27:01
3	Be 313.107†	7677.6	12412.3	5.0100	ug/L	5.0100 ppb	11:26:41
3	Cd 226.502†	154.4	446.6	5.0201	ug/L	5.0201 ppb	11:27:01
3	Co 228.616†	232.4	331.4	5.2578	ug/L	5.2578 ppb	11:27:01
3	Cr 267.716†	309.0	404.9	5.0674	ug/L	5.0674 ppb	11:27:01
3	Cu 324.752†	8859.6	3011.0	10.136	ug/L	10.136 ppb	11:26:41
3	Mn 257.610†	11959.6	11163.8	11.250	ug/L	11.250 ppb	11:26:41
3	Mo 202.031†	187.2	181.5	11.518	ug/L	11.518 ppb	11:27:01
3	Ni 231.604†	378.0	238.9	5.7107	ug/L	5.7107 ppb	11:27:01
3	P 214.914†	629.2	331.6	147.45	ug/L	147.45 ppb	11:27:01
3	Pb 220.353†	96.1	113.3	12.030	ug/L	12.030 ppb	11:27:01
3	S 181.975 Axial†	217.8	80.4	96.923	ug/L	96.923 ppb	11:27:01
3	Sb 206.836†	82.9	29.8	8.3845	ug/L	8.3845 ppb	11:27:01
3	Se 196.026†	35.4	70.0	32.064	ug/L	32.064 ppb	11:27:01
3	Si 251.611†	4063.8	3588.5	101.00	ug/L	101.00 ppb	11:27:01
3	Sn 189.927†	86.4	72.8	11.434	ug/L	11.434 ppb	11:27:01
3	Ti 334.940†	1608.9	3125.2	5.3503	ug/L	5.3503 ppb	11:26:41
3	Tl 190.801†	44.2	105.1	25.031	ug/L	25.031 ppb	11:27:01
3	U 409.014†	-3668.4	1620.0	51.182	ug/L	51.182 ppb	11:26:41
3	V 292.402†	-1087.4	612.6	5.2527	ug/L	5.2527 ppb	11:26:41
3	Zn 213.857†	2439.2	1438.9	11.835	ug/L	11.835 ppb	11:27:01
3	SiO2†	4145.4	3642.8	219.17	ug/L	219.17 ppb	11:27:17

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	752067.6	101.00	%	0.582				0.58%
Sc Radial	7002.9	101	%	0.6				0.58%
Y 371.029	588122.4	101.16	%	0.603				0.60%
Y RADIAL	6388.9	100.5	%	0.45				0.45%
Ag 328.068†	997.7	5.4671	ug/L	0.58111	5.4671	ppb	0.58111	10.63%
QC value within limits for Ag 328.068 Recovery = 109.34%								
Al 396.153Radial†	267.4	225.18	ug/L	7.531	225.18	ppb	7.531	3.34%
QC value within limits for Al 396.153Radial Recovery = 112.59%								
As 188.979†	96.8	30.693	ug/L	0.7489	30.693	ppb	0.7489	2.44%
QC value within limits for As 188.979 Recovery = 102.31%								
B 249.677†	2366.1	54.080	ug/L	0.0279	54.080	ppb	0.0279	0.05%
QC value within limits for B 249.677 Recovery = 108.16%								
Ba 233.527†	839.6	5.4570	ug/L	0.04309	5.4570	ppb	0.04309	0.79%
QC value within limits for Ba 233.527 Recovery = 109.14%								
Be 313.107†	12454.2	5.0266	ug/L	0.01507	5.0266	ppb	0.01507	0.30%
QC value within limits for Be 313.107 Recovery = 100.53%								
Ca 317.933Radial†	145.2	214.00	ug/L	0.608	214.00	ppb	0.608	0.28%

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   QC value within limits for Ca 317.933Radial  Recovery = 107.00%
Cd 226.502†              445.3      5.0044 ug/L       0.02581      5.0044 ppb        0.02581   0.52%
   QC value within limits for Cd 226.502  Recovery = 100.09%
Co 228.616†              325.3      5.1603 ug/L       0.13582      5.1603 ppb        0.13582   2.63%
   QC value within limits for Co 228.616  Recovery = 103.21%
Cr 267.716†              418.1      5.2318 ug/L       0.21443      5.2318 ppb        0.21443   4.10%
   QC value within limits for Cr 267.716  Recovery = 104.64%
Cu 324.752†             3027.9      10.193 ug/L        0.1612      10.193 ppb         0.1612   1.58%
   QC value within limits for Cu 324.752  Recovery = 101.93%
Fe 238.204 Radial†        24.6      110.20 ug/L         4.988      110.20 ppb          4.988   4.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 110.20%
K 766.490 Radial†        730.5      150.61 ug/L        17.409      150.61 ppb         17.409  11.56%
   QC value within limits for K 766.490 Radial  Recovery = 100.41%
Mg 279.077 IEC†           11.9      305.75 ug/L        36.491      305.75 ppb         36.491  11.94%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.92%
Mn 257.610†            11128.0      11.215 ug/L        0.0406      11.215 ppb         0.0406   0.36%
   QC value within limits for Mn 257.610  Recovery = 112.15%
Mo 202.031†              173.9      11.034 ug/L        0.4515      11.034 ppb         0.4515   4.09%
   QC value within limits for Mo 202.031  Recovery = 110.34%
Na 589.592 Radial†      4897.7      301.36 ug/L         2.992      301.36 ppb          2.992   0.99%
   QC value within limits for Na 589.592 Radial  Recovery = 100.45%
Ni 231.604†              238.0      5.6911 ug/L       0.06215      5.6911 ppb        0.06215   1.09%
   QC value within limits for Ni 231.604  Recovery = 113.82%
P 214.914†               323.8      143.92 ug/L         3.081      143.92 ppb          3.081   2.14%
   QC value within limits for P 214.914  Recovery = 95.94%
Pb 220.353†              104.8      11.131 ug/L        0.8747      11.131 ppb         0.8747   7.86%
   QC value within limits for Pb 220.353  Recovery = 111.31%
S 181.975 Axial†          74.5      89.772 ug/L       10.1004      89.772 ppb        10.1004  11.25%
   QC value within limits for S 181.975 Axial  Recovery = 89.77%
Sb 206.836†               29.6      8.3060 ug/L       2.84287      8.3060 ppb        2.84287  34.23%
   QC value within limits for Sb 206.836  Recovery = 83.06%
Se 196.026†               71.6      32.788 ug/L        1.2713      32.788 ppb         1.2713   3.88%
   QC value within limits for Se 196.026  Recovery = 109.29%
Si 251.611†             3545.5      99.807 ug/L        1.2702      99.807 ppb         1.2702   1.27%
   QC value within limits for Si 251.611  Recovery = 99.81%
Sn 189.927†               68.3      10.724 ug/L        0.6729      10.724 ppb         0.6729   6.27%
   QC value within limits for Sn 189.927  Recovery = 107.24%
Sr 421.552†             1581.9      4.9174 ug/L       0.14457      4.9174 ppb        0.14457   2.94%
   QC value within limits for Sr 421.552  Recovery = 98.35%
Ti 334.940†             3066.8      5.2496 ug/L       0.08896      5.2496 ppb        0.08896   1.69%
   QC value within limits for Ti 334.940  Recovery = 104.99%
Tl 190.801†               92.0      21.937 ug/L        2.7766      21.937 ppb         2.7766  12.66%
   QC value within limits for Tl 190.801  Recovery = 109.69%
U 409.014†              1661.9      52.506 ug/L        3.0813      52.506 ppb         3.0813   5.87%
   QC value within limits for U 409.014  Recovery = 105.01%
V 292.402†               591.7      5.0766 ug/L       0.34308      5.0766 ppb        0.34308   6.76%
   QC value within limits for V 292.402  Recovery = 101.53%
Zn 213.857†             1435.3      11.806 ug/L        0.1152      11.806 ppb         0.1152   0.98%
   QC value within limits for Zn 213.857  Recovery = 118.06%
SiO2†                   3623.7      218.06 ug/L         1.309      218.06 ppb          1.309   0.60%
   QC value within limits for SiO2  Recovery = 102.38%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/2/2009 11:29:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6483.0	6483.0	93.4	%			11:31:27
1	Y RADIAL	5849.8	5849.8	91.99	%			11:31:27
1	Al 396.153Radial†	571903.7	612182.7	516640	ug/L	516640	ppb	11:31:22
1	Ca 317.933Radial†	310734.5	332554.7	490130	ug/L	490130	ppb	11:31:22
1	Fe 238.204 Radial†	38665.2	41344.6	184780	ug/L	184780	ppb	11:31:27
1	K 766.490 Radial†	2222.6	-407.9	-133.98	ug/L	-133.98	ppb	11:31:22
1	Mg 279.077 IEC†	17567.2	18798.3	480680	ug/L	480680	ppb	11:31:27
1	Na 589.592 Radial†	339.2	694.3	42.720	ug/L	42.720	ppb	11:31:27
1	Sr 421.552†	1192.7	1338.9	-0.6515	ug/L	-0.6515	ppb	11:31:27
1	Sc 361.383	663540.0	663540.0	89.107	%			11:31:54
1	Y 371.029	509251.6	509251.6	87.590	%			11:31:54
1	Ag 328.068†	-7740.0	-9392.1	0.5688	ug/L	0.5688	ppb	11:31:54
1	As 188.979†	-89.4	-66.0	15.887	ug/L	15.887	ppb	11:32:14
1	B 249.677†	-54.3	820.4	6.1424	ug/L	6.1424	ppb	11:31:54
1	Ba 233.527†	-732.5	-844.5	-6.3061	ug/L	-6.3061	ppb	11:32:14
1	Be 313.107†	-5088.5	-925.8	-0.4425	ug/L	-0.4425	ppb	11:31:54
1	Cd 226.502†	1108.4	1537.1	-4.2289	ug/L	-4.2289	ppb	11:32:14
1	Co 228.616†	-34.2	62.1	-1.6343	ug/L	-1.6343	ppb	11:32:14
1	Cr 267.716†	-246.3	-178.5	1.5698	ug/L	1.5698	ppb	11:32:14
1	Cu 324.752†	2393.5	-3104.8	0.2375	ug/L	0.2375	ppb	11:31:54
1	Mn 257.610†	-1508.3	-2410.6	11.525	ug/L	11.525	ppb	11:31:54
1	Mo 202.031†	-233.5	-266.5	-4.8409	ug/L	-4.8409	ppb	11:32:14
1	Ni 231.604†	339.5	244.3	5.8444	ug/L	5.8444	ppb	11:32:14
1	P 214.914†	252.2	-10.5	22.660	ug/L	22.660	ppb	11:32:14
1	Pb 220.353†	-801.4	-881.5	-10.032	ug/L	-10.032	ppb	11:32:14
1	S 181.975 Axial†	226.2	117.9	40.505	ug/L	40.505	ppb	11:32:14
1	Sb 206.836†	111.6	72.7	9.5957	ug/L	9.5957	ppb	11:32:14
1	Se 196.026†	-1413.2	-1551.1	-53.047	ug/L	-53.047	ppb	11:32:14
1	Si 251.611†	-239.5	-717.5	-19.197	ug/L	-19.197	ppb	11:32:14
1	Sn 189.927†	-309.1	-359.8	7.6871	ug/L	7.6871	ppb	11:32:14
1	Ti 334.940†	-16940.4	-17484.5	-1.4183	ug/L	-1.4183	ppb	11:31:54
1	Tl 190.801†	-85.1	-34.4	4.1783	ug/L	4.1783	ppb	11:32:14
1	U 409.014†	-4457.2	262.4	-14.408	ug/L	-14.408	ppb	11:31:54
1	V 292.402†	-87.3	1594.9	-4.8590	ug/L	-4.8590	ppb	11:32:14
1	Zn 213.857†	3889.1	3380.1	-7.9878	ug/L	-7.9878	ppb	11:32:14
1	SiO2†	-198.0	-697.7	-39.714	ug/L	-39.714	ppb	11:33:10
2	Sc Radial	6635.6	6635.6	95.6	%			11:31:37
2	Y RADIAL	5972.7	5972.7	93.92	%			11:31:37
2	Al 396.153Radial†	573407.2	599675.7	506090	ug/L	506090	ppb	11:31:32
2	Ca 317.933Radial†	310149.3	324293.0	477950	ug/L	477950	ppb	11:31:32
2	Fe 238.204 Radial†	39382.1	41142.5	183870	ug/L	183870	ppb	11:31:37
2	K 766.490 Radial†	2276.8	-405.9	-131.82	ug/L	-131.82	ppb	11:31:32
2	Mg 279.077 IEC†	17859.3	18671.4	477430	ug/L	477430	ppb	11:31:37
2	Na 589.592 Radial†	352.4	699.7	43.053	ug/L	43.053	ppb	11:31:37
2	Sr 421.552†	1279.0	1399.7	-0.3427	ug/L	-0.3427	ppb	11:31:37
2	Sc 361.383	664560.7	664560.7	89.244	%			11:32:19
2	Y 371.029	509594.8	509594.8	87.649	%			11:32:19
2	Ag 328.068†	-7795.8	-9441.2	0.1818	ug/L	0.1818	ppb	11:32:19
2	As 188.979†	-99.8	-77.6	12.050	ug/L	12.050	ppb	11:32:40
2	B 249.677†	-203.0	653.8	2.3936	ug/L	2.3936	ppb	11:32:19
2	Ba 233.527†	-683.6	-788.5	-5.9397	ug/L	-5.9397	ppb	11:32:40
2	Be 313.107†	-5064.9	-890.6	-0.4281	ug/L	-0.4281	ppb	11:32:19
2	Cd 226.502†	1104.7	1531.1	-4.1915	ug/L	-4.1915	ppb	11:32:40
2	Co 228.616†	-25.2	72.2	-1.4650	ug/L	-1.4650	ppb	11:32:40
2	Cr 267.716†	-175.6	-98.8	2.5471	ug/L	2.5471	ppb	11:32:40
2	Cu 324.752†	2370.8	-3134.3	0.0860	ug/L	0.0860	ppb	11:32:19
2	Mn 257.610†	-1499.9	-2398.5	11.486	ug/L	11.486	ppb	11:32:19
2	Mo 202.031†	-250.2	-284.8	-6.0611	ug/L	-6.0611	ppb	11:32:40
2	Ni 231.604†	341.8	246.3	5.8916	ug/L	5.8916	ppb	11:32:40

2	P 214.914†	227.4	-38.8	7.0951 ug/L	7.0951 ppb	11:32:40
2	Pb 220.353†	-848.7	-933.2	-17.462 ug/L	-17.462 ppb	11:32:40
2	S 181.975 Axial†	229.7	121.4	46.788 ug/L	46.788 ppb	11:32:40
2	Sb 206.836†	106.9	67.2	8.2978 ug/L	8.2978 ppb	11:32:40
2	Se 196.026†	-1362.4	-1491.7	-29.874 ug/L	-29.874 ppb	11:32:40
2	Si 251.611†	-203.1	-676.4	-18.029 ug/L	-18.029 ppb	11:32:40
2	Sn 189.927†	-303.5	-353.1	7.4235 ug/L	7.4235 ppb	11:32:40
2	Ti 334.940†	-16915.6	-17427.5	-2.0336 ug/L	-2.0336 ppb	11:32:19
2	Tl 190.801†	-107.3	-59.1	-1.9402 ug/L	-1.9402 ppb	11:32:40
2	U 409.014†	-4290.6	456.8	-8.1548 ug/L	-8.1548 ppb	11:32:19
2	V 292.402†	-140.5	1535.4	-5.2783 ug/L	-5.2783 ppb	11:32:40
2	Zn 213.857†	3921.4	3409.7	-7.5365 ug/L	-7.5365 ppb	11:32:40
2	SiO2†	-234.4	-738.2	-42.148 ug/L	-42.148 ppb	11:33:15
3	Sc Radial	6550.3	6550.3	94.4 %		11:31:47
3	Y RADIAL	5920.5	5920.5	93.10 %		11:31:47
3	Al 396.153Radial†	569044.4	602866.3	508780 ug/L	508780 ppb	11:31:42
3	Ca 317.933Radial†	308697.3	326980.4	481910 ug/L	481910 ppb	11:31:42
3	Fe 238.204 Radial†	39122.2	41403.6	185040 ug/L	185040 ppb	11:31:47
3	K 766.490 Radial†	2231.6	-422.7	-135.59 ug/L	-135.59 ppb	11:31:42
3	Mg 279.077 IEC†	17763.8	18813.4	481060 ug/L	481060 ppb	11:31:47
3	Na 589.592 Radial†	359.1	711.6	43.785 ug/L	43.785 ppb	11:31:47
3	Sr 421.552†	1224.9	1359.9	-0.5053 ug/L	-0.5053 ppb	11:31:47
3	Sc 361.383	662137.4	662137.4	88.919 %		11:32:45
3	Y 371.029	508138.8	508138.8	87.399 %		11:32:45
3	Ag 328.068†	-7896.0	-9585.9	-0.2976 ug/L	-0.2976 ppb	11:32:45
3	As 188.979†	-99.8	-77.9	12.188 ug/L	12.188 ppb	11:33:05
3	B 249.677†	-258.3	590.8	0.8753 ug/L	0.8753 ppb	11:32:45
3	Ba 233.527†	-678.2	-785.2	-5.9247 ug/L	-5.9247 ppb	11:33:05
3	Be 313.107†	-4954.1	-786.8	-0.3862 ug/L	-0.3862 ppb	11:32:45
3	Cd 226.502†	1106.9	1538.1	-4.2487 ug/L	-4.2487 ppb	11:33:05
3	Co 228.616†	-33.9	62.3	-1.6370 ug/L	-1.6370 ppb	11:33:05
3	Cr 267.716†	-183.9	-108.8	2.4440 ug/L	2.4440 ppb	11:33:05
3	Cu 324.752†	2381.3	-3112.8	0.2259 ug/L	0.2259 ppb	11:32:45
3	Mn 257.610†	-1264.4	-2139.9	11.824 ug/L	11.824 ppb	11:32:45
3	Mo 202.031†	-243.7	-278.5	-5.5863 ug/L	-5.5863 ppb	11:33:05
3	Ni 231.604†	315.9	218.6	5.2289 ug/L	5.2289 ppb	11:33:05
3	P 214.914†	232.5	-32.0	10.095 ug/L	10.095 ppb	11:33:05
3	Pb 220.353†	-826.5	-911.7	-14.774 ug/L	-14.774 ppb	11:33:05
3	S 181.975 Axial†	239.6	133.5	60.882 ug/L	60.882 ppb	11:33:05
3	Sb 206.836†	101.8	61.9	6.8282 ug/L	6.8282 ppb	11:33:05
3	Se 196.026†	-1382.4	-1519.9	-38.541 ug/L	-38.541 ppb	11:33:05
3	Si 251.611†	-199.2	-672.8	-17.932 ug/L	-17.932 ppb	11:33:05
3	Sn 189.927†	-302.7	-353.4	7.8644 ug/L	7.8644 ppb	11:33:05
3	Ti 334.940†	-16839.4	-17411.2	-1.7755 ug/L	-1.7755 ppb	11:32:45
3	Tl 190.801†	-90.7	-40.9	2.4453 ug/L	2.4453 ppb	11:33:05
3	U 409.014†	-4223.0	515.3	-6.4497 ug/L	-6.4497 ppb	11:32:45
3	V 292.402†	-180.9	1489.4	-5.7490 ug/L	-5.7490 ppb	11:33:05
3	Zn 213.857†	3895.8	3396.9	-7.8856 ug/L	-7.8856 ppb	11:33:05
3	SiO2†	-153.3	-648.0	-36.707 ug/L	-36.707 ppb	11:33:20

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	663412.7	89.090	%	0.1634				0.18%
Sc Radial	6556.3	94.5	%	1.10				1.17%
Y 371.029	508995.0	87.546	%	0.1309				0.15%
Y RADIAL	5914.3	93.01	%	0.970				1.04%
Ag 328.068†	-9473.1	0.1510	ug/L	0.43402	0.1510	ppb	0.43402	287.44%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	604908.2	510500	ug/L	5484.5	510500	ppb	5484.5	1.07%
QC value within limits for Al 396.153Radial Recovery = 102.10%								
As 188.979†	-73.8	13.375	ug/L	2.1768	13.375	ppb	2.1768	16.28%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	688.3	3.1371	ug/L	2.71115	3.1371	ppb	2.71115	86.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-806.0	-6.0568	ug/L	0.21598	-6.0568	ppb	0.21598	3.57%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-867.7	-0.4189	ug/L	0.02922	-0.4189	ppb	0.02922	6.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	327942.7	483330	ug/L	6210.8	483330	ppb	6210.8	1.28%

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   QC value within limits for Ca 317.933Radial  Recovery = 96.67%
Cd 226.502†            1535.5     -4.2230 ug/L      0.02909     -4.2230 ppb      0.02909   0.69%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              65.5     -1.5788 ug/L      0.09850     -1.5788 ppb      0.09850   6.24%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -128.7      2.1870 ug/L      0.53694      2.1870 ppb      0.53694  24.55%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -3117.3      0.1831 ug/L      0.08432      0.1831 ppb      0.08432  46.05%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    41296.9      184570 ug/L        612.1      184570 ppb        612.1   0.33%
   QC value within limits for Fe 238.204 Radial  Recovery = 92.28%
K 766.490 Radial†      -412.1     -133.80 ug/L        1.891     -133.80 ppb        1.891   1.41%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       18761.0      479720 ug/L       1995.6      479720 ppb       1995.6   0.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 95.94%
Mn 257.610†           -2316.3      11.612 ug/L       0.1844      11.612 ppb       0.1844   1.59%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -276.6     -5.4961 ug/L      0.61509     -5.4961 ppb      0.61509  11.19%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      701.8      43.186 ug/L       0.5447      43.186 ppb       0.5447   1.26%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†             236.4      5.6550 ug/L      0.36976      5.6550 ppb      0.36976   6.54%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -27.1      13.283 ug/L       8.2576      13.283 ppb       8.2576  62.16%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -908.8     -14.089 ug/L       3.7620     -14.089 ppb       3.7620  26.70%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†        124.2      49.392 ug/L      10.4353      49.392 ppb      10.4353  21.13%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              67.2      8.2406 ug/L      1.38464      8.2406 ppb      1.38464  16.80%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†           -1520.9     -40.487 ug/L      11.7084     -40.487 ppb      11.7084  28.92%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -688.9     -18.386 ug/L       0.7041     -18.386 ppb       0.7041   3.83%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -355.5      7.6583 ug/L      0.22183      7.6583 ppb      0.22183   2.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†            1366.2     -0.4998 ug/L      0.15449     -0.4998 ppb      0.15449  30.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†          -17441.1     -1.7424 ug/L      0.30899     -1.7424 ppb      0.30899  17.73%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†             -44.8      1.5611 ug/L      3.15362      1.5611 ppb      3.15362 202.01%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              411.5     -9.6709 ug/L      4.19031     -9.6709 ppb      4.19031  43.33%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†             1539.9     -5.2955 ug/L      0.44525     -5.2955 ppb      0.44525   8.41%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            3395.6     -7.8033 ug/L      0.23662     -7.8033 ppb      0.23662   3.03%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                  -694.6     -39.523 ug/L       2.7254     -39.523 ppb       2.7254   6.90%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/2/2009 11:35:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6531.4	6531.4	94.1	%			11:37:30
1	Y RADIAL	5882.0	5882.0	92.50	%			11:37:30
1	Al 396.153Radial†	557317.4	592151.2	499710	ug/L	499710	ppb	11:37:25
1	Ca 317.933Radial†	298401.2	316987.8	467190	ug/L	467190	ppb	11:37:25
1	Fe 238.204 Radial†	38554.2	40920.1	182900	ug/L	182900	ppb	11:37:30
1	K 766.490 Radial†	26414.2	25275.2	5162.9	ug/L	5162.9	ppb	11:37:25
1	Mg 279.077 IEC†	17426.9	18510.0	473310	ug/L	473310	ppb	11:37:30
1	Na 589.592 Radial†	79719.5	85023.2	5231.6	ug/L	5231.6	ppb	11:37:25
1	Sr 421.552†	146945.7	156173.9	481.10	ug/L	481.10	ppb	11:37:25
1	Sc 361.383	676734.0	676734.0	90.879	%			11:37:58
1	Y 371.029	517962.3	517962.3	89.088	%			11:37:58
1	Ag 328.068†	37489.4	40546.1	275.19	ug/L	275.19	ppb	11:37:58
1	As 188.979†	1352.4	1522.4	520.81	ug/L	520.81	ppb	11:38:03
1	B 249.677†	20417.6	23348.1	519.18	ug/L	519.18	ppb	11:37:58
1	Ba 233.527†	67261.5	73989.8	480.28	ug/L	480.28	ppb	11:37:58
1	Be 313.107†	544014.2	603398.9	244.07	ug/L	244.07	ppb	11:37:58
1	Cd 226.502†	38359.0	42502.2	457.51	ug/L	457.51	ppb	11:38:03
1	Co 228.616†	25806.3	28496.8	448.26	ug/L	448.26	ppb	11:38:03
1	Cr 267.716†	34093.7	37613.5	475.70	ug/L	475.70	ppb	11:38:03
1	Cu 324.752†	148941.5	158099.2	542.47	ug/L	542.47	ppb	11:37:58
1	Mn 257.610†	423226.7	464985.9	482.14	ug/L	482.14	ppb	11:37:58
1	Mo 202.031†	6784.0	7460.5	484.98	ug/L	484.98	ppb	11:38:03
1	Ni 231.604†	17456.6	19072.0	455.95	ug/L	455.95	ppb	11:38:03
1	P 214.914†	5276.8	5512.9	2404.3	ug/L	2404.3	ppb	11:38:03
1	Pb 220.353†	3168.1	3503.9	451.09	ug/L	451.09	ppb	11:38:03
1	S 181.975 Axial†	2294.9	2389.3	2782.7	ug/L	2782.7	ppb	11:38:03
1	Sb 206.836†	1836.3	1968.0	531.01	ug/L	531.01	ppb	11:38:03
1	Se 196.026†	3637.9	4037.8	2469.4	ug/L	2469.4	ppb	11:38:03
1	Si 251.611†	167499.0	183861.2	5179.9	ug/L	5179.9	ppb	11:37:58
1	Sn 189.927†	2527.2	2767.9	495.01	ug/L	495.01	ppb	11:38:03
1	Ti 334.940†	254604.4	281684.5	510.18	ug/L	510.18	ppb	11:37:58
1	Tl 190.801†	1641.8	1867.8	458.95	ug/L	458.95	ppb	11:38:03
1	U 409.014†	10046.4	16319.3	492.44	ug/L	492.44	ppb	11:37:58
1	V 292.402†	55859.2	63158.4	506.70	ug/L	506.70	ppb	11:37:58
1	Zn 213.857†	57116.9	61865.1	472.86	ug/L	472.86	ppb	11:38:03
1	SiO2†	171223.9	187933.3	11319	ug/L	11319	ppb	11:38:30
2	Sc Radial	6517.0	6517.0	93.9	%			11:37:40
2	Y RADIAL	5921.7	5921.7	93.12	%			11:37:40
2	Al 396.153Radial†	555942.4	591995.1	499580	ug/L	499580	ppb	11:37:35
2	Ca 317.933Radial†	297947.0	317204.5	467510	ug/L	467510	ppb	11:37:35
2	Fe 238.204 Radial†	38333.9	40776.0	182250	ug/L	182250	ppb	11:37:40
2	K 766.490 Radial†	26353.4	25272.4	5161.8	ug/L	5161.8	ppb	11:37:35
2	Mg 279.077 IEC†	17308.8	18425.2	471140	ug/L	471140	ppb	11:37:40
2	Na 589.592 Radial†	79620.4	85104.8	5236.6	ug/L	5236.6	ppb	11:37:35
2	Sr 421.552†	146452.1	155993.2	480.54	ug/L	480.54	ppb	11:37:35
2	Sc 361.383	673779.4	673779.4	90.482	%			11:38:08
2	Y 371.029	515653.3	515653.3	88.691	%			11:38:08
2	Ag 328.068†	38074.1	41373.3	279.55	ug/L	279.55	ppb	11:38:08
2	As 188.979†	1373.9	1552.8	530.34	ug/L	530.34	ppb	11:38:13
2	B 249.677†	20663.1	23717.9	527.59	ug/L	527.59	ppb	11:38:08
2	Ba 233.527†	68228.2	75382.7	489.34	ug/L	489.34	ppb	11:38:08
2	Be 313.107†	553408.7	616406.6	249.33	ug/L	249.33	ppb	11:38:08
2	Cd 226.502†	39677.6	44144.5	476.09	ug/L	476.09	ppb	11:38:13
2	Co 228.616†	26730.6	29642.9	466.41	ug/L	466.41	ppb	11:38:13
2	Cr 267.716†	35255.1	39061.5	493.84	ug/L	493.84	ppb	11:38:13
2	Cu 324.752†	151572.1	161725.2	554.63	ug/L	554.63	ppb	11:38:08
2	Mn 257.610†	430298.2	474843.5	492.03	ug/L	492.03	ppb	11:38:08
2	Mo 202.031†	6996.0	7727.5	501.87	ug/L	501.87	ppb	11:38:13
2	Ni 231.604†	18139.8	19911.2	476.01	ug/L	476.01	ppb	11:38:13

2	P 214.914†	5470.9	5752.9	2510.6	ug/L	2510.6 ppb	11:38:13
2	Pb 220.353†	3297.7	3662.4	467.90	ug/L	467.90 ppb	11:38:13
2	S 181.975 Axial†	2351.2	2462.5	2871.1	ug/L	2871.1 ppb	11:38:13
2	Sb 206.836†	1912.0	2060.6	556.29	ug/L	556.29 ppb	11:38:13
2	Se 196.026†	3763.0	4193.7	2537.9	ug/L	2537.9 ppb	11:38:13
2	Si 251.611†	170225.8	187683.1	5287.4	ug/L	5287.4 ppb	11:38:08
2	Sn 189.927†	2602.3	2863.0	509.89	ug/L	509.89 ppb	11:38:13
2	Ti 334.940†	258566.3	287291.7	519.81	ug/L	519.81 ppb	11:38:08
2	Tl 190.801†	1755.6	2001.4	490.71	ug/L	490.71 ppb	11:38:13
2	U 409.014†	10023.8	16342.7	493.22	ug/L	493.22 ppb	11:38:08
2	V 292.402†	56724.8	64384.5	517.00	ug/L	517.00 ppb	11:38:08
2	Zn 213.857†	59172.5	64412.4	493.94	ug/L	493.94 ppb	11:38:13
2	SiO2†	169034.8	186340.1	11221	ug/L	11221 ppb	11:38:35
3	Sc Radial	6563.8	6563.8	94.6	%		11:37:50
3	Y RADIAL	5907.1	5907.1	92.89	%		11:37:50
3	Al 396.153Radial†	563054.7	595297.1	502370	ug/L	502370 ppb	11:37:45
3	Ca 317.933Radial†	302108.3	319343.7	470660	ug/L	470660 ppb	11:37:45
3	Fe 238.204 Radial†	38413.4	40569.3	181330	ug/L	181330 ppb	11:37:50
3	K 766.490 Radial†	26588.6	25321.2	5170.2	ug/L	5170.2 ppb	11:37:45
3	Mg 279.077 IEC†	17354.3	18341.9	469020	ug/L	469020 ppb	11:37:50
3	Na 589.592 Radial†	80979.7	85937.9	5287.9	ug/L	5287.9 ppb	11:37:45
3	Sr 421.552†	148809.1	157374.0	484.80	ug/L	484.80 ppb	11:37:45
3	Sc 361.383	616767.1	616767.1	82.826	%		11:38:19
3	Y 371.029	472851.8	472851.8	81.329	%		11:38:19
3	Ag 328.068†	38142.7	45345.7	301.11	ug/L	301.11 ppb	11:38:19
3	As 188.979†	1336.9	1648.4	560.64	ug/L	560.64 ppb	11:38:24
3	B 249.677†	20757.5	25942.9	578.38	ug/L	578.38 ppb	11:38:19
3	Ba 233.527†	68465.0	82638.9	536.52	ug/L	536.52 ppb	11:38:19
3	Be 313.107†	555237.7	675151.4	273.09	ug/L	273.09 ppb	11:38:19
3	Cd 226.502†	38732.7	47057.3	509.01	ug/L	509.01 ppb	11:38:24
3	Co 228.616†	26059.7	31563.7	496.80	ug/L	496.80 ppb	11:38:24
3	Cr 267.716†	34309.2	41521.2	524.71	ug/L	524.71 ppb	11:38:24
3	Cu 324.752†	152620.8	178475.9	610.93	ug/L	610.93 ppb	11:38:19
3	Mn 257.610†	431743.3	520547.8	537.98	ug/L	537.98 ppb	11:38:19
3	Mo 202.031†	6881.0	8303.4	538.33	ug/L	538.33 ppb	11:38:24
3	Ni 231.604†	17623.9	21141.5	505.42	ug/L	505.42 ppb	11:38:24
3	P 214.914†	5259.2	6056.2	2638.1	ug/L	2638.1 ppb	11:38:24
3	Pb 220.353†	3197.3	3878.1	491.39	ug/L	491.39 ppb	11:38:24
3	S 181.975 Axial†	2292.7	2632.2	3075.1	ug/L	3075.1 ppb	11:38:24
3	Sb 206.836†	1864.7	2198.7	594.22	ug/L	594.22 ppb	11:38:24
3	Se 196.026†	3621.1	4406.8	2631.5	ug/L	2631.5 ppb	11:38:24
3	Si 251.611†	170876.5	205859.1	5800.0	ug/L	5800.0 ppb	11:38:19
3	Sn 189.927†	2543.5	3058.0	540.67	ug/L	540.67 ppb	11:38:24
3	Ti 334.940†	260450.1	315981.4	569.19	ug/L	569.19 ppb	11:38:19
3	Tl 190.801†	1644.1	2046.2	501.79	ug/L	501.79 ppb	11:38:24
3	U 409.014†	10207.0	17588.0	532.64	ug/L	532.64 ppb	11:38:19
3	V 292.402†	56960.9	70464.6	567.44	ug/L	567.44 ppb	11:38:19
3	Zn 213.857†	57620.7	68584.0	528.36	ug/L	528.36 ppb	11:38:24
3	SiO2†	171155.6	206169.3	12417	ug/L	12417 ppb	11:38:40

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	655760.2	88.062	%	4.5392				5.15%
Sc Radial	6537.4	94.2	%	0.35				0.37%
Y 371.029	502155.8	86.370	%	4.3695				5.06%
Y RADIAL	5903.6	92.84	%	0.315				0.34%
Ag 328.068†	42421.7	285.29	ug/L	13.880	285.29	ppb	13.880	4.87%
QC value within limits for Ag 328.068 Recovery = 114.11%								
Al 396.153Radial†	593147.8	500550	ug/L	1571.1	500550	ppb	1571.1	0.31%
QC value within limits for Al 396.153Radial Recovery = 100.11%								
As 188.979†	1574.5	537.26	ug/L	20.798	537.26	ppb	20.798	3.87%
QC value within limits for As 188.979 Recovery = 107.45%								
B 249.677†	24336.3	541.71	ug/L	32.029	541.71	ppb	32.029	5.91%
QC value within limits for B 249.677 Recovery = 108.34%								
Ba 233.527†	77337.1	502.05	ug/L	30.201	502.05	ppb	30.201	6.02%
QC value within limits for Ba 233.527 Recovery = 100.41%								
Be 313.107†	631652.3	255.50	ug/L	15.465	255.50	ppb	15.465	6.05%
QC value within limits for Be 313.107 Recovery = 102.20%								
Ca 317.933Radial†	317845.4	468450	ug/L	1919.1	468450	ppb	1919.1	0.41%

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   QC value within limits for Ca 317.933Radial  Recovery = 93.69%
Cd 226.502†          44568.0      480.87 ug/L        26.081      480.87 ppb        26.081   5.42%
   QC value within limits for Cd 226.502  Recovery = 96.17%
Co 228.616†          29901.1      470.49 ug/L        24.526      470.49 ppb        24.526   5.21%
   QC value within limits for Co 228.616  Recovery = 94.10%
Cr 267.716†          39398.8      498.08 ug/L        24.780      498.08 ppb        24.780   4.98%
   QC value within limits for Cr 267.716  Recovery = 99.62%
Cu 324.752†         166100.1      569.35 ug/L        36.526      569.35 ppb        36.526   6.42%
   QC value within limits for Cu 324.752  Recovery = 113.87%
Fe 238.204 Radial†   40755.1      182160 ug/L         787.2      182160 ppb         787.2   0.43%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.08%
K 766.490 Radial†    25289.6      5165.0 ug/L          4.56      5165.0 ppb          4.56   0.09%
   QC value within limits for K 766.490 Radial  Recovery = 103.30%
Mg 279.077 IEC†      18425.7      471160 ug/L        2148.3      471160 ppb        2148.3   0.46%
   QC value within limits for Mg 279.077 IEC  Recovery = 94.23%
Mn 257.610†         486792.4      504.05 ug/L        29.799      504.05 ppb        29.799   5.91%
   QC value within limits for Mn 257.610  Recovery = 100.81%
Mo 202.031†           7830.5      508.39 ug/L        27.264      508.39 ppb        27.264   5.36%
   QC value within limits for Mo 202.031  Recovery = 101.68%
Na 589.592 Radial†   85355.3      5252.0 ug/L         31.14      5252.0 ppb         31.14   0.59%
   QC value within limits for Na 589.592 Radial  Recovery = 105.04%
Ni 231.604†          20041.6      479.13 ug/L        24.885      479.13 ppb        24.885   5.19%
   QC value within limits for Ni 231.604  Recovery = 95.83%
P 214.914†            5774.0      2517.7 ug/L        117.05      2517.7 ppb        117.05   4.65%
   QC value within limits for P 214.914  Recovery = 100.71%
Pb 220.353†           3681.5      470.13 ug/L        20.240      470.13 ppb        20.240   4.31%
   QC value within limits for Pb 220.353  Recovery = 94.03%
S 181.975 Axial†      2494.7      2909.6 ug/L        149.94      2909.6 ppb        149.94   5.15%
   QC value within limits for S 181.975 Axial  Recovery = 116.38%
Sb 206.836†           2075.8      560.51 ug/L        31.814      560.51 ppb        31.814   5.68%
   QC value within limits for Sb 206.836  Recovery = 112.10%
Se 196.026†           4212.8      2546.3 ug/L         81.33      2546.3 ppb         81.33   3.19%
   QC value within limits for Se 196.026  Recovery = 101.85%
Si 251.611†         192467.8      5422.4 ug/L        331.36      5422.4 ppb        331.36   6.11%
   QC value within limits for Si 251.611  Recovery = 108.45%
Sn 189.927†           2896.3      515.19 ug/L        23.288      515.19 ppb        23.288   4.52%
   QC value within limits for Sn 189.927  Recovery = 103.04%
Sr 421.552†         156513.7      482.15 ug/L         2.316      482.15 ppb         2.316   0.48%
   QC value within limits for Sr 421.552  Recovery = 96.43%
Ti 334.940†         294985.9      533.06 ug/L        31.660      533.06 ppb        31.660   5.94%
   QC value within limits for Ti 334.940  Recovery = 106.61%
Tl 190.801†           1971.8      483.82 ug/L        22.237      483.82 ppb        22.237   4.60%
   QC value within limits for Tl 190.801  Recovery = 96.76%
U 409.014†           16750.0      506.10 ug/L        22.986      506.10 ppb        22.986   4.54%
   QC value within limits for U 409.014  Recovery = 101.22%
V 292.402†           66002.5      530.38 ug/L        32.508      530.38 ppb        32.508   6.13%
   QC value within limits for V 292.402  Recovery = 106.08%
Zn 213.857†          64953.8      498.39 ug/L        28.020      498.39 ppb        28.020   5.62%
   QC value within limits for Zn 213.857  Recovery = 99.68%
SiO2†               193480.9       11652 ug/L         664.0       11652 ppb         664.0   5.70%
   QC value within limits for SiO2  Recovery = 108.95%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/2/2009 11:40:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6475.7	6475.7	93.3	%			11:42:54
1	Y RADIAL	5848.3	5848.3	91.97	%			11:42:54
1	Al 396.153Radial†	564519.3	604958.6	510540	ug/L	510540	ppb	11:42:48
1	Ca 317.933Radial†	298475.0	319792.5	471320	ug/L	471320	ppb	11:42:48
1	Fe 238.204 Radial†	92680.4	99269.0	443660	ug/L	443660	ppb	11:42:48
1	K 766.490 Radial†	2570.5	-32.4	-66.374	ug/L	-66.374	ppb	11:42:48
1	Mg 279.077 IEC†	17156.3	18379.2	469730	ug/L	469730	ppb	11:42:54
1	Na 589.592 Radial†	7472129.8	8006792.1	492670	ug/L	492670	ppb	11:42:43
1	Sr 421.552†	1629.7	1808.5	0.9940	ug/L	0.9940	ppb	11:42:54
1	Sc 361.383	664334.4	664334.4	89.214	%			11:43:33
1	Y 371.029	510229.3	510229.3	87.758	%			11:43:33
1	Ag 328.068†	-19377.4	-22426.0	0.1035	ug/L	0.1035	ppb	11:43:33
1	As 188.979†	-216.0	-207.8	22.775	ug/L	22.775	ppb	11:43:53
1	B 249.677†	502.4	1444.4	2.7178	ug/L	2.7178	ppb	11:43:33
1	Ba 233.527†	-1809.4	-2050.6	-15.318	ug/L	-15.318	ppb	11:43:53
1	Be 313.107†	-9871.5	-6280.3	-2.5770	ug/L	-2.5770	ppb	11:43:33
1	Cd 226.502†	3136.2	3808.6	-8.8296	ug/L	-8.8296	ppb	11:43:53
1	Co 228.616†	227.0	355.0	-0.7705	ug/L	-0.7705	ppb	11:43:53
1	Cr 267.716†	-49.3	42.7	5.0437	ug/L	5.0437	ppb	11:43:53
1	Cu 324.752†	-314.8	-6143.7	4.9806	ug/L	4.9806	ppb	11:43:33
1	Mn 257.610†	-31190.8	-35679.7	10.775	ug/L	10.775	ppb	11:43:33
1	Mo 202.031†	-517.5	-584.4	-8.1109	ug/L	-8.1109	ppb	11:43:33
1	Ni 231.604†	433.7	349.5	8.3565	ug/L	8.3565	ppb	11:43:53
1	P 214.914†	716.2	509.2	47.794	ug/L	47.794	ppb	11:43:53
1	Pb 220.353†	-537.2	-584.3	-4.3147	ug/L	-4.3147	ppb	11:43:53
1	S 181.975 Axial†	287.2	186.0	123.81	ug/L	123.81	ppb	11:43:53
1	Sb 206.836†	88.9	47.1	6.8603	ug/L	6.8603	ppb	11:43:53
1	Se 196.026†	-3306.8	-3671.8	-151.42	ug/L	-151.42	ppb	11:43:53
1	Si 251.611†	-2035.3	-2730.1	-75.638	ug/L	-75.638	ppb	11:43:53
1	Sn 189.927†	-354.7	-410.6	17.089	ug/L	17.089	ppb	11:43:53
1	Ti 334.940†	-12190.3	-12137.4	0.3285	ug/L	0.3285	ppb	11:43:33
1	Tl 190.801†	-139.0	-94.7	-10.413	ug/L	-10.413	ppb	11:43:53
1	U 409.014†	400260.6	453917.7	14293	ug/L	14293	ppb	11:43:33
1	V 292.402†	571.5	2333.5	-7.4918	ug/L	-7.4918	ppb	11:43:53
1	Zn 213.857†	7020.8	6885.2	-5.6109	ug/L	-5.6109	ppb	11:43:53
1	SiO2†	-2212.4	-2955.4	-175.16	ug/L	-175.16	ppb	11:44:50
2	Sc Radial	6466.1	6466.1	93.2	%			11:43:10
2	Y RADIAL	5924.2	5924.2	93.16	%			11:43:10
2	Al 396.153Radial†	571768.0	613640.6	517870	ug/L	517870	ppb	11:43:05
2	Ca 317.933Radial†	301210.6	323205.7	476350	ug/L	476350	ppb	11:43:05
2	Fe 238.204 Radial†	93525.1	100323.8	448370	ug/L	448370	ppb	11:43:05
2	K 766.490 Radial†	2374.7	-238.3	-108.81	ug/L	-108.81	ppb	11:43:05
2	Mg 279.077 IEC†	17299.2	18560.0	474360	ug/L	474360	ppb	11:43:10
2	Na 589.592 Radial†	7420675.2	7963532.3	490010	ug/L	490010	ppb	11:42:59
2	Sr 421.552†	1545.9	1721.2	0.6731	ug/L	0.6731	ppb	11:43:10
2	Sc 361.383	711724.5	711724.5	95.578	%			11:43:59
2	Y 371.029	545615.1	545615.1	93.845	%			11:43:59
2	Ag 328.068†	-19020.1	-20606.0	12.410	ug/L	12.410	ppb	11:43:59
2	As 188.979†	-235.7	-212.3	22.279	ug/L	22.279	ppb	11:44:19
2	B 249.677†	361.8	1259.8	-1.8251	ug/L	-1.8251	ppb	11:43:59
2	Ba 233.527†	-1804.0	-1909.9	-14.426	ug/L	-14.426	ppb	11:44:19
2	Be 313.107†	-9971.7	-5648.4	-2.3179	ug/L	-2.3179	ppb	11:43:59
2	Cd 226.502†	3112.6	3549.8	-12.293	ug/L	-12.293	ppb	11:44:19
2	Co 228.616†	234.7	346.1	-0.9654	ug/L	-0.9654	ppb	11:44:19
2	Cr 267.716†	9.8	108.2	6.3048	ug/L	6.3048	ppb	11:44:19
2	Cu 324.752†	-129.6	-5926.4	5.9842	ug/L	5.9842	ppb	11:43:59
2	Mn 257.610†	-30455.0	-32582.0	14.398	ug/L	14.398	ppb	11:43:59
2	Mo 202.031†	-457.9	-483.5	-1.4033	ug/L	-1.4033	ppb	11:43:59
2	Ni 231.604†	459.8	344.4	8.2356	ug/L	8.2356	ppb	11:44:19

2	P 214.914†	732.4	472.7	29.940	ug/L	29.940 ppb	11:44:19
2	Pb 220.353†	-581.6	-590.7	-3.9902	ug/L	-3.9902 ppb	11:44:19
2	S 181.975 Axial†	304.6	182.7	118.41	ug/L	118.41 ppb	11:44:19
2	Sb 206.836†	115.1	67.8	12.565	ug/L	12.565 ppb	11:44:19
2	Se 196.026†	-3259.4	-3375.4	-1.0993	ug/L	-1.0993 ppb	11:44:19
2	Si 251.611†	-2021.3	-2563.6	-71.081	ug/L	-71.081 ppb	11:44:19
2	Sn 189.927†	-357.0	-386.5	21.721	ug/L	21.721 ppb	11:44:19
2	Ti 334.940†	-11932.3	-10957.6	3.1162	ug/L	3.1162 ppb	11:43:59
2	Tl 190.801†	-135.6	-80.7	-6.8727	ug/L	-6.8727 ppb	11:44:19
2	U 409.014†	396599.6	420213.9	13227	ug/L	13227 ppb	11:43:59
2	V 292.402†	655.5	2378.7	-9.6919	ug/L	-9.6919 ppb	11:44:19
2	Zn 213.857†	6964.3	6302.1	-11.089	ug/L	-11.089 ppb	11:44:19
2	SiO2†	-2208.8	-2786.5	-165.28	ug/L	-165.28 ppb	11:44:55
3	Sc Radial	6504.9	6504.9	93.7	%		11:43:26
3	Y RADIAL	5899.2	5899.2	92.77	%		11:43:26
3	Al 396.153Radial†	570174.7	608277.8	513350	ug/L	513350 ppb	11:43:21
3	Ca 317.933Radial†	299213.1	319145.2	470370	ug/L	470370 ppb	11:43:21
3	Fe 238.204 Radial†	92775.5	98924.9	442120	ug/L	442120 ppb	11:43:21
3	K 766.490 Radial†	2534.5	-83.2	-77.427	ug/L	-77.427 ppb	11:43:21
3	Mg 279.077 IEC†	17213.0	18357.2	469170	ug/L	469170 ppb	11:43:26
3	Na 589.592 Radial†	7497075.8	7997486.0	492100	ug/L	492100 ppb	11:43:16
3	Sr 421.552†	1646.5	1818.6	1.0347	ug/L	1.0347 ppb	11:43:26
3	Sc 361.383	683883.4	683883.4	91.839	%		11:44:24
3	Y 371.029	525007.1	525007.1	90.300	%		11:44:24
3	Ag 328.068†	-19658.8	-22111.6	1.4201	ug/L	1.4201 ppb	11:44:24
3	As 188.979†	-228.6	-214.7	20.290	ug/L	20.290 ppb	11:44:45
3	B 249.677†	549.4	1479.6	3.6248	ug/L	3.6248 ppb	11:44:24
3	Ba 233.527†	-1870.1	-2058.7	-15.363	ug/L	-15.363 ppb	11:44:45
3	Be 313.107†	-10223.2	-6346.9	-2.6035	ug/L	-2.6035 ppb	11:44:24
3	Cd 226.502†	3169.3	3744.2	-9.3753	ug/L	-9.3753 ppb	11:44:45
3	Co 228.616†	252.6	375.6	-0.4233	ug/L	-0.4233 ppb	11:44:45
3	Cr 267.716†	-32.2	62.9	5.2928	ug/L	5.2928 ppb	11:44:45
3	Cu 324.752†	-290.6	-6107.2	5.0145	ug/L	5.0145 ppb	11:44:24
3	Mn 257.610†	-31469.5	-34983.9	11.293	ug/L	11.293 ppb	11:44:24
3	Mo 202.031†	-534.8	-586.7	-8.3545	ug/L	-8.3545 ppb	11:44:24
3	Ni 231.604†	447.1	350.2	8.3740	ug/L	8.3740 ppb	11:44:45
3	P 214.914†	783.4	559.5	72.685	ug/L	72.685 ppb	11:44:45
3	Pb 220.353†	-540.7	-570.9	-2.2098	ug/L	-2.2098 ppb	11:44:45
3	S 181.975 Axial†	315.5	207.6	149.30	ug/L	149.30 ppb	11:44:45
3	Sb 206.836†	73.5	27.4	1.4977	ug/L	1.4977 ppb	11:44:45
3	Se 196.026†	-3302.8	-3561.5	-106.43	ug/L	-106.43 ppb	11:44:45
3	Si 251.611†	-2043.7	-2674.0	-74.119	ug/L	-74.119 ppb	11:44:45
3	Sn 189.927†	-334.0	-376.6	22.189	ug/L	22.189 ppb	11:44:45
3	Ti 334.940†	-12480.9	-12063.2	0.4376	ug/L	0.4376 ppb	11:44:24
3	Tl 190.801†	-157.4	-110.2	-14.022	ug/L	-14.022 ppb	11:44:45
3	U 409.014†	409569.3	451228.8	14208	ug/L	14208 ppb	11:44:24
3	V 292.402†	616.4	2364.0	-7.2037	ug/L	-7.2037 ppb	11:44:45
3	Zn 213.857†	7000.8	6638.5	-7.4728	ug/L	-7.4728 ppb	11:44:45
3	SiO2†	-2018.1	-2673.0	-158.25	ug/L	-158.25 ppb	11:45:00

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	686647.4	92.210	%	3.1982				3.47%
Sc Radial	6482.2	93.4	%	0.29				0.31%
Y 371.029	526950.5	90.634	%	3.0569				3.37%
Y RADIAL	5890.5	92.63	%	0.608				0.66%
Ag 328.068†	-21714.5	4.6445	ug/L	6.75718	4.6445	ppb	6.75718	145.49%
Al 396.153Radial†	608959.0	513920	ug/L	3697.0	513920	ppb	3697.0	0.72%
QC value within limits for Al 396.153Radial Recovery = 102.78%								
As 188.979†	-211.6	21.781	ug/L	1.3150	21.781	ppb	1.3150	6.04%
B 249.677†	1394.6	1.5058	ug/L	2.92008	1.5058	ppb	2.92008	193.92%
Ba 233.527†	-2006.4	-15.036	ug/L	0.5282	-15.036	ppb	0.5282	3.51%
Be 313.107†	-6091.9	-2.4995	ug/L	0.15783	-2.4995	ppb	0.15783	6.31%
Ca 317.933Radial†	320714.5	472680	ug/L	3215.3	472680	ppb	3215.3	0.68%
QC value within limits for Ca 317.933Radial Recovery = 94.54%								
Cd 226.502†	3700.9	-10.166	ug/L	1.8621	-10.166	ppb	1.8621	18.32%
Co 228.616†	358.9	-0.7197	ug/L	0.27461	-0.7197	ppb	0.27461	38.15%
Cr 267.716†	71.3	5.5471	ug/L	0.66791	5.5471	ppb	0.66791	12.04%
Cu 324.752†	-6059.1	5.3264	ug/L	0.56989	5.3264	ppb	0.56989	10.70%

Fe 238.204 Radial†	99505.9	444710 ug/L	3257.5	444710 ppb	3257.5	0.73%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 88.94%						
K 766.490 Radial†	-118.0	-84.205 ug/L	22.0172	-84.205 ppb	22.0172	26.15%
Mg 279.077 IEC†	18432.1	471090 ug/L	2844.4	471090 ppb	2844.4	0.60%
QC value within limits for Mg 279.077 IEC Recovery = 94.22%						
Mn 257.610†	-34415.2	12.156 ug/L	1.9594	12.156 ppb	1.9594	16.12%
Mo 202.031†	-551.6	-5.9562 ug/L	3.94480	-5.9562 ppb	3.94480	66.23%
Na 589.592 Radial†	7989270.1	491590 ug/L	1401.1	491590 ppb	1401.1	0.29%
QC value within limits for Na 589.592 Radial Recovery = 98.32%						
Ni 231.604†	348.0	8.3221 ug/L	0.07535	8.3221 ppb	0.07535	0.91%
P 214.914†	513.8	50.140 ug/L	21.4691	50.140 ppb	21.4691	42.82%
Pb 220.353†	-582.0	-3.5049 ug/L	1.13325	-3.5049 ppb	1.13325	32.33%
S 181.975 Axial†	192.1	130.51 ug/L	16.498	130.51 ppb	16.498	12.64%
Sb 206.836†	47.5	6.9744 ug/L	5.53457	6.9744 ppb	5.53457	79.36%
Se 196.026†	-3536.2	-86.316 ug/L	77.1531	-86.316 ppb	77.1531	89.38%
Si 251.611†	-2655.9	-73.613 ug/L	2.3200	-73.613 ppb	2.3200	3.15%
Sn 189.927†	-391.2	20.333 ug/L	2.8191	20.333 ppb	2.8191	13.86%
Sr 421.552†	1782.8	0.9006 ug/L	0.19807	0.9006 ppb	0.19807	21.99%
Ti 334.940†	-11719.4	1.2941 ug/L	1.57895	1.2941 ppb	1.57895	122.01%
Tl 190.801†	-95.2	-10.436 ug/L	3.5748	-10.436 ppb	3.5748	34.26%
U 409.014†	441786.8	13909 ug/L	592.4	13909 ppb	592.4	4.26%
QC value within limits for U 409.014 Recovery = 92.73%						
V 292.402†	2358.7	-8.1291 ug/L	1.36103	-8.1291 ppb	1.36103	16.74%
Zn 213.857†	6608.6	-8.0574 ug/L	2.78520	-8.0574 ppb	2.78520	34.57%
SiO2†	-2805.0	-166.23 ug/L	8.496	-166.23 ppb	8.496	5.11%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/2/2009 11:47:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6626.0	6626.0	95.5	%			11:49:08
1	Y RADIAL	6052.6	6052.6	95.18	%			11:49:08
1	Al 396.153Radial†	423.2	513.8	26.134	ug/L	26.134	ppb	11:49:08
1	Ca 317.933Radial†	48.0	23.8	35.151	ug/L	35.151	ppb	11:49:28
1	Fe 238.204 Radial†	-20.6	-60.6	-2.7138	ug/L	-2.7138	ppb	11:49:28
1	K 766.490 Radial†	1345516.0	1406251.4	290310	ug/L	290310	ppb	11:49:03
1	Mg 279.077 IEC†	-10.3	-14.7	-184.04	ug/L	-184.04	ppb	11:49:28
1	Na 589.592 Radial†	2757.7	3219.1	198.08	ug/L	198.08	ppb	11:49:08
1	Sr 421.552†	2995852.9	3137349.9	9757.0	ug/L	9757.0	ppb	11:49:03
1	Sc 361.383	725224.3	725224.3	97.391	%			11:50:46
1	Y 371.029	554661.3	554661.3	95.401	%			11:50:46
1	Ag 328.068†	-4723.9	-5556.4	8.5981	ug/L	8.5981	ppb	11:50:51
1	As 188.979†	29868.4	30703.0	9783.1	ug/L	9783.1	ppb	11:50:51
1	B 249.677†	209856.9	216360.6	4904.7	ug/L	4904.7	ppb	11:50:46
1	Ba 233.527†	2073030.0	2128547.8	13830	ug/L	13830	ppb	11:50:46
1	Be 313.107†	6816841.2	7004261.4	2842.6	ug/L	2842.6	ppb	11:50:40
1	Cd 226.502†	855584.6	878800.5	9900.8	ug/L	9900.8	ppb	11:50:46
1	Co 228.616†	522945.3	537056.5	8493.8	ug/L	8493.8	ppb	11:50:51
1	Cr 267.716†	1855993.0	1905816.4	23896	ug/L	23896	ppb	11:50:46
1	Cu 324.752†	5673546.0	5819759.6	19580	ug/L	19580	ppb	11:50:40
1	Mn 257.610†	8937086.4	9175809.1	9240.9	ug/L	9240.9	ppb	11:50:40
1	Mo 202.031†	146186.5	150098.6	9517.4	ug/L	9517.4	ppb	11:50:51
1	Ni 231.604†	397789.9	408310.7	9762.1	ug/L	9762.1	ppb	11:50:46
1	P 214.914†	37251.8	37956.3	13328	ug/L	13328	ppb	11:50:51
1	Pb 220.353†	219400.0	225295.9	23815	ug/L	23815	ppb	11:50:51
1	S 181.975 Axial†	40426.7	41373.8	49889	ug/L	49889	ppb	11:50:51
1	Sb 206.836†	37220.0	38164.6	10136	ug/L	10136	ppb	11:50:51
1	Se 196.026†	21341.4	21948.0	9946.0	ug/L	9946.0	ppb	11:50:51
1	Si 251.611†	1625263.3	1668358.3	46748	ug/L	46748	ppb	11:50:46
1	Sn 189.927†	62624.9	64289.7	10068	ug/L	10068	ppb	11:50:51
1	Ti 334.940†	5499560.1	5648430.0	9683.4	ug/L	9683.4	ppb	11:50:40
1	Tl 190.801†	38754.4	39853.9	9531.3	ug/L	9531.3	ppb	11:50:51
1	U 409.014†	-4237.5	913.5	-17.221	ug/L	-17.221	ppb	11:50:51
1	V 292.402†	1166474.4	1199419.2	9938.8	ug/L	9938.8	ppb	11:50:46
1	Zn 213.857†	1666904.9	1710579.9	14067	ug/L	14067	ppb	11:50:46
1	SiO2†	1622332.2	1665321.9	99723	ug/L	99723	ppb	11:51:37
2	Sc Radial	6652.6	6652.6	95.9	%			11:49:39
2	Y RADIAL	6071.4	6071.4	95.48	%			11:49:39
2	Al 396.153Radial†	419.7	508.3	24.093	ug/L	24.093	ppb	11:49:39
2	Ca 317.933Radial†	47.4	23.1	33.995	ug/L	33.995	ppb	11:49:59
2	Fe 238.204 Radial†	-24.9	-65.0	-27.010	ug/L	-27.010	ppb	11:49:59
2	K 766.490 Radial†	1344350.0	1399394.0	288900	ug/L	288900	ppb	11:49:34
2	Mg 279.077 IEC†	-7.3	-11.6	-104.81	ug/L	-104.81	ppb	11:49:59
2	Na 589.592 Radial†	2570.1	3011.9	185.33	ug/L	185.33	ppb	11:49:39
2	Sr 421.552†	3000817.8	3129968.0	9734.1	ug/L	9734.1	ppb	11:49:34
2	Sc 361.383	742117.4	742117.4	99.659	%			11:51:06
2	Y 371.029	567747.7	567747.7	97.651	%			11:51:06
2	Ag 328.068†	-4869.2	-5591.8	8.4255	ug/L	8.4255	ppb	11:51:11
2	As 188.979†	30385.4	30523.6	9725.4	ug/L	9725.4	ppb	11:51:11
2	B 249.677†	214985.7	216602.0	4911.0	ug/L	4911.0	ppb	11:51:06
2	Ba 233.527†	2116053.0	2123264.4	13795	ug/L	13795	ppb	11:51:06
2	Be 313.107†	6855318.1	6883538.1	2793.6	ug/L	2793.6	ppb	11:51:00
2	Cd 226.502†	876260.1	879548.8	9909.2	ug/L	9909.2	ppb	11:51:06
2	Co 228.616†	525910.8	527809.1	8347.8	ug/L	8347.8	ppb	11:51:11
2	Cr 267.716†	1898464.2	1905052.1	23886	ug/L	23886	ppb	11:51:06
2	Cu 324.752†	5700545.5	5714242.2	19225	ug/L	19225	ppb	11:51:00
2	Mn 257.610†	8962820.0	8992741.9	9056.5	ug/L	9056.5	ppb	11:51:00
2	Mo 202.031†	148654.9	149158.7	9457.8	ug/L	9457.8	ppb	11:51:11
2	Ni 231.604†	406933.7	408188.2	9759.2	ug/L	9759.2	ppb	11:51:06

2	P 214.914†	37913.2	37749.3	13305	ug/L	13305	ppb	11:51:11
2	Pb 220.353†	223034.6	223814.9	23659	ug/L	23659	ppb	11:51:11
2	S 181.975 Axial†	41122.9	41127.5	49592	ug/L	49592	ppb	11:51:11
2	Sb 206.836†	37788.8	37865.4	10053	ug/L	10053	ppb	11:51:11
2	Se 196.026†	21702.9	21811.9	9884.3	ug/L	9884.3	ppb	11:51:11
2	Si 251.611†	1663591.0	1668829.3	46764	ug/L	46764	ppb	11:51:06
2	Sn 189.927†	63559.7	63764.0	9985.6	ug/L	9985.6	ppb	11:51:11
2	Ti 334.940†	5519634.7	5540030.6	9497.4	ug/L	9497.4	ppb	11:51:00
2	Tl 190.801†	39236.4	39431.7	9429.3	ug/L	9429.3	ppb	11:51:11
2	U 409.014†	-4271.8	978.1	-15.159	ug/L	-15.159	ppb	11:51:11
2	V 292.402†	1194534.5	1200311.0	9945.6	ug/L	9945.6	ppb	11:51:06
2	Zn 213.857†	1701271.9	1706103.3	14031	ug/L	14031	ppb	11:51:06
2	SiO2†	1609781.8	1614809.4	96677	ug/L	96677	ppb	11:51:43
3	Sc Radial	6427.3	6427.3	92.6	%			11:50:10
3	Y RADIAL	5868.3	5868.3	92.28	%			11:50:10
3	Al 396.153Radial†	416.6	520.3	34.728	ug/L	34.728	ppb	11:50:10
3	Ca 317.933Radial†	45.6	22.8	33.598	ug/L	33.598	ppb	11:50:30
3	Fe 238.204 Radial†	-21.4	-62.0	-11.631	ug/L	-11.631	ppb	11:50:30
3	K 766.490 Radial†	1321082.8	1423437.9	293860	ug/L	293860	ppb	11:50:05
3	Mg 279.077 IEC†	-5.9	-10.4	-73.493	ug/L	-73.493	ppb	11:50:30
3	Na 589.592 Radial†	2431.0	2955.6	181.87	ug/L	181.87	ppb	11:50:10
3	Sr 421.552†	2945008.2	3179456.5	9888.0	ug/L	9888.0	ppb	11:50:05
3	Sc 361.383	731451.8	731451.8	98.227	%			11:51:26
3	Y 371.029	560211.6	560211.6	96.355	%			11:51:26
3	Ag 328.068†	-4824.1	-5617.0	8.3114	ug/L	8.3114	ppb	11:51:31
3	As 188.979†	29951.2	30526.1	9727.3	ug/L	9727.3	ppb	11:51:31
3	B 249.677†	211597.9	216298.4	4903.6	ug/L	4903.6	ppb	11:51:26
3	Ba 233.527†	2087914.1	2125577.9	13810	ug/L	13810	ppb	11:51:26
3	Be 313.107†	6919231.3	7048906.2	2860.7	ug/L	2860.7	ppb	11:51:19
3	Cd 226.502†	863355.6	879232.1	9905.6	ug/L	9905.6	ppb	11:51:26
3	Co 228.616†	522878.2	532416.5	8420.1	ug/L	8420.1	ppb	11:51:31
3	Cr 267.716†	1872654.5	1906553.3	23905	ug/L	23905	ppb	11:51:26
3	Cu 324.752†	5744097.7	5841986.2	19654	ug/L	19654	ppb	11:51:19
3	Mn 257.610†	9038079.7	9200496.5	9265.7	ug/L	9265.7	ppb	11:51:19
3	Mo 202.031†	146330.5	148967.3	9445.6	ug/L	9445.6	ppb	11:51:31
3	Ni 231.604†	401004.9	408106.3	9757.2	ug/L	9757.2	ppb	11:51:26
3	P 214.914†	37133.0	37509.7	13111	ug/L	13111	ppb	11:51:31
3	Pb 220.353†	219500.3	223480.1	23623	ug/L	23623	ppb	11:51:31
3	S 181.975 Axial†	40506.9	41102.0	49561	ug/L	49561	ppb	11:51:31
3	Sb 206.836†	37130.3	37747.9	10020	ug/L	10020	ppb	11:51:31
3	Se 196.026†	21289.0	21708.1	9837.3	ug/L	9837.3	ppb	11:51:31
3	Si 251.611†	1639047.0	1668182.6	46745	ug/L	46745	ppb	11:51:26
3	Sn 189.927†	62561.5	63677.7	9972.1	ug/L	9972.1	ppb	11:51:31
3	Ti 334.940†	5574579.8	5676726.2	9731.9	ug/L	9731.9	ppb	11:51:19
3	Tl 190.801†	38746.3	39506.8	9449.7	ug/L	9449.7	ppb	11:51:31
3	U 409.014†	-4287.7	899.5	-17.682	ug/L	-17.682	ppb	11:51:31
3	V 292.402†	1177909.9	1200863.7	9949.7	ug/L	9949.7	ppb	11:51:26
3	Zn 213.857†	1678847.0	1708165.3	14047	ug/L	14047	ppb	11:51:26
3	SiO2†	1576300.5	1604276.7	96038	ug/L	96038	ppb	11:51:49

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	732931.2	98.426	%	1.1473				1.17%
Sc Radial	6568.6	94.7	%	1.77				1.87%
Y 371.029	560873.5	96.469	%	1.1297				1.17%
Y RADIAL	5997.5	94.31	%	1.765				1.87%
Ag 328.068†	-5588.4	8.4450	ug/L	0.14433	8.4450	ppb	0.14433	1.71%
Al 396.153Radial†	514.2	28.318	ug/L	5.6440	28.318	ppb	5.6440	19.93%
As 188.979†	30584.2	9745.3	ug/L	32.74	9745.3	ppb	32.74	0.34%
QC value within limits for As 188.979 Recovery = 97.45%								
B 249.677†	216420.4	4906.4	ug/L	3.96	4906.4	ppb	3.96	0.08%
QC value within limits for B 249.677 Recovery = 98.13%								
Ba 233.527†	2125796.7	13812	ug/L	17.2	13812	ppb	17.2	0.12%
QC value within limits for Ba 233.527 Recovery = 92.08%								
Be 313.107†	6978901.9	2832.3	ug/L	34.73	2832.3	ppb	34.73	1.23%
QC value within limits for Be 313.107 Recovery = 94.41%								
Ca 317.933Radial†	23.2	34.248	ug/L	0.8065	34.248	ppb	0.8065	2.35%
Cd 226.502†	879193.8	9905.2	ug/L	4.23	9905.2	ppb	4.23	0.04%
QC value within limits for Cd 226.502 Recovery = 99.05%								

Co 228.616†	532427.4	8420.6 ug/L	73.00	8420.6 ppb	73.00	0.87%
QC value less than the lower limit for Co 228.616 Recovery = 84.21%						
Cr 267.716†	1905807.3	23896 ug/L	9.4	23896 ppb	9.4	0.04%
QC value within limits for Cr 267.716 Recovery = 95.58%						
Cu 324.752†	5791996.0	19486 ug/L	229.6	19486 ppb	229.6	1.18%
QC value within limits for Cu 324.752 Recovery = 97.43%						
Fe 238.204 Radial†	-62.5	-13.785 ug/L	12.2904	-13.785 ppb	12.2904	89.16%
K 766.490 Radial†	1409694.4	291030 ug/L	2558.1	291030 ppb	2558.1	0.88%
QC value within limits for K 766.490 Radial Recovery = 97.01%						
Mg 279.077 IEC†	-12.2	-120.78 ug/L	56.977	-120.78 ppb	56.977	47.17%
Mn 257.610†	9123015.8	9187.7 ug/L	114.30	9187.7 ppb	114.30	1.24%
QC value within limits for Mn 257.610 Recovery = 91.88%						
Mo 202.031†	149408.2	9473.6 ug/L	38.40	9473.6 ppb	38.40	0.41%
QC value within limits for Mo 202.031 Recovery = 94.74%						
Na 589.592 Radial†	3062.2	188.42 ug/L	8.537	188.42 ppb	8.537	4.53%
Ni 231.604†	408201.7	9759.5 ug/L	2.43	9759.5 ppb	2.43	0.02%
QC value within limits for Ni 231.604 Recovery = 97.60%						
P 214.914†	37738.4	13248 ug/L	119.2	13248 ppb	119.2	0.90%
QC value less than the lower limit for P 214.914 Recovery = 88.32%						
Pb 220.353†	224197.0	23699 ug/L	102.2	23699 ppb	102.2	0.43%
QC value within limits for Pb 220.353 Recovery = 94.80%						
S 181.975 Axial†	41201.1	49681 ug/L	181.0	49681 ppb	181.0	0.36%
QC value within limits for S 181.975 Axial Recovery = 99.36%						
Sb 206.836†	37926.0	10070 ug/L	60.0	10070 ppb	60.0	0.60%
QC value within limits for Sb 206.836 Recovery = 100.70%						
Se 196.026†	21822.7	9889.2 ug/L	54.51	9889.2 ppb	54.51	0.55%
QC value within limits for Se 196.026 Recovery = 98.89%						
Si 251.611†	1668456.7	46753 ug/L	10.4	46753 ppb	10.4	0.02%
QC value within limits for Si 251.611 Recovery = 93.51%						
Sn 189.927†	63910.5	10009 ug/L	51.9	10009 ppb	51.9	0.52%
QC value within limits for Sn 189.927 Recovery = 100.09%						
Sr 421.552†	3148924.8	9793.0 ug/L	83.03	9793.0 ppb	83.03	0.85%
QC value within limits for Sr 421.552 Recovery = 97.93%						
Ti 334.940†	5621728.9	9637.5 ug/L	123.80	9637.5 ppb	123.80	1.28%
QC value within limits for Ti 334.940 Recovery = 96.38%						
Tl 190.801†	39597.4	9470.1 ug/L	53.99	9470.1 ppb	53.99	0.57%
QC value within limits for Tl 190.801 Recovery = 94.70%						
U 409.014†	930.3	-16.687 ug/L	1.3432	-16.687 ppb	1.3432	8.05%
V 292.402†	1200197.9	9944.7 ug/L	5.50	9944.7 ppb	5.50	0.06%
QC value within limits for V 292.402 Recovery = 99.45%						
Zn 213.857†	1708282.8	14049 ug/L	18.3	14049 ppb	18.3	0.13%
QC value within limits for Zn 213.857 Recovery = 93.66%						
SiO2†	1628136.0	97479 ug/L	1969.1	97479 ppb	1969.1	2.02%
QC value within limits for SiO2 Recovery = 91.10%						

QC Failed. Continue with analysis.

Sequence No.: 13
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 11:53:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7045.9	7045.9	102	%			11:55:56
1	Y RADIAL	6468.4	6468.4	101.7	%			11:55:56
1	Al 396.153Radial†	6079.7	6057.9	5091.5	ug/L	5091.5	ppb	11:55:56
1	Ca 317.933Radial†	3548.5	3468.1	5111.4	ug/L	5111.4	ppb	11:55:56
1	Fe 238.204 Radial†	1192.9	1135.9	5091.4	ug/L	5091.4	ppb	11:56:16
1	K 766.490 Radial†	27066.1	23868.0	4918.4	ug/L	4918.4	ppb	11:55:51
1	Mg 279.077 IEC†	206.6	199.5	5109.3	ug/L	5109.3	ppb	11:56:16
1	Na 589.592 Radial†	159925.7	157825.9	9711.3	ug/L	9711.3	ppb	11:55:51
1	Sr 421.552†	157439.2	155108.4	482.33	ug/L	482.33	ppb	11:55:51
1	Sc 361.383	791578.6	791578.6	106.30	%			11:57:25
1	Y 371.029	609245.4	609245.4	104.79	%			11:57:25
1	Ag 328.068†	95398.4	89037.4	490.39	ug/L	490.39	ppb	11:57:25
1	As 188.979†	1598.4	1538.0	490.27	ug/L	490.27	ppb	11:57:45
1	B 249.677†	23070.9	22584.6	513.73	ug/L	513.73	ppb	11:57:25
1	Ba 233.527†	79765.6	75014.7	487.67	ug/L	487.67	ppb	11:57:25
1	Be 313.107†	1280319.8	1209208.0	488.01	ug/L	488.01	ppb	11:57:25
1	Cd 226.502†	44228.2	41899.6	471.47	ug/L	471.47	ppb	11:57:45
1	Co 228.616†	31864.5	30076.1	475.78	ug/L	475.78	ppb	11:57:45
1	Cr 267.716†	40925.6	38597.5	484.34	ug/L	484.34	ppb	11:57:25
1	Cu 324.752†	160142.2	144858.2	487.64	ug/L	487.64	ppb	11:57:25
1	Mn 257.610†	515642.4	484357.5	488.33	ug/L	488.33	ppb	11:57:25
1	Mo 202.031†	8194.0	7703.9	488.81	ug/L	488.81	ppb	11:57:45
1	Ni 231.604†	21347.9	19945.8	476.83	ug/L	476.83	ppb	11:57:45
1	P 214.914†	6026.2	5375.4	2327.7	ug/L	2327.7	ppb	11:57:45
1	Pb 220.353†	4887.4	4615.6	489.08	ug/L	489.08	ppb	11:57:45
1	S 181.975 Axial†	1019.4	823.0	991.33	ug/L	991.33	ppb	11:57:45
1	Sb 206.836†	1958.6	1790.0	492.04	ug/L	492.04	ppb	11:57:45
1	Se 196.026†	1115.6	1084.3	508.67	ug/L	508.67	ppb	11:57:45
1	Si 251.611†	93924.1	87907.6	2467.5	ug/L	2467.5	ppb	11:57:25
1	Sn 189.927†	3298.6	3090.1	484.82	ug/L	484.82	ppb	11:57:45
1	Ti 334.940†	306113.4	289494.0	496.64	ug/L	496.64	ppb	11:57:25
1	Tl 190.801†	2115.3	2051.1	490.54	ug/L	490.54	ppb	11:57:45
1	U 409.014†	10333.4	14985.3	472.10	ug/L	472.10	ppb	11:57:25
1	V 292.402†	60937.1	59017.7	489.84	ug/L	489.84	ppb	11:57:25
1	Zn 213.857†	63942.1	59167.3	485.23	ug/L	485.23	ppb	11:57:25
1	SiO2†	93509.9	87491.2	5248.6	ug/L	5248.6	ppb	11:58:45
2	Sc Radial	7045.7	7045.7	102	%			11:56:26
2	Y RADIAL	6472.9	6472.9	101.8	%			11:56:26
2	Al 396.153Radial†	6088.0	6066.2	5098.4	ug/L	5098.4	ppb	11:56:26
2	Ca 317.933Radial†	3528.0	3448.1	5081.9	ug/L	5081.9	ppb	11:56:26
2	Fe 238.204 Radial†	1192.7	1135.7	5090.6	ug/L	5090.6	ppb	11:56:46
2	K 766.490 Radial†	27536.7	24332.2	5014.2	ug/L	5014.2	ppb	11:56:21
2	Mg 279.077 IEC†	212.4	205.2	5254.6	ug/L	5254.6	ppb	11:56:46
2	Na 589.592 Radial†	163517.0	161367.2	9929.2	ug/L	9929.2	ppb	11:56:21
2	Sr 421.552†	161510.5	159122.2	494.81	ug/L	494.81	ppb	11:56:21
2	Sc 361.383	782558.0	782558.0	105.09	%			11:57:52
2	Y 371.029	603083.6	603083.6	103.73	%			11:57:52
2	Ag 328.068†	94213.8	88944.6	489.87	ug/L	489.87	ppb	11:57:52
2	As 188.979†	1578.5	1536.3	489.73	ug/L	489.73	ppb	11:58:12
2	B 249.677†	22672.9	22456.0	510.78	ug/L	510.78	ppb	11:57:52
2	Ba 233.527†	78734.9	74898.9	486.92	ug/L	486.92	ppb	11:57:52
2	Be 313.107†	1261973.4	1205633.7	486.57	ug/L	486.57	ppb	11:57:52
2	Cd 226.502†	43869.3	42037.7	473.02	ug/L	473.02	ppb	11:58:12
2	Co 228.616†	31587.3	30157.8	477.08	ug/L	477.08	ppb	11:58:12
2	Cr 267.716†	40542.8	38677.1	485.34	ug/L	485.34	ppb	11:57:52
2	Cu 324.752†	157711.7	144281.9	485.70	ug/L	485.70	ppb	11:57:52
2	Mn 257.610†	508146.2	482816.0	486.78	ug/L	486.78	ppb	11:57:52
2	Mo 202.031†	8152.8	7753.5	491.96	ug/L	491.96	ppb	11:58:12
2	Ni 231.604†	21166.2	20004.4	478.24	ug/L	478.24	ppb	11:58:12

2	P 214.914†	5960.7	5378.4	2329.5	ug/L	2329.5 ppb	11:58:12
2	Pb 220.353†	4822.1	4606.3	488.12	ug/L	488.12 ppb	11:58:12
2	S 181.975 Axial†	1011.4	826.4	995.51	ug/L	995.51 ppb	11:58:12
2	Sb 206.836†	1932.8	1786.6	491.19	ug/L	491.19 ppb	11:58:12
2	Se 196.026†	1101.1	1082.6	507.89	ug/L	507.89 ppb	11:58:12
2	Si 251.611†	92540.5	87609.5	2459.0	ug/L	2459.0 ppb	11:57:52
2	Sn 189.927†	3270.8	3099.4	486.27	ug/L	486.27 ppb	11:58:12
2	Ti 334.940†	301923.8	288826.7	495.49	ug/L	495.49 ppb	11:57:52
2	Tl 190.801†	2102.4	2061.8	493.06	ug/L	493.06 ppb	11:58:12
2	U 409.014†	10323.6	15088.1	475.35	ug/L	475.35 ppb	11:57:52
2	V 292.402†	60108.8	58890.2	488.84	ug/L	488.84 ppb	11:57:52
2	Zn 213.857†	62901.3	58870.2	482.76	ug/L	482.76 ppb	11:57:52
2	SiO2†	92831.2	87859.3	5270.6	ug/L	5270.6 ppb	11:58:50
3	Sc Radial	7119.8	7119.8	103	%		11:56:56
3	Y RADIAL	6505.9	6505.9	102.3	%		11:56:56
3	Al 396.153Radial†	6110.0	6025.3	5063.8	ug/L	5063.8 ppb	11:56:56
3	Ca 317.933Radial†	3541.6	3425.1	5048.1	ug/L	5048.1 ppb	11:56:56
3	Fe 238.204 Radial†	1199.5	1130.1	5065.6	ug/L	5065.6 ppb	11:57:16
3	K 766.490 Radial†	27511.3	24025.3	4950.8	ug/L	4950.8 ppb	11:56:51
3	Mg 279.077 IEC†	209.2	199.9	5119.8	ug/L	5119.8 ppb	11:57:16
3	Na 589.592 Radial†	163917.3	160082.1	9850.1	ug/L	9850.1 ppb	11:56:51
3	Sr 421.552†	161837.2	157786.0	490.66	ug/L	490.66 ppb	11:56:51
3	Sc 361.383	781144.5	781144.5	104.90	%		11:58:19
3	Y 371.029	602230.3	602230.3	103.58	%		11:58:19
3	Ag 328.068†	94059.2	88959.5	489.96	ug/L	489.96 ppb	11:58:19
3	As 188.979†	1577.7	1538.3	490.36	ug/L	490.36 ppb	11:58:39
3	B 249.677†	22612.9	22437.9	510.36	ug/L	510.36 ppb	11:58:19
3	Ba 233.527†	78758.9	75057.4	487.95	ug/L	487.95 ppb	11:58:19
3	Be 313.107†	1261338.7	1207201.6	487.20	ug/L	487.20 ppb	11:58:19
3	Cd 226.502†	43997.2	42235.1	475.25	ug/L	475.25 ppb	11:58:39
3	Co 228.616†	31660.6	30282.1	479.05	ug/L	479.05 ppb	11:58:39
3	Cr 267.716†	40492.3	38698.7	485.61	ug/L	485.61 ppb	11:58:19
3	Cu 324.752†	157723.1	144564.4	486.65	ug/L	486.65 ppb	11:58:19
3	Mn 257.610†	507833.8	483393.1	487.36	ug/L	487.36 ppb	11:58:19
3	Mo 202.031†	8159.8	7774.2	493.27	ug/L	493.27 ppb	11:58:39
3	Ni 231.604†	21269.5	20139.3	481.46	ug/L	481.46 ppb	11:58:39
3	P 214.914†	5937.6	5366.7	2324.1	ug/L	2324.1 ppb	11:58:39
3	Pb 220.353†	4865.1	4655.7	493.33	ug/L	493.33 ppb	11:58:39
3	S 181.975 Axial†	1010.7	827.5	996.79	ug/L	996.79 ppb	11:58:39
3	Sb 206.836†	1953.3	1809.5	497.51	ug/L	497.51 ppb	11:58:39
3	Se 196.026†	1085.9	1070.0	502.13	ug/L	502.13 ppb	11:58:39
3	Si 251.611†	92489.9	87720.6	2462.1	ug/L	2462.1 ppb	11:58:19
3	Sn 189.927†	3298.3	3131.2	491.25	ug/L	491.25 ppb	11:58:39
3	Ti 334.940†	301734.6	289166.2	496.08	ug/L	496.08 ppb	11:58:19
3	Tl 190.801†	2097.9	2061.1	492.89	ug/L	492.89 ppb	11:58:39
3	U 409.014†	9992.7	14790.5	465.94	ug/L	465.94 ppb	11:58:19
3	V 292.402†	60133.1	59016.9	489.88	ug/L	489.88 ppb	11:58:19
3	Zn 213.857†	62903.4	58980.5	483.66	ug/L	483.66 ppb	11:58:19
3	SiO2†	92602.9	87801.6	5267.0	ug/L	5267.0 ppb	11:58:55

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	785093.7	105.43	%	0.760				0.72%
Sc Radial	7070.5	102	%	0.6				0.60%
Y 371.029	604853.1	104.03	%	0.658				0.63%
Y RADIAL	6482.4	101.9	%	0.32				0.32%
Ag 328.068†	88980.5	490.07	ug/L	0.276	490.07	ppb	0.276	0.06%
QC value within limits for Ag 328.068 Recovery = 98.01%								
Al 396.153Radial†	6049.8	5084.6	ug/L	18.31	5084.6	ppb	18.31	0.36%
QC value within limits for Al 396.153Radial Recovery = 101.69%								
As 188.979†	1537.6	490.12	ug/L	0.339	490.12	ppb	0.339	0.07%
QC value within limits for As 188.979 Recovery = 98.02%								
B 249.677†	22492.8	511.62	ug/L	1.836	511.62	ppb	1.836	0.36%
QC value within limits for B 249.677 Recovery = 102.32%								
Ba 233.527†	74990.3	487.51	ug/L	0.533	487.51	ppb	0.533	0.11%
QC value within limits for Ba 233.527 Recovery = 97.50%								
Be 313.107†	1207347.8	487.26	ug/L	0.723	487.26	ppb	0.723	0.15%
QC value within limits for Be 313.107 Recovery = 97.45%								
Ca 317.933Radial†	3447.1	5080.5	ug/L	31.71	5080.5	ppb	31.71	0.62%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.61%
Cd 226.502†            42057.5      473.24 ug/L          1.902      473.24 ppb          1.902   0.40%
   QC value within limits for Cd 226.502  Recovery = 94.65%
Co 228.616†            30172.0      477.30 ug/L          1.647      477.30 ppb          1.647   0.34%
   QC value within limits for Co 228.616  Recovery = 95.46%
Cr 267.716†            38657.8      485.10 ug/L          0.668      485.10 ppb          0.668   0.14%
   QC value within limits for Cr 267.716  Recovery = 97.02%
Cu 324.752†           144568.2      486.67 ug/L          0.969      486.67 ppb          0.969   0.20%
   QC value within limits for Cu 324.752  Recovery = 97.33%
Fe 238.204 Radial†      1133.9      5082.6 ug/L         14.64      5082.6 ppb         14.64   0.29%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.65%
K 766.490 Radial†      24075.2      4961.1 ug/L         48.75      4961.1 ppb         48.75   0.98%
   QC value within limits for K 766.490 Radial  Recovery = 99.22%
Mg 279.077 IEC†          201.6      5161.3 ug/L         81.04      5161.3 ppb         81.04   1.57%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.23%
Mn 257.610†           483522.2      487.49 ug/L          0.786      487.49 ppb          0.786   0.16%
   QC value within limits for Mn 257.610  Recovery = 97.50%
Mo 202.031†             7743.9      491.35 ug/L          2.291      491.35 ppb          2.291   0.47%
   QC value within limits for Mo 202.031  Recovery = 98.27%
Na 589.592 Radial†    159758.4      9830.2 ug/L        110.31      9830.2 ppb        110.31   1.12%
   QC value within limits for Na 589.592 Radial  Recovery = 98.30%
Ni 231.604†            20029.8      478.84 ug/L          2.372      478.84 ppb          2.372   0.50%
   QC value within limits for Ni 231.604  Recovery = 95.77%
P 214.914†              5373.5      2327.1 ug/L          2.76      2327.1 ppb           2.76   0.12%
   QC value within limits for P 214.914  Recovery = 93.08%
Pb 220.353†             4625.9      490.18 ug/L          2.774      490.18 ppb          2.774   0.57%
   QC value within limits for Pb 220.353  Recovery = 98.04%
S 181.975 Axial†         825.6      994.54 ug/L          2.856      994.54 ppb          2.856   0.29%
   QC value within limits for S 181.975 Axial  Recovery = 99.45%
Sb 206.836†             1795.3      493.58 ug/L          3.432      493.58 ppb          3.432   0.70%
   QC value within limits for Sb 206.836  Recovery = 98.72%
Se 196.026†             1079.0      506.23 ug/L          3.571      506.23 ppb          3.571   0.71%
   QC value within limits for Se 196.026  Recovery = 101.25%
Si 251.611†            87745.9      2462.9 ug/L           4.32      2462.9 ppb           4.32   0.18%
   QC value within limits for Si 251.611  Recovery = 98.51%
Sn 189.927†             3106.9      487.44 ug/L          3.373      487.44 ppb          3.373   0.69%
   QC value within limits for Sn 189.927  Recovery = 97.49%
Sr 421.552†           157338.9      489.27 ug/L          6.357      489.27 ppb          6.357   1.30%
   QC value within limits for Sr 421.552  Recovery = 97.85%
Ti 334.940†           289162.3      496.07 ug/L          0.574      496.07 ppb          0.574   0.12%
   QC value within limits for Ti 334.940  Recovery = 99.21%
Tl 190.801†             2058.0      492.16 ug/L          1.406      492.16 ppb          1.406   0.29%
   QC value within limits for Tl 190.801  Recovery = 98.43%
U 409.014†             14954.6      471.13 ug/L          4.777      471.13 ppb          4.777   1.01%
   QC value within limits for U 409.014  Recovery = 94.23%
V 292.402†             58974.9      489.52 ug/L          0.587      489.52 ppb          0.587   0.12%
   QC value within limits for V 292.402  Recovery = 97.90%
Zn 213.857†            59006.0      483.89 ug/L          1.250      483.89 ppb          1.250   0.26%
   QC value within limits for Zn 213.857  Recovery = 96.78%
SiO2†                  87717.4      5262.1 ug/L         11.79      5262.1 ppb         11.79   0.22%
   QC value within limits for SiO2  Recovery = 98.40%
All analyte(s) passed QC.
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Sequence No.: 14
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 12:01:04
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7526.5	7526.5	108	%			12:02:57
1	Y RADIAL	6907.7	6907.7	108.6	%			12:02:57
1	Al 396.153Radial†	-76.0	0.5	0.3608	ug/L	0.3608	ppb	12:02:57
1	Ca 317.933Radial†	26.0	-2.5	-3.6393	ug/L	-3.6393	ppb	12:03:17
1	Fe 238.204 Radial†	33.7	-7.8	-35.051	ug/L	-35.051	ppb	12:03:17
1	K 766.490 Radial†	3281.7	238.8	49.299	ug/L	49.299	ppb	12:02:57
1	Mg 279.077 IEC†	5.1	0.7	18.631	ug/L	18.631	ppb	12:03:17
1	Na 589.592 Radial†	363.1	666.0	40.978	ug/L	40.978	ppb	12:02:57
1	Sr 421.552†	-38.1	27.1	0.0844	ug/L	0.0844	ppb	12:02:57
1	Sc 361.383	760663.9	760663.9	102.15	%			12:04:13
1	Y 371.029	593421.1	593421.1	102.07	%			12:04:13
1	Ag 328.068†	768.6	46.5	0.2421	ug/L	0.2421	ppb	12:04:13
1	As 188.979†	-29.7	5.2	1.6267	ug/L	1.6267	ppb	12:04:33
1	B 249.677†	69.4	949.3	21.711	ug/L	21.711	ppb	12:04:33
1	Ba 233.527†	19.4	-3.5	-0.0225	ug/L	-0.0225	ppb	12:04:33
1	Be 313.107†	-4835.4	51.1	0.0209	ug/L	0.0209	ppb	12:04:13
1	Cd 226.502†	-214.9	82.9	0.9376	ug/L	0.9376	ppb	12:04:33
1	Co 228.616†	-86.6	15.7	0.2535	ug/L	0.2535	ppb	12:04:33
1	Cr 267.716†	-54.1	45.0	0.5632	ug/L	0.5632	ppb	12:04:33
1	Cu 324.752†	5870.9	-43.5	-0.1484	ug/L	-0.1484	ppb	12:04:13
1	Mn 257.610†	685.5	-46.9	-0.0519	ug/L	-0.0519	ppb	12:04:33
1	Mo 202.031†	36.3	31.1	1.9679	ug/L	1.9679	ppb	12:04:33
1	Ni 231.604†	176.7	36.3	0.8686	ug/L	0.8686	ppb	12:04:33
1	P 214.914†	305.8	5.9	2.7026	ug/L	2.7026	ppb	12:04:33
1	Pb 220.353†	-13.9	4.2	0.4549	ug/L	0.4549	ppb	12:04:33
1	S 181.975 Axial†	149.5	10.3	12.470	ug/L	12.470	ppb	12:04:33
1	Sb 206.836†	52.7	-1.0	-0.2244	ug/L	-0.2244	ppb	12:04:33
1	Se 196.026†	-26.7	8.7	3.8148	ug/L	3.8148	ppb	12:04:33
1	Si 251.611†	584.2	123.2	3.4197	ug/L	3.4197	ppb	12:04:33
1	Sn 189.927†	18.0	4.7	0.7271	ug/L	0.7271	ppb	12:04:33
1	Ti 334.940†	-1467.5	90.2	0.1537	ug/L	0.1537	ppb	12:04:13
1	Tl 190.801†	-46.2	15.9	3.7897	ug/L	3.7897	ppb	12:04:33
1	U 409.014†	-5332.1	44.7	1.4153	ug/L	1.4153	ppb	12:04:13
1	V 292.402†	-1735.2	-5.8	-0.0154	ug/L	-0.0154	ppb	12:04:13
1	Zn 213.857†	1163.3	154.4	1.2754	ug/L	1.2754	ppb	12:04:33
1	SiO2†	575.7	88.0	5.1849	ug/L	5.1849	ppb	12:05:29
2	Sc Radial	6884.3	6884.3	99.2	%			12:03:22
2	Y RADIAL	6354.2	6354.2	99.92	%			12:03:22
2	Al 396.153Radial†	-75.8	-5.8	-4.9271	ug/L	-4.9271	ppb	12:03:22
2	Ca 317.933Radial†	24.0	-2.2	-3.2519	ug/L	-3.2519	ppb	12:03:42
2	Fe 238.204 Radial†	36.8	-1.9	-8.4977	ug/L	-8.4977	ppb	12:03:42
2	K 766.490 Radial†	3347.7	587.5	121.37	ug/L	121.37	ppb	12:03:22
2	Mg 279.077 IEC†	1.0	-2.9	-75.301	ug/L	-75.301	ppb	12:03:42
2	Na 589.592 Radial†	369.2	703.3	43.277	ug/L	43.277	ppb	12:03:22
2	Sr 421.552†	-60.3	1.5	0.0046	ug/L	0.0046	ppb	12:03:22
2	Sc 361.383	774896.0	774896.0	104.06	%			12:04:39
2	Y 371.029	605060.0	605060.0	104.07	%			12:04:39
2	Ag 328.068†	814.2	76.5	0.4142	ug/L	0.4142	ppb	12:04:39
2	As 188.979†	-15.1	19.8	6.2633	ug/L	6.2633	ppb	12:04:59
2	B 249.677†	72.8	951.3	21.756	ug/L	21.756	ppb	12:04:59
2	Ba 233.527†	3.9	-18.6	-0.1215	ug/L	-0.1215	ppb	12:04:59
2	Be 313.107†	-4822.6	150.3	0.0606	ug/L	0.0606	ppb	12:04:39
2	Cd 226.502†	-230.4	71.9	0.8100	ug/L	0.8100	ppb	12:04:59
2	Co 228.616†	-102.4	2.0	0.0348	ug/L	0.0348	ppb	12:04:59
2	Cr 267.716†	-66.5	34.1	0.4259	ug/L	0.4259	ppb	12:04:59
2	Cu 324.752†	5791.3	-225.6	-0.7595	ug/L	-0.7595	ppb	12:04:39
2	Mn 257.610†	675.7	-68.6	-0.0687	ug/L	-0.0687	ppb	12:04:59
2	Mo 202.031†	21.8	16.5	1.0476	ug/L	1.0476	ppb	12:04:59
2	Ni 231.604†	134.2	-7.7	-0.1838	ug/L	-0.1838	ppb	12:04:59

2	P 214.914†	277.9	-26.5	-11.720	ug/L	-11.720 ppb	12:04:59
2	Pb 220.353†	-10.5	7.8	0.8220	ug/L	0.8220 ppb	12:04:59
2	S 181.975 Axial†	141.7	0.2	0.2789	ug/L	0.2789 ppb	12:04:59
2	Sb 206.836†	59.3	4.4	1.2591	ug/L	1.2591 ppb	12:04:59
2	Se 196.026†	-28.1	7.8	3.5018	ug/L	3.5018 ppb	12:04:59
2	Si 251.611†	576.8	105.5	2.8887	ug/L	2.8887 ppb	12:04:59
2	Sn 189.927†	30.9	16.7	2.6090	ug/L	2.6090 ppb	12:04:59
2	Ti 334.940†	-1558.1	29.5	0.0498	ug/L	0.0498 ppb	12:04:39
2	Tl 190.801†	-42.4	20.4	4.8533	ug/L	4.8533 ppb	12:04:59
2	U 409.014†	-5441.4	35.5	1.1232	ug/L	1.1232 ppb	12:04:39
2	V 292.402†	-1793.3	-30.5	-0.2347	ug/L	-0.2347 ppb	12:04:39
2	Zn 213.857†	1159.4	129.8	1.0799	ug/L	1.0799 ppb	12:04:59
2	SiO2†	581.6	83.4	4.8264	ug/L	4.8264 ppb	12:05:35
3	Sc Radial	6834.8	6834.8	98.5	%		12:03:47
3	Y RADIAL	6291.1	6291.1	98.93	%		12:03:47
3	Al 396.153Radial†	-76.6	-7.2	-6.1185	ug/L	-6.1185 ppb	12:03:47
3	Ca 317.933Radial†	25.6	-0.4	-0.6313	ug/L	-0.6313 ppb	12:04:07
3	Fe 238.204 Radial†	39.8	1.4	6.3344	ug/L	6.3344 ppb	12:04:07
3	K 766.490 Radial†	3246.0	508.8	105.10	ug/L	105.10 ppb	12:03:47
3	Mg 279.077 IEC†	2.8	-1.1	-27.942	ug/L	-27.942 ppb	12:04:07
3	Na 589.592 Radial†	286.7	622.2	38.287	ug/L	38.287 ppb	12:03:47
3	Sr 421.552†	-72.9	-11.7	-0.0365	ug/L	-0.0365 ppb	12:03:47
3	Sc 361.383	775742.7	775742.7	104.17	%		12:05:04
3	Y 371.029	605615.2	605615.2	104.16	%		12:05:04
3	Ag 328.068†	820.0	81.2	0.4470	ug/L	0.4470 ppb	12:05:04
3	As 188.979†	-23.2	12.1	3.8193	ug/L	3.8193 ppb	12:05:24
3	B 249.677†	17.7	898.3	20.544	ug/L	20.544 ppb	12:05:24
3	Ba 233.527†	24.0	0.6	0.0066	ug/L	0.0066 ppb	12:05:24
3	Be 313.107†	-4825.5	152.6	0.0617	ug/L	0.0617 ppb	12:05:04
3	Cd 226.502†	-239.8	63.0	0.7092	ug/L	0.7092 ppb	12:05:24
3	Co 228.616†	-94.0	10.3	0.1665	ug/L	0.1665 ppb	12:05:24
3	Cr 267.716†	-67.3	33.4	0.4187	ug/L	0.4187 ppb	12:05:24
3	Cu 324.752†	5744.0	-277.0	-0.9317	ug/L	-0.9317 ppb	12:05:04
3	Mn 257.610†	712.5	-34.0	-0.0329	ug/L	-0.0329 ppb	12:05:24
3	Mo 202.031†	29.5	23.9	1.5158	ug/L	1.5158 ppb	12:05:24
3	Ni 231.604†	150.5	7.8	0.1865	ug/L	0.1865 ppb	12:05:24
3	P 214.914†	288.0	-17.1	-7.5169	ug/L	-7.5169 ppb	12:05:24
3	Pb 220.353†	-13.3	5.0	0.5338	ug/L	0.5338 ppb	12:05:24
3	S 181.975 Axial†	150.7	8.7	10.514	ug/L	10.514 ppb	12:05:24
3	Sb 206.836†	70.7	15.3	4.1842	ug/L	4.1842 ppb	12:05:24
3	Se 196.026†	-30.6	5.5	2.5039	ug/L	2.5039 ppb	12:05:24
3	Si 251.611†	553.4	82.5	2.2594	ug/L	2.2594 ppb	12:05:24
3	Sn 189.927†	18.6	4.9	0.7682	ug/L	0.7682 ppb	12:05:24
3	Ti 334.940†	-1527.9	60.1	0.1010	ug/L	0.1010 ppb	12:05:04
3	Tl 190.801†	-47.1	15.9	3.7825	ug/L	3.7825 ppb	12:05:24
3	U 409.014†	-5334.9	143.5	4.5328	ug/L	4.5328 ppb	12:05:04
3	V 292.402†	-1628.1	130.0	1.0927	ug/L	1.0927 ppb	12:05:04
3	Zn 213.857†	1147.3	117.0	0.9682	ug/L	0.9682 ppb	12:05:24
3	SiO2†	621.5	121.1	7.1571	ug/L	7.1571 ppb	12:05:40

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	770434.2	103.46	%	1.138				1.10%
Sc Radial	7081.9	102	%	5.6				5.45%
Y 371.029	601365.4	103.43	%	1.184				1.14%
Y RADIAL	6517.7	102.5	%	5.33				5.20%
Ag 328.068†	68.1	0.3678	ug/L	0.11009	0.3678	ppb	0.11009	29.94%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-4.1	-3.5616	ug/L	3.44873	-3.5616	ppb	3.44873	96.83%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	12.4	3.9031	ug/L	2.31941	3.9031	ppb	2.31941	59.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	933.0	21.337	ug/L	0.6874	21.337	ppb	0.6874	3.22%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-7.2	-0.0458	ug/L	0.06710	-0.0458	ppb	0.06710	146.46%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	118.0	0.0478	ug/L	0.02323	0.0478	ppb	0.02323	48.65%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.7	-2.5075	ug/L	1.63635	-2.5075	ppb	1.63635	65.26%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                72.6      0.8189 ug/L       0.11446      0.8189 ppb        0.11446  13.98%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 9.4      0.1516 ug/L       0.11010      0.1516 ppb        0.11010  72.63%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                37.5      0.4692 ug/L       0.08143      0.4692 ppb        0.08143  17.35%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -182.0     -0.6132 ug/L       0.41165     -0.6132 ppb        0.41165  67.13%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -2.8     -12.405 ug/L       20.9674     -12.405 ppb        20.9674 169.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         445.0      91.922 ug/L       37.7992      91.922 ppb        37.7992  41.12%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.1     -28.204 ug/L       46.9669     -28.204 ppb        46.9669 166.53%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -49.8     -0.0512 ug/L       0.01792     -0.0512 ppb        0.01792  35.02%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                23.8      1.5104 ug/L       0.46018      1.5104 ppb        0.46018  30.47%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        663.8      40.847 ug/L        2.4978      40.847 ppb         2.4978   6.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                12.1      0.2905 ug/L       0.53385      0.2905 ppb        0.53385 183.80%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -12.6     -5.5113 ug/L       7.41728     -5.5113 ppb        7.41728 134.58%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 5.7      0.6036 ug/L       0.19323      0.6036 ppb        0.19323  32.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            6.4      7.7546 ug/L       6.54759      7.7546 ppb        6.54759  84.44%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.3      1.7396 ug/L       2.24323      1.7396 ppb        2.24323 128.95%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 7.3      3.2735 ug/L       0.68460      3.2735 ppb        0.68460  20.91%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               103.7      2.8559 ug/L       0.58081      2.8559 ppb        0.58081  20.34%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 8.7      1.3681 ug/L       1.07483      1.3681 ppb        1.07483  78.56%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 5.6      0.0175 ug/L       0.06148      0.0175 ppb        0.06148 350.57%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                59.9      0.1015 ug/L       0.05192      0.1015 ppb        0.05192  51.16%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                17.4      4.1418 ug/L       0.61618      4.1418 ppb        0.61618  14.88%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 74.6      2.3571 ug/L       1.88983      2.3571 ppb        1.88983  80.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 31.2      0.2809 ug/L       0.71158      0.2809 ppb        0.71158 253.35%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               133.7      1.1078 ug/L       0.15546      1.1078 ppb        0.15546  14.03%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      97.5      5.7228 ug/L       1.25499      5.7228 ppb        1.25499  21.93%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/2/2009 12:09:53
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601
Plasma On Time: 6/29/2009 15:26:31
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070209.sif
Batch ID:
Results Data Set: 070209
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX
IEC File: 040209.iec
Method Description:
Method Last Saved: 7/2/2009 10:41:22
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1
Sample ID: LR1
Analyst: HSC
Initial Sample Wt:
Dilution:
Autosampler Location: 36
Date Collected: 7/2/2009 12:09:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7198.8	7198.8	104	%			12:11:47
1	Y RADIAL	6641.4	6641.4	104.4	%			12:11:47
1	Al 396.153Radial†	-108.9	-34.4	-28.103	ug/L	-28.103	ppb	12:11:47

1	Ca 317.933Radial†	29.9	2.4	3.5737 ug/L	3.5737 ppb	12:12:07
1	Fe 238.204 Radial†	90939.4	87616.2	391580 ug/L	391580 ppb	12:11:47
1	K 766.490 Radial†	2606.6	-274.2	29.835 ug/L	29.835 ppb	12:11:47
1	Mg 279.077 IEC†	15.2	10.7	-62.375 ug/L	-62.375 ppb	12:12:07
1	Na 589.592 Radial†	396.9	713.7	43.916 ug/L	43.916 ppb	12:11:47
1	Sr 421.552†	95.2	154.0	0.4790 ug/L	0.4790 ppb	12:11:47
1	Sc 361.383	780907.6	780907.6	104.87 %		12:13:04
1	Y 371.029	606395.8	606395.8	104.30 %		12:13:04
1	Ag 328.068†	-21577.2	-21281.4	8.9161 ug/L	8.9161 ppb	12:13:04
1	As 188.979†	-275.6	-228.5	5.8587 ug/L	5.8587 ppb	12:13:24
1	B 249.677†	1209.8	2035.0	19.785 ug/L	19.785 ppb	12:13:04
1	Ba 233.527†	-1960.0	-1891.4	-13.979 ug/L	-13.979 ppb	12:13:24
1	Be 313.107†	-4693.5	309.1	0.1253 ug/L	0.1253 ppb	12:13:04
1	Cd 226.502†	2992.3	3146.7	-10.213 ug/L	-10.213 ppb	12:13:24
1	Co 228.616†	195.5	286.9	-1.1038 ug/L	-1.1038 ppb	12:13:24
1	Cr 267.716†	-677.4	-547.9	1.2140 ug/L	1.2140 ppb	12:13:24
1	Cu 324.752†	-2953.3	-8607.0	-6.3178 ug/L	-6.3178 ppb	12:13:04
1	Mn 257.610†	-46760.4	-45307.4	3.5981 ug/L	3.5981 ppb	12:13:04
1	Mo 202.031†	-346.7	-335.0	4.3082 ug/L	4.3082 ppb	12:13:24
1	Ni 231.604†	409.5	253.9	6.0708 ug/L	6.0708 ppb	12:13:24
1	P 214.914†	977.2	638.3	-22.635 ug/L	-22.635 ppb	12:13:24
1	Pb 220.353†	266.3	271.7	-8.3205 ug/L	-8.3205 ppb	12:13:24
1	S 181.975 Axial†	154.1	11.0	13.251 ug/L	13.251 ppb	12:13:24
1	Sb 206.836†	40.4	-14.0	3.0671 ug/L	3.0671 ppb	12:13:24
1	Se 196.026†	-2967.5	-2794.8	38.656 ug/L	38.656 ppb	12:13:24
1	Si 251.611†	-2303.1	-2645.0	-74.283 ug/L	-74.283 ppb	12:13:24
1	Sn 189.927†	-21.9	-33.8	23.856 ug/L	23.856 ppb	12:13:24
1	Ti 334.940†	-1386.6	204.5	0.3227 ug/L	0.3227 ppb	12:13:24
1	Tl 190.801†	-57.3	6.5	1.2008 ug/L	1.2008 ppb	12:13:24
1	U 409.014†	-3198.0	2215.0	21.906 ug/L	21.906 ppb	12:13:04
1	V 292.402†	4379.2	5868.7	-6.5785 ug/L	-6.5785 ppb	12:13:24
1	Zn 213.857†	5510.2	4270.0	-5.5119 ug/L	-5.5119 ppb	12:13:24
1	SiO2†	-2385.9	-2750.7	-165.17 ug/L	-165.17 ppb	12:14:21
2	Sc Radial	7180.9	7180.9	103 %		12:12:12
2	Y RADIAL	6607.2	6607.2	103.9 %		12:12:12
2	Al 396.153Radial†	-96.7	-22.8	-18.266 ug/L	-18.266 ppb	12:12:12
2	Ca 317.933Radial†	23.0	-4.2	-6.2061 ug/L	-6.2061 ppb	12:12:32
2	Fe 238.204 Radial†	89777.7	86712.4	387540 ug/L	387540 ppb	12:12:12
2	K 766.490 Radial†	2612.3	-262.4	31.414 ug/L	31.414 ppb	12:12:12
2	Mg 279.077 IEC†	14.6	10.1	-73.031 ug/L	-73.031 ppb	12:12:32
2	Na 589.592 Radial†	322.3	642.6	39.540 ug/L	39.540 ppb	12:12:12
2	Sr 421.552†	82.9	142.4	0.4430 ug/L	0.4430 ppb	12:12:12
2	Sc 361.383	780274.0	780274.0	104.78 %		12:13:30
2	Y 371.029	605603.9	605603.9	104.16 %		12:13:30
2	Ag 328.068†	-21707.7	-21422.7	6.8493 ug/L	6.8493 ppb	12:13:30
2	As 188.979†	-287.3	-239.9	1.4494 ug/L	1.4494 ppb	12:13:50
2	B 249.677†	1280.6	2103.4	21.625 ug/L	21.625 ppb	12:13:30
2	Ba 233.527†	-2038.0	-1967.4	-14.452 ug/L	-14.452 ppb	12:13:50
2	Be 313.107†	-4601.1	393.6	0.1593 ug/L	0.1593 ppb	12:13:30
2	Cd 226.502†	3033.8	3188.5	-9.2720 ug/L	-9.2720 ppb	12:13:50
2	Co 228.616†	208.0	299.0	-0.8602 ug/L	-0.8602 ppb	12:13:50
2	Cr 267.716†	-712.3	-581.8	0.7060 ug/L	0.7060 ppb	12:13:50
2	Cu 324.752†	-2924.0	-8581.4	-6.4649 ug/L	-6.4649 ppb	12:13:30
2	Mn 257.610†	-47054.5	-45624.3	2.7714 ug/L	2.7714 ppb	12:13:30
2	Mo 202.031†	-376.9	-364.2	2.1957 ug/L	2.1957 ppb	12:13:50
2	Ni 231.604†	355.9	203.0	4.8539 ug/L	4.8539 ppb	12:13:50
2	P 214.914†	968.6	630.9	-22.732 ug/L	-22.732 ppb	12:13:50
2	Pb 220.353†	260.1	266.1	-8.5384 ug/L	-8.5384 ppb	12:13:50
2	S 181.975 Axial†	152.7	9.8	11.801 ug/L	11.801 ppb	12:13:50
2	Sb 206.836†	58.8	3.6	7.7333 ug/L	7.7333 ppb	12:13:50
2	Se 196.026†	-2958.1	-2788.2	28.214 ug/L	28.214 ppb	12:13:50
2	Si 251.611†	-2243.1	-2589.4	-72.676 ug/L	-72.676 ppb	12:13:50
2	Sn 189.927†	-25.1	-37.0	23.065 ug/L	23.065 ppb	12:13:50
2	Ti 334.940†	-1389.9	200.3	0.3132 ug/L	0.3132 ppb	12:13:50
2	Tl 190.801†	-71.9	-7.4	-2.1104 ug/L	-2.1104 ppb	12:13:50
2	U 409.014†	-3056.3	2347.8	26.599 ug/L	26.599 ppb	12:13:30
2	V 292.402†	4433.8	5924.3	-5.5748 ug/L	-5.5748 ppb	12:13:50
2	Zn 213.857†	5525.7	4289.0	-4.9249 ug/L	-4.9249 ppb	12:13:50
2	SiO2†	-2390.2	-2756.6	-165.45 ug/L	-165.45 ppb	12:14:26
3	Sc Radial	7170.5	7170.5	103 %		12:12:37
3	Y RADIAL	6580.6	6580.6	103.5 %		12:12:37

3	Al 396.153Radial†	-101.0	-27.2	-21.911	ug/L	-21.911 ppb	12:12:37
3	Ca 317.933Radial†	32.6	5.1	7.5650	ug/L	7.5650 ppb	12:12:57
3	Fe 238.204 Radial†	89419.0	86490.6	386550	ug/L	386550 ppb	12:12:37
3	K 766.490 Radial†	2745.3	-130.1	58.553	ug/L	58.553 ppb	12:12:37
3	Mg 279.077 IEC†	16.6	12.1	-21.591	ug/L	-21.591 ppb	12:12:57
3	Na 589.592 Radial†	252.5	575.5	35.414	ug/L	35.414 ppb	12:12:37
3	Sr 421.552†	70.9	131.0	0.4072	ug/L	0.4072 ppb	12:12:37
3	Sc 361.383	786871.0	786871.0	105.67	%		12:13:56
3	Y 371.029	610584.3	610584.3	105.02	%		12:13:56
3	Ag 328.068†	-22042.6	-21565.8	5.7466	ug/L	5.7466 ppb	12:13:56
3	As 188.979†	-275.2	-226.1	5.6083	ug/L	5.6083 ppb	12:14:16
3	B 249.677†	1128.4	1949.2	18.165	ug/L	18.165 ppb	12:13:56
3	Ba 233.527†	-1995.7	-1911.0	-14.083	ug/L	-14.083 ppb	12:14:16
3	Be 313.107†	-4741.4	297.8	0.1207	ug/L	0.1207 ppb	12:13:56
3	Cd 226.502†	3037.3	3167.6	-9.3922	ug/L	-9.3922 ppb	12:14:16
3	Co 228.616†	209.6	298.8	-0.8505	ug/L	-0.8505 ppb	12:14:16
3	Cr 267.716†	-665.7	-532.0	1.3091	ug/L	1.3091 ppb	12:14:16
3	Cu 324.752†	-2960.1	-8592.2	-6.5586	ug/L	-6.5586 ppb	12:13:56
3	Mn 257.610†	-47840.7	-45991.8	2.2757	ug/L	2.2757 ppb	12:13:56
3	Mo 202.031†	-387.0	-370.6	1.7198	ug/L	1.7198 ppb	12:14:16
3	Ni 231.604†	354.1	198.5	4.7449	ug/L	4.7449 ppb	12:14:16
3	P 214.914†	967.8	622.4	-25.765	ug/L	-25.765 ppb	12:14:16
3	Pb 220.353†	276.1	279.1	-7.0725	ug/L	-7.0725 ppb	12:14:16
3	S 181.975 Axial†	163.5	18.7	22.604	ug/L	22.604 ppb	12:14:16
3	Sb 206.836†	44.9	-10.1	3.9958	ug/L	3.9958 ppb	12:14:16
3	Se 196.026†	-2969.0	-2774.8	30.963	ug/L	30.963 ppb	12:14:16
3	Si 251.611†	-2296.4	-2621.9	-73.596	ug/L	-73.596 ppb	12:14:16
3	Sn 189.927†	-25.5	-37.1	22.965	ug/L	22.965 ppb	12:14:16
3	Ti 334.940†	-1405.1	197.1	0.3085	ug/L	0.3085 ppb	12:14:16
3	Tl 190.801†	-75.4	-10.2	-2.7638	ug/L	-2.7638 ppb	12:14:16
3	U 409.014†	-3107.4	2323.9	25.964	ug/L	25.964 ppb	12:13:56
3	V 292.402†	4396.7	5853.7	-6.0219	ug/L	-6.0219 ppb	12:14:16
3	Zn 213.857†	5499.8	4220.3	-5.3912	ug/L	-5.3912 ppb	12:14:16
3	SiO2†	-2393.3	-2740.4	-164.47	ug/L	-164.47 ppb	12:14:31

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	782684.2	105.11	%	0.489				0.47%
Sc Radial	7183.4	104	%	0.2				0.20%
Y 371.029	607528.0	104.49	%	0.460				0.44%
Y RADIAL	6609.7	103.9	%	0.48				0.46%
Ag 328.068†	-21423.3	7.1706	ug/L	1.60901	7.1706	ppb	1.60901	22.44%
Al 396.153Radial†	-28.1	-22.760	ug/L	4.9727	-22.760	ppb	4.9727	21.85%
As 188.979†	-231.5	4.3055	ug/L	2.47660	4.3055	ppb	2.47660	57.52%
B 249.677†	2029.2	19.858	ug/L	1.7314	19.858	ppb	1.7314	8.72%
Ba 233.527†	-1923.3	-14.171	ug/L	0.2486	-14.171	ppb	0.2486	1.75%
Be 313.107†	333.5	0.1351	ug/L	0.02109	0.1351	ppb	0.02109	15.62%
Ca 317.933Radial†	1.1	1.6442	ug/L	7.08542	1.6442	ppb	7.08542	430.94%
Cd 226.502†	3167.6	-9.6258	ug/L	0.51227	-9.6258	ppb	0.51227	5.32%
Co 228.616†	294.9	-0.9382	ug/L	0.14355	-0.9382	ppb	0.14355	15.30%
Cr 267.716†	-553.9	1.0763	ug/L	0.32426	1.0763	ppb	0.32426	30.13%
Cu 324.752†	-8593.5	-6.4471	ug/L	0.12140	-6.4471	ppb	0.12140	1.88%
Fe 238.204 Radial†	86939.8	388550	ug/L	2664.7	388550	ppb	2664.7	0.69%
K 766.490 Radial†	-222.2	39.934	ug/L	16.1437	39.934	ppb	16.1437	40.43%
Mg 279.077 IEC†	11.0	-52.332	ug/L	27.1508	-52.332	ppb	27.1508	51.88%
Mn 257.610†	-45641.2	2.8817	ug/L	0.66807	2.8817	ppb	0.66807	23.18%
Mo 202.031†	-356.6	2.7412	ug/L	1.37774	2.7412	ppb	1.37774	50.26%
Na 589.592 Radial†	644.0	39.624	ug/L	4.2516	39.624	ppb	4.2516	10.73%
Ni 231.604†	218.5	5.2232	ug/L	0.73606	5.2232	ppb	0.73606	14.09%
P 214.914†	630.5	-23.710	ug/L	1.7795	-23.710	ppb	1.7795	7.51%
Pb 220.353†	272.3	-7.9771	ug/L	0.79096	-7.9771	ppb	0.79096	9.92%
S 181.975 Axial†	13.2	15.886	ug/L	5.8636	15.886	ppb	5.8636	36.91%
Sb 206.836†	-6.8	4.9321	ug/L	2.46999	4.9321	ppb	2.46999	50.08%
Se 196.026†	-2786.0	32.611	ug/L	5.4123	32.611	ppb	5.4123	16.60%
Si 251.611†	-2618.8	-73.518	ug/L	0.8066	-73.518	ppb	0.8066	1.10%
Sn 189.927†	-36.0	23.296	ug/L	0.4879	23.296	ppb	0.4879	2.09%
Sr 421.552†	142.5	0.4430	ug/L	0.03588	0.4430	ppb	0.03588	8.10%
Ti 334.940†	200.7	0.3148	ug/L	0.00722	0.3148	ppb	0.00722	2.29%
Tl 190.801†	-3.7	-1.2245	ug/L	2.12560	-1.2245	ppb	2.12560	173.59%

U 409.014†	2295.5	24.823	ug/L	2.5464	24.823	ppb	2.5464	10.26%
V 292.402†	5882.2	-6.0584	ug/L	0.50288	-6.0584	ppb	0.50288	8.30%
Zn 213.857†	4259.8	-5.2760	ug/L	0.31000	-5.2760	ppb	0.31000	5.88%
SiO2†	-2749.2	-165.03	ug/L	0.502	-165.03	ppb	0.502	0.30%

Sequence No.: 2
Sample ID: LR2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/2/2009 12:16:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7119.7	7119.7	103	%			12:18:36
1	Y RADIAL	6597.2	6597.2	103.7	%			12:18:36
1	Al 396.153Radial†	-93.1	-20.1	-17.028	ug/L	-17.028	ppb	12:18:36
1	Ca 317.933Radial†	24.8	-2.2	-3.2663	ug/L	-3.2663	ppb	12:18:56
1	Fe 238.204 Radial†	4.3	-34.7	4.8663	ug/L	4.8663	ppb	12:18:56
1	K 766.490 Radial†	2936.7	75.4	15.538	ug/L	15.538	ppb	12:18:36
1	Mg 279.077 IEC†	4.2	0.2	4.0272	ug/L	4.0272	ppb	12:18:56
1	Na 589.592 Radial†	2.7	333.8	20.540	ug/L	20.540	ppb	12:18:36
1	Sr 421.552†	-42.7	20.7	0.0643	ug/L	0.0643	ppb	12:18:36
1	Sc 361.383	775370.3	775370.3	104.12	%			12:19:53
1	Y 371.029	608897.1	608897.1	104.73	%			12:19:53
1	Ag 328.068†	658.5	-73.4	-0.4564	ug/L	-0.4564	ppb	12:19:53
1	As 188.979†	-25.5	9.8	3.0747	ug/L	3.0747	ppb	12:20:13
1	B 249.677†	236.9	1108.8	-0.6145	ug/L	-0.6145	ppb	12:20:13
1	Ba 233.527†	12.6	-10.3	-0.0650	ug/L	-0.0650	ppb	12:20:13
1	Be 313.107†	-4833.7	142.5	0.0579	ug/L	0.0579	ppb	12:19:53
1	Cd 226.502†	-306.8	-1.4	0.0056	ug/L	0.0056	ppb	12:20:13
1	Co 228.616†	334030.7	320898.7	5074.3	ug/L	5074.3	ppb	12:19:53
1	Cr 267.716†	16.0	113.3	1.4152	ug/L	1.4152	ppb	12:20:13
1	Cu 324.752†	5179.4	-816.6	-2.7564	ug/L	-2.7564	ppb	12:19:53
1	Mn 257.610†	810.6	60.6	0.0415	ug/L	0.0415	ppb	12:20:13
1	Mo 202.031†	18.7	13.5	0.8488	ug/L	0.8488	ppb	12:20:13
1	Ni 231.604†	347.2	196.8	1.4680	ug/L	1.4680	ppb	12:20:13
1	P 214.914†	283.0	-21.7	-9.0937	ug/L	-9.0937	ppb	12:20:13
1	Pb 220.353†	-0.1	17.8	1.8925	ug/L	1.8925	ppb	12:20:13
1	S 181.975 Axial†	142.3	0.7	0.8311	ug/L	0.8311	ppb	12:20:13
1	Sb 206.836†	43.9	-10.4	-2.8192	ug/L	-2.8192	ppb	12:20:13
1	Se 196.026†	-26.8	9.2	3.6253	ug/L	3.6253	ppb	12:20:13
1	Si 251.611†	501.3	32.6	0.8769	ug/L	0.8769	ppb	12:20:13
1	Sn 189.927†	26.2	12.2	1.8920	ug/L	1.8920	ppb	12:20:13
1	Ti 334.940†	-1457.7	126.8	0.2131	ug/L	0.2131	ppb	12:19:53
1	Tl 190.801†	46.4	105.7	-1.4096	ug/L	-1.4096	ppb	12:20:13
1	U 409.014†	-5202.4	268.2	8.4949	ug/L	8.4949	ppb	12:19:53
1	V 292.402†	-1685.7	73.9	0.6547	ug/L	0.6547	ppb	12:19:53
1	Zn 213.857†	1097.3	69.4	0.5641	ug/L	0.5641	ppb	12:20:13
1	SiO2†	489.8	-5.1	-0.4132	ug/L	-0.4132	ppb	12:21:09
2	Sc Radial	7086.2	7086.2	102	%			12:19:01
2	Y RADIAL	6564.9	6564.9	103.2	%			12:19:01
2	Al 396.153Radial†	-56.2	15.5	13.085	ug/L	13.085	ppb	12:19:01
2	Ca 317.933Radial†	26.7	-0.3	-0.4542	ug/L	-0.4542	ppb	12:19:21
2	Fe 238.204 Radial†	5.0	-34.1	8.3396	ug/L	8.3396	ppb	12:19:21
2	K 766.490 Radial†	2880.9	34.3	7.0404	ug/L	7.0404	ppb	12:19:01
2	Mg 279.077 IEC†	5.3	1.2	31.572	ug/L	31.572	ppb	12:19:21
2	Na 589.592 Radial†	-38.4	293.6	18.063	ug/L	18.063	ppb	12:19:01
2	Sr 421.552†	-87.4	-23.3	-0.0725	ug/L	-0.0725	ppb	12:19:01
2	Sc 361.383	771927.5	771927.5	103.66	%			12:20:18
2	Y 371.029	605600.4	605600.4	104.16	%			12:20:18
2	Ag 328.068†	876.0	139.1	0.7084	ug/L	0.7084	ppb	12:20:18
2	As 188.979†	-28.6	6.7	2.0864	ug/L	2.0864	ppb	12:20:38
2	B 249.677†	260.1	1132.2	-0.1626	ug/L	-0.1626	ppb	12:20:38
2	Ba 233.527†	8.8	-13.9	-0.0900	ug/L	-0.0900	ppb	12:20:38
2	Be 313.107†	-4836.6	119.0	0.0484	ug/L	0.0484	ppb	12:20:18
2	Cd 226.502†	-300.3	3.6	0.0607	ug/L	0.0607	ppb	12:20:38
2	Co 228.616†	333610.7	321924.3	5090.5	ug/L	5090.5	ppb	12:20:18
2	Cr 267.716†	37.6	134.2	1.6774	ug/L	1.6774	ppb	12:20:38
2	Cu 324.752†	5220.9	-754.5	-2.5470	ug/L	-2.5470	ppb	12:20:18
2	Mn 257.610†	835.0	87.6	0.0685	ug/L	0.0685	ppb	12:20:38
2	Mo 202.031†	11.4	6.6	0.4064	ug/L	0.4064	ppb	12:20:38
2	Ni 231.604†	312.0	164.4	0.6810	ug/L	0.6810	ppb	12:20:38

2	P 214.914†	290.1	-13.7	-5.5361	ug/L	-5.5361	ppb	12:20:38
2	Pb 220.353†	-9.9	8.3	0.8965	ug/L	0.8965	ppb	12:20:38
2	S 181.975 Axial†	150.2	8.9	10.705	ug/L	10.705	ppb	12:20:38
2	Sb 206.836†	25.0	-28.5	-7.7839	ug/L	-7.7839	ppb	12:20:38
2	Se 196.026†	-21.5	14.1	5.8732	ug/L	5.8732	ppb	12:20:38
2	Si 251.611†	488.7	22.7	0.6420	ug/L	0.6420	ppb	12:20:38
2	Sn 189.927†	8.6	-4.7	-0.7502	ug/L	-0.7502	ppb	12:20:38
2	Ti 334.940†	-1472.1	106.7	0.1805	ug/L	0.1805	ppb	12:20:18
2	Tl 190.801†	42.2	101.9	-2.4000	ug/L	-2.4000	ppb	12:20:38
2	U 409.014†	-5316.6	135.7	4.3053	ug/L	4.3053	ppb	12:20:18
2	V 292.402†	-1778.2	-22.5	-0.1499	ug/L	-0.1499	ppb	12:20:18
2	Zn 213.857†	1087.9	65.1	0.5315	ug/L	0.5315	ppb	12:20:38
2	SiO2†	546.0	51.2	3.0970	ug/L	3.0970	ppb	12:21:14
3	Sc Radial	7217.2	7217.2	104	%			12:19:26
3	Y RADIAL	6654.5	6654.5	104.6	%			12:19:26
3	Al 396.153Radial†	-80.9	-7.2	-6.0844	ug/L	-6.0844	ppb	12:19:26
3	Ca 317.933Radial†	28.9	1.4	2.0537	ug/L	2.0537	ppb	12:19:46
3	Fe 238.204 Radial†	2.7	-36.4	-1.9130	ug/L	-1.9130	ppb	12:19:46
3	K 766.490 Radial†	2931.6	31.8	6.5299	ug/L	6.5299	ppb	12:19:26
3	Mg 279.077 IEC†	2.3	-1.7	-43.722	ug/L	-43.722	ppb	12:19:46
3	Na 589.592 Radial†	-163.2	174.3	10.726	ug/L	10.726	ppb	12:19:26
3	Sr 421.552†	-131.7	-64.3	-0.2001	ug/L	-0.2001	ppb	12:19:26
3	Sc 361.383	772112.1	772112.1	103.69	%			12:20:43
3	Y 371.029	606000.4	606000.4	104.23	%			12:20:43
3	Ag 328.068†	811.9	77.2	0.3660	ug/L	0.3660	ppb	12:20:43
3	As 188.979†	-36.9	-1.3	-0.4625	ug/L	-0.4625	ppb	12:21:04
3	B 249.677†	249.7	1122.1	-0.4102	ug/L	-0.4102	ppb	12:21:04
3	Ba 233.527†	15.5	-7.5	-0.0470	ug/L	-0.0470	ppb	12:21:04
3	Be 313.107†	-4840.6	116.3	0.0472	ug/L	0.0472	ppb	12:20:43
3	Cd 226.502†	-302.2	1.7	0.0411	ug/L	0.0411	ppb	12:21:04
3	Co 228.616†	333896.4	322122.9	5093.7	ug/L	5093.7	ppb	12:20:43
3	Cr 267.716†	29.3	126.2	1.5764	ug/L	1.5764	ppb	12:21:04
3	Cu 324.752†	5191.4	-784.1	-2.6473	ug/L	-2.6473	ppb	12:20:43
3	Mn 257.610†	830.6	83.1	0.0641	ug/L	0.0641	ppb	12:21:04
3	Mo 202.031†	19.9	14.7	0.9237	ug/L	0.9237	ppb	12:21:04
3	Ni 231.604†	307.8	160.2	0.5799	ug/L	0.5799	ppb	12:21:04
3	P 214.914†	304.6	0.2	0.7557	ug/L	0.7557	ppb	12:21:04
3	Pb 220.353†	-17.6	0.8	0.1064	ug/L	0.1064	ppb	12:21:04
3	S 181.975 Axial†	136.5	-4.3	-5.1846	ug/L	-5.1846	ppb	12:21:04
3	Sb 206.836†	48.9	-5.4	-1.4783	ug/L	-1.4783	ppb	12:21:04
3	Se 196.026†	-24.6	11.2	4.5082	ug/L	4.5082	ppb	12:21:04
3	Si 251.611†	504.8	38.1	1.0469	ug/L	1.0469	ppb	12:21:04
3	Sn 189.927†	19.1	5.4	0.8399	ug/L	0.8399	ppb	12:21:04
3	Ti 334.940†	-1475.6	103.7	0.1746	ug/L	0.1746	ppb	12:20:43
3	Tl 190.801†	46.4	105.9	-1.4680	ug/L	-1.4680	ppb	12:21:04
3	U 409.014†	-5242.1	208.9	6.6187	ug/L	6.6187	ppb	12:20:43
3	V 292.402†	-1714.0	39.8	0.3720	ug/L	0.3720	ppb	12:20:43
3	Zn 213.857†	1106.3	82.6	0.6811	ug/L	0.6811	ppb	12:21:04
3	SiO2†	491.1	-1.9	-0.1824	ug/L	-0.1824	ppb	12:21:19

Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	773136.6	103.82	%	0.260				0.25%
Sc Radial	7141.0	103	%	1.0				0.95%
Y 371.029	606832.6	104.37	%	0.309				0.30%
Y RADIAL	6605.5	103.9	%	0.71				0.69%
Ag 328.068†	47.6	0.2060	ug/L	0.59863	0.2060	ppb	0.59863	290.58%
Al 396.153Radial†	-3.9	-3.3424	ug/L	15.24223	-3.3424	ppb	15.24223	456.02%
As 188.979†	5.1	1.5662	ug/L	1.82508	1.5662	ppb	1.82508	116.53%
B 249.677†	1121.0	-0.3958	ug/L	0.22631	-0.3958	ppb	0.22631	57.18%
Ba 233.527†	-10.6	-0.0673	ug/L	0.02160	-0.0673	ppb	0.02160	32.10%
Be 313.107†	125.9	0.0512	ug/L	0.00585	0.0512	ppb	0.00585	11.44%
Ca 317.933Radial†	-0.4	-0.5556	ug/L	2.66144	-0.5556	ppb	2.66144	479.03%
Cd 226.502†	1.3	0.0358	ug/L	0.02793	0.0358	ppb	0.02793	77.99%
Co 228.616†	321648.6	5086.2	ug/L	10.39	5086.2	ppb	10.39	0.20%
Cr 267.716†	124.6	1.5563	ug/L	0.13224	1.5563	ppb	0.13224	8.50%
Cu 324.752†	-785.1	-2.6502	ug/L	0.10470	-2.6502	ppb	0.10470	3.95%
Fe 238.204 Radial†	-35.1	3.7643	ug/L	5.21441	3.7643	ppb	5.21441	138.52%
K 766.490 Radial†	47.2	9.7027	ug/L	5.05969	9.7027	ppb	5.05969	52.15%

Mg 279.077 IEC†	-0.1	-2.7075	ug/L	38.09633	-2.7075	ppb	38.09633	>999.9%
Mn 257.610†	77.1	0.0580	ug/L	0.01450	0.0580	ppb	0.01450	24.98%
Mo 202.031†	11.6	0.7263	ug/L	0.27959	0.7263	ppb	0.27959	38.50%
Na 589.592 Radial†	267.2	16.443	ug/L	5.1038	16.443	ppb	5.1038	31.04%
Ni 231.604†	173.8	0.9096	ug/L	0.48620	0.9096	ppb	0.48620	53.45%
P 214.914†	-11.7	-4.6247	ug/L	4.98753	-4.6247	ppb	4.98753	107.84%
Pb 220.353†	9.0	0.9651	ug/L	0.89501	0.9651	ppb	0.89501	92.74%
S 181.975 Axial†	1.8	2.1171	ug/L	8.02236	2.1171	ppb	8.02236	378.94%
Sb 206.836†	-14.8	-4.0271	ug/L	3.32183	-4.0271	ppb	3.32183	82.49%
Se 196.026†	11.5	4.6689	ug/L	1.13249	4.6689	ppb	1.13249	24.26%
Si 251.611†	31.2	0.8553	ug/L	0.20334	0.8553	ppb	0.20334	23.78%
Sn 189.927†	4.3	0.6605	ug/L	1.33019	0.6605	ppb	1.33019	201.38%
Sr 421.552†	-22.3	-0.0694	ug/L	0.13221	-0.0694	ppb	0.13221	190.41%
Ti 334.940†	112.4	0.1894	ug/L	0.02076	0.1894	ppb	0.02076	10.96%
Tl 190.801†	104.5	-1.7592	ug/L	0.55574	-1.7592	ppb	0.55574	31.59%
U 409.014†	204.3	6.4730	ug/L	2.09860	6.4730	ppb	2.09860	32.42%
V 292.402†	30.4	0.2923	ug/L	0.40817	0.2923	ppb	0.40817	139.65%
Zn 213.857†	72.4	0.5922	ug/L	0.07869	0.5922	ppb	0.07869	13.29%
SiO2†	14.7	0.8338	ug/L	1.96338	0.8338	ppb	1.96338	235.47%

Sequence No.: 3
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 12:23:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Units	Sample Conc.	Units	Analysis Time
1	Sc Radial	7376.3	7376.3	106	%			12:25:27
1	Y RADIAL	6721.0	6721.0	105.7	%			12:25:27
1	Al 396.153Radial†	6258.4	5957.8	5006.6	ug/L	5006.6	ppb	12:25:27
1	Ca 317.933Radial†	3645.1	3402.5	5014.7	ug/L	5014.7	ppb	12:25:27
1	Fe 238.204 Radial†	1215.9	1104.9	4953.2	ug/L	4953.2	ppb	12:25:47
1	K 766.490 Radial†	26915.1	22532.0	4642.1	ug/L	4642.1	ppb	12:25:22
1	Mg 279.077 IEC†	211.6	195.1	4995.7	ug/L	4995.7	ppb	12:25:47
1	Na 589.592 Radial†	163447.8	154084.0	9481.0	ug/L	9481.0	ppb	12:25:22
1	Sr 421.552†	162170.3	152613.3	474.57	ug/L	474.57	ppb	12:25:22
1	Sc 361.383	783700.5	783700.5	105.24	%			12:26:56
1	Y 371.029	602708.6	602708.6	103.66	%			12:26:56
1	Ag 328.068†	96662.3	91140.4	501.90	ug/L	501.90	ppb	12:26:56
1	As 188.979†	1612.6	1566.6	499.37	ug/L	499.37	ppb	12:27:16
1	B 249.677†	22407.2	22172.1	504.25	ug/L	504.25	ppb	12:26:56
1	Ba 233.527†	81106.9	77043.5	500.86	ug/L	500.86	ppb	12:26:56
1	Be 313.107†	1301713.0	1241642.7	501.10	ug/L	501.10	ppb	12:26:56
1	Cd 226.502†	44789.0	42850.8	482.20	ug/L	482.20	ppb	12:27:16
1	Co 228.616†	32215.3	30710.7	485.82	ug/L	485.82	ppb	12:27:16
1	Cr 267.716†	41748.9	39766.9	499.01	ug/L	499.01	ppb	12:26:56
1	Cu 324.752†	162328.9	148450.4	499.72	ug/L	499.72	ppb	12:26:56
1	Mn 257.610†	523425.4	496629.0	500.68	ug/L	500.68	ppb	12:26:56
1	Mo 202.031†	8276.8	7860.0	498.71	ug/L	498.71	ppb	12:27:16
1	Ni 231.604†	21611.7	20398.3	487.65	ug/L	487.65	ppb	12:27:16
1	P 214.914†	6082.2	5485.6	2375.2	ug/L	2375.2	ppb	12:27:16
1	Pb 220.353†	4940.9	4712.6	499.34	ug/L	499.34	ppb	12:27:16
1	S 181.975 Axial†	1006.6	820.4	988.32	ug/L	988.32	ppb	12:27:16
1	Sb 206.836†	1980.7	1829.4	502.82	ug/L	502.82	ppb	12:27:16
1	Se 196.026†	1115.6	1094.8	512.99	ug/L	512.99	ppb	12:27:16
1	Si 251.611†	95286.9	90090.7	2528.9	ug/L	2528.9	ppb	12:26:56
1	Sn 189.927†	3361.1	3180.6	498.97	ug/L	498.97	ppb	12:27:16
1	Ti 334.940†	310431.1	296491.3	508.63	ug/L	508.63	ppb	12:26:56
1	Tl 190.801†	2134.5	2089.3	499.71	ug/L	499.71	ppb	12:27:16
1	U 409.014†	10471.5	15214.3	479.33	ug/L	479.33	ppb	12:26:56
1	V 292.402†	61946.8	60553.2	502.57	ug/L	502.57	ppb	12:26:56
1	Zn 213.857†	64794.3	60581.7	496.87	ug/L	496.87	ppb	12:26:56
1	SiO2†	93585.5	88447.3	5305.8	ug/L	5305.8	ppb	12:28:16
2	Sc Radial	7425.5	7425.5	107	%			12:25:57
2	Y RADIAL	6808.6	6808.6	107.1	%			12:25:57
2	Al 396.153Radial†	6297.4	5955.3	5004.3	ug/L	5004.3	ppb	12:25:57
2	Ca 317.933Radial†	3652.9	3387.1	4992.0	ug/L	4992.0	ppb	12:25:57
2	Fe 238.204 Radial†	1222.2	1103.1	4945.6	ug/L	4945.6	ppb	12:26:17
2	K 766.490 Radial†	27119.5	22555.4	4646.9	ug/L	4646.9	ppb	12:25:52
2	Mg 279.077 IEC†	213.5	195.5	5007.0	ug/L	5007.0	ppb	12:26:17
2	Na 589.592 Radial†	165508.5	154992.5	9536.9	ug/L	9536.9	ppb	12:25:52
2	Sr 421.552†	164201.3	153502.0	477.34	ug/L	477.34	ppb	12:25:52
2	Sc 361.383	777621.8	777621.8	104.43	%			12:27:23
2	Y 371.029	597942.2	597942.2	102.84	%			12:27:23
2	Ag 328.068†	94580.0	89864.4	494.90	ug/L	494.90	ppb	12:27:23
2	As 188.979†	1625.1	1590.5	506.92	ug/L	506.92	ppb	12:27:43
2	B 249.677†	21962.3	21912.5	498.28	ug/L	498.28	ppb	12:27:23
2	Ba 233.527†	79825.4	76418.7	496.80	ug/L	496.80	ppb	12:27:23
2	Be 313.107†	1278096.1	1228695.6	495.88	ug/L	495.88	ppb	12:27:23
2	Cd 226.502†	44984.3	43370.4	488.05	ug/L	488.05	ppb	12:27:43
2	Co 228.616†	32369.5	31097.6	491.96	ug/L	491.96	ppb	12:27:43
2	Cr 267.716†	41076.6	39433.2	494.82	ug/L	494.82	ppb	12:27:23
2	Cu 324.752†	158908.9	146381.1	492.76	ug/L	492.76	ppb	12:27:23
2	Mn 257.610†	514954.9	492405.4	496.42	ug/L	496.42	ppb	12:27:23
2	Mo 202.031†	8288.8	7933.0	503.33	ug/L	503.33	ppb	12:27:43
2	Ni 231.604†	21724.3	20666.7	494.07	ug/L	494.07	ppb	12:27:43

2	P 214.914†	6125.2	5572.0	2415.6 ug/L	2415.6 ppb	12:27:43
2	Pb 220.353†	4941.8	4750.1	503.33 ug/L	503.33 ppb	12:27:43
2	S 181.975 Axial†	1020.5	841.2	1013.4 ug/L	1013.4 ppb	12:27:43
2	Sb 206.836†	1987.0	1850.2	508.79 ug/L	508.79 ppb	12:27:43
2	Se 196.026†	1116.5	1104.0	517.13 ug/L	517.13 ppb	12:27:43
2	Si 251.611†	93463.3	89052.1	2499.4 ug/L	2499.4 ppb	12:27:23
2	Sn 189.927†	3387.5	3230.9	506.84 ug/L	506.84 ppb	12:27:43
2	Ti 334.940†	305149.6	293739.5	503.92 ug/L	503.92 ppb	12:27:23
2	Tl 190.801†	2125.4	2096.4	501.31 ug/L	501.31 ppb	12:27:43
2	U 409.014†	10192.8	15025.2	473.36 ug/L	473.36 ppb	12:27:23
2	V 292.402†	60881.7	59993.4	498.03 ug/L	498.03 ppb	12:27:23
2	Zn 213.857†	63542.2	59863.9	490.90 ug/L	490.90 ppb	12:27:23
2	SiO2†	94116.8	89651.1	5378.1 ug/L	5378.1 ppb	12:28:21
3	Sc Radial	7183.3	7183.3	104 %		12:26:27
3	Y RADIAL	6602.6	6602.6	103.8 %		12:26:27
3	Al 396.153Radial†	6312.3	6168.0	5183.9 ug/L	5183.9 ppb	12:26:27
3	Ca 317.933Radial†	3689.4	3537.4	5213.5 ug/L	5213.5 ppb	12:26:27
3	Fe 238.204 Radial†	1236.0	1155.0	5177.3 ug/L	5177.3 ppb	12:26:47
3	K 766.490 Radial†	27094.0	23385.0	4818.3 ug/L	4818.3 ppb	12:26:22
3	Mg 279.077 IEC†	209.4	198.4	5079.7 ug/L	5079.7 ppb	12:26:47
3	Na 589.592 Radial†	165072.1	159783.9	9831.8 ug/L	9831.8 ppb	12:26:22
3	Sr 421.552†	163804.4	158290.5	492.23 ug/L	492.23 ppb	12:26:22
3	Sc 361.383	785154.2	785154.2	105.44 %		12:27:51
3	Y 371.029	604154.5	604154.5	103.91 %		12:27:51
3	Ag 328.068†	95849.4	90199.4	496.79 ug/L	496.79 ppb	12:27:51
3	As 188.979†	1618.0	1568.9	500.11 ug/L	500.11 ppb	12:28:11
3	B 249.677†	22133.5	21873.1	497.38 ug/L	497.38 ppb	12:27:51
3	Ba 233.527†	80244.5	76082.9	494.62 ug/L	494.62 ppb	12:27:51
3	Be 313.107†	1289449.0	1227721.3	495.48 ug/L	495.48 ppb	12:27:51
3	Cd 226.502†	45112.8	43079.0	484.74 ug/L	484.74 ppb	12:28:11
3	Co 228.616†	32450.0	30876.7	488.45 ug/L	488.45 ppb	12:28:11
3	Cr 267.716†	41331.0	39297.0	493.12 ug/L	493.12 ppb	12:27:51
3	Cu 324.752†	160852.6	146764.7	494.06 ug/L	494.06 ppb	12:27:51
3	Mn 257.610†	518555.1	491089.0	495.12 ug/L	495.12 ppb	12:27:51
3	Mo 202.031†	8328.9	7894.9	500.93 ug/L	500.93 ppb	12:28:11
3	Ni 231.604†	21779.3	20519.3	490.55 ug/L	490.55 ppb	12:28:11
3	P 214.914†	6145.6	5535.0	2398.5 ug/L	2398.5 ppb	12:28:11
3	Pb 220.353†	4953.1	4715.5	499.67 ug/L	499.67 ppb	12:28:11
3	S 181.975 Axial†	1023.2	834.5	1005.2 ug/L	1005.2 ppb	12:28:11
3	Sb 206.836†	1983.4	1828.5	502.82 ug/L	502.82 ppb	12:28:11
3	Se 196.026†	1122.0	1099.0	515.63 ug/L	515.63 ppb	12:28:11
3	Si 251.611†	94267.3	88956.0	2496.7 ug/L	2496.7 ppb	12:27:51
3	Sn 189.927†	3386.1	3198.4	501.81 ug/L	501.81 ppb	12:28:11
3	Ti 334.940†	307994.2	293634.0	503.74 ug/L	503.74 ppb	12:27:51
3	Tl 190.801†	2161.9	2111.6	504.93 ug/L	504.93 ppb	12:28:11
3	U 409.014†	10623.4	15340.0	483.28 ug/L	483.28 ppb	12:27:51
3	V 292.402†	61349.6	59877.9	497.04 ug/L	497.04 ppb	12:27:51
3	Zn 213.857†	64192.3	59896.8	491.17 ug/L	491.17 ppb	12:27:51
3	SiO2†	91977.9	86758.0	5203.4 ug/L	5203.4 ppb	12:28:26

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	782158.8	105.04	%	0.537				0.51%
Sc Radial	7328.4	106	%	1.8				1.75%
Y 371.029	601601.8	103.47	%	0.559				0.54%
Y RADIAL	6710.7	105.5	%	1.63				1.54%
Ag 328.068†	90401.4	497.86	ug/L	3.621	497.86	ppb	3.621	0.73%
QC value within limits for Ag 328.068 Recovery = 99.57%								
Al 396.153Radial†	6027.0	5065.0	ug/L	103.05	5065.0	ppb	103.05	2.03%
QC value within limits for Al 396.153Radial Recovery = 101.30%								
As 188.979†	1575.3	502.13	ug/L	4.162	502.13	ppb	4.162	0.83%
QC value within limits for As 188.979 Recovery = 100.43%								
B 249.677†	21985.9	499.97	ug/L	3.732	499.97	ppb	3.732	0.75%
QC value within limits for B 249.677 Recovery = 99.99%								
Ba 233.527†	76515.0	497.43	ug/L	3.169	497.43	ppb	3.169	0.64%
QC value within limits for Ba 233.527 Recovery = 99.49%								
Be 313.107†	1232686.6	497.49	ug/L	3.135	497.49	ppb	3.135	0.63%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	3442.3	5073.4	ug/L	121.88	5073.4	ppb	121.88	2.40%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.47%
Cd 226.502†          43100.1      485.00 ug/L        2.936      485.00 ppb        2.936   0.61%
   QC value within limits for Cd 226.502  Recovery = 97.00%
Co 228.616†          30895.0      488.74 ug/L        3.080      488.74 ppb        3.080   0.63%
   QC value within limits for Co 228.616  Recovery = 97.75%
Cr 267.716†          39499.0      495.65 ug/L        3.032      495.65 ppb        3.032   0.61%
   QC value within limits for Cr 267.716  Recovery = 99.13%
Cu 324.752†         147198.7      495.51 ug/L        3.701      495.51 ppb        3.701   0.75%
   QC value within limits for Cu 324.752  Recovery = 99.10%
Fe 238.204 Radial†    1121.0      5025.3 ug/L      131.63      5025.3 ppb      131.63   2.62%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.51%
K 766.490 Radial†    22824.1      4702.4 ug/L      100.39      4702.4 ppb      100.39   2.13%
   QC value within limits for K 766.490 Radial  Recovery = 94.05%
Mg 279.077 IEC†        196.3      5027.5 ug/L       45.57      5027.5 ppb       45.57   0.91%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.55%
Mn 257.610†         493374.5      497.41 ug/L        2.905      497.41 ppb        2.905   0.58%
   QC value within limits for Mn 257.610  Recovery = 99.48%
Mo 202.031†          7896.0      500.99 ug/L        2.314      500.99 ppb        2.314   0.46%
   QC value within limits for Mo 202.031  Recovery = 100.20%
Na 589.592 Radial†  156286.8      9616.6 ug/L      188.44      9616.6 ppb      188.44   1.96%
   QC value within limits for Na 589.592 Radial  Recovery = 96.17%
Ni 231.604†          20528.1      490.76 ug/L        3.213      490.76 ppb        3.213   0.65%
   QC value within limits for Ni 231.604  Recovery = 98.15%
P 214.914†            5530.9      2396.4 ug/L       20.28      2396.4 ppb       20.28   0.85%
   QC value within limits for P 214.914  Recovery = 95.86%
Pb 220.353†           4726.1      500.78 ug/L        2.211      500.78 ppb        2.211   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.16%
S 181.975 Axial†       832.0      1002.3 ug/L       12.78      1002.3 ppb       12.78   1.28%
   QC value within limits for S 181.975 Axial  Recovery = 100.23%
Sb 206.836†           1836.0      504.81 ug/L        3.450      504.81 ppb        3.450   0.68%
   QC value within limits for Sb 206.836  Recovery = 100.96%
Se 196.026†           1099.3      515.25 ug/L        2.096      515.25 ppb        2.096   0.41%
   QC value within limits for Se 196.026  Recovery = 103.05%
Si 251.611†          89366.3      2508.4 ug/L       17.87      2508.4 ppb       17.87   0.71%
   QC value within limits for Si 251.611  Recovery = 100.33%
Sn 189.927†           3203.3      502.54 ug/L        3.986      502.54 ppb        3.986   0.79%
   QC value within limits for Sn 189.927  Recovery = 100.51%
Sr 421.552†         154801.9      481.38 ug/L        9.496      481.38 ppb        9.496   1.97%
   QC value within limits for Sr 421.552  Recovery = 96.28%
Ti 334.940†         294621.6      505.43 ug/L        2.775      505.43 ppb        2.775   0.55%
   QC value within limits for Ti 334.940  Recovery = 101.09%
Tl 190.801†           2099.1      501.98 ug/L        2.674      501.98 ppb        2.674   0.53%
   QC value within limits for Tl 190.801  Recovery = 100.40%
U 409.014†           15193.1      478.66 ug/L        4.996      478.66 ppb        4.996   1.04%
   QC value within limits for U 409.014  Recovery = 95.73%
V 292.402†           60141.5      499.22 ug/L        2.947      499.22 ppb        2.947   0.59%
   QC value within limits for V 292.402  Recovery = 99.84%
Zn 213.857†          60114.1      492.98 ug/L        3.373      492.98 ppb        3.373   0.68%
   QC value within limits for Zn 213.857  Recovery = 98.60%
SiO2†                88285.5      5295.8 ug/L       87.76      5295.8 ppb       87.76   1.66%
   QC value within limits for SiO2  Recovery = 99.03%
All analyte(s) passed QC.
```

Sequence No.: 4
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 12:30:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7032.0	7032.0	101	%			12:32:29
1	Y RADIAL	6440.8	6440.8	101.3	%			12:32:29
1	Al 396.153Radial†	-96.8	-24.9	-21.101	ug/L	-21.101	ppb	12:32:29
1	Ca 317.933Radial†	31.2	4.4	6.5225	ug/L	6.5225	ppb	12:32:49
1	Fe 238.204 Radial†	44.4	4.9	21.902	ug/L	21.902	ppb	12:32:49
1	K 766.490 Radial†	3027.1	200.3	41.379	ug/L	41.379	ppb	12:32:29
1	Mg 279.077 IEC†	4.6	0.6	14.493	ug/L	14.493	ppb	12:32:49
1	Na 589.592 Radial†	-268.5	66.3	4.0785	ug/L	4.0785	ppb	12:32:29
1	Sr 421.552†	-70.0	-6.8	-0.0212	ug/L	-0.0212	ppb	12:32:29
1	Sc 361.383	767710.4	767710.4	103.10	%			12:33:46
1	Y 371.029	599297.7	599297.7	103.08	%			12:33:46
1	Ag 328.068†	893.8	161.1	0.8887	ug/L	0.8887	ppb	12:33:46
1	As 188.979†	-28.2	6.9	2.1934	ug/L	2.1934	ppb	12:34:06
1	B 249.677†	-325.5	565.6	12.932	ug/L	12.932	ppb	12:34:06
1	Ba 233.527†	16.3	-6.6	-0.0415	ug/L	-0.0415	ppb	12:34:06
1	Be 313.107†	-4797.5	131.3	0.0530	ug/L	0.0530	ppb	12:33:46
1	Cd 226.502†	-269.9	31.4	0.3519	ug/L	0.3519	ppb	12:34:06
1	Co 228.616†	-90.3	12.9	0.2072	ug/L	0.2072	ppb	12:34:06
1	Cr 267.716†	-65.9	34.1	0.4275	ug/L	0.4275	ppb	12:34:06
1	Cu 324.752†	5836.4	-129.7	-0.4351	ug/L	-0.4351	ppb	12:33:46
1	Mn 257.610†	699.6	-39.3	-0.0371	ug/L	-0.0371	ppb	12:34:06
1	Mo 202.031†	29.7	24.4	1.5483	ug/L	1.5483	ppb	12:34:06
1	Ni 231.604†	190.0	47.7	1.1408	ug/L	1.1408	ppb	12:34:06
1	P 214.914†	303.4	0.8	0.4183	ug/L	0.4183	ppb	12:34:06
1	Pb 220.353†	-38.3	-19.3	-2.0420	ug/L	-2.0420	ppb	12:34:06
1	S 181.975 Axial†	139.1	-1.0	-1.2296	ug/L	-1.2296	ppb	12:34:06
1	Sb 206.836†	49.7	-4.4	-1.1596	ug/L	-1.1596	ppb	12:34:06
1	Se 196.026†	-46.7	-10.5	-4.6777	ug/L	-4.6777	ppb	12:34:06
1	Si 251.611†	523.2	58.7	1.6079	ug/L	1.6079	ppb	12:34:06
1	Sn 189.927†	18.3	4.8	0.7464	ug/L	0.7464	ppb	12:34:06
1	Ti 334.940†	-1530.8	42.0	0.0709	ug/L	0.0709	ppb	12:33:46
1	Tl 190.801†	-50.0	12.7	3.0141	ug/L	3.0141	ppb	12:34:06
1	U 409.014†	-5327.2	97.3	3.0726	ug/L	3.0726	ppb	12:33:46
1	V 292.402†	-1658.1	84.5	0.7156	ug/L	0.7156	ppb	12:33:46
1	Zn 213.857†	1114.2	96.3	0.7877	ug/L	0.7877	ppb	12:34:06
1	SiO2†	498.4	8.0	0.3686	ug/L	0.3686	ppb	12:35:02
2	Sc Radial	6905.5	6905.5	99.5	%			12:32:54
2	Y RADIAL	6373.8	6373.8	100.2	%			12:32:54
2	Al 396.153Radial†	-85.2	-15.0	-12.700	ug/L	-12.700	ppb	12:32:54
2	Ca 317.933Radial†	28.7	2.4	3.5801	ug/L	3.5801	ppb	12:33:14
2	Fe 238.204 Radial†	38.8	0.1	0.3411	ug/L	0.3411	ppb	12:33:14
2	K 766.490 Radial†	2798.5	25.4	5.2270	ug/L	5.2270	ppb	12:32:54
2	Mg 279.077 IEC†	3.0	-0.9	-23.579	ug/L	-23.579	ppb	12:33:14
2	Na 589.592 Radial†	-125.7	204.8	12.604	ug/L	12.604	ppb	12:32:54
2	Sr 421.552†	-25.9	36.2	0.1127	ug/L	0.1127	ppb	12:32:54
2	Sc 361.383	744071.7	744071.7	99.922	%			12:34:11
2	Y 371.029	580270.9	580270.9	99.805	%			12:34:11
2	Ag 328.068†	726.7	21.4	0.1206	ug/L	0.1206	ppb	12:34:11
2	As 188.979†	-32.4	1.9	0.5950	ug/L	0.5950	ppb	12:34:31
2	B 249.677†	-333.0	548.0	12.531	ug/L	12.531	ppb	12:34:31
2	Ba 233.527†	17.0	-5.4	-0.0359	ug/L	-0.0359	ppb	12:34:31
2	Be 313.107†	-4813.8	-32.8	-0.0130	ug/L	-0.0130	ppb	12:34:11
2	Cd 226.502†	-275.2	17.8	0.2014	ug/L	0.2014	ppb	12:34:31
2	Co 228.616†	-69.9	30.5	0.4844	ug/L	0.4844	ppb	12:34:31
2	Cr 267.716†	-33.9	64.1	0.8043	ug/L	0.8043	ppb	12:34:31
2	Cu 324.752†	5848.9	62.6	0.2108	ug/L	0.2108	ppb	12:34:11
2	Mn 257.610†	698.2	-19.1	-0.0188	ug/L	-0.0188	ppb	12:34:31
2	Mo 202.031†	20.5	16.1	1.0233	ug/L	1.0233	ppb	12:34:31
2	Ni 231.604†	178.2	41.8	0.9986	ug/L	0.9986	ppb	12:34:31

2	P 214.914†	295.7	2.4	1.0583	ug/L	1.0583 ppb	12:34:31
2	Pb 220.353†	-21.0	-3.2	-0.3379	ug/L	-0.3379 ppb	12:34:31
2	S 181.975 Axial†	136.8	0.9	1.1333	ug/L	1.1333 ppb	12:34:31
2	Sb 206.836†	54.7	2.1	0.6132	ug/L	0.6132 ppb	12:34:31
2	Se 196.026†	-26.7	8.1	3.6640	ug/L	3.6640 ppb	12:34:31
2	Si 251.611†	560.8	112.4	3.1291	ug/L	3.1291 ppb	12:34:31
2	Sn 189.927†	26.8	13.8	2.1630	ug/L	2.1630 ppb	12:34:31
2	Ti 334.940†	-1475.0	50.6	0.0891	ug/L	0.0891 ppb	12:34:11
2	Tl 190.801†	-61.1	-0.0	-0.0076	ug/L	-0.0076 ppb	12:34:31
2	U 409.014†	-5423.7	-163.4	-5.1664	ug/L	-5.1664 ppb	12:34:11
2	V 292.402†	-1728.1	-36.6	-0.2984	ug/L	-0.2984 ppb	12:34:11
2	Zn 213.857†	1119.1	135.6	1.1161	ug/L	1.1161 ppb	12:34:31
2	SiO2†	514.8	39.6	2.2858	ug/L	2.2858 ppb	12:35:07
3	Sc Radial	6866.7	6866.7	99.0	%		12:33:19
3	Y RADIAL	6311.4	6311.4	99.25	%		12:33:19
3	Al 396.153Radial†	-69.1	0.7	0.5593	ug/L	0.5593 ppb	12:33:19
3	Ca 317.933Radial†	23.2	-2.9	-4.3055	ug/L	-4.3055 ppb	12:33:39
3	Fe 238.204 Radial†	35.5	-3.1	-13.913	ug/L	-13.913 ppb	12:33:39
3	K 766.490 Radial†	2819.8	62.8	12.946	ug/L	12.946 ppb	12:33:19
3	Mg 279.077 IEC†	8.3	4.4	112.66	ug/L	112.66 ppb	12:33:39
3	Na 589.592 Radial†	-155.7	173.9	10.698	ug/L	10.698 ppb	12:33:19
3	Sr 421.552†	-112.1	-50.9	-0.1584	ug/L	-0.1584 ppb	12:33:19
3	Sc 361.383	770249.9	770249.9	103.44	%		12:34:36
3	Y 371.029	601092.9	601092.9	103.39	%		12:34:36
3	Ag 328.068†	783.2	51.2	0.2695	ug/L	0.2695 ppb	12:34:36
3	As 188.979†	-18.7	16.2	5.1374	ug/L	5.1374 ppb	12:34:56
3	B 249.677†	-355.3	537.8	12.301	ug/L	12.301 ppb	12:34:56
3	Ba 233.527†	36.2	12.5	0.0808	ug/L	0.0808 ppb	12:34:56
3	Be 313.107†	-4794.6	149.5	0.0604	ug/L	0.0604 ppb	12:34:36
3	Cd 226.502†	-264.9	37.1	0.4200	ug/L	0.4200 ppb	12:34:56
3	Co 228.616†	-104.3	-0.4	-0.0020	ug/L	-0.0020 ppb	12:34:56
3	Cr 267.716†	-69.9	30.4	0.3785	ug/L	0.3785 ppb	12:34:56
3	Cu 324.752†	5863.5	-122.2	-0.4118	ug/L	-0.4118 ppb	12:34:36
3	Mn 257.610†	685.5	-55.1	-0.0594	ug/L	-0.0594 ppb	12:34:56
3	Mo 202.031†	29.6	24.2	1.5341	ug/L	1.5341 ppb	12:34:56
3	Ni 231.604†	158.4	16.5	0.3947	ug/L	0.3947 ppb	12:34:56
3	P 214.914†	293.5	-9.8	-4.3208	ug/L	-4.3208 ppb	12:34:56
3	Pb 220.353†	-29.7	-10.9	-1.1460	ug/L	-1.1460 ppb	12:34:56
3	S 181.975 Axial†	138.2	-2.3	-2.8024	ug/L	-2.8024 ppb	12:34:56
3	Sb 206.836†	65.0	10.2	2.8078	ug/L	2.8078 ppb	12:34:56
3	Se 196.026†	-33.5	2.5	1.0889	ug/L	1.0889 ppb	12:34:56
3	Si 251.611†	522.3	56.2	1.5447	ug/L	1.5447 ppb	12:34:56
3	Sn 189.927†	19.1	5.5	0.8571	ug/L	0.8571 ppb	12:34:56
3	Ti 334.940†	-1529.0	48.6	0.0803	ug/L	0.0803 ppb	12:34:36
3	Tl 190.801†	-51.3	11.6	2.7543	ug/L	2.7543 ppb	12:34:56
3	U 409.014†	-5238.1	200.4	6.3367	ug/L	6.3367 ppb	12:34:36
3	V 292.402†	-1790.0	-37.7	-0.2740	ug/L	-0.2740 ppb	12:34:36
3	Zn 213.857†	1119.5	97.9	0.8060	ug/L	0.8060 ppb	12:34:56
3	SiO2†	590.3	95.2	5.6553	ug/L	5.6553 ppb	12:35:12

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	760677.3	102.15	%	1.939				1.90%
Sc Radial	6934.7	99.9	%	1.25				1.25%
Y 371.029	593553.8	102.09	%	1.985				1.94%
Y RADIAL	6375.3	100.3	%	1.02				1.01%
Ag 328.068†	77.9	0.4262	ug/L	0.40735	0.4262	ppb	0.40735	95.57%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.1	-11.081	ug/L	10.9206	-11.081	ppb	10.9206	98.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	8.4	2.6419	ug/L	2.30416	2.6419	ppb	2.30416	87.22%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	550.5	12.588	ug/L	0.3192	12.588	ppb	0.3192	2.54%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	0.2	0.0011	ug/L	0.06904	0.0011	ppb	0.06904	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	82.7	0.0335	ug/L	0.04041	0.0335	ppb	0.04041	120.73%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.3	1.9324	ug/L	5.59888	1.9324	ppb	5.59888	289.74%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                28.8      0.3244 ug/L       0.11183      0.3244 ppb        0.11183  34.47%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                14.3      0.2299 ug/L       0.24400      0.2299 ppb        0.24400 106.14%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                42.9      0.5368 ug/L       0.23297      0.5368 ppb        0.23297  43.40%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -63.1     -0.2120 ug/L       0.36635     -0.2120 ppb        0.36635 172.77%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.6      2.7768 ug/L      18.03168      2.7768 ppb       18.03168 649.38%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          96.2     19.851 ug/L       19.0392      19.851 ppb        19.0392  95.91%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.3     34.525 ug/L       70.2945      34.525 ppb        70.2945 203.60%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -37.9     -0.0384 ug/L       0.02037     -0.0384 ppb        0.02037  52.99%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                21.6      1.3686 ug/L       0.29910      1.3686 ppb        0.29910  21.86%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        148.3      9.1269 ug/L       4.47476      9.1269 ppb        4.47476  49.03%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                35.3      0.8447 ug/L       0.39613      0.8447 ppb        0.39613  46.90%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -2.2     -0.9481 ug/L       2.93836     -0.9481 ppb        2.93836 309.93%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -11.1     -1.1753 ug/L       0.85243     -1.1753 ppb        0.85243  72.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -0.8     -0.9663 ug/L       1.98101     -0.9663 ppb        1.98101 205.02%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 2.6      0.7538 ug/L       1.98744      0.7538 ppb        1.98744 263.67%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.0      0.0251 ug/L       4.27144      0.0251 ppb        4.27144 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                75.8      2.0939 ug/L       0.89705      2.0939 ppb        0.89705  42.84%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 8.0      1.2555 ug/L       0.78791      1.2555 ppb        0.78791  62.76%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                -7.2     -0.0223 ug/L       0.13551     -0.0223 ppb        0.13551 607.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                47.1      0.0801 ug/L       0.00906      0.0801 ppb        0.00906  11.31%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 8.1      1.9203 ug/L       1.67463      1.9203 ppb        1.67463  87.21%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 44.8      1.4143 ug/L       5.92812      1.4143 ppb        5.92812 419.16%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  3.4      0.0478 ug/L       0.57852      0.0478 ppb        0.57852 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               109.9      0.9033 ug/L       0.18454      0.9033 ppb        0.18454  20.43%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      47.6      2.7699 ug/L       2.67637      2.7699 ppb        2.67637  96.62%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/2/2009 13:42:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7214.0	7214.0	104	%			13:44:02
1	Y RADIAL	6611.4	6611.4	104.0	%			13:44:02
1	Al 396.153Radial†	6229.8	6062.8	5095.2	ug/L	5095.2	ppb	13:44:02
1	Ca 317.933Radial†	3569.7	3407.2	5021.6	ug/L	5021.6	ppb	13:44:22
1	Fe 238.204 Radial†	1244.3	1157.9	5190.4	ug/L	5190.4	ppb	13:44:22
1	K 766.490 Radial†	27587.8	23748.8	4893.6	ug/L	4893.6	ppb	13:44:02
1	Mg 279.077 IEC†	216.1	203.9	5221.1	ug/L	5221.1	ppb	13:44:22
1	Na 589.592 Radial†	166789.5	160758.5	9891.7	ug/L	9891.7	ppb	13:44:02
1	Sr 421.552†	166577.1	160285.3	498.43	ug/L	498.43	ppb	13:44:02
1	Sc 361.383	785320.2	785320.2	105.46	%			13:45:20
1	Y 371.029	604198.7	604198.7	103.92	%			13:45:20
1	Ag 328.068†	95369.8	89725.4	494.20	ug/L	494.20	ppb	13:45:20
1	As 188.979†	1608.7	1559.7	497.18	ug/L	497.18	ppb	13:45:41
1	B 249.677†	22111.3	21847.6	496.81	ug/L	496.81	ppb	13:45:20
1	Ba 233.527†	79665.2	75517.5	490.94	ug/L	490.94	ppb	13:45:20
1	Be 313.107†	1282396.0	1220775.0	492.68	ug/L	492.68	ppb	13:45:20
1	Cd 226.502†	44952.4	42917.9	482.93	ug/L	482.93	ppb	13:45:41
1	Co 228.616†	32340.5	30766.3	486.71	ug/L	486.71	ppb	13:45:41
1	Cr 267.716†	41083.8	39054.3	490.07	ug/L	490.07	ppb	13:45:20
1	Cu 324.752†	160216.5	146129.2	491.93	ug/L	491.93	ppb	13:45:20
1	Mn 257.610†	515381.1	487975.5	491.99	ug/L	491.99	ppb	13:45:20
1	Mo 202.031†	8290.6	7856.8	498.52	ug/L	498.52	ppb	13:45:41
1	Ni 231.604†	21679.5	20420.2	488.18	ug/L	488.18	ppb	13:45:41
1	P 214.914†	6130.8	5519.8	2392.0	ug/L	2392.0	ppb	13:45:41
1	Pb 220.353†	4954.5	4715.7	499.68	ug/L	499.68	ppb	13:45:41
1	S 181.975 Axial†	1057.5	866.8	1044.2	ug/L	1044.2	ppb	13:45:41
1	Sb 206.836†	1980.0	1824.8	501.75	ug/L	501.75	ppb	13:45:41
1	Se 196.026†	1110.0	1087.3	510.38	ug/L	510.38	ppb	13:45:41
1	Si 251.611†	93857.5	88548.6	2485.3	ug/L	2485.3	ppb	13:45:20
1	Sn 189.927†	3347.7	3161.4	495.98	ug/L	495.98	ppb	13:45:41
1	Ti 334.940†	306289.3	291955.7	500.86	ug/L	500.86	ppb	13:45:20
1	Tl 190.801†	2129.8	2080.7	497.56	ug/L	497.56	ppb	13:45:41
1	U 409.014†	10490.1	15211.4	479.23	ug/L	479.23	ppb	13:45:20
1	V 292.402†	61001.0	59535.1	494.20	ug/L	494.20	ppb	13:45:20
1	Zn 213.857†	63817.7	59528.7	488.13	ug/L	488.13	ppb	13:45:20
1	SiO2†	93154.7	87855.4	5270.0	ug/L	5270.0	ppb	13:46:41
2	Sc Radial	7171.0	7171.0	103	%			13:44:27
2	Y RADIAL	6556.8	6556.8	103.1	%			13:44:27
2	Al 396.153Radial†	6178.6	6049.1	5083.7	ug/L	5083.7	ppb	13:44:27
2	Ca 317.933Radial†	3575.8	3433.6	5060.5	ug/L	5060.5	ppb	13:44:47
2	Fe 238.204 Radial†	1238.5	1159.4	5197.1	ug/L	5197.1	ppb	13:44:47
2	K 766.490 Radial†	27601.6	23921.1	4929.1	ug/L	4929.1	ppb	13:44:27
2	Mg 279.077 IEC†	212.2	201.4	5157.3	ug/L	5157.3	ppb	13:44:47
2	Na 589.592 Radial†	166816.8	161745.9	9952.5	ug/L	9952.5	ppb	13:44:27
2	Sr 421.552†	166733.5	161396.4	501.89	ug/L	501.89	ppb	13:44:27
2	Sc 361.383	787317.3	787317.3	105.73	%			13:45:48
2	Y 371.029	604965.4	604965.4	104.05	%			13:45:48
2	Ag 328.068†	95691.5	89800.3	494.61	ug/L	494.61	ppb	13:45:48
2	As 188.979†	1613.5	1560.4	497.40	ug/L	497.40	ppb	13:46:08
2	B 249.677†	22236.1	21912.5	498.29	ug/L	498.29	ppb	13:45:48
2	Ba 233.527†	80060.9	75700.2	492.13	ug/L	492.13	ppb	13:45:48
2	Be 313.107†	1287053.3	1222095.6	493.21	ug/L	493.21	ppb	13:45:48
2	Cd 226.502†	45110.4	42959.2	483.39	ug/L	483.39	ppb	13:46:08
2	Co 228.616†	32410.1	30754.4	486.52	ug/L	486.52	ppb	13:46:08
2	Cr 267.716†	41298.5	39158.6	491.38	ug/L	491.38	ppb	13:45:48
2	Cu 324.752†	161003.3	146488.0	493.13	ug/L	493.13	ppb	13:45:48
2	Mn 257.610†	517517.1	488756.2	492.78	ug/L	492.78	ppb	13:45:48
2	Mo 202.031†	8313.9	7858.9	498.65	ug/L	498.65	ppb	13:46:08
2	Ni 231.604†	21789.7	20472.3	489.42	ug/L	489.42	ppb	13:46:08

2	P 214.914†	6109.0	5484.4	2375.8	ug/L	2375.8 ppb	13:46:08
2	Pb 220.353†	4960.6	4709.7	499.03	ug/L	499.03 ppb	13:46:08
2	S 181.975 Axial†	1050.8	857.8	1033.4	ug/L	1033.4 ppb	13:46:08
2	Sb 206.836†	1993.6	1833.0	503.94	ug/L	503.94 ppb	13:46:08
2	Se 196.026†	1117.8	1092.1	512.54	ug/L	512.54 ppb	13:46:08
2	Si 251.611†	94211.6	88657.7	2488.4	ug/L	2488.4 ppb	13:45:48
2	Sn 189.927†	3362.4	3167.2	496.90	ug/L	496.90 ppb	13:46:08
2	Ti 334.940†	307578.6	292438.4	501.69	ug/L	501.69 ppb	13:45:48
2	Tl 190.801†	2144.4	2089.3	499.62	ug/L	499.62 ppb	13:46:08
2	U 409.014†	10513.5	15208.3	479.12	ug/L	479.12 ppb	13:45:48
2	V 292.402†	61303.9	59674.8	495.34	ug/L	495.34 ppb	13:45:48
2	Zn 213.857†	64107.4	59649.2	489.12	ug/L	489.12 ppb	13:45:48
2	SiO2†	94502.9	88906.5	5333.4	ug/L	5333.4 ppb	13:46:46
3	Sc Radial	7059.8	7059.8	102	%		13:44:52
3	Y RADIAL	6444.3	6444.3	101.3	%		13:44:52
3	Al 396.153Radial†	6053.5	6020.4	5059.5	ug/L	5059.5 ppb	13:44:52
3	Ca 317.933Radial†	3596.4	3508.3	5170.7	ug/L	5170.7 ppb	13:45:12
3	Fe 238.204 Radial†	1248.7	1188.4	5326.5	ug/L	5326.5 ppb	13:45:12
3	K 766.490 Radial†	26963.8	23715.1	4886.7	ug/L	4886.7 ppb	13:44:52
3	Mg 279.077 IEC†	214.2	206.6	5288.9	ug/L	5288.9 ppb	13:45:12
3	Na 589.592 Radial†	162100.2	159653.9	9823.8	ug/L	9823.8 ppb	13:44:52
3	Sr 421.552†	162025.9	159312.0	495.40	ug/L	495.40 ppb	13:44:52
3	Sc 361.383	790899.5	790899.5	106.21	%		13:46:15
3	Y 371.029	608801.3	608801.3	104.71	%		13:46:15
3	Ag 328.068†	95857.4	89546.6	493.25	ug/L	493.25 ppb	13:46:15
3	As 188.979†	1606.6	1547.0	493.18	ug/L	493.18 ppb	13:46:35
3	B 249.677†	22313.9	21890.5	497.79	ug/L	497.79 ppb	13:46:15
3	Ba 233.527†	79999.5	75299.4	489.53	ug/L	489.53 ppb	13:46:15
3	Be 313.107†	1289865.0	1219229.3	492.06	ug/L	492.06 ppb	13:46:15
3	Cd 226.502†	45035.5	42695.4	480.40	ug/L	480.40 ppb	13:46:35
3	Co 228.616†	32366.5	30574.5	483.67	ug/L	483.67 ppb	13:46:35
3	Cr 267.716†	41277.3	38961.7	488.91	ug/L	488.91 ppb	13:46:15
3	Cu 324.752†	161345.4	146120.4	491.90	ug/L	491.90 ppb	13:46:15
3	Mn 257.610†	517414.7	486442.8	490.46	ug/L	490.46 ppb	13:46:15
3	Mo 202.031†	8317.8	7827.0	496.64	ug/L	496.64 ppb	13:46:35
3	Ni 231.604†	21725.5	20318.5	485.75	ug/L	485.75 ppb	13:46:35
3	P 214.914†	6113.2	5462.3	2365.9	ug/L	2365.9 ppb	13:46:35
3	Pb 220.353†	4914.7	4645.1	492.20	ug/L	492.20 ppb	13:46:35
3	S 181.975 Axial†	1050.6	853.2	1027.8	ug/L	1027.8 ppb	13:46:35
3	Sb 206.836†	1983.1	1814.6	498.95	ug/L	498.95 ppb	13:46:35
3	Se 196.026†	1128.8	1097.6	515.49	ug/L	515.49 ppb	13:46:35
3	Si 251.611†	94317.5	88353.8	2479.9	ug/L	2479.9 ppb	13:46:15
3	Sn 189.927†	3368.2	3158.3	495.52	ug/L	495.52 ppb	13:46:35
3	Ti 334.940†	307707.6	291242.2	499.64	ug/L	499.64 ppb	13:46:15
3	Tl 190.801†	2134.7	2071.0	495.26	ug/L	495.26 ppb	13:46:35
3	U 409.014†	10647.1	15289.1	481.66	ug/L	481.66 ppb	13:46:15
3	V 292.402†	61342.3	59448.3	493.45	ug/L	493.45 ppb	13:46:15
3	Zn 213.857†	63976.3	59251.1	485.83	ug/L	485.83 ppb	13:46:15
3	SiO2†	93330.3	87397.7	5242.4	ug/L	5242.4 ppb	13:46:51

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	787845.7	105.80	%	0.380				0.36%
Sc Radial	7148.3	103	%	1.1				1.11%
Y 371.029	605988.5	104.23	%	0.424				0.41%
Y RADIAL	6537.5	102.8	%	1.34				1.30%
Ag 328.068†	89690.8	494.02	ug/L	0.696	494.02	ppb	0.696	0.14%
QC value within limits for Ag 328.068 Recovery = 98.80%								
Al 396.153Radial†	6044.1	5079.5	ug/L	18.21	5079.5	ppb	18.21	0.36%
QC value within limits for Al 396.153Radial Recovery = 101.59%								
As 188.979†	1555.7	495.92	ug/L	2.373	495.92	ppb	2.373	0.48%
QC value within limits for As 188.979 Recovery = 99.18%								
B 249.677†	21883.5	497.63	ug/L	0.755	497.63	ppb	0.755	0.15%
QC value within limits for B 249.677 Recovery = 99.53%								
Ba 233.527†	75505.7	490.87	ug/L	1.304	490.87	ppb	1.304	0.27%
QC value within limits for Ba 233.527 Recovery = 98.17%								
Be 313.107†	1220700.0	492.65	ug/L	0.580	492.65	ppb	0.580	0.12%
QC value within limits for Be 313.107 Recovery = 98.53%								
Ca 317.933Radial†	3449.7	5084.2	ug/L	77.35	5084.2	ppb	77.35	1.52%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.68%
Cd 226.502†            42857.5      482.24 ug/L        1.607      482.24 ppb        1.607   0.33%
   QC value within limits for Cd 226.502  Recovery = 96.45%
Co 228.616†            30698.4      485.63 ug/L        1.702      485.63 ppb        1.702   0.35%
   QC value within limits for Co 228.616  Recovery = 97.13%
Cr 267.716†            39058.2      490.12 ug/L        1.235      490.12 ppb        1.235   0.25%
   QC value within limits for Cr 267.716  Recovery = 98.02%
Cu 324.752†           146245.9      492.32 ug/L        0.703      492.32 ppb        0.703   0.14%
   QC value within limits for Cu 324.752  Recovery = 98.46%
Fe 238.204 Radial†      1168.6      5238.0 ug/L       76.74      5238.0 ppb       76.74   1.47%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.76%
K 766.490 Radial†      23795.0      4903.1 ug/L       22.79      4903.1 ppb       22.79   0.46%
   QC value within limits for K 766.490 Radial  Recovery = 98.06%
Mg 279.077 IEC†          204.0      5222.4 ug/L       65.78      5222.4 ppb       65.78   1.26%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.45%
Mn 257.610†           487724.8      491.74 ug/L        1.178      491.74 ppb        1.178   0.24%
   QC value within limits for Mn 257.610  Recovery = 98.35%
Mo 202.031†             7847.6      497.94 ug/L        1.127      497.94 ppb        1.127   0.23%
   QC value within limits for Mo 202.031  Recovery = 99.59%
Na 589.592 Radial†    160719.4      9889.3 ug/L       64.39      9889.3 ppb       64.39   0.65%
   QC value within limits for Na 589.592 Radial  Recovery = 98.89%
Ni 231.604†            20403.7      487.78 ug/L        1.870      487.78 ppb        1.870   0.38%
   QC value within limits for Ni 231.604  Recovery = 97.56%
P 214.914†              5488.8      2377.9 ug/L       13.14      2377.9 ppb       13.14   0.55%
   QC value within limits for P 214.914  Recovery = 95.12%
Pb 220.353†             4690.2      496.97 ug/L        4.147      496.97 ppb        4.147   0.83%
   QC value within limits for Pb 220.353  Recovery = 99.39%
S 181.975 Axial†         859.3      1035.1 ug/L        8.33      1035.1 ppb        8.33   0.80%
   QC value within limits for S 181.975 Axial  Recovery = 103.51%
Sb 206.836†             1824.1      501.55 ug/L        2.501      501.55 ppb        2.501   0.50%
   QC value within limits for Sb 206.836  Recovery = 100.31%
Se 196.026†             1092.3      512.80 ug/L        2.564      512.80 ppb        2.564   0.50%
   QC value within limits for Se 196.026  Recovery = 102.56%
Si 251.611†            88520.0      2484.5 ug/L        4.32      2484.5 ppb        4.32   0.17%
   QC value within limits for Si 251.611  Recovery = 99.38%
Sn 189.927†             3162.3      496.13 ug/L        0.699      496.13 ppb        0.699   0.14%
   QC value within limits for Sn 189.927  Recovery = 99.23%
Sr 421.552†           160331.2      498.57 ug/L        3.244      498.57 ppb        3.244   0.65%
   QC value within limits for Sr 421.552  Recovery = 99.71%
Ti 334.940†           291878.8      500.73 ug/L        1.029      500.73 ppb        1.029   0.21%
   QC value within limits for Ti 334.940  Recovery = 100.15%
Tl 190.801†             2080.3      497.48 ug/L        2.181      497.48 ppb        2.181   0.44%
   QC value within limits for Tl 190.801  Recovery = 99.50%
U 409.014†             15236.3      480.00 ug/L        1.439      480.00 ppb        1.439   0.30%
   QC value within limits for U 409.014  Recovery = 96.00%
V 292.402†             59552.7      494.33 ug/L        0.952      494.33 ppb        0.952   0.19%
   QC value within limits for V 292.402  Recovery = 98.87%
Zn 213.857†            59476.3      487.70 ug/L        1.687      487.70 ppb        1.687   0.35%
   QC value within limits for Zn 213.857  Recovery = 97.54%
SiO2†                  88053.2      5281.9 ug/L       46.67      5281.9 ppb       46.67   0.88%
   QC value within limits for SiO2  Recovery = 98.77%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 13:49:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7383.5	7383.5	106	%			13:50:53
1	Y RADIAL	6726.0	6726.0	105.8	%			13:50:53
1	Al 396.153Radial†	-71.2	3.7	3.0953	ug/L	3.0953	ppb	13:50:53
1	Ca 317.933Radial†	36.3	7.7	11.349	ug/L	11.349	ppb	13:51:13
1	Fe 238.204 Radial†	40.0	-1.3	-5.8841	ug/L	-5.8841	ppb	13:51:13
1	K 766.490 Radial†	2853.3	-105.2	-21.748	ug/L	-21.748	ppb	13:50:53
1	Mg 279.077 IEC†	4.9	0.7	17.418	ug/L	17.418	ppb	13:51:13
1	Na 589.592 Radial†	-29.1	303.9	18.698	ug/L	18.698	ppb	13:50:53
1	Sr 421.552†	-32.8	31.5	0.0978	ug/L	0.0978	ppb	13:50:53
1	Sc 361.383	764989.3	764989.3	102.73	%			13:52:10
1	Y 371.029	596575.9	596575.9	102.61	%			13:52:10
1	Ag 328.068†	633.6	-89.1	-0.4906	ug/L	-0.4906	ppb	13:52:10
1	As 188.979†	-28.8	6.3	1.9954	ug/L	1.9954	ppb	13:52:30
1	B 249.677†	-364.7	526.3	12.038	ug/L	12.038	ppb	13:52:10
1	Ba 233.527†	40.3	16.8	0.1115	ug/L	0.1115	ppb	13:52:30
1	Be 313.107†	-4814.7	98.0	0.0397	ug/L	0.0397	ppb	13:52:10
1	Cd 226.502†	-278.1	22.5	0.2548	ug/L	0.2548	ppb	13:52:30
1	Co 228.616†	-109.0	-5.6	-0.0868	ug/L	-0.0868	ppb	13:52:30
1	Cr 267.716†	-104.3	-3.6	-0.0449	ug/L	-0.0449	ppb	13:52:10
1	Cu 324.752†	5886.3	-61.0	-0.2055	ug/L	-0.2055	ppb	13:52:10
1	Mn 257.610†	749.1	11.3	0.0103	ug/L	0.0103	ppb	13:52:10
1	Mo 202.031†	16.1	11.3	0.7135	ug/L	0.7135	ppb	13:52:30
1	Ni 231.604†	161.5	20.6	0.4920	ug/L	0.4920	ppb	13:52:30
1	P 214.914†	290.0	-11.2	-5.0086	ug/L	-5.0086	ppb	13:52:30
1	Pb 220.353†	-53.3	-34.0	-3.5898	ug/L	-3.5898	ppb	13:52:30
1	S 181.975 Axial†	157.2	17.1	20.597	ug/L	20.597	ppb	13:52:30
1	Sb 206.836†	58.4	4.3	1.1952	ug/L	1.1952	ppb	13:52:30
1	Se 196.026†	-32.0	3.7	1.6736	ug/L	1.6736	ppb	13:52:30
1	Si 251.611†	507.6	45.4	1.2692	ug/L	1.2692	ppb	13:52:30
1	Sn 189.927†	17.1	3.6	0.5708	ug/L	0.5708	ppb	13:52:30
1	Ti 334.940†	-1491.9	74.6	0.1261	ug/L	0.1261	ppb	13:52:10
1	Tl 190.801†	-51.0	11.5	2.7379	ug/L	2.7379	ppb	13:52:30
1	U 409.014†	-5223.0	180.4	5.7022	ug/L	5.7022	ppb	13:52:10
1	V 292.402†	-1611.3	124.4	1.0417	ug/L	1.0417	ppb	13:52:10
1	Zn 213.857†	1038.8	26.8	0.2190	ug/L	0.2190	ppb	13:52:30
1	SiO2†	528.0	38.4	2.2932	ug/L	2.2932	ppb	13:53:27
2	Sc Radial	7149.0	7149.0	103	%			13:51:18
2	Y RADIAL	6603.0	6603.0	103.8	%			13:51:18
2	Al 396.153Radial†	-41.0	30.8	25.938	ug/L	25.938	ppb	13:51:18
2	Ca 317.933Radial†	31.1	3.8	5.5573	ug/L	5.5573	ppb	13:51:38
2	Fe 238.204 Radial†	41.6	1.4	6.4352	ug/L	6.4352	ppb	13:51:38
2	K 766.490 Radial†	3027.2	151.5	31.298	ug/L	31.298	ppb	13:51:18
2	Mg 279.077 IEC†	1.3	-2.7	-68.014	ug/L	-68.014	ppb	13:51:38
2	Na 589.592 Radial†	-90.9	243.0	14.951	ug/L	14.951	ppb	13:51:18
2	Sr 421.552†	-45.3	18.3	0.0569	ug/L	0.0569	ppb	13:51:18
2	Sc 361.383	757896.3	757896.3	101.78	%			13:52:36
2	Y 371.029	591360.3	591360.3	101.71	%			13:52:36
2	Ag 328.068†	798.1	78.3	0.4222	ug/L	0.4222	ppb	13:52:36
2	As 188.979†	-26.7	8.1	2.5702	ug/L	2.5702	ppb	13:52:56
2	B 249.677†	-381.7	506.3	11.576	ug/L	11.576	ppb	13:52:36
2	Ba 233.527†	11.7	-10.9	-0.0707	ug/L	-0.0707	ppb	13:52:56
2	Be 313.107†	-4857.0	12.6	0.0058	ug/L	0.0058	ppb	13:52:36
2	Cd 226.502†	-290.6	7.7	0.0868	ug/L	0.0868	ppb	13:52:56
2	Co 228.616†	-83.7	18.3	0.2896	ug/L	0.2896	ppb	13:52:56
2	Cr 267.716†	-107.7	-7.9	-0.1017	ug/L	-0.1017	ppb	13:52:36
2	Cu 324.752†	5867.9	-25.5	-0.0854	ug/L	-0.0854	ppb	13:52:36
2	Mn 257.610†	733.2	2.5	0.0047	ug/L	0.0047	ppb	13:52:36
2	Mo 202.031†	11.4	6.8	0.4292	ug/L	0.4292	ppb	13:52:56
2	Ni 231.604†	156.7	17.3	0.4138	ug/L	0.4138	ppb	13:52:56

2	P 214.914†	298.0	-0.8	-0.3301	ug/L	-0.3301 ppb	13:52:56
2	Pb 220.353†	-18.9	-0.8	-0.0770	ug/L	-0.0770 ppb	13:52:56
2	S 181.975 Axial†	160.3	21.5	25.976	ug/L	25.976 ppb	13:52:56
2	Sb 206.836†	62.3	8.6	2.3447	ug/L	2.3447 ppb	13:52:56
2	Se 196.026†	-28.5	6.8	3.0999	ug/L	3.0999 ppb	13:52:56
2	Si 251.611†	481.8	24.7	0.6755	ug/L	0.6755 ppb	13:52:56
2	Sn 189.927†	14.8	1.5	0.2434	ug/L	0.2434 ppb	13:52:56
2	Ti 334.940†	-1377.4	173.4	0.2934	ug/L	0.2934 ppb	13:52:36
2	Tl 190.801†	-57.4	4.8	1.1384	ug/L	1.1384 ppb	13:52:56
2	U 409.014†	-5022.8	329.4	10.412	ug/L	10.412 ppb	13:52:36
2	V 292.402†	-1704.7	17.9	0.1705	ug/L	0.1705 ppb	13:52:36
2	Zn 213.857†	1066.6	63.6	0.5254	ug/L	0.5254 ppb	13:52:56
2	SiO2†	512.7	28.3	1.6615	ug/L	1.6615 ppb	13:53:32
3	Sc Radial	7070.4	7070.4	102	%		13:51:44
3	Y RADIAL	6506.1	6506.1	102.3	%		13:51:44
3	Al 396.153Radial†	-82.1	-10.0	-8.4712	ug/L	-8.4712 ppb	13:51:44
3	Ca 317.933Radial†	24.2	-2.6	-3.8710	ug/L	-3.8710 ppb	13:52:04
3	Fe 238.204 Radial†	41.2	1.5	6.5424	ug/L	6.5424 ppb	13:52:04
3	K 766.490 Radial†	2968.3	126.4	26.098	ug/L	26.098 ppb	13:51:44
3	Mg 279.077 IEC†	3.9	-0.2	-4.2531	ug/L	-4.2531 ppb	13:52:04
3	Na 589.592 Radial†	-85.2	247.6	15.236	ug/L	15.236 ppb	13:51:44
3	Sr 421.552†	-67.9	-4.3	-0.0134	ug/L	-0.0134 ppb	13:51:44
3	Sc 361.383	760445.2	760445.2	102.12	%		13:53:01
3	Y 371.029	593580.6	593580.6	102.09	%		13:53:01
3	Ag 328.068†	787.8	65.5	0.3582	ug/L	0.3582 ppb	13:53:01
3	As 188.979†	-21.7	13.1	4.1375	ug/L	4.1375 ppb	13:53:21
3	B 249.677†	-414.9	475.0	10.861	ug/L	10.861 ppb	13:53:01
3	Ba 233.527†	11.0	-11.6	-0.0760	ug/L	-0.0760 ppb	13:53:21
3	Be 313.107†	-4830.9	54.2	0.0223	ug/L	0.0223 ppb	13:53:01
3	Cd 226.502†	-285.7	13.4	0.1506	ug/L	0.1506 ppb	13:53:21
3	Co 228.616†	-84.3	18.0	0.2879	ug/L	0.2879 ppb	13:53:21
3	Cr 267.716†	-50.3	48.8	0.6101	ug/L	0.6101 ppb	13:53:01
3	Cu 324.752†	5848.6	-63.7	-0.2138	ug/L	-0.2138 ppb	13:53:01
3	Mn 257.610†	678.2	-53.8	-0.0532	ug/L	-0.0532 ppb	13:53:01
3	Mo 202.031†	31.1	26.0	1.6508	ug/L	1.6508 ppb	13:53:21
3	Ni 231.604†	151.3	11.6	0.2766	ug/L	0.2766 ppb	13:53:21
3	P 214.914†	299.8	0.0	0.0455	ug/L	0.0455 ppb	13:53:21
3	Pb 220.353†	-12.4	5.7	0.5994	ug/L	0.5994 ppb	13:53:21
3	S 181.975 Axial†	160.0	20.7	24.957	ug/L	24.957 ppb	13:53:21
3	Sb 206.836†	66.5	12.6	3.4278	ug/L	3.4278 ppb	13:53:21
3	Se 196.026†	-47.4	-11.6	-5.2144	ug/L	-5.2144 ppb	13:53:21
3	Si 251.611†	504.2	45.0	1.2342	ug/L	1.2342 ppb	13:53:21
3	Sn 189.927†	12.9	-0.4	-0.0575	ug/L	-0.0575 ppb	13:53:21
3	Ti 334.940†	-1441.0	115.7	0.1973	ug/L	0.1973 ppb	13:53:01
3	Tl 190.801†	-58.5	3.9	0.9294	ug/L	0.9294 ppb	13:53:21
3	U 409.014†	-5312.1	62.7	1.9807	ug/L	1.9807 ppb	13:53:01
3	V 292.402†	-1755.0	-25.7	-0.1879	ug/L	-0.1879 ppb	13:53:01
3	Zn 213.857†	1052.1	45.8	0.3773	ug/L	0.3773 ppb	13:53:21
3	SiO2†	506.8	20.8	1.1740	ug/L	1.1740 ppb	13:53:37

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	761110.3	102.21	%	0.482				0.47%
Sc Radial	7201.0	104	%	2.3				2.26%
Y 371.029	593838.9	102.14	%	0.450				0.44%
Y RADIAL	6611.7	104.0	%	1.73				1.67%
Ag 328.068†	18.2	0.0966	ug/L	0.50952	0.0966	ppb	0.50952	527.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	8.2	6.8539	ug/L	17.50955	6.8539	ppb	17.50955	255.47%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	9.2	2.9010	ug/L	1.10871	2.9010	ppb	1.10871	38.22%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	502.5	11.492	ug/L	0.5928	11.492	ppb	0.5928	5.16%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-1.9	-0.0117	ug/L	0.10676	-0.0117	ppb	0.10676	910.49%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	54.9	0.0226	ug/L	0.01700	0.0226	ppb	0.01700	75.24%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2.9	4.3451	ug/L	7.68197	4.3451	ppb	7.68197	176.80%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                14.6      0.1641 ug/L       0.08480      0.1641 ppb        0.08480  51.69%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                10.2      0.1635 ug/L       0.21683      0.1635 ppb        0.21683 132.58%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                12.4      0.1545 ug/L       0.39560      0.1545 ppb        0.39560 256.03%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -50.1     -0.1683 ug/L       0.07185     -0.1683 ppb        0.07185  42.70%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.5      2.3645 ug/L       7.14367      2.3645 ppb        7.14367 302.12%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          57.6      11.883 ug/L       29.2407      11.883 ppb        29.2407 246.08%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.7     -18.283 ug/L       44.4106     -18.283 ppb        44.4106 242.91%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -13.3     -0.0128 ug/L       0.03516     -0.0128 ppb        0.03516 275.55%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                14.7      0.9311 ug/L       0.63926      0.9311 ppb        0.63926  68.65%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        264.8      16.295 ug/L        2.0857      16.295 ppb         2.0857  12.80%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                16.5      0.3941 ug/L       0.10900      0.3941 ppb        0.10900  27.65%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -4.0     -1.7644 ug/L       2.81581     -1.7644 ppb        2.81581 159.59%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -9.7     -1.0225 ug/L       2.24894     -1.0225 ppb        2.24894 219.95%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           19.8      23.843 ug/L        2.8571      23.843 ppb         2.8571  11.98%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 8.5      2.3226 ug/L       1.11649      2.3226 ppb        1.11649  48.07%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -0.3     -0.1470 ug/L       4.44610     -0.1470 ppb        4.44610 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                38.3      1.0597 ug/L       0.33310      1.0597 ppb        0.33310  31.44%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.6      0.2522 ug/L       0.31426      0.2522 ppb        0.31426 124.59%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                15.2      0.0471 ug/L       0.05622      0.0471 ppb        0.05622 119.33%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               121.3      0.2056 ug/L       0.08393      0.2056 ppb        0.08393  40.82%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.7      1.6019 ug/L       0.98934      1.6019 ppb        0.98934  61.76%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                190.8      6.0318 ug/L       4.22552      6.0318 ppb        4.22552  70.05%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 38.9      0.3414 ug/L       0.63238      0.3414 ppb        0.63238 185.23%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                45.4      0.3739 ug/L       0.15320      0.3739 ppb        0.15320  40.97%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      29.2      1.7096 ug/L       0.56113      1.7096 ppb        0.56113  32.82%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/2/2009 14:09:08
Plasma On Time: 6/29/2009 15:26:31
Logged In Analyst: Optima3
Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070209.sif
Batch ID:
Results Data Set: 070209
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 7
Sample ID: CCV
Date Collected: 7/2/2009 14:09:09
Analyst:
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7081.6	7081.6	102	%			14:11:21
1	Y RADIAL	6475.7	6475.7	101.8	%			14:11:21
1	Al 396.153Radial†	6352.0	6294.5	5290.8	ug/L	5290.8	ppb	14:11:01
1	Ca 317.933Radial†	3646.4	3546.4	5226.8	ug/L	5226.8	ppb	14:11:21
1	Fe 238.204 Radial†	1247.1	1183.1	5302.7	ug/L	5302.7	ppb	14:11:21
1	K 766.490 Radial†	27818.8	24471.2	5042.8	ug/L	5042.8	ppb	14:11:01
1	Mg 279.077 IEC†	216.1	207.8	5320.5	ug/L	5320.5	ppb	14:11:21
1	Na 589.592 Radial†	171170.6	168050.1	10340	ug/L	10340	ppb	14:11:01
1	Sr 421.552†	171045.9	167659.0	521.36	ug/L	521.36	ppb	14:11:01
1	Sc 361.383	791782.2	791782.2	106.33	%			14:12:20
1	Y 371.029	608802.7	608802.7	104.71	%			14:12:20
1	Ag 328.068†	95801.8	89393.7	492.41	ug/L	492.41	ppb	14:12:20
1	As 188.979†	1636.9	1573.8	501.67	ug/L	501.67	ppb	14:12:40
1	B 249.677†	22059.6	21627.9	491.78	ug/L	491.78	ppb	14:12:20
1	Ba 233.527†	80139.0	75346.6	489.83	ug/L	489.83	ppb	14:12:20
1	Be 313.107†	1288391.2	1216489.3	490.95	ug/L	490.95	ppb	14:12:20
1	Cd 226.502†	45263.9	42863.0	482.29	ug/L	482.29	ppb	14:12:40
1	Co 228.616†	32552.0	30714.9	485.89	ug/L	485.89	ppb	14:12:40
1	Cr 267.716†	41235.0	38878.7	487.87	ug/L	487.87	ppb	14:12:20
1	Cu 324.752†	161329.1	145935.7	491.28	ug/L	491.28	ppb	14:12:20
1	Mn 257.610†	518387.6	486814.6	490.83	ug/L	490.83	ppb	14:12:20
1	Mo 202.031†	8350.8	7849.3	498.05	ug/L	498.05	ppb	14:12:40
1	Ni 231.604†	21810.7	20375.9	487.12	ug/L	487.12	ppb	14:12:40
1	P 214.914†	6168.3	5507.6	2386.6	ug/L	2386.6	ppb	14:12:40
1	Pb 220.353†	4947.0	4670.3	494.91	ug/L	494.91	ppb	14:12:40
1	S 181.975 Axial†	1016.2	819.8	987.45	ug/L	987.45	ppb	14:12:40
1	Sb 206.836†	2011.7	1839.4	505.75	ug/L	505.75	ppb	14:12:40
1	Se 196.026†	1130.9	1098.5	515.81	ug/L	515.81	ppb	14:12:40
1	Si 251.611†	94241.3	88183.2	2475.0	ug/L	2475.0	ppb	14:12:20
1	Sn 189.927†	3373.3	3159.6	495.73	ug/L	495.73	ppb	14:12:40
1	Ti 334.940†	308170.3	291354.4	499.83	ug/L	499.83	ppb	14:12:20
1	Tl 190.801†	2144.1	2077.7	496.84	ug/L	496.84	ppb	14:12:40
1	U 409.014†	10752.8	15377.3	484.46	ug/L	484.46	ppb	14:12:20
1	V 292.402†	61418.2	59455.4	493.54	ug/L	493.54	ppb	14:12:20
1	Zn 213.857†	64127.9	59326.5	486.45	ug/L	486.45	ppb	14:12:20
1	SiO2†	95361.3	89209.7	5351.7	ug/L	5351.7	ppb	14:13:40
2	Sc Radial	7192.7	7192.7	104	%			14:11:47
2	Y RADIAL	6573.6	6573.6	103.4	%			14:11:47
2	Al 396.153Radial†	6142.8	5996.6	5039.2	ug/L	5039.2	ppb	14:11:27
2	Ca 317.933Radial†	3618.6	3464.5	5106.0	ug/L	5106.0	ppb	14:11:47
2	Fe 238.204 Radial†	1233.7	1151.2	5160.5	ug/L	5160.5	ppb	14:11:47
2	K 766.490 Radial†	27006.1	23266.2	4793.8	ug/L	4793.8	ppb	14:11:27
2	Mg 279.077 IEC†	210.4	199.1	5097.6	ug/L	5097.6	ppb	14:11:47
2	Na 589.592 Radial†	164679.4	159197.8	9795.7	ug/L	9795.7	ppb	14:11:27
2	Sr 421.552†	164816.0	159060.7	494.62	ug/L	494.62	ppb	14:11:27
2	Sc 361.383	782481.6	782481.6	105.08	%			14:12:48
2	Y 371.029	601490.1	601490.1	103.45	%			14:12:48

2	Ag 328.068†	95212.7	89904.0	495.17 ug/L	495.17 ppb	14:12:48
2	As 188.979†	1614.7	1571.0	500.75 ug/L	500.75 ppb	14:13:08
2	B 249.677†	21977.8	21796.6	495.64 ug/L	495.64 ppb	14:12:48
2	Ba 233.527†	79536.7	75669.2	491.93 ug/L	491.93 ppb	14:12:48
2	Be 313.107†	1278251.7	1221242.3	492.87 ug/L	492.87 ppb	14:12:48
2	Cd 226.502†	44956.9	43076.8	484.72 ug/L	484.72 ppb	14:13:08
2	Co 228.616†	32342.3	30879.2	488.50 ug/L	488.50 ppb	14:13:08
2	Cr 267.716†	40994.1	39110.3	490.78 ug/L	490.78 ppb	14:12:48
2	Cu 324.752†	159590.3	146084.5	491.77 ug/L	491.77 ppb	14:12:48
2	Mn 257.610†	513923.6	488361.2	492.37 ug/L	492.37 ppb	14:12:48
2	Mo 202.031†	8305.9	7900.0	501.25 ug/L	501.25 ppb	14:13:08
2	Ni 231.604†	21679.2	20494.5	489.95 ug/L	489.95 ppb	14:13:08
2	P 214.914†	6124.1	5534.5	2398.7 ug/L	2398.7 ppb	14:13:08
2	Pb 220.353†	4915.5	4695.7	497.56 ug/L	497.56 ppb	14:13:08
2	S 181.975 Axial†	1001.5	817.1	984.30 ug/L	984.30 ppb	14:13:08
2	Sb 206.836†	1986.0	1837.4	505.29 ug/L	505.29 ppb	14:13:08
2	Se 196.026†	1113.4	1094.5	513.51 ug/L	513.51 ppb	14:13:08
2	Si 251.611†	93490.6	88522.2	2484.5 ug/L	2484.5 ppb	14:12:48
2	Sn 189.927†	3368.7	3192.9	500.92 ug/L	500.92 ppb	14:13:08
2	Ti 334.940†	305478.6	292237.7	501.35 ug/L	501.35 ppb	14:12:48
2	Tl 190.801†	2134.6	2092.6	500.38 ug/L	500.38 ppb	14:13:08
2	U 409.014†	10248.5	15017.6	473.10 ug/L	473.10 ppb	14:12:48
2	V 292.402†	61000.8	59744.8	495.94 ug/L	495.94 ppb	14:12:48
2	Zn 213.857†	63524.9	59469.5	487.64 ug/L	487.64 ppb	14:12:48
2	SiO2†	93824.3	88813.1	5327.6 ug/L	5327.6 ppb	14:13:46
3	Sc Radial	7079.0	7079.0	102 %		14:12:12
3	Y RADIAL	6462.9	6462.9	101.6 %		14:12:12
3	Al 396.153Radial†	6168.7	6117.1	5140.9 ug/L	5140.9 ppb	14:11:52
3	Ca 317.933Radial†	3643.6	3545.0	5224.8 ug/L	5224.8 ppb	14:12:12
3	Fe 238.204 Radial†	1242.5	1178.9	5284.5 ug/L	5284.5 ppb	14:12:12
3	K 766.490 Radial†	27277.4	23950.6	4935.2 ug/L	4935.2 ppb	14:11:52
3	Mg 279.077 IEC†	212.9	204.7	5241.8 ug/L	5241.8 ppb	14:12:12
3	Na 589.592 Radial†	166293.8	163332.4	10050 ug/L	10050 ppb	14:11:52
3	Sr 421.552†	165907.1	162684.4	505.89 ug/L	505.89 ppb	14:11:52
3	Sc 361.383	781573.3	781573.3	104.96 %		14:13:15
3	Y 371.029	601799.5	601799.5	103.51 %		14:13:15
3	Ag 328.068†	94944.7	89753.9	494.38 ug/L	494.38 ppb	14:13:15
3	As 188.979†	1617.9	1575.8	502.29 ug/L	502.29 ppb	14:13:35
3	B 249.677†	21862.4	21711.0	493.65 ug/L	493.65 ppb	14:13:15
3	Ba 233.527†	79424.3	75650.2	491.81 ug/L	491.81 ppb	14:13:15
3	Be 313.107†	1274941.7	1219502.4	492.17 ug/L	492.17 ppb	14:13:15
3	Cd 226.502†	45147.4	43308.0	487.31 ug/L	487.31 ppb	14:13:35
3	Co 228.616†	32497.4	31062.8	491.41 ug/L	491.41 ppb	14:13:35
3	Cr 267.716†	40840.7	39009.5	489.51 ug/L	489.51 ppb	14:13:15
3	Cu 324.752†	159163.7	145854.5	491.01 ug/L	491.01 ppb	14:13:15
3	Mn 257.610†	512500.7	487573.9	491.59 ug/L	491.59 ppb	14:13:15
3	Mo 202.031†	8336.0	7937.8	503.66 ug/L	503.66 ppb	14:13:35
3	Ni 231.604†	21791.5	20625.6	493.09 ug/L	493.09 ppb	14:13:35
3	P 214.914†	6129.7	5546.6	2404.3 ug/L	2404.3 ppb	14:13:35
3	Pb 220.353†	4957.7	4741.4	502.40 ug/L	502.40 ppb	14:13:35
3	S 181.975 Axial†	1010.5	826.7	995.88 ug/L	995.88 ppb	14:13:35
3	Sb 206.836†	2006.0	1858.6	511.16 ug/L	511.16 ppb	14:13:35
3	Se 196.026†	1120.4	1102.3	517.49 ug/L	517.49 ppb	14:13:35
3	Si 251.611†	93132.9	88284.9	2477.7 ug/L	2477.7 ppb	14:13:15
3	Sn 189.927†	3379.9	3207.3	503.20 ug/L	503.20 ppb	14:13:35
3	Ti 334.940†	304751.2	291882.6	500.74 ug/L	500.74 ppb	14:13:15
3	Tl 190.801†	2138.4	2098.5	501.77 ug/L	501.77 ppb	14:13:35
3	U 409.014†	10462.1	15232.5	479.88 ug/L	479.88 ppb	14:13:15
3	V 292.402†	60812.3	59632.5	495.05 ug/L	495.05 ppb	14:13:15
3	Zn 213.857†	63363.8	59386.3	486.91 ug/L	486.91 ppb	14:13:15
3	SiO2†	94801.1	89847.5	5389.9 ug/L	5389.9 ppb	14:13:51

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	785279.0	105.46	%	0.759				0.72%
Sc Radial	7117.8	103	%	0.9				0.91%
Y 371.029	604030.8	103.89	%	0.711				0.68%
Y RADIAL	6504.1	102.3	%	0.95				0.93%
Ag 328.068†	89683.9	493.99	ug/L	1.426	493.99	ppb	1.426	0.29%

```
   QC value within limits for Ag 328.068  Recovery = 98.80%
Al 396.153Radial†        6136.1      5157.0 ug/L        126.58      5157.0 ppb        126.58   2.45%
   QC value within limits for Al 396.153Radial  Recovery = 103.14%
As 188.979†              1573.5      501.57 ug/L         0.776      501.57 ppb         0.776   0.15%
   QC value within limits for As 188.979  Recovery = 100.31%
B 249.677†              21711.9      493.69 ug/L         1.928      493.69 ppb         1.928   0.39%
   QC value within limits for B 249.677  Recovery = 98.74%
Ba 233.527†             75555.4      491.19 ug/L         1.177      491.19 ppb         1.177   0.24%
   QC value within limits for Ba 233.527  Recovery = 98.24%
Be 313.107†           1219078.0      492.00 ug/L         0.970      492.00 ppb         0.970   0.20%
   QC value within limits for Be 313.107  Recovery = 98.40%
Ca 317.933Radial†        3518.6      5185.9 ug/L        69.18      5185.9 ppb        69.18   1.33%
   QC value within limits for Ca 317.933Radial  Recovery = 103.72%
Cd 226.502†             43082.6      484.77 ug/L         2.509      484.77 ppb         2.509   0.52%
   QC value within limits for Cd 226.502  Recovery = 96.95%
Co 228.616†             30885.7      488.60 ug/L         2.759      488.60 ppb         2.759   0.56%
   QC value within limits for Co 228.616  Recovery = 97.72%
Cr 267.716†             38999.5      489.39 ug/L         1.458      489.39 ppb         1.458   0.30%
   QC value within limits for Cr 267.716  Recovery = 97.88%
Cu 324.752†            145958.2      491.35 ug/L         0.388      491.35 ppb         0.388   0.08%
   QC value within limits for Cu 324.752  Recovery = 98.27%
Fe 238.204 Radial†       1171.1      5249.2 ug/L        77.37      5249.2 ppb        77.37   1.47%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.98%
K 766.490 Radial†       23896.0      4923.9 ug/L       124.84      4923.9 ppb       124.84   2.54%
   QC value within limits for K 766.490 Radial  Recovery = 98.48%
Mg 279.077 IEC†           203.9      5220.0 ug/L       113.04      5220.0 ppb       113.04   2.17%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.40%
Mn 257.610†            487583.3      491.60 ug/L         0.772      491.60 ppb         0.772   0.16%
   QC value within limits for Mn 257.610  Recovery = 98.32%
Mo 202.031†              7895.7      500.99 ug/L         2.815      500.99 ppb         2.815   0.56%
   QC value within limits for Mo 202.031  Recovery = 100.20%
Na 589.592 Radial†     163526.8       10062 ug/L         272.5       10062 ppb        272.5   2.71%
   QC value within limits for Na 589.592 Radial  Recovery = 100.62%
Ni 231.604†             20498.6      490.05 ug/L         2.986      490.05 ppb         2.986   0.61%
   QC value within limits for Ni 231.604  Recovery = 98.01%
P 214.914†               5529.6      2396.5 ug/L         9.05      2396.5 ppb         9.05   0.38%
   QC value within limits for P 214.914  Recovery = 95.86%
Pb 220.353†              4702.5      498.29 ug/L         3.798      498.29 ppb         3.798   0.76%
   QC value within limits for Pb 220.353  Recovery = 99.66%
S 181.975 Axial†          821.2      989.21 ug/L         5.989      989.21 ppb         5.989   0.61%
   QC value within limits for S 181.975 Axial  Recovery = 98.92%
Sb 206.836†              1845.2      507.40 ug/L         3.264      507.40 ppb         3.264   0.64%
   QC value within limits for Sb 206.836  Recovery = 101.48%
Se 196.026†              1098.4      515.60 ug/L         2.000      515.60 ppb         2.000   0.39%
   QC value within limits for Se 196.026  Recovery = 103.12%
Si 251.611†             88330.1      2479.0 ug/L         4.91      2479.0 ppb         4.91   0.20%
   QC value within limits for Si 251.611  Recovery = 99.16%
Sn 189.927†              3186.6      499.95 ug/L         3.830      499.95 ppb         3.830   0.77%
   QC value within limits for Sn 189.927  Recovery = 99.99%
Sr 421.552†            163134.7      507.29 ug/L        13.424      507.29 ppb        13.424   2.65%
   QC value within limits for Sr 421.552  Recovery = 101.46%
Ti 334.940†            291824.9      500.64 ug/L         0.761      500.64 ppb         0.761   0.15%
   QC value within limits for Ti 334.940  Recovery = 100.13%
Tl 190.801†              2089.6      499.66 ug/L         2.540      499.66 ppb         2.540   0.51%
   QC value within limits for Tl 190.801  Recovery = 99.93%
U 409.014†              15209.1      479.15 ug/L         5.715      479.15 ppb         5.715   1.19%
   QC value within limits for U 409.014  Recovery = 95.83%
V 292.402†              59610.9      494.84 ug/L         1.216      494.84 ppb         1.216   0.25%
   QC value within limits for V 292.402  Recovery = 98.97%
Zn 213.857†             59394.1      487.00 ug/L         0.598      487.00 ppb         0.598   0.12%
   QC value within limits for Zn 213.857  Recovery = 97.40%
SiO2†                   89290.1      5356.4 ug/L        31.38      5356.4 ppb        31.38   0.59%
   QC value within limits for SiO2  Recovery = 100.17%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/2/2009 14:16:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7838.6	7838.6	113	%			14:17:53
1	Y RADIAL	7212.3	7212.3	113.4	%			14:17:53
1	Al 396.153Radial†	-57.2	19.9	16.780	ug/L	16.780	ppb	14:17:53
1	Ca 317.933Radial†	24.4	-4.8	-7.0924	ug/L	-7.0924	ppb	14:18:13
1	Fe 238.204 Radial†	37.0	-6.2	-27.742	ug/L	-27.742	ppb	14:18:13
1	K 766.490 Radial†	2880.7	-236.7	-48.918	ug/L	-48.918	ppb	14:17:53
1	Mg 279.077 IEC†	1.6	-2.5	-64.082	ug/L	-64.082	ppb	14:18:13
1	Na 589.592 Radial†	-187.8	164.9	10.147	ug/L	10.147	ppb	14:17:53
1	Sr 421.552†	-9.1	54.2	0.1686	ug/L	0.1686	ppb	14:17:53
1	Sc 361.383	759249.5	759249.5	101.96	%			14:19:10
1	Y 371.029	592556.2	592556.2	101.92	%			14:19:10
1	Ag 328.068†	774.8	54.0	0.2876	ug/L	0.2876	ppb	14:19:10
1	As 188.979†	-34.1	0.9	0.2690	ug/L	0.2690	ppb	14:19:30
1	B 249.677†	-494.3	396.5	9.0685	ug/L	9.0685	ppb	14:19:30
1	Ba 233.527†	28.2	5.2	0.0342	ug/L	0.0342	ppb	14:19:30
1	Be 313.107†	-4869.2	9.1	0.0040	ug/L	0.0040	ppb	14:19:10
1	Cd 226.502†	-285.4	13.3	0.1536	ug/L	0.1536	ppb	14:19:30
1	Co 228.616†	-93.3	8.9	0.1438	ug/L	0.1438	ppb	14:19:30
1	Cr 267.716†	-48.4	50.5	0.6322	ug/L	0.6322	ppb	14:19:30
1	Cu 324.752†	5948.7	43.5	0.1447	ug/L	0.1447	ppb	14:19:10
1	Mn 257.610†	706.3	-25.1	-0.0275	ug/L	-0.0275	ppb	14:19:30
1	Mo 202.031†	19.3	14.5	0.9207	ug/L	0.9207	ppb	14:19:30
1	Ni 231.604†	181.9	41.8	0.9996	ug/L	0.9996	ppb	14:19:30
1	P 214.914†	296.6	-2.7	-1.2238	ug/L	-1.2238	ppb	14:19:30
1	Pb 220.353†	-30.5	-12.1	-1.2679	ug/L	-1.2679	ppb	14:19:30
1	S 181.975 Axial†	129.7	-8.8	-10.573	ug/L	-10.573	ppb	14:19:30
1	Sb 206.836†	62.7	8.9	2.3905	ug/L	2.3905	ppb	14:19:30
1	Se 196.026†	-36.5	-1.0	-0.5395	ug/L	-0.5395	ppb	14:19:30
1	Si 251.611†	500.6	42.2	1.2118	ug/L	1.2118	ppb	14:19:30
1	Sn 189.927†	3.9	-9.1	-1.4311	ug/L	-1.4311	ppb	14:19:30
1	Ti 334.940†	-1479.3	75.9	0.1301	ug/L	0.1301	ppb	14:19:10
1	Tl 190.801†	-61.2	1.2	0.2747	ug/L	0.2747	ppb	14:19:30
1	U 409.014†	-5404.1	-35.7	-1.1260	ug/L	-1.1260	ppb	14:19:10
1	V 292.402†	-1725.7	0.3	0.0143	ug/L	0.0143	ppb	14:19:10
1	Zn 213.857†	1061.3	56.5	0.4661	ug/L	0.4661	ppb	14:19:30
1	SiO2†	527.4	41.8	2.5688	ug/L	2.5688	ppb	14:20:26
2	Sc Radial	7467.8	7467.8	108	%			14:18:18
2	Y RADIAL	6834.3	6834.3	107.5	%			14:18:18
2	Al 396.153Radial†	-89.6	-12.6	-10.684	ug/L	-10.684	ppb	14:18:18
2	Ca 317.933Radial†	27.2	-1.1	-1.6307	ug/L	-1.6307	ppb	14:18:38
2	Fe 238.204 Radial†	40.9	-1.0	-4.3451	ug/L	-4.3451	ppb	14:18:38
2	K 766.490 Radial†	2788.5	-195.7	-40.446	ug/L	-40.446	ppb	14:18:18
2	Mg 279.077 IEC†	1.8	-2.2	-57.415	ug/L	-57.415	ppb	14:18:38
2	Na 589.592 Radial†	-207.3	138.6	8.5256	ug/L	8.5256	ppb	14:18:18
2	Sr 421.552†	-45.6	19.9	0.0621	ug/L	0.0621	ppb	14:18:18
2	Sc 361.383	758151.4	758151.4	101.81	%			14:19:35
2	Y 371.029	591769.1	591769.1	101.78	%			14:19:35
2	Ag 328.068†	840.8	119.9	0.6471	ug/L	0.6471	ppb	14:19:35
2	As 188.979†	-31.7	3.2	1.0157	ug/L	1.0157	ppb	14:19:55
2	B 249.677†	-477.6	412.3	9.4279	ug/L	9.4279	ppb	14:19:55
2	Ba 233.527†	35.5	12.5	0.0803	ug/L	0.0803	ppb	14:19:55
2	Be 313.107†	-4852.6	18.5	0.0080	ug/L	0.0080	ppb	14:19:35
2	Cd 226.502†	-312.0	-13.2	-0.1480	ug/L	-0.1480	ppb	14:19:55
2	Co 228.616†	-94.6	7.6	0.1212	ug/L	0.1212	ppb	14:19:55
2	Cr 267.716†	-70.6	28.6	0.3556	ug/L	0.3556	ppb	14:19:55
2	Cu 324.752†	5914.7	18.5	0.0621	ug/L	0.0621	ppb	14:19:35
2	Mn 257.610†	705.9	-24.5	-0.0241	ug/L	-0.0241	ppb	14:19:55
2	Mo 202.031†	12.9	8.2	0.5226	ug/L	0.5226	ppb	14:19:55
2	Ni 231.604†	159.6	20.2	0.4822	ug/L	0.4822	ppb	14:19:55

2	P 214.914†	308.7	9.7	4.3643	ug/L	4.3643 ppb	14:19:55
2	Pb 220.353†	-8.3	9.7	1.0222	ug/L	1.0222 ppb	14:19:55
2	S 181.975 Axial†	121.8	-16.4	-19.717	ug/L	-19.717 ppb	14:19:55
2	Sb 206.836†	48.0	-5.5	-1.4655	ug/L	-1.4655 ppb	14:19:55
2	Se 196.026†	-46.2	-10.6	-4.7980	ug/L	-4.7980 ppb	14:19:55
2	Si 251.611†	494.9	37.3	1.0459	ug/L	1.0459 ppb	14:19:55
2	Sn 189.927†	19.4	6.1	0.9524	ug/L	0.9524 ppb	14:19:55
2	Ti 334.940†	-1413.6	138.4	0.2338	ug/L	0.2338 ppb	14:19:35
2	Tl 190.801†	-62.7	-0.4	-0.1030	ug/L	-0.1030 ppb	14:19:55
2	U 409.014†	-5111.7	243.9	7.7080	ug/L	7.7080 ppb	14:19:35
2	V 292.402†	-1760.1	-35.9	-0.2737	ug/L	-0.2737 ppb	14:19:35
2	Zn 213.857†	1063.3	60.0	0.4959	ug/L	0.4959 ppb	14:19:55
2	SiO2†	510.9	26.3	1.5679	ug/L	1.5679 ppb	14:20:31
3	Sc Radial	7100.2	7100.2	102	%		14:18:43
3	Y RADIAL	6557.7	6557.7	103.1	%		14:18:43
3	Al 396.153Radial†	-85.3	-12.7	-10.811	ug/L	-10.811 ppb	14:18:43
3	Ca 317.933Radial†	39.7	12.4	18.284	ug/L	18.284 ppb	14:19:03
3	Fe 238.204 Radial†	37.6	-2.2	-9.7460	ug/L	-9.7460 ppb	14:19:03
3	K 766.490 Radial†	2994.4	139.7	28.838	ug/L	28.838 ppb	14:18:43
3	Mg 279.077 IEC†	5.7	1.6	41.723	ug/L	41.723 ppb	14:19:03
3	Na 589.592 Radial†	-147.5	187.0	11.508	ug/L	11.508 ppb	14:18:43
3	Sr 421.552†	-71.6	-7.6	-0.0240	ug/L	-0.0240 ppb	14:18:43
3	Sc 361.383	719811.8	719811.8	96.664	%		14:20:00
3	Y 371.029	560822.8	560822.8	96.460	%		14:20:00
3	Ag 328.068†	703.3	21.7	0.1206	ug/L	0.1206 ppb	14:20:00
3	As 188.979†	-33.6	-0.5	-0.1578	ug/L	-0.1578 ppb	14:20:20
3	B 249.677†	-497.1	367.0	8.3956	ug/L	8.3956 ppb	14:20:20
3	Ba 233.527†	28.3	6.9	0.0449	ug/L	0.0449 ppb	14:20:20
3	Be 313.107†	-4933.5	-319.1	-0.1285	ug/L	-0.1285 ppb	14:20:00
3	Cd 226.502†	-286.9	-3.5	-0.0381	ug/L	-0.0381 ppb	14:20:20
3	Co 228.616†	-108.2	-11.4	-0.1776	ug/L	-0.1776 ppb	14:20:20
3	Cr 267.716†	-57.4	38.6	0.4853	ug/L	0.4853 ppb	14:20:20
3	Cu 324.752†	5869.4	281.1	0.9450	ug/L	0.9450 ppb	14:20:00
3	Mn 257.610†	713.7	20.4	0.0186	ug/L	0.0186 ppb	14:20:20
3	Mo 202.031†	23.5	19.8	1.2579	ug/L	1.2579 ppb	14:20:20
3	Ni 231.604†	166.0	35.1	0.8392	ug/L	0.8392 ppb	14:20:20
3	P 214.914†	301.3	18.2	8.0056	ug/L	8.0056 ppb	14:20:20
3	Pb 220.353†	-27.6	-10.7	-1.1298	ug/L	-1.1298 ppb	14:20:20
3	S 181.975 Axial†	122.4	-9.4	-11.281	ug/L	-11.281 ppb	14:20:20
3	Sb 206.836†	51.1	0.3	0.0793	ug/L	0.0793 ppb	14:20:20
3	Se 196.026†	-30.4	3.4	1.5230	ug/L	1.5230 ppb	14:20:20
3	Si 251.611†	511.5	80.4	2.2442	ug/L	2.2442 ppb	14:20:20
3	Sn 189.927†	11.2	-1.4	-0.2143	ug/L	-0.2143 ppb	14:20:20
3	Ti 334.940†	-1492.5	-17.3	-0.0261	ug/L	-0.0261 ppb	14:20:00
3	Tl 190.801†	-53.9	5.4	1.2881	ug/L	1.2881 ppb	14:20:20
3	U 409.014†	-5272.0	-189.4	-5.9862	ug/L	-5.9862 ppb	14:20:00
3	V 292.402†	-1629.5	7.1	0.0646	ug/L	0.0646 ppb	14:20:00
3	Zn 213.857†	1056.1	108.2	0.8881	ug/L	0.8881 ppb	14:20:20
3	SiO2†	504.7	46.6	2.7551	ug/L	2.7551 ppb	14:20:36

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	745737.6	100.15	%	3.016				3.01%
Sc Radial	7468.9	108	%	5.3				4.94%
Y 371.029	581716.1	100.05	%	3.113				3.11%
Y RADIAL	6868.1	108.0	%	5.17				4.78%
Ag 328.068†	65.2	0.3518	ug/L	0.26906	0.3518	ppb	0.26906	76.49%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.8	-1.5717	ug/L	15.89338	-1.5717	ppb	15.89338	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.2	0.3756	ug/L	0.59397	0.3756	ppb	0.59397	158.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	391.9	8.9640	ug/L	0.52402	8.9640	ppb	0.52402	5.85%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.2	0.0531	ug/L	0.02413	0.0531	ppb	0.02413	45.45%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-97.1	-0.0389	ug/L	0.07769	-0.0389	ppb	0.07769	199.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2.2	3.1868	ug/L	13.35629	3.1868	ppb	13.35629	419.11%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -1.1     -0.0108 ug/L       0.15261     -0.0108 ppb        0.15261 >999.9%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 1.7      0.0291 ug/L       0.17941      0.0291 ppb        0.17941 616.42%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                39.2      0.4910 ug/L       0.13841      0.4910 ppb        0.13841  28.19%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               114.4      0.3840 ug/L       0.48767      0.3840 ppb        0.48767 127.01%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -3.1    -13.944 ug/L       12.2504     -13.944 ppb        12.2504  87.85%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -97.6    -20.176 ug/L       42.6576     -20.176 ppb        42.6576 211.43%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.0    -26.591 ug/L       59.2558     -26.591 ppb        59.2558 222.84%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -9.7     -0.0110 ug/L       0.02570     -0.0110 ppb        0.02570 232.62%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                14.2      0.9004 ug/L       0.36808      0.9004 ppb        0.36808  40.88%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        163.5     10.060 ug/L        1.4931     10.060 ppb         1.4931  14.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                32.3      0.7737 ug/L       0.26485      0.7737 ppb        0.26485  34.23%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  8.4      3.7154 ug/L       4.64882      3.7154 ppb        4.64882 125.12%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -4.4     -0.4585 ug/L       1.28419     -0.4585 ppb        1.28419 280.09%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -11.5    -13.857 ug/L        5.0875    -13.857 ppb         5.0875  36.71%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 1.2      0.3348 ug/L       1.94070      0.3348 ppb        1.94070 579.73%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.7     -1.2715 ug/L       3.22345     -1.2715 ppb        3.22345 253.52%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                53.3      1.5006 ug/L       0.64925      1.5006 ppb        0.64925  43.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.5     -0.2310 ug/L       1.19180     -0.2310 ppb        1.19180 515.94%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                22.2      0.0689 ug/L       0.09649      0.0689 ppb        0.09649 140.01%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                65.7      0.1126 ug/L       0.13082      0.1126 ppb        0.13082 116.17%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 2.0      0.4866 ug/L       0.71937      0.4866 ppb        0.71937 147.83%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                  6.3      0.1986 ug/L       6.94251      0.1986 ppb        6.94251 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 -9.5     -0.0649 ug/L       0.18253     -0.0649 ppb        0.18253 281.07%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                74.9      0.6167 ug/L       0.23553      0.6167 ppb        0.23553  38.19%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      38.2      2.2973 ug/L       0.63847      2.2973 ppb        0.63847  27.79%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: 1201871688|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 38
Date Collected: 7/2/2009 14:22:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871688|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7262.0	7262.0	105	%			14:24:39
1	Y RADIAL	6671.2	6671.2	104.9	%			14:24:39
1	Al 396.153Radial†	-60.2	13.1	11.022	ug/L	11.022	ppb	14:24:39
1	Ca 317.933Radial†	40.4	12.2	18.007	ug/L	18.007	ppb	14:24:59
1	Fe 238.204 Radial†	63.5	21.7	96.907	ug/L	96.907	ppb	14:24:59
1	K 766.490 Radial†	2878.4	-36.4	-7.5212	ug/L	-7.5212	ppb	14:24:39
1	Mg 279.077 IEC†	5.7	1.5	37.148	ug/L	37.148	ppb	14:24:59
1	Na 589.592 Radial†	-6.9	324.6	19.972	ug/L	19.972	ppb	14:24:39
1	Sr 421.552†	-48.3	16.1	0.0500	ug/L	0.0500	ppb	14:24:39
1	Sc 361.383	768554.1	768554.1	103.21	%			14:25:55
1	Y 371.029	598020.0	598020.0	102.86	%			14:25:55
1	Ag 328.068†	707.6	-20.3	-0.0819	ug/L	-0.0819	ppb	14:25:55
1	As 188.979†	-32.4	2.9	0.9457	ug/L	0.9457	ppb	14:26:15
1	B 249.677†	-519.3	378.2	8.6406	ug/L	8.6406	ppb	14:26:15
1	Ba 233.527†	29.7	6.3	0.0417	ug/L	0.0417	ppb	14:26:15
1	Be 313.107†	-4925.8	12.1	0.0058	ug/L	0.0058	ppb	14:25:55
1	Cd 226.502†	-296.9	5.5	0.0512	ug/L	0.0512	ppb	14:26:15
1	Co 228.616†	-84.9	18.3	0.2882	ug/L	0.2882	ppb	14:26:15
1	Cr 267.716†	-65.7	34.4	0.4322	ug/L	0.4322	ppb	14:26:15
1	Cu 324.752†	5835.5	-136.9	-0.4549	ug/L	-0.4549	ppb	14:25:55
1	Mn 257.610†	1375.5	614.9	0.6307	ug/L	0.6307	ppb	14:26:15
1	Mo 202.031†	15.6	10.7	0.6843	ug/L	0.6843	ppb	14:26:15
1	Ni 231.604†	158.8	17.2	0.4112	ug/L	0.4112	ppb	14:26:15
1	P 214.914†	305.2	2.2	0.9914	ug/L	0.9914	ppb	14:26:15
1	Pb 220.353†	-23.5	-5.0	-0.5291	ug/L	-0.5291	ppb	14:26:15
1	S 181.975 Axial†	177.4	35.9	43.264	ug/L	43.264	ppb	14:26:15
1	Sb 206.836†	51.3	-2.9	-0.7869	ug/L	-0.7869	ppb	14:26:15
1	Se 196.026†	-29.9	5.8	2.9697	ug/L	2.9697	ppb	14:26:15
1	Si 251.611†	1004.4	524.4	14.819	ug/L	14.819	ppb	14:26:15
1	Sn 189.927†	9.4	-3.9	-0.6027	ug/L	-0.6027	ppb	14:26:15
1	Ti 334.940†	-1337.4	231.0	0.3954	ug/L	0.3954	ppb	14:25:55
1	Tl 190.801†	-54.1	8.8	2.0839	ug/L	2.0839	ppb	14:26:15
1	U 409.014†	-5290.9	138.1	4.3539	ug/L	4.3539	ppb	14:25:55
1	V 292.402†	-1673.1	71.8	0.5927	ug/L	0.5927	ppb	14:25:55
1	Zn 213.857†	1272.7	248.7	2.0450	ug/L	2.0450	ppb	14:26:15
1	SiO2†	973.1	467.4	28.233	ug/L	28.233	ppb	14:27:11
2	Sc Radial	7357.9	7357.9	106	%			14:25:04
2	Y RADIAL	6758.6	6758.6	106.3	%			14:25:04
2	Al 396.153Radial†	-59.1	14.8	12.425	ug/L	12.425	ppb	14:25:04
2	Ca 317.933Radial†	34.0	5.7	8.3897	ug/L	8.3897	ppb	14:25:24
2	Fe 238.204 Radial†	61.7	19.3	86.069	ug/L	86.069	ppb	14:25:24
2	K 766.490 Radial†	2824.5	-123.0	-25.433	ug/L	-25.433	ppb	14:25:04
2	Mg 279.077 IEC†	5.5	1.3	32.270	ug/L	32.270	ppb	14:25:24
2	Na 589.592 Radial†	137.3	460.7	28.347	ug/L	28.347	ppb	14:25:04
2	Sr 421.552†	-40.7	23.9	0.0744	ug/L	0.0744	ppb	14:25:04
2	Sc 361.383	774115.5	774115.5	103.96	%			14:26:21
2	Y 371.029	603233.5	603233.5	103.75	%			14:26:21
2	Ag 328.068†	734.8	0.9	0.0218	ug/L	0.0218	ppb	14:26:21
2	As 188.979†	-29.7	5.7	1.8324	ug/L	1.8324	ppb	14:26:41
2	B 249.677†	-509.7	391.0	8.9349	ug/L	8.9349	ppb	14:26:41
2	Ba 233.527†	28.2	4.7	0.0315	ug/L	0.0315	ppb	14:26:41
2	Be 313.107†	-4955.6	17.7	0.0081	ug/L	0.0081	ppb	14:26:21
2	Cd 226.502†	-250.2	52.5	0.5814	ug/L	0.5814	ppb	14:26:41
2	Co 228.616†	-87.8	16.0	0.2556	ug/L	0.2556	ppb	14:26:41
2	Cr 267.716†	-37.9	61.5	0.7683	ug/L	0.7683	ppb	14:26:41
2	Cu 324.752†	6034.2	13.7	0.0511	ug/L	0.0511	ppb	14:26:21
2	Mn 257.610†	1407.0	635.5	0.6502	ug/L	0.6502	ppb	14:26:41
2	Mo 202.031†	33.8	28.1	1.7866	ug/L	1.7866	ppb	14:26:41
2	Ni 231.604†	149.5	7.2	0.1720	ug/L	0.1720	ppb	14:26:41

2	P 214.914†	298.8	-6.1	-2.8178 ug/L	-2.8178 ppb	14:26:41
2	Pb 220.353†	-20.1	-1.5	-0.1585 ug/L	-0.1585 ppb	14:26:41
2	S 181.975 Axial†	182.1	39.2	47.291 ug/L	47.291 ppb	14:26:41
2	Sb 206.836†	42.6	-11.6	-3.1153 ug/L	-3.1153 ppb	14:26:41
2	Se 196.026†	-24.3	11.4	5.4587 ug/L	5.4587 ppb	14:26:41
2	Si 251.611†	991.9	505.3	14.250 ug/L	14.250 ppb	14:26:41
2	Sn 189.927†	17.6	3.9	0.6219 ug/L	0.6219 ppb	14:26:41
2	Ti 334.940†	-1336.2	241.4	0.4077 ug/L	0.4077 ppb	14:26:21
2	Tl 190.801†	-68.3	-4.5	-1.0675 ug/L	-1.0675 ppb	14:26:41
2	U 409.014†	-4969.4	484.2	15.294 ug/L	15.294 ppb	14:26:21
2	V 292.402†	-1681.6	75.3	0.6573 ug/L	0.6573 ppb	14:26:21
2	Zn 213.857†	1270.9	238.2	1.9596 ug/L	1.9596 ppb	14:26:41
2	SiO2†	1024.7	510.2	30.757 ug/L	30.757 ppb	14:27:16
3	Sc Radial	7201.1	7201.1	104 %		14:25:29
3	Y RADIAL	6592.0	6592.0	103.7 %		14:25:29
3	Al 396.153Radial†	-59.8	13.0	10.901 ug/L	10.901 ppb	14:25:29
3	Ca 317.933Radial†	42.7	14.7	21.717 ug/L	21.717 ppb	14:25:49
3	Fe 238.204 Radial†	64.4	23.1	103.41 ug/L	103.41 ppb	14:25:49
3	K 766.490 Radial†	2898.8	6.5	1.3523 ug/L	1.3523 ppb	14:25:29
3	Mg 279.077 IEC†	3.0	-1.1	-28.315 ug/L	-28.315 ppb	14:25:49
3	Na 589.592 Radial†	92.5	420.3	25.862 ug/L	25.862 ppb	14:25:29
3	Sr 421.552†	-33.8	29.8	0.0923 ug/L	0.0923 ppb	14:25:29
3	Sc 361.383	762326.3	762326.3	102.37 %		14:26:46
3	Y 371.029	595019.9	595019.9	102.34 %		14:26:46
3	Ag 328.068†	783.3	59.3	0.3552 ug/L	0.3552 ppb	14:26:46
3	As 188.979†	-26.8	8.2	2.6053 ug/L	2.6053 ppb	14:27:06
3	B 249.677†	-519.9	373.5	8.5342 ug/L	8.5342 ppb	14:27:06
3	Ba 233.527†	37.0	13.7	0.0895 ug/L	0.0895 ppb	14:27:06
3	Be 313.107†	-4873.0	24.7	0.0110 ug/L	0.0110 ppb	14:26:46
3	Cd 226.502†	-273.5	26.0	0.2817 ug/L	0.2817 ppb	14:27:06
3	Co 228.616†	-104.8	-1.9	-0.0311 ug/L	-0.0311 ppb	14:27:06
3	Cr 267.716†	-42.0	57.0	0.7156 ug/L	0.7156 ppb	14:27:06
3	Cu 324.752†	5923.2	-5.0	-0.0107 ug/L	-0.0107 ppb	14:26:46
3	Mn 257.610†	1426.7	675.7	0.6940 ug/L	0.6940 ppb	14:27:06
3	Mo 202.031†	15.7	10.9	0.6987 ug/L	0.6987 ppb	14:27:06
3	Ni 231.604†	171.7	31.1	0.7430 ug/L	0.7430 ppb	14:27:06
3	P 214.914†	296.8	-3.6	-1.6833 ug/L	-1.6833 ppb	14:27:06
3	Pb 220.353†	-47.8	-28.8	-3.0523 ug/L	-3.0523 ppb	14:27:06
3	S 181.975 Axial†	178.6	38.4	46.347 ug/L	46.347 ppb	14:27:06
3	Sb 206.836†	56.2	2.3	0.6362 ug/L	0.6362 ppb	14:27:06
3	Se 196.026†	-23.6	11.8	5.6677 ug/L	5.6677 ppb	14:27:06
3	Si 251.611†	981.5	510.0	14.383 ug/L	14.383 ppb	14:27:06
3	Sn 189.927†	21.2	7.8	1.2240 ug/L	1.2240 ppb	14:27:06
3	Ti 334.940†	-1300.5	256.4	0.4387 ug/L	0.4387 ppb	14:26:46
3	Tl 190.801†	-58.5	4.1	0.9695 ug/L	0.9695 ppb	14:27:06
3	U 409.014†	-5227.7	158.0	4.9793 ug/L	4.9793 ppb	14:26:46
3	V 292.402†	-1661.2	70.2	0.5783 ug/L	0.5783 ppb	14:26:46
3	Zn 213.857†	1275.5	261.5	2.1496 ug/L	2.1496 ppb	14:27:06
3	SiO2†	1020.5	521.3	31.431 ug/L	31.431 ppb	14:27:22

Mean Data: 1201871688|881343|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	768331.9	103.18	%	0.792				0.77%
Sc Radial	7273.7	105	%	1.1				1.09%
Y 371.029	598757.8	102.99	%	0.715				0.69%
Y RADIAL	6673.9	105.0	%	1.31				1.25%
Ag 328.068†	13.3	0.0984	ug/L	0.22840	0.0984	ppb	0.22840	232.15%
Al 396.153Radial†	13.6	11.449	ug/L	0.8475	11.449	ppb	0.8475	7.40%
As 188.979†	5.6	1.7945	ug/L	0.83045	1.7945	ppb	0.83045	46.28%
B 249.677†	380.9	8.7032	ug/L	0.20757	8.7032	ppb	0.20757	2.39%
Ba 233.527†	8.2	0.0543	ug/L	0.03097	0.0543	ppb	0.03097	57.09%
Be 313.107†	18.2	0.0083	ug/L	0.00259	0.0083	ppb	0.00259	31.29%
Ca 317.933Radial†	10.9	16.038	ug/L	6.8783	16.038	ppb	6.8783	42.89%
Cd 226.502†	28.0	0.3048	ug/L	0.26585	0.3048	ppb	0.26585	87.23%
Co 228.616†	10.8	0.1709	ug/L	0.17571	0.1709	ppb	0.17571	102.80%
Cr 267.716†	51.0	0.6387	ug/L	0.18081	0.6387	ppb	0.18081	28.31%
Cu 324.752†	-42.7	-0.1381	ug/L	0.27602	-0.1381	ppb	0.27602	199.81%
Fe 238.204 Radial†	21.4	95.463	ug/L	8.7610	95.463	ppb	8.7610	9.18%
K 766.490 Radial†	-51.0	-10.534	ug/L	13.6446	-10.534	ppb	13.6446	129.53%

Mg 279.077 IEC†	0.5	13.701 ug/L	36.4686	13.701 ppb	36.4686	266.17%
Mn 257.610†	642.0	0.6583 ug/L	0.03245	0.6583 ppb	0.03245	4.93%
Mo 202.031†	16.6	1.0565 ug/L	0.63229	1.0565 ppb	0.63229	59.85%
Na 589.592 Radial†	401.9	24.727 ug/L	4.3013	24.727 ppb	4.3013	17.40%
Ni 231.604†	18.5	0.4421 ug/L	0.28672	0.4421 ppb	0.28672	64.86%
P 214.914†	-2.5	-1.1699 ug/L	1.95583	-1.1699 ppb	1.95583	167.18%
Pb 220.353†	-11.8	-1.2466 ug/L	1.57469	-1.2466 ppb	1.57469	126.32%
S 181.975 Axial†	37.8	45.634 ug/L	2.1057	45.634 ppb	2.1057	4.61%
Sb 206.836†	-4.1	-1.0887 ug/L	1.89385	-1.0887 ppb	1.89385	173.96%
Se 196.026†	9.7	4.6987 ug/L	1.50099	4.6987 ppb	1.50099	31.94%
Si 251.611†	513.3	14.484 ug/L	0.2977	14.484 ppb	0.2977	2.06%
Sn 189.927†	2.6	0.4144 ug/L	0.93088	0.4144 ppb	0.93088	224.62%
Sr 421.552†	23.3	0.0722 ug/L	0.02122	0.0722 ppb	0.02122	29.37%
Ti 334.940†	242.9	0.4139 ug/L	0.02235	0.4139 ppb	0.02235	5.40%
Tl 190.801†	2.8	0.6620 ug/L	1.59807	0.6620 ppb	1.59807	241.42%
U 409.014†	260.1	8.2090 ug/L	6.14366	8.2090 ppb	6.14366	74.84%
V 292.402†	72.4	0.6094 ug/L	0.04207	0.6094 ppb	0.04207	6.90%
Zn 213.857†	249.5	2.0514 ug/L	0.09518	2.0514 ppb	0.09518	4.64%
SiO2†	499.6	30.140 ug/L	1.6856	30.140 ppb	1.6856	5.59%

Sequence No.: 4
Sample ID: 1201871689|881343|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 39
Date Collected: 7/2/2009 14:29:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871689|881343|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7373.5	7373.5	106	%			14:31:44
1	Y RADIAL	7474.5	7474.5	117.5	%			14:31:24
1	Al 396.153Radial†	41743.2	39353.1	33194	ug/L	33194	ppb	14:31:24
1	Ca 317.933Radial†	12694.5	11919.8	17568	ug/L	17568	ppb	14:31:24
1	Fe 238.204 Radial†	22943.0	21551.5	96331	ug/L	96331	ppb	14:31:24
1	K 766.490 Radial†	58061.7	51852.4	10702	ug/L	10702	ppb	14:31:24
1	Mg 279.077 IEC†	614.2	574.1	14610	ug/L	14610	ppb	14:31:44
1	Na 589.592 Radial†	48401.6	45879.6	2823.0	ug/L	2823.0	ppb	14:31:24
1	Sr 421.552†	279030.7	262644.3	816.64	ug/L	816.64	ppb	14:31:24
1	Sc 361.383	808154.1	808154.1	108.53	%			14:32:44
1	Y 371.029	661396.4	661396.4	113.76	%			14:32:44
1	Ag 328.068†	122119.5	111818.2	645.59	ug/L	645.59	ppb	14:32:44
1	As 188.979†	4216.4	3919.4	1268.3	ug/L	1268.3	ppb	14:33:04
1	B 249.677†	30828.1	29287.1	661.16	ug/L	661.16	ppb	14:32:44
1	Ba 233.527†	383658.8	353490.8	2294.2	ug/L	2294.2	ppb	14:32:44
1	Be 313.107†	1168286.2	1081274.2	439.11	ug/L	439.11	ppb	14:32:44
1	Cd 226.502†	54002.6	50052.7	552.64	ug/L	552.64	ppb	14:32:44
1	Co 228.616†	27457.9	25400.9	398.80	ug/L	398.80	ppb	14:33:04
1	Cr 267.716†	31736.1	29340.5	370.80	ug/L	370.80	ppb	14:32:44
1	Cu 324.752†	166916.3	148010.2	503.52	ug/L	503.52	ppb	14:32:44
1	Mn 257.610†	1932547.5	1779981.9	1804.4	ug/L	1804.4	ppb	14:32:44
1	Mo 202.031†	6923.6	6375.1	410.52	ug/L	410.52	ppb	14:33:04
1	Ni 231.604†	22681.3	20762.5	496.42	ug/L	496.42	ppb	14:33:04
1	P 214.914†	8375.4	7423.8	3184.5	ug/L	3184.5	ppb	14:33:04
1	Pb 220.353†	8364.7	7725.3	814.24	ug/L	814.24	ppb	14:33:04
1	S 181.975 Axial†	1076.3	855.8	1025.4	ug/L	1025.4	ppb	14:33:04
1	Sb 206.836†	2091.1	1874.2	515.27	ug/L	515.27	ppb	14:33:04
1	Se 196.026†	1435.0	1357.1	937.54	ug/L	937.54	ppb	14:33:04
1	Si 251.611†	256916.4	236280.7	6659.3	ug/L	6659.3	ppb	14:32:44
1	Sn 189.927†	3669.2	3367.9	536.40	ug/L	536.40	ppb	14:33:04
1	Ti 334.940†	1021221.0	942506.5	1618.1	ug/L	1618.1	ppb	14:32:44
1	Tl 190.801†	4211.3	3941.6	956.07	ug/L	956.07	ppb	14:33:04
1	U 409.014†	-10066.6	-4011.1	-139.33	ug/L	-139.33	ppb	14:32:44
1	V 292.402†	95694.8	89868.6	726.92	ug/L	726.92	ppb	14:32:44
1	Zn 213.857†	128926.7	117812.0	960.56	ug/L	960.56	ppb	14:32:44
1	SiO2†	258250.7	237483.4	14308	ug/L	14308	ppb	14:34:04
2	Sc Radial	7420.0	7420.0	107	%			14:32:10
2	Y RADIAL	7500.1	7500.1	117.9	%			14:31:50
2	Al 396.153Radial†	42256.3	39586.3	33391	ug/L	33391	ppb	14:31:50
2	Ca 317.933Radial†	12801.8	11945.1	17605	ug/L	17605	ppb	14:31:50
2	Fe 238.204 Radial†	23222.9	21677.8	96895	ug/L	96895	ppb	14:31:50
2	K 766.490 Radial†	58771.0	52172.7	10768	ug/L	10768	ppb	14:31:50
2	Mg 279.077 IEC†	623.6	579.2	14741	ug/L	14741	ppb	14:32:10
2	Na 589.592 Radial†	48707.6	45879.7	2823.1	ug/L	2823.1	ppb	14:31:50
2	Sr 421.552†	282562.2	264298.6	821.79	ug/L	821.79	ppb	14:31:50
2	Sc 361.383	818811.4	818811.4	109.96	%			14:33:11
2	Y 371.029	670688.2	670688.2	115.36	%			14:33:11
2	Ag 328.068†	123238.5	111371.3	643.31	ug/L	643.31	ppb	14:33:11
2	As 188.979†	4219.2	3871.4	1253.2	ug/L	1253.2	ppb	14:33:31
2	B 249.677†	31236.6	29288.9	661.19	ug/L	661.19	ppb	14:33:11
2	Ba 233.527†	386355.6	351342.3	2280.3	ug/L	2280.3	ppb	14:33:11
2	Be 313.107†	1180729.8	1078579.8	438.01	ug/L	438.01	ppb	14:33:11
2	Cd 226.502†	54357.9	49728.1	548.91	ug/L	548.91	ppb	14:33:11
2	Co 228.616†	27454.5	25068.5	393.54	ug/L	393.54	ppb	14:33:31
2	Cr 267.716†	31825.5	29041.2	367.05	ug/L	367.05	ppb	14:33:11
2	Cu 324.752†	168844.7	147762.2	502.72	ug/L	502.72	ppb	14:33:11
2	Mn 257.610†	1946677.4	1769655.4	1794.1	ug/L	1794.1	ppb	14:33:11
2	Mo 202.031†	6939.3	6306.4	406.19	ug/L	406.19	ppb	14:33:31
2	Ni 231.604†	22682.7	20491.7	489.95	ug/L	489.95	ppb	14:33:31

2	P 214.914†	8419.8	7363.7	3157.2	ug/L	3157.2	ppb	14:33:31
2	Pb 220.353†	8375.7	7635.0	804.68	ug/L	804.68	ppb	14:33:31
2	S 181.975 Axial†	1075.4	842.0	1008.7	ug/L	1008.7	ppb	14:33:31
2	Sb 206.836†	2104.9	1861.7	511.76	ug/L	511.76	ppb	14:33:31
2	Se 196.026†	1423.2	1329.2	926.79	ug/L	926.79	ppb	14:33:31
2	Si 251.611†	259776.5	235800.7	6645.9	ug/L	6645.9	ppb	14:33:11
2	Sn 189.927†	3659.7	3315.3	528.20	ug/L	528.20	ppb	14:33:31
2	Ti 334.940†	1029615.9	937893.8	1610.2	ug/L	1610.2	ppb	14:33:11
2	Tl 190.801†	4236.1	3913.6	949.34	ug/L	949.34	ppb	14:33:31
2	U 409.014†	-9873.3	-3714.6	-130.02	ug/L	-130.02	ppb	14:33:11
2	V 292.402†	96526.2	89477.0	723.60	ug/L	723.60	ppb	14:33:11
2	Zn 213.857†	130174.1	117400.3	957.13	ug/L	957.13	ppb	14:33:11
2	SiO2†	258704.8	234799.3	14146	ug/L	14146	ppb	14:34:09
3	Sc Radial	7283.5	7283.5	105	%			14:32:35
3	Y RADIAL	7440.4	7440.4	117.0	%			14:32:15
3	Al 396.153Radial†	42021.4	40103.5	33827	ug/L	33827	ppb	14:32:15
3	Ca 317.933Radial†	12743.7	12114.2	17854	ug/L	17854	ppb	14:32:15
3	Fe 238.204 Radial†	23077.6	21946.6	98097	ug/L	98097	ppb	14:32:15
3	K 766.490 Radial†	58279.2	52734.7	10884	ug/L	10884	ppb	14:32:15
3	Mg 279.077 IEC†	610.4	577.5	14697	ug/L	14697	ppb	14:32:35
3	Na 589.592 Radial†	48541.0	46575.2	2865.8	ug/L	2865.8	ppb	14:32:15
3	Sr 421.552†	281103.6	267864.0	832.87	ug/L	832.87	ppb	14:32:15
3	Sc 361.383	815031.4	815031.4	109.45	%			14:33:38
3	Y 371.029	667254.4	667254.4	114.77	%			14:33:38
3	Ag 328.068†	122503.1	111219.2	642.87	ug/L	642.87	ppb	14:33:38
3	As 188.979†	4255.9	3922.7	1269.7	ug/L	1269.7	ppb	14:33:59
3	B 249.677†	30898.3	29111.6	657.03	ug/L	657.03	ppb	14:33:38
3	Ba 233.527†	385643.5	352321.1	2286.6	ug/L	2286.6	ppb	14:33:38
3	Be 313.107†	1173643.6	1077085.5	437.40	ug/L	437.40	ppb	14:33:38
3	Cd 226.502†	54421.4	50015.4	552.01	ug/L	552.01	ppb	14:33:38
3	Co 228.616†	27586.1	25304.6	397.27	ug/L	397.27	ppb	14:33:59
3	Cr 267.716†	31737.6	29095.1	367.76	ug/L	367.76	ppb	14:33:38
3	Cu 324.752†	167345.4	147104.4	500.58	ug/L	500.58	ppb	14:33:38
3	Mn 257.610†	1941440.7	1773081.6	1797.7	ug/L	1797.7	ppb	14:33:38
3	Mo 202.031†	6960.1	6354.7	409.33	ug/L	409.33	ppb	14:33:59
3	Ni 231.604†	22761.1	20659.0	493.94	ug/L	493.94	ppb	14:33:59
3	P 214.914†	8461.9	7437.7	3190.2	ug/L	3190.2	ppb	14:33:59
3	Pb 220.353†	8413.0	7704.4	811.98	ug/L	811.98	ppb	14:33:59
3	S 181.975 Axial†	1095.3	864.7	1036.0	ug/L	1036.0	ppb	14:33:59
3	Sb 206.836†	2099.0	1865.2	512.86	ug/L	512.86	ppb	14:33:59
3	Se 196.026†	1414.2	1326.9	929.81	ug/L	929.81	ppb	14:33:59
3	Si 251.611†	257704.5	235003.2	6623.2	ug/L	6623.2	ppb	14:33:38
3	Sn 189.927†	3680.2	3349.4	533.66	ug/L	533.66	ppb	14:33:59
3	Ti 334.940†	1023579.8	936721.6	1608.2	ug/L	1608.2	ppb	14:33:38
3	Tl 190.801†	4242.1	3936.9	954.87	ug/L	954.87	ppb	14:33:59
3	U 409.014†	-10321.7	-4165.9	-144.43	ug/L	-144.43	ppb	14:33:38
3	V 292.402†	96166.0	89555.1	724.09	ug/L	724.09	ppb	14:33:38
3	Zn 213.857†	129489.5	117323.8	956.35	ug/L	956.35	ppb	14:33:38
3	SiO2†	257332.6	234636.7	14136	ug/L	14136	ppb	14:34:15

Mean Data: 1201871689|881343|2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	813999.0	109.31	%	0.726				0.66%
Sc Radial	7359.0	106	%	1.0				0.94%
Y 371.029	666446.3	114.63	%	0.808				0.70%
Y RADIAL	7471.7	117.5	%	0.47				0.40%
Ag 328.068†	111469.6	643.92	ug/L	1.463	643.92	ppb	1.463	0.23%
Al 396.153Radial†	39681.0	33471	ug/L	324.1	33471	ppb	324.1	0.97%
As 188.979†	3904.5	1263.7	ug/L	9.17	1263.7	ppb	9.17	0.73%
B 249.677†	29229.2	659.80	ug/L	2.392	659.80	ppb	2.392	0.36%
Ba 233.527†	352384.7	2287.1	ug/L	6.98	2287.1	ppb	6.98	0.31%
Be 313.107†	1078979.8	438.17	ug/L	0.867	438.17	ppb	0.867	0.20%
Ca 317.933Radial†	11993.0	17676	ug/L	155.8	17676	ppb	155.8	0.88%
Cd 226.502†	49932.1	551.19	ug/L	1.994	551.19	ppb	1.994	0.36%
Co 228.616†	25258.0	396.54	ug/L	2.707	396.54	ppb	2.707	0.68%
Cr 267.716†	29158.9	368.54	ug/L	1.991	368.54	ppb	1.991	0.54%
Cu 324.752†	147625.6	502.27	ug/L	1.523	502.27	ppb	1.523	0.30%
Fe 238.204 Radial†	21725.3	97108	ug/L	901.8	97108	ppb	901.8	0.93%
K 766.490 Radial†	52253.2	10785	ug/L	92.5	10785	ppb	92.5	0.86%

Mg 279.077 IEC†	577.0	14683	ug/L	66.6	14683	ppb	66.6	0.45%
Mn 257.610†	1774239.6	1798.8	ug/L	5.24	1798.8	ppb	5.24	0.29%
Mo 202.031†	6345.4	408.68	ug/L	2.234	408.68	ppb	2.234	0.55%
Na 589.592 Radial†	46111.5	2837.3	ug/L	24.71	2837.3	ppb	24.71	0.87%
Ni 231.604†	20637.8	493.44	ug/L	3.267	493.44	ppb	3.267	0.66%
P 214.914†	7408.4	3177.3	ug/L	17.65	3177.3	ppb	17.65	0.56%
Pb 220.353†	7688.2	810.30	ug/L	5.000	810.30	ppb	5.000	0.62%
S 181.975 Axial†	854.2	1023.4	ug/L	13.75	1023.4	ppb	13.75	1.34%
Sb 206.836†	1867.0	513.29	ug/L	1.795	513.29	ppb	1.795	0.35%
Se 196.026†	1337.7	931.38	ug/L	5.542	931.38	ppb	5.542	0.60%
Si 251.611†	235694.9	6642.8	ug/L	18.25	6642.8	ppb	18.25	0.27%
Sn 189.927†	3344.2	532.76	ug/L	4.173	532.76	ppb	4.173	0.78%
Sr 421.552†	264935.6	823.77	ug/L	8.294	823.77	ppb	8.294	1.01%
Ti 334.940†	939040.6	1612.2	ug/L	5.24	1612.2	ppb	5.24	0.33%
Tl 190.801†	3930.7	953.43	ug/L	3.589	953.43	ppb	3.589	0.38%
U 409.014†	-3963.8	-137.93	ug/L	7.308	-137.93	ppb	7.308	5.30%
V 292.402†	89633.5	724.87	ug/L	1.791	724.87	ppb	1.791	0.25%
Zn 213.857†	117512.1	958.01	ug/L	2.238	958.01	ppb	2.238	0.23%
SiO2†	235639.8	14196	ug/L	96.5	14196	ppb	96.5	0.68%

Sequence No.: 5
Sample ID: 232504001|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 40
Date Collected: 7/2/2009 14:36:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504001|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7737.2	7737.2	112	%			14:38:17
1	Y RADIAL	8877.6	8877.6	139.6	%			14:38:17
1	Al 396.153Radial†	30681.2	27585.8	23280	ug/L	23280	ppb	14:38:17
1	Ca 317.933Radial†	6083.2	5429.1	8001.6	ug/L	8001.6	ppb	14:38:17
1	Fe 238.204 Radial†	21120.0	18901.7	84476	ug/L	84476	ppb	14:38:17
1	K 766.490 Radial†	18348.2	13668.2	2810.8	ug/L	2810.8	ppb	14:38:17
1	Mg 279.077 IEC†	162.8	142.0	3560.9	ug/L	3560.9	ppb	14:38:37
1	Na 589.592 Radial†	12181.2	11255.4	692.56	ug/L	692.56	ppb	14:38:17
1	Sr 421.552†	18108.8	16302.5	50.621	ug/L	50.621	ppb	14:38:17
1	Sc 361.383	813125.5	813125.5	109.20	%			14:39:35
1	Y 371.029	787530.3	787530.3	135.45	%			14:39:35
1	Ag 328.068†	-3836.3	-4219.1	4.3299	ug/L	4.3299	ppb	14:39:40
1	As 188.979†	-50.0	-11.5	25.197	ug/L	25.197	ppb	14:40:00
1	B 249.677†	190.8	1056.0	18.307	ug/L	18.307	ppb	14:39:40
1	Ba 233.527†	36450.8	33359.0	216.16	ug/L	216.16	ppb	14:39:40
1	Be 313.107†	-10213.3	-4568.5	4.1616	ug/L	4.1616	ppb	14:39:40
1	Cd 226.502†	488.9	740.9	-1.4788	ug/L	-1.4788	ppb	14:40:00
1	Co 228.616†	931.9	953.9	8.4830	ug/L	8.4830	ppb	14:40:00
1	Cr 267.716†	5029.0	4703.5	60.867	ug/L	60.867	ppb	14:39:40
1	Cu 324.752†	12984.8	6100.5	25.408	ug/L	25.408	ppb	14:39:40
1	Mn 257.610†	2455012.7	2247564.6	2274.1	ug/L	2274.1	ppb	14:39:35
1	Mo 202.031†	128.6	113.4	12.701	ug/L	12.701	ppb	14:40:00
1	Ni 231.604†	1998.9	1694.0	40.513	ug/L	40.513	ppb	14:40:00
1	P 214.914†	1475.7	1057.9	412.03	ug/L	412.03	ppb	14:40:00
1	Pb 220.353†	531.0	504.2	49.823	ug/L	49.823	ppb	14:40:00
1	S 181.975 Axial†	330.8	167.0	196.77	ug/L	196.77	ppb	14:40:00
1	Sb 206.836†	89.8	29.7	0.6053	ug/L	0.6053	ppb	14:40:00
1	Se 196.026†	-667.4	-576.3	21.923	ug/L	21.923	ppb	14:40:00
1	Si 251.611†	339445.6	310413.0	8770.9	ug/L	8770.9	ppb	14:39:40
1	Sn 189.927†	7.4	-6.2	6.1394	ug/L	6.1394	ppb	14:40:00
1	Ti 334.940†	1641457.5	1504761.4	2582.5	ug/L	2582.5	ppb	14:39:35
1	Tl 190.801†	-205.1	-126.7	3.1340	ug/L	3.1340	ppb	14:40:00
1	U 409.014†	-15004.6	-8476.6	-278.43	ug/L	-278.43	ppb	14:39:35
1	V 292.402†	7777.3	8815.2	57.296	ug/L	57.296	ppb	14:39:40
1	Zn 213.857†	53513.8	48023.1	388.19	ug/L	388.19	ppb	14:39:40
1	SiO2†	353388.6	323155.2	19521	ug/L	19521	ppb	14:41:07
2	Sc Radial	7634.9	7634.9	110	%			14:38:42
2	Y RADIAL	8734.7	8734.7	137.4	%			14:38:42
2	Al 396.153Radial†	30336.2	27640.9	23327	ug/L	23327	ppb	14:38:42
2	Ca 317.933Radial†	6024.9	5449.2	8031.2	ug/L	8031.2	ppb	14:38:42
2	Fe 238.204 Radial†	20839.6	18900.6	84472	ug/L	84472	ppb	14:38:42
2	K 766.490 Radial†	18186.7	13741.9	2826.0	ug/L	2826.0	ppb	14:38:42
2	Mg 279.077 IEC†	162.8	144.0	3612.2	ug/L	3612.2	ppb	14:39:02
2	Na 589.592 Radial†	12128.0	11353.5	698.60	ug/L	698.60	ppb	14:38:42
2	Sr 421.552†	17915.9	16344.7	50.753	ug/L	50.753	ppb	14:38:42
2	Sc 361.383	817791.8	817791.8	109.82	%			14:40:06
2	Y 371.029	791342.7	791342.7	136.11	%			14:40:06
2	Ag 328.068†	-3978.3	-4328.4	3.7262	ug/L	3.7262	ppb	14:40:11
2	As 188.979†	-46.0	-7.6	26.389	ug/L	26.389	ppb	14:40:31
2	B 249.677†	194.4	1058.3	18.357	ug/L	18.357	ppb	14:40:11
2	Ba 233.527†	36830.6	33514.3	217.17	ug/L	217.17	ppb	14:40:11
2	Be 313.107†	-10328.5	-4620.1	4.1295	ug/L	4.1295	ppb	14:40:11
2	Cd 226.502†	484.9	734.8	-1.5478	ug/L	-1.5478	ppb	14:40:31
2	Co 228.616†	968.0	981.9	8.9399	ug/L	8.9399	ppb	14:40:31
2	Cr 267.716†	5122.4	4762.3	61.601	ug/L	61.601	ppb	14:40:11
2	Cu 324.752†	13161.6	6193.7	25.721	ug/L	25.721	ppb	14:40:11
2	Mn 257.610†	2463948.2	2242872.3	2269.3	ug/L	2269.3	ppb	14:40:06
2	Mo 202.031†	149.8	132.0	13.882	ug/L	13.882	ppb	14:40:31
2	Ni 231.604†	2003.4	1687.6	40.361	ug/L	40.361	ppb	14:40:31

2	P 214.914†	1466.3	1041.6	404.62 ug/L	404.62 ppb	14:40:31
2	Pb 220.353†	560.8	528.5	52.403 ug/L	52.403 ppb	14:40:31
2	S 181.975 Axial†	340.6	174.2	205.45 ug/L	205.45 ppb	14:40:31
2	Sb 206.836†	86.7	26.4	-0.3251 ug/L	-0.3251 ppb	14:40:31
2	Se 196.026†	-655.5	-562.0	28.389 ug/L	28.389 ppb	14:40:31
2	Si 251.611†	343986.6	312774.1	8837.6 ug/L	8837.6 ppb	14:40:11
2	Sn 189.927†	-12.1	-24.0	3.3593 ug/L	3.3593 ppb	14:40:31
2	Ti 334.940†	1647760.7	1501923.5	2577.6 ug/L	2577.6 ppb	14:40:06
2	Tl 190.801†	-187.1	-109.2	7.2270 ug/L	7.2270 ppb	14:40:31
2	U 409.014†	-15043.4	-8433.5	-277.06 ug/L	-277.06 ppb	14:40:06
2	V 292.402†	7738.6	8739.4	56.698 ug/L	56.698 ppb	14:40:11
2	Zn 213.857†	54172.5	48343.3	390.84 ug/L	390.84 ppb	14:40:11
2	SiO2†	350609.2	318777.7	19256 ug/L	19256 ppb	14:41:13
3	Sc Radial	7459.5	7459.5	108 %		14:39:07
3	Y RADIAL	8628.6	8628.6	135.7 %		14:39:07
3	Al 396.153Radial†	30204.6	28166.8	23771 ug/L	23771 ppb	14:39:07
3	Ca 317.933Radial†	6029.6	5582.3	8227.4 ug/L	8227.4 ppb	14:39:07
3	Fe 238.204 Radial†	20790.8	19300.6	86259 ug/L	86259 ppb	14:39:07
3	K 766.490 Radial†	18113.9	14062.8	2893.1 ug/L	2893.1 ppb	14:39:07
3	Mg 279.077 IEC†	161.3	146.0	3662.1 ug/L	3662.1 ppb	14:39:28
3	Na 589.592 Radial†	11967.7	11463.5	705.37 ug/L	705.37 ppb	14:39:07
3	Sr 421.552†	17833.8	16651.2	51.704 ug/L	51.704 ppb	14:39:07
3	Sc 361.383	825847.2	825847.2	110.90 %		14:40:37
3	Y 371.029	794723.1	794723.1	136.69 %		14:40:37
3	Ag 328.068†	-3903.1	-4225.3	4.8531 ug/L	4.8531 ppb	14:40:42
3	As 188.979†	-52.7	-13.2	24.792 ug/L	24.792 ppb	14:41:02
3	B 249.677†	178.8	1042.5	17.876 ug/L	17.876 ppb	14:40:42
3	Ba 233.527†	36736.5	33102.3	214.49 ug/L	214.49 ppb	14:40:42
3	Be 313.107†	-10174.6	-4389.6	4.1255 ug/L	4.1255 ppb	14:40:42
3	Cd 226.502†	472.5	719.3	-1.9312 ug/L	-1.9312 ppb	14:41:02
3	Co 228.616†	965.0	970.6	8.8213 ug/L	8.8213 ppb	14:41:02
3	Cr 267.716†	5091.4	4688.8	60.715 ug/L	60.715 ppb	14:40:42
3	Cu 324.752†	13061.9	5986.8	25.129 ug/L	25.129 ppb	14:40:42
3	Mn 257.610†	2450878.8	2209203.7	2235.7 ug/L	2235.7 ppb	14:40:37
3	Mo 202.031†	141.2	122.9	13.419 ug/L	13.419 ppb	14:41:02
3	Ni 231.604†	2005.8	1672.0	39.987 ug/L	39.987 ppb	14:41:02
3	P 214.914†	1511.4	1069.3	415.95 ug/L	415.95 ppb	14:41:02
3	Pb 220.353†	552.9	516.4	51.043 ug/L	51.043 ppb	14:41:02
3	S 181.975 Axial†	341.7	172.1	202.84 ug/L	202.84 ppb	14:41:02
3	Sb 206.836†	86.9	25.7	-0.3313 ug/L	-0.3313 ppb	14:41:02
3	Se 196.026†	-658.2	-558.6	35.912 ug/L	35.912 ppb	14:41:02
3	Si 251.611†	343977.0	309710.2	8751.0 ug/L	8751.0 ppb	14:40:42
3	Sn 189.927†	-6.1	-18.5	4.3666 ug/L	4.3666 ppb	14:41:02
3	Ti 334.940†	1637072.4	1477651.0	2536.0 ug/L	2536.0 ppb	14:40:37
3	Tl 190.801†	-201.0	-120.1	4.1320 ug/L	4.1320 ppb	14:41:02
3	U 409.014†	-14860.1	-8134.7	-267.84 ug/L	-267.84 ppb	14:40:37
3	V 292.402†	7864.9	8784.6	56.877 ug/L	56.877 ppb	14:40:42
3	Zn 213.857†	53974.5	47683.7	385.20 ug/L	385.20 ppb	14:40:42
3	SiO2†	355100.9	319713.8	19313 ug/L	19313 ppb	14:41:18

Mean Data: 232504001|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	818921.5	109.97	%	0.864				0.79%
Sc Radial	7610.5	110	%	2.0				1.85%
Y 371.029	791198.7	136.08	%	0.619				0.45%
Y RADIAL	8746.9	137.6	%	1.96				1.43%
Ag 328.068†	-4257.6	4.3031	ug/L	0.56394	4.3031	ppb	0.56394	13.11%
Al 396.153Radial†	27797.9	23459	ug/L	270.7	23459	ppb	270.7	1.15%
As 188.979†	-10.8	25.459	ug/L	0.8300	25.459	ppb	0.8300	3.26%
B 249.677†	1052.3	18.180	ug/L	0.2648	18.180	ppb	0.2648	1.46%
Ba 233.527†	33325.2	215.94	ug/L	1.354	215.94	ppb	1.354	0.63%
Be 313.107†	-4526.1	4.1388	ug/L	0.01977	4.1388	ppb	0.01977	0.48%
Ca 317.933Radial†	5486.9	8086.7	ug/L	122.72	8086.7	ppb	122.72	1.52%
Cd 226.502†	731.7	-1.6526	ug/L	0.24373	-1.6526	ppb	0.24373	14.75%
Co 228.616†	968.8	8.7481	ug/L	0.23707	8.7481	ppb	0.23707	2.71%
Cr 267.716†	4718.2	61.061	ug/L	0.4740	61.061	ppb	0.4740	0.78%
Cu 324.752†	6093.7	25.419	ug/L	0.2964	25.419	ppb	0.2964	1.17%
Fe 238.204 Radial†	19034.3	85069	ug/L	1030.7	85069	ppb	1030.7	1.21%
K 766.490 Radial†	13824.3	2843.3	ug/L	43.79	2843.3	ppb	43.79	1.54%

Mg 279.077 IEC†	144.0	3611.7	ug/L	50.56	3611.7	ppb	50.56	1.40%
Mn 257.610†	2233213.5	2259.7	ug/L	20.95	2259.7	ppb	20.95	0.93%
Mo 202.031†	122.8	13.334	ug/L	0.5951	13.334	ppb	0.5951	4.46%
Na 589.592 Radial†	11357.4	698.84	ug/L	6.405	698.84	ppb	6.405	0.92%
Ni 231.604†	1684.5	40.287	ug/L	0.2703	40.287	ppb	0.2703	0.67%
P 214.914†	1056.3	410.87	ug/L	5.752	410.87	ppb	5.752	1.40%
Pb 220.353†	516.3	51.090	ug/L	1.2911	51.090	ppb	1.2911	2.53%
S 181.975 Axial†	171.1	201.69	ug/L	4.457	201.69	ppb	4.457	2.21%
Sb 206.836†	27.3	-0.0171	ug/L	0.53895	-0.0171	ppb	0.53895	>999.9%
Se 196.026†	-565.7	28.741	ug/L	7.0012	28.741	ppb	7.0012	24.36%
Si 251.611†	310965.8	8786.5	ug/L	45.37	8786.5	ppb	45.37	0.52%
Sn 189.927†	-16.2	4.6218	ug/L	1.40753	4.6218	ppb	1.40753	30.45%
Sr 421.552†	16432.8	51.026	ug/L	0.5907	51.026	ppb	0.5907	1.16%
Ti 334.940†	1494778.6	2565.4	ug/L	25.56	2565.4	ppb	25.56	1.00%
Tl 190.801†	-118.6	4.8310	ug/L	2.13416	4.8310	ppb	2.13416	44.18%
U 409.014†	-8348.3	-274.44	ug/L	5.762	-274.44	ppb	5.762	2.10%
V 292.402†	8779.7	56.957	ug/L	0.3067	56.957	ppb	0.3067	0.54%
Zn 213.857†	48016.7	388.08	ug/L	2.824	388.08	ppb	2.824	0.73%
SiO2†	320548.9	19363	ug/L	139.3	19363	ppb	139.3	0.72%

Sequence No.: 6
Sample ID: 1201871690|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 41
Date Collected: 7/2/2009 14:43:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871690|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7540.3	7540.3	109	%			14:45:21
1	Y RADIAL	8639.0	8639.0	135.9	%			14:45:21
1	Al 396.153Radial†	29448.1	27169.6	22929	ug/L	22929	ppb	14:45:21
1	Ca 317.933Radial†	6983.2	6399.7	9432.1	ug/L	9432.1	ppb	14:45:21
1	Fe 238.204 Radial†	24228.4	22256.7	99471	ug/L	99471	ppb	14:45:21
1	K 766.490 Radial†	18077.6	13848.9	2849.4	ug/L	2849.4	ppb	14:45:21
1	Mg 279.077 IEC†	166.5	149.3	3733.4	ug/L	3733.4	ppb	14:45:41
1	Na 589.592 Radial†	11712.9	11109.8	683.60	ug/L	683.60	ppb	14:45:21
1	Sr 421.552†	18475.9	17064.4	52.977	ug/L	52.977	ppb	14:45:21
1	Sc 361.383	827549.6	827549.6	111.13	%			14:46:38
1	Y 371.029	797458.5	797458.5	137.16	%			14:46:38
1	Ag 328.068†	-4875.8	-5093.2	4.3556	ug/L	4.3556	ppb	14:46:43
1	As 188.979†	-62.6	-22.0	25.123	ug/L	25.123	ppb	14:47:03
1	B 249.677†	142.4	1009.4	16.214	ug/L	16.214	ppb	14:46:43
1	Ba 233.527†	40966.8	36840.8	238.71	ug/L	238.71	ppb	14:46:43
1	Be 313.107†	-4235.5	973.5	6.5366	ug/L	6.5366	ppb	14:46:43
1	Cd 226.502†	592.9	826.7	-2.2617	ug/L	-2.2617	ppb	14:47:03
1	Co 228.616†	992.5	993.6	8.7775	ug/L	8.7775	ppb	14:47:03
1	Cr 267.716†	5145.6	4728.2	61.496	ug/L	61.496	ppb	14:46:43
1	Cu 324.752†	14538.7	7291.5	30.282	ug/L	30.282	ppb	14:46:43
1	Mn 257.610†	2672866.6	2404409.0	2433.9	ug/L	2433.9	ppb	14:46:38
1	Mo 202.031†	141.2	122.6	14.266	ug/L	14.266	ppb	14:47:03
1	Ni 231.604†	1962.9	1629.7	38.975	ug/L	38.975	ppb	14:47:03
1	P 214.914†	2043.9	1545.6	618.61	ug/L	618.61	ppb	14:47:03
1	Pb 220.353†	554.7	517.0	49.694	ug/L	49.694	ppb	14:47:03
1	S 181.975 Axial†	315.5	148.0	173.90	ug/L	173.90	ppb	14:47:03
1	Sb 206.836†	93.9	31.9	1.3042	ug/L	1.3042	ppb	14:47:03
1	Se 196.026†	-775.9	-663.4	32.424	ug/L	32.424	ppb	14:47:03
1	Si 251.611†	323671.5	290800.8	8216.7	ug/L	8216.7	ppb	14:46:43
1	Sn 189.927†	-15.1	-26.6	4.2057	ug/L	4.2057	ppb	14:47:03
1	Ti 334.940†	1710612.1	1540787.7	2644.4	ug/L	2644.4	ppb	14:46:38
1	Tl 190.801†	-214.1	-131.5	3.2108	ug/L	3.2108	ppb	14:47:03
1	U 409.014†	-14846.7	-8095.0	-268.21	ug/L	-268.21	ppb	14:46:38
1	V 292.402†	9430.3	10178.5	66.354	ug/L	66.354	ppb	14:46:43
1	Zn 213.857†	58175.1	51363.4	414.27	ug/L	414.27	ppb	14:46:43
1	SiO2†	325174.8	292126.7	17646	ug/L	17646	ppb	14:48:11
2	Sc Radial	7703.2	7703.2	111	%			14:45:46
2	Y RADIAL	8784.4	8784.4	138.1	%			14:45:46
2	Al 396.153Radial†	29937.3	27037.2	22817	ug/L	22817	ppb	14:45:46
2	Ca 317.933Radial†	7099.9	6369.0	9386.8	ug/L	9386.8	ppb	14:45:46
2	Fe 238.204 Radial†	24691.9	22202.7	99229	ug/L	99229	ppb	14:45:46
2	K 766.490 Radial†	18239.2	13642.6	2806.6	ug/L	2806.6	ppb	14:45:46
2	Mg 279.077 IEC†	162.3	142.2	3553.3	ug/L	3553.3	ppb	14:46:06
2	Na 589.592 Radial†	11933.7	11080.7	681.81	ug/L	681.81	ppb	14:45:46
2	Sr 421.552†	18773.0	16972.5	52.691	ug/L	52.691	ppb	14:45:46
2	Sc 361.383	817177.1	817177.1	109.74	%			14:47:09
2	Y 371.029	787327.5	787327.5	135.42	%			14:47:09
2	Ag 328.068†	-4808.4	-5087.6	4.3124	ug/L	4.3124	ppb	14:47:14
2	As 188.979†	-58.0	-18.5	26.215	ug/L	26.215	ppb	14:47:34
2	B 249.677†	47.8	924.9	14.299	ug/L	14.299	ppb	14:47:14
2	Ba 233.527†	40418.6	36809.1	238.50	ug/L	238.50	ppb	14:47:14
2	Be 313.107†	-4293.5	872.3	6.5062	ug/L	6.5062	ppb	14:47:14
2	Cd 226.502†	595.1	835.5	-2.1351	ug/L	-2.1351	ppb	14:47:34
2	Co 228.616†	960.3	975.6	8.4868	ug/L	8.4868	ppb	14:47:34
2	Cr 267.716†	5130.7	4773.4	62.059	ug/L	62.059	ppb	14:47:14
2	Cu 324.752†	14421.0	7350.3	30.466	ug/L	30.466	ppb	14:47:14
2	Mn 257.610†	2647817.3	2412111.3	2441.6	ug/L	2441.6	ppb	14:47:09
2	Mo 202.031†	143.8	126.6	14.503	ug/L	14.503	ppb	14:47:34
2	Ni 231.604†	1943.0	1633.9	39.077	ug/L	39.077	ppb	14:47:34

2	P 214.914†	2030.5	1556.8	623.74 ug/L	623.74 ppb	14:47:34
2	Pb 220.353†	573.4	540.3	52.157 ug/L	52.157 ppb	14:47:34
2	S 181.975 Axial†	325.9	161.0	189.62 ug/L	189.62 ppb	14:47:34
2	Sb 206.836†	105.0	43.1	4.3240 ug/L	4.3240 ppb	14:47:34
2	Se 196.026†	-746.5	-645.4	39.728 ug/L	39.728 ppb	14:47:34
2	Si 251.611†	320552.9	291655.7	8240.8 ug/L	8240.8 ppb	14:47:14
2	Sn 189.927†	-12.3	-24.2	4.5606 ug/L	4.5606 ppb	14:47:34
2	Ti 334.940†	1692012.0	1543376.4	2648.8 ug/L	2648.8 ppb	14:47:09
2	Tl 190.801†	-199.1	-120.2	5.9680 ug/L	5.9680 ppb	14:47:34
2	U 409.014†	-14755.4	-8181.4	-270.91 ug/L	-270.91 ppb	14:47:09
2	V 292.402†	9317.4	10183.4	66.417 ug/L	66.417 ppb	14:47:14
2	Zn 213.857†	57401.0	51322.4	413.96 ug/L	413.96 ppb	14:47:14
2	SiO2†	327846.5	298275.3	18018 ug/L	18018 ppb	14:48:16
3	Sc Radial	7793.9	7793.9	112 %		14:46:11
3	Y RADIAL	8955.6	8955.6	140.8 %		14:46:11
3	Al 396.153Radial†	30405.9	27140.5	22904 ug/L	22904 ppb	14:46:11
3	Ca 317.933Radial†	7199.7	6383.4	9408.0 ug/L	9408.0 ppb	14:46:11
3	Fe 238.204 Radial†	24991.0	22210.1	99262 ug/L	99262 ppb	14:46:11
3	K 766.490 Radial†	18568.9	13744.9	2827.9 ug/L	2827.9 ppb	14:46:11
3	Mg 279.077 IEC†	163.5	141.6	3538.5 ug/L	3538.5 ppb	14:46:31
3	Na 589.592 Radial†	12044.8	11054.5	680.20 ug/L	680.20 ppb	14:46:11
3	Sr 421.552†	19105.7	17071.8	53.000 ug/L	53.000 ppb	14:46:11
3	Sc 361.383	824589.7	824589.7	110.73 %		14:47:40
3	Y 371.029	794406.0	794406.0	136.64 %		14:47:40
3	Ag 328.068†	-5002.1	-5223.1	3.5823 ug/L	3.5823 ppb	14:47:45
3	As 188.979†	-56.6	-16.8	26.742 ug/L	26.742 ppb	14:48:05
3	B 249.677†	138.4	1006.3	16.159 ug/L	16.159 ppb	14:47:45
3	Ba 233.527†	41038.2	37037.5	239.99 ug/L	239.99 ppb	14:47:45
3	Be 313.107†	-4442.1	773.3	6.4592 ug/L	6.4592 ppb	14:47:45
3	Cd 226.502†	595.6	831.1	-2.1875 ug/L	-2.1875 ppb	14:48:05
3	Co 228.616†	974.4	980.5	8.5747 ug/L	8.5747 ppb	14:48:05
3	Cr 267.716†	5166.2	4763.4	61.934 ug/L	61.934 ppb	14:47:45
3	Cu 324.752†	14692.5	7477.4	30.895 ug/L	30.895 ppb	14:47:45
3	Mn 257.610†	2663295.2	2404398.8	2433.9 ug/L	2433.9 ppb	14:47:40
3	Mo 202.031†	171.9	150.9	16.042 ug/L	16.042 ppb	14:48:05
3	Ni 231.604†	2000.0	1669.5	39.927 ug/L	39.927 ppb	14:48:05
3	P 214.914†	2071.8	1577.4	632.97 ug/L	632.97 ppb	14:48:05
3	Pb 220.353†	561.4	524.8	50.542 ug/L	50.542 ppb	14:48:05
3	S 181.975 Axial†	321.5	154.3	181.58 ug/L	181.58 ppb	14:48:05
3	Sb 206.836†	83.5	22.8	-1.1621 ug/L	-1.1621 ppb	14:48:05
3	Se 196.026†	-757.6	-649.3	38.082 ug/L	38.082 ppb	14:48:05
3	Si 251.611†	325587.8	293576.7	8295.1 ug/L	8295.1 ppb	14:47:45
3	Sn 189.927†	-16.9	-28.3	3.9292 ug/L	3.9292 ppb	14:48:05
3	Ti 334.940†	1705393.6	1541600.3	2645.8 ug/L	2645.8 ppb	14:47:40
3	Tl 190.801†	-200.9	-120.3	5.8974 ug/L	5.8974 ppb	14:48:05
3	U 409.014†	-14822.8	-8121.4	-269.01 ug/L	-269.01 ppb	14:47:40
3	V 292.402†	9506.3	10277.6	67.211 ug/L	67.211 ppb	14:47:45
3	Zn 213.857†	58430.4	51781.8	417.75 ug/L	417.75 ppb	14:47:45
3	SiO2†	330202.7	297717.5	17984 ug/L	17984 ppb	14:48:21

Mean Data: 1201871690|881343|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	823105.4	110.54	%	0.718				0.65%
Sc Radial	7679.1	111	%	1.9				1.67%
Y 371.029	793064.0	136.41	%	0.894				0.66%
Y RADIAL	8793.0	138.3	%	2.49				1.80%
Ag 328.068†	-5134.7	4.0834	ug/L	0.43450	4.0834	ppb	0.43450	10.64%
Al 396.153Radial†	27115.8	22883	ug/L	58.7	22883	ppb	58.7	0.26%
As 188.979†	-19.1	26.027	ug/L	0.8255	26.027	ppb	0.8255	3.17%
B 249.677†	980.2	15.557	ug/L	1.0900	15.557	ppb	1.0900	7.01%
Ba 233.527†	36895.8	239.06	ug/L	0.804	239.06	ppb	0.804	0.34%
Be 313.107†	873.0	6.5007	ug/L	0.03899	6.5007	ppb	0.03899	0.60%
Ca 317.933Radial†	6384.0	9408.9	ug/L	22.68	9408.9	ppb	22.68	0.24%
Cd 226.502†	831.1	-2.1948	ug/L	0.06364	-2.1948	ppb	0.06364	2.90%
Co 228.616†	983.2	8.6130	ug/L	0.14911	8.6130	ppb	0.14911	1.73%
Cr 267.716†	4755.0	61.830	ug/L	0.2954	61.830	ppb	0.2954	0.48%
Cu 324.752†	7373.1	30.548	ug/L	0.3147	30.548	ppb	0.3147	1.03%
Fe 238.204 Radial†	22223.2	99321	ug/L	130.9	99321	ppb	130.9	0.13%
K 766.490 Radial†	13745.5	2828.0	ug/L	21.37	2828.0	ppb	21.37	0.76%

Mg 279.077 IEC†	144.4	3608.4	ug/L	108.49	3608.4	ppb	108.49	3.01%
Mn 257.610†	2406973.0	2436.5	ug/L	4.47	2436.5	ppb	4.47	0.18%
Mo 202.031†	133.4	14.937	ug/L	0.9641	14.937	ppb	0.9641	6.45%
Na 589.592 Radial†	11081.6	681.87	ug/L	1.702	681.87	ppb	1.702	0.25%
Ni 231.604†	1644.4	39.326	ug/L	0.5231	39.326	ppb	0.5231	1.33%
P 214.914†	1559.9	625.11	ug/L	7.275	625.11	ppb	7.275	1.16%
Pb 220.353†	527.4	50.798	ug/L	1.2513	50.798	ppb	1.2513	2.46%
S 181.975 Axial†	154.4	181.70	ug/L	7.860	181.70	ppb	7.860	4.33%
Sb 206.836†	32.6	1.4887	ug/L	2.74772	1.4887	ppb	2.74772	184.57%
Se 196.026†	-652.7	36.745	ug/L	3.8314	36.745	ppb	3.8314	10.43%
Si 251.611†	292011.1	8250.9	ug/L	40.16	8250.9	ppb	40.16	0.49%
Sn 189.927†	-26.4	4.2318	ug/L	0.31653	4.2318	ppb	0.31653	7.48%
Sr 421.552†	17036.2	52.890	ug/L	0.1719	52.890	ppb	0.1719	0.33%
Ti 334.940†	1541921.5	2646.3	ug/L	2.27	2646.3	ppb	2.27	0.09%
Tl 190.801†	-124.0	5.0254	ug/L	1.57188	5.0254	ppb	1.57188	31.28%
U 409.014†	-8132.6	-269.38	ug/L	1.387	-269.38	ppb	1.387	0.51%
V 292.402†	10213.2	66.661	ug/L	0.4778	66.661	ppb	0.4778	0.72%
Zn 213.857†	51489.2	415.33	ug/L	2.106	415.33	ppb	2.106	0.51%
SiO2†	296039.8	17883	ug/L	205.4	17883	ppb	205.4	1.15%

Sequence No.: 7
Sample ID: 1201871691|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 42
Date Collected: 7/2/2009 14:50:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871691|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Units	Sample Conc.	Units	Analysis Time
1	Sc Radial	7390.7	7390.7	107	%			14:52:45
1	Y RADIAL	8851.8	8851.8	139.2	%			14:52:25
1	Al 396.153Radial†	67158.8	63122.8	53251	ug/L	53251	ppb	14:52:25
1	Ca 317.933Radial†	9922.9	9289.8	13692	ug/L	13692	ppb	14:52:25
1	Fe 238.204 Radial†	25759.2	24145.2	107920	ug/L	107920	ppb	14:52:25
1	K 766.490 Radial†	50216.2	44359.0	9142.4	ug/L	9142.4	ppb	14:52:25
1	Mg 279.077 IEC†	483.2	449.7	11420	ug/L	11420	ppb	14:52:45
1	Na 589.592 Radial†	93641.8	88247.0	5430.0	ug/L	5430.0	ppb	14:52:25
1	Sr 421.552†	186647.3	175296.6	545.03	ug/L	545.03	ppb	14:52:25
1	Sc 361.383	802895.6	802895.6	107.82	%			14:53:44
1	Y 371.029	801256.2	801256.2	137.81	%			14:53:44
1	Ag 328.068†	88418.8	81299.1	481.30	ug/L	481.30	ppb	14:53:44
1	As 188.979†	1514.2	1438.7	493.97	ug/L	493.97	ppb	14:54:04
1	B 249.677†	22113.7	21390.9	479.44	ug/L	479.44	ppb	14:53:44
1	Ba 233.527†	116881.1	108380.2	703.78	ug/L	703.78	ppb	14:53:44
1	Be 313.107†	1249818.7	1163942.7	477.11	ug/L	477.11	ppb	14:53:44
1	Cd 226.502†	45751.3	42725.8	468.80	ug/L	468.80	ppb	14:53:44
1	Co 228.616†	31871.9	29660.4	461.06	ug/L	461.06	ppb	14:54:04
1	Cr 267.716†	45538.5	42333.2	533.45	ug/L	533.45	ppb	14:53:44
1	Cu 324.752†	173063.5	154718.8	526.76	ug/L	526.76	ppb	14:53:44
1	Mn 257.610†	2796969.2	2593361.8	2625.1	ug/L	2625.1	ppb	14:53:44
1	Mo 202.031†	7903.5	7325.7	471.55	ug/L	471.55	ppb	14:54:04
1	Ni 231.604†	23065.7	21255.9	508.18	ug/L	508.18	ppb	14:54:04
1	P 214.914†	3021.8	2509.1	963.54	ug/L	963.54	ppb	14:54:04
1	Pb 220.353†	5330.4	4961.6	525.22	ug/L	525.22	ppb	14:54:04
1	S 181.975 Axial†	4633.7	4161.6	5007.6	ug/L	5007.6	ppb	14:54:04
1	Sb 206.836†	1888.1	1698.5	457.22	ug/L	457.22	ppb	14:54:04
1	Se 196.026†	349.1	358.7	525.71	ug/L	525.71	ppb	14:54:04
1	Si 251.611†	492329.4	456167.5	12873	ug/L	12873	ppb	14:53:44
1	Sn 189.927†	3214.0	2967.9	474.21	ug/L	474.21	ppb	14:54:04
1	Ti 334.940†	2290644.5	2126010.1	3648.4	ug/L	3648.4	ppb	14:53:44
1	Tl 190.801†	1870.0	1795.5	468.07	ug/L	468.07	ppb	14:54:04
1	U 409.014†	958.8	6153.7	180.22	ug/L	180.22	ppb	14:53:44
1	V 292.402†	70417.4	67002.3	536.77	ug/L	536.77	ppb	14:53:44
1	Zn 213.857†	122315.3	112458.2	915.05	ug/L	915.05	ppb	14:53:44
1	SiO2†	497013.6	460485.2	27781	ug/L	27781	ppb	14:55:05
2	Sc Radial	7368.3	7368.3	106	%			14:53:10
2	Y RADIAL	9020.4	9020.4	141.9	%			14:52:50
2	Al 396.153Radial†	67985.8	64093.7	54071	ug/L	54071	ppb	14:52:50
2	Ca 317.933Radial†	10024.5	9413.8	13874	ug/L	13874	ppb	14:52:50
2	Fe 238.204 Radial†	26016.3	24460.9	109340	ug/L	109340	ppb	14:52:50
2	K 766.490 Radial†	50683.4	44942.5	9263.3	ug/L	9263.3	ppb	14:52:50
2	Mg 279.077 IEC†	478.5	446.6	11340	ug/L	11340	ppb	14:53:10
2	Na 589.592 Radial†	94752.1	89560.5	5510.8	ug/L	5510.8	ppb	14:52:50
2	Sr 421.552†	189024.8	178069.5	553.65	ug/L	553.65	ppb	14:52:50
2	Sc 361.383	815475.1	815475.1	109.51	%			14:54:11
2	Y 371.029	813028.7	813028.7	139.84	%			14:54:11
2	Ag 328.068†	89693.2	81197.9	481.19	ug/L	481.19	ppb	14:54:11
2	As 188.979†	1510.2	1413.4	486.22	ug/L	486.22	ppb	14:54:32
2	B 249.677†	22530.7	21455.3	480.86	ug/L	480.86	ppb	14:54:11
2	Ba 233.527†	118869.7	108523.9	704.71	ug/L	704.71	ppb	14:54:11
2	Be 313.107†	1269758.3	1164269.5	477.23	ug/L	477.23	ppb	14:54:11
2	Cd 226.502†	46546.7	42797.5	469.44	ug/L	469.44	ppb	14:54:11
2	Co 228.616†	31784.9	29125.0	452.56	ug/L	452.56	ppb	14:54:32
2	Cr 267.716†	46326.8	42401.5	534.33	ug/L	534.33	ppb	14:54:11
2	Cu 324.752†	175792.5	154734.8	526.90	ug/L	526.90	ppb	14:54:11
2	Mn 257.610†	2840583.5	2593172.1	2625.1	ug/L	2625.1	ppb	14:54:11
2	Mo 202.031†	7893.6	7203.6	463.90	ug/L	463.90	ppb	14:54:32
2	Ni 231.604†	23054.5	20915.7	500.05	ug/L	500.05	ppb	14:54:32

2	P 214.914†	3019.5	2463.8	942.17	ug/L	942.17 ppb	14:54:32
2	Pb 220.353†	5325.8	4881.1	516.73	ug/L	516.73 ppb	14:54:32
2	S 181.975 Axial†	4627.0	4089.2	4920.1	ug/L	4920.1 ppb	14:54:32
2	Sb 206.836†	1867.3	1652.5	444.44	ug/L	444.44 ppb	14:54:32
2	Se 196.026†	331.9	337.9	521.08	ug/L	521.08 ppb	14:54:32
2	Si 251.611†	501967.8	457925.2	12923	ug/L	12923 ppb	14:54:11
2	Sn 189.927†	3209.5	2917.8	466.49	ug/L	466.49 ppb	14:54:32
2	Ti 334.940†	2323169.3	2122938.0	3643.1	ug/L	3643.1 ppb	14:54:11
2	Tl 190.801†	1890.3	1787.2	466.12	ug/L	466.12 ppb	14:54:32
2	U 409.014†	1150.4	6315.0	185.14	ug/L	185.14 ppb	14:54:11
2	V 292.402†	71507.0	66989.7	536.38	ug/L	536.38 ppb	14:54:11
2	Zn 213.857†	124429.0	112638.4	916.45	ug/L	916.45 ppb	14:54:11
2	SiO2†	500606.9	456655.7	27550	ug/L	27550 ppb	14:55:10
3	Sc Radial	7355.1	7355.1	106	%		14:53:35
3	Y RADIAL	8982.3	8982.3	141.3	%		14:53:15
3	Al 396.153Radial†	67688.4	63928.2	53931	ug/L	53931 ppb	14:53:15
3	Ca 317.933Radial†	9961.5	9371.3	13812	ug/L	13812 ppb	14:53:15
3	Fe 238.204 Radial†	25731.1	24235.9	108330	ug/L	108330 ppb	14:53:15
3	K 766.490 Radial†	50205.6	44577.6	9187.6	ug/L	9187.6 ppb	14:53:15
3	Mg 279.077 IEC†	477.4	446.4	11335	ug/L	11335 ppb	14:53:35
3	Na 589.592 Radial†	93808.1	88830.3	5465.9	ug/L	5465.9 ppb	14:53:15
3	Sr 421.552†	187555.0	177002.8	550.34	ug/L	550.34 ppb	14:53:15
3	Sc 361.383	806986.5	806986.5	108.37	%		14:54:39
3	Y 371.029	805180.4	805180.4	138.49	%		14:54:39
3	Ag 328.068†	88476.1	80936.3	479.44	ug/L	479.44 ppb	14:54:39
3	As 188.979†	1526.0	1442.5	495.23	ug/L	495.23 ppb	14:54:59
3	B 249.677†	22147.8	21318.4	477.76	ug/L	477.76 ppb	14:54:39
3	Ba 233.527†	117544.4	108442.8	704.18	ug/L	704.18 ppb	14:54:39
3	Be 313.107†	1256632.6	1164354.2	477.27	ug/L	477.27 ppb	14:54:39
3	Cd 226.502†	46072.5	42807.1	469.67	ug/L	469.67 ppb	14:54:39
3	Co 228.616†	31952.9	29585.3	459.87	ug/L	459.87 ppb	14:54:59
3	Cr 267.716†	46034.7	42576.9	536.51	ug/L	536.51 ppb	14:54:39
3	Cu 324.752†	173099.5	153938.3	524.16	ug/L	524.16 ppb	14:54:39
3	Mn 257.610†	2811399.6	2593527.4	2625.3	ug/L	2625.3 ppb	14:54:39
3	Mo 202.031†	7926.0	7309.3	470.53	ug/L	470.53 ppb	14:54:59
3	Ni 231.604†	23139.2	21215.3	507.21	ug/L	507.21 ppb	14:54:59
3	P 214.914†	3043.3	2514.7	966.52	ug/L	966.52 ppb	14:54:59
3	Pb 220.353†	5360.4	4964.2	525.60	ug/L	525.60 ppb	14:54:59
3	S 181.975 Axial†	4658.1	4162.3	5008.3	ug/L	5008.3 ppb	14:54:59
3	Sb 206.836†	1900.1	1700.7	457.73	ug/L	457.73 ppb	14:54:59
3	Se 196.026†	348.3	356.2	526.01	ug/L	526.01 ppb	14:54:59
3	Si 251.611†	495618.4	456887.7	12894	ug/L	12894 ppb	14:54:39
3	Sn 189.927†	3232.2	2969.6	474.53	ug/L	474.53 ppb	14:54:59
3	Ti 334.940†	2298659.5	2122636.3	3642.6	ug/L	3642.6 ppb	14:54:39
3	Tl 190.801†	1889.3	1804.5	470.18	ug/L	470.18 ppb	14:54:59
3	U 409.014†	882.5	6078.8	177.80	ug/L	177.80 ppb	14:54:39
3	V 292.402†	70713.5	66944.4	536.22	ug/L	536.22 ppb	14:54:39
3	Zn 213.857†	122956.8	112475.2	915.16	ug/L	915.16 ppb	14:54:39
3	SiO2†	500556.4	461417.6	27837	ug/L	27837 ppb	14:55:16

Mean Data: 1201871691|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	808452.4	108.57	%	0.862				0.79%
Sc Radial	7371.4	106	%	0.3				0.24%
Y 371.029	806488.4	138.71	%	1.031				0.74%
Y RADIAL	8951.5	140.8	%	1.39				0.99%
Ag 328.068†	81144.4	480.65	ug/L	1.042	480.65	ppb	1.042	0.22%
Al 396.153Radial†	63714.9	53751	ug/L	438.5	53751	ppb	438.5	0.82%
As 188.979†	1431.5	491.81	ug/L	4.876	491.81	ppb	4.876	0.99%
B 249.677†	21388.2	479.35	ug/L	1.552	479.35	ppb	1.552	0.32%
Ba 233.527†	108449.0	704.22	ug/L	0.464	704.22	ppb	0.464	0.07%
Be 313.107†	1164188.8	477.20	ug/L	0.080	477.20	ppb	0.080	0.02%
Ca 317.933Radial†	9358.3	13793	ug/L	92.9	13793	ppb	92.9	0.67%
Cd 226.502†	42776.8	469.30	ug/L	0.449	469.30	ppb	0.449	0.10%
Co 228.616†	29456.9	457.83	ug/L	4.601	457.83	ppb	4.601	1.01%
Cr 267.716†	42437.2	534.76	ug/L	1.576	534.76	ppb	1.576	0.29%
Cu 324.752†	154464.0	525.94	ug/L	1.543	525.94	ppb	1.543	0.29%
Fe 238.204 Radial†	24280.7	108530	ug/L	726.4	108530	ppb	726.4	0.67%
K 766.490 Radial†	44626.4	9197.8	ug/L	61.06	9197.8	ppb	61.06	0.66%

Mg 279.077 IEC†	447.6	11365	ug/L	48.0	11365	ppb	48.0	0.42%
Mn 257.610†	2593353.7	2625.2	ug/L	0.13	2625.2	ppb	0.13	0.00%
Mo 202.031†	7279.6	468.66	ug/L	4.155	468.66	ppb	4.155	0.89%
Na 589.592 Radial†	88879.3	5468.9	ug/L	40.50	5468.9	ppb	40.50	0.74%
Ni 231.604†	21129.0	505.14	ug/L	4.442	505.14	ppb	4.442	0.88%
P 214.914†	2495.9	957.41	ug/L	13.285	957.41	ppb	13.285	1.39%
Pb 220.353†	4935.6	522.52	ug/L	5.012	522.52	ppb	5.012	0.96%
S 181.975 Axial†	4137.7	4978.7	ug/L	50.73	4978.7	ppb	50.73	1.02%
Sb 206.836†	1683.9	453.13	ug/L	7.528	453.13	ppb	7.528	1.66%
Se 196.026†	350.9	524.27	ug/L	2.764	524.27	ppb	2.764	0.53%
Si 251.611†	456993.5	12897	ug/L	25.1	12897	ppb	25.1	0.19%
Sn 189.927†	2951.7	471.74	ug/L	4.551	471.74	ppb	4.551	0.96%
Sr 421.552†	176789.6	549.67	ug/L	4.349	549.67	ppb	4.349	0.79%
Ti 334.940†	2123861.5	3644.7	ug/L	3.20	3644.7	ppb	3.20	0.09%
Tl 190.801†	1795.8	468.13	ug/L	2.029	468.13	ppb	2.029	0.43%
U 409.014†	6182.5	181.06	ug/L	3.743	181.06	ppb	3.743	2.07%
V 292.402†	66978.8	536.46	ug/L	0.280	536.46	ppb	0.280	0.05%
Zn 213.857†	112523.9	915.55	ug/L	0.778	915.55	ppb	0.778	0.08%
SiO2†	459519.5	27723	ug/L	152.2	27723	ppb	152.2	0.55%

Sequence No.: 8
Sample ID: 1201871693|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 43
Date Collected: 7/2/2009 14:57:26
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871693|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7471.3	7471.3	108	%			14:59:39
1	Y RADIAL	9257.8	9257.8	145.6	%			14:59:19
1	Al 396.153Radial†	73943.7	68744.0	57995	ug/L	57995	ppb	14:59:19
1	Ca 317.933Radial†	11347.5	10512.3	15493	ug/L	15493	ppb	14:59:19
1	Fe 238.204 Radial†	28165.7	26119.3	116750	ug/L	116750	ppb	14:59:19
1	K 766.490 Radial†	51338.8	44893.0	9215.9	ug/L	9215.9	ppb	14:59:19
1	Mg 279.077 IEC†	552.2	508.9	12926	ug/L	12926	ppb	14:59:39
1	Na 589.592 Radial†	98325.7	91648.8	5639.3	ug/L	5639.3	ppb	14:59:19
1	Sr 421.552†	193788.5	180038.7	559.76	ug/L	559.76	ppb	14:59:19
1	Sc 361.383	807566.0	807566.0	108.45	%			15:00:43
1	Y 371.029	843391.6	843391.6	145.06	%			15:00:37
1	Ag 328.068†	91119.1	83314.8	495.40	ug/L	495.40	ppb	15:00:43
1	As 188.979†	1555.2	1468.4	505.47	ug/L	505.47	ppb	15:01:03
1	B 249.677†	23007.0	22096.0	494.91	ug/L	494.91	ppb	15:00:43
1	Ba 233.527†	144284.3	133021.7	863.68	ug/L	863.68	ppb	15:00:43
1	Be 313.107†	1296412.8	1200203.3	491.87	ug/L	491.87	ppb	15:00:37
1	Cd 226.502†	47200.1	43816.3	480.06	ug/L	480.06	ppb	15:00:43
1	Co 228.616†	32746.2	30295.7	470.90	ug/L	470.90	ppb	15:01:03
1	Cr 267.716†	46647.7	43111.7	543.49	ug/L	543.49	ppb	15:00:43
1	Cu 324.752†	180660.8	160795.9	547.72	ug/L	547.72	ppb	15:00:43
1	Mn 257.610†	6114298.2	5637259.4	5691.7	ug/L	5691.7	ppb	15:00:37
1	Mo 202.031†	7940.2	7317.2	471.58	ug/L	471.58	ppb	15:01:03
1	Ni 231.604†	23633.7	21655.9	517.74	ug/L	517.74	ppb	15:01:03
1	P 214.914†	3964.1	3361.7	1337.9	ug/L	1337.9	ppb	15:01:03
1	Pb 220.353†	5545.1	5130.9	543.19	ug/L	543.19	ppb	15:01:03
1	S 181.975 Axial†	4673.1	4173.1	5020.5	ug/L	5020.5	ppb	15:01:03
1	Sb 206.836†	1879.2	1680.2	451.96	ug/L	451.96	ppb	15:01:03
1	Se 196.026†	294.7	306.6	531.83	ug/L	531.83	ppb	15:01:03
1	Si 251.611†	495032.9	456019.7	12869	ug/L	12869	ppb	15:00:43
1	Sn 189.927†	3223.2	2959.1	473.68	ug/L	473.68	ppb	15:01:03
1	Ti 334.940†	2346385.8	2165122.6	3715.7	ug/L	3715.7	ppb	15:00:37
1	Tl 190.801†	1798.9	1719.9	464.89	ug/L	464.89	ppb	15:01:03
1	U 409.014†	-3175.9	2336.1	58.450	ug/L	58.450	ppb	15:00:43
1	V 292.402†	76423.7	72162.9	577.58	ug/L	577.58	ppb	15:00:43
1	Zn 213.857†	127036.5	116155.6	944.59	ug/L	944.59	ppb	15:00:43
1	SiO2†	491124.0	452388.5	27292	ug/L	27292	ppb	15:02:12
2	Sc Radial	7535.4	7535.4	109	%			15:00:04
2	Y RADIAL	9182.0	9182.0	144.4	%			14:59:44
2	Al 396.153Radial†	73045.7	67333.4	56805	ug/L	56805	ppb	14:59:44
2	Ca 317.933Radial†	11169.0	10258.3	15119	ug/L	15119	ppb	14:59:44
2	Fe 238.204 Radial†	27712.5	25479.7	113890	ug/L	113890	ppb	14:59:44
2	K 766.490 Radial†	50610.3	43816.9	8993.3	ug/L	8993.3	ppb	14:59:44
2	Mg 279.077 IEC†	560.6	512.2	13015	ug/L	13015	ppb	15:00:04
2	Na 589.592 Radial†	96885.6	89546.6	5509.9	ug/L	5509.9	ppb	14:59:44
2	Sr 421.552†	190978.1	175921.2	546.96	ug/L	546.96	ppb	14:59:44
2	Sc 361.383	799627.4	799627.4	107.38	%			15:01:15
2	Y 371.029	832263.1	832263.1	143.15	%			15:01:09
2	Ag 328.068†	90460.2	83535.3	495.70	ug/L	495.70	ppb	15:01:15
2	As 188.979†	1542.6	1470.8	505.61	ug/L	505.61	ppb	15:01:35
2	B 249.677†	22805.5	22119.0	495.61	ug/L	495.61	ppb	15:01:15
2	Ba 233.527†	142849.4	133006.3	863.59	ug/L	863.59	ppb	15:01:15
2	Be 313.107†	1276092.2	1193147.8	489.00	ug/L	489.00	ppb	15:01:09
2	Cd 226.502†	46635.4	43722.5	479.34	ug/L	479.34	ppb	15:01:15
2	Co 228.616†	32781.4	30628.2	476.24	ug/L	476.24	ppb	15:01:35
2	Cr 267.716†	46190.5	43113.0	543.45	ug/L	543.45	ppb	15:01:15
2	Cu 324.752†	179262.9	161148.0	548.74	ug/L	548.74	ppb	15:01:15
2	Mn 257.610†	6034917.1	5619308.8	5673.2	ug/L	5673.2	ppb	15:01:09
2	Mo 202.031†	7954.4	7403.1	476.84	ug/L	476.84	ppb	15:01:35
2	Ni 231.604†	23693.5	21927.9	524.25	ug/L	524.25	ppb	15:01:35

2	P 214.914†	3981.8	3414.5	1363.4	ug/L	1363.4 ppb	15:01:35
2	Pb 220.353†	5580.7	5214.8	552.11	ug/L	552.11 ppb	15:01:35
2	S 181.975 Axial†	4687.7	4229.5	5088.8	ug/L	5088.8 ppb	15:01:35
2	Sb 206.836†	1893.8	1711.0	460.51	ug/L	460.51 ppb	15:01:35
2	Se 196.026†	275.7	291.6	515.47	ug/L	515.47 ppb	15:01:35
2	Si 251.611†	491601.4	457355.9	12907	ug/L	12907 ppb	15:01:15
2	Sn 189.927†	3225.6	2990.9	478.41	ug/L	478.41 ppb	15:01:35
2	Ti 334.940†	2316765.7	2159018.8	3705.2	ug/L	3705.2 ppb	15:01:09
2	Tl 190.801†	1819.3	1755.4	473.10	ug/L	473.10 ppb	15:01:35
2	U 409.014†	-3136.4	2343.7	59.043	ug/L	59.043 ppb	15:01:15
2	V 292.402†	75545.7	72045.0	577.09	ug/L	577.09 ppb	15:01:15
2	Zn 213.857†	125837.6	116202.1	945.22	ug/L	945.22 ppb	15:01:15
2	SiO2†	497358.4	462690.3	27914	ug/L	27914 ppb	15:02:18
3	Sc Radial	7460.9	7460.9	108	%		15:00:29
3	Y RADIAL	9375.6	9375.6	147.4	%		15:00:09
3	Al 396.153Radial†	74766.5	69605.0	58722	ug/L	58722 ppb	15:00:09
3	Ca 317.933Radial†	11419.3	10593.7	15613	ug/L	15613 ppb	15:00:09
3	Fe 238.204 Radial†	28365.2	26341.3	117740	ug/L	117740 ppb	15:00:09
3	K 766.490 Radial†	51573.9	45178.2	9274.6	ug/L	9274.6 ppb	15:00:09
3	Mg 279.077 IEC†	561.3	518.1	13160	ug/L	13160 ppb	15:00:29
3	Na 589.592 Radial†	98863.6	92276.4	5677.9	ug/L	5677.9 ppb	15:00:09
3	Sr 421.552†	195309.9	181704.7	564.94	ug/L	564.94 ppb	15:00:09
3	Sc 361.383	796913.2	796913.2	107.02	%		15:01:47
3	Y 371.029	837968.7	837968.7	144.13	%		15:01:41
3	Ag 328.068†	89729.9	83139.8	494.75	ug/L	494.75 ppb	15:01:47
3	As 188.979†	1565.2	1496.8	514.76	ug/L	514.76 ppb	15:02:07
3	B 249.677†	22652.5	22048.3	493.72	ug/L	493.72 ppb	15:01:47
3	Ba 233.527†	142385.0	133025.4	863.69	ug/L	863.69 ppb	15:01:47
3	Be 313.107†	1285384.9	1205878.5	494.20	ug/L	494.20 ppb	15:01:41
3	Cd 226.502†	46547.8	43788.6	479.63	ug/L	479.63 ppb	15:01:47
3	Co 228.616†	32725.5	30680.0	476.94	ug/L	476.94 ppb	15:02:07
3	Cr 267.716†	45929.1	43015.2	542.30	ug/L	542.30 ppb	15:01:47
3	Cu 324.752†	177243.9	159830.0	544.53	ug/L	544.53 ppb	15:01:47
3	Mn 257.610†	6057440.7	5659496.6	5714.2	ug/L	5714.2 ppb	15:01:41
3	Mo 202.031†	7946.3	7420.8	478.21	ug/L	478.21 ppb	15:02:07
3	Ni 231.604†	23661.2	21972.9	525.32	ug/L	525.32 ppb	15:02:07
3	P 214.914†	3921.2	3370.6	1342.0	ug/L	1342.0 ppb	15:02:07
3	Pb 220.353†	5557.2	5210.6	551.68	ug/L	551.68 ppb	15:02:07
3	S 181.975 Axial†	4687.4	4244.1	5106.0	ug/L	5106.0 ppb	15:02:07
3	Sb 206.836†	1869.5	1694.3	455.97	ug/L	455.97 ppb	15:02:07
3	Se 196.026†	280.0	296.5	530.61	ug/L	530.61 ppb	15:02:07
3	Si 251.611†	487868.2	455426.7	12852	ug/L	12852 ppb	15:01:47
3	Sn 189.927†	3214.8	2991.0	478.76	ug/L	478.76 ppb	15:02:07
3	Ti 334.940†	2327538.0	2176432.8	3735.1	ug/L	3735.1 ppb	15:01:41
3	Tl 190.801†	1823.8	1765.4	475.96	ug/L	475.96 ppb	15:02:07
3	U 409.014†	-3156.2	2315.3	57.675	ug/L	57.675 ppb	15:01:47
3	V 292.402†	74983.8	71759.5	574.19	ug/L	574.19 ppb	15:01:47
3	Zn 213.857†	125259.9	116061.4	943.65	ug/L	943.65 ppb	15:01:47
3	SiO2†	494280.3	461391.6	27835	ug/L	27835 ppb	15:02:23

Mean Data: 1201871693|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	801368.8	107.62	%	0.743				0.69%
Sc Radial	7489.2	108	%	0.6				0.54%
Y 371.029	837874.5	144.11	%	0.957				0.66%
Y RADIAL	9271.8	145.8	%	1.53				1.05%
Ag 328.068†	83330.0	495.28	ug/L	0.486	495.28	ppb	0.486	0.10%
Al 396.153Radial†	68560.8	57840	ug/L	967.8	57840	ppb	967.8	1.67%
As 188.979†	1478.7	508.61	ug/L	5.323	508.61	ppb	5.323	1.05%
B 249.677†	22087.8	494.75	ug/L	0.953	494.75	ppb	0.953	0.19%
Ba 233.527†	133017.8	863.65	ug/L	0.055	863.65	ppb	0.055	0.01%
Be 313.107†	1199743.2	491.69	ug/L	2.602	491.69	ppb	2.602	0.53%
Ca 317.933Radial†	10454.8	15409	ug/L	257.8	15409	ppb	257.8	1.67%
Cd 226.502†	43775.8	479.68	ug/L	0.361	479.68	ppb	0.361	0.08%
Co 228.616†	30534.6	474.69	ug/L	3.303	474.69	ppb	3.303	0.70%
Cr 267.716†	43080.0	543.08	ug/L	0.677	543.08	ppb	0.677	0.12%
Cu 324.752†	160591.3	546.99	ug/L	2.197	546.99	ppb	2.197	0.40%
Fe 238.204 Radial†	25980.1	116130	ug/L	1999.3	116130	ppb	1999.3	1.72%
K 766.490 Radial†	44629.3	9161.3	ug/L	148.39	9161.3	ppb	148.39	1.62%

Mg 279.077 IEC†	513.1	13034	ug/L	118.2	13034	ppb	118.2	0.91%
Mn 257.610†	5638688.3	5693.0	ug/L	20.51	5693.0	ppb	20.51	0.36%
Mo 202.031†	7380.4	475.55	ug/L	3.500	475.55	ppb	3.500	0.74%
Na 589.592 Radial†	91157.3	5609.1	ug/L	87.98	5609.1	ppb	87.98	1.57%
Ni 231.604†	21852.3	522.44	ug/L	4.101	522.44	ppb	4.101	0.78%
P 214.914†	3382.3	1347.8	ug/L	13.70	1347.8	ppb	13.70	1.02%
Pb 220.353†	5185.5	549.00	ug/L	5.029	549.00	ppb	5.029	0.92%
S 181.975 Axial†	4215.5	5071.8	ug/L	45.20	5071.8	ppb	45.20	0.89%
Sb 206.836†	1695.2	456.15	ug/L	4.279	456.15	ppb	4.279	0.94%
Se 196.026†	298.2	525.97	ug/L	9.116	525.97	ppb	9.116	1.73%
Si 251.611†	456267.4	12876	ug/L	28.0	12876	ppb	28.0	0.22%
Sn 189.927†	2980.3	476.95	ug/L	2.837	476.95	ppb	2.837	0.59%
Sr 421.552†	179221.5	557.22	ug/L	9.256	557.22	ppb	9.256	1.66%
Ti 334.940†	2166858.1	3718.6	ug/L	15.17	3718.6	ppb	15.17	0.41%
Tl 190.801†	1746.9	471.32	ug/L	5.745	471.32	ppb	5.745	1.22%
U 409.014†	2331.7	58.389	ug/L	0.6864	58.389	ppb	0.6864	1.18%
V 292.402†	71989.1	576.29	ug/L	1.829	576.29	ppb	1.829	0.32%
Zn 213.857†	116139.7	944.49	ug/L	0.791	944.49	ppb	0.791	0.08%
SiO2†	458823.5	27680	ug/L	338.8	27680	ppb	338.8	1.22%

Sequence No.: 9
Sample ID: 1201871692|881343|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 44
Date Collected: 7/2/2009 15:04:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871692|881343|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6983.3	6983.3	101	%			15:06:26
1	Y RADIAL	6791.5	6791.5	106.8	%			15:06:26
1	Al 396.153Radial†	6016.8	6049.0	5104.8	ug/L	5104.8	ppb	15:06:26
1	Ca 317.933Radial†	1227.0	1192.8	1757.9	ug/L	1757.9	ppb	15:06:46
1	Fe 238.204 Radial†	4334.1	4267.6	19073	ug/L	19073	ppb	15:06:26
1	K 766.490 Radial†	5738.8	2915.6	599.89	ug/L	599.89	ppb	15:06:26
1	Mg 279.077 IEC†	33.0	28.8	721.36	ug/L	721.36	ppb	15:06:46
1	Na 589.592 Radial†	2189.3	2506.6	154.23	ug/L	154.23	ppb	15:06:26
1	Sr 421.552†	3520.6	3560.4	11.056	ug/L	11.056	ppb	15:06:26
1	Sc 361.383	791317.0	791317.0	106.27	%			15:07:43
1	Y 371.029	644992.7	644992.7	110.94	%			15:07:43
1	Ag 328.068†	-203.2	-897.1	1.2678	ug/L	1.2678	ppb	15:07:43
1	As 188.979†	-39.4	-2.8	5.3702	ug/L	5.3702	ppb	15:08:03
1	B 249.677†	-350.7	551.3	11.288	ug/L	11.288	ppb	15:07:43
1	Ba 233.527†	7163.6	6718.7	43.529	ug/L	43.529	ppb	15:08:03
1	Be 313.107†	-6056.0	-914.2	0.8620	ug/L	0.8620	ppb	15:07:43
1	Cd 226.502†	-138.3	163.1	-0.3813	ug/L	-0.3813	ppb	15:08:03
1	Co 228.616†	129.4	222.3	2.1392	ug/L	2.1392	ppb	15:08:03
1	Cr 267.716†	1010.6	1049.0	13.575	ug/L	13.575	ppb	15:08:03
1	Cu 324.752†	7282.7	1062.4	4.6769	ug/L	4.6769	ppb	15:07:43
1	Mn 257.610†	500431.9	470204.4	475.92	ug/L	475.92	ppb	15:07:43
1	Mo 202.031†	49.5	42.2	3.9200	ug/L	3.9200	ppb	15:08:03
1	Ni 231.604†	565.3	395.3	9.4542	ug/L	9.4542	ppb	15:08:03
1	P 214.914†	549.7	223.7	86.368	ug/L	86.368	ppb	15:08:03
1	Pb 220.353†	100.5	112.4	11.068	ug/L	11.068	ppb	15:08:03
1	S 181.975 Axial†	157.8	12.5	14.086	ug/L	14.086	ppb	15:08:03
1	Sb 206.836†	66.3	9.8	1.1482	ug/L	1.1482	ppb	15:08:03
1	Se 196.026†	-149.0	-105.4	16.141	ug/L	16.141	ppb	15:08:03
1	Si 251.611†	71570.5	66901.3	1890.3	ug/L	1890.3	ppb	15:07:43
1	Sn 189.927†	8.2	-5.3	0.7752	ug/L	0.7752	ppb	15:08:03
1	Ti 334.940†	326153.4	308447.5	529.36	ug/L	529.36	ppb	15:07:43
1	Tl 190.801†	-76.4	-10.7	4.3204	ug/L	4.3204	ppb	15:08:03
1	U 409.014†	-7214.0	-1524.1	-50.542	ug/L	-50.542	ppb	15:07:43
1	V 292.402†	189.4	1871.1	12.053	ug/L	12.053	ppb	15:07:43
1	Zn 213.857†	11702.7	10028.2	80.908	ug/L	80.908	ppb	15:07:43
1	SiO2†	71696.7	66993.3	4046.8	ug/L	4046.8	ppb	15:08:59
2	Sc Radial	7531.1	7531.1	109	%			15:06:51
2	Y RADIAL	7249.8	7249.8	114.0	%			15:06:51
2	Al 396.153Radial†	5855.1	5465.2	4612.1	ug/L	4612.1	ppb	15:06:51
2	Ca 317.933Radial†	1226.8	1103.9	1627.0	ug/L	1627.0	ppb	15:07:11
2	Fe 238.204 Radial†	4236.9	3864.7	17272	ug/L	17272	ppb	15:06:51
2	K 766.490 Radial†	5728.5	2491.3	511.91	ug/L	511.91	ppb	15:06:51
2	Mg 279.077 IEC†	35.6	28.9	724.30	ug/L	724.30	ppb	15:07:11
2	Na 589.592 Radial†	1955.5	2132.8	131.24	ug/L	131.24	ppb	15:06:51
2	Sr 421.552†	3478.7	3267.4	10.146	ug/L	10.146	ppb	15:06:51
2	Sc 361.383	790154.8	790154.8	106.11	%			15:08:09
2	Y 371.029	644809.0	644809.0	110.91	%			15:08:09
2	Ag 328.068†	-249.8	-941.3	0.4490	ug/L	0.4490	ppb	15:08:09
2	As 188.979†	-22.1	13.5	10.182	ug/L	10.182	ppb	15:08:29
2	B 249.677†	-310.3	588.8	12.269	ug/L	12.269	ppb	15:08:09
2	Ba 233.527†	7230.3	6791.6	44.011	ug/L	44.011	ppb	15:08:29
2	Be 313.107†	-6075.0	-940.4	0.8521	ug/L	0.8521	ppb	15:08:09
2	Cd 226.502†	-111.7	188.0	0.1096	ug/L	0.1096	ppb	15:08:29
2	Co 228.616†	133.5	226.3	2.2287	ug/L	2.2287	ppb	15:08:29
2	Cr 267.716†	988.4	1029.5	13.292	ug/L	13.292	ppb	15:08:29
2	Cu 324.752†	7333.6	1120.5	4.7683	ug/L	4.7683	ppb	15:08:09
2	Mn 257.610†	499291.6	469822.4	475.31	ug/L	475.31	ppb	15:08:09
2	Mo 202.031†	51.3	43.9	3.9108	ug/L	3.9108	ppb	15:08:29
2	Ni 231.604†	579.5	409.5	9.7931	ug/L	9.7931	ppb	15:08:29

2	P 214.914†	530.6	206.5	79.857	ug/L	79.857 ppb	15:08:29
2	Pb 220.353†	86.2	99.1	9.7370	ug/L	9.7370 ppb	15:08:29
2	S 181.975 Axial†	150.9	6.2	6.5720	ug/L	6.5720 ppb	15:08:29
2	Sb 206.836†	70.0	13.3	2.0778	ug/L	2.0778 ppb	15:08:29
2	Se 196.026†	-159.9	-115.9	5.3714	ug/L	5.3714 ppb	15:08:29
2	Si 251.611†	70673.1	66154.7	1869.3	ug/L	1869.3 ppb	15:08:09
2	Sn 189.927†	2.1	-11.0	-0.2665	ug/L	-0.2665 ppb	15:08:29
2	Ti 334.940†	325858.4	308620.9	529.65	ug/L	529.65 ppb	15:08:09
2	Tl 190.801†	-82.9	-16.9	2.8268	ug/L	2.8268 ppb	15:08:29
2	U 409.014†	-7066.8	-1395.4	-46.252	ug/L	-46.252 ppb	15:08:09
2	V 292.402†	211.8	1892.5	12.489	ug/L	12.489 ppb	15:08:09
2	Zn 213.857†	11613.3	9960.1	80.530	ug/L	80.530 ppb	15:08:09
2	SiO2†	70796.7	66244.4	4001.6	ug/L	4001.6 ppb	15:09:05
3	Sc Radial	7429.9	7429.9	107	%		15:07:16
3	Y RADIAL	7164.6	7164.6	112.7	%		15:07:16
3	Al 396.153Radial†	5904.3	5584.7	4713.0	ug/L	4713.0 ppb	15:07:16
3	Ca 317.933Radial†	1239.6	1131.2	1667.3	ug/L	1667.3 ppb	15:07:36
3	Fe 238.204 Radial†	4268.9	3947.8	17644	ug/L	17644 ppb	15:07:16
3	K 766.490 Radial†	5879.6	2704.3	555.98	ug/L	555.98 ppb	15:07:16
3	Mg 279.077 IEC†	34.2	28.0	701.53	ug/L	701.53 ppb	15:07:36
3	Na 589.592 Radial†	2132.9	2323.1	142.95	ug/L	142.95 ppb	15:07:16
3	Sr 421.552†	3421.5	3257.7	10.115	ug/L	10.115 ppb	15:07:16
3	Sc 361.383	802000.5	802000.5	107.70	%		15:08:34
3	Y 371.029	653970.2	653970.2	112.48	%		15:08:34
3	Ag 328.068†	-319.0	-1002.1	0.2321	ug/L	0.2321 ppb	15:08:34
3	As 188.979†	-31.9	4.7	7.4701	ug/L	7.4701 ppb	15:08:54
3	B 249.677†	-435.3	477.1	9.6895	ug/L	9.6895 ppb	15:08:34
3	Ba 233.527†	7250.1	6709.3	43.475	ug/L	43.475 ppb	15:08:54
3	Be 313.107†	-6126.0	-903.2	0.8680	ug/L	0.8680 ppb	15:08:34
3	Cd 226.502†	-128.3	174.1	-0.0905	ug/L	-0.0905 ppb	15:08:54
3	Co 228.616†	128.2	219.6	2.1131	ug/L	2.1131 ppb	15:08:54
3	Cr 267.716†	1013.7	1039.2	13.421	ug/L	13.421 ppb	15:08:54
3	Cu 324.752†	7406.5	1086.0	4.6739	ug/L	4.6739 ppb	15:08:34
3	Mn 257.610†	506899.5	469936.3	475.48	ug/L	475.48 ppb	15:08:34
3	Mo 202.031†	36.1	29.1	2.9943	ug/L	2.9943 ppb	15:08:54
3	Ni 231.604†	567.8	390.6	9.3413	ug/L	9.3413 ppb	15:08:54
3	P 214.914†	523.7	192.7	73.430	ug/L	73.430 ppb	15:08:54
3	Pb 220.353†	93.3	104.5	10.292	ug/L	10.292 ppb	15:08:54
3	S 181.975 Axial†	157.7	10.4	11.647	ug/L	11.647 ppb	15:08:54
3	Sb 206.836†	60.7	3.7	-0.5181	ug/L	-0.5181 ppb	15:08:54
3	Se 196.026†	-156.4	-110.4	9.0749	ug/L	9.0749 ppb	15:08:54
3	Si 251.611†	71596.8	66028.6	1865.7	ug/L	1865.7 ppb	15:08:34
3	Sn 189.927†	12.8	-1.1	1.3157	ug/L	1.3157 ppb	15:08:54
3	Ti 334.940†	330975.6	308836.4	530.02	ug/L	530.02 ppb	15:08:34
3	Tl 190.801†	-89.8	-22.3	1.5665	ug/L	1.5665 ppb	15:08:54
3	U 409.014†	-7116.1	-1342.7	-44.635	ug/L	-44.635 ppb	15:08:34
3	V 292.402†	194.6	1873.5	12.272	ug/L	12.272 ppb	15:08:34
3	Zn 213.857†	11789.0	9961.6	80.508	ug/L	80.508 ppb	15:08:34
3	SiO2†	70871.8	65328.7	3946.3	ug/L	3946.3 ppb	15:09:10

Mean Data: 1201871692|881343|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	794490.7	106.69	%	0.877				0.82%
Sc Radial	7314.8	105	%	4.2				3.98%
Y 371.029	647924.0	111.44	%	0.901				0.81%
Y RADIAL	7068.6	111.2	%	3.83				3.45%
Ag 328.068†	-946.8	0.6497	ug/L	0.54618	0.6497	ppb	0.54618	84.07%
Al 396.153Radial†	5699.6	4810.0	ug/L	260.30	4810.0	ppb	260.30	5.41%
As 188.979†	5.1	7.6741	ug/L	2.41235	7.6741	ppb	2.41235	31.44%
B 249.677†	539.1	11.082	ug/L	1.3021	11.082	ppb	1.3021	11.75%
Ba 233.527†	6739.8	43.671	ug/L	0.2949	43.671	ppb	0.2949	0.68%
Be 313.107†	-919.3	0.8607	ug/L	0.00800	0.8607	ppb	0.00800	0.93%
Ca 317.933Radial†	1142.6	1684.0	ug/L	67.08	1684.0	ppb	67.08	3.98%
Cd 226.502†	175.1	-0.1207	ug/L	0.24686	-0.1207	ppb	0.24686	204.45%
Co 228.616†	222.7	2.1604	ug/L	0.06063	2.1604	ppb	0.06063	2.81%
Cr 267.716†	1039.2	13.429	ug/L	0.1415	13.429	ppb	0.1415	1.05%
Cu 324.752†	1089.6	4.7063	ug/L	0.05368	4.7063	ppb	0.05368	1.14%
Fe 238.204 Radial†	4026.7	17996	ug/L	950.6	17996	ppb	950.6	5.28%
K 766.490 Radial†	2703.7	555.93	ug/L	43.990	555.93	ppb	43.990	7.91%

Mg 279.077 IEC†	28.6	715.73	ug/L	12.386	715.73	ppb	12.386	1.73%
Mn 257.610†	469987.7	475.57	ug/L	0.317	475.57	ppb	0.317	0.07%
Mo 202.031†	38.4	3.6084	ug/L	0.53179	3.6084	ppb	0.53179	14.74%
Na 589.592 Radial†	2320.8	142.81	ug/L	11.498	142.81	ppb	11.498	8.05%
Ni 231.604†	398.5	9.5295	ug/L	0.23515	9.5295	ppb	0.23515	2.47%
P 214.914†	207.7	79.885	ug/L	6.4691	79.885	ppb	6.4691	8.10%
Pb 220.353†	105.3	10.366	ug/L	0.6685	10.366	ppb	0.6685	6.45%
S 181.975 Axial†	9.7	10.768	ug/L	3.8333	10.768	ppb	3.8333	35.60%
Sb 206.836†	9.0	0.9026	ug/L	1.31525	0.9026	ppb	1.31525	145.71%
Se 196.026†	-110.5	10.196	ug/L	5.4717	10.196	ppb	5.4717	53.67%
Si 251.611†	66361.5	1875.1	ug/L	13.31	1875.1	ppb	13.31	0.71%
Sn 189.927†	-5.8	0.6082	ug/L	0.80423	0.6082	ppb	0.80423	132.24%
Sr 421.552†	3361.8	10.439	ug/L	0.5344	10.439	ppb	0.5344	5.12%
Ti 334.940†	308634.9	529.68	ug/L	0.331	529.68	ppb	0.331	0.06%
Tl 190.801†	-16.6	2.9046	ug/L	1.37859	2.9046	ppb	1.37859	47.46%
U 409.014†	-1420.7	-47.143	ug/L	3.0525	-47.143	ppb	3.0525	6.47%
V 292.402†	1879.0	12.272	ug/L	0.2177	12.272	ppb	0.2177	1.77%
Zn 213.857†	9983.3	80.649	ug/L	0.2251	80.649	ppb	0.2251	0.28%
SiO2†	66188.8	3998.2	ug/L	50.35	3998.2	ppb	50.35	1.26%

Sequence No.: 10
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/2/2009 15:11:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7258.8	7258.8	105	%			15:13:12
1	Y RADIAL	6659.2	6659.2	104.7	%			15:13:12
1	Al 396.153Radial†	6231.9	6027.8	5065.6	ug/L	5065.6	ppb	15:13:12
1	Ca 317.933Radial†	3649.5	3462.2	5102.6	ug/L	5102.6	ppb	15:13:12
1	Fe 238.204 Radial†	1253.0	1158.9	5194.5	ug/L	5194.5	ppb	15:13:32
1	K 766.490 Radial†	27298.3	23308.2	4802.5	ug/L	4802.5	ppb	15:13:12
1	Mg 279.077 IEC†	211.3	198.1	5072.1	ug/L	5072.1	ppb	15:13:32
1	Na 589.592 Radial†	166341.7	159339.7	9804.4	ug/L	9804.4	ppb	15:13:12
1	Sr 421.552†	168283.9	160927.4	500.43	ug/L	500.43	ppb	15:13:12
1	Sc 361.383	782892.2	782892.2	105.13	%			15:14:31
1	Y 371.029	602449.0	602449.0	103.62	%			15:14:31
1	Ag 328.068†	95233.4	89876.1	495.02	ug/L	495.02	ppb	15:14:31
1	As 188.979†	1617.5	1572.8	501.34	ug/L	501.34	ppb	15:14:51
1	B 249.677†	21886.6	21698.9	493.40	ug/L	493.40	ppb	15:14:31
1	Ba 233.527†	79369.0	75470.0	490.64	ug/L	490.64	ppb	15:14:31
1	Be 313.107†	1280386.5	1222634.9	493.43	ug/L	493.43	ppb	15:14:31
1	Cd 226.502†	45909.2	43960.2	494.66	ug/L	494.66	ppb	15:14:31
1	Co 228.616†	32315.4	30837.5	487.84	ug/L	487.84	ppb	15:14:51
1	Cr 267.716†	41024.1	39118.4	490.87	ug/L	490.87	ppb	15:14:31
1	Cu 324.752†	159390.7	145814.9	490.87	ug/L	490.87	ppb	15:14:31
1	Mn 257.610†	513733.8	487924.3	491.94	ug/L	491.94	ppb	15:14:31
1	Mo 202.031†	8288.9	7879.6	499.96	ug/L	499.96	ppb	15:14:51
1	Ni 231.604†	21685.1	20489.3	489.83	ug/L	489.83	ppb	15:14:51
1	P 214.914†	6101.3	5509.8	2387.7	ug/L	2387.7	ppb	15:14:51
1	Pb 220.353†	4960.9	4736.4	501.86	ug/L	501.86	ppb	15:14:51
1	S 181.975 Axial†	991.1	806.7	971.72	ug/L	971.72	ppb	15:14:51
1	Sb 206.836†	2000.5	1850.2	508.66	ug/L	508.66	ppb	15:14:51
1	Se 196.026†	1121.0	1101.1	516.64	ug/L	516.64	ppb	15:14:51
1	Si 251.611†	94019.9	88979.0	2497.5	ug/L	2497.5	ppb	15:14:31
1	Sn 189.927†	3345.1	3168.7	497.14	ug/L	497.14	ppb	15:14:51
1	Ti 334.940†	305150.3	291773.1	500.55	ug/L	500.55	ppb	15:14:31
1	Tl 190.801†	2129.6	2086.8	499.00	ug/L	499.00	ppb	15:14:51
1	U 409.014†	10514.6	15265.5	480.93	ug/L	480.93	ppb	15:14:31
1	V 292.402†	60897.3	59615.8	494.88	ug/L	494.88	ppb	15:14:31
1	Zn 213.857†	63669.8	59575.7	488.52	ug/L	488.52	ppb	15:14:31
1	SiO2†	95420.9	90284.8	5416.7	ug/L	5416.7	ppb	15:15:51
2	Sc Radial	7317.7	7317.7	105	%			15:13:37
2	Y RADIAL	6665.7	6665.7	104.8	%			15:13:37
2	Al 396.153Radial†	6266.5	6012.7	5053.2	ug/L	5053.2	ppb	15:13:37
2	Ca 317.933Radial†	3684.7	3467.5	5110.6	ug/L	5110.6	ppb	15:13:37
2	Fe 238.204 Radial†	1258.5	1154.4	5174.2	ug/L	5174.2	ppb	15:13:57
2	K 766.490 Radial†	27409.6	23203.9	4781.1	ug/L	4781.1	ppb	15:13:37
2	Mg 279.077 IEC†	216.0	200.9	5144.2	ug/L	5144.2	ppb	15:13:57
2	Na 589.592 Radial†	167443.3	159105.4	9790.0	ug/L	9790.0	ppb	15:13:37
2	Sr 421.552†	169065.9	160375.1	498.71	ug/L	498.71	ppb	15:13:37
2	Sc 361.383	791469.9	791469.9	106.29	%			15:14:58
2	Y 371.029	609332.0	609332.0	104.80	%			15:14:58
2	Ag 328.068†	96265.5	89865.5	494.96	ug/L	494.96	ppb	15:14:58
2	As 188.979†	1598.1	1537.9	490.28	ug/L	490.28	ppb	15:15:18
2	B 249.677†	22251.8	21816.9	496.14	ug/L	496.14	ppb	15:14:58
2	Ba 233.527†	80058.6	75300.7	489.54	ug/L	489.54	ppb	15:14:58
2	Be 313.107†	1294322.0	1222547.4	493.40	ug/L	493.40	ppb	15:14:58
2	Cd 226.502†	46202.8	43763.1	492.44	ug/L	492.44	ppb	15:14:58
2	Co 228.616†	32178.2	30375.3	480.51	ug/L	480.51	ppb	15:15:18
2	Cr 267.716†	41419.3	39067.3	490.23	ug/L	490.23	ppb	15:14:58
2	Cu 324.752†	162061.5	146684.7	493.79	ug/L	493.79	ppb	15:14:58
2	Mn 257.610†	518575.9	487184.2	491.19	ug/L	491.19	ppb	15:14:58
2	Mo 202.031†	8240.8	7748.9	491.68	ug/L	491.68	ppb	15:15:18
2	Ni 231.604†	21618.3	20203.0	482.98	ug/L	482.98	ppb	15:15:18

2	P 214.914†	6082.3	5428.9	2350.6 ug/L	2350.6 ppb	15:15:18
2	Pb 220.353†	4913.0	4640.3	491.68 ug/L	491.68 ppb	15:15:18
2	S 181.975 Axial†	979.4	785.5	946.13 ug/L	946.13 ppb	15:15:18
2	Sb 206.836†	1986.9	1816.8	499.34 ug/L	499.34 ppb	15:15:18
2	Se 196.026†	1120.9	1089.4	511.25 ug/L	511.25 ppb	15:15:18
2	Si 251.611†	95020.6	88951.4	2496.9 ug/L	2496.9 ppb	15:14:58
2	Sn 189.927†	3338.5	3128.0	490.76 ug/L	490.76 ppb	15:15:18
2	Ti 334.940†	308988.6	292238.6	501.35 ug/L	501.35 ppb	15:14:58
2	Tl 190.801†	2114.7	2050.7	490.47 ug/L	490.47 ppb	15:15:18
2	U 409.014†	10621.4	15257.7	480.69 ug/L	480.69 ppb	15:14:58
2	V 292.402†	61648.8	59695.1	495.43 ug/L	495.43 ppb	15:14:58
2	Zn 213.857†	64176.3	59395.8	487.07 ug/L	487.07 ppb	15:14:58
2	SiO2†	95243.3	89134.2	5347.7 ug/L	5347.7 ppb	15:15:56
3	Sc Radial	7298.0	7298.0	105 %		15:14:02
3	Y RADIAL	6660.9	6660.9	104.7 %		15:14:02
3	Al 396.153Radial†	6274.5	6036.3	5073.0 ug/L	5073.0 ppb	15:14:02
3	Ca 317.933Radial†	3659.4	3452.9	5088.9 ug/L	5088.9 ppb	15:14:02
3	Fe 238.204 Radial†	1260.1	1159.1	5195.7 ug/L	5195.7 ppb	15:14:22
3	K 766.490 Radial†	27310.0	23179.2	4775.9 ug/L	4775.9 ppb	15:14:02
3	Mg 279.077 IEC†	216.0	201.5	5158.6 ug/L	5158.6 ppb	15:14:22
3	Na 589.592 Radial†	167473.0	159561.7	9818.1 ug/L	9818.1 ppb	15:14:02
3	Sr 421.552†	168991.8	160736.9	499.84 ug/L	499.84 ppb	15:14:02
3	Sc 361.383	792100.2	792100.2	106.37 %		15:15:26
3	Y 371.029	609868.2	609868.2	104.90 %		15:15:26
3	Ag 328.068†	96444.8	89962.0	495.50 ug/L	495.50 ppb	15:15:26
3	As 188.979†	1608.2	1546.2	492.91 ug/L	492.91 ppb	15:15:46
3	B 249.677†	22231.8	21781.4	495.31 ug/L	495.31 ppb	15:15:26
3	Ba 233.527†	80411.5	75572.6	491.30 ug/L	491.30 ppb	15:15:26
3	Be 313.107†	1297779.3	1224828.6	494.31 ug/L	494.31 ppb	15:15:26
3	Cd 226.502†	46511.1	44018.4	495.31 ug/L	495.31 ppb	15:15:26
3	Co 228.616†	32418.0	30576.7	483.70 ug/L	483.70 ppb	15:15:46
3	Cr 267.716†	41556.5	39165.3	491.46 ug/L	491.46 ppb	15:15:26
3	Cu 324.752†	161769.1	146288.4	492.46 ug/L	492.46 ppb	15:15:26
3	Mn 257.610†	519885.0	488026.6	492.04 ug/L	492.04 ppb	15:15:26
3	Mo 202.031†	8327.2	7824.0	496.44 ug/L	496.44 ppb	15:15:46
3	Ni 231.604†	21797.6	20355.3	486.63 ug/L	486.63 ppb	15:15:46
3	P 214.914†	6138.2	5477.0	2372.6 ug/L	2372.6 ppb	15:15:46
3	Pb 220.353†	4934.6	4656.9	493.45 ug/L	493.45 ppb	15:15:46
3	S 181.975 Axial†	992.8	797.4	960.47 ug/L	960.47 ppb	15:15:46
3	Sb 206.836†	1987.0	1815.4	499.10 ug/L	499.10 ppb	15:15:46
3	Se 196.026†	1120.5	1088.3	510.82 ug/L	510.82 ppb	15:15:46
3	Si 251.611†	95182.5	89032.4	2499.1 ug/L	2499.1 ppb	15:15:26
3	Sn 189.927†	3366.1	3151.5	494.43 ug/L	494.43 ppb	15:15:46
3	Ti 334.940†	309261.5	292263.9	501.39 ug/L	501.39 ppb	15:15:26
3	Tl 190.801†	2120.3	2054.5	491.36 ug/L	491.36 ppb	15:15:46
3	U 409.014†	10605.3	15234.5	479.95 ug/L	479.95 ppb	15:15:26
3	V 292.402†	61678.7	59677.1	495.34 ug/L	495.34 ppb	15:15:26
3	Zn 213.857†	64355.8	59516.6	488.04 ug/L	488.04 ppb	15:15:26
3	SiO2†	94621.2	88478.0	5307.8 ug/L	5307.8 ppb	15:16:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	788820.7	105.93	%	0.691				0.65%
Sc Radial	7291.5	105	%	0.4				0.41%
Y 371.029	607216.4	104.44	%	0.712				0.68%
Y RADIAL	6661.9	104.8	%	0.05				0.05%
Ag 328.068†	89901.2	495.16	ug/L	0.293	495.16	ppb	0.293	0.06%
QC value within limits for Ag 328.068 Recovery = 99.03%								
Al 396.153Radial†	6025.6	5063.9	ug/L	9.96	5063.9	ppb	9.96	0.20%
QC value within limits for Al 396.153Radial Recovery = 101.28%								
As 188.979†	1552.3	494.84	ug/L	5.779	494.84	ppb	5.779	1.17%
QC value within limits for As 188.979 Recovery = 98.97%								
B 249.677†	21765.7	494.95	ug/L	1.403	494.95	ppb	1.403	0.28%
QC value within limits for B 249.677 Recovery = 98.99%								
Ba 233.527†	75447.8	490.49	ug/L	0.890	490.49	ppb	0.890	0.18%
QC value within limits for Ba 233.527 Recovery = 98.10%								
Be 313.107†	1223337.0	493.71	ug/L	0.521	493.71	ppb	0.521	0.11%
QC value within limits for Be 313.107 Recovery = 98.74%								
Ca 317.933Radial†	3460.9	5100.7	ug/L	10.95	5100.7	ppb	10.95	0.21%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.01%
Cd 226.502†            43913.9      494.14 ug/L          1.507      494.14 ppb          1.507   0.30%
   QC value within limits for Cd 226.502  Recovery = 98.83%
Co 228.616†            30596.5      484.02 ug/L          3.676      484.02 ppb          3.676   0.76%
   QC value within limits for Co 228.616  Recovery = 96.80%
Cr 267.716†            39117.0      490.86 ug/L          0.614      490.86 ppb          0.614   0.13%
   QC value within limits for Cr 267.716  Recovery = 98.17%
Cu 324.752†           146262.7      492.37 ug/L          1.465      492.37 ppb          1.465   0.30%
   QC value within limits for Cu 324.752  Recovery = 98.47%
Fe 238.204 Radial†      1157.4      5188.2 ug/L         12.06      5188.2 ppb         12.06   0.23%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.76%
K 766.490 Radial†      23230.4      4786.5 ug/L         14.11      4786.5 ppb         14.11   0.29%
   QC value within limits for K 766.490 Radial  Recovery = 95.73%
Mg 279.077 IEC†          200.1      5125.0 ug/L         46.32      5125.0 ppb         46.32   0.90%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.50%
Mn 257.610†           487711.7      491.72 ug/L          0.465      491.72 ppb          0.465   0.09%
   QC value within limits for Mn 257.610  Recovery = 98.34%
Mo 202.031†             7817.5      496.03 ug/L          4.158      496.03 ppb          4.158   0.84%
   QC value within limits for Mo 202.031  Recovery = 99.21%
Na 589.592 Radial†    159335.6      9804.2 ug/L         14.04      9804.2 ppb         14.04   0.14%
   QC value within limits for Na 589.592 Radial  Recovery = 98.04%
Ni 231.604†            20349.2      486.48 ug/L          3.425      486.48 ppb          3.425   0.70%
   QC value within limits for Ni 231.604  Recovery = 97.30%
P 214.914†              5471.9      2370.3 ug/L         18.63      2370.3 ppb         18.63   0.79%
   QC value within limits for P 214.914  Recovery = 94.81%
Pb 220.353†             4677.8      495.66 ug/L          5.439      495.66 ppb          5.439   1.10%
   QC value within limits for Pb 220.353  Recovery = 99.13%
S 181.975 Axial†         796.5      959.44 ug/L         12.823      959.44 ppb         12.823   1.34%
   QC value within limits for S 181.975 Axial  Recovery = 95.94%
Sb 206.836†             1827.5      502.37 ug/L          5.452      502.37 ppb          5.452   1.09%
   QC value within limits for Sb 206.836  Recovery = 100.47%
Se 196.026†             1092.9      512.90 ug/L          3.241      512.90 ppb          3.241   0.63%
   QC value within limits for Se 196.026  Recovery = 102.58%
Si 251.611†            88987.6      2497.8 ug/L          1.12      2497.8 ppb          1.12   0.04%
   QC value within limits for Si 251.611  Recovery = 99.91%
Sn 189.927†             3149.4      494.11 ug/L          3.200      494.11 ppb          3.200   0.65%
   QC value within limits for Sn 189.927  Recovery = 98.82%
Sr 421.552†           160679.8      499.66 ug/L          0.873      499.66 ppb          0.873   0.17%
   QC value within limits for Sr 421.552  Recovery = 99.93%
Ti 334.940†           292091.9      501.09 ug/L          0.474      501.09 ppb          0.474   0.09%
   QC value within limits for Ti 334.940  Recovery = 100.22%
Tl 190.801†             2064.0      493.61 ug/L          4.689      493.61 ppb          4.689   0.95%
   QC value within limits for Tl 190.801  Recovery = 98.72%
U 409.014†             15252.6      480.52 ug/L          0.511      480.52 ppb          0.511   0.11%
   QC value within limits for U 409.014  Recovery = 96.10%
V 292.402†             59662.7      495.21 ug/L          0.294      495.21 ppb          0.294   0.06%
   QC value within limits for V 292.402  Recovery = 99.04%
Zn 213.857†            59496.0      487.88 ug/L          0.739      487.88 ppb          0.739   0.15%
   QC value within limits for Zn 213.857  Recovery = 97.58%
SiO2†                  89299.0      5357.4 ug/L         55.10      5357.4 ppb         55.10   1.03%
   QC value within limits for SiO2  Recovery = 100.19%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/2/2009 15:18:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7836.0	7836.0	113	%			15:20:03
1	Y RADIAL	7204.0	7204.0	113.3	%			15:20:03
1	Al 396.153Radial†	-82.3	-2.3	-1.9972	ug/L	-1.9972	ppb	15:20:03
1	Ca 317.933Radial†	31.6	1.6	2.3164	ug/L	2.3164	ppb	15:20:23
1	Fe 238.204 Radial†	37.6	-5.6	-25.154	ug/L	-25.154	ppb	15:20:23
1	K 766.490 Radial†	2764.6	-338.6	-69.978	ug/L	-69.978	ppb	15:20:03
1	Mg 279.077 IEC†	1.9	-2.3	-58.877	ug/L	-58.877	ppb	15:20:23
1	Na 589.592 Radial†	-198.1	155.8	9.5839	ug/L	9.5839	ppb	15:20:03
1	Sr 421.552†	-32.8	33.2	0.1034	ug/L	0.1034	ppb	15:20:03
1	Sc 361.383	759879.2	759879.2	102.04	%			15:21:20
1	Y 371.029	592567.0	592567.0	101.92	%			15:21:20
1	Ag 328.068†	730.5	10.0	0.0430	ug/L	0.0430	ppb	15:21:20
1	As 188.979†	-32.7	2.3	0.7045	ug/L	0.7045	ppb	15:21:40
1	B 249.677†	-471.2	419.6	9.5966	ug/L	9.5966	ppb	15:21:20
1	Ba 233.527†	41.1	17.8	0.1157	ug/L	0.1157	ppb	15:21:40
1	Be 313.107†	-4849.6	32.3	0.0135	ug/L	0.0135	ppb	15:21:20
1	Cd 226.502†	-274.8	23.9	0.2731	ug/L	0.2731	ppb	15:21:40
1	Co 228.616†	-91.3	11.1	0.1788	ug/L	0.1788	ppb	15:21:40
1	Cr 267.716†	-71.7	27.7	0.3453	ug/L	0.3453	ppb	15:21:20
1	Cu 324.752†	5818.4	-89.0	-0.3009	ug/L	-0.3009	ppb	15:21:20
1	Mn 257.610†	739.6	6.9	0.0049	ug/L	0.0049	ppb	15:21:20
1	Mo 202.031†	29.2	24.2	1.5300	ug/L	1.5300	ppb	15:21:40
1	Ni 231.604†	177.0	36.9	0.8817	ug/L	0.8817	ppb	15:21:40
1	P 214.914†	307.6	7.9	3.6504	ug/L	3.6504	ppb	15:21:40
1	Pb 220.353†	-15.3	2.8	0.3017	ug/L	0.3017	ppb	15:21:40
1	S 181.975 Axial†	115.4	-22.9	-27.567	ug/L	-27.567	ppb	15:21:40
1	Sb 206.836†	45.9	-7.6	-2.0171	ug/L	-2.0171	ppb	15:21:40
1	Se 196.026†	-34.5	1.0	0.3701	ug/L	0.3701	ppb	15:21:40
1	Si 251.611†	755.4	291.5	8.2177	ug/L	8.2177	ppb	15:21:40
1	Sn 189.927†	21.8	8.3	1.3032	ug/L	1.3032	ppb	15:21:40
1	Ti 334.940†	-1422.0	133.3	0.2270	ug/L	0.2270	ppb	15:21:20
1	Tl 190.801†	-53.8	8.4	2.0047	ug/L	2.0047	ppb	15:21:40
1	U 409.014†	-5247.1	122.6	3.8772	ug/L	3.8772	ppb	15:21:20
1	V 292.402†	-1733.9	-6.4	-0.0231	ug/L	-0.0231	ppb	15:21:20
1	Zn 213.857†	1063.1	57.4	0.4742	ug/L	0.4742	ppb	15:21:40
1	SiO2†	768.2	277.3	16.708	ug/L	16.708	ppb	15:22:36
2	Sc Radial	7262.1	7262.1	105	%			15:20:28
2	Y RADIAL	6673.4	6673.4	104.9	%			15:20:28
2	Al 396.153Radial†	-81.0	-6.8	-5.7661	ug/L	-5.7661	ppb	15:20:28
2	Ca 317.933Radial†	22.2	-5.2	-7.6921	ug/L	-7.6921	ppb	15:20:48
2	Fe 238.204 Radial†	35.9	-4.7	-20.950	ug/L	-20.950	ppb	15:20:48
2	K 766.490 Radial†	2823.5	-88.9	-18.376	ug/L	-18.376	ppb	15:20:28
2	Mg 279.077 IEC†	7.3	3.0	77.097	ug/L	77.097	ppb	15:20:48
2	Na 589.592 Radial†	-362.3	-15.0	-0.9225	ug/L	-0.9225	ppb	15:20:28
2	Sr 421.552†	-81.6	-15.6	-0.0486	ug/L	-0.0486	ppb	15:20:28
2	Sc 361.383	775206.2	775206.2	104.10	%			15:21:45
2	Y 371.029	605283.5	605283.5	104.11	%			15:21:45
2	Ag 328.068†	788.8	51.8	0.2754	ug/L	0.2754	ppb	15:21:45
2	As 188.979†	-23.8	11.4	3.6047	ug/L	3.6047	ppb	15:22:05
2	B 249.677†	-531.7	370.6	8.4767	ug/L	8.4767	ppb	15:21:45
2	Ba 233.527†	31.2	7.5	0.0511	ug/L	0.0511	ppb	15:22:05
2	Be 313.107†	-4862.3	114.1	0.0468	ug/L	0.0468	ppb	15:21:45
2	Cd 226.502†	-277.5	26.6	0.3025	ug/L	0.3025	ppb	15:22:05
2	Co 228.616†	-99.0	5.4	0.0874	ug/L	0.0874	ppb	15:22:05
2	Cr 267.716†	-95.8	6.0	0.0736	ug/L	0.0736	ppb	15:21:45
2	Cu 324.752†	5924.9	-99.5	-0.3359	ug/L	-0.3359	ppb	15:21:45
2	Mn 257.610†	837.7	86.8	0.0833	ug/L	0.0833	ppb	15:21:45
2	Mo 202.031†	19.5	14.3	0.9059	ug/L	0.9059	ppb	15:22:05
2	Ni 231.604†	153.8	11.1	0.2666	ug/L	0.2666	ppb	15:22:05

2	P 214.914†	306.5	0.8	0.4618	ug/L	0.4618 ppb	15:22:05
2	Pb 220.353†	-17.1	1.4	0.1529	ug/L	0.1529 ppb	15:22:05
2	S 181.975 Axial†	115.8	-24.8	-29.855	ug/L	-29.855 ppb	15:22:05
2	Sb 206.836†	41.1	-13.1	-3.5411	ug/L	-3.5411 ppb	15:22:05
2	Se 196.026†	-34.1	2.1	0.8687	ug/L	0.8687 ppb	15:22:05
2	Si 251.611†	764.0	285.1	8.0430	ug/L	8.0430 ppb	15:22:05
2	Sn 189.927†	15.6	2.0	0.3109	ug/L	0.3109 ppb	15:22:05
2	Ti 334.940†	-1368.0	212.7	0.3617	ug/L	0.3617 ppb	15:21:45
2	Tl 190.801†	-59.0	4.5	1.0621	ug/L	1.0621 ppb	15:22:05
2	U 409.014†	-5275.6	196.8	6.2228	ug/L	6.2228 ppb	15:21:45
2	V 292.402†	-1640.6	117.0	0.9866	ug/L	0.9866 ppb	15:21:45
2	Zn 213.857†	1040.1	14.7	0.1201	ug/L	0.1201 ppb	15:22:05
2	SiO2†	759.6	254.1	15.322	ug/L	15.322 ppb	15:22:41
3	Sc Radial	7197.0	7197.0	104	%		15:20:53
3	Y RADIAL	6642.2	6642.2	104.5	%		15:20:53
3	Al 396.153Radial†	-63.2	9.7	8.1448	ug/L	8.1448 ppb	15:20:53
3	Ca 317.933Radial†	24.5	-2.8	-4.0995	ug/L	-4.0995 ppb	15:21:13
3	Fe 238.204 Radial†	39.1	-1.2	-5.4154	ug/L	-5.4154 ppb	15:21:13
3	K 766.490 Radial†	2728.8	-155.7	-32.191	ug/L	-32.191 ppb	15:20:53
3	Mg 279.077 IEC†	5.1	1.0	24.605	ug/L	24.605 ppb	15:21:13
3	Na 589.592 Radial†	-283.8	57.6	3.5419	ug/L	3.5419 ppb	15:20:53
3	Sr 421.552†	7.4	69.5	0.2161	ug/L	0.2161 ppb	15:20:53
3	Sc 361.383	765116.2	765116.2	102.75	%		15:22:11
3	Y 371.029	596710.1	596710.1	102.63	%		15:22:11
3	Ag 328.068†	770.2	43.7	0.2325	ug/L	0.2325 ppb	15:22:11
3	As 188.979†	-30.6	4.5	1.4161	ug/L	1.4161 ppb	15:22:31
3	B 249.677†	-467.8	426.0	9.7415	ug/L	9.7415 ppb	15:22:11
3	Ba 233.527†	4.0	-18.5	-0.1187	ug/L	-0.1187 ppb	15:22:31
3	Be 313.107†	-4901.6	14.2	0.0063	ug/L	0.0063 ppb	15:22:11
3	Cd 226.502†	-281.3	19.5	0.2198	ug/L	0.2198 ppb	15:22:31
3	Co 228.616†	-91.6	11.3	0.1803	ug/L	0.1803 ppb	15:22:31
3	Cr 267.716†	-33.8	65.1	0.8139	ug/L	0.8139 ppb	15:22:11
3	Cu 324.752†	5840.5	-106.6	-0.3588	ug/L	-0.3588 ppb	15:22:11
3	Mn 257.610†	716.8	-20.3	-0.0216	ug/L	-0.0216 ppb	15:22:11
3	Mo 202.031†	20.1	15.2	0.9623	ug/L	0.9623 ppb	15:22:31
3	Ni 231.604†	147.7	7.1	0.1693	ug/L	0.1693 ppb	15:22:31
3	P 214.914†	302.2	0.5	0.3264	ug/L	0.3264 ppb	15:22:31
3	Pb 220.353†	-10.3	7.8	0.8269	ug/L	0.8269 ppb	15:22:31
3	S 181.975 Axial†	109.5	-29.4	-35.412	ug/L	-35.412 ppb	15:22:31
3	Sb 206.836†	49.8	-4.1	-1.1145	ug/L	-1.1145 ppb	15:22:31
3	Se 196.026†	-29.2	6.4	2.8836	ug/L	2.8836 ppb	15:22:31
3	Si 251.611†	738.4	269.8	7.6143	ug/L	7.6143 ppb	15:22:31
3	Sn 189.927†	15.9	2.5	0.3889	ug/L	0.3889 ppb	15:22:31
3	Ti 334.940†	-1409.6	154.9	0.2613	ug/L	0.2613 ppb	15:22:11
3	Tl 190.801†	-61.7	1.1	0.2520	ug/L	0.2520 ppb	15:22:31
3	U 409.014†	-5123.3	278.3	8.7942	ug/L	8.7942 ppb	15:22:11
3	V 292.402†	-1663.3	74.1	0.6372	ug/L	0.6372 ppb	15:22:11
3	Zn 213.857†	1026.1	14.3	0.1175	ug/L	0.1175 ppb	15:22:31
3	SiO2†	748.9	253.3	15.280	ug/L	15.280 ppb	15:22:46

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	766733.9	102.97	%	1.046				1.02%
Sc Radial	7431.7	107	%	5.1				4.73%
Y 371.029	598186.9	102.89	%	1.116				1.08%
Y RADIAL	6839.9	107.6	%	4.96				4.62%
Ag 328.068†	35.2	0.1836	ug/L	0.12366	0.1836	ppb	0.12366	67.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	0.2	0.1272	ug/L	7.19464	0.1272	ppb	7.19464	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	6.0	1.9084	ug/L	1.51152	1.9084	ppb	1.51152	79.20%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	405.4	9.2716	ug/L	0.69221	9.2716	ppb	0.69221	7.47%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	2.3	0.0160	ug/L	0.12104	0.0160	ppb	0.12104	754.47%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	53.5	0.0222	ug/L	0.02158	0.0222	ppb	0.02158	97.13%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.1	-3.1584	ug/L	5.07018	-3.1584	ppb	5.07018	160.53%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                23.3      0.2651 ug/L       0.04196      0.2651 ppb        0.04196  15.83%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 9.3      0.1488 ug/L       0.05322      0.1488 ppb        0.05322  35.76%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                32.9      0.4109 ug/L       0.37444      0.4109 ppb        0.37444  91.12%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -98.4     -0.3319 ug/L       0.02915     -0.3319 ppb        0.02915   8.78%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -3.8     -17.173 ug/L       10.3972     -17.173 ppb        10.3972  60.54%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -194.4     -40.182 ug/L       26.7128     -40.182 ppb        26.7128  66.48%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.6      14.275 ug/L       68.5732      14.275 ppb        68.5732 480.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                24.5      0.0222 ug/L       0.05451      0.0222 ppb        0.05451 245.37%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                17.9      1.1327 ug/L       0.34519      1.1327 ppb        0.34519  30.47%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         66.1      4.0677 ug/L       5.27289      4.0677 ppb        5.27289 129.63%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                18.4      0.4392 ug/L       0.38630      0.4392 ppb        0.38630  87.95%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  3.1      1.4796 ug/L       1.88124      1.4796 ppb        1.88124 127.15%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 4.0      0.4272 ug/L       0.35409      0.4272 ppb        0.35409  82.89%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -25.7     -30.945 ug/L        4.0344     -30.945 ppb         4.0344  13.04%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -8.3     -2.2243 ug/L       1.22649     -2.2243 ppb        1.22649  55.14%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.2      1.3741 ug/L       1.33081      1.3741 ppb        1.33081  96.85%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               282.2      7.9583 ug/L       0.31048      7.9583 ppb        0.31048   3.90%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 4.3      0.6677 ug/L       0.55178      0.6677 ppb        0.55178  82.64%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                29.0      0.0903 ug/L       0.13283      0.0903 ppb        0.13283 147.10%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               166.9      0.2833 ug/L       0.07001      0.2833 ppb        0.07001  24.71%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 4.7      1.1063 ug/L       0.87717      1.1063 ppb        0.87717  79.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                199.2      6.2981 ug/L       2.45939      6.2981 ppb        2.45939  39.05%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 61.6      0.5336 ug/L       0.51277      0.5336 ppb        0.51277  96.10%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                28.8      0.2373 ug/L       0.20519      0.2373 ppb        0.20519  86.47%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     261.6      15.770 ug/L        0.8130      15.770 ppb         0.8130   5.16%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 12
Sample ID: 232504002|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 45
Date Collected: 7/2/2009 15:24:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504002|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7293.0	7293.0	105	%			15:27:08
1	Y RADIAL	7886.3	7886.3	124.0	%			15:26:48
1	Al 396.153Radial†	33245.6	31701.6	26754	ug/L	26754	ppb	15:26:48
1	Ca 317.933Radial†	7028.9	6661.1	9817.4	ug/L	9817.4	ppb	15:27:08
1	Fe 238.204 Radial†	20449.9	19417.8	86783	ug/L	86783	ppb	15:26:48
1	K 766.490 Radial†	25083.2	21078.3	4342.2	ug/L	4342.2	ppb	15:26:48
1	Mg 279.077 IEC†	245.8	229.9	5805.7	ug/L	5805.7	ppb	15:27:08
1	Na 589.592 Radial†	6530.2	6544.2	402.68	ug/L	402.68	ppb	15:26:48
1	Sr 421.552†	23971.9	22870.0	71.028	ug/L	71.028	ppb	15:26:48
1	Sc 361.383	804652.8	804652.8	108.06	%			15:28:05
1	Y 371.029	723291.0	723291.0	124.40	%			15:28:05
1	Ag 328.068†	-4021.2	-4427.2	3.9264	ug/L	3.9264	ppb	15:28:10
1	As 188.979†	-71.8	-32.1	21.076	ug/L	21.076	ppb	15:28:30
1	B 249.677†	92.2	966.6	16.064	ug/L	16.064	ppb	15:28:10
1	Ba 233.527†	55319.8	51172.5	331.78	ug/L	331.78	ppb	15:28:10
1	Be 313.107†	-15428.6	-9493.4	3.1859	ug/L	3.1859	ppb	15:28:10
1	Cd 226.502†	513.0	767.9	-1.4522	ug/L	-1.4522	ppb	15:28:30
1	Co 228.616†	1460.5	1452.1	15.467	ug/L	15.467	ppb	15:28:30
1	Cr 267.716†	2513.4	2424.0	32.361	ug/L	32.361	ppb	15:28:30
1	Cu 324.752†	21256.6	13880.8	51.717	ug/L	51.717	ppb	15:28:10
1	Mn 257.610†	2393276.4	2214105.3	2240.6	ug/L	2240.6	ppb	15:28:05
1	Mo 202.031†	105.6	93.3	11.576	ug/L	11.576	ppb	15:28:30
1	Ni 231.604†	1380.1	1140.5	27.269	ug/L	27.269	ppb	15:28:30
1	P 214.914†	2287.6	1823.5	750.82	ug/L	750.82	ppb	15:28:30
1	Pb 220.353†	769.3	729.8	74.100	ug/L	74.100	ppb	15:28:30
1	S 181.975 Axial†	507.8	333.9	397.40	ug/L	397.40	ppb	15:28:30
1	Sb 206.836†	100.6	40.5	2.9883	ug/L	2.9883	ppb	15:28:30
1	Se 196.026†	-631.8	-549.8	41.817	ug/L	41.817	ppb	15:28:30
1	Si 251.611†	346786.7	320480.0	9054.9	ug/L	9054.9	ppb	15:28:10
1	Sn 189.927†	-15.0	-26.9	3.2541	ug/L	3.2541	ppb	15:28:30
1	Ti 334.940†	1897263.6	1757322.0	3015.9	ug/L	3015.9	ppb	15:28:05
1	Tl 190.801†	-199.5	-123.5	7.4708	ug/L	7.4708	ppb	15:28:30
1	U 409.014†	-10973.5	-4890.7	-165.31	ug/L	-165.31	ppb	15:28:05
1	V 292.402†	11697.9	12518.5	87.126	ug/L	87.126	ppb	15:28:10
1	Zn 213.857†	53671.2	48684.9	393.40	ug/L	393.40	ppb	15:28:10
1	SiO2†	350778.9	324147.7	19580	ug/L	19580	ppb	15:29:38
2	Sc Radial	7246.3	7246.3	104	%			15:27:33
2	Y RADIAL	8021.4	8021.4	126.1	%			15:27:13
2	Al 396.153Radial†	33575.8	32221.7	27193	ug/L	27193	ppb	15:27:13
2	Ca 317.933Radial†	7017.7	6693.5	9865.0	ug/L	9865.0	ppb	15:27:33
2	Fe 238.204 Radial†	20791.1	19869.9	88804	ug/L	88804	ppb	15:27:13
2	K 766.490 Radial†	25476.2	21608.5	4453.9	ug/L	4453.9	ppb	15:27:13
2	Mg 279.077 IEC†	251.3	236.7	5978.6	ug/L	5978.6	ppb	15:27:33
2	Na 589.592 Radial†	6716.3	6762.5	416.11	ug/L	416.11	ppb	15:27:13
2	Sr 421.552†	24371.6	23399.8	72.675	ug/L	72.675	ppb	15:27:13
2	Sc 361.383	844445.2	844445.2	113.40	%			15:28:36
2	Y 371.029	751215.6	751215.6	129.21	%			15:28:36
2	Ag 328.068†	-3849.2	-4100.2	6.3225	ug/L	6.3225	ppb	15:28:41
2	As 188.979†	-76.2	-32.9	20.300	ug/L	20.300	ppb	15:29:01
2	B 249.677†	217.3	1073.0	18.366	ug/L	18.366	ppb	15:28:41
2	Ba 233.527†	53930.0	47534.5	308.15	ug/L	308.15	ppb	15:28:41
2	Be 313.107†	-15105.7	-8535.9	3.0977	ug/L	3.0977	ppb	15:28:41
2	Cd 226.502†	532.8	763.1	-1.7434	ug/L	-1.7434	ppb	15:29:01
2	Co 228.616†	1430.3	1361.8	14.435	ug/L	14.435	ppb	15:29:01
2	Cr 267.716†	2523.5	2323.2	31.124	ug/L	31.124	ppb	15:29:01
2	Cu 324.752†	20974.9	12705.4	47.879	ug/L	47.879	ppb	15:28:41
2	Mn 257.610†	2348672.8	2070404.5	2096.1	ug/L	2096.1	ppb	15:28:36
2	Mo 202.031†	120.4	101.8	12.246	ug/L	12.246	ppb	15:29:01
2	Ni 231.604†	1390.2	1089.3	26.043	ug/L	26.043	ppb	15:29:01

2	P 214.914†	2318.6	1751.0	717.52	ug/L	717.52	ppb	15:29:01
2	Pb 220.353†	784.4	709.5	71.858	ug/L	71.858	ppb	15:29:01
2	S 181.975 Axial†	513.7	317.0	376.93	ug/L	376.93	ppb	15:29:01
2	Sb 206.836†	87.9	24.9	-0.6064	ug/L	-0.6064	ppb	15:29:01
2	Se 196.026†	-652.3	-540.4	52.859	ug/L	52.859	ppb	15:29:01
2	Si 251.611†	338088.9	297687.0	8410.8	ug/L	8410.8	ppb	15:28:41
2	Sn 189.927†	-13.1	-24.5	3.7845	ug/L	3.7845	ppb	15:29:01
2	Ti 334.940†	1856369.5	1638523.0	2812.1	ug/L	2812.1	ppb	15:28:36
2	Tl 190.801†	-203.5	-118.3	6.2886	ug/L	6.2886	ppb	15:29:01
2	U 409.014†	-10992.0	-4428.5	-150.95	ug/L	-150.95	ppb	15:28:36
2	V 292.402†	11344.0	11696.3	80.363	ug/L	80.363	ppb	15:28:41
2	Zn 213.857†	52098.6	44957.5	362.35	ug/L	362.35	ppb	15:28:41
2	SiO2†	348246.8	306617.8	18520	ug/L	18520	ppb	15:29:43
3	Sc Radial	7298.7	7298.7	105	%			15:27:58
3	Y RADIAL	7954.3	7954.3	125.1	%			15:27:38
3	Al 396.153Radial†	33485.6	31905.2	26926	ug/L	26926	ppb	15:27:38
3	Ca 317.933Radial†	7121.3	6743.8	9939.2	ug/L	9939.2	ppb	15:27:58
3	Fe 238.204 Radial†	20643.1	19586.3	87536	ug/L	87536	ppb	15:27:38
3	K 766.490 Radial†	25303.8	21269.5	4381.9	ug/L	4381.9	ppb	15:27:38
3	Mg 279.077 IEC†	251.7	235.3	5944.1	ug/L	5944.1	ppb	15:27:58
3	Na 589.592 Radial†	6749.5	6747.9	415.21	ug/L	415.21	ppb	15:27:38
3	Sr 421.552†	24331.1	23193.8	72.034	ug/L	72.034	ppb	15:27:38
3	Sc 361.383	806115.3	806115.3	108.25	%			15:29:07
3	Y 371.029	722832.2	722832.2	124.33	%			15:29:07
3	Ag 328.068†	-3865.4	-4276.6	4.9851	ug/L	4.9851	ppb	15:29:12
3	As 188.979†	-69.9	-30.3	21.714	ug/L	21.714	ppb	15:29:32
3	B 249.677†	102.6	976.1	16.232	ug/L	16.232	ppb	15:29:12
3	Ba 233.527†	53985.5	49847.1	323.17	ug/L	323.17	ppb	15:29:12
3	Be 313.107†	-15228.2	-9282.5	3.2213	ug/L	3.2213	ppb	15:29:12
3	Cd 226.502†	524.0	777.3	-1.4346	ug/L	-1.4346	ppb	15:29:32
3	Co 228.616†	1437.3	1428.2	15.119	ug/L	15.119	ppb	15:29:32
3	Cr 267.716†	2500.3	2407.6	32.169	ug/L	32.169	ppb	15:29:32
3	Cu 324.752†	20993.7	13602.2	50.823	ug/L	50.823	ppb	15:29:12
3	Mn 257.610†	2387768.1	2204998.8	2231.5	ug/L	2231.5	ppb	15:29:07
3	Mo 202.031†	108.0	95.4	11.758	ug/L	11.758	ppb	15:29:32
3	Ni 231.604†	1384.7	1142.5	27.316	ug/L	27.316	ppb	15:29:32
3	P 214.914†	2298.6	1829.8	753.34	ug/L	753.34	ppb	15:29:32
3	Pb 220.353†	762.1	721.8	73.226	ug/L	73.226	ppb	15:29:32
3	S 181.975 Axial†	507.8	333.1	396.41	ug/L	396.41	ppb	15:29:32
3	Sb 206.836†	92.4	32.7	0.9717	ug/L	0.9717	ppb	15:29:32
3	Se 196.026†	-640.6	-556.9	41.118	ug/L	41.118	ppb	15:29:32
3	Si 251.611†	337310.5	311144.1	8791.1	ug/L	8791.1	ppb	15:29:12
3	Sn 189.927†	-3.6	-16.3	4.9767	ug/L	4.9767	ppb	15:29:32
3	Ti 334.940†	1887267.7	1744902.9	2994.6	ug/L	2994.6	ppb	15:29:07
3	Tl 190.801†	-196.8	-120.6	7.9338	ug/L	7.9338	ppb	15:29:32
3	U 409.014†	-11141.4	-5027.5	-169.72	ug/L	-169.72	ppb	15:29:07
3	V 292.402†	11440.6	12261.2	84.930	ug/L	84.930	ppb	15:29:12
3	Zn 213.857†	52367.0	47390.0	382.60	ug/L	382.60	ppb	15:29:12
3	SiO2†	347772.2	320781.4	19376	ug/L	19376	ppb	15:29:48

Mean Data: 232504002|881343|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	818404.4	109.90	%	3.030				2.76%
Sc Radial	7279.3	105	%	0.4				0.39%
Y 371.029	732446.3	125.98	%	2.796				2.22%
Y RADIAL	7954.0	125.1	%	1.06				0.85%
Ag 328.068†	-4268.0	5.0780	ug/L	1.20076	5.0780	ppb	1.20076	23.65%
Al 396.153Radial†	31942.8	26957	ug/L	221.2	26957	ppb	221.2	0.82%
As 188.979†	-31.8	21.030	ug/L	0.7082	21.030	ppb	0.7082	3.37%
B 249.677†	1005.2	16.887	ug/L	1.2832	16.887	ppb	1.2832	7.60%
Ba 233.527†	49518.0	321.03	ug/L	11.956	321.03	ppb	11.956	3.72%
Be 313.107†	-9103.9	3.1683	ug/L	0.06367	3.1683	ppb	0.06367	2.01%
Ca 317.933Radial†	6699.5	9873.9	ug/L	61.40	9873.9	ppb	61.40	0.62%
Cd 226.502†	769.4	-1.5434	ug/L	0.17343	-1.5434	ppb	0.17343	11.24%
Co 228.616†	1414.0	15.007	ug/L	0.5253	15.007	ppb	0.5253	3.50%
Cr 267.716†	2385.0	31.885	ug/L	0.6653	31.885	ppb	0.6653	2.09%
Cu 324.752†	13396.1	50.140	ug/L	2.0080	50.140	ppb	2.0080	4.00%
Fe 238.204 Radial†	19624.7	87708	ug/L	1021.1	87708	ppb	1021.1	1.16%
K 766.490 Radial†	21318.8	4392.7	ug/L	56.63	4392.7	ppb	56.63	1.29%

Mg 279.077 IEC†	234.0	5909.5	ug/L	91.51	5909.5	ppb	91.51	1.55%
Mn 257.610†	2163169.6	2189.4	ug/L	80.92	2189.4	ppb	80.92	3.70%
Mo 202.031†	96.8	11.860	ug/L	0.3464	11.860	ppb	0.3464	2.92%
Na 589.592 Radial†	6684.9	411.33	ug/L	7.510	411.33	ppb	7.510	1.83%
Ni 231.604†	1124.1	26.876	ug/L	0.7217	26.876	ppb	0.7217	2.69%
P 214.914†	1801.4	740.56	ug/L	19.990	740.56	ppb	19.990	2.70%
Pb 220.353†	720.4	73.061	ug/L	1.1301	73.061	ppb	1.1301	1.55%
S 181.975 Axial†	328.0	390.25	ug/L	11.542	390.25	ppb	11.542	2.96%
Sb 206.836†	32.7	1.1178	ug/L	1.80180	1.1178	ppb	1.80180	161.19%
Se 196.026†	-549.0	45.265	ug/L	6.5860	45.265	ppb	6.5860	14.55%
Si 251.611†	309770.4	8752.3	ug/L	323.83	8752.3	ppb	323.83	3.70%
Sn 189.927†	-22.6	4.0051	ug/L	0.88222	4.0051	ppb	0.88222	22.03%
Sr 421.552†	23154.5	71.913	ug/L	0.8302	71.913	ppb	0.8302	1.15%
Ti 334.940†	1713582.6	2940.9	ug/L	112.05	2940.9	ppb	112.05	3.81%
Tl 190.801†	-120.8	7.2311	ug/L	0.84838	7.2311	ppb	0.84838	11.73%
U 409.014†	-4782.2	-161.99	ug/L	9.818	-161.99	ppb	9.818	6.06%
V 292.402†	12158.7	84.140	ug/L	3.4500	84.140	ppb	3.4500	4.10%
Zn 213.857†	47010.8	379.45	ug/L	15.763	379.45	ppb	15.763	4.15%
SiO2†	317182.3	19159	ug/L	562.1	19159	ppb	562.1	2.93%

Sequence No.: 13
Sample ID: 232504003|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 46
Date Collected: 7/2/2009 15:31:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504003|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7695.0	7695.0	111	%			15:33:52
1	Y RADIAL	9808.0	9808.0	154.2	%			15:33:52
1	Al 396.153Radial†	31840.6	28782.1	24289	ug/L	24289	ppb	15:33:52
1	Ca 317.933Radial†	5454.4	4892.0	7210.0	ug/L	7210.0	ppb	15:33:52
1	Fe 238.204 Radial†	17243.4	15510.0	69318	ug/L	69318	ppb	15:33:52
1	K 766.490 Radial†	18191.9	13617.5	2797.0	ug/L	2797.0	ppb	15:33:52
1	Mg 279.077 IEC†	156.8	137.4	3455.5	ug/L	3455.5	ppb	15:34:12
1	Na 589.592 Radial†	25506.2	23330.9	1435.6	ug/L	1435.6	ppb	15:33:52
1	Sr 421.552†	14784.2	13393.7	41.583	ug/L	41.583	ppb	15:33:52
1	Sc 361.383	829394.5	829394.5	111.38	%			15:35:09
1	Y 371.029	889214.7	889214.7	152.94	%			15:35:09
1	Ag 328.068†	-2970.0	-3372.4	4.1559	ug/L	4.1559	ppb	15:35:14
1	As 188.979†	-20.8	15.6	28.071	ug/L	28.071	ppb	15:35:34
1	B 249.677†	-165.3	732.9	11.962	ug/L	11.962	ppb	15:35:14
1	Ba 233.527†	35687.2	32018.5	207.51	ug/L	207.51	ppb	15:35:14
1	Be 313.107†	2982.7	7462.7	7.6120	ug/L	7.6120	ppb	15:35:14
1	Cd 226.502†	312.3	573.7	-1.5592	ug/L	-1.5592	ppb	15:35:34
1	Co 228.616†	816.7	833.8	8.0541	ug/L	8.0541	ppb	15:35:34
1	Cr 267.716†	13253.4	11997.3	151.96	ug/L	151.96	ppb	15:35:14
1	Cu 324.752†	15047.0	7718.8	29.976	ug/L	29.976	ppb	15:35:14
1	Mn 257.610†	2476725.0	2222957.4	2247.4	ug/L	2247.4	ppb	15:35:09
1	Mo 202.031†	257.5	226.8	18.901	ug/L	18.901	ppb	15:35:34
1	Ni 231.604†	4656.1	4043.7	96.725	ug/L	96.725	ppb	15:35:34
1	P 214.914†	1369.0	935.6	368.47	ug/L	368.47	ppb	15:35:34
1	Pb 220.353†	602.4	558.7	57.229	ug/L	57.229	ppb	15:35:34
1	S 181.975 Axial†	239.0	78.6	90.049	ug/L	90.049	ppb	15:35:34
1	Sb 206.836†	89.0	27.3	-0.7280	ug/L	-0.7280	ppb	15:35:34
1	Se 196.026†	-520.6	-432.6	36.601	ug/L	36.601	ppb	15:35:34
1	Si 251.611†	354088.4	317462.0	8969.9	ug/L	8969.9	ppb	15:35:14
1	Sn 189.927†	27.3	11.5	7.7092	ug/L	7.7092	ppb	15:35:34
1	Ti 334.940†	1285058.6	1155289.5	1982.8	ug/L	1982.8	ppb	15:35:09
1	Tl 190.801†	-201.2	-119.5	-0.4220	ug/L	-0.4220	ppb	15:35:34
1	U 409.014†	-18619.1	-11452.2	-370.79	ug/L	-370.79	ppb	15:35:09
1	V 292.402†	6187.6	7248.3	47.086	ug/L	47.086	ppb	15:35:14
1	Zn 213.857†	43618.0	38177.1	307.93	ug/L	307.93	ppb	15:35:14
1	SiO2†	353694.6	317081.8	19153	ug/L	19153	ppb	15:36:42
2	Sc Radial	7537.3	7537.3	109	%			15:34:17
2	Y RADIAL	9610.5	9610.5	151.1	%			15:34:17
2	Al 396.153Radial†	31264.9	28853.0	24349	ug/L	24349	ppb	15:34:17
2	Ca 317.933Radial†	5283.2	4837.3	7129.4	ug/L	7129.4	ppb	15:34:17
2	Fe 238.204 Radial†	16851.9	15474.9	69161	ug/L	69161	ppb	15:34:17
2	K 766.490 Radial†	17902.0	13693.8	2812.7	ug/L	2812.7	ppb	15:34:17
2	Mg 279.077 IEC†	156.1	139.7	3515.2	ug/L	3515.2	ppb	15:34:37
2	Na 589.592 Radial†	24860.8	23218.0	1428.6	ug/L	1428.6	ppb	15:34:17
2	Sr 421.552†	14639.5	13539.4	42.037	ug/L	42.037	ppb	15:34:17
2	Sc 361.383	814512.5	814512.5	109.38	%			15:35:40
2	Y 371.029	873981.8	873981.8	150.32	%			15:35:40
2	Ag 328.068†	-2941.3	-3394.9	3.9864	ug/L	3.9864	ppb	15:35:45
2	As 188.979†	-27.8	8.9	25.905	ug/L	25.905	ppb	15:36:05
2	B 249.677†	-161.3	733.9	11.993	ug/L	11.993	ppb	15:35:45
2	Ba 233.527†	35537.2	32466.9	210.42	ug/L	210.42	ppb	15:35:45
2	Be 313.107†	3062.1	7584.2	7.6593	ug/L	7.6593	ppb	15:35:45
2	Cd 226.502†	319.3	585.1	-1.4097	ug/L	-1.4097	ppb	15:36:05
2	Co 228.616†	825.9	855.6	8.4013	ug/L	8.4013	ppb	15:36:05
2	Cr 267.716†	13155.3	12125.0	153.56	ug/L	153.56	ppb	15:35:45
2	Cu 324.752†	15019.8	7940.8	30.714	ug/L	30.714	ppb	15:35:45
2	Mn 257.610†	2434719.4	2225183.4	2249.6	ug/L	2249.6	ppb	15:35:40
2	Mo 202.031†	240.9	215.8	18.195	ug/L	18.195	ppb	15:36:05
2	Ni 231.604†	4717.6	4176.4	99.898	ug/L	99.898	ppb	15:36:05

2	P 214.914†	1382.0	969.9	383.94	ug/L	383.94 ppb	15:36:05
2	Pb 220.353†	614.3	579.4	59.442	ug/L	59.442 ppb	15:36:05
2	S 181.975 Axial†	241.4	84.7	97.384	ug/L	97.384 ppb	15:36:05
2	Sb 206.836†	80.5	21.0	-2.5082	ug/L	-2.5082 ppb	15:36:05
2	Se 196.026†	-528.3	-448.2	29.015	ug/L	29.015 ppb	15:36:05
2	Si 251.611†	351317.9	320737.7	9062.5	ug/L	9062.5 ppb	15:35:45
2	Sn 189.927†	24.0	8.9	7.2770	ug/L	7.2770 ppb	15:36:05
2	Ti 334.940†	1261572.3	1154898.0	1982.1	ug/L	1982.1 ppb	15:35:40
2	Tl 190.801†	-188.3	-111.0	1.6021	ug/L	1.6021 ppb	15:36:05
2	U 409.014†	-18358.0	-11519.0	-372.89	ug/L	-372.89 ppb	15:35:40
2	V 292.402†	6109.0	7277.9	47.340	ug/L	47.340 ppb	15:35:45
2	Zn 213.857†	43281.0	38584.6	311.29	ug/L	311.29 ppb	15:35:45
2	SiO2†	359941.1	328594.6	19849	ug/L	19849 ppb	15:36:47
3	Sc Radial	7558.4	7558.4	109	%		15:34:42
3	Y RADIAL	9668.6	9668.6	152.0	%		15:34:42
3	Al 396.153Radial†	31231.4	28741.8	24255	ug/L	24255 ppb	15:34:42
3	Ca 317.933Radial†	5321.6	4858.9	7161.2	ug/L	7161.2 ppb	15:34:42
3	Fe 238.204 Radial†	16804.2	15387.8	68772	ug/L	68772 ppb	15:34:42
3	K 766.490 Radial†	17905.1	13650.7	2803.8	ug/L	2803.8 ppb	15:34:42
3	Mg 279.077 IEC†	153.3	136.8	3440.5	ug/L	3440.5 ppb	15:35:02
3	Na 589.592 Radial†	24849.1	23143.3	1424.0	ug/L	1424.0 ppb	15:34:42
3	Sr 421.552†	14600.4	13465.9	41.808	ug/L	41.808 ppb	15:34:42
3	Sc 361.383	823579.9	823579.9	110.60	%		15:36:11
3	Y 371.029	882580.7	882580.7	151.80	%		15:36:11
3	Ag 328.068†	-3019.7	-3436.2	3.6371	ug/L	3.6371 ppb	15:36:16
3	As 188.979†	-19.1	17.0	28.399	ug/L	28.399 ppb	15:36:36
3	B 249.677†	-84.0	805.4	13.657	ug/L	13.657 ppb	15:36:16
3	Ba 233.527†	35694.5	32251.4	209.02	ug/L	209.02 ppb	15:36:16
3	Be 313.107†	2932.3	7436.0	7.5976	ug/L	7.5976 ppb	15:36:16
3	Cd 226.502†	311.6	575.0	-1.4803	ug/L	-1.4803 ppb	15:36:36
3	Co 228.616†	803.9	827.3	7.9607	ug/L	7.9607 ppb	15:36:36
3	Cr 267.716†	13260.5	12087.7	153.08	ug/L	153.08 ppb	15:36:16
3	Cu 324.752†	15056.6	7822.8	30.295	ug/L	30.295 ppb	15:36:16
3	Mn 257.610†	2458140.5	2221853.3	2246.2	ug/L	2246.2 ppb	15:36:11
3	Mo 202.031†	235.8	208.7	17.723	ug/L	17.723 ppb	15:36:36
3	Ni 231.604†	4672.6	4088.1	97.787	ug/L	97.787 ppb	15:36:36
3	P 214.914†	1374.5	949.2	374.96	ug/L	374.96 ppb	15:36:36
3	Pb 220.353†	591.9	553.0	56.664	ug/L	56.664 ppb	15:36:36
3	S 181.975 Axial†	233.2	74.9	85.501	ug/L	85.501 ppb	15:36:36
3	Sb 206.836†	81.1	20.7	-2.5976	ug/L	-2.5976 ppb	15:36:36
3	Se 196.026†	-531.9	-446.1	28.645	ug/L	28.645 ppb	15:36:36
3	Si 251.611†	354224.8	319829.8	9036.9	ug/L	9036.9 ppb	15:36:16
3	Sn 189.927†	20.5	5.6	6.7293	ug/L	6.7293 ppb	15:36:36
3	Ti 334.940†	1275032.4	1154369.9	1981.2	ug/L	1981.2 ppb	15:36:11
3	Tl 190.801†	-200.2	-119.9	-0.5247	ug/L	-0.5247 ppb	15:36:36
3	U 409.014†	-18743.0	-11682.3	-378.00	ug/L	-378.00 ppb	15:36:11
3	V 292.402†	6087.4	7196.9	46.714	ug/L	46.714 ppb	15:36:16
3	Zn 213.857†	43593.5	38431.4	310.08	ug/L	310.08 ppb	15:36:16
3	SiO2†	355434.9	320897.3	19384	ug/L	19384 ppb	15:36:52

Mean Data: 232504003|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	822495.6	110.45	%	1.007				0.91%
Sc Radial	7596.9	109	%	1.2				1.13%
Y 371.029	881925.7	151.69	%	1.314				0.87%
Internal Standard Check greater than the upper limit for Y 371.029. Recovery = 151.7%								
Y RADIAL	9695.7	152.5	%	1.60				1.05%
Ag 328.068†	-3401.2	3.9265	ug/L	0.26455	3.9265	ppb	0.26455	6.74%
Al 396.153Radial†	28792.3	24298	ug/L	47.5	24298	ppb	47.5	0.20%
As 188.979†	13.9	27.458	ug/L	1.3551	27.458	ppb	1.3551	4.94%
B 249.677†	757.4	12.538	ug/L	0.9700	12.538	ppb	0.9700	7.74%
Ba 233.527†	32245.6	208.99	ug/L	1.455	208.99	ppb	1.455	0.70%
Be 313.107†	7494.3	7.6230	ug/L	0.03231	7.6230	ppb	0.03231	0.42%
Ca 317.933Radial†	4862.8	7166.9	ug/L	40.61	7166.9	ppb	40.61	0.57%
Cd 226.502†	577.9	-1.4830	ug/L	0.07479	-1.4830	ppb	0.07479	5.04%
Co 228.616†	838.9	8.1387	ug/L	0.23220	8.1387	ppb	0.23220	2.85%
Cr 267.716†	12070.0	152.87	ug/L	0.821	152.87	ppb	0.821	0.54%
Cu 324.752†	7827.5	30.328	ug/L	0.3701	30.328	ppb	0.3701	1.22%
Fe 238.204 Radial†	15457.5	69084	ug/L	281.2	69084	ppb	281.2	0.41%

K 766.490 Radial†	13654.0	2804.5	ug/L	7.88	2804.5	ppb	7.88	0.28%
Mg 279.077 IEC†	138.0	3470.4	ug/L	39.51	3470.4	ppb	39.51	1.14%
Mn 257.610†	2223331.4	2247.7	ug/L	1.73	2247.7	ppb	1.73	0.08%
Mo 202.031†	217.1	18.273	ug/L	0.5927	18.273	ppb	0.5927	3.24%
Na 589.592 Radial†	23230.7	1429.4	ug/L	5.81	1429.4	ppb	5.81	0.41%
Ni 231.604†	4102.8	98.137	ug/L	1.6150	98.137	ppb	1.6150	1.65%
P 214.914†	951.6	375.79	ug/L	7.767	375.79	ppb	7.767	2.07%
Pb 220.353†	563.7	57.778	ug/L	1.4681	57.778	ppb	1.4681	2.54%
S 181.975 Axial†	79.4	90.978	ug/L	5.9957	90.978	ppb	5.9957	6.59%
Sb 206.836†	23.0	-1.9446	ug/L	1.05454	-1.9446	ppb	1.05454	54.23%
Se 196.026†	-442.3	31.420	ug/L	4.4904	31.420	ppb	4.4904	14.29%
Si 251.611†	319343.2	9023.1	ug/L	47.80	9023.1	ppb	47.80	0.53%
Sn 189.927†	8.7	7.2385	ug/L	0.49108	7.2385	ppb	0.49108	6.78%
Sr 421.552†	13466.3	41.809	ug/L	0.2270	41.809	ppb	0.2270	0.54%
Ti 334.940†	1154852.5	1982.1	ug/L	0.79	1982.1	ppb	0.79	0.04%
Tl 190.801†	-116.8	0.2185	ug/L	1.19935	0.2185	ppb	1.19935	548.93%
U 409.014†	-11551.2	-373.89	ug/L	3.707	-373.89	ppb	3.707	0.99%
V 292.402†	7241.0	47.047	ug/L	0.3147	47.047	ppb	0.3147	0.67%
Zn 213.857†	38397.7	309.77	ug/L	1.704	309.77	ppb	1.704	0.55%
SiO2†	322191.2	19462	ug/L	354.3	19462	ppb	354.3	1.82%

Internal Standard Check failed. Continue with analysis.

Sequence No.: 14
Sample ID: 232504004|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 47
Date Collected: 7/2/2009 15:39:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504004|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7489.8	7489.8	108	%			15:40:56
1	Y RADIAL	9217.7	9217.7	145.0	%			15:40:56
1	Al 396.153Radial†	16127.7	15011.8	12668	ug/L	12668	ppb	15:40:56
1	Ca 317.933Radial†	1735.4	1581.3	2330.6	ug/L	2330.6	ppb	15:41:16
1	Fe 238.204 Radial†	16286.4	15049.3	67259	ug/L	67259	ppb	15:40:56
1	K 766.490 Radial†	15244.7	11336.5	2322.5	ug/L	2322.5	ppb	15:40:56
1	Mg 279.077 IEC†	101.5	90.1	2247.1	ug/L	2247.1	ppb	15:41:16
1	Na 589.592 Radial†	25073.5	23560.1	1449.7	ug/L	1449.7	ppb	15:40:56
1	Sr 421.552†	4590.4	4315.0	13.397	ug/L	13.397	ppb	15:40:56
1	Sc 361.383	814918.8	814918.8	109.44	%			15:42:14
1	Y 371.029	841313.6	841313.6	144.70	%			15:42:14
1	Ag 328.068†	-2867.9	-3326.6	3.7486	ug/L	3.7486	ppb	15:42:19
1	As 188.979†	-49.8	-11.2	21.609	ug/L	21.609	ppb	15:42:39
1	B 249.677†	-225.0	675.7	10.797	ug/L	10.797	ppb	15:42:19
1	Ba 233.527†	24296.0	22178.7	143.66	ug/L	143.66	ppb	15:42:19
1	Be 313.107†	-14524.7	-8487.6	2.4477	ug/L	2.4477	ppb	15:42:19
1	Cd 226.502†	292.4	560.5	-1.4759	ug/L	-1.4759	ppb	15:42:39
1	Co 228.616†	756.1	791.4	6.2639	ug/L	6.2639	ppb	15:42:39
1	Cr 267.716†	10438.6	9636.5	122.31	ug/L	122.31	ppb	15:42:19
1	Cu 324.752†	19715.0	12224.2	45.015	ug/L	45.015	ppb	15:42:19
1	Mn 257.610†	2817605.8	2573946.5	2600.6	ug/L	2600.6	ppb	15:42:14
1	Mo 202.031†	371.3	334.8	25.619	ug/L	25.619	ppb	15:42:39
1	Ni 231.604†	4001.4	3519.8	84.191	ug/L	84.191	ppb	15:42:39
1	P 214.914†	1669.4	1231.9	496.71	ug/L	496.71	ppb	15:42:39
1	Pb 220.353†	571.8	540.3	53.227	ug/L	53.227	ppb	15:42:39
1	S 181.975 Axial†	204.1	50.5	58.461	ug/L	58.461	ppb	15:42:39
1	Sb 206.836†	111.2	49.0	4.8362	ug/L	4.8362	ppb	15:42:39
1	Se 196.026†	-515.7	-436.4	27.277	ug/L	27.277	ppb	15:42:39
1	Si 251.611†	206327.5	188088.6	5313.9	ug/L	5313.9	ppb	15:42:19
1	Sn 189.927†	82.2	62.1	14.973	ug/L	14.973	ppb	15:42:39
1	Ti 334.940†	1607788.7	1470687.7	2523.7	ug/L	2523.7	ppb	15:42:14
1	Tl 190.801†	-238.6	-156.9	-3.2209	ug/L	-3.2209	ppb	15:42:39
1	U 409.014†	-17402.7	-10637.7	-344.74	ug/L	-344.74	ppb	15:42:14
1	V 292.402†	4428.2	5739.2	34.527	ug/L	34.527	ppb	15:42:19
1	Zn 213.857†	50920.5	45545.6	369.22	ug/L	369.22	ppb	15:42:19
1	SiO2†	205555.0	187356.0	11316	ug/L	11316	ppb	15:43:46
2	Sc Radial	7658.7	7658.7	110	%			15:41:21
2	Y RADIAL	9344.8	9344.8	147.0	%			15:41:21
2	Al 396.153Radial†	16237.6	14782.0	12474	ug/L	12474	ppb	15:41:21
2	Ca 317.933Radial†	1725.7	1537.0	2265.3	ug/L	2265.3	ppb	15:41:41
2	Fe 238.204 Radial†	16316.2	14743.6	65893	ug/L	65893	ppb	15:41:21
2	K 766.490 Radial†	15305.8	11080.5	2269.5	ug/L	2269.5	ppb	15:41:21
2	Mg 279.077 IEC†	102.0	88.5	2207.7	ug/L	2207.7	ppb	15:41:41
2	Na 589.592 Radial†	25277.7	23233.0	1429.6	ug/L	1429.6	ppb	15:41:21
2	Sr 421.552†	4615.7	4244.2	13.177	ug/L	13.177	ppb	15:41:21
2	Sc 361.383	822560.6	822560.6	110.46	%			15:42:45
2	Y 371.029	849019.2	849019.2	146.03	%			15:42:45
2	Ag 328.068†	-2735.5	-3182.3	4.0954	ug/L	4.0954	ppb	15:42:50
2	As 188.979†	-46.3	-7.6	22.458	ug/L	22.458	ppb	15:43:10
2	B 249.677†	-180.9	717.5	11.849	ug/L	11.849	ppb	15:42:50
2	Ba 233.527†	24094.0	21789.5	141.14	ug/L	141.14	ppb	15:42:50
2	Be 313.107†	-14337.5	-8194.8	2.5491	ug/L	2.5491	ppb	15:42:50
2	Cd 226.502†	294.5	559.8	-1.3243	ug/L	-1.3243	ppb	15:43:10
2	Co 228.616†	745.1	775.0	6.0367	ug/L	6.0367	ppb	15:43:10
2	Cr 267.716†	10274.6	9399.4	119.31	ug/L	119.31	ppb	15:42:50
2	Cu 324.752†	19557.3	11914.1	43.893	ug/L	43.893	ppb	15:42:50
2	Mn 257.610†	2831855.6	2562927.4	2589.4	ug/L	2589.4	ppb	15:42:45
2	Mo 202.031†	361.4	322.8	24.766	ug/L	24.766	ppb	15:43:10
2	Ni 231.604†	3990.8	3476.2	83.149	ug/L	83.149	ppb	15:43:10

2	P 214.914†	1621.7	1174.5	472.16	ug/L	472.16 ppb	15:43:10
2	Pb 220.353†	560.8	525.5	51.753	ug/L	51.753 ppb	15:43:10
2	S 181.975 Axial†	207.0	51.4	59.511	ug/L	59.511 ppb	15:43:10
2	Sb 206.836†	78.3	18.3	-3.4205	ug/L	-3.4205 ppb	15:43:10
2	Se 196.026†	-494.1	-412.5	33.526	ug/L	33.526 ppb	15:43:10
2	Si 251.611†	204030.7	184257.8	5205.6	ug/L	5205.6 ppb	15:42:50
2	Sn 189.927†	98.1	75.8	17.013	ug/L	17.013 ppb	15:43:10
2	Ti 334.940†	1618294.3	1466549.5	2516.6	ug/L	2516.6 ppb	15:42:45
2	Tl 190.801†	-222.6	-140.3	0.5978	ug/L	0.5978 ppb	15:43:10
2	U 409.014†	-17402.9	-10490.2	-339.90	ug/L	-339.90 ppb	15:42:45
2	V 292.402†	4384.2	5661.8	34.090	ug/L	34.090 ppb	15:42:50
2	Zn 213.857†	50515.7	44746.9	362.77	ug/L	362.77 ppb	15:42:50
2	SiO2†	205242.6	185328.2	11193	ug/L	11193 ppb	15:43:52
3	Sc Radial	7552.1	7552.1	109	%		15:41:46
3	Y RADIAL	9281.2	9281.2	146.0	%		15:41:46
3	Al 396.153Radial†	16039.1	14807.2	12495	ug/L	12495 ppb	15:41:46
3	Ca 317.933Radial†	1745.0	1576.9	2324.1	ug/L	2324.1 ppb	15:42:06
3	Fe 238.204 Radial†	16062.9	14719.6	65786	ug/L	65786 ppb	15:41:46
3	K 766.490 Radial†	15159.2	11141.5	2282.1	ug/L	2282.1 ppb	15:41:46
3	Mg 279.077 IEC†	101.0	88.9	2217.4	ug/L	2217.4 ppb	15:42:06
3	Na 589.592 Radial†	24839.5	23153.6	1424.7	ug/L	1424.7 ppb	15:41:46
3	Sr 421.552†	4578.5	4269.0	13.254	ug/L	13.254 ppb	15:41:46
3	Sc 361.383	816977.6	816977.6	109.71	%		15:43:16
3	Y 371.029	843465.5	843465.5	145.07	%		15:43:16
3	Ag 328.068†	-2773.2	-3233.6	3.7790	ug/L	3.7790 ppb	15:43:21
3	As 188.979†	-51.1	-12.3	20.927	ug/L	20.927 ppb	15:43:41
3	B 249.677†	-162.8	732.9	12.207	ug/L	12.207 ppb	15:43:21
3	Ba 233.527†	24209.7	22044.1	142.80	ug/L	142.80 ppb	15:43:21
3	Be 313.107†	-14525.3	-8454.7	2.4389	ug/L	2.4389 ppb	15:43:21
3	Cd 226.502†	282.5	550.7	-1.4140	ug/L	-1.4140 ppb	15:43:41
3	Co 228.616†	757.9	791.3	6.2997	ug/L	6.2997 ppb	15:43:41
3	Cr 267.716†	10296.8	9483.2	120.36	ug/L	120.36 ppb	15:43:21
3	Cu 324.752†	19684.4	12151.0	44.683	ug/L	44.683 ppb	15:43:21
3	Mn 257.610†	2809996.8	2560522.8	2586.9	ug/L	2586.9 ppb	15:43:16
3	Mo 202.031†	347.6	312.4	24.100	ug/L	24.100 ppb	15:43:41
3	Ni 231.604†	3984.4	3495.1	83.600	ug/L	83.600 ppb	15:43:41
3	P 214.914†	1642.7	1203.7	485.21	ug/L	485.21 ppb	15:43:41
3	Pb 220.353†	559.9	528.2	52.048	ug/L	52.048 ppb	15:43:41
3	S 181.975 Axial†	204.1	50.0	57.847	ug/L	57.847 ppb	15:43:41
3	Sb 206.836†	82.7	22.8	-2.2586	ug/L	-2.2586 ppb	15:43:41
3	Se 196.026†	-520.6	-439.7	20.874	ug/L	20.874 ppb	15:43:41
3	Si 251.611†	204704.8	186134.5	5258.7	ug/L	5258.7 ppb	15:43:21
3	Sn 189.927†	88.9	68.0	15.786	ug/L	15.786 ppb	15:43:41
3	Ti 334.940†	1605768.3	1465143.8	2514.2	ug/L	2514.2 ppb	15:43:16
3	Tl 190.801†	-223.5	-142.6	0.0300	ug/L	0.0300 ppb	15:43:41
3	U 409.014†	-17274.6	-10480.9	-339.60	ug/L	-339.60 ppb	15:43:16
3	V 292.402†	4344.8	5653.1	34.028	ug/L	34.028 ppb	15:43:21
3	Zn 213.857†	50546.1	45087.1	365.59	ug/L	365.59 ppb	15:43:21
3	SiO2†	204134.0	185587.5	11209	ug/L	11209 ppb	15:43:57

Mean Data: 232504004|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	818152.3	109.87	%	0.531				0.48%
Sc Radial	7566.9	109	%	1.2				1.13%
Y 371.029	844599.4	145.27	%	0.684				0.47%
Y RADIAL	9281.3	146.0	%	1.00				0.68%
Ag 328.068†	-3247.5	3.8744	ug/L	0.19204	3.8744	ppb	0.19204	4.96%
Al 396.153Radial†	14867.0	12546	ug/L	106.3	12546	ppb	106.3	0.85%
As 188.979†	-10.4	21.664	ug/L	0.7671	21.664	ppb	0.7671	3.54%
B 249.677†	708.7	11.617	ug/L	0.7329	11.617	ppb	0.7329	6.31%
Ba 233.527†	22004.1	142.53	ug/L	1.280	142.53	ppb	1.280	0.90%
Be 313.107†	-8379.1	2.4786	ug/L	0.06125	2.4786	ppb	0.06125	2.47%
Ca 317.933Radial†	1565.1	2306.7	ug/L	35.94	2306.7	ppb	35.94	1.56%
Cd 226.502†	557.0	-1.4047	ug/L	0.07619	-1.4047	ppb	0.07619	5.42%
Co 228.616†	785.9	6.2001	ug/L	0.14265	6.2001	ppb	0.14265	2.30%
Cr 267.716†	9506.4	120.66	ug/L	1.524	120.66	ppb	1.524	1.26%
Cu 324.752†	12096.4	44.530	ug/L	0.5766	44.530	ppb	0.5766	1.29%
Fe 238.204 Radial†	14837.5	66313	ug/L	821.5	66313	ppb	821.5	1.24%
K 766.490 Radial†	11186.2	2291.4	ug/L	27.69	2291.4	ppb	27.69	1.21%

Mg 279.077 IEC†	89.2	2224.1	ug/L	20.53	2224.1	ppb	20.53	0.92%
Mn 257.610†	2565798.9	2592.3	ug/L	7.31	2592.3	ppb	7.31	0.28%
Mo 202.031†	323.3	24.828	ug/L	0.7613	24.828	ppb	0.7613	3.07%
Na 589.592 Radial†	23315.6	1434.6	ug/L	13.26	1434.6	ppb	13.26	0.92%
Ni 231.604†	3497.0	83.647	ug/L	0.5222	83.647	ppb	0.5222	0.62%
P 214.914†	1203.4	484.70	ug/L	12.284	484.70	ppb	12.284	2.53%
Pb 220.353†	531.3	52.343	ug/L	0.7802	52.343	ppb	0.7802	1.49%
S 181.975 Axial†	50.7	58.606	ug/L	0.8411	58.606	ppb	0.8411	1.44%
Sb 206.836†	30.0	-0.2809	ug/L	4.46947	-0.2809	ppb	4.46947	>999.9%
Se 196.026†	-429.5	27.226	ug/L	6.3261	27.226	ppb	6.3261	23.24%
Si 251.611†	186160.3	5259.4	ug/L	54.13	5259.4	ppb	54.13	1.03%
Sn 189.927†	68.6	15.924	ug/L	1.0270	15.924	ppb	1.0270	6.45%
Sr 421.552†	4276.1	13.276	ug/L	0.1114	13.276	ppb	0.1114	0.84%
Ti 334.940†	1467460.3	2518.2	ug/L	4.95	2518.2	ppb	4.95	0.20%
Tl 190.801†	-146.6	-0.8643	ug/L	2.06048	-0.8643	ppb	2.06048	238.39%
U 409.014†	-10536.2	-341.41	ug/L	2.885	-341.41	ppb	2.885	0.85%
V 292.402†	5684.7	34.215	ug/L	0.2719	34.215	ppb	0.2719	0.79%
Zn 213.857†	45126.5	365.86	ug/L	3.237	365.86	ppb	3.237	0.88%
SiO2†	186090.5	11240	ug/L	66.7	11240	ppb	66.7	0.59%

Sequence No.: 15
Sample ID: 232504005|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 48
Date Collected: 7/2/2009 15:46:07
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504005|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7541.8	7541.8	109	%			15:48:21
1	Y RADIAL	8990.9	8990.9	141.4	%			15:48:01
1	Al 396.153Radial†	42071.9	38778.5	32725	ug/L	32725	ppb	15:48:01
1	Ca 317.933Radial†	4230.4	3865.7	5697.4	ug/L	5697.4	ppb	15:48:21
1	Fe 238.204 Radial†	22180.5	20368.1	91030	ug/L	91030	ppb	15:48:01
1	K 766.490 Radial†	26773.4	21846.0	4483.7	ug/L	4483.7	ppb	15:48:01
1	Mg 279.077 IEC†	254.7	230.3	5814.4	ug/L	5814.4	ppb	15:48:21
1	Na 589.592 Radial†	15560.2	14647.2	901.27	ug/L	901.27	ppb	15:48:01
1	Sr 421.552†	18179.9	16788.6	52.156	ug/L	52.156	ppb	15:48:01
1	Sc 361.383	812578.1	812578.1	109.12	%			15:49:19
1	Y 371.029	805618.1	805618.1	138.56	%			15:49:19
1	Ag 328.068†	-4127.7	-4488.6	5.0212	ug/L	5.0212	ppb	15:49:24
1	As 188.979†	-66.1	-26.3	22.269	ug/L	22.269	ppb	15:49:44
1	B 249.677†	-35.9	848.4	13.105	ug/L	13.105	ppb	15:49:24
1	Ba 233.527†	56179.7	51461.2	333.57	ug/L	333.57	ppb	15:49:24
1	Be 313.107†	-1092.5	3783.6	7.6600	ug/L	7.6600	ppb	15:49:24
1	Cd 226.502†	574.9	820.0	-1.2770	ug/L	-1.2770	ppb	15:49:44
1	Co 228.616†	1014.6	1030.3	9.4795	ug/L	9.4795	ppb	15:49:44
1	Cr 267.716†	24073.1	22158.8	279.74	ug/L	279.74	ppb	15:49:24
1	Cu 324.752†	18520.8	11181.8	42.882	ug/L	42.882	ppb	15:49:24
1	Mn 257.610†	3925073.2	3596256.8	3633.1	ug/L	3633.1	ppb	15:49:19
1	Mo 202.031†	379.3	343.2	27.699	ug/L	27.699	ppb	15:49:44
1	Ni 231.604†	7338.2	6588.1	157.59	ug/L	157.59	ppb	15:49:44
1	P 214.914†	1884.0	1433.0	575.47	ug/L	575.47	ppb	15:49:44
1	Pb 220.353†	726.4	683.5	70.016	ug/L	70.016	ppb	15:49:44
1	S 181.975 Axial†	311.4	149.4	173.73	ug/L	173.73	ppb	15:49:44
1	Sb 206.836†	108.1	46.5	-0.1465	ug/L	-0.1465	ppb	15:49:44
1	Se 196.026†	-679.4	-587.7	39.216	ug/L	39.216	ppb	15:49:44
1	Si 251.611†	330903.6	302794.4	8554.8	ug/L	8554.8	ppb	15:49:24
1	Sn 189.927†	14.3	0.1	7.3778	ug/L	7.3778	ppb	15:49:44
1	Ti 334.940†	1677479.2	1538784.8	2640.7	ug/L	2640.7	ppb	15:49:19
1	Tl 190.801†	-241.8	-160.4	2.1356	ug/L	2.1356	ppb	15:49:44
1	U 409.014†	-15486.8	-8927.8	-293.91	ug/L	-293.91	ppb	15:49:19
1	V 292.402†	8558.2	9535.7	62.335	ug/L	62.335	ppb	15:49:24
1	Zn 213.857†	70043.5	63204.1	512.29	ug/L	512.29	ppb	15:49:24
1	SiO2†	336023.3	307459.4	18571	ug/L	18571	ppb	15:50:53
2	Sc Radial	7475.5	7475.5	108	%			15:48:46
2	Y RADIAL	8703.1	8703.1	136.9	%			15:48:26
2	Al 396.153Radial†	42241.9	39279.7	33148	ug/L	33148	ppb	15:48:26
2	Ca 317.933Radial†	4289.4	3955.1	5829.1	ug/L	5829.1	ppb	15:48:46
2	Fe 238.204 Radial†	22116.5	20489.6	91573	ug/L	91573	ppb	15:48:26
2	K 766.490 Radial†	26721.2	22016.1	4518.9	ug/L	4518.9	ppb	15:48:26
2	Mg 279.077 IEC†	258.1	235.6	5949.2	ug/L	5949.2	ppb	15:48:46
2	Na 589.592 Radial†	15719.3	14921.9	918.17	ug/L	918.17	ppb	15:48:26
2	Sr 421.552†	18193.6	16949.7	52.656	ug/L	52.656	ppb	15:48:26
2	Sc 361.383	820739.8	820739.8	110.22	%			15:49:50
2	Y 371.029	814070.7	814070.7	140.02	%			15:49:50
2	Ag 328.068†	-4111.2	-4436.0	5.4711	ug/L	5.4711	ppb	15:49:56
2	As 188.979†	-66.7	-26.3	22.393	ug/L	22.393	ppb	15:50:16
2	B 249.677†	-45.4	840.2	12.880	ug/L	12.880	ppb	15:49:56
2	Ba 233.527†	56346.2	51100.3	331.23	ug/L	331.23	ppb	15:49:56
2	Be 313.107†	-1218.2	3679.4	7.6182	ug/L	7.6182	ppb	15:49:56
2	Cd 226.502†	573.3	813.4	-1.4169	ug/L	-1.4169	ppb	15:50:16
2	Co 228.616†	1016.8	1023.0	9.3562	ug/L	9.3562	ppb	15:50:16
2	Cr 267.716†	24164.3	22022.2	278.03	ug/L	278.03	ppb	15:49:56
2	Cu 324.752†	18510.1	11003.3	42.313	ug/L	42.313	ppb	15:49:56
2	Mn 257.610†	3956908.8	3589371.4	3626.2	ug/L	3626.2	ppb	15:49:50
2	Mo 202.031†	379.7	340.1	27.538	ug/L	27.538	ppb	15:50:16
2	Ni 231.604†	7299.0	6485.7	155.14	ug/L	155.14	ppb	15:50:16

2	P 214.914†	1860.6	1394.5	557.99	ug/L	557.99 ppb	15:50:16
2	Pb 220.353†	719.3	670.4	68.665	ug/L	68.665 ppb	15:50:16
2	S 181.975 Axial†	305.2	141.0	163.46	ug/L	163.46 ppb	15:50:16
2	Sb 206.836†	96.8	35.2	-3.1471	ug/L	-3.1471 ppb	15:50:16
2	Se 196.026†	-675.6	-578.1	45.413	ug/L	45.413 ppb	15:50:16
2	Si 251.611†	330633.9	299534.2	8462.6	ug/L	8462.6 ppb	15:49:56
2	Sn 189.927†	23.0	7.9	8.6542	ug/L	8.6542 ppb	15:50:16
2	Ti 334.940†	1694343.5	1538798.6	2640.7	ug/L	2640.7 ppb	15:49:50
2	Tl 190.801†	-249.8	-165.5	0.9064	ug/L	0.9064 ppb	15:50:16
2	U 409.014†	-15211.6	-8536.9	-281.62	ug/L	-281.62 ppb	15:49:50
2	V 292.402†	8678.1	9566.4	62.536	ug/L	62.536 ppb	15:49:56
2	Zn 213.857†	70023.5	62547.7	506.81	ug/L	506.81 ppb	15:49:56
2	SiO2†	339487.8	307540.5	18575	ug/L	18575 ppb	15:50:58
3	Sc Radial	7502.4	7502.4	108	%		15:49:11
3	Y RADIAL	9005.1	9005.1	141.6	%		15:48:51
3	Al 396.153Radial†	41949.3	38868.8	32802	ug/L	32802 ppb	15:48:51
3	Ca 317.933Radial†	4292.8	3943.9	5812.6	ug/L	5812.6 ppb	15:49:11
3	Fe 238.204 Radial†	22055.3	20359.7	90992	ug/L	90992 ppb	15:48:51
3	K 766.490 Radial†	26740.1	21944.8	4504.2	ug/L	4504.2 ppb	15:48:51
3	Mg 279.077 IEC†	257.1	233.9	5904.9	ug/L	5904.9 ppb	15:49:11
3	Na 589.592 Radial†	15626.4	14783.8	909.67	ug/L	909.67 ppb	15:48:51
3	Sr 421.552†	17939.4	16654.2	51.737	ug/L	51.737 ppb	15:48:51
3	Sc 361.383	826816.0	826816.0	111.03	%		15:50:22
3	Y 371.029	820285.0	820285.0	141.09	%		15:50:22
3	Ag 328.068†	-4120.3	-4416.7	5.3838	ug/L	5.3838 ppb	15:50:27
3	As 188.979†	-56.7	-16.7	25.290	ug/L	25.290 ppb	15:50:47
3	B 249.677†	-63.5	824.1	12.552	ug/L	12.552 ppb	15:50:27
3	Ba 233.527†	55844.0	50272.3	325.86	ug/L	325.86 ppb	15:50:27
3	Be 313.107†	-1109.8	3785.2	7.6606	ug/L	7.6606 ppb	15:50:27
3	Cd 226.502†	581.4	816.9	-1.3095	ug/L	-1.3095 ppb	15:50:47
3	Co 228.616†	1036.6	1034.0	9.5368	ug/L	9.5368 ppb	15:50:47
3	Cr 267.716†	23823.3	21553.9	272.15	ug/L	272.15 ppb	15:50:27
3	Cu 324.752†	18190.8	10592.3	40.897	ug/L	40.897 ppb	15:50:27
3	Mn 257.610†	3982209.6	3585774.8	3622.5	ug/L	3622.5 ppb	15:50:22
3	Mo 202.031†	369.9	328.7	26.781	ug/L	26.781 ppb	15:50:47
3	Ni 231.604†	7372.1	6502.9	155.55	ug/L	155.55 ppb	15:50:47
3	P 214.914†	1877.9	1397.8	560.09	ug/L	560.09 ppb	15:50:47
3	Pb 220.353†	748.8	692.2	70.957	ug/L	70.957 ppb	15:50:47
3	S 181.975 Axial†	302.9	136.8	158.54	ug/L	158.54 ppb	15:50:47
3	Sb 206.836†	97.8	35.5	-2.9373	ug/L	-2.9373 ppb	15:50:47
3	Se 196.026†	-681.2	-578.6	43.212	ug/L	43.212 ppb	15:50:47
3	Si 251.611†	326330.6	293454.0	8290.8	ug/L	8290.8 ppb	15:50:27
3	Sn 189.927†	34.2	17.8	10.166	ug/L	10.166 ppb	15:50:47
3	Ti 334.940†	1706846.4	1538761.9	2640.6	ug/L	2640.6 ppb	15:50:22
3	Tl 190.801†	-245.0	-159.5	2.3209	ug/L	2.3209 ppb	15:50:47
3	U 409.014†	-15328.9	-8541.2	-281.67	ug/L	-281.67 ppb	15:50:22
3	V 292.402†	8486.9	9336.4	60.723	ug/L	60.723 ppb	15:50:27
3	Zn 213.857†	69273.1	61405.0	497.42	ug/L	497.42 ppb	15:50:27
3	SiO2†	333512.0	299895.1	18113	ug/L	18113 ppb	15:51:03

Mean Data: 232504005|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	820044.6	110.12	%	0.959				0.87%
Sc Radial	7506.6	108	%	0.5				0.44%
Y 371.029	813324.6	139.89	%	1.266				0.91%
Y RADIAL	8899.7	140.0	%	2.68				1.91%
Ag 328.068†	-4447.1	5.2921	ug/L	0.23855	5.2921	ppb	0.23855	4.51%
Al 396.153Radial†	38975.7	32892	ug/L	225.4	32892	ppb	225.4	0.69%
As 188.979†	-23.1	23.317	ug/L	1.7091	23.317	ppb	1.7091	7.33%
B 249.677†	837.6	12.846	ug/L	0.2780	12.846	ppb	0.2780	2.16%
Ba 233.527†	50944.6	330.22	ug/L	3.956	330.22	ppb	3.956	1.20%
Be 313.107†	3749.4	7.6463	ug/L	0.02434	7.6463	ppb	0.02434	0.32%
Ca 317.933Radial†	3921.6	5779.7	ug/L	71.74	5779.7	ppb	71.74	1.24%
Cd 226.502†	816.8	-1.3345	ug/L	0.07320	-1.3345	ppb	0.07320	5.49%
Co 228.616†	1029.1	9.4575	ug/L	0.09228	9.4575	ppb	0.09228	0.98%
Cr 267.716†	21911.6	276.64	ug/L	3.981	276.64	ppb	3.981	1.44%
Cu 324.752†	10925.8	42.031	ug/L	1.0224	42.031	ppb	1.0224	2.43%
Fe 238.204 Radial†	20405.8	91199	ug/L	325.0	91199	ppb	325.0	0.36%
K 766.490 Radial†	21935.6	4502.3	ug/L	17.71	4502.3	ppb	17.71	0.39%

Mg 279.077 IEC†	233.3	5889.5	ug/L	68.68	5889.5	ppb	68.68	1.17%
Mn 257.610†	3590467.7	3627.3	ug/L	5.36	3627.3	ppb	5.36	0.15%
Mo 202.031†	337.3	27.339	ug/L	0.4899	27.339	ppb	0.4899	1.79%
Na 589.592 Radial†	14784.3	909.70	ug/L	8.452	909.70	ppb	8.452	0.93%
Ni 231.604†	6525.6	156.09	ug/L	1.312	156.09	ppb	1.312	0.84%
P 214.914†	1408.4	564.51	ug/L	9.542	564.51	ppb	9.542	1.69%
Pb 220.353†	682.1	69.879	ug/L	1.1524	69.879	ppb	1.1524	1.65%
S 181.975 Axial†	142.4	165.24	ug/L	7.749	165.24	ppb	7.749	4.69%
Sb 206.836†	39.1	-2.0770	ug/L	1.67507	-2.0770	ppb	1.67507	80.65%
Se 196.026†	-581.5	42.614	ug/L	3.1415	42.614	ppb	3.1415	7.37%
Si 251.611†	298594.2	8436.0	ug/L	133.98	8436.0	ppb	133.98	1.59%
Sn 189.927†	8.6	8.7326	ug/L	1.39569	8.7326	ppb	1.39569	15.98%
Sr 421.552†	16797.5	52.183	ug/L	0.4600	52.183	ppb	0.4600	0.88%
Ti 334.940†	1538781.8	2640.7	ug/L	0.03	2640.7	ppb	0.03	0.00%
Tl 190.801†	-161.8	1.7876	ug/L	0.76874	1.7876	ppb	0.76874	43.00%
U 409.014†	-8668.6	-285.74	ug/L	7.081	-285.74	ppb	7.081	2.48%
V 292.402†	9479.5	61.865	ug/L	0.9942	61.865	ppb	0.9942	1.61%
Zn 213.857†	62385.6	505.51	ug/L	7.522	505.51	ppb	7.522	1.49%
SiO2†	304965.0	18420	ug/L	265.3	18420	ppb	265.3	1.44%

Sequence No.: 16
Sample ID: 232504006|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 49
Date Collected: 7/2/2009 15:53:15
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504006|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7345.1	7345.1	106	%			15:55:28
1	Y RADIAL	7523.9	7523.9	118.3	%			15:55:08
1	Al 396.153Radial†	25164.5	23843.1	20121	ug/L	20121	ppb	15:55:08
1	Ca 317.933Radial†	19317.2	18222.2	26856	ug/L	26856	ppb	15:55:08
1	Fe 238.204 Radial†	20022.4	18875.9	84361	ug/L	84361	ppb	15:55:08
1	K 766.490 Radial†	29960.3	25516.2	5268.5	ug/L	5268.5	ppb	15:55:08
1	Mg 279.077 IEC†	362.8	338.8	8593.6	ug/L	8593.6	ppb	15:55:28
1	Na 589.592 Radial†	14639.5	14160.8	871.34	ug/L	871.34	ppb	15:55:08
1	Sr 421.552†	30944.2	29294.7	90.841	ug/L	90.841	ppb	15:55:08
1	Sc 361.383	804389.6	804389.6	108.02	%			15:56:26
1	Y 371.029	675456.5	675456.5	116.18	%			15:56:26
1	Ag 328.068†	-3737.5	-4165.9	4.3896	ug/L	4.3896	ppb	15:56:31
1	As 188.979†	-53.5	-15.2	22.468	ug/L	22.468	ppb	15:56:51
1	B 249.677†	-70.7	815.8	12.782	ug/L	12.782	ppb	15:56:31
1	Ba 233.527†	63589.0	58844.4	381.61	ug/L	381.61	ppb	15:56:31
1	Be 313.107†	-13458.7	-7674.5	2.1520	ug/L	2.1520	ppb	15:56:31
1	Cd 226.502†	1051.5	1266.6	4.4499	ug/L	4.4499	ppb	15:56:51
1	Co 228.616†	1455.9	1448.3	17.081	ug/L	17.081	ppb	15:56:51
1	Cr 267.716†	3871.2	3681.7	48.093	ug/L	48.093	ppb	15:56:31
1	Cu 324.752†	51823.2	42183.8	146.80	ug/L	146.80	ppb	15:56:31
1	Mn 257.610†	1517347.7	1403949.1	1424.4	ug/L	1424.4	ppb	15:56:26
1	Mo 202.031†	159.1	142.9	14.565	ug/L	14.565	ppb	15:56:51
1	Ni 231.604†	1735.2	1469.7	35.144	ug/L	35.144	ppb	15:56:51
1	P 214.914†	5235.6	4553.3	1960.6	ug/L	1960.6	ppb	15:56:51
1	Pb 220.353†	560.5	536.7	52.603	ug/L	52.603	ppb	15:56:51
1	S 181.975 Axial†	484.7	312.7	373.10	ug/L	373.10	ppb	15:56:51
1	Sb 206.836†	82.2	23.5	0.1539	ug/L	0.1539	ppb	15:56:51
1	Se 196.026†	-615.7	-535.1	39.984	ug/L	39.984	ppb	15:56:51
1	Si 251.611†	260779.4	240964.8	6807.7	ug/L	6807.7	ppb	15:56:31
1	Sn 189.927†	-114.6	-119.1	-9.6092	ug/L	-9.6092	ppb	15:56:51
1	Ti 334.940†	1418220.3	1314427.8	2256.9	ug/L	2256.9	ppb	15:56:26
1	Tl 190.801†	-141.9	-70.2	9.5317	ug/L	9.5317	ppb	15:56:51
1	U 409.014†	-8911.9	-2985.6	-104.83	ug/L	-104.83	ppb	15:56:31
1	V 292.402†	15296.0	15853.0	115.85	ug/L	115.85	ppb	15:56:31
1	Zn 213.857†	162392.2	149348.3	1226.4	ug/L	1226.4	ppb	15:56:31
1	SiO2†	264534.5	244414.3	14762	ug/L	14762	ppb	15:57:59
2	Sc Radial	7310.4	7310.4	105	%			15:55:54
2	Y RADIAL	7383.3	7383.3	116.1	%			15:55:34
2	Al 396.153Radial†	24935.9	23739.0	20034	ug/L	20034	ppb	15:55:34
2	Ca 317.933Radial†	19062.4	18067.1	26628	ug/L	26628	ppb	15:55:34
2	Fe 238.204 Radial†	19768.2	18724.5	83684	ug/L	83684	ppb	15:55:34
2	K 766.490 Radial†	29702.1	25405.7	5245.6	ug/L	5245.6	ppb	15:55:34
2	Mg 279.077 IEC†	364.3	341.8	8672.1	ug/L	8672.1	ppb	15:55:54
2	Na 589.592 Radial†	14466.7	14062.5	865.29	ug/L	865.29	ppb	15:55:34
2	Sr 421.552†	30533.3	29043.6	90.063	ug/L	90.063	ppb	15:55:34
2	Sc 361.383	800572.0	800572.0	107.51	%			15:56:57
2	Y 371.029	672469.9	672469.9	115.66	%			15:56:57
2	Ag 328.068†	-3789.4	-4230.6	3.8300	ug/L	3.8300	ppb	15:57:02
2	As 188.979†	-69.3	-30.2	17.580	ug/L	17.580	ppb	15:57:22
2	B 249.677†	-33.6	850.1	13.610	ug/L	13.610	ppb	15:57:02
2	Ba 233.527†	64597.7	60063.3	389.53	ug/L	389.53	ppb	15:57:02
2	Be 313.107†	-13635.5	-7898.3	2.0568	ug/L	2.0568	ppb	15:57:02
2	Cd 226.502†	1042.3	1262.7	4.4846	ug/L	4.4846	ppb	15:57:22
2	Co 228.616†	1468.0	1465.9	17.377	ug/L	17.377	ppb	15:57:22
2	Cr 267.716†	4031.5	3847.9	50.165	ug/L	50.165	ppb	15:57:02
2	Cu 324.752†	52576.8	43113.6	149.89	ug/L	149.89	ppb	15:57:02
2	Mn 257.610†	1508894.5	1402784.7	1423.1	ug/L	1423.1	ppb	15:56:57
2	Mo 202.031†	157.5	142.0	14.466	ug/L	14.466	ppb	15:57:22
2	Ni 231.604†	1714.3	1457.9	34.862	ug/L	34.862	ppb	15:57:22

2	P 214.914†	5237.5	4578.1	1971.7 ug/L	1971.7 ppb	15:57:22
2	Pb 220.353†	545.4	525.1	51.427 ug/L	51.427 ppb	15:57:22
2	S 181.975 Axial†	491.4	321.1	383.25 ug/L	383.25 ppb	15:57:22
2	Sb 206.836†	83.3	24.9	0.4934 ug/L	0.4934 ppb	15:57:22
2	Se 196.026†	-627.5	-548.8	31.535 ug/L	31.535 ppb	15:57:22
2	Si 251.611†	263782.6	244909.4	6919.2 ug/L	6919.2 ppb	15:57:02
2	Sn 189.927†	-109.8	-115.1	-9.0691 ug/L	-9.0691 ppb	15:57:22
2	Ti 334.940†	1410120.6	1313154.6	2254.7 ug/L	2254.7 ppb	15:56:57
2	Tl 190.801†	-164.1	-91.5	4.4442 ug/L	4.4442 ppb	15:57:22
2	U 409.014†	-8741.9	-2866.8	-100.99 ug/L	-100.99 ppb	15:57:02
2	V 292.402†	15577.3	16182.1	118.65 ug/L	118.65 ppb	15:57:02
2	Zn 213.857†	164570.7	152091.6	1249.2 ug/L	1249.2 ppb	15:57:02
2	SiO2†	264823.0	245850.4	14849 ug/L	14849 ppb	15:58:04
3	Sc Radial	7394.8	7394.8	107 %		15:56:19
3	Y RADIAL	7703.2	7703.2	121.1 %		15:55:59
3	Al 396.153Radial†	25891.9	24365.9	20563 ug/L	20563 ppb	15:55:59
3	Ca 317.933Radial†	19901.7	18648.0	27484 ug/L	27484 ppb	15:55:59
3	Fe 238.204 Radial†	20692.6	19377.6	86604 ug/L	86604 ppb	15:55:59
3	K 766.490 Radial†	30924.3	26230.6	5416.5 ug/L	5416.5 ppb	15:55:59
3	Mg 279.077 IEC†	358.9	332.8	8438.8 ug/L	8438.8 ppb	15:56:19
3	Na 589.592 Radial†	15131.0	14529.1	894.00 ug/L	894.00 ppb	15:55:59
3	Sr 421.552†	32055.3	30140.8	93.467 ug/L	93.467 ppb	15:55:59
3	Sc 361.383	815640.0	815640.0	109.53 %		15:57:28
3	Y 371.029	684556.3	684556.3	117.74 %		15:57:28
3	Ag 328.068†	-3780.7	-4157.6	5.1385 ug/L	5.1385 ppb	15:57:33
3	As 188.979†	-51.8	-12.9	23.641 ug/L	23.641 ppb	15:57:53
3	B 249.677†	-11.8	870.6	13.881 ug/L	13.881 ppb	15:57:33
3	Ba 233.527†	63684.6	58119.7	376.90 ug/L	376.90 ppb	15:57:33
3	Be 313.107†	-13430.6	-7477.0	2.2369 ug/L	2.2369 ppb	15:57:33
3	Cd 226.502†	1071.9	1271.9	4.2464 ug/L	4.2464 ppb	15:57:53
3	Co 228.616†	1462.2	1435.4	16.840 ug/L	16.840 ppb	15:57:53
3	Cr 267.716†	3883.6	3643.6	47.660 ug/L	47.660 ppb	15:57:33
3	Cu 324.752†	51852.6	41549.0	144.79 ug/L	144.79 ppb	15:57:33
3	Mn 257.610†	1540143.4	1405385.9	1426.1 ug/L	1426.1 ppb	15:57:28
3	Mo 202.031†	165.1	146.3	14.926 ug/L	14.926 ppb	15:57:53
3	Ni 231.604†	1697.4	1413.0	33.788 ug/L	33.788 ppb	15:57:53
3	P 214.914†	5224.9	4476.6	1924.8 ug/L	1924.8 ppb	15:57:53
3	Pb 220.353†	564.4	533.1	52.102 ug/L	52.102 ppb	15:57:53
3	S 181.975 Axial†	484.0	305.9	364.79 ug/L	364.79 ppb	15:57:53
3	Sb 206.836†	95.8	34.9	3.2875 ug/L	3.2875 ppb	15:57:53
3	Se 196.026†	-631.5	-541.7	44.509 ug/L	44.509 ppb	15:57:53
3	Si 251.611†	260595.5	237467.0	6708.9 ug/L	6708.9 ppb	15:57:33
3	Sn 189.927†	-121.0	-123.5	-10.072 ug/L	-10.072 ppb	15:57:53
3	Ti 334.940†	1439543.5	1315786.0	2259.3 ug/L	2259.3 ppb	15:57:28
3	Tl 190.801†	-153.4	-78.9	7.5068 ug/L	7.5068 ppb	15:57:53
3	U 409.014†	-8878.5	-2841.3	-100.54 ug/L	-100.54 ppb	15:57:33
3	V 292.402†	15484.3	15829.6	115.35 ug/L	115.35 ppb	15:57:33
3	Zn 213.857†	162338.9	147226.0	1208.6 ug/L	1208.6 ppb	15:57:33
3	SiO2†	264022.6	240569.1	14530 ug/L	14530 ppb	15:58:09

Mean Data: 232504006|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	806867.2	108.35	%	1.052				0.97%
Sc Radial	7350.1	106	%	0.6				0.58%
Y 371.029	677494.3	116.53	%	1.083				0.93%
Y RADIAL	7536.8	118.5	%	2.52				2.13%
Ag 328.068†	-4184.7	4.4527	ug/L	0.65653	4.4527	ppb	0.65653	14.74%
Al 396.153Radial†	23982.6	20239	ug/L	283.5	20239	ppb	283.5	1.40%
As 188.979†	-19.4	21.230	ug/L	3.2143	21.230	ppb	3.2143	15.14%
B 249.677†	845.5	13.424	ug/L	0.5728	13.424	ppb	0.5728	4.27%
Ba 233.527†	59009.1	382.68	ug/L	6.382	382.68	ppb	6.382	1.67%
Be 313.107†	-7683.3	2.1485	ug/L	0.09012	2.1485	ppb	0.09012	4.19%
Ca 317.933Radial†	18312.4	26989	ug/L	443.3	26989	ppb	443.3	1.64%
Cd 226.502†	1267.1	4.3936	ug/L	0.12868	4.3936	ppb	0.12868	2.93%
Co 228.616†	1449.9	17.099	ug/L	0.2691	17.099	ppb	0.2691	1.57%
Cr 267.716†	3724.4	48.639	ug/L	1.3390	48.639	ppb	1.3390	2.75%
Cu 324.752†	42282.2	147.16	ug/L	2.567	147.16	ppb	2.567	1.74%
Fe 238.204 Radial†	18992.6	84883	ug/L	1528.0	84883	ppb	1528.0	1.80%
K 766.490 Radial†	25717.5	5310.2	ug/L	92.77	5310.2	ppb	92.77	1.75%

Mg 279.077 IEC†	337.8	8568.2	ug/L	118.72	8568.2	ppb	118.72	1.39%
Mn 257.610†	1404039.9	1424.5	ug/L	1.50	1424.5	ppb	1.50	0.11%
Mo 202.031†	143.7	14.652	ug/L	0.2418	14.652	ppb	0.2418	1.65%
Na 589.592 Radial†	14250.8	876.88	ug/L	15.135	876.88	ppb	15.135	1.73%
Ni 231.604†	1446.9	34.598	ug/L	0.7156	34.598	ppb	0.7156	2.07%
P 214.914†	4536.0	1952.4	ug/L	24.49	1952.4	ppb	24.49	1.25%
Pb 220.353†	531.6	52.044	ug/L	0.5898	52.044	ppb	0.5898	1.13%
S 181.975 Axial†	313.2	373.71	ug/L	9.245	373.71	ppb	9.245	2.47%
Sb 206.836†	27.8	1.3116	ug/L	1.71954	1.3116	ppb	1.71954	131.10%
Se 196.026†	-541.9	38.676	ug/L	6.5849	38.676	ppb	6.5849	17.03%
Si 251.611†	241113.7	6811.9	ug/L	105.24	6811.9	ppb	105.24	1.54%
Sn 189.927†	-119.2	-9.5836	ug/L	0.50214	-9.5836	ppb	0.50214	5.24%
Sr 421.552†	29493.0	91.457	ug/L	1.7834	91.457	ppb	1.7834	1.95%
Ti 334.940†	1314456.1	2257.0	ug/L	2.28	2257.0	ppb	2.28	0.10%
Tl 190.801†	-80.2	7.1609	ug/L	2.56136	7.1609	ppb	2.56136	35.77%
U 409.014†	-2897.9	-102.12	ug/L	2.355	-102.12	ppb	2.355	2.31%
V 292.402†	15954.9	116.62	ug/L	1.780	116.62	ppb	1.780	1.53%
Zn 213.857†	149555.3	1228.1	ug/L	20.32	1228.1	ppb	20.32	1.65%
SiO2†	243611.2	14714	ug/L	165.0	14714	ppb	165.0	1.12%

Sequence No.: 17
Sample ID: 232504007|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 50
Date Collected: 7/2/2009 16:00:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504007|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7323.8	7323.8	106	%			16:02:33
1	Y RADIAL	7669.2	7669.2	120.6	%			16:02:13
1	Al 396.153Radial†	32328.2	30699.2	25908	ug/L	25908	ppb	16:02:13
1	Ca 317.933Radial†	9157.2	8649.4	12748	ug/L	12748	ppb	16:02:13
1	Fe 238.204 Radial†	17775.1	16801.6	75091	ug/L	75091	ppb	16:02:13
1	K 766.490 Radial†	27264.3	23044.3	4752.1	ug/L	4752.1	ppb	16:02:13
1	Mg 279.077 IEC†	311.7	291.4	7389.3	ug/L	7389.3	ppb	16:02:33
1	Na 589.592 Radial†	10034.4	9838.0	605.35	ug/L	605.35	ppb	16:02:13
1	Sr 421.552†	27704.3	26310.1	81.698	ug/L	81.698	ppb	16:02:13
1	Sc 361.383	811133.2	811133.2	108.93	%			16:03:31
1	Y 371.029	691083.0	691083.0	118.86	%			16:03:31
1	Ag 328.068†	-3295.8	-3731.6	3.9581	ug/L	3.9581	ppb	16:03:31
1	As 188.979†	-62.3	-22.8	19.301	ug/L	19.301	ppb	16:03:51
1	B 249.677†	-302.6	603.5	8.5403	ug/L	8.5403	ppb	16:03:31
1	Ba 233.527†	98698.4	90586.8	587.52	ug/L	587.52	ppb	16:03:31
1	Be 313.107†	-14453.7	-8484.4	2.3825	ug/L	2.3825	ppb	16:03:31
1	Cd 226.502†	379.5	641.6	-1.5087	ug/L	-1.5087	ppb	16:03:51
1	Co 228.616†	1709.3	1669.7	20.288	ug/L	20.288	ppb	16:03:51
1	Cr 267.716†	3504.9	3315.7	43.297	ug/L	43.297	ppb	16:03:51
1	Cu 324.752†	24086.0	16321.1	59.251	ug/L	59.251	ppb	16:03:31
1	Mn 257.610†	1856416.1	1703550.1	1724.9	ug/L	1724.9	ppb	16:03:31
1	Mo 202.031†	85.8	74.3	9.6107	ug/L	9.6107	ppb	16:03:51
1	Ni 231.604†	1609.0	1340.5	32.051	ug/L	32.051	ppb	16:03:51
1	P 214.914†	4033.9	3409.7	1472.6	ug/L	1472.6	ppb	16:03:51
1	Pb 220.353†	627.4	593.8	60.673	ug/L	60.673	ppb	16:03:51
1	S 181.975 Axial†	697.5	504.3	603.02	ug/L	603.02	ppb	16:03:51
1	Sb 206.836†	76.5	17.7	-2.2708	ug/L	-2.2708	ppb	16:03:51
1	Se 196.026†	-551.5	-471.5	38.305	ug/L	38.305	ppb	16:03:51
1	Si 251.611†	291389.1	267058.6	7545.2	ug/L	7545.2	ppb	16:03:31
1	Sn 189.927†	-40.6	-50.3	-0.9758	ug/L	-0.9758	ppb	16:03:51
1	Ti 334.940†	1582156.8	1454013.2	2495.6	ug/L	2495.6	ppb	16:03:31
1	Tl 190.801†	-181.1	-105.1	4.8850	ug/L	4.8850	ppb	16:03:51
1	U 409.014†	-10301.3	-4192.5	-141.83	ug/L	-141.83	ppb	16:03:31
1	V 292.402†	12673.6	13327.8	96.017	ug/L	96.017	ppb	16:03:51
1	Zn 213.857†	38105.9	33998.5	272.99	ug/L	272.99	ppb	16:03:31
1	SiO2†	291225.8	266882.0	16120	ug/L	16120	ppb	16:04:51
2	Sc Radial	7362.2	7362.2	106	%			16:02:58
2	Y RADIAL	7618.2	7618.2	119.8	%			16:02:38
2	Al 396.153Radial†	32144.7	30366.6	25627	ug/L	25627	ppb	16:02:38
2	Ca 317.933Radial†	9089.7	8540.5	12587	ug/L	12587	ppb	16:02:38
2	Fe 238.204 Radial†	17783.9	16722.1	74736	ug/L	74736	ppb	16:02:38
2	K 766.490 Radial†	27182.3	22832.3	4708.3	ug/L	4708.3	ppb	16:02:38
2	Mg 279.077 IEC†	306.7	285.1	7228.6	ug/L	7228.6	ppb	16:02:58
2	Na 589.592 Radial†	10036.7	9790.7	602.44	ug/L	602.44	ppb	16:02:38
2	Sr 421.552†	27569.0	26045.8	80.878	ug/L	80.878	ppb	16:02:38
2	Sc 361.383	809782.0	809782.0	108.75	%			16:03:58
2	Y 371.029	689044.7	689044.7	118.51	%			16:03:58
2	Ag 328.068†	-3368.4	-3803.4	3.4520	ug/L	3.4520	ppb	16:03:58
2	As 188.979†	-58.6	-19.5	20.294	ug/L	20.294	ppb	16:04:18
2	B 249.677†	-202.6	695.0	10.656	ug/L	10.656	ppb	16:03:58
2	Ba 233.527†	98745.8	90781.6	588.79	ug/L	588.79	ppb	16:03:58
2	Be 313.107†	-14476.9	-8527.9	2.3728	ug/L	2.3728	ppb	16:03:58
2	Cd 226.502†	367.1	630.8	-1.5886	ug/L	-1.5886	ppb	16:04:18
2	Co 228.616†	1729.5	1690.9	20.622	ug/L	20.622	ppb	16:04:18
2	Cr 267.716†	3494.4	3311.4	43.235	ug/L	43.235	ppb	16:04:18
2	Cu 324.752†	24116.5	16386.0	59.449	ug/L	59.449	ppb	16:03:58
2	Mn 257.610†	1855961.4	1705975.7	1727.3	ug/L	1727.3	ppb	16:03:58
2	Mo 202.031†	91.3	79.5	9.9201	ug/L	9.9201	ppb	16:04:18
2	Ni 231.604†	1615.0	1348.5	32.242	ug/L	32.242	ppb	16:04:18

2	P 214.914†	4044.5	3425.7	1479.9	ug/L	1479.9 ppb	16:04:18
2	Pb 220.353†	654.3	619.5	63.363	ug/L	63.363 ppb	16:04:18
2	S 181.975 Axial†	694.6	502.7	601.16	ug/L	601.16 ppb	16:04:18
2	Sb 206.836†	81.2	22.1	-1.0451	ug/L	-1.0451 ppb	16:04:18
2	Se 196.026†	-551.9	-472.6	36.573	ug/L	36.573 ppb	16:04:18
2	Si 251.611†	291253.9	267380.7	7554.3	ug/L	7554.3 ppb	16:03:58
2	Sn 189.927†	-31.9	-42.3	0.2257	ug/L	0.2257 ppb	16:04:18
2	Ti 334.940†	1581646.9	1455968.0	2499.0	ug/L	2499.0 ppb	16:03:58
2	Tl 190.801†	-171.1	-96.2	7.0362	ug/L	7.0362 ppb	16:04:18
2	U 409.014†	-10190.1	-4106.1	-139.05	ug/L	-139.05 ppb	16:03:58
2	V 292.402†	12674.3	13347.8	96.235	ug/L	96.235 ppb	16:04:18
2	Zn 213.857†	38111.9	34062.3	273.55	ug/L	273.55 ppb	16:03:58
2	SiO2†	291430.8	267516.7	16158	ug/L	16158 ppb	16:04:56
3	Sc Radial	7397.3	7397.3	107	%		16:03:23
3	Y RADIAL	7597.3	7597.3	119.5	%		16:03:03
3	Al 396.153Radial†	31872.5	29967.5	25290	ug/L	25290 ppb	16:03:03
3	Ca 317.933Radial†	9018.4	8433.0	12429	ug/L	12429 ppb	16:03:03
3	Fe 238.204 Radial†	17621.5	16490.3	73700	ug/L	73700 ppb	16:03:03
3	K 766.490 Radial†	26953.5	22496.2	4638.7	ug/L	4638.7 ppb	16:03:03
3	Mg 279.077 IEC†	314.4	291.0	7380.2	ug/L	7380.2 ppb	16:03:23
3	Na 589.592 Radial†	9957.7	9671.6	595.11	ug/L	595.11 ppb	16:03:03
3	Sr 421.552†	27415.0	25778.0	80.046	ug/L	80.046 ppb	16:03:03
3	Sc 361.383	798540.9	798540.9	107.24	%		16:04:25
3	Y 371.029	679703.4	679703.4	116.91	%		16:04:25
3	Ag 328.068†	-3135.5	-3629.8	4.0903	ug/L	4.0903 ppb	16:04:25
3	As 188.979†	-71.0	-31.9	16.171	ug/L	16.171 ppb	16:04:45
3	B 249.677†	-239.0	658.5	9.8889	ug/L	9.8889 ppb	16:04:25
3	Ba 233.527†	97571.6	90964.9	589.98	ug/L	589.98 ppb	16:04:25
3	Be 313.107†	-14233.7	-8488.5	2.3837	ug/L	2.3837 ppb	16:04:25
3	Cd 226.502†	367.7	636.1	-1.4072	ug/L	-1.4072 ppb	16:04:45
3	Co 228.616†	1730.4	1714.1	21.008	ug/L	21.008 ppb	16:04:45
3	Cr 267.716†	3487.3	3349.9	43.704	ug/L	43.704 ppb	16:04:45
3	Cu 324.752†	23919.1	16514.1	59.820	ug/L	59.820 ppb	16:04:25
3	Mn 257.610†	1830925.0	1706653.9	1727.9	ug/L	1727.9 ppb	16:04:25
3	Mo 202.031†	84.9	74.8	9.5495	ug/L	9.5495 ppb	16:04:45
3	Ni 231.604†	1642.3	1394.8	33.350	ug/L	33.350 ppb	16:04:45
3	P 214.914†	4074.9	3506.4	1516.9	ug/L	1516.9 ppb	16:04:45
3	Pb 220.353†	650.3	624.3	63.898	ug/L	63.898 ppb	16:04:45
3	S 181.975 Axial†	705.8	522.2	624.73	ug/L	624.73 ppb	16:04:45
3	Sb 206.836†	96.0	36.9	2.9449	ug/L	2.9449 ppb	16:04:45
3	Se 196.026†	-537.7	-466.5	35.868	ug/L	35.868 ppb	16:04:45
3	Si 251.611†	286779.5	266978.5	7543.0	ug/L	7543.0 ppb	16:04:25
3	Sn 189.927†	-37.5	-47.9	-0.7442	ug/L	-0.7442 ppb	16:04:45
3	Ti 334.940†	1558351.1	1454718.3	2496.8	ug/L	2496.8 ppb	16:04:25
3	Tl 190.801†	-162.1	-90.0	8.4726	ug/L	8.4726 ppb	16:04:45
3	U 409.014†	-10306.8	-4346.7	-146.53	ug/L	-146.53 ppb	16:04:25
3	V 292.402†	12847.3	13673.2	99.034	ug/L	99.034 ppb	16:04:45
3	Zn 213.857†	37651.4	34126.2	274.18	ug/L	274.18 ppb	16:04:25
3	SiO2†	294273.4	273940.0	16546	ug/L	16546 ppb	16:05:01

Mean Data: 232504007|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	806485.4	108.30	%	0.928				0.86%
Sc Radial	7361.1	106	%	0.5				0.50%
Y 371.029	686610.4	118.10	%	1.044				0.88%
Y RADIAL	7628.2	120.0	%	0.58				0.48%
Ag 328.068†	-3721.6	3.8335	ug/L	0.33692	3.8335	ppb	0.33692	8.79%
Al 396.153Radial†	30344.4	25608	ug/L	309.1	25608	ppb	309.1	1.21%
As 188.979†	-24.7	18.589	ug/L	2.1518	18.589	ppb	2.1518	11.58%
B 249.677†	652.3	9.6952	ug/L	1.07123	9.6952	ppb	1.07123	11.05%
Ba 233.527†	90777.8	588.76	ug/L	1.233	588.76	ppb	1.233	0.21%
Be 313.107†	-8500.2	2.3797	ug/L	0.00597	2.3797	ppb	0.00597	0.25%
Ca 317.933Radial†	8540.9	12588	ug/L	159.5	12588	ppb	159.5	1.27%
Cd 226.502†	636.2	-1.5015	ug/L	0.09095	-1.5015	ppb	0.09095	6.06%
Co 228.616†	1691.5	20.639	ug/L	0.3604	20.639	ppb	0.3604	1.75%
Cr 267.716†	3325.7	43.412	ug/L	0.2547	43.412	ppb	0.2547	0.59%
Cu 324.752†	16407.1	59.507	ug/L	0.2888	59.507	ppb	0.2888	0.49%
Fe 238.204 Radial†	16671.3	74509	ug/L	722.9	74509	ppb	722.9	0.97%
K 766.490 Radial†	22790.9	4699.7	ug/L	57.23	4699.7	ppb	57.23	1.22%

Mg 279.077 IEC†	289.2	7332.7	ug/L	90.31	7332.7	ppb	90.31	1.23%
Mn 257.610†	1705393.2	1726.7	ug/L	1.57	1726.7	ppb	1.57	0.09%
Mo 202.031†	76.2	9.6934	ug/L	0.19863	9.6934	ppb	0.19863	2.05%
Na 589.592 Radial†	9766.8	600.97	ug/L	5.275	600.97	ppb	5.275	0.88%
Ni 231.604†	1361.3	32.548	ug/L	0.7013	32.548	ppb	0.7013	2.15%
P 214.914†	3447.3	1489.8	ug/L	23.74	1489.8	ppb	23.74	1.59%
Pb 220.353†	612.5	62.645	ug/L	1.7283	62.645	ppb	1.7283	2.76%
S 181.975 Axial†	509.8	609.64	ug/L	13.103	609.64	ppb	13.103	2.15%
Sb 206.836†	25.6	-0.1237	ug/L	2.72722	-0.1237	ppb	2.72722	>999.9%
Se 196.026†	-470.2	36.915	ug/L	1.2538	36.915	ppb	1.2538	3.40%
Si 251.611†	267139.3	7547.5	ug/L	6.00	7547.5	ppb	6.00	0.08%
Sn 189.927†	-46.8	-0.4981	ug/L	0.63741	-0.4981	ppb	0.63741	127.96%
Sr 421.552†	26044.6	80.874	ug/L	0.8259	80.874	ppb	0.8259	1.02%
Ti 334.940†	1454899.8	2497.1	ug/L	1.69	2497.1	ppb	1.69	0.07%
Tl 190.801†	-97.1	6.7979	ug/L	1.80559	6.7979	ppb	1.80559	26.56%
U 409.014†	-4215.1	-142.47	ug/L	3.781	-142.47	ppb	3.781	2.65%
V 292.402†	13449.6	97.095	ug/L	1.6825	97.095	ppb	1.6825	1.73%
Zn 213.857†	34062.3	273.57	ug/L	0.597	273.57	ppb	0.597	0.22%
SiO2†	269446.2	16275	ug/L	235.9	16275	ppb	235.9	1.45%

Sequence No.: 18
Sample ID: 232504008|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 51
Date Collected: 7/2/2009 16:07:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504008|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7433.5	7433.5	107	%			16:09:04
1	Y RADIAL	7801.4	7801.4	122.7	%			16:09:04
1	Al 396.153Radial†	35948.1	33626.4	28377	ug/L	28377	ppb	16:09:04
1	Ca 317.933Radial†	43148.0	40250.1	59322	ug/L	59322	ppb	16:09:04
1	Fe 238.204 Radial†	16621.2	15476.1	69167	ug/L	69167	ppb	16:09:04
1	K 766.490 Radial†	25795.8	21292.4	4385.5	ug/L	4385.5	ppb	16:09:04
1	Mg 279.077 IEC†	344.7	317.8	8069.3	ug/L	8069.3	ppb	16:09:24
1	Na 589.592 Radial†	28389.1	26831.0	1651.0	ug/L	1651.0	ppb	16:09:04
1	Sr 421.552†	47653.3	44544.3	137.95	ug/L	137.95	ppb	16:09:04
1	Sc 361.383	803781.6	803781.6	107.94	%			16:10:22
1	Y 371.029	713827.3	713827.3	122.78	%			16:10:22
1	Ag 328.068†	-2970.5	-3457.9	2.8384	ug/L	2.8384	ppb	16:10:22
1	As 188.979†	-13.7	21.6	27.755	ug/L	27.755	ppb	16:10:42
1	B 249.677†	-361.9	546.0	7.6825	ug/L	7.6825	ppb	16:10:22
1	Ba 233.527†	55674.4	51556.5	334.30	ug/L	334.30	ppb	16:10:22
1	Be 313.107†	-6246.5	-1002.3	3.1322	ug/L	3.1322	ppb	16:10:22
1	Cd 226.502†	340.1	608.3	-1.1584	ug/L	-1.1584	ppb	16:10:42
1	Co 228.616†	996.3	1023.5	12.128	ug/L	12.128	ppb	16:10:42
1	Cr 267.716†	8724.1	8180.3	104.12	ug/L	104.12	ppb	16:10:42
1	Cu 324.752†	26194.8	18477.1	66.162	ug/L	66.162	ppb	16:10:22
1	Mn 257.610†	1867546.7	1729449.6	1750.3	ug/L	1750.3	ppb	16:10:22
1	Mo 202.031†	352.3	322.0	24.928	ug/L	24.928	ppb	16:10:42
1	Ni 231.604†	4010.3	3578.6	85.597	ug/L	85.597	ppb	16:10:42
1	P 214.914†	1766.7	1343.2	545.97	ug/L	545.97	ppb	16:10:42
1	Pb 220.353†	717.3	682.4	71.102	ug/L	71.102	ppb	16:10:42
1	S 181.975 Axial†	1138.9	919.1	1102.7	ug/L	1102.7	ppb	16:10:42
1	Sb 206.836†	74.8	16.7	-1.4372	ug/L	-1.4372	ppb	16:10:42
1	Se 196.026†	-536.3	-462.0	23.056	ug/L	23.056	ppb	16:10:42
1	Si 251.611†	488168.9	451809.8	12766	ug/L	12766	ppb	16:10:22
1	Sn 189.927†	-149.3	-151.3	-12.466	ug/L	-12.466	ppb	16:10:42
1	Ti 334.940†	955338.6	886589.4	1524.8	ug/L	1524.8	ppb	16:10:22
1	Tl 190.801†	-159.6	-86.7	1.1056	ug/L	1.1056	ppb	16:10:42
1	U 409.014†	-12939.0	-6722.7	-221.19	ug/L	-221.19	ppb	16:10:22
1	V 292.402†	8966.5	9999.8	70.647	ug/L	70.647	ppb	16:10:42
1	Zn 213.857†	53373.7	48463.1	392.93	ug/L	392.93	ppb	16:10:22
1	SiO2†	487055.3	450751.3	27228	ug/L	27228	ppb	16:11:42
2	Sc Radial	7390.5	7390.5	107	%			16:09:29
2	Y RADIAL	7796.8	7796.8	122.6	%			16:09:29
2	Al 396.153Radial†	35759.6	33644.8	28393	ug/L	28393	ppb	16:09:29
2	Ca 317.933Radial†	42726.3	40088.7	59084	ug/L	59084	ppb	16:09:29
2	Fe 238.204 Radial†	16508.7	15460.8	69098	ug/L	69098	ppb	16:09:29
2	K 766.490 Radial†	25425.4	21084.9	4342.6	ug/L	4342.6	ppb	16:09:29
2	Mg 279.077 IEC†	343.8	318.9	8097.3	ug/L	8097.3	ppb	16:09:49
2	Na 589.592 Radial†	28412.3	27007.1	1661.8	ug/L	1661.8	ppb	16:09:29
2	Sr 421.552†	47424.4	44588.4	138.09	ug/L	138.09	ppb	16:09:29
2	Sc 361.383	810785.1	810785.1	108.88	%			16:10:49
2	Y 371.029	719026.6	719026.6	123.67	%			16:10:49
2	Ag 328.068†	-2959.5	-3424.0	3.0014	ug/L	3.0014	ppb	16:10:49
2	As 188.979†	-12.1	23.2	28.237	ug/L	28.237	ppb	16:11:09
2	B 249.677†	-229.6	670.5	10.533	ug/L	10.533	ppb	16:10:49
2	Ba 233.527†	56233.3	51624.2	334.74	ug/L	334.74	ppb	16:10:49
2	Be 313.107†	-6225.0	-932.5	3.1635	ug/L	3.1635	ppb	16:10:49
2	Cd 226.502†	345.7	610.8	-1.1236	ug/L	-1.1236	ppb	16:11:09
2	Co 228.616†	1002.7	1021.4	12.091	ug/L	12.091	ppb	16:11:09
2	Cr 267.716†	8687.9	8077.3	102.82	ug/L	102.82	ppb	16:11:09
2	Cu 324.752†	26659.7	18694.4	66.889	ug/L	66.889	ppb	16:10:49
2	Mn 257.610†	1886487.8	1731900.8	1752.7	ug/L	1752.7	ppb	16:10:49
2	Mo 202.031†	334.2	302.5	23.689	ug/L	23.689	ppb	16:11:09
2	Ni 231.604†	3996.4	3533.8	84.524	ug/L	84.524	ppb	16:11:09

2	P 214.914†	1775.9	1337.5	543.30	ug/L	543.30	ppb	16:11:09
2	Pb 220.353†	722.9	681.8	71.047	ug/L	71.047	ppb	16:11:09
2	S 181.975 Axial†	1140.3	911.4	1093.3	ug/L	1093.3	ppb	16:11:09
2	Sb 206.836†	76.5	17.6	-1.1899	ug/L	-1.1899	ppb	16:11:09
2	Se 196.026†	-518.0	-441.0	32.351	ug/L	32.351	ppb	16:11:09
2	Si 251.611†	494578.2	453789.7	12822	ug/L	12822	ppb	16:10:49
2	Sn 189.927†	-148.2	-149.1	-12.143	ug/L	-12.143	ppb	16:11:09
2	Ti 334.940†	964541.7	887396.7	1526.1	ug/L	1526.1	ppb	16:10:49
2	Tl 190.801†	-165.8	-91.2	0.0727	ug/L	0.0727	ppb	16:11:09
2	U 409.014†	-13007.9	-6682.4	-219.91	ug/L	-219.91	ppb	16:10:49
2	V 292.402†	8942.8	9906.2	69.876	ug/L	69.876	ppb	16:11:09
2	Zn 213.857†	54016.5	48626.3	394.29	ug/L	394.29	ppb	16:10:49
2	SiO2†	486793.4	446613.1	26978	ug/L	26978	ppb	16:11:47
3	Sc Radial	7529.9	7529.9	109	%			16:09:54
3	Y RADIAL	7922.8	7922.8	124.6	%			16:09:54
3	Al 396.153Radial†	36313.2	33533.2	28299	ug/L	28299	ppb	16:09:54
3	Ca 317.933Radial†	43349.7	39920.3	58836	ug/L	58836	ppb	16:09:54
3	Fe 238.204 Radial†	16700.0	15350.2	68604	ug/L	68604	ppb	16:09:54
3	K 766.490 Radial†	25824.9	21011.0	4327.3	ug/L	4327.3	ppb	16:09:54
3	Mg 279.077 IEC†	343.7	312.8	7942.0	ug/L	7942.0	ppb	16:10:14
3	Na 589.592 Radial†	28614.3	26699.3	1642.8	ug/L	1642.8	ppb	16:09:54
3	Sr 421.552†	48166.3	44447.6	137.65	ug/L	137.65	ppb	16:09:54
3	Sc 361.383	797360.2	797360.2	107.08	%			16:11:16
3	Y 371.029	708102.9	708102.9	121.79	%			16:11:16
3	Ag 328.068†	-2782.4	-3304.4	3.5131	ug/L	3.5131	ppb	16:11:16
3	As 188.979†	-6.0	28.7	29.905	ug/L	29.905	ppb	16:11:36
3	B 249.677†	-291.5	609.1	9.1652	ug/L	9.1652	ppb	16:11:16
3	Ba 233.527†	55291.0	51613.8	334.68	ug/L	334.68	ppb	16:11:16
3	Be 313.107†	-6096.1	-908.4	3.1715	ug/L	3.1715	ppb	16:11:16
3	Cd 226.502†	347.0	617.3	-0.9913	ug/L	-0.9913	ppb	16:11:36
3	Co 228.616†	975.9	1011.9	11.953	ug/L	11.953	ppb	16:11:36
3	Cr 267.716†	8669.0	8194.0	104.28	ug/L	104.28	ppb	16:11:36
3	Cu 324.752†	26048.8	18536.1	66.328	ug/L	66.328	ppb	16:11:16
3	Mn 257.610†	1855351.6	1731994.2	1752.8	ug/L	1752.8	ppb	16:11:16
3	Mo 202.031†	361.4	333.1	25.598	ug/L	25.598	ppb	16:11:36
3	Ni 231.604†	4008.0	3606.5	86.263	ug/L	86.263	ppb	16:11:36
3	P 214.914†	1767.4	1357.1	552.59	ug/L	552.59	ppb	16:11:36
3	Pb 220.353†	715.3	685.8	71.504	ug/L	71.504	ppb	16:11:36
3	S 181.975 Axial†	1142.6	931.1	1117.2	ug/L	1117.2	ppb	16:11:36
3	Sb 206.836†	90.3	31.8	2.6484	ug/L	2.6484	ppb	16:11:36
3	Se 196.026†	-525.6	-456.0	23.897	ug/L	23.897	ppb	16:11:36
3	Si 251.611†	484717.3	452228.5	12778	ug/L	12778	ppb	16:11:16
3	Sn 189.927†	-147.0	-150.3	-12.395	ug/L	-12.395	ppb	16:11:36
3	Ti 334.940†	948115.7	886971.7	1525.4	ug/L	1525.4	ppb	16:11:16
3	Tl 190.801†	-166.0	-93.9	-0.5786	ug/L	-0.5786	ppb	16:11:36
3	U 409.014†	-13028.9	-6903.1	-226.82	ug/L	-226.82	ppb	16:11:16
3	V 292.402†	8978.2	10077.6	71.359	ug/L	71.359	ppb	16:11:36
3	Zn 213.857†	53061.7	48569.9	393.87	ug/L	393.87	ppb	16:11:16
3	SiO2†	483713.9	451264.8	27259	ug/L	27259	ppb	16:11:53

Mean Data: 232504008|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	803975.6	107.97	%	0.902				0.84%
Sc Radial	7451.3	107	%	1.0				0.96%
Y 371.029	713652.3	122.75	%	0.940				0.77%
Y RADIAL	7840.3	123.3	%	1.12				0.91%
Ag 328.068†	-3395.4	3.1176	ug/L	0.35204	3.1176	ppb	0.35204	11.29%
Al 396.153Radial†	33601.5	28356	ug/L	50.5	28356	ppb	50.5	0.18%
As 188.979†	24.5	28.632	ug/L	1.1282	28.632	ppb	1.1282	3.94%
B 249.677†	608.5	9.1271	ug/L	1.42583	9.1271	ppb	1.42583	15.62%
Ba 233.527†	51598.2	334.57	ug/L	0.237	334.57	ppb	0.237	0.07%
Be 313.107†	-947.7	3.1557	ug/L	0.02078	3.1557	ppb	0.02078	0.66%
Ca 317.933Radial†	40086.4	59080	ug/L	243.0	59080	ppb	243.0	0.41%
Cd 226.502†	612.1	-1.0911	ug/L	0.08819	-1.0911	ppb	0.08819	8.08%
Co 228.616†	1018.9	12.057	ug/L	0.0923	12.057	ppb	0.0923	0.77%
Cr 267.716†	8150.5	103.74	ug/L	0.798	103.74	ppb	0.798	0.77%
Cu 324.752†	18569.2	66.460	ug/L	0.3810	66.460	ppb	0.3810	0.57%
Fe 238.204 Radial†	15429.0	68956	ug/L	307.2	68956	ppb	307.2	0.45%
K 766.490 Radial†	21129.5	4351.8	ug/L	30.20	4351.8	ppb	30.20	0.69%

Mg 279.077 IEC†	316.5	8036.2	ug/L	82.76	8036.2	ppb	82.76	1.03%
Mn 257.610†	1731114.8	1751.9	ug/L	1.43	1751.9	ppb	1.43	0.08%
Mo 202.031†	319.2	24.738	ug/L	0.9686	24.738	ppb	0.9686	3.92%
Na 589.592 Radial†	26845.8	1651.9	ug/L	9.50	1651.9	ppb	9.50	0.58%
Ni 231.604†	3573.0	85.461	ug/L	0.8774	85.461	ppb	0.8774	1.03%
P 214.914†	1345.9	547.29	ug/L	4.785	547.29	ppb	4.785	0.87%
Pb 220.353†	683.3	71.218	ug/L	0.2496	71.218	ppb	0.2496	0.35%
S 181.975 Axial†	920.5	1104.4	ug/L	12.02	1104.4	ppb	12.02	1.09%
Sb 206.836†	22.1	0.0071	ug/L	2.29074	0.0071	ppb	2.29074	>999.9%
Se 196.026†	-453.0	26.435	ug/L	5.1412	26.435	ppb	5.1412	19.45%
Si 251.611†	452609.3	12789	ug/L	29.5	12789	ppb	29.5	0.23%
Sn 189.927†	-150.3	-12.335	ug/L	0.1696	-12.335	ppb	0.1696	1.37%
Sr 421.552†	44526.8	137.90	ug/L	0.222	137.90	ppb	0.222	0.16%
Ti 334.940†	886985.9	1525.4	ug/L	0.69	1525.4	ppb	0.69	0.04%
Tl 190.801†	-90.6	0.1999	ug/L	0.84925	0.1999	ppb	0.84925	424.89%
U 409.014†	-6769.4	-222.64	ug/L	3.680	-222.64	ppb	3.680	1.65%
V 292.402†	9994.5	70.627	ug/L	0.7419	70.627	ppb	0.7419	1.05%
Zn 213.857†	48553.1	393.70	ug/L	0.698	393.70	ppb	0.698	0.18%
SiO2†	449543.1	27155	ug/L	154.0	27155	ppb	154.0	0.57%

Sequence No.: 19
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/2/2009 16:14:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7087.6	7087.6	102	%			16:16:15
1	Y RADIAL	6467.1	6467.1	101.7	%			16:16:15
1	Al 396.153Radial†	6269.3	6208.3	5218.0	ug/L	5218.0	ppb	16:15:55
1	Ca 317.933Radial†	3648.0	3545.0	5224.7	ug/L	5224.7	ppb	16:16:15
1	Fe 238.204 Radial†	1264.1	1198.6	5372.1	ug/L	5372.1	ppb	16:16:15
1	K 766.490 Radial†	27346.7	23986.0	4942.5	ug/L	4942.5	ppb	16:15:55
1	Mg 279.077 IEC†	218.9	210.4	5386.6	ug/L	5386.6	ppb	16:16:15
1	Na 589.592 Radial†	167680.7	164492.1	10121	ug/L	10121	ppb	16:15:55
1	Sr 421.552†	169326.6	165834.6	515.69	ug/L	515.69	ppb	16:15:55
1	Sc 361.383	789215.8	789215.8	105.98	%			16:17:14
1	Y 371.029	607472.8	607472.8	104.48	%			16:17:14
1	Ag 328.068†	96061.9	89932.0	495.39	ug/L	495.39	ppb	16:17:14
1	As 188.979†	1627.5	1569.9	500.45	ug/L	500.45	ppb	16:17:34
1	B 249.677†	22076.4	21711.2	493.67	ug/L	493.67	ppb	16:17:14
1	Ba 233.527†	80076.1	75532.3	491.04	ug/L	491.04	ppb	16:17:14
1	Be 313.107†	1294211.4	1225921.1	494.75	ug/L	494.75	ppb	16:17:14
1	Cd 226.502†	46288.9	43968.6	494.74	ug/L	494.74	ppb	16:17:14
1	Co 228.616†	32607.2	30866.6	488.30	ug/L	488.30	ppb	16:17:34
1	Cr 267.716†	41362.5	39125.1	490.96	ug/L	490.96	ppb	16:17:14
1	Cu 324.752†	161592.3	146677.5	493.78	ug/L	493.78	ppb	16:17:14
1	Mn 257.610†	517924.6	487963.1	492.00	ug/L	492.00	ppb	16:17:14
1	Mo 202.031†	8370.6	7893.6	500.86	ug/L	500.86	ppb	16:17:34
1	Ni 231.604†	21898.3	20525.2	490.69	ug/L	490.69	ppb	16:17:34
1	P 214.914†	6181.2	5538.7	2400.0	ug/L	2400.0	ppb	16:17:34
1	Pb 220.353†	4967.2	4704.6	498.51	ug/L	498.51	ppb	16:17:34
1	S 181.975 Axial†	1005.1	812.4	978.55	ug/L	978.55	ppb	16:17:34
1	Sb 206.836†	1998.8	1833.3	504.13	ug/L	504.13	ppb	16:17:34
1	Se 196.026†	1138.7	1109.3	520.93	ug/L	520.93	ppb	16:17:34
1	Si 251.611†	94924.5	89116.0	2501.3	ug/L	2501.3	ppb	16:17:14
1	Sn 189.927†	3381.3	3177.4	498.52	ug/L	498.52	ppb	16:17:34
1	Ti 334.940†	308013.9	292149.3	501.20	ug/L	501.20	ppb	16:17:14
1	Tl 190.801†	2153.9	2093.4	500.59	ug/L	500.59	ppb	16:17:34
1	U 409.014†	10632.1	15296.3	481.88	ug/L	481.88	ppb	16:17:14
1	V 292.402†	61544.9	59762.8	496.08	ug/L	496.08	ppb	16:17:14
1	Zn 213.857†	64217.1	59606.8	488.74	ug/L	488.74	ppb	16:17:14
1	SiO2†	95096.6	89251.7	5354.1	ug/L	5354.1	ppb	16:18:35
2	Sc Radial	7084.7	7084.7	102	%			16:16:40
2	Y RADIAL	6486.6	6486.6	102.0	%			16:16:40
2	Al 396.153Radial†	6307.4	6248.1	5251.8	ug/L	5251.8	ppb	16:16:20
2	Ca 317.933Radial†	3656.9	3555.2	5239.7	ug/L	5239.7	ppb	16:16:40
2	Fe 238.204 Radial†	1269.2	1204.1	5396.7	ug/L	5396.7	ppb	16:16:40
2	K 766.490 Radial†	27519.5	24166.1	4979.8	ug/L	4979.8	ppb	16:16:20
2	Mg 279.077 IEC†	213.8	205.5	5260.8	ug/L	5260.8	ppb	16:16:40
2	Na 589.592 Radial†	168520.9	165381.7	10176	ug/L	10176	ppb	16:16:20
2	Sr 421.552†	170581.1	167130.6	519.72	ug/L	519.72	ppb	16:16:20
2	Sc 361.383	798144.9	798144.9	107.18	%			16:17:41
2	Y 371.029	613471.3	613471.3	105.52	%			16:17:41
2	Ag 328.068†	97176.9	89958.4	495.53	ug/L	495.53	ppb	16:17:41
2	As 188.979†	1629.5	1554.6	495.62	ug/L	495.62	ppb	16:18:02
2	B 249.677†	22343.8	21727.7	494.08	ug/L	494.08	ppb	16:17:41
2	Ba 233.527†	80927.0	75481.0	490.71	ug/L	490.71	ppb	16:17:41
2	Be 313.107†	1309912.1	1226908.4	495.15	ug/L	495.15	ppb	16:17:41
2	Cd 226.502†	46954.7	44101.1	496.22	ug/L	496.22	ppb	16:17:41
2	Co 228.616†	32532.7	30452.9	481.73	ug/L	481.73	ppb	16:18:02
2	Cr 267.716†	41837.5	39131.6	491.04	ug/L	491.04	ppb	16:17:41
2	Cu 324.752†	163214.2	146485.0	493.13	ug/L	493.13	ppb	16:17:41
2	Mn 257.610†	524487.4	488619.1	492.66	ug/L	492.66	ppb	16:17:41
2	Mo 202.031†	8338.4	7775.1	493.35	ug/L	493.35	ppb	16:18:02
2	Ni 231.604†	21879.0	20276.0	484.73	ug/L	484.73	ppb	16:18:02

2	P 214.914†	6170.4	5463.3	2366.1 ug/L	2366.1 ppb	16:18:02
2	Pb 220.353†	4961.0	4646.4	492.35 ug/L	492.35 ppb	16:18:02
2	S 181.975 Axial†	986.6	784.5	944.87 ug/L	944.87 ppb	16:18:02
2	Sb 206.836†	1992.2	1806.1	496.50 ug/L	496.50 ppb	16:18:02
2	Se 196.026†	1134.3	1093.1	513.69 ug/L	513.69 ppb	16:18:02
2	Si 251.611†	96161.0	89267.7	2505.7 ug/L	2505.7 ppb	16:17:41
2	Sn 189.927†	3383.4	3143.6	493.24 ug/L	493.24 ppb	16:18:02
2	Ti 334.940†	311619.7	292262.2	501.39 ug/L	501.39 ppb	16:17:41
2	Tl 190.801†	2147.3	2064.6	493.77 ug/L	493.77 ppb	16:18:02
2	U 409.014†	10841.9	15379.8	484.52 ug/L	484.52 ppb	16:17:41
2	V 292.402†	62092.4	59623.9	494.84 ug/L	494.84 ppb	16:17:41
2	Zn 213.857†	64961.0	59623.0	488.91 ug/L	488.91 ppb	16:17:41
2	SiO2†	95917.3	89013.5	5340.1 ug/L	5340.1 ppb	16:18:40
3	Sc Radial	7089.4	7089.4	102 %		16:17:05
3	Y RADIAL	6505.2	6505.2	102.3 %		16:17:05
3	Al 396.153Radial†	6214.0	6152.6	5171.2 ug/L	5171.2 ppb	16:16:45
3	Ca 317.933Radial†	3647.9	3544.0	5223.3 ug/L	5223.3 ppb	16:17:05
3	Fe 238.204 Radial†	1262.3	1196.6	5362.8 ug/L	5362.8 ppb	16:17:05
3	K 766.490 Radial†	27221.0	23856.2	4915.8 ug/L	4915.8 ppb	16:16:45
3	Mg 279.077 IEC†	213.1	204.6	5239.8 ug/L	5239.8 ppb	16:17:05
3	Na 589.592 Radial†	166673.7	163465.3	10058 ug/L	10058 ppb	16:16:45
3	Sr 421.552†	168728.0	165207.1	513.74 ug/L	513.74 ppb	16:16:45
3	Sc 361.383	793551.9	793551.9	106.57 %		16:18:09
3	Y 371.029	609940.2	609940.2	104.91 %		16:18:09
3	Ag 328.068†	96851.2	90177.5	496.73 ug/L	496.73 ppb	16:18:09
3	As 188.979†	1614.1	1549.0	493.84 ug/L	493.84 ppb	16:18:29
3	B 249.677†	22294.7	21802.3	495.79 ug/L	495.79 ppb	16:18:09
3	Ba 233.527†	80762.1	75763.3	492.54 ug/L	492.54 ppb	16:18:09
3	Be 313.107†	1305184.0	1229545.2	496.21 ug/L	496.21 ppb	16:18:09
3	Cd 226.502†	46815.0	44223.5	497.60 ug/L	497.60 ppb	16:18:09
3	Co 228.616†	32338.0	30445.9	481.63 ug/L	481.63 ppb	16:18:29
3	Cr 267.716†	41678.6	39208.4	492.01 ug/L	492.01 ppb	16:18:09
3	Cu 324.752†	162507.8	146703.4	493.87 ug/L	493.87 ppb	16:18:09
3	Mn 257.610†	522553.0	489636.1	493.68 ug/L	493.68 ppb	16:18:09
3	Mo 202.031†	8314.8	7798.0	494.80 ug/L	494.80 ppb	16:18:29
3	Ni 231.604†	21771.5	20293.3	485.14 ug/L	485.14 ppb	16:18:29
3	P 214.914†	6122.1	5451.3	2360.6 ug/L	2360.6 ppb	16:18:29
3	Pb 220.353†	4937.0	4650.6	492.79 ug/L	492.79 ppb	16:18:29
3	S 181.975 Axial†	992.4	795.3	957.98 ug/L	957.98 ppb	16:18:29
3	Sb 206.836†	1989.9	1814.7	498.81 ug/L	498.81 ppb	16:18:29
3	Se 196.026†	1120.9	1086.7	510.66 ug/L	510.66 ppb	16:18:29
3	Si 251.611†	95747.7	89399.1	2509.5 ug/L	2509.5 ppb	16:18:09
3	Sn 189.927†	3352.0	3132.5	491.49 ug/L	491.49 ppb	16:18:29
3	Ti 334.940†	310207.1	292619.3	502.01 ug/L	502.01 ppb	16:18:09
3	Tl 190.801†	2122.0	2052.4	490.88 ug/L	490.88 ppb	16:18:29
3	U 409.014†	10639.3	15248.2	480.36 ug/L	480.36 ppb	16:18:09
3	V 292.402†	61986.2	59859.6	496.79 ug/L	496.79 ppb	16:18:09
3	Zn 213.857†	64812.0	59834.0	490.66 ug/L	490.66 ppb	16:18:09
3	SiO2†	95660.5	89290.5	5356.9 ug/L	5356.9 ppb	16:18:45

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	793637.5	106.58	%	0.600				0.56%
Sc Radial	7087.2	102	%	0.0				0.03%
Y 371.029	610294.8	104.97	%	0.519				0.49%
Y RADIAL	6486.3	102.0	%	0.30				0.29%
Ag 328.068†	90022.6	495.88	ug/L	0.738	495.88	ppb	0.738	0.15%
QC value within limits for Ag 328.068 Recovery = 99.18%								
Al 396.153Radial†	6203.0	5213.7	ug/L	40.50	5213.7	ppb	40.50	0.78%
QC value within limits for Al 396.153Radial Recovery = 104.27%								
As 188.979†	1557.8	496.64	ug/L	3.422	496.64	ppb	3.422	0.69%
QC value within limits for As 188.979 Recovery = 99.33%								
B 249.677†	21747.1	494.51	ug/L	1.123	494.51	ppb	1.123	0.23%
QC value within limits for B 249.677 Recovery = 98.90%								
Ba 233.527†	75592.2	491.43	ug/L	0.977	491.43	ppb	0.977	0.20%
QC value within limits for Ba 233.527 Recovery = 98.29%								
Be 313.107†	1227458.2	495.37	ug/L	0.755	495.37	ppb	0.755	0.15%
QC value within limits for Be 313.107 Recovery = 99.07%								
Ca 317.933Radial†	3548.1	5229.3	ug/L	9.08	5229.3	ppb	9.08	0.17%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.59%
Cd 226.502†            44097.7      496.19 ug/L        1.434      496.19 ppb        1.434   0.29%
   QC value within limits for Cd 226.502  Recovery = 99.24%
Co 228.616†            30588.5      483.89 ug/L        3.820      483.89 ppb        3.820   0.79%
   QC value within limits for Co 228.616  Recovery = 96.78%
Cr 267.716†            39155.0      491.34 ug/L        0.582      491.34 ppb        0.582   0.12%
   QC value within limits for Cr 267.716  Recovery = 98.27%
Cu 324.752†           146622.0      493.59 ug/L        0.400      493.59 ppb        0.400   0.08%
   QC value within limits for Cu 324.752  Recovery = 98.72%
Fe 238.204 Radial†      1199.8      5377.2 ug/L       17.50      5377.2 ppb       17.50   0.33%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.54%
K 766.490 Radial†      24002.8      4946.0 ug/L       32.16      4946.0 ppb       32.16   0.65%
   QC value within limits for K 766.490 Radial  Recovery = 98.92%
Mg 279.077 IEC†          206.8      5295.7 ug/L       79.39      5295.7 ppb       79.39   1.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.91%
Mn 257.610†           488739.4      492.78 ug/L        0.849      492.78 ppb        0.849   0.17%
   QC value within limits for Mn 257.610  Recovery = 98.56%
Mo 202.031†             7822.2      496.34 ug/L        3.985      496.34 ppb        3.985   0.80%
   QC value within limits for Mo 202.031  Recovery = 99.27%
Na 589.592 Radial†    164446.4       10119 ug/L       59.0        10119 ppb       59.0   0.58%
   QC value within limits for Na 589.592 Radial  Recovery = 101.19%
Ni 231.604†            20364.9      486.85 ug/L        3.326      486.85 ppb        3.326   0.68%
   QC value within limits for Ni 231.604  Recovery = 97.37%
P 214.914†              5484.4      2375.6 ug/L       21.35      2375.6 ppb       21.35   0.90%
   QC value within limits for P 214.914  Recovery = 95.02%
Pb 220.353†             4667.2      494.55 ug/L        3.438      494.55 ppb        3.438   0.70%
   QC value within limits for Pb 220.353  Recovery = 98.91%
S 181.975 Axial†         797.4      960.47 ug/L       16.979      960.47 ppb       16.979   1.77%
   QC value within limits for S 181.975 Axial  Recovery = 96.05%
Sb 206.836†             1818.1      499.82 ug/L        3.914      499.82 ppb        3.914   0.78%
   QC value within limits for Sb 206.836  Recovery = 99.96%
Se 196.026†             1096.4      515.09 ug/L        5.279      515.09 ppb        5.279   1.02%
   QC value within limits for Se 196.026  Recovery = 103.02%
Si 251.611†            89260.9      2505.5 ug/L        4.11      2505.5 ppb        4.11   0.16%
   QC value within limits for Si 251.611  Recovery = 100.22%
Sn 189.927†             3151.2      494.41 ug/L        3.661      494.41 ppb        3.661   0.74%
   QC value within limits for Sn 189.927  Recovery = 98.88%
Sr 421.552†           166057.5      516.38 ug/L        3.051      516.38 ppb        3.051   0.59%
   QC value within limits for Sr 421.552  Recovery = 103.28%
Ti 334.940†           292343.6      501.53 ug/L        0.421      501.53 ppb        0.421   0.08%
   QC value within limits for Ti 334.940  Recovery = 100.31%
Tl 190.801†             2070.1      495.08 ug/L        4.982      495.08 ppb        4.982   1.01%
   QC value within limits for Tl 190.801  Recovery = 99.02%
U 409.014†             15308.1      482.25 ug/L        2.103      482.25 ppb        2.103   0.44%
   QC value within limits for U 409.014  Recovery = 96.45%
V 292.402†             59748.8      495.90 ug/L        0.985      495.90 ppb        0.985   0.20%
   QC value within limits for V 292.402  Recovery = 99.18%
Zn 213.857†            59687.9      489.43 ug/L        1.062      489.43 ppb        1.062   0.22%
   QC value within limits for Zn 213.857  Recovery = 97.89%
SiO2†                  89185.2      5350.4 ug/L        8.99      5350.4 ppb        8.99   0.17%
   QC value within limits for SiO2  Recovery = 100.05%
All analyte(s) passed QC.
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Sequence No.: 20
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/2/2009 16:20:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7396.9	7396.9	107	%			16:22:46
1	Y RADIAL	6794.6	6794.6	106.8	%			16:22:46
1	Al 396.153Radial†	-43.6	29.7	24.965	ug/L	24.965	ppb	16:22:46
1	Ca 317.933Radial†	24.4	-3.5	-5.2134	ug/L	-5.2134	ppb	16:23:06
1	Fe 238.204 Radial†	39.7	-1.7	-7.8157	ug/L	-7.8157	ppb	16:23:06
1	K 766.490 Radial†	2701.0	-252.9	-52.278	ug/L	-52.278	ppb	16:22:46
1	Mg 279.077 IEC†	5.9	1.6	40.230	ug/L	40.230	ppb	16:23:06
1	Na 589.592 Radial†	-332.3	19.5	1.1988	ug/L	1.1988	ppb	16:22:46
1	Sr 421.552†	-39.4	25.3	0.0789	ug/L	0.0789	ppb	16:22:46
1	Sc 361.383	775887.3	775887.3	104.19	%			16:24:03
1	Y 371.029	605298.0	605298.0	104.11	%			16:24:03
1	Ag 328.068†	817.5	78.7	0.4252	ug/L	0.4252	ppb	16:24:03
1	As 188.979†	-28.9	6.6	2.0881	ug/L	2.0881	ppb	16:24:23
1	B 249.677†	-639.4	267.6	6.1211	ug/L	6.1211	ppb	16:24:03
1	Ba 233.527†	16.3	-6.8	-0.0416	ug/L	-0.0416	ppb	16:24:23
1	Be 313.107†	-4923.3	59.7	0.0247	ug/L	0.0247	ppb	16:24:03
1	Cd 226.502†	-266.2	37.8	0.4260	ug/L	0.4260	ppb	16:24:23
1	Co 228.616†	-99.4	5.0	0.0833	ug/L	0.0833	ppb	16:24:23
1	Cr 267.716†	-31.1	68.1	0.8520	ug/L	0.8520	ppb	16:24:03
1	Cu 324.752†	5933.3	-96.4	-0.3249	ug/L	-0.3249	ppb	16:24:03
1	Mn 257.610†	702.8	-43.4	-0.0454	ug/L	-0.0454	ppb	16:24:03
1	Mo 202.031†	32.0	26.3	1.6647	ug/L	1.6647	ppb	16:24:23
1	Ni 231.604†	146.8	4.3	0.1018	ug/L	0.1018	ppb	16:24:23
1	P 214.914†	299.8	-5.8	-2.5172	ug/L	-2.5172	ppb	16:24:23
1	Pb 220.353†	-18.7	-0.1	-0.0052	ug/L	-0.0052	ppb	16:24:23
1	S 181.975 Axial†	103.6	-36.5	-44.053	ug/L	-44.053	ppb	16:24:23
1	Sb 206.836†	62.5	7.4	2.0268	ug/L	2.0268	ppb	16:24:23
1	Se 196.026†	-26.3	9.6	4.3446	ug/L	4.3446	ppb	16:24:23
1	Si 251.611†	684.0	207.7	5.8462	ug/L	5.8462	ppb	16:24:23
1	Sn 189.927†	19.2	5.5	0.8561	ug/L	0.8561	ppb	16:24:23
1	Ti 334.940†	-1423.8	160.3	0.2705	ug/L	0.2705	ppb	16:24:03
1	Tl 190.801†	-50.3	12.9	3.0577	ug/L	3.0577	ppb	16:24:23
1	U 409.014†	-5188.3	285.1	9.0103	ug/L	9.0103	ppb	16:24:03
1	V 292.402†	-1617.9	140.1	1.1891	ug/L	1.1891	ppb	16:24:03
1	Zn 213.857†	1038.6	12.4	0.1017	ug/L	0.1017	ppb	16:24:23
1	SiO2†	641.4	140.0	8.4093	ug/L	8.4093	ppb	16:25:19
2	Sc Radial	7203.2	7203.2	104	%			16:23:11
2	Y RADIAL	6653.0	6653.0	104.6	%			16:23:11
2	Al 396.153Radial†	-52.1	20.4	17.204	ug/L	17.204	ppb	16:23:11
2	Ca 317.933Radial†	23.3	-4.0	-5.8285	ug/L	-5.8285	ppb	16:23:31
2	Fe 238.204 Radial†	37.5	-2.8	-12.638	ug/L	-12.638	ppb	16:23:31
2	K 766.490 Radial†	2724.2	-162.5	-33.586	ug/L	-33.586	ppb	16:23:11
2	Mg 279.077 IEC†	0.3	-3.6	-92.494	ug/L	-92.494	ppb	16:23:31
2	Na 589.592 Radial†	-302.5	39.8	2.4476	ug/L	2.4476	ppb	16:23:11
2	Sr 421.552†	-13.1	49.7	0.1545	ug/L	0.1545	ppb	16:23:11
2	Sc 361.383	779309.2	779309.2	104.65	%			16:24:28
2	Y 371.029	607911.5	607911.5	104.56	%			16:24:28
2	Ag 328.068†	743.2	4.3	0.0122	ug/L	0.0122	ppb	16:24:28
2	As 188.979†	-30.3	5.4	1.7017	ug/L	1.7017	ppb	16:24:48
2	B 249.677†	-681.7	229.9	5.2570	ug/L	5.2570	ppb	16:24:28
2	Ba 233.527†	38.5	14.4	0.0942	ug/L	0.0942	ppb	16:24:48
2	Be 313.107†	-5008.6	-1.1	0.0002	ug/L	0.0002	ppb	16:24:28
2	Cd 226.502†	-282.9	23.0	0.2601	ug/L	0.2601	ppb	16:24:48
2	Co 228.616†	-83.8	20.4	0.3244	ug/L	0.3244	ppb	16:24:48
2	Cr 267.716†	-54.3	46.1	0.5741	ug/L	0.5741	ppb	16:24:28
2	Cu 324.752†	5916.0	-137.9	-0.4647	ug/L	-0.4647	ppb	16:24:28
2	Mn 257.610†	759.4	7.7	0.0080	ug/L	0.0080	ppb	16:24:28
2	Mo 202.031†	21.4	16.0	1.0150	ug/L	1.0150	ppb	16:24:48
2	Ni 231.604†	152.3	8.9	0.2132	ug/L	0.2132	ppb	16:24:48

2	P 214.914†	287.9	-18.4	-8.1695	ug/L	-8.1695 ppb	16:24:48
2	Pb 220.353†	-29.5	-10.4	-1.0915	ug/L	-1.0915 ppb	16:24:48
2	S 181.975 Axial†	96.6	-43.7	-52.641	ug/L	-52.641 ppb	16:24:48
2	Sb 206.836†	41.6	-12.8	-3.4517	ug/L	-3.4517 ppb	16:24:48
2	Se 196.026†	-6.1	29.0	13.078	ug/L	13.078 ppb	16:24:48
2	Si 251.611†	668.7	190.2	5.3449	ug/L	5.3449 ppb	16:24:48
2	Sn 189.927†	24.7	10.6	1.6662	ug/L	1.6662 ppb	16:24:48
2	Ti 334.940†	-1426.2	164.0	0.2764	ug/L	0.2764 ppb	16:24:28
2	Tl 190.801†	-60.0	3.9	0.9156	ug/L	0.9156 ppb	16:24:48
2	U 409.014†	-5171.9	322.6	10.198	ug/L	10.198 ppb	16:24:28
2	V 292.402†	-1726.6	43.0	0.3853	ug/L	0.3853 ppb	16:24:28
2	Zn 213.857†	1034.0	3.6	0.0335	ug/L	0.0335 ppb	16:24:48
2	SiO2†	708.9	201.8	12.129	ug/L	12.129 ppb	16:25:24
3	Sc Radial	7282.7	7282.7	105	%		16:23:36
3	Y RADIAL	6691.5	6691.5	105.2	%		16:23:36
3	Al 396.153Radial†	-52.9	20.2	17.033	ug/L	17.033 ppb	16:23:36
3	Ca 317.933Radial†	25.9	-1.7	-2.5027	ug/L	-2.5027 ppb	16:23:56
3	Fe 238.204 Radial†	39.4	-1.4	-6.4389	ug/L	-6.4389 ppb	16:23:56
3	K 766.490 Radial†	2682.1	-231.2	-47.776	ug/L	-47.776 ppb	16:23:36
3	Mg 279.077 IEC†	3.4	-0.7	-17.686	ug/L	-17.686 ppb	16:23:56
3	Na 589.592 Radial†	-315.9	30.2	1.8587	ug/L	1.8587 ppb	16:23:36
3	Sr 421.552†	-86.7	-20.3	-0.0631	ug/L	-0.0631 ppb	16:23:36
3	Sc 361.383	769348.9	769348.9	103.32	%		16:24:54
3	Y 371.029	600065.8	600065.8	103.21	%		16:24:54
3	Ag 328.068†	817.3	85.2	0.4595	ug/L	0.4595 ppb	16:24:54
3	As 188.979†	-43.7	-8.0	-2.5423	ug/L	-2.5423 ppb	16:25:14
3	B 249.677†	-609.3	291.6	6.6674	ug/L	6.6674 ppb	16:24:54
3	Ba 233.527†	-1.5	-23.8	-0.1543	ug/L	-0.1543 ppb	16:25:14
3	Be 313.107†	-5013.9	-68.2	-0.0273	ug/L	-0.0273 ppb	16:24:54
3	Cd 226.502†	-294.1	8.6	0.0979	ug/L	0.0979 ppb	16:25:14
3	Co 228.616†	-79.7	23.4	0.3718	ug/L	0.3718 ppb	16:25:14
3	Cr 267.716†	-60.4	39.5	0.4934	ug/L	0.4934 ppb	16:24:54
3	Cu 324.752†	5855.3	-123.5	-0.4159	ug/L	-0.4159 ppb	16:24:54
3	Mn 257.610†	783.9	40.9	0.0407	ug/L	0.0407 ppb	16:24:54
3	Mo 202.031†	19.7	14.7	0.9289	ug/L	0.9289 ppb	16:25:14
3	Ni 231.604†	172.0	29.9	0.7141	ug/L	0.7141 ppb	16:25:14
3	P 214.914†	307.9	4.5	2.1485	ug/L	2.1485 ppb	16:25:14
3	Pb 220.353†	-44.0	-24.7	-2.6044	ug/L	-2.6044 ppb	16:25:14
3	S 181.975 Axial†	107.9	-31.6	-38.047	ug/L	-38.047 ppb	16:25:14
3	Sb 206.836†	58.1	3.6	1.0239	ug/L	1.0239 ppb	16:25:14
3	Se 196.026†	-39.5	-3.4	-1.5646	ug/L	-1.5646 ppb	16:25:14
3	Si 251.611†	668.2	198.0	5.5689	ug/L	5.5689 ppb	16:25:14
3	Sn 189.927†	25.6	11.8	1.8515	ug/L	1.8515 ppb	16:25:14
3	Ti 334.940†	-1528.3	47.6	0.0786	ug/L	0.0786 ppb	16:24:54
3	Tl 190.801†	-58.6	4.4	1.0462	ug/L	1.0462 ppb	16:25:14
3	U 409.014†	-5235.2	197.4	6.2390	ug/L	6.2390 ppb	16:24:54
3	V 292.402†	-1730.6	17.8	0.1701	ug/L	0.1701 ppb	16:24:54
3	Zn 213.857†	1047.6	29.6	0.2421	ug/L	0.2421 ppb	16:25:14
3	SiO2†	682.9	185.4	11.146	ug/L	11.146 ppb	16:25:29

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	774848.5	104.05	%	0.680				0.65%
Sc Radial	7294.2	105	%	1.4				1.33%
Y 371.029	604425.1	103.96	%	0.687				0.66%
Y RADIAL	6713.1	105.6	%	1.15				1.09%
Ag 328.068†	56.1	0.2990	ug/L	0.24891	0.2990	ppb	0.24891	83.25%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	23.4	19.734	ug/L	4.5309	19.734	ppb	4.5309	22.96%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.3	0.4158	ug/L	2.56912	0.4158	ppb	2.56912	617.85%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	263.0	6.0152	ug/L	0.71114	6.0152	ppb	0.71114	11.82%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-5.4	-0.0339	ug/L	0.12444	-0.0339	ppb	0.12444	366.69%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-3.2	-0.0008	ug/L	0.02598	-0.0008	ppb	0.02598	>999.9%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.1	-4.5149	ug/L	1.76950	-4.5149	ppb	1.76950	39.19%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                23.1      0.2613 ug/L       0.16409      0.2613 ppb        0.16409  62.79%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                16.3      0.2599 ug/L       0.15471      0.2599 ppb        0.15471  59.53%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                51.2      0.6398 ug/L       0.18812      0.6398 ppb        0.18812  29.40%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -119.3     -0.4018 ug/L       0.07098     -0.4018 ppb        0.07098  17.66%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -2.0     -8.9642 ug/L       3.25526     -8.9642 ppb        3.25526  36.31%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -215.5     -44.547 ug/L        9.7556     -44.547 ppb         9.7556  21.90%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.9     -23.317 ug/L       66.5407     -23.317 ppb        66.5407 285.38%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                 1.7      0.0011 ug/L       0.04346      0.0011 ppb        0.04346 >999.9%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                19.0      1.2028 ug/L       0.40226      1.2028 ppb        0.40226  33.44%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         29.8      1.8350 ug/L       0.62473      1.8350 ppb        0.62473  34.04%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.3      0.3430 ug/L       0.32618      0.3430 ppb        0.32618  95.08%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.6     -2.8461 ug/L       5.16684     -2.8461 ppb        5.16684 181.54%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -11.8     -1.2337 ug/L       1.30540     -1.2337 ppb        1.30540 105.81%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -37.2     -44.914 ug/L        7.3351     -44.914 ppb         7.3351  16.33%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.6     -0.1336 ug/L       2.91695     -0.1336 ppb        2.91695 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                11.7      5.2860 ug/L       7.36653      5.2860 ppb        7.36653 139.36%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               198.6      5.5867 ug/L       0.25110      5.5867 ppb        0.25110   4.49%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.3      1.4579 ug/L       0.52938      1.4579 ppb        0.52938  36.31%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                18.2      0.0568 ug/L       0.11047      0.0568 ppb        0.11047 194.65%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               124.0      0.2085 ug/L       0.11255      0.2085 ppb        0.11255  53.98%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 7.0      1.6732 ug/L       1.20078      1.6732 ppb        1.20078  71.77%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                268.4      8.4825 ug/L       2.03165      8.4825 ppb        2.03165  23.95%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 67.0      0.5815 ug/L       0.53710      0.5815 ppb        0.53710  92.37%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                15.2      0.1257 ug/L       0.10637      0.1257 ppb        0.10637  84.60%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     175.8      10.561 ug/L        1.9273      10.561 ppb         1.9273  18.25%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 21
Sample ID: 232504009|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 52
Date Collected: 7/2/2009 16:27:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504009|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7196.2	7196.2	104	%			16:29:31
1	Y RADIAL	7162.0	7162.0	112.6	%			16:29:31
1	Al 396.153Radial†	17969.5	17397.4	14682	ug/L	14682	ppb	16:29:31
1	Ca 317.933Radial†	4278.9	4099.5	6041.9	ug/L	6041.9	ppb	16:29:31
1	Fe 238.204 Radial†	22089.1	21260.1	95017	ug/L	95017	ppb	16:29:31
1	K 766.490 Radial†	18438.6	14992.4	3087.5	ug/L	3087.5	ppb	16:29:31
1	Mg 279.077 IEC†	164.5	154.6	3874.3	ug/L	3874.3	ppb	16:29:52
1	Na 589.592 Radial†	12912.5	12781.8	786.49	ug/L	786.49	ppb	16:29:31
1	Sr 421.552†	13514.9	13093.8	40.662	ug/L	40.662	ppb	16:29:31
1	Sc 361.383	808153.1	808153.1	108.53	%			16:30:49
1	Y 371.029	675738.0	675738.0	116.23	%			16:30:49
1	Ag 328.068†	-4023.0	-4412.8	6.5702	ug/L	6.5702	ppb	16:30:54
1	As 188.979†	-86.0	-44.9	15.201	ug/L	15.201	ppb	16:31:14
1	B 249.677†	-52.7	832.7	12.426	ug/L	12.426	ppb	16:30:54
1	Ba 233.527†	38690.1	35627.7	230.86	ug/L	230.86	ppb	16:30:54
1	Be 313.107†	-14464.8	-8543.5	1.8138	ug/L	1.8138	ppb	16:30:54
1	Cd 226.502†	483.0	738.3	-2.7503	ug/L	-2.7503	ppb	16:31:14
1	Co 228.616†	1653.1	1623.7	19.619	ug/L	19.619	ppb	16:31:14
1	Cr 267.716†	2294.6	2212.3	29.829	ug/L	29.829	ppb	16:31:14
1	Cu 324.752†	10473.5	3859.7	18.479	ug/L	18.479	ppb	16:30:54
1	Mn 257.610†	2473902.8	2278803.8	2306.8	ug/L	2306.8	ppb	16:30:49
1	Mo 202.031†	70.0	60.1	10.010	ug/L	10.010	ppb	16:31:14
1	Ni 231.604†	1069.8	849.1	20.296	ug/L	20.296	ppb	16:31:14
1	P 214.914†	3063.0	2528.8	1064.5	ug/L	1064.5	ppb	16:31:14
1	Pb 220.353†	513.5	491.0	45.759	ug/L	45.759	ppb	16:31:14
1	S 181.975 Axial†	334.1	171.9	204.34	ug/L	204.34	ppb	16:31:14
1	Sb 206.836†	94.5	34.5	3.9195	ug/L	3.9195	ppb	16:31:14
1	Se 196.026†	-647.2	-561.5	63.169	ug/L	63.169	ppb	16:31:14
1	Si 251.611†	239019.4	219790.3	6210.0	ug/L	6210.0	ppb	16:30:54
1	Sn 189.927†	-4.0	-16.6	5.0876	ug/L	5.0876	ppb	16:31:14
1	Ti 334.940†	1428040.5	1317362.4	2260.8	ug/L	2260.8	ppb	16:30:49
1	Tl 190.801†	-183.6	-108.0	4.6307	ug/L	4.6307	ppb	16:31:14
1	U 409.014†	-8673.7	-2727.7	-97.947	ug/L	-97.947	ppb	16:30:54
1	V 292.402†	9550.9	10493.3	70.273	ug/L	70.273	ppb	16:30:54
1	Zn 213.857†	71777.6	65153.5	528.98	ug/L	528.98	ppb	16:30:54
1	SiO2†	240952.5	221544.7	13382	ug/L	13382	ppb	16:32:22
2	Sc Radial	7283.2	7283.2	105	%			16:29:57
2	Y RADIAL	7255.3	7255.3	114.1	%			16:29:57
2	Al 396.153Radial†	17503.0	16746.1	14132	ug/L	14132	ppb	16:29:57
2	Ca 317.933Radial†	4174.5	3950.8	5822.7	ug/L	5822.7	ppb	16:29:57
2	Fe 238.204 Radial†	21401.0	20350.1	90950	ug/L	90950	ppb	16:29:57
2	K 766.490 Radial†	18145.3	14500.7	2985.1	ug/L	2985.1	ppb	16:29:57
2	Mg 279.077 IEC†	164.6	152.8	3831.6	ug/L	3831.6	ppb	16:30:17
2	Na 589.592 Radial†	12525.8	12264.8	754.67	ug/L	754.67	ppb	16:29:57
2	Sr 421.552†	13118.1	12560.2	39.004	ug/L	39.004	ppb	16:29:57
2	Sc 361.383	812072.3	812072.3	109.05	%			16:31:20
2	Y 371.029	678856.5	678856.5	116.76	%			16:31:20
2	Ag 328.068†	-4001.6	-4375.2	5.4795	ug/L	5.4795	ppb	16:31:25
2	As 188.979†	-88.9	-47.2	13.643	ug/L	13.643	ppb	16:31:45
2	B 249.677†	-63.5	823.0	12.482	ug/L	12.482	ppb	16:31:25
2	Ba 233.527†	38926.1	35672.0	231.17	ug/L	231.17	ppb	16:31:25
2	Be 313.107†	-14535.9	-8544.4	1.8117	ug/L	1.8117	ppb	16:31:25
2	Cd 226.502†	487.6	740.4	-2.2531	ug/L	-2.2531	ppb	16:31:45
2	Co 228.616†	1663.3	1625.7	19.709	ug/L	19.709	ppb	16:31:45
2	Cr 267.716†	2310.1	2216.3	29.796	ug/L	29.796	ppb	16:31:45
2	Cu 324.752†	10497.5	3835.1	18.161	ug/L	18.161	ppb	16:31:25
2	Mn 257.610†	2483035.6	2276176.9	2303.7	ug/L	2303.7	ppb	16:31:20
2	Mo 202.031†	71.3	60.9	9.7976	ug/L	9.7976	ppb	16:31:45
2	Ni 231.604†	1066.5	841.4	20.111	ug/L	20.111	ppb	16:31:45

2	P 214.914†	3061.5	2513.8	1060.8	ug/L	1060.8	ppb	16:31:45
2	Pb 220.353†	517.0	491.9	46.128	ug/L	46.128	ppb	16:31:45
2	S 181.975 Axial†	337.6	173.6	206.53	ug/L	206.53	ppb	16:31:45
2	Sb 206.836†	75.9	17.0	-0.8701	ug/L	-0.8701	ppb	16:31:45
2	Se 196.026†	-654.1	-565.0	48.012	ug/L	48.012	ppb	16:31:45
2	Si 251.611†	240016.2	219641.4	6205.8	ug/L	6205.8	ppb	16:31:25
2	Sn 189.927†	-4.5	-17.1	4.6908	ug/L	4.6908	ppb	16:31:45
2	Ti 334.940†	1434501.8	1316936.7	2260.0	ug/L	2260.0	ppb	16:31:20
2	Tl 190.801†	-172.4	-96.9	7.2282	ug/L	7.2282	ppb	16:31:45
2	U 409.014†	-8777.6	-2784.4	-99.239	ug/L	-99.239	ppb	16:31:25
2	V 292.402†	9601.2	10497.0	70.867	ug/L	70.867	ppb	16:31:25
2	Zn 213.857†	72088.9	65119.7	529.13	ug/L	529.13	ppb	16:31:25
2	SiO2†	243826.3	223108.4	13476	ug/L	13476	ppb	16:32:27
3	Sc Radial	7528.6	7528.6	108	%			16:30:22
3	Y RADIAL	7468.2	7468.2	117.4	%			16:30:22
3	Al 396.153Radial†	17455.9	16159.0	13637	ug/L	13637	ppb	16:30:22
3	Ca 317.933Radial†	4183.6	3829.5	5644.0	ug/L	5644.0	ppb	16:30:22
3	Fe 238.204 Radial†	21351.1	19639.6	87774	ug/L	87774	ppb	16:30:22
3	K 766.490 Radial†	18025.7	13827.0	2845.2	ug/L	2845.2	ppb	16:30:22
3	Mg 279.077 IEC†	160.8	144.2	3613.8	ug/L	3613.8	ppb	16:30:42
3	Na 589.592 Radial†	12478.7	11832.4	728.06	ug/L	728.06	ppb	16:30:22
3	Sr 421.552†	13186.6	12215.9	37.936	ug/L	37.936	ppb	16:30:22
3	Sc 361.383	816090.0	816090.0	109.59	%			16:31:51
3	Y 371.029	682465.8	682465.8	117.38	%			16:31:51
3	Ag 328.068†	-4009.8	-4364.7	4.5245	ug/L	4.5245	ppb	16:31:56
3	As 188.979†	-69.1	-28.8	18.882	ug/L	18.882	ppb	16:32:16
3	B 249.677†	-83.5	805.1	12.290	ug/L	12.290	ppb	16:31:56
3	Ba 233.527†	39283.9	35822.8	232.16	ug/L	232.16	ppb	16:31:56
3	Be 313.107†	-14694.5	-8623.5	1.7914	ug/L	1.7914	ppb	16:31:56
3	Cd 226.502†	465.5	718.0	-2.1348	ug/L	-2.1348	ppb	16:32:16
3	Co 228.616†	1657.3	1612.7	19.540	ug/L	19.540	ppb	16:32:16
3	Cr 267.716†	2273.3	2172.3	29.180	ug/L	29.180	ppb	16:32:16
3	Cu 324.752†	10562.8	3847.3	18.018	ug/L	18.018	ppb	16:31:56
3	Mn 257.610†	2499461.0	2279955.1	2307.1	ug/L	2307.1	ppb	16:31:51
3	Mo 202.031†	71.8	61.1	9.5998	ug/L	9.5998	ppb	16:32:16
3	Ni 231.604†	1062.9	833.3	19.917	ug/L	19.917	ppb	16:32:16
3	P 214.914†	3045.6	2485.4	1050.4	ug/L	1050.4	ppb	16:32:16
3	Pb 220.353†	527.8	499.4	47.130	ug/L	47.130	ppb	16:32:16
3	S 181.975 Axial†	342.4	176.4	210.04	ug/L	210.04	ppb	16:32:16
3	Sb 206.836†	76.7	17.4	-0.8438	ug/L	-0.8438	ppb	16:32:16
3	Se 196.026†	-652.9	-560.9	39.257	ug/L	39.257	ppb	16:32:16
3	Si 251.611†	242975.2	221257.8	6251.5	ug/L	6251.5	ppb	16:31:56
3	Sn 189.927†	-12.4	-24.3	3.3058	ug/L	3.3058	ppb	16:32:16
3	Ti 334.940†	1444763.4	1319824.2	2265.0	ug/L	2265.0	ppb	16:31:51
3	Tl 190.801†	-185.7	-108.3	4.5863	ug/L	4.5863	ppb	16:32:16
3	U 409.014†	-8719.8	-2692.0	-95.928	ug/L	-95.928	ppb	16:31:56
3	V 292.402†	9745.4	10585.2	72.031	ug/L	72.031	ppb	16:31:56
3	Zn 213.857†	73009.8	65634.5	533.73	ug/L	533.73	ppb	16:31:56
3	SiO2†	245214.2	223274.1	13487	ug/L	13487	ppb	16:32:32

Mean Data: 232504009|881343|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	812105.1	109.06	%	0.533				0.49%
Sc Radial	7336.0	106	%	2.5				2.35%
Y 371.029	679020.1	116.79	%	0.579				0.50%
Y RADIAL	7295.2	114.7	%	2.47				2.15%
Ag 328.068†	-4384.2	5.5247	ug/L	1.02361	5.5247	ppb	1.02361	18.53%
Al 396.153Radial†	16767.5	14150	ug/L	522.8	14150	ppb	522.8	3.69%
As 188.979†	-40.3	15.909	ug/L	2.6901	15.909	ppb	2.6901	16.91%
B 249.677†	820.3	12.400	ug/L	0.0989	12.400	ppb	0.0989	0.80%
Ba 233.527†	35707.5	231.40	ug/L	0.680	231.40	ppb	0.680	0.29%
Be 313.107†	-8570.5	1.8056	ug/L	0.01237	1.8056	ppb	0.01237	0.69%
Ca 317.933Radial†	3959.9	5836.2	ug/L	199.28	5836.2	ppb	199.28	3.41%
Cd 226.502†	732.2	-2.3794	ug/L	0.32662	-2.3794	ppb	0.32662	13.73%
Co 228.616†	1620.7	19.622	ug/L	0.0848	19.622	ppb	0.0848	0.43%
Cr 267.716†	2200.3	29.602	ug/L	0.3654	29.602	ppb	0.3654	1.23%
Cu 324.752†	3847.4	18.219	ug/L	0.2357	18.219	ppb	0.2357	1.29%
Fe 238.204 Radial†	20416.6	91247	ug/L	3630.3	91247	ppb	3630.3	3.98%
K 766.490 Radial†	14440.0	2972.6	ug/L	121.60	2972.6	ppb	121.60	4.09%

Mg 279.077 IEC†	150.6	3773.2	ug/L	139.72	3773.2	ppb	139.72	3.70%
Mn 257.610†	2278311.9	2305.9	ug/L	1.90	2305.9	ppb	1.90	0.08%
Mo 202.031†	60.7	9.8023	ug/L	0.20498	9.8023	ppb	0.20498	2.09%
Na 589.592 Radial†	12293.0	756.41	ug/L	29.250	756.41	ppb	29.250	3.87%
Ni 231.604†	841.2	20.108	ug/L	0.1896	20.108	ppb	0.1896	0.94%
P 214.914†	2509.3	1058.5	ug/L	7.30	1058.5	ppb	7.30	0.69%
Pb 220.353†	494.1	46.339	ug/L	0.7094	46.339	ppb	0.7094	1.53%
S 181.975 Axial†	173.9	206.97	ug/L	2.877	206.97	ppb	2.877	1.39%
Sb 206.836†	22.9	0.7352	ug/L	2.75771	0.7352	ppb	2.75771	375.09%
Se 196.026†	-562.4	50.146	ug/L	12.0975	50.146	ppb	12.0975	24.12%
Si 251.611†	220229.8	6222.4	ug/L	25.29	6222.4	ppb	25.29	0.41%
Sn 189.927†	-19.4	4.3614	ug/L	0.93545	4.3614	ppb	0.93545	21.45%
Sr 421.552†	12623.3	39.201	ug/L	1.3737	39.201	ppb	1.3737	3.50%
Ti 334.940†	1318041.1	2261.9	ug/L	2.67	2261.9	ppb	2.67	0.12%
Tl 190.801†	-104.4	5.4817	ug/L	1.51262	5.4817	ppb	1.51262	27.59%
U 409.014†	-2734.7	-97.705	ug/L	1.6686	-97.705	ppb	1.6686	1.71%
V 292.402†	10525.2	71.057	ug/L	0.8941	71.057	ppb	0.8941	1.26%
Zn 213.857†	65302.6	530.61	ug/L	2.700	530.61	ppb	2.700	0.51%
SiO2†	222642.4	13448	ug/L	57.7	13448	ppb	57.7	0.43%

Sequence No.: 22
Sample ID: 232504010|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 53
Date Collected: 7/2/2009 16:34:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504010|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7539.9	7539.9	109	%			16:36:35
1	Y RADIAL	8121.3	8121.3	127.7	%			16:36:35
1	Al 396.153Radial†	32142.3	29650.4	25022	ug/L	25022	ppb	16:36:35
1	Ca 317.933Radial†	3319.6	3028.6	4463.6	ug/L	4463.6	ppb	16:36:35
1	Fe 238.204 Radial†	19445.4	17856.3	79804	ug/L	79804	ppb	16:36:35
1	K 766.490 Radial†	22515.9	17934.2	3696.9	ug/L	3696.9	ppb	16:36:35
1	Mg 279.077 IEC†	105.5	93.2	2315.4	ug/L	2315.4	ppb	16:36:55
1	Na 589.592 Radial†	30839.8	28712.3	1766.7	ug/L	1766.7	ppb	16:36:35
1	Sr 421.552†	10953.5	10142.6	31.499	ug/L	31.499	ppb	16:36:35
1	Sc 361.383	817709.4	817709.4	109.81	%			16:37:52
1	Y 371.029	739075.0	739075.0	127.12	%			16:37:52
1	Ag 328.068†	-2979.6	-3419.3	7.2327	ug/L	7.2327	ppb	16:37:57
1	As 188.979†	-62.6	-22.7	22.793	ug/L	22.793	ppb	16:38:17
1	B 249.677†	-193.1	705.5	10.573	ug/L	10.573	ppb	16:37:57
1	Ba 233.527†	32143.5	29249.3	189.55	ug/L	189.55	ppb	16:37:57
1	Be 313.107†	-19232.9	-12729.8	1.9008	ug/L	1.9008	ppb	16:37:57
1	Cd 226.502†	547.3	791.7	-0.3396	ug/L	-0.3396	ppb	16:38:17
1	Co 228.616†	1423.9	1397.2	14.625	ug/L	14.625	ppb	16:38:17
1	Cr 267.716†	10623.5	9772.3	124.27	ug/L	124.27	ppb	16:37:57
1	Cu 324.752†	16939.6	9635.3	37.030	ug/L	37.030	ppb	16:37:57
1	Mn 257.610†	1930801.9	1757584.1	1780.0	ug/L	1780.0	ppb	16:37:52
1	Mo 202.031†	389.9	350.7	27.443	ug/L	27.443	ppb	16:38:17
1	Ni 231.604†	3705.5	3237.8	77.439	ug/L	77.439	ppb	16:38:17
1	P 214.914†	1301.4	891.6	339.28	ug/L	339.28	ppb	16:38:17
1	Pb 220.353†	608.8	572.2	57.822	ug/L	57.822	ppb	16:38:17
1	S 181.975 Axial†	301.8	138.8	162.50	ug/L	162.50	ppb	16:38:17
1	Sb 206.836†	95.2	34.1	-0.6259	ug/L	-0.6259	ppb	16:38:17
1	Se 196.026†	-594.9	-506.9	37.944	ug/L	37.944	ppb	16:38:17
1	Si 251.611†	252431.0	229429.7	6481.7	ug/L	6481.7	ppb	16:37:57
1	Sn 189.927†	77.4	57.5	15.397	ug/L	15.397	ppb	16:38:17
1	Ti 334.940†	1932989.5	1761821.0	3023.3	ug/L	3023.3	ppb	16:37:52
1	Tl 190.801†	-198.1	-119.2	6.4162	ug/L	6.4162	ppb	16:38:17
1	U 409.014†	-12178.5	-5826.0	-194.19	ug/L	-194.19	ppb	16:37:52
1	V 292.402†	9148.3	10023.9	67.682	ug/L	67.682	ppb	16:37:57
1	Zn 213.857†	74433.2	66798.9	543.85	ug/L	543.85	ppb	16:37:57
1	SiO2†	255188.4	231914.1	14007	ug/L	14007	ppb	16:39:25
2	Sc Radial	7550.0	7550.0	109	%			16:37:00
2	Y RADIAL	8149.0	8149.0	128.1	%			16:37:00
2	Al 396.153Radial†	32035.8	29513.1	24906	ug/L	24906	ppb	16:37:00
2	Ca 317.933Radial†	3318.6	3023.6	4456.2	ug/L	4456.2	ppb	16:37:00
2	Fe 238.204 Radial†	19320.9	17718.0	79186	ug/L	79186	ppb	16:37:00
2	K 766.490 Radial†	22418.5	17817.1	3672.6	ug/L	3672.6	ppb	16:37:00
2	Mg 279.077 IEC†	107.5	94.9	2359.7	ug/L	2359.7	ppb	16:37:20
2	Na 589.592 Radial†	30801.0	28638.9	1762.2	ug/L	1762.2	ppb	16:37:00
2	Sr 421.552†	10935.9	10113.0	31.407	ug/L	31.407	ppb	16:37:00
2	Sc 361.383	825752.2	825752.2	110.89	%			16:38:23
2	Y 371.029	746419.1	746419.1	128.38	%			16:38:23
2	Ag 328.068†	-3012.7	-3422.7	7.0100	ug/L	7.0100	ppb	16:38:28
2	As 188.979†	-67.1	-26.2	21.549	ug/L	21.549	ppb	16:38:48
2	B 249.677†	-208.7	693.1	10.336	ug/L	10.336	ppb	16:38:28
2	Ba 233.527†	32395.0	29191.1	189.17	ug/L	189.17	ppb	16:38:28
2	Be 313.107†	-19591.0	-12882.2	1.8452	ug/L	1.8452	ppb	16:38:28
2	Cd 226.502†	583.2	819.1	0.0423	ug/L	0.0423	ppb	16:38:48
2	Co 228.616†	1402.8	1365.5	14.125	ug/L	14.125	ppb	16:38:48
2	Cr 267.716†	10668.5	9718.7	123.59	ug/L	123.59	ppb	16:38:28
2	Cu 324.752†	17156.1	9680.3	37.146	ug/L	37.146	ppb	16:38:28
2	Mn 257.610†	1947665.9	1755666.0	1778.0	ug/L	1778.0	ppb	16:38:23
2	Mo 202.031†	377.7	336.1	26.480	ug/L	26.480	ppb	16:38:48
2	Ni 231.604†	3762.6	3256.5	77.887	ug/L	77.887	ppb	16:38:48

2	P 214.914†	1303.2	881.6	335.21	ug/L	335.21 ppb	16:38:48
2	Pb 220.353†	575.4	536.7	54.108	ug/L	54.108 ppb	16:38:48
2	S 181.975 Axial†	299.3	134.0	156.63	ug/L	156.63 ppb	16:38:48
2	Sb 206.836†	92.8	31.1	-1.4903	ug/L	-1.4903 ppb	16:38:48
2	Se 196.026†	-600.7	-506.9	35.873	ug/L	35.873 ppb	16:38:48
2	Si 251.611†	254797.2	229324.6	6478.8	ug/L	6478.8 ppb	16:38:28
2	Sn 189.927†	70.9	50.9	14.331	ug/L	14.331 ppb	16:38:48
2	Ti 334.940†	1953623.4	1763283.0	3025.8	ug/L	3025.8 ppb	16:38:23
2	Tl 190.801†	-192.1	-112.1	8.1285	ug/L	8.1285 ppb	16:38:48
2	U 409.014†	-12122.0	-5667.0	-189.09	ug/L	-189.09 ppb	16:38:23
2	V 292.402†	9159.4	9952.7	67.181	ug/L	67.181 ppb	16:38:28
2	Zn 213.857†	75031.1	66677.8	542.91	ug/L	542.91 ppb	16:38:28
2	SiO2†	253653.8	228266.7	13787	ug/L	13787 ppb	16:39:30
3	Sc Radial	7702.4	7702.4	111	%		16:37:25
3	Y RADIAL	8282.6	8282.6	130.2	%		16:37:25
3	Al 396.153Radial†	32762.1	29584.8	24967	ug/L	24967 ppb	16:37:25
3	Ca 317.933Radial†	3384.1	3022.2	4454.2	ug/L	4454.2 ppb	16:37:25
3	Fe 238.204 Radial†	19771.4	17772.4	79429	ug/L	79429 ppb	16:37:25
3	K 766.490 Radial†	22834.7	17784.3	3666.0	ug/L	3666.0 ppb	16:37:25
3	Mg 279.077 IEC†	107.5	92.9	2308.0	ug/L	2308.0 ppb	16:37:45
3	Na 589.592 Radial†	31241.7	28475.7	1752.2	ug/L	1752.2 ppb	16:37:25
3	Sr 421.552†	11070.0	10034.9	31.164	ug/L	31.164 ppb	16:37:25
3	Sc 361.383	820905.5	820905.5	110.24	%		16:38:54
3	Y 371.029	742848.0	742848.0	127.77	%		16:38:54
3	Ag 328.068†	-2925.6	-3359.7	7.4326	ug/L	7.4326 ppb	16:38:59
3	As 188.979†	-65.0	-24.6	22.087	ug/L	22.087 ppb	16:39:19
3	B 249.677†	-220.0	681.7	10.056	ug/L	10.056 ppb	16:38:59
3	Ba 233.527†	32032.2	29034.5	188.16	ug/L	188.16 ppb	16:38:59
3	Be 313.107†	-19255.7	-12682.4	1.9138	ug/L	1.9138 ppb	16:38:59
3	Cd 226.502†	584.7	823.6	0.0647	ug/L	0.0647 ppb	16:39:19
3	Co 228.616†	1416.8	1385.7	14.450	ug/L	14.450 ppb	16:39:19
3	Cr 267.716†	10560.1	9677.2	123.07	ug/L	123.07 ppb	16:38:59
3	Cu 324.752†	16840.4	9485.3	36.504	ug/L	36.504 ppb	16:38:59
3	Mn 257.610†	1932097.8	1751913.8	1774.3	ug/L	1774.3 ppb	16:38:54
3	Mo 202.031†	372.5	333.5	26.328	ug/L	26.328 ppb	16:39:19
3	Ni 231.604†	3771.3	3284.4	78.554	ug/L	78.554 ppb	16:39:19
3	P 214.914†	1278.2	865.9	328.09	ug/L	328.09 ppb	16:39:19
3	Pb 220.353†	598.3	560.5	56.613	ug/L	56.613 ppb	16:39:19
3	S 181.975 Axial†	305.1	140.8	164.85	ug/L	164.85 ppb	16:39:19
3	Sb 206.836†	97.2	35.6	-0.2359	ug/L	-0.2359 ppb	16:39:19
3	Se 196.026†	-610.0	-518.5	31.420	ug/L	31.420 ppb	16:39:19
3	Si 251.611†	250278.8	226582.5	6401.3	ug/L	6401.3 ppb	16:38:59
3	Sn 189.927†	69.6	50.1	14.220	ug/L	14.220 ppb	16:39:19
3	Ti 334.940†	1938870.8	1760302.4	3020.7	ug/L	3020.7 ppb	16:38:54
3	Tl 190.801†	-192.0	-113.0	7.8421	ug/L	7.8421 ppb	16:39:19
3	U 409.014†	-12168.3	-5773.5	-192.49	ug/L	-192.49 ppb	16:38:54
3	V 292.402†	9016.7	9872.1	66.482	ug/L	66.482 ppb	16:38:59
3	Zn 213.857†	73884.4	66037.1	537.58	ug/L	537.58 ppb	16:38:59
3	SiO2†	253840.3	229786.4	13878	ug/L	13878 ppb	16:39:35

Mean Data: 232504010|881343|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	821455.7	110.31	%	0.544				0.49%
Sc Radial	7597.4	109	%	1.3				1.20%
Y 371.029	742780.7	127.76	%	0.632				0.49%
Y RADIAL	8184.3	128.7	%	1.36				1.05%
Ag 328.068†	-3400.6	7.2251	ug/L	0.21141	7.2251	ppb	0.21141	2.93%
Al 396.153Radial†	29582.8	24965	ug/L	57.9	24965	ppb	57.9	0.23%
As 188.979†	-24.5	22.143	ug/L	0.6242	22.143	ppb	0.6242	2.82%
B 249.677†	693.4	10.322	ug/L	0.2588	10.322	ppb	0.2588	2.51%
Ba 233.527†	29158.3	188.96	ug/L	0.722	188.96	ppb	0.722	0.38%
Be 313.107†	-12764.8	1.8866	ug/L	0.03641	1.8866	ppb	0.03641	1.93%
Ca 317.933Radial†	3024.8	4458.0	ug/L	4.97	4458.0	ppb	4.97	0.11%
Cd 226.502†	811.5	-0.0775	ug/L	0.22722	-0.0775	ppb	0.22722	293.14%
Co 228.616†	1382.8	14.400	ug/L	0.2539	14.400	ppb	0.2539	1.76%
Cr 267.716†	9722.7	123.64	ug/L	0.603	123.64	ppb	0.603	0.49%
Cu 324.752†	9600.3	36.893	ug/L	0.3422	36.893	ppb	0.3422	0.93%
Fe 238.204 Radial†	17782.2	79473	ug/L	311.3	79473	ppb	311.3	0.39%
K 766.490 Radial†	17845.2	3678.5	ug/L	16.29	3678.5	ppb	16.29	0.44%

Mg 279.077 IEC†	93.6	2327.7	ug/L	27.93	2327.7	ppb	27.93	1.20%
Mn 257.610†	1755054.6	1777.5	ug/L	2.92	1777.5	ppb	2.92	0.16%
Mo 202.031†	340.1	26.750	ug/L	0.6045	26.750	ppb	0.6045	2.26%
Na 589.592 Radial†	28609.0	1760.4	ug/L	7.45	1760.4	ppb	7.45	0.42%
Ni 231.604†	3259.5	77.960	ug/L	0.5609	77.960	ppb	0.5609	0.72%
P 214.914†	879.7	334.19	ug/L	5.663	334.19	ppb	5.663	1.69%
Pb 220.353†	556.5	56.181	ug/L	1.8940	56.181	ppb	1.8940	3.37%
S 181.975 Axial†	137.9	161.33	ug/L	4.231	161.33	ppb	4.231	2.62%
Sb 206.836†	33.6	-0.7841	ug/L	0.64200	-0.7841	ppb	0.64200	81.88%
Se 196.026†	-510.8	35.079	ug/L	3.3338	35.079	ppb	3.3338	9.50%
Si 251.611†	228445.6	6453.9	ug/L	45.61	6453.9	ppb	45.61	0.71%
Sn 189.927†	52.8	14.649	ug/L	0.6496	14.649	ppb	0.6496	4.43%
Sr 421.552†	10096.8	31.357	ug/L	0.1730	31.357	ppb	0.1730	0.55%
Ti 334.940†	1761802.1	3023.3	ug/L	2.56	3023.3	ppb	2.56	0.08%
Tl 190.801†	-114.8	7.4622	ug/L	0.91716	7.4622	ppb	0.91716	12.29%
U 409.014†	-5755.5	-191.92	ug/L	2.597	-191.92	ppb	2.597	1.35%
V 292.402†	9949.5	67.115	ug/L	0.6028	67.115	ppb	0.6028	0.90%
Zn 213.857†	66504.6	541.44	ug/L	3.382	541.44	ppb	3.382	0.62%
SiO2†	229989.1	13891	ug/L	110.6	13891	ppb	110.6	0.80%

Sequence No.: 23
Sample ID: 232504011|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 54
Date Collected: 7/2/2009 16:41:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504011|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7536.6	7536.6	109	%			16:43:39
1	Y RADIAL	7761.7	7761.7	122.1	%			16:43:39
1	Al 396.153Radial†	19295.0	17835.2	15051	ug/L	15051	ppb	16:43:39
1	Ca 317.933Radial†	5818.5	5330.6	7856.4	ug/L	7856.4	ppb	16:43:39
1	Fe 238.204 Radial†	16508.6	15160.3	67755	ug/L	67755	ppb	16:43:39
1	K 766.490 Radial†	23492.6	18842.5	3880.5	ug/L	3880.5	ppb	16:43:39
1	Mg 279.077 IEC†	216.2	195.1	4933.6	ug/L	4933.6	ppb	16:43:59
1	Na 589.592 Radial†	15045.1	14183.0	872.70	ug/L	872.70	ppb	16:43:39
1	Sr 421.552†	14352.3	13276.2	41.211	ug/L	41.211	ppb	16:43:39
1	Sc 361.383	817463.2	817463.2	109.78	%			16:44:56
1	Y 371.029	706953.0	706953.0	121.59	%			16:44:56
1	Ag 328.068†	-3029.8	-3465.8	3.0548	ug/L	3.0548	ppb	16:45:01
1	As 188.979†	-69.0	-28.6	15.312	ug/L	15.312	ppb	16:45:21
1	B 249.677†	-251.4	652.3	10.209	ug/L	10.209	ppb	16:45:01
1	Ba 233.527†	40204.7	36601.4	237.31	ug/L	237.31	ppb	16:45:01
1	Be 313.107†	-11113.7	-5339.1	3.2946	ug/L	3.2946	ppb	16:45:01
1	Cd 226.502†	355.5	617.0	-0.9362	ug/L	-0.9362	ppb	16:45:21
1	Co 228.616†	1026.8	1035.8	10.538	ug/L	10.538	ppb	16:45:21
1	Cr 267.716†	2488.8	2365.1	31.204	ug/L	31.204	ppb	16:45:21
1	Cu 324.752†	11886.5	5036.9	20.863	ug/L	20.863	ppb	16:45:01
1	Mn 257.610†	2175016.8	1980577.0	2003.1	ug/L	2003.1	ppb	16:44:56
1	Mo 202.031†	70.6	59.9	8.2186	ug/L	8.2186	ppb	16:45:21
1	Ni 231.604†	1190.9	948.2	22.672	ug/L	22.672	ppb	16:45:21
1	P 214.914†	3232.7	2651.2	1140.9	ug/L	1140.9	ppb	16:45:21
1	Pb 220.353†	509.3	481.8	47.427	ug/L	47.427	ppb	16:45:21
1	S 181.975 Axial†	348.4	181.4	215.80	ug/L	215.80	ppb	16:45:21
1	Sb 206.836†	78.4	18.9	-1.0879	ug/L	-1.0879	ppb	16:45:21
1	Se 196.026†	-509.4	-429.2	32.304	ug/L	32.304	ppb	16:45:21
1	Si 251.611†	245510.4	223194.8	6305.9	ug/L	6305.9	ppb	16:45:01
1	Sn 189.927†	-2.6	-15.4	3.4406	ug/L	3.4406	ppb	16:45:21
1	Ti 334.940†	1496965.1	1365161.9	2342.9	ug/L	2342.9	ppb	16:44:56
1	Tl 190.801†	-180.2	-103.0	5.1889	ug/L	5.1889	ppb	16:45:21
1	U 409.014†	-10651.9	-4438.6	-148.68	ug/L	-148.68	ppb	16:44:56
1	V 292.402†	9756.2	10580.1	74.606	ug/L	74.606	ppb	16:45:01
1	Zn 213.857†	72929.1	65449.1	534.22	ug/L	534.22	ppb	16:45:01
1	SiO2†	249937.2	227200.6	13723	ug/L	13723	ppb	16:46:29
2	Sc Radial	7571.3	7571.3	109	%			16:44:04
2	Y RADIAL	7756.7	7756.7	122.0	%			16:44:04
2	Al 396.153Radial†	19359.0	17812.5	15032	ug/L	15032	ppb	16:44:04
2	Ca 317.933Radial†	5843.7	5329.1	7854.2	ug/L	7854.2	ppb	16:44:04
2	Fe 238.204 Radial†	16618.9	15191.7	67896	ug/L	67896	ppb	16:44:04
2	K 766.490 Radial†	23759.5	18988.1	3910.6	ug/L	3910.6	ppb	16:44:04
2	Mg 279.077 IEC†	217.3	195.2	4936.0	ug/L	4936.0	ppb	16:44:24
2	Na 589.592 Radial†	14965.3	14046.4	864.30	ug/L	864.30	ppb	16:44:04
2	Sr 421.552†	14309.4	13176.4	40.901	ug/L	40.901	ppb	16:44:04
2	Sc 361.383	810062.4	810062.4	108.78	%			16:45:27
2	Y 371.029	701937.4	701937.4	120.73	%			16:45:27
2	Ag 328.068†	-3033.4	-3494.3	2.9467	ug/L	2.9467	ppb	16:45:32
2	As 188.979†	-60.5	-21.3	17.660	ug/L	17.660	ppb	16:45:52
2	B 249.677†	-347.2	562.1	8.1348	ug/L	8.1348	ppb	16:45:32
2	Ba 233.527†	40160.7	36895.5	239.22	ug/L	239.22	ppb	16:45:32
2	Be 313.107†	-11169.1	-5482.5	3.2421	ug/L	3.2421	ppb	16:45:32
2	Cd 226.502†	361.9	625.9	-0.8531	ug/L	-0.8531	ppb	16:45:52
2	Co 228.616†	1047.1	1063.0	10.967	ug/L	10.967	ppb	16:45:52
2	Cr 267.716†	2546.9	2439.3	32.137	ug/L	32.137	ppb	16:45:52
2	Cu 324.752†	11897.2	5145.7	21.237	ug/L	21.237	ppb	16:45:32
2	Mn 257.610†	2156748.3	1981884.9	2004.4	ug/L	2004.4	ppb	16:45:27
2	Mo 202.031†	98.8	86.4	9.9100	ug/L	9.9100	ppb	16:45:52
2	Ni 231.604†	1177.8	946.1	22.622	ug/L	22.622	ppb	16:45:52

2	P 214.914†	3280.8	2722.3	1172.7	ug/L	1172.7	ppb	16:45:52
2	Pb 220.353†	521.2	496.9	49.018	ug/L	49.018	ppb	16:45:52
2	S 181.975 Axial†	362.9	197.6	235.33	ug/L	235.33	ppb	16:45:52
2	Sb 206.836†	77.7	18.9	-1.0736	ug/L	-1.0736	ppb	16:45:52
2	Se 196.026†	-515.1	-438.7	28.467	ug/L	28.467	ppb	16:45:52
2	Si 251.611†	245132.3	224890.5	6353.8	ug/L	6353.8	ppb	16:45:32
2	Sn 189.927†	-2.1	-14.9	3.5222	ug/L	3.5222	ppb	16:45:52
2	Ti 334.940†	1484831.3	1366466.2	2345.1	ug/L	2345.1	ppb	16:45:27
2	Tl 190.801†	-202.4	-124.9	0.0137	ug/L	0.0137	ppb	16:45:52
2	U 409.014†	-10633.9	-4510.7	-150.98	ug/L	-150.98	ppb	16:45:27
2	V 292.402†	9707.9	10616.9	74.903	ug/L	74.903	ppb	16:45:32
2	Zn 213.857†	72745.1	65886.9	537.82	ug/L	537.82	ppb	16:45:32
2	SiO2†	247684.7	227210.0	13724	ug/L	13724	ppb	16:46:34
3	Sc Radial	7568.9	7568.9	109	%			16:44:29
3	Y RADIAL	7756.8	7756.8	122.0	%			16:44:29
3	Al 396.153Radial†	19354.6	17814.0	15034	ug/L	15034	ppb	16:44:29
3	Ca 317.933Radial†	5828.1	5316.5	7835.7	ug/L	7835.7	ppb	16:44:29
3	Fe 238.204 Radial†	16530.8	15115.7	67556	ug/L	67556	ppb	16:44:29
3	K 766.490 Radial†	23770.5	19005.0	3914.1	ug/L	3914.1	ppb	16:44:29
3	Mg 279.077 IEC†	213.2	191.5	4841.1	ug/L	4841.1	ppb	16:44:49
3	Na 589.592 Radial†	15101.9	14175.9	872.27	ug/L	872.27	ppb	16:44:29
3	Sr 421.552†	14378.9	13244.2	41.112	ug/L	41.112	ppb	16:44:29
3	Sc 361.383	820878.6	820878.6	110.24	%			16:45:58
3	Y 371.029	711198.8	711198.8	122.32	%			16:45:58
3	Ag 328.068†	-2947.2	-3379.4	3.4582	ug/L	3.4582	ppb	16:46:03
3	As 188.979†	-76.7	-35.3	13.132	ug/L	13.132	ppb	16:46:23
3	B 249.677†	-229.6	673.0	10.695	ug/L	10.695	ppb	16:46:03
3	Ba 233.527†	40161.9	36410.1	236.07	ug/L	236.07	ppb	16:46:03
3	Be 313.107†	-11110.6	-5294.1	3.3116	ug/L	3.3116	ppb	16:46:03
3	Cd 226.502†	357.5	617.5	-0.9076	ug/L	-0.9076	ppb	16:46:23
3	Co 228.616†	1047.9	1051.1	10.786	ug/L	10.786	ppb	16:46:23
3	Cr 267.716†	2499.6	2365.5	31.202	ug/L	31.202	ppb	16:46:23
3	Cu 324.752†	11902.6	5006.5	20.749	ug/L	20.749	ppb	16:46:03
3	Mn 257.610†	2178093.9	1975124.8	1997.5	ug/L	1997.5	ppb	16:45:58
3	Mo 202.031†	90.3	77.5	9.3215	ug/L	9.3215	ppb	16:46:23
3	Ni 231.604†	1175.1	929.4	22.222	ug/L	22.222	ppb	16:46:23
3	P 214.914†	3246.8	2651.8	1141.3	ug/L	1141.3	ppb	16:46:23
3	Pb 220.353†	526.5	495.5	48.895	ug/L	48.895	ppb	16:46:23
3	S 181.975 Axial†	354.6	185.7	220.91	ug/L	220.91	ppb	16:46:23
3	Sb 206.836†	97.3	35.7	3.5075	ug/L	3.5075	ppb	16:46:23
3	Se 196.026†	-513.0	-430.5	31.042	ug/L	31.042	ppb	16:46:23
3	Si 251.611†	244457.6	221309.3	6252.6	ug/L	6252.6	ppb	16:46:03
3	Sn 189.927†	0.4	-12.7	3.8509	ug/L	3.8509	ppb	16:46:23
3	Ti 334.940†	1502903.7	1364875.4	2342.4	ug/L	2342.4	ppb	16:45:58
3	Tl 190.801†	-177.4	-99.7	5.9404	ug/L	5.9404	ppb	16:46:23
3	U 409.014†	-10631.8	-4380.0	-146.80	ug/L	-146.80	ppb	16:45:58
3	V 292.402†	9643.4	10440.8	73.508	ug/L	73.508	ppb	16:46:03
3	Zn 213.857†	72689.1	64955.0	530.15	ug/L	530.15	ppb	16:46:03
3	SiO2†	248807.7	225228.7	13604	ug/L	13604	ppb	16:46:39

Mean Data: 232504011|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	816134.8	109.60	%	0.743				0.68%
Sc Radial	7558.9	109	%	0.3				0.26%
Y 371.029	706696.4	121.55	%	0.797				0.66%
Y RADIAL	7758.4	122.0	%	0.04				0.04%
Ag 328.068†	-3446.5	3.1533	ug/L	0.26958	3.1533	ppb	0.26958	8.55%
Al 396.153Radial†	17820.5	15039	ug/L	10.7	15039	ppb	10.7	0.07%
As 188.979†	-28.4	15.368	ug/L	2.2645	15.368	ppb	2.2645	14.74%
B 249.677†	629.1	9.6794	ug/L	1.35952	9.6794	ppb	1.35952	14.05%
Ba 233.527†	36635.7	237.53	ug/L	1.587	237.53	ppb	1.587	0.67%
Be 313.107†	-5371.9	3.2827	ug/L	0.03623	3.2827	ppb	0.03623	1.10%
Ca 317.933Radial†	5325.4	7848.8	ug/L	11.39	7848.8	ppb	11.39	0.15%
Cd 226.502†	620.2	-0.8990	ug/L	0.04222	-0.8990	ppb	0.04222	4.70%
Co 228.616†	1050.0	10.764	ug/L	0.2151	10.764	ppb	0.2151	2.00%
Cr 267.716†	2390.0	31.514	ug/L	0.5393	31.514	ppb	0.5393	1.71%
Cu 324.752†	5063.0	20.950	ug/L	0.2552	20.950	ppb	0.2552	1.22%
Fe 238.204 Radial†	15155.9	67736	ug/L	170.7	67736	ppb	170.7	0.25%
K 766.490 Radial†	18945.2	3901.8	ug/L	18.46	3901.8	ppb	18.46	0.47%

Mg 279.077 IEC†	194.0	4903.6	ug/L	54.14	4903.6	ppb	54.14	1.10%
Mn 257.610†	1979195.5	2001.7	ug/L	3.63	2001.7	ppb	3.63	0.18%
Mo 202.031†	74.6	9.1501	ug/L	0.85862	9.1501	ppb	0.85862	9.38%
Na 589.592 Radial†	14135.1	869.75	ug/L	4.732	869.75	ppb	4.732	0.54%
Ni 231.604†	941.2	22.505	ug/L	0.2466	22.505	ppb	0.2466	1.10%
P 214.914†	2675.1	1151.6	ug/L	18.24	1151.6	ppb	18.24	1.58%
Pb 220.353†	491.4	48.446	ug/L	0.8852	48.446	ppb	0.8852	1.83%
S 181.975 Axial†	188.2	224.01	ug/L	10.127	224.01	ppb	10.127	4.52%
Sb 206.836†	24.5	0.4487	ug/L	2.64902	0.4487	ppb	2.64902	590.41%
Se 196.026†	-432.8	30.605	ug/L	1.9558	30.605	ppb	1.9558	6.39%
Si 251.611†	223131.5	6304.1	ug/L	50.62	6304.1	ppb	50.62	0.80%
Sn 189.927†	-14.3	3.6045	ug/L	0.21719	3.6045	ppb	0.21719	6.03%
Sr 421.552†	13232.3	41.075	ug/L	0.1584	41.075	ppb	0.1584	0.39%
Ti 334.940†	1365501.2	2343.5	ug/L	1.46	2343.5	ppb	1.46	0.06%
Tl 190.801†	-109.2	3.7143	ug/L	3.22679	3.7143	ppb	3.22679	86.87%
U 409.014†	-4443.1	-148.82	ug/L	2.091	-148.82	ppb	2.091	1.40%
V 292.402†	10545.9	74.339	ug/L	0.7346	74.339	ppb	0.7346	0.99%
Zn 213.857†	65430.4	534.06	ug/L	3.837	534.06	ppb	3.837	0.72%
SiO2†	226546.4	13683	ug/L	69.0	13683	ppb	69.0	0.50%

Sequence No.: 24
Sample ID: 232504012|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 55
Date Collected: 7/2/2009 16:48:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504012|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7286.0	7286.0	105	%			16:51:04
1	Y RADIAL	7657.8	7657.8	120.4	%			16:50:44
1	Al 396.153Radial†	42226.4	40284.7	33997	ug/L	33997	ppb	16:50:44
1	Ca 317.933Radial†	161276.6	153564.8	226330	ug/L	226330	ppb	16:50:44
1	Fe 238.204 Radial†	16098.1	15292.0	68344	ug/L	68344	ppb	16:50:44
1	K 766.490 Radial†	35018.1	30562.7	6288.0	ug/L	6288.0	ppb	16:50:44
1	Mg 279.077 IEC†	436.1	411.3	10463	ug/L	10463	ppb	16:51:04
1	Na 589.592 Radial†	13921.2	13588.9	836.15	ug/L	836.15	ppb	16:50:44
1	Sr 421.552†	78795.7	75103.1	231.34	ug/L	231.34	ppb	16:50:44
1	Sc 361.383	789834.2	789834.2	106.07	%			16:52:02
1	Y 371.029	682896.5	682896.5	117.46	%			16:52:02
1	Ag 328.068†	-2524.0	-3085.5	2.1838	ug/L	2.1838	ppb	16:52:02
1	As 188.979†	-11.2	23.8	31.572	ug/L	31.572	ppb	16:52:22
1	B 249.677†	75.0	952.0	16.991	ug/L	16.991	ppb	16:52:02
1	Ba 233.527†	85627.5	80707.0	523.46	ug/L	523.46	ppb	16:52:02
1	Be 313.107†	-8582.2	-3306.5	3.8874	ug/L	3.8874	ppb	16:52:02
1	Cd 226.502†	380.6	652.1	-0.6028	ug/L	-0.6028	ppb	16:52:22
1	Co 228.616†	1404.0	1424.2	16.998	ug/L	16.998	ppb	16:52:22
1	Cr 267.716†	2886.7	2819.5	36.933	ug/L	36.933	ppb	16:52:22
1	Cu 324.752†	38878.0	30863.2	107.79	ug/L	107.79	ppb	16:52:02
1	Mn 257.610†	2141981.4	2018738.6	2041.5	ug/L	2041.5	ppb	16:52:02
1	Mo 202.031†	32.7	26.4	6.1335	ug/L	6.1335	ppb	16:52:22
1	Ni 231.604†	1675.4	1443.0	34.504	ug/L	34.504	ppb	16:52:22
1	P 214.914†	3238.6	2759.8	1177.9	ug/L	1177.9	ppb	16:52:22
1	Pb 220.353†	744.5	719.7	76.155	ug/L	76.155	ppb	16:52:22
1	S 181.975 Axial†	1177.9	974.6	1168.4	ug/L	1168.4	ppb	16:52:22
1	Sb 206.836†	77.3	20.3	-1.6172	ug/L	-1.6172	ppb	16:52:22
1	Se 196.026†	-481.9	-419.5	39.875	ug/L	39.875	ppb	16:52:22
1	Si 251.611†	444229.0	418369.6	11821	ug/L	11821	ppb	16:52:02
1	Sn 189.927†	-265.5	-263.3	-12.931	ug/L	-12.931	ppb	16:52:22
1	Ti 334.940†	1386368.2	1308592.5	2258.6	ug/L	2258.6	ppb	16:52:02
1	Tl 190.801†	-180.3	-108.8	3.5271	ug/L	3.5271	ppb	16:52:22
1	U 409.014†	-9069.9	-3286.6	-112.35	ug/L	-112.35	ppb	16:52:02
1	V 292.402†	12380.2	13364.9	97.608	ug/L	97.608	ppb	16:52:22
1	Zn 213.857†	38375.6	35196.1	283.41	ug/L	283.41	ppb	16:52:02
1	SiO2†	443782.4	417921.8	25245	ug/L	25245	ppb	16:53:22
2	Sc Radial	7292.8	7292.8	105	%			16:51:29
2	Y RADIAL	7723.9	7723.9	121.5	%			16:51:09
2	Al 396.153Radial†	42768.0	40762.5	34401	ug/L	34401	ppb	16:51:09
2	Ca 317.933Radial†	162763.3	154836.1	228200	ug/L	228200	ppb	16:51:09
2	Fe 238.204 Radial†	16216.0	15389.9	68782	ug/L	68782	ppb	16:51:09
2	K 766.490 Radial†	35269.5	30770.8	6331.0	ug/L	6331.0	ppb	16:51:09
2	Mg 279.077 IEC†	438.9	413.6	10521	ug/L	10521	ppb	16:51:29
2	Na 589.592 Radial†	14074.7	13722.7	844.38	ug/L	844.38	ppb	16:51:09
2	Sr 421.552†	79802.7	75991.2	234.09	ug/L	234.09	ppb	16:51:09
2	Sc 361.383	796495.3	796495.3	106.96	%			16:52:29
2	Y 371.029	689051.5	689051.5	118.52	%			16:52:29
2	Ag 328.068†	-2609.4	-3145.5	1.9691	ug/L	1.9691	ppb	16:52:29
2	As 188.979†	-20.4	15.2	28.941	ug/L	28.941	ppb	16:52:49
2	B 249.677†	89.6	965.0	17.260	ug/L	17.260	ppb	16:52:29
2	Ba 233.527†	86209.5	80576.0	522.61	ug/L	522.61	ppb	16:52:29
2	Be 313.107†	-8684.9	-3334.9	3.8722	ug/L	3.8722	ppb	16:52:29
2	Cd 226.502†	354.5	624.7	-0.9631	ug/L	-0.9631	ppb	16:52:49
2	Co 228.616†	1408.1	1417.0	16.880	ug/L	16.880	ppb	16:52:49
2	Cr 267.716†	2891.6	2801.4	36.715	ug/L	36.715	ppb	16:52:49
2	Cu 324.752†	39122.0	30784.8	107.55	ug/L	107.55	ppb	16:52:29
2	Mn 257.610†	2154714.5	2013754.1	2036.5	ug/L	2036.5	ppb	16:52:29
2	Mo 202.031†	24.9	18.9	5.6831	ug/L	5.6831	ppb	16:52:49
2	Ni 231.604†	1620.5	1378.4	32.959	ug/L	32.959	ppb	16:52:49

2	P 214.914†	3249.4	2744.4	1170.8	ug/L	1170.8 ppb	16:52:49
2	Pb 220.353†	741.6	711.1	75.282	ug/L	75.282 ppb	16:52:49
2	S 181.975 Axial†	1176.2	963.7	1155.3	ug/L	1155.3 ppb	16:52:49
2	Sb 206.836†	93.0	34.3	2.2259	ug/L	2.2259 ppb	16:52:49
2	Se 196.026†	-513.4	-445.1	29.772	ug/L	29.772 ppb	16:52:49
2	Si 251.611†	446719.3	417195.2	11788	ug/L	11788 ppb	16:52:29
2	Sn 189.927†	-250.4	-247.1	-10.169	ug/L	-10.169 ppb	16:52:49
2	Ti 334.940†	1397049.1	1307647.1	2257.0	ug/L	2257.0 ppb	16:52:29
2	Tl 190.801†	-181.3	-108.4	3.6095	ug/L	3.6095 ppb	16:52:49
2	U 409.014†	-9307.7	-3437.4	-117.17	ug/L	-117.17 ppb	16:52:29
2	V 292.402†	12384.8	13271.5	96.769	ug/L	96.769 ppb	16:52:49
2	Zn 213.857†	38522.2	35030.5	282.01	ug/L	282.01 ppb	16:52:29
2	SiO2†	447380.2	417786.4	25236	ug/L	25236 ppb	16:53:27
3	Sc Radial	7333.2	7333.2	106	%		16:51:54
3	Y RADIAL	7714.1	7714.1	121.3	%		16:51:34
3	Al 396.153Radial†	42623.9	40402.0	34096	ug/L	34096 ppb	16:51:34
3	Ca 317.933Radial†	162200.0	153449.8	226160	ug/L	226160 ppb	16:51:34
3	Fe 238.204 Radial†	16200.5	15290.2	68336	ug/L	68336 ppb	16:51:34
3	K 766.490 Radial†	35245.4	30563.1	6288.1	ug/L	6288.1 ppb	16:51:34
3	Mg 279.077 IEC†	438.2	410.7	10446	ug/L	10446 ppb	16:51:54
3	Na 589.592 Radial†	13966.9	13546.9	833.56	ug/L	833.56 ppb	16:51:34
3	Sr 421.552†	79596.9	75378.2	232.20	ug/L	232.20 ppb	16:51:34
3	Sc 361.383	798199.4	798199.4	107.19	%		16:52:56
3	Y 371.029	690196.4	690196.4	118.71	%		16:52:56
3	Ag 328.068†	-2495.4	-3033.9	2.4635	ug/L	2.4635 ppb	16:52:56
3	As 188.979†	-19.7	15.9	29.077	ug/L	29.077 ppb	16:53:16
3	B 249.677†	188.9	1057.6	19.407	ug/L	19.407 ppb	16:52:56
3	Ba 233.527†	86025.6	80232.3	520.38	ug/L	520.38 ppb	16:52:56
3	Be 313.107†	-8700.3	-3331.9	3.8785	ug/L	3.8785 ppb	16:52:56
3	Cd 226.502†	365.1	633.8	-0.8077	ug/L	-0.8077 ppb	16:53:16
3	Co 228.616†	1414.4	1420.0	16.931	ug/L	16.931 ppb	16:53:16
3	Cr 267.716†	2877.1	2782.1	36.463	ug/L	36.463 ppb	16:53:16
3	Cu 324.752†	39253.1	30829.1	107.67	ug/L	107.67 ppb	16:52:56
3	Mn 257.610†	2158127.8	2012637.8	2035.3	ug/L	2035.3 ppb	16:52:56
3	Mo 202.031†	38.6	31.6	6.4644	ug/L	6.4644 ppb	16:53:16
3	Ni 231.604†	1650.3	1403.0	33.548	ug/L	33.548 ppb	16:53:16
3	P 214.914†	3259.5	2747.3	1172.3	ug/L	1172.3 ppb	16:53:16
3	Pb 220.353†	776.0	741.8	78.508	ug/L	78.508 ppb	16:53:16
3	S 181.975 Axial†	1175.0	960.2	1151.2	ug/L	1151.2 ppb	16:53:16
3	Sb 206.836†	83.5	25.3	-0.2464	ug/L	-0.2464 ppb	16:53:16
3	Se 196.026†	-506.3	-437.5	31.709	ug/L	31.709 ppb	16:53:16
3	Si 251.611†	448124.8	417614.8	11800	ug/L	11800 ppb	16:52:56
3	Sn 189.927†	-269.1	-264.0	-13.053	ug/L	-13.053 ppb	16:53:16
3	Ti 334.940†	1401424.9	1308940.9	2259.1	ug/L	2259.1 ppb	16:52:56
3	Tl 190.801†	-190.1	-116.2	1.7619	ug/L	1.7619 ppb	16:53:16
3	U 409.014†	-9139.7	-3262.1	-111.57	ug/L	-111.57 ppb	16:52:56
3	V 292.402†	12451.8	13309.4	97.159	ug/L	97.159 ppb	16:53:16
3	Zn 213.857†	38663.8	35085.7	282.51	ug/L	282.51 ppb	16:52:56
3	SiO2†	442625.7	412457.9	24915	ug/L	24915 ppb	16:53:33

Mean Data: 232504012|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	794842.9	106.74	%	0.594				0.56%
Sc Radial	7304.0	105	%	0.4				0.35%
Y 371.029	687381.5	118.23	%	0.675				0.57%
Y RADIAL	7698.6	121.1	%	0.56				0.46%
Ag 328.068†	-3088.3	2.2055	ug/L	0.24790	2.2055	ppb	0.24790	11.24%
Al 396.153Radial†	40483.1	34165	ug/L	210.2	34165	ppb	210.2	0.62%
As 188.979†	18.3	29.863	ug/L	1.4812	29.863	ppb	1.4812	4.96%
B 249.677†	991.5	17.886	ug/L	1.3239	17.886	ppb	1.3239	7.40%
Ba 233.527†	80505.1	522.15	ug/L	1.590	522.15	ppb	1.590	0.30%
Be 313.107†	-3324.5	3.8793	ug/L	0.00763	3.8793	ppb	0.00763	0.20%
Ca 317.933Radial†	153950.2	226900	ug/L	1133.9	226900	ppb	1133.9	0.50%
Cd 226.502†	636.9	-0.7912	ug/L	0.18074	-0.7912	ppb	0.18074	22.84%
Co 228.616†	1420.4	16.936	ug/L	0.0596	16.936	ppb	0.0596	0.35%
Cr 267.716†	2801.0	36.704	ug/L	0.2354	36.704	ppb	0.2354	0.64%
Cu 324.752†	30825.7	107.67	ug/L	0.119	107.67	ppb	0.119	0.11%
Fe 238.204 Radial†	15324.1	68487	ug/L	254.9	68487	ppb	254.9	0.37%
K 766.490 Radial†	30632.2	6302.4	ug/L	24.79	6302.4	ppb	24.79	0.39%

Mg 279.077 IEC†	411.9	10477	ug/L	39.3	10477	ppb	39.3	0.38%
Mn 257.610†	2015043.5	2037.7	ug/L	3.26	2037.7	ppb	3.26	0.16%
Mo 202.031†	25.6	6.0937	ug/L	0.39217	6.0937	ppb	0.39217	6.44%
Na 589.592 Radial†	13619.5	838.03	ug/L	5.648	838.03	ppb	5.648	0.67%
Ni 231.604†	1408.1	33.670	ug/L	0.7796	33.670	ppb	0.7796	2.32%
P 214.914†	2750.5	1173.7	ug/L	3.72	1173.7	ppb	3.72	0.32%
Pb 220.353†	724.2	76.649	ug/L	1.6686	76.649	ppb	1.6686	2.18%
S 181.975 Axial†	966.2	1158.3	ug/L	9.03	1158.3	ppb	9.03	0.78%
Sb 206.836†	26.7	0.1208	ug/L	1.94765	0.1208	ppb	1.94765	>999.9%
Se 196.026†	-434.1	33.785	ug/L	5.3618	33.785	ppb	5.3618	15.87%
Si 251.611†	417726.6	11803	ug/L	16.8	11803	ppb	16.8	0.14%
Sn 189.927†	-258.2	-12.051	ug/L	1.6310	-12.051	ppb	1.6310	13.53%
Sr 421.552†	75490.8	232.54	ug/L	1.404	232.54	ppb	1.404	0.60%
Ti 334.940†	1308393.5	2258.3	ug/L	1.08	2258.3	ppb	1.08	0.05%
Tl 190.801†	-111.1	2.9661	ug/L	1.04371	2.9661	ppb	1.04371	35.19%
U 409.014†	-3328.7	-113.70	ug/L	3.033	-113.70	ppb	3.033	2.67%
V 292.402†	13315.3	97.178	ug/L	0.4201	97.178	ppb	0.4201	0.43%
Zn 213.857†	35104.1	282.64	ug/L	0.713	282.64	ppb	0.713	0.25%
SiO2†	416055.3	25132	ug/L	188.2	25132	ppb	188.2	0.75%

Sequence No.: 25
Sample ID: 232504013|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 56
Date Collected: 7/2/2009 16:55:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504013|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7499.9	7499.9	108	%			16:57:36
1	Y RADIAL	8732.5	8732.5	137.3	%			16:57:36
1	Al 396.153Radial†	32867.1	30478.9	25722	ug/L	25722	ppb	16:57:36
1	Ca 317.933Radial†	6541.7	6025.9	8881.2	ug/L	8881.2	ppb	16:57:36
1	Fe 238.204 Radial†	21676.6	20016.0	89456	ug/L	89456	ppb	16:57:36
1	K 766.490 Radial†	19242.2	15016.0	3087.1	ug/L	3087.1	ppb	16:57:36
1	Mg 279.077 IEC†	178.6	161.3	4049.0	ug/L	4049.0	ppb	16:57:56
1	Na 589.592 Radial†	11603.0	11066.1	680.92	ug/L	680.92	ppb	16:57:36
1	Sr 421.552†	19265.7	17886.7	55.540	ug/L	55.540	ppb	16:57:36
1	Sc 361.383	818951.3	818951.3	109.98	%			16:58:53
1	Y 371.029	794588.1	794588.1	136.67	%			16:58:53
1	Ag 328.068†	-4274.4	-4592.5	3.9050	ug/L	3.9050	ppb	16:58:58
1	As 188.979†	-49.3	-10.5	26.621	ug/L	26.621	ppb	16:59:18
1	B 249.677†	-75.3	812.8	12.397	ug/L	12.397	ppb	16:58:58
1	Ba 233.527†	41231.9	37468.9	242.82	ug/L	242.82	ppb	16:58:58
1	Be 313.107†	-10220.8	-4508.8	4.2482	ug/L	4.2482	ppb	16:58:58
1	Cd 226.502†	507.1	754.3	-1.9075	ug/L	-1.9075	ppb	16:59:18
1	Co 228.616†	1060.2	1064.5	10.114	ug/L	10.114	ppb	16:59:18
1	Cr 267.716†	5300.7	4917.8	63.669	ug/L	63.669	ppb	16:58:58
1	Cu 324.752†	13966.4	6908.5	28.414	ug/L	28.414	ppb	16:58:58
1	Mn 257.610†	2729274.3	2480951.0	2509.7	ug/L	2509.7	ppb	16:58:53
1	Mo 202.031†	130.0	113.8	13.054	ug/L	13.054	ppb	16:59:18
1	Ni 231.604†	2097.3	1770.4	42.340	ug/L	42.340	ppb	16:59:18
1	P 214.914†	1503.0	1073.1	415.11	ug/L	415.11	ppb	16:59:18
1	Pb 220.353†	629.3	590.0	58.899	ug/L	58.899	ppb	16:59:18
1	S 181.975 Axial†	320.1	155.1	181.96	ug/L	181.96	ppb	16:59:18
1	Sb 206.836†	96.5	35.2	1.9892	ug/L	1.9892	ppb	16:59:18
1	Se 196.026†	-676.8	-580.5	36.759	ug/L	36.759	ppb	16:59:18
1	Si 251.611†	312084.4	283322.7	8005.3	ug/L	8005.3	ppb	16:58:58
1	Sn 189.927†	-5.4	-17.9	4.7631	ug/L	4.7631	ppb	16:59:18
1	Ti 334.940†	1670479.8	1520457.1	2609.5	ug/L	2609.5	ppb	16:58:53
1	Tl 190.801†	-219.2	-138.1	1.7620	ug/L	1.7620	ppb	16:59:18
1	U 409.014†	-15101.3	-8466.7	-278.73	ug/L	-278.73	ppb	16:58:53
1	V 292.402†	9131.9	9996.3	66.267	ug/L	66.267	ppb	16:58:58
1	Zn 213.857†	55105.8	49122.1	396.73	ug/L	396.73	ppb	16:58:58
1	SiO2†	311235.6	282524.1	17066	ug/L	17066	ppb	17:00:26
2	Sc Radial	7607.7	7607.7	110	%			16:58:01
2	Y RADIAL	8782.0	8782.0	138.1	%			16:58:01
2	Al 396.153Radial†	33033.1	30199.4	25486	ug/L	25486	ppb	16:58:01
2	Ca 317.933Radial†	6581.3	5976.3	8808.0	ug/L	8808.0	ppb	16:58:01
2	Fe 238.204 Radial†	21772.8	19819.5	88578	ug/L	88578	ppb	16:58:01
2	K 766.490 Radial†	19252.6	14773.2	3036.8	ug/L	3036.8	ppb	16:58:01
2	Mg 279.077 IEC†	178.8	159.2	3995.4	ug/L	3995.4	ppb	16:58:21
2	Na 589.592 Radial†	11796.8	11090.8	682.43	ug/L	682.43	ppb	16:58:01
2	Sr 421.552†	19421.3	17776.1	55.196	ug/L	55.196	ppb	16:58:01
2	Sc 361.383	813807.5	813807.5	109.29	%			16:59:24
2	Y 371.029	789469.6	789469.6	135.79	%			16:59:24
2	Ag 328.068†	-4196.3	-4545.6	3.8739	ug/L	3.8739	ppb	16:59:29
2	As 188.979†	-60.1	-20.7	23.206	ug/L	23.206	ppb	16:59:49
2	B 249.677†	-97.2	792.3	11.987	ug/L	11.987	ppb	16:59:29
2	Ba 233.527†	40912.3	37413.3	242.47	ug/L	242.47	ppb	16:59:29
2	Be 313.107†	-10073.2	-4432.5	4.2766	ug/L	4.2766	ppb	16:59:29
2	Cd 226.502†	505.3	755.6	-1.7898	ug/L	-1.7898	ppb	16:59:49
2	Co 228.616†	1063.3	1073.4	10.268	ug/L	10.268	ppb	16:59:49
2	Cr 267.716†	5218.8	4873.3	63.090	ug/L	63.090	ppb	16:59:29
2	Cu 324.752†	13721.5	6764.6	27.880	ug/L	27.880	ppb	16:59:29
2	Mn 257.610†	2710397.0	2479363.6	2508.0	ug/L	2508.0	ppb	16:59:24
2	Mo 202.031†	112.5	98.5	12.027	ug/L	12.027	ppb	16:59:49
2	Ni 231.604†	2128.1	1810.6	43.302	ug/L	43.302	ppb	16:59:49

2	P 214.914†	1511.8	1089.8	423.37	ug/L	423.37	ppb	16:59:49
2	Pb 220.353†	629.0	593.4	59.288	ug/L	59.288	ppb	16:59:49
2	S 181.975 Axial†	315.4	152.6	178.97	ug/L	178.97	ppb	16:59:49
2	Sb 206.836†	86.6	26.6	-0.3578	ug/L	-0.3578	ppb	16:59:49
2	Se 196.026†	-673.2	-581.2	33.539	ug/L	33.539	ppb	16:59:49
2	Si 251.611†	307183.0	280631.4	7929.3	ug/L	7929.3	ppb	16:59:29
2	Sn 189.927†	-4.8	-17.3	4.7835	ug/L	4.7835	ppb	16:59:49
2	Ti 334.940†	1659358.1	1519881.2	2608.5	ug/L	2608.5	ppb	16:59:24
2	Tl 190.801†	-212.2	-133.0	2.9667	ug/L	2.9667	ppb	16:59:49
2	U 409.014†	-14872.6	-8344.3	-274.75	ug/L	-274.75	ppb	16:59:24
2	V 292.402†	8925.3	9859.7	65.265	ug/L	65.265	ppb	16:59:29
2	Zn 213.857†	54558.6	48938.1	395.30	ug/L	395.30	ppb	16:59:29
2	SiO2†	315910.0	288590.1	17432	ug/L	17432	ppb	17:00:31
3	Sc Radial	7670.7	7670.7	111	%			16:58:26
3	Y RADIAL	8856.3	8856.3	139.3	%			16:58:26
3	Al 396.153Radial†	33424.0	30305.3	25575	ug/L	25575	ppb	16:58:26
3	Ca 317.933Radial†	6668.4	6005.7	8851.4	ug/L	8851.4	ppb	16:58:26
3	Fe 238.204 Radial†	22129.3	19978.8	89290	ug/L	89290	ppb	16:58:26
3	K 766.490 Radial†	19558.0	14905.1	3064.1	ug/L	3064.1	ppb	16:58:26
3	Mg 279.077 IEC†	182.2	160.9	4038.8	ug/L	4038.8	ppb	16:58:46
3	Na 589.592 Radial†	12095.2	11272.3	693.60	ug/L	693.60	ppb	16:58:26
3	Sr 421.552†	19700.9	17883.4	55.530	ug/L	55.530	ppb	16:58:26
3	Sc 361.383	823945.7	823945.7	110.65	%			16:59:55
3	Y 371.029	799239.1	799239.1	137.47	%			16:59:55
3	Ag 328.068†	-4208.9	-4509.7	4.2923	ug/L	4.2923	ppb	17:00:00
3	As 188.979†	-53.6	-14.2	25.437	ug/L	25.437	ppb	17:00:20
3	B 249.677†	-147.5	748.0	10.928	ug/L	10.928	ppb	17:00:00
3	Ba 233.527†	40830.3	36878.7	238.99	ug/L	238.99	ppb	17:00:00
3	Be 313.107†	-10045.1	-4293.7	4.3403	ug/L	4.3403	ppb	17:00:00
3	Cd 226.502†	497.5	742.9	-2.0173	ug/L	-2.0173	ppb	17:00:20
3	Co 228.616†	1031.3	1032.5	9.6058	ug/L	9.6058	ppb	17:00:20
3	Cr 267.716†	5205.1	4802.2	62.211	ug/L	62.211	ppb	17:00:00
3	Cu 324.752†	13874.6	6748.5	27.867	ug/L	27.867	ppb	17:00:00
3	Mn 257.610†	2747288.4	2482188.8	2510.9	ug/L	2510.9	ppb	16:59:55
3	Mo 202.031†	132.3	115.1	13.127	ug/L	13.127	ppb	17:00:20
3	Ni 231.604†	2098.7	1760.1	42.094	ug/L	42.094	ppb	17:00:20
3	P 214.914†	1525.0	1084.7	420.55	ug/L	420.55	ppb	17:00:20
3	Pb 220.353†	631.0	588.1	58.684	ug/L	58.684	ppb	17:00:20
3	S 181.975 Axial†	311.9	145.9	170.91	ug/L	170.91	ppb	17:00:20
3	Sb 206.836†	100.0	37.7	2.7224	ug/L	2.7224	ppb	17:00:20
3	Se 196.026†	-658.2	-560.0	45.481	ug/L	45.481	ppb	17:00:20
3	Si 251.611†	307863.2	277787.6	7848.8	ug/L	7848.8	ppb	17:00:00
3	Sn 189.927†	1.9	-11.3	5.7847	ug/L	5.7847	ppb	17:00:20
3	Ti 334.940†	1682201.5	1521843.8	2611.8	ug/L	2611.8	ppb	16:59:55
3	Tl 190.801†	-222.9	-140.3	1.2709	ug/L	1.2709	ppb	17:00:20
3	U 409.014†	-15033.3	-8322.0	-274.13	ug/L	-274.13	ppb	16:59:55
3	V 292.402†	8880.3	9718.6	64.020	ug/L	64.020	ppb	17:00:00
3	Zn 213.857†	54519.7	48288.7	389.86	ug/L	389.86	ppb	17:00:00
3	SiO2†	317517.5	286486.1	17305	ug/L	17305	ppb	17:00:36

Mean Data: 232504013|881343|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	818901.5	109.97	%	0.681				0.62%
Sc Radial	7592.8	109	%	1.2				1.14%
Y 371.029	794432.3	136.64	%	0.840				0.62%
Y RADIAL	8790.3	138.2	%	0.98				0.71%
Ag 328.068†	-4549.3	4.0237	ug/L	0.23310	4.0237	ppb	0.23310	5.79%
Al 396.153Radial†	30327.9	25594	ug/L	119.1	25594	ppb	119.1	0.47%
As 188.979†	-15.1	25.088	ug/L	1.7338	25.088	ppb	1.7338	6.91%
B 249.677†	784.4	11.770	ug/L	0.7581	11.770	ppb	0.7581	6.44%
Ba 233.527†	37253.6	241.43	ug/L	2.117	241.43	ppb	2.117	0.88%
Be 313.107†	-4411.7	4.2884	ug/L	0.04718	4.2884	ppb	0.04718	1.10%
Ca 317.933Radial†	6002.6	8846.9	ug/L	36.79	8846.9	ppb	36.79	0.42%
Cd 226.502†	750.9	-1.9049	ug/L	0.11373	-1.9049	ppb	0.11373	5.97%
Co 228.616†	1056.8	9.9961	ug/L	0.34668	9.9961	ppb	0.34668	3.47%
Cr 267.716†	4864.4	62.990	ug/L	0.7338	62.990	ppb	0.7338	1.17%
Cu 324.752†	6807.2	28.053	ug/L	0.3126	28.053	ppb	0.3126	1.11%
Fe 238.204 Radial†	19938.1	89108	ug/L	466.4	89108	ppb	466.4	0.52%
K 766.490 Radial†	14898.1	3062.7	ug/L	25.18	3062.7	ppb	25.18	0.82%

Mg 279.077 IEC†	160.4	4027.8	ug/L	28.48	4027.8	ppb	28.48	0.71%
Mn 257.610†	2480834.4	2509.6	ug/L	1.47	2509.6	ppb	1.47	0.06%
Mo 202.031†	109.2	12.736	ug/L	0.6154	12.736	ppb	0.6154	4.83%
Na 589.592 Radial†	11143.1	685.65	ug/L	6.927	685.65	ppb	6.927	1.01%
Ni 231.604†	1780.4	42.579	ug/L	0.6383	42.579	ppb	0.6383	1.50%
P 214.914†	1082.5	419.68	ug/L	4.198	419.68	ppb	4.198	1.00%
Pb 220.353†	590.5	58.957	ug/L	0.3062	58.957	ppb	0.3062	0.52%
S 181.975 Axial†	151.2	177.28	ug/L	5.718	177.28	ppb	5.718	3.23%
Sb 206.836†	33.2	1.4513	ug/L	1.60899	1.4513	ppb	1.60899	110.87%
Se 196.026†	-573.9	38.593	ug/L	6.1785	38.593	ppb	6.1785	16.01%
Si 251.611†	280580.5	7927.8	ug/L	78.22	7927.8	ppb	78.22	0.99%
Sn 189.927†	-15.5	5.1104	ug/L	0.58403	5.1104	ppb	0.58403	11.43%
Sr 421.552†	17848.7	55.422	ug/L	0.1953	55.422	ppb	0.1953	0.35%
Ti 334.940†	1520727.4	2609.9	ug/L	1.73	2609.9	ppb	1.73	0.07%
Tl 190.801†	-137.2	1.9999	ug/L	0.87253	1.9999	ppb	0.87253	43.63%
U 409.014†	-8377.7	-275.87	ug/L	2.495	-275.87	ppb	2.495	0.90%
V 292.402†	9858.2	65.184	ug/L	1.1257	65.184	ppb	1.1257	1.73%
Zn 213.857†	48783.0	393.96	ug/L	3.628	393.96	ppb	3.628	0.92%
SiO2†	285866.8	17268	ug/L	186.1	17268	ppb	186.1	1.08%

Sequence No.: 26
Sample ID: 232504014|881343|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 57
Date Collected: 7/2/2009 17:02:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232504014|881343|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7412.1	7412.1	107	%			17:05:00
1	Y RADIAL	7272.5	7272.5	114.4	%			17:04:40
1	Al 396.153Radial†	24991.3	23466.1	19804	ug/L	19804	ppb	17:04:40
1	Ca 317.933Radial†	20048.3	18741.7	27622	ug/L	27622	ppb	17:04:40
1	Fe 238.204 Radial†	15372.7	14352.1	64143	ug/L	64143	ppb	17:04:40
1	K 766.490 Radial†	30981.7	26216.7	5408.3	ug/L	5408.3	ppb	17:04:40
1	Mg 279.077 IEC†	370.0	342.4	8702.8	ug/L	8702.8	ppb	17:05:00
1	Na 589.592 Radial†	14346.8	13761.8	846.79	ug/L	846.79	ppb	17:04:40
1	Sr 421.552†	28973.1	27185.3	84.274	ug/L	84.274	ppb	17:04:40
1	Sc 361.383	806408.6	806408.6	108.29	%			17:05:57
1	Y 371.029	666790.7	666790.7	114.69	%			17:05:57
1	Ag 328.068†	-2765.3	-3259.5	2.8564	ug/L	2.8564	ppb	17:06:02
1	As 188.979†	-72.3	-32.4	11.369	ug/L	11.369	ppb	17:06:22
1	B 249.677†	-334.9	572.1	8.5877	ug/L	8.5877	ppb	17:06:02
1	Ba 233.527†	49685.1	45857.8	297.46	ug/L	297.46	ppb	17:06:02
1	Be 313.107†	-12180.6	-6463.1	1.8256	ug/L	1.8256	ppb	17:06:02
1	Cd 226.502†	268.5	541.1	-1.3637	ug/L	-1.3637	ppb	17:06:22
1	Co 228.616†	1454.4	1443.5	17.980	ug/L	17.980	ppb	17:06:22
1	Cr 267.716†	3738.1	3549.9	46.021	ug/L	46.021	ppb	17:06:22
1	Cu 324.752†	39705.2	30873.8	107.58	ug/L	107.58	ppb	17:06:02
1	Mn 257.610†	1576295.9	1454866.3	1473.1	ug/L	1473.1	ppb	17:05:57
1	Mo 202.031†	22.1	16.0	5.1970	ug/L	5.1970	ppb	17:06:22
1	Ni 231.604†	1598.1	1339.1	32.018	ug/L	32.018	ppb	17:06:22
1	P 214.914†	6217.2	5447.5	2387.0	ug/L	2387.0	ppb	17:06:22
1	Pb 220.353†	592.6	565.1	57.449	ug/L	57.449	ppb	17:06:22
1	S 181.975 Axial†	392.1	226.1	268.73	ug/L	268.73	ppb	17:06:22
1	Sb 206.836†	90.7	31.1	2.6995	ug/L	2.6995	ppb	17:06:22
1	Se 196.026†	-491.1	-418.6	25.378	ug/L	25.378	ppb	17:06:22
1	Si 251.611†	264430.1	243731.4	6886.0	ug/L	6886.0	ppb	17:06:02
1	Sn 189.927†	-129.1	-132.2	-13.088	ug/L	-13.088	ppb	17:06:22
1	Ti 334.940†	1200694.4	1110272.7	1906.7	ug/L	1906.7	ppb	17:05:57
1	Tl 190.801†	-153.9	-81.0	4.1647	ug/L	4.1647	ppb	17:06:22
1	U 409.014†	-8768.6	-2832.6	-97.502	ug/L	-97.502	ppb	17:06:02
1	V 292.402†	14952.8	15500.6	116.07	ug/L	116.07	ppb	17:06:02
1	Zn 213.857†	28648.2	25470.0	203.44	ug/L	203.44	ppb	17:06:02
1	SiO2†	266674.8	245777.5	14845	ug/L	14845	ppb	17:07:30
2	Sc Radial	7376.9	7376.9	106	%			17:05:25
2	Y RADIAL	7357.3	7357.3	115.7	%			17:05:05
2	Al 396.153Radial†	25186.3	23761.2	20053	ug/L	20053	ppb	17:05:05
2	Ca 317.933Radial†	20204.1	18977.9	27970	ug/L	27970	ppb	17:05:05
2	Fe 238.204 Radial†	15505.8	14546.1	65010	ug/L	65010	ppb	17:05:05
2	K 766.490 Radial†	31176.3	26538.3	5474.9	ug/L	5474.9	ppb	17:05:05
2	Mg 279.077 IEC†	373.8	347.6	8836.7	ug/L	8836.7	ppb	17:05:25
2	Na 589.592 Radial†	14330.2	13810.4	849.77	ug/L	849.77	ppb	17:05:05
2	Sr 421.552†	29179.6	27509.1	85.277	ug/L	85.277	ppb	17:05:05
2	Sc 361.383	815086.0	815086.0	109.46	%			17:06:28
2	Y 371.029	673570.9	673570.9	115.85	%			17:06:28
2	Ag 328.068†	-2623.1	-3102.4	3.9716	ug/L	3.9716	ppb	17:06:33
2	As 188.979†	-59.0	-19.6	15.586	ug/L	15.586	ppb	17:06:53
2	B 249.677†	-435.9	483.0	6.4937	ug/L	6.4937	ppb	17:06:33
2	Ba 233.527†	49049.4	44788.6	290.51	ug/L	290.51	ppb	17:06:33
2	Be 313.107†	-11974.2	-6154.7	1.9443	ug/L	1.9443	ppb	17:06:33
2	Cd 226.502†	286.3	554.8	-1.3113	ug/L	-1.3113	ppb	17:06:53
2	Co 228.616†	1452.0	1427.1	17.709	ug/L	17.709	ppb	17:06:53
2	Cr 267.716†	3673.0	3453.6	44.826	ug/L	44.826	ppb	17:06:53
2	Cu 324.752†	39141.5	29968.4	104.58	ug/L	104.58	ppb	17:06:33
2	Mn 257.610†	1590397.5	1452253.3	1470.6	ug/L	1470.6	ppb	17:06:28
2	Mo 202.031†	19.7	13.6	5.1046	ug/L	5.1046	ppb	17:06:53
2	Ni 231.604†	1619.2	1342.7	32.105	ug/L	32.105	ppb	17:06:53

2	P 214.914†	6192.5	5363.9	2349.3	ug/L	2349.3 ppb	17:06:53
2	Pb 220.353†	633.4	596.5	60.732	ug/L	60.732 ppb	17:06:53
2	S 181.975 Axial†	395.2	225.0	267.42	ug/L	267.42 ppb	17:06:53
2	Sb 206.836†	80.2	20.7	-0.0676	ug/L	-0.0676 ppb	17:06:53
2	Se 196.026†	-468.1	-392.8	39.957	ug/L	39.957 ppb	17:06:53
2	Si 251.611†	260221.7	237287.1	6703.9	ug/L	6703.9 ppb	17:06:33
2	Sn 189.927†	-119.0	-121.7	-11.347	ug/L	-11.347 ppb	17:06:53
2	Ti 334.940†	1212144.8	1108930.1	1904.4	ug/L	1904.4 ppb	17:06:28
2	Tl 190.801†	-156.8	-82.1	3.8858	ug/L	3.8858 ppb	17:06:53
2	U 409.014†	-8610.0	-2601.5	-90.301	ug/L	-90.301 ppb	17:06:33
2	V 292.402†	14758.0	15175.7	113.30	ug/L	113.30 ppb	17:06:33
2	Zn 213.857†	28277.7	24849.8	198.22	ug/L	198.22 ppb	17:06:33
2	SiO2†	262864.0	239674.4	14476	ug/L	14476 ppb	17:07:35
3	Sc Radial	7374.7	7374.7	106	%		17:05:50
3	Y RADIAL	7337.8	7337.8	115.4	%		17:05:30
3	Al 396.153Radial†	25142.9	23727.3	20024	ug/L	20024 ppb	17:05:30
3	Ca 317.933Radial†	20195.9	18975.7	27967	ug/L	27967 ppb	17:05:30
3	Fe 238.204 Radial†	15491.6	14537.0	64970	ug/L	64970 ppb	17:05:30
3	K 766.490 Radial†	31106.1	26480.8	5463.0	ug/L	5463.0 ppb	17:05:30
3	Mg 279.077 IEC†	366.7	341.1	8669.5	ug/L	8669.5 ppb	17:05:50
3	Na 589.592 Radial†	14458.4	13935.0	857.44	ug/L	857.44 ppb	17:05:30
3	Sr 421.552†	29143.7	27483.4	85.197	ug/L	85.197 ppb	17:05:30
3	Sc 361.383	802383.6	802383.6	107.75	%		17:06:59
3	Y 371.029	663494.5	663494.5	114.12	%		17:06:59
3	Ag 328.068†	-2677.6	-3190.8	3.4903	ug/L	3.4903 ppb	17:07:04
3	As 188.979†	-53.5	-15.4	16.919	ug/L	16.919 ppb	17:07:24
3	B 249.677†	-303.4	599.7	9.1628	ug/L	9.1628 ppb	17:07:04
3	Ba 233.527†	49243.5	45678.2	296.29	ug/L	296.29 ppb	17:07:04
3	Be 313.107†	-12090.7	-6436.0	1.8309	ug/L	1.8309 ppb	17:07:04
3	Cd 226.502†	304.8	576.1	-1.0660	ug/L	-1.0660 ppb	17:07:24
3	Co 228.616†	1450.8	1446.9	18.030	ug/L	18.030 ppb	17:07:24
3	Cr 267.716†	3711.4	3542.4	45.943	ug/L	45.943 ppb	17:07:24
3	Cu 324.752†	39368.2	30744.9	107.19	ug/L	107.19 ppb	17:07:04
3	Mn 257.610†	1565550.9	1452196.0	1470.5	ug/L	1470.5 ppb	17:06:59
3	Mo 202.031†	42.5	35.0	6.4576	ug/L	6.4576 ppb	17:07:24
3	Ni 231.604†	1612.2	1359.6	32.509	ug/L	32.509 ppb	17:07:24
3	P 214.914†	6223.1	5481.9	2401.9	ug/L	2401.9 ppb	17:07:24
3	Pb 220.353†	629.7	602.3	61.345	ug/L	61.345 ppb	17:07:24
3	S 181.975 Axial†	398.3	233.7	277.83	ug/L	277.83 ppb	17:07:24
3	Sb 206.836†	80.6	22.2	0.2836	ug/L	0.2836 ppb	17:07:24
3	Se 196.026†	-470.3	-401.6	35.838	ug/L	35.838 ppb	17:07:24
3	Si 251.611†	261605.9	242335.4	6846.6	ug/L	6846.6 ppb	17:07:04
3	Sn 189.927†	-142.0	-144.8	-14.964	ug/L	-14.964 ppb	17:07:24
3	Ti 334.940†	1193200.6	1108879.9	1904.3	ug/L	1904.3 ppb	17:06:59
3	Tl 190.801†	-155.6	-83.3	3.5984	ug/L	3.5984 ppb	17:07:24
3	U 409.014†	-8763.9	-2868.9	-98.749	ug/L	-98.749 ppb	17:07:04
3	V 292.402†	14812.4	15439.5	115.47	ug/L	115.47 ppb	17:07:04
3	Zn 213.857†	28381.5	25355.2	202.40	ug/L	202.40 ppb	17:07:04
3	SiO2†	267905.1	248154.6	14988	ug/L	14988 ppb	17:07:40

Mean Data: 232504014|881343|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	807959.4	108.50	%	0.872				0.80%
Sc Radial	7387.9	106	%	0.3				0.28%
Y 371.029	667952.0	114.89	%	0.884				0.77%
Y RADIAL	7322.5	115.2	%	0.70				0.61%
Ag 328.068†	-3184.2	3.4394	ug/L	0.55936	3.4394	ppb	0.55936	16.26%
Al 396.153Radial†	23651.5	19960	ug/L	136.3	19960	ppb	136.3	0.68%
As 188.979†	-22.5	14.625	ug/L	2.8972	14.625	ppb	2.8972	19.81%
B 249.677†	551.6	8.0814	ug/L	1.40472	8.0814	ppb	1.40472	17.38%
Ba 233.527†	45441.5	294.76	ug/L	3.719	294.76	ppb	3.719	1.26%
Be 313.107†	-6351.3	1.8669	ug/L	0.06710	1.8669	ppb	0.06710	3.59%
Ca 317.933Radial†	18898.4	27853	ug/L	200.1	27853	ppb	200.1	0.72%
Cd 226.502†	557.3	-1.2470	ug/L	0.15895	-1.2470	ppb	0.15895	12.75%
Co 228.616†	1439.2	17.907	ug/L	0.1726	17.907	ppb	0.1726	0.96%
Cr 267.716†	3515.3	45.597	ug/L	0.6687	45.597	ppb	0.6687	1.47%
Cu 324.752†	30529.0	106.45	ug/L	1.630	106.45	ppb	1.630	1.53%
Fe 238.204 Radial†	14478.4	64708	ug/L	489.2	64708	ppb	489.2	0.76%
K 766.490 Radial†	26411.9	5448.7	ug/L	35.53	5448.7	ppb	35.53	0.65%

Mg 279.077 IEC†	343.7	8736.3	ug/L	88.49	8736.3	ppb	88.49	1.01%
Mn 257.610†	1453105.2	1471.4	ug/L	1.48	1471.4	ppb	1.48	0.10%
Mo 202.031†	21.5	5.5864	ug/L	0.75586	5.5864	ppb	0.75586	13.53%
Na 589.592 Radial†	13835.7	851.33	ug/L	5.495	851.33	ppb	5.495	0.65%
Ni 231.604†	1347.1	32.211	ug/L	0.2620	32.211	ppb	0.2620	0.81%
P 214.914†	5431.1	2379.4	ug/L	27.10	2379.4	ppb	27.10	1.14%
Pb 220.353†	587.9	59.842	ug/L	2.0949	59.842	ppb	2.0949	3.50%
S 181.975 Axial†	228.3	271.33	ug/L	5.674	271.33	ppb	5.674	2.09%
Sb 206.836†	24.7	0.9718	ug/L	1.50650	0.9718	ppb	1.50650	155.01%
Se 196.026†	-404.3	33.724	ug/L	7.5157	33.724	ppb	7.5157	22.29%
Si 251.611†	241118.0	6812.2	ug/L	95.83	6812.2	ppb	95.83	1.41%
Sn 189.927†	-132.9	-13.133	ug/L	1.8092	-13.133	ppb	1.8092	13.78%
Sr 421.552†	27392.6	84.916	ug/L	0.5577	84.916	ppb	0.5577	0.66%
Ti 334.940†	1109360.9	1905.1	ug/L	1.34	1905.1	ppb	1.34	0.07%
Tl 190.801†	-82.1	3.8830	ug/L	0.28315	3.8830	ppb	0.28315	7.29%
U 409.014†	-2767.7	-95.517	ug/L	4.5605	-95.517	ppb	4.5605	4.77%
V 292.402†	15371.9	114.95	ug/L	1.456	114.95	ppb	1.456	1.27%
Zn 213.857†	25225.0	201.35	ug/L	2.766	201.35	ppb	2.766	1.37%
SiO2†	244535.5	14770	ug/L	264.3	14770	ppb	264.3	1.79%

Sequence No.: 27
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/2/2009 17:09:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7157.7	7157.7	103	%			17:12:02
1	Y RADIAL	6538.7	6538.7	102.8	%			17:12:02
1	Al 396.153Radial†	6315.1	6192.6	5205.0	ug/L	5205.0	ppb	17:11:42
1	Ca 317.933Radial†	3677.3	3538.5	5215.1	ug/L	5215.1	ppb	17:12:02
1	Fe 238.204 Radial†	1285.9	1207.6	5412.2	ug/L	5412.2	ppb	17:12:02
1	K 766.490 Radial†	27131.0	23514.7	4845.3	ug/L	4845.3	ppb	17:11:42
1	Mg 279.077 IEC†	213.2	202.8	5191.8	ug/L	5191.8	ppb	17:12:02
1	Na 589.592 Radial†	168712.2	163884.8	10084	ug/L	10084	ppb	17:11:42
1	Sr 421.552†	170624.2	165469.5	514.55	ug/L	514.55	ppb	17:11:42
1	Sc 361.383	796849.8	796849.8	107.01	%			17:13:01
1	Y 371.029	613390.3	613390.3	105.50	%			17:13:01
1	Ag 328.068†	97011.9	89951.5	495.50	ug/L	495.50	ppb	17:13:01
1	As 188.979†	1631.6	1559.0	497.02	ug/L	497.02	ppb	17:13:21
1	B 249.677†	22142.3	21573.2	490.54	ug/L	490.54	ppb	17:13:01
1	Ba 233.527†	80726.6	75416.4	490.29	ug/L	490.29	ppb	17:13:01
1	Be 313.107†	1306407.9	1225620.0	494.63	ug/L	494.63	ppb	17:13:01
1	Cd 226.502†	45309.4	42634.7	479.71	ug/L	479.71	ppb	17:13:21
1	Co 228.616†	32498.6	30470.4	482.01	ug/L	482.01	ppb	17:13:21
1	Cr 267.716†	41792.0	39152.5	491.31	ug/L	491.31	ppb	17:13:01
1	Cu 324.752†	162692.3	146244.7	492.33	ug/L	492.33	ppb	17:13:01
1	Mn 257.610†	522438.2	487499.5	491.54	ug/L	491.54	ppb	17:13:01
1	Mo 202.031†	8335.9	7785.5	494.01	ug/L	494.01	ppb	17:13:21
1	Ni 231.604†	21841.8	20274.4	484.69	ug/L	484.69	ppb	17:13:21
1	P 214.914†	6141.3	5445.5	2358.3	ug/L	2358.3	ppb	17:13:21
1	Pb 220.353†	4942.1	4636.2	491.26	ug/L	491.26	ppb	17:13:21
1	S 181.975 Axial†	985.4	784.9	945.43	ug/L	945.43	ppb	17:13:21
1	Sb 206.836†	1998.5	1815.0	498.91	ug/L	498.91	ppb	17:13:21
1	Se 196.026†	1126.3	1087.3	511.12	ug/L	511.12	ppb	17:13:21
1	Si 251.611†	95341.7	88647.9	2488.3	ug/L	2488.3	ppb	17:13:01
1	Sn 189.927†	3375.0	3140.9	492.82	ug/L	492.82	ppb	17:13:21
1	Ti 334.940†	310603.7	291785.2	500.57	ug/L	500.57	ppb	17:13:01
1	Tl 190.801†	2140.1	2061.0	492.91	ug/L	492.91	ppb	17:13:21
1	U 409.014†	10875.9	15428.0	486.04	ug/L	486.04	ppb	17:13:01
1	V 292.402†	62110.1	59734.6	495.76	ug/L	495.76	ppb	17:13:01
1	Zn 213.857†	64740.3	59515.2	488.02	ug/L	488.02	ppb	17:13:01
1	SiO2†	95461.8	88733.4	5323.3	ug/L	5323.3	ppb	17:14:21
2	Sc Radial	7186.3	7186.3	104	%			17:12:28
2	Y RADIAL	6559.3	6559.3	103.1	%			17:12:28
2	Al 396.153Radial†	6233.4	6089.4	5117.9	ug/L	5117.9	ppb	17:12:08
2	Ca 317.933Radial†	3687.7	3534.3	5208.9	ug/L	5208.9	ppb	17:12:28
2	Fe 238.204 Radial†	1280.6	1197.5	5367.2	ug/L	5367.2	ppb	17:12:28
2	K 766.490 Radial†	26716.2	23009.6	4740.9	ug/L	4740.9	ppb	17:12:08
2	Mg 279.077 IEC†	217.5	206.1	5276.9	ug/L	5276.9	ppb	17:12:28
2	Na 589.592 Radial†	166381.8	160983.7	9905.6	ug/L	9905.6	ppb	17:12:08
2	Sr 421.552†	168607.6	162864.0	506.45	ug/L	506.45	ppb	17:12:08
2	Sc 361.383	801103.5	801103.5	107.58	%			17:13:29
2	Y 371.029	615868.0	615868.0	105.93	%			17:13:29
2	Ag 328.068†	97474.3	89900.0	495.21	ug/L	495.21	ppb	17:13:29
2	As 188.979†	1622.8	1542.8	491.87	ug/L	491.87	ppb	17:13:49
2	B 249.677†	22388.3	21692.0	493.26	ug/L	493.26	ppb	17:13:29
2	Ba 233.527†	81095.0	75358.3	489.91	ug/L	489.91	ppb	17:13:29
2	Be 313.107†	1313213.6	1225463.8	494.57	ug/L	494.57	ppb	17:13:29
2	Cd 226.502†	45488.1	42576.1	479.05	ug/L	479.05	ppb	17:13:49
2	Co 228.616†	32681.5	30479.2	482.15	ug/L	482.15	ppb	17:13:49
2	Cr 267.716†	41947.7	39089.9	490.52	ug/L	490.52	ppb	17:13:29
2	Cu 324.752†	163936.5	146594.0	493.50	ug/L	493.50	ppb	17:13:29
2	Mn 257.610†	525648.9	487891.6	491.92	ug/L	491.92	ppb	17:13:29
2	Mo 202.031†	8363.7	7770.0	493.02	ug/L	493.02	ppb	17:13:49
2	Ni 231.604†	21976.6	20291.4	485.10	ug/L	485.10	ppb	17:13:49

2	P 214.914†	6203.4	5472.8	2370.3	ug/L	2370.3 ppb	17:13:49
2	Pb 220.353†	4987.0	4653.4	493.07	ug/L	493.07 ppb	17:13:49
2	S 181.975 Axial†	988.9	783.3	943.45	ug/L	943.45 ppb	17:13:49
2	Sb 206.836†	1999.0	1805.6	496.39	ug/L	496.39 ppb	17:13:49
2	Se 196.026†	1142.8	1097.1	515.39	ug/L	515.39 ppb	17:13:49
2	Si 251.611†	95958.6	88748.2	2491.1	ug/L	2491.1 ppb	17:13:29
2	Sn 189.927†	3408.8	3155.6	495.11	ug/L	495.11 ppb	17:13:49
2	Ti 334.940†	312681.6	292175.5	501.24	ug/L	501.24 ppb	17:13:29
2	Tl 190.801†	2140.0	2050.3	490.37	ug/L	490.37 ppb	17:13:49
2	U 409.014†	10833.8	15334.9	483.11	ug/L	483.11 ppb	17:13:29
2	V 292.402†	62447.0	59739.6	495.79	ug/L	495.79 ppb	17:13:29
2	Zn 213.857†	65095.6	59524.3	488.09	ug/L	488.09 ppb	17:13:29
2	SiO2†	95566.0	88356.5	5300.6	ug/L	5300.6 ppb	17:14:27
3	Sc Radial	7219.7	7219.7	104	%		17:12:53
3	Y RADIAL	6629.6	6629.6	104.3	%		17:12:53
3	Al 396.153Radial†	6230.5	6058.7	5092.2	ug/L	5092.2 ppb	17:12:33
3	Ca 317.933Radial†	3716.5	3545.5	5225.4	ug/L	5225.4 ppb	17:12:53
3	Fe 238.204 Radial†	1293.2	1203.9	5395.7	ug/L	5395.7 ppb	17:12:53
3	K 766.490 Radial†	26712.9	22887.1	4715.7	ug/L	4715.7 ppb	17:12:33
3	Mg 279.077 IEC†	220.0	207.5	5311.8	ug/L	5311.8 ppb	17:12:53
3	Na 589.592 Radial†	165551.3	159442.5	9810.8	ug/L	9810.8 ppb	17:12:33
3	Sr 421.552†	167757.3	161293.8	501.57	ug/L	501.57 ppb	17:12:33
3	Sc 361.383	803531.7	803531.7	107.91	%		17:13:56
3	Y 371.029	617571.5	617571.5	106.22	%		17:13:56
3	Ag 328.068†	97489.6	89640.3	493.79	ug/L	493.79 ppb	17:13:56
3	As 188.979†	1613.8	1529.8	487.78	ug/L	487.78 ppb	17:14:16
3	B 249.677†	22506.0	21738.2	494.34	ug/L	494.34 ppb	17:13:56
3	Ba 233.527†	81093.7	75129.3	488.43	ug/L	488.43 ppb	17:13:56
3	Be 313.107†	1314820.6	1223264.3	493.68	ug/L	493.68 ppb	17:13:56
3	Cd 226.502†	45188.4	42170.6	474.48	ug/L	474.48 ppb	17:14:16
3	Co 228.616†	32451.8	30174.5	477.32	ug/L	477.32 ppb	17:14:16
3	Cr 267.716†	41985.2	39006.8	489.48	ug/L	489.48 ppb	17:13:56
3	Cu 324.752†	164328.8	146497.0	493.17	ug/L	493.17 ppb	17:13:56
3	Mn 257.610†	525504.8	486281.5	490.31	ug/L	490.31 ppb	17:13:56
3	Mo 202.031†	8326.8	7712.2	489.36	ug/L	489.36 ppb	17:14:16
3	Ni 231.604†	21803.9	20069.6	479.80	ug/L	479.80 ppb	17:14:16
3	P 214.914†	6136.7	5393.5	2334.6	ug/L	2334.6 ppb	17:14:16
3	Pb 220.353†	4917.6	4575.1	484.78	ug/L	484.78 ppb	17:14:16
3	S 181.975 Axial†	980.2	772.4	930.34	ug/L	930.34 ppb	17:14:16
3	Sb 206.836†	1986.5	1788.3	491.54	ug/L	491.54 ppb	17:14:16
3	Se 196.026†	1122.3	1074.9	505.41	ug/L	505.41 ppb	17:14:16
3	Si 251.611†	96083.8	88594.7	2487.0	ug/L	2487.0 ppb	17:13:56
3	Sn 189.927†	3367.7	3108.0	487.65	ug/L	487.65 ppb	17:14:16
3	Ti 334.940†	313211.1	291788.0	500.58	ug/L	500.58 ppb	17:13:56
3	Tl 190.801†	2118.0	2023.9	484.11	ug/L	484.11 ppb	17:14:16
3	U 409.014†	10897.7	15363.7	484.01	ug/L	484.01 ppb	17:13:56
3	V 292.402†	62482.2	59596.8	494.57	ug/L	494.57 ppb	17:13:56
3	Zn 213.857†	65075.0	59322.3	486.45	ug/L	486.45 ppb	17:13:56
3	SiO2†	96612.0	89057.4	5343.3	ug/L	5343.3 ppb	17:14:32

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	800495.0	107.50	%	0.454				0.42%
Sc Radial	7187.9	104	%	0.4				0.43%
Y 371.029	615610.0	105.88	%	0.362				0.34%
Y RADIAL	6575.9	103.4	%	0.75				0.73%
Ag 328.068†	89830.6	494.83	ug/L	0.915	494.83	ppb	0.915	0.18%
QC value within limits for Ag 328.068 Recovery = 98.97%								
Al 396.153Radial†	6113.6	5138.4	ug/L	59.14	5138.4	ppb	59.14	1.15%
QC value within limits for Al 396.153Radial Recovery = 102.77%								
As 188.979†	1543.9	492.22	ug/L	4.631	492.22	ppb	4.631	0.94%
QC value within limits for As 188.979 Recovery = 98.44%								
B 249.677†	21667.8	492.71	ug/L	1.957	492.71	ppb	1.957	0.40%
QC value within limits for B 249.677 Recovery = 98.54%								
Ba 233.527†	75301.3	489.54	ug/L	0.986	489.54	ppb	0.986	0.20%
QC value within limits for Ba 233.527 Recovery = 97.91%								
Be 313.107†	1224782.7	494.29	ug/L	0.531	494.29	ppb	0.531	0.11%
QC value within limits for Be 313.107 Recovery = 98.86%								
Ca 317.933Radial†	3539.4	5216.5	ug/L	8.33	5216.5	ppb	8.33	0.16%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.33%
Cd 226.502†            42460.5      477.75 ug/L         2.848      477.75 ppb          2.848   0.60%
   QC value within limits for Cd 226.502  Recovery = 95.55%
Co 228.616†            30374.7      480.49 ug/L         2.749      480.49 ppb          2.749   0.57%
   QC value within limits for Co 228.616  Recovery = 96.10%
Cr 267.716†            39083.1      490.44 ug/L         0.917      490.44 ppb          0.917   0.19%
   QC value within limits for Cr 267.716  Recovery = 98.09%
Cu 324.752†           146445.3      493.00 ug/L         0.605      493.00 ppb          0.605   0.12%
   QC value within limits for Cu 324.752  Recovery = 98.60%
Fe 238.204 Radial†      1203.0      5391.7 ug/L        22.76      5391.7 ppb         22.76   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.83%
K 766.490 Radial†      23137.1      4767.3 ug/L        68.68      4767.3 ppb         68.68   1.44%
   QC value within limits for K 766.490 Radial  Recovery = 95.35%
Mg 279.077 IEC†          205.4      5260.2 ug/L        61.71      5260.2 ppb         61.71   1.17%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.20%
Mn 257.610†           487224.2      491.26 ug/L         0.845      491.26 ppb          0.845   0.17%
   QC value within limits for Mn 257.610  Recovery = 98.25%
Mo 202.031†             7755.9      492.13 ug/L         2.448      492.13 ppb          2.448   0.50%
   QC value within limits for Mo 202.031  Recovery = 98.43%
Na 589.592 Radial†    161437.0      9933.5 ug/L       138.79      9933.5 ppb        138.79   1.40%
   QC value within limits for Na 589.592 Radial  Recovery = 99.33%
Ni 231.604†            20211.8      483.20 ug/L         2.951      483.20 ppb          2.951   0.61%
   QC value within limits for Ni 231.604  Recovery = 96.64%
P 214.914†              5437.2      2354.4 ug/L        18.20      2354.4 ppb         18.20   0.77%
   QC value within limits for P 214.914  Recovery = 94.18%
Pb 220.353†             4621.6      489.70 ug/L         4.359      489.70 ppb          4.359   0.89%
   QC value within limits for Pb 220.353  Recovery = 97.94%
S 181.975 Axial†         780.2      939.74 ug/L         8.197      939.74 ppb          8.197   0.87%
   QC value within limits for S 181.975 Axial  Recovery = 93.97%
Sb 206.836†             1803.0      495.61 ug/L         3.750      495.61 ppb          3.750   0.76%
   QC value within limits for Sb 206.836  Recovery = 99.12%
Se 196.026†             1086.4      510.64 ug/L         5.008      510.64 ppb          5.008   0.98%
   QC value within limits for Se 196.026  Recovery = 102.13%
Si 251.611†            88663.6      2488.8 ug/L          2.13      2488.8 ppb           2.13   0.09%
   QC value within limits for Si 251.611  Recovery = 99.55%
Sn 189.927†             3134.8      491.86 ug/L         3.818      491.86 ppb          3.818   0.78%
   QC value within limits for Sn 189.927  Recovery = 98.37%
Sr 421.552†           163209.1      507.52 ug/L         6.559      507.52 ppb          6.559   1.29%
   QC value within limits for Sr 421.552  Recovery = 101.50%
Ti 334.940†           291916.2      500.80 ug/L         0.385      500.80 ppb          0.385   0.08%
   QC value within limits for Ti 334.940  Recovery = 100.16%
Tl 190.801†             2045.1      489.13 ug/L         4.530      489.13 ppb          4.530   0.93%
   QC value within limits for Tl 190.801  Recovery = 97.83%
U 409.014†             15375.6      484.39 ug/L         1.503      484.39 ppb          1.503   0.31%
   QC value within limits for U 409.014  Recovery = 96.88%
V 292.402†             59690.3      495.37 ug/L         0.695      495.37 ppb          0.695   0.14%
   QC value within limits for V 292.402  Recovery = 99.07%
Zn 213.857†            59453.9      487.52 ug/L         0.927      487.52 ppb          0.927   0.19%
   QC value within limits for Zn 213.857  Recovery = 97.50%
SiO2†                  88715.7      5322.4 ug/L        21.38      5322.4 ppb         21.38   0.40%
   QC value within limits for SiO2  Recovery = 99.53%
All analyte(s) passed QC.
```

Sequence No.: 28
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/2/2009 17:16:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7158.6	7158.6	103	%			17:18:34
1	Y RADIAL	6586.3	6586.3	103.6	%			17:18:34
1	Al 396.153Radial†	-46.6	25.4	21.403	ug/L	21.403	ppb	17:18:34
1	Ca 317.933Radial†	26.1	-1.1	-1.5774	ug/L	-1.5774	ppb	17:18:54
1	Fe 238.204 Radial†	39.2	-0.9	-4.1099	ug/L	-4.1099	ppb	17:18:54
1	K 766.490 Radial†	2637.8	-229.8	-47.503	ug/L	-47.503	ppb	17:18:34
1	Mg 279.077 IEC†	1.6	-2.4	-62.371	ug/L	-62.371	ppb	17:18:54
1	Na 589.592 Radial†	-352.3	-10.3	-0.6325	ug/L	-0.6325	ppb	17:18:34
1	Sr 421.552†	-65.0	-0.7	-0.0020	ug/L	-0.0020	ppb	17:18:34
1	Sc 361.383	768529.6	768529.6	103.21	%			17:19:51
1	Y 371.029	599565.1	599565.1	103.12	%			17:19:51
1	Ag 328.068†	742.5	13.6	0.0709	ug/L	0.0709	ppb	17:19:51
1	As 188.979†	-31.2	4.0	1.2734	ug/L	1.2734	ppb	17:20:11
1	B 249.677†	-708.6	194.7	4.4521	ug/L	4.4521	ppb	17:19:51
1	Ba 233.527†	14.6	-8.2	-0.0519	ug/L	-0.0519	ppb	17:20:11
1	Be 313.107†	-4838.0	97.0	0.0395	ug/L	0.0395	ppb	17:19:51
1	Cd 226.502†	-275.6	26.2	0.2954	ug/L	0.2954	ppb	17:20:11
1	Co 228.616†	-88.1	15.2	0.2431	ug/L	0.2431	ppb	17:20:11
1	Cr 267.716†	-69.8	30.4	0.3796	ug/L	0.3796	ppb	17:19:51
1	Cu 324.752†	5755.6	-214.0	-0.7203	ug/L	-0.7203	ppb	17:19:51
1	Mn 257.610†	704.2	-35.6	-0.0352	ug/L	-0.0352	ppb	17:19:51
1	Mo 202.031†	29.0	23.7	1.4998	ug/L	1.4998	ppb	17:20:11
1	Ni 231.604†	149.0	7.7	0.1851	ug/L	0.1851	ppb	17:20:11
1	P 214.914†	305.3	2.3	1.1643	ug/L	1.1643	ppb	17:20:11
1	Pb 220.353†	-30.9	-12.1	-1.2732	ug/L	-1.2732	ppb	17:20:11
1	S 181.975 Axial†	102.5	-36.7	-44.254	ug/L	-44.254	ppb	17:20:11
1	Sb 206.836†	46.4	-7.6	-2.0530	ug/L	-2.0530	ppb	17:20:11
1	Se 196.026†	-42.1	-6.0	-2.7157	ug/L	-2.7157	ppb	17:20:11
1	Si 251.611†	570.5	104.0	2.9344	ug/L	2.9344	ppb	17:20:11
1	Sn 189.927†	10.7	-2.7	-0.4183	ug/L	-0.4183	ppb	17:20:11
1	Ti 334.940†	-1461.2	110.9	0.1875	ug/L	0.1875	ppb	17:19:51
1	Tl 190.801†	-55.6	7.3	1.7278	ug/L	1.7278	ppb	17:20:11
1	U 409.014†	-5242.0	185.4	5.8599	ug/L	5.8599	ppb	17:19:51
1	V 292.402†	-1657.3	87.0	0.7434	ug/L	0.7434	ppb	17:19:51
1	Zn 213.857†	1022.4	6.3	0.0543	ug/L	0.0543	ppb	17:20:11
1	SiO2†	631.9	136.8	8.2541	ug/L	8.2541	ppb	17:21:07
2	Sc Radial	7191.8	7191.8	104	%			17:18:59
2	Y RADIAL	6591.4	6591.4	103.7	%			17:18:59
2	Al 396.153Radial†	-95.9	-22.0	-18.627	ug/L	-18.627	ppb	17:18:59
2	Ca 317.933Radial†	26.4	-0.9	-1.3742	ug/L	-1.3742	ppb	17:19:19
2	Fe 238.204 Radial†	38.4	-1.9	-8.3502	ug/L	-8.3502	ppb	17:19:19
2	K 766.490 Radial†	2719.5	-162.8	-33.664	ug/L	-33.664	ppb	17:18:59
2	Mg 279.077 IEC†	0.6	-3.4	-87.193	ug/L	-87.193	ppb	17:19:19
2	Na 589.592 Radial†	-387.6	-42.7	-2.6299	ug/L	-2.6299	ppb	17:18:59
2	Sr 421.552†	-28.7	34.6	0.1077	ug/L	0.1077	ppb	17:18:59
2	Sc 361.383	779997.8	779997.8	104.75	%			17:20:16
2	Y 371.029	607624.9	607624.9	104.51	%			17:20:16
2	Ag 328.068†	652.9	-82.6	-0.4647	ug/L	-0.4647	ppb	17:20:16
2	As 188.979†	-28.9	6.7	2.1132	ug/L	2.1132	ppb	17:20:36
2	B 249.677†	-715.4	198.3	4.5342	ug/L	4.5342	ppb	17:20:16
2	Ba 233.527†	7.4	-15.4	-0.0991	ug/L	-0.0991	ppb	17:20:36
2	Be 313.107†	-4997.5	13.7	0.0062	ug/L	0.0062	ppb	17:20:16
2	Cd 226.502†	-283.5	22.6	0.2550	ug/L	0.2550	ppb	17:20:36
2	Co 228.616†	-83.9	20.4	0.3276	ug/L	0.3276	ppb	17:20:36
2	Cr 267.716†	-79.1	22.5	0.2780	ug/L	0.2780	ppb	17:20:16
2	Cu 324.752†	5927.1	-132.4	-0.4458	ug/L	-0.4458	ppb	17:20:16
2	Mn 257.610†	812.1	57.4	0.0585	ug/L	0.0585	ppb	17:20:16
2	Mo 202.031†	38.6	32.4	2.0528	ug/L	2.0528	ppb	17:20:36
2	Ni 231.604†	151.7	8.2	0.1960	ug/L	0.1960	ppb	17:20:36

2	P 214.914†	297.6	-9.4	-4.1359	ug/L	-4.1359	ppb	17:20:36
2	Pb 220.353†	-30.6	-11.4	-1.1977	ug/L	-1.1977	ppb	17:20:36
2	S 181.975 Axial†	101.4	-39.2	-47.225	ug/L	-47.225	ppb	17:20:36
2	Sb 206.836†	59.6	4.3	1.2021	ug/L	1.2021	ppb	17:20:36
2	Se 196.026†	-42.2	-5.4	-2.4846	ug/L	-2.4846	ppb	17:20:36
2	Si 251.611†	564.2	89.9	2.5132	ug/L	2.5132	ppb	17:20:36
2	Sn 189.927†	14.8	1.1	0.1776	ug/L	0.1776	ppb	17:20:36
2	Ti 334.940†	-1407.8	182.7	0.3076	ug/L	0.3076	ppb	17:20:16
2	Tl 190.801†	-48.9	14.5	3.4404	ug/L	3.4404	ppb	17:20:36
2	U 409.014†	-5080.1	414.6	13.104	ug/L	13.104	ppb	17:20:16
2	V 292.402†	-1739.4	32.3	0.3154	ug/L	0.3154	ppb	17:20:16
2	Zn 213.857†	1010.7	-19.4	-0.1577	ug/L	-0.1577	ppb	17:20:36
2	SiO2†	615.0	111.6	6.6867	ug/L	6.6867	ppb	17:21:12
3	Sc Radial	7144.8	7144.8	103	%			17:19:24
3	Y RADIAL	6577.9	6577.9	103.4	%			17:19:24
3	Al 396.153Radial†	-50.9	21.2	17.831	ug/L	17.831	ppb	17:19:24
3	Ca 317.933Radial†	24.9	-2.2	-3.3085	ug/L	-3.3085	ppb	17:19:44
3	Fe 238.204 Radial†	36.7	-3.3	-14.737	ug/L	-14.737	ppb	17:19:44
3	K 766.490 Radial†	2712.3	-152.6	-31.535	ug/L	-31.535	ppb	17:19:24
3	Mg 279.077 IEC†	2.0	-2.0	-50.317	ug/L	-50.317	ppb	17:19:44
3	Na 589.592 Radial†	-459.8	-115.3	-7.0957	ug/L	-7.0957	ppb	17:19:24
3	Sr 421.552†	-92.5	-27.5	-0.0856	ug/L	-0.0856	ppb	17:19:24
3	Sc 361.383	771850.2	771850.2	103.65	%			17:20:41
3	Y 371.029	601911.2	601911.2	103.53	%			17:20:41
3	Ag 328.068†	684.4	-45.6	-0.2633	ug/L	-0.2633	ppb	17:20:41
3	As 188.979†	-38.5	-2.8	-0.9031	ug/L	-0.9031	ppb	17:21:01
3	B 249.677†	-707.4	198.8	4.5470	ug/L	4.5470	ppb	17:20:41
3	Ba 233.527†	16.3	-6.7	-0.0427	ug/L	-0.0427	ppb	17:21:01
3	Be 313.107†	-4974.2	-14.2	-0.0052	ug/L	-0.0052	ppb	17:20:41
3	Cd 226.502†	-295.2	8.4	0.0968	ug/L	0.0968	ppb	17:21:01
3	Co 228.616†	-96.6	7.3	0.1173	ug/L	0.1173	ppb	17:21:01
3	Cr 267.716†	-21.6	77.1	0.9624	ug/L	0.9624	ppb	17:20:41
3	Cu 324.752†	5852.1	-144.9	-0.4885	ug/L	-0.4885	ppb	17:20:41
3	Mn 257.610†	693.3	-49.0	-0.0503	ug/L	-0.0503	ppb	17:20:41
3	Mo 202.031†	23.4	18.2	1.1522	ug/L	1.1522	ppb	17:21:01
3	Ni 231.604†	154.6	12.5	0.3000	ug/L	0.3000	ppb	17:21:01
3	P 214.914†	293.4	-10.5	-4.6089	ug/L	-4.6089	ppb	17:21:01
3	Pb 220.353†	-34.0	-15.0	-1.5761	ug/L	-1.5761	ppb	17:21:01
3	S 181.975 Axial†	106.1	-33.6	-40.507	ug/L	-40.507	ppb	17:21:01
3	Sb 206.836†	46.8	-7.4	-2.0177	ug/L	-2.0177	ppb	17:21:01
3	Se 196.026†	-26.9	8.9	3.9602	ug/L	3.9602	ppb	17:21:01
3	Si 251.611†	572.4	103.4	2.9132	ug/L	2.9132	ppb	17:21:01
3	Sn 189.927†	13.4	-0.0	-0.0092	ug/L	-0.0092	ppb	17:21:01
3	Ti 334.940†	-1440.6	136.9	0.2290	ug/L	0.2290	ppb	17:20:41
3	Tl 190.801†	-56.8	6.4	1.5120	ug/L	1.5120	ppb	17:21:01
3	U 409.014†	-5055.3	387.3	12.243	ug/L	12.243	ppb	17:20:41
3	V 292.402†	-1712.1	41.1	0.3759	ug/L	0.3759	ppb	17:20:41
3	Zn 213.857†	1015.3	-4.9	-0.0386	ug/L	-0.0386	ppb	17:21:01
3	SiO2†	592.5	96.1	5.7858	ug/L	5.7858	ppb	17:21:17

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	773459.2	103.87	%	0.792				0.76%
Sc Radial	7165.1	103	%	0.3				0.34%
Y 371.029	603033.7	103.72	%	0.713				0.69%
Y RADIAL	6585.2	103.6	%	0.11				0.10%
Ag 328.068†	-38.2	-0.2190	ug/L	0.27052	-0.2190	ppb	0.27052	123.50%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	8.2	6.8689	ug/L	22.15238	6.8689	ppb	22.15238	322.50%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.6	0.8279	ug/L	1.55673	0.8279	ppb	1.55673	188.04%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	197.3	4.5111	ug/L	0.05149	4.5111	ppb	0.05149	1.14%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-10.1	-0.0645	ug/L	0.03029	-0.0645	ppb	0.03029	46.94%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	32.2	0.0135	ug/L	0.02321	0.0135	ppb	0.02321	171.65%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.4	-2.0867	ug/L	1.06299	-2.0867	ppb	1.06299	50.94%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              19.1      0.2157 ug/L       0.10497      0.2157 ppb        0.10497  48.66%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              14.3      0.2293 ug/L       0.10581      0.2293 ppb        0.10581  46.13%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              43.3      0.5400 ug/L       0.36928      0.5400 ppb        0.36928  68.39%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -163.8     -0.5515 ug/L       0.14769     -0.5515 ppb        0.14769  26.78%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       -2.0     -9.0656 ug/L       5.34930     -9.0656 ppb        5.34930  59.01%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†      -181.7     -37.567 ug/L        8.6697     -37.567 ppb         8.6697  23.08%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -2.6     -66.627 ug/L      18.8029     -66.627 ppb        18.8029  28.22%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -9.1      -0.0090 ug/L       0.05892      -0.0090 ppb        0.05892 655.92%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              24.7       1.5682 ug/L       0.45419       1.5682 ppb        0.45419  28.96%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      -56.1      -3.4527 ug/L       3.30927      -3.4527 ppb        3.30927  95.85%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               9.5       0.2270 ug/L       0.06341       0.2270 ppb        0.06341  27.93%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -5.9      -2.5268 ug/L       3.20533      -2.5268 ppb        3.20533 126.85%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             -12.8      -1.3490 ug/L       0.20026      -1.3490 ppb        0.20026  14.85%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†        -36.5     -43.995 ug/L        3.3666     -43.995 ppb         3.3666   7.65%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              -3.6      -0.9562 ug/L       1.86925      -0.9562 ppb        1.86925 195.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.9      -0.4134 ug/L       3.78942      -0.4134 ppb        3.78942 916.70%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              99.1       2.7869 ug/L       0.23733       2.7869 ppb        0.23733   8.52%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -0.5      -0.0833 ug/L       0.30478      -0.0833 ppb        0.30478 365.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               2.1       0.0067 ug/L       0.09693       0.0067 ppb        0.09693 >999.9%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             143.5       0.2414 ug/L       0.06097       0.2414 ppb        0.06097  25.26%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               9.4       2.2268 ug/L       1.05660       2.2268 ppb        1.05660  47.45%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              329.1      10.402 ug/L        3.9575      10.402 ppb         3.9575  38.04%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               53.5       0.4782 ug/L       0.23161       0.4782 ppb        0.23161  48.43%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              -6.0      -0.0473 ug/L       0.10628      -0.0473 ppb        0.10628 224.58%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   114.8       6.9088 ug/L       1.24905       6.9088 ppb        1.24905  18.08%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Sunday, July 05, 2009 10:41:34
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default2\Sample.536
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	5344.4	5344.400	66.042	1.2
	Mg	24.0	51183.5	51183.531	356.423	0.7
	Co	58.9	71255.7	71255.681	730.735	1.0
	Rh	102.9	146275.4	146275.365	1931.315	1.3
	In	114.9	184822.3	184822.346	1416.065	0.8
	Pb	208.0	163682.5	163682.458	1715.928	1.0
⌈>	Ba	137.9	189837.8	189837.768	2231.224	1.2
⌊	Ba++	69.0	4629.0	0.024	0.000	0.9
⌈>	Ce	139.9	235979.0	235978.982	2224.353	0.9
⌊	CeO	155.9	5671.2	0.024	0.001	2.1
	Bkgd	220.0	17.2	17.200	3.947	22.9

Current Optimization File Data

Current Value	Description
0.88	Nebulizer Gas Flow
8.00	Lens Voltage
1450.00	ICP RF Power
-1950.00	Analog Stage Voltage
1350.00	Pulse Stage Voltage
250.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	13	9.0	5421.4
Co	59	13	9.5	76221.5
In	115	13	10.5	184817.2

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	603	2045	0.624
Be	9.0	9.0	2052	2060	0.629
Mg	24.0	24.0	5683	2060	0.608
Mg	25.0	25.0	5949	2050	0.658
Mg	26.0	25.9	6147	2080	0.633
Co	58.9	58.9	14169	2090	0.625
Rh	102.9	102.9	24878	2140	0.644
In	114.9	114.9	27792	2165	0.631
Ce	139.9	139.9	33876	2190	0.614
Pb	206.0	206.0	49948	2275	0.649
Pb	207.0	207.0	50171	2240	0.633
Pb	208.0	208.0	50451	2260	0.681
U	238.1	238.1	57731	2265	0.742

Report Date/Time: Sunday, July 05, 2009 10:40:51
Page 1

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Sunday, July 05, 2009 23:09:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\Blank.166

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		120	
	Be	9		ug/L		21	
	B	11		ug/L		696	
	Na	23		ug/L		18012	
	Mg	24		ug/L		8003	
	Al	27		ug/L		9003	
	P	31		ug/L		4232	
	K	39		ug/L		396428	
	Ca	43		ug/L		279	
>	Sc	45		ug/L		526483	
	Ti	47		ug/L		224	
	V	51		ug/L		5024	
	Cr	52		ug/L		759	
	Cr	53		ug/L		47538	
	Mn	55		ug/L		1069	
	Fe	57		ug/L		3983	
	Co	59		ug/L		189	
	Ni	60		ug/L		76	
	Cu	63		ug/L		404	
	Cu	65		ug/L		177	
	Zn	66		ug/L		305	
	Zn	67		ug/L		7867	
	Zn	68		ug/L		944	
>	Ge	74		ug/L		294820	
	As	75		ug/L		-418	
	Se	77		ug/L		2919	
	Se	82		ug/L		-26	
	Kr	83		ug/L		109	
	Sr	88		ug/L		600	
	Y	89		ug/L		48	
	Mo	98		ug/L		125	
	Ag	107		ug/L		91	
	Cd	111		ug/L		37	
	Cd	114		ug/L		88	
>	In	115		ug/L		194657	
	Sn	120		ug/L		225	
	Sb	121		ug/L		132	
	Sb	123		ug/L		123	
	Ba	135		ug/L		58	
	Ba	137		ug/L		96	
	Ho	165		ug/L		53	
>	Lu	175		ug/L		387429	
	Tl	205		ug/L		2111	
	Pb	208		ug/L		1851	
	Bi	209		ug/L		171	
	Th	232		ug/L		1190	
	U	238		ug/L		4514	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9997

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Sunday, July 05, 2009 23:15:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\Standard 1.167

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	2.991	20374	0.039
	Be	9	**10.000**	**ug/L**	4.737	4357	0.008
	B	11	**20.000**	**ug/L**	1.160	7505	0.013
	Na	23	**1000.000**	**ug/L**	3.302	2666094	5.113
	Mg	24	**1000.000**	**ug/L**	4.591	1977684	3.800
	Al	27	**1000.000**	**ug/L**	8.673	2637252	5.078
	P	31	**1000.000**	**ug/L**	3.753	173260	0.327
	K	39	**1000.000**	**ug/L**	6.264	3485105	5.980
	Ca	43	**1000.000**	**ug/L**	3.040	7920	0.015
>	Sc	45		**ug/L**		518143	518143.314
	Ti	47	**10.000**	**ug/L**	4.794	4202	0.008
	V	51	**10.000**	**ug/L**	5.243	52526	0.092
	Cr	52	**10.000**	**ug/L**	3.688	36984	0.070
	Cr	53		**ug/L**		62128	0.030
	Mn	55	**10.000**	**ug/L**	3.812	58372	0.111
	Fe	57	**1000.000**	**ug/L**	2.478	117171	0.219
	Co	59	**10.000**	**ug/L**	1.727	43786	0.084
	Ni	60	**10.000**	**ug/L**	3.121	9673	0.019
	Cu	63		**ug/L**		23632	0.045
	Cu	65	**10.000**	**ug/L**	4.053	11612	0.022
	Zn	66	**10.000**	**ug/L**	2.585	8003	0.026
	Zn	67		**ug/L**		11417	0.012
	Zn	68		**ug/L**		6762	0.020
>	Ge	74		**ug/L**		293265	293264.666
	As	75	**10.000**	**ug/L**	0.822	8016	0.029
	Se	77		**ug/L**		4411	0.005
	Se	82	**10.000**	**ug/L**	2.567	724	0.003
	Kr	83		**ug/L**		107	-0.000
	Sr	88	**10.000**	**ug/L**	2.034	96586	0.493
	Y	89		**ug/L**		64	0.000
	Mo	98	**10.000**	**ug/L**	1.466	25103	0.128
	Ag	107	**10.000**	**ug/L**	1.991	45104	0.231
	Cd	111	**10.000**	**ug/L**	0.568	10860	0.056
	Cd	114		**ug/L**		25710	0.132
>	In	115		**ug/L**		194607	194607.241
	Sn	120	**10.000**	**ug/L**	0.548	45931	0.235
	Sb	121	**10.000**	**ug/L**	1.129	39895	0.204
	Sb	123		**ug/L**		31027	0.159
	Ba	135		**ug/L**		11846	0.030
	Ba	137	**10.000**	**ug/L**	1.553	21206	0.054
	Ho	165		**ug/L**		54	-0.000
>	Lu	175		**ug/L**		390486	390485.984
	Tl	205	**10.000**	**ug/L**	2.630	162273	0.410
	Pb	208	**10.000**	**ug/L**	2.618	259902	0.661
	Bi	209		**ug/L**		257	0.000
	Th	232	**10.000**	**ug/L**	4.001	322102	0.822
	U	238	**10.000**	**ug/L**	2.883	344496	0.871

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Sunday, July 05, 2009 23:21:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\Standard 2.168

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**99.901**	ug/L	0.390	193757	0.356
	Be	9	**99.937**	ug/L	1.732	42899	0.079
	B	11	**199.902**	ug/L	2.765	69053	0.125
	Na	23	**10003.249**	ug/L	5.090	28809736	52.861
	Mg	24	**9996.285**	ug/L	4.861	19958654	36.624
	Al	27	**9997.581**	ug/L	6.054	27012909	49.573
	P	31	**9990.141**	ug/L	2.081	1621775	2.970
	K	39	**10004.576**	ug/L	4.241	34553802	62.693
	Ca	43	**9993.873**	ug/L	1.872	75992	0.139
>	Sc	45		ug/L		544667	544666.733
	Ti	47	**99.955**	ug/L	0.820	40285	0.074
	V	51	**99.938**	ug/L	1.419	476227	0.865
	Cr	52	**99.933**	ug/L	1.321	357930	0.656
	Cr	53		ug/L		86356	0.068
	Mn	55	**99.924**	ug/L	1.441	560892	1.028
	Fe	57	**9989.477**	ug/L	1.891	1080394	1.976
	Co	59	**99.912**	ug/L	1.300	421241	0.773
	Ni	60	**99.921**	ug/L	2.688	93558	0.172
	Cu	63		ug/L		224366	0.411
	Cu	65	**99.936**	ug/L	1.382	113205	0.208
	Zn	66	**99.964**	ug/L	1.497	77495	0.253
	Zn	67		ug/L		19988	0.039
	Zn	68		ug/L		59051	0.191
>	Ge	74		ug/L		304758	304758.268
	As	75	**99.958**	ug/L	0.845	83627	0.276
	Se	77		ug/L		8837	0.019
	Se	82	**100.036**	ug/L	2.106	8060	0.027
	Kr	83		ug/L		137	0.000
	Sr	88	**99.944**	ug/L	1.412	925793	4.669
	Y	89		ug/L		125	0.000
	Mo	98	**99.988**	ug/L	1.585	251444	1.268
	Ag	107	**99.936**	ug/L	0.416	430359	2.172
	Cd	111	**99.992**	ug/L	0.967	109322	0.552
	Cd	114		ug/L		254803	1.286
>	In	115		ug/L		198136	198136.290
	Sn	120	**99.951**	ug/L	0.323	443460	2.237
	Sb	121	**99.959**	ug/L	2.465	389033	1.963
	Sb	123		ug/L		306108	1.544
	Ba	135		ug/L		115967	0.297
	Ba	137	**99.975**	ug/L	0.490	206293	0.528
	Ho	165		ug/L		67	0.000
>	Lu	175		ug/L		390822	390821.676
	Tl	205	**99.879**	ug/L	1.393	1431228	3.657
	Pb	208	**99.887**	ug/L	0.749	2319493	5.930
	Bi	209		ug/L		1221	0.003
	Th	232	**99.763**	ug/L	0.853	2592770	6.631
	U	238	**99.737**	ug/L	1.068	2692129	6.877

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Sunday, July 05, 2009 23:27:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 1.169

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.213**	**ug/L**	0.764	98945	0.182
	Be	9	**50.195**	**ug/L**	2.523	21462	0.040
	B	11	**109.237**	**ug/L**	0.883	37893	0.069
	Na	23	**5042.464**	**ug/L**	2.316	14469531	26.646
	Mg	24	**4926.621**	**ug/L**	5.905	9798482	18.050
	Al	27	**5212.792**	**ug/L**	2.606	14027501	25.848
	P	31	**5143.613**	**ug/L**	0.436	833445	1.529
	K	39	**4489.010**	**ug/L**	1.083	15663258	28.130
	Ca	43	**4907.219**	**ug/L**	0.178	37295	0.068
>	Sc	45		**ug/L**		542269	542268.896
	Ti	47	**49.036**	**ug/L**	2.001	19793	0.036
	V	51	**49.776**	**ug/L**	2.077	238717	0.431
	Cr	52	**50.877**	**ug/L**	0.960	181807	0.334
	Cr	53		**ug/L**		66029	0.031
	Mn	55	**48.266**	**ug/L**	0.300	270293	0.496
	Fe	57	**5078.974**	**ug/L**	1.703	548911	1.005
	Co	59	**51.464**	**ug/L**	1.134	216107	0.398
	Ni	60	**51.588**	**ug/L**	1.730	48123	0.089
	Cu	63		**ug/L**		110646	0.203
	Cu	65	**48.140**	**ug/L**	1.835	54390	0.100
	Zn	66	**49.412**	**ug/L**	0.923	38737	0.125
	Zn	67		**ug/L**		13814	0.018
	Zn	68		**ug/L**		29813	0.094
>	Ge	74		**ug/L**		306922	306921.734
	As	75	**49.416**	**ug/L**	0.800	41416	0.136
	Se	77		**ug/L**		5694	0.009
	Se	82	**49.070**	**ug/L**	2.019	3968	0.013
	Kr	83		**ug/L**		112	-0.000
	Sr	88	**50.158**	**ug/L**	1.304	467787	2.343
	Y	89		**ug/L**		79	0.000
	Mo	98	**47.701**	**ug/L**	2.009	120750	0.605
	Ag	107	**50.076**	**ug/L**	1.219	217016	1.088
	Cd	111	**51.391**	**ug/L**	1.150	56550	0.283
	Cd	114		**ug/L**		132438	0.664
>	In	115		**ug/L**		199381	199381.343
	Sn	120	**48.894**	**ug/L**	2.134	218378	1.094
	Sb	121	**50.095**	**ug/L**	1.934	196225	0.984
	Sb	123		**ug/L**		154534	0.775
	Ba	135		**ug/L**		56571	0.143
	Ba	137	**48.552**	**ug/L**	2.676	101543	0.256
	Ho	165		**ug/L**		87	0.000
>	Lu	175		**ug/L**		395971	395970.796
	Tl	205	**49.895**	**ug/L**	2.194	725495	1.827
	Pb	208	**50.694**	**ug/L**	1.279	1193563	3.010
	Bi	209		**ug/L**		423	0.001
	Th	232	**52.594**	**ug/L**	1.083	1385451	3.496
	U	238	**54.141**	**ug/L**	1.466	1482691	3.733

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	102.426				
	Be	9	100.390				
	B	11	109.237				
	Na	23	100.849				
	Mg	24	98.532				
	Al	27	103.224				
	P	31	102.872				
	K	39	89.780				
	Ca	43	98.144				
>	Sc	45		103.0			
	Ti	47	98.071				
	V	51	99.552				
	Cr	52	101.755				
	Cr	53					
	Mn	55	96.533				
	Fe	57	101.579				
	Co	59	102.927				
	Ni	60	103.176				
	Cu	63					
	Cu	65	96.281				
	Zn	66	98.823				
	Zn	67					
	Zn	68					
>	Ge	74		104.1			
	As	75	98.831				
	Se	77					
	Se	82	98.140				
	Kr	83					
	Sr	88	100.316				
	Y	89					
	Mo	98	95.402				
	Ag	107	100.152				
	Cd	111	102.781				
	Cd	114					
>	In	115		102.4			
	Sn	120	97.789				
	Sb	121	100.190				
	Sb	123					
	Ba	135					
	Ba	137	97.103				
	Ho	165					
>	Lu	175		102.2			
	Tl	205	99.791				
	Pb	208	101.389				
	Bi	209					
	Th	232	105.188				
	U	238	108.283				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	K	39	ICV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Sunday, July 05, 2009 23:33:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 2.170

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.017**	**ug/L**	34.120	154	0.000
	Be	9	**-0.003**	**ug/L**	288.327	20	-0.000
	B	11	**5.287**	**ug/L**	18.359	2490	0.003
	Na	23	**1.045**	**ug/L**	14.803	21349	0.006
	Mg	24	**0.776**	**ug/L**	217.024	9670	0.003
	Al	27	**-0.447**	**ug/L**	440.569	8003	-0.002
	P	31	**1.075**	**ug/L**	17.501	4491	0.000
	K	39	**-3.150**	**ug/L**	56.382	394030	-0.020
	Ca	43	**-2.089**	**ug/L**	168.756	269	-0.000
>	Sc	45		**ug/L**		537313	537312.754
	Ti	47	**-0.032**	**ug/L**	88.703	216	-0.000
	V	51	**-0.067**	**ug/L**	129.495	4814	-0.001
	Cr	52	**0.039**	**ug/L**	107.924	912	0.000
	Cr	53		**ug/L**		45512	-0.006
	Mn	55	**-0.005**	**ug/L**	172.380	1063	-0.000
	Fe	57	**2.041**	**ug/L**	66.036	4280	0.000
	Co	59	**0.009**	**ug/L**	21.826	231	0.000
	Ni	60	**0.026**	**ug/L**	11.129	102	0.000
	Cu	63		**ug/L**		407	-0.000
	Cu	65	**0.008**	**ug/L**	149.561	190	0.000
	Zn	66	**-0.024**	**ug/L**	65.422	296	-0.000
	Zn	67		**ug/L**		7710	-0.001
	Zn	68		**ug/L**		921	-0.000
>	Ge	74		**ug/L**		304201	304201.409
	As	75	**0.457**	**ug/L**	77.683	-51	0.001
	Se	77		**ug/L**		2622	-0.001
	Se	82	**0.108**	**ug/L**	282.005	-19	0.000
	Kr	83		**ug/L**		100	-0.000
	Sr	88	**0.003**	**ug/L**	53.009	640	0.000
	Y	89		**ug/L**		58	0.000
	Mo	98	**0.040**	**ug/L**	4.606	228	0.001
	Ag	107	**0.007**	**ug/L**	33.345	123	0.000
	Cd	111	**0.006**	**ug/L**	139.763	44	0.000
	Cd	114		**ug/L**		98	0.000
>	In	115		**ug/L**		197669	197669.211
	Sn	120	**0.035**	**ug/L**	14.832	383	0.001
	Sb	121	**0.086**	**ug/L**	21.359	466	0.002
	Sb	123		**ug/L**		350	0.001
	Ba	135		**ug/L**		65	0.000
	Ba	137	**0.009**	**ug/L**	66.290	114	0.000
	Ho	165		**ug/L**		59	0.000
>	Lu	175		**ug/L**		384973	384972.788
	Tl	205	**0.347**	**ug/L**	21.206	6991	0.013
	Pb	208	**0.004**	**ug/L**	88.061	1941	0.000
	Bi	209		**ug/L**		161	-0.000
	Th	232	**0.077**	**ug/L**	23.437	3165	0.005
	U	238	**0.032**	**ug/L**	36.508	5324	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		102.1			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		101.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Sunday, July 05, 2009 23:39:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 3.171

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.642**	**ug/L**	1.873	20247	0.038
	Be	9	**0.491**	**ug/L**	4.120	227	0.000
	B	11	**17.077**	**ug/L**	1.605	6397	0.011
	Na	23	**287.311**	**ug/L**	2.683	825182	1.518
	Mg	24	**14.895**	**ug/L**	24.870	37049	0.055
	Al	27	**38.060**	**ug/L**	5.090	109418	0.189
	P	31	**65.019**	**ug/L**	0.475	14544	0.019
	K	39	**314.693**	**ug/L**	10.982	1448536	1.972
	Ca	43	**205.264**	**ug/L**	4.067	1799	0.003
>	Sc	45		**ug/L**		531442	531441.877
	Ti	47	**8.615**	**ug/L**	2.324	3595	0.006
	V	51	**9.914**	**ug/L**	5.875	50645	0.086
	Cr	52	**10.362**	**ug/L**	1.512	36896	0.068
	Cr	53		**ug/L**		61561	0.026
	Mn	55	**5.388**	**ug/L**	2.191	30533	0.055
	Fe	57	**110.456**	**ug/L**	1.862	15630	0.022
	Co	59	**1.036**	**ug/L**	2.150	4449	0.008
	Ni	60	**2.120**	**ug/L**	3.088	2011	0.004
	Cu	63		**ug/L**		2848	0.005
	Cu	65	**1.095**	**ug/L**	5.530	1387	0.002
	Zn	66	**10.208**	**ug/L**	1.619	8028	0.026
	Zn	67		**ug/L**		11499	0.012
	Zn	68		**ug/L**		6842	0.020
>	Ge	74		**ug/L**		298549	298548.591
	As	75	**5.413**	**ug/L**	8.473	4034	0.015
	Se	77		**ug/L**		3747	0.003
	Se	82	**5.164**	**ug/L**	5.021	382	0.001
	Kr	83		**ug/L**		101	-0.000
	Sr	88	**10.592**	**ug/L**	1.303	98243	0.495
	Y	89		**ug/L**		50	0.000
	Mo	98	**0.491**	**ug/L**	1.727	1355	0.006
	Ag	107	**1.055**	**ug/L**	2.489	4613	0.023
	Cd	111	**0.980**	**ug/L**	5.107	1104	0.005
	Cd	114		**ug/L**		2637	0.013
>	In	115		**ug/L**		197312	197311.825
	Sn	120	**5.124**	**ug/L**	2.785	22851	0.115
	Sb	121	**3.064**	**ug/L**	2.326	12003	0.060
	Sb	123		**ug/L**		9487	0.047
	Ba	135		**ug/L**		2347	0.006
	Ba	137	**2.029**	**ug/L**	1.920	4245	0.011
	Ho	165		**ug/L**		53	-0.000
>	Lu	175		**ug/L**		387527	387527.482
	Tl	205	**1.156**	**ug/L**	3.030	18513	0.042
	Pb	208	**2.132**	**ug/L**	1.006	50914	0.127
	Bi	209		**ug/L**		135	-0.000
	Th	232	**1.235**	**ug/L**	1.212	33010	0.082
	U	238	**0.146**	**ug/L**	1.530	8408	0.010

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	106.416				
	Be	9	98.158				
	B	11	113.844				
	Na	23	114.925				
	Mg	24	99.302				
	Al	27	126.865				
	P	31	130.038				
	K	39	104.898				
	Ca	43	102.632				
>	Sc	45		100.9			
	Ti	47	86.155				
	V	51	99.144				
	Cr	52	103.622				
	Cr	53					
	Mn	55	107.769				
	Fe	57	110.456				
	Co	59	103.562				
	Ni	60	105.994				
	Cu	63					
	Cu	65	109.537				
	Zn	66	102.082				
	Zn	67					
	Zn	68					
>	Ge	74		101.3			
	As	75	108.253				
	Se	77					
	Se	82	103.284				
	Kr	83					
	Sr	88	105.921				
	Y	89					
	Mo	98	98.189				
	Ag	107	105.469				
	Cd	111	97.951				
	Cd	114					
>	In	115		101.4			
	Sn	120	102.487				
	Sb	121	102.143				
	Sb	123					
	Ba	135					
	Ba	137	101.436				
	Ho	165					
>	Lu	175		100.0			
	Tl	205	115.614				
	Pb	208	106.623				
	Bi	209					
	Th	232	123.539				
	U	238	72.848				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	P	31	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Sunday, July 05, 2009 23:45:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 4.172

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.120**	ug/L	19.723	347	0.000
	Be	9	**0.066**	ug/L	45.176	49	0.000
	B	11	**1.501**	ug/L	11.764	1200	0.001
	Na	23	**102586.161**	ug/L	2.475	287460682	542.100
	Mg	24	**104890.192**	ug/L	5.078	203773360	384.289
	Al	27	**102796.009**	ug/L	3.145	270315386	509.715
	P	31	**111779.636**	ug/L	1.458	17622457	33.227
	K	39	**93488.893**	ug/L	3.982	310984217	585.839
	Ca	43	**99307.297**	ug/L	0.828	732588	1.381
>	Sc	45		ug/L		530248	530248.230
	Ti	47	**1796.926**	ug/L	1.423	701165	1.322
	V	51	**0.228**	ug/L	234.032	6102	0.002
	Cr	52	**2.721**	ug/L	3.318	10233	0.018
	Cr	53		ug/L		49985	0.004
	Mn	55	**6.200**	ug/L	2.212	34885	0.064
	Fe	57	**94936.253**	ug/L	0.605	9961430	18.779
	Co	59	**0.377**	ug/L	5.728	1736	0.003
	Ni	60	**2.938**	ug/L	2.876	2752	0.005
	Cu	63		ug/L		5039	0.009
	Cu	65	**2.982**	ug/L	2.908	3460	0.006
	Zn	66	**3.768**	ug/L	0.183	3221	0.010
	Zn	67		ug/L		10089	0.006
	Zn	68		ug/L		1633	0.002
>	Ge	74		ug/L		304460	304459.695
	As	75	**0.918**	ug/L	60.182	339	0.003
	Se	77		ug/L		4940	0.006
	Se	82	**-1.041**	ug/L	13.252	-111	-0.000
	Kr	83		ug/L		246	0.000
	Sr	88	**1.370**	ug/L	1.164	12462	0.064
	Y	89		ug/L		388	0.002
	Mo	98	**2078.249**	ug/L	1.747	4897849	26.364
	Ag	107	**0.061**	ug/L	14.165	333	0.001
	Cd	111	**0.463**	ug/L	30.449	510	0.003
	Cd	114		ug/L		5938	0.032
>	In	115		ug/L		185786	185786.364
	Sn	120	**0.208**	ug/L	5.258	1077	0.005
	Sb	121	**0.069**	ug/L	7.902	377	0.001
	Sb	123		ug/L		288	0.001
	Ba	135		ug/L		896	0.002
	Ba	137	**0.732**	ug/L	1.308	1469	0.004
	Ho	165		ug/L		922	0.002
>	Lu	175		ug/L		357420	357420.218
	Tl	205	**0.033**	ug/L	21.556	2380	0.001
	Pb	208	**0.185**	ug/L	2.924	5631	0.011
	Bi	209		ug/L		871	0.002
	Th	232	**0.050**	ug/L	40.271	2287	0.003
	U	238	**0.130**	ug/L	1.613	7365	0.009

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	102.586				
	Mg	24	104.890				
	Al	27	102.796				
	P	31	111.780				
	K	39	93.489				
	Ca	43	99.307				
>	Sc	45			100.7		
	Ti	47	89.846				
	V	51					
	Cr	52	73.548				
	Cr	53					
	Mn	55	106.893				
	Fe	57	94.936				
	Co	59	150.656				
	Ni	60	108.817				
	Cu	63					
	Cu	65	102.816				
	Zn	66	104.671				
	Zn	67					
	Zn	68					
>	Ge	74			103.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	114.149				
	Y	89					
	Mo	98	103.912				
	Ag	107					
	Cd	111	115.702				
	Cd	114					
>	In	115			95.4		
	Sn	120					
	Sb	121	68.795				
	Sb	123					
	Ba	135					
	Ba	137	109.218				
	Ho	165					
>	Lu	175			92.3		
	Tl	205					
	Pb	208	92.433				
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Sunday, July 05, 2009 23:51:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 5.173

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**19.926**	**ug/L**	0.351	37810	0.071
	Be	9	**19.204**	**ug/L**	3.425	8058	0.015
	B	11	**19.404**	**ug/L**	2.558	7174	0.012
	Na	23	**99478.248**	**ug/L**	2.627	279502191	525.677
	Mg	24	**102834.332**	**ug/L**	6.342	200090709	376.757
	Al	27	**101936.310**	**ug/L**	5.828	268452427	505.452
	P	31	**110537.629**	**ug/L**	2.109	17466198	32.858
	K	39	**91401.675**	**ug/L**	1.612	304772298	572.760
	Ca	43	**97669.432**	**ug/L**	2.192	722028	1.358
>	Sc	45		**ug/L**		531552	531552.390
	Ti	47	**1766.462**	**ug/L**	1.274	690878	1.300
	V	51	**20.581**	**ug/L**	3.863	99676	0.178
	Cr	52	**22.970**	**ug/L**	2.194	80857	0.151
	Cr	53		**ug/L**		58639	0.020
	Mn	55	**26.651**	**ug/L**	3.464	146697	0.274
	Fe	57	**93101.794**	**ug/L**	3.443	9787439	18.416
	Co	59	**20.913**	**ug/L**	2.382	86167	0.162
	Ni	60	**21.867**	**ug/L**	3.356	20031	0.038
	Cu	63		**ug/L**		46833	0.087
	Cu	65	**21.560**	**ug/L**	1.336	23970	0.045
	Zn	66	**21.806**	**ug/L**	3.721	17217	0.055
	Zn	67		**ug/L**		12809	0.015
	Zn	68		**ug/L**		12535	0.038
>	Ge	74		**ug/L**		306073	306073.317
	As	75	**20.221**	**ug/L**	1.471	16648	0.056
	Se	77		**ug/L**		6194	0.010
	Se	82	**19.172**	**ug/L**	3.803	1530	0.005
	Kr	83		**ug/L**		258	0.000
	Sr	88	**24.391**	**ug/L**	2.082	214688	1.140
	Y	89		**ug/L**		385	0.002
	Mo	98	**2040.477**	**ug/L**	1.837	4863789	25.885
	Ag	107	**19.921**	**ug/L**	2.251	81419	0.433
	Cd	111	**19.804**	**ug/L**	2.979	20561	0.109
	Cd	114		**ug/L**		52952	0.281
>	In	115		**ug/L**		187919	187919.410
	Sn	120	**21.031**	**ug/L**	1.966	88653	0.471
	Sb	121	**21.320**	**ug/L**	2.370	78789	0.419
	Sb	123		**ug/L**		61112	0.325
	Ba	135		**ug/L**		23378	0.065
	Ba	137	**21.812**	**ug/L**	1.674	41560	0.115
	Ho	165		**ug/L**		946	0.002
>	Lu	175		**ug/L**		360338	360338.296
	Tl	205	**20.591**	**ug/L**	1.083	273587	0.754
	Pb	208	**21.071**	**ug/L**	1.701	452418	1.251
	Bi	209		**ug/L**		939	0.002
	Th	232	**24.263**	**ug/L**	1.150	582167	1.613
	U	238	**25.392**	**ug/L**	2.667	634856	1.751

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	99.628				
	Be	9	96.018				
	B	11	97.022				
	Na	23	99.478				
	Mg	24	102.834				
	Al	27	101.936				
	P	31	110.538				
	K	39	91.402				
	Ca	43	97.669				
>	Sc	45		101.0			
	Ti	47	88.323				
	V	51	102.906				
	Cr	52	96.919				
	Cr	53					
	Mn	55	103.299				
	Fe	57	93.102				
	Co	59	103.276				
	Ni	60	96.332				
	Cu	63					
	Cu	65	94.150				
	Zn	66	92.400				
	Zn	67					
	Zn	68					
>	Ge	74		103.8			
	As	75	101.104				
	Se	77					
	Se	82	95.862				
	Kr	83					
	Sr	88	115.054				
	Y	89					
	Mo	98	102.024				
	Ag	107	99.607				
	Cd	111	97.081				
	Cd	114					
>	In	115		96.5			
	Sn	120	105.155				
	Sb	121	106.070				
	Sb	123					
	Ba	135					
	Ba	137	105.524				
	Ho	165					
>	Lu	175		93.0			
	Tl	205	102.953				
	Pb	208	104.314				
	Bi	209					
	Th	232	121.316				
	U	238	126.958				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Th	232	ICSAB is out of limits
QC Std 5	U	238	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Sunday, July 05, 2009 23:57:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 6.174

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.280**	ug/L	1.398	100530	0.179
	Be	9	**50.542**	ug/L	3.112	22357	0.040
	B	11	**103.106**	ug/L	3.443	37066	0.065
	Na	23	**4917.236**	ug/L	7.540	14596369	25.984
	Mg	24	**5134.714**	ug/L	2.742	10568441	18.812
	Al	27	**5249.264**	ug/L	4.626	14612587	26.029
	P	31	**5169.008**	ug/L	2.899	866480	1.536
	K	39	**4612.078**	ug/L	4.792	16630837	28.901
	Ca	43	**4922.693**	ug/L	1.438	38712	0.068
>	Sc	45		ug/L		561254	561254.117
	Ti	47	**49.697**	ug/L	2.645	20751	0.037
	V	51	**49.503**	ug/L	3.429	245682	0.428
	Cr	52	**50.439**	ug/L	3.038	186474	0.331
	Cr	53		ug/L		68560	0.032
	Mn	55	**48.452**	ug/L	2.486	280718	0.498
	Fe	57	**5116.982**	ug/L	3.346	572034	1.012
	Co	59	**51.056**	ug/L	1.822	221847	0.395
	Ni	60	**51.786**	ug/L	2.626	49988	0.089
	Cu	63		ug/L		114138	0.203
	Cu	65	**48.641**	ug/L	1.687	56861	0.101
	Zn	66	**49.583**	ug/L	2.155	40240	0.126
	Zn	67		ug/L		14985	0.020
	Zn	68		ug/L		30686	0.093
>	Ge	74		ug/L		317710	317709.650
	As	75	**49.127**	ug/L	1.023	42620	0.136
	Se	77		ug/L		5731	0.008
	Se	82	**50.190**	ug/L	0.906	4202	0.013
	Kr	83		ug/L		86	-0.000
	Sr	88	**49.992**	ug/L	2.829	482839	2.336
	Y	89		ug/L		77	0.000
	Mo	98	**47.636**	ug/L	2.334	124899	0.604
	Ag	107	**49.571**	ug/L	2.061	222505	1.077
	Cd	111	**50.696**	ug/L	2.319	57777	0.280
	Cd	114		ug/L		138122	0.669
>	In	115		ug/L		206523	206522.596
	Sn	120	**48.881**	ug/L	0.657	226155	1.094
	Sb	121	**49.970**	ug/L	2.377	202735	0.981
	Sb	123		ug/L		158858	0.769
	Ba	135		ug/L		58705	0.145
	Ba	137	**48.770**	ug/L	0.707	104290	0.257
	Ho	165		ug/L		93	0.000
>	Lu	175		ug/L		404807	404806.838
	Tl	205	**49.521**	ug/L	2.070	736088	1.813
	Pb	208	**51.341**	ug/L	1.387	1235718	3.048
	Bi	209		ug/L		422	0.001
	Th	232	**52.410**	ug/L	1.658	1411320	3.484
	U	238	**54.395**	ug/L	0.164	1522928	3.750

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	100.561				
	Be	9	101.084				
	B	11	103.106				
	Na	23	98.345				
	Mg	24	102.694				
	Al	27	103.946				
	P	31	103.380				
	K	39	92.242				
	Ca	43	98.454				
>	Sc	45		106.6			
	Ti	47	99.393				
	V	51	99.006				
	Cr	52	100.878				
	Cr	53					
	Mn	55	96.904				
	Fe	57	102.340				
	Co	59	102.112				
	Ni	60	103.571				
	Cu	63					
	Cu	65	97.282				
	Zn	66	99.166				
	Zn	67					
	Zn	68					
>	Ge	74		107.8			
	As	75	98.253				
	Se	77					
	Se	82	100.379				
	Kr	83					
	Sr	88	99.985				
	Y	89					
	Mo	98	95.273				
	Ag	107	99.143				
	Cd	111	101.391				
	Cd	114					
>	In	115		106.1			
	Sn	120	97.761				
	Sb	121	99.939				
	Sb	123					
	Ba	135					
	Ba	137	97.540				
	Ho	165					
>	Lu	175		104.5			
	Tl	205	99.043				
	Pb	208	102.682				
	Bi	209					
	Th	232	104.820				
	U	238	108.790				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, July 06, 2009 00:03:48
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 7.175

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.011**	ug/L	40.733	151	0.000
	Be	9	**0.008**	ug/L	57.193	26	0.000
	B	11	**3.143**	ug/L	16.087	1873	0.002
	Na	23	**7.636**	ug/L	19.480	42397	0.040
	Mg	24	**2.255**	ug/L	109.339	13340	0.008
	Al	27	**4.245**	ug/L	47.862	21684	0.021
	P	31	**2.401**	ug/L	34.808	4976	0.001
	K	39	**0.929**	ug/L	465.243	431423	0.006
	Ca	43	**-3.838**	ug/L	65.956	271	-0.000
>	Sc	45		ug/L		568549	568548.718
	Ti	47	**-0.048**	ug/L	48.904	222	-0.000
	V	51	**0.177**	ug/L	170.827	6294	0.002
	Cr	52	**-0.082**	ug/L	41.917	515	-0.001
	Cr	53		ug/L		46199	-0.009
	Mn	55	**-0.033**	ug/L	30.843	963	-0.000
	Fe	57	**3.545**	ug/L	11.681	4699	0.001
	Co	59	**0.008**	ug/L	11.690	241	0.000
	Ni	60	**0.017**	ug/L	19.849	99	0.000
	Cu	63		ug/L		328	-0.000
	Cu	65	**-0.001**	ug/L	951.158	190	-0.000
	Zn	66	**-0.021**	ug/L	55.759	313	-0.000
	Zn	67		ug/L		8178	-0.001
	Zn	68		ug/L		965	-0.000
>	Ge	74		ug/L		319233	319232.998
	As	75	**0.346**	ug/L	47.467	-148	0.001
	Se	77		ug/L		2462	-0.002
	Se	82	**0.382**	ug/L	30.151	4	0.000
	Kr	83		ug/L		83	-0.000
	Sr	88	**0.004**	ug/L	127.994	675	0.000
	Y	89		ug/L		51	0.000
	Mo	98	**0.117**	ug/L	8.096	435	0.001
	Ag	107	**0.005**	ug/L	43.602	116	0.000
	Cd	111	**0.009**	ug/L	106.674	50	0.000
	Cd	114		ug/L		108	0.000
>	In	115		ug/L		205227	205227.459
	Sn	120	**0.024**	ug/L	15.603	347	0.001
	Sb	121	**0.038**	ug/L	18.798	293	0.001
	Sb	123		ug/L		234	0.001
	Ba	135		ug/L		66	0.000
	Ba	137	**0.010**	ug/L	52.861	119	0.000
	Ho	165		ug/L		59	0.000
>	Lu	175		ug/L		393502	393502.276
	Tl	205	**0.322**	ug/L	25.687	6795	0.012
	Pb	208	**0.007**	ug/L	43.605	2032	0.000
	Bi	209		ug/L		145	-0.000
	Th	232	**0.086**	ug/L	21.957	3453	0.006
	U	238	**0.009**	ug/L	20.695	4824	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		108.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		108.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		101.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Monday, July 06, 2009 00:09:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 10.176

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**916.907**	ug/L	0.393	1798166	3.263
	Be	9	**977.351**	ug/L	0.551	424276	0.770
	B	11	**1.186**	ug/L	6.526	1138	0.001
	Na	23	**51435.893**	ug/L	1.507	149778794	271.805
	Mg	24	**54536.711**	ug/L	1.848	110128804	199.808
	Al	27	**54391.340**	ug/L	5.359	148664148	269.700
	P	31	**28364.184**	ug/L	1.243	4650670	8.431
	K	39	**46877.513**	ug/L	2.266	162286395	293.753
	Ca	43	**50037.842**	ug/L	0.180	383742	0.696
>	Sc	45		ug/L		551037	551037.485
	Ti	47	**40.355**	ug/L	1.452	16595	0.030
	V	51	**878.372**	ug/L	1.790	4193263	7.601
	Cr	52	**914.485**	ug/L	0.849	3307100	6.000
	Cr	53		ug/L		478142	0.777
	Mn	55	**907.617**	ug/L	0.955	5145349	9.335
	Fe	57	**47115.092**	ug/L	1.507	5139633	9.320
	Co	59	**869.169**	ug/L	1.768	3706170	6.725
	Ni	60	**906.404**	ug/L	0.601	857960	1.557
	Cu	63		ug/L		1864169	3.382
	Cu	65	**879.413**	ug/L	0.802	1006492	1.826
	Zn	66	**1997.669**	ug/L	2.272	1596720	5.061
	Zn	67		ug/L		304440	0.939
	Zn	68		ug/L		1282144	4.062
>	Ge	74		ug/L		315444	315444.258
	As	75	**903.449**	ug/L	0.393	785939	2.493
	Se	77		ug/L		34282	0.099
	Se	82	**474.905**	ug/L	0.857	39713	0.126
	Kr	83		ug/L		186	0.000
	Sr	88	**982.854**	ug/L	1.586	8958181	45.919
	Y	89		ug/L		464	0.002
	Mo	98	**1045.099**	ug/L	2.963	2586023	13.258
	Ag	107	**239.945**	ug/L	2.771	1016993	5.214
	Cd	111	**926.412**	ug/L	1.531	996887	5.110
	Cd	114		ug/L		2406351	12.337
>	In	115		ug/L		195113	195112.689
	Sn	120	**980.244**	ug/L	1.652	4280397	21.939
	Sb	121	**240.726**	ug/L	2.136	922138	4.727
	Sb	123		ug/L		734753	3.766
	Ba	135		ug/L		2802105	7.402
	Ba	137	**2513.858**	ug/L	1.510	5021814	13.266
	Ho	165		ug/L		393	0.001
>	Lu	175		ug/L		378546	378545.585
	Tl	205	**465.642**	ug/L	0.916	6455354	17.048
	Pb	208	**4814.278**	ug/L	1.052	108194442	285.817
	Bi	209		ug/L		19657	0.051
	Th	232	**2611.970**	ug/L	1.447	65720447	173.614
	U	238	**5544.172**	ug/L	2.019	144701413	382.261

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	91.691				
	Be	9	97.735				
	B	11					
	Na	23	102.872				
	Mg	24	109.073				
	Al	27	108.783				
	P	31	113.457				
	K	39	93.755				
	Ca	43	100.076				
>	Sc	45		104.7			
	Ti	47					
	V	51	87.837				
	Cr	52	91.448				
	Cr	53					
	Mn	55	90.762				
	Fe	57	94.230				
	Co	59	86.917				
	Ni	60	90.640				
	Cu	63					
	Cu	65	87.941				
	Zn	66	79.907				
	Zn	67					
	Zn	68					
>	Ge	74		107.0			
	As	75	90.345				
	Se	77					
	Se	82	94.981				
	Kr	83					
	Sr	88	98.285				
	Y	89					
	Mo	98	104.510				
	Ag	107	95.978				
	Cd	111	92.641				
	Cd	114					
>	In	115		100.2			
	Sn	120	98.024				
	Sb	121	96.290				
	Sb	123					
	Ba	135					
	Ba	137	100.554				
	Ho	165					
>	Lu	175		97.7			
	Tl	205	93.128				
	Pb	208	96.286				
	Bi	209					
	Th	232	104.479				
	U	238	110.883				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	P	31	LRS is out of limits (+/- 10%)
QC Std 10	V	51	LRS is out of limits (+/- 10%)
QC Std 10	Co	59	LRS is out of limits (+/- 10%)
QC Std 10	Cu	65	LRS is out of limits (+/- 10%)
QC Std 10	Zn	66	LRS is out of limits (+/- 10%)
QC Std 10	U	238	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Monday, July 06, 2009 00:15:58
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 11.177

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**47.317**	ug/L	0.755	99744	0.168
	Be	9	**49.660**	ug/L	0.307	23164	0.039
	B	11	**103.686**	ug/L	2.338	39272	0.065
	Na	23	**4696.915**	ug/L	1.814	14700824	24.820
	Mg	24	**5231.187**	ug/L	2.863	11343881	19.166
	Al	27	**5380.953**	ug/L	2.463	15791490	26.681
	P	31	**5164.257**	ug/L	2.348	912660	1.535
	K	39	**4568.477**	ug/L	2.539	17376995	28.628
	Ca	43	**4980.994**	ug/L	1.903	41285	0.069
>	Sc	45		ug/L		591532	591532.346
	Ti	47	**48.824**	ug/L	1.655	21498	0.036
	V	51	**49.806**	ug/L	2.794	260526	0.431
	Cr	52	**50.289**	ug/L	1.543	196014	0.330
	Cr	53		ug/L		70184	0.028
	Mn	55	**48.293**	ug/L	1.787	294971	0.497
	Fe	57	**5071.935**	ug/L	4.074	597780	1.003
	Co	59	**50.572**	ug/L	1.308	231644	0.391
	Ni	60	**50.686**	ug/L	1.897	51579	0.087
	Cu	63		ug/L		116586	0.196
	Cu	65	**47.337**	ug/L	1.356	58338	0.098
	Zn	66	**49.136**	ug/L	0.815	42232	0.124
	Zn	67		ug/L		15843	0.020
	Zn	68		ug/L		32708	0.094
>	Ge	74		ug/L		336476	336476.210
	As	75	**48.414**	ug/L	1.264	44472	0.134
	Se	77		ug/L		5780	0.007
	Se	82	**48.708**	ug/L	1.081	4318	0.013
	Kr	83		ug/L		95	-0.000
	Sr	88	**51.385**	ug/L	1.354	504526	2.401
	Y	89		ug/L		86	0.000
	Mo	98	**48.813**	ug/L	1.594	130103	0.619
	Ag	107	**49.579**	ug/L	1.750	226212	1.077
	Cd	111	**50.801**	ug/L	2.792	58851	0.280
	Cd	114		ug/L		139980	0.666
>	In	115		ug/L		209905	209904.563
	Sn	120	**49.432**	ug/L	1.665	232450	1.106
	Sb	121	**50.524**	ug/L	2.319	208355	0.992
	Sb	123		ug/L		164511	0.783
	Ba	135		ug/L		60726	0.152
	Ba	137	**51.562**	ug/L	0.859	108732	0.272
	Ho	165		ug/L		100	0.000
>	Lu	175		ug/L		399218	399217.783
	Tl	205	**51.352**	ug/L	1.784	752688	1.880
	Pb	208	**51.553**	ug/L	2.961	1223558	3.061
	Bi	209		ug/L		405	0.001
	Th	232	**53.163**	ug/L	0.965	1411853	3.534
	U	238	**55.690**	ug/L	1.650	1537452	3.840

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	94.634				
	Be	9	99.320				
	B	11	103.686				
	Na	23	93.938				
	Mg	24	104.624				
	Al	27	106.554				
	P	31	103.285				
	K	39	91.370				
	Ca	43	99.620				
>	Sc	45		112.4			
	Ti	47	97.648				
	V	51	99.612				
	Cr	52	100.577				
	Cr	53					
	Mn	55	96.586				
	Fe	57	101.439				
	Co	59	101.143				
	Ni	60	101.372				
	Cu	63					
	Cu	65	94.673				
	Zn	66	98.271				
	Zn	67					
	Zn	68					
>	Ge	74		114.1			
	As	75	96.827				
	Se	77					
	Se	82	97.416				
	Kr	83					
	Sr	88	102.769				
	Y	89					
	Mo	98	97.626				
	Ag	107	99.158				
	Cd	111	101.603				
	Cd	114					
>	In	115		107.8			
	Sn	120	98.863				
	Sb	121	101.047				
	Sb	123					
	Ba	135					
	Ba	137	103.123				
	Ho	165					
>	Lu	175		103.0			
	Tl	205	102.704				
	Pb	208	103.105				
	Bi	209					
	Th	232	106.326				
	U	238	111.380				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Monday, July 06, 2009 00:22:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 12.178

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.055**	ug/L	1.927	250	0.000
	Be	9	**0.026**	ug/L	44.084	36	0.000
	B	11	**2.974**	ug/L	23.073	1884	0.002
	Na	23	**2.807**	ug/L	97.509	29031	0.015
	Mg	24	**0.621**	ug/L	342.216	10338	0.002
	Al	27	**0.991**	ug/L	38.471	13006	0.005
	P	31	**-0.095**	ug/L	1432.555	4733	-0.000
	K	39	**-0.689**	ug/L	733.197	442418	-0.004
	Ca	43	**-3.346**	ug/L	67.726	286	-0.000
>	Sc	45		ug/L		591090	591089.837
	Ti	47	**-0.068**	ug/L	68.450	222	-0.000
	V	51	**0.130**	ug/L	144.502	6307	0.001
	Cr	52	**-0.123**	ug/L	16.897	375	-0.001
	Cr	53		ug/L		45956	-0.013
	Mn	55	**-0.005**	ug/L	90.412	1173	-0.000
	Fe	57	**0.890**	ug/L	118.941	4576	0.000
	Co	59	**0.045**	ug/L	11.101	419	0.000
	Ni	60	**0.048**	ug/L	7.753	134	0.000
	Cu	63		ug/L		444	-0.000
	Cu	65	**0.016**	ug/L	69.443	217	0.000
	Zn	66	**0.021**	ug/L	173.542	359	0.000
	Zn	67		ug/L		8446	-0.001
	Zn	68		ug/L		1001	-0.000
>	Ge	74		ug/L		330188	330188.244
	As	75	**0.557**	ug/L	38.433	40	0.002
	Se	77		ug/L		2417	-0.003
	Se	82	**0.182**	ug/L	19.212	-13	0.000
	Kr	83		ug/L		92	-0.000
	Sr	88	**0.020**	ug/L	8.808	840	0.001
	Y	89		ug/L		46	-0.000
	Mo	98	**0.115**	ug/L	19.994	436	0.001
	Ag	107	**0.010**	ug/L	8.800	144	0.000
	Cd	111	**0.017**	ug/L	16.534	59	0.000
	Cd	114		ug/L		147	0.000
>	In	115		ug/L		208671	208670.779
	Sn	120	**0.091**	ug/L	16.189	664	0.002
	Sb	121	**0.274**	ug/L	11.352	1262	0.005
	Sb	123		ug/L		1043	0.004
	Ba	135		ug/L		124	0.000
	Ba	137	**0.055**	ug/L	13.765	214	0.000
	Ho	165		ug/L		53	-0.000
>	Lu	175		ug/L		396548	396547.760
	Tl	205	**0.564**	ug/L	13.847	10369	0.021
	Pb	208	**0.086**	ug/L	16.457	3913	0.005
	Bi	209		ug/L		156	-0.000
	Th	232	**0.147**	ug/L	4.312	5093	0.010
	U	238	**0.091**	ug/L	16.546	7088	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		112.3			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		112.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		107.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		102.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201871718
Sample Date/Time: Monday, July 06, 2009 00:28:13
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\1201871718.179

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.011**	ug/L	137.389	155	0.000
	Be	9	**0.008**	ug/L	270.546	27	0.000
	B	11	**1.125**	ug/L	28.170	1180	0.001
	Na	23	**3.378**	ug/L	7.932	30366	0.018
	Mg	24	**1.027**	ug/L	209.629	11005	0.004
	Al	27	**5.124**	ug/L	47.161	24689	0.025
	P	31	**27.344**	ug/L	11.045	9421	0.008
	K	39	**-5.952**	ug/L	27.335	417347	-0.037
	Ca	43	**0.783**	ug/L	432.621	315	0.000
>	Sc	45		ug/L		583045	583045.376
	Ti	47	**0.203**	ug/L	49.213	335	0.000
	V	51	**-0.108**	ug/L	216.106	5007	-0.001
	Cr	52	**0.287**	ug/L	3.957	1938	0.002
	Cr	53		ug/L		38214	-0.025
	Mn	55	**0.231**	ug/L	2.537	2567	0.002
	Fe	57	**24.421**	ug/L	1.757	7227	0.005
	Co	59	**0.029**	ug/L	53.053	339	0.000
	Ni	60	**0.112**	ug/L	10.003	196	0.000
	Cu	63		ug/L		980	0.001
	Cu	65	**0.241**	ug/L	14.569	486	0.000
	Zn	66	**0.765**	ug/L	8.661	970	0.002
	Zn	67		ug/L		7263	-0.004
	Zn	68		ug/L		1381	0.001
>	Ge	74		ug/L		326591	326590.715
	As	75	**0.505**	ug/L	7.948	-8	0.001
	Se	77		ug/L		1829	-0.004
	Se	82	**0.459**	ug/L	51.178	11	0.000
	Kr	83		ug/L		92	-0.000
	Sr	88	**0.033**	ug/L	36.809	981	0.002
	Y	89		ug/L		65	0.000
	Mo	98	**0.121**	ug/L	26.368	459	0.002
	Ag	107	**-0.008**	ug/L	36.504	61	-0.000
	Cd	111	**0.007**	ug/L	207.786	49	0.000
	Cd	114		ug/L		96	0.000
>	In	115		ug/L		211131	211131.353
	Sn	120	**0.116**	ug/L	7.570	792	0.003
	Sb	121	**0.056**	ug/L	21.169	375	0.001
	Sb	123		ug/L		308	0.001
	Ba	135		ug/L		136	0.000
	Ba	137	**0.061**	ug/L	45.431	234	0.000
	Ho	165		ug/L		63	0.000
>	Lu	175		ug/L		411750	411750.205
	Tl	205	**0.232**	ug/L	10.440	5729	0.008
	Pb	208	**0.165**	ug/L	20.999	5992	0.010
	Bi	209		ug/L		149	-0.000
	Th	232	**0.196**	ug/L	44.594	6609	0.013
	U	238	**-0.029**	ug/L	260.960	3950	-0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		110.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		110.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		108.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		106.3			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201871719
Sample Date/Time: Monday, July 06, 2009 00:34:22
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881360|40|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\1201871719.180

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**1.846**	ug/L	2.288	4114	0.007
	Be	9	**22.844**	ug/L	0.925	10918	0.018
	B	11	**35.213**	ug/L	4.627	14178	0.022
	Na	23	**176.833**	ug/L	14.050	586254	0.934
	Mg	24	**807.808**	ug/L	5.938	1800616	2.960
	Al	27	**2409.271**	ug/L	5.316	7242254	11.946
	P	31	**214.498**	ug/L	1.884	43466	0.064
	K	39	**566.704**	ug/L	2.077	2605488	3.551
	Ca	43	**942.118**	ug/L	2.470	8253	0.013
>	Sc	45		ug/L		605362	605362.109
	Ti	47	**65.588**	ug/L	1.392	29467	0.048
	V	51	**32.315**	ug/L	1.927	175045	0.280
	Cr	52	**17.367**	ug/L	0.674	69855	0.114
	Cr	53		ug/L		54477	-0.000
	Mn	55	**91.733**	ug/L	0.644	572367	0.943
	Fe	57	**2650.747**	ug/L	0.923	321988	0.524
	Co	59	**21.651**	ug/L	1.415	101624	0.168
	Ni	60	**26.037**	ug/L	2.144	27161	0.045
	Cu	63		ug/L		63840	0.105
	Cu	65	**25.068**	ug/L	2.007	31713	0.052
	Zn	66	**51.540**	ug/L	1.354	44346	0.131
	Zn	67		ug/L		15813	0.020
	Zn	68		ug/L		35461	0.102
>	Ge	74		ug/L		336975	336974.691
	As	75	**65.059**	ug/L	1.622	60018	0.180
	Se	77		ug/L		5649	0.007
	Se	82	**46.756**	ug/L	2.084	4150	0.012
	Kr	83		ug/L		109	-0.000
	Sr	88	**44.377**	ug/L	0.661	437749	2.073
	Y	89		ug/L		40000	0.190
	Mo	98	**21.157**	ug/L	1.699	56717	0.268
	Ag	107	**5.756**	ug/L	1.641	26464	0.125
	Cd	111	**31.461**	ug/L	1.493	36626	0.174
	Cd	114		ug/L		86621	0.410
>	In	115		ug/L		210835	210834.903
	Sn	120	**9.775**	ug/L	1.223	46365	0.219
	Sb	121	**8.252**	ug/L	1.600	34303	0.162
	Sb	123		ug/L		26824	0.127
	Ba	135		ug/L		155479	0.384
	Ba	137	**128.706**	ug/L	2.148	275050	0.679
	Ho	165		ug/L		3442	0.008
>	Lu	175		ug/L		404869	404868.770
	Tl	205	**57.219**	ug/L	1.853	850284	2.095
	Pb	208	**44.957**	ug/L	0.685	1082498	2.669
	Bi	209		ug/L		1804	0.004
	Th	232	**3.383**	ug/L	1.183	92289	0.225
	U	238	**0.434**	ug/L	2.391	16825	0.030

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		115.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		114.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		108.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		104.5			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504001
Sample Date/Time: Monday, July 06, 2009 00:40:31
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504001.181

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**31.298**	ug/L	1.941	69779	0.111
	Be	9	**2.422**	ug/L	4.830	1218	0.002
	B	11	**5.487**	ug/L	2.897	2980	0.003
	Na	23	**526.338**	ug/L	5.056	1760296	2.781
	Mg	24	**2908.425**	ug/L	2.661	6672065	10.656
	Al	27	**24034.452**	ug/L	8.389	74518370	119.175
	P	31	**293.150**	ug/L	0.344	59511	0.087
	K	39	**2200.574**	ug/L	3.123	9093425	13.790
	Ca	43	**4350.797**	ug/L	1.507	38165	0.061
>	Sc	45		ug/L		625255	625254.612
	Ti	47	**595.016**	ug/L	1.572	273960	0.438
	V	51	**26.032**	ug/L	1.461	146805	0.225
	Cr	52	**13.775**	ug/L	1.389	57415	0.090
	Cr	53		ug/L		40825	-0.025
	Mn	55	**798.934**	ug/L	1.188	5138994	8.217
	Fe	57	**23485.639**	ug/L	2.376	2909268	4.646
	Co	59	**4.771**	ug/L	1.429	23305	0.037
	Ni	60	**12.572**	ug/L	0.803	13593	0.022
	Cu	63		ug/L		40255	0.064
	Cu	65	**15.514**	ug/L	2.298	20353	0.032
	Zn	66	**107.829**	ug/L	0.234	88351	0.273
	Zn	67		ug/L		21032	0.039
	Zn	68		ug/L		68703	0.210
>	Ge	74		ug/L		322204	322204.313
	As	75	**6.453**	ug/L	1.367	5281	0.018
	Se	77		ug/L		1889	-0.004
	Se	82	**1.563**	ug/L	21.805	105	0.000
	Kr	83		ug/L		186	0.000
	Sr	88	**32.148**	ug/L	0.476	315205	1.502
	Y	89		ug/L		1008825	4.817
	Mo	98	**3.061**	ug/L	3.142	8265	0.039
	Ag	107	**0.249**	ug/L	1.634	1231	0.005
	Cd	111	**1.199**	ug/L	3.928	1426	0.007
	Cd	114		ug/L		545	0.002
>	In	115		ug/L		209436	209436.274
	Sn	120	**1.270**	ug/L	1.238	6194	0.028
	Sb	121	**0.260**	ug/L	3.871	1212	0.005
	Sb	123		ug/L		962	0.004
	Ba	135		ug/L		158701	0.364
	Ba	137	**122.198**	ug/L	1.498	281018	0.645
	Ho	165		ug/L		83823	0.192
>	Lu	175		ug/L		435638	435637.875
	Tl	205	**0.494**	ug/L	19.890	10236	0.018
	Pb	208	**26.804**	ug/L	0.747	695275	1.591
	Bi	209		ug/L		7818	0.018
	Th	232	**27.344**	ug/L	2.651	792937	1.817
	U	238	**3.513**	ug/L	1.738	110593	0.242

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		118.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		109.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		107.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		112.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201871720
Sample Date/Time: Monday, July 06, 2009 00:46:41
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\1201871720.182

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**30.845**	ug/L	0.210	65998	0.110
	Be	9	**2.471**	ug/L	5.545	1191	0.002
	B	11	**4.680**	ug/L	2.377	2555	0.003
	Na	23	**483.901**	ug/L	6.498	1555598	2.557
	Mg	24	**2919.109**	ug/L	6.408	6425459	10.695
	Al	27	**22602.685**	ug/L	5.526	67252829	112.076
	P	31	**256.427**	ug/L	4.217	50542	0.076
	K	39	**2310.375**	ug/L	3.961	9141956	14.478
	Ca	43	**4429.283**	ug/L	1.077	37276	0.062
>	Sc	45		ug/L		600020	600019.827
	Ti	47	**556.911**	ug/L	1.578	246072	0.410
	V	51	**25.247**	ug/L	1.824	136792	0.218
	Cr	52	**13.832**	ug/L	3.344	55303	0.091
	Cr	53		ug/L		38528	-0.026
	Mn	55	**673.110**	ug/L	1.969	4154711	6.923
	Fe	57	**23459.599**	ug/L	0.619	2788795	4.640
	Co	59	**4.411**	ug/L	1.360	20692	0.034
	Ni	60	**12.454**	ug/L	2.361	12919	0.021
	Cu	63		ug/L		37234	0.061
	Cu	65	**14.831**	ug/L	1.441	18677	0.031
	Zn	66	**103.967**	ug/L	1.896	81593	0.263
	Zn	67		ug/L		18996	0.035
	Zn	68		ug/L		63207	0.202
>	Ge	74		ug/L		308563	308562.774
	As	75	**5.946**	ug/L	2.470	4625	0.016
	Se	77		ug/L		1775	-0.004
	Se	82	**1.395**	ug/L	25.335	87	0.000
	Kr	83		ug/L		184	0.000
	Sr	88	**31.742**	ug/L	0.633	305670	1.483
	Y	89		ug/L		975410	4.742
	Mo	98	**2.566**	ug/L	2.366	6828	0.033
	Ag	107	**0.253**	ug/L	2.109	1227	0.005
	Cd	111	**1.170**	ug/L	8.238	1366	0.006
	Cd	114		ug/L		481	0.002
>	In	115		ug/L		205694	205694.316
	Sn	120	**1.125**	ug/L	4.536	5416	0.025
	Sb	121	**0.218**	ug/L	8.772	1020	0.004
	Sb	123		ug/L		839	0.003
	Ba	135		ug/L		151396	0.352
	Ba	137	**116.769**	ug/L	2.618	265152	0.616
	Ho	165		ug/L		83063	0.193
>	Lu	175		ug/L		430260	430259.999
	Tl	205	**0.257**	ug/L	8.044	6383	0.009
	Pb	208	**25.267**	ug/L	1.927	647326	1.500
	Bi	209		ug/L		8474	0.019
	Th	232	**26.953**	ug/L	2.143	771955	1.792
	U	238	**3.365**	ug/L	0.979	104845	0.232

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		114.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		104.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		111.1			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201871721
Sample Date/Time: Monday, July 06, 2009 00:52:52
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\1201871721.183

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.549**	ug/L	1.648	118535	0.198
	Be	9	**23.432**	ug/L	1.842	11078	0.018
	B	11	**46.720**	ug/L	3.298	18358	0.029
	Na	23	**1391.581**	ug/L	1.412	4424423	7.354
	Mg	24	**4317.227**	ug/L	2.333	9480635	15.817
	Al	27	**26841.306**	ug/L	1.508	79734656	133.093
	P	31	**1143.255**	ug/L	1.444	208324	0.340
	K	39	**3228.498**	ug/L	2.332	12569431	20.231
	Ca	43	**4852.772**	ug/L	2.311	40729	0.067
>	Sc	45		ug/L		598930	598930.192
	Ti	47	**686.625**	ug/L	0.354	302792	0.505
	V	51	**47.938**	ug/L	1.242	254167	0.415
	Cr	52	**36.141**	ug/L	0.526	142886	0.237
	Cr	53		ug/L		48369	-0.009
	Mn	55	**725.026**	ug/L	1.468	4467091	7.457
	Fe	57	**23749.917**	ug/L	1.489	2818212	4.698
	Co	59	**27.417**	ug/L	0.572	127266	0.212
	Ni	60	**33.857**	ug/L	3.004	34906	0.058
	Cu	63		ug/L		89094	0.148
	Cu	65	**35.622**	ug/L	1.759	44498	0.074
	Zn	66	**126.036**	ug/L	1.148	97877	0.319
	Zn	67		ug/L		21657	0.044
	Zn	68		ug/L		74915	0.242
>	Ge	74		ug/L		305573	305573.487
	As	75	**38.448**	ug/L	1.544	31981	0.106
	Se	77		ug/L		2306	-0.002
	Se	82	**8.185**	ug/L	4.149	636	0.002
	Kr	83		ug/L		191	0.000
	Sr	88	**51.843**	ug/L	0.358	507586	2.422
	Y	89		ug/L		867906	4.147
	Mo	98	**20.483**	ug/L	0.655	54518	0.260
	Ag	107	**19.113**	ug/L	0.763	87016	0.415
	Cd	111	**5.626**	ug/L	1.782	6535	0.031
	Cd	114		ug/L		12339	0.059
>	In	115		ug/L		209292	209291.869
	Sn	120	**14.615**	ug/L	1.111	68694	0.327
	Sb	121	**44.044**	ug/L	1.302	181132	0.865
	Sb	123		ug/L		142136	0.679
	Ba	135		ug/L		182042	0.422
	Ba	137	**141.893**	ug/L	0.693	323099	0.749
	Ho	165		ug/L		76740	0.178
>	Lu	175		ug/L		431330	431329.784
	Tl	205	**44.645**	ug/L	0.250	707359	1.634
	Pb	208	**107.244**	ug/L	1.605	2748179	6.367
	Bi	209		ug/L		7539	0.017
	Th	232	**48.026**	ug/L	1.288	1378237	3.192
	U	238	**29.759**	ug/L	1.290	890048	2.052

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		113.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		107.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		111.3			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201871723
Sample Date/Time: Monday, July 06, 2009 00:59:03
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\1201871723.184

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.256**	ug/L	1.450	106541	0.179
	Be	9	**23.487**	ug/L	0.939	11031	0.019
	B	11	**46.427**	ug/L	2.785	18122	0.029
	Na	23	**1355.369**	ug/L	9.780	4282663	7.162
	Mg	24	**3924.657**	ug/L	1.902	8562712	14.379
	Al	27	**27033.369**	ug/L	8.016	79734656	134.045
	P	31	**1046.619**	ug/L	1.949	189870	0.311
	K	39	**3125.580**	ug/L	2.444	12099290	19.586
	Ca	43	**4767.998**	ug/L	0.973	39766	0.066
>	Sc	45		ug/L		594942	594941.830
	Ti	47	**506.249**	ug/L	1.218	221820	0.372
	V	51	**46.948**	ug/L	1.884	247353	0.406
	Cr	52	**35.150**	ug/L	1.759	138063	0.231
	Cr	53		ug/L		47205	-0.011
	Mn	55	**557.912**	ug/L	0.810	3414918	5.738
	Fe	57	**22343.630**	ug/L	0.441	2633947	4.420
	Co	59	**25.253**	ug/L	1.568	116449	0.195
	Ni	60	**32.644**	ug/L	0.972	33442	0.056
	Cu	63		ug/L		83609	0.140
	Cu	65	**33.663**	ug/L	1.015	41784	0.070
	Zn	66	**114.661**	ug/L	1.882	88614	0.290
	Zn	67		ug/L		19838	0.039
	Zn	68		ug/L		67359	0.218
>	Ge	74		ug/L		304024	304023.676
	As	75	**38.959**	ug/L	1.311	32249	0.108
	Se	77		ug/L		2221	-0.003
	Se	82	**8.290**	ug/L	0.335	642	0.002
	Kr	83		ug/L		174	0.000
	Sr	88	**51.444**	ug/L	0.569	496913	2.403
	Y	89		ug/L		838396	4.060
	Mo	98	**19.379**	ug/L	0.870	50892	0.246
	Ag	107	**18.683**	ug/L	1.662	83926	0.406
	Cd	111	**5.529**	ug/L	1.247	6336	0.030
	Cd	114		ug/L		12170	0.058
>	In	115		ug/L		206485	206484.735
	Sn	120	**11.442**	ug/L	1.092	53115	0.256
	Sb	121	**38.801**	ug/L	0.499	157464	0.762
	Sb	123		ug/L		123912	0.600
	Ba	135		ug/L		162942	0.374
	Ba	137	**126.674**	ug/L	0.763	290916	0.668
	Ho	165		ug/L		72347	0.166
>	Lu	175		ug/L		435034	435033.897
	Tl	205	**43.775**	ug/L	0.740	699545	1.603
	Pb	208	**105.497**	ug/L	0.850	2726578	6.263
	Bi	209		ug/L		10043	0.023
	Th	232	**46.906**	ug/L	1.757	1357514	3.118
	U	238	**28.583**	ug/L	2.519	862218	1.971

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		113.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		106.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		112.3			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1201871722
Sample Date/Time: Monday, July 06, 2009 01:05:15
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881360|10|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\1201871722.185

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**6.770**	**ug/L**	1.225	13293	0.024
	Be	9	**0.484**	**ug/L**	6.123	230	0.000
	B	11	**2.224**	**ug/L**	19.144	1485	0.001
	Na	23	**108.764**	**ug/L**	10.123	332855	0.575
	Mg	24	**581.311**	**ug/L**	7.780	1172369	2.130
	Al	27	**4182.840**	**ug/L**	2.882	11346586	20.741
	P	31	**61.600**	**ug/L**	0.666	14403	0.018
	K	39	**458.734**	**ug/L**	1.923	1982963	2.875
	Ca	43	**842.619**	**ug/L**	2.124	6696	0.012
>	Sc	45		**ug/L**		546631	546630.939
	Ti	47	**119.347**	**ug/L**	1.250	48227	0.088
	V	51	**4.904**	**ug/L**	6.218	28410	0.042
	Cr	52	**2.807**	**ug/L**	0.172	10858	0.018
	Cr	53		**ug/L**		39287	-0.018
	Mn	55	**174.200**	**ug/L**	0.233	980480	1.792
	Fe	57	**5232.539**	**ug/L**	1.430	569896	1.035
	Co	59	**0.962**	**ug/L**	1.554	4264	0.007
	Ni	60	**2.647**	**ug/L**	0.951	2564	0.005
	Cu	63		**ug/L**		7636	0.013
	Cu	65	**3.321**	**ug/L**	1.248	3953	0.007
	Zn	66	**22.221**	**ug/L**	0.944	17172	0.056
	Zn	67		**ug/L**		9143	0.004
	Zn	68		**ug/L**		13399	0.042
>	Ge	74		**ug/L**		299545	299544.529
	As	75	**1.592**	**ug/L**	13.577	891	0.004
	Se	77		**ug/L**		2197	-0.003
	Se	82	**0.510**	**ug/L**	37.548	14	0.000
	Kr	83		**ug/L**		102	-0.000
	Sr	88	**5.680**	**ug/L**	1.095	54210	0.265
	Y	89		**ug/L**		181195	0.897
	Mo	98	**0.533**	**ug/L**	6.222	1495	0.007
	Ag	107	**0.036**	**ug/L**	8.606	253	0.001
	Cd	111	**0.198**	**ug/L**	12.736	259	0.001
	Cd	114		**ug/L**		112	0.000
>	In	115		**ug/L**		201967	201966.688
	Sn	120	**0.220**	**ug/L**	3.824	1227	0.005
	Sb	121	**0.062**	**ug/L**	1.120	382	0.001
	Sb	123		**ug/L**		339	0.001
	Ba	135		**ug/L**		28760	0.070
	Ba	137	**23.604**	**ug/L**	1.885	50853	0.125
	Ho	165		**ug/L**		15605	0.038
>	Lu	175		**ug/L**		407439	407438.952
	Tl	205	**0.283**	**ug/L**	22.892	6436	0.010
	Pb	208	**5.427**	**ug/L**	0.982	133225	0.322
	Bi	209		**ug/L**		1559	0.003
	Th	232	**5.630**	**ug/L**	0.702	153716	0.374
	U	238	**0.552**	**ug/L**	1.446	20269	0.038

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		103.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		105.2			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Monday, July 06, 2009 01:11:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 8.186

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.655**	**ug/L**	0.944	103219	0.187
	Be	9	**51.294**	**ug/L**	1.965	22250	0.040
	B	11	**100.671**	**ug/L**	3.751	35480	0.063
	Na	23	**4912.218**	**ug/L**	2.051	14297926	25.958
	Mg	24	**5353.221**	**ug/L**	6.473	10790387	19.613
	Al	27	**5415.545**	**ug/L**	4.731	14781417	26.853
	P	31	**5224.742**	**ug/L**	1.570	858862	1.553
	K	39	**4656.712**	**ug/L**	5.281	16464013	29.181
	Ca	43	**5034.621**	**ug/L**	3.172	38824	0.070
>	Sc	45		**ug/L**		550247	550246.821
	Ti	47	**49.627**	**ug/L**	0.719	20325	0.037
	V	51	**50.207**	**ug/L**	3.147	244200	0.434
	Cr	52	**51.169**	**ug/L**	1.266	185500	0.336
	Cr	53		**ug/L**		64007	0.026
	Mn	55	**48.795**	**ug/L**	0.180	277266	0.502
	Fe	57	**5135.880**	**ug/L**	2.037	563000	1.016
	Co	59	**52.148**	**ug/L**	1.718	222157	0.403
	Ni	60	**52.672**	**ug/L**	2.499	49854	0.090
	Cu	63		**ug/L**		113577	0.206
	Cu	65	**49.082**	**ug/L**	1.939	56249	0.102
	Zn	66	**50.938**	**ug/L**	1.497	40010	0.129
	Zn	67		**ug/L**		13707	0.018
	Zn	68		**ug/L**		30747	0.097
>	Ge	74		**ug/L**		307604	307603.972
	As	75	**49.265**	**ug/L**	1.765	41383	0.136
	Se	77		**ug/L**		5593	0.008
	Se	82	**50.102**	**ug/L**	0.353	4061	0.013
	Kr	83		**ug/L**		104	-0.000
	Sr	88	**50.772**	**ug/L**	0.466	485396	2.372
	Y	89		**ug/L**		111	0.000
	Mo	98	**48.453**	**ug/L**	0.788	125748	0.615
	Ag	107	**50.411**	**ug/L**	0.459	223958	1.095
	Cd	111	**51.722**	**ug/L**	2.299	58350	0.285
	Cd	114		**ug/L**		137071	0.670
>	In	115		**ug/L**		204362	204362.218
	Sn	120	**49.751**	**ug/L**	2.380	227768	1.113
	Sb	121	**49.726**	**ug/L**	0.922	199689	0.976
	Sb	123		**ug/L**		155716	0.761
	Ba	135		**ug/L**		60096	0.150
	Ba	137	**50.985**	**ug/L**	1.879	108133	0.269
	Ho	165		**ug/L**		93	0.000
>	Lu	175		**ug/L**		401550	401550.227
	Tl	205	**52.079**	**ug/L**	1.467	767799	1.907
	Pb	208	**52.282**	**ug/L**	1.334	1248219	3.104
	Bi	209		**ug/L**		462	0.001
	Th	232	**54.404**	**ug/L**	2.828	1453218	3.616
	U	238	**56.138**	**ug/L**	1.428	1558812	3.871

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	105.310				
	Be	9	102.588				
	B	11	100.671				
	Na	23	98.244				
	Mg	24	107.064				
	Al	27	107.239				
	P	31	104.495				
	K	39	93.134				
	Ca	43	100.692				
>	Sc	45		104.5			
	Ti	47	99.253				
	V	51	100.414				
	Cr	52	102.337				
	Cr	53					
	Mn	55	97.590				
	Fe	57	102.718				
	Co	59	104.295				
	Ni	60	105.344				
	Cu	63					
	Cu	65	98.163				
	Zn	66	101.875				
	Zn	67					
	Zn	68					
>	Ge	74		104.3			
	As	75	98.530				
	Se	77					
	Se	82	100.204				
	Kr	83					
	Sr	88	101.544				
	Y	89					
	Mo	98	96.906				
	Ag	107	100.822				
	Cd	111	103.444				
	Cd	114					
>	In	115		105.0			
	Sn	120	99.502				
	Sb	121	99.453				
	Sb	123					
	Ba	135					
	Ba	137	101.970				
	Ho	165					
>	Lu	175		103.6			
	Tl	205	104.158				
	Pb	208	104.564				
	Bi	209					
	Th	232	108.808				
	U	238	112.276				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Monday, July 06, 2009 01:17:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 9.187

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.015**	**ug/L**	20.233	155	0.000
	Be	9	**0.012**	**ug/L**	105.341	27	0.000
	B	11	**2.756**	**ug/L**	22.006	1690	0.002
	Na	23	**2.155**	**ug/L**	72.506	25356	0.011
	Mg	24	**1.081**	**ug/L**	138.135	10671	0.004
	Al	27	**1.645**	**ug/L**	25.103	14007	0.008
	P	31	**0.078**	**ug/L**	1517.633	4471	0.000
	K	39	**-0.610**	**ug/L**	798.649	415632	-0.004
	Ca	43	**-7.699**	**ug/L**	65.307	235	-0.000
>	Sc	45		**ug/L**		554966	554966.187
	Ti	47	**-0.076**	**ug/L**	48.468	205	-0.000
	V	51	**-0.198**	**ug/L**	246.459	4309	-0.002
	Cr	52	**-0.034**	**ug/L**	78.313	678	-0.000
	Cr	53		**ug/L**		43191	-0.012
	Mn	55	**0.033**	**ug/L**	27.714	1316	0.000
	Fe	57	**-0.331**	**ug/L**	161.548	4161	-0.000
	Co	59	**0.010**	**ug/L**	91.266	241	0.000
	Ni	60	**0.006**	**ug/L**	41.362	85	0.000
	Cu	63		**ug/L**		352	-0.000
	Cu	65	**0.001**	**ug/L**	1474.262	188	0.000
	Zn	66	**0.081**	**ug/L**	35.171	383	0.000
	Zn	67		**ug/L**		7493	-0.002
	Zn	68		**ug/L**		955	-0.000
>	Ge	74		**ug/L**		309222	309222.022
	As	75	**0.524**	**ug/L**	7.975	9	0.001
	Se	77		**ug/L**		2347	-0.002
	Se	82	**0.158**	**ug/L**	106.430	-15	0.000
	Kr	83		**ug/L**		104	-0.000
	Sr	88	**0.004**	**ug/L**	65.816	665	0.000
	Y	89		**ug/L**		60	0.000
	Mo	98	**0.035**	**ug/L**	20.898	220	0.000
	Ag	107	**0.005**	**ug/L**	31.973	117	0.000
	Cd	111	**0.018**	**ug/L**	19.889	59	0.000
	Cd	114		**ug/L**		113	0.000
>	In	115		**ug/L**		203154	203153.778
	Sn	120	**0.029**	**ug/L**	36.279	364	0.001
	Sb	121	**0.102**	**ug/L**	25.622	544	0.002
	Sb	123		**ug/L**		437	0.002
	Ba	135		**ug/L**		79	0.000
	Ba	137	**0.011**	**ug/L**	42.318	122	0.000
	Ho	165		**ug/L**		58	0.000
>	Lu	175		**ug/L**		399235	399235.355
	Tl	205	**0.251**	**ug/L**	24.265	5834	0.009
	Pb	208	**0.025**	**ug/L**	23.215	2499	0.001
	Bi	209		**ug/L**		186	0.000
	Th	232	**0.060**	**ug/L**	25.145	2826	0.004
	U	238	**0.006**	**ug/L**	80.545	4817	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		105.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		104.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		104.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		103.0			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504002
Sample Date/Time: Monday, July 06, 2009 01:23:40
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504002.188

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**37.976**	**ug/L**	1.602	78203	0.135
	Be	9	**1.526**	**ug/L**	7.877	717	0.001
	B	11	**5.395**	**ug/L**	2.230	2719	0.003
	Na	23	**494.070**	**ug/L**	0.926	1527903	2.611
	Mg	24	**6217.936**	**ug/L**	3.042	13166026	22.781
	Al	27	**20638.286**	**ug/L**	13.916	59055808	102.335
	P	31	**733.412**	**ug/L**	0.949	130567	0.218
	K	39	**2577.725**	**ug/L**	7.061	9769821	16.153
	Ca	43	**5203.944**	**ug/L**	0.625	42110	0.072
>	Sc	45		**ug/L**		577653	577653.397
	Ti	47	**661.329**	**ug/L**	1.395	281284	0.487
	V	51	**37.527**	**ug/L**	0.934	193086	0.325
	Cr	52	**14.629**	**ug/L**	1.590	56273	0.096
	Cr	53		**ug/L**		40455	-0.020
	Mn	55	**765.653**	**ug/L**	1.703	4549873	7.875
	Fe	57	**24795.137**	**ug/L**	1.428	2837320	4.905
	Co	59	**10.049**	**ug/L**	0.453	45119	0.078
	Ni	60	**18.378**	**ug/L**	2.703	18320	0.032
	Cu	63		**ug/L**		59748	0.103
	Cu	65	**24.682**	**ug/L**	2.051	29794	0.051
	Zn	66	**113.758**	**ug/L**	1.108	87639	0.288
	Zn	67		**ug/L**		20429	0.041
	Zn	68		**ug/L**		67903	0.221
>	Ge	74		**ug/L**		303004	303004.163
	As	75	**6.221**	**ug/L**	2.917	4773	0.017
	Se	77		**ug/L**		1842	-0.004
	Se	82	**0.461**	**ug/L**	31.631	10	0.000
	Kr	83		**ug/L**		156	0.000
	Sr	88	**39.430**	**ug/L**	1.779	379481	1.842
	Y	89		**ug/L**		580211	2.821
	Mo	98	**2.407**	**ug/L**	0.991	6412	0.031
	Ag	107	**0.175**	**ug/L**	4.743	879	0.004
	Cd	111	**0.893**	**ug/L**	7.132	1052	0.005
	Cd	114		**ug/L**		646	0.003
>	In	115		**ug/L**		205652	205651.930
	Sn	120	**1.267**	**ug/L**	2.032	6071	0.028
	Sb	121	**0.246**	**ug/L**	2.144	1132	0.005
	Sb	123		**ug/L**		903	0.004
	Ba	135		**ug/L**		183432	0.437
	Ba	137	**146.765**	**ug/L**	2.175	325128	0.775
	Ho	165		**ug/L**		50565	0.120
>	Lu	175		**ug/L**		419733	419732.789
	Tl	205	**0.291**	**ug/L**	6.589	6755	0.011
	Pb	208	**36.025**	**ug/L**	1.447	899589	2.139
	Bi	209		**ug/L**		12162	0.029
	Th	232	**17.508**	**ug/L**	1.292	489724	1.164
	U	238	**3.614**	**ug/L**	1.161	109475	0.249

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		109.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		108.3			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504003
Sample Date/Time: Monday, July 06, 2009 01:29:50
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504003.189

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.816**	ug/L	0.988	46177	0.078
	Be	9	**4.003**	ug/L	3.332	1894	0.003
	B	11	**3.182**	ug/L	2.361	1968	0.002
	Na	23	**870.595**	ug/L	5.961	2748166	4.601
	Mg	24	**2664.705**	ug/L	8.246	5795243	9.763
	Al	27	**20966.773**	ug/L	3.751	61663951	103.964
	P	31	**222.199**	ug/L	2.206	43936	0.066
	K	39	**1935.863**	ug/L	8.088	7637506	12.131
	Ca	43	**3613.969**	ug/L	2.078	30117	0.050
>	Sc	45		ug/L		593094	593093.549
	Ti	47	**516.301**	ug/L	0.152	225529	0.380
	V	51	**21.046**	ug/L	1.120	113672	0.182
	Cr	52	**15.735**	ug/L	0.889	62082	0.103
	Cr	53		ug/L		38847	-0.025
	Mn	55	**598.705**	ug/L	1.745	3652639	6.158
	Fe	57	**25546.647**	ug/L	0.998	3001445	5.053
	Co	59	**3.040**	ug/L	1.831	14160	0.024
	Ni	60	**14.793**	ug/L	2.206	15152	0.025
	Cu	63		ug/L		43875	0.073
	Cu	65	**17.584**	ug/L	2.792	21850	0.037
	Zn	66	**123.754**	ug/L	2.359	94431	0.314
	Zn	67		ug/L		20419	0.041
	Zn	68		ug/L		71268	0.234
>	Ge	74		ug/L		300281	300281.107
	As	75	**5.587**	ug/L	3.585	4205	0.015
	Se	77		ug/L		1902	-0.004
	Se	82	**0.899**	ug/L	2.556	45	0.000
	Kr	83		ug/L		208	0.000
	Sr	88	**24.255**	ug/L	1.168	233653	1.133
	Y	89		ug/L		1347401	6.553
	Mo	98	**2.173**	ug/L	1.353	5801	0.028
	Ag	107	**0.255**	ug/L	2.672	1233	0.006
	Cd	111	**1.391**	ug/L	1.987	1617	0.008
	Cd	114		ug/L		298	0.001
>	In	115		ug/L		205639	205638.922
	Sn	120	**1.696**	ug/L	2.011	8043	0.038
	Sb	121	**0.210**	ug/L	5.591	986	0.004
	Sb	123		ug/L		789	0.003
	Ba	135		ug/L		102308	0.226
	Ba	137	**76.106**	ug/L	1.422	181764	0.402
	Ho	165		ug/L		126015	0.278
>	Lu	175		ug/L		452319	452318.903
	Tl	205	**0.160**	ug/L	3.765	5122	0.006
	Pb	208	**23.983**	ug/L	1.312	646124	1.424
	Bi	209		ug/L		7208	0.015
	Th	232	**22.311**	ug/L	1.113	672112	1.483
	U	238	**2.163**	ug/L	3.758	72717	0.149

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		112.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		116.7			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504004
Sample Date/Time: Monday, July 06, 2009 01:36:00
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504004.190

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.671**	ug/L	1.445	21807	0.038
	Be	9	**1.429**	ug/L	6.602	665	0.001
	B	11	**0.568**	ug/L	12.495	958	0.000
	Na	23	**1086.390**	ug/L	7.873	3292825	5.741
	Mg	24	**677.365**	ug/L	4.780	1426343	2.482
	Al	27	**8010.646**	ug/L	10.973	22658242	39.721
	P	31	**197.419**	ug/L	1.511	38088	0.059
	K	39	**1501.987**	ug/L	7.840	5811542	9.412
	Ca	43	**881.986**	ug/L	2.443	7303	0.012
>	Sc	45		ug/L		570960	570960.197
	Ti	47	**613.218**	ug/L	2.038	257728	0.451
	V	51	**9.081**	ug/L	2.913	50300	0.079
	Cr	52	**7.707**	ug/L	1.037	29696	0.051
	Cr	53		ug/L		34789	-0.029
	Mn	55	**801.628**	ug/L	3.116	4706078	8.245
	Fe	57	**19859.808**	ug/L	2.662	2246241	3.928
	Co	59	**1.967**	ug/L	2.374	8892	0.015
	Ni	60	**7.768**	ug/L	1.575	7698	0.013
	Cu	63		ug/L		38240	0.066
	Cu	65	**16.129**	ug/L	1.472	19309	0.033
	Zn	66	**128.290**	ug/L	1.364	96667	0.325
	Zn	67		ug/L		20631	0.043
	Zn	68		ug/L		72636	0.242
>	Ge	74		ug/L		296512	296512.086
	As	75	**3.046**	ug/L	9.314	2073	0.008
	Se	77		ug/L		1775	-0.004
	Se	82	**0.533**	ug/L	52.589	15	0.000
	Kr	83		ug/L		179	0.000
	Sr	88	**6.116**	ug/L	1.624	58842	0.286
	Y	89		ug/L		1017146	4.992
	Mo	98	**3.665**	ug/L	1.501	9605	0.046
	Ag	107	**0.284**	ug/L	3.680	1352	0.006
	Cd	111	**1.215**	ug/L	0.786	1405	0.007
	Cd	114		ug/L		284	0.001
>	In	115		ug/L		203749	203748.892
	Sn	120	**4.728**	ug/L	1.604	21796	0.106
	Sb	121	**0.266**	ug/L	0.613	1201	0.005
	Sb	123		ug/L		931	0.004
	Ba	135		ug/L		67578	0.156
	Ba	137	**53.165**	ug/L	4.088	121606	0.281
	Ho	165		ug/L		96086	0.222
>	Lu	175		ug/L		433358	433358.140
	Tl	205	**0.012**	ug/L	33.481	2545	0.000
	Pb	208	**16.654**	ug/L	2.892	430317	0.989
	Bi	209		ug/L		1458	0.003
	Th	232	**22.512**	ug/L	5.204	649200	1.496
	U	238	**1.947**	ug/L	4.210	63177	0.134

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		108.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		104.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		111.9			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504005
Sample Date/Time: Monday, July 06, 2009 01:42:10
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504005.191

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**33.879**	ug/L	1.569	70793	0.121
	Be	9	**3.925**	ug/L	4.170	1835	0.003
	B	11	**3.375**	ug/L	6.837	2015	0.002
	Na	23	**570.178**	ug/L	1.817	1786211	3.013
	Mg	24	**2665.114**	ug/L	1.645	5732222	9.764
	Al	27	**23782.718**	ug/L	3.740	69115788	117.927
	P	31	**270.687**	ug/L	3.102	51839	0.080
	K	39	**2292.609**	ug/L	6.977	8856838	14.366
	Ca	43	**2849.945**	ug/L	2.358	23528	0.040
>	Sc	45		ug/L		586007	586006.628
	Ti	47	**452.024**	ug/L	2.098	195120	0.333
	V	51	**21.728**	ug/L	1.854	115744	0.188
	Cr	52	**26.473**	ug/L	1.752	102621	0.174
	Cr	53		ug/L		43078	-0.017
	Mn	55	**956.632**	ug/L	1.989	5764989	9.839
	Fe	57	**21013.879**	ug/L	3.293	2438945	4.157
	Co	59	**3.861**	ug/L	2.155	17711	0.030
	Ni	60	**19.418**	ug/L	3.393	19621	0.033
	Cu	63		ug/L		43275	0.073
	Cu	65	**17.673**	ug/L	1.746	21695	0.037
	Zn	66	**134.727**	ug/L	2.034	102148	0.341
	Zn	67		ug/L		21906	0.047
	Zn	68		ug/L		77428	0.256
>	Ge	74		ug/L		298391	298391.493
	As	75	**4.632**	ug/L	1.685	3391	0.013
	Se	77		ug/L		1775	-0.004
	Se	82	**0.585**	ug/L	17.679	20	0.000
	Kr	83		ug/L		182	0.000
	Sr	88	**28.127**	ug/L	1.455	269221	1.314
	Y	89		ug/L		1062880	5.201
	Mo	98	**3.353**	ug/L	3.141	8823	0.043
	Ag	107	**0.309**	ug/L	2.209	1468	0.007
	Cd	111	**1.331**	ug/L	1.817	1540	0.007
	Cd	114		ug/L		788	0.003
>	In	115		ug/L		204421	204420.846
	Sn	120	**0.966**	ug/L	1.223	4656	0.022
	Sb	121	**0.210**	ug/L	1.636	983	0.004
	Sb	123		ug/L		790	0.003
	Ba	135		ug/L		175262	0.401
	Ba	137	**134.918**	ug/L	1.084	311557	0.712
	Ho	165		ug/L		94630	0.216
>	Lu	175		ug/L		437440	437439.727
	Tl	205	**0.111**	ug/L	11.844	4162	0.004
	Pb	208	**25.906**	ug/L	2.231	674754	1.538
	Bi	209		ug/L		5754	0.013
	Th	232	**26.270**	ug/L	1.858	765043	1.746
	U	238	**2.846**	ug/L	2.142	90935	0.196

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		111.3			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		112.9			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504006
Sample Date/Time: Monday, July 06, 2009 01:48:21
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504006.192

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**20.600**	ug/L	1.300	42402	0.073
	Be	9	**0.958**	ug/L	0.951	458	0.001
	B	11	**3.271**	ug/L	4.963	1946	0.002
	Na	23	**655.261**	ug/L	10.030	2018094	3.463
	Mg	24	**4422.455**	ug/L	1.504	9351851	16.203
	Al	27	**16676.770**	ug/L	6.033	47691757	82.692
	P	31	**1219.078**	ug/L	2.545	213600	0.362
	K	39	**2989.701**	ug/L	9.140	11243938	18.735
	Ca	43	**13409.508**	ug/L	1.646	107857	0.186
>	Sc	45		ug/L		576670	576670.315
	Ti	47	**699.301**	ug/L	0.781	296937	0.514
	V	51	**34.015**	ug/L	0.960	175237	0.294
	Cr	52	**15.083**	ug/L	2.526	57905	0.099
	Cr	53		ug/L		37378	-0.025
	Mn	55	**707.546**	ug/L	3.281	4198270	7.277
	Fe	57	**18700.580**	ug/L	2.299	2137655	3.699
	Co	59	**8.391**	ug/L	2.499	37642	0.065
	Ni	60	**14.286**	ug/L	1.615	14232	0.025
	Cu	63		ug/L		95591	0.165
	Cu	65	**39.805**	ug/L	1.707	47860	0.083
	Zn	66	**77.194**	ug/L	1.899	59377	0.196
	Zn	67		ug/L		15385	0.024
	Zn	68		ug/L		45920	0.149
>	Ge	74		ug/L		302022	302021.606
	As	75	**3.664**	ug/L	5.322	2627	0.010
	Se	77		ug/L		1801	-0.004
	Se	82	**0.221**	ug/L	71.970	-9	0.000
	Kr	83		ug/L		141	0.000
	Sr	88	**47.757**	ug/L	1.459	453744	2.231
	Y	89		ug/L		344562	1.697
	Mo	98	**1.286**	ug/L	3.669	3443	0.016
	Ag	107	**0.135**	ug/L	9.431	692	0.003
	Cd	111	**0.616**	ug/L	9.548	729	0.003
	Cd	114		ug/L		567	0.002
>	In	115		ug/L		203073	203072.625
	Sn	120	**0.794**	ug/L	1.500	3843	0.018
	Sb	121	**0.140**	ug/L	3.405	696	0.003
	Sb	123		ug/L		561	0.002
	Ba	135		ug/L		254091	0.621
	Ba	137	**206.788**	ug/L	2.985	446788	1.091
	Ho	165		ug/L		31055	0.076
>	Lu	175		ug/L		409445	409444.980
	Tl	205	**0.182**	ug/L	2.415	4962	0.007
	Pb	208	**24.225**	ug/L	2.348	590725	1.438
	Bi	209		ug/L		10472	0.025
	Th	232	**15.110**	ug/L	2.421	412412	1.004
	U	238	**2.035**	ug/L	2.306	62219	0.140

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		109.5			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		104.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		105.7			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504007
Sample Date/Time: Monday, July 06, 2009 01:54:33
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504007.193

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**22.614**	ug/L	1.577	47053	0.080
	Be	9	**1.216**	ug/L	8.263	582	0.001
	B	11	**3.568**	ug/L	5.844	2076	0.002
	Na	23	**483.764**	ug/L	8.199	1510063	2.556
	Mg	24	**4318.867**	ug/L	2.002	9234028	15.823
	Al	27	**19205.194**	ug/L	7.297	55516186	95.229
	P	31	**833.092**	ug/L	1.867	149065	0.248
	K	39	**2644.119**	ug/L	4.262	10103469	16.569
	Ca	43	**6482.411**	ug/L	1.513	52869	0.090
>	Sc	45		ug/L		583091	583091.172
	Ti	47	**633.310**	ug/L	0.838	271915	0.466
	V	51	**30.181**	ug/L	2.725	157813	0.261
	Cr	52	**12.742**	ug/L	2.832	49584	0.084
	Cr	53		ug/L		37158	-0.027
	Mn	55	**630.862**	ug/L	0.966	3784686	6.488
	Fe	57	**18688.768**	ug/L	0.676	2159928	3.697
	Co	59	**7.891**	ug/L	2.995	35802	0.061
	Ni	60	**14.094**	ug/L	1.321	14200	0.024
	Cu	63		ug/L		63601	0.108
	Cu	65	**26.122**	ug/L	0.616	31822	0.054
	Zn	66	**92.899**	ug/L	1.208	71651	0.235
	Zn	67		ug/L		17271	0.030
	Zn	68		ug/L		55386	0.180
>	Ge	74		ug/L		303135	303135.340
	As	75	**4.352**	ug/L	5.222	3211	0.012
	Se	77		ug/L		1731	-0.004
	Se	82	**0.325**	ug/L	49.912	-1	0.000
	Kr	83		ug/L		138	0.000
	Sr	88	**37.660**	ug/L	1.380	360838	1.759
	Y	89		ug/L		386584	1.888
	Mo	98	**1.521**	ug/L	1.090	4081	0.019
	Ag	107	**0.136**	ug/L	3.864	699	0.003
	Cd	111	**0.708**	ug/L	13.150	839	0.004
	Cd	114		ug/L		576	0.002
>	In	115		ug/L		204727	204727.284
	Sn	120	**0.772**	ug/L	2.643	3774	0.017
	Sb	121	**0.143**	ug/L	6.441	712	0.003
	Sb	123		ug/L		567	0.002
	Ba	135		ug/L		251307	0.607
	Ba	137	**202.863**	ug/L	0.648	443094	1.071
	Ho	165		ug/L		33973	0.082
>	Lu	175		ug/L		413798	413798.241
	Tl	205	**0.148**	ug/L	6.238	4490	0.005
	Pb	208	**26.865**	ug/L	1.014	661959	1.595
	Bi	209		ug/L		12155	0.029
	Th	232	**15.778**	ug/L	0.792	435245	1.049
	U	238	**2.643**	ug/L	1.336	80213	0.182

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		110.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		106.8			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504008
Sample Date/Time: Monday, July 06, 2009 02:00:46
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504008.194

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.786**	ug/L	0.202	49053	0.078
	Be	9	**1.731**	ug/L	5.499	884	0.001
	B	11	**5.134**	ug/L	2.013	2866	0.003
	Na	23	**1052.035**	ug/L	4.027	3529093	5.559
	Mg	24	**6323.465**	ug/L	2.792	14623742	23.167
	Al	27	**27312.439**	ug/L	4.633	85509829	135.429
	P	31	**533.710**	ug/L	2.105	105163	0.159
	K	39	**3013.140**	ug/L	7.257	12396540	18.882
	Ca	43	**28364.994**	ug/L	0.414	249172	0.394
>	Sc	45		ug/L		630850	630850.343
	Ti	47	**475.337**	ug/L	1.593	220833	0.350
	V	51	**35.760**	ug/L	1.220	201197	0.309
	Cr	52	**21.595**	ug/L	2.444	90283	0.142
	Cr	53		ug/L		42165	-0.023
	Mn	55	**441.784**	ug/L	2.206	2866590	4.544
	Fe	57	**26007.618**	ug/L	0.999	3249653	5.144
	Co	59	**7.659**	ug/L	1.472	37618	0.059
	Ni	60	**23.538**	ug/L	0.058	25596	0.040
	Cu	63		ug/L		121923	0.192
	Cu	65	**46.400**	ug/L	1.301	60981	0.096
	Zn	66	**197.673**	ug/L	1.539	156319	0.501
	Zn	67		ug/L		30552	0.071
	Zn	68		ug/L		119879	0.382
>	Ge	74		ug/L		311567	311567.427
	As	75	**7.348**	ug/L	7.383	5877	0.020
	Se	77		ug/L		2082	-0.003
	Se	82	**0.578**	ug/L	47.385	20	0.000
	Kr	83		ug/L		151	0.000
	Sr	88	**80.968**	ug/L	1.687	773640	3.783
	Y	89		ug/L		556807	2.724
	Mo	98	**4.541**	ug/L	1.639	11904	0.058
	Ag	107	**0.363**	ug/L	2.092	1709	0.008
	Cd	111	**0.899**	ug/L	2.525	1052	0.005
	Cd	114		ug/L		717	0.003
>	In	115		ug/L		204378	204378.041
	Sn	120	**0.614**	ug/L	1.111	3044	0.014
	Sb	121	**0.144**	ug/L	4.199	714	0.003
	Sb	123		ug/L		571	0.002
	Ba	135		ug/L		212237	0.515
	Ba	137	**175.595**	ug/L	2.374	381532	0.927
	Ho	165		ug/L		46503	0.113
>	Lu	175		ug/L		411643	411642.985
	Tl	205	**0.612**	ug/L	0.637	11472	0.022
	Pb	208	**38.610**	ug/L	0.341	945557	2.292
	Bi	209		ug/L		66859	0.162
	Th	232	**23.753**	ug/L	1.000	651157	1.579
	U	238	**2.799**	ug/L	1.013	84248	0.193

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			119.8		
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74			105.7		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			105.0		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			106.2		
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Monday, July 06, 2009 02:06:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 8.195

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.234**	ug/L	2.980	103910	0.179
	Be	9	**50.172**	ug/L	1.480	22973	0.040
	B	11	**98.367**	ug/L	1.076	36625	0.062
	Na	23	**4872.616**	ug/L	3.618	14981859	25.749
	Mg	24	**5455.053**	ug/L	1.524	11615147	19.986
	Al	27	**5235.552**	ug/L	4.852	15084148	25.961
	P	31	**5247.689**	ug/L	1.154	910493	1.560
	K	39	**4583.756**	ug/L	5.614	17107044	28.724
	Ca	43	**5122.122**	ug/L	1.536	41672	0.071
>	Sc	45		ug/L		580781	580780.540
	Ti	47	**50.810**	ug/L	3.164	21947	0.037
	V	51	**50.275**	ug/L	0.878	258171	0.435
	Cr	52	**51.523**	ug/L	0.966	197152	0.338
	Cr	53		ug/L		66578	0.024
	Mn	55	**49.225**	ug/L	3.073	295080	0.506
	Fe	57	**5184.925**	ug/L	1.554	599908	1.026
	Co	59	**52.124**	ug/L	1.275	234389	0.403
	Ni	60	**52.010**	ug/L	2.904	51946	0.089
	Cu	63		ug/L		118542	0.203
	Cu	65	**49.240**	ug/L	2.962	59554	0.102
	Zn	66	**50.941**	ug/L	1.606	42352	0.129
	Zn	67		ug/L		14294	0.017
	Zn	68		ug/L		32600	0.097
>	Ge	74		ug/L		325616	325615.518
	As	75	**49.605**	ug/L	2.556	44099	0.137
	Se	77		ug/L		5957	0.008
	Se	82	**49.339**	ug/L	1.895	4232	0.013
	Kr	83		ug/L		103	-0.000
	Sr	88	**53.502**	ug/L	0.459	509556	2.500
	Y	89		ug/L		151	0.000
	Mo	98	**50.357**	ug/L	1.661	130185	0.639
	Ag	107	**52.072**	ug/L	1.506	230481	1.132
	Cd	111	**52.958**	ug/L	1.089	59512	0.292
	Cd	114		ug/L		138940	0.682
>	In	115		ug/L		203602	203601.964
	Sn	120	**50.998**	ug/L	1.347	232615	1.141
	Sb	121	**50.588**	ug/L	0.302	202387	0.993
	Sb	123		ug/L		159797	0.784
	Ba	135		ug/L		61489	0.155
	Ba	137	**52.869**	ug/L	0.993	110516	0.279
	Ho	165		ug/L		101	0.000
>	Lu	175		ug/L		395769	395769.039
	Tl	205	**51.729**	ug/L	1.523	751605	1.894
	Pb	208	**52.704**	ug/L	1.060	1240121	3.129
	Bi	209		ug/L		429	0.001
	Th	232	**53.735**	ug/L	2.335	1414533	3.572
	U	238	**56.219**	ug/L	1.585	1538484	3.876

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	100.469				
	Be	9	100.344				
	B	11	98.367				
	Na	23	97.452				
	Mg	24	109.101				
	Al	27	103.674				
	P	31	104.954				
	K	39	91.675				
	Ca	43	102.442				
>	Sc	45		110.3			
	Ti	47	101.619				
	V	51	100.551				
	Cr	52	103.047				
	Cr	53					
	Mn	55	98.449				
	Fe	57	103.699				
	Co	59	104.248				
	Ni	60	104.019				
	Cu	63					
	Cu	65	98.480				
	Zn	66	101.882				
	Zn	67					
	Zn	68					
>	Ge	74		110.4			
	As	75	99.210				
	Se	77					
	Se	82	98.678				
	Kr	83					
	Sr	88	107.004				
	Y	89					
	Mo	98	100.713				
	Ag	107	104.145				
	Cd	111	105.915				
	Cd	114					
>	In	115		104.6			
	Sn	120	101.997				
	Sb	121	101.175				
	Sb	123					
	Ba	135					
	Ba	137	105.739				
	Ho	165					
>	Lu	175		102.2			
	Tl	205	103.459				
	Pb	208	105.407				
	Bi	209					
	Th	232	107.470				
	U	238	112.437				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Monday, July 06, 2009 02:13:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 9.196

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.014**	**ug/L**	43.676	159	0.000
	Be	9	**0.011**	**ug/L**	84.953	28	0.000
	B	11	**2.644**	**ug/L**	27.592	1707	0.002
	Na	23	**0.453**	**ug/L**	501.173	21017	0.002
	Mg	24	**0.612**	**ug/L**	70.598	10004	0.002
	Al	27	**2.303**	**ug/L**	18.161	16343	0.011
	P	31	**-0.280**	**ug/L**	685.092	4558	-0.000
	K	39	**2.547**	**ug/L**	315.995	440714	0.016
	Ca	43	**-8.970**	**ug/L**	18.892	233	-0.000
>	Sc	45		**ug/L**		573129	573129.212
	Ti	47	**-0.101**	**ug/L**	52.552	202	-0.000
	V	51	**-0.048**	**ug/L**	223.275	5231	-0.000
	Cr	52	**-0.032**	**ug/L**	58.644	706	-0.000
	Cr	53		**ug/L**		43351	-0.015
	Mn	55	**0.053**	**ug/L**	18.013	1478	0.001
	Fe	57	**1.884**	**ug/L**	73.502	4548	0.000
	Co	59	**0.007**	**ug/L**	24.687	236	0.000
	Ni	60	**0.014**	**ug/L**	53.654	96	0.000
	Cu	63		**ug/L**		363	-0.000
	Cu	65	**-0.000**	**ug/L**	6879.189	192	-0.000
	Zn	66	**0.084**	**ug/L**	30.942	396	0.000
	Zn	67		**ug/L**		7259	-0.004
	Zn	68		**ug/L**		939	-0.000
>	Ge	74		**ug/L**		317968	317968.330
	As	75	**0.491**	**ug/L**	12.320	-20	0.001
	Se	77		**ug/L**		2501	-0.002
	Se	82	**-0.002**	**ug/L**	9940.464	-29	-0.000
	Kr	83		**ug/L**		103	-0.000
	Sr	88	**0.004**	**ug/L**	87.290	660	0.000
	Y	89		**ug/L**		63	0.000
	Mo	98	**0.026**	**ug/L**	18.767	196	0.000
	Ag	107	**0.005**	**ug/L**	91.869	117	0.000
	Cd	111	**0.014**	**ug/L**	37.142	54	0.000
	Cd	114		**ug/L**		111	0.000
>	In	115		**ug/L**		201980	201980.186
	Sn	120	**0.018**	**ug/L**	35.733	315	0.000
	Sb	121	**0.101**	**ug/L**	15.815	538	0.002
	Sb	123		**ug/L**		408	0.001
	Ba	135		**ug/L**		79	0.000
	Ba	137	**0.013**	**ug/L**	19.344	124	0.000
	Ho	165		**ug/L**		64	0.000
>	Lu	175		**ug/L**		390121	390120.587
	Tl	205	**0.134**	**ug/L**	35.529	4028	0.005
	Pb	208	**0.035**	**ug/L**	17.188	2681	0.002
	Bi	209		**ug/L**		185	0.000
	Th	232	**0.048**	**ug/L**	24.654	2432	0.003
	U	238	**0.006**	**ug/L**	106.514	4700	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		108.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		107.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.7			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504009
Sample Date/Time: Monday, July 06, 2009 02:19:12
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504009.197

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**17.745**	ug/L	3.223	36408	0.063
	Be	9	**1.128**	ug/L	8.291	534	0.001
	B	11	**3.324**	ug/L	8.319	1960	0.002
	Na	23	**555.068**	ug/L	5.693	1706070	2.933
	Mg	24	**2765.219**	ug/L	1.176	5830864	10.131
	Al	27	**12427.693**	ug/L	6.139	35396226	61.623
	P	31	**481.036**	ug/L	2.575	86772	0.143
	K	39	**2185.666**	ug/L	2.726	8304802	13.696
	Ca	43	**3404.898**	ug/L	0.773	27521	0.047
>	Sc	45		ug/L		574744	574744.209
	Ti	47	**501.971**	ug/L	1.399	212456	0.369
	V	51	**22.674**	ug/L	1.998	118234	0.196
	Cr	52	**13.438**	ug/L	1.757	51492	0.088
	Cr	53		ug/L		40187	-0.020
	Mn	55	**464.613**	ug/L	2.202	2746803	4.779
	Fe	57	**14954.815**	ug/L	2.739	1703863	2.958
	Co	59	**5.609**	ug/L	2.349	25142	0.043
	Ni	60	**8.895**	ug/L	0.545	8864	0.015
	Cu	63		ug/L		27402	0.047
	Cu	65	**11.466**	ug/L	1.161	13877	0.024
	Zn	66	**177.297**	ug/L	1.764	135012	0.449
	Zn	67		ug/L		27524	0.065
	Zn	68		ug/L		102430	0.338
>	Ge	74		ug/L		299938	299938.301
	As	75	**3.550**	ug/L	4.652	2513	0.010
	Se	77		ug/L		1919	-0.004
	Se	82	**0.204**	ug/L	27.575	-11	0.000
	Kr	83		ug/L		138	0.000
	Sr	88	**22.607**	ug/L	0.357	213293	1.056
	Y	89		ug/L		363265	1.804
	Mo	98	**1.912**	ug/L	3.402	5012	0.024
	Ag	107	**0.118**	ug/L	7.228	608	0.003
	Cd	111	**0.475**	ug/L	2.118	566	0.003
	Cd	114		ug/L		340	0.001
>	In	115		ug/L		201353	201352.953
	Sn	120	**0.859**	ug/L	1.815	4103	0.019
	Sb	121	**0.228**	ug/L	7.802	1037	0.004
	Sb	123		ug/L		789	0.003
	Ba	135		ug/L		170011	0.421
	Ba	137	**141.993**	ug/L	1.869	302803	0.749
	Ho	165		ug/L		31764	0.078
>	Lu	175		ug/L		404065	404064.544
	Tl	205	**0.160**	ug/L	4.461	4566	0.006
	Pb	208	**28.915**	ug/L	2.118	695356	1.717
	Bi	209		ug/L		11207	0.027
	Th	232	**11.636**	ug/L	4.500	313560	0.773
	U	238	**1.465**	ug/L	3.615	45507	0.101

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		109.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		104.3			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504010
Sample Date/Time: Monday, July 06, 2009 02:25:22
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504010.198

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**23.268**	ug/L	2.536	47053	0.083
	Be	9	**1.397**	ug/L	7.927	646	0.001
	B	11	**1.444**	ug/L	2.149	1262	0.001
	Na	23	**1164.641**	ug/L	3.296	3506710	6.154
	Mg	24	**1464.742**	ug/L	6.597	3049695	5.366
	Al	27	**15318.009**	ug/L	5.238	43034359	75.954
	P	31	**238.833**	ug/L	3.538	44773	0.071
	K	39	**1912.467**	ug/L	1.652	7215897	11.984
	Ca	43	**1790.255**	ug/L	1.155	14407	0.025
>	Sc	45		ug/L		566601	566600.747
	Ti	47	**746.797**	ug/L	1.495	311508	0.549
	V	51	**24.508**	ug/L	3.588	125525	0.212
	Cr	52	**19.847**	ug/L	2.123	74592	0.130
	Cr	53		ug/L		39239	-0.021
	Mn	55	**526.580**	ug/L	0.511	3069778	5.416
	Fe	57	**25804.274**	ug/L	1.750	2895982	5.104
	Co	59	**4.722**	ug/L	2.274	20898	0.037
	Ni	60	**14.447**	ug/L	1.690	14140	0.025
	Cu	63		ug/L		58538	0.103
	Cu	65	**24.698**	ug/L	0.677	29249	0.051
	Zn	66	**196.640**	ug/L	1.713	144405	0.498
	Zn	67		ug/L		28136	0.071
	Zn	68		ug/L		108597	0.372
>	Ge	74		ug/L		289312	289311.656
	As	75	**6.490**	ug/L	3.721	4772	0.018
	Se	77		ug/L		1663	-0.004
	Se	82	**0.498**	ug/L	18.097	13	0.000
	Kr	83		ug/L		172	0.000
	Sr	88	**12.877**	ug/L	0.574	120315	0.602
	Y	89		ug/L		696164	3.499
	Mo	98	**6.989**	ug/L	2.160	17766	0.089
	Ag	107	**1.184**	ug/L	2.626	5210	0.026
	Cd	111	**1.621**	ug/L	7.627	1818	0.009
	Cd	114		ug/L		1342	0.006
>	In	115		ug/L		198966	198966.220
	Sn	120	**4.445**	ug/L	1.808	20022	0.099
	Sb	121	**0.331**	ug/L	2.595	1428	0.007
	Sb	123		ug/L		1165	0.005
	Ba	135		ug/L		80909	0.196
	Ba	137	**67.417**	ug/L	0.545	146942	0.356
	Ho	165		ug/L		59336	0.144
>	Lu	175		ug/L		412739	412738.727
	Tl	205	**0.040**	ug/L	11.439	2856	0.001
	Pb	208	**23.076**	ug/L	1.976	567393	1.370
	Bi	209		ug/L		1991	0.004
	Th	232	**27.093**	ug/L	2.207	744462	1.801
	U	238	**2.384**	ug/L	0.280	72645	0.164

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		107.6			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		106.5			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504011
Sample Date/Time: Monday, July 06, 2009 02:31:32
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504011.199

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**16.509**	**ug/L**	1.145	32148	0.059
	Be	9	**0.981**	**ug/L**	8.227	443	0.001
	B	11	**2.369**	**ug/L**	2.502	1530	0.001
	Na	23	**539.713**	**ug/L**	4.006	1572766	2.852
	Mg	24	**2607.025**	**ug/L**	7.583	5211609	9.551
	Al	27	**12956.634**	**ug/L**	2.461	35023634	64.246
	P	31	**441.024**	**ug/L**	2.315	75828	0.131
	K	39	**2031.887**	**ug/L**	3.892	7349356	12.733
	Ca	43	**3870.249**	**ug/L**	2.389	29623	0.054
>	Sc	45		**ug/L**		545082	545082.302
	Ti	47	**433.061**	**ug/L**	0.754	173885	0.319
	V	51	**18.235**	**ug/L**	2.565	91191	0.158
	Cr	52	**10.071**	**ug/L**	1.593	36800	0.066
	Cr	53		**ug/L**		34477	-0.027
	Mn	55	**528.016**	**ug/L**	1.668	2960926	5.431
	Fe	57	**12786.942**	**ug/L**	2.444	1382648	2.529
	Co	59	**4.896**	**ug/L**	1.173	20844	0.038
	Ni	60	**9.497**	**ug/L**	2.458	8968	0.016
	Cu	63		**ug/L**		21756	0.039
	Cu	65	**9.571**	**ug/L**	1.563	11015	0.020
	Zn	66	**183.548**	**ug/L**	2.578	133484	0.465
	Zn	67		**ug/L**		25893	0.064
	Zn	68		**ug/L**		99867	0.345
>	Ge	74		**ug/L**		286506	286506.155
	As	75	**3.062**	**ug/L**	1.747	2014	0.008
	Se	77		**ug/L**		1648	-0.004
	Se	82	**0.293**	**ug/L**	63.699	-3	0.000
	Kr	83		**ug/L**		130	0.000
	Sr	88	**21.647**	**ug/L**	3.490	194598	1.011
	Y	89		**ug/L**		343809	1.792
	Mo	98	**1.393**	**ug/L**	4.022	3512	0.018
	Ag	107	**0.102**	**ug/L**	5.084	516	0.002
	Cd	111	**0.533**	**ug/L**	11.193	602	0.003
	Cd	114		**ug/L**		375	0.002
>	In	115		**ug/L**		191938	191938.429
	Sn	120	**0.698**	**ug/L**	3.204	3220	0.016
	Sb	121	**0.168**	**ug/L**	8.613	763	0.003
	Sb	123		**ug/L**		600	0.002
	Ba	135		**ug/L**		129774	0.327
	Ba	137	**109.385**	**ug/L**	1.647	229343	0.577
	Ho	165		**ug/L**		29795	0.075
>	Lu	175		**ug/L**		397180	397179.782
	Tl	205	**0.090**	**ug/L**	4.896	3468	0.003
	Pb	208	**22.801**	**ug/L**	0.857	539517	1.354
	Bi	209		**ug/L**		9965	0.025
	Th	232	**12.385**	**ug/L**	0.636	328182	0.823
	U	238	**1.377**	**ug/L**	4.147	42319	0.095

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		103.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		97.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		102.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504012
Sample Date/Time: Monday, July 06, 2009 02:37:43
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504012.200

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**36.307**	ug/L	1.641	73658	0.129
	Be	9	**1.948**	ug/L	5.174	895	0.002
	B	11	**7.773**	ug/L	5.452	3530	0.005
	Na	23	**722.937**	ug/L	5.866	2191072	3.820
	Mg	24	**6071.777**	ug/L	3.182	12667333	22.245
	Al	27	**30625.674**	ug/L	1.277	86441309	151.858
	P	31	**824.760**	ug/L	2.526	144025	0.245
	K	39	**4058.224**	ug/L	3.643	14895867	25.430
	Ca	43	**10735.636**	ug/L	1.554	85238	0.149
>	Sc	45		ug/L		569059	569059.327
	Ti	47	**793.955**	ug/L	1.556	332581	0.584
	V	51	**42.300**	ug/L	1.836	213687	0.366
	Cr	52	**20.132**	ug/L	2.032	75960	0.132
	Cr	53		ug/L		38618	-0.022
	Mn	55	**704.269**	ug/L	1.303	4123469	7.243
	Fe	57	**26716.532**	ug/L	1.755	3011954	5.285
	Co	59	**9.197**	ug/L	1.953	40683	0.071
	Ni	60	**18.586**	ug/L	1.662	18243	0.032
	Cu	63		ug/L		188938	0.331
	Cu	65	**79.966**	ug/L	0.901	94666	0.166
	Zn	66	**142.177**	ug/L	2.193	104182	0.360
	Zn	67		ug/L		22161	0.050
	Zn	68		ug/L		80256	0.275
>	Ge	74		ug/L		288474	288473.571
	As	75	**6.191**	ug/L	2.100	4521	0.017
	Se	77		ug/L		1714	-0.004
	Se	82	**0.358**	ug/L	48.427	2	0.000
	Kr	83		ug/L		155	0.000
	Sr	88	**75.541**	ug/L	2.205	687418	3.529
	Y	89		ug/L		600288	3.084
	Mo	98	**2.125**	ug/L	1.942	5371	0.027
	Ag	107	**0.249**	ug/L	4.664	1143	0.005
	Cd	111	**1.097**	ug/L	11.348	1216	0.006
	Cd	114		ug/L		887	0.004
>	In	115		ug/L		194616	194616.400
	Sn	120	**1.005**	ug/L	1.405	4600	0.022
	Sb	121	**0.259**	ug/L	5.407	1123	0.005
	Sb	123		ug/L		904	0.004
	Ba	135		ug/L		315010	0.785
	Ba	137	**259.334**	ug/L	1.266	549177	1.369
	Ho	165		ug/L		52254	0.130
>	Lu	175		ug/L		401290	401290.020
	Tl	205	**0.437**	ug/L	2.554	8612	0.016
	Pb	208	**51.479**	ug/L	2.574	1227817	3.056
	Bi	209		ug/L		53291	0.132
	Th	232	**22.733**	ug/L	2.624	607309	1.511
	U	238	**10.635**	ug/L	3.667	298751	0.733

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		108.1			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		103.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504013
Sample Date/Time: Monday, July 06, 2009 02:43:55
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504013.201

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**32.500**	ug/L	1.331	65937	0.116
	Be	9	**2.326**	ug/L	1.349	1065	0.002
	B	11	**3.642**	ug/L	3.606	2053	0.002
	Na	23	**485.436**	ug/L	3.585	1479231	2.565
	Mg	24	**2877.956**	ug/L	4.498	6006229	10.544
	Al	27	**20801.174**	ug/L	3.981	58683216	103.143
	P	31	**256.620**	ug/L	1.979	47979	0.076
	K	39	**2199.642**	ug/L	5.112	8268404	13.784
	Ca	43	**3931.771**	ug/L	1.435	31414	0.055
>	Sc	45		ug/L		568952	568951.652
	Ti	47	**545.387**	ug/L	1.685	228548	0.401
	V	51	**24.200**	ug/L	1.071	124572	0.209
	Cr	52	**12.727**	ug/L	1.298	48332	0.084
	Cr	53		ug/L		35358	-0.028
	Mn	55	**702.216**	ug/L	0.916	4110423	7.222
	Fe	57	**22161.544**	ug/L	0.760	2498347	4.384
	Co	59	**4.110**	ug/L	1.255	18294	0.032
	Ni	60	**12.344**	ug/L	1.609	12145	0.021
	Cu	63		ug/L		36249	0.063
	Cu	65	**15.345**	ug/L	1.149	18321	0.032
	Zn	66	**105.825**	ug/L	0.085	78036	0.268
	Zn	67		ug/L		17584	0.034
	Zn	68		ug/L		59316	0.201
>	Ge	74		ug/L		289954	289953.588
	As	75	**5.564**	ug/L	8.325	4042	0.015
	Se	77		ug/L		1698	-0.004
	Se	82	**0.536**	ug/L	28.005	15	0.000
	Kr	83		ug/L		185	0.000
	Sr	88	**28.937**	ug/L	1.058	270397	1.352
	Y	89		ug/L		841883	4.219
	Mo	98	**2.493**	ug/L	1.383	6438	0.032
	Ag	107	**0.222**	ug/L	3.500	1054	0.005
	Cd	111	**1.027**	ug/L	5.313	1168	0.006
	Cd	114		ug/L		469	0.002
>	In	115		ug/L		199539	199538.976
	Sn	120	**1.148**	ug/L	2.087	5355	0.026
	Sb	121	**0.191**	ug/L	2.823	885	0.004
	Sb	123		ug/L		690	0.003
	Ba	135		ug/L		143417	0.349
	Ba	137	**117.103**	ug/L	1.206	253656	0.618
	Ho	165		ug/L		73343	0.179
>	Lu	175		ug/L		410304	410303.915
	Tl	205	**0.101**	ug/L	11.907	3746	0.004
	Pb	208	**24.216**	ug/L	0.833	591852	1.438
	Bi	209		ug/L		6805	0.016
	Th	232	**24.829**	ug/L	1.468	678429	1.650
	U	238	**2.952**	ug/L	0.293	88300	0.204

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		108.1			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		98.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		102.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.9			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 232504014
Sample Date/Time: Monday, July 06, 2009 02:50:07
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881360|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\232504014.202

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.472**	ug/L	0.814	43159	0.076
	Be	9	**0.871**	ug/L	2.709	409	0.001
	B	11	**2.341**	ug/L	10.114	1572	0.001
	Na	23	**785.256**	ug/L	10.470	2355216	4.150
	Mg	24	**5739.979**	ug/L	4.424	11856273	21.030
	Al	27	**15269.849**	ug/L	4.263	42661767	75.716
	P	31	**1545.883**	ug/L	1.420	263307	0.460
	K	39	**2846.680**	ug/L	9.129	10473515	17.838
	Ca	43	**10331.636**	ug/L	1.639	81228	0.144
>	Sc	45		ug/L		563168	563168.126
	Ti	47	**637.341**	ug/L	0.601	264287	0.469
	V	51	**39.018**	ug/L	1.648	195547	0.338
	Cr	52	**17.782**	ug/L	1.790	66524	0.117
	Cr	53		ug/L		38149	-0.023
	Mn	55	**516.497**	ug/L	1.241	2992428	5.312
	Fe	57	**17423.056**	ug/L	0.238	1945189	3.446
	Co	59	**8.409**	ug/L	1.012	36848	0.065
	Ni	60	**18.585**	ug/L	2.571	18063	0.032
	Cu	63		ug/L		88224	0.156
	Cu	65	**37.301**	ug/L	0.285	43808	0.077
	Zn	66	**72.581**	ug/L	1.376	54726	0.184
	Zn	67		ug/L		14350	0.022
	Zn	68		ug/L		42622	0.141
>	Ge	74		ug/L		295949	295949.199
	As	75	**3.464**	ug/L	8.152	2409	0.010
	Se	77		ug/L		1681	-0.004
	Se	82	**0.123**	ug/L	76.720	-17	0.000
	Kr	83		ug/L		128	0.000
	Sr	88	**52.135**	ug/L	1.860	477548	2.436
	Y	89		ug/L		274788	1.403
	Mo	98	**1.054**	ug/L	1.974	2745	0.013
	Ag	107	**0.140**	ug/L	2.488	687	0.003
	Cd	111	**0.554**	ug/L	5.909	635	0.003
	Cd	114		ug/L		434	0.002
>	In	115		ug/L		195822	195821.988
	Sn	120	**0.732**	ug/L	3.678	3432	0.016
	Sb	121	**0.148**	ug/L	4.706	703	0.003
	Sb	123		ug/L		534	0.002
	Ba	135		ug/L		185770	0.470
	Ba	137	**156.547**	ug/L	4.146	326401	0.826
	Ho	165		ug/L		24218	0.061
>	Lu	175		ug/L		395133	395133.042
	Tl	205	**0.141**	ug/L	4.507	4196	0.005
	Pb	208	**20.192**	ug/L	1.415	475517	1.199
	Bi	209		ug/L		6966	0.017
	Th	232	**11.049**	ug/L	2.287	291331	0.734
	U	238	**1.744**	ug/L	2.429	52116	0.120

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		107.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		102.0			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, July 06, 2009 02:56:16
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 6.203

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.783**	ug/L	0.933	98957	0.181
	Be	9	**48.809**	ug/L	0.712	21047	0.038
	B	11	**99.539**	ug/L	2.803	34889	0.062
	Na	23	**5092.792**	ug/L	1.150	14738130	26.912
	Mg	24	**5235.580**	ug/L	4.313	10491720	19.182
	Al	27	**5056.710**	ug/L	7.206	13721859	25.074
	P	31	**5162.645**	ug/L	1.776	843450	1.535
	K	39	**4686.970**	ug/L	2.995	16467046	29.370
	Ca	43	**5001.521**	ug/L	2.373	38317	0.070
>	Sc	45		ug/L		546896	546895.708
	Ti	47	**49.341**	ug/L	1.385	20082	0.036
	V	51	**49.389**	ug/L	3.048	238854	0.427
	Cr	52	**50.335**	ug/L	1.946	181361	0.330
	Cr	53		ug/L		61166	0.022
	Mn	55	**48.154**	ug/L	1.305	271916	0.495
	Fe	57	**5125.728**	ug/L	3.123	558514	1.014
	Co	59	**51.314**	ug/L	2.378	217279	0.397
	Ni	60	**51.083**	ug/L	3.263	48040	0.088
	Cu	63		ug/L		110420	0.201
	Cu	65	**47.718**	ug/L	0.235	54374	0.099
	Zn	66	**50.081**	ug/L	1.175	38994	0.127
	Zn	67		ug/L		13062	0.016
	Zn	68		ug/L		29820	0.095
>	Ge	74		ug/L		304841	304840.812
	As	75	**49.094**	ug/L	0.640	40865	0.135
	Se	77		ug/L		5392	0.008
	Se	82	**47.659**	ug/L	4.325	3826	0.013
	Kr	83		ug/L		112	-0.000
	Sr	88	**51.314**	ug/L	1.499	473196	2.397
	Y	89		ug/L		121	0.000
	Mo	98	**48.003**	ug/L	1.666	120165	0.609
	Ag	107	**50.282**	ug/L	2.684	215452	1.093
	Cd	111	**51.298**	ug/L	2.755	55811	0.283
	Cd	114		ug/L		130896	0.664
>	In	115		ug/L		197153	197152.567
	Sn	120	**49.542**	ug/L	1.394	218845	1.109
	Sb	121	**50.103**	ug/L	2.057	194064	0.984
	Sb	123		ug/L		153437	0.778
	Ba	135		ug/L		57467	0.149
	Ba	137	**50.688**	ug/L	0.840	103108	0.267
	Ho	165		ug/L		89	0.000
>	Lu	175		ug/L		385090	385090.422
	Tl	205	**50.288**	ug/L	2.099	710984	1.841
	Pb	208	**51.289**	ug/L	0.861	1174387	3.045
	Bi	209		ug/L		336	0.000
	Th	232	**53.141**	ug/L	1.828	1361252	3.532
	U	238	**55.423**	ug/L	0.843	1475995	3.821

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	101.566				
	Be	9	97.617				
	B	11	99.539				
	Na	23	101.856				
	Mg	24	104.712				
	Al	27	100.133				
	P	31	103.253				
	K	39	93.739				
	Ca	43	100.030				
>	Sc	45		103.9			
	Ti	47	98.682				
	V	51	98.779				
	Cr	52	100.671				
	Cr	53					
	Mn	55	96.308				
	Fe	57	102.515				
	Co	59	102.629				
	Ni	60	102.166				
	Cu	63					
	Cu	65	95.437				
	Zn	66	100.162				
	Zn	67					
	Zn	68					
>	Ge	74		103.4			
	As	75	98.187				
	Se	77					
	Se	82	95.319				
	Kr	83					
	Sr	88	102.628				
	Y	89					
	Mo	98	96.006				
	Ag	107	100.564				
	Cd	111	102.595				
	Cd	114					
>	In	115		101.3			
	Sn	120	99.084				
	Sb	121	100.205				
	Sb	123					
	Ba	135					
	Ba	137	101.376				
	Ho	165					
>	Lu	175		99.4			
	Tl	205	100.576				
	Pb	208	102.579				
	Bi	209					
	Th	232	106.282				
	U	238	110.846				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, July 06, 2009 03:02:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\090705\QC Std 7.204

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.025**	ug/L	6.106	172	0.000
	Be	9	**0.027**	ug/L	43.979	33	0.000
	B	11	**2.750**	ug/L	29.711	1661	0.002
	Na	23	**0.585**	ug/L	549.770	20350	0.003
	Mg	24	**1.173**	ug/L	124.036	10671	0.004
	Al	27	**3.334**	ug/L	34.870	18345	0.017
	P	31	**0.309**	ug/L	464.867	4438	0.000
	K	39	**7.160**	ug/L	24.501	435542	0.045
	Ca	43	**-7.520**	ug/L	23.899	233	-0.000
>	Sc	45		ug/L		545884	545883.803
	Ti	47	**-0.061**	ug/L	55.802	208	-0.000
	V	51	**-0.214**	ug/L	136.941	4203	-0.002
	Cr	52	**-0.021**	ug/L	102.894	713	-0.000
	Cr	53		ug/L		41542	-0.014
	Mn	55	**0.076**	ug/L	20.791	1532	0.001
	Fe	57	**1.232**	ug/L	140.894	4261	0.000
	Co	59	**0.008**	ug/L	61.711	231	0.000
	Ni	60	**-0.004**	ug/L	461.367	75	-0.000
	Cu	63		ug/L		394	-0.000
	Cu	65	**0.009**	ug/L	87.100	193	0.000
	Zn	66	**0.095**	ug/L	3.639	387	0.000
	Zn	67		ug/L		6954	-0.004
	Zn	68		ug/L		919	-0.000
>	Ge	74		ug/L		303078	303077.670
	As	75	**0.392**	ug/L	36.015	-101	0.001
	Se	77		ug/L		2307	-0.002
	Se	82	**0.385**	ug/L	51.877	4	0.000
	Kr	83		ug/L		80	-0.000
	Sr	88	**0.007**	ug/L	46.374	665	0.000
	Y	89		ug/L		63	0.000
	Mo	98	**0.027**	ug/L	46.703	194	0.000
	Ag	107	**0.005**	ug/L	82.552	114	0.000
	Cd	111	**0.013**	ug/L	37.781	52	0.000
	Cd	114		ug/L		115	0.000
>	In	115		ug/L		196012	196011.628
	Sn	120	**0.019**	ug/L	26.521	309	0.000
	Sb	121	**0.041**	ug/L	30.780	291	0.001
	Sb	123		ug/L		237	0.001
	Ba	135		ug/L		71	0.000
	Ba	137	**0.015**	ug/L	37.538	124	0.000
	Ho	165		ug/L		55	0.000
>	Lu	175		ug/L		379451	379450.633
	Tl	205	**0.232**	ug/L	31.885	5299	0.008
	Pb	208	**0.049**	ug/L	17.708	2926	0.003
	Bi	209		ug/L		172	0.000
	Th	232	**0.052**	ug/L	14.449	2477	0.003
	U	238	**0.007**	ug/L	57.166	4590	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		103.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.7			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.9			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL
Method Description: 7471A, ILM04 ANALYST JXL1
Element: Hg

Date: 07/13/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 071309S1.SIF Results Data Set Name: 071309S2

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/13/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0026	0.0026	09:36:04	No
2			0.0025	0.0025	09:36:39	No
Mean:			0.0025			
SD :			0.0001			
%RSD:			2.0116			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/13/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0047	0.0072	09:38:01	No
2			0.0046	0.0071	09:38:35	No
Mean:			0.0046			
SD :			0.0001			
%RSD:			1.1672			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.02310
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/13/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0089	0.0114	09:39:58	No
2			0.0089	0.0115	09:40:33	No
Mean:			0.0089			
SD :			0.0001			
%RSD:			0.5682			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99055 Slope: 0.01750
Intercept : 0.00042

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/13/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0294	0.0320	09:41:58	No
2			0.0290	0.0315	09:42:33	No
Mean:			0.0292			
SD :			0.0003			
%RSD:			1.1424			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99775 Slope: 0.01416
Intercept : 0.00112

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/13/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0650	0.0676	09:43:58	No
2			0.0670	0.0695	09:44:32	No
Mean:			0.0660			
SD :			0.0014			
%RSD:			2.0933			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99895 Slope: 0.01299
Intercept : 0.00174

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/13/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1277	0.1302	09:45:59	No
2			0.1281	0.1306	09:46:33	No
Mean:			0.1279			
SD :			0.0003			
%RSD:			0.1987			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99964 Slope: 0.01265
Intercept : 0.00213

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0025	---	----	----	----
S0.2	0.0046	0.200	0.197	0.0001	1.2
S0.5	0.0089	0.500	0.535	0.0001	0.6
S2.0	0.0292	2.000	2.141	0.0003	1.1
S5.0	0.0660	5.000	5.051	0.0014	2.1
S10	0.1279	10.000	9.945	0.0003	0.2
Calib Blank	0.0025	---	----	----	----

Correlation Coefficient: 0.99964 Slope: 0.01265 Intercept: 0.0021

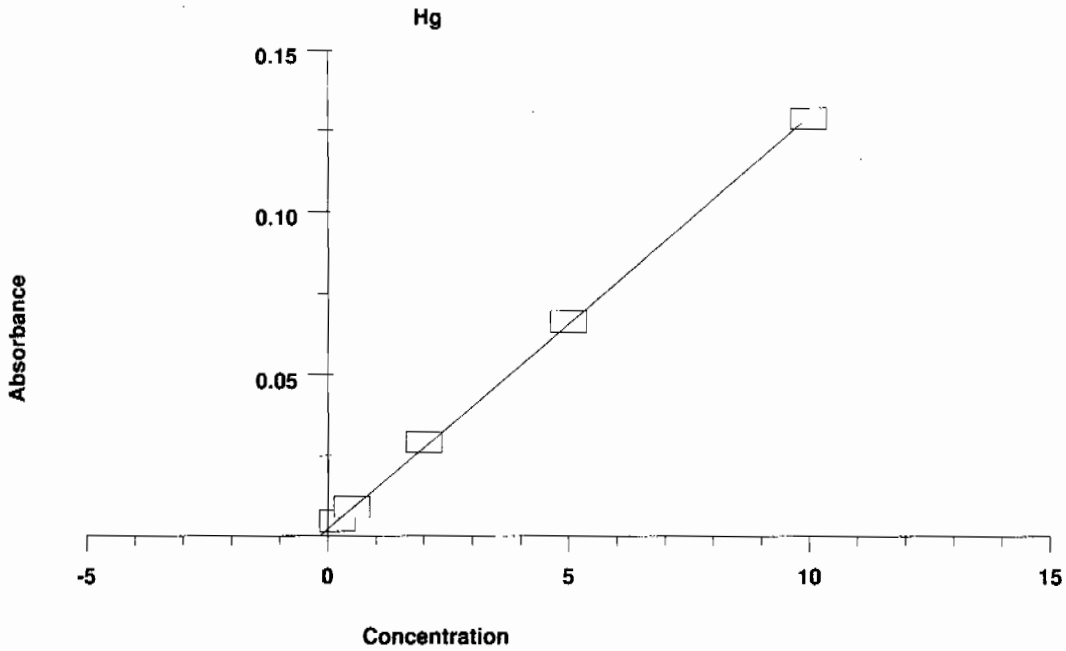

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/13/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.179	5.179	0.0676	0.0702	09:48:02	No
2	5.264	5.264	0.0687	0.0712	09:48:37	No
Mean:	5.221	5.221	0.0682			
SD :	0.0602	0.0602	0.0008			
%RSD:	1.2	1.2	1.1171			

QC value within specified limits.

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/13/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.117	-0.117	0.0007	0.0032	09:49:59	No
2	-0.126	-0.126	0.0005	0.0031	09:50:34	No
Mean:	-0.121	-0.121	0.0006			
SD :	0.0064	0.0064	0.0001			
%RSD:	5.3	5.3	13.7540			

QC value within specified limits.

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/13/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.156	0.156	0.0041	0.0066	09:51:56	No
2	0.135	0.135	0.0038	0.0064	09:52:31	No
Mean:	0.146	0.146	0.0040			
SD :	0.0146	0.0146	0.0002			
%RSD:	10.0	10.0	4.6526			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	09:53:56	No
2	5.219	5.219	0.0681	0.0707	09:54:31	No
Mean:	5.160	5.160	0.0674			
SD :	0.0831	0.0831	0.0011			
%RSD:	1.6	1.6	1.5602			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.014	0.014	0.0023	0.0048	09:55:59	No
2	0.023	0.023	0.0024	0.0050	09:56:34	No
Mean:	0.019	0.019	0.0024			
SD :	0.0063	0.0063	0.0001			
%RSD:	33.8	33.8	3.3712			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/13/2009
Sample ID: 1201870737|i||880997|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.145	-0.145	0.0003	0.0028	09:58:00	No
2	-0.154	-0.154	0.0002	0.0027	09:58:35	No
Mean:	-0.150	-0.150	0.0002			
SD :	0.0066	0.0066	0.0001			
%RSD:	4.4	4.4	35.8425			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/13/2009
Sample ID: 1201870738|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.783	3.783	0.0500	0.0525	10:00:01	No
2	3.816	3.816	0.0504	0.0529	10:00:35	No
Mean:	3.800	3.800	0.0502			
SD :	0.0230	0.0230	0.0003			
%RSD:	0.6	0.6	0.5806			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/13/2009
Sample ID: 232424001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.002	-0.002	0.0021	0.0046	10:02:01	No
2	-0.007	-0.007	0.0020	0.0046	10:02:35	No
Mean:	-0.005	-0.005	0.0021			
SD :	0.0040	0.0040	0.0001			
%RSD:	86.6	86.6	2.4535			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/13/2009
Sample ID: 232426001|i|||

%RSD: 1.7 1.7 1.5996

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Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/13/2009
Sample ID: 1201870745|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.025	0.025	0.0024	0.0050	10:15:50	No
2	-0.002	-0.002	0.0021	0.0046	10:16:25	No
Mean:	0.012	0.012	0.0023			
SD :	0.0185	0.0185	0.0002			
%RSD:	159.8	159.8	10.3056			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.101	5.101	0.0666	0.0692	10:17:50	No
2	4.942	4.942	0.0646	0.0672	10:18:24	No
Mean:	5.022	5.022	0.0656			
SD :	0.1122	0.1122	0.0014			
%RSD:	2.2	2.2	2.1625			

QC value within specified limits.

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Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.043	-0.043	0.0016	0.0041	10:19:52	No
2	-0.052	-0.052	0.0015	0.0040	10:20:27	No
Mean:	-0.048	-0.048	0.0015			
SD :	0.0057	0.0057	0.0001			
%RSD:	11.9	11.9	4.7042			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/13/2009
Sample ID: 232429002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.240	0.240	0.0052	0.0077	10:21:52	No
2	0.235	0.235	0.0051	0.0076	10:22:27	No
Mean:	0.238	0.238	0.0051			
SD :	0.0035	0.0035	0.0000			
%RSD:	1.5	1.5	0.8527			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/13/2009
Sample ID: 232429003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.189	0.189	0.0045	0.0070	10:23:51	No
2	0.176	0.176	0.0044	0.0069	10:24:26	No
Mean:	0.183	0.183	0.0044			
SD :	0.0087	0.0087	0.0001			
%RSD:	4.8	4.8	2.4733			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/13/2009
Sample ID: 232429004|i|||

%RSD: 1.7 1.7 1.4172

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Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/13/2009
Sample ID: 232429010|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.233	0.233	0.0051	0.0076	10:37:52	No
2	0.223	0.223	0.0049	0.0075	10:38:27	No
Mean:	0.228	0.228	0.0050			
SD :	0.0069	0.0069	0.0001			
%RSD:	3.0	3.0	1.7516			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/13/2009
Sample ID: 232429011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.044	0.044	0.0027	0.0052	10:39:54	No
2	0.039	0.039	0.0026	0.0052	10:40:28	No
Mean:	0.042	0.042	0.0027			
SD :	0.0041	0.0041	0.0001			
%RSD:	9.8	9.8	1.9407			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.042	5.042	0.0659	0.0684	10:41:55	No
2	5.045	5.045	0.0659	0.0685	10:42:29	No
Mean:	5.044	5.044	0.0659			
SD :	0.0015	0.0015	0.0000			
%RSD:						

QC value within specified limits.

==========

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.064	-0.064	0.0013	0.0039	10:43:58	No
2	-0.060	-0.060	0.0014	0.0039	10:44:32	No
Mean:	-0.062	-0.062	0.0013			
SD :	0.0028	0.0028	0.0000			
%RSD:	4.5	4.5	2.6158			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/13/2009
Sample ID: 232429012|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.371	0.371	0.0068	0.0093	10:45:57	No
2	0.372	0.372	0.0068	0.0094	10:46:32	No
Mean:	0.371	0.371	0.0068			
SD :	0.0010	0.0010	0.0000			
%RSD:	0.3	0.3	0.1822			

==========

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/13/2009
Sample ID: 232429013|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.093	0.093	0.0033	0.0058	10:47:52	No
2	0.091	0.091	0.0033	0.0058	10:48:27	No
Mean:	0.092	0.092	0.0033			
SD :	0.0018	0.0018	0.0000			
%RSD:	1.9	1.9	0.6877			

Element: Hg Seq. No.: 38 AS Loc.: 34 Date: 07/13/2009
Sample ID: 232429014|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.295	0.295	0.0059	0.0084	10:49:47	No
2	0.296	0.296	0.0059	0.0084	10:50:22	No
Mean:	0.296	0.296	0.0059			
SD :	0.0013	0.0013	0.0000			
%RSD:	0.4	0.4	0.2724			

Element: Hg Seq. No.: 39 AS Loc.: 35 Date: 07/13/2009
Sample ID: 232429015|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.250	0.250	0.0053	0.0078	10:51:43	No
2	0.239	0.239	0.0052	0.0077	10:52:18	No
Mean:	0.245	0.245	0.0052			
SD :	0.0073	0.0073	0.0001			
%RSD:	3.0	3.0	1.7687			

Element: Hg Seq. No.: 40 AS Loc.: 36 Date: 07/13/2009
Sample ID: 1201873031|i||881913|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.032	-0.032	0.0017	0.0043	10:53:40	No
2	-0.031	-0.031	0.0017	0.0043	10:54:15	No
Mean:	-0.031	-0.031	0.0017			
SD :	0.0010	0.0010	0.0000			
%RSD:	3.1	3.1	0.7150			

Element: Hg Seq. No.: 41 AS Loc.: 37 Date: 07/13/2009
Sample ID: 1201873032|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.475	3.475	0.0461	0.0486	10:55:38	No
2	3.365	3.365	0.0447	0.0472	10:56:13	No
Mean:	3.420	3.420	0.0454			
SD :	0.0778	0.0778	0.0010			
%RSD:	2.3	2.3	2.1674			

Element: Hg Seq. No.: 42 AS Loc.: 38 Date: 07/13/2009
Sample ID: 232504001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.116	0.116	0.0036	0.0061	10:57:35	No
2	0.112	0.112	0.0035	0.0061	10:58:09	No
Mean:	0.114	0.114	0.0036			
SD :	0.0025	0.0025	0.0000			

%RSD: 2.2 2.2 0.9016

==========

Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 07/13/2009
Sample ID: 232504002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.105	0.105	0.0035	0.0060	10:59:32	No
2	0.090	0.090	0.0033	0.0058	11:00:07	No
Mean:	0.097	0.097	0.0034			
SD :	0.0108	0.0108	0.0001			
%RSD:	11.0	11.0	4.0497			

==========

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 07/13/2009
Sample ID: 232504003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.390	0.390	0.0071	0.0096	11:01:30	No
2	0.372	0.372	0.0068	0.0094	11:02:05	No
Mean:	0.381	0.381	0.0069			
SD :	0.0123	0.0123	0.0002			
%RSD:	3.2	3.2	2.2337			

==========

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 07/13/2009
Sample ID: 232504004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.166	0.166	0.0042	0.0068	11:03:29	No
2	0.150	0.150	0.0040	0.0066	11:04:04	No
Mean:	0.158	0.158	0.0041			
SD :	0.0114	0.0114	0.0001			
%RSD:	7.2	7.2	3.4993			

==========

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.130	5.130	0.0670	0.0695	11:05:30	No
2	5.073	5.073	0.0663	0.0688	11:06:05	No
Mean:	5.101	5.101	0.0666			
SD :	0.0403	0.0403	0.0005			
%RSD:	0.8	0.8	0.7652			

QC value within specified limits.

==========

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.056	-0.056	0.0014	0.0040	11:07:33	No
2	-0.058	-0.058	0.0014	0.0039	11:08:08	No
Mean:	-0.057	-0.057	0.0014			
SD :	0.0014	0.0014	0.0000			
%RSD:	2.4	2.4	1.2413			

QC value within specified limits.

==========

Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 07/13/2009
Sample ID: 232504005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.201	0.201	0.0047	0.0072	11:09:34	No
2	0.187	0.187	0.0045	0.0070	11:10:09	No
Mean:	0.194	0.194	0.0046			
SD :	0.0100	0.0100	0.0001			
%RSD:	5.2	5.2	2.7637			

Element: Hg Seq. No.: 49 AS Loc.: 43 Date: 07/13/2009
Sample ID: 232504006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.046	-0.046	0.0015	0.0041	11:11:34	No
2	-0.036	-0.036	0.0017	0.0042	11:12:09	No
Mean:	-0.041	-0.041	0.0016			
SD :	0.0068	0.0068	0.0001			
%RSD:	16.5	16.5	5.3493			

Element: Hg Seq. No.: 50 AS Loc.: 44 Date: 07/13/2009
Sample ID: 232504007|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.072	-0.072	0.0012	0.0037	11:13:34	No
2	-0.080	-0.080	0.0011	0.0036	11:14:08	No
Mean:	-0.076	-0.076	0.0012			
SD :	0.0056	0.0056	0.0001			
%RSD:	7.3	7.3	6.0607			

Element: Hg Seq. No.: 51 AS Loc.: 45 Date: 07/13/2009
Sample ID: 232504008|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.033	0.033	0.0025	0.0051	11:15:34	No
2	0.022	0.022	0.0024	0.0049	11:16:08	No
Mean:	0.028	0.028	0.0025			
SD :	0.0078	0.0078	0.0001			
%RSD:	28.1	28.1	3.9875			

Element: Hg Seq. No.: 52 AS Loc.: 46 Date: 07/13/2009
Sample ID: 232504009|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.024	0.024	0.0024	0.0050	11:17:35	No
2	0.017	0.017	0.0023	0.0049	11:18:10	No
Mean:	0.020	0.020	0.0024			
SD :	0.0050	0.0050	0.0001			
%RSD:	24.7	24.7	2.6568			

Element: Hg Seq. No.: 53 AS Loc.: 47 Date: 07/13/2009
Sample ID: 232504010|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.129	0.129	0.0038	0.0063	11:19:36	No
2	0.119	0.119	0.0036	0.0062	11:20:11	No
Mean:	0.124	0.124	0.0037			
SD :	0.0075	0.0075	0.0001			

%RSD: 6.0 6.0 2.5541

==========

Element: Hg Seq. No.: 54 AS Loc.: 48 Date: 07/13/2009
Sample ID: 232504011|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.022	-0.022	0.0019	0.0044	11:21:35	No
2	-0.036	-0.036	0.0017	0.0042	11:22:10	No
Mean:	-0.029	-0.029	0.0018			
SD :	0.0101	0.0101	0.0001			
%RSD:	35.2	35.2	7.2230			

==========

Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 07/13/2009
Sample ID: 232504012|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.073	0.073	0.0030	0.0056	11:23:30	No
2	0.069	0.069	0.0030	0.0055	11:24:05	No
Mean:	0.071	0.071	0.0030			
SD :	0.0030	0.0030	0.0000			
%RSD:	4.3	4.3	1.2653			

==========

Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 07/13/2009
Sample ID: 232504013|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.132	0.132	0.0038	0.0063	11:25:25	No
2	0.124	0.124	0.0037	0.0062	11:26:00	No
Mean:	0.128	0.128	0.0037			
SD :	0.0058	0.0058	0.0001			
%RSD:	4.5	4.5	1.9637			

==========

Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 07/13/2009
Sample ID: 232504014|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.072	-0.072	0.0012	0.0037	11:27:22	No
2	-0.079	-0.079	0.0011	0.0037	11:27:57	No
Mean:	-0.075	-0.075	0.0012			
SD :	0.0047	0.0047	0.0001			
%RSD:	6.2	6.2	5.0576			

==========

Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 07/13/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.976	4.976	0.0651	0.0676	11:29:22	No
2	5.108	5.108	0.0667	0.0693	11:29:57	No
Mean:	5.042	5.042	0.0659			
SD :	0.0927	0.0927	0.0012			
%RSD:	1.8	1.8	1.7799			

QC value within specified limits.

==========

Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	0.0015	0.0040	11:31:25	No
2	-0.046	-0.046	0.0015	0.0041	11:31:59	No
Mean:	-0.050	-0.050	0.0015			
SD :	0.0051	0.0051	0.0001			
%RSD:	10.2	10.2	4.2953			

QC value within specified limits.

==========

Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 07/13/2009
Sample ID: 232509001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.787	1.787	0.0247	0.0273	11:33:23	No
2	1.785	1.785	0.0247	0.0272	11:33:58	No
Mean:	1.786	1.786	0.0247			
SD :	0.0015	0.0015	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 07/13/2009
Sample ID: 1201873033|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.961	0.961	0.0143	0.0168	11:35:20	No
2	0.924	0.924	0.0138	0.0163	11:35:55	No
Mean:	0.942	0.942	0.0140			
SD :	0.0259	0.0259	0.0003			
%RSD:	2.8	2.8	2.3359			

==========

Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 07/13/2009
Sample ID: 1201873034|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.725	3.725	0.0492	0.0518	11:37:17	No
2	3.714	3.714	0.0491	0.0516	11:37:52	No
Mean:	3.720	3.720	0.0492			
SD :	0.0083	0.0083	0.0001			
%RSD:	0.2	0.2	0.2132			

==========

Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 07/13/2009
Sample ID: 1201873037|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.892	3.892	0.0514	0.0539	11:39:15	No
2	3.893	3.893	0.0514	0.0539	11:39:49	No
Mean:	3.893	3.893	0.0514			
SD :	0.0008	0.0008	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 07/13/2009
Sample ID: 1201873036|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.267	0.267	0.0055	0.0080	11:41:13	No
2	0.248	0.248	0.0053	0.0078	11:41:48	No
Mean:	0.258	0.258	0.0054			
SD :	0.0134	0.0134	0.0002			

```
%RSD:        5.2         5.2     3.1457

==========================================================================
Element: Hg     Seq. No.: 65        AS Loc.: 57    Date: 07/13/2009
Sample ID: 232509002|i|||
--------------------------------------------------------------------------
Repl    SampleConc  StndConc    BlnkCorr    Peak       Time    Peak
 #      µg/L        µg/L        Signal      Height             Stored
 1        0.313      0.313     0.0061      0.0086    11:43:12  No
 2        0.292      0.292     0.0058      0.0084    11:43:47  No
Mean:     0.303      0.303     0.0060
SD  :    0.0145     0.0145     0.0002
%RSD:       4.8        4.8     3.0720

==========================================================================
Element: Hg     Seq. No.: 66        AS Loc.: 58    Date: 07/13/2009
Sample ID: 232509003|i|||
--------------------------------------------------------------------------
Repl    SampleConc  StndConc    BlnkCorr    Peak       Time    Peak
 #      µg/L        µg/L        Signal      Height             Stored
 1       -0.067     -0.067     0.0013      0.0038    11:45:11  No
 2       -0.067     -0.067     0.0013      0.0038    11:45:46  No
Mean:    -0.067     -0.067     0.0013
SD  :    0.0003     0.0003     0.0000
%RSD:       0.5        0.5     0.3351

==========================================================================
Element: Hg     Seq. No.: 67        AS Loc.: 59    Date: 07/13/2009
Sample ID: 232509004|i|||
--------------------------------------------------------------------------
Repl    SampleConc  StndConc    BlnkCorr    Peak       Time    Peak
 #      µg/L        µg/L        Signal      Height             Stored
 1        1.344      1.344     0.0191      0.0217    11:47:11  No
 2        1.328      1.328     0.0189      0.0215    11:47:45  No
Mean:     1.336      1.336     0.0190
SD  :    0.0116     0.0116     0.0001
%RSD:       0.9        0.9     0.7745

==========================================================================
Element: Hg     Seq. No.: 68        AS Loc.: 60    Date: 07/13/2009
Sample ID: 232509005|i|||
--------------------------------------------------------------------------
Repl    SampleConc  StndConc    BlnkCorr    Peak       Time    Peak
 #      µg/L        µg/L        Signal      Height             Stored
 1        0.566      0.566     0.0093      0.0118    11:49:10  No
 2        0.563      0.563     0.0093      0.0118    11:49:45  No
Mean:     0.565      0.565     0.0093
SD  :    0.0016     0.0016     0.0000
%RSD:       0.3        0.3     0.2214

==========================================================================
Element: Hg     Seq. No.: 69        AS Loc.: 61    Date: 07/13/2009
Sample ID: 232509006|i|||
--------------------------------------------------------------------------
Repl    SampleConc  StndConc    BlnkCorr    Peak       Time    Peak
 #      µg/L        µg/L        Signal      Height             Stored
 1        0.184      0.184     0.0045      0.0070    11:51:12  No
 2        0.171      0.171     0.0043      0.0068    11:51:47  No
Mean:     0.178      0.178     0.0044
SD  :    0.0089     0.0089     0.0001
%RSD:       5.0        5.0     2.5778

==========================================================================
Element: Hg     Seq. No.: 70        AS Loc.: 7     Date: 07/13/2009
Sample ID: CCV
--------------------------------------------------------------------------
Repl    SampleConc  StndConc    BlnkCorr    Peak       Time    Peak
```

#	µg/L	µg/L	Signal	Height		Stored
1	5.144	5.144	0.0672	0.0697	11:53:13	No
2	5.119	5.119	0.0669	0.0694	11:53:48	No
Mean:	5.131	5.131	0.0670			
SD :	0.0183	0.0183	0.0002			
%RSD:	0.4	0.4	0.3449			

QC value within specified limits.

==========

Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 07/13/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	0.0014	0.0039	11:55:16	No
2	-0.064	-0.064	0.0013	0.0038	11:55:51	No
Mean:	-0.061	-0.061	0.0014			
SD :	0.0051	0.0051	0.0001			
%RSD:	8.4	8.4	4.7284			

QC value within specified limits.

==========

Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 07/13/2009
Sample ID: 1201873038|i||881916|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.121	-0.121	0.0006	0.0031	11:57:18	No
2	-0.129	-0.129	0.0005	0.0030	11:57:53	No
Mean:	-0.125	-0.125	0.0006			
SD :	0.0055	0.0055	0.0001			
%RSD:	4.4	4.4	12.7065			

==========

Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 07/13/2009
Sample ID: 1201873039|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.532	3.532	0.0468	0.0493	11:59:16	No
2	3.416	3.416	0.0453	0.0479	11:59:50	No
Mean:	3.474	3.474	0.0461			
SD :	0.0817	0.0817	0.0010			
%RSD:	2.4	2.4	2.2434			

==========

Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 07/13/2009
Sample ID: 232582001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.170	0.170	0.0043	0.0068	12:01:10	No
2	0.157	0.157	0.0041	0.0066	12:01:46	No
Mean:	0.163	0.163	0.0042			
SD :	0.0090	0.0090	0.0001			
%RSD:	5.5	5.5	2.7076			

==========

Element: Hg Seq. No.: 75 AS Loc.: 65 Date: 07/13/2009
Sample ID: 232582002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.106	0.106	0.0035	0.0060	12:03:06	No
2	0.108	0.108	0.0035	0.0060	12:03:40	No
Mean:	0.107	0.107	0.0035			
SD :	0.0013	0.0013	0.0000			

Miscellaneous

Prep LogBook

Analyst: FGA Verified by:_____

Batch: 881342

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871689	UI652380	.503	g
MS	1201871691	UI090622-01	.25	mL
MS	1201871691	UI090622-06	.25	mL
MSD	1201871693	UI090622-01	.25	mL
MSD	1201871693	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871688		SW846 3050B	30-JUN-2009 14:00	0.521 g	50 mL	95.96929	SOIL
LCS	1201871689		SW846 3050B	30-JUN-2009 14:00	0.503 g	50 mL	99.40358	SOIL
SAMPLE	232504001		SW846 3050B	30-JUN-2009 14:00	0.511 g	50 mL	97.84736	SOIL
DUP	1201871690	232504001	SW846 3050B	30-JUN-2009 14:00	0.512 g	50 mL	97.65625	SOIL
MS	1201871691	232504001	SW846 3050B	30-JUN-2009 14:00	0.514 g	50 mL	97.27626	SOIL
MSD	1201871693	232504001	SW846 3050B	30-JUN-2009 14:00	0.505 g	50 mL	99.0099	SOIL
SDILT	1201871692	232504001	SW846 3050B	30-JUN-2009 14:00	0.511 g	50 mL	97.84736	SOIL
SAMPLE	232504002		SW846 3050B	30-JUN-2009 14:00	0.518 g	50 mL	96.5251	SOIL
SAMPLE	232504003		SW846 3050B	30-JUN-2009 14:00	0.5 g	50 mL	100	SOIL
SAMPLE	232504004		SW846 3050B	30-JUN-2009 14:00	0.5 g	50 mL	100	SOIL
SAMPLE	232504005		SW846 3050B	30-JUN-2009 14:00	0.5 g	50 mL	100	SOIL
SAMPLE	232504006		SW846 3050B	30-JUN-2009 14:00	0.507 g	50 mL	98.61933	SOIL
SAMPLE	232504007		SW846 3050B	30-JUN-2009 14:00	0.51 g	50 mL	98.03922	SOIL
SAMPLE	232504008		SW846 3050B	30-JUN-2009 14:00	0.508 g	50 mL	98.4252	SOIL
SAMPLE	232504009		SW846 3050B	30-JUN-2009 14:00	0.518 g	50 mL	96.5251	SOIL
SAMPLE	232504010		SW846 3050B	30-JUN-2009 14:00	0.508 g	50 mL	98.4252	SOIL
SAMPLE	232504011		SW846 3050B	30-JUN-2009 14:00	0.509 g	50 mL	98.23183	SOIL
SAMPLE	232504012		SW846 3050B	30-JUN-2009 14:00	0.517 g	50 mL	96.7118	SOIL
SAMPLE	232504013		SW846 3050B	30-JUN-2009 14:00	0.525 g	50 mL	95.2381	SOIL
SAMPLE	232504014		SW846 3050B	30-JUN-2009 14:00	0.501 g	50 mL	99.8004	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments Brown,medium soil.

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 881359

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871719	UI647733-01	.509	g
MS	1201871721	UI042709-A	.5	mL
MS	1201871721	UI042709-B	.5	mL
MSD	1201871723	UI042709-A	.5	mL
MSD	1201871723	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871718		SW846 3050B	01-JUL-2009 08:32	0.512 g	50 mL	97.65625	SOIL
LCS	1201871719		SW846 3050B	01-JUL-2009 08:32	0.509 g	50 mL	98.23183	SOIL
SAMPLE	232504001		SW846 3050B	01-JUL-2009 08:32	0.519 g	50 mL	96.33911	SOIL
DUP	1201871720	232504001	SW846 3050B	01-JUL-2009 08:32	0.517 g	50 mL	96.7118	SOIL
MS	1201871721	232504001	SW846 3050B	01-JUL-2009 08:32	0.517 g	50 mL	96.7118	SOIL
MSD	1201871723	232504001	SW846 3050B	01-JUL-2009 08:32	0.514 g	50 mL	97.27626	SOIL
SDILT	1201871722	232504001	SW846 3050B	01-JUL-2009 08:32	0.519 g	50 mL	96.33911	SOIL
SAMPLE	232504002		SW846 3050B	01-JUL-2009 08:32	0.501 g	50 mL	99.8004	SOIL
SAMPLE	232504003		SW846 3050B	01-JUL-2009 08:32	0.521 g	50 mL	95.96929	SOIL
SAMPLE	232504004		SW846 3050B	01-JUL-2009 08:32	0.521 g	50 mL	95.96929	SOIL
SAMPLE	232504005		SW846 3050B	01-JUL-2009 08:32	0.518 g	50 mL	96.5251	SOIL
SAMPLE	232504006		SW846 3050B	01-JUL-2009 08:32	0.513 g	50 mL	97.46589	SOIL
SAMPLE	232504007		SW846 3050B	01-JUL-2009 08:32	0.524 g	50 mL	95.41985	SOIL
SAMPLE	232504008		SW846 3050B	01-JUL-2009 08:32	0.501 g	50 mL	99.8004	SOIL
SAMPLE	232504009		SW846 3050B	01-JUL-2009 08:32	0.509 g	50 mL	98.23183	SOIL
SAMPLE	232504010		SW846 3050B	01-JUL-2009 08:32	0.5 g	50 mL	100	SOIL
SAMPLE	232504011		SW846 3050B	01-JUL-2009 08:32	0.511 g	50 mL	97.84736	SOIL
SAMPLE	232504012		SW846 3050B	01-JUL-2009 08:32	0.509 g	50 mL	98.23183	SOIL
SAMPLE	232504013		SW846 3050B	01-JUL-2009 08:32	0.5 g	50 mL	100	SOIL
SAMPLE	232504014		SW846 3050B	01-JUL-2009 08:32	0.521 g	50 mL	95.96929	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments QC Sample #232504001 is a brown, medium soil.

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881912

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873032	UI031809A	.201	g
MS	1201873034	WHG090710-14	.3	mL
MSD	1201873037	WHG090710-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873031		SW846 7471A Prep	10-JUL-2009 14:20	0.58 g	30 mL	51.72414	SOIL
LCS	1201873032		SW846 7471A Prep	10-JUL-2009 14:20	0.201 g	30 mL	149.25373	SOIL
SAMPLE	232504001		SW846 7471A Prep	10-JUL-2009 14:20	0.582 g	30 mL	51.54639	SOIL
SAMPLE	232504002		SW846 7471A Prep	10-JUL-2009 14:20	0.586 g	30 mL	51.19454	SOIL
SAMPLE	232504003		SW846 7471A Prep	10-JUL-2009 14:20	0.581 g	30 mL	51.63511	SOIL
SAMPLE	232504004		SW846 7471A Prep	10-JUL-2009 14:20	0.542 g	30 mL	55.35055	SOIL
SAMPLE	232504005		SW846 7471A Prep	10-JUL-2009 14:20	0.599 g	30 mL	50.08347	SOIL
SAMPLE	232504006		SW846 7471A Prep	10-JUL-2009 14:20	0.573 g	30 mL	52.35602	SOIL
SAMPLE	232504007		SW846 7471A Prep	10-JUL-2009 14:20	0.521 g	30 mL	57.58157	SOIL
SAMPLE	232504008		SW846 7471A Prep	10-JUL-2009 14:20	0.51 g	30 mL	58.82353	SOIL
SAMPLE	232504009		SW846 7471A Prep	10-JUL-2009 14:20	0.521 g	30 mL	57.58157	SOIL
SAMPLE	232504010		SW846 7471A Prep	10-JUL-2009 14:20	0.56 g	30 mL	53.57143	SOIL
SAMPLE	232504011		SW846 7471A Prep	10-JUL-2009 14:20	0.534 g	30 mL	56.17978	SOIL
SAMPLE	232504012		SW846 7471A Prep	10-JUL-2009 14:20	0.508 g	30 mL	59.05512	SOIL
SAMPLE	232504013		SW846 7471A Prep	10-JUL-2009 14:20	0.597 g	30 mL	50.25126	SOIL
SAMPLE	232504014		SW846 7471A Prep	10-JUL-2009 14:20	0.546 g	30 mL	54.94505	SOIL
SAMPLE	232509001		SW846 7471A Prep	10-JUL-2009 14:20	0.533 g	30 mL	56.28518	SOIL
DUP	1201873033	232509001	SW846 7471A Prep	10-JUL-2009 14:20	0.519 g	30 mL	57.80347	SOIL
MS	1201873034	232509001	SW846 7471A Prep	10-JUL-2009 14:20	0.561 g	30 mL	53.47594	SOIL
MSD	1201873037	232509001	SW846 7471A Prep	10-JUL-2009 14:20	0.535 g	30 mL	56.07477	SOIL
SDILT	1201873036	232509001	SW846 7471A Prep	10-JUL-2009 14:20	0.533 g	30 mL	56.28518	SOIL
SAMPLE	232509002		SW846 7471A Prep	10-JUL-2009 14:20	0.579 g	30 mL	51.81347	SOIL
SAMPLE	232509003		SW846 7471A Prep	10-JUL-2009 14:20	0.516 g	30 mL	58.13953	SOIL
SAMPLE	232509004		SW846 7471A Prep	10-JUL-2009 14:20	0.594 g	30 mL	50.50505	SOIL
SAMPLE	232509005		SW846 7471A Prep	10-JUL-2009 14:20	0.532 g	30 mL	56.39098	SOIL
SAMPLE	232509006		SW846 7471A Prep	10-JUL-2009 14:20	0.556 g	30 mL	53.95683	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution

Comments Sample 232509001 consist of brown rocky, moist soil.
Digestion Start Date: 10-JUL-09 14:20
Digestion End Date: 10-JUL-09 14:50

Prep LogBook

1144356-C	2 mL	Hg reducing agent
WHG090710-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090710-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG090710-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090710-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090710-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090710-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 707928
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
03-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
881343	See Below		

Potentially affected work order(s)(SDG): 232504(09-2498)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for MS/MSD, or PS/PSD

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201871691MS 2. Failed RPD for MS/MSD, or PS/PSD: QC 1201871693MSD 3. Failed Recovery for MSD/PSD: QC 1201871693MSD	1. The matrix spike recovery failed outside of the control limits for magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The matrix spike and matrix spike duplicate % RPD failed outside of the control limits for barium and manganese due to possible matrix interferences and/or sample non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike duplicate recovery failed outside of the control limits for barium,calcium,magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported

Originator's Name:
Helen Camello 03-JUL-09

Data Validator/Group Leader:
Louise Smith 06-JUL-09

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
06-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3050B/6020	Solid	LANL
Batch ID:	**Sample Numbers:**		
881360	See Below		

Potentially affected work order(s)(SDG): 232504(09-2498)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201871721MS 2. Failed Recovery for MSD/PSD: QC 1201871723MSD	The matrix spike and matrix spike duplicate recoveries failed outside of the control limits for Se due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Elizabeth Janssen 06-JUL-09

Data Validator/Group Leader:

Samantha Jacobs 06-JUL-09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 710801
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
13-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
MERCURY	SW846 7471A	Solid	LANL
Batch ID:	**Sample Numbers:**		
881913	See Below		

Potentially affected work order(s)(SDG): 232504(09-2498),232509(09-2500)

Application Issues:

Failed RPD for DUP

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed RPD for DUP: QC 1201873033DUP	1. The sample and sample duplicate % RPD failed outside the control limits for Hg due to possible sample non-homogeneity and/or matrix interference. Sample is a rocky, moist brown soil. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Jason Loy 13-JUL-09

Data Validator/Group Leader:

Eric Lawson 13-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Standard Logbook

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.14 **Opened:** 02-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 03-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L

Analyte	Concentration	Analyte	Concentration
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I

Standard Logbook

Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI647733-01 **Opened:** 02-APR-07 **Amount :** 80 g
Name: ICPMSSOILSRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis
Supplier: ERA
Description: ICPMS Soil LCS (Reference)
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	8270 mg/kg	Antimony	55.8 mg/kg
Arsenic	255 mg/kg	Barium	469 mg/kg
Beryllium	86.4 mg/kg	Boron	138 mg/kg
Cadmium	119 mg/kg	Calcium	3760 mg/kg
Chromium	71.2 mg/kg	Cobalt	79.6 mg/kg
Copper	96.2 mg/kg	Iron	13200 mg/kg
Lead	169 mg/kg	Lithium	8.01 mg/kg
Magnesium	2990 mg/kg	Manganese	364 mg/kg
Mercury	4.18 mg/kg	Molybdenum	79.6 mg/kg
Nickel	101 mg/kg	Phosphorous	752 mg/kg
Potassium	2420 mg/kg	Selenium	171 mg/kg
Silver	116 mg/kg	Sodium	575 mg/kg
Strontium	144 mg/kg	Thallium	203 mg/kg
Thorium	17.2 mg/kg	Titanium	255 mg/kg
Uranium	2.12 mg/kg	Uranium-235	.0153 mg/kg
Uranium-238	2.105 mg/kg	Vanadium	134 mg/kg
Zinc	202 mg/kg	Zirconium	6.83 mg/kg

Standard Logbook

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Standard Logbook

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090710-01 **Opened:** 10-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 10-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090710-02 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 10-JUL-09
Type: Intermediate **Expires:** 11-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090710-07 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090710-08 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090710-09 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090710-10 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-11 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090710-12 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090710-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090710-14 **Opened:** 10-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 10-JUL-09
Type: Working **Expires:** 17-JUL-09
Employee: Lamanuel Hightower **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090702-42 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090702-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090702-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090702-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090702-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090702-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090702-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090702-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090702-43 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746

Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09

Type: Working **Expires:** 03-JUL-09

Employee: Helen Camello

Supplier: GEL

Description: TRACE ICP 0.5/CCV CALIBRATION STD.

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090702-44 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1143746

Name: TRACE ICP SCAL 1.0 **Received:** 02-JUL-09

Type: Working **Expires:** 03-JUL-09

Employee: Helen Camello

Supplier: o2si

Description: Trace ICP Calibration Standard 1.0ppm

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090702-45 **Opened:** 02-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1143746
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Standard Logbook

Serial ID: WI090702-46 **Opened:** 02-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1143746
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Standard Logbook

Serial ID: WI090702-47 **Opened:** 02-JUL-09 **Solvent :** 3%HCL &1%HNO3-1143746
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 03-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090705-04 **Opened:** 05-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 05-JUL-09 **Solvent :** 2%HNO3/1%HCl-1143705
Type: Working **Expires:** 06-JUL-09
Employee: Elizabeth Janssen
Supplier: GEL

Standard Logbook

Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090705-04A **Opened:** 05-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 05-JUL-09
Type: Working **Expires:** 06-JUL-09
Employee: Elizabeth Janssen
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090705-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090705-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090705-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090705-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090705-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090705-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090705-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090705-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090705-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090705-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090705-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090705-05 **Opened:** 05-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 05-JUL-09
Type: Working **Expires:** 06-JUL-09
Employee: Elizabeth Janssen
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090705-06 **Opened:** 05-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 05-JUL-09
Type: Working **Expires:** 06-JUL-09
Employee: Elizabeth Janssen
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090705-07 **Opened:** 05-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 05-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 06-JUL-09
Employee: Elizabeth Janssen
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090705-08 **Opened:** 05-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 05-JUL-09
Type: Working **Expires:** 06-JUL-09
Employee: Elizabeth Janssen
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090705-70 **Opened:** 05-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS LINEAR RANGE ST **Received:** 05-JUL-09
Type: Working **Expires:** 06-JUL-09
Employee: Elizabeth Janssen
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Standard Logbook

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1143705 **Opened:** 29-JUN-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 06-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1143746 **Opened:** 29-JUN-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JUN-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 05-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Standard Logbook

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2498-1

Sample Analysis

Sample ID	**Client ID**
232506001	CAMO-09-10381
232506002	CAMO-09-10380
1201871706	Method Blank (MB) **ICP**
1201871707	Laboratory Control Sample (LCS)
1201871710	232510001(CAMO-09-6533L) Serial Dilution (SD)
1201871708	232510001(CAMO-09-6533D) Sample Duplicate (DUP)
1201871709	232510001(CAMO-09-6533S) Matrix Spike (MS)
1201871711	Method Blank (MB) **ICP-MS**
1201871712	Laboratory Control Sample (LCS)
1201871715	232370001(CAMO-09-6053L) Serial Dilution (SD)
1201871713	232370001(CAMO-09-6053D) Sample Duplicate (DUP)
1201871714	232370001(CAMO-09-6053S) Matrix Spike (MS)
1201871797	Method Blank (MB) **CVAA**
1201871798	Laboratory Control Sample (LCS)
1201871801	232510001(CAMO-09-6533L) Serial Dilution (SD)
1201871799	232510001(CAMO-09-6533D) Sample Duplicate (DUP)
1201871800	232510001(CAMO-09-6533S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Method/Analysis Information

Analytical Batch:	881354, 881357 and 881396
Prep Batch :	881353, 881356 and 881395
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3005/6010B, SW846 3005/6020 and SW846 7470A
Prep Method :	SW846 3005A and SW846 7470A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232510001 (CAMO-09-6533)-ICP and CVAA and 232370001 (CAMO-09-6053)-ICP-MS.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of thallium, as indicated by the "N" qualifier.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 708200. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Parson **Date:** 7/17/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232506001 **BASIS:** As Received **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10381 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/04/09 02:42	090703-2	881357
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/04/09 02:42	090703-2	881357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/04/09 02:42	090703-2	881357
7440-70-2	Calcium	42.9	ug/L	J	30	100	100	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-47-3	Chromium	5	ug/L	U	2	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	06/30/09 19:06	063009-1	881354
7439-89-6	Iron	100	ug/L	U	25	100	100	1	P	HSC	06/30/09 19:06	063009-1	881354
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/04/09 02:42	090703-2	881357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	06/30/09 19:06	063009-1	881354
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/04/09 02:42	090703-2	881357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	ETL	07/02/09 11:00	070209W1-4	881396
7440-02-0	Nickel	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-09-7	Potassium	367	ug/L		50	150	150	1	P	HSC	06/30/09 19:06	063009-1	881354
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-23-5	Sodium	202	ug/L		45	150	150	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	PRB	07/04/09 15:19	090703-3	881357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:06	063009-1	881354
7440-66-6	Zinc	10	ug/L	U	2	10	10	1	P	HSC	06/30/09 19:06	063009-1	881354

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881354	881353	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881357	881356	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881396	881395	SW846 7470A Prep	20	mL	20	mL	07/01/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2498-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232506002 **BASIS:** As Received **DATE COLLECTED** 24-JUN-09

CLIENT ID: CAMO-09-10380 **LEVEL:** Low **DATE RECEIVED** 27-JUN-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/04/09 02:46	090703-2	881357
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/04/09 02:46	090703-2	881357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/04/09 02:46	090703-2	881357
7440-70-2	Calcium	34.8	ug/L	J	30	100	100	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-47-3	Chromium	5	ug/L	U	2	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	06/30/09 19:27	063009-1	881354
7439-89-6	Iron	100	ug/L	U	25	100	100	1	P	HSC	06/30/09 19:27	063009-1	881354
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/04/09 02:46	090703-2	881357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	06/30/09 19:27	063009-1	881354
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/04/09 02:46	090703-2	881357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	ETL	07/02/09 11:02	070209W1-4	881396
7440-02-0	Nickel	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-09-7	Potassium	355	ug/L		50	150	150	1	P	HSC	06/30/09 19:27	063009-1	881354
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-23-5	Sodium	253	ug/L		45	150	150	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	PRB	07/04/09 15:22	090703-3	881357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	06/30/09 19:27	063009-1	881354
7440-66-6	Zinc	10	ug/L	U	2	10	10	1	P	HSC	06/30/09 19:27	063009-1	881354

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881354	881353	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881357	881356	SW846 3005A	50	mL	50	mL	06/30/09	AXG2
881396	881395	SW846 7470A Prep	20	mL	20	mL	07/01/09	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5320	ug/L	5000	ug/L	106.4	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Arsenic	486	ug/L	500	ug/L	97.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Barium	536	ug/L	500	ug/L	107.3	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Calcium	5140	ug/L	5000	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Cobalt	480	ug/L	500	ug/L	96.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Copper	522	ug/L	500	ug/L	104.3	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Iron	5220	ug/L	5000	ug/L	104.4	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Magnesium	5500	ug/L	5000	ug/L	110	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Nickel	530	ug/L	500	ug/L	105.9	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Potassium	2480	ug/L	2500	ug/L	99.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Selenium	2630	ug/L	2500	ug/L	105.2	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Silver	256	ug/L	250	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Sodium	2650	ug/L	2500	ug/L	106.1	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Zinc	508	ug/L	500	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 08:32	063009-1
	Mercury	5.23	ug/L	5	ug/L	104.6	90.0 - 110.0	AV	02-JUL-09 08:19	070209W1-4
	Antimony	48.1	ug/L	50	ug/L	96.2	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Beryllium	51.6	ug/L	50	ug/L	103.2	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Cadmium	52.5	ug/L	50	ug/L	105	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Lead	51.3	ug/L	50	ug/L	102.6	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Manganese	48.7	ug/L	50	ug/L	97.4	90.0 - 110.0	MS	04-JUL-09 01:07	090703-2
	Thallium	49.7	ug/L	50	ug/L	99.4	90.0 - 110.0	MS	04-JUL-09 14:15	090703-3
CCV01										
	Aluminum	5240	ug/L	5000	ug/L	104.7	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Arsenic	515	ug/L	500	ug/L	103.1	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Barium	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Chromium	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 09:33	063009-1
	Cobalt	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 09:33	063009-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2498–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Copper	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Iron	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Magnesium	5250	ug/L	5000	ug/L	105.1	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Nickel	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Potassium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Selenium	535	ug/L	500	ug/L	107	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Silver	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Sodium	10200	ug/L	10000	ug/L	102.2	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Zinc	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	30–JUN–09 09:33	063009–1
	Mercury	4.85	ug/L	5	ug/L	97	80.0 – 120.0	AV	02–JUL–09 08:25	070209W1–4
	Antimony	51.5	ug/L	50	ug/L	102.9	90.0 – 110.0	MS	04–JUL–09 01:31	090703–2
	Beryllium	53.8	ug/L	50	ug/L	107.6	90.0 – 110.0	MS	04–JUL–09 01:31	090703–2
	Cadmium	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	04–JUL–09 01:31	090703–2
	Lead	52.2	ug/L	50	ug/L	104.4	90.0 – 110.0	MS	04–JUL–09 01:31	090703–2
	Manganese	52.1	ug/L	50	ug/L	104.2	90.0 – 110.0	MS	04–JUL–09 01:31	090703–2
	Thallium	48.9	ug/L	50	ug/L	97.7	90.0 – 110.0	MS	04–JUL–09 14:33	090703–3
CCV02										
	Aluminum	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Arsenic	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Barium	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Calcium	5260	ug/L	5000	ug/L	105.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Chromium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Cobalt	500	ug/L	500	ug/L	100	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Copper	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Magnesium	5280	ug/L	5000	ug/L	105.6	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Nickel	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Potassium	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	30–JUN–09 09:54	063009–1
	Selenium	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	30–JUN–09 09:54	063009–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Sodium	10300	ug/L	10000	ug/L	103.3	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Zinc	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	30-JUN-09 09:54	063009-1
	Mercury	4.78	ug/L	5	ug/L	95.5	80.0 - 120.0	AV	02-JUL-09 08:49	070209W1-4
	Antimony	53.3	ug/L	50	ug/L	106.7	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Beryllium	52	ug/L	50	ug/L	104	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Cadmium	49.6	ug/L	50	ug/L	99.3	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Lead	53.2	ug/L	50	ug/L	106.3	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Manganese	50.1	ug/L	50	ug/L	100.2	90.0 - 110.0	MS	04-JUL-09 01:45	090703-2
	Thallium	48.5	ug/L	50	ug/L	96.9	90.0 - 110.0	MS	04-JUL-09 15:03	090703-3
CCV03										
	Aluminum	5200	ug/L	5000	ug/L	104	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Arsenic	516	ug/L	500	ug/L	103.1	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Barium	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Calcium	5150	ug/L	5000	ug/L	102.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Chromium	513	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Cobalt	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Copper	507	ug/L	500	ug/L	101.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Iron	4940	ug/L	5000	ug/L	98.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Magnesium	5190	ug/L	5000	ug/L	103.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Nickel	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Potassium	4790	ug/L	5000	ug/L	95.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Selenium	532	ug/L	500	ug/L	106.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Silver	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Zinc	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 10:57	063009-1
	Mercury	4.76	ug/L	5	ug/L	95.3	80.0 - 120.0	AV	02-JUL-09 09:13	070209W1-4
	Antimony	50.6	ug/L	50	ug/L	101.1	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	54.4	ug/L	50	ug/L	108.9	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2
	Cadmium	49.2	ug/L	50	ug/L	98.4	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2
	Manganese	52.9	ug/L	50	ug/L	105.8	90.0 - 110.0	MS	04-JUL-09 02:23	090703-2
	Thallium	47	ug/L	50	ug/L	94	90.0 - 110.0	MS	04-JUL-09 15:30	090703-3
CCV04										
	Aluminum	5210	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Arsenic	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Barium	511	ug/L	500	ug/L	102.3	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Chromium	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Cobalt	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Copper	505	ug/L	500	ug/L	100.9	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Iron	4990	ug/L	5000	ug/L	99.8	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Nickel	500	ug/L	500	ug/L	100	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Potassium	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Selenium	526	ug/L	500	ug/L	105.3	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Silver	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Zinc	506	ug/L	500	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 11:52	063009-1
	Mercury	4.77	ug/L	5	ug/L	95.4	80.0 - 120.0	AV	02-JUL-09 09:36	070209W1-4
	Antimony	49.4	ug/L	50	ug/L	98.8	90.0 - 110.0	MS	04-JUL-09 02:56	090703-2
	Beryllium	55.1	ug/L	50	ug/L	110.3	90.0 - 110.0	MS	04-JUL-09 02:56	090703-2
	Cadmium	48.3	ug/L	50	ug/L	96.7	90.0 - 110.0	MS	04-JUL-09 02:56	090703-2
	Lead	50.9	ug/L	50	ug/L	101.8	90.0 - 110.0	MS	04-JUL-09 02:56	090703-2
	Manganese	51.8	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	04-JUL-09 02:56	090703-2
CCV05										
	Aluminum	5340	ug/L	5000	ug/L	106.7	90.0 - 110.0	P	30-JUN-09 13:02	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Arsenic	520	ug/L	500	ug/L	103.9	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Barium	515	ug/L	500	ug/L	103	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Calcium	5320	ug/L	5000	ug/L	106.3	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Chromium	515	ug/L	500	ug/L	102.9	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Cobalt	518	ug/L	500	ug/L	103.7	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Copper	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Iron	5100	ug/L	5000	ug/L	102.1	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Magnesium	5370	ug/L	5000	ug/L	107.4	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Nickel	516	ug/L	500	ug/L	103.2	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Potassium	4990	ug/L	5000	ug/L	99.7	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Selenium	533	ug/L	500	ug/L	106.6	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Silver	515	ug/L	500	ug/L	103	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Sodium	10500	ug/L	10000	ug/L	104.8	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Vanadium	518	ug/L	500	ug/L	103.6	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Zinc	510	ug/L	500	ug/L	102	90.0 - 110.0	P	30-JUN-09 13:02	063009-1
	Mercury	4.82	ug/L	5	ug/L	96.3	80.0 - 120.0	AV	02-JUL-09 10:00	070209W1-4
CCV06										
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Arsenic	525	ug/L	500	ug/L	104.9	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Barium	515	ug/L	500	ug/L	102.9	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Calcium	5280	ug/L	5000	ug/L	105.6	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Chromium	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Cobalt	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Copper	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Iron	5080	ug/L	5000	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Magnesium	5300	ug/L	5000	ug/L	106	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Nickel	511	ug/L	500	ug/L	102.3	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Potassium	5040	ug/L	5000	ug/L	100.8	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Selenium	539	ug/L	500	ug/L	107.7	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Silver	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	30-JUN-09 14:20	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	10600	ug/L	10000	ug/L	106	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Vanadium	516	ug/L	500	ug/L	103.2	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Zinc	509	ug/L	500	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 14:20	063009-1
	Mercury	4.8	ug/L	5	ug/L	96	80.0 - 120.0	AV	02-JUL-09 10:24	070209W1-4
CCV07										
	Aluminum	5370	ug/L	5000	ug/L	107.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Arsenic	505	ug/L	500	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Barium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Calcium	5340	ug/L	5000	ug/L	106.8	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Chromium	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Cobalt	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Copper	495	ug/L	500	ug/L	98.9	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Iron	5140	ug/L	5000	ug/L	102.9	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Magnesium	5350	ug/L	5000	ug/L	107.1	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Nickel	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Potassium	5010	ug/L	5000	ug/L	100.1	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Selenium	524	ug/L	500	ug/L	104.9	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Silver	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Sodium	10500	ug/L	10000	ug/L	105.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Vanadium	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	30-JUN-09 14:43	063009-1
	Mercury	4.82	ug/L	5	ug/L	96.5	80.0 - 120.0	AV	02-JUL-09 10:48	070209W1-4
CCV08										
	Aluminum	5290	ug/L	5000	ug/L	105.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Arsenic	520	ug/L	500	ug/L	104	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Barium	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Calcium	5180	ug/L	5000	ug/L	103.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Cobalt	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Copper	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Iron	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Nickel	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Potassium	4840	ug/L	5000	ug/L	96.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Selenium	534	ug/L	500	ug/L	106.9	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Silver	512	ug/L	500	ug/L	102.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Sodium	10200	ug/L	10000	ug/L	102.5	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Zinc	509	ug/L	500	ug/L	101.8	90.0 - 110.0	P	30-JUN-09 15:52	063009-1
	Mercury	4.82	ug/L	5	ug/L	96.4	80.0 - 120.0	AV	02-JUL-09 11:11	070209W1-4
CCV09										
	Aluminum	5250	ug/L	5000	ug/L	105	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Arsenic	516	ug/L	500	ug/L	103.1	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Barium	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Calcium	5260	ug/L	5000	ug/L	105.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Chromium	510	ug/L	500	ug/L	102.1	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Cobalt	507	ug/L	500	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Copper	506	ug/L	500	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Iron	5050	ug/L	5000	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Magnesium	5230	ug/L	5000	ug/L	104.6	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Nickel	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Potassium	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Selenium	531	ug/L	500	ug/L	106.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Silver	510	ug/L	500	ug/L	102	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Sodium	10400	ug/L	10000	ug/L	104.3	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Vanadium	514	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
	Zinc	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	30-JUN-09 17:08	063009-1
CCV10										
	Aluminum	5270	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Arsenic	513	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 18:18	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Barium	518	ug/L	500	ug/L	103.5	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Calcium	5250	ug/L	5000	ug/L	104.9	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Chromium	519	ug/L	500	ug/L	103.9	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Cobalt	521	ug/L	500	ug/L	104.3	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Copper	514	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Iron	5060	ug/L	5000	ug/L	101.3	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Magnesium	5240	ug/L	5000	ug/L	104.7	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Nickel	519	ug/L	500	ug/L	103.8	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Potassium	4970	ug/L	5000	ug/L	99.3	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Selenium	530	ug/L	500	ug/L	106	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Silver	520	ug/L	500	ug/L	104.1	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Sodium	10500	ug/L	10000	ug/L	104.9	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Vanadium	524	ug/L	500	ug/L	104.7	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
	Zinc	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	30-JUN-09 18:18	063009-1
CCV11										
	Aluminum	5230	ug/L	5000	ug/L	104.5	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Arsenic	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Barium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Calcium	5110	ug/L	5000	ug/L	102.3	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Chromium	507	ug/L	500	ug/L	101.4	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Cobalt	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Copper	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Iron	4920	ug/L	5000	ug/L	98.4	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Magnesium	5090	ug/L	5000	ug/L	101.7	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Nickel	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Potassium	4890	ug/L	5000	ug/L	97.9	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Selenium	529	ug/L	500	ug/L	105.8	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Silver	506	ug/L	500	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Sodium	10400	ug/L	10000	ug/L	104	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
	Vanadium	510	ug/L	500	ug/L	102	90.0 - 110.0	P	30-JUN-09 19:13	063009-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Zinc	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	30-JUN-09 19:13	063009-1
CCV12										
	Aluminum	5290	ug/L	5000	ug/L	105.7	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Arsenic	519	ug/L	500	ug/L	103.7	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Barium	510	ug/L	500	ug/L	102	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Cobalt	513	ug/L	500	ug/L	102.7	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Copper	505	ug/L	500	ug/L	101.1	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Iron	4910	ug/L	5000	ug/L	98.1	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Magnesium	5080	ug/L	5000	ug/L	101.6	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Nickel	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Potassium	4890	ug/L	5000	ug/L	97.9	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Selenium	534	ug/L	500	ug/L	106.9	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Silver	512	ug/L	500	ug/L	102.5	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Sodium	10300	ug/L	10000	ug/L	103.4	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Vanadium	516	ug/L	500	ug/L	103.3	90.0 - 110.0	P	30-JUN-09 20:01	063009-1
	Zinc	507	ug/L	500	ug/L	101.4	90.0 - 110.0	P	30-JUN-09 20:01	063009-1

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 09–2498–1

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.228	ug/L	.2	ug/L	114	70.0 – 130.0	AV	02–JUL–09 08:23	070209W1–4
	Antimony	3.11	ug/L	3	ug/L	103.5	70.0 – 130.0	MS	04–JUL–09 01:16	090703–2
	Beryllium	.571	ug/L	.5	ug/L	114.2	70.0 – 130.0	MS	04–JUL–09 01:16	090703–2
	Cadmium	1.01	ug/L	1	ug/L	100.5	70.0 – 130.0	MS	04–JUL–09 01:16	090703–2
	Manganese	5.61	ug/L	5	ug/L	112.2	70.0 – 130.0	MS	04–JUL–09 01:16	090703–2
	Lead	2.17	ug/L	2	ug/L	108.7	70.0 – 130.0	MS	04–JUL–09 01:16	090703–2
	Thallium	.981	ug/L	1	ug/L	98.1	70.0 – 130.0	MS	04–JUL–09 14:22	090703–3
PQL01										
	Aluminum	208	ug/L	200	ug/L	104.1	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Arsenic	18.2	ug/L	15	ug/L	121	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Barium	5.29	ug/L	5	ug/L	105.7	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Calcium	103	ug/L	100	ug/L	103.4	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Chromium	5.14	ug/L	5	ug/L	102.9	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Cobalt	5.22	ug/L	5	ug/L	104.4	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Copper	9.75	ug/L	10	ug/L	97.5	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Iron	114	ug/L	100	ug/L	114.1	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Magnesium	331	ug/L	300	ug/L	110.5	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Nickel	5.6	ug/L	5	ug/L	111.9	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Potassium	153	ug/L	150	ug/L	102.1	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Selenium	16.6	ug/L	15	ug/L	110.5	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Silver	5.26	ug/L	5	ug/L	105.1	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Sodium	156	ug/L	150	ug/L	104.3	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Vanadium	5.17	ug/L	5	ug/L	103.5	70.0 – 130.0	P	30–JUN–09 08:45	063009–1
	Zinc	10.5	ug/L	10	ug/L	104.6	70.0 – 130.0	P	30–JUN–09 08:45	063009–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 08:39	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 08:39	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 08:39	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 08:39	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 08:39	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 08:39	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 08:39	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 08:39	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 08:39	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 08:39	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 08:39	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 08:21	070209W1-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	04-JUL-09 01:12	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 01:12	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 01:12	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 01:12	090703-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 01:12	090703-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	04-JUL-09 14:19	090703-3
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 09:40	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 09:40	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 09:40	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 09:40	063009-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 09:40	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 09:40	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 09:40	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 09:40	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 09:40	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 09:40	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 09:40	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 08:27	070209W1-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 01:35	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 01:35	090703-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	04-JUL-09 14:37	090703-3
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 10:01	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 10:01	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 10:01	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 10:01	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 10:01	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 10:01	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 10:01	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 10:01	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 10:01	063009-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 10:01	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 10:01	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 08:51	070209W1-4
	Antimony	1.36	+/-3	J	1.0	3.0	LIQ	MS	04-JUL-09 01:50	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 01:50	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 01:50	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 01:50	090703-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 01:50	090703-2
	Thallium	0.37	+/-1	J	0.3	1.0	LIQ	MS	04-JUL-09 15:07	090703-3
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 11:04	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 11:04	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 11:04	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 11:04	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 11:04	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 11:04	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 11:04	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 11:04	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 11:04	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:04	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 11:04	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 09:15	070209W1-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	04-JUL-09 02:28	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 02:28	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 02:28	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 02:28	090703-2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 02:28	090703-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	04-JUL-09 15:34	090703-3
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 11:59	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 11:59	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 11:59	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 11:59	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 11:59	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 11:59	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 11:59	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 11:59	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 11:59	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 11:59	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 11:59	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 09:38	070209W1-4
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	04-JUL-09 03:01	090703-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	04-JUL-09 03:01	090703-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	04-JUL-09 03:01	090703-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	04-JUL-09 03:01	090703-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	04-JUL-09 03:01	090703-2
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 13:09	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 13:09	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 13:09	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 13:09	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 13:09	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 13:09	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 13:09	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 13:09	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 13:09	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 13:09	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 13:09	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 10:02	070209W1-4
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 14:26	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 14:26	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 14:26	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 14:26	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 14:26	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 14:26	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 14:26	063009-1
	Selenium	-5.83	+/-15	J	5.0	15.0	LIQ	P	30-JUN-09 14:26	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 14:26	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:26	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 14:26	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 10:26	070209W1-4

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 14:50	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 14:50	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:50	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 14:50	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 14:50	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:50	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 14:50	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 14:50	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 14:50	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:50	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 14:50	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 14:50	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:50	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 14:50	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 14:50	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 14:50	063009-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	02-JUL-09 10:50	070209W1-4
CCB08										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 15:59	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 15:59	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 15:59	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 15:59	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 15:59	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 15:59	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 15:59	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 15:59	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 15:59	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 15:59	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 15:59	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 15:59	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 15:59	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 15:59	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 15:59	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 15:59	063009-1
	Mercury	-0.074	+/-.2	J	0.066	0.2	LIQ	AV	02-JUL-09 11:13	070209W1-4
CCB09										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 17:15	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 17:15	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 17:15	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 17:15	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 17:15	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 17:15	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 17:15	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 17:15	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 17:15	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 17:15	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 17:15	063009-1
CCB10										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 18:25	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 18:25	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 18:25	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 18:25	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 18:25	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 18:25	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498-1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 18:25	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 18:25	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 18:25	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 18:25	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 18:25	063009-1
CCB11										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 19:20	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 19:20	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 19:20	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 19:20	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 19:20	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 19:20	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 19:20	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 19:20	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 19:20	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 19:20	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 19:20	063009-1
CCB12										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	30-JUN-09 20:08	063009-1
	Arsenic	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 20:08	063009-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Calcium	30.0	+/-100	U	30.0	100	LIQ	P	30-JUN-09 20:08	063009-1
	Chromium	2.0	+/-5	U	2.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2498-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	30-JUN-09 20:08	063009-1
	Iron	25.0	+/-100	U	25.0	100	LIQ	P	30-JUN-09 20:08	063009-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	30-JUN-09 20:08	063009-1
	Nickel	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	30-JUN-09 20:08	063009-1
	Selenium	5.0	+/-15	U	5.0	15.0	LIQ	P	30-JUN-09 20:08	063009-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Sodium	45.0	+/-150	U	45.0	150	LIQ	P	30-JUN-09 20:08	063009-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	30-JUN-09 20:08	063009-1
	Zinc	2.0	+/-10	U	2.0	10.0	LIQ	P	30-JUN-09 20:08	063009-1

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 09-2498-1

Contract: LANL01004

Matrix: WATER

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201871706								
	Aluminum	68	ug/L	+/-200	U	P	68	200
	Arsenic	5	ug/L	+/-15.0	U	P	5	15
	Barium	1	ug/L	+/-5.0	U	P	1	5
	Calcium	30	ug/L	+/-100	U	P	30	100
	Chromium	2	ug/L	+/-5.0	U	P	2	5
	Cobalt	1	ug/L	+/-5.0	U	P	1	5
	Copper	3	ug/L	+/-10.0	U	P	3	10
	Iron	25	ug/L	+/-100	U	P	25	100
	Magnesium	85	ug/L	+/-300	U	P	85	300
	Nickel	1	ug/L	+/-5.0	U	P	1	5
	Potassium	50	ug/L	+/-150	U	P	50	150
	Selenium	5	ug/L	+/-15.0	U	P	5	15
	Silver	1	ug/L	+/-5.0	U	P	1	5
	Sodium	45	ug/L	+/-150	U	P	45	150
	Vanadium	1	ug/L	+/-5.0	U	P	1	5
	Zinc	2	ug/L	+/-10.0	U	P	2	10
1201871711								
	Antimony	1.08	ug/L	+/-3.0	J	MS	1	3
	Beryllium	0.1	ug/L	+/-0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/-1.0	U	MS	0.11	1
	Lead	0.5	ug/L	+/-2.0	U	MS	0.5	2
	Manganese	1	ug/L	+/-5.0	U	MS	1	5
	Thallium	0.3	ug/L	+/-1.0	U	MS	0.3	1
1201871797								
	Mercury	-0.0839	ug/L	+/-0.2	J	AV	0.066	0.2

METALS
-4-
Interference Check Sample

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	521000	ug/L	500000	ug/L	104	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Arsenic	12.1	ug/L					30-JUN-09 08:52	063009-1
	Barium	-4.95	ug/L					30-JUN-09 08:52	063009-1
	Calcium	479000	ug/L	500000	ug/L	95.8	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Chromium	2.29	ug/L					30-JUN-09 08:52	063009-1
	Cobalt	-1.33	ug/L					30-JUN-09 08:52	063009-1
	Copper	1.81	ug/L					30-JUN-09 08:52	063009-1
	Iron	181000	ug/L	200000	ug/L	90.7	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Magnesium	476000	ug/L	500000	ug/L	95.2	80.0 - 120.0	30-JUN-09 08:52	063009-1
	Nickel	5.0	ug/L					30-JUN-09 08:52	063009-1
	Potassium	-32.1	ug/L					30-JUN-09 08:52	063009-1
	Selenium	0.557	ug/L					30-JUN-09 08:52	063009-1
	Silver	-0.79	ug/L					30-JUN-09 08:52	063009-1
	Sodium	31.8	ug/L					30-JUN-09 08:52	063009-1
	Vanadium	-2.42	ug/L					30-JUN-09 08:52	063009-1
	Zinc	-6.97	ug/L					30-JUN-09 08:52	063009-1
ICSAB01									
	Aluminum	519000	ug/L	500000	ug/L	104	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Arsenic	532	ug/L	500	ug/L	106	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Barium	498	ug/L	500	ug/L	99.6	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Calcium	473000	ug/L	500000	ug/L	94.6	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Chromium	496	ug/L	500	ug/L	99.3	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Cobalt	467	ug/L	500	ug/L	93.4	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Copper	562	ug/L	500	ug/L	112	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Iron	179000	ug/L	200000	ug/L	89.6	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Magnesium	470000	ug/L	500000	ug/L	94.1	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Nickel	473	ug/L	500	ug/L	94.5	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Potassium	5110	ug/L	5000	ug/L	102	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Selenium	2610	ug/L	2500	ug/L	104	80.0 - 120.0	30-JUN-09 08:58	063009-1

METALS
-4-
Interference Check Sample

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silver	282	ug/L	250	ug/L	113	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Sodium	5390	ug/L	5000	ug/L	108	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Vanadium	519	ug/L	500	ug/L	104	80.0 - 120.0	30-JUN-09 08:58	063009-1
	Zinc	495	ug/L	500	ug/L	99	80.0 - 120.0	30-JUN-09 08:58	063009-1

METALS
-4-
Interference Check Sample

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.278	ug/L					04-JUL-09 01:21	090703-2
	Beryllium	0.051	ug/L					04-JUL-09 01:21	090703-2
	Cadmium	0.292	ug/L					04-JUL-09 01:21	090703-2
	Lead	0.17	ug/L					04-JUL-09 01:21	090703-2
	Manganese	5.89	ug/L					04-JUL-09 01:21	090703-2
ICSAB01									
	Antimony	22.0	ug/L	20.1	ug/L	109	80.0 - 120.0	04-JUL-09 01:26	090703-2
	Beryllium	22.7	ug/L	20	ug/L	113	80.0 - 120.0	04-JUL-09 01:26	090703-2
	Cadmium	20.8	ug/L	20.4	ug/L	102	80.0 - 120.0	04-JUL-09 01:26	090703-2
	Lead	20.4	ug/L	20.5	ug/L	99.4	80.0 - 120.0	04-JUL-09 01:26	090703-2
	Manganese	26.2	ug/L	25.8	ug/L	102	80.0 - 120.0	04-JUL-09 01:26	090703-2

METALS
-4-
Interference Check Sample

SDG No: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Thallium	0.034	ug/L					04-JUL-09 14:26	090703-3
ICSAB01									
	Thallium	18.3	ug/L	20	ug/L	91.7	80.0 – 120.0	04-JUL-09 14:30	090703-3

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2498-1 **Client ID** CAMO-09-6533S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232510001 **Spike ID:** 1201871709

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75-125	5120		68	U	5000	102		P
Arsenic	ug/L	75-125	499		5	U	500	99.6		P
Barium	ug/L	75-125	506		1	U	500	101		P
Calcium	ug/L	75-125	5050		30	U	5000	101		P
Chromium	ug/L	75-125	496		2	U	500	99.1		P
Cobalt	ug/L	75-125	485		1	U	500	97		P
Copper	ug/L	75-125	500		3	U	500	100		P
Iron	ug/L	75-125	4770		25	U	5000	95.4		P
Magnesium	ug/L	75-125	4990		85	U	5000	99.5		P
Nickel	ug/L	75-125	494		1	U	500	98.7		P
Potassium	ug/L	75-125	5020		126	J	5000	97.8		P
Selenium	ug/L	75-125	501		5	U	500	100		P
Silver	ug/L	75-125	496		1	U	500	99.2		P
Sodium	ug/L	75-125	5280		85.2	J	5000	104		P
Vanadium	ug/L	75-125	505		1	U	500	101		P
Zinc	ug/L	75-125	483		2	U	500	96.4		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2498-1 **Client ID** CAMO-09-6053S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232370001 **Spike ID:** 1201871714

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Beryllium	ug/L	75-125	55.2		0.1	U	50	110		MS
Cadmium	ug/L	75-125	5.33		0.11	U	5	107		MS
Lead	ug/L	75-125	21.2		0.5	U	20	106		MS
Manganese	ug/L	75-125	53.3		1	U	50	106		MS
Antimony	ug/L	75-125	106		1	U	100	105		MS
Thallium	ug/L	75-125	29.3		0.3	U	50	58.3	N	MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2498-1 **Client ID** CAMO-09-6533S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232510001 **Spike ID:** 1201871800

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75-125	2.04		0.066	U	2	102		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2498-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-6533D

Sample ID: 232510001 **Duplicate ID:** 1201871708 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68	U	68	U			P
Arsenic	ug/L		5	U	5	U			P
Barium	ug/L		1	U	1	U			P
Calcium	ug/L		30	U	30	U			P
Chromium	ug/L		2	U	2	U			P
Cobalt	ug/L		1	U	1	U			P
Copper	ug/L		3	U	3	U			P
Iron	ug/L		25	U	25	U			P
Magnesium	ug/L		85	U	85	U			P
Nickel	ug/L		1	U	1	U			P
Potassium	ug/L	+/-150	126	J	117	J	6.62		P
Selenium	ug/L		5	U	5	U			P
Silver	ug/L		1	U	1	U			P
Sodium	ug/L	+/-150	85.2	J	82.9	J	2.77		P
Vanadium	ug/L		1	U	1	U			P
Zinc	ug/L		2	U	2	U			P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2498–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO–09–6053D

Sample ID: 232370001 **Duplicate ID:** 1201871713 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		1	U	1	U			MS
Beryllium	ug/L		0.1	U	0.1	U			MS
Cadmium	ug/L		0.11	U	0.11	U			MS
Lead	ug/L		0.5	U	0.5	U			MS
Manganese	ug/L		1	U	1	U			MS
Thallium	ug/L		0.3	U	0.3	U			MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2498–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO–09–6533D

Sample ID: 232510001 **Duplicate ID:** 1201871799 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066	U	0.066	U			AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2498-1

Contract: LANL01004

Aqueous LCS Source: OS2I **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871707								
	Copper	ug/L	500	502		100	80-120	P
	Iron	ug/L	5000	4950		98.9	80-120	P
	Magnesium	ug/L	5000	5150		103	80-120	P
	Nickel	ug/L	500	498		99.5	80-120	P
	Potassium	ug/L	5000	4920		98.4	80-120	P
	Selenium	ug/L	500	507		101	80-120	P
	Silver	ug/L	500	498		99.6	80-120	P
	Sodium	ug/L	5000	5220		104	80-120	P
	Vanadium	ug/L	500	508		102	80-120	P
	Zinc	ug/L	500	488		97.6	80-120	P
	Aluminum	ug/L	5000	5150		103	80-120	P
	Arsenic	ug/L	500	500		100	80-120	P
	Barium	ug/L	500	508		102	80-120	P
	Calcium	ug/L	5000	5050		101	80-120	P
	Chromium	ug/L	500	499		99.9	80-120	P
	Cobalt	ug/L	500	487		97.5	80-120	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2498-1

Contract: LANL01004

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871712								
	Antimony	ug/L	50	54.2		108	80-120	MS
	Beryllium	ug/L	50	53.6		107	80-120	MS
	Cadmium	ug/L	50	51.5		103	80-120	MS
	Lead	ug/L	50	51.6		103	80-120	MS
	Manganese	ug/L	50	52.4		105	80-120	MS
	Thallium	ug/L	50	43		86	80-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2498-1

Contract: LANL01004

Aqueous LCS Source: GEL **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201871798								
	Mercury	ug/L	2	1.99		99.6	80-120	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2498-1 **Client ID** CAMO-09-6533L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232510001 **Serial Dilution ID:** 1201871710

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Arsenic	5	U	25	U				P
Barium	1	U	5	U				P
Calcium	30	U	150	U				P
Chromium	2	U	10	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	25	U	125	U				P
Magnesium	85	U	425	U				P
Nickel	1	U	5	U				P
Potassium	126	J	250	U	100			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	85.2	J	225	U	100			P
Vanadium	1	U	5	U				P
Zinc	2	U	10	U				P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2498-1 **Client ID** CAMO-09-6053L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232370001 **Serial Dilution ID:** 1201871715

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	1	U	5	U				MS
Beryllium	.1	U	.5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	.5	U	2.5	U				MS
Manganese	1	U	5	U				MS
Thallium	.3	U	4.09	J				MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2498-1 **Client ID** CAMO-09-6533L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232510001 **Serial Dilution ID:** 1201871801

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2498-1 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881353						
1201871706	MB for batch 881353	MB	W	30-JUN-09	50mL	50mL	
1201871707	LCS for batch 881353	LCS	W	30-JUN-09	50mL	50mL	
1201871709	CAMO-09-6533S	MS	W	30-JUN-09	50mL	50mL	
1201871708	CAMO-09-6533D	DUP	W	30-JUN-09	50mL	50mL	
232506001	CAMO-09-10381	SAMPLE	W	30-JUN-09	50mL	50mL	
232506002	CAMO-09-10380	SAMPLE	W	30-JUN-09	50mL	50mL	

METALS
–13–
SAMPLE PREPARATION SUMMARY

SDG No: 09–2498–1 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881356						
1201871711	MB for batch 881356	MB	W	30–JUN–09	50mL	50mL	
1201871712	LCS for batch 881356	LCS	W	30–JUN–09	50mL	50mL	
1201871714	CAMO–09–6053S	MS	W	30–JUN–09	50mL	50mL	
1201871713	CAMO–09–6053D	DUP	W	30–JUN–09	50mL	50mL	
232506001	CAMO–09–10381	SAMPLE	W	30–JUN–09	50mL	50mL	
232506002	CAMO–09–10380	SAMPLE	W	30–JUN–09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2498-1 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881395						
1201871797	MB for batch 881395	MB	W	01-JUL-09	20mL	20mL	
1201871798	LCS for batch 881395	LCS	W	01-JUL-09	20mL	20mL	
1201871800	CAMO-09-6533S	MS	W	01-JUL-09	20mL	20mL	
1201871799	CAMO-09-6533D	DUP	W	01-JUL-09	20mL	20mL	
232506001	CAMO-09-10381	SAMPLE	W	01-JUL-09	20mL	20mL	
232506002	CAMO-09-10380	SAMPLE	W	01-JUL-09	20mL	20mL	

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 30-JUN-09 **End Date:** 30-JUN-09

Client Sdg: 09-2498-1
Method P
Data File: 063009-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	08:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S0.1	1	08:06			X	X				X	X	X						X	X	X	X			X	X
S0.5	1	08:12	X		X	X			X	X	X	X			X			X	X	X	X			X	X
SCAL	1	08:19	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S10	1	08:26	X						X				X		X							X			
ICV01	1	08:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICB01	1	08:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
PQL01	1	08:45	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSA01	1	08:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSAB01	1	08:58	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR01	1	09:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR02	1	09:10	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	09:17																							
ZZZZZZ	1	09:24																							
CCV01	1	09:33	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB01	1	09:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR03	1	09:47	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV02	1	09:54	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB02	1	10:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	10:15																							
ZZZZZZ	1	10:22																							
ZZZZZZ	1	10:29																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:43																							
ZZZZZZ	5	10:50																							
CCV03	1	10:57	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB03	1	11:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	11:11																							
ZZZZZZ	5	11:18																							
ZZZZZZ	5	11:25																							
ZZZZZZ	5	11:32																							
ZZZZZZ	25	11:38																							
ZZZZZZ	5	11:45																							
CCV04	1	11:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB04	1	11:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	12:06																							
ZZZZZZ	2	12:13																							
ZZZZZZ	1	12:20																							
ZZZZZZ	1	12:27																							
ZZZZZZ	1	12:34																							

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	1	12:41																						
ZZZZZZ	1	12:48																						
ZZZZZZ	1	12:55																						
CCV05	1	13:02	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB05	1	13:09	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	13:16																						
ZZZZZZ	1	13:23																						
ZZZZZZ	1	13:30																						
ZZZZZZ	1	13:38																						
ZZZZZZ	1	13:45																						
ZZZZZZ	1	13:52																						
ZZZZZZ	5	13:59																						
ZZZZZZ	1	14:05																						
ZZZZZZ	1	14:13																						
CCV06	1	14:20	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB06	1	14:26	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV07	1	14:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB07	1	14:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	14:56																						
ZZZZZZ	2	15:03																						
ZZZZZZ	1	15:10																						
ZZZZZZ	1	15:17																						
ZZZZZZ	1	15:24																						
ZZZZZZ	1	15:31																						
ZZZZZZ	5	15:38																						
ZZZZZZ	1	15:45																						
CCV08	1	15:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB08	1	15:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	16:06																						
ZZZZZZ	2	16:12																						
ZZZZZZ	1	16:19																						
ZZZZZZ	1	16:26																						
ZZZZZZ	1	16:34																						
ZZZZZZ	1	16:40																						
ZZZZZZ	5	16:47																						
ZZZZZZ	1	16:54																						
ZZZZZZ	1	17:01																						
CCV09	1	17:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB09	1	17:15	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	17:22																						

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	17:29																							
ZZZZZZ	1	17:36																							
ZZZZZZ	1	17:43																							
ZZZZZZ	1	17:50																							
ZZZZZZ	1	17:57																							
ZZZZZZ	1	18:04																							
ZZZZZZ	1	18:11																							
CCV10	1	18:18	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB10	1	18:25	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871706	1	18:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871707	1	18:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	18:46																							
ZZZZZZ	1	18:53																							
ZZZZZZ	1	18:59																							
232506001	1	19:06	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV11	1	19:13	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB11	1	19:20	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
232506002	1	19:27	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	19:34																							
1201871708	1	19:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871709	1	19:47	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201871710	5	19:54	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV12	1	20:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB12	1	20:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 02-JUL-09 **End Date:** 02-JUL-09

Client Sdg: 09-2498-1
Method AV
Data File: 070209W1-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	08:07															X								
S0.2	1	08:09															X								
S0.5	1	08:11															X								
S2.0	1	08:13															X								
S5.0	1	08:15															X								
S10	1	08:17															X								
ICV01	1	08:19															X								
ICB01	1	08:21															X								
CRDL01	1	08:23															X								
CCV01	1	08:25															X								
CCB01	1	08:27															X								
ZZZZZZ	1	08:29																							
ZZZZZZ	1	08:31																							
ZZZZZZ	1	08:33																							
ZZZZZZ	1	08:35																							
ZZZZZZ	1	08:37																							
ZZZZZZ	5	08:39																							
ZZZZZZ	1	08:41																							
ZZZZZZ	1	08:43																							
ZZZZZZ	1	08:45																							
ZZZZZZ	1	08:47																							
CCV02	1	08:49															X								
CCB02	1	08:51															X								
ZZZZZZ	1	08:53																							
ZZZZZZ	1	08:55																							
ZZZZZZ	1	08:57																							
ZZZZZZ	5	08:59																							
ZZZZZZ	1	09:01																							
ZZZZZZ	1	09:03																							
ZZZZZZ	1	09:05																							
ZZZZZZ	1	09:07																							
ZZZZZZ	1	09:09																							
ZZZZZZ	1	09:11																							
CCV03	1	09:13															X								
CCB03	1	09:15															X								
ZZZZZZ	1	09:17																							
ZZZZZZ	1	09:19																							
ZZZZZZ	1	09:21																							
ZZZZZZ	1	09:23																							
ZZZZZZ	1	09:25																							

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																					
ZZZZZZ	1	09:26																					
ZZZZZZ	1	09:28																					
ZZZZZZ	1	09:30																					
ZZZZZZ	1	09:32																					
ZZZZZZ	1	09:34																					
CCV04	1	09:36													X								
CCB04	1	09:38													X								
ZZZZZZ	1	09:40																					
ZZZZZZ	1	09:42																					
ZZZZZZ	1	09:44																					
ZZZZZZ	1	09:47																					
ZZZZZZ	1	09:49																					
ZZZZZZ	1	09:51																					
ZZZZZZ	1	09:53																					
ZZZZZZ	5	09:54																					
ZZZZZZ	1	09:56																					
ZZZZZZ	1	09:58																					
CCV05	1	10:00													X								
CCB05	1	10:02													X								
ZZZZZZ	1	10:04																					
ZZZZZZ	1	10:06																					
ZZZZZZ	1	10:08																					
ZZZZZZ	1	10:10																					
ZZZZZZ	1	10:12																					
ZZZZZZ	1	10:14																					
ZZZZZZ	5	10:16																					
ZZZZZZ	1	10:18																					
ZZZZZZ	1	10:20																					
ZZZZZZ	1	10:22																					
CCV06	1	10:24													X								
CCB06	1	10:26													X								
ZZZZZZ	1	10:28																					
ZZZZZZ	1	10:30																					
ZZZZZZ	1	10:32																					
ZZZZZZ	1	10:34																					
ZZZZZZ	1	10:36																					
ZZZZZZ	1	10:38																					
ZZZZZZ	1	10:40																					
ZZZZZZ	1	10:42																					
ZZZZZZ	1	10:44																					

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	10:46																							
CCV07	1	10:48															X								
CCB07	1	10:50															X								
ZZZZZZ	5	10:52																							
1201871797	1	10:54															X								
1201871798	1	10:56															X								
ZZZZZZ	1	10:58																							
232506001	1	11:00															X								
232506002	1	11:02															X								
ZZZZZZ	1	11:04																							
1201871799	1	11:06															X								
1201871800	1	11:08															X								
1201871801	5	11:09															X								
CCV08	1	11:11															X								
CCB08	1	11:13															X								

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 04-JUL-09 **End Date:** 04-JUL-09

Client Sdg: 09-2498-1
Method MS
Data File: 090703-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	00:53		X			X	X						X		X									
S10	1	00:58		X			X	X						X		X									
S100	1	01:02		X			X	X						X		X									
ICV01	1	01:07		X			X	X						X		X									
ICB01	1	01:12		X			X	X						X		X									
CRDL01	1	01:16		X			X	X						X		X									
ICSA01	1	01:21		X			X	X						X		X									
ICSAB01	1	01:26		X			X	X						X		X									
CCV01	1	01:31		X			X	X						X		X									
CCB01	1	01:35		X			X	X						X		X									
LR01	1	01:40		X			X	X						X		X									
CCV02	1	01:45		X			X	X						X		X									
CCB02	1	01:50		X			X	X						X		X									
1201871711	1	01:54		X			X	X						X		X									
1201871712	1	01:59		X			X	X						X		X									
ZZZZZZ	1	02:04																							
1201871713	1	02:08		X			X	X						X		X									
1201871714	1	02:13		X			X	X						X		X									
1201871715	5	02:18		X			X	X						X		X									
CCV03	1	02:23		X			X	X						X		X									
CCB03	1	02:28		X			X	X						X		X									
ZZZZZZ	1	02:32																							
ZZZZZZ	1	02:37																							
232506001	1	02:42		X			X	X						X		X									
232506002	1	02:46		X			X	X						X		X									
ZZZZZZ	1	02:51																							
CCV04	1	02:56		X			X	X						X		X									
CCB04	1	03:01		X			X	X						X		X									

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 04-JUL-09 **End Date:** 04-JUL-09

Client Sdg: 09-2498-1
Method MS
Data File: 090703-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	14:04																					X		
S10	1	14:08																					X		
S100	1	14:11																					X		
ICV01	1	14:15																					X		
ICB01	1	14:19																					X		
CRDL01	1	14:22																					X		
ICSA01	1	14:26																					X		
ICSAB01	1	14:30																					X		
CCV01	1	14:33																					X		
CCB01	1	14:37																					X		
1201871711	1	14:41																					X		
1201871712	1	14:45																					X		
ZZZZZZ	1	14:48																							
1201871713	1	14:52																					X		
1201871714	1	14:56																					X		
1201871715	5	15:00																					X		
CCV02	1	15:03																					X		
CCB02	1	15:07																					X		
ZZZZZZ	1	15:11																							
ZZZZZZ	1	15:15																							
232506001	1	15:19																					X		
232506002	1	15:22																					X		
ZZZZZZ	1	15:26																							
CCV03	1	15:30																					X		
CCB03	1	15:34																					X		

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2498-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		3.0	10
	Zinc		3.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2498-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Mercury		0.066	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2498-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 23-JUL-07

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	15
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	30.0	100
	Chromium	267.716	2.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	25.0	100
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.0	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	15
	Silver	328.068	1.0	5
	Sodium	589.592	45.0	150
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	2.0	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 09-2498-1
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-MAY-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2498-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2498-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09
Aluminum	20	500000	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2498-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

Raw Data

Spectra

Method: Hg_ReAlign
Result: 070909

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

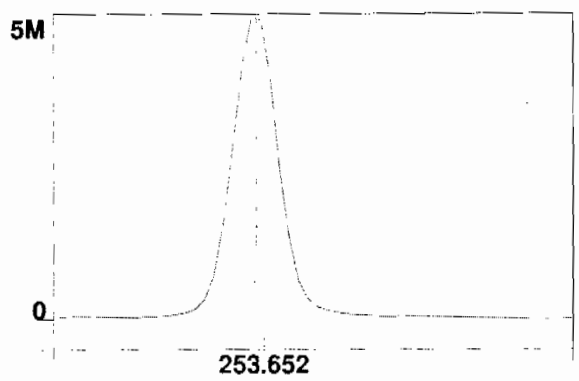

Intensity: 5431129.6 cps
Conc:

1

Start Time: 6/30/2009 08:00:09
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601
Plasma On Time: 6/29/2009 15:26:31
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: S0
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 8
Date Collected: 6/30/2009 08:00:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7332.9	7332.9	98.1	%	08:02:02
1	Y RADIAL	6768.4	6768.4	97.75	%	08:02:02
1	Al 396.153Radial†	-69.2	-70.5	[0.00]	ug/L	08:02:02
1	Ca 317.933Radial†	30.7	31.3	[0.00]	ug/L	08:02:22
1	Fe 238.204 Radial†	34.0	34.7	[0.00]	ug/L	08:02:22
1	K 766.490 Radial†	2350.8	2396.2	[0.00]	ug/L	08:02:02
1	Mg 279.077 IEC†	1.8	1.8	[0.00]	ug/L	08:02:22
1	Na 589.592 Radial†	-137.1	-139.7	[0.00]	ug/L	08:02:02
1	Sr 421.552†	-74.2	-75.6	[0.00]	ug/L	08:02:02
1	Sc 361.383	723693.7	723693.7	100.70	%	08:03:19
1	Y 371.029	565792.8	565792.8	100.67	%	08:03:19
1	Ag 328.068†	572.4	568.4	[0.00]	ug/L	08:03:19
1	As 188.979†	-46.3	-46.0	[0.00]	ug/L	08:03:39
1	B 249.677†	-1020.4	-1013.3	[0.00]	ug/L	08:03:19
1	Ba 233.527†	-1.7	-1.7	[0.00]	ug/L	08:03:39
1	Be 313.107†	-4879.3	-4845.6	[0.00]	ug/L	08:03:19
1	Cd 226.502†	-281.3	-279.4	[0.00]	ug/L	08:03:39
1	Co 228.616†	-99.0	-98.3	[0.00]	ug/L	08:03:39
1	Cr 267.716†	-47.5	-47.2	[0.00]	ug/L	08:03:19
1	Cu 324.752†	5579.8	5541.2	[0.00]	ug/L	08:03:19
1	Mn 257.610†	659.8	655.2	[0.00]	ug/L	08:03:19
1	Mo 202.031†	7.3	7.3	[0.00]	ug/L	08:03:39
1	Ni 231.604†	119.2	118.4	[0.00]	ug/L	08:03:39
1	P 214.914†	315.8	313.6	[0.00]	ug/L	08:03:39
1	Pb 220.353†	-12.1	-12.0	[0.00]	ug/L	08:03:39
1	S 181.975 Axial†	77.2	76.7	[0.00]	ug/L	08:03:39
1	Sb 206.836†	60.4	60.0	[0.00]	ug/L	08:03:39
1	Se 196.026†	-31.0	-30.8	[0.00]	ug/L	08:03:39
1	Si 251.611†	415.3	412.5	[0.00]	ug/L	08:03:39
1	Sn 189.927†	11.9	11.8	[0.00]	ug/L	08:03:39
1	Ti 334.940†	-1389.6	-1380.0	[0.00]	ug/L	08:03:19
1	Tl 190.801†	-57.8	-57.4	[0.00]	ug/L	08:03:39
1	U 409.014†	-4755.0	-4722.1	[0.00]	ug/L	08:03:19
1	V 292.402†	-1589.6	-1578.6	[0.00]	ug/L	08:03:19
1	Zn 213.857†	901.8	895.6	[0.00]	ug/L	08:03:39
1	SiO2†	429.1	426.2	[0.00]	ug/L	08:04:35
2	Sc Radial	7660.2	7660.2	102	%	08:02:27
2	Y RADIAL	7100.7	7100.7	102.5	%	08:02:27
2	Al 396.153Radial†	-86.3	-84.2	[0.00]	ug/L	08:02:27
2	Ca 317.933Radial†	21.4	20.9	[0.00]	ug/L	08:02:47
2	Fe 238.204 Radial†	36.8	35.9	[0.00]	ug/L	08:02:47
2	K 766.490 Radial†	2362.0	2304.8	[0.00]	ug/L	08:02:27
2	Mg 279.077 IEC†	5.1	5.0	[0.00]	ug/L	08:02:47
2	Na 589.592 Radial†	-283.4	-276.5	[0.00]	ug/L	08:02:27
2	Sr 421.552†	-46.7	-45.6	[0.00]	ug/L	08:02:27
2	Sc 361.383	713270.6	713270.6	99.246	%	08:03:44
2	Y 371.029	557882.4	557882.4	99.267	%	08:03:44
2	Ag 328.068†	711.7	717.1	[0.00]	ug/L	08:03:44
2	As 188.979†	-32.3	-32.5	[0.00]	ug/L	08:04:04
2	B 249.677†	-913.5	-920.4	[0.00]	ug/L	08:03:44

2	Ba 233.527†	-1.8	-1.8	[0.00]	ug/L	08:04:04
2	Be 313.107†	-4896.3	-4933.5	[0.00]	ug/L	08:03:44
2	Cd 226.502†	-295.8	-298.0	[0.00]	ug/L	08:04:04
2	Co 228.616†	-106.2	-107.0	[0.00]	ug/L	08:04:04
2	Cr 267.716†	-79.3	-79.9	[0.00]	ug/L	08:03:44
2	Cu 324.752†	5643.3	5686.2	[0.00]	ug/L	08:03:44
2	Mn 257.610†	692.3	697.5	[0.00]	ug/L	08:03:44
2	Mo 202.031†	19.0	19.2	[0.00]	ug/L	08:04:04
2	Ni 231.604†	121.8	122.7	[0.00]	ug/L	08:04:04
2	P 214.914†	309.8	312.1	[0.00]	ug/L	08:04:04
2	Pb 220.353†	-3.0	-3.0	[0.00]	ug/L	08:04:04
2	S 181.975 Axial†	69.7	70.3	[0.00]	ug/L	08:04:04
2	Sb 206.836†	54.7	55.1	[0.00]	ug/L	08:04:04
2	Se 196.026†	-23.1	-23.3	[0.00]	ug/L	08:04:04
2	Si 251.611†	423.6	426.8	[0.00]	ug/L	08:04:04
2	Sn 189.927†	7.3	7.3	[0.00]	ug/L	08:04:04
2	Ti 334.940†	-1312.1	-1322.1	[0.00]	ug/L	08:03:44
2	Tl 190.801†	-61.2	-61.7	[0.00]	ug/L	08:04:04
2	U 409.014†	-4836.8	-4873.6	[0.00]	ug/L	08:03:44
2	V 292.402†	-1570.5	-1582.4	[0.00]	ug/L	08:03:44
2	Zn 213.857†	928.6	935.7	[0.00]	ug/L	08:04:04
2	SiO2†	424.7	427.9	[0.00]	ug/L	08:04:40
3	Sc Radial	7430.7	7430.7	99.4	%	08:02:52
3	Y RADIAL	6903.8	6903.8	99.70	%	08:02:52
3	Al 396.153Radial†	-62.8	-63.2	[0.00]	ug/L	08:02:52
3	Ca 317.933Radial†	34.9	35.1	[0.00]	ug/L	08:03:12
3	Fe 238.204 Radial†	33.6	33.8	[0.00]	ug/L	08:03:12
3	K 766.490 Radial†	2505.8	2520.6	[0.00]	ug/L	08:02:52
3	Mg 279.077 IEC†	2.3	2.3	[0.00]	ug/L	08:03:12
3	Na 589.592 Radial†	9.5	9.6	[0.00]	ug/L	08:02:52
3	Sr 421.552†	-46.2	-46.4	[0.00]	ug/L	08:02:52
3	Sc 361.383	719103.6	719103.6	100.06	%	08:04:10
3	Y 371.029	562324.5	562324.5	100.06	%	08:04:10
3	Ag 328.068†	612.8	612.4	[0.00]	ug/L	08:04:10
3	As 188.979†	-27.8	-27.8	[0.00]	ug/L	08:04:30
3	B 249.677†	-886.6	-886.0	[0.00]	ug/L	08:04:10
3	Ba 233.527†	5.0	5.0	[0.00]	ug/L	08:04:30
3	Be 313.107†	-4868.9	-4866.1	[0.00]	ug/L	08:04:10
3	Cd 226.502†	-266.1	-265.9	[0.00]	ug/L	08:04:30
3	Co 228.616†	-93.0	-93.0	[0.00]	ug/L	08:04:30
3	Cr 267.716†	-105.1	-105.1	[0.00]	ug/L	08:04:10
3	Cu 324.752†	5691.2	5687.9	[0.00]	ug/L	08:04:10
3	Mn 257.610†	686.5	686.1	[0.00]	ug/L	08:04:10
3	Mo 202.031†	25.0	25.0	[0.00]	ug/L	08:04:30
3	Ni 231.604†	118.4	118.3	[0.00]	ug/L	08:04:30
3	P 214.914†	318.8	318.6	[0.00]	ug/L	08:04:30
3	Pb 220.353†	-24.8	-24.7	[0.00]	ug/L	08:04:30
3	S 181.975 Axial†	79.4	79.3	[0.00]	ug/L	08:04:30
3	Sb 206.836†	56.7	56.7	[0.00]	ug/L	08:04:30
3	Se 196.026†	-32.3	-32.3	[0.00]	ug/L	08:04:30
3	Si 251.611†	396.3	396.0	[0.00]	ug/L	08:04:30
3	Sn 189.927†	18.3	18.3	[0.00]	ug/L	08:04:30
3	Ti 334.940†	-1343.5	-1342.7	[0.00]	ug/L	08:04:10
3	Tl 190.801†	-63.3	-63.2	[0.00]	ug/L	08:04:30
3	U 409.014†	-4953.4	-4950.5	[0.00]	ug/L	08:04:10
3	V 292.402†	-1535.5	-1534.6	[0.00]	ug/L	08:04:10
3	Zn 213.857†	944.6	944.1	[0.00]	ug/L	08:04:30
3	SiO2†	456.8	456.5	[0.00]	ug/L	08:04:45

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	718689.3	5223.89	0.73%	100.00	%
Sc Radial	7474.6	167.97	2.25%	100	%
Y 371.029	561999.9	3965.18	0.71%	100.00	%
Y RADIAL	6924.3	167.10	2.41%	100.0	%
Ag 328.068†	632.6	76.36	12.07%	[0.00]	ug/L
Al 396.153Radial†	-72.6	10.68	14.70%	[0.00]	ug/L
As 188.979†	-35.4	9.45	26.67%	[0.00]	ug/L
B 249.677†	-939.9	65.84	7.01%	[0.00]	ug/L

Ba 233.527†	0.5	3.89	769.35%	[0.00]	ug/L
Be 313.107†	-4881.7	46.00	0.94%	[0.00]	ug/L
Ca 317.933Radial†	29.1	7.36	25.29%	[0.00]	ug/L
Cd 226.502†	-281.1	16.12	5.73%	[0.00]	ug/L
Co 228.616†	-99.4	7.08	7.12%	[0.00]	ug/L
Cr 267.716†	-77.4	29.04	37.52%	[0.00]	ug/L
Cu 324.752†	5638.4	84.19	1.49%	[0.00]	ug/L
Fe 238.204 Radial†	34.8	1.08	3.11%	[0.00]	ug/L
K 766.490 Radial†	2407.2	108.32	4.50%	[0.00]	ug/L
Mg 279.077 IEC†	3.0	1.67	54.91%	[0.00]	ug/L
Mn 257.610†	679.6	21.90	3.22%	[0.00]	ug/L
Mo 202.031†	17.1	9.03	52.69%	[0.00]	ug/L
Na 589.592 Radial†	-135.6	143.12	105.58%	[0.00]	ug/L
Ni 231.604†	119.8	2.51	2.09%	[0.00]	ug/L
P 214.914†	314.8	3.38	1.07%	[0.00]	ug/L
Pb 220.353†	-13.3	10.92	82.37%	[0.00]	ug/L
S 181.975 Axial†	75.4	4.65	6.16%	[0.00]	ug/L
Sb 206.836†	57.3	2.49	4.36%	[0.00]	ug/L
Se 196.026†	-28.8	4.81	16.71%	[0.00]	ug/L
Si 251.611†	411.8	15.40	3.74%	[0.00]	ug/L
Sn 189.927†	12.5	5.52	44.16%	[0.00]	ug/L
Sr 421.552†	-55.9	17.09	30.60%	[0.00]	ug/L
Ti 334.940†	-1348.3	29.36	2.18%	[0.00]	ug/L
Tl 190.801†	-60.8	3.03	4.98%	[0.00]	ug/L
U 409.014†	-4848.7	116.20	2.40%	[0.00]	ug/L
V 292.402†	-1565.2	26.55	1.70%	[0.00]	ug/L
Zn 213.857†	925.1	25.93	2.80%	[0.00]	ug/L
SiO2†	436.9	17.05	3.90%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 6/30/2009 08:06:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7536.7	7536.7	101	%	08:08:52
1	Y RADIAL	6939.1	6939.1	100.2	%	08:08:52
1	K 766.490 Radial†	7002.8	4537.9	[1000]	ug/L	08:08:47
1	Sr 421.552†	34034.9	33810.4	[100]	ug/L	08:08:47
1	Sc 361.383	734393.9	734393.9	102.19	%	08:09:19
1	Y 371.029	573053.1	573053.1	101.97	%	08:09:19
1	Ag 328.068†	18107.9	17088.1	[100]	ug/L	08:09:19
1	As 188.979†	245.2	275.4	[100]	ug/L	08:09:39
1	B 249.677†	3110.2	3983.6	[100]	ug/L	08:09:19
1	Ba 233.527†	14955.4	14635.1	[100]	ug/L	08:09:19
1	Be 313.107†	222292.2	222420.4	[100]	ug/L	08:09:19
1	Cd 226.502†	7806.4	7920.5	[100]	ug/L	08:09:39
1	Co 228.616†	5943.2	5915.6	[100]	ug/L	08:09:39
1	Cr 267.716†	7405.7	7324.8	[100]	ug/L	08:09:19
1	Cu 324.752†	34513.6	28137.2	[100]	ug/L	08:09:19
1	Mn 257.610†	97154.7	94397.5	[100]	ug/L	08:09:19
1	Mo 202.031†	1505.5	1456.1	[100]	ug/L	08:09:39
1	Ni 231.604†	3998.2	3792.9	[100]	ug/L	08:09:39
1	P 214.914†	1350.2	1006.6	[500]	ug/L	08:09:39
1	Pb 220.353†	890.6	884.8	[100]	ug/L	08:09:39
1	S 181.975 Axial†	232.7	152.3	[200]	ug/L	08:09:39
1	Sb 206.836†	401.3	335.5	[100]	ug/L	08:09:39
1	Se 196.026†	174.4	199.5	[100]	ug/L	08:09:39
1	Si 251.611†	17145.7	16367.3	[500]	ug/L	08:09:19
1	Sn 189.927†	597.0	571.7	[100]	ug/L	08:09:39
1	Ti 334.940†	55327.0	55492.2	[100]	ug/L	08:09:19
1	Tl 190.801†	353.4	406.6	[100]	ug/L	08:09:39
1	U 409.014†	-1643.9	3240.0	[100]	ug/L	08:09:19
1	V 292.402†	9828.0	11183.0	[100]	ug/L	08:09:19
1	Zn 213.857†	12345.3	11156.2	[100]	ug/L	08:09:19
1	SiO2†	16831.6	16034.7	[1069.5]	ug/L	08:10:36
2	Sc Radial	7396.9	7396.9	99.0	%	08:09:02
2	Y RADIAL	6800.1	6800.1	98.21	%	08:09:02
2	K 766.490 Radial†	6887.5	4552.7	[1000]	ug/L	08:08:57
2	Sr 421.552†	34356.2	34773.1	[100]	ug/L	08:08:57
2	Sc 361.383	729336.4	729336.4	101.48	%	08:09:45
2	Y 371.029	568343.4	568343.4	101.13	%	08:09:45
2	Ag 328.068†	18043.8	17147.7	[100]	ug/L	08:09:45
2	As 188.979†	267.9	299.4	[100]	ug/L	08:10:05
2	B 249.677†	2982.8	3879.2	[100]	ug/L	08:09:45
2	Ba 233.527†	14864.7	14647.2	[100]	ug/L	08:09:45
2	Be 313.107†	220607.8	222269.0	[100]	ug/L	08:09:45
2	Cd 226.502†	7778.0	7945.6	[100]	ug/L	08:10:05
2	Co 228.616†	5930.9	5943.8	[100]	ug/L	08:10:05
2	Cr 267.716†	7358.5	7328.4	[100]	ug/L	08:09:45
2	Cu 324.752†	34059.7	27924.1	[100]	ug/L	08:09:45
2	Mn 257.610†	96466.5	94378.6	[100]	ug/L	08:09:45
2	Mo 202.031†	1502.6	1463.6	[100]	ug/L	08:10:05
2	Ni 231.604†	3991.0	3813.0	[100]	ug/L	08:10:05
2	P 214.914†	1333.3	999.1	[500]	ug/L	08:10:05
2	Pb 220.353†	883.7	884.1	[100]	ug/L	08:10:05
2	S 181.975 Axial†	238.4	159.5	[200]	ug/L	08:10:05
2	Sb 206.836†	392.3	329.4	[100]	ug/L	08:10:05
2	Se 196.026†	178.3	204.5	[100]	ug/L	08:10:05
2	Si 251.611†	17027.5	16367.1	[500]	ug/L	08:09:45
2	Sn 189.927†	595.1	573.9	[100]	ug/L	08:10:05
2	Ti 334.940†	54903.8	55450.6	[100]	ug/L	08:09:45
2	Tl 190.801†	340.2	396.0	[100]	ug/L	08:10:05
2	U 409.014†	-1533.7	3337.4	[100]	ug/L	08:09:45

2	V 292.402†	9767.9	11190.5	[100]	ug/L	08:09:45
2	Zn 213.857†	12219.7	11116.2	[100]	ug/L	08:09:45
2	SiO2†	16580.2	15901.3	[1069.5]	ug/L	08:10:41
3	Sc Radial	7592.7	7592.7	102	%	08:09:12
3	Y RADIAL	7005.7	7005.7	101.2	%	08:09:12
3	K 766.490 Radial†	7071.4	4554.3	[1000]	ug/L	08:09:07
3	Sr 421.552†	34873.0	34386.5	[100]	ug/L	08:09:07
3	Sc 361.383	738752.0	738752.0	102.79	%	08:10:10
3	Y 371.029	576233.1	576233.1	102.53	%	08:10:10
3	Ag 328.068†	18197.8	17071.0	[100]	ug/L	08:10:10
3	As 188.979†	254.2	282.7	[100]	ug/L	08:10:30
3	B 249.677†	3118.6	3973.8	[100]	ug/L	08:10:10
3	Ba 233.527†	15063.6	14654.0	[100]	ug/L	08:10:10
3	Be 313.107†	223875.9	222677.8	[100]	ug/L	08:10:10
3	Cd 226.502†	7755.4	7825.9	[100]	ug/L	08:10:30
3	Co 228.616†	5940.8	5878.9	[100]	ug/L	08:10:30
3	Cr 267.716†	7475.5	7349.9	[100]	ug/L	08:10:10
3	Cu 324.752†	34750.0	28167.8	[100]	ug/L	08:10:10
3	Mn 257.610†	97657.0	94325.2	[100]	ug/L	08:10:10
3	Mo 202.031†	1495.8	1438.1	[100]	ug/L	08:10:30
3	Ni 231.604†	4016.8	3787.9	[100]	ug/L	08:10:30
3	P 214.914†	1333.5	982.5	[500]	ug/L	08:10:30
3	Pb 220.353†	877.8	867.2	[100]	ug/L	08:10:30
3	S 181.975 Axial†	222.6	141.1	[200]	ug/L	08:10:30
3	Sb 206.836†	398.6	330.5	[100]	ug/L	08:10:30
3	Se 196.026†	170.3	194.5	[100]	ug/L	08:10:30
3	Si 251.611†	17254.1	16373.7	[500]	ug/L	08:10:10
3	Sn 189.927†	587.6	559.2	[100]	ug/L	08:10:30
3	Ti 334.940†	55848.1	55679.6	[100]	ug/L	08:10:10
3	Tl 190.801†	343.9	395.3	[100]	ug/L	08:10:30
3	U 409.014†	-1621.5	3271.3	[100]	ug/L	08:10:10
3	V 292.402†	9943.5	11238.7	[100]	ug/L	08:10:10
3	Zn 213.857†	12396.5	11134.7	[100]	ug/L	08:10:10
3	SiO2†	16720.9	15829.9	[1069.5]	ug/L	08:10:46

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	734160.8	4712.12	0.64%	102.15	%
Sc Radial	7508.7	100.86	1.34%	100	%
Y 371.029	572543.2	3969.45	0.69%	101.88	%
Y RADIAL	6915.0	104.91	1.52%	99.86	%
Ag 328.068†	17102.3	40.29	0.24%	[100]	ug/L
As 188.979†	285.9	12.31	4.31%	[100]	ug/L
B 249.677†	3945.5	57.65	1.46%	[100]	ug/L
Ba 233.527†	14645.4	9.59	0.07%	[100]	ug/L
Be 313.107†	222455.7	206.65	0.09%	[100]	ug/L
Cd 226.502†	7897.3	63.13	0.80%	[100]	ug/L
Co 228.616†	5912.7	32.55	0.55%	[100]	ug/L
Cr 267.716†	7334.4	13.58	0.19%	[100]	ug/L
Cu 324.752†	28076.4	132.76	0.47%	[100]	ug/L
K 766.490 Radial†	4548.3	9.03	0.20%	[1000]	ug/L
Mn 257.610†	94367.1	37.47	0.04%	[100]	ug/L
Mo 202.031†	1452.6	13.10	0.90%	[100]	ug/L
Ni 231.604†	3797.9	13.28	0.35%	[100]	ug/L
P 214.914†	996.1	12.30	1.24%	[500]	ug/L
Pb 220.353†	878.7	9.94	1.13%	[100]	ug/L
S 181.975 Axial†	151.0	9.23	6.12%	[200]	ug/L
Sb 206.836†	331.8	3.25	0.98%	[100]	ug/L
Se 196.026†	199.5	5.01	2.51%	[100]	ug/L
Si 251.611†	16369.4	3.77	0.02%	[500]	ug/L
Sn 189.927†	568.3	7.94	1.40%	[100]	ug/L
Sr 421.552†	34323.3	484.48	1.41%	[100]	ug/L
Ti 334.940†	55540.8	122.03	0.22%	[100]	ug/L
Tl 190.801†	399.3	6.30	1.58%	[100]	ug/L
U 409.014†	3282.9	49.72	1.51%	[100]	ug/L
V 292.402†	11204.1	30.19	0.27%	[100]	ug/L
Zn 213.857†	11135.7	20.05	0.18%	[100]	ug/L
SiO2†	15922.0	103.97	0.65%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 6/30/2009 08:12:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7331.6	7331.6	98.1	%	08:14:48
1	Y RADIAL	6711.6	6711.6	96.93	%	08:14:48
1	Al 396.153Radial†	6146.5	6339.0	[5000]	ug/L	08:14:48
1	Ca 317.933Radial†	3679.6	3722.2	[5000]	ug/L	08:14:48
1	K 766.490 Radial†	24598.6	22671.0	[5000]	ug/L	08:14:48
1	Mg 279.077 IEC†	216.5	217.7	[5000]	ug/L	08:15:08
1	Sr 421.552†	169572.9	172935.1	[500]	ug/L	08:14:48
1	Sc 361.383	769868.5	769868.5	107.12	%	08:16:07
1	Y 371.029	593513.7	593513.7	105.61	%	08:16:07
1	Ag 328.068†	87541.8	81089.5	[500]	ug/L	08:16:07
1	As 188.979†	1409.8	1351.5	[500]	ug/L	08:16:27
1	B 249.677†	19467.3	19113.1	[500]	ug/L	08:16:07
1	Ba 233.527†	73932.8	69017.4	[500]	ug/L	08:16:07
1	Be 313.107†	1136680.0	1065997.8	[500]	ug/L	08:16:07
1	Cd 226.502†	39456.0	37114.2	[500]	ug/L	08:16:27
1	Co 228.616†	29402.6	27547.4	[500]	ug/L	08:16:27
1	Cr 267.716†	37090.5	34702.2	[500]	ug/L	08:16:07
1	Cu 324.752†	149279.1	133716.9	[500]	ug/L	08:16:07
1	Mn 257.610†	473775.8	441600.6	[500]	ug/L	08:16:07
1	Mo 202.031†	7403.7	6894.4	[500]	ug/L	08:16:27
1	Ni 231.604†	19288.8	17886.7	[500]	ug/L	08:16:27
1	P 214.914†	5408.5	4734.1	[2500]	ug/L	08:16:27
1	Pb 220.353†	4336.2	4061.2	[500]	ug/L	08:16:27
1	S 181.975 Axial†	819.7	689.8	[1000]	ug/L	08:16:27
1	Sb 206.836†	1784.5	1608.6	[500]	ug/L	08:16:27
1	Se 196.026†	996.6	959.1	[500]	ug/L	08:16:27
1	Si 251.611†	85511.7	79415.3	[2500]	ug/L	08:16:07
1	Sn 189.927†	2931.4	2724.0	[500]	ug/L	08:16:27
1	Ti 334.940†	282238.5	264824.2	[500]	ug/L	08:16:07
1	Tl 190.801†	1928.3	1860.8	[500]	ug/L	08:16:27
1	U 409.014†	10443.6	14598.1	[500]	ug/L	08:16:07
1	V 292.402†	55566.5	53437.8	[500]	ug/L	08:16:07
1	Zn 213.857†	57403.7	52662.5	[500]	ug/L	08:16:07
1	SiO2†	86466.0	80281.1	[5347.5]	ug/L	08:17:27
2	Sc Radial	7012.2	7012.2	93.8	%	08:15:13
2	Y RADIAL	6406.9	6406.9	92.53	%	08:15:13
2	Al 396.153Radial†	6199.2	6680.6	[5000]	ug/L	08:15:13
2	Ca 317.933Radial†	3669.6	3882.5	[5000]	ug/L	08:15:13
2	K 766.490 Radial†	24515.2	23724.5	[5000]	ug/L	08:15:13
2	Mg 279.077 IEC†	213.8	224.8	[5000]	ug/L	08:15:33
2	Sr 421.552†	170064.4	181333.7	[500]	ug/L	08:15:13
2	Sc 361.383	741530.7	741530.7	103.18	%	08:16:34
2	Y 371.029	572044.7	572044.7	101.79	%	08:16:34
2	Ag 328.068†	87246.2	83926.1	[500]	ug/L	08:16:34
2	As 188.979†	1416.7	1408.5	[500]	ug/L	08:16:54
2	B 249.677†	19479.9	19819.7	[500]	ug/L	08:16:34
2	Ba 233.527†	73805.8	71531.8	[500]	ug/L	08:16:34
2	Be 313.107†	1135032.3	1104951.6	[500]	ug/L	08:16:34
2	Cd 226.502†	39893.2	38945.5	[500]	ug/L	08:16:54
2	Co 228.616†	29720.4	28904.3	[500]	ug/L	08:16:54
2	Cr 267.716†	37001.7	35939.3	[500]	ug/L	08:16:34
2	Cu 324.752†	148954.2	138727.6	[500]	ug/L	08:16:34
2	Mn 257.610†	472845.3	457600.6	[500]	ug/L	08:16:34
2	Mo 202.031†	7472.5	7225.2	[500]	ug/L	08:16:54
2	Ni 231.604†	19486.5	18766.4	[500]	ug/L	08:16:54
2	P 214.914†	5446.9	4964.3	[2500]	ug/L	08:16:54
2	Pb 220.353†	4388.1	4266.1	[500]	ug/L	08:16:54
2	S 181.975 Axial†	832.2	731.2	[1000]	ug/L	08:16:54
2	Sb 206.836†	1819.4	1706.1	[500]	ug/L	08:16:54

2	Se 196.026†	994.2	992.4	[500]	ug/L	08:16:54
2	Si 251.611†	85264.0	82225.8	[2500]	ug/L	08:16:34
2	Sn 189.927†	2961.9	2858.2	[500]	ug/L	08:16:54
2	Ti 334.940†	282021.6	274682.7	[500]	ug/L	08:16:34
2	Tl 190.801†	1952.3	1953.0	[500]	ug/L	08:16:54
2	U 409.014†	10246.1	14779.2	[500]	ug/L	08:16:34
2	V 292.402†	55595.3	55448.0	[500]	ug/L	08:16:34
2	Zn 213.857†	57330.7	54639.6	[500]	ug/L	08:16:34
2	SiO2†	85458.1	82388.9	[5347.5]	ug/L	08:17:32
3	Sc Radial	7281.7	7281.7	97.4	%	08:15:38
3	Y RADIAL	6673.6	6673.6	96.38	%	08:15:38
3	Al 396.153Radial†	6002.9	6234.6	[5000]	ug/L	08:15:38
3	Ca 317.933Radial†	3580.6	3646.4	[5000]	ug/L	08:15:38
3	K 766.490 Radial†	24009.6	22238.6	[5000]	ug/L	08:15:38
3	Mg 279.077 IEC†	207.3	209.8	[5000]	ug/L	08:15:58
3	Sr 421.552†	165542.3	169984.4	[500]	ug/L	08:15:38
3	Sc 361.383	732297.7	732297.7	101.89	%	08:17:02
3	Y 371.029	565284.2	565284.2	100.58	%	08:17:02
3	Ag 328.068†	86631.1	84388.6	[500]	ug/L	08:17:02
3	As 188.979†	1413.7	1422.9	[500]	ug/L	08:17:22
3	B 249.677†	19357.3	19937.5	[500]	ug/L	08:17:02
3	Ba 233.527†	73252.9	71891.1	[500]	ug/L	08:17:02
3	Be 313.107†	1126344.5	1110295.2	[500]	ug/L	08:17:02
3	Cd 226.502†	39932.3	39471.3	[500]	ug/L	08:17:22
3	Co 228.616†	29714.9	29262.1	[500]	ug/L	08:17:22
3	Cr 267.716†	36694.0	36089.5	[500]	ug/L	08:17:02
3	Cu 324.752†	147084.2	138712.4	[500]	ug/L	08:17:02
3	Mn 257.610†	469176.5	459778.1	[500]	ug/L	08:17:02
3	Mo 202.031†	7457.0	7301.3	[500]	ug/L	08:17:22
3	Ni 231.604†	19533.9	19051.1	[500]	ug/L	08:17:22
3	P 214.914†	5449.9	5033.8	[2500]	ug/L	08:17:22
3	Pb 220.353†	4412.4	4343.7	[500]	ug/L	08:17:22
3	S 181.975 Axial†	840.6	749.6	[1000]	ug/L	08:17:22
3	Sb 206.836†	1816.0	1725.0	[500]	ug/L	08:17:22
3	Se 196.026†	1002.2	1012.3	[500]	ug/L	08:17:22
3	Si 251.611†	84453.6	82472.4	[2500]	ug/L	08:17:02
3	Sn 189.927†	2978.8	2910.9	[500]	ug/L	08:17:22
3	Ti 334.940†	278860.4	275026.5	[500]	ug/L	08:17:02
3	Tl 190.801†	1948.7	1973.3	[500]	ug/L	08:17:22
3	U 409.014†	9966.0	14629.5	[500]	ug/L	08:17:02
3	V 292.402†	54895.9	55441.0	[500]	ug/L	08:17:02
3	Zn 213.857†	56933.7	54950.6	[500]	ug/L	08:17:02
3	SiO2†	86700.3	84652.2	[5347.5]	ug/L	08:17:37

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	747899.0	19578.21	2.62%	104.06	%
Sc Radial	7208.5	171.81	2.38%	96.4	%
Y 371.029	576947.5	14739.54	2.55%	102.66	%
Y RADIAL	6597.4	166.02	2.52%	95.28	%
Ag 328.068†	83134.7	1786.23	2.15%	[500]	ug/L
Al 396.153Radial†	6418.0	233.28	3.63%	[5000]	ug/L
As 188.979†	1394.3	37.77	2.71%	[500]	ug/L
B 249.677†	19623.4	445.89	2.27%	[500]	ug/L
Ba 233.527†	70813.4	1565.76	2.21%	[500]	ug/L
Be 313.107†	1093748.2	24180.62	2.21%	[500]	ug/L
Ca 317.933Radial†	3750.4	120.53	3.21%	[5000]	ug/L
Cd 226.502†	38510.3	1237.37	3.21%	[500]	ug/L
Co 228.616†	28571.3	904.57	3.17%	[500]	ug/L
Cr 267.716†	35577.0	761.31	2.14%	[500]	ug/L
Cu 324.752†	137052.3	2888.55	2.11%	[500]	ug/L
K 766.490 Radial†	22878.0	764.29	3.34%	[5000]	ug/L
Mg 279.077 IEC†	217.4	7.53	3.46%	[5000]	ug/L
Mn 257.610†	452993.1	9926.07	2.19%	[500]	ug/L
Mo 202.031†	7140.3	216.36	3.03%	[500]	ug/L
Ni 231.604†	18568.1	607.02	3.27%	[500]	ug/L
P 214.914†	4910.7	156.86	3.19%	[2500]	ug/L
Pb 220.353†	4223.7	145.95	3.46%	[500]	ug/L
S 181.975 Axial†	723.5	30.63	4.23%	[1000]	ug/L

Sb 206.836†	1679.9	62.46	3.72%	[500]	ug/L
Se 196.026†	987.9	26.86	2.72%	[500]	ug/L
Si 251.611†	81371.2	1698.29	2.09%	[2500]	ug/L
Sn 189.927†	2831.0	96.35	3.40%	[500]	ug/L
Sr 421.552†	174751.0	5888.55	3.37%	[500]	ug/L
Ti 334.940†	271511.1	5793.62	2.13%	[500]	ug/L
Tl 190.801†	1929.0	59.92	3.11%	[500]	ug/L
U 409.014†	14668.9	96.79	0.66%	[500]	ug/L
V 292.402†	54775.6	1158.59	2.12%	[500]	ug/L
Zn 213.857†	54084.3	1241.03	2.29%	[500]	ug/L
SiO2†	82440.7	2186.02	2.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 6/30/2009 08:19:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7204.7	7204.7	96.4	%	08:22:02
1	Y RADIAL	7061.7	7061.7	102.0	%	08:21:42
1	Al 396.153Radial†	12196.2	12725.7	[10000]	ug/L	08:21:42
1	Ca 317.933Radial†	7147.7	7386.4	[10000]	ug/L	08:22:02
1	Fe 238.204 Radial†	2424.5	2480.5	[10000]	ug/L	08:22:02
1	K 766.490 Radial†	45808.2	45117.1	[10000]	ug/L	08:21:42
1	Mg 279.077 IEC†	418.3	431.0	[10000]	ug/L	08:22:02
1	Na 589.592 Radial†	161229.1	167404.7	[10000]	ug/L	08:21:42
1	Sr 421.552†	336493.3	349155.2	[1000]	ug/L	08:21:42
1	Sc 361.383	731644.6	731644.6	101.80	%	08:23:01
1	Y 371.029	562448.6	562448.6	100.08	%	08:23:01
1	Ag 328.068†	173528.7	169823.4	[1000]	ug/L	08:23:01
1	As 188.979†	2839.1	2824.3	[1000]	ug/L	08:23:21
1	B 249.677†	40015.0	40246.4	[1000]	ug/L	08:23:01
1	Ba 233.527†	146287.3	143696.5	[1000]	ug/L	08:23:01
1	Be 313.107†	2249343.7	2214396.2	[1000]	ug/L	08:23:01
1	Cd 226.502†	81183.1	80026.7	[1000]	ug/L	08:23:01
1	Co 228.616†	59665.4	58708.3	[1000]	ug/L	08:23:01
1	Cr 267.716†	73671.7	72444.6	[1000]	ug/L	08:23:01
1	Cu 324.752†	290566.6	279783.1	[1000]	ug/L	08:23:01
1	Mn 257.610†	937074.5	919802.1	[1000]	ug/L	08:23:01
1	Mo 202.031†	14767.8	14489.2	[1000]	ug/L	08:23:21
1	Ni 231.604†	38890.7	38082.2	[1000]	ug/L	08:23:01
1	P 214.914†	10479.1	9978.8	[5000]	ug/L	08:23:21
1	Pb 220.353†	8695.5	8554.8	[1000]	ug/L	08:23:21
1	S 181.975 Axial†	1600.3	1496.5	[2000]	ug/L	08:23:21
1	Sb 206.836†	3574.8	3454.3	[1000]	ug/L	08:23:21
1	Se 196.026†	2002.9	1996.2	[1000]	ug/L	08:23:21
1	Si 251.611†	167224.9	163852.0	[5000]	ug/L	08:23:01
1	Sn 189.927†	5879.4	5762.8	[1000]	ug/L	08:23:21
1	Ti 334.940†	562505.4	553893.3	[1000]	ug/L	08:23:01
1	Tl 190.801†	3903.4	3895.0	[1000]	ug/L	08:23:21
1	U 409.014†	25254.0	29655.6	[1000]	ug/L	08:23:01
1	V 292.402†	112154.0	111733.3	[1000]	ug/L	08:23:01
1	Zn 213.857†	113078.1	110150.7	[1000]	ug/L	08:23:01
1	SiO2†	166605.1	163218.1	[10695]	ug/L	08:24:22
2	Sc Radial	7030.2	7030.2	94.1	%	08:22:27
2	Y RADIAL	5925.9	5925.9	85.58	%	08:22:07
2	Al 396.153Radial†	12831.1	13714.8	[10000]	ug/L	08:22:07
2	Ca 317.933Radial†	7296.2	7728.2	[10000]	ug/L	08:22:27
2	Fe 238.204 Radial†	2474.3	2595.9	[10000]	ug/L	08:22:27
2	K 766.490 Radial†	47735.1	48345.1	[10000]	ug/L	08:22:07
2	Mg 279.077 IEC†	418.7	442.2	[10000]	ug/L	08:22:27
2	Na 589.592 Radial†	168332.5	179107.6	[10000]	ug/L	08:22:07
2	Sr 421.552†	352945.4	375309.4	[1000]	ug/L	08:22:07
2	Sc 361.383	736250.1	736250.1	102.44	%	08:23:29
2	Y 371.029	566550.5	566550.5	100.81	%	08:23:29
2	Ag 328.068†	173180.3	168417.0	[1000]	ug/L	08:23:29
2	As 188.979†	2763.2	2732.7	[1000]	ug/L	08:23:49
2	B 249.677†	39944.8	39932.0	[1000]	ug/L	08:23:29
2	Ba 233.527†	145645.5	142171.1	[1000]	ug/L	08:23:29
2	Be 313.107†	2241322.6	2192745.1	[1000]	ug/L	08:23:29
2	Cd 226.502†	80530.2	78890.5	[1000]	ug/L	08:23:29
2	Co 228.616†	59248.5	57934.7	[1000]	ug/L	08:23:29
2	Cr 267.716†	73330.1	71658.4	[1000]	ug/L	08:23:29
2	Cu 324.752†	290171.2	277611.7	[1000]	ug/L	08:23:29
2	Mn 257.610†	932429.5	909509.9	[1000]	ug/L	08:23:29
2	Mo 202.031†	14414.1	14053.2	[1000]	ug/L	08:23:49
2	Ni 231.604†	38630.1	37588.9	[1000]	ug/L	08:23:29

2	P 214.914†	10255.7	9696.3	[5000]	ug/L	08:23:49
2	Pb 220.353†	8495.4	8306.1	[1000]	ug/L	08:23:49
2	S 181.975 Axial†	1560.2	1447.6	[2000]	ug/L	08:23:49
2	Sb 206.836†	3479.3	3339.0	[1000]	ug/L	08:23:49
2	Se 196.026†	1946.5	1928.8	[1000]	ug/L	08:23:49
2	Si 251.611†	166585.8	162200.7	[5000]	ug/L	08:23:29
2	Sn 189.927†	5744.7	5595.1	[1000]	ug/L	08:23:49
2	Ti 334.940†	561361.9	549320.8	[1000]	ug/L	08:23:29
2	Tl 190.801†	3783.4	3753.9	[1000]	ug/L	08:23:49
2	U 409.014†	25427.8	29670.0	[1000]	ug/L	08:23:29
2	V 292.402†	111767.7	110667.1	[1000]	ug/L	08:23:29
2	Zn 213.857†	112281.5	108678.3	[1000]	ug/L	08:23:29
2	SiO2†	169107.1	164636.8	[10695]	ug/L	08:24:27
3	Sc Radial	7179.0	7179.0	96.0	%	08:22:52
3	Y RADIAL	6782.9	6782.9	97.96	%	08:22:32
3	Al 396.153Radial†	12455.1	13040.5	[10000]	ug/L	08:22:32
3	Ca 317.933Radial†	7211.3	7479.1	[10000]	ug/L	08:22:52
3	Fe 238.204 Radial†	2448.1	2514.1	[10000]	ug/L	08:22:52
3	K 766.490 Radial†	46541.4	46050.6	[10000]	ug/L	08:22:32
3	Mg 279.077 IEC†	421.5	435.8	[10000]	ug/L	08:22:52
3	Na 589.592 Radial†	163743.5	170621.2	[10000]	ug/L	08:22:32
3	Sr 421.552†	342328.1	356479.3	[1000]	ug/L	08:22:32
3	Sc 361.383	754192.3	754192.3	104.94	%	08:23:56
3	Y 371.029	580172.7	580172.7	103.23	%	08:23:56
3	Ag 328.068†	173481.6	164682.5	[1000]	ug/L	08:23:56
3	As 188.979†	2839.1	2740.9	[1000]	ug/L	08:24:16
3	B 249.677†	40141.4	39191.7	[1000]	ug/L	08:23:56
3	Ba 233.527†	146129.4	139249.9	[1000]	ug/L	08:23:56
3	Be 313.107†	2245004.3	2144204.4	[1000]	ug/L	08:23:56
3	Cd 226.502†	80829.2	77305.3	[1000]	ug/L	08:23:56
3	Co 228.616†	59391.2	56694.9	[1000]	ug/L	08:23:56
3	Cr 267.716†	73470.2	70089.1	[1000]	ug/L	08:23:56
3	Cu 324.752†	291067.4	271727.3	[1000]	ug/L	08:23:56
3	Mn 257.610†	935327.1	890617.8	[1000]	ug/L	08:23:56
3	Mo 202.031†	14715.4	14005.6	[1000]	ug/L	08:24:16
3	Ni 231.604†	38693.3	36752.0	[1000]	ug/L	08:23:56
3	P 214.914†	10487.0	9678.6	[5000]	ug/L	08:24:16
3	Pb 220.353†	8683.7	8288.1	[1000]	ug/L	08:24:16
3	S 181.975 Axial†	1594.1	1443.7	[2000]	ug/L	08:24:16
3	Sb 206.836†	3539.1	3315.3	[1000]	ug/L	08:24:16
3	Se 196.026†	2006.3	1940.6	[1000]	ug/L	08:24:16
3	Si 251.611†	167230.5	158946.5	[5000]	ug/L	08:23:56
3	Sn 189.927†	5871.1	5582.2	[1000]	ug/L	08:24:16
3	Ti 334.940†	562636.9	537499.6	[1000]	ug/L	08:23:56
3	Tl 190.801†	3902.1	3779.2	[1000]	ug/L	08:24:16
3	U 409.014†	25678.7	29318.6	[1000]	ug/L	08:23:56
3	V 292.402†	111958.9	108253.7	[1000]	ug/L	08:23:56
3	Zn 213.857†	112557.5	106333.8	[1000]	ug/L	08:23:56
3	SiO2†	166725.6	158440.2	[10695]	ug/L	08:24:32

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	740695.7	11913.08	1.61%	103.06	%
Sc Radial	7138.0	94.18	1.32%	95.5	%
Y 371.029	569723.9	9278.37	1.63%	101.37	%
Y RADIAL	6590.2	591.92	8.98%	95.17	%
Ag 328.068†	167641.0	2656.88	1.58%	[1000]	ug/L
Al 396.153Radial†	13160.3	505.29	3.84%	[10000]	ug/L
As 188.979†	2766.0	50.67	1.83%	[1000]	ug/L
B 249.677†	39790.0	541.48	1.36%	[1000]	ug/L
Ba 233.527†	141705.8	2259.47	1.59%	[1000]	ug/L
Be 313.107†	2183781.9	35944.05	1.65%	[1000]	ug/L
Ca 317.933Radial†	7531.2	176.79	2.35%	[10000]	ug/L
Cd 226.502†	78740.8	1366.83	1.74%	[1000]	ug/L
Co 228.616†	57779.3	1015.70	1.76%	[1000]	ug/L
Cr 267.716†	71397.4	1199.28	1.68%	[1000]	ug/L
Cu 324.752†	276374.0	4168.09	1.51%	[1000]	ug/L
Fe 238.204 Radial†	2530.2	59.32	2.34%	[10000]	ug/L
K 766.490 Radial†	46504.2	1661.12	3.57%	[10000]	ug/L

Mg 279.077 IEC†	436.3	5.61	1.29%	[10000]	ug/L
Mn 257.610†	906643.3	14801.82	1.63%	[1000]	ug/L
Mo 202.031†	14182.7	266.55	1.88%	[1000]	ug/L
Na 589.592 Radial†	172377.9	6045.95	3.51%	[10000]	ug/L
Ni 231.604†	37474.4	672.45	1.79%	[1000]	ug/L
P 214.914†	9784.6	168.42	1.72%	[5000]	ug/L
Pb 220.353†	8383.0	149.05	1.78%	[1000]	ug/L
S 181.975 Axial†	1462.6	29.43	2.01%	[2000]	ug/L
Sb 206.836†	3369.5	74.35	2.21%	[1000]	ug/L
Se 196.026†	1955.2	35.97	1.84%	[1000]	ug/L
Si 251.611†	161666.4	2496.06	1.54%	[5000]	ug/L
Sn 189.927†	5646.7	100.73	1.78%	[1000]	ug/L
Sr 421.552†	360314.6	13492.36	3.74%	[1000]	ug/L
Ti 334.940†	546904.5	8459.75	1.55%	[1000]	ug/L
Tl 190.801†	3809.4	75.25	1.98%	[1000]	ug/L
U 409.014†	29548.0	198.85	0.67%	[1000]	ug/L
V 292.402†	110218.0	1782.72	1.62%	[1000]	ug/L
Zn 213.857†	108387.6	1924.98	1.78%	[1000]	ug/L
SiO2†	162098.4	3246.49	2.00%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 6/30/2009 08:26:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7395.9	7395.9	98.9	%	08:28:57
1	Y RADIAL	6757.0	6757.0	97.58	%	08:28:57
1	Al 396.153Radial†	58979.0	59679.3	[50000]	ug/L	08:28:37
1	Ca 317.933Radial†	34828.4	35170.0	[50000]	ug/L	08:28:57
1	Fe 238.204 Radial†	4716.7	4732.1	[20000]	ug/L	08:28:57
1	Mg 279.077 IEC†	1974.9	1992.8	[50000]	ug/L	08:28:57
1	Na 589.592 Radial†	312800.4	316264.9	[20000]	ug/L	08:28:37
1	Sc 361.383	728229.0	728229.0	101.33	%	08:29:54
1	Y 371.029	558499.0	558499.0	99.377	%	08:29:54
2	Sc Radial	7352.7	7352.7	98.4	%	08:29:22
2	Y RADIAL	6711.0	6711.0	96.92	%	08:29:22
2	Al 396.153Radial†	59889.8	60955.7	[50000]	ug/L	08:29:02
2	Ca 317.933Radial†	34701.3	35247.7	[50000]	ug/L	08:29:22
2	Fe 238.204 Radial†	4700.8	4744.0	[20000]	ug/L	08:29:22
2	Mg 279.077 IEC†	1971.2	2000.9	[50000]	ug/L	08:29:22
2	Na 589.592 Radial†	318315.5	323730.2	[20000]	ug/L	08:29:02
2	Sc 361.383	719163.9	719163.9	100.07	%	08:30:00
2	Y 371.029	551632.9	551632.9	98.155	%	08:30:00
3	Sc Radial	7422.8	7422.8	99.3	%	08:29:47
3	Y RADIAL	6775.3	6775.3	97.85	%	08:29:47
3	Al 396.153Radial†	60312.5	60805.9	[50000]	ug/L	08:29:27
3	Ca 317.933Radial†	34904.4	35118.8	[50000]	ug/L	08:29:47
3	Fe 238.204 Radial†	4722.7	4720.8	[20000]	ug/L	08:29:47
3	Mg 279.077 IEC†	1986.0	1996.8	[50000]	ug/L	08:29:47
3	Na 589.592 Radial†	321104.6	323480.3	[20000]	ug/L	08:29:27
3	Sc 361.383	728485.1	728485.1	101.36	%	08:30:05
3	Y 371.029	558549.8	558549.8	99.386	%	08:30:05

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	725292.7	5309.24	0.73%	100.92	%
Sc Radial	7390.4	35.39	0.48%	98.9	%
Y 371.029	556227.2	3978.89	0.72%	98.973	%
Y RADIAL	6747.8	33.13	0.49%	97.45	%
Al 396.153Radial†	60480.3	697.72	1.15%	[50000]	ug/L
Ca 317.933Radial†	35178.8	64.92	0.18%	[50000]	ug/L
Fe 238.204 Radial†	4732.3	11.57	0.24%	[20000]	ug/L
Mg 279.077 IEC†	1996.9	4.02	0.20%	[50000]	ug/L
Na 589.592 Radial†	321158.5	4239.77	1.32%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	167.4	0.00000	0.999993	
Al 396.153Radial	3	Lin Thru 0	0.0	1.214	0.00000	0.999844	
As 188.979	3	Lin Thru 0	0.0	2.771	0.00000	0.999991	
B 249.677	3	Lin Thru 0	0.0	39.68	0.00000	0.999985	
Ba 233.527	3	Lin Thru 0	0.0	141.7	0.00000	0.999996	
Be 313.107	3	Lin Thru 0	0.0	2185	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.7059	0.00000	0.999891	
Cd 226.502	3	Lin Thru 0	0.0	78.40	0.00000	0.999962	
Co 228.616	3	Lin Thru 0	0.0	57.66	0.00000	0.999988	
Cr 267.716	3	Lin Thru 0	0.0	71.36	0.00000	0.999996	
Cu 324.752	3	Lin Thru 0	0.0	276.0	0.00000	0.999993	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.2399	0.00000	0.999626	
K 766.490 Radial	3	Lin Thru 0	0.0	4.635	0.00000	0.999978	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0401	0.00000	0.999811
Mn 257.610	3	Lin Thru 0	0.0	906.8	0.00000	0.999993
Mo 202.031	3	Lin Thru 0	0.0	14.20	0.00000	0.999994
Na 589.592 Radia	2	Lin Thru 0	0.0	16.29	0.00000	0.999581
Ni 231.604	3	Lin Thru 0	0.0	37.41	0.00000	0.999993
P 214.914	3	Lin Thru 0	0.0	1.959	0.00000	0.999998
Pb 220.353	3	Lin Thru 0	0.0	8.399	0.00000	0.999987
S 181.975 Axial	3	Lin Thru 0	0.0	0.7299	0.00000	0.999986
Sb 206.836	3	Lin Thru 0	0.0	3.367	0.00000	0.999998
Se 196.026	3	Lin Thru 0	0.0	1.960	0.00000	0.999990
Si 251.611	3	Lin Thru 0	0.0	32.38	0.00000	0.999996
Sn 189.927	3	Lin Thru 0	0.0	5.650	0.00000	0.999999
Sr 421.552	3	Lin Thru 0	0.0	358.0	0.00000	0.999921
Ti 334.940	3	Lin Thru 0	0.0	546.2	0.00000	0.999995
Tl 190.801	3	Lin Thru 0	0.0	3.820	0.00000	0.999979
U 409.014	3	Lin Thru 0	0.0	29.53	0.00000	0.999946
V 292.402	3	Lin Thru 0	0.0	110.1	0.00000	0.999996
Zn 213.857	3	Lin Thru 0	0.0	108.4	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	15.21	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 6/30/2009 08:32:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7311.1	7311.1	97.8	%			08:34:29
1	Y RADIAL	6721.5	6721.5	97.07	%			08:34:29
1	Al 396.153Radial†	6272.0	6484.9	5317.7	ug/L	5317.7	ppb	08:34:09
1	Ca 317.933Radial†	3582.0	3633.1	5146.7	ug/L	5146.7	ppb	08:34:29
1	Fe 238.204 Radial†	1260.1	1253.5	5240.1	ug/L	5240.1	ppb	08:34:29
1	K 766.490 Radial†	13670.6	11569.2	2483.4	ug/L	2483.4	ppb	08:34:09
1	Mg 279.077 IEC†	218.5	220.3	5498.7	ug/L	5498.7	ppb	08:34:29
1	Na 589.592 Radial†	42038.9	43114.8	2646.1	ug/L	2646.1	ppb	08:34:09
1	Sr 421.552†	169418.8	173264.0	483.88	ug/L	483.88	ppb	08:34:09
1	Sc 361.383	742145.3	742145.3	103.26	%			08:35:26
1	Y 371.029	574749.9	574749.9	102.27	%			08:35:26
1	Ag 328.068†	44211.4	42181.4	255.12	ug/L	255.12	ppb	08:35:26
1	As 188.979†	1339.9	1333.0	483.93	ug/L	483.93	ppb	08:35:46
1	B 249.677†	19594.8	19915.4	499.11	ug/L	499.11	ppb	08:35:26
1	Ba 233.527†	78271.1	75796.8	535.91	ug/L	535.91	ppb	08:35:26
1	Be 313.107†	582097.1	568581.3	261.42	ug/L	261.42	ppb	08:35:26
1	Cd 226.502†	39466.2	38500.0	490.79	ug/L	490.79	ppb	08:35:46
1	Co 228.616†	28280.5	27486.1	476.94	ug/L	476.94	ppb	08:35:46
1	Cr 267.716†	36963.9	35873.1	503.38	ug/L	503.38	ppb	08:35:26
1	Cu 324.752†	154059.0	143551.4	520.49	ug/L	520.49	ppb	08:35:26
1	Mn 257.610†	490018.2	473851.2	523.10	ug/L	523.10	ppb	08:35:26
1	Mo 202.031†	7718.1	7457.0	525.30	ug/L	525.30	ppb	08:35:46
1	Ni 231.604†	20442.3	19676.4	525.64	ug/L	525.64	ppb	08:35:46
1	P 214.914†	5439.5	4952.8	2430.0	ug/L	2430.0	ppb	08:35:46
1	Pb 220.353†	4408.1	4282.1	511.42	ug/L	511.42	ppb	08:35:46
1	S 181.975 Axial†	2049.7	1909.5	2614.9	ug/L	2614.9	ppb	08:35:46
1	Sb 206.836†	1869.3	1753.0	528.00	ug/L	528.00	ppb	08:35:46
1	Se 196.026†	5231.7	5095.1	2618.6	ug/L	2618.6	ppb	08:35:46
1	Si 251.611†	167612.2	161902.9	4983.0	ug/L	4983.0	ppb	08:35:26
1	Sn 189.927†	3142.3	3030.5	537.29	ug/L	537.29	ppb	08:35:46
1	Ti 334.940†	286278.1	278578.4	509.91	ug/L	509.91	ppb	08:35:26
1	Tl 190.801†	1924.1	1924.0	507.00	ug/L	507.00	ppb	08:35:46
1	U 409.014†	11414.2	15902.2	536.85	ug/L	536.85	ppb	08:35:26
1	V 292.402†	55390.3	55204.8	507.68	ug/L	507.68	ppb	08:35:26
1	Zn 213.857†	58307.0	55539.1	507.72	ug/L	507.72	ppb	08:35:26
1	SiO2†	167219.3	161497.4	10582	ug/L	10582	ppb	08:36:44
2	Sc Radial	7274.5	7274.5	97.3	%			08:34:54
2	Y RADIAL	6697.6	6697.6	96.73	%			08:34:54
2	Al 396.153Radial†	6255.2	6499.9	5329.7	ug/L	5329.7	ppb	08:34:34
2	Ca 317.933Radial†	3558.1	3626.9	5137.9	ug/L	5137.9	ppb	08:34:54
2	Fe 238.204 Radial†	1245.9	1245.3	5206.4	ug/L	5206.4	ppb	08:34:54
2	K 766.490 Radial†	13611.2	11578.5	2485.3	ug/L	2485.3	ppb	08:34:34
2	Mg 279.077 IEC†	219.7	222.7	5558.2	ug/L	5558.2	ppb	08:34:54
2	Na 589.592 Radial†	42036.0	43328.0	2659.2	ug/L	2659.2	ppb	08:34:34
2	Sr 421.552†	168803.2	173502.8	484.55	ug/L	484.55	ppb	08:34:34
2	Sc 361.383	733513.4	733513.4	102.06	%			08:35:52
2	Y 371.029	568212.8	568212.8	101.11	%			08:35:52
2	Ag 328.068†	43958.9	42437.9	256.64	ug/L	256.64	ppb	08:35:52
2	As 188.979†	1336.4	1344.8	488.20	ug/L	488.20	ppb	08:36:12
2	B 249.677†	19510.6	20056.2	502.63	ug/L	502.63	ppb	08:35:52
2	Ba 233.527†	77397.0	75832.3	536.16	ug/L	536.16	ppb	08:35:52
2	Be 313.107†	576054.7	569294.5	261.75	ug/L	261.75	ppb	08:35:52
2	Cd 226.502†	39397.2	38882.0	495.67	ug/L	495.67	ppb	08:36:12
2	Co 228.616†	28277.3	27805.3	482.49	ug/L	482.49	ppb	08:36:12
2	Cr 267.716†	36653.8	35990.4	505.02	ug/L	505.02	ppb	08:35:52
2	Cu 324.752†	152551.9	143830.4	521.50	ug/L	521.50	ppb	08:35:52
2	Mn 257.610†	485576.9	475083.9	524.45	ug/L	524.45	ppb	08:35:52
2	Mo 202.031†	7722.0	7548.8	531.76	ug/L	531.76	ppb	08:36:12
2	Ni 231.604†	20462.9	19929.6	532.41	ug/L	532.41	ppb	08:36:12

2	P 214.914†	5426.8	5002.3	2455.2 ug/L	2455.2 ppb	08:36:12
2	Pb 220.353†	4388.7	4313.2	515.16 ug/L	515.16 ppb	08:36:12
2	S 181.975 Axial†	2036.4	1919.9	2629.1 ug/L	2629.1 ppb	08:36:12
2	Sb 206.836†	1877.4	1782.2	536.82 ug/L	536.82 ppb	08:36:12
2	Se 196.026†	5200.7	5124.4	2633.4 ug/L	2633.4 ppb	08:36:12
2	Si 251.611†	165998.4	162231.9	4993.0 ug/L	4993.0 ppb	08:35:52
2	Sn 189.927†	3121.5	3045.9	540.00 ug/L	540.00 ppb	08:36:12
2	Ti 334.940†	283330.6	278952.8	510.60 ug/L	510.60 ppb	08:35:52
2	Tl 190.801†	1916.6	1938.6	510.80 ug/L	510.80 ppb	08:36:12
2	U 409.014†	11015.3	15641.4	528.02 ug/L	528.02 ppb	08:35:52
2	V 292.402†	54718.8	55178.2	507.51 ug/L	507.51 ppb	08:35:52
2	Zn 213.857†	57714.9	55623.4	508.45 ug/L	508.45 ppb	08:35:52
2	SiO2†	167334.4	163515.8	10715 ug/L	10715 ppb	08:36:49
3	Sc Radial	7288.8	7288.8	97.5 %		08:35:19
3	Y RADIAL	6706.2	6706.2	96.85 %		08:35:19
3	Al 396.153Radial†	6253.6	6485.7	5318.1 ug/L	5318.1 ppb	08:34:59
3	Ca 317.933Radial†	3567.3	3629.1	5141.1 ug/L	5141.1 ppb	08:35:19
3	Fe 238.204 Radial†	1249.8	1246.8	5212.6 ug/L	5212.6 ppb	08:35:19
3	K 766.490 Radial†	13537.7	11475.5	2463.1 ug/L	2463.1 ppb	08:34:59
3	Mg 279.077 IEC†	215.7	218.2	5446.1 ug/L	5446.1 ppb	08:35:19
3	Na 589.592 Radial†	41958.3	43163.3	2649.0 ug/L	2649.0 ppb	08:34:59
3	Sr 421.552†	169081.7	173447.1	484.39 ug/L	484.39 ppb	08:34:59
3	Sc 361.383	733570.0	733570.0	102.07 %		08:36:18
3	Y 371.029	568459.5	568459.5	101.15 %		08:36:18
3	Ag 328.068†	43827.3	42305.6	255.84 ug/L	255.84 ppb	08:36:18
3	As 188.979†	1326.6	1335.2	484.71 ug/L	484.71 ppb	08:36:38
3	B 249.677†	19479.8	20024.6	501.84 ug/L	501.84 ppb	08:36:18
3	Ba 233.527†	77507.0	75934.2	536.88 ug/L	536.88 ppb	08:36:18
3	Be 313.107†	575610.8	568816.2	261.53 ug/L	261.53 ppb	08:36:18
3	Cd 226.502†	39293.8	38777.8	494.34 ug/L	494.34 ppb	08:36:38
3	Co 228.616†	28220.0	27747.0	481.47 ug/L	481.47 ppb	08:36:38
3	Cr 267.716†	36597.3	35932.3	504.20 ug/L	504.20 ppb	08:36:18
3	Cu 324.752†	153006.8	144264.6	523.08 ug/L	523.08 ppb	08:36:18
3	Mn 257.610†	485201.7	474679.6	524.01 ug/L	524.01 ppb	08:36:18
3	Mo 202.031†	7703.1	7529.7	530.42 ug/L	530.42 ppb	08:36:38
3	Ni 231.604†	20403.2	19869.5	530.80 ug/L	530.80 ppb	08:36:38
3	P 214.914†	5408.5	4984.0	2445.5 ug/L	2445.5 ppb	08:36:38
3	Pb 220.353†	4351.6	4276.6	510.79 ug/L	510.79 ppb	08:36:38
3	S 181.975 Axial†	2025.2	1908.7	2613.8 ug/L	2613.8 ppb	08:36:38
3	Sb 206.836†	1863.8	1768.7	532.77 ug/L	532.77 ppb	08:36:38
3	Se 196.026†	5202.5	5125.8	2634.2 ug/L	2634.2 ppb	08:36:38
3	Si 251.611†	166092.4	162311.4	4995.5 ug/L	4995.5 ppb	08:36:18
3	Sn 189.927†	3112.8	3037.1	538.46 ug/L	538.46 ppb	08:36:38
3	Ti 334.940†	283620.0	279215.0	511.08 ug/L	511.08 ppb	08:36:18
3	Tl 190.801†	1917.3	1939.2	510.95 ug/L	510.95 ppb	08:36:38
3	U 409.014†	11453.0	16069.4	542.52 ug/L	542.52 ppb	08:36:18
3	V 292.402†	54718.6	55173.8	507.48 ug/L	507.48 ppb	08:36:18
3	Zn 213.857†	57781.1	55683.9	509.02 ug/L	509.02 ppb	08:36:18
3	SiO2†	166907.8	163085.1	10687 ug/L	10687 ppb	08:36:54

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	736409.6	102.47	%	0.691				0.67%
Sc Radial	7291.5	97.5	%	0.25				0.25%
Y 371.029	570474.1	101.51	%	0.659				0.65%
Y RADIAL	6708.4	96.88	%	0.174				0.18%
Ag 328.068†	42308.3	255.87	ug/L	0.764	255.87	ppb	0.764	0.30%
QC value within limits for Ag 328.068 Recovery = 102.35%								
Al 396.153Radial†	6490.2	5321.8	ug/L	6.84	5321.8	ppb	6.84	0.13%
QC value within limits for Al 396.153Radial Recovery = 106.44%								
As 188.979†	1337.7	485.61	ug/L	2.269	485.61	ppb	2.269	0.47%
QC value within limits for As 188.979 Recovery = 97.12%								
B 249.677†	19998.8	501.19	ug/L	1.848	501.19	ppb	1.848	0.37%
QC value within limits for B 249.677 Recovery = 100.24%								
Ba 233.527†	75854.4	536.31	ug/L	0.503	536.31	ppb	0.503	0.09%
QC value within limits for Ba 233.527 Recovery = 107.26%								
Be 313.107†	568897.3	261.57	ug/L	0.167	261.57	ppb	0.167	0.06%
QC value within limits for Be 313.107 Recovery = 104.63%								
Ca 317.933Radial†	3629.7	5141.9	ug/L	4.41	5141.9	ppb	4.41	0.09%

QC value within limits for Ca 317.933Radial Recovery = 102.84%

Cd 226.502†	38720.0	493.60 ug/L	2.523	493.60 ppb	2.523	0.51%
QC value within limits for Cd 226.502 Recovery = 98.72%						
Co 228.616†	27679.5	480.30 ug/L	2.955	480.30 ppb	2.955	0.62%
QC value within limits for Co 228.616 Recovery = 96.06%						
Cr 267.716†	35931.9	504.20 ug/L	0.823	504.20 ppb	0.823	0.16%
QC value within limits for Cr 267.716 Recovery = 100.84%						
Cu 324.752†	143882.1	521.69 ug/L	1.302	521.69 ppb	1.302	0.25%
QC value within limits for Cu 324.752 Recovery = 104.34%						
Fe 238.204 Radial†	1248.5	5219.7 ug/L	17.92	5219.7 ppb	17.92	0.34%
QC value within limits for Fe 238.204 Radial Recovery = 104.39%						
K 766.490 Radial†	11541.1	2477.3 ug/L	12.30	2477.3 ppb	12.30	0.50%
QC value within limits for K 766.490 Radial Recovery = 99.09%						
Mg 279.077 IEC†	220.4	5501.0 ug/L	56.09	5501.0 ppb	56.09	1.02%
QC value greater than the upper limit for Mg 279.077 IEC Recovery = 110.02%						
Mn 257.610†	474538.3	523.86 ug/L	0.690	523.86 ppb	0.690	0.13%
QC value within limits for Mn 257.610 Recovery = 104.77%						
Mo 202.031†	7511.8	529.16 ug/L	3.409	529.16 ppb	3.409	0.64%
QC value within limits for Mo 202.031 Recovery = 105.83%						
Na 589.592 Radial†	43202.0	2651.4 ug/L	6.86	2651.4 ppb	6.86	0.26%
QC value within limits for Na 589.592 Radial Recovery = 106.06%						
Ni 231.604†	19825.2	529.62 ug/L	3.534	529.62 ppb	3.534	0.67%
QC value within limits for Ni 231.604 Recovery = 105.92%						
P 214.914†	4979.7	2443.5 ug/L	12.68	2443.5 ppb	12.68	0.52%
QC value within limits for P 214.914 Recovery = 97.74%						
Pb 220.353†	4290.6	512.46 ug/L	2.360	512.46 ppb	2.360	0.46%
QC value within limits for Pb 220.353 Recovery = 102.49%						
S 181.975 Axial†	1912.7	2619.3 ug/L	8.53	2619.3 ppb	8.53	0.33%
QC value within limits for S 181.975 Axial Recovery = 104.77%						
Sb 206.836†	1768.0	532.53 ug/L	4.414	532.53 ppb	4.414	0.83%
QC value within limits for Sb 206.836 Recovery = 106.51%						
Se 196.026†	5115.1	2628.7 ug/L	8.78	2628.7 ppb	8.78	0.33%
QC value within limits for Se 196.026 Recovery = 105.15%						
Si 251.611†	162148.7	4990.5 ug/L	6.62	4990.5 ppb	6.62	0.13%
QC value within limits for Si 251.611 Recovery = 99.81%						
Sn 189.927†	3037.8	538.58 ug/L	1.361	538.58 ppb	1.361	0.25%
QC value within limits for Sn 189.927 Recovery = 107.72%						
Sr 421.552†	173404.7	484.27 ug/L	0.349	484.27 ppb	0.349	0.07%
QC value within limits for Sr 421.552 Recovery = 96.85%						
Ti 334.940†	278915.4	510.53 ug/L	0.584	510.53 ppb	0.584	0.11%
QC value within limits for Ti 334.940 Recovery = 102.11%						
Tl 190.801†	1933.9	509.58 ug/L	2.243	509.58 ppb	2.243	0.44%
QC value within limits for Tl 190.801 Recovery = 101.92%						
U 409.014†	15871.0	535.80 ug/L	7.305	535.80 ppb	7.305	1.36%
QC value within limits for U 409.014 Recovery = 107.16%						
V 292.402†	55185.6	507.56 ug/L	0.110	507.56 ppb	0.110	0.02%
QC value within limits for V 292.402 Recovery = 101.51%						
Zn 213.857†	55615.4	508.40 ug/L	0.654	508.40 ppb	0.654	0.13%
QC value within limits for Zn 213.857 Recovery = 101.68%						
SiO2†	162699.4	10661 ug/L	69.7	10661 ppb	69.7	0.65%
QC value within limits for SiO2 Recovery = 99.69%						

QC Failed. Continue with analysis.

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 6/30/2009 08:39:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7601.5	7601.5	102	%			08:40:58
1	Y RADIAL	7021.8	7021.8	101.4	%			08:40:58
1	Al 396.153Radial†	-76.5	-2.6	-2.1567	ug/L	-2.1567	ppb	08:40:58
1	Ca 317.933Radial†	33.4	3.8	5.3776	ug/L	5.3776	ppb	08:41:18
1	Fe 238.204 Radial†	37.6	2.2	9.2474	ug/L	9.2474	ppb	08:41:18
1	K 766.490 Radial†	2581.0	130.8	28.208	ug/L	28.208	ppb	08:40:58
1	Mg 279.077 IEC†	0.5	-2.6	-64.453	ug/L	-64.453	ppb	08:41:18
1	Na 589.592 Radial†	-143.1	-5.2	-0.3171	ug/L	-0.3171	ppb	08:40:58
1	Sr 421.552†	-51.1	5.6	0.0157	ug/L	0.0157	ppb	08:40:58
1	Sc 361.383	721142.6	721142.6	100.34	%			08:42:15
1	Y 371.029	564655.5	564655.5	100.47	%			08:42:15
1	Ag 328.068†	614.3	-20.5	-0.1160	ug/L	-0.1160	ppb	08:42:15
1	As 188.979†	-23.4	12.1	4.3570	ug/L	4.3570	ppb	08:42:35
1	B 249.677†	-582.3	359.6	9.0628	ug/L	9.0628	ppb	08:42:15
1	Ba 233.527†	20.3	19.7	0.1392	ug/L	0.1392	ppb	08:42:35
1	Be 313.107†	-4751.1	146.8	0.0669	ug/L	0.0669	ppb	08:42:15
1	Cd 226.502†	-282.9	-0.8	-0.0112	ug/L	-0.0112	ppb	08:42:35
1	Co 228.616†	-100.1	-0.3	-0.0047	ug/L	-0.0047	ppb	08:42:35
1	Cr 267.716†	-50.9	26.7	0.3755	ug/L	0.3755	ppb	08:42:15
1	Cu 324.752†	5612.3	-45.2	-0.1632	ug/L	-0.1632	ppb	08:42:15
1	Mn 257.610†	701.4	19.4	0.0238	ug/L	0.0238	ppb	08:42:35
1	Mo 202.031†	22.6	5.3	0.3767	ug/L	0.3767	ppb	08:42:35
1	Ni 231.604†	146.7	26.4	0.7070	ug/L	0.7070	ppb	08:42:35
1	P 214.914†	307.0	-8.8	-4.4889	ug/L	-4.4889	ppb	08:42:35
1	Pb 220.353†	-28.4	-15.0	-1.7872	ug/L	-1.7872	ppb	08:42:35
1	S 181.975 Axial†	75.0	-0.7	-0.9099	ug/L	-0.9099	ppb	08:42:35
1	Sb 206.836†	58.3	0.8	0.2323	ug/L	0.2323	ppb	08:42:35
1	Se 196.026†	-30.1	-1.2	-0.5968	ug/L	-0.5968	ppb	08:42:35
1	Si 251.611†	433.8	20.5	0.6297	ug/L	0.6297	ppb	08:42:35
1	Sn 189.927†	7.7	-4.9	-0.8615	ug/L	-0.8615	ppb	08:42:35
1	Ti 334.940†	-1422.8	-69.7	-0.1260	ug/L	-0.1260	ppb	08:42:15
1	Tl 190.801†	-44.6	16.3	4.2752	ug/L	4.2752	ppb	08:42:35
1	U 409.014†	-4967.7	-102.1	-3.4593	ug/L	-3.4593	ppb	08:42:15
1	V 292.402†	-1558.5	12.0	0.1047	ug/L	0.1047	ppb	08:42:15
1	Zn 213.857†	954.8	26.4	0.2410	ug/L	0.2410	ppb	08:42:35
1	SiO2†	430.2	-8.2	-0.5457	ug/L	-0.5457	ppb	08:43:31
2	Sc Radial	7362.4	7362.4	98.5	%			08:41:23
2	Y RADIAL	6811.5	6811.5	98.37	%			08:41:23
2	Al 396.153Radial†	-79.9	-8.5	-7.0111	ug/L	-7.0111	ppb	08:41:23
2	Ca 317.933Radial†	28.2	-0.4	-0.6266	ug/L	-0.6266	ppb	08:41:43
2	Fe 238.204 Radial†	33.9	-0.4	-1.6120	ug/L	-1.6120	ppb	08:41:43
2	K 766.490 Radial†	2372.6	1.6	0.3348	ug/L	0.3348	ppb	08:41:23
2	Mg 279.077 IEC†	2.7	-0.3	-6.6483	ug/L	-6.6483	ppb	08:41:43
2	Na 589.592 Radial†	-194.1	-61.5	-3.7725	ug/L	-3.7725	ppb	08:41:23
2	Sr 421.552†	-59.5	-4.6	-0.0127	ug/L	-0.0127	ppb	08:41:23
2	Sc 361.383	709208.7	709208.7	98.681	%			08:42:40
2	Y 371.029	555090.4	555090.4	98.771	%			08:42:40
2	Ag 328.068†	564.1	-61.0	-0.3641	ug/L	-0.3641	ppb	08:42:40
2	As 188.979†	-35.6	-0.6	-0.2289	ug/L	-0.2289	ppb	08:43:00
2	B 249.677†	-626.2	305.3	7.6930	ug/L	7.6930	ppb	08:42:40
2	Ba 233.527†	3.8	3.3	0.0236	ug/L	0.0236	ppb	08:43:00
2	Be 313.107†	-4739.3	79.1	0.0362	ug/L	0.0362	ppb	08:42:40
2	Cd 226.502†	-277.4	0.0	0.0008	ug/L	0.0008	ppb	08:43:00
2	Co 228.616†	-78.7	19.7	0.3421	ug/L	0.3421	ppb	08:43:00
2	Cr 267.716†	5.5	82.9	1.1624	ug/L	1.1624	ppb	08:42:40
2	Cu 324.752†	5692.5	130.2	0.4717	ug/L	0.4717	ppb	08:42:40
2	Mn 257.610†	663.0	-7.7	-0.0086	ug/L	-0.0086	ppb	08:43:00
2	Mo 202.031†	20.5	3.7	0.2595	ug/L	0.2595	ppb	08:43:00
2	Ni 231.604†	145.0	27.2	0.7260	ug/L	0.7260	ppb	08:43:00

2	P 214.914†	321.5	11.0	5.4982 ug/L	5.4982 ppb	08:43:00
2	Pb 220.353†	5.3	18.6	2.2131 ug/L	2.2131 ppb	08:43:00
2	S 181.975 Axial†	80.8	6.5	8.8568 ug/L	8.8568 ppb	08:43:00
2	Sb 206.836†	62.7	6.3	1.8523 ug/L	1.8523 ppb	08:43:00
2	Se 196.026†	-21.3	7.2	3.6577 ug/L	3.6577 ppb	08:43:00
2	Si 251.611†	440.4	34.5	1.0656 ug/L	1.0656 ppb	08:43:00
2	Sn 189.927†	10.4	-2.0	-0.3500 ug/L	-0.3500 ppb	08:43:00
2	Ti 334.940†	-1330.5	-0.0	0.0000 ug/L	0.0000 ppb	08:42:40
2	Tl 190.801†	-57.5	2.5	0.6582 ug/L	0.6582 ppb	08:43:00
2	U 409.014†	-4821.6	-37.3	-1.2666 ug/L	-1.2666 ppb	08:42:40
2	V 292.402†	-1545.3	-0.8	-0.0067 ug/L	-0.0067 ppb	08:42:40
2	Zn 213.857†	934.9	22.3	0.2010 ug/L	0.2010 ppb	08:43:00
2	SiO2†	467.2	36.6	2.4059 ug/L	2.4059 ppb	08:43:36
3	Sc Radial	7531.9	7531.9	101 %		08:41:48
3	Y RADIAL	6932.5	6932.5	100.1 %		08:41:48
3	Al 396.153Radial†	-64.4	8.8	7.2185 ug/L	7.2185 ppb	08:41:48
3	Ca 317.933Radial†	28.1	-1.2	-1.7339 ug/L	-1.7339 ppb	08:42:08
3	Fe 238.204 Radial†	34.0	-1.0	-4.2524 ug/L	-4.2524 ppb	08:42:08
3	K 766.490 Radial†	2517.4	91.0	19.640 ug/L	19.640 ppb	08:41:48
3	Mg 279.077 IEC†	4.8	1.7	42.633 ug/L	42.633 ppb	08:42:08
3	Na 589.592 Radial†	-181.8	-44.8	-2.7524 ug/L	-2.7524 ppb	08:41:48
3	Sr 421.552†	-7.9	48.0	0.1342 ug/L	0.1342 ppb	08:41:48
3	Sc 361.383	717543.5	717543.5	99.841 %		08:43:06
3	Y 371.029	562243.3	562243.3	100.04 %		08:43:06
3	Ag 328.068†	733.3	101.9	0.6059 ug/L	0.6059 ppb	08:43:06
3	As 188.979†	-22.7	12.7	4.5745 ug/L	4.5745 ppb	08:43:26
3	B 249.677†	-621.9	317.0	7.9909 ug/L	7.9909 ppb	08:43:06
3	Ba 233.527†	9.8	9.3	0.0660 ug/L	0.0660 ppb	08:43:26
3	Be 313.107†	-4668.4	205.9	0.0939 ug/L	0.0939 ppb	08:43:06
3	Cd 226.502†	-260.8	19.9	0.2548 ug/L	0.2548 ppb	08:43:26
3	Co 228.616†	-104.9	-5.6	-0.0962 ug/L	-0.0962 ppb	08:43:26
3	Cr 267.716†	-107.3	-30.0	-0.4214 ug/L	-0.4214 ppb	08:43:06
3	Cu 324.752†	5580.9	-48.6	-0.1764 ug/L	-0.1764 ppb	08:43:06
3	Mn 257.610†	660.2	-18.4	-0.0216 ug/L	-0.0216 ppb	08:43:26
3	Mo 202.031†	18.5	1.4	0.0960 ug/L	0.0960 ppb	08:43:26
3	Ni 231.604†	145.2	25.7	0.6864 ug/L	0.6864 ppb	08:43:26
3	P 214.914†	316.1	1.8	0.9886 ug/L	0.9886 ppb	08:43:26
3	Pb 220.353†	-18.2	-5.0	-0.5942 ug/L	-0.5942 ppb	08:43:26
3	S 181.975 Axial†	74.8	-0.5	-0.6830 ug/L	-0.6830 ppb	08:43:26
3	Sb 206.836†	45.9	-11.3	-3.3175 ug/L	-3.3175 ppb	08:43:26
3	Se 196.026†	-20.8	7.9	4.0410 ug/L	4.0410 ppb	08:43:26
3	Si 251.611†	442.8	31.7	0.9554 ug/L	0.9554 ppb	08:43:26
3	Sn 189.927†	18.7	6.3	1.1088 ug/L	1.1088 ppb	08:43:26
3	Ti 334.940†	-1425.7	-79.7	-0.1466 ug/L	-0.1466 ppb	08:43:06
3	Tl 190.801†	-50.9	9.8	2.5513 ug/L	2.5513 ppb	08:43:26
3	U 409.014†	-4789.5	51.6	1.7472 ug/L	1.7472 ppb	08:43:06
3	V 292.402†	-1556.1	6.6	0.0661 ug/L	0.0661 ppb	08:43:06
3	Zn 213.857†	957.3	33.7	0.3060 ug/L	0.3060 ppb	08:43:26
3	SiO2†	457.2	21.1	1.3325 ug/L	1.3325 ppb	08:43:41

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	715964.9	99.621	%	0.8518				0.86%
Sc Radial	7498.6	100	%	1.6				1.64%
Y 371.029	560663.1	99.762	%	0.8851				0.89%
Y RADIAL	6922.0	99.97	%	1.524				1.52%
Ag 328.068†	6.8	0.0419	ug/L	0.50392	0.0419	ppb	0.50392	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-0.8	-0.6498	ug/L	7.23350	-0.6498	ppb	7.23350	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	8.1	2.9008	ug/L	2.71265	2.9008	ppb	2.71265	93.51%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	327.3	8.2489	ug/L	0.72044	8.2489	ppb	0.72044	8.73%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.8	0.0763	ug/L	0.05850	0.0763	ppb	0.05850	76.71%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	143.9	0.0657	ug/L	0.02888	0.0657	ppb	0.02888	43.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.7	1.0057	ug/L	3.82643	1.0057	ppb	3.82643	380.47%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                6.4      0.0815 ug/L       0.15021      0.0815 ppb        0.15021 184.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.6      0.0804 ug/L       0.23125      0.0804 ppb        0.23125 287.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               26.5      0.3722 ug/L       0.79191      0.3722 ppb        0.79191 212.78%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               12.1      0.0440 ug/L       0.37040      0.0440 ppb        0.37040 841.44%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.3      1.1277 ug/L       7.15474      1.1277 ppb        7.15474 634.48%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         74.4     16.061 ug/L       14.2773     16.061 ppb        14.2773  88.89%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4     -9.4894 ug/L      53.59919     -9.4894 ppb       53.59919 564.83%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -2.2     -0.0022 ug/L       0.02340     -0.0022 ppb        0.02340 >999.9%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                3.5      0.2441 ug/L       0.14099      0.2441 ppb        0.14099  57.77%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -37.2     -2.2807 ug/L       1.77531     -2.2807 ppb        1.77531  77.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               26.4      0.7064 ug/L       0.01981      0.7064 ppb        0.01981   2.80%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 1.3      0.6660 ug/L       5.00137      0.6660 ppb        5.00137 750.97%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -0.5     -0.0561 ug/L       2.05369     -0.0561 ppb        2.05369 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           1.8      2.4213 ug/L       5.57447      2.4213 ppb        5.57447 230.23%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               -1.4     -0.4109 ug/L       2.64424     -0.4109 ppb        2.64424 643.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.6      2.3673 ug/L       2.57415      2.3673 ppb        2.57415 108.74%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               28.9      0.8836 ug/L       0.22666      0.8836 ppb        0.22666  25.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -0.2     -0.0342 ug/L       1.02240     -0.0342 ppb        1.02240 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               16.4      0.0457 ug/L       0.07791      0.0457 ppb        0.07791 170.38%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -49.8     -0.0909 ug/L       0.07939     -0.0909 ppb        0.07939  87.37%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                9.5      2.4949 ug/L       1.80916      2.4949 ppb        1.80916  72.52%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -29.3     -0.9929 ug/L       2.61405     -0.9929 ppb        2.61405 263.27%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 5.9      0.0547 ug/L       0.05658      0.0547 ppb        0.05658 103.45%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               27.5      0.2493 ug/L       0.05300      0.2493 ppb        0.05300  21.26%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     16.5      1.0642 ug/L       1.49397      1.0642 ppb        1.49397 140.38%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 6/30/2009 08:45:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7469.8	7469.8	99.9	%			08:47:44
1	Y RADIAL	6890.6	6890.6	99.51	%			08:47:44
1	Al 396.153Radial†	175.4	248.2	203.90	ug/L	203.90	ppb	08:47:44
1	Ca 317.933Radial†	103.5	74.5	105.52	ug/L	105.52	ppb	08:48:04
1	Fe 238.204 Radial†	63.0	28.3	117.94	ug/L	117.94	ppb	08:48:04
1	K 766.490 Radial†	3099.8	694.7	149.59	ug/L	149.59	ppb	08:47:44
1	Mg 279.077 IEC†	18.2	15.1	377.15	ug/L	377.15	ppb	08:48:04
1	Na 589.592 Radial†	2396.5	2533.6	155.49	ug/L	155.49	ppb	08:47:44
1	Sr 421.552†	1663.1	1720.0	4.8031	ug/L	4.8031	ppb	08:47:44
1	Sc 361.383	725321.6	725321.6	100.92	%			08:49:01
1	Y 371.029	567853.4	567853.4	101.04	%			08:49:01
1	Ag 328.068†	1530.3	883.7	5.2825	ug/L	5.2825	ppb	08:49:01
1	As 188.979†	12.1	47.4	17.111	ug/L	17.111	ppb	08:49:21
1	B 249.677†	1246.2	2174.8	54.774	ug/L	54.774	ppb	08:49:01
1	Ba 233.527†	767.7	760.2	5.3731	ug/L	5.3731	ppb	08:49:21
1	Be 313.107†	6713.9	11534.3	5.2910	ug/L	5.2910	ppb	08:49:01
1	Cd 226.502†	144.1	423.9	5.3963	ug/L	5.3963	ppb	08:49:21
1	Co 228.616†	193.0	290.7	5.0579	ug/L	5.0579	ppb	08:49:21
1	Cr 267.716†	317.5	392.0	5.4832	ug/L	5.4832	ppb	08:49:01
1	Cu 324.752†	8440.7	2725.1	9.8818	ug/L	9.8818	ppb	08:49:01
1	Mn 257.610†	10489.3	9713.8	10.720	ug/L	10.720	ppb	08:49:01
1	Mo 202.031†	172.5	153.8	10.834	ug/L	10.834	ppb	08:49:21
1	Ni 231.604†	340.9	218.0	5.8229	ug/L	5.8229	ppb	08:49:21
1	P 214.914†	620.8	300.4	151.53	ug/L	151.53	ppb	08:49:21
1	Pb 220.353†	78.8	91.3	10.926	ug/L	10.926	ppb	08:49:21
1	S 181.975 Axial†	179.1	102.0	139.75	ug/L	139.75	ppb	08:49:21
1	Sb 206.836†	84.0	25.9	7.9773	ug/L	7.9773	ppb	08:49:21
1	Se 196.026†	0.8	29.5	15.487	ug/L	15.487	ppb	08:49:21
1	Si 251.611†	3837.4	3390.5	104.32	ug/L	104.32	ppb	08:49:01
1	Sn 189.927†	78.5	65.3	11.575	ug/L	11.575	ppb	08:49:21
1	Ti 334.940†	1430.2	2765.4	5.0414	ug/L	5.0414	ppb	08:49:01
1	Tl 190.801†	24.6	85.1	22.333	ug/L	22.333	ppb	08:49:21
1	U 409.014†	-3151.4	1726.2	58.424	ug/L	58.424	ppb	08:49:01
1	V 292.402†	-1092.4	482.8	4.6171	ug/L	4.6171	ppb	08:49:01
1	Zn 213.857†	2104.5	1160.2	10.630	ug/L	10.630	ppb	08:49:21
1	SiO2†	3737.0	3266.0	213.91	ug/L	213.91	ppb	08:50:18
2	Sc Radial	7389.0	7389.0	98.9	%			08:48:09
2	Y RADIAL	6822.2	6822.2	98.53	%			08:48:09
2	Al 396.153Radial†	187.2	262.0	215.31	ug/L	215.31	ppb	08:48:09
2	Ca 317.933Radial†	104.7	76.8	108.86	ug/L	108.86	ppb	08:48:29
2	Fe 238.204 Radial†	62.6	28.5	119.06	ug/L	119.06	ppb	08:48:29
2	K 766.490 Radial†	3147.0	776.2	167.20	ug/L	167.20	ppb	08:48:09
2	Mg 279.077 IEC†	15.7	12.9	321.01	ug/L	321.01	ppb	08:48:29
2	Na 589.592 Radial†	2342.4	2505.1	153.74	ug/L	153.74	ppb	08:48:09
2	Sr 421.552†	1719.8	1795.5	5.0140	ug/L	5.0140	ppb	08:48:09
2	Sc 361.383	733226.2	733226.2	102.02	%			08:49:27
2	Y 371.029	573027.7	573027.7	101.96	%			08:49:27
2	Ag 328.068†	1568.7	904.9	5.4068	ug/L	5.4068	ppb	08:49:27
2	As 188.979†	19.6	54.7	19.748	ug/L	19.748	ppb	08:49:47
2	B 249.677†	1211.3	2127.2	53.574	ug/L	53.574	ppb	08:49:27
2	Ba 233.527†	742.7	727.5	5.1428	ug/L	5.1428	ppb	08:49:47
2	Be 313.107†	6763.7	11511.4	5.2808	ug/L	5.2808	ppb	08:49:27
2	Cd 226.502†	135.2	413.6	5.2649	ug/L	5.2649	ppb	08:49:47
2	Co 228.616†	208.3	303.6	5.2795	ug/L	5.2795	ppb	08:49:47
2	Cr 267.716†	250.3	322.7	4.5115	ug/L	4.5115	ppb	08:49:27
2	Cu 324.752†	8539.6	2731.8	9.9063	ug/L	9.9063	ppb	08:49:27
2	Mn 257.610†	10566.6	9677.5	10.681	ug/L	10.681	ppb	08:49:27
2	Mo 202.031†	166.3	145.9	10.280	ug/L	10.280	ppb	08:49:47
2	Ni 231.604†	323.5	197.3	5.2697	ug/L	5.2697	ppb	08:49:47

2	P 214.914†	614.1	287.1	144.74 ug/L	144.74 ppb	08:49:47
2	Pb 220.353†	84.8	96.4	11.526 ug/L	11.526 ppb	08:49:47
2	S 181.975 Axial†	160.4	81.8	112.05 ug/L	112.05 ppb	08:49:47
2	Sb 206.836†	89.6	30.6	9.3585 ug/L	9.3585 ppb	08:49:47
2	Se 196.026†	8.6	37.2	19.421 ug/L	19.421 ppb	08:49:47
2	Si 251.611†	3808.8	3321.5	102.20 ug/L	102.20 ppb	08:49:27
2	Sn 189.927†	77.2	63.1	11.195 ug/L	11.195 ppb	08:49:47
2	Ti 334.940†	1503.2	2821.7	5.1427 ug/L	5.1427 ppb	08:49:27
2	Tl 190.801†	30.6	90.8	23.822 ug/L	23.822 ppb	08:49:47
2	U 409.014†	-3028.0	1880.8	63.661 ug/L	63.661 ppb	08:49:27
2	V 292.402†	-1064.8	521.6	4.9718 ug/L	4.9718 ppb	08:49:27
2	Zn 213.857†	2100.2	1133.4	10.389 ug/L	10.389 ppb	08:49:47
2	SiO2†	3824.9	3312.2	216.97 ug/L	216.97 ppb	08:50:23
3	Sc Radial	7545.0	7545.0	101 %		08:48:34
3	Y RADIAL	6987.4	6987.4	100.9 %		08:48:34
3	Al 396.153Radial†	179.1	250.1	205.50 ug/L	205.50 ppb	08:48:34
3	Ca 317.933Radial†	97.6	67.6	95.785 ug/L	95.785 ppb	08:48:54
3	Fe 238.204 Radial†	60.5	25.2	105.16 ug/L	105.16 ppb	08:48:54
3	K 766.490 Radial†	3097.9	661.8	142.50 ug/L	142.50 ppb	08:48:34
3	Mg 279.077 IEC†	15.1	11.9	296.23 ug/L	296.23 ppb	08:48:54
3	Na 589.592 Radial†	2493.3	2605.6	159.91 ug/L	159.91 ppb	08:48:34
3	Sr 421.552†	1679.3	1719.5	4.8017 ug/L	4.8017 ppb	08:48:34
3	Sc 361.383	735021.6	735021.6	102.27 %		08:49:52
3	Y 371.029	575191.2	575191.2	102.35 %		08:49:52
3	Ag 328.068†	1514.9	848.6	5.0767 ug/L	5.0767 ppb	08:49:52
3	As 188.979†	13.6	48.8	17.600 ug/L	17.600 ppb	08:50:12
3	B 249.677†	1366.1	2275.7	57.317 ug/L	57.317 ppb	08:49:52
3	Ba 233.527†	773.0	755.3	5.3414 ug/L	5.3414 ppb	08:50:12
3	Be 313.107†	6813.5	11543.9	5.2957 ug/L	5.2957 ppb	08:49:52
3	Cd 226.502†	136.9	415.0	5.2844 ug/L	5.2844 ppb	08:50:12
3	Co 228.616†	211.0	305.8	5.3190 ug/L	5.3190 ppb	08:50:12
3	Cr 267.716†	318.4	388.7	5.4401 ug/L	5.4401 ppb	08:49:52
3	Cu 324.752†	8436.2	2610.3	9.4650 ug/L	9.4650 ppb	08:49:52
3	Mn 257.610†	10583.1	9668.4	10.669 ug/L	10.669 ppb	08:49:52
3	Mo 202.031†	172.2	151.2	10.654 ug/L	10.654 ppb	08:50:12
3	Ni 231.604†	340.6	213.2	5.6963 ug/L	5.6963 ppb	08:50:12
3	P 214.914†	625.1	296.4	149.59 ug/L	149.59 ppb	08:50:12
3	Pb 220.353†	81.2	92.7	11.086 ug/L	11.086 ppb	08:50:12
3	S 181.975 Axial†	161.5	82.5	113.02 ug/L	113.02 ppb	08:50:12
3	Sb 206.836†	96.1	36.7	11.181 ug/L	11.181 ppb	08:50:12
3	Se 196.026†	-0.5	28.3	14.812 ug/L	14.812 ppb	08:50:12
3	Si 251.611†	3835.0	3338.0	102.70 ug/L	102.70 ppb	08:49:52
3	Sn 189.927†	80.7	66.4	11.763 ug/L	11.763 ppb	08:50:12
3	Ti 334.940†	1516.6	2831.1	5.1624 ug/L	5.1624 ppb	08:49:52
3	Tl 190.801†	19.2	79.6	20.887 ug/L	20.887 ppb	08:50:12
3	U 409.014†	-3277.7	1643.9	55.640 ug/L	55.640 ppb	08:49:52
3	V 292.402†	-957.8	628.7	5.9348 ug/L	5.9348 ppb	08:49:52
3	Zn 213.857†	2101.3	1129.5	10.352 ug/L	10.352 ppb	08:50:12
3	SiO2†	3842.2	3319.9	217.46 ug/L	217.46 ppb	08:50:28

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	731189.8	101.74	%	0.718				0.71%
Sc Radial	7467.9	99.9	%	1.04				1.04%
Y 371.029	572024.1	101.78	%	0.671				0.66%
Y RADIAL	6900.1	99.65	%	1.199				1.20%
Ag 328.068†	879.1	5.2553	ug/L	0.16669	5.2553	ppb	0.16669	3.17%
QC value within limits for Ag 328.068 Recovery = 105.11%								
Al 396.153Radial†	253.4	208.24	ug/L	6.175	208.24	ppb	6.175	2.97%
QC value within limits for Al 396.153Radial Recovery = 104.12%								
As 188.979†	50.3	18.153	ug/L	1.4027	18.153	ppb	1.4027	7.73%
QC value within limits for As 188.979 Recovery = 121.02%								
B 249.677†	2192.5	55.222	ug/L	1.9115	55.222	ppb	1.9115	3.46%
QC value within limits for B 249.677 Recovery = 110.44%								
Ba 233.527†	747.6	5.2858	ug/L	0.12480	5.2858	ppb	0.12480	2.36%
QC value within limits for Ba 233.527 Recovery = 105.72%								
Be 313.107†	11529.8	5.2891	ug/L	0.00762	5.2891	ppb	0.00762	0.14%
QC value within limits for Be 313.107 Recovery = 105.78%								
Ca 317.933Radial†	73.0	103.39	ug/L	6.794	103.39	ppb	6.794	6.57%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.39%
Cd 226.502†              417.5      5.3152 ug/L       0.07090      5.3152 ppb        0.07090   1.33%
   QC value within limits for Cd 226.502  Recovery = 106.30%
Co 228.616†              300.0      5.2188 ug/L       0.14074      5.2188 ppb        0.14074   2.70%
   QC value within limits for Co 228.616  Recovery = 104.38%
Cr 267.716†              367.8      5.1449 ug/L       0.54900      5.1449 ppb        0.54900  10.67%
   QC value within limits for Cr 267.716  Recovery = 102.90%
Cu 324.752†             2689.1      9.7511 ug/L       0.24804      9.7511 ppb        0.24804   2.54%
   QC value within limits for Cu 324.752  Recovery = 97.51%
Fe 238.204 Radial†       27.3      114.05 ug/L         7.726      114.05 ppb          7.726   6.77%
   QC value within limits for Fe 238.204 Radial  Recovery = 114.05%
K 766.490 Radial†        710.9      153.10 ug/L        12.717      153.10 ppb         12.717   8.31%
   QC value within limits for K 766.490 Radial  Recovery = 102.07%
Mg 279.077 IEC†          13.3      331.46 ug/L        41.459      331.46 ppb         41.459  12.51%
   QC value within limits for Mg 279.077 IEC  Recovery = 110.49%
Mn 257.610†             9686.5      10.690 ug/L        0.0263      10.690 ppb        0.0263   0.25%
   QC value within limits for Mn 257.610  Recovery = 106.90%
Mo 202.031†              150.3      10.589 ug/L        0.2827      10.589 ppb        0.2827   2.67%
   QC value within limits for Mo 202.031  Recovery = 105.89%
Na 589.592 Radial†      2548.1      156.38 ug/L         3.178      156.38 ppb         3.178   2.03%
   QC value within limits for Na 589.592 Radial  Recovery = 104.25%
Ni 231.604†              209.5      5.5963 ug/L       0.28988      5.5963 ppb        0.28988   5.18%
   QC value within limits for Ni 231.604  Recovery = 111.93%
P 214.914†               294.6      148.62 ug/L         3.496      148.62 ppb         3.496   2.35%
   QC value within limits for P 214.914  Recovery = 99.08%
Pb 220.353†               93.5      11.179 ug/L        0.3107      11.179 ppb        0.3107   2.78%
   QC value within limits for Pb 220.353  Recovery = 111.79%
S 181.975 Axial†          88.8      121.61 ug/L        15.720      121.61 ppb        15.720  12.93%
   QC value within limits for S 181.975 Axial  Recovery = 121.61%
Sb 206.836†               31.1      9.5055 ug/L       1.60681      9.5055 ppb       1.60681  16.90%
   QC value within limits for Sb 206.836  Recovery = 95.06%
Se 196.026†               31.7      16.573 ug/L        2.4893      16.573 ppb        2.4893  15.02%
   QC value within limits for Se 196.026  Recovery = 110.49%
Si 251.611†             3350.0      103.07 ug/L         1.109      103.07 ppb         1.109   1.08%
   QC value within limits for Si 251.611  Recovery = 103.07%
Sn 189.927†               64.9      11.511 ug/L        0.2890      11.511 ppb        0.2890   2.51%
   QC value within limits for Sn 189.927  Recovery = 115.11%
Sr 421.552†             1745.0      4.8729 ug/L       0.12215      4.8729 ppb       0.12215   2.51%
   QC value within limits for Sr 421.552  Recovery = 97.46%
Ti 334.940†             2806.1      5.1155 ug/L       0.06491      5.1155 ppb       0.06491   1.27%
   QC value within limits for Ti 334.940  Recovery = 102.31%
Tl 190.801†               85.1      22.347 ug/L        1.4678      22.347 ppb        1.4678   6.57%
   QC value within limits for Tl 190.801  Recovery = 111.74%
U 409.014†              1750.3      59.242 ug/L        4.0728      59.242 ppb        4.0728   6.87%
   QC value within limits for U 409.014  Recovery = 118.48%
V 292.402†               544.3      5.1746 ug/L       0.68186      5.1746 ppb       0.68186  13.18%
   QC value within limits for V 292.402  Recovery = 103.49%
Zn 213.857†             1141.0      10.457 ug/L        0.1509      10.457 ppb        0.1509   1.44%
   QC value within limits for Zn 213.857  Recovery = 104.57%
SiO2†                   3299.4      216.11 ug/L         1.925      216.11 ppb         1.925   0.89%
   QC value within limits for SiO2  Recovery = 101.46%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 6/30/2009 08:52:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6850.8	6850.8	91.7	%			08:54:37
1	Y RADIAL	6235.8	6235.8	90.06	%			08:54:37
1	Al 396.153Radial†	583718.5	636936.7	524500	ug/L	524500	ppb	08:54:32
1	Ca 317.933Radial†	312430.1	340846.7	482850	ug/L	482850	ppb	08:54:32
1	Fe 238.204 Radial†	40162.7	43784.6	182510	ug/L	182510	ppb	08:54:37
1	K 766.490 Radial†	2341.7	147.7	-18.935	ug/L	-18.935	ppb	08:54:37
1	Mg 279.077 IEC†	17585.8	19183.9	478110	ug/L	478110	ppb	08:54:37
1	Na 589.592 Radial†	330.1	495.8	30.426	ug/L	30.426	ppb	08:54:37
1	Sr 421.552†	1325.2	1501.7	-0.5494	ug/L	-0.5494	ppb	08:54:37
1	Sc 361.383	638864.5	638864.5	88.893	%			08:55:04
1	Y 371.029	490311.2	490311.2	87.244	%			08:55:04
1	Ag 328.068†	-7196.6	-8728.4	-0.7953	ug/L	-0.7953	ppb	08:55:04
1	As 188.979†	-92.4	-68.5	11.625	ug/L	11.625	ppb	08:55:24
1	B 249.677†	-106.4	820.2	8.2059	ug/L	8.2059	ppb	08:55:04
1	Ba 233.527†	-509.4	-573.6	-4.8606	ug/L	-4.8606	ppb	08:55:24
1	Be 313.107†	-4943.1	-679.0	-0.3804	ug/L	-0.3804	ppb	08:55:04
1	Cd 226.502†	1055.1	1468.1	-2.5471	ug/L	-2.5471	ppb	08:55:24
1	Co 228.616†	-33.7	61.5	-1.5195	ug/L	-1.5195	ppb	08:55:24
1	Cr 267.716†	-157.6	-99.9	2.3562	ug/L	2.3562	ppb	08:55:24
1	Cu 324.752†	2925.6	-2347.3	2.0463	ug/L	2.0463	ppb	08:55:04
1	Mn 257.610†	56.7	-615.8	13.039	ug/L	13.039	ppb	08:55:04
1	Mo 202.031†	-211.7	-255.3	-6.0630	ug/L	-6.0630	ppb	08:55:24
1	Ni 231.604†	274.2	188.7	5.0434	ug/L	5.0434	ppb	08:55:24
1	P 214.914†	243.2	-41.2	10.354	ug/L	10.354	ppb	08:55:24
1	Pb 220.353†	-657.8	-726.7	-1.6856	ug/L	-1.6856	ppb	08:55:24
1	S 181.975 Axial†	106.7	44.7	-41.972	ug/L	-41.972	ppb	08:55:24
1	Sb 206.836†	107.0	63.1	8.2049	ug/L	8.2049	ppb	08:55:24
1	Se 196.026†	-1143.6	-1257.7	0.0601	ug/L	0.0601	ppb	08:55:24
1	Si 251.611†	-128.9	-556.8	-16.030	ug/L	-16.030	ppb	08:55:24
1	Sn 189.927†	-312.0	-363.4	-1.2012	ug/L	-1.2012	ppb	08:55:24
1	Ti 334.940†	-15732.9	-16350.4	-1.7855	ug/L	-1.7855	ppb	08:55:04
1	Tl 190.801†	-98.6	-50.2	-0.5835	ug/L	-0.5835	ppb	08:55:24
1	U 409.014†	-3610.2	787.5	4.2387	ug/L	4.2387	ppb	08:55:04
1	V 292.402†	68.5	1642.2	-2.7310	ug/L	-2.7310	ppb	08:55:24
1	Zn 213.857†	3606.0	3131.4	-6.7355	ug/L	-6.7355	ppb	08:55:24
1	SiO2†	-207.4	-670.2	-41.439	ug/L	-41.439	ppb	08:56:21
2	Sc Radial	6902.1	6902.1	92.3	%			08:54:48
2	Y RADIAL	6270.0	6270.0	90.55	%			08:54:48
2	Al 396.153Radial†	588201.4	637059.3	524600	ug/L	524600	ppb	08:54:43
2	Ca 317.933Radial†	313676.9	339664.1	481170	ug/L	481170	ppb	08:54:43
2	Fe 238.204 Radial†	40118.0	43410.6	180960	ug/L	180960	ppb	08:54:48
2	K 766.490 Radial†	2274.2	55.7	-39.051	ug/L	-39.051	ppb	08:54:48
2	Mg 279.077 IEC†	17568.0	19022.0	474070	ug/L	474070	ppb	08:54:48
2	Na 589.592 Radial†	396.1	564.6	34.648	ug/L	34.648	ppb	08:54:48
2	Sr 421.552†	1347.8	1515.4	-0.4946	ug/L	-0.4946	ppb	08:54:48
2	Sc 361.383	652326.9	652326.9	90.766	%			08:55:30
2	Y 371.029	500307.2	500307.2	89.023	%			08:55:30
2	Ag 328.068†	-7238.1	-8607.1	-0.5407	ug/L	-0.5407	ppb	08:55:30
2	As 188.979†	-93.3	-67.4	11.741	ug/L	11.741	ppb	08:55:50
2	B 249.677†	-18.8	919.2	10.806	ug/L	10.806	ppb	08:55:30
2	Ba 233.527†	-527.7	-581.9	-4.9115	ug/L	-4.9115	ppb	08:55:50
2	Be 313.107†	-4881.7	-496.6	-0.2943	ug/L	-0.2943	ppb	08:55:30
2	Cd 226.502†	1039.2	1426.0	-2.9018	ug/L	-2.9018	ppb	08:55:50
2	Co 228.616†	-27.1	69.6	-1.3609	ug/L	-1.3609	ppb	08:55:50
2	Cr 267.716†	-169.0	-108.8	2.2016	ug/L	2.2016	ppb	08:55:50
2	Cu 324.752†	2941.1	-2398.1	1.7719	ug/L	1.7719	ppb	08:55:30
2	Mn 257.610†	102.2	-567.0	12.975	ug/L	12.975	ppb	08:55:30
2	Mo 202.031†	-222.9	-262.7	-6.6896	ug/L	-6.6896	ppb	08:55:50
2	Ni 231.604†	294.4	204.6	5.4673	ug/L	5.4673	ppb	08:55:50

2	P 214.914†	245.8	-44.0	10.245 ug/L	10.245 ppb	08:55:50
2	Pb 220.353†	-685.3	-741.8	-3.3156 ug/L	-3.3156 ppb	08:55:50
2	S 181.975 Axial†	135.4	73.8	-2.1013 ug/L	-2.1013 ppb	08:55:50
2	Sb 206.836†	100.3	53.2	5.2286 ug/L	5.2286 ppb	08:55:50
2	Se 196.026†	-1149.2	-1237.4	5.2343 ug/L	5.2343 ppb	08:55:50
2	Si 251.611†	-174.6	-604.1	-17.479 ug/L	-17.479 ppb	08:55:50
2	Sn 189.927†	-317.5	-362.3	-1.2801 ug/L	-1.2801 ppb	08:55:50
2	Ti 334.940†	-15508.9	-15738.4	-0.7613 ug/L	-0.7613 ppb	08:55:30
2	Tl 190.801†	-102.2	-51.8	-0.9939 ug/L	-0.9939 ppb	08:55:50
2	U 409.014†	-3768.6	696.7	1.3570 ug/L	1.3570 ppb	08:55:30
2	V 292.402†	97.5	1672.6	-2.3186 ug/L	-2.3186 ppb	08:55:50
2	Zn 213.857†	3582.3	3021.6	-7.4489 ug/L	-7.4489 ppb	08:55:50
2	SiO2†	-193.6	-650.2	-40.093 ug/L	-40.093 ppb	08:56:26
3	Sc Radial	7020.0	7020.0	93.9 %		08:54:58
3	Y RADIAL	6403.5	6403.5	92.48 %		08:54:58
3	Al 396.153Radial†	587631.3	625753.0	515290 ug/L	515290 ppb	08:54:53
3	Ca 317.933Radial†	313618.8	333896.4	473000 ug/L	473000 ppb	08:54:53
3	Fe 238.204 Radial†	40809.0	43416.6	180980 ug/L	180980 ppb	08:54:58
3	K 766.490 Radial†	2309.7	52.0	-38.307 ug/L	-38.307 ppb	08:54:58
3	Mg 279.077 IEC†	17948.0	19107.1	476190 ug/L	476190 ppb	08:54:58
3	Na 589.592 Radial†	337.3	494.7	30.360 ug/L	30.360 ppb	08:54:58
3	Sr 421.552†	1390.4	1536.3	-0.3561 ug/L	-0.3561 ppb	08:54:58
3	Sc 361.383	643963.2	643963.2	89.602 %		08:55:55
3	Y 371.029	493367.8	493367.8	87.788 %		08:55:55
3	Ag 328.068†	-7239.8	-8712.5	-1.0341 ug/L	-1.0341 ppb	08:55:55
3	As 188.979†	-89.2	-64.1	12.933 ug/L	12.933 ppb	08:56:15
3	B 249.677†	-136.4	787.7	7.4900 ug/L	7.4900 ppb	08:55:55
3	Ba 233.527†	-542.4	-605.8	-5.0801 ug/L	-5.0801 ppb	08:56:15
3	Be 313.107†	-4938.6	-630.0	-0.3576 ug/L	-0.3576 ppb	08:55:55
3	Cd 226.502†	1053.5	1456.9	-2.5114 ug/L	-2.5114 ppb	08:56:15
3	Co 228.616†	-14.3	83.5	-1.1097 ug/L	-1.1097 ppb	08:56:15
3	Cr 267.716†	-159.7	-100.9	2.3163 ug/L	2.3163 ppb	08:56:15
3	Cu 324.752†	2865.6	-2440.4	1.6203 ug/L	1.6203 ppb	08:55:55
3	Mn 257.610†	344.3	-295.4	13.236 ug/L	13.236 ppb	08:55:55
3	Mo 202.031†	-176.1	-213.7	-3.2346 ug/L	-3.2346 ppb	08:56:15
3	Ni 231.604†	257.8	167.9	4.4876 ug/L	4.4876 ppb	08:56:15
3	P 214.914†	234.9	-52.6	2.7037 ug/L	2.7037 ppb	08:56:15
3	Pb 220.353†	-706.7	-775.4	-9.1286 ug/L	-9.1286 ppb	08:56:15
3	S 181.975 Axial†	131.0	70.8	-4.3212 ug/L	-4.3212 ppb	08:56:15
3	Sb 206.836†	92.7	46.2	3.4672 ug/L	3.4672 ppb	08:56:15
3	Se 196.026†	-1149.1	-1253.7	-3.6228 ug/L	-3.6228 ppb	08:56:15
3	Si 251.611†	-167.3	-598.5	-17.391 ug/L	-17.391 ppb	08:56:15
3	Sn 189.927†	-303.9	-351.6	-0.2390 ug/L	-0.2390 ppb	08:56:15
3	Ti 334.940†	-15801.5	-16286.9	-2.2375 ug/L	-2.2375 ppb	08:55:55
3	Tl 190.801†	-103.1	-54.4	-1.9044 ug/L	-1.9044 ppb	08:56:15
3	U 409.014†	-3992.1	393.4	-8.9157 ug/L	-8.9157 ppb	08:55:55
3	V 292.402†	102.0	1679.0	-2.2042 ug/L	-2.2042 ppb	08:56:15
3	Zn 213.857†	3614.0	3108.3	-6.7189 ug/L	-6.7189 ppb	08:56:15
3	SiO2†	-215.1	-677.0	-42.041 ug/L	-42.041 ppb	08:56:31

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	645051.5	89.754	%	0.9457				1.05%
Sc Radial	6924.3	92.6	%	1.16				1.25%
Y 371.029	494662.1	88.018	%	0.9114				1.04%
Y RADIAL	6303.1	91.03	%	1.280				1.41%
Ag 328.068†	-8682.7	-0.7900	ug/L	0.24674	-0.7900	ppb	0.24674	31.23%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	633249.7	521470	ug/L	5346.6	521470	ppb	5346.6	1.03%
QC value within limits for Al 396.153Radial Recovery = 104.29%								
As 188.979†	-66.7	12.100	ug/L	0.7241	12.100	ppb	0.7241	5.98%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	842.4	8.8340	ug/L	1.74505	8.8340	ppb	1.74505	19.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-587.1	-4.9508	ug/L	0.11490	-4.9508	ppb	0.11490	2.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-601.9	-0.3441	ug/L	0.04461	-0.3441	ppb	0.04461	12.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	338135.7	479010	ug/L	5267.9	479010	ppb	5267.9	1.10%

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   QC value within limits for Ca 317.933Radial  Recovery = 95.80%
Cd 226.502†            1450.3     -2.6535 ug/L       0.21582     -2.6535 ppb        0.21582   8.13%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              71.5     -1.3300 ug/L       0.20665     -1.3300 ppb        0.20665  15.54%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -103.2      2.2914 ug/L       0.08023      2.2914 ppb        0.08023   3.50%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -2395.2      1.8128 ug/L       0.21594      1.8128 ppb        0.21594  11.91%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    43537.2      181480 ug/L         893.0      181480 ppb          893.0   0.49%
   QC value within limits for Fe 238.204 Radial  Recovery = 90.74%
K 766.490 Radial†        85.1     -32.097 ug/L       11.4050     -32.097 ppb        11.4050  35.53%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       19104.3      476120 ug/L        2018.8      476120 ppb         2018.8   0.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 95.22%
Mn 257.610†            -492.7      13.083 ug/L        0.1364      13.083 ppb         0.1364   1.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -243.9     -5.3291 ug/L       1.84072     -5.3291 ppb        1.84072  34.54%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       518.3      31.811 ug/L        2.4568      31.811 ppb         2.4568   7.72%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              187.1      4.9994 ug/L       0.49137      4.9994 ppb        0.49137   9.83%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -45.9      7.7676 ug/L       4.38582      7.7676 ppb        4.38582  56.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -748.0     -4.7099 ug/L       3.91250     -4.7099 ppb        3.91250  83.07%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         63.1     -16.132 ug/L       22.4062     -16.132 ppb        22.4062 138.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              54.2      5.6336 ug/L       2.39467      5.6336 ppb        2.39467  42.51%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†           -1249.6      0.5572 ug/L       4.44942      0.5572 ppb        4.44942 798.53%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -586.5     -16.967 ug/L        0.8126     -16.967 ppb         0.8126   4.79%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -359.1     -0.9068 ug/L       0.57964     -0.9068 ppb        0.57964  63.92%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†            1517.8     -0.4667 ug/L       0.09963     -0.4667 ppb        0.09963  21.35%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†          -16125.2     -1.5947 ug/L       0.75634     -1.5947 ppb        0.75634  47.43%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -52.1     -1.1606 ug/L       0.67608     -1.1606 ppb        0.67608  58.25%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               625.9     -1.1067 ug/L       6.91461     -1.1067 ppb        6.91461 624.82%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†             1664.6     -2.4180 ug/L       0.27710     -2.4180 ppb        0.27710  11.46%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            3087.1     -6.9678 ug/L       0.41678     -6.9678 ppb        0.41678   5.98%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                  -665.8     -41.191 ug/L        0.9975     -41.191 ppb         0.9975   2.42%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 6/30/2009 08:58:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6855.2	6855.2	91.7	%			09:00:40
1	Y RADIAL	6208.8	6208.8	89.67	%			09:00:40
1	Al 396.153Radial†	587975.9	641176.3	527970	ug/L	527970	ppb	09:00:35
1	Ca 317.933Radial†	311516.7	339635.4	481130	ug/L	481130	ppb	09:00:35
1	Fe 238.204 Radial†	39507.6	43042.6	179440	ug/L	179440	ppb	09:00:40
1	K 766.490 Radial†	24540.8	24351.0	5189.4	ug/L	5189.4	ppb	09:00:35
1	Mg 279.077 IEC†	17320.4	18882.3	470600	ug/L	470600	ppb	09:00:40
1	Na 589.592 Radial†	81859.5	89391.6	5486.2	ug/L	5486.2	ppb	09:00:35
1	Sr 421.552†	160589.6	175155.9	484.49	ug/L	484.49	ppb	09:00:35
1	Sc 361.383	652496.2	652496.2	90.790	%			09:01:08
1	Y 371.029	498677.7	498677.7	88.733	%			09:01:08
1	Ag 328.068†	35600.4	38579.2	282.44	ug/L	282.44	ppb	09:01:08
1	As 188.979†	1196.4	1353.2	526.01	ug/L	526.01	ppb	09:01:13
1	B 249.677†	18992.0	21858.6	536.23	ug/L	536.23	ppb	09:01:08
1	Ba 233.527†	64009.1	70502.1	497.80	ug/L	497.80	ppb	09:01:08
1	Be 313.107†	497779.3	553158.8	254.33	ug/L	254.33	ppb	09:01:08
1	Cd 226.502†	35153.6	39000.9	476.84	ug/L	476.84	ppb	09:01:13
1	Co 228.616†	24397.7	26972.2	465.48	ug/L	465.48	ppb	09:01:13
1	Cr 267.716†	31670.4	34960.6	494.20	ug/L	494.20	ppb	09:01:13
1	Cu 324.752†	143721.4	152662.9	563.58	ug/L	563.58	ppb	09:01:08
1	Mn 257.610†	400655.3	440620.6	499.38	ug/L	499.38	ppb	09:01:08
1	Mo 202.031†	6383.3	7013.7	505.46	ug/L	505.46	ppb	09:01:13
1	Ni 231.604†	16114.7	17629.7	470.94	ug/L	470.94	ppb	09:01:13
1	P 214.914†	4855.3	5033.1	2499.9	ug/L	2499.9	ppb	09:01:13
1	Pb 220.353†	2927.1	3237.3	472.24	ug/L	472.24	ppb	09:01:13
1	S 181.975 Axial†	1913.5	2032.2	2680.3	ug/L	2680.3	ppb	09:01:13
1	Sb 206.836†	1774.0	1896.7	559.70	ug/L	559.70	ppb	09:01:13
1	Se 196.026†	3495.6	3879.0	2612.1	ug/L	2612.1	ppb	09:01:13
1	Si 251.611†	159246.7	174989.8	5388.0	ug/L	5388.0	ppb	09:01:08
1	Sn 189.927†	2332.9	2557.1	515.29	ug/L	515.29	ppb	09:01:13
1	Ti 334.940†	244564.5	270722.8	523.29	ug/L	523.29	ppb	09:01:08
1	Tl 190.801†	1581.3	1802.5	487.68	ug/L	487.68	ppb	09:01:13
1	U 409.014†	10317.9	16213.3	526.01	ug/L	526.01	ppb	09:01:08
1	V 292.402†	51266.1	58032.1	516.45	ug/L	516.45	ppb	09:01:13
1	Zn 213.857†	53333.6	57819.0	494.77	ug/L	494.77	ppb	09:01:13
1	SiO2†	156907.4	172388.1	11300	ug/L	11300	ppb	09:01:40
2	Sc Radial	6964.5	6964.5	93.2	%			09:00:51
2	Y RADIAL	6360.1	6360.1	91.85	%			09:00:51
2	Al 396.153Radial†	584733.7	627632.3	516820	ug/L	516820	ppb	09:00:45
2	Ca 317.933Radial†	310333.5	333033.2	471780	ug/L	471780	ppb	09:00:45
2	Fe 238.204 Radial†	40096.1	42997.9	179250	ug/L	179250	ppb	09:00:51
2	K 766.490 Radial†	24603.7	23998.5	5115.2	ug/L	5115.2	ppb	09:00:45
2	Mg 279.077 IEC†	17606.9	18893.4	470880	ug/L	470880	ppb	09:00:51
2	Na 589.592 Radial†	81588.7	87699.8	5382.4	ug/L	5382.4	ppb	09:00:45
2	Sr 421.552†	159721.7	171475.5	474.30	ug/L	474.30	ppb	09:00:45
2	Sc 361.383	640008.8	640008.8	89.052	%			09:01:19
2	Y 371.029	489123.1	489123.1	87.033	%			09:01:19
2	Ag 328.068†	34867.9	38521.8	282.23	ug/L	282.23	ppb	09:01:19
2	As 188.979†	1221.0	1406.6	545.22	ug/L	545.22	ppb	09:01:24
2	B 249.677†	18525.2	21742.5	533.29	ug/L	533.29	ppb	09:01:19
2	Ba 233.527†	62881.8	70611.7	498.59	ug/L	498.59	ppb	09:01:19
2	Be 313.107†	488771.8	553741.5	254.60	ug/L	254.60	ppb	09:01:19
2	Cd 226.502†	35071.1	39663.7	485.32	ug/L	485.32	ppb	09:01:24
2	Co 228.616†	24242.5	27322.3	471.56	ug/L	471.56	ppb	09:01:24
2	Cr 267.716†	31487.6	35436.0	500.88	ug/L	500.88	ppb	09:01:24
2	Cu 324.752†	140491.7	152124.9	561.62	ug/L	561.62	ppb	09:01:19
2	Mn 257.610†	393408.5	441093.3	499.87	ug/L	499.87	ppb	09:01:19
2	Mo 202.031†	6298.7	7055.9	508.42	ug/L	508.42	ppb	09:01:24
2	Ni 231.604†	16045.8	17898.6	478.12	ug/L	478.12	ppb	09:01:24

2	P 214.914†	4819.0	5096.7	2529.1 ug/L	2529.1 ppb	09:01:24
2	Pb 220.353†	2892.3	3261.1	472.94 ug/L	472.94 ppb	09:01:24
2	S 181.975 Axial†	1952.4	2117.1	2798.6 ug/L	2798.6 ppb	09:01:24
2	Sb 206.836†	1748.6	1906.3	562.68 ug/L	562.68 ppb	09:01:24
2	Se 196.026†	3502.5	3961.8	2652.9 ug/L	2652.9 ppb	09:01:24
2	Si 251.611†	155984.1	174748.5	5380.5 ug/L	5380.5 ppb	09:01:19
2	Sn 189.927†	2266.7	2532.8	510.03 ug/L	510.03 ppb	09:01:24
2	Ti 334.940†	239914.7	270757.3	522.82 ug/L	522.82 ppb	09:01:19
2	Tl 190.801†	1494.2	1738.7	470.66 ug/L	470.66 ppb	09:01:24
2	U 409.014†	9585.9	15613.1	505.69 ug/L	505.69 ppb	09:01:19
2	V 292.402†	51169.7	59025.5	525.50 ug/L	525.50 ppb	09:01:24
2	Zn 213.857†	52846.7	58418.3	500.27 ug/L	500.27 ppb	09:01:24
2	SiO2†	158025.2	177015.4	11605 ug/L	11605 ppb	09:01:45
3	Sc Radial	6904.4	6904.4	92.4 %		09:01:01
3	Y RADIAL	6308.2	6308.2	91.10 %		09:01:01
3	Al 396.153Radial†	574321.0	621827.5	512040 ug/L	512040 ppb	09:00:56
3	Ca 317.933Radial†	304252.1	329351.6	466560 ug/L	466560 ppb	09:00:56
3	Fe 238.204 Radial†	39631.2	42869.6	178720 ug/L	178720 ppb	09:01:01
3	K 766.490 Radial†	24062.9	23643.1	5039.3 ug/L	5039.3 ppb	09:00:56
3	Mg 279.077 IEC†	17393.5	18827.0	469220 ug/L	469220 ppb	09:01:01
3	Na 589.592 Radial†	79837.6	86567.1	5312.9 ug/L	5312.9 ppb	09:00:56
3	Sr 421.552†	156550.0	169535.4	468.93 ug/L	468.93 ppb	09:00:56
3	Sc 361.383	645704.5	645704.5	89.845 %		09:01:30
3	Y 371.029	493775.8	493775.8	87.860 %		09:01:30
3	Ag 328.068†	35088.0	38421.5	281.49 ug/L	281.49 ppb	09:01:30
3	As 188.979†	1180.9	1349.8	524.64 ug/L	524.64 ppb	09:01:35
3	B 249.677†	18741.7	21800.0	534.82 ug/L	534.82 ppb	09:01:30
3	Ba 233.527†	63400.4	70566.1	498.25 ug/L	498.25 ppb	09:01:30
3	Be 313.107†	493451.6	554108.9	254.77 ug/L	254.77 ppb	09:01:30
3	Cd 226.502†	34757.3	38967.1	476.49 ug/L	476.49 ppb	09:01:35
3	Co 228.616†	24041.0	26857.8	463.49 ug/L	463.49 ppb	09:01:35
3	Cr 267.716†	31321.8	34939.5	493.89 ug/L	493.89 ppb	09:01:35
3	Cu 324.752†	141805.9	152196.0	561.85 ug/L	561.85 ppb	09:01:30
3	Mn 257.610†	397141.2	441351.0	500.12 ug/L	500.12 ppb	09:01:30
3	Mo 202.031†	6256.8	6946.9	500.71 ug/L	500.71 ppb	09:01:35
3	Ni 231.604†	15872.8	17547.1	468.74 ug/L	468.74 ppb	09:01:35
3	P 214.914†	4818.5	5048.3	2503.0 ug/L	2503.0 ppb	09:01:35
3	Pb 220.353†	2896.5	3237.1	469.18 ug/L	469.18 ppb	09:01:35
3	S 181.975 Axial†	1916.4	2057.6	2718.1 ug/L	2718.1 ppb	09:01:35
3	Sb 206.836†	1759.5	1901.1	561.12 ug/L	561.12 ppb	09:01:35
3	Se 196.026†	3380.6	3791.5	2564.0 ug/L	2564.0 ppb	09:01:35
3	Si 251.611†	157500.7	174891.4	5385.2 ug/L	5385.2 ppb	09:01:30
3	Sn 189.927†	2251.2	2493.2	502.44 ug/L	502.44 ppb	09:01:35
3	Ti 334.940†	242241.8	270971.0	522.90 ug/L	522.90 ppb	09:01:30
3	Tl 190.801†	1495.1	1724.9	467.00 ug/L	467.00 ppb	09:01:35
3	U 409.014†	9825.0	15784.2	511.57 ug/L	511.57 ppb	09:01:30
3	V 292.402†	50585.3	57868.2	514.95 ug/L	514.95 ppb	09:01:35
3	Zn 213.857†	52327.3	57316.8	490.27 ug/L	490.27 ppb	09:01:35
3	SiO2†	157730.3	175121.9	11481 ug/L	11481 ppb	09:01:51

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	646069.8	89.896	%	0.8699				0.97%
Sc Radial	6908.0	92.4	%	0.73				0.79%
Y 371.029	493858.9	87.875	%	0.8501				0.97%
Y RADIAL	6292.4	90.87	%	1.110				1.22%
Ag 328.068†	38507.5	282.05	ug/L	0.500	282.05	ppb	0.500	0.18%
QC value within limits for Ag 328.068 Recovery = 112.82%								
Al 396.153Radial†	630212.0	518940	ug/L	8176.2	518940	ppb	8176.2	1.58%
QC value within limits for Al 396.153Radial Recovery = 103.79%								
As 188.979†	1369.9	531.96	ug/L	11.511	531.96	ppb	11.511	2.16%
QC value within limits for As 188.979 Recovery = 106.39%								
B 249.677†	21800.4	534.78	ug/L	1.473	534.78	ppb	1.473	0.28%
QC value within limits for B 249.677 Recovery = 106.96%								
Ba 233.527†	70560.0	498.22	ug/L	0.399	498.22	ppb	0.399	0.08%
QC value within limits for Ba 233.527 Recovery = 99.64%								
Be 313.107†	553669.7	254.57	ug/L	0.220	254.57	ppb	0.220	0.09%
QC value within limits for Be 313.107 Recovery = 101.83%								
Ca 317.933Radial†	334006.7	473160	ug/L	7381.4	473160	ppb	7381.4	1.56%

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   QC value within limits for Ca 317.933Radial  Recovery = 94.63%
Cd 226.502†          39210.6      479.55 ug/L        5.000      479.55 ppb        5.000   1.04%
   QC value within limits for Cd 226.502  Recovery = 95.91%
Co 228.616†          27050.7      466.84 ug/L        4.202      466.84 ppb        4.202   0.90%
   QC value within limits for Co 228.616  Recovery = 93.37%
Cr 267.716†          35112.0      496.32 ug/L        3.947      496.32 ppb        3.947   0.80%
   QC value within limits for Cr 267.716  Recovery = 99.26%
Cu 324.752†         152327.9      562.35 ug/L        1.072      562.35 ppb        1.072   0.19%
   QC value within limits for Cu 324.752  Recovery = 112.47%
Fe 238.204 Radial†   42970.0      179130 ug/L        374.5      179130 ppb        374.5   0.21%
   QC value within limits for Fe 238.204 Radial  Recovery = 89.57%
K 766.490 Radial†    23997.5      5114.6 ug/L        75.05      5114.6 ppb        75.05   1.47%
   QC value within limits for K 766.490 Radial  Recovery = 102.29%
Mg 279.077 IEC†      18867.5      470230 ug/L        887.1      470230 ppb        887.1   0.19%
   QC value within limits for Mg 279.077 IEC  Recovery = 94.05%
Mn 257.610†         441021.6      499.79 ug/L        0.377      499.79 ppb        0.377   0.08%
   QC value within limits for Mn 257.610  Recovery = 99.96%
Mo 202.031†           7005.5      504.86 ug/L        3.890      504.86 ppb        3.890   0.77%
   QC value within limits for Mo 202.031  Recovery = 100.97%
Na 589.592 Radial†   87886.2      5393.8 ug/L        87.24      5393.8 ppb        87.24   1.62%
   QC value within limits for Na 589.592 Radial  Recovery = 107.88%
Ni 231.604†          17691.8      472.60 ug/L        4.909      472.60 ppb        4.909   1.04%
   QC value within limits for Ni 231.604  Recovery = 94.52%
P 214.914†            5059.4      2510.7 ug/L        16.01      2510.7 ppb        16.01   0.64%
   QC value within limits for P 214.914  Recovery = 100.43%
Pb 220.353†           3245.2      471.45 ug/L        1.999      471.45 ppb        1.999   0.42%
   QC value within limits for Pb 220.353  Recovery = 94.29%
S 181.975 Axial†      2069.0      2732.3 ug/L        60.46      2732.3 ppb        60.46   2.21%
   QC value within limits for S 181.975 Axial  Recovery = 109.29%
Sb 206.836†           1901.4      561.17 ug/L        1.489      561.17 ppb        1.489   0.27%
   QC value within limits for Sb 206.836  Recovery = 112.23%
Se 196.026†           3877.5      2609.7 ug/L        44.55      2609.7 ppb        44.55   1.71%
   QC value within limits for Se 196.026  Recovery = 104.39%
Si 251.611†         174876.6      5384.6 ug/L         3.75      5384.6 ppb         3.75   0.07%
   QC value within limits for Si 251.611  Recovery = 107.69%
Sn 189.927†           2527.7      509.25 ug/L        6.461      509.25 ppb        6.461   1.27%
   QC value within limits for Sn 189.927  Recovery = 101.85%
Sr 421.552†         172055.6      475.91 ug/L        7.901      475.91 ppb        7.901   1.66%
   QC value within limits for Sr 421.552  Recovery = 95.18%
Ti 334.940†         270817.0      523.00 ug/L        0.253      523.00 ppb        0.253   0.05%
   QC value within limits for Ti 334.940  Recovery = 104.60%
Tl 190.801†           1755.3      475.11 ug/L       11.036      475.11 ppb       11.036   2.32%
   QC value within limits for Tl 190.801  Recovery = 95.02%
U 409.014†           15870.2      514.42 ug/L       10.453      514.42 ppb       10.453   2.03%
   QC value within limits for U 409.014  Recovery = 102.88%
V 292.402†           58308.6      518.97 ug/L        5.707      518.97 ppb        5.707   1.10%
   QC value within limits for V 292.402  Recovery = 103.79%
Zn 213.857†          57851.4      495.10 ug/L        5.004      495.10 ppb        5.004   1.01%
   QC value within limits for Zn 213.857  Recovery = 99.02%
SiO2†               174841.8       11462 ug/L        153.1       11462 ppb        153.1   1.34%
   QC value within limits for SiO2  Recovery = 107.17%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 6/30/2009 09:04:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6672.9	6672.9	89.3	%			09:06:04
1	Y RADIAL	6066.4	6066.4	87.61	%			09:06:04
1	Al 396.153Radial†	588193.9	658933.3	542620	ug/L	542620	ppb	09:05:59
1	Ca 317.933Radial†	308456.8	345486.3	489420	ug/L	489420	ppb	09:05:59
1	Fe 238.204 Radial†	95333.1	106751.7	444990	ug/L	444990	ppb	09:05:59
1	K 766.490 Radial†	3042.4	1000.7	149.11	ug/L	149.11	ppb	09:06:04
1	Mg 279.077 IEC†	16910.7	18939.3	471780	ug/L	471780	ppb	09:06:04
1	Na 589.592 Radial†	7414295.7	8305199.0	509710	ug/L	509710	ppb	09:05:53
1	Sr 421.552†	1706.7	1967.6	0.6871	ug/L	0.6871	ppb	09:06:04
1	Sc 361.383	634303.9	634303.9	88.258	%			09:06:43
1	Y 371.029	486307.1	486307.1	86.532	%			09:06:43
1	Ag 328.068†	-17514.1	-20476.8	0.1770	ug/L	0.1770	ppb	09:06:43
1	As 188.979†	-218.8	-212.4	12.230	ug/L	12.230	ppb	09:07:03
1	B 249.677†	714.0	1748.9	13.664	ug/L	13.664	ppb	09:06:43
1	Ba 233.527†	-1455.2	-1649.3	-13.645	ug/L	-13.645	ppb	09:07:03
1	Be 313.107†	-9676.3	-6081.9	-2.8306	ug/L	-2.8306	ppb	09:06:43
1	Cd 226.502†	2949.9	3623.5	-5.6487	ug/L	-5.6487	ppb	09:07:03
1	Co 228.616†	229.2	359.1	-0.1629	ug/L	-0.1629	ppb	09:07:03
1	Cr 267.716†	-60.5	8.8	4.4697	ug/L	4.4697	ppb	09:07:03
1	Cu 324.752†	771.2	-4764.6	8.4617	ug/L	8.4617	ppb	09:06:43
1	Mn 257.610†	-24677.9	-28640.6	15.252	ug/L	15.252	ppb	09:06:43
1	Mo 202.031†	-390.1	-459.2	-3.2898	ug/L	-3.2898	ppb	09:06:43
1	Ni 231.604†	451.5	391.7	10.467	ug/L	10.467	ppb	09:07:03
1	P 214.914†	700.2	478.6	71.900	ug/L	71.900	ppb	09:07:03
1	Pb 220.353†	-433.0	-477.4	6.7025	ug/L	6.7025	ppb	09:07:03
1	S 181.975 Axial†	141.3	84.7	9.2496	ug/L	9.2496	ppb	09:07:03
1	Sb 206.836†	116.3	74.5	15.554	ug/L	15.554	ppb	09:07:03
1	Se 196.026†	-2719.4	-3052.4	-40.929	ug/L	-40.929	ppb	09:07:03
1	Si 251.611†	-1841.5	-2498.2	-75.766	ug/L	-75.766	ppb	09:07:03
1	Sn 189.927†	-322.1	-377.4	16.539	ug/L	16.539	ppb	09:07:03
1	Ti 334.940†	-10915.4	-11019.2	1.7610	ug/L	1.7610	ppb	09:06:43
1	Tl 190.801†	-137.4	-94.9	-11.963	ug/L	-11.963	ppb	09:07:03
1	U 409.014†	385912.9	442102.1	14915	ug/L	14915	ppb	09:06:43
1	V 292.402†	1135.5	2851.8	0.3848	ug/L	0.3848	ppb	09:07:03
1	Zn 213.857†	6547.8	6493.8	-2.8943	ug/L	-2.8943	ppb	09:07:03
1	SiO2†	-1901.7	-2591.6	-167.31	ug/L	-167.31	ppb	09:08:00
2	Sc Radial	6734.9	6734.9	90.1	%			09:06:20
2	Y RADIAL	6141.0	6141.0	88.69	%			09:06:20
2	Al 396.153Radial†	563254.8	625190.0	514830	ug/L	514830	ppb	09:06:15
2	Ca 317.933Radial†	294889.7	327248.4	463590	ug/L	463590	ppb	09:06:15
2	Fe 238.204 Radial†	91146.1	101121.9	421520	ug/L	421520	ppb	09:06:15
2	K 766.490 Radial†	2910.4	822.9	110.63	ug/L	110.63	ppb	09:06:20
2	Mg 279.077 IEC†	16879.2	18730.0	466580	ug/L	466580	ppb	09:06:20
2	Na 589.592 Radial†	7462964.3	8282760.6	508340	ug/L	508340	ppb	09:06:10
2	Sr 421.552†	1762.9	2012.4	1.0662	ug/L	1.0662	ppb	09:06:20
2	Sc 361.383	627079.1	627079.1	87.253	%			09:07:09
2	Y 371.029	480401.5	480401.5	85.481	%			09:07:09
2	Ag 328.068†	-17263.2	-20417.8	-6.6947	ug/L	-6.6947	ppb	09:07:09
2	As 188.979†	-216.4	-212.6	7.4911	ug/L	7.4911	ppb	09:07:29
2	B 249.677†	703.7	1746.5	15.208	ug/L	15.208	ppb	09:07:09
2	Ba 233.527†	-1544.3	-1770.4	-14.389	ug/L	-14.389	ppb	09:07:29
2	Be 313.107†	-9692.9	-6227.2	-2.8955	ug/L	-2.8955	ppb	09:07:09
2	Cd 226.502†	2948.1	3659.9	-2.4489	ug/L	-2.4489	ppb	09:07:29
2	Co 228.616†	210.3	340.4	-0.1617	ug/L	-0.1617	ppb	09:07:29
2	Cr 267.716†	24.0	104.9	5.2985	ug/L	5.2985	ppb	09:07:29
2	Cu 324.752†	682.2	-4856.6	6.7716	ug/L	6.7716	ppb	09:07:09
2	Mn 257.610†	-24380.0	-28621.3	12.424	ug/L	12.424	ppb	09:07:09
2	Mo 202.031†	-417.9	-496.1	-7.4217	ug/L	-7.4217	ppb	09:07:09
2	Ni 231.604†	402.0	340.9	9.1088	ug/L	9.1088	ppb	09:07:29

2	P 214.914†	696.9	484.0	84.249	ug/L	84.249 ppb	09:07:29
2	Pb 220.353†	-474.2	-530.2	-2.7882	ug/L	-2.7882 ppb	09:07:29
2	S 181.975 Axial†	145.2	91.0	23.403	ug/L	23.403 ppb	09:07:29
2	Sb 206.836†	101.7	59.3	11.195	ug/L	11.195 ppb	09:07:29
2	Se 196.026†	-2705.3	-3071.7	-130.71	ug/L	-130.71 ppb	09:07:29
2	Si 251.611†	-1871.8	-2557.0	-77.540	ug/L	-77.540 ppb	09:07:29
2	Sn 189.927†	-312.9	-371.1	13.268	ug/L	13.268 ppb	09:07:29
2	Ti 334.940†	-10467.4	-10648.3	0.8830	ug/L	0.8830 ppb	09:07:09
2	Tl 190.801†	-132.6	-91.2	-11.657	ug/L	-11.657 ppb	09:07:29
2	U 409.014†	384426.7	445436.5	15031	ug/L	15031 ppb	09:07:09
2	V 292.402†	1147.9	2880.8	4.0182	ug/L	4.0182 ppb	09:07:29
2	Zn 213.857†	6559.6	6592.8	0.6570	ug/L	0.6570 ppb	09:07:29
2	SiO2†	-2024.5	-2757.1	-178.11	ug/L	-178.11 ppb	09:08:05
3	Sc Radial	6767.1	6767.1	90.5	%		09:06:36
3	Y RADIAL	6211.2	6211.2	89.70	%		09:06:36
3	Al 396.153Radial†	575709.6	635976.0	523710	ug/L	523710 ppb	09:06:31
3	Ca 317.933Radial†	302452.6	334046.7	473220	ug/L	473220 ppb	09:06:31
3	Fe 238.204 Radial†	93273.8	102991.4	429320	ug/L	429320 ppb	09:06:31
3	K 766.490 Radial†	3023.0	931.8	134.94	ug/L	134.94 ppb	09:06:36
3	Mg 279.077 IEC†	16986.4	18759.4	467310	ug/L	467310 ppb	09:06:36
3	Na 589.592 Radial†	7426290.6	8202888.0	503430	ug/L	503430 ppb	09:06:26
3	Sr 421.552†	1779.2	2021.1	0.9958	ug/L	0.9958 ppb	09:06:36
3	Sc 361.383	633280.0	633280.0	88.116	%		09:07:34
3	Y 371.029	485991.6	485991.6	86.475	%		09:07:34
3	Ag 328.068†	-17711.5	-20732.8	-6.2775	ug/L	-6.2775 ppb	09:07:34
3	As 188.979†	-214.8	-208.3	10.577	ug/L	10.577 ppb	09:07:55
3	B 249.677†	734.1	1773.0	15.342	ug/L	15.342 ppb	09:07:34
3	Ba 233.527†	-1477.0	-1676.8	-13.768	ug/L	-13.768 ppb	09:07:55
3	Be 313.107†	-9808.8	-6249.9	-2.9076	ug/L	-2.9076 ppb	09:07:34
3	Cd 226.502†	2908.0	3581.3	-4.3598	ug/L	-4.3598 ppb	09:07:55
3	Co 228.616†	236.6	367.9	0.2042	ug/L	0.2042 ppb	09:07:55
3	Cr 267.716†	-40.2	31.8	4.4141	ug/L	4.4141 ppb	09:07:55
3	Cu 324.752†	877.3	-4642.8	7.9967	ug/L	7.9967 ppb	09:07:34
3	Mn 257.610†	-24695.8	-28706.0	13.296	ug/L	13.296 ppb	09:07:34
3	Mo 202.031†	-432.4	-507.9	-7.7409	ug/L	-7.7409 ppb	09:07:34
3	Ni 231.604†	439.3	378.8	10.121	ug/L	10.121 ppb	09:07:55
3	P 214.914†	689.5	467.7	72.429	ug/L	72.429 ppb	09:07:55
3	Pb 220.353†	-434.1	-479.4	4.2570	ug/L	4.2570 ppb	09:07:55
3	S 181.975 Axial†	133.6	76.2	1.3507	ug/L	1.3507 ppb	09:07:55
3	Sb 206.836†	101.8	58.3	10.743	ug/L	10.743 ppb	09:07:55
3	Se 196.026†	-2700.4	-3035.8	-85.863	ug/L	-85.863 ppb	09:07:55
3	Si 251.611†	-1854.9	-2516.9	-76.210	ug/L	-76.210 ppb	09:07:55
3	Sn 189.927†	-346.5	-405.7	8.7052	ug/L	8.7052 ppb	09:07:55
3	Ti 334.940†	-10916.1	-11040.1	0.7034	ug/L	0.7034 ppb	09:07:34
3	Tl 190.801†	-124.8	-80.9	-8.7461	ug/L	-8.7461 ppb	09:07:55
3	U 409.014†	389663.6	447065.6	15085	ug/L	15085 ppb	09:07:34
3	V 292.402†	1019.7	2722.5	1.6041	ug/L	1.6041 ppb	09:07:55
3	Zn 213.857†	6557.7	6517.1	-0.8875	ug/L	-0.8875 ppb	09:07:55
3	SiO2†	-1993.7	-2699.5	-174.12	ug/L	-174.12 ppb	09:08:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	631554.3	87.876	%	0.5440				0.62%
Sc Radial	6725.0	90.0	%	0.64				0.71%
Y 371.029	484233.4	86.163	%	0.5912				0.69%
Y RADIAL	6139.5	88.67	%	1.045				1.18%
Ag 328.068†	-20542.5	-4.2651	ug/L	3.85262	-4.2651	ppb	3.85262	90.33%
Al 396.153Radial†	640033.1	527050	ug/L	14191.4	527050	ppb	14191.4	2.69%
QC value within limits for Al 396.153Radial Recovery = 105.41%								
As 188.979†	-211.1	10.099	ug/L	2.4052	10.099	ppb	2.4052	23.82%
B 249.677†	1756.1	14.738	ug/L	0.9322	14.738	ppb	0.9322	6.33%
Ba 233.527†	-1698.8	-13.934	ug/L	0.3991	-13.934	ppb	0.3991	2.86%
Be 313.107†	-6186.4	-2.8779	ug/L	0.04141	-2.8779	ppb	0.04141	1.44%
Ca 317.933Radial†	335593.8	475410	ug/L	13056.7	475410	ppb	13056.7	2.75%
QC value within limits for Ca 317.933Radial Recovery = 95.08%								
Cd 226.502†	3621.5	-4.1525	ug/L	1.60991	-4.1525	ppb	1.60991	38.77%
Co 228.616†	355.8	-0.0401	ug/L	0.21157	-0.0401	ppb	0.21157	527.33%
Cr 267.716†	48.5	4.7274	ug/L	0.49533	4.7274	ppb	0.49533	10.48%
Cu 324.752†	-4754.7	7.7433	ug/L	0.87304	7.7433	ppb	0.87304	11.27%

Fe 238.204 Radial†	103621.7	431940 ug/L	11952.5	431940 ppb	11952.5	2.77%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 86.39%						
K 766.490 Radial†	918.5	131.56 ug/L	19.462	131.56 ppb	19.462	14.79%
Mg 279.077 IEC†	18809.6	468560 ug/L	2815.7	468560 ppb	2815.7	0.60%
QC value within limits for Mg 279.077 IEC Recovery = 93.71%						
Mn 257.610†	-28656.0	13.657 ug/L	1.4485	13.657 ppb	1.4485	10.61%
Mo 202.031†	-487.7	-6.1508 ug/L	2.48284	-6.1508 ppb	2.48284	40.37%
Na 589.592 Radial†	8263615.9	507160 ug/L	3300.3	507160 ppb	3300.3	0.65%
QC value within limits for Na 589.592 Radial Recovery = 101.43%						
Ni 231.604†	370.5	9.8988 ug/L	0.70582	9.8988 ppb	0.70582	7.13%
P 214.914†	476.7	76.193 ug/L	6.9820	76.193 ppb	6.9820	9.16%
Pb 220.353†	-495.7	2.7238 ug/L	4.92765	2.7238 ppb	4.92765	180.91%
S 181.975 Axial†	84.0	11.334 ug/L	11.1731	11.334 ppb	11.1731	98.58%
Sb 206.836†	64.1	12.497 ug/L	2.6567	12.497 ppb	2.6567	21.26%
Se 196.026†	-3053.3	-85.835 ug/L	44.8929	-85.835 ppb	44.8929	52.30%
Si 251.611†	-2524.0	-76.505 ug/L	0.9228	-76.505 ppb	0.9228	1.21%
Sn 189.927†	-384.7	12.837 ug/L	3.9344	12.837 ppb	3.9344	30.65%
Sr 421.552†	2000.3	0.9164 ug/L	0.20161	0.9164 ppb	0.20161	22.00%
Ti 334.940†	-10902.5	1.1158 ug/L	0.56593	1.1158 ppb	0.56593	50.72%
Tl 190.801†	-89.0	-10.789 ug/L	1.7755	-10.789 ppb	1.7755	16.46%
U 409.014†	444868.0	15011 ug/L	86.8	15011 ppb	86.8	0.58%
QC value within limits for U 409.014 Recovery = 100.07%						
V 292.402†	2818.3	2.0024 ug/L	1.84916	2.0024 ppb	1.84916	92.35%
Zn 213.857†	6534.5	-1.0416 ug/L	1.78067	-1.0416 ppb	1.78067	170.95%
SiO2†	-2682.7	-173.18 ug/L	5.457	-173.18 ppb	5.457	3.15%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 6/30/2009 09:10:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7422.4	7422.4	99.3	%			09:12:17
1	Y RADIAL	6803.8	6803.8	98.26	%			09:12:17
1	Al 396.153Radial†	486.3	562.3	36.776	ug/L	36.776	ppb	09:12:17
1	Ca 317.933Radial†	56.2	27.5	38.995	ug/L	38.995	ppb	09:12:37
1	Fe 238.204 Radial†	-27.3	-62.3	51.387	ug/L	51.387	ppb	09:12:37
1	K 766.490 Radial†	1284333.0	1290956.1	278300	ug/L	278300	ppb	09:12:12
1	Mg 279.077 IEC†	-12.1	-15.2	-176.89	ug/L	-176.89	ppb	09:12:37
1	Na 589.592 Radial†	3381.0	3540.3	217.28	ug/L	217.28	ppb	09:12:17
1	Sr 421.552†	3247986.4	3270879.2	9135.7	ug/L	9135.7	ppb	09:12:12
1	Sc 361.383	718051.7	718051.7	99.911	%			09:13:56
1	Y 371.029	548825.4	548825.4	97.656	%			09:13:56
1	Ag 328.068†	-5154.5	-5791.7	5.5336	ug/L	5.5336	ppb	09:14:01
1	As 188.979†	28412.9	28473.6	10329	ug/L	10329	ppb	09:14:01
1	B 249.677†	200225.0	201342.7	5023.7	ug/L	5023.7	ppb	09:13:56
1	Ba 233.527†	2013651.4	2015439.0	14243	ug/L	14243	ppb	09:13:56
1	Be 313.107†	6475018.7	6485650.3	2991.6	ug/L	2991.6	ppb	09:13:49
1	Cd 226.502†	801401.5	802394.2	10241	ug/L	10241	ppb	09:13:56
1	Co 228.616†	568003.8	568607.7	9862.7	ug/L	9862.7	ppb	09:13:56
1	Cr 267.716†	1753379.4	1755013.8	24608	ug/L	24608	ppb	09:13:56
1	Cu 324.752†	5633997.2	5633361.7	20414	ug/L	20414	ppb	09:13:49
1	Mn 257.610†	8719648.2	8726711.6	9623.5	ug/L	9623.5	ppb	09:13:49
1	Mo 202.031†	141325.9	141434.3	9956.8	ug/L	9956.8	ppb	09:14:01
1	Ni 231.604†	375246.3	375459.7	10030	ug/L	10030	ppb	09:13:56
1	P 214.914†	36848.1	36566.0	14746	ug/L	14746	ppb	09:14:01
1	Pb 220.353†	208794.7	208993.4	24898	ug/L	24898	ppb	09:14:01
1	S 181.975 Axial†	38281.0	38239.6	52387	ug/L	52387	ppb	09:14:01
1	Sb 206.836†	36376.8	36351.9	10574	ug/L	10574	ppb	09:14:01
1	Se 196.026†	20377.2	20424.1	10437	ug/L	10437	ppb	09:14:01
1	Si 251.611†	1574586.6	1575573.0	48252	ug/L	48252	ppb	09:13:56
1	Sn 189.927†	59738.9	59779.5	10580	ug/L	10580	ppb	09:14:01
1	Ti 334.940†	5433406.0	5439579.1	9950.3	ug/L	9950.3	ppb	09:13:49
1	Tl 190.801†	37513.8	37607.8	9901.1	ug/L	9901.1	ppb	09:14:01
1	U 409.014†	-3927.2	918.0	-16.385	ug/L	-16.385	ppb	09:14:01
1	V 292.402†	1111733.1	1114285.5	10226	ug/L	10226	ppb	09:13:56
1	Zn 213.857†	1578752.8	1579229.6	14482	ug/L	14482	ppb	09:13:56
1	SiO2†	1612167.7	1613162.5	105180	ug/L	105180	ppb	09:14:48
2	Sc Radial	7206.1	7206.1	96.4	%			09:12:48
2	Y RADIAL	6605.6	6605.6	95.40	%			09:12:48
2	Al 396.153Radial†	485.6	576.3	60.533	ug/L	60.533	ppb	09:12:48
2	Ca 317.933Radial†	45.1	17.7	25.032	ug/L	25.032	ppb	09:13:08
2	Fe 238.204 Radial†	-30.3	-66.2	35.518	ug/L	35.518	ppb	09:13:08
2	K 766.490 Radial†	1251869.1	1296097.9	279420	ug/L	279420	ppb	09:12:43
2	Mg 279.077 IEC†	-5.2	-8.5	-15.141	ug/L	-15.141	ppb	09:13:08
2	Na 589.592 Radial†	3117.0	3368.6	206.74	ug/L	206.74	ppb	09:12:48
2	Sr 421.552†	3168878.4	3286984.7	9180.7	ug/L	9180.7	ppb	09:12:43
2	Sc 361.383	735519.8	735519.8	102.34	%			09:14:16
2	Y 371.029	561414.9	561414.9	99.896	%			09:14:16
2	Ag 328.068†	-5183.2	-5697.2	6.1117	ug/L	6.1117	ppb	09:14:21
2	As 188.979†	28211.9	27601.8	10014	ug/L	10014	ppb	09:14:21
2	B 249.677†	206438.4	202654.5	5056.7	ug/L	5056.7	ppb	09:14:16
2	Ba 233.527†	2058610.8	2011504.3	14215	ug/L	14215	ppb	09:14:16
2	Be 313.107†	6582936.2	6437184.4	2969.3	ug/L	2969.3	ppb	09:14:09
2	Cd 226.502†	822941.6	804391.7	10266	ug/L	10266	ppb	09:14:16
2	Co 228.616†	582933.8	569694.3	9881.0	ug/L	9881.0	ppb	09:14:16
2	Cr 267.716†	1796035.7	1755015.5	24608	ug/L	24608	ppb	09:14:16
2	Cu 324.752†	5728920.0	5592190.0	20265	ug/L	20265	ppb	09:14:09
2	Mn 257.610†	8853284.4	8650020.1	9539.0	ug/L	9539.0	ppb	09:14:09
2	Mo 202.031†	140614.3	137379.6	9671.3	ug/L	9671.3	ppb	09:14:21
2	Ni 231.604†	385203.4	376269.2	10051	ug/L	10051	ppb	09:14:16

2	P 214.914†	36681.5	35527.3	14242	ug/L	14242 ppb	09:14:21
2	Pb 220.353†	208078.1	203330.0	24223	ug/L	24223 ppb	09:14:21
2	S 181.975 Axial†	38120.9	37173.1	50926	ug/L	50926 ppb	09:14:21
2	Sb 206.836†	36309.4	35421.3	10287	ug/L	10287 ppb	09:14:21
2	Se 196.026†	20351.7	19914.8	10177	ug/L	10177 ppb	09:14:21
2	Si 251.611†	1618495.9	1581049.0	48430	ug/L	48430 ppb	09:14:16
2	Sn 189.927†	59380.7	58009.4	10267	ug/L	10267 ppb	09:14:21
2	Ti 334.940†	5520991.7	5396006.2	9870.5	ug/L	9870.5 ppb	09:14:09
2	Tl 190.801†	37408.7	36613.5	9639.6	ug/L	9639.6 ppb	09:14:21
2	U 409.014†	-3870.5	1066.8	-11.345	ug/L	-11.345 ppb	09:14:21
2	V 292.402†	1139430.5	1114922.7	10228	ug/L	10228 ppb	09:14:16
2	Zn 213.857†	1616276.8	1578367.4	14474	ug/L	14474 ppb	09:14:16
2	SiO2†	1605287.1	1568117.4	102240	ug/L	102240 ppb	09:14:56
3	Sc Radial	7389.2	7389.2	98.9	%		09:13:19
3	Y RADIAL	6809.8	6809.8	98.35	%		09:13:19
3	Al 396.153Radial†	492.6	570.9	52.098	ug/L	52.098 ppb	09:13:19
3	Ca 317.933Radial†	52.2	23.7	33.632	ug/L	33.632 ppb	09:13:39
3	Fe 238.204 Radial†	-32.6	-67.8	28.576	ug/L	28.576 ppb	09:13:39
3	K 766.490 Radial†	1295433.0	1307991.1	281980	ug/L	281980 ppb	09:13:14
3	Mg 279.077 IEC†	-9.0	-12.1	-104.20	ug/L	-104.20 ppb	09:13:39
3	Na 589.592 Radial†	3056.6	3227.4	198.08	ug/L	198.08 ppb	09:13:19
3	Sr 421.552†	3283861.0	3321853.3	9278.0	ug/L	9278.0 ppb	09:13:14
3	Sc 361.383	730486.3	730486.3	101.64	%		09:14:36
3	Y 371.029	557699.4	557699.4	99.235	%		09:14:36
3	Ag 328.068†	-5279.5	-5826.9	5.3135	ug/L	5.3135 ppb	09:14:41
3	As 188.979†	28275.2	27854.1	10105	ug/L	10105 ppb	09:14:41
3	B 249.677†	204596.7	202232.5	5046.2	ug/L	5046.2 ppb	09:14:36
3	Ba 233.527†	2042687.3	2009698.5	14203	ug/L	14203 ppb	09:14:36
3	Be 313.107†	6531840.2	6431236.2	2966.5	ug/L	2966.5 ppb	09:14:29
3	Cd 226.502†	815548.9	802659.3	10244	ug/L	10244 ppb	09:14:36
3	Co 228.616†	577808.6	568576.8	9861.8	ug/L	9861.8 ppb	09:14:36
3	Cr 267.716†	1781881.5	1753182.4	24582	ug/L	24582 ppb	09:14:36
3	Cu 324.752†	5675359.2	5578066.8	20213	ug/L	20213 ppb	09:14:29
3	Mn 257.610†	8795863.8	8653135.7	9542.4	ug/L	9542.4 ppb	09:14:29
3	Mo 202.031†	140994.6	138700.4	9764.3	ug/L	9764.3 ppb	09:14:41
3	Ni 231.604†	381768.8	375483.6	10030	ug/L	10030 ppb	09:14:36
3	P 214.914†	36776.7	35868.0	14427	ug/L	14427 ppb	09:14:41
3	Pb 220.353†	208448.9	205095.8	24434	ug/L	24434 ppb	09:14:41
3	S 181.975 Axial†	38215.1	37522.6	51405	ug/L	51405 ppb	09:14:41
3	Sb 206.836†	36365.1	35720.6	10380	ug/L	10380 ppb	09:14:41
3	Se 196.026†	20296.9	19997.9	10219	ug/L	10219 ppb	09:14:41
3	Si 251.611†	1604788.1	1578459.9	48346	ug/L	48346 ppb	09:14:36
3	Sn 189.927†	59493.6	58520.3	10358	ug/L	10358 ppb	09:14:41
3	Ti 334.940†	5479942.6	5392792.7	9864.6	ug/L	9864.6 ppb	09:14:29
3	Tl 190.801†	37353.2	36810.7	9691.3	ug/L	9691.3 ppb	09:14:41
3	U 409.014†	-3711.6	1197.1	-6.8830	ug/L	-6.8830 ppb	09:14:41
3	V 292.402†	1131143.9	1114441.7	10225	ug/L	10225 ppb	09:14:36
3	Zn 213.857†	1603469.7	1576649.5	14458	ug/L	14458 ppb	09:14:36
3	SiO2†	1587412.8	1561340.0	101780	ug/L	101780 ppb	09:15:03

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	728019.3	101.30	%	1.251				1.24%
Sc Radial	7339.3	98.2	%	1.56				1.59%
Y 371.029	555979.9	98.929	%	1.1510				1.16%
Y RADIAL	6739.7	97.33	%	1.679				1.72%
Ag 328.068†	-5771.9	5.6529	ug/L	0.41226	5.6529	ppb	0.41226	7.29%
Al 396.153Radial†	569.9	49.803	ug/L	12.0435	49.803	ppb	12.0435	24.18%
As 188.979†	27976.5	10149	ug/L	161.9	10149	ppb	161.9	1.60%
QC value within limits for As 188.979 Recovery = 101.49%								
B 249.677†	202076.6	5042.2	ug/L	16.84	5042.2	ppb	16.84	0.33%
QC value within limits for B 249.677 Recovery = 100.84%								
Ba 233.527†	2012213.9	14220	ug/L	20.7	14220	ppb	20.7	0.15%
QC value within limits for Ba 233.527 Recovery = 94.80%								
Be 313.107†	6451357.0	2975.8	ug/L	13.77	2975.8	ppb	13.77	0.46%
QC value within limits for Be 313.107 Recovery = 99.19%								
Ca 317.933Radial†	23.0	32.553	ug/L	7.0439	32.553	ppb	7.0439	21.64%
Cd 226.502†	803148.4	10251	ug/L	13.8	10251	ppb	13.8	0.14%
QC value within limits for Cd 226.502 Recovery = 102.51%								

Co 228.616†	568959.6	9868.5 ug/L	10.79	9868.5 ppb	10.79	0.11%
QC value within limits for Co 228.616 Recovery = 98.69%						
Cr 267.716†	1754403.9	24599 ug/L	14.8	24599 ppb	14.8	0.06%
QC value within limits for Cr 267.716 Recovery = 98.40%						
Cu 324.752†	5601206.2	20297 ug/L	104.1	20297 ppb	104.1	0.51%
QC value within limits for Cu 324.752 Recovery = 101.49%						
Fe 238.204 Radial†	-65.4	38.494 ug/L	11.6927	38.494 ppb	11.6927	30.38%
K 766.490 Radial†	1298348.4	279900 ug/L	1886.5	279900 ppb	1886.5	0.67%
QC value within limits for K 766.490 Radial Recovery = 93.30%						
Mg 279.077 IEC†	-11.9	-98.743 ug/L	81.0101	-98.743 ppb	81.0101	82.04%
Mn 257.610†	8676622.5	9568.3 ug/L	47.87	9568.3 ppb	47.87	0.50%
QC value within limits for Mn 257.610 Recovery = 95.68%						
Mo 202.031†	139171.4	9797.5 ug/L	145.58	9797.5 ppb	145.58	1.49%
QC value within limits for Mo 202.031 Recovery = 97.97%						
Na 589.592 Radial†	3378.8	207.37 ug/L	9.617	207.37 ppb	9.617	4.64%
Ni 231.604†	375737.5	10037 ug/L	12.3	10037 ppb	12.3	0.12%
QC value within limits for Ni 231.604 Recovery = 100.37%						
P 214.914†	35987.1	14472 ug/L	255.4	14472 ppb	255.4	1.76%
QC value within limits for P 214.914 Recovery = 96.48%						
Pb 220.353†	205806.4	24519 ug/L	345.3	24519 ppb	345.3	1.41%
QC value within limits for Pb 220.353 Recovery = 98.07%						
S 181.975 Axial†	37645.1	51572 ug/L	744.8	51572 ppb	744.8	1.44%
QC value within limits for S 181.975 Axial Recovery = 103.14%						
Sb 206.836†	35831.3	10413 ug/L	146.6	10413 ppb	146.6	1.41%
QC value within limits for Sb 206.836 Recovery = 104.13%						
Se 196.026†	20112.3	10278 ug/L	139.7	10278 ppb	139.7	1.36%
QC value within limits for Se 196.026 Recovery = 102.78%						
Si 251.611†	1578360.6	48343 ug/L	89.0	48343 ppb	89.0	0.18%
QC value within limits for Si 251.611 Recovery = 96.69%						
Sn 189.927†	58769.7	10402 ug/L	161.2	10402 ppb	161.2	1.55%
QC value within limits for Sn 189.927 Recovery = 104.02%						
Sr 421.552†	3293239.0	9198.1 ug/L	72.78	9198.1 ppb	72.78	0.79%
QC value within limits for Sr 421.552 Recovery = 91.98%						
Ti 334.940†	5409459.3	9895.1 ug/L	47.85	9895.1 ppb	47.85	0.48%
QC value within limits for Ti 334.940 Recovery = 98.95%						
Tl 190.801†	37010.7	9744.0 ug/L	138.47	9744.0 ppb	138.47	1.42%
QC value within limits for Tl 190.801 Recovery = 97.44%						
U 409.014†	1060.7	-11.538 ug/L	4.7539	-11.538 ppb	4.7539	41.20%
V 292.402†	1114550.0	10226 ug/L	1.6	10226 ppb	1.6	0.02%
QC value within limits for V 292.402 Recovery = 102.26%						
Zn 213.857†	1578082.1	14471 ug/L	12.0	14471 ppb	12.0	0.08%
QC value within limits for Zn 213.857 Recovery = 96.47%						
SiO2†	1580873.3	103070 ug/L	1844.0	103070 ppb	1844.0	1.79%
QC value within limits for SiO2 Recovery = 96.32%						

All analyte(s) passed QC.

Analysis Begun

Start Time: 6/30/2009 09:33:27 **Plasma On Time:** 6/29/2009 15:26:31
Logged In Analyst: Optima3 **Technique:** ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601 **Autosampler Model:** S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX **Method Last Saved:** 6/30/2009 07:55:59
IEC File: 040209.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 **Autosampler Location:** 7
Sample ID: CCV **Date Collected:** 6/30/2009 09:33:28
Analyst: **Data Type:** Original
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Units	Sample Conc.	Units	Analysis Time
1	Sc Radial	7423.1	7423.1	99.3	%			09:35:25
1	Y RADIAL	6826.3	6826.3	98.58	%			09:35:25
1	Al 396.153Radial†	6345.6	6462.3	5299.9	ug/L	5299.9	ppb	09:35:25

1	Ca 317.933Radial†	3697.4	3693.9	5232.9 ug/L	5232.9 ppb	09:35:25
1	Fe 238.204 Radial†	1240.3	1214.1	5076.9 ug/L	5076.9 ppb	09:35:45
1	K 766.490 Radial†	24857.4	22622.8	4867.7 ug/L	4867.7 ppb	09:35:20
1	Mg 279.077 IEC†	213.4	211.8	5286.2 ug/L	5286.2 ppb	09:35:45
1	Na 589.592 Radial†	164426.0	165702.9	10170 ug/L	10170 ppb	09:35:20
1	Sr 421.552†	170615.6	171855.8	479.95 ug/L	479.95 ppb	09:35:20
1	Sc 361.383	749922.0	749922.0	104.35 %		09:36:53
1	Y 371.029	578377.8	578377.8	102.91 %		09:36:53
1	Ag 328.068†	88179.2	83874.1	504.14 ug/L	504.14 ppb	09:36:58
1	As 188.979†	1443.2	1418.5	514.68 ug/L	514.68 ppb	09:37:18
1	B 249.677†	20193.0	20291.9	508.46 ug/L	508.46 ppb	09:36:58
1	Ba 233.527†	74246.7	71154.0	503.15 ug/L	503.15 ppb	09:36:58
1	Be 313.107†	1148696.4	1105737.4	507.23 ug/L	507.23 ppb	09:36:53
1	Cd 226.502†	41055.7	39626.9	505.17 ug/L	505.17 ppb	09:36:58
1	Co 228.616†	30353.3	29188.6	506.44 ug/L	506.44 ppb	09:36:58
1	Cr 267.716†	37337.8	35860.2	503.20 ug/L	503.20 ppb	09:36:58
1	Cu 324.752†	149034.2	137188.8	497.43 ug/L	497.43 ppb	09:36:58
1	Mn 257.610†	478322.5	457721.8	505.30 ug/L	505.30 ppb	09:36:53
1	Mo 202.031†	7514.2	7184.1	506.08 ug/L	506.08 ppb	09:37:18
1	Ni 231.604†	19794.6	18850.4	503.55 ug/L	503.55 ppb	09:36:58
1	P 214.914†	5522.9	4978.1	2447.3 ug/L	2447.3 ppb	09:37:18
1	Pb 220.353†	4426.8	4255.7	508.26 ug/L	508.26 ppb	09:37:18
1	S 181.975 Axial†	852.5	741.5	1014.8 ug/L	1014.8 ppb	09:37:18
1	Sb 206.836†	1850.3	1716.0	516.26 ug/L	516.26 ppb	09:37:18
1	Se 196.026†	1028.0	1014.0	535.42 ug/L	535.42 ppb	09:37:18
1	Si 251.611†	86183.9	82182.8	2520.8 ug/L	2520.8 ppb	09:36:58
1	Sn 189.927†	3027.0	2888.4	512.14 ug/L	512.14 ppb	09:37:18
1	Ti 334.940†	276976.0	266788.8	488.34 ug/L	488.34 ppb	09:36:58
1	Tl 190.801†	1970.3	1949.0	513.11 ug/L	513.11 ppb	09:37:18
1	U 409.014†	10959.4	15351.7	518.23 ug/L	518.23 ppb	09:36:58
1	V 292.402†	55911.1	55147.7	506.93 ug/L	506.93 ppb	09:36:58
1	Zn 213.857†	57939.9	54601.7	499.26 ug/L	499.26 ppb	09:36:58
1	SiO2†	87174.2	83106.7	5426.9 ug/L	5426.9 ppb	09:38:25
2	Sc Radial	7525.2	7525.2	101 %		09:35:55
2	Y RADIAL	6923.0	6923.0	99.98 %		09:35:55
2	Al 396.153Radial†	6313.2	6343.4	5202.2 ug/L	5202.2 ppb	09:35:55
2	Ca 317.933Radial†	3695.1	3641.2	5158.2 ug/L	5158.2 ppb	09:35:55
2	Fe 238.204 Radial†	1235.4	1192.3	4986.0 ug/L	4986.0 ppb	09:36:15
2	K 766.490 Radial†	24952.7	22377.7	4814.9 ug/L	4814.9 ppb	09:35:50
2	Mg 279.077 IEC†	213.2	208.7	5209.3 ug/L	5209.3 ppb	09:36:15
2	Na 589.592 Radial†	166648.8	165663.7	10167 ug/L	10167 ppb	09:35:50
2	Sr 421.552†	172873.2	171766.5	479.70 ug/L	479.70 ppb	09:35:50
2	Sc 361.383	749726.7	749726.7	104.32 %		09:37:24
2	Y 371.029	577553.5	577553.5	102.77 %		09:37:24
2	Ag 328.068†	88437.2	84143.4	505.74 ug/L	505.74 ppb	09:37:29
2	As 188.979†	1424.9	1401.3	508.49 ug/L	508.49 ppb	09:37:49
2	B 249.677†	20283.9	20384.1	510.77 ug/L	510.77 ppb	09:37:29
2	Ba 233.527†	74577.0	71489.2	505.52 ug/L	505.52 ppb	09:37:29
2	Be 313.107†	1154468.4	1111557.2	509.90 ug/L	509.90 ppb	09:37:24
2	Cd 226.502†	41318.3	39888.9	508.52 ug/L	508.52 ppb	09:37:29
2	Co 228.616†	30503.1	29339.8	509.04 ug/L	509.04 ppb	09:37:29
2	Cr 267.716†	37503.7	36028.5	505.56 ug/L	505.56 ppb	09:37:29
2	Cu 324.752†	149487.6	137660.6	499.13 ug/L	499.13 ppb	09:37:29
2	Mn 257.610†	481180.8	460581.1	508.44 ug/L	508.44 ppb	09:37:24
2	Mo 202.031†	7416.3	7092.1	499.60 ug/L	499.60 ppb	09:37:49
2	Ni 231.604†	19877.2	18934.5	505.79 ug/L	505.79 ppb	09:37:29
2	P 214.914†	5449.0	4908.6	2411.4 ug/L	2411.4 ppb	09:37:49
2	Pb 220.353†	4369.2	4201.6	501.79 ug/L	501.79 ppb	09:37:49
2	S 181.975 Axial†	848.0	737.4	1009.2 ug/L	1009.2 ppb	09:37:49
2	Sb 206.836†	1820.4	1687.8	507.57 ug/L	507.57 ppb	09:37:49
2	Se 196.026†	1016.3	1003.0	529.49 ug/L	529.49 ppb	09:37:49
2	Si 251.611†	86487.8	82495.6	2530.7 ug/L	2530.7 ppb	09:37:29
2	Sn 189.927†	2979.1	2843.3	504.13 ug/L	504.13 ppb	09:37:49
2	Ti 334.940†	278487.2	268306.6	491.12 ug/L	491.12 ppb	09:37:29
2	Tl 190.801†	1949.7	1929.7	508.08 ug/L	508.08 ppb	09:37:49
2	U 409.014†	10728.8	15133.4	510.85 ug/L	510.85 ppb	09:37:29
2	V 292.402†	56273.5	55509.1	510.12 ug/L	510.12 ppb	09:37:29
2	Zn 213.857†	58249.1	54912.5	502.13 ug/L	502.13 ppb	09:37:29
2	SiO2†	86644.3	82620.5	5395.5 ug/L	5395.5 ppb	09:38:30
3	Sc Radial	7497.0	7497.0	100 %		09:36:26
3	Y RADIAL	6929.0	6929.0	100.1 %		09:36:26

3	Al 396.153Radial†	6295.9	6349.8	5207.0 ug/L	5207.0 ppb	09:36:26
3	Ca 317.933Radial†	3671.2	3631.1	5143.9 ug/L	5143.9 ppb	09:36:26
3	Fe 238.204 Radial†	1247.9	1209.4	5057.6 ug/L	5057.6 ppb	09:36:46
3	K 766.490 Radial†	25275.1	22792.3	4904.2 ug/L	4904.2 ppb	09:36:21
3	Mg 279.077 IEC†	214.6	210.9	5263.3 ug/L	5263.3 ppb	09:36:46
3	Na 589.592 Radial†	168542.7	168174.3	10321 ug/L	10321 ppb	09:36:21
3	Sr 421.552†	175020.0	174552.5	487.48 ug/L	487.48 ppb	09:36:21
3	Sc 361.383	742795.5	742795.5	103.35 %		09:37:55
3	Y 371.029	572707.4	572707.4	101.91 %		09:37:55
3	Ag 328.068†	89178.1	85651.4	514.80 ug/L	514.80 ppb	09:38:00
3	As 188.979†	1453.3	1441.6	523.06 ug/L	523.06 ppb	09:38:20
3	B 249.677†	20460.7	20736.6	519.61 ug/L	519.61 ppb	09:38:00
3	Ba 233.527†	75243.2	72800.8	514.80 ug/L	514.80 ppb	09:38:00
3	Be 313.107†	1144942.8	1112667.4	510.43 ug/L	510.43 ppb	09:37:55
3	Cd 226.502†	41580.1	40511.8	516.47 ug/L	516.47 ppb	09:38:00
3	Co 228.616†	30748.5	29850.0	517.90 ug/L	517.90 ppb	09:38:00
3	Cr 267.716†	37784.8	36635.9	514.08 ug/L	514.08 ppb	09:38:00
3	Cu 324.752†	150573.6	140048.6	507.79 ug/L	507.79 ppb	09:38:00
3	Mn 257.610†	477446.4	461272.1	509.21 ug/L	509.21 ppb	09:37:55
3	Mo 202.031†	7501.5	7240.9	510.08 ug/L	510.08 ppb	09:38:20
3	Ni 231.604†	20016.5	19247.1	514.14 ug/L	514.14 ppb	09:38:00
3	P 214.914†	5517.1	5023.3	2468.3 ug/L	2468.3 ppb	09:38:20
3	Pb 220.353†	4428.4	4297.9	513.28 ug/L	513.28 ppb	09:38:20
3	S 181.975 Axial†	853.9	750.8	1027.5 ug/L	1027.5 ppb	09:38:20
3	Sb 206.836†	1857.2	1739.7	523.18 ug/L	523.18 ppb	09:38:20
3	Se 196.026†	1026.5	1021.9	539.41 ug/L	539.41 ppb	09:38:20
3	Si 251.611†	87171.3	83930.5	2574.7 ug/L	2574.7 ppb	09:38:00
3	Sn 189.927†	3017.8	2907.3	515.47 ug/L	515.47 ppb	09:38:20
3	Ti 334.940†	280908.0	273139.9	499.96 ug/L	499.96 ppb	09:38:00
3	Tl 190.801†	1984.5	1980.8	521.47 ug/L	521.47 ppb	09:38:20
3	U 409.014†	11073.0	15562.3	525.35 ug/L	525.35 ppb	09:38:00
3	V 292.402†	56726.1	56450.4	518.81 ug/L	518.81 ppb	09:38:00
3	Zn 213.857†	58702.4	55872.2	510.91 ug/L	510.91 ppb	09:38:00
3	SiO2†	87234.6	83966.6	5483.2 ug/L	5483.2 ppb	09:38:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	747481.4	104.01	%	0.565				0.54%
Sc Radial	7481.8	100	%	0.7				0.71%
Y 371.029	576212.9	102.53	%	0.545				0.53%
Y RADIAL	6892.8	99.54	%	0.833				0.84%
Ag 328.068†	84556.3	508.23	ug/L	5.745	508.23	ppb	5.745	1.13%
QC value within limits for Ag 328.068 Recovery = 101.65%								
Al 396.153Radial†	6385.1	5236.4	ug/L	55.04	5236.4	ppb	55.04	1.05%
QC value within limits for Al 396.153Radial Recovery = 104.73%								
As 188.979†	1420.5	515.41	ug/L	7.313	515.41	ppb	7.313	1.42%
QC value within limits for As 188.979 Recovery = 103.08%								
B 249.677†	20470.9	512.95	ug/L	5.884	512.95	ppb	5.884	1.15%
QC value within limits for B 249.677 Recovery = 102.59%								
Ba 233.527†	71814.7	507.82	ug/L	6.155	507.82	ppb	6.155	1.21%
QC value within limits for Ba 233.527 Recovery = 101.56%								
Be 313.107†	1109987.3	509.19	ug/L	1.715	509.19	ppb	1.715	0.34%
QC value within limits for Be 313.107 Recovery = 101.84%								
Ca 317.933Radial†	3655.4	5178.3	ug/L	47.79	5178.3	ppb	47.79	0.92%
QC value within limits for Ca 317.933Radial Recovery = 103.57%								
Cd 226.502†	40009.2	510.05	ug/L	5.801	510.05	ppb	5.801	1.14%
QC value within limits for Cd 226.502 Recovery = 102.01%								
Co 228.616†	29459.5	511.13	ug/L	6.007	511.13	ppb	6.007	1.18%
QC value within limits for Co 228.616 Recovery = 102.23%								
Cr 267.716†	36174.9	507.61	ug/L	5.726	507.61	ppb	5.726	1.13%
QC value within limits for Cr 267.716 Recovery = 101.52%								
Cu 324.752†	138299.3	501.45	ug/L	5.556	501.45	ppb	5.556	1.11%
QC value within limits for Cu 324.752 Recovery = 100.29%								
Fe 238.204 Radial†	1205.3	5040.2	ug/L	47.87	5040.2	ppb	47.87	0.95%
QC value within limits for Fe 238.204 Radial Recovery = 100.80%								
K 766.490 Radial†	22597.6	4862.3	ug/L	44.91	4862.3	ppb	44.91	0.92%
QC value within limits for K 766.490 Radial Recovery = 97.25%								
Mg 279.077 IEC†	210.5	5252.9	ug/L	39.45	5252.9	ppb	39.45	0.75%
QC value within limits for Mg 279.077 IEC Recovery = 105.06%								

Mn 257.610†	459858.3	507.65 ug/L	2.073	507.65 ppb	2.073	0.41%
QC value within limits for Mn 257.610 Recovery = 101.53%						
Mo 202.031†	7172.4	505.25 ug/L	5.288	505.25 ppb	5.288	1.05%
QC value within limits for Mo 202.031 Recovery = 101.05%						
Na 589.592 Radial†	166513.6	10219 ug/L	88.3	10219 ppb	88.3	0.86%
QC value within limits for Na 589.592 Radial Recovery = 102.19%						
Ni 231.604†	19010.7	507.83 ug/L	5.584	507.83 ppb	5.584	1.10%
QC value within limits for Ni 231.604 Recovery = 101.57%						
P 214.914†	4970.0	2442.3 ug/L	28.79	2442.3 ppb	28.79	1.18%
QC value within limits for P 214.914 Recovery = 97.69%						
Pb 220.353†	4251.7	507.77 ug/L	5.758	507.77 ppb	5.758	1.13%
QC value within limits for Pb 220.353 Recovery = 101.55%						
S 181.975 Axial†	743.3	1017.2 ug/L	9.36	1017.2 ppb	9.36	0.92%
QC value within limits for S 181.975 Axial Recovery = 101.72%						
Sb 206.836†	1714.5	515.67 ug/L	7.821	515.67 ppb	7.821	1.52%
QC value within limits for Sb 206.836 Recovery = 103.13%						
Se 196.026†	1013.0	534.77 ug/L	4.996	534.77 ppb	4.996	0.93%
QC value within limits for Se 196.026 Recovery = 106.95%						
Si 251.611†	82869.6	2542.1 ug/L	28.66	2542.1 ppb	28.66	1.13%
QC value within limits for Si 251.611 Recovery = 101.68%						
Sn 189.927†	2879.7	510.58 ug/L	5.831	510.58 ppb	5.831	1.14%
QC value within limits for Sn 189.927 Recovery = 102.12%						
Sr 421.552†	172725.0	482.38 ug/L	4.423	482.38 ppb	4.423	0.92%
QC value within limits for Sr 421.552 Recovery = 96.48%						
Ti 334.940†	269411.7	493.14 ug/L	6.066	493.14 ppb	6.066	1.23%
QC value within limits for Ti 334.940 Recovery = 98.63%						
Tl 190.801†	1953.2	514.22 ug/L	6.763	514.22 ppb	6.763	1.32%
QC value within limits for Tl 190.801 Recovery = 102.84%						
U 409.014†	15349.1	518.14 ug/L	7.251	518.14 ppb	7.251	1.40%
QC value within limits for U 409.014 Recovery = 103.63%						
V 292.402†	55702.4	511.96 ug/L	6.148	511.96 ppb	6.148	1.20%
QC value within limits for V 292.402 Recovery = 102.39%						
Zn 213.857†	55128.8	504.10 ug/L	6.068	504.10 ppb	6.068	1.20%
QC value within limits for Zn 213.857 Recovery = 100.82%						
SiO2†	83231.3	5435.2 ug/L	44.44	5435.2 ppb	44.44	0.82%
QC value within limits for SiO2 Recovery = 101.64%						

All analyte(s) passed QC.

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 09:40:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6894.2	6894.2	92.2	%			09:42:38
1	Y RADIAL	6384.5	6384.5	92.20	%			09:42:38
1	Al 396.153Radial†	-102.5	-38.5	-31.712	ug/L	-31.712	ppb	09:42:38
1	Ca 317.933Radial†	29.5	2.9	4.0374	ug/L	4.0374	ppb	09:42:58
1	Fe 238.204 Radial†	36.5	4.8	20.033	ug/L	20.033	ppb	09:42:58
1	K 766.490 Radial†	2481.1	282.8	61.013	ug/L	61.013	ppb	09:42:38
1	Mg 279.077 IEC†	0.9	-2.0	-50.288	ug/L	-50.288	ppb	09:42:58
1	Na 589.592 Radial†	184.5	335.6	20.597	ug/L	20.597	ppb	09:42:38
1	Sr 421.552†	-9.0	46.1	0.1288	ug/L	0.1288	ppb	09:42:38
1	Sc 361.383	719880.5	719880.5	100.17	%			09:43:55
1	Y 371.029	563118.3	563118.3	100.20	%			09:43:55
1	Ag 328.068†	709.6	75.7	0.4618	ug/L	0.4618	ppb	09:43:55
1	As 188.979†	-34.9	0.6	0.2269	ug/L	0.2269	ppb	09:44:15
1	B 249.677†	-391.1	549.5	13.844	ug/L	13.844	ppb	09:43:55
1	Ba 233.527†	18.8	18.3	0.1286	ug/L	0.1286	ppb	09:44:15
1	Be 313.107†	-4691.2	198.3	0.0903	ug/L	0.0903	ppb	09:43:55
1	Cd 226.502†	-263.5	18.0	0.2283	ug/L	0.2283	ppb	09:44:15
1	Co 228.616†	-72.7	26.9	0.4673	ug/L	0.4673	ppb	09:44:15
1	Cr 267.716†	-53.4	24.1	0.3395	ug/L	0.3395	ppb	09:43:55
1	Cu 324.752†	5742.2	94.2	0.3426	ug/L	0.3426	ppb	09:43:55
1	Mn 257.610†	688.0	7.2	0.0115	ug/L	0.0115	ppb	09:43:55
1	Mo 202.031†	25.4	8.2	0.5818	ug/L	0.5818	ppb	09:44:15
1	Ni 231.604†	157.3	37.2	0.9947	ug/L	0.9947	ppb	09:44:15
1	P 214.914†	308.9	-6.4	-3.3577	ug/L	-3.3577	ppb	09:44:15
1	Pb 220.353†	9.0	22.2	2.6412	ug/L	2.6412	ppb	09:44:15
1	S 181.975 Axial†	78.3	2.7	3.7221	ug/L	3.7221	ppb	09:44:15
1	Sb 206.836†	56.2	-1.1	-0.3198	ug/L	-0.3198	ppb	09:44:15
1	Se 196.026†	-22.0	6.8	3.5212	ug/L	3.5212	ppb	09:44:15
1	Si 251.611†	507.8	95.2	2.9043	ug/L	2.9043	ppb	09:44:15
1	Sn 189.927†	14.6	2.0	0.3634	ug/L	0.3634	ppb	09:44:15
1	Ti 334.940†	-1464.0	-113.3	-0.2055	ug/L	-0.2055	ppb	09:43:55
1	Tl 190.801†	-49.5	11.3	2.9527	ug/L	2.9527	ppb	09:44:15
1	U 409.014†	-4984.1	-127.1	-4.3081	ug/L	-4.3081	ppb	09:43:55
1	V 292.402†	-1586.5	-18.7	-0.1745	ug/L	-0.1745	ppb	09:43:55
1	Zn 213.857†	1000.9	74.1	0.6768	ug/L	0.6768	ppb	09:44:15
1	SiO2†	526.1	88.4	5.7331	ug/L	5.7331	ppb	09:45:11
2	Sc Radial	7433.1	7433.1	99.4	%			09:43:03
2	Y RADIAL	6894.2	6894.2	99.57	%			09:43:03
2	Al 396.153Radial†	-54.3	18.0	14.812	ug/L	14.812	ppb	09:43:03
2	Ca 317.933Radial†	23.2	-5.7	-8.1219	ug/L	-8.1219	ppb	09:43:23
2	Fe 238.204 Radial†	40.9	6.3	26.394	ug/L	26.394	ppb	09:43:23
2	K 766.490 Radial†	2620.1	227.6	49.101	ug/L	49.101	ppb	09:43:03
2	Mg 279.077 IEC†	1.7	-1.3	-32.309	ug/L	-32.309	ppb	09:43:23
2	Na 589.592 Radial†	226.0	362.8	22.267	ug/L	22.267	ppb	09:43:03
2	Sr 421.552†	-22.1	33.7	0.0941	ug/L	0.0941	ppb	09:43:03
2	Sc 361.383	714110.1	714110.1	99.363	%			09:44:21
2	Y 371.029	559063.9	559063.9	99.478	%			09:44:21
2	Ag 328.068†	565.2	-63.8	-0.3693	ug/L	-0.3693	ppb	09:44:21
2	As 188.979†	-19.0	16.4	5.9022	ug/L	5.9022	ppb	09:44:41
2	B 249.677†	-386.0	551.5	13.897	ug/L	13.897	ppb	09:44:21
2	Ba 233.527†	21.6	21.2	0.1505	ug/L	0.1505	ppb	09:44:41
2	Be 313.107†	-4693.3	158.3	0.0722	ug/L	0.0722	ppb	09:44:21
2	Cd 226.502†	-258.1	21.4	0.2697	ug/L	0.2697	ppb	09:44:41
2	Co 228.616†	-103.6	-4.8	-0.0823	ug/L	-0.0823	ppb	09:44:41
2	Cr 267.716†	-79.8	-2.9	-0.0388	ug/L	-0.0388	ppb	09:44:21
2	Cu 324.752†	5568.8	-33.9	-0.1215	ug/L	-0.1215	ppb	09:44:21
2	Mn 257.610†	712.7	37.7	0.0455	ug/L	0.0455	ppb	09:44:21
2	Mo 202.031†	24.6	7.7	0.5407	ug/L	0.5407	ppb	09:44:41
2	Ni 231.604†	139.0	20.1	0.5377	ug/L	0.5377	ppb	09:44:41

2	P 214.914†	311.1	-1.7	-0.8331 ug/L	-0.8331 ppb	09:44:41
2	Pb 220.353†	5.5	18.8	2.2417 ug/L	2.2417 ppb	09:44:41
2	S 181.975 Axial†	76.0	1.1	1.4516 ug/L	1.4516 ppb	09:44:41
2	Sb 206.836†	61.5	4.7	1.4121 ug/L	1.4121 ppb	09:44:41
2	Se 196.026†	-35.8	-7.2	-3.6099 ug/L	-3.6099 ppb	09:44:41
2	Si 251.611†	492.7	84.1	2.5666 ug/L	2.5666 ppb	09:44:41
2	Sn 189.927†	14.8	2.4	0.4327 ug/L	0.4327 ppb	09:44:41
2	Ti 334.940†	-1394.0	-54.7	-0.0997 ug/L	-0.0997 ppb	09:44:21
2	Tl 190.801†	-53.5	6.9	1.8178 ug/L	1.8178 ppb	09:44:41
2	U 409.014†	-4881.1	-63.7	-2.1597 ug/L	-2.1597 ppb	09:44:21
2	V 292.402†	-1517.5	38.0	0.3435 ug/L	0.3435 ppb	09:44:21
2	Zn 213.857†	988.3	69.5	0.6366 ug/L	0.6366 ppb	09:44:41
2	SiO2†	496.6	62.9	4.0655 ug/L	4.0655 ppb	09:45:17
3	Sc Radial	7360.3	7360.3	98.5 %		09:43:28
3	Y RADIAL	6797.8	6797.8	98.17 %		09:43:28
3	Al 396.153Radial†	-90.0	-18.7	-15.460 ug/L	-15.460 ppb	09:43:28
3	Ca 317.933Radial†	32.4	3.8	5.4300 ug/L	5.4300 ppb	09:43:49
3	Fe 238.204 Radial†	35.1	0.9	3.5646 ug/L	3.5646 ppb	09:43:49
3	K 766.490 Radial†	2468.3	99.4	21.436 ug/L	21.436 ppb	09:43:28
3	Mg 279.077 IEC†	2.7	-0.3	-7.6229 ug/L	-7.6229 ppb	09:43:49
3	Na 589.592 Radial†	277.0	416.8	25.582 ug/L	25.582 ppb	09:43:28
3	Sr 421.552†	-56.3	-1.3	-0.0036 ug/L	-0.0036 ppb	09:43:28
3	Sc 361.383	722967.1	722967.1	100.60 %		09:44:46
3	Y 371.029	565613.4	565613.4	100.64 %		09:44:46
3	Ag 328.068†	639.5	3.1	0.0184 ug/L	0.0184 ppb	09:44:46
3	As 188.979†	-31.7	3.9	1.3987 ug/L	1.3987 ppb	09:45:06
3	B 249.677†	-390.2	552.0	13.909 ug/L	13.909 ppb	09:44:46
3	Ba 233.527†	39.7	39.0	0.2765 ug/L	0.2765 ppb	09:45:06
3	Be 313.107†	-4786.6	123.5	0.0567 ug/L	0.0567 ppb	09:44:46
3	Cd 226.502†	-275.3	7.4	0.0941 ug/L	0.0941 ppb	09:45:06
3	Co 228.616†	-79.1	20.8	0.3617 ug/L	0.3617 ppb	09:45:06
3	Cr 267.716†	-45.9	31.7	0.4442 ug/L	0.4442 ppb	09:44:46
3	Cu 324.752†	5639.4	-32.4	-0.1170 ug/L	-0.1170 ppb	09:44:46
3	Mn 257.610†	719.5	35.7	0.0399 ug/L	0.0399 ppb	09:44:46
3	Mo 202.031†	24.7	7.4	0.5208 ug/L	0.5208 ppb	09:45:06
3	Ni 231.604†	144.8	24.2	0.6462 ug/L	0.6462 ppb	09:45:06
3	P 214.914†	309.6	-7.0	-3.5366 ug/L	-3.5366 ppb	09:45:06
3	Pb 220.353†	-7.1	6.2	0.7392 ug/L	0.7392 ppb	09:45:06
3	S 181.975 Axial†	80.1	4.2	5.7096 ug/L	5.7096 ppb	09:45:06
3	Sb 206.836†	52.2	-5.4	-1.5761 ug/L	-1.5761 ppb	09:45:06
3	Se 196.026†	-16.0	12.9	6.5953 ug/L	6.5953 ppb	09:45:06
3	Si 251.611†	510.2	95.4	2.9083 ug/L	2.9083 ppb	09:45:06
3	Sn 189.927†	22.2	9.6	1.6974 ug/L	1.6974 ppb	09:45:06
3	Ti 334.940†	-1304.9	51.0	0.0916 ug/L	0.0916 ppb	09:44:46
3	Tl 190.801†	-58.8	2.3	0.6090 ug/L	0.6090 ppb	09:45:06
3	U 409.014†	-4742.7	134.1	4.5395 ug/L	4.5395 ppb	09:44:46
3	V 292.402†	-1494.0	80.0	0.7414 ug/L	0.7414 ppb	09:44:46
3	Zn 213.857†	990.5	59.5	0.5453 ug/L	0.5453 ppb	09:45:06
3	SiO2†	542.4	102.3	6.6406 ug/L	6.6406 ppb	09:45:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	718985.9	100.04	%	0.626				0.63%
Sc Radial	7229.2	96.7	%	3.91				4.04%
Y 371.029	562598.5	100.11	%	0.588				0.59%
Y RADIAL	6692.2	96.65	%	3.911				4.05%
Ag 328.068†	5.0	0.0370	ug/L	0.41585	0.0370	ppb	0.41585	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.1	-10.787	ug/L	23.6114	-10.787	ppb	23.6114	218.89%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.0	2.5093	ug/L	2.99621	2.5093	ppb	2.99621	119.40%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	551.0	13.883	ug/L	0.0344	13.883	ppb	0.0344	0.25%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.2	0.1852	ug/L	0.07981	0.1852	ppb	0.07981	43.10%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	160.1	0.0731	ug/L	0.01679	0.0731	ppb	0.01679	22.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.3	0.4485	ug/L	7.45476	0.4485	ppb	7.45476	>999.9%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                15.6      0.1974 ug/L       0.09179      0.1974 ppb        0.09179  46.51%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                14.3      0.2489 ug/L       0.29165      0.2489 ppb        0.29165 117.19%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.6      0.2483 ug/L       0.25408      0.2483 ppb        0.25408 102.32%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                 9.3      0.0347 ug/L       0.26665      0.0347 ppb        0.26665 768.84%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.0      16.664 ug/L       11.7815      16.664 ppb        11.7815  70.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         203.3      43.850 ug/L       20.3045      43.850 ppb        20.3045  46.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.2     -30.073 ug/L       21.4204     -30.073 ppb        21.4204  71.23%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                26.9      0.0323 ug/L       0.01826      0.0323 ppb        0.01826  56.53%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 7.8      0.5478 ug/L       0.03113      0.5478 ppb        0.03113   5.68%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        371.7      22.815 ug/L        2.5369      22.815 ppb         2.5369  11.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                27.2      0.7262 ug/L       0.23879      0.7262 ppb        0.23879  32.88%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -5.0     -2.5758 ug/L       1.51188     -2.5758 ppb        1.51188  58.70%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                15.8      1.8740 ug/L       1.00290      1.8740 ppb        1.00290  53.52%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            2.6      3.6278 ug/L       2.13055      3.6278 ppb        2.13055  58.73%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.6     -0.1613 ug/L       1.50040     -0.1613 ppb        1.50040 930.30%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 4.1      2.1689 ug/L       5.23531      2.1689 ppb        5.23531 241.38%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                91.6      2.7931 ug/L       0.19618      2.7931 ppb        0.19618   7.02%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 4.7      0.8312 ug/L       0.75095      0.8312 ppb        0.75095  90.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                26.2      0.0731 ug/L       0.06869      0.0731 ppb        0.06869  93.96%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -39.0     -0.0712 ug/L       0.15057     -0.0712 ppb        0.15057 211.53%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.7932 ug/L       1.17204      1.7932 ppb        1.17204  65.36%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -18.9     -0.6428 ug/L       4.61470     -0.6428 ppb        4.61470 717.96%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 33.1      0.3035 ug/L       0.45926      0.3035 ppb        0.45926 151.34%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                67.7      0.6196 ug/L       0.06739      0.6196 ppb        0.06739  10.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      84.5      5.4798 ug/L       1.30612      5.4798 ppb        1.30612  23.84%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 3
Sample ID: LR1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 6/30/2009 09:47:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7516.4	7516.4	101	%			09:49:26
1	Y RADIAL	6915.7	6915.7	99.88	%			09:49:26
1	Al 396.153Radial†	-98.8	-25.7	-20.086	ug/L	-20.086	ppb	09:49:26
1	Ca 317.933Radial†	37.1	7.8	11.041	ug/L	11.041	ppb	09:49:46
1	Fe 238.204 Radial†	87066.9	86547.6	360770	ug/L	360770	ppb	09:49:26
1	K 766.490 Radial†	2428.8	8.1	81.500	ug/L	81.500	ppb	09:49:26
1	Mg 279.077 IEC†	12.0	8.9	-88.405	ug/L	-88.405	ppb	09:49:46
1	Na 589.592 Radial†	397.1	530.5	32.556	ug/L	32.556	ppb	09:49:26
1	Sr 421.552†	117.9	173.1	0.4834	ug/L	0.4834	ppb	09:49:26
1	Sc 361.383	725108.3	725108.3	100.89	%			09:50:43
1	Y 371.029	563385.4	563385.4	100.25	%			09:50:43
1	Ag 328.068†	-18790.9	-19257.2	0.5238	ug/L	0.5238	ppb	09:50:43
1	As 188.979†	-260.5	-222.8	-8.2675	ug/L	-8.2675	ppb	09:51:03
1	B 249.677†	1152.5	2082.2	27.824	ug/L	27.824	ppb	09:50:43
1	Ba 233.527†	-1624.5	-1610.6	-12.915	ug/L	-12.915	ppb	09:51:03
1	Be 313.107†	-4636.8	286.0	0.1315	ug/L	0.1315	ppb	09:50:43
1	Cd 226.502†	2753.8	3010.5	-3.6531	ug/L	-3.6531	ppb	09:51:03
1	Co 228.616†	166.0	264.0	-0.6316	ug/L	-0.6316	ppb	09:51:03
1	Cr 267.716†	-640.8	-557.7	-0.3574	ug/L	-0.3574	ppb	09:51:03
1	Cu 324.752†	-525.4	-6159.2	-1.4610	ug/L	-1.4610	ppb	09:50:43
1	Mn 257.610†	-38240.2	-38581.3	2.8086	ug/L	2.8086	ppb	09:50:43
1	Mo 202.031†	-332.9	-347.1	-0.8931	ug/L	-0.8931	ppb	09:51:03
1	Ni 231.604†	309.3	186.8	4.9901	ug/L	4.9901	ppb	09:51:03
1	P 214.914†	895.5	572.8	5.9449	ug/L	5.9449	ppb	09:51:03
1	Pb 220.353†	275.4	286.2	-0.0517	ug/L	-0.0517	ppb	09:51:03
1	S 181.975 Axial†	104.1	27.7	37.997	ug/L	37.997	ppb	09:51:03
1	Sb 206.836†	39.7	-17.9	0.9970	ug/L	0.9970	ppb	09:51:03
1	Se 196.026†	-2351.1	-2301.5	26.401	ug/L	26.401	ppb	09:51:03
1	Si 251.611†	-1963.8	-2358.2	-72.361	ug/L	-72.361	ppb	09:51:03
1	Sn 189.927†	-6.1	-18.5	23.583	ug/L	23.583	ppb	09:51:03
1	Ti 334.940†	-1212.7	146.3	0.2396	ug/L	0.2396	ppb	09:51:03
1	Tl 190.801†	-59.6	1.7	0.1017	ug/L	0.1017	ppb	09:51:03
1	U 409.014†	-2758.9	2114.2	27.271	ug/L	27.271	ppb	09:50:43
1	V 292.402†	4514.8	6040.0	4.3981	ug/L	4.3981	ppb	09:51:03
1	Zn 213.857†	5026.5	4056.9	-0.1994	ug/L	-0.1994	ppb	09:51:03
1	SiO2†	-2098.2	-2516.5	-164.47	ug/L	-164.47	ppb	09:51:59
2	Sc Radial	7401.7	7401.7	99.0	%			09:49:51
2	Y RADIAL	6860.1	6860.1	99.07	%			09:49:51
2	Al 396.153Radial†	-68.9	3.0	3.4831	ug/L	3.4831	ppb	09:49:51
2	Ca 317.933Radial†	32.6	3.8	5.4514	ug/L	5.4514	ppb	09:50:11
2	Fe 238.204 Radial†	86091.0	86904.1	362260	ug/L	362260	ppb	09:49:51
2	K 766.490 Radial†	2280.1	-104.6	57.480	ug/L	57.480	ppb	09:49:51
2	Mg 279.077 IEC†	14.0	11.1	-34.289	ug/L	-34.289	ppb	09:50:11
2	Na 589.592 Radial†	370.6	509.8	31.289	ug/L	31.289	ppb	09:49:51
2	Sr 421.552†	114.6	171.6	0.4793	ug/L	0.4793	ppb	09:49:51
2	Sc 361.383	731404.0	731404.0	101.77	%			09:51:08
2	Y 371.029	568361.3	568361.3	101.13	%			09:51:08
2	Ag 328.068†	-18900.9	-19204.9	1.3021	ug/L	1.3021	ppb	09:51:08
2	As 188.979†	-252.9	-213.1	-4.4741	ug/L	-4.4741	ppb	09:51:28
2	B 249.677†	1176.0	2095.5	28.056	ug/L	28.056	ppb	09:51:08
2	Ba 233.527†	-1621.3	-1593.6	-12.806	ug/L	-12.806	ppb	09:51:28
2	Be 313.107†	-4754.1	210.3	0.0968	ug/L	0.0968	ppb	09:51:08
2	Cd 226.502†	2731.8	2965.4	-4.4011	ug/L	-4.4011	ppb	09:51:28
2	Co 228.616†	168.6	265.1	-0.6302	ug/L	-0.6302	ppb	09:51:28
2	Cr 267.716†	-644.5	-555.9	-0.3045	ug/L	-0.3045	ppb	09:51:28
2	Cu 324.752†	-590.7	-6218.9	-1.5916	ug/L	-1.5916	ppb	09:51:08
2	Mn 257.610†	-38621.6	-38629.8	2.9409	ug/L	2.9409	ppb	09:51:08
2	Mo 202.031†	-320.2	-331.8	0.2783	ug/L	0.2783	ppb	09:51:28
2	Ni 231.604†	288.4	163.5	4.3684	ug/L	4.3684	ppb	09:51:28

2	P 214.914†	902.1	571.6	4.1616	ug/L	4.1616 ppb	09:51:28
2	Pb 220.353†	269.2	277.8	-1.1874	ug/L	-1.1874 ppb	09:51:28
2	S 181.975 Axial†	109.6	32.2	44.179	ug/L	44.179 ppb	09:51:28
2	Sb 206.836†	47.8	-10.3	3.2563	ug/L	3.2563 ppb	09:51:28
2	Se 196.026†	-2354.5	-2284.8	39.892	ug/L	39.892 ppb	09:51:28
2	Si 251.611†	-2007.9	-2384.8	-73.149	ug/L	-73.149 ppb	09:51:28
2	Sn 189.927†	-24.3	-36.4	20.525	ug/L	20.525 ppb	09:51:28
2	Ti 334.940†	-1232.5	137.2	0.2210	ug/L	0.2210 ppb	09:51:28
2	Tl 190.801†	-76.8	-14.8	-4.1977	ug/L	-4.1977 ppb	09:51:28
2	U 409.014†	-2677.4	2217.9	30.599	ug/L	30.599 ppb	09:51:08
2	V 292.402†	4373.9	5863.1	2.6053	ug/L	2.6053 ppb	09:51:28
2	Zn 213.857†	5020.1	4007.7	-0.8055	ug/L	-0.8055 ppb	09:51:28
2	SiO2†	-2031.8	-2433.4	-158.93	ug/L	-158.93 ppb	09:52:05
3	Sc Radial	7410.2	7410.2	99.1	%		09:50:16
3	Y RADIAL	6847.3	6847.3	98.89	%		09:50:16
3	Al 396.153Radial†	-111.8	-40.1	-31.936	ug/L	-31.936 ppb	09:50:16
3	Ca 317.933Radial†	33.1	4.3	6.1250	ug/L	6.1250 ppb	09:50:36
3	Fe 238.204 Radial†	86398.0	87114.4	363130	ug/L	363130 ppb	09:50:16
3	K 766.490 Radial†	2431.6	45.5	90.097	ug/L	90.097 ppb	09:50:16
3	Mg 279.077 IEC†	13.0	10.1	-60.202	ug/L	-60.202 ppb	09:50:36
3	Na 589.592 Radial†	433.2	572.5	35.136	ug/L	35.136 ppb	09:50:16
3	Sr 421.552†	140.6	197.7	0.5521	ug/L	0.5521 ppb	09:50:16
3	Sc 361.383	728972.2	728972.2	101.43	%		09:51:34
3	Y 371.029	566673.6	566673.6	100.83	%		09:51:34
3	Ag 328.068†	-18859.5	-19226.1	1.4611	ug/L	1.4611 ppb	09:51:34
3	As 188.979†	-247.1	-208.1	-2.5135	ug/L	-2.5135 ppb	09:51:54
3	B 249.677†	1234.9	2157.4	29.557	ug/L	29.557 ppb	09:51:34
3	Ba 233.527†	-1639.4	-1616.8	-12.972	ug/L	-12.972 ppb	09:51:54
3	Be 313.107†	-4699.9	248.2	0.1140	ug/L	0.1140 ppb	09:51:34
3	Cd 226.502†	2783.8	3025.7	-3.7352	ug/L	-3.7352 ppb	09:51:54
3	Co 228.616†	174.3	271.3	-0.5400	ug/L	-0.5400 ppb	09:51:54
3	Cr 267.716†	-591.8	-506.0	0.4145	ug/L	0.4145 ppb	09:51:54
3	Cu 324.752†	-729.8	-6357.9	-2.0447	ug/L	-2.0447 ppb	09:51:34
3	Mn 257.610†	-38791.6	-38924.0	2.7271	ug/L	2.7271 ppb	09:51:34
3	Mo 202.031†	-344.1	-356.4	-1.3967	ug/L	-1.3967 ppb	09:51:54
3	Ni 231.604†	295.1	171.1	4.5706	ug/L	4.5706 ppb	09:51:54
3	P 214.914†	869.6	542.5	-11.288	ug/L	-11.288 ppb	09:51:54
3	Pb 220.353†	261.6	271.1	-2.0706	ug/L	-2.0706 ppb	09:51:54
3	S 181.975 Axial†	102.7	25.9	35.435	ug/L	35.435 ppb	09:51:54
3	Sb 206.836†	50.3	-7.7	4.0433	ug/L	4.0433 ppb	09:51:54
3	Se 196.026†	-2361.0	-2299.0	35.562	ug/L	35.562 ppb	09:51:54
3	Si 251.611†	-1975.7	-2359.6	-72.383	ug/L	-72.383 ppb	09:51:54
3	Sn 189.927†	-11.8	-24.1	22.763	ug/L	22.763 ppb	09:51:54
3	Ti 334.940†	-1278.1	88.2	0.1322	ug/L	0.1322 ppb	09:51:54
3	Tl 190.801†	-76.3	-14.5	-4.1245	ug/L	-4.1245 ppb	09:51:54
3	U 409.014†	-2741.1	2146.3	28.066	ug/L	28.066 ppb	09:51:34
3	V 292.402†	4447.8	5950.2	3.2477	ug/L	3.2477 ppb	09:51:54
3	Zn 213.857†	5010.6	4014.8	-0.8309	ug/L	-0.8309 ppb	09:51:54
3	SiO2†	-2036.2	-2444.4	-159.68	ug/L	-159.68 ppb	09:52:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	728494.8	101.36	%	0.442				0.44%
Sc Radial	7442.8	99.6	%	0.86				0.86%
Y 371.029	566140.1	100.74	%	0.450				0.45%
Y RADIAL	6874.4	99.28	%	0.525				0.53%
Ag 328.068†	-19229.4	1.0957	ug/L	0.50161	1.0957	ppb	0.50161	45.78%
Al 396.153Radial†	-20.9	-16.179	ug/L	18.0298	-16.179	ppb	18.0298	111.44%
As 188.979†	-214.7	-5.0850	ug/L	2.92523	-5.0850	ppb	2.92523	57.53%
B 249.677†	2111.7	28.479	ug/L	0.9406	28.479	ppb	0.9406	3.30%
Ba 233.527†	-1607.0	-12.898	ug/L	0.0845	-12.898	ppb	0.0845	0.66%
Be 313.107†	248.1	0.1141	ug/L	0.01735	0.1141	ppb	0.01735	15.21%
Ca 317.933Radial†	5.3	7.5390	ug/L	3.05107	7.5390	ppb	3.05107	40.47%
Cd 226.502†	3000.5	-3.9298	ug/L	0.41023	-3.9298	ppb	0.41023	10.44%
Co 228.616†	266.8	-0.6006	ug/L	0.05250	-0.6006	ppb	0.05250	8.74%
Cr 267.716†	-539.9	-0.0825	ug/L	0.43120	-0.0825	ppb	0.43120	522.91%
Cu 324.752†	-6245.3	-1.6991	ug/L	0.30636	-1.6991	ppb	0.30636	18.03%
Fe 238.204 Radial†	86855.3	362050	ug/L	1194.5	362050	ppb	1194.5	0.33%
K 766.490 Radial†	-17.0	76.359	ug/L	16.9055	76.359	ppb	16.9055	22.14%

Mg 279.077 IEC†	10.0	-60.965	ug/L	27.0664	-60.965	ppb	27.0664	44.40%
Mn 257.610†	-38711.7	2.8255	ug/L	0.10788	2.8255	ppb	0.10788	3.82%
Mo 202.031†	-345.1	-0.6705	ug/L	0.85941	-0.6705	ppb	0.85941	128.18%
Na 589.592 Radial†	537.6	32.994	ug/L	1.9608	32.994	ppb	1.9608	5.94%
Ni 231.604†	173.8	4.6430	ug/L	0.31712	4.6430	ppb	0.31712	6.83%
P 214.914†	562.3	-0.3937	ug/L	9.47646	-0.3937	ppb	9.47646	>999.9%
Pb 220.353†	278.4	-1.1032	ug/L	1.01205	-1.1032	ppb	1.01205	91.73%
S 181.975 Axial†	28.6	39.204	ug/L	4.4950	39.204	ppb	4.4950	11.47%
Sb 206.836†	-12.0	2.7655	ug/L	1.58134	2.7655	ppb	1.58134	57.18%
Se 196.026†	-2295.1	33.951	ug/L	6.8883	33.951	ppb	6.8883	20.29%
Si 251.611†	-2367.5	-72.631	ug/L	0.4490	-72.631	ppb	0.4490	0.62%
Sn 189.927†	-26.4	22.290	ug/L	1.5828	22.290	ppb	1.5828	7.10%
Sr 421.552†	180.8	0.5049	ug/L	0.04089	0.5049	ppb	0.04089	8.10%
Ti 334.940†	123.9	0.1976	ug/L	0.05741	0.1976	ppb	0.05741	29.06%
Tl 190.801†	-9.2	-2.7402	ug/L	2.46144	-2.7402	ppb	2.46144	89.83%
U 409.014†	2159.5	28.645	ug/L	1.7380	28.645	ppb	1.7380	6.07%
V 292.402†	5951.1	3.4170	ug/L	0.90831	3.4170	ppb	0.90831	26.58%
Zn 213.857†	4026.5	-0.6119	ug/L	0.35751	-0.6119	ppb	0.35751	58.42%
SiO2†	-2464.7	-161.03	ug/L	3.008	-161.03	ppb	3.008	1.87%

Sequence No.: 4
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 09:54:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7478.5	7478.5	100	%			09:56:33
1	Y RADIAL	6940.5	6940.5	100.2	%			09:56:13
1	Al 396.153Radial†	6252.6	6321.9	5184.7	ug/L	5184.7	ppb	09:56:13
1	Ca 317.933Radial†	3732.0	3701.0	5242.8	ug/L	5242.8	ppb	09:56:33
1	Fe 238.204 Radial†	1242.8	1207.3	5048.3	ug/L	5048.3	ppb	09:56:33
1	K 766.490 Radial†	24779.2	22359.0	4811.0	ug/L	4811.0	ppb	09:56:13
1	Mg 279.077 IEC†	213.1	209.9	5239.8	ug/L	5239.8	ppb	09:56:33
1	Na 589.592 Radial†	165729.6	165778.2	10174	ug/L	10174	ppb	09:56:13
1	Sr 421.552†	172347.0	172312.4	481.22	ug/L	481.22	ppb	09:56:13
1	Sc 361.383	755963.2	755963.2	105.19	%			09:57:32
1	Y 371.029	582662.1	582662.1	103.68	%			09:57:32
1	Ag 328.068†	87925.9	82958.0	498.66	ug/L	498.66	ppb	09:57:32
1	As 188.979†	1406.2	1372.3	498.06	ug/L	498.06	ppb	09:57:52
1	B 249.677†	19796.4	19760.2	495.13	ug/L	495.13	ppb	09:57:32
1	Ba 233.527†	74510.0	70835.7	500.89	ug/L	500.89	ppb	09:57:32
1	Be 313.107†	1145024.8	1093449.4	501.63	ug/L	501.63	ppb	09:57:32
1	Cd 226.502†	39856.8	38172.7	486.62	ug/L	486.62	ppb	09:57:52
1	Co 228.616†	29708.8	28343.4	491.74	ug/L	491.74	ppb	09:57:52
1	Cr 267.716†	37343.6	35579.8	499.27	ug/L	499.27	ppb	09:57:32
1	Cu 324.752†	150019.0	136983.6	496.68	ug/L	496.68	ppb	09:57:32
1	Mn 257.610†	477832.6	453592.8	500.74	ug/L	500.74	ppb	09:57:32
1	Mo 202.031†	7443.1	7058.9	497.27	ug/L	497.27	ppb	09:57:52
1	Ni 231.604†	19445.4	18366.8	490.63	ug/L	490.63	ppb	09:57:52
1	P 214.914†	5462.1	4878.0	2396.1	ug/L	2396.1	ppb	09:57:52
1	Pb 220.353†	4416.7	4212.2	503.04	ug/L	503.04	ppb	09:57:52
1	S 181.975 Axial†	837.4	720.7	986.32	ug/L	986.32	ppb	09:57:52
1	Sb 206.836†	1799.7	1653.7	497.42	ug/L	497.42	ppb	09:57:52
1	Se 196.026†	1002.5	981.8	518.88	ug/L	518.88	ppb	09:57:52
1	Si 251.611†	86227.0	81563.6	2502.1	ug/L	2502.1	ppb	09:57:32
1	Sn 189.927†	2970.3	2811.3	498.49	ug/L	498.49	ppb	09:57:52
1	Ti 334.940†	284289.1	271620.1	497.20	ug/L	497.20	ppb	09:57:32
1	Tl 190.801†	1943.0	1907.9	502.50	ug/L	502.50	ppb	09:57:52
1	U 409.014†	10464.7	14797.5	499.48	ug/L	499.48	ppb	09:57:32
1	V 292.402†	55893.3	54702.6	502.73	ug/L	502.73	ppb	09:57:32
1	Zn 213.857†	58022.0	54236.0	495.98	ug/L	495.98	ppb	09:57:32
1	SiO2†	85674.8	81013.6	5290.1	ug/L	5290.1	ppb	09:58:53
2	Sc Radial	7375.3	7375.3	98.7	%			09:56:59
2	Y RADIAL	6971.4	6971.4	100.7	%			09:56:39
2	Al 396.153Radial†	6237.3	6393.9	5243.3	ug/L	5243.3	ppb	09:56:39
2	Ca 317.933Radial†	3700.7	3721.4	5271.8	ug/L	5271.8	ppb	09:56:59
2	Fe 238.204 Radial†	1238.5	1220.4	5103.2	ug/L	5103.2	ppb	09:56:59
2	K 766.490 Radial†	24868.6	22796.1	4905.0	ug/L	4905.0	ppb	09:56:39
2	Mg 279.077 IEC†	212.1	211.9	5288.6	ug/L	5288.6	ppb	09:56:59
2	Na 589.592 Radial†	166224.2	168596.9	10347	ug/L	10347	ppb	09:56:39
2	Sr 421.552†	172525.7	174903.5	488.46	ug/L	488.46	ppb	09:56:39
2	Sc 361.383	741650.4	741650.4	103.19	%			09:58:00
2	Y 371.029	572297.5	572297.5	101.83	%			09:58:00
2	Ag 328.068†	87542.3	84199.4	506.12	ug/L	506.12	ppb	09:58:00
2	As 188.979†	1428.4	1419.6	515.15	ug/L	515.15	ppb	09:58:20
2	B 249.677†	19712.4	20042.0	502.16	ug/L	502.16	ppb	09:58:00
2	Ba 233.527†	74207.4	71909.5	508.48	ug/L	508.48	ppb	09:58:00
2	Be 313.107†	1140040.3	1109627.1	509.05	ug/L	509.05	ppb	09:58:00
2	Cd 226.502†	40268.6	39303.1	501.04	ug/L	501.04	ppb	09:58:20
2	Co 228.616†	29947.4	29119.7	505.23	ug/L	505.23	ppb	09:58:20
2	Cr 267.716†	37278.3	36201.6	507.99	ug/L	507.99	ppb	09:58:00
2	Cu 324.752†	148944.0	138694.3	502.89	ug/L	502.89	ppb	09:58:00
2	Mn 257.610†	475432.5	460033.8	507.85	ug/L	507.85	ppb	09:58:00
2	Mo 202.031†	7521.0	7271.0	512.20	ug/L	512.20	ppb	09:58:20
2	Ni 231.604†	19618.0	18890.8	504.63	ug/L	504.63	ppb	09:58:20

2	P 214.914†	5502.9	5017.8	2466.4 ug/L	2466.4 ppb	09:58:20
2	Pb 220.353†	4442.9	4318.6	515.75 ug/L	515.75 ppb	09:58:20
2	S 181.975 Axial†	845.3	743.7	1017.9 ug/L	1017.9 ppb	09:58:20
2	Sb 206.836†	1809.1	1695.8	510.22 ug/L	510.22 ppb	09:58:20
2	Se 196.026†	1003.1	1000.8	528.79 ug/L	528.79 ppb	09:58:20
2	Si 251.611†	85675.8	82611.5	2534.0 ug/L	2534.0 ppb	09:58:00
2	Sn 189.927†	2986.0	2881.1	510.85 ug/L	510.85 ppb	09:58:20
2	Ti 334.940†	282438.0	275042.2	503.46 ug/L	503.46 ppb	09:58:00
2	Tl 190.801†	1958.2	1958.3	515.69 ug/L	515.69 ppb	09:58:20
2	U 409.014†	10221.9	14754.2	497.99 ug/L	497.99 ppb	09:58:00
2	V 292.402†	55452.0	55300.4	508.33 ug/L	508.33 ppb	09:58:00
2	Zn 213.857†	57730.0	55017.6	503.09 ug/L	503.09 ppb	09:58:00
2	SiO2†	87267.4	84128.8	5493.9 ug/L	5493.9 ppb	09:58:58
3	Sc Radial	7411.0	7411.0	99.1 %		09:57:24
3	Y RADIAL	7040.6	7040.6	101.7 %		09:57:04
3	Al 396.153Radial†	6347.5	6474.6	5309.9 ug/L	5309.9 ppb	09:57:04
3	Ca 317.933Radial†	3721.8	3724.7	5276.5 ug/L	5276.5 ppb	09:57:24
3	Fe 238.204 Radial†	1240.8	1216.7	5087.6 ug/L	5087.6 ppb	09:57:24
3	K 766.490 Radial†	25163.8	22972.6	4943.1 ug/L	4943.1 ppb	09:57:04
3	Mg 279.077 IEC†	213.8	212.6	5307.0 ug/L	5307.0 ppb	09:57:24
3	Na 589.592 Radial†	168879.2	170464.6	10462 ug/L	10462 ppb	09:57:04
3	Sr 421.552†	175504.4	177067.0	494.50 ug/L	494.50 ppb	09:57:04
3	Sc 361.383	748842.8	748842.8	104.20 %		09:58:27
3	Y 371.029	577212.1	577212.1	102.71 %		09:58:27
3	Ag 328.068†	88600.2	84400.0	507.32 ug/L	507.32 ppb	09:58:27
3	As 188.979†	1449.4	1426.5	517.65 ug/L	517.65 ppb	09:58:47
3	B 249.677†	20105.2	20235.5	507.05 ug/L	507.05 ppb	09:58:27
3	Ba 233.527†	75265.7	72234.5	510.78 ug/L	510.78 ppb	09:58:27
3	Be 313.107†	1157683.3	1115948.9	511.94 ug/L	511.94 ppb	09:58:27
3	Cd 226.502†	40484.4	39135.4	498.90 ug/L	498.90 ppb	09:58:47
3	Co 228.616†	30123.4	29009.9	503.32 ug/L	503.32 ppb	09:58:47
3	Cr 267.716†	37752.9	36310.1	509.52 ug/L	509.52 ppb	09:58:27
3	Cu 324.752†	151098.8	139376.1	505.35 ug/L	505.35 ppb	09:58:27
3	Mn 257.610†	482278.8	462179.4	510.21 ug/L	510.21 ppb	09:58:27
3	Mo 202.031†	7551.9	7230.7	509.36 ug/L	509.36 ppb	09:58:47
3	Ni 231.604†	19742.2	18827.4	502.93 ug/L	502.93 ppb	09:58:47
3	P 214.914†	5533.5	4995.9	2454.7 ug/L	2454.7 ppb	09:58:47
3	Pb 220.353†	4475.9	4308.9	514.60 ug/L	514.60 ppb	09:58:47
3	S 181.975 Axial†	854.0	744.2	1018.4 ug/L	1018.4 ppb	09:58:47
3	Sb 206.836†	1825.2	1694.4	509.69 ug/L	509.69 ppb	09:58:47
3	Se 196.026†	1023.7	1011.2	534.06 ug/L	534.06 ppb	09:58:47
3	Si 251.611†	87051.0	83134.0	2550.2 ug/L	2550.2 ppb	09:58:27
3	Sn 189.927†	3008.4	2874.7	509.72 ug/L	509.72 ppb	09:58:47
3	Ti 334.940†	286275.1	276096.0	505.39 ug/L	505.39 ppb	09:58:27
3	Tl 190.801†	1979.1	1960.2	516.21 ug/L	516.21 ppb	09:58:47
3	U 409.014†	10307.6	14741.2	497.55 ug/L	497.55 ppb	09:58:27
3	V 292.402†	56401.2	55695.3	511.88 ug/L	511.88 ppb	09:58:27
3	Zn 213.857†	58544.6	55262.1	505.35 ug/L	505.35 ppb	09:58:27
3	SiO2†	87811.5	83838.7	5475.0 ug/L	5475.0 ppb	09:59:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	748818.8	104.19	%	0.996				0.96%
Sc Radial	7421.6	99.3	%	0.70				0.71%
Y 371.029	577390.6	102.74	%	0.923				0.90%
Y RADIAL	6984.2	100.9	%	0.74				0.73%
Ag 328.068†	83852.5	504.03	ug/L	4.692	504.03	ppb	4.692	0.93%
QC value within limits for Ag 328.068 Recovery = 100.81%								
Al 396.153Radial†	6396.8	5246.0	ug/L	62.65	5246.0	ppb	62.65	1.19%
QC value within limits for Al 396.153Radial Recovery = 104.92%								
As 188.979†	1406.1	510.29	ug/L	10.662	510.29	ppb	10.662	2.09%
QC value within limits for As 188.979 Recovery = 102.06%								
B 249.677†	20012.6	501.45	ug/L	5.991	501.45	ppb	5.991	1.19%
QC value within limits for B 249.677 Recovery = 100.29%								
Ba 233.527†	71659.9	506.72	ug/L	5.175	506.72	ppb	5.175	1.02%
QC value within limits for Ba 233.527 Recovery = 101.34%								
Be 313.107†	1106341.8	507.54	ug/L	5.321	507.54	ppb	5.321	1.05%
QC value within limits for Be 313.107 Recovery = 101.51%								
Ca 317.933Radial†	3715.7	5263.7	ug/L	18.21	5263.7	ppb	18.21	0.35%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.27%
Cd 226.502†            38870.4      495.52 ug/L          7.782      495.52 ppb          7.782   1.57%
   QC value within limits for Cd 226.502  Recovery = 99.10%
Co 228.616†            28824.3      500.10 ug/L          7.297      500.10 ppb          7.297   1.46%
   QC value within limits for Co 228.616  Recovery = 100.02%
Cr 267.716†            36030.5      505.59 ug/L          5.530      505.59 ppb          5.530   1.09%
   QC value within limits for Cr 267.716  Recovery = 101.12%
Cu 324.752†           138351.3      501.64 ug/L          4.468      501.64 ppb          4.468   0.89%
   QC value within limits for Cu 324.752  Recovery = 100.33%
Fe 238.204 Radial†      1214.8      5079.7 ug/L         28.29      5079.7 ppb         28.29   0.56%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.59%
K 766.490 Radial†      22709.2      4886.3 ug/L         68.00      4886.3 ppb         68.00   1.39%
   QC value within limits for K 766.490 Radial  Recovery = 97.73%
Mg 279.077 IEC†          211.5      5278.5 ug/L         34.76      5278.5 ppb         34.76   0.66%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.57%
Mn 257.610†           458602.0      506.27 ug/L          4.930      506.27 ppb          4.930   0.97%
   QC value within limits for Mn 257.610  Recovery = 101.25%
Mo 202.031†             7186.9      506.28 ug/L          7.930      506.28 ppb          7.930   1.57%
   QC value within limits for Mo 202.031  Recovery = 101.26%
Na 589.592 Radial†    168279.9       10328 ug/L        144.8       10328 ppb        144.8   1.40%
   QC value within limits for Na 589.592 Radial  Recovery = 103.28%
Ni 231.604†            18695.0      499.40 ug/L          7.640      499.40 ppb          7.640   1.53%
   QC value within limits for Ni 231.604  Recovery = 99.88%
P 214.914†              4963.9      2439.1 ug/L         37.67      2439.1 ppb         37.67   1.54%
   QC value within limits for P 214.914  Recovery = 97.56%
Pb 220.353†             4279.9      511.13 ug/L          7.030      511.13 ppb          7.030   1.38%
   QC value within limits for Pb 220.353  Recovery = 102.23%
S 181.975 Axial†         736.2      1007.5 ug/L         18.37      1007.5 ppb         18.37   1.82%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             1681.3      505.78 ug/L          7.243      505.78 ppb          7.243   1.43%
   QC value within limits for Sb 206.836  Recovery = 101.16%
Se 196.026†              998.0      527.24 ug/L          7.706      527.24 ppb          7.706   1.46%
   QC value within limits for Se 196.026  Recovery = 105.45%
Si 251.611†            82436.4      2528.7 ug/L         24.47      2528.7 ppb         24.47   0.97%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†             2855.7      506.35 ug/L          6.833      506.35 ppb          6.833   1.35%
   QC value within limits for Sn 189.927  Recovery = 101.27%
Sr 421.552†           174760.9      488.06 ug/L          6.649      488.06 ppb          6.649   1.36%
   QC value within limits for Sr 421.552  Recovery = 97.61%
Ti 334.940†           274252.7      502.02 ug/L          4.284      502.02 ppb          4.284   0.85%
   QC value within limits for Ti 334.940  Recovery = 100.40%
Tl 190.801†             1942.1      511.46 ug/L          7.769      511.46 ppb          7.769   1.52%
   QC value within limits for Tl 190.801  Recovery = 102.29%
U 409.014†             14764.3      498.34 ug/L          1.011      498.34 ppb          1.011   0.20%
   QC value within limits for U 409.014  Recovery = 99.67%
V 292.402†             55232.8      507.65 ug/L          4.612      507.65 ppb          4.612   0.91%
   QC value within limits for V 292.402  Recovery = 101.53%
Zn 213.857†            54838.6      501.47 ug/L          4.890      501.47 ppb          4.890   0.98%
   QC value within limits for Zn 213.857  Recovery = 100.29%
SiO2†                  82993.7      5419.7 ug/L        112.62      5419.7 ppb        112.62   2.08%
   QC value within limits for SiO2  Recovery = 101.35%
All analyte(s) passed QC.
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Sequence No.: 5
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 10:01:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7523.2	7523.2	101	%			10:03:05
1	Y RADIAL	7002.2	7002.2	101.1	%			10:03:05
1	Al 396.153Radial†	-76.6	-3.4	-2.8352	ug/L	-2.8352	ppb	10:03:05
1	Ca 317.933Radial†	29.1	-0.2	-0.2986	ug/L	-0.2986	ppb	10:03:25
1	Fe 238.204 Radial†	35.7	0.7	2.9537	ug/L	2.9537	ppb	10:03:25
1	K 766.490 Radial†	2487.9	64.7	13.944	ug/L	13.944	ppb	10:03:05
1	Mg 279.077 IEC†	6.1	3.0	75.404	ug/L	75.404	ppb	10:03:25
1	Na 589.592 Radial†	81.7	216.7	13.301	ug/L	13.301	ppb	10:03:05
1	Sr 421.552†	-19.2	36.8	0.1029	ug/L	0.1029	ppb	10:03:05
1	Sc 361.383	722848.6	722848.6	100.58	%			10:04:22
1	Y 371.029	565709.7	565709.7	100.66	%			10:04:22
1	Ag 328.068†	713.2	76.4	0.4596	ug/L	0.4596	ppb	10:04:22
1	As 188.979†	-27.7	7.9	2.8303	ug/L	2.8303	ppb	10:04:42
1	B 249.677†	-657.8	285.9	7.2027	ug/L	7.2027	ppb	10:04:22
1	Ba 233.527†	32.1	31.4	0.2212	ug/L	0.2212	ppb	10:04:42
1	Be 313.107†	-4822.3	87.2	0.0396	ug/L	0.0396	ppb	10:04:22
1	Cd 226.502†	-263.1	19.5	0.2480	ug/L	0.2480	ppb	10:04:42
1	Co 228.616†	-67.3	32.6	0.5665	ug/L	0.5665	ppb	10:04:42
1	Cr 267.716†	-53.9	23.8	0.3341	ug/L	0.3341	ppb	10:04:22
1	Cu 324.752†	5612.3	-58.4	-0.2116	ug/L	-0.2116	ppb	10:04:22
1	Mn 257.610†	625.0	-58.2	-0.0652	ug/L	-0.0652	ppb	10:04:42
1	Mo 202.031†	24.0	6.7	0.4712	ug/L	0.4712	ppb	10:04:42
1	Ni 231.604†	124.8	4.3	0.1134	ug/L	0.1134	ppb	10:04:42
1	P 214.914†	314.4	-2.2	-1.0806	ug/L	-1.0806	ppb	10:04:42
1	Pb 220.353†	-6.9	6.4	0.7635	ug/L	0.7635	ppb	10:04:42
1	S 181.975 Axial†	79.8	3.9	5.3226	ug/L	5.3226	ppb	10:04:42
1	Sb 206.836†	60.4	2.8	0.8532	ug/L	0.8532	ppb	10:04:42
1	Se 196.026†	-27.6	1.4	0.7143	ug/L	0.7143	ppb	10:04:42
1	Si 251.611†	482.7	68.1	2.0772	ug/L	2.0772	ppb	10:04:42
1	Sn 189.927†	18.8	6.2	1.0938	ug/L	1.0938	ppb	10:04:42
1	Ti 334.940†	-1435.9	-79.4	-0.1442	ug/L	-0.1442	ppb	10:04:22
1	Tl 190.801†	-53.0	8.1	2.1110	ug/L	2.1110	ppb	10:04:42
1	U 409.014†	-4963.2	-85.9	-2.9104	ug/L	-2.9104	ppb	10:04:22
1	V 292.402†	-1585.9	-11.6	-0.1040	ug/L	-0.1040	ppb	10:04:22
1	Zn 213.857†	973.9	43.2	0.3953	ug/L	0.3953	ppb	10:04:42
1	SiO2†	517.3	77.4	5.0284	ug/L	5.0284	ppb	10:05:38
2	Sc Radial	7549.3	7549.3	101	%			10:03:30
2	Y RADIAL	6999.8	6999.8	101.1	%			10:03:30
2	Al 396.153Radial†	-68.7	4.6	3.7370	ug/L	3.7370	ppb	10:03:30
2	Ca 317.933Radial†	28.8	-0.6	-0.8039	ug/L	-0.8039	ppb	10:03:50
2	Fe 238.204 Radial†	38.7	3.5	14.687	ug/L	14.687	ppb	10:03:50
2	K 766.490 Radial†	2642.9	209.5	45.202	ug/L	45.202	ppb	10:03:30
2	Mg 279.077 IEC†	-0.6	-3.6	-90.505	ug/L	-90.505	ppb	10:03:50
2	Na 589.592 Radial†	76.5	211.3	12.970	ug/L	12.970	ppb	10:03:30
2	Sr 421.552†	29.1	84.7	0.2365	ug/L	0.2365	ppb	10:03:30
2	Sc 361.383	732900.9	732900.9	101.98	%			10:04:47
2	Y 371.029	573361.1	573361.1	102.02	%			10:04:47
2	Ag 328.068†	679.3	33.4	0.2003	ug/L	0.2003	ppb	10:04:47
2	As 188.979†	-34.5	1.6	0.5908	ug/L	0.5908	ppb	10:05:07
2	B 249.677†	-583.0	368.2	9.2784	ug/L	9.2784	ppb	10:04:47
2	Ba 233.527†	20.6	19.7	0.1389	ug/L	0.1389	ppb	10:05:07
2	Be 313.107†	-4829.5	145.9	0.0669	ug/L	0.0669	ppb	10:04:47
2	Cd 226.502†	-270.4	16.0	0.2023	ug/L	0.2023	ppb	10:05:07
2	Co 228.616†	-90.6	10.6	0.1862	ug/L	0.1862	ppb	10:05:07
2	Cr 267.716†	-58.4	20.1	0.2805	ug/L	0.2805	ppb	10:04:47
2	Cu 324.752†	5752.2	2.2	0.0090	ug/L	0.0090	ppb	10:04:47
2	Mn 257.610†	657.3	-35.1	-0.0351	ug/L	-0.0351	ppb	10:05:07
2	Mo 202.031†	28.8	11.1	0.7824	ug/L	0.7824	ppb	10:05:07
2	Ni 231.604†	141.7	19.2	0.5124	ug/L	0.5124	ppb	10:05:07

2	P 214.914†	297.2	-23.3	-11.906	ug/L	-11.906 ppb	10:05:07
2	Pb 220.353†	-9.9	3.5	0.4219	ug/L	0.4219 ppb	10:05:07
2	S 181.975 Axial†	80.3	3.3	4.5650	ug/L	4.5650 ppb	10:05:07
2	Sb 206.836†	74.9	16.2	4.8151	ug/L	4.8151 ppb	10:05:07
2	Se 196.026†	-31.1	-1.8	-0.8478	ug/L	-0.8478 ppb	10:05:07
2	Si 251.611†	459.2	38.5	1.1551	ug/L	1.1551 ppb	10:05:07
2	Sn 189.927†	15.2	2.4	0.4310	ug/L	0.4310 ppb	10:05:07
2	Ti 334.940†	-1349.9	24.5	0.0426	ug/L	0.0426 ppb	10:04:47
2	Tl 190.801†	-51.1	10.6	2.7838	ug/L	2.7838 ppb	10:05:07
2	U 409.014†	-4797.1	144.7	4.8967	ug/L	4.8967 ppb	10:04:47
2	V 292.402†	-1595.8	0.3	0.0187	ug/L	0.0187 ppb	10:04:47
2	Zn 213.857†	962.1	18.3	0.1675	ug/L	0.1675 ppb	10:05:07
2	SiO2†	487.2	40.8	2.6085	ug/L	2.6085 ppb	10:05:43
3	Sc Radial	7617.8	7617.8	102	%		10:03:55
3	Y RADIAL	7019.0	7019.0	101.4	%		10:03:55
3	Al 396.153Radial†	-52.2	21.5	17.674	ug/L	17.674 ppb	10:03:55
3	Ca 317.933Radial†	32.5	2.8	3.9509	ug/L	3.9509 ppb	10:04:15
3	Fe 238.204 Radial†	35.8	0.3	1.4002	ug/L	1.4002 ppb	10:04:15
3	K 766.490 Radial†	2517.2	62.7	13.516	ug/L	13.516 ppb	10:03:55
3	Mg 279.077 IEC†	4.6	1.4	35.985	ug/L	35.985 ppb	10:04:15
3	Na 589.592 Radial†	142.1	275.0	16.876	ug/L	16.876 ppb	10:03:55
3	Sr 421.552†	-5.0	50.9	0.1422	ug/L	0.1422 ppb	10:03:55
3	Sc 361.383	725063.9	725063.9	100.89	%		10:05:13
3	Y 371.029	567550.1	567550.1	100.99	%		10:05:13
3	Ag 328.068†	597.1	-40.8	-0.2368	ug/L	-0.2368 ppb	10:05:13
3	As 188.979†	-33.2	2.5	0.9038	ug/L	0.9038 ppb	10:05:33
3	B 249.677†	-630.7	314.8	7.9341	ug/L	7.9341 ppb	10:05:13
3	Ba 233.527†	24.9	24.2	0.1724	ug/L	0.1724 ppb	10:05:33
3	Be 313.107†	-4848.3	76.1	0.0351	ug/L	0.0351 ppb	10:05:13
3	Cd 226.502†	-279.6	4.0	0.0508	ug/L	0.0508 ppb	10:05:33
3	Co 228.616†	-108.0	-7.6	-0.1325	ug/L	-0.1325 ppb	10:05:33
3	Cr 267.716†	-50.7	27.1	0.3823	ug/L	0.3823 ppb	10:05:13
3	Cu 324.752†	5699.5	11.0	0.0399	ug/L	0.0399 ppb	10:05:13
3	Mn 257.610†	651.6	-33.8	-0.0378	ug/L	-0.0378 ppb	10:05:33
3	Mo 202.031†	15.3	-1.9	-0.1364	ug/L	-0.1364 ppb	10:05:33
3	Ni 231.604†	135.6	14.6	0.3914	ug/L	0.3914 ppb	10:05:33
3	P 214.914†	311.4	-6.1	-3.1113	ug/L	-3.1113 ppb	10:05:33
3	Pb 220.353†	-13.2	0.2	0.0218	ug/L	0.0218 ppb	10:05:33
3	S 181.975 Axial†	84.3	8.2	11.170	ug/L	11.170 ppb	10:05:33
3	Sb 206.836†	60.6	2.8	0.8387	ug/L	0.8387 ppb	10:05:33
3	Se 196.026†	-32.6	-3.6	-1.8077	ug/L	-1.8077 ppb	10:05:33
3	Si 251.611†	470.8	54.9	1.6774	ug/L	1.6774 ppb	10:05:33
3	Sn 189.927†	19.6	6.9	1.2305	ug/L	1.2305 ppb	10:05:33
3	Ti 334.940†	-1300.4	59.2	0.1106	ug/L	0.1106 ppb	10:05:13
3	Tl 190.801†	-51.4	9.8	2.5707	ug/L	2.5707 ppb	10:05:33
3	U 409.014†	-5032.0	-139.1	-4.7100	ug/L	-4.7100 ppb	10:05:13
3	V 292.402†	-1505.5	72.9	0.6516	ug/L	0.6516 ppb	10:05:13
3	Zn 213.857†	974.6	41.0	0.3740	ug/L	0.3740 ppb	10:05:33
3	SiO2†	505.5	64.2	4.1801	ug/L	4.1801 ppb	10:05:48

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	726937.8	101.15	%	0.735				0.73%
Sc Radial	7563.4	101	%	0.7				0.65%
Y 371.029	568873.6	101.22	%	0.711				0.70%
Y RADIAL	7007.0	101.2	%	0.15				0.15%
Ag 328.068†	23.0	0.1410	ug/L	0.35197	0.1410	ppb	0.35197	249.56%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	7.5	6.1919	ug/L	10.47268	6.1919	ppb	10.47268	169.13%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.0	1.4416	ug/L	1.21278	1.4416	ppb	1.21278	84.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	323.0	8.1384	ug/L	1.05284	8.1384	ppb	1.05284	12.94%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.1	0.1775	ug/L	0.04137	0.1775	ppb	0.04137	23.31%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	103.1	0.0472	ug/L	0.01721	0.0472	ppb	0.01721	36.48%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.7	0.9495	ug/L	2.61157	0.9495	ppb	2.61157	275.05%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              13.1      0.1670 ug/L       0.10326      0.1670 ppb        0.10326  61.82%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              11.9      0.2067 ug/L       0.34993      0.2067 ppb        0.34993 169.27%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              23.7      0.3323 ug/L       0.05096      0.3323 ppb        0.05096  15.33%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -15.1     -0.0542 ug/L       0.13715     -0.0542 ppb        0.13715 252.94%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        1.5      6.3469 ug/L       7.26416      6.3469 ppb        7.26416 114.45%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       112.3     24.221 ug/L       18.1718     24.221 ppb        18.1718  75.03%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.3      6.9612 ug/L      86.67921      6.9612 ppb       86.67921 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -42.3     -0.0460 ug/L       0.01669     -0.0460 ppb        0.01669  36.26%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.3      0.3724 ug/L       0.46732      0.3724 ppb        0.46732 125.49%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      234.3     14.382 ug/L        2.1662     14.382 ppb         2.1662  15.06%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              12.7      0.3391 ug/L       0.20457      0.3391 ppb        0.20457  60.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -10.6     -5.3660 ug/L       5.75414     -5.3660 ppb        5.75414 107.23%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               3.4      0.4024 ug/L       0.37122      0.4024 ppb        0.37122  92.26%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          5.1      7.0191 ug/L       3.61445      7.0191 ppb        3.61445  51.49%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               7.3      2.1690 ug/L       2.29159      2.1690 ppb        2.29159 105.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -1.3     -0.6470 ug/L       1.27291     -0.6470 ppb        1.27291 196.73%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              53.9      1.6366 ug/L       0.46242      1.6366 ppb        0.46242  28.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               5.2      0.9184 ug/L       0.42765      0.9184 ppb        0.42765  46.56%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              57.5      0.1605 ug/L       0.06866      0.1605 ppb        0.06866  42.77%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               1.5      0.0030 ug/L       0.13197      0.0030 ppb        0.13197 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               9.5      2.4885 ug/L       0.34386      2.4885 ppb        0.34386  13.82%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -26.8     -0.9079 ug/L       5.10685     -0.9079 ppb        5.10685 562.48%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               20.6      0.1888 ug/L       0.40548      0.1888 ppb        0.40548 214.78%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              34.2      0.3123 ug/L       0.12585      0.3123 ppb        0.12585  40.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    60.8      3.9390 ug/L       1.22783      3.9390 ppb        1.22783  31.17%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 10:57:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7562.8	7562.8	101	%			10:59:20
1	Y RADIAL	6962.9	6962.9	100.6	%			10:59:20
1	Al 396.153Radial†	6246.8	6246.6	5122.4	ug/L	5122.4	ppb	10:59:20
1	Ca 317.933Radial†	3649.3	3577.7	5068.2	ug/L	5068.2	ppb	10:59:20
1	Fe 238.204 Radial†	1210.3	1161.4	4857.7	ug/L	4857.7	ppb	10:59:40
1	K 766.490 Radial†	24506.8	21813.9	4693.3	ug/L	4693.3	ppb	10:59:15
1	Mg 279.077 IEC†	213.1	207.6	5181.7	ug/L	5181.7	ppb	10:59:40
1	Na 589.592 Radial†	163646.8	161874.2	9934.7	ug/L	9934.7	ppb	10:59:15
1	Sr 421.552†	170737.3	168802.3	471.42	ug/L	471.42	ppb	10:59:15
1	Sc 361.383	744688.2	744688.2	103.62	%			11:00:47
1	Y 371.029	574366.7	574366.7	102.20	%			11:00:47
1	Ag 328.068†	89936.9	86164.3	517.80	ug/L	517.80	ppb	11:00:53
1	As 188.979†	1426.8	1412.4	512.51	ug/L	512.51	ppb	11:01:13
1	B 249.677†	20280.2	20512.1	513.95	ug/L	513.95	ppb	11:00:53
1	Ba 233.527†	75895.8	73245.6	517.94	ug/L	517.94	ppb	11:00:53
1	Be 313.107†	1130809.6	1096212.0	502.90	ug/L	502.90	ppb	11:00:47
1	Cd 226.502†	41959.0	40775.2	519.85	ug/L	519.85	ppb	11:00:53
1	Co 228.616†	30995.3	30012.6	520.70	ug/L	520.70	ppb	11:00:53
1	Cr 267.716†	38126.3	36872.6	517.40	ug/L	517.40	ppb	11:00:53
1	Cu 324.752†	152100.8	141152.2	511.78	ug/L	511.78	ppb	11:00:53
1	Mn 257.610†	471556.1	454413.3	501.62	ug/L	501.62	ppb	11:00:47
1	Mo 202.031†	7425.7	7149.3	503.62	ug/L	503.62	ppb	11:01:13
1	Ni 231.604†	20201.5	19376.4	517.60	ug/L	517.60	ppb	11:00:53
1	P 214.914†	5455.1	4949.9	2430.1	ug/L	2430.1	ppb	11:01:13
1	Pb 220.353†	4376.8	4237.3	506.04	ug/L	506.04	ppb	11:01:13
1	S 181.975 Axial†	849.2	744.1	1018.4	ug/L	1018.4	ppb	11:01:13
1	Sb 206.836†	1844.4	1722.8	517.79	ug/L	517.79	ppb	11:01:13
1	Se 196.026†	1011.7	1005.1	530.14	ug/L	530.14	ppb	11:01:13
1	Si 251.611†	88149.6	84660.3	2597.5	ug/L	2597.5	ppb	11:00:53
1	Sn 189.927†	2975.9	2859.5	506.99	ug/L	506.99	ppb	11:01:13
1	Ti 334.940†	282974.0	274443.0	502.34	ug/L	502.34	ppb	11:00:53
1	Tl 190.801†	1970.9	1962.9	516.73	ug/L	516.73	ppb	11:01:13
1	U 409.014†	11173.4	15632.0	527.73	ug/L	527.73	ppb	11:00:53
1	V 292.402†	57110.2	56681.5	520.86	ug/L	520.86	ppb	11:00:53
1	Zn 213.857†	59267.2	56272.9	514.60	ug/L	514.60	ppb	11:00:53
1	SiO2†	86293.0	82843.4	5410.0	ug/L	5410.0	ppb	11:02:20
2	Sc Radial	7484.4	7484.4	100	%			10:59:50
2	Y RADIAL	6908.6	6908.6	99.77	%			10:59:50
2	Al 396.153Radial†	6320.9	6385.2	5236.3	ug/L	5236.3	ppb	10:59:50
2	Ca 317.933Radial†	3688.8	3654.8	5177.5	ug/L	5177.5	ppb	10:59:50
2	Fe 238.204 Radial†	1236.0	1199.6	5016.6	ug/L	5016.6	ppb	11:00:10
2	K 766.490 Radial†	24856.7	22416.9	4823.2	ug/L	4823.2	ppb	10:59:45
2	Mg 279.077 IEC†	209.9	206.6	5155.6	ug/L	5155.6	ppb	11:00:10
2	Na 589.592 Radial†	166232.1	166149.1	10197	ug/L	10197	ppb	10:59:45
2	Sr 421.552†	172573.7	172402.7	481.48	ug/L	481.48	ppb	10:59:45
2	Sc 361.383	736289.9	736289.9	102.45	%			11:01:18
2	Y 371.029	568354.7	568354.7	101.13	%			11:01:18
2	Ag 328.068†	87992.3	85256.3	512.41	ug/L	512.41	ppb	11:01:24
2	As 188.979†	1423.0	1424.4	516.86	ug/L	516.86	ppb	11:01:44
2	B 249.677†	19665.8	20135.6	504.48	ug/L	504.48	ppb	11:01:24
2	Ba 233.527†	74096.3	72324.5	511.43	ug/L	511.43	ppb	11:01:24
2	Be 313.107†	1132360.3	1110173.7	509.28	ug/L	509.28	ppb	11:01:18
2	Cd 226.502†	40924.6	40227.4	512.84	ug/L	512.84	ppb	11:01:24
2	Co 228.616†	30278.6	29654.3	514.51	ug/L	514.51	ppb	11:01:24
2	Cr 267.716†	37224.4	36412.0	510.94	ug/L	510.94	ppb	11:01:24
2	Cu 324.752†	148247.3	139065.1	504.22	ug/L	504.22	ppb	11:01:24
2	Mn 257.610†	472204.2	460236.9	508.07	ug/L	508.07	ppb	11:01:18
2	Mo 202.031†	7412.9	7218.6	508.50	ug/L	508.50	ppb	11:01:44
2	Ni 231.604†	19663.4	19073.6	509.51	ug/L	509.51	ppb	11:01:24

2	P 214.914†	5417.4	4973.1	2443.4	ug/L	2443.4 ppb	11:01:44
2	Pb 220.353†	4337.3	4246.9	507.21	ug/L	507.21 ppb	11:01:44
2	S 181.975 Axial†	840.2	744.7	1019.2	ug/L	1019.2 ppb	11:01:44
2	Sb 206.836†	1839.9	1738.7	522.83	ug/L	522.83 ppb	11:01:44
2	Se 196.026†	1010.9	1015.5	535.99	ug/L	535.99 ppb	11:01:44
2	Si 251.611†	85710.2	83249.6	2553.8	ug/L	2553.8 ppb	11:01:24
2	Sn 189.927†	2960.6	2877.3	510.16	ug/L	510.16 ppb	11:01:44
2	Ti 334.940†	276718.0	271451.5	496.87	ug/L	496.87 ppb	11:01:24
2	Tl 190.801†	1946.4	1960.6	516.18	ug/L	516.18 ppb	11:01:44
2	U 409.014†	10777.4	15368.5	518.79	ug/L	518.79 ppb	11:01:24
2	V 292.402†	55755.1	55987.6	514.58	ug/L	514.58 ppb	11:01:24
2	Zn 213.857†	57695.5	55391.2	506.51	ug/L	506.51 ppb	11:01:24
2	SiO2†	85916.0	83425.4	5447.9	ug/L	5447.9 ppb	11:02:25
3	Sc Radial	7491.8	7491.8	100	%		11:00:20
3	Y RADIAL	6880.3	6880.3	99.36	%		11:00:20
3	Al 396.153Radial†	6340.0	6398.1	5246.9	ug/L	5246.9 ppb	11:00:20
3	Ca 317.933Radial†	3701.1	3663.5	5189.8	ug/L	5189.8 ppb	11:00:20
3	Fe 238.204 Radial†	1222.5	1184.9	4955.6	ug/L	4955.6 ppb	11:00:40
3	K 766.490 Radial†	25054.1	22589.4	4860.4	ug/L	4860.4 ppb	11:00:15
3	Mg 279.077 IEC†	213.6	210.0	5242.5	ug/L	5242.5 ppb	11:00:40
3	Na 589.592 Radial†	167473.7	167224.7	10263	ug/L	10263 ppb	11:00:15
3	Sr 421.552†	174168.1	173824.1	485.45	ug/L	485.45 ppb	11:00:15
3	Sc 361.383	742591.9	742591.9	103.33	%		11:01:49
3	Y 371.029	573318.2	573318.2	102.01	%		11:01:49
3	Ag 328.068†	88554.5	85071.4	511.29	ug/L	511.29 ppb	11:01:55
3	As 188.979†	1436.9	1426.1	517.43	ug/L	517.43 ppb	11:02:15
3	B 249.677†	19971.5	20268.6	507.83	ug/L	507.83 ppb	11:01:55
3	Ba 233.527†	74813.9	72405.2	512.00	ug/L	512.00 ppb	11:01:55
3	Be 313.107†	1143597.4	1111669.0	509.96	ug/L	509.96 ppb	11:01:49
3	Cd 226.502†	41324.4	40275.3	513.46	ug/L	513.46 ppb	11:01:55
3	Co 228.616†	30570.8	29686.2	515.06	ug/L	515.06 ppb	11:01:55
3	Cr 267.716†	37594.3	36461.7	511.64	ug/L	511.64 ppb	11:01:55
3	Cu 324.752†	149668.9	139212.9	504.76	ug/L	504.76 ppb	11:01:55
3	Mn 257.610†	476911.1	460880.6	508.77	ug/L	508.77 ppb	11:01:49
3	Mo 202.031†	7473.8	7216.1	508.32	ug/L	508.32 ppb	11:02:15
3	Ni 231.604†	19910.2	19149.5	511.54	ug/L	511.54 ppb	11:01:55
3	P 214.914†	5449.8	4959.6	2436.4	ug/L	2436.4 ppb	11:02:15
3	Pb 220.353†	4381.3	4253.5	508.01	ug/L	508.01 ppb	11:02:15
3	S 181.975 Axial†	857.8	754.8	1033.0	ug/L	1033.0 ppb	11:02:15
3	Sb 206.836†	1854.8	1737.8	522.52	ug/L	522.52 ppb	11:02:15
3	Se 196.026†	1006.2	1002.5	529.17	ug/L	529.17 ppb	11:02:15
3	Si 251.611†	86609.1	83409.5	2558.7	ug/L	2558.7 ppb	11:01:55
3	Sn 189.927†	2974.4	2866.2	508.19	ug/L	508.19 ppb	11:02:15
3	Ti 334.940†	278364.8	270753.1	495.59	ug/L	495.59 ppb	11:01:55
3	Tl 190.801†	1953.6	1951.5	513.77	ug/L	513.77 ppb	11:02:15
3	U 409.014†	10927.4	15424.4	520.69	ug/L	520.69 ppb	11:01:55
3	V 292.402†	56335.4	56087.3	515.50	ug/L	515.50 ppb	11:01:55
3	Zn 213.857†	58236.1	55436.5	506.92	ug/L	506.92 ppb	11:01:55
3	SiO2†	88598.9	85310.2	5571.9	ug/L	5571.9 ppb	11:02:30

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	741190.0	103.13	%	0.608				0.59%
Sc Radial	7513.0	101	%	0.6				0.58%
Y 371.029	572013.2	101.78	%	0.571				0.56%
Y RADIAL	6917.3	99.90	%	0.606				0.61%
Ag 328.068†	85497.3	513.83	ug/L	3.483	513.83	ppb	3.483	0.68%
QC value within limits for Ag 328.068 Recovery = 102.77%								
Al 396.153Radial†	6343.3	5201.9	ug/L	69.03	5201.9	ppb	69.03	1.33%
QC value within limits for Al 396.153Radial Recovery = 104.04%								
As 188.979†	1421.0	515.60	ug/L	2.693	515.60	ppb	2.693	0.52%
QC value within limits for As 188.979 Recovery = 103.12%								
B 249.677†	20305.4	508.75	ug/L	4.800	508.75	ppb	4.800	0.94%
QC value within limits for B 249.677 Recovery = 101.75%								
Ba 233.527†	72658.4	513.79	ug/L	3.607	513.79	ppb	3.607	0.70%
QC value within limits for Ba 233.527 Recovery = 102.76%								
Be 313.107†	1106018.2	507.38	ug/L	3.894	507.38	ppb	3.894	0.77%
QC value within limits for Be 313.107 Recovery = 101.48%								
Ca 317.933Radial†	3632.0	5145.2	ug/L	66.93	5145.2	ppb	66.93	1.30%

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   QC value within limits for Ca 317.933Radial  Recovery = 102.90%
Cd 226.502†            40426.0      515.38 ug/L         3.881      515.38 ppb          3.881   0.75%
   QC value within limits for Cd 226.502  Recovery = 103.08%
Co 228.616†            29784.3      516.76 ug/L         3.426      516.76 ppb          3.426   0.66%
   QC value within limits for Co 228.616  Recovery = 103.35%
Cr 267.716†            36582.1      513.32 ug/L         3.545      513.32 ppb          3.545   0.69%
   QC value within limits for Cr 267.716  Recovery = 102.66%
Cu 324.752†           139810.0      506.92 ug/L         4.216      506.92 ppb          4.216   0.83%
   QC value within limits for Cu 324.752  Recovery = 101.38%
Fe 238.204 Radial†      1182.0      4943.3 ug/L         80.13      4943.3 ppb          80.13   1.62%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.87%
K 766.490 Radial†      22273.4      4792.3 ug/L         87.75      4792.3 ppb          87.75   1.83%
   QC value within limits for K 766.490 Radial  Recovery = 95.85%
Mg 279.077 IEC†          208.1      5193.3 ug/L         44.55      5193.3 ppb          44.55   0.86%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.87%
Mn 257.610†           458510.3      506.15 ug/L         3.937      506.15 ppb          3.937   0.78%
   QC value within limits for Mn 257.610  Recovery = 101.23%
Mo 202.031†             7194.7      506.82 ug/L         2.770      506.82 ppb          2.770   0.55%
   QC value within limits for Mo 202.031  Recovery = 101.36%
Na 589.592 Radial†    165082.7       10132 ug/L         173.7       10132 ppb          173.7   1.71%
   QC value within limits for Na 589.592 Radial  Recovery = 101.32%
Ni 231.604†            19199.8      512.88 ug/L         4.209      512.88 ppb          4.209   0.82%
   QC value within limits for Ni 231.604  Recovery = 102.58%
P 214.914†              4960.9      2436.6 ug/L          6.66      2436.6 ppb           6.66   0.27%
   QC value within limits for P 214.914  Recovery = 97.47%
Pb 220.353†             4245.9      507.08 ug/L         0.988      507.08 ppb          0.988   0.19%
   QC value within limits for Pb 220.353  Recovery = 101.42%
S 181.975 Axial†         747.9      1023.5 ug/L          8.21      1023.5 ppb           8.21   0.80%
   QC value within limits for S 181.975 Axial  Recovery = 102.35%
Sb 206.836†             1733.1      521.05 ug/L         2.822      521.05 ppb          2.822   0.54%
   QC value within limits for Sb 206.836  Recovery = 104.21%
Se 196.026†             1007.7      531.77 ug/L         3.684      531.77 ppb          3.684   0.69%
   QC value within limits for Se 196.026  Recovery = 106.35%
Si 251.611†            83773.2      2570.0 ug/L         23.95      2570.0 ppb          23.95   0.93%
   QC value within limits for Si 251.611  Recovery = 102.80%
Sn 189.927†             2867.7      508.45 ug/L         1.600      508.45 ppb          1.600   0.31%
   QC value within limits for Sn 189.927  Recovery = 101.69%
Sr 421.552†           171676.4      479.45 ug/L         7.229      479.45 ppb          7.229   1.51%
   QC value within limits for Sr 421.552  Recovery = 95.89%
Ti 334.940†           272215.9      498.27 ug/L         3.582      498.27 ppb          3.582   0.72%
   QC value within limits for Ti 334.940  Recovery = 99.65%
Tl 190.801†             1958.3      515.56 ug/L         1.574      515.56 ppb          1.574   0.31%
   QC value within limits for Tl 190.801  Recovery = 103.11%
U 409.014†             15475.0      522.40 ug/L         4.706      522.40 ppb          4.706   0.90%
   QC value within limits for U 409.014  Recovery = 104.48%
V 292.402†             56252.1      516.98 ug/L         3.388      516.98 ppb          3.388   0.66%
   QC value within limits for V 292.402  Recovery = 103.40%
Zn 213.857†            55700.2      509.35 ug/L         4.558      509.35 ppb          4.558   0.89%
   QC value within limits for Zn 213.857  Recovery = 101.87%
SiO2†                  83859.6      5476.6 ug/L         84.67      5476.6 ppb          84.67   1.55%
   QC value within limits for SiO2  Recovery = 102.41%
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 11:04:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7365.6	7365.6	98.5	%			11:06:33
1	Y RADIAL	6805.4	6805.4	98.28	%			11:06:33
1	Al 396.153Radial†	-89.3	-18.0	-14.782	ug/L	-14.782	ppb	11:06:33
1	Ca 317.933Radial†	32.9	4.3	6.0431	ug/L	6.0431	ppb	11:06:53
1	Fe 238.204 Radial†	33.1	-1.3	-5.2293	ug/L	-5.2293	ppb	11:06:53
1	K 766.490 Radial†	2548.1	178.7	38.547	ug/L	38.547	ppb	11:06:33
1	Mg 279.077 IEC†	2.9	-0.1	-2.5683	ug/L	-2.5683	ppb	11:06:53
1	Na 589.592 Radial†	-30.3	104.8	6.4324	ug/L	6.4324	ppb	11:06:33
1	Sr 421.552†	18.9	75.1	0.2096	ug/L	0.2096	ppb	11:06:33
1	Sc 361.383	728492.4	728492.4	101.36	%			11:07:50
1	Y 371.029	571035.3	571035.3	101.61	%			11:07:50
1	Ag 328.068†	631.7	-9.5	-0.0600	ug/L	-0.0600	ppb	11:07:50
1	As 188.979†	-28.4	7.4	2.6780	ug/L	2.6780	ppb	11:08:10
1	B 249.677†	-589.2	358.7	9.0389	ug/L	9.0389	ppb	11:07:50
1	Ba 233.527†	25.1	24.2	0.1721	ug/L	0.1721	ppb	11:08:10
1	Be 313.107†	-4679.9	264.8	0.1213	ug/L	0.1213	ppb	11:07:50
1	Cd 226.502†	-254.6	30.0	0.3830	ug/L	0.3830	ppb	11:08:10
1	Co 228.616†	-95.8	5.0	0.0862	ug/L	0.0862	ppb	11:08:10
1	Cr 267.716†	-52.7	25.4	0.3547	ug/L	0.3547	ppb	11:07:50
1	Cu 324.752†	5672.3	-42.5	-0.1541	ug/L	-0.1541	ppb	11:07:50
1	Mn 257.610†	704.2	15.1	0.0161	ug/L	0.0161	ppb	11:08:10
1	Mo 202.031†	17.3	-0.1	-0.0066	ug/L	-0.0066	ppb	11:08:10
1	Ni 231.604†	132.1	10.5	0.2808	ug/L	0.2808	ppb	11:08:10
1	P 214.914†	302.8	-16.1	-8.1629	ug/L	-8.1629	ppb	11:08:10
1	Pb 220.353†	-1.8	11.5	1.3675	ug/L	1.3675	ppb	11:08:10
1	S 181.975 Axial†	82.9	6.3	8.6662	ug/L	8.6662	ppb	11:08:10
1	Sb 206.836†	50.0	-7.9	-2.3383	ug/L	-2.3383	ppb	11:08:10
1	Se 196.026†	-25.7	3.4	1.7142	ug/L	1.7142	ppb	11:08:10
1	Si 251.611†	527.4	108.5	3.3159	ug/L	3.3159	ppb	11:08:10
1	Sn 189.927†	22.2	9.4	1.6619	ug/L	1.6619	ppb	11:08:10
1	Ti 334.940†	-1354.1	12.4	0.0209	ug/L	0.0209	ppb	11:07:50
1	Tl 190.801†	-56.7	4.8	1.2660	ug/L	1.2660	ppb	11:08:10
1	U 409.014†	-4780.0	133.1	4.5069	ug/L	4.5069	ppb	11:07:50
1	V 292.402†	-1529.6	56.2	0.5195	ug/L	0.5195	ppb	11:07:50
1	Zn 213.857†	994.4	55.9	0.5148	ug/L	0.5148	ppb	11:08:10
1	SiO2†	560.3	115.9	7.5403	ug/L	7.5403	ppb	11:09:06
2	Sc Radial	7520.6	7520.6	101	%			11:06:58
2	Y RADIAL	6922.2	6922.2	99.97	%			11:06:58
2	Al 396.153Radial†	-54.9	18.1	14.887	ug/L	14.887	ppb	11:06:58
2	Ca 317.933Radial†	32.4	3.1	4.4074	ug/L	4.4074	ppb	11:07:18
2	Fe 238.204 Radial†	40.1	5.0	20.992	ug/L	20.992	ppb	11:07:18
2	K 766.490 Radial†	2407.0	-14.9	-3.2266	ug/L	-3.2266	ppb	11:06:58
2	Mg 279.077 IEC†	1.5	-1.5	-38.623	ug/L	-38.623	ppb	11:07:18
2	Na 589.592 Radial†	-80.6	55.5	3.4061	ug/L	3.4061	ppb	11:06:58
2	Sr 421.552†	-47.4	8.7	0.0244	ug/L	0.0244	ppb	11:06:58
2	Sc 361.383	728647.1	728647.1	101.39	%			11:08:16
2	Y 371.029	570984.1	570984.1	101.60	%			11:08:16
2	Ag 328.068†	543.1	-96.9	-0.5685	ug/L	-0.5685	ppb	11:08:16
2	As 188.979†	-28.6	7.2	2.6118	ug/L	2.6118	ppb	11:08:36
2	B 249.677†	-764.1	186.3	4.6931	ug/L	4.6931	ppb	11:08:16
2	Ba 233.527†	3.2	2.6	0.0209	ug/L	0.0209	ppb	11:08:36
2	Be 313.107†	-4636.0	309.1	0.1414	ug/L	0.1414	ppb	11:08:16
2	Cd 226.502†	-290.4	-5.3	-0.0703	ug/L	-0.0703	ppb	11:08:36
2	Co 228.616†	-107.0	-6.1	-0.1039	ug/L	-0.1039	ppb	11:08:36
2	Cr 267.716†	-64.0	14.3	0.2021	ug/L	0.2021	ppb	11:08:16
2	Cu 324.752†	5705.6	-10.8	-0.0379	ug/L	-0.0379	ppb	11:08:16
2	Mn 257.610†	685.6	-3.4	-0.0004	ug/L	-0.0004	ppb	11:08:36
2	Mo 202.031†	25.6	8.1	0.5737	ug/L	0.5737	ppb	11:08:36
2	Ni 231.604†	130.2	8.6	0.2296	ug/L	0.2296	ppb	11:08:36

2	P 214.914†	323.9	4.7	2.3879 ug/L	2.3879 ppb		11:08:36
2	Pb 220.353†	-10.2	3.1	0.3766 ug/L	0.3766 ppb		11:08:36
2	S 181.975 Axial†	83.1	6.5	8.9582 ug/L	8.9582 ppb		11:08:36
2	Sb 206.836†	61.2	3.1	0.9360 ug/L	0.9360 ppb		11:08:36
2	Se 196.026†	-29.5	-0.3	-0.0928 ug/L	-0.0928 ppb		11:08:36
2	Si 251.611†	502.3	83.7	2.5823 ug/L	2.5823 ppb		11:08:36
2	Sn 189.927†	9.4	-3.2	-0.5694 ug/L	-0.5694 ppb		11:08:36
2	Ti 334.940†	-1385.2	-18.0	-0.0330 ug/L	-0.0330 ppb		11:08:16
2	Tl 190.801†	-57.5	4.0	1.0469 ug/L	1.0469 ppb		11:08:36
2	U 409.014†	-4900.3	15.4	0.5177 ug/L	0.5177 ppb		11:08:16
2	V 292.402†	-1462.9	122.3	1.1153 ug/L	1.1153 ppb		11:08:16
2	Zn 213.857†	990.6	52.0	0.4772 ug/L	0.4772 ppb		11:08:36
2	SiO2†	527.4	83.3	5.4746 ug/L	5.4746 ppb		11:09:11
3	Sc Radial	7467.1	7467.1	99.9 %			11:07:24
3	Y RADIAL	6890.2	6890.2	99.51 %			11:07:24
3	Al 396.153Radial†	-117.4	-44.9	-36.953 ug/L	-36.953 ppb		11:07:24
3	Ca 317.933Radial†	34.2	5.2	7.3018 ug/L	7.3018 ppb		11:07:44
3	Fe 238.204 Radial†	34.3	-0.4	-1.7725 ug/L	-1.7725 ppb		11:07:44
3	K 766.490 Radial†	2550.1	145.5	31.394 ug/L	31.394 ppb		11:07:24
3	Mg 279.077 IEC†	-0.5	-3.6	-88.784 ug/L	-88.784 ppb		11:07:44
3	Na 589.592 Radial†	-14.1	121.5	7.4542 ug/L	7.4542 ppb		11:07:24
3	Sr 421.552†	-10.5	45.3	0.1265 ug/L	0.1265 ppb		11:07:24
3	Sc 361.383	732992.4	732992.4	101.99 %			11:08:41
3	Y 371.029	573758.4	573758.4	102.09 %			11:08:41
3	Ag 328.068†	703.3	56.9	0.3346 ug/L	0.3346 ppb		11:08:41
3	As 188.979†	-29.2	6.8	2.4619 ug/L	2.4619 ppb		11:09:01
3	B 249.677†	-699.1	254.5	6.4135 ug/L	6.4135 ppb		11:08:41
3	Ba 233.527†	33.7	32.5	0.2297 ug/L	0.2297 ppb		11:09:01
3	Be 313.107†	-4724.9	249.0	0.1140 ug/L	0.1140 ppb		11:08:41
3	Cd 226.502†	-265.1	21.1	0.2695 ug/L	0.2695 ppb		11:09:01
3	Co 228.616†	-98.7	2.7	0.0445 ug/L	0.0445 ppb		11:09:01
3	Cr 267.716†	-56.2	22.3	0.3109 ug/L	0.3109 ppb		11:08:41
3	Cu 324.752†	5668.8	-80.3	-0.2910 ug/L	-0.2910 ppb		11:08:41
3	Mn 257.610†	700.1	6.8	0.0090 ug/L	0.0090 ppb		11:09:01
3	Mo 202.031†	8.1	-9.2	-0.6488 ug/L	-0.6488 ppb		11:09:01
3	Ni 231.604†	115.0	-7.0	-0.1876 ug/L	-0.1876 ppb		11:09:01
3	P 214.914†	312.0	-8.9	-4.4559 ug/L	-4.4559 ppb		11:09:01
3	Pb 220.353†	3.3	16.5	1.9544 ug/L	1.9544 ppb		11:09:01
3	S 181.975 Axial†	87.1	10.0	13.702 ug/L	13.702 ppb		11:09:01
3	Sb 206.836†	48.7	-9.5	-2.8044 ug/L	-2.8044 ppb		11:09:01
3	Se 196.026†	-31.7	-2.3	-1.1651 ug/L	-1.1651 ppb		11:09:01
3	Si 251.611†	504.6	83.0	2.5402 ug/L	2.5402 ppb		11:09:01
3	Sn 189.927†	22.8	9.8	1.7428 ug/L	1.7428 ppb		11:09:01
3	Ti 334.940†	-1368.8	6.2	0.0091 ug/L	0.0091 ppb		11:08:41
3	Tl 190.801†	-50.7	11.1	2.8932 ug/L	2.8932 ppb		11:09:01
3	U 409.014†	-4769.8	172.0	5.8227 ug/L	5.8227 ppb		11:08:41
3	V 292.402†	-1585.3	10.8	0.1001 ug/L	0.1001 ppb		11:08:41
3	Zn 213.857†	996.4	51.8	0.4830 ug/L	0.4830 ppb		11:09:01
3	SiO2†	547.1	99.5	6.4910 ug/L	6.4910 ppb		11:09:16

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	730044.0	101.58	%	0.355				0.35%
Sc Radial	7451.1	99.7	%	1.05				1.06%
Y 371.029	571925.9	101.77	%	0.282				0.28%
Y RADIAL	6872.6	99.25	%	0.871				0.88%
Ag 328.068†	-16.5	-0.0980	ug/L	0.45276	-0.0980	ppb	0.45276	462.07%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-14.9	-12.283	ug/L	26.0102	-12.283	ppb	26.0102	211.76%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.2	2.5839	ug/L	0.11071	2.5839	ppb	0.11071	4.28%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	266.5	6.7152	ug/L	2.18855	6.7152	ppb	2.18855	32.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	19.8	0.1409	ug/L	0.10782	0.1409	ppb	0.10782	76.53%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	274.3	0.1256	ug/L	0.01420	0.1256	ppb	0.01420	11.31%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.2	5.9174	ug/L	1.45127	5.9174	ppb	1.45127	24.53%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                15.3      0.1941 ug/L       0.23587      0.1941 ppb        0.23587 121.52%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 0.5      0.0089 ug/L       0.09992      0.0089 ppb        0.09992 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                20.7      0.2892 ug/L       0.07855      0.2892 ppb        0.07855  27.16%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -44.5     -0.1610 ug/L       0.12666     -0.1610 ppb        0.12666  78.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.1      4.6633 ug/L      14.24596      4.6633 ppb       14.24596 305.49%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         103.1     22.238 ug/L       22.3410     22.238 ppb        22.3410 100.46%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -1.7    -43.325 ug/L       43.2999    -43.325 ppb        43.2999  99.94%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                 6.2      0.0082 ug/L       0.00824      0.0082 ppb        0.00824 100.09%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.4     -0.0272 ug/L       0.61151     -0.0272 ppb        0.61151 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         93.9      5.7642 ug/L       2.10510      5.7642 ppb        2.10510  36.52%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 4.0      0.1076 ug/L       0.25693      0.1076 ppb        0.25693 238.78%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.8     -3.4103 ug/L       5.35253     -3.4103 ppb        5.35253 156.95%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                10.4      1.2328 ug/L       0.79748      1.2328 ppb        0.79748  64.69%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.6     10.442 ug/L        2.8268      10.442 ppb         2.8268  27.07%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -4.8     -1.4022 ug/L       2.03830     -1.4022 ppb        2.03830 145.36%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.3      0.1521 ug/L       1.45521      0.1521 ppb        1.45521 956.84%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                91.7      2.8128 ug/L       0.43618      2.8128 ppb        0.43618  15.51%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 5.3      0.9451 ug/L       1.31223      0.9451 ppb        1.31223 138.85%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                43.0      0.1202 ug/L       0.09280      0.1202 ppb        0.09280  77.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 0.2     -0.0010 ug/L       0.02834     -0.0010 ppb        0.02834 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.6      1.7354 ug/L       1.00868      1.7354 ppb        1.00868  58.12%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                106.8      3.6158 ug/L       2.76251      3.6158 ppb        2.76251  76.40%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 63.1      0.5783 ug/L       0.51014      0.5783 ppb        0.51014  88.22%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                53.2      0.4917 ug/L       0.02026      0.4917 ppb        0.02026   4.12%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      99.5      6.5020 ug/L       1.03286      6.5020 ppb        1.03286  15.89%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 11:52:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7651.7	7651.7	102	%			11:54:44
1	Y RADIAL	7137.7	7137.7	103.1	%			11:54:44
1	Al 396.153Radial†	6083.8	6015.6	4932.2	ug/L	4932.2	ppb	11:54:24
1	Ca 317.933Radial†	3595.9	3483.6	4934.9	ug/L	4934.9	ppb	11:54:44
1	Fe 238.204 Radial†	1199.3	1136.8	4754.3	ug/L	4754.3	ppb	11:54:44
1	K 766.490 Radial†	24321.8	21351.6	4593.5	ug/L	4593.5	ppb	11:54:24
1	Mg 279.077 IEC†	207.3	199.5	4979.2	ug/L	4979.2	ppb	11:54:44
1	Na 589.592 Radial†	161684.3	158077.3	9701.6	ug/L	9701.6	ppb	11:54:24
1	Sr 421.552†	167822.7	163993.9	457.99	ug/L	457.99	ppb	11:54:24
1	Sc 361.383	744388.0	744388.0	103.58	%			11:55:43
1	Y 371.029	574786.2	574786.2	102.28	%			11:55:43
1	Ag 328.068†	88348.0	84665.3	508.81	ug/L	508.81	ppb	11:55:43
1	As 188.979†	1410.9	1397.6	507.17	ug/L	507.17	ppb	11:56:03
1	B 249.677†	19853.2	20107.7	503.88	ug/L	503.88	ppb	11:55:43
1	Ba 233.527†	74986.6	72397.3	511.94	ug/L	511.94	ppb	11:55:43
1	Be 313.107†	1153787.7	1118837.0	513.27	ug/L	513.27	ppb	11:55:43
1	Cd 226.502†	39844.3	38749.9	494.02	ug/L	494.02	ppb	11:56:03
1	Co 228.616†	29656.2	28731.8	498.49	ug/L	498.49	ppb	11:56:03
1	Cr 267.716†	37552.8	36333.7	509.84	ug/L	509.84	ppb	11:55:43
1	Cu 324.752†	150414.6	139583.4	506.09	ug/L	506.09	ppb	11:55:43
1	Mn 257.610†	479727.5	462486.1	510.52	ug/L	510.52	ppb	11:55:43
1	Mo 202.031†	7428.6	7155.0	504.01	ug/L	504.01	ppb	11:56:03
1	Ni 231.604†	19436.9	18646.1	498.09	ug/L	498.09	ppb	11:56:03
1	P 214.914†	5441.6	4939.0	2425.6	ug/L	2425.6	ppb	11:56:03
1	Pb 220.353†	4406.2	4267.4	509.60	ug/L	509.60	ppb	11:56:03
1	S 181.975 Axial†	846.9	742.2	1015.8	ug/L	1015.8	ppb	11:56:03
1	Sb 206.836†	1803.7	1684.2	506.44	ug/L	506.44	ppb	11:56:03
1	Se 196.026†	997.3	991.6	522.92	ug/L	522.92	ppb	11:56:03
1	Si 251.611†	86686.8	83282.4	2555.0	ug/L	2555.0	ppb	11:55:43
1	Sn 189.927†	2954.3	2839.8	503.47	ug/L	503.47	ppb	11:56:03
1	Ti 334.940†	284554.5	276079.0	505.34	ug/L	505.34	ppb	11:55:43
1	Tl 190.801†	1952.6	1946.0	512.51	ug/L	512.51	ppb	11:56:03
1	U 409.014†	10428.5	14917.2	503.55	ug/L	503.55	ppb	11:55:43
1	V 292.402†	56156.7	55783.2	512.67	ug/L	512.67	ppb	11:55:43
1	Zn 213.857†	58255.7	55319.4	505.95	ug/L	505.95	ppb	11:55:43
1	SiO2†	85799.0	82400.1	5381.0	ug/L	5381.0	ppb	11:57:03
2	Sc Radial	7165.7	7165.7	95.9	%			11:55:10
2	Y RADIAL	6575.4	6575.4	94.96	%			11:55:10
2	Al 396.153Radial†	6218.8	6559.5	5380.0	ug/L	5380.0	ppb	11:54:50
2	Ca 317.933Radial†	3617.3	3744.1	5304.0	ug/L	5304.0	ppb	11:55:10
2	Fe 238.204 Radial†	1209.3	1226.6	5128.7	ug/L	5128.7	ppb	11:55:10
2	K 766.490 Radial†	24712.0	23370.0	5028.8	ug/L	5028.8	ppb	11:54:50
2	Mg 279.077 IEC†	203.6	209.3	5224.9	ug/L	5224.9	ppb	11:55:10
2	Na 589.592 Radial†	164743.4	171980.1	10555	ug/L	10555	ppb	11:54:50
2	Sr 421.552†	170948.2	178372.7	498.15	ug/L	498.15	ppb	11:54:50
2	Sc 361.383	749020.2	749020.2	104.22	%			11:56:11
2	Y 371.029	577772.1	577772.1	102.81	%			11:56:11
2	Ag 328.068†	88621.7	84400.4	507.33	ug/L	507.33	ppb	11:56:11
2	As 188.979†	1428.3	1405.9	510.25	ug/L	510.25	ppb	11:56:31
2	B 249.677†	19956.4	20088.2	503.36	ug/L	503.36	ppb	11:56:11
2	Ba 233.527†	75280.5	72231.6	510.76	ug/L	510.76	ppb	11:56:11
2	Be 313.107†	1159234.9	1117174.5	512.50	ug/L	512.50	ppb	11:56:11
2	Cd 226.502†	40076.5	38734.8	493.78	ug/L	493.78	ppb	11:56:31
2	Co 228.616†	29834.6	28725.9	498.38	ug/L	498.38	ppb	11:56:31
2	Cr 267.716†	37755.8	36304.3	509.43	ug/L	509.43	ppb	11:56:11
2	Cu 324.752†	150915.7	139166.1	504.60	ug/L	504.60	ppb	11:56:11
2	Mn 257.610†	482150.4	461946.5	509.96	ug/L	509.96	ppb	11:56:11
2	Mo 202.031†	7480.9	7160.8	504.45	ug/L	504.45	ppb	11:56:31
2	Ni 231.604†	19539.0	18628.0	497.61	ug/L	497.61	ppb	11:56:31

2	P 214.914†	5495.4	4958.1	2435.5 ug/L	2435.5 ppb	11:56:31
2	Pb 220.353†	4445.8	4279.0	511.04 ug/L	511.04 ppb	11:56:31
2	S 181.975 Axial†	848.2	738.4	1010.5 ug/L	1010.5 ppb	11:56:31
2	Sb 206.836†	1825.6	1694.4	509.48 ug/L	509.48 ppb	11:56:31
2	Se 196.026†	1003.1	991.2	523.98 ug/L	523.98 ppb	11:56:31
2	Si 251.611†	87228.1	83284.1	2554.9 ug/L	2554.9 ppb	11:56:11
2	Sn 189.927†	2974.6	2841.7	503.87 ug/L	503.87 ppb	11:56:31
2	Ti 334.940†	286071.2	275835.3	504.91 ug/L	504.91 ppb	11:56:11
2	Tl 190.801†	1932.4	1915.0	504.40 ug/L	504.40 ppb	11:56:31
2	U 409.014†	10523.2	14945.8	504.47 ug/L	504.47 ppb	11:56:11
2	V 292.402†	56362.2	55645.0	511.37 ug/L	511.37 ppb	11:56:11
2	Zn 213.857†	58590.5	55292.8	505.67 ug/L	505.67 ppb	11:56:11
2	SiO2†	86417.9	82481.6	5386.0 ug/L	5386.0 ppb	11:57:09
3	Sc Radial	7319.7	7319.7	97.9 %		11:55:35
3	Y RADIAL	6733.7	6733.7	97.25 %		11:55:35
3	Al 396.153Radial†	6287.9	6493.6	5325.5 ug/L	5325.5 ppb	11:55:15
3	Ca 317.933Radial†	3688.6	3737.5	5294.6 ug/L	5294.6 ppb	11:55:35
3	Fe 238.204 Radial†	1223.8	1214.9	5080.0 ug/L	5080.0 ppb	11:55:35
3	K 766.490 Radial†	24945.3	23066.0	4963.2 ug/L	4963.2 ppb	11:55:15
3	Mg 279.077 IEC†	211.0	212.4	5301.6 ug/L	5301.6 ppb	11:55:35
3	Na 589.592 Radial†	166850.6	170517.3	10465 ug/L	10465 ppb	11:55:15
3	Sr 421.552†	173511.1	177239.0	494.98 ug/L	494.98 ppb	11:55:15
3	Sc 361.383	740419.2	740419.2	103.02 %		11:56:38
3	Y 371.029	571986.6	571986.6	101.78 %		11:56:38
3	Ag 328.068†	87696.7	84490.4	507.86 ug/L	507.86 ppb	11:56:38
3	As 188.979†	1426.3	1419.9	515.26 ug/L	515.26 ppb	11:56:58
3	B 249.677†	19642.0	20005.5	501.25 ug/L	501.25 ppb	11:56:38
3	Ba 233.527†	74465.2	72279.3	511.10 ug/L	511.10 ppb	11:56:38
3	Be 313.107†	1144420.5	1115715.8	511.84 ug/L	511.84 ppb	11:56:38
3	Cd 226.502†	40084.3	39189.0	499.59 ug/L	499.59 ppb	11:56:58
3	Co 228.616†	29827.3	29051.3	504.04 ug/L	504.04 ppb	11:56:58
3	Cr 267.716†	37244.3	36228.7	508.38 ug/L	508.38 ppb	11:56:38
3	Cu 324.752†	148855.8	138848.8	503.44 ug/L	503.44 ppb	11:56:38
3	Mn 257.610†	476478.4	461815.1	509.81 ug/L	509.81 ppb	11:56:38
3	Mo 202.031†	7477.4	7240.9	510.08 ug/L	510.08 ppb	11:56:58
3	Ni 231.604†	19572.6	18878.4	504.30 ug/L	504.30 ppb	11:56:58
3	P 214.914†	5519.2	5042.4	2478.9 ug/L	2478.9 ppb	11:56:58
3	Pb 220.353†	4424.2	4307.6	514.45 ug/L	514.45 ppb	11:56:58
3	S 181.975 Axial†	849.9	749.5	1025.8 ug/L	1025.8 ppb	11:56:58
3	Sb 206.836†	1830.8	1719.8	517.30 ug/L	517.30 ppb	11:56:58
3	Se 196.026†	1007.9	1007.1	531.92 ug/L	531.92 ppb	11:56:58
3	Si 251.611†	85938.1	83004.2	2546.1 ug/L	2546.1 ppb	11:56:38
3	Sn 189.927†	2983.0	2882.9	511.17 ug/L	511.17 ppb	11:56:58
3	Ti 334.940†	282816.0	275864.2	504.97 ug/L	504.97 ppb	11:56:38
3	Tl 190.801†	1960.9	1964.1	517.24 ug/L	517.24 ppb	11:56:58
3	U 409.014†	10268.3	14815.7	500.07 ug/L	500.07 ppb	11:56:38
3	V 292.402†	55820.6	55747.6	512.37 ug/L	512.37 ppb	11:56:38
3	Zn 213.857†	57893.1	55268.9	505.41 ug/L	505.41 ppb	11:56:38
3	SiO2†	85553.5	82605.8	5393.8 ug/L	5393.8 ppb	11:57:14

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	744609.1	103.61	%	0.599				0.58%
Sc Radial	7379.0	98.7	%	3.32				3.37%
Y 371.029	574848.3	102.29	%	0.515				0.50%
Y RADIAL	6815.6	98.43	%	4.187				4.25%
Ag 328.068†	84518.7	508.00	ug/L	0.747	508.00	ppb	0.747	0.15%
QC value within limits for Ag 328.068 Recovery = 101.60%								
Al 396.153Radial†	6356.3	5212.6	ug/L	244.36	5212.6	ppb	244.36	4.69%
QC value within limits for Al 396.153Radial Recovery = 104.25%								
As 188.979†	1407.8	510.89	ug/L	4.082	510.89	ppb	4.082	0.80%
QC value within limits for As 188.979 Recovery = 102.18%								
B 249.677†	20067.1	502.83	ug/L	1.392	502.83	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.57%								
Ba 233.527†	72302.7	511.27	ug/L	0.604	511.27	ppb	0.604	0.12%
QC value within limits for Ba 233.527 Recovery = 102.25%								
Be 313.107†	1117242.4	512.53	ug/L	0.715	512.53	ppb	0.715	0.14%
QC value within limits for Be 313.107 Recovery = 102.51%								
Ca 317.933Radial†	3655.1	5177.8	ug/L	210.45	5177.8	ppb	210.45	4.06%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.56%
Cd 226.502†            38891.2      495.79 ug/L        3.285      495.79 ppb        3.285   0.66%
   QC value within limits for Cd 226.502  Recovery = 99.16%
Co 228.616†            28836.3      500.30 ug/L        3.237      500.30 ppb        3.237   0.65%
   QC value within limits for Co 228.616  Recovery = 100.06%
Cr 267.716†            36288.9      509.22 ug/L        0.756      509.22 ppb        0.756   0.15%
   QC value within limits for Cr 267.716  Recovery = 101.84%
Cu 324.752†           139199.4      504.71 ug/L        1.325      504.71 ppb        1.325   0.26%
   QC value within limits for Cu 324.752  Recovery = 100.94%
Fe 238.204 Radial†      1192.7      4987.7 ug/L       203.57      4987.7 ppb       203.57   4.08%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.75%
K 766.490 Radial†      22595.9      4861.8 ug/L       234.72      4861.8 ppb       234.72   4.83%
   QC value within limits for K 766.490 Radial  Recovery = 97.24%
Mg 279.077 IEC†          207.1      5168.6 ug/L       168.46      5168.6 ppb       168.46   3.26%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.37%
Mn 257.610†           462082.6      510.10 ug/L        0.371      510.10 ppb        0.371   0.07%
   QC value within limits for Mn 257.610  Recovery = 102.02%
Mo 202.031†             7185.6      506.18 ug/L        3.383      506.18 ppb        3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.24%
Na 589.592 Radial†    166858.3       10241 ug/L        468.9       10241 ppb        468.9   4.58%
   QC value within limits for Na 589.592 Radial  Recovery = 102.41%
Ni 231.604†            18717.5      500.00 ug/L        3.730      500.00 ppb        3.730   0.75%
   QC value within limits for Ni 231.604  Recovery = 100.00%
P 214.914†              4979.8      2446.7 ug/L       28.35      2446.7 ppb       28.35   1.16%
   QC value within limits for P 214.914  Recovery = 97.87%
Pb 220.353†             4284.6      511.70 ug/L        2.490      511.70 ppb        2.490   0.49%
   QC value within limits for Pb 220.353  Recovery = 102.34%
S 181.975 Axial†         743.4      1017.4 ug/L        7.74      1017.4 ppb         7.74   0.76%
   QC value within limits for S 181.975 Axial  Recovery = 101.74%
Sb 206.836†             1699.5      511.08 ug/L        5.604      511.08 ppb        5.604   1.10%
   QC value within limits for Sb 206.836  Recovery = 102.22%
Se 196.026†              996.7      526.27 ug/L        4.918      526.27 ppb        4.918   0.93%
   QC value within limits for Se 196.026  Recovery = 105.25%
Si 251.611†            83190.2      2552.0 ug/L        5.12      2552.0 ppb         5.12   0.20%
   QC value within limits for Si 251.611  Recovery = 102.08%
Sn 189.927†             2854.8      506.17 ug/L        4.333      506.17 ppb        4.333   0.86%
   QC value within limits for Sn 189.927  Recovery = 101.23%
Sr 421.552†           173201.9      483.71 ug/L       22.327      483.71 ppb       22.327   4.62%
   QC value within limits for Sr 421.552  Recovery = 96.74%
Ti 334.940†           275926.2      505.07 ug/L        0.231      505.07 ppb        0.231   0.05%
   QC value within limits for Ti 334.940  Recovery = 101.01%
Tl 190.801†             1941.7      511.38 ug/L        6.494      511.38 ppb        6.494   1.27%
   QC value within limits for Tl 190.801  Recovery = 102.28%
U 409.014†             14892.9      502.70 ug/L        2.319      502.70 ppb        2.319   0.46%
   QC value within limits for U 409.014  Recovery = 100.54%
V 292.402†             55725.3      512.14 ug/L        0.679      512.14 ppb        0.679   0.13%
   QC value within limits for V 292.402  Recovery = 102.43%
Zn 213.857†            55293.7      505.68 ug/L        0.274      505.68 ppb        0.274   0.05%
   QC value within limits for Zn 213.857  Recovery = 101.14%
SiO2†                  82495.8      5386.9 ug/L         6.44      5386.9 ppb         6.44   0.12%
   QC value within limits for SiO2  Recovery = 100.74%
All analyte(s) passed QC.
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Sequence No.: 16
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 11:59:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6676.6	6676.6	89.3	%			12:01:16
1	Y RADIAL	6221.6	6221.6	89.85	%			12:01:16
1	Al 396.153Radial†	-74.0	-10.2	-8.3558	ug/L	-8.3558	ppb	12:01:16
1	Ca 317.933Radial†	31.1	5.8	8.1594	ug/L	8.1594	ppb	12:01:36
1	Fe 238.204 Radial†	36.5	6.1	25.452	ug/L	25.452	ppb	12:01:36
1	K 766.490 Radial†	2487.6	377.7	81.514	ug/L	81.514	ppb	12:01:16
1	Mg 279.077 IEC†	6.6	4.3	107.37	ug/L	107.37	ppb	12:01:36
1	Na 589.592 Radial†	-155.2	-38.2	-2.3449	ug/L	-2.3449	ppb	12:01:16
1	Sr 421.552†	-43.6	7.0	0.0196	ug/L	0.0196	ppb	12:01:16
1	Sc 361.383	722196.1	722196.1	100.49	%			12:02:33
1	Y 371.029	566873.9	566873.9	100.87	%			12:02:33
1	Ag 328.068†	661.5	25.6	0.1612	ug/L	0.1612	ppb	12:02:33
1	As 188.979†	-35.7	-0.0	-0.0121	ug/L	-0.0121	ppb	12:02:53
1	B 249.677†	-645.8	297.3	7.4909	ug/L	7.4909	ppb	12:02:33
1	Ba 233.527†	10.4	9.8	0.0698	ug/L	0.0698	ppb	12:02:53
1	Be 313.107†	-4667.2	237.2	0.1083	ug/L	0.1083	ppb	12:02:33
1	Cd 226.502†	-262.4	20.0	0.2521	ug/L	0.2521	ppb	12:02:53
1	Co 228.616†	-99.7	0.3	0.0031	ug/L	0.0031	ppb	12:02:53
1	Cr 267.716†	-90.0	-12.1	-0.1697	ug/L	-0.1697	ppb	12:02:33
1	Cu 324.752†	5702.3	36.2	0.1327	ug/L	0.1327	ppb	12:02:33
1	Mn 257.610†	713.1	30.1	0.0343	ug/L	0.0343	ppb	12:02:33
1	Mo 202.031†	9.5	-7.7	-0.5372	ug/L	-0.5372	ppb	12:02:53
1	Ni 231.604†	138.5	18.0	0.4814	ug/L	0.4814	ppb	12:02:53
1	P 214.914†	305.5	-10.8	-5.5324	ug/L	-5.5324	ppb	12:02:53
1	Pb 220.353†	12.8	26.0	3.0925	ug/L	3.0925	ppb	12:02:53
1	S 181.975 Axial†	84.6	8.8	12.017	ug/L	12.017	ppb	12:02:53
1	Sb 206.836†	59.4	1.9	0.5718	ug/L	0.5718	ppb	12:02:53
1	Se 196.026†	-32.6	-3.7	-1.8088	ug/L	-1.8088	ppb	12:02:53
1	Si 251.611†	471.3	57.2	1.7336	ug/L	1.7336	ppb	12:02:53
1	Sn 189.927†	18.9	6.3	1.1223	ug/L	1.1223	ppb	12:02:53
1	Ti 334.940†	-1417.4	-62.3	-0.1140	ug/L	-0.1140	ppb	12:02:33
1	Tl 190.801†	-48.4	12.6	3.2842	ug/L	3.2842	ppb	12:02:53
1	U 409.014†	-4843.9	28.3	0.9560	ug/L	0.9560	ppb	12:02:33
1	V 292.402†	-1549.3	23.4	0.2065	ug/L	0.2065	ppb	12:02:33
1	Zn 213.857†	997.4	67.5	0.6132	ug/L	0.6132	ppb	12:02:53
1	SiO2†	511.0	71.6	4.6352	ug/L	4.6352	ppb	12:03:49
2	Sc Radial	7850.3	7850.3	105	%			12:01:41
2	Y RADIAL	7299.1	7299.1	105.4	%			12:01:41
2	Al 396.153Radial†	-80.8	-4.3	-3.5266	ug/L	-3.5266	ppb	12:01:41
2	Ca 317.933Radial†	37.6	6.7	9.5130	ug/L	9.5130	ppb	12:02:01
2	Fe 238.204 Radial†	37.1	0.5	2.1865	ug/L	2.1865	ppb	12:02:01
2	K 766.490 Radial†	2543.6	14.7	3.1649	ug/L	3.1649	ppb	12:01:41
2	Mg 279.077 IEC†	5.2	1.9	46.597	ug/L	46.597	ppb	12:02:01
2	Na 589.592 Radial†	-97.8	42.4	2.6046	ug/L	2.6046	ppb	12:01:41
2	Sr 421.552†	-10.6	45.8	0.1278	ug/L	0.1278	ppb	12:01:41
2	Sc 361.383	738106.8	738106.8	102.70	%			12:02:58
2	Y 371.029	578058.3	578058.3	102.86	%			12:02:58
2	Ag 328.068†	702.7	51.6	0.3084	ug/L	0.3084	ppb	12:02:58
2	As 188.979†	-28.3	7.9	2.8321	ug/L	2.8321	ppb	12:03:18
2	B 249.677†	-737.6	221.8	5.5873	ug/L	5.5873	ppb	12:02:58
2	Ba 233.527†	34.1	32.7	0.2315	ug/L	0.2315	ppb	12:03:18
2	Be 313.107†	-4673.0	331.6	0.1518	ug/L	0.1518	ppb	12:02:58
2	Cd 226.502†	-270.9	17.3	0.2209	ug/L	0.2209	ppb	12:03:18
2	Co 228.616†	-85.3	16.4	0.2843	ug/L	0.2843	ppb	12:03:18
2	Cr 267.716†	-38.2	40.2	0.5638	ug/L	0.5638	ppb	12:02:58
2	Cu 324.752†	5712.8	-75.9	-0.2750	ug/L	-0.2750	ppb	12:02:58
2	Mn 257.610†	706.1	8.0	0.0082	ug/L	0.0082	ppb	12:02:58
2	Mo 202.031†	20.8	3.1	0.2205	ug/L	0.2205	ppb	12:03:18
2	Ni 231.604†	123.8	0.7	0.0186	ug/L	0.0186	ppb	12:03:18

2	P 214.914†	315.2	-7.9	-3.9885 ug/L	-3.9885 ppb	12:03:18
2	Pb 220.353†	-5.4	8.0	0.9477 ug/L	0.9477 ppb	12:03:18
2	S 181.975 Axial†	83.9	6.3	8.5731 ug/L	8.5731 ppb	12:03:18
2	Sb 206.836†	59.1	0.3	0.0711 ug/L	0.0711 ppb	12:03:18
2	Se 196.026†	-25.3	4.1	2.1232 ug/L	2.1232 ppb	12:03:18
2	Si 251.611†	478.4	54.0	1.6718 ug/L	1.6718 ppb	12:03:18
2	Sn 189.927†	9.6	-3.2	-0.5582 ug/L	-0.5582 ppb	12:03:18
2	Ti 334.940†	-1390.3	-5.5	-0.0105 ug/L	-0.0105 ppb	12:02:58
2	Tl 190.801†	-56.0	6.2	1.6193 ug/L	1.6193 ppb	12:03:18
2	U 409.014†	-4919.4	58.8	1.9895 ug/L	1.9895 ppb	12:02:58
2	V 292.402†	-1566.7	39.7	0.3675 ug/L	0.3675 ppb	12:02:58
2	Zn 213.857†	991.9	40.7	0.3737 ug/L	0.3737 ppb	12:03:18
2	SiO2†	510.4	60.1	3.9610 ug/L	3.9610 ppb	12:03:54
3	Sc Radial	7481.5	7481.5	100 %		12:02:06
3	Y RADIAL	6948.3	6948.3	100.3 %		12:02:06
3	Al 396.153Radial†	-66.5	6.2	5.1212 ug/L	5.1212 ppb	12:02:06
3	Ca 317.933Radial†	29.3	0.2	0.2331 ug/L	0.2331 ppb	12:02:26
3	Fe 238.204 Radial†	38.4	3.6	15.060 ug/L	15.060 ppb	12:02:26
3	K 766.490 Radial†	2403.8	-5.6	-1.2057 ug/L	-1.2057 ppb	12:02:06
3	Mg 279.077 IEC†	2.5	-0.6	-13.800 ug/L	-13.800 ppb	12:02:26
3	Na 589.592 Radial†	-192.8	-57.0	-3.4996 ug/L	-3.4996 ppb	12:02:06
3	Sr 421.552†	-56.4	-0.4	-0.0012 ug/L	-0.0012 ppb	12:02:06
3	Sc 361.383	737609.7	737609.7	102.63 %		12:03:24
3	Y 371.029	577833.9	577833.9	102.82 %		12:03:24
3	Ag 328.068†	559.5	-87.4	-0.5206 ug/L	-0.5206 ppb	12:03:24
3	As 188.979†	-28.1	8.1	2.9158 ug/L	2.9158 ppb	12:03:44
3	B 249.677†	-718.9	239.4	6.0314 ug/L	6.0314 ppb	12:03:24
3	Ba 233.527†	43.0	41.4	0.2924 ug/L	0.2924 ppb	12:03:44
3	Be 313.107†	-4699.2	303.1	0.1387 ug/L	0.1387 ppb	12:03:24
3	Cd 226.502†	-276.5	11.7	0.1475 ug/L	0.1475 ppb	12:03:44
3	Co 228.616†	-81.7	19.8	0.3442 ug/L	0.3442 ppb	12:03:44
3	Cr 267.716†	-60.4	18.5	0.2587 ug/L	0.2587 ppb	12:03:24
3	Cu 324.752†	5668.2	-115.6	-0.4180 ug/L	-0.4180 ppb	12:03:24
3	Mn 257.610†	759.7	60.6	0.0690 ug/L	0.0690 ppb	12:03:24
3	Mo 202.031†	21.7	4.0	0.2812 ug/L	0.2812 ppb	12:03:44
3	Ni 231.604†	123.3	0.3	0.0086 ug/L	0.0086 ppb	12:03:44
3	P 214.914†	328.6	5.3	2.8084 ug/L	2.8084 ppb	12:03:44
3	Pb 220.353†	-14.4	-0.8	-0.0937 ug/L	-0.0937 ppb	12:03:44
3	S 181.975 Axial†	79.6	2.2	2.9820 ug/L	2.9820 ppb	12:03:44
3	Sb 206.836†	63.1	4.2	1.2666 ug/L	1.2666 ppb	12:03:44
3	Se 196.026†	-26.7	2.7	1.4534 ug/L	1.4534 ppb	12:03:44
3	Si 251.611†	490.5	66.2	2.0309 ug/L	2.0309 ppb	12:03:44
3	Sn 189.927†	16.4	3.4	0.6087 ug/L	0.6087 ppb	12:03:44
3	Ti 334.940†	-1399.2	-15.1	-0.0297 ug/L	-0.0297 ppb	12:03:24
3	Tl 190.801†	-58.2	4.1	1.0626 ug/L	1.0626 ppb	12:03:44
3	U 409.014†	-4842.3	130.6	4.4214 ug/L	4.4214 ppb	12:03:24
3	V 292.402†	-1583.7	22.2	0.2111 ug/L	0.2111 ppb	12:03:24
3	Zn 213.857†	1000.5	49.7	0.4579 ug/L	0.4579 ppb	12:03:44
3	SiO2†	479.5	30.3	1.9621 ug/L	1.9621 ppb	12:03:59

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	732637.5	101.94	%	1.259				1.23%
Sc Radial	7336.1	98.1	%	8.03				8.18%
Y 371.029	574255.4	102.18	%	1.138				1.11%
Y RADIAL	6823.0	98.54	%	7.936				8.05%
Ag 328.068†	-3.4	-0.0170	ug/L	0.44227	-0.0170	ppb	0.44227	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-2.7	-2.2537	ug/L	6.82809	-2.2537	ppb	6.82809	302.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.3	1.9119	ug/L	1.66680	1.9119	ppb	1.66680	87.18%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	252.8	6.3699	ug/L	0.99589	6.3699	ppb	0.99589	15.63%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	28.0	0.1979	ug/L	0.11506	0.1979	ppb	0.11506	58.14%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	290.6	0.1329	ug/L	0.02230	0.1329	ppb	0.02230	16.78%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.2	5.9685	ug/L	5.01291	5.9685	ppb	5.01291	83.99%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                16.3      0.2069 ug/L       0.05370      0.2069 ppb        0.05370  25.96%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                12.1      0.2105 ug/L       0.18212      0.2105 ppb        0.18212  86.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                15.5      0.2176 ug/L       0.36845      0.2176 ppb        0.36845 169.30%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -51.8     -0.1868 ug/L       0.28574     -0.1868 ppb        0.28574 152.98%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4      14.233 ug/L       11.6546      14.233 ppb        11.6546  81.89%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         128.9      27.824 ug/L       46.5479      27.824 ppb        46.5479 167.29%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.9      46.722 ug/L       60.5843      46.722 ppb        60.5843 129.67%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                32.9      0.0372 ug/L       0.03054      0.0372 ppb        0.03054  82.18%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.2     -0.0118 ug/L       0.45599     -0.0118 ppb        0.45599 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -17.6     -1.0800 ug/L       3.24277     -1.0800 ppb        3.24277 300.27%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 6.3      0.1695 ug/L       0.27013      0.1695 ppb        0.27013 159.35%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -4.4     -2.2375 ug/L       4.43752     -2.2375 ppb        4.43752 198.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                11.1      1.3155 ug/L       1.62466      1.3155 ppb        1.62466 123.50%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.7      7.8573 ug/L       4.55971      7.8573 ppb        4.55971  58.03%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 2.1      0.6365 ug/L       0.60041      0.6365 ppb        0.60041  94.33%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 1.1      0.5893 ug/L       2.10363      0.5893 ppb        2.10363 356.99%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                59.1      1.8121 ug/L       0.19200      1.8121 ppb        0.19200  10.60%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 2.2      0.3909 ug/L       0.86112      0.3909 ppb        0.86112 220.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                17.5      0.0487 ug/L       0.06926      0.0487 ppb        0.06926 142.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -27.6     -0.0514 ug/L       0.05503     -0.0514 ppb        0.05503 107.08%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 7.6      1.9887 ug/L       1.15598      1.9887 ppb        1.15598  58.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 72.6      2.4556 ug/L       1.77912      2.4556 ppb        1.77912  72.45%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 28.4      0.2617 ug/L       0.09166      0.2617 ppb        0.09166  35.03%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                52.6      0.4816 ug/L       0.12146      0.4816 ppb        0.12146  25.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      54.0      3.5195 ug/L       1.39017      3.5195 ppb        1.39017  39.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 13:02:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7281.5	7281.5	97.4	%			13:05:06
1	Y RADIAL	6680.3	6680.3	96.48	%			13:05:06
1	Al 396.153Radial†	6299.3	6539.0	5362.9	ug/L	5362.9	ppb	13:04:46
1	Ca 317.933Radial†	3703.5	3772.6	5344.4	ug/L	5344.4	ppb	13:05:06
1	Fe 238.204 Radial†	1228.0	1225.8	5126.1	ug/L	5126.1	ppb	13:05:06
1	K 766.490 Radial†	24961.3	23216.1	4995.5	ug/L	4995.5	ppb	13:04:46
1	Mg 279.077 IEC†	211.7	214.2	5347.0	ug/L	5347.0	ppb	13:05:06
1	Na 589.592 Radial†	166781.0	171339.3	10516	ug/L	10516	ppb	13:04:46
1	Sr 421.552†	173274.8	177925.7	496.90	ug/L	496.90	ppb	13:04:46
1	Sc 361.383	741755.7	741755.7	103.21	%			13:06:04
1	Y 371.029	572432.8	572432.8	101.86	%			13:06:04
1	Ag 328.068†	89777.9	86353.5	519.02	ug/L	519.02	ppb	13:06:09
1	As 188.979†	1445.8	1436.2	521.17	ug/L	521.17	ppb	13:06:29
1	B 249.677†	20111.0	20425.5	511.73	ug/L	511.73	ppb	13:06:09
1	Ba 233.527†	75676.2	73322.4	518.48	ug/L	518.48	ppb	13:06:09
1	Be 313.107†	1161288.0	1130057.2	518.40	ug/L	518.40	ppb	13:06:04
1	Cd 226.502†	41966.5	40942.5	521.96	ug/L	521.96	ppb	13:06:09
1	Co 228.616†	31029.2	30163.8	523.33	ug/L	523.33	ppb	13:06:09
1	Cr 267.716†	38024.5	36919.4	518.06	ug/L	518.06	ppb	13:06:09
1	Cu 324.752†	151507.1	141157.3	511.81	ug/L	511.81	ppb	13:06:09
1	Mn 257.610†	483722.8	468000.8	516.64	ug/L	516.64	ppb	13:06:04
1	Mo 202.031†	7486.1	7236.2	509.75	ug/L	509.75	ppb	13:06:29
1	Ni 231.604†	20203.6	19455.5	519.71	ug/L	519.71	ppb	13:06:09
1	P 214.914†	5506.0	5020.0	2465.8	ug/L	2465.8	ppb	13:06:29
1	Pb 220.353†	4373.3	4250.6	507.66	ug/L	507.66	ppb	13:06:29
1	S 181.975 Axial†	861.0	758.8	1038.5	ug/L	1038.5	ppb	13:06:29
1	Sb 206.836†	1842.1	1727.5	519.43	ug/L	519.43	ppb	13:06:29
1	Se 196.026†	1015.3	1012.5	534.84	ug/L	534.84	ppb	13:06:29
1	Si 251.611†	87862.7	84718.7	2599.0	ug/L	2599.0	ppb	13:06:09
1	Sn 189.927†	3005.5	2899.5	514.11	ug/L	514.11	ppb	13:06:29
1	Ti 334.940†	282291.1	274861.0	503.12	ug/L	503.12	ppb	13:06:09
1	Tl 190.801†	1971.1	1970.5	518.80	ug/L	518.80	ppb	13:06:29
1	U 409.014†	11031.4	15537.1	524.48	ug/L	524.48	ppb	13:06:09
1	V 292.402†	57055.2	56846.2	522.39	ug/L	522.39	ppb	13:06:09
1	Zn 213.857†	58967.8	56209.0	513.97	ug/L	513.97	ppb	13:06:09
1	SiO2†	87498.0	84340.2	5507.8	ug/L	5507.8	ppb	13:07:37
2	Sc Radial	7294.7	7294.7	97.6	%			13:05:32
2	Y RADIAL	6695.2	6695.2	96.69	%			13:05:32
2	Al 396.153Radial†	6307.0	6535.2	5359.7	ug/L	5359.7	ppb	13:05:12
2	Ca 317.933Radial†	3668.9	3730.3	5284.4	ug/L	5284.4	ppb	13:05:32
2	Fe 238.204 Radial†	1215.4	1210.6	5062.6	ug/L	5062.6	ppb	13:05:32
2	K 766.490 Radial†	25174.2	23388.0	5032.6	ug/L	5032.6	ppb	13:05:12
2	Mg 279.077 IEC†	212.5	214.7	5359.2	ug/L	5359.2	ppb	13:05:32
2	Na 589.592 Radial†	167635.3	171905.9	10550	ug/L	10550	ppb	13:05:12
2	Sr 421.552†	173780.8	178123.3	497.45	ug/L	497.45	ppb	13:05:12
2	Sc 361.383	744205.0	744205.0	103.55	%			13:06:35
2	Y 371.029	574002.9	574002.9	102.14	%			13:06:35
2	Ag 328.068†	89345.2	85649.2	514.78	ug/L	514.78	ppb	13:06:40
2	As 188.979†	1454.7	1440.3	522.60	ug/L	522.60	ppb	13:07:00
2	B 249.677†	20044.2	20296.9	508.53	ug/L	508.53	ppb	13:06:40
2	Ba 233.527†	75470.1	72882.1	515.37	ug/L	515.37	ppb	13:06:40
2	Be 313.107†	1157004.1	1122217.0	514.80	ug/L	514.80	ppb	13:06:35
2	Cd 226.502†	41734.2	40584.4	517.39	ug/L	517.39	ppb	13:06:40
2	Co 228.616†	30787.2	29831.1	517.58	ug/L	517.58	ppb	13:06:40
2	Cr 267.716†	37890.1	36668.4	514.54	ug/L	514.54	ppb	13:06:40
2	Cu 324.752†	150966.9	140152.4	508.17	ug/L	508.17	ppb	13:06:40
2	Mn 257.610†	483147.7	465903.0	514.32	ug/L	514.32	ppb	13:06:35
2	Mo 202.031†	7534.1	7258.7	511.33	ug/L	511.33	ppb	13:07:00
2	Ni 231.604†	20097.6	19288.7	515.26	ug/L	515.26	ppb	13:06:40

2	P 214.914†	5532.6	5028.1	2470.8 ug/L	2470.8 ppb	13:07:00
2	Pb 220.353†	4435.0	4296.2	513.10 ug/L	513.10 ppb	13:07:00
2	S 181.975 Axial†	855.6	750.9	1027.6 ug/L	1027.6 ppb	13:07:00
2	Sb 206.836†	1849.1	1728.4	519.83 ug/L	519.83 ppb	13:07:00
2	Se 196.026†	1031.5	1024.9	540.96 ug/L	540.96 ppb	13:07:00
2	Si 251.611†	87511.3	84099.1	2579.8 ug/L	2579.8 ppb	13:06:40
2	Sn 189.927†	3021.0	2904.9	515.06 ug/L	515.06 ppb	13:07:00
2	Ti 334.940†	281132.5	272841.9	499.42 ug/L	499.42 ppb	13:06:40
2	Tl 190.801†	1993.9	1986.3	522.92 ug/L	522.92 ppb	13:07:00
2	U 409.014†	11073.6	15542.7	524.68 ug/L	524.68 ppb	13:06:40
2	V 292.402†	56696.5	56317.8	517.62 ug/L	517.62 ppb	13:06:40
2	Zn 213.857†	58743.5	55804.3	510.27 ug/L	510.27 ppb	13:06:40
2	SiO2†	86542.0	83137.9	5428.6 ug/L	5428.6 ppb	13:07:42
3	Sc Radial	7304.1	7304.1	97.7 %		13:05:57
3	Y RADIAL	6729.5	6729.5	97.19 %		13:05:57
3	Al 396.153Radial†	6230.7	6448.7	5288.8 ug/L	5288.8 ppb	13:05:37
3	Ca 317.933Radial†	3697.0	3754.2	5318.3 ug/L	5318.3 ppb	13:05:57
3	Fe 238.204 Radial†	1230.4	1224.3	5119.7 ug/L	5119.7 ppb	13:05:57
3	K 766.490 Radial†	24732.5	22902.6	4928.0 ug/L	4928.0 ppb	13:05:37
3	Mg 279.077 IEC†	214.6	216.5	5404.1 ug/L	5404.1 ppb	13:05:57
3	Na 589.592 Radial†	164955.2	168941.0	10368 ug/L	10368 ppb	13:05:37
3	Sr 421.552†	171454.6	175512.4	490.16 ug/L	490.16 ppb	13:05:37
3	Sc 361.383	749321.2	749321.2	104.26 %		13:07:06
3	Y 371.029	578032.5	578032.5	102.85 %		13:07:06
3	Ag 328.068†	89258.3	84976.8	510.78 ug/L	510.78 ppb	13:07:11
3	As 188.979†	1443.6	1420.0	515.27 ug/L	515.27 ppb	13:07:31
3	B 249.677†	19999.5	20121.8	504.13 ug/L	504.13 ppb	13:07:11
3	Ba 233.527†	75388.4	72306.1	511.30 ug/L	511.30 ppb	13:07:11
3	Be 313.107†	1168029.6	1125162.9	516.14 ug/L	516.14 ppb	13:07:06
3	Cd 226.502†	41658.4	40236.6	512.95 ug/L	512.95 ppb	13:07:11
3	Co 228.616†	30816.1	29655.8	514.53 ug/L	514.53 ppb	13:07:11
3	Cr 267.716†	37880.8	36409.6	510.91 ug/L	510.91 ppb	13:07:11
3	Cu 324.752†	150551.5	138758.6	503.12 ug/L	503.12 ppb	13:07:11
3	Mn 257.610†	486365.0	465803.0	514.21 ug/L	514.21 ppb	13:07:06
3	Mo 202.031†	7486.1	7162.9	504.59 ug/L	504.59 ppb	13:07:31
3	Ni 231.604†	20123.8	19181.4	512.39 ug/L	512.39 ppb	13:07:11
3	P 214.914†	5487.2	4948.1	2430.7 ug/L	2430.7 ppb	13:07:31
3	Pb 220.353†	4377.3	4211.6	503.00 ug/L	503.00 ppb	13:07:31
3	S 181.975 Axial†	855.2	744.9	1019.4 ug/L	1019.4 ppb	13:07:31
3	Sb 206.836†	1834.1	1701.9	511.79 ug/L	511.79 ppb	13:07:31
3	Se 196.026†	1001.4	989.2	522.93 ug/L	522.93 ppb	13:07:31
3	Si 251.611†	87420.1	83434.6	2559.6 ug/L	2559.6 ppb	13:07:11
3	Sn 189.927†	2997.8	2862.7	507.60 ug/L	507.60 ppb	13:07:31
3	Ti 334.940†	280603.6	270480.9	495.11 ug/L	495.11 ppb	13:07:11
3	Tl 190.801†	1970.7	1950.9	513.65 ug/L	513.65 ppb	13:07:31
3	U 409.014†	10813.4	15220.1	513.76 ug/L	513.76 ppb	13:07:11
3	V 292.402†	56734.7	55980.6	514.45 ug/L	514.45 ppb	13:07:11
3	Zn 213.857†	58697.7	55373.1	506.31 ug/L	506.31 ppb	13:07:11
3	SiO2†	86581.0	82604.7	5394.1 ug/L	5394.1 ppb	13:07:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	745094.0	103.67	%	0.537				0.52%
Sc Radial	7293.4	97.6	%	0.15				0.16%
Y 371.029	574822.7	102.28	%	0.514				0.50%
Y RADIAL	6701.6	96.78	%	0.364				0.38%
Ag 328.068†	85659.8	514.86	ug/L	4.124	514.86	ppb	4.124	0.80%
QC value within limits for Ag 328.068 Recovery = 102.97%								
Al 396.153Radial†	6507.6	5337.1	ug/L	41.89	5337.1	ppb	41.89	0.78%
QC value within limits for Al 396.153Radial Recovery = 106.74%								
As 188.979†	1432.2	519.68	ug/L	3.887	519.68	ppb	3.887	0.75%
QC value within limits for As 188.979 Recovery = 103.94%								
B 249.677†	20281.4	508.13	ug/L	3.820	508.13	ppb	3.820	0.75%
QC value within limits for B 249.677 Recovery = 101.63%								
Ba 233.527†	72836.9	515.05	ug/L	3.605	515.05	ppb	3.605	0.70%
QC value within limits for Ba 233.527 Recovery = 103.01%								
Be 313.107†	1125812.4	516.44	ug/L	1.818	516.44	ppb	1.818	0.35%
QC value within limits for Be 313.107 Recovery = 103.29%								
Ca 317.933Radial†	3752.4	5315.7	ug/L	30.06	5315.7	ppb	30.06	0.57%

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   QC value within limits for Ca 317.933Radial  Recovery = 106.31%
Cd 226.502†            40587.8      517.43 ug/L         4.504      517.43 ppb          4.504   0.87%
   QC value within limits for Cd 226.502  Recovery = 103.49%
Co 228.616†            29883.6      518.48 ug/L         4.472      518.48 ppb          4.472   0.86%
   QC value within limits for Co 228.616  Recovery = 103.70%
Cr 267.716†            36665.8      514.50 ug/L         3.576      514.50 ppb          3.576   0.70%
   QC value within limits for Cr 267.716  Recovery = 102.90%
Cu 324.752†           140022.8      507.70 ug/L         4.365      507.70 ppb          4.365   0.86%
   QC value within limits for Cu 324.752  Recovery = 101.54%
Fe 238.204 Radial†      1220.2      5102.8 ug/L        34.97      5102.8 ppb         34.97   0.69%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.06%
K 766.490 Radial†      23168.9      4985.3 ug/L        53.03      4985.3 ppb         53.03   1.06%
   QC value within limits for K 766.490 Radial  Recovery = 99.71%
Mg 279.077 IEC†          215.2      5370.1 ug/L        30.07      5370.1 ppb         30.07   0.56%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.40%
Mn 257.610†           466569.0      515.05 ug/L         1.371      515.05 ppb          1.371   0.27%
   QC value within limits for Mn 257.610  Recovery = 103.01%
Mo 202.031†             7219.3      508.56 ug/L         3.523      508.56 ppb          3.523   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.71%
Na 589.592 Radial†    170728.7       10478 ug/L        96.6        10478 ppb         96.6   0.92%
   QC value within limits for Na 589.592 Radial  Recovery = 104.78%
Ni 231.604†            19308.6      515.78 ug/L         3.690      515.78 ppb          3.690   0.72%
   QC value within limits for Ni 231.604  Recovery = 103.16%
P 214.914†              4998.7      2455.8 ug/L        21.82      2455.8 ppb         21.82   0.89%
   QC value within limits for P 214.914  Recovery = 98.23%
Pb 220.353†             4252.8      507.92 ug/L         5.056      507.92 ppb          5.056   1.00%
   QC value within limits for Pb 220.353  Recovery = 101.58%
S 181.975 Axial†         751.5      1028.5 ug/L         9.59      1028.5 ppb          9.59   0.93%
   QC value within limits for S 181.975 Axial  Recovery = 102.85%
Sb 206.836†             1719.3      517.02 ug/L         4.533      517.02 ppb          4.533   0.88%
   QC value within limits for Sb 206.836  Recovery = 103.40%
Se 196.026†             1008.9      532.91 ug/L         9.172      532.91 ppb          9.172   1.72%
   QC value within limits for Se 196.026  Recovery = 106.58%
Si 251.611†            84084.2      2579.5 ug/L        19.73      2579.5 ppb         19.73   0.76%
   QC value within limits for Si 251.611  Recovery = 103.18%
Sn 189.927†             2889.0      512.26 ug/L         4.062      512.26 ppb          4.062   0.79%
   QC value within limits for Sn 189.927  Recovery = 102.45%
Sr 421.552†           177187.1      494.84 ug/L         4.060      494.84 ppb          4.060   0.82%
   QC value within limits for Sr 421.552  Recovery = 98.97%
Ti 334.940†           272727.9      499.22 ug/L         4.011      499.22 ppb          4.011   0.80%
   QC value within limits for Ti 334.940  Recovery = 99.84%
Tl 190.801†             1969.2      518.46 ug/L         4.648      518.46 ppb          4.648   0.90%
   QC value within limits for Tl 190.801  Recovery = 103.69%
U 409.014†             15433.3      520.97 ug/L         6.249      520.97 ppb          6.249   1.20%
   QC value within limits for U 409.014  Recovery = 104.19%
V 292.402†             56381.5      518.15 ug/L         3.994      518.15 ppb          3.994   0.77%
   QC value within limits for V 292.402  Recovery = 103.63%
Zn 213.857†            55795.5      510.18 ug/L         3.829      510.18 ppb          3.829   0.75%
   QC value within limits for Zn 213.857  Recovery = 102.04%
SiO2†                  83360.9      5443.5 ug/L        58.29      5443.5 ppb         58.29   1.07%
   QC value within limits for SiO2  Recovery = 101.79%
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 13:09:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7339.6	7339.6	98.2	%			13:11:49
1	Y RADIAL	6824.4	6824.4	98.56	%			13:11:49
1	Al 396.153Radial†	-77.7	-6.5	-5.3397	ug/L	-5.3397	ppb	13:11:49
1	Ca 317.933Radial†	31.1	2.6	3.6605	ug/L	3.6605	ppb	13:12:09
1	Fe 238.204 Radial†	35.4	1.3	5.4250	ug/L	5.4250	ppb	13:12:09
1	K 766.490 Radial†	2410.9	48.1	10.371	ug/L	10.371	ppb	13:11:49
1	Mg 279.077 IEC†	2.6	-0.4	-9.7786	ug/L	-9.7786	ppb	13:12:09
1	Na 589.592 Radial†	-194.8	-62.8	-3.8556	ug/L	-3.8556	ppb	13:11:49
1	Sr 421.552†	-28.9	26.4	0.0738	ug/L	0.0738	ppb	13:11:49
1	Sc 361.383	735705.4	735705.4	102.37	%			13:13:06
1	Y 371.029	575918.7	575918.7	102.48	%			13:13:06
1	Ag 328.068†	609.8	-36.9	-0.2214	ug/L	-0.2214	ppb	13:13:06
1	As 188.979†	-29.2	6.9	2.4993	ug/L	2.4993	ppb	13:13:26
1	B 249.677†	-756.7	200.7	5.0583	ug/L	5.0583	ppb	13:13:06
1	Ba 233.527†	3.1	2.6	0.0191	ug/L	0.0191	ppb	13:13:26
1	Be 313.107†	-4761.6	230.3	0.1056	ug/L	0.1056	ppb	13:13:06
1	Cd 226.502†	-263.7	23.5	0.2992	ug/L	0.2992	ppb	13:13:26
1	Co 228.616†	-97.4	4.3	0.0754	ug/L	0.0754	ppb	13:13:26
1	Cr 267.716†	-49.2	29.3	0.4105	ug/L	0.4105	ppb	13:13:06
1	Cu 324.752†	5670.5	-99.0	-0.3586	ug/L	-0.3586	ppb	13:13:06
1	Mn 257.610†	756.0	58.9	0.0658	ug/L	0.0658	ppb	13:13:06
1	Mo 202.031†	20.7	3.1	0.2182	ug/L	0.2182	ppb	13:13:26
1	Ni 231.604†	145.5	22.3	0.5970	ug/L	0.5970	ppb	13:13:26
1	P 214.914†	298.1	-23.6	-11.955	ug/L	-11.955	ppb	13:13:26
1	Pb 220.353†	-12.3	1.3	0.1482	ug/L	0.1482	ppb	13:13:26
1	S 181.975 Axial†	87.8	10.4	14.208	ug/L	14.208	ppb	13:13:26
1	Sb 206.836†	53.6	-4.9	-1.4416	ug/L	-1.4416	ppb	13:13:26
1	Se 196.026†	-20.9	8.4	4.2944	ug/L	4.2944	ppb	13:13:26
1	Si 251.611†	501.3	77.9	2.3948	ug/L	2.3948	ppb	13:13:26
1	Sn 189.927†	14.5	1.7	0.2979	ug/L	0.2979	ppb	13:13:26
1	Ti 334.940†	-1320.2	58.6	0.1051	ug/L	0.1051	ppb	13:13:06
1	Tl 190.801†	-63.1	-0.9	-0.2409	ug/L	-0.2409	ppb	13:13:26
1	U 409.014†	-4805.0	154.9	5.2424	ug/L	5.2424	ppb	13:13:06
1	V 292.402†	-1545.0	56.0	0.5201	ug/L	0.5201	ppb	13:13:06
1	Zn 213.857†	1008.0	59.6	0.5466	ug/L	0.5466	ppb	13:13:26
1	SiO2†	537.4	88.1	5.7670	ug/L	5.7670	ppb	13:14:22
2	Sc Radial	7299.4	7299.4	97.7	%			13:12:14
2	Y RADIAL	6806.6	6806.6	98.30	%			13:12:14
2	Al 396.153Radial†	-64.9	6.2	5.1385	ug/L	5.1385	ppb	13:12:14
2	Ca 317.933Radial†	31.8	3.5	4.9128	ug/L	4.9128	ppb	13:12:34
2	Fe 238.204 Radial†	39.9	6.1	25.460	ug/L	25.460	ppb	13:12:34
2	K 766.490 Radial†	2496.6	149.3	32.227	ug/L	32.227	ppb	13:12:14
2	Mg 279.077 IEC†	1.3	-1.7	-42.568	ug/L	-42.568	ppb	13:12:34
2	Na 589.592 Radial†	-273.7	-144.7	-8.8794	ug/L	-8.8794	ppb	13:12:14
2	Sr 421.552†	4.5	60.4	0.1688	ug/L	0.1688	ppb	13:12:14
2	Sc 361.383	768724.4	768724.4	106.96	%			13:13:31
2	Y 371.029	602364.5	602364.5	107.18	%			13:13:31
2	Ag 328.068†	798.0	113.4	0.6792	ug/L	0.6792	ppb	13:13:31
2	As 188.979†	-36.8	1.1	0.3905	ug/L	0.3905	ppb	13:13:51
2	B 249.677†	-757.7	231.5	5.8327	ug/L	5.8327	ppb	13:13:31
2	Ba 233.527†	24.3	22.2	0.1574	ug/L	0.1574	ppb	13:13:51
2	Be 313.107†	-4731.8	458.0	0.2099	ug/L	0.2099	ppb	13:13:31
2	Cd 226.502†	-281.1	18.3	0.2310	ug/L	0.2310	ppb	13:13:51
2	Co 228.616†	-98.3	7.6	0.1297	ug/L	0.1297	ppb	13:13:51
2	Cr 267.716†	-37.2	42.6	0.5951	ug/L	0.5951	ppb	13:13:31
2	Cu 324.752†	5667.3	-340.0	-1.2308	ug/L	-1.2308	ppb	13:13:31
2	Mn 257.610†	765.8	36.3	0.0441	ug/L	0.0441	ppb	13:13:31
2	Mo 202.031†	12.7	-5.3	-0.3691	ug/L	-0.3691	ppb	13:13:51
2	Ni 231.604†	129.7	1.5	0.0392	ug/L	0.0392	ppb	13:13:51

2	P 214.914†	307.7	-27.1	-13.596	ug/L	-13.596	ppb	13:13:51
2	Pb 220.353†	-14.8	-0.6	-0.0732	ug/L	-0.0732	ppb	13:13:51
2	S 181.975 Axial†	78.9	-1.7	-2.3105	ug/L	-2.3105	ppb	13:13:51
2	Sb 206.836†	59.0	-2.1	-0.6442	ug/L	-0.6442	ppb	13:13:51
2	Se 196.026†	-24.1	6.3	3.2860	ug/L	3.2860	ppb	13:13:51
2	Si 251.611†	664.4	209.4	6.4638	ug/L	6.4638	ppb	13:13:51
2	Sn 189.927†	12.6	-0.7	-0.1213	ug/L	-0.1213	ppb	13:13:51
2	Ti 334.940†	-1365.3	71.8	0.1274	ug/L	0.1274	ppb	13:13:31
2	Tl 190.801†	-46.9	16.9	4.4161	ug/L	4.4161	ppb	13:13:51
2	U 409.014†	-4885.6	281.1	9.5138	ug/L	9.5138	ppb	13:13:31
2	V 292.402†	-1624.1	46.8	0.4340	ug/L	0.4340	ppb	13:13:31
2	Zn 213.857†	994.2	4.4	0.0406	ug/L	0.0406	ppb	13:13:51
2	SiO2†	527.4	56.1	3.6863	ug/L	3.6863	ppb	13:14:27
3	Sc Radial	7409.2	7409.2	99.1	%			13:12:39
3	Y RADIAL	6911.5	6911.5	99.82	%			13:12:39
3	Al 396.153Radial†	-54.6	17.5	14.385	ug/L	14.385	ppb	13:12:39
3	Ca 317.933Radial†	32.6	3.8	5.3612	ug/L	5.3612	ppb	13:12:59
3	Fe 238.204 Radial†	32.0	-2.5	-10.621	ug/L	-10.621	ppb	13:12:59
3	K 766.490 Radial†	2415.8	29.9	6.4454	ug/L	6.4454	ppb	13:12:39
3	Mg 279.077 IEC†	4.7	1.7	43.296	ug/L	43.296	ppb	13:12:59
3	Na 589.592 Radial†	-201.9	-68.2	-4.1837	ug/L	-4.1837	ppb	13:12:39
3	Sr 421.552†	-23.6	32.1	0.0896	ug/L	0.0896	ppb	13:12:39
3	Sc 361.383	732304.3	732304.3	101.89	%			13:13:57
3	Y 371.029	573568.0	573568.0	102.06	%			13:13:57
3	Ag 328.068†	701.6	55.9	0.3317	ug/L	0.3317	ppb	13:13:57
3	As 188.979†	-28.6	7.3	2.6374	ug/L	2.6374	ppb	13:14:17
3	B 249.677†	-724.4	229.0	5.7731	ug/L	5.7731	ppb	13:13:57
3	Ba 233.527†	26.2	25.3	0.1787	ug/L	0.1787	ppb	13:14:17
3	Be 313.107†	-4592.5	374.6	0.1718	ug/L	0.1718	ppb	13:13:57
3	Cd 226.502†	-278.3	8.0	0.1038	ug/L	0.1038	ppb	13:14:17
3	Co 228.616†	-103.0	-1.7	-0.0274	ug/L	-0.0274	ppb	13:14:17
3	Cr 267.716†	-65.7	12.9	0.1810	ug/L	0.1810	ppb	13:13:57
3	Cu 324.752†	5614.1	-128.7	-0.4670	ug/L	-0.4670	ppb	13:13:57
3	Mn 257.610†	731.2	38.0	0.0397	ug/L	0.0397	ppb	13:13:57
3	Mo 202.031†	27.9	10.2	0.7177	ug/L	0.7177	ppb	13:14:17
3	Ni 231.604†	139.4	17.0	0.4539	ug/L	0.4539	ppb	13:14:17
3	P 214.914†	328.4	7.5	3.9420	ug/L	3.9420	ppb	13:14:17
3	Pb 220.353†	0.7	14.0	1.6695	ug/L	1.6695	ppb	13:14:17
3	S 181.975 Axial†	89.7	12.7	17.328	ug/L	17.328	ppb	13:14:17
3	Sb 206.836†	58.2	-0.1	-0.0504	ug/L	-0.0504	ppb	13:14:17
3	Se 196.026†	-29.1	0.2	0.0784	ug/L	0.0784	ppb	13:14:17
3	Si 251.611†	486.7	65.9	2.0347	ug/L	2.0347	ppb	13:14:17
3	Sn 189.927†	6.7	-5.9	-1.0522	ug/L	-1.0522	ppb	13:14:17
3	Ti 334.940†	-1290.1	82.2	0.1510	ug/L	0.1510	ppb	13:13:57
3	Tl 190.801†	-68.9	-6.9	-1.7955	ug/L	-1.7955	ppb	13:14:17
3	U 409.014†	-4958.8	-17.9	-0.6055	ug/L	-0.6055	ppb	13:13:57
3	V 292.402†	-1571.6	22.8	0.2167	ug/L	0.2167	ppb	13:13:57
3	Zn 213.857†	1009.2	65.4	0.6006	ug/L	0.6006	ppb	13:14:17
3	SiO2†	470.1	24.5	1.6090	ug/L	1.6090	ppb	13:14:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	745578.0	103.74	%	2.799				2.70%
Sc Radial	7349.4	98.3	%	0.74				0.76%
Y 371.029	583950.4	103.91	%	2.845				2.74%
Y RADIAL	6847.5	98.89	%	0.811				0.82%
Ag 328.068†	44.1	0.2631	ug/L	0.45419	0.2631	ppb	0.45419	172.60%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.8	4.7278	ug/L	9.86858	4.7278	ppb	9.86858	208.74%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.1	1.8424	ug/L	1.25927	1.8424	ppb	1.25927	68.35%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	220.4	5.5547	ug/L	0.43092	5.5547	ppb	0.43092	7.76%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	16.7	0.1184	ug/L	0.08664	0.1184	ppb	0.08664	73.15%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	354.3	0.1625	ug/L	0.05276	0.1625	ppb	0.05276	32.47%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	3.3	4.6449	ug/L	0.88144	4.6449	ppb	0.88144	18.98%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                16.6      0.2113 ug/L       0.09916      0.2113 ppb        0.09916  46.92%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 3.4      0.0592 ug/L       0.07982      0.0592 ppb        0.07982 134.79%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                28.3      0.3955 ug/L       0.20743      0.3955 ppb        0.20743  52.45%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -189.3     -0.6855 ug/L       0.47536     -0.6855 ppb        0.47536  69.35%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.6      6.7546 ug/L      18.07716      6.7546 ppb       18.07716 267.63%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          75.8     16.348 ug/L       13.8911      16.348 ppb        13.8911  84.97%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.1     -3.0170 ug/L      43.32954     -3.0170 ppb       43.32954 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                44.4      0.0499 ug/L       0.01397      0.0499 ppb        0.01397  28.02%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.7      0.1889 ug/L       0.54399      0.1889 ppb        0.54399 287.92%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -91.9     -5.6396 ug/L       2.81058     -5.6396 ppb        2.81058  49.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                13.6      0.3634 ug/L       0.28971      0.3634 ppb        0.28971  79.73%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -14.4     -7.2029 ug/L       9.68661     -7.2029 ppb        9.68661 134.48%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 4.9      0.5815 ug/L       0.94872      0.5815 ppb        0.94872 163.15%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.1      9.7418 ug/L      10.55350      9.7418 ppb       10.55350 108.33%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.4     -0.7121 ug/L       0.69810     -0.7121 ppb        0.69810  98.04%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      2.5530 ug/L       2.20151      2.5530 ppb        2.20151  86.23%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               117.7      3.6311 ug/L       2.45976      3.6311 ppb        2.45976  67.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.7     -0.2919 ug/L       0.69099     -0.2919 ppb        0.69099 236.73%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                39.7      0.1107 ug/L       0.05087      0.1107 ppb        0.05087  45.94%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                70.9      0.1278 ug/L       0.02295      0.1278 ppb        0.02295  17.96%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.0      0.7933 ug/L       3.23236      0.7933 ppb        3.23236 407.48%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                139.3      4.7169 ug/L       5.08007      4.7169 ppb        5.08007 107.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 41.8      0.3903 ug/L       0.15636      0.3903 ppb        0.15636  40.06%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                43.1      0.3959 ug/L       0.30892      0.3959 ppb        0.30892  78.02%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      56.2      3.6874 ug/L       2.07903      3.6874 ppb        2.07903  56.38%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 20
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 14:20:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7268.9	7268.9	97.2	%			14:22:17
1	Y RADIAL	6682.9	6682.9	96.51	%			14:22:17
1	Al 396.153Radial†	6364.0	6616.7	5426.5	ug/L	5426.5	ppb	14:21:57
1	Ca 317.933Radial†	3675.0	3749.9	5312.2	ug/L	5312.2	ppb	14:22:17
1	Fe 238.204 Radial†	1220.9	1220.6	5104.3	ug/L	5104.3	ppb	14:22:17
1	K 766.490 Radial†	25405.0	23716.6	5103.4	ug/L	5103.4	ppb	14:21:57
1	Mg 279.077 IEC†	209.6	212.5	5304.3	ug/L	5304.3	ppb	14:22:17
1	Na 589.592 Radial†	169392.5	174320.7	10699	ug/L	10699	ppb	14:21:57
1	Sr 421.552†	175803.8	180833.6	505.02	ug/L	505.02	ppb	14:21:57
1	Sc 361.383	736145.7	736145.7	102.43	%			14:23:16
1	Y 371.029	568107.5	568107.5	101.09	%			14:23:16
1	Ag 328.068†	88288.3	85562.1	514.28	ug/L	514.28	ppb	14:23:16
1	As 188.979†	1443.8	1445.0	524.36	ug/L	524.36	ppb	14:23:36
1	B 249.677†	19754.4	20225.9	506.76	ug/L	506.76	ppb	14:23:16
1	Ba 233.527†	74705.4	72933.4	515.73	ug/L	515.73	ppb	14:23:16
1	Be 313.107†	1147152.8	1124832.0	516.02	ug/L	516.02	ppb	14:23:16
1	Cd 226.502†	40642.0	39959.4	509.41	ug/L	509.41	ppb	14:23:36
1	Co 228.616†	30160.4	29544.7	512.60	ug/L	512.60	ppb	14:23:36
1	Cr 267.716†	37385.8	36576.7	513.26	ug/L	513.26	ppb	14:23:16
1	Cu 324.752†	149905.1	140712.0	510.20	ug/L	510.20	ppb	14:23:16
1	Mn 257.610†	478523.4	466496.5	514.98	ug/L	514.98	ppb	14:23:16
1	Mo 202.031†	7561.8	7365.3	518.84	ug/L	518.84	ppb	14:23:36
1	Ni 231.604†	19787.9	19198.8	512.86	ug/L	512.86	ppb	14:23:36
1	P 214.914†	5569.3	5122.4	2518.5	ug/L	2518.5	ppb	14:23:36
1	Pb 220.353†	4461.9	4369.3	521.84	ug/L	521.84	ppb	14:23:36
1	S 181.975 Axial†	857.2	761.5	1042.1	ug/L	1042.1	ppb	14:23:36
1	Sb 206.836†	1836.0	1735.3	522.07	ug/L	522.07	ppb	14:23:36
1	Se 196.026†	1023.6	1028.1	542.76	ug/L	542.76	ppb	14:23:36
1	Si 251.611†	86539.5	84075.6	2578.9	ug/L	2578.9	ppb	14:23:16
1	Sn 189.927†	3007.9	2924.1	518.45	ug/L	518.45	ppb	14:23:36
1	Ti 334.940†	284645.0	279243.5	511.15	ug/L	511.15	ppb	14:23:16
1	Tl 190.801†	1978.3	1992.2	524.59	ug/L	524.59	ppb	14:23:36
1	U 409.014†	10517.9	15117.2	510.27	ug/L	510.27	ppb	14:23:16
1	V 292.402†	56077.6	56313.0	517.63	ug/L	517.63	ppb	14:23:16
1	Zn 213.857†	58084.8	55782.3	510.08	ug/L	510.08	ppb	14:23:16
1	SiO2†	87073.4	84571.7	5522.4	ug/L	5522.4	ppb	14:24:36
2	Sc Radial	7373.5	7373.5	98.6	%			14:22:42
2	Y RADIAL	6779.1	6779.1	97.90	%			14:22:42
2	Al 396.153Radial†	6208.6	6366.3	5220.5	ug/L	5220.5	ppb	14:22:22
2	Ca 317.933Radial†	3650.1	3671.1	5200.5	ug/L	5200.5	ppb	14:22:42
2	Fe 238.204 Radial†	1214.0	1195.9	5000.9	ug/L	5000.9	ppb	14:22:42
2	K 766.490 Radial†	24977.7	22912.9	4930.1	ug/L	4930.1	ppb	14:22:22
2	Mg 279.077 IEC†	212.9	212.8	5310.5	ug/L	5310.5	ppb	14:22:42
2	Na 589.592 Radial†	165853.5	168262.0	10327	ug/L	10327	ppb	14:22:22
2	Sr 421.552†	171817.1	174227.6	486.57	ug/L	486.57	ppb	14:22:22
2	Sc 361.383	745644.9	745644.9	103.75	%			14:23:43
2	Y 371.029	574518.9	574518.9	102.23	%			14:23:43
2	Ag 328.068†	88786.8	84944.5	510.56	ug/L	510.56	ppb	14:23:43
2	As 188.979†	1459.8	1442.5	523.43	ug/L	523.43	ppb	14:24:04
2	B 249.677†	19865.1	20086.9	503.28	ug/L	503.28	ppb	14:23:43
2	Ba 233.527†	75307.6	72584.7	513.26	ug/L	513.26	ppb	14:23:43
2	Be 313.107†	1157447.5	1120486.7	514.03	ug/L	514.03	ppb	14:23:43
2	Cd 226.502†	40807.8	39613.7	505.01	ug/L	505.01	ppb	14:24:04
2	Co 228.616†	30335.0	29337.9	509.01	ug/L	509.01	ppb	14:24:04
2	Cr 267.716†	37765.4	36477.5	511.86	ug/L	511.86	ppb	14:23:43
2	Cu 324.752†	151498.8	140383.5	509.00	ug/L	509.00	ppb	14:23:43
2	Mn 257.610†	483051.4	464909.1	513.21	ug/L	513.21	ppb	14:23:43
2	Mo 202.031†	7588.0	7296.6	513.99	ug/L	513.99	ppb	14:24:04
2	Ni 231.604†	19856.2	19018.6	508.04	ug/L	508.04	ppb	14:24:04

2	P 214.914†	5598.5	5081.3	2497.7 ug/L	2497.7 ppb	14:24:04
2	Pb 220.353†	4505.8	4356.1	520.22 ug/L	520.22 ppb	14:24:04
2	S 181.975 Axial†	872.9	765.9	1048.3 ug/L	1048.3 ppb	14:24:04
2	Sb 206.836†	1849.5	1725.4	518.94 ug/L	518.94 ppb	14:24:04
2	Se 196.026†	1016.7	1008.7	532.50 ug/L	532.50 ppb	14:24:04
2	Si 251.611†	87327.2	83758.4	2569.4 ug/L	2569.4 ppb	14:23:43
2	Sn 189.927†	2997.1	2876.2	509.97 ug/L	509.97 ppb	14:24:04
2	Ti 334.940†	287277.4	278240.4	509.31 ug/L	509.31 ppb	14:23:43
2	Tl 190.801†	1977.4	1966.6	517.91 ug/L	517.91 ppb	14:24:04
2	U 409.014†	10533.6	15001.5	506.37 ug/L	506.37 ppb	14:23:43
2	V 292.402†	56503.2	56025.7	514.97 ug/L	514.97 ppb	14:23:43
2	Zn 213.857†	58507.6	55467.4	507.22 ug/L	507.22 ppb	14:23:43
2	SiO2†	87741.9	84133.1	5494.2 ug/L	5494.2 ppb	14:24:41
3	Sc Radial	7240.3	7240.3	96.9 %		14:23:08
3	Y RADIAL	6661.5	6661.5	96.20 %		14:23:08
3	Al 396.153Radial†	6383.5	6662.7	5464.4 ug/L	5464.4 ppb	14:22:48
3	Ca 317.933Radial†	3673.9	3763.7	5331.7 ug/L	5331.7 ppb	14:23:08
3	Fe 238.204 Radial†	1226.4	1231.3	5148.8 ug/L	5148.8 ppb	14:23:08
3	K 766.490 Radial†	25214.2	23623.1	5083.2 ug/L	5083.2 ppb	14:22:48
3	Mg 279.077 IEC†	207.9	211.6	5281.7 ug/L	5281.7 ppb	14:23:08
3	Na 589.592 Radial†	169684.7	175312.2	10759 ug/L	10759 ppb	14:22:48
3	Sr 421.552†	175629.8	181370.1	506.52 ug/L	506.52 ppb	14:22:48
3	Sc 361.383	740782.9	740782.9	103.07 %		14:24:11
3	Y 371.029	571291.1	571291.1	101.65 %		14:24:11
3	Ag 328.068†	88278.7	85013.2	511.01 ug/L	511.01 ppb	14:24:11
3	As 188.979†	1458.3	1450.2	526.22 ug/L	526.22 ppb	14:24:31
3	B 249.677†	19775.7	20125.9	504.23 ug/L	504.23 ppb	14:24:11
3	Ba 233.527†	75004.4	72766.9	514.55 ug/L	514.55 ppb	14:24:11
3	Be 313.107†	1148487.1	1119115.7	513.40 ug/L	513.40 ppb	14:24:11
3	Cd 226.502†	40987.9	40046.6	510.52 ug/L	510.52 ppb	14:24:31
3	Co 228.616†	30462.5	29653.4	514.50 ug/L	514.50 ppb	14:24:31
3	Cr 267.716†	37490.7	36449.9	511.48 ug/L	511.48 ppb	14:24:11
3	Cu 324.752†	150206.8	140088.5	507.94 ug/L	507.94 ppb	14:24:11
3	Mn 257.610†	480485.2	465475.3	513.86 ug/L	513.86 ppb	14:24:11
3	Mo 202.031†	7621.7	7377.2	519.68 ug/L	519.68 ppb	14:24:31
3	Ni 231.604†	19909.6	19196.0	512.78 ug/L	512.78 ppb	14:24:31
3	P 214.914†	5597.5	5115.8	2515.6 ug/L	2515.6 ppb	14:24:31
3	Pb 220.353†	4520.4	4398.8	525.36 ug/L	525.36 ppb	14:24:31
3	S 181.975 Axial†	866.8	765.5	1047.6 ug/L	1047.6 ppb	14:24:31
3	Sb 206.836†	1868.9	1755.9	528.27 ug/L	528.27 ppb	14:24:31
3	Se 196.026†	1025.7	1023.9	540.74 ug/L	540.74 ppb	14:24:31
3	Si 251.611†	86940.6	83935.9	2574.6 ug/L	2574.6 ppb	14:24:11
3	Sn 189.927†	3032.5	2929.6	519.44 ug/L	519.44 ppb	14:24:31
3	Ti 334.940†	284896.7	277748.0	508.42 ug/L	508.42 ppb	14:24:11
3	Tl 190.801†	1987.7	1989.2	523.79 ug/L	523.79 ppb	14:24:31
3	U 409.014†	10425.0	14962.8	505.04 ug/L	505.04 ppb	14:24:11
3	V 292.402†	56204.3	56093.2	515.63 ug/L	515.63 ppb	14:24:11
3	Zn 213.857†	58249.3	55586.9	508.28 ug/L	508.28 ppb	14:24:11
3	SiO2†	87617.3	84567.3	5522.1 ug/L	5522.1 ppb	14:24:47

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	740857.8	103.08	%	0.661				0.64%
Sc Radial	7294.2	97.6	%	0.94				0.96%
Y 371.029	571305.8	101.66	%	0.570				0.56%
Y RADIAL	6707.8	96.87	%	0.904				0.93%
Ag 328.068†	85173.3	511.95	ug/L	2.033	511.95	ppb	2.033	0.40%
QC value within limits for Ag 328.068 Recovery = 102.39%								
Al 396.153Radial†	6548.6	5370.4	ug/L	131.23	5370.4	ppb	131.23	2.44%
QC value within limits for Al 396.153Radial Recovery = 107.41%								
As 188.979†	1445.9	524.67	ug/L	1.421	524.67	ppb	1.421	0.27%
QC value within limits for As 188.979 Recovery = 104.93%								
B 249.677†	20146.2	504.76	ug/L	1.799	504.76	ppb	1.799	0.36%
QC value within limits for B 249.677 Recovery = 100.95%								
Ba 233.527†	72761.7	514.51	ug/L	1.233	514.51	ppb	1.233	0.24%
QC value within limits for Ba 233.527 Recovery = 102.90%								
Be 313.107†	1121478.1	514.48	ug/L	1.369	514.48	ppb	1.369	0.27%
QC value within limits for Be 313.107 Recovery = 102.90%								
Ca 317.933Radial†	3728.2	5281.5	ug/L	70.82	5281.5	ppb	70.82	1.34%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.63%
Cd 226.502†            39873.2      508.32 ug/L         2.913      508.32 ppb          2.913   0.57%
   QC value within limits for Cd 226.502  Recovery = 101.66%
Co 228.616†            29512.0      512.04 ug/L         2.788      512.04 ppb          2.788   0.54%
   QC value within limits for Co 228.616  Recovery = 102.41%
Cr 267.716†            36501.4      512.20 ug/L         0.935      512.20 ppb          0.935   0.18%
   QC value within limits for Cr 267.716  Recovery = 102.44%
Cu 324.752†           140394.7      509.05 ug/L         1.129      509.05 ppb          1.129   0.22%
   QC value within limits for Cu 324.752  Recovery = 101.81%
Fe 238.204 Radial†      1215.9      5084.7 ug/L        75.87      5084.7 ppb         75.87   1.49%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.69%
K 766.490 Radial†      23417.5      5038.9 ug/L        94.75      5038.9 ppb         94.75   1.88%
   QC value within limits for K 766.490 Radial  Recovery = 100.78%
Mg 279.077 IEC†          212.3      5298.8 ug/L        15.20      5298.8 ppb         15.20   0.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.98%
Mn 257.610†           465627.0      514.01 ug/L         0.892      514.01 ppb          0.892   0.17%
   QC value within limits for Mn 257.610  Recovery = 102.80%
Mo 202.031†             7346.4      517.51 ug/L         3.070      517.51 ppb          3.070   0.59%
   QC value within limits for Mo 202.031  Recovery = 103.50%
Na 589.592 Radial†    172631.6       10595 ug/L       234.2         10595 ppb        234.2   2.21%
   QC value within limits for Na 589.592 Radial  Recovery = 105.95%
Ni 231.604†            19137.8      511.23 ug/L         2.759      511.23 ppb          2.759   0.54%
   QC value within limits for Ni 231.604  Recovery = 102.25%
P 214.914†              5106.5      2510.6 ug/L        11.29      2510.6 ppb         11.29   0.45%
   QC value within limits for P 214.914  Recovery = 100.42%
Pb 220.353†             4374.8      522.47 ug/L         2.623      522.47 ppb          2.623   0.50%
   QC value within limits for Pb 220.353  Recovery = 104.49%
S 181.975 Axial†         764.3      1046.0 ug/L         3.36      1046.0 ppb          3.36   0.32%
   QC value within limits for S 181.975 Axial  Recovery = 104.60%
Sb 206.836†             1738.8      523.09 ug/L         4.752      523.09 ppb          4.752   0.91%
   QC value within limits for Sb 206.836  Recovery = 104.62%
Se 196.026†             1020.3      538.67 ug/L         5.438      538.67 ppb          5.438   1.01%
   QC value within limits for Se 196.026  Recovery = 107.73%
Si 251.611†            83923.3      2574.3 ug/L         4.78      2574.3 ppb          4.78   0.19%
   QC value within limits for Si 251.611  Recovery = 102.97%
Sn 189.927†             2910.0      515.95 ug/L         5.205      515.95 ppb          5.205   1.01%
   QC value within limits for Sn 189.927  Recovery = 103.19%
Sr 421.552†           178810.5      499.37 ug/L        11.110      499.37 ppb         11.110   2.22%
   QC value within limits for Sr 421.552  Recovery = 99.87%
Ti 334.940†           278410.6      509.63 ug/L         1.394      509.63 ppb          1.394   0.27%
   QC value within limits for Ti 334.940  Recovery = 101.93%
Tl 190.801†             1982.7      522.10 ug/L         3.647      522.10 ppb          3.647   0.70%
   QC value within limits for Tl 190.801  Recovery = 104.42%
U 409.014†             15027.2      507.23 ug/L         2.718      507.23 ppb          2.718   0.54%
   QC value within limits for U 409.014  Recovery = 101.45%
V 292.402†             56144.0      516.07 ug/L         1.385      516.07 ppb          1.385   0.27%
   QC value within limits for V 292.402  Recovery = 103.21%
Zn 213.857†            55612.2      508.52 ug/L         1.448      508.52 ppb          1.448   0.28%
   QC value within limits for Zn 213.857  Recovery = 101.70%
SiO2†                  84424.0      5512.9 ug/L        16.23      5512.9 ppb         16.23   0.29%
   QC value within limits for SiO2  Recovery = 103.09%
All analyte(s) passed QC.
```

Sequence No.: 21
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 14:26:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7357.7	7357.7	98.4	%			14:28:49
1	Y RADIAL	6806.0	6806.0	98.29	%			14:28:49
1	Al 396.153Radial†	-57.0	14.7	12.054	ug/L	12.054	ppb	14:28:49
1	Ca 317.933Radial†	30.0	1.3	1.8928	ug/L	1.8928	ppb	14:29:09
1	Fe 238.204 Radial†	35.7	1.5	6.3098	ug/L	6.3098	ppb	14:29:09
1	K 766.490 Radial†	2420.4	51.7	11.141	ug/L	11.141	ppb	14:28:49
1	Mg 279.077 IEC†	4.1	1.1	28.546	ug/L	28.546	ppb	14:29:09
1	Na 589.592 Radial†	-146.4	-13.1	-0.8054	ug/L	-0.8054	ppb	14:28:49
1	Sr 421.552†	-20.7	34.9	0.0973	ug/L	0.0973	ppb	14:28:49
1	Sc 361.383	720454.6	720454.6	100.25	%			14:30:06
1	Y 371.029	563412.7	563412.7	100.25	%			14:30:06
1	Ag 328.068†	662.0	27.8	0.1718	ug/L	0.1718	ppb	14:30:06
1	As 188.979†	-25.3	10.2	3.6748	ug/L	3.6748	ppb	14:30:26
1	B 249.677†	-672.7	268.9	6.7766	ug/L	6.7766	ppb	14:30:06
1	Ba 233.527†	42.7	42.1	0.2992	ug/L	0.2992	ppb	14:30:26
1	Be 313.107†	-4827.3	66.3	0.0302	ug/L	0.0302	ppb	14:30:06
1	Cd 226.502†	-275.4	6.3	0.0804	ug/L	0.0804	ppb	14:30:26
1	Co 228.616†	-102.0	-2.3	-0.0375	ug/L	-0.0375	ppb	14:30:26
1	Cr 267.716†	-61.4	16.2	0.2281	ug/L	0.2281	ppb	14:30:06
1	Cu 324.752†	5602.1	-50.0	-0.1809	ug/L	-0.1809	ppb	14:30:06
1	Mn 257.610†	762.0	80.5	0.0890	ug/L	0.0890	ppb	14:30:26
1	Mo 202.031†	29.0	11.8	0.8323	ug/L	0.8323	ppb	14:30:26
1	Ni 231.604†	149.4	29.2	0.7802	ug/L	0.7802	ppb	14:30:26
1	P 214.914†	320.3	4.7	2.4546	ug/L	2.4546	ppb	14:30:26
1	Pb 220.353†	-18.0	-4.7	-0.5563	ug/L	-0.5563	ppb	14:30:26
1	S 181.975 Axial†	71.6	-4.0	-5.4613	ug/L	-5.4613	ppb	14:30:26
1	Sb 206.836†	66.9	9.5	2.8349	ug/L	2.8349	ppb	14:30:26
1	Se 196.026†	-44.1	-15.2	-7.7493	ug/L	-7.7493	ppb	14:30:26
1	Si 251.611†	526.1	113.1	3.4662	ug/L	3.4662	ppb	14:30:26
1	Sn 189.927†	15.7	3.2	0.5611	ug/L	0.5611	ppb	14:30:26
1	Ti 334.940†	-1383.1	-31.5	-0.0578	ug/L	-0.0578	ppb	14:30:06
1	Tl 190.801†	-57.8	3.1	0.8061	ug/L	0.8061	ppb	14:30:26
1	U 409.014†	-4853.3	7.3	0.2454	ug/L	0.2454	ppb	14:30:06
1	V 292.402†	-1455.3	113.4	1.0408	ug/L	1.0408	ppb	14:30:06
1	Zn 213.857†	994.5	67.0	0.6118	ug/L	0.6118	ppb	14:30:26
1	SiO2†	566.6	128.3	8.3824	ug/L	8.3824	ppb	14:31:22
2	Sc Radial	7144.9	7144.9	95.6	%			14:29:14
2	Y RADIAL	6613.7	6613.7	95.51	%			14:29:14
2	Al 396.153Radial†	-62.5	7.2	5.9468	ug/L	5.9468	ppb	14:29:14
2	Ca 317.933Radial†	38.1	10.8	15.270	ug/L	15.270	ppb	14:29:34
2	Fe 238.204 Radial†	37.7	4.7	19.470	ug/L	19.470	ppb	14:29:34
2	K 766.490 Radial†	2432.2	137.3	29.614	ug/L	29.614	ppb	14:29:14
2	Mg 279.077 IEC†	2.0	-1.0	-24.813	ug/L	-24.813	ppb	14:29:34
2	Na 589.592 Radial†	-275.4	-152.5	-9.3607	ug/L	-9.3607	ppb	14:29:14
2	Sr 421.552†	-48.3	5.4	0.0148	ug/L	0.0148	ppb	14:29:14
2	Sc 361.383	710699.1	710699.1	98.888	%			14:30:31
2	Y 371.029	556084.3	556084.3	98.947	%			14:30:31
2	Ag 328.068†	587.2	-38.9	-0.2273	ug/L	-0.2273	ppb	14:30:31
2	As 188.979†	-30.4	4.7	1.6844	ug/L	1.6844	ppb	14:30:51
2	B 249.677†	-781.9	149.3	3.7592	ug/L	3.7592	ppb	14:30:31
2	Ba 233.527†	28.1	27.9	0.1965	ug/L	0.1965	ppb	14:30:51
2	Be 313.107†	-4635.1	194.5	0.0886	ug/L	0.0886	ppb	14:30:31
2	Cd 226.502†	-278.4	-0.5	-0.0082	ug/L	-0.0082	ppb	14:30:51
2	Co 228.616†	-86.4	12.1	0.2105	ug/L	0.2105	ppb	14:30:51
2	Cr 267.716†	-79.0	-2.5	-0.0353	ug/L	-0.0353	ppb	14:30:31
2	Cu 324.752†	5698.4	124.0	0.4504	ug/L	0.4504	ppb	14:30:31
2	Mn 257.610†	727.6	56.2	0.0649	ug/L	0.0649	ppb	14:30:51
2	Mo 202.031†	20.1	3.2	0.2260	ug/L	0.2260	ppb	14:30:51
2	Ni 231.604†	111.5	-7.0	-0.1876	ug/L	-0.1876	ppb	14:30:51

2	P 214.914†	312.0	0.7	0.2668	ug/L	0.2668	ppb	14:30:51
2	Pb 220.353†	1.4	14.6	1.7419	ug/L	1.7419	ppb	14:30:51
2	S 181.975 Axial†	89.1	14.7	20.125	ug/L	20.125	ppb	14:30:51
2	Sb 206.836†	61.8	5.2	1.5531	ug/L	1.5531	ppb	14:30:51
2	Se 196.026†	-34.4	-6.0	-2.9820	ug/L	-2.9820	ppb	14:30:51
2	Si 251.611†	523.9	118.1	3.6358	ug/L	3.6358	ppb	14:30:51
2	Sn 189.927†	11.0	-1.4	-0.2406	ug/L	-0.2406	ppb	14:30:51
2	Ti 334.940†	-1427.4	-95.1	-0.1739	ug/L	-0.1739	ppb	14:30:31
2	Tl 190.801†	-57.0	3.1	0.8020	ug/L	0.8020	ppb	14:30:51
2	U 409.014†	-4754.9	40.4	1.3643	ug/L	1.3643	ppb	14:30:31
2	V 292.402†	-1548.4	-0.6	-0.0029	ug/L	-0.0029	ppb	14:30:31
2	Zn 213.857†	1006.1	92.3	0.8516	ug/L	0.8516	ppb	14:30:51
2	SiO2†	567.5	137.0	8.9890	ug/L	8.9890	ppb	14:31:27
3	Sc Radial	7320.7	7320.7	97.9	%			14:29:39
3	Y RADIAL	6770.7	6770.7	97.78	%			14:29:39
3	Al 396.153Radial†	-80.2	-9.3	-7.6114	ug/L	-7.6114	ppb	14:29:39
3	Ca 317.933Radial†	32.7	4.3	6.0964	ug/L	6.0964	ppb	14:29:59
3	Fe 238.204 Radial†	38.0	4.0	16.490	ug/L	16.490	ppb	14:29:59
3	K 766.490 Radial†	2520.8	166.6	35.953	ug/L	35.953	ppb	14:29:39
3	Mg 279.077 IEC†	6.8	3.9	96.707	ug/L	96.707	ppb	14:29:59
3	Na 589.592 Radial†	-174.0	-42.1	-2.5864	ug/L	-2.5864	ppb	14:29:39
3	Sr 421.552†	-67.5	-13.0	-0.0364	ug/L	-0.0364	ppb	14:29:39
3	Sc 361.383	722799.3	722799.3	100.57	%			14:30:56
3	Y 371.029	564630.8	564630.8	100.47	%			14:30:56
3	Ag 328.068†	662.4	26.0	0.1590	ug/L	0.1590	ppb	14:30:56
3	As 188.979†	-38.2	-2.6	-0.9212	ug/L	-0.9212	ppb	14:31:16
3	B 249.677†	-733.3	210.8	5.3117	ug/L	5.3117	ppb	14:30:56
3	Ba 233.527†	34.8	34.1	0.2388	ug/L	0.2388	ppb	14:31:16
3	Be 313.107†	-4763.4	145.5	0.0666	ug/L	0.0666	ppb	14:30:56
3	Cd 226.502†	-294.8	-12.0	-0.1548	ug/L	-0.1548	ppb	14:31:16
3	Co 228.616†	-103.7	-3.7	-0.0657	ug/L	-0.0657	ppb	14:31:16
3	Cr 267.716†	-48.4	29.3	0.4098	ug/L	0.4098	ppb	14:30:56
3	Cu 324.752†	5673.0	2.3	0.0092	ug/L	0.0092	ppb	14:30:56
3	Mn 257.610†	724.2	40.5	0.0449	ug/L	0.0449	ppb	14:31:16
3	Mo 202.031†	10.6	-6.6	-0.4657	ug/L	-0.4657	ppb	14:31:16
3	Ni 231.604†	134.7	14.1	0.3771	ug/L	0.3771	ppb	14:31:16
3	P 214.914†	329.0	12.4	6.2915	ug/L	6.2915	ppb	14:31:16
3	Pb 220.353†	-18.4	-5.1	-0.6070	ug/L	-0.6070	ppb	14:31:16
3	S 181.975 Axial†	87.4	11.5	15.691	ug/L	15.691	ppb	14:31:16
3	Sb 206.836†	50.4	-7.1	-2.1543	ug/L	-2.1543	ppb	14:31:16
3	Se 196.026†	-42.4	-13.4	-6.7728	ug/L	-6.7728	ppb	14:31:16
3	Si 251.611†	525.2	110.5	3.4199	ug/L	3.4199	ppb	14:31:16
3	Sn 189.927†	7.4	-5.1	-0.9024	ug/L	-0.9024	ppb	14:31:16
3	Ti 334.940†	-1347.4	8.5	0.0163	ug/L	0.0163	ppb	14:30:56
3	Tl 190.801†	-65.9	-4.7	-1.2408	ug/L	-1.2408	ppb	14:31:16
3	U 409.014†	-4904.5	-27.9	-0.9480	ug/L	-0.9480	ppb	14:30:56
3	V 292.402†	-1643.2	-68.7	-0.6323	ug/L	-0.6323	ppb	14:30:56
3	Zn 213.857†	998.2	67.4	0.6142	ug/L	0.6142	ppb	14:31:16
3	SiO2†	536.0	96.1	6.3369	ug/L	6.3369	ppb	14:31:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	717984.4	99.902	%	0.8929				0.89%
Sc Radial	7274.4	97.3	%	1.52				1.56%
Y 371.029	561375.9	99.889	%	0.8226				0.82%
Y RADIAL	6730.1	97.20	%	1.479				1.52%
Ag 328.068†	5.0	0.0345	ug/L	0.22680	0.0345	ppb	0.22680	657.52%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	4.2	3.4631	ug/L	10.06512	3.4631	ppb	10.06512	290.64%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.1	1.4793	ug/L	2.30486	1.4793	ppb	2.30486	155.80%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	209.7	5.2825	ug/L	1.50894	5.2825	ppb	1.50894	28.56%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	34.7	0.2449	ug/L	0.05159	0.2449	ppb	0.05159	21.07%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	135.4	0.0618	ug/L	0.02952	0.0618	ppb	0.02952	47.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.5	7.7531	ug/L	6.84079	7.7531	ppb	6.84079	88.23%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -2.0     -0.0275 ug/L       0.11883     -0.0275 ppb        0.11883 431.73%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 2.0      0.0358 ug/L       0.15200      0.0358 ppb        0.15200 424.78%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.3      0.2009 ug/L       0.22380      0.2009 ppb        0.22380 111.41%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                25.4      0.0929 ug/L       0.32389      0.0929 ppb        0.32389 348.61%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4     14.090 ug/L        6.9006     14.090 ppb         6.9006  48.98%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         118.5     25.569 ug/L       12.8914     25.569 ppb        12.8914  50.42%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.3     33.480 ug/L       60.9101     33.480 ppb        60.9101 181.93%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                59.1      0.0663 ug/L       0.02210      0.0663 ppb        0.02210  33.35%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.8      0.1975 ug/L       0.64950      0.1975 ppb        0.64950 328.83%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -69.3     -4.2508 ug/L       4.51400     -4.2508 ppb        4.51400 106.19%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                12.1      0.3233 ug/L       0.48613      0.3233 ppb        0.48613 150.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  5.9      3.0043 ug/L       3.04972      3.0043 ppb        3.04972 101.51%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 1.6      0.1929 ug/L       1.34174      0.1929 ppb        1.34174 695.60%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            7.4     10.118 ug/L       13.6732     10.118 ppb        13.6732 135.13%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 2.5      0.7446 ug/L       2.59100      0.7446 ppb        2.59100 347.98%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -11.5     -5.8347 ug/L       2.51832     -5.8347 ppb        2.51832  43.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               113.9      3.5073 ug/L       0.11368      3.5073 ppb        0.11368   3.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.1     -0.1939 ug/L       0.73286     -0.1939 ppb        0.73286 377.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 9.1      0.0252 ug/L       0.06748      0.0252 ppb        0.06748 267.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -39.4     -0.0718 ug/L       0.09585     -0.0718 ppb        0.09585 133.50%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 0.5      0.1224 ug/L       1.18057      0.1224 ppb        1.18057 964.40%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                  6.6      0.2206 ug/L       1.15636      0.2206 ppb        1.15636 524.25%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 14.7      0.1352 ug/L       0.84504      0.1352 ppb        0.84504 625.07%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                75.6      0.6925 ug/L       0.13778      0.6925 ppb        0.13778  19.90%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     120.5      7.9028 ug/L       1.38958      7.9028 ppb        1.38958  17.58%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 6/30/2009 14:43:19
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601

Plasma On Time: 6/29/2009 15:26:31
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\063009.sif
Batch ID:
Results Data Set: 063009
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 14:43:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7137.2	7137.2	95.5	%			14:45:32
1	Y RADIAL	6564.5	6564.5	94.80	%			14:45:32
1	Al 396.153Radial†	6313.0	6684.1	5482.8	ug/L	5482.8	ppb	14:45:12
1	Ca 317.933Radial†	3719.0	3865.8	5476.3	ug/L	5476.3	ppb	14:45:32
1	Fe 238.204 Radial†	1240.3	1264.1	5285.0	ug/L	5285.0	ppb	14:45:32
1	K 766.490 Radial†	24931.6	23703.1	5101.0	ug/L	5101.0	ppb	14:45:12
1	Mg 279.077 IEC†	211.3	218.3	5447.3	ug/L	5447.3	ppb	14:45:32
1	Na 589.592 Radial†	167622.3	175682.6	10782	ug/L	10782	ppb	14:45:12
1	Sr 421.552†	174150.3	182439.6	509.51	ug/L	509.51	ppb	14:45:12
1	Sc 361.383	766538.4	766538.4	106.66	%			14:46:31
1	Y 371.029	591502.5	591502.5	105.25	%			14:46:31
1	Ag 328.068†	88049.0	81920.1	492.51	ug/L	492.51	ppb	14:46:31
1	As 188.979†	1426.3	1372.7	498.22	ug/L	498.22	ppb	14:46:51
1	B 249.677†	19721.2	19430.0	486.80	ug/L	486.80	ppb	14:46:31
1	Ba 233.527†	74223.1	69589.4	492.08	ug/L	492.08	ppb	14:46:31
1	Be 313.107†	1142807.9	1076352.9	493.78	ug/L	493.78	ppb	14:46:31
1	Cd 226.502†	40577.3	38325.4	488.54	ug/L	488.54	ppb	14:46:51
1	Co 228.616†	30101.9	28322.3	491.40	ug/L	491.40	ppb	14:46:51
1	Cr 267.716†	37316.8	35064.8	492.05	ug/L	492.05	ppb	14:46:31
1	Cu 324.752†	149803.2	134813.7	488.83	ug/L	488.83	ppb	14:46:31
1	Mn 257.610†	475710.6	445336.1	491.66	ug/L	491.66	ppb	14:46:31
1	Mo 202.031†	7571.2	7081.5	498.87	ug/L	498.87	ppb	14:46:51
1	Ni 231.604†	19779.8	18425.3	492.19	ug/L	492.19	ppb	14:46:51
1	P 214.914†	5537.1	4876.6	2396.9	ug/L	2396.9	ppb	14:46:51
1	Pb 220.353†	4488.4	4221.4	504.19	ug/L	504.19	ppb	14:46:51
1	S 181.975 Axial†	851.2	722.7	988.94	ug/L	988.94	ppb	14:46:51
1	Sb 206.836†	1827.8	1656.5	498.41	ug/L	498.41	ppb	14:46:51
1	Se 196.026†	1012.1	977.7	517.57	ug/L	517.57	ppb	14:46:51
1	Si 251.611†	86130.7	80342.5	2464.3	ug/L	2464.3	ppb	14:46:31
1	Sn 189.927†	2996.3	2796.8	495.96	ug/L	495.96	ppb	14:46:51
1	Ti 334.940†	283264.6	266930.9	488.63	ug/L	488.63	ppb	14:46:31
1	Tl 190.801†	1968.1	1906.0	501.90	ug/L	501.90	ppb	14:46:51
1	U 409.014†	10490.6	14684.5	495.64	ug/L	495.64	ppb	14:46:31
1	V 292.402†	55760.9	53845.4	494.94	ug/L	494.94	ppb	14:46:31
1	Zn 213.857†	57833.3	53298.1	487.29	ug/L	487.29	ppb	14:46:31
1	SiO2†	86560.6	80720.4	5270.6	ug/L	5270.6	ppb	14:47:51
2	Sc Radial	7255.2	7255.2	97.1	%			14:45:57
2	Y RADIAL	6649.7	6649.7	96.03	%			14:45:57
2	Al 396.153Radial†	6286.0	6548.7	5371.3	ug/L	5371.3	ppb	14:45:37
2	Ca 317.933Radial†	3699.9	3782.7	5358.6	ug/L	5358.6	ppb	14:45:57
2	Fe 238.204 Radial†	1225.9	1228.1	5135.0	ug/L	5135.0	ppb	14:45:57
2	K 766.490 Radial†	24915.7	23261.9	5005.8	ug/L	5005.8	ppb	14:45:37
2	Mg 279.077 IEC†	212.6	216.0	5391.2	ug/L	5391.2	ppb	14:45:57
2	Na 589.592 Radial†	165986.4	171140.5	10503	ug/L	10503	ppb	14:45:37
2	Sr 421.552†	172511.4	177783.0	496.50	ug/L	496.50	ppb	14:45:37
2	Sc 361.383	765905.4	765905.4	106.57	%			14:46:58
2	Y 371.029	590898.1	590898.1	105.14	%			14:46:58

2	Ag 328.068†	87867.8	81818.4	491.86 ug/L	491.86 ppb	14:46:58
2	As 188.979†	1444.7	1391.1	504.81 ug/L	504.81 ppb	14:47:18
2	B 249.677†	19805.4	19524.4	489.17 ug/L	489.17 ppb	14:46:58
2	Ba 233.527†	74361.4	69776.7	493.41 ug/L	493.41 ppb	14:46:58
2	Be 313.107†	1144475.3	1078803.1	494.90 ug/L	494.90 ppb	14:46:58
2	Cd 226.502†	40726.0	38496.4	490.74 ug/L	490.74 ppb	14:47:18
2	Co 228.616†	30228.7	28464.6	493.87 ug/L	493.87 ppb	14:47:18
2	Cr 267.716†	37299.4	35077.4	492.22 ug/L	492.22 ppb	14:46:58
2	Cu 324.752†	149550.1	134692.3	488.38 ug/L	488.38 ppb	14:46:58
2	Mn 257.610†	476621.3	446559.2	492.99 ug/L	492.99 ppb	14:46:58
2	Mo 202.031†	7579.4	7095.0	499.81 ug/L	499.81 ppb	14:47:18
2	Ni 231.604†	19793.6	18453.6	492.95 ug/L	492.95 ppb	14:47:18
2	P 214.914†	5556.7	4899.3	2408.7 ug/L	2408.7 ppb	14:47:18
2	Pb 220.353†	4502.6	4238.3	506.18 ug/L	506.18 ppb	14:47:18
2	S 181.975 Axial†	856.2	728.0	996.26 ug/L	996.26 ppb	14:47:18
2	Sb 206.836†	1827.7	1657.8	498.87 ug/L	498.87 ppb	14:47:18
2	Se 196.026†	1022.1	987.8	522.25 ug/L	522.25 ppb	14:47:18
2	Si 251.611†	86108.9	80388.7	2465.7 ug/L	2465.7 ppb	14:46:58
2	Sn 189.927†	3017.4	2818.9	499.84 ug/L	499.84 ppb	14:47:18
2	Ti 334.940†	283539.8	267408.6	489.50 ug/L	489.50 ppb	14:46:58
2	Tl 190.801†	1974.7	1913.7	503.91 ug/L	503.91 ppb	14:47:18
2	U 409.014†	10341.8	14553.0	491.20 ug/L	491.20 ppb	14:46:58
2	V 292.402†	55922.9	54040.6	496.74 ug/L	496.74 ppb	14:46:58
2	Zn 213.857†	57768.0	53281.6	487.15 ug/L	487.15 ppb	14:46:58
2	SiO2†	87933.2	82075.5	5359.6 ug/L	5359.6 ppb	14:47:56
3	Sc Radial	7426.8	7426.8	99.4 %		14:46:22
3	Y RADIAL	6805.9	6805.9	98.29 %		14:46:22
3	Al 396.153Radial†	6296.0	6409.2	5255.8 ug/L	5255.8 ppb	14:46:02
3	Ca 317.933Radial†	3666.3	3660.8	5185.9 ug/L	5185.9 ppb	14:46:22
3	Fe 238.204 Radial†	1224.8	1197.9	5009.4 ug/L	5009.4 ppb	14:46:22
3	K 766.490 Radial†	25058.1	22812.2	4908.4 ug/L	4908.4 ppb	14:46:02
3	Mg 279.077 IEC†	211.0	209.3	5224.6 ug/L	5224.6 ppb	14:46:22
3	Na 589.592 Radial†	167205.4	168417.2	10336 ug/L	10336 ppb	14:46:02
3	Sr 421.552†	173181.4	174351.9	486.92 ug/L	486.92 ppb	14:46:02
3	Sc 361.383	749065.5	749065.5	104.23 %		14:47:25
3	Y 371.029	577293.0	577293.0	102.72 %		14:47:25
3	Ag 328.068†	89173.2	84924.4	510.44 ug/L	510.44 ppb	14:47:25
3	As 188.979†	1436.8	1414.0	513.12 ug/L	513.12 ppb	14:47:45
3	B 249.677†	20007.2	20135.8	504.53 ug/L	504.53 ppb	14:47:25
3	Ba 233.527†	75493.4	72431.5	512.18 ug/L	512.18 ppb	14:47:25
3	Be 313.107†	1162013.9	1119773.6	513.70 ug/L	513.70 ppb	14:47:25
3	Cd 226.502†	40671.0	39302.8	501.05 ug/L	501.05 ppb	14:47:45
3	Co 228.616†	30234.1	29107.5	505.02 ug/L	505.02 ppb	14:47:45
3	Cr 267.716†	37870.8	36412.4	510.95 ug/L	510.95 ppb	14:47:25
3	Cu 324.752†	151474.5	139693.5	506.50 ug/L	506.50 ppb	14:47:25
3	Mn 257.610†	483656.1	463363.2	511.51 ug/L	511.51 ppb	14:47:25
3	Mo 202.031†	7607.2	7281.6	512.94 ug/L	512.94 ppb	14:47:45
3	Ni 231.604†	19846.1	18921.5	505.45 ug/L	505.45 ppb	14:47:45
3	P 214.914†	5543.9	5004.3	2458.8 ug/L	2458.8 ppb	14:47:45
3	Pb 220.353†	4505.4	4335.9	517.82 ug/L	517.82 ppb	14:47:45
3	S 181.975 Axial†	855.5	745.4	1020.1 ug/L	1020.1 ppb	14:47:45
3	Sb 206.836†	1838.2	1706.4	513.28 ug/L	513.28 ppb	14:47:45
3	Se 196.026†	1023.4	1010.6	533.50 ug/L	533.50 ppb	14:47:45
3	Si 251.611†	87271.9	83321.1	2555.9 ug/L	2555.9 ppb	14:47:25
3	Sn 189.927†	3001.6	2867.4	508.40 ug/L	508.40 ppb	14:47:45
3	Ti 334.940†	287210.2	276911.5	506.88 ug/L	506.88 ppb	14:47:25
3	Tl 190.801†	1981.5	1961.9	516.66 ug/L	516.66 ppb	14:47:45
3	U 409.014†	10450.5	14875.5	502.10 ug/L	502.10 ppb	14:47:25
3	V 292.402†	56735.2	55999.7	514.71 ug/L	514.71 ppb	14:47:25
3	Zn 213.857†	58731.8	55425.0	506.85 ug/L	506.85 ppb	14:47:25
3	SiO2†	87396.9	83415.8	5447.1 ug/L	5447.1 ppb	14:48:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	760503.1	105.82	%	1.379				1.30%
Sc Radial	7273.1	97.3	%	1.95				2.00%
Y 371.029	586564.5	104.37	%	1.430				1.37%
Y RADIAL	6673.4	96.38	%	1.768				1.83%
Ag 328.068†	82887.6	498.27	ug/L	10.545	498.27	ppb	10.545	2.12%

```
   QC value within limits for Ag 328.068  Recovery = 99.65%
Al 396.153Radial†       6547.3      5370.0 ug/L        113.49      5370.0 ppb        113.49   2.11%
   QC value within limits for Al 396.153Radial  Recovery = 107.40%
As 188.979†             1392.6      505.38 ug/L         7.465      505.38 ppb         7.465   1.48%
   QC value within limits for As 188.979  Recovery = 101.08%
B 249.677†             19696.7      493.50 ug/L         9.627      493.50 ppb         9.627   1.95%
   QC value within limits for B 249.677  Recovery = 98.70%
Ba 233.527†            70599.2      499.22 ug/L        11.240      499.22 ppb        11.240   2.25%
   QC value within limits for Ba 233.527  Recovery = 99.84%
Be 313.107†          1091643.2      500.79 ug/L        11.188      500.79 ppb        11.188   2.23%
   QC value within limits for Be 313.107  Recovery = 100.16%
Ca 317.933Radial†       3769.7      5340.3 ug/L       146.08      5340.3 ppb       146.08   2.74%
   QC value within limits for Ca 317.933Radial  Recovery = 106.81%
Cd 226.502†            38708.2      493.44 ug/L         6.677      493.44 ppb         6.677   1.35%
   QC value within limits for Cd 226.502  Recovery = 98.69%
Co 228.616†            28631.5      496.76 ug/L         7.257      496.76 ppb         7.257   1.46%
   QC value within limits for Co 228.616  Recovery = 99.35%
Cr 267.716†            35518.2      498.41 ug/L        10.865      498.41 ppb        10.865   2.18%
   QC value within limits for Cr 267.716  Recovery = 99.68%
Cu 324.752†           136399.8      494.57 ug/L        10.332      494.57 ppb        10.332   2.09%
   QC value within limits for Cu 324.752  Recovery = 98.91%
Fe 238.204 Radial†      1230.1      5143.1 ug/L       137.94      5143.1 ppb       137.94   2.68%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.86%
K 766.490 Radial†      23259.1      5005.1 ug/L        96.30      5005.1 ppb        96.30   1.92%
   QC value within limits for K 766.490 Radial  Recovery = 100.10%
Mg 279.077 IEC†          214.5      5354.4 ug/L       115.81      5354.4 ppb       115.81   2.16%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.09%
Mn 257.610†           451752.8      498.72 ug/L        11.096      498.72 ppb        11.096   2.22%
   QC value within limits for Mn 257.610  Recovery = 99.74%
Mo 202.031†             7152.7      503.87 ug/L         7.865      503.87 ppb         7.865   1.56%
   QC value within limits for Mo 202.031  Recovery = 100.77%
Na 589.592 Radial†    171746.7       10541 ug/L       225.3        10541 ppb       225.3   2.14%
   QC value within limits for Na 589.592 Radial  Recovery = 105.41%
Ni 231.604†            18600.1      496.86 ug/L         7.444      496.86 ppb         7.444   1.50%
   QC value within limits for Ni 231.604  Recovery = 99.37%
P 214.914†              4926.7      2421.5 ug/L        32.89      2421.5 ppb        32.89   1.36%
   QC value within limits for P 214.914  Recovery = 96.86%
Pb 220.353†             4265.2      509.40 ug/L         7.366      509.40 ppb         7.366   1.45%
   QC value within limits for Pb 220.353  Recovery = 101.88%
S 181.975 Axial†         732.0      1001.8 ug/L        16.31      1001.8 ppb        16.31   1.63%
   QC value within limits for S 181.975 Axial  Recovery = 100.18%
Sb 206.836†             1673.6      503.52 ug/L         8.451      503.52 ppb         8.451   1.68%
   QC value within limits for Sb 206.836  Recovery = 100.70%
Se 196.026†              992.0      524.44 ug/L         8.185      524.44 ppb         8.185   1.56%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†            81350.8      2495.3 ug/L        52.51      2495.3 ppb        52.51   2.10%
   QC value within limits for Si 251.611  Recovery = 99.81%
Sn 189.927†             2827.7      501.40 ug/L         6.367      501.40 ppb         6.367   1.27%
   QC value within limits for Sn 189.927  Recovery = 100.28%
Sr 421.552†           178191.5      497.64 ug/L        11.336      497.64 ppb        11.336   2.28%
   QC value within limits for Sr 421.552  Recovery = 99.53%
Ti 334.940†           270417.0      495.00 ug/L        10.293      495.00 ppb        10.293   2.08%
   QC value within limits for Ti 334.940  Recovery = 99.00%
Tl 190.801†             1927.2      507.49 ug/L         8.006      507.49 ppb         8.006   1.58%
   QC value within limits for Tl 190.801  Recovery = 101.50%
U 409.014†             14704.3      496.31 ug/L         5.481      496.31 ppb         5.481   1.10%
   QC value within limits for U 409.014  Recovery = 99.26%
V 292.402†             54628.6      502.13 ug/L        10.929      502.13 ppb        10.929   2.18%
   QC value within limits for V 292.402  Recovery = 100.43%
Zn 213.857†            54001.6      493.76 ug/L        11.331      493.76 ppb        11.331   2.29%
   QC value within limits for Zn 213.857  Recovery = 98.75%
SiO2†                  82070.6      5359.1 ug/L        88.25      5359.1 ppb        88.25   1.65%
   QC value within limits for SiO2  Recovery = 100.22%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 14:50:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7498.2	7498.2	100	%			14:52:03
1	Y RADIAL	6974.0	6974.0	100.7	%			14:52:03
1	Al 396.153Radial†	-76.4	-3.5	-2.8247	ug/L	-2.8247	ppb	14:52:03
1	Ca 317.933Radial†	27.2	-2.0	-2.8304	ug/L	-2.8304	ppb	14:52:23
1	Fe 238.204 Radial†	39.0	4.1	17.204	ug/L	17.204	ppb	14:52:23
1	K 766.490 Radial†	2478.1	63.1	13.619	ug/L	13.619	ppb	14:52:03
1	Mg 279.077 IEC†	4.6	1.5	37.389	ug/L	37.389	ppb	14:52:23
1	Na 589.592 Radial†	-154.1	-18.0	-1.1077	ug/L	-1.1077	ppb	14:52:03
1	Sr 421.552†	-23.5	32.4	0.0905	ug/L	0.0905	ppb	14:52:03
1	Sc 361.383	720920.1	720920.1	100.31	%			14:53:20
1	Y 371.029	564413.2	564413.2	100.43	%			14:53:20
1	Ag 328.068†	628.9	-5.6	-0.0297	ug/L	-0.0297	ppb	14:53:20
1	As 188.979†	-28.6	7.0	2.5106	ug/L	2.5106	ppb	14:53:40
1	B 249.677†	-707.3	234.8	5.9156	ug/L	5.9156	ppb	14:53:20
1	Ba 233.527†	42.1	41.5	0.2935	ug/L	0.2935	ppb	14:53:40
1	Be 313.107†	-4744.7	151.7	0.0693	ug/L	0.0693	ppb	14:53:20
1	Cd 226.502†	-268.2	13.7	0.1731	ug/L	0.1731	ppb	14:53:40
1	Co 228.616†	-96.0	3.7	0.0625	ug/L	0.0625	ppb	14:53:40
1	Cr 267.716†	-46.5	31.1	0.4351	ug/L	0.4351	ppb	14:53:20
1	Cu 324.752†	5622.5	-33.3	-0.1197	ug/L	-0.1197	ppb	14:53:20
1	Mn 257.610†	734.5	52.6	0.0594	ug/L	0.0594	ppb	14:53:20
1	Mo 202.031†	5.4	-11.8	-0.8283	ug/L	-0.8283	ppb	14:53:40
1	Ni 231.604†	134.8	14.5	0.3885	ug/L	0.3885	ppb	14:53:40
1	P 214.914†	299.8	-16.0	-8.1209	ug/L	-8.1209	ppb	14:53:40
1	Pb 220.353†	-10.0	3.3	0.3868	ug/L	0.3868	ppb	14:53:40
1	S 181.975 Axial†	85.0	9.4	12.814	ug/L	12.814	ppb	14:53:40
1	Sb 206.836†	64.7	7.2	2.1388	ug/L	2.1388	ppb	14:53:40
1	Se 196.026†	-28.6	0.3	0.1849	ug/L	0.1849	ppb	14:53:40
1	Si 251.611†	538.2	124.8	3.8488	ug/L	3.8488	ppb	14:53:40
1	Sn 189.927†	19.0	6.5	1.1461	ug/L	1.1461	ppb	14:53:40
1	Ti 334.940†	-1389.9	-37.3	-0.0703	ug/L	-0.0703	ppb	14:53:20
1	Tl 190.801†	-54.1	6.9	1.7974	ug/L	1.7974	ppb	14:53:40
1	U 409.014†	-4751.7	111.7	3.7797	ug/L	3.7797	ppb	14:53:20
1	V 292.402†	-1521.6	48.3	0.4341	ug/L	0.4341	ppb	14:53:20
1	Zn 213.857†	999.2	71.0	0.6499	ug/L	0.6499	ppb	14:53:40
1	SiO2†	483.8	45.4	2.9735	ug/L	2.9735	ppb	14:54:36
2	Sc Radial	7550.7	7550.7	101	%			14:52:28
2	Y RADIAL	6988.0	6988.0	100.9	%			14:52:28
2	Al 396.153Radial†	-84.3	-10.8	-8.8757	ug/L	-8.8757	ppb	14:52:28
2	Ca 317.933Radial†	32.6	3.2	4.5234	ug/L	4.5234	ppb	14:52:48
2	Fe 238.204 Radial†	37.3	2.1	8.6923	ug/L	8.6923	ppb	14:52:48
2	K 766.490 Radial†	2505.7	73.3	15.813	ug/L	15.813	ppb	14:52:28
2	Mg 279.077 IEC†	8.2	5.1	125.98	ug/L	125.98	ppb	14:52:48
2	Na 589.592 Radial†	-224.4	-86.6	-5.3161	ug/L	-5.3161	ppb	14:52:28
2	Sr 421.552†	35.9	91.4	0.2551	ug/L	0.2551	ppb	14:52:28
2	Sc 361.383	727136.0	727136.0	101.18	%			14:53:45
2	Y 371.029	568952.0	568952.0	101.24	%			14:53:45
2	Ag 328.068†	578.3	-61.1	-0.3614	ug/L	-0.3614	ppb	14:53:45
2	As 188.979†	-32.2	3.6	1.2893	ug/L	1.2893	ppb	14:54:05
2	B 249.677†	-725.3	223.1	5.6208	ug/L	5.6208	ppb	14:53:45
2	Ba 233.527†	38.1	37.2	0.2626	ug/L	0.2626	ppb	14:54:05
2	Be 313.107†	-4754.7	182.3	0.0838	ug/L	0.0838	ppb	14:53:45
2	Cd 226.502†	-270.9	13.3	0.1698	ug/L	0.1698	ppb	14:54:05
2	Co 228.616†	-89.7	10.8	0.1870	ug/L	0.1870	ppb	14:54:05
2	Cr 267.716†	-109.1	-30.5	-0.4262	ug/L	-0.4262	ppb	14:53:45
2	Cu 324.752†	5761.6	56.2	0.2042	ug/L	0.2042	ppb	14:53:45
2	Mn 257.610†	794.7	105.9	0.1154	ug/L	0.1154	ppb	14:53:45
2	Mo 202.031†	13.5	-3.8	-0.2662	ug/L	-0.2662	ppb	14:54:05
2	Ni 231.604†	156.2	34.6	0.9254	ug/L	0.9254	ppb	14:54:05

2	P 214.914†	326.2	7.6	3.8332 ug/L	3.8332 ppb	14:54:05
2	Pb 220.353†	-8.0	5.4	0.6349 ug/L	0.6349 ppb	14:54:05
2	S 181.975 Axial†	87.2	10.8	14.815 ug/L	14.815 ppb	14:54:05
2	Sb 206.836†	57.9	0.0	0.0225 ug/L	0.0225 ppb	14:54:05
2	Se 196.026†	-16.7	12.2	6.2667 ug/L	6.2667 ppb	14:54:05
2	Si 251.611†	507.4	89.7	2.7566 ug/L	2.7566 ppb	14:54:05
2	Sn 189.927†	18.2	5.5	0.9763 ug/L	0.9763 ppb	14:54:05
2	Ti 334.940†	-1283.3	79.9	0.1467 ug/L	0.1467 ppb	14:53:45
2	Tl 190.801†	-55.5	5.9	1.5495 ug/L	1.5495 ppb	14:54:05
2	U 409.014†	-4907.8	-2.0	-0.0694 ug/L	-0.0694 ppb	14:53:45
2	V 292.402†	-1560.6	22.7	0.2040 ug/L	0.2040 ppb	14:53:45
2	Zn 213.857†	995.5	58.8	0.5313 ug/L	0.5313 ppb	14:54:05
2	SiO2†	534.8	91.7	6.0009 ug/L	6.0009 ppb	14:54:41
3	Sc Radial	7378.8	7378.8	98.7 %		14:52:53
3	Y RADIAL	6834.8	6834.8	98.71 %		14:52:53
3	Al 396.153Radial†	-60.7	11.1	9.1352 ug/L	9.1352 ppb	14:52:53
3	Ca 317.933Radial†	23.7	-5.1	-7.1543 ug/L	-7.1543 ppb	14:53:13
3	Fe 238.204 Radial†	41.7	7.4	30.851 ug/L	30.851 ppb	14:53:13
3	K 766.490 Radial†	2380.1	3.8	0.8155 ug/L	0.8155 ppb	14:52:53
3	Mg 279.077 IEC†	6.1	3.1	76.957 ug/L	76.957 ppb	14:53:13
3	Na 589.592 Radial†	-60.8	73.9	4.5371 ug/L	4.5371 ppb	14:52:53
3	Sr 421.552†	-18.8	36.8	0.1030 ug/L	0.1030 ppb	14:52:53
3	Sc 361.383	722489.3	722489.3	100.53 %		14:54:11
3	Y 371.029	565343.4	565343.4	100.59 %		14:54:11
3	Ag 328.068†	586.2	-49.5	-0.2853 ug/L	-0.2853 ppb	14:54:11
3	As 188.979†	-28.8	6.8	2.4664 ug/L	2.4664 ppb	14:54:31
3	B 249.677†	-718.1	225.6	5.6844 ug/L	5.6844 ppb	14:54:11
3	Ba 233.527†	19.6	19.0	0.1349 ug/L	0.1349 ppb	14:54:31
3	Be 313.107†	-4696.3	210.1	0.0956 ug/L	0.0956 ppb	14:54:11
3	Cd 226.502†	-268.1	14.5	0.1810 ug/L	0.1810 ppb	14:54:31
3	Co 228.616†	-99.3	0.7	0.0120 ug/L	0.0120 ppb	14:54:31
3	Cr 267.716†	-101.0	-23.1	-0.3230 ug/L	-0.3230 ppb	14:54:11
3	Cu 324.752†	5636.0	-32.1	-0.1144 ug/L	-0.1144 ppb	14:54:11
3	Mn 257.610†	782.6	98.9	0.1114 ug/L	0.1114 ppb	14:54:11
3	Mo 202.031†	19.4	2.2	0.1564 ug/L	0.1564 ppb	14:54:31
3	Ni 231.604†	136.9	16.3	0.4366 ug/L	0.4366 ppb	14:54:31
3	P 214.914†	326.7	10.2	5.2465 ug/L	5.2465 ppb	14:54:31
3	Pb 220.353†	15.4	28.6	3.4017 ug/L	3.4017 ppb	14:54:31
3	S 181.975 Axial†	82.5	6.6	9.0567 ug/L	9.0567 ppb	14:54:31
3	Sb 206.836†	50.7	-6.8	-1.9961 ug/L	-1.9961 ppb	14:54:31
3	Se 196.026†	-29.7	-0.8	-0.2859 ug/L	-0.2859 ppb	14:54:31
3	Si 251.611†	496.8	82.4	2.5275 ug/L	2.5275 ppb	14:54:31
3	Sn 189.927†	18.9	6.3	1.1210 ug/L	1.1210 ppb	14:54:31
3	Ti 334.940†	-1487.1	-131.0	-0.2407 ug/L	-0.2407 ppb	14:54:11
3	Tl 190.801†	-50.3	10.7	2.8039 ug/L	2.8039 ppb	14:54:31
3	U 409.014†	-4837.8	36.3	1.2271 ug/L	1.2271 ppb	14:54:11
3	V 292.402†	-1527.7	45.5	0.4151 ug/L	0.4151 ppb	14:54:11
3	Zn 213.857†	1007.6	77.2	0.7040 ug/L	0.7040 ppb	14:54:31
3	SiO2†	483.3	43.9	2.8469 ug/L	2.8469 ppb	14:54:46

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	723515.1	100.67	%	0.450				0.45%
Sc Radial	7475.9	100	%	1.2				1.18%
Y 371.029	566236.2	100.75	%	0.427				0.42%
Y RADIAL	6932.3	100.1	%	1.22				1.22%
Ag 328.068†	-38.8	-0.2254	ug/L	0.17376	-0.2254	ppb	0.17376	77.08%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.1	-0.8551	ug/L	9.16556	-0.8551	ppb	9.16556	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.8	2.0888	ug/L	0.69274	2.0888	ppb	0.69274	33.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	227.8	5.7403	ug/L	0.15517	5.7403	ppb	0.15517	2.70%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.5	0.2303	ug/L	0.08411	0.2303	ppb	0.08411	36.51%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	181.4	0.0829	ug/L	0.01319	0.0829	ppb	0.01319	15.91%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.3	-1.8204	ug/L	5.90399	-1.8204	ppb	5.90399	324.32%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.8      0.1747 ug/L       0.00575      0.1747 ppb        0.00575   3.29%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 5.1      0.0872 ug/L       0.09006      0.0872 ppb        0.09006 103.29%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -7.5     -0.1047 ug/L       0.47033     -0.1047 ppb        0.47033 449.21%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -3.1     -0.0100 ug/L       0.18548     -0.0100 ppb        0.18548 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          4.5      18.916 ug/L       11.1783      18.916 ppb        11.1783  59.09%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          46.7      10.082 ug/L        8.1000      10.082 ppb         8.1000  80.34%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             3.2      80.108 ug/L       44.3783      80.108 ppb        44.3783  55.40%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                85.8      0.0954 ug/L       0.03124      0.0954 ppb        0.03124  32.74%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -4.5     -0.3127 ug/L       0.49396     -0.3127 ppb        0.49396 157.97%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -10.2     -0.6289 ug/L       4.94403     -0.6289 ppb        4.94403 786.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.8      0.5835 ug/L       0.29710      0.5835 ppb        0.29710  50.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  0.6      0.3196 ug/L       7.34373      0.3196 ppb        7.34373 >999.9%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                12.4      1.4745 ug/L       1.67362      1.4745 ppb        1.67362 113.51%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            8.9      12.229 ug/L        2.9233      12.229 ppb         2.9233  23.91%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 0.1      0.0551 ug/L       2.06766      0.0551 ppb        2.06766 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.9      2.0552 ug/L       3.65483      2.0552 ppb        3.65483 177.83%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                99.0      3.0443 ug/L       0.70605      3.0443 ppb        0.70605  23.19%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 6.1      1.0811 ug/L       0.09168      1.0811 ppb        0.09168   8.48%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                53.5      0.1495 ug/L       0.09166      0.1495 ppb        0.09166  61.29%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -29.5     -0.0548 ug/L       0.19418     -0.0548 ppb        0.19418 354.51%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 7.8      2.0503 ug/L       0.66435      2.0503 ppb        0.66435  32.40%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 48.7      1.6458 ug/L       1.95840      1.6458 ppb        1.95840 119.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 38.9      0.3510 ug/L       0.12772      0.3510 ppb        0.12772  36.38%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                69.0      0.6284 ug/L       0.08833      0.6284 ppb        0.08833  14.06%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      60.4      3.9404 ug/L       1.78552      3.9404 ppb        1.78552  45.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 6/30/2009 15:52:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7392.6	7392.6	98.9	%			15:54:14
1	Y RADIAL	6831.1	6831.1	98.65	%			15:54:14
1	Al 396.153Radial†	6384.8	6528.2	5353.8	ug/L	5353.8	ppb	15:54:14
1	Ca 317.933Radial†	3686.9	3698.7	5239.7	ug/L	5239.7	ppb	15:54:14
1	Fe 238.204 Radial†	1233.5	1212.4	5070.0	ug/L	5070.0	ppb	15:54:34
1	K 766.490 Radial†	24999.4	22869.4	4920.7	ug/L	4920.7	ppb	15:54:09
1	Mg 279.077 IEC†	209.4	208.7	5208.0	ug/L	5208.0	ppb	15:54:34
1	Na 589.592 Radial†	167953.4	169950.9	10430	ug/L	10430	ppb	15:54:09
1	Sr 421.552†	173977.9	175962.5	491.42	ug/L	491.42	ppb	15:54:09
1	Sc 361.383	743690.7	743690.7	103.48	%			15:55:43
1	Y 371.029	574212.4	574212.4	102.17	%			15:55:43
1	Ag 328.068†	88739.6	85123.7	511.65	ug/L	511.65	ppb	15:55:43
1	As 188.979†	1447.8	1434.5	520.56	ug/L	520.56	ppb	15:56:03
1	B 249.677†	19920.6	20190.8	505.90	ug/L	505.90	ppb	15:55:43
1	Ba 233.527†	75114.0	72588.3	513.29	ug/L	513.29	ppb	15:55:43
1	Be 313.107†	1157668.5	1123631.7	515.47	ug/L	515.47	ppb	15:55:43
1	Cd 226.502†	40637.1	39552.0	504.22	ug/L	504.22	ppb	15:56:03
1	Co 228.616†	30224.8	29308.2	508.49	ug/L	508.49	ppb	15:56:03
1	Cr 267.716†	37736.9	36545.7	512.82	ug/L	512.82	ppb	15:55:43
1	Cu 324.752†	151200.3	140478.8	509.35	ug/L	509.35	ppb	15:55:43
1	Mn 257.610†	481419.3	464555.3	512.83	ug/L	512.83	ppb	15:55:43
1	Mo 202.031†	7567.4	7295.9	513.95	ug/L	513.95	ppb	15:56:03
1	Ni 231.604†	19802.2	19016.7	507.99	ug/L	507.99	ppb	15:56:03
1	P 214.914†	5532.0	5031.2	2472.1	ug/L	2472.1	ppb	15:56:03
1	Pb 220.353†	4494.8	4356.9	520.34	ug/L	520.34	ppb	15:56:03
1	S 181.975 Axial†	857.8	753.6	1031.3	ug/L	1031.3	ppb	15:56:03
1	Sb 206.836†	1837.2	1718.1	516.80	ug/L	516.80	ppb	15:56:03
1	Se 196.026†	1010.8	1005.5	531.10	ug/L	531.10	ppb	15:56:03
1	Si 251.611†	87008.6	83671.7	2566.7	ug/L	2566.7	ppb	15:55:43
1	Sn 189.927†	3003.5	2890.0	512.42	ug/L	512.42	ppb	15:56:03
1	Ti 334.940†	286554.6	278269.5	509.36	ug/L	509.36	ppb	15:55:43
1	Tl 190.801†	1965.3	1960.0	516.18	ug/L	516.18	ppb	15:56:03
1	U 409.014†	10786.1	15272.3	515.53	ug/L	515.53	ppb	15:55:43
1	V 292.402†	56589.2	56252.0	517.03	ug/L	517.03	ppb	15:55:43
1	Zn 213.857†	58438.7	55549.0	507.96	ug/L	507.96	ppb	15:55:43
1	SiO2†	85865.0	82541.5	5389.4	ug/L	5389.4	ppb	15:57:03
2	Sc Radial	7563.8	7563.8	101	%			15:54:44
2	Y RADIAL	6952.9	6952.9	100.4	%			15:54:44
2	Al 396.153Radial†	6473.5	6469.8	5305.5	ug/L	5305.5	ppb	15:54:44
2	Ca 317.933Radial†	3725.1	3652.1	5173.6	ug/L	5173.6	ppb	15:54:44
2	Fe 238.204 Radial†	1246.4	1196.9	5005.6	ug/L	5005.6	ppb	15:55:04
2	K 766.490 Radial†	25155.6	22451.7	4830.5	ug/L	4830.5	ppb	15:54:39
2	Mg 279.077 IEC†	215.7	210.1	5245.3	ug/L	5245.3	ppb	15:55:04
2	Na 589.592 Radial†	167405.4	165566.2	10161	ug/L	10161	ppb	15:54:39
2	Sr 421.552†	173610.7	171618.6	479.29	ug/L	479.29	ppb	15:54:39
2	Sc 361.383	736578.7	736578.7	102.49	%			15:56:10
2	Y 371.029	568582.4	568582.4	101.17	%			15:56:10
2	Ag 328.068†	87970.1	85200.9	512.10	ug/L	512.10	ppb	15:56:10
2	As 188.979†	1438.6	1439.1	522.18	ug/L	522.18	ppb	15:56:30
2	B 249.677†	19816.6	20275.2	508.01	ug/L	508.01	ppb	15:56:10
2	Ba 233.527†	74484.7	72675.2	513.91	ug/L	513.91	ppb	15:56:10
2	Be 313.107†	1146088.8	1123135.4	515.24	ug/L	515.24	ppb	15:56:10
2	Cd 226.502†	40673.3	39966.5	509.52	ug/L	509.52	ppb	15:56:30
2	Co 228.616†	30183.5	29549.9	512.70	ug/L	512.70	ppb	15:56:30
2	Cr 267.716†	37369.9	36539.7	512.74	ug/L	512.74	ppb	15:56:10
2	Cu 324.752†	149465.5	140197.0	508.32	ug/L	508.32	ppb	15:56:10
2	Mn 257.610†	477259.4	464988.6	513.30	ug/L	513.30	ppb	15:56:10
2	Mo 202.031†	7576.9	7375.8	519.57	ug/L	519.57	ppb	15:56:30
2	Ni 231.604†	19805.0	19204.2	513.00	ug/L	513.00	ppb	15:56:30

2	P 214.914†	5548.0	5098.5	2506.7 ug/L	2506.7 ppb	15:56:30
2	Pb 220.353†	4482.5	4386.9	523.92 ug/L	523.92 ppb	15:56:30
2	S 181.975 Axial†	856.1	759.9	1040.0 ug/L	1040.0 ppb	15:56:30
2	Sb 206.836†	1835.4	1733.5	521.56 ug/L	521.56 ppb	15:56:30
2	Se 196.026†	1007.5	1011.8	534.09 ug/L	534.09 ppb	15:56:30
2	Si 251.611†	86181.3	83676.4	2566.7 ug/L	2566.7 ppb	15:56:10
2	Sn 189.927†	3000.1	2914.7	516.77 ug/L	516.77 ppb	15:56:30
2	Ti 334.940†	283810.8	278266.1	509.35 ug/L	509.35 ppb	15:56:10
2	Tl 190.801†	1980.1	1992.7	524.72 ug/L	524.72 ppb	15:56:30
2	U 409.014†	10428.8	15024.2	507.14 ug/L	507.14 ppb	15:56:10
2	V 292.402†	56028.9	56233.3	516.92 ug/L	516.92 ppb	15:56:10
2	Zn 213.857†	57986.8	55653.4	508.90 ug/L	508.90 ppb	15:56:10
2	SiO2†	86048.5	83521.8	5453.6 ug/L	5453.6 ppb	15:57:08
3	Sc Radial	7629.1	7629.1	102 %		15:55:14
3	Y RADIAL	7031.2	7031.2	101.5 %		15:55:14
3	Al 396.153Radial†	6423.1	6365.7	5220.0 ug/L	5220.0 ppb	15:55:14
3	Ca 317.933Radial†	3714.0	3609.7	5113.6 ug/L	5113.6 ppb	15:55:14
3	Fe 238.204 Radial†	1236.5	1176.7	4920.8 ug/L	4920.8 ppb	15:55:35
3	K 766.490 Radial†	25116.6	22200.8	4776.4 ug/L	4776.4 ppb	15:55:09
3	Mg 279.077 IEC†	207.6	200.4	5001.5 ug/L	5001.5 ppb	15:55:35
3	Na 589.592 Radial†	168735.2	165453.6	10154 ug/L	10154 ppb	15:55:09
3	Sr 421.552†	174182.3	170710.7	476.75 ug/L	476.75 ppb	15:55:09
3	Sc 361.383	747076.8	747076.8	103.95 %		15:56:38
3	Y 371.029	576159.0	576159.0	102.52 %		15:56:38
3	Ag 328.068†	89375.6	85346.9	512.94 ug/L	512.94 ppb	15:56:38
3	As 188.979†	1443.8	1424.4	516.88 ug/L	516.88 ppb	15:56:58
3	B 249.677†	20109.7	20285.5	508.30 ug/L	508.30 ppb	15:56:38
3	Ba 233.527†	75729.9	72851.8	515.15 ug/L	515.15 ppb	15:56:38
3	Be 313.107†	1165222.4	1125828.0	516.48 ug/L	516.48 ppb	15:56:38
3	Cd 226.502†	40756.6	39489.0	503.43 ug/L	503.43 ppb	15:56:58
3	Co 228.616†	30278.2	29227.2	507.09 ug/L	507.09 ppb	15:56:58
3	Cr 267.716†	37926.9	36563.2	513.06 ug/L	513.06 ppb	15:56:38
3	Cu 324.752†	152097.2	140679.4	510.07 ug/L	510.07 ppb	15:56:38
3	Mn 257.610†	485326.4	466205.4	514.64 ug/L	514.64 ppb	15:56:38
3	Mo 202.031†	7598.8	7292.9	513.73 ug/L	513.73 ppb	15:56:58
3	Ni 231.604†	19847.3	18973.3	506.83 ug/L	506.83 ppb	15:56:58
3	P 214.914†	5569.7	5043.2	2478.1 ug/L	2478.1 ppb	15:56:58
3	Pb 220.353†	4504.7	4346.8	519.11 ug/L	519.11 ppb	15:56:58
3	S 181.975 Axial†	863.9	755.6	1034.2 ug/L	1034.2 ppb	15:56:58
3	Sb 206.836†	1832.0	1705.1	512.89 ug/L	512.89 ppb	15:56:58
3	Se 196.026†	1030.2	1019.9	537.90 ug/L	537.90 ppb	15:56:58
3	Si 251.611†	87713.4	83968.6	2575.9 ug/L	2575.9 ppb	15:56:38
3	Sn 189.927†	3007.4	2880.7	510.74 ug/L	510.74 ppb	15:56:58
3	Ti 334.940†	288512.1	278897.4	510.51 ug/L	510.51 ppb	15:56:38
3	Tl 190.801†	1973.1	1958.9	515.92 ug/L	515.92 ppb	15:56:58
3	U 409.014†	10473.8	14924.6	503.77 ug/L	503.77 ppb	15:56:38
3	V 292.402†	56778.9	56186.6	516.42 ug/L	516.42 ppb	15:56:38
3	Zn 213.857†	58897.4	55734.3	509.70 ug/L	509.70 ppb	15:56:38
3	SiO2†	86419.9	82699.2	5400.0 ug/L	5400.0 ppb	15:57:13

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	742448.7	103.31	%	0.746				0.72%
Sc Radial	7528.5	101	%	1.6				1.62%
Y 371.029	572984.6	101.95	%	0.700				0.69%
Y RADIAL	6938.4	100.2	%	1.46				1.45%
Ag 328.068†	85223.8	512.23	ug/L	0.658	512.23	ppb	0.658	0.13%
QC value within limits for Ag 328.068 Recovery = 102.45%								
Al 396.153Radial†	6454.6	5293.1	ug/L	67.75	5293.1	ppb	67.75	1.28%
QC value within limits for Al 396.153Radial Recovery = 105.86%								
As 188.979†	1432.7	519.87	ug/L	2.717	519.87	ppb	2.717	0.52%
QC value within limits for As 188.979 Recovery = 103.97%								
B 249.677†	20250.5	507.40	ug/L	1.311	507.40	ppb	1.311	0.26%
QC value within limits for B 249.677 Recovery = 101.48%								
Ba 233.527†	72705.1	514.12	ug/L	0.947	514.12	ppb	0.947	0.18%
QC value within limits for Ba 233.527 Recovery = 102.82%								
Be 313.107†	1124198.3	515.73	ug/L	0.657	515.73	ppb	0.657	0.13%
QC value within limits for Be 313.107 Recovery = 103.15%								
Ca 317.933Radial†	3653.5	5175.6	ug/L	63.05	5175.6	ppb	63.05	1.22%

```
   QC value within limits for Ca 317.933Radial  Recovery = 103.51%
Cd 226.502†            39669.2      505.72 ug/L          3.309      505.72 ppb          3.309   0.65%
   QC value within limits for Cd 226.502  Recovery = 101.14%
Co 228.616†            29361.7      509.43 ug/L          2.921      509.43 ppb          2.921   0.57%
   QC value within limits for Co 228.616  Recovery = 101.89%
Cr 267.716†            36549.5      512.87 ug/L          0.171      512.87 ppb          0.171   0.03%
   QC value within limits for Cr 267.716  Recovery = 102.57%
Cu 324.752†           140451.7      509.25 ug/L          0.876      509.25 ppb          0.876   0.17%
   QC value within limits for Cu 324.752  Recovery = 101.85%
Fe 238.204 Radial†      1195.3      4998.8 ug/L         74.81      4998.8 ppb         74.81   1.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.98%
K 766.490 Radial†      22507.3      4842.6 ug/L         72.87      4842.6 ppb         72.87   1.50%
   QC value within limits for K 766.490 Radial  Recovery = 96.85%
Mg 279.077 IEC†          206.4      5151.6 ug/L        131.28      5151.6 ppb        131.28   2.55%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.03%
Mn 257.610†           465249.7      513.59 ug/L          0.936      513.59 ppb          0.936   0.18%
   QC value within limits for Mn 257.610  Recovery = 102.72%
Mo 202.031†             7321.5      515.75 ug/L          3.310      515.75 ppb          3.310   0.64%
   QC value within limits for Mo 202.031  Recovery = 103.15%
Na 589.592 Radial†    166990.2       10249 ug/L        157.4       10249 ppb         157.4   1.54%
   QC value within limits for Na 589.592 Radial  Recovery = 102.49%
Ni 231.604†            19064.7      509.27 ug/L          3.278      509.27 ppb          3.278   0.64%
   QC value within limits for Ni 231.604  Recovery = 101.85%
P 214.914†              5057.7      2485.6 ug/L         18.51      2485.6 ppb         18.51   0.74%
   QC value within limits for P 214.914  Recovery = 99.43%
Pb 220.353†             4363.5      521.12 ug/L          2.496      521.12 ppb          2.496   0.48%
   QC value within limits for Pb 220.353  Recovery = 104.22%
S 181.975 Axial†         756.4      1035.1 ug/L          4.42      1035.1 ppb          4.42   0.43%
   QC value within limits for S 181.975 Axial  Recovery = 103.51%
Sb 206.836†             1718.9      517.08 ug/L          4.344      517.08 ppb          4.344   0.84%
   QC value within limits for Sb 206.836  Recovery = 103.42%
Se 196.026†             1012.4      534.36 ug/L          3.408      534.36 ppb          3.408   0.64%
   QC value within limits for Se 196.026  Recovery = 106.87%
Si 251.611†            83772.3      2569.7 ug/L          5.33      2569.7 ppb          5.33   0.21%
   QC value within limits for Si 251.611  Recovery = 102.79%
Sn 189.927†             2895.1      513.31 ug/L          3.114      513.31 ppb          3.114   0.61%
   QC value within limits for Sn 189.927  Recovery = 102.66%
Sr 421.552†           172763.9      482.48 ug/L          7.839      482.48 ppb          7.839   1.62%
   QC value within limits for Sr 421.552  Recovery = 96.50%
Ti 334.940†           278477.7      509.74 ug/L          0.664      509.74 ppb          0.664   0.13%
   QC value within limits for Ti 334.940  Recovery = 101.95%
Tl 190.801†             1970.6      518.94 ug/L          5.011      518.94 ppb          5.011   0.97%
   QC value within limits for Tl 190.801  Recovery = 103.79%
U 409.014†             15073.7      508.81 ug/L          6.054      508.81 ppb          6.054   1.19%
   QC value within limits for U 409.014  Recovery = 101.76%
V 292.402†             56224.0      516.79 ug/L          0.322      516.79 ppb          0.322   0.06%
   QC value within limits for V 292.402  Recovery = 103.36%
Zn 213.857†            55645.6      508.86 ug/L          0.871      508.86 ppb          0.871   0.17%
   QC value within limits for Zn 213.857  Recovery = 101.77%
SiO2†                  82920.8      5414.3 ug/L         34.42      5414.3 ppb         34.42   0.64%
   QC value within limits for SiO2  Recovery = 101.25%
All analyte(s) passed QC.
```

Sequence No.: 12
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 6/30/2009 15:59:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7369.9	7369.9	98.6	%			16:01:16
1	Y RADIAL	6844.4	6844.4	98.85	%			16:01:16
1	Al 396.153Radial†	-59.2	12.6	10.377	ug/L	10.377	ppb	16:01:16
1	Ca 317.933Radial†	33.2	4.6	6.5450	ug/L	6.5450	ppb	16:01:36
1	Fe 238.204 Radial†	37.0	2.7	11.352	ug/L	11.352	ppb	16:01:36
1	K 766.490 Radial†	2418.3	45.5	9.8141	ug/L	9.8141	ppb	16:01:16
1	Mg 279.077 IEC†	2.3	-0.8	-19.006	ug/L	-19.006	ppb	16:01:36
1	Na 589.592 Radial†	-198.6	-65.9	-4.0422	ug/L	-4.0422	ppb	16:01:16
1	Sr 421.552†	-79.9	-25.1	-0.0703	ug/L	-0.0703	ppb	16:01:16
1	Sc 361.383	726891.3	726891.3	101.14	%			16:02:33
1	Y 371.029	569168.5	569168.5	101.28	%			16:02:33
1	Ag 328.068†	697.4	56.9	0.3397	ug/L	0.3397	ppb	16:02:33
1	As 188.979†	-38.2	-2.3	-0.8482	ug/L	-0.8482	ppb	16:02:53
1	B 249.677†	-671.7	275.8	6.9498	ug/L	6.9498	ppb	16:02:33
1	Ba 233.527†	33.8	33.0	0.2312	ug/L	0.2312	ppb	16:02:53
1	Be 313.107†	-4696.0	238.7	0.1095	ug/L	0.1095	ppb	16:02:33
1	Cd 226.502†	-284.9	-0.6	-0.0089	ug/L	-0.0089	ppb	16:02:53
1	Co 228.616†	-86.0	14.4	0.2516	ug/L	0.2516	ppb	16:02:53
1	Cr 267.716†	-69.6	8.6	0.1188	ug/L	0.1188	ppb	16:02:33
1	Cu 324.752†	5760.4	57.0	0.2072	ug/L	0.2072	ppb	16:02:33
1	Mn 257.610†	807.8	119.1	0.1332	ug/L	0.1332	ppb	16:02:33
1	Mo 202.031†	25.5	8.1	0.5713	ug/L	0.5713	ppb	16:02:53
1	Ni 231.604†	141.8	20.4	0.5460	ug/L	0.5460	ppb	16:02:53
1	P 214.914†	314.2	-4.2	-2.1738	ug/L	-2.1738	ppb	16:02:53
1	Pb 220.353†	-13.6	-0.2	-0.0209	ug/L	-0.0209	ppb	16:02:53
1	S 181.975 Axial†	92.0	15.6	21.315	ug/L	21.315	ppb	16:02:53
1	Sb 206.836†	53.2	-4.6	-1.3693	ug/L	-1.3693	ppb	16:02:53
1	Se 196.026†	-33.1	-4.0	-1.9932	ug/L	-1.9932	ppb	16:02:53
1	Si 251.611†	527.7	110.0	3.3813	ug/L	3.3813	ppb	16:02:53
1	Sn 189.927†	13.3	0.6	0.1119	ug/L	0.1119	ppb	16:02:53
1	Ti 334.940†	-1299.6	63.3	0.1154	ug/L	0.1154	ppb	16:02:33
1	Tl 190.801†	-48.1	13.2	3.4495	ug/L	3.4495	ppb	16:02:53
1	U 409.014†	-4846.5	56.9	1.9255	ug/L	1.9255	ppb	16:02:33
1	V 292.402†	-1646.4	-62.6	-0.5598	ug/L	-0.5598	ppb	16:02:33
1	Zn 213.857†	1000.6	64.2	0.5878	ug/L	0.5878	ppb	16:02:53
1	SiO2†	506.6	64.0	4.1738	ug/L	4.1738	ppb	16:03:49
2	Sc Radial	7474.7	7474.7	100	%			16:01:41
2	Y RADIAL	6888.8	6888.8	99.49	%			16:01:41
2	Al 396.153Radial†	-87.5	-14.9	-12.233	ug/L	-12.233	ppb	16:01:41
2	Ca 317.933Radial†	26.4	-2.7	-3.8030	ug/L	-3.8030	ppb	16:02:01
2	Fe 238.204 Radial†	39.6	4.8	19.820	ug/L	19.820	ppb	16:02:01
2	K 766.490 Radial†	2372.9	-34.3	-7.3891	ug/L	-7.3891	ppb	16:01:41
2	Mg 279.077 IEC†	3.2	0.2	4.5260	ug/L	4.5260	ppb	16:02:01
2	Na 589.592 Radial†	-109.1	26.5	1.6262	ug/L	1.6262	ppb	16:01:41
2	Sr 421.552†	-82.0	-26.1	-0.0729	ug/L	-0.0729	ppb	16:01:41
2	Sc 361.383	727502.2	727502.2	101.23	%			16:02:58
2	Y 371.029	568746.1	568746.1	101.20	%			16:02:58
2	Ag 328.068†	721.7	80.3	0.4829	ug/L	0.4829	ppb	16:02:58
2	As 188.979†	-34.1	1.7	0.6198	ug/L	0.6198	ppb	16:03:19
2	B 249.677†	-686.8	261.4	6.5865	ug/L	6.5865	ppb	16:02:58
2	Ba 233.527†	47.1	46.0	0.3244	ug/L	0.3244	ppb	16:03:19
2	Be 313.107†	-4841.6	98.8	0.0452	ug/L	0.0452	ppb	16:02:58
2	Cd 226.502†	-268.2	16.1	0.2033	ug/L	0.2033	ppb	16:03:19
2	Co 228.616†	-87.4	13.1	0.2251	ug/L	0.2251	ppb	16:03:19
2	Cr 267.716†	-59.9	18.2	0.2544	ug/L	0.2544	ppb	16:02:58
2	Cu 324.752†	5579.9	-126.1	-0.4559	ug/L	-0.4559	ppb	16:02:58
2	Mn 257.610†	753.5	64.7	0.0738	ug/L	0.0738	ppb	16:02:58
2	Mo 202.031†	7.9	-9.3	-0.6544	ug/L	-0.6544	ppb	16:03:19
2	Ni 231.604†	136.5	15.0	0.4017	ug/L	0.4017	ppb	16:03:19

2	P 214.914†	304.8	-13.7	-6.9260 ug/L	-6.9260 ppb	16:03:19
2	Pb 220.353†	-6.8	6.5	0.7689 ug/L	0.7689 ppb	16:03:19
2	S 181.975 Axial†	94.8	18.2	24.961 ug/L	24.961 ppb	16:03:19
2	Sb 206.836†	53.9	-4.0	-1.2212 ug/L	-1.2212 ppb	16:03:19
2	Se 196.026†	-25.0	4.0	2.1270 ug/L	2.1270 ppb	16:03:19
2	Si 251.611†	485.0	67.3	2.0965 ug/L	2.0965 ppb	16:03:19
2	Sn 189.927†	11.3	-1.4	-0.2431 ug/L	-0.2431 ppb	16:03:19
2	Ti 334.940†	-1357.2	7.5	0.0117 ug/L	0.0117 ppb	16:02:58
2	Tl 190.801†	-54.0	7.4	1.9319 ug/L	1.9319 ppb	16:03:19
2	U 409.014†	-4788.7	118.1	3.9945 ug/L	3.9945 ppb	16:02:58
2	V 292.402†	-1579.9	4.4	0.0367 ug/L	0.0367 ppb	16:02:58
2	Zn 213.857†	1037.5	99.8	0.9166 ug/L	0.9166 ppb	16:03:19
2	SiO2†	486.4	43.6	2.9058 ug/L	2.9058 ppb	16:03:54
3	Sc Radial	7403.0	7403.0	99.0 %		16:02:06
3	Y RADIAL	6847.2	6847.2	98.89 %		16:02:06
3	Al 396.153Radial†	-54.0	18.1	14.884 ug/L	14.884 ppb	16:02:06
3	Ca 317.933Radial†	31.7	2.9	4.1275 ug/L	4.1275 ppb	16:02:26
3	Fe 238.204 Radial†	37.0	2.6	10.803 ug/L	10.803 ppb	16:02:26
3	K 766.490 Radial†	2437.2	53.6	11.551 ug/L	11.551 ppb	16:02:06
3	Mg 279.077 IEC†	2.8	-0.2	-4.3818 ug/L	-4.3818 ppb	16:02:26
3	Na 589.592 Radial†	-102.2	32.4	1.9864 ug/L	1.9864 ppb	16:02:06
3	Sr 421.552†	12.5	68.5	0.1913 ug/L	0.1913 ppb	16:02:06
3	Sc 361.383	724912.0	724912.0	100.87 %		16:03:24
3	Y 371.029	566560.2	566560.2	100.81 %		16:03:24
3	Ag 328.068†	611.5	-26.3	-0.1562 ug/L	-0.1562 ppb	16:03:24
3	As 188.979†	-25.8	9.9	3.5743 ug/L	3.5743 ppb	16:03:44
3	B 249.677†	-797.7	149.0	3.7569 ug/L	3.7569 ppb	16:03:24
3	Ba 233.527†	-2.1	-2.6	-0.0191 ug/L	-0.0191 ppb	16:03:44
3	Be 313.107†	-4783.9	138.9	0.0636 ug/L	0.0636 ppb	16:03:24
3	Cd 226.502†	-262.4	20.9	0.2656 ug/L	0.2656 ppb	16:03:44
3	Co 228.616†	-117.9	-17.5	-0.3023 ug/L	-0.3023 ppb	16:03:44
3	Cr 267.716†	-91.4	-13.2	-0.1862 ug/L	-0.1862 ppb	16:03:24
3	Cu 324.752†	5727.1	39.5	0.1438 ug/L	0.1438 ppb	16:03:24
3	Mn 257.610†	762.8	76.6	0.0860 ug/L	0.0860 ppb	16:03:24
3	Mo 202.031†	23.2	5.8	0.4125 ug/L	0.4125 ppb	16:03:44
3	Ni 231.604†	129.2	8.3	0.2223 ug/L	0.2223 ppb	16:03:44
3	P 214.914†	315.7	-1.8	-0.9448 ug/L	-0.9448 ppb	16:03:44
3	Pb 220.353†	-9.3	4.1	0.4857 ug/L	0.4857 ppb	16:03:44
3	S 181.975 Axial†	83.4	7.2	9.8891 ug/L	9.8891 ppb	16:03:44
3	Sb 206.836†	58.2	0.4	0.1393 ug/L	0.1393 ppb	16:03:44
3	Se 196.026†	-28.4	0.6	0.3462 ug/L	0.3462 ppb	16:03:44
3	Si 251.611†	508.5	92.3	2.8372 ug/L	2.8372 ppb	16:03:44
3	Sn 189.927†	13.9	1.3	0.2327 ug/L	0.2327 ppb	16:03:44
3	Ti 334.940†	-1350.6	9.3	0.0167 ug/L	0.0167 ppb	16:03:24
3	Tl 190.801†	-65.3	-3.9	-1.0304 ug/L	-1.0304 ppb	16:03:44
3	U 409.014†	-4846.3	44.0	1.4896 ug/L	1.4896 ppb	16:03:24
3	V 292.402†	-1605.2	-26.2	-0.2317 ug/L	-0.2317 ppb	16:03:24
3	Zn 213.857†	1020.7	86.8	0.7986 ug/L	0.7986 ppb	16:03:44
3	SiO2†	500.0	58.8	3.8345 ug/L	3.8345 ppb	16:03:59

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	726435.2	101.08	%	0.188				0.19%
Sc Radial	7415.8	99.2	%	0.72				0.72%
Y 371.029	568158.2	101.10	%	0.249				0.25%
Y RADIAL	6860.1	99.07	%	0.359				0.36%
Ag 328.068†	37.0	0.2221	ug/L	0.33539	0.2221	ppb	0.33539	150.99%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.3	4.3424	ug/L	14.53076	4.3424	ppb	14.53076	334.62%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.1	1.1153	ug/L	2.25251	1.1153	ppb	2.25251	201.97%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	228.8	5.7644	ug/L	1.74802	5.7644	ppb	1.74802	30.32%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.4	0.1788	ug/L	0.17762	0.1788	ppb	0.17762	99.32%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	158.8	0.0728	ug/L	0.03311	0.0728	ppb	0.03311	45.49%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.6	2.2898	ug/L	5.41322	2.2898	ppb	5.41322	236.40%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                12.1      0.1533 ug/L       0.14389      0.1533 ppb        0.14389  93.85%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 3.3      0.0581 ug/L       0.31243      0.0581 ppb        0.31243 537.72%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 4.5      0.0623 ug/L       0.22565      0.0623 ppb        0.22565 361.94%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                -9.9     -0.0350 ug/L       0.36590     -0.0350 ppb        0.36590 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          3.4      13.992 ug/L        5.0547      13.992 ppb         5.0547  36.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          21.6      4.6586 ug/L      10.46975      4.6586 ppb       10.46975 224.74%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -6.2873 ug/L      11.88120     -6.2873 ppb       11.88120 188.97%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                86.8      0.0976 ug/L       0.03136      0.0976 ppb        0.03136  32.12%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 1.5      0.1098 ug/L       0.66654      0.1098 ppb        0.66654 607.14%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -2.3     -0.1432 ug/L       3.38145     -0.1432 ppb        3.38145 >999.9%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.6      0.3900 ug/L       0.16215      0.3900 ppb        0.16215  41.58%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.6     -3.3482 ug/L       3.15883     -3.3482 ppb        3.15883  94.34%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 3.5      0.4112 ug/L       0.40015      0.4112 ppb        0.40015  97.30%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           13.7      18.722 ug/L        7.8634      18.722 ppb         7.8634  42.00%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.8     -0.8171 ug/L       0.83153     -0.8171 ppb        0.83153 101.77%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.2      0.1600 ug/L       2.06638      0.1600 ppb        2.06638 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                89.9      2.7717 ug/L       0.64491      2.7717 ppb        0.64491  23.27%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 0.2      0.0338 ug/L       0.24736      0.0338 ppb        0.24736 730.83%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 5.8      0.0161 ug/L       0.15179      0.0161 ppb        0.15179 944.43%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                26.7      0.0479 ug/L       0.05850      0.0479 ppb        0.05850 122.09%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.5      1.4503 ug/L       2.27843      1.4503 ppb        2.27843 157.10%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 73.0      2.4699 ug/L       1.33823      2.4699 ppb        1.33823  54.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -28.1     -0.2516 ug/L       0.29875     -0.2516 ppb        0.29875 118.75%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                83.6      0.7677 ug/L       0.16655      0.7677 ppb        0.16655  21.70%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      55.5      3.6380 ug/L       0.65642      3.6380 ppb        0.65642  18.04%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 22
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 17:08:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7355.2	7355.2	98.4	%			17:10:59
1	Y RADIAL	6761.2	6761.2	97.64	%			17:10:59
1	Al 396.153Radial†	6223.9	6397.5	5246.3	ug/L	5246.3	ppb	17:10:39
1	Ca 317.933Radial†	3673.7	3704.2	5247.5	ug/L	5247.5	ppb	17:10:59
1	Fe 238.204 Radial†	1224.8	1209.9	5059.2	ug/L	5059.2	ppb	17:10:59
1	K 766.490 Radial†	25156.0	23156.9	4982.8	ug/L	4982.8	ppb	17:10:39
1	Mg 279.077 IEC†	209.2	209.6	5230.9	ug/L	5230.9	ppb	17:10:59
1	Na 589.592 Radial†	167127.7	169975.0	10432	ug/L	10432	ppb	17:10:39
1	Sr 421.552†	173183.6	176049.5	491.66	ug/L	491.66	ppb	17:10:39
1	Sc 361.383	741120.8	741120.8	103.12	%			17:11:58
1	Y 371.029	572028.0	572028.0	101.78	%			17:11:58
1	Ag 328.068†	88301.1	84995.8	510.88	ug/L	510.88	ppb	17:11:58
1	As 188.979†	1419.5	1412.0	512.41	ug/L	512.41	ppb	17:12:18
1	B 249.677†	19772.0	20113.5	503.96	ug/L	503.96	ppb	17:11:58
1	Ba 233.527†	74712.4	72450.6	512.31	ug/L	512.31	ppb	17:11:58
1	Be 313.107†	1148778.6	1118890.4	513.29	ug/L	513.29	ppb	17:11:58
1	Cd 226.502†	40390.2	39448.9	502.90	ug/L	502.90	ppb	17:12:18
1	Co 228.616†	30009.5	29200.6	506.63	ug/L	506.63	ppb	17:12:18
1	Cr 267.716†	37484.1	36427.0	511.16	ug/L	511.16	ppb	17:11:58
1	Cu 324.752†	149844.6	139670.9	506.42	ug/L	506.42	ppb	17:11:58
1	Mn 257.610†	478419.7	463259.8	511.40	ug/L	511.40	ppb	17:11:58
1	Mo 202.031†	7522.9	7278.1	512.70	ug/L	512.70	ppb	17:12:18
1	Ni 231.604†	19647.4	18932.9	505.75	ug/L	505.75	ppb	17:12:18
1	P 214.914†	5504.7	5023.3	2468.5	ug/L	2468.5	ppb	17:12:18
1	Pb 220.353†	4456.9	4335.3	517.74	ug/L	517.74	ppb	17:12:18
1	S 181.975 Axial†	852.7	751.5	1028.4	ug/L	1028.4	ppb	17:12:18
1	Sb 206.836†	1816.2	1704.0	512.55	ug/L	512.55	ppb	17:12:18
1	Se 196.026†	997.4	995.9	526.15	ug/L	526.15	ppb	17:12:18
1	Si 251.611†	87163.1	84113.2	2580.3	ug/L	2580.3	ppb	17:11:58
1	Sn 189.927†	2974.4	2871.9	509.21	ug/L	509.21	ppb	17:12:18
1	Ti 334.940†	284487.2	277224.9	507.45	ug/L	507.45	ppb	17:11:58
1	Tl 190.801†	1946.4	1948.2	513.09	ug/L	513.09	ppb	17:12:18
1	U 409.014†	10382.3	14916.8	503.49	ug/L	503.49	ppb	17:11:58
1	V 292.402†	56045.4	55914.2	513.92	ug/L	513.92	ppb	17:11:58
1	Zn 213.857†	58130.4	55445.8	507.03	ug/L	507.03	ppb	17:11:58
1	SiO2†	87839.5	84744.0	5534.4	ug/L	5534.4	ppb	17:13:18
2	Sc Radial	7325.9	7325.9	98.0	%			17:11:24
2	Y RADIAL	6752.9	6752.9	97.52	%			17:11:24
2	Al 396.153Radial†	6231.0	6430.1	5273.1	ug/L	5273.1	ppb	17:11:04
2	Ca 317.933Radial†	3670.6	3716.0	5264.1	ug/L	5264.1	ppb	17:11:24
2	Fe 238.204 Radial†	1218.3	1208.3	5052.5	ug/L	5052.5	ppb	17:11:24
2	K 766.490 Radial†	25340.6	23447.7	5045.5	ug/L	5045.5	ppb	17:11:04
2	Mg 279.077 IEC†	208.2	209.4	5225.8	ug/L	5225.8	ppb	17:11:24
2	Na 589.592 Radial†	167131.7	170659.6	10474	ug/L	10474	ppb	17:11:04
2	Sr 421.552†	173419.2	176995.0	494.30	ug/L	494.30	ppb	17:11:04
2	Sc 361.383	739217.0	739217.0	102.86	%			17:12:25
2	Y 371.029	570105.1	570105.1	101.44	%			17:12:25
2	Ag 328.068†	87884.9	84811.8	509.78	ug/L	509.78	ppb	17:12:25
2	As 188.979†	1422.5	1418.5	514.76	ug/L	514.76	ppb	17:12:45
2	B 249.677†	19750.7	20142.2	504.69	ug/L	504.69	ppb	17:12:25
2	Ba 233.527†	74335.0	72270.3	511.04	ug/L	511.04	ppb	17:12:25
2	Be 313.107†	1143521.5	1116648.2	512.27	ug/L	512.27	ppb	17:12:25
2	Cd 226.502†	40177.9	39343.3	501.56	ug/L	501.56	ppb	17:12:45
2	Co 228.616†	29852.3	29122.8	505.28	ug/L	505.28	ppb	17:12:45
2	Cr 267.716†	37289.3	36331.2	509.81	ug/L	509.81	ppb	17:12:25
2	Cu 324.752†	149532.5	139741.6	506.68	ug/L	506.68	ppb	17:12:25
2	Mn 257.610†	476899.3	462976.5	511.09	ug/L	511.09	ppb	17:12:25
2	Mo 202.031†	7496.3	7271.0	512.20	ug/L	512.20	ppb	17:12:45
2	Ni 231.604†	19580.3	18916.7	505.32	ug/L	505.32	ppb	17:12:45

2	P 214.914†	5485.3	5018.2	2465.9 ug/L	2465.9 ppb	17:12:45
2	Pb 220.353†	4415.6	4306.2	514.28 ug/L	514.28 ppb	17:12:45
2	S 181.975 Axial†	848.0	749.0	1025.0 ug/L	1025.0 ppb	17:12:45
2	Sb 206.836†	1816.8	1709.1	514.09 ug/L	514.09 ppb	17:12:45
2	Se 196.026†	1003.6	1004.5	530.52 ug/L	530.52 ppb	17:12:45
2	Si 251.611†	86801.9	83979.7	2576.2 ug/L	2576.2 ppb	17:12:25
2	Sn 189.927†	2961.8	2867.1	508.36 ug/L	508.36 ppb	17:12:45
2	Ti 334.940†	283706.8	277176.6	507.37 ug/L	507.37 ppb	17:12:25
2	Tl 190.801†	1947.0	1953.6	514.51 ug/L	514.51 ppb	17:12:45
2	U 409.014†	10377.7	14938.2	504.22 ug/L	504.22 ppb	17:12:25
2	V 292.402†	55940.5	55952.3	514.27 ug/L	514.27 ppb	17:12:25
2	Zn 213.857†	57861.6	55329.7	505.96 ug/L	505.96 ppb	17:12:25
2	SiO2†	87366.6	84503.6	5518.6 ug/L	5518.6 ppb	17:13:23
3	Sc Radial	7318.8	7318.8	97.9 %		17:11:49
3	Y RADIAL	6734.8	6734.8	97.26 %		17:11:49
3	Al 396.153Radial†	6166.3	6370.2	5223.7 ug/L	5223.7 ppb	17:11:29
3	Ca 317.933Radial†	3664.6	3713.5	5260.6 ug/L	5260.6 ppb	17:11:49
3	Fe 238.204 Radial†	1215.9	1207.0	5047.4 ug/L	5047.4 ppb	17:11:49
3	K 766.490 Radial†	25093.8	23220.7	4996.6 ug/L	4996.6 ppb	17:11:29
3	Mg 279.077 IEC†	208.1	209.4	5227.5 ug/L	5227.5 ppb	17:11:49
3	Na 589.592 Radial†	165706.5	169369.3	10395 ug/L	10395 ppb	17:11:29
3	Sr 421.552†	171906.5	175621.7	490.47 ug/L	490.47 ppb	17:11:29
3	Sc 361.383	734212.8	734212.8	102.16 %		17:12:52
3	Y 371.029	566556.0	566556.0	100.81 %		17:12:52
3	Ag 328.068†	87293.3	84815.0	509.79 ug/L	509.79 ppb	17:12:52
3	As 188.979†	1427.4	1432.6	519.86 ug/L	519.86 ppb	17:13:12
3	B 249.677†	19543.9	20070.6	502.87 ug/L	502.87 ppb	17:12:52
3	Ba 233.527†	73660.1	72102.2	509.85 ug/L	509.85 ppb	17:12:52
3	Be 313.107†	1132526.8	1113463.4	510.81 ug/L	510.81 ppb	17:12:52
3	Cd 226.502†	40095.0	39528.3	503.92 ug/L	503.92 ppb	17:13:12
3	Co 228.616†	29800.1	29269.5	507.83 ug/L	507.83 ppb	17:13:12
3	Cr 267.716†	37069.1	36362.7	510.25 ug/L	510.25 ppb	17:12:52
3	Cu 324.752†	148278.3	139504.8	505.82 ug/L	505.82 ppb	17:12:52
3	Mn 257.610†	472366.2	461699.3	509.68 ug/L	509.68 ppb	17:12:52
3	Mo 202.031†	7470.0	7295.0	513.88 ug/L	513.88 ppb	17:13:12
3	Ni 231.604†	19500.0	18967.9	506.69 ug/L	506.69 ppb	17:13:12
3	P 214.914†	5484.0	5053.2	2483.9 ug/L	2483.9 ppb	17:13:12
3	Pb 220.353†	4417.4	4337.3	517.98 ug/L	517.98 ppb	17:13:12
3	S 181.975 Axial†	835.5	742.4	1016.1 ug/L	1016.1 ppb	17:13:12
3	Sb 206.836†	1812.6	1717.1	516.49 ug/L	516.49 ppb	17:13:12
3	Se 196.026†	1010.2	1017.6	537.19 ug/L	537.19 ppb	17:13:12
3	Si 251.611†	86011.1	83780.7	2570.0 ug/L	2570.0 ppb	17:12:52
3	Sn 189.927†	2947.7	2872.9	509.39 ug/L	509.39 ppb	17:13:12
3	Ti 334.940†	281343.0	276742.8	506.57 ug/L	506.57 ppb	17:12:52
3	Tl 190.801†	1949.3	1968.9	518.46 ug/L	518.46 ppb	17:13:12
3	U 409.014†	10333.0	14963.3	505.07 ug/L	505.07 ppb	17:12:52
3	V 292.402†	55374.7	55769.1	512.63 ug/L	512.63 ppb	17:12:52
3	Zn 213.857†	57333.5	55196.2	504.72 ug/L	504.72 ppb	17:12:52
3	SiO2†	86755.9	84484.7	5517.2 ug/L	5517.2 ppb	17:13:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	738183.5	102.71	%	0.496				0.48%
Sc Radial	7333.3	98.1	%	0.26				0.26%
Y 371.029	569563.0	101.35	%	0.494				0.49%
Y RADIAL	6749.7	97.48	%	0.195				0.20%
Ag 328.068†	84874.2	510.15	ug/L	0.633	510.15	ppb	0.633	0.12%
QC value within limits for Ag 328.068 Recovery = 102.03%								
Al 396.153Radial†	6399.3	5247.7	ug/L	24.76	5247.7	ppb	24.76	0.47%
QC value within limits for Al 396.153Radial Recovery = 104.95%								
As 188.979†	1421.0	515.68	ug/L	3.810	515.68	ppb	3.810	0.74%
QC value within limits for As 188.979 Recovery = 103.14%								
B 249.677†	20108.8	503.84	ug/L	0.914	503.84	ppb	0.914	0.18%
QC value within limits for B 249.677 Recovery = 100.77%								
Ba 233.527†	72274.4	511.07	ug/L	1.231	511.07	ppb	1.231	0.24%
QC value within limits for Ba 233.527 Recovery = 102.21%								
Be 313.107†	1116334.0	512.12	ug/L	1.249	512.12	ppb	1.249	0.24%
QC value within limits for Be 313.107 Recovery = 102.42%								
Ca 317.933Radial†	3711.3	5257.4	ug/L	8.77	5257.4	ppb	8.77	0.17%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.15%
Cd 226.502†            39440.2      502.79 ug/L          1.185      502.79 ppb          1.185   0.24%
   QC value within limits for Cd 226.502  Recovery = 100.56%
Co 228.616†            29197.6      506.58 ug/L          1.275      506.58 ppb          1.275   0.25%
   QC value within limits for Co 228.616  Recovery = 101.32%
Cr 267.716†            36373.6      510.41 ug/L          0.684      510.41 ppb          0.684   0.13%
   QC value within limits for Cr 267.716  Recovery = 102.08%
Cu 324.752†           139639.1      506.31 ug/L          0.441      506.31 ppb          0.441   0.09%
   QC value within limits for Cu 324.752  Recovery = 101.26%
Fe 238.204 Radial†      1208.4      5053.0 ug/L           5.94      5053.0 ppb           5.94   0.12%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.06%
K 766.490 Radial†      23275.1      5008.3 ug/L          32.97      5008.3 ppb          32.97   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 100.17%
Mg 279.077 IEC†          209.5      5228.1 ug/L           2.59      5228.1 ppb           2.59   0.05%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.56%
Mn 257.610†           462645.2      510.72 ug/L          0.917      510.72 ppb          0.917   0.18%
   QC value within limits for Mn 257.610  Recovery = 102.14%
Mo 202.031†             7281.4      512.93 ug/L          0.866      512.93 ppb          0.866   0.17%
   QC value within limits for Mo 202.031  Recovery = 102.59%
Na 589.592 Radial†    170001.3       10433 ug/L           39.6       10433 ppb           39.6   0.38%
   QC value within limits for Na 589.592 Radial  Recovery = 104.33%
Ni 231.604†            18939.2      505.92 ug/L          0.698      505.92 ppb          0.698   0.14%
   QC value within limits for Ni 231.604  Recovery = 101.18%
P 214.914†              5031.6      2472.8 ug/L           9.75      2472.8 ppb           9.75   0.39%
   QC value within limits for P 214.914  Recovery = 98.91%
Pb 220.353†             4326.3      516.67 ug/L          2.067      516.67 ppb          2.067   0.40%
   QC value within limits for Pb 220.353  Recovery = 103.33%
S 181.975 Axial†         747.6      1023.2 ug/L           6.38      1023.2 ppb           6.38   0.62%
   QC value within limits for S 181.975 Axial  Recovery = 102.32%
Sb 206.836†             1710.0      514.38 ug/L          1.985      514.38 ppb          1.985   0.39%
   QC value within limits for Sb 206.836  Recovery = 102.88%
Se 196.026†             1006.0      531.29 ug/L          5.557      531.29 ppb          5.557   1.05%
   QC value within limits for Se 196.026  Recovery = 106.26%
Si 251.611†            83957.9      2575.5 ug/L           5.18      2575.5 ppb           5.18   0.20%
   QC value within limits for Si 251.611  Recovery = 103.02%
Sn 189.927†             2870.6      508.98 ug/L          0.547      508.98 ppb          0.547   0.11%
   QC value within limits for Sn 189.927  Recovery = 101.80%
Sr 421.552†           176222.1      492.14 ug/L          1.963      492.14 ppb          1.963   0.40%
   QC value within limits for Sr 421.552  Recovery = 98.43%
Ti 334.940†           277048.1      507.13 ug/L          0.486      507.13 ppb          0.486   0.10%
   QC value within limits for Ti 334.940  Recovery = 101.43%
Tl 190.801†             1956.9      515.35 ug/L          2.787      515.35 ppb          2.787   0.54%
   QC value within limits for Tl 190.801  Recovery = 103.07%
U 409.014†             14939.4      504.26 ug/L          0.789      504.26 ppb          0.789   0.16%
   QC value within limits for U 409.014  Recovery = 100.85%
V 292.402†             55878.5      513.61 ug/L          0.865      513.61 ppb          0.865   0.17%
   QC value within limits for V 292.402  Recovery = 102.72%
Zn 213.857†            55323.9      505.91 ug/L          1.155      505.91 ppb          1.155   0.23%
   QC value within limits for Zn 213.857  Recovery = 101.18%
SiO2†                  84577.4      5523.4 ug/L           9.53      5523.4 ppb           9.53   0.17%
   QC value within limits for SiO2  Recovery = 103.29%
All analyte(s) passed QC.
```

Sequence No.: 23
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 17:15:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7383.1	7383.1	98.8	%			17:17:29
1	Y RADIAL	6829.3	6829.3	98.63	%			17:17:29
1	Al 396.153Radial†	-55.3	16.7	13.755	ug/L	13.755	ppb	17:17:29
1	Ca 317.933Radial†	22.6	-6.2	-8.8370	ug/L	-8.8370	ppb	17:17:49
1	Fe 238.204 Radial†	35.1	0.8	3.2274	ug/L	3.2274	ppb	17:17:49
1	K 766.490 Radial†	2425.1	48.0	10.354	ug/L	10.354	ppb	17:17:29
1	Mg 279.077 IEC†	6.3	3.3	82.931	ug/L	82.931	ppb	17:17:49
1	Na 589.592 Radial†	-137.4	-3.6	-0.2206	ug/L	-0.2206	ppb	17:17:29
1	Sr 421.552†	-31.9	23.5	0.0658	ug/L	0.0658	ppb	17:17:29
1	Sc 361.383	729651.1	729651.1	101.53	%			17:18:46
1	Y 371.029	571078.0	571078.0	101.62	%			17:18:46
1	Ag 328.068†	704.8	61.6	0.3645	ug/L	0.3645	ppb	17:18:46
1	As 188.979†	-33.9	2.1	0.7411	ug/L	0.7411	ppb	17:19:06
1	B 249.677†	-666.7	283.2	7.1376	ug/L	7.1376	ppb	17:18:46
1	Ba 233.527†	12.7	12.0	0.0865	ug/L	0.0865	ppb	17:19:06
1	Be 313.107†	-4888.7	66.5	0.0307	ug/L	0.0307	ppb	17:18:46
1	Cd 226.502†	-288.5	-3.0	-0.0388	ug/L	-0.0388	ppb	17:19:06
1	Co 228.616†	-98.7	2.2	0.0387	ug/L	0.0387	ppb	17:19:06
1	Cr 267.716†	-105.2	-26.2	-0.3687	ug/L	-0.3687	ppb	17:18:46
1	Cu 324.752†	5591.3	-131.1	-0.4750	ug/L	-0.4750	ppb	17:18:46
1	Mn 257.610†	767.2	76.0	0.0826	ug/L	0.0826	ppb	17:18:46
1	Mo 202.031†	17.0	-0.4	-0.0272	ug/L	-0.0272	ppb	17:19:06
1	Ni 231.604†	141.1	19.2	0.5126	ug/L	0.5126	ppb	17:19:06
1	P 214.914†	323.3	3.7	1.9606	ug/L	1.9606	ppb	17:19:06
1	Pb 220.353†	2.6	15.8	1.8861	ug/L	1.8861	ppb	17:19:06
1	S 181.975 Axial†	84.2	7.5	10.335	ug/L	10.335	ppb	17:19:06
1	Sb 206.836†	56.2	-1.9	-0.5435	ug/L	-0.5435	ppb	17:19:06
1	Se 196.026†	-23.3	5.8	2.9742	ug/L	2.9742	ppb	17:19:06
1	Si 251.611†	778.3	354.8	10.956	ug/L	10.956	ppb	17:19:06
1	Sn 189.927†	12.2	-0.5	-0.0805	ug/L	-0.0805	ppb	17:19:06
1	Ti 334.940†	-1301.1	66.7	0.1175	ug/L	0.1175	ppb	17:18:46
1	Tl 190.801†	-47.8	13.7	3.5830	ug/L	3.5830	ppb	17:19:06
1	U 409.014†	-4642.7	275.8	9.3385	ug/L	9.3385	ppb	17:18:46
1	V 292.402†	-1500.3	87.4	0.8126	ug/L	0.8126	ppb	17:18:46
1	Zn 213.857†	967.2	27.5	0.2483	ug/L	0.2483	ppb	17:19:06
1	SiO2†	761.7	313.4	20.603	ug/L	20.603	ppb	17:20:02
2	Sc Radial	7555.7	7555.7	101	%			17:17:54
2	Y RADIAL	7004.6	7004.6	101.2	%			17:17:54
2	Al 396.153Radial†	-70.3	3.1	2.5786	ug/L	2.5786	ppb	17:17:54
2	Ca 317.933Radial†	14.0	-15.3	-21.619	ug/L	-21.619	ppb	17:18:14
2	Fe 238.204 Radial†	38.2	3.0	12.580	ug/L	12.580	ppb	17:18:14
2	K 766.490 Radial†	2533.5	99.1	21.403	ug/L	21.403	ppb	17:17:54
2	Mg 279.077 IEC†	4.3	1.2	30.148	ug/L	30.148	ppb	17:18:14
2	Na 589.592 Radial†	-268.9	-130.5	-8.0088	ug/L	-8.0088	ppb	17:17:54
2	Sr 421.552†	-30.4	25.7	0.0721	ug/L	0.0721	ppb	17:17:54
2	Sc 361.383	716378.7	716378.7	99.678	%			17:19:11
2	Y 371.029	560732.4	560732.4	99.774	%			17:19:11
2	Ag 328.068†	618.9	-11.7	-0.0617	ug/L	-0.0617	ppb	17:19:11
2	As 188.979†	-24.0	11.3	4.0898	ug/L	4.0898	ppb	17:19:31
2	B 249.677†	-741.4	196.1	4.9415	ug/L	4.9415	ppb	17:19:11
2	Ba 233.527†	6.3	5.8	0.0414	ug/L	0.0414	ppb	17:19:31
2	Be 313.107†	-4782.5	83.8	0.0386	ug/L	0.0386	ppb	17:19:11
2	Cd 226.502†	-267.5	12.8	0.1616	ug/L	0.1616	ppb	17:19:31
2	Co 228.616†	-97.4	1.8	0.0286	ug/L	0.0286	ppb	17:19:31
2	Cr 267.716†	-27.4	49.9	0.7010	ug/L	0.7010	ppb	17:19:11
2	Cu 324.752†	5628.5	8.2	0.0304	ug/L	0.0304	ppb	17:19:11
2	Mn 257.610†	744.8	67.6	0.0755	ug/L	0.0755	ppb	17:19:11
2	Mo 202.031†	8.5	-8.6	-0.6049	ug/L	-0.6049	ppb	17:19:31
2	Ni 231.604†	136.4	17.1	0.4563	ug/L	0.4563	ppb	17:19:31

2	P 214.914†	342.5	28.8	14.695	ug/L	14.695 ppb	17:19:31
2	Pb 220.353†	2.1	15.4	1.8303	ug/L	1.8303 ppb	17:19:31
2	S 181.975 Axial†	79.4	4.3	5.8761	ug/L	5.8761 ppb	17:19:31
2	Sb 206.836†	54.6	-2.5	-0.7895	ug/L	-0.7895 ppb	17:19:31
2	Se 196.026†	-26.7	2.0	1.0415	ug/L	1.0415 ppb	17:19:31
2	Si 251.611†	745.8	336.4	10.409	ug/L	10.409 ppb	17:19:31
2	Sn 189.927†	6.2	-6.3	-1.1127	ug/L	-1.1127 ppb	17:19:31
2	Ti 334.940†	-1294.5	49.5	0.0909	ug/L	0.0909 ppb	17:19:11
2	Tl 190.801†	-53.8	6.8	1.7745	ug/L	1.7745 ppb	17:19:31
2	U 409.014†	-4950.8	-118.1	-4.0008	ug/L	-4.0008 ppb	17:19:11
2	V 292.402†	-1542.2	18.0	0.1466	ug/L	0.1466 ppb	17:19:11
2	Zn 213.857†	963.2	41.1	0.3744	ug/L	0.3744 ppb	17:19:31
2	SiO2†	776.6	342.3	22.549	ug/L	22.549 ppb	17:20:07
3	Sc Radial	7361.7	7361.7	98.5	%		17:18:19
3	Y RADIAL	6861.2	6861.2	99.09	%		17:18:19
3	Al 396.153Radial†	-72.8	-1.3	-1.0607	ug/L	-1.0607 ppb	17:18:19
3	Ca 317.933Radial†	31.6	3.0	4.2344	ug/L	4.2344 ppb	17:18:39
3	Fe 238.204 Radial†	36.7	2.5	10.477	ug/L	10.477 ppb	17:18:39
3	K 766.490 Radial†	2542.7	174.5	37.654	ug/L	37.654 ppb	17:18:19
3	Mg 279.077 1EC†	1.9	-1.1	-27.017	ug/L	-27.017 ppb	17:18:39
3	Na 589.592 Radial†	-207.9	-75.5	-4.6364	ug/L	-4.6364 ppb	17:18:19
3	Sr 421.552†	-71.0	-16.2	-0.0452	ug/L	-0.0452 ppb	17:18:19
3	Sc 361.383	722458.7	722458.7	100.52	%		17:19:37
3	Y 371.029	565036.5	565036.5	100.54	%		17:19:37
3	Ag 328.068†	564.6	-71.0	-0.4225	ug/L	-0.4225 ppb	17:19:37
3	As 188.979†	-40.8	-5.1	-1.8485	ug/L	-1.8485 ppb	17:19:57
3	B 249.677†	-804.1	140.0	3.5258	ug/L	3.5258 ppb	17:19:37
3	Ba 233.527†	3.1	2.6	0.0174	ug/L	0.0174 ppb	17:19:57
3	Be 313.107†	-4788.1	118.6	0.0543	ug/L	0.0543 ppb	17:19:37
3	Cd 226.502†	-270.0	12.5	0.1593	ug/L	0.1593 ppb	17:19:57
3	Co 228.616†	-82.6	17.3	0.3002	ug/L	0.3002 ppb	17:19:57
3	Cr 267.716†	-53.3	24.4	0.3415	ug/L	0.3415 ppb	17:19:37
3	Cu 324.752†	5622.5	-45.3	-0.1635	ug/L	-0.1635 ppb	17:19:37
3	Mn 257.610†	717.0	33.6	0.0389	ug/L	0.0389 ppb	17:19:37
3	Mo 202.031†	24.0	6.8	0.4785	ug/L	0.4785 ppb	17:19:57
3	Ni 231.604†	148.7	28.1	0.7516	ug/L	0.7516 ppb	17:19:57
3	P 214.914†	311.3	-5.1	-2.5655	ug/L	-2.5655 ppb	17:19:57
3	Pb 220.353†	-9.4	3.9	0.4590	ug/L	0.4590 ppb	17:19:57
3	S 181.975 Axial†	78.1	2.3	3.1219	ug/L	3.1219 ppb	17:19:57
3	Sb 206.836†	44.1	-13.4	-3.9514	ug/L	-3.9514 ppb	17:19:57
3	Se 196.026†	-21.7	7.1	3.6792	ug/L	3.6792 ppb	17:19:57
3	Si 251.611†	737.4	321.8	9.8971	ug/L	9.8971 ppb	17:19:57
3	Sn 189.927†	21.2	8.6	1.5176	ug/L	1.5176 ppb	17:19:57
3	Ti 334.940†	-1359.0	-3.7	-0.0066	ug/L	-0.0066 ppb	17:19:37
3	Tl 190.801†	-53.6	7.4	1.9366	ug/L	1.9366 ppb	17:19:57
3	U 409.014†	-4870.7	3.4	0.1132	ug/L	0.1132 ppb	17:19:37
3	V 292.402†	-1621.8	-48.1	-0.4327	ug/L	-0.4327 ppb	17:19:37
3	Zn 213.857†	957.3	27.2	0.2461	ug/L	0.2461 ppb	17:19:57
3	SiO2†	748.2	307.4	20.123	ug/L	20.123 ppb	17:20:12

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	722829.5	100.58	%	0.924				0.92%
Sc Radial	7433.5	99.5	%	1.42				1.43%
Y 371.029	565615.6	100.64	%	0.925				0.92%
Y RADIAL	6898.4	99.63	%	1.349				1.35%
Ag 328.068†	-7.0	-0.0399	ug/L	0.39393	-0.0399	ppb	0.39393	987.29%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	6.2	5.0908	ug/L	7.72056	5.0908	ppb	7.72056	151.66%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.8	0.9941	ug/L	2.97723	0.9941	ppb	2.97723	299.48%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	206.4	5.2017	ug/L	1.81989	5.2017	ppb	1.81989	34.99%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	6.8	0.0484	ug/L	0.03505	0.0484	ppb	0.03505	72.38%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	89.6	0.0412	ug/L	0.01198	0.0412	ppb	0.01198	29.10%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-6.2	-8.7407	ug/L	12.92716	-8.7407	ppb	12.92716	147.90%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                7.4      0.0941 ug/L       0.11506      0.0941 ppb        0.11506 122.32%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                7.1      0.1225 ug/L       0.15398      0.1225 ppb        0.15398 125.73%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               16.0      0.2246 ug/L       0.54437      0.2246 ppb        0.54437 242.37%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -56.1     -0.2027 ug/L       0.25498     -0.2027 ppb        0.25498 125.79%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         2.1      8.7613 ug/L       4.90648      8.7613 ppb        4.90648  56.00%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        107.2     23.137 ug/L       13.7321     23.137 ppb        13.7321  59.35%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            1.2     28.687 ug/L       54.9883     28.687 ppb        54.9883 191.68%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               59.1      0.0657 ug/L       0.02347      0.0657 ppb        0.02347  35.73%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.7     -0.0512 ug/L       0.54211     -0.0512 ppb        0.54211 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -69.9     -4.2886 ug/L       3.90572     -4.2886 ppb        3.90572  91.07%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.5      0.5735 ug/L       0.15675      0.5735 ppb        0.15675  27.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 9.1      4.6966 ug/L       8.94941      4.6966 ppb        8.94941 190.55%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               11.7      1.3918 ug/L       0.80833      1.3918 ppb        0.80833  58.08%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           4.7      6.4442 ug/L       3.63975      6.4442 ppb        3.63975  56.48%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               -5.9     -1.7615 ug/L       1.90051     -1.7615 ppb        1.90051 107.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                5.0      2.5649 ug/L       1.36562      2.5649 ppb        1.36562  53.24%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              337.7     10.421 ug/L        0.5298     10.421 ppb         0.5298   5.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                0.6      0.1081 ug/L       1.32522      0.1081 ppb        1.32522 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               11.0      0.0309 ug/L       0.06601      0.0309 ppb        0.06601 213.73%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               37.5      0.0673 ug/L       0.06537      0.0673 ppb        0.06537  97.16%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                9.3      2.4314 ug/L       1.00061      2.4314 ppb        1.00061  41.15%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                53.7      1.8170 ug/L       6.83090      1.8170 ppb        6.83090 375.95%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                19.1      0.1755 ug/L       0.62311      0.1755 ppb        0.62311 355.08%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               32.0      0.2896 ug/L       0.07345      0.2896 ppb        0.07345  25.36%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    321.0     21.092 ug/L        1.2851     21.092 ppb         1.2851   6.09%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 32
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 18:18:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7366.9	7366.9	98.6	%			18:21:03
1	Y RADIAL	6789.6	6789.6	98.05	%			18:21:03
1	Al 396.153Radial†	6381.2	6547.1	5369.6	ug/L	5369.6	ppb	18:20:43
1	Ca 317.933Radial†	3683.4	3708.2	5253.1	ug/L	5253.1	ppb	18:21:03
1	Fe 238.204 Radial†	1228.3	1211.4	5066.0	ug/L	5066.0	ppb	18:21:03
1	K 766.490 Radial†	25571.7	23538.4	5065.1	ug/L	5065.1	ppb	18:20:43
1	Mg 279.077 IEC†	208.6	208.6	5205.9	ug/L	5205.9	ppb	18:21:03
1	Na 589.592 Radial†	171913.5	174562.7	10713	ug/L	10713	ppb	18:20:43
1	Sr 421.552†	178023.7	180682.5	504.60	ug/L	504.60	ppb	18:20:43
1	Sc 361.383	741979.7	741979.7	103.24	%			18:22:00
1	Y 371.029	481732.9	481732.9	85.718	%			18:22:05
1	Ag 328.068†	89407.2	85968.1	516.69	ug/L	516.69	ppb	18:22:05
1	As 188.979†	1424.3	1415.1	513.50	ug/L	513.50	ppb	18:22:25
1	B 249.677†	20010.2	20322.0	509.17	ug/L	509.17	ppb	18:22:05
1	Ba 233.527†	74975.3	72621.4	513.53	ug/L	513.53	ppb	18:22:05
1	Be 313.107†	1148144.2	1116986.4	512.41	ug/L	512.41	ppb	18:22:00
1	Cd 226.502†	41517.3	40495.1	516.25	ug/L	516.25	ppb	18:22:05
1	Co 228.616†	30576.8	29716.4	515.58	ug/L	515.58	ppb	18:22:05
1	Cr 267.716†	37878.9	36767.3	515.92	ug/L	515.92	ppb	18:22:05
1	Cu 324.752†	150859.2	140485.4	509.37	ug/L	509.37	ppb	18:22:05
1	Mn 257.610†	477837.9	462159.2	510.19	ug/L	510.19	ppb	18:22:00
1	Mo 202.031†	7481.2	7229.2	509.26	ug/L	509.26	ppb	18:22:25
1	Ni 231.604†	20046.2	19297.1	515.48	ug/L	515.48	ppb	18:22:05
1	P 214.914†	5493.4	5006.2	2459.3	ug/L	2459.3	ppb	18:22:25
1	Pb 220.353†	4396.0	4271.3	510.13	ug/L	510.13	ppb	18:22:25
1	S 181.975 Axial†	849.6	747.5	1023.0	ug/L	1023.0	ppb	18:22:25
1	Sb 206.836†	1829.4	1714.7	515.60	ug/L	515.60	ppb	18:22:25
1	Se 196.026†	1005.0	1002.3	529.41	ug/L	529.41	ppb	18:22:25
1	Si 251.611†	87322.6	84169.8	2582.1	ug/L	2582.1	ppb	18:22:05
1	Sn 189.927†	2980.6	2874.6	509.68	ug/L	509.68	ppb	18:22:25
1	Ti 334.940†	281193.2	273715.0	501.01	ug/L	501.01	ppb	18:22:05
1	Tl 190.801†	1949.3	1948.9	513.14	ug/L	513.14	ppb	18:22:25
1	U 409.014†	11260.3	15755.5	531.88	ug/L	531.88	ppb	18:22:05
1	V 292.402†	56741.6	56525.7	519.49	ug/L	519.49	ppb	18:22:05
1	Zn 213.857†	58482.3	55721.5	509.51	ug/L	509.51	ppb	18:22:05
1	SiO2†	86787.3	83626.2	5460.9	ug/L	5460.9	ppb	18:23:32
2	Sc Radial	7380.2	7380.2	98.7	%			18:21:28
2	Y RADIAL	6784.0	6784.0	97.97	%			18:21:28
2	Al 396.153Radial†	6225.4	6377.7	5230.5	ug/L	5230.5	ppb	18:21:08
2	Ca 317.933Radial†	3695.3	3713.4	5260.5	ug/L	5260.5	ppb	18:21:28
2	Fe 238.204 Radial†	1233.9	1214.9	5080.5	ug/L	5080.5	ppb	18:21:28
2	K 766.490 Radial†	24792.4	22702.4	4884.9	ug/L	4884.9	ppb	18:21:08
2	Mg 279.077 IEC†	211.8	211.4	5277.1	ug/L	5277.1	ppb	18:21:28
2	Na 589.592 Radial†	166312.9	168576.6	10346	ug/L	10346	ppb	18:21:08
2	Sr 421.552†	171966.4	174222.8	486.56	ug/L	486.56	ppb	18:21:08
2	Sc 361.383	756402.4	756402.4	105.25	%			18:22:31
2	Y 371.029	482492.8	482492.8	85.853	%			18:22:36
2	Ag 328.068†	91031.8	85860.5	516.05	ug/L	516.05	ppb	18:22:36
2	As 188.979†	1430.0	1394.1	505.95	ug/L	505.95	ppb	18:22:56
2	B 249.677†	20503.7	20421.3	511.66	ug/L	511.66	ppb	18:22:36
2	Ba 233.527†	76369.9	72561.7	513.11	ug/L	513.11	ppb	18:22:36
2	Be 313.107†	1172757.8	1119167.6	513.41	ug/L	513.41	ppb	18:22:31
2	Cd 226.502†	42375.2	40543.5	516.87	ug/L	516.87	ppb	18:22:36
2	Co 228.616†	31301.9	29840.7	517.71	ug/L	517.71	ppb	18:22:36
2	Cr 267.716†	38449.3	36609.7	513.72	ug/L	513.72	ppb	18:22:36
2	Cu 324.752†	153966.2	140651.2	509.98	ug/L	509.98	ppb	18:22:36
2	Mn 257.610†	487165.4	462196.5	510.23	ug/L	510.23	ppb	18:22:31
2	Mo 202.031†	7470.1	7080.6	498.79	ug/L	498.79	ppb	18:22:56
2	Ni 231.604†	20398.8	19261.9	514.54	ug/L	514.54	ppb	18:22:36

2	P 214.914†	5494.2	4905.5	2407.5 ug/L	2407.5 ppb	18:22:56
2	Pb 220.353†	4375.4	4170.5	498.08 ug/L	498.08 ppb	18:22:56
2	S 181.975 Axial†	845.8	728.2	996.63 ug/L	996.63 ppb	18:22:56
2	Sb 206.836†	1841.0	1692.0	508.54 ug/L	508.54 ppb	18:22:56
2	Se 196.026†	1005.5	984.1	520.17 ug/L	520.17 ppb	18:22:56
2	Si 251.611†	89109.8	84255.1	2585.1 ug/L	2585.1 ppb	18:22:36
2	Sn 189.927†	2986.1	2824.8	500.87 ug/L	500.87 ppb	18:22:56
2	Ti 334.940†	286481.9	273546.6	500.71 ug/L	500.71 ppb	18:22:36
2	Tl 190.801†	1954.4	1917.7	504.96 ug/L	504.96 ppb	18:22:56
2	U 409.014†	11416.3	15695.8	529.86 ug/L	529.86 ppb	18:22:36
2	V 292.402†	57831.1	56512.9	519.24 ug/L	519.24 ppb	18:22:36
2	Zn 213.857†	59611.9	55714.6	509.45 ug/L	509.45 ppb	18:22:36
2	SiO2†	88060.2	83232.8	5435.8 ug/L	5435.8 ppb	18:23:38
3	Sc Radial	7353.6	7353.6	98.4 %		18:21:53
3	Y RADIAL	6759.1	6759.1	97.61 %		18:21:53
3	Al 396.153Radial†	6191.3	6365.8	5219.8 ug/L	5219.8 ppb	18:21:33
3	Ca 317.933Radial†	3658.2	3689.3	5226.3 ug/L	5226.3 ppb	18:21:53
3	Fe 238.204 Radial†	1220.9	1206.2	5044.6 ug/L	5044.6 ppb	18:21:53
3	K 766.490 Radial†	24981.2	22985.2	4945.7 ug/L	4945.7 ppb	18:21:33
3	Mg 279.077 IEC†	209.0	209.4	5227.8 ug/L	5227.8 ppb	18:21:53
3	Na 589.592 Radial†	166943.5	169826.9	10423 ug/L	10423 ppb	18:21:33
3	Sr 421.552†	172581.9	175478.5	490.07 ug/L	490.07 ppb	18:21:33
3	Sc 361.383	727526.5	727526.5	101.23 %		18:23:02
3	Y 371.029	481127.2	481127.2	85.610 %		18:23:07
3	Ag 328.068†	89683.8	87961.8	528.63 ug/L	528.63 ppb	18:23:07
3	As 188.979†	1416.1	1434.3	520.49 ug/L	520.49 ppb	18:23:27
3	B 249.677†	20221.5	20915.8	524.06 ug/L	524.06 ppb	18:23:07
3	Ba 233.527†	75324.7	74409.3	526.17 ug/L	526.17 ppb	18:23:07
3	Be 313.107†	1125090.4	1116305.8	512.12 ug/L	512.12 ppb	18:23:02
3	Cd 226.502†	41808.2	41581.4	530.12 ug/L	530.12 ppb	18:23:07
3	Co 228.616†	30846.9	30571.7	530.41 ug/L	530.41 ppb	18:23:07
3	Cr 267.716†	38029.6	37645.0	528.24 ug/L	528.24 ppb	18:23:07
3	Cu 324.752†	151258.9	143783.1	521.32 ug/L	521.32 ppb	18:23:07
3	Mn 257.610†	468798.8	462424.7	510.48 ug/L	510.48 ppb	18:23:02
3	Mo 202.031†	7491.9	7383.7	520.13 ug/L	520.13 ppb	18:23:27
3	Ni 231.604†	20078.8	19715.1	526.64 ug/L	526.64 ppb	18:23:07
3	P 214.914†	5486.3	5104.9	2507.4 ug/L	2507.4 ppb	18:23:27
3	Pb 220.353†	4369.1	4329.3	517.04 ug/L	517.04 ppb	18:23:27
3	S 181.975 Axial†	852.1	766.4	1048.9 ug/L	1048.9 ppb	18:23:27
3	Sb 206.836†	1848.7	1769.0	531.80 ug/L	531.80 ppb	18:23:27
3	Se 196.026†	1008.5	1025.0	540.96 ug/L	540.96 ppb	18:23:27
3	Si 251.611†	87674.8	86198.1	2644.5 ug/L	2644.5 ppb	18:23:07
3	Sn 189.927†	2977.2	2928.5	519.23 ug/L	519.23 ppb	18:23:27
3	Ti 334.940†	282004.8	279927.6	512.38 ug/L	512.38 ppb	18:23:07
3	Tl 190.801†	1957.8	1994.7	525.13 ug/L	525.13 ppb	18:23:27
3	U 409.014†	11254.7	15966.7	539.01 ug/L	539.01 ppb	18:23:07
3	V 292.402†	57044.9	57917.2	532.27 ug/L	532.27 ppb	18:23:07
3	Zn 213.857†	58861.3	57221.2	523.26 ug/L	523.26 ppb	18:23:07
3	SiO2†	85896.9	84416.7	5512.3 ug/L	5512.3 ppb	18:23:43

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	741969.5	103.24	%	2.009				1.95%
Sc Radial	7366.9	98.6	%	0.18				0.18%
Y 371.029	481784.3	85.727	%	0.1217				0.14%
Y RADIAL	6777.6	97.88	%	0.234				0.24%
Ag 328.068†	86596.8	520.46	ug/L	7.089	520.46	ppb	7.089	1.36%
QC value within limits for Ag 328.068 Recovery = 104.09%								
Al 396.153Radial†	6430.2	5273.3	ug/L	83.55	5273.3	ppb	83.55	1.58%
QC value within limits for Al 396.153Radial Recovery = 105.47%								
As 188.979†	1414.5	513.31	ug/L	7.270	513.31	ppb	7.270	1.42%
QC value within limits for As 188.979 Recovery = 102.66%								
B 249.677†	20553.0	514.96	ug/L	7.976	514.96	ppb	7.976	1.55%
QC value within limits for B 249.677 Recovery = 102.99%								
Ba 233.527†	73197.5	517.61	ug/L	7.424	517.61	ppb	7.424	1.43%
QC value within limits for Ba 233.527 Recovery = 103.52%								
Be 313.107†	1117486.6	512.65	ug/L	0.674	512.65	ppb	0.674	0.13%
QC value within limits for Be 313.107 Recovery = 102.53%								
Ca 317.933Radial†	3703.7	5246.7	ug/L	17.98	5246.7	ppb	17.98	0.34%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.93%
Cd 226.502†            40873.4      521.08 ug/L         7.834      521.08 ppb          7.834   1.50%
   QC value within limits for Cd 226.502  Recovery = 104.22%
Co 228.616†            30042.9      521.23 ug/L         8.023      521.23 ppb          8.023   1.54%
   QC value within limits for Co 228.616  Recovery = 104.25%
Cr 267.716†            37007.3      519.29 ug/L         7.826      519.29 ppb          7.826   1.51%
   QC value within limits for Cr 267.716  Recovery = 103.86%
Cu 324.752†           141639.9      513.56 ug/L         6.732      513.56 ppb          6.732   1.31%
   QC value within limits for Cu 324.752  Recovery = 102.71%
Fe 238.204 Radial†      1210.8      5063.7 ug/L        18.05      5063.7 ppb         18.05   0.36%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.27%
K 766.490 Radial†      23075.4      4965.2 ug/L        91.67      4965.2 ppb         91.67   1.85%
   QC value within limits for K 766.490 Radial  Recovery = 99.30%
Mg 279.077 IEC†          209.8      5236.9 ug/L        36.47      5236.9 ppb         36.47   0.70%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.74%
Mn 257.610†           462260.1      510.30 ug/L         0.157      510.30 ppb         0.157   0.03%
   QC value within limits for Mn 257.610  Recovery = 102.06%
Mo 202.031†             7231.2      509.39 ug/L        10.671      509.39 ppb        10.671   2.09%
   QC value within limits for Mo 202.031  Recovery = 101.88%
Na 589.592 Radial†    170988.8       10494 ug/L        193.8       10494 ppb         193.8   1.85%
   QC value within limits for Na 589.592 Radial  Recovery = 104.94%
Ni 231.604†            19424.7      518.89 ug/L         6.733      518.89 ppb          6.733   1.30%
   QC value within limits for Ni 231.604  Recovery = 103.78%
P 214.914†              5005.5      2458.0 ug/L        49.92      2458.0 ppb         49.92   2.03%
   QC value within limits for P 214.914  Recovery = 98.32%
Pb 220.353†             4257.0      508.42 ug/L         9.594      508.42 ppb          9.594   1.89%
   QC value within limits for Pb 220.353  Recovery = 101.68%
S 181.975 Axial†         747.4      1022.8 ug/L        26.13      1022.8 ppb         26.13   2.55%
   QC value within limits for S 181.975 Axial  Recovery = 102.28%
Sb 206.836†             1725.2      518.65 ug/L        11.923      518.65 ppb        11.923   2.30%
   QC value within limits for Sb 206.836  Recovery = 103.73%
Se 196.026†             1003.8      530.18 ug/L        10.417      530.18 ppb        10.417   1.96%
   QC value within limits for Se 196.026  Recovery = 106.04%
Si 251.611†            84874.3      2603.9 ug/L        35.17      2603.9 ppb         35.17   1.35%
   QC value within limits for Si 251.611  Recovery = 104.16%
Sn 189.927†             2876.0      509.93 ug/L         9.184      509.93 ppb          9.184   1.80%
   QC value within limits for Sn 189.927  Recovery = 101.99%
Sr 421.552†           176794.6      493.74 ug/L         9.566      493.74 ppb          9.566   1.94%
   QC value within limits for Sr 421.552  Recovery = 98.75%
Ti 334.940†           275729.7      504.70 ug/L         6.652      504.70 ppb          6.652   1.32%
   QC value within limits for Ti 334.940  Recovery = 100.94%
Tl 190.801†             1953.8      514.41 ug/L        10.148      514.41 ppb        10.148   1.97%
   QC value within limits for Tl 190.801  Recovery = 102.88%
U 409.014†             15806.0      533.59 ug/L         4.806      533.59 ppb          4.806   0.90%
   QC value within limits for U 409.014  Recovery = 106.72%
V 292.402†             56985.3      523.67 ug/L         7.450      523.67 ppb          7.450   1.42%
   QC value within limits for V 292.402  Recovery = 104.73%
Zn 213.857†            56219.1      514.07 ug/L         7.959      514.07 ppb          7.959   1.55%
   QC value within limits for Zn 213.857  Recovery = 102.81%
SiO2†                  83758.5      5469.7 ug/L        38.97      5469.7 ppb         38.97   0.71%
   QC value within limits for SiO2  Recovery = 102.28%
All analyte(s) passed QC.
```

Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 18:25:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7284.7	7284.7	97.5	%			18:27:44
1	Y RADIAL	6752.1	6752.1	97.51	%			18:27:44
1	Al 396.153Radial†	-76.5	-5.9	-4.8707	ug/L	-4.8707	ppb	18:27:44
1	Ca 317.933Radial†	26.4	-2.0	-2.8920	ug/L	-2.8920	ppb	18:28:04
1	Fe 238.204 Radial†	36.0	2.1	8.7733	ug/L	8.7733	ppb	18:28:04
1	K 766.490 Radial†	2474.9	132.2	28.523	ug/L	28.523	ppb	18:27:44
1	Mg 279.077 IEC†	4.3	1.3	33.065	ug/L	33.065	ppb	18:28:04
1	Na 589.592 Radial†	-403.9	-278.9	-17.116	ug/L	-17.116	ppb	18:27:44
1	Sr 421.552†	-70.1	-16.1	-0.0448	ug/L	-0.0448	ppb	18:27:44
1	Sc 361.383	721634.9	721634.9	100.41	%			18:29:01
1	Y 371.029	565103.1	565103.1	100.55	%			18:29:01
1	Ag 328.068†	599.7	-35.4	-0.2134	ug/L	-0.2134	ppb	18:29:01
1	As 188.979†	-38.1	-2.5	-0.8990	ug/L	-0.8990	ppb	18:29:21
1	B 249.677†	-765.3	177.8	4.4803	ug/L	4.4803	ppb	18:29:01
1	Ba 233.527†	10.2	9.7	0.0674	ug/L	0.0674	ppb	18:29:21
1	Be 313.107†	-4778.8	122.5	0.0562	ug/L	0.0562	ppb	18:29:01
1	Cd 226.502†	-255.0	27.1	0.3447	ug/L	0.3447	ppb	18:29:21
1	Co 228.616†	-102.0	-2.1	-0.0361	ug/L	-0.0361	ppb	18:29:21
1	Cr 267.716†	-87.4	-9.6	-0.1366	ug/L	-0.1366	ppb	18:29:01
1	Cu 324.752†	5674.0	12.4	0.0456	ug/L	0.0456	ppb	18:29:01
1	Mn 257.610†	685.1	2.7	0.0035	ug/L	0.0035	ppb	18:29:21
1	Mo 202.031†	21.7	4.4	0.3133	ug/L	0.3133	ppb	18:29:21
1	Ni 231.604†	118.5	-1.8	-0.0474	ug/L	-0.0474	ppb	18:29:21
1	P 214.914†	298.8	-17.2	-8.8168	ug/L	-8.8168	ppb	18:29:21
1	Pb 220.353†	-13.5	-0.2	-0.0295	ug/L	-0.0295	ppb	18:29:21
1	S 181.975 Axial†	79.3	3.6	4.8842	ug/L	4.8842	ppb	18:29:21
1	Sb 206.836†	53.8	-3.7	-1.0934	ug/L	-1.0934	ppb	18:29:21
1	Se 196.026†	-38.4	-9.5	-4.8185	ug/L	-4.8185	ppb	18:29:21
1	Si 251.611†	557.5	143.4	4.4165	ug/L	4.4165	ppb	18:29:21
1	Sn 189.927†	11.7	-0.9	-0.1592	ug/L	-0.1592	ppb	18:29:21
1	Ti 334.940†	-1310.4	43.2	0.0772	ug/L	0.0772	ppb	18:29:01
1	Tl 190.801†	-48.7	12.2	3.2027	ug/L	3.2027	ppb	18:29:21
1	U 409.014†	-4756.3	111.8	3.7862	ug/L	3.7862	ppb	18:29:01
1	V 292.402†	-1611.3	-39.6	-0.3487	ug/L	-0.3487	ppb	18:29:01
1	Zn 213.857†	959.6	30.5	0.2799	ug/L	0.2799	ppb	18:29:21
1	SiO2†	620.6	181.2	11.888	ug/L	11.888	ppb	18:30:17
2	Sc Radial	7350.6	7350.6	98.3	%			18:28:09
2	Y RADIAL	6817.8	6817.8	98.46	%			18:28:09
2	Al 396.153Radial†	-89.6	-18.4	-15.159	ug/L	-15.159	ppb	18:28:09
2	Ca 317.933Radial†	33.2	4.6	6.5582	ug/L	6.5582	ppb	18:28:29
2	Fe 238.204 Radial†	38.1	4.0	16.509	ug/L	16.509	ppb	18:28:29
2	K 766.490 Radial†	2441.1	75.1	16.221	ug/L	16.221	ppb	18:28:09
2	Mg 279.077 IEC†	1.8	-1.2	-31.067	ug/L	-31.067	ppb	18:28:29
2	Na 589.592 Radial†	-285.1	-154.3	-9.4724	ug/L	-9.4724	ppb	18:28:09
2	Sr 421.552†	-40.7	14.4	0.0402	ug/L	0.0402	ppb	18:28:09
2	Sc 361.383	728244.2	728244.2	101.33	%			18:29:26
2	Y 371.029	570115.9	570115.9	101.44	%			18:29:26
2	Ag 328.068†	662.5	21.2	0.1259	ug/L	0.1259	ppb	18:29:26
2	As 188.979†	-32.5	3.4	1.2323	ug/L	1.2323	ppb	18:29:46
2	B 249.677†	-782.3	167.9	4.2312	ug/L	4.2312	ppb	18:29:26
2	Ba 233.527†	8.3	7.7	0.0545	ug/L	0.0545	ppb	18:29:46
2	Be 313.107†	-4851.6	93.8	0.0427	ug/L	0.0427	ppb	18:29:26
2	Cd 226.502†	-276.3	8.4	0.1052	ug/L	0.1052	ppb	18:29:46
2	Co 228.616†	-112.3	-11.4	-0.1991	ug/L	-0.1991	ppb	18:29:46
2	Cr 267.716†	-90.2	-11.6	-0.1645	ug/L	-0.1645	ppb	18:29:26
2	Cu 324.752†	5687.4	-25.6	-0.0919	ug/L	-0.0919	ppb	18:29:26
2	Mn 257.610†	669.5	-18.9	-0.0182	ug/L	-0.0182	ppb	18:29:46
2	Mo 202.031†	10.8	-6.5	-0.4550	ug/L	-0.4550	ppb	18:29:46
2	Ni 231.604†	135.3	13.7	0.3660	ug/L	0.3660	ppb	18:29:46

2	P 214.914†	316.8	-2.1	-1.0649	ug/L	-1.0649 ppb	18:29:46
2	Pb 220.353†	4.7	17.9	2.1207	ug/L	2.1207 ppb	18:29:46
2	S 181.975 Axial†	80.5	4.1	5.5884	ug/L	5.5884 ppb	18:29:46
2	Sb 206.836†	69.3	11.1	3.3194	ug/L	3.3194 ppb	18:29:46
2	Se 196.026†	-28.5	0.7	0.4013	ug/L	0.4013 ppb	18:29:46
2	Si 251.611†	536.1	117.3	3.6134	ug/L	3.6134 ppb	18:29:46
2	Sn 189.927†	17.6	4.9	0.8646	ug/L	0.8646 ppb	18:29:46
2	Ti 334.940†	-1410.3	-43.6	-0.0828	ug/L	-0.0828 ppb	18:29:26
2	Tl 190.801†	-55.9	5.6	1.4742	ug/L	1.4742 ppb	18:29:46
2	U 409.014†	-4679.1	231.0	7.8208	ug/L	7.8208 ppb	18:29:26
2	V 292.402†	-1557.6	28.1	0.2619	ug/L	0.2619 ppb	18:29:26
2	Zn 213.857†	958.3	20.6	0.1874	ug/L	0.1874 ppb	18:29:46
2	SiO2†	576.1	131.7	8.6371	ug/L	8.6371 ppb	18:30:22
3	Sc Radial	7382.0	7382.0	98.8	%		18:28:34
3	Y RADIAL	6824.7	6824.7	98.56	%		18:28:34
3	Al 396.153Radial†	-80.8	-9.2	-7.5951	ug/L	-7.5951 ppb	18:28:34
3	Ca 317.933Radial†	25.7	-3.0	-4.2807	ug/L	-4.2807 ppb	18:28:54
3	Fe 238.204 Radial†	34.9	0.5	2.1414	ug/L	2.1414 ppb	18:28:54
3	K 766.490 Radial†	2405.9	28.9	6.2193	ug/L	6.2193 ppb	18:28:34
3	Mg 279.077 IEC†	3.1	0.1	3.0843	ug/L	3.0843 ppb	18:28:54
3	Na 589.592 Radial†	-246.5	-114.0	-6.9971	ug/L	-6.9971 ppb	18:28:34
3	Sr 421.552†	-15.0	40.7	0.1137	ug/L	0.1137 ppb	18:28:34
3	Sc 361.383	724186.7	724186.7	100.76	%		18:29:51
3	Y 371.029	566691.6	566691.6	100.83	%		18:29:51
3	Ag 328.068†	571.7	-65.2	-0.3875	ug/L	-0.3875 ppb	18:29:51
3	As 188.979†	-20.8	14.8	5.3251	ug/L	5.3251 ppb	18:30:12
3	B 249.677†	-781.5	164.3	4.1420	ug/L	4.1420 ppb	18:29:51
3	Ba 233.527†	4.7	4.2	0.0305	ug/L	0.0305 ppb	18:30:12
3	Be 313.107†	-4880.0	38.8	0.0178	ug/L	0.0178 ppb	18:29:51
3	Cd 226.502†	-269.9	13.2	0.1685	ug/L	0.1685 ppb	18:30:12
3	Co 228.616†	-108.8	-8.5	-0.1459	ug/L	-0.1459 ppb	18:30:12
3	Cr 267.716†	-75.6	2.3	0.0333	ug/L	0.0333 ppb	18:29:51
3	Cu 324.752†	5626.2	-55.0	-0.1990	ug/L	-0.1990 ppb	18:29:51
3	Mn 257.610†	685.5	0.7	0.0010	ug/L	0.0010 ppb	18:30:12
3	Mo 202.031†	30.1	12.7	0.8936	ug/L	0.8936 ppb	18:30:12
3	Ni 231.604†	136.2	15.3	0.4102	ug/L	0.4102 ppb	18:30:12
3	P 214.914†	321.4	4.2	2.1530	ug/L	2.1530 ppb	18:30:12
3	Pb 220.353†	-34.7	-21.2	-2.5272	ug/L	-2.5272 ppb	18:30:12
3	S 181.975 Axial†	72.1	-3.9	-5.3248	ug/L	-5.3248 ppb	18:30:12
3	Sb 206.836†	49.5	-8.1	-2.3935	ug/L	-2.3935 ppb	18:30:12
3	Se 196.026†	-31.5	-2.5	-1.2567	ug/L	-1.2567 ppb	18:30:12
3	Si 251.611†	564.1	148.1	4.5578	ug/L	4.5578 ppb	18:30:12
3	Sn 189.927†	11.7	-0.9	-0.1668	ug/L	-0.1668 ppb	18:30:12
3	Ti 334.940†	-1337.9	20.5	0.0370	ug/L	0.0370 ppb	18:29:51
3	Tl 190.801†	-63.5	-2.2	-0.5887	ug/L	-0.5887 ppb	18:30:12
3	U 409.014†	-4871.3	14.4	0.4881	ug/L	0.4881 ppb	18:29:51
3	V 292.402†	-1523.9	52.9	0.4925	ug/L	0.4925 ppb	18:29:51
3	Zn 213.857†	967.0	34.6	0.3164	ug/L	0.3164 ppb	18:30:12
3	SiO2†	588.3	147.0	9.6312	ug/L	9.6312 ppb	18:30:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	724688.6	100.83	%	0.464				0.46%
Sc Radial	7339.1	98.2	%	0.66				0.68%
Y 371.029	567303.5	100.94	%	0.456				0.45%
Y RADIAL	6798.2	98.18	%	0.579				0.59%
Ag 328.068†	-26.5	-0.1583	ug/L	0.26109	-0.1583	ppb	0.26109	164.90%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-11.2	-9.2082	ug/L	5.33032	-9.2082	ppb	5.33032	57.89%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.2	1.8861	ug/L	3.16317	1.8861	ppb	3.16317	167.71%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	170.0	4.2845	ug/L	0.17536	4.2845	ppb	0.17536	4.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.2	0.0508	ug/L	0.01873	0.0508	ppb	0.01873	36.86%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	85.0	0.0389	ug/L	0.01948	0.0389	ppb	0.01948	50.02%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-0.1	-0.2048	ug/L	5.89796	-0.2048	ppb	5.89796	>999.9%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                16.2      0.2062 ug/L       0.12410      0.2062 ppb        0.12410  60.19%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -7.4     -0.1270 ug/L       0.08310     -0.1270 ppb        0.08310  65.41%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -6.3     -0.0893 ug/L       0.10707     -0.0893 ppb        0.10707 119.95%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -22.7     -0.0818 ug/L       0.12263     -0.0818 ppb        0.12263 149.92%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          2.2      9.1411 ug/L       7.19072      9.1411 ppb        7.19072  78.66%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          78.7      16.988 ug/L       11.1718      16.988 ppb        11.1718  65.76%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.1      1.6943 ug/L      32.08835      1.6943 ppb       32.08835 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -5.1     -0.0046 ug/L       0.01185     -0.0046 ppb        0.01185 260.18%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 3.6      0.2506 ug/L       0.67648      0.2506 ppb        0.67648 269.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -182.4     -11.195 ug/L        5.2747     -11.195 ppb         5.2747  47.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 9.1      0.2429 ug/L       0.25241      0.2429 ppb        0.25241 103.92%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -5.1     -2.5762 ug/L       5.63890     -2.5762 ppb        5.63890 218.88%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -1.2     -0.1453 ug/L       2.32613     -0.1453 ppb        2.32613 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            1.3      1.7159 ug/L       6.10762      1.7159 ppb        6.10762 355.93%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.2     -0.0558 ug/L       2.99448     -0.0558 ppb        2.99448 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -3.8     -1.8913 ug/L       2.66714     -1.8913 ppb        2.66714 141.02%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               136.3      4.1959 ug/L       0.50942      4.1959 ppb        0.50942  12.14%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.0      0.1796 ug/L       0.59332      0.1796 ppb        0.59332 330.44%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                13.0      0.0364 ug/L       0.07932      0.0364 ppb        0.07932 218.16%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 6.7      0.0105 ug/L       0.08325      0.0105 ppb        0.08325 794.40%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.2      1.3627 ug/L       1.89815      1.3627 ppb        1.89815 139.29%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                119.1      4.0317 ug/L       3.67251      4.0317 ppb        3.67251  91.09%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 13.8      0.1352 ug/L       0.43464      0.1352 ppb        0.43464 321.39%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                28.6      0.2612 ug/L       0.06651      0.2612 ppb        0.06651  25.46%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     153.3      10.052 ug/L        1.6656      10.052 ppb         1.6656  16.57%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 34
Sample ID: 1201871706|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 6/30/2009 18:32:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871706|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7511.8	7511.8	100	%			18:34:29
1	Y RADIAL	6950.7	6950.7	100.4	%			18:34:29
1	Al 396.153Radial†	-77.8	-4.8	-3.9731	ug/L	-3.9731	ppb	18:34:29
1	Ca 317.933Radial†	24.6	-4.7	-6.5948	ug/L	-6.5948	ppb	18:34:49
1	Fe 238.204 Radial†	38.5	3.5	14.778	ug/L	14.778	ppb	18:34:49
1	K 766.490 Radial†	2421.9	2.8	0.5996	ug/L	0.5996	ppb	18:34:29
1	Mg 279.077 IEC†	5.2	2.2	53.757	ug/L	53.757	ppb	18:34:49
1	Na 589.592 Radial†	-238.0	-101.3	-6.2164	ug/L	-6.2164	ppb	18:34:29
1	Sr 421.552†	-59.0	-2.8	-0.0079	ug/L	-0.0079	ppb	18:34:29
1	Sc 361.383	720917.4	720917.4	100.31	%			18:35:46
1	Y 371.029	564150.6	564150.6	100.38	%			18:35:46
1	Ag 328.068†	661.5	26.8	0.1666	ug/L	0.1666	ppb	18:35:46
1	As 188.979†	-32.6	2.9	1.0579	ug/L	1.0579	ppb	18:36:06
1	B 249.677†	-780.4	161.9	4.0801	ug/L	4.0801	ppb	18:35:46
1	Ba 233.527†	9.8	9.3	0.0651	ug/L	0.0651	ppb	18:36:06
1	Be 313.107†	-4769.6	126.9	0.0582	ug/L	0.0582	ppb	18:35:46
1	Cd 226.502†	-294.4	-12.4	-0.1587	ug/L	-0.1587	ppb	18:36:06
1	Co 228.616†	-113.8	-14.0	-0.2415	ug/L	-0.2415	ppb	18:36:06
1	Cr 267.716†	-81.7	-4.1	-0.0560	ug/L	-0.0560	ppb	18:35:46
1	Cu 324.752†	5503.3	-152.1	-0.5504	ug/L	-0.5504	ppb	18:35:46
1	Mn 257.610†	638.9	-42.7	-0.0462	ug/L	-0.0462	ppb	18:36:06
1	Mo 202.031†	22.4	5.2	0.3666	ug/L	0.3666	ppb	18:36:06
1	Ni 231.604†	158.6	38.3	1.0239	ug/L	1.0239	ppb	18:36:06
1	P 214.914†	333.3	17.4	9.0135	ug/L	9.0135	ppb	18:36:06
1	Pb 220.353†	-23.5	-10.2	-1.2162	ug/L	-1.2162	ppb	18:36:06
1	S 181.975 Axial†	78.6	3.0	4.0433	ug/L	4.0433	ppb	18:36:06
1	Sb 206.836†	56.2	-1.2	-0.3388	ug/L	-0.3388	ppb	18:36:06
1	Se 196.026†	-35.6	-6.8	-3.4019	ug/L	-3.4019	ppb	18:36:06
1	Si 251.611†	837.7	423.3	13.057	ug/L	13.057	ppb	18:36:06
1	Sn 189.927†	16.8	4.3	0.7595	ug/L	0.7595	ppb	18:36:06
1	Ti 334.940†	-1324.1	28.2	0.0524	ug/L	0.0524	ppb	18:35:46
1	Tl 190.801†	-59.4	1.5	0.4069	ug/L	0.4069	ppb	18:36:06
1	U 409.014†	-4938.2	-74.2	-2.5147	ug/L	-2.5147	ppb	18:35:46
1	V 292.402†	-1587.7	-17.6	-0.1612	ug/L	-0.1612	ppb	18:35:46
1	Zn 213.857†	997.9	69.8	0.6345	ug/L	0.6345	ppb	18:36:06
1	SiO2†	892.2	452.5	29.723	ug/L	29.723	ppb	18:37:02
2	Sc Radial	7634.5	7634.5	102	%			18:34:54
2	Y RADIAL	7043.7	7043.7	101.7	%			18:34:54
2	Al 396.153Radial†	-68.9	5.2	4.2486	ug/L	4.2486	ppb	18:34:54
2	Ca 317.933Radial†	29.6	-0.1	-0.1315	ug/L	-0.1315	ppb	18:35:14
2	Fe 238.204 Radial†	36.6	1.1	4.3988	ug/L	4.3988	ppb	18:35:14
2	K 766.490 Radial†	2376.2	-80.8	-17.424	ug/L	-17.424	ppb	18:34:54
2	Mg 279.077 IEC†	0.1	-3.0	-74.443	ug/L	-74.443	ppb	18:35:14
2	Na 589.592 Radial†	-116.0	21.9	1.3466	ug/L	1.3466	ppb	18:34:54
2	Sr 421.552†	-16.2	40.0	0.1116	ug/L	0.1116	ppb	18:34:54
2	Sc 361.383	736026.2	736026.2	102.41	%			18:36:11
2	Y 371.029	575819.9	575819.9	102.46	%			18:36:11
2	Ag 328.068†	600.6	-46.2	-0.2824	ug/L	-0.2824	ppb	18:36:11
2	As 188.979†	-31.8	4.3	1.5668	ug/L	1.5668	ppb	18:36:31
2	B 249.677†	-763.7	194.3	4.8956	ug/L	4.8956	ppb	18:36:11
2	Ba 233.527†	22.6	21.6	0.1546	ug/L	0.1546	ppb	18:36:31
2	Be 313.107†	-4965.0	33.7	0.0158	ug/L	0.0158	ppb	18:36:11
2	Cd 226.502†	-273.9	13.6	0.1736	ug/L	0.1736	ppb	18:36:31
2	Co 228.616†	-106.2	-4.3	-0.0747	ug/L	-0.0747	ppb	18:36:31
2	Cr 267.716†	-84.5	-5.1	-0.0744	ug/L	-0.0744	ppb	18:36:11
2	Cu 324.752†	5655.5	-116.1	-0.4205	ug/L	-0.4205	ppb	18:36:11
2	Mn 257.610†	684.6	-11.1	-0.0102	ug/L	-0.0102	ppb	18:36:31
2	Mo 202.031†	15.5	-2.0	-0.1373	ug/L	-0.1373	ppb	18:36:31
2	Ni 231.604†	148.2	24.9	0.6669	ug/L	0.6669	ppb	18:36:31

2	P 214.914†	342.9	20.1	10.328	ug/L	10.328 ppb	18:36:31
2	Pb 220.353†	-34.0	-20.0	-2.3801	ug/L	-2.3801 ppb	18:36:31
2	S 181.975 Axial†	79.3	2.0	2.7036	ug/L	2.7036 ppb	18:36:31
2	Sb 206.836†	60.1	1.5	0.4284	ug/L	0.4284 ppb	18:36:31
2	Se 196.026†	-16.0	13.1	6.7222	ug/L	6.7222 ppb	18:36:31
2	Si 251.611†	810.5	379.6	11.737	ug/L	11.737 ppb	18:36:31
2	Sn 189.927†	11.2	-1.6	-0.2770	ug/L	-0.2770 ppb	18:36:31
2	Ti 334.940†	-1294.4	84.4	0.1484	ug/L	0.1484 ppb	18:36:11
2	Tl 190.801†	-62.4	-0.2	-0.0463	ug/L	-0.0463 ppb	18:36:31
2	U 409.014†	-4547.3	408.6	13.834	ug/L	13.834 ppb	18:36:11
2	V 292.402†	-1488.4	111.9	1.0393	ug/L	1.0393 ppb	18:36:11
2	Zn 213.857†	1013.7	64.8	0.5960	ug/L	0.5960 ppb	18:36:31
2	SiO2†	851.5	394.5	25.973	ug/L	25.973 ppb	18:37:07
3	Sc Radial	7574.9	7574.9	101	%		18:35:19
3	Y RADIAL	7048.8	7048.8	101.8	%		18:35:19
3	Al 396.153Radial†	-43.4	29.9	24.564	ug/L	24.564 ppb	18:35:19
3	Ca 317.933Radial†	23.2	-6.2	-8.7615	ug/L	-8.7615 ppb	18:35:39
3	Fe 238.204 Radial†	34.2	-1.1	-4.5073	ug/L	-4.5073 ppb	18:35:39
3	K 766.490 Radial†	2426.9	-12.4	-2.6884	ug/L	-2.6884 ppb	18:35:19
3	Mg 279.077 IEC†	3.5	0.4	9.6412	ug/L	9.6412 ppb	18:35:39
3	Na 589.592 Radial†	-134.2	3.2	0.1954	ug/L	0.1954 ppb	18:35:19
3	Sr 421.552†	-23.5	32.6	0.0912	ug/L	0.0912 ppb	18:35:19
3	Sc 361.383	737077.2	737077.2	102.56	%		18:36:37
3	Y 371.029	576099.6	576099.6	102.51	%		18:36:37
3	Ag 328.068†	511.5	-133.9	-0.8106	ug/L	-0.8106 ppb	18:36:37
3	As 188.979†	-40.3	-3.8	-1.3914	ug/L	-1.3914 ppb	18:36:57
3	B 249.677†	-739.9	218.5	5.5053	ug/L	5.5053 ppb	18:36:37
3	Ba 233.527†	15.8	14.9	0.1061	ug/L	0.1061 ppb	18:36:57
3	Be 313.107†	-4980.5	25.5	0.0125	ug/L	0.0125 ppb	18:36:37
3	Cd 226.502†	-277.5	10.5	0.1348	ug/L	0.1348 ppb	18:36:57
3	Co 228.616†	-89.9	11.8	0.2054	ug/L	0.2054 ppb	18:36:57
3	Cr 267.716†	-61.6	17.3	0.2388	ug/L	0.2388 ppb	18:36:37
3	Cu 324.752†	5577.5	-200.1	-0.7252	ug/L	-0.7252 ppb	18:36:37
3	Mn 257.610†	676.1	-20.3	-0.0232	ug/L	-0.0232 ppb	18:36:57
3	Mo 202.031†	24.6	6.8	0.4811	ug/L	0.4811 ppb	18:36:57
3	Ni 231.604†	130.6	7.6	0.2023	ug/L	0.2023 ppb	18:36:57
3	P 214.914†	317.6	-5.1	-2.4776	ug/L	-2.4776 ppb	18:36:57
3	Pb 220.353†	-16.4	-2.7	-0.3144	ug/L	-0.3144 ppb	18:36:57
3	S 181.975 Axial†	82.1	4.7	6.4013	ug/L	6.4013 ppb	18:36:57
3	Sb 206.836†	67.9	9.0	2.6668	ug/L	2.6668 ppb	18:36:57
3	Se 196.026†	-29.5	-0.0	-0.0282	ug/L	-0.0282 ppb	18:36:57
3	Si 251.611†	803.8	371.9	11.487	ug/L	11.487 ppb	18:36:57
3	Sn 189.927†	9.7	-3.0	-0.5396	ug/L	-0.5396 ppb	18:36:57
3	Ti 334.940†	-1184.5	193.3	0.3479	ug/L	0.3479 ppb	18:36:37
3	Tl 190.801†	-49.9	12.1	3.1693	ug/L	3.1693 ppb	18:36:57
3	U 409.014†	-4599.0	364.4	12.340	ug/L	12.340 ppb	18:36:37
3	V 292.402†	-1570.4	34.0	0.3389	ug/L	0.3389 ppb	18:36:37
3	Zn 213.857†	1006.5	56.3	0.5196	ug/L	0.5196 ppb	18:36:57
3	SiO2†	855.6	397.4	26.135	ug/L	26.135 ppb	18:37:12

Mean Data: 1201871706|881354|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	731340.3	101.76	%	1.258				1.24%
Sc Radial	7573.7	101	%	0.8				0.81%
Y 371.029	572023.3	101.78	%	1.213				1.19%
Y RADIAL	7014.4	101.3	%	0.80				0.79%
Ag 328.068†	-51.1	-0.3088	ug/L	0.48913	-0.3088	ppb	0.48913	158.41%
Al 396.153Radial†	10.1	8.2797	ug/L	14.68934	8.2797	ppb	14.68934	177.41%
As 188.979†	1.1	0.4111	ug/L	1.58158	0.4111	ppb	1.58158	384.74%
B 249.677†	191.5	4.8270	ug/L	0.71509	4.8270	ppb	0.71509	14.81%
Ba 233.527†	15.3	0.1086	ug/L	0.04476	0.1086	ppb	0.04476	41.21%
Be 313.107†	62.0	0.0288	ug/L	0.02549	0.0288	ppb	0.02549	88.45%
Ca 317.933Radial†	-3.6	-5.1626	ug/L	4.48970	-5.1626	ppb	4.48970	86.97%
Cd 226.502†	3.9	0.0499	ug/L	0.18171	0.0499	ppb	0.18171	364.31%
Co 228.616†	-2.1	-0.0369	ug/L	0.22580	-0.0369	ppb	0.22580	611.55%
Cr 267.716†	2.7	0.0361	ug/L	0.17580	0.0361	ppb	0.17580	486.71%
Cu 324.752†	-156.1	-0.5654	ug/L	0.15291	-0.5654	ppb	0.15291	27.05%
Fe 238.204 Radial†	1.2	4.8899	ug/L	9.65206	4.8899	ppb	9.65206	197.39%
K 766.490 Radial†	-30.1	-6.5043	ug/L	9.59863	-6.5043	ppb	9.59863	147.57%

Mg 279.077 IEC†	-0.1	-3.6816	ug/L	65.12984	-3.6816	ppb	65.12984	>999.9%
Mn 257.610†	-24.7	-0.0266	ug/L	0.01823	-0.0266	ppb	0.01823	68.65%
Mo 202.031†	3.4	0.2368	ug/L	0.32901	0.2368	ppb	0.32901	138.94%
Na 589.592 Radial†	-25.4	-1.5582	ug/L	4.07500	-1.5582	ppb	4.07500	261.53%
Ni 231.604†	23.6	0.6310	ug/L	0.41197	0.6310	ppb	0.41197	65.29%
P 214.914†	10.8	5.6212	ug/L	7.04450	5.6212	ppb	7.04450	125.32%
Pb 220.353†	-11.0	-1.3036	ug/L	1.03564	-1.3036	ppb	1.03564	79.44%
S 181.975 Axial†	3.2	4.3827	ug/L	1.87207	4.3827	ppb	1.87207	42.71%
Sb 206.836†	3.1	0.9188	ug/L	1.56169	0.9188	ppb	1.56169	169.97%
Se 196.026†	2.1	1.0974	ug/L	5.15507	1.0974	ppb	5.15507	469.77%
Si 251.611†	391.6	12.093	ug/L	0.8437	12.093	ppb	0.8437	6.98%
Sn 189.927†	-0.1	-0.0190	ug/L	0.68690	-0.0190	ppb	0.68690	>999.9%
Sr 421.552†	23.2	0.0650	ug/L	0.06393	0.0650	ppb	0.06393	98.37%
Ti 334.940†	102.0	0.1829	ug/L	0.15072	0.1829	ppb	0.15072	82.41%
Tl 190.801†	4.5	1.1766	ug/L	1.74051	1.1766	ppb	1.74051	147.92%
U 409.014†	232.9	7.8865	ug/L	9.03860	7.8865	ppb	9.03860	114.61%
V 292.402†	42.8	0.4057	ug/L	0.60300	0.4057	ppb	0.60300	148.64%
Zn 213.857†	63.6	0.5834	ug/L	0.05846	0.5834	ppb	0.05846	10.02%
SiO2†	414.8	27.277	ug/L	2.1199	27.277	ppb	2.1199	7.77%

Sequence No.: 35
Sample ID: 1201871707|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 6/30/2009 18:39:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871707|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7570.2	7570.2	101	%			18:41:15
1	Y RADIAL	6946.8	6946.8	100.3	%			18:41:15
1	Al 396.153Radial†	6284.1	6277.3	5148.0	ug/L	5148.0	ppb	18:41:15
1	Ca 317.933Radial†	3613.8	3539.0	5013.4	ug/L	5013.4	ppb	18:41:35
1	Fe 238.204 Radial†	1228.8	1178.5	4928.1	ug/L	4928.1	ppb	18:41:35
1	K 766.490 Radial†	25587.0	22856.6	4919.0	ug/L	4919.0	ppb	18:41:15
1	Mg 279.077 IEC†	214.6	208.8	5211.3	ug/L	5211.3	ppb	18:41:35
1	Na 589.592 Radial†	86001.0	85050.3	5219.8	ug/L	5219.8	ppb	18:41:15
1	Sr 421.552†	175566.4	173404.7	484.28	ug/L	484.28	ppb	18:41:15
1	Sc 361.383	750645.2	750645.2	104.45	%			18:42:34
1	Y 371.029	579516.0	579516.0	103.12	%			18:42:34
1	Ag 328.068†	87134.6	82792.5	497.65	ug/L	497.65	ppb	18:42:34
1	As 188.979†	1415.1	1390.3	504.54	ug/L	504.54	ppb	18:42:54
1	B 249.677†	19358.9	19474.7	487.95	ug/L	487.95	ppb	18:42:34
1	Ba 233.527†	74836.8	71650.4	506.65	ug/L	506.65	ppb	18:42:34
1	Be 313.107†	1128674.5	1085507.2	498.00	ug/L	498.00	ppb	18:42:34
1	Cd 226.502†	40625.4	39177.0	499.45	ug/L	499.45	ppb	18:42:54
1	Co 228.616†	29452.2	28297.8	490.95	ug/L	490.95	ppb	18:42:54
1	Cr 267.716†	37070.9	35570.2	499.13	ug/L	499.13	ppb	18:42:34
1	Cu 324.752†	149925.0	137904.1	500.01	ug/L	500.01	ppb	18:42:34
1	Mn 257.610†	475642.8	454714.5	501.96	ug/L	501.96	ppb	18:42:34
1	Mo 202.031†	7373.9	7042.9	496.13	ug/L	496.13	ppb	18:42:54
1	Ni 231.604†	19708.6	18749.8	500.87	ug/L	500.87	ppb	18:42:54
1	P 214.914†	1512.0	1132.9	483.68	ug/L	483.68	ppb	18:42:54
1	Pb 220.353†	4447.0	4270.9	510.04	ug/L	510.04	ppb	18:42:54
1	S 181.975 Axial†	3922.3	3679.9	5040.3	ug/L	5040.3	ppb	18:42:54
1	Sb 206.836†	1845.4	1709.5	514.24	ug/L	514.24	ppb	18:42:54
1	Se 196.026†	974.8	962.1	508.42	ug/L	508.42	ppb	18:42:54
1	Si 251.611†	168646.9	161055.6	4956.9	ug/L	4956.9	ppb	18:42:34
1	Sn 189.927†	3041.1	2899.1	514.00	ug/L	514.00	ppb	18:42:54
1	Ti 334.940†	284109.0	273362.4	500.37	ug/L	500.37	ppb	18:42:34
1	Tl 190.801†	1934.8	1913.2	503.90	ug/L	503.90	ppb	18:42:54
1	U 409.014†	10796.5	15185.6	512.63	ug/L	512.63	ppb	18:42:34
1	V 292.402†	56083.3	55260.9	507.83	ug/L	507.83	ppb	18:42:34
1	Zn 213.857†	56679.0	53341.0	487.66	ug/L	487.66	ppb	18:42:34
1	SiO2†	168042.4	160451.8	10514	ug/L	10514	ppb	18:43:54
2	Sc Radial	7439.4	7439.4	99.5	%			18:41:40
2	Y RADIAL	6862.0	6862.0	99.10	%			18:41:40
2	Al 396.153Radial†	6208.3	6310.3	5175.4	ug/L	5175.4	ppb	18:41:40
2	Ca 317.933Radial†	3629.0	3617.1	5124.0	ug/L	5124.0	ppb	18:42:00
2	Fe 238.204 Radial†	1232.3	1203.3	5031.3	ug/L	5031.3	ppb	18:42:00
2	K 766.490 Radial†	25220.2	22932.3	4935.4	ug/L	4935.4	ppb	18:41:40
2	Mg 279.077 IEC†	211.4	209.3	5223.9	ug/L	5223.9	ppb	18:42:00
2	Na 589.592 Radial†	84626.5	85162.2	5226.6	ug/L	5226.6	ppb	18:41:40
2	Sr 421.552†	172041.3	172910.7	482.90	ug/L	482.90	ppb	18:41:40
2	Sc 361.383	757569.2	757569.2	105.41	%			18:43:01
2	Y 371.029	584063.8	584063.8	103.93	%			18:43:01
2	Ag 328.068†	88167.7	83010.2	498.97	ug/L	498.97	ppb	18:43:01
2	As 188.979†	1394.6	1358.5	493.11	ug/L	493.11	ppb	18:43:22
2	B 249.677†	19769.5	19694.8	493.53	ug/L	493.53	ppb	18:43:01
2	Ba 233.527†	75782.7	71892.9	508.36	ug/L	508.36	ppb	18:43:01
2	Be 313.107†	1140521.3	1086869.3	498.62	ug/L	498.62	ppb	18:43:01
2	Cd 226.502†	40451.5	38656.6	492.79	ug/L	492.79	ppb	18:43:22
2	Co 228.616†	29269.7	27866.9	483.46	ug/L	483.46	ppb	18:43:22
2	Cr 267.716†	37465.9	35620.5	499.84	ug/L	499.84	ppb	18:43:01
2	Cu 324.752†	152238.6	138787.0	503.22	ug/L	503.22	ppb	18:43:01
2	Mn 257.610†	480776.3	455422.4	502.76	ug/L	502.76	ppb	18:43:01
2	Mo 202.031†	7363.9	6968.8	490.92	ug/L	490.92	ppb	18:43:22
2	Ni 231.604†	19586.6	18461.6	493.17	ug/L	493.17	ppb	18:43:22

2	P 214.914†	1516.9	1124.3	478.51	ug/L	478.51 ppb	18:43:22
2	Pb 220.353†	4400.0	4187.4	500.07	ug/L	500.07 ppb	18:43:22
2	S 181.975 Axial†	3880.0	3605.5	4938.3	ug/L	4938.3 ppb	18:43:22
2	Sb 206.836†	1856.9	1704.3	512.48	ug/L	512.48 ppb	18:43:22
2	Se 196.026†	987.4	965.5	510.49	ug/L	510.49 ppb	18:43:22
2	Si 251.611†	170889.5	161707.4	4977.1	ug/L	4977.1 ppb	18:43:01
2	Sn 189.927†	3041.6	2873.0	509.40	ug/L	509.40 ppb	18:43:22
2	Ti 334.940†	287306.3	273909.4	501.38	ug/L	501.38 ppb	18:43:01
2	Tl 190.801†	1924.2	1886.2	496.90	ug/L	496.90 ppb	18:43:22
2	U 409.014†	11022.1	15305.1	516.67	ug/L	516.67 ppb	18:43:01
2	V 292.402†	56497.5	55163.1	506.87	ug/L	506.87 ppb	18:43:01
2	Zn 213.857†	57288.4	53423.1	488.45	ug/L	488.45 ppb	18:43:01
2	SiO2†	169845.2	160691.5	10530	ug/L	10530 ppb	18:44:00
3	Sc Radial	7536.8	7536.8	101	%		18:42:05
3	Y RADIAL	6953.1	6953.1	100.4	%		18:42:05
3	Al 396.153Radial†	6236.6	6257.7	5131.9	ug/L	5131.9 ppb	18:42:05
3	Ca 317.933Radial†	3588.2	3529.5	5000.0	ug/L	5000.0 ppb	18:42:26
3	Fe 238.204 Radial†	1212.1	1167.3	4881.1	ug/L	4881.1 ppb	18:42:26
3	K 766.490 Radial†	25431.4	22814.3	4909.9	ug/L	4909.9 ppb	18:42:05
3	Mg 279.077 IEC†	205.5	200.8	5011.9	ug/L	5011.9 ppb	18:42:26
3	Na 589.592 Radial†	85530.3	84959.7	5214.2	ug/L	5214.2 ppb	18:42:05
3	Sr 421.552†	174039.5	172658.6	482.19	ug/L	482.19 ppb	18:42:05
3	Sc 361.383	751772.5	751772.5	104.60	%		18:43:29
3	Y 371.029	579877.2	579877.2	103.18	%		18:43:29
3	Ag 328.068†	87290.5	82816.5	497.78	ug/L	497.78 ppb	18:43:29
3	As 188.979†	1410.1	1383.5	502.07	ug/L	502.07 ppb	18:43:49
3	B 249.677†	19537.5	19617.6	491.57	ug/L	491.57 ppb	18:43:29
3	Ba 233.527†	75167.6	71859.2	508.13	ug/L	508.13 ppb	18:43:29
3	Be 313.107†	1131025.9	1086134.6	498.29	ug/L	498.29 ppb	18:43:29
3	Cd 226.502†	40501.5	39000.3	497.20	ug/L	497.20 ppb	18:43:49
3	Co 228.616†	29306.9	28116.7	487.81	ug/L	487.81 ppb	18:43:49
3	Cr 267.716†	37100.7	35545.4	498.79	ug/L	498.79 ppb	18:43:29
3	Cu 324.752†	150548.4	138284.8	501.39	ug/L	501.39 ppb	18:43:29
3	Mn 257.610†	476366.5	454723.5	501.97	ug/L	501.97 ppb	18:43:29
3	Mo 202.031†	7374.8	7033.2	495.44	ug/L	495.44 ppb	18:43:49
3	Ni 231.604†	19657.8	18672.9	498.81	ug/L	498.81 ppb	18:43:49
3	P 214.914†	1510.9	1129.7	481.79	ug/L	481.79 ppb	18:43:49
3	Pb 220.353†	4412.3	4231.4	505.33	ug/L	505.33 ppb	18:43:49
3	S 181.975 Axial†	3892.9	3646.1	4994.1	ug/L	4994.1 ppb	18:43:49
3	Sb 206.836†	1834.5	1696.5	510.35	ug/L	510.35 ppb	18:43:49
3	Se 196.026†	965.2	951.5	502.85	ug/L	502.85 ppb	18:43:49
3	Si 251.611†	169144.0	161288.7	4964.1	ug/L	4964.1 ppb	18:43:29
3	Sn 189.927†	3041.6	2895.3	513.31	ug/L	513.31 ppb	18:43:49
3	Ti 334.940†	284685.2	273505.3	500.63	ug/L	500.63 ppb	18:43:29
3	Tl 190.801†	1932.6	1908.3	502.63	ug/L	502.63 ppb	18:43:49
3	U 409.014†	10812.0	15184.9	512.62	ug/L	512.62 ppb	18:43:29
3	V 292.402†	56201.7	55293.7	508.12	ug/L	508.12 ppb	18:43:29
3	Zn 213.857†	56807.7	53382.7	488.07	ug/L	488.07 ppb	18:43:29
3	SiO2†	170081.6	162159.9	10626	ug/L	10626 ppb	18:44:05

Mean Data: 1201871707|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	753329.0	104.82	%	0.517				0.49%
Sc Radial	7515.5	101	%	0.9				0.90%
Y 371.029	581152.3	103.41	%	0.450				0.43%
Y RADIAL	6920.7	99.95	%	0.734				0.73%
Ag 328.068†	82873.0	498.13	ug/L	0.730	498.13	ppb	0.730	0.15%
Al 396.153Radial†	6281.8	5151.7	ug/L	21.99	5151.7	ppb	21.99	0.43%
As 188.979†	1377.4	499.91	ug/L	6.017	499.91	ppb	6.017	1.20%
B 249.677†	19595.7	491.02	ug/L	2.831	491.02	ppb	2.831	0.58%
Ba 233.527†	71800.8	507.72	ug/L	0.926	507.72	ppb	0.926	0.18%
Be 313.107†	1086170.4	498.30	ug/L	0.313	498.30	ppb	0.313	0.06%
Ca 317.933Radial†	3561.9	5045.8	ug/L	68.04	5045.8	ppb	68.04	1.35%
Cd 226.502†	38944.6	496.48	ug/L	3.385	496.48	ppb	3.385	0.68%
Co 228.616†	28093.8	487.40	ug/L	3.760	487.40	ppb	3.760	0.77%
Cr 267.716†	35578.7	499.25	ug/L	0.536	499.25	ppb	0.536	0.11%
Cu 324.752†	138325.3	501.54	ug/L	1.608	501.54	ppb	1.608	0.32%
Fe 238.204 Radial†	1183.0	4946.8	ug/L	76.82	4946.8	ppb	76.82	1.55%
K 766.490 Radial†	22867.7	4921.4	ug/L	12.93	4921.4	ppb	12.93	0.26%

Mg 279.077 IEC†	206.3	5149.0	ug/L	118.91	5149.0	ppb	118.91	2.31%
Mn 257.610†	454953.4	502.23	ug/L	0.456	502.23	ppb	0.456	0.09%
Mo 202.031†	7015.0	494.17	ug/L	2.828	494.17	ppb	2.828	0.57%
Na 589.592 Radial†	85057.4	5220.2	ug/L	6.22	5220.2	ppb	6.22	0.12%
Ni 231.604†	18628.1	497.62	ug/L	3.987	497.62	ppb	3.987	0.80%
P 214.914†	1128.9	481.32	ug/L	2.615	481.32	ppb	2.615	0.54%
Pb 220.353†	4229.9	505.14	ug/L	4.986	505.14	ppb	4.986	0.99%
S 181.975 Axial†	3643.8	4990.9	ug/L	51.04	4990.9	ppb	51.04	1.02%
Sb 206.836†	1703.5	512.36	ug/L	1.947	512.36	ppb	1.947	0.38%
Se 196.026†	959.7	507.25	ug/L	3.954	507.25	ppb	3.954	0.78%
Si 251.611†	161350.5	4966.0	ug/L	10.28	4966.0	ppb	10.28	0.21%
Sn 189.927†	2889.1	512.23	ug/L	2.483	512.23	ppb	2.483	0.48%
Sr 421.552†	172991.3	483.12	ug/L	1.060	483.12	ppb	1.060	0.22%
Ti 334.940†	273592.4	500.79	ug/L	0.522	500.79	ppb	0.522	0.10%
Tl 190.801†	1902.6	501.14	ug/L	3.728	501.14	ppb	3.728	0.74%
U 409.014†	15225.2	513.97	ug/L	2.334	513.97	ppb	2.334	0.45%
V 292.402†	55239.2	507.61	ug/L	0.656	507.61	ppb	0.656	0.13%
Zn 213.857†	53382.2	488.06	ug/L	0.396	488.06	ppb	0.396	0.08%
SiO2†	161101.1	10557	ug/L	60.8	10557	ppb	60.8	0.58%

Sequence No.: 39
Sample ID: 232506001|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 68
Date Collected: 6/30/2009 19:06:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232506001|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7764.7	7764.7	104	%			19:08:29
1	Y RADIAL	7174.7	7174.7	103.6	%			19:08:29
1	Al 396.153Radial†	-77.5	-2.0	-1.6227	ug/L	-1.6227	ppb	19:08:29
1	Ca 317.933Radial†	61.7	30.3	42.989	ug/L	42.989	ppb	19:08:49
1	Fe 238.204 Radial†	36.0	-0.1	-0.5784	ug/L	-0.5784	ppb	19:08:49
1	K 766.490 Radial†	4287.6	1720.2	371.12	ug/L	371.12	ppb	19:08:29
1	Mg 279.077 IEC†	1.5	-1.6	-39.730	ug/L	-39.730	ppb	19:08:49
1	Na 589.592 Radial†	3227.8	3242.8	199.02	ug/L	199.02	ppb	19:08:29
1	Sr 421.552†	33.1	87.8	0.2447	ug/L	0.2447	ppb	19:08:29
1	Sc 361.383	749168.8	749168.8	104.24	%			19:09:46
1	Y 371.029	585246.5	585246.5	104.14	%			19:09:46
1	Ag 328.068†	684.8	24.3	0.1355	ug/L	0.1355	ppb	19:09:46
1	As 188.979†	-23.3	13.1	4.7280	ug/L	4.7280	ppb	19:10:06
1	B 249.677†	-439.9	517.9	13.053	ug/L	13.053	ppb	19:09:46
1	Ba 233.527†	49.0	46.5	0.3299	ug/L	0.3299	ppb	19:10:06
1	Be 313.107†	-4852.0	227.1	0.1050	ug/L	0.1050	ppb	19:09:46
1	Cd 226.502†	-286.9	5.9	0.0753	ug/L	0.0753	ppb	19:10:06
1	Co 228.616†	-99.0	4.5	0.0763	ug/L	0.0763	ppb	19:10:06
1	Cr 267.716†	-121.2	-38.8	-0.5475	ug/L	-0.5475	ppb	19:09:46
1	Cu 324.752†	5884.2	6.4	0.0230	ug/L	0.0230	ppb	19:09:46
1	Mn 257.610†	881.0	165.5	0.1832	ug/L	0.1832	ppb	19:10:06
1	Mo 202.031†	10.8	-6.8	-0.4755	ug/L	-0.4755	ppb	19:10:06
1	Ni 231.604†	139.2	13.7	0.3673	ug/L	0.3673	ppb	19:10:06
1	P 214.914†	335.3	6.8	3.4869	ug/L	3.4869	ppb	19:10:06
1	Pb 220.353†	-14.8	-0.9	-0.1090	ug/L	-0.1090	ppb	19:10:06
1	S 181.975 Axial†	117.4	37.2	50.994	ug/L	50.994	ppb	19:10:06
1	Sb 206.836†	64.0	4.1	1.2230	ug/L	1.2230	ppb	19:10:06
1	Se 196.026†	-36.4	-6.2	-3.1532	ug/L	-3.1532	ppb	19:10:06
1	Si 251.611†	40155.6	38110.1	1176.9	ug/L	1176.9	ppb	19:09:46
1	Sn 189.927†	12.5	-0.5	-0.0840	ug/L	-0.0840	ppb	19:10:06
1	Ti 334.940†	-1158.6	236.8	0.4297	ug/L	0.4297	ppb	19:09:46
1	Tl 190.801†	-63.4	-0.1	-0.0140	ug/L	-0.0140	ppb	19:10:06
1	U 409.014†	-4595.0	440.7	14.924	ug/L	14.924	ppb	19:09:46
1	V 292.402†	-1528.4	99.0	0.9215	ug/L	0.9215	ppb	19:09:46
1	Zn 213.857†	1080.6	111.5	1.0280	ug/L	1.0280	ppb	19:10:06
1	SiO2†	39836.3	37778.7	2484.2	ug/L	2484.2	ppb	19:11:02
2	Sc Radial	7658.9	7658.9	102	%			19:08:54
2	Y RADIAL	7070.9	7070.9	102.1	%			19:08:54
2	Al 396.153Radial†	-62.5	11.6	9.5813	ug/L	9.5813	ppb	19:08:54
2	Ca 317.933Radial†	67.1	36.4	51.597	ug/L	51.597	ppb	19:09:14
2	Fe 238.204 Radial†	35.1	-0.5	-2.0947	ug/L	-2.0947	ppb	19:09:14
2	K 766.490 Radial†	4199.5	1691.2	364.87	ug/L	364.87	ppb	19:08:54
2	Mg 279.077 IEC†	5.5	2.3	57.912	ug/L	57.912	ppb	19:09:14
2	Na 589.592 Radial†	3244.1	3301.6	202.63	ug/L	202.63	ppb	19:08:54
2	Sr 421.552†	37.9	92.8	0.2588	ug/L	0.2588	ppb	19:08:54
2	Sc 361.383	742853.4	742853.4	103.36	%			19:10:11
2	Y 371.029	580237.3	580237.3	103.25	%			19:10:11
2	Ag 328.068†	606.1	-46.2	-0.2853	ug/L	-0.2853	ppb	19:10:11
2	As 188.979†	-32.5	4.0	1.4273	ug/L	1.4273	ppb	19:10:31
2	B 249.677†	-435.7	518.4	13.065	ug/L	13.065	ppb	19:10:11
2	Ba 233.527†	38.8	37.1	0.2623	ug/L	0.2623	ppb	19:10:31
2	Be 313.107†	-4908.9	132.5	0.0612	ug/L	0.0612	ppb	19:10:11
2	Cd 226.502†	-274.4	15.7	0.2005	ug/L	0.2005	ppb	19:10:31
2	Co 228.616†	-101.0	1.7	0.0300	ug/L	0.0300	ppb	19:10:31
2	Cr 267.716†	-104.8	-24.0	-0.3398	ug/L	-0.3398	ppb	19:10:11
2	Cu 324.752†	5767.9	-58.2	-0.2109	ug/L	-0.2109	ppb	19:10:11
2	Mn 257.610†	865.0	157.3	0.1721	ug/L	0.1721	ppb	19:10:31
2	Mo 202.031†	17.8	0.1	0.0083	ug/L	0.0083	ppb	19:10:31
2	Ni 231.604†	155.4	30.6	0.8168	ug/L	0.8168	ppb	19:10:31

2	P 214.914†	331.9	6.3	3.3086	ug/L	3.3086 ppb	19:10:31
2	Pb 220.353†	-7.5	6.0	0.7185	ug/L	0.7185 ppb	19:10:31
2	S 181.975 Axial†	110.6	31.6	43.325	ug/L	43.325 ppb	19:10:31
2	Sb 206.836†	54.7	-4.3	-1.2415	ug/L	-1.2415 ppb	19:10:31
2	Se 196.026†	-29.7	0.1	0.0272	ug/L	0.0272 ppb	19:10:31
2	Si 251.611†	39876.0	38167.1	1178.6	ug/L	1178.6 ppb	19:10:11
2	Sn 189.927†	22.5	9.2	1.6382	ug/L	1.6382 ppb	19:10:31
2	Ti 334.940†	-1266.9	122.5	0.2229	ug/L	0.2229 ppb	19:10:11
2	Tl 190.801†	-62.9	-0.1	-0.0124	ug/L	-0.0124 ppb	19:10:31
2	U 409.014†	-4695.4	306.1	10.366	ug/L	10.366 ppb	19:10:11
2	V 292.402†	-1584.8	31.9	0.3115	ug/L	0.3115 ppb	19:10:11
2	Zn 213.857†	1068.5	108.6	0.9956	ug/L	0.9956 ppb	19:10:31
2	SiO2†	40476.1	38722.6	2546.2	ug/L	2546.2 ppb	19:11:07
3	Sc Radial	7704.5	7704.5	103	%		19:09:19
3	Y RADIAL	7161.9	7161.9	103.4	%		19:09:19
3	Al 396.153Radial†	-58.6	15.8	12.986	ug/L	12.986 ppb	19:09:19
3	Ca 317.933Radial†	54.9	24.2	34.262	ug/L	34.262 ppb	19:09:39
3	Fe 238.204 Radial†	37.2	1.3	5.3917	ug/L	5.3917 ppb	19:09:39
3	K 766.490 Radial†	4232.2	1698.8	366.48	ug/L	366.48 ppb	19:09:19
3	Mg 279.077 IEC†	3.8	0.6	16.062	ug/L	16.062 ppb	19:09:39
3	Na 589.592 Radial†	3271.8	3309.8	203.13	ug/L	203.13 ppb	19:09:19
3	Sr 421.552†	41.7	96.3	0.2687	ug/L	0.2687 ppb	19:09:19
3	Sc 361.383	755639.1	755639.1	105.14	%		19:10:37
3	Y 371.029	590746.3	590746.3	105.12	%		19:10:37
3	Ag 328.068†	550.6	-108.9	-0.6608	ug/L	-0.6608 ppb	19:10:37
3	As 188.979†	-33.1	4.0	1.4209	ug/L	1.4209 ppb	19:10:57
3	B 249.677†	-402.2	557.4	14.047	ug/L	14.047 ppb	19:10:37
3	Ba 233.527†	17.1	15.8	0.1118	ug/L	0.1118 ppb	19:10:57
3	Be 313.107†	-4915.3	206.7	0.0956	ug/L	0.0956 ppb	19:10:37
3	Cd 226.502†	-281.7	13.2	0.1677	ug/L	0.1677 ppb	19:10:57
3	Co 228.616†	-99.3	5.0	0.0873	ug/L	0.0873 ppb	19:10:57
3	Cr 267.716†	-30.0	48.9	0.6806	ug/L	0.6806 ppb	19:10:37
3	Cu 324.752†	5843.5	-80.7	-0.2919	ug/L	-0.2919 ppb	19:10:37
3	Mn 257.610†	873.2	150.9	0.1668	ug/L	0.1668 ppb	19:10:57
3	Mo 202.031†	31.7	13.0	0.9163	ug/L	0.9163 ppb	19:10:57
3	Ni 231.604†	138.2	11.6	0.3104	ug/L	0.3104 ppb	19:10:57
3	P 214.914†	336.0	4.8	2.5262	ug/L	2.5262 ppb	19:10:57
3	Pb 220.353†	-15.4	-1.4	-0.1666	ug/L	-0.1666 ppb	19:10:57
3	S 181.975 Axial†	110.0	29.2	39.990	ug/L	39.990 ppb	19:10:57
3	Sb 206.836†	58.1	-2.0	-0.5685	ug/L	-0.5685 ppb	19:10:57
3	Se 196.026†	-30.6	-0.3	-0.1371	ug/L	-0.1371 ppb	19:10:57
3	Si 251.611†	40327.9	37944.1	1171.7	ug/L	1171.7 ppb	19:10:37
3	Sn 189.927†	20.0	6.5	1.1579	ug/L	1.1579 ppb	19:10:57
3	Ti 334.940†	-1184.9	221.3	0.4004	ug/L	0.4004 ppb	19:10:37
3	Tl 190.801†	-55.1	8.4	2.1998	ug/L	2.1998 ppb	19:10:57
3	U 409.014†	-4641.2	434.4	14.709	ug/L	14.709 ppb	19:10:37
3	V 292.402†	-1610.8	33.1	0.3399	ug/L	0.3399 ppb	19:10:37
3	Zn 213.857†	1090.9	112.5	1.0351	ug/L	1.0351 ppb	19:10:57
3	SiO2†	40179.6	37778.0	2484.1	ug/L	2484.1 ppb	19:11:12

Mean Data: 232506001|881354|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	749220.4	104.25	%	0.890				0.85%
Sc Radial	7709.3	103	%	0.7				0.69%
Y 371.029	585410.0	104.17	%	0.935				0.90%
Y RADIAL	7135.8	103.1	%	0.82				0.79%
Ag 328.068†	-43.6	-0.2702	ug/L	0.39837	-0.2702	ppb	0.39837	147.42%
Al 396.153Radial†	8.5	6.9814	ug/L	7.64334	6.9814	ppb	7.64334	109.48%
As 188.979†	7.0	2.5254	ug/L	1.90748	2.5254	ppb	1.90748	75.53%
B 249.677†	531.3	13.388	ug/L	0.5708	13.388	ppb	0.5708	4.26%
Ba 233.527†	33.1	0.2347	ug/L	0.11162	0.2347	ppb	0.11162	47.57%
Be 313.107†	188.8	0.0872	ug/L	0.02305	0.0872	ppb	0.02305	26.43%
Ca 317.933Radial†	30.3	42.949	ug/L	8.6675	42.949	ppb	8.6675	20.18%
Cd 226.502†	11.6	0.1479	ug/L	0.06490	0.1479	ppb	0.06490	43.89%
Co 228.616†	3.7	0.0646	ug/L	0.03038	0.0646	ppb	0.03038	47.07%
Cr 267.716†	-4.7	-0.0689	ug/L	0.65734	-0.0689	ppb	0.65734	953.87%
Cu 324.752†	-44.2	-0.1599	ug/L	0.16354	-0.1599	ppb	0.16354	102.25%
Fe 238.204 Radial†	0.2	0.9062	ug/L	3.95786	0.9062	ppb	3.95786	436.75%
K 766.490 Radial†	1703.4	367.49	ug/L	3.245	367.49	ppb	3.245	0.88%

Mg 279.077 IEC†	0.5	11.415	ug/L	48.9868	11.415	ppb	48.9868 429.16%
Mn 257.610†	157.9	0.1740	ug/L	0.00841	0.1740	ppb	0.00841 4.83%
Mo 202.031†	2.1	0.1497	ug/L	0.70658	0.1497	ppb	0.70658 471.93%
Na 589.592 Radial†	3284.7	201.59	ug/L	2.243	201.59	ppb	2.243 1.11%
Ni 231.604†	18.6	0.4982	ug/L	0.27739	0.4982	ppb	0.27739 55.68%
P 214.914†	6.0	3.1072	ug/L	0.51103	3.1072	ppb	0.51103 16.45%
Pb 220.353†	1.2	0.1476	ug/L	0.49525	0.1476	ppb	0.49525 335.44%
S 181.975 Axial†	32.7	44.770	ug/L	5.6424	44.770	ppb	5.6424 12.60%
Sb 206.836†	-0.7	-0.1957	ug/L	1.27382	-0.1957	ppb	1.27382 651.01%
Se 196.026†	-2.1	-1.0877	ug/L	1.79064	-1.0877	ppb	1.79064 164.63%
Si 251.611†	38073.8	1175.7	ug/L	3.59	1175.7	ppb	3.59 0.31%
Sn 189.927†	5.1	0.9040	ug/L	0.88876	0.9040	ppb	0.88876 98.31%
Sr 421.552†	92.3	0.2574	ug/L	0.01204	0.2574	ppb	0.01204 4.68%
Ti 334.940†	193.6	0.3510	ug/L	0.11190	0.3510	ppb	0.11190 31.88%
Tl 190.801†	2.8	0.7245	ug/L	1.27765	0.7245	ppb	1.27765 176.36%
U 409.014†	393.7	13.333	ug/L	2.5716	13.333	ppb	2.5716 19.29%
V 292.402†	54.7	0.5243	ug/L	0.34425	0.5243	ppb	0.34425 65.66%
Zn 213.857†	110.9	1.0195	ug/L	0.02108	1.0195	ppb	0.02108 2.07%
SiO2†	38093.1	2504.8	ug/L	35.84	2504.8	ppb	35.84 1.43%

Sequence No.: 40
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 19:13:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7624.8	7624.8	102	%			19:15:19
1	Y RADIAL	7017.8	7017.8	101.4	%			19:15:19
1	Al 396.153Radial†	6388.3	6335.1	5195.6	ug/L	5195.6	ppb	19:15:19
1	Ca 317.933Radial†	3676.3	3574.7	5064.0	ug/L	5064.0	ppb	19:15:19
1	Fe 238.204 Radial†	1223.7	1164.8	4870.8	ug/L	4870.8	ppb	19:15:39
1	K 766.490 Radial†	25168.9	22265.7	4790.9	ug/L	4790.9	ppb	19:15:14
1	Mg 279.077 IEC†	212.4	205.2	5121.7	ug/L	5121.7	ppb	19:15:39
1	Na 589.592 Radial†	169779.8	166569.6	10223	ug/L	10223	ppb	19:15:14
1	Sr 421.552†	175689.9	172283.6	481.14	ug/L	481.14	ppb	19:15:14
1	Sc 361.383	768663.6	768663.6	106.95	%			19:16:48
1	Y 371.029	592644.8	592644.8	105.45	%			19:16:48
1	Ag 328.068†	88040.7	81684.2	490.97	ug/L	490.97	ppb	19:16:48
1	As 188.979†	1437.1	1379.1	500.45	ug/L	500.45	ppb	19:17:08
1	B 249.677†	19667.4	19328.6	484.28	ug/L	484.28	ppb	19:16:48
1	Ba 233.527†	74178.4	69355.2	490.43	ug/L	490.43	ppb	19:16:48
1	Be 313.107†	1145311.2	1075731.2	493.50	ug/L	493.50	ppb	19:16:48
1	Cd 226.502†	40488.8	38137.6	486.19	ug/L	486.19	ppb	19:17:08
1	Co 228.616†	30065.4	28210.2	489.45	ug/L	489.45	ppb	19:17:08
1	Cr 267.716†	37378.5	35025.8	491.49	ug/L	491.49	ppb	19:16:48
1	Cu 324.752†	149927.6	134541.7	487.82	ug/L	487.82	ppb	19:16:48
1	Mn 257.610†	476428.3	444773.9	491.00	ug/L	491.00	ppb	19:16:48
1	Mo 202.031†	7534.1	7027.2	495.02	ug/L	495.02	ppb	19:17:08
1	Ni 231.604†	19734.5	18331.7	489.69	ug/L	489.69	ppb	19:17:08
1	P 214.914†	5522.7	4848.8	2383.1	ug/L	2383.1	ppb	19:17:08
1	Pb 220.353†	4470.7	4193.3	500.81	ug/L	500.81	ppb	19:17:08
1	S 181.975 Axial†	841.5	711.4	973.60	ug/L	973.60	ppb	19:17:08
1	Sb 206.836†	1830.8	1654.5	497.69	ug/L	497.69	ppb	19:17:08
1	Se 196.026†	1012.3	975.3	514.95	ug/L	514.95	ppb	19:17:08
1	Si 251.611†	86043.3	80037.5	2455.1	ug/L	2455.1	ppb	19:16:48
1	Sn 189.927†	2979.0	2772.8	491.64	ug/L	491.64	ppb	19:17:08
1	Ti 334.940†	283813.9	266710.1	488.20	ug/L	488.20	ppb	19:16:48
1	Tl 190.801†	1926.6	1862.1	490.42	ug/L	490.42	ppb	19:17:08
1	U 409.014†	10499.7	14665.8	495.06	ug/L	495.06	ppb	19:16:48
1	V 292.402†	55901.1	53832.0	494.83	ug/L	494.83	ppb	19:16:48
1	Zn 213.857†	57858.7	53171.9	486.20	ug/L	486.20	ppb	19:16:48
1	SiO2†	85478.5	79484.3	5189.8	ug/L	5189.8	ppb	19:18:08
2	Sc Radial	7544.5	7544.5	101	%			19:15:49
2	Y RADIAL	6937.8	6937.8	100.2	%			19:15:49
2	Al 396.153Radial†	6375.5	6389.0	5239.3	ug/L	5239.3	ppb	19:15:49
2	Ca 317.933Radial†	3709.0	3645.6	5164.4	ug/L	5164.4	ppb	19:15:49
2	Fe 238.204 Radial†	1234.6	1188.3	4969.4	ug/L	4969.4	ppb	19:16:09
2	K 766.490 Radial†	25456.1	22812.9	4908.5	ug/L	4908.5	ppb	19:15:44
2	Mg 279.077 IEC†	208.8	203.9	5088.6	ug/L	5088.6	ppb	19:16:09
2	Na 589.592 Radial†	171290.6	169838.5	10423	ug/L	10423	ppb	19:15:44
2	Sr 421.552†	176920.7	175336.7	489.67	ug/L	489.67	ppb	19:15:44
2	Sc 361.383	739420.8	739420.8	102.88	%			19:17:15
2	Y 371.029	570351.5	570351.5	101.49	%			19:17:15
2	Ag 328.068†	89145.4	86013.3	516.95	ug/L	516.95	ppb	19:17:15
2	As 188.979†	1425.2	1420.7	515.58	ug/L	515.58	ppb	19:17:35
2	B 249.677†	20099.8	20476.2	513.11	ug/L	513.11	ppb	19:17:15
2	Ba 233.527†	75262.9	73152.2	517.28	ug/L	517.28	ppb	19:17:15
2	Be 313.107†	1163202.3	1135470.9	520.90	ug/L	520.90	ppb	19:17:15
2	Cd 226.502†	40416.2	39564.1	504.38	ug/L	504.38	ppb	19:17:35
2	Co 228.616†	29966.2	29225.4	507.04	ug/L	507.04	ppb	19:17:35
2	Cr 267.716†	37953.8	36967.1	518.73	ug/L	518.73	ppb	19:17:15
2	Cu 324.752†	151617.6	141728.2	513.87	ug/L	513.87	ppb	19:17:15
2	Mn 257.610†	483691.3	469450.3	518.22	ug/L	518.22	ppb	19:17:15
2	Mo 202.031†	7504.4	7276.8	512.60	ug/L	512.60	ppb	19:17:35
2	Ni 231.604†	19673.8	19002.4	507.61	ug/L	507.61	ppb	19:17:35

2	P 214.914†	5508.5	5039.3	2475.3	ug/L	2475.3	ppb	19:17:35
2	Pb 220.353†	4456.7	4345.0	518.90	ug/L	518.90	ppb	19:17:35
2	S 181.975 Axial†	846.6	747.5	1023.0	ug/L	1023.0	ppb	19:17:35
2	Sb 206.836†	1823.0	1714.6	515.60	ug/L	515.60	ppb	19:17:35
2	Se 196.026†	1008.5	1009.0	532.54	ug/L	532.54	ppb	19:17:35
2	Si 251.611†	87369.2	84507.9	2592.5	ug/L	2592.5	ppb	19:17:15
2	Sn 189.927†	2991.0	2894.6	513.22	ug/L	513.22	ppb	19:17:35
2	Ti 334.940†	287913.1	281189.0	514.70	ug/L	514.70	ppb	19:17:15
2	Tl 190.801†	1928.6	1935.3	509.77	ug/L	509.77	ppb	19:17:35
2	U 409.014†	10549.8	15102.7	509.79	ug/L	509.79	ppb	19:17:15
2	V 292.402†	56794.2	56767.0	521.68	ug/L	521.68	ppb	19:17:15
2	Zn 213.857†	58603.9	56035.7	512.47	ug/L	512.47	ppb	19:17:15
2	SiO2†	86477.1	83615.7	5460.1	ug/L	5460.1	ppb	19:18:13
3	Sc Radial	7531.2	7531.2	101	%			19:16:19
3	Y RADIAL	6899.9	6899.9	99.65	%			19:16:19
3	Al 396.153Radial†	6366.9	6391.6	5241.3	ug/L	5241.3	ppb	19:16:19
3	Ca 317.933Radial†	3664.6	3608.0	5111.1	ug/L	5111.1	ppb	19:16:19
3	Fe 238.204 Radial†	1221.5	1177.5	4924.4	ug/L	4924.4	ppb	19:16:39
3	K 766.490 Radial†	25737.9	23137.1	4978.4	ug/L	4978.4	ppb	19:16:14
3	Mg 279.077 IEC†	206.8	202.2	5047.9	ug/L	5047.9	ppb	19:16:39
3	Na 589.592 Radial†	173049.7	171883.5	10549	ug/L	10549	ppb	19:16:14
3	Sr 421.552†	178978.7	177688.1	496.24	ug/L	496.24	ppb	19:16:14
3	Sc 361.383	740672.0	740672.0	103.06	%			19:17:43
3	Y 371.029	571519.5	571519.5	101.69	%			19:17:43
3	Ag 328.068†	87920.0	84678.0	508.94	ug/L	508.94	ppb	19:17:43
3	As 188.979†	1448.4	1440.9	522.80	ug/L	522.80	ppb	19:18:03
3	B 249.677†	19705.1	20060.2	502.61	ug/L	502.61	ppb	19:17:43
3	Ba 233.527†	74275.9	72070.9	509.63	ug/L	509.63	ppb	19:17:43
3	Be 313.107†	1148041.0	1118849.7	513.27	ug/L	513.27	ppb	19:17:43
3	Cd 226.502†	40802.6	39872.7	508.33	ug/L	508.33	ppb	19:18:03
3	Co 228.616†	30206.7	29409.7	510.27	ug/L	510.27	ppb	19:18:03
3	Cr 267.716†	37413.1	36380.1	510.50	ug/L	510.50	ppb	19:17:43
3	Cu 324.752†	149436.4	139362.8	505.30	ug/L	505.30	ppb	19:17:43
3	Mn 257.610†	476929.6	462095.1	510.10	ug/L	510.10	ppb	19:17:43
3	Mo 202.031†	7565.6	7324.0	515.92	ug/L	515.92	ppb	19:18:03
3	Ni 231.604†	19891.1	19180.9	512.38	ug/L	512.38	ppb	19:18:03
3	P 214.914†	5557.6	5077.8	2496.8	ug/L	2496.8	ppb	19:18:03
3	Pb 220.353†	4503.6	4383.2	523.47	ug/L	523.47	ppb	19:18:03
3	S 181.975 Axial†	846.1	745.6	1020.4	ug/L	1020.4	ppb	19:18:03
3	Sb 206.836†	1857.8	1745.5	525.08	ug/L	525.08	ppb	19:18:03
3	Se 196.026†	1024.3	1022.6	539.33	ug/L	539.33	ppb	19:18:03
3	Si 251.611†	86072.0	83105.7	2549.1	ug/L	2549.1	ppb	19:17:43
3	Sn 189.927†	3015.7	2913.7	516.58	ug/L	516.58	ppb	19:18:03
3	Ti 334.940†	283942.2	276863.3	506.78	ug/L	506.78	ppb	19:17:43
3	Tl 190.801†	1956.9	1959.5	516.02	ug/L	516.02	ppb	19:18:03
3	U 409.014†	10363.0	14904.2	503.08	ug/L	503.08	ppb	19:17:43
3	V 292.402†	55972.0	55876.0	513.63	ug/L	513.63	ppb	19:17:43
3	Zn 213.857†	57980.4	55334.5	505.98	ug/L	505.98	ppb	19:17:43
3	SiO2†	87652.8	84614.4	5525.5	ug/L	5525.5	ppb	19:18:18

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	749585.4	104.30	%	2.301				2.21%
Sc Radial	7566.9	101	%	0.7				0.67%
Y 371.029	578171.9	102.88	%	2.233				2.17%
Y RADIAL	6951.8	100.4	%	0.87				0.87%
Ag 328.068†	84125.2	505.62	ug/L	13.306	505.62	ppb	13.306	2.63%
QC value within limits for Ag 328.068 Recovery = 101.12%								
Al 396.153Radial†	6371.9	5225.4	ug/L	25.81	5225.4	ppb	25.81	0.49%
QC value within limits for Al 396.153Radial Recovery = 104.51%								
As 188.979†	1413.6	512.94	ug/L	11.405	512.94	ppb	11.405	2.22%
QC value within limits for As 188.979 Recovery = 102.59%								
B 249.677†	19955.0	500.00	ug/L	14.588	500.00	ppb	14.588	2.92%
QC value within limits for B 249.677 Recovery = 100.00%								
Ba 233.527†	71526.1	505.78	ug/L	13.833	505.78	ppb	13.833	2.74%
QC value within limits for Ba 233.527 Recovery = 101.16%								
Be 313.107†	1110017.3	509.22	ug/L	14.144	509.22	ppb	14.144	2.78%
QC value within limits for Be 313.107 Recovery = 101.84%								
Ca 317.933Radial†	3609.4	5113.2	ug/L	50.20	5113.2	ppb	50.20	0.98%

```
   QC value within limits for Ca 317.933Radial  Recovery = 102.26%
Cd 226.502†            39191.5      499.63 ug/L        11.810      499.63 ppb        11.810   2.36%
   QC value within limits for Cd 226.502  Recovery = 99.93%
Co 228.616†            28948.4      502.25 ug/L        11.206      502.25 ppb        11.206   2.23%
   QC value within limits for Co 228.616  Recovery = 100.45%
Cr 267.716†            36124.3      506.91 ug/L        13.971      506.91 ppb        13.971   2.76%
   QC value within limits for Cr 267.716  Recovery = 101.38%
Cu 324.752†           138544.2      502.33 ug/L        13.275      502.33 ppb        13.275   2.64%
   QC value within limits for Cu 324.752  Recovery = 100.47%
Fe 238.204 Radial†      1176.9      4921.6 ug/L         49.35      4921.6 ppb         49.35   1.00%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.43%
K 766.490 Radial†      22738.6      4892.6 ug/L         94.74      4892.6 ppb         94.74   1.94%
   QC value within limits for K 766.490 Radial  Recovery = 97.85%
Mg 279.077 IEC†          203.8      5086.1 ug/L         36.96      5086.1 ppb         36.96   0.73%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.72%
Mn 257.610†           458773.1      506.44 ug/L        13.978      506.44 ppb        13.978   2.76%
   QC value within limits for Mn 257.610  Recovery = 101.29%
Mo 202.031†             7209.3      507.85 ug/L        11.231      507.85 ppb        11.231   2.21%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†    169430.5       10398 ug/L         164.5       10398 ppb         164.5   1.58%
   QC value within limits for Na 589.592 Radial  Recovery = 103.98%
Ni 231.604†            18838.3      503.23 ug/L        11.962      503.23 ppb        11.962   2.38%
   QC value within limits for Ni 231.604  Recovery = 100.65%
P 214.914†              4988.6      2451.7 ug/L         60.44      2451.7 ppb         60.44   2.47%
   QC value within limits for P 214.914  Recovery = 98.07%
Pb 220.353†             4307.2      514.39 ug/L        11.984      514.39 ppb        11.984   2.33%
   QC value within limits for Pb 220.353  Recovery = 102.88%
S 181.975 Axial†         734.8      1005.7 ug/L         27.80      1005.7 ppb         27.80   2.76%
   QC value within limits for S 181.975 Axial  Recovery = 100.57%
Sb 206.836†             1704.9      512.79 ug/L        13.907      512.79 ppb        13.907   2.71%
   QC value within limits for Sb 206.836  Recovery = 102.56%
Se 196.026†             1002.3      528.94 ug/L        12.583      528.94 ppb        12.583   2.38%
   QC value within limits for Se 196.026  Recovery = 105.79%
Si 251.611†            82550.3      2532.2 ug/L         70.25      2532.2 ppb         70.25   2.77%
   QC value within limits for Si 251.611  Recovery = 101.29%
Sn 189.927†             2860.4      507.15 ug/L        13.537      507.15 ppb        13.537   2.67%
   QC value within limits for Sn 189.927  Recovery = 101.43%
Sr 421.552†           175102.8      489.02 ug/L         7.568      489.02 ppb         7.568   1.55%
   QC value within limits for Sr 421.552  Recovery = 97.80%
Ti 334.940†           274920.8      503.23 ug/L        13.602      503.23 ppb        13.602   2.70%
   QC value within limits for Ti 334.940  Recovery = 100.65%
Tl 190.801†             1919.0      505.40 ug/L        13.346      505.40 ppb        13.346   2.64%
   QC value within limits for Tl 190.801  Recovery = 101.08%
U 409.014†             14890.9      502.64 ug/L         7.375      502.64 ppb         7.375   1.47%
   QC value within limits for U 409.014  Recovery = 100.53%
V 292.402†             55491.7      510.05 ug/L        13.782      510.05 ppb        13.782   2.70%
   QC value within limits for V 292.402  Recovery = 102.01%
Zn 213.857†            54847.4      501.55 ug/L        13.684      501.55 ppb        13.684   2.73%
   QC value within limits for Zn 213.857  Recovery = 100.31%
SiO2†                  82571.4      5391.8 ug/L        177.96      5391.8 ppb        177.96   3.30%
   QC value within limits for SiO2  Recovery = 100.83%
All analyte(s) passed QC.
```

Sequence No.: 41
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 19:20:29
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7503.2	7503.2	100	%			19:22:21
1	Y RADIAL	6942.1	6942.1	100.3	%			19:22:21
1	Al 396.153Radial†	-77.2	-4.3	-3.5081	ug/L	-3.5081	ppb	19:22:21
1	Ca 317.933Radial†	29.2	-0.1	-0.0742	ug/L	-0.0742	ppb	19:22:41
1	Fe 238.204 Radial†	33.7	-1.2	-5.1310	ug/L	-5.1310	ppb	19:22:41
1	K 766.490 Radial†	2474.2	57.6	12.430	ug/L	12.430	ppb	19:22:21
1	Mg 279.077 IEC†	3.7	0.6	15.906	ug/L	15.906	ppb	19:22:41
1	Na 589.592 Radial†	-232.6	-96.2	-5.9039	ug/L	-5.9039	ppb	19:22:21
1	Sr 421.552†	-55.5	0.6	0.0017	ug/L	0.0017	ppb	19:22:21
1	Sc 361.383	733564.8	733564.8	102.07	%			19:23:37
1	Y 371.029	574142.8	574142.8	102.16	%			19:23:37
1	Ag 328.068†	711.6	64.6	0.3807	ug/L	0.3807	ppb	19:23:37
1	As 188.979†	-31.3	4.7	1.7032	ug/L	1.7032	ppb	19:23:58
1	B 249.677†	-734.7	220.1	5.5477	ug/L	5.5477	ppb	19:23:37
1	Ba 233.527†	6.1	5.5	0.0396	ug/L	0.0396	ppb	19:23:58
1	Be 313.107†	-4820.2	159.3	0.0731	ug/L	0.0731	ppb	19:23:37
1	Cd 226.502†	-267.6	18.9	0.2422	ug/L	0.2422	ppb	19:23:58
1	Co 228.616†	-110.0	-8.3	-0.1445	ug/L	-0.1445	ppb	19:23:58
1	Cr 267.716†	-121.0	-41.2	-0.5781	ug/L	-0.5781	ppb	19:23:37
1	Cu 324.752†	5705.7	-48.4	-0.1757	ug/L	-0.1757	ppb	19:23:37
1	Mn 257.610†	747.5	52.7	0.0572	ug/L	0.0572	ppb	19:23:37
1	Mo 202.031†	14.6	-2.9	-0.2021	ug/L	-0.2021	ppb	19:23:58
1	Ni 231.604†	125.3	3.0	0.0803	ug/L	0.0803	ppb	19:23:58
1	P 214.914†	326.2	4.8	2.5214	ug/L	2.5214	ppb	19:23:58
1	Pb 220.353†	-26.5	-12.7	-1.5125	ug/L	-1.5125	ppb	19:23:58
1	S 181.975 Axial†	84.8	7.7	10.517	ug/L	10.517	ppb	19:23:58
1	Sb 206.836†	50.9	-7.4	-2.1646	ug/L	-2.1646	ppb	19:23:58
1	Se 196.026†	-19.3	9.9	5.0124	ug/L	5.0124	ppb	19:23:58
1	Si 251.611†	457.4	36.4	1.0998	ug/L	1.0998	ppb	19:23:58
1	Sn 189.927†	22.7	9.8	1.7290	ug/L	1.7290	ppb	19:23:58
1	Ti 334.940†	-1316.0	59.0	0.1058	ug/L	0.1058	ppb	19:23:37
1	Tl 190.801†	-44.8	16.8	4.4094	ug/L	4.4094	ppb	19:23:58
1	U 409.014†	-4789.3	156.6	5.3032	ug/L	5.3032	ppb	19:23:37
1	V 292.402†	-1564.9	32.0	0.2994	ug/L	0.2994	ppb	19:23:37
1	Zn 213.857†	956.9	12.4	0.1142	ug/L	0.1142	ppb	19:23:58
1	SiO2†	452.6	6.6	0.3761	ug/L	0.3761	ppb	19:24:54
2	Sc Radial	7446.1	7446.1	99.6	%			19:22:46
2	Y RADIAL	6863.2	6863.2	99.12	%			19:22:46
2	Al 396.153Radial†	-61.9	10.5	8.6366	ug/L	8.6366	ppb	19:22:46
2	Ca 317.933Radial†	27.9	-1.1	-1.4958	ug/L	-1.4958	ppb	19:23:06
2	Fe 238.204 Radial†	39.4	4.8	19.992	ug/L	19.992	ppb	19:23:06
2	K 766.490 Radial†	2526.6	129.0	27.851	ug/L	27.851	ppb	19:22:46
2	Mg 279.077 IEC†	1.8	-1.3	-31.935	ug/L	-31.935	ppb	19:23:06
2	Na 589.592 Radial†	-298.2	-163.8	-10.055	ug/L	-10.055	ppb	19:22:46
2	Sr 421.552†	-32.2	23.5	0.0657	ug/L	0.0657	ppb	19:22:46
2	Sc 361.383	724908.4	724908.4	100.87	%			19:24:03
2	Y 371.029	568012.1	568012.1	101.07	%			19:24:03
2	Ag 328.068†	650.9	12.7	0.0769	ug/L	0.0769	ppb	19:24:03
2	As 188.979†	-24.9	10.8	3.8911	ug/L	3.8911	ppb	19:24:23
2	B 249.677†	-714.3	231.8	5.8408	ug/L	5.8408	ppb	19:24:03
2	Ba 233.527†	13.0	12.3	0.0878	ug/L	0.0878	ppb	19:24:23
2	Be 313.107†	-4795.9	127.0	0.0581	ug/L	0.0581	ppb	19:24:03
2	Cd 226.502†	-265.1	18.2	0.2306	ug/L	0.2306	ppb	19:24:23
2	Co 228.616†	-114.9	-14.5	-0.2526	ug/L	-0.2526	ppb	19:24:23
2	Cr 267.716†	-46.1	31.7	0.4424	ug/L	0.4424	ppb	19:24:03
2	Cu 324.752†	5637.2	-49.6	-0.1787	ug/L	-0.1787	ppb	19:24:03
2	Mn 257.610†	726.0	40.2	0.0474	ug/L	0.0474	ppb	19:24:03
2	Mo 202.031†	11.8	-5.4	-0.3778	ug/L	-0.3778	ppb	19:24:23
2	Ni 231.604†	148.9	27.8	0.7438	ug/L	0.7438	ppb	19:24:23

2	P 214.914†	308.1	-9.3	-4.7005	ug/L	-4.7005 ppb	19:24:23
2	Pb 220.353†	-9.8	3.5	0.4190	ug/L	0.4190 ppb	19:24:23
2	S 181.975 Axial†	77.8	1.7	2.2949	ug/L	2.2949 ppb	19:24:23
2	Sb 206.836†	67.8	10.0	2.9668	ug/L	2.9668 ppb	19:24:23
2	Se 196.026†	-29.4	-0.4	-0.1143	ug/L	-0.1143 ppb	19:24:23
2	Si 251.611†	460.8	45.1	1.3740	ug/L	1.3740 ppb	19:24:23
2	Sn 189.927†	19.7	7.0	1.2412	ug/L	1.2412 ppb	19:24:23
2	Ti 334.940†	-1372.9	-12.8	-0.0272	ug/L	-0.0272 ppb	19:24:03
2	Tl 190.801†	-52.2	9.0	2.3613	ug/L	2.3613 ppb	19:24:23
2	U 409.014†	-4660.0	228.7	7.7397	ug/L	7.7397 ppb	19:24:03
2	V 292.402†	-1538.2	40.2	0.3722	ug/L	0.3722 ppb	19:24:03
2	Zn 213.857†	948.2	14.9	0.1323	ug/L	0.1323 ppb	19:24:23
2	SiO2†	435.2	-5.4	-0.4009	ug/L	-0.4009 ppb	19:24:59
3	Sc Radial	7395.5	7395.5	98.9	%		19:23:11
3	Y RADIAL	6866.3	6866.3	99.16	%		19:23:11
3	Al 396.153Radial†	-81.3	-9.5	-7.8152	ug/L	-7.8152 ppb	19:23:11
3	Ca 317.933Radial†	21.3	-7.6	-10.721	ug/L	-10.721 ppb	19:23:31
3	Fe 238.204 Radial†	33.0	-1.4	-6.0319	ug/L	-6.0319 ppb	19:23:31
3	K 766.490 Radial†	2473.3	92.6	19.979	ug/L	19.979 ppb	19:23:11
3	Mg 279.077 IEC†	1.7	-1.3	-31.980	ug/L	-31.980 ppb	19:23:31
3	Na 589.592 Radial†	-332.7	-200.7	-12.316	ug/L	-12.316 ppb	19:23:11
3	Sr 421.552†	-59.9	-4.7	-0.0129	ug/L	-0.0129 ppb	19:23:11
3	Sc 361.383	732958.1	732958.1	101.99	%		19:24:28
3	Y 371.029	573677.3	573677.3	102.08	%		19:24:28
3	Ag 328.068†	581.8	-62.2	-0.3768	ug/L	-0.3768 ppb	19:24:28
3	As 188.979†	-31.1	4.9	1.7798	ug/L	1.7798 ppb	19:24:48
3	B 249.677†	-687.3	266.0	6.7049	ug/L	6.7049 ppb	19:24:28
3	Ba 233.527†	18.1	17.2	0.1217	ug/L	0.1217 ppb	19:24:48
3	Be 313.107†	-4756.9	217.4	0.0996	ug/L	0.0996 ppb	19:24:28
3	Cd 226.502†	-284.8	1.9	0.0249	ug/L	0.0249 ppb	19:24:48
3	Co 228.616†	-110.9	-9.2	-0.1601	ug/L	-0.1601 ppb	19:24:48
3	Cr 267.716†	-69.2	9.5	0.1322	ug/L	0.1322 ppb	19:24:28
3	Cu 324.752†	5718.5	-31.3	-0.1137	ug/L	-0.1137 ppb	19:24:28
3	Mn 257.610†	735.5	41.6	0.0458	ug/L	0.0458 ppb	19:24:28
3	Mo 202.031†	18.6	1.1	0.0789	ug/L	0.0789 ppb	19:24:48
3	Ni 231.604†	138.1	15.6	0.4172	ug/L	0.4172 ppb	19:24:48
3	P 214.914†	319.1	-1.9	-0.9416	ug/L	-0.9416 ppb	19:24:48
3	Pb 220.353†	-8.3	5.2	0.6134	ug/L	0.6134 ppb	19:24:48
3	S 181.975 Axial†	83.2	6.2	8.4605	ug/L	8.4605 ppb	19:24:48
3	Sb 206.836†	60.5	2.0	0.6113	ug/L	0.6113 ppb	19:24:48
3	Se 196.026†	-23.7	5.6	2.8158	ug/L	2.8158 ppb	19:24:48
3	Si 251.611†	447.6	27.1	0.8193	ug/L	0.8193 ppb	19:24:48
3	Sn 189.927†	16.4	3.6	0.6306	ug/L	0.6306 ppb	19:24:48
3	Ti 334.940†	-1363.0	11.8	0.0188	ug/L	0.0188 ppb	19:24:28
3	Tl 190.801†	-47.6	14.1	3.6939	ug/L	3.6939 ppb	19:24:48
3	U 409.014†	-4805.4	136.9	4.6345	ug/L	4.6345 ppb	19:24:28
3	V 292.402†	-1580.9	15.1	0.1473	ug/L	0.1473 ppb	19:24:28
3	Zn 213.857†	959.8	16.0	0.1466	ug/L	0.1466 ppb	19:24:48
3	SiO2†	416.5	-28.5	-1.9131	ug/L	-1.9131 ppb	19:25:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	730477.1	101.64	%	0.672				0.66%
Sc Radial	7448.3	99.6	%	0.72				0.72%
Y 371.029	571944.0	101.77	%	0.607				0.60%
Y RADIAL	6890.5	99.51	%	0.646				0.65%
Ag 328.068†	5.0	0.0269	ug/L	0.38118	0.0269	ppb	0.38118	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.1	-0.8956	ug/L	8.53136	-0.8956	ppb	8.53136	952.59%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	6.8	2.4580	ug/L	1.24170	2.4580	ppb	1.24170	50.52%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	239.3	6.0311	ug/L	0.60163	6.0311	ppb	0.60163	9.98%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	11.7	0.0830	ug/L	0.04122	0.0830	ppb	0.04122	49.66%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	167.9	0.0769	ug/L	0.02100	0.0769	ppb	0.02100	27.30%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.9	-4.0971	ug/L	5.78053	-4.0971	ppb	5.78053	141.09%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.0      0.1659 ug/L       0.12227      0.1659 ppb        0.12227  73.70%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -10.7     -0.1857 ug/L       0.05844     -0.1857 ppb        0.05844  31.46%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 0.0     -0.0012 ug/L       0.52317     -0.0012 ppb        0.52317 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -43.1     -0.1560 ug/L       0.03671     -0.1560 ppb        0.03671  23.53%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.7      2.9430 ug/L      14.77161      2.9430 ppb       14.77161 501.92%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          93.1      20.087 ug/L        7.7111      20.087 ppb         7.7111  38.39%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.6     -16.003 ug/L       27.6339     -16.003 ppb        27.6339 172.68%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                44.8      0.0501 ug/L       0.00619      0.0501 ppb        0.00619  12.34%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -2.4     -0.1670 ug/L       0.23034     -0.1670 ppb        0.23034 137.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -153.6     -9.4250 ug/L       3.25231     -9.4250 ppb        3.25231  34.51%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                15.5      0.4138 ug/L       0.33178      0.4138 ppb        0.33178  80.18%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -2.1     -1.0402 ug/L       3.61197     -1.0402 ppb        3.61197 347.23%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -1.3     -0.1600 ug/L       1.17530     -0.1600 ppb        1.17530 734.38%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            5.2      7.0906 ug/L       4.27861      7.0906 ppb        4.27861  60.34%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 1.5      0.4712 ug/L       2.56853      0.4712 ppb        2.56853 545.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.0      2.5713 ug/L       2.57210      2.5713 ppb        2.57210 100.03%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                36.2      1.0977 ug/L       0.27738      1.0977 ppb        0.27738  25.27%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 6.8      1.2003 ug/L       0.55031      1.2003 ppb        0.55031  45.85%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 6.5      0.0182 ug/L       0.04183      0.0182 ppb        0.04183 230.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                19.3      0.0325 ug/L       0.06753      0.0325 ppb        0.06753 207.90%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                13.3      3.4882 ug/L       1.03945      3.4882 ppb        1.03945  29.80%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                174.0      5.8925 ug/L       1.63431      5.8925 ppb        1.63431  27.74%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 29.1      0.2730 ug/L       0.11478      0.2730 ppb        0.11478  42.05%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                14.4      0.1310 ug/L       0.01626      0.1310 ppb        0.01626  12.41%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      -9.1     -0.6460 ug/L       1.16412     -0.6460 ppb        1.16412 180.21%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 42
Sample ID: 232506002|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 69
Date Collected: 6/30/2009 19:27:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232506002|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7658.0	7658.0	102	%			19:29:06
1	Y RADIAL	7094.2	7094.2	102.5	%			19:29:06
1	Al 396.153Radial†	-95.6	-20.7	-17.038	ug/L	-17.038	ppb	19:29:06
1	Ca 317.933Radial†	52.3	21.9	31.090	ug/L	31.090	ppb	19:29:26
1	Fe 238.204 Radial†	37.7	2.0	8.2774	ug/L	8.2774	ppb	19:29:26
1	K 766.490 Radial†	4113.0	1607.3	346.76	ug/L	346.76	ppb	19:29:06
1	Mg 279.077 IEC†	2.1	-1.0	-24.197	ug/L	-24.197	ppb	19:29:26
1	Na 589.592 Radial†	4101.0	4138.3	253.98	ug/L	253.98	ppb	19:29:06
1	Sr 421.552†	-10.1	46.0	0.1283	ug/L	0.1283	ppb	19:29:06
1	Sc 361.383	746227.4	746227.4	103.83	%			19:30:23
1	Y 371.029	582866.9	582866.9	103.71	%			19:30:23
1	Ag 328.068†	710.6	51.7	0.3056	ug/L	0.3056	ppb	19:30:23
1	As 188.979†	-35.0	1.8	0.6286	ug/L	0.6286	ppb	19:30:43
1	B 249.677†	-371.8	581.9	14.664	ug/L	14.664	ppb	19:30:23
1	Ba 233.527†	67.9	64.9	0.4609	ug/L	0.4609	ppb	19:30:43
1	Be 313.107†	-4855.6	205.3	0.0945	ug/L	0.0945	ppb	19:30:23
1	Cd 226.502†	-265.1	25.8	0.3284	ug/L	0.3284	ppb	19:30:43
1	Co 228.616†	-107.8	-4.4	-0.0773	ug/L	-0.0773	ppb	19:30:43
1	Cr 267.716†	-44.6	34.5	0.4812	ug/L	0.4812	ppb	19:30:23
1	Cu 324.752†	5753.4	-97.4	-0.3523	ug/L	-0.3523	ppb	19:30:23
1	Mn 257.610†	883.0	170.8	0.1899	ug/L	0.1899	ppb	19:30:43
1	Mo 202.031†	13.9	-3.7	-0.2601	ug/L	-0.2601	ppb	19:30:43
1	Ni 231.604†	148.8	23.5	0.6281	ug/L	0.6281	ppb	19:30:43
1	P 214.914†	328.6	1.7	0.9225	ug/L	0.9225	ppb	19:30:43
1	Pb 220.353†	-11.1	2.6	0.3012	ug/L	0.3012	ppb	19:30:43
1	S 181.975 Axial†	112.1	32.6	44.617	ug/L	44.617	ppb	19:30:43
1	Sb 206.836†	59.1	-0.3	-0.1097	ug/L	-0.1097	ppb	19:30:43
1	Se 196.026†	-29.7	0.2	0.1302	ug/L	0.1302	ppb	19:30:43
1	Si 251.611†	39298.8	37436.7	1156.1	ug/L	1156.1	ppb	19:30:23
1	Sn 189.927†	12.4	-0.5	-0.0900	ug/L	-0.0900	ppb	19:30:43
1	Ti 334.940†	-1276.1	119.2	0.2144	ug/L	0.2144	ppb	19:30:23
1	Tl 190.801†	-51.6	11.0	2.8874	ug/L	2.8874	ppb	19:30:43
1	U 409.014†	-4648.8	371.4	12.576	ug/L	12.576	ppb	19:30:23
1	V 292.402†	-1477.6	142.1	1.3099	ug/L	1.3099	ppb	19:30:23
1	Zn 213.857†	1127.1	160.4	1.4763	ug/L	1.4763	ppb	19:30:43
1	SiO2†	39225.3	37340.9	2455.4	ug/L	2455.4	ppb	19:31:39
2	Sc Radial	7742.4	7742.4	104	%			19:29:31
2	Y RADIAL	7143.0	7143.0	103.2	%			19:29:31
2	Al 396.153Radial†	-79.2	-3.8	-3.1378	ug/L	-3.1378	ppb	19:29:31
2	Ca 317.933Radial†	58.3	27.1	38.453	ug/L	38.453	ppb	19:29:51
2	Fe 238.204 Radial†	37.9	1.8	7.6118	ug/L	7.6118	ppb	19:29:51
2	K 766.490 Radial†	4188.1	1636.0	352.95	ug/L	352.95	ppb	19:29:31
2	Mg 279.077 IEC†	2.3	-0.8	-19.493	ug/L	-19.493	ppb	19:29:51
2	Na 589.592 Radial†	4146.5	4138.7	254.00	ug/L	254.00	ppb	19:29:31
2	Sr 421.552†	-55.5	2.3	0.0060	ug/L	0.0060	ppb	19:29:31
2	Sc 361.383	747954.2	747954.2	104.07	%			19:30:48
2	Y 371.029	584064.2	584064.2	103.93	%			19:30:48
2	Ag 328.068†	622.1	-34.9	-0.2136	ug/L	-0.2136	ppb	19:30:48
2	As 188.979†	-25.4	11.0	3.9725	ug/L	3.9725	ppb	19:31:08
2	B 249.677†	-305.8	646.1	16.282	ug/L	16.282	ppb	19:30:48
2	Ba 233.527†	53.2	50.6	0.3570	ug/L	0.3570	ppb	19:31:08
2	Be 313.107†	-4898.5	174.9	0.0807	ug/L	0.0807	ppb	19:30:48
2	Cd 226.502†	-283.1	9.1	0.1153	ug/L	0.1153	ppb	19:31:08
2	Co 228.616†	-85.1	17.7	0.3052	ug/L	0.3052	ppb	19:31:08
2	Cr 267.716†	-53.4	26.1	0.3628	ug/L	0.3628	ppb	19:30:48
2	Cu 324.752†	5784.6	-80.1	-0.2900	ug/L	-0.2900	ppb	19:30:48
2	Mn 257.610†	878.6	164.6	0.1828	ug/L	0.1828	ppb	19:31:08
2	Mo 202.031†	15.9	-1.8	-0.1293	ug/L	-0.1293	ppb	19:31:08
2	Ni 231.604†	135.4	10.3	0.2743	ug/L	0.2743	ppb	19:31:08

2	P 214.914†	330.3	2.6	1.3532	ug/L	1.3532 ppb	19:31:08
2	Pb 220.353†	-0.7	12.6	1.5007	ug/L	1.5007 ppb	19:31:08
2	S 181.975 Axial†	115.9	36.0	49.309	ug/L	49.309 ppb	19:31:08
2	Sb 206.836†	64.7	4.9	1.4427	ug/L	1.4427 ppb	19:31:08
2	Se 196.026†	-29.3	0.6	0.3527	ug/L	0.3527 ppb	19:31:08
2	Si 251.611†	39392.5	37439.5	1156.2	ug/L	1156.2 ppb	19:30:48
2	Sn 189.927†	8.3	-4.6	-0.8035	ug/L	-0.8035 ppb	19:31:08
2	Ti 334.940†	-1242.7	154.2	0.2810	ug/L	0.2810 ppb	19:30:48
2	Tl 190.801†	-54.3	8.5	2.2392	ug/L	2.2392 ppb	19:31:08
2	U 409.014†	-4807.4	229.4	7.7668	ug/L	7.7668 ppb	19:30:48
2	V 292.402†	-1638.8	-9.4	-0.0741	ug/L	-0.0741 ppb	19:30:48
2	Zn 213.857†	1127.4	158.2	1.4584	ug/L	1.4584 ppb	19:31:08
2	SiO2†	39648.7	37660.5	2476.5	ug/L	2476.5 ppb	19:31:44
3	Sc Radial	7732.6	7732.6	103	%		19:29:56
3	Y RADIAL	7105.5	7105.5	102.6	%		19:29:56
3	Al 396.153Radial†	-74.3	0.8	0.6382	ug/L	0.6382 ppb	19:29:56
3	Ca 317.933Radial†	55.6	24.7	34.939	ug/L	34.939 ppb	19:30:16
3	Fe 238.204 Radial†	35.6	-0.4	-1.4810	ug/L	-1.4810 ppb	19:30:16
3	K 766.490 Radial†	4242.9	1694.2	365.50	ug/L	365.50 ppb	19:29:56
3	Mg 279.077 IEC†	6.8	3.5	86.776	ug/L	86.776 ppb	19:30:16
3	Na 589.592 Radial†	4078.7	4078.2	250.29	ug/L	250.29 ppb	19:29:56
3	Sr 421.552†	-13.1	43.2	0.1202	ug/L	0.1202 ppb	19:29:56
3	Sc 361.383	746688.8	746688.8	103.90	%		19:31:14
3	Y 371.029	583390.7	583390.7	103.81	%		19:31:14
3	Ag 328.068†	576.7	-77.5	-0.4662	ug/L	-0.4662 ppb	19:31:14
3	As 188.979†	-32.4	4.3	1.5281	ug/L	1.5281 ppb	19:31:34
3	B 249.677†	-463.0	494.3	12.456	ug/L	12.456 ppb	19:31:14
3	Ba 233.527†	66.9	63.9	0.4535	ug/L	0.4535 ppb	19:31:34
3	Be 313.107†	-4777.6	283.2	0.1301	ug/L	0.1301 ppb	19:31:14
3	Cd 226.502†	-252.7	37.9	0.4840	ug/L	0.4840 ppb	19:31:34
3	Co 228.616†	-99.0	4.2	0.0738	ug/L	0.0738 ppb	19:31:34
3	Cr 267.716†	-105.4	-24.0	-0.3375	ug/L	-0.3375 ppb	19:31:14
3	Cu 324.752†	5801.8	-54.2	-0.1966	ug/L	-0.1966 ppb	19:31:14
3	Mn 257.610†	914.8	200.9	0.2197	ug/L	0.2197 ppb	19:31:34
3	Mo 202.031†	25.0	6.9	0.4877	ug/L	0.4877 ppb	19:31:34
3	Ni 231.604†	147.1	21.8	0.5818	ug/L	0.5818 ppb	19:31:34
3	P 214.914†	329.2	2.1	1.1304	ug/L	1.1304 ppb	19:31:34
3	Pb 220.353†	-5.8	7.7	0.9182	ug/L	0.9182 ppb	19:31:34
3	S 181.975 Axial†	119.3	39.4	54.035	ug/L	54.035 ppb	19:31:34
3	Sb 206.836†	59.8	0.3	0.1144	ug/L	0.1144 ppb	19:31:34
3	Se 196.026†	-15.0	14.4	7.3344	ug/L	7.3344 ppb	19:31:34
3	Si 251.611†	39429.5	37539.2	1159.2	ug/L	1159.2 ppb	19:31:14
3	Sn 189.927†	18.7	5.5	0.9692	ug/L	0.9692 ppb	19:31:34
3	Ti 334.940†	-1289.0	107.6	0.1959	ug/L	0.1959 ppb	19:31:14
3	Tl 190.801†	-57.7	5.3	1.3745	ug/L	1.3745 ppb	19:31:34
3	U 409.014†	-4812.9	216.3	7.3250	ug/L	7.3250 ppb	19:31:14
3	V 292.402†	-1502.3	119.2	1.1047	ug/L	1.1047 ppb	19:31:14
3	Zn 213.857†	1128.0	160.6	1.4758	ug/L	1.4758 ppb	19:31:34
3	SiO2†	39291.5	37381.3	2458.0	ug/L	2458.0 ppb	19:31:49

Mean Data: 232506002|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	746956.8	103.93	%	0.124				0.12%
Sc Radial	7711.0	103	%	0.6				0.60%
Y 371.029	583440.6	103.82	%	0.107				0.10%
Y RADIAL	7114.2	102.7	%	0.37				0.36%
Ag 328.068†	-20.2	-0.1247	ug/L	0.39348	-0.1247	ppb	0.39348	315.47%
Al 396.153Radial†	-7.9	-6.5124	ug/L	9.30855	-6.5124	ppb	9.30855	142.94%
As 188.979†	5.7	2.0431	ug/L	1.73041	2.0431	ppb	1.73041	84.70%
B 249.677†	574.1	14.467	ug/L	1.9203	14.467	ppb	1.9203	13.27%
Ba 233.527†	59.8	0.4238	ug/L	0.05795	0.4238	ppb	0.05795	13.67%
Be 313.107†	221.2	0.1018	ug/L	0.02549	0.1018	ppb	0.02549	25.04%
Ca 317.933Radial†	24.6	34.828	ug/L	3.6830	34.828	ppb	3.6830	10.57%
Cd 226.502†	24.3	0.3092	ug/L	0.18505	0.3092	ppb	0.18505	59.84%
Co 228.616†	5.8	0.1006	ug/L	0.19262	0.1006	ppb	0.19262	191.57%
Cr 267.716†	12.2	0.1688	ug/L	0.44252	0.1688	ppb	0.44252	262.08%
Cu 324.752†	-77.2	-0.2796	ug/L	0.07838	-0.2796	ppb	0.07838	28.03%
Fe 238.204 Radial†	1.2	4.8027	ug/L	5.45201	4.8027	ppb	5.45201	113.52%
K 766.490 Radial†	1645.8	355.07	ug/L	9.545	355.07	ppb	9.545	2.69%

Mg 279.077 IEC†	0.6	14.362 ug/L	62.7562	14.362 ppb	62.7562	436.97%
Mn 257.610†	178.8	0.1975 ug/L	0.01958	0.1975 ppb	0.01958	9.92%
Mo 202.031†	0.5	0.0328 ug/L	0.39938	0.0328 ppb	0.39938	>999.9%
Na 589.592 Radial†	4118.4	252.76 ug/L	2.138	252.76 ppb	2.138	0.85%
Ni 231.604†	18.5	0.4948 ug/L	0.19229	0.4948 ppb	0.19229	38.86%
P 214.914†	2.1	1.1354 ug/L	0.21543	1.1354 ppb	0.21543	18.97%
Pb 220.353†	7.6	0.9067 ug/L	0.59983	0.9067 ppb	0.59983	66.16%
S 181.975 Axial†	36.0	49.321 ug/L	4.7092	49.321 ppb	4.7092	9.55%
Sb 206.836†	1.6	0.4825 ug/L	0.83912	0.4825 ppb	0.83912	173.92%
Se 196.026†	5.1	2.6057 ug/L	4.09662	2.6057 ppb	4.09662	157.21%
Si 251.611†	37471.8	1157.2 ug/L	1.78	1157.2 ppb	1.78	0.15%
Sn 189.927†	0.1	0.0252 ug/L	0.89193	0.0252 ppb	0.89193	>999.9%
Sr 421.552†	30.5	0.0848 ug/L	0.06838	0.0848 ppb	0.06838	80.59%
Ti 334.940†	127.0	0.2304 ug/L	0.04475	0.2304 ppb	0.04475	19.42%
Tl 190.801†	8.3	2.1670 ug/L	0.75904	2.1670 ppb	0.75904	35.03%
U 409.014†	272.4	9.2225 ug/L	2.91235	9.2225 ppb	2.91235	31.58%
V 292.402†	84.0	0.7802 ug/L	0.74689	0.7802 ppb	0.74689	95.73%
Zn 213.857†	159.7	1.4702 ug/L	0.01022	1.4702 ppb	0.01022	0.69%
SiO2†	37460.9	2463.3 ug/L	11.47	2463.3 ppb	11.47	0.47%

Sequence No.: 44
Sample ID: 1201871708|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 71
Date Collected: 6/30/2009 19:40:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871708|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7744.1	7744.1	104	%			19:42:40
1	Y RADIAL	7164.9	7164.9	103.5	%			19:42:40
1	Al 396.153Radial†	-60.7	14.1	11.570	ug/L	11.570	ppb	19:42:40
1	Ca 317.933Radial†	39.3	8.9	12.557	ug/L	12.557	ppb	19:43:00
1	Fe 238.204 Radial†	36.0	-0.0	-0.1785	ug/L	-0.1785	ppb	19:43:00
1	K 766.490 Radial†	2968.6	458.1	98.814	ug/L	98.814	ppb	19:42:40
1	Mg 279.077 IEC†	2.3	-0.8	-19.459	ug/L	-19.459	ppb	19:43:00
1	Na 589.592 Radial†	1188.2	1282.4	78.702	ug/L	78.702	ppb	19:42:40
1	Sr 421.552†	35.0	89.7	0.2503	ug/L	0.2503	ppb	19:42:40
1	Sc 361.383	746456.7	746456.7	103.86	%			19:43:57
1	Y 371.029	583514.3	583514.3	103.83	%			19:43:57
1	Ag 328.068†	715.3	56.1	0.3269	ug/L	0.3269	ppb	19:43:57
1	As 188.979†	-33.9	2.8	0.9956	ug/L	0.9956	ppb	19:44:17
1	B 249.677†	129.9	1065.0	26.841	ug/L	26.841	ppb	19:43:57
1	Ba 233.527†	40.9	38.9	0.2750	ug/L	0.2750	ppb	19:44:17
1	Be 313.107†	-4807.4	253.2	0.1160	ug/L	0.1160	ppb	19:43:57
1	Cd 226.502†	-262.6	28.2	0.3601	ug/L	0.3601	ppb	19:44:17
1	Co 228.616†	-112.2	-8.6	-0.1475	ug/L	-0.1475	ppb	19:44:17
1	Cr 267.716†	-65.3	14.5	0.2004	ug/L	0.2004	ppb	19:43:57
1	Cu 324.752†	5805.8	-48.6	-0.1763	ug/L	-0.1763	ppb	19:43:57
1	Mn 257.610†	1062.6	343.4	0.3791	ug/L	0.3791	ppb	19:44:17
1	Mo 202.031†	24.8	6.8	0.4777	ug/L	0.4777	ppb	19:44:17
1	Ni 231.604†	125.9	1.5	0.0390	ug/L	0.0390	ppb	19:44:17
1	P 214.914†	329.0	2.0	1.0244	ug/L	1.0244	ppb	19:44:17
1	Pb 220.353†	-2.6	10.7	1.2778	ug/L	1.2778	ppb	19:44:17
1	S 181.975 Axial†	102.7	23.4	32.116	ug/L	32.116	ppb	19:44:17
1	Sb 206.836†	66.6	6.8	2.0049	ug/L	2.0049	ppb	19:44:17
1	Se 196.026†	-24.8	4.9	2.4866	ug/L	2.4866	ppb	19:44:17
1	Si 251.611†	53887.6	51471.2	1589.6	ug/L	1589.6	ppb	19:43:57
1	Sn 189.927†	2.6	-10.0	-1.7773	ug/L	-1.7773	ppb	19:44:17
1	Ti 334.940†	-1373.2	26.2	0.0437	ug/L	0.0437	ppb	19:43:57
1	Tl 190.801†	-64.1	-0.9	-0.2362	ug/L	-0.2362	ppb	19:44:17
1	U 409.014†	-4699.1	324.4	10.985	ug/L	10.985	ppb	19:43:57
1	V 292.402†	-1580.5	43.5	0.4218	ug/L	0.4218	ppb	19:43:57
1	Zn 213.857†	1112.4	145.9	1.3474	ug/L	1.3474	ppb	19:44:17
1	SiO2†	53460.1	51034.5	3356.2	ug/L	3356.2	ppb	19:45:13
2	Sc Radial	7668.0	7668.0	103	%			19:43:05
2	Y RADIAL	7098.7	7098.7	102.5	%			19:43:05
2	Al 396.153Radial†	-79.7	-5.0	-4.1476	ug/L	-4.1476	ppb	19:43:05
2	Ca 317.933Radial†	39.3	9.2	13.011	ug/L	13.011	ppb	19:43:25
2	Fe 238.204 Radial†	36.9	1.2	5.0496	ug/L	5.0496	ppb	19:43:25
2	K 766.490 Radial†	3084.5	599.5	129.33	ug/L	129.33	ppb	19:43:05
2	Mg 279.077 IEC†	2.1	-1.0	-23.705	ug/L	-23.705	ppb	19:43:25
2	Na 589.592 Radial†	1279.2	1382.5	84.846	ug/L	84.846	ppb	19:43:05
2	Sr 421.552†	-15.1	41.2	0.1149	ug/L	0.1149	ppb	19:43:05
2	Sc 361.383	753828.8	753828.8	104.89	%			19:44:22
2	Y 371.029	589108.4	589108.4	104.82	%			19:44:22
2	Ag 328.068†	642.7	-19.9	-0.1290	ug/L	-0.1290	ppb	19:44:22
2	As 188.979†	-29.4	7.4	2.6523	ug/L	2.6523	ppb	19:44:42
2	B 249.677†	96.9	1032.3	26.015	ug/L	26.015	ppb	19:44:22
2	Ba 233.527†	46.6	44.0	0.3101	ug/L	0.3101	ppb	19:44:42
2	Be 313.107†	-4845.6	262.0	0.1203	ug/L	0.1203	ppb	19:44:22
2	Cd 226.502†	-292.8	2.0	0.0248	ug/L	0.0248	ppb	19:44:42
2	Co 228.616†	-96.7	7.3	0.1272	ug/L	0.1272	ppb	19:44:42
2	Cr 267.716†	4.1	81.3	1.1353	ug/L	1.1353	ppb	19:44:22
2	Cu 324.752†	5827.3	-82.8	-0.2997	ug/L	-0.2997	ppb	19:44:22
2	Mn 257.610†	1075.4	345.6	0.3823	ug/L	0.3823	ppb	19:44:42
2	Mo 202.031†	26.6	8.3	0.5823	ug/L	0.5823	ppb	19:44:42
2	Ni 231.604†	142.3	15.8	0.4231	ug/L	0.4231	ppb	19:44:42

2	P 214.914†	331.4	1.1	0.6272 ug/L	0.6272 ppb		19:44:42
2	Pb 220.353†	-4.6	8.9	1.0608 ug/L	1.0608 ppb		19:44:42
2	S 181.975 Axial†	102.4	22.2	30.457 ug/L	30.457 ppb		19:44:42
2	Sb 206.836†	58.4	-1.6	-0.4877 ug/L	-0.4877 ppb		19:44:42
2	Se 196.026†	-31.5	-1.3	-0.6380 ug/L	-0.6380 ppb		19:44:42
2	Si 251.611†	54608.0	51650.7	1595.1 ug/L	1595.1 ppb		19:44:22
2	Sn 189.927†	13.7	0.5	0.0970 ug/L	0.0970 ppb		19:44:42
2	Ti 334.940†	-1322.0	87.9	0.1555 ug/L	0.1555 ppb		19:44:22
2	Tl 190.801†	-66.4	-2.6	-0.6678 ug/L	-0.6678 ppb		19:44:42
2	U 409.014†	-4676.7	390.0	13.203 ug/L	13.203 ppb		19:44:22
2	V 292.402†	-1647.0	-5.0	-0.0145 ug/L	-0.0145 ppb		19:44:22
2	Zn 213.857†	1121.3	143.9	1.3258 ug/L	1.3258 ppb		19:44:42
2	SiO2†	53563.9	50630.2	3329.5 ug/L	3329.5 ppb		19:45:18
3	Sc Radial	7610.9	7610.9	102 %			19:43:30
3	Y RADIAL	7017.4	7017.4	101.3 %			19:43:30
3	Al 396.153Radial†	-49.4	24.1	19.929 ug/L	19.929 ppb		19:43:30
3	Ca 317.933Radial†	41.7	11.9	16.839 ug/L	16.839 ppb		19:43:50
3	Fe 238.204 Radial†	36.0	0.5	2.2499 ug/L	2.2499 ppb		19:43:50
3	K 766.490 Radial†	3037.8	576.2	124.31 ug/L	124.31 ppb		19:43:30
3	Mg 279.077 IEC†	1.0	-2.0	-50.857 ug/L	-50.857 ppb		19:43:50
3	Na 589.592 Radial†	1272.2	1385.0	85.002 ug/L	85.002 ppb		19:43:30
3	Sr 421.552†	9.1	64.8	0.1808 ug/L	0.1808 ppb		19:43:30
3	Sc 361.383	742155.8	742155.8	103.27 %			19:44:48
3	Y 371.029	580272.8	580272.8	103.25 %			19:44:48
3	Ag 328.068†	589.3	-61.9	-0.3821 ug/L	-0.3821 ppb		19:44:48
3	As 188.979†	-33.3	3.2	1.1501 ug/L	1.1501 ppb		19:45:08
3	B 249.677†	152.5	1087.6	27.411 ug/L	27.411 ppb		19:44:48
3	Ba 233.527†	33.9	32.3	0.2278 ug/L	0.2278 ppb		19:45:08
3	Be 313.107†	-4852.4	182.7	0.0845 ug/L	0.0845 ppb		19:44:48
3	Cd 226.502†	-271.4	18.3	0.2331 ug/L	0.2331 ppb		19:45:08
3	Co 228.616†	-111.9	-8.9	-0.1591 ug/L	-0.1591 ppb		19:45:08
3	Cr 267.716†	-19.1	58.9	0.8211 ug/L	0.8211 ppb		19:44:48
3	Cu 324.752†	5750.5	-69.7	-0.2526 ug/L	-0.2526 ppb		19:44:48
3	Mn 257.610†	1058.2	345.1	0.3819 ug/L	0.3819 ppb		19:45:08
3	Mo 202.031†	-1.2	-18.3	-1.2904 ug/L	-1.2904 ppb		19:45:08
3	Ni 231.604†	148.1	23.6	0.6309 ug/L	0.6309 ppb		19:45:08
3	P 214.914†	325.3	0.2	0.1660 ug/L	0.1660 ppb		19:45:08
3	Pb 220.353†	-18.4	-4.5	-0.5408 ug/L	-0.5408 ppb		19:45:08
3	S 181.975 Axial†	95.3	16.9	23.090 ug/L	23.090 ppb		19:45:08
3	Sb 206.836†	64.1	4.8	1.3771 ug/L	1.3771 ppb		19:45:08
3	Se 196.026†	-21.3	8.2	4.1830 ug/L	4.1830 ppb		19:45:08
3	Si 251.611†	53511.4	51407.6	1587.7 ug/L	1587.7 ppb		19:44:48
3	Sn 189.927†	13.4	0.5	0.0881 ug/L	0.0881 ppb		19:45:08
3	Ti 334.940†	-1191.4	194.5	0.3502 ug/L	0.3502 ppb		19:44:48
3	Tl 190.801†	-58.5	4.1	1.0780 ug/L	1.0780 ppb		19:45:08
3	U 409.014†	-4553.8	439.0	14.862 ug/L	14.862 ppb		19:44:48
3	V 292.402†	-1614.3	2.0	0.0285 ug/L	0.0285 ppb		19:44:48
3	Zn 213.857†	1138.9	177.8	1.6381 ug/L	1.6381 ppb		19:45:08
3	SiO2†	53594.0	51462.5	3384.3 ug/L	3384.3 ppb		19:45:23

Mean Data: 1201871708|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	747480.4	104.01	%	0.821				0.79%
Sc Radial	7674.3	103	%	0.9				0.87%
Y 371.029	584298.5	103.97	%	0.795				0.76%
Y RADIAL	7093.7	102.4	%	1.07				1.04%
Ag 328.068†	-8.6	-0.0614	ug/L	0.35929	-0.0614	ppb	0.35929	584.99%
Al 396.153Radial†	11.1	9.1172	ug/L	12.22422	9.1172	ppb	12.22422	134.08%
As 188.979†	4.5	1.5993	ug/L	0.91517	1.5993	ppb	0.91517	57.22%
B 249.677†	1061.6	26.755	ug/L	0.7018	26.755	ppb	0.7018	2.62%
Ba 233.527†	38.4	0.2710	ug/L	0.04125	0.2710	ppb	0.04125	15.22%
Be 313.107†	232.6	0.1069	ug/L	0.01957	0.1069	ppb	0.01957	18.30%
Ca 317.933Radial†	10.0	14.135	ug/L	2.3522	14.135	ppb	2.3522	16.64%
Cd 226.502†	16.2	0.2060	ug/L	0.16930	0.2060	ppb	0.16930	82.19%
Co 228.616†	-3.4	-0.0598	ug/L	0.16204	-0.0598	ppb	0.16204	271.01%
Cr 267.716†	51.6	0.7189	ug/L	0.47571	0.7189	ppb	0.47571	66.17%
Cu 324.752†	-67.1	-0.2428	ug/L	0.06227	-0.2428	ppb	0.06227	25.64%
Fe 238.204 Radial†	0.6	2.3737	ug/L	2.61624	2.3737	ppb	2.61624	110.22%
K 766.490 Radial†	544.6	117.49	ug/L	16.363	117.49	ppb	16.363	13.93%

Mg 279.077 IEC†	-1.3	-31.340	ug/L	17.0351	-31.340	ppb	17.0351	54.36%
Mn 257.610†	344.7	0.3811	ug/L	0.00172	0.3811	ppb	0.00172	0.45%
Mo 202.031†	-1.1	-0.0768	ug/L	1.05234	-0.0768	ppb	1.05234	>999.9%
Na 589.592 Radial†	1350.0	82.850	ug/L	3.5928	82.850	ppb	3.5928	4.34%
Ni 231.604†	13.6	0.3643	ug/L	0.30032	0.3643	ppb	0.30032	82.43%
P 214.914†	1.1	0.6059	ug/L	0.42960	0.6059	ppb	0.42960	70.90%
Pb 220.353†	5.0	0.5993	ug/L	0.99325	0.5993	ppb	0.99325	165.74%
S 181.975 Axial†	20.8	28.554	ug/L	4.8043	28.554	ppb	4.8043	16.83%
Sb 206.836†	3.3	0.9648	ug/L	1.29642	0.9648	ppb	1.29642	134.38%
Se 196.026†	3.9	2.0105	ug/L	2.44554	2.0105	ppb	2.44554	121.64%
Si 251.611†	51509.9	1590.8	ug/L	3.87	1590.8	ppb	3.87	0.24%
Sn 189.927†	-3.0	-0.5307	ug/L	1.07958	-0.5307	ppb	1.07958	203.41%
Sr 421.552†	65.2	0.1820	ug/L	0.06772	0.1820	ppb	0.06772	37.21%
Ti 334.940†	102.9	0.1831	ug/L	0.15511	0.1831	ppb	0.15511	84.70%
Tl 190.801†	0.2	0.0580	ug/L	0.90935	0.0580	ppb	0.90935	>999.9%
U 409.014†	384.5	13.017	ug/L	1.9450	13.017	ppb	1.9450	14.94%
V 292.402†	13.5	0.1453	ug/L	0.24043	0.1453	ppb	0.24043	165.51%
Zn 213.857†	155.9	1.4371	ug/L	0.17438	1.4371	ppb	0.17438	12.13%
SiO2†	51042.4	3356.7	ug/L	27.41	3356.7	ppb	27.41	0.82%

Sequence No.: 45
Sample ID: 1201871709|881354|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 72
Date Collected: 6/30/2009 19:47:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871709|881354|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7707.3	7707.3	103	%			19:49:28
1	Y RADIAL	7078.2	7078.2	102.2	%			19:49:28
1	Al 396.153Radial†	6342.7	6223.9	5104.0	ug/L	5104.0	ppb	19:49;28
1	Ca 317.933Radial†	3701.1	3560.3	5043.5	ug/L	5043.5	ppb	19:49:28
1	Fe 238.204 Radial†	1221.2	1149.5	4807.0	ug/L	4807.0	ppb	19:49:48
1	K 766.490 Radial†	26476.1	23269.5	5008.1	ug/L	5008.1	ppb	19:49:28
1	Mg 279.077 IEC†	207.8	198.5	4954.2	ug/L	4954.2	ppb	19:49:48
1	Na 589.592 Radial†	88419.6	85885.6	5271.0	ug/L	5271.0	ppb	19:49:28
1	Sr 421.552†	176922.3	171636.4	479.34	ug/L	479.34	ppb	19:49:28
1	Sc 361.383	748522.5	748522.5	104.15	%			19:50:46
1	Y 371.029	577845.3	577845.3	102.82	%			19:50:46
1	Ag 328.068†	86617.7	82532.9	496.04	ug/L	496.04	ppb	19:50:46
1	As 188.979†	1398.8	1378.4	500.22	ug/L	500.22	ppb	19:51:07
1	B 249.677†	20224.1	20357.9	510.24	ug/L	510.24	ppb	19:50:46
1	Ba 233.527†	74460.8	71492.6	505.53	ug/L	505.53	ppb	19:50:46
1	Be 313.107†	1125260.2	1085293.5	497.89	ug/L	497.89	ppb	19:50:46
1	Cd 226.502†	40175.3	38855.2	495.35	ug/L	495.35	ppb	19:51:07
1	Co 228.616†	29156.8	28094.2	487.42	ug/L	487.42	ppb	19:51:07
1	Cr 267.716†	36758.8	35371.2	496.34	ug/L	496.34	ppb	19:50:46
1	Cu 324.752†	149200.9	137615.9	498.96	ug/L	498.96	ppb	19:50:46
1	Mn 257.610†	471737.8	452256.6	499.24	ug/L	499.24	ppb	19:50:46
1	Mo 202.031†	7330.7	7021.4	494.61	ug/L	494.61	ppb	19:51:07
1	Ni 231.604†	19441.6	18547.0	495.45	ug/L	495.45	ppb	19:51:07
1	P 214.914†	1454.3	1081.5	457.71	ug/L	457.71	ppb	19:51:07
1	Pb 220.353†	4364.3	4203.6	502.02	ug/L	502.02	ppb	19:51:07
1	S 181.975 Axial†	3880.4	3650.4	4999.9	ug/L	4999.9	ppb	19:51:07
1	Sb 206.836†	1841.3	1710.6	514.56	ug/L	514.56	ppb	19:51:07
1	Se 196.026†	965.9	956.2	504.98	ug/L	504.98	ppb	19:51:07
1	Si 251.611†	220649.1	211443.1	6513.1	ug/L	6513.1	ppb	19:50:46
1	Sn 189.927†	3018.5	2885.7	511.61	ug/L	511.61	ppb	19:51:07
1	Ti 334.940†	281471.7	271601.6	497.15	ug/L	497.15	ppb	19:50:46
1	Tl 190.801†	1811.3	1799.8	474.22	ug/L	474.22	ppb	19:51:07
1	U 409.014†	10725.7	15147.0	511.35	ug/L	511.35	ppb	19:50:46
1	V 292.402†	55559.5	54910.3	504.64	ug/L	504.64	ppb	19:50:46
1	Zn 213.857†	55945.4	52790.5	482.64	ug/L	482.64	ppb	19:50:46
1	SiO2†	220542.1	211315.3	13859	ug/L	13859	ppb	19:52:07
2	Sc Radial	7731.2	7731.2	103	%			19:49:53
2	Y RADIAL	7162.5	7162.5	103.4	%			19:49:53
2	Al 396.153Radial†	6390.7	6251.2	5126.7	ug/L	5126.7	ppb	19:49:53
2	Ca 317.933Radial†	3730.5	3577.6	5068.1	ug/L	5068.1	ppb	19:49:53
2	Fe 238.204 Radial†	1210.3	1135.4	4748.0	ug/L	4748.0	ppb	19:50:13
2	K 766.490 Radial†	26570.0	23280.7	5010.6	ug/L	5010.6	ppb	19:49:53
2	Mg 279.077 IEC†	212.2	202.2	5045.6	ug/L	5045.6	ppb	19:50:13
2	Na 589.592 Radial†	88783.8	85972.0	5276.3	ug/L	5276.3	ppb	19:49:53
2	Sr 421.552†	178392.2	172525.9	481.82	ug/L	481.82	ppb	19:49:53
2	Sc 361.383	749577.0	749577.0	104.30	%			19:51:14
2	Y 371.029	578691.4	578691.4	102.97	%			19:51:14
2	Ag 328.068†	86774.5	82566.1	496.22	ug/L	496.22	ppb	19:51:14
2	As 188.979†	1404.3	1381.9	501.44	ug/L	501.44	ppb	19:51:34
2	B 249.677†	20263.0	20367.9	510.50	ug/L	510.50	ppb	19:51:14
2	Ba 233.527†	74574.7	71501.2	505.59	ug/L	505.59	ppb	19:51:14
2	Be 313.107†	1126888.8	1085335.2	497.91	ug/L	497.91	ppb	19:51:14
2	Cd 226.502†	40106.0	38734.5	493.82	ug/L	493.82	ppb	19:51:34
2	Co 228.616†	29102.9	28003.1	485.84	ug/L	485.84	ppb	19:51:34
2	Cr 267.716†	36809.7	35370.3	496.32	ug/L	496.32	ppb	19:51:14
2	Cu 324.752†	149739.4	137930.7	500.10	ug/L	500.10	ppb	19:51:14
2	Mn 257.610†	472755.7	452595.4	499.61	ug/L	499.61	ppb	19:51:14
2	Mo 202.031†	7298.3	6980.5	491.72	ug/L	491.72	ppb	19:51:34
2	Ni 231.604†	19423.1	18502.9	494.27	ug/L	494.27	ppb	19:51:34

2	P 214.914†	1477.4	1101.7	467.83 ug/L	467.83 ppb	19:51:34
2	Pb 220.353†	4362.5	4196.0	501.11 ug/L	501.11 ppb	19:51:34
2	S 181.975 Axial†	3871.4	3636.5	4980.8 ug/L	4980.8 ppb	19:51:34
2	Sb 206.836†	1826.0	1693.5	509.37 ug/L	509.37 ppb	19:51:34
2	Se 196.026†	963.9	953.0	503.14 ug/L	503.14 ppb	19:51:34
2	Si 251.611†	221172.6	211647.0	6519.4 ug/L	6519.4 ppb	19:51:14
2	Sn 189.927†	3012.2	2875.5	509.81 ug/L	509.81 ppb	19:51:34
2	Ti 334.940†	281724.5	271463.8	496.90 ug/L	496.90 ppb	19:51:14
2	Tl 190.801†	1809.2	1795.4	473.06 ug/L	473.06 ppb	19:51:34
2	U 409.014†	10813.8	15217.0	513.73 ug/L	513.73 ppb	19:51:14
2	V 292.402†	55567.9	54843.4	504.01 ug/L	504.01 ppb	19:51:14
2	Zn 213.857†	56125.1	52887.2	483.54 ug/L	483.54 ppb	19:51:14
2	SiO2†	221694.8	212122.6	13912 ug/L	13912 ppb	19:52:12
3	Sc Radial	7664.2	7664.2	103 %		19:50:18
3	Y RADIAL	7133.2	7133.2	103.0 %		19:50:18
3	Al 396.153Radial†	6345.1	6260.8	5134.7 ug/L	5134.7 ppb	19:50:18
3	Ca 317.933Radial†	3684.4	3564.1	5049.0 ug/L	5049.0 ppb	19:50:18
3	Fe 238.204 Radial†	1203.7	1139.1	4763.4 ug/L	4763.4 ppb	19:50:38
3	K 766.490 Radial†	26437.3	23376.1	5031.2 ug/L	5031.2 ppb	19:50:18
3	Mg 279.077 IEC†	206.8	198.7	4958.9 ug/L	4958.9 ppb	19:50:38
3	Na 589.592 Radial†	88332.5	86282.6	5295.4 ug/L	5295.4 ppb	19:50:18
3	Sr 421.552†	176751.3	172434.0	481.56 ug/L	481.56 ppb	19:50:18
3	Sc 361.383	753327.1	753327.1	104.82 %		19:51:41
3	Y 371.029	581538.1	581538.1	103.48 %		19:51:41
3	Ag 328.068†	87118.8	82480.5	495.71 ug/L	495.71 ppb	19:51:41
3	As 188.979†	1390.5	1362.0	494.29 ug/L	494.29 ppb	19:52:01
3	B 249.677†	20481.2	20479.4	513.33 ug/L	513.33 ppb	19:51:41
3	Ba 233.527†	75043.0	71592.0	506.24 ug/L	506.24 ppb	19:51:41
3	Be 313.107†	1132474.5	1085285.4	497.89 ug/L	497.89 ppb	19:51:41
3	Cd 226.502†	40014.2	38455.4	490.26 ug/L	490.26 ppb	19:52:01
3	Co 228.616†	29033.3	27797.8	482.26 ug/L	482.26 ppb	19:52:01
3	Cr 267.716†	36967.8	35345.5	495.98 ug/L	495.98 ppb	19:51:41
3	Cu 324.752†	150637.0	138072.3	500.61 ug/L	500.61 ppb	19:51:41
3	Mn 257.610†	474716.9	452209.9	499.19 ug/L	499.19 ppb	19:51:41
3	Mo 202.031†	7272.1	6920.6	487.51 ug/L	487.51 ppb	19:52:01
3	Ni 231.604†	19399.2	18387.4	491.19 ug/L	491.19 ppb	19:52:01
3	P 214.914†	1484.1	1101.0	467.32 ug/L	467.32 ppb	19:52:01
3	Pb 220.353†	4355.1	4168.1	497.78 ug/L	497.78 ppb	19:52:01
3	S 181.975 Axial†	3853.8	3601.2	4932.5 ug/L	4932.5 ppb	19:52:01
3	Sb 206.836†	1820.4	1679.4	505.04 ug/L	505.04 ppb	19:52:01
3	Se 196.026†	952.3	937.3	495.22 ug/L	495.22 ppb	19:52:01
3	Si 251.611†	222314.6	211680.9	6520.6 ug/L	6520.6 ppb	19:51:41
3	Sn 189.927†	3000.8	2850.3	505.35 ug/L	505.35 ppb	19:52:01
3	Ti 334.940†	283402.6	271720.1	497.36 ug/L	497.36 ppb	19:51:41
3	Tl 190.801†	1828.3	1805.0	475.59 ug/L	475.59 ppb	19:52:01
3	U 409.014†	10970.9	15315.2	517.05 ug/L	517.05 ppb	19:51:41
3	V 292.402†	55969.5	54961.2	505.03 ug/L	505.03 ppb	19:51:41
3	Zn 213.857†	56265.1	52752.9	482.32 ug/L	482.32 ppb	19:51:41
3	SiO2†	218646.9	208156.7	13651 ug/L	13651 ppb	19:52:17

Mean Data: 1201871709|881354|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	750475.5	104.42	%	0.351				0.34%
Sc Radial	7700.9	103	%	0.5				0.44%
Y 371.029	579358.3	103.09	%	0.344				0.33%
Y RADIAL	7124.6	102.9	%	0.62				0.60%
Ag 328.068†	82526.5	495.99	ug/L	0.256	495.99	ppb	0.256	0.05%
Al 396.153Radial†	6245.3	5121.8	ug/L	15.92	5121.8	ppb	15.92	0.31%
As 188.979†	1374.1	498.65	ug/L	3.829	498.65	ppb	3.829	0.77%
B 249.677†	20401.7	511.35	ug/L	1.713	511.35	ppb	1.713	0.34%
Ba 233.527†	71528.6	505.79	ug/L	0.390	505.79	ppb	0.390	0.08%
Be 313.107†	1085304.7	497.90	ug/L	0.012	497.90	ppb	0.012	0.00%
Ca 317.933Radial†	3567.3	5053.5	ug/L	12.90	5053.5	ppb	12.90	0.26%
Cd 226.502†	38681.7	493.14	ug/L	2.615	493.14	ppb	2.615	0.53%
Co 228.616†	27965.0	485.17	ug/L	2.642	485.17	ppb	2.642	0.54%
Cr 267.716†	35362.3	496.21	ug/L	0.205	496.21	ppb	0.205	0.04%
Cu 324.752†	137873.0	499.89	ug/L	0.845	499.89	ppb	0.845	0.17%
Fe 238.204 Radial†	1141.3	4772.8	ug/L	30.58	4772.8	ppb	30.58	0.64%
K 766.490 Radial†	23308.8	5016.6	ug/L	12.67	5016.6	ppb	12.67	0.25%

Mg 279.077 IEC†	199.8	4986.3 ug/L	51.47	4986.3 ppb	51.47	1.03%
Mn 257.610†	452354.0	499.34 ug/L	0.229	499.34 ppb	0.229	0.05%
Mo 202.031†	6974.1	491.28 ug/L	3.571	491.28 ppb	3.571	0.73%
Na 589.592 Radial†	86046.7	5280.9 ug/L	12.81	5280.9 ppb	12.81	0.24%
Ni 231.604†	18479.1	493.63 ug/L	2.201	493.63 ppb	2.201	0.45%
P 214.914†	1094.8	464.29 ug/L	5.700	464.29 ppb	5.700	1.23%
Pb 220.353†	4189.2	500.30 ug/L	2.231	500.30 ppb	2.231	0.45%
S 181.975 Axial†	3629.3	4971.1 ug/L	34.76	4971.1 ppb	34.76	0.70%
Sb 206.836†	1694.5	509.66 ug/L	4.767	509.66 ppb	4.767	0.94%
Se 196.026†	948.8	501.11 ug/L	5.188	501.11 ppb	5.188	1.04%
Si 251.611†	211590.3	6517.7 ug/L	4.06	6517.7 ppb	4.06	0.06%
Sn 189.927†	2870.5	508.92 ug/L	3.225	508.92 ppb	3.225	0.63%
Sr 421.552†	172198.8	480.91 ug/L	1.366	480.91 ppb	1.366	0.28%
Ti 334.940†	271595.2	497.14 ug/L	0.234	497.14 ppb	0.234	0.05%
Tl 190.801†	1800.1	474.29 ug/L	1.264	474.29 ppb	1.264	0.27%
U 409.014†	15226.4	514.04 ug/L	2.864	514.04 ppb	2.864	0.56%
V 292.402†	54905.0	504.56 ug/L	0.515	504.56 ppb	0.515	0.10%
Zn 213.857†	52810.2	482.84 ug/L	0.632	482.84 ppb	0.632	0.13%
SiO2†	210531.5	13807 ug/L	137.6	13807 ppb	137.6	1.00%

Sequence No.: 46
Sample ID: 1201871710|881354|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 73
Date Collected: 6/30/2009 19:54:29
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201871710|881354|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7635.3	7635.3	102	%			19:56:22
1	Y RADIAL	7043.6	7043.6	101.7	%			19:56:22
1	Al 396.153Radial†	-64.2	9.8	8.0666	ug/L	8.0666	ppb	19:56:22
1	Ca 317.933Radial†	29.6	-0.1	-0.1384	ug/L	-0.1384	ppb	19:56:42
1	Fe 238.204 Radial†	39.2	3.5	14.712	ug/L	14.712	ppb	19:56:42
1	K 766.490 Radial†	2547.4	86.6	18.668	ug/L	18.668	ppb	19:56:22
1	Mg 279.077 IEC†	1.6	-1.5	-37.750	ug/L	-37.750	ppb	19:56:42
1	Na 589.592 Radial†	169.2	301.2	18.484	ug/L	18.484	ppb	19:56:22
1	Sr 421.552†	-34.6	22.0	0.0613	ug/L	0.0613	ppb	19:56:22
1	Sc 361.383	746613.0	746613.0	103.89	%			19:57:39
1	Y 371.029	583323.8	583323.8	103.79	%			19:57:39
1	Ag 328.068†	623.9	-32.1	-0.1945	ug/L	-0.1945	ppb	19:57:39
1	As 188.979†	-28.2	8.3	2.9911	ug/L	2.9911	ppb	19:57:59
1	B 249.677†	-585.5	376.3	9.4820	ug/L	9.4820	ppb	19:57:39
1	Ba 233.527†	13.5	12.5	0.0884	ug/L	0.0884	ppb	19:57:59
1	Be 313.107†	-4826.2	236.1	0.1081	ug/L	0.1081	ppb	19:57:39
1	Cd 226.502†	-269.4	21.8	0.2764	ug/L	0.2764	ppb	19:57:59
1	Co 228.616†	-103.6	-0.3	-0.0041	ug/L	-0.0041	ppb	19:57:59
1	Cr 267.716†	-63.3	16.4	0.2276	ug/L	0.2276	ppb	19:57:39
1	Cu 324.752†	5824.2	-32.1	-0.1153	ug/L	-0.1153	ppb	19:57:39
1	Mn 257.610†	778.3	69.6	0.0793	ug/L	0.0793	ppb	19:57:39
1	Mo 202.031†	27.1	9.0	0.6321	ug/L	0.6321	ppb	19:57:59
1	Ni 231.604†	127.7	3.1	0.0831	ug/L	0.0831	ppb	19:57:59
1	P 214.914†	320.3	-6.4	-3.2492	ug/L	-3.2492	ppb	19:57:59
1	Pb 220.353†	-16.8	-2.9	-0.3482	ug/L	-0.3482	ppb	19:57:59
1	S 181.975 Axial†	87.6	8.9	12.214	ug/L	12.214	ppb	19:57:59
1	Sb 206.836†	60.7	1.1	0.3722	ug/L	0.3722	ppb	19:57:59
1	Se 196.026†	-24.2	5.5	2.8361	ug/L	2.8361	ppb	19:57:59
1	Si 251.611†	11425.0	10585.9	326.90	ug/L	326.90	ppb	19:57:39
1	Sn 189.927†	22.0	8.7	1.5395	ug/L	1.5395	ppb	19:57:59
1	Ti 334.940†	-1381.5	18.4	0.0296	ug/L	0.0296	ppb	19:57:39
1	Tl 190.801†	-42.9	19.5	5.0984	ug/L	5.0984	ppb	19:57:59
1	U 409.014†	-4753.7	272.8	9.2359	ug/L	9.2359	ppb	19:57:39
1	V 292.402†	-1618.0	7.7	0.0933	ug/L	0.0933	ppb	19:57:39
1	Zn 213.857†	1007.2	44.4	0.4091	ug/L	0.4091	ppb	19:57:59
1	SiO2†	11002.8	10154.4	667.71	ug/L	667.71	ppb	19:58:56
2	Sc Radial	7463.0	7463.0	99.8	%			19:56:48
2	Y RADIAL	6902.2	6902.2	99.68	%			19:56:48
2	Al 396.153Radial†	-56.7	15.8	12.990	ug/L	12.990	ppb	19:56:48
2	Ca 317.933Radial†	33.5	4.5	6.3247	ug/L	6.3247	ppb	19:57:08
2	Fe 238.204 Radial†	34.7	-0.0	-0.1473	ug/L	-0.1473	ppb	19:57:08
2	K 766.490 Radial†	2513.5	110.2	23.773	ug/L	23.773	ppb	19:56:48
2	Mg 279.077 IEC†	3.7	0.6	16.008	ug/L	16.008	ppb	19:57:08
2	Na 589.592 Radial†	121.0	256.8	15.759	ug/L	15.759	ppb	19:56:48
2	Sr 421.552†	-34.6	21.2	0.0593	ug/L	0.0593	ppb	19:56:48
2	Sc 361.383	748378.6	748378.6	104.13	%			19:58:05
2	Y 371.029	584915.5	584915.5	104.08	%			19:58:05
2	Ag 328.068†	621.8	-35.5	-0.2219	ug/L	-0.2219	ppb	19:58:05
2	As 188.979†	-23.4	13.0	4.6826	ug/L	4.6826	ppb	19:58:25
2	B 249.677†	-562.2	400.1	10.082	ug/L	10.082	ppb	19:58:05
2	Ba 233.527†	29.7	28.0	0.1984	ug/L	0.1984	ppb	19:58:25
2	Be 313.107†	-4850.5	223.6	0.1026	ug/L	0.1026	ppb	19:58:05
2	Cd 226.502†	-280.1	12.1	0.1550	ug/L	0.1550	ppb	19:58:25
2	Co 228.616†	-101.8	1.6	0.0302	ug/L	0.0302	ppb	19:58:25
2	Cr 267.716†	-109.2	-27.5	-0.3885	ug/L	-0.3885	ppb	19:58:05
2	Cu 324.752†	5854.5	-16.2	-0.0588	ug/L	-0.0588	ppb	19:58:05
2	Mn 257.610†	800.9	89.5	0.0984	ug/L	0.0984	ppb	19:58:05
2	Mo 202.031†	26.8	8.6	0.6028	ug/L	0.6028	ppb	19:58:25
2	Ni 231.604†	131.9	6.9	0.1833	ug/L	0.1833	ppb	19:58:25

2	P 214.914†	309.7	-17.3	-8.8170	ug/L	-8.8170 ppb	19:58:25
2	Pb 220.353†	-10.5	3.2	0.3828	ug/L	0.3828 ppb	19:58:25
2	S 181.975 Axial†	90.3	11.3	15.486	ug/L	15.486 ppb	19:58:25
2	Sb 206.836†	70.2	10.2	3.0672	ug/L	3.0672 ppb	19:58:25
2	Se 196.026†	-31.5	-1.4	-0.7296	ug/L	-0.7296 ppb	19:58:25
2	Si 251.611†	11356.8	10494.5	324.08	ug/L	324.08 ppb	19:58:05
2	Sn 189.927†	20.3	7.0	1.2360	ug/L	1.2360 ppb	19:58:25
2	Ti 334.940†	-1350.9	51.0	0.0883	ug/L	0.0883 ppb	19:58:05
2	Tl 190.801†	-38.4	23.9	6.2625	ug/L	6.2625 ppb	19:58:25
2	U 409.014†	-4662.9	370.8	12.556	ug/L	12.556 ppb	19:58:05
2	V 292.402†	-1591.4	36.9	0.3677	ug/L	0.3677 ppb	19:58:05
2	Zn 213.857†	1021.7	56.1	0.5160	ug/L	0.5160 ppb	19:58:25
2	SiO2†	11258.2	10374.7	682.20	ug/L	682.20 ppb	19:59:01
3	Sc Radial	7504.6	7504.6	100	%		19:57:13
3	Y RADIAL	6956.8	6956.8	100.5	%		19:57:13
3	Al 396.153Radial†	-62.8	10.1	8.2733	ug/L	8.2733 ppb	19:57:13
3	Ca 317.933Radial†	36.6	7.3	10.375	ug/L	10.375 ppb	19:57:33
3	Fe 238.204 Radial†	32.8	-2.1	-8.8492	ug/L	-8.8492 ppb	19:57:33
3	K 766.490 Radial†	2625.2	207.5	44.752	ug/L	44.752 ppb	19:57:13
3	Mg 279.077 IEC†	1.6	-1.4	-35.740	ug/L	-35.740 ppb	19:57:33
3	Na 589.592 Radial†	25.4	160.9	9.8719	ug/L	9.8719 ppb	19:57:13
3	Sr 421.552†	-62.4	-6.2	-0.0175	ug/L	-0.0175 ppb	19:57:13
3	Sc 361.383	735151.3	735151.3	102.29	%		19:58:30
3	Y 371.029	575283.2	575283.2	102.36	%		19:58:30
3	Ag 328.068†	615.4	-31.0	-0.1934	ug/L	-0.1934 ppb	19:58:30
3	As 188.979†	-30.3	5.8	2.0933	ug/L	2.0933 ppb	19:58:50
3	B 249.677†	-528.2	423.5	10.674	ug/L	10.674 ppb	19:58:30
3	Ba 233.527†	21.7	20.7	0.1470	ug/L	0.1470 ppb	19:58:50
3	Be 313.107†	-4848.5	141.8	0.0648	ug/L	0.0648 ppb	19:58:30
3	Cd 226.502†	-279.9	7.4	0.0963	ug/L	0.0963 ppb	19:58:50
3	Co 228.616†	-93.1	8.5	0.1477	ug/L	0.1477 ppb	19:58:50
3	Cr 267.716†	-45.2	33.2	0.4626	ug/L	0.4626 ppb	19:58:30
3	Cu 324.752†	5738.6	-28.3	-0.1032	ug/L	-0.1032 ppb	19:58:30
3	Mn 257.610†	763.0	66.3	0.0727	ug/L	0.0727 ppb	19:58:30
3	Mo 202.031†	21.7	4.1	0.2848	ug/L	0.2848 ppb	19:58:50
3	Ni 231.604†	156.8	33.5	0.8951	ug/L	0.8951 ppb	19:58:50
3	P 214.914†	321.4	-0.6	-0.2736	ug/L	-0.2736 ppb	19:58:50
3	Pb 220.353†	-7.9	5.5	0.6617	ug/L	0.6617 ppb	19:58:50
3	S 181.975 Axial†	85.7	8.3	11.404	ug/L	11.404 ppb	19:58:50
3	Sb 206.836†	54.2	-4.3	-1.2678	ug/L	-1.2678 ppb	19:58:50
3	Se 196.026†	-24.9	4.4	2.2211	ug/L	2.2211 ppb	19:58:50
3	Si 251.611†	11107.7	10447.2	322.63	ug/L	322.63 ppb	19:58:30
3	Sn 189.927†	16.1	3.3	0.5784	ug/L	0.5784 ppb	19:58:50
3	Ti 334.940†	-1412.5	-32.6	-0.0630	ug/L	-0.0630 ppb	19:58:30
3	Tl 190.801†	-39.4	22.2	5.8122	ug/L	5.8122 ppb	19:58:50
3	U 409.014†	-4699.6	254.3	8.6126	ug/L	8.6126 ppb	19:58:30
3	V 292.402†	-1545.2	54.6	0.5170	ug/L	0.5170 ppb	19:58:30
3	Zn 213.857†	1012.6	64.8	0.5946	ug/L	0.5946 ppb	19:58:50
3	SiO2†	11294.7	10604.9	697.36	ug/L	697.36 ppb	19:59:06

Mean Data: 1201871710|881354|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	743381.0	103.44	%	0.999				0.97%
Sc Radial	7534.3	101	%	1.2				1.19%
Y 371.029	581174.1	103.41	%	0.919				0.89%
Y RADIAL	6967.5	100.6	%	1.03				1.02%
Ag 328.068†	-32.9	-0.2033	ug/L	0.01613	-0.2033	ppb	0.01613	7.94%
Al 396.153Radial†	11.9	9.7766	ug/L	2.78467	9.7766	ppb	2.78467	28.48%
As 188.979†	9.0	3.2557	ug/L	1.31478	3.2557	ppb	1.31478	40.38%
B 249.677†	400.0	10.079	ug/L	0.5958	10.079	ppb	0.5958	5.91%
Ba 233.527†	20.4	0.1446	ug/L	0.05504	0.1446	ppb	0.05504	38.06%
Be 313.107†	200.5	0.0918	ug/L	0.02358	0.0918	ppb	0.02358	25.68%
Ca 317.933Radial†	3.9	5.5205	ug/L	5.30264	5.5205	ppb	5.30264	96.05%
Cd 226.502†	13.8	0.1759	ug/L	0.09188	0.1759	ppb	0.09188	52.24%
Co 228.616†	3.3	0.0579	ug/L	0.07962	0.0579	ppb	0.07962	137.46%
Cr 267.716†	7.4	0.1006	ug/L	0.43955	0.1006	ppb	0.43955	437.06%
Cu 324.752†	-25.5	-0.0924	ug/L	0.02976	-0.0924	ppb	0.02976	32.19%
Fe 238.204 Radial†	0.5	1.9052	ug/L	11.91397	1.9052	ppb	11.91397	625.34%
K 766.490 Radial†	134.8	29.064	ug/L	13.8236	29.064	ppb	13.8236	47.56%

Mg 279.077 IEC†	-0.8	-19.161	ug/L	30.4732	-19.161	ppb	30.4732 159.04%
Mn 257.610†	75.1	0.0835	ug/L	0.01334	0.0835	ppb	0.01334 15.98%
Mo 202.031†	7.2	0.5065	ug/L	0.19263	0.5065	ppb	0.19263 38.03%
Na 589.592 Radial†	239.6	14.705	ug/L	4.4019	14.705	ppb	4.4019 29.93%
Ni 231.604†	14.5	0.3871	ug/L	0.44273	0.3871	ppb	0.44273 114.36%
P 214.914†	-8.1	-4.1132	ug/L	4.33675	-4.1132	ppb	4.33675 105.43%
Pb 220.353†	1.9	0.2321	ug/L	0.52150	0.2321	ppb	0.52150 224.70%
S 181.975 Axial†	9.5	13.034	ug/L	2.1609	13.034	ppb	2.1609 16.58%
Sb 206.836†	2.3	0.7239	ug/L	2.18875	0.7239	ppb	2.18875 302.36%
Se 196.026†	2.8	1.4425	ug/L	1.90606	1.4425	ppb	1.90606 132.13%
Si 251.611†	10509.2	324.53	ug/L	2.173	324.53	ppb	2.173 0.67%
Sn 189.927†	6.3	1.1179	ug/L	0.49130	1.1179	ppb	0.49130 43.95%
Sr 421.552†	12.3	0.0344	ug/L	0.04495	0.0344	ppb	0.04495 130.84%
Ti 334.940†	12.3	0.0183	ug/L	0.07629	0.0183	ppb	0.07629 417.17%
Tl 190.801†	21.9	5.7244	ug/L	0.58701	5.7244	ppb	0.58701 10.25%
U 409.014†	299.3	10.135	ug/L	2.1196	10.135	ppb	2.1196 20.91%
V 292.402†	33.1	0.3260	ug/L	0.21489	0.3260	ppb	0.21489 65.92%
Zn 213.857†	55.1	0.5066	ug/L	0.09314	0.5066	ppb	0.09314 18.38%
SiO2†	10378.0	682.42	ug/L	14.825	682.42	ppb	14.825 2.17%

Sequence No.: 47
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 6/30/2009 20:01:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7378.2	7378.2	98.7	%			20:03:14
1	Y RADIAL	6796.8	6796.8	98.16	%			20:03:14
1	Al 396.153Radial†	6314.9	6470.1	5306.0	ug/L	5306.0	ppb	20:03:14
1	Ca 317.933Radial†	3572.8	3590.4	5086.2	ug/L	5086.2	ppb	20:03:34
1	Fe 238.204 Radial†	1207.5	1188.5	4970.4	ug/L	4970.4	ppb	20:03:34
1	K 766.490 Radial†	25097.1	23017.6	4952.7	ug/L	4952.7	ppb	20:03:09
1	Mg 279.077 IEC†	209.6	209.3	5224.5	ug/L	5224.5	ppb	20:03:34
1	Na 589.592 Radial†	168379.6	170714.0	10477	ug/L	10477	ppb	20:03:09
1	Sr 421.552†	173940.5	176267.9	492.27	ug/L	492.27	ppb	20:03:09
1	Sc 361.383	741283.4	741283.4	103.14	%			20:04:41
1	Y 371.029	571635.2	571635.2	101.71	%			20:04:41
1	Ag 328.068†	88388.3	85061.6	511.23	ug/L	511.23	ppb	20:04:47
1	As 188.979†	1434.6	1426.3	517.52	ug/L	517.52	ppb	20:05:07
1	B 249.677†	19762.9	20100.4	503.60	ug/L	503.60	ppb	20:04:47
1	Ba 233.527†	74323.3	72057.4	509.54	ug/L	509.54	ppb	20:04:47
1	Be 313.107†	1154700.8	1124387.7	515.78	ug/L	515.78	ppb	20:04:41
1	Cd 226.502†	41249.1	40273.0	513.43	ug/L	513.43	ppb	20:04:47
1	Co 228.616†	30415.8	29588.2	513.37	ug/L	513.37	ppb	20:04:47
1	Cr 267.716†	37625.3	36555.9	512.95	ug/L	512.95	ppb	20:04:47
1	Cu 324.752†	149212.0	139025.6	504.08	ug/L	504.08	ppb	20:04:47
1	Mn 257.610†	480271.6	464953.5	513.26	ug/L	513.26	ppb	20:04:41
1	Mo 202.031†	7505.4	7259.5	511.39	ug/L	511.39	ppb	20:05:07
1	Ni 231.604†	19915.7	19188.9	512.59	ug/L	512.59	ppb	20:04:47
1	P 214.914†	5511.4	5028.6	2471.9	ug/L	2471.9	ppb	20:05:07
1	Pb 220.353†	4407.9	4286.8	511.99	ug/L	511.99	ppb	20:05:07
1	S 181.975 Axial†	853.8	752.4	1029.7	ug/L	1029.7	ppb	20:05:07
1	Sb 206.836†	1832.4	1719.3	517.16	ug/L	517.16	ppb	20:05:07
1	Se 196.026†	1013.8	1011.6	533.87	ug/L	533.87	ppb	20:05:07
1	Si 251.611†	86257.7	83216.8	2552.6	ug/L	2552.6	ppb	20:04:47
1	Sn 189.927†	3010.9	2906.6	515.33	ug/L	515.33	ppb	20:05:07
1	Ti 334.940†	278147.4	271017.9	496.07	ug/L	496.07	ppb	20:04:47
1	Tl 190.801†	1940.4	1942.0	511.34	ug/L	511.34	ppb	20:05:07
1	U 409.014†	11021.7	15534.5	524.42	ug/L	524.42	ppb	20:04:47
1	V 292.402†	56206.8	56058.8	515.29	ug/L	515.29	ppb	20:04:47
1	Zn 213.857†	58090.0	55394.3	506.53	ug/L	506.53	ppb	20:04:47
1	SiO2†	87130.5	84037.9	5487.8	ug/L	5487.8	ppb	20:06:14
2	Sc Radial	7555.4	7555.4	101	%			20:03:44
2	Y RADIAL	6947.9	6947.9	100.3	%			20:03:44
2	Al 396.153Radial†	6431.6	6435.4	5277.8	ug/L	5277.8	ppb	20:03:44
2	Ca 317.933Radial†	3560.6	3493.4	4948.9	ug/L	4948.9	ppb	20:04:04
2	Fe 238.204 Radial†	1199.3	1151.6	4816.7	ug/L	4816.7	ppb	20:04:04
2	K 766.490 Radial†	25027.4	22352.5	4809.3	ug/L	4809.3	ppb	20:03:39
2	Mg 279.077 IEC†	203.9	198.7	4958.6	ug/L	4958.6	ppb	20:04:04
2	Na 589.592 Radial†	167823.9	166164.5	10198	ug/L	10198	ppb	20:03:39
2	Sr 421.552†	173176.3	171379.9	478.62	ug/L	478.62	ppb	20:03:39
2	Sc 361.383	746132.9	746132.9	103.82	%			20:05:12
2	Y 371.029	575395.9	575395.9	102.38	%			20:05:12
2	Ag 328.068†	89212.5	85298.6	512.61	ug/L	512.61	ppb	20:05:18
2	As 188.979†	1439.7	1422.1	516.00	ug/L	516.00	ppb	20:05:38
2	B 249.677†	20051.7	20254.1	507.49	ug/L	507.49	ppb	20:05:18
2	Ba 233.527†	74916.5	72160.5	510.28	ug/L	510.28	ppb	20:05:18
2	Be 313.107†	1161252.2	1123421.8	515.34	ug/L	515.34	ppb	20:05:12
2	Cd 226.502†	41519.8	40273.7	513.46	ug/L	513.46	ppb	20:05:18
2	Co 228.616†	30587.9	29562.3	512.91	ug/L	512.91	ppb	20:05:18
2	Cr 267.716†	37870.0	36554.5	512.93	ug/L	512.93	ppb	20:05:18
2	Cu 324.752†	150635.1	139456.1	505.63	ug/L	505.63	ppb	20:05:18
2	Mn 257.610†	482597.4	464167.3	512.38	ug/L	512.38	ppb	20:05:12
2	Mo 202.031†	7478.8	7186.5	506.24	ug/L	506.24	ppb	20:05:38
2	Ni 231.604†	20073.1	19215.0	513.29	ug/L	513.29	ppb	20:05:18

2	P 214.914†	5468.1	4952.2	2432.6 ug/L	2432.6 ppb	20:05:38
2	Pb 220.353†	4393.3	4244.9	506.99 ug/L	506.99 ppb	20:05:38
2	S 181.975 Axial†	849.1	742.4	1016.0 ug/L	1016.0 ppb	20:05:38
2	Sb 206.836†	1837.5	1712.7	514.99 ug/L	514.99 ppb	20:05:38
2	Se 196.026†	1024.7	1015.8	535.47 ug/L	535.47 ppb	20:05:38
2	Si 251.611†	86858.0	83251.5	2553.9 ug/L	2553.9 ppb	20:05:18
2	Sn 189.927†	2993.8	2871.1	509.03 ug/L	509.03 ppb	20:05:38
2	Ti 334.940†	280644.2	271670.1	497.26 ug/L	497.26 ppb	20:05:18
2	Tl 190.801†	1947.6	1936.7	509.95 ug/L	509.95 ppb	20:05:38
2	U 409.014†	11205.8	15642.4	528.09 ug/L	528.09 ppb	20:05:18
2	V 292.402†	56777.4	56254.3	517.02 ug/L	517.02 ppb	20:05:18
2	Zn 213.857†	58534.6	55456.5	507.12 ug/L	507.12 ppb	20:05:18
2	SiO2†	86418.9	82803.4	5407.1 ug/L	5407.1 ppb	20:06:19
3	Sc Radial	7474.1	7474.1	100.0 %		20:04:14
3	Y RADIAL	6870.0	6870.0	99.21 %		20:04:14
3	Al 396.153Radial†	6361.2	6434.3	5276.6 ug/L	5276.6 ppb	20:04:14
3	Ca 317.933Radial†	3559.7	3530.8	5001.8 ug/L	5001.8 ppb	20:04:34
3	Fe 238.204 Radial†	1214.0	1179.3	4932.1 ug/L	4932.1 ppb	20:04:34
3	K 766.490 Radial†	25250.4	22844.9	4915.4 ug/L	4915.4 ppb	20:04:09
3	Mg 279.077 IEC†	205.7	202.6	5058.0 ug/L	5058.0 ppb	20:04:34
3	Na 589.592 Radial†	168598.1	168745.0	10356 ug/L	10356 ppb	20:04:09
3	Sr 421.552†	174180.1	174247.7	486.63 ug/L	486.63 ppb	20:04:09
3	Sc 361.383	742105.5	742105.5	103.26 %		20:05:43
3	Y 371.029	572233.2	572233.2	101.82 %		20:05:43
3	Ag 328.068†	88837.8	85402.0	513.26 ug/L	513.26 ppb	20:05:49
3	As 188.979†	1450.6	1440.3	522.56 ug/L	522.56 ppb	20:06:09
3	B 249.677†	19901.8	20213.7	506.46 ug/L	506.46 ppb	20:05:49
3	Ba 233.527†	74531.4	72179.2	510.41 ug/L	510.41 ppb	20:05:49
3	Be 313.107†	1159905.5	1128188.0	517.53 ug/L	517.53 ppb	20:05:43
3	Cd 226.502†	41274.0	40252.7	513.18 ug/L	513.18 ppb	20:05:49
3	Co 228.616†	30494.5	29631.8	514.12 ug/L	514.12 ppb	20:05:49
3	Cr 267.716†	37686.2	36574.4	513.22 ug/L	513.22 ppb	20:05:49
3	Cu 324.752†	150133.2	139757.5	506.73 ug/L	506.73 ppb	20:05:49
3	Mn 257.610†	482050.4	466160.4	514.59 ug/L	514.59 ppb	20:05:43
3	Mo 202.031†	7504.7	7250.8	510.77 ug/L	510.77 ppb	20:06:09
3	Ni 231.604†	19957.2	19207.7	513.09 ug/L	513.09 ppb	20:05:49
3	P 214.914†	5514.8	5026.0	2470.0 ug/L	2470.0 ppb	20:06:09
3	Pb 220.353†	4410.5	4284.6	511.72 ug/L	511.72 ppb	20:06:09
3	S 181.975 Axial†	847.4	745.2	1019.9 ug/L	1019.9 ppb	20:06:09
3	Sb 206.836†	1863.6	1747.5	525.53 ug/L	525.53 ppb	20:06:09
3	Se 196.026†	1015.5	1012.2	534.03 ug/L	534.03 ppb	20:06:09
3	Si 251.611†	86572.7	83429.3	2559.2 ug/L	2559.2 ppb	20:05:49
3	Sn 189.927†	3015.1	2907.5	515.48 ug/L	515.48 ppb	20:06:09
3	Ti 334.940†	279441.6	271972.4	497.81 ug/L	497.81 ppb	20:05:49
3	Tl 190.801†	1955.3	1954.4	514.58 ug/L	514.58 ppb	20:06:09
3	U 409.014†	11053.8	15553.7	525.07 ug/L	525.07 ppb	20:05:49
3	V 292.402†	56412.3	56197.5	516.54 ug/L	516.54 ppb	20:05:49
3	Zn 213.857†	58279.6	55515.5	507.65 ug/L	507.65 ppb	20:05:49
3	SiO2†	87776.5	84569.9	5522.8 ug/L	5522.8 ppb	20:06:24

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	743173.9	103.41	%	0.361				0.35%
Sc Radial	7469.2	99.9	%	1.19				1.19%
Y 371.029	573088.1	101.97	%	0.360				0.35%
Y RADIAL	6871.5	99.24	%	1.091				1.10%
Ag 328.068†	85254.0	512.37	ug/L	1.035	512.37	ppb	1.035	0.20%
QC value within limits for Ag 328.068 Recovery = 102.47%								
Al 396.153Radial†	6446.6	5286.8	ug/L	16.67	5286.8	ppb	16.67	0.32%
QC value within limits for Al 396.153Radial Recovery = 105.74%								
As 188.979†	1429.6	518.69	ug/L	3.436	518.69	ppb	3.436	0.66%
QC value within limits for As 188.979 Recovery = 103.74%								
B 249.677†	20189.4	505.85	ug/L	2.013	505.85	ppb	2.013	0.40%
QC value within limits for B 249.677 Recovery = 101.17%								
Ba 233.527†	72132.4	510.07	ug/L	0.465	510.07	ppb	0.465	0.09%
QC value within limits for Ba 233.527 Recovery = 102.01%								
Be 313.107†	1125332.5	516.22	ug/L	1.154	516.22	ppb	1.154	0.22%
QC value within limits for Be 313.107 Recovery = 103.24%								
Ca 317.933Radial†	3538.2	5012.3	ug/L	69.28	5012.3	ppb	69.28	1.38%

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   QC value within limits for Ca 317.933Radial  Recovery = 100.25%
Cd 226.502†            40266.5      513.35 ug/L        0.155      513.35 ppb        0.155   0.03%
   QC value within limits for Cd 226.502  Recovery = 102.67%
Co 228.616†            29594.1      513.47 ug/L        0.613      513.47 ppb        0.613   0.12%
   QC value within limits for Co 228.616  Recovery = 102.69%
Cr 267.716†            36561.6      513.04 ug/L        0.157      513.04 ppb        0.157   0.03%
   QC value within limits for Cr 267.716  Recovery = 102.61%
Cu 324.752†           139413.1      505.48 ug/L        1.331      505.48 ppb        1.331   0.26%
   QC value within limits for Cu 324.752  Recovery = 101.10%
Fe 238.204 Radial†      1173.1      4906.4 ug/L       80.00      4906.4 ppb       80.00   1.63%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.13%
K 766.490 Radial†      22738.4      4892.5 ug/L       74.42      4892.5 ppb       74.42   1.52%
   QC value within limits for K 766.490 Radial  Recovery = 97.85%
Mg 279.077 IEC†          203.5      5080.4 ug/L      134.35      5080.4 ppb      134.35   2.64%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.61%
Mn 257.610†           465093.7      513.41 ug/L        1.113      513.41 ppb        1.113   0.22%
   QC value within limits for Mn 257.610  Recovery = 102.68%
Mo 202.031†             7232.3      509.46 ug/L        2.811      509.46 ppb        2.811   0.55%
   QC value within limits for Mo 202.031  Recovery = 101.89%
Na 589.592 Radial†    168541.2       10344 ug/L      140.0        10344 ppb      140.0   1.35%
   QC value within limits for Na 589.592 Radial  Recovery = 103.44%
Ni 231.604†            19203.8      512.99 ug/L        0.359      512.99 ppb        0.359   0.07%
   QC value within limits for Ni 231.604  Recovery = 102.60%
P 214.914†              5002.3      2458.2 ug/L       22.16      2458.2 ppb       22.16   0.90%
   QC value within limits for P 214.914  Recovery = 98.33%
Pb 220.353†             4272.1      510.23 ug/L        2.809      510.23 ppb        2.809   0.55%
   QC value within limits for Pb 220.353  Recovery = 102.05%
S 181.975 Axial†         746.7      1021.9 ug/L        7.04      1021.9 ppb        7.04   0.69%
   QC value within limits for S 181.975 Axial  Recovery = 102.19%
Sb 206.836†             1726.5      519.22 ug/L        5.564      519.22 ppb        5.564   1.07%
   QC value within limits for Sb 206.836  Recovery = 103.84%
Se 196.026†             1013.2      534.46 ug/L        0.882      534.46 ppb        0.882   0.16%
   QC value within limits for Se 196.026  Recovery = 106.89%
Si 251.611†            83299.2      2555.2 ug/L        3.49      2555.2 ppb        3.49   0.14%
   QC value within limits for Si 251.611  Recovery = 102.21%
Sn 189.927†             2895.1      513.28 ug/L        3.683      513.28 ppb        3.683   0.72%
   QC value within limits for Sn 189.927  Recovery = 102.66%
Sr 421.552†           173965.2      485.84 ug/L        6.860      485.84 ppb        6.860   1.41%
   QC value within limits for Sr 421.552  Recovery = 97.17%
Ti 334.940†           271553.4      497.05 ug/L        0.890      497.05 ppb        0.890   0.18%
   QC value within limits for Ti 334.940  Recovery = 99.41%
Tl 190.801†             1944.4      511.96 ug/L        2.378      511.96 ppb        2.378   0.46%
   QC value within limits for Tl 190.801  Recovery = 102.39%
U 409.014†             15576.9      525.86 ug/L        1.959      525.86 ppb        1.959   0.37%
   QC value within limits for U 409.014  Recovery = 105.17%
V 292.402†             56170.2      516.28 ug/L        0.895      516.28 ppb        0.895   0.17%
   QC value within limits for V 292.402  Recovery = 103.26%
Zn 213.857†            55455.5      507.10 ug/L        0.561      507.10 ppb        0.561   0.11%
   QC value within limits for Zn 213.857  Recovery = 101.42%
SiO2†                  83803.8      5472.6 ug/L       59.34      5472.6 ppb       59.34   1.08%
   QC value within limits for SiO2  Recovery = 102.34%
All analyte(s) passed QC.
```

Sequence No.: 48
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 6/30/2009 20:08:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7745.1	7745.1	104	%			20:10:26
1	Y RADIAL	7165.9	7165.9	103.5	%			20:10:26
1	Al 396.153Radial†	-43.2	30.9	25.431	ug/L	25.431	ppb	20:10:26
1	Ca 317.933Radial†	26.4	-3.6	-5.1697	ug/L	-5.1697	ppb	20:10:46
1	Fe 238.204 Radial†	32.9	-3.1	-12.766	ug/L	-12.766	ppb	20:10:46
1	K 766.490 Radial†	2421.3	-70.4	-15.210	ug/L	-15.210	ppb	20:10:26
1	Mg 279.077 IEC†	3.8	0.6	14.359	ug/L	14.359	ppb	20:10:46
1	Na 589.592 Radial†	-281.4	-136.1	-8.3500	ug/L	-8.3500	ppb	20:10:26
1	Sr 421.552†	-38.8	18.5	0.0516	ug/L	0.0516	ppb	20:10:26
1	Sc 361.383	723317.7	723317.7	100.64	%			20:11:43
1	Y 371.029	565880.7	565880.7	100.69	%			20:11:43
1	Ag 328.068†	637.0	0.3	-0.0052	ug/L	-0.0052	ppb	20:11:43
1	As 188.979†	-27.2	8.4	3.0242	ug/L	3.0242	ppb	20:12:03
1	B 249.677†	-662.5	281.6	7.0972	ug/L	7.0972	ppb	20:11:43
1	Ba 233.527†	19.1	18.5	0.1294	ug/L	0.1294	ppb	20:12:03
1	Be 313.107†	-4782.1	130.3	0.0596	ug/L	0.0596	ppb	20:11:43
1	Cd 226.502†	-265.6	17.2	0.2210	ug/L	0.2210	ppb	20:12:03
1	Co 228.616†	-83.7	16.3	0.2846	ug/L	0.2846	ppb	20:12:03
1	Cr 267.716†	-73.8	4.0	0.0549	ug/L	0.0549	ppb	20:11:43
1	Cu 324.752†	5541.3	-132.6	-0.4812	ug/L	-0.4812	ppb	20:11:43
1	Mn 257.610†	690.4	6.4	0.0052	ug/L	0.0052	ppb	20:12:03
1	Mo 202.031†	24.2	6.9	0.4836	ug/L	0.4836	ppb	20:12:03
1	Ni 231.604†	137.4	16.7	0.4467	ug/L	0.4467	ppb	20:12:03
1	P 214.914†	316.1	-0.7	-0.2411	ug/L	-0.2411	ppb	20:12:03
1	Pb 220.353†	-12.0	1.4	0.1706	ug/L	0.1706	ppb	20:12:03
1	S 181.975 Axial†	76.2	0.3	0.3663	ug/L	0.3663	ppb	20:12:03
1	Sb 206.836†	69.5	11.8	3.5051	ug/L	3.5051	ppb	20:12:03
1	Se 196.026†	-32.9	-4.0	-2.0603	ug/L	-2.0603	ppb	20:12:03
1	Si 251.611†	441.3	26.7	0.8354	ug/L	0.8354	ppb	20:12:03
1	Sn 189.927†	7.1	-5.5	-0.9672	ug/L	-0.9672	ppb	20:12:03
1	Ti 334.940†	-1352.5	4.5	0.0071	ug/L	0.0071	ppb	20:11:43
1	Tl 190.801†	-54.8	6.3	1.6475	ug/L	1.6475	ppb	20:12:03
1	U 409.014†	-4830.7	49.0	1.6596	ug/L	1.6596	ppb	20:11:43
1	V 292.402†	-1621.9	-46.3	-0.4092	ug/L	-0.4092	ppb	20:11:43
1	Zn 213.857†	977.1	45.7	0.4207	ug/L	0.4207	ppb	20:12:03
1	SiO2†	468.7	28.8	1.9199	ug/L	1.9199	ppb	20:12:59
2	Sc Radial	7288.6	7288.6	97.5	%			20:10:52
2	Y RADIAL	6772.5	6772.5	97.81	%			20:10:52
2	Al 396.153Radial†	-53.8	17.5	14.378	ug/L	14.378	ppb	20:10:52
2	Ca 317.933Radial†	26.6	-1.8	-2.5459	ug/L	-2.5459	ppb	20:11:12
2	Fe 238.204 Radial†	38.3	4.5	18.846	ug/L	18.846	ppb	20:11:12
2	K 766.490 Radial†	2432.1	86.9	18.756	ug/L	18.756	ppb	20:10:52
2	Mg 279.077 IEC†	1.8	-1.2	-28.925	ug/L	-28.925	ppb	20:11:12
2	Na 589.592 Radial†	-273.2	-144.6	-8.8775	ug/L	-8.8775	ppb	20:10:52
2	Sr 421.552†	-76.6	-22.7	-0.0635	ug/L	-0.0635	ppb	20:10:52
2	Sc 361.383	723248.4	723248.4	100.63	%			20:12:09
2	Y 371.029	566470.0	566470.0	100.80	%			20:12:09
2	Ag 328.068†	649.0	12.3	0.0724	ug/L	0.0724	ppb	20:12:09
2	As 188.979†	-32.7	3.0	1.0762	ug/L	1.0762	ppb	20:12:29
2	B 249.677†	-753.1	191.6	4.8255	ug/L	4.8255	ppb	20:12:09
2	Ba 233.527†	11.6	11.1	0.0793	ug/L	0.0793	ppb	20:12:29
2	Be 313.107†	-4747.3	164.4	0.0751	ug/L	0.0751	ppb	20:12:09
2	Cd 226.502†	-263.9	18.9	0.2389	ug/L	0.2389	ppb	20:12:29
2	Co 228.616†	-78.6	21.3	0.3697	ug/L	0.3697	ppb	20:12:29
2	Cr 267.716†	-78.3	-0.4	-0.0085	ug/L	-0.0085	ppb	20:12:09
2	Cu 324.752†	5597.5	-76.3	-0.2752	ug/L	-0.2752	ppb	20:12:09
2	Mn 257.610†	687.3	3.3	0.0066	ug/L	0.0066	ppb	20:12:29
2	Mo 202.031†	18.7	1.4	0.1027	ug/L	0.1027	ppb	20:12:29
2	Ni 231.604†	147.7	27.0	0.7213	ug/L	0.7213	ppb	20:12:29

2	P 214.914†	317.2	0.4	0.2422 ug/L	0.2422 ppb	20:12:29
2	Pb 220.353†	-16.3	-3.0	-0.3514 ug/L	-0.3514 ppb	20:12:29
2	S 181.975 Axial†	76.8	0.9	1.2742 ug/L	1.2742 ppb	20:12:29
2	Sb 206.836†	67.6	9.9	2.9631 ug/L	2.9631 ppb	20:12:29
2	Se 196.026†	-39.3	-10.3	-5.1697 ug/L	-5.1697 ppb	20:12:29
2	Si 251.611†	447.9	33.3	1.0147 ug/L	1.0147 ppb	20:12:29
2	Sn 189.927†	15.1	2.5	0.4381 ug/L	0.4381 ppb	20:12:29
2	Ti 334.940†	-1398.3	-41.2	-0.0804 ug/L	-0.0804 ppb	20:12:09
2	Tl 190.801†	-37.8	23.2	6.0785 ug/L	6.0785 ppb	20:12:29
2	U 409.014†	-4559.0	318.5	10.783 ug/L	10.783 ppb	20:12:09
2	V 292.402†	-1512.1	62.6	0.5882 ug/L	0.5882 ppb	20:12:09
2	Zn 213.857†	954.9	23.8	0.2141 ug/L	0.2141 ppb	20:12:29
2	SiO2†	458.1	18.4	1.1770 ug/L	1.1770 ppb	20:13:05
3	Sc Radial	7341.9	7341.9	98.2 %		20:11:17
3	Y RADIAL	6770.2	6770.2	97.77 %		20:11:17
3	Al 396.153Radial†	-102.2	-31.4	-25.871 ug/L	-25.871 ppb	20:11:17
3	Ca 317.933Radial†	28.1	-0.5	-0.6906 ug/L	-0.6906 ppb	20:11:37
3	Fe 238.204 Radial†	36.3	2.2	9.0365 ug/L	9.0365 ppb	20:11:37
3	K 766.490 Radial†	2372.7	8.4	1.8054 ug/L	1.8054 ppb	20:11:17
3	Mg 279.077 IEC†	1.3	-1.7	-43.540 ug/L	-43.540 ppb	20:11:37
3	Na 589.592 Radial†	-177.5	-45.1	-2.7699 ug/L	-2.7699 ppb	20:11:17
3	Sr 421.552†	-29.4	26.0	0.0726 ug/L	0.0726 ppb	20:11:17
3	Sc 361.383	722738.6	722738.6	100.56 %		20:12:34
3	Y 371.029	566076.7	566076.7	100.73 %		20:12:34
3	Ag 328.068†	701.5	64.9	0.3886 ug/L	0.3886 ppb	20:12:34
3	As 188.979†	-29.2	6.4	2.3054 ug/L	2.3054 ppb	20:12:54
3	B 249.677†	-702.5	241.4	6.0833 ug/L	6.0833 ppb	20:12:34
3	Ba 233.527†	16.4	15.8	0.1113 ug/L	0.1113 ppb	20:12:54
3	Be 313.107†	-4822.0	86.8	0.0395 ug/L	0.0395 ppb	20:12:34
3	Cd 226.502†	-263.4	19.2	0.2442 ug/L	0.2442 ppb	20:12:54
3	Co 228.616†	-102.7	-2.7	-0.0436 ug/L	-0.0436 ppb	20:12:54
3	Cr 267.716†	-64.1	13.7	0.1910 ug/L	0.1910 ppb	20:12:34
3	Cu 324.752†	5610.6	-59.2	-0.2141 ug/L	-0.2141 ppb	20:12:34
3	Mn 257.610†	673.6	-9.8	-0.0089 ug/L	-0.0089 ppb	20:12:54
3	Mo 202.031†	30.2	12.9	0.9069 ug/L	0.9069 ppb	20:12:54
3	Ni 231.604†	129.9	9.4	0.2507 ug/L	0.2507 ppb	20:12:54
3	P 214.914†	306.9	-9.6	-4.9046 ug/L	-4.9046 ppb	20:12:54
3	Pb 220.353†	-12.7	0.6	0.0650 ug/L	0.0650 ppb	20:12:54
3	S 181.975 Axial†	85.1	9.2	12.594 ug/L	12.594 ppb	20:12:54
3	Sb 206.836†	65.7	8.1	2.4071 ug/L	2.4071 ppb	20:12:54
3	Se 196.026†	-22.1	6.8	3.5138 ug/L	3.5138 ppb	20:12:54
3	Si 251.611†	440.9	26.7	0.8180 ug/L	0.8180 ppb	20:12:54
3	Sn 189.927†	8.2	-4.4	-0.7737 ug/L	-0.7737 ppb	20:12:54
3	Ti 334.940†	-1415.2	-59.0	-0.1088 ug/L	-0.1088 ppb	20:12:34
3	Tl 190.801†	-48.4	12.6	3.2974 ug/L	3.2974 ppb	20:12:54
3	U 409.014†	-4833.9	41.9	1.4186 ug/L	1.4186 ppb	20:12:34
3	V 292.402†	-1593.5	-19.4	-0.1640 ug/L	-0.1640 ppb	20:12:34
3	Zn 213.857†	968.9	38.4	0.3534 ug/L	0.3534 ppb	20:12:54
3	SiO2†	488.1	48.5	3.1748 ug/L	3.1748 ppb	20:13:10

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	723101.6	100.61	%	0.044				0.04%
Sc Radial	7458.5	99.8	%	3.34				3.35%
Y 371.029	566142.5	100.74	%	0.053				0.05%
Y RADIAL	6902.9	99.69	%	3.290				3.30%
Ag 328.068†	25.8	0.1519	ug/L	0.20864	0.1519	ppb	0.20864	137.33%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.7	4.6460	ug/L	27.00035	4.6460	ppb	27.00035	581.15%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.9	2.1353	ug/L	0.98508	2.1353	ppb	0.98508	46.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	238.2	6.0020	ug/L	1.13799	6.0020	ppb	1.13799	18.96%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	15.1	0.1067	ug/L	0.02537	0.1067	ppb	0.02537	23.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	127.1	0.0581	ug/L	0.01785	0.0581	ppb	0.01785	30.74%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.0	-2.8021	ug/L	2.25052	-2.8021	ppb	2.25052	80.32%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                18.4      0.2347 ug/L       0.01215      0.2347 ppb        0.01215   5.18%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                11.7      0.2035 ug/L       0.21825      0.2035 ppb        0.21825 107.22%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 5.7      0.0791 ug/L       0.10191      0.0791 ppb        0.10191 128.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -89.4     -0.3235 ug/L       0.13994     -0.3235 ppb        0.13994  43.26%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.2      5.0387 ug/L      16.18086      5.0387 ppb       16.18086 321.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†           8.3      1.7841 ug/L      16.98300      1.7841 ppb       16.98300 951.92%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.8    -19.369 ug/L       30.1092    -19.369 ppb        30.1092 155.45%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                -0.0      0.0010 ug/L       0.00854      0.0010 ppb        0.00854 885.91%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 7.1      0.4977 ug/L       0.40228      0.4977 ppb        0.40228  80.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -108.6     -6.6658 ug/L       3.38420     -6.6658 ppb        3.38420  50.77%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                17.7      0.4729 ug/L       0.23635      0.4729 ppb        0.23635  49.98%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -3.3     -1.6345 ug/L       2.84225     -1.6345 ppb        2.84225 173.89%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                -0.3     -0.0386 ug/L       0.27602     -0.0386 ppb        0.27602 715.17%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            3.5      4.7448 ug/L       6.81273      4.7448 ppb        6.81273 143.58%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                10.0      2.9584 ug/L       0.54904      2.9584 ppb        0.54904  18.56%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.5     -1.2387 ug/L       4.39970     -1.2387 ppb        4.39970 355.18%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                28.9      0.8894 ug/L       0.10887      0.8894 ppb        0.10887  12.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -2.5     -0.4343 ug/L       0.76167     -0.4343 ppb        0.76167 175.38%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 7.2      0.0202 ug/L       0.07323      0.0202 ppb        0.07323 361.91%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -31.9     -0.0607 ug/L       0.06042     -0.0607 ppb        0.06042  99.52%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                14.0      3.6744 ug/L       2.23945      3.6744 ppb        2.23945  60.95%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                136.5      4.6203 ug/L       5.33820      4.6203 ppb        5.33820 115.54%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 -1.0      0.0050 ug/L       0.51970      0.0050 ppb        0.51970 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                36.0      0.3294 ug/L       0.10536      0.3294 ppb        0.10536  31.99%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      31.9      2.0906 ug/L       1.00977      2.0906 ppb        1.00977  48.30%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Friday, July 03, 2009 10:25:37
Sample Description:
Method File: C:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.871
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1965.7	1965.735	62.027	3.2
	Mg	24.0	18263.7	18263.671	386.561	2.1
	Co	58.9	37400.9	37400.908	681.541	1.8
	Rh	102.9	79798.7	79798.678	939.041	1.2
	In	114.9	105201.2	105201.179	1277.023	1.2
	Pb	208.0	46766.0	46766.037	741.582	1.6
⌈>	Ba	137.9	96373.8	96373.753	1295.560	1.3
⌊	Ba++	69.0	2307.1	0.024	0.000	2.0
⌈>	Ce	139.9	123013.2	123013.181	920.861	0.7
⌊	CeO	155.9	1649.9	0.013	0.000	3.1
	Bkgd	220.0	11.1	11.100	2.584	23.3

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-2000.00	Analog Stage Voltage
1950.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	7.5	1634.1
Co	59	17	8.5	30653.5
In	115	17	9.5	114099.2

ICPMS#3 Instrument Tuning Report

File Name: 090703.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	578	2070	0.649
Be	9.0	9.0	2051	2070	0.624
Mg	24.0	24.0	5700	2120	0.561
Mg	25.0	25.0	5919	2050	0.619
Mg	26.0	25.9	6203	2130	0.680
Co	58.9	58.9	14191	2110	0.678
Rh	102.9	102.9	24896	2170	0.664
In	114.9	114.9	27823	2180	0.659
Ce	139.9	139.9	33909	2200	0.693
Pb	206.0	206.0	49992	2270	0.665
Pb	207.0	207.0	50281	2300	0.673
Pb	208.0	208.0	50486	2320	0.631
U	238.1	238.0	57844	2340	0.680

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Saturday, July 04, 2009 00:53:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Blank.944

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		14	
	Be	9		ug/L		15	
	B	11		ug/L		202	
	Na	23		ug/L		30366	
	Mg	24		ug/L		1667	
	Al	27		ug/L		6001	
	P	31		ug/L		3443	
	K	39		ug/L		431761	
	Ca	43		ug/L		685	
>	Sc	45		ug/L		259742	
	Ti	47		ug/L		218	
	V	51		ug/L		35273	
	Cr	52		ug/L		-2554	
	Cr	53		ug/L		211336	
	Mn	55		ug/L		1205	
	Fe	57		ug/L		5661	
	Co	59		ug/L		135	
	Ni	60		ug/L		77	
	Cu	63		ug/L		179	
	Cu	65		ug/L		69	
	Zn	66		ug/L		105	
	Zn	67		ug/L		9125	
	Zn	68		ug/L		695	
>	Ge	74		ug/L		194460	
	As	75		ug/L		335	
	Se	77		ug/L		8508	
	Se	82		ug/L		-10	
	Kr	83		ug/L		94	
	Sr	88		ug/L		172	
	Y	89		ug/L		29	
	Zr	90		ug/L		222	
	Mo	98		ug/L		76	
	Ag	107		ug/L		49	
	Cd	111		ug/L		24	
	Cd	114		ug/L		49	
>	In	115		ug/L		146234	
	Sn	120		ug/L		155	
	Sb	121		ug/L		424	
	Sb	123		ug/L		346	
	Ba	135		ug/L		38	
	Ba	137		ug/L		60	
	Ho	165		ug/L		34	
>	Lu	175		ug/L		198590	
	Tl	205		ug/L		915	
	Pb	208		ug/L		271	
	Th	232		ug/L		233	
	U	238		ug/L		191	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	0.9991
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 04, 2009 00:58:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Standard 1.945

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	7.519	1457	0.005
	Be	9	**10.000**	**ug/L**	7.847	1321	0.005
	B	11	**20.000**	**ug/L**	6.026	2406	0.008
	Na	23	**1000.000**	**ug/L**	8.178	1069333	3.940
	Mg	24	**1000.000**	**ug/L**	4.819	804723	3.045
	Al	27	**1000.000**	**ug/L**	2.145	1312372	4.948
	P	31	**1000.000**	**ug/L**	2.624	95863	0.350
	K	39	**1000.000**	**ug/L**	7.537	2572982	8.078
	Ca	43	**1000.000**	**ug/L**	4.934	4873	0.016
>	Sc	45		**ug/L**		263905	263904.866
	Ti	47	**10.000**	**ug/L**	1.597	2490	0.009
	V	51	**10.000**	**ug/L**	13.856	52484	0.063
	Cr	52	**10.000**	**ug/L**	4.641	19790	0.085
	Cr	53		**ug/L**		202820	-0.045
	Mn	55	**10.000**	**ug/L**	1.726	36585	0.134
	Fe	57	**1000.000**	**ug/L**	1.565	75725	0.265
	Co	59	**10.000**	**ug/L**	1.901	27054	0.102
	Ni	60	**10.000**	**ug/L**	1.795	5757	0.022
	Cu	63		**ug/L**		13240	0.049
	Cu	65	**10.000**	**ug/L**	2.689	6161	0.023
	Zn	66	**10.000**	**ug/L**	3.735	4544	0.022
	Zn	67		**ug/L**		8999	-0.002
	Zn	68		**ug/L**		3754	0.015
>	Ge	74		**ug/L**		199081	199080.554
	As	75	**10.000**	**ug/L**	6.665	6514	0.031
	Se	77		**ug/L**		8302	-0.002
	Se	82	**10.000**	**ug/L**	10.344	409	0.002
	Kr	83		**ug/L**		98	0.000
	Sr	88	**10.000**	**ug/L**	2.495	60108	0.408
	Y	89		**ug/L**		28	-0.000
	Zr	90	**10.000**	**ug/L**	1.871	33966	0.229
	Mo	98	**10.000**	**ug/L**	2.578	15412	0.104
	Ag	107	**10.000**	**ug/L**	3.222	26596	0.181
	Cd	111	**10.000**	**ug/L**	2.659	6298	0.043
	Cd	114		**ug/L**		15241	0.103
>	In	115		**ug/L**		147096	147095.867
	Sn	120	**10.000**	**ug/L**	2.933	27452	0.186
	Sb	121	**10.000**	**ug/L**	2.322	26450	0.177
	Sb	123		**ug/L**		20447	0.137
	Ba	135		**ug/L**		7021	0.035
	Ba	137	**10.000**	**ug/L**	2.781	12320	0.061
	Ho	165		**ug/L**		30	-0.000
>	Lu	175		**ug/L**		200628	200628.478
	Tl	205	**10.000**	**ug/L**	1.278	67367	0.331
	Pb	208	**10.000**	**ug/L**	1.278	75019	0.373
	Th	232	**10.000**	**ug/L**	0.896	77142	0.383
	U	238	**10.000**	**ug/L**	1.220	75456	0.375

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 04, 2009 01:02:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\Standard 2.946

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.010**	ug/L	4.027	14431	0.055
	Be	9	**100.005**	ug/L	3.253	13006	0.050
	B	11	**200.013**	ug/L	4.645	22099	0.084
	Na	23	**10002.784**	ug/L	4.871	10598164	40.535
	Mg	24	**10004.469**	ug/L	5.138	8315220	31.889
	Al	27	**9993.795**	ug/L	0.385	12150908	46.562
	P	31	**9997.252**	ug/L	2.736	891897	3.407
	K	39	**9986.078**	ug/L	10.888	18898396	70.813
	Ca	43	**9996.557**	ug/L	2.198	40580	0.153
>	Sc	45		ug/L		260837	260836.667
	Ti	47	**99.954**	ug/L	2.558	21644	0.082
	V	51	**100.225**	ug/L	3.929	248290	0.816
	Cr	52	**99.976**	ug/L	2.835	213555	0.829
	Cr	53		ug/L		208495	-0.015
	Mn	55	**99.975**	ug/L	1.181	342300	1.308
	Fe	57	**9996.513**	ug/L	1.191	673831	2.562
	Co	59	**99.961**	ug/L	2.465	256193	0.982
	Ni	60	**99.969**	ug/L	1.989	54527	0.209
	Cu	63		ug/L		126894	0.486
	Cu	65	**99.974**	ug/L	0.769	58770	0.225
	Zn	66	**99.968**	ug/L	2.005	41789	0.216
	Zn	67		ug/L		14058	0.026
	Zn	68		ug/L		30116	0.152
>	Ge	74		ug/L		193112	193111.608
	As	75	**99.878**	ug/L	2.794	53594	0.276
	Se	77		ug/L		9929	0.008
	Se	82	**100.012**	ug/L	2.475	4111	0.021
	Kr	83		ug/L		88	-0.000
	Sr	88	**99.970**	ug/L	0.693	568807	3.956
	Y	89		ug/L		75	0.000
	Zr	90	**99.990**	ug/L	1.012	326689	2.271
	Mo	98	**99.989**	ug/L	2.186	148371	1.032
	Ag	107	**99.975**	ug/L	2.365	253206	1.761
	Cd	111	**99.983**	ug/L	1.555	60300	0.419
	Cd	114		ug/L		146428	1.018
>	In	115		ug/L		143762	143762.480
	Sn	120	**99.990**	ug/L	0.665	264471	1.839
	Sb	121	**100.015**	ug/L	0.598	258829	1.798
	Sb	123		ug/L		200890	1.395
	Ba	135		ug/L		68281	0.342
	Ba	137	**99.974**	ug/L	1.923	118869	0.595
	Ho	165		ug/L		38	0.000
>	Lu	175		ug/L		199624	199623.846
	Tl	205	**99.961**	ug/L	2.459	636443	3.185
	Pb	208	**99.943**	ug/L	1.720	703220	3.523
	Th	232	**99.943**	ug/L	2.474	723504	3.625
	U	238	**99.925**	ug/L	3.026	695829	3.487

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 04, 2009 01:07:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c;\elandata\Dataset\default\QC Std 1.947

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.612**	ug/L	4.170	7452	0.029
	Be	9	**51.573**	ug/L	2.572	6712	0.026
	B	11	**104.599**	ug/L	4.736	11646	0.044
	Na	23	**4688.287**	ug/L	7.639	4979923	18.999
	Mg	24	**5204.936**	ug/L	9.478	4320123	16.591
	Al	27	**5254.327**	ug/L	5.411	6383388	24.480
	P	31	**5088.406**	ug/L	1.725	455495	1.734
	K	39	**5458.499**	ug/L	4.317	10532706	38.707
	Ca	43	**5129.546**	ug/L	0.779	21153	0.078
>	Sc	45		ug/L		260780	260780.029
	Ti	47	**49.899**	ug/L	0.559	10914	0.041
	V	51	**47.078**	ug/L	4.509	135374	0.383
	Cr	52	**51.333**	ug/L	2.248	108363	0.426
	Cr	53		ug/L		195537	-0.064
	Mn	55	**48.722**	ug/L	2.494	167343	0.637
	Fe	57	**5108.123**	ug/L	2.617	346893	1.309
	Co	59	**51.726**	ug/L	1.404	132591	0.508
	Ni	60	**52.199**	ug/L	2.660	28493	0.109
	Cu	63		ug/L		62811	0.240
	Cu	65	**50.130**	ug/L	3.272	29482	0.113
	Zn	66	**51.519**	ug/L	2.178	21736	0.111
	Zn	67		ug/L		10914	0.009
	Zn	68		ug/L		15831	0.078
>	Ge	74		ug/L		194444	194443.902
	As	75	**49.625**	ug/L	1.306	26989	0.137
	Se	77		ug/L		8731	0.001
	Se	82	**49.673**	ug/L	1.204	2050	0.011
	Kr	83		ug/L		90	-0.000
	Sr	88	**49.868**	ug/L	1.612	288993	1.973
	Y	89		ug/L		43	0.000
	Zr	90	**48.886**	ug/L	2.025	162740	1.110
	Mo	98	**48.820**	ug/L	1.950	73805	0.504
	Ag	107	**49.539**	ug/L	1.412	127807	0.873
	Cd	111	**52.489**	ug/L	2.178	32243	0.220
	Cd	114		ug/L		77209	0.527
>	In	115		ug/L		146390	146389.750
	Sn	120	**49.197**	ug/L	4.531	132532	0.905
	Sb	121	**48.109**	ug/L	3.664	126960	0.865
	Sb	123		ug/L		99421	0.677
	Ba	135		ug/L		33867	0.170
	Ba	137	**51.032**	ug/L	2.182	60618	0.304
	Ho	165		ug/L		50	0.000
>	Lu	175		ug/L		199286	199285.778
	Tl	205	**49.173**	ug/L	1.513	313157	1.567
	Pb	208	**51.274**	ug/L	1.773	360394	1.807
	Th	232	**51.015**	ug/L	1.722	368948	1.850
	U	238	**53.227**	ug/L	1.762	370284	1.857

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	103.223				
	Be	9	103.146				
	B	11	104.599				
	Na	23	93.766				
	Mg	24	104.099				
	Al	27	104.046				
	P	31	101.768				
	K	39	109.170				
	Ca	43	102.591				
>	Sc	45			100.4		
	Ti	47	99.798				
	V	51	94.156				
	Cr	52	102.667				
	Cr	53					
	Mn	55	97.444				
	Fe	57	102.162				
	Co	59	103.451				
	Ni	60	104.398				
	Cu	63					
	Cu	65	100.260				
	Zn	66	103.038				
	Zn	67					
	Zn	68					
>	Ge	74			100.0		
	As	75	99.250				
	Se	77					
	Se	82	99.346				
	Kr	83					
	Sr	88	99.735				
	Y	89					
	Zr	90	97.772				
	Mo	98	97.641				
	Ag	107	99.079				
	Cd	111	104.978				
	Cd	114					
>	In	115			100.1		
	Sn	120	98.395				
	Sb	121	96.218				
	Sb	123					
	Ba	135					
	Ba	137	102.064				
	Ho	165					
>	Lu	175			100.4		
	Tl	205	98.346				
	Pb	208	102.547				
	Th	232	102.029				
	U	238	106.453				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 04, 2009 01:12:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 2.948

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.091**	**ug/L**	33.031	27	0.000
	Be	9	**-0.007**	**ug/L**	318.475	14	-0.000
	B	11	**3.273**	**ug/L**	20.537	557	0.001
	Na	23	**1.373**	**ug/L**	337.989	31702	0.006
	Mg	24	**2.027**	**ug/L**	33.571	3334	0.006
	Al	27	**-0.817**	**ug/L**	303.666	5001	-0.004
	P	31	**-3.319**	**ug/L**	22.959	3137	-0.001
	K	39	**26.232**	**ug/L**	21.357	478209	0.186
	Ca	43	**-18.864**	**ug/L**	66.672	608	-0.000
>	Sc	45		**ug/L**		258709	258709.162
	Ti	47	**0.015**	**ug/L**	793.491	221	0.000
	V	51	**-2.335**	**ug/L**	60.770	30222	-0.019
	Cr	52	**0.446**	**ug/L**	27.498	-1588	0.004
	Cr	53		**ug/L**		192257	-0.071
	Mn	55	**-0.023**	**ug/L**	27.497	1121	-0.000
	Fe	57	**3.996**	**ug/L**	41.483	5904	0.001
	Co	59	**0.001**	**ug/L**	304.267	137	0.000
	Ni	60	**-0.015**	**ug/L**	201.405	68	-0.000
	Cu	63		**ug/L**		179	0.000
	Cu	65	**0.019**	**ug/L**	131.617	80	0.000
	Zn	66	**0.024**	**ug/L**	110.767	117	0.000
	Zn	67		**ug/L**		8089	-0.006
	Zn	68		**ug/L**		646	-0.000
>	Ge	74		**ug/L**		197285	197284.774
	As	75	**1.112**	**ug/L**	36.901	945	0.003
	Se	77		**ug/L**		8027	-0.003
	Se	82	**-0.105**	**ug/L**	471.784	-15	-0.000
	Kr	83		**ug/L**		101	0.000
	Sr	88	**0.005**	**ug/L**	15.375	199	0.000
	Y	89		**ug/L**		28	-0.000
	Zr	90	**0.123**	**ug/L**	22.963	621	0.003
	Mo	98	**0.080**	**ug/L**	19.618	193	0.001
	Ag	107	**0.008**	**ug/L**	47.454	68	0.000
	Cd	111	**-0.009**	**ug/L**	270.240	18	-0.000
	Cd	114		**ug/L**		57	0.000
>	In	115		**ug/L**		143922	143921.586
	Sn	120	**0.024**	**ug/L**	11.411	217	0.000
	Sb	121	**0.868**	**ug/L**	23.776	2662	0.016
	Sb	123		**ug/L**		2089	0.012
	Ba	135		**ug/L**		36	-0.000
	Ba	137	**0.008**	**ug/L**	132.971	68	0.000
	Ho	165		**ug/L**		29	-0.000
>	Lu	175		**ug/L**		192783	192782.652
	Tl	205	**0.511**	**ug/L**	24.227	4029	0.016
	Pb	208	**0.011**	**ug/L**	5.340	335	0.000
	Th	232	**0.109**	**ug/L**	39.306	985	0.004
	U	238	**0.021**	**ug/L**	13.006	326	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			99.6		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			101.5		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.1		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 04, 2009 01:16:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 3.949

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**11.263**	ug/L	3.123	1591	0.006
	Be	9	**0.571**	ug/L	4.231	86	0.000
	B	11	**17.097**	ug/L	2.984	2018	0.007
	Na	23	**236.090**	ug/L	7.652	272595	0.957
	Mg	24	**15.887**	ug/L	37.425	14341	0.051
	Al	27	**35.958**	ug/L	25.877	48419	0.168
	P	31	**46.399**	ug/L	7.997	7360	0.016
	K	39	**390.279**	ug/L	10.340	1121012	2.768
	Ca	43	**202.038**	ug/L	8.017	1451	0.003
>	Sc	45		ug/L		253462	253462.025
	Ti	47	**8.973**	ug/L	3.382	2081	0.007
	V	51	**6.413**	ug/L	24.897	47680	0.052
	Cr	52	**10.718**	ug/L	0.476	20026	0.089
	Cr	53		ug/L		194012	-0.047
	Mn	55	**5.608**	ug/L	3.809	19754	0.073
	Fe	57	**115.524**	ug/L	5.057	13019	0.030
	Co	59	**1.077**	ug/L	4.071	2811	0.011
	Ni	60	**2.199**	ug/L	6.973	1237	0.005
	Cu	63		ug/L		1627	0.006
	Cu	65	**1.216**	ug/L	3.217	762	0.003
	Zn	66	**10.554**	ug/L	2.251	4529	0.023
	Zn	67		ug/L		8625	-0.002
	Zn	68		ug/L		3615	0.015
>	Ge	74		ug/L		194083	194082.815
	As	75	**6.167**	ug/L	9.828	3641	0.017
	Se	77		ug/L		8036	-0.002
	Se	82	**5.196**	ug/L	11.268	205	0.001
	Kr	83		ug/L		102	0.000
	Sr	88	**10.583**	ug/L	1.572	60625	0.419
	Y	89		ug/L		24	-0.000
	Zr	90	**1.997**	ug/L	0.620	6769	0.045
	Mo	98	**0.542**	ug/L	1.799	882	0.006
	Ag	107	**1.061**	ug/L	2.993	2747	0.019
	Cd	111	**1.005**	ug/L	3.091	632	0.004
	Cd	114		ug/L		1536	0.010
>	In	115		ug/L		144379	144379.265
	Sn	120	**5.098**	ug/L	2.215	13688	0.094
	Sb	121	**3.106**	ug/L	1.790	8480	0.056
	Sb	123		ug/L		6572	0.043
	Ba	135		ug/L		1414	0.007
	Ba	137	**2.088**	ug/L	3.703	2452	0.012
	Ho	165		ug/L		35	0.000
>	Lu	175		ug/L		192559	192559.169
	Tl	205	**1.160**	ug/L	0.855	8006	0.037
	Pb	208	**2.174**	ug/L	3.041	15012	0.077
	Th	232	**1.080**	ug/L	2.738	7767	0.039
	U	238	**0.217**	ug/L	1.557	1641	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.630				
	Be	9	114.132				
	B	11	113.981				
	Na	23	94.436				
	Mg	24	105.916				
	Al	27	119.860				
	P	31	92.798				
	K	39	130.093				
	Ca	43	101.019				
>	Sc	45			97.6		
	Ti	47	89.725				
	V	51	64.132				
	Cr	52	107.181				
	Cr	53					
	Mn	55	112.160				
	Fe	57	115.524				
	Co	59	107.730				
	Ni	60	109.936				
	Cu	63					
	Cu	65	121.591				
	Zn	66	105.537				
	Zn	67					
	Zn	68					
>	Ge	74			99.8		
	As	75	123.336				
	Se	77					
	Se	82	103.929				
	Kr	83					
	Sr	88	105.828				
	Y	89					
	Zr	90	99.865				
	Mo	98	108.338				
	Ag	107	106.099				
	Cd	111	100.503				
	Cd	114					
>	In	115			98.7		
	Sn	120	101.969				
	Sb	121	103.548				
	Sb	123					
	Ba	135					
	Ba	137	104.392				
	Ho	165					
>	Lu	175			97.0		
	Tl	205	116.023				
	Pb	208	108.694				
	Th	232	108.005				
	U	238	108.362				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 3	K	39CRDL is out of limits
QC Std 3	V	51CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 04, 2009 01:21:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 4.950

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.147**	ug/L	27.599	33	0.000
	Be	9	**0.051**	ug/L	74.719	20	0.000
	B	11	**1.727**	ug/L	3.074	367	0.001
	Na	23	**105347.607**	ug/L	8.165	104363880	426.907
	Mg	24	**103491.822**	ug/L	7.556	80606174	329.878
	Al	27	**104460.384**	ug/L	0.629	118956833	486.692
	P	31	**99695.908**	ug/L	3.004	8305761	33.974
	K	39	**110305.143**	ug/L	6.532	191548543	782.190
	Ca	43	**100643.864**	ug/L	2.058	376994	1.540
>	Sc	45		ug/L		244404	244403.715
	Ti	47	**1832.225**	ug/L	1.505	368284	1.506
	V	51	**-4.862**	ug/L	11.323	23513	-0.040
	Cr	52	**3.246**	ug/L	6.051	4173	0.027
	Cr	53		ug/L		161729	-0.152
	Mn	55	**5.892**	ug/L	2.127	19969	0.077
	Fe	57	**99394.419**	ug/L	1.789	6230519	25.472
	Co	59	**0.216**	ug/L	3.988	645	0.002
	Ni	60	**2.537**	ug/L	3.495	1367	0.005
	Cu	63		ug/L		2556	0.010
	Cu	65	**2.444**	ug/L	7.986	1410	0.006
	Zn	66	**3.060**	ug/L	5.928	1322	0.007
	Zn	67		ug/L		7410	-0.007
	Zn	68		ug/L		892	0.001
>	Ge	74		ug/L		184938	184937.634
	As	75	**0.217**	ug/L	327.200	426	0.001
	Se	77		ug/L		6838	-0.007
	Se	82	**-0.862**	ug/L	38.289	-44	-0.000
	Kr	83		ug/L		149	0.000
	Sr	88	**1.115**	ug/L	1.863	6188	0.044
	Y	89		ug/L		172	0.001
	Zr	90	**0.541**	ug/L	38.934	1893	0.012
	Mo	98	**1965.314**	ug/L	2.237	2769408	20.279
	Ag	107	**0.047**	ug/L	8.821	160	0.001
	Cd	111	**0.292**	ug/L	21.591	189	0.001
	Cd	114		ug/L		3054	0.022
>	In	115		ug/L		136595	136595.465
	Sn	120	**0.171**	ug/L	10.093	574	0.003
	Sb	121	**0.278**	ug/L	18.762	1080	0.005
	Sb	123		ug/L		856	0.004
	Ba	135		ug/L		472	0.002
	Ba	137	**0.657**	ug/L	3.679	794	0.004
	Ho	165		ug/L		433	0.002
>	Lu	175		ug/L		188523	188523.020
	Tl	205	**0.054**	ug/L	17.839	1193	0.002
	Pb	208	**0.170**	ug/L	5.551	1387	0.006
	Th	232	**0.023**	ug/L	58.371	378	0.001
	U	238	**-0.015**	ug/L	6.023	83	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23	105.348				
	Mg	24	103.492				
	Al	27	104.460				
	P	31	99.696				
	K	39	110.305				
	Ca	43	100.644				
>	Sc	45			94.1		
	Ti	47	91.611				
	V	51					
	Cr	52	87.739				
	Cr	53					
	Mn	55	101.581				
	Fe	57	99.394				
	Co	59	86.377				
	Ni	60	93.963				
	Cu	63					
	Cu	65	84.271				
	Zn	66	84.991				
	Zn	67					
	Zn	68					
>	Ge	74			95.1		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	92.916				
	Y	89					
	Zr	90					
	Mo	98	98.266				
	Ag	107					
	Cd	111	73.051				
	Cd	114					
>	In	115			93.4		
	Sn	120					
	Sb	121	278.099				
	Sb	123					
	Ba	135					
	Ba	137	98.004				
	Ho	165					
>	Lu	175			94.9		
	Tl	205					
	Pb	208	85.081				
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 04, 2009 01:26:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 5.951

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**22.447**	ug/L	3.271	3071	0.012
	Be	9	**22.647**	ug/L	2.881	2793	0.011
	B	11	**22.317**	ug/L	5.531	2499	0.009
	Na	23	**97790.103**	ug/L	12.955	97417314	396.281
	Mg	24	**94023.155**	ug/L	1.742	73845656	299.697
	Al	27	**100200.703**	ug/L	1.664	115050788	466.846
	P	31	**99104.746**	ug/L	4.819	8317378	33.772
	K	39	**107503.666**	ug/L	3.504	188144032	762.325
	Ca	43	**101032.454**	ug/L	3.639	381309	1.546
>	Sc	45		ug/L		246444	246443.634
	Ti	47	**1816.977**	ug/L	2.476	368076	1.494
	V	51	**15.809**	ug/L	5.333	65189	0.129
	Cr	52	**23.148**	ug/L	4.012	44834	0.192
	Cr	53		ug/L		167329	-0.134
	Mn	55	**26.240**	ug/L	3.290	85676	0.343
	Fe	57	**99334.417**	ug/L	5.043	6273094	25.457
	Co	59	**20.577**	ug/L	4.415	49889	0.202
	Ni	60	**21.647**	ug/L	3.190	11207	0.045
	Cu	63		ug/L		26228	0.106
	Cu	65	**22.018**	ug/L	3.120	12273	0.050
	Zn	66	**22.501**	ug/L	1.787	9078	0.049
	Zn	67		ug/L		8340	-0.002
	Zn	68		ug/L		6338	0.031
>	Ge	74		ug/L		184781	184780.836
	As	75	**21.202**	ug/L	3.823	11137	0.059
	Se	77		ug/L		7594	-0.003
	Se	82	**20.519**	ug/L	5.601	798	0.004
	Kr	83		ug/L		141	0.000
	Sr	88	**21.915**	ug/L	1.246	116339	0.867
	Y	89		ug/L		196	0.001
	Zr	90	**21.287**	ug/L	0.765	64981	0.484
	Mo	98	**2062.342**	ug/L	0.845	2851028	21.280
	Ag	107	**20.448**	ug/L	2.176	48308	0.360
	Cd	111	**20.830**	ug/L	3.805	11724	0.087
	Cd	114		ug/L		30708	0.229
>	In	115		ug/L		133985	133985.483
	Sn	120	**20.800**	ug/L	1.418	51387	0.382
	Sb	121	**21.977**	ug/L	1.448	53305	0.395
	Sb	123		ug/L		41005	0.304
	Ba	135		ug/L		13238	0.070
	Ba	137	**21.011**	ug/L	2.102	23759	0.125
	Ho	165		ug/L		422	0.002
>	Lu	175		ug/L		189448	189448.368
	Tl	205	**18.980**	ug/L	0.849	115453	0.605
	Pb	208	**20.378**	ug/L	2.579	136285	0.718
	Th	232	**21.405**	ug/L	2.097	147266	0.776
	U	238	**21.954**	ug/L	0.738	145290	0.766

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.235				
	Be	9	113.233				
	B	11	111.585				
	Na	23	97.790				
	Mg	24	94.023				
	Al	27	100.201				
	P	31	99.105				
	K	39	107.504				
	Ca	43	101.032				
>	Sc	45			94.9		
	Ti	47	90.849				
	V	51	79.043				
	Cr	52	97.672				
	Cr	53					
	Mn	55	101.706				
	Fe	57	99.334				
	Co	59	101.614				
	Ni	60	95.360				
	Cu	63					
	Cu	65	96.147				
	Zn	66	95.343				
	Zn	67					
	Zn	68					
>	Ge	74			95.0		
	As	75	106.010				
	Se	77					
	Se	82	102.594				
	Kr	83					
	Sr	88	103.372				
	Y	89					
	Zr	90	106.433				
	Mo	98	103.117				
	Ag	107	102.238				
	Cd	111	102.110				
	Cd	114					
>	In	115			91.6		
	Sn	120	104.001				
	Sb	121	109.336				
	Sb	123					
	Ba	135					
	Ba	137	101.652				
	Ho	165					
>	Lu	175			95.4		
	Tl	205	94.900				
	Pb	208	100.881				
	Th	232	107.023				
	U	238	109.768				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 5	V	51ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 01:31:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.952

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.337**	ug/L	1.464	8073	0.030
	Be	9	**53.789**	ug/L	1.558	7203	0.027
	B	11	**105.199**	ug/L	2.113	12058	0.044
	Na	23	**4911.740**	ug/L	0.663	5370150	19.904
	Mg	24	**4932.779**	ug/L	3.513	4219907	15.723
	Al	27	**5374.446**	ug/L	7.180	6721838	25.040
	P	31	**5097.195**	ug/L	1.531	469431	1.737
	K	39	**5427.945**	ug/L	4.543	10770686	38.490
	Ca	43	**5149.006**	ug/L	3.385	21837	0.079
>	Sc	45		ug/L		268231	268230.838
	Ti	47	**51.234**	ug/L	0.201	11522	0.042
	V	51	**49.737**	ug/L	1.432	145104	0.405
	Cr	52	**51.215**	ug/L	1.722	111255	0.425
	Cr	53		ug/L		197093	-0.079
	Mn	55	**52.111**	ug/L	1.062	184087	0.682
	Fe	57	**5206.112**	ug/L	1.021	363700	1.334
	Co	59	**51.248**	ug/L	0.492	135155	0.503
	Ni	60	**51.248**	ug/L	1.311	28789	0.107
	Cu	63		ug/L		66874	0.249
	Cu	65	**51.848**	ug/L	0.957	31378	0.117
	Zn	66	**49.459**	ug/L	2.983	21940	0.107
	Zn	67		ug/L		10475	0.004
	Zn	68		ug/L		16420	0.077
>	Ge	74		ug/L		204522	204521.508
	As	75	**49.992**	ug/L	5.332	28546	0.138
	Se	77		ug/L		9312	0.002
	Se	82	**49.645**	ug/L	4.556	2152	0.011
	Kr	83		ug/L		92	-0.000
	Sr	88	**51.410**	ug/L	8.081	298222	2.034
	Y	89		ug/L		54	0.000
	Zr	90	**51.568**	ug/L	9.281	171738	1.171
	Mo	98	**52.756**	ug/L	10.131	79753	0.544
	Ag	107	**51.688**	ug/L	7.396	133540	0.911
	Cd	111	**51.746**	ug/L	9.002	31809	0.217
	Cd	114		ug/L		75266	0.513
>	In	115		ug/L		147088	147088.124
	Sn	120	**50.476**	ug/L	7.753	136172	0.928
	Sb	121	**51.458**	ug/L	8.458	135911	0.925
	Sb	123		ug/L		105824	0.720
	Ba	135		ug/L		34952	0.174
	Ba	137	**52.096**	ug/L	2.603	62134	0.310
	Ho	165		ug/L		33	-0.000
>	Lu	175		ug/L		200152	200152.217
	Tl	205	**50.761**	ug/L	3.284	324482	1.617
	Pb	208	**52.196**	ug/L	2.434	368344	1.840
	Th	232	**52.198**	ug/L	2.279	379033	1.893
	U	238	**52.946**	ug/L	1.999	369837	1.847

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	108.674				
	Be	9	107.577				
	B	11	105.199				
	Na	23	98.235				
	Mg	24	98.656				
	Al	27	106.425				
	P	31	101.944				
	K	39	108.559				
	Ca	43	102.980				
>	Sc	45		103.3			
	Ti	47	102.468				
	V	51	99.475				
	Cr	52	102.430				
	Cr	53					
	Mn	55	104.223				
	Fe	57	104.122				
	Co	59	102.495				
	Ni	60	102.496				
	Cu	63					
	Cu	65	103.696				
	Zn	66	98.917				
	Zn	67					
	Zn	68					
>	Ge	74		105.2			
	As	75	99.983				
	Se	77					
	Se	82	99.290				
	Kr	83					
	Sr	88	102.820				
	Y	89					
	Zr	90	103.136				
	Mo	98	105.512				
	Ag	107	103.376				
	Cd	111	103.492				
	Cd	114					
>	In	115		100.6			
	Sn	120	100.952				
	Sb	121	102.916				
	Sb	123					
	Ba	135					
	Ba	137	104.191				
	Ho	165					
>	Lu	175		100.8			
	Tl	205	101.521				
	Pb	208	104.391				
	Th	232	104.397				
	U	238	105.891				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 01:35:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.953

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.037**	**ug/L**	39.891	21	0.000
	Be	9	**0.017**	**ug/L**	94.918	18	0.000
	B	11	**2.422**	**ug/L**	37.849	489	0.001
	Na	23	**12.214**	**ug/L**	23.570	45406	0.049
	Mg	24	**1.425**	**ug/L**	77.306	3000	0.005
	Al	27	**1.070**	**ug/L**	113.547	7669	0.005
	P	31	**-4.038**	**ug/L**	50.835	3242	-0.001
	K	39	**11.979**	**ug/L**	62.909	477181	0.085
	Ca	43	**-22.224**	**ug/L**	32.146	627	-0.000
>	Sc	45		**ug/L**		273055	273055.341
	Ti	47	**0.071**	**ug/L**	136.716	245	0.000
	V	51	**-3.177**	**ug/L**	53.229	29981	-0.026
	Cr	52	**0.486**	**ug/L**	27.409	-1582	0.004
	Cr	53		**ug/L**		195659	-0.097
	Mn	55	**-0.024**	**ug/L**	77.299	1180	-0.000
	Fe	57	**8.438**	**ug/L**	57.317	6538	0.002
	Co	59	**-0.005**	**ug/L**	63.633	130	-0.000
	Ni	60	**-0.006**	**ug/L**	86.049	77	-0.000
	Cu	63		**ug/L**		161	-0.000
	Cu	65	**0.000**	**ug/L**	4059.776	73	0.000
	Zn	66	**0.014**	**ug/L**	140.150	118	0.000
	Zn	67		**ug/L**		7650	-0.010
	Zn	68		**ug/L**		558	-0.001
>	Ge	74		**ug/L**		206836	206836.307
	As	75	**0.560**	**ug/L**	24.869	675	0.002
	Se	77		**ug/L**		8687	-0.002
	Se	82	**0.159**	**ug/L**	149.844	-4	0.000
	Kr	83		**ug/L**		92	-0.000
	Sr	88	**0.002**	**ug/L**	160.611	186	0.000
	Y	89		**ug/L**		28	-0.000
	Zr	90	**0.021**	**ug/L**	37.313	299	0.000
	Mo	98	**0.170**	**ug/L**	24.053	340	0.002
	Ag	107	**0.007**	**ug/L**	15.247	69	0.000
	Cd	111	**-0.013**	**ug/L**	90.304	16	-0.000
	Cd	114		**ug/L**		49	-0.000
>	In	115		**ug/L**		149357	149356.811
	Sn	120	**0.006**	**ug/L**	24.610	175	0.000
	Sb	121	**0.236**	**ug/L**	22.137	1068	0.004
	Sb	123		**ug/L**		860	0.003
	Ba	135		**ug/L**		37	-0.000
	Ba	137	**-0.005**	**ug/L**	66.381	55	-0.000
	Ho	165		**ug/L**		39	0.000
>	Lu	175		**ug/L**		201112	201111.744
	Tl	205	**0.703**	**ug/L**	29.459	5427	0.022
	Pb	208	**0.009**	**ug/L**	62.197	341	0.000
	Th	232	**0.067**	**ug/L**	43.818	721	0.002
	U	238	**0.014**	**ug/L**	21.836	295	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		105.1			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		106.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		101.3			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Saturday, July 04, 2009 01:40:35
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 10.954

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**1099.862**	ug/L	1.353	152815	0.608
	Be	9	**1081.591**	ug/L	1.897	135415	0.539
	B	11	**1.100**	ug/L	19.996	312	0.000
	Na	23	**51774.825**	ug/L	2.364	52760820	209.811
	Mg	24	**53429.185**	ug/L	5.709	42816613	170.304
	Al	27	**52455.497**	ug/L	1.369	61431439	244.396
	P	31	**26054.920**	ug/L	1.116	2234600	8.879
	K	39	**55477.396**	ug/L	4.559	99268375	393.399
	Ca	43	**51573.570**	ug/L	0.294	198976	0.789
>	Sc	45		ug/L		251311	251310.569
	Ti	47	**29.799**	ug/L	3.169	6365	0.024
	V	51	**1017.116**	ug/L	3.308	2115936	8.285
	Cr	52	**968.886**	ug/L	4.740	2016487	8.032
	Cr	53		ug/L		418911	0.853
	Mn	55	**1027.813**	ug/L	1.873	3379654	13.445
	Fe	57	**51929.528**	ug/L	2.671	3349360	13.308
	Co	59	**988.104**	ug/L	1.800	2439108	9.705
	Ni	60	**973.808**	ug/L	2.344	511296	2.034
	Cu	63		ug/L		1173705	4.670
	Cu	65	**1000.270**	ug/L	1.674	566029	2.252
	Zn	66	**2308.684**	ug/L	2.159	975222	4.986
	Zn	67		ug/L		161208	0.777
	Zn	68		ug/L		696747	3.558
>	Ge	74		ug/L		195626	195626.080
	As	75	**919.724**	ug/L	0.712	497243	2.540
	Se	77		ug/L		20634	0.062
	Se	82	**473.085**	ug/L	2.457	19725	0.101
	Kr	83		ug/L		125	0.000
	Sr	88	**1011.810**	ug/L	1.310	5404052	40.035
	Y	89		ug/L		445	0.003
	Zr	90	**503.453**	ug/L	0.745	1543843	11.435
	Mo	98	**1005.809**	ug/L	1.132	1401015	10.378
	Ag	107	**248.353**	ug/L	1.307	590711	4.376
	Cd	111	**999.875**	ug/L	1.626	566111	4.194
	Cd	114		ug/L		1318894	9.770
>	In	115		ug/L		134984	134984.422
	Sn	120	**995.426**	ug/L	0.676	2470915	18.305
	Sb	121	**251.716**	ug/L	0.249	611090	4.524
	Sb	123		ug/L		477027	3.532
	Ba	135		ug/L		1487696	7.820
	Ba	137	**2403.132**	ug/L	0.849	2722519	14.311
	Ho	165		ug/L		197	0.001
>	Lu	175		ug/L		190246	190245.768
	Tl	205	**458.139**	ug/L	2.653	2777391	14.598
	Pb	208	**4789.372**	ug/L	1.721	32109501	168.804
	Th	232	**2371.066**	ug/L	4.111	16355640	85.997
	U	238	**5034.849**	ug/L	2.398	33414971	175.678

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	109.986				
	Be	9	108.159				
	B	11					
	Na	23	103.550				
	Mg	24	106.858				
	Al	27	104.911				
	P	31	104.220				
	K	39	110.955				
	Ca	43	103.147				
>	Sc	45		96.8			
	Ti	47					
	V	51	101.712				
	Cr	52	96.889				
	Cr	53					
	Mn	55	102.781				
	Fe	57	103.859				
	Co	59	98.810				
	Ni	60	97.381				
	Cu	63					
	Cu	65	100.027				
	Zn	66	92.347				
	Zn	67					
	Zn	68					
>	Ge	74		100.6			
	As	75	91.972				
	Se	77					
	Se	82	94.617				
	Kr	83					
	Sr	88	101.181				
	Y	89					
	Zr	90	100.691				
	Mo	98	100.581				
	Ag	107	99.341				
	Cd	111	99.988				
	Cd	114					
>	In	115		92.3			
	Sn	120	99.543				
	Sb	121	100.686				
	Sb	123					
	Ba	135					
	Ba	137	96.125				
	Ho	165					
>	Lu	175		95.8			
	Tl	205	91.628				
	Pb	208	95.787				
	Th	232	94.843				
	U	238	100.697				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 10	K	39LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Saturday, July 04, 2009 01:45:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 11.955

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.296**	**ug/L**	1.785	8225	0.031
	Be	9	**52.007**	**ug/L**	0.954	6972	0.026
	B	11	**102.366**	**ug/L**	1.049	11752	0.043
	Na	23	**5311.112**	**ug/L**	7.115	5809479	21.523
	Mg	24	**5118.306**	**ug/L**	6.832	4379710	16.315
	Al	27	**5333.428**	**ug/L**	4.038	6674677	24.849
	P	31	**4914.763**	**ug/L**	1.514	453178	1.675
	K	39	**5801.844**	**ug/L**	5.997	11487425	41.142
	Ca	43	**4981.100**	**ug/L**	1.543	21169	0.076
>	Sc	45		**ug/L**		268509	268509.315
	Ti	47	**48.487**	**ug/L**	4.413	10922	0.040
	V	51	**46.743**	**ug/L**	4.282	138653	0.381
	Cr	52	**50.104**	**ug/L**	2.809	108850	0.415
	Cr	53		**ug/L**		190467	-0.104
	Mn	55	**50.078**	**ug/L**	2.912	177090	0.655
	Fe	57	**5002.624**	**ug/L**	3.319	349946	1.282
	Co	59	**50.507**	**ug/L**	2.798	133297	0.496
	Ni	60	**49.131**	**ug/L**	1.808	27626	0.103
	Cu	63		**ug/L**		65812	0.244
	Cu	65	**50.723**	**ug/L**	2.433	30727	0.114
	Zn	66	**49.991**	**ug/L**	1.773	21818	0.108
	Zn	67		**ug/L**		10648	0.006
	Zn	68		**ug/L**		15940	0.076
>	Ge	74		**ug/L**		201082	201082.139
	As	75	**49.497**	**ug/L**	1.925	27838	0.137
	Se	77		**ug/L**		8481	-0.002
	Se	82	**48.554**	**ug/L**	1.638	2072	0.010
	Kr	83		**ug/L**		90	-0.000
	Sr	88	**49.968**	**ug/L**	1.094	286901	1.977
	Y	89		**ug/L**		59	0.000
	Zr	90	**51.146**	**ug/L**	4.056	168622	1.162
	Mo	98	**52.148**	**ug/L**	3.481	78085	0.538
	Ag	107	**50.064**	**ug/L**	2.808	127950	0.882
	Cd	111	**49.627**	**ug/L**	3.425	30199	0.208
	Cd	114		**ug/L**		73058	0.503
>	In	115		**ug/L**		145048	145047.817
	Sn	120	**50.231**	**ug/L**	4.750	134040	0.924
	Sb	121	**53.343**	**ug/L**	2.496	139433	0.959
	Sb	123		**ug/L**		107365	0.738
	Ba	135		**ug/L**		34471	0.177
	Ba	137	**52.488**	**ug/L**	2.467	60747	0.313
	Ho	165		**ug/L**		33	0.000
>	Lu	175		**ug/L**		194160	194160.148
	Tl	205	**51.283**	**ug/L**	0.432	318155	1.634
	Pb	208	**53.167**	**ug/L**	0.688	364096	1.874
	Th	232	**52.702**	**ug/L**	0.606	371362	1.911
	U	238	**53.496**	**ug/L**	1.568	362621	1.867

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	110.592				
	Be	9	104.013				
	B	11	102.366				
	Na	23	106.222				
	Mg	24	102.366				
	Al	27	105.612				
	P	31	98.295				
	K	39	116.037				
	Ca	43	99.622				
>	Sc	45		103.4			
	Ti	47	96.974				
	V	51	93.487				
	Cr	52	100.209				
	Cr	53					
	Mn	55	100.155				
	Fe	57	100.052				
	Co	59	101.014				
	Ni	60	98.263				
	Cu	63					
	Cu	65	101.446				
	Zn	66	99.982				
	Zn	67					
	Zn	68					
>	Ge	74		103.4			
	As	75	98.995				
	Se	77					
	Se	82	97.108				
	Kr	83					
	Sr	88	99.935				
	Y	89					
	Zr	90	102.291				
	Mo	98	104.297				
	Ag	107	100.128				
	Cd	111	99.254				
	Cd	114					
>	In	115		99.2			
	Sn	120	100.463				
	Sb	121	106.685				
	Sb	123					
	Ba	135					
	Ba	137	104.977				
	Ho	165					
>	Lu	175		97.8			
	Tl	205	102.566				
	Pb	208	106.335				
	Th	232	105.403				
	U	238	106.991				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Li	7	CCV is out of limits (+/- 10%)
QC Std 11	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Saturday, July 04, 2009 01:50:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 12.956

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.293**	ug/L	4.290	58	0.000
	Be	9	**0.017**	ug/L	293.712	17	0.000
	B	11	**2.235**	ug/L	19.071	458	0.001
	Na	23	**0.169**	ug/L	2773.444	31368	0.001
	Mg	24	**2.290**	ug/L	128.589	3667	0.007
	Al	27	**1.743**	ug/L	51.966	8336	0.008
	P	31	**-2.130**	ug/L	100.677	3344	-0.001
	K	39	**17.381**	ug/L	30.404	476485	0.123
	Ca	43	**-21.581**	ug/L	39.372	616	-0.000
>	Sc	45		ug/L		266861	266861.125
	Ti	47	**-0.061**	ug/L	47.344	211	-0.000
	V	51	**-3.375**	ug/L	33.299	28896	-0.027
	Cr	52	**0.623**	ug/L	14.099	-1247	0.005
	Cr	53		ug/L		188907	-0.106
	Mn	55	**0.050**	ug/L	157.186	1413	0.001
	Fe	57	**9.374**	ug/L	29.720	6457	0.002
	Co	59	**0.018**	ug/L	33.386	186	0.000
	Ni	60	**-0.004**	ug/L	755.901	76	-0.000
	Cu	63		ug/L		221	0.000
	Cu	65	**0.036**	ug/L	13.517	93	0.000
	Zn	66	**0.054**	ug/L	29.904	132	0.000
	Zn	67		ug/L		7579	-0.009
	Zn	68		ug/L		640	-0.000
>	Ge	74		ug/L		200384	200383.637
	As	75	**0.966**	ug/L	47.045	879	0.003
	Se	77		ug/L		7997	-0.004
	Se	82	**0.162**	ug/L	145.557	-3	0.000
	Kr	83		ug/L		92	-0.000
	Sr	88	**0.021**	ug/L	23.610	291	0.001
	Y	89		ug/L		28	-0.000
	Zr	90	**0.052**	ug/L	4.788	388	0.001
	Mo	98	**0.239**	ug/L	6.463	430	0.002
	Ag	107	**0.017**	ug/L	20.675	92	0.000
	Cd	111	**0.020**	ug/L	134.806	35	0.000
	Cd	114		ug/L		66	0.000
>	In	115		ug/L		144149	144149.228
	Sn	120	**0.063**	ug/L	13.426	321	0.001
	Sb	121	**1.358**	ug/L	15.857	3942	0.024
	Sb	123		ug/L		3066	0.019
	Ba	135		ug/L		61	0.000
	Ba	137	**0.045**	ug/L	35.699	111	0.000
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194396	194396.402
	Tl	205	**1.027**	ug/L	24.516	7247	0.033
	Pb	208	**0.087**	ug/L	30.499	860	0.003
	Th	232	**0.185**	ug/L	28.582	1531	0.007
	U	238	**0.207**	ug/L	20.207	1589	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		102.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 12	Tl	205CCB is out of limits (+/- PQL)
QC Std 12	U	238CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201871711
Sample Date/Time: Saturday, July 04, 2009 01:54:49
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871711.957

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.349**	ug/L	12.054	66	0.000
	Be	9	**-0.040**	ug/L	117.355	10	-0.000
	B	11	**0.983**	ug/L	34.872	316	0.000
	Na	23	**-18.342**	ug/L	5.113	11338	-0.074
	Mg	24	**-1.228**	ug/L	55.413	667	-0.004
	Al	27	**-2.282**	ug/L	106.587	3334	-0.011
	P	31	**-15.559**	ug/L	12.337	2115	-0.005
	K	39	**29.666**	ug/L	29.954	498212	0.210
	Ca	43	**35.746**	ug/L	21.250	847	0.001
>	Sc	45		ug/L		266073	266072.772
	Ti	47	**0.217**	ug/L	37.506	271	0.000
	V	51	**3.904**	ug/L	38.759	44613	0.032
	Cr	52	**0.747**	ug/L	26.771	-969	0.006
	Cr	53		ug/L		397084	0.679
	Mn	55	**0.177**	ug/L	5.710	1849	0.002
	Fe	57	**15.265**	ug/L	12.684	6839	0.004
	Co	59	**-0.013**	ug/L	24.159	104	-0.000
	Ni	60	**0.025**	ug/L	68.235	92	0.000
	Cu	63		ug/L		288	0.000
	Cu	65	**0.113**	ug/L	18.146	138	0.000
	Zn	66	**0.570**	ug/L	10.223	370	0.001
	Zn	67		ug/L		18527	0.042
	Zn	68		ug/L		1223	0.002
>	Ge	74		ug/L		208569	208569.397
	As	75	**3.847**	ug/L	17.694	2578	0.011
	Se	77		ug/L		23088	0.067
	Se	82	**-0.171**	ug/L	215.730	-18	-0.000
	Kr	83		ug/L		94	-0.000
	Sr	88	**0.012**	ug/L	22.862	248	0.000
	Y	89		ug/L		27	-0.000
	Zr	90	**0.021**	ug/L	12.113	299	0.000
	Mo	98	**0.049**	ug/L	8.592	155	0.001
	Ag	107	**-0.007**	ug/L	11.236	32	-0.000
	Cd	111	**-0.023**	ug/L	39.023	10	-0.000
	Cd	114		ug/L		32	-0.000
>	In	115		ug/L		150788	150788.156
	Sn	120	**0.136**	ug/L	2.729	537	0.002
	Sb	121	**1.083**	ug/L	12.628	3370	0.019
	Sb	123		ug/L		2593	0.015
	Ba	135		ug/L		66	0.000
	Ba	137	**0.032**	ug/L	25.655	98	0.000
	Ho	165		ug/L		31	-0.000
>	Lu	175		ug/L		198113	198112.901
	Tl	205	**0.236**	ug/L	6.775	2405	0.008
	Pb	208	**0.002**	ug/L	63.559	281	0.000
	Th	232	**0.024**	ug/L	14.991	404	0.001
	U	238	**0.024**	ug/L	12.845	358	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		102.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		107.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.8			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871712
Sample Date/Time: Saturday, July 04, 2009 01:59:32
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871712.958

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.273**	**ug/L**	1.638	7945	0.030
	Be	9	**53.569**	**ug/L**	1.838	7068	0.027
	B	11	**104.686**	**ug/L**	1.812	11823	0.044
	Na	23	**1908.098**	**ug/L**	6.519	2073707	7.732
	Mg	24	**1775.868**	**ug/L**	5.271	1498135	5.661
	Al	27	**2049.622**	**ug/L**	2.020	2530052	9.549
	P	31	**2023.215**	**ug/L**	2.607	185698	0.689
	K	39	**2152.249**	**ug/L**	4.537	4474020	15.262
	Ca	43	**2143.018**	**ug/L**	2.637	9363	0.033
>	Sc	45		**ug/L**		264298	264297.549
	Ti	47	**47.830**	**ug/L**	1.362	10612	0.039
	V	51	**53.478**	**ug/L**	6.380	150978	0.436
	Cr	52	**51.335**	**ug/L**	2.283	109861	0.426
	Cr	53		**ug/L**		436284	0.837
	Mn	55	**52.404**	**ug/L**	1.748	182396	0.686
	Fe	57	**2133.237**	**ug/L**	2.373	150231	0.547
	Co	59	**52.683**	**ug/L**	0.874	136893	0.517
	Ni	60	**52.727**	**ug/L**	1.577	29182	0.110
	Cu	63		**ug/L**		68572	0.259
	Cu	65	**54.072**	**ug/L**	1.342	32245	0.122
	Zn	66	**50.392**	**ug/L**	1.161	22825	0.109
	Zn	67		**ug/L**		23623	0.066
	Zn	68		**ug/L**		17081	0.078
>	Ge	74		**ug/L**		208692	208691.606
	As	75	**52.284**	**ug/L**	4.782	30480	0.144
	Se	77		**ug/L**		24814	0.075
	Se	82	**51.845**	**ug/L**	3.068	2297	0.011
	Kr	83		**ug/L**		95	-0.000
	Sr	88	**51.575**	**ug/L**	1.246	304501	2.041
	Y	89		**ug/L**		48	0.000
	Zr	90	**50.268**	**ug/L**	2.893	170459	1.142
	Mo	98	**51.012**	**ug/L**	0.933	78567	0.526
	Ag	107	**52.524**	**ug/L**	1.136	138058	0.925
	Cd	111	**51.482**	**ug/L**	0.545	32226	0.216
	Cd	114		**ug/L**		78134	0.524
>	In	115		**ug/L**		149131	149130.823
	Sn	120	**50.111**	**ug/L**	1.239	137564	0.921
	Sb	121	**54.163**	**ug/L**	1.919	145589	0.973
	Sb	123		**ug/L**		112226	0.750
	Ba	135		**ug/L**		35268	0.179
	Ba	137	**53.133**	**ug/L**	2.381	62194	0.316
	Ho	165		**ug/L**		42	0.000
>	Lu	175		**ug/L**		196395	196394.796
	Tl	205	**46.106**	**ug/L**	2.968	289413	1.469
	Pb	208	**51.633**	**ug/L**	1.089	357658	1.820
	Th	232	**51.230**	**ug/L**	0.600	365138	1.858
	U	238	**53.549**	**ug/L**	0.509	367155	1.868

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		107.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871713
Sample Date/Time: Saturday, July 04, 2009 02:08:59
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871713.960

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.413**	ug/L	18.005	74	0.000
	Be	9	**-0.014**	ug/L	87.231	13	-0.000
	B	11	**11.410**	ug/L	2.847	1456	0.005
	Na	23	**196.484**	ug/L	14.589	238664	0.796
	Mg	24	**6.768**	ug/L	35.565	7335	0.022
	Al	27	**-1.688**	ug/L	174.841	4001	-0.008
	P	31	**-13.511**	ug/L	16.344	2261	-0.005
	K	39	**478.992**	ug/L	12.415	1321593	3.397
	Ca	43	**103.560**	ug/L	12.526	1105	0.002
>	Sc	45		ug/L		261460	261460.293
	Ti	47	**0.374**	ug/L	21.523	300	0.000
	V	51	**0.875**	ug/L	499.196	37277	0.007
	Cr	52	**1.845**	ug/L	15.198	1428	0.015
	Cr	53		ug/L		452497	0.917
	Mn	55	**0.502**	ug/L	3.117	2928	0.007
	Fe	57	**17.241**	ug/L	9.341	6854	0.004
	Co	59	**-0.009**	ug/L	19.189	113	-0.000
	Ni	60	**0.085**	ug/L	16.854	124	0.000
	Cu	63		ug/L		1107	0.004
	Cu	65	**0.738**	ug/L	6.837	504	0.002
	Zn	66	**1.210**	ug/L	5.250	652	0.003
	Zn	67		ug/L		20874	0.054
	Zn	68		ug/L		1535	0.004
>	Ge	74		ug/L		206924	206924.438
	As	75	**1.463**	ug/L	82.957	1183	0.004
	Se	77		ug/L		26733	0.086
	Se	82	**-0.099**	ug/L	615.179	-15	-0.000
	Kr	83		ug/L		100	0.000
	Sr	88	**0.168**	ug/L	2.737	1191	0.007
	Y	89		ug/L		56	0.000
	Zr	90	**0.050**	ug/L	10.647	402	0.001
	Mo	98	**0.011**	ug/L	67.301	97	0.000
	Ag	107	**-0.009**	ug/L	19.044	27	-0.000
	Cd	111	**-0.016**	ug/L	80.178	14	-0.000
	Cd	114		ug/L		46	-0.000
>	In	115		ug/L		151802	151801.561
	Sn	120	**0.086**	ug/L	0.597	400	0.002
	Sb	121	**0.521**	ug/L	6.374	1860	0.009
	Sb	123		ug/L		1436	0.007
	Ba	135		ug/L		113	0.000
	Ba	137	**0.124**	ug/L	7.229	207	0.001
	Ho	165		ug/L		37	0.000
>	Lu	175		ug/L		198551	198551.077
	Tl	205	**0.204**	ug/L	11.977	2208	0.007
	Pb	208	**0.015**	ug/L	17.175	376	0.001
	Th	232	**0.001**	ug/L	154.516	237	0.000
	U	238	**-0.008**	ug/L	15.984	134	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		106.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.0			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871714
Sample Date/Time: Saturday, July 04, 2009 02:13:44
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871714.961

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.448**	ug/L	2.658	8179	0.031
	Be	9	**55.232**	ug/L	2.821	7213	0.028
	B	11	**117.193**	ug/L	1.771	13078	0.049
	Na	23	**2167.664**	ug/L	4.374	2328443	8.784
	Mg	24	**1952.516**	ug/L	5.882	1630192	6.224
	Al	27	**1972.369**	ug/L	8.743	2410762	9.189
	P	31	**2028.566**	ug/L	0.716	184335	0.691
	K	39	**2797.093**	ug/L	8.799	5621923	19.835
	Ca	43	**2253.076**	ug/L	1.605	9711	0.034
>	Sc	45		ug/L		261645	261644.667
	Ti	47	**47.681**	ug/L	1.944	10474	0.039
	V	51	**51.842**	ug/L	10.098	145979	0.422
	Cr	52	**54.622**	ug/L	1.563	115899	0.453
	Cr	53		ug/L		440248	0.869
	Mn	55	**53.277**	ug/L	1.534	183552	0.697
	Fe	57	**2218.633**	ug/L	0.848	154461	0.569
	Co	59	**53.851**	ug/L	1.484	138526	0.529
	Ni	60	**53.652**	ug/L	2.489	29393	0.112
	Cu	63		ug/L		69616	0.265
	Cu	65	**55.183**	ug/L	1.096	32573	0.124
	Zn	66	**50.032**	ug/L	2.769	22900	0.108
	Zn	67		ug/L		23549	0.065
	Zn	68		ug/L		17293	0.078
>	Ge	74		ug/L		210905	210905.483
	As	75	**41.306**	ug/L	2.621	24422	0.114
	Se	77		ug/L		24392	0.072
	Se	82	**9.933**	ug/L	4.122	436	0.002
	Kr	83		ug/L		96	-0.000
	Sr	88	**51.858**	ug/L	0.663	307646	2.052
	Y	89		ug/L		68	0.000
	Zr	90	**51.172**	ug/L	1.513	174385	1.162
	Mo	98	**51.989**	ug/L	2.091	80446	0.536
	Ag	107	**52.346**	ug/L	1.186	138236	0.922
	Cd	111	**5.327**	ug/L	0.768	3372	0.022
	Cd	114		ug/L		8006	0.053
>	In	115		ug/L		149857	149857.013
	Sn	120	**50.509**	ug/L	1.754	139323	0.929
	Sb	121	**105.709**	ug/L	2.256	285075	1.900
	Sb	123		ug/L		222758	1.484
	Ba	135		ug/L		36818	0.186
	Ba	137	**54.837**	ug/L	2.246	64492	0.327
	Ho	165		ug/L		39	0.000
>	Lu	175		ug/L		197325	197325.489
	Tl	205	**26.502**	ug/L	6.424	167594	0.844
	Pb	208	**21.162**	ug/L	1.991	147432	0.746
	Th	232	**52.364**	ug/L	1.471	374985	1.899
	U	238	**54.189**	ug/L	1.925	373266	1.891

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.7			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		108.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.4			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871715
Sample Date/Time: Saturday, July 04, 2009 02:18:29
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881357|5|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\1201871715.962

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.088**	ug/L	39.985	27	0.000
	Be	9	**0.023**	ug/L	127.973	18	0.000
	B	11	**4.528**	ug/L	10.542	696	0.002
	Na	23	**29.250**	ug/L	31.866	61133	0.119
	Mg	24	**1.212**	ug/L	59.518	2667	0.004
	Al	27	**-4.134**	ug/L	20.051	1000	-0.019
	P	31	**-12.615**	ug/L	6.674	2327	-0.004
	K	39	**78.759**	ug/L	16.307	576756	0.558
	Ca	43	**-0.976**	ug/L	1256.023	681	-0.000
>	Sc	45		ug/L		259742	259742.059
	Ti	47	**0.039**	ug/L	189.291	227	0.000
	V	51	**-1.401**	ug/L	130.042	32318	-0.011
	Cr	52	**0.982**	ug/L	22.200	-439	0.008
	Cr	53		ug/L		270763	0.229
	Mn	55	**0.079**	ug/L	21.046	1475	0.001
	Fe	57	**6.706**	ug/L	20.748	6108	0.002
	Co	59	**-0.013**	ug/L	57.943	102	-0.000
	Ni	60	**-0.001**	ug/L	4268.980	76	-0.000
	Cu	63		ug/L		339	0.001
	Cu	65	**0.146**	ug/L	16.136	155	0.000
	Zn	66	**0.333**	ug/L	13.487	254	0.001
	Zn	67		ug/L		10662	0.006
	Zn	68		ug/L		833	0.001
>	Ge	74		ug/L		201666	201666.144
	As	75	**1.377**	ug/L	30.651	1114	0.004
	Se	77		ug/L		13538	0.023
	Se	82	**0.274**	ug/L	53.351	1	0.000
	Kr	83		ug/L		85	-0.000
	Sr	88	**0.030**	ug/L	20.911	341	0.001
	Y	89		ug/L		28	-0.000
	Zr	90	**0.020**	ug/L	38.278	282	0.000
	Mo	98	**0.023**	ug/L	83.947	109	0.000
	Ag	107	**-0.000**	ug/L	1506.644	48	-0.000
	Cd	111	**-0.033**	ug/L	41.200	3	-0.000
	Cd	114		ug/L		31	-0.000
>	In	115		ug/L		144129	144129.045
	Sn	120	**0.014**	ug/L	19.877	190	0.000
	Sb	121	**0.274**	ug/L	10.329	1127	0.005
	Sb	123		ug/L		849	0.004
	Ba	135		ug/L		50	0.000
	Ba	137	**0.016**	ug/L	73.744	77	0.000
	Ho	165		ug/L		27	-0.000
>	Lu	175		ug/L		194491	194490.676
	Tl	205	**3.217**	ug/L	14.536	20848	0.102
	Pb	208	**-0.005**	ug/L	29.663	230	-0.000
	Th	232	**0.005**	ug/L	85.235	263	0.000
	U	238	**-0.007**	ug/L	22.726	142	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		97.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 02:23:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.963

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.081**	ug/L	1.442	7987	0.031
	Be	9	**54.436**	ug/L	0.560	6988	0.027
	B	11	**104.324**	ug/L	4.827	11451	0.044
	Na	23	**4926.997**	ug/L	2.768	5168576	19.966
	Mg	24	**5362.075**	ug/L	10.902	4385128	17.092
	Al	27	**5265.782**	ug/L	8.220	6302937	24.534
	P	31	**5025.347**	ug/L	3.237	443384	1.712
	K	39	**5388.561**	ug/L	1.542	10249930	38.211
	Ca	43	**5129.567**	ug/L	4.017	20844	0.078
>	Sc	45		ug/L		257159	257158.933
	Ti	47	**50.609**	ug/L	3.501	10905	0.042
	V	51	**49.608**	ug/L	5.804	138668	0.404
	Cr	52	**52.029**	ug/L	4.754	108237	0.431
	Cr	53		ug/L		202983	-0.023
	Mn	55	**52.908**	ug/L	4.659	178945	0.692
	Fe	57	**5322.415**	ug/L	5.120	355868	1.364
	Co	59	**53.194**	ug/L	5.432	134290	0.522
	Ni	60	**51.952**	ug/L	6.034	27935	0.109
	Cu	63		ug/L		64478	0.250
	Cu	65	**52.358**	ug/L	6.783	30322	0.118
	Zn	66	**49.901**	ug/L	2.860	21833	0.108
	Zn	67		ug/L		10838	0.007
	Zn	68		ug/L		15807	0.075
>	Ge	74		ug/L		201592	201592.470
	As	75	**49.186**	ug/L	1.832	27730	0.136
	Se	77		ug/L		9431	0.003
	Se	82	**48.809**	ug/L	1.748	2088	0.010
	Kr	83		ug/L		92	-0.000
	Sr	88	**49.646**	ug/L	2.006	285828	1.964
	Y	89		ug/L		57	0.000
	Zr	90	**49.336**	ug/L	0.747	163182	1.121
	Mo	98	**50.951**	ug/L	1.505	76522	0.526
	Ag	107	**49.791**	ug/L	0.576	127617	0.877
	Cd	111	**49.207**	ug/L	0.196	30034	0.206
	Cd	114		ug/L		72763	0.500
>	In	115		ug/L		145418	145418.478
	Sn	120	**49.271**	ug/L	0.151	131909	0.906
	Sb	121	**50.566**	ug/L	1.641	132580	0.909
	Sb	123		ug/L		103113	0.707
	Ba	135		ug/L		33700	0.171
	Ba	137	**50.903**	ug/L	1.829	59662	0.303
	Ho	165		ug/L		38	0.000
>	Lu	175		ug/L		196644	196643.927
	Tl	205	**42.489**	ug/L	4.160	267054	1.354
	Pb	208	**50.874**	ug/L	0.600	352853	1.793
	Th	232	**51.647**	ug/L	1.236	368573	1.873
	U	238	**52.693**	ug/L	3.568	361645	1.839

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	112.162				
	Be	9	108.873				
	B	11	104.324				
	Na	23	98.540				
	Mg	24	107.241				
	Al	27	104.273				
	P	31	100.507				
	K	39	107.771				
	Ca	43	102.591				
>	Sc	45		99.0			
	Ti	47	101.217				
	V	51	99.215				
	Cr	52	104.057				
	Cr	53					
	Mn	55	105.817				
	Fe	57	106.448				
	Co	59	106.389				
	Ni	60	103.904				
	Cu	63					
	Cu	65	104.716				
	Zn	66	99.802				
	Zn	67					
	Zn	68					
>	Ge	74		103.7			
	As	75	98.371				
	Se	77					
	Se	82	97.617				
	Kr	83					
	Sr	88	99.292				
	Y	89					
	Zr	90	98.671				
	Mo	98	101.903				
	Ag	107	99.582				
	Cd	111	98.413				
	Cd	114					
>	In	115		99.4			
	Sn	120	98.543				
	Sb	121	101.131				
	Sb	123					
	Ba	135					
	Ba	137	101.807				
	Ho	165					
>	Lu	175		99.0			
	Tl	205	84.978				
	Pb	208	101.749				
	Th	232	103.295				
	U	238	105.387				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits (+/- 10%)
QC Std 6	Tl	205CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 02:28:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.964

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.098**	**ug/L**	6.922	29	0.000
	Be	9	**0.032**	**ug/L**	106.556	19	0.000
	B	11	**2.828**	**ug/L**	19.314	514	0.001
	Na	23	**-3.016**	**ug/L**	195.199	27360	-0.012
	Mg	24	**0.777**	**ug/L**	82.791	2334	0.002
	Al	27	**-1.666**	**ug/L**	101.736	4001	-0.008
	P	31	**-4.392**	**ug/L**	6.083	3079	-0.001
	K	39	**2.178**	**ug/L**	438.900	438978	0.015
	Ca	43	**-34.431**	**ug/L**	10.354	553	-0.001
>	Sc	45		**ug/L**		261788	261788.050
	Ti	47	**0.052**	**ug/L**	344.563	231	0.000
	V	51	**-4.128**	**ug/L**	39.572	26703	-0.034
	Cr	52	**0.812**	**ug/L**	19.034	-810	0.007
	Cr	53		**ug/L**		189825	-0.088
	Mn	55	**-0.017**	**ug/L**	134.421	1154	-0.000
	Fe	57	**10.098**	**ug/L**	28.516	6381	0.003
	Co	59	**0.010**	**ug/L**	19.874	162	0.000
	Ni	60	**-0.030**	**ug/L**	43.534	61	-0.000
	Cu	63		**ug/L**		147	-0.000
	Cu	65	**0.023**	**ug/L**	79.367	83	0.000
	Zn	66	**0.004**	**ug/L**	363.200	112	0.000
	Zn	67		**ug/L**		7581	-0.010
	Zn	68		**ug/L**		573	-0.001
>	Ge	74		**ug/L**		203154	203153.747
	As	75	**1.191**	**ug/L**	93.365	1014	0.003
	Se	77		**ug/L**		8420	-0.002
	Se	82	**0.034**	**ug/L**	630.681	-9	0.000
	Kr	83		**ug/L**		86	-0.000
	Sr	88	**0.005**	**ug/L**	69.163	194	0.000
	Y	89		**ug/L**		27	-0.000
	Zr	90	**0.036**	**ug/L**	23.860	334	0.001
	Mo	98	**0.079**	**ug/L**	28.896	192	0.001
	Ag	107	**0.007**	**ug/L**	22.881	66	0.000
	Cd	111	**0.002**	**ug/L**	616.736	24	0.000
	Cd	114		**ug/L**		53	0.000
>	In	115		**ug/L**		143137	143137.440
	Sn	120	**0.015**	**ug/L**	61.493	191	0.000
	Sb	121	**0.328**	**ug/L**	16.068	1260	0.006
	Sb	123		**ug/L**		966	0.004
	Ba	135		**ug/L**		43	0.000
	Ba	137	**0.008**	**ug/L**	94.313	68	0.000
	Ho	165		**ug/L**		32	-0.000
>	Lu	175		**ug/L**		195393	195392.902
	Tl	205	**4.291**	**ug/L**	16.990	27625	0.137
	Pb	208	**0.022**	**ug/L**	18.893	419	0.001
	Th	232	**0.090**	**ug/L**	36.089	867	0.003
	U	238	**0.024**	**ug/L**	26.786	353	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			100.8		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			104.5		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			97.9		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			98.4		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 7	Tl	205	CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232506001
Sample Date/Time: Saturday, July 04, 2009 02:42:14
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\232506001.967

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.354**	**ug/L**	36.965	65	0.000
	Be	9	**-0.025**	**ug/L**	70.377	11	-0.000
	B	11	**11.017**	**ug/L**	2.213	1396	0.005
	Na	23	**157.082**	**ug/L**	21.010	194336	0.637
	Mg	24	**10.128**	**ug/L**	11.110	10004	0.032
	Al	27	**1.121**	**ug/L**	163.883	7335	0.005
	P	31	**-15.067**	**ug/L**	6.367	2098	-0.005
	K	39	**445.942**	**ug/L**	2.425	1246448	3.162
	Ca	43	**83.641**	**ug/L**	31.975	1011	0.001
>	Sc	45		**ug/L**		258368	258368.339
	Ti	47	**0.344**	**ug/L**	9.046	290	0.000
	V	51	**-2.786**	**ug/L**	98.152	29185	-0.023
	Cr	52	**2.108**	**ug/L**	5.246	1974	0.017
	Cr	53		**ug/L**		475438	1.027
	Mn	55	**0.475**	**ug/L**	1.731	2803	0.006
	Fe	57	**23.147**	**ug/L**	9.233	7162	0.006
	Co	59	**-0.004**	**ug/L**	131.049	125	-0.000
	Ni	60	**0.082**	**ug/L**	23.260	120	0.000
	Cu	63		**ug/L**		932	0.003
	Cu	65	**0.652**	**ug/L**	6.256	448	0.001
	Zn	66	**1.220**	**ug/L**	7.360	684	0.003
	Zn	67		**ug/L**		20475	0.048
	Zn	68		**ug/L**		1446	0.003
>	Ge	74		**ug/L**		215310	215310.286
	As	75	**1.098**	**ug/L**	96.567	1021	0.003
	Se	77		**ug/L**		31547	0.103
	Se	82	**0.317**	**ug/L**	111.450	3	0.000
	Kr	83		**ug/L**		85	-0.000
	Sr	88	**0.156**	**ug/L**	3.544	1123	0.006
	Y	89		**ug/L**		140	0.001
	Zr	90	**0.031**	**ug/L**	22.415	342	0.001
	Mo	98	**-0.006**	**ug/L**	104.124	70	-0.000
	Ag	107	**-0.009**	**ug/L**	12.256	26	-0.000
	Cd	111	**-0.013**	**ug/L**	66.453	16	-0.000
	Cd	114		**ug/L**		43	-0.000
>	In	115		**ug/L**		153142	153142.253
	Sn	120	**0.059**	**ug/L**	8.730	329	0.001
	Sb	121	**0.230**	**ug/L**	3.015	1078	0.004
	Sb	123		**ug/L**		845	0.003
	Ba	135		**ug/L**		155	0.001
	Ba	137	**0.179**	**ug/L**	7.000	277	0.001
	Ho	165		**ug/L**		39	0.000
>	Lu	175		**ug/L**		202138	202138.219
	Tl	205	**0.439**	**ug/L**	5.303	3761	0.014
	Pb	208	**0.009**	**ug/L**	21.362	342	0.000
	Th	232	**-0.011**	**ug/L**	15.370	153	-0.000
	U	238	**-0.014**	**ug/L**	11.455	97	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			99.5		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			110.7		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			104.7		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			101.8		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232506002
Sample Date/Time: Saturday, July 04, 2009 02:46:57
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\232506002.968

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.284**	ug/L	11.154	55	0.000
	Be	9	**-0.013**	ug/L	114.295	13	-0.000
	B	11	**10.823**	ug/L	6.489	1380	0.005
	Na	23	**210.903**	ug/L	12.831	251885	0.855
	Mg	24	**7.657**	ug/L	26.216	8002	0.024
	Al	27	**-1.096**	ug/L	157.808	4668	-0.005
	P	31	**-15.210**	ug/L	1.936	2094	-0.005
	K	39	**428.810**	ug/L	4.901	1219634	3.041
	Ca	43	**71.132**	ug/L	16.934	967	0.001
>	Sc	45		ug/L		259320	259319.817
	Ti	47	**0.317**	ug/L	38.442	285	0.000
	V	51	**-3.221**	ug/L	111.793	28445	-0.026
	Cr	52	**1.853**	ug/L	13.878	1431	0.015
	Cr	53		ug/L		475100	1.019
	Mn	55	**0.532**	ug/L	3.503	3008	0.007
	Fe	57	**21.144**	ug/L	10.537	7057	0.005
	Co	59	**-0.006**	ug/L	60.700	120	-0.000
	Ni	60	**0.047**	ug/L	26.968	102	0.000
	Cu	63		ug/L		883	0.003
	Cu	65	**0.589**	ug/L	11.070	413	0.001
	Zn	66	**1.143**	ug/L	4.939	649	0.002
	Zn	67		ug/L		20510	0.048
	Zn	68		ug/L		1411	0.003
>	Ge	74		ug/L		215568	215568.466
	As	75	**2.761**	ug/L	14.299	2017	0.008
	Se	77		ug/L		31633	0.103
	Se	82	**0.318**	ug/L	153.503	3	0.000
	Kr	83		ug/L		95	-0.000
	Sr	88	**0.149**	ug/L	2.201	1073	0.006
	Y	89		ug/L		69	0.000
	Zr	90	**-0.003**	ug/L	49.444	219	-0.000
	Mo	98	**-0.010**	ug/L	43.416	63	-0.000
	Ag	107	**-0.011**	ug/L	11.885	20	-0.000
	Cd	111	**-0.015**	ug/L	29.094	15	-0.000
	Cd	114		ug/L		38	-0.000
>	In	115		ug/L		151595	151594.887
	Sn	120	**0.077**	ug/L	10.574	375	0.001
	Sb	121	**0.231**	ug/L	9.746	1067	0.004
	Sb	123		ug/L		818	0.003
	Ba	135		ug/L		361	0.002
	Ba	137	**0.483**	ug/L	9.977	639	0.003
	Ho	165		ug/L		32	-0.000
>	Lu	175		ug/L		201017	201017.120
	Tl	205	**0.312**	ug/L	2.713	2927	0.010
	Pb	208	**0.004**	ug/L	148.512	302	0.000
	Th	232	**-0.017**	ug/L	4.488	108	-0.001
	U	238	**-0.020**	ug/L	5.238	52	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			99.8		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			110.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			103.7		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			101.2		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 02:56:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.970

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.801**	ug/L	5.445	8026	0.031
	Be	9	**55.134**	ug/L	3.125	7024	0.027
	B	11	**100.809**	ug/L	4.621	10999	0.042
	Na	23	**4771.226**	ug/L	10.775	4961833	19.335
	Mg	24	**4998.899**	ug/L	13.415	4065520	15.934
	Al	27	**5143.022**	ug/L	4.516	6119841	23.962
	P	31	**4748.563**	ug/L	2.077	416344	1.618
	K	39	**5216.401**	ug/L	2.018	9866363	36.990
	Ca	43	**4877.992**	ug/L	1.752	19722	0.075
>	Sc	45		ug/L		255243	255243.095
	Ti	47	**48.518**	ug/L	3.148	10392	0.040
	V	51	**47.433**	ug/L	3.919	133254	0.386
	Cr	52	**50.493**	ug/L	2.827	104310	0.419
	Cr	53		ug/L		218872	0.043
	Mn	55	**51.771**	ug/L	1.369	174026	0.677
	Fe	57	**5202.310**	ug/L	3.022	345792	1.333
	Co	59	**51.581**	ug/L	1.501	129440	0.507
	Ni	60	**51.253**	ug/L	0.670	27398	0.107
	Cu	63		ug/L		63800	0.249
	Cu	65	**51.488**	ug/L	1.217	29652	0.116
	Zn	66	**47.822**	ug/L	2.336	21139	0.103
	Zn	67		ug/L		11340	0.009
	Zn	68		ug/L		15422	0.072
>	Ge	74		ug/L		203620	203620.289
	As	75	**48.612**	ug/L	0.907	27689	0.134
	Se	77		ug/L		10143	0.006
	Se	82	**46.113**	ug/L	3.318	1992	0.010
	Kr	83		ug/L		79	-0.000
	Sr	88	**48.234**	ug/L	0.975	276276	1.909
	Y	89		ug/L		58	0.000
	Zr	90	**48.614**	ug/L	3.745	159937	1.104
	Mo	98	**50.109**	ug/L	1.089	74876	0.517
	Ag	107	**49.420**	ug/L	2.232	126001	0.871
	Cd	111	**48.338**	ug/L	1.110	29352	0.203
	Cd	114		ug/L		72102	0.498
>	In	115		ug/L		144688	144687.716
	Sn	120	**48.209**	ug/L	2.308	128383	0.887
	Sb	121	**49.415**	ug/L	1.210	128904	0.888
	Sb	123		ug/L		100068	0.689
	Ba	135		ug/L		33172	0.168
	Ba	137	**49.914**	ug/L	1.558	58763	0.297
	Ho	165		ug/L		42	0.000
>	Lu	175		ug/L		197513	197512.814
	Tl	205	**36.785**	ug/L	2.884	232363	1.172
	Pb	208	**50.881**	ug/L	0.794	354446	1.793
	Th	232	**51.850**	ug/L	2.051	371611	1.881
	U	238	**52.234**	ug/L	1.385	360129	1.823

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	113.601				
	Be	9	110.268				
	B	11	100.809				
	Na	23	95.425				
	Mg	24	99.978				
	Al	27	101.842				
	P	31	94.971				
	K	39	104.328				
	Ca	43	97.560				
>	Sc	45		98.3			
	Ti	47	97.036				
	V	51	94.865				
	Cr	52	100.987				
	Cr	53					
	Mn	55	103.541				
	Fe	57	104.046				
	Co	59	103.162				
	Ni	60	102.506				
	Cu	63					
	Cu	65	102.976				
	Zn	66	95.644				
	Zn	67					
	Zn	68					
>	Ge	74		104.7			
	As	75	97.223				
	Se	77					
	Se	82	92.226				
	Kr	83					
	Sr	88	96.468				
	Y	89					
	Zr	90	97.229				
	Mo	98	100.219				
	Ag	107	98.841				
	Cd	111	96.676				
	Cd	114					
>	In	115		98.9			
	Sn	120	96.419				
	Sb	121	98.829				
	Sb	123					
	Ba	135					
	Ba	137	99.827				
	Ho	165					
>	Lu	175		99.5			
	Tl	205	73.569				
	Pb	208	101.761				
	Th	232	103.701				
	U	238	104.469				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits (+/- 10%)
QC Std 6	Be	9CCV is out of limits (+/- 10%)
QC Std 6	Tl	205CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 03:01:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 3.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.971

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.051**	ug/L	25.397	21	0.000
	Be	9	**0.024**	ug/L	22.382	17	0.000
	B	11	**2.351**	ug/L	22.913	446	0.001
	Na	23	**-0.486**	ug/L	331.587	29030	-0.002
	Mg	24	**0.473**	ug/L	265.593	2000	0.002
	Al	27	**-2.975**	ug/L	43.946	2334	-0.014
	P	31	**-4.816**	ug/L	38.669	2934	-0.002
	K	39	**1.849**	ug/L	567.689	423187	0.013
	Ca	43	**-35.631**	ug/L	12.561	529	-0.001
>	Sc	45		ug/L		252553	252553.265
	Ti	47	**-0.021**	ug/L	843.142	208	-0.000
	V	51	**-2.920**	ug/L	60.984	28308	-0.024
	Cr	52	**0.724**	ug/L	16.144	-968	0.006
	Cr	53		ug/L		188018	-0.069
	Mn	55	**-0.013**	ug/L	36.906	1128	-0.000
	Fe	57	**9.704**	ug/L	46.525	6132	0.002
	Co	59	**0.005**	ug/L	139.610	144	0.000
	Ni	60	**-0.012**	ug/L	207.010	68	-0.000
	Cu	63		ug/L		137	-0.000
	Cu	65	**0.002**	ug/L	1045.413	69	0.000
	Zn	66	**0.019**	ug/L	205.630	117	0.000
	Zn	67		ug/L		7445	-0.010
	Zn	68		ug/L		571	-0.001
>	Ge	74		ug/L		199852	199851.899
	As	75	**1.252**	ug/L	41.240	1036	0.003
	Se	77		ug/L		8405	-0.002
	Se	82	**0.284**	ug/L	39.148	2	0.000
	Kr	83		ug/L		77	-0.000
	Sr	88	**0.005**	ug/L	49.749	195	0.000
	Y	89		ug/L		24	-0.000
	Zr	90	**0.033**	ug/L	25.328	320	0.001
	Mo	98	**0.070**	ug/L	37.724	177	0.001
	Ag	107	**0.009**	ug/L	55.596	71	0.000
	Cd	111	**0.005**	ug/L	160.410	26	0.000
	Cd	114		ug/L		60	0.000
>	In	115		ug/L		141761	141761.344
	Sn	120	**0.017**	ug/L	26.674	194	0.000
	Sb	121	**0.265**	ug/L	25.204	1088	0.005
	Sb	123		ug/L		856	0.004
	Ba	135		ug/L		40	0.000
	Ba	137	**0.006**	ug/L	47.761	67	0.000
	Ho	165		ug/L		33	0.000
>	Lu	175		ug/L		194922	194922.260
	Tl	205	**3.450**	ug/L	14.724	22357	0.110
	Pb	208	**0.018**	ug/L	26.405	386	0.001
	Th	232	**0.085**	ug/L	38.072	832	0.003
	U	238	**0.023**	ug/L	14.589	346	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	0.9999
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		97.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.2			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Saturday, July 04, 2009 11:02:58
Sample Description:
Method File: C:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.1057
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 35
Current Dead Time (ns): 35
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1681.5	1681.499	43.815	2.6
	Mg	24.0	16793.5	16793.469	385.861	2.3
	Co	58.9	32721.8	32721.842	598.507	1.8
	Rh	102.9	71511.8	71511.777	1135.666	1.6
	In	114.9	91608.9	91608.866	1676.072	1.8
	Pb	208.0	41004.2	41004.167	382.874	0.9
⌈>	Ba	137.9	85130.0	85129.980	1041.796	1.2
⌊	Ba++	69.0	1858.6	0.022	0.000	1.9
⌈>	Ce	139.9	109273.8	109273.813	1682.715	1.5
⌊	CeO	155.9	1508.8	0.014	0.000	2.3
	Bkgd	220.0	10.1	10.100	1.673	16.6

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-2000.00	Analog Stage Voltage
1950.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	7.3	1853.1
Co	59	17	8.3	33908.2
In	115	17	9.3	120912.5

ICPMS#3 Instrument Tuning Report

File Name: 090704.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	582	2070	0.655
Be	9.0	9.0	2046	2070	0.628
Mg	24.0	24.0	5708	2120	0.577
Mg	25.0	25.0	5927	2050	0.652
Mg	26.0	26.0	6188	2130	0.633
Co	58.9	58.9	14199	2110	0.679
Rh	102.9	103.0	24906	2170	0.655
In	114.9	114.9	27822	2180	0.658
Ce	139.9	139.9	33907	2200	0.688
Pb	206.0	205.9	49980	2270	0.703
Pb	207.0	207.0	50269	2300	0.673
Pb	208.0	208.0	50486	2320	0.628
U	238.1	238.0	57832	2340	0.668

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Saturday, July 04, 2009 14:04:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Blank.1058

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		221755	
	Tl	205		ug/L		93	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Simple Linear	
Tl	205	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175					
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 04, 2009 14:08:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Standard 1.1059

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		216188	216188.484
	Tl	205	**10.000**	**ug/L**	0.595	78913	0.365

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175					
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 04, 2009 14:11:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\Standard 2.1060

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		208064	208064.435
	Tl	205	**99.979**	**ug/L**	1.276	742955	3.571

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 04, 2009 14:15:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 1.1061

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		205540	205540.181
	Tl	205	**49.707**	**ug/L**	0.765	364996	1.775

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		92.7			
	Tl	205	99.414				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 04, 2009 14:19:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 2.1062

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		212674	212673.926
	Tl	205	0.047	ug/L	9.653	446	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			95.9		
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 04, 2009 14:22:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 3.1063

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		211516	211516.206
	Tl	205	**0.981**	**ug/L**	0.855	7500	0.035

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			95.4		
	Tl	205	98.110				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 04, 2009 14:26:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 4.1064

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		203137	203136.803
	Tl	205	**0.034**	**ug/L**	1.253	332	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		91.6			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 04, 2009 14:30:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 5.1065

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		200750	200749.728
	Tl	205	**18.343**	**ug/L**	1.086	131602	0.655

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			90.5		
	Tl	205	91.714				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 14:33:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1066

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		206829	206829.015
	Tl	205	**48.863**	**ug/L**	1.236	361023	1.745

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			93.3		
	Tl	205	97.726				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 14:37:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1067

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		211763	211762.861
	Tl	205	**0.054**	ug/L	3.235	494	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			95.5		
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871711
Sample Date/Time: Saturday, July 04, 2009 14:41:23
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871711.1068

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		211249	211249.053
	Tl	205	**0.016**	**ug/L**	7.494	208	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175			95.3		
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871712
Sample Date/Time: Saturday, July 04, 2009 14:45:10
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871712.1069

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		212039	212039.147
	Tl	205	42.993	ug/L	0.441	325701	1.536

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			95.6		
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871713
Sample Date/Time: Saturday, July 04, 2009 14:52:44
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871713.1071

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		213947	213947.221
	Tl	205	**0.039**	**ug/L**	9.530	385	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			96.5		
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871714
Sample Date/Time: Saturday, July 04, 2009 14:56:30
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871714.1072

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		209571	209570.521
[	Tl	205	29.263	ug/L	0.556	219126	1.045

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			94.5		
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201871715
Sample Date/Time: Saturday, July 04, 2009 15:00:15
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 881357|5|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\1201871715.1073

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		208353	208352.504
	Tl	205	0.818	ug/L	1.503	6174	0.029

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			94.0		
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 15:03:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1074

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		202248	202248.130
	Tl	205	**48.451**	**ug/L**	1.527	350035	1.731

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		91.2			
⌊	Tl	205	96.903				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 15:07:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1075

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		209532	209532.009
	Tl	205	0.370	ug/L	2.492	2860	0.013

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		94.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232506001
Sample Date/Time: Saturday, July 04, 2009 15:19:00
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\232506001.1078

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		211816	211815.527
	Tl	205	0.065	ug/L	0.481	579	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			95.5		
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232506002
Sample Date/Time: Saturday, July 04, 2009 15:22:48
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 881357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\232506002.1079

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		211770	211769.584
	Tl	205	0.045	ug/L	7.228	432	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		95.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 04, 2009 15:30:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 6.1081

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		204551	204550.807
	Tl	205	46.976	ug/L	1.330	343271	1.678

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175			92.2		
	Tl	205	93.953				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 04, 2009 15:34:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\Dataset\default\QC Std 7.1082

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		**ug/L**		206366	206365.675
	Tl	205	**0.205**	**ug/L**	3.291	1600	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		93.1			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: WATER
Method Description: 7470A, 245.2, ILM04 ANALYST JXL1
Element: Hg

Date: 07/02/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 070209W1.SIF Results Data Set Name: 070209W1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/02/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0035	0.0035	08:06:52	No
2			0.0035	0.0035	08:07:27	No
Mean:			0.0035			
SD :			0.0000			
%RSD:						

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/02/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0024	0.0059	08:08:50	No
2			0.0024	0.0059	08:09:25	No
Mean:			0.0024			
SD :			0.0000			
%RSD:						

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.01208
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/02/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0065	0.0099	08:10:48	No
2			0.0062	0.0097	08:11:23	No
Mean:			0.0064			
SD :			0.0002			
%RSD:			2.3730			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99975 Slope: 0.01274
Intercept : -0.00005

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/02/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0263	0.0297	08:12:48	No
2			0.0260	0.0294	08:13:22	No
Mean:			0.0261			
SD :			0.0002			
%RSD:			0.8210			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99997 Slope: 0.01312
Intercept : -0.00013

==========

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/02/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0654	0.0689	08:14:47	No
2			0.0647	0.0682	08:15:22	No
Mean:			0.0651			
SD :			0.0005			
%RSD:			0.7186			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99999 Slope: 0.01304
Intercept : -0.00009

==========

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/02/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1313	0.1348	08:16:48	No
2			0.1307	0.1341	08:17:23	No
Mean:			0.1310			
SD :			0.0005			
%RSD:			0.3773			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 1.00000 Slope: 0.01310
Intercept : -0.00016

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0035	---	----	----	----
S0.2	0.0024	0.200	0.196	0.0000	----
S0.5	0.0064	0.500	0.497	0.0002	2.4
S2.0	0.0261	2.000	2.006	0.0002	0.8
S5.0	0.0651	5.000	4.979	0.0005	0.7
S10	0.1310	10.000	10.01	0.0005	0.4

Correlation Coefficient: 1.00000 Slope: 0.01310 Intercept: -0.0002

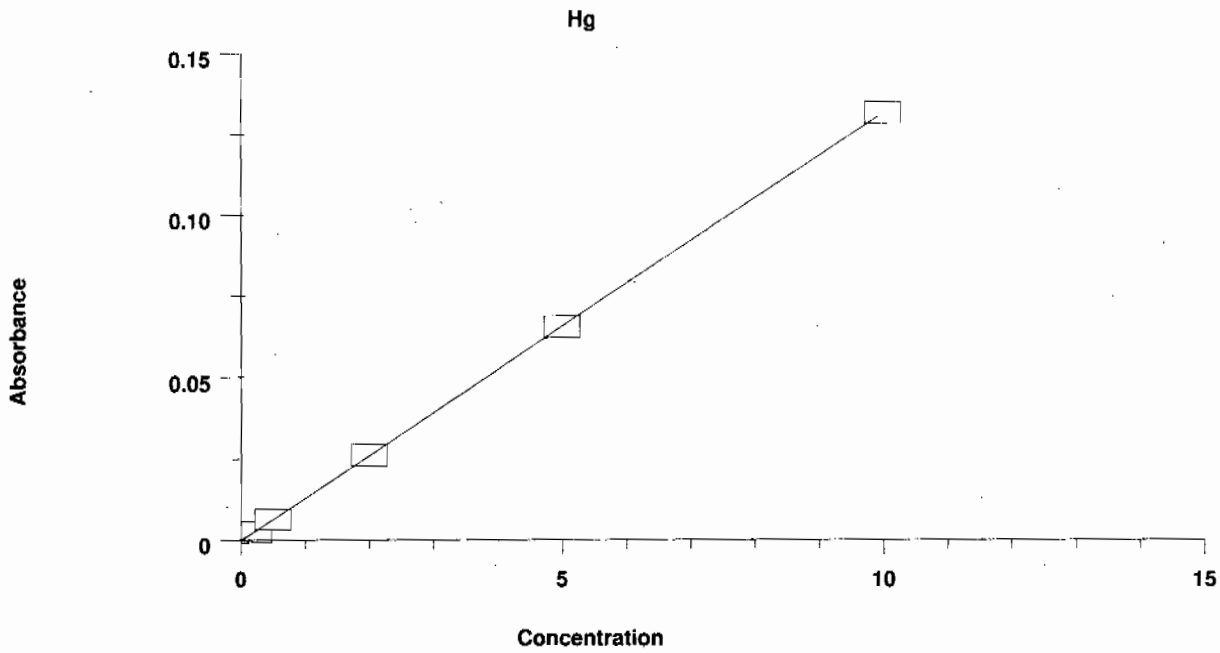

==========

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/02/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.225	5.225	0.0683	0.0718	08:18:51	No
2	5.236	5.236	0.0685	0.0719	08:19:27	No
Mean:	5.231	5.231	0.0684			
SD :	0.0077	0.0077	0.0001			
%RSD:	0.1	0.1	0.1470			

QC value within specified limits.

==========

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/02/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0004	0.0031	08:20:49	No
2	-0.021	-0.021	-0.0004	0.0030	08:21:24	No
Mean:	-0.019	-0.019	-0.0004			
SD :	0.0022	0.0022	0.0000			
%RSD:	11.5	11.5	7.0604			

QC value within specified limits.

==========

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/02/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.232	0.232	0.0029	0.0063	08:22:47	No
2	0.224	0.224	0.0028	0.0062	08:23:22	No
Mean:	0.228	0.228	0.0028			
SD :	0.0056	0.0056	0.0001			
%RSD:	2.4	2.4	2.5791			

QC value within specified limits.

==========

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.883	4.883	0.0638	0.0673	08:24:47	No
2	4.821	4.821	0.0630	0.0665	08:25:21	No
Mean:	4.852	4.852	0.0634			
SD :	0.0441	0.0441	0.0006			
%RSD:	0.9	0.9	0.9102			

QC value within specified limits.

==========

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.008	-0.008	-0.0003	0.0032	08:26:49	No
2	-0.012	-0.012	-0.0003	0.0031	08:27:24	No
Mean:	-0.010	-0.010	-0.0003			
SD :	0.0032	0.0032	0.0000			
%RSD:	31.8	31.8	14.4763			

QC value within specified limits.

==========

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/02/2009
Sample ID: 1201870347|i||880856|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.032	-0.032	-0.0006	0.0029	08:28:49	No
2	-0.048	-0.048	-0.0008	0.0027	08:29:25	No
Mean:	-0.040	-0.040	-0.0007			
SD :	0.0112	0.0112	0.0001			
%RSD:	28.3	28.3	21.6993			

==========

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/02/2009
Sample ID: 1201870348|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.008	2.008	0.0261	0.0296	08:30:49	No
2	1.976	1.976	0.0257	0.0292	08:31:24	No
Mean:	1.992	1.992	0.0259			
SD :	0.0223	0.0223	0.0003			
%RSD:	1.1	1.1	1.1248			

==========

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/02/2009
Sample ID: 232341001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.041	-0.041	-0.0007	0.0028	08:32:50	No
2	-0.057	-0.057	-0.0009	0.0026	08:33:24	No
Mean:	-0.049	-0.049	-0.0008			
SD :	0.0112	0.0112	0.0001			
%RSD:	23.1	23.1	18.5514			

==========

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/02/2009
Sample ID: 1201870349|i|||DUP

%RSD:	14.9	14.9	11.8685

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/02/2009
Sample ID: 1201872353|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.963	1.963	0.0256	0.0290	08:46:39	No
2	1.968	1.968	0.0256	0.0291	08:47:13	No
Mean:	1.966	1.966	0.0256			
SD :	0.0033	0.0033	0.0000			
%RSD:	0.2	0.2	0.1702			

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.785	4.785	0.0625	0.0660	08:48:37	No
2	4.766	4.766	0.0623	0.0657	08:49:11	No
Mean:	4.775	4.775	0.0624			
SD :	0.0139	0.0139	0.0002			
%RSD:	0.3	0.3	0.2925			

QC value within specified limits.

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.031	-0.031	-0.0006	0.0029	08:50:39	No
2	-0.034	-0.034	-0.0006	0.0029	08:51:14	No
Mean:	-0.033	-0.033	-0.0006			
SD :	0.0018	0.0018	0.0000			
%RSD:	5.5	5.5	4.0500			

QC value within specified limits.

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/02/2009
Sample ID: 231723001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	-0.0010	0.0024	08:52:40	No
2	-0.080	-0.080	-0.0012	0.0023	08:53:15	No
Mean:	-0.073	-0.073	-0.0011			
SD :	0.0091	0.0091	0.0001			
%RSD:	12.4	12.4	10.6120			

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/02/2009
Sample ID: 1201871389|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.542	1.542	0.0201	0.0235	08:54:38	No
2	1.548	1.548	0.0201	0.0236	08:55:13	No
Mean:	1.545	1.545	0.0201			
SD :	0.0038	0.0038	0.0001			
%RSD:	0.2	0.2	0.2492			

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/02/2009
Sample ID: 1201872354|i|||DUP

%RSD: 7.6 7.6 6.1821

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/02/2009
Sample ID: 231723006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.063	-0.063	-0.0010	0.0025	09:08:39	No
2	-0.061	-0.061	-0.0010	0.0025	09:09:14	No
Mean:	-0.062	-0.062	-0.0010			
SD :	0.0011	0.0011	0.0000			
%RSD:	1.8	1.8	1.4924			

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/02/2009
Sample ID: 231727001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.072	-0.072	-0.0011	0.0024	09:10:41	No
2	-0.070	-0.070	-0.0011	0.0024	09:11:16	No
Mean:	-0.071	-0.071	-0.0011			
SD :	0.0013	0.0013	0.0000			
%RSD:	1.8	1.8	1.5214			

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.773	4.773	0.0624	0.0658	09:12:43	No
2	4.755	4.755	0.0622	0.0656	09:13:18	No
Mean:	4.764	4.764	0.0623			
SD :	0.0125	0.0125	0.0002			
%RSD:	0.3	0.3	0.2638			

QC value within specified limits.

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.024	-0.024	-0.0005	0.0030	09:14:46	No
2	-0.036	-0.036	-0.0006	0.0028	09:15:21	No
Mean:	-0.030	-0.030	-0.0005			
SD :	0.0082	0.0082	0.0001			
%RSD:	27.4	27.4	19.5797			

QC value within specified limits.

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/02/2009
Sample ID: 231727002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.016	-0.016	-0.0004	0.0031	09:16:46	No
2	-0.024	-0.024	-0.0005	0.0030	09:17:21	No
Mean:	-0.020	-0.020	-0.0004			
SD :	0.0057	0.0057	0.0001			
%RSD:	28.3	28.3	17.7366			

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/02/2009
Sample ID: 231727003|i|||

%RSD: 44.5 44.5 14.3043

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Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 07/02/2009
Sample ID: 231732003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.006	-0.006	-0.0002	0.0032	09:30:20	No
2	-0.018	-0.018	-0.0004	0.0031	09:30:55	No
Mean:	-0.012	-0.012	-0.0003			
SD :	0.0085	0.0085	0.0001			
%RSD:	69.5	69.5	35.1341			

==========

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 07/02/2009
Sample ID: 231732004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0000	0.0034	09:32:19	No
2	-0.003	-0.003	-0.0002	0.0033	09:32:54	No
Mean:	0.003	0.003	-0.0001			
SD :	0.0084	0.0084	0.0001			
%RSD:	264.7	264.7	94.3912			

==========

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 07/02/2009
Sample ID: 231732005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	-0.0004	0.0030	09:34:18	No
2	-0.034	-0.034	-0.0006	0.0029	09:34:53	No
Mean:	-0.027	-0.027	-0.0005			
SD :	0.0103	0.0103	0.0001			
%RSD:	38.0	38.0	26.3442			

==========

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.761	4.761	0.0622	0.0657	09:36:18	No
2	4.778	4.778	0.0625	0.0659	09:36:53	No
Mean:	4.769	4.769	0.0623			
SD :	0.0124	0.0124	0.0002			
%RSD:	0.3	0.3	0.2608			

QC value within specified limits.

==========

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.023	-0.023	-0.0005	0.0030	09:38:22	No
2	-0.032	-0.032	-0.0006	0.0029	09:38:57	No
Mean:	-0.027	-0.027	-0.0005			
SD :	0.0068	0.0068	0.0001			
%RSD:	25.0	25.0	17.3712			

QC value within specified limits.

==========

Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 07/02/2009
Sample ID: 231732006|i|||

%RSD: 32.2 32.2 18.1163

Element: Hg Seq. No.: 54 AS Loc.: 48 Date: 07/02/2009
Sample ID: 1201872366|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.024	2.024	0.0264	0.0298	09:52:27	No
2	2.014	2.014	0.0262	0.0297	09:53:02	No
Mean:	2.019	2.019	0.0263			
SD :	0.0072	0.0072	0.0001			
%RSD:	0.4	0.4	0.3580			

Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 07/02/2009
Sample ID: 1201872367|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0012	0.0023	09:54:21	No
2	-0.082	-0.082	-0.0012	0.0022	09:54:56	No
Mean:	-0.079	-0.079	-0.0012			
SD :	0.0042	0.0042	0.0001			
%RSD:	5.3	5.3	4.6033			

Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 07/02/2009
Sample ID: 232604003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.026	-0.026	-0.0005	0.0030	09:56:16	No
2	-0.025	-0.025	-0.0005	0.0030	09:56:51	No
Mean:	-0.025	-0.025	-0.0005			
SD :	0.0005	0.0005	0.0000			
%RSD:	2.0	2.0	1.3807			

Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 07/02/2009
Sample ID: 232604004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.029	-0.029	-0.0005	0.0029	09:58:11	No
2	-0.034	-0.034	-0.0006	0.0029	09:58:46	No
Mean:	-0.032	-0.032	-0.0006			
SD :	0.0038	0.0038	0.0001			
%RSD:	12.1	12.1	8.7533			

Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.824	4.824	0.0631	0.0665	10:00:10	No
2	4.809	4.809	0.0629	0.0663	10:00:45	No
Mean:	4.816	4.816	0.0630			
SD :	0.0111	0.0111	0.0001			
%RSD:	0.2	0.2	0.2305			

QC value within specified limits.

Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.028	-0.028	-0.0005	0.0029	10:02:14	No
2	-0.033	-0.033	-0.0006	0.0029	10:02:49	No
Mean:	-0.030	-0.030	-0.0006			
SD :	0.0038	0.0038	0.0000			
%RSD:	12.4	12.4	8.9172			

QC value within specified limits.

==========

Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 07/02/2009
Sample ID: 232604005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.039	-0.039	-0.0007	0.0028	10:04:14	No
2	-0.045	-0.045	-0.0007	0.0027	10:04:49	No
Mean:	-0.042	-0.042	-0.0007			
SD :	0.0040	0.0040	0.0001			
%RSD:	9.5	9.5	7.4059			

==========

Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 07/02/2009
Sample ID: 1201872375|i||881662|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	-0.0004	0.0030	10:06:11	No
2	-0.029	-0.029	-0.0005	0.0029	10:06:46	No
Mean:	-0.025	-0.025	-0.0005			
SD :	0.0065	0.0065	0.0001			
%RSD:	26.6	26.6	17.8750			

==========

Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 07/02/2009
Sample ID: 1201872376|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.992	1.992	0.0259	0.0294	10:08:08	No
2	1.968	1.968	0.0256	0.0291	10:08:43	No
Mean:	1.980	1.980	0.0258			
SD :	0.0171	0.0171	0.0002			
%RSD:	0.9	0.9	0.8681			

==========

Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 07/02/2009
Sample ID: 231763001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.019	-0.019	-0.0004	0.0030	10:10:06	No
2	-0.045	-0.045	-0.0007	0.0027	10:10:41	No
Mean:	-0.032	-0.032	-0.0006			
SD :	0.0179	0.0179	0.0002			
%RSD:	55.8	55.8	40.5951			

==========

Element: Hg Seq. No.: 64 AS Loc.: 56 Date: 07/02/2009
Sample ID: 1201872377|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.027	-0.027	-0.0005	0.0029	10:12:04	No
2	-0.034	-0.034	-0.0006	0.0029	10:12:38	No
Mean:	-0.030	-0.030	-0.0006			
SD :	0.0046	0.0046	0.0001			

%RSD:	15.1	15.1	10.8186

Element: Hg Seq. No.: 65 AS Loc.: 57 Date: 07/02/2009
Sample ID: 1201872378|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.136	2.136	0.0278	0.0313	10:14:03	No
2	2.111	2.111	0.0275	0.0310	10:14:37	No
Mean:	2.124	2.124	0.0277			
SD :	0.0179	0.0179	0.0002			
%RSD:	0.8	0.8	0.8466			

Element: Hg Seq. No.: 66 AS Loc.: 58 Date: 07/02/2009
Sample ID: 1201872379|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.093	-0.093	-0.0014	0.0021	10:16:01	No
2	-0.097	-0.097	-0.0014	0.0020	10:16:36	No
Mean:	-0.095	-0.095	-0.0014			
SD :	0.0030	0.0030	0.0000			
%RSD:	3.1	3.1	2.7945			

Element: Hg Seq. No.: 67 AS Loc.: 59 Date: 07/02/2009
Sample ID: 231763002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.003	0.003	-0.0001	0.0033	10:18:00	No
2	-0.010	-0.010	-0.0003	0.0032	10:18:35	No
Mean:	-0.004	-0.004	-0.0002			
SD :	0.0098	0.0098	0.0001			
%RSD:	277.5	277.5	63.0283			

Element: Hg Seq. No.: 68 AS Loc.: 60 Date: 07/02/2009
Sample ID: 231763003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0004	0.0031	10:20:00	No
2	-0.021	-0.021	-0.0004	0.0030	10:20:35	No
Mean:	-0.019	-0.019	-0.0004			
SD :	0.0021	0.0021	0.0000			
%RSD:	10.6	10.6	6.5449			

Element: Hg Seq. No.: 69 AS Loc.: 61 Date: 07/02/2009
Sample ID: 231763004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0000	0.0034	10:22:00	No
2	-0.038	-0.038	-0.0007	0.0028	10:22:35	No
Mean:	-0.015	-0.015	-0.0003			
SD :	0.0333	0.0333	0.0004			
%RSD:	229.6	229.6	125.6828			

Element: Hg Seq. No.: 70 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	4.826	4.826	0.0631	0.0665	10:24:01	No
2	4.773	4.773	0.0624	0.0658	10:24:37	No
Mean:	4.800	4.800	0.0627			
SD :	0.0374	0.0374	0.0005			
%RSD:	0.8	0.8	0.7802			

QC value within specified limits.

==========

Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	-0.0009	0.0026	10:26:05	No
2	-0.049	-0.049	-0.0008	0.0027	10:26:40	No
Mean:	-0.051	-0.051	-0.0008			
SD :	0.0031	0.0031	0.0000			
%RSD:	6.1	6.1	4.9132			

QC value within specified limits.

==========

Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 07/02/2009
Sample ID: 231763005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.067	-0.067	-0.0010	0.0024	10:28:07	No
2	-0.068	-0.068	-0.0011	0.0024	10:28:42	No
Mean:	-0.068	-0.068	-0.0010			
SD :	0.0008	0.0008	0.0000			
%RSD:	1.1	1.1	0.9406			

==========

Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 07/02/2009
Sample ID: 231763006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.061	-0.061	-0.0010	0.0025	10:30:05	No
2	-0.059	-0.059	-0.0009	0.0025	10:30:40	No
Mean:	-0.060	-0.060	-0.0009			
SD :	0.0015	0.0015	0.0000			
%RSD:	2.4	2.4	2.0349			

==========

Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 07/02/2009
Sample ID: 231763007|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0012	0.0023	10:32:00	No
2	-0.077	-0.077	-0.0012	0.0023	10:32:35	No
Mean:	-0.076	-0.076	-0.0012			
SD :	0.0001	0.0001	0.0000			
%RSD:	0.1	0.1	0.1295			

==========

Element: Hg Seq. No.: 75 AS Loc.: 65 Date: 07/02/2009
Sample ID: 231763008|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.064	-0.064	-0.0010	0.0025	10:33:55	No
2	-0.073	-0.073	-0.0011	0.0023	10:34:30	No
Mean:	-0.069	-0.069	-0.0011			
SD :	0.0062	0.0062	0.0001			

#	µg/L	µg/L	Signal	Height		Stored
1	2.016	2.016	0.0263	0.0297	10:45:33	No
2	1.985	1.985	0.0259	0.0293	10:46:08	No
Mean:	2.001	2.001	0.0261			
SD :	0.0217	0.0217	0.0003			
%RSD:	1.1	1.1	1.0889			

==========

Element: Hg Seq. No.: 82 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.826	4.826	0.0631	0.0665	10:47:34	No
2	4.823	4.823	0.0630	0.0665	10:48:09	No
Mean:	4.824	4.824	0.0631			
SD :	0.0018	0.0018	0.0000			
%RSD:						

QC value within specified limits.

==========

Element: Hg Seq. No.: 83 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.053	-0.053	-0.0009	0.0026	10:49:37	No
2	-0.060	-0.060	-0.0009	0.0025	10:50:12	No
Mean:	-0.057	-0.057	-0.0009			
SD :	0.0048	0.0048	0.0001			
%RSD:	8.4	8.4	6.9349			

QC value within specified limits.

==========

Element: Hg Seq. No.: 84 AS Loc.: 72 Date: 07/02/2009
Sample ID: 1201871796|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.110	-0.110	-0.0016	0.0019	10:51:37	No
2	-0.117	-0.117	-0.0017	0.0018	10:52:12	No
Mean:	-0.113	-0.113	-0.0016			
SD :	0.0051	0.0051	0.0001			
%RSD:	4.5	4.5	4.0716			

==========

Element: Hg Seq. No.: 85 AS Loc.: 73 Date: 07/02/2009
Sample ID: 1201871797|i||881396|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.077	-0.077	-0.0012	0.0023	10:53:36	No
2	-0.090	-0.090	-0.0013	0.0021	10:54:11	No
Mean:	-0.084	-0.084	-0.0013			
SD :	0.0091	0.0091	0.0001			
%RSD:	10.8	10.8	9.4415			

==========

Element: Hg Seq. No.: 86 AS Loc.: 74 Date: 07/02/2009
Sample ID: 1201871798|i|||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.001	2.001	0.0261	0.0295	10:55:36	No
2	1.982	1.982	0.0258	0.0293	10:56:11	No
Mean:	1.991	1.991	0.0259			
SD :	0.0132	0.0132	0.0002			

%RSD:	0.7	0.7	0.6679

Element: Hg Seq. No.: 87 AS Loc.: 75 Date: 07/02/2009
Sample ID: 232432001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.048	-0.048	-0.0008	0.0027	10:57:36	No
2	-0.056	-0.056	-0.0009	0.0026	10:58:12	No
Mean:	-0.052	-0.052	-0.0008			
SD :	0.0052	0.0052	0.0001			
%RSD:	9.9	9.9	8.0619			

Element: Hg Seq. No.: 88 AS Loc.: 76 Date: 07/02/2009
Sample ID: 232506001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.042	-0.042	-0.0007	0.0028	10:59:38	No
2	-0.051	-0.051	-0.0008	0.0026	11:00:13	No
Mean:	-0.046	-0.046	-0.0008			
SD :	0.0063	0.0063	0.0001			
%RSD:	13.6	13.6	10.7799			

Element: Hg Seq. No.: 89 AS Loc.: 77 Date: 07/02/2009
Sample ID: 232506002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.061	-0.061	-0.0010	0.0025	11:01:39	No
2	-0.064	-0.064	-0.0010	0.0025	11:02:14	No
Mean:	-0.063	-0.063	-0.0010			
SD :	0.0018	0.0018	0.0000			
%RSD:	2.9	2.9	2.4024			

Element: Hg Seq. No.: 90 AS Loc.: 78 Date: 07/02/2009
Sample ID: 232510001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.046	-0.046	-0.0008	0.0027	11:03:36	No
2	-0.073	-0.073	-0.0011	0.0023	11:04:11	No
Mean:	-0.060	-0.060	-0.0009			
SD :	0.0189	0.0189	0.0002			
%RSD:	31.7	31.7	26.3588			

Element: Hg Seq. No.: 91 AS Loc.: 79 Date: 07/02/2009
Sample ID: 1201871799|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.082	-0.082	-0.0012	0.0022	11:05:31	No
2	-0.093	-0.093	-0.0014	0.0021	11:06:06	No
Mean:	-0.088	-0.088	-0.0013			
SD :	0.0079	0.0079	0.0001			
%RSD:	9.0	9.0	7.8881			

Element: Hg Seq. No.: 92 AS Loc.: 80 Date: 07/02/2009
Sample ID: 1201871800|i|||MS

Repl	SampleConc	StndConc	BlnkCorr	Peak	Time	Peak

#	µg/L	µg/L	Signal	Height		Stored
1	2.050	2.050	0.0267	0.0302	11:07:26	No
2	2.029	2.029	0.0264	0.0299	11:08:01	No
Mean:	2.040	2.040	0.0266			
SD :	0.0148	0.0148	0.0002			
%RSD:	0.7	0.7	0.7307			

==========

Element: Hg Seq. No.: 93 AS Loc.: 81 Date: 07/02/2009
Sample ID: 1201871801|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.126	-0.126	-0.0018	0.0017	11:09:21	No
2	-0.126	-0.126	-0.0018	0.0017	11:09:55	No
Mean:	-0.126	-0.126	-0.0018			
SD :	0.0004	0.0004	0.0000			
%RSD:	0.3	0.3	0.2773			

==========

Element: Hg Seq. No.: 94 AS Loc.: 7 Date: 07/02/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.813	4.813	0.0629	0.0664	11:11:19	No
2	4.826	4.826	0.0631	0.0665	11:11:55	No
Mean:	4.820	4.820	0.0630			
SD :	0.0094	0.0094	0.0001			
%RSD:	0.2	0.2	0.1953			

QC value within specified limits.

==========

Element: Hg Seq. No.: 95 AS Loc.: 8 Date: 07/02/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.070	-0.070	-0.0011	0.0024	11:13:23	No
2	-0.077	-0.077	-0.0012	0.0023	11:13:57	No
Mean:	-0.074	-0.074	-0.0011			
SD :	0.0049	0.0049	0.0001			
%RSD:	6.7	6.7	5.7719			

QC value within specified limits.

==========

Element: Hg Seq. No.: 96 AS Loc.: 82 Date: 07/02/2009
Sample ID: 1201871638|i||881660|TB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	-0.0009	0.0026	11:15:21	No
2	-0.070	-0.070	-0.0011	0.0024	11:15:56	No
Mean:	-0.064	-0.064	-0.0010			
SD :	0.0090	0.0090	0.0001			
%RSD:	14.2	14.2	11.9285			

==========

Element: Hg Seq. No.: 97 AS Loc.: 83 Date: 07/02/2009
Sample ID: 1201872368|i|||MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.079	-0.079	-0.0012	0.0023	11:17:17	No
2	-0.086	-0.086	-0.0013	0.0022	11:17:51	No
Mean:	-0.083	-0.083	-0.0012			
SD :	0.0048	0.0048	0.0001			

Miscellaneous

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881353

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871707	UI090622-01	.25	mL
LCS	1201871707	UI090622-06	.25	mL
MS	1201871709	UI090622-01	.25	mL
MS	1201871709	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871706		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
LCS	1201871707		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232370001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232425001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232432001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506002		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232510001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
DUP	1201871708	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
MS	1201871709	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SDILT	1201871710	232510001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 881356

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871712	UI090622-A	.5	mL
LCS	1201871712	UI090622-B	.5	mL
MS	1201871714	UI090612-A	.5	mL
MS	1201871714	UI090612-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871711		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
LCS	1201871712		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232370001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
DUP	1201871713	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
MS	1201871714	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SDILT	1201871715	232370001	SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232425001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232432001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232506002		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER
SAMPLE	232510001		SW846 3005A	30-JUN-2009 06:25	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 881395

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201871798	WHG090701-13	.2	mL
MS	1201871800	WHG090701-13	.2	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201871797		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
LCS	1201871798		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232432001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232506001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232506002		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SAMPLE	232510001		SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
DUP	1201871799	232510001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
MS	1201871800	232510001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER
SDILT	1201871801	232510001	SW846 7470A Prep	01-JUL-2009 11:35	20 mL	20 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143839	1 mL	Sulfuric Acid, Concentrated
1136798-1	.5 mL	NITRIC ACID
1125381-C	1.5 mL	5% Potassium Persulfate
1144332-C	3 mL	5% KMnO4 solution
1144356-C	1 mL	Hg reducing agent
WHG090701-06	500 uL	Mercury Working 2nd Source 5.0/ICV
WHG090701-01	20 uL	Mercury Working 1st Source CAL 0.2/CRA
WHG090701-02	50 uL	Mercury Working 1st Source CAL 0.5
WHG090701-05	1 mL	Mercury Working 1st Source CAL 10.0
WHG090701-03	200 uL	Mercury Working 1st Source CAL 2.0
WHG090701-04	500 uL	Mercury Working 1st Source CAL 5.0/CCV

Comments Digestion Start Date: 01-JUL-09 11:35
Digestion End Date: 01-JUL-09 13:35

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
05-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3005/6020	Liquid	LANL
Batch ID:	**Sample Numbers:**		
881357	See Below		

Potentially affected work order(s)(SDG): 232370(09-2452-1),232425(09-2473-1),232432(09-2478-1),232506(09-2498-1),232510(09-2500-1)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201871714MS	The matrix spike recovery failed outside of the control limits for Tl due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Paul Boyd 05-JUL-09

Data Validator/Group Leader:

Kristen Parson 17-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B

Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090121-40 **Opened:** 22-JAN-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 20-JAN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 22-JAN-10 **Lot Number :** 1014592
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	7.5 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	50 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	7.5 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	75 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Standard Logbook

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** 5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-11 **Opened:** 10-JUN-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 10-JUN-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 10-JUN-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A

Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.12 **Opened:** 30-JUN-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 01-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090612-A **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE liquid Spike Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	4 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	.5 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L

Analyte	Concentration	Analyte	Concentration
Iron	200 mg/L	Lead	2 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	1 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	5 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090612-B **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE Liquid Spike Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090622-A **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090622-B **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Standard Logbook

Serial ID:	UI090701-09	**Opened:**	01-JUL-09	**Amount :**	250 mL
Name:	ICP-MS CRDL Master #1	**Received:**	01-JUL-09	**Catalog Number :**	160044-09-02
Type:	Source Material	**Expires:**	01-JUL-10	**Lot Number :**	1016477
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% IN 2% HNO3
Supplier:	02SI				
Description:	ICPMS CRDL Master Soln #1				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID:	UI090701-10	**Opened:**	01-JUL-09	**Amount :**	250 mL
Name:	ICP-MS CRDL Master #2	**Received:**	01-JUL-09	**Catalog Number :**	160044-08-02
Type:	Source Material	**Expires:**	01-JUL-10	**Lot Number :**	1016476
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% IN 2% HNO3
Supplier:	02SI				
Description:	ICPMS CRDL Soln #2				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID:	UMS090605-01	**Opened:**	05-JUN-09	**Amount :**	250 mL
Name:	ICPMSCalSPIKEB	**Received:**	05-JUN-09	**Catalog Number :**	ZGEL-100-250
Type:	Source Material	**Expires:**	30-MAY-10	**Lot Number :**	17-42JB
Employee:	Paul Boyd				
Supplier:	SPEX				
Description:	ICPMS Calibration Standard Solution B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090701-01 **Opened:** 01-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 01-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 02-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L

Standard Logbook

Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090701-02 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 01-JUL-09
Type: Intermediate **Expires:** 02-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090701-01 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.2CRA **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

Serial ID: WHG090701-02 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.5 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG090701-03 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL2.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Serial ID: WHG090701-04 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL5.0CCV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090701-05 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL10.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG090701-06 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORK5.0ICV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090701-07 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090701-08 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090701-09 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090701-10 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090701-11 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090701-12 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090701-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090701-13 **Opened:** 01-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGLIQLCSMSSPIKE **Received:** 01-JUL-09
Type: Working **Expires:** 07-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury working intermediate standard for LCS/MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090630-42 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090630-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090630-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090630-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090630-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090630-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090630-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090630-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090630-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090630-43 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 - 1143746
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090630-44 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1 %HNO3 -1143746

Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09

Type: Working **Expires:** 01-JUL-09

Employee: Helen Camello

Supplier: o2si

Description: Trace ICP Calibration Standard 1.0ppm

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090630-45 **Opened:** 30-JUN-09 **Solvent :** 3%HCL and 1%HNO3 -1143746
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090630-46 **Opened:** 30-JUN-09 **Solvent :** 3%HCL AND 1%HNO3 -1143746
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090630-47 **Opened:** 30-JUN-09 **Solvent :** 3%HCL &1%HNO3-1143746
Name: PQL Working Standard **Received:** 22-JAN-09
Type: Working **Expires:** 01-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090121-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090121-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Arsenic	7.5 mg/L	2 mL	1000 mL	15 ug/L
UI090121-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090121-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Calcium	50 mg/L	2 mL	1000 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090121-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090121-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Selenium	7.5 mg/L	2 mL	1000 mL	15 ug/L
UI090121-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Sodium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090121-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090121-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090121-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090121-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090121-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090121-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090703-04 **Opened:** 03-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl-1143705
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090703-04A **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090703-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090703-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090703-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090703-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090703-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090703-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090703-05 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090703-06 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090703-07 **Opened:** 03-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090703-08 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090610-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090610-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090610-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090610-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090703-70 **Opened:** 03-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS LINEAR RANGE ST **Received:** 03-JUL-09
Type: Working **Expires:** 04-JUL-09
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Standard Logbook

Serial ID: 1116812 **Opened:** 29-APR-09 **Lot Number :** E45475
Name: B-K2S2O8S-MER **Received:** 29-APR-09
Type: Reagent/Solvent **Expires:** 29-APR-10
Employee: Tara Griffin
Supplier: J.T BAKER
Description: Potassium Persulfate Concentrate.
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1125381-C **Opened:** 21-MAY-09
Name: B-K2S2O8-MER **Received:** 21-MAY-09
Type: Reagent/Solvent **Expires:** 21-NOV-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% Potassium Persulfate
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1116812	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1143705 **Opened:** 29-JUN-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 06-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1143746 **Opened:** 29-JUN-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JUN-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 05-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1143839 **Opened:** 29-JUN-09 **Lot Number :** G45010
Name: B-H2SO4-MER **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 29-JUN-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Sulfuric Acid, Concentrated
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL

Standard Logbook

Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2498

Method/Analysis Information

Product:	**Hexavalent Chromium**		
Analytical Batch:	881618	**Method:**	SW846 7196A
Prep Batch :	881616	**Method:**	SW846 3060A

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 7196A:

Sample ID	Client ID
232504001	CAMO-09-10375
232504002	CAMO-09-10376
232504003	CAMO-09-10373
232504004	CAMO-09-10367
232504005	CAMO-09-10377
232504006	CAMO-09-10370
232504007	CAMO-09-10374
232504008	CAMO-09-10371
232504009	CAMO-09-10368
232504010	CAMO-09-10369
232504011	CAMO-09-10366
232504012	CAMO-09-10372
232504013	CAMO-09-10378
232504014	CAMO-09-10379
1201872262	Method Blank (MB)
1201872263	232504001(CAMO-09-10375) Sample Duplicate (DUP)
1201872264	232504014(CAMO-09-10379) Sample Duplicate (DUP)
1201872265	232504001(CAMO-09-10375) Matrix Spike (MS)
1201872266	232504014(CAMO-09-10379) Matrix Spike (MS)
1201872267	Laboratory Control Sample (LCS)
1201872268	Insoluble Lab Control Sample (ILCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-044 REV# 10.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Spectrometric analysis was performed on a Spectronic 20D + Digital Spectrophotometer.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation

The following samples were selected for QC analysis: 232504001 (CAMO-09-10375) and 232504014 (CAMO-09-10379).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The MS/PS recoveries for this sample set were within the required acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201872264 (CAMO-09-10379) and 232504014 (CAMO-09-10379).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times

All samples in this SDG met the specified holding time.

Sample Dilutions
The following samples in this sample group were diluted due to matrix interference: 1201872263 (CAMO-09-10375), 1201872265 (CAMO-09-10375), 232504001 (CAMO-09-10375), 232504002 (CAMO-09-10376) and 232504012 (CAMO-09-10372).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 709979 232504001 (CAMO-09-10375), 232504002 (CAMO-09-10376), 232504003 (CAMO-09-10373), 232504004 (CAMO-09-10367), 232504005 (CAMO-09-10377), 232504006 (CAMO-09-10370), 232504007 (CAMO-09-10374), 232504008 (CAMO-09-10371), 232504009 (CAMO-09-10368), 232504010 (CAMO-09-10369), 232504011 (CAMO-09-10366), 232504012 (CAMO-09-10372), 232504013 (CAMO-09-10378) and 232504014 (CAMO-09-10379).

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 17July09

Sample Data Summary

GEL LABORATORIES LLC

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Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2498 GEL Work Order: 232504

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10375	Project:	LANL01004
Sample ID:	232504001	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.34%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.244	0.812	mg/kg	2	RXG2 07/09/09	1318	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10376	Project:	LANL01004
Sample ID:	232504002	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.53%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.249	0.830	mg/kg	2	RXG2 07/09/09	1321	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10373	Project:	LANL01004
Sample ID:	232504003	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	11.4%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	J	0.157	0.132	0.439	mg/kg	1	RXG2 07/09/09	1323	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10367	Project:	LANL01004
Sample ID:	232504004	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	14.6%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	J	0.206	0.137	0.456	mg/kg	1	RXG2 07/09/09	1323	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10377	Project:	LANL01004
Sample ID:	232504005	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	6.54%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.128	0.428	mg/kg	1	RXG2 07/09/09	1324	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10370	Project:	LANL01004
Sample ID:	232504006	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.09%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.124	0.412	mg/kg	1	RXG2 07/09/09	1326	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10374	Project:	LANL01004
Sample ID:	232504007	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.61%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.124	0.412	mg/kg	1	RXG2 07/09/09	1326	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10371	Project:	LANL01004
Sample ID:	232504008	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	14.1%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.138	0.459	mg/kg	1	RXG2 07/09/09	1327	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10368	Project:	LANL01004
Sample ID:	232504009	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	5.47%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.124	0.414	mg/kg	1	RXG2 07/09/09	1327	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10369	Project:	LANL01004
Sample ID:	232504010	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	11.5%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.130	0.433	mg/kg	1	RXG2 07/09/09	1328	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10366	Project:	LANL01004
Sample ID:	232504011	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	8.4%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	J	0.154	0.129	0.430	mg/kg	1	RXG2 07/09/09	1330	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10372	Project:	LANL01004
Sample ID:	232504012	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	9.83%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.262	0.873	mg/kg	2	RXG2 07/09/09	1330	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10378	Project:	LANL01004
Sample ID:	232504013	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.27%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.122	0.406	mg/kg	1	RXG2 07/09/09	1330	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2498

Client Sample ID:	CAMO-09-10379	Project:	LANL01004
Sample ID:	232504014	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09 12:00		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.33%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Spectrometric Analysis Federal										
SW846_7196A Hexavalent Chromium "Dry Weight Corrected"										
Hexavalent Chromium	U	ND	0.122	0.408	mg/kg	1	RXG2 07/09/09	1331	881618	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	RXG2	07/08/09	1045	881616

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 7196A	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 10, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232504

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Spectrometric Analysis											
Batch 881618											
QC1201872263 232504001 DUP											
Hexavalent Chromium		U	ND	U	ND	mg/kg	N/A		(+/-0.824)	RXG2	07/09/09 13:19
QC1201872264 232504014 DUP											
Hexavalent Chromium		U	ND	J	0.145	mg/kg	N/A		(+/-0.403)		07/09/09 13:32
QC1201872268 ILCS											
Hexavalent Chromium	7.89				7.25	mg/kg		91.9	(80%-120%)		07/09/09 13:18
QC1201872267 LCS											
Hexavalent Chromium	3.98				4.13	mg/kg		104	(80%-120%)		07/09/09 13:17
QC1201872262 MB											
Hexavalent Chromium				U	0.392	mg/kg					07/09/09 13:17
QC1201872265 232504001 MS											
Hexavalent Chromium	4.10	U	ND		3.72	mg/kg		87.3	(75%-125%)		07/09/09 13:20
QC1201872266 232504014 MS											
Hexavalent Chromium	3.98	U	ND		3.29	mg/kg		80.8	(75%-125%)		07/09/09 13:34

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected

QC Summary

Workorder: 232504

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 10-JUL-2009 23:21

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2498**

Spectrometric Analysis

Method: SW846 7196A Concentration Units:mg/L

Instrument: Spectronic 20D + Digital Spectrophotometer

Parmname: Hexavalent Chromium

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**09-JUL-2009 13:17:21**	**881618**	**0.09739**	**0.1**	**97**	**(80%-120%)**	**Yes**
CCV	09-JUL-2009 13:25:02	881618	0.09739	0.1	97	(80%-120%)	Yes
CCV	09-JUL-2009 13:33:49	881618	0.09646	0.1	97	(80%-120%)	Yes
CCV	09-JUL-2009 13:35:11	881618	0.09832	0.1	98	(80%-120%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**09-JUL-2009 13:17:28**	**881618**	**0.00173**	**0.01**	**Yes**
CCB	09-JUL-2009 13:25:30	881618	0.00266	0.01	Yes
CCB	09-JUL-2009 13:33:54	881618	0.0008	0.01	Yes
CCB	09-JUL-2009 13:35:16	881618	0.0008	0.01	Yes

Hexavalent Chromium

Prep LogBook

Analyst: RXG2 Verified by:_____

Batch: 881616

Lab SOP: GL-GC-E-044 REV# 10

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
ILCS	1201872268	IMM090219-HVC	.08	g
LCS	1201872267	WD090708-1	.4	mL
MS	1201872265	WD090708-2	.4	mL
MS	1201872266	WD090708-2	.4	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201872262		SW846 3060A	08-JUL-2009 10:45	7.45	1.0198 g	40 mL	39.22338	SOIL
LCS	1201872267		SW846 3060A	08-JUL-2009 10:45	7.21	1.005 g	40 mL	39.801	SOIL
ILCS	1201872268		SW846 3060A	08-JUL-2009 10:45	7.12	1.0139 g	40 mL	39.45162	SOIL
SAMPLE	232504001		SW846 3060A	08-JUL-2009 10:45	7.02	1.0189 g	40 mL	39.25802	SOIL
DUP	1201872263	232504001	SW846 3060A	08-JUL-2009 10:45	7.39	1.0042 g	40 mL	39.8327	SOIL
MS	1201872265	232504001	SW846 3060A	08-JUL-2009 10:45	7.75	1.0105 g	40 mL	39.58436	SOIL
SAMPLE	232504002		SW846 3060A	08-JUL-2009 10:45	7.91	1.0091 g	40 mL	39.63928	SOIL
SAMPLE	232504003		SW846 3060A	08-JUL-2009 10:45	7.17	1.028 g	40 mL	38.91051	SOIL
SAMPLE	232504004		SW846 3060A	08-JUL-2009 10:45	7.51	1.0265 g	40 mL	38.96736	SOIL
SAMPLE	232504005		SW846 3060A	08-JUL-2009 10:45	7.15	1.0001 g	40 mL	39.996	SOIL
SAMPLE	232504006		SW846 3060A	08-JUL-2009 10:45	7.45	1.0115 g	40 mL	39.54523	SOIL
SAMPLE	232504007		SW846 3060A	08-JUL-2009 10:45	7.12	1.0065 g	40 mL	39.74168	SOIL
SAMPLE	232504008		SW846 3060A	08-JUL-2009 10:45	7.41	1.0137 g	40 mL	39.45941	SOIL
SAMPLE	232504009		SW846 3060A	08-JUL-2009 10:45	7.85	1.0233 g	40 mL	39.08922	SOIL
SAMPLE	232504010		SW846 3060A	08-JUL-2009 10:45	7.69	1.045 g	40 mL	38.27751	SOIL
SAMPLE	232504011		SW846 3060A	08-JUL-2009 10:45	7.65	1.0156 g	40 mL	39.38558	SOIL
SAMPLE	232504012		SW846 3060A	08-JUL-2009 10:45	7.98	1.016 g	40 mL	39.37008	SOIL
SAMPLE	232504013		SW846 3060A	08-JUL-2009 10:45	7.09	1.0175 g	40 mL	39.31204	SOIL
SAMPLE	232504014		SW846 3060A	08-JUL-2009 10:45	7.02	1.0255 g	40 mL	39.00536	SOIL
DUP	1201872264	232504014	SW846 3060A	08-JUL-2009 10:45	7.12	1.0365 g	40 mL	38.59141	SOIL
MS	1201872266	232504014	SW846 3060A	08-JUL-2009 10:45	7.41	1.0495 g	40 mL	38.11339	SOIL

Reagent/Solvent Lot ID	Amount	Description
IMM090626-HVC	2 mL	5M Nitric Acid Solution for Cr+6
IMM090519-HVCS	20 mL	DIGESTION SOLUTION FOR CR+6
090428-C	.4 mL	MAGNESIUM CHLORIDE SOLUTION FOR CR+6
IMM090501-HVCS	.2 mL	PHOSPHATE BUFFER SOLUTION FOR CR+6

Comments

Analytical Logbook

Colorimetric Determination of Hexavalent Chromium

Batch ID: 881618.0
Analyst: Robert Getsinger
Method: SW846 7196A
Lab SOP: GL-GC-E-044 REV# 10
Instrument: Spectronic 20D + Digital Spectrophotometer

Type	Sample Id	Description	Serial Number	Amount	Nominal	Recovery	Rpd %
	All	5N Sulfuric Acid for Cr+6	IMM090224	.5 mL			
CCV	13:25:02	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	97.4	
CCV	13:33:49	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	96.5	
CCV	13:35:11	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	98.3	
DUP	1201872263						1.453
DUP	1201872264						68.992
ICV	13:17:21	Cr6 LCS 10mg/L	WD090708-1	.25 mL	0.100 mg/L	97.4	

Sample ID	Run Date	Dilution	Hexavalent Chromium Absorbance (mg/L)	Hexavalent Chromium Backgroud (mg/L)	Hexavalent Chromium Initial Result (mg/L)	Hexavalent Chromium Result (mg/kg)
ICV	09-JUL-2009 13:17:21	1	0.105	0	0.09739	0.09739
ICB	09-JUL-2009 13:17:28	1	0.002	0	0.00173	0.00173
1201872262 MB	09-JUL-2009 13:17:37	1	0.002	0	0.00173	0.06776
1201872267 LCS	09-JUL-2009 13:17:42	1	0.112	0	0.10389	4.13487
1201872268 ILCS	09-JUL-2009 13:18:08	1	0.198	0	0.18376	7.24963
232504001	09-JUL-2009 13:18:57	2	0.009	0.007	0.00173	0.14032
1201872263 DUP (232504001)	09-JUL-2009 13:19:40	2	0.009	0.007	0.00173	0.14237
1201872265 MS (232504001)	09-JUL-2009 13:20:50	2	0.056	0.007	0.04538	3.71666
232504002	09-JUL-2009 13:21:49	2	0.03	0.031	-0.00106	-0.08792
232504003	09-JUL-2009 13:23:20	1	0.004	0	0.00358	0.1574
232504004	09-JUL-2009 13:23:53	1	0.009	0.004	0.00451	0.20602
232504005	09-JUL-2009 13:24:26	1	0.016	0.017	-0.00106	-0.04531
CCV	09-JUL-2009 13:25:02	1	0.105	0	0.09739	0.09739
CCB	09-JUL-2009 13:25:30	1	0.003	0	0.00266	0.00266
232504006	09-JUL-2009 13:26:14	1	0.014	0.012	0.00173	0.07123
232504007	09-JUL-2009 13:26:23	1	0.015	0.016	-0.00106	-0.04365
232504008	09-JUL-2009 13:27:15	1	0.013	0.014	-0.00106	-0.04864
232504009	09-JUL-2009 13:27:52	1	0.013	0.011	0.00173	0.07143
232504010	09-JUL-2009 13:28:32	1	0.023	0.025	-0.00199	-0.086
232504011	09-JUL-2009 13:30:07	1	0.004	0	0.00358	0.15415
232504012	09-JUL-2009 13:30:39	2	0.089	0.092	-0.00292	-0.25466
232504013	09-JUL-2009 13:30:43	1	0.022	0.019	0.00266	0.10795
232504014	09-JUL-2009 13:31:21	1	0.002	0	0.00173	0.07043

Analytical Logbook

Batch ID: 881618.0
Analyst: Robert Getsinger
Method: SW846 7196A
Lab SOP: GL-GC-E-044 REV# 10
Instrument: Spectronic 20D + Digital Spectrophotometer

Type	Sample Id	Description	Serial Number	Amount	Nominal	Recovery	Rpd %
	All	5N Sulfuric Acid for Cr+6	IMM090224	.5 mL			
CCV	13:25:02	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	97.4	
CCV	13:33:49	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	96.5	
CCV	13:35:11	HEXAVALENT CR INTERMEDIATE SPIKE 10 MG/L	WD090708-2	.25 mL	0.100 mg/L	98.3	
DUP	1201872263						1.453
DUP	1201872264						68.992
ICV	13:17:21	Cr6 LCS 10mg/L	WD090708-1	.25 mL	0.100 mg/L	97.4	

Sample ID	Run Date	Dilution	Hexavalent Chromium Absorbance (mg/L)	Hexavalent Chromium Backgroud (mg/L)	Hexavalent Chromium Initial Result (mg/L)	Hexavalent Chromium Result (mg/kg)
1201872264 DUP (232504014)	09-JUL-2009 13:32:03	1	0.004	0	0.00358	0.14461
CCV	09-JUL-2009 13:33:49	1	0.104	0	0.09646	0.09646
CCB	09-JUL-2009 13:33:54	1	0.001	0	0.0008	0.0008
1201872266 MS (232504014)	09-JUL-2009 13:34:37	1	0.089	0	0.08253	3.28786
CCV	09-JUL-2009 13:35:11	1	0.106	0	0.09832	0.09832
CCB	09-JUL-2009 13:35:16	1	0.001	0	0.0008	0.0008

Calibration Information:

Run Date:	09-JUL-09 13:
Instrument:	SPC611
Analyst:	RXG2
Corr. Coefficient :	0.99992
Y-Intercept :	0.00014
Slope:	1.07673

Standard	Absorbance	True Value	Result	Units
WD090709d	.001	0	.00080	mg/L
WD090709a1	.012	.01	.01101	mg/L
WD090709a2	.02	.02	.01844	mg/L
WD090709a3	.054	.05	.05002	mg/L
WD090709a4	.107	.1	.09924	mg/L
WD090709a5	.216	.2	.20048	mg/L

Comments:

Calculation: {[(Corrected Absorbance - Y intercept) / Slope] * Dilution} / (1 - moisture)

Miscellaneous

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 709979
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
09-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
VIS SPECTROMETER	SW846 7196A	Solid	LANL
Batch ID:	**Sample Numbers:**		
881618	See Below		

Potentially affected work order(s)(SDG): 232504(09-2498)

Application Issues:

Container scanning event for custody missed

Specification and Requirements Nonconformance Description:	NRG Disposition:
!. Container scanning event for custody missed: 232504 001,002,003,004,005,006,007,008,009, 010,011,012,013,014	1. Due to analyst oversight the samples were not scanned to the analytical batch. The samples were scanned to the prep batch and were in the custody of the analyst during analysis.

Originator's Name:
Robert Getsinger 09-JUL-09

Data Validator/Group Leader:
Julia Hamilton 10-JUL-09

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2498

Method/Analysis Information

Procedure: **Dry Weight-Percent Moisture**

Analytical Method:

Analytical Batch Number: 881098

Sample ID	Client ID
232504001	CAMO-09-10375
232504002	CAMO-09-10376
232504003	CAMO-09-10373
232504004	CAMO-09-10367
232504005	CAMO-09-10377
232504006	CAMO-09-10370
232504007	CAMO-09-10374
232504008	CAMO-09-10371
232504009	CAMO-09-10368
232504010	CAMO-09-10369
232504011	CAMO-09-10366
232504012	CAMO-09-10372
232504013	CAMO-09-10378
232504014	CAMO-09-10379
1201871073	232504001(CAMO-09-10375) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-020 REV# 9.

Calibration Information:

Quality Control (QC) Information:

Designated QC
The following sample was used for QC: 232504001 (CAMO-09-10375). The QC was from LANL work order 232504.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU. Not Applicable.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
Not Applicable. The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	881220
Prep Batch Number:	881118

Sample ID	Client ID
232504001	CAMO-09-10375
232504002	CAMO-09-10376
232504003	CAMO-09-10373
232504004	CAMO-09-10367
232504005	CAMO-09-10377
232504006	CAMO-09-10370
232504007	CAMO-09-10374
232504008	CAMO-09-10371
232504009	CAMO-09-10368
232504010	CAMO-09-10369
232504011	CAMO-09-10366
232504012	CAMO-09-10372
232504013	CAMO-09-10378
232504014	CAMO-09-10379
1201871426	Method Blank (MB)
1201871427	232511001(CAMO-09-6519) Sample Duplicate (DUP)
1201871428	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, November 2008, January 2009, February 2009, March 2009, April 2009 and June 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232511001 (CAMO-09-6519). The QC was from LANL work order 232511.

QC Information

All of the QC samples met the required acceptance limits.

CSU
The blank. 1201871426 (MB), result for Ra-224 is greater than 1.65 times the CSU but less than the MDC.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232504001	CAMO-09-10375
			232504002	CAMO-09-10376
			232504003	CAMO-09-10373
			232504004	CAMO-09-10367
			232504005	CAMO-09-10377
			232504006	CAMO-09-10370
			232504007	CAMO-09-10374
			232504008	CAMO-09-10371
			232504009	CAMO-09-10368
			232504010	CAMO-09-10369

	232504011	CAMO-09-10366
	232504012	CAMO-09-10372
	232504013	CAMO-09-10378
	232504014	CAMO-09-10379
	1201871427	CAMO-09-6519(232511001DUP)
Cadmium-109	232504001	CAMO-09-10375
	232504002	CAMO-09-10376
	232504003	CAMO-09-10373
	232504004	CAMO-09-10367
	232504005	CAMO-09-10377
	232504007	CAMO-09-10374
	232504008	CAMO-09-10371
	232504009	CAMO-09-10368
	232504010	CAMO-09-10369
	232504011	CAMO-09-10366
	232504012	CAMO-09-10372
	232504013	CAMO-09-10378
	232504014	CAMO-09-10379
	1201871427	CAMO-09-6519(232511001DUP)
Mercury-203	232504005	CAMO-09-10377
	232504009	CAMO-09-10368
	232504011	CAMO-09-10366
Radium-224	232504001	CAMO-09-10375
	232504002	CAMO-09-10376
	232504003	CAMO-09-10373
	232504004	CAMO-09-10367
	232504005	CAMO-09-10377
	232504006	CAMO-09-10370
	232504007	CAMO-09-10374
	232504008	CAMO-09-10371

			232504009	CAMO-09-10368
			232504010	CAMO-09-10369
			232504011	CAMO-09-10366
			232504012	CAMO-09-10372
			232504013	CAMO-09-10378
			232504014	CAMO-09-10379
			1201871427	CAMO-09-6519(232511001DUP)
UI	Data rejected due to low abundance.	Cesium-134	232504001	CAMO-09-10375
			232504003	CAMO-09-10373
			232504004	CAMO-09-10367
			232504006	CAMO-09-10370
			232504009	CAMO-09-10368
			232504010	CAMO-09-10369
			232504013	CAMO-09-10378
			1201871427	CAMO-09-6519(232511001DUP)
		Strontium-85	232504002	CAMO-09-10376
			232504005	CAMO-09-10377
			232504006	CAMO-09-10370
			232504007	CAMO-09-10374
			232504008	CAMO-09-10371
			232504009	CAMO-09-10368
			232504010	CAMO-09-10369
			232504011	CAMO-09-10366
			1201871427	CAMO-09-6519(232511001DUP)
UI	Data rejected due to no valid peak.	Thorium-234	232504009	CAMO-09-10368

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883018

Sample ID	Client ID
232504001	CAMO-09-10375
232504002	CAMO-09-10376
232504003	CAMO-09-10373
232504004	CAMO-09-10367
232504005	CAMO-09-10377
232504006	CAMO-09-10370
232504007	CAMO-09-10374
232504008	CAMO-09-10371
232504009	CAMO-09-10368
232504010	CAMO-09-10369
232504011	CAMO-09-10366
232504012	CAMO-09-10372
232504013	CAMO-09-10378
232504014	CAMO-09-10379
1201875580	Method Blank (MB)
1201875581	232511002(CAMO-09-6518) Sample Duplicate (DUP)
1201875582	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232511002 (CAMO-09-6518). The QC was from LANL work order 232511.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: Pamela Wilkes 7/17/09

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2498 GEL Work Order: 232504

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10375	Project:	LANL01004
Sample ID:	232504001	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.34%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0437	0.360	+/-0.100	0.200	pCi/g		MXR1	07/07/09	0839	881220	2
Bismuth-211	UI	4.83	0.373	+/-0.302		pCi/g						
Bismuth-214		1.42	0.136	+/-0.106	0.200	pCi/g						
Cadmium-109	UI	3.92	1.59	+/-0.593		pCi/g						
Cerium-139	U	0.0127	0.0599	+/-0.0172	0.050	pCi/g						
Cesium-134	UI	0.151	0.107	+/-0.0464	0.100	pCi/g						
Cesium-137	U	0.00424	0.0777	+/-0.0233	0.100	pCi/g						
Cobalt-60	U	0.0519	0.0835	+/-0.0228	0.100	pCi/g						
Europium-152	U	-0.0319	0.183	+/-0.0707	0.200	pCi/g						
Lanthanum-140	U	-0.058	0.126	+/-0.0502		pCi/g						
Lead-212		2.08	0.109	+/-0.0986	0.100	pCi/g						
Lead-214		1.68	0.130	+/-0.114	0.100	pCi/g						
Mercury-203	U	0.0556	0.0825	+/-0.0223	0.100	pCi/g						
Potassium-40		31.7	0.677	+/-1.42	1.00	pCi/g						
Radium-223	U	-0.941	1.37	+/-0.420		pCi/g						
Radium-224	UI	5.39	1.24	+/-0.829		pCi/g						
Radium-226		1.42	0.136	+/-0.106		pCi/g						
Radium-228		2.25	0.229	+/-0.190	0.500	pCi/g						
Ruthenium-106	U	0.131	0.619	+/-0.181	0.800	pCi/g						
Sodium-22	U	-0.0343	0.0766	+/-0.0251	0.080	pCi/g						
Strontium-85	U	0.062	0.0767	+/-0.0237		pCi/g						
Thallium-208		0.670	0.0675	+/-0.0511	0.080	pCi/g						
Thorium-227	U	0.135	0.777	+/-0.229		pCi/g						
Thorium-231	U	-0.941	1.37	+/-0.420		pCi/g						
Thorium-234	U	0.683	3.10	+/-0.853	2.00	pCi/g						
Tin-113	U	-0.033	0.0843	+/-0.0254	0.100	pCi/g						
Uranium-235	U	-0.00157	0.427	+/-0.125	0.500	pCi/g						
Yttrium-88	U	0.00421	0.0553	+/-0.0163	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	74.9	187	+/-56.6	250	pCi/L		KXK2	07/13/09	2310	883018	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10375
Sample ID: 232504001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10376	Project:	LANL01004
Sample ID:	232504002	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.53%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.00349	0.310	+/-0.087	0.200	pCi/g		MXR1	07/07/09 0843	881220	2
Bismuth-211	UI	3.50	0.342	+/-0.260		pCi/g					
Bismuth-214		1.06	0.108	+/-0.0862	0.200	pCi/g					
Cadmium-109	UI	2.51	1.35	+/-0.462		pCi/g					
Cerium-139	U	-0.0135	0.047	+/-0.0133	0.050	pCi/g					
Cesium-134	U	0.0853	0.0887	+/-0.0262	0.100	pCi/g					
Cesium-137		0.131	0.0543	+/-0.0352	0.100	pCi/g					
Cobalt-60	U	-0.0346	0.0611	+/-0.020	0.100	pCi/g					
Europium-152	U	-0.0416	0.154	+/-0.0502	0.200	pCi/g					
Lanthanum-140	U	-0.0593	0.119	+/-0.0403		pCi/g					
Lead-212		1.82	0.0853	+/-0.087	0.100	pCi/g					
Lead-214		1.22	0.119	+/-0.096	0.100	pCi/g					
Mercury-203	U	0.0512	0.0684	+/-0.0208	0.100	pCi/g					
Potassium-40		26.4	0.464	+/-1.39	1.00	pCi/g					
Radium-223	U	0.131	1.06	+/-0.347		pCi/g					
Radium-224	UI	4.79	0.970	+/-0.574		pCi/g					
Radium-226		1.06	0.108	+/-0.0862		pCi/g					
Radium-228		1.86	0.184	+/-0.195	0.500	pCi/g					
Ruthenium-106	U	-0.103	0.459	+/-0.137	0.800	pCi/g					
Sodium-22	U	-0.0061	0.0709	+/-0.0213	0.080	pCi/g					
Strontium-85	UI	0.0658	0.062	+/-0.0185		pCi/g					
Thallium-208		0.554	0.0548	+/-0.0434	0.080	pCi/g					
Thorium-227	U	-0.112	0.632	+/-0.184		pCi/g					
Thorium-231	U	0.131	1.06	+/-0.347		pCi/g					
Thorium-234	U	0.141	2.56	+/-0.727	2.00	pCi/g					
Tin-113	U	-0.0234	0.068	+/-0.0209	0.100	pCi/g					
Uranium-235	U	0.0847	0.356	+/-0.104	0.500	pCi/g					
Yttrium-88	U	0.014	0.0575	+/-0.0164	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	94.6	166	+/-51.1	250	pCi/L		KXK2	07/14/09 0114	883018	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10376
Sample ID: 232504002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10373	Project:	LANL01004
Sample ID:	232504003	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	11.4%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0207	0.219	+/-0.069	0.200	pCi/g		MXR1	07/07/09	0848	881220	2
Bismuth-211	UI	4.08	0.321	+/-0.256		pCi/g						
Bismuth-214		1.42	0.105	+/-0.0935	0.200	pCi/g						
Cadmium-109	UI	3.91	1.19	+/-0.468		pCi/g						
Cerium-139	U	-0.0142	0.0502	+/-0.015	0.050	pCi/g						
Cesium-134	UI	0.123	0.0882	+/-0.0357	0.100	pCi/g						
Cesium-137	U	-0.0206	0.0593	+/-0.0187	0.100	pCi/g						
Cobalt-60	U	-0.000933	0.069	+/-0.0212	0.100	pCi/g						
Europium-152	U	-0.126	0.146	+/-0.0509	0.200	pCi/g						
Lanthanum-140	U	-0.0462	0.0981	+/-0.0328		pCi/g						
Lead-212		1.82	0.0916	+/-0.0898	0.100	pCi/g						
Lead-214		1.42	0.105	+/-0.0964	0.100	pCi/g						
Mercury-203	U	0.0165	0.066	+/-0.0214	0.100	pCi/g						
Potassium-40		36.0	0.478	+/-1.50	1.00	pCi/g						
Radium-223	U	-0.24	1.06	+/-0.359		pCi/g						
Radium-224	UI	4.72	1.04	+/-0.720		pCi/g						
Radium-226		1.42	0.105	+/-0.0935		pCi/g						
Radium-228		1.51	0.209	+/-0.163	0.500	pCi/g						
Ruthenium-106	U	0.251	0.546	+/-0.156	0.800	pCi/g						
Sodium-22	U	-0.0144	0.071	+/-0.0223	0.080	pCi/g						
Strontium-85	U	0.0405	0.0591	+/-0.0186		pCi/g						
Thallium-208		0.590	0.056	+/-0.0464	0.080	pCi/g						
Thorium-227	U	-0.358	0.598	+/-0.191		pCi/g						
Thorium-231	U	-0.24	1.06	+/-0.359		pCi/g						
Thorium-234	U	1.00	1.97	+/-0.789	2.00	pCi/g						
Tin-113	U	-0.0237	0.0684	+/-0.0207	0.100	pCi/g						
Uranium-235	U	0.258	0.369	+/-0.106	0.500	pCi/g						
Yttrium-88	U	-0.0294	0.0387	+/-0.0148	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	2.14	180	+/-52.7	250	pCi/L		KXK2	07/14/09	0546	883018	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10373
Sample ID: 232504003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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> Result is greater than value reported
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F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

GEL LABORATORIES LLC

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10367	Project:	LANL01004
Sample ID:	232504004	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	14.6%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.211	0.287	+/-0.0852	0.200	pCi/g		MXR1	07/07/09	0849	881220	2
Bismuth-211	UI	4.40	0.332	+/-0.287		pCi/g						
Bismuth-214		1.26	0.111	+/-0.100	0.200	pCi/g						
Cadmium-109	UI	2.10	1.61	+/-0.665		pCi/g						
Cerium-139	U	0.0245	0.0506	+/-0.0147	0.050	pCi/g						
Cesium-134	UI	0.114	0.107	+/-0.0338	0.100	pCi/g						
Cesium-137	U	-0.0196	0.0632	+/-0.0196	0.100	pCi/g						
Cobalt-60	U	-4.14E-05	0.0682	+/-0.0208	0.100	pCi/g						
Europium-152	U	-0.0277	0.160	+/-0.0552	0.200	pCi/g						
Lanthanum-140	U	-0.0685	0.119	+/-0.0405		pCi/g						
Lead-212		1.77	0.0907	+/-0.0845	0.100	pCi/g						
Lead-214		1.53	0.116	+/-0.108	0.100	pCi/g						
Mercury-203	U	-0.0132	0.0673	+/-0.0203	0.100	pCi/g						
Potassium-40		38.2	0.449	+/-1.68	1.00	pCi/g						
Radium-223	U	-0.827	1.04	+/-0.390		pCi/g						
Radium-224	UI	4.95	1.03	+/-0.763		pCi/g						
Radium-226		1.26	0.111	+/-0.100		pCi/g						
Radium-228		1.59	0.207	+/-0.196	0.500	pCi/g						
Ruthenium-106	U	0.0724	0.561	+/-0.163	0.800	pCi/g						
Sodium-22	U	-0.00962	0.088	+/-0.0271	0.080	pCi/g						
Strontium-85	U	0.0602	0.0728	+/-0.0231		pCi/g						
Thallium-208		0.542	0.0647	+/-0.0479	0.080	pCi/g						
Thorium-227	U	0.129	0.667	+/-0.191		pCi/g						
Thorium-231	U	-0.827	1.04	+/-0.390		pCi/g						
Thorium-234	U	0.788	2.28	+/-0.989	2.00	pCi/g						
Tin-113	U	-0.0491	0.069	+/-0.0224	0.100	pCi/g						
Uranium-235	U	0.072	0.370	+/-0.110	0.500	pCi/g						
Yttrium-88	U	0.0183	0.0625	+/-0.0173	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	110	233	+/-70.7	250	pCi/L		KXK2	07/14/09	0754	883018	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10367
Sample ID: 232504004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10377
Sample ID: 232504005
Matrix: R
Collect Date: 24-JUN-09
Receive Date: 27-JUN-09
Collector: Client
Moisture: 6.54%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0254	0.114	+/-0.0344	0.200	pCi/g		MXR1	07/07/09 0850	881220	2
Bismuth-211	UI	4.83	0.435	+/-0.340		pCi/g					
Bismuth-214		1.43	0.155	+/-0.132	0.200	pCi/g					
Cadmium-109	UI	3.93	1.13	+/-0.467		pCi/g					
Cerium-139	U	-0.0083	0.0567	+/-0.0171	0.050	pCi/g					
Cesium-134	U	0.111	0.119	+/-0.032	0.100	pCi/g					
Cesium-137	U	-0.0424	0.0868	+/-0.0276	0.100	pCi/g					
Cobalt-60	U	0.0462	0.0939	+/-0.0269	0.100	pCi/g					
Europium-152	U	-0.13	0.188	+/-0.0688	0.200	pCi/g					
Lanthanum-140	U	-0.0334	0.174	+/-0.0555		pCi/g					
Lead-212		2.15	0.106	+/-0.117	0.100	pCi/g					
Lead-214		1.68	0.152	+/-0.126	0.100	pCi/g					
Mercury-203	UI	0.0975	0.0782	+/-0.0301	0.100	pCi/g					
Potassium-40		33.4	0.678	+/-1.42	1.00	pCi/g					
Radium-223	U	-0.297	1.31	+/-0.453		pCi/g					
Radium-224	UI	6.07	1.20	+/-0.744		pCi/g					
Radium-226		1.43	0.155	+/-0.132		pCi/g					
Radium-228		2.07	0.316	+/-0.237	0.500	pCi/g					
Ruthenium-106	U	-0.0439	0.686	+/-0.207	0.800	pCi/g					
Sodium-22	U	0.00864	0.102	+/-0.0302	0.080	pCi/g					
Strontium-85	UI	0.148	0.0941	+/-0.0273		pCi/g					
Thallium-208		0.669	0.0834	+/-0.0534	0.080	pCi/g					
Thorium-227	U	-0.0669	0.759	+/-0.221		pCi/g					
Thorium-231	U	-0.297	1.31	+/-0.453		pCi/g					
Thorium-234		1.98	1.15	+/-0.575	2.00	pCi/g					
Tin-113	U	0.0136	0.0919	+/-0.0274	0.100	pCi/g					
Uranium-235	U	0.0871	0.420	+/-0.124	0.500	pCi/g					
Yttrium-88	U	-0.00785	0.0654	+/-0.0204	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	44.6	241	+/-70.4	250	pCi/L		KXK2	07/14/09 0841	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10377
Sample ID: 232504005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10370	Project:	LANL01004
Sample ID:	232504006	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.09%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0654	0.392	+/-0.123	0.200	pCi/g		MXR1	07/07/09	0850	881220	2
Bismuth-211	UI	2.33	0.330	+/-0.212		pCi/g						
Bismuth-214		0.916	0.0911	+/-0.0791	0.200	pCi/g						
Cadmium-109	U	0.363	1.51	+/-0.687		pCi/g						
Cerium-139	U	-0.00452	0.0466	+/-0.0135	0.050	pCi/g						
Cesium-134	UI	0.121	0.0844	+/-0.0272	0.100	pCi/g						
Cesium-137	U	-0.00737	0.0554	+/-0.017	0.100	pCi/g						
Cobalt-60	U	0.018	0.0583	+/-0.0166	0.100	pCi/g						
Europium-152	U	-0.00128	0.153	+/-0.048	0.200	pCi/g						
Lanthanum-140	U	-0.00394	0.108	+/-0.0325		pCi/g						
Lead-212		0.898	0.0971	+/-0.0614	0.100	pCi/g						
Lead-214		0.811	0.107	+/-0.0768	0.100	pCi/g						
Mercury-203	U	0.0559	0.0709	+/-0.0188	0.100	pCi/g						
Potassium-40		24.0	0.474	+/-1.18	1.00	pCi/g						
Radium-223	U	0.413	1.09	+/-0.340		pCi/g						
Radium-224	UI	2.95	1.10	+/-0.694		pCi/g						
Radium-226		0.916	0.0911	+/-0.0791		pCi/g						
Radium-228		1.05	0.176	+/-0.152	0.500	pCi/g						
Ruthenium-106	U	-0.0104	0.494	+/-0.148	0.800	pCi/g						
Sodium-22	U	-0.00435	0.0639	+/-0.0197	0.080	pCi/g						
Strontium-85	UI	0.0769	0.067	+/-0.0195		pCi/g						
Thallium-208		0.325	0.0531	+/-0.037	0.080	pCi/g						
Thorium-227	U	0.187	0.659	+/-0.181		pCi/g						
Thorium-231	U	0.413	1.09	+/-0.340		pCi/g						
Thorium-234	U	0.690	3.07	+/-0.924	2.00	pCi/g						
Tin-113	U	-0.0125	0.0717	+/-0.021	0.100	pCi/g						
Uranium-235	U	0.141	0.359	+/-0.102	0.500	pCi/g						
Yttrium-88	U	0.0116	0.043	+/-0.0117	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	-38.8	233	+/-65.1	250	pCi/L		KXK2	07/14/09	0928	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10370
Sample ID: 232504006

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10374	Project:	LANL01004
Sample ID:	232504007	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.61%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0248	0.252	+/-0.069	0.200	pCi/g		MXR1	07/07/09	0851	881220	2
Bismuth-211	UI	2.64	0.257	+/-0.180		pCi/g						
Bismuth-214		0.776	0.0903	+/-0.0632	0.200	pCi/g						
Cadmium-109	UI	1.94	1.05	+/-0.308		pCi/g						
Cerium-139	U	0.0132	0.0422	+/-0.0119	0.050	pCi/g						
Cesium-134	U	0.0584	0.071	+/-0.0188	0.100	pCi/g						
Cesium-137		0.0747	0.0584	+/-0.0226	0.100	pCi/g						
Cobalt-60	U	-0.0123	0.0495	+/-0.0158	0.100	pCi/g						
Europium-152	U	0.0458	0.139	+/-0.044	0.200	pCi/g						
Lanthanum-140	U	0.0438	0.0884	+/-0.0251		pCi/g						
Lead-212		1.25	0.0751	+/-0.0601	0.100	pCi/g						
Lead-214		0.917	0.0844	+/-0.0671	0.100	pCi/g						
Mercury-203	U	0.00812	0.0596	+/-0.0168	0.100	pCi/g						
Potassium-40		25.5	0.511	+/-1.30	1.00	pCi/g						
Radium-223	U	-0.21	0.832	+/-0.280		pCi/g						
Radium-224	UI	3.58	0.854	+/-0.502		pCi/g						
Radium-226		0.776	0.0903	+/-0.0632		pCi/g						
Radium-228		1.09	0.168	+/-0.129	0.500	pCi/g						
Ruthenium-106	U	-0.0688	0.439	+/-0.133	0.800	pCi/g						
Sodium-22	U	-0.0244	0.052	+/-0.0171	0.080	pCi/g						
Strontium-85	UI	0.0739	0.0535	+/-0.0149		pCi/g						
Thallium-208		0.334	0.0474	+/-0.0334	0.080	pCi/g						
Thorium-227	U	0.0231	0.536	+/-0.158		pCi/g						
Thorium-231	U	-0.21	0.832	+/-0.280		pCi/g						
Thorium-234	U	0.429	2.14	+/-0.571	2.00	pCi/g						
Tin-113	U	0.00599	0.0623	+/-0.0178	0.100	pCi/g						
Uranium-235	U	0.0482	0.315	+/-0.0898	0.500	pCi/g						
Yttrium-88	U	-0.0208	0.0339	+/-0.0125	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	78.1	234	+/-69.8	250	pCi/L		KXK2	07/14/09	1015	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10374
Sample ID: 232504007

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10371	Project:	LANL01004
Sample ID:	232504008	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	14.1%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0562	0.121	+/-0.0392	0.200	pCi/g		MXR1	07/07/09	0851	881220	2
Bismuth-211	UI	4.13	0.423	+/-0.283		pCi/g						
Bismuth-214		1.25	0.153	+/-0.118	0.200	pCi/g						
Cadmium-109	UI	2.31	1.31	+/-0.457		pCi/g						
Cerium-139	U	0.00798	0.0546	+/-0.0155	0.050	pCi/g						
Cesium-134	U	0.119	0.132	+/-0.0352	0.100	pCi/g						
Cesium-137	U	-0.0083	0.0919	+/-0.0274	0.100	pCi/g						
Cobalt-60	U	-0.0415	0.0877	+/-0.0299	0.100	pCi/g						
Europium-152	U	-0.0612	0.195	+/-0.0693	0.200	pCi/g						
Lanthanum-140	U	0.0191	0.192	+/-0.0562		pCi/g						
Lead-212		1.87	0.104	+/-0.0955	0.100	pCi/g						
Lead-214		1.44	0.147	+/-0.105	0.100	pCi/g						
Mercury-203	U	0.0386	0.0805	+/-0.0259	0.100	pCi/g						
Potassium-40		30.6	0.893	+/-1.50	1.00	pCi/g						
Radium-223	U	0.584	1.38	+/-0.451		pCi/g						
Radium-224	UI	5.86	1.18	+/-0.737		pCi/g						
Radium-226		1.25	0.153	+/-0.118		pCi/g						
Radium-228		2.03	0.304	+/-0.224	0.500	pCi/g						
Ruthenium-106	U	-0.0569	0.674	+/-0.217	0.800	pCi/g						
Sodium-22	U	-0.0616	0.103	+/-0.0351	0.080	pCi/g						
Strontium-85	UI	0.142	0.0984	+/-0.0258		pCi/g						
Thallium-208		0.614	0.0736	+/-0.0541	0.080	pCi/g						
Thorium-227	U	0.290	0.794	+/-0.227		pCi/g						
Thorium-231	U	0.584	1.38	+/-0.451		pCi/g						
Thorium-234	U	0.892	1.12	+/-0.467	2.00	pCi/g						
Tin-113	U	-0.071	0.086	+/-0.0281	0.100	pCi/g						
Uranium-235	U	-0.0532	0.383	+/-0.118	0.500	pCi/g						
Yttrium-88	U	0.000923	0.091	+/-0.0275	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	53.9	233	+/-68.5	250	pCi/L		KXK2	07/14/09	1102	883018	3

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10371
Sample ID: 232504008

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Los Alamos National Laboratory
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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10368	Project:	LANL01004
Sample ID:	232504009	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	5.47%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0227	0.269	+/-0.0835	0.200	pCi/g		MXR1	07/07/09	0912	881220	2
Bismuth-211	UI	3.32	0.257	+/-0.186		pCi/g						
Bismuth-214		0.972	0.0839	+/-0.0704	0.200	pCi/g						
Cadmium-109	UI	2.30	1.11	+/-0.462		pCi/g						
Cerium-139	U	0.0027	0.0398	+/-0.0111	0.050	pCi/g						
Cesium-134	UI	0.130	0.0712	+/-0.0238	0.100	pCi/g						
Cesium-137	U	-0.011	0.047	+/-0.014	0.100	pCi/g						
Cobalt-60	U	0.00072	0.0428	+/-0.013	0.100	pCi/g						
Europium-152	U	-0.026	0.114	+/-0.0403	0.200	pCi/g						
Lanthanum-140	U	-0.0243	0.0706	+/-0.0273		pCi/g						
Lead-212		1.23	0.0888	+/-0.0642	0.100	pCi/g						
Lead-214		1.16	0.0893	+/-0.0713	0.100	pCi/g						
Mercury-203	UI	0.0615	0.0502	+/-0.0291	0.100	pCi/g						
Potassium-40		29.4	0.354	+/-1.29	1.00	pCi/g						
Radium-223	U	-0.229	0.814	+/-0.287		pCi/g						
Radium-224	UI	1.95	1.15	+/-0.329		pCi/g						
Radium-226		0.972	0.0839	+/-0.0704		pCi/g						
Radium-228		1.42	0.172	+/-0.154	0.500	pCi/g						
Ruthenium-106	U	0.0869	0.417	+/-0.123	0.800	pCi/g						
Sodium-22	U	0.00331	0.0545	+/-0.0163	0.080	pCi/g						
Strontium-85	UI	0.120	0.0575	+/-0.0162		pCi/g						
Thallium-208		0.451	0.0402	+/-0.0355	0.080	pCi/g						
Thorium-227	U	-0.108	0.490	+/-0.146		pCi/g						
Thorium-231	U	-0.229	0.814	+/-0.287		pCi/g						
Thorium-234	UI	2.17	2.12	+/-0.965	2.00	pCi/g						
Tin-113	U	-0.0136	0.0552	+/-0.0162	0.100	pCi/g						
Uranium-235	U	0.0894	0.304	+/-0.0898	0.500	pCi/g						
Yttrium-88	U	-0.00881	0.0336	+/-0.011	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	96.7	232	+/-70.0	250	pCi/L		KXK2	07/14/09	1149	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10368
Sample ID: 232504009

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
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F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10369	Project:	LANL01004
Sample ID:	232504010	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	11.5%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0293	0.221	+/-0.0733	0.200	pCi/g	MXR1	07/07/09	0912	881220	2
Bismuth-211	UI	4.55	0.307	+/-0.236		pCi/g					
Bismuth-214		1.33	0.0974	+/-0.0908	0.200	pCi/g					
Cadmium-109	UI	4.42	1.23	+/-0.477		pCi/g					
Cerium-139	U	-0.0311	0.0446	+/-0.0138	0.050	pCi/g					
Cesium-134	UI	0.131	0.0757	+/-0.0339	0.100	pCi/g					
Cesium-137	U	0.0272	0.0571	+/-0.0165	0.100	pCi/g					
Cobalt-60	U	-0.00438	0.054	+/-0.0164	0.100	pCi/g					
Europium-152	U	-0.0134	0.139	+/-0.0553	0.200	pCi/g					
Lanthanum-140	U	-0.0881	0.0998	+/-0.0353		pCi/g					
Lead-212		1.93	0.084	+/-0.0858	0.100	pCi/g					
Lead-214		1.58	0.102	+/-0.092	0.100	pCi/g					
Mercury-203	U	0.0532	0.0587	+/-0.0277	0.100	pCi/g					
Potassium-40		38.0	0.445	+/-1.54	1.00	pCi/g					
Radium-223	U	0.103	0.962	+/-0.325		pCi/g					
Radium-224	UI	5.45	0.954	+/-0.529		pCi/g					
Radium-226		1.33	0.0974	+/-0.0908		pCi/g					
Radium-228		2.01	0.194	+/-0.176	0.500	pCi/g					
Ruthenium-106	U	0.0219	0.452	+/-0.135	0.800	pCi/g					
Sodium-22	U	-0.00182	0.0673	+/-0.0202	0.080	pCi/g					
Strontium-85	UI	0.182	0.0717	+/-0.0204		pCi/g					
Thallium-208		0.567	0.0495	+/-0.0454	0.080	pCi/g					
Thorium-227	U	0.0553	0.585	+/-0.169		pCi/g					
Thorium-231	U	0.103	0.962	+/-0.325		pCi/g					
Thorium-234	U	1.74	1.84	+/-0.803	2.00	pCi/g					
Tin-113	U	-0.0103	0.063	+/-0.0192	0.100	pCi/g					
Uranium-235	U	0.0608	0.351	+/-0.103	0.500	pCi/g					
Yttrium-88	U	0.0035	0.0354	+/-0.0104	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		366	234	+/-82.9	250	pCi/L	KXK2	07/14/09	1236	883018	3

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Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10369
Sample ID: 232504010

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

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- F Estimated Value
- H Analytical holding time was exceeded
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- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
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- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
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The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10366	Project:	LANL01004
Sample ID:	232504011	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	8.4%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.0475	0.237	+/-0.0749	0.200	pCi/g		MXR1	07/07/09	0913	881220 2
Bismuth-211	UI	3.48	0.298	+/-0.245		pCi/g					
Bismuth-214		1.06	0.123	+/-0.0886	0.200	pCi/g					
Cadmium-109	UI	3.12	1.14	+/-0.461		pCi/g					
Cerium-139	U	-0.0221	0.0415	+/-0.0124	0.050	pCi/g					
Cesium-134	U	0.0301	0.0893	+/-0.0259	0.100	pCi/g					
Cesium-137	U	0.00184	0.0649	+/-0.0191	0.100	pCi/g					
Cobalt-60	U	0.042	0.0767	+/-0.0207	0.100	pCi/g					
Europium-152	U	0.0204	0.150	+/-0.0427	0.200	pCi/g					
Lanthanum-140	U	-0.0231	0.131	+/-0.0417		pCi/g					
Lead-212		1.54	0.0805	+/-0.0756	0.100	pCi/g					
Lead-214		1.21	0.104	+/-0.091	0.100	pCi/g					
Mercury-203	UI	0.0796	0.0593	+/-0.0262	0.100	pCi/g					
Potassium-40		29.1	0.622	+/-1.45	1.00	pCi/g					
Radium-223	U	0.071	1.01	+/-0.327		pCi/g					
Radium-224	UI	4.84	0.917	+/-0.550		pCi/g					
Radium-226		1.06	0.123	+/-0.0886		pCi/g					
Radium-228		1.70	0.232	+/-0.170	0.500	pCi/g					
Ruthenium-106	U	-0.195	0.496	+/-0.153	0.800	pCi/g					
Sodium-22	U	-0.0309	0.0826	+/-0.0269	0.080	pCi/g					
Strontium-85	UI	0.0683	0.066	+/-0.0197		pCi/g					
Thallium-208		0.470	0.0627	+/-0.0447	0.080	pCi/g					
Thorium-227	U	-0.0793	0.575	+/-0.175		pCi/g					
Thorium-231	U	0.071	1.01	+/-0.327		pCi/g					
Thorium-234	U	1.48	2.01	+/-1.06	2.00	pCi/g					
Tin-113	U	-0.0152	0.068	+/-0.0204	0.100	pCi/g					
Uranium-235	U	0.140	0.325	+/-0.0898	0.500	pCi/g					
Yttrium-88	U	0.00986	0.0597	+/-0.0171	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	101	232	+/-70.1	250	pCi/L		KXK2	07/14/09	1323	883018 3

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Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10366
Sample ID: 232504011

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
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- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10372	Project:	LANL01004
Sample ID:	232504012	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	9.83%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.0336	0.277	+/-0.0839	0.200	pCi/g	MXR1	07/07/09	0943	881220	2
Bismuth-211	UI	3.61	0.286	+/-0.248		pCi/g					
Bismuth-214		1.04	0.0989	+/-0.0857	0.200	pCi/g					
Cadmium-109	UI	1.87	1.48	+/-0.536		pCi/g					
Cerium-139	U	0.00426	0.0443	+/-0.0127	0.050	pCi/g					
Cesium-134	U	0.0341	0.0816	+/-0.0307	0.100	pCi/g					
Cesium-137		0.453	0.0583	+/-0.0356	0.100	pCi/g					
Cobalt-60	U	0.00855	0.0657	+/-0.0197	0.100	pCi/g					
Europium-152	U	0.00283	0.140	+/-0.0428	0.200	pCi/g					
Lanthanum-140	U	-0.0769	0.103	+/-0.0378		pCi/g					
Lead-212		1.48	0.0859	+/-0.075	0.100	pCi/g					
Lead-214		1.26	0.0995	+/-0.0922	0.100	pCi/g					
Mercury-203	U	0.012	0.0627	+/-0.0186	0.100	pCi/g					
Potassium-40		27.3	0.556	+/-1.31	1.00	pCi/g					
Radium-223	U	-0.332	0.965	+/-0.348		pCi/g					
Radium-224	UI	3.99	0.977	+/-0.622		pCi/g					
Radium-226		1.04	0.0989	+/-0.0857		pCi/g					
Radium-228		1.76	0.183	+/-0.163	0.500	pCi/g					
Ruthenium-106	U	0.234	0.533	+/-0.152	0.800	pCi/g					
Sodium-22	U	0.041	0.0652	+/-0.0176	0.080	pCi/g					
Strontium-85	U	0.00525	0.0579	+/-0.0193		pCi/g					
Thallium-208		0.440	0.0546	+/-0.046	0.080	pCi/g					
Thorium-227	U	0.0507	0.553	+/-0.164		pCi/g					
Thorium-231	U	-0.332	0.965	+/-0.348		pCi/g					
Thorium-234	U	0.964	2.15	+/-0.911	2.00	pCi/g					
Tin-113	U	-0.015	0.0621	+/-0.0184	0.100	pCi/g					
Uranium-235	U	0.0396	0.333	+/-0.0967	0.500	pCi/g					
Yttrium-88	U	0.00627	0.0376	+/-0.0106	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	53.7	232	+/-68.2	250	pCi/L	KXK2	07/14/09	1410	883018	3

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10372
Sample ID: 232504012

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10378	Project:	LANL01004
Sample ID:	232504013	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	3.27%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.132	0.229	+/-0.0706	0.200	pCi/g		MXR1	07/07/09 0944	881220	2
Bismuth-211	UI	5.01	0.323	+/-0.275		pCi/g					
Bismuth-214		1.61	0.110	+/-0.108	0.200	pCi/g					
Cadmium-109	UI	3.69	1.36	+/-0.478		pCi/g					
Cerium-139	U	-0.00595	0.051	+/-0.015	0.050	pCi/g					
Cesium-134	UI	0.130	0.0932	+/-0.0292	0.100	pCi/g					
Cesium-137	U	0.000704	0.0704	+/-0.0212	0.100	pCi/g					
Cobalt-60	U	-0.0314	0.0576	+/-0.0193	0.100	pCi/g					
Europium-152	U	-0.021	0.158	+/-0.0675	0.200	pCi/g					
Lanthanum-140	U	-0.0705	0.117	+/-0.0408		pCi/g					
Lead-212		2.15	0.0917	+/-0.0976	0.100	pCi/g					
Lead-214		1.74	0.113	+/-0.106	0.100	pCi/g					
Mercury-203	U	0.0376	0.0697	+/-0.0218	0.100	pCi/g					
Potassium-40		33.7	0.549	+/-1.49	1.00	pCi/g					
Radium-223	U	-0.455	1.04	+/-0.359		pCi/g					
Radium-224	UI	5.73	1.04	+/-0.625		pCi/g					
Radium-226		1.61	0.110	+/-0.108		pCi/g					
Radium-228		2.31	0.217	+/-0.218	0.500	pCi/g					
Ruthenium-106	U	0.215	0.566	+/-0.163	0.800	pCi/g					
Sodium-22	U	0.012	0.0743	+/-0.0219	0.080	pCi/g					
Strontium-85	U	0.0329	0.0628	+/-0.0202		pCi/g					
Thallium-208		0.647	0.0584	+/-0.0482	0.080	pCi/g					
Thorium-227	U	0.163	0.649	+/-0.182		pCi/g					
Thorium-231	U	-0.455	1.04	+/-0.359		pCi/g					
Thorium-234		2.37	1.90	+/-0.773	2.00	pCi/g					
Tin-113	U	0.0371	0.0776	+/-0.0217	0.100	pCi/g					
Uranium-235	U	0.129	0.387	+/-0.112	0.500	pCi/g					
Yttrium-88	U	0.00457	0.0603	+/-0.0178	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	102	234	+/-70.5	250	pCi/L		KXK2	07/14/09 1457	883018	3

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10378
Sample ID: 232504013

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID:	CAMO-09-10379	Project:	LANL01004
Sample ID:	232504014	Client ID:	LANL010
Matrix:	R		
Collect Date:	24-JUN-09		
Receive Date:	27-JUN-09		
Collector:	Client		
Moisture:	4.33%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Gravimetric Solids											
"As Received"											
Rad Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	-0.00368	0.286	+/-0.0859	0.200	pCi/g		MXR1	07/07/09 0947	881220	2
Bismuth-211	UI	2.18	0.246	+/-0.185		pCi/g					
Bismuth-214		0.808	0.0771	+/-0.0633	0.200	pCi/g					
Cadmium-109	UI	1.35	1.19	+/-0.412		pCi/g					
Cerium-139	U	-0.00146	0.037	+/-0.0108	0.050	pCi/g					
Cesium-134	U	0.0295	0.0629	+/-0.0173	0.100	pCi/g					
Cesium-137	U	-0.0046	0.046	+/-0.0135	0.100	pCi/g					
Cobalt-60	U	0.0167	0.0555	+/-0.0156	0.100	pCi/g					
Europium-152	U	0.00808	0.123	+/-0.0399	0.200	pCi/g					
Lanthanum-140	U	-0.0275	0.0956	+/-0.0312		pCi/g					
Lead-212		0.770	0.0672	+/-0.0472	0.100	pCi/g					
Lead-214		0.757	0.0857	+/-0.0674	0.100	pCi/g					
Mercury-203	U	0.0222	0.052	+/-0.0143	0.100	pCi/g					
Potassium-40		24.5	0.420	+/-1.27	1.00	pCi/g					
Radium-223	U	0.0485	0.785	+/-0.252		pCi/g					
Radium-224	UI	3.44	0.765	+/-0.410		pCi/g					
Radium-226		0.808	0.0771	+/-0.0633		pCi/g					
Radium-228		0.885	0.150	+/-0.118	0.500	pCi/g					
Ruthenium-106	U	0.124	0.384	+/-0.105	0.800	pCi/g					
Sodium-22	U	0.0284	0.062	+/-0.017	0.080	pCi/g					
Strontium-85	U	0.0355	0.0477	+/-0.0145		pCi/g					
Thallium-208		0.281	0.0428	+/-0.0253	0.080	pCi/g					
Thorium-227	U	-0.00911	0.473	+/-0.132		pCi/g					
Thorium-231	U	0.0485	0.785	+/-0.252		pCi/g					
Thorium-234	U	1.99	2.24	+/-0.886	2.00	pCi/g					
Tin-113	U	-0.0339	0.048	+/-0.0152	0.100	pCi/g					
Uranium-235	U	-0.0049	0.265	+/-0.0773	0.500	pCi/g					
Yttrium-88	U	-0.00401	0.0384	+/-0.0123	0.100	pCi/g					
Rad Liquid Scintillation Analysis											
H3 "As Received"											
Tritium	U	215	233	+/-75.3	250	pCi/L		KXK2	07/14/09 1544	883018	3

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 17, 2009

Client Sample ID: CAMO-09-10379
Sample ID: 232504014

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	EML HASL 300, 4.5.2.3
3	GL-RAD-A-002

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
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E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
F Estimated Value
H Analytical holding time was exceeded
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M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 17, 2009

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232504

Rad Gamma Spec

Batch 881220

QC1201871427 232511001 DUP

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Americium-241		8.90		8.10	pCi/g	0.459		(0-1)	MXR1	07/07/0911:20
	TPU:	+/-0.456		+/-0.414						
Bismuth-211	UI	4.46	UI	4.40	pCi/g	0.0324		(0-1)		
	TPU:	+/-0.518		+/-0.407						
Bismuth-214		1.59		1.30	pCi/g	0.516		(0-1)		
	TPU:	+/-0.162		+/-0.118						
Cadmium-109	UI	3.05	UI	3.57	pCi/g	0.160		(0-1)		
	TPU:	+/-0.810		+/-0.815						
Cerium-139	U	0.00716	U	0.00471	pCi/g	0.0201		(0-1)		
	TPU:	+/-0.0363		+/-0.0248						
Cesium-134	U	0.113	UI	0.137	pCi/g	0.207		(0-1)		
	TPU:	+/-0.0308		+/-0.0282						
Cesium-137		73.3		69.7	pCi/g	0.326		(0-1)		
	TPU:	+/-2.79		+/-2.68						
Cobalt-60	U	0.0408	U	0.043	pCi/g	0.0235		(0-1)		
	TPU:	+/-0.0291		+/-0.0168						
Europium-152	U	-0.0333	U	-0.0854	pCi/g	0.0909		(0-1)		
	TPU:	+/-0.175		+/-0.112						
Lanthanum-140	U	-0.109	U	0.0166	pCi/g	0.811		(0-1)		
	TPU:	+/-0.0474		+/-0.030						
Lead-212		1.90		1.81	pCi/g	0.180		(0-1)		
	TPU:	+/-0.129		+/-0.0969						
Lead-214		1.55		1.53	pCi/g	0.0317		(0-1)		
	TPU:	+/-0.185		+/-0.147						
Mercury-203	U	-0.0157	U	0.0611	pCi/g	0.397		(0-1)		
	TPU:	+/-0.0566		+/-0.0401						
Potassium-40		32.2		34.3	pCi/g	0.347		(0-1)		
	TPU:	+/-1.41		+/-1.48						
Radium-223	U	0.647	U	-0.81	pCi/g	0.412		(0-1)		
	TPU:	+/-1.05		+/-0.718						
Radium-224	UI	16.1	UI	4.76	pCi/g	2.58		(0-1)		
	TPU:	+/-1.30		+/-0.885						
Radium-226		1.59		1.30	pCi/g	0.516		(0-1)		
	TPU:	+/-0.162		+/-0.118						
Radium-228		1.99		1.80	pCi/g	0.257		(0-1)		
	TPU:	+/-0.198		+/-0.173						
Ruthenium-106	U	-0.158	U	0.435	pCi/g	0.442		(0-1)		
	TPU:	+/-0.404		+/-0.266						
Sodium-22	U	0.0131	U	-0.0327	pCi/g	0.484		(0-1)		
	TPU:	+/-0.0294		+/-0.0179						
Strontium-85	U	0.113	UI	0.161	pCi/g	0.215		(0-1)		
	TPU:	+/-0.0675		+/-0.0421						
Thallium-208		0.670		0.584	pCi/g	0.313		(0-1)		
	TPU:	+/-0.0768		+/-0.0593						

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QC Summary

Workorder: 232504

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881220										
Thorium-227	U	0.478	U	-0.472	pCi/g	0.485		(0-1)		
	TPU:	+/-0.585		+/-0.395						
Thorium-231	U	0.647	U	-0.81	pCi/g	0.412		(0-1)		
	TPU:	+/-1.05		+/-0.718						
Thorium-234	UI	2.47	U	-0.313	pCi/g	0.669		(0-1)		
	TPU:	+/-0.788		+/-1.29						
Tin-113	U	0.00348	U	0.0517	pCi/g	0.177		(0-1)		
	TPU:	+/-0.0847		+/-0.0519						
Uranium-235	U	0.0725	U	-0.108	pCi/g	0.210		(0-1)		
	TPU:	+/-0.246		+/-0.184						
Yttrium-88	U	-0.0276	U	0.0205	pCi/g	0.614		(0-1)		
	TPU:	+/-0.0261		+/-0.0131						
QC1201871428 LCS										
Americium-241	15.9			14.4	pCi/g		90.5	(75%-125%)		07/07/0910:00
	TPU:			+/-0.754						
Bismuth-211				2.63	pCi/g					
	TPU:			+/-0.364						
Bismuth-214				0.604	pCi/g					
	TPU:			+/-0.113						
Cadmium-109				42.4	pCi/g					
	TPU:			+/-2.37						
Cerium-139			U	0.0193	pCi/g					
	TPU:			+/-0.020						
Cesium-134			U	0.0635	pCi/g					
	TPU:			+/-0.0631						
Cesium-137	5.64			5.71	pCi/g		101	(75%-125%)		
	TPU:			+/-0.185						
Cobalt-60	6.93			7.14	pCi/g		103	(75%-125%)		
	TPU:			+/-0.293						
Europium-152			U	0.131	pCi/g					
	TPU:			+/-0.0936						
Lanthanum-140			U	-0.0291	pCi/g					
	TPU:			+/-0.0342						
Lead-212				0.946	pCi/g					
	TPU:			+/-0.0714						
Lead-214				0.915	pCi/g					
	TPU:			+/-0.129						
Mercury-203			U	0.0442	pCi/g					
	TPU:			+/-0.0278						
Potassium-40			U	0.359	pCi/g					
	TPU:			+/-0.254						
Radium-223			U	-0.846	pCi/g					
	TPU:			+/-0.541						
Radium-224				2.44	pCi/g					
	TPU:			+/-0.739						
Radium-226				0.604	pCi/g					
	TPU:			+/-0.113						
Radium-228				1.24	pCi/g					
	TPU:			+/-0.258						
Ruthenium-106			U	0.585	pCi/g					
	TPU:			+/-0.263						

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QC Summary

Workorder: 232504

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881220										
Sodium-22			U	-0.00817	pCi/g					
	TPU:			+/-0.0223						
Strontium-85			U	0.0291	pCi/g					
	TPU:			+/-0.0324						
Thallium-208				0.356	pCi/g					
	TPU:			+/-0.0571						
Thorium-227			U	-0.119	pCi/g					
	TPU:			+/-0.296						
Thorium-231			U	-0.846	pCi/g					
	TPU:			+/-0.541						
Thorium-234			U	-1.68	pCi/g					
	TPU:			+/-1.12						
Tin-113			U	0.0298	pCi/g					
	TPU:			+/-0.0376						
Uranium-235			U	0.0477	pCi/g					
	TPU:			+/-0.138						
Yttrium-88			U	0.0593	pCi/g					
	TPU:			+/-0.0226						
QC1201871426 MB										
Americium-241			U	-0.0148	pCi/g					07/07/0910:59
	TPU:			+/-0.00827						
Bismuth-211			U	0.00477	pCi/g					
	TPU:			+/-0.0585						
Bismuth-214			U	0.0315	pCi/g					
	TPU:			+/-0.0237						
Cadmium-109			U	-0.0277	pCi/g					
	TPU:			+/-0.0861						
Cerium-139			U	0.0072	pCi/g					
	TPU:			+/-0.0054						
Cesium-134			U	-0.0139	pCi/g					
	TPU:			+/-0.0125						
Cesium-137			U	-0.00372	pCi/g					
	TPU:			+/-0.0098						
Cobalt-60			U	0.0102	pCi/g					
	TPU:			+/-0.0123						
Europium-152			U	-0.000264	pCi/g					
	TPU:			+/-0.0248						
Lanthanum-140			U	0.0147	pCi/g					
	TPU:			+/-0.0244						
Lead-212			U	0.000506	pCi/g					
	TPU:			+/-0.0141						
Lead-214			U	-0.0132	pCi/g					
	TPU:			+/-0.0206						
Mercury-203			U	0.00199	pCi/g					
	TPU:			+/-0.00765						
Potassium-40			U	-0.00394	pCi/g					
	TPU:			+/-0.150						
Radium-223			U	-0.10	pCi/g					
	TPU:			+/-0.155						
Radium-224			U	0.239	pCi/g					
	TPU:			+/-0.139						

QC Summary

Workorder: 232504

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 881220										
Radium-226			U	0.0315	pCi/g					
	TPU:			+/-0.0237						
Radium-228			U	0.0272	pCi/g					
	TPU:			+/-0.0326						
Ruthenium-106			U	-0.218	pCi/g					
	TPU:			+/-0.112						
Sodium-22			U	-0.00585	pCi/g					
	TPU:			+/-0.0113						
Strontium-85			U	-0.028	pCi/g					
	TPU:			+/-0.0143						
Thallium-208			U	0.00392	pCi/g					
	TPU:			+/-0.0123						
Thorium-227			U	-0.0473	pCi/g					
	TPU:			+/-0.0908						
Thorium-231			U	-0.10	pCi/g					
	TPU:			+/-0.155						
Thorium-234			U	0.116	pCi/g					
	TPU:			+/-0.0766						
Tin-113			U	0.0122	pCi/g					
	TPU:			+/-0.0102						
Uranium-235			U	0.00884	pCi/g					
	TPU:			+/-0.0365						
Yttrium-88			U	0.00855	pCi/g					
	TPU:			+/-0.0139						
Rad Liquid Scintillation										
Batch 883018										
QC1201875581 232511002 DUP										
Tritium	U	192	U	149	pCi/L	0.147		(0-1)	KXK2	07/14/0922:00
	TPU:	+/-74.2		+/-72.2						
QC1201875582 LCS										
Tritium	5730			5450	pCi/L		95	(75%-125%)		07/14/0922:47
	TPU:			+/-417						
QC1201875580 MB										
Tritium			U	-62.2	pCi/L					07/14/0921:13
	TPU:			+/-63.8						

Notes:
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- > Result is greater than value reported
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- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

QC Summary

Workorder: 232504

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time

E	Metals--%differcnce of sample and SD is >10%. Sample concentration must meet flagging criteria
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samplcs were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 881220 Product: Gamma Solid Date: 07/16/09

LANL

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			N/A
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initiated and dated. No transcription errors are apparent.	✓		
Aux data is correct.	✓		
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/16/09

Secondary Review Performed By: [signature] 7/17/09

7/20/09

Gamma Spec Que Sheet

I.G. - 7/7/09

06/29/2009

Batch #: 881220 **Analyst:** MXR1 **First Client DueDate** 07/20/2009 **Internal Due Date:** 07/09/2009

Gamma Spike Isotope: Mixed Gamma **Spike Code:** na **Expiration Date:** na **Vol:** na **Nominal Concentration:** na

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1.0mL **Nominal Concentration:** Cs137-5.638 Co60-6.932 ✓

Initials: MS **Prep Date:** 6/30/09 **Witness:** Am241-15.92

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1 g F)	Detector	Sealing Date/Time (If Applicable)
232504001-1	CAMO-09-10375	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	145.75	6	6/30/09
232504002-1	CAMO-09-10376	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	153.35	8	
232504003-1	CAMO-09-10373	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	138.62	11	
232504004-1	CAMO-09-10367	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	127.09	12	
232504005-1	CAMO-09-10377	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	138.04	13	
232504006-1	CAMO-09-10370	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	162.74	15	
232504007-1	CAMO-09-10374	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	153.35	16	
232504008-1	CAMO-09-10371	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	128.90	21	
232504009-1	CAMO-09-10368	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	145.07	18	
232504010-1	CAMO-09-10369	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	128.72	22	
232504011-1	CAMO-09-10366	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	146.41	23	
232504012-1	CAMO-09-10372	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	138.23	9	
232504013-1	CAMO-09-10378	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	145.06	14	
232504014-1	CAMO-09-10379	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	166.76	10	
232511001-1	CAMO-09-6519	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	144.92	17	
232511002-1	CAMO-09-6518	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	155.08	2	
232511003-1	CAMO-09-6527	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	151.38	8	
232511004-1	CAMO-09-6529	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	158.27	12	
232511005-1	CAMO-09-6528	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	156.96	13	
232511006-1	CAMO-09-6531	SAMPLE		.05 pCi/g	LANL010	SOIL	24-JUN-09 12:00:00	147.27	16	
1201871426-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	6/30/09	166.76	21	
1201871427-1	DUP CAMO-09-6519(232511001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	24-JUN-09 12:00:00	144.91	18	
1201871428-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	6/30/09	155.44	1	

988

GEL Laboratories LLC, Radiochemistry Division

history ✓
duties ✓

Data Reviewed By: 7/16/09 7/17/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881220	232504001	SAMPLE	07-JUL-09	Americium-241	-0.04374	0.3598	0.200
				Cerium-139	0.01265	0.05986	0.050
				Thorium-234	0.6829	3.096	2.00
881220	232504002	SAMPLE	07-JUL-09	Americium-241	0.00349	0.3102	0.200
				Thorium-234	0.1405	2.557	2.00
881220	232504003	SAMPLE	07-JUL-09	Americium-241	0.02066	0.219	0.200
				Cerium-139	-0.01423	0.05015	0.050
881220	232504004	SAMPLE	07-JUL-09	Americium-241	0.2105	0.2869	0.200
				Cerium-139	0.02452	0.05061	0.050
				Sodium-22	-0.00962	0.08801	0.080
				Thorium-234	0.7879	2.276	2.00
881220	232504005	SAMPLE	07-JUL-09	Cerium-139	-0.0083	0.05671	0.050
				Cesium-134	0.1106	0.1187	0.100
				Sodium-22	0.00864	0.1021	0.080
881220	232504006	SAMPLE	07-JUL-09	Americium-241	-0.06538	0.3917	0.200
				Thorium-234	0.69	3.065	2.00
881220	232504007	SAMPLE	07-JUL-09	Americium-241	-0.0248	0.2521	0.200
				Thorium-234	0.429	2.135	2.00
881220	232504008	SAMPLE	07-JUL-09	Cerium-139	0.00798	0.05464	0.050
				Cesium-134	0.1188	0.1324	0.100
				Sodium-22	-0.06158	0.1029	0.080
881220	232504009	SAMPLE	07-JUL-09	Americium-241	-0.02267	0.2687	0.200
881220	232504010	SAMPLE	07-JUL-09	Americium-241	0.02928	0.2207	0.200
881220	232504011	SAMPLE	07-JUL-09	Americium-241	-0.04747	0.2374	0.200
				Sodium-22	-0.0309	0.0826	0.080
				Thorium-234	1.478	2.008	2.00
881220	232504012	SAMPLE	07-JUL-09	Americium-241	-0.03357	0.277	0.200
				Thorium-234	0.9639	2.149	2.00
881220	232504013	SAMPLE	07-JUL-09	Americium-241	0.1321	0.2287	0.200
				Cerium-139	-0.00595	0.05101	0.050
881220	232504014	SAMPLE	07-JUL-09	Americium-241	-0.00368	0.2861	0.200
				Thorium-234	1.992	2.237	2.00
881220	232511001	SAMPLE	07-JUL-09	Cerium-139	0.00716	0.1251	0.050
				Cesium-134	0.1128	0.1179	0.100
				Cobalt-60	0.04083	0.1021	0.100
				Europium-152	-0.03327	0.5722	0.200
				Mercury-203	-0.0157	0.1988	0.100
				Ruthenium-106	-0.158	1.336	0.800
				Sodium-22	0.01308	0.09868	0.080
				Tin-113	0.00348	0.2918	0.100
				Uranium-235	0.07247	0.8525	0.500
881220	232511002	SAMPLE	07-JUL-09	Cerium-139	-0.00796	0.0532	0.050
				Thorium-234	2.409	2.504	2.00
881220	232511003	SAMPLE	07-JUL-09	Americium-241	-0.1747	0.3175	0.200

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
881220	232511003	SAMPLE	07-JUL-09	Thorium-234	1.877	2.822	2.00
881220	232511004	SAMPLE	07-JUL-09	Cerium-139	0.01081	0.1107	0.050
				Europium-152	0.1661	0.4832	0.200
				Mercury-203	0.00665	0.1741	0.100
				Ruthenium-106	-0.05854	1.137	0.800
				Thorium-234	1.803	4.235	2.00
				Tin-113	0.0002	0.2391	0.100
				Uranium-235	-0.1134	0.7339	0.500
881220	232511005	SAMPLE	07-JUL-09	Cerium-139	-0.01715	0.0687	0.050
				Cesium-134	0.05939	0.1017	0.100
				Europium-152	0.07737	0.2759	0.200
				Mercury-203	0.03284	0.1055	0.100
				Tin-113	0.0133	0.1394	0.100
881220	232511006	SAMPLE	07-JUL-09	Cerium-139	0.0018	0.05501	0.050
				Thorium-234	1.598	2.398	2.00
881220	1201871426	MB	07-JUL-09				
881220	1201871427	DUP	07-JUL-09	Cerium-139	0.00471	0.08862	0.050
				Europium-152	-0.08539	0.356	0.200
				Mercury-203	0.06106	0.1378	0.100
				Ruthenium-106	0.4348	0.8977	0.800
				Thorium-234	-0.3133	4.149	2.00
				Tin-113	0.05172	0.1816	0.100
				Uranium-235	-0.1078	0.6114	0.500
881220	1201871428	LCS	07-JUL-09	Cerium-139	0.01927	0.07316	0.050
				Cesium-134	0.06354	0.1505	0.100
				Europium-152	0.1313	0.2751	0.200
				Ruthenium-106	0.585	0.9619	0.800
				Thorium-234	-1.68	3.462	2.00
				Tin-113	0.02981	0.1298	0.100

GEL QUALS

Batch ID: 881220

Report run on: July 16, 2009 8:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232504001-1 07-JUL-2009 08:39	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.833			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.916			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1507		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.392			
232504002-1 07-JUL-2009 08:43	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.504			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.508			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.785			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.06581			
232504003-1 07-JUL-2009 08:48	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.081			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.909			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1229		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.722			
232504004-1 07-JUL-2009 08:49	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.4			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.096			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1142		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.947			
232504005-1 07-JUL-2009 08:50	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.831			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.933			
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.09747		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		6.065			

GEL QUALS

Batch ID: 881220

Report run on: July 16, 2009 8:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232504005-1 07-JUL-2009 08:50	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1479			
232504006-1 07-JUL-2009 08:50	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.332			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1211		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.953			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07694			
232504007-1 07-JUL-2009 08:51	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.636			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.939			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.582			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07385			
232504008-1 07-JUL-2009 08:51	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.127			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.31			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.856			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1418			
232504009-1 07-JUL-2009 09:12	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.324			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.296			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1296		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.06151		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		1.952			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1198			
	Thorium-234	UI			Data rejected due to no valid peak.		0.168			

GEL QUALS

Batch ID: 881220

Report run on: July 16, 2009 8:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232504010-1 07-JUL-2009 09:12	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.554			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.417			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.131		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.445			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1816			
232504011-1 07-JUL-2009 09:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.477			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.116			
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.07963		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.837			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0683			
232504012-1 07-JUL-2009 09:43	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.611			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.865			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.991			
232504013-1 07-JUL-2009 09:44	Bismuth-211	UI	UI	UI	Data rejected due to interference.		5.012			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.694			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1295		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.729			
232504014-1 07-JUL-2009 09:47	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.176			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.347			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.436			

GEL QUALS

Batch ID: 881220

Report run on: July 16, 2009 8:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232511001-1 07-JUL-2009 10:10	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.459			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.048			
	Radium-224	UI	UI	UI	Data rejected due to low abundance.		16.06			
	Thorium-234	UI	UI	UI	Data rejected due to low abundance.		2.468		2	2
232511002-1 07-JUL-2009 10:19	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.571			
	Cadmium-109	UI	UI	UI	Data rejected due to low abundance.		3.312			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09187		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.34			
232511003-1 07-JUL-2009 10:50	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.289			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.492			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1346		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.466			
232511004-1 07-JUL-2009 10:53	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.647			
	Cobalt-60	UI	UI	UI	Data rejected due to low abundance.		.08393		.1	.1
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1872			
	Bismuth-211		UI		Data rejected due to interference.		3.711			
232511005-1 07-JUL-2009 10:54	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.506			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1914			
232511006-1 07-JUL-2009 10:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.037			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.81			

GEL QUALS

Batch ID: 881220

Report run on: July 16, 2009 8:04 AM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232511006-1 07-JUL-2009 10:58	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1099		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.931			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09636			
1201871427-1 DUP 07-JUL-2009 11:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.399			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.567			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1372		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.764			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1605			

Gamma Review Report based on Result > MDA for Batch:881220

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504001	24-JUN-09 12:00	07-JUL-09 08:39	12.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	2.251	0.1897	pCi/g	0.2293	N	911	3	1.648	IDENTIFIED	6.703		
Americium-243	int nr	0.4813	0.04835	pCi/g	0.1141	N	74.94	1	1.14	IDENTIFIED	8.971		
Annihilation Rad.	HE	0.1221	0.03856	pCi/g	0.05325	N	510.6	1	1.321	IDENTIFIED	31.47		
Bismuth-211	int	4.833	0.3024	pCi/g	0.3728	Y	352	4	1.255	IDENTIFIED	5.361	ui	
Bismuth-212	nr	1.233	0.2822	pCi/g	0.5343	N	727.4	1	1.539	IDENTIFIED	22.57		
Bismuth-214	✓	1.417	0.1058	pCi/g	0.1362	0.200	609.2	4	1.423	IDENTIFIED	6.497		
Cadmium-109	int	3.916	0.5926	pCi/g	1.593	Y	87.3	5	1.271	IDENTIFIED	14.32	ui	
Cerium-143		296.7	45.53	pCi/g	0	N	87.3	5	1.271	FAIL_DECAY	14.32		
Cesium-134	la	0.1507	0.04641	pCi/g	0.1073	0.100	796.3	1	1.1	FAIL_ABUND	30.63	UI	Data rejected due to low abundance.
Gross Gamma		11.23	1.467	pCi/g	4.596	N		0					
Iodine-123	HE	2.46E+05	1.96E+05	pCi/g	0	N	87.3	5	1.271	NOT_IDENTI	14.32		
Lead-212	✓	2.076	0.09863	pCi/g	0.1092	0.100	238.7	5	1.151	IDENTIFIED	2.996		
Lead-214	✓	1.681	0.114	pCi/g	0.13	0.100	352	4	1.255	IDENTIFIED	5.361		
Lutetium-177	HE	2.83	0.7697	pCi/g	1.891	N	209.3	1	1.036	FAIL_ABUND	27.05		
Neptunium-237	int nr	1.134	0.2077	pCi/g	0.5004	N	87.3	5	1.271	IDENTIFIED	14.32		
Polonium-212	nr	2.076	0.09863	pCi/g	0.1092	N	238.7	5	1.151	IDENTIFIED	2.996		
Polonium-214	nr	1.681	0.114	pCi/g	0.13	N	352	4	1.255	IDENTIFIED	5.361		
Polonium-216	nr	2.076	0.09863	pCi/g	0.1092	N	238.7	5	1.151	IDENTIFIED	2.996		
Polonium-218	nr	1.681	0.114	pCi/g	0.13	N	352	4	1.255	IDENTIFIED	5.361		
Potassium-40	✓	31.67	1.417	pCi/g	0.6765	1.00	1460	1	2.259	IDENTIFIED	3.013		
Radium-224	int	5.392	0.8291	pCi/g	1.242	Y	241.8	1	1.952	IDENTIFIED	15.09	ui	
Radium-226	✓	1.417	0.1058	pCi/g	0.1362	Y	609.2	4	1.423	IDENTIFIED	6.497		
Radium-228	✓	2.251	0.1897	pCi/g	0.2293	0.500	911	3	1.648	IDENTIFIED	6.703		
Thallium-208	✓	0.6698	0.0511	pCi/g	0.06751	0.080	583.2	1	1.344	IDENTIFIED	6.944		
Thorium-228	nr	2.076	0.09863	pCi/g	0.1092	N	238.7	5	1.151	IDENTIFIED	2.996		
Thorium-230	nr	1.417	0.1058	pCi/g	0.1362	N	609.2	4	1.423	IDENTIFIED	6.497		
Thorium-232	nr	2.251	0.1897	pCi/g	0.2293	N	911	3	1.648	IDENTIFIED	6.703		
Tin-126	int nr	0.3862	0.05844	pCi/g	0.1752	N	87.3	5	1.271	IDENTIFIED	14.32		
Titanium-44	la nr	0.4493	0.03544	pCi/g	0.1037	N	77.23	1	1.115	FAIL_ABUND	6.43		
Uranium-234	nr	1.417	0.1058	pCi/g	0.1362	N	609.2	4	1.423	IDENTIFIED	6.497		
Zirconium-97		4.74E+05	1.28E+05	pCi/g	0	N	238.7	5	1.151	NOT_IDENTI	2.996		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504002	24-JUN-09 12:00	07-JUL-09 08:43	12.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual		Qual Comment
Actinium-228	nr	1.856	0.1951	pCi/g	0.1835	N	910.6	3	1.514	IDENTIFIED	8.251			
Americium-243	int nr	0.4231	0.04732	pCi/g	0.09323	N	74.84	1	1.414	IDENTIFIED	9.827			
Annihilation Rad.		0.1622	0.03133	pCi/g	0.04481	N	510.8	2	2.073	IDENTIFIED	19.09			
Barium-137m		0.1237	0.03328	pCi/g	0.05141	N	661.3	2	0.8052	IDENTIFIED	26.78			
Beryllium-7	HE	0.837	0.2676	pCi/g	0.5144	N	478.3	2	1.516	IDENTIFIED	31.79			
Bismuth-211	int	3.504	0.2604	pCi/g	0.342	Y	351.7	4	1.159	IDENTIFIED	6.651		ui	
Bismuth-212	la nr	1.272	0.2348	pCi/g	0.694	N	727	1	1.243	FAIL_ABUND	17.99			
Bismuth-214	✓	1.063	0.08624	pCi/g	0.1075	0.200	608.8	4	1.47	IDENTIFIED	7.182			
Cadmium-109	int	2.508	0.4616	pCi/g	1.354	Y	87.15	4	1.119	IDENTIFIED	17.49		ui	
Cerium-143		280.2	40.74	pCi/g	0	N	327.4	1	1.351	FAIL_DECAY	26.8			
Cesium-135	int nr	0.5503	0.1186	pCi/g	0.2443	N	269.6	1	1.309	IDENTIFIED	21.2			
Cesium-137	✓	0.1307	0.03518	pCi/g	0.05434	0.100	661.3	2	0.8052	IDENTIFIED	26.78			
Gross Gamma		9.337	1.261	pCi/g	3.12	N		0						
Iodine-123	HE	24710	1.54E+05	pCi/g	0	N	87.15	4	1.119	NOT_IDENTI	17.49			
Iodine-133	HE	113.5	448.1	pCi/g	0	N	510.8	2	2.073	FAIL_DECAY	19.09			
Krypton-85	HE	13.14	3.685	pCi/g	12.38	N	238.4	8	1.184	NOT_IDENTI	3.042			
Lead-212	✓	1.82	0.08703	pCi/g	0.08529	0.100	238.4	8	1.184	IDENTIFIED	3.042			
Lead-214	✓	1.219	0.09599	pCi/g	0.1192	0.100	351.7	4	1.159	IDENTIFIED	6.651			
Lutetium-177	HE	2.734	0.6323	pCi/g	1.687	N	208.8	1	0.8819	FAIL_ABUND	22.96			
Neptunium-237	HE	0.7263	0.1532	pCi/g	0.4279	N	87.15	4	1.119	IDENTIFIED	17.49			
Niobium-97	HE	9844	4994	pCi/g	0	N	238.4	8	1.184	NOT_IDENTI	3.042			
Polonium-212	nr	1.82	0.08703	pCi/g	0.08529	N	238.4	8	1.184	IDENTIFIED	3.042			
Polonium-214	nr	1.219	0.09599	pCi/g	0.1192	N	351.7	4	1.159	IDENTIFIED	6.651			
Polonium-216	nr	1.82	0.08703	pCi/g	0.08529	N	238.4	8	1.184	IDENTIFIED	3.042			
Polonium-218	nr	1.219	0.09599	pCi/g	0.1192	N	351.7	4	1.159	IDENTIFIED	6.651			
Potassium-40	✓	26.44	1.387	pCi/g	0.464	1.00	1460	1	1.898	IDENTIFIED	3.091			
Radium-224	int	4.785	0.5741	pCi/g	0.9703	Y	241.5	1	1.698	IDENTIFIED	11.63		ui	
Radium-226	✓	1.063	0.08624	pCi/g	0.1075	Y	608.8	4	1.47	IDENTIFIED	7.182			
Radium-228	✓	1.856	0.1951	pCi/g	0.1835	0.500	910.6	3	1.514	IDENTIFIED	8.251			
Sodium-24	HE	20110	27120	pCi/g	0	N	478.3	2	1.516	NOT_IDENTI	31.79			
Strontium-85	la	0.06581	0.01845	pCi/g	0.062	Y	238.4	8	1.184	NOT_IDENTI	3.042		UI	Data rejected due to low abundance.
Thallium-208	✓	0.5538	0.04341	pCi/g	0.05477	0.080	582.9	1	1.566	IDENTIFIED	7.128			
Thorium-228	nr	1.82	0.08703	pCi/g	0.08528	N	238.4	8	1.184	IDENTIFIED	3.042			
Thorium-230	nr	1.063	0.08624	pCi/g	0.1075	N	608.8	4	1.47	IDENTIFIED	7.182			
Thorium-232	nr	1.856	0.1951	pCi/g	0.1835	N	910.6	3	1.514	IDENTIFIED	8.251			
Tin-126	int nr	0.2473	0.04552	pCi/g	0.1373	N	87.15	4	1.119	IDENTIFIED	17.49			
Titanium-44	la nr	0.3933	0.03309	pCi/g	0.08414	N	77.09	1	1.113	FAIL_ABUND	6.474			
Uranium-234	nr	1.063	0.08624	pCi/g	0.1075	N	608.8	4	1.47	IDENTIFIED	7.182			
Zirconium-97		2.95E+05	1.08E+05	pCi/g	0	N	238.4	8	1.184	NOT_IDENTI	3.042			

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504003	24-JUN-09 12:00	07-JUL-09 08:48	12.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.506	0.1628	pCi/g	0.2089	N	911	3	1.321	IDENTIFIED	9.376		
Americium-243	int nr	0.3839	0.03303	pCi/g	0.08521	N	74.25	1	0.9406	IDENTIFIED	7.705		
Annihilation Rad.		0.1373	0.03207	pCi/g	0.0427	N	510.2	1	1.452	IDENTIFIED	23.16		
Bismuth-211	int	4.081	0.2559	pCi/g	0.3205	Y	351.5	4	1.093	IDENTIFIED	5.204	ui	
Bismuth-212	nr	1.24	0.2021	pCi/g	0.4852	N	727	1	1.465	IDENTIFIED	15.66		
Bismuth-214	✓	1.423	0.0935	pCi/g	0.1049	0.200	609	4	1.309	IDENTIFIED	5		
Cadmium-109	int	3.909	0.4684	pCi/g	1.193	Y	86.68	4	1.147	IDENTIFIED	11.11	ui	
Cerium-143		451.9	60.77	pCi/g	0	N	294.7	1	1.13	FAIL_DECAY	7.767		
Cesium-134	la	0.1229	0.03573	pCi/g	0.08816	0.100	795.1	2	1.002	FAIL_ABUND	28.81	UI	Data rejected due to low abundance.
Cesium-135	HE	0.4085	0.09286	pCi/g	0.2994	N	795.1	2	1.002	NOT_IDENTI	28.81		
Gross Gamma		10.69	1.544	pCi/g	3.799	N		0					
Iodine-123	HE	2.02E+05	1.67E+05	pCi/g	0	N	86.68	4	1.147	NOT_IDENTI	11.11		
Lead-212	✓	1.816	0.08981	pCi/g	0.09157	0.100	238.1	7	0.9655	IDENTIFIED	2.81		
Lead-214	✓	1.419	0.09642	pCi/g	0.105	0.100	351.5	4	1.093	IDENTIFIED	5.204		
Lutetium-177	HE	2.81	0.647	pCi/g	1.655	N	208.6	1	0.9459	FAIL_ABUND	22.82		
Neptunium-237	int nr	1.132	0.179	pCi/g	0.3495	N	86.68	4	1.147	IDENTIFIED	11.11		
Niobium-95m	la nr	1.201	0.09728	pCi/g	0.316	N	238.1	7	0.9655	NOT_IDENTI	2.81		
Niobium-97	HE	6204	5224	pCi/g	0	N	238.1	7	0.9655	NOT_IDENTI	2.81		
Polonium-212	nr	1.816	0.08981	pCi/g	0.09157	N	238.1	7	0.9655	IDENTIFIED	2.81		
Polonium-214	nr	1.419	0.09642	pCi/g	0.105	N	351.5	4	1.093	IDENTIFIED	5.204		
Polonium-216	nr	1.816	0.08981	pCi/g	0.09157	N	238.1	7	0.9655	IDENTIFIED	2.81		
Polonium-218	nr	1.419	0.09642	pCi/g	0.105	N	351.5	4	1.093	IDENTIFIED	5.204		
Potassium-40	✓	36.02	1.501	pCi/g	0.478	1.00	1461	2	1.619	IDENTIFIED	2.478		
Radium-224	int	4.722	0.7197	pCi/g	1.042	Y	241.1	1	1.949	IDENTIFIED	14.85	ui	
Radium-226	✓	1.423	0.0935	pCi/g	0.1049	Y	609	4	1.309	IDENTIFIED	5		
Radium-228	✓	1.506	0.1628	pCi/g	0.2089	0.500	911	3	1.321	IDENTIFIED	9.376		
Thallium-208	✓	0.5904	0.04639	pCi/g	0.05597	0.080	582.8	1	1.378	IDENTIFIED	6.929		
Thorium-228	nr	1.816	0.08981	pCi/g	0.09156	N	238.1	7	0.9655	IDENTIFIED	2.81		
Thorium-230	nr	1.423	0.0935	pCi/g	0.1049	N	609	4	1.309	IDENTIFIED	5		
Thorium-232	nr	1.506	0.1628	pCi/g	0.2089	N	911	3	1.321	IDENTIFIED	9.376		
Tin-126	int nr	0.3855	0.0462	pCi/g	0.118	N	86.68	4	1.147	IDENTIFIED	11.11		
Titanium-44	la nr	0.2047	0.02618	pCi/g	0.06988	N	1461	2	1.619	NOT_IDENTI	2.478		
Total Uranium		3.0998	2.35E-06	ug/g	2.9395	N		0					
Uranium-234	nr	1.423	0.0935	pCi/g	0.1049	N	609	4	1.309	IDENTIFIED	5		
Zirconium-97		6.36E+05	1.13E+05	pCi/g	0	N	238.1	7	0.9655	NOT_IDENTI	2.81		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504004	24-JUN-09 12:00	07-JUL-09 08:49	12.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.594	0.1961	pCi/g	0.2073	N	911.7	3	1.762	IDENTIFIED	11.01		
Americium-243	int nr	0.4515	0.04144	pCi/g	0.09491	N	74.82	2	1.046	IDENTIFIED	8.525		
Annihilation Rad.		0.1282	0.03598	pCi/g	0.04674	N	510.8	1	1.317	IDENTIFIED	27.89		
Bismuth-211	int	4.4	0.2869	pCi/g	0.3318	Y	352	4	1.139	IDENTIFIED	5.713	ui	
Bismuth-212	HE	1.252	0.2984	pCi/g	0.7713	N	728.1	1	1.476	FAIL_ABUND	23.43		
Bismuth-214	✓	1.262	0.1002	pCi/g	0.1111	0.200	609.5	4	1.255	IDENTIFIED	6.792		
Cadmium-109	int	2.096	0.6651	pCi/g	1.606	Y	86.82	3	1.297	IDENTIFIED	31.51	ui	
Cerium-143		190	33.2	pCi/g	0	N	328.1	1	1.137	FAIL_DECAY	33.05		
Cesium-134	la	0.1142	0.03384	pCi/g	0.1074	0.100	795.3	1	0.8133	FAIL_ABUND	29.39	UI	Data rejected due to low abundance.
Gross Gamma		10.57	1.809	pCi/g	3.311	N		0					
Lead-212	✓	1.77	0.08447	pCi/g	0.09065	0.100	238.7	5	1.061	IDENTIFIED	3.19		
Lead-214	✓	1.53	0.1075	pCi/g	0.1157	0.100	352	4	1.139	IDENTIFIED	5.713		
Lutetium-177	HE	2.153	0.7002	pCi/g	1.702	N	209.2	1	0.9427	FAIL_ABUND	32.41		
Neptunium-237	HE	0.607	0.2025	pCi/g	0.4127	N	86.82	3	1.297	IDENTIFIED	31.51		
Polonium-212	nr	1.77	0.08447	pCi/g	0.09065	N	238.7	5	1.061	IDENTIFIED	3.19		
Polonium-214	nr	1.53	0.1075	pCi/g	0.1157	N	352	4	1.139	IDENTIFIED	5.713		
Polonium-216	nr	1.77	0.08447	pCi/g	0.09065	N	238.7	5	1.061	IDENTIFIED	3.19		
Polonium-218	nr	1.53	0.1075	pCi/g	0.1157	N	352	4	1.139	IDENTIFIED	5.713		
Potassium-40	✓	38.23	1.683	pCi/g	0.4493	1.00	1461	1	2.014	IDENTIFIED	2.583		
Radium-224	int	4.947	0.7626	pCi/g	1.032	Y	241.6	1	1.796	IDENTIFIED	15.17	ui	
Radium-226	✓	1.262	0.1002	pCi/g	0.1111	Y	609.5	4	1.255	IDENTIFIED	6.792		
Radium-228	✓	1.594	0.1961	pCi/g	0.2073	0.500	911.7	3	1.762	IDENTIFIED	11.01		
Thallium-200	HE	12.04	57.7	pCi/g	0	N	74.82	2	1.046	NOT_IDENTI	8.525		
Thallium-208	✓	0.5418	0.04785	pCi/g	0.06471	0.080	583.4	1	1.438	IDENTIFIED	8.075		
Thorium-228	nr	1.77	0.08447	pCi/g	0.09064	N	238.7	5	1.061	IDENTIFIED	3.19		
Thorium-230	nr	1.262	0.1002	pCi/g	0.1111	N	609.5	4	1.255	IDENTIFIED	6.792		
Thorium-232	nr	1.594	0.1961	pCi/g	0.2073	N	911.7	3	1.762	IDENTIFIED	11.01		
Tin-126	HE	0.2067	0.0656	pCi/g	0.1591	N	86.82	3	1.297	IDENTIFIED	31.51		
Titanium-44	la nr	0.417	0.02938	pCi/g	0.08205	N	77.12	1	0.9578	FAIL_ABUND	6.137		
Uranium-234	nr	1.262	0.1002	pCi/g	0.1111	N	609.5	4	1.255	IDENTIFIED	6.792		
Zirconium-97	HE	2.02E+05	1.09E+05	pCi/g	0	N	238.7	5	1.061	NOT_IDENTI	3.19		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504005	24-JUN-09 12:00	07-JUL-09 08:50	12.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	2.067	0.2371	pCi/g	0.3155	N	911.9	3	1.544	IDENTIFIED	10.23		

Americium-243	int nr	**0.4666**	0.03567	pCi/g	**0.07003**	N	75.24	1	1.001	IDENTIFIED	6.319			
Annihilation Rad.		**0.2268**	0.03939	pCi/g	**0.05826**	N	511.3	2	1.349	IDENTIFIED	17.01			
Bismuth-210	HE	**1.355**	0.3531	pCi/g	**0.9502**	N	47	3	1.032	IDENTIFIED	25.74			
Bismuth-211	int	**4.831**	0.3403	pCi/g	**0.4354**	Y	352.5	4	1.289	IDENTIFIED	6.035		ui	
Bismuth-212	HE	**1.472**	0.3012	pCi/g	**0.8717**	N	727.8	1	1.916	FAIL_ABUND	19.89			
Bismuth-214 ✓		**1.427**	0.1317	pCi/g	**0.1549**	**0.200**	609.7	4	1.496	IDENTIFIED	7.956			
Cadmium-109	int	**3.933**	0.4673	pCi/g	**1.13**	Y	87.58	4	0.9729	IDENTIFIED	11.2		ui	
Cerium-143		**82.56**	28.91	pCi/g	**0**	N	328.3	1	1.771	NOT_IDENTI	30.29			
Europium-155	HE	**0.2252**	0.05717	pCi/g	**0.2073**	N	87.58	4	0.9729	FAIL_ABUND	11.2			
Gross Gamma		**11.93**	1.701	pCi/g	**4.309**	N		0						
Iodine-135	HE	**2.18E+12**	1.35E+13	pCi/g	**0**	N	511.3	2	1.349	NOT_IDENTI	17.01			
Krypton-85	HE	**29.54**	5.455	pCi/g	**18.79**	N	239.1	7	1.185	NOT_IDENTI	2.966			
Lead-210	HE	**1.355**	0.3531	pCi/g	**0.9502**	N	47	3	1.032	IDENTIFIED	25.74			
Lead-212 ✓		**2.149**	0.1166	pCi/g	**0.1058**	**0.100**	239.1	7	1.185	IDENTIFIED	2.966			
Lead-214 ✓		**1.68**	0.1262	pCi/g	**0.1518**	**0.100**	352.5	4	1.289	IDENTIFIED	6.035			
Lutetium-177	HE	**2.605**	0.677	pCi/g	**1.788**	N	209.8	2	1.103	FAIL_ABUND	25.69			
Mercury-203	int	**0.09747**	0.0301	pCi/g	**0.07816**	**0.100**	277.9	1	1.491	IDENTIFIED	30.62		ui	
Neptunium-237	int nr	**1.139**	0.1792	pCi/g	**0.3543**	N	87.58	4	0.9729	IDENTIFIED	11.2			
Polonium-210	HE	**1.355**	0.3521	pCi/g	**0.9502**	N	47	3	1.032	IDENTIFIED	25.74			
Polonium-212	nr	**2.149**	0.1166	pCi/g	**0.1058**	N	239.1	7	1.185	IDENTIFIED	2.966			
Polonium-214	nr	**1.68**	0.1262	pCi/g	**0.1518**	N	352.5	4	1.289	IDENTIFIED	6.035			
Polonium-216	nr	**2.149**	0.1166	pCi/g	**0.1058**	N	239.1	7	1.185	IDENTIFIED	2.966			
Polonium-218	nr	**1.68**	0.1262	pCi/g	**0.1518**	N	352.5	4	1.289	IDENTIFIED	6.035			
Potassium-40 ✓		**33.37**	1.418	pCi/g	**0.6783**	**1.00**	1462	1	2.031	IDENTIFIED	2.952			
Radium-224	int	**6.065**	0.7443	pCi/g	**1.204**	Y	242.1	1	1.833	IDENTIFIED	11.62		ui	
Radium-226 ✓		**1.427**	0.1317	pCi/g	**0.1549**	Y	609.7	4	1.496	IDENTIFIED	7.956			
Radium-228 ✓		**2.067**	0.2371	pCi/g	**0.3155**	**0.500**	911.9	3	1.544	IDENTIFIED	10.23			
Strontium-85	la	**0.1479**	0.02731	pCi/g	**0.0941**	Y	239.1	7	1.185	NOT_IDENTI	2.966	☑	UI	Data rejected due to low abundance.
Thallium-208 ✓		**0.669**	0.05337	pCi/g	**0.08335**	**0.080**	583.7	1	1.508	IDENTIFIED	6.818			
Thorium-228	nr	**2.149**	0.1166	pCi/g	**0.1058**	N	239.1	7	1.185	IDENTIFIED	2.966			
Thorium-230	nr	**1.427**	0.1317	pCi/g	**0.1549**	N	609.7	4	1.496	IDENTIFIED	7.956			
Thorium-232	nr	**2.067**	0.2371	pCi/g	**0.3155**	N	911.9	3	1.544	IDENTIFIED	10.23			
Thorium-234 ✓		**1.98**	0.5748	pCi/g	**1.145**	**2.00**	63.67	2	1.053	IDENTIFIED	27.55			
Tin-126	int nr	**0.3879**	0.04608	pCi/g	**0.121**	N	87.58	4	0.9729	IDENTIFIED	11.2			
Titanium-44	la nr	**0.4484**	0.02842	pCi/g	**0.0768**	N	77.54	1	1.027	FAIL_ABUND	4.715			
Total Uranium		**5.9298**	1.71E-06	ug/g	**1.7077**	N		0						
Tungsten-181	HE	**0.4163**	0.1161	pCi/g	**0.3909**	N	209.8	2	1.103	NOT_IDENTI	25.69			
Uranium-234	nr	**1.427**	0.1317	pCi/g	**0.1549**	N	609.7	4	1.496	IDENTIFIED	7.956			
Uranium-238	HE	**1.98**	0.5748	pCi/g	**1.145**	N	63.67	2	1.053	IDENTIFIED	27.55			
Zirconium-97	HE	**1.55E+05**	1.31E+05	pCi/g	**0**	N	239.1	7	1.185	NOT_IDENTI	2.966			

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504006	24-JUN-09 12:00	07-JUL-09 08:50	12.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.047	0.1517	pCi/g	0.1759	N	911.8	3	2.196	IDENTIFIED	13.38		
Americium-243	int nr	0.3263	0.04559	pCi/g	0.09834	N	75.03	1	1.584	IDENTIFIED	12.82		
Annihilation Rad.	HE	0.05366	0.03386	pCi/g	0.04589	N	511.2	1	1.965	IDENTIFIED	63.03		
Bismuth-211	int	2.332	0.2121	pCi/g	0.3303	Y	352.1	4	1.427	IDENTIFIED	8.424	ui	
Bismuth-212	HE	0.8965	0.2225	pCi/g	0.4523	N	727.6	1	1.464	IDENTIFIED	24.51		
Bismuth-214	✓	0.9164	0.0791	pCi/g	0.09114	0.200	609.3	4	1.535	IDENTIFIED	7.792		
Cerium-143		119	27.84	pCi/g	0	N	327.6	1	1.572	NOT_IDENTI	54.63		
Cesium-134	la	0.1211	0.02723	pCi/g	0.08443	0.100	795.2	2	1.835	FAIL_ABUND	22.21	UI	Data rejected due to low abundance.
Gross Gamma		6.069	1.458	pCi/g	2.161	N		0					
Iodine-123	HE	1.89E+05	1.59E+05	pCi/g	0	N	88.35	1	2.949	NOT_IDENTI	189.5		
Iodine-135	HE	2.25E+12	9.00E+12	pCi/g	0	N	795.2	2	1.835	NOT_IDENTI	22.21		
Krypton-85	HE	15.37	3.894	pCi/g	13.38	N	238.8	8	1.299	NOT_IDENTI	5.441		
Lead-212	✓	0.8977	0.06137	pCi/g	0.0971	0.100	238.8	8	1.299	IDENTIFIED	5.441		
Lead-214	✓	0.8113	0.07677	pCi/g	0.1066	0.100	352.1	4	1.427	IDENTIFIED	8.424		
Niobium-97	HE	4149	4516	pCi/g	0	N	238.8	8	1.299	NOT_IDENTI	5.441		
Polonium-212	nr	0.8977	0.06137	pCi/g	0.0971	N	238.8	8	1.299	IDENTIFIED	5.441		
Polonium-214	nr	0.8113	0.07677	pCi/g	0.1066	N	352.1	4	1.427	IDENTIFIED	8.424		
Polonium-216	nr	0.8977	0.06137	pCi/g	0.0971	N	238.8	8	1.299	IDENTIFIED	5.441		
Polonium-218	nr	0.8113	0.07677	pCi/g	0.1066	N	352.1	4	1.427	IDENTIFIED	8.424		
Potassium-40	✓	24.02	1.181	pCi/g	0.4738	1.00	1461	1	2.064	IDENTIFIED	3.091		
Radium-224	int	2.953	0.6941	pCi/g	1.104	Y	241.5	1	2.09	IDENTIFIED	23.24	ui	
Radium-226	✓	0.9164	0.0791	pCi/g	0.09114	Y	609.3	4	1.535	IDENTIFIED	7.792		
Radium-228	✓	1.047	0.1517	pCi/g	0.1759	0.500	911.8	3	2.196	IDENTIFIED	13.38		
Sodium-24	HE	15990	27660	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Strontium-85	la	0.07694	0.0195	pCi/g	0.06699	Y	238.8	8	1.299	NOT_IDENTI	5.441	UI	Data rejected due to low abundance.
Thallium-208	✓	0.3253	0.03704	pCi/g	0.05312	0.080	583.1	1	1.506	IDENTIFIED	10.93		
Thorium-228	nr	0.8977	0.06137	pCi/g	0.09709	N	238.8	8	1.299	IDENTIFIED	5.441		
Thorium-230	nr	0.9164	0.0791	pCi/g	0.09114	N	609.3	4	1.535	IDENTIFIED	7.792		
Thorium-232	nr	1.047	0.1517	pCi/g	0.1759	N	911.8	3	2.196	IDENTIFIED	13.38		
Titanium-44	la nr	0.2164	0.02959	pCi/g	0.08364	N	77.29	1	1.444	FAIL_ABUND	12.49		
Uranium-234	nr	0.9164	0.0791	pCi/g	0.09114	N	609.3	4	1.535	IDENTIFIED	7.792		
Zirconium-97		3.82E+05	1.05E+05	pCi/g	0	N	238.8	8	1.299	NOT_IDENTI	5.441		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504007	24-JUN-09 12:00	07-JUL-09 08:51	12.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.093	0.1293	pCi/g	0.1675	N	911.2	3	1.324	IDENTIFIED	10.24		
Americium-243	int nr	0.2203	0.02551	pCi/g	0.08419	N	75.04	1	0.7763	IDENTIFIED	10.92		
Annihilation Rad.		0.09033	0.02322	pCi/g	0.03994	N	510.8	2	1.491	IDENTIFIED	25.54		
Barium-137m	HE	0.07067	0.02135	pCi/g	0.05526	N	662.4	2	1.333	IDENTIFIED	30.05		
Bismuth-211	int	2.636	0.1801	pCi/g	0.2571	Y	352	4	1.105	IDENTIFIED	6.084	ui	
Bismuth-212	HE	0.7209	0.1657	pCi/g	0.5198	N	727.2	1	1.594	FAIL_ABUND	22.58		
Bismuth-214	✓	0.7757	0.06315	pCi/g	0.09034	0.200	609.4	4	1.149	IDENTIFIED	7.097		
Cadmium-109	int	1.939	0.3075	pCi/g	1.05	Y	87.41	4	1.147	IDENTIFIED	15.27	ui	
Cerium-143		195.4	29.95	pCi/g	0	N	328.4	1	0.7705	FAIL_DECAY	34.95		
Cesium-137	✓	0.07471	0.02256	pCi/g	0.05841	0.100	662.4	2	1.333	IDENTIFIED	30.05		
Gross Gamma		7.267	1.087	pCi/g	3.013	N		0					
Iodine-123	HE	39000	1.37E+05	pCi/g	0	N	87.41	4	1.147	NOT_IDENTI	15.27		
Iodine-135	HE	1.69E+12	8.25E+12	pCi/g	0	N	510.8	2	1.491	NOT_IDENTI	25.54		
Krypton-85	HE	14.75	2.984	pCi/g	10.69	N	238.7	7	1.16	NOT_IDENTI	3.261		
Lead-212	✓	1.252	0.06014	pCi/g	0.07508	0.100	238.7	7	1.16	IDENTIFIED	3.261		
Lead-214	✓	0.9171	0.06705	pCi/g	0.08442	0.100	352	4	1.105	IDENTIFIED	6.084		
Neptunium-237	int nr	0.5615	0.1062	pCi/g	0.3271	N	87.41	4	1.147	IDENTIFIED	15.27		
Polonium-212	nr	1.252	0.06014	pCi/g	0.07508	N	238.7	7	1.16	IDENTIFIED	3.261		
Polonium-214	nr	0.9171	0.06705	pCi/g	0.08442	N	352	4	1.105	IDENTIFIED	6.084		
Polonium-216	nr	1.252	0.06014	pCi/g	0.07508	N	238.7	7	1.16	IDENTIFIED	3.261		
Polonium-218	nr	0.9171	0.06705	pCi/g	0.08442	N	352	4	1.105	IDENTIFIED	6.084		
Potassium-40	✓	25.52	1.298	pCi/g	0.5113	1.00	1460	1	1.862	IDENTIFIED	2.856		
Radium-224	int	3.582	0.5022	pCi/g	0.8537	Y	241.8	1	1.952	IDENTIFIED	13.75	ui	
Radium-226	✓	0.7757	0.06315	pCi/g	0.09034	Y	609.4	4	1.149	IDENTIFIED	7.097		
Radium-228	✓	1.093	0.1293	pCi/g	0.1675	0.500	911.2	3	1.324	IDENTIFIED	10.24		
Strontium-85	la	0.07385	0.01494	pCi/g	0.05354	Y	238.7	7	1.16	NOT_IDENTI	3.261	UI	Data rejected due to low abundance.
Thallium-208	✓	0.3336	0.03337	pCi/g	0.04744	0.080	583.1	1	1.212	IDENTIFIED	9.391		
Thorium-228	nr	1.252	0.06014	pCi/g	0.07507	N	238.7	7	1.16	IDENTIFIED	3.261		
Thorium-230	nr	0.7757	0.06315	pCi/g	0.09033	N	609.4	4	1.149	IDENTIFIED	7.097		
Thorium-232	nr	1.093	0.1293	pCi/g	0.1675	N	911.2	3	1.324	IDENTIFIED	10.24		
Tin-126	int nr	0.1912	0.03032	pCi/g	0.1166	N	87.41	4	1.147	IDENTIFIED	15.27		
Titanium-44	la nr	0.234	0.01923	pCi/g	0.07213	N	77.31	1	0.874	FAIL_ABUND	7.226		
Uranium-234	nr	0.7757	0.06315	pCi/g	0.09033	N	609.4	4	1.149	IDENTIFIED	7.097		
Zirconium-97		3.19E+05	88830	pCi/g	0	N	238.7	7	1.16	NOT_IDENTI	3.261		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504008	24-JUN-09 12:00	07-JUL-09 08:51	12.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	2.031	0.2239	pCi/g	0.3039	N	911.5	3	1.327	IDENTIFIED	9.788		

Americium-243	int nr	0.5406	0.04066	pCi/g	0.06483	N	74.92	1	1.86	IDENTIFIED	6.5		
Annihilation Rad.		0.1641	0.04949	pCi/g	0.05776	N	511.3	1	2.055	IDENTIFIED	29.99		
Bismuth-210	HE	1.603	0.3865	pCi/g	1.001	N	46.37	3	1.399	IDENTIFIED	23.81		
Bismuth-211	int	4.127	0.2828	pCi/g	0.4225	Y	352	4	1.577	IDENTIFIED	6.071		ui
Bismuth-212	HE	1.862	0.5097	pCi/g	0.9966	N	728.2	1	1.926	FAIL_ABUND	27.01		
Bismuth-214	✓	1.249	0.1177	pCi/g	0.153	0.200	609.5	4	1.501	IDENTIFIED	8.368		
Cadmium-109	int	2.31	0.4571	pCi/g	1.312	Y	86.97	3	1.664	IDENTIFIED	19.36		ui
Cerium-143		280	44.34	pCi/g	0	N	327.7	1	0.8934	FAIL_DECAY	56.09		
Gross Gamma		9.957	1.653	pCi/g	4.99	N		0					
Iodine-135	HE	9.68E+12	1.60E+13	pCi/g	0	N	569.3	1	1.953	NOT_IDENTI	21.26		
Krypton-85	HE	28.31	5.16	pCi/g	19.65	N	238.6	8	1.492	NOT_IDENTI	3.408		
Lead-210	HE	1.603	0.3865	pCi/g	1.001	N	46.37	3	1.399	IDENTIFIED	23.81		
Lead-212	✓	1.869	0.09554	pCi/g	0.1035	0.100	238.6	8	1.492	IDENTIFIED	3.408		
Lead-214	✓	1.435	0.1053	pCi/g	0.1467	0.100	352	4	1.577	IDENTIFIED	6.071		
Lutetium-177	HE	2.814	0.8527	pCi/g	1.96	N	209.4	1	1.768	FAIL_ABUND	30.15		
Neptunium-237	int nr	0.6688	0.1493	pCi/g	0.3181	N	86.97	3	1.664	IDENTIFIED	19.36		
Niobium-95m	la nr	0.6552	0.09209	pCi/g	0.3109	N	238.6	8	1.492	NOT_IDENTI	3.408		
Polonium-210	HE	1.603	0.3852	pCi/g	1.001	N	46.37	3	1.399	IDENTIFIED	23.81		
Polonium-212	nr	1.869	0.09554	pCi/g	0.1035	N	238.6	8	1.492	IDENTIFIED	3.408		
Polonium-214	nr	1.435	0.1053	pCi/g	0.1467	N	352	4	1.577	IDENTIFIED	6.071		
Polonium-216	nr	1.869	0.09554	pCi/g	0.1035	N	238.6	8	1.492	IDENTIFIED	3.408		
Polonium-218	nr	1.435	0.1053	pCi/g	0.1467	N	352	4	1.577	IDENTIFIED	6.071		
Potassium-40	✓	30.55	1.501	pCi/g	0.8928	1.00	1461	1	2.26	IDENTIFIED	3.746		
Radium-224	int	5.856	0.7372	pCi/g	1.18	Y	241.4	1	2.1	IDENTIFIED	12.21		ui
Radium-226	✓	1.249	0.1177	pCi/g	0.153	Y	609.5	4	1.501	IDENTIFIED	8.368		
Radium-228	✓	2.031	0.2239	pCi/g	0.3039	0.500	911.5	3	1.327	IDENTIFIED	9.788		
Strontium-85	la	0.1418	0.02584	pCi/g	0.09842	Y	238.6	8	1.492	NOT_IDENTI	3.408	UI	Data rejected due to low abundance.
Thallium-208	✓	0.6139	0.05413	pCi/g	0.07361	0.080	583.3	1	1.832	IDENTIFIED	7.96		
Thorium-228	nr	1.869	0.09554	pCi/g	0.1035	N	238.6	8	1.492	IDENTIFIED	3.408		
Thorium-230	nr	1.249	0.1177	pCi/g	0.153	N	609.5	4	1.501	IDENTIFIED	8.368		
Thorium-232	nr	2.031	0.2239	pCi/g	0.3039	N	911.5	3	1.327	IDENTIFIED	9.788		
Tin-126	int nr	0.2278	0.04508	pCi/g	0.133	N	86.97	3	1.664	IDENTIFIED	19.36		
Titanium-44	la nr	0.4283	0.0274	pCi/g	0.07172	N	77.18	1	1.436	FAIL_ABUND	5.119		
Total Uranium		2.6298	1.39E-06	ug/g	1.6748	N		0					
Uranium-234	nr	1.249	0.1177	pCi/g	0.153	N	609.5	4	1.501	IDENTIFIED	8.368		
Zirconium-97		4.56E+05	1.50E+05	pCi/g	0	N	238.6	8	1.492	NOT_IDENTI	3.408		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504009	24-JUN-09 12:00	07-JUL-09 09:12	12.9	SAMPLE	LOAD	1	LANL	LANL01004:GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.419	0.1542	pCi/g	0.1724	N	911.5	3	2.208	IDENTIFIED	8.609		
Americium-243	int nr	0.3121	0.03695	pCi/g	0.07978	N	74.85	1	1.172	IDENTIFIED	11.08		
Annihilation Rad.		0.169	0.02517	pCi/g	0.03179	N	511	2	2.206	IDENTIFIED	14.52		
Beryllium-7	nr	1.412	0.1999	pCi/g	0.3661	N	477.8	2	1.187	IDENTIFIED	13.68		
Bismuth-211	int	3.324	0.1856	pCi/g	0.2568	Y	352	4	1.546	IDENTIFIED	4.568	ui	
Bismuth-212	HE	0.6913	0.1912	pCi/g	0.4603	N	727.6	1	1.542	FAIL_ABUND	27.21		
Bismuth-214	✓	0.9715	0.07042	pCi/g	0.08386	0.200	609.5	4	1.564	IDENTIFIED	5.709		
Cadmium-109	int	2.296	0.4622	pCi/g	1.11	Y	87.3	4	1.411	IDENTIFIED	19.6	ui	
Cerium-143		185.6	28.77	pCi/g	0	N	327.9	1	1.297	FAIL_DECAY	28.61		
Cesium-134	la	0.1296	0.02375	pCi/g	0.07119	0.100	795.1	2	1.819	FAIL_ABUND	17.68	UI	Data rejected due to low abundance.
Gross Gamma		8.643	1.307	pCi/g	2.208	N		0					
Iodine-123	HE	26360	1.32E+05	pCi/g	0	N	87.3	4	1.411	NOT_IDENTI	19.6		
Iodine-133	HE	76.4	349.1	pCi/g	0	N	511	2	2.206	FAIL_DECAY	14.52		
Iodine-135	HE	1.86E+12	7.91E+12	pCi/g	0	N	795.1	2	1.819	NOT_IDENTI	17.68		
Krypton-85	la nr	23.92	3.234	pCi/g	11.48	N	238.7	7	1.21	NOT_IDENTI	3.785		
Lead-212	✓	1.233	0.06419	pCi/g	0.08875	0.100	238.7	7	1.21	IDENTIFIED	3.785		
Lead-214	✓	1.156	0.07127	pCi/g	0.08929	0.100	352	4	1.546	IDENTIFIED	4.568		
Lutetium-177	int nr	2.149	0.4695	pCi/g	1.125	N	209.5	1	1.296	IDENTIFIED	21.68		
Mercury-203	int	0.06151	0.02907	pCi/g	0.05021	0.100	278.1	1	1.846	IDENTIFIED	47.17	ui	
Neptunium-237	HE	0.665	0.1504	pCi/g	0.3726	N	87.3	4	1.411	IDENTIFIED	19.6		
Polonium-212	nr	1.233	0.06419	pCi/g	0.08875	N	238.7	7	1.21	IDENTIFIED	3.785		
Polonium-214	nr	1.156	0.07127	pCi/g	0.08929	N	352	4	1.546	IDENTIFIED	4.568		
Polonium-216	nr	1.233	0.06419	pCi/g	0.08875	N	238.7	7	1.21	IDENTIFIED	3.785		
Polonium-218	nr	1.156	0.07127	pCi/g	0.08929	N	352	4	1.546	IDENTIFIED	4.568		
Potassium-40	✓	29.36	1.294	pCi/g	0.3541	1.00	1461	1	2.073	IDENTIFIED	2.246		
Radium-224	int	1.952	0.3288	pCi/g	1.153	Y	241.9	1	1.118	IDENTIFIED	16.61	ui	
Radium-226	✓	0.9715	0.07042	pCi/g	0.08386	Y	609.5	4	1.564	IDENTIFIED	5.709		
Radium-228	✓	1.419	0.1542	pCi/g	0.1724	0.500	911.5	3	2.208	IDENTIFIED	8.609		
Sodium-24	HE	12540	22820	pCi/g	0	N	477.8	2	1.187	NOT_IDENTI	13.68		
Strontium-85	la	0.1198	0.0162	pCi/g	0.05751	Y	238.7	7	1.21	NOT_IDENTI	3.785	UI	Data rejected due to low abundance.
Thallium-208	✓	0.4506	0.03545	pCi/g	0.04022	0.080	583.2	1	1.593	IDENTIFIED	6.822		
Thorium-228	nr	1.233	0.06419	pCi/g	0.08874	N	238.7	7	1.21	IDENTIFIED	3.785		
Thorium-230	nr	0.9714	0.07042	pCi/g	0.08386	N	609.5	4	1.564	IDENTIFIED	5.709		
Thorium-232	nr	1.419	0.1542	pCi/g	0.1724	N	911.5	3	2.208	IDENTIFIED	8.609		
Thorium-234	NUP KE 7/17/09	2.168	0.9646	pCi/g	2.119	2.00	63.27	2	1.992	IDENTIFIED	43.61	VI	
Tin-126	int nr	0.2265	0.04558	pCi/g	0.1256	N	87.3	4	1.411	IDENTIFIED	19.6		
Titanium-44	la nr	0.3526	0.02755	pCi/g	0.07353	N	77.15	1	1.101	FAIL_ABUND	6.564		
Total Uranium		6.4913	2.87E-06	ug/g	3.1541	N		0					
Uranium-234	nr	0.9714	0.07042	pCi/g	0.08386	N	609.5	4	1.564	IDENTIFIED	5.709		

Uranium-238	HE	2.168	0.9646	pCi/g	2.119	N	63.27	2	1.992	IDENTIFIED	43.61			
Zirconium-97		3.85E+05	77830	pCi/g	0	N	238.7	7	1.21	NOT_IDENTI	3.785			

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504010	24-JUN-09 12:00	07-JUL-09 09:12	12.9	SAMPLE	LOAD	I	LANL	LANL01004;GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	nr	2.013	0.1762	pCi/g	0.1936	N	911.8	3	2.276	IDENTIFIED	6.125		
Americium-243	int nr	0.4905	0.04127	pCi/g	0.08218	N	74.87	2	1.305	IDENTIFIED	7.458		
Annihilation Rad.		0.09453	0.02569	pCi/g	0.04117	N	511.2	2	2.421	IDENTIFIED	26.98		
Bismuth-211	int	4.554	0.2361	pCi/g	0.3066	Y	352.1	4	1.549	IDENTIFIED	4.102	ui	
Bismuth-212	nr	1.06	0.2079	pCi/g	0.4187	N	727.7	1	1.47	IDENTIFIED	19.01		
Bismuth-214	✓	1.328	0.09075	pCi/g	0.09742	0.200	609.5	4	1.906	IDENTIFIED	5.234		
Cadmium-109	int	4.417	0.4774	pCi/g	1.231	Y	87.39	3	1.579	IDENTIFIED	9.854	ui	
Cerium-143		298.3	40.24	pCi/g	0	N	328.7	1	1.98	NOT_IDENTI	28.92		
Cesium-134	la	0.131	0.03385	pCi/g	0.07568	0.100	795	1	1.275	FAIL_ABUND	25.43	UI	Data rejected due to low abundance.
Gross Gamma		10.84	1.247	pCi/g	2.081	N		0					
Iodine-133	HE	176.2	397.4	pCi/g	0	N	511.2	2	2.421	FAIL_DECAY	26.98		
Krypton-85	la nr	36.26	4.07	pCi/g	14.31	N	238.8	8	1.329	NOT_IDENTI	2.684		
Lead-212	✓	1.933	0.08579	pCi/g	0.08397	0.100	238.8	8	1.329	IDENTIFIED	2.684		
Lead-214	✓	1.584	0.09196	pCi/g	0.1018	0.100	352.1	4	1.549	IDENTIFIED	4.102		
Lutetium-177	la nr	3.435	0.6217	pCi/g	1.542	N	209.1	1	1.253	FAIL_ABUND	17.9		
Neptunium-237	int nr	1.279	0.1911	pCi/g	0.4007	N	87.39	3	1.579	IDENTIFIED	9.854		
Niobium-95m	HE	0.2895	0.06815	pCi/g	0.2122	N	238.8	8	1.329	NOT_IDENTI	2.684		
Polonium-212	nr	1.933	0.08579	pCi/g	0.08397	N	238.8	8	1.329	IDENTIFIED	2.684		
Polonium-214	nr	1.584	0.09196	pCi/g	0.1018	N	352.1	4	1.549	IDENTIFIED	4.102		
Polonium-216	nr	1.933	0.08579	pCi/g	0.08397	N	238.8	8	1.329	IDENTIFIED	2.684		
Polonium-218	nr	1.584	0.09196	pCi/g	0.1018	N	352.1	4	1.549	IDENTIFIED	4.102		
Potassium-40	✓	37.98	1.543	pCi/g	0.4446	1.00	1461	1	3.005	IDENTIFIED	2.098	~~UI~~	~~Data rejected due to high peak-width~~
Radium-224	int	5.445	0.5293	pCi/g	0.9541	Y	241.8	1	1.721	IDENTIFIED	9.327	ui	
Radium-226	✓	1.328	0.09075	pCi/g	0.09742	Y	609.5	4	1.906	IDENTIFIED	5.234		
Radium-228	✓	2.013	0.1762	pCi/g	0.1936	0.500	911.8	3	2.276	IDENTIFIED	6.125		
Strontium-85	la	0.1816	0.02038	pCi/g	0.07168	Y	238.8	8	1.329	NOT_IDENTI	2.684	UI	Data rejected due to low abundance.
Thallium-200	HE	14.34	48.25	pCi/g	0	N	74.87	2	1.305	NOT_IDENTI	7.458		
Thallium-208	✓	0.5673	0.04538	pCi/g	0.04953	0.080	583.3	1	1.905	IDENTIFIED	7.012		
Thorium-228	nr	1.933	0.08579	pCi/g	0.08397	N	238.8	8	1.329	IDENTIFIED	2.684		
Thorium-230	nr	1.328	0.09075	pCi/g	0.09742	N	609.5	4	1.906	IDENTIFIED	5.234		
Thorium-232	nr	2.013	0.1762	pCi/g	0.1936	N	911.8	3	2.276	IDENTIFIED	6.125		
Tin-126	int nr	0.4356	0.04708	pCi/g	0.1219	N	87.39	3	1.579	IDENTIFIED	9.854		
Titanium-44	la nr	0.4576	0.02984	pCi/g	0.07905	N	77.2	1	1.22	FAIL_ABUND	5.167		
Total Uranium		5.1922	2.39E-06	ug/g	2.745	N		0					

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Uranium-234	nr	1.328	0.09075	pCi/g	0.09742	N	609.5	4	1.906	IDENTIFIED	5.234				
Zirconium-97		4.49E+05	94410	pCi/g	0	N	238.8	8	1.329	NOT_IDENTI	2.684				

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504011	24-JUN-09 12:00	07-JUL-09 09:13	12.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.697	0.1701	pCi/g	0.2322	N	911.2	3	1.713	IDENTIFIED	8.2		
Americium-243	int nr	0.4194	0.0394	pCi/g	0.08003	N	74.88	1	0.9766	IDENTIFIED	8.274		
Annihilation Rad.		0.1237	0.03214	pCi/g	0.0469	N	511	2	1.358	IDENTIFIED	25.82		
Bismuth-211	int	3.477	0.2452	pCi/g	0.2981	Y	351.9	4	1.27	IDENTIFIED	6.255	ui	
Bismuth-212	la nr	1.133	0.1983	pCi/g	0.6448	N	727.2	1	1.21	FAIL_ABUND	17.04		
Bismuth-214	✓	1.058	0.08855	pCi/g	0.1228	0.200	609.6	4	1.397	IDENTIFIED	7.479		
Cadmium-109	int	3.116	0.4613	pCi/g	1.144	Y	87.3	4	1.077	IDENTIFIED	13.99	ui	
Cerium-143		84.99	23.97	pCi/g	0	N	327.8	1	1.633	FAIL_DECAY	37.93		
Gross Gamma		8.72	1.435	pCi/g	2.187	N		0					
Iodine-123	HE	1.10E+05	1.41E+05	pCi/g	0	N	87.3	4	1.077	NOT_IDENTI	13.99		
Iodine-135	HE	5.60E+12	1.20E+13	pCi/g	0	N	511	2	1.358	NOT_IDENTI	25.82		
Krypton-85	HE	13.64	3.937	pCi/g	13.19	N	238.8	7	0.9701	NOT_IDENTI	3.344		
Lead-212	✓	1.541	0.07564	pCi/g	0.0805	0.100	238.8	7	0.9701	IDENTIFIED	3.344		
Lead-214	✓	1.21	0.09096	pCi/g	0.104	0.100	351.9	4	1.27	IDENTIFIED	6.255		
Lutetium-177	HE	1.813	0.5855	pCi/g	1.499	N	209.4	1	1.283	FAIL_ABUND	32.19		
Mercury-203	int	0.07963	0.02619	pCi/g	0.05927	0.100	278	1	1.274	IDENTIFIED	32.74	ui	
Neptunium-237	int nr	0.9024	0.1628	pCi/g	0.3378	N	87.3	4	1.077	IDENTIFIED	13.99		
Polonium-212	nr	1.541	0.07564	pCi/g	0.0805	N	238.8	7	0.9701	IDENTIFIED	3.344		
Polonium-214	nr	1.21	0.09096	pCi/g	0.104	N	351.9	4	1.27	IDENTIFIED	6.255		
Polonium-216	nr	1.541	0.07564	pCi/g	0.0805	N	238.8	7	0.9701	IDENTIFIED	3.344		
Polonium-218	nr	1.21	0.09096	pCi/g	0.104	N	351.9	4	1.27	IDENTIFIED	6.255		
Potassium-40	✓	29.05	1.448	pCi/g	0.6215	1.00	1461	1	2.012	IDENTIFIED	3.294		
Radium-224	int	4.837	0.5501	pCi/g	0.9169	Y	241.6	1	1.954	IDENTIFIED	11.02	ui	
Radium-226	✓	1.058	0.08855	pCi/g	0.1228	Y	609.6	4	1.397	IDENTIFIED	7.479		
Radium-228	✓	1.697	0.1701	pCi/g	0.2322	0.500	911.2	3	1.713	IDENTIFIED	8.2		
Strontium-85	la	0.0683	0.01972	pCi/g	0.06604	Y	238.8	7	0.9701	NOT_IDENTI	3.344	UI	Data rejected due to low abundance.
Thallium-208	✓	0.4702	0.04474	pCi/g	0.06274	0.080	583.6	1	1.54	IDENTIFIED	8.943		
Thorium-228	nr	1.541	0.07564	pCi/g	0.08049	N	238.8	7	0.9701	IDENTIFIED	3.344		
Thorium-230	nr	1.058	0.08855	pCi/g	0.1228	N	609.6	4	1.397	IDENTIFIED	7.479		
Thorium-232	nr	1.697	0.1701	pCi/g	0.2322	N	911.2	3	1.713	IDENTIFIED	8.2		
Tin-126	int nr	0.3073	0.04549	pCi/g	0.1135	N	87.3	4	1.077	IDENTIFIED	13.99		
Titanium-44	la nr	0.3608	0.02688	pCi/g	0.06624	N	77.17	1	0.8804	FAIL_ABUND	5.937		
Total Uranium		4.4626	3.15E-06	ug/g	2.9903	N		0					
Uranium-234	nr	1.058	0.08855	pCi/g	0.1228	N	609.6	4	1.397	IDENTIFIED	7.479		

Zirconium-97		2.92E+05	1.08E+05	pCi/g	0	N	238.8	7	0.9701	NOT_IDENTI	3.344	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504012	24-JUN-09 12:00	07-JUL-09 09:43	12.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.76	0.1626	pCi/g	0.1831	N	911.4	3	1.489	IDENTIFIED	7.152		
Americium-243	int nr	0.357	0.04165	pCi/g	0.0868	N	74.99	2	1.121	IDENTIFIED	11.05		
Annihilation Rad.		0.1077	0.02985	pCi/g	0.04012	N	510.7	1	1.643	IDENTIFIED	27.55		
Barium-137m		0.4289	0.03366	pCi/g	0.05514	N	661.8	2	1.559	IDENTIFIED	7.177		
Bismuth-211	int	3.611	0.2476	pCi/g	0.2855	Y	352.1	4	1.132	IDENTIFIED	6.08	ui	
Bismuth-212	HE	0.9465	0.2024	pCi/g	0.6335	N	727.7	1	1.801	FAIL_ABUND	20.93		
Bismuth-214	✓	1.042	0.08568	pCi/g	0.09888	0.200	609.5	4	1.478	IDENTIFIED	7.139		
Cadmium-109	int	1.865	0.5364	pCi/g	1.48	Y	87.15	4	1.129	IDENTIFIED	28.46	ui	
Cerium-143		97.02	24.39	pCi/g	0	N	328	1	1.08	FAIL_DECAY	39.18		
Cesium-137	✓	0.4534	0.0356	pCi/g	0.05829	0.100	661.8	2	1.559	IDENTIFIED	7.177		
Gross Gamma		8.82	1.461	pCi/g	2.925	N		0					
Iodine-123	HE	89700	1.45E+05	pCi/g	0	N	87.15	4	1.129	NOT_IDENTI	28.46		
Lead-212	✓	1.48	0.07504	pCi/g	0.08587	0.100	238.8	6	1.121	IDENTIFIED	3.566		
Lead-214	✓	1.256	0.09217	pCi/g	0.09952	0.100	352.1	4	1.132	IDENTIFIED	6.08		
Lutetium-177	HE	1.773	0.5674	pCi/g	1.475	N	209.2	1	1.479	FAIL_ABUND	31.89		
Neptunium-237	HE	0.5402	0.165	pCi/g	0.4025	N	87.15	4	1.129	IDENTIFIED	28.46		
Polonium-212	nr	1.48	0.07504	pCi/g	0.08587	N	238.8	6	1.121	IDENTIFIED	3.566		
Polonium-214	nr	1.256	0.09217	pCi/g	0.09952	N	352.1	4	1.132	IDENTIFIED	6.08		
Polonium-216	nr	1.48	0.07504	pCi/g	0.08587	N	238.8	6	1.121	IDENTIFIED	3.566		
Polonium-218	nr	1.256	0.09217	pCi/g	0.09952	N	352.1	4	1.132	IDENTIFIED	6.08		
Potassium-40	✓	27.33	1.311	pCi/g	0.556	1.00	1461	1	2.008	IDENTIFIED	2.986		
Radium-224	int	3.991	0.6216	pCi/g	0.9771	Y	241.7	1	1.733	IDENTIFIED	15.31	ui	
Radium-226	✓	1.042	0.08568	pCi/g	0.09888	Y	609.5	4	1.478	IDENTIFIED	7.139		
Radium-228	✓	1.76	0.1626	pCi/g	0.1831	0.500	911.4	3	1.489	IDENTIFIED	7.152		
Sodium-24	HE	31980	32820	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Technetium-99m	HE	2.11E+13	3.71E+13	pCi/g	0	N	238.8	6	1.121	NOT_IDENTI	3.566		
Thallium-200	HE	63.07	50.17	pCi/g	0	N	74.99	2	1.121	NOT_IDENTI	11.05		
Thallium-208	✓	0.4397	0.04601	pCi/g	0.05459	0.080	583.4	1	1.636	IDENTIFIED	9.849		
Thorium-228	nr	1.48	0.07504	pCi/g	0.08586	N	238.8	6	1.121	IDENTIFIED	3.566		
Thorium-230	nr	1.042	0.08568	pCi/g	0.09887	N	609.5	4	1.478	IDENTIFIED	7.139		
Thorium-232	nr	1.76	0.1626	pCi/g	0.1831	N	911.4	3	1.489	IDENTIFIED	7.152		
Tin-126	HE	0.184	0.05289	pCi/g	0.1422	N	87.15	4	1.129	IDENTIFIED	28.46		
Titanium-44	la nr	0.3663	0.0277	pCi/g	0.07614	N	77.27	1	0.9516	FAIL_ABUND	6.545		
Uranium-234	nr	1.042	0.08568	pCi/g	0.09887	N	609.5	4	1.478	IDENTIFIED	7.139		
Zirconium-97	HE	59590	95040	pCi/g	0	N	238.8	6	1.121	NOT_IDENTI	3.566		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504013	24-JUN-09 12:00	07-JUL-09 09:44	12.9	SAMPLE	LOAD	1	LANL	LANL01004;GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	2.31	0.2183	pCi/g	0.2174	N	911.2	3	1.802	IDENTIFIED	7.405		
Americium-243	int nr	0.5266	0.04524	pCi/g	0.08939	N	74.79	1	1.583	IDENTIFIED	7.727		
Annihilation Rad.		0.1254	0.03426	pCi/g	0.04827	N	510.6	1	1.783	IDENTIFIED	27.15		
Bismuth-211	int	5.012	0.2751	pCi/g	0.3233	Y	351.5	4	1.574	IDENTIFIED	4.483	ui	
Bismuth-212	la nr	1.336	0.2656	pCi/g	0.7123	N	727.2	1	1.483	FAIL_ABUND	19.42		
Bismuth-214	✓	1.613	0.108	pCi/g	0.1101	0.200	608.9	4	1.643	IDENTIFIED	5.401		
Cadmium-109	int	3.694	0.4775	pCi/g	1.356	Y	87.28	3	1.162	IDENTIFIED	12.18	ui	
Cerium-143		544.5	65.8	pCi/g	0	N	327.7	1	1.277	FAIL_DECAY	23.42		
Cesium-134	la	0.1295	0.02922	pCi/g	0.09324	0.100	795.1	2	1.049	FAIL_ABUND	22.22	UI	Data rejected due to low abundance.
Cesium-135	HE	0.3758	0.0905	pCi/g	0.3032	N	795.1	2	1.049	NOT_IDENTI	22.22		
Gross Gamma		12	1.549	pCi/g	4.529	N		0					
Lead-212	✓	2.152	0.09762	pCi/g	0.09173	0.100	238.4	6	1.323	IDENTIFIED	2.705		
Lead-214	✓	1.743	0.1059	pCi/g	0.1127	0.100	351.5	4	1.574	IDENTIFIED	4.483		
Lutetium-177	HE	2.662	0.6567	pCi/g	1.693	N	208.8	1	1.147	FAIL_ABUND	24.51		
Neptunium-237	int nr	1.07	0.1769	pCi/g	0.4352	N	87.28	3	1.162	IDENTIFIED	12.18		
Niobium-95m	la nr	1.051	0.08982	pCi/g	0.2993	N	238.4	6	1.323	NOT_IDENTI	2.705		
Polonium-212	nr	2.152	0.09762	pCi/g	0.09173	N	238.4	6	1.323	IDENTIFIED	2.705		
Polonium-214	nr	1.743	0.1059	pCi/g	0.1127	N	351.5	4	1.574	IDENTIFIED	4.483		
Polonium-216	nr	2.152	0.09762	pCi/g	0.09173	N	238.4	6	1.323	IDENTIFIED	2.705		
Polonium-218	nr	1.743	0.1059	pCi/g	0.1127	N	351.5	4	1.574	IDENTIFIED	4.483		
Potassium-40	✓	33.69	1.494	pCi/g	0.5489	1.00	1460	1	2.096	IDENTIFIED	2.543		
Radium-224	int	5.729	0.6252	pCi/g	1.043	Y	241.3	1	1.696	IDENTIFIED	10.53	ui	
Radium-226	✓	1.613	0.108	pCi/g	0.1101	Y	608.9	4	1.643	IDENTIFIED	5.401		
Radium-228	✓	2.31	0.2183	pCi/g	0.2174	0.500	911.2	3	1.802	IDENTIFIED	7.405		
Thallium-208	✓	0.6466	0.04821	pCi/g	0.05836	0.080	582.7	1	1.589	IDENTIFIED	6.626		
Thorium-228	nr	2.152	0.09762	pCi/g	0.09172	N	238.4	6	1.323	IDENTIFIED	2.705		
Thorium-230	nr	1.613	0.108	pCi/g	0.1101	N	608.9	4	1.643	IDENTIFIED	5.401		
Thorium-232	nr	2.31	0.2183	pCi/g	0.2174	N	911.2	3	1.802	IDENTIFIED	7.405		
Thorium-234	✓	2.37	0.773	pCi/g	1.902	2.00	63.26	2	2.19	IDENTIFIED	31.46		
Tin-126	int nr	0.3643	0.04709	pCi/g	0.1342	N	87.28	3	1.162	IDENTIFIED	12.18		
Titanium-44	la nr	0.4702	0.03014	pCi/g	0.08726	N	77.13	1	1.19	FAIL_ABUND	5.124		
Total Uranium		7.1103	2.30E-06	ug/g	2.8316	N		0					
Uranium-234	nr	1.613	0.108	pCi/g	0.1101	N	608.9	4	1.643	IDENTIFIED	5.401		
Uranium-238	HE	2.37	0.773	pCi/g	1.902	N	63.26	2	2.19	IDENTIFIED	31.46		
Zirconium-97		6.58E+05	1.22E+05	pCi/g	0	N	238.4	6	1.323	NOT_IDENTI	2.705		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232504014	24-JUN-09 12:00	07-JUL-09 09:47	12.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	0.8853	0.1175	pCi/g	0.1503	N	911.5	3	1.685	IDENTIFIED	11.75		
Americium-243	int nr	0.2299	0.03042	pCi/g	0.0808	N	75.02	1	1.075	IDENTIFIED	12.05		
Annihilation Rad.	HE	0.06445	0.02063	pCi/g	0.03431	N	511.5	1	1.883	IDENTIFIED	31.86		
Bismuth-211	int	2.176	0.1853	pCi/g	0.246	Y	352.1	4	0.9888	IDENTIFIED	7.696	ui	
Bismuth-212	HE	0.7016	0.1937	pCi/g	0.4728	N	727.1	1	2.16	FAIL_ABUND	27.31		
Bismuth-214 ✓		0.8075	0.0633	pCi/g	0.0771	0.200	609.5	4	1.586	IDENTIFIED	6.854		
Cadmium-109	int	1.347	0.4116	pCi/g	1.192	Y	87.44	3	1.103	IDENTIFIED	30.04	ui	
Cerium-143		84.85	19.7	pCi/g	0	N	328.2	1	1.662	FAIL_DECAY	113		
Gross Gamma		5.869	1.01	pCi/g	1.662	N		0					
Lead-212 ✓		0.77	0.04719	pCi/g	0.06723	0.100	238.9	6	1.1	IDENTIFIED	4.812		
Lead-214 ✓		0.757	0.06743	pCi/g	0.08574	0.100	352.1	4	0.9888	IDENTIFIED	7.696		
Lutetium-177	HE	1.567	0.4706	pCi/g	1.214	N	209.5	1	1.431	FAIL_ABUND	29.88		
Neptunium-237	HE	0.39	0.1258	pCi/g	0.3316	N	87.44	3	1.103	IDENTIFIED	30.04		
Polonium-212	nr	0.77	0.04719	pCi/g	0.06723	N	238.9	6	1.1	IDENTIFIED	4.812		
Polonium-214	nr	0.757	0.06743	pCi/g	0.08574	N	352.1	4	0.9888	IDENTIFIED	7.696		
Polonium-216	nr	0.77	0.04719	pCi/g	0.06723	N	238.9	6	1.1	IDENTIFIED	4.812		
Polonium-218	nr	0.757	0.06743	pCi/g	0.08574	N	352.1	4	0.9888	IDENTIFIED	7.696		
Potassium-40 ✓		24.51	1.268	pCi/g	0.4198	1.00	1461	1	2.039	IDENTIFIED	2.867		
Radium-224	int	3.436	0.4098	pCi/g	0.7647	Y	241.9	1	1.667	IDENTIFIED	11.52	ui	
Radium-226 ✓		0.8075	0.0633	pCi/g	0.0771	Y	609.5	4	1.586	IDENTIFIED	6.854		
Radium-228 ✓		0.8853	0.1175	pCi/g	0.1503	0.500	911.5	3	1.685	IDENTIFIED	11.75		
Technetium-99m	HE	4.43E+12	2.98E+13	pCi/g	0	N	238.9	6	1.1	NOT_IDENTI	4.812		
Thallium-208 ✓		0.2812	0.02526	pCi/g	0.04276	0.080	583.5	1	1.59	IDENTIFIED	8.332		
Thorium-228	nr	0.77	0.04719	pCi/g	0.06722	N	238.9	6	1.1	IDENTIFIED	4.812		
Thorium-230	nr	0.8075	0.06329	pCi/g	0.0771	N	609.5	4	1.586	IDENTIFIED	6.854		
Thorium-232	nr	0.8853	0.1175	pCi/g	0.1503	N	911.5	3	1.685	IDENTIFIED	11.75		
Tin-126	HE	0.1328	0.04059	pCi/g	0.1183	N	87.44	3	1.103	IDENTIFIED	30.04		
Titanium-44	la nr	0.2109	0.02128	pCi/g	0.06666	N	77.33	1	1.025	FAIL_ABUND	8.482		
Total Uranium		5.9234	2.64E-06	ug/g	3.3302	N		0					
Uranium-234	nr	0.8075	0.06329	pCi/g	0.0771	N	609.5	4	1.586	IDENTIFIED	6.854		
Zirconium-97	HE	7370	76910	pCi/g	0	N	238.9	6	1.1	NOT_IDENTI	4.812		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232511001	24-JUN-09 12:00	07-JUL-09 10:10	12.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.993	0.1977	pCi/g	0.304	N	910.9	3	1.581	IDENTIFIED	8.501		
Americium-241 ✓		8.899	0.4557	pCi/g	0.2667	0.200	59.8	1	0.8742	IDENTIFIED	1.654		

Americium-243	int nr	0.3999	0.0388	pCi/g	0.124	N	75.06	2	0.819	IDENTIFIED	8.729			
Barium-137m		69.33	2.635	pCi/g	0.132	N	661.5	3	1.411	IDENTIFIED	0.5191			
Bismuth-211	int	4.459	0.5176	pCi/g	1.173	Y	352	5	1.191	IDENTIFIED	11.04		ui	
Bismuth-212	HE	1.616	0.3637	pCi/g	0.8911	N	727.3	1	1.821	FAIL_ABUND	22.04			
Bismuth-214	✓	1.589	0.1623	pCi/g	0.2887	0.200	609.1	4	1.44	IDENTIFIED	9.178			
Cadmium-109	int	3.048	0.8099	pCi/g	2.244	Y	87.67	4	1.088	IDENTIFIED	26.27		ui	
Cerium-143		194.7	76.65	pCi/g	0	N	661.5	3	1.411	FAIL_DECAY	0.5191			
Cesium-137	✓	73.29	2.792	pCi/g	0.1395	0.100	661.5	3	1.411	IDENTIFIED	0.5191			
Gross Gamma		75.53	7.932	pCi/g	9.281	N		0						
Lead-212	✓	1.895	0.1286	pCi/g	0.2859	0.100	238.8	6	1.084	IDENTIFIED	5.178			
Lead-214	✓	1.551	0.1845	pCi/g	0.4114	0.100	352	5	1.191	IDENTIFIED	11.04			
Neptunium-237	HE	0.8826	0.2516	pCi/g	0.6323	N	87.67	4	1.088	IDENTIFIED	26.27			
Niobium-97		1.14E+06	52960	pCi/g	0	N	238.8	6	1.084	NOT_IDENTI	5.178			
Polonium-212	nr	1.895	0.1286	pCi/g	0.2859	N	238.8	6	1.084	IDENTIFIED	5.178			
Polonium-214	nr	1.551	0.1845	pCi/g	0.4114	N	352	5	1.191	IDENTIFIED	11.04			
Polonium-216	nr	1.895	0.1286	pCi/g	0.2859	N	238.8	6	1.084	IDENTIFIED	5.178			
Polonium-218	nr	1.551	0.1845	pCi/g	0.4114	N	352	5	1.191	IDENTIFIED	11.04			
Potassium-40	✓	32.24	1.414	pCi/g	0.5784	1.00	1460	1	2.03	IDENTIFIED	3.128			
Radium-224	la	16.06	1.301	pCi/g	3.908	Y	352	5	1.191	NOT_IDENTI	11.04	☑	UI	Data rejected due to low abundance.
Radium-226	✓	1.589	0.1623	pCi/g	0.2887	Y	609.1	4	1.44	IDENTIFIED	9.178			
Radium-228	✓	1.993	0.1977	pCi/g	0.304	0.500	910.9	3	1.581	IDENTIFIED	8.501			
Silver-110m	la nr	2.415	0.1273	pCi/g	0.3479	N	87.67	4	1.088	NOT_IDENTI	26.27			
Sodium-24	HE	42510	41000	pCi/g	0	N	0	1	0	NOT_IDENTI	0			
Thallium-200	HE	23.12	206.6	pCi/g	0	N	75.06	2	0.819	NOT_IDENTI	8.729			
Thallium-208	✓	0.6695	0.07682	pCi/g	0.151	0.080	583.2	1	1.107	IDENTIFIED	10.77			
Thorium-228	nr	1.895	0.1286	pCi/g	0.2859	N	238.8	6	1.084	IDENTIFIED	5.178			
Thorium-230	nr	1.589	0.1623	pCi/g	0.2887	N	609.1	4	1.44	IDENTIFIED	9.178			
Thorium-232	nr	1.993	0.1977	pCi/g	0.304	N	910.9	3	1.581	IDENTIFIED	8.501			
Thorium-234	la	2.468	0.7875	pCi/g	2.218	2.00	63.83	3	0.9068	FAIL_ABUND	30.59	☑	UI	Data rejected due to low abundance.
Tin-126	HE	0.3005	0.07987	pCi/g	0.2267	N	87.67	4	1.088	IDENTIFIED	26.27			
Titanium-44	la nr	0.4162	0.03033	pCi/g	0.1057	N	77.37	1	0.8022	FAIL_ABUND	5.96			
Total Uranium		7.3756	2.35E-06	ug/g	3.3075	N		0						
Tungsten-181	HE	0.732	0.2263	pCi/g	0.6533	N	63.83	3	0.9068	FAIL_ABUND	30.59			
Uranium-234	nr	1.589	0.1623	pCi/g	0.2887	N	609.1	4	1.44	IDENTIFIED	9.178			
Uranium-238	HE	2.468	0.7875	pCi/g	2.218	N	63.83	3	0.9068	FAIL_ABUND	30.59			
Zirconium-97	HE	42970	3.92E+05	pCi/g	0	N	238.8	6	1.084	NOT_IDENTI	5.178			

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232511002	24-JUN-09 12:00	07-JUL-09 10:19	12.9	SAMPLE	LOAD	1	LANL	LANL01004;GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 nr	1.491	0.1659	pCi/g	0.2024	N	911.3	3	1.906	IDENTIFIED	9.463		
Americium-241 ✓	10.01	0.5346	pCi/g	0.4092	0.200	59.52	1	0.9868	IDENTIFIED	2.665		
Americium-243 int nr	0.3907	0.04493	pCi/g	0.09465	N	74.8	1	1.085	IDENTIFIED	10.28		
Annihilation Rad.	0.1691	0.03935	pCi/g	0.05689	N	510.8	3	1.525	IDENTIFIED	23.04		
Barium-137m	3.936	0.1471	pCi/g	0.06414	N	661.7	2	1.438	IDENTIFIED	1.929		
Bismuth-211 int	3.571	0.2783	pCi/g	0.3744	Y	352	4	1.219	IDENTIFIED	6.666	ui	
Bismuth-212 la nr	1.23	0.2532	pCi/g	0.6619	N	727.7	1	1.735	FAIL_ABUND	20.11		
Bismuth-214 ✓	1.125	0.08916	pCi/g	0.1175	0.200	609.4	4	1.438	IDENTIFIED	6.745		
Cadmium-109 la	3.312	0.547	pCi/g	1.591	Y	510.8	3	1.525	NOT_IDENTI	23.04	UI	Data rejected due to low abundance.
Cerium-143	164.5	32.55	pCi/g	0	N	327.4	1	1.383	FAIL_DECAY	37.44		
Cesium-134 la	0.09187	0.02595	pCi/g	0.08883	0.100	510.8	3	1.525	NOT_IDENTI	23.04	UI	Data rejected due to low abundance.
Cesium-135 HE	0.4909	0.1368	pCi/g	0.2725	N	269.7	2	1.551	IDENTIFIED	27.38		
Cesium-137 ✓	4.161	0.1559	pCi/g	0.0678	0.100	661.7	2	1.438	IDENTIFIED	1.929		
Gross Gamma	16.03	1.819	pCi/g	3.475	N		0					
Iodine-135 HE	9.61E+12	1.12E+13	pCi/g	0	N	269.7	2	1.551	NOT_IDENTI	27.38		
Lead-212 ✓	1.552	0.09075	pCi/g	0.1005	0.100	238.7	7	1.081	IDENTIFIED	3.425		
Lead-214 ✓	1.242	0.1021	pCi/g	0.1305	0.100	352	4	1.219	IDENTIFIED	6.666		
Lutetium-177 la nr	3.169	0.6326	pCi/g	1.711	N	209.3	1	1.736	FAIL_ABUND	19.59		
Niobium-97	23230	6743	pCi/g	0	N	238.7	7	1.081	NOT_IDENTI	3.425		
Polonium-212 nr	1.552	0.09075	pCi/g	0.1005	N	238.7	7	1.081	IDENTIFIED	3.425		
Polonium-214 nr	1.242	0.1021	pCi/g	0.1305	N	352	4	1.219	IDENTIFIED	6.666		
Polonium-216 nr	1.552	0.09075	pCi/g	0.1005	N	238.7	7	1.081	IDENTIFIED	3.425		
Polonium-218 nr	1.242	0.1021	pCi/g	0.1305	N	352	4	1.219	IDENTIFIED	6.666		
Potassium-40 ✓	29.82	1.397	pCi/g	0.5411	1.00	1461	1	2.115	IDENTIFIED	2.867		
Radium-224 int	3.34	0.6236	pCi/g	1.144	Y	241.5	1	1.609	IDENTIFIED	18.19	ui	
Radium-226 ✓	1.125	0.08916	pCi/g	0.1175	Y	609.4	4	1.438	IDENTIFIED	6.745		
Radium-228 ✓	1.491	0.1659	pCi/g	0.2024	0.500	911.3	3	1.906	IDENTIFIED	9.463		
Sodium-24 HE	28890	28850	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Technetium-99m HE	4.07E+13	4.58E+13	pCi/g	0	N	238.7	7	1.081	NOT_IDENTI	3.425		
Thallium-208 ✓	0.4777	0.04214	pCi/g	0.06119	0.080	583.2	1	1.168	IDENTIFIED	8.022		
Thorium-228 nr	1.552	0.09075	pCi/g	0.1005	N	238.7	7	1.081	IDENTIFIED	3.425		
Thorium-230 nr	1.125	0.08915	pCi/g	0.1175	N	609.4	4	1.438	IDENTIFIED	6.745		
Thorium-232 nr	1.491	0.1659	pCi/g	0.2024	N	911.3	3	1.906	IDENTIFIED	9.463		
Titanium-44 la nr	0.3351	0.03005	pCi/g	0.07473	N	77.08	1	1.03	FAIL_ABUND	7.258		
Total Uranium	7.0985	3.10E-06	ug/g	3.7279	N		0					
Uranium-234 nr	1.125	0.08915	pCi/g	0.1175	N	609.4	4	1.438	IDENTIFIED	6.745		
Zirconium-97	2.82E+05	1.39E+05	pCi/g	0	N	238.7	7	1.081	NOT_IDENTI	3.425		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue

232511003	24-JUN-09 12:00	07-JUL-09 10:50	13	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.752	0.2048	pCi/g	0.1952	N	910.8	3	1.731	IDENTIFIED	9.707		
Americium-243	int nr	0.3807	0.04471	pCi/g	0.1018	N	74.84	1	1.19	IDENTIFIED	10.46		
Annihilation Rad.		0.1283	0.03471	pCi/g	0.04433	N	510.2	1	2.104	IDENTIFIED	26.9		
Bismuth-211	int	4.289	0.2564	pCi/g	0.3686	Y	351.7	4	1.326	IDENTIFIED	4.977	ui	
Bismuth-212	HE	0.9618	0.2335	pCi/g	0.6866	N	727	1	1.415	FAIL_ABUND	23.92		
Bismuth-214		1.315	0.08907	pCi/g	0.106	0.200	609	4	1.627	IDENTIFIED	5.624		
Cadmium-109	int	3.492	0.5391	pCi/g	1.252	Y	87.37	3	1.132	IDENTIFIED	14.33	ui	
Cerium-143		344.9	47.64	pCi/g	0	N	328	1	1.468	FAIL_DECAY	33.64		
Cesium-134	la	0.1346	0.02671	pCi/g	0.09239	0.100	794.8	1	2.044	FAIL_ABUND	19.41	UI	Data rejected due to low abundance.
Gross Gamma		10.39	1.385	pCi/g	3.335	N		0					
Lead-212		1.878	0.08945	pCi/g	0.09165	0.100	238.5	5	1.19	IDENTIFIED	3.011		
Lead-214		1.492	0.09732	pCi/g	0.1285	0.100	351.7	4	1.326	IDENTIFIED	4.977		
Lutetium-177	HE	2.155	0.7092	pCi/g	1.709	N	209.1	1	1.176	FAIL_ABUND	32.79		
Neptunium-237	int nr	1.011	0.1877	pCi/g	0.3696	N	87.37	3	1.132	IDENTIFIED	14.33		
Polonium-212	nr	1.878	0.08945	pCi/g	0.09165	N	238.5	5	1.19	IDENTIFIED	3.011		
Polonium-214	nr	1.492	0.09732	pCi/g	0.1285	N	351.7	4	1.326	IDENTIFIED	4.977		
Polonium-216	nr	1.878	0.08945	pCi/g	0.09165	N	238.5	5	1.19	IDENTIFIED	3.011		
Polonium-218	nr	1.492	0.09732	pCi/g	0.1285	N	351.7	4	1.326	IDENTIFIED	4.977		
Potassium-40		34.16	1.721	pCi/g	0.4858	1.00	1460	1	1.9	IDENTIFIED	2.723		
Radium-224	int	4.466	0.5566	pCi/g	1.043	Y	241.4	1	1.544	IDENTIFIED	12.11	ui	
Radium-226		1.315	0.08907	pCi/g	0.106	Y	609	4	1.627	IDENTIFIED	5.624		
Radium-228		1.752	0.2048	pCi/g	0.1952	0.500	910.8	3	1.731	IDENTIFIED	9.707		
Sodium-24	HE	12250	33090	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Thallium-208		0.5548	0.04211	pCi/g	0.0609	0.080	582.8	1	1.324	IDENTIFIED	6.854		
Thorium-228	nr	1.878	0.08945	pCi/g	0.09164	N	238.5	5	1.19	IDENTIFIED	3.011		
Thorium-230	nr	1.315	0.08907	pCi/g	0.106	N	609	4	1.627	IDENTIFIED	5.624		
Thorium-232	nr	1.752	0.2048	pCi/g	0.1952	N	910.8	3	1.731	IDENTIFIED	9.707		
Tin-126	int nr	0.3443	0.05316	pCi/g	0.1241	N	87.37	3	1.132	IDENTIFIED	14.33		
Titanium-44	la nr	0.398	0.03297	pCi/g	0.09002	N	77.13	1	1.046	FAIL_ABUND	6.302		
Total Uranium		5.6182	2.37E-06	ug/g	4.2015	N		0					
Uranium-234	nr	1.315	0.08907	pCi/g	0.106	N	609	4	1.627	IDENTIFIED	5.624		
Zirconium-97		6.14E+05	1.15E+05	pCi/g	0	N	238.5	5	1.19	NOT_IDENTI	3.011		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232511004	24-JUN-09 12:00	07-JUL-09 10:53	13	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.679	0.1687	pCi/g	0.2151	N	911.7	3	1.723	IDENTIFIED	8.412		
Americium-241		235.2	8.418	pCi/g	1.125	0.200	59.51	1	1.018	IDENTIFIED	0.4352		

Americium-243 int nr	0.4504	0.05855	pCi/g	0.1655	N	74.85	1	1.011	IDENTIFIED	12.55			
Barium-137m	84.18	2.749	pCi/g	0.1215	N	662	3	1.485	IDENTIFIED	0.3833			
Bismuth-211 int	3.647	0.4584	pCi/g	0.984	Y	352.1	4	1.522	IDENTIFIED	12.17	ui		
Bismuth-212 nr	1.264	0.2465	pCi/g	0.4101	N	727.8	1	1.631	IDENTIFIED	19.02			
Bismuth-214 ✓	1.364	0.1308	pCi/g	0.2387	0.200	609.6	4	1.426	IDENTIFIED	8.657			
Cerium-143 HE	84.2	62.61	pCi/g	0	N	662	3	1.485	FAIL_DECAY	0.3833			
Cesium-137 ✓	88.99	2.915	pCi/g	0.1284	0.100	662	3	1.485	IDENTIFIED	0.3833			
Cobalt-60 la	0.08393	0.02448	pCi/g	0.08095	0.100	1333	1	1.919	FAIL_ABUND	28.96	☒	UI	Data rejected due to low abundance.
Gadolinium-153 HE	0.3857	0.1076	pCi/g	0.2787	N	98.87	2	2.041	FAIL_ABUND	27.7			
Gold-195 HE	1.121	0.3128	pCi/g	0.8234	N	98.87	2	2.041	FAIL_ABUND	27.7			
Gross Gamma	169.4	8.161	pCi/g	11.41	N		0						
Iodine-126 HE	0.5342	0.1199	pCi/g	0.4057	N	969.5	1	1.955	NOT_IDENTI	10.4			
Iodine-133 HE	1972	1467	pCi/g	0	N	511.4	2	1.527	FAIL_DECAY	89.91			
Iodine-135 HE	5.90E+12	1.22E+13	pCi/g	0	N	511.4	2	1.527	NOT_IDENTI	89.91			
Krypton-85 HE	37.35	10.79	pCi/g	32.87	N	238.7	9	1.127	NOT_IDENTI	6.194			
Lead-212 ✓	1.584	0.1131	pCi/g	0.2419	0.100	238.7	9	1.127	IDENTIFIED	6.194			
Lead-214 ✓	1.269	0.1629	pCi/g	0.3472	0.100	352.1	4	1.522	IDENTIFIED	12.17			
Niobium-97	1.91E+05	18840	pCi/g	0	N	238.7	9	1.127	NOT_IDENTI	6.194			
Polonium-212 nr	1.584	0.1131	pCi/g	0.2419	N	238.7	9	1.127	IDENTIFIED	6.194			
Polonium-214 nr	1.269	0.1629	pCi/g	0.3472	N	352.1	4	1.522	IDENTIFIED	12.17			
Polonium-216 nr	1.584	0.1131	pCi/g	0.2419	N	238.7	9	1.127	IDENTIFIED	6.194			
Polonium-218 nr	1.269	0.1629	pCi/g	0.3472	N	352.1	4	1.522	IDENTIFIED	12.17			
Potassium-40 ✓	30.79	1.362	pCi/g	0.5564	1.00	1461	1	1.993	IDENTIFIED	2.623			
Radium-226 ✓	1.364	0.1308	pCi/g	0.2387	Y	609.6	4	1.426	IDENTIFIED	8.657			
Radium-228 ✓	1.679	0.1687	pCi/g	0.2151	0.500	911.7	3	1.723	IDENTIFIED	8.412			
Silver-110m la nr	0.4027	0.05327	pCi/g	0.1735	N	86.64	1	1.089	NOT_IDENTI	49.4			
Strontium-85 la	0.1872	0.05409	pCi/g	0.1648	Y	238.7	9	1.127	NOT_IDENTI	6.194	☒	UI	Data rejected due to low abundance.
Technetium-99m HE	9.89E+11	9.79E+13	pCi/g	0	N	238.7	9	1.127	NOT_IDENTI	6.194			
Thallium-208 ✓	0.5431	0.0649	pCi/g	0.1319	0.080	583.5	1	1.252	IDENTIFIED	11.4			
Thorium-228 nr	1.584	0.1131	pCi/g	0.2418	N	238.7	9	1.127	IDENTIFIED	6.194			
Thorium-230 nr	1.364	0.1308	pCi/g	0.2387	N	609.6	4	1.426	IDENTIFIED	8.657			
Thorium-232 nr	1.679	0.1687	pCi/g	0.2151	N	911.7	3	1.723	IDENTIFIED	8.412			
Titanium-44 la nr	0.41	0.03949	pCi/g	0.1173	N	77.16	1	0.9753	FAIL_ABUND	8.99			
Uranium-234 nr	1.364	0.1308	pCi/g	0.2387	N	609.6	4	1.426	IDENTIFIED	8.657			
Zirconium-97 HE	78770	3.41E+05	pCi/g	0	N	238.7	9	1.127	NOT_IDENTI	6.194			

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232511005	24-JUN-09 12:00	07-JUL-09 10:54	13	SAMPLE	LOAD	1	LANL	LANL01004;GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 nr	1.828	0.18	pCi/g	0.2509	N	911.6	3	1.884	IDENTIFIED	8.371	☐	

Americium-241 ✓		110.5	5.617	pCi/g	0.4384	0.200	59.91	1	1.076	IDENTIFIED	0.3399		
Americium-243	int nr	0.3945	0.03528	pCi/g	0.07336	N	75.25	1	1.093	IDENTIFIED	7.842		
Annihilation Rad.	HE	0.1595	0.05546	pCi/g	0.08779	N	511	1	2.037	IDENTIFIED	34.59		
Barium-137m		17.58	0.7348	pCi/g	0.08084	N	662.2	3	1.52	IDENTIFIED	0.9193		
Bismuth-211	int	3.711	0.2896	pCi/g	0.5706	Y	352.4	4	1.314	IDENTIFIED	6.905	ui	
Bismuth-212	HE	0.9527	0.3146	pCi/g	0.7856	N	727.9	1	1.354	FAIL_ABUND	32.67		
Bismuth-214 ✓		1.156	0.115	pCi/g	0.1731	0.200	609.9	4	1.641	IDENTIFIED	8.777		
Cadmium-109	int	3.506	0.4912	pCi/g	1.168	Y	87.68	6	1.179	IDENTIFIED	13.44	ui	
Cerium-143	HE	56.12	38.73	pCi/g	0	N	662.2	3	1.52	NOT_IDENTI	0.9193		
Cesium-137 ✓		18.58	0.7784	pCi/g	0.08545	0.100	662.2	3	1.52	IDENTIFIED	0.9193		
Gold-195	HE	0.8506	0.2069	pCi/g	0.4728	N	99.59	1	1.545	FAIL_ABUND	23.87		
Gross Gamma		64.38	3.094	pCi/g	7.946	N		0					
Iodine-123	HE	1.35E+05	2.54E+05	pCi/g	0	N	87.68	6	1.179	NOT_IDENTI	13.44		
Iodine-126	HE	0.447	0.1296	pCi/g	0.4206	N	87.68	6	1.179	NOT_IDENTI	13.44		
Krypton-85	la nr	38.19	7.008	pCi/g	23.35	N	239.1	8	1.116	NOT_IDENTI	3.988		
Lead-212 ✓		1.59	0.09611	pCi/g	0.1413	0.100	239.1	8	1.116	IDENTIFIED	3.988		
Lead-214 ✓		1.291	0.1062	pCi/g	0.199	0.100	352.4	4	1.314	IDENTIFIED	6.905		
Neptunium-237	int nr	1.015	0.1766	pCi/g	0.3517	N	87.68	6	1.179	IDENTIFIED	13.44		
Niobium-97		62660	11280	pCi/g	0	N	239.1	8	1.116	NOT_IDENTI	3.988		
Polonium-212	nr	1.59	0.09611	pCi/g	0.1413	N	239.1	8	1.116	IDENTIFIED	3.988		
Polonium-214	nr	1.291	0.1062	pCi/g	0.199	N	352.4	4	1.314	IDENTIFIED	6.905		
Polonium-216	nr	1.59	0.09611	pCi/g	0.1413	N	239.1	8	1.116	IDENTIFIED	3.988		
Polonium-218	nr	1.291	0.1062	pCi/g	0.199	N	352.4	4	1.314	IDENTIFIED	6.905		
Potassium-40 ✓		26.18	1.168	pCi/g	0.6651	1.00	1462	1	2.061	IDENTIFIED	3.249		
Radium-226 ✓		1.156	0.115	pCi/g	0.1731	Y	609.9	4	1.641	IDENTIFIED	8.777		
Radium-228 ✓		1.828	0.18	pCi/g	0.2509	0.500	911.6	3	1.884	IDENTIFIED	8.371		
Silver-110m	HE	0.1148	0.03281	pCi/g	0.105	N	87.68	6	1.179	NOT_IDENTI	13.44		
Strontium-85	la	0.1914	0.03512	pCi/g	0.117	Y	239.1	8	1.116	NOT_IDENTI	3.988	UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5148	0.05967	pCi/g	0.08663	0.080	583.5	1	1.431	IDENTIFIED	10.83		
Thorium-228	nr	1.59	0.09611	pCi/g	0.1412	N	239.1	8	1.116	IDENTIFIED	3.988		
Thorium-230	nr	1.156	0.115	pCi/g	0.1731	N	609.9	4	1.641	IDENTIFIED	8.777		
Thorium-232	nr	1.828	0.18	pCi/g	0.2509	N	911.6	3	1.884	IDENTIFIED	8.371		
Tin-126	int nr	0.3457	0.04843	pCi/g	0.1191	N	87.68	6	1.179	IDENTIFIED	13.44		
Titanium-44	la nr	0.345	0.02453	pCi/g	0.07049	N	77.48	1	1.038	FAIL_ABUND	5.711		
Total Uranium		3.4225	1.37E-06	ug/g	1.7887	N		0					
Uranium-234	nr	1.156	0.115	pCi/g	0.1731	N	609.9	4	1.641	IDENTIFIED	8.777		
Zirconium-97		3.91E+05	1.95E+05	pCi/g	0	N	239.1	8	1.116	NOT_IDENTI	3.988		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232511006	24-JUN-09 12:00	07-JUL-09 10:58	13	SAMPLE	LOAD	1	LANL	LANL01004;GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 nr	1.605	0.1536	pCi/g	0.1889	N	911.1	3	1.611	IDENTIFIED	7.512		
Americium-241 ✓	8.931	0.4212	pCi/g	0.4031	0.200	59.74	1	0.9898	IDENTIFIED	2.524		
Americium-243 int nr	0.4922	0.0399	pCi/g	0.09712	N	74.96	1	1.232	IDENTIFIED	7.137		
Annihilation Rad.	0.155	0.03106	pCi/g	0.05463	N	510.8	2	2.225	IDENTIFIED	19.83		
Barium-137m	4.472	0.1563	pCi/g	0.06542	N	661.6	2	1.392	IDENTIFIED	1.71		
Bismuth-211 int	4.037	0.2556	pCi/g	0.3705	Y	351.7	4	1.12	IDENTIFIED	5.518	ui	
Bismuth-212 la nr	1.033	0.2097	pCi/g	0.6033	N	727.3	1	1.247	FAIL_ABUND	19.84		
Bismuth-214 ✓	1.092	0.08324	pCi/g	0.1088	0.200	609.4	4	1.34	IDENTIFIED	6.493		
Cadmium-109 int	3.81	0.502	pCi/g	1.374	Y	87.34	5	1.124	IDENTIFIED	12.46	ui	
Cerium-143	231.2	38.84	pCi/g	0	N	327.9	1	1.283	FAIL_DECAY	35.02		
Cesium-134 la	0.1099	0.03516	pCi/g	0.08355	0.100	794.8	2	1.035	FAIL_ABUND	31.73	UI	Data rejected due to low abundance.
Cesium-137 ✓	4.727	0.1657	pCi/g	0.06915	0.100	661.6	2	1.392	IDENTIFIED	1.71		
Gross Gamma	16.9	1.781	pCi/g	5.042	N		0					
Iodine-123 HE	1.45E+05	2.02E+05	pCi/g	0	N	87.34	5	1.124	NOT_IDENTI	12.46		
Iodine-133 HE	371.3	575.2	pCi/g	0	N	510.8	2	2.225	FAIL_DECAY	19.83		
Iodine-135 HE	1.97E+13	1.18E+13	pCi/g	0	N	794.8	2	1.035	NOT_IDENTI	31.73		
Krypton-85 HE	19.23	4.405	pCi/g	14.71	N	238.7	8	0.9852	NOT_IDENTI	3.115		
Lead-212 ✓	1.556	0.07322	pCi/g	0.1024	0.100	238.7	8	0.9852	IDENTIFIED	3.115		
Lead-214 ✓	1.404	0.09616	pCi/g	0.1364	0.100	351.7	4	1.12	IDENTIFIED	5.518		
Lutetium-177 HE	2.334	0.7309	pCi/g	1.798	N	209.3	1	0.8052	FAIL_ABUND	31.21		
Neptunium-237 int nr	1.103	0.1846	pCi/g	0.4051	N	87.34	5	1.124	IDENTIFIED	12.46		
Niobium-97	80220	8591	pCi/g	0	N	238.7	8	0.9852	NOT_IDENTI	3.115		
Polonium-212 nr	1.556	0.07322	pCi/g	0.1024	N	238.7	8	0.9852	IDENTIFIED	3.115		
Polonium-214 nr	1.404	0.09616	pCi/g	0.1364	N	351.7	4	1.12	IDENTIFIED	5.518		
Polonium-216 nr	1.556	0.07322	pCi/g	0.1024	N	238.7	8	0.9852	IDENTIFIED	3.115		
Polonium-218 nr	1.404	0.09616	pCi/g	0.1364	N	351.7	4	1.12	IDENTIFIED	5.518		
Potassium-40 ✓	31.75	1.565	pCi/g	0.4989	1.00	1460	1	1.966	IDENTIFIED	2.565		
Radium-224 int	4.931	0.6582	pCi/g	1.164	Y	241.8	1	1.943	IDENTIFIED	13.07	ui	
Radium-226 ✓	1.092	0.08324	pCi/g	0.1088	Y	609.4	4	1.34	IDENTIFIED	6.493		
Radium-228 ✓	1.605	0.1536	pCi/g	0.1889	0.500	911.1	3	1.611	IDENTIFIED	7.512		
Silver-110m la nr	0.1608	0.02335	pCi/g	0.08269	N	87.34	5	1.124	NOT_IDENTI	12.46		
Sodium-24 HE	33270	29560	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Strontium-85 la	0.09636	0.02208	pCi/g	0.07371	Y	238.7	8	0.9852	NOT_IDENTI	3.115	UI	Data rejected due to low abundance.
Thallium-208 ✓	0.477	0.03738	pCi/g	0.06251	0.080	583.1	1	1.336	IDENTIFIED	7.039		
Thorium-228 nr	1.556	0.07322	pCi/g	0.1024	N	238.7	8	0.9852	IDENTIFIED	3.115		
Thorium-230 nr	1.092	0.08324	pCi/g	0.1088	N	609.4	4	1.34	IDENTIFIED	6.493		
Thorium-232 nr	1.605	0.1536	pCi/g	0.1889	N	911.1	3	1.611	IDENTIFIED	7.512		
Tin-126 int nr	0.3757	0.0495	pCi/g	0.1362	N	87.34	5	1.124	IDENTIFIED	12.46		
Titanium-44 la nr	0.371	0.02483	pCi/g	0.08756	N	77.31	1	0.8643	FAIL_ABUND	5.43		

Total Uranium		4.8596	2.43E-06	ug/g	3.5709	N		0					
Uranium-234	nr	1.092	0.08324	pCi/g	0.1088	N	609.4	4	1.34	IDENTIFIED	6.493		
Zirconium-97		5.20E+05	1.35E+05	pCi/g	0	N	238.7	8	0.9852	NOT_IDENTI	3.115		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871426		07-JUL-09 10:59	0	MB	LOAD	1		GEL	N	RGSP

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871427	24-JUN-09 12:00	07-JUL-09 11:20	13	DUP	LOAD	1		LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.802	0.1732	pCi/g	0.1763	N	911.6	3	2.105	IDENTIFIED	6.968		
Americium-241	✓	8.1	0.4142	pCi/g	0.5786	0.200	59.62	1	1.024	IDENTIFIED	2.988		
Americium-243	int nr	0.3895	0.06843	pCi/g	0.1545	N	74.88	2	1.317	IDENTIFIED	17.06		
Barium-137m		65.96	2.526	pCi/g	0.07816	N	661.9	2	1.672	IDENTIFIED	0.3577		
Bismuth-211	int	4.399	0.407	pCi/g	0.7494	Y	352.2	4	1.61	IDENTIFIED	8.677	ui	
Bismuth-212	nr	1.376	0.2078	pCi/g	0.3395	N	727.2	1	2.199	IDENTIFIED	14.25		
Bismuth-214	✓	1.3	0.1178	pCi/g	0.1797	0.200	609.5	4	1.575	IDENTIFIED	7.885		
Cadmium-109	int	3.567	0.8149	pCi/g	2.353	Y	87.23	5	1.3	IDENTIFIED	22.38	ui	
Cerium-143		254.2	58.1	pCi/g	0	N	57.84	1	0.9996	FAIL_DECAY	50.07		
Cesium-134	la	0.1372	0.0282	pCi/g	0.0746	0.100	795.5	2	1.031	FAIL_ABUND	19.98	UI	Data rejected due to low abundance.
Cesium-137	✓	69.72	2.677	pCi/g	0.08263	0.100	661.9	2	1.672	IDENTIFIED	0.3577		
Gross Gamma		72.38	4.267	pCi/g	4.54	N		0					
Iodine-123	HE	2.90E+05	3.18E+05	pCi/g	0	N	87.23	5	1.3	NOT_IDENTI	22.38		
Iodine-126	la nr	2.378	0.1501	pCi/g	0.4941	N	969.4	1	2.024	NOT_IDENTI	8.117		
Iodine-135	HE	1.60E+12	1.11E+13	pCi/g	0	N	795.5	2	1.031	NOT_IDENTI	19.98		
Krypton-85	HE	32.01	8.399	pCi/g	25.63	N	238.8	10	1.128	NOT_IDENTI	3.968		
Lead-212	✓	1.814	0.09686	pCi/g	0.184	0.100	238.8	10	1.128	IDENTIFIED	3.968		
Lead-214	✓	1.53	0.1471	pCi/g	0.2604	0.100	352.2	4	1.61	IDENTIFIED	8.677		
Neptunium-237	HE	1.033	0.2589	pCi/g	0.6571	N	87.23	5	1.3	IDENTIFIED	22.38		
Niobium-95	HE	0.07065	0.0189	pCi/g	0.06213	N	238.8	10	1.128	NOT_IDENTI	3.968		
Niobium-97		1.37E+06	56640	pCi/g	0	N	238.8	10	1.128	NOT_IDENTI	3.968		
Polonium-212	nr	1.814	0.09686	pCi/g	0.184	N	238.8	10	1.128	IDENTIFIED	3.968		
Polonium-214	nr	1.53	0.1471	pCi/g	0.2604	N	352.2	4	1.61	IDENTIFIED	8.677		
Polonium-216	nr	1.814	0.09686	pCi/g	0.184	N	238.8	10	1.128	IDENTIFIED	3.968		
Polonium-218	nr	1.53	0.1471	pCi/g	0.2604	N	352.2	4	1.61	IDENTIFIED	8.677		
Potassium-40	✓	34.25	1.484	pCi/g	0.4231	1.00	1461	1	2.564	IDENTIFIED	2.094		
Radium-224	int	4.764	0.8845	pCi/g	2.091	Y	241.8	1	1.798	IDENTIFIED	18.36	ui	
Radium-226	✓	1.3	0.1178	pCi/g	0.1797	Y	609.5	4	1.575	IDENTIFIED	7.885		
Radium-228	✓	1.802	0.1732	pCi/g	0.1763	0.500	911.6	3	2.105	IDENTIFIED	6.968		
Silver-110m	la nr	2.899	0.128	pCi/g	0.2466	N	87.23	5	1.3	NOT_IDENTI	22.38		

Sodium-24	HE	6152	25230	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Strontium-85	la	0.1605	0.04211	pCi/g	0.1285	Y	238.8	10	1.128	NOT_IDENTI	3.968	UI	Data rejected due to low abundance.
Technetium-99m	HE	7.48E+13	8.95E+13	pCi/g	0	N	238.8	10	1.128	NOT_IDENTI	3.968		
Thallium-200	HE	15.2	133	pCi/g	0	N	74.88	2	1.317	NOT_IDENTI	17.06		
Thallium-208		0.5844	0.05934	pCi/g	0.1009	0.080	583.2	1	1.532	IDENTIFIED	9.367		
Thorium-228	nr	1.814	0.09686	pCi/g	0.184	N	238.8	10	1.128	IDENTIFIED	3.968		
Thorium-230	nr	1.3	0.1178	pCi/g	0.1797	N	609.5	4	1.575	IDENTIFIED	7.885		
Thorium-232	nr	1.802	0.1732	pCi/g	0.1763	N	911.6	3	2.105	IDENTIFIED	6.968		
Tin-126	HE	0.3517	0.08035	pCi/g	0.2275	N	87.23	5	1.3	IDENTIFIED	22.38		
Titanium-44	la nr	0.389	0.03875	pCi/g	0.1111	N	77.14	1	1.028	FAIL_ABUND	9.012		
Uranium-234	nr	1.3	0.1178	pCi/g	0.1797	N	609.5	4	1.575	IDENTIFIED	7.885		
Zirconium-97	HE	2.15E+05	2.54E+05	pCi/g	0	N	238.8	10	1.128	NOT_IDENTI	3.968		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201871428		07-JUL-09 10:00	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228		1.236	0.258	pCi/g	0.4764	N	911.9	3	1.788	IDENTIFIED	20.25		
Americium-241		14.4	0.7538	pCi/g	0.5388	0.200	59.52	1	1.064	IDENTIFIED	2.55		
Barium-137m		5.402	0.1746	pCi/g	0.09627	N	662	2	1.519	IDENTIFIED	2.018		
Bismuth-211		2.629	0.3635	pCi/g	0.555	Y	352.1	4	1.502	IDENTIFIED	13.46		
Bismuth-214		0.6038	0.1125	pCi/g	0.292	0.200	609.6	4	1.675	FAIL_ABUND	18.27		
Cadmium-109		42.43	2.37	pCi/g	2.025	Y	88.06	2	1.148	IDENTIFIED	3.172		
Cesium-137		5.71	0.1852	pCi/g	0.1018	0.100	662	2	1.519	IDENTIFIED	2.018		
Cobalt-57		0.4139	0.03787	pCi/g	0.05826	N	122.1	1	1.109	IDENTIFIED	8.621		
Cobalt-60		7.138	0.2927	pCi/g	0.0765	0.100	1333	1	1.825	IDENTIFIED	2.193		
Gross Gamma		28.63	3.612	pCi/g	4.257	N		0					
Lead-212		0.946	0.07141	pCi/g	0.1579	0.100	239	6	1.144	IDENTIFIED	6.61		
Lead-214		0.9145	0.1287	pCi/g	0.1935	0.100	352.1	4	1.502	IDENTIFIED	13.46		
Neptunium-237		7.171	0.8558	pCi/g	1.155	N	92.94	1	1.306	NOT_IDENTI	40.01		
Niobium-97	HE	4.221	47.6	pCi/g	0	N	239	6	1.144	NOT_IDENTI	6.61		
Polonium-212		0.946	0.07141	pCi/g	0.1579	N	239	6	1.144	IDENTIFIED	6.61		
Polonium-214		0.9145	0.1287	pCi/g	0.1935	N	352.1	4	1.502	IDENTIFIED	13.46		
Polonium-216		0.946	0.07141	pCi/g	0.1579	N	239	6	1.144	IDENTIFIED	6.61		
Polonium-218		0.9145	0.1287	pCi/g	0.1935	N	352.1	4	1.502	IDENTIFIED	13.46		
Radium-224		2.441	0.7386	pCi/g	1.698	Y	242	1	1.457	IDENTIFIED	30.12		
Radium-226		0.6038	0.1125	pCi/g	0.292	Y	609.6	4	1.675	FAIL_ABUND	18.27		
Radium-228		1.236	0.258	pCi/g	0.4764	0.500	911.9	3	1.788	IDENTIFIED	20.25		
Sodium-24	HE	11.71	75.88	pCi/g	0	N	0	1	0	NOT_IDENTI	0		
Thallium-208		0.3558	0.05713	pCi/g	0.1014	0.080	583.5	1	1.337	IDENTIFIED	15.74		
Thorium-228		0.946	0.07141	pCi/g	0.1579	N	239	6	1.144	IDENTIFIED	6.61		

Thorium-230		**0.6038**	0.1125	pCi/g	**0.292**	N	609.6	4	1.675	FAIL_ABUND	18.27	☐
Thorium-232		**1.236**	0.258	pCi/g	**0.4764**	N	911.9	3	1.788	IDENTIFIED	20.25	☐
Tin-126		**4.218**	0.2357	pCi/g	**0.2024**	N	88.06	2	1.148	IDENTIFIED	3.172	☐
Titanium-44	HE	**0.1538**	0.04047	pCi/g	**0.104**	N	77.28	1	1.1	FAIL_ABUND	25.96	☐
Uranium-234		**0.6038**	0.1125	pCi/g	**0.292**	N	609.6	4	1.675	FAIL_ABUND	18.27	☐
Zirconium-97	HE	**1194**	851.9	pCi/g	**0**	N	239	6	1.144	NOT_IDENTI	6.61	☐

*** = Number of isotopes identified with a keyline at this energy.

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertanty	Units	DL	RDL
881220	232511006	SAMPLE	07-JUL-09	Iodine-133	371.3	575.2	pCi/g	0	N
				Iodine-135	1.97E+13	1.18E+13	pCi/g	0	N
				Krypton-85	19.23	4.405	pCi/g	7.357	N
				Lead-212	1.556	0.07322	pCi/g	0.05123	0.100
				Lead-214	1.404	0.09616	pCi/g	0.06823	0.100
				Niobium-97	80220	8591	pCi/g	0	N
				Potassium-40	31.75	1.565	pCi/g	0.2496	1.00
				Radium-224	4.931	0.6582	pCi/g	0.5826	Y
				Radium-226	1.092	0.08324	pCi/g	0.05445	Y
				Radium-228	1.605	0.1536	pCi/g	0.09449	0.500
				Ruthenium-106	0.331	0.1533	pCi/g	0.2736	0.800
				Sodium-24	33270	29560	pCi/g	0	N
				Strontium-85	0.09636	0.02208	pCi/g	0.03688	Y
				Thallium-208	0.477	0.03738	pCi/g	0.03127	0.080
				Thorium-234	1.598	0.8165	pCi/g	1.2	2.00
				Uranium-235	0.2282	0.1161	pCi/g	0.2038	0.500
				Zirconium-97	5.20E+05	1.35E+05	pCi/g	0	N
881220	1201871426	MB	07-JUL-09						
881220	1201871427	DUP	07-JUL-09	Americium-241	8.1	0.4142	pCi/g	0.2895	0.200
				Barium-137m	65.96	2.526	pCi/g	0.03911	N
				Bismuth-211	4.399	0.407	pCi/g	0.3749	Y
				Bismuth-214	1.3	0.1178	pCi/g	0.0899	0.200
				Cadmium-109	3.567	0.8149	pCi/g	1.177	Y
				Cerium-143	254.2	58.1	pCi/g	0	N
				Cesium-134	0.1372	0.0282	pCi/g	0.03732	0.100
				Cesium-137	69.72	2.677	pCi/g	0.04134	0.100
				Cobalt-60	0.04299	0.01682	pCi/g	0.03024	0.100
				Gross Gamma	72.38	4.267	pCi/g	2.236	N
				Iodine-123	2.90E+05	3.18E+05	pCi/g	0	N
				Iodine-135	1.60E+12	1.11E+13	pCi/g	0	N
				Krypton-85	32.01	8.399	pCi/g	12.82	N
				Lead-212	1.814	0.09686	pCi/g	0.09205	0.100
				Lead-214	1.53	0.1471	pCi/g	0.1303	0.100
				Niobium-97	1.37E+06	56640	pCi/g	0	N
				Potassium-40	34.25	1.484	pCi/g	0.2117	1.00
				Radium-224	4.764	0.8845	pCi/g	1.046	Y
				Radium-226	1.3	0.1178	pCi/g	0.0899	Y

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:39:42.98

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504001.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:39:16.
Sample ID         : G232504001           Sample quantity  : 1.45750E+02 GRAM
Detector name     : GAM06                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.57  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	74.94*	510	547	1.14	148.49	141	19	7.08E-02	9.0	1.83E+00
2	3	77.23*	742	514	1.12	153.08	141	19	1.03E-01	6.4	
3	0	87.30	287	508	1.27	173.23	170	7	3.98E-02	14.3	
4	2	90.16	159	275	1.04	178.95	177	14	2.21E-02	16.2	1.14E+00
5	2	93.17*	354	534	1.56	184.96	177	14	4.92E-02	13.6	
6	0	186.31*	298	450	1.33	371.27	367	12	4.14E-02	15.8	
7	0	209.33	153	418	1.04	417.32	413	11	2.12E-02	27.1	
8	3	238.73*	1569	205	1.15	476.13	468	21	2.18E-01	3.0	1.45E+00
9	3	241.84	357	302	1.95	482.35	468	21	4.96E-02	15.1	
10	0	270.25	122	222	1.29	539.18	535	9	1.70E-02	23.7	
11	0	295.22*	432	261	1.14	589.14	584	11	6.00E-02	8.8	
12	0	300.17	87	201	0.71	599.04	595	9	1.20E-02	31.7	
13	0	338.31	351	293	1.14	675.34	668	14	4.87E-02	11.7	
14	0	351.96*	787	214	1.26	702.65	696	14	1.09E-01	5.4	
15	0	462.47*	108	110	1.12	923.73	917	12	1.50E-02	22.3	
16	0	510.65*	114	206	1.32	1020.13	1013	15	1.58E-02	31.5	
17	0	583.17*	472	134	1.34	1165.23	1160	13	6.56E-02	6.9	
18	0	609.17*	530	146	1.42	1217.24	1211	13	7.36E-02	6.5	
19	0	727.39	101	103	1.54	1453.81	1448	12	1.40E-02	22.6	
20	0	769.21	112	121	2.99	1537.50	1529	20	1.56E-02	25.8	
21	0	785.80	27	79	1.43	1570.71	1565	10	3.75E-03	64.8	
22	0	796.26	73	87	1.10	1591.63	1583	18	1.02E-02	30.6	
23	0	860.66	59	63	1.26	1720.52	1714	13	8.25E-03	30.7	
24	0	910.99*	354	45	1.65	1821.25	1815	13	4.92E-02	6.7	
25	1	964.43	59	85	2.12	1928.20	1922	26	8.14E-03	32.4	2.24E+00
26	1	968.88*	173	46	1.80	1937.10	1922	26	2.40E-02	11.5	
27	0	1120.11	138	86	2.53	2239.80	2231	19	1.91E-02	18.2	
28	0	1237.99	63	82	1.60	2475.79	2469	15	8.81E-03	33.6	
29	0	1460.04*	1263	32	2.26	2920.33	2911	18	1.75E-01	3.0	
30	0	1589.70	29	42	2.33	3179.97	3168	21	4.03E-03	58.9	
31	0	1728.90*	39	0	1.99	3458.70	3451	14	5.44E-03	17.4	
32	0	1763.55*	94	7	1.76	3528.11	3520	15	1.31E-02	12.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:39:45

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:39:16
Sample ID : G232504001 Sample quantity : 145.75 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA6 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.57 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.167E+01	2.833E+00	6.728E-01	4.450E-02	47.066
CD-109	+	88.03	*	3.916E+00	1.185E+00	1.487E+00	1.468E-01	2.633
SN-126		64.28		1.944E-01	6.527E-01	1.096E+00	1.688E-01	0.177
	+	86.94		1.605E+00	8.111E-01	6.781E-01	2.822E-01	2.368
	+	87.57	*	3.862E-01	1.169E-01	1.636E-01	1.610E-02	2.361
TL-208		277.35		3.194E-01	4.575E-01	7.518E-01	8.006E-02	0.425
	+	510.84		5.650E-01	3.601E-01	2.391E-01	2.400E-02	2.363
	+	583.14	*	6.698E-01	1.022E-01	6.571E-02	4.153E-03	10.194
	+	860.37		7.979E-01	4.943E-01	5.382E-01	4.115E-02	1.482
BI-211		72.87		1.354E+01	4.036E+00	6.971E+00	6.259E-01	1.942
	+	351.07	*	4.833E+00	6.048E-01	3.587E-01	2.316E-02	13.472
BI-212	+	727.18	*	1.233E+00	5.644E-01	5.227E-01	3.931E-02	2.359
	+	785.46		2.114E+00	2.744E+00	3.066E+00	1.871E-01	0.690
		1620.62		4.812E-01	1.356E+00	2.374E+00	1.456E-01	0.203
PB-212	+	74.81		2.969E+00	6.579E-01	6.527E-01	8.486E-02	4.548
	+	77.11		2.435E+00	3.841E-01	3.681E-01	3.361E-02	6.614
	+	87.30		1.786E+00	5.693E-01	7.848E-01	1.100E-01	2.276
	+	238.63	*	2.076E+00	1.973E-01	1.041E-01	7.677E-03	19.938
	+	300.09		1.782E+00	1.140E+00	1.366E+00	1.143E-01	1.305
PO-212	+	74.81		2.969E+00	6.579E-01	6.527E-01	8.486E-02	4.548
	+	77.11		2.435E+00	3.841E-01	3.681E-01	3.361E-02	6.614
	+	87.30		1.786E+00	5.693E-01	7.848E-01	1.100E-01	2.276
		115.19		9.821E-01	4.097E+00	6.804E+00	4.490E-01	0.144
	+	238.63	*	2.076E+00	1.973E-01	1.041E-01	7.677E-03	19.938
	+	300.09		1.782E+00	1.140E+00	1.366E+00	1.143E-01	1.305
BI-214	+	609.31	*	1.417E+00	2.117E-01	1.327E-01	9.794E-03	10.675
	+	768.36		3.364E+00	1.757E+00	1.381E+00	1.161E-01	2.437
		934.06		7.231E-01	1.377E+00	2.377E+00	2.257E-01	0.304
	+	1120.29		1.938E+00	7.289E-01	5.367E-01	4.902E-02	3.612
	+	1238.11		2.484E+00	1.682E+00	1.577E+00	1.317E-01	1.575
		1377.67		1.319E+00	1.070E+00	1.970E+00	1.759E-01	0.670
	+	1764.49		1.824E+00	4.703E-01	4.234E-01	2.479E-02	4.307
PB-214	+	74.81		5.116E+00	1.095E+00	1.125E+00	1.314E-01	4.548
	+	77.11		4.174E+00	7.312E-01	6.311E-01	7.504E-02	6.614

Sample ID : G232504001 Acquisition date : 7-JUL-2009 08:39:16

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		3.060E+00	9.557E-01	1.344E+00	1.678E-01	2.276
	+	241.98		2.844E+00	8.890E-01	6.272E-01	5.089E-02	4.534
	+	295.21		1.560E+00	3.069E-01	2.556E-01	2.210E-02	6.103
	+	351.92	*	1.681E+00	2.279E-01	1.251E-01	1.038E-02	13.444
PO-214	+	74.81		5.116E+00	1.095E+00	1.125E+00	1.314E-01	4.548
	+	77.11		4.174E+00	7.312E-01	6.311E-01	7.504E-02	6.614
	+	87.30		3.060E+00	9.557E-01	1.344E+00	1.678E-01	2.276
	+	241.98		2.844E+00	8.890E-01	6.272E-01	5.089E-02	4.534
	+	295.21		1.560E+00	3.069E-01	2.556E-01	2.210E-02	6.103
	+	351.92	*	1.681E+00	2.279E-01	1.251E-01	1.038E-02	13.444
PO-216	+	74.81		2.969E+00	6.579E-01	6.527E-01	8.486E-02	4.548
	+	77.11		2.435E+00	3.841E-01	3.681E-01	3.361E-02	6.614
	+	87.30		1.786E+00	5.693E-01	7.848E-01	1.100E-01	2.276
	+	238.63	*	2.076E+00	1.973E-01	1.041E-01	7.677E-03	19.938
	+	300.09		1.782E+00	1.140E+00	1.366E+00	1.143E-01	1.305
PO-218	+	74.81		5.116E+00	1.095E+00	1.125E+00	1.314E-01	4.548
	+	77.11		4.174E+00	7.312E-01	6.311E-01	7.504E-02	6.614
	+	87.30		3.060E+00	9.557E-01	1.344E+00	1.678E-01	2.276
	+	241.98		2.844E+00	8.890E-01	6.272E-01	5.089E-02	4.534
	+	295.21		1.560E+00	3.069E-01	2.556E-01	2.210E-02	6.103
	+	351.92	*	1.681E+00	2.279E-01	1.251E-01	1.038E-02	13.444
RA-224	+	240.98	*	5.392E+00	1.658E+00	1.185E+00	6.947E-02	4.549
RA-226	+	609.31	*	1.417E+00	2.117E-01	1.327E-01	9.794E-03	10.675
	+	768.36		3.364E+00	1.757E+00	1.381E+00	1.161E-01	2.437
		934.06		7.231E-01	1.377E+00	2.377E+00	2.257E-01	0.304
	+	1120.29		1.938E+00	7.289E-01	5.367E-01	4.902E-02	3.612
	+	1238.11		2.484E+00	1.682E+00	1.577E+00	1.317E-01	1.575
		1377.67		1.319E+00	1.070E+00	1.970E+00	1.759E-01	0.670
	+	1764.49		1.824E+00	4.703E-01	4.234E-01	2.479E-02	4.307
AC-228	+	338.32		2.370E+00	1.113E+00	4.180E-01	1.705E-01	5.668
	+	911.07	*	2.251E+00	3.795E-01	2.255E-01	2.305E-02	9.982
	+	969.11		1.943E+00	6.288E-01	4.476E-01	1.021E-01	4.341
RA-228	+	338.32		2.370E+00	1.113E+00	4.180E-01	1.705E-01	5.668
	+	911.07	*	2.251E+00	3.795E-01	2.255E-01	2.305E-02	9.982
	+	969.11		1.943E+00	6.288E-01	4.476E-01	1.021E-01	4.341
TH-228		84.40		8.506E-01	3.447E+00	5.040E+00	6.950E-01	0.169
	+	238.60	*	2.076E+00	1.973E-01	1.041E-01	7.676E-03	19.940
	+	300.10		1.782E+00	1.543E+00	1.366E+00	8.052E-01	1.305
TH-230	+	609.31	*	1.417E+00	2.117E-01	1.327E-01	9.794E-03	10.675
	+	768.36		3.364E+00	1.757E+00	1.380E+00	1.160E-01	2.437
		934.06		7.231E-01	1.377E+00	2.377E+00	2.257E-01	0.304
	+	1120.29		1.938E+00	7.288E-01	5.366E-01	4.902E-02	3.612
	+	1238.11		2.484E+00	1.682E+00	1.577E+00	1.317E-01	1.575
		1377.67		1.319E+00	1.070E+00	1.970E+00	1.759E-01	0.670
	+	1764.49		1.824E+00	4.702E-01	4.234E-01	2.479E-02	4.307
TH-232	+	338.32		2.370E+00	5.702E-01	4.180E-01	2.459E-02	5.668
	+	911.07	*	2.251E+00	3.795E-01	2.255E-01	2.305E-02	9.982
	+	969.11		1.943E+00	6.288E-01	4.476E-01	1.021E-01	4.341
U-234	+	609.31	*	1.417E+00	2.117E-01	1.327E-01	9.794E-03	10.675

Sample ID : G232504001 Acquisition date : 7-JUL-2009 08:39:16

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	768.36		3.364E+00	1.757E+00	1.380E+00	1.160E-01	2.437
		934.06		7.231E-01	1.377E+00	2.377E+00	2.257E-01	0.304
	+	1120.29		1.938E+00	7.288E-01	5.366E-01	4.902E-02	3.612
	+	1238.11		2.484E+00	1.682E+00	1.577E+00	1.317E-01	1.575
		1377.67		1.319E+00	1.070E+00	1.970E+00	1.759E-01	0.670
	+	1764.49		1.824E+00	4.702E-01	4.234E-01	2.479E-02	4.307
NP-237	+	86.50	*	1.134E+00	4.154E-01	4.670E-01	1.066E-01	2.428
		95.87		-2.749E-03	1.225E+00	1.783E+00	4.389E-01	-0.002
AM-243	+	74.67	*	4.813E-01	9.671E-02	1.062E-01	9.590E-03	4.533
	+	86.72		4.253E+01	1.287E+01	1.740E+01	1.700E+00	2.444
		117.66		-7.799E-01	4.440E+00	7.265E+00	4.658E-01	-0.107
		142.18		2.937E+00	2.089E+01	3.384E+01	1.932E+00	0.087
ANH-511	+	511.00	*	1.221E-01	7.711E-02	5.167E-02	2.888E-03	2.362

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-4.916E-02	3.452E-01	5.631E-01	3.719E-02	-0.087
NA-22		1274.54	*	-3.426E-02	5.014E-02	7.588E-02	4.686E-03	-0.452
NA-24		1368.53	*	-3.203E-03	5.014E-02	Half-Life too short		
AL-26		1129.67		-8.770E-01	2.183E+00	3.174E+00	1.977E-01	-0.276
		1808.65	*	5.780E-03	3.116E-02	5.338E-02	3.066E-03	0.108
TI-44		67.85		1.577E-02	6.161E-02	9.637E-02	8.599E-03	0.164
	+	78.38	*	4.493E-01	7.087E-02	9.661E-02	8.880E-03	4.650
SC-46		889.25	*	3.036E-03	4.099E-02	6.874E-02	4.927E-03	0.044
	+	1120.51		3.257E-01	1.205E-01	1.482E-01	9.319E-03	2.198
V-48		944.10		-7.705E-01	9.651E-01	1.491E+00	1.065E-01	-0.517
		983.50	*	-2.197E-02	7.737E-02	1.251E-01	8.758E-03	-0.176
		1312.09		-8.035E-02	8.273E-02	1.189E-01	7.422E-03	-0.676
CR-51		320.08	*	1.077E-01	4.121E-01	6.994E-01	4.608E-02	0.154
MN-52		744.21		-1.455E-02	2.134E-01	3.412E-01	1.946E-02	-0.043
		848.13		8.618E-01	5.860E+00	9.901E+00	6.670E-01	0.087
		935.52		2.134E-01	2.309E-01	4.097E-01	2.935E-02	0.521
		1246.25		1.520E+00	7.103E+00	1.061E+01	6.473E-01	0.143
		1333.61		1.482E+00	4.482E+00	7.548E+00	4.742E-01	0.196
		1434.06	*	-4.866E-02	1.661E-01	2.549E-01	1.604E-02	-0.191
MN-54		834.83	*	4.389E-03	4.401E-02	7.411E-02	4.891E-03	0.059
CO-56		846.75	*	-4.790E-03	4.386E-02	7.264E-02	4.883E-03	-0.066
		977.42		2.852E+00	3.763E+00	5.864E+00	4.119E-01	0.486
		1037.82		-1.313E-01	3.670E-01	5.870E-01	4.308E-02	-0.224
		1175.09		-2.282E+00	2.645E+00	4.002E+00	2.370E-01	-0.570
	+	1238.25		2.467E-01	1.665E-01	2.073E-01	1.332E-02	1.190
		1360.21		7.460E-01	1.084E+00	1.906E+00	1.199E-01	0.391
		1771.40		-4.180E-01	3.204E-01	4.259E-01	2.487E-02	-0.981
CO-57		122.06	*	1.398E-02	2.966E-02	4.956E-02	3.027E-03	0.282
		136.48		-1.992E-02	2.508E-01	4.099E-01	2.754E-02	-0.049
CO-58		810.76	*	-5.417E-02	4.458E-02	6.724E-02	4.293E-03	-0.806
FE-59		142.65		8.026E-01	3.115E+00	5.064E+00	2.888E-01	0.158

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		192.34		1.137E-01	1.217E+00	1.731E+00	2.026E-01	0.066
		1099.22	*	-4.525E-02	1.053E-01	1.666E-01	1.222E-02	-0.272
		1291.56		7.442E-02	1.261E-01	2.183E-01	1.689E-02	0.341
CO-60		1173.22		-1.618E-02	5.456E-02	8.715E-02	5.156E-03	-0.186
		1332.49	*	5.191E-02	4.552E-02	8.290E-02	5.208E-03	0.626
ZN-65		1115.52	*	1.170E-01	1.073E-01	1.725E-01	1.092E-02	0.679
GE-68		1077.35	*	1.030E+00	1.357E+00	2.387E+00	1.565E-01	0.431
AS-73		53.44	*	1.653E-01	1.142E+00	1.928E+00	1.763E-01	0.086
AS-74		595.88	*	-7.513E-02	9.997E-02	1.539E-01	8.181E-03	-0.488
		634.78		-1.927E-01	3.920E-01	6.121E-01	3.129E-02	-0.315
SE-75		66.05		9.764E-01	6.053E+00	1.017E+01	1.088E+00	0.096
		96.73		-6.239E-01	9.970E-01	1.404E+00	1.898E-01	-0.444
		121.11		1.235E-01	1.574E-01	2.653E-01	2.511E-02	0.466
		136.00		1.950E-03	4.706E-02	7.723E-02	4.552E-03	0.025
		198.60		9.755E-01	2.249E+00	3.621E+00	2.528E-01	0.269
		264.65	*	-3.353E-03	5.760E-02	8.365E-02	5.018E-03	-0.040
		279.53		1.463E-01	1.217E-01	2.147E-01	1.379E-02	0.681
		303.91		-1.702E+00	2.595E+00	3.617E+00	3.489E-01	-0.470
		400.65		1.138E-01	3.084E-01	5.216E-01	4.673E-02	0.218
BR-77	+	87.88		4.396E+02	1.331E+02	2.091E+02	2.064E+01	2.102
		200.40		1.513E+01	1.039E+02	1.690E+02	9.518E+00	0.090
	+	239.00		1.727E+02	1.446E+01	2.253E+01	1.319E+00	7.663
		249.79		7.294E+00	3.999E+01	6.463E+01	3.811E+00	0.113
		281.68		-6.927E+01	5.347E+01	8.475E+01	5.059E+00	-0.817
		297.23		2.305E+02	6.079E+01	7.976E+01	4.764E+00	2.890
		303.76		-7.607E+01	1.158E+02	1.617E+02	9.650E+00	-0.470
		439.47		2.140E+01	8.708E+01	1.460E+02	8.215E+00	0.147
		484.57		-9.922E+01	1.327E+02	2.048E+02	1.152E+01	-0.485
		520.65	*	-2.139E-01	6.265E+00	1.025E+01	5.710E-01	-0.021
		574.64		-2.569E+01	1.343E+02	2.163E+02	1.170E+01	-0.119
		578.91		2.563E+01	6.037E+01	8.853E+01	4.774E+00	0.289
		585.48		1.120E+03	1.652E+02	3.120E+02	1.673E+01	3.591
		755.35		3.678E+01	1.030E+02	1.701E+02	9.883E+00	0.216
		817.79		2.874E+01	7.924E+01	1.363E+02	8.759E+00	0.211
SR-82		698.33		-1.845E+01	4.001E+01	6.239E+01	3.289E+00	-0.296
		776.49	*	-9.639E-02	4.583E-01	6.484E-01	3.900E-02	-0.149
		1395.20		-2.860E+00	1.114E+01	1.740E+01	1.096E+00	-0.164
RB-83		520.41	*	3.606E-03	7.895E-02	1.298E-01	7.235E-03	0.028
		529.64		-6.120E-02	1.186E-01	1.872E-01	1.039E-02	-0.327
		552.65		2.041E-01	2.288E-01	3.960E-01	2.173E-02	0.515
RB-84		881.50	*	2.020E-02	7.596E-02	1.294E-01	9.165E-03	0.156
KR-85		513.99	*	1.238E+01	9.459E+00	1.487E+01	8.306E-01	0.833
SR-85		513.99	*	6.199E-02	4.736E-02	7.447E-02	4.159E-03	0.833
RB-86		1076.63	*	5.831E-01	7.865E-01	1.382E+00	9.067E-02	0.422
Y-88		898.02		2.767E-02	4.855E-02	8.381E-02	6.127E-03	0.330
		1836.01	*	4.207E-03	3.260E-02	5.529E-02	3.142E-03	0.076
ZR-88		392.90	*	-3.888E-04	3.557E-02	5.908E-02	3.278E-03	-0.007
Y-91		1204.90	*	-1.773E+01	2.257E+01	3.449E+01	2.069E+00	-0.514
NB-94		702.63	*	4.013E-02	4.124E-02	7.102E-02	3.772E-03	0.565

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		871.10		1.276E-02	3.809E-02	6.528E-02	4.554E-03	0.195
NB-95		765.79	*	5.337E-02	6.029E-02	9.067E-02	5.360E-03	0.589
NB-95M		235.69	*	4.533E-02	1.739E-01	2.471E-01	1.867E-02	0.183
ZR-95		724.18		1.825E-01	1.286E-01	2.028E-01	1.342E-02	0.899
		756.15	*	6.023E-02	8.439E-02	1.430E-01	1.008E-02	0.421
NB-97		657.90	*	-8.107E-03	8.439E-02	Half-Life too short		
		1024.50		8.171E-01	8.439E-02	Half-Life too short		
ZR-97		254.15		6.120E-01	8.439E-02	Half-Life too short		
		355.39		2.521E-01	8.439E-02	Half-Life too short		
		507.63	*	4.740E-01	8.439E-02	Half-Life too short		
		602.52		-4.342E-01	8.439E-02	Half-Life too short		
		1021.30		-8.034E-01	8.439E-02	Half-Life too short		
		1147.95		1.103E-01	8.439E-02	Half-Life too short		
		1362.66		3.138E-01	8.439E-02	Half-Life too short		
		1750.46		2.427E-01	8.439E-02	Half-Life too short		
MO-99		140.51		-5.827E+00	1.762E+01	2.810E+01	7.567E+00	-0.207
		181.06		-5.150E-01	1.306E+01	1.849E+01	3.151E+00	-0.028
		366.43		9.683E+00	5.439E+01	9.153E+01	5.251E+00	0.106
		739.58	*	-7.914E-01	7.600E+00	1.211E+01	1.662E+00	-0.065
		778.00		-2.051E+01	3.233E+01	3.488E+01	2.104E+00	-0.588
TC-99M		140.51	*	-2.930E+07	3.233E+01	Half-Life too short		
RH-101		127.23		-1.780E-03	3.754E-02	6.156E-02	3.676E-03	-0.029
		198.01	*	2.806E-02	4.111E-02	6.676E-02	3.750E-03	0.420
		325.23		-1.132E-01	2.735E-01	4.499E-01	2.667E-02	-0.252
RH-102		418.52		1.555E-01	3.234E-01	5.506E-01	3.084E-02	0.282
		475.06	*	1.740E-02	3.032E-02	5.188E-02	2.922E-03	0.335
		631.29		4.775E-02	6.255E-02	1.073E-01	5.505E-03	0.445
		697.49		-4.731E-02	9.492E-02	1.475E-01	7.765E-03	-0.321
		766.84		2.080E-01	1.597E-01	2.479E-01	1.468E-02	0.839
		1046.59		-5.478E-02	1.361E-01	2.166E-01	1.456E-02	-0.253
		1112.84		-2.519E-02	2.845E-01	3.966E-01	2.514E-02	-0.064
RU-103		497.08	*	4.529E-03	4.527E-02	7.494E-02	9.412E-03	0.060
	+	610.33		1.470E+01	2.942E+00	3.312E+00	5.040E-01	4.439
RH-106	+	511.85		6.070E-01	3.835E-01	4.833E-01	2.701E-02	1.256
		621.84	*	1.310E-01	3.619E-01	6.033E-01	6.906E-02	0.217
		1050.47		1.523E+00	2.694E+00	4.655E+00	3.119E-01	0.327
RU-106	+	511.85		6.070E-01	3.835E-01	4.833E-01	2.701E-02	1.256
		621.84	*	1.310E-01	3.616E-01	6.033E-01	3.129E-02	0.217
		1050.47		1.523E+00	2.694E+00	4.655E+00	3.119E-01	0.327
AG-108M		433.93	*	1.404E-02	3.838E-02	6.482E-02	3.975E-03	0.217
		614.37		-4.701E-03	5.339E-02	7.429E-02	4.284E-03	-0.063
		722.95		1.248E-02	5.533E-02	7.873E-02	4.737E-03	0.159
AG-110M		657.75	*	-3.055E-02	4.085E-02	6.225E-02	3.361E-03	-0.491
		677.61		-1.091E-01	3.717E-01	5.874E-01	3.221E-02	-0.186
		706.67		-2.142E-01	2.607E-01	3.941E-01	2.256E-02	-0.543
		763.93		1.382E-01	2.250E-01	3.319E-01	2.072E-02	0.417
		884.67		-2.394E-02	5.514E-02	8.842E-02	6.589E-03	-0.271
		937.48		3.040E-02	1.310E-01	2.216E-01	1.669E-02	0.137
		1384.27		-4.058E-02	1.748E-01	2.744E-01	1.818E-02	-0.148

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-111		171.28		1.540E-01	6.849E-01	1.123E+00	6.105E-02	0.137
		245.39	*	-2.796E-01	7.986E-01	1.090E+00	6.409E-02	-0.257
IN-113M		391.69	*	-3.297E-02	5.075E-02	8.128E-02	4.837E-03	-0.406
SN-113		391.69	*	-3.297E-02	5.075E-02	8.128E-02	4.837E-03	-0.406
IN-114M		190.27	*	-3.189E-02	2.326E-01	3.268E-01	1.818E-02	-0.098
CD-115		260.90		1.625E+00	7.692E+01	1.232E+02	7.304E+00	0.013
		492.35		-8.795E+00	2.102E+01	3.361E+01	1.888E+00	-0.262
		527.90	*	2.104E+00	6.158E+00	1.032E+01	5.735E-01	0.204
SN-117M		156.02		3.997E-01	2.458E+00	4.032E+00	2.228E-01	0.099
		158.56	*	3.940E-02	5.808E-02	9.694E-02	5.325E-03	0.406
SB-122		563.90	*	-5.401E-01	1.356E+00	2.152E+00	1.173E-01	-0.251
		692.80		1.135E+01	3.014E+01	4.997E+01	2.609E+00	0.227
I-123		159.00	*	2.459E-01	3.014E+01	Half-Life too short		
		528.96		-9.803E+00	3.014E+01	Half-Life too short		
TE-123M		159.00	*	2.091E-02	3.339E-02	5.563E-02	3.098E-03	0.376
I-124		602.71	*	-2.677E-01	6.346E-01	8.545E-01	4.516E-02	-0.313
		722.78		-3.597E-01	4.095E+00	5.628E+00	3.095E-01	-0.064
		1325.50		5.466E+00	2.727E+01	4.533E+01	2.841E+00	0.121
		1376.25		3.129E+01	2.332E+01	4.340E+01	2.732E+00	0.721
		1509.49		1.283E+01	1.055E+01	2.008E+01	1.256E+00	0.639
		1691.02		1.972E+00	2.766E+00	5.131E+00	3.086E-01	0.384
SB-124		602.71		-2.204E-02	5.225E-02	7.035E-02	3.720E-03	-0.313
		645.85		2.079E-02	5.834E-01	9.482E-01	5.579E-02	0.022
		709.31		-8.702E-01	3.342E+00	5.282E+00	2.838E-01	-0.165
		713.82		1.795E-02	1.913E+00	3.086E+00	3.085E-01	0.006
		722.78		-4.293E-02	4.887E-01	6.716E-01	3.887E-02	-0.064
	+	968.20		1.949E+01	4.681E+00	8.278E+00	5.843E-01	2.355
		1045.16		-5.552E-01	2.888E+00	4.686E+00	3.153E-01	-0.118
		1325.50		6.967E-01	3.476E+00	5.778E+00	3.622E-01	0.121
		1368.21		-7.715E-02	1.680E+00	2.706E+00	3.280E-01	-0.029
		1436.60		-9.191E-01	3.524E+00	5.449E+00	3.429E-01	-0.169
		1691.02	*	5.552E-02	7.788E-02	1.444E-01	9.379E-03	0.384
SB-125		427.89	*	-4.121E-04	1.089E-01	1.803E-01	1.058E-02	-0.002
	+	463.38		1.038E+00	4.677E-01	6.484E-01	4.294E-02	1.601
		600.56		-1.229E-02	2.093E-01	3.393E-01	2.130E-02	-0.036
		635.90		-3.071E-02	3.261E-01	5.253E-01	3.261E-02	-0.058
TE-125M		109.28	*	-6.407E+00	1.092E+01	1.730E+01	1.571E+00	-0.370
I-126		388.63		-5.267E-02	2.103E-01	3.449E-01	1.922E-02	-0.153
		666.33	*	-2.492E-03	2.006E-01	3.243E-01	1.615E-02	-0.008
		753.82		2.854E-01	1.569E+00	2.558E+00	1.482E-01	0.112
SB-126		223.80		-1.576E-01	4.408E+00	7.084E+00	4.092E-01	-0.022
		278.60		2.310E+00	2.508E+00	4.379E+00	2.612E-01	0.527
	+	296.50		1.369E+01	2.554E+00	3.769E+00	2.251E-01	3.632
		414.70		-1.009E-01	7.791E-02	1.170E-01	6.548E-03	-0.862
		415.30		-8.772E+00	6.439E+00	9.613E+00	5.380E-01	-0.913
		555.20		-1.290E+00	4.281E+00	6.852E+00	3.754E-01	-0.188
		573.80		1.980E-01	1.130E+00	1.856E+00	1.005E-01	0.107
		593.00		2.064E-01	9.264E-01	1.533E+00	8.174E-02	0.135
		656.30		-1.426E+00	3.511E+00	5.509E+00	2.741E-01	-0.259

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		666.33		-1.036E-03	8.339E-02	1.348E-01	6.714E-03	-0.008
		675.00		8.498E-01	2.108E+00	3.511E+00	1.776E-01	0.242
		695.00		-1.071E-02	8.475E-02	1.355E-01	7.103E-03	-0.079
		697.00		-1.390E-01	2.969E-01	4.628E-01	2.434E-02	-0.300
		720.50	*	-1.361E-02	1.630E-01	2.354E-01	1.289E-02	-0.058
		856.80		2.596E-01	5.547E-01	8.391E-01	5.728E-02	0.309
		989.30		8.723E-01	1.322E+00	2.305E+00	1.609E-01	0.378
		1034.80		5.129E+00	9.058E+00	1.568E+01	1.063E+00	0.327
		1213.00		-1.001E+00	5.260E+00	8.472E+00	5.099E-01	-0.118
SB-127		61.10		-4.931E+01	4.979E+01	8.057E+01	8.798E+00	-0.612
		252.40		-1.591E+00	3.602E+00	5.551E+00	2.298E+00	-0.287
		290.80		-1.605E+01	1.886E+01	2.611E+01	2.217E+00	-0.615
		411.60		7.433E+00	9.312E+00	1.602E+01	2.211E+00	0.464
		444.90		-3.701E+00	7.539E+00	1.207E+01	1.210E+00	-0.307
		473.00		-1.156E+00	1.198E+00	1.829E+00	1.910E-01	-0.632
		543.00		7.691E+00	1.262E+01	2.145E+01	2.623E+00	0.359
		603.60		-7.213E+00	1.078E+01	1.411E+01	1.384E+00	-0.511
		685.20	*	-3.870E-01	1.047E+00	1.639E+00	1.351E-01	-0.236
		698.50		-1.329E+00	1.237E+01	1.981E+01	2.729E+00	-0.067
		722.20		-4.340E+00	2.713E+01	3.697E+01	3.017E+00	-0.117
		783.80		5.915E+00	3.241E+00	5.445E+00	5.528E-01	1.086
XE-127		57.60		-1.307E+00	7.776E+00	1.298E+01	1.194E+00	-0.101
		145.22		4.151E-01	7.714E-01	1.285E+00	7.279E-02	0.323
		172.10		3.294E-02	1.344E-01	2.206E-01	1.200E-02	0.149
		202.84	*	-1.984E-02	5.643E-02	8.664E-02	4.894E-03	-0.229
		374.96		4.761E-02	2.171E-01	3.658E-01	2.077E-02	0.130
I-131		80.18		-3.445E+00	5.130E+00	7.299E+00	6.810E-01	-0.472
		284.30		-1.160E+00	1.380E+00	2.234E+00	1.471E-01	-0.519
		364.48	*	-3.775E-02	1.072E-01	1.753E-01	1.124E-02	-0.215
		636.97		-2.360E-01	1.537E+00	2.465E+00	1.443E-01	-0.096
		722.89		-5.344E-01	7.912E+00	1.090E+01	6.062E-01	-0.049
TE-132		49.72		2.001E+00	1.776E+01	2.998E+01	3.098E+00	0.067
		111.76		-9.764E+00	2.100E+01	3.405E+01	3.023E+00	-0.287
		116.30		-2.962E+00	1.979E+01	3.242E+01	2.789E+00	-0.091
		228.16	*	-3.336E-01	5.410E-01	8.446E-01	1.177E-01	-0.395
BA-133		53.15		3.852E-01	5.062E+00	8.527E+00	7.784E-01	0.045
		79.62		2.148E+00	1.781E+00	2.680E+00	4.179E-01	0.802
		81.00		-2.019E-01	1.379E-01	1.844E-01	3.003E-02	-1.095
		276.40		5.294E-01	4.710E-01	7.585E-01	9.888E-02	0.698
		302.84		4.380E-02	1.792E-01	2.665E-01	3.130E-02	0.164
		356.01	*	-1.699E-02	5.235E-02	7.392E-02	8.545E-03	-0.230
		383.85		1.141E-01	3.482E-01	5.890E-01	6.345E-02	0.194
I-133	+	510.53		2.043E-01	3.482E-01	Half-Life too short		
		529.87	*	-5.828E-04	3.482E-01	Half-Life too short		
		706.58		-6.854E-02	3.482E-01	Half-Life too short		
		856.28		5.028E-02	3.482E-01	Half-Life too short		
		875.33		-2.393E-02	3.482E-01	Half-Life too short		
		1236.41		2.418E-01	3.482E-01	Half-Life too short		
		1298.22		-2.201E-02	3.482E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		475.35		1.248E+00	1.989E+00	3.414E+00	1.923E-01	0.365
		563.23		-3.343E-02	4.079E-01	6.623E-01	3.696E-02	-0.050
		569.32		6.221E-02	2.386E-01	3.947E-01	2.216E-02	0.158
		604.70		1.219E-03	4.529E-02	6.381E-02	3.389E-03	0.019
	+	795.84	*	1.507E-01	9.282E-02	1.052E-01	6.621E-03	1.433
		801.93		-5.396E-01	5.487E-01	7.062E-01	4.473E-02	-0.764
		1038.57		-1.123E+00	4.700E+00	7.601E+00	5.139E-01	-0.148
		1167.94		-2.474E-01	3.288E+00	5.357E+00	3.190E-01	-0.046
		1365.15		-9.185E-01	1.336E+00	1.957E+00	1.335E-01	-0.469
CS-135		268.24	*	1.348E-01	2.225E-01	3.214E-01	2.497E-02	0.420
I-135		288.45		1.142E+08	2.225E-01	Half-Life too short		
		417.63		3.765E+07	2.225E-01	Half-Life too short		
		546.56		-1.208E+07	2.225E-01	Half-Life too short		
		836.80		3.088E+07	2.225E-01	Half-Life too short		
		1038.76		-1.342E+07	2.225E-01	Half-Life too short		
		1124.00		1.124E+08	2.225E-01	Half-Life too short		
		1131.51		-3.586E+06	2.225E-01	Half-Life too short		
		1260.41	*	-7.476E+06	2.225E-01	Half-Life too short		
		1457.56		3.860E+09	2.225E-01	Half-Life too short		
		1678.03		-8.182E+06	2.225E-01	Half-Life too short		
		1706.46		-9.907E+05	2.225E-01	Half-Life too short		
		1791.20		-2.536E+07	2.225E-01	Half-Life too short		
CS-136		66.91		1.433E-01	8.732E-01	1.466E+00	2.288E-01	0.098
	+	86.29		4.475E+00	1.420E+00	2.160E+00	2.942E-01	2.071
		153.22		4.015E-01	7.107E-01	1.182E+00	8.306E-02	0.340
		163.89		-2.619E-01	1.089E+00	1.758E+00	1.223E-01	-0.149
		176.55		2.616E-01	3.848E-01	6.405E-01	3.986E-02	0.408
		273.65		-5.779E-01	5.784E-01	7.497E-01	5.062E-02	-0.771
		340.57		7.351E-01	1.661E-01	2.906E-01	1.811E-02	2.530
		818.51		2.876E-03	7.418E-02	1.245E-01	8.023E-03	0.023
		1048.07	*	-1.246E-02	1.151E-01	1.881E-01	1.350E-02	-0.066
		1235.34		1.107E+00	7.534E-01	1.201E+00	1.218E-01	0.922
BA-137M		661.65	*	4.013E-03	4.403E-02	7.174E-02	3.543E-03	0.056
CS-137		661.65	*	4.242E-03	4.655E-02	7.583E-02	3.767E-03	0.056
CE-139		165.85	*	1.265E-02	3.433E-02	5.665E-02	3.063E-03	0.223
BA-140		162.64		-7.501E-01	7.736E-01	1.212E+00	7.521E-02	-0.619
		304.84		-7.492E-01	1.440E+00	2.010E+00	5.493E-01	-0.373
		423.70		1.336E-02	2.026E+00	3.356E+00	1.066E+00	0.004
		537.32	*	1.186E-01	2.529E-01	4.231E-01	1.374E-01	0.280
LA-140		328.77		5.275E-01	3.217E-01	5.724E-01	3.778E-02	0.922
		432.53		4.131E-02	2.134E+00	3.536E+00	2.208E-01	0.012
		487.03		5.959E-02	1.382E-01	2.336E-01	1.497E-02	0.255
		751.79		-1.214E+00	1.783E+00	2.694E+00	1.907E-01	-0.451
		815.85		1.808E-01	3.220E-01	5.619E-01	4.322E-02	0.322
		867.82		-3.527E-01	1.561E+00	2.227E+00	1.670E-01	-0.158
		919.63		2.876E+00	2.908E+00	5.112E+00	4.877E-01	0.563
		925.24		-6.171E-01	1.089E+00	1.715E+00	1.343E-01	-0.360
		1596.49	*	-5.797E-02	1.004E-01	1.258E-01	7.761E-03	-0.461
CE-141		145.44	*	2.912E-02	7.011E-02	1.163E-01	6.860E-03	0.250

---- Non-Identified Nuclides ----

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CE-143		57.37		-8.689E-06	7.011E-02	Half-Life too short		
		231.56		2.130E-04	7.011E-02	Half-Life too short		
		293.26	*	2.967E-04	7.011E-02	Half-Life too short		
	+	350.59		1.228E-02	7.011E-02	Half-Life too short		
		490.36		-3.260E-05	7.011E-02	Half-Life too short		
		664.57		-2.272E-05	7.011E-02	Half-Life too short		
		721.93		-3.330E-05	7.011E-02	Half-Life too short		
CE-144		80.11		-1.776E+00	2.856E+00	4.074E+00	3.784E-01	-0.436
		133.54	*	1.477E-01	2.499E-01	4.164E-01	5.922E-02	0.355
PM-144		476.78		6.737E-02	7.161E-02	1.251E-01	8.506E-03	0.539
		618.01		8.035E-03	3.757E-02	6.198E-02	3.465E-03	0.130
		696.49	*	-1.899E-02	4.275E-02	6.674E-02	3.509E-03	-0.285
		778.57		-2.544E+00	3.822E+00	4.098E+00	2.475E-01	-0.621
PR-144		696.49	*	-1.286E+00	2.893E+00	4.517E+00	2.373E-01	-0.285
		1489.15		-2.910E+00	1.240E+01	1.922E+01	1.205E+00	-0.151
PM-146		453.90	*	2.613E-02	5.196E-02	8.614E-02	7.331E-03	0.303
		633.02		-5.290E-01	1.692E+00	2.664E+00	9.783E-01	-0.199
		735.90		-7.566E-02	1.703E-01	2.612E-01	7.273E-02	-0.290
		747.13		3.021E-02	1.041E-01	1.714E-01	2.138E-02	0.176
ND-147	+	91.11		6.193E-01	2.102E-01	5.186E-01	5.168E-02	1.194
		319.41		8.588E-01	3.349E+00	5.683E+00	3.378E-01	0.151
		439.89		2.692E+00	5.912E+00	1.003E+01	5.645E-01	0.268
		531.02	*	-1.020E-01	5.458E-01	8.818E-01	1.183E-01	-0.116
PM-149		285.90	*	2.747E+01	5.134E+01	8.826E+01	1.257E+01	0.311
EU-152		121.78		6.990E-02	8.624E-02	1.455E-01	1.143E-02	0.480
		244.69		4.131E-01	4.274E-01	6.341E-01	3.726E-02	0.651
		344.27	*	-3.186E-02	1.414E-01	1.760E-01	1.160E-02	-0.181
		443.98		-1.652E-02	1.109E+00	1.831E+00	1.031E-01	-0.009
		778.89		-3.026E-01	4.426E-01	4.729E-01	2.856E-02	-0.640
		867.32		-3.372E-01	1.111E+00	1.509E+00	1.047E-01	-0.223
	+	964.01		7.567E-01	4.930E-01	7.034E-01	4.975E-02	1.076
		1085.78		1.668E-02	4.495E-01	7.426E-01	4.831E-02	0.022
		1112.02		-1.974E-01	4.253E-01	5.630E-01	3.572E-02	-0.351
		1407.95		1.268E-01	2.299E-01	3.896E-01	2.453E-02	0.326
GD-153		69.67		-1.855E+00	2.293E+00	3.257E+00	2.907E-01	-0.569
		83.37		3.378E+00	2.344E+01	2.910E+01	2.766E+00	0.116
		97.43	*	2.051E-02	1.007E-01	1.478E-01	1.236E-02	0.139
		103.18		-1.243E-01	1.236E-01	1.968E-01	1.512E-02	-0.632
EU-154		123.07		-1.696E-02	6.078E-02	9.892E-02	9.471E-03	-0.171
		247.94		-2.521E-01	4.907E-01	6.612E-01	6.345E-02	-0.381
		591.81		3.652E-01	7.076E-01	1.166E+00	1.109E-01	0.313
		723.30		8.612E-02	2.334E-01	3.371E-01	2.306E-02	0.255
		756.87		4.447E-01	9.474E-01	1.576E+00	1.600E-01	0.282
		873.19		1.657E-01	3.237E-01	5.623E-01	6.276E-02	0.295
		996.32		-3.233E-01	4.350E-01	6.678E-01	1.136E-01	-0.484
		1004.76		-2.050E-01	2.554E-01	3.919E-01	4.092E-02	-0.523
		1274.45	*	-1.031E-01	1.397E-01	2.097E-01	2.007E-02	-0.492
EU-155		48.70		1.831E+00	3.638E+00	6.212E+00	5.202E-01	0.295
		60.01		-5.455E+00	6.525E+00	1.064E+01	9.746E-01	-0.513

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.54		4.647E-01	1.408E-01	2.231E-01	2.193E-02	2.083
		105.31	*	7.121E-02	1.262E-01	2.121E-01	1.609E-02	0.336
TB-160	+	86.79		1.216E+00	3.680E-01	5.781E-01	5.650E-02	2.103
		197.04		-3.213E-02	6.904E-01	1.092E+00	6.127E-02	-0.029
		215.65		7.463E-02	9.424E-01	1.408E+00	8.068E-02	0.053
		298.57		1.927E-01	2.213E-01	2.398E-01	1.432E-02	0.804
		879.36	*	4.229E-02	1.520E-01	2.592E-01	1.831E-02	0.163
		962.29		1.196E+00	7.269E-01	1.199E+00	8.485E-02	0.998
		966.15		1.602E+00	3.349E-01	6.490E-01	4.586E-02	2.469
		1177.93		-5.068E-01	4.336E-01	6.368E-01	3.775E-02	-0.796
		1271.85		-7.383E-01	7.666E-01	1.115E+00	6.864E-02	-0.662
HO-166M		80.57		-5.193E-01	3.751E-01	5.150E-01	4.798E-02	-1.008
		184.41		1.580E-01	4.884E-02	7.822E-02	4.321E-03	2.020
		280.46		-5.796E-02	9.663E-02	1.586E-01	9.466E-03	-0.365
		410.95		2.332E-01	2.835E-01	4.903E-01	2.740E-02	0.476
		711.68	*	8.729E-02	7.279E-02	1.276E-01	6.883E-03	0.684
		752.31		1.139E-02	3.183E-01	5.129E-01	2.965E-02	0.022
		810.29		-6.572E-02	6.834E-02	1.056E-01	6.705E-03	-0.623
TM-171		51.35		-5.705E+00	4.449E+01	7.453E+01	6.684E+00	-0.077
		52.39		-3.465E+00	2.244E+01	3.755E+01	3.408E+00	-0.092
		59.40		-7.368E+00	3.443E+01	5.735E+01	5.271E+00	-0.128
		66.72	*	1.034E+01	3.580E+01	6.030E+01	5.386E+00	0.171
LU-176	+	88.36		9.159E-01	2.772E-01	4.428E-01	4.343E-02	2.068
		201.83		-6.282E-04	3.454E-02	5.578E-02	3.147E-03	-0.011
		306.84	*	1.245E-02	2.846E-02	4.761E-02	2.840E-03	0.262
		401.10		5.718E+00	7.999E+00	1.377E+01	7.666E-01	0.415
LU-177		112.95		-7.389E-01	1.479E+00	2.395E+00	1.624E-01	-0.308
	+	208.36	*	2.830E+00	1.539E+00	1.799E+00	1.023E-01	1.573
LU-177M		52.97		3.020E-01	2.266E+00	3.824E+00	3.487E-01	0.079
		54.07		-4.423E-01	1.184E+00	1.966E+00	1.802E-01	-0.225
		61.30		-1.518E+00	1.902E+00	3.106E+00	2.824E-01	-0.489
		121.62		3.600E-01	4.380E-01	7.398E-01	4.531E-02	0.487
		147.16		-8.804E-01	7.602E-01	1.188E+00	6.702E-02	-0.741
		171.86		9.095E-02	5.647E-01	9.236E-01	5.025E-02	0.098
		218.09		3.025E-01	1.012E+00	1.651E+00	9.484E-02	0.183
	+	268.79		2.466E+00	1.177E+00	1.686E+00	1.003E-01	1.462
		319.02		-3.502E-02	3.012E-01	5.025E-01	2.987E-02	-0.070
		367.43		5.765E-02	1.034E+00	1.729E+00	9.903E-02	0.033
		413.65	*	-2.818E-01	2.070E-01	3.102E-01	1.735E-02	-0.908
HF-181		56.28		-3.629E-01	1.234E+00	2.053E+00	1.890E-01	-0.177
		57.53		2.864E-02	6.535E-01	1.098E+00	1.010E-01	0.026
		65.20		1.529E+00	1.167E+00	2.007E+00	1.798E-01	0.762
		133.02		2.077E-02	7.824E-02	1.294E-01	7.581E-03	0.160
		136.25		-2.261E-02	5.345E-01	8.747E-01	5.075E-02	-0.026
		345.85		1.104E-01	2.400E-01	3.423E-01	2.002E-02	0.323
		482.03	*	-3.282E-02	4.548E-02	7.110E-02	4.001E-03	-0.462
W-181		56.28		-2.422E-01	4.981E-01	8.230E-01	7.576E-02	-0.294
		57.53		1.129E-02	2.622E-01	4.405E-01	4.054E-02	0.026
		65.20	*	6.085E-01	4.646E-01	7.989E-01	7.156E-02	0.762

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		67.75		-5.624E-02	1.487E-01	2.276E-01	2.031E-02	-0.247
		100.10		1.269E-01	2.027E-01	3.418E-01	2.743E-02	0.371
		152.43		5.010E-01	3.982E-01	6.766E-01	3.769E-02	0.741
		222.10		2.486E-01	4.134E-01	6.818E-01	3.932E-02	0.365
		1001.68		1.936E+00	2.320E+00	4.049E+00	2.806E-01	0.478
	+	1121.28		9.040E-01	3.346E-01	4.135E-01	2.599E-02	2.186
		1189.05		-2.989E-01	3.751E-01	5.724E-01	3.410E-02	-0.522
		1221.42	*	-2.436E-01	2.383E-01	3.559E-01	2.149E-02	-0.684
		1230.97		-1.622E-01	6.605E-01	8.977E-01	5.442E-02	-0.181
RE-183		57.98		-2.792E-02	2.587E-01	4.324E-01	3.979E-02	-0.065
		59.32		-2.936E-02	1.389E-01	2.314E-01	2.127E-02	-0.127
		67.20		7.809E-03	2.534E-01	4.101E-01	3.661E-02	0.019
		162.32	*	-1.133E-01	1.251E-01	1.966E-01	1.071E-02	-0.576
	+	208.81		3.141E+00	1.709E+00	2.047E+00	1.164E-01	1.535
		291.72		8.469E-02	1.179E+00	1.737E+00	1.038E-01	0.049
RE-184		57.98		-1.042E-01	9.657E-01	1.614E+00	1.486E-01	-0.065
		59.32		-1.095E-01	5.183E-01	8.633E-01	7.936E-02	-0.127
		67.20		2.915E-02	9.458E-01	1.531E+00	1.366E-01	0.019
		161.27		-7.093E-02	4.076E-01	6.598E-01	3.603E-02	-0.107
		216.55		-1.132E-01	3.286E-01	5.027E-01	2.883E-02	-0.225
		252.85	*	3.096E-02	2.775E-01	4.468E-01	2.639E-02	0.069
		318.01		-1.323E-01	5.193E-01	8.606E-01	5.117E-02	-0.154
		792.07		6.404E-01	1.475E+00	1.908E+00	1.177E-01	0.336
		903.28		-9.849E-02	1.275E+00	1.887E+00	1.368E-01	-0.052
		920.93		4.837E-01	5.087E-01	9.097E-01	6.554E-02	0.532
OS-185		59.72		-2.902E-01	3.806E-01	6.223E-01	5.711E-02	-0.466
		61.14		-2.029E-01	2.087E-01	3.386E-01	3.081E-02	-0.599
		69.30		-3.228E-01	4.067E-01	5.780E-01	5.158E-02	-0.558
		592.07		1.821E+00	2.760E+00	4.712E+00	2.514E-01	0.387
		646.12	*	4.389E-03	5.002E-02	8.161E-02	4.114E-03	0.054
		717.42		-9.884E-01	1.068E+00	1.590E+00	8.665E-02	-0.622
		874.81		-3.087E-01	6.439E-01	1.029E+00	7.219E-02	-0.300
		880.27		1.719E-01	8.458E-01	1.434E+00	1.014E-01	0.120
RE-188		155.03	*	6.655E-02	2.042E-01	3.369E-01	1.866E-02	0.198
		477.96		-3.909E-01	3.322E+00	5.427E+00	3.055E-01	-0.072
		633.10		-1.046E+00	3.325E+00	5.269E+00	2.698E-01	-0.199
W-188		63.58		3.145E+01	6.614E+01	1.117E+02	1.005E+01	0.282
		227.08		-6.349E+00	1.558E+01	2.463E+01	1.427E+00	-0.258
		290.67	*	-5.755E+00	9.331E+00	1.314E+01	7.847E-01	-0.438
IR-192	+	295.96		1.164E+00	2.176E-01	3.223E-01	1.954E-02	3.613
		308.46		3.287E-02	1.061E-01	1.808E-01	1.090E-02	0.182
		316.51	*	-5.171E-03	3.885E-02	6.476E-02	3.871E-03	-0.080
		468.07		6.493E-02	7.607E-02	1.175E-01	7.690E-03	0.552
		604.41		-2.563E-02	5.985E-01	8.374E-01	9.288E-02	-0.031
		612.46		1.581E+00	1.057E+00	1.658E+00	1.185E-01	0.954
AU-195		65.12		2.793E-01	2.162E-01	3.716E-01	3.329E-02	0.752
		66.83		2.441E-02	1.174E-01	1.973E-01	1.762E-02	0.124
	+	75.70		1.544E+00	3.103E-01	5.635E-01	5.110E-02	2.741
		98.88	*	3.308E-01	2.899E-01	4.416E-01	3.609E-02	0.749

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		129.76		4.003E+00	3.372E+00	5.735E+00	3.395E-01	0.698
TL-200		367.94	*	-6.187E-06	3.372E+00	Half-Life too short		
		579.30		5.677E-04	3.372E+00	Half-Life too short		
		828.27		8.907E-04	3.372E+00	Half-Life too short		
		1205.75		-1.433E-04	3.372E+00	Half-Life too short		
TL-201		68.90		-3.192E+00	4.014E+00	5.705E+00	5.091E-01	-0.559
		70.82		-4.677E-01	2.196E+00	3.199E+00	2.860E-01	-0.146
		80.30		-3.070E+00	4.054E+00	5.743E+00	5.341E-01	-0.535
		135.34		1.006E+01	1.837E+01	3.065E+01	1.783E+00	0.328
		167.43	*	3.919E-01	4.958E+00	8.092E+00	4.379E-01	0.048
TL-202		68.90		-4.223E-01	5.310E-01	7.548E-01	6.735E-02	-0.559
		70.82		-6.171E-02	2.897E-01	4.221E-01	3.773E-02	-0.146
		80.30		-4.052E-01	5.349E-01	7.579E-01	7.049E-02	-0.535
		439.56	*	1.838E-02	7.167E-02	1.203E-01	6.766E-03	0.153
HG-203		70.83		-2.845E-01	1.380E+00	2.011E+00	2.777E-01	-0.142
		72.87		2.604E+00	8.188E-01	1.341E+00	1.802E-01	1.942
		82.60		2.486E+00	1.851E+00	2.117E+00	3.022E-01	1.174
		279.20	*	5.559E-02	4.466E-02	7.893E-02	4.984E-03	0.704
BI-207		72.80		8.195E-01	2.551E-01	4.011E-01	3.600E-02	2.043
	+	74.97		8.639E-01	1.736E-01	2.821E-01	2.551E-02	3.062
		84.90		3.021E-01	2.563E-01	3.856E-01	3.709E-02	0.784
		569.67		6.692E-03	3.757E-02	6.182E-02	3.355E-03	0.108
		1063.62	*	5.363E-03	5.842E-02	9.711E-02	6.439E-03	0.055
		1770.23		-2.605E+00	8.792E-01	9.013E-01	5.265E-02	-2.890
TL-207		81.07		-4.817E-01	3.001E-01	4.068E-01	3.802E-02	-1.184
		83.78		-9.908E-03	2.004E-01	2.462E-01	2.347E-02	-0.040
		94.90		9.288E-01	3.172E-01	4.998E-01	4.351E-02	1.858
		122.32		6.199E-01	2.050E+00	3.406E+00	2.368E-01	0.182
		144.24		4.322E-01	8.063E-01	1.322E+00	9.434E-02	0.327
		154.21		1.095E-01	4.870E-01	8.007E-01	5.450E-02	0.137
	+	269.46		5.829E-01	2.784E-01	4.113E-01	2.553E-02	1.417
		323.87	*	-9.414E-01	8.389E-01	1.312E+00	2.173E-01	-0.718
	+	338.28		9.895E+00	2.535E+00	3.048E+00	3.224E-01	3.246
		445.03		-2.064E+00	2.681E+00	4.209E+00	4.282E-01	-0.490
PO-209		260.50		-4.155E-01	1.145E+01	1.828E+01	1.084E+00	-0.023
		262.80		1.548E+01	3.170E+01	5.187E+01	3.079E+00	0.298
		896.60	*	4.745E+00	8.595E+00	1.493E+01	1.082E+00	0.318
BI-210		46.50	*	-9.459E-01	5.419E+00	9.011E+00	7.419E-01	-0.105
PB-210		46.50	*	-9.459E-01	5.419E+00	9.011E+00	7.419E-01	-0.105
PO-210		46.50	*	-9.459E-01	5.419E+00	9.011E+00	6.509E-01	-0.105
PB-211		404.84	*	-3.799E-01	1.182E+00	1.889E+00	1.177E+00	-0.201
		427.08		1.040E+00	2.505E+00	4.106E+00	2.537E+00	0.253
		831.96		1.295E-01	1.454E+00	2.444E+00	1.526E+00	0.053
PO-215		81.07		-4.817E-01	3.001E-01	4.068E-01	3.802E-02	-1.184
		83.78		-9.908E-03	2.004E-01	2.462E-01	2.347E-02	-0.040
		94.90		9.288E-01	3.172E-01	4.998E-01	4.351E-02	1.858
		122.32		6.199E-01	2.050E+00	3.406E+00	2.368E-01	0.182
		144.24		4.322E-01	8.063E-01	1.322E+00	9.434E-02	0.327
		154.21		1.095E-01	4.870E-01	8.007E-01	5.450E-02	0.137

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.829E-01	2.784E-01	4.113E-01	2.553E-02	1.417
		323.87	*	-9.414E-01	8.389E-01	1.312E+00	2.173E-01	-0.718
	+	338.28		9.895E+00	2.535E+00	3.048E+00	3.224E-01	3.246
		445.03		-2.064E+00	2.681E+00	4.209E+00	4.282E-01	-0.490
RN-219	+	271.23		7.479E-01	3.595E-01	5.359E-01	4.403E-02	1.396
		401.81	*	3.191E-01	5.039E-01	8.606E-01	1.163E-01	0.371
RN-220		549.76	*	-1.250E+01	3.105E+01	4.934E+01	2.712E+00	-0.253
RA-223		81.07		-4.817E-01	3.001E-01	4.068E-01	3.802E-02	-1.184
		83.78		-9.908E-03	2.004E-01	2.462E-01	2.347E-02	-0.040
		94.90		9.288E-01	3.172E-01	4.998E-01	4.351E-02	1.858
		122.32		6.199E-01	2.050E+00	3.406E+00	2.368E-01	0.182
		144.24		4.322E-01	8.063E-01	1.322E+00	9.434E-02	0.327
		154.21		1.095E-01	4.870E-01	8.007E-01	5.450E-02	0.137
	+	269.46		5.829E-01	2.784E-01	4.113E-01	2.553E-02	1.417
		323.87	*	-9.414E-01	8.389E-01	1.312E+00	2.173E-01	-0.718
	+	338.28		9.895E+00	2.535E+00	3.048E+00	3.224E-01	3.246
		445.03		-2.064E+00	2.681E+00	4.209E+00	4.282E-01	-0.490
AC-227		79.80		9.522E-01	2.183E+00	3.236E+00	7.045E-01	0.294
		236.00		1.000E+00	3.713E-01	5.651E-01	5.919E-02	1.770
		256.20	*	1.350E-01	4.576E-01	7.421E-01	1.040E-01	0.182
		286.10		1.238E+00	1.761E+00	3.046E+00	3.548E-01	0.406
	+	299.80		3.302E+00	2.163E+00	3.053E+00	4.990E-01	1.082
		304.40		-2.295E+00	2.442E+00	3.296E+00	5.720E-01	-0.696
		334.20		-1.288E+00	3.085E+00	4.352E+00	7.993E-01	-0.296
TH-227		79.80		9.522E-01	2.183E+00	3.236E+00	7.133E-01	0.294
	+	94.00		1.187E+01	4.139E+00	4.493E+00	9.825E-01	2.642
		236.00		1.000E+00	3.677E-01	5.651E-01	5.132E-02	1.770
		256.20	*	1.350E-01	4.578E-01	7.421E-01	1.257E-01	0.182
		286.10		1.238E+00	2.149E+00	3.046E+00	3.052E+00	0.406
	+	299.80		3.302E+00	2.163E+00	3.053E+00	4.990E-01	1.082
		304.40		-2.295E+00	2.442E+00	3.296E+00	5.720E-01	-0.696
		334.20		-1.288E+00	3.085E+00	4.352E+00	7.993E-01	-0.296
TH-229		85.43		6.328E-01	2.619E-01	4.023E-01	3.887E-02	1.573
	+	88.47		5.273E-01	1.596E-01	2.549E-01	2.495E-02	2.068
		100.00		1.463E-01	2.138E-01	3.611E-01	2.903E-02	0.405
		193.63	*	-3.483E-01	6.308E-01	9.613E-01	5.371E-02	-0.362
		210.97		2.768E+00	1.063E+00	1.679E+00	9.575E-02	1.648
PA-231		283.67	*	-1.153E+00	1.710E+00	2.782E+00	3.854E-01	-0.414
	+	301.29		1.321E+00	8.495E-01	1.184E+00	1.249E-01	1.116
TH-231		81.07		-4.817E-01	3.001E-01	4.068E-01	3.802E-02	-1.184
		83.78		-9.908E-03	2.004E-01	2.462E-01	2.347E-02	-0.040
		94.90		9.288E-01	3.172E-01	4.998E-01	4.351E-02	1.858
		122.32		6.199E-01	2.050E+00	3.406E+00	2.368E-01	0.182
		144.24		4.322E-01	8.063E-01	1.322E+00	9.434E-02	0.327
		154.21		1.095E-01	4.870E-01	8.007E-01	5.450E-02	0.137
	+	269.46		5.829E-01	2.784E-01	4.113E-01	2.553E-02	1.417
		323.87	*	-9.414E-01	8.389E-01	1.312E+00	2.173E-01	-0.718
	+	338.28		9.895E+00	2.535E+00	3.048E+00	3.224E-01	3.246
		445.03		-2.064E+00	2.681E+00	4.209E+00	4.282E-01	-0.490

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		-5.021E-01	5.410E+00	7.300E+00	6.983E-01	-0.069
	+	92.29		8.079E+00	2.307E+00	3.228E+00	2.939E-01	2.503
		95.87	*	-2.147E-03	9.569E-01	1.392E+00	1.193E-01	-0.002
		108.00		-1.130E+00	1.721E+00	2.722E+00	1.962E-01	-0.415
PA-233	+	75.28		2.521E+01	5.992E+00	8.671E+00	1.352E+00	2.908
	+	86.59		7.560E+00	2.987E+00	3.623E+00	9.857E-01	2.087
	+	300.12		9.207E-01	5.972E-01	8.435E-01	1.140E-01	1.091
		311.98	*	-2.924E-02	7.364E-02	1.213E-01	7.649E-03	-0.241
		340.50		4.384E+00	1.337E+00	1.621E+00	3.725E-01	2.705
		398.62		-2.694E+00	2.655E+00	4.019E+00	1.037E+00	-0.670
		415.76		-2.107E+00	1.976E+00	2.941E+00	6.038E-01	-0.717
PA-234		63.00		5.314E-01	2.000E+00	3.359E+00	5.282E-01	0.158
		94.67		8.209E-01	2.457E-01	3.709E-01	4.631E-02	2.213
		98.44		9.770E-02	1.303E-01	1.786E-01	9.954E-02	0.547
		99.86		5.484E-01	5.542E-01	9.152E-01	7.372E-02	0.599
		111.00		-1.795E-02	2.117E-01	3.481E-01	3.813E-02	-0.052
		131.20		4.108E-03	1.297E-01	2.130E-01	1.255E-02	0.019
		152.70		4.568E-01	3.947E-01	6.592E-01	1.037E-01	0.693
	+	186.00		7.429E+00	3.258E+00	2.942E+00	8.976E-01	2.525
		226.40		-1.453E-01	5.016E-01	7.968E-01	9.207E-02	-0.182
		227.20		-9.481E-02	5.340E-01	8.526E-01	4.941E-02	-0.111
		248.90		-3.078E-01	9.955E-01	1.510E+00	3.248E-01	-0.204
		293.70		6.447E+00	1.511E+00	1.987E+00	3.208E-01	3.245
		369.80		5.532E-01	9.925E-01	1.691E+00	3.517E-01	0.327
		568.70		-2.139E-01	1.193E+00	1.916E+00	1.041E-01	-0.112
		569.50		5.580E-02	3.332E-01	5.478E-01	2.974E-02	0.102
		574.00		-1.655E-01	1.864E+00	3.011E+00	1.629E-01	-0.055
		699.00		1.087E-01	8.709E-01	1.418E+00	2.527E-01	0.077
		706.10		-9.022E-01	1.360E+00	1.988E+00	8.763E-01	-0.454
		733.00		4.375E-01	4.576E-01	6.975E-01	1.479E-01	0.627
		742.81		3.462E-01	1.590E+00	2.577E+00	1.724E+00	0.134
	+	796.30		2.936E+00	1.958E+00	2.007E+00	5.294E-01	1.463
		805.60		1.174E+00	1.222E+00	2.031E+00	6.110E-01	0.578
		819.60		-4.893E-02	1.409E+00	2.351E+00	8.839E-01	-0.021
		826.30		-3.351E-01	9.517E-01	1.528E+00	6.783E-01	-0.219
		831.60		-3.789E-02	7.436E-01	1.239E+00	3.632E-01	-0.031
		876.40		-7.128E-01	1.179E+00	1.438E+00	1.477E+00	-0.496
		880.51		1.411E-01	3.112E-01	5.381E-01	3.807E-02	0.262
		883.24		1.365E-02	3.232E-01	5.403E-01	3.623E-01	0.025
		899.00		3.710E-01	1.009E+00	1.695E+00	7.369E-01	0.219
		925.00		-8.676E-01	1.307E+00	2.040E+00	1.468E-01	-0.425
		926.50		-5.757E-02	1.907E-01	3.074E-01	7.631E-02	-0.187
		946.00	*	3.615E-02	3.573E-01	5.979E-01	1.084E-01	0.060
		949.00		3.753E-01	5.476E-01	9.557E-01	6.808E-02	0.393
		980.50		-7.219E-01	8.850E-01	1.361E+00	9.547E-02	-0.530
		1394.10		4.684E-01	1.302E+00	2.154E+00	1.396E+00	0.217
PA-234M		766.41		4.125E+01	3.993E+01	3.952E+01	3.020E+01	1.044
		1001.03	*	3.899E+00	7.863E+00	1.337E+01	1.328E+00	0.292
TH-234		63.29	*	6.829E-01	1.706E+00	2.870E+00	5.218E-01	0.238

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		3.072E+00	1.004E+00	1.221E+00	2.235E-01	2.517
U-235	+	89.95		2.844E+00	1.277E+00	2.197E+00	6.837E-01	1.294
	+	93.35		3.693E+00	1.443E+00	1.436E+00	4.040E-01	2.571
		105.00		7.123E-01	1.256E+00	2.084E+00	6.156E-01	0.342
		143.76	*	-1.567E-03	2.504E-01	4.033E-01	6.559E-02	-0.004
		163.35		-6.250E-01	5.594E-01	8.540E-01	1.526E-01	-0.732
	+	185.71		2.751E-01	8.802E-02	1.084E-01	6.000E-03	2.537
		205.31		-3.824E-01	6.894E-01	9.339E-01	1.675E-01	-0.409
NP-236	+	94.67		8.029E-01	2.293E-01	2.815E-01	2.461E-02	2.852
		98.44		7.383E-02	8.969E-02	1.350E-01	1.111E-02	0.547
		111.00		-1.358E-02	1.601E-01	2.633E-01	1.828E-02	-0.052
		160.31	*	-1.144E-02	9.291E-02	1.507E-01	8.248E-03	-0.076
U-238		63.29	*	6.829E-01	1.706E+00	2.870E+00	5.218E-01	0.238
	+	92.38		3.072E+00	8.774E-01	1.221E+00	1.110E-01	2.517
NP-239		99.55		1.811E-01	1.849E-01	3.053E-01	2.471E-02	0.593
		117.00	*	-3.270E-02	2.220E-01	3.638E-01	2.350E-02	-0.090
	+	209.75		2.534E+00	1.378E+00	1.695E+00	9.652E-02	1.495
		228.18		-1.770E-01	2.851E-01	4.464E-01	2.589E-02	-0.397
		277.60		1.541E-01	2.204E-01	3.628E-01	2.164E-02	0.425
		334.30		-1.902E-01	1.702E+00	2.459E+00	1.450E-01	-0.077
AM-241		59.54	*	-4.374E-02	2.001E-01	3.332E-01	3.257E-02	-0.131
CM-243		99.55		1.864E-01	1.903E-01	3.141E-01	2.542E-02	0.593
		103.76	*	4.505E-02	1.130E-01	1.890E-01	1.441E-02	0.238
		117.00		-3.363E-02	2.284E-01	3.742E-01	2.418E-02	-0.090
	+	209.75		2.497E+00	1.359E+00	1.671E+00	9.513E-02	1.495
		228.18		-1.788E-01	2.880E-01	4.510E-01	2.615E-02	-0.397
		277.60		1.554E-01	2.222E-01	3.657E-01	2.181E-02	0.425
CM-247		278.00		8.058E-01	8.566E-01	1.497E+00	8.931E-02	0.538
		287.40		1.027E+00	1.390E+00	2.414E+00	1.442E-01	0.425
		402.60	*	1.712E-02	4.565E-02	7.722E-02	4.303E-03	0.222
CF-249		252.85		1.172E-01	1.051E+00	1.692E+00	9.993E-02	0.069
		333.44		-1.754E-01	2.287E-01	3.153E-01	1.860E-02	-0.556
		387.95	*	-1.389E-02	4.757E-02	7.789E-02	4.344E-03	-0.178
CF-251		176.60	*	9.942E-02	1.493E-01	2.485E-01	1.359E-02	0.400
		227.00		-2.008E-01	4.778E-01	7.550E-01	4.374E-02	-0.266
		285.00		-8.358E-01	1.975E+00	3.264E+00	1.949E-01	-0.256

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504001      *
* Acquisition date :  7-JUL-2009 08:39:16 Detector SN#     :                *
* Detector ID        : GAM06               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.57      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504001           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.4575E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  4-FEB-2009 13:05:54 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.167E+01	2.777E+00	6.765E-01	0.000E+00
CD-109	3.916E+00	1.161E+00	1.593E+00	0.000E+00
SN-126	3.862E-01	1.145E-01	1.752E-01	0.000E+00
TL-208	6.698E-01	1.002E-01	6.751E-02	0.000E+00
BI-211	4.833E+00	5.927E-01	3.728E-01	0.000E+00
BI-212	1.233E+00	5.531E-01	5.343E-01	0.000E+00
PB-212	2.076E+00	1.933E-01	1.092E-01	0.000E+00
PO-212	2.076E+00	1.933E-01	1.092E-01	0.000E+00
BI-214	1.417E+00	2.075E-01	1.362E-01	0.000E+00
PB-214	1.681E+00	2.234E-01	1.300E-01	0.000E+00
PO-214	1.681E+00	2.234E-01	1.300E-01	0.000E+00
PO-216	2.076E+00	1.933E-01	1.092E-01	0.000E+00
PO-218	1.681E+00	2.234E-01	1.300E-01	0.000E+00
RA-224	5.392E+00	1.625E+00	1.242E+00	0.000E+00
RA-226	1.417E+00	2.075E-01	1.362E-01	0.000E+00
AC-228	2.251E+00	3.719E-01	2.293E-01	0.000E+00
RA-228	2.251E+00	3.719E-01	2.293E-01	0.000E+00
TH-228	2.076E+00	1.933E-01	1.092E-01	0.000E+00
TH-230	1.417E+00	2.075E-01	1.362E-01	0.000E+00
TH-232	2.251E+00	3.719E-01	2.293E-01	0.000E+00
U-234	1.417E+00	2.075E-01	1.362E-01	0.000E+00
NP-237	1.134E+00	4.071E-01	5.004E-01	0.000E+00
AM-243	4.813E-01	9.477E-02	1.141E-01	0.000E+00
ANH-511	1.221E-01	7.557E-02	5.325E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-4.916E-02	3.383E-01	5.812E-01	0.000E+00	NOT IDENT.
NA-22	-3.426E-02	4.914E-02	7.655E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.704E+04	0.000E+00	0.000E+00	SHORT HLIF

AL-26	5.780E-03	3.054E-02	5.340E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.945E-02	1.037E-01	0.000E+00	FAIL ABUN
SC-46	3.036E-03	4.017E-02	6.994E-02	0.000E+00	FAIL ABUN
V-48	-2.197E-02	7.583E-02	1.270E-01	0.000E+00	NOT IDENT.
CR-51	1.077E-01	4.039E-01	7.284E-01	0.000E+00	NOT IDENT.
MN-52	-4.866E-02	1.627E-01	2.564E-01	0.000E+00	NOT IDENT.
MN-54	4.389E-03	4.313E-02	7.551E-02	0.000E+00	NOT IDENT.
CO-56	-4.790E-03	4.298E-02	7.399E-02	0.000E+00	FAIL ABUN
CO-57	1.398E-02	2.907E-02	5.271E-02	0.000E+00	NOT IDENT.
CO-58	-5.417E-02	4.369E-02	6.856E-02	0.000E+00	NOT IDENT.
FE-59	-4.525E-02	1.032E-01	1.686E-01	0.000E+00	NOT IDENT.
CO-60	5.191E-02	4.461E-02	8.354E-02	0.000E+00	NOT IDENT.
ZN-65	1.170E-01	1.052E-01	1.745E-01	0.000E+00	NOT IDENT.
GE-68	1.030E+00	1.330E+00	2.418E+00	0.000E+00	NOT IDENT.
AS-73	1.653E-01	1.119E+00	2.086E+00	0.000E+00	NOT IDENT.
AS-74	-7.513E-02	9.797E-02	1.580E-01	0.000E+00	NOT IDENT.
SE-75	-3.353E-03	5.645E-02	8.748E-02	0.000E+00	NOT IDENT.
BR-77	-2.139E-01	6.139E+00	1.056E+01	0.000E+00	FAIL ABUN
SR-82	-9.639E-02	4.491E-01	6.618E-01	0.000E+00	NOT IDENT.
RB-83	3.606E-03	7.737E-02	1.338E-01	0.000E+00	NOT IDENT.
RB-84	2.020E-02	7.444E-02	1.316E-01	0.000E+00	NOT IDENT.
KR-85	1.238E+01	9.270E+00	1.532E+01	0.000E+00	NOT IDENT.
SR-85	6.199E-02	4.641E-02	7.673E-02	0.000E+00	NOT IDENT.
RB-86	5.831E-01	7.707E-01	1.400E+00	0.000E+00	NOT IDENT.
Y-88	4.207E-03	3.195E-02	5.529E-02	0.000E+00	NOT IDENT.
ZR-88	-3.888E-04	3.485E-02	6.124E-02	0.000E+00	NOT IDENT.
Y-91	-1.773E+01	2.212E+01	3.484E+01	0.000E+00	NOT IDENT.
NB-94	4.013E-02	4.041E-02	7.265E-02	0.000E+00	NOT IDENT.
NB-95	5.337E-02	5.909E-02	9.257E-02	0.000E+00	NOT IDENT.
NB-95M	4.533E-02	1.704E-01	2.591E-01	0.000E+00	NOT IDENT.
ZR-95	6.023E-02	8.271E-02	1.460E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.227E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.504E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-7.914E-01	7.448E+00	1.238E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	8.679E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.806E-02	4.029E-02	7.027E-02	0.000E+00	NOT IDENT.
RH-102	1.740E-02	2.971E-02	5.356E-02	0.000E+00	NOT IDENT.
RU-103	4.529E-03	4.436E-02	7.727E-02	0.000E+00	FAIL ABUN
RH-106	1.310E-01	3.546E-01	6.189E-01	0.000E+00	FAIL ABUN
RU-106	1.310E-01	3.544E-01	6.189E-01	0.000E+00	FAIL ABUN
AG-108M	1.404E-02	3.761E-02	6.705E-02	0.000E+00	NOT IDENT.
AG-110M	-3.055E-02	4.004E-02	6.378E-02	0.000E+00	NOT IDENT.
IN-111	-2.796E-01	7.826E-01	1.142E+00	0.000E+00	NOT IDENT.
IN-113M	-3.297E-02	4.974E-02	8.426E-02	0.000E+00	NOT IDENT.
SN-113	-3.297E-02	4.974E-02	8.426E-02	0.000E+00	NOT IDENT.
IN-114M	-3.189E-02	2.279E-01	3.442E-01	0.000E+00	NOT IDENT.
CD-115	2.104E+00	6.034E+00	1.063E+01	0.000E+00	NOT IDENT.
SN-117M	3.940E-02	5.692E-02	1.025E-01	0.000E+00	NOT IDENT.
SB-122	-5.401E-01	1.329E+00	2.213E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.848E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.091E-02	3.272E-02	5.883E-02	0.000E+00	NOT IDENT.
I-124	-2.677E-01	6.219E-01	8.773E-01	0.000E+00	NOT IDENT.
SB-124	5.552E-02	7.633E-02	1.447E-01	0.000E+00	FAIL ABUN
SB-125	-4.121E-04	1.068E-01	1.866E-01	0.000E+00	FAIL ABUN
TE-125M	-6.407E+00	1.070E+01	1.844E+01	0.000E+00	NOT IDENT.
I-126	-2.492E-03	1.966E-01	3.322E-01	0.000E+00	NOT IDENT.
SB-126	-1.361E-02	1.597E-01	2.406E-01	0.000E+00	FAIL ABUN
SB-127	-3.870E-01	1.026E+00	1.678E+00	0.000E+00	NOT IDENT.
XE-127	-1.984E-02	5.531E-02	9.115E-02	0.000E+00	NOT IDENT.
I-131	-3.775E-02	1.051E-01	1.821E-01	0.000E+00	NOT IDENT.
TE-132	-3.336E-01	5.301E-01	8.862E-01	0.000E+00	NOT IDENT.
BA-133	-1.699E-02	5.130E-02	7.680E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.117E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	9.096E-02	1.073E-01	0.000E+00	FAIL ABUN
CS-135	1.348E-01	2.181E-01	3.360E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.109E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.246E-02	1.128E-01	1.907E-01	0.000E+00	FAIL ABUN
BA-137M	4.013E-03	4.315E-02	7.349E-02	0.000E+00	NOT IDENT.
CS-137	4.242E-03	4.561E-02	7.768E-02	0.000E+00	NOT IDENT.
CE-139	1.265E-02	3.365E-02	5.986E-02	0.000E+00	NOT IDENT.
BA-140	1.186E-01	2.479E-01	4.356E-01	0.000E+00	NOT IDENT.
LA-140	-5.797E-02	9.838E-02	1.262E-01	0.000E+00	NOT IDENT.
CE-141	2.912E-02	6.871E-02	1.232E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.923E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.477E-01	2.449E-01	4.421E-01	0.000E+00	NOT IDENT.
PM-144	-1.899E-02	4.189E-02	6.828E-02	0.000E+00	NOT IDENT.
PR-144	-1.286E+00	2.835E+00	4.622E+00	0.000E+00	NOT IDENT.
PM-146	2.613E-02	5.092E-02	8.900E-02	0.000E+00	NOT IDENT.

ND-147	-1.020E-01	5.349E-01	9.079E-01	0.000E+00	FAIL ABUN
PM-149	2.747E+01	5.031E+01	9.215E+01	0.000E+00	NOT IDENT.
EU-152	-3.186E-02	1.386E-01	1.830E-01	0.000E+00	FAIL ABUN
GD-153	2.051E-02	9.870E-02	1.580E-01	0.000E+00	NOT IDENT.
EU-154	-1.031E-01	1.370E-01	2.115E-01	0.000E+00	NOT IDENT.
EU-155	7.121E-02	1.237E-01	2.263E-01	0.000E+00	FAIL ABUN
TB-160	4.229E-02	1.489E-01	2.638E-01	0.000E+00	FAIL ABUN
HO-166M	8.729E-02	7.134E-02	1.305E-01	0.000E+00	NOT IDENT.
TM-171	1.034E+01	3.508E+01	6.495E+01	0.000E+00	NOT IDENT.
LU-176	1.245E-02	2.789E-02	4.963E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.509E+00	1.891E+00	0.000E+00	FAIL ABUN
LU-177M	-2.818E-01	2.028E-01	3.212E-01	0.000E+00	FAIL ABUN
HF-181	-3.282E-02	4.457E-02	7.337E-02	0.000E+00	NOT IDENT.
W-181	6.085E-01	4.553E-01	8.610E-01	0.000E+00	NOT IDENT.
TA-182	-2.436E-01	2.336E-01	3.594E-01	0.000E+00	FAIL ABUN
RE-183	-1.133E-01	1.226E-01	2.079E-01	0.000E+00	FAIL ABUN
RE-184	3.096E-02	2.720E-01	4.677E-01	0.000E+00	NOT IDENT.
OS-185	4.389E-03	4.902E-02	8.365E-02	0.000E+00	NOT IDENT.
RE-188	6.655E-02	2.001E-01	3.565E-01	0.000E+00	NOT IDENT.
W-188	-5.755E+00	9.145E+00	1.371E+01	0.000E+00	NOT IDENT.
IR-192	-5.171E-03	3.807E-02	6.746E-02	0.000E+00	FAIL ABUN
AU-195	3.308E-01	2.841E-01	4.717E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.236E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.919E-01	4.859E+00	8.548E+00	0.000E+00	NOT IDENT.
TL-202	1.838E-02	7.024E-02	1.244E-01	0.000E+00	NOT IDENT.
HG-203	5.559E-02	4.376E-02	8.245E-02	0.000E+00	NOT IDENT.
BI-207	5.363E-03	5.725E-02	9.839E-02	0.000E+00	FAIL ABUN
TL-207	-9.414E-01	8.222E-01	1.366E+00	0.000E+00	FAIL ABUN
PO-209	4.745E+00	8.423E+00	1.519E+01	0.000E+00	NOT IDENT.
BI-210	-9.459E-01	5.311E+00	9.780E+00	0.000E+00	NOT IDENT.
PB-210	-9.459E-01	5.311E+00	9.780E+00	0.000E+00	NOT IDENT.
PO-210	-9.459E-01	5.311E+00	9.780E+00	0.000E+00	NOT IDENT.
PB-211	-3.799E-01	1.158E+00	1.957E+00	0.000E+00	NOT IDENT.
PO-215	-9.414E-01	8.222E-01	1.366E+00	0.000E+00	FAIL ABUN
RN-219	3.191E-01	4.938E-01	8.917E-01	0.000E+00	FAIL ABUN
RN-220	-1.250E+01	3.043E+01	5.076E+01	0.000E+00	NOT IDENT.
RA-223	-9.414E-01	8.222E-01	1.366E+00	0.000E+00	FAIL ABUN
AC-227	1.350E-01	4.485E-01	7.767E-01	0.000E+00	FAIL ABUN
TH-227	1.350E-01	4.487E-01	7.767E-01	0.000E+00	FAIL ABUN
TH-229	-3.483E-01	6.182E-01	1.012E+00	0.000E+00	FAIL ABUN
PA-231	-1.153E+00	1.676E+00	2.905E+00	0.000E+00	FAIL ABUN
TH-231	-9.414E-01	8.222E-01	1.366E+00	0.000E+00	FAIL ABUN
U-231	-2.147E-03	9.377E-01	1.489E+00	0.000E+00	FAIL ABUN
PA-233	-2.924E-02	7.217E-02	1.264E-01	0.000E+00	FAIL ABUN
PA-234	3.615E-02	3.501E-01	6.075E-01	0.000E+00	FAIL ABUN
PA-234M	3.899E+00	7.706E+00	1.356E+01	0.000E+00	NOT IDENT.
TH-234	6.829E-01	1.672E+00	3.096E+00	0.000E+00	FAIL ABUN
U-235	-1.567E-03	2.454E-01	4.274E-01	0.000E+00	FAIL ABUN
NP-236	-1.144E-02	9.106E-02	1.594E-01	0.000E+00	FAIL ABUN
U-238	6.829E-01	1.672E+00	3.096E+00	0.000E+00	FAIL ABUN
NP-239	-3.270E-02	2.176E-01	3.873E-01	0.000E+00	FAIL ABUN
AM-241	-4.374E-02	1.961E-01	3.598E-01	0.000E+00	NOT IDENT.
CM-243	4.505E-02	1.107E-01	2.018E-01	0.000E+00	FAIL ABUN
CM-247	1.712E-02	4.474E-02	8.001E-02	0.000E+00	NOT IDENT.
CF-249	-1.389E-02	4.662E-02	8.077E-02	0.000E+00	NOT IDENT.
CF-251	9.942E-02	1.463E-01	2.622E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:39:43.95

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504001.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:39:16.
Sample ID         : G232504001           Sample quantity  : 1.45750E+02 GRAM
Detector name     : GAM06                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.57  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1263	10.67*	9.627E-01	3.167E+01	3.167E+01	8.95
CD-109	88.03	287	3.72*	5.164E+00	3.841E+00	3.916E+00	30.27
SN-126	64.28	------	9.60	2.881E+00	------ Line Not Found		------
	86.94	287	8.90	5.164E+00	1.605E+00	1.605E+00	50.52
	87.57	287	37.00*	5.164E+00	3.862E-01	3.862E-01	30.27
TL-208	277.35	------	6.80	3.899E+00	------ Line Not Found		------
	510.84	114	21.60	2.407E+00	5.650E-01	5.650E-01	63.73
	583.14	472	84.20*	2.157E+00	6.698E-01	6.698E-01	15.26
	860.37	59	12.46	1.538E+00	7.979E-01	7.979E-01	61.95
BI-211	72.87	------	1.27	3.913E+00	------ Line Not Found		------
	351.07	787	12.94*	3.240E+00	4.833E+00	4.833E+00	12.51
BI-212	727.18	101	11.80*	1.786E+00	1.233E+00	1.233E+00	45.77
	785.46	27	1.97	1.669E+00	2.114E+00	2.114E+00	129.81
	1620.62	------	2.75	8.893E-01	------ Line Not Found		------
PB-212	74.81	510	10.70	4.132E+00	2.969E+00	2.969E+00	22.16
	77.11	742	18.00	4.360E+00	2.435E+00	2.435E+00	15.78
	87.30	287	8.00	5.164E+00	1.786E+00	1.786E+00	31.88
	238.63	1569	44.60*	4.363E+00	2.076E+00	2.076E+00	9.50
	300.09	87	3.41	3.669E+00	1.782E+00	1.782E+00	63.99
PO-212	74.81	510	10.70	4.132E+00	2.969E+00	2.969E+00	22.16
	77.11	742	18.00	4.360E+00	2.435E+00	2.435E+00	15.78
	87.30	287	8.00	5.164E+00	1.786E+00	1.786E+00	31.88
	115.19	------	0.60	6.030E+00	------ Line Not Found		------
	238.63	1569	44.60*	4.363E+00	2.076E+00	2.076E+00	9.50
	300.09	87	3.41	3.669E+00	1.782E+00	1.782E+00	63.99
BI-214	609.31	530	46.30*	2.080E+00	1.417E+00	1.417E+00	14.94
	768.36	112	5.04	1.701E+00	3.364E+00	3.364E+00	52.24
	934.06	------	3.21	1.429E+00	------ Line Not Found		------
	1120.29	138	15.10	1.211E+00	1.938E+00	1.938E+00	37.60
	1238.11	63	5.94	1.107E+00	2.484E+00	2.484E+00	67.72
	1377.67	------	4.11	1.010E+00	------ Line Not Found		------
	1764.49	94	15.80	8.406E-01	1.824E+00	1.824E+00	25.78

Sample ID : G232504001 Acquisition date : 7-JUL-2009 08:39:16

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	510	6.21	4.132E+00	5.116E+00	5.116E+00	21.41
	77.11	742	10.50	4.360E+00	4.174E+00	4.174E+00	17.52
	87.30	287	4.67	5.164E+00	3.060E+00	3.060E+00	31.23
	241.98	357	7.49	4.321E+00	2.844E+00	2.844E+00	31.26
	295.21	432	19.20	3.716E+00	1.560E+00	1.560E+00	19.68
	351.92	787	37.20*	3.240E+00	1.681E+00	1.681E+00	13.56
PO-214	74.81	510	6.21	4.132E+00	5.116E+00	5.116E+00	21.41
	77.11	742	10.50	4.360E+00	4.174E+00	4.174E+00	17.52
	87.30	287	4.67	5.164E+00	3.060E+00	3.060E+00	31.23
	241.98	357	7.49	4.321E+00	2.844E+00	2.844E+00	31.26
	295.21	432	19.20	3.716E+00	1.560E+00	1.560E+00	19.68
	351.92	787	37.20*	3.240E+00	1.681E+00	1.681E+00	13.56
PO-216	74.81	510	10.70	4.132E+00	2.969E+00	2.969E+00	22.16
	77.11	742	18.00	4.360E+00	2.435E+00	2.435E+00	15.78
	87.30	287	8.00	5.164E+00	1.786E+00	1.786E+00	31.88
	238.63	1569	44.60*	4.363E+00	2.076E+00	2.076E+00	9.50
	300.09	87	3.41	3.669E+00	1.782E+00	1.782E+00	63.99
PO-218	74.81	510	6.21	4.132E+00	5.116E+00	5.116E+00	21.41
	77.11	742	10.50	4.360E+00	4.174E+00	4.174E+00	17.52
	87.30	287	4.67	5.164E+00	3.060E+00	3.060E+00	31.23
	241.98	357	7.49	4.321E+00	2.844E+00	2.844E+00	31.26
	295.21	432	19.20	3.716E+00	1.560E+00	1.560E+00	19.68
	351.92	787	37.20*	3.240E+00	1.681E+00	1.681E+00	13.56
RA-224	240.98	357	3.95*	4.321E+00	5.392E+00	5.392E+00	30.75
RA-226	609.31	530	46.30*	2.080E+00	1.417E+00	1.417E+00	14.94
	768.36	112	5.04	1.701E+00	3.364E+00	3.364E+00	52.24
	934.06	------	3.21	1.429E+00	------ Line Not Found		------
	1120.29	138	15.10	1.211E+00	1.938E+00	1.938E+00	37.60
	1238.11	63	5.94	1.107E+00	2.484E+00	2.484E+00	67.72
	1377.67	------	4.11	1.010E+00	------ Line Not Found		------
	1764.49	94	15.80	8.406E-01	1.824E+00	1.824E+00	25.78
AC-228	338.32	351	11.40	3.342E+00	2.370E+00	2.370E+00	46.98
	911.07	354	27.70*	1.461E+00	2.251E+00	2.251E+00	16.86
	969.11	173	16.60	1.382E+00	1.943E+00	1.943E+00	32.36
RA-228	338.32	351	11.40	3.342E+00	2.370E+00	2.370E+00	46.98
	911.07	354	27.70*	1.461E+00	2.251E+00	2.251E+00	16.86
	969.11	173	16.60	1.382E+00	1.943E+00	1.943E+00	32.36
TH-228	84.40	------	1.21	4.965E+00	------ Line Not Found		------
	238.60	1569	44.60*	4.363E+00	2.076E+00	2.076E+00	9.50
	300.10	87	3.41	3.669E+00	1.782E+00	1.782E+00	86.60
TH-230	609.31	530	46.30*	2.080E+00	1.417E+00	1.417E+00	14.94
	768.36	112	5.04	1.701E+00	3.364E+00	3.364E+00	52.24
	934.06	------	3.21	1.429E+00	------ Line Not Found		------
	1120.29	138	15.10	1.211E+00	1.938E+00	1.938E+00	37.60
	1238.11	63	5.94	1.107E+00	2.484E+00	2.484E+00	67.72
	1377.67	------	4.11	1.010E+00	------ Line Not Found		------
	1764.49	94	15.80	8.406E-01	1.824E+00	1.824E+00	25.78
TH-232	338.32	351	11.40	3.342E+00	2.370E+00	2.370E+00	24.06
	911.07	354	27.70*	1.461E+00	2.251E+00	2.251E+00	16.86

Sample ID : G232504001 Acquisition date : 7-JUL-2009 08:39:16

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	173	16.60	1.382E+00	1.943E+00	1.943E+00	32.36
U-234	609.31	530	46.30*	2.080E+00	1.417E+00	1.417E+00	14.94
	768.36	112	5.04	1.701E+00	3.364E+00	3.364E+00	52.24
	934.06	------	3.21	1.429E+00	------ Line Not Found		------
	1120.29	138	15.10	1.211E+00	1.938E+00	1.938E+00	37.60
	1238.11	63	5.94	1.107E+00	2.484E+00	2.484E+00	67.72
	1377.67	------	4.11	1.010E+00	------ Line Not Found		------
	1764.49	94	15.80	8.406E-01	1.824E+00	1.824E+00	25.78
NP-237	86.50	287	12.60*	5.164E+00	1.134E+00	1.134E+00	36.63
	95.87	------	2.60	5.611E+00	------ Line Not Found		------
AM-243	74.67	510	66.00*	4.132E+00	4.813E-01	4.813E-01	20.09
	86.72	287	0.34	5.164E+00	4.253E+01	4.253E+01	30.27
	117.66	------	0.55	6.042E+00	------ Line Not Found		------
	142.18	------	0.13	5.887E+00	------ Line Not Found		------
ANH-511	511.00	114	100.00*	2.407E+00	1.221E-01	1.221E-01	63.18

Flag: "*" = Keyline

Sample ID : G232504001 Acquisition date : 7-JUL-2009 08:39:16

Total number of lines in spectrum 32
Number of unidentified lines 2
Number of lines tentatively identified by NID 30 93.75%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.167E+01	3.167E+01	0.283E+01	8.95	
CD-109	464.00D	1.02	3.841E+00	3.916E+00	1.185E+00	30.27	
SN-126	1.00E+05Y	1.00	3.862E-01	3.862E-01	1.169E-01	30.27	
TL-208	1.41E+10Y	1.00	6.698E-01	6.698E-01	1.022E-01	15.26	
BI-211	7.04E+08Y	1.00	4.833E+00	4.833E+00	0.605E+00	12.51	
BI-212	1.41E+10Y	1.00	1.233E+00	1.233E+00	0.564E+00	45.77	
PB-212	1.41E+10Y	1.00	2.076E+00	2.076E+00	0.197E+00	9.50	
PO-212	1.41E+10Y	1.00	2.076E+00	2.076E+00	0.197E+00	9.50	
BI-214	1600.00Y	1.00	1.417E+00	1.417E+00	0.212E+00	14.94	
PB-214	1600.00Y	1.00	1.681E+00	1.681E+00	0.228E+00	13.56	
PO-214	1600.00Y	1.00	1.681E+00	1.681E+00	0.228E+00	13.56	
PO-216	1.41E+10Y	1.00	2.076E+00	2.076E+00	0.197E+00	9.50	
PO-218	1600.00Y	1.00	1.681E+00	1.681E+00	0.228E+00	13.56	
RA-224	1.41E+10Y	1.00	5.392E+00	5.392E+00	1.658E+00	30.75	
RA-226	1600.00Y	1.00	1.417E+00	1.417E+00	0.212E+00	14.94	
AC-228	1.41E+10Y	1.00	2.251E+00	2.251E+00	0.379E+00	16.86	
RA-228	1.41E+10Y	1.00	2.251E+00	2.251E+00	0.379E+00	16.86	
TH-228	1.41E+10Y	1.00	2.076E+00	2.076E+00	0.197E+00	9.50	
TH-230	4.47E+09Y	1.00	1.417E+00	1.417E+00	0.212E+00	14.94	
TH-232	1.41E+10Y	1.00	2.251E+00	2.251E+00	0.379E+00	16.86	
U-234	4.47E+09Y	1.00	1.417E+00	1.417E+00	0.212E+00	14.94	
NP-237	2.14E+06Y	1.00	1.134E+00	1.134E+00	0.415E+00	36.63	
AM-243	7380.00Y	1.00	4.813E-01	4.813E-01	0.967E-01	20.09	
ANH-511	1.00E+09Y	1.00	1.221E-01	1.221E-01	0.771E-01	63.18	
		Total Activity :	7.553E+01	7.560E+01			

Grand Total Activity : 7.553E+01 7.560E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232504001 Acquisition date : 7-JUL-2009 08:39:16

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	90.16	159	275	1.04	178.95	177	14	2.21E-02	32.4	5.34E+00	T
2	93.17	354	534	1.56	184.96	177	14	4.92E-02	27.1	5.49E+00	T
0	186.31	298	450	1.33	371.27	367	12	4.14E-02	31.5	5.17E+00	T
0	209.33	153	418	1.04	417.32	413	11	2.12E-02	54.1	4.79E+00	T
0	270.25	122	222	1.29	539.18	535	9	1.70E-02	47.4	3.98E+00	T
0	462.47	108	110	1.12	923.73	917	12	1.50E-02	44.6	2.61E+00	T
0	796.26	73	87	1.10	1591.63	1583	18	1.02E-02	61.3	1.65E+00	T
1	964.43	59	85	2.12	1928.20	1922	26	8.14E-03	64.8	1.39E+00	T
0	1589.70	29	42	2.33	3179.97	3168	21	4.03E-03	****	9.02E-01	
0	1728.90	39	0	1.99	3458.70	3451	14	5.44E-03	34.9	8.51E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:39:49.34

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504001.CNF;1 *
* Acquisition date  : 7-JUL-2009 08:39:16.  Detector SN#     :             *
* Detector ID       : GAM06                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.57          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504001            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.45750E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 4-FEB-2009 13:05:54.47MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.167E+01	2.833E+00	6.728E-01	4.450E-02	47.066
CD-109	3.916E+00	1.185E+00	1.487E+00	1.468E-01	2.633
SN-126	3.862E-01	1.169E-01	1.636E-01	1.610E-02	2.361
TL-208	6.698E-01	1.022E-01	6.571E-02	4.153E-03	10.194
BI-211	4.833E+00	6.048E-01	3.587E-01	2.316E-02	13.472
BI-212	1.233E+00	5.644E-01	5.227E-01	3.931E-02	2.359
PB-212	2.076E+00	1.973E-01	1.041E-01	7.677E-03	19.938
PO-212	2.076E+00	1.973E-01	1.041E-01	7.677E-03	19.938
BI-214	1.417E+00	2.117E-01	1.327E-01	9.794E-03	10.675
PB-214	1.681E+00	2.279E-01	1.251E-01	1.038E-02	13.444
PO-214	1.681E+00	2.279E-01	1.251E-01	1.038E-02	13.444
PO-216	2.076E+00	1.973E-01	1.041E-01	7.677E-03	19.938
PO-218	1.681E+00	2.279E-01	1.251E-01	1.038E-02	13.444
RA-224	5.392E+00	1.658E+00	1.185E+00	6.947E-02	4.549
RA-226	1.417E+00	2.117E-01	1.327E-01	9.794E-03	10.675
AC-228	2.251E+00	3.795E-01	2.255E-01	2.305E-02	9.982
RA-228	2.251E+00	3.795E-01	2.255E-01	2.305E-02	9.982
TH-228	2.076E+00	1.973E-01	1.041E-01	7.676E-03	19.940

Sample ID : G232504001 Acquisition date : 7-JUL-2009 08:39:16

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.417E+00	2.117E-01	1.327E-01	9.794E-03	10.675
TH-232	2.251E+00	3.795E-01	2.255E-01	2.305E-02	9.982
U-234	1.417E+00	2.117E-01	1.327E-01	9.794E-03	10.675
NP-237	1.134E+00	4.154E-01	4.670E-01	1.066E-01	2.428
AM-243	4.813E-01	9.671E-02	1.062E-01	9.590E-03	4.533
ANH-511	1.221E-01	7.711E-02	5.167E-02	2.888E-03	2.362

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-4.916E-02		3.452E-01	5.631E-01	3.719E-02	-0.087
NA-22	-3.426E-02		5.014E-02	7.588E-02	4.686E-03	-0.452
NA-24	-3.203E-03		2.910E-02	Half-Life too short		
AL-26	5.780E-03		3.116E-02	5.338E-02	3.066E-03	0.108
TI-44	4.493E-01	+	7.087E-02	9.661E-02	8.880E-03	4.650
SC-46	3.036E-03		4.099E-02	6.874E-02	4.927E-03	0.044
V-48	-2.197E-02		7.737E-02	1.251E-01	8.758E-03	-0.176
CR-51	1.077E-01		4.121E-01	6.994E-01	4.608E-02	0.154
MN-52	-4.866E-02		1.661E-01	2.549E-01	1.604E-02	-0.191
MN-54	4.389E-03		4.401E-02	7.411E-02	4.891E-03	0.059
CO-56	-4.790E-03		4.386E-02	7.264E-02	4.883E-03	-0.066
CO-57	1.398E-02		2.966E-02	4.956E-02	3.027E-03	0.282
CO-58	-5.417E-02		4.458E-02	6.724E-02	4.293E-03	-0.806
FE-59	-4.525E-02		1.053E-01	1.666E-01	1.222E-02	-0.272
CO-60	5.191E-02		4.552E-02	8.290E-02	5.208E-03	0.626
ZN-65	1.170E-01		1.073E-01	1.725E-01	1.092E-02	0.679
GE-68	1.030E+00		1.357E+00	2.387E+00	1.565E-01	0.431
AS-73	1.653E-01		1.142E+00	1.928E+00	1.763E-01	0.086
AS-74	-7.513E-02		9.997E-02	1.539E-01	8.181E-03	-0.488
SE-75	-3.353E-03		5.760E-02	8.365E-02	5.018E-03	-0.040
BR-77	-2.139E-01		6.265E+00	1.025E+01	5.710E-01	-0.021
SR-82	-9.639E-02		4.583E-01	6.484E-01	3.900E-02	-0.149
RB-83	3.606E-03		7.895E-02	1.298E-01	7.235E-03	0.028
RB-84	2.020E-02		7.596E-02	1.294E-01	9.165E-03	0.156
KR-85	1.238E+01		9.459E+00	1.487E+01	8.306E-01	0.833
SR-85	6.199E-02		4.736E-02	7.447E-02	4.159E-03	0.833
RB-86	5.831E-01		7.865E-01	1.382E+00	9.067E-02	0.422
Y-88	4.207E-03		3.260E-02	5.529E-02	3.142E-03	0.076
ZR-88	-3.888E-04		3.557E-02	5.908E-02	3.278E-03	-0.007
Y-91	-1.773E+01		2.257E+01	3.449E+01	2.069E+00	-0.514
NB-94	4.013E-02		4.124E-02	7.102E-02	3.772E-03	0.565
NB-95	5.337E-02		6.029E-02	9.067E-02	5.360E-03	0.589
NB-95M	4.533E-02		1.739E-01	2.471E-01	1.867E-02	0.183
ZR-95	6.023E-02		8.439E-02	1.430E-01	1.008E-02	0.421
NB-97	-8.107E-03		6.259E-03	Half-Life too short		
ZR-97	4.740E-01		1.278E-01	Half-Life too short		
MO-99	-7.914E-01		7.600E+00	1.211E+01	1.662E+00	-0.065

Sample ID : G232504001 Acquisition date : 7-JUL-2009 08:39:16

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TC-99M	-2.930E+07		4.428E+07	Half-Life too short		
RH-101	2.806E-02		4.111E-02	6.676E-02	3.750E-03	0.420
RH-102	1.740E-02		3.032E-02	5.188E-02	2.922E-03	0.335
RU-103	4.529E-03		4.527E-02	7.494E-02	9.412E-03	0.060
RH-106	1.310E-01		3.619E-01	6.033E-01	6.906E-02	0.217
RU-106	1.310E-01		3.616E-01	6.033E-01	3.129E-02	0.217
AG-108M	1.404E-02		3.838E-02	6.482E-02	3.975E-03	0.217
AG-110M	-3.055E-02		4.085E-02	6.225E-02	3.361E-03	-0.491
IN-111	-2.796E-01		7.986E-01	1.090E+00	6.409E-02	-0.257
IN-113M	-3.297E-02		5.075E-02	8.128E-02	4.837E-03	-0.406
SN-113	-3.297E-02		5.075E-02	8.128E-02	4.837E-03	-0.406
IN-114M	-3.189E-02		2.326E-01	3.268E-01	1.818E-02	-0.098
CD-115	2.104E+00		6.158E+00	1.032E+01	5.735E-01	0.204
SN-117M	3.940E-02		5.808E-02	9.694E-02	5.325E-03	0.406
SB-122	-5.401E-01		1.356E+00	2.152E+00	1.173E-01	-0.251
I-123	2.459E-01		1.963E-01	Half-Life too short		
TE-123M	2.091E-02		3.339E-02	5.563E-02	3.098E-03	0.376
I-124	-2.677E-01		6.346E-01	8.545E-01	4.516E-02	-0.313
SB-124	5.552E-02		7.788E-02	1.444E-01	9.379E-03	0.384
SB-125	-4.121E-04		1.089E-01	1.803E-01	1.058E-02	-0.002
TE-125M	-6.407E+00		1.092E+01	1.730E+01	1.571E+00	-0.370
I-126	-2.492E-03		2.006E-01	3.243E-01	1.615E-02	-0.008
SB-126	-1.361E-02		1.630E-01	2.354E-01	1.289E-02	-0.058
SB-127	-3.870E-01		1.047E+00	1.639E+00	1.351E-01	-0.236
XE-127	-1.984E-02		5.643E-02	8.664E-02	4.894E-03	-0.229
I-131	-3.775E-02		1.072E-01	1.753E-01	1.124E-02	-0.215
TE-132	-3.336E-01		5.410E-01	8.446E-01	1.177E-01	-0.395
BA-133	-1.699E-02		5.235E-02	7.392E-02	8.545E-03	-0.230
I-133	-5.828E-04		5.698E-04	Half-Life too short		
CS-134	1.507E-01	+	9.282E-02	1.052E-01	6.621E-03	1.433
CS-135	1.348E-01		2.225E-01	3.214E-01	2.497E-02	0.420
I-135	-7.476E+06		1.076E+07	Half-Life too short		
CS-136	-1.246E-02		1.151E-01	1.881E-01	1.350E-02	-0.066
BA-137M	4.013E-03		4.403E-02	7.174E-02	3.543E-03	0.056
CS-137	4.242E-03		4.655E-02	7.583E-02	3.767E-03	0.056
CE-139	1.265E-02		3.433E-02	5.665E-02	3.063E-03	0.223
BA-140	1.186E-01		2.529E-01	4.231E-01	1.374E-01	0.280
LA-140	-5.797E-02		1.004E-01	1.258E-01	7.761E-03	-0.461
CE-141	2.912E-02		7.011E-02	1.163E-01	6.860E-03	0.250
CE-143	2.967E-04		4.553E-05	Half-Life too short		
CE-144	1.477E-01		2.499E-01	4.164E-01	5.922E-02	0.355
PM-144	-1.899E-02		4.275E-02	6.674E-02	3.509E-03	-0.285
PR-144	-1.286E+00		2.893E+00	4.517E+00	2.373E-01	-0.285
PM-146	2.613E-02		5.196E-02	8.614E-02	7.331E-03	0.303
ND-147	-1.020E-01		5.458E-01	8.818E-01	1.183E-01	-0.116
PM-149	2.747E+01		5.134E+01	8.826E+01	1.257E+01	0.311
EU-152	-3.186E-02		1.414E-01	1.760E-01	1.160E-02	-0.181
GD-153	2.051E-02		1.007E-01	1.478E-01	1.236E-02	0.139

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154	-1.031E-01		1.397E-01	2.097E-01	2.007E-02	-0.492
EU-155	7.121E-02		1.262E-01	2.121E-01	1.609E-02	0.336
TB-160	4.229E-02		1.520E-01	2.592E-01	1.831E-02	0.163
HO-166M	8.729E-02		7.279E-02	1.276E-01	6.883E-03	0.684
TM-171	1.034E+01		3.580E+01	6.030E+01	5.386E+00	0.171
LU-176	1.245E-02		2.846E-02	4.761E-02	2.840E-03	0.262
LU-177	2.830E+00	+	1.539E+00	1.799E+00	1.023E-01	1.573
LU-177M	-2.818E-01		2.070E-01	3.102E-01	1.735E-02	-0.908
HF-181	-3.282E-02		4.548E-02	7.110E-02	4.001E-03	-0.462
W-181	6.085E-01		4.646E-01	7.989E-01	7.156E-02	0.762
TA-182	-2.436E-01		2.383E-01	3.559E-01	2.149E-02	-0.684
RE-183	-1.133E-01		1.251E-01	1.966E-01	1.071E-02	-0.576
RE-184	3.096E-02		2.775E-01	4.468E-01	2.639E-02	0.069
OS-185	4.389E-03		5.002E-02	8.161E-02	4.114E-03	0.054
RE-188	6.655E-02		2.042E-01	3.369E-01	1.866E-02	0.198
W-188	-5.755E+00		9.331E+00	1.314E+01	7.847E-01	-0.438
IR-192	-5.171E-03		3.885E-02	6.476E-02	3.871E-03	-0.080
AU-195	3.308E-01		2.899E-01	4.416E-01	3.609E-02	0.749
TL-200	-6.187E-06		6.305E-05	Half-Life too short		
TL-201	3.919E-01		4.958E+00	8.092E+00	4.379E-01	0.048
TL-202	1.838E-02		7.167E-02	1.203E-01	6.766E-03	0.153
HG-203	5.559E-02		4.466E-02	7.893E-02	4.984E-03	0.704
BI-207	5.363E-03		5.842E-02	9.711E-02	6.439E-03	0.055
TL-207	-9.414E-01		8.389E-01	1.312E+00	2.173E-01	-0.718
PO-209	4.745E+00		8.595E+00	1.493E+01	1.082E+00	0.318
BI-210	-9.459E-01		5.419E+00	9.011E+00	7.419E-01	-0.105
PB-210	-9.459E-01		5.419E+00	9.011E+00	7.419E-01	-0.105
PO-210	-9.459E-01		5.419E+00	9.011E+00	6.509E-01	-0.105
PB-211	-3.799E-01		1.182E+00	1.889E+00	1.177E+00	-0.201
PO-215	-9.414E-01		8.389E-01	1.312E+00	2.173E-01	-0.718
RN-219	3.191E-01		5.039E-01	8.606E-01	1.163E-01	0.371
RN-220	-1.250E+01		3.105E+01	4.934E+01	2.712E+00	-0.253
RA-223	-9.414E-01		8.389E-01	1.312E+00	2.173E-01	-0.718
AC-227	1.350E-01		4.576E-01	7.421E-01	1.040E-01	0.182
TH-227	1.350E-01		4.578E-01	7.421E-01	1.257E-01	0.182
TH-229	-3.483E-01		6.308E-01	9.613E-01	5.371E-02	-0.362
PA-231	-1.153E+00		1.710E+00	2.782E+00	3.854E-01	-0.414
TH-231	-9.414E-01		8.389E-01	1.312E+00	2.173E-01	-0.718
U-231	-2.147E-03		9.569E-01	1.392E+00	1.193E-01	-0.002
PA-233	-2.924E-02		7.364E-02	1.213E-01	7.649E-03	-0.241
PA-234	3.615E-02		3.573E-01	5.979E-01	1.084E-01	0.060
PA-234M	3.899E+00		7.863E+00	1.337E+01	1.328E+00	0.292
TH-234	6.829E-01		1.706E+00	2.870E+00	5.218E-01	0.238
U-235	-1.567E-03		2.504E-01	4.033E-01	6.559E-02	-0.004
NP-236	-1.144E-02		9.291E-02	1.507E-01	8.248E-03	-0.076
U-238	6.829E-01		1.706E+00	2.870E+00	5.218E-01	0.238
NP-239	-3.270E-02		2.220E-01	3.638E-01	2.350E-02	-0.090
AM-241	-4.374E-02		2.001E-01	3.332E-01	3.257E-02	-0.131

Sample ID : G232504001 Acquisition date : 7-JUL-2009 08:39:16

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.505E-02		1.130E-01	1.890E-01	1.441E-02	0.238
CM-247	1.712E-02		4.565E-02	7.722E-02	4.303E-03	0.222
CF-249	-1.389E-02		4.757E-02	7.789E-02	4.344E-03	-0.178
CF-251	9.942E-02		1.493E-01	2.485E-01	1.359E-02	0.400

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                            DETECTOR DATA                              *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504001       *
* Acquisition date  :  7-JUL-2009 08:39:16 Detector SN#     :           *
* Detector ID       : GAM06                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:01.57      Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                             SAMPLE DATA                               *
*                                                                       *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232504001           Analyst initials: MXR1       *
* Batch Number      : 881220               Sample Quantity : 1.4575E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                               QC DATA                                 *
*                                                                       *
* CALIB. DATE/TIME :  4-FEB-2009 13:05:54 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.167E+01	2.777E+00	3.385E-01	1.417E+00
CD-109	3.916E+00	1.161E+00	7.970E-01	5.926E-01
SN-126	3.862E-01	1.145E-01	8.765E-02	5.844E-02
TL-208	6.698E-01	1.002E-01	3.377E-02	5.110E-02
BI-211	4.833E+00	5.927E-01	1.865E-01	3.024E-01
BI-212	1.233E+00	5.531E-01	2.673E-01	2.822E-01
PB-212	2.076E+00	1.933E-01	5.462E-02	9.863E-02
PO-212	2.076E+00	1.933E-01	5.462E-02	9.863E-02
BI-214	1.417E+00	2.075E-01	6.815E-02	1.058E-01
PB-214	1.681E+00	2.234E-01	6.502E-02	1.140E-01
PO-214	1.681E+00	2.234E-01	6.502E-02	1.140E-01
PO-216	2.076E+00	1.933E-01	5.462E-02	9.863E-02
PO-218	1.681E+00	2.234E-01	6.502E-02	1.140E-01
RA-224	5.392E+00	1.625E+00	6.215E-01	8.291E-01
RA-226	1.417E+00	2.075E-01	6.815E-02	1.058E-01
AC-228	2.251E+00	3.719E-01	1.147E-01	1.897E-01
RA-228	2.251E+00	3.719E-01	1.147E-01	1.897E-01
TH-228	2.076E+00	1.933E-01	5.461E-02	9.863E-02
TH-230	1.417E+00	2.075E-01	6.815E-02	1.058E-01
TH-232	2.251E+00	3.719E-01	1.147E-01	1.897E-01
U-234	1.417E+00	2.075E-01	6.815E-02	1.058E-01
NP-237	1.134E+00	4.071E-01	2.503E-01	2.077E-01
AM-243	4.813E-01	9.477E-02	5.709E-02	4.835E-02
ANH-511	1.221E-01	7.557E-02	2.664E-02	3.856E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-4.916E-02	3.383E-01	2.908E-01	1.726E-01	NOT IDENT.
NA-22	-3.426E-02	4.914E-02	3.830E-02	2.507E-02	NOT IDENT.
NA-24	-3.203E+03	5.704E+04	0.000E+00	2.910E+04	SHORT HLIF

AL-26	5.780E-03	3.054E-02	2.672E-02	1.558E-02	NOT IDENT.
TI-44	4.493E-01	6.945E-02	5.189E-02	3.544E-02	FAIL ABUN
SC-46	3.036E-03	4.017E-02	3.499E-02	2.049E-02	FAIL ABUN
V-48	-2.197E-02	7.583E-02	6.351E-02	3.869E-02	NOT IDENT.
CR-51	1.077E-01	4.039E-01	3.644E-01	2.061E-01	NOT IDENT.
MN-52	-4.866E-02	1.627E-01	1.283E-01	8.303E-02	NOT IDENT.
MN-54	4.389E-03	4.313E-02	3.778E-02	2.201E-02	NOT IDENT.
CO-56	-4.790E-03	4.298E-02	3.702E-02	2.193E-02	FAIL ABUN
CO-57	1.398E-02	2.907E-02	2.637E-02	1.483E-02	NOT IDENT.
CO-58	-5.417E-02	4.369E-02	3.430E-02	2.229E-02	NOT IDENT.
FE-59	-4.525E-02	1.032E-01	8.437E-02	5.263E-02	NOT IDENT.
CO-60	5.191E-02	4.461E-02	4.180E-02	2.276E-02	NOT IDENT.
ZN-65	1.170E-01	1.052E-01	8.731E-02	5.367E-02	NOT IDENT.
GE-68	1.030E+00	1.330E+00	1.210E+00	6.786E-01	NOT IDENT.
AS-73	1.653E-01	1.119E+00	1.044E+00	5.712E-01	NOT IDENT.
AS-74	-7.513E-02	9.797E-02	7.904E-02	4.999E-02	NOT IDENT.
SE-75	-3.353E-03	5.645E-02	4.377E-02	2.880E-02	NOT IDENT.
BR-77	-2.139E-01	6.139E+00	5.281E+00	3.132E+00	FAIL ABUN
SR-82	-9.639E-02	4.491E-01	3.311E-01	2.291E-01	NOT IDENT.
RB-83	3.606E-03	7.737E-02	6.692E-02	3.947E-02	NOT IDENT.
RB-84	2.020E-02	7.444E-02	6.585E-02	3.798E-02	NOT IDENT.
KR-85	1.238E+01	9.270E+00	7.666E+00	4.729E+00	NOT IDENT.
SR-85	6.199E-02	4.641E-02	3.839E-02	2.368E-02	NOT IDENT.
RB-86	5.831E-01	7.707E-01	7.006E-01	3.932E-01	NOT IDENT.
Y-88	4.207E-03	3.195E-02	2.766E-02	1.630E-02	NOT IDENT.
ZR-88	-3.888E-04	3.485E-02	3.064E-02	1.778E-02	NOT IDENT.
Y-91	-1.773E+01	2.212E+01	1.743E+01	1.129E+01	NOT IDENT.
NB-94	4.013E-02	4.041E-02	3.635E-02	2.062E-02	NOT IDENT.
NB-95	5.337E-02	5.909E-02	4.631E-02	3.015E-02	NOT IDENT.
NB-95M	4.533E-02	1.704E-01	1.296E-01	8.696E-02	NOT IDENT.
ZR-95	6.023E-02	8.271E-02	7.305E-02	4.220E-02	NOT IDENT.
NB-97	-8.107E+03	1.227E+04	0.000E+00	6.259E+03	SHORT HLIF
ZR-97	4.740E+05	2.504E+05	0.000E+00	1.278E+05	SHORT HLIF
MO-99	-7.914E-01	7.448E+00	6.193E+00	3.800E+00	NOT IDENT.
TC-99M	-2.930E+13	8.679E+13	0.000E+00	4.428E+13	SHORT HLIF
RH-101	2.806E-02	4.029E-02	3.516E-02	2.055E-02	NOT IDENT.
RH-102	1.740E-02	2.971E-02	2.679E-02	1.516E-02	NOT IDENT.
RU-103	4.529E-03	4.436E-02	3.866E-02	2.263E-02	FAIL ABUN
RH-106	1.310E-01	3.546E-01	3.097E-01	1.809E-01	FAIL ABUN
RU-106	1.310E-01	3.544E-01	3.097E-01	1.808E-01	FAIL ABUN
AG-108M	1.404E-02	3.761E-02	3.354E-02	1.919E-02	NOT IDENT.
AG-110M	-3.055E-02	4.004E-02	3.191E-02	2.043E-02	NOT IDENT.
IN-111	-2.796E-01	7.826E-01	5.713E-01	3.993E-01	NOT IDENT.
IN-113M	-3.297E-02	4.974E-02	4.216E-02	2.538E-02	NOT IDENT.
SN-113	-3.297E-02	4.974E-02	4.216E-02	2.538E-02	NOT IDENT.
IN-114M	-3.189E-02	2.279E-01	1.722E-01	1.163E-01	NOT IDENT.
CD-115	2.104E+00	6.034E+00	5.318E+00	3.079E+00	NOT IDENT.
SN-117M	3.940E-02	5.692E-02	5.129E-02	2.904E-02	NOT IDENT.
SB-122	-5.401E-01	1.329E+00	1.107E+00	6.779E-01	NOT IDENT.
I-123	2.459E+05	3.848E+05	0.000E+00	1.963E+05	SHORT HLIF
TE-123M	2.091E-02	3.272E-02	2.943E-02	1.669E-02	NOT IDENT.
I-124	-2.677E-01	6.219E-01	4.389E-01	3.173E-01	NOT IDENT.
SB-124	5.552E-02	7.633E-02	7.241E-02	3.894E-02	FAIL ABUN
SB-125	-4.121E-04	1.068E-01	9.334E-02	5.447E-02	FAIL ABUN
TE-125M	-6.407E+00	1.070E+01	9.225E+00	5.460E+00	NOT IDENT.
I-126	-2.492E-03	1.966E-01	1.662E-01	1.003E-01	NOT IDENT.
SB-126	-1.361E-02	1.597E-01	1.204E-01	8.149E-02	FAIL ABUN
SB-127	-3.870E-01	1.026E+00	8.395E-01	5.234E-01	NOT IDENT.
XE-127	-1.984E-02	5.531E-02	4.560E-02	2.822E-02	NOT IDENT.
I-131	-3.775E-02	1.051E-01	9.109E-02	5.361E-02	NOT IDENT.
TE-132	-3.336E-01	5.301E-01	4.434E-01	2.705E-01	NOT IDENT.
BA-133	-1.699E-02	5.130E-02	3.842E-02	2.617E-02	NOT IDENT.
I-133	-5.828E+02	1.117E+03	0.000E+00	5.698E+02	SHORT HLIF
CS-134	1.507E-01	9.096E-02	5.369E-02	4.641E-02	FAIL ABUN
CS-135	1.348E-01	2.181E-01	1.681E-01	1.113E-01	NOT IDENT.
I-135	-7.476E+12	2.109E+13	0.000E+00	1.076E+13	SHORT HLIF
CS-136	-1.246E-02	1.128E-01	9.540E-02	5.755E-02	FAIL ABUN
BA-137M	4.013E-03	4.315E-02	3.677E-02	2.202E-02	NOT IDENT.
CS-137	4.242E-03	4.561E-02	3.886E-02	2.327E-02	NOT IDENT.
CE-139	1.265E-02	3.365E-02	2.995E-02	1.717E-02	NOT IDENT.
BA-140	1.186E-01	2.479E-01	2.179E-01	1.265E-01	NOT IDENT.
LA-140	-5.797E-02	9.838E-02	6.315E-02	5.019E-02	NOT IDENT.
CE-141	2.912E-02	6.871E-02	6.164E-02	3.506E-02	NOT IDENT.
CE-143	2.967E+02	8.923E+01	0.000E+00	4.553E+01	SHORT HLIF
CE-144	1.477E-01	2.449E-01	2.212E-01	1.250E-01	NOT IDENT.
PM-144	-1.899E-02	4.189E-02	3.416E-02	2.137E-02	NOT IDENT.
PR-144	-1.286E+00	2.835E+00	2.312E+00	1.447E+00	NOT IDENT.
PM-146	2.613E-02	5.092E-02	4.453E-02	2.598E-02	NOT IDENT.

ND-147	-1.020E-01	5.349E-01	4.542E-01	2.729E-01	FAIL ABUN
PM-149	2.747E+01	5.031E+01	4.610E+01	2.567E+01	NOT IDENT.
EU-152	-3.186E-02	1.386E-01	9.157E-02	7.071E-02	FAIL ABUN
GD-153	2.051E-02	9.870E-02	7.905E-02	5.036E-02	NOT IDENT.
EU-154	-1.031E-01	1.370E-01	1.058E-01	6.987E-02	NOT IDENT.
EU-155	7.121E-02	1.237E-01	1.132E-01	6.310E-02	FAIL ABUN
TB-160	4.229E-02	1.489E-01	1.320E-01	7.599E-02	FAIL ABUN
HO-166M	8.729E-02	7.134E-02	6.527E-02	3.640E-02	NOT IDENT.
TM-171	1.034E+01	3.508E+01	3.250E+01	1.790E+01	NOT IDENT.
LU-176	1.245E-02	2.789E-02	2.483E-02	1.423E-02	FAIL ABUN
LU-177	2.830E+00	1.509E+00	9.461E-01	7.697E-01	FAIL ABUN
LU-177M	-2.818E-01	2.028E-01	1.607E-01	1.035E-01	FAIL ABUN
HF-181	-3.282E-02	4.457E-02	3.671E-02	2.274E-02	NOT IDENT.
W-181	6.085E-01	4.553E-01	4.308E-01	2.323E-01	NOT IDENT.
TA-182	-2.436E-01	2.336E-01	1.798E-01	1.192E-01	FAIL ABUN
RE-183	-1.133E-01	1.226E-01	1.040E-01	6.257E-02	FAIL ABUN
RE-184	3.096E-02	2.720E-01	2.340E-01	1.388E-01	NOT IDENT.
OS-185	4.389E-03	4.902E-02	4.185E-02	2.501E-02	NOT IDENT.
RE-188	6.655E-02	2.001E-01	1.784E-01	1.021E-01	NOT IDENT.
W-188	-5.755E+00	9.145E+00	6.859E+00	4.666E+00	NOT IDENT.
IR-192	-5.171E-03	3.807E-02	3.375E-02	1.942E-02	FAIL ABUN
AU-195	3.308E-01	2.841E-01	2.360E-01	1.450E-01	FAIL ABUN
TL-200	-6.187E+00	1.236E+02	0.000E+00	6.305E+01	SHORT HLIF
TL-201	3.919E-01	4.859E+00	4.276E+00	2.479E+00	NOT IDENT.
TL-202	1.838E-02	7.024E-02	6.222E-02	3.584E-02	NOT IDENT.
HG-203	5.559E-02	4.376E-02	4.125E-02	2.233E-02	NOT IDENT.
BI-207	5.363E-03	5.725E-02	4.922E-02	2.921E-02	FAIL ABUN
TL-207	-9.414E-01	8.222E-01	6.834E-01	4.195E-01	FAIL ABUN
PO-209	4.745E+00	8.423E+00	7.600E+00	4.298E+00	NOT IDENT.
BI-210	-9.459E-01	5.311E+00	4.893E+00	2.710E+00	NOT IDENT.
PB-210	-9.459E-01	5.311E+00	4.893E+00	2.710E+00	NOT IDENT.
PO-210	-9.459E-01	5.311E+00	4.893E+00	2.709E+00	NOT IDENT.
PB-211	-3.799E-01	1.158E+00	9.792E-01	5.908E-01	NOT IDENT.
PO-215	-9.414E-01	8.222E-01	6.834E-01	4.195E-01	FAIL ABUN
RN-219	3.191E-01	4.938E-01	4.461E-01	2.519E-01	FAIL ABUN
RN-220	-1.250E+01	3.043E+01	2.540E+01	1.552E+01	NOT IDENT.
RA-223	-9.414E-01	8.222E-01	6.834E-01	4.195E-01	FAIL ABUN
AC-227	1.350E-01	4.485E-01	3.886E-01	2.288E-01	FAIL ABUN
TH-227	1.350E-01	4.487E-01	3.886E-01	2.289E-01	FAIL ABUN
TH-229	-3.483E-01	6.182E-01	5.065E-01	3.154E-01	FAIL ABUN
PA-231	-1.153E+00	1.676E+00	1.453E+00	8.552E-01	FAIL ABUN
TH-231	-9.414E-01	8.222E-01	6.834E-01	4.195E-01	FAIL ABUN
U-231	-2.147E-03	9.377E-01	7.447E-01	4.784E-01	FAIL ABUN
PA-233	-2.924E-02	7.217E-02	6.322E-02	3.682E-02	FAIL ABUN
PA-234	3.615E-02	3.501E-01	3.039E-01	1.786E-01	FAIL ABUN
PA-234M	3.899E+00	7.706E+00	6.786E+00	3.932E+00	NOT IDENT.
TH-234	6.829E-01	1.672E+00	1.549E+00	8.531E-01	FAIL ABUN
U-235	-1.567E-03	2.454E-01	2.138E-01	1.252E-01	FAIL ABUN
NP-236	-1.144E-02	9.106E-02	7.974E-02	4.646E-02	FAIL ABUN
U-238	6.829E-01	1.672E+00	1.549E+00	8.531E-01	FAIL ABUN
NP-239	-3.270E-02	2.176E-01	1.937E-01	1.110E-01	FAIL ABUN
AM-241	-4.374E-02	1.961E-01	1.800E-01	1.000E-01	NOT IDENT.
CM-243	4.505E-02	1.107E-01	1.009E-01	5.648E-02	FAIL ABUN
CM-247	1.712E-02	4.474E-02	4.003E-02	2.283E-02	NOT IDENT.
CF-249	-1.389E-02	4.662E-02	4.041E-02	2.379E-02	NOT IDENT.
CF-251	9.942E-02	1.463E-01	1.312E-01	7.466E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	476.1141
46.50	476.1141
46.50	476.1141
48.70	460.7713
49.72	475.2326
51.35	483.8713
52.39	479.2570
52.97	467.8496
53.15	473.4765
53.44	469.1352
54.07	492.5178
56.28	496.1543
56.28	508.1008
57.37	0.0000
57.53	490.7179
57.53	490.7199
57.60	505.5062
57.98	504.8938
57.98	504.8938
59.32	522.5920
59.32	522.5920
59.40	522.6578
59.54	522.7734
59.72	561.7258
60.01	573.0738
61.10	598.1237
61.14	598.1606
61.30	591.8265
63.00	570.1612
63.29	573.2006
63.29	573.2006
63.58	572.5242
64.28	592.6696
65.12	566.4010
65.20	566.4694
65.20	566.4694
66.05	611.9645
66.72	607.9011
66.83	609.8684
66.91	609.9406
67.20	611.9376
67.20	611.9376
67.75	637.1906
67.85	587.3989
68.90	634.0095
68.90	634.0095
69.30	629.8770
69.67	634.7169
70.82	604.1974
70.82	604.1974
70.83	604.2047
72.80	541.0790
72.87	575.6118
72.87	575.6118
74.67	577.0522
74.81	577.1641
74.81	577.1641
74.81	577.1641
74.81	577.1641
74.81	577.1641
74.81	577.1641
74.97	577.2922
75.28	577.5370
75.70	577.8703
77.11	578.9774
77.11	578.9774
77.11	578.9774

77.11	578.9774
77.11	578.9774
77.11	578.9774
78.38	579.9680
79.62	582.6396
79.80	582.7776
79.80	582.7776
80.11	643.9055
80.18	643.9648
80.30	644.0681
80.30	644.0681
80.57	688.4696
81.00	688.8586
81.07	698.0670
81.07	698.0670
81.07	698.0670
81.07	698.0670
82.60	488.7051
83.37	601.2977
83.78	609.2647
83.78	609.2647
83.78	609.2647
83.78	609.2647
84.21	619.8028
84.40	600.0538
84.90	572.8679
85.43	556.3932
86.29	569.2758
86.50	630.8187
86.54	626.2466
86.59	626.2864
86.72	626.3885
86.79	626.4434
86.94	671.0980
87.30	732.8547
87.30	732.8547
87.30	732.8547
87.30	732.8547
87.30	732.8547
87.30	732.8547
87.57	685.4609
87.88	557.3438
88.03	557.4478
88.36	557.6779
88.47	557.7553
89.95	558.7775
91.11	455.3756
92.29	456.0310
92.38	456.0797
92.38	456.0797
93.35	456.6144
94.00	456.9709
94.67	452.6838
94.67	452.6873
94.90	452.8103
94.90	452.8103
94.90	452.8103
94.90	452.8103
95.87	471.9626
95.87	471.9626
96.73	481.7696
97.43	432.3914
98.44	412.6586
98.44	412.6586
98.88	403.5224
99.55	404.2809
99.55	404.2809
99.86	404.4265
100.00	423.1560
100.10	423.2073
103.18	483.4093
103.76	428.8923
105.00	429.4904
105.31	429.6391
108.00	474.2113
109.28	463.0543
111.00	427.3997
111.00	427.3997

111.76	438.6173
112.95	441.1563
115.19	411.4713
116.30	423.8661
117.00	423.1838
117.00	423.1838
117.66	422.4822
121.11	386.0818
121.62	387.2807
121.78	387.3443
122.06	401.4357
122.32	401.5415
122.32	401.5415
122.32	401.5415
122.32	401.5415
123.07	422.8402
127.23	440.6713
129.76	421.6469
131.20	472.6283
133.02	461.3478
133.54	438.3509
135.34	426.9679
136.00	443.4336
136.25	443.5405
136.48	441.6117
140.51	424.9905
140.51	0.0000
142.18	413.4310
142.65	413.6107
143.76	420.1537
144.24	396.8737
144.24	396.8737
144.24	396.8737
144.24	396.8737
145.22	401.3144
145.44	410.5876
147.16	454.1962
152.43	388.5104
152.70	391.6883
153.22	422.7243
154.21	440.5913
154.21	440.5913
154.21	440.5913
154.21	440.5913
155.03	427.5192
156.02	427.8896
158.56	379.2360
159.00	0.0000
159.00	381.4462
160.31	387.0514
161.27	382.1894
162.32	406.3764
162.64	406.4871
163.35	410.8826
163.89	375.7761
165.85	366.0024
167.43	382.1031
171.28	366.6123
171.86	365.7440
172.10	357.4546
176.55	347.2126
176.60	347.2253
181.06	382.3670
184.41	368.1783
185.71	388.8409
186.00	388.9308
190.27	349.5009
192.34	341.5577
193.63	376.6421
197.04	362.3888
198.01	335.9877
198.60	354.2748
200.40	373.9872
201.83	363.6858
202.84	375.5803
205.31	338.0238
208.36	330.1781
208.81	311.3633

209.75	317.3829
209.75	317.3829
210.97	308.4013
215.65	322.6881
216.55	338.5437
218.09	316.0289
222.10	307.1497
223.80	335.7645
226.40	342.8970
227.00	345.2169
227.08	345.2362
227.20	334.3736
228.16	356.3889
228.18	356.3939
228.18	356.3939
231.56	0.0000
235.69	373.3272
236.00	373.4026
236.00	373.4026
238.60	286.4644
238.63	286.4704
238.63	286.4704
238.63	286.4704
239.00	286.5401
240.98	286.9164
241.98	287.1056
241.98	287.1056
241.98	287.1056
244.69	236.2633
245.39	259.3028
247.94	265.0323
248.90	253.8315
249.79	239.9198
252.40	275.7614
252.85	254.7930
252.85	254.7930
254.15	0.0000
256.20	247.5642
256.20	247.5642
260.50	244.8950
260.90	242.7319
262.80	228.5261
264.65	239.5773
268.24	261.2851
268.79	243.4719
269.46	232.8257
269.46	232.8257
269.46	232.8257
269.46	232.8257
271.23	277.9026
273.65	307.0402
276.40	235.0942
277.35	244.0654
277.60	244.1018
277.60	244.1018
278.00	232.2346
278.60	234.1174
279.20	212.5844
279.53	212.6247
280.46	251.5053
281.68	265.2209
283.67	230.3093
284.30	235.8176
285.00	229.5860
285.90	210.7182
286.10	210.7410
286.10	210.7410
287.40	203.6618
288.45	0.0000
290.67	238.8162
290.80	255.4633
291.72	226.8616
293.26	0.0000
293.70	230.1523
295.21	231.8657
295.21	231.8657
295.21	231.8657
295.96	245.6136

296.50	245.6895
297.23	245.7916
298.57	245.9795
299.80	203.6090
299.80	203.6090
300.09	203.6417
300.09	203.6417
300.09	203.6417
300.10	203.6417
300.12	203.6445
301.29	191.6147
302.84	196.3502
303.76	210.1586
303.91	210.1754
304.40	225.4688
304.40	225.4688
304.84	208.7611
306.84	188.1491
308.46	191.4753
311.98	209.2913
316.51	200.6148
318.01	209.0689
319.02	209.1825
319.41	197.2447
320.08	200.0840
323.87	265.1737
323.87	265.1737
323.87	265.1737
323.87	265.1737
325.23	247.7986
328.77	205.6589
333.44	225.9834
334.20	218.3331
334.20	218.3331
334.30	202.8592
338.28	176.9050
338.28	176.9050
338.28	176.9050
338.28	176.9050
338.32	176.9073
338.32	176.9073
338.32	176.9073
340.50	155.3609
340.57	160.0259
344.27	175.1244
345.85	151.4320
350.59	0.0000
351.07	158.4004
351.92	158.4684
351.92	158.4684
351.92	158.4684
355.39	0.0000
356.01	153.4739
364.48	164.1955
366.43	155.8557
367.43	162.5476
367.94	0.0000
369.80	154.2232
374.96	156.5123
383.85	155.2858
387.95	176.5923
388.63	167.1002
391.69	170.2125
391.69	170.2125
392.90	164.5695
398.62	195.7150
400.65	168.0530
401.10	154.6422
401.81	162.3799
402.60	172.0515
404.84	188.5878
410.95	143.7708
411.60	138.0233
413.65	171.9660
414.70	164.3160
415.30	162.4280
415.76	157.6277
417.63	0.0000

418.52	130.7137
423.70	155.2832
427.08	138.9956
427.89	147.7974
432.53	140.3086
433.93	134.5466
439.47	135.8525
439.56	135.8576
439.89	130.9902
443.98	134.1620
444.90	141.0750
445.03	149.8997
445.03	149.8997
445.03	149.8997
445.03	149.8997
453.90	124.5777
463.38	121.7902
468.07	89.0497
473.00	119.9705
475.06	92.2871
475.35	92.2984
476.78	91.3610
477.59	115.2325
477.96	114.2560
482.03	122.4099
484.57	117.5578
487.03	108.7006
490.36	0.0000
492.35	126.9256
497.08	108.1437
507.63	0.0000
510.53	0.0000
510.84	107.7327
511.00	107.7393
511.85	105.7614
511.85	105.7614
513.99	115.9314
513.99	115.9314
520.41	112.1815
520.65	112.1924
527.90	102.3710
528.96	0.0000
529.64	114.6111
529.87	0.0000
531.02	104.5239
537.32	89.5189
543.00	94.8096
546.56	0.0000
549.76	117.5381
552.65	95.1547
555.20	120.8492
563.23	105.8013
563.90	117.1283
568.70	111.1614
569.32	108.0967
569.50	111.1931
569.67	111.2010
573.80	111.3671
574.00	118.5966
574.64	124.8108
578.91	106.7542
579.30	0.0000
583.14	99.3305
585.48	75.9401
591.81	85.3397
592.07	83.0391
593.00	92.4135
595.88	119.5315
600.56	112.4429
602.52	0.0000
602.71	123.2937
602.71	123.2937
603.60	130.2795
604.41	114.6782
604.70	114.6917
609.31	113.8326
609.31	113.8326
609.31	113.8326

609.31	113.8326
610.33	120.1407
612.46	123.7155
614.37	113.3348
618.01	98.4636
621.84	87.0568
621.84	87.0568
631.29	79.9726
633.02	105.2881
633.10	105.2930
634.78	105.3516
635.90	100.1234
636.97	101.2125
645.85	95.1724
646.12	94.1214
656.30	102.9323
657.75	106.1646
657.90	0.0000
661.65	106.3013
661.65	106.3013
664.57	0.0000
666.33	110.7234
666.33	110.7234
675.00	89.6848
677.61	100.4464
685.20	91.0513
692.80	98.7899
695.00	107.4536
696.49	113.9552
696.49	113.9552
697.00	116.1237
697.49	113.9914
698.33	116.1738
698.50	106.4975
699.00	102.2108
702.63	90.4805
706.10	115.3803
706.58	0.0000
706.67	118.6367
709.31	104.7036
711.68	76.6942
713.82	91.8793
717.42	104.9665
720.50	88.2017
721.93	0.0000
722.20	95.7304
722.78	95.7476
722.78	95.7476
722.89	95.7520
722.95	86.7188
723.30	86.7285
724.18	84.9446
727.18	84.6612
733.00	56.1799
735.90	82.7112
739.58	80.6250
742.81	76.3420
744.21	84.0120
747.13	73.1651
751.79	90.7650
752.31	79.8420
753.82	84.2545
755.35	81.0098
756.15	78.8379
756.87	83.2363
763.93	84.1443
765.79	95.1704
766.41	82.3755
766.84	95.2000
768.36	97.8087
768.36	97.8087
768.36	97.8087
768.36	97.8087
776.49	80.2585
778.00	96.4316
778.57	96.4487
778.89	96.4572
783.80	64.6602

785.46	70.8716
792.07	69.1620
795.84	64.6224
796.30	64.6309
801.93	93.5353
805.60	63.3220
810.29	89.9192
810.76	93.6395
815.85	64.9927
817.79	69.6732
818.51	70.6161
819.60	73.4260
826.30	78.2202
828.27	0.0000
831.60	85.7970
831.96	85.8064
834.83	87.7406
836.80	0.0000
846.75	73.9837
848.13	71.2005
856.28	0.0000
856.80	72.4438
860.37	74.2602
867.32	71.0366
867.82	67.8164
871.10	61.2774
873.19	55.6522
874.81	70.7748
875.33	0.0000
876.40	72.6935
879.36	61.4136
880.27	61.4281
880.51	58.5968
881.50	64.2854
883.24	65.2603
884.67	70.0164
889.25	57.7869
896.60	62.6444
898.02	62.6686
899.00	65.5340
903.28	72.7382
911.07	58.1195
911.07	58.1195
911.07	58.1195
919.63	55.2103
920.93	53.4923
925.00	68.8477
925.24	65.0269
926.50	62.1779
934.06	69.9672
934.06	69.9672
934.06	69.9672
934.06	69.9672
935.52	64.2397
937.48	70.0281
944.10	79.7561
946.00	69.2183
949.00	67.3468
962.29	71.1588
964.01	73.3962
966.15	73.4364
968.20	73.4735
969.11	73.4905
969.11	73.4905
969.11	73.4905
977.42	53.1551
980.50	79.5159
983.50	72.7814
989.30	59.2799
996.32	76.9057
1001.03	61.4004
1001.68	52.6366
1004.76	79.9897
1021.30	0.0000
1024.50	0.0000
1034.80	56.0050
1037.82	71.7762
1038.57	71.7881

1038.76	0.0000
1045.16	69.9311
1046.59	70.9395
1048.07	68.9946
1050.47	58.1838
1050.47	58.1838
1063.62	57.3746
1076.63	46.6328
1077.35	47.6328
1085.78	58.6615
1099.22	72.8040
1112.02	70.3000
1112.84	60.0244
1115.52	46.3328
1120.29	67.1390
1120.29	67.1390
1120.29	67.1390
1120.29	67.1390
1120.51	67.1418
1121.28	67.1527
1124.00	0.0000
1129.67	73.6407
1131.51	0.0000
1147.95	0.0000
1167.94	88.1010
1173.22	78.0621
1175.09	83.1645
1177.93	90.3182
1189.05	88.5010
1204.90	90.8397
1205.75	0.0000
1213.00	90.9954
1221.42	96.2796
1230.97	86.2080
1235.34	75.7209
1236.41	0.0000
1238.11	75.0317
1238.11	75.0317
1238.11	75.0317
1238.11	75.0317
1238.25	75.0317
1246.25	63.3168
1260.41	0.0000
1271.85	57.9574
1274.45	60.0603
1274.54	60.0603
1291.56	36.3686
1298.22	0.0000
1312.09	52.1688
1325.50	38.7073
1325.50	38.7073
1332.49	30.3794
1333.61	38.7690
1360.21	27.3838
1362.66	0.0000
1365.15	35.8442
1368.21	25.3164
1368.53	0.0000
1376.25	25.3555
1377.67	25.3623
1377.67	25.3623
1377.67	25.3623
1377.67	25.3623
1384.27	32.8013
1394.10	25.4424
1395.20	30.7488
1407.95	31.8860
1434.06	21.3607
1436.60	22.4398
1457.56	0.0000
1460.81	33.2730
1489.15	22.6560
1509.49	12.9937
1596.49	29.6829
1620.62	18.9237
1678.03	0.0000
1691.02	11.4877
1691.02	11.4877

1706.46	0.0000
1750.46	0.0000
1764.49	22.0367
1764.49	22.0367
1764.49	22.0367
1764.49	22.0367
1770.23	76.5946
1771.40	35.8799
1791.20	0.0000
1808.65	11.7045
1836.01	10.7744

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504001

Total Uranium Activity	2.0309E+00	ug/g
Total Uranium Counting Unc.	4.9759E+00	ug/g
Total Uranium Tpu	2.5387E-06	ug/g
Total Uranium Mda	4.6085E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232504001      *
*   ANALYST       : MXR1                      DETECTOR    : GAM06           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:39:16.96    SAMPLE ALQT:  145.750 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.123E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.467E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 4.596E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.242E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:44:20.97

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504002.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:43:46.
Sample ID         : G232504002           Sample quantity  : 1.53350E+02 GRAM
Detector name     : GAM08                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:06.02  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	74.84*	496	545	1.41	149.78	143	19	6.89E-02	9.8	1.52E+00
2	3	77.09	721	478	1.11	154.28	143	19	1.00E-01	6.5	
3	0	87.15	206	441	1.12	174.37	172	6	2.86E-02	17.5	
4	8	89.89	154	221	0.87	179.85	178	18	2.15E-02	14.4	1.24E+00
5	8	92.86*	274	574	1.46	185.77	178	18	3.80E-02	17.4	
6	0	128.89	112	345	1.16	257.75	254	7	1.55E-02	29.2	
7	0	185.80*	160	411	1.31	371.44	367	9	2.23E-02	24.9	
8	0	208.77*	167	357	0.88	417.33	412	10	2.31E-02	23.0	
9	3	238.45*	1557	233	1.18	476.63	471	21	2.16E-01	3.0	7.30E-01
10	3	241.46	359	286	1.70	482.64	471	21	4.99E-02	11.6	
11	0	269.63	155	248	1.31	538.94	535	11	2.15E-02	21.2	
12	0	277.24	47	239	1.43	554.13	550	9	6.46E-03	61.6	
13	0	295.03*	432	233	1.35	589.69	585	11	6.00E-02	8.6	
14	0	299.93	94	143	1.08	599.47	596	8	1.31E-02	24.2	
15	0	327.38	100	178	1.35	654.32	650	10	1.39E-02	26.8	
16	0	338.20*	352	200	1.27	675.95	671	11	4.89E-02	9.6	
17	0	351.70*	657	280	1.16	702.91	697	13	9.12E-02	6.7	
18	0	462.74	55	138	1.22	924.83	919	10	7.70E-03	41.8	
19	0	478.32	85	156	1.52	955.96	949	12	1.18E-02	31.8	
20	0	510.81*	177	151	2.07	1020.89	1014	16	2.46E-02	19.1	
21	0	582.87*	458	134	1.57	1164.93	1159	13	6.36E-02	7.1	
22	0	608.81*	466	137	1.47	1216.80	1209	14	6.47E-02	7.2	
23	0	661.27	98	128	0.81	1321.66	1316	15	1.36E-02	26.8	
24	0	726.99	122	88	1.24	1453.06	1448	12	1.69E-02	18.0	
25	0	794.21	98	64	3.80	1587.47	1579	17	1.36E-02	21.2	
26	0	860.90	60	102	1.76	1720.82	1715	14	8.30E-03	38.5	
27	0	910.57*	339	76	1.51	1820.17	1811	18	4.71E-02	8.3	
28	1	964.54	46	33	1.77	1928.11	1925	20	6.45E-03	24.9	1.80E+00
29	1	968.57*	213	46	1.93	1936.16	1925	20	2.96E-02	9.6	
30	0	1119.91*	129	52	1.79	2238.90	2233	13	1.79E-02	14.7	
31	0	1377.66*	23	14	1.26	2754.64	2749	13	3.25E-03	40.9	
32	0	1460.24*	1204	32	1.90	2919.92	2910	17	1.67E-01	3.1	
33	0	1764.04*	96	6	2.40	3528.15	3522	12	1.34E-02	12.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:44:23

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:43:46
Sample ID : G232504002 Sample quantity : 153.35 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA8 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:06.02 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	+	477.59	*	8.370E-01	5.353E-01	4.954E-01	3.384E-02	1.689
K-40	+	1460.81	*	2.644E+01	2.773E+00	4.604E-01	3.901E-02	57.421
CD-109	+	88.03	*	2.508E+00	9.231E-01	1.251E+00	1.440E-01	2.005
SN-126		64.28		-9.596E-02	5.548E-01	8.868E-01	1.470E-01	-0.108
	+	86.94		1.028E+00	5.623E-01	5.656E-01	2.377E-01	1.818
	+	87.57	*	2.473E-01	9.104E-02	1.268E-01	1.456E-02	1.951
CS-135	+	268.24	*	5.503E-01	2.372E-01	2.319E-01	1.810E-02	2.373
BA-137M	+	661.65	*	1.237E-01	6.655E-02	4.994E-02	2.580E-03	2.477
CS-137	+	661.65	*	1.307E-01	7.036E-02	5.279E-02	2.742E-03	2.477
TL-208	+	277.35		3.969E-01	4.912E-01	5.807E-01	6.204E-02	0.684
	+	510.84		7.510E-01	2.968E-01	2.001E-01	2.037E-02	3.753
	+	583.14	*	5.538E-01	8.682E-02	5.302E-02	3.459E-03	10.444
	+	860.37		6.900E-01	5.365E-01	4.406E-01	4.608E-02	1.566
BI-211		72.87		8.284E+00	3.270E+00	5.511E+00	5.864E-01	1.503
	+	351.07	*	3.504E+00	5.207E-01	3.268E-01	2.166E-02	10.723
PB-212	+	74.81		2.610E+00	6.326E-01	5.272E-01	7.480E-02	4.951
	+	77.11		2.131E+00	3.586E-01	2.962E-01	3.184E-02	7.195
	+	87.30		1.144E+00	4.363E-01	6.195E-01	9.422E-02	1.846
	+	238.63	*	1.820E+00	1.741E-01	8.071E-02	5.956E-03	22.550
	+	300.09		1.699E+00	8.350E-01	1.130E+00	9.534E-02	1.503
PO-212	+	74.81		2.610E+00	6.326E-01	5.272E-01	7.480E-02	4.951
	+	77.11		2.131E+00	3.586E-01	2.962E-01	3.184E-02	7.195
	+	87.30		1.144E+00	4.363E-01	6.195E-01	9.422E-02	1.846
		115.19		2.321E+00	3.409E+00	5.582E+00	3.848E-01	0.416
	+	238.63	*	1.820E+00	1.741E-01	8.071E-02	5.956E-03	22.550
	+	300.09		1.699E+00	8.350E-01	1.130E+00	9.534E-02	1.503
BI-214	+	609.31	*	1.063E+00	1.725E-01	1.042E-01	7.862E-03	10.205
		768.36		6.281E-01	7.435E-01	1.290E+00	1.237E-01	0.487
		934.06		1.012E+00	1.102E+00	1.918E+00	2.348E-01	0.528
	+	1120.29		1.583E+00	4.914E-01	4.428E-01	4.381E-02	3.575
		1238.11		2.477E+00	1.011E+00	1.896E+00	1.729E-01	1.307
	+	1377.67		1.273E+00	1.049E+00	1.341E+00	1.419E-01	0.949
	+	1764.49		1.620E+00	4.071E-01	2.092E-01	1.361E-02	7.743
PB-214	+	74.81		4.497E+00	1.059E+00	9.084E-01	1.180E-01	4.951

Sample ID : G232504002 Acquisition date : 7-JUL-2009 08:43:46

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		3.654E+00	6.749E-01	5.078E-01	6.691E-02	7.195
	+	87.30		1.960E+00	7.370E-01	1.061E+00	1.466E-01	1.846
	+	241.98		2.524E+00	6.219E-01	4.860E-01	3.948E-02	5.193
	+	295.21		1.366E+00	2.643E-01	1.827E-01	1.590E-02	7.477
	+	351.92	*	1.219E+00	1.920E-01	1.139E-01	9.606E-03	10.702
PO-214	+	74.81		4.497E+00	1.059E+00	9.084E-01	1.180E-01	4.951
	+	77.11		3.654E+00	6.749E-01	5.078E-01	6.691E-02	7.195
	+	87.30		1.960E+00	7.370E-01	1.061E+00	1.466E-01	1.846
	+	241.98		2.524E+00	6.219E-01	4.860E-01	3.948E-02	5.193
	+	295.21		1.366E+00	2.643E-01	1.827E-01	1.590E-02	7.477
	+	351.92	*	1.219E+00	1.920E-01	1.139E-01	9.606E-03	10.702
PO-216	+	74.81		2.610E+00	6.326E-01	5.272E-01	7.480E-02	4.951
	+	77.11		2.131E+00	3.586E-01	2.962E-01	3.184E-02	7.195
	+	87.30		1.144E+00	4.363E-01	6.195E-01	9.422E-02	1.846
	+	238.63	*	1.820E+00	1.741E-01	8.071E-02	5.956E-03	22.550
	+	300.09		1.699E+00	8.350E-01	1.130E+00	9.534E-02	1.503
PO-218	+	74.81		4.497E+00	1.059E+00	9.084E-01	1.180E-01	4.951
	+	77.11		3.654E+00	6.749E-01	5.078E-01	6.691E-02	7.195
	+	87.30		1.960E+00	7.370E-01	1.061E+00	1.466E-01	1.846
	+	241.98		2.524E+00	6.219E-01	4.860E-01	3.948E-02	5.193
	+	295.21		1.366E+00	2.643E-01	1.827E-01	1.590E-02	7.477
	+	351.92	*	1.219E+00	1.920E-01	1.139E-01	9.606E-03	10.702
RA-224	+	240.98	*	4.785E+00	1.148E+00	9.185E-01	5.395E-02	5.210
RA-226	+	609.31	*	1.063E+00	1.725E-01	1.042E-01	7.862E-03	10.205
		768.36		6.281E-01	7.435E-01	1.290E+00	1.237E-01	0.487
		934.06		1.012E+00	1.102E+00	1.918E+00	2.348E-01	0.528
	+	1120.29		1.583E+00	4.914E-01	4.428E-01	4.381E-02	3.575
		1238.11		2.477E+00	1.011E+00	1.896E+00	1.729E-01	1.307
	+	1377.67		1.273E+00	1.049E+00	1.341E+00	1.419E-01	0.949
	+	1764.49		1.620E+00	4.071E-01	2.092E-01	1.361E-02	7.743
AC-228	+	338.32		2.071E+00	9.334E-01	3.542E-01	1.445E-01	5.847
	+	911.07	*	1.856E+00	3.901E-01	1.798E-01	2.339E-02	10.325
	+	969.11		2.064E+00	6.342E-01	3.558E-01	8.508E-02	5.802
RA-228	+	338.32		2.071E+00	9.334E-01	3.542E-01	1.445E-01	5.847
	+	911.07	*	1.856E+00	3.901E-01	1.798E-01	2.339E-02	10.325
	+	969.11		2.064E+00	6.342E-01	3.558E-01	8.508E-02	5.802
TH-228		84.40		4.107E+00	2.743E+00	4.106E+00	6.142E-01	1.000
	+	238.60	*	1.820E+00	1.741E-01	8.071E-02	5.955E-03	22.552
	+	300.10		1.699E+00	1.296E+00	1.130E+00	6.665E-01	1.503
TH-230	+	609.31	*	1.063E+00	1.725E-01	1.042E-01	7.862E-03	10.205
		768.36		6.281E-01	7.435E-01	1.290E+00	1.237E-01	0.487
		934.06		1.012E+00	1.102E+00	1.918E+00	2.348E-01	0.528
	+	1120.29		1.583E+00	4.914E-01	4.428E-01	4.381E-02	3.575
		1238.11		2.477E+00	1.011E+00	1.896E+00	1.728E-01	1.307
	+	1377.67		1.273E+00	1.049E+00	1.341E+00	1.419E-01	0.949
	+	1764.49		1.620E+00	4.071E-01	2.092E-01	1.361E-02	7.743
TH-232	+	338.32		2.071E+00	4.158E-01	3.542E-01	2.141E-02	5.847
	+	911.07	*	1.856E+00	3.901E-01	1.798E-01	2.339E-02	10.325
	+	969.11		2.064E+00	6.342E-01	3.558E-01	8.508E-02	5.802

Sample ID : G232504002 Acquisition date : 7-JUL-2009 08:43:46

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.063E+00	1.725E-01	1.042E-01	7.862E-03	10.205
		768.36		6.281E-01	7.435E-01	1.290E+00	1.237E-01	0.487
		934.06		1.012E+00	1.102E+00	1.918E+00	2.348E-01	0.528
	+	1120.29		1.583E+00	4.914E-01	4.428E-01	4.381E-02	3.575
		1238.11		2.477E+00	1.011E+00	1.896E+00	1.728E-01	1.307
	+	1377.67		1.273E+00	1.049E+00	1.341E+00	1.419E-01	0.949
	+	1764.49		1.620E+00	4.071E-01	2.092E-01	1.361E-02	7.743
NP-237	+	86.50	*	7.263E-01	3.065E-01	3.951E-01	9.311E-02	1.838
		95.87		-9.713E-01	1.031E+00	1.359E+00	3.403E-01	-0.715
AM-243	+	74.67	*	4.231E-01	9.463E-02	8.578E-02	9.155E-03	4.932
	+	86.72		2.724E+01	1.003E+01	1.519E+01	1.732E+00	1.793
		117.66		-4.374E+00	3.730E+00	5.632E+00	3.721E-01	-0.777
		142.18		2.824E+00	1.739E+01	2.768E+01	1.576E+00	0.102
ANH-511	+	511.00	*	1.622E-01	6.266E-02	4.323E-02	2.526E-03	3.752

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22		1274.54	*	-6.103E-03	4.268E-02	7.012E-02	5.376E-03	-0.087
NA-24		1368.53	*	2.011E-02	4.268E-02	Half-Life too short		
AL-26		1129.67		7.598E-01	1.734E+00	3.010E+00	2.151E-01	0.252
		1808.65	*	7.357E-03	2.775E-02	4.738E-02	2.923E-03	0.155
TI-44		67.85		3.984E-03	4.769E-02	7.770E-02	8.313E-03	0.051
	+	78.38	*	3.933E-01	6.618E-02	7.751E-02	8.375E-03	5.074
SC-46		889.25	*	5.334E-03	3.591E-02	5.941E-02	6.367E-03	0.090
	+	1120.51		2.659E-01	8.067E-02	1.265E-01	9.291E-03	2.103
V-48		944.10		4.473E-01	7.770E-01	1.328E+00	1.383E-01	0.337
		983.50	*	4.681E-02	6.420E-02	1.107E-01	1.091E-02	0.423
		1312.09		-2.818E-02	8.094E-02	1.301E-01	1.074E-02	-0.217
CR-51		320.08	*	-1.021E-01	3.328E-01	5.365E-01	3.596E-02	-0.190
MN-52		744.21		-5.083E-03	1.659E-01	2.732E-01	1.898E-02	-0.019
		848.13		6.634E-01	4.833E+00	8.009E+00	7.660E-01	0.083
		935.52		-6.383E-02	1.886E-01	2.951E-01	3.106E-02	-0.216
		1246.25		-2.126E+00	5.495E+00	8.864E+00	6.400E-01	-0.240
		1333.61		-1.221E+00	3.731E+00	5.965E+00	5.118E-01	-0.205
		1434.06	*	-2.070E-02	1.533E-01	2.481E-01	2.063E-02	-0.083
MN-54		834.83	*	-1.095E-02	3.751E-02	6.005E-02	5.528E-03	-0.182
CO-56		846.75	*	-1.791E-03	3.564E-02	5.809E-02	5.535E-03	-0.031
		977.42		-8.473E-01	2.834E+00	4.342E+00	4.320E-01	-0.195
		1037.82		-6.454E-03	3.144E-01	5.066E-01	4.769E-02	-0.013
		1175.09		1.420E+00	2.135E+00	3.764E+00	2.320E-01	0.377
		1238.25		2.461E-01	9.960E-02	1.883E-01	1.393E-02	1.307
		1360.21		1.697E-02	9.165E-01	1.523E+00	1.298E-01	0.011
		1771.40		-1.989E-02	2.144E-01	3.422E-01	2.209E-02	-0.058
CO-57		122.06	*	-3.419E-03	2.487E-02	3.934E-02	2.412E-03	-0.087
		136.48		-1.194E-02	2.061E-01	3.256E-01	2.187E-02	-0.037
CO-58		810.76	*	-2.071E-02	3.515E-02	5.453E-02	4.688E-03	-0.380
FE-59		142.65		8.362E-01	2.586E+00	4.142E+00	2.355E-01	0.202

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		192.34		-3.842E-01	8.207E-01	1.350E+00	1.578E-01	-0.285
		1099.22	*	1.608E-02	8.467E-02	1.387E-01	1.188E-02	0.116
		1291.56		9.329E-02	1.137E-01	2.036E-01	1.868E-02	0.458
CO-60		1173.22		4.604E-02	4.298E-02	7.804E-02	4.789E-03	0.590
		1332.49	*	-3.463E-02	4.002E-02	6.049E-02	5.190E-03	-0.573
ZN-65		1115.52	*	2.437E-02	1.002E-01	1.431E-01	1.068E-02	0.170
GE-68		1077.35	*	6.748E-01	1.171E+00	1.992E+00	1.641E-01	0.339
AS-73		53.44	*	3.110E-02	9.857E-01	1.615E+00	1.820E-01	0.019
AS-74		595.88	*	-1.582E-02	7.672E-02	1.266E-01	7.028E-03	-0.125
		634.78		-1.584E-01	3.000E-01	4.801E-01	2.565E-02	-0.330
SE-75		66.05		-3.633E+00	5.081E+00	8.032E+00	9.860E-01	-0.452
		96.73		-5.693E-01	8.087E-01	1.107E+00	1.576E-01	-0.514
		121.11		5.218E-02	1.303E-01	2.107E-01	2.003E-02	0.248
		136.00		-4.013E-03	3.797E-02	5.988E-02	3.527E-03	-0.067
		198.60		-1.837E-03	1.623E+00	2.721E+00	1.892E-01	-0.001
		264.65	*	6.814E-03	4.487E-02	6.595E-02	3.983E-03	0.103
		279.53		6.999E-02	1.146E-01	1.728E-01	1.120E-02	0.405
		303.91		1.744E+00	2.054E+00	3.145E+00	3.052E-01	0.555
		400.65		8.454E-02	2.425E-01	4.012E-01	3.669E-02	0.211
BR-77	+	87.88		2.818E+02	1.037E+02	1.676E+02	1.930E+01	1.682
		200.40		2.334E+01	7.849E+01	1.331E+02	7.454E+00	0.175
	+	239.00		1.515E+02	1.280E+01	1.982E+01	1.162E+00	7.644
		249.79		-1.121E+01	3.296E+01	5.195E+01	3.074E+00	-0.216
		281.68		-4.551E+00	4.937E+01	7.107E+01	4.287E+00	-0.064
		297.23		1.019E+02	3.708E+01	5.065E+01	3.069E+00	2.013
		303.76		7.329E+01	9.145E+01	1.399E+02	8.484E+00	0.524
		439.47		-4.518E+00	7.092E+01	1.138E+02	6.718E+00	-0.040
		484.57		4.250E+00	1.177E+02	1.825E+02	1.074E+01	0.023
		520.65	*	-8.128E-02	4.880E+00	7.773E+00	4.525E-01	-0.010
		574.64		-2.664E+01	9.553E+01	1.571E+02	8.871E+00	-0.170
		578.91		2.308E+01	4.593E+01	7.026E+01	3.956E+00	0.329
		585.48		4.160E+02	1.068E+02	1.960E+02	1.098E+01	2.123
		755.35		1.046E+01	8.028E+01	1.327E+02	9.565E+00	0.079
		817.79		6.810E+01	6.637E+01	1.178E+02	1.031E+01	0.578
SR-82		698.33		-7.066E+00	2.978E+01	4.849E+01	2.874E+00	-0.146
		776.49	*	-8.323E-02	3.399E-01	5.485E-01	4.232E-02	-0.152
		1395.20		-5.336E-01	9.549E+00	1.569E+01	1.323E+00	-0.034
RB-83		520.41	*	2.207E-03	6.135E-02	9.816E-02	5.715E-03	0.022
		529.64		2.424E-02	9.278E-02	1.591E-01	9.225E-03	0.152
		552.65		-7.589E-02	1.676E-01	2.724E-01	1.561E-02	-0.279
RB-84		881.50	*	7.085E-03	6.389E-02	1.054E-01	1.106E-02	0.067
KR-85		513.99	*	1.314E+01	7.370E+00	1.195E+01	6.974E-01	1.100
SR-85		513.99	*	6.581E-02	3.690E-02	5.983E-02	3.492E-03	1.100
RB-86		1076.63	*	2.112E-01	7.034E-01	1.166E+00	9.620E-02	0.181
Y-88		898.02		-1.983E-02	3.807E-02	5.884E-02	6.474E-03	-0.337
		1836.01	*	1.395E-02	3.289E-02	5.741E-02	3.425E-03	0.243
ZR-88		392.90	*	4.519E-04	2.880E-02	4.676E-02	2.735E-03	0.010
Y-91		1204.90	*	-9.262E+00	1.699E+01	2.704E+01	1.784E+00	-0.343
NB-94		702.63	*	-2.515E-03	3.094E-02	5.096E-02	3.067E-03	-0.049

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		871.10		-2.471E-02	3.383E-02	5.144E-02	5.246E-03	-0.480
NB-95		765.79	*	2.117E-02	4.287E-02	7.297E-02	5.442E-03	0.290
NB-95M		235.69	*	2.152E-01	1.359E-01	2.138E-01	1.617E-02	1.007
ZR-95		724.18		1.973E-01	1.039E-01	1.741E-01	1.298E-02	1.133
		756.15	*	1.232E-02	6.421E-02	1.066E-01	8.797E-03	0.116
NB-97		657.90	*	9.844E-03	6.421E-02	Half-Life too short		
		1024.50		5.981E-01	6.421E-02	Half-Life too short		
ZR-97		254.15		-6.707E-02	6.421E-02	Half-Life too short		
		355.39		-5.713E-02	6.421E-02	Half-Life too short		
		507.63	*	2.953E-01	6.421E-02	Half-Life too short		
		602.52		-2.512E-01	6.421E-02	Half-Life too short		
		1021.30		-1.750E-01	6.421E-02	Half-Life too short		
		1147.95		-2.962E-01	6.421E-02	Half-Life too short		
		1362.66		-2.694E-01	6.421E-02	Half-Life too short		
		1750.46		-3.233E-01	6.421E-02	Half-Life too short		
MO-99		140.51		-1.089E+01	1.532E+01	2.282E+01	6.146E+00	-0.477
		181.06		5.701E-01	1.001E+01	1.490E+01	2.537E+00	0.038
		366.43		-1.866E+00	4.578E+01	7.435E+01	4.435E+00	-0.025
		739.58	*	1.754E-01	5.990E+00	9.919E+00	1.414E+00	0.018
		778.00		-8.716E+00	1.788E+01	2.819E+01	2.186E+00	-0.309
TC-99M		140.51	*	-5.519E+07	1.788E+01	Half-Life too short		
RH-101		127.23		3.161E-02	3.546E-02	5.234E-02	3.132E-03	0.604
		198.01	*	-3.563E-03	2.997E-02	5.003E-02	2.793E-03	-0.071
		325.23		6.560E-02	2.426E-01	3.553E-01	2.154E-02	0.185
RH-102		418.52		-7.532E-02	2.689E-01	4.263E-01	2.510E-02	-0.177
		475.06	*	2.627E-02	3.555E-02	5.294E-02	3.121E-03	0.496
		631.29		9.052E-03	4.938E-02	8.350E-02	4.478E-03	0.108
		697.49		-2.320E-02	7.219E-02	1.168E-01	6.904E-03	-0.199
		766.84		1.037E-01	1.125E-01	1.963E-01	1.469E-02	0.528
		1046.59		5.532E-02	1.129E-01	1.906E-01	1.680E-02	0.290
		1112.84		1.181E-01	2.316E-01	3.579E-01	2.688E-02	0.330
RU-103		497.08	*	1.597E-02	3.628E-02	5.991E-02	7.594E-03	0.267
		610.33		1.039E+01	2.020E+00	2.558E+00	3.913E-01	4.061
RH-106	+	511.85		8.068E-01	3.116E-01	4.051E-01	2.366E-02	1.992
		621.84	*	-1.034E-01	2.749E-01	4.452E-01	5.143E-02	-0.232
		1050.47		1.184E+00	2.293E+00	3.875E+00	3.389E-01	0.306
RU-106	+	511.85		8.068E-01	3.116E-01	4.051E-01	2.366E-02	1.992
		621.84	*	-1.034E-01	2.747E-01	4.452E-01	2.412E-02	-0.232
		1050.47		1.184E+00	2.293E+00	3.875E+00	3.389E-01	0.306
AG-108M		433.93	*	2.667E-02	3.170E-02	5.388E-02	3.443E-03	0.495
		614.37		1.389E-02	3.804E-02	5.738E-02	3.431E-03	0.242
		722.95		1.575E-02	4.472E-02	6.656E-02	4.599E-03	0.237
AG-110M		657.75	*	2.823E-02	3.240E-02	5.150E-02	2.889E-03	0.548
		677.61		-2.630E-01	2.887E-01	4.450E-01	2.610E-02	-0.591
		706.67		-1.283E-01	1.970E-01	3.100E-01	1.996E-02	-0.414
		763.93		-1.156E-01	1.702E-01	2.666E-01	2.052E-02	-0.433
		884.67		1.576E-02	4.743E-02	7.970E-02	8.616E-03	0.198
		937.48		-2.015E-01	1.101E-01	1.425E-01	1.533E-02	-1.414
		1384.27		1.213E-01	1.560E-01	2.546E-01	2.218E-02	0.477

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-111		171.28		2.207E-01	5.326E-01	9.123E-01	4.899E-02	0.242
		245.39	*	1.261E-01	5.895E-01	8.738E-01	5.152E-02	0.144
IN-113M		391.69	*	-2.335E-02	4.169E-02	6.516E-02	4.061E-03	-0.358
SN-113		391.69	*	-2.335E-02	4.169E-02	6.516E-02	4.061E-03	-0.358
IN-114M		190.27	*	-5.070E-02	1.792E-01	2.612E-01	1.442E-02	-0.194
CD-115		260.90		-4.020E+01	5.940E+01	9.502E+01	5.669E+00	-0.423
		492.35		-7.337E+00	1.683E+01	2.601E+01	1.528E+00	-0.282
		527.90	*	2.318E+00	4.894E+00	8.502E+00	4.934E-01	0.273
SN-117M		156.02		3.903E-02	1.867E+00	3.164E+00	1.733E-01	0.012
		158.56	*	6.899E-04	4.534E-02	7.679E-02	4.177E-03	0.009
SB-122		563.90	*	1.774E-01	1.123E+00	1.905E+00	1.084E-01	0.093
		692.80		3.922E+00	2.327E+01	3.905E+01	2.268E+00	0.100
I-123		159.00	*	2.471E-02	2.327E+01	Half-Life too short		
		528.96		3.174E+00	2.327E+01	Half-Life too short		
TE-123M		159.00	*	2.093E-03	2.608E-02	4.426E-02	2.441E-03	0.047
I-124		602.71	*	-1.817E-01	4.694E-01	6.559E-01	3.621E-02	-0.277
		722.78		9.493E-01	3.203E+00	4.741E+00	3.063E-01	0.200
		1325.50		-2.308E+00	2.278E+01	3.740E+01	3.167E+00	-0.062
	+	1376.25		2.744E+01	2.256E+01	3.413E+01	2.895E+00	0.804
		1509.49		5.616E+00	1.050E+01	1.845E+01	1.480E+00	0.304
		1691.02		7.297E-01	2.154E+00	3.753E+00	2.635E-01	0.194
SB-124		602.71		-1.495E-02	3.862E-02	5.397E-02	2.981E-03	-0.277
		645.85		9.031E-02	4.493E-01	7.597E-01	4.620E-02	0.119
		709.31		2.230E-01	2.499E+00	4.168E+00	2.569E-01	0.053
		713.82		2.403E-02	1.484E+00	2.460E+00	2.578E-01	0.010
		722.78		1.132E-01	3.820E-01	5.655E-01	3.793E-02	0.200
	+	968.20		2.071E+01	4.506E+00	7.188E+00	7.247E-01	2.881
		1045.16		-5.734E-03	2.438E+00	3.933E+00	3.477E-01	-0.001
		1325.50		-2.941E-01	2.902E+00	4.764E+00	4.034E-01	-0.062
		1368.21		3.256E-01	1.545E+00	2.627E+00	3.521E-01	0.124
		1436.60		4.679E-01	3.153E+00	5.317E+00	4.416E-01	0.088
		1691.02	*	2.053E-02	6.062E-02	1.056E-01	7.851E-03	0.194
SB-125		427.89	*	3.874E-02	8.854E-02	1.470E-01	9.023E-03	0.264
	+	463.38		4.583E-01	3.843E-01	5.219E-01	3.576E-02	0.878
		600.56		1.416E-01	1.667E-01	2.810E-01	1.820E-02	0.504
		635.90		-1.687E-02	2.554E-01	4.238E-01	2.712E-02	-0.040
TE-125M		109.28	*	-1.349E+00	9.112E+00	1.433E+01	1.362E+00	-0.094
I-126		388.63		-2.768E-02	1.713E-01	2.751E-01	1.613E-02	-0.101
		666.33	*	4.555E-02	1.544E-01	2.306E-01	1.213E-02	0.198
		753.82		-8.752E-01	1.194E+00	1.844E+00	1.323E-01	-0.475
SB-126		223.80		3.463E-01	3.316E+00	5.557E+00	3.206E-01	0.062
	+	278.60		2.314E+00	2.856E+00	3.687E+00	2.221E-01	0.628
	+	296.50		1.199E+01	2.196E+00	2.969E+00	1.799E-01	4.038
		414.70		4.104E-02	5.999E-02	1.014E-01	5.965E-03	0.405
		415.30		2.595E+00	5.017E+00	8.391E+00	4.938E-01	0.309
		555.20		-9.956E-01	3.124E+00	5.132E+00	2.936E-01	-0.194
		573.80		-5.022E-03	8.044E-01	1.349E+00	7.623E-02	-0.004
		593.00		4.329E-01	7.300E-01	1.273E+00	7.086E-02	0.340
		656.30		1.168E+00	2.666E+00	4.061E+00	2.114E-01	0.288

Sample ID : G232504002 Acquisition date : 7-JUL-2009 08:43:46

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		666.33		1.894E-02	6.421E-02	9.586E-02	5.043E-03	0.198
		675.00		9.557E-01	1.649E+00	2.855E+00	1.552E-01	0.335
		695.00		2.406E-02	6.421E-02	1.093E-01	6.400E-03	0.220
		697.00		-7.483E-02	2.218E-01	3.586E-01	2.115E-02	-0.209
		720.50	*	-6.457E-02	1.309E-01	1.868E-01	1.198E-02	-0.346
		856.80		-1.250E-01	4.616E-01	6.308E-01	6.183E-02	-0.198
		989.30		4.911E-01	1.003E+00	1.705E+00	1.666E-01	0.288
		1034.80		3.885E+00	7.813E+00	1.320E+01	1.191E+00	0.294
		1213.00		-6.613E-02	3.747E+00	6.252E+00	4.200E-01	-0.011
SB-127		61.10		-3.652E+01	4.340E+01	6.827E+01	8.671E+00	-0.535
		252.40		1.303E+00	2.769E+00	4.607E+00	1.907E+00	0.283
		290.80		2.083E+00	1.504E+01	2.197E+01	1.877E+00	0.095
		411.60		-3.799E-01	7.791E+00	1.256E+01	1.749E+00	-0.030
		444.90		9.458E-01	6.152E+00	1.001E+01	1.020E+00	0.094
		473.00		-1.098E+00	1.390E+00	1.795E+00	1.901E-01	-0.611
		543.00		2.579E-01	1.006E+01	1.695E+01	2.092E+00	0.015
		603.60		-4.355E-01	7.812E+00	1.130E+01	1.123E+00	-0.039
		685.20	*	-2.091E-01	8.205E-01	1.334E+00	1.143E-01	-0.157
		698.50		-2.719E+00	9.379E+00	1.520E+01	2.135E+00	-0.179
		722.20		1.193E+01	2.067E+01	3.150E+01	2.782E+00	0.379
		783.80		2.258E+00	2.167E+00	3.844E+00	4.356E-01	0.587
XE-127		57.60		3.787E+00	6.668E+00	1.109E+01	1.264E+00	0.341
		145.22		5.997E-01	6.528E-01	1.069E+00	6.034E-02	0.561
		172.10		1.664E-02	1.063E-01	1.804E-01	9.697E-03	0.092
		202.84	*	-1.063E-02	4.563E-02	7.020E-02	3.945E-03	-0.151
		374.96		-2.564E-02	1.876E-01	3.025E-01	1.794E-02	-0.085
I-131		80.18		-2.997E+00	4.118E+00	5.670E+00	6.200E-01	-0.529
		284.30		-4.503E-02	1.159E+00	1.909E+00	1.268E-01	-0.024
		364.48	*	-3.449E-02	9.004E-02	1.431E-01	9.461E-03	-0.241
		636.97		-5.621E-01	1.262E+00	2.037E+00	1.234E-01	-0.276
		722.89		2.059E+00	6.194E+00	9.202E+00	5.997E-01	0.224
TE-132		49.72		-1.076E+00	1.589E+01	2.599E+01	3.059E+00	-0.041
		111.76		-5.294E-02	1.789E+01	2.857E+01	2.633E+00	-0.002
		116.30		-6.330E+00	1.646E+01	2.580E+01	2.269E+00	-0.245
		228.16	*	9.223E-03	4.013E-01	6.697E-01	9.334E-02	0.014
BA-133		53.15		-2.179E+00	4.425E+00	7.092E+00	7.973E-01	-0.307
		79.62		2.877E-01	1.393E+00	2.011E+00	3.338E-01	0.143
		81.00		-1.371E-01	1.103E-01	1.450E-01	2.502E-02	-0.945
	+	276.40		3.921E-01	4.861E-01	6.291E-01	8.218E-02	0.623
		302.84		8.311E-02	1.436E-01	2.157E-01	2.544E-02	0.385
		356.01	*	-2.358E-02	4.860E-02	6.632E-02	7.735E-03	-0.355
		383.85		2.591E-01	2.731E-01	4.680E-01	5.110E-02	0.554
I-133	+	510.53		2.722E-01	2.731E-01	Half-Life too short		
		529.87	*	1.135E-04	2.731E-01	Half-Life too short		
		706.58		-3.882E-02	2.731E-01	Half-Life too short		
		856.28		-6.261E-02	2.731E-01	Half-Life too short		
		875.33		2.994E-02	2.731E-01	Half-Life too short		
		1236.41		2.083E-01	2.731E-01	Half-Life too short		
		1298.22		5.936E-03	2.731E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		475.35		2.657E+00	2.359E+00	3.612E+00	2.129E-01	0.736
		563.23		3.549E-01	3.434E-01	6.127E-01	3.564E-02	0.579
		569.32		-5.261E-02	1.857E-01	2.946E-01	1.722E-02	-0.179
		604.70		-5.902E-03	3.352E-02	4.789E-02	2.655E-03	-0.123
		795.84	*	8.532E-02	5.240E-02	8.658E-02	7.153E-03	0.985
		801.93		-4.513E-02	4.486E-01	6.597E-01	5.542E-02	-0.068
		1038.57		3.017E+00	3.788E+00	6.564E+00	5.880E-01	0.460
		1167.94		-5.973E-01	2.310E+00	3.782E+00	2.369E-01	-0.158
		1365.15		-3.862E-01	1.121E+00	1.773E+00	1.580E-01	-0.218
I-135		288.45		8.470E+07	1.121E+00	Half-Life too short		
		417.63		-2.962E+07	1.121E+00	Half-Life too short		
		546.56		-1.391E+05	1.121E+00	Half-Life too short		
		836.80		9.664E+07	1.121E+00	Half-Life too short		
		1038.76		4.700E+07	1.121E+00	Half-Life too short		
		1124.00		-1.813E+08	1.121E+00	Half-Life too short		
		1131.51		6.291E+06	1.121E+00	Half-Life too short		
		1260.41	*	-8.442E+06	1.121E+00	Half-Life too short		
		1457.56		2.641E+09	1.121E+00	Half-Life too short		
		1678.03		-1.969E+06	1.121E+00	Half-Life too short		
		1706.46		-2.842E+07	1.121E+00	Half-Life too short		
		1791.20		1.282E+07	1.121E+00	Half-Life too short		
CS-136		66.91		1.894E-02	7.151E-01	1.163E+00	1.944E-01	0.016
	+	86.29		2.866E+00	1.090E+00	1.686E+00	2.501E-01	1.700
		153.22		1.821E-01	5.349E-01	9.169E-01	6.416E-02	0.199
		163.89		5.250E-01	8.586E-01	1.482E+00	1.023E-01	0.354
		176.55		-1.381E-02	3.063E-01	5.072E-01	3.130E-02	-0.027
		273.65		-2.185E-01	5.820E-01	5.818E-01	3.955E-02	-0.376
		340.57		3.006E-01	1.223E-01	2.025E-01	1.294E-02	1.485
		818.51		5.062E-02	6.398E-02	1.116E-01	9.804E-03	0.453
		1048.07	*	3.643E-02	9.795E-02	1.634E-01	1.494E-02	0.223
		1235.34		4.274E-01	5.710E-01	9.966E-01	1.073E-01	0.429
CE-139		165.85	*	-1.353E-02	2.663E-02	4.412E-02	2.353E-03	-0.307
BA-140		162.64		-2.522E-02	6.144E-01	1.037E+00	6.381E-02	-0.024
		304.84		8.133E-02	1.161E+00	1.683E+00	4.601E-01	0.048
		423.70		-1.412E+00	1.678E+00	2.456E+00	7.810E-01	-0.575
		537.32	*	-8.480E-02	2.013E-01	3.256E-01	1.059E-01	-0.260
LA-140	+	328.77		6.444E-01	3.482E-01	4.609E-01	3.102E-02	1.398
		432.53		-2.619E-01	1.799E+00	2.873E+00	1.867E-01	-0.091
		487.03		7.845E-02	1.142E-01	1.920E-01	1.275E-02	0.409
		751.79		-1.362E+00	1.466E+00	2.230E+00	1.832E-01	-0.611
		815.85		2.783E-02	2.791E-01	4.619E-01	4.477E-02	0.060
		867.82		2.514E-01	1.318E+00	1.911E+00	2.006E-01	0.132
		919.63		-4.074E-01	2.227E+00	3.455E+00	4.287E-01	-0.118
		925.24		6.614E-02	9.686E-01	1.587E+00	1.760E-01	0.042
		1596.49	*	-5.927E-02	8.062E-02	1.182E-01	8.981E-03	-0.501
CE-141		145.44	*	3.687E-02	5.827E-02	9.444E-02	5.552E-03	0.390
CE-143		57.37		2.139E-04	5.827E-02	Half-Life too short		
		231.56		3.179E-04	5.827E-02	Half-Life too short		
		293.26	*	2.802E-04	5.827E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	350.59		8.921E-03	5.827E-02	Half-Life too short		
		490.36		-2.867E-05	5.827E-02	Half-Life too short		
		664.57		3.448E-04	5.827E-02	Half-Life too short		
		721.93		2.351E-04	5.827E-02	Half-Life too short		
CE-144		80.11		-1.658E+00	2.291E+00	3.155E+00	3.438E-01	-0.525
		133.54	*	5.513E-02	2.019E-01	3.235E-01	4.601E-02	0.170
PM-144		476.78		1.446E-01	8.776E-02	1.382E-01	9.700E-03	1.046
		618.01		-2.985E-03	2.707E-02	4.483E-02	2.604E-03	-0.067
		696.49	*	3.876E-03	3.135E-02	5.247E-02	3.091E-03	0.074
		778.57		-7.993E-01	2.104E+00	3.351E+00	2.604E-01	-0.239
PR-144		696.49	*	2.623E-01	2.122E+00	3.552E+00	2.091E-01	0.074
		1489.15		-5.205E+00	9.162E+00	1.346E+01	1.092E+00	-0.387
PM-146		453.90	*	-7.799E-03	4.206E-02	6.676E-02	5.804E-03	-0.117
		633.02		-2.193E-01	1.273E+00	2.092E+00	7.688E-01	-0.105
		735.90		8.632E-02	1.355E-01	2.319E-01	6.516E-02	0.372
		747.13		2.585E-02	8.882E-02	1.498E-01	1.965E-02	0.173
ND-147	+	91.11		5.348E-01	1.660E-01	4.220E-01	4.775E-02	1.267
		319.41		-5.133E-01	2.709E+00	4.396E+00	2.668E-01	-0.117
		439.89		8.720E-01	4.822E+00	7.866E+00	4.645E-01	0.111
		531.02	*	4.221E-01	4.332E-01	7.709E-01	1.042E-01	0.548
PM-149		285.90	*	-1.197E+01	4.359E+01	7.086E+01	1.011E+01	-0.169
EU-152		121.78		1.301E-02	7.198E-02	1.154E-01	9.094E-03	0.113
		244.69		2.687E-01	3.167E-01	4.883E-01	2.878E-02	0.550
		344.27	*	-4.158E-02	1.004E-01	1.473E-01	9.934E-03	-0.282
		443.98		-2.507E-01	9.116E-01	1.440E+00	8.501E-02	-0.174
		778.89		-9.585E-02	2.471E-01	3.933E-01	3.058E-02	-0.244
		867.32		7.298E-01	8.450E-01	1.328E+00	1.340E-01	0.550
	+	964.01		5.178E-01	2.636E-01	5.444E-01	5.522E-02	0.951
		1085.78		-1.332E-01	3.903E-01	6.059E-01	4.889E-02	-0.220
		1112.02		2.944E-01	3.221E-01	5.354E-01	4.030E-02	0.550
		1407.95		2.155E-01	1.923E-01	3.543E-01	2.975E-02	0.608
GD-153		69.67		-6.977E-01	1.894E+00	2.696E+00	2.872E-01	-0.259
		83.37		2.622E+01	1.705E+01	2.387E+01	2.654E+00	1.098
		97.43	*	-5.750E-02	8.505E-02	1.170E-01	1.103E-02	-0.492
		103.18		-7.066E-02	1.014E-01	1.576E-01	1.336E-02	-0.448
EU-154		123.07		-1.313E-02	5.105E-02	8.031E-02	7.699E-03	-0.163
		247.94		-2.933E-01	3.687E-01	5.067E-01	4.868E-02	-0.579
		591.81		2.717E-01	5.563E-01	9.626E-01	9.281E-02	0.282
		723.30		1.099E-01	1.882E-01	2.863E-01	2.188E-02	0.384
		756.87		2.557E-01	7.213E-01	1.212E+00	1.337E-01	0.211
		873.19		2.018E-01	2.795E-01	4.845E-01	6.515E-02	0.416
		996.32		-4.991E-02	3.458E-01	5.516E-01	1.009E-01	-0.090
		1004.76		-4.370E-02	2.015E-01	3.188E-01	3.930E-02	-0.137
		1274.45	*	-4.348E-02	1.222E-01	1.966E-01	2.083E-02	-0.221
EU-155		48.70		-2.581E-02	3.435E+00	5.457E+00	5.323E-01	-0.005
		60.01		1.686E+00	5.465E+00	9.006E+00	1.018E+00	0.187
	+	86.54		2.976E-01	1.096E-01	1.754E-01	2.009E-02	1.697
		105.31	*	7.431E-02	1.069E-01	1.755E-01	1.452E-02	0.424
TB-160	+	86.79		7.787E-01	2.866E-01	4.570E-01	5.215E-02	1.704

---- Non-Identified Nuclides ----

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		197.04		-1.742E-01	5.059E-01	8.372E-01	4.668E-02	-0.208
		215.65		4.068E-01	6.866E-01	1.174E+00	6.708E-02	0.347
	+	298.57		2.420E-01	1.181E-01	1.801E-01	1.092E-02	1.343
		879.36	*	-5.004E-02	1.270E-01	1.993E-01	2.079E-02	-0.251
		962.29		6.523E-01	5.883E-01	9.228E-01	9.381E-02	0.707
		966.15		1.259E+00	2.878E-01	5.294E-01	5.353E-02	2.378
		1177.93		6.126E-02	3.320E-01	5.646E-01	3.503E-02	0.109
		1271.85		5.814E-02	6.784E-01	1.139E+00	8.674E-02	0.051
HO-166M		80.57		-2.355E-01	2.938E-01	4.026E-01	4.399E-02	-0.585
	+	184.41		9.842E-02	4.940E-02	6.435E-02	3.522E-03	1.530
		280.46		1.764E-02	8.942E-02	1.314E-01	7.921E-03	0.134
		410.95		1.628E-01	2.312E-01	3.902E-01	2.294E-02	0.417
		711.68	*	3.164E-02	5.752E-02	9.907E-02	6.158E-03	0.319
		752.31		-2.680E-01	2.584E-01	3.881E-01	2.770E-02	-0.691
		810.29		-4.157E-02	5.538E-02	8.462E-02	7.246E-03	-0.491
TM-171		51.35		-1.414E+01	3.837E+01	6.188E+01	6.759E+00	-0.228
		52.39		-1.000E+01	1.930E+01	3.089E+01	3.440E+00	-0.324
		59.40		-3.335E+00	2.982E+01	4.845E+01	5.508E+00	-0.069
		66.72	*	-1.481E+01	2.976E+01	4.749E+01	5.102E+00	-0.312
LU-176	+	88.36		5.866E-01	2.159E-01	3.544E-01	4.051E-02	1.655
		201.83		7.466E-04	2.683E-02	4.501E-02	2.526E-03	0.017
		306.84	*	-2.194E-02	2.327E-02	3.618E-02	2.195E-03	-0.606
		401.10		2.645E-02	6.360E+00	1.031E+01	6.044E-01	0.003
LU-177		112.95		9.976E-01	1.251E+00	2.057E+00	1.473E-01	0.485
	+	208.36	*	2.734E+00	1.265E+00	1.592E+00	9.011E-02	1.718
LU-177M		52.97		-8.383E-01	1.964E+00	3.157E+00	3.542E-01	-0.266
		54.07		3.379E-01	1.006E+00	1.666E+00	1.887E-01	0.203
		61.30		-8.910E-01	1.646E+00	2.628E+00	2.931E-01	-0.339
		121.62		8.120E-02	3.662E-01	5.882E-01	3.626E-02	0.138
		147.16		-1.732E-01	5.922E-01	9.950E-01	5.585E-02	-0.174
		171.86		4.709E-02	4.438E-01	7.517E-01	4.039E-02	0.063
		218.09		-4.685E-01	7.951E-01	1.295E+00	7.423E-02	-0.362
	+	268.79		2.738E+00	1.173E+00	1.466E+00	8.787E-02	1.868
		319.02		5.734E-03	2.439E-01	4.005E-01	2.430E-02	0.014
		367.43		-1.590E-01	8.753E-01	1.409E+00	8.401E-02	-0.113
		413.65	*	-1.069E-01	1.644E-01	2.541E-01	1.495E-02	-0.421
HF-181		56.28		-3.063E-01	1.070E+00	1.728E+00	1.971E-01	-0.177
		57.53		3.169E-01	5.650E-01	9.399E-01	1.071E-01	0.337
		65.20		1.415E-01	9.508E-01	1.554E+00	1.682E-01	0.091
		133.02		8.981E-03	6.609E-02	1.002E-01	5.874E-03	0.090
		136.25		-6.548E-02	4.361E-01	6.865E-01	3.981E-02	-0.095
		345.85		-2.225E-01	2.099E-01	2.741E-01	1.653E-02	-0.812
		482.03	*	-2.302E-02	4.525E-02	5.984E-02	3.524E-03	-0.385
W-181		56.28		-1.227E-01	4.290E-01	6.929E-01	7.900E-02	-0.177
		57.53		1.271E-01	2.267E-01	3.771E-01	4.299E-02	0.337
		65.20	*	5.630E-02	3.785E-01	6.187E-01	6.697E-02	0.091
TA-182		67.75		2.132E-02	1.121E-01	1.832E-01	1.961E-02	0.116
		100.10		3.287E-02	1.917E-01	2.747E-01	2.463E-02	0.120
		152.43		3.643E-02	3.013E-01	5.128E-01	2.837E-02	0.071

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		1.709E-01	3.161E-01	5.392E-01	3.105E-02	0.317
		1001.68		8.234E-01	1.915E+00	3.221E+00	3.085E-01	0.256
	+	1121.28		7.382E-01	2.239E-01	3.404E-01	2.495E-02	2.168
		1189.05		-1.272E-02	2.793E-01	4.656E-01	2.964E-02	-0.027
		1221.42	*	8.914E-02	1.846E-01	3.201E-01	2.191E-02	0.278
		1230.97		-5.268E-01	4.654E-01	7.036E-01	4.916E-02	-0.749
RE-183		57.98		-1.374E-03	2.236E-01	3.649E-01	4.157E-02	-0.004
		59.32		-2.254E-02	1.201E-01	1.945E-01	2.212E-02	-0.116
		67.20		-3.948E-02	2.033E-01	3.281E-01	3.518E-02	-0.120
		162.32	*	-1.476E-02	9.985E-02	1.680E-01	9.041E-03	-0.088
	+	208.81		3.033E+00	1.403E+00	1.740E+00	9.858E-02	1.743
		291.72		-5.260E-01	9.704E-01	1.348E+00	8.156E-02	-0.390
RE-184		57.98		-5.131E-03	8.346E-01	1.362E+00	1.552E-01	-0.004
		59.32		-8.409E-02	4.479E-01	7.256E-01	8.251E-02	-0.116
		67.20		-1.474E-01	7.587E-01	1.225E+00	1.313E-01	-0.120
		161.27		-2.061E-02	3.230E-01	5.450E-01	2.943E-02	-0.038
		216.55		7.832E-02	2.475E-01	4.187E-01	2.395E-02	0.187
		252.85	*	-5.934E-02	2.189E-01	3.586E-01	2.127E-02	-0.165
		318.01		-1.182E-01	4.215E-01	6.806E-01	4.130E-02	-0.174
		792.07		1.624E+00	9.738E-01	1.645E+00	1.333E-01	0.987
		903.28		6.159E-01	1.085E+00	1.637E+00	1.786E-01	0.376
		920.93		5.695E-03	3.978E-01	6.486E-01	6.943E-02	0.009
OS-185		59.72		7.136E-02	3.246E-01	5.335E-01	6.049E-02	0.134
		61.14		-1.166E-01	1.804E-01	2.866E-01	3.202E-02	-0.407
		69.30		1.434E-02	3.289E-01	4.775E-01	5.089E-02	0.030
		592.07		1.648E+00	2.206E+00	3.885E+00	2.165E-01	0.424
		646.12	*	4.889E-03	3.881E-02	6.525E-02	3.440E-03	0.075
		717.42		-4.594E-03	7.878E-01	1.303E+00	8.266E-02	-0.004
		874.81		7.159E-01	5.538E-01	9.984E-01	1.029E-01	0.717
		880.27		-5.527E-01	7.378E-01	1.116E+00	1.167E-01	-0.495
RE-188		155.03	*	1.223E-01	1.562E-01	2.714E-01	1.491E-02	0.451
	+	477.96		8.070E+00	5.153E+00	6.335E+00	3.733E-01	1.274
		633.10		-3.653E-01	2.518E+00	4.154E+00	2.224E-01	-0.088
W-188		63.58		4.415E+00	5.624E+01	9.067E+01	9.919E+00	0.049
		227.08		-7.602E+00	1.183E+01	1.918E+01	1.111E+00	-0.396
		290.67	*	1.192E+00	7.647E+00	1.118E+01	6.765E-01	0.107
IR-192	+	295.96		1.020E+00	1.871E-01	2.718E-01	1.671E-02	3.751
		308.46		3.568E-02	8.771E-02	1.472E-01	9.027E-03	0.242
		316.51	*	1.441E-02	3.144E-02	5.288E-02	3.224E-03	0.272
		468.07		3.346E-02	7.053E-02	1.085E-01	7.348E-03	0.308
		604.41		4.531E-02	4.415E-01	6.490E-01	7.272E-02	0.070
		612.46		4.311E-01	6.940E-01	1.069E+00	7.828E-02	0.403
AU-195		65.12		2.081E-02	1.771E-01	2.892E-01	3.132E-02	0.072
		66.83		7.970E-04	9.596E-02	1.560E-01	1.675E-02	0.005
	+	75.70		1.358E+00	3.036E-01	4.615E-01	4.937E-02	2.942
		98.88	*	1.599E-01	2.379E-01	3.494E-01	3.205E-02	0.458
	+	129.76		5.475E+00	3.218E+00	4.832E+00	2.864E-01	1.133
TL-200		367.94	*	-7.392E-06	3.218E+00	Half-Life too short		
		579.30		4.938E-04	3.218E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		828.27		1.390E-04	3.218E+00	Half-Life too short		
		1205.75		2.329E-05	3.218E+00	Half-Life too short		
TL-201		68.90		-4.318E-01	3.263E+00	4.699E+00	5.012E-01	-0.092
		70.82		4.482E-01	1.793E+00	2.624E+00	2.791E-01	0.171
		80.30		-2.395E+00	3.260E+00	4.487E+00	4.895E-01	-0.534
		135.34		4.556E-01	1.511E+01	2.398E+01	1.394E+00	0.019
		167.43	*	-1.800E+00	3.777E+00	6.263E+00	3.344E-01	-0.287
TL-202		68.90		-5.710E-02	4.314E-01	6.212E-01	6.627E-02	-0.092
		70.82		5.910E-02	2.364E-01	3.459E-01	3.680E-02	0.171
		80.30		-3.158E-01	4.300E-01	5.918E-01	6.456E-02	-0.534
		439.56	*	-2.381E-03	5.838E-02	9.382E-02	5.539E-03	-0.025
HG-203		70.83		2.869E-01	1.126E+00	1.648E+00	2.466E-01	0.174
		72.87		1.593E+00	6.488E-01	1.060E+00	1.548E-01	1.503
		82.60		7.181E-01	1.235E+00	1.665E+00	2.562E-01	0.431
		279.20	*	5.116E-02	4.155E-02	6.499E-02	4.141E-03	0.787
BI-207		72.80		4.252E-01	1.877E-01	3.165E-01	3.368E-02	1.344
	+	74.97		7.594E-01	1.698E-01	2.322E-01	2.480E-02	3.271
		84.90		3.523E-01	2.038E-01	3.095E-01	3.480E-02	1.138
		569.67		7.779E-04	2.901E-02	4.705E-02	2.667E-03	0.017
		1063.62	*	-7.238E-02	5.519E-02	7.681E-02	6.529E-03	-0.942
		1770.23		-2.442E+00	7.697E-01	6.688E-01	4.322E-02	-3.652
TL-207		81.07		-3.025E-01	2.401E-01	3.200E-01	3.506E-02	-0.945
		83.78		1.688E-01	1.481E-01	2.042E-01	2.277E-02	0.827
		94.90		1.829E-01	2.471E-01	3.651E-01	3.619E-02	0.501
		122.32		-3.196E-01	1.727E+00	2.726E+00	1.900E-01	-0.117
		144.24		4.096E-01	6.726E-01	1.089E+00	7.752E-02	0.376
		154.21		2.248E-01	3.636E-01	6.287E-01	4.257E-02	0.357
	+	269.46		6.474E-01	2.774E-01	3.550E-01	2.220E-02	1.823
		323.87	*	1.311E-01	6.933E-01	1.010E+00	1.678E-01	0.130
	+	338.28		8.648E+00	1.895E+00	2.569E+00	2.741E-01	3.367
		445.03		3.488E-01	2.151E+00	3.503E+00	3.619E-01	0.100
PO-209		260.50		-4.319E-01	8.915E+00	1.473E+01	8.789E-01	-0.029
		262.80		-2.221E+01	2.465E+01	3.892E+01	2.325E+00	-0.571
		896.60	*	-5.756E+00	6.573E+00	9.683E+00	1.058E+00	-0.594
BI-210		46.50	*	1.061E+00	5.368E+00	8.619E+00	7.279E-01	0.123
PB-210		46.50	*	1.061E+00	5.368E+00	8.619E+00	7.279E-01	0.123
PO-210		46.50	*	1.061E+00	5.367E+00	8.619E+00	6.433E-01	0.123
PB-211		404.84	*	-6.887E-01	9.897E-01	1.372E+00	8.553E-01	-0.502
		427.08		2.019E+00	2.290E+00	3.315E+00	2.049E+00	0.609
		831.96		-7.430E-01	1.234E+00	1.766E+00	1.108E+00	-0.421
BI-212	+	727.18	*	1.272E+00	4.696E-01	6.758E-01	5.609E-02	1.882
		785.46		2.580E-01	1.685E+00	2.653E+00	2.106E-01	0.097
		1620.62		6.386E-01	1.375E+00	2.381E+00	1.776E-01	0.268
PO-215		81.07		-3.025E-01	2.401E-01	3.200E-01	3.506E-02	-0.945
		83.78		1.688E-01	1.481E-01	2.042E-01	2.277E-02	0.827
		94.90		1.829E-01	2.471E-01	3.651E-01	3.619E-02	0.501
		122.32		-3.196E-01	1.727E+00	2.726E+00	1.900E-01	-0.117
		144.24		4.096E-01	6.726E-01	1.089E+00	7.752E-02	0.376
		154.21		2.248E-01	3.636E-01	6.287E-01	4.257E-02	0.357

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		6.474E-01	2.774E-01	3.550E-01	2.220E-02	1.823
		323.87	*	1.311E-01	6.933E-01	1.010E+00	1.678E-01	0.130
	+	338.28		8.648E+00	1.895E+00	2.569E+00	2.741E-01	3.367
		445.03		3.488E-01	2.151E+00	3.503E+00	3.619E-01	0.100
RN-219		271.23		4.751E-01	2.914E-01	4.350E-01	3.589E-02	1.092
		401.81	*	-6.468E-02	3.927E-01	6.294E-01	8.581E-02	-0.103
RN-220		549.76	*	5.261E+00	2.216E+01	3.791E+01	2.176E+00	0.139
RA-223		81.07		-3.025E-01	2.401E-01	3.200E-01	3.506E-02	-0.945
		83.78		1.688E-01	1.481E-01	2.042E-01	2.277E-02	0.827
		94.90		1.829E-01	2.471E-01	3.651E-01	3.619E-02	0.501
		122.32		-3.196E-01	1.727E+00	2.726E+00	1.900E-01	-0.117
		144.24		4.096E-01	6.726E-01	1.089E+00	7.752E-02	0.376
		154.21		2.248E-01	3.636E-01	6.287E-01	4.257E-02	0.357
	+	269.46		6.474E-01	2.774E-01	3.550E-01	2.220E-02	1.823
		323.87	*	1.311E-01	6.933E-01	1.010E+00	1.678E-01	0.130
	+	338.28		8.648E+00	1.895E+00	2.569E+00	2.741E-01	3.367
		445.03		3.488E-01	2.151E+00	3.503E+00	3.619E-01	0.100
AC-227		79.80		-2.916E-01	1.748E+00	2.478E+00	5.576E-01	-0.118
		236.00		9.177E-01	2.940E-01	4.684E-01	4.907E-02	1.959
		256.20	*	-1.123E-01	3.669E-01	5.992E-01	8.402E-02	-0.187
		286.10		-7.094E-01	1.492E+00	2.398E+00	2.802E-01	-0.296
	+	299.80		3.149E+00	1.609E+00	2.393E+00	3.921E-01	1.316
		304.40		1.624E+00	1.855E+00	2.826E+00	4.913E-01	0.575
		334.20		3.884E-01	2.426E+00	3.520E+00	6.481E-01	0.110
TH-227		79.80		-2.916E-01	1.748E+00	2.478E+00	5.641E-01	-0.118
	+	94.00		8.145E+00	3.377E+00	3.431E+00	7.687E-01	2.374
		236.00		9.177E-01	2.901E-01	4.684E-01	4.256E-02	1.959
		256.20	*	-1.123E-01	3.671E-01	5.992E-01	1.016E-01	-0.187
		286.10		-7.094E-01	1.650E+00	2.398E+00	2.403E+00	-0.296
	+	299.80		3.149E+00	1.609E+00	2.393E+00	3.921E-01	1.316
		304.40		1.624E+00	1.855E+00	2.826E+00	4.913E-01	0.575
		334.20		3.884E-01	2.426E+00	3.520E+00	6.481E-01	0.110
TH-229		85.43		3.466E-01	2.065E-01	3.124E-01	3.527E-02	1.109
	+	88.47		3.377E-01	1.243E-01	2.044E-01	2.330E-02	1.652
		100.00		1.160E-01	1.987E-01	2.907E-01	2.611E-02	0.399
		193.63	*	-3.314E-01	4.647E-01	7.576E-01	4.203E-02	-0.437
		210.97		8.144E-01	7.917E-01	1.229E+00	6.982E-02	0.663
PA-231		283.67	*	-6.722E-01	1.454E+00	2.338E+00	3.245E-01	-0.288
	+	301.29		1.260E+00	6.242E-01	9.711E-01	1.029E-01	1.297
TH-231		81.07		-3.025E-01	2.401E-01	3.200E-01	3.506E-02	-0.945
		83.78		1.688E-01	1.481E-01	2.042E-01	2.277E-02	0.827
		94.90		1.829E-01	2.471E-01	3.651E-01	3.619E-02	0.501
		122.32		-3.196E-01	1.727E+00	2.726E+00	1.900E-01	-0.117
		144.24		4.096E-01	6.726E-01	1.089E+00	7.752E-02	0.376
		154.21		2.248E-01	3.636E-01	6.287E-01	4.257E-02	0.357
	+	269.46		6.474E-01	2.774E-01	3.550E-01	2.220E-02	1.823
		323.87	*	1.311E-01	6.933E-01	1.010E+00	1.678E-01	0.130
	+	338.28		8.648E+00	1.895E+00	2.569E+00	2.741E-01	3.367
		445.03		3.488E-01	2.151E+00	3.503E+00	3.619E-01	0.100

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		6.065E+00	3.946E+00	5.978E+00	6.686E-01	1.015
	+	92.29		5.545E+00	2.014E+00	2.557E+00	2.676E-01	2.169
		95.87	*	-7.589E-01	7.859E-01	1.062E+00	1.032E-01	-0.715
		108.00		-7.167E-01	1.453E+00	2.255E+00	1.758E-01	-0.318
PA-233	+	75.28		2.216E+01	5.700E+00	7.085E+00	1.176E+00	3.128
	+	86.59		4.842E+00	2.165E+00	2.856E+00	7.949E-01	1.695
	+	300.12		8.779E-01	4.413E-01	6.695E-01	9.074E-02	1.311
		311.98	*	-3.925E-02	6.283E-02	9.683E-02	6.210E-03	-0.405
		340.50		1.843E+00	7.922E-01	1.135E+00	2.613E-01	1.624
		398.62		-3.821E-01	2.033E+00	3.252E+00	8.412E-01	-0.118
		415.76		2.275E-01	1.506E+00	2.458E+00	5.067E-01	0.093
PA-234		63.00		5.954E-01	1.715E+00	2.786E+00	4.717E-01	0.214
		94.67		2.441E-01	1.824E-01	2.729E-01	3.648E-02	0.894
		98.44		5.679E-03	9.998E-02	1.425E-01	7.964E-02	0.040
		99.86		5.039E-01	4.966E-01	7.404E-01	6.668E-02	0.681
		111.00		-1.265E-01	1.837E-01	2.844E-01	3.200E-02	-0.445
		131.20		3.858E-02	1.166E-01	1.673E-01	9.866E-03	0.231
		152.70		1.746E-02	2.969E-01	5.042E-01	7.922E-02	0.035
	+	186.00		3.543E+00	2.072E+00	2.388E+00	7.282E-01	1.484
		226.40		-1.153E-01	3.758E-01	6.182E-01	7.142E-02	-0.186
		227.20		-2.669E-01	4.085E-01	6.619E-01	3.834E-02	-0.403
		248.90		-6.091E-01	8.214E-01	1.192E+00	2.565E-01	-0.511
	+	293.70		6.556E+00	1.552E+00	1.709E+00	2.765E-01	3.836
		369.80		8.646E-02	8.259E-01	1.352E+00	2.822E-01	0.064
		568.70		-3.006E-01	9.447E-01	1.495E+00	8.481E-02	-0.201
		569.50		-1.471E-02	2.559E-01	4.125E-01	2.338E-02	-0.036
		574.00		-6.216E-02	1.313E+00	2.195E+00	1.240E-01	-0.028
		699.00		-4.093E-01	6.756E-01	1.063E+00	1.916E-01	-0.385
		706.10		-3.961E-01	9.853E-01	1.556E+00	6.875E-01	-0.254
		733.00		1.973E-01	3.823E-01	5.778E-01	1.243E-01	0.341
		742.81		-6.577E-01	1.352E+00	2.021E+00	1.355E+00	-0.325
		796.30		1.419E+00	1.095E+00	1.671E+00	4.500E-01	0.849
		805.60		5.806E-01	9.817E-01	1.663E+00	5.089E-01	0.349
		819.60		3.024E-01	1.225E+00	2.043E+00	7.777E-01	0.148
		826.30		-2.102E-01	7.572E-01	1.200E+00	5.380E-01	-0.175
		831.60		-3.016E-01	5.967E-01	9.237E-01	2.770E-01	-0.327
		876.40		-8.380E-02	8.076E-01	1.299E+00	1.338E+00	-0.065
		880.51		-1.218E-01	2.691E-01	4.202E-01	4.398E-02	-0.290
		883.24		1.555E-01	2.922E-01	4.681E-01	3.160E-01	0.332
		899.00		4.651E-02	7.578E-01	1.243E+00	5.497E-01	0.037
		925.00		1.641E-01	1.115E+00	1.840E+00	1.961E-01	0.089
		926.50		1.696E-02	1.683E-01	2.763E-01	7.194E-02	0.061
		946.00	*	1.445E-02	2.988E-01	4.877E-01	9.577E-02	0.030
		949.00		-3.099E-01	4.600E-01	6.997E-01	7.241E-02	-0.443
		980.50		4.433E-02	7.296E-01	1.189E+00	1.178E-01	0.037
		1394.10		3.843E-01	1.054E+00	1.781E+00	1.159E+00	0.216
PA-234M		766.41		1.695E+01	2.194E+01	3.104E+01	2.376E+01	0.546
		1001.03	*	-8.441E-01	6.390E+00	1.021E+01	1.220E+00	-0.083
TH-234		63.29	*	1.405E-01	1.453E+00	2.344E+00	4.506E-01	0.060

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.108E+00	8.356E-01	9.696E-01	1.844E-01	2.174
U-235	+	89.95		2.455E+00	1.050E+00	1.836E+00	5.803E-01	1.338
	+	93.35		2.534E+00	1.142E+00	1.150E+00	3.285E-01	2.203
		105.00		5.480E-01	1.063E+00	1.716E+00	5.100E-01	0.319
		143.76	*	8.467E-02	2.077E-01	3.330E-01	5.415E-02	0.254
		163.35		1.056E-01	4.304E-01	7.335E-01	1.309E-01	0.144
	+	185.71		1.312E-01	6.587E-02	8.863E-02	4.861E-03	1.481
		205.31		2.985E-01	5.605E-01	8.445E-01	1.514E-01	0.353
NP-236		94.67		1.870E-01	1.374E-01	2.072E-01	2.063E-02	0.903
		98.44		4.300E-03	7.554E-02	1.077E-01	9.965E-03	0.040
		111.00		-9.567E-02	1.387E-01	2.151E-01	1.593E-02	-0.445
		160.31	*	6.606E-03	7.404E-02	1.257E-01	6.802E-03	0.053
U-238		63.29	*	1.405E-01	1.453E+00	2.344E+00	4.506E-01	0.060
	+	92.38		2.108E+00	7.655E-01	9.696E-01	1.013E-01	2.174
NP-239		99.55		2.448E-01	1.640E-01	2.494E-01	2.259E-02	0.982
		117.00	*	-1.031E-01	1.842E-01	2.865E-01	1.915E-02	-0.360
	+	209.75		2.447E+00	1.132E+00	1.355E+00	7.686E-02	1.806
		228.18		7.139E-03	2.121E-01	3.541E-01	2.053E-02	0.020
	+	277.60		1.914E-01	2.363E-01	3.066E-01	1.846E-02	0.624
		334.30		1.678E-01	1.372E+00	1.985E+00	1.201E-01	0.085
AM-241		59.54	*	3.492E-03	1.739E-01	2.839E-01	3.363E-02	0.012
CM-243		99.55		2.519E-01	1.688E-01	2.566E-01	2.324E-02	0.982
		103.76	*	2.408E-02	9.477E-02	1.532E-01	1.286E-02	0.157
		117.00		-1.061E-01	1.895E-01	2.948E-01	1.970E-02	-0.360
	+	209.75		2.412E+00	1.116E+00	1.336E+00	7.576E-02	1.806
		228.18		7.212E-03	2.143E-01	3.577E-01	2.074E-02	0.020
	+	277.60		1.930E-01	2.382E-01	3.090E-01	1.861E-02	0.624
CM-247	+	278.00		7.939E-01	9.799E-01	1.274E+00	7.675E-02	0.623
		287.40		8.806E-01	1.179E+00	2.014E+00	1.217E-01	0.437
		402.60	*	1.833E-03	3.457E-02	5.619E-02	3.296E-03	0.033
CF-249		252.85		-2.247E-01	8.291E-01	1.358E+00	8.057E-02	-0.165
		333.44		-1.003E-02	2.224E-01	2.669E-01	1.616E-02	-0.038
		387.95	*	-2.439E-03	3.724E-02	6.019E-02	3.531E-03	-0.041
CF-251		176.60	*	-5.363E-03	1.189E-01	1.969E-01	1.066E-02	-0.027
		227.00		-2.307E-01	3.632E-01	5.889E-01	3.410E-02	-0.392
		285.00		1.566E-01	1.683E+00	2.789E+00	1.684E-01	0.056

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504002      *
* Acquisition date :  7-JUL-2009 08:43:46 Detector SN#     :                *
* Detector ID        : GAM08               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:06.02      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504002           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.5335E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
BE-7	8.370E-01	5.246E-01	5.144E-01	0.000E+00
K-40	2.644E+01	2.718E+00	4.640E-01	0.000E+00
CD-109	2.508E+00	9.047E-01	1.354E+00	0.000E+00
SN-126	2.473E-01	8.922E-02	1.373E-01	0.000E+00
CS-135	5.503E-01	2.325E-01	2.443E-01	0.000E+00
BA-137M	1.237E-01	6.522E-02	5.141E-02	0.000E+00
CS-137	1.307E-01	6.895E-02	5.434E-02	0.000E+00
TL-208	5.538E-01	8.508E-02	5.477E-02	0.000E+00
BI-211	3.504E+00	5.103E-01	3.420E-01	0.000E+00
PB-212	1.820E+00	1.706E-01	8.529E-02	0.000E+00
PO-212	1.820E+00	1.706E-01	8.529E-02	0.000E+00
BI-214	1.063E+00	1.690E-01	1.075E-01	0.000E+00
PB-214	1.219E+00	1.881E-01	1.192E-01	0.000E+00
PO-214	1.219E+00	1.881E-01	1.192E-01	0.000E+00
PO-216	1.820E+00	1.706E-01	8.529E-02	0.000E+00
PO-218	1.219E+00	1.881E-01	1.192E-01	0.000E+00
RA-224	4.785E+00	1.125E+00	9.703E-01	0.000E+00
RA-226	1.063E+00	1.690E-01	1.075E-01	0.000E+00
AC-228	1.856E+00	3.823E-01	1.835E-01	0.000E+00
RA-228	1.856E+00	3.823E-01	1.835E-01	0.000E+00
TH-228	1.820E+00	1.706E-01	8.528E-02	0.000E+00
TH-230	1.063E+00	1.690E-01	1.075E-01	0.000E+00
TH-232	1.856E+00	3.823E-01	1.835E-01	0.000E+00
U-234	1.063E+00	1.690E-01	1.075E-01	0.000E+00
NP-237	7.263E-01	3.004E-01	4.279E-01	0.000E+00
AM-243	4.231E-01	9.274E-02	9.323E-02	0.000E+00
ANH-511	1.622E-01	6.141E-02	4.481E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

NA-22	-6.103E-03	4.183E-02	7.093E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.315E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	7.357E-03	2.720E-02	4.748E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.485E-02	8.414E-02	0.000E+00	FAIL ABUN
SC-46	5.334E-03	3.519E-02	6.069E-02	0.000E+00	FAIL ABUN
V-48	4.681E-02	6.292E-02	1.128E-01	0.000E+00	NOT IDENT.
CR-51	-1.021E-01	3.262E-01	5.627E-01	0.000E+00	NOT IDENT.
MN-52	-2.070E-02	1.503E-01	2.502E-01	0.000E+00	NOT IDENT.
MN-54	-1.095E-02	3.676E-02	6.144E-02	0.000E+00	NOT IDENT.
CO-56	-1.791E-03	3.493E-02	5.942E-02	0.000E+00	NOT IDENT.
CO-57	-3.419E-03	2.437E-02	4.226E-02	0.000E+00	NOT IDENT.
CO-58	-2.071E-02	3.444E-02	5.584E-02	0.000E+00	NOT IDENT.
FE-59	1.608E-02	8.297E-02	1.409E-01	0.000E+00	NOT IDENT.
CO-60	-3.463E-02	3.922E-02	6.112E-02	0.000E+00	NOT IDENT.
ZN-65	2.437E-02	9.822E-02	1.453E-01	0.000E+00	NOT IDENT.
GE-68	6.748E-01	1.147E+00	2.025E+00	0.000E+00	NOT IDENT.
AS-73	3.110E-02	9.659E-01	1.769E+00	0.000E+00	NOT IDENT.
AS-74	-1.582E-02	7.518E-02	1.306E-01	0.000E+00	NOT IDENT.
SE-75	6.814E-03	4.397E-02	6.950E-02	0.000E+00	NOT IDENT.
BR-77	-8.128E-02	4.782E+00	8.052E+00	0.000E+00	FAIL ABUN
SR-82	-8.323E-02	3.331E-01	5.623E-01	0.000E+00	NOT IDENT.
RB-83	2.207E-03	6.012E-02	1.017E-01	0.000E+00	NOT IDENT.
RB-84	7.085E-03	6.261E-02	1.077E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.223E+00	1.238E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.617E-02	6.200E-02	0.000E+00	NOT IDENT.
RB-86	2.112E-01	6.893E-01	1.185E+00	0.000E+00	NOT IDENT.
Y-88	1.395E-02	3.223E-02	5.750E-02	0.000E+00	NOT IDENT.
ZR-88	4.519E-04	2.822E-02	4.879E-02	0.000E+00	NOT IDENT.
Y-91	-9.262E+00	1.665E+01	2.739E+01	0.000E+00	NOT IDENT.
NB-94	-2.515E-03	3.032E-02	5.238E-02	0.000E+00	NOT IDENT.
NB-95	2.117E-02	4.201E-02	7.483E-02	0.000E+00	NOT IDENT.
NB-95M	2.152E-01	1.332E-01	2.260E-01	0.000E+00	NOT IDENT.
ZR-95	1.232E-02	6.293E-02	1.094E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.789E+03	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.113E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.754E-01	5.870E+00	1.018E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.584E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.563E-03	2.937E-02	5.311E-02	0.000E+00	NOT IDENT.
RH-102	2.627E-02	3.484E-02	5.497E-02	0.000E+00	NOT IDENT.
RU-103	1.597E-02	3.556E-02	6.213E-02	0.000E+00	NOT IDENT.
RH-106	-1.034E-01	2.694E-01	4.591E-01	0.000E+00	FAIL ABUN
RU-106	-1.034E-01	2.692E-01	4.591E-01	0.000E+00	FAIL ABUN
AG-108M	2.667E-02	3.107E-02	5.608E-02	0.000E+00	NOT IDENT.
AG-110M	2.823E-02	3.175E-02	5.303E-02	0.000E+00	NOT IDENT.
IN-111	1.261E-01	5.777E-01	9.227E-01	0.000E+00	NOT IDENT.
IN-113M	-2.335E-02	4.086E-02	6.800E-02	0.000E+00	NOT IDENT.
SN-113	-2.335E-02	4.086E-02	6.800E-02	0.000E+00	NOT IDENT.
IN-114M	-5.070E-02	1.756E-01	2.775E-01	0.000E+00	NOT IDENT.
CD-115	2.318E+00	4.797E+00	8.804E+00	0.000E+00	NOT IDENT.
SN-117M	6.899E-04	4.444E-02	8.196E-02	0.000E+00	NOT IDENT.
SB-122	1.774E-01	1.101E+00	1.970E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.018E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.093E-03	2.556E-02	4.724E-02	0.000E+00	NOT IDENT.
I-124	-1.817E-01	4.600E-01	6.769E-01	0.000E+00	FAIL ABUN
SB-124	2.053E-02	5.940E-02	1.060E-01	0.000E+00	FAIL ABUN
SB-125	3.874E-02	8.677E-02	1.530E-01	0.000E+00	FAIL ABUN
TE-125M	-1.349E+00	8.929E+00	1.543E+01	0.000E+00	NOT IDENT.
I-126	4.555E-02	1.514E-01	2.373E-01	0.000E+00	NOT IDENT.
SB-126	-6.457E-02	1.283E-01	1.919E-01	0.000E+00	FAIL ABUN
SB-127	-2.091E-01	8.040E-01	1.372E+00	0.000E+00	NOT IDENT.
XE-127	-1.063E-02	4.472E-02	7.447E-02	0.000E+00	NOT IDENT.
I-131	-3.449E-02	8.824E-02	1.496E-01	0.000E+00	NOT IDENT.
TE-132	9.223E-03	3.933E-01	7.084E-01	0.000E+00	NOT IDENT.
BA-133	-2.358E-02	4.763E-02	6.938E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	8.782E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.532E-02	5.135E-02	8.870E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.749E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.643E-02	9.599E-02	1.662E-01	0.000E+00	FAIL ABUN
CE-139	-1.353E-02	2.610E-02	4.704E-02	0.000E+00	NOT IDENT.
BA-140	-8.480E-02	1.972E-01	3.370E-01	0.000E+00	NOT IDENT.
LA-140	-5.927E-02	7.901E-02	1.189E-01	0.000E+00	FAIL ABUN
CE-141	3.687E-02	5.711E-02	1.010E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.985E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	5.513E-02	1.979E-01	3.467E-01	0.000E+00	NOT IDENT.
PM-144	3.876E-03	3.073E-02	5.395E-02	0.000E+00	NOT IDENT.
PR-144	2.623E-01	2.080E+00	3.651E+00	0.000E+00	NOT IDENT.
PM-146	-7.799E-03	4.121E-02	6.941E-02	0.000E+00	NOT IDENT.
ND-147	4.221E-01	4.246E-01	7.982E-01	0.000E+00	FAIL ABUN

PM-149	-1.197E+01	4.272E+01	7.454E+01	0.000E+00	NOT IDENT.
EU-152	-4.158E-02	9.843E-02	1.542E-01	0.000E+00	FAIL ABUN
GD-153	-5.750E-02	8.335E-02	1.263E-01	0.000E+00	NOT IDENT.
EU-154	-4.348E-02	1.197E-01	1.989E-01	0.000E+00	NOT IDENT.
EU-155	7.431E-02	1.048E-01	1.891E-01	0.000E+00	FAIL ABUN
TB-160	-5.004E-02	1.244E-01	2.037E-01	0.000E+00	FAIL ABUN
HO-166M	3.164E-02	5.637E-02	1.018E-01	0.000E+00	FAIL ABUN
TM-171	-1.481E+01	2.916E+01	5.175E+01	0.000E+00	NOT IDENT.
LU-176	-2.194E-02	2.280E-02	3.799E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.239E+00	1.687E+00	0.000E+00	FAIL ABUN
LU-177M	-1.069E-01	1.611E-01	2.648E-01	0.000E+00	FAIL ABUN
HF-181	-2.302E-02	4.434E-02	6.212E-02	0.000E+00	NOT IDENT.
W-181	5.630E-02	3.709E-01	6.745E-01	0.000E+00	NOT IDENT.
TA-182	8.914E-02	1.809E-01	3.242E-01	0.000E+00	FAIL ABUN
RE-183	-1.476E-02	9.785E-02	1.792E-01	0.000E+00	FAIL ABUN
RE-184	-5.934E-02	2.145E-01	3.784E-01	0.000E+00	NOT IDENT.
OS-185	4.889E-03	3.803E-02	6.722E-02	0.000E+00	NOT IDENT.
RE-188	1.223E-01	1.531E-01	2.898E-01	0.000E+00	FAIL ABUN
W-188	1.192E+00	7.494E+00	1.176E+01	0.000E+00	NOT IDENT.
IR-192	1.441E-02	3.082E-02	5.548E-02	0.000E+00	FAIL ABUN
AU-195	1.599E-01	2.331E-01	3.772E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.023E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.800E+00	3.701E+00	6.676E+00	0.000E+00	NOT IDENT.
TL-202	-2.381E-03	5.721E-02	9.761E-02	0.000E+00	NOT IDENT.
HG-203	5.116E-02	4.072E-02	6.841E-02	0.000E+00	NOT IDENT.
BI-207	-7.238E-02	5.409E-02	7.808E-02	0.000E+00	FAIL ABUN
TL-207	1.311E-01	6.794E-01	1.059E+00	0.000E+00	FAIL ABUN
PO-209	-5.756E+00	6.441E+00	9.889E+00	0.000E+00	NOT IDENT.
BI-210	1.061E+00	5.260E+00	9.470E+00	0.000E+00	NOT IDENT.
PB-210	1.061E+00	5.260E+00	9.470E+00	0.000E+00	NOT IDENT.
PO-210	1.061E+00	5.260E+00	9.470E+00	0.000E+00	NOT IDENT.
PB-211	-6.887E-01	9.699E-01	1.430E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.602E-01	6.940E-01	0.000E+00	FAIL ABUN
PO-215	1.311E-01	6.794E-01	1.059E+00	0.000E+00	FAIL ABUN
RN-219	-6.468E-02	3.849E-01	6.564E-01	0.000E+00	NOT IDENT.
RN-220	5.261E+00	2.172E+01	3.921E+01	0.000E+00	NOT IDENT.
RA-223	1.311E-01	6.794E-01	1.059E+00	0.000E+00	FAIL ABUN
AC-227	-1.123E-01	3.596E-01	6.320E-01	0.000E+00	FAIL ABUN
TH-227	-1.123E-01	3.597E-01	6.320E-01	0.000E+00	FAIL ABUN
TH-229	-3.314E-01	4.554E-01	8.047E-01	0.000E+00	FAIL ABUN
PA-231	-6.722E-01	1.425E+00	2.460E+00	0.000E+00	FAIL ABUN
TH-231	1.311E-01	6.794E-01	1.059E+00	0.000E+00	FAIL ABUN
U-231	-7.589E-01	7.702E-01	1.147E+00	0.000E+00	FAIL ABUN
PA-233	-3.925E-02	6.157E-02	1.016E-01	0.000E+00	FAIL ABUN
PA-234	1.445E-02	2.928E-01	4.973E-01	0.000E+00	FAIL ABUN
PA-234M	-8.441E-01	6.262E+00	1.040E+01	0.000E+00	NOT IDENT.
TH-234	1.405E-01	1.424E+00	2.557E+00	0.000E+00	FAIL ABUN
U-235	8.467E-02	2.035E-01	3.563E-01	0.000E+00	FAIL ABUN
NP-236	6.606E-03	7.256E-02	1.341E-01	0.000E+00	NOT IDENT.
U-238	1.405E-01	1.424E+00	2.557E+00	0.000E+00	FAIL ABUN
NP-239	-1.031E-01	1.806E-01	3.081E-01	0.000E+00	FAIL ABUN
AM-241	3.492E-03	1.705E-01	3.102E-01	0.000E+00	NOT IDENT.
CM-243	2.408E-02	9.288E-02	1.652E-01	0.000E+00	FAIL ABUN
CM-247	1.833E-03	3.388E-02	5.859E-02	0.000E+00	FAIL ABUN
CF-249	-2.439E-03	3.649E-02	6.283E-02	0.000E+00	NOT IDENT.
CF-251	-5.363E-03	1.166E-01	2.097E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:44:21.98

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504002.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:43:46.
Sample ID         : G232504002           Sample quantity  : 1.53350E+02 GRAM
Detector name     : GAM08                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:06.02  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
BE-7	477.59	85	10.42*	2.814E+00	7.080E-01	8.370E-01	63.95
K-40	1460.81	1204	10.67*	1.045E+00	2.644E+01	2.644E+01	10.49
CD-109	88.03	206	3.72*	5.517E+00	2.460E+00	2.508E+00	36.81
SN-126	64.28	------	9.60	2.945E+00	------	Line Not Found	------
	86.94	206	8.90	5.517E+00	1.028E+00	1.028E+00	54.69
	87.57	206	37.00*	5.517E+00	2.473E-01	2.473E-01	36.81
CS-135	268.24	155	16.00*	4.302E+00	5.503E-01	5.503E-01	43.11
BA-137M	661.65	98	89.98*	2.159E+00	1.236E-01	1.237E-01	53.81
CS-137	661.65	98	85.12*	2.159E+00	1.306E-01	1.307E-01	53.81
TL-208	277.35	47	6.80	4.217E+00	3.969E-01	3.969E-01	123.75
	510.84	177	21.60	2.673E+00	7.510E-01	7.510E-01	39.51
	583.14	458	84.20*	2.402E+00	5.538E-01	5.538E-01	15.68
	860.37	60	12.46	1.701E+00	6.900E-01	6.900E-01	77.76
BI-211	72.87	------	1.27	4.110E+00	------	Line Not Found	------
	351.07	657	12.94*	3.546E+00	3.504E+00	3.504E+00	14.86
PB-212	74.81	496	10.70	4.347E+00	2.610E+00	2.610E+00	24.24
	77.11	721	18.00	4.602E+00	2.131E+00	2.131E+00	16.83
	87.30	206	8.00	5.517E+00	1.144E+00	1.144E+00	38.14
	238.63	1557	44.60*	4.695E+00	1.820E+00	1.820E+00	9.56
	300.09	94	3.41	3.984E+00	1.699E+00	1.699E+00	49.14
PO-212	74.81	496	10.70	4.347E+00	2.610E+00	2.610E+00	24.24
	77.11	721	18.00	4.602E+00	2.131E+00	2.131E+00	16.83
	87.30	206	8.00	5.517E+00	1.144E+00	1.144E+00	38.14
	115.19	------	0.60	6.485E+00	------	Line Not Found	------
	238.63	1557	44.60*	4.695E+00	1.820E+00	1.820E+00	9.56
	300.09	94	3.41	3.984E+00	1.699E+00	1.699E+00	49.14
BI-214	609.31	466	46.30*	2.317E+00	1.063E+00	1.063E+00	16.23
	768.36	------	5.04	1.890E+00	------	Line Not Found	------
	934.06	------	3.21	1.574E+00	------	Line Not Found	------
	1120.29	129	15.10	1.323E+00	1.583E+00	1.583E+00	31.05
	1238.11	------	5.94	1.205E+00	------	Line Not Found	------
	1377.67	23	4.11	1.096E+00	1.273E+00	1.273E+00	82.46

Sample ID : G232504002 Acquisition date : 7-JUL-2009 08:43:46

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	96	15.80	9.225E-01	1.620E+00	1.620E+00	25.13
PB-214	74.81	496	6.21	4.347E+00	4.497E+00	4.497E+00	23.56
	77.11	721	10.50	4.602E+00	3.654E+00	3.654E+00	18.47
	87.30	206	4.67	5.517E+00	1.960E+00	1.960E+00	37.61
	241.98	359	7.49	4.653E+00	2.524E+00	2.524E+00	24.64
	295.21	432	19.20	4.032E+00	1.366E+00	1.366E+00	19.35
	351.92	657	37.20*	3.546E+00	1.219E+00	1.219E+00	15.75
PO-214	74.81	496	6.21	4.347E+00	4.497E+00	4.497E+00	23.56
	77.11	721	10.50	4.602E+00	3.654E+00	3.654E+00	18.47
	87.30	206	4.67	5.517E+00	1.960E+00	1.960E+00	37.61
	241.98	359	7.49	4.653E+00	2.524E+00	2.524E+00	24.64
	295.21	432	19.20	4.032E+00	1.366E+00	1.366E+00	19.35
	351.92	657	37.20*	3.546E+00	1.219E+00	1.219E+00	15.75
PO-216	74.81	496	10.70	4.347E+00	2.610E+00	2.610E+00	24.24
	77.11	721	18.00	4.602E+00	2.131E+00	2.131E+00	16.83
	87.30	206	8.00	5.517E+00	1.144E+00	1.144E+00	38.14
	238.63	1557	44.60*	4.695E+00	1.820E+00	1.820E+00	9.56
	300.09	94	3.41	3.984E+00	1.699E+00	1.699E+00	49.14
PO-218	74.81	496	6.21	4.347E+00	4.497E+00	4.497E+00	23.56
	77.11	721	10.50	4.602E+00	3.654E+00	3.654E+00	18.47
	87.30	206	4.67	5.517E+00	1.960E+00	1.960E+00	37.61
	241.98	359	7.49	4.653E+00	2.524E+00	2.524E+00	24.64
	295.21	432	19.20	4.032E+00	1.366E+00	1.366E+00	19.35
	351.92	657	37.20*	3.546E+00	1.219E+00	1.219E+00	15.75
RA-224	240.98	359	3.95*	4.653E+00	4.785E+00	4.785E+00	24.00
RA-226	609.31	466	46.30*	2.317E+00	1.063E+00	1.063E+00	16.23
	768.36	------	5.04	1.890E+00	------ Line Not Found		------
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	129	15.10	1.323E+00	1.583E+00	1.583E+00	31.05
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	23	4.11	1.096E+00	1.273E+00	1.273E+00	82.46
	1764.49	96	15.80	9.225E-01	1.620E+00	1.620E+00	25.13
AC-228	338.32	352	11.40	3.650E+00	2.071E+00	2.071E+00	45.07
	911.07	339	27.70*	1.613E+00	1.856E+00	1.856E+00	21.02
	969.11	213	16.60	1.520E+00	2.064E+00	2.064E+00	30.72
RA-228	338.32	352	11.40	3.650E+00	2.071E+00	2.071E+00	45.07
	911.07	339	27.70*	1.613E+00	1.856E+00	1.856E+00	21.02
	969.11	213	16.60	1.520E+00	2.064E+00	2.064E+00	30.72
TH-228	84.40	------	1.21	5.304E+00	------ Line Not Found		------
	238.60	1557	44.60*	4.695E+00	1.820E+00	1.820E+00	9.56
	300.10	94	3.41	3.984E+00	1.699E+00	1.699E+00	76.29
TH-230	609.31	466	46.30*	2.317E+00	1.063E+00	1.063E+00	16.23
	768.36	------	5.04	1.890E+00	------ Line Not Found		------
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	129	15.10	1.323E+00	1.583E+00	1.583E+00	31.05
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	23	4.11	1.096E+00	1.273E+00	1.273E+00	82.46
	1764.49	96	15.80	9.225E-01	1.620E+00	1.620E+00	25.13
TH-232	338.32	352	11.40	3.650E+00	2.071E+00	2.071E+00	20.08

Sample ID : G232504002 Acquisition date : 7-JUL-2009 08:43:46

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	911.07	339	27.70*	1.613E+00	1.856E+00	1.856E+00	21.02
	969.11	213	16.60	1.520E+00	2.064E+00	2.064E+00	30.72
U-234	609.31	466	46.30*	2.317E+00	1.063E+00	1.063E+00	16.23
	768.36	------	5.04	1.890E+00	------ Line Not Found		------
	934.06	------	3.21	1.574E+00	------ Line Not Found		------
	1120.29	129	15.10	1.323E+00	1.583E+00	1.583E+00	31.05
	1238.11	------	5.94	1.205E+00	------ Line Not Found		------
	1377.67	23	4.11	1.096E+00	1.273E+00	1.273E+00	82.46
	1764.49	96	15.80	9.225E-01	1.620E+00	1.620E+00	25.13
NP-237	86.50	206	12.60*	5.517E+00	7.263E-01	7.263E-01	42.20
	95.87	------	2.60	6.030E+00	------ Line Not Found		------
AM-243	74.67	496	66.00*	4.347E+00	4.231E-01	4.231E-01	22.37
	86.72	206	0.34	5.517E+00	2.724E+01	2.724E+01	36.81
	117.66	------	0.55	6.497E+00	------ Line Not Found		------
	142.18	------	0.13	6.311E+00	------ Line Not Found		------
ANH-511	511.00	177	100.00*	2.673E+00	1.622E-01	1.622E-01	38.63

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232504002 Acquisition date : 7-JUL-2009 08:43:46

Total number of lines in spectrum 33
Number of unidentified lines 1
Number of lines tentatively identified by NID 32 96.97%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BE-7	53.44D	1.18	7.080E-01	8.370E-01	5.353E-01	63.95	
K-40	1.28E+09Y	1.00	2.644E+01	2.644E+01	0.277E+01	10.49	
CD-109	464.00D	1.02	2.460E+00	2.508E+00	0.923E+00	36.81	
SN-126	1.00E+05Y	1.00	2.473E-01	2.473E-01	0.910E-01	36.81	
CS-135	2.30E+06Y	1.00	5.503E-01	5.503E-01	2.372E-01	43.11	
BA-137M	30.17Y	1.00	1.236E-01	1.237E-01	0.666E-01	53.81	
CS-137	30.17Y	1.00	1.306E-01	1.307E-01	0.704E-01	53.81	
TL-208	1.41E+10Y	1.00	5.538E-01	5.538E-01	0.868E-01	15.68	
BI-211	7.04E+08Y	1.00	3.504E+00	3.504E+00	0.521E+00	14.86	
PB-212	1.41E+10Y	1.00	1.820E+00	1.820E+00	0.174E+00	9.56	
PO-212	1.41E+10Y	1.00	1.820E+00	1.820E+00	0.174E+00	9.56	
BI-214	1600.00Y	1.00	1.063E+00	1.063E+00	0.172E+00	16.23	
PB-214	1600.00Y	1.00	1.219E+00	1.219E+00	0.192E+00	15.75	
PO-214	1600.00Y	1.00	1.219E+00	1.219E+00	0.192E+00	15.75	
PO-216	1.41E+10Y	1.00	1.820E+00	1.820E+00	0.174E+00	9.56	
PO-218	1600.00Y	1.00	1.219E+00	1.219E+00	0.192E+00	15.75	
RA-224	1.41E+10Y	1.00	4.785E+00	4.785E+00	1.148E+00	24.00	
RA-226	1600.00Y	1.00	1.063E+00	1.063E+00	0.172E+00	16.23	
AC-228	1.41E+10Y	1.00	1.856E+00	1.856E+00	0.390E+00	21.02	
RA-228	1.41E+10Y	1.00	1.856E+00	1.856E+00	0.390E+00	21.02	
TH-228	1.41E+10Y	1.00	1.820E+00	1.820E+00	0.174E+00	9.56	
TH-230	4.47E+09Y	1.00	1.063E+00	1.063E+00	0.172E+00	16.23	
TH-232	1.41E+10Y	1.00	1.856E+00	1.856E+00	0.390E+00	21.02	
U-234	4.47E+09Y	1.00	1.063E+00	1.063E+00	0.172E+00	16.23	
NP-237	2.14E+06Y	1.00	7.263E-01	7.263E-01	3.065E-01	42.20	
AM-243	7380.00Y	1.00	4.231E-01	4.231E-01	0.946E-01	22.37	
ANH-511	1.00E+09Y	1.00	1.622E-01	1.622E-01	0.627E-01	38.63	
	Total Activity :		6.157E+01	6.175E+01			

Grand Total Activity : 6.157E+01 6.175E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232504002 Acquisition date : 7-JUL-2009 08:43:46

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
8	89.89	154	221	0.87	179.85	178	18	2.15E-02	28.8	5.70E+00	T
8	92.86	274	574	1.46	185.77	178	18	3.80E-02	34.8	5.88E+00	T
0	128.89	112	345	1.16	257.75	254	7	1.55E-02	58.5	6.47E+00	T
0	185.80	160	411	1.31	371.44	367	9	2.23E-02	49.9	5.54E+00	T
0	208.77	167	357	0.88	417.33	412	10	2.31E-02	45.9	5.14E+00	T
0	327.38	100	178	1.35	654.32	650	10	1.39E-02	53.6	3.74E+00	T
0	462.74	55	138	1.22	924.83	919	10	7.70E-03	83.6	2.89E+00	T
0	726.99	122	88	1.24	1453.06	1448	12	1.69E-02	36.0	1.99E+00	T
0	794.21	98	64	3.80	1587.47	1579	17	1.36E-02	42.4	1.83E+00	
1	964.54	46	33	1.77	1928.11	1925	20	6.45E-03	49.9	1.53E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:44:26.98

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504002.CNF;1 *
* Acquisition date  : 7-JUL-2009 08:43:46.  Detector SN#     :             *
* Detector ID       : GAM08                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:06.02          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504002            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.53350E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06.7MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	8.370E-01	5.353E-01	4.954E-01	3.384E-02	1.689
K-40	2.644E+01	2.773E+00	4.604E-01	3.901E-02	57.421
CD-109	2.508E+00	9.231E-01	1.251E+00	1.440E-01	2.005
SN-126	2.473E-01	9.104E-02	1.268E-01	1.456E-02	1.951
CS-135	5.503E-01	2.372E-01	2.319E-01	1.810E-02	2.373
BA-137M	1.237E-01	6.655E-02	4.994E-02	2.580E-03	2.477
CS-137	1.307E-01	7.036E-02	5.279E-02	2.742E-03	2.477
TL-208	5.538E-01	8.682E-02	5.302E-02	3.459E-03	10.444
BI-211	3.504E+00	5.207E-01	3.268E-01	2.166E-02	10.723
PB-212	1.820E+00	1.741E-01	8.071E-02	5.956E-03	22.550
PO-212	1.820E+00	1.741E-01	8.071E-02	5.956E-03	22.550
BI-214	1.063E+00	1.725E-01	1.042E-01	7.862E-03	10.205
PB-214	1.219E+00	1.920E-01	1.139E-01	9.606E-03	10.702
PO-214	1.219E+00	1.920E-01	1.139E-01	9.606E-03	10.702
PO-216	1.820E+00	1.741E-01	8.071E-02	5.956E-03	22.550
PO-218	1.219E+00	1.920E-01	1.139E-01	9.606E-03	10.702
RA-224	4.785E+00	1.148E+00	9.185E-01	5.395E-02	5.210
RA-226	1.063E+00	1.725E-01	1.042E-01	7.862E-03	10.205

Sample ID : G232504002 Acquisition date : 7-JUL-2009 08:43:46

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	1.856E+00	3.901E-01	1.798E-01	2.339E-02	10.325
RA-228	1.856E+00	3.901E-01	1.798E-01	2.339E-02	10.325
TH-228	1.820E+00	1.741E-01	8.071E-02	5.955E-03	22.552
TH-230	1.063E+00	1.725E-01	1.042E-01	7.862E-03	10.205
TH-232	1.856E+00	3.901E-01	1.798E-01	2.339E-02	10.325
U-234	1.063E+00	1.725E-01	1.042E-01	7.862E-03	10.205
NP-237	7.263E-01	3.065E-01	3.951E-01	9.311E-02	1.838
AM-243	4.231E-01	9.463E-02	8.578E-02	9.155E-03	4.932
ANH-511	1.622E-01	6.266E-02	4.323E-02	2.526E-03	3.752

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	-6.103E-03		4.268E-02	7.012E-02	5.376E-03	-0.087
NA-24	2.011E-02		2.712E-02	Half-Life too short		
AL-26	7.357E-03		2.775E-02	4.738E-02	2.923E-03	0.155
TI-44	3.933E-01	+	6.618E-02	7.751E-02	8.375E-03	5.074
SC-46	5.334E-03		3.591E-02	5.941E-02	6.367E-03	0.090
V-48	4.681E-02		6.420E-02	1.107E-01	1.091E-02	0.423
CR-51	-1.021E-01		3.328E-01	5.365E-01	3.596E-02	-0.190
MN-52	-2.070E-02		1.533E-01	2.481E-01	2.063E-02	-0.083
MN-54	-1.095E-02		3.751E-02	6.005E-02	5.528E-03	-0.182
CO-56	-1.791E-03		3.564E-02	5.809E-02	5.535E-03	-0.031
CO-57	-3.419E-03		2.487E-02	3.934E-02	2.412E-03	-0.087
CO-58	-2.071E-02		3.515E-02	5.453E-02	4.688E-03	-0.380
FE-59	1.608E-02		8.467E-02	1.387E-01	1.188E-02	0.116
CO-60	-3.463E-02		4.002E-02	6.049E-02	5.190E-03	-0.573
ZN-65	2.437E-02		1.002E-01	1.431E-01	1.068E-02	0.170
GE-68	6.748E-01		1.171E+00	1.992E+00	1.641E-01	0.339
AS-73	3.110E-02		9.857E-01	1.615E+00	1.820E-01	0.019
AS-74	-1.582E-02		7.672E-02	1.266E-01	7.028E-03	-0.125
SE-75	6.814E-03		4.487E-02	6.595E-02	3.983E-03	0.103
BR-77	-8.128E-02		4.880E+00	7.773E+00	4.525E-01	-0.010
SR-82	-8.323E-02		3.399E-01	5.485E-01	4.232E-02	-0.152
RB-83	2.207E-03		6.135E-02	9.816E-02	5.715E-03	0.022
RB-84	7.085E-03		6.389E-02	1.054E-01	1.106E-02	0.067
KR-85	1.314E+01		7.370E+00	1.195E+01	6.974E-01	1.100
SR-85	6.581E-02		3.690E-02	5.983E-02	3.492E-03	1.100
RB-86	2.112E-01		7.034E-01	1.166E+00	9.620E-02	0.181
Y-88	1.395E-02		3.289E-02	5.741E-02	3.425E-03	0.243
ZR-88	4.519E-04		2.880E-02	4.676E-02	2.735E-03	0.010
Y-91	-9.262E+00		1.699E+01	2.704E+01	1.784E+00	-0.343
NB-94	-2.515E-03		3.094E-02	5.096E-02	3.067E-03	-0.049
NB-95	2.117E-02		4.287E-02	7.297E-02	5.442E-03	0.290
NB-95M	2.152E-01		1.359E-01	2.138E-01	1.617E-02	1.007
ZR-95	1.232E-02		6.421E-02	1.066E-01	8.797E-03	0.116
NB-97	9.844E-03		4.994E-03	Half-Life too short		

Sample ID : G232504002 Acquisition date : 7-JUL-2009 08:43:46

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	2.953E-01		1.078E-01	Half-Life too short		
MO-99	1.754E-01		5.990E+00	9.919E+00	1.414E+00	0.018
TC-99M	-5.519E+07		3.869E+07	Half-Life too short		
RH-101	-3.563E-03		2.997E-02	5.003E-02	2.793E-03	-0.071
RH-102	2.627E-02		3.555E-02	5.294E-02	3.121E-03	0.496
RU-103	1.597E-02		3.628E-02	5.991E-02	7.594E-03	0.267
RH-106	-1.034E-01		2.749E-01	4.452E-01	5.143E-02	-0.232
RU-106	-1.034E-01		2.747E-01	4.452E-01	2.412E-02	-0.232
AG-108M	2.667E-02		3.170E-02	5.388E-02	3.443E-03	0.495
AG-110M	2.823E-02		3.240E-02	5.150E-02	2.889E-03	0.548
IN-111	1.261E-01		5.895E-01	8.738E-01	5.152E-02	0.144
IN-113M	-2.335E-02		4.169E-02	6.516E-02	4.061E-03	-0.358
SN-113	-2.335E-02		4.169E-02	6.516E-02	4.061E-03	-0.358
IN-114M	-5.070E-02		1.792E-01	2.612E-01	1.442E-02	-0.194
CD-115	2.318E+00		4.894E+00	8.502E+00	4.934E-01	0.273
SN-117M	6.899E-04		4.534E-02	7.679E-02	4.177E-03	0.009
SB-122	1.774E-01		1.123E+00	1.905E+00	1.084E-01	0.093
I-123	2.471E-02		1.540E-01	Half-Life too short		
TE-123M	2.093E-03		2.608E-02	4.426E-02	2.441E-03	0.047
I-124	-1.817E-01		4.694E-01	6.559E-01	3.621E-02	-0.277
SB-124	2.053E-02		6.062E-02	1.056E-01	7.851E-03	0.194
SB-125	3.874E-02		8.854E-02	1.470E-01	9.023E-03	0.264
TE-125M	-1.349E+00		9.112E+00	1.433E+01	1.362E+00	-0.094
I-126	4.555E-02		1.544E-01	2.306E-01	1.213E-02	0.198
SB-126	-6.457E-02		1.309E-01	1.868E-01	1.198E-02	-0.346
SB-127	-2.091E-01		8.205E-01	1.334E+00	1.143E-01	-0.157
XE-127	-1.063E-02		4.563E-02	7.020E-02	3.945E-03	-0.151
I-131	-3.449E-02		9.004E-02	1.431E-01	9.461E-03	-0.241
TE-132	9.223E-03		4.013E-01	6.697E-01	9.334E-02	0.014
BA-133	-2.358E-02		4.860E-02	6.632E-02	7.735E-03	-0.355
I-133	1.135E-04		4.481E-04	Half-Life too short		
CS-134	8.532E-02		5.240E-02	8.658E-02	7.153E-03	0.985
I-135	-8.442E+06		8.925E+06	Half-Life too short		
CS-136	3.643E-02		9.795E-02	1.634E-01	1.494E-02	0.223
CE-139	-1.353E-02		2.663E-02	4.412E-02	2.353E-03	-0.307
BA-140	-8.480E-02		2.013E-01	3.256E-01	1.059E-01	-0.260
LA-140	-5.927E-02		8.062E-02	1.182E-01	8.981E-03	-0.501
CE-141	3.687E-02		5.827E-02	9.444E-02	5.552E-03	0.390
CE-143	2.802E-04		4.074E-05	Half-Life too short		
CE-144	5.513E-02		2.019E-01	3.235E-01	4.601E-02	0.170
PM-144	3.876E-03		3.135E-02	5.247E-02	3.091E-03	0.074
PR-144	2.623E-01		2.122E+00	3.552E+00	2.091E-01	0.074
PM-146	-7.799E-03		4.206E-02	6.676E-02	5.804E-03	-0.117
ND-147	4.221E-01		4.332E-01	7.709E-01	1.042E-01	0.548
PM-149	-1.197E+01		4.359E+01	7.086E+01	1.011E+01	-0.169
EU-152	-4.158E-02		1.004E-01	1.473E-01	9.934E-03	-0.282
GD-153	-5.750E-02		8.505E-02	1.170E-01	1.103E-02	-0.492
EU-154	-4.348E-02		1.222E-01	1.966E-01	2.083E-02	-0.221

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	7.431E-02		1.069E-01	1.755E-01	1.452E-02	0.424
TB-160	-5.004E-02		1.270E-01	1.993E-01	2.079E-02	-0.251
HO-166M	3.164E-02		5.752E-02	9.907E-02	6.158E-03	0.319
TM-171	-1.481E+01		2.976E+01	4.749E+01	5.102E+00	-0.312
LU-176	-2.194E-02		2.327E-02	3.618E-02	2.195E-03	-0.606
LU-177	2.734E+00	+	1.265E+00	1.592E+00	9.011E-02	1.718
LU-177M	-1.069E-01		1.644E-01	2.541E-01	1.495E-02	-0.421
HF-181	-2.302E-02		4.525E-02	5.984E-02	3.524E-03	-0.385
W-181	5.630E-02		3.785E-01	6.187E-01	6.697E-02	0.091
TA-182	8.914E-02		1.846E-01	3.201E-01	2.191E-02	0.278
RE-183	-1.476E-02		9.985E-02	1.680E-01	9.041E-03	-0.088
RE-184	-5.934E-02		2.189E-01	3.586E-01	2.127E-02	-0.165
OS-185	4.889E-03		3.881E-02	6.525E-02	3.440E-03	0.075
RE-188	1.223E-01		1.562E-01	2.714E-01	1.491E-02	0.451
W-188	1.192E+00		7.647E+00	1.118E+01	6.765E-01	0.107
IR-192	1.441E-02		3.144E-02	5.288E-02	3.224E-03	0.272
AU-195	1.599E-01		2.379E-01	3.494E-01	3.205E-02	0.458
TL-200	-7.392E-06		5.221E-05	Half-Life too short		
TL-201	-1.800E+00		3.777E+00	6.263E+00	3.344E-01	-0.287
TL-202	-2.381E-03		5.838E-02	9.382E-02	5.539E-03	-0.025
HG-203	5.116E-02		4.155E-02	6.499E-02	4.141E-03	0.787
BI-207	-7.238E-02		5.519E-02	7.681E-02	6.529E-03	-0.942
TL-207	1.311E-01		6.933E-01	1.010E+00	1.678E-01	0.130
PO-209	-5.756E+00		6.573E+00	9.683E+00	1.058E+00	-0.594
BI-210	1.061E+00		5.368E+00	8.619E+00	7.279E-01	0.123
PB-210	1.061E+00		5.368E+00	8.619E+00	7.279E-01	0.123
PO-210	1.061E+00		5.367E+00	8.619E+00	6.433E-01	0.123
PB-211	-6.887E-01		9.897E-01	1.372E+00	8.553E-01	-0.502
BI-212	1.272E+00	+	4.696E-01	6.758E-01	5.609E-02	1.882
PO-215	1.311E-01		6.933E-01	1.010E+00	1.678E-01	0.130
RN-219	-6.468E-02		3.927E-01	6.294E-01	8.581E-02	-0.103
RN-220	5.261E+00		2.216E+01	3.791E+01	2.176E+00	0.139
RA-223	1.311E-01		6.933E-01	1.010E+00	1.678E-01	0.130
AC-227	-1.123E-01		3.669E-01	5.992E-01	8.402E-02	-0.187
TH-227	-1.123E-01		3.671E-01	5.992E-01	1.016E-01	-0.187
TH-229	-3.314E-01		4.647E-01	7.576E-01	4.203E-02	-0.437
PA-231	-6.722E-01		1.454E+00	2.338E+00	3.245E-01	-0.288
TH-231	1.311E-01		6.933E-01	1.010E+00	1.678E-01	0.130
U-231	-7.589E-01		7.859E-01	1.062E+00	1.032E-01	-0.715
PA-233	-3.925E-02		6.283E-02	9.683E-02	6.210E-03	-0.405
PA-234	1.445E-02		2.988E-01	4.877E-01	9.577E-02	0.030
PA-234M	-8.441E-01		6.390E+00	1.021E+01	1.220E+00	-0.083
TH-234	1.405E-01		1.453E+00	2.344E+00	4.506E-01	0.060
U-235	8.467E-02		2.077E-01	3.330E-01	5.415E-02	0.254
NP-236	6.606E-03		7.404E-02	1.257E-01	6.802E-03	0.053
U-238	1.405E-01		1.453E+00	2.344E+00	4.506E-01	0.060
NP-239	-1.031E-01		1.842E-01	2.865E-01	1.915E-02	-0.360
AM-241	3.492E-03		1.739E-01	2.839E-01	3.363E-02	0.012

Sample ID : G232504002 Acquisition date : 7-JUL-2009 08:43:46

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.408E-02		9.477E-02	1.532E-01	1.286E-02	0.157
CM-247	1.833E-03		3.457E-02	5.619E-02	3.296E-03	0.033
CF-249	-2.439E-03		3.724E-02	6.019E-02	3.531E-03	-0.041
CF-251	-5.363E-03		1.189E-01	1.969E-01	1.066E-02	-0.027

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504002           *
* Acquisition date  :  7-JUL-2009 08:43:46 Detector SN#     :               *
* Detector ID       : GAM08                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:06.02      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504002           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.5335E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 30-JAN-2009 14:03:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
BE-7	8.370E-01	5.246E-01	2.573E-01	2.676E-01
K-40	2.644E+01	2.718E+00	2.321E-01	1.387E+00
CD-109	2.508E+00	9.047E-01	6.773E-01	4.616E-01
SN-126	2.473E-01	8.922E-02	6.868E-02	4.552E-02
CS-135	5.503E-01	2.325E-01	1.222E-01	1.186E-01
BA-137M	1.237E-01	6.522E-02	2.572E-02	3.328E-02
CS-137	1.307E-01	6.895E-02	2.719E-02	3.518E-02
TL-208	5.538E-01	8.508E-02	2.740E-02	4.341E-02
BI-211	3.504E+00	5.103E-01	1.711E-01	2.604E-01
PB-212	1.820E+00	1.706E-01	4.267E-02	8.703E-02
PO-212	1.820E+00	1.706E-01	4.267E-02	8.703E-02
BI-214	1.063E+00	1.690E-01	5.376E-02	8.624E-02
PB-214	1.219E+00	1.881E-01	5.963E-02	9.599E-02
PO-214	1.219E+00	1.881E-01	5.963E-02	9.599E-02
PO-216	1.820E+00	1.706E-01	4.267E-02	8.703E-02
PO-218	1.219E+00	1.881E-01	5.963E-02	9.599E-02
RA-224	4.785E+00	1.125E+00	4.854E-01	5.741E-01
RA-226	1.063E+00	1.690E-01	5.376E-02	8.624E-02
AC-228	1.856E+00	3.823E-01	9.183E-02	1.951E-01
RA-228	1.856E+00	3.823E-01	9.183E-02	1.951E-01
TH-228	1.820E+00	1.706E-01	4.266E-02	8.703E-02
TH-230	1.063E+00	1.690E-01	5.376E-02	8.624E-02
TH-232	1.856E+00	3.823E-01	9.183E-02	1.951E-01
U-234	1.063E+00	1.690E-01	5.376E-02	8.624E-02
NP-237	7.263E-01	3.004E-01	2.141E-01	1.532E-01
AM-243	4.231E-01	9.274E-02	4.664E-02	4.732E-02
ANH-511	1.622E-01	6.141E-02	2.242E-02	3.133E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

NA-22	-6.103E-03	4.183E-02	3.549E-02	2.134E-02	NOT IDENT.
NA-24	2.011E+04	5.315E+04	0.000E+00	2.712E+04	SHORT HLIF
AL-26	7.357E-03	2.720E-02	2.375E-02	1.388E-02	NOT IDENT.
TI-44	3.933E-01	6.485E-02	4.209E-02	3.309E-02	FAIL ABUN
SC-46	5.334E-03	3.519E-02	3.036E-02	1.795E-02	FAIL ABUN
V-48	4.681E-02	6.292E-02	5.643E-02	3.210E-02	NOT IDENT.
CR-51	-1.021E-01	3.262E-01	2.815E-01	1.664E-01	NOT IDENT.
MN-52	-2.070E-02	1.503E-01	1.252E-01	7.667E-02	NOT IDENT.
MN-54	-1.095E-02	3.676E-02	3.074E-02	1.876E-02	NOT IDENT.
CO-56	-1.791E-03	3.493E-02	2.973E-02	1.782E-02	NOT IDENT.
CO-57	-3.419E-03	2.437E-02	2.114E-02	1.243E-02	NOT IDENT.
CO-58	-2.071E-02	3.444E-02	2.794E-02	1.757E-02	NOT IDENT.
FE-59	1.608E-02	8.297E-02	7.048E-02	4.233E-02	NOT IDENT.
CO-60	-3.463E-02	3.922E-02	3.058E-02	2.001E-02	NOT IDENT.
ZN-65	2.437E-02	9.822E-02	7.270E-02	5.011E-02	NOT IDENT.
GE-68	6.748E-01	1.147E+00	1.013E+00	5.854E-01	NOT IDENT.
AS-73	3.110E-02	9.659E-01	8.849E-01	4.928E-01	NOT IDENT.
AS-74	-1.582E-02	7.518E-02	6.536E-02	3.836E-02	NOT IDENT.
SE-75	6.814E-03	4.397E-02	3.477E-02	2.244E-02	NOT IDENT.
BR-77	-8.128E-02	4.782E+00	4.029E+00	2.440E+00	FAIL ABUN
SR-82	-8.323E-02	3.331E-01	2.813E-01	1.700E-01	NOT IDENT.
RB-83	2.207E-03	6.012E-02	5.087E-02	3.068E-02	NOT IDENT.
RB-84	7.085E-03	6.261E-02	5.387E-02	3.195E-02	NOT IDENT.
KR-85	1.314E+01	7.223E+00	6.194E+00	3.685E+00	NOT IDENT.
SR-85	6.581E-02	3.617E-02	3.102E-02	1.845E-02	NOT IDENT.
RB-86	2.112E-01	6.893E-01	5.929E-01	3.517E-01	NOT IDENT.
Y-88	1.395E-02	3.223E-02	2.877E-02	1.644E-02	NOT IDENT.
ZR-88	4.519E-04	2.822E-02	2.441E-02	1.440E-02	NOT IDENT.
Y-91	-9.262E+00	1.665E+01	1.370E+01	8.493E+00	NOT IDENT.
NB-94	-2.515E-03	3.032E-02	2.621E-02	1.547E-02	NOT IDENT.
NB-95	2.117E-02	4.201E-02	3.744E-02	2.143E-02	NOT IDENT.
NB-95M	2.152E-01	1.332E-01	1.131E-01	6.795E-02	NOT IDENT.
ZR-95	1.232E-02	6.293E-02	5.472E-02	3.211E-02	NOT IDENT.
NB-97	9.844E+03	9.789E+03	0.000E+00	4.994E+03	SHORT HLIF
ZR-97	2.953E+05	2.113E+05	0.000E+00	1.078E+05	SHORT HLIF
MO-99	1.754E-01	5.870E+00	5.094E+00	2.995E+00	NOT IDENT.
TC-99M	-5.519E+13	7.584E+13	0.000E+00	3.869E+13	SHORT HLIF
RH-101	-3.563E-03	2.937E-02	2.657E-02	1.498E-02	NOT IDENT.
RH-102	2.627E-02	3.484E-02	2.750E-02	1.778E-02	NOT IDENT.
RU-103	1.597E-02	3.556E-02	3.109E-02	1.814E-02	NOT IDENT.
RH-106	-1.034E-01	2.694E-01	2.297E-01	1.375E-01	FAIL ABUN
RU-106	-1.034E-01	2.692E-01	2.297E-01	1.374E-01	FAIL ABUN
AG-108M	2.667E-02	3.107E-02	2.806E-02	1.585E-02	NOT IDENT.
AG-110M	2.823E-02	3.175E-02	2.653E-02	1.620E-02	NOT IDENT.
IN-111	1.261E-01	5.777E-01	4.616E-01	2.948E-01	NOT IDENT.
IN-113M	-2.335E-02	4.086E-02	3.402E-02	2.085E-02	NOT IDENT.
SN-113	-2.335E-02	4.086E-02	3.402E-02	2.085E-02	NOT IDENT.
IN-114M	-5.070E-02	1.756E-01	1.388E-01	8.958E-02	NOT IDENT.
CD-115	2.318E+00	4.797E+00	4.405E+00	2.447E+00	NOT IDENT.
SN-117M	6.899E-04	4.444E-02	4.100E-02	2.267E-02	NOT IDENT.
SB-122	1.774E-01	1.101E+00	9.854E-01	5.617E-01	NOT IDENT.
I-123	2.471E+04	3.018E+05	0.000E+00	1.540E+05	SHORT HLIF
TE-123M	2.093E-03	2.556E-02	2.363E-02	1.304E-02	NOT IDENT.
I-124	-1.817E-01	4.600E-01	3.386E-01	2.347E-01	FAIL ABUN
SB-124	2.053E-02	5.940E-02	5.303E-02	3.031E-02	FAIL ABUN
SB-125	3.874E-02	8.677E-02	7.656E-02	4.427E-02	FAIL ABUN
TE-125M	-1.349E+00	8.929E+00	7.720E+00	4.556E+00	NOT IDENT.
I-126	4.555E-02	1.514E-01	1.187E-01	7.722E-02	NOT IDENT.
SB-126	-6.457E-02	1.283E-01	9.600E-02	6.546E-02	FAIL ABUN
SB-127	-2.091E-01	8.040E-01	6.865E-01	4.102E-01	NOT IDENT.
XE-127	-1.063E-02	4.472E-02	3.726E-02	2.282E-02	NOT IDENT.
I-131	-3.449E-02	8.824E-02	7.486E-02	4.502E-02	NOT IDENT.
TE-132	9.223E-03	3.933E-01	3.544E-01	2.007E-01	NOT IDENT.
BA-133	-2.358E-02	4.763E-02	3.471E-02	2.430E-02	FAIL ABUN
I-133	1.135E+02	8.782E+02	0.000E+00	4.481E+02	SHORT HLIF
CS-134	8.532E-02	5.135E-02	4.438E-02	2.620E-02	NOT IDENT.
I-135	-8.442E+12	1.749E+13	0.000E+00	8.925E+12	SHORT HLIF
CS-136	3.643E-02	9.599E-02	8.314E-02	4.897E-02	FAIL ABUN
CE-139	-1.353E-02	2.610E-02	2.353E-02	1.331E-02	NOT IDENT.
BA-140	-8.480E-02	1.972E-01	1.686E-01	1.006E-01	NOT IDENT.
LA-140	-5.927E-02	7.901E-02	5.948E-02	4.031E-02	FAIL ABUN
CE-141	3.687E-02	5.711E-02	5.054E-02	2.914E-02	NOT IDENT.
CE-143	2.802E+02	7.985E+01	0.000E+00	4.074E+01	SHORT HLIF
CE-144	5.513E-02	1.979E-01	1.735E-01	1.010E-01	NOT IDENT.
PM-144	3.876E-03	3.073E-02	2.699E-02	1.568E-02	NOT IDENT.
PR-144	2.623E-01	2.080E+00	1.827E+00	1.061E+00	NOT IDENT.
PM-146	-7.799E-03	4.121E-02	3.472E-02	2.103E-02	NOT IDENT.
ND-147	4.221E-01	4.246E-01	3.993E-01	2.166E-01	FAIL ABUN

PM-149	-1.197E+01	4.272E+01	3.729E+01	2.180E+01	NOT IDENT.
EU-152	-4.158E-02	9.843E-02	7.713E-02	5.022E-02	FAIL ABUN
GD-153	-5.750E-02	8.335E-02	6.319E-02	4.252E-02	NOT IDENT.
EU-154	-4.348E-02	1.197E-01	9.949E-02	6.109E-02	NOT IDENT.
EU-155	7.431E-02	1.048E-01	9.462E-02	5.347E-02	FAIL ABUN
TB-160	-5.004E-02	1.244E-01	1.019E-01	6.348E-02	FAIL ABUN
HO-166M	3.164E-02	5.637E-02	5.093E-02	2.876E-02	FAIL ABUN
TM-171	-1.481E+01	2.916E+01	2.589E+01	1.488E+01	NOT IDENT.
LU-176	-2.194E-02	2.280E-02	1.901E-02	1.163E-02	FAIL ABUN
LU-177	2.734E+00	1.239E+00	8.442E-01	6.323E-01	FAIL ABUN
LU-177M	-1.069E-01	1.611E-01	1.325E-01	8.218E-02	FAIL ABUN
HF-181	-2.302E-02	4.434E-02	3.108E-02	2.262E-02	NOT IDENT.
W-181	5.630E-02	3.709E-01	3.375E-01	1.892E-01	NOT IDENT.
TA-182	8.914E-02	1.809E-01	1.622E-01	9.231E-02	FAIL ABUN
RE-183	-1.476E-02	9.785E-02	8.963E-02	4.992E-02	FAIL ABUN
RE-184	-5.934E-02	2.145E-01	1.893E-01	1.095E-01	NOT IDENT.
OS-185	4.889E-03	3.803E-02	3.363E-02	1.940E-02	NOT IDENT.
RE-188	1.223E-01	1.531E-01	1.450E-01	7.810E-02	FAIL ABUN
W-188	1.192E+00	7.494E+00	5.881E+00	3.824E+00	NOT IDENT.
IR-192	1.441E-02	3.082E-02	2.776E-02	1.572E-02	FAIL ABUN
AU-195	1.599E-01	2.331E-01	1.887E-01	1.189E-01	FAIL ABUN
TL-200	-7.392E+00	1.023E+02	0.000E+00	5.221E+01	SHORT HLIF
TL-201	-1.800E+00	3.701E+00	3.340E+00	1.888E+00	NOT IDENT.
TL-202	-2.381E-03	5.721E-02	4.884E-02	2.919E-02	NOT IDENT.
HG-203	5.116E-02	4.072E-02	3.422E-02	2.077E-02	NOT IDENT.
BI-207	-7.238E-02	5.409E-02	3.906E-02	2.760E-02	FAIL ABUN
TL-207	1.311E-01	6.794E-01	5.298E-01	3.466E-01	FAIL ABUN
PO-209	-5.756E+00	6.441E+00	4.947E+00	3.286E+00	NOT IDENT.
BI-210	1.061E+00	5.260E+00	4.738E+00	2.684E+00	NOT IDENT.
PB-210	1.061E+00	5.260E+00	4.738E+00	2.684E+00	NOT IDENT.
PO-210	1.061E+00	5.260E+00	4.738E+00	2.684E+00	NOT IDENT.
PB-211	-6.887E-01	9.699E-01	7.156E-01	4.949E-01	NOT IDENT.
BI-212	1.272E+00	4.602E-01	3.472E-01	2.348E-01	FAIL ABUN
PO-215	1.311E-01	6.794E-01	5.298E-01	3.466E-01	FAIL ABUN
RN-219	-6.468E-02	3.849E-01	3.284E-01	1.964E-01	NOT IDENT.
RN-220	5.261E+00	2.172E+01	1.962E+01	1.108E+01	NOT IDENT.
RA-223	1.311E-01	6.794E-01	5.298E-01	3.466E-01	FAIL ABUN
AC-227	-1.123E-01	3.596E-01	3.162E-01	1.835E-01	FAIL ABUN
TH-227	-1.123E-01	3.597E-01	3.162E-01	1.835E-01	FAIL ABUN
TH-229	-3.314E-01	4.554E-01	4.026E-01	2.324E-01	FAIL ABUN
PA-231	-6.722E-01	1.425E+00	1.231E+00	7.270E-01	FAIL ABUN
TH-231	1.311E-01	6.794E-01	5.298E-01	3.466E-01	FAIL ABUN
U-231	-7.589E-01	7.702E-01	5.739E-01	3.929E-01	FAIL ABUN
PA-233	-3.925E-02	6.157E-02	5.085E-02	3.141E-02	FAIL ABUN
PA-234	1.445E-02	2.928E-01	2.488E-01	1.494E-01	FAIL ABUN
PA-234M	-8.441E-01	6.262E+00	5.203E+00	3.195E+00	NOT IDENT.
TH-234	1.405E-01	1.424E+00	1.279E+00	7.265E-01	FAIL ABUN
U-235	8.467E-02	2.035E-01	1.783E-01	1.038E-01	FAIL ABUN
NP-236	6.606E-03	7.256E-02	6.708E-02	3.702E-02	NOT IDENT.
U-238	1.405E-01	1.424E+00	1.279E+00	7.265E-01	FAIL ABUN
NP-239	-1.031E-01	1.806E-01	1.541E-01	9.212E-02	FAIL ABUN
AM-241	3.492E-03	1.705E-01	1.552E-01	8.697E-02	NOT IDENT.
CM-243	2.408E-02	9.288E-02	8.267E-02	4.739E-02	FAIL ABUN
CM-247	1.833E-03	3.388E-02	2.931E-02	1.729E-02	FAIL ABUN
CF-249	-2.439E-03	3.649E-02	3.143E-02	1.862E-02	NOT IDENT.
CF-251	-5.363E-03	1.166E-01	1.049E-01	5.947E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	347.3269
46.50	347.3269
46.50	347.3269
48.70	330.8778
49.72	338.6932
51.35	334.8097
52.39	339.6146
52.97	345.1176
53.15	356.4505
53.44	335.2660
54.07	325.4998
56.28	373.0913
56.28	373.0932
57.37	0.0000
57.53	357.5864
57.53	357.5873
57.60	357.6360
57.98	383.6166
57.98	383.6166
59.32	406.2814
59.32	406.2814
59.40	406.3456
59.54	406.4558
59.72	403.5021
60.01	394.4359
61.10	480.1119
61.14	468.7657
61.30	466.8394
63.00	430.9603
63.29	442.6238
63.29	442.6238
63.58	442.8638
64.28	464.2607
65.12	455.5990
65.20	450.4521
65.20	450.4521
66.05	501.2817
66.72	490.3904
66.83	460.1595
66.91	460.2267
67.20	477.2126
67.20	477.2126
67.75	456.7324
67.85	463.1031
68.90	472.3686
68.90	472.3686
69.30	461.6753
69.67	496.6672
70.82	459.7495
70.82	459.7495
70.83	459.7583
72.80	461.8587
72.87	461.9142
72.87	461.9142
74.67	463.3323
74.81	463.4412
74.81	463.4412
74.81	463.4412
74.81	463.4412
74.81	463.4412
74.81	463.4412
74.97	463.5657
75.28	463.8080
75.70	464.1347
77.11	465.2260
77.11	465.2260
77.11	465.2260

77.11	465.2260
77.11	465.2260
77.11	465.2260
78.38	466.2018
79.62	450.5750
79.80	450.7079
79.80	450.7079
80.11	484.6327
80.18	484.6880
80.30	484.7824
80.30	484.7824
80.57	484.9921
81.00	519.0765
81.07	519.1357
81.07	519.1357
81.07	519.1357
81.07	519.1357
82.60	442.5299
83.37	419.4095
83.78	451.9644
83.78	451.9644
83.78	451.9644
83.78	451.9644
84.21	424.8107
84.40	428.1685
84.90	434.9711
85.43	469.3141
86.29	503.9703
86.50	572.2165
86.54	572.2515
86.59	572.2946
86.72	604.8416
86.79	604.9042
86.94	592.0668
87.30	579.4114
87.30	579.4114
87.30	579.4114
87.30	579.4114
87.30	579.4114
87.30	579.4114
87.57	522.8226
87.88	500.3261
88.03	500.4413
88.36	500.6927
88.47	500.7773
89.95	560.5616
91.11	409.7249
92.29	410.4430
92.38	410.4966
92.38	410.4966
93.35	411.0845
94.00	411.4752
94.67	411.8754
94.67	411.8773
94.90	412.0152
94.90	412.0152
94.90	412.0152
94.90	412.0152
95.87	412.5935
95.87	412.5935
96.73	393.3566
97.43	400.3386
98.44	366.2682
98.44	366.2682
98.88	331.8282
99.55	294.1362
99.55	294.1362
99.86	315.7550
100.00	337.3131
100.10	358.8599
103.18	386.4174
103.76	366.7805
105.00	372.9517
105.31	366.4462
108.00	403.4405
109.28	377.3360
111.00	400.5722
111.00	400.5722

111.76	370.7302
112.95	344.3835
115.19	329.6295
116.30	357.1361
117.00	359.7090
117.00	359.7090
117.66	381.4534
121.11	326.4331
121.62	339.1154
121.78	339.1824
122.06	352.9168
122.32	353.0307
122.32	353.0307
122.32	353.0307
122.32	353.0307
123.07	356.7652
127.23	347.7238
129.76	353.9305
131.20	352.8130
133.02	357.3612
133.54	349.7559
135.34	356.2502
136.00	347.2903
136.25	354.3161
136.48	354.4098
140.51	374.5925
140.51	0.0000
142.18	359.0289
142.65	355.7300
143.76	350.3492
144.24	344.7130
144.24	344.7130
144.24	344.7130
144.24	344.7130
145.22	329.9306
145.44	330.0083
147.16	359.2567
152.43	331.3437
152.70	339.3717
153.22	331.6219
154.21	324.0258
154.21	324.0258
154.21	324.0258
154.21	324.0258
155.03	327.8405
156.02	340.5672
158.56	331.7184
159.00	0.0000
159.00	330.9795
160.31	330.5405
161.27	325.5331
162.32	336.5669
162.64	329.5510
163.35	312.8557
163.89	296.9745
165.85	321.6934
167.43	315.9392
171.28	296.4869
171.86	309.2410
172.10	306.6169
176.55	298.9207
176.60	298.9359
181.06	309.1074
184.41	324.6458
185.71	322.4897
186.00	322.5788
190.27	291.2877
192.34	289.6418
193.63	305.5845
197.04	305.6066
198.01	292.9743
198.60	292.2054
200.40	286.2141
201.83	298.5936
202.84	308.4208
205.31	289.3079
208.36	296.5849
208.81	296.7005

209.75	275.5308
209.75	275.5308
210.97	268.3652
215.65	261.9531
216.55	267.7693
218.09	286.8657
222.10	245.4999
223.80	257.1476
226.40	265.2491
227.00	279.5438
227.08	279.5641
227.20	279.5912
228.16	258.0662
228.18	258.0703
228.18	258.0703
231.56	0.0000
235.69	283.0302
236.00	296.7990
236.00	296.7990
238.60	220.1974
238.63	220.2018
238.63	220.2018
238.63	220.2018
239.00	220.2670
240.98	220.6089
241.98	220.7817
241.98	220.7817
241.98	220.7817
244.69	180.8301
245.39	188.5945
247.94	215.0825
248.90	224.2098
249.79	219.7824
252.40	205.2176
252.85	226.4909
252.85	226.4909
254.15	0.0000
256.20	231.8958
256.20	231.8958
260.50	205.4979
260.90	213.3163
262.80	217.5024
264.65	189.7940
268.24	198.0933
268.79	199.7312
269.46	206.8533
269.46	206.8533
269.46	206.8533
269.46	206.8533
271.23	212.9804
273.65	219.2251
276.40	213.7721
277.35	213.9152
277.60	196.2891
277.60	196.2891
278.00	201.0563
278.60	190.1437
279.20	177.6467
279.53	193.4127
280.46	191.9653
281.68	195.2818
283.67	204.0309
284.30	192.2864
285.00	197.3145
285.90	205.3340
286.10	212.2738
286.10	212.2738
287.40	181.8325
288.45	0.0000
290.67	190.1660
290.80	190.1836
291.72	204.5765
293.26	0.0000
293.70	181.0334
295.21	154.1959
295.21	154.1959
295.21	154.1959
295.96	135.1886

296.50	135.2384
297.23	135.3048
298.57	135.4272
299.80	175.4038
299.80	175.4038
300.09	181.8183
300.09	181.8183
300.09	181.8183
300.10	181.8211
300.12	181.8211
301.29	180.3696
302.84	153.3938
303.76	143.8945
303.91	143.9077
304.40	139.1575
304.40	139.1575
304.84	166.3975
306.84	190.2493
308.46	161.3832
311.98	179.8412
316.51	154.1743
318.01	173.4881
319.02	169.5637
319.41	169.6073
320.08	173.7191
323.87	160.3723
323.87	160.3723
323.87	160.3723
323.87	160.3723
325.23	176.7232
328.77	167.3700
333.44	181.9845
334.20	164.6798
334.20	164.6798
334.30	164.6897
338.28	167.5485
338.28	167.5485
338.28	167.5485
338.28	167.5485
338.32	167.5535
338.32	167.5535
338.32	167.5535
340.50	142.4073
340.57	142.4137
344.27	168.1666
345.85	190.4994
350.59	0.0000
351.07	174.0105
351.92	174.0982
351.92	174.0982
351.92	174.0982
355.39	0.0000
356.01	156.9703
364.48	147.3779
366.43	143.3906
367.43	151.7922
367.94	0.0000
369.80	144.7139
374.96	154.5423
383.85	110.1974
387.95	134.6465
388.63	139.9609
391.69	145.4690
391.69	145.4690
392.90	137.1292
398.62	143.9127
400.65	132.4196
401.10	135.6309
401.81	138.8637
402.60	130.4398
404.84	150.7732
410.95	123.5739
411.60	138.5356
413.65	139.7552
414.70	106.7429
415.30	109.9813
415.76	115.3482
417.63	0.0000

418.52	127.2837
423.70	140.5028
427.08	102.0725
427.89	118.2379
432.53	130.3774
433.93	109.9843
439.47	120.0309
439.56	120.0360
439.89	115.7300
443.98	120.3070
444.90	111.6881
445.03	111.6960
445.03	111.6960
445.03	111.6960
445.03	111.6960
453.90	120.9100
463.38	126.0773
468.07	118.4694
473.00	151.3021
475.06	125.0370
475.35	123.2938
476.78	128.6661
477.59	116.8158
477.96	116.8352
482.03	114.8561
484.57	106.1499
487.03	91.8831
490.36	0.0000
492.35	105.4327
497.08	91.2065
507.63	0.0000
510.53	0.0000
510.84	102.9848
511.00	102.9925
511.85	103.0318
511.85	103.0318
513.99	84.2999
513.99	84.2999
520.41	87.6953
520.65	87.7048
527.90	91.1490
528.96	0.0000
529.64	91.2206
529.87	0.0000
531.02	77.7212
537.32	94.2525
543.00	95.3972
546.56	0.0000
549.76	79.2770
552.65	90.3230
555.20	94.0780
563.23	91.6528
563.90	108.1820
568.70	96.4585
569.32	95.5652
569.50	90.9780
569.67	90.9853
573.80	88.3828
574.00	89.3106
574.64	93.0181
578.91	89.1877
579.30	0.0000
583.14	88.7273
585.48	77.0955
591.81	80.6980
592.07	75.1406
593.00	77.9543
595.88	95.7000
600.56	80.2908
602.52	0.0000
602.71	99.3828
602.71	99.3828
603.60	94.7590
604.41	90.1270
604.70	94.8012
609.31	96.2230
609.31	96.2230
609.31	96.2230

609.31	96.2230
610.33	88.7865
612.46	85.7450
614.37	79.5692
618.01	77.8105
621.84	81.6836
621.84	81.6836
631.29	79.1622
633.02	85.8168
633.10	85.8190
634.78	90.5953
635.90	88.7469
636.97	102.9512
645.85	79.6113
646.12	81.5152
656.30	57.0938
657.75	57.1260
657.90	0.0000
661.65	72.4653
661.65	72.4653
664.57	0.0000
666.33	68.4543
666.33	68.4543
675.00	76.6641
677.61	95.9229
685.20	79.8409
692.80	82.9577
695.00	78.1978
696.49	82.1030
696.49	82.1030
697.00	92.7445
697.49	93.7272
698.33	90.8582
698.50	90.8628
699.00	97.6465
702.63	86.1579
706.10	90.1437
706.58	0.0000
706.67	96.9482
709.31	80.5440
711.68	76.7280
713.82	79.7018
717.42	72.9932
720.50	87.6863
721.93	0.0000
722.20	73.1158
722.78	81.2581
722.78	81.2581
722.89	81.2602
722.95	81.2622
723.30	79.6469
724.18	73.1671
727.18	88.8716
733.00	63.6099
735.90	61.7142
739.58	70.6219
742.81	81.5025
744.21	72.7010
747.13	76.7070
751.79	91.6059
752.31	88.6663
753.82	80.8269
755.35	67.0620
756.15	65.1073
756.87	64.1367
763.93	110.7805
765.79	96.9927
766.41	90.0847
766.84	94.0583
768.36	92.1259
768.36	92.1259
768.36	92.1259
768.36	92.1259
776.49	78.4715
778.00	76.5244
778.57	74.5496
778.89	76.5469
783.80	56.7579

785.46	68.4949
792.07	46.5960
795.84	63.3163
796.30	68.3250
801.93	80.1387
805.60	66.1934
810.29	75.3351
810.76	70.3230
815.85	69.4329
817.79	55.3800
818.51	59.4206
819.60	68.5097
826.30	64.6188
828.27	0.0000
831.60	75.8533
831.96	77.8835
834.83	88.0790
836.80	0.0000
846.75	63.0066
848.13	63.0338
856.28	0.0000
856.80	73.0594
860.37	67.3567
867.32	46.0239
867.82	57.9644
871.10	74.7484
873.19	51.2305
874.81	47.1556
875.33	0.0000
876.40	63.5878
879.36	62.6188
880.27	70.8513
880.51	66.7488
881.50	60.6046
883.24	54.4712
884.67	58.6073
889.25	56.6301
896.60	60.8826
898.02	64.0056
899.00	54.7313
903.28	56.8691
911.07	49.7461
911.07	49.7461
911.07	49.7461
919.63	51.9507
920.93	50.9308
925.00	56.1951
925.24	59.3212
926.50	58.3023
934.06	50.0836
934.06	50.0836
934.06	50.0836
934.06	50.0836
935.52	66.8063
937.48	84.6011
944.10	52.3230
946.00	62.8213
949.00	76.5003
962.29	64.8689
964.01	57.8843
966.15	62.1315
968.20	62.1675
969.11	62.1848
969.11	62.1848
969.11	62.1848
977.42	57.5176
980.50	60.2689
983.50	52.9126
989.30	44.5184
996.32	57.3500
1001.03	63.8057
1001.68	55.3071
1004.76	58.5476
1021.30	0.0000
1024.50	0.0000
1034.80	53.6621
1037.82	63.3731
1038.57	48.3442

1038.76	0.0000
1045.16	61.3446
1046.59	52.7563
1048.07	58.1607
1050.47	53.8867
1050.47	53.8867
1063.62	80.0306
1076.63	52.0898
1077.35	46.6722
1085.78	59.8286
1099.22	53.4861
1112.02	47.9135
1112.84	50.0737
1115.52	60.2878
1120.29	60.3604
1120.29	60.3604
1120.29	60.3604
1120.29	60.3604
1120.51	56.7047
1121.28	58.5443
1124.00	0.0000
1129.67	65.0862
1131.51	0.0000
1147.95	0.0000
1167.94	62.0055
1173.22	50.9650
1175.09	57.4766
1177.93	59.3724
1189.05	60.4641
1204.90	69.0980
1205.75	0.0000
1213.00	61.7461
1221.42	62.8070
1230.97	91.1348
1235.34	90.2891
1236.41	0.0000
1238.11	69.6430
1238.11	69.6430
1238.11	69.6430
1238.11	69.6430
1238.25	69.6430
1246.25	71.6613
1260.41	0.0000
1271.85	51.2183
1274.45	58.8415
1274.54	54.0962
1291.56	38.1104
1298.22	0.0000
1312.09	60.3007
1325.50	39.3601
1325.50	39.3601
1332.49	46.1523
1333.61	42.3153
1360.21	31.9218
1362.66	0.0000
1365.15	31.9567
1368.21	27.1318
1368.53	0.0000
1376.25	33.2813
1377.67	28.1587
1377.67	28.1587
1377.67	28.1587
1377.67	28.1587
1384.27	20.0031
1394.10	22.4113
1395.20	29.2395
1407.95	28.3404
1434.06	23.5830
1436.60	21.6294
1457.56	0.0000
1460.81	20.3262
1489.15	18.8817
1509.49	23.9482
1596.49	34.5077
1620.62	21.4119
1678.03	0.0000
1691.02	10.3300
1691.02	10.3300

1706.46	0.0000
1750.46	0.0000
1764.49	7.1772
1764.49	7.1772
1764.49	7.1772
1764.49	7.1772
1770.23	76.4843
1771.40	15.7190
1791.20	0.0000
1808.65	11.6025
1836.01	12.7168

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504002

Total Uranium Activity	4.5721E-01	ug/g
Total Uranium Counting Unc.	4.2373E+00	ug/g
Total Uranium Tpu	2.1619E-06	ug/g
Total Uranium Mda	3.8074E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID  : G232504002       *
*   ANALYST       : MXR1                      DETECTOR   : GAM08            *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:43:46.93    SAMPLE ALQT:  153.350 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.337E+00
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.261E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 3.120E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 1.516E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:49:19.19

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504003.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:48:52.
Sample ID         : G232504003           Sample quantity  : 1.38620E+02 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.02  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.61*	62	673	0.88	125.23	121	9	8.55E-03	78.2	
2	4	74.25	552	517	0.94	148.51	142	16	7.66E-02	7.7	1.75E+00
3	4	76.51*	862	391	0.83	153.01	142	16	1.20E-01	5.0	
4	2	83.49*	134	541	1.15	166.97	163	30	1.86E-02	29.1	4.54E+00
5	2	86.68	364	495	1.15	173.37	163	30	5.06E-02	11.1	
6	2	89.40	285	451	1.15	178.80	163	30	3.96E-02	13.9	
7	2	92.16*	347	453	1.27	184.32	163	30	4.82E-02	13.1	
8	0	128.04	122	504	0.73	256.09	251	10	1.70E-02	35.5	
9	0	185.52*	290	472	1.16	371.05	366	12	4.03E-02	16.6	
10	0	208.58	180	404	0.95	417.17	412	11	2.51E-02	22.8	
11	5	238.07*	1642	174	0.97	476.14	471	18	2.28E-01	2.8	5.75E-01
12	5	241.06*	375	312	1.95	482.12	471	18	5.21E-02	14.9	
13	0	269.96	134	250	1.68	539.91	536	10	1.86E-02	23.7	
14	0	276.33	62	309	1.18	552.66	546	12	8.56E-03	58.5	
15	0	294.73	492	242	1.13	589.45	584	12	6.84E-02	7.8	
16	0	299.64	94	172	1.03	599.29	596	8	1.30E-02	26.2	
17	0	327.25	53	260	1.45	654.49	650	11	7.32E-03	60.7	
18	0	337.69*	282	224	1.13	675.39	669	11	3.91E-02	12.1	
19	0	351.47*	804	225	1.09	702.95	697	12	1.12E-01	5.2	
20	0	462.21*	136	150	1.57	924.43	917	15	1.89E-02	21.7	
21	0	510.22*	156	189	1.45	1020.45	1013	16	2.17E-02	23.2	
22	0	582.80*	508	146	1.38	1165.59	1158	15	7.05E-02	6.9	
23	0	608.98*	649	82	1.31	1217.97	1213	13	9.01E-02	5.0	
24	0	726.97	124	73	1.46	1453.94	1449	10	1.72E-02	15.7	
25	0	768.05	51	46	1.10	1536.10	1533	7	7.02E-03	26.5	
26	0	795.06	73	78	1.00	1590.12	1583	15	1.02E-02	28.8	
27	0	860.07	71	61	1.14	1720.14	1715	11	9.86E-03	24.3	
28	0	911.03*	291	98	1.32	1822.07	1816	14	4.04E-02	9.4	
29	2	933.48	42	48	2.32	1866.96	1860	45	5.83E-03	38.6	1.87E+00
30	2	949.60	40	37	2.33	1899.19	1860	45	5.53E-03	37.3	
31	0	968.06*	255	115	1.61	1936.12	1928	15	3.54E-02	11.2	
32	0	1120.45	105	67	0.98	2240.91	2234	13	1.46E-02	18.9	
33	0	1377.33	33	24	0.93	2754.67	2748	12	4.58E-03	34.4	
34	0	1460.63*	1784	29	1.62	2921.26	2913	17	2.48E-01	2.5	
35	0	1620.95	22	7	1.21	3241.91	3235	13	2.99E-03	32.6	
36	0	1764.39*	116	0	2.23	3528.77	3522	14	1.61E-02	9.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:49:22

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:48:52
Sample ID : G232504003 Sample quantity : 138.62 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA11 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.02 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.602E+01	3.002E+00	4.764E-01	3.193E-02	75.600
CD-109	+	88.03	*	3.909E+00	9.368E-01	1.125E+00	1.030E-01	3.475
SN-126		64.28		9.949E-02	4.851E-01	7.182E-01	1.022E-01	0.139
	+	86.94		1.603E+00	7.535E-01	4.650E-01	1.927E-01	3.446
	+	87.57	*	3.855E-01	9.239E-02	1.113E-01	1.014E-02	3.463
TL-208	+	277.35		4.970E-01	5.842E-01	5.841E-01	6.848E-02	0.851
	+	510.84		6.356E-01	3.016E-01	1.928E-01	1.999E-02	3.296
	+	583.14	*	5.904E-01	9.277E-02	5.476E-02	4.058E-03	10.783
	+	860.37		7.770E-01	3.839E-01	4.273E-01	3.685E-02	1.818
BI-211	+	72.87		1.995E+01	3.433E+00	4.300E+00	3.239E-01	4.639
	+	351.07	*	4.081E+00	5.118E-01	3.104E-01	2.176E-02	13.148
BI-212	+	727.18	*	1.240E+00	4.042E-01	4.767E-01	4.278E-02	2.602
		785.46		1.006E+00	1.743E+00	3.034E+00	2.322E-01	0.331
	+	1620.62		1.823E+00	1.194E+00	1.272E+00	7.740E-02	1.433
PB-212	+	74.81		2.368E+00	4.637E-01	4.931E-01	5.976E-02	4.802
	+	77.11		2.117E+00	2.681E-01	2.752E-01	2.185E-02	7.695
	+	87.30		1.783E+00	4.630E-01	5.159E-01	6.968E-02	3.456
	+	238.63	*	1.816E+00	1.796E-01	8.803E-02	7.172E-03	20.632
	+	300.09		1.603E+00	8.543E-01	1.060E+00	1.007E-01	1.512
PO-212	+	74.81		2.368E+00	4.637E-01	4.931E-01	5.976E-02	4.802
	+	77.11		2.117E+00	2.681E-01	2.752E-01	2.185E-02	7.695
	+	87.30		1.783E+00	4.630E-01	5.159E-01	6.968E-02	3.456
		115.19		-1.219E+00	3.475E+00	5.655E+00	3.905E-01	-0.216
	+	238.63	*	1.816E+00	1.796E-01	8.803E-02	7.172E-03	20.632
	+	300.09		1.603E+00	8.543E-01	1.060E+00	1.007E-01	1.512
BI-214	+	609.31	*	1.423E+00	1.870E-01	1.027E-01	8.761E-03	13.856
	+	768.36		1.239E+00	6.680E-01	1.207E+00	1.164E-01	1.026
	+	934.06		1.917E+00	1.491E+00	1.800E+00	1.803E-01	1.065
	+	1120.29		1.199E+00	4.651E-01	4.554E-01	4.114E-02	2.633
		1238.11		1.302E+00	9.399E-01	1.666E+00	1.368E-01	0.781
	+	1377.67		1.649E+00	1.145E+00	1.211E+00	1.095E-01	1.361
	+	1764.49		1.810E+00	3.683E-01	1.896E-01	1.075E-02	9.550
PB-214	+	74.81		4.080E+00	7.644E-01	8.497E-01	9.087E-02	4.802
	+	77.11		3.630E+00	5.364E-01	4.717E-01	5.191E-02	7.695

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		3.054E+00	7.689E-01	8.838E-01	1.053E-01	3.456
	+	241.98		2.490E+00	7.719E-01	5.299E-01	4.703E-02	4.700
	+	295.21		1.475E+00	2.710E-01	2.009E-01	1.969E-02	7.341
	+	351.92	*	1.419E+00	1.928E-01	1.017E-01	8.868E-03	13.964
PO-214	+	74.81		4.080E+00	7.644E-01	8.497E-01	9.087E-02	4.802
	+	77.11		3.630E+00	5.364E-01	4.717E-01	5.191E-02	7.695
	+	87.30		3.054E+00	7.689E-01	8.838E-01	1.053E-01	3.456
	+	241.98		2.490E+00	7.719E-01	5.299E-01	4.703E-02	4.700
	+	295.21		1.475E+00	2.710E-01	2.009E-01	1.969E-02	7.341
	+	351.92	*	1.419E+00	1.928E-01	1.017E-01	8.868E-03	13.964
PO-216	+	74.81		2.368E+00	4.637E-01	4.931E-01	5.976E-02	4.802
	+	77.11		2.117E+00	2.681E-01	2.752E-01	2.185E-02	7.695
	+	87.30		1.783E+00	4.630E-01	5.159E-01	6.968E-02	3.456
	+	238.63	*	1.816E+00	1.796E-01	8.803E-02	7.172E-03	20.632
	+	300.09		1.603E+00	8.543E-01	1.060E+00	1.007E-01	1.512
PO-218	+	74.81		4.080E+00	7.644E-01	8.497E-01	9.087E-02	4.802
	+	77.11		3.630E+00	5.364E-01	4.717E-01	5.191E-02	7.695
	+	87.30		3.054E+00	7.689E-01	8.838E-01	1.053E-01	3.456
	+	241.98		2.490E+00	7.719E-01	5.299E-01	4.703E-02	4.700
	+	295.21		1.475E+00	2.710E-01	2.009E-01	1.969E-02	7.341
	+	351.92	*	1.419E+00	1.928E-01	1.017E-01	8.868E-03	13.964
RA-224	+	240.98	*	4.722E+00	1.439E+00	1.001E+00	6.868E-02	4.715
RA-226	+	609.31	*	1.423E+00	1.870E-01	1.027E-01	8.761E-03	13.856
	+	768.36		1.239E+00	6.680E-01	1.207E+00	1.164E-01	1.026
	+	934.06		1.917E+00	1.491E+00	1.800E+00	1.803E-01	1.065
	+	1120.29		1.199E+00	4.651E-01	4.554E-01	4.114E-02	2.633
		1238.11		1.302E+00	9.399E-01	1.666E+00	1.368E-01	0.781
	+	1377.67		1.649E+00	1.145E+00	1.211E+00	1.095E-01	1.361
	+	1764.49		1.810E+00	3.683E-01	1.896E-01	1.075E-02	9.550
AC-228	+	338.32		1.574E+00	7.477E-01	3.564E-01	1.458E-01	4.415
	+	911.07	*	1.506E+00	3.256E-01	2.062E-01	2.220E-02	7.303
	+	969.11		2.320E+00	7.456E-01	3.744E-01	8.603E-02	6.195
RA-228	+	338.32		1.574E+00	7.477E-01	3.564E-01	1.458E-01	4.415
	+	911.07	*	1.506E+00	3.256E-01	2.062E-01	2.220E-02	7.303
	+	969.11		2.320E+00	7.456E-01	3.744E-01	8.603E-02	6.195
TH-228	+	84.40		4.459E+00	2.663E+00	3.495E+00	4.618E-01	1.276
	+	238.60	*	1.816E+00	1.796E-01	8.802E-02	7.171E-03	20.634
	+	300.10		1.603E+00	1.267E+00	1.060E+00	6.266E-01	1.512
TH-230	+	609.31	*	1.423E+00	1.870E-01	1.027E-01	8.761E-03	13.856
	+	768.36		1.239E+00	6.680E-01	1.207E+00	1.164E-01	1.026
	+	934.06		1.917E+00	1.491E+00	1.800E+00	1.803E-01	1.065
	+	1120.29		1.199E+00	4.651E-01	4.554E-01	4.114E-02	2.633
		1238.11		1.302E+00	9.399E-01	1.666E+00	1.368E-01	0.781
	+	1377.67		1.649E+00	1.145E+00	1.211E+00	1.095E-01	1.361
	+	1764.49		1.810E+00	3.683E-01	1.896E-01	1.075E-02	9.550
TH-232	+	338.32		1.574E+00	3.949E-01	3.564E-01	2.401E-02	4.415
	+	911.07	*	1.506E+00	3.256E-01	2.062E-01	2.220E-02	7.303
	+	969.11		2.320E+00	7.456E-01	3.744E-01	8.603E-02	6.195
TH-234	+	63.29	*	1.002E+00	1.577E+00	1.851E+00	3.176E-01	0.541

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.416E+00	7.679E-01	7.386E-01	1.336E-01	3.271
U-234	+	609.31	*	1.423E+00	1.870E-01	1.027E-01	8.761E-03	13.856
	+	768.36		1.239E+00	6.680E-01	1.207E+00	1.164E-01	1.026
	+	934.06		1.917E+00	1.491E+00	1.800E+00	1.803E-01	1.065
	+	1120.29		1.199E+00	4.651E-01	4.554E-01	4.114E-02	2.633
		1238.11		1.302E+00	9.399E-01	1.666E+00	1.368E-01	0.781
	+	1377.67		1.649E+00	1.145E+00	1.211E+00	1.095E-01	1.361
	+	1764.49		1.810E+00	3.683E-01	1.896E-01	1.075E-02	9.550
NP-237	+	86.50	*	1.132E+00	3.580E-01	3.296E-01	7.418E-02	3.434
		95.87		-1.703E-01	9.890E-01	1.427E+00	3.498E-01	-0.119
U-238	+	63.29	*	1.002E+00	1.577E+00	1.851E+00	3.176E-01	0.541
	+	92.38		2.416E+00	6.649E-01	7.386E-01	6.379E-02	3.271
AM-243	+	74.67	*	3.839E-01	6.606E-02	8.014E-02	6.171E-03	4.790
	+	86.72		4.245E+01	1.017E+01	1.234E+01	1.111E+00	3.440
		117.66		-5.764E-02	3.762E+00	6.191E+00	4.192E-01	-0.009
		142.18		-8.067E+00	1.751E+01	2.793E+01	1.654E+00	-0.289
ANH-511	+	511.00	*	1.373E-01	6.414E-02	4.167E-02	2.568E-03	3.295

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.523E-01	2.879E-01	4.572E-01	3.139E-02	-0.333
NA-22		1274.54	*	-1.442E-02	4.461E-02	7.054E-02	4.324E-03	-0.204
NA-24		1368.53	*	-3.385E-02	4.461E-02	Half-Life too short		
AL-26		1129.67		7.605E-01	1.721E+00	2.924E+00	1.765E-01	0.260
		1808.65	*	-4.356E-03	2.223E-02	3.514E-02	1.939E-03	-0.124
TI-44		67.85		-3.744E-02	4.952E-02	6.558E-02	4.651E-03	-0.571
		78.38	*	2.047E-01	5.237E-02	6.578E-02	5.308E-03	3.112
SC-46		889.25	*	-9.703E-03	3.716E-02	6.059E-02	4.868E-03	-0.160
	+	1120.51		2.015E-01	7.700E-02	1.148E-01	7.050E-03	1.756
V-48		944.10		1.489E-01	8.065E-01	1.358E+00	1.056E-01	0.110
		983.50	*	-4.068E-02	6.183E-02	9.643E-02	7.215E-03	-0.422
		1312.09		2.278E-02	7.316E-02	1.227E-01	7.791E-03	0.186
CR-51		320.08	*	1.277E-02	3.373E-01	5.523E-01	4.235E-02	0.023
MN-52		744.21		1.345E-01	1.835E-01	3.111E-01	2.325E-02	0.432
		848.13		3.432E-01	5.249E+00	8.809E+00	6.955E-01	0.039
		935.52		1.845E-01	1.982E-01	3.505E-01	2.745E-02	0.527
		1246.25		6.018E-01	5.719E+00	9.412E+00	5.592E-01	0.064
		1333.61		9.943E-01	3.981E+00	6.632E+00	4.297E-01	0.150
		1434.06	*	-1.459E-02	1.605E-01	2.562E-01	1.642E-02	-0.057
MN-54		834.83	*	-1.888E-02	3.571E-02	5.736E-02	4.501E-03	-0.329
CO-56		846.75	*	-2.964E-02	3.946E-02	6.216E-02	4.905E-03	-0.477
		977.42		-9.142E-01	2.862E+00	4.615E+00	3.475E-01	-0.198
		1037.82		-1.613E-01	2.907E-01	4.558E-01	3.450E-02	-0.354
		1175.09		1.537E-02	2.311E+00	3.787E+00	2.085E-01	0.004
		1238.25		1.323E-01	9.289E-02	1.654E-01	1.034E-02	0.800
		1360.21		-8.540E-01	9.324E-01	1.334E+00	8.626E-02	-0.640
		1771.40		-1.177E+00	3.224E-01	2.204E-01	1.244E-02	-5.342

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	5.426E-03	2.715E-02	4.168E-02	2.734E-03	0.130
		136.48		1.635E-01	2.078E-01	3.492E-01	2.434E-02	0.468
CO-58		810.76	*	-4.064E-02	3.627E-02	5.511E-02	4.287E-03	-0.737
FE-59		142.65		1.670E+00	2.566E+00	4.254E+00	2.514E-01	0.393
		192.34		3.147E-01	9.800E-01	1.488E+00	1.755E-01	0.212
		1099.22	*	-5.880E-02	9.247E-02	1.441E-01	1.052E-02	-0.408
		1291.56		-7.678E-02	1.162E-01	1.761E-01	1.366E-02	-0.436
CO-60		1173.22		2.160E-02	4.569E-02	7.762E-02	4.264E-03	0.278
		1332.49	*	-9.331E-04	4.230E-02	6.859E-02	4.444E-03	-0.014
ZN-65		1115.52	*	1.773E-02	1.061E-01	1.548E-01	9.618E-03	0.115
GE-68		1077.35	*	3.227E-01	1.279E+00	2.149E+00	1.423E-01	0.150
AS-73		53.44	*	4.305E-01	6.225E-01	1.057E+00	6.742E-02	0.407
AS-74		595.88	*	4.651E-02	8.145E-02	1.377E-01	9.226E-03	0.338
		634.78		-2.063E-01	2.948E-01	4.498E-01	3.113E-02	-0.459
SE-75		66.05		-2.141E+00	4.620E+00	6.657E+00	6.058E-01	-0.322
		96.73		-1.908E-01	8.034E-01	1.150E+00	1.537E-01	-0.166
		121.11		4.409E-02	1.330E-01	2.212E-01	2.157E-02	0.199
		136.00		4.026E-02	3.877E-02	6.567E-02	4.061E-03	0.613
		198.60		-1.376E-01	1.774E+00	2.860E+00	2.062E-01	-0.048
		264.65	*	-2.164E-02	4.921E-02	6.638E-02	4.954E-03	-0.326
		279.53		-2.528E-02	1.162E-01	1.664E-01	1.351E-02	-0.152
		303.91		-9.093E-01	2.199E+00	3.125E+00	3.312E-01	-0.291
		400.65		1.586E-01	2.425E-01	4.161E-01	3.674E-02	0.381
BR-77	+	87.88		4.397E+02	1.054E+02	1.819E+02	1.664E+01	2.417
		200.40		-1.692E+01	8.759E+01	1.405E+02	8.351E+00	-0.120
	+	239.00		1.513E+02	1.334E+01	1.983E+01	1.350E+00	7.633
		249.79		-2.031E+01	3.409E+01	5.299E+01	3.743E+00	-0.383
		281.68		1.082E+01	4.945E+01	7.366E+01	5.698E+00	0.147
		297.23		1.199E+02	4.188E+01	5.390E+01	4.051E+00	2.225
		303.76		-3.944E+01	9.846E+01	1.402E+02	1.039E+01	-0.281
		439.47		2.278E+00	7.142E+01	1.183E+02	6.692E+00	0.019
		484.57		-1.942E+01	1.181E+02	1.923E+02	1.151E+01	-0.101
		520.65	*	1.420E+00	4.982E+00	8.328E+00	5.187E-01	0.170
		574.64		-7.685E+01	1.117E+02	1.616E+02	1.062E+01	-0.476
		578.91		1.142E+01	4.790E+01	6.913E+01	4.560E+00	0.165
		585.48		5.704E+02	1.317E+02	2.295E+02	1.523E+01	2.486
		755.35		3.155E+01	8.863E+01	1.462E+02	1.100E+01	0.216
		817.79		2.896E+01	6.916E+01	1.192E+02	9.276E+00	0.243
SR-82		698.33		-8.862E+00	3.268E+01	5.170E+01	3.750E+00	-0.171
		776.49	*	-2.597E-01	3.545E-01	5.635E-01	4.291E-02	-0.461
		1395.20		-1.277E+01	1.006E+01	1.345E+01	8.671E-01	-0.949
RB-83		520.41	*	1.467E-02	6.212E-02	1.035E-01	6.445E-03	0.142
		529.64		-1.621E-03	9.609E-02	1.572E-01	9.885E-03	-0.010
		552.65		-1.294E-01	1.960E-01	3.057E-01	1.967E-02	-0.423
RB-84		881.50	*	6.389E-02	6.768E-02	1.203E-01	9.633E-03	0.531
KR-85		513.99	*	8.086E+00	7.409E+00	1.152E+01	7.121E-01	0.702
SR-85		513.99	*	4.049E-02	3.710E-02	5.766E-02	3.566E-03	0.702
RB-86		1076.63	*	-1.464E-01	7.620E-01	1.236E+00	8.189E-02	-0.118
Y-88		898.02		-1.696E-02	4.292E-02	6.935E-02	5.622E-03	-0.245

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	-2.940E-02	2.952E-02	3.872E-02	2.103E-03	-0.759
ZR-88		392.90	*	8.236E-03	2.835E-02	4.787E-02	2.536E-03	0.172
Y-91		1204.90	*	3.091E+01	2.012E+01	3.627E+01	2.062E+00	0.852
NB-94		702.63	*	7.351E-03	3.491E-02	5.715E-02	4.158E-03	0.129
		871.10		7.288E-03	3.336E-02	5.657E-02	4.512E-03	0.129
NB-95		765.79	*	6.138E-02	5.043E-02	7.768E-02	5.880E-03	0.790
NB-95M		235.69	*	1.201E+00	1.946E-01	3.037E-01	2.511E-02	3.956
ZR-95		724.18		1.714E-01	1.060E-01	1.692E-01	1.394E-02	1.013
		756.15	*	5.139E-02	7.211E-02	1.218E-01	1.037E-02	0.422
NB-97		657.90	*	6.204E-03	7.211E-02	Half-Life too short		
		1024.50		-1.126E-01	7.211E-02	Half-Life too short		
ZR-97		254.15		-7.551E-02	7.211E-02	Half-Life too short		
		355.39		6.014E-04	7.211E-02	Half-Life too short		
		507.63	*	6.360E-01	7.211E-02	Half-Life too short		
		602.52		9.204E-02	7.211E-02	Half-Life too short		
		1021.30		2.332E-01	7.211E-02	Half-Life too short		
		1147.95		-4.962E-01	7.211E-02	Half-Life too short		
		1362.66		5.890E-01	7.211E-02	Half-Life too short		
		1750.46		6.417E-02	7.211E-02	Half-Life too short		
MO-99		140.51		-2.468E+01	1.607E+01	2.249E+01	6.069E+00	-1.097
		181.06		-2.698E+00	1.105E+01	1.546E+01	2.636E+00	-0.175
		366.43		4.620E+00	4.547E+01	7.623E+01	4.600E+00	0.061
		739.58	*	-2.286E-01	6.627E+00	1.063E+01	1.547E+00	-0.022
		778.00		-1.637E+01	1.892E+01	2.970E+01	2.264E+00	-0.551
TC-99M		140.51	*	-1.262E+08	1.892E+01	Half-Life too short		
RH-101	+	127.23		6.510E-02	4.646E-02	5.657E-02	3.603E-03	1.151
		198.01	*	-3.351E-02	3.431E-02	5.190E-02	3.057E-03	-0.646
		325.23		2.887E-01	2.438E-01	3.816E-01	2.677E-02	0.757
RH-102		418.52		-1.619E-01	2.731E-01	4.367E-01	2.401E-02	-0.371
		475.06	*	1.286E-02	2.569E-02	4.371E-02	2.586E-03	0.294
		631.29		3.853E-02	4.944E-02	8.499E-02	5.866E-03	0.453
		697.49		1.958E-03	7.766E-02	1.256E-01	9.104E-03	0.016
	+	766.84		1.852E-01	9.926E-02	1.969E-01	1.491E-02	0.941
		1046.59		-5.077E-02	1.056E-01	1.665E-01	1.153E-02	-0.305
		1112.84		8.282E-02	2.657E-01	3.883E-01	2.419E-02	0.213
RU-103		497.08	*	-1.008E-02	3.873E-02	6.256E-02	7.990E-03	-0.161
	+	610.33		1.477E+01	2.762E+00	2.807E+00	4.438E-01	5.261
RH-106		511.85		6.373E-01	2.213E-01	4.077E-01	2.515E-02	1.563
		621.84	*	2.508E-01	3.131E-01	5.349E-01	6.574E-02	0.469
		1050.47		1.016E+00	2.061E+00	3.549E+00	2.445E-01	0.286
RU-106		511.85		6.373E-01	2.213E-01	4.077E-01	2.515E-02	1.563
		621.84	*	2.508E-01	3.121E-01	5.349E-01	3.663E-02	0.469
		1050.47		1.016E+00	2.061E+00	3.549E+00	2.445E-01	0.286
AG-108M		433.93	*	1.191E-02	3.130E-02	5.292E-02	3.243E-03	0.225
		614.37		1.712E-02	3.933E-02	5.777E-02	4.177E-03	0.296
		722.95		8.290E-03	4.374E-02	6.204E-02	4.818E-03	0.134
AG-110M		657.75	*	2.096E-02	3.415E-02	5.770E-02	4.245E-03	0.363
		677.61		-8.564E-02	3.047E-01	4.819E-01	3.585E-02	-0.178
		706.67		9.984E-04	2.225E-01	3.590E-01	2.719E-02	0.003

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		6.859E-02	1.919E-01	2.753E-01	2.158E-02	0.249
		884.67		-6.457E-05	4.932E-02	8.220E-02	6.836E-03	-0.001
		937.48		-2.680E-02	1.036E-01	1.683E-01	1.373E-02	-0.159
		1384.27		-1.389E-01	1.721E-01	2.132E-01	1.444E-02	-0.652
IN-111		171.28		2.457E-01	5.769E-01	9.530E-01	5.092E-02	0.258
		245.39	*	4.379E-01	6.407E-01	9.367E-01	6.520E-02	0.468
IN-113M		391.69	*	-2.374E-02	4.130E-02	6.641E-02	3.793E-03	-0.357
SN-113		391.69	*	-2.374E-02	4.130E-02	6.641E-02	3.793E-03	-0.357
IN-114M		190.27	*	-9.037E-03	1.979E-01	2.795E-01	1.601E-02	-0.032
CD-115		260.90		2.069E+01	6.206E+01	1.009E+02	7.392E+00	0.205
		492.35		-4.012E+00	1.815E+01	2.944E+01	1.777E+00	-0.136
		527.90	*	6.158E-01	5.017E+00	8.289E+00	5.202E-01	0.074
SN-117M		156.02		-3.638E+00	2.030E+00	3.076E+00	1.701E-01	-1.183
		158.56	*	2.760E-02	4.876E-02	8.110E-02	4.425E-03	0.340
SB-122		563.90	*	1.269E+00	1.159E+00	2.020E+00	1.314E-01	0.628
		692.80		-1.789E+01	2.296E+01	3.465E+01	2.504E+00	-0.516
I-123		159.00	*	2.018E-01	2.296E+01	Half-Life too short		
		528.96		-5.555E+00	2.296E+01	Half-Life too short		
TE-123M		159.00	*	1.702E-02	2.823E-02	4.700E-02	2.597E-03	0.362
I-124		602.71	*	3.441E-02	5.274E-01	7.459E-01	5.026E-02	0.046
		722.78		6.309E-01	3.148E+00	4.471E+00	3.297E-01	0.141
		1325.50		8.167E+00	2.575E+01	4.266E+01	2.746E+00	0.191
	+	1376.25		3.557E+01	2.460E+01	3.805E+01	2.457E+00	0.935
		1509.49		5.152E+00	1.019E+01	1.750E+01	1.104E+00	0.294
		1691.02		-2.487E+00	2.384E+00	3.211E+00	1.894E-01	-0.775
SB-124		602.71		2.830E-03	4.338E-02	6.134E-02	4.135E-03	0.046
		645.85		1.858E-01	4.850E-01	8.080E-01	6.149E-02	0.230
		709.31		1.117E+00	2.831E+00	4.690E+00	3.428E-01	0.238
		713.82		-7.688E-01	1.612E+00	2.498E+00	2.786E-01	-0.308
		722.78		7.522E-02	3.753E-01	5.330E-01	4.046E-02	0.141
	+	968.20		2.327E+01	5.521E+00	7.445E+00	5.658E-01	3.126
		1045.16		-6.080E-03	2.328E+00	3.841E+00	2.666E-01	-0.002
		1325.50		1.040E+00	3.279E+00	5.432E+00	3.496E-01	0.191
		1368.21		-9.082E-01	1.715E+00	2.440E+00	2.979E-01	-0.372
		1436.60		2.014E+00	3.418E+00	5.947E+00	3.810E-01	0.339
		1691.02	*	-6.994E-02	6.706E-02	9.030E-02	5.768E-03	-0.775
SB-125		427.89	*	-2.661E-02	8.515E-02	1.383E-01	8.054E-03	-0.192
	+	463.38		1.075E+00	4.731E-01	5.528E-01	3.754E-02	1.945
		600.56		-4.338E-02	1.820E-01	2.916E-01	2.194E-02	-0.149
		635.90		-2.090E-01	2.407E-01	3.607E-01	2.805E-02	-0.579
TE-125M		109.28	*	2.268E+00	8.804E+00	1.465E+01	1.349E+00	0.155
I-126		388.63		-1.827E-03	1.738E-01	2.889E-01	1.555E-02	-0.006
		666.33	*	2.147E-01	1.636E-01	2.872E-01	2.036E-02	0.748
		753.82		7.644E-01	1.291E+00	2.169E+00	1.630E-01	0.352
SB-126		223.80		1.129E+00	3.498E+00	5.707E+00	3.688E-01	0.198
		278.60		2.409E+00	2.398E+00	3.681E+00	2.854E-01	0.654
		296.50		1.119E+01	2.138E+00	3.000E+00	2.258E-01	3.729
		414.70		1.493E-02	6.330E-02	1.063E-01	5.814E-03	0.140
		415.30		1.595E-01	5.216E+00	8.662E+00	4.741E-01	0.018

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		2.547E+00	3.522E+00	6.021E+00	3.884E-01	0.423
		573.80		-1.105E-01	8.808E-01	1.384E+00	9.090E-02	-0.080
		593.00		-9.622E-01	8.085E-01	1.197E+00	8.001E-02	-0.804
		656.30		-5.788E-01	2.995E+00	4.782E+00	3.365E-01	-0.121
		666.33		8.925E-02	6.801E-02	1.194E-01	8.466E-03	0.748
		675.00		1.303E+00	1.714E+00	2.925E+00	2.087E-01	0.445
		695.00		5.303E-02	6.469E-02	1.107E-01	8.014E-03	0.479
		697.00		2.648E-01	2.304E-01	4.015E-01	2.910E-02	0.659
		720.50	*	-1.182E-02	1.357E-01	1.959E-01	1.442E-02	-0.060
		856.80		2.524E-01	4.645E-01	7.068E-01	5.602E-02	0.357
		989.30		5.693E-01	1.053E+00	1.822E+00	1.355E-01	0.312
		1034.80		-4.773E+00	7.181E+00	1.111E+01	7.821E-01	-0.430
		1213.00		2.265E+00	4.058E+00	6.921E+00	3.970E-01	0.327
SB-127		61.10		5.662E+01	3.520E+01	5.466E+01	4.866E+00	1.036
		252.40		2.182E+00	2.959E+00	4.680E+00	1.946E+00	0.466
		290.80		3.583E+00	1.448E+01	2.158E+01	2.096E+00	0.166
		411.60		1.390E+00	7.895E+00	1.321E+01	1.816E+00	0.105
		444.90		3.494E+00	6.140E+00	1.048E+01	1.055E+00	0.333
		473.00		-3.847E-01	1.012E+00	1.623E+00	1.719E-01	-0.237
		543.00		5.622E+00	1.082E+01	1.827E+01	2.309E+00	0.308
		603.60		-1.917E+00	8.865E+00	1.220E+01	1.301E+00	-0.157
		685.20	*	3.825E-01	9.192E-01	1.529E+00	1.476E-01	0.250
		698.50		-4.438E+00	1.045E+01	1.631E+01	2.390E+00	-0.272
		722.20		2.440E-01	2.158E+01	3.000E+01	2.858E+00	0.008
		783.80		3.012E+00	2.421E+00	4.349E+00	4.853E-01	0.693
XE-127		57.60		-2.225E+00	5.201E+00	7.547E+00	4.823E-01	-0.295
		145.22		4.277E-01	6.513E-01	1.089E+00	6.353E-02	0.393
		172.10		-6.788E-02	1.143E-01	1.814E-01	9.723E-03	-0.374
		202.84	*	4.140E-02	5.217E-02	7.669E-02	4.597E-03	0.540
		374.96		1.473E-01	1.819E-01	3.153E-01	1.827E-02	0.467
I-131		80.18		1.691E+00	5.123E+00	5.560E+00	4.615E-01	0.304
		284.30		-1.087E-01	1.151E+00	1.932E+00	1.581E-01	-0.056
		364.48	*	1.353E-02	9.036E-02	1.519E-01	1.020E-02	0.089
		636.97		-1.197E+00	1.156E+00	1.705E+00	1.280E-01	-0.702
		722.89		1.174E+00	6.069E+00	8.612E+00	6.391E-01	0.136
TE-132		49.72		-1.431E+01	8.501E+00	1.339E+01	1.137E+00	-1.069
		111.76		-2.075E+00	1.762E+01	2.894E+01	2.620E+00	-0.072
		116.30		6.770E+00	1.668E+01	2.783E+01	2.464E+00	0.243
		228.16	*	1.962E-01	4.341E-01	7.100E-01	1.014E-01	0.276
BA-133		53.15		1.397E+00	2.733E+00	4.617E+00	2.946E-01	0.303
		79.62		4.359E-01	1.743E+00	1.881E+00	2.820E-01	0.232
		81.00		2.195E-02	1.354E-01	1.451E-01	2.283E-02	0.151
	+	276.40		4.910E-01	5.782E-01	6.309E-01	8.781E-02	0.778
		302.84		4.267E-02	1.491E-01	2.223E-01	2.789E-02	0.192
		356.01	*	-2.843E-02	4.639E-02	6.399E-02	7.567E-03	-0.444
		383.85		1.098E-01	2.900E-01	4.917E-01	5.276E-02	0.223
I-133	+	510.53		2.310E-01	2.900E-01	Half-Life too short		
		529.87	*	-3.919E-05	2.900E-01	Half-Life too short		
		706.58		7.523E-04	2.900E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		856.28		1.108E-02	2.900E-01	Half-Life too short		
		875.33		-2.254E-02	2.900E-01	Half-Life too short		
		1236.41		1.292E-01	2.900E-01	Half-Life too short		
		1298.22		4.678E-03	2.900E-01	Half-Life too short		
CS-134		475.35		3.328E-01	1.713E+00	2.857E+00	1.691E-01	0.116
		563.23		4.111E-01	3.678E-01	6.407E-01	4.235E-02	0.642
		569.32		-8.928E-02	1.976E-01	3.060E-01	2.048E-02	-0.292
		604.70		1.191E-02	3.693E-02	5.350E-02	3.627E-03	0.223
	+	795.84	*	1.229E-01	7.146E-02	8.678E-02	6.739E-03	1.416
		801.93		1.223E-01	4.505E-01	6.743E-01	5.242E-02	0.181
		1038.57		-1.802E+00	3.708E+00	5.855E+00	4.101E-01	-0.308
		1167.94		-1.826E+00	2.549E+00	3.928E+00	2.185E-01	-0.465
		1365.15		1.999E-01	1.136E+00	1.883E+00	1.315E-01	0.106
CS-135		268.24	*	4.085E-01	1.857E-01	2.885E-01	2.601E-02	1.416
I-135		288.45		-2.020E+07	1.857E-01	Half-Life too short		
		417.63		-9.009E+07	1.857E-01	Half-Life too short		
		546.56		-1.288E+07	1.857E-01	Half-Life too short		
		836.80		1.495E+07	1.857E-01	Half-Life too short		
		1038.76		-2.250E+07	1.857E-01	Half-Life too short		
		1124.00		1.670E+06	1.857E-01	Half-Life too short		
		1131.51		-1.338E+07	1.857E-01	Half-Life too short		
		1260.41	*	-1.569E+07	1.857E-01	Half-Life too short		
		1457.56		3.325E+09	1.857E-01	Half-Life too short		
		1678.03		4.606E+06	1.857E-01	Half-Life too short		
		1706.46		-1.090E+07	1.857E-01	Half-Life too short		
		1791.20		-2.040E+07	1.857E-01	Half-Life too short		
CS-136		66.91		-3.118E-01	7.297E-01	9.799E-01	1.431E-01	-0.318
	+	86.29		4.469E+00	1.153E+00	1.695E+00	2.216E-01	2.636
		153.22		5.795E-01	5.828E-01	9.823E-01	6.943E-02	0.590
		163.89		4.006E-01	9.585E-01	1.584E+00	1.086E-01	0.253
		176.55		2.165E-01	3.259E-01	5.422E-01	3.363E-02	0.399
		273.65		9.491E-02	5.988E-01	6.061E-01	5.010E-02	0.157
		340.57		1.898E-01	1.162E-01	1.863E-01	1.304E-02	1.019
		818.51		-8.086E-03	6.428E-02	1.066E-01	8.304E-03	-0.076
		1048.07	*	-4.623E-02	8.951E-02	1.407E-01	1.036E-02	-0.329
		1235.34		2.312E-01	5.632E-01	9.444E-01	9.470E-02	0.245
BA-137M		661.65	*	-1.946E-02	3.545E-02	5.501E-02	3.887E-03	-0.354
CS-137		661.65	*	-2.057E-02	3.748E-02	5.815E-02	4.121E-03	-0.354
CE-139		165.85	*	-1.423E-02	2.994E-02	4.788E-02	2.512E-03	-0.297
BA-140		162.64		-5.163E-02	6.829E-01	1.109E+00	6.786E-02	-0.047
		304.84		-6.654E-01	1.218E+00	1.696E+00	4.693E-01	-0.392
		423.70		1.693E-01	1.605E+00	2.673E+00	8.485E-01	0.063
		537.32	*	-1.144E-01	2.233E-01	3.473E-01	1.133E-01	-0.329
LA-140		328.77		3.901E-01	3.021E-01	4.727E-01	3.561E-02	0.825
		432.53		1.953E-01	1.732E+00	2.884E+00	1.797E-01	0.068
		487.03		-2.032E-02	1.221E-01	1.987E-01	1.340E-02	-0.102
		751.79		-1.939E+00	1.573E+00	2.259E+00	1.931E-01	-0.858
		815.85		9.098E-02	2.794E-01	4.787E-01	4.243E-02	0.190
		867.82		3.044E-01	1.263E+00	2.053E+00	1.736E-01	0.148

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		4.403E-01	2.346E+00	3.791E+00	3.829E-01	0.116
		925.24		5.937E-01	9.949E-01	1.626E+00	1.380E-01	0.365
		1596.49	*	-4.617E-02	6.559E-02	9.795E-02	6.016E-03	-0.471
CE-141		145.44	*	3.556E-03	5.914E-02	9.692E-02	5.873E-03	0.037
CE-143		57.37		-9.855E-05	5.914E-02	Half-Life too short		
		231.56		-2.548E-04	5.914E-02	Half-Life too short		
	+	293.26	*	4.519E-04	5.914E-02	Half-Life too short		
	+	350.59		1.041E-02	5.914E-02	Half-Life too short		
		490.36		-1.113E-04	5.914E-02	Half-Life too short		
		664.57		-2.292E-04	5.914E-02	Half-Life too short		
		721.93		8.022E-06	5.914E-02	Half-Life too short		
CE-144		80.11		9.200E-01	2.847E+00	3.088E+00	2.548E-01	0.298
		133.54	*	7.605E-02	2.228E-01	3.426E-01	4.919E-02	0.222
PM-144		476.78		-4.096E-02	6.210E-02	9.768E-02	6.886E-03	-0.419
		618.01		1.025E-02	3.122E-02	5.189E-02	3.697E-03	0.197
		696.49	*	3.342E-02	3.323E-02	5.744E-02	4.163E-03	0.582
		778.57		-1.282E+00	2.168E+00	3.478E+00	2.652E-01	-0.369
PR-144		696.49	*	2.262E+00	2.249E+00	3.888E+00	2.817E-01	0.582
		1489.15		3.643E+00	9.060E+00	1.562E+01	9.904E-01	0.233
PM-146		453.90	*	1.958E-02	4.428E-02	7.104E-02	6.107E-03	0.276
		633.02		2.820E-01	1.253E+00	2.063E+00	7.638E-01	0.137
		735.90		-8.922E-02	1.557E-01	2.358E-01	6.666E-02	-0.378
		747.13		2.672E-02	9.280E-02	1.524E-01	2.038E-02	0.175
ND-147	+	91.11		1.054E+00	2.927E-01	4.603E-01	4.363E-02	2.291
		319.41		1.985E+00	2.737E+00	4.740E+00	3.381E-01	0.419
		439.89		-1.237E+00	4.849E+00	7.894E+00	4.470E-01	-0.157
		531.02	*	3.479E-02	4.455E-01	7.338E-01	1.008E-01	0.047
PM-149		285.90	*	-8.317E+00	4.150E+01	6.925E+01	1.041E+01	-0.120
EU-152		121.78		1.797E-02	7.926E-02	1.218E-01	9.996E-03	0.148
		244.69		1.708E-01	3.442E-01	4.973E-01	3.453E-02	0.344
		344.27	*	-1.264E-01	1.018E-01	1.415E-01	1.026E-02	-0.894
		443.98		-7.149E-02	8.962E-01	1.474E+00	8.387E-02	-0.049
		778.89		-8.555E-02	2.560E-01	4.193E-01	3.197E-02	-0.204
		867.32		-5.604E-02	8.934E-01	1.375E+00	1.095E-01	-0.041
		964.01		2.963E-01	3.671E-01	5.614E-01	4.284E-02	0.528
		1085.78		5.352E-02	3.941E-01	6.562E-01	4.285E-02	0.082
		1112.02		1.942E-01	3.487E-01	5.588E-01	3.487E-02	0.347
		1407.95		4.140E-02	1.718E-01	2.864E-01	1.843E-02	0.145
GD-153		69.67		-7.107E-01	1.645E+00	2.378E+00	1.723E-01	-0.299
	+	83.37		2.545E+01	1.499E+01	2.385E+01	2.054E+00	1.067
		97.43	*	2.021E-02	8.328E-02	1.218E-01	9.910E-03	0.166
		103.18		4.627E-03	1.017E-01	1.684E-01	1.291E-02	0.027
EU-154		123.07		4.728E-02	5.717E-02	8.549E-02	8.430E-03	0.553
		247.94		-1.424E-01	3.850E-01	5.563E-01	5.746E-02	-0.256
		591.81		-4.461E-01	6.117E-01	9.412E-01	9.710E-02	-0.474
		723.30		4.519E-02	1.893E-01	2.697E-01	2.271E-02	0.168
		756.87		6.285E-01	7.956E-01	1.349E+00	1.514E-01	0.466
		873.19		-1.362E-01	2.937E-01	4.712E-01	5.562E-02	-0.289
		996.32		-1.221E-01	3.723E-01	5.990E-01	1.030E-01	-0.204

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		-1.209E-01	2.177E-01	3.433E-01	3.675E-02	-0.352
		1274.45	*	-4.130E-02	1.247E-01	1.970E-01	1.879E-02	-0.210
EU-155		48.70		-1.516E+00	1.663E+00	2.715E+00	1.726E-01	-0.558
		60.01		2.680E+00	4.418E+00	6.680E+00	4.311E-01	0.401
	+	86.54		4.639E-01	1.113E-01	1.765E-01	1.601E-02	2.628
		105.31	*	-5.952E-02	1.050E-01	1.701E-01	1.299E-02	-0.350
TB-160	+	86.79		1.214E+00	2.909E-01	4.636E-01	4.179E-02	2.618
		197.04		-2.344E-01	5.687E-01	8.819E-01	5.177E-02	-0.266
		215.65		3.546E-01	6.941E-01	1.143E+00	7.176E-02	0.310
	+	298.57		2.282E-01	1.209E-01	1.917E-01	1.437E-02	1.191
		879.36	*	1.353E-01	1.337E-01	2.392E-01	1.914E-02	0.565
		962.29		6.558E-01	6.261E-01	9.799E-01	7.491E-02	0.669
		966.15		1.546E+00	3.129E-01	5.642E-01	4.297E-02	2.741
		1177.93		4.448E-02	3.802E-01	6.282E-01	3.469E-02	0.071
		1271.85		-3.717E-01	7.231E-01	1.123E+00	6.850E-02	-0.331
HO-166M		80.57		1.070E-01	3.666E-01	3.967E-01	3.293E-02	0.270
	+	184.41		1.692E-01	5.695E-02	7.023E-02	3.936E-03	2.410
		280.46		-4.289E-02	9.153E-02	1.305E-01	1.011E-02	-0.329
		410.95		2.073E-01	2.408E-01	4.168E-01	2.267E-02	0.497
		711.68	*	-1.694E-02	6.269E-02	9.900E-02	7.247E-03	-0.171
		752.31		-1.981E-01	2.826E-01	4.279E-01	3.213E-02	-0.463
		810.29		-6.802E-02	5.540E-02	8.320E-02	6.450E-03	-0.818
TM-171		51.35		9.615E-01	2.200E+01	3.705E+01	2.364E+00	0.026
		52.39		-4.550E-01	1.175E+01	1.953E+01	1.246E+00	-0.023
		59.40		2.797E+00	2.367E+01	3.513E+01	2.252E+00	0.080
		66.72	*	-1.220E+01	2.766E+01	3.991E+01	2.793E+00	-0.306
LU-176	+	88.36		7.007E-01	2.044E-01	3.650E-01	3.327E-02	1.920
		201.83		-1.562E-02	3.088E-02	4.710E-02	2.813E-03	-0.332
		306.84	*	-9.462E-03	2.354E-02	3.879E-02	2.855E-03	-0.244
		401.10		4.792E+00	6.371E+00	1.100E+01	5.897E-01	0.436
LU-177		112.95		2.833E-01	1.223E+00	2.031E+00	1.428E-01	0.139
	+	208.36	*	2.810E+00	1.294E+00	1.587E+00	9.705E-02	1.771
LU-177M		52.97		4.029E-01	1.223E+00	2.056E+00	1.312E-01	0.196
		54.07		7.267E-01	6.546E-01	1.123E+00	7.164E-02	0.647
	+	61.30		1.059E+00	1.659E+00	2.124E+00	1.393E-01	0.499
		121.62		-3.156E-02	3.901E-01	6.180E-01	4.058E-02	-0.051
		147.16		-7.974E-01	6.502E-01	1.014E+00	5.860E-02	-0.787
		171.86		-2.411E-01	4.774E-01	7.609E-01	4.074E-02	-0.317
		218.09		5.336E-02	8.135E-01	1.314E+00	8.324E-02	0.041
	+	268.79		2.248E+00	1.079E+00	1.479E+00	1.111E-01	1.520
		319.02		1.328E-01	2.452E-01	4.213E-01	3.007E-02	0.315
		367.43		-1.832E-01	8.309E-01	1.368E+00	8.219E-02	-0.134
		413.65	*	-4.095E-02	1.712E-01	2.802E-01	1.530E-02	-0.146
HF-181		56.28		-5.881E-01	7.216E-01	1.180E+00	7.533E-02	-0.498
		57.53		-1.221E-01	4.373E-01	6.388E-01	4.082E-02	-0.191
		65.20		2.458E-02	8.661E-01	1.274E+00	8.756E-02	0.019
		133.02		4.818E-02	7.155E-02	1.061E-01	6.566E-03	0.454
		136.25		4.450E-01	4.432E-01	7.499E-01	4.569E-02	0.593
		345.85		-5.112E-02	1.987E-01	2.834E-01	1.859E-02	-0.180

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	4.333E-02	3.914E-02	6.869E-02	4.097E-03	0.631
W-181		56.28		-2.363E-01	2.893E-01	4.730E-01	3.020E-02	-0.500
		57.53		-4.897E-02	1.755E-01	2.563E-01	1.638E-02	-0.191
		65.20	*	9.785E-03	3.447E-01	5.069E-01	3.485E-02	0.019
TA-182		67.75		-8.319E-02	1.167E-01	1.549E-01	1.097E-02	-0.537
		100.10		2.055E-01	1.729E-01	2.868E-01	2.268E-02	0.716
		152.43		4.431E-01	3.320E-01	5.657E-01	3.186E-02	0.783
		222.10		-1.701E-01	3.382E-01	5.324E-01	3.420E-02	-0.320
		1001.68		7.093E-01	2.087E+00	3.552E+00	2.605E-01	0.200
	+	1121.28		5.593E-01	2.137E-01	3.180E-01	1.951E-02	1.759
		1189.05		6.725E-02	3.352E-01	5.567E-01	3.112E-02	0.121
		1221.42	*	1.050E-01	2.065E-01	3.498E-01	2.024E-02	0.300
		1230.97		-1.046E-01	4.939E-01	7.941E-01	4.643E-02	-0.132
RE-183		57.98		-1.006E-02	1.730E-01	2.551E-01	1.631E-02	-0.039
		59.32		9.121E-03	9.532E-02	1.414E-01	9.058E-03	0.065
		67.20		-1.020E-01	2.064E-01	2.770E-01	1.949E-02	-0.368
		162.32	*	2.578E-02	1.112E-01	1.826E-01	9.762E-03	0.141
	+	208.81		3.117E+00	1.435E+00	1.761E+00	1.079E-01	1.770
		291.72		7.073E-01	9.689E-01	1.484E+00	1.128E-01	0.477
RE-184		57.98		-3.757E-02	6.459E-01	9.523E-01	6.089E-02	-0.039
		59.32		3.402E-02	3.556E-01	5.273E-01	3.379E-02	0.065
		67.20		-3.807E-01	7.703E-01	1.034E+00	7.275E-02	-0.368
		161.27		1.591E-01	3.610E-01	5.974E-01	3.213E-02	0.266
		216.55		9.951E-02	2.550E-01	4.177E-01	2.631E-02	0.238
		252.85	*	8.921E-02	2.245E-01	3.664E-01	2.615E-02	0.243
		318.01		-1.494E-01	4.177E-01	6.883E-01	4.927E-02	-0.217
		792.07		8.136E-01	1.081E+00	1.679E+00	1.290E-01	0.484
		903.28		3.666E-01	1.076E+00	1.713E+00	1.376E-01	0.214
		920.93		-4.125E-01	4.188E-01	6.339E-01	5.024E-02	-0.651
OS-185		59.72		1.014E-01	2.569E-01	3.855E-01	2.479E-02	0.263
	+	61.14		1.151E-01	1.802E-01	2.299E-01	1.505E-02	0.501
		69.30		-1.564E-01	2.913E-01	4.193E-01	3.026E-02	-0.373
		592.07		-1.907E+00	2.422E+00	3.712E+00	2.478E-01	-0.514
		646.12	*	1.865E-03	4.199E-02	6.828E-02	4.768E-03	0.027
		717.42		2.295E-02	8.561E-01	1.382E+00	1.016E-01	0.017
		874.81		-6.375E-01	5.595E-01	8.412E-01	6.719E-02	-0.758
		880.27		7.274E-01	7.561E-01	1.347E+00	1.079E-01	0.540
RE-188		155.03	*	-1.117E-01	1.670E-01	2.657E-01	1.477E-02	-0.421
		477.96		-9.230E-01	2.777E+00	4.471E+00	2.654E-01	-0.206
		633.10		4.367E-01	2.461E+00	4.050E+00	2.799E-01	0.108
W-188	+	63.58		3.937E+01	6.166E+01	7.423E+01	5.006E+00	0.530
		227.08		4.693E+00	1.261E+01	2.060E+01	1.347E+00	0.228
		290.67	*	1.819E+00	7.348E+00	1.096E+01	8.341E-01	0.166
IR-192	+	295.96		1.101E+00	1.906E-01	2.687E-01	2.044E-02	4.098
		308.46		7.045E-02	8.981E-02	1.560E-01	1.152E-02	0.452
		316.51	*	-2.082E-02	3.237E-02	5.258E-02	3.791E-03	-0.396
		468.07		4.408E-02	6.652E-02	1.008E-01	6.796E-03	0.437
		604.41		8.282E-02	4.856E-01	6.938E-01	8.230E-02	0.119
		612.46		5.444E-01	7.453E-01	1.119E+00	9.354E-02	0.487

---- Non-Identified Nuclides ----

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AU-195		65.12		-2.725E-03	1.602E-01	2.351E-01	1.615E-02	-0.012
		66.83		-3.830E-02	9.096E-02	1.313E-01	9.203E-03	-0.292
	+	75.70		1.853E+00	2.346E-01	4.497E-01	3.507E-02	4.121
		98.88	*	3.314E-02	2.467E-01	3.590E-01	2.875E-02	0.092
		129.76		4.967E+00	3.244E+00	4.969E+00	3.126E-01	0.999
TL-200		367.94	*	-2.635E-05	3.244E+00	Half-Life too short		
		579.30		1.039E-03	3.244E+00	Half-Life too short		
		828.27		1.181E-03	3.244E+00	Half-Life too short		
		1205.75		7.689E-04	3.244E+00	Half-Life too short		
TL-201		68.90		-6.161E-01	2.828E+00	4.125E+00	2.962E-01	-0.149
		70.82		9.013E-02	1.616E+00	2.380E+00	1.748E-01	0.038
		80.30		1.378E+00	4.062E+00	4.411E+00	3.649E-01	0.312
		135.34		8.188E+00	1.523E+01	2.541E+01	1.555E+00	0.322
		167.43	*	8.638E-01	4.162E+00	6.825E+00	3.597E-01	0.127
TL-202		68.90		-8.141E-02	3.737E-01	5.451E-01	3.914E-02	-0.149
		70.82		1.188E-02	2.129E-01	3.136E-01	2.304E-02	0.038
		80.30		1.816E-01	5.355E-01	5.814E-01	4.809E-02	0.312
		439.56	*	1.548E-03	5.863E-02	9.709E-02	5.493E-03	0.016
HG-203		70.83		5.880E-02	1.014E+00	1.493E+00	1.917E-01	0.039
	+	72.87		3.837E+00	7.638E-01	1.122E+00	1.404E-01	3.421
	+	82.60		1.842E+00	1.102E+00	1.752E+00	2.397E-01	1.051
		279.20	*	1.649E-02	4.284E-02	6.365E-02	5.116E-03	0.259
BI-207	+	72.80		1.163E+00	2.001E-01	3.356E-01	2.525E-02	3.466
	+	74.97		6.890E-01	1.186E-01	2.487E-01	1.922E-02	2.770
	+	84.90		3.313E-01	1.951E-01	3.372E-01	2.964E-02	0.982
		569.67		-1.060E-02	3.055E-02	4.764E-02	3.116E-03	-0.223
		1063.62	*	9.996E-03	5.204E-02	8.715E-02	5.891E-03	0.115
		1770.23		5.851E-02	3.237E-01	4.888E-01	2.762E-02	0.120
TL-207		81.07		7.034E-02	2.993E-01	3.224E-01	2.694E-02	0.218
	+	83.78		2.185E-01	1.286E-01	2.006E-01	1.737E-02	1.089
		94.90		1.039E-01	2.374E-01	3.519E-01	2.947E-02	0.295
		122.32		1.337E+00	1.945E+00	2.895E+00	2.128E-01	0.462
		144.24		6.934E-01	6.794E-01	1.138E+00	8.285E-02	0.610
		154.21		6.105E-02	3.965E-01	6.507E-01	4.446E-02	0.094
	+	269.46		5.314E-01	2.553E-01	3.526E-01	2.728E-02	1.507
		323.87	*	-2.398E-01	7.187E-01	1.023E+00	1.738E-01	-0.234
	+	338.28		6.571E+00	1.747E+00	2.384E+00	2.640E-01	2.756
		445.03		1.325E+00	2.152E+00	3.680E+00	3.758E-01	0.360
PO-209		260.50		4.678E+00	9.343E+00	1.530E+01	1.120E+00	0.306
		262.80		-1.761E+01	2.634E+01	4.063E+01	2.995E+00	-0.433
		896.60	*	3.648E+00	7.399E+00	1.277E+01	1.029E+00	0.286
BI-210		46.50	*	6.943E-01	2.318E+00	3.901E+00	2.892E-01	0.178
PB-210		46.50	*	6.943E-01	2.318E+00	3.901E+00	2.892E-01	0.178
PO-210		46.50	*	6.943E-01	2.318E+00	3.901E+00	2.447E-01	0.178
PB-211		404.84	*	-6.332E-01	1.005E+00	1.478E+00	9.211E-01	-0.428
		427.08		-5.065E-01	1.925E+00	3.093E+00	1.911E+00	-0.164
		831.96		-5.122E-01	1.205E+00	1.879E+00	1.176E+00	-0.273
PO-215		81.07		7.034E-02	2.993E-01	3.224E-01	2.694E-02	0.218
	+	83.78		2.185E-01	1.286E-01	2.006E-01	1.737E-02	1.089

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		1.039E-01	2.374E-01	3.519E-01	2.947E-02	0.295
		122.32		1.337E+00	1.945E+00	2.895E+00	2.128E-01	0.462
		144.24		6.934E-01	6.794E-01	1.138E+00	8.285E-02	0.610
		154.21		6.105E-02	3.965E-01	6.507E-01	4.446E-02	0.094
	+	269.46		5.314E-01	2.553E-01	3.526E-01	2.728E-02	1.507
		323.87	*	-2.398E-01	7.187E-01	1.023E+00	1.738E-01	-0.234
	+	338.28		6.571E+00	1.747E+00	2.384E+00	2.640E-01	2.756
		445.03		1.325E+00	2.152E+00	3.680E+00	3.758E-01	0.360
RN-219	+	271.23		6.818E-01	3.296E-01	4.461E-01	4.218E-02	1.528
		401.81	*	5.838E-02	4.005E-01	6.700E-01	8.997E-02	0.087
RN-220		549.76	*	-6.673E+00	2.538E+01	4.074E+01	2.614E+00	-0.164
RA-223		81.07		7.034E-02	2.993E-01	3.224E-01	2.694E-02	0.218
	+	83.78		2.185E-01	1.286E-01	2.006E-01	1.737E-02	1.089
		94.90		1.039E-01	2.374E-01	3.519E-01	2.947E-02	0.295
		122.32		1.337E+00	1.945E+00	2.895E+00	2.128E-01	0.462
		144.24		6.934E-01	6.794E-01	1.138E+00	8.285E-02	0.610
		154.21		6.105E-02	3.965E-01	6.507E-01	4.446E-02	0.094
	+	269.46		5.314E-01	2.553E-01	3.526E-01	2.728E-02	1.507
		323.87	*	-2.398E-01	7.187E-01	1.023E+00	1.738E-01	-0.234
	+	338.28		6.571E+00	1.747E+00	2.384E+00	2.640E-01	2.756
		445.03		1.325E+00	2.152E+00	3.680E+00	3.758E-01	0.360
AC-227		79.80		6.293E-01	2.217E+00	2.395E+00	5.112E-01	0.263
		236.00		4.399E+00	6.083E-01	7.244E-01	7.971E-02	6.072
		256.20	*	-3.582E-01	3.809E-01	5.754E-01	8.403E-02	-0.623
		286.10		-2.846E-01	1.404E+00	2.343E+00	2.954E-01	-0.121
	+	299.80		2.970E+00	1.637E+00	2.496E+00	4.232E-01	1.190
		304.40		-5.719E-01	2.002E+00	2.871E+00	5.138E-01	-0.199
		334.20		-2.071E-01	2.839E+00	3.608E+00	6.740E-01	-0.057
TH-227		79.80		6.293E-01	2.217E+00	2.395E+00	5.178E-01	0.263
		94.00		6.220E+00	2.325E+00	3.406E+00	7.397E-01	1.826
		236.00		4.399E+00	5.633E-01	7.244E-01	7.018E-02	6.072
		256.20	*	-3.582E-01	3.824E-01	5.754E-01	1.003E-01	-0.623
		286.10		-2.846E-01	1.433E+00	2.343E+00	2.350E+00	-0.121
	+	299.80		2.970E+00	1.637E+00	2.496E+00	4.232E-01	1.190
		304.40		-5.719E-01	2.002E+00	2.871E+00	5.138E-01	-0.199
		334.20		-2.071E-01	2.839E+00	3.608E+00	6.740E-01	-0.057
TH-229	+	85.43		8.645E-01	2.072E-01	3.388E-01	2.999E-02	2.551
	+	88.47		4.033E-01	1.176E-01	2.065E-01	1.880E-02	1.953
		100.00		2.223E-01	1.821E-01	3.024E-01	2.393E-02	0.735
		193.63	*	1.888E-01	5.137E-01	8.432E-01	4.888E-02	0.224
		210.97		1.123E+00	8.176E-01	1.238E+00	7.641E-02	0.907
PA-231		283.67	*	-3.704E-01	1.426E+00	2.374E+00	3.486E-01	-0.156
		301.29		1.467E+00	6.285E-01	1.015E+00	1.162E-01	1.446
TH-231		81.07		7.034E-02	2.993E-01	3.224E-01	2.694E-02	0.218
	+	83.78		2.185E-01	1.286E-01	2.006E-01	1.737E-02	1.089
		94.90		1.039E-01	2.374E-01	3.519E-01	2.947E-02	0.295
		122.32		1.337E+00	1.945E+00	2.895E+00	2.128E-01	0.462
		144.24		6.934E-01	6.794E-01	1.138E+00	8.285E-02	0.610
		154.21		6.105E-02	3.965E-01	6.507E-01	4.446E-02	0.094

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.314E-01	2.553E-01	3.526E-01	2.728E-02	1.507
		323.87	*	-2.398E-01	7.187E-01	1.023E+00	1.738E-01	-0.234
	+	338.28		6.571E+00	1.747E+00	2.384E+00	2.640E-01	2.756
		445.03		1.325E+00	2.152E+00	3.680E+00	3.758E-01	0.360
U-231	+	84.21		6.489E+00	3.821E+00	6.029E+00	5.250E-01	1.076
	+	92.29		6.360E+00	1.751E+00	2.586E+00	2.236E-01	2.459
		95.87	*	-1.331E-01	7.725E-01	1.115E+00	9.236E-02	-0.119
		108.00		3.892E-01	1.375E+00	2.291E+00	1.680E-01	0.170
PA-233	+	75.28		2.011E+01	4.300E+00	7.423E+00	1.105E+00	2.709
	+	86.59		7.547E+00	2.635E+00	2.874E+00	7.743E-01	2.626
	+	300.12		8.280E-01	4.500E-01	7.023E-01	1.000E-01	1.179
		311.98	*	2.971E-02	6.092E-02	1.045E-01	7.901E-03	0.284
		340.50		1.267E+00	7.047E-01	1.051E+00	2.440E-01	1.205
		398.62		-1.419E+00	2.108E+00	3.322E+00	8.555E-01	-0.427
		415.76		-3.546E-01	1.586E+00	2.592E+00	5.314E-01	-0.137
PA-234	+	63.00		1.168E+00	1.835E+00	2.241E+00	3.254E-01	0.521
		94.67		2.393E-01	1.708E-01	2.597E-01	3.181E-02	0.921
		98.44		1.565E-02	1.002E-01	1.454E-01	8.101E-02	0.108
		99.86		5.834E-01	4.618E-01	7.676E-01	6.085E-02	0.760
		111.00		-1.006E-01	1.791E-01	2.892E-01	3.206E-02	-0.348
		131.20		-5.597E-02	1.229E-01	1.729E-01	1.080E-02	-0.324
		152.70		4.231E-01	3.289E-01	5.499E-01	8.658E-02	0.769
	+	186.00		6.093E+00	2.747E+00	2.551E+00	7.787E-01	2.388
		226.40		-1.700E-01	4.144E-01	6.544E-01	7.813E-02	-0.260
		227.20		1.460E-01	4.350E-01	7.095E-01	4.640E-02	0.206
		248.90		-6.746E-01	8.362E-01	1.267E+00	2.769E-01	-0.532
	+	293.70		7.081E+00	1.620E+00	1.717E+00	2.884E-01	4.125
		369.80		-3.792E-01	8.040E-01	1.299E+00	2.710E-01	-0.292
		568.70		-9.738E-01	1.035E+00	1.548E+00	1.011E-01	-0.629
		569.50		-9.112E-02	2.714E-01	4.235E-01	2.770E-02	-0.215
		574.00		-9.605E-01	1.479E+00	2.227E+00	1.463E-01	-0.431
		699.00		-3.163E-01	7.457E-01	1.163E+00	2.152E-01	-0.272
		706.10		-1.912E-01	1.130E+00	1.795E+00	7.962E-01	-0.107
		733.00		2.420E-01	4.247E-01	6.472E-01	1.408E-01	0.374
		742.81		-7.593E-02	1.437E+00	2.300E+00	1.543E+00	-0.033
	+	796.30		2.393E+00	1.521E+00	1.674E+00	4.481E-01	1.430
		805.60		5.810E-02	9.536E-01	1.605E+00	4.880E-01	0.036
		819.60		-6.815E-01	1.244E+00	1.952E+00	7.386E-01	-0.349
		826.30		2.459E-01	8.344E-01	1.413E+00	6.302E-01	0.174
		831.60		-3.146E-01	6.244E-01	9.943E-01	2.946E-01	-0.316
		876.40		-1.079E+00	1.387E+00	1.243E+00	1.277E+00	-0.869
		880.51		3.602E-01	2.760E-01	5.023E-01	4.022E-02	0.717
		883.24		8.091E-02	2.956E-01	4.943E-01	3.319E-01	0.164
		899.00		-6.024E-01	8.883E-01	1.335E+00	5.822E-01	-0.451
		925.00		5.311E-01	1.165E+00	1.879E+00	1.485E-01	0.283
		926.50		1.962E-01	1.773E-01	2.801E-01	7.012E-02	0.701
		946.00	*	1.834E-01	3.107E-01	5.356E-01	9.848E-02	0.342
	+	949.00		7.257E-01	5.448E-01	8.627E-01	6.677E-02	0.841
		980.50		1.878E-01	6.884E-01	1.167E+00	8.757E-02	0.161

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-1.825E+00	1.646E+00	1.442E+00	9.349E-01	-1.266
PA-234M		766.41		1.462E+01	2.441E+01	3.191E+01	2.443E+01	0.458
		1001.03	*	4.529E+00	6.583E+00	1.148E+01	1.173E+00	0.395
U-235	+	89.95		4.048E+00	1.683E+00	1.934E+00	5.985E-01	2.093
	+	93.35		2.904E+00	1.113E+00	1.171E+00	3.279E-01	2.480
		105.00		-4.730E-01	1.034E+00	1.667E+00	4.925E-01	-0.284
		143.76	*	2.579E-01	2.120E-01	3.514E-01	5.739E-02	0.734
		163.35		6.108E-02	4.786E-01	7.829E-01	1.396E-01	0.078
	+	185.71		2.256E-01	7.594E-02	9.443E-02	5.318E-03	2.390
		205.31		1.777E-01	5.958E-01	8.530E-01	1.541E-01	0.208
NP-236		94.67		1.840E-01	1.286E-01	1.972E-01	1.656E-02	0.933
		98.44		1.180E-02	7.548E-02	1.099E-01	8.848E-03	0.107
		111.00		-7.608E-02	1.353E-01	2.188E-01	1.564E-02	-0.348
		160.31	*	7.912E-02	8.031E-02	1.353E-01	7.315E-03	0.585
NP-239		99.55		1.744E-01	1.603E-01	2.554E-01	2.031E-02	0.683
		117.00	*	6.267E-02	1.864E-01	3.105E-01	2.113E-02	0.202
	+	209.75		2.515E+00	1.158E+00	1.412E+00	8.680E-02	1.781
		228.18		1.052E-01	2.288E-01	3.750E-01	2.461E-02	0.281
	+	277.60		2.397E-01	2.809E-01	3.121E-01	2.411E-02	0.768
		334.30		-1.796E-01	1.606E+00	2.034E+00	1.388E-01	-0.088
AM-241		59.54	*	2.066E-02	1.380E-01	2.051E-01	1.483E-02	0.101
CM-243		99.55		1.794E-01	1.649E-01	2.628E-01	2.090E-02	0.683
		103.76	*	1.766E-03	9.374E-02	1.550E-01	1.182E-02	0.011
		117.00		6.446E-02	1.918E-01	3.194E-01	2.174E-02	0.202
	+	209.75		2.479E+00	1.141E+00	1.392E+00	8.556E-02	1.781
		228.18		1.063E-01	2.312E-01	3.789E-01	2.486E-02	0.281
	+	277.60		2.416E-01	2.832E-01	3.145E-01	2.431E-02	0.768
CM-247		278.00		1.168E+00	8.323E-01	1.301E+00	1.007E-01	0.898
		287.40		-3.351E-01	1.163E+00	1.881E+00	1.441E-01	-0.178
		402.60	*	2.153E-03	3.616E-02	6.023E-02	3.237E-03	0.036
CF-249		252.85		3.379E-01	8.503E-01	1.388E+00	9.902E-02	0.243
		333.44		-5.415E-02	2.806E-01	2.701E-01	1.848E-02	-0.201
		387.95	*	-4.848E-03	3.829E-02	6.324E-02	3.418E-03	-0.077
CF-251		176.60	*	8.635E-02	1.266E-01	2.108E-01	1.148E-02	0.410
		227.00		1.574E-01	3.862E-01	6.318E-01	4.128E-02	0.249
		285.00		3.230E-02	1.667E+00	2.812E+00	2.163E-01	0.011

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504003      *
* Acquisition date :  7-JUL-2009 08:48:52 Detector SN#     :               *
* Detector ID        : GAM11               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:02.02      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232504003           Analyst initials: MXR1         *
* Batch Number       : 881220               Sample Quantity : 1.3862E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope      :               *
* LCS DPM          :    0.000             LCS Isotope      :               *
* LCSD DPM         :    0.000             LCSD Isotope     :               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.602E+01	2.942E+00	4.780E-01	0.000E+00
CD-109	3.909E+00	9.181E-01	1.193E+00	0.000E+00
SN-126	3.855E-01	9.054E-02	1.180E-01	0.000E+00
TL-208	5.904E-01	9.092E-02	5.597E-02	0.000E+00
BI-211	4.081E+00	5.016E-01	3.205E-01	0.000E+00
BI-212	1.240E+00	3.961E-01	4.852E-01	0.000E+00
PB-212	1.816E+00	1.760E-01	9.157E-02	0.000E+00
PO-212	1.816E+00	1.760E-01	9.157E-02	0.000E+00
BI-214	1.423E+00	1.833E-01	1.049E-01	0.000E+00
PB-214	1.419E+00	1.890E-01	1.050E-01	0.000E+00
PO-214	1.419E+00	1.890E-01	1.050E-01	0.000E+00
PO-216	1.816E+00	1.760E-01	9.157E-02	0.000E+00
PO-218	1.419E+00	1.890E-01	1.050E-01	0.000E+00
RA-224	4.722E+00	1.411E+00	1.042E+00	0.000E+00
RA-226	1.423E+00	1.833E-01	1.049E-01	0.000E+00
AC-228	1.506E+00	3.191E-01	2.089E-01	0.000E+00
RA-228	1.506E+00	3.191E-01	2.089E-01	0.000E+00
TH-228	1.816E+00	1.760E-01	9.156E-02	0.000E+00
TH-230	1.423E+00	1.833E-01	1.049E-01	0.000E+00
TH-232	1.506E+00	3.191E-01	2.089E-01	0.000E+00
TH-234	1.002E+00	1.545E+00	1.974E+00	0.000E+00
U-234	1.423E+00	1.833E-01	1.049E-01	0.000E+00
NP-237	1.132E+00	3.509E-01	3.495E-01	0.000E+00
U-238	1.002E+00	1.545E+00	1.974E+00	0.000E+00
AM-243	3.839E-01	6.474E-02	8.521E-02	0.000E+00
ANH-511	1.373E-01	6.285E-02	4.270E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
BE-7	-1.523E-01		2.822E-01	4.692E-01	0.000E+00	NOT IDENT.

NA-22	-1.442E-02	4.372E-02	7.097E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.875E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-4.356E-03	2.179E-02	3.510E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.132E-02	6.988E-02	0.000E+00	NOT IDENT.
SC-46	-9.703E-03	3.641E-02	6.142E-02	0.000E+00	FAIL ABUN
V-48	-4.068E-02	6.059E-02	9.754E-02	0.000E+00	NOT IDENT.
CR-51	1.277E-02	3.306E-01	5.713E-01	0.000E+00	NOT IDENT.
MN-52	-1.459E-02	1.573E-01	2.571E-01	0.000E+00	NOT IDENT.
MN-54	-1.888E-02	3.500E-02	5.822E-02	0.000E+00	NOT IDENT.
CO-56	-2.964E-02	3.867E-02	6.307E-02	0.000E+00	NOT IDENT.
CO-57	5.426E-03	2.660E-02	4.392E-02	0.000E+00	NOT IDENT.
CO-58	-4.064E-02	3.555E-02	5.597E-02	0.000E+00	NOT IDENT.
FE-59	-5.880E-02	9.062E-02	1.454E-01	0.000E+00	NOT IDENT.
CO-60	-9.331E-04	4.146E-02	6.895E-02	0.000E+00	NOT IDENT.
ZN-65	1.773E-02	1.040E-01	1.562E-01	0.000E+00	NOT IDENT.
GE-68	3.227E-01	1.254E+00	2.170E+00	0.000E+00	NOT IDENT.
AS-73	4.305E-01	6.100E-01	1.130E+00	0.000E+00	NOT IDENT.
AS-74	4.651E-02	7.982E-02	1.407E-01	0.000E+00	NOT IDENT.
SE-75	-2.164E-02	4.822E-02	6.892E-02	0.000E+00	NOT IDENT.
BR-77	1.420E+00	4.882E+00	8.532E+00	0.000E+00	FAIL ABUN
SR-82	-2.597E-01	3.474E-01	5.727E-01	0.000E+00	NOT IDENT.
RB-83	1.467E-02	6.087E-02	1.061E-01	0.000E+00	NOT IDENT.
RB-84	6.389E-02	6.632E-02	1.219E-01	0.000E+00	NOT IDENT.
KR-85	8.086E+00	7.261E+00	1.180E+01	0.000E+00	NOT IDENT.
SR-85	4.049E-02	3.636E-02	5.909E-02	0.000E+00	NOT IDENT.
RB-86	-1.464E-01	7.467E-01	1.248E+00	0.000E+00	NOT IDENT.
Y-88	-2.940E-02	2.893E-02	3.867E-02	0.000E+00	NOT IDENT.
ZR-88	8.236E-03	2.779E-02	4.932E-02	0.000E+00	NOT IDENT.
Y-91	3.091E+01	1.972E+01	3.653E+01	0.000E+00	NOT IDENT.
NB-94	7.351E-03	3.421E-02	5.820E-02	0.000E+00	NOT IDENT.
NB-95	6.138E-02	4.942E-02	7.898E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.907E-01	3.160E-01	0.000E+00	NOT IDENT.
ZR-95	5.139E-02	7.067E-02	1.239E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.024E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.215E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.286E-01	6.495E+00	1.081E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.929E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.351E-02	3.362E-02	5.418E-02	0.000E+00	FAIL ABUN
RH-102	1.286E-02	2.517E-02	4.486E-02	0.000E+00	FAIL ABUN
RU-103	-1.008E-02	3.795E-02	6.416E-02	0.000E+00	FAIL ABUN
RH-106	2.508E-01	3.068E-01	5.461E-01	0.000E+00	NOT IDENT.
RU-106	2.508E-01	3.058E-01	5.461E-01	0.000E+00	NOT IDENT.
AG-108M	1.191E-02	3.067E-02	5.441E-02	0.000E+00	NOT IDENT.
AG-110M	2.096E-02	3.347E-02	5.884E-02	0.000E+00	NOT IDENT.
IN-111	4.379E-01	6.278E-01	9.739E-01	0.000E+00	NOT IDENT.
IN-113M	-2.374E-02	4.048E-02	6.842E-02	0.000E+00	NOT IDENT.
SN-113	-2.374E-02	4.048E-02	6.842E-02	0.000E+00	NOT IDENT.
IN-114M	-9.037E-03	1.940E-01	2.921E-01	0.000E+00	NOT IDENT.
CD-115	6.158E-01	4.916E+00	8.490E+00	0.000E+00	NOT IDENT.
SN-117M	2.760E-02	4.779E-02	8.503E-02	0.000E+00	NOT IDENT.
SB-122	1.269E+00	1.136E+00	2.066E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.281E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.702E-02	2.767E-02	4.927E-02	0.000E+00	NOT IDENT.
I-124	3.441E-02	5.169E-01	7.620E-01	0.000E+00	FAIL ABUN
SB-124	-6.994E-02	6.572E-02	9.033E-02	0.000E+00	FAIL ABUN
SB-125	-2.661E-02	8.345E-02	1.422E-01	0.000E+00	FAIL ABUN
TE-125M	2.268E+00	8.628E+00	1.546E+01	0.000E+00	NOT IDENT.
I-126	2.147E-01	1.603E-01	2.928E-01	0.000E+00	NOT IDENT.
SB-126	-1.182E-02	1.330E-01	1.994E-01	0.000E+00	NOT IDENT.
SB-127	3.825E-01	9.008E-01	1.558E+00	0.000E+00	NOT IDENT.
XE-127	4.140E-02	5.112E-02	8.002E-02	0.000E+00	NOT IDENT.
I-131	1.353E-02	8.855E-02	1.567E-01	0.000E+00	NOT IDENT.
TE-132	1.962E-01	4.254E-01	7.392E-01	0.000E+00	NOT IDENT.
BA-133	-2.843E-02	4.547E-02	6.605E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	9.110E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	7.004E-02	8.816E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.820E-01	2.994E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.016E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.623E-02	8.772E-02	1.421E-01	0.000E+00	FAIL ABUN
BA-137M	-1.946E-02	3.475E-02	5.609E-02	0.000E+00	NOT IDENT.
CS-137	-2.057E-02	3.673E-02	5.929E-02	0.000E+00	NOT IDENT.
CE-139	-1.423E-02	2.934E-02	5.015E-02	0.000E+00	NOT IDENT.
BA-140	-1.144E-01	2.188E-01	3.556E-01	0.000E+00	NOT IDENT.
LA-140	-4.617E-02	6.427E-02	9.810E-02	0.000E+00	NOT IDENT.
CE-141	3.556E-03	5.796E-02	1.018E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.191E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	7.605E-02	2.184E-01	3.603E-01	0.000E+00	NOT IDENT.
PM-144	3.342E-02	3.256E-02	5.851E-02	0.000E+00	NOT IDENT.

PR-144	2.262E+00	2.204E+00	3.960E+00	0.000E+00	NOT IDENT.
PM-146	1.958E-02	4.339E-02	7.298E-02	0.000E+00	NOT IDENT.
ND-147	3.479E-02	4.366E-01	7.515E-01	0.000E+00	FAIL ABUN
PM-149	-8.317E+00	4.067E+01	7.179E+01	0.000E+00	NOT IDENT.
EU-152	-1.264E-01	9.981E-02	1.461E-01	0.000E+00	NOT IDENT.
GD-153	2.021E-02	8.162E-02	1.289E-01	0.000E+00	FAIL ABUN
EU-154	-4.130E-02	1.222E-01	1.982E-01	0.000E+00	NOT IDENT.
EU-155	-5.952E-02	1.029E-01	1.797E-01	0.000E+00	FAIL ABUN
TB-160	1.353E-01	1.311E-01	2.425E-01	0.000E+00	FAIL ABUN
HO-166M	-1.694E-02	6.143E-02	1.008E-01	0.000E+00	FAIL ABUN
TM-171	-1.220E+01	2.711E+01	4.253E+01	0.000E+00	NOT IDENT.
LU-176	-9.462E-03	2.307E-02	4.016E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.268E+00	1.655E+00	0.000E+00	FAIL ABUN
LU-177M	-4.095E-02	1.678E-01	2.884E-01	0.000E+00	FAIL ABUN
HF-181	4.333E-02	3.836E-02	7.048E-02	0.000E+00	NOT IDENT.
W-181	9.785E-03	3.378E-01	5.404E-01	0.000E+00	NOT IDENT.
TA-182	1.050E-01	2.024E-01	3.522E-01	0.000E+00	FAIL ABUN
RE-183	2.578E-02	1.089E-01	1.913E-01	0.000E+00	FAIL ABUN
RE-184	8.921E-02	2.200E-01	3.807E-01	0.000E+00	NOT IDENT.
OS-185	1.865E-03	4.115E-02	6.966E-02	0.000E+00	FAIL ABUN
RE-188	-1.117E-01	1.636E-01	2.787E-01	0.000E+00	NOT IDENT.
W-188	1.819E+00	7.201E+00	1.135E+01	0.000E+00	FAIL ABUN
IR-192	-2.082E-02	3.172E-02	5.440E-02	0.000E+00	FAIL ABUN
AU-195	3.314E-02	2.418E-01	3.797E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	9.956E+01	0.000E+00	0.000E+00	SHORT HLIF
TL-201	8.638E-01	4.078E+00	7.148E+00	0.000E+00	NOT IDENT.
TL-202	1.548E-03	5.746E-02	9.981E-02	0.000E+00	NOT IDENT.
HG-203	1.649E-02	4.198E-02	6.602E-02	0.000E+00	FAIL ABUN
BI-207	9.996E-03	5.100E-02	8.801E-02	0.000E+00	FAIL ABUN
TL-207	-2.398E-01	7.044E-01	1.058E+00	0.000E+00	FAIL ABUN
PO-209	3.648E+00	7.251E+00	1.294E+01	0.000E+00	NOT IDENT.
BI-210	6.943E-01	2.271E+00	4.184E+00	0.000E+00	NOT IDENT.
PB-210	6.943E-01	2.271E+00	4.184E+00	0.000E+00	NOT IDENT.
PO-210	6.943E-01	2.271E+00	4.184E+00	0.000E+00	NOT IDENT.
PB-211	-6.332E-01	9.851E-01	1.522E+00	0.000E+00	NOT IDENT.
PO-215	-2.398E-01	7.044E-01	1.058E+00	0.000E+00	FAIL ABUN
RN-219	5.838E-02	3.925E-01	6.900E-01	0.000E+00	FAIL ABUN
RN-220	-6.673E+00	2.488E+01	4.170E+01	0.000E+00	NOT IDENT.
RA-223	-2.398E-01	7.044E-01	1.058E+00	0.000E+00	FAIL ABUN
AC-227	-3.582E-01	3.733E-01	5.977E-01	0.000E+00	FAIL ABUN
TH-227	-3.582E-01	3.748E-01	5.977E-01	0.000E+00	FAIL ABUN
TH-229	1.888E-01	5.034E-01	8.806E-01	0.000E+00	FAIL ABUN
PA-231	-3.704E-01	1.398E+00	2.461E+00	0.000E+00	NOT IDENT.
TH-231	-2.398E-01	7.044E-01	1.058E+00	0.000E+00	FAIL ABUN
U-231	-1.331E-01	7.570E-01	1.180E+00	0.000E+00	FAIL ABUN
PA-233	2.971E-02	5.970E-02	1.082E-01	0.000E+00	FAIL ABUN
PA-234	1.834E-01	3.045E-01	5.422E-01	0.000E+00	FAIL ABUN
PA-234M	4.529E+00	6.451E+00	1.161E+01	0.000E+00	NOT IDENT.
U-235	2.579E-01	2.078E-01	3.691E-01	0.000E+00	FAIL ABUN
NP-236	7.912E-02	7.870E-02	1.418E-01	0.000E+00	NOT IDENT.
NP-239	6.267E-02	1.827E-01	3.274E-01	0.000E+00	FAIL ABUN
AM-241	2.066E-02	1.352E-01	2.190E-01	0.000E+00	NOT IDENT.
CM-243	1.766E-03	9.186E-02	1.638E-01	0.000E+00	FAIL ABUN
CM-247	2.153E-03	3.544E-02	6.202E-02	0.000E+00	NOT IDENT.
CF-249	-4.848E-03	3.752E-02	6.516E-02	0.000E+00	NOT IDENT.
CF-251	8.635E-02	1.241E-01	2.205E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:49:20.15

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504003.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:48:52.
Sample ID         : G232504003           Sample quantity  : 1.38620E+02 GRAM
Detector name     : GAM11                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.02  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1784	10.67*	1.257E+00	3.602E+01	3.602E+01	8.34
CD-109	88.03	364	3.72*	6.911E+00	3.834E+00	3.909E+00	23.97
SN-126	64.28	------	9.60	4.631E+00	------ Line Not Found		------
	86.94	364	8.90	6.911E+00	1.603E+00	1.603E+00	47.02
	87.57	364	37.00*	6.911E+00	3.855E-01	3.855E-01	23.97
TL-208	277.35	62	6.80	4.937E+00	4.970E-01	4.970E-01	117.53
	510.84	156	21.60	3.081E+00	6.356E-01	6.356E-01	47.46
	583.14	508	84.20*	2.766E+00	5.904E-01	5.904E-01	15.71
	860.37	71	12.46	1.986E+00	7.770E-01	7.770E-01	49.41
BI-211	72.87	552	1.27	5.896E+00	1.995E+01	1.995E+01	17.21
	351.07	804	12.94*	4.125E+00	4.081E+00	4.081E+00	12.54
BI-212	727.18	124	11.80*	2.297E+00	1.240E+00	1.240E+00	32.58
	785.46	------	1.97	2.149E+00	------ Line Not Found		------
	1620.62	22	2.75	1.161E+00	1.823E+00	1.823E+00	65.48
PB-212	74.81	552	10.70	5.896E+00	2.368E+00	2.368E+00	19.58
	77.11	862	18.00	6.124E+00	2.117E+00	2.117E+00	12.66
	87.30	364	8.00	6.911E+00	1.783E+00	1.783E+00	25.97
	238.63	1642	44.60*	5.489E+00	1.816E+00	1.816E+00	9.89
	300.09	94	3.41	4.651E+00	1.603E+00	1.603E+00	53.30
PO-212	74.81	552	10.70	5.896E+00	2.368E+00	2.368E+00	19.58
	77.11	862	18.00	6.124E+00	2.117E+00	2.117E+00	12.66
	87.30	364	8.00	6.911E+00	1.783E+00	1.783E+00	25.97
	115.19	------	0.60	7.604E+00	------ Line Not Found		------
	238.63	1642	44.60*	5.489E+00	1.816E+00	1.816E+00	9.89
	300.09	94	3.41	4.651E+00	1.603E+00	1.603E+00	53.30
BI-214	609.31	649	46.30*	2.667E+00	1.423E+00	1.423E+00	13.14
	768.36	51	5.04	2.192E+00	1.239E+00	1.239E+00	53.92
	934.06	42	3.21	1.848E+00	1.917E+00	1.917E+00	77.76
	1120.29	105	15.10	1.574E+00	1.199E+00	1.199E+00	38.79
	1238.11	------	5.94	1.443E+00	------ Line Not Found		------
	1377.67	33	4.11	1.319E+00	1.649E+00	1.649E+00	69.43
	1764.49	116	15.80	1.095E+00	1.810E+00	1.810E+00	20.34

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	552	6.21	5.896E+00	4.080E+00	4.080E+00	18.74
	77.11	862	10.50	6.124E+00	3.630E+00	3.630E+00	14.78
	87.30	364	4.67	6.911E+00	3.054E+00	3.054E+00	25.18
	241.98	375	7.49	5.442E+00	2.490E+00	2.490E+00	31.00
	295.21	492	19.20	4.708E+00	1.475E+00	1.475E+00	18.37
	351.92	804	37.20*	4.125E+00	1.419E+00	1.419E+00	13.59
PO-214	74.81	552	6.21	5.896E+00	4.080E+00	4.080E+00	18.74
	77.11	862	10.50	6.124E+00	3.630E+00	3.630E+00	14.78
	87.30	364	4.67	6.911E+00	3.054E+00	3.054E+00	25.18
	241.98	375	7.49	5.442E+00	2.490E+00	2.490E+00	31.00
	295.21	492	19.20	4.708E+00	1.475E+00	1.475E+00	18.37
	351.92	804	37.20*	4.125E+00	1.419E+00	1.419E+00	13.59
PO-216	74.81	552	10.70	5.896E+00	2.368E+00	2.368E+00	19.58
	77.11	862	18.00	6.124E+00	2.117E+00	2.117E+00	12.66
	87.30	364	8.00	6.911E+00	1.783E+00	1.783E+00	25.97
	238.63	1642	44.60*	5.489E+00	1.816E+00	1.816E+00	9.89
	300.09	94	3.41	4.651E+00	1.603E+00	1.603E+00	53.30
PO-218	74.81	552	6.21	5.896E+00	4.080E+00	4.080E+00	18.74
	77.11	862	10.50	6.124E+00	3.630E+00	3.630E+00	14.78
	87.30	364	4.67	6.911E+00	3.054E+00	3.054E+00	25.18
	241.98	375	7.49	5.442E+00	2.490E+00	2.490E+00	31.00
	295.21	492	19.20	4.708E+00	1.475E+00	1.475E+00	18.37
	351.92	804	37.20*	4.125E+00	1.419E+00	1.419E+00	13.59
RA-224	240.98	375	3.95*	5.442E+00	4.722E+00	4.722E+00	30.49
RA-226	609.31	649	46.30*	2.667E+00	1.423E+00	1.423E+00	13.14
	768.36	51	5.04	2.192E+00	1.239E+00	1.239E+00	53.92
	934.06	42	3.21	1.848E+00	1.917E+00	1.917E+00	77.76
	1120.29	105	15.10	1.574E+00	1.199E+00	1.199E+00	38.79
	1238.11	------	5.94	1.443E+00	------ Line Not Found		------
	1377.67	33	4.11	1.319E+00	1.649E+00	1.649E+00	69.43
	1764.49	116	15.80	1.095E+00	1.810E+00	1.810E+00	20.34
AC-228	338.32	282	11.40	4.252E+00	1.574E+00	1.574E+00	47.52
	911.07	291	27.70*	1.888E+00	1.506E+00	1.506E+00	21.62
	969.11	255	16.60	1.790E+00	2.320E+00	2.320E+00	32.14
RA-228	338.32	282	11.40	4.252E+00	1.574E+00	1.574E+00	47.52
	911.07	291	27.70*	1.888E+00	1.506E+00	1.506E+00	21.62
	969.11	255	16.60	1.790E+00	2.320E+00	2.320E+00	32.14
TH-228	84.40	134	1.21	6.705E+00	4.459E+00	4.459E+00	59.71
	238.60	1642	44.60*	5.489E+00	1.816E+00	1.816E+00	9.89
	300.10	94	3.41	4.651E+00	1.603E+00	1.603E+00	79.04
TH-230	609.31	649	46.30*	2.667E+00	1.423E+00	1.423E+00	13.14
	768.36	51	5.04	2.192E+00	1.239E+00	1.239E+00	53.92
	934.06	42	3.21	1.848E+00	1.917E+00	1.917E+00	77.76
	1120.29	105	15.10	1.574E+00	1.199E+00	1.199E+00	38.79
	1238.11	------	5.94	1.443E+00	------ Line Not Found		------
	1377.67	33	4.11	1.319E+00	1.649E+00	1.649E+00	69.43
	1764.49	116	15.80	1.095E+00	1.810E+00	1.810E+00	20.34
TH-232	338.32	282	11.40	4.252E+00	1.574E+00	1.574E+00	25.10
	911.07	291	27.70*	1.888E+00	1.506E+00	1.506E+00	21.62

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	255	16.60	1.790E+00	2.320E+00	2.320E+00	32.14
TH-234	63.29	62	3.80*	4.381E+00	1.002E+00	1.002E+00	157.41
	92.38	347	5.41	7.189E+00	2.416E+00	2.416E+00	31.78
U-234	609.31	649	46.30*	2.667E+00	1.423E+00	1.423E+00	13.14
	768.36	51	5.04	2.192E+00	1.239E+00	1.239E+00	53.92
	934.06	42	3.21	1.848E+00	1.917E+00	1.917E+00	77.76
	1120.29	105	15.10	1.574E+00	1.199E+00	1.199E+00	38.79
	1238.11	------	5.94	1.443E+00	------ Line Not Found		------
	1377.67	33	4.11	1.319E+00	1.649E+00	1.649E+00	69.43
	1764.49	116	15.80	1.095E+00	1.810E+00	1.810E+00	20.34
NP-237	86.50	364	12.60*	6.911E+00	1.132E+00	1.132E+00	31.63
	95.87	------	2.60	7.329E+00	------ Line Not Found		------
U-238	63.29	62	3.80*	4.381E+00	1.002E+00	1.002E+00	157.41
	92.38	347	5.41	7.189E+00	2.416E+00	2.416E+00	27.52
AM-243	74.67	552	66.00*	5.896E+00	3.839E-01	3.839E-01	17.21
	86.72	364	0.34	6.911E+00	4.245E+01	4.245E+01	23.97
	117.66	------	0.55	7.600E+00	------ Line Not Found		------
	142.18	------	0.13	7.314E+00	------ Line Not Found		------
ANH-511	511.00	156	100.00*	3.081E+00	1.373E-01	1.373E-01	46.72

Flag: "*" = Keyline

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

Total number of lines in spectrum 36
Number of unidentified lines 1
Number of lines tentatively identified by NID 35 97.22%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.602E+01	3.602E+01	0.300E+01	8.34	
CD-109	464.00D	1.02	3.834E+00	3.909E+00	0.937E+00	23.97	
SN-126	1.00E+05Y	1.00	3.855E-01	3.855E-01	0.924E-01	23.97	
TL-208	1.41E+10Y	1.00	5.904E-01	5.904E-01	0.928E-01	15.71	
BI-211	7.04E+08Y	1.00	4.081E+00	4.081E+00	0.512E+00	12.54	
BI-212	1.41E+10Y	1.00	1.240E+00	1.240E+00	0.404E+00	32.58	
PB-212	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.180E+00	9.89	
PO-212	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.180E+00	9.89	
BI-214	1600.00Y	1.00	1.423E+00	1.423E+00	0.187E+00	13.14	
PB-214	1600.00Y	1.00	1.419E+00	1.419E+00	0.193E+00	13.59	
PO-214	1600.00Y	1.00	1.419E+00	1.419E+00	0.193E+00	13.59	
PO-216	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.180E+00	9.89	
PO-218	1600.00Y	1.00	1.419E+00	1.419E+00	0.193E+00	13.59	
RA-224	1.41E+10Y	1.00	4.722E+00	4.722E+00	1.439E+00	30.49	
RA-226	1600.00Y	1.00	1.423E+00	1.423E+00	0.187E+00	13.14	
AC-228	1.41E+10Y	1.00	1.506E+00	1.506E+00	0.326E+00	21.62	
RA-228	1.41E+10Y	1.00	1.506E+00	1.506E+00	0.326E+00	21.62	
TH-228	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.180E+00	9.89	
TH-230	4.47E+09Y	1.00	1.423E+00	1.423E+00	0.187E+00	13.14	
TH-232	1.41E+10Y	1.00	1.506E+00	1.506E+00	0.326E+00	21.62	
TH-234	4.47E+09Y	1.00	1.002E+00	1.002E+00	1.577E+00	157.41	
U-234	4.47E+09Y	1.00	1.423E+00	1.423E+00	0.187E+00	13.14	
NP-237	2.14E+06Y	1.00	1.132E+00	1.132E+00	0.358E+00	31.63	
U-238	4.47E+09Y	1.00	1.002E+00	1.002E+00	1.577E+00	157.41	
AM-243	7380.00Y	1.00	3.839E-01	3.839E-01	0.661E-01	17.21	
ANH-511	1.00E+09Y	1.00	1.373E-01	1.373E-01	0.641E-01	46.72	
	Total Activity :		7.626E+01	7.633E+01			

Grand Total Activity : 7.626E+01 7.633E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.40	285	451	1.15	178.80	163	30	3.96E-02	27.8	7.06E+00	T
0	128.04	122	504	0.73	256.09	251	10	1.70E-02	71.1	7.52E+00	T
0	185.52	290	472	1.16	371.05	366	12	4.03E-02	33.2	6.45E+00	T
0	208.58	180	404	0.95	417.17	412	11	2.51E-02	45.6	6.00E+00	T
0	269.96	134	250	1.68	539.91	536	10	1.86E-02	47.4	5.02E+00	T
0	327.25	53	260	1.45	654.49	650	11	7.32E-03	****	4.35E+00	
0	462.21	136	150	1.57	924.43	917	15	1.89E-02	43.5	3.33E+00	T
0	795.06	73	78	1.00	1590.12	1583	15	1.02E-02	57.6	2.13E+00	T
2	949.60	40	37	2.33	1899.19	1860	45	5.53E-03	74.7	1.82E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:49:25.39

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504003.CNF;1 *
* Acquisition date  : 7-JUL-2009 08:48:52.  Detector SN#     :              *
* Detector ID       : GAM11                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:02.02          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504003            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.38620E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 1-NOV-2008 15:37:21.59MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.602E+01	3.002E+00	4.764E-01	3.193E-02	75.600
CD-109	3.909E+00	9.368E-01	1.125E+00	1.030E-01	3.475
SN-126	3.855E-01	9.239E-02	1.113E-01	1.014E-02	3.463
TL-208	5.904E-01	9.277E-02	5.476E-02	4.058E-03	10.783
BI-211	4.081E+00	5.118E-01	3.104E-01	2.176E-02	13.148
BI-212	1.240E+00	4.042E-01	4.767E-01	4.278E-02	2.602
PB-212	1.816E+00	1.796E-01	8.803E-02	7.172E-03	20.632
PO-212	1.816E+00	1.796E-01	8.803E-02	7.172E-03	20.632
BI-214	1.423E+00	1.870E-01	1.027E-01	8.761E-03	13.856
PB-214	1.419E+00	1.928E-01	1.017E-01	8.868E-03	13.964
PO-214	1.419E+00	1.928E-01	1.017E-01	8.868E-03	13.964
PO-216	1.816E+00	1.796E-01	8.803E-02	7.172E-03	20.632
PO-218	1.419E+00	1.928E-01	1.017E-01	8.868E-03	13.964
RA-224	4.722E+00	1.439E+00	1.001E+00	6.868E-02	4.715
RA-226	1.423E+00	1.870E-01	1.027E-01	8.761E-03	13.856
AC-228	1.506E+00	3.256E-01	2.062E-01	2.220E-02	7.303
RA-228	1.506E+00	3.256E-01	2.062E-01	2.220E-02	7.303
TH-228	1.816E+00	1.796E-01	8.802E-02	7.171E-03	20.634

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.423E+00	1.870E-01	1.027E-01	8.761E-03	13.856
TH-232	1.506E+00	3.256E-01	2.062E-01	2.220E-02	7.303
TH-234	1.002E+00	1.577E+00	1.851E+00	3.176E-01	0.541
U-234	1.423E+00	1.870E-01	1.027E-01	8.761E-03	13.856
NP-237	1.132E+00	3.580E-01	3.296E-01	7.418E-02	3.434
U-238	1.002E+00	1.577E+00	1.851E+00	3.176E-01	0.541
AM-243	3.839E-01	6.606E-02	8.014E-02	6.171E-03	4.790
ANH-511	1.373E-01	6.414E-02	4.167E-02	2.568E-03	3.295

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.523E-01		2.879E-01	4.572E-01	3.139E-02	-0.333
NA-22	-1.442E-02		4.461E-02	7.054E-02	4.324E-03	-0.204
NA-24	-3.385E-02		2.997E-02	Half-Life too short		
AL-26	-4.356E-03		2.223E-02	3.514E-02	1.939E-03	-0.124
TI-44	2.047E-01		5.237E-02	6.578E-02	5.308E-03	3.112
SC-46	-9.703E-03		3.716E-02	6.059E-02	4.868E-03	-0.160
V-48	-4.068E-02		6.183E-02	9.643E-02	7.215E-03	-0.422
CR-51	1.277E-02		3.373E-01	5.523E-01	4.235E-02	0.023
MN-52	-1.459E-02		1.605E-01	2.562E-01	1.642E-02	-0.057
MN-54	-1.888E-02		3.571E-02	5.736E-02	4.501E-03	-0.329
CO-56	-2.964E-02		3.946E-02	6.216E-02	4.905E-03	-0.477
CO-57	5.426E-03		2.715E-02	4.168E-02	2.734E-03	0.130
CO-58	-4.064E-02		3.627E-02	5.511E-02	4.287E-03	-0.737
FE-59	-5.880E-02		9.247E-02	1.441E-01	1.052E-02	-0.408
CO-60	-9.331E-04		4.230E-02	6.859E-02	4.444E-03	-0.014
ZN-65	1.773E-02		1.061E-01	1.548E-01	9.618E-03	0.115
GE-68	3.227E-01		1.279E+00	2.149E+00	1.423E-01	0.150
AS-73	4.305E-01		6.225E-01	1.057E+00	6.742E-02	0.407
AS-74	4.651E-02		8.145E-02	1.377E-01	9.226E-03	0.338
SE-75	-2.164E-02		4.921E-02	6.638E-02	4.954E-03	-0.326
BR-77	1.420E+00		4.982E+00	8.328E+00	5.187E-01	0.170
SR-82	-2.597E-01		3.545E-01	5.635E-01	4.291E-02	-0.461
RB-83	1.467E-02		6.212E-02	1.035E-01	6.445E-03	0.142
RB-84	6.389E-02		6.768E-02	1.203E-01	9.633E-03	0.531
KR-85	8.086E+00		7.409E+00	1.152E+01	7.121E-01	0.702
SR-85	4.049E-02		3.710E-02	5.766E-02	3.566E-03	0.702
RB-86	-1.464E-01		7.620E-01	1.236E+00	8.189E-02	-0.118
Y-88	-2.940E-02		2.952E-02	3.872E-02	2.103E-03	-0.759
ZR-88	8.236E-03		2.835E-02	4.787E-02	2.536E-03	0.172
Y-91	3.091E+01		2.012E+01	3.627E+01	2.062E+00	0.852
NB-94	7.351E-03		3.491E-02	5.715E-02	4.158E-03	0.129
NB-95	6.138E-02		5.043E-02	7.768E-02	5.880E-03	0.790
NB-95M	1.201E+00		1.946E-01	3.037E-01	2.511E-02	3.956
ZR-95	5.139E-02		7.211E-02	1.218E-01	1.037E-02	0.422
NB-97	6.204E-03		5.224E-03	Half-Life too short		

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	6.360E-01		1.130E-01	Half-Life too short		
MO-99	-2.286E-01		6.627E+00	1.063E+01	1.547E+00	-0.022
TC-99M	-1.262E+08		4.045E+07	Half-Life too short		
RH-101	-3.351E-02		3.431E-02	5.190E-02	3.057E-03	-0.646
RH-102	1.286E-02		2.569E-02	4.371E-02	2.586E-03	0.294
RU-103	-1.008E-02		3.873E-02	6.256E-02	7.990E-03	-0.161
RH-106	2.508E-01		3.131E-01	5.349E-01	6.574E-02	0.469
RU-106	2.508E-01		3.121E-01	5.349E-01	3.663E-02	0.469
AG-108M	1.191E-02		3.130E-02	5.292E-02	3.243E-03	0.225
AG-110M	2.096E-02		3.415E-02	5.770E-02	4.245E-03	0.363
IN-111	4.379E-01		6.407E-01	9.367E-01	6.520E-02	0.468
IN-113M	-2.374E-02		4.130E-02	6.641E-02	3.793E-03	-0.357
SN-113	-2.374E-02		4.130E-02	6.641E-02	3.793E-03	-0.357
IN-114M	-9.037E-03		1.979E-01	2.795E-01	1.601E-02	-0.032
CD-115	6.158E-01		5.017E+00	8.289E+00	5.202E-01	0.074
SN-117M	2.760E-02		4.876E-02	8.110E-02	4.425E-03	0.340
SB-122	1.269E+00		1.159E+00	2.020E+00	1.314E-01	0.628
I-123	2.018E-01		1.674E-01	Half-Life too short		
TE-123M	1.702E-02		2.823E-02	4.700E-02	2.597E-03	0.362
I-124	3.441E-02		5.274E-01	7.459E-01	5.026E-02	0.046
SB-124	-6.994E-02		6.706E-02	9.030E-02	5.768E-03	-0.775
SB-125	-2.661E-02		8.515E-02	1.383E-01	8.054E-03	-0.192
TE-125M	2.268E+00		8.804E+00	1.465E+01	1.349E+00	0.155
I-126	2.147E-01		1.636E-01	2.872E-01	2.036E-02	0.748
SB-126	-1.182E-02		1.357E-01	1.959E-01	1.442E-02	-0.060
SB-127	3.825E-01		9.192E-01	1.529E+00	1.476E-01	0.250
XE-127	4.140E-02		5.217E-02	7.669E-02	4.597E-03	0.540
I-131	1.353E-02		9.036E-02	1.519E-01	1.020E-02	0.089
TE-132	1.962E-01		4.341E-01	7.100E-01	1.014E-01	0.276
BA-133	-2.843E-02		4.639E-02	6.399E-02	7.567E-03	-0.444
I-133	-3.919E-05		4.648E-04	Half-Life too short		
CS-134	1.229E-01	+	7.146E-02	8.678E-02	6.739E-03	1.416
CS-135	4.085E-01		1.857E-01	2.885E-01	2.601E-02	1.416
I-135	-1.569E+07		1.029E+07	Half-Life too short		
CS-136	-4.623E-02		8.951E-02	1.407E-01	1.036E-02	-0.329
BA-137M	-1.946E-02		3.545E-02	5.501E-02	3.887E-03	-0.354
CS-137	-2.057E-02		3.748E-02	5.815E-02	4.121E-03	-0.354
CE-139	-1.423E-02		2.994E-02	4.788E-02	2.512E-03	-0.297
BA-140	-1.144E-01		2.233E-01	3.473E-01	1.133E-01	-0.329
LA-140	-4.617E-02		6.559E-02	9.795E-02	6.016E-03	-0.471
CE-141	3.556E-03		5.914E-02	9.692E-02	5.873E-03	0.037
CE-143	4.519E-04	+	6.077E-05	Half-Life too short		
CE-144	7.605E-02		2.228E-01	3.426E-01	4.919E-02	0.222
PM-144	3.342E-02		3.323E-02	5.744E-02	4.163E-03	0.582
PR-144	2.262E+00		2.249E+00	3.888E+00	2.817E-01	0.582
PM-146	1.958E-02		4.428E-02	7.104E-02	6.107E-03	0.276
ND-147	3.479E-02		4.455E-01	7.338E-01	1.008E-01	0.047
PM-149	-8.317E+00		4.150E+01	6.925E+01	1.041E+01	-0.120

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-1.264E-01		1.018E-01	1.415E-01	1.026E-02	-0.894
GD-153	2.021E-02		8.328E-02	1.218E-01	9.910E-03	0.166
EU-154	-4.130E-02		1.247E-01	1.970E-01	1.879E-02	-0.210
EU-155	-5.952E-02		1.050E-01	1.701E-01	1.299E-02	-0.350
TB-160	1.353E-01		1.337E-01	2.392E-01	1.914E-02	0.565
HO-166M	-1.694E-02		6.269E-02	9.900E-02	7.247E-03	-0.171
TM-171	-1.220E+01		2.766E+01	3.991E+01	2.793E+00	-0.306
LU-176	-9.462E-03		2.354E-02	3.879E-02	2.855E-03	-0.244
LU-177	2.810E+00	+	1.294E+00	1.587E+00	9.705E-02	1.771
LU-177M	-4.095E-02		1.712E-01	2.802E-01	1.530E-02	-0.146
HF-181	4.333E-02		3.914E-02	6.869E-02	4.097E-03	0.631
W-181	9.785E-03		3.447E-01	5.069E-01	3.485E-02	0.019
TA-182	1.050E-01		2.065E-01	3.498E-01	2.024E-02	0.300
RE-183	2.578E-02		1.112E-01	1.826E-01	9.762E-03	0.141
RE-184	8.921E-02		2.245E-01	3.664E-01	2.615E-02	0.243
OS-185	1.865E-03		4.199E-02	6.828E-02	4.768E-03	0.027
RE-188	-1.117E-01		1.670E-01	2.657E-01	1.477E-02	-0.421
W-188	1.819E+00		7.348E+00	1.096E+01	8.341E-01	0.166
IR-192	-2.082E-02		3.237E-02	5.258E-02	3.791E-03	-0.396
AU-195	3.314E-02		2.467E-01	3.590E-01	2.875E-02	0.092
TL-200	-2.635E-05		5.080E-05	Half-Life too short		
TL-201	8.638E-01		4.162E+00	6.825E+00	3.597E-01	0.127
TL-202	1.548E-03		5.863E-02	9.709E-02	5.493E-03	0.016
HG-203	1.649E-02		4.284E-02	6.365E-02	5.116E-03	0.259
BI-207	9.996E-03		5.204E-02	8.715E-02	5.891E-03	0.115
TL-207	-2.398E-01		7.187E-01	1.023E+00	1.738E-01	-0.234
PO-209	3.648E+00		7.399E+00	1.277E+01	1.029E+00	0.286
BI-210	6.943E-01		2.318E+00	3.901E+00	2.892E-01	0.178
PB-210	6.943E-01		2.318E+00	3.901E+00	2.892E-01	0.178
PO-210	6.943E-01		2.318E+00	3.901E+00	2.447E-01	0.178
PB-211	-6.332E-01		1.005E+00	1.478E+00	9.211E-01	-0.428
PO-215	-2.398E-01		7.187E-01	1.023E+00	1.738E-01	-0.234
RN-219	5.838E-02		4.005E-01	6.700E-01	8.997E-02	0.087
RN-220	-6.673E+00		2.538E+01	4.074E+01	2.614E+00	-0.164
RA-223	-2.398E-01		7.187E-01	1.023E+00	1.738E-01	-0.234
AC-227	-3.582E-01		3.809E-01	5.754E-01	8.403E-02	-0.623
TH-227	-3.582E-01		3.824E-01	5.754E-01	1.003E-01	-0.623
TH-229	1.888E-01		5.137E-01	8.432E-01	4.888E-02	0.224
PA-231	-3.704E-01		1.426E+00	2.374E+00	3.486E-01	-0.156
TH-231	-2.398E-01		7.187E-01	1.023E+00	1.738E-01	-0.234
U-231	-1.331E-01		7.725E-01	1.115E+00	9.236E-02	-0.119
PA-233	2.971E-02		6.092E-02	1.045E-01	7.901E-03	0.284
PA-234	1.834E-01		3.107E-01	5.356E-01	9.848E-02	0.342
PA-234M	4.529E+00		6.583E+00	1.148E+01	1.173E+00	0.395
U-235	2.579E-01		2.120E-01	3.514E-01	5.739E-02	0.734
NP-236	7.912E-02		8.031E-02	1.353E-01	7.315E-03	0.585
NP-239	6.267E-02		1.864E-01	3.105E-01	2.113E-02	0.202
AM-241	2.066E-02		1.380E-01	2.051E-01	1.483E-02	0.101

Sample ID : G232504003 Acquisition date : 7-JUL-2009 08:48:52

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.766E-03		9.374E-02	1.550E-01	1.182E-02	0.011
CM-247	2.153E-03		3.616E-02	6.023E-02	3.237E-03	0.036
CF-249	-4.848E-03		3.829E-02	6.324E-02	3.418E-03	-0.077
CF-251	8.635E-02		1.266E-01	2.108E-01	1.148E-02	0.410

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504003           *
* Acquisition date  :  7-JUL-2009 08:48:52 Detector SN#     :               *
* Detector ID       : GAM11                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:02.02     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504003           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.3862E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 15:37:21 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.602E+01	2.942E+00	2.391E-01	1.501E+00
CD-109	3.909E+00	9.181E-01	5.966E-01	4.684E-01
SN-126	3.855E-01	9.054E-02	5.905E-02	4.620E-02
TL-208	5.904E-01	9.092E-02	2.800E-02	4.639E-02
BI-211	4.081E+00	5.016E-01	1.603E-01	2.559E-01
BI-212	1.240E+00	3.961E-01	2.427E-01	2.021E-01
PB-212	1.816E+00	1.760E-01	4.581E-02	8.981E-02
PO-212	1.816E+00	1.760E-01	4.581E-02	8.981E-02
BI-214	1.423E+00	1.833E-01	5.247E-02	9.350E-02
PB-214	1.419E+00	1.890E-01	5.251E-02	9.642E-02
PO-214	1.419E+00	1.890E-01	5.251E-02	9.642E-02
PO-216	1.816E+00	1.760E-01	4.581E-02	8.981E-02
PO-218	1.419E+00	1.890E-01	5.251E-02	9.642E-02
RA-224	4.722E+00	1.411E+00	5.211E-01	7.197E-01
RA-226	1.423E+00	1.833E-01	5.247E-02	9.350E-02
AC-228	1.506E+00	3.191E-01	1.045E-01	1.628E-01
RA-228	1.506E+00	3.191E-01	1.045E-01	1.628E-01
TH-228	1.816E+00	1.760E-01	4.581E-02	8.981E-02
TH-230	1.423E+00	1.833E-01	5.247E-02	9.350E-02
TH-232	1.506E+00	3.191E-01	1.045E-01	1.628E-01
TH-234	1.002E+00	1.545E+00	9.877E-01	7.885E-01
U-234	1.423E+00	1.833E-01	5.247E-02	9.350E-02
NP-237	1.132E+00	3.509E-01	1.749E-01	1.790E-01
U-238	1.002E+00	1.545E+00	9.877E-01	7.885E-01
AM-243	3.839E-01	6.474E-02	4.263E-02	3.303E-02
ANH-511	1.373E-01	6.285E-02	2.136E-02	3.207E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.523E-01	2.822E-01	2.347E-01	1.440E-01 NOT IDENT.

NA-22	-1.442E-02	4.372E-02	3.551E-02	2.231E-02	NOT IDENT.
NA-24	-3.385E+04	5.875E+04	0.000E+00	2.997E+04	SHORT HLIF
AL-26	-4.356E-03	2.179E-02	1.756E-02	1.111E-02	NOT IDENT.
TI-44	2.047E-01	5.132E-02	3.496E-02	2.618E-02	NOT IDENT.
SC-46	-9.703E-03	3.641E-02	3.073E-02	1.858E-02	FAIL ABUN
V-48	-4.068E-02	6.059E-02	4.880E-02	3.091E-02	NOT IDENT.
CR-51	1.277E-02	3.306E-01	2.858E-01	1.687E-01	NOT IDENT.
MN-52	-1.459E-02	1.573E-01	1.286E-01	8.026E-02	NOT IDENT.
MN-54	-1.888E-02	3.500E-02	2.913E-02	1.786E-02	NOT IDENT.
CO-56	-2.964E-02	3.867E-02	3.155E-02	1.973E-02	NOT IDENT.
CO-57	5.426E-03	2.660E-02	2.197E-02	1.357E-02	NOT IDENT.
CO-58	-4.064E-02	3.555E-02	2.800E-02	1.814E-02	NOT IDENT.
FE-59	-5.880E-02	9.062E-02	7.276E-02	4.623E-02	NOT IDENT.
CO-60	-9.331E-04	4.146E-02	3.449E-02	2.115E-02	NOT IDENT.
ZN-65	1.773E-02	1.040E-01	7.814E-02	5.305E-02	NOT IDENT.
GE-68	3.227E-01	1.254E+00	1.086E+00	6.396E-01	NOT IDENT.
AS-73	4.305E-01	6.100E-01	5.655E-01	3.112E-01	NOT IDENT.
AS-74	4.651E-02	7.982E-02	7.041E-02	4.072E-02	NOT IDENT.
SE-75	-2.164E-02	4.822E-02	3.448E-02	2.460E-02	NOT IDENT.
BR-77	1.420E+00	4.882E+00	4.269E+00	2.491E+00	FAIL ABUN
SR-82	-2.597E-01	3.474E-01	2.865E-01	1.772E-01	NOT IDENT.
RB-83	1.467E-02	6.087E-02	5.306E-02	3.106E-02	NOT IDENT.
RB-84	6.389E-02	6.632E-02	6.100E-02	3.384E-02	NOT IDENT.
KR-85	8.086E+00	7.261E+00	5.904E+00	3.705E+00	NOT IDENT.
SR-85	4.049E-02	3.636E-02	2.956E-02	1.855E-02	NOT IDENT.
RB-86	-1.464E-01	7.467E-01	6.242E-01	3.810E-01	NOT IDENT.
Y-88	-2.940E-02	2.893E-02	1.935E-02	1.476E-02	NOT IDENT.
ZR-88	8.236E-03	2.779E-02	2.467E-02	1.418E-02	NOT IDENT.
Y-91	3.091E+01	1.972E+01	1.828E+01	1.006E+01	NOT IDENT.
NB-94	7.351E-03	3.421E-02	2.912E-02	1.746E-02	NOT IDENT.
NB-95	6.138E-02	4.942E-02	3.951E-02	2.521E-02	NOT IDENT.
NB-95M	1.201E+00	1.907E-01	1.581E-01	9.728E-02	NOT IDENT.
ZR-95	5.139E-02	7.067E-02	6.198E-02	3.605E-02	NOT IDENT.
NB-97	6.204E+03	1.024E+04	0.000E+00	5.224E+03	SHORT HLIF
ZR-97	6.360E+05	2.215E+05	0.000E+00	1.130E+05	SHORT HLIF
MO-99	-2.286E-01	6.495E+00	5.411E+00	3.314E+00	NOT IDENT.
TC-99M	-1.262E+14	7.929E+13	0.000E+00	4.045E+13	SHORT HLIF
RH-101	-3.351E-02	3.362E-02	2.711E-02	1.715E-02	FAIL ABUN
RH-102	1.286E-02	2.517E-02	2.245E-02	1.284E-02	FAIL ABUN
RU-103	-1.008E-02	3.795E-02	3.210E-02	1.936E-02	FAIL ABUN
RH-106	2.508E-01	3.068E-01	2.732E-01	1.566E-01	NOT IDENT.
RU-106	2.508E-01	3.058E-01	2.732E-01	1.560E-01	NOT IDENT.
AG-108M	1.191E-02	3.067E-02	2.722E-02	1.565E-02	NOT IDENT.
AG-110M	2.096E-02	3.347E-02	2.944E-02	1.707E-02	NOT IDENT.
IN-111	4.379E-01	6.278E-01	4.872E-01	3.203E-01	NOT IDENT.
IN-113M	-2.374E-02	4.048E-02	3.423E-02	2.065E-02	NOT IDENT.
SN-113	-2.374E-02	4.048E-02	3.423E-02	2.065E-02	NOT IDENT.
IN-114M	-9.037E-03	1.940E-01	1.461E-01	9.896E-02	NOT IDENT.
CD-115	6.158E-01	4.916E+00	4.248E+00	2.508E+00	NOT IDENT.
SN-117M	2.760E-02	4.779E-02	4.254E-02	2.438E-02	NOT IDENT.
SB-122	1.269E+00	1.136E+00	1.034E+00	5.794E-01	NOT IDENT.
I-123	2.018E+05	3.281E+05	0.000E+00	1.674E+05	SHORT HLIF
TE-123M	1.702E-02	2.767E-02	2.465E-02	1.412E-02	NOT IDENT.
I-124	3.441E-02	5.169E-01	3.812E-01	2.637E-01	FAIL ABUN
SB-124	-6.994E-02	6.572E-02	4.519E-02	3.353E-02	FAIL ABUN
SB-125	-2.661E-02	8.345E-02	7.115E-02	4.257E-02	FAIL ABUN
TE-125M	2.268E+00	8.628E+00	7.736E+00	4.402E+00	NOT IDENT.
I-126	2.147E-01	1.603E-01	1.465E-01	8.179E-02	NOT IDENT.
SB-126	-1.182E-02	1.330E-01	9.975E-02	6.784E-02	NOT IDENT.
SB-127	3.825E-01	9.008E-01	7.796E-01	4.596E-01	NOT IDENT.
XE-127	4.140E-02	5.112E-02	4.004E-02	2.608E-02	NOT IDENT.
I-131	1.353E-02	8.855E-02	7.839E-02	4.518E-02	NOT IDENT.
TE-132	1.962E-01	4.254E-01	3.698E-01	2.170E-01	NOT IDENT.
BA-133	-2.843E-02	4.547E-02	3.305E-02	2.320E-02	FAIL ABUN
I-133	-3.919E+01	9.110E+02	0.000E+00	4.648E+02	SHORT HLIF
CS-134	1.229E-01	7.004E-02	4.411E-02	3.573E-02	FAIL ABUN
CS-135	4.085E-01	1.820E-01	1.498E-01	9.286E-02	NOT IDENT.
I-135	-1.569E+13	2.016E+13	0.000E+00	1.029E+13	SHORT HLIF
CS-136	-4.623E-02	8.772E-02	7.109E-02	4.475E-02	FAIL ABUN
BA-137M	-1.946E-02	3.475E-02	2.806E-02	1.773E-02	NOT IDENT.
CS-137	-2.057E-02	3.673E-02	2.966E-02	1.874E-02	NOT IDENT.
CE-139	-1.423E-02	2.934E-02	2.509E-02	1.497E-02	NOT IDENT.
BA-140	-1.144E-01	2.188E-01	1.779E-01	1.116E-01	NOT IDENT.
LA-140	-4.617E-02	6.427E-02	4.908E-02	3.279E-02	NOT IDENT.
CE-141	3.556E-03	5.796E-02	5.092E-02	2.957E-02	NOT IDENT.
CE-143	4.519E+02	1.191E+02	0.000E+00	6.077E+01	SHORT HLIF
CE-144	7.605E-02	2.184E-01	1.803E-01	1.114E-01	NOT IDENT.
PM-144	3.342E-02	3.256E-02	2.927E-02	1.661E-02	NOT IDENT.

PR-144	2.262E+00	2.204E+00	1.981E+00	1.124E+00	NOT IDENT.
PM-146	1.958E-02	4.339E-02	3.651E-02	2.214E-02	NOT IDENT.
ND-147	3.479E-02	4.366E-01	3.760E-01	2.228E-01	FAIL ABUN
PM-149	-8.317E+00	4.067E+01	3.591E+01	2.075E+01	NOT IDENT.
EU-152	-1.264E-01	9.981E-02	7.310E-02	5.092E-02	NOT IDENT.
GD-153	2.021E-02	8.162E-02	6.447E-02	4.164E-02	FAIL ABUN
EU-154	-4.130E-02	1.222E-01	9.914E-02	6.235E-02	NOT IDENT.
EU-155	-5.952E-02	1.029E-01	8.992E-02	5.252E-02	FAIL ABUN
TB-160	1.353E-01	1.311E-01	1.213E-01	6.687E-02	FAIL ABUN
HO-166M	-1.694E-02	6.143E-02	5.043E-02	3.134E-02	FAIL ABUN
TM-171	-1.220E+01	2.711E+01	2.128E+01	1.383E+01	NOT IDENT.
LU-176	-9.462E-03	2.307E-02	2.009E-02	1.177E-02	FAIL ABUN
LU-177	2.810E+00	1.268E+00	8.280E-01	6.470E-01	FAIL ABUN
LU-177M	-4.095E-02	1.678E-01	1.443E-01	8.561E-02	FAIL ABUN
HF-181	4.333E-02	3.836E-02	3.526E-02	1.957E-02	NOT IDENT.
W-181	9.785E-03	3.378E-01	2.703E-01	1.724E-01	NOT IDENT.
TA-182	1.050E-01	2.024E-01	1.762E-01	1.033E-01	FAIL ABUN
RE-183	2.578E-02	1.089E-01	9.571E-02	5.558E-02	FAIL ABUN
RE-184	8.921E-02	2.200E-01	1.905E-01	1.123E-01	NOT IDENT.
OS-185	1.865E-03	4.115E-02	3.485E-02	2.100E-02	FAIL ABUN
RE-188	-1.117E-01	1.636E-01	1.394E-01	8.349E-02	NOT IDENT.
W-188	1.819E+00	7.201E+00	5.680E+00	3.674E+00	FAIL ABUN
IR-192	-2.082E-02	3.172E-02	2.722E-02	1.618E-02	FAIL ABUN
AU-195	3.314E-02	2.418E-01	1.900E-01	1.234E-01	FAIL ABUN
TL-200	-2.635E+01	9.956E+01	0.000E+00	5.080E+01	SHORT HLIF
TL-201	8.638E-01	4.078E+00	3.576E+00	2.081E+00	NOT IDENT.
TL-202	1.548E-03	5.746E-02	4.993E-02	2.932E-02	NOT IDENT.
HG-203	1.649E-02	4.198E-02	3.303E-02	2.142E-02	FAIL ABUN
BI-207	9.996E-03	5.100E-02	4.403E-02	2.602E-02	FAIL ABUN
TL-207	-2.398E-01	7.044E-01	5.291E-01	3.594E-01	FAIL ABUN
PO-209	3.648E+00	7.251E+00	6.476E+00	3.699E+00	NOT IDENT.
BI-210	6.943E-01	2.271E+00	2.093E+00	1.159E+00	NOT IDENT.
PB-210	6.943E-01	2.271E+00	2.093E+00	1.159E+00	NOT IDENT.
PO-210	6.943E-01	2.271E+00	2.093E+00	1.159E+00	NOT IDENT.
PB-211	-6.332E-01	9.851E-01	7.616E-01	5.026E-01	NOT IDENT.
PO-215	-2.398E-01	7.044E-01	5.291E-01	3.594E-01	FAIL ABUN
RN-219	5.838E-02	3.925E-01	3.452E-01	2.002E-01	FAIL ABUN
RN-220	-6.673E+00	2.488E+01	2.086E+01	1.269E+01	NOT IDENT.
RA-223	-2.398E-01	7.044E-01	5.291E-01	3.594E-01	FAIL ABUN
AC-227	-3.582E-01	3.733E-01	2.990E-01	1.904E-01	FAIL ABUN
TH-227	-3.582E-01	3.748E-01	2.990E-01	1.912E-01	FAIL ABUN
TH-229	1.888E-01	5.034E-01	4.406E-01	2.569E-01	FAIL ABUN
PA-231	-3.704E-01	1.398E+00	1.231E+00	7.130E-01	NOT IDENT.
TH-231	-2.398E-01	7.044E-01	5.291E-01	3.594E-01	FAIL ABUN
U-231	-1.331E-01	7.570E-01	5.906E-01	3.862E-01	FAIL ABUN
PA-233	2.971E-02	5.970E-02	5.411E-02	3.046E-02	FAIL ABUN
PA-234	1.834E-01	3.045E-01	2.713E-01	1.553E-01	FAIL ABUN
PA-234M	4.529E+00	6.451E+00	5.806E+00	3.291E+00	NOT IDENT.
U-235	2.579E-01	2.078E-01	1.847E-01	1.060E-01	FAIL ABUN
NP-236	7.912E-02	7.870E-02	7.096E-02	4.015E-02	NOT IDENT.
NP-239	6.267E-02	1.827E-01	1.638E-01	9.322E-02	FAIL ABUN
AM-241	2.066E-02	1.352E-01	1.096E-01	6.900E-02	NOT IDENT.
CM-243	1.766E-03	9.186E-02	8.195E-02	4.687E-02	FAIL ABUN
CM-247	2.153E-03	3.544E-02	3.103E-02	1.808E-02	NOT IDENT.
CF-249	-4.848E-03	3.752E-02	3.260E-02	1.914E-02	NOT IDENT.
CF-251	8.635E-02	1.241E-01	1.103E-01	6.330E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	409.2534
46.50	409.2534
46.50	409.2534
48.70	470.7417
49.72	500.6679
51.35	446.5037
52.39	454.6028
52.97	455.9640
53.15	449.7047
53.44	443.5229
54.07	435.7529
56.28	530.1423
56.28	530.1445
57.37	0.0000
57.53	502.3121
57.53	502.3131
57.60	512.6808
57.98	496.7788
57.98	496.7788
59.32	508.1811
59.32	508.1811
59.40	508.2451
59.54	508.3575
59.72	498.1549
60.01	498.3822
61.10	505.1572
61.14	506.6700
61.30	506.7963
63.00	626.9832
63.29	627.2595
63.29	627.2595
63.58	626.0499
64.28	613.3152
65.12	588.7511
65.20	588.8210
65.20	588.8210
66.05	620.9125
66.72	627.5006
66.83	627.6057
66.91	631.4163
67.20	652.2422
67.20	652.2422
67.75	667.7299
67.85	667.8279
68.90	642.9947
68.90	642.9947
69.30	665.8618
69.67	664.7190
70.82	650.7791
70.82	650.7791
70.83	650.7897
72.80	620.7638
72.87	620.8242
72.87	620.8242
74.67	622.3777
74.81	622.4984
74.81	622.4984
74.81	622.4984
74.81	622.4984
74.81	622.4984
74.81	622.4984
74.97	622.6342
75.28	622.9006
75.70	623.2576
77.11	591.2889
77.11	591.2889
77.11	591.2889

77.11	591.2889
77.11	591.2889
77.11	591.2889
78.38	565.7230
79.62	566.6575
79.80	566.7916
79.80	566.7916
80.11	567.0258
80.18	567.0781
80.30	567.1667
80.30	567.1667
80.57	567.3691
81.00	594.3596
81.07	594.4144
81.07	594.4144
81.07	594.4144
81.07	594.4144
82.60	568.8765
83.37	515.9359
83.78	516.2098
83.78	516.2098
83.78	516.2098
83.78	516.2098
84.21	516.4962
84.40	516.6218
84.90	516.9514
85.43	517.2995
86.29	517.8640
86.50	518.0020
86.54	518.0267
86.59	518.0596
86.72	518.1461
86.79	518.1894
86.94	518.2883
87.30	518.5231
87.30	518.5231
87.30	518.5231
87.30	518.5231
87.30	518.5231
87.30	518.5231
87.57	518.6982
87.88	518.9001
88.03	518.9969
88.36	519.2090
88.47	519.2812
89.95	520.2328
91.11	520.9744
92.29	521.7222
92.38	521.7798
92.38	521.7798
93.35	522.3917
94.00	522.7996
94.67	455.7780
94.67	455.7807
94.90	490.0218
94.90	490.0218
94.90	490.0218
94.90	490.0218
95.87	478.1670
95.87	478.1670
96.73	460.0050
97.43	438.6078
98.44	453.1387
98.44	453.1405
98.88	464.2772
99.55	420.9818
99.55	420.9818
99.86	415.5612
100.00	415.6279
100.10	415.6783
103.18	458.9399
103.76	451.4070
105.00	466.7449
105.31	474.7537
108.00	442.7216
109.28	442.3578
111.00	457.0055
111.00	457.0055

111.76	436.6349
112.95	414.4431
115.19	443.1941
116.30	413.9331
117.00	413.2435
117.00	413.2435
117.66	429.4341
121.11	407.0257
121.62	435.7571
121.78	417.9528
122.06	418.0725
122.32	385.1543
122.32	385.1543
122.32	385.1543
122.32	385.1543
123.07	377.4516
127.23	403.1220
129.76	415.4014
131.20	470.8073
133.02	405.4146
133.54	428.2441
135.34	409.7615
136.00	390.7826
136.25	394.9274
136.48	398.0522
140.51	469.7193
140.51	0.0000
142.18	420.5528
142.65	376.9302
143.76	365.0796
144.24	375.4430
144.24	375.4430
144.24	375.4430
144.24	375.4430
145.22	395.1816
145.44	417.7310
147.16	464.4189
152.43	373.0892
152.70	371.1217
153.22	381.5776
154.21	408.6733
154.21	408.6733
154.21	408.6733
154.21	408.6733
155.03	425.4525
156.02	457.7835
158.56	375.0970
159.00	0.0000
159.00	380.4069
160.31	370.4876
161.27	399.7941
162.32	413.6270
162.64	415.8136
163.35	399.4633
163.89	386.1524
165.85	411.7467
167.43	370.6450
171.28	356.1623
171.86	382.4582
172.10	382.5336
176.55	348.2565
176.60	348.2692
181.06	385.7303
184.41	383.3729
185.71	367.7030
186.00	367.7879
190.27	352.8890
192.34	341.2696
193.63	352.9450
197.04	364.5153
198.01	383.9804
198.60	361.7393
200.40	381.4615
201.83	393.6307
202.84	342.5439
205.31	353.4615
208.36	340.7063
208.81	340.8176

209.75	289.1909
209.75	289.1909
210.97	284.2766
215.65	279.8272
216.55	292.9782
218.09	294.3789
222.10	317.9986
223.80	291.2091
226.40	335.2724
227.00	300.5631
227.08	302.7581
227.20	302.7836
228.16	300.8011
228.18	300.8053
228.18	300.8053
231.56	0.0000
235.69	306.7178
236.00	303.2758
236.00	303.2758
238.60	291.9482
238.63	291.9543
238.63	291.9543
238.63	291.9543
239.00	292.0253
240.98	292.4088
241.98	292.6016
241.98	292.6016
241.98	292.6016
244.69	227.4444
245.39	218.7286
247.94	259.1392
248.90	279.5581
249.79	265.3455
252.40	223.7069
252.85	232.6339
252.85	232.6339
254.15	0.0000
256.20	268.6534
256.20	268.6534
260.50	222.6288
260.90	219.3465
262.80	250.8179
264.65	244.6333
268.24	220.1208
268.79	232.7273
269.46	234.6135
269.46	234.6135
269.46	234.6135
269.46	234.6135
271.23	224.1119
273.65	224.4415
276.40	239.2019
277.35	241.1378
277.60	212.3770
277.60	212.3770
278.00	211.5287
278.60	214.6047
279.20	216.1846
279.53	225.2350
280.46	243.3889
281.68	218.0074
283.67	223.9841
284.30	221.3583
285.00	226.8713
285.90	214.3328
286.10	213.4515
286.10	213.4515
287.40	217.2363
288.45	0.0000
290.67	199.5146
290.80	199.5281
291.72	208.7098
293.26	0.0000
293.70	213.4937
295.21	207.6155
295.21	207.6155
295.21	207.6155
295.96	172.8369

296.50	172.8903
297.23	172.9622
298.57	173.0944
299.80	212.7230
299.80	212.7230
300.09	177.8042
300.09	177.8042
300.09	177.8042
300.10	177.8042
300.12	177.8066
301.29	179.4463
302.84	196.3476
303.76	214.7244
303.91	214.7416
304.40	213.2784
304.40	213.2784
304.84	216.3772
306.84	214.1820
308.46	188.7244
311.98	190.0120
316.51	212.5724
318.01	198.9352
319.02	187.9853
319.41	181.5733
320.08	189.5291
323.87	206.3462
323.87	206.3462
323.87	206.3462
323.87	206.3462
325.23	186.4629
328.77	211.5233
333.44	208.9545
334.20	195.1036
334.20	195.1036
334.30	195.1139
338.28	187.7652
338.28	187.7652
338.28	187.7652
338.28	187.7652
338.32	187.7676
338.32	187.7676
338.32	187.7676
340.50	163.1268
340.57	163.1311
344.27	206.8108
345.85	182.2745
350.59	0.0000
351.07	173.3946
351.92	153.1529
351.92	153.1529
351.92	153.1529
355.39	0.0000
356.01	180.0946
364.48	161.3625
366.43	160.5765
367.43	158.7653
367.94	0.0000
369.80	167.4672
374.96	149.8705
383.85	157.1891
387.95	165.1356
388.63	163.2787
391.69	164.4729
391.69	164.4729
392.90	148.3020
398.62	182.2813
400.65	146.9245
401.10	143.1142
401.81	160.4562
402.60	164.3600
404.84	183.7746
410.95	152.4530
411.60	159.2556
413.65	166.1673
414.70	145.9495
415.30	145.9900
415.76	153.7576
417.63	0.0000

418.52	155.8862
423.70	141.6941
427.08	137.0499
427.89	138.0721
432.53	134.4607
433.93	131.6184
439.47	137.8055
439.56	137.8106
439.89	141.7414
443.98	130.2432
444.90	120.4986
445.03	120.5061
445.03	120.5061
445.03	120.5061
445.03	120.5061
453.90	126.6236
463.38	134.9550
468.07	103.8900
473.00	117.9861
475.06	99.2322
475.35	108.1764
476.78	127.1078
477.59	124.1714
477.96	121.2092
482.03	104.4950
484.57	134.4908
487.03	135.6248
490.36	0.0000
492.35	135.9187
497.08	131.1727
507.63	0.0000
510.53	0.0000
510.84	103.7035
511.00	103.7098
511.85	97.3664
511.85	97.3664
513.99	107.5286
513.99	107.5286
520.41	100.0514
520.65	100.0611
527.90	103.3846
528.96	0.0000
529.64	104.4686
529.87	0.0000
531.02	99.4499
537.32	117.9994
543.00	105.0017
546.56	0.0000
549.76	114.4691
552.65	127.8931
555.20	105.4845
563.23	107.8531
563.90	102.7441
568.70	125.5683
569.32	110.1557
569.50	106.0452
569.67	106.0503
573.80	104.2634
574.00	118.0208
574.64	119.9112
578.91	101.5863
579.30	0.0000
583.14	102.4321
585.48	122.5397
591.81	118.3195
592.07	116.2547
593.00	124.5996
595.88	98.7411
600.56	129.0980
602.52	0.0000
602.71	119.8179
602.71	119.8179
603.60	125.0684
604.41	109.4656
604.70	109.4758
609.31	101.2982
609.31	101.2982
609.31	101.2982

609.31	101.2982
610.33	97.5033
612.46	99.3186
614.37	85.4370
618.01	99.5111
621.84	90.2013
621.84	90.2013
631.29	73.6589
633.02	80.0189
633.10	80.0208
634.78	91.6559
635.90	90.6359
636.97	95.9410
645.85	93.0553
646.12	99.4091
656.30	108.2355
657.75	91.3015
657.90	0.0000
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661.65	111.6163
664.57	0.0000
666.33	89.4305
666.33	89.4305
675.00	83.2768
677.61	100.4441
685.20	93.1915
692.80	99.8615
695.00	80.5902
696.49	82.7788
696.49	82.7788
697.00	81.7167
697.49	106.4637
698.33	112.9442
698.50	117.2548
699.00	119.4253
702.63	108.7895
706.10	120.7691
706.58	0.0000
706.67	116.4771
709.31	102.5425
711.68	106.9398
713.82	103.7672
717.42	88.7346
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721.93	0.0000
722.20	88.5045
722.78	81.2933
722.78	81.2933
722.89	81.2970
722.95	81.2988
723.30	86.7285
724.18	83.1373
727.18	105.2838
733.00	88.5397
735.90	103.3890
739.58	90.4287
742.81	99.2424
744.21	81.8280
747.13	87.3613
751.79	111.5401
752.31	103.9016
753.82	79.8776
755.35	89.7656
756.15	86.5027
756.87	83.2363
763.93	95.1175
765.79	95.1704
766.41	111.6621
766.84	112.0431
768.36	112.0929
768.36	112.0929
768.36	112.0929
768.36	112.0929
776.49	103.7328
778.00	101.9420
778.57	92.7724
778.89	92.7806
783.80	80.0350

785.46	88.3574
792.07	80.6231
795.84	75.6989
796.30	83.8865
801.93	76.0965
805.60	81.4652
810.29	91.7712
810.76	91.7833
815.85	77.0611
817.79	78.9612
818.51	81.7642
819.60	89.2246
826.30	81.9432
828.27	0.0000
831.60	95.1207
831.96	89.5352
834.83	95.2079
836.80	0.0000
846.75	98.3307
848.13	87.1270
856.28	0.0000
856.80	75.6619
860.37	70.4987
867.32	81.6185
867.82	74.5964
871.10	72.5885
873.19	82.0616
874.81	87.7608
875.33	0.0000
876.40	94.4051
879.36	62.3571
880.27	64.2633
880.51	58.5968
881.50	68.0654
883.24	76.6082
884.67	78.5302
889.25	75.7845
896.60	71.1868
898.02	92.1018
899.00	90.2260
903.28	78.6016
911.07	73.3624
911.07	73.3624
911.07	73.3624
919.63	60.7300
920.93	77.3712
925.00	58.6468
925.24	57.3755
926.50	42.6363
934.06	71.8826
934.06	71.8826
934.06	71.8826
934.06	71.8826
935.52	71.9101
937.48	71.9452
944.10	72.0673
946.00	72.1024
949.00	72.1573
962.29	89.3603
964.01	104.2976
966.15	76.1955
968.20	78.3056
969.11	77.9093
969.11	77.9093
969.11	77.9093
977.42	75.5784
980.50	61.0902
983.50	74.7222
989.30	58.3081
996.32	80.7980
1001.03	62.3737
1001.68	73.1049
1004.76	84.8654
1021.30	0.0000
1024.50	0.0000
1034.80	66.8130
1037.82	70.7930
1038.57	70.8047

1038.76	0.0000
1045.16	66.9762
1046.59	66.0131
1048.07	68.0061
1050.47	52.2668
1050.47	52.2668
1063.62	68.2560
1076.63	80.3672
1077.35	72.4416
1085.78	67.6099
1099.22	87.7637
1112.02	72.0146
1112.84	75.4593
1115.52	78.9342
1120.29	73.8673
1120.29	73.8673
1120.29	73.8673
1120.29	73.8673
1120.51	73.8703
1121.28	75.6004
1124.00	0.0000
1129.67	71.2947
1131.51	0.0000
1147.95	0.0000
1167.94	89.1100
1173.22	74.0070
1175.09	85.1929
1177.93	88.2886
1189.05	93.5872
1204.90	76.5503
1205.75	0.0000
1213.00	73.6143
1221.42	89.1099
1230.97	100.5760
1235.34	104.7766
1236.41	0.0000
1238.11	87.3623
1238.11	87.3623
1238.11	87.3623
1238.11	87.3623
1238.25	86.3379
1246.25	80.3042
1260.41	0.0000
1271.85	72.4467
1274.45	68.3418
1274.54	68.3445
1291.56	61.3047
1298.22	0.0000
1312.09	49.0367
1325.50	47.0746
1325.50	47.0746
1332.49	54.4735
1333.61	48.1974
1360.21	45.2886
1362.66	0.0000
1365.15	32.6802
1368.21	40.5063
1368.53	0.0000
1376.25	34.8638
1377.67	27.1739
1377.67	27.1739
1377.67	27.1739
1377.67	27.1739
1384.27	42.8533
1394.10	48.7627
1395.20	46.6533
1407.95	32.9476
1434.06	28.8369
1436.60	25.6445
1457.56	0.0000
1460.81	25.7598
1489.15	15.1040
1509.49	25.9863
1596.49	28.2683
1620.62	10.4076
1678.03	0.0000
1691.02	23.9319
1691.02	23.9319

1706.46	0.0000
1750.46	0.0000
1764.49	6.7805
1764.49	6.7805
1764.49	6.7805
1764.49	6.7805
1770.23	6.7866
1771.40	72.7269
1791.20	0.0000
1808.65	10.7291
1836.01	19.5898

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504003

Total Uranium Activity	3.0998E+00	ug/g
Total Uranium Counting Unc.	4.5989E+00	ug/g
Total Uranium Tpu	2.3464E-06	ug/g
Total Uranium Mda	2.9395E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232504003 .    *
*   ANALYST       : MXR1                      DETECTOR    : GAM11           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:48:52.64    SAMPLE ALQT:  138.620 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.069E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.544E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.799E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.853E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:50:16.94

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504004.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:49:30.
Sample ID         : G232504004           Sample quantity  : 1.27090E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.64  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.27*	32	510	0.99	126.01	123	8	4.51E-03	125.2	
2	2	74.82*	464	407	1.05	149.14	142	16	6.44E-02	8.5	1.49E+00
3	2	77.12	665	380	0.96	153.74	142	16	9.23E-02	6.1	
4	0	83.85*	44	412	1.29	167.20	165	6	6.07E-03	74.9	
5	0	86.82	146	660	1.30	173.15	171	8	2.02E-02	31.5	
6	0	93.01*	206	495	1.37	185.53	182	8	2.86E-02	21.2	
7	0	129.12	92	322	1.38	257.79	255	8	1.28E-02	35.2	
8	0	185.82*	168	438	1.19	371.25	367	11	2.33E-02	26.2	
9	0	209.22*	116	357	0.94	418.06	413	10	1.60E-02	32.4	
10	5	238.73*	1340	177	1.06	477.11	471	19	1.86E-01	3.2	1.19E+00
11	5	241.57	329	266	1.80	482.79	471	19	4.57E-02	15.2	
12	0	270.47	120	215	0.97	540.62	535	11	1.66E-02	25.4	
13	0	295.38	444	215	1.17	590.46	584	11	6.17E-02	7.9	
14	0	300.02	72	142	1.20	599.74	596	7	9.94E-03	30.0	
15	0	328.07	70	141	1.14	655.86	651	9	9.67E-03	33.0	
16	0	338.50*	310	211	1.20	676.75	670	14	4.31E-02	11.5	
17	0	352.02*	725	213	1.14	703.78	697	14	1.01E-01	5.7	
18	0	409.76	65	107	1.27	819.31	814	10	9.04E-03	32.3	
19	0	510.77*	121	164	1.32	1021.41	1014	15	1.68E-02	27.9	
20	0	583.39*	387	126	1.44	1166.68	1160	14	5.37E-02	8.1	
21	0	609.49*	477	135	1.25	1218.91	1214	12	6.63E-02	6.8	
22	0	728.09	104	108	1.48	1456.15	1448	14	1.44E-02	23.4	
23	0	768.66	53	81	1.82	1537.30	1532	11	7.39E-03	35.3	
24	0	795.29	56	63	0.81	1590.58	1585	10	7.84E-03	29.4	
25	0	861.04	64	88	1.45	1722.09	1714	16	8.83E-03	35.3	
26	0	911.75*	255	100	1.76	1823.53	1817	17	3.54E-02	11.0	
27	0	934.84	31	58	1.30	1869.73	1864	12	4.36E-03	51.3	
28	0	969.30	163	143	1.70	1938.66	1929	20	2.27E-02	20.4	
29	0	1121.12	102	98	1.70	2242.31	2238	14	1.42E-02	23.3	
30	0	1238.47	36	63	1.32	2477.00	2474	8	5.07E-03	40.6	
31	0	1378.43	32	23	1.83	2756.89	2749	13	4.51E-03	35.0	
32	0	1461.33*	1570	11	2.01	2922.67	2912	19	2.18E-01	2.6	
33	0	1765.38*	94	0	1.68	3530.64	3524	16	1.31E-02	11.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:50:21

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504004.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:49:30
Sample ID : G232504004 Sample quantity : 127.09 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA12 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.64 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.823E+01	3.366E+00	4.494E-01	3.204E-02	85.073
CD-109	+	88.03	*	2.096E+00	1.330E+00	1.541E+00	1.179E-01	1.360
SN-126	+	64.28		3.119E-01	7.820E-01	8.174E-01	1.148E-01	0.382
	+	86.94		8.594E-01	6.468E-01	6.390E-01	2.629E-01	1.345
	+	87.57	*	2.067E-01	1.312E-01	1.527E-01	1.164E-02	1.354
TL-208		277.35		2.119E-01	3.789E-01	6.394E-01	6.697E-02	0.331
	+	510.84		5.937E-01	3.368E-01	2.130E-01	2.199E-02	2.788
	+	583.14	*	5.418E-01	9.571E-02	6.383E-02	4.566E-03	8.488
	+	860.37		8.407E-01	5.980E-01	4.991E-01	4.361E-02	1.685
BI-211		72.87		5.085E+00	3.126E+00	5.480E+00	3.677E-01	0.928
	+	351.07	*	4.400E+00	5.737E-01	3.248E-01	2.042E-02	13.546
PB-212	+	74.81		2.785E+00	5.737E-01	5.588E-01	6.459E-02	4.984
	+	77.11		2.260E+00	3.185E-01	3.171E-01	2.195E-02	7.126
	+	87.30		9.561E-01	6.142E-01	7.081E-01	8.894E-02	1.350
	+	238.63	*	1.770E+00	1.689E-01	8.825E-02	6.266E-03	20.055
	+	300.09		1.458E+00	8.844E-01	1.192E+00	9.731E-02	1.223
PO-212	+	74.81		2.785E+00	5.737E-01	5.588E-01	6.459E-02	4.984
	+	77.11		2.260E+00	3.185E-01	3.171E-01	2.195E-02	7.126
	+	87.30		9.561E-01	6.142E-01	7.081E-01	8.894E-02	1.350
		115.19		1.726E+00	3.574E+00	5.985E+00	3.796E-01	0.288
	+	238.63	*	1.770E+00	1.689E-01	8.825E-02	6.266E-03	20.055
	+	300.09		1.458E+00	8.844E-01	1.192E+00	9.731E-02	1.223
BI-214	+	609.31	*	1.262E+00	2.004E-01	1.096E-01	9.025E-03	11.510
	+	768.36		1.574E+00	1.123E+00	1.259E+00	1.189E-01	1.250
	+	934.06		1.733E+00	1.787E+00	1.849E+00	1.891E-01	0.937
	+	1120.29		1.404E+00	6.678E-01	4.979E-01	4.522E-02	2.820
	+	1238.11		1.391E+00	1.134E+00	1.664E+00	1.390E-01	0.836
	+	1377.67		1.959E+00	1.382E+00	1.583E+00	1.487E-01	1.237
	+	1764.49		1.779E+00	4.073E-01	1.977E-01	1.171E-02	8.999
PB-214	+	74.81		4.798E+00	9.499E-01	9.628E-01	9.683E-02	4.984
	+	77.11		3.874E+00	6.206E-01	5.436E-01	5.596E-02	7.126
	+	87.30		1.638E+00	1.047E+00	1.213E+00	1.313E-01	1.350
	+	241.98		2.609E+00	8.175E-01	5.315E-01	4.183E-02	4.908
	+	295.21		1.590E+00	2.856E-01	1.962E-01	1.656E-02	8.102

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.530E+00	2.150E-01	1.132E-01	9.250E-03	13.516
PO-214	+	74.81		4.798E+00	9.499E-01	9.628E-01	9.683E-02	4.984
	+	77.11		3.874E+00	6.206E-01	5.436E-01	5.596E-02	7.126
	+	87.30		1.638E+00	1.047E+00	1.213E+00	1.313E-01	1.350
	+	241.98		2.609E+00	8.175E-01	5.315E-01	4.183E-02	4.908
	+	295.21		1.590E+00	2.856E-01	1.962E-01	1.656E-02	8.102
	+	351.92	*	1.530E+00	2.150E-01	1.132E-01	9.250E-03	13.516
PO-216	+	74.81		2.785E+00	5.737E-01	5.588E-01	6.459E-02	4.984
	+	77.11		2.260E+00	3.185E-01	3.171E-01	2.195E-02	7.126
	+	87.30		9.561E-01	6.142E-01	7.081E-01	8.894E-02	1.350
	+	238.63	*	1.770E+00	1.689E-01	8.825E-02	6.266E-03	20.055
	+	300.09		1.458E+00	8.844E-01	1.192E+00	9.731E-02	1.223
PO-218	+	74.81		4.798E+00	9.499E-01	9.628E-01	9.683E-02	4.984
	+	77.11		3.874E+00	6.206E-01	5.436E-01	5.596E-02	7.126
	+	87.30		1.638E+00	1.047E+00	1.213E+00	1.313E-01	1.350
	+	241.98		2.609E+00	8.175E-01	5.315E-01	4.183E-02	4.908
	+	295.21		1.590E+00	2.856E-01	1.962E-01	1.656E-02	8.102
	+	351.92	*	1.530E+00	2.150E-01	1.132E-01	9.250E-03	13.516
RA-224	+	240.98	*	4.947E+00	1.525E+00	1.004E+00	5.541E-02	4.925
RA-226	+	609.31	*	1.262E+00	2.004E-01	1.096E-01	9.025E-03	11.510
	+	768.36		1.574E+00	1.123E+00	1.259E+00	1.189E-01	1.250
	+	934.06		1.733E+00	1.787E+00	1.849E+00	1.891E-01	0.937
	+	1120.29		1.404E+00	6.678E-01	4.979E-01	4.522E-02	2.820
	+	1238.11		1.391E+00	1.134E+00	1.664E+00	1.390E-01	0.836
	+	1377.67		1.959E+00	1.382E+00	1.583E+00	1.487E-01	1.237
	+	1764.49		1.779E+00	4.073E-01	1.977E-01	1.171E-02	8.999
AC-228	+	338.32		2.074E+00	9.711E-01	3.524E-01	1.436E-01	5.884
	+	911.07	*	1.594E+00	3.923E-01	2.059E-01	2.260E-02	7.745
	+	969.11		1.797E+00	8.414E-01	4.410E-01	1.017E-01	4.075
RA-228	+	338.32		2.074E+00	9.711E-01	3.524E-01	1.436E-01	5.884
	+	911.07	*	1.594E+00	3.923E-01	2.059E-01	2.260E-02	7.745
	+	969.11		1.797E+00	8.414E-01	4.410E-01	1.017E-01	4.075
TH-228	+	84.40		1.971E+00	2.963E+00	3.903E+00	4.826E-01	0.505
	+	238.60	*	1.770E+00	1.689E-01	8.824E-02	6.265E-03	20.057
	+	300.10		1.458E+00	1.227E+00	1.192E+00	7.024E-01	1.223
TH-230	+	609.31	*	1.262E+00	2.004E-01	1.096E-01	9.025E-03	11.510
	+	768.36		1.574E+00	1.123E+00	1.259E+00	1.189E-01	1.250
	+	934.06		1.733E+00	1.787E+00	1.849E+00	1.891E-01	0.937
	+	1120.29		1.404E+00	6.678E-01	4.979E-01	4.522E-02	2.820
	+	1238.11		1.391E+00	1.134E+00	1.664E+00	1.390E-01	0.836
	+	1377.67		1.959E+00	1.382E+00	1.583E+00	1.487E-01	1.237
	+	1764.49		1.779E+00	4.073E-01	1.977E-01	1.171E-02	8.999
TH-232	+	338.32		2.074E+00	4.930E-01	3.524E-01	1.996E-02	5.884
	+	911.07	*	1.594E+00	3.923E-01	2.059E-01	2.260E-02	7.745
	+	969.11		1.797E+00	8.414E-01	4.410E-01	1.017E-01	4.075
TH-234	+	63.29	*	7.879E-01	1.977E+00	2.174E+00	3.702E-01	0.362
	+	92.38		1.874E+00	8.603E-01	1.052E+00	1.840E-01	1.782
U-234	+	609.31	*	1.262E+00	2.004E-01	1.096E-01	9.025E-03	11.510
	+	768.36		1.574E+00	1.123E+00	1.259E+00	1.189E-01	1.250

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	934.06		1.733E+00	1.787E+00	1.849E+00	1.891E-01	0.937
	+	1120.29		1.404E+00	6.678E-01	4.979E-01	4.522E-02	2.820
	+	1238.11		1.391E+00	1.134E+00	1.664E+00	1.390E-01	0.836
	+	1377.67		1.959E+00	1.382E+00	1.583E+00	1.487E-01	1.237
	+	1764.49		1.779E+00	4.073E-01	1.977E-01	1.171E-02	8.999
NP-237	+	86.50	*	6.070E-01	4.051E-01	3.960E-01	8.699E-02	1.533
		95.87		-8.557E-01	1.057E+00	1.472E+00	3.552E-01	-0.581
U-238	+	63.29	*	7.879E-01	1.977E+00	2.174E+00	3.702E-01	0.362
	+	92.38		1.874E+00	8.070E-01	1.052E+00	7.660E-02	1.782
AM-243	+	74.67	*	4.515E-01	8.288E-02	9.087E-02	6.174E-03	4.969
	+	86.72		2.276E+01	1.445E+01	1.481E+01	1.119E+00	1.537
		117.66		-4.176E+00	3.829E+00	5.970E+00	3.761E-01	-0.700
		142.18		-5.605E+00	1.779E+01	2.849E+01	1.613E+00	-0.197
ANH-511	+	511.00	*	1.282E-01	7.196E-02	4.601E-02	2.804E-03	2.787

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.954E-01	3.414E-01	5.714E-01	3.932E-02	0.342
NA-22		1274.54	*	-9.616E-03	5.428E-02	8.784E-02	5.657E-03	-0.109
NA-24		1368.53	*	-2.261E-02	5.428E-02	Half-Life too short		
AL-26		1129.67		-2.407E+00	2.079E+00	2.639E+00	1.608E-01	-0.912
		1808.65	*	1.627E-02	3.455E-02	6.158E-02	3.533E-03	0.264
TI-44		67.85		-5.262E-02	5.167E-02	7.428E-02	4.835E-03	-0.708
	+	78.38	*	4.170E-01	5.876E-02	7.860E-02	5.498E-03	5.305
SC-46		889.25	*	-2.264E-02	4.373E-02	6.733E-02	5.581E-03	-0.336
	+	1120.51		2.359E-01	1.111E-01	1.450E-01	9.009E-03	1.627
V-48		944.10		-7.662E-01	8.788E-01	1.284E+00	1.031E-01	-0.597
		983.50	*	-2.820E-03	6.856E-02	1.096E-01	8.445E-03	-0.026
		1312.09		-2.869E-02	9.012E-02	1.431E-01	9.714E-03	-0.200
CR-51		320.08	*	4.668E-01	3.602E-01	6.364E-01	4.046E-02	0.734
MN-52		744.21		-1.486E-02	1.968E-01	3.217E-01	2.298E-02	-0.046
		848.13		-2.037E+00	5.758E+00	9.067E+00	7.222E-01	-0.225
	+	935.52		2.918E-01	3.003E-01	4.007E-01	3.244E-02	0.728
		1246.25		5.767E+00	6.912E+00	1.188E+01	7.318E-01	0.486
		1333.61		-5.192E+00	4.024E+00	5.451E+00	3.807E-01	-0.953
		1434.06	*	6.433E-02	1.714E-01	2.943E-01	2.022E-02	0.219
MN-54		834.83	*	-3.892E-02	4.217E-02	6.313E-02	4.963E-03	-0.616
CO-56		846.75	*	-6.997E-03	4.416E-02	7.085E-02	5.636E-03	-0.099
		977.42		3.008E-01	4.050E+00	5.661E+00	4.392E-01	0.053
		1037.82		-4.182E-01	3.443E-01	5.112E-01	3.948E-02	-0.818
		1175.09		-2.150E+00	2.578E+00	3.967E+00	2.187E-01	-0.542
	+	1238.25		1.382E-01	1.124E-01	1.986E-01	1.279E-02	0.696
		1360.21		-2.598E-01	1.044E+00	1.651E+00	1.149E-01	-0.157
		1771.40		4.487E-02	2.154E-01	3.261E-01	1.923E-02	0.138
CO-57		122.06	*	-3.121E-02	2.481E-02	3.819E-02	2.388E-03	-0.817
		136.48		-1.182E-01	2.041E-01	3.233E-01	2.174E-02	-0.366
CO-58		810.76	*	-2.644E-02	4.247E-02	6.543E-02	5.035E-03	-0.404

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		8.614E-02	2.708E+00	4.346E+00	2.455E-01	0.020
		192.34		-9.072E-01	9.284E-01	1.397E+00	1.614E-01	-0.650
		1099.22	*	1.301E-02	9.808E-02	1.652E-01	1.220E-02	0.079
		1291.56		6.451E-02	1.318E-01	2.268E-01	1.826E-02	0.284
CO-60		1173.22		-3.223E-03	5.282E-02	8.704E-02	4.784E-03	-0.037
		1332.49	*	-4.137E-05	4.159E-02	6.808E-02	4.755E-03	-0.001
ZN-65		1115.52	*	-1.088E-01	1.194E-01	1.515E-01	9.527E-03	-0.719
GE-68		1077.35	*	6.188E-01	1.221E+00	2.134E+00	1.439E-01	0.290
AS-73		53.44	*	4.763E-01	7.960E-01	1.364E+00	8.807E-02	0.349
AS-74		595.88	*	-2.829E-02	8.159E-02	1.329E-01	8.459E-03	-0.213
		634.78		1.942E-01	3.368E-01	5.848E-01	3.768E-02	0.332
SE-75		66.05		-1.702E+00	5.094E+00	7.584E+00	6.621E-01	-0.224
		96.73		-1.059E+00	8.756E-01	1.202E+00	1.523E-01	-0.881
		121.11		-1.838E-03	1.317E-01	2.156E-01	2.053E-02	-0.009
		136.00		2.262E-03	3.729E-02	6.086E-02	3.594E-03	0.037
		198.60		-1.616E+00	1.849E+00	2.756E+00	1.852E-01	-0.586
		264.65	*	-2.208E-02	4.599E-02	6.559E-02	3.718E-03	-0.337
		279.53		-9.431E-02	1.097E-01	1.722E-01	1.056E-02	-0.548
		303.91		8.782E-01	2.273E+00	3.420E+00	3.239E-01	0.257
		400.65		1.021E-02	2.534E-01	4.146E-01	3.705E-02	0.025
BR-77	+	87.88		2.358E+02	1.497E+02	1.882E+02	1.439E+01	1.253
		200.40		4.257E+01	8.405E+01	1.369E+02	7.263E+00	0.311
	+	239.00		1.475E+02	1.243E+01	2.060E+01	1.135E+00	7.158
		249.79		-1.992E+01	3.204E+01	5.226E+01	2.902E+00	-0.381
		281.68		-1.734E+01	4.708E+01	7.725E+01	4.365E+00	-0.224
		297.23		1.631E+02	4.177E+01	6.222E+01	3.532E+00	2.622
		303.76		5.636E+01	1.011E+02	1.541E+02	8.758E+00	0.366
		439.47		2.944E+01	8.067E+01	1.339E+02	7.710E+00	0.220
		484.57		-8.753E+01	1.355E+02	2.076E+02	1.242E+01	-0.422
		520.65	*	-4.114E+00	5.492E+00	8.200E+00	5.029E-01	-0.502
		574.64		-3.789E+01	1.128E+02	1.848E+02	1.166E+01	-0.205
		578.91		3.624E+01	4.844E+01	7.617E+01	4.816E+00	0.476
		585.48		8.154E+02	1.502E+02	2.777E+02	1.760E+01	2.937
		755.35		1.237E+02	9.566E+01	1.719E+02	1.243E+01	0.720
		817.79		-9.221E+00	7.175E+01	1.157E+02	8.936E+00	-0.080
SR-82		698.33		5.275E-02	3.514E+01	5.810E+01	3.937E+00	0.001
		776.49	*	-1.320E-01	3.754E-01	5.961E-01	4.411E-02	-0.222
		1395.20		-3.534E+00	1.126E+01	1.760E+01	1.219E+00	-0.201
RB-83		520.41	*	6.035E-03	6.602E-02	1.064E-01	6.524E-03	0.057
		529.64		-5.550E-02	1.101E-01	1.684E-01	1.038E-02	-0.330
		552.65		-1.010E-01	1.879E-01	3.032E-01	1.894E-02	-0.333
RB-84		881.50	*	5.264E-03	7.551E-02	1.232E-01	1.014E-02	0.043
KR-85		513.99	*	1.201E+01	9.209E+00	1.431E+01	8.740E-01	0.839
SR-85		513.99	*	6.016E-02	4.611E-02	7.167E-02	4.377E-03	0.839
RB-86		1076.63	*	-7.397E-02	7.331E-01	1.211E+00	8.175E-02	-0.061
Y-88		898.02		1.413E-02	4.500E-02	7.493E-02	6.294E-03	0.189
		1836.01	*	1.829E-02	3.469E-02	6.275E-02	3.532E-03	0.291
ZR-88		392.90	*	-2.653E-02	3.015E-02	4.623E-02	2.536E-03	-0.574
Y-91		1204.90	*	-9.301E-01	2.175E+01	3.580E+01	2.070E+00	-0.026

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	-8.380E-03	3.747E-02	6.090E-02	4.148E-03	-0.138
		871.10		2.753E-02	3.939E-02	6.768E-02	5.513E-03	0.407
NB-95		765.79	*	4.625E-02	4.780E-02	7.522E-02	5.502E-03	0.615
NB-95M		235.69	*	2.501E-06	1.299E-01	1.939E-01	1.414E-02	0.000
ZR-95		724.18		4.149E-02	1.029E-01	1.539E-01	1.213E-02	0.270
		756.15	*	7.055E-02	7.948E-02	1.389E-01	1.147E-02	0.508
NB-97		657.90	*	-8.621E-03	7.948E-02	Half-Life too short		
		1024.50		3.912E-03	7.948E-02	Half-Life too short		
ZR-97		254.15		4.695E-02	7.948E-02	Half-Life too short		
		355.39		-1.867E-01	7.948E-02	Half-Life too short		
		507.63	*	2.022E-01	7.948E-02	Half-Life too short		
		602.52		-2.424E-01	7.948E-02	Half-Life too short		
		1021.30		1.184E-01	7.948E-02	Half-Life too short		
		1147.95		2.424E-01	7.948E-02	Half-Life too short		
		1362.66		7.259E-02	7.948E-02	Half-Life too short		
		1750.46		-6.701E-01	7.948E-02	Half-Life too short		
MO-99		140.51		-5.605E+00	1.516E+01	2.387E+01	6.427E+00	-0.235
		181.06		-4.737E+00	1.085E+01	1.496E+01	2.535E+00	-0.317
		366.43		-1.595E+01	5.080E+01	8.181E+01	4.574E+00	-0.195
		739.58	*	-1.664E+00	6.941E+00	1.118E+01	1.608E+00	-0.149
		778.00		-1.050E+01	1.998E+01	3.116E+01	2.310E+00	-0.337
TC-99M		140.51	*	-2.869E+07	1.998E+01	Half-Life too short		
RH-101		127.23		-9.566E-03	3.582E-02	5.147E-02	3.124E-03	-0.186
		198.01	*	-4.019E-03	3.412E-02	5.299E-02	2.803E-03	-0.076
		325.23		-1.797E-01	2.488E-01	3.405E-01	1.934E-02	-0.528
RH-102		418.52		1.559E-01	3.060E-01	5.139E-01	2.899E-02	0.303
		475.06	*	-7.717E-03	2.928E-02	4.617E-02	2.742E-03	-0.167
		631.29		2.223E-02	5.893E-02	1.008E-01	6.492E-03	0.220
		697.49		-3.141E-02	8.520E-02	1.370E-01	9.275E-03	-0.229
		766.84		2.310E-01	1.344E-01	2.229E-01	1.632E-02	1.036
		1046.59		-1.131E-01	1.390E-01	2.143E-01	1.518E-02	-0.528
		1112.84		6.222E-02	2.468E-01	4.191E-01	2.645E-02	0.148
RU-103		497.08	*	4.188E-03	4.138E-02	6.692E-02	8.536E-03	0.063
	+	610.33		1.310E+01	2.714E+00	3.114E+00	4.875E-01	4.205
RH-106	+	511.85		6.378E-01	3.579E-01	4.774E-01	2.911E-02	1.336
		621.84	*	7.239E-02	3.267E-01	5.539E-01	6.678E-02	0.131
		1050.47		1.811E+00	2.630E+00	4.634E+00	3.264E-01	0.391
RU-106	+	511.85		6.378E-01	3.579E-01	4.774E-01	2.911E-02	1.336
		621.84	*	7.239E-02	3.267E-01	5.539E-01	3.557E-02	0.131
		1050.47		1.811E+00	2.630E+00	4.634E+00	3.264E-01	0.391
AG-108M		433.93	*	-6.637E-03	3.402E-02	5.440E-02	3.390E-03	-0.122
		614.37		-1.050E-02	4.517E-02	6.397E-02	4.385E-03	-0.164
		722.95		5.698E-03	4.657E-02	6.751E-02	4.986E-03	0.084
AG-110M		657.75	*	-1.964E-02	3.619E-02	5.754E-02	3.921E-03	-0.341
		677.61		1.707E-01	3.308E-01	5.689E-01	3.939E-02	0.300
		706.67		-1.035E-01	2.256E-01	3.592E-01	2.565E-02	-0.288
		763.93		6.420E-02	1.783E-01	2.648E-01	2.009E-02	0.242
		884.67		3.427E-02	5.626E-02	9.597E-02	8.197E-03	0.357
		937.48		8.095E-02	1.388E-01	2.077E-01	1.748E-02	0.390

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1384.27		2.358E-01	1.383E-01	2.672E-01	1.934E-02	0.882
IN-111		171.28		-2.254E-01	5.715E-01	8.996E-01	4.627E-02	-0.251
		245.39	*	4.106E-01	6.038E-01	9.410E-01	5.209E-02	0.436
IN-113M		391.69	*	-4.910E-02	4.483E-02	6.768E-02	3.984E-03	-0.725
SN-113		391.69	*	-4.910E-02	4.483E-02	6.768E-02	3.984E-03	-0.725
IN-114M		190.27	*	6.111E-02	1.951E-01	2.823E-01	1.481E-02	0.216
CD-115		260.90		2.213E+01	6.276E+01	1.072E+02	5.999E+00	0.206
		492.35		-8.012E+00	1.860E+01	2.883E+01	1.735E+00	-0.278
		527.90	*	2.714E+00	5.552E+00	9.218E+00	5.678E-01	0.294
SN-117M		156.02		4.658E-01	2.035E+00	3.320E+00	1.772E-01	0.140
		158.56	*	-5.640E-03	4.772E-02	7.654E-02	4.043E-03	-0.074
SB-122		563.90	*	4.610E-01	1.187E+00	2.047E+00	1.286E-01	0.225
		692.80		1.894E+01	2.771E+01	4.797E+01	3.230E+00	0.395
I-123		159.00	*	-1.470E-01	2.771E+01	Half-Life too short		
		528.96		1.116E+01	2.771E+01	Half-Life too short		
TE-123M		159.00	*	-1.239E-02	2.818E-02	4.450E-02	2.384E-03	-0.278
I-124		602.71	*	-1.659E-01	5.101E-01	7.844E-01	5.005E-02	-0.212
		722.78		1.201E-01	3.328E+00	4.776E+00	3.329E-01	0.025
		1325.50		-7.769E+00	2.583E+01	4.082E+01	2.823E+00	-0.190
		1376.25		2.541E+01	2.816E+01	4.474E+01	3.107E+00	0.568
		1509.49		5.599E+00	1.161E+01	2.003E+01	1.348E+00	0.279
		1691.02		9.522E-01	2.497E+00	4.441E+00	2.756E-01	0.214
SB-124		602.71		-1.365E-02	4.195E-02	6.451E-02	4.118E-03	-0.212
		645.85		-7.102E-02	5.205E-01	8.567E-01	6.115E-02	-0.083
		709.31		2.533E+00	2.818E+00	4.965E+00	3.408E-01	0.510
		713.82		-7.969E-01	1.611E+00	2.541E+00	2.763E-01	-0.314
		722.78		1.432E-02	3.968E-01	5.693E-01	4.099E-02	0.025
	+	968.20		1.803E+01	7.481E+00	7.884E+00	6.178E-01	2.286
		1045.16		-7.243E-01	2.811E+00	4.600E+00	3.267E-01	-0.157
		1325.50		-9.891E-01	3.289E+00	5.197E+00	3.594E-01	-0.190
		1368.21		-9.750E-01	1.840E+00	2.653E+00	3.310E-01	-0.368
		1436.60		-8.900E-01	3.689E+00	5.779E+00	3.968E-01	-0.154
		1691.02	*	2.677E-02	7.022E-02	1.249E-01	8.332E-03	0.214
SB-125		427.89	*	1.817E-03	9.356E-02	1.521E-01	9.042E-03	0.012
		463.38		7.830E-01	3.335E-01	6.047E-01	4.133E-02	1.295
		600.56		5.431E-02	1.861E-01	3.174E-01	2.289E-02	0.171
		635.90		-3.133E-01	2.959E-01	4.517E-01	3.321E-02	-0.693
TE-125M		109.28	*	9.213E+00	8.925E+00	1.526E+01	1.315E+00	0.604
I-126		388.63		1.618E-01	1.848E-01	3.184E-01	1.749E-02	0.508
		666.33	*	2.726E-02	1.694E-01	2.844E-01	1.855E-02	0.096
		753.82		1.113E+00	1.492E+00	2.585E+00	1.866E-01	0.431
SB-126		223.80		-1.198E+00	3.471E+00	5.800E+00	3.151E-01	-0.207
		278.60		5.678E-01	2.283E+00	3.804E+00	2.147E-01	0.149
	+	296.50		1.396E+01	2.351E+00	3.406E+00	1.933E-01	4.098
		414.70		-6.305E-03	7.968E-02	1.126E-01	6.328E-03	-0.056
		415.30		2.662E+00	6.124E+00	9.538E+00	5.363E-01	0.279
		555.20		1.354E+00	3.480E+00	6.015E+00	3.761E-01	0.225
		573.80		-3.997E-02	9.603E-01	1.607E+00	1.014E-01	-0.025
		593.00		-5.679E-01	7.977E-01	1.259E+00	8.007E-02	-0.451

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		656.30		-5.535E-02	3.089E+00	5.124E+00	3.318E-01	-0.011
		666.33		1.133E-02	7.043E-02	1.183E-01	7.710E-03	0.096
		675.00		5.981E-01	1.800E+00	3.061E+00	2.017E-01	0.195
		695.00		-2.038E-02	7.706E-02	1.250E-01	8.435E-03	-0.163
		697.00		-7.887E-02	2.649E-01	4.284E-01	2.898E-02	-0.184
		720.50	*	-5.015E-02	1.476E-01	2.020E-01	1.405E-02	-0.248
		856.80		1.551E-01	4.871E-01	7.127E-01	5.725E-02	0.218
		989.30		3.804E-01	1.233E+00	2.039E+00	1.560E-01	0.187
		1034.80		7.969E-01	8.347E+00	1.409E+01	1.016E+00	0.057
		1213.00		1.270E+00	4.707E+00	7.935E+00	4.646E-01	0.160
SB-127		61.10		-1.450E+00	4.229E+01	6.431E+01	5.617E+00	-0.023
		252.40		8.584E-02	2.773E+00	4.675E+00	1.933E+00	0.018
		290.80		-1.790E+01	1.614E+01	2.164E+01	1.792E+00	-0.827
		411.60		5.868E+00	9.416E+00	1.413E+01	1.950E+00	0.415
		444.90		-4.055E-01	6.902E+00	1.113E+01	1.126E+00	-0.036
		473.00		-2.319E+00	1.199E+00	1.586E+00	1.683E-01	-1.462
		543.00		1.070E+01	1.128E+01	2.008E+01	2.522E+00	0.533
		603.60		2.633E+00	9.116E+00	1.363E+01	1.423E+00	0.193
		685.20	*	-7.476E-01	9.541E-01	1.474E+00	1.367E-01	-0.507
		698.50		-2.652E-01	1.109E+01	1.830E+01	2.639E+00	-0.014
		722.20		5.361E+00	2.195E+01	3.229E+01	2.977E+00	0.166
		783.80		3.305E+00	2.466E+00	4.444E+00	4.902E-01	0.744
XE-127		57.60		-3.160E+00	5.788E+00	9.620E+00	6.079E-01	-0.328
		145.22		5.197E-01	6.866E-01	1.134E+00	6.333E-02	0.458
		172.10		2.213E-02	1.101E-01	1.785E-01	9.188E-03	0.124
		202.84	*	2.188E-02	4.602E-02	7.477E-02	3.976E-03	0.293
		374.96		2.154E-02	1.947E-01	3.214E-01	1.786E-02	0.067
I-131		80.18		4.659E+00	4.873E+00	6.216E+00	4.445E-01	0.749
		284.30		8.650E-01	1.239E+00	2.140E+00	1.348E-01	0.404
		364.48	*	2.465E-02	9.929E-02	1.656E-01	1.039E-02	0.149
		636.97		-1.970E+00	1.434E+00	2.131E+00	1.505E-01	-0.924
		722.89		5.894E-01	6.445E+00	9.310E+00	6.537E-01	0.063
TE-132		49.72		-2.139E+00	1.133E+01	1.920E+01	1.656E+00	-0.111
		111.76		-2.857E+01	1.904E+01	2.850E+01	2.430E+00	-1.003
		116.30		-1.499E+01	1.713E+01	2.699E+01	2.283E+00	-0.556
		228.16	*	3.385E-02	4.045E-01	6.877E-01	9.491E-02	0.049
BA-133		53.15		2.915E-01	3.548E+00	5.970E+00	3.860E-01	0.049
		79.62		1.225E+00	1.436E+00	2.057E+00	2.962E-01	0.595
		81.00		3.261E-02	1.283E-01	1.558E-01	2.358E-02	0.209
		276.40		5.513E-01	3.864E-01	6.607E-01	8.518E-02	0.834
		302.84		8.899E-02	1.579E-01	2.403E-01	2.787E-02	0.370
		356.01	*	-8.973E-03	4.721E-02	6.675E-02	7.659E-03	-0.134
		383.85		1.956E-01	3.020E-01	5.137E-01	5.508E-02	0.381
I-133	+	510.53		2.159E-01	3.020E-01	Half-Life too short		
		529.87	*	-5.710E-04	3.020E-01	Half-Life too short		
		706.58		-3.354E-02	3.020E-01	Half-Life too short		
		856.28		-1.851E-02	3.020E-01	Half-Life too short		
		875.33		1.780E-03	3.020E-01	Half-Life too short		
		1236.41		2.090E-01	3.020E-01	Half-Life too short		

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1298.22		-3.099E-02	3.020E-01	Half-Life too short		
CS-134		475.35		-5.201E-01	1.946E+00	3.068E+00	1.822E-01	-0.170
		563.23		1.165E-01	3.747E-01	6.427E-01	4.107E-02	0.181
		569.32		-2.648E-02	2.120E-01	3.490E-01	2.253E-02	-0.076
		604.70		1.174E-02	3.776E-02	5.664E-02	3.634E-03	0.207
	+	795.84	*	1.142E-01	6.769E-02	1.064E-01	8.111E-03	1.074
		801.93		-4.385E-01	4.272E-01	6.067E-01	4.645E-02	-0.723
		1038.57		-2.669E+00	4.302E+00	6.799E+00	4.876E-01	-0.392
		1167.94		1.025E+00	2.983E+00	5.072E+00	2.826E-01	0.202
		1365.15		8.221E-01	1.224E+00	2.173E+00	1.616E-01	0.378
CS-135		268.24	*	1.411E-01	1.625E-01	2.544E-01	1.913E-02	0.555
I-135		288.45		1.558E+07	1.625E-01	Half-Life too short		
		417.63		1.872E+07	1.625E-01	Half-Life too short		
		546.56		1.321E+07	1.625E-01	Half-Life too short		
		836.80		1.703E+07	1.625E-01	Half-Life too short		
		1038.76		-3.451E+07	1.625E-01	Half-Life too short		
		1124.00		3.715E+08	1.625E-01	Half-Life too short		
		1131.51		-1.122E+07	1.625E-01	Half-Life too short		
		1260.41	*	-1.443E+07	1.625E-01	Half-Life too short		
		1457.56		1.398E+09	1.625E-01	Half-Life too short		
		1678.03		2.368E+07	1.625E-01	Half-Life too short		
		1706.46		-2.616E+07	1.625E-01	Half-Life too short		
		1791.20		1.693E+07	1.625E-01	Half-Life too short		
CS-136		66.91		-2.942E-01	7.624E-01	1.131E+00	1.623E-01	-0.260
	+	86.29		2.396E+00	1.538E+00	1.865E+00	2.264E-01	1.285
		153.22		3.242E-02	6.086E-01	9.683E-01	6.686E-02	0.033
		163.89		-1.160E-01	9.397E-01	1.504E+00	1.015E-01	-0.077
		176.55		2.531E-02	3.366E-01	5.413E-01	3.226E-02	0.047
		273.65		-3.374E-01	4.583E-01	6.421E-01	4.151E-02	-0.526
		340.57		3.770E-01	1.340E-01	2.284E-01	1.378E-02	1.651
		818.51		-3.685E-02	7.132E-02	1.107E-01	8.567E-03	-0.333
		1048.07	*	7.939E-03	1.137E-01	1.893E-01	1.421E-02	0.042
		1235.34		5.374E-01	6.745E-01	1.035E+00	1.050E-01	0.519
BA-137M		661.65	*	-1.849E-02	3.702E-02	5.905E-02	3.828E-03	-0.313
CS-137		661.65	*	-1.955E-02	3.913E-02	6.242E-02	4.060E-03	-0.313
CE-139		165.85	*	2.452E-02	2.936E-02	4.901E-02	2.511E-03	0.500
BA-140		162.64		1.893E-01	6.431E-01	1.050E+00	6.289E-02	0.180
		304.84		-5.774E-01	1.159E+00	1.790E+00	4.879E-01	-0.323
		423.70		-8.448E-01	1.809E+00	2.814E+00	8.937E-01	-0.300
		537.32	*	-5.736E-03	2.186E-01	3.679E-01	1.199E-01	-0.016
LA-140	+	328.77		5.088E-01	3.379E-01	4.747E-01	3.032E-02	1.072
		432.53		7.562E-01	1.830E+00	3.056E+00	1.936E-01	0.247
		487.03		3.022E-02	1.332E-01	2.177E-01	1.467E-02	0.139
		751.79		-1.361E+00	1.699E+00	2.602E+00	2.155E-01	-0.523
		815.85		4.136E-01	3.078E-01	5.566E-01	4.902E-02	0.743
		867.82		-4.496E-01	1.656E+00	2.240E+00	1.927E-01	-0.201
		919.63		-1.976E+00	3.260E+00	4.147E+00	4.280E-01	-0.477
		925.24		4.490E-01	1.114E+00	1.865E+00	1.631E-01	0.241
		1596.49	*	-6.848E-02	8.102E-02	1.189E-01	7.745E-03	-0.576

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	5.678E-02	6.024E-02	1.015E-01	5.906E-03	0.560
CE-143		57.37		-2.799E-04	6.024E-02	Half-Life too short		
		231.56		-2.957E-04	6.024E-02	Half-Life too short		
		293.26	*	1.900E-04	6.024E-02	Half-Life too short		
	+	350.59		1.122E-02	6.024E-02	Half-Life too short		
		490.36		-6.064E-04	6.024E-02	Half-Life too short		
		664.57		7.428E-05	6.024E-02	Half-Life too short		
		721.93		1.507E-04	6.024E-02	Half-Life too short		
CE-144		80.11		2.585E+00	2.709E+00	3.455E+00	2.452E-01	0.748
		133.54	*	1.314E-01	2.191E-01	3.290E-01	4.684E-02	0.399
PM-144		476.78		3.289E-02	7.002E-02	1.166E-01	8.239E-03	0.282
		618.01		1.601E-02	3.279E-02	5.664E-02	3.812E-03	0.283
		696.49	*	-7.822E-03	3.788E-02	6.168E-02	4.172E-03	-0.127
		778.57		-1.353E+00	2.297E+00	3.554E+00	2.636E-01	-0.381
PR-144		696.49	*	-5.294E-01	2.564E+00	4.175E+00	2.823E-01	-0.127
		1489.15		-2.335E+00	9.589E+00	1.476E+01	9.995E-01	-0.158
PM-146		453.90	*	-9.897E-03	4.694E-02	7.472E-02	6.460E-03	-0.132
		633.02		1.635E-01	1.485E+00	2.491E+00	9.199E-01	0.066
		735.90		-7.562E-02	1.496E-01	2.325E-01	6.552E-02	-0.325
		747.13		4.047E-03	9.887E-02	1.631E-01	2.152E-02	0.025
ND-147		91.11		4.153E-01	3.512E-01	4.447E-01	3.646E-02	0.934
		319.41		1.628E+00	2.942E+00	5.022E+00	2.856E-01	0.324
		439.89		1.792E+00	5.505E+00	9.112E+00	5.251E-01	0.197
		531.02	*	-1.446E-01	5.024E-01	7.817E-01	1.070E-01	-0.185
PM-149		285.90	*	-2.040E+01	4.614E+01	7.518E+01	1.061E+01	-0.271
EU-152		121.78		-8.585E-02	7.285E-02	1.124E-01	8.944E-03	-0.763
		244.69		1.522E-01	3.229E-01	4.964E-01	2.746E-02	0.307
		344.27	*	-2.767E-02	1.103E-01	1.563E-01	1.002E-02	-0.177
		443.98		-2.556E-01	1.009E+00	1.603E+00	9.270E-02	-0.159
		778.89		-1.048E-01	2.598E-01	4.093E-01	3.036E-02	-0.256
		867.32		-1.133E-01	1.086E+00	1.502E+00	1.219E-01	-0.075
		964.01		2.354E-01	4.194E-01	6.154E-01	4.844E-02	0.382
		1085.78		5.305E-02	4.541E-01	7.643E-01	5.078E-02	0.069
		1112.02		2.674E-01	3.404E-01	6.030E-01	3.812E-02	0.443
		1407.95		-1.057E-01	2.125E-01	3.271E-01	2.260E-02	-0.323
GD-153		69.67		1.975E-01	1.791E+00	2.723E+00	1.790E-01	0.073
	+	83.37		1.125E+01	1.688E+01	2.450E+01	1.791E+00	0.459
		97.43	*	-5.194E-02	9.041E-02	1.294E-01	9.001E-03	-0.401
		103.18		-8.938E-02	1.057E-01	1.683E-01	1.125E-02	-0.531
EU-154		123.07		-3.732E-02	4.995E-02	7.876E-02	7.610E-03	-0.474
		247.94		-5.941E-02	3.562E-01	5.521E-01	5.183E-02	-0.108
		591.81		-5.272E-01	6.282E-01	9.811E-01	9.923E-02	-0.537
		723.30		8.080E-02	1.943E-01	2.912E-01	2.350E-02	0.278
		756.87		9.523E-01	8.815E-01	1.555E+00	1.715E-01	0.612
		873.19		1.227E-01	3.394E-01	5.679E-01	6.773E-02	0.216
		996.32		-1.968E-01	4.256E-01	6.856E-01	1.185E-01	-0.287
		1004.76		-7.944E-02	2.281E-01	3.708E-01	4.020E-02	-0.214
		1274.45	*	-3.043E-02	1.515E-01	2.446E-01	2.384E-02	-0.124
EU-155		48.70		-4.605E-01	2.277E+00	3.857E+00	2.520E-01	-0.119

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		7.408E+00	5.398E+00	8.722E+00	5.481E-01	0.849
	+	86.54		2.488E-01	1.579E-01	1.976E-01	1.510E-02	1.259
		105.31	*	1.902E-01	1.117E-01	1.951E-01	1.315E-02	0.975
TB-160	+	86.79		6.509E-01	4.131E-01	5.207E-01	3.937E-02	1.250
		197.04		2.444E-02	5.690E-01	8.911E-01	4.709E-02	0.027
		215.65		-3.945E-01	7.352E-01	1.129E+00	6.083E-02	-0.350
	+	298.57		2.077E-01	1.254E-01	1.865E-01	1.059E-02	1.114
		879.36	*	-4.030E-02	1.485E-01	2.345E-01	1.925E-02	-0.172
		962.29		6.025E-01	6.719E-01	1.027E+00	8.098E-02	0.587
		966.15		6.389E-01	3.045E-01	4.990E-01	3.919E-02	1.280
		1177.93		1.851E-01	4.000E-01	6.868E-01	3.804E-02	0.269
		1271.85		-3.372E-01	8.897E-01	1.415E+00	9.058E-02	-0.238
HO-166M		80.57		5.253E-01	3.321E-01	4.417E-01	3.148E-02	1.189
	+	184.41		1.176E-01	6.196E-02	6.683E-02	3.484E-03	1.760
		280.46		-1.028E-01	8.648E-02	1.357E-01	7.664E-03	-0.758
	+	410.95		5.143E-01	3.331E-01	4.498E-01	2.517E-02	1.143
		711.68	*	-1.309E-02	6.304E-02	1.023E-01	7.040E-03	-0.128
		752.31		-4.709E-02	3.087E-01	5.011E-01	3.611E-02	-0.094
		810.29		-4.886E-02	6.564E-02	9.992E-02	7.661E-03	-0.489
TM-171		51.35		-8.927E+00	2.906E+01	4.893E+01	3.189E+00	-0.182
		52.39		-1.965E+00	1.517E+01	2.572E+01	1.669E+00	-0.076
		59.40		3.575E+01	2.926E+01	4.702E+01	2.949E+00	0.760
		66.72	*	-2.702E+01	3.179E+01	4.618E+01	2.988E+00	-0.585
LU-176		88.36		-2.854E-02	2.762E-01	3.753E-01	2.859E-02	-0.076
		201.83		-1.358E-02	2.973E-02	4.615E-02	2.451E-03	-0.294
		306.84	*	-2.039E-02	2.510E-02	3.940E-02	2.239E-03	-0.517
		401.10		1.828E-01	6.705E+00	1.096E+01	6.067E-01	0.017
LU-177		112.95		-4.844E-01	1.343E+00	2.134E+00	1.363E-01	-0.227
	+	208.36	*	2.153E+00	1.400E+00	1.654E+00	8.846E-02	1.302
LU-177M		52.97		-8.992E-02	1.581E+00	2.647E+00	1.713E-01	-0.034
		54.07		2.086E-01	8.262E-01	1.398E+00	8.996E-02	0.149
		61.30		-9.445E-02	1.620E+00	2.460E+00	1.554E-01	-0.038
		121.62		-4.106E-01	3.705E-01	5.751E-01	3.591E-02	-0.714
		147.16		-3.459E-01	6.508E-01	1.029E+00	5.703E-02	-0.336
		171.86		9.698E-02	4.589E-01	7.442E-01	3.830E-02	0.130
		218.09		-3.035E-01	8.556E-01	1.326E+00	7.165E-02	-0.229
		268.79		1.641E+00	8.311E-01	1.383E+00	7.769E-02	1.187
		319.02		-6.460E-03	2.619E-01	4.337E-01	2.465E-02	-0.015
		367.43		3.074E-01	9.458E-01	1.583E+00	8.844E-02	0.194
		413.65	*	-1.249E-01	2.072E-01	2.780E-01	1.560E-02	-0.449
HF-181		56.28		-8.630E-01	8.886E-01	1.451E+00	9.226E-02	-0.595
		57.53		-3.073E-01	4.885E-01	8.093E-01	5.116E-02	-0.380
		65.20		-5.302E-01	9.903E-01	1.461E+00	9.389E-02	-0.363
		133.02		-2.923E-03	6.935E-02	1.007E-01	5.937E-03	-0.029
		136.25		-1.042E-01	4.294E-01	6.912E-01	4.016E-02	-0.151
		345.85		1.197E-01	2.171E-01	3.083E-01	1.742E-02	0.388
		482.03	*	7.771E-04	4.654E-02	7.495E-02	4.475E-03	0.010
W-181		56.28		-3.459E-01	3.562E-01	5.816E-01	3.699E-02	-0.595
		57.53		-1.238E-01	1.960E-01	3.246E-01	2.052E-02	-0.381

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		65.20	*	-2.110E-01	3.942E-01	5.817E-01	3.737E-02	-0.363
TA-182		67.75		-1.320E-01	1.215E-01	1.740E-01	1.132E-02	-0.759
		100.10		1.138E-01	1.733E-01	2.940E-01	2.004E-02	0.387
		152.43		-7.934E-02	3.395E-01	5.432E-01	2.944E-02	-0.146
		222.10		-3.006E-04	3.311E-01	5.619E-01	3.048E-02	-0.001
		1001.68		-2.041E-01	2.279E+00	3.807E+00	2.869E-01	-0.054
	+	1121.28		6.549E-01	3.084E-01	4.067E-01	2.523E-02	1.610
		1189.05		-2.247E-01	3.537E-01	5.540E-01	3.124E-02	-0.406
		1221.42	*	2.450E-01	2.253E-01	4.014E-01	2.381E-02	0.610
		1230.97		2.835E-01	5.269E-01	8.880E-01	5.346E-02	0.319
RE-183		57.98		-5.503E-02	1.947E-01	3.269E-01	2.062E-02	-0.168
		59.32		1.624E-01	1.171E-01	1.895E-01	1.189E-02	0.857
		67.20		-1.525E-01	2.155E-01	3.149E-01	2.043E-02	-0.484
		162.32	*	-4.925E-02	1.049E-01	1.651E-01	8.582E-03	-0.298
	+	208.81		2.388E+00	1.553E+00	1.824E+00	9.763E-02	1.309
		291.72		-1.361E+00	1.057E+00	1.401E+00	7.940E-02	-0.971
RE-184		57.98		-2.055E-01	7.270E-01	1.221E+00	7.700E-02	-0.168
		59.32		6.059E-01	4.368E-01	7.067E-01	4.434E-02	0.857
		67.20		-5.690E-01	8.042E-01	1.175E+00	7.624E-02	-0.484
		161.27		-3.158E-01	3.454E-01	5.314E-01	2.775E-02	-0.594
		216.55		2.561E-02	2.599E-01	4.131E-01	2.229E-02	0.062
		252.85	*	7.591E-03	2.223E-01	3.748E-01	2.086E-02	0.020
		318.01		-8.105E-02	4.491E-01	7.372E-01	4.191E-02	-0.110
		792.07		5.521E-01	1.129E+00	1.694E+00	1.274E-01	0.326
		903.28		2.965E-01	1.104E+00	1.783E+00	1.484E-01	0.166
		920.93		-9.515E-02	5.194E-01	7.725E-01	6.337E-02	-0.123
OS-185		59.72		5.221E-01	3.129E-01	5.116E-01	3.211E-02	1.021
		61.14		-9.263E-03	1.772E-01	2.693E-01	1.700E-02	-0.034
		69.30		9.925E-02	3.118E-01	4.787E-01	3.141E-02	0.207
		592.07		-1.570E+00	2.503E+00	3.989E+00	2.536E-01	-0.394
		646.12	*	2.046E-03	4.430E-02	7.395E-02	4.778E-03	0.028
		717.42		-2.215E-02	8.539E-01	1.405E+00	9.736E-02	-0.016
		874.81		1.231E-01	6.352E-01	1.049E+00	8.575E-02	0.117
		880.27		8.419E-02	8.452E-01	1.383E+00	1.137E-01	0.061
RE-188		155.03	*	1.873E-01	1.719E-01	2.853E-01	1.529E-02	0.657
		477.96		1.834E+00	3.289E+00	5.502E+00	3.275E-01	0.333
		633.10		3.600E-01	2.937E+00	4.936E+00	3.179E-01	0.073
W-188	+	63.58		3.096E+01	7.755E+01	9.188E+01	5.861E+00	0.337
		227.08		-2.102E-01	1.178E+01	1.994E+01	1.087E+00	-0.011
		290.67	*	-5.972E+00	7.998E+00	1.108E+01	6.277E-01	-0.539
IR-192	+	295.96		1.187E+00	2.003E-01	2.988E-01	1.724E-02	3.973
		308.46		7.049E-02	9.264E-02	1.602E-01	9.215E-03	0.440
		316.51	*	-1.790E-02	3.351E-02	5.386E-02	3.078E-03	-0.332
		468.07		-1.411E-02	7.102E-02	1.129E-01	7.652E-03	-0.125
		604.41		-1.869E-01	5.351E-01	7.505E-01	8.750E-02	-0.249
		612.46		1.920E+00	9.678E-01	1.607E+00	1.293E-01	1.195
AU-195		65.12		-1.064E-01	1.852E-01	2.728E-01	1.752E-02	-0.390
		66.83		-8.609E-02	1.045E-01	1.519E-01	9.839E-03	-0.567
	+	75.70		1.449E+00	2.659E-01	4.668E-01	3.196E-02	3.103

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	3.709E-01	2.276E-01	3.950E-01	2.716E-02	0.939
	+	129.76		5.318E+00	3.761E+00	4.983E+00	2.986E-01	1.067
TL-200		367.94	*	1.204E-05	3.761E+00	Half-Life too short		
		579.30		5.326E-04	3.761E+00	Half-Life too short		
		828.27		3.084E-04	3.761E+00	Half-Life too short		
		1205.75		-1.510E-04	3.761E+00	Half-Life too short		
TL-201		68.90		9.314E-01	3.092E+00	4.744E+00	3.106E-01	0.196
		70.82		1.412E+00	1.733E+00	2.711E+00	1.795E-01	0.521
		80.30		3.703E+00	3.862E+00	4.927E+00	3.503E-01	0.752
		135.34		1.480E+00	1.482E+01	2.424E+01	1.414E+00	0.061
		167.43	*	7.356E-01	4.223E+00	6.844E+00	3.508E-01	0.107
TL-202		68.90		1.231E-01	4.086E-01	6.268E-01	4.103E-02	0.196
		70.82		1.860E-01	2.283E-01	3.572E-01	2.365E-02	0.521
		80.30		4.881E-01	5.091E-01	6.494E-01	4.617E-02	0.752
		439.56	*	2.456E-02	6.627E-02	1.100E-01	6.337E-03	0.223
HG-203		70.83		8.824E-01	1.091E+00	1.700E+00	2.114E-01	0.519
		72.87		9.782E-01	6.092E-01	1.054E+00	1.269E-01	0.928
	+	82.60		8.139E-01	1.224E+00	1.689E+00	2.184E-01	0.482
		279.20	*	-1.320E-02	4.054E-02	6.561E-02	3.946E-03	-0.201
BI-207		72.80		2.557E-01	1.808E-01	3.157E-01	2.117E-02	0.810
	+	74.97		8.103E-01	1.488E-01	2.388E-01	1.626E-02	3.394
	+	84.90		1.464E-01	2.197E-01	3.339E-01	2.478E-02	0.438
		569.67		-4.841E-03	3.323E-02	5.462E-02	3.439E-03	-0.089
		1063.62	*	-4.602E-02	5.883E-02	9.134E-02	6.302E-03	-0.504
		1770.23		9.833E-02	4.758E-01	7.162E-01	4.227E-02	0.137
TL-207		81.07		6.019E-02	2.828E-01	3.425E-01	2.452E-02	0.176
	+	83.78		9.655E-02	1.449E-01	2.160E-01	1.586E-02	0.447
		94.90		2.807E-01	2.461E-01	3.855E-01	2.739E-02	0.728
		122.32		-2.325E+00	1.721E+00	2.632E+00	1.863E-01	-0.883
		144.24		3.299E-01	7.130E-01	1.164E+00	8.242E-02	0.283
		154.21		1.904E-01	4.132E-01	6.686E-01	4.459E-02	0.285
	+	269.46		5.657E-01	2.897E-01	3.425E-01	2.018E-02	1.651
		323.87	*	-8.268E-01	7.790E-01	1.020E+00	1.680E-01	-0.811
	+	338.28		8.659E+00	2.195E+00	2.621E+00	2.741E-01	3.304
		445.03		-4.908E-01	2.435E+00	3.884E+00	3.986E-01	-0.126
PO-209		260.50		5.774E-02	9.454E+00	1.589E+01	8.888E-01	0.004
		262.80		9.369E+00	2.538E+01	4.340E+01	2.431E+00	0.216
		896.60	*	-2.223E+00	8.415E+00	1.329E+01	1.109E+00	-0.167
BI-210		46.50	*	1.574E+00	3.293E+00	5.663E+00	4.266E-01	0.278
PB-210		46.50	*	1.574E+00	3.293E+00	5.663E+00	4.266E-01	0.278
PO-210		46.50	*	1.574E+00	3.292E+00	5.663E+00	3.632E-01	0.278
PB-211		404.84	*	-2.553E-01	1.072E+00	1.479E+00	9.214E-01	-0.173
		427.08		4.662E-01	2.126E+00	3.473E+00	2.147E+00	0.134
		831.96		-4.613E-01	1.408E+00	2.179E+00	1.363E+00	-0.212
BI-212	+	727.18	*	1.252E+00	5.968E-01	7.633E-01	6.609E-02	1.640
		785.46		2.298E+00	1.824E+00	3.282E+00	2.452E-01	0.700
		1620.62		6.077E-01	1.438E+00	2.534E+00	1.632E-01	0.240
PO-215		81.07		6.019E-02	2.828E-01	3.425E-01	2.452E-02	0.176
	+	83.78		9.655E-02	1.449E-01	2.160E-01	1.586E-02	0.447

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		2.807E-01	2.461E-01	3.855E-01	2.739E-02	0.728
		122.32		-2.325E+00	1.721E+00	2.632E+00	1.863E-01	-0.883
		144.24		3.299E-01	7.130E-01	1.164E+00	8.242E-02	0.283
		154.21		1.904E-01	4.132E-01	6.686E-01	4.459E-02	0.285
	+	269.46		5.657E-01	2.897E-01	3.425E-01	2.018E-02	1.651
		323.87	*	-8.268E-01	7.790E-01	1.020E+00	1.680E-01	-0.811
	+	338.28		8.659E+00	2.195E+00	2.621E+00	2.741E-01	3.304
		445.03		-4.908E-01	2.435E+00	3.884E+00	3.986E-01	-0.126
RN-219	+	271.23		7.257E-01	3.737E-01	4.541E-01	3.624E-02	1.598
		401.81	*	-4.652E-03	4.123E-01	6.720E-01	9.071E-02	-0.007
RN-220		549.76	*	-1.151E+00	2.566E+01	4.307E+01	2.685E+00	-0.027
RA-223		81.07		6.019E-02	2.828E-01	3.425E-01	2.452E-02	0.176
	+	83.78		9.655E-02	1.449E-01	2.160E-01	1.586E-02	0.447
		94.90		2.807E-01	2.461E-01	3.855E-01	2.739E-02	0.728
		122.32		-2.325E+00	1.721E+00	2.632E+00	1.863E-01	-0.883
		144.24		3.299E-01	7.130E-01	1.164E+00	8.242E-02	0.283
		154.21		1.904E-01	4.132E-01	6.686E-01	4.459E-02	0.285
	+	269.46		5.657E-01	2.897E-01	3.425E-01	2.018E-02	1.651
		323.87	*	-8.268E-01	7.790E-01	1.020E+00	1.680E-01	-0.811
	+	338.28		8.659E+00	2.195E+00	2.621E+00	2.741E-01	3.304
		445.03		-4.908E-01	2.435E+00	3.884E+00	3.986E-01	-0.126
AC-227		79.80		1.784E+00	1.853E+00	2.636E+00	5.518E-01	0.677
		236.00		7.077E-02	2.524E-01	3.827E-01	3.936E-02	0.185
		256.20	*	1.285E-01	3.810E-01	6.502E-01	9.018E-02	0.198
		286.10		-2.532E-01	1.541E+00	2.551E+00	2.931E-01	-0.099
	+	299.80		2.702E+00	1.682E+00	2.653E+00	4.309E-01	1.019
		304.40		2.385E-01	1.959E+00	3.047E+00	5.258E-01	0.078
		334.20		4.955E-01	2.396E+00	3.537E+00	6.470E-01	0.140
TH-227		79.80		1.784E+00	1.854E+00	2.636E+00	5.593E-01	0.677
	+	94.00		7.243E+00	3.439E+00	3.936E+00	8.361E-01	1.840
		236.00		7.077E-02	2.524E-01	3.827E-01	3.392E-02	0.185
		256.20	*	1.285E-01	3.812E-01	6.502E-01	1.094E-01	0.198
		286.10		-2.532E-01	1.561E+00	2.551E+00	2.555E+00	-0.099
	+	299.80		2.702E+00	1.682E+00	2.653E+00	4.309E-01	1.019
		304.40		2.385E-01	1.959E+00	3.047E+00	5.258E-01	0.078
		334.20		4.955E-01	2.396E+00	3.537E+00	6.470E-01	0.140
TH-229	+	85.43		4.636E-01	2.942E-01	3.362E-01	2.508E-02	1.379
		88.47		-3.309E-02	1.584E-01	2.142E-01	1.630E-02	-0.154
		100.00		1.289E-01	1.848E-01	3.115E-01	2.125E-02	0.414
		193.63	*	-3.647E-01	5.112E-01	7.842E-01	4.129E-02	-0.465
		210.97		1.508E+00	8.700E-01	1.352E+00	7.253E-02	1.115
PA-231		283.67	*	1.054E+00	1.528E+00	2.631E+00	3.609E-01	0.401
	+	301.29		1.081E+00	6.593E-01	1.095E+00	1.137E-01	0.987
TH-231		81.07		6.019E-02	2.828E-01	3.425E-01	2.452E-02	0.176
	+	83.78		9.655E-02	1.449E-01	2.160E-01	1.586E-02	0.447
		94.90		2.807E-01	2.461E-01	3.855E-01	2.739E-02	0.728
		122.32		-2.325E+00	1.721E+00	2.632E+00	1.863E-01	-0.883
		144.24		3.299E-01	7.130E-01	1.164E+00	8.242E-02	0.283
		154.21		1.904E-01	4.132E-01	6.686E-01	4.459E-02	0.285

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.657E-01	2.897E-01	3.425E-01	2.018E-02	1.651
		323.87	*	-8.268E-01	7.790E-01	1.020E+00	1.680E-01	-0.811
	+	338.28		8.659E+00	2.195E+00	2.621E+00	2.741E-01	3.304
		445.03		-4.908E-01	2.435E+00	3.884E+00	3.986E-01	-0.126
U-231	+	84.21		2.868E+00	4.303E+00	6.472E+00	4.771E-01	0.443
	+	92.29		4.935E+00	2.125E+00	2.926E+00	2.132E-01	1.686
		95.87	*	-6.690E-01	8.114E-01	1.151E+00	8.107E-02	-0.581
		108.00		-1.615E+00	1.474E+00	2.317E+00	1.510E-01	-0.697
PA-233	+	75.28		2.365E+01	5.279E+00	7.196E+00	1.037E+00	3.286
	+	86.59		4.047E+00	2.766E+00	3.229E+00	8.556E-01	1.253
	+	300.12		7.534E-01	4.639E-01	7.461E-01	9.986E-02	1.010
		311.98	*	-2.464E-02	6.356E-02	1.032E-01	6.245E-03	-0.239
		340.50		2.315E+00	9.052E-01	1.284E+00	2.945E-01	1.803
		398.62		1.212E+00	2.132E+00	3.571E+00	9.212E-01	0.339
		415.76		7.600E-01	1.786E+00	2.881E+00	5.917E-01	0.264
PA-234	+	63.00		9.184E-01	2.303E+00	2.775E+00	3.987E-01	0.331
		94.67		3.428E-01	1.844E-01	2.922E-01	3.334E-02	1.173
		98.44		1.321E-01	1.180E-01	1.602E-01	8.899E-02	0.824
		99.86		4.169E-01	4.691E-01	7.958E-01	5.434E-02	0.524
		111.00		-2.186E-01	1.864E-01	2.893E-01	3.078E-02	-0.756
		131.20		1.130E-02	1.162E-01	1.704E-01	1.014E-02	0.066
		152.70		3.769E-02	3.294E-01	5.351E-01	8.386E-02	0.070
	+	186.00		4.234E+00	2.567E+00	2.652E+00	8.075E-01	1.597
		226.40		2.434E-01	3.795E-01	6.595E-01	7.510E-02	0.369
		227.20		5.257E-02	4.031E-01	6.870E-01	3.744E-02	0.077
		248.90		-7.889E-01	7.789E-01	1.213E+00	2.599E-01	-0.650
		293.70		5.649E+00	1.274E+00	1.728E+00	2.772E-01	3.268
		369.80		-2.312E-01	9.128E-01	1.473E+00	3.058E-01	-0.157
		568.70		-5.698E-01	1.080E+00	1.727E+00	1.087E-01	-0.330
		569.50		-3.670E-02	2.940E-01	4.840E-01	3.047E-02	-0.076
		574.00		-2.515E-01	1.550E+00	2.572E+00	1.623E-01	-0.098
		699.00		-1.816E-02	7.750E-01	1.279E+00	2.343E-01	-0.014
		706.10		-7.317E-01	1.206E+00	1.827E+00	8.092E-01	-0.400
		733.00		1.856E-01	3.976E-01	5.993E-01	1.297E-01	0.310
		742.81		3.118E-01	1.487E+00	2.463E+00	1.651E+00	0.127
	+	796.30		2.224E+00	1.436E+00	2.048E+00	5.475E-01	1.086
		805.60		6.765E-01	1.074E+00	1.805E+00	5.484E-01	0.375
		819.60		-5.210E-01	1.322E+00	2.052E+00	7.765E-01	-0.254
		826.30		3.678E-02	9.299E-01	1.521E+00	6.781E-01	0.024
		831.60		-1.104E-01	7.051E-01	1.131E+00	3.349E-01	-0.098
		876.40		-6.927E-01	1.166E+00	1.390E+00	1.428E+00	-0.498
		880.51		8.254E-02	3.075E-01	5.109E-01	4.199E-02	0.162
		883.24		1.878E-01	3.547E-01	5.640E-01	3.789E-01	0.333
		899.00		-5.906E-01	9.575E-01	1.400E+00	6.112E-01	-0.422
		925.00		1.957E-02	1.342E+00	2.170E+00	1.774E-01	0.009
		926.50		1.735E-01	1.956E-01	3.342E-01	8.396E-02	0.519
		946.00	*	-1.796E-01	3.415E-01	5.194E-01	9.606E-02	-0.346
		949.00		2.079E-01	5.457E-01	9.075E-01	7.253E-02	0.229
		980.50		9.518E-02	8.156E-01	1.325E+00	1.024E-01	0.072

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		4.839E-01	1.208E+00	2.011E+00	1.305E+00	0.241
PA-234M		766.41		3.076E+01	3.139E+01	3.413E+01	2.612E+01	0.901
		1001.03	*	1.511E+00	7.410E+00	1.266E+01	1.313E+00	0.119
U-235		89.95		-1.019E+00	1.754E+00	1.966E+00	6.007E-01	-0.519
	+	93.35		2.253E+00	1.141E+00	1.337E+00	3.692E-01	1.686
		105.00		2.185E+00	1.257E+00	1.923E+00	5.639E-01	1.137
		143.76	*	7.199E-02	2.202E-01	3.572E-01	5.802E-02	0.202
		163.35		-2.103E-01	4.688E-01	7.365E-01	1.310E-01	-0.286
	+	185.71		1.568E-01	8.261E-02	9.839E-02	5.136E-03	1.594
		205.31		3.736E-01	5.917E-01	8.631E-01	1.539E-01	0.433
NP-236		94.67		2.624E-01	1.380E-01	2.219E-01	1.580E-02	1.182
		98.44		9.981E-02	7.018E-02	1.211E-01	8.355E-03	0.824
		111.00		-1.653E-01	1.403E-01	2.188E-01	1.408E-02	-0.756
		160.31	*	2.473E-02	7.580E-02	1.241E-01	6.507E-03	0.199
NP-239		99.55		1.749E-01	1.582E-01	2.703E-01	1.849E-02	0.647
		117.00	*	-3.018E-01	1.914E-01	2.908E-01	1.835E-02	-1.038
	+	209.75		1.927E+00	1.253E+00	1.488E+00	7.970E-02	1.295
		228.18		-1.075E-02	2.147E-01	3.629E-01	1.980E-02	-0.030
		277.60		1.057E-01	1.837E-01	3.106E-01	1.752E-02	0.340
		334.30		2.289E-01	1.354E+00	1.994E+00	1.131E-01	0.115
AM-241		59.54	*	2.105E-01	1.705E-01	2.738E-01	1.946E-02	0.769
CM-243		99.55		1.800E-01	1.627E-01	2.781E-01	1.903E-02	0.647
		103.76	*	-1.607E-02	9.746E-02	1.599E-01	1.065E-02	-0.101
		117.00		-3.105E-01	1.969E-01	2.991E-01	1.888E-02	-1.038
	+	209.75		1.899E+00	1.235E+00	1.466E+00	7.855E-02	1.295
		228.18		-1.086E-02	2.169E-01	3.667E-01	2.000E-02	-0.030
		277.60		1.065E-01	1.852E-01	3.131E-01	1.766E-02	0.340
CM-247		278.00		5.226E-01	7.619E-01	1.294E+00	7.304E-02	0.404
		287.40		1.190E+00	1.205E+00	2.110E+00	1.195E-01	0.564
		402.60	*	-8.275E-03	3.681E-02	5.911E-02	3.278E-03	-0.140
CF-249		252.85		2.875E-02	8.417E-01	1.419E+00	7.899E-02	0.020
		333.44		9.883E-02	1.893E-01	2.689E-01	1.525E-02	0.368
		387.95	*	9.415E-03	4.168E-02	6.912E-02	3.799E-03	0.136
CF-251		176.60	*	9.545E-03	1.307E-01	2.101E-01	1.086E-02	0.045
		227.00		2.452E-03	3.618E-01	6.134E-01	3.342E-02	0.004
		285.00		-4.306E-01	1.775E+00	2.928E+00	1.657E-01	-0.147

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504004      *
* Acquisition date :  7-JUL-2009 08:49:30 Detector SN#     :                *
* Detector ID        : GAM12               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.64      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504004           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.2709E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.823E+01	3.299E+00	4.493E-01	0.000E+00
CD-109	2.096E+00	1.304E+00	1.606E+00	0.000E+00
SN-126	2.067E-01	1.286E-01	1.591E-01	0.000E+00
TL-208	5.418E-01	9.379E-02	6.471E-02	0.000E+00
BI-211	4.400E+00	5.622E-01	3.318E-01	0.000E+00
PB-212	1.770E+00	1.656E-01	9.065E-02	0.000E+00
PO-212	1.770E+00	1.656E-01	9.065E-02	0.000E+00
BI-214	1.262E+00	1.964E-01	1.111E-01	0.000E+00
PB-214	1.530E+00	2.107E-01	1.157E-01	0.000E+00
PO-214	1.530E+00	2.107E-01	1.157E-01	0.000E+00
PO-216	1.770E+00	1.656E-01	9.065E-02	0.000E+00
PO-218	1.530E+00	2.107E-01	1.157E-01	0.000E+00
RA-224	4.947E+00	1.495E+00	1.032E+00	0.000E+00
RA-226	1.262E+00	1.964E-01	1.111E-01	0.000E+00
AC-228	1.594E+00	3.844E-01	2.073E-01	0.000E+00
RA-228	1.594E+00	3.844E-01	2.073E-01	0.000E+00
TH-228	1.770E+00	1.656E-01	9.064E-02	0.000E+00
TH-230	1.262E+00	1.964E-01	1.111E-01	0.000E+00
TH-232	1.594E+00	3.844E-01	2.073E-01	0.000E+00
TH-234	7.879E-01	1.938E+00	2.276E+00	0.000E+00
U-234	1.262E+00	1.964E-01	1.111E-01	0.000E+00
NP-237	6.070E-01	3.970E-01	4.127E-01	0.000E+00
U-238	7.879E-01	1.938E+00	2.276E+00	0.000E+00
AM-243	4.515E-01	8.122E-02	9.491E-02	0.000E+00
ANH-511	1.282E-01	7.052E-02	4.674E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.954E-01	3.345E-01	5.810E-01	0.000E+00	NOT IDENT.
NA-22	-9.616E-03	5.320E-02	8.801E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	6.577E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.627E-02	3.386E-02	6.136E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.759E-02	8.205E-02	0.000E+00	FAIL ABUN
SC-46	-2.264E-02	4.285E-02	6.783E-02	0.000E+00	FAIL ABUN
V-48	-2.820E-03	6.719E-02	1.103E-01	0.000E+00	NOT IDENT.
CR-51	4.668E-01	3.530E-01	6.509E-01	0.000E+00	NOT IDENT.
MN-52	6.433E-02	1.679E-01	2.943E-01	0.000E+00	FAIL ABUN
MN-54	-3.892E-02	4.132E-02	6.366E-02	0.000E+00	NOT IDENT.
CO-56	-6.997E-03	4.327E-02	7.142E-02	0.000E+00	FAIL ABUN
CO-57	-3.121E-02	2.432E-02	3.961E-02	0.000E+00	NOT IDENT.
CO-58	-2.644E-02	4.162E-02	6.600E-02	0.000E+00	NOT IDENT.
FE-59	1.301E-02	9.612E-02	1.658E-01	0.000E+00	NOT IDENT.
CO-60	-4.137E-05	4.076E-02	6.816E-02	0.000E+00	NOT IDENT.
ZN-65	-1.088E-01	1.170E-01	1.520E-01	0.000E+00	NOT IDENT.
GE-68	6.188E-01	1.197E+00	2.143E+00	0.000E+00	NOT IDENT.
AS-73	4.763E-01	7.801E-01	1.432E+00	0.000E+00	NOT IDENT.
AS-74	-2.829E-02	7.996E-02	1.347E-01	0.000E+00	NOT IDENT.
SE-75	-2.208E-02	4.507E-02	6.727E-02	0.000E+00	NOT IDENT.
BR-77	-4.114E+00	5.382E+00	8.327E+00	0.000E+00	FAIL ABUN
SR-82	-1.320E-01	3.679E-01	6.017E-01	0.000E+00	NOT IDENT.
RB-83	6.035E-03	6.470E-02	1.080E-01	0.000E+00	NOT IDENT.
RB-84	5.264E-03	7.400E-02	1.241E-01	0.000E+00	NOT IDENT.
KR-85	1.201E+01	9.024E+00	1.454E+01	0.000E+00	NOT IDENT.
SR-85	6.016E-02	4.519E-02	7.279E-02	0.000E+00	NOT IDENT.
RB-86	-7.397E-02	7.185E-01	1.216E+00	0.000E+00	NOT IDENT.
Y-88	1.829E-02	3.399E-02	6.251E-02	0.000E+00	NOT IDENT.
ZR-88	-2.653E-02	2.955E-02	4.714E-02	0.000E+00	NOT IDENT.
Y-91	-9.301E-01	2.131E+01	3.590E+01	0.000E+00	NOT IDENT.
NB-94	-8.380E-03	3.672E-02	6.157E-02	0.000E+00	NOT IDENT.
NB-95	4.625E-02	4.684E-02	7.595E-02	0.000E+00	NOT IDENT.
NB-95M	2.501E-06	1.273E-01	1.992E-01	0.000E+00	NOT IDENT.
ZR-95	7.055E-02	7.789E-02	1.402E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.106E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.136E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.664E+00	6.802E+00	1.130E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.598E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-4.019E-03	3.343E-02	5.458E-02	0.000E+00	NOT IDENT.
RH-102	-7.717E-03	2.870E-02	4.695E-02	0.000E+00	NOT IDENT.
RU-103	4.188E-03	4.055E-02	6.800E-02	0.000E+00	FAIL ABUN
RH-106	7.239E-02	3.202E-01	5.610E-01	0.000E+00	FAIL ABUN
RU-106	7.239E-02	3.201E-01	5.610E-01	0.000E+00	FAIL ABUN
AG-108M	-6.637E-03	3.334E-02	5.540E-02	0.000E+00	NOT IDENT.
AG-110M	-1.964E-02	3.547E-02	5.823E-02	0.000E+00	NOT IDENT.
IN-111	4.106E-01	5.917E-01	9.662E-01	0.000E+00	NOT IDENT.
IN-113M	-4.910E-02	4.393E-02	6.902E-02	0.000E+00	NOT IDENT.
SN-113	-4.910E-02	4.393E-02	6.902E-02	0.000E+00	NOT IDENT.
IN-114M	6.111E-02	1.912E-01	2.909E-01	0.000E+00	NOT IDENT.
CD-115	2.714E+00	5.441E+00	9.359E+00	0.000E+00	NOT IDENT.
SN-117M	-5.640E-03	4.676E-02	7.909E-02	0.000E+00	NOT IDENT.
SB-122	4.610E-01	1.164E+00	2.077E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.276E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.239E-02	2.761E-02	4.598E-02	0.000E+00	NOT IDENT.
I-124	-1.659E-01	4.999E-01	7.948E-01	0.000E+00	NOT IDENT.
SB-124	2.677E-02	6.881E-02	1.246E-01	0.000E+00	FAIL ABUN
SB-125	1.817E-03	9.169E-02	1.549E-01	0.000E+00	NOT IDENT.
TE-125M	9.213E+00	8.747E+00	1.586E+01	0.000E+00	NOT IDENT.
I-126	2.726E-02	1.660E-01	2.878E-01	0.000E+00	NOT IDENT.
SB-126	-5.015E-02	1.446E-01	2.041E-01	0.000E+00	FAIL ABUN
SB-127	-7.476E-01	9.350E-01	1.491E+00	0.000E+00	NOT IDENT.
XE-127	2.188E-02	4.510E-02	7.698E-02	0.000E+00	NOT IDENT.
I-131	2.465E-02	9.730E-02	1.690E-01	0.000E+00	NOT IDENT.
TE-132	3.385E-02	3.964E-01	7.069E-01	0.000E+00	NOT IDENT.
BA-133	-8.973E-03	4.627E-02	6.817E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.040E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.633E-02	1.074E-01	0.000E+00	FAIL ABUN
CS-135	1.411E-01	1.593E-01	2.609E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.292E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.939E-03	1.114E-01	1.902E-01	0.000E+00	FAIL ABUN
BA-137M	-1.849E-02	3.628E-02	5.975E-02	0.000E+00	NOT IDENT.
CS-137	-1.955E-02	3.835E-02	6.316E-02	0.000E+00	NOT IDENT.
CE-139	2.452E-02	2.877E-02	5.061E-02	0.000E+00	NOT IDENT.
BA-140	-5.736E-03	2.142E-01	3.734E-01	0.000E+00	NOT IDENT.
LA-140	-6.848E-02	7.940E-02	1.187E-01	0.000E+00	FAIL ABUN
CE-141	5.678E-02	5.904E-02	1.050E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	6.507E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.314E-01	2.147E-01	3.408E-01	0.000E+00	NOT IDENT.
PM-144	-7.822E-03	3.712E-02	6.236E-02	0.000E+00	NOT IDENT.
PR-144	-5.294E-01	2.513E+00	4.221E+00	0.000E+00	NOT IDENT.

PM-146	-9.897E-03	4.600E-02	7.603E-02	0.000E+00	NOT IDENT.
ND-147	-1.446E-01	4.924E-01	7.936E-01	0.000E+00	NOT IDENT.
PM-149	-2.040E+01	4.522E+01	7.703E+01	0.000E+00	NOT IDENT.
EU-152	-2.767E-02	1.081E-01	1.597E-01	0.000E+00	NOT IDENT.
GD-153	-5.194E-02	8.860E-02	1.347E-01	0.000E+00	FAIL ABUN
EU-154	-3.043E-02	1.485E-01	2.451E-01	0.000E+00	NOT IDENT.
EU-155	1.902E-01	1.094E-01	2.028E-01	0.000E+00	FAIL ABUN
TB-160	-4.030E-02	1.455E-01	2.362E-01	0.000E+00	FAIL ABUN
HO-166M	-1.309E-02	6.178E-02	1.034E-01	0.000E+00	FAIL ABUN
TM-171	-2.702E+01	3.116E+01	4.831E+01	0.000E+00	NOT IDENT.
LU-176	-2.039E-02	2.460E-02	4.032E-02	0.000E+00	NOT IDENT.
LU-177	0.000E+00	1.372E+00	1.702E+00	0.000E+00	FAIL ABUN
LU-177M	-1.249E-01	2.030E-01	2.833E-01	0.000E+00	NOT IDENT.
HF-181	7.771E-04	4.560E-02	7.620E-02	0.000E+00	NOT IDENT.
W-181	-2.110E-01	3.863E-01	6.087E-01	0.000E+00	NOT IDENT.
TA-182	2.450E-01	2.208E-01	4.024E-01	0.000E+00	FAIL ABUN
RE-183	-4.925E-02	1.028E-01	1.705E-01	0.000E+00	FAIL ABUN
RE-184	7.591E-03	2.178E-01	3.847E-01	0.000E+00	NOT IDENT.
OS-185	2.046E-03	4.342E-02	7.485E-02	0.000E+00	NOT IDENT.
RE-188	1.873E-01	1.685E-01	2.949E-01	0.000E+00	NOT IDENT.
W-188	-5.972E+00	7.838E+00	1.135E+01	0.000E+00	FAIL ABUN
IR-192	-1.790E-02	3.284E-02	5.510E-02	0.000E+00	FAIL ABUN
AU-195	3.709E-01	2.230E-01	4.110E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.131E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	7.356E-01	4.138E+00	7.067E+00	0.000E+00	NOT IDENT.
TL-202	2.456E-02	6.495E-02	1.120E-01	0.000E+00	NOT IDENT.
HG-203	-1.320E-02	3.973E-02	6.725E-02	0.000E+00	FAIL ABUN
BI-207	-4.602E-02	5.765E-02	9.177E-02	0.000E+00	FAIL ABUN
TL-207	-8.268E-01	7.634E-01	1.043E+00	0.000E+00	FAIL ABUN
PO-209	-2.223E+00	8.247E+00	1.338E+01	0.000E+00	NOT IDENT.
BI-210	1.574E+00	3.227E+00	5.955E+00	0.000E+00	NOT IDENT.
PB-210	1.574E+00	3.227E+00	5.955E+00	0.000E+00	NOT IDENT.
PO-210	1.574E+00	3.226E+00	5.955E+00	0.000E+00	NOT IDENT.
PB-211	-2.553E-01	1.051E+00	1.507E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.849E-01	7.713E-01	0.000E+00	FAIL ABUN
PO-215	-8.268E-01	7.634E-01	1.043E+00	0.000E+00	FAIL ABUN
RN-219	-4.652E-03	4.041E-01	6.851E-01	0.000E+00	FAIL ABUN
RN-220	-1.151E+00	2.515E+01	4.370E+01	0.000E+00	NOT IDENT.
RA-223	-8.268E-01	7.634E-01	1.043E+00	0.000E+00	FAIL ABUN
AC-227	1.285E-01	3.733E-01	6.672E-01	0.000E+00	FAIL ABUN
TH-227	1.285E-01	3.735E-01	6.672E-01	0.000E+00	FAIL ABUN
TH-229	-3.647E-01	5.009E-01	8.081E-01	0.000E+00	FAIL ABUN
PA-231	1.054E+00	1.497E+00	2.695E+00	0.000E+00	FAIL ABUN
TH-231	-8.268E-01	7.634E-01	1.043E+00	0.000E+00	FAIL ABUN
U-231	-6.690E-01	7.952E-01	1.198E+00	0.000E+00	FAIL ABUN
PA-233	-2.464E-02	6.229E-02	1.056E-01	0.000E+00	FAIL ABUN
PA-234	-1.796E-01	3.346E-01	5.227E-01	0.000E+00	FAIL ABUN
PA-234M	1.511E+00	7.262E+00	1.273E+01	0.000E+00	NOT IDENT.
U-235	7.199E-02	2.158E-01	3.697E-01	0.000E+00	FAIL ABUN
NP-236	2.473E-02	7.428E-02	1.282E-01	0.000E+00	NOT IDENT.
NP-239	-3.018E-01	1.876E-01	3.018E-01	0.000E+00	FAIL ABUN
AM-241	2.105E-01	1.671E-01	2.869E-01	0.000E+00	NOT IDENT.
CM-243	-1.607E-02	9.551E-02	1.662E-01	0.000E+00	FAIL ABUN
CM-247	-8.275E-03	3.607E-02	6.026E-02	0.000E+00	NOT IDENT.
CF-249	9.415E-03	4.084E-02	7.050E-02	0.000E+00	NOT IDENT.
CF-251	9.545E-03	1.281E-01	2.168E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:50:17.91

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*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504004.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:49:30.
Sample ID         : G232504004           Sample quantity  : 1.27090E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.64  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1570	10.67*	1.137E+00	3.823E+01	3.823E+01	8.80
CD-109	88.03	146	3.72*	5.625E+00	2.056E+00	2.096E+00	63.46
SN-126	64.28	32	9.60	3.203E+00	3.119E-01	3.119E-01	250.75
	86.94	146	8.90	5.625E+00	8.594E-01	8.594E-01	75.26
	87.57	146	37.00*	5.625E+00	2.067E-01	2.067E-01	63.46
TL-208	277.35	------	6.80	4.505E+00	------ Line Not Found		------
	510.84	121	21.60	2.794E+00	5.937E-01	5.937E-01	56.74
	583.14	387	84.20*	2.504E+00	5.418E-01	5.418E-01	17.66
	860.37	64	12.46	1.793E+00	8.407E-01	8.407E-01	71.13
BI-211	72.87	------	1.27	4.387E+00	------ Line Not Found		------
	351.07	725	12.94*	3.760E+00	4.400E+00	4.400E+00	13.04
PB-212	74.81	464	10.70	4.596E+00	2.785E+00	2.785E+00	20.60
	77.11	665	18.00	4.828E+00	2.260E+00	2.260E+00	14.09
	87.30	146	8.00	5.625E+00	9.561E-01	9.561E-01	64.25
	238.63	1340	44.60*	5.012E+00	1.770E+00	1.770E+00	9.55
	300.09	72	3.41	4.249E+00	1.458E+00	1.458E+00	60.65
PO-212	74.81	464	10.70	4.596E+00	2.785E+00	2.785E+00	20.60
	77.11	665	18.00	4.828E+00	2.260E+00	2.260E+00	14.09
	87.30	146	8.00	5.625E+00	9.561E-01	9.561E-01	64.25
	115.19	------	0.60	6.604E+00	------ Line Not Found		------
	238.63	1340	44.60*	5.012E+00	1.770E+00	1.770E+00	9.55
	300.09	72	3.41	4.249E+00	1.458E+00	1.458E+00	60.65
BI-214	609.31	477	46.30*	2.414E+00	1.262E+00	1.262E+00	15.88
	768.36	53	5.04	1.980E+00	1.574E+00	1.574E+00	71.31
	934.06	31	3.21	1.668E+00	1.733E+00	1.733E+00	103.12
	1120.29	102	15.10	1.422E+00	1.404E+00	1.404E+00	47.56
	1238.11	36	5.94	1.304E+00	1.391E+00	1.391E+00	81.55
	1377.67	32	4.11	1.192E+00	1.959E+00	1.959E+00	70.54
	1764.49	94	15.80	9.898E-01	1.779E+00	1.779E+00	22.90
PB-214	74.81	464	6.21	4.596E+00	4.798E+00	4.798E+00	19.80
	77.11	665	10.50	4.828E+00	3.874E+00	3.874E+00	16.02
	87.30	146	4.67	5.625E+00	1.638E+00	1.638E+00	63.93

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	329	7.49	4.972E+00	2.609E+00	2.609E+00	31.34
	295.21	444	19.20	4.299E+00	1.590E+00	1.590E+00	17.97
	351.92	725	37.20*	3.760E+00	1.530E+00	1.530E+00	14.05
PO-214	74.81	464	6.21	4.596E+00	4.798E+00	4.798E+00	19.80
	77.11	665	10.50	4.828E+00	3.874E+00	3.874E+00	16.02
	87.30	146	4.67	5.625E+00	1.638E+00	1.638E+00	63.93
	241.98	329	7.49	4.972E+00	2.609E+00	2.609E+00	31.34
	295.21	444	19.20	4.299E+00	1.590E+00	1.590E+00	17.97
	351.92	725	37.20*	3.760E+00	1.530E+00	1.530E+00	14.05
PO-216	74.81	464	10.70	4.596E+00	2.785E+00	2.785E+00	20.60
	77.11	665	18.00	4.828E+00	2.260E+00	2.260E+00	14.09
	87.30	146	8.00	5.625E+00	9.561E-01	9.561E-01	64.25
	238.63	1340	44.60*	5.012E+00	1.770E+00	1.770E+00	9.55
	300.09	72	3.41	4.249E+00	1.458E+00	1.458E+00	60.65
PO-218	74.81	464	6.21	4.596E+00	4.798E+00	4.798E+00	19.80
	77.11	665	10.50	4.828E+00	3.874E+00	3.874E+00	16.02
	87.30	146	4.67	5.625E+00	1.638E+00	1.638E+00	63.93
	241.98	329	7.49	4.972E+00	2.609E+00	2.609E+00	31.34
	295.21	444	19.20	4.299E+00	1.590E+00	1.590E+00	17.97
	351.92	725	37.20*	3.760E+00	1.530E+00	1.530E+00	14.05
RA-224	240.98	329	3.95*	4.972E+00	4.947E+00	4.947E+00	30.83
RA-226	609.31	477	46.30*	2.414E+00	1.262E+00	1.262E+00	15.88
	768.36	53	5.04	1.980E+00	1.574E+00	1.574E+00	71.31
	934.06	31	3.21	1.668E+00	1.733E+00	1.733E+00	103.12
	1120.29	102	15.10	1.422E+00	1.404E+00	1.404E+00	47.56
	1238.11	36	5.94	1.304E+00	1.391E+00	1.391E+00	81.55
	1377.67	32	4.11	1.192E+00	1.959E+00	1.959E+00	70.54
	1764.49	94	15.80	9.898E-01	1.779E+00	1.779E+00	22.90
AC-228	338.32	310	11.40	3.876E+00	2.074E+00	2.074E+00	46.83
	911.07	255	27.70*	1.705E+00	1.594E+00	1.594E+00	24.60
	969.11	163	16.60	1.616E+00	1.797E+00	1.797E+00	46.83
RA-228	338.32	310	11.40	3.876E+00	2.074E+00	2.074E+00	46.83
	911.07	255	27.70*	1.705E+00	1.594E+00	1.594E+00	24.60
	969.11	163	16.60	1.616E+00	1.797E+00	1.797E+00	46.83
TH-228	84.40	44	1.21	5.411E+00	1.971E+00	1.971E+00	150.37
	238.60	1340	44.60*	5.012E+00	1.770E+00	1.770E+00	9.55
	300.10	72	3.41	4.249E+00	1.458E+00	1.458E+00	84.17
TH-230	609.31	477	46.30*	2.414E+00	1.262E+00	1.262E+00	15.88
	768.36	53	5.04	1.980E+00	1.574E+00	1.574E+00	71.31
	934.06	31	3.21	1.668E+00	1.733E+00	1.733E+00	103.12
	1120.29	102	15.10	1.422E+00	1.404E+00	1.404E+00	47.56
	1238.11	36	5.94	1.304E+00	1.391E+00	1.391E+00	81.55
	1377.67	32	4.11	1.192E+00	1.959E+00	1.959E+00	70.54
	1764.49	94	15.80	9.898E-01	1.779E+00	1.779E+00	22.90
TH-232	338.32	310	11.40	3.876E+00	2.074E+00	2.074E+00	23.77
	911.07	255	27.70*	1.705E+00	1.594E+00	1.594E+00	24.60
	969.11	163	16.60	1.616E+00	1.797E+00	1.797E+00	46.83
TH-234	63.29	32	3.80*	3.203E+00	7.879E-01	7.879E-01	250.93
	92.38	206	5.41	5.989E+00	1.874E+00	1.874E+00	45.89

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	477	46.30*	2.414E+00	1.262E+00	1.262E+00	15.88
	768.36	53	5.04	1.980E+00	1.574E+00	1.574E+00	71.31
	934.06	31	3.21	1.668E+00	1.733E+00	1.733E+00	103.12
	1120.29	102	15.10	1.422E+00	1.404E+00	1.404E+00	47.56
	1238.11	36	5.94	1.304E+00	1.391E+00	1.391E+00	81.55
	1377.67	32	4.11	1.192E+00	1.959E+00	1.959E+00	70.54
	1764.49	94	15.80	9.898E-01	1.779E+00	1.779E+00	22.90
NP-237	86.50	146	12.60*	5.625E+00	6.070E-01	6.070E-01	66.73
	95.87	------	2.60	6.124E+00	------ Line Not Found		------
U-238	63.29	32	3.80*	3.203E+00	7.879E-01	7.879E-01	250.93
	92.38	206	5.41	5.989E+00	1.874E+00	1.874E+00	43.05
AM-243	74.67	464	66.00*	4.596E+00	4.515E-01	4.515E-01	18.36
	86.72	146	0.34	5.625E+00	2.276E+01	2.276E+01	63.46
	117.66	------	0.55	6.624E+00	------ Line Not Found		------
	142.18	------	0.13	6.534E+00	------ Line Not Found		------
ANH-511	511.00	121	100.00*	2.794E+00	1.282E-01	1.282E-01	56.12

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

Total number of lines in spectrum 33
Number of unidentified lines 0
Number of lines tentatively identified by NID 33 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.823E+01	3.823E+01	0.337E+01	8.80	
CD-109	464.00D	1.02	2.056E+00	2.096E+00	1.330E+00	63.46	
SN-126	1.00E+05Y	1.00	2.067E-01	2.067E-01	1.312E-01	63.46	
TL-208	1.41E+10Y	1.00	5.418E-01	5.418E-01	0.957E-01	17.66	
BI-211	7.04E+08Y	1.00	4.400E+00	4.400E+00	0.574E+00	13.04	
PB-212	1.41E+10Y	1.00	1.770E+00	1.770E+00	0.169E+00	9.55	
PO-212	1.41E+10Y	1.00	1.770E+00	1.770E+00	0.169E+00	9.55	
BI-214	1600.00Y	1.00	1.262E+00	1.262E+00	0.200E+00	15.88	
PB-214	1600.00Y	1.00	1.530E+00	1.530E+00	0.215E+00	14.05	
PO-214	1600.00Y	1.00	1.530E+00	1.530E+00	0.215E+00	14.05	
PO-216	1.41E+10Y	1.00	1.770E+00	1.770E+00	0.169E+00	9.55	
PO-218	1600.00Y	1.00	1.530E+00	1.530E+00	0.215E+00	14.05	
RA-224	1.41E+10Y	1.00	4.947E+00	4.947E+00	1.525E+00	30.83	
RA-226	1600.00Y	1.00	1.262E+00	1.262E+00	0.200E+00	15.88	
AC-228	1.41E+10Y	1.00	1.594E+00	1.594E+00	0.392E+00	24.60	
RA-228	1.41E+10Y	1.00	1.594E+00	1.594E+00	0.392E+00	24.60	
TH-228	1.41E+10Y	1.00	1.770E+00	1.770E+00	0.169E+00	9.55	
TH-230	4.47E+09Y	1.00	1.262E+00	1.262E+00	0.200E+00	15.88	
TH-232	1.41E+10Y	1.00	1.594E+00	1.594E+00	0.392E+00	24.60	
TH-234	4.47E+09Y	1.00	7.879E-01	7.879E-01	19.77E-01	250.93	
U-234	4.47E+09Y	1.00	1.262E+00	1.262E+00	0.200E+00	15.88	
NP-237	2.14E+06Y	1.00	6.070E-01	6.070E-01	4.051E-01	66.73	
U-238	4.47E+09Y	1.00	7.879E-01	7.879E-01	19.77E-01	250.93	
AM-243	7380.00Y	1.00	4.515E-01	4.515E-01	0.829E-01	18.36	
ANH-511	1.00E+09Y	1.00	1.282E-01	1.282E-01	0.720E-01	56.12	
	Total Activity :		7.465E+01	7.469E+01			

Grand Total Activity : 7.465E+01 7.469E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	129.12	92	322	1.38	257.79	255	8	1.28E-02	70.5	6.64E+00	T
0	185.82	168	438	1.19	371.25	367	11	2.33E-02	52.4	5.86E+00	T
0	209.22	116	357	0.94	418.06	413	10	1.60E-02	64.8	5.47E+00	T
0	270.47	120	215	0.97	540.62	535	11	1.66E-02	50.9	4.59E+00	T
0	328.07	70	141	1.14	655.86	651	9	9.67E-03	66.1	3.97E+00	T
0	409.76	65	107	1.27	819.31	814	10	9.04E-03	64.5	3.34E+00	T
0	728.09	104	108	1.48	1456.15	1448	14	1.44E-02	46.9	2.08E+00	T
0	795.29	56	63	0.81	1590.58	1585	10	7.84E-03	58.8	1.92E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:50:25.49

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                            DETECTOR DATA                                  *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504004.CNF;1 *
* Acquisition date  : 7-JUL-2009 08:49:30.  Detector SN#     :             *
* Detector ID       : GAM12                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.64          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                             SAMPLE DATA                                   *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504004            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.27090E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24.5MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.823E+01	3.366E+00	4.494E-01	3.204E-02	85.073
CD-109	2.096E+00	1.330E+00	1.541E+00	1.179E-01	1.360
SN-126	2.067E-01	1.312E-01	1.527E-01	1.164E-02	1.354
TL-208	5.418E-01	9.571E-02	6.383E-02	4.566E-03	8.488
BI-211	4.400E+00	5.737E-01	3.248E-01	2.042E-02	13.546
PB-212	1.770E+00	1.689E-01	8.825E-02	6.266E-03	20.055
PO-212	1.770E+00	1.689E-01	8.825E-02	6.266E-03	20.055
BI-214	1.262E+00	2.004E-01	1.096E-01	9.025E-03	11.510
PB-214	1.530E+00	2.150E-01	1.132E-01	9.250E-03	13.516
PO-214	1.530E+00	2.150E-01	1.132E-01	9.250E-03	13.516
PO-216	1.770E+00	1.689E-01	8.825E-02	6.266E-03	20.055
PO-218	1.530E+00	2.150E-01	1.132E-01	9.250E-03	13.516
RA-224	4.947E+00	1.525E+00	1.004E+00	5.541E-02	4.925
RA-226	1.262E+00	2.004E-01	1.096E-01	9.025E-03	11.510
AC-228	1.594E+00	3.923E-01	2.059E-01	2.260E-02	7.745
RA-228	1.594E+00	3.923E-01	2.059E-01	2.260E-02	7.745
TH-228	1.770E+00	1.689E-01	8.824E-02	6.265E-03	20.057
TH-230	1.262E+00	2.004E-01	1.096E-01	9.025E-03	11.510

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.594E+00	3.923E-01	2.059E-01	2.260E-02	7.745
TH-234	7.879E-01	1.977E+00	2.174E+00	3.702E-01	0.362
U-234	1.262E+00	2.004E-01	1.096E-01	9.025E-03	11.510
NP-237	6.070E-01	4.051E-01	3.960E-01	8.699E-02	1.533
U-238	7.879E-01	1.977E+00	2.174E+00	3.702E-01	0.362
AM-243	4.515E-01	8.288E-02	9.087E-02	6.174E-03	4.969
ANH-511	1.282E-01	7.196E-02	4.601E-02	2.804E-03	2.787

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.954E-01		3.414E-01	5.714E-01	3.932E-02	0.342
NA-22	-9.616E-03		5.428E-02	8.784E-02	5.657E-03	-0.109
NA-24	-2.261E-02		3.356E-02	Half-Life too short		
AL-26	1.627E-02		3.455E-02	6.158E-02	3.533E-03	0.264
TI-44	4.170E-01	+	5.876E-02	7.860E-02	5.498E-03	5.305
SC-46	-2.264E-02		4.373E-02	6.733E-02	5.581E-03	-0.336
V-48	-2.820E-03		6.856E-02	1.096E-01	8.445E-03	-0.026
CR-51	4.668E-01		3.602E-01	6.364E-01	4.046E-02	0.734
MN-52	6.433E-02		1.714E-01	2.943E-01	2.022E-02	0.219
MN-54	-3.892E-02		4.217E-02	6.313E-02	4.963E-03	-0.616
CO-56	-6.997E-03		4.416E-02	7.085E-02	5.636E-03	-0.099
CO-57	-3.121E-02		2.481E-02	3.819E-02	2.388E-03	-0.817
CO-58	-2.644E-02		4.247E-02	6.543E-02	5.035E-03	-0.404
FE-59	1.301E-02		9.808E-02	1.652E-01	1.220E-02	0.079
CO-60	-4.137E-05		4.159E-02	6.808E-02	4.755E-03	-0.001
ZN-65	-1.088E-01		1.194E-01	1.515E-01	9.527E-03	-0.719
GE-68	6.188E-01		1.221E+00	2.134E+00	1.439E-01	0.290
AS-73	4.763E-01		7.960E-01	1.364E+00	8.807E-02	0.349
AS-74	-2.829E-02		8.159E-02	1.329E-01	8.459E-03	-0.213
SE-75	-2.208E-02		4.599E-02	6.559E-02	3.718E-03	-0.337
BR-77	-4.114E+00		5.492E+00	8.200E+00	5.029E-01	-0.502
SR-82	-1.320E-01		3.754E-01	5.961E-01	4.411E-02	-0.222
RB-83	6.035E-03		6.602E-02	1.064E-01	6.524E-03	0.057
RB-84	5.264E-03		7.551E-02	1.232E-01	1.014E-02	0.043
KR-85	1.201E+01		9.209E+00	1.431E+01	8.740E-01	0.839
SR-85	6.016E-02		4.611E-02	7.167E-02	4.377E-03	0.839
RB-86	-7.397E-02		7.331E-01	1.211E+00	8.175E-02	-0.061
Y-88	1.829E-02		3.469E-02	6.275E-02	3.532E-03	0.291
ZR-88	-2.653E-02		3.015E-02	4.623E-02	2.536E-03	-0.574
Y-91	-9.301E-01		2.175E+01	3.580E+01	2.070E+00	-0.026
NB-94	-8.380E-03		3.747E-02	6.090E-02	4.148E-03	-0.138
NB-95	4.625E-02		4.780E-02	7.522E-02	5.502E-03	0.615
NB-95M	2.501E-06		1.299E-01	1.939E-01	1.414E-02	0.000
ZR-95	7.055E-02		7.948E-02	1.389E-01	1.147E-02	0.508
NB-97	-8.621E-03		5.643E-03	Half-Life too short		
ZR-97	2.022E-01		1.090E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	-1.664E+00		6.941E+00	1.118E+01	1.608E+00	-0.149
TC-99M	-2.869E+07		3.877E+07	Half-Life too short		
RH-101	-4.019E-03		3.412E-02	5.299E-02	2.803E-03	-0.076
RH-102	-7.717E-03		2.928E-02	4.617E-02	2.742E-03	-0.167
RU-103	4.188E-03		4.138E-02	6.692E-02	8.536E-03	0.063
RH-106	7.239E-02		3.267E-01	5.539E-01	6.678E-02	0.131
RU-106	7.239E-02		3.267E-01	5.539E-01	3.557E-02	0.131
AG-108M	-6.637E-03		3.402E-02	5.440E-02	3.390E-03	-0.122
AG-110M	-1.964E-02		3.619E-02	5.754E-02	3.921E-03	-0.341
IN-111	4.106E-01		6.038E-01	9.410E-01	5.209E-02	0.436
IN-113M	-4.910E-02		4.483E-02	6.768E-02	3.984E-03	-0.725
SN-113	-4.910E-02		4.483E-02	6.768E-02	3.984E-03	-0.725
IN-114M	6.111E-02		1.951E-01	2.823E-01	1.481E-02	0.216
CD-115	2.714E+00		5.552E+00	9.218E+00	5.678E-01	0.294
SN-117M	-5.640E-03		4.772E-02	7.654E-02	4.043E-03	-0.074
SB-122	4.610E-01		1.187E+00	2.047E+00	1.286E-01	0.225
I-123	-1.470E-01		1.672E-01	Half-Life too short		
TE-123M	-1.239E-02		2.818E-02	4.450E-02	2.384E-03	-0.278
I-124	-1.659E-01		5.101E-01	7.844E-01	5.005E-02	-0.212
SB-124	2.677E-02		7.022E-02	1.249E-01	8.332E-03	0.214
SB-125	1.817E-03		9.356E-02	1.521E-01	9.042E-03	0.012
TE-125M	9.213E+00		8.925E+00	1.526E+01	1.315E+00	0.604
I-126	2.726E-02		1.694E-01	2.844E-01	1.855E-02	0.096
SB-126	-5.015E-02		1.476E-01	2.020E-01	1.405E-02	-0.248
SB-127	-7.476E-01		9.541E-01	1.474E+00	1.367E-01	-0.507
XE-127	2.188E-02		4.602E-02	7.477E-02	3.976E-03	0.293
I-131	2.465E-02		9.929E-02	1.656E-01	1.039E-02	0.149
TE-132	3.385E-02		4.045E-01	6.877E-01	9.491E-02	0.049
BA-133	-8.973E-03		4.721E-02	6.675E-02	7.659E-03	-0.134
I-133	-5.710E-04		5.306E-04	Half-Life too short		
CS-134	1.142E-01	+	6.769E-02	1.064E-01	8.111E-03	1.074
CS-135	1.411E-01		1.625E-01	2.544E-01	1.913E-02	0.555
I-135	-1.443E+07		1.169E+07	Half-Life too short		
CS-136	7.939E-03		1.137E-01	1.893E-01	1.421E-02	0.042
BA-137M	-1.849E-02		3.702E-02	5.905E-02	3.828E-03	-0.313
CS-137	-1.955E-02		3.913E-02	6.242E-02	4.060E-03	-0.313
CE-139	2.452E-02		2.936E-02	4.901E-02	2.511E-03	0.500
BA-140	-5.736E-03		2.186E-01	3.679E-01	1.199E-01	-0.016
LA-140	-6.848E-02		8.102E-02	1.189E-01	7.745E-03	-0.576
CE-141	5.678E-02		6.024E-02	1.015E-01	5.906E-03	0.560
CE-143	1.900E-04		3.320E-05	Half-Life too short		
CE-144	1.314E-01		2.191E-01	3.290E-01	4.684E-02	0.399
PM-144	-7.822E-03		3.788E-02	6.168E-02	4.172E-03	-0.127
PR-144	-5.294E-01		2.564E+00	4.175E+00	2.823E-01	-0.127
PM-146	-9.897E-03		4.694E-02	7.472E-02	6.460E-03	-0.132
ND-147	-1.446E-01		5.024E-01	7.817E-01	1.070E-01	-0.185
PM-149	-2.040E+01		4.614E+01	7.518E+01	1.061E+01	-0.271
EU-152	-2.767E-02		1.103E-01	1.563E-01	1.002E-02	-0.177

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-5.194E-02		9.041E-02	1.294E-01	9.001E-03	-0.401
EU-154	-3.043E-02		1.515E-01	2.446E-01	2.384E-02	-0.124
EU-155	1.902E-01		1.117E-01	1.951E-01	1.315E-02	0.975
TB-160	-4.030E-02		1.485E-01	2.345E-01	1.925E-02	-0.172
HO-166M	-1.309E-02		6.304E-02	1.023E-01	7.040E-03	-0.128
TM-171	-2.702E+01		3.179E+01	4.618E+01	2.988E+00	-0.585
LU-176	-2.039E-02		2.510E-02	3.940E-02	2.239E-03	-0.517
LU-177	2.153E+00	+	1.400E+00	1.654E+00	8.846E-02	1.302
LU-177M	-1.249E-01		2.072E-01	2.780E-01	1.560E-02	-0.449
HF-181	7.771E-04		4.654E-02	7.495E-02	4.475E-03	0.010
W-181	-2.110E-01		3.942E-01	5.817E-01	3.737E-02	-0.363
TA-182	2.450E-01		2.253E-01	4.014E-01	2.381E-02	0.610
RE-183	-4.925E-02		1.049E-01	1.651E-01	8.582E-03	-0.298
RE-184	7.591E-03		2.223E-01	3.748E-01	2.086E-02	0.020
OS-185	2.046E-03		4.430E-02	7.395E-02	4.778E-03	0.028
RE-188	1.873E-01		1.719E-01	2.853E-01	1.529E-02	0.657
W-188	-5.972E+00		7.998E+00	1.108E+01	6.277E-01	-0.539
IR-192	-1.790E-02		3.351E-02	5.386E-02	3.078E-03	-0.332
AU-195	3.709E-01		2.276E-01	3.950E-01	2.716E-02	0.939
TL-200	1.204E-05		5.770E-05	Half-Life too short		
TL-201	7.356E-01		4.223E+00	6.844E+00	3.508E-01	0.107
TL-202	2.456E-02		6.627E-02	1.100E-01	6.337E-03	0.223
HG-203	-1.320E-02		4.054E-02	6.561E-02	3.946E-03	-0.201
BI-207	-4.602E-02		5.883E-02	9.134E-02	6.302E-03	-0.504
TL-207	-8.268E-01		7.790E-01	1.020E+00	1.680E-01	-0.811
PO-209	-2.223E+00		8.415E+00	1.329E+01	1.109E+00	-0.167
BI-210	1.574E+00		3.293E+00	5.663E+00	4.266E-01	0.278
PB-210	1.574E+00		3.293E+00	5.663E+00	4.266E-01	0.278
PO-210	1.574E+00		3.292E+00	5.663E+00	3.632E-01	0.278
PB-211	-2.553E-01		1.072E+00	1.479E+00	9.214E-01	-0.173
BI-212	1.252E+00	+	5.968E-01	7.633E-01	6.609E-02	1.640
PO-215	-8.268E-01		7.790E-01	1.020E+00	1.680E-01	-0.811
RN-219	-4.652E-03		4.123E-01	6.720E-01	9.071E-02	-0.007
RN-220	-1.151E+00		2.566E+01	4.307E+01	2.685E+00	-0.027
RA-223	-8.268E-01		7.790E-01	1.020E+00	1.680E-01	-0.811
AC-227	1.285E-01		3.810E-01	6.502E-01	9.018E-02	0.198
TH-227	1.285E-01		3.812E-01	6.502E-01	1.094E-01	0.198
TH-229	-3.647E-01		5.112E-01	7.842E-01	4.129E-02	-0.465
PA-231	1.054E+00		1.528E+00	2.631E+00	3.609E-01	0.401
TH-231	-8.268E-01		7.790E-01	1.020E+00	1.680E-01	-0.811
U-231	-6.690E-01		8.114E-01	1.151E+00	8.107E-02	-0.581
PA-233	-2.464E-02		6.356E-02	1.032E-01	6.245E-03	-0.239
PA-234	-1.796E-01		3.415E-01	5.194E-01	9.606E-02	-0.346
PA-234M	1.511E+00		7.410E+00	1.266E+01	1.313E+00	0.119
U-235	7.199E-02		2.202E-01	3.572E-01	5.802E-02	0.202
NP-236	2.473E-02		7.580E-02	1.241E-01	6.507E-03	0.199
NP-239	-3.018E-01		1.914E-01	2.908E-01	1.835E-02	-1.038
AM-241	2.105E-01		1.705E-01	2.738E-01	1.946E-02	0.769

Sample ID : G232504004 Acquisition date : 7-JUL-2009 08:49:30

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.607E-02		9.746E-02	1.599E-01	1.065E-02	-0.101
CM-247	-8.275E-03		3.681E-02	5.911E-02	3.278E-03	-0.140
CF-249	9.415E-03		4.168E-02	6.912E-02	3.799E-03	0.136
CF-251	9.545E-03		1.307E-01	2.101E-01	1.086E-02	0.045

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504004           *
* Acquisition date :  7-JUL-2009 08:49:30 Detector SN#     :               *
* Detector ID      : GAM12                Sensitivity     : 5.000          *
* Geometry         : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.64     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID        : G232504004           Analyst initials: MXR1           *
* Batch Number     : 881220               Sample Quantity : 1.2709E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.823E+01	3.299E+00	2.248E-01	1.683E+00
CD-109	2.096E+00	1.304E+00	8.033E-01	6.651E-01
SN-126	2.067E-01	1.286E-01	7.960E-02	6.560E-02
TL-208	5.418E-01	9.379E-02	3.238E-02	4.785E-02
BI-211	4.400E+00	5.622E-01	1.660E-01	2.869E-01
PB-212	1.770E+00	1.656E-01	4.535E-02	8.447E-02
PO-212	1.770E+00	1.656E-01	4.535E-02	8.447E-02
BI-214	1.262E+00	1.964E-01	5.557E-02	1.002E-01
PB-214	1.530E+00	2.107E-01	5.787E-02	1.075E-01
PO-214	1.530E+00	2.107E-01	5.787E-02	1.075E-01
PO-216	1.770E+00	1.656E-01	4.535E-02	8.447E-02
PO-218	1.530E+00	2.107E-01	5.787E-02	1.075E-01
RA-224	4.947E+00	1.495E+00	5.161E-01	7.626E-01
RA-226	1.262E+00	1.964E-01	5.557E-02	1.002E-01
AC-228	1.594E+00	3.844E-01	1.037E-01	1.961E-01
RA-228	1.594E+00	3.844E-01	1.037E-01	1.961E-01
TH-228	1.770E+00	1.656E-01	4.535E-02	8.447E-02
TH-230	1.262E+00	1.964E-01	5.557E-02	1.002E-01
TH-232	1.594E+00	3.844E-01	1.037E-01	1.961E-01
TH-234	7.879E-01	1.938E+00	1.139E+00	9.886E-01
U-234	1.262E+00	1.964E-01	5.557E-02	1.002E-01
NP-237	6.070E-01	3.970E-01	2.065E-01	2.025E-01
U-238	7.879E-01	1.938E+00	1.139E+00	9.886E-01
AM-243	4.515E-01	8.122E-02	4.748E-02	4.144E-02
ANH-511	1.282E-01	7.052E-02	2.338E-02	3.598E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	1.954E-01	3.345E-01	2.907E-01	1.707E-01	NOT IDENT.
NA-22	-9.616E-03	5.320E-02	4.403E-02	2.714E-02	NOT IDENT.

NA-24	-2.261E+04	6.577E+04	0.000E+00	3.356E+04	SHORT HLIF
AL-26	1.627E-02	3.386E-02	3.070E-02	1.727E-02	NOT IDENT.
TI-44	4.170E-01	5.759E-02	4.105E-02	2.938E-02	FAIL ABUN
SC-46	-2.264E-02	4.285E-02	3.393E-02	2.186E-02	FAIL ABUN
V-48	-2.820E-03	6.719E-02	5.516E-02	3.428E-02	NOT IDENT.
CR-51	4.668E-01	3.530E-01	3.256E-01	1.801E-01	NOT IDENT.
MN-52	6.433E-02	1.679E-01	1.472E-01	8.568E-02	FAIL ABUN
MN-54	-3.892E-02	4.132E-02	3.185E-02	2.108E-02	NOT IDENT.
CO-56	-6.997E-03	4.327E-02	3.573E-02	2.208E-02	FAIL ABUN
CO-57	-3.121E-02	2.432E-02	1.982E-02	1.241E-02	NOT IDENT.
CO-58	-2.644E-02	4.162E-02	3.302E-02	2.123E-02	NOT IDENT.
FE-59	1.301E-02	9.612E-02	8.297E-02	4.904E-02	NOT IDENT.
CO-60	-4.137E-05	4.076E-02	3.410E-02	2.079E-02	NOT IDENT.
ZN-65	-1.088E-01	1.170E-01	7.607E-02	5.968E-02	NOT IDENT.
GE-68	6.188E-01	1.197E+00	1.072E+00	6.106E-01	NOT IDENT.
AS-73	4.763E-01	7.801E-01	7.162E-01	3.980E-01	NOT IDENT.
AS-74	-2.829E-02	7.996E-02	6.738E-02	4.080E-02	NOT IDENT.
SE-75	-2.208E-02	4.507E-02	3.366E-02	2.299E-02	NOT IDENT.
BR-77	-4.114E+00	5.382E+00	4.166E+00	2.746E+00	FAIL ABUN
SR-82	-1.320E-01	3.679E-01	3.010E-01	1.877E-01	NOT IDENT.
RB-83	6.035E-03	6.470E-02	5.405E-02	3.301E-02	NOT IDENT.
RB-84	5.264E-03	7.400E-02	6.210E-02	3.775E-02	NOT IDENT.
KR-85	1.201E+01	9.024E+00	7.273E+00	4.604E+00	NOT IDENT.
SR-85	6.016E-02	4.519E-02	3.642E-02	2.306E-02	NOT IDENT.
RB-86	-7.397E-02	7.185E-01	6.086E-01	3.666E-01	NOT IDENT.
Y-88	1.829E-02	3.399E-02	3.127E-02	1.734E-02	NOT IDENT.
ZR-88	-2.653E-02	2.955E-02	2.359E-02	1.508E-02	NOT IDENT.
Y-91	-9.301E-01	2.131E+01	1.796E+01	1.087E+01	NOT IDENT.
NB-94	-8.380E-03	3.672E-02	3.080E-02	1.874E-02	NOT IDENT.
NB-95	4.625E-02	4.684E-02	3.800E-02	2.390E-02	NOT IDENT.
NB-95M	2.501E-06	1.273E-01	9.968E-02	6.495E-02	NOT IDENT.
ZR-95	7.055E-02	7.789E-02	7.016E-02	3.974E-02	NOT IDENT.
NB-97	-8.621E+03	1.106E+04	0.000E+00	5.643E+03	SHORT HLIF
ZR-97	2.022E+05	2.136E+05	0.000E+00	1.090E+05	SHORT HLIF
MO-99	-1.664E+00	6.802E+00	5.651E+00	3.471E+00	NOT IDENT.
TC-99M	-2.869E+13	7.598E+13	0.000E+00	3.877E+13	SHORT HLIF
RH-101	-4.019E-03	3.343E-02	2.731E-02	1.706E-02	NOT IDENT.
RH-102	-7.717E-03	2.870E-02	2.349E-02	1.464E-02	NOT IDENT.
RU-103	4.188E-03	4.055E-02	3.402E-02	2.069E-02	FAIL ABUN
RH-106	7.239E-02	3.202E-01	2.806E-01	1.634E-01	FAIL ABUN
RU-106	7.239E-02	3.201E-01	2.806E-01	1.633E-01	FAIL ABUN
AG-108M	-6.637E-03	3.334E-02	2.772E-02	1.701E-02	NOT IDENT.
AG-110M	-1.964E-02	3.547E-02	2.913E-02	1.810E-02	NOT IDENT.
IN-111	4.106E-01	5.917E-01	4.834E-01	3.019E-01	NOT IDENT.
IN-113M	-4.910E-02	4.393E-02	3.453E-02	2.241E-02	NOT IDENT.
SN-113	-4.910E-02	4.393E-02	3.453E-02	2.241E-02	NOT IDENT.
IN-114M	6.111E-02	1.912E-01	1.455E-01	9.753E-02	NOT IDENT.
CD-115	2.714E+00	5.441E+00	4.682E+00	2.776E+00	NOT IDENT.
SN-117M	-5.640E-03	4.676E-02	3.957E-02	2.386E-02	NOT IDENT.
SB-122	4.610E-01	1.164E+00	1.039E+00	5.936E-01	NOT IDENT.
I-123	-1.470E+05	3.276E+05	0.000E+00	1.672E+05	SHORT HLIF
TE-123M	-1.239E-02	2.761E-02	2.301E-02	1.409E-02	NOT IDENT.
I-124	-1.659E-01	4.999E-01	3.976E-01	2.551E-01	NOT IDENT.
SB-124	2.677E-02	6.881E-02	6.231E-02	3.511E-02	FAIL ABUN
SB-125	1.817E-03	9.169E-02	7.750E-02	4.678E-02	NOT IDENT.
TE-125M	9.213E+00	8.747E+00	7.933E+00	4.463E+00	NOT IDENT.
I-126	2.726E-02	1.660E-01	1.440E-01	8.471E-02	NOT IDENT.
SB-126	-5.015E-02	1.446E-01	1.021E-01	7.378E-02	FAIL ABUN
SB-127	-7.476E-01	9.350E-01	7.460E-01	4.770E-01	NOT IDENT.
XE-127	2.188E-02	4.510E-02	3.852E-02	2.301E-02	NOT IDENT.
I-131	2.465E-02	9.730E-02	8.455E-02	4.964E-02	NOT IDENT.
TE-132	3.385E-02	3.964E-01	3.537E-01	2.022E-01	NOT IDENT.
BA-133	-8.973E-03	4.627E-02	3.411E-02	2.361E-02	NOT IDENT.
I-133	-5.710E+02	1.040E+03	0.000E+00	5.306E+02	SHORT HLIF
CS-134	1.142E-01	6.633E-02	5.371E-02	3.384E-02	FAIL ABUN
CS-135	1.411E-01	1.593E-01	1.305E-01	8.127E-02	NOT IDENT.
I-135	-1.443E+13	2.292E+13	0.000E+00	1.169E+13	SHORT HLIF
CS-136	7.939E-03	1.114E-01	9.514E-02	5.685E-02	FAIL ABUN
BA-137M	-1.849E-02	3.628E-02	2.989E-02	1.851E-02	NOT IDENT.
CS-137	-1.955E-02	3.835E-02	3.160E-02	1.957E-02	NOT IDENT.
CE-139	2.452E-02	2.877E-02	2.532E-02	1.468E-02	NOT IDENT.
BA-140	-5.736E-03	2.142E-01	1.868E-01	1.093E-01	NOT IDENT.
LA-140	-6.848E-02	7.940E-02	5.940E-02	4.051E-02	FAIL ABUN
CE-141	5.678E-02	5.904E-02	5.251E-02	3.012E-02	NOT IDENT.
CE-143	1.900E+02	6.507E+01	0.000E+00	3.320E+01	SHORT HLIF
CE-144	1.314E-01	2.147E-01	1.705E-01	1.096E-01	NOT IDENT.
PM-144	-7.822E-03	3.712E-02	3.120E-02	1.894E-02	NOT IDENT.
PR-144	-5.294E-01	2.513E+00	2.112E+00	1.282E+00	NOT IDENT.

PM-146	-9.897E-03	4.600E-02	3.804E-02	2.347E-02	NOT IDENT.
ND-147	-1.446E-01	4.924E-01	3.970E-01	2.512E-01	NOT IDENT.
PM-149	-2.040E+01	4.522E+01	3.854E+01	2.307E+01	NOT IDENT.
EU-152	-2.767E-02	1.081E-01	7.990E-02	5.515E-02	NOT IDENT.
GD-153	-5.194E-02	8.860E-02	6.739E-02	4.520E-02	FAIL ABUN
EU-154	-3.043E-02	1.485E-01	1.226E-01	7.575E-02	NOT IDENT.
EU-155	1.902E-01	1.094E-01	1.015E-01	5.583E-02	FAIL ABUN
TB-160	-4.030E-02	1.455E-01	1.182E-01	7.425E-02	FAIL ABUN
HO-166M	-1.309E-02	6.178E-02	5.172E-02	3.152E-02	FAIL ABUN
TM-171	-2.702E+01	3.116E+01	2.417E+01	1.590E+01	NOT IDENT.
LU-176	-2.039E-02	2.460E-02	2.017E-02	1.255E-02	NOT IDENT.
LU-177	2.153E+00	1.372E+00	8.516E-01	7.002E-01	FAIL ABUN
LU-177M	-1.249E-01	2.030E-01	1.417E-01	1.036E-01	NOT IDENT.
HF-181	7.771E-04	4.560E-02	3.812E-02	2.327E-02	NOT IDENT.
W-181	-2.110E-01	3.863E-01	3.045E-01	1.971E-01	NOT IDENT.
TA-182	2.450E-01	2.208E-01	2.013E-01	1.127E-01	FAIL ABUN
RE-183	-4.925E-02	1.028E-01	8.532E-02	5.244E-02	FAIL ABUN
RE-184	7.591E-03	2.178E-01	1.925E-01	1.111E-01	NOT IDENT.
OS-185	2.046E-03	4.342E-02	3.745E-02	2.215E-02	NOT IDENT.
RE-188	1.873E-01	1.685E-01	1.475E-01	8.597E-02	NOT IDENT.
W-188	-5.972E+00	7.838E+00	5.676E+00	3.999E+00	FAIL ABUN
IR-192	-1.790E-02	3.284E-02	2.756E-02	1.675E-02	FAIL ABUN
AU-195	3.709E-01	2.230E-01	2.056E-01	1.138E-01	FAIL ABUN
TL-200	1.204E+01	1.131E+02	0.000E+00	5.770E+01	SHORT HLIF
TL-201	7.356E-01	4.138E+00	3.535E+00	2.111E+00	NOT IDENT.
TL-202	2.456E-02	6.495E-02	5.604E-02	3.314E-02	NOT IDENT.
HG-203	-1.320E-02	3.973E-02	3.364E-02	2.027E-02	FAIL ABUN
BI-207	-4.602E-02	5.765E-02	4.591E-02	2.941E-02	FAIL ABUN
TL-207	-8.268E-01	7.634E-01	5.217E-01	3.895E-01	FAIL ABUN
PO-209	-2.223E+00	8.247E+00	6.695E+00	4.207E+00	NOT IDENT.
BI-210	1.574E+00	3.227E+00	2.979E+00	1.646E+00	NOT IDENT.
PB-210	1.574E+00	3.227E+00	2.979E+00	1.646E+00	NOT IDENT.
PO-210	1.574E+00	3.226E+00	2.979E+00	1.646E+00	NOT IDENT.
PB-211	-2.553E-01	1.051E+00	7.540E-01	5.361E-01	NOT IDENT.
BI-212	1.252E+00	5.849E-01	3.859E-01	2.984E-01	FAIL ABUN
PO-215	-8.268E-01	7.634E-01	5.217E-01	3.895E-01	FAIL ABUN
RN-219	-4.652E-03	4.041E-01	3.428E-01	2.062E-01	FAIL ABUN
RN-220	-1.151E+00	2.515E+01	2.186E+01	1.283E+01	NOT IDENT.
RA-223	-8.268E-01	7.634E-01	5.217E-01	3.895E-01	FAIL ABUN
AC-227	1.285E-01	3.733E-01	3.338E-01	1.905E-01	FAIL ABUN
TH-227	1.285E-01	3.735E-01	3.338E-01	1.906E-01	FAIL ABUN
TH-229	-3.647E-01	5.009E-01	4.043E-01	2.556E-01	FAIL ABUN
PA-231	1.054E+00	1.497E+00	1.349E+00	7.639E-01	FAIL ABUN
TH-231	-8.268E-01	7.634E-01	5.217E-01	3.895E-01	FAIL ABUN
U-231	-6.690E-01	7.952E-01	5.993E-01	4.057E-01	FAIL ABUN
PA-233	-2.464E-02	6.229E-02	5.284E-02	3.178E-02	FAIL ABUN
PA-234	-1.796E-01	3.346E-01	2.615E-01	1.707E-01	FAIL ABUN
PA-234M	1.511E+00	7.262E+00	6.369E+00	3.705E+00	NOT IDENT.
U-235	7.199E-02	2.158E-01	1.849E-01	1.101E-01	FAIL ABUN
NP-236	2.473E-02	7.428E-02	6.414E-02	3.790E-02	NOT IDENT.
NP-239	-3.018E-01	1.876E-01	1.510E-01	9.570E-02	FAIL ABUN
AM-241	2.105E-01	1.671E-01	1.436E-01	8.523E-02	NOT IDENT.
CM-243	-1.607E-02	9.551E-02	8.317E-02	4.873E-02	FAIL ABUN
CM-247	-8.275E-03	3.607E-02	3.015E-02	1.840E-02	NOT IDENT.
CF-249	9.415E-03	4.084E-02	3.527E-02	2.084E-02	NOT IDENT.
CF-251	9.545E-03	1.281E-01	1.084E-01	6.533E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	235.3876
46.50	235.3876
46.50	235.3876
48.70	268.7236
49.72	270.4953
51.35	274.5252
52.39	278.8998
52.97	273.3602
53.15	273.5161
53.44	253.8408
54.07	263.8933
56.28	318.1390
56.28	318.1418
57.37	0.0000
57.53	329.8749
57.53	329.8769
57.60	329.9448
57.98	329.4420
57.98	329.4420
59.32	293.7090
59.32	293.7090
59.40	303.0408
59.54	303.1657
59.72	282.1325
60.01	298.2805
61.10	360.4000
61.14	360.4419
61.30	360.6073
63.00	371.7199
63.29	372.0232
63.29	372.0232
63.58	372.3270
64.28	363.6637
65.12	377.9625
65.20	369.9739
65.20	369.9739
66.05	353.3078
66.72	405.2879
66.83	405.4115
66.91	377.1158
67.20	388.2335
67.20	388.2335
67.75	403.7092
67.85	403.8206
68.90	368.2645
68.90	368.2645
69.30	361.8535
69.67	382.6340
70.82	357.8373
70.82	357.8373
70.83	357.8473
72.80	398.1106
72.87	398.1836
72.87	398.1836
74.67	400.0045
74.81	400.1461
74.81	400.1461
74.81	400.1461
74.81	400.1461
74.81	400.1461
74.81	400.1461
74.97	400.3065
75.28	400.6174
75.70	401.0378
77.11	402.4405
77.11	402.4405
77.11	402.4405

77.11	402.4405
77.11	402.4405
77.11	402.4405
78.38	410.6530
79.62	318.3393
79.80	318.4767
79.80	318.4767
80.11	327.1023
80.18	327.1558
80.30	327.2505
80.30	327.2505
80.57	282.6801
81.00	355.8136
81.07	355.8736
81.07	355.8736
81.07	355.8736
81.07	355.8736
82.60	368.4095
83.37	385.9752
83.78	407.4977
83.78	407.4977
83.78	407.4977
83.78	407.4977
84.21	351.4462
84.40	351.6000
84.90	412.7949
85.43	413.2983
86.29	414.1093
86.50	414.3075
86.54	414.3454
86.59	414.3922
86.72	414.5147
86.79	414.5793
86.94	543.9674
87.30	544.4086
87.30	544.4086
87.30	544.4086
87.30	544.4086
87.30	544.4086
87.30	544.4086
87.57	544.7418
87.88	545.1216
88.03	545.3057
88.36	604.1269
88.47	604.2757
89.95	560.5093
91.11	455.8634
92.29	609.3835
92.38	609.5032
92.38	609.5032
93.35	447.5219
94.00	291.3922
94.67	300.4742
94.67	300.4774
94.90	300.6250
94.90	300.6250
94.90	300.6250
94.90	300.6250
95.87	337.4511
95.87	337.4511
96.73	361.2810
97.43	338.5604
98.44	265.9810
98.44	265.9824
98.88	262.3384
99.55	270.4847
99.55	270.4847
99.86	270.6572
100.00	274.6304
100.10	276.6374
103.18	321.4970
103.76	301.2631
105.00	257.7397
105.31	269.7104
108.00	346.3417
109.28	259.9052
111.00	322.4707
111.00	322.4707

111.76	323.9338
112.95	302.6856
115.19	276.8704
116.30	303.5760
117.00	317.0508
117.00	317.0508
117.66	306.3503
121.11	261.6218
121.62	292.3096
121.78	292.3931
122.06	291.5238
122.32	291.6581
122.32	291.6581
122.32	291.6581
122.32	291.6581
123.07	270.6771
127.23	296.7424
129.76	280.0186
131.20	261.6127
133.02	270.1784
133.54	243.9925
135.34	261.8694
136.00	254.8719
136.25	267.4678
136.48	280.0605
140.51	291.3338
140.51	0.0000
142.18	302.6221
142.65	287.0743
143.76	285.4757
144.24	281.4739
144.24	281.4739
144.24	281.4739
144.24	281.4739
145.22	263.9593
145.44	265.1070
147.16	298.6525
152.43	293.6058
152.70	281.9771
153.22	281.1283
154.21	270.8431
154.21	270.8431
154.21	270.8431
154.21	270.8431
155.03	244.3815
156.02	270.5057
158.56	253.2088
159.00	0.0000
159.00	274.9348
160.31	231.1737
161.27	272.6052
162.32	261.1030
162.64	239.5448
163.35	268.0004
163.89	259.5220
165.85	238.4731
167.43	256.4719
171.28	251.2771
171.86	225.1238
172.10	225.1989
176.55	261.9479
176.60	261.9660
181.06	263.5463
184.41	241.2642
185.71	277.4788
186.00	277.5847
190.27	232.9824
192.34	266.3282
193.63	257.7223
197.04	239.5364
198.01	243.2361
198.60	261.6138
200.40	223.4409
201.83	266.0903
202.84	238.9795
205.31	233.9658
208.36	246.3425
208.81	246.4753

209.75	226.5755
209.75	226.5755
210.97	214.7806
215.65	232.2286
216.55	210.3878
218.09	228.2320
222.10	229.0003
223.80	237.3562
226.40	198.3822
227.00	212.6328
227.08	212.6530
227.20	205.6207
228.16	210.2601
228.18	215.5663
228.18	215.5663
231.56	0.0000
235.69	240.8869
236.00	248.0987
236.00	248.0987
238.60	206.4429
238.63	206.4499
238.63	206.4499
238.63	206.4499
239.00	206.5310
240.98	206.9751
241.98	207.1972
241.98	207.1972
241.98	207.1972
244.69	158.3224
245.39	152.6791
247.94	173.3115
248.90	193.3661
249.79	185.4075
252.40	180.4713
252.85	183.2783
252.85	183.2783
254.15	0.0000
256.20	189.3760
256.20	189.3760
260.50	185.6383
260.90	172.9049
262.80	164.0733
264.65	171.9094
268.24	151.8822
268.79	140.1621
269.46	155.0186
269.46	155.0186
269.46	155.0186
269.46	155.0186
271.23	190.7852
273.65	219.4057
276.40	165.6303
277.35	177.6082
277.60	179.5092
277.60	179.5092
278.00	176.7885
278.60	196.4409
279.20	195.6253
279.53	202.2091
280.46	213.5833
281.68	190.4874
283.67	159.0404
284.30	161.9446
285.00	182.6608
285.90	187.5031
286.10	177.2250
286.10	177.2250
287.40	146.4595
288.45	0.0000
290.67	182.3183
290.80	195.9045
291.72	208.1388
293.26	0.0000
293.70	142.0350
295.21	139.2084
295.21	139.2084
295.21	139.2084
295.96	136.2766

296.50	121.1934
297.23	121.2754
298.57	121.4238
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299.80	162.5872
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300.09	158.0719
300.09	158.0719
300.10	158.0719
300.12	158.0744
301.29	156.7229
302.84	149.3232
303.76	144.8727
303.91	149.4668
304.40	153.8570
304.40	153.8570
304.84	167.9111
306.84	165.3447
308.46	136.8707
311.98	156.5010
316.51	156.1613
318.01	155.4013
319.02	156.5049
319.41	145.9264
320.08	132.4742
323.87	176.9505
323.87	176.9505
323.87	176.9505
323.87	176.9505
325.23	163.1730
328.77	154.3129
333.44	121.2773
334.20	126.8354
334.20	126.8354
334.30	126.8453
338.28	128.6413
338.28	128.6413
338.28	128.6413
338.28	128.6413
338.32	128.6473
338.32	128.6473
338.32	128.6473
340.50	127.5018
340.57	127.5078
344.27	142.1082
345.85	120.5517
350.59	0.0000
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351.92	133.0635
351.92	133.0635
351.92	133.0635
355.39	0.0000
356.01	117.9574
364.48	130.3848
366.43	142.6370
367.43	130.6844
367.94	0.0000
369.80	144.0168
374.96	126.3905
383.85	109.9396
387.95	126.6168
388.63	110.3351
391.69	139.2560
391.69	139.2560
392.90	130.1568
398.62	109.0909
400.65	116.4675
401.10	116.5054
401.81	116.5657
402.60	118.6955
404.84	119.0953
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411.60	109.7008
413.65	129.8350
414.70	123.2671
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415.76	111.9299
417.63	0.0000

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423.70	126.7716
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427.89	107.1766
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433.93	111.8405
439.47	112.2627
439.56	112.2692
439.89	113.3544
443.98	112.6040
444.90	110.5476
445.03	114.8093
445.03	114.8093
445.03	114.8093
445.03	114.8093
453.90	115.4866
463.38	104.3680
468.07	116.5545
473.00	127.7481
475.06	95.3947
475.35	98.6648
476.78	92.2437
477.59	99.8908
477.96	99.9147
482.03	114.3246
484.57	124.3222
487.03	101.5761
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497.08	94.5152
507.63	0.0000
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510.84	87.5478
511.00	87.5562
511.85	87.6008
511.85	87.6008
513.99	108.3636
513.99	108.3636
520.41	75.7861
520.65	92.5189
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528.96	0.0000
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529.87	0.0000
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543.00	75.8830
546.56	0.0000
549.76	83.4289
552.65	86.2886
555.20	78.2252
563.23	91.3672
563.90	86.8313
568.70	100.8074
569.32	94.4250
569.50	94.4351
569.67	95.3596
573.80	94.6564
574.00	94.6665
574.64	97.4574
578.91	70.6509
579.30	0.0000
583.14	96.0603
585.48	86.3151
591.81	93.7209
592.07	90.0234
593.00	85.4234
595.88	82.7639
600.56	91.3582
602.52	0.0000
602.71	102.6604
602.71	102.6604
603.60	91.8154
604.41	104.3086
604.70	84.0828
609.31	79.6024
609.31	79.6024
609.31	79.6024

609.31	79.6024
610.33	79.6439
612.46	103.1841
614.37	90.7666
618.01	77.1393
621.84	78.2320
621.84	78.2320
631.29	81.4501
633.02	83.4152
633.10	83.4195
634.78	71.1566
635.90	101.5742
636.97	111.1243
645.85	83.9523
646.12	80.1466
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657.75	88.2827
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661.65	88.4489
661.65	88.4489
664.57	0.0000
666.33	82.8674
666.33	82.8674
675.00	70.6350
677.61	75.5663
685.20	86.5338
692.80	84.8908
695.00	97.6758
696.49	93.8344
696.49	93.8344
697.00	97.7661
697.49	97.7881
698.33	90.9792
698.50	90.9861
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702.63	96.0620
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711.68	77.7598
713.82	75.8645
717.42	64.1478
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721.93	0.0000
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722.78	67.6010
722.78	67.6010
722.89	67.6043
722.95	67.6060
723.30	64.3176
724.18	67.6427
727.18	73.3514
733.00	51.3475
735.90	69.6565
739.58	73.7579
742.81	71.8664
744.21	76.9041
747.13	74.0036
751.79	90.1868
752.31	83.1925
753.82	74.2204
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756.15	72.2865
756.87	68.2922
763.93	58.7634
765.79	62.1710
766.41	63.8683
766.84	65.5618
768.36	83.7720
768.36	83.7720
768.36	83.7720
768.36	83.7720
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778.00	71.9551
778.57	68.9314
778.89	63.8721
783.80	50.7971

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792.07	59.4698
795.84	54.4570
796.30	49.3611
801.93	77.3430
805.60	54.3366
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810.76	77.0544
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817.79	60.7905
818.51	70.0835
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826.30	70.3060
828.27	0.0000
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831.96	77.7191
834.83	91.2957
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846.75	74.0092
848.13	73.0061
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856.80	55.8138
860.37	66.0223
867.32	68.3024
867.82	73.5701
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873.19	62.1387
874.81	60.0699
875.33	0.0000
876.40	70.6510
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880.27	61.2512
880.51	58.0884
881.50	64.4506
883.24	61.3206
884.67	59.2389
889.25	70.9994
896.60	68.0078
898.02	58.4764
899.00	69.1339
903.28	59.1838
911.07	50.2152
911.07	50.2152
911.07	50.2152
919.63	69.6671
920.93	60.3177
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925.24	55.8492
926.50	48.3530
934.06	52.0787
934.06	52.0787
934.06	52.0787
934.06	52.0787
935.52	57.4961
937.48	53.9417
944.10	65.9667
946.00	68.1757
949.00	69.3328
962.29	67.1227
964.01	90.7613
966.15	83.5640
968.20	74.1708
969.11	74.1957
969.11	74.1957
969.11	74.1957
977.42	65.6587
980.50	56.9651
983.50	53.7349
989.30	53.8438
996.32	76.1880
1001.03	57.0036
1001.68	61.6143
1004.76	64.4415
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1037.82	77.2688
1038.57	68.9053

1038.76	0.0000
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1046.59	80.2926
1048.07	66.3227
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1050.47	57.9610
1063.62	72.2940
1076.63	51.8579
1077.35	43.3814
1085.78	63.3577
1099.22	61.7310
1112.02	52.4465
1112.84	61.9981
1115.52	85.0949
1120.29	60.6386
1120.29	60.6386
1120.29	60.6386
1120.29	60.6386
1120.51	60.6438
1121.28	54.1015
1124.00	0.0000
1129.67	74.7881
1131.51	0.0000
1147.95	0.0000
1167.94	72.7570
1173.22	75.7878
1175.09	84.5822
1177.93	64.2195
1189.05	82.9801
1204.90	81.4093
1205.75	0.0000
1213.00	72.7534
1221.42	66.0322
1230.97	67.9219
1235.34	72.9434
1236.41	0.0000
1238.11	88.1381
1238.11	88.1381
1238.11	88.1381
1238.11	88.1381
1238.25	84.1803
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1260.41	0.0000
1271.85	74.9878
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1274.54	69.0421
1291.56	44.2345
1298.22	0.0000
1312.09	58.6396
1325.50	41.6039
1325.50	41.6039
1332.49	36.5991
1333.61	46.7786
1360.21	34.8218
1362.66	0.0000
1365.15	22.5613
1368.21	32.4705
1368.53	0.0000
1376.25	35.2637
1377.67	31.8956
1377.67	31.8956
1377.67	31.8956
1377.67	31.8956
1384.27	7.0675
1394.10	22.7332
1395.20	34.1091
1407.95	37.3330
1434.06	19.8350
1436.60	26.1149
1457.56	0.0000
1460.81	15.7642
1489.15	14.8169
1509.49	23.3992
1596.49	30.7085
1620.62	22.4573
1678.03	0.0000
1691.02	11.4065
1691.02	11.4065

1706.46	0.0000
1750.46	0.0000
1764.49	5.0698
1764.49	5.0698
1764.49	5.0698
1764.49	5.0698
1770.23	10.1517
1771.40	8.4619
1791.20	0.0000
1808.65	13.6445
1836.01	10.7813

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504004

Total Uranium Activity	2.3773E+00	ug/g
Total Uranium Counting Unc.	5.7652E+00	ug/g
Total Uranium Tpu	2.9414E-06	ug/g
Total Uranium Mda	3.3894E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232504004      *
*   ANALYST       : MXR1                      DETECTOR    : GAM12           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:49:30.53    SAMPLE ALQT:  127.090 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.057E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.809E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.311E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.604E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:51:22.53

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504005.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:50:02.
Sample ID         : G232504005           Sample quantity  : 1.38040E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.00  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	47.00*	147	425	1.03	93.75	91	6	2.04E-02	25.7	
2	0	63.67*	204	834	1.05	127.12	123	8	2.84E-02	27.6	
3	2	75.24*	833	771	1.00	150.25	145	15	1.16E-01	6.3	7.87E-01
4	2	77.54*	1181	703	1.03	154.86	145	15	1.64E-01	4.7	
5	1	84.54*	110	544	1.04	168.87	166	13	1.53E-02	36.4	1.18E+00
6	1	87.58	382	596	0.97	174.94	166	13	5.31E-02	11.2	
7	4	90.36	199	554	1.00	180.50	178	13	2.76E-02	19.6	1.21E+00
8	4	93.21*	425	667	1.31	186.20	178	13	5.90E-02	13.2	
9	0	129.71	111	486	0.95	259.23	255	8	1.54E-02	35.7	
10	0	186.42*	220	629	1.21	372.68	368	12	3.05E-02	25.1	
11	0	209.80	143	369	1.10	419.43	415	9	1.98E-02	25.7	
12	4	239.11*	1659	230	1.19	478.07	471	19	2.30E-01	3.0	1.59E+00
13	4	242.09	411	312	1.83	484.03	471	19	5.71E-02	11.6	
14	0	270.90	124	337	1.28	541.67	537	11	1.73E-02	29.9	
15	0	277.88	96	240	1.49	555.64	551	9	1.34E-02	30.6	
16	0	295.70*	548	263	1.13	591.28	586	11	7.61E-02	7.3	
17	0	301.04	134	297	0.97	601.97	597	11	1.86E-02	26.4	
18	0	328.31	94	223	1.77	656.52	652	9	1.31E-02	30.3	
19	0	338.89*	438	302	1.37	677.68	670	16	6.08E-02	10.2	
20	0	352.48*	803	347	1.29	704.88	698	13	1.11E-01	6.0	
21	0	463.44	106	135	1.14	926.87	922	9	1.47E-02	22.0	
22	0	511.32*	211	158	1.35	1022.64	1015	15	2.94E-02	17.0	
23	0	583.73*	467	161	1.51	1167.52	1162	11	6.49E-02	6.8	
24	0	609.72*	527	231	1.50	1219.51	1211	16	7.32E-02	8.0	
25	0	727.76*	119	106	1.92	1455.67	1450	12	1.65E-02	19.9	
26	0	768.87	76	81	1.91	1537.93	1533	11	1.05E-02	25.8	
27	0	798.71	109	257	9.27	1597.63	1582	33	1.51E-02	45.7	
28	0	911.86*	322	149	1.54	1824.01	1815	17	4.47E-02	10.2	
29	0	935.87	68	125	3.05	1872.06	1863	20	9.38E-03	42.3	
30	1	965.13	84	89	2.18	1930.60	1921	52	1.17E-02	23.3	1.66E+00
31	1	969.53	224	62	1.91	1939.40	1921	52	3.11E-02	9.4	
32	0	1121.23	141	101	1.92	2242.93	2234	15	1.95E-02	17.7	
33	0	1379.23	35	31	1.31	2759.16	2751	16	4.85E-03	39.9	
34	0	1461.57*	1362	39	2.03	2923.93	2914	20	1.89E-01	3.0	
35	0	1765.54*	98	27	1.90	3532.18	3525	14	1.37E-02	16.0	
36	0	1813.66	14	11	1.31	3628.47	3617	15	1.88E-03	60.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:51:25

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504005.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:50:02
Sample ID : G232504005 Sample quantity : 138.04 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.00 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.337E+01	2.837E+00	6.762E-01	4.134E-02	49.353
CD-109	+	88.03	*	3.933E+00	9.346E-01	1.067E+00	8.422E-02	3.685
SN-126	+	64.28		7.836E-01	4.488E-01	4.313E-01	6.716E-02	1.817
	+	86.94		1.613E+00	7.565E-01	4.740E-01	1.954E-01	3.402
	+	87.57	*	3.879E-01	9.217E-02	1.142E-01	9.036E-03	3.396
HG-203		70.83		-1.859E-01	7.577E-01	1.126E+00	1.550E-01	-0.165
		72.87		8.678E-02	4.623E-01	7.029E-01	9.338E-02	0.123
		82.60		2.103E-01	9.979E-01	1.381E+00	1.861E-01	0.152
	+	279.20	*	9.747E-02	6.020E-02	7.541E-02	6.004E-03	1.293
TL-208	+	277.35		9.144E-01	5.702E-01	7.074E-01	8.286E-02	1.293
	+	510.84		1.050E+00	3.751E-01	2.632E-01	2.860E-02	3.990
	+	583.14	*	6.690E-01	1.067E-01	8.157E-02	6.752E-03	8.201
		860.37		9.210E-01	4.418E-01	8.089E-01	6.820E-02	1.139
BI-210	+	46.50	*	1.355E+00	7.062E-01	8.868E-01	7.228E-02	1.528
PB-210	+	46.50	*	1.355E+00	7.062E-01	8.868E-01	7.228E-02	1.528
PO-210	+	46.50	*	1.355E+00	7.041E-01	8.868E-01	6.322E-02	1.528
BI-211		72.87		4.511E-01	2.403E+00	3.654E+00	3.196E-01	0.123
	+	351.07	*	4.831E+00	6.805E-01	4.219E-01	3.075E-02	11.449
PB-212	+	74.81		2.878E+00	5.157E-01	4.068E-01	5.174E-02	7.076
	+	77.11		2.430E+00	3.080E-01	2.431E-01	2.066E-02	9.994
	+	87.30		1.794E+00	4.625E-01	5.279E-01	6.736E-02	3.398
	+	238.63	*	2.149E+00	2.331E-01	1.017E-01	9.242E-03	21.124
	+	300.09		2.694E+00	1.443E+00	1.373E+00	1.306E-01	1.963
PO-212	+	74.81		2.878E+00	5.157E-01	4.068E-01	5.174E-02	7.076
	+	77.11		2.430E+00	3.080E-01	2.431E-01	2.066E-02	9.994
	+	87.30		1.794E+00	4.625E-01	5.279E-01	6.736E-02	3.398
		115.19		-3.375E-01	3.802E+00	6.203E+00	7.194E-01	-0.054
	+	238.63	*	2.149E+00	2.331E-01	1.017E-01	9.242E-03	21.124
	+	300.09		2.694E+00	1.443E+00	1.373E+00	1.306E-01	1.963
BI-214	+	609.31	*	1.427E+00	2.634E-01	1.517E-01	1.419E-02	9.403
	+	768.36		2.315E+00	1.217E+00	1.553E+00	1.557E-01	1.491
		934.06		2.560E+00	1.890E+00	3.001E+00	2.892E-01	0.853
	+	1120.29		1.968E+00	7.200E-01	6.250E-01	5.591E-02	3.149
		1238.11		1.892E+00	1.254E+00	2.252E+00	1.802E-01	0.840

Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		1.265E+00	1.431E+00	2.257E+00	1.925E-01	0.561
	+	1764.49		1.887E+00	6.135E-01	4.428E-01	2.515E-02	4.261
PB-214	+	74.81		4.959E+00	8.425E-01	7.009E-01	7.971E-02	7.076
	+	77.11		4.166E+00	6.160E-01	4.168E-01	4.757E-02	9.994
	+	87.30		3.073E+00	7.677E-01	9.044E-01	9.998E-02	3.398
	+	241.98		3.199E+00	8.053E-01	6.130E-01	5.934E-02	5.218
	+	295.21		1.928E+00	3.384E-01	2.392E-01	2.343E-02	8.062
	+	351.92	*	1.680E+00	2.525E-01	1.471E-01	1.317E-02	11.422
PO-214	+	74.81		4.959E+00	8.425E-01	7.009E-01	7.971E-02	7.076
	+	77.11		4.166E+00	6.160E-01	4.168E-01	4.757E-02	9.994
	+	87.30		3.073E+00	7.677E-01	9.044E-01	9.998E-02	3.398
	+	241.98		3.199E+00	8.053E-01	6.130E-01	5.934E-02	5.218
	+	295.21		1.928E+00	3.384E-01	2.392E-01	2.343E-02	8.062
	+	351.92	*	1.680E+00	2.525E-01	1.471E-01	1.317E-02	11.422
PO-216	+	74.81		2.878E+00	5.157E-01	4.068E-01	5.174E-02	7.076
	+	77.11		2.430E+00	3.080E-01	2.431E-01	2.066E-02	9.994
	+	87.30		1.794E+00	4.625E-01	5.279E-01	6.736E-02	3.398
	+	238.63	*	2.149E+00	2.331E-01	1.017E-01	9.242E-03	21.124
	+	300.09		2.694E+00	1.443E+00	1.373E+00	1.306E-01	1.963
PO-218	+	74.81		4.959E+00	8.425E-01	7.009E-01	7.971E-02	7.076
	+	77.11		4.166E+00	6.160E-01	4.168E-01	4.757E-02	9.994
	+	87.30		3.073E+00	7.677E-01	9.044E-01	9.998E-02	3.398
	+	241.98		3.199E+00	8.053E-01	6.130E-01	5.934E-02	5.218
	+	295.21		1.928E+00	3.384E-01	2.392E-01	2.343E-02	8.062
	+	351.92	*	1.680E+00	2.525E-01	1.471E-01	1.317E-02	11.422
RA-224	+	240.98	*	6.065E+00	1.489E+00	1.158E+00	9.143E-02	5.236
RA-226	+	609.31	*	1.427E+00	2.634E-01	1.517E-01	1.419E-02	9.403
	+	768.36		2.315E+00	1.217E+00	1.553E+00	1.557E-01	1.491
		934.06		2.560E+00	1.890E+00	3.001E+00	2.892E-01	0.853
	+	1120.29		1.968E+00	7.200E-01	6.250E-01	5.591E-02	3.149
		1238.11		1.892E+00	1.254E+00	2.252E+00	1.802E-01	0.840
		1377.67		1.265E+00	1.431E+00	2.257E+00	1.925E-01	0.561
	+	1764.49		1.887E+00	6.135E-01	4.428E-01	2.515E-02	4.261
AC-228	+	338.32		2.894E+00	1.325E+00	4.194E-01	1.717E-01	6.901
	+	911.07	*	2.067E+00	4.743E-01	3.115E-01	3.235E-02	6.636
	+	969.11		2.532E+00	7.490E-01	4.960E-01	1.133E-01	5.104
RA-228	+	338.32		2.894E+00	1.325E+00	4.194E-01	1.717E-01	6.901
	+	911.07	*	2.067E+00	4.743E-01	3.115E-01	3.235E-02	6.636
	+	969.11		2.532E+00	7.490E-01	4.960E-01	1.133E-01	5.104
TH-228	+	84.40		3.408E+00	2.522E+00	3.461E+00	4.428E-01	0.985
	+	238.60	*	2.149E+00	2.331E-01	1.017E-01	9.241E-03	21.126
	+	300.10		2.694E+00	2.134E+00	1.373E+00	8.117E-01	1.963
TH-230	+	609.31	*	1.427E+00	2.634E-01	1.517E-01	1.419E-02	9.403
	+	768.36		2.315E+00	1.217E+00	1.553E+00	1.557E-01	1.491
		934.06		2.560E+00	1.890E+00	3.001E+00	2.892E-01	0.853
	+	1120.29		1.968E+00	7.200E-01	6.250E-01	5.591E-02	3.149
		1238.11		1.892E+00	1.254E+00	2.252E+00	1.801E-01	0.840
		1377.67		1.265E+00	1.431E+00	2.257E+00	1.925E-01	0.561
	+	1764.49		1.887E+00	6.135E-01	4.428E-01	2.515E-02	4.261

Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	+	338.32		2.894E+00	6.259E-01	4.194E-01	2.920E-02	6.901
	+	911.07	*	2.067E+00	4.743E-01	3.115E-01	3.235E-02	6.636
	+	969.11		2.532E+00	7.490E-01	4.960E-01	1.133E-01	5.104
TH-234	+	63.29	*	1.980E+00	1.150E+00	1.075E+00	1.973E-01	1.841
	+	92.38		2.978E+00	9.500E-01	7.051E-01	1.269E-01	4.223
U-234	+	609.31	*	1.427E+00	2.634E-01	1.517E-01	1.419E-02	9.403
	+	768.36		2.315E+00	1.217E+00	1.553E+00	1.557E-01	1.491
		934.06		2.560E+00	1.890E+00	3.001E+00	2.892E-01	0.853
	+	1120.29		1.968E+00	7.200E-01	6.250E-01	5.591E-02	3.149
		1238.11		1.892E+00	1.254E+00	2.252E+00	1.801E-01	0.840
		1377.67		1.265E+00	1.431E+00	2.257E+00	1.925E-01	0.561
	+	1764.49		1.887E+00	6.135E-01	4.428E-01	2.515E-02	4.261
NP-237	+	86.50	*	1.139E+00	3.585E-01	3.344E-01	7.397E-02	3.407
		95.87		-7.221E-01	9.997E-01	1.412E+00	3.491E-01	-0.512
U-238	+	63.29	*	1.980E+00	1.150E+00	1.075E+00	1.973E-01	1.841
	+	92.38		2.978E+00	8.237E-01	7.051E-01	5.952E-02	4.223
AM-243	+	74.67	*	4.666E-01	7.134E-02	6.592E-02	5.694E-03	7.078
	+	86.72		4.272E+01	1.015E+01	1.255E+01	9.984E-01	3.404
		117.66		-4.658E+00	4.126E+00	6.400E+00	7.659E-01	-0.728
		142.18		-4.812E+00	2.017E+01	3.226E+01	3.418E+00	-0.149
ANH-511	+	511.00	*	2.268E-01	7.879E-02	5.687E-02	3.968E-03	3.989

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.807E-02	3.919E-01	6.526E-01	4.906E-02	-0.043
NA-22		1274.54	*	8.639E-03	6.038E-02	1.015E-01	5.727E-03	0.085
NA-24		1368.53	*	-2.006E-02	6.038E-02	Half-Life too short		
AL-26		1129.67		1.631E+00	2.457E+00	3.999E+00	2.370E-01	0.408
		1808.65	*	1.073E-02	4.359E-02	6.516E-02	3.677E-03	0.165
TI-44		67.85		-1.860E-03	2.895E-02	4.618E-02	4.181E-03	-0.040
	+	78.38	*	4.484E-01	5.683E-02	7.236E-02	6.094E-03	6.197
SC-46		889.25	*	4.708E-02	5.235E-02	9.193E-02	6.961E-03	0.512
	+	1120.51		3.306E-01	1.190E-01	1.647E-01	9.905E-03	2.007
V-48		944.10		-2.035E-01	1.363E+00	1.897E+00	1.385E-01	-0.107
		983.50	*	2.607E-03	9.812E-02	1.385E-01	9.796E-03	0.019
		1312.09		-3.017E-03	9.988E-02	1.652E-01	9.364E-03	-0.018
CR-51		320.08	*	2.258E-01	4.170E-01	6.991E-01	5.441E-02	0.323
MN-52		744.21		1.559E-01	2.776E-01	4.617E-01	3.748E-02	0.338
		848.13		3.590E+00	7.392E+00	1.233E+01	9.603E-01	0.291
	+	935.52		6.446E-01	5.477E-01	5.249E-01	3.856E-02	1.228
		1246.25		-6.920E+00	7.946E+00	1.245E+01	6.971E-01	-0.556
		1333.61		2.310E+00	5.360E+00	8.995E+00	5.117E-01	0.257
		1434.06	*	1.596E-02	2.273E-01	3.765E-01	2.164E-02	0.042
MN-54		834.83	*	-3.015E-02	5.099E-02	8.157E-02	6.401E-03	-0.370
CO-56		846.75	*	-8.619E-03	5.402E-02	8.888E-02	6.927E-03	-0.097
		977.42		-7.353E-01	3.939E+00	6.371E+00	4.530E-01	-0.115
		1037.82		8.768E-02	4.165E-01	6.908E-01	5.032E-02	0.127

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1175.09		2.898E-01	3.124E+00	5.070E+00	2.788E-01	0.057
		1238.25		1.959E-01	1.234E-01	2.232E-01	1.331E-02	0.878
		1360.21		9.991E-01	1.334E+00	2.353E+00	1.343E-01	0.425
		1771.40		8.480E-02	3.356E-01	5.013E-01	2.844E-02	0.169
CO-57		122.06	*	8.029E-03	2.873E-02	4.650E-02	5.882E-03	0.173
		136.48		8.042E-02	2.389E-01	3.912E-01	4.579E-02	0.206
CO-58		810.76	*	-3.593E-02	5.712E-02	7.654E-02	6.097E-03	-0.469
FE-59		142.65		-7.877E-01	3.095E+00	4.888E+00	5.155E-01	-0.161
		192.34		8.308E-01	1.107E+00	1.714E+00	2.225E-01	0.485
		1099.22	*	-1.301E-01	1.263E-01	1.878E-01	1.342E-02	-0.693
		1291.56		5.444E-04	1.583E-01	2.630E-01	1.921E-02	0.002
CO-60		1173.22		5.163E-02	6.217E-02	1.063E-01	5.844E-03	0.486
		1332.49	*	4.622E-02	5.375E-02	9.338E-02	5.311E-03	0.495
ZN-65		1115.52	*	-1.303E-01	1.571E-01	1.987E-01	1.206E-02	-0.656
GE-68		1077.35	*	7.203E-01	1.732E+00	2.905E+00	1.857E-01	0.248
AS-73		53.44	*	2.437E-01	2.475E-01	4.225E-01	3.569E-02	0.577
AS-74		595.88	*	3.381E-02	1.106E-01	1.848E-01	1.419E-02	0.183
		634.78		-3.861E-01	4.490E-01	6.889E-01	5.490E-02	-0.560
SE-75		66.05		-2.775E+00	3.015E+00	4.384E+00	4.776E-01	-0.633
		96.73		-1.122E+00	8.307E-01	1.135E+00	1.576E-01	-0.988
		121.11		9.779E-02	1.501E-01	2.454E-01	3.536E-02	0.399
		136.00		2.027E-02	4.466E-02	7.340E-02	8.291E-03	0.276
		198.60		3.768E-01	1.969E+00	3.306E+00	2.954E-01	0.114
		264.65	*	9.238E-03	5.283E-02	8.428E-02	6.602E-03	0.110
		279.53		1.394E-01	1.461E-01	2.229E-01	1.794E-02	0.625
		303.91		2.200E+00	2.620E+00	3.969E+00	4.217E-01	0.554
		400.65		1.908E-01	3.296E-01	5.444E-01	5.004E-02	0.351
BR-77	+	87.88		4.425E+02	1.051E+02	1.652E+02	1.304E+01	2.679
		200.40		-5.456E+01	9.203E+01	1.523E+02	1.206E+01	-0.358
	+	239.00		1.791E+02	1.769E+01	2.249E+01	1.777E+00	7.962
		249.79		-5.390E+00	3.901E+01	6.461E+01	5.080E+00	-0.083
		281.68		3.478E+01	6.036E+01	9.057E+01	6.945E+00	0.384
		297.23		3.174E+02	6.006E+01	8.457E+01	6.361E+00	3.754
		303.76		1.078E+02	1.171E+02	1.786E+02	1.330E+01	0.604
		439.47		6.830E+01	9.426E+01	1.641E+02	1.037E+01	0.416
		484.57		-4.711E+01	1.518E+02	2.491E+02	1.679E+01	-0.189
		520.65	*	-4.500E+00	6.856E+00	1.092E+01	7.711E-01	-0.412
		574.64		9.260E+00	1.440E+02	2.379E+02	1.788E+01	0.039
		578.91		-2.304E+01	6.981E+01	9.663E+01	7.293E+00	-0.238
		585.48		1.413E+03	2.171E+02	3.682E+02	2.798E+01	3.838
		755.35		1.503E+02	1.138E+02	1.990E+02	1.612E+01	0.755
		817.79		5.603E+01	9.120E+01	1.583E+02	1.253E+01	0.354
SR-82		698.33		-1.893E+01	4.526E+01	7.117E+01	5.810E+00	-0.266
		776.49	*	-1.787E-01	5.233E-01	8.173E-01	6.578E-02	-0.219
		1395.20		-1.005E+01	1.314E+01	1.979E+01	1.134E+00	-0.508
RB-83		520.41	*	-1.346E-02	8.495E-02	1.396E-01	9.860E-03	-0.096
		529.64		-3.745E-02	1.272E-01	2.069E-01	1.477E-02	-0.181
		552.65		2.097E-02	2.469E-01	4.097E-01	3.005E-02	0.051
RB-84		881.50	*	-1.553E-02	8.965E-02	1.423E-01	1.084E-02	-0.109

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
KR-85		513.99	*	2.954E+01	1.091E+01	1.835E+01	1.285E+00	1.610
SR-85		513.99	*	1.479E-01	5.463E-02	9.187E-02	6.435E-03	1.610
RB-86		1076.63	*	-1.556E-01	1.032E+00	1.659E+00	1.061E-01	-0.094
Y-88		898.02		1.238E-02	5.712E-02	9.590E-02	7.259E-03	0.129
		1836.01	*	-7.847E-03	4.080E-02	6.552E-02	3.689E-03	-0.120
ZR-88		392.90	*	-3.500E-02	3.861E-02	5.876E-02	3.441E-03	-0.596
Y-91		1204.90	*	2.303E+01	2.455E+01	4.347E+01	2.409E+00	0.530
NB-94		702.63	*	-1.614E-03	4.976E-02	8.026E-02	6.551E-03	-0.020
		871.10		-2.607E-02	4.669E-02	7.425E-02	5.697E-03	-0.351
NB-95		765.79	*	3.351E-02	6.396E-02	9.670E-02	7.808E-03	0.347
NB-95M		235.69	*	1.854E-01	1.444E-01	2.257E-01	2.087E-02	0.822
ZR-95		724.18		5.429E-02	1.432E-01	2.060E-01	1.840E-02	0.264
		756.15	*	9.840E-03	9.585E-02	1.550E-01	1.398E-02	0.063
NB-97		657.90	*	-8.843E-03	9.585E-02	Half-Life too short		
		1024.50		3.955E-01	9.585E-02	Half-Life too short		
ZR-97		254.15		-3.668E-01	9.585E-02	Half-Life too short		
		355.39		2.112E-01	9.585E-02	Half-Life too short		
		507.63	*	1.545E-01	9.585E-02	Half-Life too short		
		602.52		1.391E-01	9.585E-02	Half-Life too short		
		1021.30		-1.391E+00	9.585E-02	Half-Life too short		
		1147.95		1.357E-01	9.585E-02	Half-Life too short		
		1362.66		-1.479E-01	9.585E-02	Half-Life too short		
		1750.46		-1.833E-01	9.585E-02	Half-Life too short		
MO-99		140.51		-5.139E+00	1.677E+01	2.667E+01	7.583E+00	-0.193
		181.06		2.688E+00	1.189E+01	1.810E+01	3.249E+00	0.149
		366.43		3.356E+01	5.701E+01	9.512E+01	6.118E+00	0.353
		739.58	*	-2.750E+00	1.026E+01	1.621E+01	2.416E+00	-0.170
		778.00		-3.325E+01	2.762E+01	4.258E+01	3.426E+00	-0.781
TC-99M		140.51	*	-2.633E+07	2.762E+01	Half-Life too short		
RH-101		127.23		-1.684E-02	3.827E-02	5.424E-02	6.586E-03	-0.310
		198.01	*	1.704E-03	3.668E-02	6.129E-02	4.854E-03	0.028
		325.23		-6.451E-02	3.004E-01	4.230E-01	3.032E-02	-0.153
RH-102		418.52		5.943E-02	3.599E-01	5.807E-01	3.550E-02	0.102
		475.06	*	-2.751E-02	3.672E-02	5.879E-02	3.912E-03	-0.468
		631.29		-8.199E-03	7.626E-02	1.236E-01	9.818E-03	-0.066
		697.49		-4.397E-02	1.083E-01	1.704E-01	1.391E-02	-0.258
		766.84		5.977E-02	1.743E-01	2.594E-01	2.094E-02	0.230
		1046.59		1.056E-01	1.514E-01	2.601E-01	1.726E-02	0.406
		1112.84		3.434E-01	3.811E-01	5.758E-01	3.503E-02	0.596
RU-103		497.08	*	-2.513E-02	4.869E-02	7.849E-02	1.033E-02	-0.320
	+	610.33		1.481E+01	3.370E+00	3.412E+00	5.552E-01	4.340
RH-106	+	511.85		1.128E+00	3.919E-01	5.276E-01	3.686E-02	2.138
		621.84	*	-4.385E-02	4.145E-01	6.725E-01	8.668E-02	-0.065
		1050.47		-4.250E-01	3.162E+00	5.100E+00	3.370E-01	-0.083
RU-106	+	511.85		1.128E+00	3.919E-01	5.276E-01	3.686E-02	2.138
		621.84	*	-4.385E-02	4.144E-01	6.725E-01	5.296E-02	-0.065
		1050.47		-4.250E-01	3.162E+00	5.100E+00	3.370E-01	-0.083
AG-108M		433.93	*	2.825E-02	4.023E-02	7.011E-02	4.716E-03	0.403
		614.37		3.028E-02	5.804E-02	8.584E-02	7.031E-03	0.353

Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.95		-2.912E-02	6.666E-02	8.856E-02	7.531E-03	-0.329
AG-110M		657.75	*	-3.973E-02	4.848E-02	7.442E-02	6.252E-03	-0.534
		677.61		1.129E-01	4.275E-01	7.049E-01	5.936E-02	0.160
		706.67		4.881E-01	3.029E-01	5.324E-01	4.478E-02	0.917
		763.93		1.346E-01	2.394E-01	3.642E-01	3.037E-02	0.370
		884.67		-1.269E-02	6.650E-02	1.086E-01	8.593E-03	-0.117
		937.48		1.812E-01	1.630E-01	2.871E-01	2.210E-02	0.631
		1384.27		2.040E-01	2.280E-01	3.642E-01	2.215E-02	0.560
IN-111		171.28		-2.107E-01	6.647E-01	1.044E+00	8.195E-02	-0.202
		245.39	*	4.834E-02	7.361E-01	1.085E+00	8.549E-02	0.045
IN-113M		391.69	*	1.363E-02	5.477E-02	8.924E-02	5.560E-03	0.153
SN-113		391.69	*	1.363E-02	5.477E-02	8.924E-02	5.560E-03	0.153
IN-114M		190.27	*	2.825E-02	2.305E-01	3.254E-01	2.572E-02	0.087
CD-115		260.90		-5.225E+01	7.656E+01	1.233E+02	9.629E+00	-0.424
		492.35		-3.618E+00	2.296E+01	3.794E+01	2.585E+00	-0.095
		527.90	*	-1.269E+00	6.698E+00	1.097E+01	7.819E-01	-0.116
SN-117M		156.02		1.453E+00	2.336E+00	3.830E+00	3.460E-01	0.379
		158.56	*	-6.084E-03	5.730E-02	9.137E-02	7.979E-03	-0.067
SB-122		563.90	*	6.706E-01	1.516E+00	2.563E+00	1.904E-01	0.262
		692.80		2.144E+01	3.340E+01	5.624E+01	4.592E+00	0.381
I-123		159.00	*	-6.295E-02	3.340E+01	Half-Life too short		
		528.96		-1.331E+01	3.340E+01	Half-Life too short		
TE-123M		159.00	*	-5.303E-03	3.271E-02	5.203E-02	4.543E-03	-0.102
I-124		602.71	*	-7.832E-03	7.106E-01	1.007E+00	7.784E-02	-0.008
		722.78		-1.784E+00	4.742E+00	6.339E+00	5.164E-01	-0.281
		1325.50		-2.729E+01	2.999E+01	4.510E+01	2.562E+00	-0.605
		1376.25		1.206E+01	3.206E+01	4.749E+01	2.716E+00	0.254
		1509.49		1.265E+01	1.404E+01	2.519E+01	1.452E+00	0.502
		1691.02		1.479E+00	3.256E+00	5.635E+00	3.227E-01	0.262
SB-124		602.71		-6.440E-04	5.843E-02	8.278E-02	6.402E-03	-0.008
		645.85		-3.092E-01	6.697E-01	1.056E+00	9.084E-02	-0.293
		709.31		-3.060E+00	4.009E+00	6.143E+00	5.012E-01	-0.498
		713.82		-2.850E-01	2.224E+00	3.556E+00	4.165E-01	-0.080
		722.78		-2.127E-01	5.653E-01	7.556E-01	6.305E-02	-0.281
	+	968.20		2.540E+01	5.109E+00	9.306E+00	6.669E-01	2.729
		1045.16		-1.029E-01	3.279E+00	5.333E+00	3.545E-01	-0.019
		1325.50		-3.475E+00	3.818E+00	5.741E+00	3.262E-01	-0.605
		1368.21		-1.114E+00	2.313E+00	3.547E+00	4.196E-01	-0.314
		1436.60		-3.068E-01	4.781E+00	7.802E+00	4.485E-01	-0.039
		1691.02	*	4.159E-02	9.155E-02	1.585E-01	9.868E-03	0.262
SB-125		427.89	*	-7.949E-02	1.129E-01	1.833E-01	1.179E-02	-0.434
	+	463.38		1.018E+00	4.541E-01	7.014E-01	5.199E-02	1.452
		600.56		-2.798E-02	2.502E-01	3.963E-01	3.337E-02	-0.071
		635.90		-5.797E-02	3.534E-01	5.698E-01	4.971E-02	-0.102
TE-125M		109.28	*	-5.501E+00	9.746E+00	1.566E+01	1.902E+00	-0.351
I-126		388.63		5.976E-02	2.301E-01	3.753E-01	2.222E-02	0.159
		666.33	*	8.697E-02	2.315E-01	3.843E-01	3.136E-02	0.226
		753.82		1.490E+00	1.763E+00	2.995E+00	2.426E-01	0.497
SB-126		223.80		1.116E-01	4.037E+00	6.786E+00	5.379E-01	0.016

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	278.60		5.332E+00	3.291E+00	4.518E+00	3.475E-01	1.180
	+	296.50		1.693E+01	2.776E+00	3.945E+00	2.971E-01	4.291
		414.70		-5.783E-02	8.652E-02	1.329E-01	8.073E-03	-0.435
		415.30		-6.260E-01	6.981E+00	1.110E+01	6.752E-01	-0.056
		555.20		-1.422E-01	4.399E+00	7.246E+00	5.330E-01	-0.020
		573.80		-1.507E-01	1.243E+00	2.031E+00	1.524E-01	-0.074
		593.00		-1.364E+00	1.097E+00	1.648E+00	1.262E-01	-0.828
		656.30		1.379E+00	3.943E+00	6.557E+00	5.324E-01	0.210
		666.33		3.616E-02	9.624E-02	1.598E-01	1.304E-02	0.226
		675.00		6.499E-02	2.443E+00	3.970E+00	3.241E-01	0.016
		695.00		7.796E-02	9.440E-02	1.604E-01	1.310E-02	0.486
		697.00		-1.008E-01	3.344E-01	5.301E-01	4.328E-02	-0.190
		720.50	*	1.651E-01	1.840E-01	2.892E-01	2.357E-02	0.571
		856.80		-5.956E-01	6.252E-01	9.739E-01	7.544E-02	-0.612
		989.30		5.743E-01	1.669E+00	2.441E+00	1.718E-01	0.235
		1034.80		4.007E-01	1.082E+01	1.770E+01	1.191E+00	0.023
		1213.00		-3.266E+00	5.796E+00	9.329E+00	5.181E-01	-0.350
SB-127		61.10		1.779E+01	1.795E+01	2.831E+01	3.186E+00	0.628
		252.40		2.446E+00	3.416E+00	5.599E+00	2.336E+00	0.437
		290.80		-4.609E+00	1.850E+01	2.629E+01	2.549E+00	-0.175
		411.60		3.645E+00	1.103E+01	1.766E+01	2.471E+00	0.206
		444.90		-4.020E+00	8.180E+00	1.338E+01	1.400E+00	-0.300
		473.00		-3.877E-01	1.385E+00	2.279E+00	2.512E-01	-0.170
		543.00		3.906E-01	1.532E+01	2.537E+01	3.325E+00	0.015
		603.60		-2.604E+00	1.202E+01	1.673E+01	1.894E+00	-0.156
		685.20	*	7.140E-01	1.248E+00	2.095E+00	2.178E-01	0.341
		698.50		-4.389E+00	1.430E+01	2.264E+01	3.425E+00	-0.194
		722.20		4.891E+00	3.010E+01	4.249E+01	4.309E+00	0.115
		783.80		4.669E+00	3.480E+00	6.200E+00	7.083E-01	0.753
XE-127		57.60		-9.651E-01	2.130E+00	3.575E+00	3.304E-01	-0.270
		145.22		-7.537E-02	7.806E-01	1.239E+00	1.272E-01	-0.061
		172.10		3.912E-02	1.316E-01	2.120E-01	1.665E-02	0.185
		202.84	*	-1.213E-02	4.857E-02	8.138E-02	6.449E-03	-0.149
		374.96		-1.272E-01	2.411E-01	3.774E-01	2.357E-02	-0.337
I-131		80.18		1.520E+00	3.485E+00	4.874E+00	4.075E-01	0.312
		284.30		-4.507E-01	1.428E+00	2.321E+00	1.888E-01	-0.194
		364.48	*	6.124E-02	1.130E-01	1.881E-01	1.329E-02	0.326
		636.97		-3.293E-01	1.692E+00	2.722E+00	2.310E-01	-0.121
		722.89		-4.158E+00	9.241E+00	1.226E+01	1.004E+00	-0.339
TE-132		49.72		-2.802E-02	2.736E+00	4.231E+00	4.047E-01	-0.007
		111.76		-3.632E+00	2.045E+01	3.267E+01	4.062E+00	-0.111
		116.30		1.213E+01	1.826E+01	3.046E+01	3.971E+00	0.398
		228.16	*	-1.224E-01	4.619E-01	7.658E-01	1.145E-01	-0.160
BA-133		53.15		1.252E+00	1.076E+00	1.844E+00	1.547E-01	0.679
		79.62		1.293E+00	1.149E+00	1.758E+00	2.650E-01	0.735
		81.00		-7.929E-03	1.052E-01	1.257E-01	1.972E-02	-0.063
	+	276.40		9.033E-01	5.673E-01	7.305E-01	1.017E-01	1.237
		302.84		2.730E-01	1.897E-01	2.937E-01	3.691E-02	0.930
		356.01	*	-1.662E-02	6.212E-02	8.842E-02	1.062E-02	-0.188

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		383.85		-1.515E-02	3.672E-01	5.898E-01	6.488E-02	-0.026
I-133	+	510.53		3.820E-01	3.672E-01	Half-Life too short		
		529.87	*	-5.326E-04	3.672E-01	Half-Life too short		
		706.58		1.623E-01	3.672E-01	Half-Life too short		
		856.28		-1.862E-01	3.672E-01	Half-Life too short		
		875.33		-1.792E-02	3.672E-01	Half-Life too short		
		1236.41		1.441E-01	3.672E-01	Half-Life too short		
		1298.22		1.622E-02	3.672E-01	Half-Life too short		
CS-134		475.35		-1.403E+00	2.348E+00	3.791E+00	2.523E-01	-0.370
		563.23		1.585E-01	4.731E-01	7.950E-01	5.976E-02	0.199
		569.32		4.565E-02	2.567E-01	4.272E-01	3.249E-02	0.107
		604.70		1.178E-02	5.308E-02	7.660E-02	5.952E-03	0.154
		795.84	*	1.106E-01	6.409E-02	1.169E-01	9.424E-03	0.946
		801.93		4.545E-01	5.761E-01	9.833E-01	7.891E-02	0.462
		1038.57		4.653E-01	5.265E+00	8.651E+00	5.794E-01	0.054
		1167.94		-1.712E+00	3.427E+00	5.308E+00	2.946E-01	-0.323
		1365.15		-1.310E+00	1.689E+00	2.571E+00	1.616E-01	-0.510
CS-135		268.24	*	-1.273E-01	2.048E-01	2.864E-01	2.646E-02	-0.444
I-135		288.45		5.666E+07	2.048E-01	Half-Life too short		
		417.63		1.149E+08	2.048E-01	Half-Life too short		
		546.56		4.904E+07	2.048E-01	Half-Life too short		
		836.80		-1.138E+07	2.048E-01	Half-Life too short		
		1038.76		3.752E+06	2.048E-01	Half-Life too short		
		1124.00		4.288E+08	2.048E-01	Half-Life too short		
		1131.51		4.804E+07	2.048E-01	Half-Life too short		
		1260.41	*	2.179E+06	2.048E-01	Half-Life too short		
		1457.56		1.570E+09	2.048E-01	Half-Life too short		
		1678.03		-2.303E+07	2.048E-01	Half-Life too short		
		1706.46		1.550E+08	2.048E-01	Half-Life too short		
		1791.20		-5.175E+06	2.048E-01	Half-Life too short		
CS-136		66.91		-1.699E-01	4.419E-01	6.567E-01	1.032E-01	-0.259
	+	86.29		4.497E+00	1.151E+00	1.542E+00	1.917E-01	2.916
		153.22		1.206E-01	6.646E-01	1.074E+00	1.107E-01	0.112
		163.89		-4.503E-01	1.148E+00	1.779E+00	1.633E-01	-0.253
		176.55		7.096E-02	3.782E-01	6.055E-01	5.091E-02	0.117
		273.65		6.783E-02	7.072E-01	7.507E-01	6.273E-02	0.090
		340.57		8.556E-01	1.699E-01	3.088E-01	2.233E-02	2.771
		818.51		1.107E-01	8.422E-02	1.525E-01	1.208E-02	0.726
		1048.07	*	-1.668E-02	1.298E-01	2.094E-01	1.485E-02	-0.080
		1235.34		1.930E-01	7.493E-01	1.268E+00	1.250E-01	0.152
BA-137M		661.65	*	-4.007E-02	5.213E-02	8.052E-02	6.567E-03	-0.498
CS-137		661.65	*	-4.236E-02	5.511E-02	8.512E-02	6.957E-03	-0.498
CE-139		165.85	*	-8.301E-03	3.428E-02	5.417E-02	4.247E-03	-0.153
BA-140		162.64		1.315E-01	8.005E-01	1.270E+00	1.112E-01	0.104
		304.84		1.146E+00	1.444E+00	2.140E+00	5.925E-01	0.535
		423.70		1.853E+00	2.219E+00	3.588E+00	1.143E+00	0.517
		537.32	*	-1.457E-01	3.056E-01	4.853E-01	1.592E-01	-0.300
LA-140	+	328.77		6.812E-01	4.160E-01	5.812E-01	4.472E-02	1.172
		432.53		4.534E-02	2.217E+00	3.740E+00	2.549E-01	0.012

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		487.03		3.062E-02	1.563E-01	2.636E-01	1.959E-02	0.116
		751.79		-1.400E+00	2.065E+00	3.140E+00	2.851E-01	-0.446
		815.85		-1.842E-01	3.746E-01	6.027E-01	5.420E-02	-0.306
		867.82		1.070E+00	1.732E+00	2.988E+00	2.450E-01	0.358
		919.63		-9.514E-01	3.802E+00	5.477E+00	5.315E-01	-0.174
		925.24		-2.248E-01	1.435E+00	2.287E+00	1.835E-01	-0.098
		1596.49	*	-3.340E-02	1.109E-01	1.742E-01	1.004E-02	-0.192
CE-141		145.44	*	2.152E-02	6.818E-02	1.111E-01	1.152E-02	0.194
CE-143		57.37		-1.711E-05	6.818E-02	Half-Life too short		
		231.56		-5.827E-04	6.818E-02	Half-Life too short		
		293.26	*	8.256E-05	6.818E-02	Half-Life too short		
		350.59		8.806E-03	6.818E-02	Half-Life too short		
		490.36		-1.992E-04	6.818E-02	Half-Life too short		
		664.57		4.968E-04	6.818E-02	Half-Life too short		
		721.93		2.030E-04	6.818E-02	Half-Life too short		
CE-144		80.11		8.835E-01	1.936E+00	2.710E+00	2.256E-01	0.326
		133.54	*	1.695E-01	2.670E-01	3.895E-01	6.751E-02	0.435
PM-144		476.78		-4.116E-02	8.473E-02	1.378E-01	1.059E-02	-0.299
		618.01		-1.788E-02	4.396E-02	6.794E-02	5.507E-03	-0.263
		696.49	*	3.117E-03	4.840E-02	7.861E-02	6.420E-03	0.040
		778.57		-3.260E+00	3.192E+00	4.984E+00	4.010E-01	-0.654
PR-144		696.49	*	2.110E-01	3.276E+00	5.320E+00	4.344E-01	0.040
		1489.15		-6.852E-01	1.643E+01	2.679E+01	1.543E+00	-0.026
PM-146		453.90	*	2.434E-02	5.282E-02	9.077E-02	8.238E-03	0.268
		633.02		-3.638E-02	1.865E+00	3.039E+00	1.131E+00	-0.012
		735.90		-1.858E-01	2.255E-01	3.320E-01	9.450E-02	-0.560
		747.13		-6.644E-02	1.316E-01	2.033E-01	2.792E-02	-0.327
ND-147	+	91.11		6.042E-01	2.425E-01	4.032E-01	3.636E-02	1.498
		319.41		8.950E-01	3.439E+00	5.693E+00	4.129E-01	0.157
		439.89		5.695E+00	6.396E+00	1.122E+01	7.094E-01	0.508
		531.02	*	-2.939E-02	5.984E-01	9.885E-01	1.399E-01	-0.030
PM-149		285.90	*	-4.403E+01	5.343E+01	8.408E+01	1.262E+01	-0.524
EU-152		121.78		5.552E-02	8.349E-02	1.365E-01	1.847E-02	0.407
		244.69		1.855E-01	4.102E-01	6.174E-01	4.867E-02	0.300
		344.27	*	-1.295E-01	1.377E-01	1.817E-01	1.362E-02	-0.713
		443.98		-6.414E-01	1.201E+00	1.963E+00	1.249E-01	-0.327
		778.89		-1.855E-01	3.556E-01	5.751E-01	4.625E-02	-0.323
		867.32		-5.903E-01	1.235E+00	1.984E+00	1.526E-01	-0.298
	+	964.01		1.093E+00	5.160E-01	7.151E-01	5.142E-02	1.529
		1085.78		-4.478E-01	5.609E-01	8.520E-01	5.385E-02	-0.526
		1112.02		3.516E-01	5.343E-01	8.182E-01	4.983E-02	0.430
		1407.95		1.224E-01	2.542E-01	4.373E-01	2.508E-02	0.280
GD-153		69.67		-2.825E-01	1.109E+00	1.748E+00	1.563E-01	-0.162
	+	83.37		1.945E+01	1.426E+01	2.016E+01	1.641E+00	0.965
		97.43	*	-1.088E-01	8.803E-02	1.225E-01	1.115E-02	-0.888
		103.18		-1.886E-01	1.115E-01	1.709E-01	1.688E-02	-1.104
EU-154		123.07		-2.957E-02	5.903E-02	9.258E-02	1.349E-02	-0.319
		247.94		-4.900E-03	4.341E-01	6.709E-01	7.329E-02	-0.007
		591.81		-8.825E-01	8.138E-01	1.231E+00	1.351E-01	-0.717

---- Non-Identified Nuclides ----

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		723.30		-1.107E-01	2.792E-01	3.725E-01	3.391E-02	-0.297
		756.87		-2.790E-01	1.096E+00	1.727E+00	2.004E-01	-0.162
		873.19		-1.630E-01	3.941E-01	6.326E-01	7.332E-02	-0.258
		996.32		1.885E-01	5.450E-01	9.126E-01	1.555E-01	0.207
		1004.76		3.048E-02	3.121E-01	5.144E-01	5.378E-02	0.059
		1274.45	*	1.818E-02	1.684E-01	2.822E-01	2.607E-02	0.064
EU-155		48.70		1.545E-01	4.849E-01	7.608E-01	5.742E-02	0.203
		60.01		8.480E-01	2.256E+00	3.499E+00	3.350E-01	0.242
	+	86.54		4.668E-01	1.111E-01	1.665E-01	1.342E-02	2.804
		105.31	*	2.252E-01	1.143E-01	1.964E-01	2.015E-02	1.147
TB-160	+	86.79		1.221E+00	2.902E-01	4.464E-01	3.551E-02	2.736
		197.04		2.542E-02	5.978E-01	1.014E+00	8.030E-02	0.025
		215.65		-2.387E-01	7.912E-01	1.316E+00	1.044E-01	-0.181
		298.57		2.543E-01	1.957E-01	2.313E-01	1.736E-02	1.100
		879.36	*	7.956E-02	1.704E-01	2.924E-01	2.230E-02	0.272
		962.29		3.983E-01	8.010E-01	1.184E+00	8.528E-02	0.336
	+	966.15		7.350E-01	3.469E-01	5.609E-01	4.027E-02	1.310
		1177.93		1.085E-01	4.918E-01	8.057E-01	4.434E-02	0.135
		1271.85		-6.336E-01	9.654E-01	1.523E+00	8.572E-02	-0.416
HO-166M		80.57		7.644E-02	2.876E-01	3.505E-01	2.909E-02	0.218
		184.41		7.989E-02	4.731E-02	7.137E-02	5.631E-03	1.119
		280.46		4.746E-02	1.119E-01	1.664E-01	1.277E-02	0.285
		410.95		3.598E-01	3.162E-01	5.360E-01	3.236E-02	0.671
		711.68	*	-3.705E-02	8.613E-02	1.349E-01	1.100E-02	-0.275
		752.31		-1.459E-01	3.704E-01	5.769E-01	4.675E-02	-0.253
		810.29		2.454E-02	8.365E-02	1.241E-01	9.861E-03	0.198
TM-171		51.35		-3.554E+00	7.506E+00	1.266E+01	1.019E+00	-0.281
		52.39		-2.323E+00	4.437E+00	7.279E+00	6.003E-01	-0.319
		59.40		3.197E+00	1.170E+01	1.809E+01	1.735E+00	0.177
		66.72	*	-6.991E+00	1.790E+01	2.664E+01	2.431E+00	-0.262
LU-176	+	88.36		9.201E-01	2.186E-01	3.444E-01	2.732E-02	2.672
		201.83		-4.811E-03	3.092E-02	5.200E-02	4.120E-03	-0.093
		306.84	*	-6.346E-03	3.002E-02	4.495E-02	3.332E-03	-0.141
		401.10		1.049E+00	8.865E+00	1.431E+01	8.498E-01	0.073
LU-177		112.95		-7.901E-01	1.445E+00	2.274E+00	2.561E-01	-0.348
	+	208.36	*	2.605E+00	1.354E+00	1.715E+00	1.360E-01	1.519
LU-177M		52.97		3.622E-01	4.755E-01	8.084E-01	6.756E-02	0.448
		54.07		1.635E-01	2.670E-01	4.519E-01	3.871E-02	0.362
		61.30		6.193E-01	7.035E-01	1.107E+00	1.050E-01	0.559
		121.62		2.609E-01	4.228E-01	6.910E-01	8.688E-02	0.378
		147.16		-5.907E-01	7.372E-01	1.146E+00	1.152E-01	-0.515
		171.86		4.977E-02	5.474E-01	8.747E-01	6.868E-02	0.057
		218.09		-7.526E-01	9.287E-01	1.511E+00	1.198E-01	-0.498
		268.79		9.956E-01	1.005E+00	1.543E+00	1.198E-01	0.645
		319.02		-2.663E-02	3.074E-01	5.004E-01	3.632E-02	-0.053
		367.43		-7.764E-01	1.087E+00	1.682E+00	1.078E-01	-0.461
		413.65	*	-3.282E-01	2.380E-01	3.429E-01	2.080E-02	-0.957
HF-181		56.28		-2.229E-01	3.098E-01	5.156E-01	4.635E-02	-0.432
		57.53		-1.992E-02	1.776E-01	3.014E-01	2.781E-02	-0.066

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		65.20		1.046E+00	5.831E-01	9.222E-01	8.506E-02	1.134
		133.02		9.717E-03	8.338E-02	1.194E-01	1.381E-02	0.081
		136.25		2.310E-01	5.090E-01	8.364E-01	9.388E-02	0.276
		345.85		-2.230E-02	3.629E-01	3.672E-01	2.509E-02	-0.061
		482.03	*	-2.944E-03	5.322E-02	8.864E-02	5.955E-03	-0.033
W-181		56.28		-8.925E-02	1.242E-01	2.068E-01	1.859E-02	-0.432
		57.53		-8.014E-03	7.125E-02	1.209E-01	1.116E-02	-0.066
		65.20	*	4.163E-01	2.321E-01	3.671E-01	3.386E-02	1.134
TA-182		67.75		-5.533E-03	6.792E-02	1.083E-01	9.813E-03	-0.051
		100.10		2.107E-01	1.826E-01	3.054E-01	2.888E-02	0.690
		152.43		-2.442E-01	3.746E-01	5.849E-01	5.529E-02	-0.418
		222.10		3.010E-01	3.889E-01	6.706E-01	5.317E-02	0.449
		1001.68		-2.355E+00	3.152E+00	4.825E+00	3.357E-01	-0.488
	+	1121.28		9.178E-01	3.303E-01	4.602E-01	2.764E-02	1.994
		1189.05		1.846E-01	4.319E-01	7.419E-01	4.095E-02	0.249
		1221.42	*	6.210E-02	2.803E-01	4.741E-01	2.638E-02	0.131
		1230.97		-1.603E-01	6.815E-01	1.121E+00	6.251E-02	-0.143
RE-183		57.98		-4.041E-02	7.255E-02	1.213E-01	1.130E-02	-0.333
		59.32		1.025E-02	4.688E-02	7.238E-02	6.929E-03	0.142
		67.20		-5.736E-02	1.260E-01	1.869E-01	1.700E-02	-0.307
		162.32	*	1.538E-02	1.292E-01	2.046E-01	1.693E-02	0.075
	+	208.81		2.889E+00	1.502E+00	1.953E+00	1.549E-01	1.479
		291.72		-1.127E+00	1.194E+00	1.613E+00	1.222E-01	-0.699
RE-184		57.98		-1.508E-01	2.709E-01	4.528E-01	4.218E-02	-0.333
		59.32		3.822E-02	1.749E-01	2.700E-01	2.585E-02	0.142
		67.20		-2.141E-01	4.701E-01	6.975E-01	6.344E-02	-0.307
		161.27		1.380E-02	4.129E-01	6.613E-01	5.558E-02	0.021
		216.55		-1.868E-02	2.865E-01	4.810E-01	3.815E-02	-0.039
		252.85	*	2.003E-01	2.616E-01	4.485E-01	3.521E-02	0.447
		318.01		-1.525E-01	5.296E-01	8.534E-01	6.205E-02	-0.179
		792.07		-1.590E+00	1.522E+00	1.964E+00	1.572E-01	-0.810
		903.28		1.900E+00	1.561E+00	2.476E+00	1.857E-01	0.767
		920.93		-4.336E-01	6.622E-01	9.840E-01	7.299E-02	-0.441
OS-185		59.72		4.015E-02	1.302E-01	2.015E-01	1.933E-02	0.199
		61.14		7.759E-02	7.539E-02	1.192E-01	1.132E-02	0.651
		69.30		-1.280E-01	1.877E-01	3.052E-01	2.735E-02	-0.420
		592.07		-3.757E+00	3.245E+00	4.899E+00	3.748E-01	-0.767
		646.12	*	-1.214E-02	5.694E-02	9.141E-02	7.357E-03	-0.133
		717.42		1.074E-01	1.237E+00	2.008E+00	1.637E-01	0.053
		874.81		-6.062E-01	7.401E-01	1.146E+00	8.773E-02	-0.529
		880.27		3.363E-01	9.924E-01	1.685E+00	1.285E-01	0.200
RE-188		155.03	*	1.568E-01	1.921E-01	3.170E-01	2.901E-02	0.495
		477.96		4.780E-01	3.814E+00	6.418E+00	4.288E-01	0.074
		633.10		-1.093E-01	3.687E+00	6.004E+00	4.777E-01	-0.018
W-188	+	63.58		7.780E+01	4.348E+01	5.900E+01	5.505E+00	1.319
		227.08		-5.226E+00	1.379E+01	2.278E+01	1.805E+00	-0.229
		290.67	*	3.732E+00	9.093E+00	1.349E+01	1.023E+00	0.277
IR-192	+	295.96		1.440E+00	2.365E-01	3.355E-01	2.552E-02	4.291
		308.46		-2.797E-02	1.075E-01	1.738E-01	1.294E-02	-0.161

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		316.51	*	-2.036E-02	4.063E-02	6.477E-02	4.738E-03	-0.314
		468.07		3.695E-02	9.157E-02	1.375E-01	1.015E-02	0.269
		604.41		4.119E-02	6.985E-01	9.949E-01	1.239E-01	0.041
		612.46		7.305E+00	1.479E+00	2.475E+00	2.277E-01	2.952
AU-195	+	65.12		2.724E-01	1.522E-01	1.743E-01	1.608E-02	1.563
		66.83		-2.286E-02	5.904E-02	8.785E-02	8.011E-03	-0.260
	+	75.70		1.497E+00	2.289E-01	3.475E-01	2.981E-02	4.308
		98.88	*	2.717E-01	2.301E-01	3.853E-01	3.581E-02	0.705
	+	129.76		5.971E+00	4.324E+00	5.555E+00	6.605E-01	1.075
TL-200		367.94	*	-6.656E-05	4.324E+00	Half-Life too short		
		579.30		-6.490E-05	4.324E+00	Half-Life too short		
		828.27		8.026E-04	4.324E+00	Half-Life too short		
		1205.75		4.289E-04	4.324E+00	Half-Life too short		
TL-201		68.90		-3.917E-02	1.749E+00	2.948E+00	2.650E-01	-0.013
		70.82		-3.091E-01	1.207E+00	1.793E+00	1.590E-01	-0.172
		80.30		1.169E+00	2.767E+00	3.867E+00	3.215E-01	0.302
		135.34		-2.252E+00	1.760E+01	2.837E+01	3.212E+00	-0.079
		167.43	*	2.591E+00	4.749E+00	7.739E+00	6.065E-01	0.335
TL-202		68.90		-5.175E-03	2.310E-01	3.895E-01	3.501E-02	-0.013
		70.82		-4.073E-02	1.590E-01	2.363E-01	2.095E-02	-0.172
		80.30		1.541E-01	3.647E-01	5.097E-01	4.237E-02	0.302
		439.56	*	6.866E-02	7.711E-02	1.353E-01	8.547E-03	0.508
BI-207		72.80		1.634E-02	1.398E-01	2.121E-01	1.856E-02	0.077
	+	74.97		8.375E-01	1.280E-01	1.840E-01	1.586E-02	4.551
	+	84.90		2.532E-01	1.857E-01	2.746E-01	2.212E-02	0.922
		569.67		7.136E-03	4.011E-02	6.674E-02	4.988E-03	0.107
		1063.62	*	1.530E-03	7.275E-02	1.186E-01	7.715E-03	0.013
		1770.23		6.471E-01	8.311E-01	1.332E+00	7.559E-02	0.486
TL-207		81.07		-2.801E-02	2.323E-01	2.767E-01	2.288E-02	-0.101
	+	83.78		1.669E-01	1.224E-01	1.772E-01	1.438E-02	0.942
		94.90		1.104E+00	2.673E-01	4.299E-01	3.769E-02	2.568
		122.32		2.609E-03	1.997E+00	3.201E+00	4.182E-01	0.001
		144.24		1.291E-01	8.076E-01	1.294E+00	1.454E-01	0.100
		154.21		1.355E-01	4.515E-01	7.326E-01	7.365E-02	0.185
	+	269.46		5.785E-01	3.489E-01	3.935E-01	3.131E-02	1.470
		323.87	*	-2.972E-01	9.066E-01	1.265E+00	2.157E-01	-0.235
	+	338.28		1.209E+01	2.821E+00	3.079E+00	3.453E-01	3.925
		445.03		-1.300E+00	2.854E+00	4.679E+00	4.961E-01	-0.278
PO-209		260.50		-5.470E+00	1.145E+01	1.863E+01	1.455E+00	-0.294
		262.80		-4.323E-02	3.162E+01	5.170E+01	4.032E+00	-0.001
		896.60	*	1.622E+00	1.063E+01	1.777E+01	1.338E+00	0.091
PB-211		404.84	*	-4.520E-01	1.259E+00	1.926E+00	1.201E+00	-0.235
		427.08		-7.201E-01	2.669E+00	4.127E+00	2.553E+00	-0.174
		831.96		-7.700E-01	1.679E+00	2.591E+00	1.621E+00	-0.297
BI-212	+	727.18	*	1.472E+00	6.024E-01	8.568E-01	8.225E-02	1.718
		785.46		3.021E+00	2.583E+00	4.433E+00	3.557E-01	0.682
		1620.62		2.120E+00	1.729E+00	3.204E+00	1.844E-01	0.662
PO-215		81.07		-2.801E-02	2.323E-01	2.767E-01	2.288E-02	-0.101
	+	83.78		1.669E-01	1.224E-01	1.772E-01	1.438E-02	0.942

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		1.104E+00	2.673E-01	4.299E-01	3.769E-02	2.568
		122.32		2.609E-03	1.997E+00	3.201E+00	4.182E-01	0.001
		144.24		1.291E-01	8.076E-01	1.294E+00	1.454E-01	0.100
		154.21		1.355E-01	4.515E-01	7.326E-01	7.365E-02	0.185
	+	269.46		5.785E-01	3.489E-01	3.935E-01	3.131E-02	1.470
		323.87	*	-2.972E-01	9.066E-01	1.265E+00	2.157E-01	-0.235
	+	338.28		1.209E+01	2.821E+00	3.079E+00	3.453E-01	3.925
		445.03		-1.300E+00	2.854E+00	4.679E+00	4.961E-01	-0.278
RN-219	+	271.23		7.422E-01	4.495E-01	5.345E-01	5.129E-02	1.388
		401.81	*	-9.587E-02	5.465E-01	8.677E-01	1.186E-01	-0.110
RN-220		549.76	*	-1.123E+01	3.436E+01	5.564E+01	4.068E+00	-0.202
RA-223		81.07		-2.801E-02	2.323E-01	2.767E-01	2.288E-02	-0.101
	+	83.78		1.669E-01	1.224E-01	1.772E-01	1.438E-02	0.942
		94.90		1.104E+00	2.673E-01	4.299E-01	3.769E-02	2.568
		122.32		2.609E-03	1.997E+00	3.201E+00	4.182E-01	0.001
		144.24		1.291E-01	8.076E-01	1.294E+00	1.454E-01	0.100
		154.21		1.355E-01	4.515E-01	7.326E-01	7.365E-02	0.185
	+	269.46		5.785E-01	3.489E-01	3.935E-01	3.131E-02	1.470
		323.87	*	-2.972E-01	9.066E-01	1.265E+00	2.157E-01	-0.235
	+	338.28		1.209E+01	2.821E+00	3.079E+00	3.453E-01	3.925
		445.03		-1.300E+00	2.854E+00	4.679E+00	4.961E-01	-0.278
AC-227		79.80		3.470E-01	1.409E+00	2.118E+00	4.531E-01	0.164
		236.00		3.822E-01	2.761E-01	4.310E-01	5.065E-02	0.887
		256.20	*	-6.692E-02	4.424E-01	7.308E-01	1.090E-01	-0.092
		286.10		-1.312E+00	1.814E+00	2.880E+00	3.622E-01	-0.456
	+	299.80		4.993E+00	2.765E+00	3.150E+00	5.344E-01	1.585
		304.40		2.191E+00	2.357E+00	3.560E+00	6.378E-01	0.615
		334.20		-1.792E+00	3.352E+00	4.225E+00	7.926E-01	-0.424
TH-227		79.80		3.470E-01	1.409E+00	2.118E+00	4.589E-01	0.164
	+	94.00		1.151E+01	3.928E+00	4.436E+00	9.667E-01	2.594
		236.00		3.822E-01	2.754E-01	4.310E-01	4.539E-02	0.887
		256.20	*	-6.692E-02	4.425E-01	7.308E-01	1.294E-01	-0.092
		286.10		-1.312E+00	2.235E+00	2.880E+00	2.888E+00	-0.456
	+	299.80		4.993E+00	2.765E+00	3.150E+00	5.344E-01	1.585
		304.40		2.191E+00	2.357E+00	3.560E+00	6.378E-01	0.615
		334.20		-1.792E+00	3.352E+00	4.225E+00	7.926E-01	-0.424
TH-229	+	85.43		2.499E-01	1.833E-01	2.701E-01	2.168E-02	0.925
	+	88.47		5.296E-01	1.258E-01	1.967E-01	1.563E-02	2.692
		100.00		2.363E-01	1.927E-01	3.226E-01	3.047E-02	0.732
		193.63	*	1.378E-01	5.584E-01	9.551E-01	7.555E-02	0.144
	+	210.97		2.314E+00	1.203E+00	1.565E+00	1.241E-01	1.478
PA-231		283.67	*	4.302E-01	1.829E+00	2.950E+00	4.323E-01	0.146
	+	301.29		1.997E+00	1.078E+00	1.304E+00	1.496E-01	1.531
TH-231		81.07		-2.801E-02	2.323E-01	2.767E-01	2.288E-02	-0.101
	+	83.78		1.669E-01	1.224E-01	1.772E-01	1.438E-02	0.942
		94.90		1.104E+00	2.673E-01	4.299E-01	3.769E-02	2.568
		122.32		2.609E-03	1.997E+00	3.201E+00	4.182E-01	0.001
		144.24		1.291E-01	8.076E-01	1.294E+00	1.454E-01	0.100
		154.21		1.355E-01	4.515E-01	7.326E-01	7.365E-02	0.185

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.785E-01	3.489E-01	3.935E-01	3.131E-02	1.470
		323.87	*	-2.972E-01	9.066E-01	1.265E+00	2.157E-01	-0.235
	+	338.28		1.209E+01	2.821E+00	3.079E+00	3.453E-01	3.925
		445.03		-1.300E+00	2.854E+00	4.679E+00	4.961E-01	-0.278
U-231	+	84.21		4.960E+00	3.637E+00	5.347E+00	4.328E-01	0.928
	+	92.29		7.840E+00	2.169E+00	3.019E+00	2.545E-01	2.597
		95.87	*	-5.646E-01	7.707E-01	1.104E+00	9.815E-02	-0.512
		108.00		-1.601E+00	1.516E+00	2.386E+00	2.517E-01	-0.671
PA-233	+	75.28		2.444E+01	4.858E+00	5.428E+00	8.325E-01	4.503
	+	86.59		7.594E+00	2.641E+00	2.722E+00	7.245E-01	2.790
	+	300.12		1.392E+00	7.602E-01	8.790E-01	1.253E-01	1.584
		311.98	*	1.530E-02	7.720E-02	1.276E-01	9.746E-03	0.120
		340.50		4.939E+00	1.444E+00	1.714E+00	3.991E-01	2.881
		398.62		2.552E+00	2.745E+00	4.499E+00	1.165E+00	0.567
		415.76		-1.714E-02	2.099E+00	3.354E+00	6.932E-01	-0.005
PA-234	+	63.00		2.308E+00	1.323E+00	1.697E+00	2.703E-01	1.360
	+	94.67		1.026E+00	2.982E-01	3.345E-01	4.175E-02	3.068
		98.44		1.396E-02	9.277E-02	1.507E-01	8.423E-02	0.093
		99.86		6.762E-01	4.892E-01	8.218E-01	7.746E-02	0.823
		111.00		-6.805E-03	1.974E-01	3.235E-01	4.488E-02	-0.021
	+	131.20		2.258E-01	1.635E-01	2.000E-01	2.348E-02	1.129
		152.70		-2.551E-01	3.709E-01	5.752E-01	1.005E-01	-0.444
	+	186.00		5.414E+00	3.191E+00	3.166E+00	9.820E-01	1.710
		226.40		4.638E-02	4.451E-01	7.498E-01	9.567E-02	0.062
		227.20		-2.747E-01	4.771E-01	7.816E-01	6.192E-02	-0.351
		248.90		-2.237E-01	9.209E-01	1.517E+00	3.357E-01	-0.147
		293.70		4.130E+00	1.202E+00	1.706E+00	2.865E-01	2.422
		369.80		8.874E-03	1.032E+00	1.668E+00	3.500E-01	0.005
		568.70		5.328E-01	1.303E+00	2.197E+00	1.640E-01	0.243
		569.50		6.331E-02	3.559E-01	5.923E-01	4.426E-02	0.107
		574.00		-2.932E-01	2.021E+00	3.298E+00	2.476E-01	-0.089
		699.00		-6.596E-01	1.052E+00	1.598E+00	3.016E-01	-0.413
		706.10		1.809E+00	1.738E+00	2.663E+00	1.185E+00	0.679
		733.00		9.776E-04	5.953E-01	8.257E-01	1.818E-01	0.001
		742.81		3.368E+00	3.062E+00	3.657E+00	2.456E+00	0.921
		796.30		2.243E+00	1.381E+00	2.295E+00	6.164E-01	0.977
		805.60		1.377E+00	1.585E+00	2.390E+00	7.282E-01	0.576
		819.60		9.457E-01	1.680E+00	2.845E+00	1.078E+00	0.332
		826.30		-6.954E-01	1.144E+00	1.755E+00	7.827E-01	-0.396
		831.60		-2.080E-01	8.365E-01	1.366E+00	4.049E-01	-0.152
		876.40		-1.053E+00	1.536E+00	1.673E+00	1.719E+00	-0.630
		880.51		8.968E-02	3.622E-01	6.112E-01	4.658E-02	0.147
		883.24		-3.185E-01	4.500E-01	5.985E-01	4.016E-01	-0.532
		899.00		4.529E-01	1.205E+00	2.018E+00	8.780E-01	0.224
		925.00		5.926E-01	1.596E+00	2.703E+00	2.000E-01	0.219
		926.50		1.969E-01	2.584E-01	4.146E-01	1.032E-01	0.475
		946.00	*	-1.471E-01	4.930E-01	7.316E-01	1.331E-01	-0.201
		949.00		7.033E-01	6.559E-01	1.153E+00	8.387E-02	0.610
		980.50		-1.423E-01	1.005E+00	1.631E+00	1.157E-01	-0.087

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-1.280E+00	1.709E+00	2.225E+00	1.441E+00	-0.575
PA-234M		766.41		1.806E+01	3.033E+01	4.126E+01	3.161E+01	0.438
		1001.03	*	-6.235E+00	1.034E+01	1.598E+01	1.591E+00	-0.390
U-235	+	89.95		2.773E+00	1.380E+00	1.754E+00	5.390E-01	1.581
	+	93.35		3.580E+00	1.375E+00	1.451E+00	4.064E-01	2.467
		105.00		1.781E+00	1.210E+00	1.880E+00	5.698E-01	0.948
		143.76	*	8.711E-02	2.486E-01	4.005E-01	7.395E-02	0.217
		163.35		-2.182E-01	5.696E-01	8.815E-01	1.663E-01	-0.248
	+	185.71		2.005E-01	1.017E-01	1.174E-01	9.266E-03	1.708
		205.31		1.969E-02	6.402E-01	9.479E-01	1.780E-01	0.021
NP-236	+	94.67		7.782E-01	2.153E-01	2.541E-01	2.220E-02	3.062
		98.44		1.045E-02	6.989E-02	1.139E-01	1.052E-02	0.092
		111.00		-5.147E-03	1.493E-01	2.447E-01	2.687E-02	-0.021
		160.31	*	8.344E-03	9.398E-02	1.509E-01	1.286E-02	0.055
NP-239		99.55		2.620E-01	1.640E-01	2.767E-01	2.596E-02	0.947
		117.00	*	-1.916E-02	2.007E-01	3.270E-01	3.880E-02	-0.059
	+	209.75		2.331E+00	1.212E+00	1.603E+00	1.271E-01	1.454
		228.18		-1.031E-01	2.452E-01	4.042E-01	3.202E-02	-0.255
	+	277.60		4.410E-01	2.722E-01	3.738E-01	2.878E-02	1.180
		334.30		-9.769E-01	1.893E+00	2.401E+00	1.688E-01	-0.407
AM-241		59.54	*	2.535E-02	6.876E-02	1.067E-01	1.085E-02	0.238
CM-243		99.55		2.695E-01	1.688E-01	2.846E-01	2.671E-02	0.947
		103.76	*	-1.187E-01	1.030E-01	1.621E-01	1.614E-02	-0.733
		117.00		-1.970E-02	2.064E-01	3.363E-01	3.991E-02	-0.059
	+	209.75		2.297E+00	1.194E+00	1.580E+00	1.253E-01	1.454
		228.18		-1.041E-01	2.478E-01	4.083E-01	3.235E-02	-0.255
	+	277.60		4.445E-01	2.744E-01	3.768E-01	2.901E-02	1.180
CM-247	+	278.00		1.829E+00	1.129E+00	1.560E+00	1.200E-01	1.173
		287.40		2.775E-01	1.423E+00	2.367E+00	1.803E-01	0.117
		402.60	*	-1.785E-02	4.899E-02	7.696E-02	4.583E-03	-0.232
CF-249		252.85		7.584E-01	9.905E-01	1.698E+00	1.333E-01	0.447
		333.44		2.611E-02	2.657E-01	3.214E-01	2.264E-02	0.081
		387.95	*	2.828E-02	5.030E-02	8.335E-02	4.949E-03	0.339
CF-251		176.60	*	4.259E-02	1.459E-01	2.346E-01	1.846E-02	0.182
		227.00		-1.284E-01	4.244E-01	7.034E-01	5.573E-02	-0.183
		285.00		-2.342E+00	2.076E+00	3.234E+00	2.471E-01	-0.724

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504005      *
* Acquisition date :  7-JUL-2009 08:50:02 Detector SN#     :               *
* Detector ID        : GAM13               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:02.00     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232504005           Analyst initials: MXR1         *
* Batch Number       : 881220               Sample Quantity : 1.3804E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                            *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.337E+01	2.780E+00	6.783E-01	0.000E+00
CD-109	3.933E+00	9.159E-01	1.130E+00	0.000E+00
SN-126	3.879E-01	9.032E-02	1.210E-01	0.000E+00
HG-203	9.747E-02	5.899E-02	7.816E-02	0.000E+00
TL-208	6.690E-01	1.046E-01	8.335E-02	0.000E+00
BI-210	1.355E+00	6.920E-01	9.502E-01	0.000E+00
PB-210	1.355E+00	6.920E-01	9.502E-01	0.000E+00
PO-210	1.355E+00	6.900E-01	9.502E-01	0.000E+00
BI-211	4.831E+00	6.669E-01	4.354E-01	0.000E+00
PB-212	2.149E+00	2.285E-01	1.058E-01	0.000E+00
PO-212	2.149E+00	2.285E-01	1.058E-01	0.000E+00
BI-214	1.427E+00	2.581E-01	1.549E-01	0.000E+00
PB-214	1.680E+00	2.474E-01	1.518E-01	0.000E+00
PO-214	1.680E+00	2.474E-01	1.518E-01	0.000E+00
PO-216	2.149E+00	2.285E-01	1.058E-01	0.000E+00
PO-218	1.680E+00	2.474E-01	1.518E-01	0.000E+00
RA-224	6.065E+00	1.459E+00	1.204E+00	0.000E+00
RA-226	1.427E+00	2.581E-01	1.549E-01	0.000E+00
AC-228	2.067E+00	4.648E-01	3.155E-01	0.000E+00
RA-228	2.067E+00	4.648E-01	3.155E-01	0.000E+00
TH-228	2.149E+00	2.285E-01	1.058E-01	0.000E+00
TH-230	1.427E+00	2.581E-01	1.549E-01	0.000E+00
TH-232	2.067E+00	4.648E-01	3.155E-01	0.000E+00
TH-234	1.980E+00	1.127E+00	1.145E+00	0.000E+00
U-234	1.427E+00	2.581E-01	1.549E-01	0.000E+00
NP-237	1.139E+00	3.513E-01	3.543E-01	0.000E+00
U-238	1.980E+00	1.127E+00	1.145E+00	0.000E+00
AM-243	4.666E-01	6.991E-02	7.003E-02	0.000E+00
ANH-511	2.268E-01	7.721E-02	5.826E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line Activity	K.L. Act error	MDA

Nuclide	(pCi/GRAM	) Ided	(pCi/GRAM	)	
BE-7	-2.807E-02	3.841E-01	6.694E-01	0.000E+00	NOT IDENT.
NA-22	8.639E-03	5.918E-02	1.021E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.068E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.073E-02	4.272E-02	6.508E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.570E-02	7.680E-02	0.000E+00	FAIL ABUN
SC-46	4.708E-02	5.130E-02	9.315E-02	0.000E+00	FAIL ABUN
V-48	2.607E-03	9.615E-02	1.400E-01	0.000E+00	NOT IDENT.
CR-51	2.258E-01	4.087E-01	7.227E-01	0.000E+00	NOT IDENT.
MN-52	1.596E-02	2.227E-01	3.779E-01	0.000E+00	FAIL ABUN
MN-54	-3.015E-02	4.997E-02	8.276E-02	0.000E+00	NOT IDENT.
CO-56	-8.619E-03	5.294E-02	9.015E-02	0.000E+00	NOT IDENT.
CO-57	8.029E-03	2.816E-02	4.896E-02	0.000E+00	NOT IDENT.
CO-58	-3.593E-02	5.598E-02	7.770E-02	0.000E+00	NOT IDENT.
FE-59	-1.301E-01	1.237E-01	1.895E-01	0.000E+00	NOT IDENT.
CO-60	4.622E-02	5.267E-02	9.385E-02	0.000E+00	NOT IDENT.
ZN-65	-1.303E-01	1.540E-01	2.004E-01	0.000E+00	NOT IDENT.
GE-68	7.203E-01	1.698E+00	2.932E+00	0.000E+00	NOT IDENT.
AS-73	2.437E-01	2.425E-01	4.516E-01	0.000E+00	NOT IDENT.
AS-74	3.381E-02	1.084E-01	1.887E-01	0.000E+00	NOT IDENT.
SE-75	9.238E-03	5.177E-02	8.745E-02	0.000E+00	NOT IDENT.
BR-77	-4.500E+00	6.719E+00	1.118E+01	0.000E+00	FAIL ABUN
SR-82	-1.787E-01	5.129E-01	8.304E-01	0.000E+00	NOT IDENT.
RB-83	-1.346E-02	8.325E-02	1.430E-01	0.000E+00	NOT IDENT.
RB-84	-1.553E-02	8.785E-02	1.442E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.069E+01	1.879E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.353E-02	9.410E-02	0.000E+00	NOT IDENT.
RB-86	-1.556E-01	1.011E+00	1.674E+00	0.000E+00	NOT IDENT.
Y-88	-7.847E-03	3.999E-02	6.542E-02	0.000E+00	NOT IDENT.
ZR-88	-3.500E-02	3.784E-02	6.050E-02	0.000E+00	NOT IDENT.
Y-91	2.303E+01	2.406E+01	4.377E+01	0.000E+00	NOT IDENT.
NB-94	-1.614E-03	4.877E-02	8.170E-02	0.000E+00	NOT IDENT.
NB-95	3.351E-02	6.269E-02	9.827E-02	0.000E+00	NOT IDENT.
NB-95M	1.854E-01	1.415E-01	2.347E-01	0.000E+00	NOT IDENT.
ZR-95	9.840E-03	9.394E-02	1.575E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.441E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.559E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.750E+00	1.006E+01	1.648E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	8.414E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.704E-03	3.595E-02	6.395E-02	0.000E+00	NOT IDENT.
RH-102	-2.751E-02	3.599E-02	6.032E-02	0.000E+00	NOT IDENT.
RU-103	-2.513E-02	4.771E-02	8.045E-02	0.000E+00	FAIL ABUN
RH-106	-4.385E-02	4.062E-01	6.863E-01	0.000E+00	FAIL ABUN
RU-106	-4.385E-02	4.061E-01	6.863E-01	0.000E+00	FAIL ABUN
AG-108M	2.825E-02	3.943E-02	7.205E-02	0.000E+00	NOT IDENT.
AG-110M	-3.973E-02	4.752E-02	7.587E-02	0.000E+00	NOT IDENT.
IN-111	4.834E-02	7.214E-01	1.127E+00	0.000E+00	NOT IDENT.
IN-113M	1.363E-02	5.367E-02	9.190E-02	0.000E+00	NOT IDENT.
SN-113	1.363E-02	5.367E-02	9.190E-02	0.000E+00	NOT IDENT.
IN-114M	2.825E-02	2.258E-01	3.397E-01	0.000E+00	NOT IDENT.
CD-115	-1.269E+00	6.564E+00	1.123E+01	0.000E+00	NOT IDENT.
SN-117M	-6.084E-03	5.615E-02	9.573E-02	0.000E+00	NOT IDENT.
SB-122	6.706E-01	1.486E+00	2.621E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.805E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-5.303E-03	3.205E-02	5.451E-02	0.000E+00	NOT IDENT.
I-124	-7.832E-03	6.964E-01	1.028E+00	0.000E+00	NOT IDENT.
SB-124	4.159E-02	8.971E-02	1.585E-01	0.000E+00	FAIL ABUN
SB-125	-7.949E-02	1.106E-01	1.884E-01	0.000E+00	FAIL ABUN
TE-125M	-5.501E+00	9.551E+00	1.652E+01	0.000E+00	NOT IDENT.
I-126	8.697E-02	2.269E-01	3.917E-01	0.000E+00	NOT IDENT.
SB-126	1.651E-01	1.803E-01	2.943E-01	0.000E+00	FAIL ABUN
SB-127	7.140E-01	1.223E+00	2.133E+00	0.000E+00	NOT IDENT.
XE-127	-1.213E-02	4.760E-02	8.486E-02	0.000E+00	NOT IDENT.
I-131	6.124E-02	1.107E-01	1.939E-01	0.000E+00	NOT IDENT.
TE-132	-1.224E-01	4.527E-01	7.968E-01	0.000E+00	NOT IDENT.
BA-133	-1.662E-02	6.088E-02	9.122E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	1.208E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.106E-01	6.281E-02	1.187E-01	0.000E+00	NOT IDENT.
CS-135	-1.273E-01	2.007E-01	2.971E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.637E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.668E-02	1.272E-01	2.115E-01	0.000E+00	FAIL ABUN
BA-137M	-4.007E-02	5.109E-02	8.207E-02	0.000E+00	NOT IDENT.
CS-137	-4.236E-02	5.400E-02	8.676E-02	0.000E+00	NOT IDENT.
CE-139	-8.301E-03	3.359E-02	5.671E-02	0.000E+00	NOT IDENT.
BA-140	-1.457E-01	2.995E-01	4.967E-01	0.000E+00	NOT IDENT.
LA-140	-3.340E-02	1.087E-01	1.744E-01	0.000E+00	FAIL ABUN
CE-141	2.152E-02	6.682E-02	1.166E-01	0.000E+00	NOT IDENT.

CE-143	0.000E+00	5.666E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.695E-01	2.616E-01	4.094E-01	0.000E+00	NOT IDENT.
PM-144	3.117E-03	4.743E-02	8.004E-02	0.000E+00	NOT IDENT.
PR-144	2.110E-01	3.211E+00	5.417E+00	0.000E+00	NOT IDENT.
PM-146	2.434E-02	5.177E-02	9.320E-02	0.000E+00	NOT IDENT.
ND-147	-2.939E-02	5.865E-01	1.012E+00	0.000E+00	FAIL ABUN
PM-149	-4.403E+01	5.236E+01	8.711E+01	0.000E+00	NOT IDENT.
EU-152	-1.295E-01	1.349E-01	1.876E-01	0.000E+00	FAIL ABUN
GD-153	-1.088E-01	8.626E-02	1.295E-01	0.000E+00	FAIL ABUN
EU-154	1.818E-02	1.650E-01	2.839E-01	0.000E+00	NOT IDENT.
EU-155	0.000E+00	1.121E-01	2.073E-01	0.000E+00	FAIL ABUN
TB-160	7.956E-02	1.670E-01	2.963E-01	0.000E+00	FAIL ABUN
HO-166M	-3.705E-02	8.440E-02	1.373E-01	0.000E+00	NOT IDENT.
TM-171	-6.991E+00	1.755E+01	2.836E+01	0.000E+00	NOT IDENT.
LU-176	-6.346E-03	2.942E-02	4.650E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.327E+00	1.788E+00	0.000E+00	FAIL ABUN
LU-177M	-3.282E-01	2.332E-01	3.528E-01	0.000E+00	NOT IDENT.
HF-181	-2.944E-03	5.216E-02	9.091E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	2.275E-01	3.909E-01	0.000E+00	NOT IDENT.
TA-182	6.210E-02	2.747E-01	4.773E-01	0.000E+00	FAIL ABUN
RE-183	1.538E-02	1.266E-01	2.142E-01	0.000E+00	FAIL ABUN
RE-184	2.003E-01	2.563E-01	4.657E-01	0.000E+00	NOT IDENT.
OS-185	-1.214E-02	5.580E-02	9.321E-02	0.000E+00	NOT IDENT.
RE-188	1.568E-01	1.883E-01	3.322E-01	0.000E+00	NOT IDENT.
W-188	3.732E+00	8.911E+00	1.397E+01	0.000E+00	FAIL ABUN
IR-192	-2.036E-02	3.982E-02	6.697E-02	0.000E+00	FAIL ABUN
AU-195	2.717E-01	2.255E-01	4.072E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.292E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.591E+00	4.654E+00	8.099E+00	0.000E+00	NOT IDENT.
TL-202	6.866E-02	7.557E-02	1.390E-01	0.000E+00	NOT IDENT.
BI-207	1.530E-03	7.129E-02	1.198E-01	0.000E+00	FAIL ABUN
TL-207	-2.972E-01	8.885E-01	1.307E+00	0.000E+00	FAIL ABUN
PO-209	1.622E+00	1.042E+01	1.800E+01	0.000E+00	NOT IDENT.
PB-211	-4.520E-01	1.233E+00	1.982E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.904E-01	8.717E-01	0.000E+00	FAIL ABUN
PO-215	-2.972E-01	8.885E-01	1.307E+00	0.000E+00	FAIL ABUN
RN-219	-9.587E-02	5.355E-01	8.931E-01	0.000E+00	FAIL ABUN
RN-220	-1.123E+01	3.368E+01	5.692E+01	0.000E+00	NOT IDENT.
RA-223	-2.972E-01	8.885E-01	1.307E+00	0.000E+00	FAIL ABUN
AC-227	-6.692E-02	4.336E-01	7.587E-01	0.000E+00	FAIL ABUN
TH-227	-6.692E-02	4.336E-01	7.587E-01	0.000E+00	FAIL ABUN
TH-229	1.378E-01	5.473E-01	9.968E-01	0.000E+00	FAIL ABUN
PA-231	4.302E-01	1.793E+00	3.056E+00	0.000E+00	FAIL ABUN
TH-231	-2.972E-01	8.885E-01	1.307E+00	0.000E+00	FAIL ABUN
U-231	-5.646E-01	7.553E-01	1.167E+00	0.000E+00	FAIL ABUN
PA-233	1.530E-02	7.566E-02	1.320E-01	0.000E+00	FAIL ABUN
PA-234	-1.471E-01	4.831E-01	7.404E-01	0.000E+00	FAIL ABUN
PA-234M	-6.235E+00	1.013E+01	1.615E+01	0.000E+00	NOT IDENT.
U-235	8.711E-02	2.436E-01	4.204E-01	0.000E+00	FAIL ABUN
NP-236	8.344E-03	9.210E-02	1.581E-01	0.000E+00	FAIL ABUN
NP-239	-1.916E-02	1.966E-01	3.445E-01	0.000E+00	FAIL ABUN
AM-241	2.535E-02	6.738E-02	1.138E-01	0.000E+00	NOT IDENT.
CM-243	-1.187E-01	1.009E-01	1.712E-01	0.000E+00	FAIL ABUN
CM-247	-1.785E-02	4.801E-02	7.921E-02	0.000E+00	FAIL ABUN
CF-249	2.828E-02	4.930E-02	8.584E-02	0.000E+00	NOT IDENT.
CF-251	4.259E-02	1.430E-01	2.453E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:51:23.95

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504005.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:50:02.
Sample ID         : G232504005           Sample quantity  : 1.38040E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.00  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1362	10.67*	1.040E+00	3.337E+01	3.337E+01	8.50
CD-109	88.03	382	3.72*	7.243E+00	3.858E+00	3.933E+00	23.76
SN-126	64.28	204	9.60	7.391E+00	7.836E-01	7.836E-01	57.27
	86.94	382	8.90	7.243E+00	1.613E+00	1.613E+00	46.91
	87.57	382	37.00*	7.243E+00	3.879E-01	3.879E-01	23.76
HG-203	70.83	------	4.75	7.378E+00	------	Line Not Found	------
	72.87	------	8.00	7.369E+00	------	Line Not Found	------
	82.60	------	3.55	7.296E+00	------	Line Not Found	------
	279.20	96	77.30*	4.219E+00	8.044E-02	9.747E-02	61.76
TL-208	277.35	96	6.80	4.219E+00	9.144E-01	9.144E-01	62.35
	510.84	211	21.60	2.534E+00	1.050E+00	1.050E+00	35.72
	583.14	467	84.20*	2.254E+00	6.690E-01	6.690E-01	15.95
	860.37	------	12.46	1.606E+00	------	Line Not Found	------
BI-210	46.50	147	4.05*	7.302E+00	1.353E+00	1.355E+00	52.13
PB-210	46.50	147	4.05*	7.302E+00	1.353E+00	1.355E+00	52.13
PO-210	46.50	147	4.05*	7.302E+00	1.353E+00	1.355E+00	51.98
BI-211	72.87	------	1.27	7.369E+00	------	Line Not Found	------
	351.07	803	12.94*	3.492E+00	4.831E+00	4.831E+00	14.09
PB-212	74.81	833	10.70	7.355E+00	2.878E+00	2.878E+00	17.92
	77.11	1181	18.00	7.340E+00	2.430E+00	2.430E+00	12.68
	87.30	382	8.00	7.243E+00	1.794E+00	1.794E+00	25.78
	238.63	1659	44.60*	4.707E+00	2.149E+00	2.149E+00	10.85
	300.09	134	3.41	3.966E+00	2.694E+00	2.694E+00	53.57
PO-212	74.81	833	10.70	7.355E+00	2.878E+00	2.878E+00	17.92
	77.11	1181	18.00	7.340E+00	2.430E+00	2.430E+00	12.68
	87.30	382	8.00	7.243E+00	1.794E+00	1.794E+00	25.78
	115.19	------	0.60	6.822E+00	------	Line Not Found	------
	238.63	1659	44.60*	4.707E+00	2.149E+00	2.149E+00	10.85
	300.09	134	3.41	3.966E+00	2.694E+00	2.694E+00	53.57
BI-214	609.31	527	46.30*	2.169E+00	1.427E+00	1.427E+00	18.46
	768.36	76	5.04	1.769E+00	2.315E+00	2.315E+00	52.58
	934.06	------	3.21	1.497E+00	------	Line Not Found	------

Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1120.29	141	15.10	1.286E+00	1.968E+00	1.968E+00	36.59
	1238.11	------	5.94	1.187E+00	------	Line Not Found	------
	1377.67	------	4.11	1.090E+00	------	Line Not Found	------
	1764.49	98	15.80	8.983E-01	1.887E+00	1.887E+00	32.52
PB-214	74.81	833	6.21	7.355E+00	4.959E+00	4.959E+00	16.99
	77.11	1181	10.50	7.340E+00	4.166E+00	4.166E+00	14.79
	87.30	382	4.67	7.243E+00	3.073E+00	3.073E+00	24.98
	241.98	411	7.49	4.666E+00	3.199E+00	3.199E+00	25.18
	295.21	548	19.20	4.022E+00	1.928E+00	1.928E+00	17.55
	351.92	803	37.20*	3.492E+00	1.680E+00	1.680E+00	15.02
PO-214	74.81	833	6.21	7.355E+00	4.959E+00	4.959E+00	16.99
	77.11	1181	10.50	7.340E+00	4.166E+00	4.166E+00	14.79
	87.30	382	4.67	7.243E+00	3.073E+00	3.073E+00	24.98
	241.98	411	7.49	4.666E+00	3.199E+00	3.199E+00	25.18
	295.21	548	19.20	4.022E+00	1.928E+00	1.928E+00	17.55
	351.92	803	37.20*	3.492E+00	1.680E+00	1.680E+00	15.02
PO-216	74.81	833	10.70	7.355E+00	2.878E+00	2.878E+00	17.92
	77.11	1181	18.00	7.340E+00	2.430E+00	2.430E+00	12.68
	87.30	382	8.00	7.243E+00	1.794E+00	1.794E+00	25.78
	238.63	1659	44.60*	4.707E+00	2.149E+00	2.149E+00	10.85
	300.09	134	3.41	3.966E+00	2.694E+00	2.694E+00	53.57
PO-218	74.81	833	6.21	7.355E+00	4.959E+00	4.959E+00	16.99
	77.11	1181	10.50	7.340E+00	4.166E+00	4.166E+00	14.79
	87.30	382	4.67	7.243E+00	3.073E+00	3.073E+00	24.98
	241.98	411	7.49	4.666E+00	3.199E+00	3.199E+00	25.18
	295.21	548	19.20	4.022E+00	1.928E+00	1.928E+00	17.55
	351.92	803	37.20*	3.492E+00	1.680E+00	1.680E+00	15.02
RA-224	240.98	411	3.95*	4.666E+00	6.065E+00	6.065E+00	24.55
RA-226	609.31	527	46.30*	2.169E+00	1.427E+00	1.427E+00	18.46
	768.36	76	5.04	1.769E+00	2.315E+00	2.315E+00	52.58
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	141	15.10	1.286E+00	1.968E+00	1.968E+00	36.59
	1238.11	------	5.94	1.187E+00	------	Line Not Found	------
	1377.67	------	4.11	1.090E+00	------	Line Not Found	------
	1764.49	98	15.80	8.983E-01	1.887E+00	1.887E+00	32.52
AC-228	338.32	438	11.40	3.607E+00	2.894E+00	2.894E+00	45.78
	911.07	322	27.70*	1.528E+00	2.067E+00	2.067E+00	22.94
	969.11	224	16.60	1.451E+00	2.532E+00	2.532E+00	29.58
RA-228	338.32	438	11.40	3.607E+00	2.894E+00	2.894E+00	45.78
	911.07	322	27.70*	1.528E+00	2.067E+00	2.067E+00	22.94
	969.11	224	16.60	1.451E+00	2.532E+00	2.532E+00	29.58
TH-228	84.40	110	1.21	7.276E+00	3.408E+00	3.408E+00	74.01
	238.60	1659	44.60*	4.707E+00	2.149E+00	2.149E+00	10.85
	300.10	134	3.41	3.966E+00	2.694E+00	2.694E+00	79.22
TH-230	609.31	527	46.30*	2.169E+00	1.427E+00	1.427E+00	18.46
	768.36	76	5.04	1.769E+00	2.315E+00	2.315E+00	52.58
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	141	15.10	1.286E+00	1.968E+00	1.968E+00	36.59
	1238.11	------	5.94	1.187E+00	------	Line Not Found	------

Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	98	15.80	8.983E-01	1.887E+00	1.887E+00	32.52
TH-232	338.32	438	11.40	3.607E+00	2.894E+00	2.894E+00	21.63
	911.07	322	27.70*	1.528E+00	2.067E+00	2.067E+00	22.94
	969.11	224	16.60	1.451E+00	2.532E+00	2.532E+00	29.58
TH-234	63.29	204	3.80*	7.391E+00	1.980E+00	1.980E+00	58.07
	92.38	425	5.41	7.172E+00	2.978E+00	2.978E+00	31.90
U-234	609.31	527	46.30*	2.169E+00	1.427E+00	1.427E+00	18.46
	768.36	76	5.04	1.769E+00	2.315E+00	2.315E+00	52.58
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	141	15.10	1.286E+00	1.968E+00	1.968E+00	36.59
	1238.11	------	5.94	1.187E+00	------ Line Not Found		------
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	98	15.80	8.983E-01	1.887E+00	1.887E+00	32.52
NP-237	86.50	382	12.60*	7.243E+00	1.139E+00	1.139E+00	31.47
	95.87	------	2.60	7.135E+00	------ Line Not Found		------
U-238	63.29	204	3.80*	7.391E+00	1.980E+00	1.980E+00	58.07
	92.38	425	5.41	7.172E+00	2.978E+00	2.978E+00	27.66
AM-243	74.67	833	66.00*	7.355E+00	4.666E-01	4.666E-01	15.29
	86.72	382	0.34	7.243E+00	4.272E+01	4.272E+01	23.76
	117.66	------	0.55	6.778E+00	------ Line Not Found		------
	142.18	------	0.13	6.323E+00	------ Line Not Found		------
ANH-511	511.00	211	100.00*	2.534E+00	2.268E-01	2.268E-01	34.73

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

Total number of lines in spectrum 36
Number of unidentified lines 3
Number of lines tentatively identified by NID 33 91.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.337E+01	3.337E+01	0.284E+01	8.50	
CD-109	464.00D	1.02	3.858E+00	3.933E+00	0.935E+00	23.76	
SN-126	1.00E+05Y	1.00	3.879E-01	3.879E-01	0.922E-01	23.76	
HG-203	46.60D	1.21	8.044E-02	9.747E-02	6.020E-02	61.76	
TL-208	1.41E+10Y	1.00	6.690E-01	6.690E-01	1.067E-01	15.95	
BI-210	22.26Y	1.00	1.353E+00	1.355E+00	0.706E+00	52.13	
PB-210	22.26Y	1.00	1.353E+00	1.355E+00	0.706E+00	52.13	
PO-210	22.26Y	1.00	1.353E+00	1.355E+00	0.704E+00	51.98	
BI-211	7.04E+08Y	1.00	4.831E+00	4.831E+00	0.681E+00	14.09	
PB-212	1.41E+10Y	1.00	2.149E+00	2.149E+00	0.233E+00	10.85	
PO-212	1.41E+10Y	1.00	2.149E+00	2.149E+00	0.233E+00	10.85	
BI-214	1600.00Y	1.00	1.427E+00	1.427E+00	0.263E+00	18.46	
PB-214	1600.00Y	1.00	1.680E+00	1.680E+00	0.252E+00	15.02	
PO-214	1600.00Y	1.00	1.680E+00	1.680E+00	0.252E+00	15.02	
PO-216	1.41E+10Y	1.00	2.149E+00	2.149E+00	0.233E+00	10.85	
PO-218	1600.00Y	1.00	1.680E+00	1.680E+00	0.252E+00	15.02	
RA-224	1.41E+10Y	1.00	6.065E+00	6.065E+00	1.489E+00	24.55	
RA-226	1600.00Y	1.00	1.427E+00	1.427E+00	0.263E+00	18.46	
AC-228	1.41E+10Y	1.00	2.067E+00	2.067E+00	0.474E+00	22.94	
RA-228	1.41E+10Y	1.00	2.067E+00	2.067E+00	0.474E+00	22.94	
TH-228	1.41E+10Y	1.00	2.149E+00	2.149E+00	0.233E+00	10.85	
TH-230	4.47E+09Y	1.00	1.427E+00	1.427E+00	0.263E+00	18.46	
TH-232	1.41E+10Y	1.00	2.067E+00	2.067E+00	0.474E+00	22.94	
TH-234	4.47E+09Y	1.00	1.980E+00	1.980E+00	1.150E+00	58.07	
U-234	4.47E+09Y	1.00	1.427E+00	1.427E+00	0.263E+00	18.46	
NP-237	2.14E+06Y	1.00	1.139E+00	1.139E+00	0.358E+00	31.47	
U-238	4.47E+09Y	1.00	1.980E+00	1.980E+00	1.150E+00	58.07	
AM-243	7380.00Y	1.00	4.666E-01	4.666E-01	0.713E-01	15.29	
ANH-511	1.00E+09Y	1.00	2.268E-01	2.268E-01	0.788E-01	34.73	
	Total Activity :		8.466E+01	8.476E+01			

Grand Total Activity : 8.466E+01 8.476E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	90.36	199	554	1.00	180.50	178	13	2.76E-02	39.1	7.21E+00	T
0	129.71	111	486	0.95	259.23	255	8	1.54E-02	71.4	6.56E+00	T
0	186.42	220	629	1.21	372.68	368	12	3.05E-02	50.1	5.52E+00	T
0	209.80	143	369	1.10	419.43	415	9	1.98E-02	51.4	5.14E+00	T
0	270.90	124	337	1.28	541.67	537	11	1.73E-02	59.8	4.30E+00	T
0	328.31	94	223	1.77	656.52	652	9	1.31E-02	60.6	3.70E+00	T
0	463.44	106	135	1.14	926.87	922	9	1.47E-02	44.0	2.76E+00	T
0	727.76	119	106	1.92	1455.67	1450	12	1.65E-02	39.8	1.86E+00	T
0	798.71	109	257	9.27	1597.63	1582	33	1.51E-02	91.5	1.71E+00	
0	935.87	68	125	3.05	1872.06	1863	20	9.38E-03	84.7	1.49E+00	T
1	965.13	84	89	2.18	1930.60	1921	52	1.17E-02	46.6	1.46E+00	T
0	1379.23	35	31	1.31	2759.16	2751	16	4.85E-03	79.8	1.09E+00	
0	1813.66	14	11	1.31	3628.47	3617	15	1.88E-03	****	8.80E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:51:29.11

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504005.CNF;1 *
* Acquisition date  : 7-JUL-2009 08:50:02.  Detector SN#     :             *
* Detector ID       : GAM13                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:02.00          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504005            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.38040E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 2-FEB-2009 10:41:22.03MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.337E+01	2.837E+00	6.762E-01	4.134E-02	49.353
CD-109	3.933E+00	9.346E-01	1.067E+00	8.422E-02	3.685
SN-126	3.879E-01	9.217E-02	1.142E-01	9.036E-03	3.396
HG-203	9.747E-02	6.020E-02	7.541E-02	6.004E-03	1.293
TL-208	6.690E-01	1.067E-01	8.157E-02	6.752E-03	8.201
BI-210	1.355E+00	7.062E-01	8.868E-01	7.228E-02	1.528
PB-210	1.355E+00	7.062E-01	8.868E-01	7.228E-02	1.528
PO-210	1.355E+00	7.041E-01	8.868E-01	6.322E-02	1.528
BI-211	4.831E+00	6.805E-01	4.219E-01	3.075E-02	11.449
PB-212	2.149E+00	2.331E-01	1.017E-01	9.242E-03	21.124
PO-212	2.149E+00	2.331E-01	1.017E-01	9.242E-03	21.124
BI-214	1.427E+00	2.634E-01	1.517E-01	1.419E-02	9.403
PB-214	1.680E+00	2.525E-01	1.471E-01	1.317E-02	11.422
PO-214	1.680E+00	2.525E-01	1.471E-01	1.317E-02	11.422
PO-216	2.149E+00	2.331E-01	1.017E-01	9.242E-03	21.124
PO-218	1.680E+00	2.525E-01	1.471E-01	1.317E-02	11.422
RA-224	6.065E+00	1.489E+00	1.158E+00	9.143E-02	5.236
RA-226	1.427E+00	2.634E-01	1.517E-01	1.419E-02	9.403

Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	2.067E+00	4.743E-01	3.115E-01	3.235E-02	6.636
RA-228	2.067E+00	4.743E-01	3.115E-01	3.235E-02	6.636
TH-228	2.149E+00	2.331E-01	1.017E-01	9.241E-03	21.126
TH-230	1.427E+00	2.634E-01	1.517E-01	1.419E-02	9.403
TH-232	2.067E+00	4.743E-01	3.115E-01	3.235E-02	6.636
TH-234	1.980E+00	1.150E+00	1.075E+00	1.973E-01	1.841
U-234	1.427E+00	2.634E-01	1.517E-01	1.419E-02	9.403
NP-237	1.139E+00	3.585E-01	3.344E-01	7.397E-02	3.407
U-238	1.980E+00	1.150E+00	1.075E+00	1.973E-01	1.841
AM-243	4.666E-01	7.134E-02	6.592E-02	5.694E-03	7.078
ANH-511	2.268E-01	7.879E-02	5.687E-02	3.968E-03	3.989

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.807E-02		3.919E-01	6.526E-01	4.906E-02	-0.043
NA-22	8.639E-03		6.038E-02	1.015E-01	5.727E-03	0.085
NA-24	-2.006E-02		4.117E-02	Half-Life too short		
AL-26	1.073E-02		4.359E-02	6.516E-02	3.677E-03	0.165
TI-44	4.484E-01	+	5.683E-02	7.236E-02	6.094E-03	6.197
SC-46	4.708E-02		5.235E-02	9.193E-02	6.961E-03	0.512
V-48	2.607E-03		9.812E-02	1.385E-01	9.796E-03	0.019
CR-51	2.258E-01		4.170E-01	6.991E-01	5.441E-02	0.323
MN-52	1.596E-02		2.273E-01	3.765E-01	2.164E-02	0.042
MN-54	-3.015E-02		5.099E-02	8.157E-02	6.401E-03	-0.370
CO-56	-8.619E-03		5.402E-02	8.888E-02	6.927E-03	-0.097
CO-57	8.029E-03		2.873E-02	4.650E-02	5.882E-03	0.173
CO-58	-3.593E-02		5.712E-02	7.654E-02	6.097E-03	-0.469
FE-59	-1.301E-01		1.263E-01	1.878E-01	1.342E-02	-0.693
CO-60	4.622E-02		5.375E-02	9.338E-02	5.311E-03	0.495
ZN-65	-1.303E-01		1.571E-01	1.987E-01	1.206E-02	-0.656
GE-68	7.203E-01		1.732E+00	2.905E+00	1.857E-01	0.248
AS-73	2.437E-01		2.475E-01	4.225E-01	3.569E-02	0.577
AS-74	3.381E-02		1.106E-01	1.848E-01	1.419E-02	0.183
SE-75	9.238E-03		5.283E-02	8.428E-02	6.602E-03	0.110
BR-77	-4.500E+00		6.856E+00	1.092E+01	7.711E-01	-0.412
SR-82	-1.787E-01		5.233E-01	8.173E-01	6.578E-02	-0.219
RB-83	-1.346E-02		8.495E-02	1.396E-01	9.860E-03	-0.096
RB-84	-1.553E-02		8.965E-02	1.423E-01	1.084E-02	-0.109
KR-85	2.954E+01		1.091E+01	1.835E+01	1.285E+00	1.610
SR-85	1.479E-01		5.463E-02	9.187E-02	6.435E-03	1.610
RB-86	-1.556E-01		1.032E+00	1.659E+00	1.061E-01	-0.094
Y-88	-7.847E-03		4.080E-02	6.552E-02	3.689E-03	-0.120
ZR-88	-3.500E-02		3.861E-02	5.876E-02	3.441E-03	-0.596
Y-91	2.303E+01		2.455E+01	4.347E+01	2.409E+00	0.530
NB-94	-1.614E-03		4.976E-02	8.026E-02	6.551E-03	-0.020
NB-95	3.351E-02		6.396E-02	9.670E-02	7.808E-03	0.347

Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	1.854E-01		1.444E-01	2.257E-01	2.087E-02	0.822
ZR-95	9.840E-03		9.585E-02	1.550E-01	1.398E-02	0.063
NB-97	-8.843E-03		7.351E-03	Half-Life too short		
ZR-97	1.545E-01		1.306E-01	Half-Life too short		
MO-99	-2.750E+00		1.026E+01	1.621E+01	2.416E+00	-0.170
TC-99M	-2.633E+07		4.293E+07	Half-Life too short		
RH-101	1.704E-03		3.668E-02	6.129E-02	4.854E-03	0.028
RH-102	-2.751E-02		3.672E-02	5.879E-02	3.912E-03	-0.468
RU-103	-2.513E-02		4.869E-02	7.849E-02	1.033E-02	-0.320
RH-106	-4.385E-02		4.145E-01	6.725E-01	8.668E-02	-0.065
RU-106	-4.385E-02		4.144E-01	6.725E-01	5.296E-02	-0.065
AG-108M	2.825E-02		4.023E-02	7.011E-02	4.716E-03	0.403
AG-110M	-3.973E-02		4.848E-02	7.442E-02	6.252E-03	-0.534
IN-111	4.834E-02		7.361E-01	1.085E+00	8.549E-02	0.045
IN-113M	1.363E-02		5.477E-02	8.924E-02	5.560E-03	0.153
SN-113	1.363E-02		5.477E-02	8.924E-02	5.560E-03	0.153
IN-114M	2.825E-02		2.305E-01	3.254E-01	2.572E-02	0.087
CD-115	-1.269E+00		6.698E+00	1.097E+01	7.819E-01	-0.116
SN-117M	-6.084E-03		5.730E-02	9.137E-02	7.979E-03	-0.067
SB-122	6.706E-01		1.516E+00	2.563E+00	1.904E-01	0.262
I-123	-6.295E-02		1.941E-01	Half-Life too short		
TE-123M	-5.303E-03		3.271E-02	5.203E-02	4.543E-03	-0.102
I-124	-7.832E-03		7.106E-01	1.007E+00	7.784E-02	-0.008
SB-124	4.159E-02		9.155E-02	1.585E-01	9.868E-03	0.262
SB-125	-7.949E-02		1.129E-01	1.833E-01	1.179E-02	-0.434
TE-125M	-5.501E+00		9.746E+00	1.566E+01	1.902E+00	-0.351
I-126	8.697E-02		2.315E-01	3.843E-01	3.136E-02	0.226
SB-126	1.651E-01		1.840E-01	2.892E-01	2.357E-02	0.571
SB-127	7.140E-01		1.248E+00	2.095E+00	2.178E-01	0.341
XE-127	-1.213E-02		4.857E-02	8.138E-02	6.449E-03	-0.149
I-131	6.124E-02		1.130E-01	1.881E-01	1.329E-02	0.326
TE-132	-1.224E-01		4.619E-01	7.658E-01	1.145E-01	-0.160
BA-133	-1.662E-02		6.212E-02	8.842E-02	1.062E-02	-0.188
I-133	-5.326E-04		6.161E-04	Half-Life too short		
CS-134	1.106E-01		6.409E-02	1.169E-01	9.424E-03	0.946
CS-135	-1.273E-01		2.048E-01	2.864E-01	2.646E-02	-0.444
I-135	2.179E+06		1.345E+07	Half-Life too short		
CS-136	-1.668E-02		1.298E-01	2.094E-01	1.485E-02	-0.080
BA-137M	-4.007E-02		5.213E-02	8.052E-02	6.567E-03	-0.498
CS-137	-4.236E-02		5.511E-02	8.512E-02	6.957E-03	-0.498
CE-139	-8.301E-03		3.428E-02	5.417E-02	4.247E-03	-0.153
BA-140	-1.457E-01		3.056E-01	4.853E-01	1.592E-01	-0.300
LA-140	-3.340E-02		1.109E-01	1.742E-01	1.004E-02	-0.192
CE-141	2.152E-02		6.818E-02	1.111E-01	1.152E-02	0.194
CE-143	8.256E-05		2.891E-05	Half-Life too short		
CE-144	1.695E-01		2.670E-01	3.895E-01	6.751E-02	0.435
PM-144	3.117E-03		4.840E-02	7.861E-02	6.420E-03	0.040
PR-144	2.110E-01		3.276E+00	5.320E+00	4.344E-01	0.040

Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-146	2.434E-02		5.282E-02	9.077E-02	8.238E-03	0.268
ND-147	-2.939E-02		5.984E-01	9.885E-01	1.399E-01	-0.030
PM-149	-4.403E+01		5.343E+01	8.408E+01	1.262E+01	-0.524
EU-152	-1.295E-01		1.377E-01	1.817E-01	1.362E-02	-0.713
GD-153	-1.088E-01		8.803E-02	1.225E-01	1.115E-02	-0.888
EU-154	1.818E-02		1.684E-01	2.822E-01	2.607E-02	0.064
EU-155	2.252E-01		1.143E-01	1.964E-01	2.015E-02	1.147
TB-160	7.956E-02		1.704E-01	2.924E-01	2.230E-02	0.272
HO-166M	-3.705E-02		8.613E-02	1.349E-01	1.100E-02	-0.275
TM-171	-6.991E+00		1.790E+01	2.664E+01	2.431E+00	-0.262
LU-176	-6.346E-03		3.002E-02	4.495E-02	3.332E-03	-0.141
LU-177	2.605E+00	+	1.354E+00	1.715E+00	1.360E-01	1.519
LU-177M	-3.282E-01		2.380E-01	3.429E-01	2.080E-02	-0.957
HF-181	-2.944E-03		5.322E-02	8.864E-02	5.955E-03	-0.033
W-181	4.163E-01		2.321E-01	3.671E-01	3.386E-02	1.134
TA-182	6.210E-02		2.803E-01	4.741E-01	2.638E-02	0.131
RE-183	1.538E-02		1.292E-01	2.046E-01	1.693E-02	0.075
RE-184	2.003E-01		2.616E-01	4.485E-01	3.521E-02	0.447
OS-185	-1.214E-02		5.694E-02	9.141E-02	7.357E-03	-0.133
RE-188	1.568E-01		1.921E-01	3.170E-01	2.901E-02	0.495
W-188	3.732E+00		9.093E+00	1.349E+01	1.023E+00	0.277
IR-192	-2.036E-02		4.063E-02	6.477E-02	4.738E-03	-0.314
AU-195	2.717E-01		2.301E-01	3.853E-01	3.581E-02	0.705
TL-200	-6.656E-05		6.593E-05	Half-Life too short		
TL-201	2.591E+00		4.749E+00	7.739E+00	6.065E-01	0.335
TL-202	6.866E-02		7.711E-02	1.353E-01	8.547E-03	0.508
BI-207	1.530E-03		7.275E-02	1.186E-01	7.715E-03	0.013
TL-207	-2.972E-01		9.066E-01	1.265E+00	2.157E-01	-0.235
PO-209	1.622E+00		1.063E+01	1.777E+01	1.338E+00	0.091
PB-211	-4.520E-01		1.259E+00	1.926E+00	1.201E+00	-0.235
BI-212	1.472E+00	+	6.024E-01	8.568E-01	8.225E-02	1.718
PO-215	-2.972E-01		9.066E-01	1.265E+00	2.157E-01	-0.235
RN-219	-9.587E-02		5.465E-01	8.677E-01	1.186E-01	-0.110
RN-220	-1.123E+01		3.436E+01	5.564E+01	4.068E+00	-0.202
RA-223	-2.972E-01		9.066E-01	1.265E+00	2.157E-01	-0.235
AC-227	-6.692E-02		4.424E-01	7.308E-01	1.090E-01	-0.092
TH-227	-6.692E-02		4.425E-01	7.308E-01	1.294E-01	-0.092
TH-229	1.378E-01		5.584E-01	9.551E-01	7.555E-02	0.144
PA-231	4.302E-01		1.829E+00	2.950E+00	4.323E-01	0.146
TH-231	-2.972E-01		9.066E-01	1.265E+00	2.157E-01	-0.235
U-231	-5.646E-01		7.707E-01	1.104E+00	9.815E-02	-0.512
PA-233	1.530E-02		7.720E-02	1.276E-01	9.746E-03	0.120
PA-234	-1.471E-01		4.930E-01	7.316E-01	1.331E-01	-0.201
PA-234M	-6.235E+00		1.034E+01	1.598E+01	1.591E+00	-0.390
U-235	8.711E-02		2.486E-01	4.005E-01	7.395E-02	0.217
NP-236	8.344E-03		9.398E-02	1.509E-01	1.286E-02	0.055
NP-239	-1.916E-02		2.007E-01	3.270E-01	3.880E-02	-0.059
AM-241	2.535E-02		6.876E-02	1.067E-01	1.085E-02	0.238

Sample ID : G232504005 Acquisition date : 7-JUL-2009 08:50:02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.187E-01		1.030E-01	1.621E-01	1.614E-02	-0.733
CM-247	-1.785E-02		4.899E-02	7.696E-02	4.583E-03	-0.232
CF-249	2.828E-02		5.030E-02	8.335E-02	4.949E-03	0.339
CF-251	4.259E-02		1.459E-01	2.346E-01	1.846E-02	0.182

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504005           *
* Acquisition date  :  7-JUL-2009 08:50:02 Detector SN#     :               *
* Detector ID       : GAM13                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:02.00      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504005           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.3804E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.337E+01	2.780E+00	3.394E-01	1.418E+00
CD-109	3.933E+00	9.159E-01	5.656E-01	4.673E-01
SN-126	3.879E-01	9.032E-02	6.054E-02	4.608E-02
HG-203	9.747E-02	5.899E-02	3.910E-02	3.010E-02
TL-208	6.690E-01	1.046E-01	4.170E-02	5.337E-02
BI-210	1.355E+00	6.920E-01	4.754E-01	3.531E-01
PB-210	1.355E+00	6.920E-01	4.754E-01	3.531E-01
PO-210	1.355E+00	6.900E-01	4.754E-01	3.521E-01
BI-211	4.831E+00	6.669E-01	2.178E-01	3.403E-01
PB-212	2.149E+00	2.285E-01	5.291E-02	1.166E-01
PO-212	2.149E+00	2.285E-01	5.291E-02	1.166E-01
BI-214	1.427E+00	2.581E-01	7.751E-02	1.317E-01
PB-214	1.680E+00	2.474E-01	7.595E-02	1.262E-01
PO-214	1.680E+00	2.474E-01	7.595E-02	1.262E-01
PO-216	2.149E+00	2.285E-01	5.291E-02	1.166E-01
PO-218	1.680E+00	2.474E-01	7.595E-02	1.262E-01
RA-224	6.065E+00	1.459E+00	6.023E-01	7.443E-01
RA-226	1.427E+00	2.581E-01	7.751E-02	1.317E-01
AC-228	2.067E+00	4.648E-01	1.578E-01	2.371E-01
RA-228	2.067E+00	4.648E-01	1.578E-01	2.371E-01
TH-228	2.149E+00	2.285E-01	5.291E-02	1.166E-01
TH-230	1.427E+00	2.581E-01	7.750E-02	1.317E-01
TH-232	2.067E+00	4.648E-01	1.578E-01	2.371E-01
TH-234	1.980E+00	1.127E+00	5.731E-01	5.748E-01
U-234	1.427E+00	2.581E-01	7.750E-02	1.317E-01
NP-237	1.139E+00	3.513E-01	1.773E-01	1.792E-01
U-238	1.980E+00	1.127E+00	5.731E-01	5.748E-01
AM-243	4.666E-01	6.991E-02	3.504E-02	3.567E-02
ANH-511	2.268E-01	7.721E-02	2.915E-02	3.939E-02

---- Non-Identified Nuclides ----

Key-Line Activity	K.L Act error	DLC	TPU

Nuclide	(pCi/GRAM)		(pCi/GRAM)		
BE-7	-2.807E-02	3.841E-01	3.349E-01	1.960E-01	NOT IDENT.
NA-22	8.639E-03	5.918E-02	5.106E-02	3.019E-02	NOT IDENT.
NA-24	-2.006E+04	8.068E+04	0.000E+00	4.117E+04	SHORT HLIF
AL-26	1.073E-02	4.272E-02	3.256E-02	2.180E-02	NOT IDENT.
TI-44	4.484E-01	5.570E-02	3.842E-02	2.842E-02	FAIL ABUN
SC-46	4.708E-02	5.130E-02	4.660E-02	2.618E-02	FAIL ABUN
V-48	2.607E-03	9.615E-02	7.006E-02	4.906E-02	NOT IDENT.
CR-51	2.258E-01	4.087E-01	3.616E-01	2.085E-01	NOT IDENT.
MN-52	1.596E-02	2.227E-01	1.890E-01	1.136E-01	FAIL ABUN
MN-54	-3.015E-02	4.997E-02	4.141E-02	2.549E-02	NOT IDENT.
CO-56	-8.619E-03	5.294E-02	4.510E-02	2.701E-02	NOT IDENT.
CO-57	8.029E-03	2.816E-02	2.449E-02	1.437E-02	NOT IDENT.
CO-58	-3.593E-02	5.598E-02	3.887E-02	2.856E-02	NOT IDENT.
FE-59	-1.301E-01	1.237E-01	9.480E-02	6.314E-02	NOT IDENT.
CO-60	4.622E-02	5.267E-02	4.695E-02	2.687E-02	NOT IDENT.
ZN-65	-1.303E-01	1.540E-01	1.003E-01	7.857E-02	NOT IDENT.
GE-68	7.203E-01	1.698E+00	1.467E+00	8.661E-01	NOT IDENT.
AS-73	2.437E-01	2.425E-01	2.259E-01	1.237E-01	NOT IDENT.
AS-74	3.381E-02	1.084E-01	9.441E-02	5.529E-02	NOT IDENT.
SE-75	9.238E-03	5.177E-02	4.375E-02	2.641E-02	NOT IDENT.
BR-77	-4.500E+00	6.719E+00	5.593E+00	3.428E+00	FAIL ABUN
SR-82	-1.787E-01	5.129E-01	4.154E-01	2.617E-01	NOT IDENT.
RB-83	-1.346E-02	8.325E-02	7.155E-02	4.247E-02	NOT IDENT.
RB-84	-1.553E-02	8.785E-02	7.214E-02	4.482E-02	NOT IDENT.
KR-85	2.954E+01	1.069E+01	9.402E+00	5.455E+00	NOT IDENT.
SR-85	1.479E-01	5.353E-02	4.708E-02	2.731E-02	NOT IDENT.
RB-86	-1.556E-01	1.011E+00	8.375E-01	5.160E-01	NOT IDENT.
Y-88	-7.847E-03	3.999E-02	3.273E-02	2.040E-02	NOT IDENT.
ZR-88	-3.500E-02	3.784E-02	3.027E-02	1.931E-02	NOT IDENT.
Y-91	2.303E+01	2.406E+01	2.190E+01	1.228E+01	NOT IDENT.
NB-94	-1.614E-03	4.877E-02	4.088E-02	2.488E-02	NOT IDENT.
NB-95	3.351E-02	6.269E-02	4.917E-02	3.198E-02	NOT IDENT.
NB-95M	1.854E-01	1.415E-01	1.174E-01	7.219E-02	NOT IDENT.
ZR-95	9.840E-03	9.394E-02	7.881E-02	4.793E-02	NOT IDENT.
NB-97	-8.843E+03	1.441E+04	0.000E+00	7.351E+03	SHORT HLIF
ZR-97	1.545E+05	2.559E+05	0.000E+00	1.306E+05	SHORT HLIF
MO-99	-2.750E+00	1.006E+01	8.246E+00	5.131E+00	NOT IDENT.
TC-99M	-2.633E+13	8.414E+13	0.000E+00	4.293E+13	SHORT HLIF
RH-101	1.704E-03	3.595E-02	3.199E-02	1.834E-02	NOT IDENT.
RH-102	-2.751E-02	3.599E-02	3.018E-02	1.836E-02	NOT IDENT.
RU-103	-2.513E-02	4.771E-02	4.025E-02	2.434E-02	FAIL ABUN
RH-106	-4.385E-02	4.062E-01	3.433E-01	2.072E-01	FAIL ABUN
RU-106	-4.385E-02	4.061E-01	3.433E-01	2.072E-01	FAIL ABUN
AG-108M	2.825E-02	3.943E-02	3.605E-02	2.012E-02	NOT IDENT.
AG-110M	-3.973E-02	4.752E-02	3.796E-02	2.424E-02	NOT IDENT.
IN-111	4.834E-02	7.214E-01	5.640E-01	3.681E-01	NOT IDENT.
IN-113M	1.363E-02	5.367E-02	4.598E-02	2.738E-02	NOT IDENT.
SN-113	1.363E-02	5.367E-02	4.598E-02	2.738E-02	NOT IDENT.
IN-114M	2.825E-02	2.258E-01	1.700E-01	1.152E-01	NOT IDENT.
CD-115	-1.269E+00	6.564E+00	5.621E+00	3.349E+00	NOT IDENT.
SN-117M	-6.084E-03	5.615E-02	4.789E-02	2.865E-02	NOT IDENT.
SB-122	6.706E-01	1.486E+00	1.311E+00	7.582E-01	NOT IDENT.
I-123	-6.295E+04	3.805E+05	0.000E+00	1.941E+05	SHORT HLIF
TE-123M	-5.303E-03	3.205E-02	2.727E-02	1.635E-02	NOT IDENT.
I-124	-7.832E-03	6.964E-01	5.143E-01	3.553E-01	NOT IDENT.
SB-124	4.159E-02	8.971E-02	7.929E-02	4.577E-02	FAIL ABUN
SB-125	-7.949E-02	1.106E-01	9.426E-02	5.644E-02	FAIL ABUN
TE-125M	-5.501E+00	9.551E+00	8.267E+00	4.873E+00	NOT IDENT.
I-126	8.697E-02	2.269E-01	1.959E-01	1.158E-01	NOT IDENT.
SB-126	1.651E-01	1.803E-01	1.472E-01	9.200E-02	FAIL ABUN
SB-127	7.140E-01	1.223E+00	1.067E+00	6.239E-01	NOT IDENT.
XE-127	-1.213E-02	4.760E-02	4.246E-02	2.429E-02	NOT IDENT.
I-131	6.124E-02	1.107E-01	9.702E-02	5.648E-02	NOT IDENT.
TE-132	-1.224E-01	4.527E-01	3.987E-01	2.310E-01	NOT IDENT.
BA-133	-1.662E-02	6.088E-02	4.564E-02	3.106E-02	FAIL ABUN
I-133	-5.326E+02	1.208E+03	0.000E+00	6.161E+02	SHORT HLIF
CS-134	1.106E-01	6.281E-02	5.941E-02	3.204E-02	NOT IDENT.
CS-135	-1.273E-01	2.007E-01	1.486E-01	1.024E-01	NOT IDENT.
I-135	2.179E+12	2.637E+13	0.000E+00	1.345E+13	SHORT HLIF
CS-136	-1.668E-02	1.272E-01	1.058E-01	6.489E-02	FAIL ABUN
BA-137M	-4.007E-02	5.109E-02	4.106E-02	2.606E-02	NOT IDENT.
CS-137	-4.236E-02	5.400E-02	4.340E-02	2.755E-02	NOT IDENT.
CE-139	-8.301E-03	3.359E-02	2.837E-02	1.714E-02	NOT IDENT.
BA-140	-1.457E-01	2.995E-01	2.485E-01	1.528E-01	NOT IDENT.
LA-140	-3.340E-02	1.087E-01	8.726E-02	5.545E-02	FAIL ABUN
CE-141	2.152E-02	6.682E-02	5.833E-02	3.409E-02	NOT IDENT.

CE-143	8.256E+01	5.666E+01	0.000E+00	2.891E+01	SHORT HLIF
CE-144	1.695E-01	2.616E-01	2.048E-01	1.335E-01	NOT IDENT.
PM-144	3.117E-03	4.743E-02	4.004E-02	2.420E-02	NOT IDENT.
PR-144	2.110E-01	3.211E+00	2.710E+00	1.638E+00	NOT IDENT.
PM-146	2.434E-02	5.177E-02	4.663E-02	2.641E-02	NOT IDENT.
ND-147	-2.939E-02	5.865E-01	5.063E-01	2.992E-01	FAIL ABUN
PM-149	-4.403E+01	5.236E+01	4.358E+01	2.671E+01	NOT IDENT.
EU-152	-1.295E-01	1.349E-01	9.384E-02	6.883E-02	FAIL ABUN
GD-153	-1.088E-01	8.626E-02	6.481E-02	4.401E-02	FAIL ABUN
EU-154	1.818E-02	1.650E-01	1.420E-01	8.419E-02	NOT IDENT.
EU-155	2.252E-01	1.121E-01	1.037E-01	5.717E-02	FAIL ABUN
TB-160	7.956E-02	1.670E-01	1.483E-01	8.522E-02	FAIL ABUN
HO-166M	-3.705E-02	8.440E-02	6.869E-02	4.306E-02	NOT IDENT.
TM-171	-6.991E+00	1.755E+01	1.419E+01	8.952E+00	NOT IDENT.
LU-176	-6.346E-03	2.942E-02	2.327E-02	1.501E-02	FAIL ABUN
LU-177	2.605E+00	1.327E+00	8.943E-01	6.770E-01	FAIL ABUN
LU-177M	-3.282E-01	2.332E-01	1.765E-01	1.190E-01	NOT IDENT.
HF-181	-2.944E-03	5.216E-02	4.548E-02	2.661E-02	NOT IDENT.
W-181	4.163E-01	2.275E-01	1.956E-01	1.161E-01	NOT IDENT.
TA-182	6.210E-02	2.747E-01	2.388E-01	1.401E-01	FAIL ABUN
RE-183	1.538E-02	1.266E-01	1.072E-01	6.459E-02	FAIL ABUN
RE-184	2.003E-01	2.563E-01	2.330E-01	1.308E-01	NOT IDENT.
OS-185	-1.214E-02	5.580E-02	4.663E-02	2.847E-02	NOT IDENT.
RE-188	1.568E-01	1.883E-01	1.662E-01	9.606E-02	NOT IDENT.
W-188	3.732E+00	8.911E+00	6.989E+00	4.547E+00	FAIL ABUN
IR-192	-2.036E-02	3.982E-02	3.351E-02	2.031E-02	FAIL ABUN
AU-195	2.717E-01	2.255E-01	2.037E-01	1.151E-01	FAIL ABUN
TL-200	-6.656E+01	1.292E+02	0.000E+00	6.593E+01	SHORT HLIF
TL-201	2.591E+00	4.654E+00	4.052E+00	2.375E+00	NOT IDENT.
TL-202	6.866E-02	7.557E-02	6.953E-02	3.856E-02	NOT IDENT.
BI-207	1.530E-03	7.129E-02	5.992E-02	3.637E-02	FAIL ABUN
TL-207	-2.972E-01	8.885E-01	6.541E-01	4.533E-01	FAIL ABUN
PO-209	1.622E+00	1.042E+01	9.007E+00	5.316E+00	NOT IDENT.
PB-211	-4.520E-01	1.233E+00	9.916E-01	6.293E-01	NOT IDENT.
BI-212	1.472E+00	5.904E-01	4.361E-01	3.012E-01	FAIL ABUN
PO-215	-2.972E-01	8.885E-01	6.541E-01	4.533E-01	FAIL ABUN
RN-219	-9.587E-02	5.355E-01	4.468E-01	2.732E-01	FAIL ABUN
RN-220	-1.123E+01	3.368E+01	2.848E+01	1.718E+01	NOT IDENT.
RA-223	-2.972E-01	8.885E-01	6.541E-01	4.533E-01	FAIL ABUN
AC-227	-6.692E-02	4.336E-01	3.796E-01	2.212E-01	FAIL ABUN
TH-227	-6.692E-02	4.336E-01	3.796E-01	2.212E-01	FAIL ABUN
TH-229	1.378E-01	5.473E-01	4.987E-01	2.792E-01	FAIL ABUN
PA-231	4.302E-01	1.793E+00	1.529E+00	9.147E-01	FAIL ABUN
TH-231	-2.972E-01	8.885E-01	6.541E-01	4.533E-01	FAIL ABUN
U-231	-5.646E-01	7.553E-01	5.839E-01	3.853E-01	FAIL ABUN
PA-233	1.530E-02	7.566E-02	6.604E-02	3.860E-02	FAIL ABUN
PA-234	-1.471E-01	4.831E-01	3.704E-01	2.465E-01	FAIL ABUN
PA-234M	-6.235E+00	1.013E+01	8.081E+00	5.168E+00	NOT IDENT.
U-235	8.711E-02	2.436E-01	2.103E-01	1.243E-01	FAIL ABUN
NP-236	8.344E-03	9.210E-02	7.908E-02	4.699E-02	FAIL ABUN
NP-239	-1.916E-02	1.966E-01	1.723E-01	1.003E-01	FAIL ABUN
AM-241	2.535E-02	6.738E-02	5.694E-02	3.438E-02	NOT IDENT.
CM-243	-1.187E-01	1.009E-01	8.563E-02	5.150E-02	FAIL ABUN
CM-247	-1.785E-02	4.801E-02	3.963E-02	2.449E-02	FAIL ABUN
CF-249	2.828E-02	4.930E-02	4.295E-02	2.515E-02	NOT IDENT.
CF-251	4.259E-02	1.430E-01	1.227E-01	7.296E-02	NOT IDENT.

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                           CHARLESTON ,SC 29417                        *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                *
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46.50	428.6342
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49.72	425.2451
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53.44	418.8499
54.07	430.1168
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56.28	480.2309
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57.53	462.5915
57.60	483.4641
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57.98	486.7405
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59.32	475.2020
59.40	475.3395
59.54	475.5797
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61.10	461.1615
61.14	461.2271
61.30	479.8951
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63.29	570.1860
63.58	570.7577
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65.12	588.8657
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65.20	589.0251
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66.72	597.3900
66.83	597.6146
66.91	597.7711
67.20	603.7125
67.20	603.7125
67.75	596.7436
67.85	596.9434
68.90	624.1792
68.90	624.1792
69.30	657.4077
69.67	636.2003
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70.83	661.1016
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72.87	715.9185
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74.97	641.7379
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77.11	645.9070

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77.11	645.9070
77.11	645.9070
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80.30	521.6105
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81.07	546.1152
81.07	546.1152
81.07	546.1152
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84.40	580.9994
84.90	581.8131
85.43	582.6723
86.29	584.0614
86.50	584.4000
86.54	584.4628
86.59	584.5443
86.72	584.7512
86.79	584.8610
86.94	585.1056
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87.30	585.6826
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87.88	586.6107
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88.47	497.4888
89.95	499.4721
91.11	467.9041
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92.38	469.4737
92.38	469.4737
93.35	470.6638
94.00	404.7280
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94.67	415.6025
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94.90	415.8469
94.90	415.8469
94.90	415.8469
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98.44	435.2448
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99.55	401.1428
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100.00	407.4813
100.10	407.5847
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105.31	380.9331
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111.00	435.4058

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117.00	385.1130
117.00	385.1130
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121.78	364.3455
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122.32	388.5303
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122.32	388.5303
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144.24	386.4422
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147.16	415.6764
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154.21	371.5476
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163.35	380.8499
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171.86	337.5812
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176.60	333.3269
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186.00	318.5814
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193.63	337.5146
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210.97	305.6661
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228.18	296.0517
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236.00	269.7987
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238.63	286.0276
238.63	286.0276
239.00	286.1606
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241.98	287.2322
241.98	287.2322
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248.90	264.1317
249.79	265.3647
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252.85	240.6658
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256.20	273.1491
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260.90	287.1561
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269.46	225.0297
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351.92	228.9996
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391.69	173.7655
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401.81	201.6865
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404.84	203.2939
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445.03	172.4210
445.03	172.4210
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513.99	132.5472
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609.31	145.4020
609.31	145.4020

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696.49	133.3130
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768.36	119.9932
768.36	119.9932
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911.07	108.8704
911.07	108.8704
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934.06	84.8563
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968.20	89.3042
969.11	89.3368
969.11	89.3368
969.11	89.3368
977.42	89.6247
980.50	89.7297
983.50	79.5967
989.30	72.8364
996.32	100.4180
1001.03	107.7080
1001.68	109.7688
1004.76	101.7558
1021.30	0.0000
1024.50	0.0000
1034.80	86.4336
1037.82	82.4089
1038.57	83.4620

1038.76	0.0000
1045.16	85.7288
1046.59	71.3051
1048.07	85.8200
1050.47	88.9989
1050.47	88.9989
1063.62	88.3791
1076.63	94.0137
1077.35	83.5872
1085.78	100.6055
1099.22	109.5013
1112.02	101.5273
1112.84	92.4873
1115.52	128.8757
1120.29	92.2711
1120.29	92.2711
1120.29	92.2711
1120.29	92.2711
1120.51	92.2782
1121.28	81.8450
1124.00	0.0000
1129.67	82.9893
1131.51	0.0000
1147.95	0.0000
1167.94	100.2240
1173.22	84.2048
1175.09	99.3784
1177.93	94.0659
1189.05	105.1020
1204.90	88.8140
1205.75	0.0000
1213.00	123.7224
1221.42	120.2946
1230.97	133.8580
1235.34	133.0973
1236.41	0.0000
1238.11	108.6468
1238.11	108.6468
1238.11	108.6468
1238.11	108.6468
1238.25	105.8203
1246.25	123.1309
1260.41	0.0000
1271.85	91.6473
1274.45	81.2113
1274.54	81.2143
1291.56	71.0707
1298.22	0.0000
1312.09	68.6079
1325.50	62.0893
1325.50	62.0893
1332.49	45.6919
1333.61	53.4865
1360.21	46.0607
1362.66	0.0000
1365.15	60.8474
1368.21	53.9481
1368.53	0.0000
1376.25	51.6870
1377.67	43.0908
1377.67	43.0908
1377.67	43.0908
1377.67	43.0908
1384.27	34.5374
1394.10	50.4646
1395.20	50.4806
1407.95	48.6753
1434.06	39.0218
1436.60	42.0527
1457.56	0.0000
1460.81	35.2759
1489.15	40.6222
1509.49	31.6520
1596.49	45.9351
1620.62	24.1551
1678.03	0.0000
1691.02	18.1597
1691.02	18.1597

1706.46	0.0000
1750.46	0.0000
1764.49	24.7209
1764.49	24.7209
1764.49	24.7209
1764.49	24.7209
1770.23	27.0799
1771.40	20.3158
1791.20	0.0000
1808.65	17.0719
1836.01	19.3225

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504005

Total Uranium Activity	5.9298E+00	ug/g
Total Uranium Counting Unc.	3.3538E+00	ug/g
Total Uranium Tpu	1.7111E-06	ug/g
Total Uranium Mda	1.7077E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID  : G232504005       *
*   ANALYST       : MXR1                      DETECTOR   : GAM13            *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:50:02.32    SAMPLE ALQT:  138.040 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.193E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.701E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 4.309E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 2.101E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:52:19.86

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504006.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:50:39.
Sample ID         : G232504006           Sample quantity  : 1.62740E+02 GRAM
Detector name     : GAM15                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.19  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.20*	20	237	0.92	126.89	124	7	2.84E-03	133.5	
2	2	75.03*	303	325	1.58	150.55	142	19	4.21E-02	12.8	2.56E+00
3	2	77.29*	321	298	1.44	155.07	142	19	4.45E-02	12.5	
4	0	88.35	26	644	2.95	177.18	171	11	3.62E-03	189.5	
5	0	93.20*	107	465	1.71	186.87	182	10	1.49E-02	41.4	
6	0	186.71*	155	409	1.50	373.80	367	13	2.15E-02	29.2	
7	0	209.61	86	273	0.99	419.59	414	10	1.20E-02	37.3	
8	4	238.77*	731	220	1.30	477.89	473	17	1.02E-01	5.4	8.77E-01
9	4	241.54	211	332	2.09	483.41	473	17	2.93E-02	23.2	
10	0	295.55*	187	252	1.58	591.40	585	13	2.60E-02	19.3	
11	0	327.64	50	171	1.57	655.56	650	12	6.93E-03	54.6	
12	0	338.32*	138	135	1.25	676.90	671	10	1.92E-02	18.5	
13	0	352.10*	419	173	1.43	704.46	699	13	5.82E-02	8.4	
14	0	511.24*	57	172	1.96	1022.62	1014	19	7.94E-03	63.0	
15	0	583.09*	265	104	1.51	1166.27	1158	16	3.68E-02	10.9	
16	0	609.33*	396	98	1.54	1218.73	1211	17	5.50E-02	7.8	
17	0	727.57	86	73	1.46	1455.13	1448	15	1.19E-02	24.5	
18	0	786.20	36	33	1.72	1572.38	1567	11	4.93E-03	35.5	
19	0	795.16	69	39	1.84	1590.29	1585	13	9.58E-03	22.2	
20	0	860.68*	46	30	1.57	1721.29	1716	12	6.33E-03	29.6	
21	0	911.77*	192	62	2.20	1823.45	1815	20	2.67E-02	13.4	
22	0	970.19*	38	116	1.11	1940.26	1930	13	5.33E-03	61.2	
23	0	1120.01*	87	48	3.23	2239.83	2231	16	1.20E-02	21.3	
24	0	1238.62	46	48	2.01	2477.03	2472	12	6.39E-03	33.5	
25	0	1460.59*	1110	9	2.06	2920.90	2913	18	1.54E-01	3.1	
26	0	1764.58	54	12	1.41	3528.85	3521	16	7.54E-03	19.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:52:22

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504006.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:50:39
Sample ID : G232504006 Sample quantity : 162.74 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA15 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.19 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.402E+01	2.361E+00	4.687E-01	3.583E-02	51.241
CD-109	+	88.03	*	3.625E-01	1.375E+00	1.373E+00	1.587E-01	0.264
SN-126	+	64.28		2.731E-01	7.309E-01	1.016E+00	1.742E-01	0.269
	+	86.94		1.486E-01	5.669E-01	5.547E-01	2.333E-01	0.268
	+	87.57	*	3.575E-02	1.356E-01	1.364E-01	1.574E-02	0.262
TL-208		277.35		4.312E-01	3.541E-01	6.204E-01	6.951E-02	0.695
	+	510.84		2.484E-01	3.142E-01	2.035E-01	2.049E-02	1.221
	+	583.14	*	3.253E-01	7.409E-02	5.109E-02	3.253E-03	6.366
	+	860.37		5.235E-01	3.130E-01	3.762E-01	3.233E-02	1.392
BI-211		72.87		9.850E+00	3.551E+00	6.128E+00	6.833E-01	1.607
	+	351.07	*	2.332E+00	4.243E-01	3.130E-01	2.150E-02	7.452
BI-212	+	727.18	*	8.965E-01	4.450E-01	4.379E-01	3.409E-02	2.047
	+	785.46		2.379E+00	1.697E+00	2.366E+00	1.593E-01	1.006
		1620.62		1.304E+00	1.138E+00	2.189E+00	1.505E-01	0.596
PB-212	+	74.81		2.013E+00	5.930E-01	5.479E-01	7.956E-02	3.673
	+	77.11		1.173E+00	3.207E-01	3.018E-01	3.351E-02	3.886
	+	87.30		1.654E-01	6.273E-01	6.340E-01	9.671E-02	0.261
	+	238.63	*	8.977E-01	1.227E-01	9.101E-02	7.533E-03	9.865
		300.09		6.642E-01	8.074E-01	1.237E+00	1.109E-01	0.537
PO-212	+	74.81		2.013E+00	5.930E-01	5.479E-01	7.956E-02	3.673
	+	77.11		1.173E+00	3.207E-01	3.018E-01	3.351E-02	3.886
	+	87.30		1.654E-01	6.273E-01	6.340E-01	9.671E-02	0.261
		115.19		3.780E+00	3.500E+00	5.935E+00	4.541E-01	0.637
	+	238.63	*	8.977E-01	1.227E-01	9.101E-02	7.533E-03	9.865
		300.09		6.642E-01	8.074E-01	1.237E+00	1.109E-01	0.537
BI-214	+	609.31	*	9.164E-01	1.582E-01	8.778E-02	6.518E-03	10.439
		768.36		4.936E-01	6.802E-01	1.190E+00	1.047E-01	0.415
		934.06		3.261E-01	9.636E-01	1.641E+00	1.703E-01	0.199
	+	1120.29		1.047E+00	4.561E-01	4.157E-01	3.835E-02	2.519
	+	1238.11		1.551E+00	1.049E+00	1.430E+00	1.230E-01	1.085
		1377.67		6.007E-01	9.115E-01	1.617E+00	1.587E-01	0.372
	+	1764.49		8.993E-01	3.581E-01	2.657E-01	1.653E-02	3.385
PB-214	+	74.81		3.468E+00	1.003E+00	9.441E-01	1.261E-01	3.673
	+	77.11		2.011E+00	5.708E-01	5.174E-01	6.968E-02	3.886

Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.833E-01	1.074E+00	1.086E+00	1.505E-01	0.261
	+	241.98		1.557E+00	7.373E-01	5.478E-01	4.897E-02	2.843
	+	295.21		6.201E-01	2.461E-01	2.149E-01	1.988E-02	2.885
	+	351.92	*	8.113E-01	1.535E-01	1.010E-01	8.705E-03	8.034
PO-214	+	74.81		3.468E+00	1.003E+00	9.441E-01	1.261E-01	3.673
	+	77.11		2.011E+00	5.708E-01	5.174E-01	6.968E-02	3.886
	+	87.30		2.833E-01	1.074E+00	1.086E+00	1.505E-01	0.261
	+	241.98		1.557E+00	7.373E-01	5.478E-01	4.897E-02	2.843
	+	295.21		6.201E-01	2.461E-01	2.149E-01	1.988E-02	2.885
	+	351.92	*	8.113E-01	1.535E-01	1.010E-01	8.705E-03	8.034
PO-216	+	74.81		2.013E+00	5.930E-01	5.479E-01	7.956E-02	3.673
	+	77.11		1.173E+00	3.207E-01	3.018E-01	3.351E-02	3.886
	+	87.30		1.654E-01	6.273E-01	6.340E-01	9.671E-02	0.261
	+	238.63	*	8.977E-01	1.227E-01	9.101E-02	7.533E-03	9.865
		300.09		6.642E-01	8.074E-01	1.237E+00	1.109E-01	0.537
PO-218	+	74.81		3.468E+00	1.003E+00	9.441E-01	1.261E-01	3.673
	+	77.11		2.011E+00	5.708E-01	5.174E-01	6.968E-02	3.886
	+	87.30		2.833E-01	1.074E+00	1.086E+00	1.505E-01	0.261
	+	241.98		1.557E+00	7.373E-01	5.478E-01	4.897E-02	2.843
	+	295.21		6.201E-01	2.461E-01	2.149E-01	1.988E-02	2.885
	+	351.92	*	8.113E-01	1.535E-01	1.010E-01	8.705E-03	8.034
RA-224	+	240.98	*	2.953E+00	1.388E+00	1.035E+00	7.206E-02	2.852
RA-226	+	609.31	*	9.164E-01	1.582E-01	8.778E-02	6.518E-03	10.439
		768.36		4.936E-01	6.802E-01	1.190E+00	1.047E-01	0.415
		934.06		3.261E-01	9.636E-01	1.641E+00	1.703E-01	0.199
	+	1120.29		1.047E+00	4.561E-01	4.157E-01	3.835E-02	2.519
	+	1238.11		1.551E+00	1.049E+00	1.430E+00	1.230E-01	1.085
		1377.67		6.007E-01	9.115E-01	1.617E+00	1.587E-01	0.372
	+	1764.49		8.993E-01	3.581E-01	2.657E-01	1.653E-02	3.385
AC-228	+	338.32		8.505E-01	4.687E-01	3.335E-01	1.363E-01	2.550
	+	911.07	*	1.047E+00	3.034E-01	1.715E-01	1.907E-02	6.106
	+	969.11		3.693E-01	4.598E-01	3.084E-01	7.131E-02	1.197
RA-228	+	338.32		8.505E-01	4.687E-01	3.335E-01	1.363E-01	2.550
	+	911.07	*	1.047E+00	3.034E-01	1.715E-01	1.907E-02	6.106
	+	969.11		3.693E-01	4.598E-01	3.084E-01	7.131E-02	1.197
TH-228		84.40		3.123E+00	2.860E+00	4.270E+00	6.432E-01	0.731
	+	238.60	*	8.977E-01	1.227E-01	9.100E-02	7.532E-03	9.866
		300.10		6.638E-01	8.955E-01	1.237E+00	7.302E-01	0.537
TH-230	+	609.31	*	9.164E-01	1.582E-01	8.778E-02	6.517E-03	10.439
		768.36		4.936E-01	6.802E-01	1.190E+00	1.047E-01	0.415
		934.06		3.260E-01	9.636E-01	1.641E+00	1.703E-01	0.199
	+	1120.29		1.047E+00	4.561E-01	4.157E-01	3.835E-02	2.519
	+	1238.11		1.551E+00	1.049E+00	1.430E+00	1.230E-01	1.085
		1377.67		6.007E-01	9.114E-01	1.617E+00	1.587E-01	0.372
	+	1764.49		8.993E-01	3.580E-01	2.657E-01	1.653E-02	3.385
TH-232	+	338.32		8.505E-01	3.193E-01	3.335E-01	2.147E-02	2.550
	+	911.07	*	1.047E+00	3.034E-01	1.715E-01	1.907E-02	6.106
	+	969.11		3.693E-01	4.598E-01	3.084E-01	7.131E-02	1.197
TH-234	+	63.29	*	6.900E-01	1.848E+00	2.770E+00	5.467E-01	0.249

Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		9.337E-01	7.928E-01	8.928E-01	1.702E-01	1.046
U-234	+	609.31	*	9.164E-01	1.582E-01	8.778E-02	6.517E-03	10.439
		768.36		4.936E-01	6.802E-01	1.190E+00	1.047E-01	0.415
		934.06		3.260E-01	9.636E-01	1.641E+00	1.703E-01	0.199
	+	1120.29		1.047E+00	4.561E-01	4.157E-01	3.835E-02	2.519
	+	1238.11		1.551E+00	1.049E+00	1.430E+00	1.230E-01	1.085
		1377.67		6.007E-01	9.114E-01	1.617E+00	1.587E-01	0.372
	+	1764.49		8.993E-01	3.580E-01	2.657E-01	1.653E-02	3.385
U-238	+	63.29	*	6.900E-01	1.848E+00	2.770E+00	5.467E-01	0.249
	+	92.38		9.337E-01	7.788E-01	8.928E-01	9.392E-02	1.046
AM-243	+	74.67	*	3.263E-01	9.118E-02	8.928E-02	9.921E-03	3.655
		86.72		1.068E+01	1.061E+01	1.592E+01	1.828E+00	0.671
		117.66		-1.373E+00	3.745E+00	6.016E+00	4.494E-01	-0.228
		142.18		9.675E+00	1.699E+01	2.769E+01	1.886E+00	0.349
ANH-511	+	511.00	*	5.366E-02	6.772E-02	4.397E-02	2.483E-03	1.220

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.541E-01	2.924E-01	4.951E-01	3.299E-02	0.311
NA-22		1274.54	*	-4.345E-03	3.939E-02	6.297E-02	4.322E-03	-0.069
NA-24		1368.53	*	1.599E-02	3.939E-02	Half-Life too short		
AL-26		1129.67		-1.221E+00	1.384E+00	2.023E+00	1.275E-01	-0.604
		1808.65	*	-1.343E-03	2.677E-02	4.358E-02	2.608E-03	-0.031
TI-44		67.85		1.890E-03	8.399E-02	8.853E-02	1.010E-02	0.021
	+	78.38	*	2.164E-01	5.918E-02	7.603E-02	8.453E-03	2.847
SC-46		889.25	*	-1.908E-02	3.373E-02	5.268E-02	4.419E-03	-0.362
	+	1120.51		1.760E-01	7.574E-02	1.054E-01	6.767E-03	1.670
V-48		944.10		-1.688E-01	7.657E-01	1.237E+00	1.017E-01	-0.136
		983.50	*	-1.116E-02	5.419E-02	8.722E-02	6.890E-03	-0.128
		1312.09		-5.711E-02	7.164E-02	1.046E-01	7.635E-03	-0.546
CR-51		320.08	*	-1.263E-01	3.246E-01	5.131E-01	3.701E-02	-0.246
MN-52		744.21		1.465E-01	1.503E-01	2.711E-01	1.663E-02	0.540
		848.13		2.124E+00	4.466E+00	7.720E+00	5.951E-01	0.275
		935.52		8.911E-02	1.612E-01	2.800E-01	2.319E-02	0.318
		1246.25		8.292E-01	6.284E+00	9.230E+00	6.018E-01	0.090
		1333.61		5.908E-01	3.202E+00	5.300E+00	4.000E-01	0.111
		1434.06	*	3.948E-02	1.636E-01	2.816E-01	2.088E-02	0.140
MN-54		834.83	*	-5.883E-03	3.283E-02	5.370E-02	4.025E-03	-0.110
CO-56		846.75	*	1.502E-02	3.450E-02	5.938E-02	4.564E-03	0.253
		977.42		1.231E+00	2.475E+00	4.272E+00	3.398E-01	0.288
		1037.82		-2.315E-01	2.940E-01	4.444E-01	3.517E-02	-0.521
		1175.09		-1.353E+00	1.860E+00	2.784E+00	1.591E-01	-0.486
	+	1238.25		1.541E-01	1.039E-01	1.589E-01	1.074E-02	0.970
		1360.21		7.181E-02	8.095E-01	1.322E+00	9.948E-02	0.054
		1771.40		-1.307E-01	2.115E-01	2.330E-01	1.441E-02	-0.561
CO-57		122.06	*	-1.352E-02	2.384E-02	3.787E-02	2.723E-03	-0.357
		136.48		-1.378E-01	1.904E-01	2.988E-01	2.293E-02	-0.461

Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-58		810.76	*	4.056E-03	3.596E-02	6.037E-02	4.312E-03	0.067
FE-59		142.65		1.265E+00	2.540E+00	4.128E+00	2.811E-01	0.307
		192.34		-1.088E-01	1.020E+00	1.418E+00	1.748E-01	-0.077
		1099.22	*	-1.950E-02	8.837E-02	1.415E-01	1.071E-02	-0.138
		1291.56		-1.117E-02	1.093E-01	1.747E-01	1.474E-02	-0.064
CO-60		1173.22		-1.846E-02	3.805E-02	5.868E-02	3.342E-03	-0.315
		1332.49	*	1.804E-02	3.322E-02	5.749E-02	4.339E-03	0.314
ZN-65		1115.52	*	3.224E-02	8.799E-02	1.296E-01	8.420E-03	0.249
GE-68		1077.35	*	-4.697E-01	1.037E+00	1.611E+00	1.119E-01	-0.292
AS-73		53.44	*	-4.812E-01	1.571E+00	2.579E+00	3.524E-01	-0.187
AS-74		595.88	*	1.336E-02	7.346E-02	1.205E-01	6.479E-03	0.111
		634.78		9.016E-02	2.973E-01	4.880E-01	2.531E-02	0.185
SE-75		66.05		1.933E-01	6.574E+00	9.569E+00	1.241E+00	0.020
		96.73		-8.315E-02	8.269E-01	1.183E+00	1.696E-01	-0.070
		121.11		-3.656E-03	1.279E-01	2.083E-01	2.125E-02	-0.018
		136.00		-2.261E-02	3.588E-02	5.661E-02	3.942E-03	-0.399
		198.60		-1.312E+00	1.718E+00	2.649E+00	2.114E-01	-0.495
		264.65	*	1.700E-02	3.950E-02	6.760E-02	4.728E-03	0.252
		279.53		1.317E-01	1.012E-01	1.789E-01	1.305E-02	0.736
		303.91		-1.493E+00	2.005E+00	3.207E+00	3.256E-01	-0.466
		400.65		-2.678E-02	2.425E-01	3.970E-01	3.585E-02	-0.067
BR-77	+	87.88		4.079E+01	1.547E+02	1.645E+02	1.902E+01	0.248
		200.40		-1.082E+01	8.119E+01	1.293E+02	8.834E+00	-0.084
	+	239.00		7.483E+01	9.666E+00	1.608E+01	1.119E+00	4.654
		249.79		-1.752E+01	3.266E+01	5.348E+01	3.723E+00	-0.328
		281.68		-3.266E+01	4.404E+01	7.083E+01	4.878E+00	-0.461
		297.23		7.367E+01	3.533E+01	5.676E+01	3.862E+00	1.298
		303.76		-6.830E+01	8.961E+01	1.434E+02	9.694E+00	-0.476
		439.47		4.064E+01	7.098E+01	1.207E+02	6.900E+00	0.337
		484.57		-7.328E-01	1.036E+02	1.691E+02	9.619E+00	-0.004
		520.65	*	-1.310E+00	5.217E+00	7.808E+00	4.393E-01	-0.168
		574.64		5.421E+01	1.065E+02	1.642E+02	8.970E+00	0.330
		578.91		-1.616E+01	4.838E+01	6.501E+01	3.541E+00	-0.249
		585.48		5.772E+02	1.217E+02	2.230E+02	1.209E+01	2.589
		755.35		5.537E+01	7.355E+01	1.302E+02	8.196E+00	0.425
		817.79		-3.116E+01	5.863E+01	9.251E+01	6.685E+00	-0.337
SR-82		698.33		-1.011E+01	3.002E+01	4.914E+01	2.705E+00	-0.206
		776.49	*	-3.079E-02	3.064E-01	5.066E-01	3.344E-02	-0.061
		1395.20		1.222E+00	8.386E+00	1.431E+01	1.070E+00	0.085
RB-83		520.41	*	-1.514E-02	6.582E-02	9.873E-02	5.555E-03	-0.153
		529.64		-7.477E-02	9.626E-02	1.467E-01	8.224E-03	-0.510
		552.65		-3.992E-02	1.805E-01	2.877E-01	1.593E-02	-0.139
RB-84		881.50	*	2.707E-03	6.050E-02	1.006E-01	8.306E-03	0.027
KR-85		513.99	*	1.537E+01	7.787E+00	1.282E+01	7.231E-01	1.199
SR-85		513.99	*	7.694E-02	3.899E-02	6.419E-02	3.621E-03	1.199
RB-86		1076.63	*	-7.672E-02	5.786E-01	9.324E-01	6.487E-02	-0.082
Y-88		898.02		2.850E-02	3.958E-02	6.925E-02	5.942E-03	0.412
		1836.01	*	1.161E-02	2.335E-02	4.287E-02	2.504E-03	0.271
ZR-88		392.90	*	7.253E-03	2.833E-02	4.746E-02	2.692E-03	0.153

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91		1204.90	*	-1.200E+00	1.863E+01	3.010E+01	1.821E+00	-0.040
NB-94		702.63	*	-3.772E-04	2.998E-02	5.022E-02	2.793E-03	-0.008
		871.10		3.178E-02	2.851E-02	5.198E-02	4.202E-03	0.611
NB-95		765.79	*	3.324E-02	3.867E-02	6.833E-02	4.403E-03	0.486
NB-95M		235.69	*	1.887E-01	1.332E-01	2.092E-01	1.768E-02	0.902
ZR-95		724.18		6.138E-03	1.007E-01	1.463E-01	1.010E-02	0.042
		756.15	*	4.202E-02	5.901E-02	1.042E-01	7.766E-03	0.403
NB-97		657.90	*	4.149E-03	5.901E-02	Half-Life too short		
		1024.50		-5.584E-01	5.901E-02	Half-Life too short		
ZR-97		254.15		3.283E-01	5.901E-02	Half-Life too short		
		355.39		3.316E-01	5.901E-02	Half-Life too short		
		507.63	*	3.815E-01	5.901E-02	Half-Life too short		
		602.52		1.359E-01	5.901E-02	Half-Life too short		
		1021.30		6.442E-01	5.901E-02	Half-Life too short		
		1147.95		-6.278E-01	5.901E-02	Half-Life too short		
		1362.66		-2.566E-01	5.901E-02	Half-Life too short		
		1750.46		-9.046E-02	5.901E-02	Half-Life too short		
MO-99		140.51		-2.358E+00	1.442E+01	2.286E+01	6.215E+00	-0.103
		181.06		1.569E+00	1.079E+01	1.528E+01	2.670E+00	0.103
		366.43		-4.794E+00	4.481E+01	7.365E+01	4.472E+00	-0.065
		739.58	*	-5.002E+00	5.698E+00	8.729E+00	1.213E+00	-0.573
		778.00		-5.637E+00	1.636E+01	2.508E+01	1.662E+00	-0.225
TC-99M		140.51	*	-1.209E+07	1.636E+01	Half-Life too short		
RH-101		127.23		6.339E-03	3.113E-02	5.106E-02	3.598E-03	0.124
		198.01	*	-1.557E-02	3.177E-02	4.972E-02	3.392E-03	-0.313
		325.23		8.841E-02	2.372E-01	3.523E-01	2.317E-02	0.251
RH-102		418.52		-4.374E-02	2.760E-01	4.414E-01	2.518E-02	-0.099
		475.06	*	-8.202E-03	2.632E-02	4.202E-02	2.395E-03	-0.195
		631.29		-2.527E-03	4.668E-02	7.481E-02	3.894E-03	-0.034
		697.49		1.095E-02	7.143E-02	1.211E-01	6.652E-03	0.090
		766.84		8.582E-02	1.034E-01	1.820E-01	1.176E-02	0.472
		1046.59		3.850E-02	9.700E-02	1.655E-01	1.207E-02	0.233
		1112.84		8.358E-02	2.318E-01	3.410E-01	2.223E-02	0.245
RU-103		497.08	*	-7.112E-03	3.687E-02	5.927E-02	7.460E-03	-0.120
	+	610.33		9.511E+00	2.073E+00	2.380E+00	3.628E-01	3.995
RH-106	+	511.85		2.669E-01	3.368E-01	3.805E-01	2.148E-02	0.701
		621.84	*	-1.042E-02	2.963E-01	4.763E-01	5.467E-02	-0.022
		1050.47		1.782E+00	1.879E+00	3.379E+00	2.449E-01	0.528
RU-106	+	511.85		2.669E-01	3.368E-01	3.805E-01	2.148E-02	0.701
		621.84	*	-1.042E-02	2.963E-01	4.763E-01	2.503E-02	-0.022
		1050.47		1.782E+00	1.879E+00	3.379E+00	2.449E-01	0.528
AG-108M		433.93	*	8.495E-03	2.965E-02	4.964E-02	3.086E-03	0.171
		614.37		1.695E-02	4.105E-02	5.972E-02	3.479E-03	0.284
		722.95		-4.256E-03	4.318E-02	6.167E-02	3.901E-03	-0.069
AG-110M		657.75	*	1.539E-02	2.960E-02	4.979E-02	2.729E-03	0.309
		677.61		9.841E-02	2.911E-01	4.803E-01	2.702E-02	0.205
		706.67		-4.573E-02	1.892E-01	3.114E-01	1.861E-02	-0.147
		763.93		-6.629E-03	1.531E-01	2.547E-01	1.717E-02	-0.026
		884.67		-4.448E-03	4.525E-02	7.424E-02	6.383E-03	-0.060

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		937.48		-7.037E-02	9.945E-02	1.526E-01	1.311E-02	-0.461
		1384.27		-7.494E-02	1.353E-01	2.094E-01	1.627E-02	-0.358
IN-111		171.28		4.533E-01	5.442E-01	9.087E-01	6.065E-02	0.499
		245.39	*	3.091E-01	6.541E-01	9.865E-01	6.869E-02	0.313
IN-113M		391.69	*	-1.250E-02	4.207E-02	6.813E-02	4.133E-03	-0.183
SN-113		391.69	*	-1.250E-02	4.207E-02	6.813E-02	4.133E-03	-0.183
IN-114M		190.27	*	8.781E-02	1.866E-01	2.693E-01	1.826E-02	0.326
CD-115		260.90		-7.312E+01	5.960E+01	9.346E+01	6.497E+00	-0.782
		492.35		7.959E+00	1.623E+01	2.743E+01	1.558E+00	0.290
		527.90	*	-2.672E+00	4.977E+00	7.675E+00	4.305E-01	-0.348
SN-117M		156.02		-7.432E-01	1.919E+00	3.050E+00	2.044E-01	-0.244
		158.56	*	2.000E-02	4.618E-02	7.601E-02	5.082E-03	0.263
SB-122		563.90	*	-1.243E-01	1.092E+00	1.754E+00	9.648E-02	-0.071
		692.80		2.695E+01	2.246E+01	4.074E+01	2.213E+00	0.662
I-123		159.00	*	1.887E-01	2.246E+01	Half-Life too short		
		528.96		-1.630E+01	2.246E+01	Half-Life too short		
TE-123M		159.00	*	1.589E-02	2.671E-02	4.423E-02	2.986E-03	0.359
I-124		602.71	*	1.577E-01	4.272E-01	6.223E-01	3.327E-02	0.253
		722.78		-2.330E-01	3.112E+00	4.456E+00	2.600E-01	-0.052
		1325.50		-9.526E+00	2.369E+01	3.640E+01	2.716E+00	-0.262
		1376.25		2.105E+01	2.054E+01	3.681E+01	2.762E+00	0.572
		1509.49		5.064E+00	9.616E+00	1.711E+01	1.239E+00	0.296
		1691.02		-7.723E-01	2.259E+00	3.484E+00	2.293E-01	-0.222
SB-124		602.71		1.297E-02	3.513E-02	5.117E-02	2.737E-03	0.253
		645.85		1.641E-01	4.323E-01	7.187E-01	4.279E-02	0.228
		709.31		1.799E+00	2.424E+00	4.279E+00	2.419E-01	0.420
		713.82		-3.082E-01	1.453E+00	2.394E+00	2.433E-01	-0.129
		722.78		-2.777E-02	3.709E-01	5.311E-01	3.244E-02	-0.052
		968.20		7.281E+00	2.964E+00	5.467E+00	4.389E-01	1.332
		1045.16		5.100E-01	2.073E+00	3.484E+00	2.545E-01	0.146
		1325.50		-1.213E+00	3.016E+00	4.634E+00	3.458E-01	-0.262
		1368.21		2.530E-01	1.521E+00	2.509E+00	3.211E-01	0.101
		1436.60		-6.199E-01	3.401E+00	5.545E+00	4.108E-01	-0.112
		1691.02	*	-2.171E-02	6.351E-02	9.795E-02	6.879E-03	-0.222
SB-125		427.89	*	4.646E-02	8.222E-02	1.402E-01	8.356E-03	0.331
		463.38		5.346E-01	2.569E-01	4.723E-01	3.157E-02	1.132
		600.56		2.363E-03	1.592E-01	2.423E-01	1.533E-02	0.010
		635.90		-2.034E-02	2.500E-01	3.972E-01	2.491E-02	-0.051
TE-125M		109.28	*	1.001E-01	8.764E+00	1.434E+01	1.424E+00	0.007
I-126		388.63		-1.106E-02	1.735E-01	2.852E-01	1.632E-02	-0.039
		666.33	*	-1.548E-02	1.467E-01	2.335E-01	1.188E-02	-0.066
		753.82		7.454E-01	1.104E+00	1.944E+00	1.219E-01	0.383
SB-126		223.80		-5.955E-01	3.559E+00	5.631E+00	3.901E-01	-0.106
		278.60		3.771E+00	2.042E+00	3.680E+00	2.539E-01	1.025
	+	296.50		5.445E+00	2.134E+00	2.655E+00	1.808E-01	2.051
		414.70		-5.415E-02	6.058E-02	9.349E-02	5.330E-03	-0.579
		415.30		-2.877E+00	5.112E+00	8.093E+00	4.614E-01	-0.355
		555.20		-2.945E-01	3.135E+00	5.045E+00	2.790E-01	-0.058
		573.80		1.068E-01	8.741E-01	1.391E+00	7.601E-02	0.077

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		593.00		-2.501E-01	7.415E-01	1.164E+00	6.274E-02	-0.215
		656.30		1.695E+00	2.560E+00	4.354E+00	2.205E-01	0.389
		666.33		-6.434E-03	6.098E-02	9.706E-02	4.940E-03	-0.066
		675.00		-1.053E+00	1.710E+00	2.599E+00	1.352E-01	-0.405
		695.00		3.168E-02	6.648E-02	1.150E-01	6.282E-03	0.275
		697.00		-2.106E-02	2.248E-01	3.745E-01	2.055E-02	-0.056
		720.50	*	7.106E-02	1.288E-01	1.974E-01	1.146E-02	0.360
		856.80		2.461E-01	3.590E-01	5.630E-01	4.419E-02	0.437
		989.30		-2.407E-01	1.036E+00	1.665E+00	1.307E-01	-0.145
		1034.80		3.190E+00	7.666E+00	1.304E+01	9.668E-01	0.245
		1213.00		1.323E-01	4.163E+00	6.780E+00	4.163E-01	0.020
SB-127		61.10		1.616E+01	5.532E+01	8.205E+01	1.109E+01	0.197
		252.40		8.688E-02	2.749E+00	4.624E+00	1.922E+00	0.019
		290.80		3.759E+00	1.461E+01	2.163E+01	1.973E+00	0.174
		411.60		2.498E+00	7.502E+00	1.259E+01	1.743E+00	0.198
		444.90		-5.309E+00	6.080E+00	9.313E+00	9.388E-01	-0.570
		473.00		-1.294E+00	1.023E+00	1.496E+00	1.569E-01	-0.865
		543.00		-1.467E+00	1.046E+01	1.681E+01	2.059E+00	-0.087
		603.60		-1.483E-01	7.387E+00	1.026E+01	1.010E+00	-0.014
		685.20	*	-8.909E-01	7.975E-01	1.211E+00	1.012E-01	-0.736
		698.50		3.728E-01	9.276E+00	1.560E+01	2.164E+00	0.024
		722.20		4.966E+00	2.013E+01	2.986E+01	2.506E+00	0.166
		783.80		1.889E+00	2.173E+00	3.460E+00	3.646E-01	0.546
XE-127		57.60		4.475E+00	9.188E+00	1.507E+01	1.919E+00	0.297
		145.22		1.885E-01	6.316E-01	1.036E+00	7.028E-02	0.182
		172.10		6.050E-02	1.081E-01	1.785E-01	1.192E-02	0.339
		202.84	*	-1.150E-03	4.489E-02	6.925E-02	4.741E-03	-0.017
		374.96		-4.599E-02	1.685E-01	2.736E-01	1.626E-02	-0.168
I-131		80.18		-3.610E+00	4.277E+00	5.883E+00	6.582E-01	-0.614
		284.30		-1.195E+00	1.130E+00	1.777E+00	1.317E-01	-0.672
		364.48	*	4.741E-02	8.950E-02	1.527E-01	1.027E-02	0.311
		636.97		-6.742E-02	1.173E+00	1.879E+00	1.112E-01	-0.036
		722.89		-5.406E-01	5.995E+00	8.569E+00	5.052E-01	-0.063
TE-132		49.72		6.965E+00	2.752E+01	4.633E+01	6.762E+00	0.150
		111.76		-6.602E+00	1.811E+01	2.914E+01	2.832E+00	-0.227
		116.30		-4.410E+00	1.707E+01	2.757E+01	2.599E+00	-0.160
		228.16	*	-1.634E-02	4.081E-01	6.869E-01	9.928E-02	-0.024
BA-133		53.15		-8.528E-01	7.020E+00	1.163E+01	1.594E+00	-0.073
		79.62		1.100E+00	1.498E+00	2.233E+00	3.747E-01	0.493
		81.00		-1.519E-01	1.129E-01	1.469E-01	2.557E-02	-1.034
		276.40		1.710E-01	3.511E-01	5.996E-01	8.093E-02	0.285
		302.84		3.293E-02	1.417E-01	2.261E-01	2.752E-02	0.146
		356.01	*	5.447E-03	4.206E-02	6.117E-02	7.204E-03	0.089
		383.85		-1.801E-01	2.862E-01	4.531E-01	4.926E-02	-0.398
I-133	+	510.53		9.040E-02	2.862E-01	Half-Life too short		
		529.87	*	-6.366E-04	2.862E-01	Half-Life too short		
		706.58		-1.683E-02	2.862E-01	Half-Life too short		
		856.28		3.769E-02	2.862E-01	Half-Life too short		
		875.33		-1.498E-02	2.862E-01	Half-Life too short		

Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1236.41		1.553E-01	2.862E-01	Half-Life too short		
		1298.22		-3.851E-03	2.862E-01	Half-Life too short		
CS-134		475.35		7.333E-01	1.672E+00	2.822E+00	1.609E-01	0.260
		563.23		3.299E-02	3.336E-01	5.448E-01	3.068E-02	0.061
		569.32		4.371E-02	1.848E-01	3.047E-01	1.726E-02	0.143
		604.70		1.530E-02	3.263E-02	4.792E-02	2.574E-03	0.319
	+	795.84	*	1.211E-01	5.446E-02	8.197E-02	5.712E-03	1.478
		801.93		-4.687E-01	4.432E-01	5.511E-01	3.881E-02	-0.851
		1038.57		-2.587E+00	3.662E+00	5.579E+00	4.114E-01	-0.464
		1167.94		1.434E+00	2.313E+00	3.981E+00	2.298E-01	0.360
		1365.15		-4.533E-01	1.096E+00	1.657E+00	1.320E-01	-0.274
CS-135		268.24	*	3.070E-03	1.509E-01	2.531E-01	2.164E-02	0.012
I-135		288.45		3.734E+07	1.509E-01	Half-Life too short		
		417.63		-3.721E+07	1.509E-01	Half-Life too short		
		546.56		-5.032E+06	1.509E-01	Half-Life too short		
		836.80		3.686E+07	1.509E-01	Half-Life too short		
		1038.76		-4.170E+07	1.509E-01	Half-Life too short		
		1124.00		2.047E+08	1.509E-01	Half-Life too short		
		1131.51		-1.374E+06	1.509E-01	Half-Life too short		
		1260.41	*	2.247E+06	1.509E-01	Half-Life too short		
		1457.56		2.292E+09	1.509E-01	Half-Life too short		
		1678.03		-2.227E+07	1.509E-01	Half-Life too short		
		1706.46		-1.809E+07	1.509E-01	Half-Life too short		
		1791.20		-6.071E+06	1.509E-01	Half-Life too short		
CS-136		66.91		-2.828E-01	1.025E+00	1.366E+00	2.349E-01	-0.207
		86.29		1.740E+00	1.134E+00	1.709E+00	2.546E-01	1.018
		153.22		-5.029E-02	5.600E-01	9.026E-01	7.201E-02	-0.056
		163.89		-2.131E-01	8.935E-01	1.426E+00	1.134E-01	-0.149
		176.55		-9.493E-02	3.127E-01	4.963E-01	3.638E-02	-0.191
		273.65		-8.574E-01	3.967E-01	5.877E-01	4.474E-02	-1.459
		340.57		3.338E-01	1.209E-01	2.050E-01	1.382E-02	1.628
		818.51		4.533E-03	5.534E-02	9.271E-02	6.717E-03	0.049
		1048.07	*	-2.878E-02	8.385E-02	1.325E-01	1.020E-02	-0.217
		1235.34		8.134E-01	5.975E-01	9.491E-01	9.815E-02	0.857
BA-137M		661.65	*	-6.968E-03	3.210E-02	5.060E-02	2.546E-03	-0.138
CS-137		661.65	*	-7.366E-03	3.393E-02	5.348E-02	2.706E-03	-0.138
CE-139		165.85	*	-4.524E-03	2.702E-02	4.325E-02	2.877E-03	-0.105
BA-140		162.64		1.045E-01	6.203E-01	1.009E+00	7.367E-02	0.104
		304.84		-9.462E-01	1.131E+00	1.754E+00	4.824E-01	-0.540
		423.70		-3.768E-01	1.600E+00	2.582E+00	8.203E-01	-0.146
		537.32	*	-3.175E-02	2.170E-01	3.482E-01	1.131E-01	-0.091
LA-140	+	328.77		3.356E-01	3.675E-01	4.217E-01	3.022E-02	0.796
		432.53		-4.729E-01	1.696E+00	2.731E+00	1.728E-01	-0.173
		487.03		-8.559E-02	1.116E-01	1.713E-01	1.107E-02	-0.500
		751.79		-4.022E-01	1.255E+00	2.037E+00	1.520E-01	-0.197
		815.85		-2.696E-01	2.536E-01	3.784E-01	3.164E-02	-0.712
		867.82		-4.987E-01	1.204E+00	1.692E+00	1.441E-01	-0.295
		919.63		-8.167E-01	2.424E+00	3.139E+00	3.285E-01	-0.260
		925.24		6.240E-01	8.612E-01	1.518E+00	1.353E-01	0.411

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1596.49	*	-3.939E-03	6.501E-02	1.068E-01	7.444E-03	-0.037
CE-141		145.44	*	2.187E-03	5.720E-02	9.285E-02	6.480E-03	0.024
CE-143		57.37		1.420E-04	5.720E-02	Half-Life too short		
		231.56		1.472E-05	5.720E-02	Half-Life too short		
		293.26	*	1.190E-04	5.720E-02	Half-Life too short		
		350.59		5.625E-03	5.720E-02	Half-Life too short		
		490.36		5.729E-04	5.720E-02	Half-Life too short		
		664.57		-4.493E-05	5.720E-02	Half-Life too short		
		721.93		9.922E-05	5.720E-02	Half-Life too short		
CE-144		80.11		-1.975E+00	2.380E+00	3.276E+00	3.655E-01	-0.603
		133.54	*	-4.076E-02	1.935E-01	3.116E-01	4.579E-02	-0.131
PM-144		476.78		1.692E-02	6.195E-02	1.032E-01	7.077E-03	0.164
		618.01		7.284E-03	3.204E-02	4.965E-02	2.807E-03	0.147
		696.49	*	-1.599E-02	3.263E-02	5.281E-02	2.896E-03	-0.303
		778.57		-1.636E+00	2.113E+00	2.983E+00	1.979E-01	-0.548
PR-144		696.49	*	-1.082E+00	2.208E+00	3.575E+00	1.959E-01	-0.303
		1489.15		5.303E+00	8.372E+00	1.546E+01	1.128E+00	0.343
PM-146		453.90	*	4.635E-02	3.952E-02	6.961E-02	5.962E-03	0.666
		633.02		1.449E-01	1.233E+00	2.005E+00	7.366E-01	0.072
		735.90		1.391E-01	1.384E-01	2.281E-01	6.371E-02	0.610
		747.13		-1.506E-02	7.613E-02	1.250E-01	1.585E-02	-0.121
ND-147		91.11		3.133E-01	3.895E-01	4.286E-01	4.875E-02	0.731
		319.41		-1.635E+00	2.606E+00	4.175E+00	2.769E-01	-0.392
		439.89		3.705E+00	4.727E+00	8.149E+00	4.658E-01	0.455
		531.02	*	2.916E-02	4.401E-01	7.192E-01	9.664E-02	0.041
PM-149		285.90	*	-1.015E+01	4.073E+01	6.715E+01	9.829E+00	-0.151
EU-152		121.78		-3.231E-03	6.866E-02	1.117E-01	9.740E-03	-0.029
		244.69		3.491E-01	3.594E-01	5.566E-01	3.875E-02	0.627
		344.27	*	-1.282E-03	9.599E-02	1.446E-01	1.019E-02	-0.009
		443.98		-1.291E+00	8.936E-01	1.307E+00	7.472E-02	-0.987
		778.89		-6.802E-02	2.323E-01	3.473E-01	2.305E-02	-0.196
		867.32		-4.665E-01	8.499E-01	1.117E+00	8.958E-02	-0.418
		964.01		9.708E-02	3.207E-01	4.694E-01	3.785E-02	0.207
		1085.78		5.106E-01	3.694E-01	6.788E-01	4.650E-02	0.752
		1112.02		-1.854E-02	3.444E-01	4.784E-01	3.123E-02	-0.039
		1407.95		2.458E-01	1.772E-01	3.387E-01	2.526E-02	0.726
GD-153		69.67		-9.770E-01	2.095E+00	2.964E+00	3.346E-01	-0.330
		83.37		8.384E+00	1.941E+01	2.433E+01	2.744E+00	0.345
		97.43	*	2.045E-02	8.481E-02	1.236E-01	1.186E-02	0.165
		103.18		-8.005E-02	9.924E-02	1.566E-01	1.378E-02	-0.511
EU-154		123.07		-3.366E-02	4.953E-02	7.817E-02	8.047E-03	-0.431
		247.94		-1.356E-02	3.766E-01	5.755E-01	5.921E-02	-0.024
		591.81		-1.231E-02	5.724E-01	8.981E-01	8.567E-02	-0.014
		723.30		-1.483E-02	1.825E-01	2.611E-01	1.858E-02	-0.057
		756.87		3.242E-01	6.689E-01	1.160E+00	1.211E-01	0.280
		873.19		4.545E-02	2.634E-01	4.433E-01	5.274E-02	0.103
		996.32		-1.116E-01	3.331E-01	5.289E-01	9.190E-02	-0.211
		1004.76		-1.356E-01	1.869E-01	2.831E-01	3.109E-02	-0.479
		1274.45	*	-1.111E-02	1.103E-01	1.765E-01	1.770E-02	-0.063

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		48.70		-1.938E+00	5.859E+00	9.624E+00	1.238E+00	-0.201
		60.01		-2.025E+00	7.611E+00	1.093E+01	1.336E+00	-0.185
		86.54		1.226E-01	1.165E-01	1.751E-01	2.020E-02	0.700
		105.31	*	2.416E-02	1.018E-01	1.683E-01	1.457E-02	0.144
TB-160		86.79		2.994E-01	3.027E-01	4.541E-01	5.215E-02	0.659
		197.04		3.561E-01	5.244E-01	8.662E-01	5.904E-02	0.411
		215.65		5.182E-01	7.731E-01	1.230E+00	8.490E-02	0.421
		298.57		9.403E-02	1.203E-01	1.835E-01	1.247E-02	0.512
		879.36	*	6.812E-02	1.223E-01	2.125E-01	1.747E-02	0.321
		962.29		1.827E-01	5.599E-01	8.226E-01	6.645E-02	0.222
		966.15		5.226E-01	2.470E-01	4.141E-01	3.332E-02	1.262
		1177.93		-1.405E-01	3.271E-01	5.097E-01	2.930E-02	-0.276
		1271.85		6.470E-01	6.140E-01	1.106E+00	7.540E-02	0.585
HO-166M		80.57		-3.730E-01	3.096E-01	4.151E-01	4.636E-02	-0.899
		184.41		3.358E-02	4.180E-02	6.248E-02	4.216E-03	0.538
		280.46		-1.137E-02	8.009E-02	1.330E-01	9.171E-03	-0.085
		410.95		6.465E-02	2.291E-01	3.836E-01	2.185E-02	0.169
		711.68	*	9.726E-03	5.504E-02	9.342E-02	5.310E-03	0.104
		752.31		1.121E-01	2.246E-01	3.911E-01	2.444E-02	0.287
		810.29		2.799E-02	5.570E-02	9.633E-02	6.850E-03	0.291
TM-171		51.35		6.497E+01	6.449E+01	1.109E+02	1.532E+01	0.586
		52.39		7.935E+00	3.170E+01	5.331E+01	7.354E+00	0.149
		59.40		-1.378E-01	4.194E+01	6.122E+01	7.534E+00	-0.002
		66.72	*	-1.388E+01	4.195E+01	5.574E+01	6.410E+00	-0.249
LU-176	+	88.36		8.480E-02	3.216E-01	3.427E-01	3.932E-02	0.247
		201.83		1.837E-03	2.758E-02	4.432E-02	3.032E-03	0.041
		306.84	*	-3.782E-03	2.359E-02	3.899E-02	2.627E-03	-0.097
		401.10		-1.370E+00	6.546E+00	1.065E+01	6.054E-01	-0.129
LU-177		112.95		-5.016E-01	1.269E+00	2.039E+00	1.596E-01	-0.246
	+	208.36	*	1.492E+00	1.119E+00	1.441E+00	9.905E-02	1.035
LU-177M		52.97		2.237E-01	3.158E+00	5.274E+00	7.243E-01	0.042
		54.07		-4.292E-01	1.574E+00	2.588E+00	3.507E-01	-0.166
		61.30		8.626E-01	2.118E+00	3.160E+00	3.815E-01	0.273
		121.62		-2.617E-03	3.494E-01	5.694E-01	4.102E-02	-0.005
		147.16		-7.686E-01	6.198E-01	9.471E-01	6.408E-02	-0.812
		171.86		1.782E-01	4.544E-01	7.448E-01	4.974E-02	0.239
		218.09		-2.002E-01	8.768E-01	1.385E+00	9.571E-02	-0.145
		268.79		6.258E-01	7.574E-01	1.314E+00	9.109E-02	0.476
		319.02		-1.231E-01	2.301E-01	3.708E-01	2.460E-02	-0.332
		367.43		-6.483E-01	8.390E-01	1.320E+00	7.993E-02	-0.491
		413.65	*	-1.297E-01	1.612E-01	2.508E-01	1.430E-02	-0.517
HF-181		56.28		1.309E-01	1.499E+00	2.501E+00	3.266E-01	0.052
		57.53		3.845E-01	7.561E-01	1.281E+00	1.633E-01	0.300
		65.20		7.207E-01	1.314E+00	1.961E+00	2.282E-01	0.368
		133.02		-2.275E-02	6.124E-02	9.798E-02	6.795E-03	-0.232
		136.25		-3.093E-01	4.067E-01	6.374E-01	4.389E-02	-0.485
		345.85		-1.426E-01	1.980E-01	2.672E-01	1.696E-02	-0.534
		482.03	*	-3.404E-02	3.886E-02	5.932E-02	3.377E-03	-0.574
W-181		56.28		5.198E-02	6.007E-01	1.002E+00	1.309E-01	0.052

---- Non-Identified Nuclides ----

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		57.53		1.544E-01	3.034E-01	5.139E-01	6.554E-02	0.300
		65.20	*	2.869E-01	5.230E-01	7.804E-01	9.083E-02	0.368
TA-182		67.75		-2.285E-02	1.998E-01	2.097E-01	2.394E-02	-0.109
		100.10		1.257E-01	1.658E-01	2.796E-01	2.571E-02	0.450
		152.43		1.587E-01	3.143E-01	5.192E-01	3.492E-02	0.306
		222.10		-1.609E-01	3.492E-01	5.446E-01	3.771E-02	-0.295
		1001.68		3.522E-01	1.753E+00	2.978E+00	2.304E-01	0.118
	+	1121.28		4.886E-01	2.102E-01	2.959E-01	1.897E-02	1.651
		1189.05		1.050E-02	2.906E-01	4.742E-01	2.783E-02	0.022
		1221.42	*	4.480E-02	1.892E-01	3.134E-01	1.954E-02	0.143
		1230.97		-6.763E-02	5.101E-01	7.543E-01	4.785E-02	-0.090
RE-183		57.98		2.350E-02	3.032E-01	4.888E-01	6.180E-02	0.048
		59.32		2.077E-03	1.697E-01	2.479E-01	3.056E-02	0.008
		67.20		1.496E-01	2.989E-01	3.821E-01	4.379E-02	0.391
		162.32	*	1.822E-02	1.014E-01	1.649E-01	1.099E-02	0.110
	+	208.81		1.655E+00	1.241E+00	1.607E+00	1.104E-01	1.030
		291.72		-8.715E-01	9.868E-01	1.337E+00	9.139E-02	-0.652
RE-184		57.98		8.772E-02	1.132E+00	1.825E+00	2.307E-01	0.048
		59.32		7.747E-03	6.329E-01	9.248E-01	1.140E-01	0.008
		67.20		5.583E-01	1.116E+00	1.426E+00	1.634E-01	0.391
		161.27		6.514E-02	3.349E-01	5.454E-01	3.638E-02	0.119
		216.55		1.417E-01	2.692E-01	4.402E-01	3.039E-02	0.322
		252.85	*	6.054E-02	2.165E-01	3.682E-01	2.563E-02	0.164
		318.01		-1.047E-01	3.991E-01	6.541E-01	4.346E-02	-0.160
		792.07		1.954E+00	1.166E+00	1.556E+00	1.063E-01	1.256
		903.28		-6.084E-01	1.029E+00	1.411E+00	1.200E-01	-0.431
		920.93		-2.695E-01	4.894E-01	6.201E-01	5.201E-02	-0.435
OS-185		59.72		-2.005E-01	4.588E-01	6.514E-01	7.985E-02	-0.308
		61.14		7.310E-02	2.319E-01	3.443E-01	4.164E-02	0.212
		69.30		-3.057E-01	3.810E-01	5.276E-01	5.968E-02	-0.579
		592.07		-2.186E-01	2.246E+00	3.601E+00	1.942E-01	-0.061
		646.12	*	5.255E-03	3.754E-02	6.115E-02	3.133E-03	0.086
		717.42		-1.280E-01	8.017E-01	1.326E+00	7.641E-02	-0.097
		874.81		-4.565E-01	5.252E-01	7.965E-01	6.488E-02	-0.573
		880.27		3.036E-01	6.895E-01	1.186E+00	9.770E-02	0.256
RE-188		155.03	*	-1.855E-02	1.574E-01	2.532E-01	1.698E-02	-0.073
		477.96		1.684E+00	2.820E+00	4.798E+00	2.733E-01	0.351
		633.10		2.546E-01	2.435E+00	3.957E+00	2.056E-01	0.064
W-188	+	63.58		2.712E+01	7.248E+01	1.100E+02	1.299E+01	0.247
		227.08		2.234E+00	1.165E+01	1.980E+01	1.373E+00	0.113
		290.67	*	2.583E+00	7.449E+00	1.110E+01	7.593E-01	0.233
IR-192	+	295.96		4.630E-01	1.815E-01	2.268E-01	1.562E-02	2.042
		308.46		-1.769E-02	8.915E-02	1.470E-01	9.968E-03	-0.120
		316.51	*	-2.192E-02	3.080E-02	4.913E-02	3.283E-03	-0.446
		468.07		-7.142E-02	6.041E-02	8.999E-02	5.944E-03	-0.794
		604.41		1.440E-01	4.290E-01	6.209E-01	6.905E-02	0.232
		612.46		1.777E+00	8.337E-01	1.369E+00	9.852E-02	1.298
AU-195		65.12		1.489E-01	2.445E-01	3.658E-01	4.260E-02	0.407
		66.83		-4.111E-02	1.375E-01	1.832E-01	2.104E-02	-0.224

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	75.70		1.047E+00	2.926E-01	4.537E-01	5.038E-02	2.308
		98.88	*	2.311E-01	2.262E-01	3.592E-01	3.367E-02	0.643
		129.76		4.364E+00	2.753E+00	4.724E+00	3.304E-01	0.924
TL-200		367.94	*	-7.935E-05	2.753E+00	Half-Life too short		
		579.30		2.025E-07	2.753E+00	Half-Life too short		
		828.27		-1.262E-04	2.753E+00	Half-Life too short		
		1205.75		4.445E-05	2.753E+00	Half-Life too short		
TL-201		68.90		-3.580E+00	4.069E+00	5.180E+00	5.871E-01	-0.691
		70.82		1.694E+00	1.964E+00	2.971E+00	3.336E-01	0.570
		80.30		-2.937E+00	3.383E+00	4.646E+00	5.185E-01	-0.632
		135.34		1.892E-01	1.400E+01	2.275E+01	1.569E+00	0.008
		167.43	*	-3.423E+00	3.931E+00	6.073E+00	4.041E-01	-0.564
TL-202		68.90		-4.729E-01	5.376E-01	6.843E-01	7.757E-02	-0.691
		70.82		2.232E-01	2.587E-01	3.914E-01	4.395E-02	0.570
		80.30		-3.871E-01	4.459E-01	6.123E-01	6.834E-02	-0.632
		439.56	*	3.096E-02	5.812E-02	9.863E-02	5.636E-03	0.314
HG-203		70.83		1.071E+00	1.237E+00	1.864E+00	2.869E-01	0.575
		72.87		1.895E+00	7.089E-01	1.179E+00	1.766E-01	1.607
		82.60		1.301E-02	1.656E+00	1.729E+00	2.684E-01	0.008
		279.20	*	5.586E-02	3.751E-02	6.673E-02	4.806E-03	0.837
BI-207		72.80		5.375E-01	2.050E-01	3.541E-01	3.950E-02	1.518
	+	74.97		5.857E-01	1.636E-01	2.375E-01	2.638E-02	2.466
		84.90		2.261E-01	2.141E-01	3.208E-01	3.645E-02	0.705
		569.67		1.573E-02	2.787E-02	4.710E-02	2.581E-03	0.334
		1063.62	*	3.341E-02	4.893E-02	8.517E-02	6.051E-03	0.392
		1770.23		8.126E-03	3.756E-01	5.319E-01	3.294E-02	0.015
TL-207		81.07		-3.448E-01	2.652E-01	3.245E-01	3.630E-02	-1.063
		83.78		1.121E-01	1.505E-01	2.098E-01	2.371E-02	0.534
		94.90		5.129E-01	2.616E-01	4.056E-01	4.067E-02	1.264
		122.32		-1.701E+00	1.671E+00	2.595E+00	2.055E-01	-0.656
		144.24		4.138E-01	6.533E-01	1.066E+00	8.585E-02	0.388
		154.21		-6.589E-02	3.747E-01	6.013E-01	4.682E-02	-0.110
		269.46		2.661E-01	1.790E-01	3.179E-01	2.274E-02	0.837
		323.87	*	4.128E-01	6.805E-01	1.026E+00	1.724E-01	0.402
	+	338.28		3.551E+00	1.369E+00	1.983E+00	2.160E-01	1.791
		445.03		-1.835E+00	2.124E+00	3.257E+00	3.329E-01	-0.563
PO-209		260.50		-7.306E+00	8.761E+00	1.406E+01	9.775E-01	-0.520
		262.80		1.003E+00	2.420E+01	4.067E+01	2.826E+00	0.025
		896.60	*	3.638E+00	6.966E+00	1.203E+01	1.024E+00	0.302
BI-210		46.50	*	-5.743E+00	9.795E+00	1.552E+01	1.612E+00	-0.370
PB-210		46.50	*	-5.743E+00	9.795E+00	1.552E+01	1.612E+00	-0.370
PO-210		46.50	*	-5.743E+00	9.792E+00	1.552E+01	1.491E+00	-0.370
PB-211		404.84	*	-1.199E-01	9.333E-01	1.521E+00	9.478E-01	-0.079
		427.08		-6.209E-01	1.942E+00	3.059E+00	1.891E+00	-0.203
		831.96		-9.097E-03	9.979E-01	1.656E+00	1.035E+00	-0.005
PO-215		81.07		-3.448E-01	2.652E-01	3.245E-01	3.630E-02	-1.063
		83.78		1.121E-01	1.505E-01	2.098E-01	2.371E-02	0.534
		94.90		5.129E-01	2.616E-01	4.056E-01	4.067E-02	1.264
		122.32		-1.701E+00	1.671E+00	2.595E+00	2.055E-01	-0.656

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		144.24		4.138E-01	6.533E-01	1.066E+00	8.585E-02	0.388
		154.21		-6.589E-02	3.747E-01	6.013E-01	4.682E-02	-0.110
		269.46		2.661E-01	1.790E-01	3.179E-01	2.274E-02	0.837
		323.87	*	4.128E-01	6.805E-01	1.026E+00	1.724E-01	0.402
	+	338.28		3.551E+00	1.369E+00	1.983E+00	2.160E-01	1.791
		445.03		-1.835E+00	2.124E+00	3.257E+00	3.329E-01	-0.563
RN-219		271.23		4.833E-01	2.306E-01	4.152E-01	3.714E-02	1.164
		401.81	*	5.329E-02	4.002E-01	6.646E-01	9.010E-02	0.080
RN-220		549.76	*	9.332E+00	2.393E+01	4.001E+01	2.220E+00	0.233
RA-223		81.07		-3.448E-01	2.652E-01	3.245E-01	3.630E-02	-1.063
		83.78		1.121E-01	1.505E-01	2.098E-01	2.371E-02	0.534
		94.90		5.129E-01	2.616E-01	4.056E-01	4.067E-02	1.264
		122.32		-1.701E+00	1.671E+00	2.595E+00	2.055E-01	-0.656
		144.24		4.138E-01	6.533E-01	1.066E+00	8.585E-02	0.388
		154.21		-6.589E-02	3.747E-01	6.013E-01	4.682E-02	-0.110
		269.46		2.661E-01	1.790E-01	3.179E-01	2.274E-02	0.837
		323.87	*	4.128E-01	6.805E-01	1.026E+00	1.724E-01	0.402
	+	338.28		3.551E+00	1.369E+00	1.983E+00	2.160E-01	1.791
		445.03		-1.835E+00	2.124E+00	3.257E+00	3.329E-01	-0.563
AC-227		79.80		3.594E-01	1.850E+00	2.703E+00	6.118E-01	0.133
		236.00		7.993E-01	2.814E-01	4.501E-01	5.012E-02	1.776
		256.20	*	1.870E-01	3.612E-01	6.191E-01	8.964E-02	0.302
		286.10		-1.649E-02	1.371E+00	2.290E+00	2.778E-01	-0.007
		299.80		1.294E+00	1.510E+00	2.301E+00	3.834E-01	0.563
		304.40		-9.258E-01	1.790E+00	2.893E+00	5.103E-01	-0.320
		334.20		1.088E+00	3.052E+00	3.609E+00	6.698E-01	0.302
TH-227		79.80		3.594E-01	1.850E+00	2.703E+00	6.189E-01	0.133
	+	94.00		3.608E+00	3.095E+00	3.649E+00	8.192E-01	0.989
		236.00		7.993E-01	2.783E-01	4.501E-01	4.428E-02	1.776
		256.20	*	1.870E-01	3.616E-01	6.191E-01	1.073E-01	0.302
		286.10		-1.649E-02	1.371E+00	2.290E+00	2.296E+00	-0.007
		299.80		1.294E+00	1.510E+00	2.301E+00	3.834E-01	0.563
		304.40		-9.258E-01	1.790E+00	2.893E+00	5.103E-01	-0.320
		334.20		1.088E+00	3.052E+00	3.609E+00	6.698E-01	0.302
TH-229		85.43		3.156E-01	2.157E-01	3.266E-01	3.722E-02	0.966
	+	88.47		4.881E-02	1.851E-01	1.971E-01	2.255E-02	0.248
		100.00		1.120E-01	1.757E-01	2.949E-01	2.717E-02	0.380
		193.63	*	1.583E-01	5.100E-01	8.015E-01	5.449E-02	0.198
	+	210.97		1.325E+00	9.938E-01	1.282E+00	8.827E-02	1.033
PA-231		283.67	*	-1.414E+00	1.411E+00	2.210E+00	3.152E-01	-0.640
		301.29		5.586E-01	6.077E-01	9.339E-01	1.030E-01	0.598
TH-231		81.07		-3.448E-01	2.652E-01	3.245E-01	3.630E-02	-1.063
		83.78		1.121E-01	1.505E-01	2.098E-01	2.371E-02	0.534
		94.90		5.129E-01	2.616E-01	4.056E-01	4.067E-02	1.264
		122.32		-1.701E+00	1.671E+00	2.595E+00	2.055E-01	-0.656
		144.24		4.138E-01	6.533E-01	1.066E+00	8.585E-02	0.388
		154.21		-6.589E-02	3.747E-01	6.013E-01	4.682E-02	-0.110
		269.46		2.661E-01	1.790E-01	3.179E-01	2.274E-02	0.837
		323.87	*	4.128E-01	6.805E-01	1.026E+00	1.724E-01	0.402

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	338.28		3.551E+00	1.369E+00	1.983E+00	2.160E-01	1.791
		445.03		-1.835E+00	2.124E+00	3.257E+00	3.329E-01	-0.563
U-231		84.21		4.412E+00	4.147E+00	6.223E+00	7.047E-01	0.709
	+	92.29		2.459E+00	2.051E+00	2.624E+00	2.765E-01	0.937
		95.87	*	9.627E-02	8.173E-01	1.183E+00	1.166E-01	0.081
		108.00		2.113E-01	1.352E+00	2.226E+00	1.841E-01	0.095
PA-233	+	75.28		1.709E+01	5.246E+00	7.144E+00	1.205E+00	2.393
		86.59		1.967E+00	1.958E+00	2.844E+00	7.926E-01	0.692
		300.12		3.426E-01	4.188E-01	6.389E-01	8.875E-02	0.536
		311.98	*	2.848E-02	5.934E-02	1.014E-01	7.105E-03	0.281
		340.50		1.901E+00	7.865E-01	1.131E+00	2.616E-01	1.681
		398.62		-2.037E-01	1.968E+00	3.222E+00	8.322E-01	-0.063
		415.76		-7.581E-01	1.567E+00	2.437E+00	5.011E-01	-0.311
PA-234	+	63.00		8.043E-01	2.152E+00	3.318E+00	5.814E-01	0.242
	+	94.67		3.218E-01	2.699E-01	2.995E-01	4.028E-02	1.074
		98.44		5.966E-02	1.044E-01	1.471E-01	8.225E-02	0.406
		99.86		3.079E-01	4.432E-01	7.455E-01	6.882E-02	0.413
		111.00		-1.087E-01	1.807E-01	2.874E-01	3.348E-02	-0.378
		131.20		2.130E-02	1.038E-01	1.701E-01	1.185E-02	0.125
		152.70		5.080E-02	3.102E-01	5.052E-01	8.169E-02	0.101
	+	186.00		3.592E+00	2.372E+00	2.373E+00	7.297E-01	1.514
		226.40		-9.925E-02	3.801E-01	6.336E-01	7.711E-02	-0.157
		227.20		9.058E-02	4.031E-01	6.860E-01	4.759E-02	0.132
		248.90		-4.963E-01	8.126E-01	1.278E+00	2.791E-01	-0.388
		293.70		2.915E+00	9.225E-01	1.385E+00	2.282E-01	2.105
		369.80		1.294E-01	7.591E-01	1.268E+00	2.649E-01	0.102
		568.70		3.461E-01	9.368E-01	1.560E+00	8.554E-02	0.222
		569.50		8.553E-02	2.522E-01	4.191E-01	2.297E-02	0.204
		574.00		4.152E-01	1.403E+00	2.264E+00	1.237E-01	0.183
		699.00		3.630E-01	6.669E-01	1.155E+00	2.067E-01	0.314
		706.10		-5.301E-01	9.767E-01	1.523E+00	6.716E-01	-0.348
		733.00		1.921E-01	3.631E-01	5.541E-01	1.181E-01	0.347
		742.81		6.111E-01	1.219E+00	2.005E+00	1.343E+00	0.305
	+	796.30		2.359E+00	1.221E+00	1.570E+00	4.170E-01	1.502
		805.60		2.859E-01	9.521E-01	1.615E+00	4.885E-01	0.177
		819.60		3.699E-01	1.055E+00	1.795E+00	6.775E-01	0.206
		826.30		2.083E-01	6.850E-01	1.160E+00	5.165E-01	0.180
		831.60		-1.085E-01	5.209E-01	8.472E-01	2.501E-01	-0.128
		876.40		-3.489E-01	8.333E-01	1.192E+00	1.225E+00	-0.293
		880.51		1.018E-01	2.568E-01	4.400E-01	3.626E-02	0.231
		883.24		-2.750E-02	2.663E-01	4.358E-01	2.927E-01	-0.063
		899.00		4.268E-01	8.164E-01	1.375E+00	6.007E-01	0.310
		925.00		8.057E-01	1.018E+00	1.804E+00	1.508E-01	0.447
		926.50		-8.480E-03	1.531E-01	2.514E-01	6.331E-02	-0.034
		946.00	*	1.199E-01	2.775E-01	4.741E-01	8.808E-02	0.253
		949.00		1.262E-01	4.141E-01	7.013E-01	5.739E-02	0.180
		980.50		-5.580E-01	6.398E-01	9.535E-01	7.558E-02	-0.585
		1394.10		5.206E-02	9.510E-01	1.602E+00	1.041E+00	0.032
PA-234M		766.41		2.035E+01	2.235E+01	2.912E+01	2.227E+01	0.699

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1001.03	*	-1.535E+00	5.804E+00	9.432E+00	9.921E-01	-0.163
U-235		89.95		-4.709E-01	1.776E+00	1.799E+00	5.691E-01	-0.262
	+	93.35		1.123E+00	9.829E-01	1.162E+00	3.323E-01	0.966
		105.00		3.714E-02	1.009E+00	1.654E+00	4.935E-01	0.022
		143.76	*	1.414E-01	2.040E-01	3.320E-01	5.540E-02	0.426
		163.35		-1.684E-01	4.458E-01	7.056E-01	1.290E-01	-0.239
	+	185.71		1.330E-01	7.827E-02	8.762E-02	5.918E-03	1.518
		205.31		-4.075E-01	5.974E-01	7.849E-01	1.440E-01	-0.519
NP-236	+	94.67		2.440E-01	2.035E-01	2.273E-01	2.289E-02	1.074
		98.44		4.509E-02	7.493E-02	1.112E-01	1.050E-02	0.405
		111.00		-8.225E-02	1.365E-01	2.174E-01	1.738E-02	-0.378
		160.31	*	4.628E-02	7.507E-02	1.244E-01	8.307E-03	0.372
NP-237		86.50	*	4.093E-01	2.939E-01	4.281E-01	1.011E-01	0.956
		95.87		1.231E-01	1.046E+00	1.513E+00	3.798E-01	0.081
NP-239		99.55		9.361E-02	1.477E-01	2.479E-01	2.300E-02	0.378
		117.00	*	7.665E-03	1.884E-01	3.080E-01	2.315E-02	0.025
	+	209.75		1.335E+00	1.001E+00	1.315E+00	9.045E-02	1.015
		228.18		-6.642E-03	2.155E-01	3.628E-01	2.518E-02	-0.018
		277.60		2.204E-01	1.702E-01	3.007E-01	2.076E-02	0.733
		334.30		5.893E-01	1.725E+00	2.040E+00	1.322E-01	0.289
AM-241		59.54	*	-6.538E-02	2.462E-01	3.535E-01	4.499E-02	-0.185
CM-243		99.55		9.631E-02	1.519E-01	2.551E-01	2.366E-02	0.378
		103.76	*	-2.661E-02	9.133E-02	1.477E-01	1.289E-02	-0.180
		117.00		7.885E-03	1.938E-01	3.168E-01	2.382E-02	0.025
	+	209.75		1.316E+00	9.867E-01	1.296E+00	8.915E-02	1.015
		228.18		-6.711E-03	2.177E-01	3.665E-01	2.544E-02	-0.018
		277.60		2.221E-01	1.716E-01	3.031E-01	2.093E-02	0.733
CM-247		278.00		9.839E-01	7.057E-01	1.251E+00	8.638E-02	0.786
		287.40		8.332E-01	1.146E+00	1.939E+00	1.330E-01	0.430
		402.60	*	1.664E-02	3.583E-02	6.065E-02	3.449E-03	0.274
CF-249		252.85		2.293E-01	8.198E-01	1.395E+00	9.707E-02	0.164
		333.44		1.771E-01	2.381E-01	2.587E-01	1.680E-02	0.685
		387.95	*	-6.319E-03	3.813E-02	6.230E-02	3.572E-03	-0.101
CF-251		176.60	*	-3.812E-02	1.213E-01	1.925E-01	1.290E-02	-0.198
		227.00		6.028E-02	3.571E-01	6.064E-01	4.206E-02	0.099
		285.00		-1.620E+00	1.597E+00	2.519E+00	1.731E-01	-0.643

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504006      *
* Acquisition date :  7-JUL-2009 08:50:39 Detector SN#    :                 *
* Detector ID        : GAM15                Sensitivity     : 5.000        *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000       *
* Elapsed real time:    0 02:00:01.19       Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504006           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.6274E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 16-FEB-2009 10:54:12 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.402E+01	2.314E+00	4.738E-01	0.000E+00
CD-109	3.625E-01	1.347E+00	1.505E+00	0.000E+00
SN-126	3.575E-02	1.329E-01	1.496E-01	0.000E+00
TL-208	3.253E-01	7.261E-02	5.312E-02	0.000E+00
BI-211	2.332E+00	4.158E-01	3.303E-01	0.000E+00
BI-212	8.965E-01	4.361E-01	4.523E-01	0.000E+00
PB-212	8.977E-01	1.203E-01	9.710E-02	0.000E+00
PO-212	8.977E-01	1.203E-01	9.710E-02	0.000E+00
BI-214	9.164E-01	1.550E-01	9.114E-02	0.000E+00
PB-214	8.113E-01	1.505E-01	1.066E-01	0.000E+00
PO-214	8.113E-01	1.505E-01	1.066E-01	0.000E+00
PO-216	8.977E-01	1.203E-01	9.710E-02	0.000E+00
PO-218	8.113E-01	1.505E-01	1.066E-01	0.000E+00
RA-224	2.953E+00	1.360E+00	1.104E+00	0.000E+00
RA-226	9.164E-01	1.550E-01	9.114E-02	0.000E+00
AC-228	1.047E+00	2.974E-01	1.759E-01	0.000E+00
RA-228	1.047E+00	2.974E-01	1.759E-01	0.000E+00
TH-228	8.977E-01	1.203E-01	9.709E-02	0.000E+00
TH-230	9.164E-01	1.550E-01	9.114E-02	0.000E+00
TH-232	1.047E+00	2.974E-01	1.759E-01	0.000E+00
TH-234	6.900E-01	1.811E+00	3.065E+00	0.000E+00
U-234	9.164E-01	1.550E-01	9.114E-02	0.000E+00
U-238	6.900E-01	1.811E+00	3.065E+00	0.000E+00
AM-243	3.263E-01	8.935E-02	9.834E-02	0.000E+00
ANH-511	5.366E-02	6.636E-02	4.589E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.541E-01	2.865E-01	5.178E-01	0.000E+00	NOT IDENT.
NA-22	-4.345E-03	3.860E-02	6.393E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	5.421E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.343E-03	2.623E-02	4.375E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.800E-02	8.364E-02	0.000E+00	FAIL ABUN
SC-46	-1.908E-02	3.305E-02	5.408E-02	0.000E+00	FAIL ABUN
V-48	-1.116E-02	5.311E-02	8.926E-02	0.000E+00	NOT IDENT.
CR-51	-1.263E-01	3.181E-01	5.429E-01	0.000E+00	NOT IDENT.
MN-52	3.948E-02	1.603E-01	2.848E-01	0.000E+00	NOT IDENT.
MN-54	-5.883E-03	3.218E-02	5.523E-02	0.000E+00	NOT IDENT.
CO-56	1.502E-02	3.381E-02	6.105E-02	0.000E+00	FAIL ABUN
CO-57	-1.352E-02	2.336E-02	4.117E-02	0.000E+00	NOT IDENT.
CO-58	4.056E-03	3.524E-02	6.214E-02	0.000E+00	NOT IDENT.
FE-59	-1.950E-02	8.660E-02	1.443E-01	0.000E+00	NOT IDENT.
CO-60	1.804E-02	3.255E-02	5.828E-02	0.000E+00	NOT IDENT.
ZN-65	3.224E-02	8.623E-02	1.321E-01	0.000E+00	NOT IDENT.
GE-68	-4.697E-01	1.016E+00	1.643E+00	0.000E+00	NOT IDENT.
AS-73	-4.812E-01	1.539E+00	2.866E+00	0.000E+00	NOT IDENT.
AS-74	1.336E-02	7.199E-02	1.252E-01	0.000E+00	NOT IDENT.
SE-75	1.700E-02	3.871E-02	7.192E-02	0.000E+00	NOT IDENT.
BR-77	-1.310E+00	5.112E+00	8.145E+00	0.000E+00	FAIL ABUN
SR-82	-3.079E-02	3.003E-01	5.222E-01	0.000E+00	NOT IDENT.
RB-83	-1.514E-02	6.450E-02	1.030E-01	0.000E+00	NOT IDENT.
RB-84	2.707E-03	5.929E-02	1.033E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.632E+00	1.338E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.821E-02	6.699E-02	0.000E+00	NOT IDENT.
RB-86	-7.672E-02	5.670E-01	9.515E-01	0.000E+00	NOT IDENT.
Y-88	1.161E-02	2.289E-02	4.301E-02	0.000E+00	NOT IDENT.
ZR-88	7.253E-03	2.776E-02	4.992E-02	0.000E+00	NOT IDENT.
Y-91	-1.200E+00	1.826E+01	3.061E+01	0.000E+00	NOT IDENT.
NB-94	-3.772E-04	2.938E-02	5.192E-02	0.000E+00	NOT IDENT.
NB-95	3.324E-02	3.789E-02	7.046E-02	0.000E+00	NOT IDENT.
NB-95M	1.887E-01	1.305E-01	2.233E-01	0.000E+00	NOT IDENT.
ZR-95	4.202E-02	5.783E-02	1.075E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.851E+03	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.050E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-5.002E+00	5.584E+00	9.010E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.247E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.557E-02	3.113E-02	5.333E-02	0.000E+00	NOT IDENT.
RH-102	-8.202E-03	2.579E-02	4.395E-02	0.000E+00	NOT IDENT.
RU-103	-7.112E-03	3.613E-02	6.192E-02	0.000E+00	FAIL ABUN
RH-106	-1.042E-02	2.904E-01	4.943E-01	0.000E+00	FAIL ABUN
RU-106	-1.042E-02	2.904E-01	4.943E-01	0.000E+00	FAIL ABUN
AG-108M	8.495E-03	2.906E-02	5.206E-02	0.000E+00	NOT IDENT.
AG-110M	1.539E-02	2.901E-02	5.157E-02	0.000E+00	NOT IDENT.
IN-111	3.091E-01	6.410E-01	1.052E+00	0.000E+00	NOT IDENT.
IN-113M	-1.250E-02	4.123E-02	7.167E-02	0.000E+00	NOT IDENT.
SN-113	-1.250E-02	4.123E-02	7.167E-02	0.000E+00	NOT IDENT.
IN-114M	8.781E-02	1.829E-01	2.892E-01	0.000E+00	NOT IDENT.
CD-115	-2.672E+00	4.877E+00	8.003E+00	0.000E+00	NOT IDENT.
SN-117M	2.000E-02	4.526E-02	8.203E-02	0.000E+00	NOT IDENT.
SB-122	-1.243E-01	1.070E+00	1.825E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.109E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.589E-02	2.618E-02	4.773E-02	0.000E+00	NOT IDENT.
I-124	1.577E-01	4.187E-01	6.463E-01	0.000E+00	NOT IDENT.
SB-124	-2.171E-02	6.224E-02	9.855E-02	0.000E+00	NOT IDENT.
SB-125	4.646E-02	8.058E-02	1.471E-01	0.000E+00	NOT IDENT.
TE-125M	1.001E-01	8.589E+00	1.563E+01	0.000E+00	NOT IDENT.
I-126	-1.548E-02	1.438E-01	2.418E-01	0.000E+00	NOT IDENT.
SB-126	7.106E-02	1.262E-01	2.039E-01	0.000E+00	FAIL ABUN
SB-127	-8.909E-01	7.816E-01	1.253E+00	0.000E+00	NOT IDENT.
XE-127	-1.150E-03	4.399E-02	7.422E-02	0.000E+00	NOT IDENT.
I-131	4.741E-02	8.771E-02	1.609E-01	0.000E+00	NOT IDENT.
TE-132	-1.634E-02	4.000E-01	7.339E-01	0.000E+00	NOT IDENT.
BA-133	5.447E-03	4.122E-02	6.453E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	9.083E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.337E-02	8.443E-02	0.000E+00	FAIL ABUN
CS-135	3.070E-03	1.478E-01	2.691E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.763E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-2.878E-02	8.218E-02	1.353E-01	0.000E+00	NOT IDENT.
BA-137M	-6.968E-03	3.146E-02	5.240E-02	0.000E+00	NOT IDENT.
CS-137	-7.366E-03	3.325E-02	5.539E-02	0.000E+00	NOT IDENT.
CE-139	-4.524E-03	2.648E-02	4.662E-02	0.000E+00	NOT IDENT.
BA-140	-3.175E-02	2.126E-01	3.628E-01	0.000E+00	NOT IDENT.
LA-140	-3.939E-03	6.371E-02	1.076E-01	0.000E+00	FAIL ABUN
CE-141	2.187E-03	5.606E-02	1.004E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.457E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-4.076E-02	1.897E-01	3.379E-01	0.000E+00	NOT IDENT.
PM-144	-1.599E-02	3.198E-02	5.462E-02	0.000E+00	NOT IDENT.
PR-144	-1.082E+00	2.164E+00	3.697E+00	0.000E+00	NOT IDENT.

PM-146	4.635E-02	3.873E-02	7.291E-02	0.000E+00	NOT IDENT.
ND-147	2.916E-02	4.313E-01	7.498E-01	0.000E+00	NOT IDENT.
PM-149	-1.015E+01	3.992E+01	7.128E+01	0.000E+00	NOT IDENT.
EU-152	-1.282E-03	9.407E-02	1.527E-01	0.000E+00	NOT IDENT.
GD-153	2.045E-02	8.311E-02	1.352E-01	0.000E+00	NOT IDENT.
EU-154	-1.111E-02	1.080E-01	1.791E-01	0.000E+00	NOT IDENT.
EU-155	2.416E-02	9.981E-02	1.837E-01	0.000E+00	NOT IDENT.
TB-160	6.812E-02	1.199E-01	2.182E-01	0.000E+00	NOT IDENT.
HO-166M	9.726E-03	5.394E-02	9.654E-02	0.000E+00	NOT IDENT.
TM-171	-1.388E+01	4.111E+01	6.158E+01	0.000E+00	NOT IDENT.
LU-176	-3.782E-03	2.312E-02	4.131E-02	0.000E+00	FAIL ABUN
LU-177	1.492E+00	1.097E+00	1.544E+00	0.000E+00	FAIL ABUN
LU-177M	-1.297E-01	1.580E-01	2.634E-01	0.000E+00	NOT IDENT.
HF-181	-3.404E-02	3.808E-02	6.202E-02	0.000E+00	NOT IDENT.
W-181	2.869E-01	5.125E-01	8.628E-01	0.000E+00	NOT IDENT.
TA-182	4.480E-02	1.854E-01	3.186E-01	0.000E+00	FAIL ABUN
RE-183	1.822E-02	9.932E-02	1.779E-01	0.000E+00	FAIL ABUN
RE-184	6.054E-02	2.121E-01	3.923E-01	0.000E+00	NOT IDENT.
OS-185	5.255E-03	3.679E-02	6.338E-02	0.000E+00	NOT IDENT.
RE-188	-1.855E-02	1.542E-01	2.734E-01	0.000E+00	NOT IDENT.
W-188	2.583E+00	7.300E+00	1.177E+01	0.000E+00	FAIL ABUN
IR-192	-2.192E-02	3.019E-02	5.200E-02	0.000E+00	FAIL ABUN
AU-195	2.311E-01	2.217E-01	3.927E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	9.982E+01	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.423E+00	3.852E+00	6.544E+00	0.000E+00	NOT IDENT.
TL-202	3.096E-02	5.695E-02	1.034E-01	0.000E+00	NOT IDENT.
HG-203	5.586E-02	3.676E-02	7.088E-02	0.000E+00	NOT IDENT.
BI-207	3.341E-02	4.796E-02	8.694E-02	0.000E+00	FAIL ABUN
TL-207	4.128E-01	6.669E-01	1.085E+00	0.000E+00	FAIL ABUN
PO-209	3.638E+00	6.827E+00	1.235E+01	0.000E+00	NOT IDENT.
BI-210	-5.743E+00	9.599E+00	1.731E+01	0.000E+00	NOT IDENT.
PB-210	-5.743E+00	9.599E+00	1.731E+01	0.000E+00	NOT IDENT.
PO-210	-5.743E+00	9.596E+00	1.731E+01	0.000E+00	NOT IDENT.
PB-211	-1.199E-01	9.146E-01	1.598E+00	0.000E+00	NOT IDENT.
PO-215	4.128E-01	6.669E-01	1.085E+00	0.000E+00	FAIL ABUN
RN-219	5.329E-02	3.922E-01	6.986E-01	0.000E+00	NOT IDENT.
RN-220	9.332E+00	2.345E+01	4.167E+01	0.000E+00	NOT IDENT.
RA-223	4.128E-01	6.669E-01	1.085E+00	0.000E+00	FAIL ABUN
AC-227	1.870E-01	3.539E-01	6.592E-01	0.000E+00	NOT IDENT.
TH-227	1.870E-01	3.544E-01	6.592E-01	0.000E+00	FAIL ABUN
TH-229	1.583E-01	4.998E-01	8.602E-01	0.000E+00	FAIL ABUN
PA-231	-1.414E+00	1.383E+00	2.346E+00	0.000E+00	NOT IDENT.
TH-231	4.128E-01	6.669E-01	1.085E+00	0.000E+00	FAIL ABUN
U-231	9.627E-02	8.009E-01	1.295E+00	0.000E+00	FAIL ABUN
PA-233	2.848E-02	5.815E-02	1.073E-01	0.000E+00	FAIL ABUN
PA-234	1.199E-01	2.719E-01	4.857E-01	0.000E+00	FAIL ABUN
PA-234M	-1.535E+00	5.688E+00	9.647E+00	0.000E+00	NOT IDENT.
U-235	1.414E-01	1.999E-01	3.593E-01	0.000E+00	FAIL ABUN
NP-236	4.628E-02	7.357E-02	1.342E-01	0.000E+00	FAIL ABUN
NP-237	4.093E-01	2.881E-01	4.697E-01	0.000E+00	NOT IDENT.
NP-239	7.665E-03	1.847E-01	3.352E-01	0.000E+00	FAIL ABUN
AM-241	-6.538E-02	2.412E-01	3.917E-01	0.000E+00	NOT IDENT.
CM-243	-2.661E-02	8.950E-02	1.613E-01	0.000E+00	FAIL ABUN
CM-247	1.664E-02	3.512E-02	6.374E-02	0.000E+00	NOT IDENT.
CF-249	-6.319E-03	3.737E-02	6.555E-02	0.000E+00	NOT IDENT.
CF-251	-3.812E-02	1.189E-01	2.071E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:52:20.84

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504006.CNF;1
Sample date      : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:50:39.
Sample ID        : G232504006           Sample quantity  : 1.62740E+02 GRAM
Detector name    : GAM15                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:01.19  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : MXR1
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 881220               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1110	10.67*	9.988E-01	2.402E+01	2.402E+01	9.83
CD-109	88.03	26	3.72*	4.544E+00	3.556E-01	3.625E-01	379.22
SN-126	64.28	20	9.60	1.796E+00	2.731E-01	2.731E-01	267.57
	86.94	26	8.90	4.544E+00	1.486E-01	1.486E-01	381.38
	87.57	26	37.00*	4.544E+00	3.575E-02	3.575E-02	379.22
TL-208	277.35	------	6.80	3.788E+00	------	Line Not Found	------
	510.84	57	21.60	2.459E+00	2.484E-01	2.484E-01	126.46
	583.14	265	84.20*	2.229E+00	3.253E-01	3.253E-01	22.78
	860.37	46	12.46	1.612E+00	5.235E-01	5.235E-01	59.79
BI-211	72.87	------	1.27	2.992E+00	------	Line Not Found	------
	351.07	419	12.94*	3.201E+00	2.332E+00	2.332E+00	18.19
BI-212	727.18	86	11.80*	1.867E+00	8.965E-01	8.965E-01	49.64
	785.46	36	1.97	1.747E+00	2.379E+00	2.379E+00	71.30
	1620.62	------	2.75	9.260E-01	------	Line Not Found	------
PB-212	74.81	303	10.70	3.247E+00	2.013E+00	2.013E+00	29.46
	77.11	321	18.00	3.502E+00	1.173E+00	1.173E+00	27.34
	87.30	26	8.00	4.544E+00	1.654E-01	1.654E-01	379.36
	238.63	731	44.60*	4.212E+00	8.977E-01	8.977E-01	13.67
	300.09	------	3.41	3.583E+00	------	Line Not Found	------
PO-212	74.81	303	10.70	3.247E+00	2.013E+00	2.013E+00	29.46
	77.11	321	18.00	3.502E+00	1.173E+00	1.173E+00	27.34
	87.30	26	8.00	4.544E+00	1.654E-01	1.654E-01	379.36
	115.19	------	0.60	5.666E+00	------	Line Not Found	------
	238.63	731	44.60*	4.212E+00	8.977E-01	8.977E-01	13.67
	300.09	------	3.41	3.583E+00	------	Line Not Found	------
BI-214	609.31	396	46.30*	2.154E+00	9.164E-01	9.164E-01	17.26
	768.36	------	5.04	1.782E+00	------	Line Not Found	------
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	87	15.10	1.263E+00	1.047E+00	1.047E+00	43.54
	1238.11	46	5.94	1.151E+00	1.551E+00	1.551E+00	67.65
	1377.67	------	4.11	1.048E+00	------	Line Not Found	------
	1764.49	54	15.80	8.815E-01	8.993E-01	8.993E-01	39.81

Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	303	6.21	3.247E+00	3.468E+00	3.468E+00	28.91
	77.11	321	10.50	3.502E+00	2.011E+00	2.011E+00	28.39
	87.30	26	4.67	4.544E+00	2.833E-01	2.833E-01	379.30
	241.98	211	7.49	4.178E+00	1.557E+00	1.557E+00	47.34
	295.21	187	19.20	3.621E+00	6.201E-01	6.201E-01	39.69
	351.92	419	37.20*	3.201E+00	8.113E-01	8.113E-01	18.92
PO-214	74.81	303	6.21	3.247E+00	3.468E+00	3.468E+00	28.91
	77.11	321	10.50	3.502E+00	2.011E+00	2.011E+00	28.39
	87.30	26	4.67	4.544E+00	2.833E-01	2.833E-01	379.30
	241.98	211	7.49	4.178E+00	1.557E+00	1.557E+00	47.34
	295.21	187	19.20	3.621E+00	6.201E-01	6.201E-01	39.69
	351.92	419	37.20*	3.201E+00	8.113E-01	8.113E-01	18.92
PO-216	74.81	303	10.70	3.247E+00	2.013E+00	2.013E+00	29.46
	77.11	321	18.00	3.502E+00	1.173E+00	1.173E+00	27.34
	87.30	26	8.00	4.544E+00	1.654E-01	1.654E-01	379.36
	238.63	731	44.60*	4.212E+00	8.977E-01	8.977E-01	13.67
	300.09	------	3.41	3.583E+00	------ Line Not Found		------
PO-218	74.81	303	6.21	3.247E+00	3.468E+00	3.468E+00	28.91
	77.11	321	10.50	3.502E+00	2.011E+00	2.011E+00	28.39
	87.30	26	4.67	4.544E+00	2.833E-01	2.833E-01	379.30
	241.98	211	7.49	4.178E+00	1.557E+00	1.557E+00	47.34
	295.21	187	19.20	3.621E+00	6.201E-01	6.201E-01	39.69
	351.92	419	37.20*	3.201E+00	8.113E-01	8.113E-01	18.92
RA-224	240.98	211	3.95*	4.178E+00	2.953E+00	2.953E+00	47.01
RA-226	609.31	396	46.30*	2.154E+00	9.164E-01	9.164E-01	17.26
	768.36	------	5.04	1.782E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	87	15.10	1.263E+00	1.047E+00	1.047E+00	43.54
	1238.11	46	5.94	1.151E+00	1.551E+00	1.551E+00	67.65
	1377.67	------	4.11	1.048E+00	------ Line Not Found		------
	1764.49	54	15.80	8.815E-01	8.993E-01	8.993E-01	39.81
AC-228	338.32	138	11.40	3.292E+00	8.505E-01	8.505E-01	55.11
	911.07	192	27.70*	1.530E+00	1.047E+00	1.047E+00	28.97
	969.11	38	16.60	1.445E+00	3.693E-01	3.693E-01	124.52
RA-228	338.32	138	11.40	3.292E+00	8.505E-01	8.505E-01	55.11
	911.07	192	27.70*	1.530E+00	1.047E+00	1.047E+00	28.97
	969.11	38	16.60	1.445E+00	3.693E-01	3.693E-01	124.52
TH-228	84.40	------	1.21	4.214E+00	------ Line Not Found		------
	238.60	731	44.60*	4.212E+00	8.977E-01	8.977E-01	13.67
	300.10	------	3.41	3.583E+00	------ Line Not Found		------
TH-230	609.31	396	46.30*	2.154E+00	9.164E-01	9.164E-01	17.26
	768.36	------	5.04	1.782E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	87	15.10	1.263E+00	1.047E+00	1.047E+00	43.54
	1238.11	46	5.94	1.151E+00	1.551E+00	1.551E+00	67.65
	1377.67	------	4.11	1.048E+00	------ Line Not Found		------
	1764.49	54	15.80	8.815E-01	8.993E-01	8.993E-01	39.81
TH-232	338.32	138	11.40	3.292E+00	8.505E-01	8.505E-01	37.54
	911.07	192	27.70*	1.530E+00	1.047E+00	1.047E+00	28.97

Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	38	16.60	1.445E+00	3.693E-01	3.693E-01	124.52
TH-234	63.29	20	3.80*	1.796E+00	6.900E-01	6.900E-01	267.75
	92.38	107	5.41	4.884E+00	9.337E-01	9.337E-01	84.90
U-234	609.31	396	46.30*	2.154E+00	9.164E-01	9.164E-01	17.26
	768.36	------	5.04	1.782E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	87	15.10	1.263E+00	1.047E+00	1.047E+00	43.54
	1238.11	46	5.94	1.151E+00	1.551E+00	1.551E+00	67.65
	1377.67	------	4.11	1.048E+00	------ Line Not Found		------
	1764.49	54	15.80	8.815E-01	8.993E-01	8.993E-01	39.81
U-238	63.29	20	3.80*	1.796E+00	6.900E-01	6.900E-01	267.75
	92.38	107	5.41	4.884E+00	9.337E-01	9.337E-01	83.40
AM-243	74.67	303	66.00*	3.247E+00	3.263E-01	3.263E-01	27.94
	86.72	------	0.34	4.414E+00	------ Line Not Found		------
	117.66	------	0.55	5.694E+00	------ Line Not Found		------
	142.18	------	0.13	5.637E+00	------ Line Not Found		------
ANH-511	511.00	57	100.00*	2.459E+00	5.366E-02	5.366E-02	126.18

Flag: "*" = Keyline

Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

Total number of lines in spectrum 26
Number of unidentified lines 0
Number of lines tentatively identified by NID 26 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.402E+01	2.402E+01	0.236E+01	9.83	
CD-109	464.00D	1.02	3.556E-01	3.625E-01	13.75E-01	379.22	
SN-126	1.00E+05Y	1.00	3.575E-02	3.575E-02	13.56E-02	379.22	
TL-208	1.41E+10Y	1.00	3.253E-01	3.253E-01	0.741E-01	22.78	
BI-211	7.04E+08Y	1.00	2.332E+00	2.332E+00	0.424E+00	18.19	
BI-212	1.41E+10Y	1.00	8.965E-01	8.965E-01	4.450E-01	49.64	
PB-212	1.41E+10Y	1.00	8.977E-01	8.977E-01	1.227E-01	13.67	
PO-212	1.41E+10Y	1.00	8.977E-01	8.977E-01	1.227E-01	13.67	
BI-214	1600.00Y	1.00	9.164E-01	9.164E-01	1.582E-01	17.26	
PB-214	1600.00Y	1.00	8.113E-01	8.113E-01	1.535E-01	18.92	
PO-214	1600.00Y	1.00	8.113E-01	8.113E-01	1.535E-01	18.92	
PO-216	1.41E+10Y	1.00	8.977E-01	8.977E-01	1.227E-01	13.67	
PO-218	1600.00Y	1.00	8.113E-01	8.113E-01	1.535E-01	18.92	
RA-224	1.41E+10Y	1.00	2.953E+00	2.953E+00	1.388E+00	47.01	
RA-226	1600.00Y	1.00	9.164E-01	9.164E-01	1.582E-01	17.26	
AC-228	1.41E+10Y	1.00	1.047E+00	1.047E+00	0.303E+00	28.97	
RA-228	1.41E+10Y	1.00	1.047E+00	1.047E+00	0.303E+00	28.97	
TH-228	1.41E+10Y	1.00	8.977E-01	8.977E-01	1.227E-01	13.67	
TH-230	4.47E+09Y	1.00	9.164E-01	9.164E-01	1.582E-01	17.26	
TH-232	1.41E+10Y	1.00	1.047E+00	1.047E+00	0.303E+00	28.97	
TH-234	4.47E+09Y	1.00	6.900E-01	6.900E-01	18.48E-01	267.75	
U-234	4.47E+09Y	1.00	9.164E-01	9.164E-01	1.582E-01	17.26	
U-238	4.47E+09Y	1.00	6.900E-01	6.900E-01	18.48E-01	267.75	
AM-243	7380.00Y	1.00	3.263E-01	3.263E-01	0.912E-01	27.94	
ANH-511	1.00E+09Y	1.00	5.366E-02	5.366E-02	6.772E-02	126.18	
	Total Activity :		4.551E+01	4.552E+01			

Grand Total Activity : 4.551E+01 4.552E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	186.71	155	409	1.50	373.80	367	13	2.15E-02	58.4	4.96E+00	T
0	209.61	86	273	0.99	419.59	414	10	1.20E-02	74.7	4.61E+00	T
0	327.64	50	171	1.57	655.56	650	12	6.93E-03	****	3.37E+00	T
0	795.16	69	39	1.84	1590.29	1585	13	9.58E-03	44.4	1.73E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:52:26.61

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504006.CNF;1 *
* Acquisition date  : 7-JUL-2009 08:50:39.  Detector SN#     :             *
* Detector ID       : GAM15                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.19          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504006            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.62740E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-FEB-2009 10:54:12.9MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.402E+01	2.361E+00	4.687E-01	3.583E-02	51.241
CD-109	3.625E-01	1.375E+00	1.373E+00	1.587E-01	0.264
SN-126	3.575E-02	1.356E-01	1.364E-01	1.574E-02	0.262
TL-208	3.253E-01	7.409E-02	5.109E-02	3.253E-03	6.366
BI-211	2.332E+00	4.243E-01	3.130E-01	2.150E-02	7.452
BI-212	8.965E-01	4.450E-01	4.379E-01	3.409E-02	2.047
PB-212	8.977E-01	1.227E-01	9.101E-02	7.533E-03	9.865
PO-212	8.977E-01	1.227E-01	9.101E-02	7.533E-03	9.865
BI-214	9.164E-01	1.582E-01	8.778E-02	6.518E-03	10.439
PB-214	8.113E-01	1.535E-01	1.010E-01	8.705E-03	8.034
PO-214	8.113E-01	1.535E-01	1.010E-01	8.705E-03	8.034
PO-216	8.977E-01	1.227E-01	9.101E-02	7.533E-03	9.865
PO-218	8.113E-01	1.535E-01	1.010E-01	8.705E-03	8.034
RA-224	2.953E+00	1.388E+00	1.035E+00	7.206E-02	2.852
RA-226	9.164E-01	1.582E-01	8.778E-02	6.518E-03	10.439
AC-228	1.047E+00	3.034E-01	1.715E-01	1.907E-02	6.106
RA-228	1.047E+00	3.034E-01	1.715E-01	1.907E-02	6.106
TH-228	8.977E-01	1.227E-01	9.100E-02	7.532E-03	9.866

Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	9.164E-01	1.582E-01	8.778E-02	6.517E-03	10.439
TH-232	1.047E+00	3.034E-01	1.715E-01	1.907E-02	6.106
TH-234	6.900E-01	1.848E+00	2.770E+00	5.467E-01	0.249
U-234	9.164E-01	1.582E-01	8.778E-02	6.517E-03	10.439
U-238	6.900E-01	1.848E+00	2.770E+00	5.467E-01	0.249
AM-243	3.263E-01	9.118E-02	8.928E-02	9.921E-03	3.655
ANH-511	5.366E-02	6.772E-02	4.397E-02	2.483E-03	1.220

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.541E-01		2.924E-01	4.951E-01	3.299E-02	0.311
NA-22	-4.345E-03		3.939E-02	6.297E-02	4.322E-03	-0.069
NA-24	1.599E-02		2.766E-02	Half-Life too short		
AL-26	-1.343E-03		2.677E-02	4.358E-02	2.608E-03	-0.031
TI-44	2.164E-01	+	5.918E-02	7.603E-02	8.453E-03	2.847
SC-46	-1.908E-02		3.373E-02	5.268E-02	4.419E-03	-0.362
V-48	-1.116E-02		5.419E-02	8.722E-02	6.890E-03	-0.128
CR-51	-1.263E-01		3.246E-01	5.131E-01	3.701E-02	-0.246
MN-52	3.948E-02		1.636E-01	2.816E-01	2.088E-02	0.140
MN-54	-5.883E-03		3.283E-02	5.370E-02	4.025E-03	-0.110
CO-56	1.502E-02		3.450E-02	5.938E-02	4.564E-03	0.253
CO-57	-1.352E-02		2.384E-02	3.787E-02	2.723E-03	-0.357
CO-58	4.056E-03		3.596E-02	6.037E-02	4.312E-03	0.067
FE-59	-1.950E-02		8.837E-02	1.415E-01	1.071E-02	-0.138
CO-60	1.804E-02		3.322E-02	5.749E-02	4.339E-03	0.314
ZN-65	3.224E-02		8.799E-02	1.296E-01	8.420E-03	0.249
GE-68	-4.697E-01		1.037E+00	1.611E+00	1.119E-01	-0.292
AS-73	-4.812E-01		1.571E+00	2.579E+00	3.524E-01	-0.187
AS-74	1.336E-02		7.346E-02	1.205E-01	6.479E-03	0.111
SE-75	1.700E-02		3.950E-02	6.760E-02	4.728E-03	0.252
BR-77	-1.310E+00		5.217E+00	7.808E+00	4.393E-01	-0.168
SR-82	-3.079E-02		3.064E-01	5.066E-01	3.344E-02	-0.061
RB-83	-1.514E-02		6.582E-02	9.873E-02	5.555E-03	-0.153
RB-84	2.707E-03		6.050E-02	1.006E-01	8.306E-03	0.027
KR-85	1.537E+01		7.787E+00	1.282E+01	7.231E-01	1.199
SR-85	7.694E-02		3.899E-02	6.419E-02	3.621E-03	1.199
RB-86	-7.672E-02		5.786E-01	9.324E-01	6.487E-02	-0.082
Y-88	1.161E-02		2.335E-02	4.287E-02	2.504E-03	0.271
ZR-88	7.253E-03		2.833E-02	4.746E-02	2.692E-03	0.153
Y-91	-1.200E+00		1.863E+01	3.010E+01	1.821E+00	-0.040
NB-94	-3.772E-04		2.998E-02	5.022E-02	2.793E-03	-0.008
NB-95	3.324E-02		3.867E-02	6.833E-02	4.403E-03	0.486
NB-95M	1.887E-01		1.332E-01	2.092E-01	1.768E-02	0.902
ZR-95	4.202E-02		5.901E-02	1.042E-01	7.766E-03	0.403
NB-97	4.149E-03		4.516E-03	Half-Life too short		
ZR-97	3.815E-01		1.046E-01	Half-Life too short		

Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	-5.002E+00		5.698E+00	8.729E+00	1.213E+00	-0.573
TC-99M	-1.209E+07		3.697E+07	Half-Life too short		
RH-101	-1.557E-02		3.177E-02	4.972E-02	3.392E-03	-0.313
RH-102	-8.202E-03		2.632E-02	4.202E-02	2.395E-03	-0.195
RU-103	-7.112E-03		3.687E-02	5.927E-02	7.460E-03	-0.120
RH-106	-1.042E-02		2.963E-01	4.763E-01	5.467E-02	-0.022
RU-106	-1.042E-02		2.963E-01	4.763E-01	2.503E-02	-0.022
AG-108M	8.495E-03		2.965E-02	4.964E-02	3.086E-03	0.171
AG-110M	1.539E-02		2.960E-02	4.979E-02	2.729E-03	0.309
IN-111	3.091E-01		6.541E-01	9.865E-01	6.869E-02	0.313
IN-113M	-1.250E-02		4.207E-02	6.813E-02	4.133E-03	-0.183
SN-113	-1.250E-02		4.207E-02	6.813E-02	4.133E-03	-0.183
IN-114M	8.781E-02		1.866E-01	2.693E-01	1.826E-02	0.326
CD-115	-2.672E+00		4.977E+00	7.675E+00	4.305E-01	-0.348
SN-117M	2.000E-02		4.618E-02	7.601E-02	5.082E-03	0.263
SB-122	-1.243E-01		1.092E+00	1.754E+00	9.648E-02	-0.071
I-123	1.887E-01		1.586E-01	Half-Life too short		
TE-123M	1.589E-02		2.671E-02	4.423E-02	2.986E-03	0.359
I-124	1.577E-01		4.272E-01	6.223E-01	3.327E-02	0.253
SB-124	-2.171E-02		6.351E-02	9.795E-02	6.879E-03	-0.222
SB-125	4.646E-02		8.222E-02	1.402E-01	8.356E-03	0.331
TE-125M	1.001E-01		8.764E+00	1.434E+01	1.424E+00	0.007
I-126	-1.548E-02		1.467E-01	2.335E-01	1.188E-02	-0.066
SB-126	7.106E-02		1.288E-01	1.974E-01	1.146E-02	0.360
SB-127	-8.909E-01		7.975E-01	1.211E+00	1.012E-01	-0.736
XE-127	-1.150E-03		4.489E-02	6.925E-02	4.741E-03	-0.017
I-131	4.741E-02		8.950E-02	1.527E-01	1.027E-02	0.311
TE-132	-1.634E-02		4.081E-01	6.869E-01	9.928E-02	-0.024
BA-133	5.447E-03		4.206E-02	6.117E-02	7.204E-03	0.089
I-133	-6.366E-04		4.634E-04	Half-Life too short		
CS-134	1.211E-01	+	5.446E-02	8.197E-02	5.712E-03	1.478
CS-135	3.070E-03		1.509E-01	2.531E-01	2.164E-02	0.012
I-135	2.247E+06		8.997E+06	Half-Life too short		
CS-136	-2.878E-02		8.385E-02	1.325E-01	1.020E-02	-0.217
BA-137M	-6.968E-03		3.210E-02	5.060E-02	2.546E-03	-0.138
CS-137	-7.366E-03		3.393E-02	5.348E-02	2.706E-03	-0.138
CE-139	-4.524E-03		2.702E-02	4.325E-02	2.877E-03	-0.105
BA-140	-3.175E-02		2.170E-01	3.482E-01	1.131E-01	-0.091
LA-140	-3.939E-03		6.501E-02	1.068E-01	7.444E-03	-0.037
CE-141	2.187E-03		5.720E-02	9.285E-02	6.480E-03	0.024
CE-143	1.190E-04		2.784E-05	Half-Life too short		
CE-144	-4.076E-02		1.935E-01	3.116E-01	4.579E-02	-0.131
PM-144	-1.599E-02		3.263E-02	5.281E-02	2.896E-03	-0.303
PR-144	-1.082E+00		2.208E+00	3.575E+00	1.959E-01	-0.303
PM-146	4.635E-02		3.952E-02	6.961E-02	5.962E-03	0.666
ND-147	2.916E-02		4.401E-01	7.192E-01	9.664E-02	0.041
PM-149	-1.015E+01		4.073E+01	6.715E+01	9.829E+00	-0.151
EU-152	-1.282E-03		9.599E-02	1.446E-01	1.019E-02	-0.009

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	2.045E-02		8.481E-02	1.236E-01	1.186E-02	0.165
EU-154	-1.111E-02		1.103E-01	1.765E-01	1.770E-02	-0.063
EU-155	2.416E-02		1.018E-01	1.683E-01	1.457E-02	0.144
TB-160	6.812E-02		1.223E-01	2.125E-01	1.747E-02	0.321
HO-166M	9.726E-03		5.504E-02	9.342E-02	5.310E-03	0.104
TM-171	-1.388E+01		4.195E+01	5.574E+01	6.410E+00	-0.249
LU-176	-3.782E-03		2.359E-02	3.899E-02	2.627E-03	-0.097
LU-177	1.492E+00	+	1.119E+00	1.441E+00	9.905E-02	1.035
LU-177M	-1.297E-01		1.612E-01	2.508E-01	1.430E-02	-0.517
HF-181	-3.404E-02		3.886E-02	5.932E-02	3.377E-03	-0.574
W-181	2.869E-01		5.230E-01	7.804E-01	9.083E-02	0.368
TA-182	4.480E-02		1.892E-01	3.134E-01	1.954E-02	0.143
RE-183	1.822E-02		1.014E-01	1.649E-01	1.099E-02	0.110
RE-184	6.054E-02		2.165E-01	3.682E-01	2.563E-02	0.164
OS-185	5.255E-03		3.754E-02	6.115E-02	3.133E-03	0.086
RE-188	-1.855E-02		1.574E-01	2.532E-01	1.698E-02	-0.073
W-188	2.583E+00		7.449E+00	1.110E+01	7.593E-01	0.233
IR-192	-2.192E-02		3.080E-02	4.913E-02	3.283E-03	-0.446
AU-195	2.311E-01		2.262E-01	3.592E-01	3.367E-02	0.643
TL-200	-7.935E-05		5.093E-05	Half-Life too short		
TL-201	-3.423E+00		3.931E+00	6.073E+00	4.041E-01	-0.564
TL-202	3.096E-02		5.812E-02	9.863E-02	5.636E-03	0.314
HG-203	5.586E-02		3.751E-02	6.673E-02	4.806E-03	0.837
BI-207	3.341E-02		4.893E-02	8.517E-02	6.051E-03	0.392
TL-207	4.128E-01		6.805E-01	1.026E+00	1.724E-01	0.402
PO-209	3.638E+00		6.966E+00	1.203E+01	1.024E+00	0.302
BI-210	-5.743E+00		9.795E+00	1.552E+01	1.612E+00	-0.370
PB-210	-5.743E+00		9.795E+00	1.552E+01	1.612E+00	-0.370
PO-210	-5.743E+00		9.792E+00	1.552E+01	1.491E+00	-0.370
PB-211	-1.199E-01		9.333E-01	1.521E+00	9.478E-01	-0.079
PO-215	4.128E-01		6.805E-01	1.026E+00	1.724E-01	0.402
RN-219	5.329E-02		4.002E-01	6.646E-01	9.010E-02	0.080
RN-220	9.332E+00		2.393E+01	4.001E+01	2.220E+00	0.233
RA-223	4.128E-01		6.805E-01	1.026E+00	1.724E-01	0.402
AC-227	1.870E-01		3.612E-01	6.191E-01	8.964E-02	0.302
TH-227	1.870E-01		3.616E-01	6.191E-01	1.073E-01	0.302
TH-229	1.583E-01		5.100E-01	8.015E-01	5.449E-02	0.198
PA-231	-1.414E+00		1.411E+00	2.210E+00	3.152E-01	-0.640
TH-231	4.128E-01		6.805E-01	1.026E+00	1.724E-01	0.402
U-231	9.627E-02		8.173E-01	1.183E+00	1.166E-01	0.081
PA-233	2.848E-02		5.934E-02	1.014E-01	7.105E-03	0.281
PA-234	1.199E-01		2.775E-01	4.741E-01	8.808E-02	0.253
PA-234M	-1.535E+00		5.804E+00	9.432E+00	9.921E-01	-0.163
U-235	1.414E-01		2.040E-01	3.320E-01	5.540E-02	0.426
NP-236	4.628E-02		7.507E-02	1.244E-01	8.307E-03	0.372
NP-237	4.093E-01		2.939E-01	4.281E-01	1.011E-01	0.956
NP-239	7.665E-03		1.884E-01	3.080E-01	2.315E-02	0.025
AM-241	-6.538E-02		2.462E-01	3.535E-01	4.499E-02	-0.185

Sample ID : G232504006 Acquisition date : 7-JUL-2009 08:50:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-2.661E-02		9.133E-02	1.477E-01	1.289E-02	-0.180
CM-247	1.664E-02		3.583E-02	6.065E-02	3.449E-03	0.274
CF-249	-6.319E-03		3.813E-02	6.230E-02	3.572E-03	-0.101
CF-251	-3.812E-02		1.213E-01	1.925E-01	1.290E-02	-0.198

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504006           *
* Acquisition date  :  7-JUL-2009 08:50:39 Detector SN#     :               *
* Detector ID       : GAM15                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.19      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504006           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.6274E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 16-FEB-2009 10:54:12 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.402E+01	2.314E+00	2.370E-01	1.181E+00
CD-109	3.625E-01	1.347E+00	7.531E-01	6.874E-01
SN-126	3.575E-02	1.329E-01	7.487E-02	6.779E-02
TL-208	3.253E-01	7.261E-02	2.657E-02	3.704E-02
BI-211	2.332E+00	4.158E-01	1.652E-01	2.121E-01
BI-212	8.965E-01	4.361E-01	2.263E-01	2.225E-01
PB-212	8.977E-01	1.203E-01	4.858E-02	6.137E-02
PO-212	8.977E-01	1.203E-01	4.858E-02	6.137E-02
BI-214	9.164E-01	1.550E-01	4.560E-02	7.910E-02
PB-214	8.113E-01	1.505E-01	5.331E-02	7.677E-02
PO-214	8.113E-01	1.505E-01	5.331E-02	7.677E-02
PO-216	8.977E-01	1.203E-01	4.858E-02	6.137E-02
PO-218	8.113E-01	1.505E-01	5.331E-02	7.677E-02
RA-224	2.953E+00	1.360E+00	5.526E-01	6.941E-01
RA-226	9.164E-01	1.550E-01	4.560E-02	7.910E-02
AC-228	1.047E+00	2.974E-01	8.801E-02	1.517E-01
RA-228	1.047E+00	2.974E-01	8.801E-02	1.517E-01
TH-228	8.977E-01	1.203E-01	4.857E-02	6.137E-02
TH-230	9.164E-01	1.550E-01	4.560E-02	7.910E-02
TH-232	1.047E+00	2.974E-01	8.801E-02	1.517E-01
TH-234	6.900E-01	1.811E+00	1.533E+00	9.238E-01
U-234	9.164E-01	1.550E-01	4.560E-02	7.910E-02
U-238	6.900E-01	1.811E+00	1.533E+00	9.238E-01
AM-243	3.263E-01	8.935E-02	4.920E-02	4.559E-02
ANH-511	5.366E-02	6.636E-02	2.296E-02	3.386E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.541E-01	2.865E-01	2.591E-01	1.462E-01 NOT IDENT.
NA-22	-4.345E-03	3.860E-02	3.198E-02	1.969E-02 NOT IDENT.

NA-24	1.599E+04	5.421E+04	0.000E+00	2.766E+04	SHORT HLIF
AL-26	-1.343E-03	2.623E-02	2.189E-02	1.338E-02	NOT IDENT.
TI-44	2.164E-01	5.800E-02	4.184E-02	2.959E-02	FAIL ABUN
SC-46	-1.908E-02	3.305E-02	2.705E-02	1.686E-02	FAIL ABUN
V-48	-1.116E-02	5.311E-02	4.465E-02	2.710E-02	NOT IDENT.
CR-51	-1.263E-01	3.181E-01	2.716E-01	1.623E-01	NOT IDENT.
MN-52	3.948E-02	1.603E-01	1.425E-01	8.181E-02	NOT IDENT.
MN-54	-5.883E-03	3.218E-02	2.763E-02	1.642E-02	NOT IDENT.
CO-56	1.502E-02	3.381E-02	3.054E-02	1.725E-02	FAIL ABUN
CO-57	-1.352E-02	2.336E-02	2.060E-02	1.192E-02	NOT IDENT.
CO-58	4.056E-03	3.524E-02	3.109E-02	1.798E-02	NOT IDENT.
FE-59	-1.950E-02	8.660E-02	7.220E-02	4.418E-02	NOT IDENT.
CO-60	1.804E-02	3.255E-02	2.916E-02	1.661E-02	NOT IDENT.
ZN-65	3.224E-02	8.623E-02	6.610E-02	4.400E-02	NOT IDENT.
GE-68	-4.697E-01	1.016E+00	8.222E-01	5.185E-01	NOT IDENT.
AS-73	-4.812E-01	1.539E+00	1.434E+00	7.853E-01	NOT IDENT.
AS-74	1.336E-02	7.199E-02	6.265E-02	3.673E-02	NOT IDENT.
SE-75	1.700E-02	3.871E-02	3.598E-02	1.975E-02	NOT IDENT.
BR-77	-1.310E+00	5.112E+00	4.075E+00	2.608E+00	FAIL ABUN
SR-82	-3.079E-02	3.003E-01	2.612E-01	1.532E-01	NOT IDENT.
RB-83	-1.514E-02	6.450E-02	5.153E-02	3.291E-02	NOT IDENT.
RB-84	2.707E-03	5.929E-02	5.167E-02	3.025E-02	NOT IDENT.
KR-85	1.537E+01	7.632E+00	6.693E+00	3.894E+00	NOT IDENT.
SR-85	7.694E-02	3.821E-02	3.351E-02	1.950E-02	NOT IDENT.
RB-86	-7.672E-02	5.670E-01	4.760E-01	2.893E-01	NOT IDENT.
Y-88	1.161E-02	2.289E-02	2.152E-02	1.168E-02	NOT IDENT.
ZR-88	7.253E-03	2.776E-02	2.497E-02	1.417E-02	NOT IDENT.
Y-91	-1.200E+00	1.826E+01	1.532E+01	9.314E+00	NOT IDENT.
NB-94	-3.772E-04	2.938E-02	2.597E-02	1.499E-02	NOT IDENT.
NB-95	3.324E-02	3.789E-02	3.525E-02	1.933E-02	NOT IDENT.
NB-95M	1.887E-01	1.305E-01	1.117E-01	6.659E-02	NOT IDENT.
ZR-95	4.202E-02	5.783E-02	5.376E-02	2.951E-02	NOT IDENT.
NB-97	4.149E+03	8.851E+03	0.000E+00	4.516E+03	SHORT HLIF
ZR-97	3.815E+05	2.050E+05	0.000E+00	1.046E+05	SHORT HLIF
MO-99	-5.002E+00	5.584E+00	4.508E+00	2.849E+00	NOT IDENT.
TC-99M	-1.209E+13	7.247E+13	0.000E+00	3.697E+13	SHORT HLIF
RH-101	-1.557E-02	3.113E-02	2.668E-02	1.588E-02	NOT IDENT.
RH-102	-8.202E-03	2.579E-02	2.199E-02	1.316E-02	NOT IDENT.
RU-103	-7.112E-03	3.613E-02	3.098E-02	1.844E-02	FAIL ABUN
RH-106	-1.042E-02	2.904E-01	2.473E-01	1.482E-01	FAIL ABUN
RU-106	-1.042E-02	2.904E-01	2.473E-01	1.482E-01	FAIL ABUN
AG-108M	8.495E-03	2.906E-02	2.604E-02	1.483E-02	NOT IDENT.
AG-110M	1.539E-02	2.901E-02	2.580E-02	1.480E-02	NOT IDENT.
IN-111	3.091E-01	6.410E-01	5.262E-01	3.270E-01	NOT IDENT.
IN-113M	-1.250E-02	4.123E-02	3.586E-02	2.104E-02	NOT IDENT.
SN-113	-1.250E-02	4.123E-02	3.586E-02	2.104E-02	NOT IDENT.
IN-114M	8.781E-02	1.829E-01	1.447E-01	9.331E-02	NOT IDENT.
CD-115	-2.672E+00	4.877E+00	4.004E+00	2.488E+00	NOT IDENT.
SN-117M	2.000E-02	4.526E-02	4.104E-02	2.309E-02	NOT IDENT.
SB-122	-1.243E-01	1.070E+00	9.130E-01	5.458E-01	NOT IDENT.
I-123	1.887E+05	3.109E+05	0.000E+00	1.586E+05	SHORT HLIF
TE-123M	1.589E-02	2.618E-02	2.388E-02	1.336E-02	NOT IDENT.
I-124	1.577E-01	4.187E-01	3.234E-01	2.136E-01	NOT IDENT.
SB-124	-2.171E-02	6.224E-02	4.930E-02	3.175E-02	NOT IDENT.
SB-125	4.646E-02	8.058E-02	7.359E-02	4.111E-02	NOT IDENT.
TE-125M	1.001E-01	8.589E+00	7.821E+00	4.382E+00	NOT IDENT.
I-126	-1.548E-02	1.438E-01	1.209E-01	7.334E-02	NOT IDENT.
SB-126	7.106E-02	1.262E-01	1.020E-01	6.438E-02	FAIL ABUN
SB-127	-8.909E-01	7.816E-01	6.268E-01	3.988E-01	NOT IDENT.
XE-127	-1.150E-03	4.399E-02	3.713E-02	2.245E-02	NOT IDENT.
I-131	4.741E-02	8.771E-02	8.051E-02	4.475E-02	NOT IDENT.
TE-132	-1.634E-02	4.000E-01	3.672E-01	2.041E-01	NOT IDENT.
BA-133	5.447E-03	4.122E-02	3.228E-02	2.103E-02	NOT IDENT.
I-133	-6.366E+02	9.083E+02	0.000E+00	4.634E+02	SHORT HLIF
CS-134	1.211E-01	5.337E-02	4.224E-02	2.723E-02	FAIL ABUN
CS-135	3.070E-03	1.478E-01	1.346E-01	7.543E-02	NOT IDENT.
I-135	2.247E+12	1.763E+13	0.000E+00	8.997E+12	SHORT HLIF
CS-136	-2.878E-02	8.218E-02	6.769E-02	4.193E-02	NOT IDENT.
BA-137M	-6.968E-03	3.146E-02	2.622E-02	1.605E-02	NOT IDENT.
CS-137	-7.366E-03	3.325E-02	2.771E-02	1.697E-02	NOT IDENT.
CE-139	-4.524E-03	2.648E-02	2.333E-02	1.351E-02	NOT IDENT.
BA-140	-3.175E-02	2.126E-01	1.815E-01	1.085E-01	NOT IDENT.
LA-140	-3.939E-03	6.371E-02	5.386E-02	3.250E-02	FAIL ABUN
CE-141	2.187E-03	5.606E-02	5.025E-02	2.860E-02	NOT IDENT.
CE-143	1.190E+02	5.457E+01	0.000E+00	2.784E+01	SHORT HLIF
CE-144	-4.076E-02	1.897E-01	1.690E-01	9.676E-02	NOT IDENT.
PM-144	-1.599E-02	3.198E-02	2.732E-02	1.631E-02	NOT IDENT.
PR-144	-1.082E+00	2.164E+00	1.849E+00	1.104E+00	NOT IDENT.

PM-146	4.635E-02	3.873E-02	3.648E-02	1.976E-02	NOT IDENT.
ND-147	2.916E-02	4.313E-01	3.751E-01	2.201E-01	NOT IDENT.
PM-149	-1.015E+01	3.992E+01	3.566E+01	2.037E+01	NOT IDENT.
EU-152	-1.282E-03	9.407E-02	7.638E-02	4.799E-02	NOT IDENT.
GD-153	2.045E-02	8.311E-02	6.762E-02	4.240E-02	NOT IDENT.
EU-154	-1.111E-02	1.080E-01	8.962E-02	5.513E-02	NOT IDENT.
EU-155	2.416E-02	9.981E-02	9.189E-02	5.092E-02	NOT IDENT.
TB-160	6.812E-02	1.199E-01	1.092E-01	6.116E-02	NOT IDENT.
HO-166M	9.726E-03	5.394E-02	4.830E-02	2.752E-02	NOT IDENT.
TM-171	-1.388E+01	4.111E+01	3.081E+01	2.097E+01	NOT IDENT.
LU-176	-3.782E-03	2.312E-02	2.067E-02	1.180E-02	FAIL ABUN
LU-177	1.492E+00	1.097E+00	7.724E-01	5.595E-01	FAIL ABUN
LU-177M	-1.297E-01	1.580E-01	1.318E-01	8.059E-02	NOT IDENT.
HF-181	-3.404E-02	3.808E-02	3.103E-02	1.943E-02	NOT IDENT.
W-181	2.869E-01	5.125E-01	4.316E-01	2.615E-01	NOT IDENT.
TA-182	4.480E-02	1.854E-01	1.594E-01	9.459E-02	FAIL ABUN
RE-183	1.822E-02	9.932E-02	8.899E-02	5.068E-02	FAIL ABUN
RE-184	6.054E-02	2.121E-01	1.962E-01	1.082E-01	NOT IDENT.
OS-185	5.255E-03	3.679E-02	3.171E-02	1.877E-02	NOT IDENT.
RE-188	-1.855E-02	1.542E-01	1.368E-01	7.868E-02	NOT IDENT.
W-188	2.583E+00	7.300E+00	5.890E+00	3.724E+00	FAIL ABUN
IR-192	-2.192E-02	3.019E-02	2.602E-02	1.540E-02	FAIL ABUN
AU-195	2.311E-01	2.217E-01	1.965E-01	1.131E-01	FAIL ABUN
TL-200	-7.935E+01	9.982E+01	0.000E+00	5.093E+01	SHORT HLIF
TL-201	-3.423E+00	3.852E+00	3.274E+00	1.965E+00	NOT IDENT.
TL-202	3.096E-02	5.695E-02	5.173E-02	2.906E-02	NOT IDENT.
HG-203	5.586E-02	3.676E-02	3.546E-02	1.876E-02	NOT IDENT.
BI-207	3.341E-02	4.796E-02	4.350E-02	2.447E-02	FAIL ABUN
TL-207	4.128E-01	6.669E-01	5.429E-01	3.403E-01	FAIL ABUN
PO-209	3.638E+00	6.827E+00	6.178E+00	3.483E+00	NOT IDENT.
BI-210	-5.743E+00	9.599E+00	8.659E+00	4.897E+00	NOT IDENT.
PB-210	-5.743E+00	9.599E+00	8.659E+00	4.897E+00	NOT IDENT.
PO-210	-5.743E+00	9.596E+00	8.659E+00	4.896E+00	NOT IDENT.
PB-211	-1.199E-01	9.146E-01	7.995E-01	4.666E-01	NOT IDENT.
PO-215	4.128E-01	6.669E-01	5.429E-01	3.403E-01	FAIL ABUN
RN-219	5.329E-02	3.922E-01	3.495E-01	2.001E-01	NOT IDENT.
RN-220	9.332E+00	2.345E+01	2.085E+01	1.197E+01	NOT IDENT.
RA-223	4.128E-01	6.669E-01	5.429E-01	3.403E-01	FAIL ABUN
AC-227	1.870E-01	3.539E-01	3.298E-01	1.806E-01	NOT IDENT.
TH-227	1.870E-01	3.544E-01	3.298E-01	1.808E-01	FAIL ABUN
TH-229	1.583E-01	4.998E-01	4.303E-01	2.550E-01	FAIL ABUN
PA-231	-1.414E+00	1.383E+00	1.174E+00	7.055E-01	NOT IDENT.
TH-231	4.128E-01	6.669E-01	5.429E-01	3.403E-01	FAIL ABUN
U-231	9.627E-02	8.009E-01	6.478E-01	4.086E-01	FAIL ABUN
PA-233	2.848E-02	5.815E-02	5.369E-02	2.967E-02	FAIL ABUN
PA-234	1.199E-01	2.719E-01	2.430E-01	1.387E-01	FAIL ABUN
PA-234M	-1.535E+00	5.688E+00	4.826E+00	2.902E+00	NOT IDENT.
U-235	1.414E-01	1.999E-01	1.798E-01	1.020E-01	FAIL ABUN
NP-236	4.628E-02	7.357E-02	6.716E-02	3.754E-02	FAIL ABUN
NP-237	4.093E-01	2.881E-01	2.350E-01	1.470E-01	NOT IDENT.
NP-239	7.665E-03	1.847E-01	1.677E-01	9.422E-02	FAIL ABUN
AM-241	-6.538E-02	2.412E-01	1.960E-01	1.231E-01	NOT IDENT.
CM-243	-2.661E-02	8.950E-02	8.068E-02	4.566E-02	FAIL ABUN
CM-247	1.664E-02	3.512E-02	3.189E-02	1.792E-02	NOT IDENT.
CF-249	-6.319E-03	3.737E-02	3.279E-02	1.907E-02	NOT IDENT.
CF-251	-3.812E-02	1.189E-01	1.036E-01	6.067E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	248.0836
46.50	248.0836
46.50	248.0836
48.70	259.4128
49.72	251.3603
51.35	233.0991
52.39	261.0273
52.97	268.8767
53.15	276.5590
53.44	280.4927
54.07	277.9243
56.28	263.6231
56.28	263.6242
57.37	0.0000
57.53	249.7861
57.53	249.7872
57.60	249.4033
57.98	261.5901
57.98	261.5901
59.32	261.0341
59.32	261.0341
59.40	261.0663
59.54	273.4099
59.72	279.6312
60.01	267.4576
61.10	254.0420
61.14	254.0571
61.30	254.1180
63.00	325.2079
63.29	314.7268
63.29	314.7268
63.58	296.5107
64.28	307.8366
65.12	317.5057
65.20	317.5423
65.20	317.5423
66.05	314.8297
66.72	335.6996
66.83	335.7537
66.91	335.7920
67.20	284.7967
67.20	284.7967
67.75	322.5888
67.85	322.6344
68.90	363.9875
68.90	363.9875
69.30	361.4649
69.67	344.5045
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70.83	299.7785
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72.87	309.2254
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74.81	310.0331
74.81	310.0331
74.81	310.0331
74.81	310.0331
74.97	310.0994
75.28	310.2271
75.70	310.3995
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77.11	310.9757
77.11	310.9757

77.11	310.9757
77.11	310.9757
77.11	310.9757
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79.80	349.1932
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80.30	374.7143
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81.07	395.6558
81.07	395.6558
81.07	395.6558
81.07	395.6558
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83.78	339.4403
83.78	339.4403
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84.40	328.9738
84.90	348.2613
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86.50	390.3730
86.54	415.8875
86.59	415.9130
86.72	415.9783
86.79	416.0134
86.94	416.0898
87.30	444.9815
87.30	444.9815
87.30	444.9815
87.30	444.9815
87.30	444.9815
87.30	444.9815
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87.88	445.2931
88.03	445.3748
88.36	445.5520
88.47	445.6116
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91.11	472.6536
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92.38	473.3612
92.38	473.3612
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94.00	297.4160
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94.67	321.7798
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94.90	321.8652
94.90	321.8652
94.90	321.8652
95.87	335.1143
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98.44	290.8521
98.88	272.1351
99.55	284.1375
99.55	284.1375
99.86	284.2361
100.00	288.3268
100.10	281.2780
103.18	321.8322
103.76	305.7823
105.00	308.2302
105.31	298.1571
108.00	310.2471
109.28	323.9544
111.00	343.9942
111.00	343.9942

111.76	346.3177
112.95	346.7458
115.19	300.2484
116.30	343.8246
117.00	326.5574
117.00	326.5574
117.66	331.9298
121.11	297.9097
121.62	287.7119
121.78	287.7575
122.06	307.5094
122.32	322.0866
122.32	322.0866
122.32	322.0866
122.32	322.0866
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144.24	289.6575
144.24	289.6575
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147.16	344.4620
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154.21	302.8507
154.21	302.8507
154.21	302.8507
154.21	302.8507
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172.10	253.2417
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176.60	280.2093
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186.00	285.5285
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198.60	288.2107
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201.83	261.2147
202.84	263.3026
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208.81	245.8295

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209.75	235.0847
210.97	301.2355
215.65	255.4670
216.55	258.3400
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227.20	234.2999
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228.18	248.8818
228.18	248.8818
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236.00	250.7680
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238.63	254.2217
238.63	254.2217
238.63	254.2217
239.00	254.2815
240.98	254.6062
241.98	254.7686
241.98	254.7686
241.98	254.7686
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245.39	206.6895
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252.85	195.1386
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268.79	198.8907
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269.46	182.3140
269.46	182.3140
269.46	182.3140
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277.60	172.9605
277.60	172.9605
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286.10	160.7314
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293.26	0.0000
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295.21	194.4390
295.96	194.5199

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300.09	163.2596
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323.87	135.1592
323.87	135.1592
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338.28	136.1743
338.28	136.1743
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351.92	125.8232
351.92	125.8232
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391.69	138.1167
392.90	123.3871
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445.03	120.2086
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511.85	101.7067
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513.99	90.0182
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529.87	0.0000
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591.81	79.5552
592.07	81.2231
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602.71	66.1486
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604.70	73.3499
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609.31	66.6561
609.31	66.6561

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614.37	82.5664
618.01	83.5660
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621.84	82.0544
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633.10	70.4431
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661.65	78.7605
664.57	0.0000
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695.00	88.4395
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696.49	98.6189
697.00	93.1032
697.49	86.6639
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722.78	81.2297
722.78	81.2297
722.89	81.2332
722.95	81.2350
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727.18	80.9395
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739.58	74.7038
742.81	56.0815
744.21	49.5592
747.13	62.7035
751.79	63.7265
752.31	53.4259
753.82	55.3257
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756.15	55.3629
756.87	60.0677
763.93	84.6442
765.79	75.2799
766.41	70.5872
766.84	81.8917
768.36	80.0437
768.36	80.0437
768.36	80.0437
768.36	80.0437
776.49	64.1858
778.00	58.9253
778.57	70.5195
778.89	59.1924
783.80	45.4023

785.46	57.7261
792.07	28.4430
795.84	60.7422
796.30	58.5804
801.93	88.0099
805.60	69.4742
810.29	63.8471
810.76	67.6690
815.85	71.5820
817.79	60.1609
818.51	52.5315
819.60	50.6364
826.30	48.8159
828.27	0.0000
831.60	58.4720
831.96	55.6022
834.83	69.0776
836.80	0.0000
846.75	55.8252
848.13	51.9950
856.28	0.0000
856.80	38.0528
860.37	49.6812
867.32	61.3858
867.82	59.5281
871.10	37.7820
873.19	53.3115
874.81	67.8794
875.33	0.0000
876.40	62.0872
879.36	50.4850
880.27	52.4399
880.51	54.3856
881.50	57.3135
883.24	61.2274
884.67	60.2782
889.25	59.3767
896.60	55.5887
898.02	57.5596
899.00	57.5752
903.28	68.8720
911.07	46.0065
911.07	46.0065
911.07	46.0065
919.63	45.4062
920.93	58.8794
925.00	42.2406
925.24	42.2433
926.50	52.0835
934.06	47.2598
934.06	47.2598
934.06	47.2598
934.06	47.2598
935.52	44.3225
937.48	64.0518
944.10	62.1835
946.00	52.3379
949.00	55.3415
962.29	69.6880
964.01	74.8178
966.15	73.1564
968.20	67.5186
969.11	47.6709
969.11	47.6709
969.11	47.6709
977.42	42.7918
980.50	57.7616
983.50	47.8379
989.30	57.8844
996.32	57.9823
1001.03	48.0391
1001.68	42.0410
1004.76	58.0991
1021.30	0.0000
1024.50	0.0000
1034.80	55.4834
1037.82	66.6284
1038.57	63.6101

1038.76	0.0000
1045.16	44.4941
1046.59	41.4738
1048.07	51.6060
1050.47	33.4109
1050.47	33.4109
1063.62	47.7286
1076.63	40.7406
1077.35	47.8778
1085.78	38.7824
1099.22	66.5393
1112.02	58.0746
1112.84	49.2852
1115.52	47.5513
1120.29	54.6544
1120.29	54.6544
1120.29	54.6544
1120.29	54.6544
1120.51	54.6565
1121.28	35.2679
1124.00	0.0000
1129.67	51.5279
1131.51	0.0000
1147.95	0.0000
1167.94	50.9141
1173.22	53.0524
1175.09	55.1544
1177.93	62.4756
1189.05	62.6221
1204.90	74.3483
1205.75	0.0000
1213.00	73.4237
1221.42	67.2474
1230.97	78.6072
1235.34	63.2227
1236.41	0.0000
1238.11	83.1408
1238.11	83.1408
1238.11	83.1408
1238.11	83.1408
1238.25	81.1859
1246.25	66.5325
1260.41	0.0000
1271.85	31.8457
1274.45	44.6062
1274.54	44.6062
1291.56	42.6270
1298.22	0.0000
1312.09	50.2875
1325.50	43.9812
1325.50	43.9812
1332.49	24.7061
1333.61	26.8606
1360.21	23.7572
1362.66	0.0000
1365.15	30.2650
1368.21	25.9561
1368.53	0.0000
1376.25	23.8289
1377.67	26.0020
1377.67	26.0020
1377.67	26.0020
1377.67	26.0020
1384.27	30.6831
1394.10	22.3560
1395.20	22.3610
1407.95	22.4138
1434.06	25.3360
1436.60	29.1036
1457.56	0.0000
1460.81	21.6868
1489.15	10.4245
1509.49	20.9242
1596.49	20.2727
1620.62	12.6001
1678.03	0.0000
1691.02	15.6869
1691.02	15.6869

1706.46	0.0000
1750.46	0.0000
1764.49	11.9025
1764.49	11.9025
1764.49	11.9025
1764.49	11.9025
1770.23	8.6865
1771.40	13.9009
1791.20	0.0000
1808.65	12.9819
1836.01	6.0165

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504006

Total Uranium Activity	2.1183E+00	ug/g
Total Uranium Counting Unc.	5.3874E+00	ug/g
Total Uranium Tpu	2.7487E-06	ug/g
Total Uranium Mda	4.5623E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID  : G232504006       *
*   ANALYST       : MXR1                      DETECTOR   : GAM15            *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:50:39.68    SAMPLE ALQT:  162.740 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 6.069E+00
GROSS GAMMA ERROR (pCi/GRAM) : 1.458E+00
GROSS GAMMA MDA (pCi/GRAM) : 2.161E+00
GROSS GAMMA DLC (pCi/GRAM) : 1.042E+00

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:53:16.48

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504007.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:51:14.
Sample ID         : G232504007           Sample quantity  : 1.55350E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.96  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	5	75.04	305	367	0.78	150.09	146	21	4.24E-02	10.9	1.59E+00
2	5	77.31*	504	348	0.87	154.62	146	21	7.00E-02	7.2	
3	0	84.22*	84	333	1.51	168.44	166	6	1.16E-02	37.1	
4	2	87.41*	183	275	1.15	174.82	172	21	2.55E-02	15.3	1.44E+00
5	2	90.10	189	306	1.06	180.21	172	21	2.62E-02	16.2	
6	2	93.01*	239	371	1.32	186.02	172	21	3.31E-02	16.9	
7	0	186.06*	152	346	1.30	372.12	367	10	2.11E-02	25.3	
8	0	209.39	90	301	0.98	418.78	414	9	1.25E-02	36.4	
9	3	238.69*	1267	149	1.16	477.38	469	21	1.76E-01	3.3	6.40E+00
10	3	241.79	318	248	1.95	483.58	469	21	4.42E-02	13.8	
11	0	270.65	165	257	1.35	541.29	535	14	2.30E-02	21.9	
12	0	294.99*	359	239	1.16	589.98	584	13	4.99E-02	10.4	
13	0	300.14	78	160	1.15	600.28	596	9	1.09E-02	31.2	
14	0	328.39	69	144	0.77	656.79	651	10	9.53E-03	34.9	
15	0	338.37	217	190	1.23	676.74	671	11	3.02E-02	14.0	
16	0	352.02*	588	172	1.10	704.03	698	11	8.17E-02	6.1	
17	0	463.74	80	136	1.37	927.49	919	14	1.10E-02	33.1	
18	0	510.80*	117	122	1.49	1021.60	1014	14	1.62E-02	25.5	
19	0	583.11*	326	137	1.21	1166.22	1160	13	4.53E-02	9.4	
20	0	609.35*	402	91	1.15	1218.70	1213	12	5.58E-02	7.1	
21	0	662.38	66	88	1.33	1324.76	1317	11	9.20E-03	30.0	
22	0	727.17	82	69	1.59	1454.33	1449	11	1.13E-02	22.6	
23	0	861.02	71	60	1.67	1722.04	1714	15	9.91E-03	26.5	
24	0	911.17*	236	64	1.32	1822.35	1815	15	3.28E-02	10.2	
25	0	935.83	68	79	1.57	1871.66	1863	18	9.41E-03	33.4	
26	1	964.37	48	58	2.12	1928.75	1919	37	6.71E-03	35.2	1.56E+00
27	1	968.88*	172	46	2.13	1937.76	1919	37	2.39E-02	11.5	
28	0	1120.56*	86	100	1.86	2241.12	2232	16	1.19E-02	29.0	
29	0	1237.90	73	72	1.81	2475.80	2468	17	1.02E-02	29.1	
30	0	1460.29*	1384	30	1.86	2920.58	2911	17	1.92E-01	2.9	
31	0	1591.45	37	46	5.17	3182.91	3162	32	5.19E-03	57.9	
32	0	1729.87	26	8	1.95	3459.74	3450	16	3.58E-03	31.5	
33	0	1763.53*	90	4	1.37	3527.06	3520	15	1.25E-02	12.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:53:19

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504007.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:51:14
Sample ID : G232504007 Sample quantity : 155.35 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.96 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.552E+01	2.597E+00	5.070E-01	4.268E-02	50.336
CD-109	+	88.03	*	1.939E+00	6.149E-01	9.668E-01	8.337E-02	2.005
SN-126		64.28		-1.751E-01	4.407E-01	7.356E-01	1.065E-01	-0.238
	+	86.94		7.949E-01	4.086E-01	4.242E-01	1.754E-01	1.874
	+	87.57	*	1.912E-01	6.064E-02	1.073E-01	9.220E-03	1.781
BA-137M	+	661.65	*	7.067E-02	4.269E-02	5.361E-02	3.267E-03	1.318
CS-137	+	661.65	*	7.471E-02	4.513E-02	5.667E-02	3.467E-03	1.318
TL-208		277.35		4.696E-01	3.609E-01	5.420E-01	5.655E-02	0.867
	+	510.84		4.182E-01	2.178E-01	1.781E-01	1.816E-02	2.348
	+	583.14	*	3.336E-01	6.674E-02	4.587E-02	3.159E-03	7.274
	+	860.37		6.955E-01	3.739E-01	3.375E-01	3.223E-02	2.061
BI-211		72.87		2.737E+00	2.940E+00	4.466E+00	3.389E-01	0.613
	+	351.07	*	2.636E+00	3.601E-01	2.452E-01	1.523E-02	10.751
PB-212	+	74.81		1.359E+00	3.394E-01	4.749E-01	5.746E-02	2.862
	+	77.11		1.268E+00	2.084E-01	2.685E-01	2.098E-02	4.723
	+	87.30		8.843E-01	2.941E-01	4.700E-01	6.188E-02	1.882
	+	238.63	*	1.252E+00	1.203E-01	7.090E-02	5.002E-03	17.658
	+	300.09		1.188E+00	7.466E-01	9.628E-01	7.808E-02	1.234
PO-212	+	74.81		1.359E+00	3.394E-01	4.749E-01	5.746E-02	2.862
	+	77.11		1.268E+00	2.084E-01	2.685E-01	2.098E-02	4.723
	+	87.30		8.843E-01	2.941E-01	4.700E-01	6.188E-02	1.882
		115.19		1.685E+00	3.001E+00	5.041E+00	3.226E-01	0.334
	+	238.63	*	1.252E+00	1.203E-01	7.090E-02	5.002E-03	17.658
	+	300.09		1.188E+00	7.466E-01	9.628E-01	7.808E-02	1.234
BI-214	+	609.31	*	7.757E-01	1.263E-01	8.744E-02	6.976E-03	8.871
		768.36		5.439E-02	6.261E-01	1.011E+00	9.722E-02	0.054
		934.06		1.992E+00	1.141E+00	1.912E+00	2.123E-01	1.042
	+	1120.29		8.838E-01	5.196E-01	3.652E-01	3.400E-02	2.420
	+	1238.11		2.100E+00	1.235E+00	1.157E+00	1.021E-01	1.816
		1377.67		6.551E-01	8.383E-01	1.472E+00	1.555E-01	0.445
	+	1764.49		1.277E+00	3.193E-01	2.858E-01	1.808E-02	4.468
PB-214	+	74.81		2.342E+00	5.693E-01	8.183E-01	8.733E-02	2.862
	+	77.11		2.174E+00	3.939E-01	4.604E-01	5.023E-02	4.723
	+	87.30		1.515E+00	4.945E-01	8.051E-01	9.277E-02	1.882

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		1.889E+00	5.402E-01	4.266E-01	3.339E-02	4.428
	+	295.21		9.545E-01	2.142E-01	1.742E-01	1.461E-02	5.480
	+	351.92	*	9.171E-01	1.341E-01	8.053E-02	6.531E-03	11.388
PO-214	+	74.81		2.342E+00	5.693E-01	8.183E-01	8.733E-02	2.862
	+	77.11		2.174E+00	3.939E-01	4.604E-01	5.023E-02	4.723
	+	87.30		1.515E+00	4.945E-01	8.051E-01	9.277E-02	1.882
	+	241.98		1.889E+00	5.402E-01	4.266E-01	3.339E-02	4.428
	+	295.21		9.545E-01	2.142E-01	1.742E-01	1.461E-02	5.480
	+	351.92	*	9.171E-01	1.341E-01	8.053E-02	6.531E-03	11.388
PO-216	+	74.81		1.359E+00	3.394E-01	4.749E-01	5.746E-02	2.862
	+	77.11		1.268E+00	2.084E-01	2.685E-01	2.098E-02	4.723
	+	87.30		8.843E-01	2.941E-01	4.700E-01	6.188E-02	1.882
	+	238.63	*	1.252E+00	1.203E-01	7.090E-02	5.002E-03	17.658
	+	300.09		1.188E+00	7.466E-01	9.628E-01	7.808E-02	1.234
PO-218	+	74.81		2.342E+00	5.693E-01	8.183E-01	8.733E-02	2.862
	+	77.11		2.174E+00	3.939E-01	4.604E-01	5.023E-02	4.723
	+	87.30		1.515E+00	4.945E-01	8.051E-01	9.277E-02	1.882
	+	241.98		1.889E+00	5.402E-01	4.266E-01	3.339E-02	4.428
	+	295.21		9.545E-01	2.142E-01	1.742E-01	1.461E-02	5.480
	+	351.92	*	9.171E-01	1.341E-01	8.053E-02	6.531E-03	11.388
RA-224	+	240.98	*	3.582E+00	1.004E+00	8.064E-01	4.400E-02	4.442
RA-226	+	609.31	*	7.757E-01	1.263E-01	8.744E-02	6.976E-03	8.871
		768.36		5.439E-02	6.261E-01	1.011E+00	9.722E-02	0.054
		934.06		1.992E+00	1.141E+00	1.912E+00	2.123E-01	1.042
	+	1120.29		8.838E-01	5.196E-01	3.652E-01	3.400E-02	2.420
	+	1238.11		2.100E+00	1.235E+00	1.157E+00	1.021E-01	1.816
		1377.67		6.551E-01	8.383E-01	1.472E+00	1.555E-01	0.445
	+	1764.49		1.277E+00	3.193E-01	2.858E-01	1.808E-02	4.468
AC-228	+	338.32		1.075E+00	5.313E-01	2.966E-01	1.208E-01	3.623
	+	911.07	*	1.093E+00	2.586E-01	1.639E-01	1.945E-02	6.667
	+	969.11		1.410E+00	4.632E-01	2.872E-01	6.720E-02	4.908
RA-228	+	338.32		1.075E+00	5.313E-01	2.966E-01	1.208E-01	3.623
	+	911.07	*	1.093E+00	2.586E-01	1.639E-01	1.945E-02	6.667
	+	969.11		1.410E+00	4.632E-01	2.872E-01	6.720E-02	4.908
TH-228	+	84.40		2.776E+00	2.088E+00	3.163E+00	4.095E-01	0.878
	+	238.60	*	1.252E+00	1.203E-01	7.090E-02	5.001E-03	17.659
	+	300.10		1.188E+00	1.019E+00	9.628E-01	5.673E-01	1.234
TH-230	+	609.31	*	7.757E-01	1.263E-01	8.744E-02	6.976E-03	8.871
		768.36		5.439E-02	6.261E-01	1.011E+00	9.722E-02	0.054
		934.06		1.992E+00	1.141E+00	1.912E+00	2.123E-01	1.042
	+	1120.29		8.838E-01	5.196E-01	3.652E-01	3.400E-02	2.420
	+	1238.11		2.100E+00	1.235E+00	1.157E+00	1.021E-01	1.816
		1377.67		6.551E-01	8.383E-01	1.472E+00	1.555E-01	0.445
	+	1764.49		1.277E+00	3.193E-01	2.858E-01	1.808E-02	4.468
TH-232	+	338.32		1.075E+00	3.071E-01	2.966E-01	1.655E-02	3.623
	+	911.07	*	1.093E+00	2.586E-01	1.639E-01	1.945E-02	6.667
	+	969.11		1.410E+00	4.632E-01	2.872E-01	6.720E-02	4.908
U-234	+	609.31	*	7.757E-01	1.263E-01	8.744E-02	6.976E-03	8.871
		768.36		5.439E-02	6.261E-01	1.011E+00	9.722E-02	0.054

Sample ID : G232504007 Acquisition date : 7-JUL-2009 08:51:14

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		1.992E+00	1.141E+00	1.912E+00	2.123E-01	1.042
	+	1120.29		8.838E-01	5.196E-01	3.652E-01	3.400E-02	2.420
	+	1238.11		2.100E+00	1.235E+00	1.157E+00	1.021E-01	1.816
		1377.67		6.551E-01	8.383E-01	1.472E+00	1.555E-01	0.445
	+	1764.49		1.277E+00	3.193E-01	2.858E-01	1.808E-02	4.468
NP-237	+	86.50	*	5.615E-01	2.125E-01	3.012E-01	6.721E-02	1.864
		95.87		-5.576E-01	8.924E-01	1.244E+00	3.026E-01	-0.448
AM-243	+	74.67	*	2.203E-01	5.102E-02	7.724E-02	5.929E-03	2.852
	+	86.72		2.105E+01	6.678E+00	1.126E+01	9.592E-01	1.869
		117.66		-1.095E+00	3.216E+00	5.226E+00	3.285E-01	-0.210
		142.18		4.146E+00	1.464E+01	2.422E+01	1.347E+00	0.171
ANH-511	+	511.00	*	9.033E-02	4.645E-02	3.848E-02	2.260E-03	2.348

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	7.242E-02	2.478E-01	4.159E-01	2.796E-02	0.174
NA-22		1274.54	*	-2.439E-02	3.428E-02	5.136E-02	3.818E-03	-0.475
NA-24		1368.53	*	-4.998E-02	3.428E-02	Half-Life too short		
AL-26		1129.67		-7.594E-01	1.529E+00	2.343E+00	1.493E-01	-0.324
		1808.65	*	-9.206E-03	2.191E-02	3.298E-02	1.969E-03	-0.279
TI-44		67.85		-7.958E-03	3.945E-02	6.466E-02	4.783E-03	-0.123
	+	78.38	*	2.340E-01	3.846E-02	6.625E-02	5.227E-03	3.533
SC-46		889.25	*	9.974E-03	2.955E-02	5.067E-02	4.762E-03	0.197
	+	1120.51		1.485E-01	8.676E-02	1.073E-01	7.015E-03	1.384
V-48		944.10		9.765E-01	7.371E-01	1.176E+00	1.068E-01	0.830
		983.50	*	-5.244E-03	4.827E-02	7.730E-02	6.665E-03	-0.068
		1312.09		5.008E-02	6.560E-02	1.146E-01	9.356E-03	0.437
CR-51		320.08	*	-3.493E-02	2.766E-01	4.495E-01	2.825E-02	-0.078
MN-52		744.21		4.177E-02	1.482E-01	2.439E-01	1.757E-02	0.171
		848.13		2.522E+00	4.145E+00	7.247E+00	6.338E-01	0.348
	+	935.52		4.667E-01	3.145E-01	3.346E-01	3.069E-02	1.395
		1246.25		1.425E+00	5.314E+00	7.691E+00	5.289E-01	0.185
		1333.61		-9.077E-01	3.116E+00	4.881E+00	4.187E-01	-0.186
		1434.06	*	-4.772E-03	1.332E-01	2.142E-01	1.771E-02	-0.022
MN-54		834.83	*	2.217E-02	2.965E-02	5.224E-02	4.461E-03	0.424
CO-56		846.75	*	1.477E-02	3.090E-02	5.355E-02	4.671E-03	0.276
		977.42		1.365E+00	2.355E+00	3.637E+00	3.163E-01	0.375
		1037.82		-6.723E-03	2.366E-01	3.895E-01	3.267E-02	-0.017
		1175.09		-1.214E+00	2.118E+00	3.239E+00	1.805E-01	-0.375
	+	1238.25		2.086E-01	1.221E-01	1.462E-01	1.030E-02	1.427
		1360.21		-8.489E-01	8.073E-01	1.116E+00	9.500E-02	-0.760
		1771.40		-3.153E-01	2.253E-01	2.890E-01	1.813E-02	-1.091
CO-57		122.06	*	1.524E-04	2.061E-02	3.391E-02	2.074E-03	0.004
		136.48		4.187E-02	1.790E-01	2.958E-01	1.962E-02	0.142
CO-58		810.76	*	-1.196E-02	3.017E-02	4.886E-02	4.004E-03	-0.245
FE-59		142.65		-3.083E-01	2.243E+00	3.615E+00	2.007E-01	-0.085
		192.34		-4.099E-01	7.736E-01	1.176E+00	1.356E-01	-0.349

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1099.22	*	-2.226E-02	8.221E-02	1.322E-01	1.027E-02	-0.168
		1291.56		-6.263E-02	1.044E-01	1.593E-01	1.439E-02	-0.393
CO-60		1173.22		3.179E-02	4.249E-02	7.210E-02	3.994E-03	0.441
		1332.49	*	-1.234E-02	3.165E-02	4.891E-02	4.197E-03	-0.252
ZN-65		1115.52	*	-3.896E-02	8.360E-02	1.105E-01	7.339E-03	-0.353
GE-68		1077.35	*	-4.636E-01	1.067E+00	1.688E+00	1.228E-01	-0.275
AS-73		53.44	*	5.047E-01	7.327E-01	1.258E+00	9.294E-02	0.401
AS-74		595.88	*	-1.847E-02	6.777E-02	1.081E-01	6.538E-03	-0.171
		634.78		-2.506E-01	2.542E-01	3.766E-01	2.292E-02	-0.665
SE-75		66.05		-4.995E+00	4.171E+00	6.585E+00	6.198E-01	-0.759
		96.73		-8.583E-01	7.115E-01	9.584E-01	1.248E-01	-0.896
		121.11		3.699E-02	1.108E-01	1.844E-01	1.743E-02	0.201
		136.00		2.348E-02	3.343E-02	5.614E-02	3.255E-03	0.418
		198.60		2.176E+00	1.487E+00	2.537E+00	1.694E-01	0.857
		264.65	*	4.794E-03	3.969E-02	5.580E-02	3.126E-03	0.086
		279.53		-1.045E-02	9.114E-02	1.508E-01	9.140E-03	-0.069
		303.91		-5.759E-01	1.824E+00	2.608E+00	2.457E-01	-0.221
		400.65		-2.086E-03	2.028E-01	3.366E-01	2.989E-02	-0.006
BR-77	+	87.88		2.182E+02	6.920E+01	1.387E+02	1.195E+01	1.573
		200.40		9.755E-01	7.208E+01	1.166E+02	6.119E+00	0.008
	+	239.00		1.044E+02	8.868E+00	1.503E+01	8.188E-01	6.943
		249.79		-6.258E+00	2.798E+01	4.430E+01	2.432E+00	-0.141
		281.68		-2.724E+01	3.835E+01	6.256E+01	3.490E+00	-0.435
		297.23		1.352E+02	3.786E+01	5.114E+01	2.864E+00	2.643
		303.76		-2.866E+01	8.156E+01	1.163E+02	6.518E+00	-0.246
		439.47		2.511E+01	5.755E+01	9.776E+01	5.495E+00	0.257
		484.57		1.397E+01	9.634E+01	1.600E+02	9.269E+00	0.087
		520.65	*	-3.852E+00	4.410E+00	6.769E+00	3.994E-01	-0.569
		574.64		6.579E+01	8.396E+01	1.447E+02	8.709E+00	0.455
		578.91		2.316E+00	4.093E+01	5.803E+01	3.496E+00	0.040
		585.48		6.334E+02	1.117E+02	2.060E+02	1.243E+01	3.075
		755.35		5.344E+01	7.040E+01	1.201E+02	8.844E+00	0.445
		817.79		1.780E+01	5.077E+01	8.755E+01	7.248E+00	0.203
SR-82		698.33		-2.862E+01	2.748E+01	4.061E+01	2.670E+00	-0.705
		776.49	*	-1.669E-01	2.866E-01	4.591E-01	3.520E-02	-0.363
		1395.20		-2.039E+00	8.495E+00	1.331E+01	1.119E+00	-0.153
RB-83		520.41	*	-5.362E-02	5.480E-02	8.333E-02	4.916E-03	-0.643
		529.64		-9.280E-02	8.273E-02	1.239E-01	7.338E-03	-0.749
		552.65		1.139E-01	1.397E-01	2.429E-01	1.452E-02	0.469
RB-84		881.50	*	3.036E-02	5.657E-02	9.818E-02	9.105E-03	0.309
KR-85		513.99	*	1.475E+01	5.968E+00	1.030E+01	6.061E-01	1.431
SR-85		513.99	*	7.385E-02	2.989E-02	5.159E-02	3.035E-03	1.431
RB-86		1076.63	*	-3.101E-01	6.221E-01	9.781E-01	7.129E-02	-0.317
Y-88		898.02		-2.635E-02	3.145E-02	4.814E-02	4.611E-03	-0.547
		1836.01	*	-2.081E-02	2.502E-02	3.385E-02	1.949E-03	-0.615
ZR-88		392.90	*	-1.419E-03	2.469E-02	4.090E-02	2.210E-03	-0.035
Y-91		1204.90	*	-8.268E-01	1.489E+01	2.424E+01	1.480E+00	-0.034
NB-94		702.63	*	3.317E-03	2.811E-02	4.575E-02	3.034E-03	0.072
		871.10		3.807E-03	2.735E-02	4.616E-02	4.204E-03	0.082

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95		765.79	*	2.748E-02	3.431E-02	5.841E-02	4.388E-03	0.470
NB-95M		235.69	*	1.618E-01	1.080E-01	1.646E-01	1.193E-02	0.983
ZR-95		724.18		5.550E-02	8.798E-02	1.303E-01	1.021E-02	0.426
		756.15	*	5.413E-02	5.765E-02	9.947E-02	8.334E-03	0.544
NB-97		657.90	*	-6.470E-04	5.765E-02	Half-Life too short		
		1024.50		5.366E-01	5.765E-02	Half-Life too short		
ZR-97		254.15		3.515E-01	5.765E-02	Half-Life too short		
		355.39		1.909E-01	5.765E-02	Half-Life too short		
		507.63	*	3.185E-01	5.765E-02	Half-Life too short		
		602.52		1.617E-01	5.765E-02	Half-Life too short		
		1021.30		-5.787E-01	5.765E-02	Half-Life too short		
		1147.95		3.092E-01	5.765E-02	Half-Life too short		
		1362.66		6.234E-02	5.765E-02	Half-Life too short		
		1750.46		-2.656E-01	5.765E-02	Half-Life too short		
MO-99		140.51		-1.454E+01	1.346E+01	1.989E+01	5.352E+00	-0.731
		181.06		-5.379E-01	9.102E+00	1.287E+01	2.179E+00	-0.042
		366.43		7.557E+00	3.678E+01	6.205E+01	3.416E+00	0.122
		739.58	*	-6.756E+00	5.488E+00	7.693E+00	1.107E+00	-0.878
		778.00		-7.214E-01	1.533E+01	2.565E+01	1.972E+00	-0.028
TC-99M		140.51	*	-7.465E+07	1.533E+01	Half-Life too short		
RH-101		127.23		3.207E-03	2.667E-02	4.399E-02	2.614E-03	0.073
		198.01	*	2.738E-02	2.780E-02	4.671E-02	2.445E-03	0.586
		325.23		-4.588E-02	1.881E-01	2.692E-01	1.507E-02	-0.170
RH-102		418.52		-1.756E-01	2.325E-01	3.674E-01	2.031E-02	-0.478
		475.06	*	-5.384E-03	2.287E-02	3.707E-02	2.135E-03	-0.145
		631.29		1.608E-02	4.317E-02	7.213E-02	4.388E-03	0.223
		697.49		-7.367E-02	6.491E-02	9.494E-02	6.231E-03	-0.776
		766.84		3.610E-03	9.309E-02	1.498E-01	1.128E-02	0.024
		1046.59		3.323E-02	9.401E-02	1.592E-01	1.235E-02	0.209
		1112.84		2.373E-02	2.083E-01	2.985E-01	1.993E-02	0.080
RU-103		497.08	*	-8.134E-03	2.883E-02	4.635E-02	5.867E-03	-0.176
	+	610.33		8.051E+00	1.693E+00	2.082E+00	3.231E-01	3.867
RH-106	+	511.85		4.493E-01	2.310E-01	3.249E-01	1.909E-02	1.383
		621.84	*	-6.882E-02	2.667E-01	4.246E-01	5.043E-02	-0.162
		1050.47		3.080E-01	1.909E+00	3.194E+00	2.459E-01	0.096
RU-106	+	511.85		4.493E-01	2.310E-01	3.249E-01	1.909E-02	1.383
		621.84	*	-6.882E-02	2.667E-01	4.246E-01	2.580E-02	-0.162
		1050.47		3.080E-01	1.909E+00	3.194E+00	2.459E-01	0.096
AG-108M		433.93	*	2.146E-03	2.578E-02	4.287E-02	2.620E-03	0.050
		614.37		2.026E-02	3.323E-02	4.977E-02	3.256E-03	0.407
		722.95		7.668E-03	3.781E-02	5.374E-02	3.937E-03	0.143
AG-110M		657.75	*	-2.737E-03	3.358E-02	4.649E-02	2.999E-03	-0.059
		677.61		-7.226E-02	2.544E-01	3.933E-01	2.607E-02	-0.184
		706.67		1.072E-01	1.729E-01	2.919E-01	2.040E-02	0.367
		763.93		-1.693E-02	1.388E-01	2.206E-01	1.713E-02	-0.077
		884.67		7.584E-03	4.020E-02	6.804E-02	6.519E-03	0.111
		937.48		1.095E-01	1.087E-01	1.726E-01	1.630E-02	0.635
		1384.27		-6.077E-02	1.333E-01	2.030E-01	1.763E-02	-0.299
IN-111		171.28		8.056E-02	4.861E-01	7.958E-01	4.043E-02	0.101

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		245.39	*	-7.198E-03	5.500E-01	7.684E-01	4.206E-02	-0.009
IN-113M		391.69	*	5.994E-03	3.551E-02	5.959E-02	3.463E-03	0.101
SN-113		391.69	*	5.994E-03	3.551E-02	5.959E-02	3.463E-03	0.101
IN-114M		190.27	*	-6.178E-02	1.607E-01	2.221E-01	1.152E-02	-0.278
CD-115		260.90		1.327E+00	5.289E+01	8.469E+01	4.682E+00	0.016
		492.35		-2.060E+00	1.357E+01	2.206E+01	1.283E+00	-0.093
		527.90	*	-3.794E-02	4.301E+00	7.043E+00	4.169E-01	-0.005
SN-117M		156.02		4.328E-01	1.733E+00	2.854E+00	1.502E-01	0.152
		158.56	*	-2.149E-03	4.083E-02	6.644E-02	3.461E-03	-0.032
SB-122		563.90	*	2.089E-01	9.179E-01	1.523E+00	9.139E-02	0.137
		692.80		1.939E+01	1.981E+01	3.435E+01	2.233E+00	0.565
I-123		159.00	*	3.900E-02	1.981E+01	Half-Life too short		
		528.96		-2.083E+01	1.981E+01	Half-Life too short		
TE-123M		159.00	*	3.282E-03	2.311E-02	3.789E-02	2.003E-03	0.087
I-124		602.71	*	9.298E-02	4.146E-01	5.964E-01	3.613E-02	0.156
		722.78		6.134E-01	2.725E+00	3.882E+00	2.681E-01	0.158
		1325.50		1.694E+01	1.776E+01	3.216E+01	2.714E+00	0.527
		1376.25		3.471E+01	1.746E+01	3.402E+01	2.879E+00	1.020
		1509.49		1.016E+01	9.522E+00	1.735E+01	1.379E+00	0.586
		1691.02		6.987E-01	1.678E+00	3.022E+00	2.076E-01	0.231
SB-124		602.71		7.645E-03	3.409E-02	4.904E-02	2.972E-03	0.156
		645.85		-1.835E-01	3.793E-01	5.891E-01	4.007E-02	-0.311
		709.31		2.341E-01	2.317E+00	3.764E+00	2.531E-01	0.062
		713.82		2.094E-01	1.339E+00	2.185E+00	2.360E-01	0.096
		722.78		7.312E-02	3.248E-01	4.627E-01	3.303E-02	0.158
	+	968.20		1.414E+01	3.491E+00	5.661E+00	4.986E-01	2.498
		1045.16		-1.503E-02	1.989E+00	3.265E+00	2.539E-01	-0.005
		1325.50		2.156E+00	2.261E+00	4.094E+00	3.455E-01	0.527
		1368.21		-7.076E-01	1.420E+00	2.146E+00	2.873E-01	-0.330
		1436.60		1.167E+00	2.471E+00	4.302E+00	3.553E-01	0.271
		1691.02	*	1.964E-02	4.717E-02	8.495E-02	6.196E-03	0.231
SB-125		427.89	*	-6.977E-02	7.146E-02	1.106E-01	6.443E-03	-0.631
	+	463.38		5.545E-01	3.691E-01	4.319E-01	2.890E-02	1.284
		600.56		1.016E-02	1.428E-01	2.336E-01	1.619E-02	0.043
		635.90		-1.882E-01	2.086E-01	3.112E-01	2.190E-02	-0.605
TE-125M		109.28	*	-9.566E-01	7.716E+00	1.268E+01	1.114E+00	-0.075
I-126		388.63		4.901E-02	1.454E-01	2.463E-01	1.333E-02	0.199
		666.33	*	4.095E-02	1.530E-01	2.198E-01	1.353E-02	0.186
		753.82		-4.004E-01	1.133E+00	1.767E+00	1.297E-01	-0.227
SB-126		223.80		1.856E+00	3.052E+00	5.041E+00	2.710E-01	0.368
		278.60		3.237E-01	1.902E+00	3.116E+00	1.737E-01	0.104
		296.50		7.885E+00	1.760E+00	2.475E+00	1.386E-01	3.185
		414.70		-1.193E-02	5.308E-02	8.682E-02	4.784E-03	-0.137
		415.30		3.060E-01	4.365E+00	7.266E+00	4.006E-01	0.042
		555.20		-2.072E+00	2.761E+00	4.173E+00	2.496E-01	-0.497
		573.80		2.847E-01	7.252E-01	1.217E+00	7.320E-02	0.234
		593.00		1.529E-01	6.350E-01	1.053E+00	6.368E-02	0.145
		656.30		6.818E-01	2.842E+00	4.076E+00	2.484E-01	0.167
		666.33		1.702E-02	6.361E-02	9.138E-02	5.624E-03	0.186

Sample ID : G232504007 Acquisition date : 7-JUL-2009 08:51:14

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		675.00		-1.085E+00	1.475E+00	2.190E+00	1.372E-01	-0.495
		695.00		3.903E-02	6.017E-02	9.714E-02	6.343E-03	0.402
		697.00		-1.942E-01	2.019E-01	3.005E-01	1.970E-02	-0.646
		720.50	*	-2.292E-02	1.169E-01	1.668E-01	1.147E-02	-0.137
		856.80		1.777E-01	3.433E-01	5.264E-01	4.675E-02	0.338
		989.30		3.922E-01	9.053E-01	1.555E+00	1.330E-01	0.252
		1034.80		3.307E+00	5.970E+00	1.037E+01	8.223E-01	0.319
		1213.00		2.481E+00	3.601E+00	6.205E+00	3.882E-01	0.400
SB-127		61.10		-1.154E+01	3.350E+01	5.549E+01	5.237E+00	-0.208
		252.40		-8.461E-01	2.443E+00	3.802E+00	1.572E+00	-0.223
		290.80		-5.582E+00	1.255E+01	1.783E+01	1.467E+00	-0.313
		411.60		4.158E+00	6.476E+00	1.109E+01	1.527E+00	0.375
		444.90		3.244E+00	5.030E+00	8.638E+00	8.673E-01	0.376
		473.00		-3.993E-01	8.927E-01	1.425E+00	1.498E-01	-0.280
		543.00		5.200E+00	8.625E+00	1.469E+01	1.826E+00	0.354
		603.60		-8.833E-02	7.071E+00	9.924E+00	1.017E+00	-0.009
		685.20	*	-9.441E-02	6.873E-01	1.097E+00	9.958E-02	-0.086
		698.50		-6.630E+00	8.558E+00	1.288E+01	1.846E+00	-0.515
		722.20		3.718E+00	1.811E+01	2.574E+01	2.360E+00	0.144
		783.80		7.594E-01	1.873E+00	3.235E+00	3.639E-01	0.235
XE-127		57.60		-3.517E+00	5.145E+00	8.422E+00	6.129E-01	-0.418
		145.22		6.941E-01	5.541E-01	9.460E-01	5.198E-02	0.734
		172.10		2.898E-02	9.673E-02	1.591E-01	8.093E-03	0.182
		202.84	*	-5.225E-02	3.904E-02	5.678E-02	2.988E-03	-0.920
		374.96		8.807E-03	1.453E-01	2.428E-01	1.329E-02	0.036
I-131		80.18		-4.002E+00	3.525E+00	4.879E+00	3.928E-01	-0.820
		284.30		-3.108E-01	9.679E-01	1.606E+00	1.001E-01	-0.193
		364.48	*	2.463E-02	7.277E-02	1.237E-01	7.665E-03	0.199
		636.97		-9.781E-01	9.693E-01	1.428E+00	9.613E-02	-0.685
		722.89		1.106E+00	5.249E+00	7.467E+00	5.195E-01	0.148
TE-132		49.72		-1.493E+01	1.136E+01	1.811E+01	1.674E+00	-0.824
		111.76		-3.674E+00	1.569E+01	2.566E+01	2.218E+00	-0.143
		116.30		8.044E+00	1.451E+01	2.436E+01	2.065E+00	0.330
		228.16	*	-1.783E-03	3.623E-01	5.826E-01	8.027E-02	-0.003
BA-133		53.15		1.680E+00	3.232E+00	5.524E+00	4.082E-01	0.304
		79.62		-1.432E-01	1.233E+00	1.797E+00	2.671E-01	-0.080
		81.00		-1.130E-01	9.198E-02	1.247E-01	1.944E-02	-0.906
		276.40		3.398E-01	3.613E-01	5.309E-01	6.828E-02	0.640
		302.84		3.820E-02	1.254E-01	1.874E-01	2.167E-02	0.204
		356.01	*	-2.663E-02	3.649E-02	4.943E-02	5.650E-03	-0.539
		383.85		4.849E-02	2.387E-01	4.016E-01	4.289E-02	0.121
I-133	+	510.53		1.522E-01	2.387E-01	Half-Life too short		
		529.87	*	-9.870E-04	2.387E-01	Half-Life too short		
		706.58		3.457E-02	2.387E-01	Half-Life too short		
		856.28		-4.856E-04	2.387E-01	Half-Life too short		
		875.33		2.622E-04	2.387E-01	Half-Life too short		
	+	1236.41		2.554E-01	2.387E-01	Half-Life too short		
		1298.22		5.034E-03	2.387E-01	Half-Life too short		
CS-134		475.35		-2.830E-01	1.505E+00	2.448E+00	1.410E-01	-0.116

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		563.23		-2.496E-02	2.823E-01	4.579E-01	2.800E-02	-0.055
		569.32		1.504E-02	1.460E-01	2.402E-01	1.483E-02	0.063
		604.70		3.664E-04	3.085E-02	4.340E-02	2.644E-03	0.008
		795.84	*	5.841E-02	3.751E-02	6.925E-02	5.552E-03	0.843
		801.93		-2.761E-01	3.080E-01	4.761E-01	3.853E-02	-0.580
		1038.57		2.408E-01	3.005E+00	4.998E+00	3.936E-01	0.048
		1167.94		-1.076E+00	2.251E+00	3.541E+00	1.998E-01	-0.304
		1365.15		6.662E-01	9.303E-01	1.651E+00	1.468E-01	0.404
CS-135		268.24	*	1.506E-01	1.471E-01	2.189E-01	1.635E-02	0.688
I-135		288.45		7.162E+07	1.471E-01	Half-Life too short		
		417.63		-3.145E+06	1.471E-01	Half-Life too short		
		546.56		-8.654E+06	1.471E-01	Half-Life too short		
		836.80		7.616E+07	1.471E-01	Half-Life too short		
		1038.76		1.361E+07	1.471E-01	Half-Life too short		
		1124.00		9.108E+07	1.471E-01	Half-Life too short		
		1131.51		-1.753E+07	1.471E-01	Half-Life too short		
		1260.41	*	1.693E+06	1.471E-01	Half-Life too short		
		1457.56		3.036E+09	1.471E-01	Half-Life too short		
		1678.03		1.044E+07	1.471E-01	Half-Life too short		
		1706.46		3.087E+07	1.471E-01	Half-Life too short		
		1791.20		-3.522E+06	1.471E-01	Half-Life too short		
CS-136		66.91		-8.080E-01	6.154E-01	9.550E-01	1.411E-01	-0.846
	+	86.29		2.217E+00	7.341E-01	1.438E+00	1.834E-01	1.542
		153.22		3.831E-01	4.909E-01	8.238E-01	5.637E-02	0.465
		163.89		-2.715E-01	7.784E-01	1.227E+00	8.221E-02	-0.221
		176.55		-7.154E-02	2.742E-01	4.406E-01	2.603E-02	-0.162
		273.65		-2.651E-01	4.031E-01	5.347E-01	3.425E-02	-0.496
		340.57		2.843E-01	1.126E-01	1.866E-01	1.111E-02	1.523
		818.51		2.914E-02	4.927E-02	8.650E-02	7.175E-03	0.337
		1048.07	*	2.383E-02	7.878E-02	1.335E-01	1.086E-02	0.179
		1235.34		6.408E-01	5.399E-01	8.441E-01	8.876E-02	0.759
CE-139		165.85	*	1.318E-02	2.370E-02	3.945E-02	1.995E-03	0.334
BA-140		162.64		-4.196E-01	5.512E-01	8.536E-01	5.061E-02	-0.492
		304.84		3.999E-01	9.778E-01	1.464E+00	3.990E-01	0.273
		423.70		6.843E-01	1.387E+00	2.336E+00	7.414E-01	0.293
		537.32	*	2.961E-02	1.814E-01	3.000E-01	9.763E-02	0.099
LA-140	+	328.77		3.715E-01	2.607E-01	3.587E-01	2.264E-02	1.036
		432.53		7.784E-01	1.397E+00	2.392E+00	1.487E-01	0.325
		487.03		6.225E-02	9.677E-02	1.659E-01	1.089E-02	0.375
		751.79		-4.074E-01	1.273E+00	1.989E+00	1.667E-01	-0.205
		815.85		2.873E-02	2.196E-01	3.716E-01	3.449E-02	0.077
		867.82		-1.427E-01	1.097E+00	1.551E+00	1.472E-01	-0.092
		919.63		-3.285E-01	2.130E+00	3.329E+00	3.739E-01	-0.099
		925.24		1.160E-01	8.365E-01	1.407E+00	1.376E-01	0.082
		1596.49	*	4.383E-02	5.012E-02	8.788E-02	6.575E-03	0.499
CE-141		145.44	*	6.157E-02	4.992E-02	8.517E-02	4.883E-03	0.723
CE-143		57.37		-2.145E-04	4.992E-02	Half-Life too short		
		231.56		2.964E-04	4.992E-02	Half-Life too short		
		293.26	*	1.954E-04	4.992E-02	Half-Life too short		

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	+	350.59		6.729E-03	4.992E-02	Half-Life too short		
		490.36		-3.837E-04	4.992E-02	Half-Life too short		
		664.57		5.507E-04	4.992E-02	Half-Life too short		
		721.93		9.022E-06	4.992E-02	Half-Life too short		
CE-144		80.11		-2.086E+00	1.962E+00	2.727E+00	2.183E-01	-0.765
		133.54	*	-8.399E-02	1.790E-01	2.880E-01	4.086E-02	-0.292
PM-144		476.78		1.764E-02	5.429E-02	9.127E-02	6.309E-03	0.193
		618.01		-8.006E-03	2.626E-02	4.168E-02	2.670E-03	-0.192
		696.49	*	-2.142E-03	2.862E-02	4.593E-02	3.010E-03	-0.047
		778.57		2.412E-01	1.738E+00	2.950E+00	2.271E-01	0.082
PR-144		696.49	*	-1.450E-01	1.937E+00	3.109E+00	2.036E-01	-0.047
		1489.15		-5.636E+00	7.810E+00	1.071E+01	8.607E-01	-0.526
PM-146		453.90	*	5.278E-03	3.366E-02	5.613E-02	4.795E-03	0.094
		633.02		-2.409E-02	1.056E+00	1.711E+00	6.308E-01	-0.014
		735.90		5.971E-02	1.220E-01	2.025E-01	5.706E-02	0.295
		747.13		-9.359E-03	7.755E-02	1.234E-01	1.633E-02	-0.076
ND-147	+	91.11		5.708E-01	1.924E-01	3.789E-01	3.394E-02	1.507
		319.41		2.954E-01	2.273E+00	3.745E+00	2.098E-01	0.079
		439.89		1.361E+00	3.976E+00	6.714E+00	3.777E-01	0.203
		531.02	*	-3.706E-01	3.879E-01	5.843E-01	7.933E-02	-0.634
PM-149		285.90	*	-4.845E+00	3.567E+01	5.970E+01	8.406E+00	-0.081
EU-152		121.78		1.098E-03	6.016E-02	9.902E-02	7.776E-03	0.011
		244.69		2.574E-01	2.983E-01	4.415E-01	2.416E-02	0.583
		344.27	*	4.583E-02	8.794E-02	1.328E-01	8.411E-03	0.345
		443.98		2.854E-01	7.454E-01	1.262E+00	7.117E-02	0.226
		778.89		2.797E-02	2.015E-01	3.419E-01	2.633E-02	0.082
		867.32		-6.607E-02	7.209E-01	1.024E+00	9.264E-02	-0.065
	+	964.01		4.538E-01	3.223E-01	4.823E-01	4.271E-02	0.941
		1085.78		-2.417E-01	3.465E-01	5.340E-01	3.813E-02	-0.453
		1112.02		-4.957E-02	2.974E-01	4.101E-01	2.744E-02	-0.121
		1407.95		2.655E-01	1.566E-01	3.005E-01	2.513E-02	0.883
GD-153		69.67		-1.253E-01	1.471E+00	2.273E+00	1.695E-01	-0.055
	+	83.37		1.584E+01	1.181E+01	2.044E+01	1.684E+00	0.775
		97.43	*	7.107E-03	7.039E-02	1.029E-01	7.769E-03	0.069
		103.18		-1.337E-01	8.768E-02	1.359E-01	9.636E-03	-0.984
EU-154		123.07		-5.552E-03	4.241E-02	6.937E-02	6.643E-03	-0.080
		247.94		4.753E-02	3.292E-01	4.649E-01	4.348E-02	0.102
		591.81		-3.215E-01	4.879E-01	7.515E-01	7.455E-02	-0.428
		723.30		9.188E-03	1.600E-01	2.236E-01	1.793E-02	0.041
		756.87		5.678E-01	6.410E-01	1.100E+00	1.223E-01	0.516
		873.19		1.727E-02	2.430E-01	4.076E-01	5.143E-02	0.042
		996.32		-9.319E-02	3.022E-01	4.858E-01	8.592E-02	-0.192
		1004.76		5.521E-03	1.699E-01	2.836E-01	3.244E-02	0.019
		1274.45	*	-6.376E-02	9.642E-02	1.453E-01	1.515E-02	-0.439
EU-155		48.70		-5.624E-01	2.266E+00	3.782E+00	2.743E-01	-0.149
		60.01		-2.129E-02	4.410E+00	7.390E+00	5.348E-01	-0.003
	+	86.54		2.301E-01	7.303E-02	1.470E-01	1.263E-02	1.565
		105.31	*	3.650E-02	8.934E-02	1.497E-01	1.059E-02	0.244
TB-160	+	86.79		6.020E-01	1.909E-01	3.793E-01	3.232E-02	1.587

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		197.04		4.128E-02	4.694E-01	7.620E-01	3.984E-02	0.054
		215.65		-3.107E-01	5.960E-01	9.371E-01	4.998E-02	-0.332
		298.57		1.393E-01	1.379E-01	1.541E-01	8.631E-03	0.904
		879.36	*	6.044E-02	1.170E-01	2.026E-01	1.872E-02	0.298
		962.29		8.960E-01	4.425E-01	8.261E-01	7.333E-02	1.085
		966.15		9.602E-01	2.224E-01	4.252E-01	3.755E-02	2.258
		1177.93		-3.051E-01	3.247E-01	4.893E-01	2.751E-02	-0.624
		1271.85		-1.089E-01	5.633E-01	8.993E-01	6.627E-02	-0.121
HO-166M		80.57		-2.825E-01	2.519E-01	3.489E-01	2.804E-02	-0.809
		184.41		9.801E-02	3.368E-02	5.409E-02	2.788E-03	1.812
		280.46		-6.429E-02	7.189E-02	1.146E-01	6.389E-03	-0.561
		410.95		1.287E-01	1.961E-01	3.370E-01	1.851E-02	0.382
		711.68	*	-7.777E-03	5.226E-02	8.326E-02	5.624E-03	-0.093
		752.31		-8.011E-02	2.328E-01	3.630E-01	2.657E-02	-0.221
		810.29		5.117E-03	4.561E-02	7.709E-02	6.295E-03	0.066
TM-171		51.35		-6.715E+00	2.796E+01	4.663E+01	3.448E+00	-0.144
		52.39		1.053E+01	1.423E+01	2.449E+01	1.811E+00	0.430
		59.40		7.462E+00	2.316E+01	3.921E+01	2.836E+00	0.190
		66.72	*	-3.793E+01	2.499E+01	3.906E+01	2.877E+00	-0.971
LU-176	+	88.36		4.535E-01	1.438E-01	3.020E-01	2.590E-02	1.501
		201.83		-6.781E-03	2.355E-02	3.757E-02	1.975E-03	-0.180
		306.84	*	1.107E-02	1.962E-02	3.308E-02	1.854E-03	0.335
		401.10		-6.368E-01	5.389E+00	8.888E+00	4.839E-01	-0.072
LU-177		112.95		-2.693E-01	1.086E+00	1.774E+00	1.154E-01	-0.152
	+	208.36	*	1.260E+00	9.190E-01	1.288E+00	6.817E-02	0.979
LU-177M		52.97		4.991E-01	1.456E+00	2.474E+00	1.829E-01	0.202
		54.07		4.168E-01	7.564E-01	1.293E+00	9.537E-02	0.322
		61.30		-3.779E-01	1.291E+00	2.142E+00	1.554E-01	-0.176
		121.62		-8.323E-02	3.105E-01	5.053E-01	3.092E-02	-0.165
		147.16		-4.220E-01	5.440E-01	8.620E-01	4.700E-02	-0.490
		171.86		1.132E-01	4.026E-01	6.620E-01	3.365E-02	0.171
		218.09		1.954E-01	7.024E-01	1.146E+00	6.126E-02	0.171
		268.79		1.096E+00	7.533E-01	1.148E+00	6.372E-02	0.954
		319.02		-6.659E-03	1.952E-01	3.269E-01	1.831E-02	-0.020
		367.43		-3.117E-01	6.868E-01	1.114E+00	6.128E-02	-0.280
		413.65	*	-2.926E-02	1.417E-01	2.322E-01	1.278E-02	-0.126
HF-181		56.28		-8.831E-01	8.080E-01	1.301E+00	9.514E-02	-0.679
		57.53		-4.140E-01	4.396E-01	7.125E-01	5.187E-02	-0.581
		65.20		-7.825E-02	7.978E-01	1.314E+00	9.625E-02	-0.060
		133.02		-3.433E-02	5.584E-02	8.949E-02	5.176E-03	-0.384
		136.25		2.141E-01	3.807E-01	6.365E-01	3.630E-02	0.336
		345.85		-6.066E-02	1.708E-01	2.416E-01	1.344E-02	-0.251
		482.03	*	-1.942E-02	3.412E-02	5.404E-02	3.125E-03	-0.359
W-181		56.28		-3.536E-01	3.239E-01	5.215E-01	3.814E-02	-0.678
		57.53		-1.662E-01	1.764E-01	2.858E-01	2.081E-02	-0.581
		65.20	*	-3.114E-02	3.175E-01	5.228E-01	3.831E-02	-0.060
TA-182		67.75		-2.209E-02	9.286E-02	1.520E-01	1.124E-02	-0.145
		100.10		-2.077E-02	1.483E-01	2.358E-01	1.727E-02	-0.088
		152.43		2.110E-02	2.802E-01	4.588E-01	2.449E-02	0.046

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		-5.283E-02	2.963E-01	4.734E-01	2.541E-02	-0.112
		1001.68		-5.442E-01	1.632E+00	2.671E+00	2.241E-01	-0.204
	+	1121.28		4.122E-01	2.408E-01	3.005E-01	1.961E-02	1.372
		1189.05		2.986E-02	2.747E-01	4.536E-01	2.640E-02	0.066
		1221.42	*	-5.686E-02	1.676E-01	2.660E-01	1.705E-02	-0.214
		1230.97		-1.562E-01	4.819E-01	6.484E-01	4.272E-02	-0.241
RE-183		57.98		-1.073E-01	1.723E-01	2.827E-01	2.054E-02	-0.380
		59.32		2.487E-02	9.322E-02	1.576E-01	1.140E-02	0.158
		67.20		-1.826E-01	1.699E-01	2.702E-01	1.993E-02	-0.676
		162.32	*	-8.356E-02	8.783E-02	1.347E-01	6.909E-03	-0.620
	+	208.81		1.398E+00	1.019E+00	1.406E+00	7.448E-02	0.994
		291.72		1.652E-01	8.015E-01	1.192E+00	6.668E-02	0.139
RE-184		57.98		-4.007E-01	6.432E-01	1.055E+00	7.669E-02	-0.380
		59.32		9.277E-02	3.477E-01	5.879E-01	4.252E-02	0.158
		67.20		-6.816E-01	6.341E-01	1.008E+00	7.439E-02	-0.676
		161.27		-1.873E-01	2.838E-01	4.494E-01	2.315E-02	-0.417
		216.55		-1.717E-01	2.167E-01	3.362E-01	1.795E-02	-0.511
		252.85	*	1.923E-02	1.895E-01	3.051E-01	1.679E-02	0.063
		318.01		6.075E-02	3.333E-01	5.645E-01	3.163E-02	0.108
		792.07		2.632E-01	7.761E-01	1.334E+00	1.053E-01	0.197
		903.28		3.974E-01	8.787E-01	1.376E+00	1.306E-01	0.289
		920.93		1.934E-01	3.689E-01	6.395E-01	5.962E-02	0.302
OS-185		59.72		3.853E-03	2.575E-01	4.318E-01	3.123E-02	0.009
		61.14		-5.569E-02	1.409E-01	2.330E-01	1.690E-02	-0.239
		69.30		2.310E-02	2.505E-01	4.060E-01	3.022E-02	0.057
		592.07		-1.161E+00	1.967E+00	3.052E+00	1.845E-01	-0.380
		646.12	*	-3.288E-03	3.199E-02	5.139E-02	3.130E-03	-0.064
		717.42		-2.344E-01	7.565E-01	1.162E+00	7.937E-02	-0.202
		874.81		2.075E-02	4.786E-01	8.010E-01	7.343E-02	0.026
		880.27		1.945E-01	6.556E-01	1.118E+00	1.035E-01	0.174
RE-188		155.03	*	6.612E-02	1.436E-01	2.382E-01	1.259E-02	0.278
		477.96		7.820E-01	2.396E+00	4.030E+00	2.325E-01	0.194
		633.10		-8.766E-02	2.086E+00	3.373E+00	2.052E-01	-0.026
W-188		63.58		7.018E+00	4.426E+01	7.527E+01	5.491E+00	0.093
		227.08		-3.989E+00	1.063E+01	1.680E+01	9.060E-01	-0.237
		290.67	*	-2.909E+00	6.364E+00	9.037E+00	5.054E-01	-0.322
IR-192	+	295.96		7.127E-01	1.538E-01	2.104E-01	1.198E-02	3.387
		308.46		2.832E-02	7.162E-02	1.227E-01	6.959E-03	0.231
		316.51	*	8.366E-03	2.574E-02	4.391E-02	2.474E-03	0.191
		468.07		3.039E-02	5.704E-02	8.557E-02	5.673E-03	0.355
		604.41		9.003E-03	4.095E-01	5.768E-01	6.625E-02	0.016
		612.46		1.160E+00	6.732E-01	1.086E+00	8.450E-02	1.068
AU-195		65.12		8.058E-03	1.485E-01	2.457E-01	1.800E-02	0.033
		66.83		-1.254E-01	8.202E-02	1.281E-01	9.441E-03	-0.979
	+	75.70		7.070E-01	1.637E-01	3.734E-01	2.887E-02	1.893
		98.88	*	1.674E-01	2.051E-01	3.099E-01	2.300E-02	0.540
		129.76		1.890E+00	2.435E+00	4.061E+00	2.384E-01	0.465
TL-200		367.94	*	-5.033E-05	2.435E+00	Half-Life too short		
		579.30		5.027E-05	2.435E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		828.27		4.180E-04	2.435E+00	Half-Life too short		
		1205.75		1.344E-05	2.435E+00	Half-Life too short		
TL-201		68.90		5.977E-03	2.484E+00	4.014E+00	2.982E-01	0.001
		70.82		2.954E-01	1.520E+00	2.252E+00	1.689E-01	0.131
		80.30		-3.181E+00	2.793E+00	3.865E+00	3.098E-01	-0.823
		135.34		1.003E+01	1.303E+01	2.194E+01	1.256E+00	0.457
		167.43	*	-2.127E+00	3.561E+00	5.563E+00	2.815E-01	-0.382
TL-202		68.90		7.896E-04	3.281E-01	5.302E-01	3.940E-02	0.001
		70.82		3.891E-02	2.002E-01	2.966E-01	2.225E-02	0.131
		80.30		-4.192E-01	3.681E-01	5.093E-01	4.083E-02	-0.823
		439.56	*	2.230E-02	4.736E-02	8.061E-02	4.531E-03	0.277
HG-203		70.83		1.877E-01	9.533E-01	1.412E+00	1.825E-01	0.133
		72.87		5.266E-01	5.679E-01	8.591E-01	1.078E-01	0.613
		82.60		1.659E+00	1.264E+00	1.462E+00	1.970E-01	1.135
		279.20	*	8.120E-03	3.363E-02	5.648E-02	3.359E-03	0.144
BI-207		72.80		1.335E-01	1.708E-01	2.583E-01	1.959E-02	0.517
	+	74.97		3.954E-01	9.157E-02	1.831E-01	1.408E-02	2.160
	+	84.90		2.062E-01	1.538E-01	2.655E-01	2.220E-02	0.777
		569.67		-2.963E-03	2.376E-02	3.841E-02	2.308E-03	-0.077
		1063.62	*	2.188E-02	4.864E-02	8.299E-02	6.221E-03	0.264
		1770.23		6.428E-02	3.843E-01	5.700E-01	3.580E-02	0.113
TL-207		81.07		-2.562E-01	2.001E-01	2.746E-01	2.216E-02	-0.933
	+	83.78		1.360E-01	1.014E-01	1.742E-01	1.441E-02	0.780
		94.90		4.758E-01	2.199E-01	3.458E-01	2.695E-02	1.376
		122.32		-9.103E-02	1.438E+00	2.359E+00	1.641E-01	-0.039
		144.24		7.852E-02	5.846E-01	9.514E-01	6.667E-02	0.083
		154.21		2.558E-01	3.352E-01	5.621E-01	3.713E-02	0.455
	+	269.46		5.836E-01	2.584E-01	2.810E-01	1.637E-02	2.077
		323.87	*	-2.098E-01	5.605E-01	7.921E-01	1.303E-01	-0.265
	+	338.28		4.487E+00	1.342E+00	1.856E+00	1.932E-01	2.418
		445.03		1.240E+00	1.764E+00	3.039E+00	3.094E-01	0.408
PO-209		260.50		3.671E+00	7.794E+00	1.277E+01	7.059E-01	0.287
		262.80		1.180E+00	2.166E+01	3.473E+01	1.922E+00	0.034
		896.60	*	-2.133E+00	5.504E+00	8.825E+00	8.400E-01	-0.242
BI-210		46.50	*	1.611E+00	3.352E+00	5.675E+00	4.482E-01	0.284
PB-210		46.50	*	1.611E+00	3.352E+00	5.675E+00	4.482E-01	0.284
PO-210		46.50	*	1.611E+00	3.351E+00	5.675E+00	3.881E-01	0.284
PB-211		404.84	*	-7.569E-01	8.878E-01	1.175E+00	7.321E-01	-0.644
		427.08		-1.509E+00	1.881E+00	2.547E+00	1.574E+00	-0.592
		831.96		-9.964E-01	1.123E+00	1.420E+00	8.895E-01	-0.702
BI-212	+	727.18	*	7.209E-01	3.314E-01	5.056E-01	4.361E-02	1.426
		785.46		8.457E-01	1.362E+00	2.388E+00	1.862E-01	0.354
		1620.62		9.213E-01	8.551E-01	1.664E+00	1.220E-01	0.554
PO-215		81.07		-2.562E-01	2.001E-01	2.746E-01	2.216E-02	-0.933
	+	83.78		1.360E-01	1.014E-01	1.742E-01	1.441E-02	0.780
		94.90		4.758E-01	2.199E-01	3.458E-01	2.695E-02	1.376
		122.32		-9.103E-02	1.438E+00	2.359E+00	1.641E-01	-0.039
		144.24		7.852E-02	5.846E-01	9.514E-01	6.667E-02	0.083
		154.21		2.558E-01	3.352E-01	5.621E-01	3.713E-02	0.455

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.836E-01	2.584E-01	2.810E-01	1.637E-02	2.077
		323.87	*	-2.098E-01	5.605E-01	7.921E-01	1.303E-01	-0.265
	+	338.28		4.487E+00	1.342E+00	1.856E+00	1.932E-01	2.418
		445.03		1.240E+00	1.764E+00	3.039E+00	3.094E-01	0.408
RN-219	+	271.23		7.488E-01	3.340E-01	3.764E-01	2.986E-02	1.989
		401.81	*	-7.540E-02	3.302E-01	5.407E-01	7.278E-02	-0.139
RN-220		549.76	*	-8.135E+00	1.961E+01	3.100E+01	1.851E+00	-0.262
RA-223		81.07		-2.562E-01	2.001E-01	2.746E-01	2.216E-02	-0.933
	+	83.78		1.360E-01	1.014E-01	1.742E-01	1.441E-02	0.780
		94.90		4.758E-01	2.199E-01	3.458E-01	2.695E-02	1.376
		122.32		-9.103E-02	1.438E+00	2.359E+00	1.641E-01	-0.039
		144.24		7.852E-02	5.846E-01	9.514E-01	6.667E-02	0.083
		154.21		2.558E-01	3.352E-01	5.621E-01	3.713E-02	0.455
	+	269.46		5.836E-01	2.584E-01	2.810E-01	1.637E-02	2.077
		323.87	*	-2.098E-01	5.605E-01	7.921E-01	1.303E-01	-0.265
	+	338.28		4.487E+00	1.342E+00	1.856E+00	1.932E-01	2.418
		445.03		1.240E+00	1.764E+00	3.039E+00	3.094E-01	0.408
AC-227		79.80		-8.647E-01	1.556E+00	2.207E+00	4.692E-01	-0.392
		236.00		5.369E-01	2.243E-01	3.478E-01	3.566E-02	1.544
		256.20	*	2.306E-02	3.155E-01	5.069E-01	7.018E-02	0.045
		286.10		-1.410E-01	1.213E+00	2.032E+00	2.328E-01	-0.069
	+	299.80		2.202E+00	1.418E+00	2.019E+00	3.274E-01	1.091
		304.40		4.160E-02	1.627E+00	2.386E+00	4.111E-01	0.017
		334.20		9.921E-01	2.226E+00	2.955E+00	5.398E-01	0.336
TH-227		79.80		-8.647E-01	1.556E+00	2.207E+00	4.754E-01	-0.392
	+	94.00		6.218E+00	2.494E+00	3.151E+00	6.774E-01	1.973
		236.00		5.369E-01	2.225E-01	3.478E-01	3.070E-02	1.544
		256.20	*	2.306E-02	3.156E-01	5.069E-01	8.518E-02	0.045
		286.10		-1.410E-01	1.221E+00	2.032E+00	2.036E+00	-0.069
	+	299.80		2.202E+00	1.418E+00	2.019E+00	3.274E-01	1.091
		304.40		4.160E-02	1.627E+00	2.386E+00	4.111E-01	0.017
		334.20		9.921E-01	2.226E+00	2.955E+00	5.398E-01	0.336
TH-229	+	85.43		2.036E-01	1.518E-01	2.729E-01	2.294E-02	0.746
	+	88.47		2.610E-01	8.280E-02	1.748E-01	1.496E-02	1.494
		100.00		-1.835E-02	1.562E-01	2.486E-01	1.822E-02	-0.074
		193.63	*	-2.719E-01	4.270E-01	6.721E-01	3.501E-02	-0.405
		210.97		1.228E+00	7.157E-01	1.104E+00	5.858E-02	1.113
PA-231		283.67	*	-7.932E-01	1.230E+00	2.003E+00	2.742E-01	-0.396
	+	301.29		8.809E-01	5.564E-01	7.994E-01	8.269E-02	1.102
TH-231		81.07		-2.562E-01	2.001E-01	2.746E-01	2.216E-02	-0.933
	+	83.78		1.360E-01	1.014E-01	1.742E-01	1.441E-02	0.780
		94.90		4.758E-01	2.199E-01	3.458E-01	2.695E-02	1.376
		122.32		-9.103E-02	1.438E+00	2.359E+00	1.641E-01	-0.039
		144.24		7.852E-02	5.846E-01	9.514E-01	6.667E-02	0.083
		154.21		2.558E-01	3.352E-01	5.621E-01	3.713E-02	0.455
	+	269.46		5.836E-01	2.584E-01	2.810E-01	1.637E-02	2.077
		323.87	*	-2.098E-01	5.605E-01	7.921E-01	1.303E-01	-0.265
	+	338.28		4.487E+00	1.342E+00	1.856E+00	1.932E-01	2.418
		445.03		1.240E+00	1.764E+00	3.039E+00	3.094E-01	0.408

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231	+	84.21		4.040E+00	3.013E+00	5.161E+00	4.287E-01	0.783
	+	92.29		4.237E+00	1.473E+00	2.307E+00	1.863E-01	1.836
		95.87	*	-4.360E-01	6.905E-01	9.725E-01	7.484E-02	-0.448
		108.00		3.054E-01	1.186E+00	1.975E+00	1.339E-01	0.155
PA-233	+	75.28		1.154E+01	3.048E+00	5.623E+00	8.353E-01	2.052
	+	86.59		3.743E+00	1.521E+00	2.384E+00	6.384E-01	1.570
	+	300.12		6.140E-01	3.912E-01	5.633E-01	7.521E-02	1.090
		311.98	*	-2.658E-02	4.873E-02	7.943E-02	4.746E-03	-0.335
		340.50		1.656E+00	7.199E-01	1.033E+00	2.366E-01	1.603
		398.62		-1.593E-01	1.680E+00	2.774E+00	7.149E-01	-0.057
		415.76		-1.896E-01	1.313E+00	2.156E+00	4.423E-01	-0.088
PA-234		63.00		8.063E-01	1.348E+00	2.314E+00	3.425E-01	0.348
		94.67		4.957E-01	1.669E-01	2.582E-01	3.061E-02	1.920
		98.44		1.507E-01	1.163E-01	1.285E-01	7.147E-02	1.173
		99.86		-3.449E-02	3.959E-01	6.309E-01	4.632E-02	-0.055
		111.00		-1.651E-02	1.565E-01	2.571E-01	2.763E-02	-0.064
		131.20		5.722E-03	9.219E-02	1.500E-01	8.748E-03	0.038
		152.70		1.199E-01	2.755E-01	4.561E-01	7.135E-02	0.263
	+	186.00		2.878E+00	1.698E+00	1.977E+00	6.017E-01	1.456
		226.40		-3.653E-02	3.455E-01	5.532E-01	6.284E-02	-0.066
		227.20		-1.522E-01	3.666E-01	5.784E-01	3.119E-02	-0.263
		248.90		-2.293E-01	6.823E-01	1.031E+00	2.207E-01	-0.222
	+	293.70		4.582E+00	1.203E+00	1.323E+00	2.118E-01	3.462
		369.80		2.962E-02	6.457E-01	1.079E+00	2.238E-01	0.027
		568.70		8.293E-03	7.795E-01	1.273E+00	7.650E-02	0.007
		569.50		-4.195E-02	2.097E-01	3.370E-01	2.025E-02	-0.124
		574.00		5.561E-01	1.188E+00	2.002E+00	1.205E-01	0.278
		699.00		-2.993E-01	5.982E-01	9.231E-01	1.685E-01	-0.324
		706.10		1.242E-01	8.706E-01	1.417E+00	6.271E-01	0.088
		733.00		-1.265E-02	3.682E-01	5.084E-01	1.100E-01	-0.025
		742.81		8.127E-01	1.215E+00	1.858E+00	1.246E+00	0.437
		796.30		1.139E+00	7.796E-01	1.337E+00	3.590E-01	0.852
		805.60		6.374E-01	7.841E-01	1.357E+00	4.141E-01	0.470
		819.60		-2.952E-01	9.293E-01	1.501E+00	5.696E-01	-0.197
		826.30		4.683E-01	6.338E-01	1.068E+00	4.775E-01	0.438
		831.60		-7.360E-01	5.372E-01	7.150E-01	2.131E-01	-1.029
		876.40		-2.774E-01	7.752E-01	1.165E+00	1.198E+00	-0.238
		880.51		1.348E-01	2.371E-01	4.125E-01	3.819E-02	0.327
		883.24		1.660E-01	2.661E-01	4.244E-01	2.857E-01	0.391
		899.00		-2.017E-01	6.534E-01	1.048E+00	4.600E-01	-0.193
		925.00		6.538E-01	9.647E-01	1.691E+00	1.570E-01	0.387
		926.50		-4.817E-02	1.578E-01	2.347E-01	5.985E-02	-0.205
		946.00	*	-1.616E-02	2.597E-01	3.963E-01	7.518E-02	-0.041
		949.00		-2.740E-01	3.511E-01	5.391E-01	4.867E-02	-0.508
		980.50		-8.180E-02	6.146E-01	8.582E-01	7.431E-02	-0.095
		1394.10		-7.401E-01	1.121E+00	1.478E+00	9.618E-01	-0.501
PA-234M		766.41		3.801E+00	1.503E+01	2.413E+01	1.847E+01	0.158
		1001.03	*	-2.618E+00	5.314E+00	8.568E+00	9.432E-01	-0.306
TH-234		63.29	*	4.290E-01	1.142E+00	1.951E+00	3.393E-01	0.220

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		1.609E+00	6.152E-01	8.715E-01	1.553E-01	1.846
U-235	+	89.95		2.620E+00	1.172E+00	1.578E+00	4.859E-01	1.660
	+	93.35		1.934E+00	8.477E-01	1.013E+00	2.818E-01	1.910
		105.00		8.119E-01	8.955E-01	1.474E+00	4.336E-01	0.551
		143.76	*	4.821E-02	1.795E-01	2.934E-01	4.755E-02	0.164
		163.35		-1.378E-01	3.891E-01	6.125E-01	1.088E-01	-0.225
	+	185.71		1.066E-01	5.416E-02	7.343E-02	3.791E-03	1.452
		205.31		1.115E-01	4.740E-01	6.778E-01	1.208E-01	0.165
NP-236		94.67		3.774E-01	1.221E-01	1.960E-01	1.532E-02	1.926
		98.44		1.139E-01	6.160E-02	9.713E-02	7.247E-03	1.173
		111.00		-1.248E-02	1.184E-01	1.945E-01	1.285E-02	-0.064
		160.31	*	-3.608E-02	6.586E-02	1.049E-01	5.426E-03	-0.344
U-238		63.29	*	4.290E-01	1.142E+00	1.951E+00	3.393E-01	0.220
	+	92.38		1.609E+00	5.596E-01	8.715E-01	7.028E-02	1.846
NP-239		99.55		5.406E-02	1.369E-01	2.135E-01	1.573E-02	0.253
		117.00	*	-4.154E-04	1.618E-01	2.664E-01	1.683E-02	-0.002
	+	209.75		1.127E+00	8.221E-01	1.123E+00	5.954E-02	1.004
		228.18		-2.218E-03	1.911E-01	3.072E-01	1.658E-02	-0.007
		277.60		1.435E-01	1.684E-01	2.601E-01	1.449E-02	0.552
		334.30		5.292E-01	1.256E+00	1.669E+00	9.321E-02	0.317
AM-241		59.54	*	-2.480E-02	1.381E-01	2.301E-01	1.833E-02	-0.108
CM-243		99.55		5.562E-02	1.408E-01	2.197E-01	1.618E-02	0.253
		103.76	*	-8.877E-03	7.929E-02	1.305E-01	9.199E-03	-0.068
		117.00		-4.273E-04	1.665E-01	2.741E-01	1.731E-02	-0.002
	+	209.75		1.111E+00	8.103E-01	1.107E+00	5.868E-02	1.004
		228.18		-2.240E-03	1.931E-01	3.104E-01	1.675E-02	-0.007
		277.60		1.446E-01	1.697E-01	2.621E-01	1.460E-02	0.552
CM-247		278.00		3.335E-01	6.839E-01	1.075E+00	5.988E-02	0.310
		287.40		3.674E-01	9.865E-01	1.650E+00	9.218E-02	0.223
		402.60	*	1.110E-03	2.937E-02	4.887E-02	2.664E-03	0.023
CF-249		252.85		7.284E-02	7.178E-01	1.156E+00	6.357E-02	0.063
		333.44		2.187E-01	1.928E-01	2.224E-01	1.242E-02	0.983
		387.95	*	-5.385E-03	3.264E-02	5.379E-02	2.913E-03	-0.100
CF-251		176.60	*	-2.798E-02	1.064E-01	1.710E-01	8.738E-03	-0.164
		227.00		-1.779E-01	3.297E-01	5.171E-01	2.788E-02	-0.344
		285.00		-8.644E-01	1.394E+00	2.279E+00	1.272E-01	-0.379

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504007      *
* Acquisition date :  7-JUL-2009 08:51:14 Detector SN#     :                *
* Detector ID        : GAM16               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.96     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504007           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.5535E+02 GRAM *
* Recovery           :     1.00000          Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.552E+01	2.545E+00	5.113E-01	0.000E+00
CD-109	1.939E+00	6.026E-01	1.050E+00	0.000E+00
SN-126	1.912E-01	5.943E-02	1.166E-01	0.000E+00
BA-137M	7.067E-02	4.184E-02	5.526E-02	0.000E+00
CS-137	7.471E-02	4.423E-02	5.841E-02	0.000E+00
TL-208	3.336E-01	6.541E-02	4.744E-02	0.000E+00
BI-211	2.636E+00	3.529E-01	2.571E-01	0.000E+00
PB-212	1.252E+00	1.179E-01	7.508E-02	0.000E+00
PO-212	1.252E+00	1.179E-01	7.508E-02	0.000E+00
BI-214	7.757E-01	1.238E-01	9.034E-02	0.000E+00
PB-214	9.171E-01	1.314E-01	8.442E-02	0.000E+00
PO-214	9.171E-01	1.314E-01	8.442E-02	0.000E+00
PO-216	1.252E+00	1.179E-01	7.508E-02	0.000E+00
PO-218	9.171E-01	1.314E-01	8.442E-02	0.000E+00
RA-224	3.582E+00	9.844E-01	8.537E-01	0.000E+00
RA-226	7.757E-01	1.238E-01	9.034E-02	0.000E+00
AC-228	1.093E+00	2.534E-01	1.675E-01	0.000E+00
RA-228	1.093E+00	2.534E-01	1.675E-01	0.000E+00
TH-228	1.252E+00	1.179E-01	7.507E-02	0.000E+00
TH-230	7.757E-01	1.238E-01	9.033E-02	0.000E+00
TH-232	1.093E+00	2.534E-01	1.675E-01	0.000E+00
U-234	7.757E-01	1.238E-01	9.033E-02	0.000E+00
NP-237	5.615E-01	2.082E-01	3.271E-01	0.000E+00
AM-243	2.203E-01	5.000E-02	8.419E-02	0.000E+00
ANH-511	9.033E-02	4.552E-02	3.994E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	7.242E-02	2.429E-01	4.325E-01	0.000E+00	NOT IDENT.
NA-22	-2.439E-02	3.360E-02	5.200E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	5.098E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-9.206E-03	2.147E-02	3.306E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	3.769E-02	7.213E-02	0.000E+00	FAIL ABUN
SC-46	9.974E-03	2.896E-02	5.181E-02	0.000E+00	FAIL ABUN
V-48	-5.244E-03	4.730E-02	7.883E-02	0.000E+00	NOT IDENT.
CR-51	-3.493E-02	2.711E-01	4.724E-01	0.000E+00	NOT IDENT.
MN-52	-4.772E-03	1.306E-01	2.161E-01	0.000E+00	FAIL ABUN
MN-54	2.217E-02	2.906E-02	5.351E-02	0.000E+00	NOT IDENT.
CO-56	1.477E-02	3.028E-02	5.483E-02	0.000E+00	FAIL ABUN
CO-57	1.524E-04	2.020E-02	3.651E-02	0.000E+00	NOT IDENT.
CO-58	-1.196E-02	2.957E-02	5.009E-02	0.000E+00	NOT IDENT.
FE-59	-2.226E-02	8.056E-02	1.344E-01	0.000E+00	NOT IDENT.
CO-60	-1.234E-02	3.102E-02	4.946E-02	0.000E+00	NOT IDENT.
ZN-65	-3.896E-02	8.193E-02	1.123E-01	0.000E+00	NOT IDENT.
GE-68	-4.636E-01	1.045E+00	1.717E+00	0.000E+00	NOT IDENT.
AS-73	5.047E-01	7.180E-01	1.383E+00	0.000E+00	NOT IDENT.
AS-74	-1.847E-02	6.642E-02	1.117E-01	0.000E+00	NOT IDENT.
SE-75	4.794E-03	3.890E-02	5.893E-02	0.000E+00	NOT IDENT.
BR-77	-3.852E+00	4.322E+00	7.023E+00	0.000E+00	FAIL ABUN
SR-82	-1.669E-01	2.809E-01	4.712E-01	0.000E+00	NOT IDENT.
RB-83	-5.362E-02	5.370E-02	8.646E-02	0.000E+00	NOT IDENT.
RB-84	3.036E-02	5.544E-02	1.004E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	5.849E+00	1.069E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.929E-02	5.354E-02	0.000E+00	NOT IDENT.
RB-86	-3.101E-01	6.097E-01	9.949E-01	0.000E+00	NOT IDENT.
Y-88	-2.081E-02	2.452E-02	3.392E-02	0.000E+00	NOT IDENT.
ZR-88	-1.419E-03	2.419E-02	4.275E-02	0.000E+00	NOT IDENT.
Y-91	-8.268E-01	1.460E+01	2.458E+01	0.000E+00	NOT IDENT.
NB-94	3.317E-03	2.754E-02	4.709E-02	0.000E+00	NOT IDENT.
NB-95	2.748E-02	3.362E-02	5.998E-02	0.000E+00	NOT IDENT.
NB-95M	1.618E-01	1.058E-01	1.744E-01	0.000E+00	NOT IDENT.
ZR-95	5.413E-02	5.650E-02	1.022E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.011E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.741E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-6.756E+00	5.378E+00	7.906E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	6.723E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.738E-02	2.725E-02	4.970E-02	0.000E+00	NOT IDENT.
RH-102	-5.384E-03	2.241E-02	3.855E-02	0.000E+00	NOT IDENT.
RU-103	-8.134E-03	2.825E-02	4.814E-02	0.000E+00	FAIL ABUN
RH-106	-6.882E-02	2.614E-01	4.385E-01	0.000E+00	FAIL ABUN
RU-106	-6.882E-02	2.613E-01	4.385E-01	0.000E+00	FAIL ABUN
AG-108M	2.146E-03	2.526E-02	4.469E-02	0.000E+00	NOT IDENT.
AG-110M	-2.737E-03	3.291E-02	4.793E-02	0.000E+00	NOT IDENT.
IN-111	-7.198E-03	5.390E-01	8.131E-01	0.000E+00	NOT IDENT.
IN-113M	5.994E-03	3.480E-02	6.229E-02	0.000E+00	NOT IDENT.
SN-113	5.994E-03	3.480E-02	6.229E-02	0.000E+00	NOT IDENT.
IN-114M	-6.178E-02	1.575E-01	2.365E-01	0.000E+00	NOT IDENT.
CD-115	-3.794E-02	4.215E+00	7.304E+00	0.000E+00	NOT IDENT.
SN-117M	-2.149E-03	4.002E-02	7.109E-02	0.000E+00	NOT IDENT.
SB-122	2.089E-01	8.996E-01	1.577E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.691E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	3.282E-03	2.265E-02	4.054E-02	0.000E+00	NOT IDENT.
I-124	9.298E-02	4.063E-01	6.164E-01	0.000E+00	NOT IDENT.
SB-124	1.964E-02	4.622E-02	8.532E-02	0.000E+00	FAIL ABUN
SB-125	-6.977E-02	7.003E-02	1.153E-01	0.000E+00	FAIL ABUN
TE-125M	-9.566E-01	7.562E+00	1.369E+01	0.000E+00	NOT IDENT.
I-126	4.095E-02	1.499E-01	2.265E-01	0.000E+00	NOT IDENT.
SB-126	-2.292E-02	1.146E-01	1.715E-01	0.000E+00	NOT IDENT.
SB-127	-9.441E-02	6.736E-01	1.130E+00	0.000E+00	NOT IDENT.
XE-127	-5.225E-02	3.826E-02	6.037E-02	0.000E+00	NOT IDENT.
I-131	2.463E-02	7.131E-02	1.295E-01	0.000E+00	NOT IDENT.
TE-132	-1.783E-03	3.551E-01	6.176E-01	0.000E+00	NOT IDENT.
BA-133	-2.663E-02	3.576E-02	5.180E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.909E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	5.841E-02	3.676E-02	7.103E-02	0.000E+00	NOT IDENT.
CS-135	1.506E-01	1.441E-01	2.311E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.616E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.383E-02	7.721E-02	1.359E-01	0.000E+00	FAIL ABUN
CE-139	1.318E-02	2.323E-02	4.216E-02	0.000E+00	NOT IDENT.
BA-140	2.961E-02	1.777E-01	3.109E-01	0.000E+00	NOT IDENT.
LA-140	4.383E-02	4.911E-02	8.841E-02	0.000E+00	FAIL ABUN
CE-141	6.157E-02	4.892E-02	9.132E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.870E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-8.399E-02	1.755E-01	3.094E-01	0.000E+00	NOT IDENT.
PM-144	-2.142E-03	2.805E-02	4.728E-02	0.000E+00	NOT IDENT.
PR-144	-1.450E-01	1.899E+00	3.200E+00	0.000E+00	NOT IDENT.
PM-146	5.278E-03	3.299E-02	5.845E-02	0.000E+00	NOT IDENT.
ND-147	-3.706E-01	3.801E-01	6.059E-01	0.000E+00	FAIL ABUN

PM-149	-4.845E+00	3.495E+01	6.292E+01	0.000E+00	NOT IDENT.
EU-152	4.583E-02	8.618E-02	1.393E-01	0.000E+00	FAIL ABUN
GD-153	7.107E-03	6.898E-02	1.114E-01	0.000E+00	FAIL ABUN
EU-154	-6.376E-02	9.450E-02	1.471E-01	0.000E+00	NOT IDENT.
EU-155	3.650E-02	8.755E-02	1.618E-01	0.000E+00	FAIL ABUN
TB-160	6.044E-02	1.146E-01	2.073E-01	0.000E+00	FAIL ABUN
HO-166M	-7.777E-03	5.122E-02	8.566E-02	0.000E+00	NOT IDENT.
TM-171	-3.793E+01	2.449E+01	4.269E+01	0.000E+00	NOT IDENT.
LU-176	1.107E-02	1.923E-02	3.480E-02	0.000E+00	FAIL ABUN
LU-177	1.260E+00	9.006E-01	1.368E+00	0.000E+00	FAIL ABUN
LU-177M	-2.926E-02	1.389E-01	2.423E-01	0.000E+00	NOT IDENT.
HF-181	-1.942E-02	3.344E-02	5.618E-02	0.000E+00	NOT IDENT.
W-181	-3.114E-02	3.112E-01	5.717E-01	0.000E+00	NOT IDENT.
TA-182	-5.686E-02	1.642E-01	2.696E-01	0.000E+00	FAIL ABUN
RE-183	-8.356E-02	8.607E-02	1.440E-01	0.000E+00	FAIL ABUN
RE-184	1.923E-02	1.858E-01	3.226E-01	0.000E+00	NOT IDENT.
OS-185	-3.288E-03	3.135E-02	5.301E-02	0.000E+00	NOT IDENT.
RE-188	6.612E-02	1.407E-01	2.550E-01	0.000E+00	NOT IDENT.
W-188	-2.909E+00	6.237E+00	9.521E+00	0.000E+00	NOT IDENT.
IR-192	8.366E-03	2.523E-02	4.616E-02	0.000E+00	FAIL ABUN
AU-195	1.674E-01	2.010E-01	3.355E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	8.219E+01	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.127E+00	3.489E+00	5.943E+00	0.000E+00	NOT IDENT.
TL-202	2.230E-02	4.641E-02	8.401E-02	0.000E+00	NOT IDENT.
HG-203	8.120E-03	3.296E-02	5.957E-02	0.000E+00	NOT IDENT.
BI-207	2.188E-02	4.766E-02	8.444E-02	0.000E+00	FAIL ABUN
TL-207	-2.098E-01	5.493E-01	8.322E-01	0.000E+00	FAIL ABUN
PO-209	-2.133E+00	5.394E+00	9.022E+00	0.000E+00	NOT IDENT.
BI-210	1.611E+00	3.285E+00	6.256E+00	0.000E+00	NOT IDENT.
PB-210	1.611E+00	3.285E+00	6.256E+00	0.000E+00	NOT IDENT.
PO-210	1.611E+00	3.284E+00	6.256E+00	0.000E+00	NOT IDENT.
PB-211	-7.569E-01	8.700E-01	1.227E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.248E-01	5.198E-01	0.000E+00	FAIL ABUN
PO-215	-2.098E-01	5.493E-01	8.322E-01	0.000E+00	FAIL ABUN
RN-219	-7.540E-02	3.236E-01	5.648E-01	0.000E+00	FAIL ABUN
RN-220	-8.135E+00	1.922E+01	3.211E+01	0.000E+00	NOT IDENT.
RA-223	-2.098E-01	5.493E-01	8.322E-01	0.000E+00	FAIL ABUN
AC-227	2.306E-02	3.092E-01	5.358E-01	0.000E+00	FAIL ABUN
TH-227	2.306E-02	3.092E-01	5.358E-01	0.000E+00	FAIL ABUN
TH-229	-2.719E-01	4.185E-01	7.154E-01	0.000E+00	FAIL ABUN
PA-231	-7.932E-01	1.206E+00	2.112E+00	0.000E+00	FAIL ABUN
TH-231	-2.098E-01	5.493E-01	8.322E-01	0.000E+00	FAIL ABUN
U-231	-4.360E-01	6.767E-01	1.054E+00	0.000E+00	FAIL ABUN
PA-233	-2.658E-02	4.776E-02	8.352E-02	0.000E+00	FAIL ABUN
PA-234	-1.616E-02	2.545E-01	4.045E-01	0.000E+00	FAIL ABUN
PA-234M	-2.618E+00	5.208E+00	8.732E+00	0.000E+00	NOT IDENT.
TH-234	4.290E-01	1.120E+00	2.135E+00	0.000E+00	FAIL ABUN
U-235	4.821E-02	1.759E-01	3.146E-01	0.000E+00	FAIL ABUN
NP-236	-3.608E-02	6.455E-02	1.122E-01	0.000E+00	NOT IDENT.
U-238	4.290E-01	1.120E+00	2.135E+00	0.000E+00	FAIL ABUN
NP-239	-4.154E-04	1.586E-01	2.872E-01	0.000E+00	FAIL ABUN
AM-241	-2.480E-02	1.353E-01	2.521E-01	0.000E+00	NOT IDENT.
CM-243	-8.877E-03	7.770E-02	1.411E-01	0.000E+00	FAIL ABUN
CM-247	1.110E-03	2.878E-02	5.105E-02	0.000E+00	NOT IDENT.
CF-249	-5.385E-03	3.199E-02	5.624E-02	0.000E+00	NOT IDENT.
CF-251	-2.798E-02	1.043E-01	1.825E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:53:17.44

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504007.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:51:14.
Sample ID         : G232504007           Sample quantity  : 1.55350E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.96  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1384	10.67*	1.228E+00	2.552E+01	2.552E+01	10.17
CD-109	88.03	183	3.72*	6.262E+00	1.902E+00	1.939E+00	31.72
SN-126	64.28	------	9.60	3.590E+00	------ Line Not Found		------
	86.94	183	8.90	6.262E+00	7.949E-01	7.949E-01	51.40
	87.57	183	37.00*	6.262E+00	1.912E-01	1.912E-01	31.72
BA-137M	661.65	66	89.98*	2.518E+00	7.062E-02	7.067E-02	60.40
CS-137	661.65	66	85.12*	2.518E+00	7.465E-02	7.471E-02	60.41
TL-208	277.35	------	6.80	4.948E+00	------ Line Not Found		------
	510.84	117	21.60	3.129E+00	4.182E-01	4.182E-01	52.09
	583.14	326	84.20*	2.808E+00	3.336E-01	3.336E-01	20.00
	860.37	71	12.46	1.989E+00	6.955E-01	6.955E-01	53.77
BI-211	72.87	------	1.27	4.802E+00	------ Line Not Found		------
	351.07	588	12.94*	4.167E+00	2.636E+00	2.636E+00	13.66
PB-212	74.81	305	10.70	5.070E+00	1.359E+00	1.359E+00	24.97
	77.11	504	18.00	5.331E+00	1.268E+00	1.268E+00	16.43
	87.30	183	8.00	6.262E+00	8.843E-01	8.843E-01	33.26
	238.63	1267	44.60*	5.483E+00	1.252E+00	1.252E+00	9.61
	300.09	78	3.41	4.679E+00	1.188E+00	1.188E+00	62.83
PO-212	74.81	305	10.70	5.070E+00	1.359E+00	1.359E+00	24.97
	77.11	504	18.00	5.331E+00	1.268E+00	1.268E+00	16.43
	87.30	183	8.00	6.262E+00	8.843E-01	8.843E-01	33.26
	115.19	------	0.60	7.278E+00	------ Line Not Found		------
	238.63	1267	44.60*	5.483E+00	1.252E+00	1.252E+00	9.61
	300.09	78	3.41	4.679E+00	1.188E+00	1.188E+00	62.83
BI-214	609.31	402	46.30*	2.705E+00	7.757E-01	7.757E-01	16.28
	768.36	------	5.04	2.208E+00	------ Line Not Found		------
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	86	15.10	1.553E+00	8.838E-01	8.838E-01	58.80
	1238.11	73	5.94	1.417E+00	2.100E+00	2.100E+00	58.79
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	90	15.80	1.075E+00	1.277E+00	1.277E+00	25.00
PB-214	74.81	305	6.21	5.070E+00	2.342E+00	2.342E+00	24.31

Sample ID : G232504007 Acquisition date : 7-JUL-2009 08:51:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	504	10.50	5.331E+00	2.174E+00	2.174E+00	18.11
	87.30	183	4.67	6.262E+00	1.515E+00	1.515E+00	32.64
	241.98	318	7.49	5.436E+00	1.889E+00	1.889E+00	28.59
	295.21	359	19.20	4.737E+00	9.545E-01	9.545E-01	22.44
	351.92	588	37.20*	4.167E+00	9.171E-01	9.171E-01	14.62
PO-214	74.81	305	6.21	5.070E+00	2.342E+00	2.342E+00	24.31
	77.11	504	10.50	5.331E+00	2.174E+00	2.174E+00	18.11
	87.30	183	4.67	6.262E+00	1.515E+00	1.515E+00	32.64
	241.98	318	7.49	5.436E+00	1.889E+00	1.889E+00	28.59
	295.21	359	19.20	4.737E+00	9.545E-01	9.545E-01	22.44
	351.92	588	37.20*	4.167E+00	9.171E-01	9.171E-01	14.62
PO-216	74.81	305	10.70	5.070E+00	1.359E+00	1.359E+00	24.97
	77.11	504	18.00	5.331E+00	1.268E+00	1.268E+00	16.43
	87.30	183	8.00	6.262E+00	8.843E-01	8.843E-01	33.26
	238.63	1267	44.60*	5.483E+00	1.252E+00	1.252E+00	9.61
	300.09	78	3.41	4.679E+00	1.188E+00	1.188E+00	62.83
PO-218	74.81	305	6.21	5.070E+00	2.342E+00	2.342E+00	24.31
	77.11	504	10.50	5.331E+00	2.174E+00	2.174E+00	18.11
	87.30	183	4.67	6.262E+00	1.515E+00	1.515E+00	32.64
	241.98	318	7.49	5.436E+00	1.889E+00	1.889E+00	28.59
	295.21	359	19.20	4.737E+00	9.545E-01	9.545E-01	22.44
	351.92	588	37.20*	4.167E+00	9.171E-01	9.171E-01	14.62
RA-224	240.98	318	3.95*	5.436E+00	3.582E+00	3.582E+00	28.04
RA-226	609.31	402	46.30*	2.705E+00	7.757E-01	7.757E-01	16.28
	768.36	------	5.04	2.208E+00	------ Line Not Found		------
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	86	15.10	1.553E+00	8.838E-01	8.838E-01	58.80
	1238.11	73	5.94	1.417E+00	2.100E+00	2.100E+00	58.79
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	90	15.80	1.075E+00	1.277E+00	1.277E+00	25.00
AC-228	338.32	217	11.40	4.290E+00	1.075E+00	1.075E+00	49.45
	911.07	236	27.70*	1.886E+00	1.093E+00	1.093E+00	23.67
	969.11	172	16.60	1.781E+00	1.410E+00	1.410E+00	32.86
RA-228	338.32	217	11.40	4.290E+00	1.075E+00	1.075E+00	49.45
	911.07	236	27.70*	1.886E+00	1.093E+00	1.093E+00	23.67
	969.11	172	16.60	1.781E+00	1.410E+00	1.410E+00	32.86
TH-228	84.40	84	1.21	6.008E+00	2.776E+00	2.776E+00	75.23
	238.60	1267	44.60*	5.483E+00	1.252E+00	1.252E+00	9.61
	300.10	78	3.41	4.679E+00	1.188E+00	1.188E+00	85.75
TH-230	609.31	402	46.30*	2.705E+00	7.757E-01	7.757E-01	16.28
	768.36	------	5.04	2.208E+00	------ Line Not Found		------
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	86	15.10	1.553E+00	8.838E-01	8.838E-01	58.80
	1238.11	73	5.94	1.417E+00	2.100E+00	2.100E+00	58.79
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	90	15.80	1.075E+00	1.277E+00	1.277E+00	25.00
TH-232	338.32	217	11.40	4.290E+00	1.075E+00	1.075E+00	28.58
	911.07	236	27.70*	1.886E+00	1.093E+00	1.093E+00	23.67
	969.11	172	16.60	1.781E+00	1.410E+00	1.410E+00	32.86

Sample ID : G232504007 Acquisition date : 7-JUL-2009 08:51:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	402	46.30*	2.705E+00	7.757E-01	7.757E-01	16.28
	768.36	------	5.04	2.208E+00	------	Line Not Found	------
	934.06	------	3.21	1.843E+00	------	Line Not Found	------
	1120.29	86	15.10	1.553E+00	8.838E-01	8.838E-01	58.80
	1238.11	73	5.94	1.417E+00	2.100E+00	2.100E+00	58.79
	1377.67	------	4.11	1.289E+00	------	Line Not Found	------
	1764.49	90	15.80	1.075E+00	1.277E+00	1.277E+00	25.00
NP-237	86.50	183	12.60*	6.262E+00	5.615E-01	5.615E-01	37.84
	95.87	------	2.60	6.774E+00	------	Line Not Found	------
AM-243	74.67	305	66.00*	5.070E+00	2.203E-01	2.203E-01	23.16
	86.72	183	0.34	6.262E+00	2.105E+01	2.105E+01	31.72
	117.66	------	0.55	7.296E+00	------	Line Not Found	------
	142.18	------	0.13	7.157E+00	------	Line Not Found	------
ANH-511	511.00	117	100.00*	3.129E+00	9.033E-02	9.033E-02	51.42

Flag: "*" = Keyline

Sample ID : G232504007 Acquisition date : 7-JUL-2009 08:51:14

Total number of lines in spectrum 33
Number of unidentified lines 2
Number of lines tentatively identified by NID 31 93.94%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.552E+01	2.552E+01	0.260E+01	10.17	
CD-109	464.00D	1.02	1.902E+00	1.939E+00	0.615E+00	31.72	
SN-126	1.00E+05Y	1.00	1.912E-01	1.912E-01	0.606E-01	31.72	
BA-137M	30.17Y	1.00	7.062E-02	7.067E-02	4.269E-02	60.40	
CS-137	30.17Y	1.00	7.465E-02	7.471E-02	4.513E-02	60.41	
TL-208	1.41E+10Y	1.00	3.336E-01	3.336E-01	0.667E-01	20.00	
BI-211	7.04E+08Y	1.00	2.636E+00	2.636E+00	0.360E+00	13.66	
PB-212	1.41E+10Y	1.00	1.252E+00	1.252E+00	0.120E+00	9.61	
PO-212	1.41E+10Y	1.00	1.252E+00	1.252E+00	0.120E+00	9.61	
BI-214	1600.00Y	1.00	7.757E-01	7.757E-01	1.263E-01	16.28	
PB-214	1600.00Y	1.00	9.171E-01	9.171E-01	1.341E-01	14.62	
PO-214	1600.00Y	1.00	9.171E-01	9.171E-01	1.341E-01	14.62	
PO-216	1.41E+10Y	1.00	1.252E+00	1.252E+00	0.120E+00	9.61	
PO-218	1600.00Y	1.00	9.171E-01	9.171E-01	1.341E-01	14.62	
RA-224	1.41E+10Y	1.00	3.582E+00	3.582E+00	1.004E+00	28.04	
RA-226	1600.00Y	1.00	7.757E-01	7.757E-01	1.263E-01	16.28	
AC-228	1.41E+10Y	1.00	1.093E+00	1.093E+00	0.259E+00	23.67	
RA-228	1.41E+10Y	1.00	1.093E+00	1.093E+00	0.259E+00	23.67	
TH-228	1.41E+10Y	1.00	1.252E+00	1.252E+00	0.120E+00	9.61	
TH-230	4.47E+09Y	1.00	7.757E-01	7.757E-01	1.263E-01	16.28	
TH-232	1.41E+10Y	1.00	1.093E+00	1.093E+00	0.259E+00	23.67	
U-234	4.47E+09Y	1.00	7.757E-01	7.757E-01	1.263E-01	16.28	
NP-237	2.14E+06Y	1.00	5.615E-01	5.615E-01	2.125E-01	37.84	
AM-243	7380.00Y	1.00	2.203E-01	2.203E-01	0.510E-01	23.16	
ANH-511	1.00E+09Y	1.00	9.033E-02	9.033E-02	4.645E-02	51.42	
	Total Activity :		4.932E+01	4.936E+01			

Grand Total Activity : 4.932E+01 4.936E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232504007 Acquisition date : 7-JUL-2009 08:51:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	90.10	189	306	1.06	180.21	172	21	2.62E-02	32.5	6.45E+00	T
2	93.01	239	371	1.32	186.02	172	21	3.31E-02	33.8	6.63E+00	T
0	186.06	152	346	1.30	372.12	367	10	2.11E-02	50.6	6.39E+00	T
0	209.39	90	301	0.98	418.78	414	9	1.25E-02	72.7	5.96E+00	T
0	270.65	165	257	1.35	541.29	535	14	2.30E-02	43.9	5.03E+00	T
0	328.39	69	144	0.77	656.79	651	10	9.53E-03	69.9	4.38E+00	T
0	463.74	80	136	1.37	927.49	919	14	1.10E-02	66.2	3.38E+00	T
0	727.17	82	69	1.59	1454.33	1449	11	1.13E-02	45.2	2.32E+00	T
0	935.83	68	79	1.57	1871.66	1863	18	9.41E-03	66.8	1.84E+00	T
1	964.37	48	58	2.12	1928.75	1919	37	6.71E-03	70.5	1.79E+00	T
0	1591.45	37	46	5.17	3182.91	3162	32	5.19E-03	****	1.15E+00	
0	1729.87	26	8	1.95	3459.74	3450	16	3.58E-03	63.0	1.09E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:53:22.35

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504007.CNF;1 *
* Acquisition date  : 7-JUL-2009 08:51:14.  Detector SN#     :             *
* Detector ID       : GAM16                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.96          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504007            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.55350E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.552E+01	2.597E+00	5.070E-01	4.268E-02	50.336
CD-109	1.939E+00	6.149E-01	9.668E-01	8.337E-02	2.005
SN-126	1.912E-01	6.064E-02	1.073E-01	9.220E-03	1.781
BA-137M	7.067E-02	4.269E-02	5.361E-02	3.267E-03	1.318
CS-137	7.471E-02	4.513E-02	5.667E-02	3.467E-03	1.318
TL-208	3.336E-01	6.674E-02	4.587E-02	3.159E-03	7.274
BI-211	2.636E+00	3.601E-01	2.452E-01	1.523E-02	10.751
PB-212	1.252E+00	1.203E-01	7.090E-02	5.002E-03	17.658
PO-212	1.252E+00	1.203E-01	7.090E-02	5.002E-03	17.658
BI-214	7.757E-01	1.263E-01	8.744E-02	6.976E-03	8.871
PB-214	9.171E-01	1.341E-01	8.053E-02	6.531E-03	11.388
PO-214	9.171E-01	1.341E-01	8.053E-02	6.531E-03	11.388
PO-216	1.252E+00	1.203E-01	7.090E-02	5.002E-03	17.658
PO-218	9.171E-01	1.341E-01	8.053E-02	6.531E-03	11.388
RA-224	3.582E+00	1.004E+00	8.064E-01	4.400E-02	4.442
RA-226	7.757E-01	1.263E-01	8.744E-02	6.976E-03	8.871
AC-228	1.093E+00	2.586E-01	1.639E-01	1.945E-02	6.667
RA-228	1.093E+00	2.586E-01	1.639E-01	1.945E-02	6.667

Sample ID : G232504007 Acquisition date : 7-JUL-2009 08:51:14

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.252E+00	1.203E-01	7.090E-02	5.001E-03	17.659
TH-230	7.757E-01	1.263E-01	8.744E-02	6.976E-03	8.871
TH-232	1.093E+00	2.586E-01	1.639E-01	1.945E-02	6.667
U-234	7.757E-01	1.263E-01	8.744E-02	6.976E-03	8.871
NP-237	5.615E-01	2.125E-01	3.012E-01	6.721E-02	1.864
AM-243	2.203E-01	5.102E-02	7.724E-02	5.929E-03	2.852
ANH-511	9.033E-02	4.645E-02	3.848E-02	2.260E-03	2.348

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	7.242E-02		2.478E-01	4.159E-01	2.796E-02	0.174
NA-22	-2.439E-02		3.428E-02	5.136E-02	3.818E-03	-0.475
NA-24	-4.998E-02		2.601E-02	Half-Life too short		
AL-26	-9.206E-03		2.191E-02	3.298E-02	1.969E-03	-0.279
TI-44	2.340E-01	+	3.846E-02	6.625E-02	5.227E-03	3.533
SC-46	9.974E-03		2.955E-02	5.067E-02	4.762E-03	0.197
V-48	-5.244E-03		4.827E-02	7.730E-02	6.665E-03	-0.068
CR-51	-3.493E-02		2.766E-01	4.495E-01	2.825E-02	-0.078
MN-52	-4.772E-03		1.332E-01	2.142E-01	1.771E-02	-0.022
MN-54	2.217E-02		2.965E-02	5.224E-02	4.461E-03	0.424
CO-56	1.477E-02		3.090E-02	5.355E-02	4.671E-03	0.276
CO-57	1.524E-04		2.061E-02	3.391E-02	2.074E-03	0.004
CO-58	-1.196E-02		3.017E-02	4.886E-02	4.004E-03	-0.245
FE-59	-2.226E-02		8.221E-02	1.322E-01	1.027E-02	-0.168
CO-60	-1.234E-02		3.165E-02	4.891E-02	4.197E-03	-0.252
ZN-65	-3.896E-02		8.360E-02	1.105E-01	7.339E-03	-0.353
GE-68	-4.636E-01		1.067E+00	1.688E+00	1.228E-01	-0.275
AS-73	5.047E-01		7.327E-01	1.258E+00	9.294E-02	0.401
AS-74	-1.847E-02		6.777E-02	1.081E-01	6.538E-03	-0.171
SE-75	4.794E-03		3.969E-02	5.580E-02	3.126E-03	0.086
BR-77	-3.852E+00		4.410E+00	6.769E+00	3.994E-01	-0.569
SR-82	-1.669E-01		2.866E-01	4.591E-01	3.520E-02	-0.363
RB-83	-5.362E-02		5.480E-02	8.333E-02	4.916E-03	-0.643
RB-84	3.036E-02		5.657E-02	9.818E-02	9.105E-03	0.309
KR-85	1.475E+01		5.968E+00	1.030E+01	6.061E-01	1.431
SR-85	7.385E-02		2.989E-02	5.159E-02	3.035E-03	1.431
RB-86	-3.101E-01		6.221E-01	9.781E-01	7.129E-02	-0.317
Y-88	-2.081E-02		2.502E-02	3.385E-02	1.949E-03	-0.615
ZR-88	-1.419E-03		2.469E-02	4.090E-02	2.210E-03	-0.035
Y-91	-8.268E-01		1.489E+01	2.424E+01	1.480E+00	-0.034
NB-94	3.317E-03		2.811E-02	4.575E-02	3.034E-03	0.072
NB-95	2.748E-02		3.431E-02	5.841E-02	4.388E-03	0.470
NB-95M	1.618E-01		1.080E-01	1.646E-01	1.193E-02	0.983
ZR-95	5.413E-02		5.765E-02	9.947E-02	8.334E-03	0.544
NB-97	-6.470E-04		5.159E-03	Half-Life too short		
ZR-97	3.185E-01		8.883E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	-6.756E+00		5.488E+00	7.693E+00	1.107E+00	-0.878
TC-99M	-7.465E+07		3.430E+07	Half-Life too short		
RH-101	2.738E-02		2.780E-02	4.671E-02	2.445E-03	0.586
RH-102	-5.384E-03		2.287E-02	3.707E-02	2.135E-03	-0.145
RU-103	-8.134E-03		2.883E-02	4.635E-02	5.867E-03	-0.176
RH-106	-6.882E-02		2.667E-01	4.246E-01	5.043E-02	-0.162
RU-106	-6.882E-02		2.667E-01	4.246E-01	2.580E-02	-0.162
AG-108M	2.146E-03		2.578E-02	4.287E-02	2.620E-03	0.050
AG-110M	-2.737E-03		3.358E-02	4.649E-02	2.999E-03	-0.059
IN-111	-7.198E-03		5.500E-01	7.684E-01	4.206E-02	-0.009
IN-113M	5.994E-03		3.551E-02	5.959E-02	3.463E-03	0.101
SN-113	5.994E-03		3.551E-02	5.959E-02	3.463E-03	0.101
IN-114M	-6.178E-02		1.607E-01	2.221E-01	1.152E-02	-0.278
CD-115	-3.794E-02		4.301E+00	7.043E+00	4.169E-01	-0.005
SN-117M	-2.149E-03		4.083E-02	6.644E-02	3.461E-03	-0.032
SB-122	2.089E-01		9.179E-01	1.523E+00	9.139E-02	0.137
I-123	3.900E-02		1.373E-01	Half-Life too short		
TE-123M	3.282E-03		2.311E-02	3.789E-02	2.003E-03	0.087
I-124	9.298E-02		4.146E-01	5.964E-01	3.613E-02	0.156
SB-124	1.964E-02		4.717E-02	8.495E-02	6.196E-03	0.231
SB-125	-6.977E-02		7.146E-02	1.106E-01	6.443E-03	-0.631
TE-125M	-9.566E-01		7.716E+00	1.268E+01	1.114E+00	-0.075
I-126	4.095E-02		1.530E-01	2.198E-01	1.353E-02	0.186
SB-126	-2.292E-02		1.169E-01	1.668E-01	1.147E-02	-0.137
SB-127	-9.441E-02		6.873E-01	1.097E+00	9.958E-02	-0.086
XE-127	-5.225E-02		3.904E-02	5.678E-02	2.988E-03	-0.920
I-131	2.463E-02		7.277E-02	1.237E-01	7.665E-03	0.199
TE-132	-1.783E-03		3.623E-01	5.826E-01	8.027E-02	-0.003
BA-133	-2.663E-02		3.649E-02	4.943E-02	5.650E-03	-0.539
I-133	-9.870E-04		4.035E-04	Half-Life too short		
CS-134	5.841E-02		3.751E-02	6.925E-02	5.552E-03	0.843
CS-135	1.506E-01		1.471E-01	2.189E-01	1.635E-02	0.688
I-135	1.693E+06		8.246E+06	Half-Life too short		
CS-136	2.383E-02		7.878E-02	1.335E-01	1.086E-02	0.179
CE-139	1.318E-02		2.370E-02	3.945E-02	1.995E-03	0.334
BA-140	2.961E-02		1.814E-01	3.000E-01	9.763E-02	0.099
LA-140	4.383E-02		5.012E-02	8.788E-02	6.575E-03	0.499
CE-141	6.157E-02		4.992E-02	8.517E-02	4.883E-03	0.723
CE-143	1.954E-04		2.995E-05	Half-Life too short		
CE-144	-8.399E-02		1.790E-01	2.880E-01	4.086E-02	-0.292
PM-144	-2.142E-03		2.862E-02	4.593E-02	3.010E-03	-0.047
PR-144	-1.450E-01		1.937E+00	3.109E+00	2.036E-01	-0.047
PM-146	5.278E-03		3.366E-02	5.613E-02	4.795E-03	0.094
ND-147	-3.706E-01		3.879E-01	5.843E-01	7.933E-02	-0.634
PM-149	-4.845E+00		3.567E+01	5.970E+01	8.406E+00	-0.081
EU-152	4.583E-02		8.794E-02	1.328E-01	8.411E-03	0.345
GD-153	7.107E-03		7.039E-02	1.029E-01	7.769E-03	0.069
EU-154	-6.376E-02		9.642E-02	1.453E-01	1.515E-02	-0.439

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	3.650E-02		8.934E-02	1.497E-01	1.059E-02	0.244
TB-160	6.044E-02		1.170E-01	2.026E-01	1.872E-02	0.298
HO-166M	-7.777E-03		5.226E-02	8.326E-02	5.624E-03	-0.093
TM-171	-3.793E+01		2.499E+01	3.906E+01	2.877E+00	-0.971
LU-176	1.107E-02		1.962E-02	3.308E-02	1.854E-03	0.335
LU-177	1.260E+00	+	9.190E-01	1.288E+00	6.817E-02	0.979
LU-177M	-2.926E-02		1.417E-01	2.322E-01	1.278E-02	-0.126
HF-181	-1.942E-02		3.412E-02	5.404E-02	3.125E-03	-0.359
W-181	-3.114E-02		3.175E-01	5.228E-01	3.831E-02	-0.060
TA-182	-5.686E-02		1.676E-01	2.660E-01	1.705E-02	-0.214
RE-183	-8.356E-02		8.783E-02	1.347E-01	6.909E-03	-0.620
RE-184	1.923E-02		1.895E-01	3.051E-01	1.679E-02	0.063
OS-185	-3.288E-03		3.199E-02	5.139E-02	3.130E-03	-0.064
RE-188	6.612E-02		1.436E-01	2.382E-01	1.259E-02	0.278
W-188	-2.909E+00		6.364E+00	9.037E+00	5.054E-01	-0.322
IR-192	8.366E-03		2.574E-02	4.391E-02	2.474E-03	0.191
AU-195	1.674E-01		2.051E-01	3.099E-01	2.300E-02	0.540
TL-200	-5.033E-05		4.193E-05	Half-Life too short		
TL-201	-2.127E+00		3.561E+00	5.563E+00	2.815E-01	-0.382
TL-202	2.230E-02		4.736E-02	8.061E-02	4.531E-03	0.277
HG-203	8.120E-03		3.363E-02	5.648E-02	3.359E-03	0.144
BI-207	2.188E-02		4.864E-02	8.299E-02	6.221E-03	0.264
TL-207	-2.098E-01		5.605E-01	7.921E-01	1.303E-01	-0.265
PO-209	-2.133E+00		5.504E+00	8.825E+00	8.400E-01	-0.242
BI-210	1.611E+00		3.352E+00	5.675E+00	4.482E-01	0.284
PB-210	1.611E+00		3.352E+00	5.675E+00	4.482E-01	0.284
PO-210	1.611E+00		3.351E+00	5.675E+00	3.881E-01	0.284
PB-211	-7.569E-01		8.878E-01	1.175E+00	7.321E-01	-0.644
BI-212	7.209E-01	+	3.314E-01	5.056E-01	4.361E-02	1.426
PO-215	-2.098E-01		5.605E-01	7.921E-01	1.303E-01	-0.265
RN-219	-7.540E-02		3.302E-01	5.407E-01	7.278E-02	-0.139
RN-220	-8.135E+00		1.961E+01	3.100E+01	1.851E+00	-0.262
RA-223	-2.098E-01		5.605E-01	7.921E-01	1.303E-01	-0.265
AC-227	2.306E-02		3.155E-01	5.069E-01	7.018E-02	0.045
TH-227	2.306E-02		3.156E-01	5.069E-01	8.518E-02	0.045
TH-229	-2.719E-01		4.270E-01	6.721E-01	3.501E-02	-0.405
PA-231	-7.932E-01		1.230E+00	2.003E+00	2.742E-01	-0.396
TH-231	-2.098E-01		5.605E-01	7.921E-01	1.303E-01	-0.265
U-231	-4.360E-01		6.905E-01	9.725E-01	7.484E-02	-0.448
PA-233	-2.658E-02		4.873E-02	7.943E-02	4.746E-03	-0.335
PA-234	-1.616E-02		2.597E-01	3.963E-01	7.518E-02	-0.041
PA-234M	-2.618E+00		5.314E+00	8.568E+00	9.432E-01	-0.306
TH-234	4.290E-01		1.142E+00	1.951E+00	3.393E-01	0.220
U-235	4.821E-02		1.795E-01	2.934E-01	4.755E-02	0.164
NP-236	-3.608E-02		6.586E-02	1.049E-01	5.426E-03	-0.344
U-238	4.290E-01		1.142E+00	1.951E+00	3.393E-01	0.220
NP-239	-4.154E-04		1.618E-01	2.664E-01	1.683E-02	-0.002
AM-241	-2.480E-02		1.381E-01	2.301E-01	1.833E-02	-0.108

Sample ID : G232504007 Acquisition date : 7-JUL-2009 08:51:14

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-8.877E-03		7.929E-02	1.305E-01	9.199E-03	-0.068
CM-247	1.110E-03		2.937E-02	4.887E-02	2.664E-03	0.023
CF-249	-5.385E-03		3.264E-02	5.379E-02	2.913E-03	-0.100
CF-251	-2.798E-02		1.064E-01	1.710E-01	8.738E-03	-0.164

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
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*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504007            *
* Acquisition date :  7-JUL-2009 08:51:14 Detector SN#     :                *
* Detector ID      : GAM16                Sensitivity     : 5.000          *
* Geometry         : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.96     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID        : G232504007           Analyst initials: MXR1           *
* Batch Number     : 881220               Sample Quantity : 1.5535E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.552E+01	2.545E+00	2.558E-01	1.298E+00
CD-109	1.939E+00	6.026E-01	5.251E-01	3.075E-01
SN-126	1.912E-01	5.943E-02	5.831E-02	3.032E-02
BA-137M	7.067E-02	4.184E-02	2.765E-02	2.135E-02
CS-137	7.471E-02	4.423E-02	2.922E-02	2.256E-02
TL-208	3.336E-01	6.541E-02	2.374E-02	3.337E-02
BI-211	2.636E+00	3.529E-01	1.286E-01	1.801E-01
PB-212	1.252E+00	1.179E-01	3.756E-02	6.014E-02
PO-212	1.252E+00	1.179E-01	3.756E-02	6.014E-02
BI-214	7.757E-01	1.238E-01	4.519E-02	6.315E-02
PB-214	9.171E-01	1.314E-01	4.223E-02	6.705E-02
PO-214	9.171E-01	1.314E-01	4.223E-02	6.705E-02
PO-216	1.252E+00	1.179E-01	3.756E-02	6.014E-02
PO-218	9.171E-01	1.314E-01	4.223E-02	6.705E-02
RA-224	3.582E+00	9.844E-01	4.271E-01	5.022E-01
RA-226	7.757E-01	1.238E-01	4.519E-02	6.315E-02
AC-228	1.093E+00	2.534E-01	8.380E-02	1.293E-01
RA-228	1.093E+00	2.534E-01	8.380E-02	1.293E-01
TH-228	1.252E+00	1.179E-01	3.756E-02	6.014E-02
TH-230	7.757E-01	1.238E-01	4.519E-02	6.315E-02
TH-232	1.093E+00	2.534E-01	8.380E-02	1.293E-01
U-234	7.757E-01	1.238E-01	4.519E-02	6.315E-02
NP-237	5.615E-01	2.082E-01	1.636E-01	1.062E-01
AM-243	2.203E-01	5.000E-02	4.212E-02	2.551E-02
ANH-511	9.033E-02	4.552E-02	1.998E-02	2.322E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	7.242E-02	2.429E-01	2.164E-01	1.239E-01 NOT IDENT.
NA-22	-2.439E-02	3.360E-02	2.602E-02	1.714E-02 NOT IDENT.

NA-24	-4.998E+04	5.098E+04	0.000E+00	2.601E+04	SHORT HLIF
AL-26	-9.206E-03	2.147E-02	1.654E-02	1.095E-02	NOT IDENT.
TI-44	2.340E-01	3.769E-02	3.608E-02	1.923E-02	FAIL ABUN
SC-46	9.974E-03	2.896E-02	2.592E-02	1.477E-02	FAIL ABUN
V-48	-5.244E-03	4.730E-02	3.944E-02	2.413E-02	NOT IDENT.
CR-51	-3.493E-02	2.711E-01	2.363E-01	1.383E-01	NOT IDENT.
MN-52	-4.772E-03	1.306E-01	1.081E-01	6.662E-02	FAIL ABUN
MN-54	2.217E-02	2.906E-02	2.677E-02	1.483E-02	NOT IDENT.
CO-56	1.477E-02	3.028E-02	2.743E-02	1.545E-02	FAIL ABUN
CO-57	1.524E-04	2.020E-02	1.827E-02	1.031E-02	NOT IDENT.
CO-58	-1.196E-02	2.957E-02	2.506E-02	1.509E-02	NOT IDENT.
FE-59	-2.226E-02	8.056E-02	6.726E-02	4.110E-02	NOT IDENT.
CO-60	-1.234E-02	3.102E-02	2.474E-02	1.583E-02	NOT IDENT.
ZN-65	-3.896E-02	8.193E-02	5.618E-02	4.180E-02	NOT IDENT.
GE-68	-4.636E-01	1.045E+00	8.589E-01	5.333E-01	NOT IDENT.
AS-73	5.047E-01	7.180E-01	6.917E-01	3.663E-01	NOT IDENT.
AS-74	-1.847E-02	6.642E-02	5.589E-02	3.389E-02	NOT IDENT.
SE-75	4.794E-03	3.890E-02	2.948E-02	1.985E-02	NOT IDENT.
BR-77	-3.852E+00	4.322E+00	3.513E+00	2.205E+00	FAIL ABUN
SR-82	-1.669E-01	2.809E-01	2.358E-01	1.433E-01	NOT IDENT.
RB-83	-5.362E-02	5.370E-02	4.325E-02	2.740E-02	NOT IDENT.
RB-84	3.036E-02	5.544E-02	5.024E-02	2.829E-02	NOT IDENT.
KR-85	1.475E+01	5.849E+00	5.350E+00	2.984E+00	NOT IDENT.
SR-85	7.385E-02	2.929E-02	2.679E-02	1.494E-02	NOT IDENT.
RB-86	-3.101E-01	6.097E-01	4.977E-01	3.111E-01	NOT IDENT.
Y-88	-2.081E-02	2.452E-02	1.697E-02	1.251E-02	NOT IDENT.
ZR-88	-1.419E-03	2.419E-02	2.139E-02	1.234E-02	NOT IDENT.
Y-91	-8.268E-01	1.460E+01	1.230E+01	7.447E+00	NOT IDENT.
NB-94	3.317E-03	2.754E-02	2.356E-02	1.405E-02	NOT IDENT.
NB-95	2.748E-02	3.362E-02	3.001E-02	1.715E-02	NOT IDENT.
NB-95M	1.618E-01	1.058E-01	8.724E-02	5.398E-02	NOT IDENT.
ZR-95	5.413E-02	5.650E-02	5.112E-02	2.883E-02	NOT IDENT.
NB-97	-6.470E+02	1.011E+04	0.000E+00	5.159E+03	SHORT HLIF
ZR-97	3.185E+05	1.741E+05	0.000E+00	8.883E+04	SHORT HLIF
MO-99	-6.756E+00	5.378E+00	3.956E+00	2.744E+00	NOT IDENT.
TC-99M	-7.465E+13	6.723E+13	0.000E+00	3.430E+13	SHORT HLIF
RH-101	2.738E-02	2.725E-02	2.486E-02	1.390E-02	NOT IDENT.
RH-102	-5.384E-03	2.241E-02	1.929E-02	1.143E-02	NOT IDENT.
RU-103	-8.134E-03	2.825E-02	2.409E-02	1.441E-02	FAIL ABUN
RH-106	-6.882E-02	2.614E-01	2.194E-01	1.334E-01	FAIL ABUN
RU-106	-6.882E-02	2.613E-01	2.194E-01	1.333E-01	FAIL ABUN
AG-108M	2.146E-03	2.526E-02	2.236E-02	1.289E-02	NOT IDENT.
AG-110M	-2.737E-03	3.291E-02	2.398E-02	1.679E-02	NOT IDENT.
IN-111	-7.198E-03	5.390E-01	4.068E-01	2.750E-01	NOT IDENT.
IN-113M	5.994E-03	3.480E-02	3.116E-02	1.776E-02	NOT IDENT.
SN-113	5.994E-03	3.480E-02	3.116E-02	1.776E-02	NOT IDENT.
IN-114M	-6.178E-02	1.575E-01	1.183E-01	8.034E-02	NOT IDENT.
CD-115	-3.794E-02	4.215E+00	3.654E+00	2.151E+00	NOT IDENT.
SN-117M	-2.149E-03	4.002E-02	3.556E-02	2.042E-02	NOT IDENT.
SB-122	2.089E-01	8.996E-01	7.890E-01	4.590E-01	NOT IDENT.
I-123	3.900E+04	2.691E+05	0.000E+00	1.373E+05	SHORT HLIF
TE-123M	3.282E-03	2.265E-02	2.028E-02	1.155E-02	NOT IDENT.
I-124	9.298E-02	4.063E-01	3.084E-01	2.073E-01	NOT IDENT.
SB-124	1.964E-02	4.622E-02	4.268E-02	2.358E-02	FAIL ABUN
SB-125	-6.977E-02	7.003E-02	5.770E-02	3.573E-02	FAIL ABUN
TE-125M	-9.566E-01	7.562E+00	6.848E+00	3.858E+00	NOT IDENT.
I-126	4.095E-02	1.499E-01	1.133E-01	7.650E-02	NOT IDENT.
SB-126	-2.292E-02	1.146E-01	8.582E-02	5.847E-02	NOT IDENT.
SB-127	-9.441E-02	6.736E-01	5.651E-01	3.437E-01	NOT IDENT.
XE-127	-5.225E-02	3.826E-02	3.020E-02	1.952E-02	NOT IDENT.
I-131	2.463E-02	7.131E-02	6.481E-02	3.638E-02	NOT IDENT.
TE-132	-1.783E-03	3.551E-01	3.090E-01	1.812E-01	NOT IDENT.
BA-133	-2.663E-02	3.576E-02	2.591E-02	1.825E-02	NOT IDENT.
I-133	-9.870E+02	7.909E+02	0.000E+00	4.035E+02	SHORT HLIF
CS-134	5.841E-02	3.676E-02	3.554E-02	1.876E-02	NOT IDENT.
CS-135	1.506E-01	1.441E-01	1.156E-01	7.355E-02	NOT IDENT.
I-135	1.693E+12	1.616E+13	0.000E+00	8.246E+12	SHORT HLIF
CS-136	2.383E-02	7.721E-02	6.797E-02	3.939E-02	FAIL ABUN
CE-139	1.318E-02	2.323E-02	2.109E-02	1.185E-02	NOT IDENT.
BA-140	2.961E-02	1.777E-01	1.556E-01	9.068E-02	NOT IDENT.
LA-140	4.383E-02	4.911E-02	4.423E-02	2.506E-02	FAIL ABUN
CE-141	6.157E-02	4.892E-02	4.569E-02	2.496E-02	NOT IDENT.
CE-143	1.954E+02	5.870E+01	0.000E+00	2.995E+01	SHORT HLIF
CE-144	-8.399E-02	1.755E-01	1.548E-01	8.952E-02	NOT IDENT.
PM-144	-2.142E-03	2.805E-02	2.365E-02	1.431E-02	NOT IDENT.
PR-144	-1.450E-01	1.899E+00	1.601E+00	9.687E-01	NOT IDENT.
PM-146	5.278E-03	3.299E-02	2.924E-02	1.683E-02	NOT IDENT.
ND-147	-3.706E-01	3.801E-01	3.031E-01	1.940E-01	FAIL ABUN

PM-149	-4.845E+00	3.495E+01	3.148E+01	1.783E+01	NOT IDENT.
EU-152	4.583E-02	8.618E-02	6.969E-02	4.397E-02	FAIL ABUN
GD-153	7.107E-03	6.898E-02	5.575E-02	3.519E-02	FAIL ABUN
EU-154	-6.376E-02	9.450E-02	7.358E-02	4.821E-02	NOT IDENT.
EU-155	3.650E-02	8.755E-02	8.094E-02	4.467E-02	FAIL ABUN
TB-160	6.044E-02	1.146E-01	1.037E-01	5.848E-02	FAIL ABUN
HO-166M	-7.777E-03	5.122E-02	4.285E-02	2.613E-02	NOT IDENT.
TM-171	-3.793E+01	2.449E+01	2.136E+01	1.249E+01	NOT IDENT.
LU-176	1.107E-02	1.923E-02	1.741E-02	9.811E-03	FAIL ABUN
LU-177	1.260E+00	9.006E-01	6.845E-01	4.595E-01	FAIL ABUN
LU-177M	-2.926E-02	1.389E-01	1.212E-01	7.086E-02	NOT IDENT.
HF-181	-1.942E-02	3.344E-02	2.811E-02	1.706E-02	NOT IDENT.
W-181	-3.114E-02	3.112E-01	2.860E-01	1.588E-01	NOT IDENT.
TA-182	-5.686E-02	1.642E-01	1.349E-01	8.378E-02	FAIL ABUN
RE-183	-8.356E-02	8.607E-02	7.206E-02	4.391E-02	FAIL ABUN
RE-184	1.923E-02	1.858E-01	1.614E-01	9.477E-02	NOT IDENT.
OS-185	-3.288E-03	3.135E-02	2.652E-02	1.599E-02	NOT IDENT.
RE-188	6.612E-02	1.407E-01	1.276E-01	7.178E-02	NOT IDENT.
W-188	-2.909E+00	6.237E+00	4.763E+00	3.182E+00	NOT IDENT.
IR-192	8.366E-03	2.523E-02	2.309E-02	1.287E-02	FAIL ABUN
AU-195	1.674E-01	2.010E-01	1.678E-01	1.026E-01	FAIL ABUN
TL-200	-5.033E+01	8.219E+01	0.000E+00	4.193E+01	SHORT HLIF
TL-201	-2.127E+00	3.489E+00	2.974E+00	1.780E+00	NOT IDENT.
TL-202	2.230E-02	4.641E-02	4.203E-02	2.368E-02	NOT IDENT.
HG-203	8.120E-03	3.296E-02	2.980E-02	1.681E-02	NOT IDENT.
BI-207	2.188E-02	4.766E-02	4.224E-02	2.432E-02	FAIL ABUN
TL-207	-2.098E-01	5.493E-01	4.163E-01	2.803E-01	FAIL ABUN
PO-209	-2.133E+00	5.394E+00	4.514E+00	2.752E+00	NOT IDENT.
BI-210	1.611E+00	3.285E+00	3.130E+00	1.676E+00	NOT IDENT.
PB-210	1.611E+00	3.285E+00	3.130E+00	1.676E+00	NOT IDENT.
PO-210	1.611E+00	3.284E+00	3.130E+00	1.676E+00	NOT IDENT.
PB-211	-7.569E-01	8.700E-01	6.139E-01	4.439E-01	NOT IDENT.
BI-212	7.209E-01	3.248E-01	2.601E-01	1.657E-01	FAIL ABUN
PO-215	-2.098E-01	5.493E-01	4.163E-01	2.803E-01	FAIL ABUN
RN-219	-7.540E-02	3.236E-01	2.826E-01	1.651E-01	FAIL ABUN
RN-220	-8.135E+00	1.922E+01	1.607E+01	9.804E+00	NOT IDENT.
RA-223	-2.098E-01	5.493E-01	4.163E-01	2.803E-01	FAIL ABUN
AC-227	2.306E-02	3.092E-01	2.681E-01	1.578E-01	FAIL ABUN
TH-227	2.306E-02	3.092E-01	2.681E-01	1.578E-01	FAIL ABUN
TH-229	-2.719E-01	4.185E-01	3.579E-01	2.135E-01	FAIL ABUN
PA-231	-7.932E-01	1.206E+00	1.057E+00	6.151E-01	FAIL ABUN
TH-231	-2.098E-01	5.493E-01	4.163E-01	2.803E-01	FAIL ABUN
U-231	-4.360E-01	6.767E-01	5.271E-01	3.452E-01	FAIL ABUN
PA-233	-2.658E-02	4.776E-02	4.179E-02	2.437E-02	FAIL ABUN
PA-234	-1.616E-02	2.545E-01	2.024E-01	1.299E-01	FAIL ABUN
PA-234M	-2.618E+00	5.208E+00	4.369E+00	2.657E+00	NOT IDENT.
TH-234	4.290E-01	1.120E+00	1.068E+00	5.712E-01	FAIL ABUN
U-235	4.821E-02	1.759E-01	1.574E-01	8.977E-02	FAIL ABUN
NP-236	-3.608E-02	6.455E-02	5.615E-02	3.293E-02	NOT IDENT.
U-238	4.290E-01	1.120E+00	1.068E+00	5.712E-01	FAIL ABUN
NP-239	-4.154E-04	1.586E-01	1.437E-01	8.091E-02	FAIL ABUN
AM-241	-2.480E-02	1.353E-01	1.261E-01	6.903E-02	NOT IDENT.
CM-243	-8.877E-03	7.770E-02	7.059E-02	3.964E-02	FAIL ABUN
CM-247	1.110E-03	2.878E-02	2.554E-02	1.469E-02	NOT IDENT.
CF-249	-5.385E-03	3.199E-02	2.814E-02	1.632E-02	NOT IDENT.
CF-251	-2.798E-02	1.043E-01	9.129E-02	5.322E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	345.1099
46.50	345.1099
46.50	345.1099
48.70	373.6909
49.72	414.3459
51.35	371.7827
52.39	342.3214
52.97	360.0196
53.15	352.8171
53.44	348.4170
54.07	353.3626
56.28	414.3747
56.28	414.3764
57.37	0.0000
57.53	433.6309
57.53	433.6318
57.60	419.8680
57.98	423.8098
57.98	423.8098
59.32	412.7125
59.32	412.7125
59.40	412.7645
59.54	449.8003
59.72	445.3091
60.01	451.9823
61.10	472.1961
61.14	476.8549
61.30	476.9738
63.00	431.7938
63.29	441.2740
63.29	441.2740
63.58	448.9046
64.28	483.8045
65.12	483.4839
65.20	483.5413
65.20	483.5413
66.05	515.8723
66.72	539.7252
66.83	539.8156
66.91	526.8029
67.20	514.8789
67.20	514.8789
67.75	469.4684
67.85	469.5373
68.90	488.1878
68.90	488.1878
69.30	478.8292
69.67	486.4103
70.82	485.4542
70.82	485.4542
70.83	485.4620
72.80	518.4650
72.87	518.5154
72.87	518.5154
74.67	519.8129
74.81	519.9137
74.81	519.9137
74.81	519.9137
74.81	519.9137
74.81	519.9137
74.81	519.9137
74.97	520.0271
75.28	520.2496
75.70	520.5478
77.11	521.5472
77.11	521.5472
77.11	521.5472

77.11	521.5472
77.11	521.5472
77.11	521.5472
78.38	522.4395
79.62	523.3025
79.80	523.4263
79.80	523.4263
80.11	523.6426
80.18	523.6909
80.30	523.7728
80.30	523.7728
80.57	523.9597
81.00	524.2557
81.07	524.3040
81.07	524.3040
81.07	524.3040
81.07	524.3040
82.60	381.7963
83.37	515.9359
83.78	516.2098
83.78	516.2098
83.78	516.2098
83.78	516.2098
84.21	547.1033
84.40	420.9511
84.90	436.5367
85.43	436.8307
86.29	437.3073
86.50	437.4239
86.54	437.4447
86.59	437.4726
86.72	437.5456
86.79	437.5822
86.94	437.6656
87.30	437.8640
87.30	437.8640
87.30	437.8640
87.30	437.8640
87.30	437.8640
87.30	437.8640
87.57	491.8027
87.88	392.0578
88.03	392.1310
88.36	392.2913
88.47	392.3458
89.95	393.0648
91.11	393.6251
92.29	394.1901
92.38	394.2337
92.38	394.2337
93.35	394.6959
94.00	395.0041
94.67	370.5135
94.67	370.5156
94.90	389.2262
94.90	389.2262
94.90	389.2262
94.90	389.2262
95.87	420.7249
95.87	420.7249
96.73	414.9370
97.43	351.5084
98.44	291.1923
98.44	291.1934
98.88	341.1970
99.55	352.1175
99.55	352.1175
99.86	369.8829
100.00	369.9423
100.10	369.9871
103.18	416.8623
103.76	362.3006
105.00	333.3892
105.31	359.0079
108.00	370.9023
109.28	395.0678
111.00	386.9247
111.00	386.9247

111.76	398.1082
112.95	386.7476
115.19	355.9433
116.30	356.3596
117.00	368.5417
117.00	368.5417
117.66	371.7786
121.11	328.2144
121.62	350.3452
121.78	332.4322
122.06	332.5275
122.32	336.6105
122.32	336.6105
122.32	336.6105
122.32	336.6105
123.07	338.8668
127.23	365.3795
129.76	359.2498
131.20	379.9108
133.02	415.9134
133.54	405.0139
135.34	350.0679
136.00	355.3489
136.25	359.4852
136.48	367.6666
140.51	400.5831
140.51	0.0000
142.18	356.4007
142.65	365.7241
143.76	349.7830
144.24	357.0789
144.24	357.0789
144.24	357.0789
144.24	357.0789
145.22	326.7651
145.44	325.8097
147.16	384.6289
152.43	355.6167
152.70	349.5329
153.22	333.2376
154.21	337.6444
154.21	337.6444
154.21	337.6444
154.21	337.6444
155.03	353.3419
156.02	357.7723
158.56	335.8307
159.00	0.0000
159.00	321.4851
160.31	341.5109
161.27	327.2926
162.32	324.4743
162.64	328.7105
163.35	314.3828
163.89	310.3752
165.85	292.1738
167.43	332.1229
171.28	316.4726
171.86	315.5802
172.10	315.6425
176.55	326.2283
176.60	326.2401
181.06	320.0382
184.41	307.3738
185.71	291.6265
186.00	291.6939
190.27	295.2053
192.34	305.8682
193.63	326.3679
197.04	325.0794
198.01	294.3850
198.60	275.3060
200.40	316.2818
201.83	302.7106
202.84	337.6505
205.31	279.6807
208.36	306.0983
208.81	275.2344

209.75	282.3054
209.75	282.3054
210.97	263.6019
215.65	280.9076
216.55	290.8160
218.09	269.4866
222.10	298.4629
223.80	270.5637
226.40	286.2878
227.00	296.2072
227.08	286.4222
227.20	286.4463
228.16	273.5546
228.18	273.5584
228.18	273.5584
231.56	0.0000
235.69	229.6002
236.00	245.4255
236.00	245.4255
238.60	238.1682
238.63	238.1732
238.63	238.1732
238.63	238.1732
239.00	238.2311
240.98	238.5441
241.98	238.7013
241.98	238.7013
241.98	238.7013
244.69	208.0499
245.39	215.2007
247.94	204.9555
248.90	215.9433
249.79	218.9100
252.40	230.3517
252.85	214.9094
252.85	214.9094
254.15	0.0000
256.20	217.5870
256.20	217.5870
260.50	195.9133
260.90	207.0987
262.80	201.7690
264.65	192.8496
268.24	198.6456
268.79	202.2937
269.46	197.0037
269.46	197.0037
269.46	197.0037
269.46	197.0037
271.23	214.0269
273.65	267.5343
276.40	212.2243
277.35	197.9490
277.60	218.9762
277.60	218.9762
278.00	212.1716
278.60	224.1094
279.20	216.1846
279.53	220.7303
280.46	231.6702
281.68	238.1543
283.67	218.5651
284.30	203.2883
285.00	214.2171
285.90	199.8631
286.10	200.7891
286.10	200.7891
287.40	186.0589
288.45	0.0000
290.67	202.5376
290.80	202.5512
291.72	190.5612
293.26	0.0000
293.70	178.6685
295.21	198.5229
295.21	198.5229
295.21	198.5229
295.96	198.6108

296.50	172.8903
297.23	172.9622
298.57	173.0944
299.80	177.7756
299.80	177.7756
300.09	186.9224
300.09	186.9224
300.09	186.9224
300.10	186.9224
300.12	186.9249
301.29	176.4049
302.84	176.5606
303.76	187.3127
303.91	187.3278
304.40	175.1930
304.40	175.1930
304.84	164.5686
306.84	162.7214
308.46	159.4080
311.98	173.4892
316.51	155.5184
318.01	152.8854
319.02	162.1834
319.41	157.6093
320.08	161.3559
323.87	161.6891
323.87	161.6891
323.87	161.6891
323.87	161.6891
325.23	163.3477
328.77	163.6604
333.44	116.0858
334.20	150.9731
334.20	150.9731
334.30	150.9810
338.28	166.6610
338.28	166.6610
338.28	166.6610
338.28	166.6610
338.32	166.6632
338.32	166.6632
338.32	166.6632
340.50	180.2163
340.57	180.2210
344.27	154.1074
345.85	174.4850
350.59	0.0000
351.07	139.0281
351.92	123.4600
351.92	123.4600
351.92	123.4600
355.39	0.0000
356.01	145.6417
364.48	131.1660
366.43	133.1841
367.43	143.6448
367.94	0.0000
369.80	132.4600
374.96	134.6937
383.85	140.0412
387.95	155.5902
388.63	141.3172
391.69	144.3919
391.69	144.3919
392.90	151.1724
398.62	144.8656
400.65	144.0436
401.10	146.9562
401.81	147.0048
402.60	140.3307
404.84	163.5690
410.95	133.1552
411.60	129.3349
413.65	146.8455
414.70	140.1501
415.30	131.4877
415.76	135.3840
417.63	0.0000

418.52	149.1085
423.70	127.1365
427.08	141.9098
427.89	136.1274
432.53	106.2045
433.93	119.9190
439.47	109.4625
439.56	109.4666
439.89	114.3706
443.98	109.6785
444.90	102.8646
445.03	102.8710
445.03	102.8710
445.03	102.8710
445.03	102.8710
453.90	110.1502
463.38	117.5096
468.07	100.5919
473.00	119.9690
475.06	113.1247
475.35	114.1310
476.78	111.2193
477.59	107.2841
477.96	107.2999
482.03	129.3748
484.57	111.5775
487.03	98.7269
490.36	0.0000
492.35	97.9414
497.08	95.1252
507.63	0.0000
510.53	0.0000
510.84	114.7786
511.00	114.7856
511.85	119.1899
511.85	119.1899
513.99	70.5657
513.99	70.5657
520.41	118.2426
520.65	118.2540
527.90	100.3438
528.96	0.0000
529.64	115.6254
529.87	0.0000
531.02	110.6126
537.32	94.6030
543.00	84.6130
546.56	0.0000
549.76	90.9621
552.65	67.5275
555.20	93.1950
563.23	97.5814
563.90	94.5246
568.70	94.6908
569.32	84.4184
569.50	94.7200
569.67	94.7245
573.80	89.7124
574.00	89.7188
574.64	80.4565
578.91	98.1427
579.30	0.0000
583.14	93.1201
585.48	81.1178
591.81	97.5617
592.07	97.5709
593.00	83.0664
595.88	99.7805
600.56	98.9058
602.52	0.0000
602.71	93.7705
602.71	93.7705
603.60	100.7495
604.41	102.5154
604.70	102.5250
609.31	95.0324
609.31	95.0324
609.31	95.0324

609.31	95.0324
610.33	90.5387
612.46	90.6064
614.37	76.7189
618.01	99.5111
621.84	99.6410
621.84	99.6410
631.29	77.8680
633.02	76.8603
633.10	76.8621
634.78	91.6559
635.90	88.5281
636.97	87.5066
645.85	83.5383
646.12	76.1432
656.30	88.4277
657.75	93.7787
657.90	0.0000
661.65	116.9314
661.65	116.9314
664.57	0.0000
666.33	88.7207
666.33	88.7207
675.00	92.8857
677.61	84.4158
685.20	72.8394
692.80	73.0170
695.00	74.1430
696.49	93.5292
696.49	93.5292
697.00	109.6724
697.49	110.7652
698.33	112.9442
698.50	105.4218
699.00	100.0590
702.63	91.5555
706.10	88.4203
706.58	0.0000
706.67	81.9653
709.31	91.7485
711.68	93.9774
713.82	84.3108
717.42	87.6524
720.50	88.1997
721.93	0.0000
722.20	77.6672
722.78	77.6803
722.78	77.6803
722.89	77.6838
722.95	77.6855
723.30	81.3080
724.18	84.9446
727.18	89.0028
733.00	85.1741
735.90	69.6516
739.58	91.5182
742.81	63.2534
744.21	73.0997
747.13	82.9933
751.79	84.2018
752.31	86.4024
753.82	90.8198
755.35	66.7768
756.15	66.7932
756.87	66.8081
763.93	91.0933
765.79	77.9665
766.41	92.2585
766.84	97.7631
768.36	97.8066
768.36	97.8066
768.36	97.8066
768.36	97.8066
776.49	85.3730
778.00	76.2269
778.57	67.9718
778.89	67.9779
783.80	70.8355

785.46	67.1885
792.07	74.6949
795.84	60.9283
796.30	59.0898
801.93	73.9827
805.60	56.4702
810.29	64.8887
810.76	73.2412
815.85	62.2059
817.79	53.8794
818.51	52.9609
819.60	63.2008
826.30	48.4210
828.27	0.0000
831.60	88.5928
831.96	81.1412
834.83	67.2056
836.80	0.0000
846.75	62.7443
848.13	61.8320
856.28	0.0000
856.80	51.5145
860.37	55.4589
867.32	58.1196
867.82	61.3564
871.10	62.2188
873.19	65.0834
874.81	67.9438
875.33	0.0000
876.40	78.3562
879.36	66.1363
880.27	68.9885
880.51	63.3223
881.50	64.2840
883.24	61.4757
884.67	63.3918
889.25	53.9965
896.60	57.8986
898.02	67.4147
899.00	62.6833
903.28	59.9020
911.07	58.1183
911.07	58.1183
911.07	58.1183
919.63	66.4593
920.93	58.2672
925.00	55.4594
925.24	64.0693
926.50	68.8740
934.06	52.5770
934.06	52.5770
934.06	52.5770
934.06	52.5770
935.52	59.4457
937.48	59.2006
944.10	37.8868
946.00	59.7794
949.00	67.3468
962.29	56.9534
964.01	56.9774
966.15	57.0086
968.20	57.0374
969.11	57.0506
969.11	57.0506
969.11	57.0506
977.42	39.8655
980.50	48.2072
983.50	49.7560
989.30	54.4209
996.32	66.1960
1001.03	59.4499
1001.68	58.4839
1004.76	54.6260
1021.30	0.0000
1024.50	0.0000
1034.80	45.1970
1037.82	53.0947
1038.57	52.1201

1038.76	0.0000
1045.16	55.1569
1046.59	50.2488
1048.07	56.1790
1050.47	59.1699
1050.47	59.1699
1063.62	70.2344
1076.63	69.4531
1077.35	69.4645
1085.78	73.5754
1099.22	80.7825
1112.02	61.7268
1112.84	58.3094
1115.52	68.6384
1120.29	58.1204
1120.29	58.1204
1120.29	58.1204
1120.29	58.1204
1120.51	58.1227
1121.28	75.6004
1124.00	0.0000
1129.67	76.6806
1131.51	0.0000
1147.95	0.0000
1167.94	82.0217
1173.22	66.9104
1175.09	87.2213
1177.93	91.3330
1189.05	77.3112
1204.90	66.3436
1205.75	0.0000
1213.00	68.5022
1221.42	80.9159
1230.97	86.2080
1235.34	75.7209
1236.41	0.0000
1238.11	75.0288
1238.11	75.0288
1238.11	75.0288
1238.11	75.0288
1238.25	75.0317
1246.25	60.0075
1260.41	0.0000
1271.85	50.7127
1274.45	52.8096
1274.54	52.8116
1291.56	59.2266
1298.22	0.0000
1312.09	42.7767
1325.50	24.0603
1325.50	24.0603
1332.49	39.8075
1333.61	39.8153
1360.21	42.1289
1362.66	0.0000
1365.15	22.1382
1368.21	36.9198
1368.53	0.0000
1376.25	20.0731
1377.67	33.8164
1377.67	33.8164
1377.67	33.8164
1377.67	33.8164
1384.27	37.0337
1394.10	39.2222
1395.20	32.8694
1407.95	20.1937
1434.06	23.4967
1436.60	16.0278
1457.56	0.0000
1460.81	34.9597
1489.15	19.4194
1509.49	22.7380
1596.49	8.2449
1620.62	9.4615
1678.03	0.0000
1691.02	8.6155
1691.02	8.6155

1706.46	0.0000
1750.46	0.0000
1764.49	18.6464
1764.49	18.6464
1764.49	18.6464
1764.49	18.6464
1770.23	11.8766
1771.40	33.9392
1791.20	0.0000
1808.65	13.6553
1836.01	16.6514

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504007

Total Uranium Activity	1.2986E+00	ug/g
Total Uranium Counting Unc.	3.3316E+00	ug/g
Total Uranium Tpu	1.6998E-06	ug/g
Total Uranium Mda	3.1789E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232504007      *
*   ANALYST       : MXR1                      DETECTOR    : GAM16           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME  :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:51:14.40    SAMPLE ALQT:  155.350 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.267E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.087E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.013E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.466E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:54:15.09

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504008.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:51:52.
Sample ID         : G232504008           Sample quantity  : 1.28200E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.61  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.37	167	433	1.40	91.91	88	9	2.31E-02	23.8	
2	0	63.20	97	738	1.19	125.52	122	9	1.34E-02	51.7	
3	3	74.92*	1030	803	1.86	148.92	140	24	1.43E-01	6.5	5.44E+00
4	3	77.18*	1205	585	1.44	153.43	140	24	1.67E-01	5.1	
5	0	83.48	76	479	1.33	166.02	164	7	1.06E-02	48.6	
6	0	86.97*	239	627	1.66	172.99	170	8	3.32E-02	19.4	
7	0	93.27*	333	546	1.23	185.56	182	10	4.63E-02	14.7	
8	0	128.90	182	442	1.16	256.72	251	12	2.53E-02	24.2	
9	0	186.14*	273	304	1.47	371.02	366	11	3.79E-02	14.0	
10	0	209.42	141	385	1.77	417.52	413	13	1.96E-02	30.1	
11	3	238.59*	1286	174	1.49	475.81	468	19	1.79E-01	3.4	2.41E+00
12	3	241.44	353	172	2.10	481.50	468	19	4.90E-02	12.2	
13	0	270.24	80	327	1.81	539.03	532	16	1.11E-02	52.1	
14	0	277.65	46	176	0.98	553.84	549	10	6.37E-03	56.3	
15	0	295.21*	337	159	1.65	588.91	583	11	4.69E-02	9.2	
16	0	327.69	45	170	0.89	653.81	649	10	6.30E-03	56.1	
17	0	338.43	201	173	1.42	675.28	669	11	2.79E-02	14.5	
18	0	352.01*	563	134	1.58	702.41	697	13	7.81E-02	6.1	
19	0	409.59	47	95	1.53	817.50	812	10	6.53E-03	41.4	
20	0	511.33*	117	159	2.06	1020.87	1012	20	1.62E-02	30.0	
21	0	557.56	20	74	3.38	1113.31	1104	12	2.77E-03	89.6	
22	0	569.28	106	87	1.95	1136.74	1130	14	1.48E-02	21.3	
23	0	583.34*	321	67	1.83	1164.86	1160	14	4.46E-02	8.0	
24	0	609.47*	343	98	1.50	1217.12	1210	15	4.76E-02	8.4	
25	0	728.20	108	113	1.93	1454.60	1444	22	1.50E-02	27.0	
26	0	911.48	221	50	1.33	1821.37	1814	15	3.07E-02	9.8	
27	0	934.75*	39	27	0.97	1867.94	1863	12	5.35E-03	33.6	
28	0	969.57	99	70	1.88	1937.65	1931	12	1.38E-02	19.1	
29	0	1001.83	19	18	1.33	2002.24	1999	6	2.62E-03	43.2	
30	0	1120.62	65	77	2.06	2240.13	2232	15	8.99E-03	32.3	
31	0	1460.71	811	21	2.26	2921.66	2913	17	1.13E-01	3.7	
32	0	1764.61*	41	16	1.55	3531.24	3522	16	5.71E-03	27.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 10:54:18

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504008.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:51:52
Sample ID : G232504008 Sample quantity : 128.20 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:09.61 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.055E+01	3.003E+00	8.927E-01	5.681E-02	34.217
CD-109	+	88.03	*	2.310E+00	9.141E-01	1.257E+00	1.041E-01	1.838
SN-126	+	64.28		3.532E-01	3.684E-01	4.249E-01	6.122E-02	0.831
	+	86.94		9.469E-01	5.359E-01	5.404E-01	2.230E-01	1.752
	+	87.57	*	2.278E-01	9.015E-02	1.274E-01	1.052E-02	1.788
TL-208	+	277.35		5.043E-01	5.703E-01	6.726E-01	7.125E-02	0.750
	+	510.84		7.596E-01	4.626E-01	2.629E-01	2.759E-02	2.889
	+	583.14	*	6.139E-01	1.083E-01	7.255E-02	5.503E-03	8.462
		860.37		8.386E-01	4.202E-01	8.031E-01	6.421E-02	1.044
BI-210	+	46.50	*	1.603E+00	7.729E-01	9.501E-01	7.197E-02	1.687
PB-210	+	46.50	*	1.603E+00	7.729E-01	9.501E-01	7.197E-02	1.687
PO-210	+	46.50	*	1.603E+00	7.703E-01	9.501E-01	6.140E-02	1.687
BI-211		72.87		1.344E+01	2.754E+00	4.274E+00	3.194E-01	3.145
	+	351.07	*	4.127E+00	5.656E-01	4.132E-01	2.629E-02	9.988
PB-212	+	74.81		3.335E+00	5.905E-01	3.822E-01	4.595E-02	8.724
	+	77.11		2.321E+00	2.970E-01	2.278E-01	1.747E-02	10.190
	+	87.30		1.053E+00	4.300E-01	6.045E-01	7.833E-02	1.743
	+	238.63	*	1.869E+00	1.911E-01	1.006E-01	7.668E-03	18.571
		300.09		1.262E+00	1.086E+00	1.676E+00	1.390E-01	0.753
PO-212	+	74.81		3.335E+00	5.905E-01	3.822E-01	4.595E-02	8.724
	+	77.11		2.321E+00	2.970E-01	2.278E-01	1.747E-02	10.190
	+	87.30		1.053E+00	4.300E-01	6.045E-01	7.833E-02	1.743
		115.19		-1.499E+00	3.575E+00	5.652E+00	6.080E-01	-0.265
	+	238.63	*	1.869E+00	1.911E-01	1.006E-01	7.668E-03	18.571
		300.09		1.262E+00	1.086E+00	1.676E+00	1.390E-01	0.753
BI-214	+	609.31	*	1.249E+00	2.353E-01	1.509E-01	1.307E-02	8.276
		768.36		8.108E-01	1.056E+00	1.855E+00	1.752E-01	0.437
	+	934.06		3.131E+00	2.127E+00	2.641E+00	2.486E-01	1.186
	+	1120.29		1.336E+00	8.721E-01	6.718E-01	6.043E-02	1.989
		1238.11		9.823E-01	1.403E+00	2.413E+00	1.970E-01	0.407
		1377.67		1.053E+00	1.487E+00	2.617E+00	2.287E-01	0.402
	+	1764.49		1.252E+00	6.883E-01	4.879E-01	2.763E-02	2.566
PB-214	+	74.81		5.746E+00	9.633E-01	6.586E-01	6.971E-02	8.724
	+	77.11		3.979E+00	5.925E-01	3.905E-01	4.222E-02	10.190

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		1.805E+00	7.277E-01	1.036E+00	1.169E-01	1.743
	+	241.98		3.088E+00	7.966E-01	5.721E-01	4.759E-02	5.398
	+	295.21		1.396E+00	2.837E-01	2.977E-01	2.552E-02	4.690
	+	351.92	*	1.435E+00	2.105E-01	1.435E-01	1.180E-02	10.006
PO-214	+	74.81		5.746E+00	9.633E-01	6.586E-01	6.971E-02	8.724
	+	77.11		3.979E+00	5.925E-01	3.905E-01	4.222E-02	10.190
	+	87.30		1.805E+00	7.277E-01	1.036E+00	1.169E-01	1.743
	+	241.98		3.088E+00	7.966E-01	5.721E-01	4.759E-02	5.398
	+	295.21		1.396E+00	2.837E-01	2.977E-01	2.552E-02	4.690
	+	351.92	*	1.435E+00	2.105E-01	1.435E-01	1.180E-02	10.006
PO-216	+	74.81		3.335E+00	5.905E-01	3.822E-01	4.595E-02	8.724
	+	77.11		2.321E+00	2.970E-01	2.278E-01	1.747E-02	10.190
	+	87.30		1.053E+00	4.300E-01	6.045E-01	7.833E-02	1.743
	+	238.63	*	1.869E+00	1.911E-01	1.006E-01	7.668E-03	18.571
		300.09		1.262E+00	1.086E+00	1.676E+00	1.390E-01	0.753
PO-218	+	74.81		5.746E+00	9.633E-01	6.586E-01	6.971E-02	8.724
	+	77.11		3.979E+00	5.925E-01	3.905E-01	4.222E-02	10.190
	+	87.30		1.805E+00	7.277E-01	1.036E+00	1.169E-01	1.743
	+	241.98		3.088E+00	7.966E-01	5.721E-01	4.759E-02	5.398
	+	295.21		1.396E+00	2.837E-01	2.977E-01	2.552E-02	4.690
	+	351.92	*	1.435E+00	2.105E-01	1.435E-01	1.180E-02	10.006
RA-224	+	240.98	*	5.856E+00	1.474E+00	1.147E+00	7.056E-02	5.104
RA-226	+	609.31	*	1.249E+00	2.353E-01	1.509E-01	1.307E-02	8.276
		768.36		8.108E-01	1.056E+00	1.855E+00	1.752E-01	0.437
	+	934.06		3.131E+00	2.127E+00	2.641E+00	2.486E-01	1.186
	+	1120.29		1.336E+00	8.721E-01	6.718E-01	6.043E-02	1.989
		1238.11		9.823E-01	1.403E+00	2.413E+00	1.970E-01	0.407
		1377.67		1.053E+00	1.487E+00	2.617E+00	2.287E-01	0.402
	+	1764.49		1.252E+00	6.883E-01	4.879E-01	2.763E-02	2.566
AC-228	+	338.32		1.604E+00	8.032E-01	4.579E-01	1.866E-01	3.503
	+	911.07	*	2.031E+00	4.477E-01	3.016E-01	3.059E-02	6.734
	+	969.11		1.619E+00	7.187E-01	6.485E-01	1.477E-01	2.496
RA-228	+	338.32		1.604E+00	8.032E-01	4.579E-01	1.866E-01	3.503
	+	911.07	*	2.031E+00	4.477E-01	3.016E-01	3.059E-02	6.734
	+	969.11		1.619E+00	7.187E-01	6.485E-01	1.477E-01	2.496
TH-228	+	84.40		2.208E+00	2.162E+00	3.057E+00	3.908E-01	0.722
	+	238.60	*	1.869E+00	1.911E-01	1.006E-01	7.667E-03	18.574
		300.10		1.261E+00	1.312E+00	1.676E+00	9.879E-01	0.753
TH-230	+	609.31	*	1.249E+00	2.353E-01	1.509E-01	1.307E-02	8.276
		768.36		8.108E-01	1.056E+00	1.855E+00	1.752E-01	0.437
	+	934.06		3.131E+00	2.127E+00	2.640E+00	2.486E-01	1.186
	+	1120.29		1.336E+00	8.721E-01	6.718E-01	6.043E-02	1.989
		1238.11		9.823E-01	1.403E+00	2.413E+00	1.970E-01	0.407
		1377.67		1.053E+00	1.487E+00	2.617E+00	2.287E-01	0.402
	+	1764.49		1.252E+00	6.883E-01	4.879E-01	2.763E-02	2.566
TH-232	+	338.32		1.604E+00	4.756E-01	4.579E-01	2.650E-02	3.503
	+	911.07	*	2.031E+00	4.477E-01	3.016E-01	3.059E-02	6.734
	+	969.11		1.619E+00	7.187E-01	6.485E-01	1.477E-01	2.496
TH-234	+	63.29	*	8.922E-01	9.347E-01	1.071E+00	1.856E-01	0.833

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.202E+00	7.615E-01	9.330E-01	1.688E-01	2.361
U-234	+	609.31	*	1.249E+00	2.353E-01	1.509E-01	1.307E-02	8.276
		768.36		8.108E-01	1.056E+00	1.855E+00	1.752E-01	0.437
	+	934.06		3.131E+00	2.127E+00	2.640E+00	2.486E-01	1.186
	+	1120.29		1.336E+00	8.721E-01	6.718E-01	6.043E-02	1.989
		1238.11		9.823E-01	1.403E+00	2.413E+00	1.970E-01	0.407
		1377.67		1.053E+00	1.487E+00	2.617E+00	2.287E-01	0.402
	+	1764.49		1.252E+00	6.883E-01	4.879E-01	2.763E-02	2.566
NP-237	+	86.50	*	6.688E-01	2.985E-01	3.046E-01	6.763E-02	2.196
		95.87		-1.438E-01	9.786E-01	1.371E+00	3.393E-01	-0.105
U-238	+	63.29	*	8.922E-01	9.347E-01	1.071E+00	1.856E-01	0.833
	+	92.38		2.202E+00	6.762E-01	9.330E-01	8.051E-02	2.361
AM-243	+	74.67	*	5.406E-01	8.131E-02	6.196E-02	4.680E-03	8.725
	+	86.72		2.508E+01	9.927E+00	1.430E+01	1.174E+00	1.753
		117.66		2.312E+00	3.845E+00	6.318E+00	6.961E-01	0.366
		142.18		-2.629E+01	1.927E+01	2.885E+01	2.679E+00	-0.911
ANH-511	+	511.00	*	1.641E-01	9.897E-02	5.681E-02	3.624E-03	2.888

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	4.035E-01	3.932E-01	6.783E-01	4.775E-02	0.595
NA-22		1274.54	*	-6.158E-02	7.021E-02	1.027E-01	6.071E-03	-0.600
NA-24		1368.53	*	-5.630E-02	7.021E-02	Half-Life too short		
AL-26		1129.67		-2.616E-01	2.733E+00	4.327E+00	2.604E-01	-0.060
		1808.65	*	-1.494E-02	4.635E-02	7.134E-02	3.972E-03	-0.209
TI-44		67.85		-1.205E-02	4.392E-02	4.407E-02	3.206E-03	-0.273
	+	78.38	*	4.283E-01	5.480E-02	6.859E-02	5.305E-03	6.244
SC-46		889.25	*	8.881E-03	5.816E-02	9.761E-02	7.009E-03	0.091
	+	1120.51		2.246E-01	1.458E-01	1.842E-01	1.121E-02	1.219
V-48		944.10		-4.909E-01	1.101E+00	1.728E+00	1.214E-01	-0.284
		983.50	*	3.350E-02	9.127E-02	1.559E-01	1.073E-02	0.215
		1312.09		1.113E-02	1.083E-01	1.779E-01	1.063E-02	0.063
CR-51		320.08	*	-4.078E-01	4.291E-01	6.470E-01	4.208E-02	-0.630
MN-52		744.21		1.737E-01	2.608E-01	4.581E-01	3.351E-02	0.379
		848.13		-5.079E+00	6.847E+00	1.047E+01	7.616E-01	-0.485
	+	935.52		5.271E-01	3.566E-01	5.334E-01	3.763E-02	0.988
		1246.25		-6.393E+00	8.951E+00	1.352E+01	7.895E-01	-0.473
		1333.61		-2.071E+00	5.772E+00	8.893E+00	5.350E-01	-0.233
		1434.06	*	7.511E-02	2.666E-01	4.488E-01	2.705E-02	0.167
MN-54		834.83	*	3.125E-02	5.551E-02	9.630E-02	7.025E-03	0.324
CO-56		846.75	*	-2.875E-02	5.274E-02	8.269E-02	6.016E-03	-0.348
		977.42		-1.310E+00	4.322E+00	6.540E+00	4.516E-01	-0.200
		1037.82		1.259E-01	4.433E-01	7.492E-01	5.398E-02	0.168
		1175.09		2.873E-01	3.343E+00	5.500E+00	3.120E-01	0.052
		1238.25		7.074E-02	1.401E-01	2.374E-01	1.468E-02	0.298
		1360.21		1.103E-02	1.647E+00	2.667E+00	1.607E-01	0.004
		1771.40		-3.343E-01	4.629E-01	6.801E-01	3.842E-02	-0.492

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-4.262E-03	2.711E-02	4.173E-02	4.802E-03	-0.102
		136.48		2.658E-03	2.240E-01	3.590E-01	3.777E-02	0.007
CO-58		810.76	*	1.614E-02	5.753E-02	9.791E-02	7.192E-03	0.165
FE-59		142.65		-3.858E+00	2.902E+00	4.316E+00	3.983E-01	-0.894
		192.34		-3.437E-01	1.069E+00	1.605E+00	1.926E-01	-0.214
		1099.22	*	-2.269E-03	1.324E-01	2.165E-01	1.553E-02	-0.010
		1291.56		-8.676E-02	1.858E-01	2.848E-01	2.144E-02	-0.305
CO-60		1173.22		-2.866E-02	6.952E-02	1.088E-01	6.164E-03	-0.263
		1332.49	*	-4.151E-02	5.979E-02	8.752E-02	5.264E-03	-0.474
ZN-65		1115.52	*	-9.109E-02	1.499E-01	1.902E-01	1.167E-02	-0.479
GE-68		1077.35	*	-8.522E-01	1.833E+00	2.854E+00	1.822E-01	-0.299
AS-73		53.44	*	-6.891E-02	2.544E-01	4.124E-01	2.771E-02	-0.167
AS-74		595.88	*	2.172E-04	1.127E-01	1.817E-01	1.250E-02	0.001
		634.78		-3.220E-01	4.784E-01	7.213E-01	5.085E-02	-0.446
SE-75		66.05		-1.617E+00	3.091E+00	4.288E+00	3.992E-01	-0.377
		96.73		-1.329E-01	7.707E-01	1.078E+00	1.495E-01	-0.123
		121.11		-7.345E-02	1.391E-01	2.182E-01	2.939E-02	-0.337
		136.00		-1.429E-02	4.382E-02	6.670E-02	6.713E-03	-0.214
		198.60		8.574E-01	1.948E+00	3.320E+00	2.472E-01	0.258
		264.65	*	1.060E-02	5.638E-02	8.249E-02	4.990E-03	0.129
		279.53		8.380E-02	1.403E-01	2.106E-01	1.328E-02	0.398
		303.91		-3.330E+00	2.678E+00	4.121E+00	3.948E-01	-0.808
		400.65		-8.921E-02	3.317E-01	5.339E-01	4.750E-02	-0.167
BR-77	+	87.88		2.599E+02	1.029E+02	1.594E+02	1.319E+01	1.631
		200.40		-8.379E+00	9.571E+01	1.599E+02	9.904E+00	-0.052
	+	239.00		1.558E+02	1.432E+01	2.281E+01	1.405E+00	6.831
		249.79		-1.318E+01	3.880E+01	6.354E+01	3.878E+00	-0.207
		281.68		-4.751E+01	6.289E+01	8.533E+01	4.988E+00	-0.557
		297.23		1.780E+02	4.749E+01	8.004E+01	4.695E+00	2.224
		303.76		-1.456E+02	1.196E+02	1.853E+02	1.087E+01	-0.786
		439.47		-2.307E+01	1.002E+02	1.610E+02	9.368E+00	-0.143
		484.57		1.966E+01	1.549E+02	2.543E+02	1.573E+01	0.077
		520.65	*	6.289E+00	7.607E+00	1.211E+01	7.808E-01	0.519
		574.64		2.521E+01	1.522E+02	2.164E+02	1.465E+01	0.117
		578.91		-2.701E-01	6.268E+01	8.710E+01	5.919E+00	-0.003
		585.48		9.989E+02	1.939E+02	3.540E+02	2.418E+01	2.822
		755.35		7.754E+00	1.213E+02	2.034E+02	1.490E+01	0.038
		817.79		4.622E+01	9.816E+01	1.700E+02	1.243E+01	0.272
SR-82		698.33		-4.322E+00	4.371E+01	7.260E+01	5.257E+00	-0.060
		776.49	*	-2.478E-01	5.073E-01	8.086E-01	5.928E-02	-0.306
		1395.20		1.625E+01	1.571E+01	2.894E+01	1.745E+00	0.561
RB-83		520.41	*	1.197E-01	9.254E-02	1.538E-01	9.914E-03	0.778
		529.64		-5.323E-02	1.414E-01	2.220E-01	1.444E-02	-0.240
		552.65		-4.888E-02	2.973E-01	4.059E-01	2.699E-02	-0.120
RB-84		881.50	*	1.287E-02	1.018E-01	1.705E-01	1.228E-02	0.075
KR-85		513.99	*	2.831E+01	1.032E+01	1.933E+01	1.237E+00	1.464
SR-85		513.99	*	1.418E-01	5.168E-02	9.682E-02	6.197E-03	1.464
RB-86		1076.63	*	-2.010E-01	1.047E+00	1.681E+00	1.073E-01	-0.120
Y-88		898.02		-2.132E-02	5.968E-02	9.528E-02	6.866E-03	-0.224

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	9.232E-04	5.507E-02	9.131E-02	5.039E-03	0.010
ZR-88		392.90	*	-3.619E-02	3.861E-02	5.930E-02	3.198E-03	-0.610
Y-91		1204.90	*	-1.410E-01	2.798E+01	4.557E+01	2.617E+00	-0.003
NB-94		702.63	*	-1.811E-02	4.563E-02	7.388E-02	5.356E-03	-0.245
		871.10		2.301E-03	4.869E-02	8.104E-02	5.857E-03	0.028
NB-95		765.79	*	3.847E-02	6.282E-02	1.093E-01	8.009E-03	0.352
NB-95M		235.69	*	6.552E-01	1.842E-01	3.022E-01	2.363E-02	2.168
ZR-95		724.18		1.768E-01	1.509E-01	2.436E-01	1.987E-02	0.726
		756.15	*	-3.783E-02	9.881E-02	1.594E-01	1.328E-02	-0.237
NB-97		657.90	*	-6.398E-03	9.881E-02	Half-Life too short		
		1024.50		-6.211E-01	9.881E-02	Half-Life too short		
ZR-97		254.15		1.945E-01	9.881E-02	Half-Life too short		
		355.39		7.388E-01	9.881E-02	Half-Life too short		
		507.63	*	4.559E-01	9.881E-02	Half-Life too short		
		602.52		-9.433E-01	9.881E-02	Half-Life too short		
		1021.30		3.529E-01	9.881E-02	Half-Life too short		
		1147.95		-8.891E-02	9.881E-02	Half-Life too short		
		1362.66		1.807E-01	9.881E-02	Half-Life too short		
		1750.46		-4.934E-03	9.881E-02	Half-Life too short		
MO-99		140.51		-3.093E+00	1.571E+01	2.490E+01	6.965E+00	-0.124
		181.06		1.547E+01	1.163E+01	1.782E+01	3.075E+00	0.868
		366.43		4.091E+01	5.820E+01	9.982E+01	5.610E+00	0.410
		739.58	*	-8.392E+00	9.477E+00	1.448E+01	2.097E+00	-0.580
		778.00		-8.546E+00	2.719E+01	4.404E+01	3.229E+00	-0.194
TC-99M		140.51	*	-1.590E+07	2.719E+01	Half-Life too short		
RH-101		127.23		5.416E-02	4.053E-02	6.000E-02	6.585E-03	0.903
		198.01	*	3.894E-02	3.608E-02	6.287E-02	3.890E-03	0.619
		325.23		3.362E-01	3.153E-01	4.864E-01	2.838E-02	0.691
RH-102		418.52		-5.847E-02	3.601E-01	5.823E-01	3.280E-02	-0.100
		475.06	*	-2.848E-02	3.630E-02	5.519E-02	3.374E-03	-0.516
		631.29		-9.524E-03	7.848E-02	1.247E-01	8.777E-03	-0.076
		697.49		-4.995E-03	1.054E-01	1.757E-01	1.272E-02	-0.028
		766.84		1.109E-01	1.611E-01	2.817E-01	2.064E-02	0.394
		1046.59		-4.576E-02	1.523E-01	2.413E-01	1.585E-02	-0.190
		1112.84		1.440E-01	3.661E-01	5.442E-01	3.342E-02	0.265
RU-103		497.08	*	8.801E-03	5.140E-02	8.455E-02	1.088E-02	0.104
	+	610.33		1.296E+01	2.990E+00	3.584E+00	5.694E-01	3.616
RH-106	+	511.85		8.161E-01	4.923E-01	5.568E-01	3.556E-02	1.466
		621.84	*	-5.692E-02	4.337E-01	6.648E-01	8.225E-02	-0.086
		1050.47		-4.707E-01	3.331E+00	5.385E+00	3.525E-01	-0.087
RU-106	+	511.85		8.161E-01	4.923E-01	5.568E-01	3.556E-02	1.466
		621.84	*	-5.692E-02	4.337E-01	6.648E-01	4.652E-02	-0.086
		1050.47		-4.707E-01	3.331E+00	5.385E+00	3.525E-01	-0.087
AG-108M		433.93	*	1.040E-02	4.451E-02	7.380E-02	4.627E-03	0.141
		614.37		-4.299E-02	6.502E-02	8.280E-02	6.112E-03	-0.519
		722.95		-1.079E-02	6.717E-02	9.497E-02	7.297E-03	-0.114
AG-110M		657.75	*	-1.903E-02	4.898E-02	7.975E-02	5.932E-03	-0.239
		677.61		1.119E-01	4.061E-01	6.960E-01	5.206E-02	0.161
		706.67		7.039E-02	2.898E-01	4.939E-01	3.724E-02	0.143

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		1.395E-01	2.444E-01	4.246E-01	3.233E-02	0.329
		884.67		2.503E-02	7.484E-02	1.276E-01	9.601E-03	0.196
		937.48		2.070E-01	1.546E-01	2.644E-01	1.964E-02	0.783
		1384.27		-3.017E-01	2.520E-01	3.336E-01	2.125E-02	-0.905
IN-111		171.28		8.978E-02	6.232E-01	1.055E+00	6.413E-02	0.085
		245.39	*	9.344E-02	7.521E-01	1.099E+00	6.732E-02	0.085
IN-113M		391.69	*	-7.101E-02	5.627E-02	8.428E-02	4.887E-03	-0.842
SN-113		391.69	*	-7.101E-02	5.627E-02	8.428E-02	4.887E-03	-0.842
IN-114M		190.27	*	9.020E-02	2.028E-01	3.042E-01	1.876E-02	0.297
CD-115		260.90		-1.679E+01	7.601E+01	1.251E+02	7.533E+00	-0.134
		492.35		5.113E+00	2.363E+01	3.903E+01	2.437E+00	0.131
		527.90	*	-3.657E+00	7.189E+00	1.114E+01	7.236E-01	-0.328
SN-117M		156.02		2.217E+00	2.306E+00	3.814E+00	2.856E-01	0.581
		158.56	*	8.017E-03	5.543E-02	8.897E-02	6.345E-03	0.090
SB-122		563.90	*	4.913E-01	1.981E+00	2.832E+00	1.902E-01	0.173
		692.80		2.080E+00	3.443E+01	5.793E+01	4.188E+00	0.036
I-123		159.00	*	-1.572E-01	3.443E+01	Half-Life too short		
		528.96		-2.433E+01	3.443E+01	Half-Life too short		
TE-123M		159.00	*	-1.322E-02	3.199E-02	5.012E-02	3.575E-03	-0.264
I-124		602.71	*	-5.812E-01	7.691E-01	9.700E-01	6.707E-02	-0.599
		722.78		-6.681E-01	4.841E+00	6.864E+00	5.001E-01	-0.097
		1325.50		-1.530E+01	3.769E+01	5.788E+01	3.474E+00	-0.264
		1376.25		4.895E+01	3.100E+01	5.984E+01	3.607E+00	0.818
		1509.49		1.363E+01	1.316E+01	2.558E+01	1.534E+00	0.533
		1691.02		-3.407E+00	3.438E+00	4.297E+00	2.490E-01	-0.793
SB-124		602.71		-4.778E-02	6.323E-02	7.975E-02	5.515E-03	-0.599
		645.85		-3.486E-01	7.161E-01	1.098E+00	8.468E-02	-0.317
		709.31		2.171E+00	3.787E+00	6.613E+00	4.803E-01	0.328
		713.82		-1.516E+00	2.229E+00	3.503E+00	3.892E-01	-0.433
		722.78		-7.962E-02	5.770E-01	8.180E-01	6.140E-02	-0.097
	+	968.20		1.624E+01	6.291E+00	1.011E+01	7.018E-01	1.606
		1045.16		-1.009E-01	3.212E+00	5.255E+00	3.456E-01	-0.019
		1325.50		-1.947E+00	4.797E+00	7.367E+00	4.422E-01	-0.264
		1368.21		-1.461E+00	2.708E+00	4.033E+00	4.833E-01	-0.362
		1436.60		3.096E+00	5.317E+00	9.351E+00	5.636E-01	0.331
		1691.02	*	-9.577E-02	9.668E-02	1.208E-01	7.600E-03	-0.793
SB-125		427.89	*	9.281E-02	1.172E-01	2.016E-01	1.203E-02	0.460
		463.38		7.612E-01	4.047E-01	7.282E-01	5.063E-02	1.045
		600.56		3.823E-02	2.559E-01	4.059E-01	3.119E-02	0.094
		635.90		4.712E-02	3.964E-01	6.432E-01	5.075E-02	0.073
TE-125M		109.28	*	-5.715E+00	9.052E+00	1.420E+01	1.652E+00	-0.402
I-126		388.63		2.439E-01	2.187E-01	3.839E-01	2.079E-02	0.635
		666.33	*	9.434E-02	2.306E-01	3.982E-01	2.850E-02	0.237
		753.82		7.605E-01	1.851E+00	3.192E+00	2.337E-01	0.238
SB-126		223.80		-3.774E-01	3.974E+00	6.614E+00	4.101E-01	-0.057
	+	278.60		2.940E+00	3.315E+00	4.341E+00	2.538E-01	0.677
	+	296.50		1.226E+01	2.370E+00	3.704E+00	2.172E-01	3.311
		414.70		-6.676E-02	9.668E-02	1.271E-01	7.117E-03	-0.525
		415.30		-4.211E+00	7.501E+00	1.054E+01	5.907E-01	-0.399

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		4.252E+00	5.424E+00	8.244E+00	5.493E-01	0.516
		573.80		5.634E-01	1.294E+00	1.902E+00	1.288E-01	0.296
		593.00		-1.371E+00	1.097E+00	1.551E+00	1.065E-01	-0.884
		656.30		1.127E+00	4.208E+00	7.203E+00	5.133E-01	0.156
		666.33		3.922E-02	9.588E-02	1.655E-01	1.185E-02	0.237
		675.00		-1.085E+00	2.329E+00	3.749E+00	2.693E-01	-0.289
		695.00		5.018E-02	9.444E-02	1.645E-01	1.190E-02	0.305
		697.00		-2.453E-02	3.231E-01	5.377E-01	3.892E-02	-0.046
		720.50	*	-1.539E-02	2.066E-01	2.952E-01	2.150E-02	-0.052
		856.80		-1.134E+00	6.347E-01	8.673E-01	6.294E-02	-1.308
		989.30		1.087E+00	1.590E+00	2.796E+00	1.916E-01	0.389
		1034.80		5.480E+00	1.186E+01	2.036E+01	1.351E+00	0.269
		1213.00		-5.435E+00	6.491E+00	9.703E+00	5.592E-01	-0.560
SB-127		61.10		2.024E+01	2.095E+01	3.094E+01	2.880E+00	0.654
		252.40		-1.604E+00	3.445E+00	5.501E+00	2.279E+00	-0.292
		290.80		-1.328E+01	1.922E+01	2.614E+01	2.200E+00	-0.508
		411.60		4.813E+00	1.178E+01	1.729E+01	2.384E+00	0.278
		444.90		7.866E-01	8.399E+00	1.379E+01	1.402E+00	0.057
		473.00		-5.929E-01	1.377E+00	2.160E+00	2.312E-01	-0.274
		543.00		-4.754E+00	1.630E+01	2.572E+01	3.279E+00	-0.185
		603.60		-4.359E+00	1.227E+01	1.628E+01	1.755E+00	-0.268
		685.20	*	8.987E-01	1.258E+00	2.220E+00	2.146E-01	0.405
		698.50		-3.004E+00	1.387E+01	2.281E+01	3.341E+00	-0.132
		722.20		-5.417E+00	3.285E+01	4.644E+01	4.394E+00	-0.117
		783.80		2.599E+00	3.527E+00	6.199E+00	6.786E-01	0.419
XE-127		57.60		-2.656E-02	2.471E+00	3.897E+00	2.704E-01	-0.007
		145.22		9.298E-01	7.321E-01	1.222E+00	1.089E-01	0.761
		172.10		1.291E-01	1.232E-01	2.151E-01	1.308E-02	0.600
		202.84	*	-2.366E-02	5.472E-02	8.494E-02	5.264E-03	-0.279
		374.96		2.088E-01	2.457E-01	4.234E-01	2.349E-02	0.493
I-131		80.18		6.492E+00	4.202E+00	4.757E+00	3.745E-01	1.365
		284.30		7.451E-01	1.542E+00	2.481E+00	1.607E-01	0.300
		364.48	*	-1.404E-02	1.195E-01	1.949E-01	1.229E-02	-0.072
		636.97		5.210E-03	1.905E+00	3.060E+00	2.332E-01	0.002
		722.89		-1.456E+00	9.323E+00	1.319E+01	9.673E-01	-0.110
TE-132		49.72		-2.167E+00	3.209E+00	4.453E+00	3.848E-01	-0.487
		111.76		-5.254E+00	1.803E+01	2.869E+01	3.392E+00	-0.183
		116.30		7.256E+00	1.715E+01	2.801E+01	3.428E+00	0.259
		228.16	*	-4.829E-02	4.918E-01	8.179E-01	1.154E-01	-0.059
BA-133		53.15		-3.399E-01	1.097E+00	1.777E+00	1.191E-01	-0.191
		79.62		3.591E+00	1.333E+00	1.918E+00	2.834E-01	1.872
		81.00		7.206E-02	1.092E-01	1.165E-01	1.804E-02	0.618
	+	276.40		4.981E-01	5.646E-01	7.493E-01	9.738E-02	0.665
		302.84		-1.595E-02	1.805E-01	2.974E-01	3.477E-02	-0.054
		356.01	*	1.491E-02	6.040E-02	8.791E-02	1.012E-02	0.170
		383.85		-2.494E-01	3.702E-01	5.784E-01	6.187E-02	-0.431
I-133	+	510.53		2.766E-01	3.702E-01	Half-Life too short		
		529.87	*	-3.586E-04	3.702E-01	Half-Life too short		
		706.58		2.610E-02	3.702E-01	Half-Life too short		

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		856.28		-2.796E-01	3.702E-01	Half-Life too short		
		875.33		1.268E-02	3.702E-01	Half-Life too short		
		1236.41		5.875E-02	3.702E-01	Half-Life too short		
		1298.22		2.013E-03	3.702E-01	Half-Life too short		
CS-134		475.35		-1.495E+00	2.398E+00	3.703E+00	2.265E-01	-0.404
		563.23		2.403E-01	6.902E-01	8.776E-01	5.981E-02	0.274
	+	569.32		1.096E+00	4.719E-01	6.194E-01	4.270E-02	1.769
		604.70		2.861E-02	5.088E-02	7.526E-02	5.231E-03	0.380
		795.84	*	1.188E-01	7.043E-02	1.311E-01	9.704E-03	0.906
		801.93		-4.761E-01	5.769E-01	8.872E-01	6.551E-02	-0.537
		1038.57		-2.445E+00	5.632E+00	8.816E+00	5.830E-01	-0.277
		1167.94		1.780E+00	3.902E+00	6.640E+00	3.792E-01	0.268
		1365.15		-2.812E-01	1.934E+00	3.065E+00	2.015E-01	-0.092
CS-135		268.24	*	2.611E-01	2.165E-01	3.353E-01	2.608E-02	0.779
I-135		288.45		7.237E+05	2.165E-01	Half-Life too short		
		417.63		2.062E+07	2.165E-01	Half-Life too short		
		546.56		3.083E+07	2.165E-01	Half-Life too short		
		836.80		5.717E+07	2.165E-01	Half-Life too short		
		1038.76		-4.130E+07	2.165E-01	Half-Life too short		
		1124.00		1.462E+08	2.165E-01	Half-Life too short		
		1131.51		1.305E+07	2.165E-01	Half-Life too short		
		1260.41	*	9.681E+06	2.165E-01	Half-Life too short		
		1457.56		2.650E+09	2.165E-01	Half-Life too short		
		1678.03		3.510E+07	2.165E-01	Half-Life too short		
		1706.46		-1.211E+08	2.165E-01	Half-Life too short		
		1791.20		-3.293E+07	2.165E-01	Half-Life too short		
CS-136		66.91		-2.236E-01	5.468E-01	6.379E-01	9.384E-02	-0.350
	+	86.29		2.640E+00	1.075E+00	1.563E+00	1.963E-01	1.689
		153.22		-5.534E-02	6.783E-01	1.080E+00	9.687E-02	-0.051
		163.89		6.211E-01	9.850E-01	1.697E+00	1.307E-01	0.366
		176.55		-1.556E-01	3.511E-01	5.805E-01	3.941E-02	-0.268
		273.65		-4.613E-02	7.857E-01	7.521E-01	5.041E-02	-0.061
		340.57		6.045E-01	1.737E-01	2.986E-01	1.834E-02	2.025
		818.51		5.612E-02	9.160E-02	1.607E-01	1.176E-02	0.349
		1048.07	*	-4.516E-02	1.317E-01	2.078E-01	1.461E-02	-0.217
		1235.34		-1.520E-01	8.553E-01	1.371E+00	1.370E-01	-0.111
BA-137M		661.65	*	-7.849E-03	5.175E-02	8.588E-02	6.134E-03	-0.091
CS-137		661.65	*	-8.297E-03	5.470E-02	9.078E-02	6.503E-03	-0.091
CE-139		165.85	*	7.978E-03	3.106E-02	5.284E-02	3.201E-03	0.151
BA-140		162.64		-2.438E-01	6.856E-01	1.140E+00	8.196E-02	-0.214
		304.84		-1.612E+00	1.496E+00	2.229E+00	6.085E-01	-0.723
		423.70		-1.722E+00	2.248E+00	3.368E+00	1.070E+00	-0.511
		537.32	*	-1.953E-01	3.379E-01	5.124E-01	1.674E-01	-0.381
LA-140	+	328.77		3.927E-01	4.413E-01	5.889E-01	3.838E-02	0.667
		432.53		-1.514E+00	2.439E+00	3.808E+00	2.425E-01	-0.398
		487.03		6.845E-02	1.558E-01	2.618E-01	1.813E-02	0.262
		751.79		5.711E-01	2.204E+00	3.755E+00	3.149E-01	0.152
		815.85		-7.032E-02	4.172E-01	6.828E-01	5.779E-02	-0.103
		867.82		-1.994E+00	1.731E+00	2.515E+00	1.955E-01	-0.793

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		-4.079E-01	3.538E+00	5.333E+00	5.045E-01	-0.076
		925.24		6.084E-01	1.392E+00	2.400E+00	1.856E-01	0.254
		1596.49	*	1.905E-02	1.123E-01	1.920E-01	1.138E-02	0.099
CE-141		145.44	*	8.189E-02	6.604E-02	1.101E-01	9.953E-03	0.744
CE-143		57.37		-1.368E-05	6.604E-02	Half-Life too short		
		231.56		-6.693E-04	6.604E-02	Half-Life too short		
		293.26	*	2.800E-04	6.604E-02	Half-Life too short		
	+	350.59		1.054E-02	6.604E-02	Half-Life too short		
		490.36		-9.210E-04	6.604E-02	Half-Life too short		
		664.57		5.458E-04	6.604E-02	Half-Life too short		
		721.93		-2.094E-04	6.604E-02	Half-Life too short		
CE-144		80.11		3.096E-01	1.880E+00	2.685E+00	2.101E-01	0.115
		133.54	*	1.399E-01	2.452E-01	3.524E-01	5.832E-02	0.397
PM-144		476.78		4.996E-02	8.457E-02	1.416E-01	1.022E-02	0.353
		618.01		-1.281E-03	4.537E-02	7.075E-02	5.146E-03	-0.018
		696.49	*	1.861E-02	4.725E-02	8.148E-02	5.899E-03	0.228
		778.57		-2.215E+00	3.255E+00	5.089E+00	3.732E-01	-0.435
PR-144		696.49	*	1.259E+00	3.198E+00	5.515E+00	3.991E-01	0.228
		1489.15		5.788E+00	1.784E+01	3.123E+01	1.876E+00	0.185
PM-146		453.90	*	1.513E-02	5.685E-02	9.440E-02	8.230E-03	0.160
		633.02		-5.287E-01	2.070E+00	3.237E+00	1.199E+00	-0.163
		735.90		1.331E-01	2.374E-01	3.612E-01	1.020E-01	0.368
		747.13		6.875E-02	1.372E-01	2.375E-01	3.153E-02	0.290
ND-147		91.11		4.054E-01	3.743E-01	4.037E-01	3.733E-02	1.004
		319.41		-3.361E+00	3.374E+00	5.233E+00	3.062E-01	-0.642
		439.89		-4.688E-01	6.772E+00	1.100E+01	6.407E-01	-0.043
		531.02	*	3.818E-01	6.597E-01	1.114E+00	1.542E-01	0.343
PM-149		285.90	*	6.784E+01	5.526E+01	9.573E+01	1.358E+01	0.709
EU-152		121.78		-3.007E-02	7.957E-02	1.212E-01	1.513E-02	-0.248
		244.69		4.077E-01	4.124E-01	6.350E-01	3.894E-02	0.642
		344.27	*	-6.119E-02	1.387E-01	1.904E-01	1.238E-02	-0.321
		443.98		7.556E-01	1.200E+00	2.045E+00	1.198E-01	0.369
		778.89		-2.322E-01	3.737E-01	5.873E-01	4.306E-02	-0.395
		867.32		-1.366E+00	1.173E+00	1.705E+00	1.233E-01	-0.801
		964.01		2.924E-01	5.029E-01	7.621E-01	5.303E-02	0.384
		1085.78		2.055E-02	6.141E-01	1.010E+00	6.388E-02	0.020
		1112.02		2.552E-01	4.923E-01	7.717E-01	4.744E-02	0.331
		1407.95		1.658E-01	2.442E-01	4.360E-01	2.629E-02	0.380
GD-153		69.67		3.048E-01	1.257E+00	1.684E+00	1.236E-01	0.181
	+	83.37		1.260E+01	1.228E+01	1.934E+01	1.548E+00	0.652
		97.43	*	-5.830E-03	7.963E-02	1.120E-01	1.014E-02	-0.052
		103.18		-8.380E-02	1.018E-01	1.588E-01	1.519E-02	-0.528
EU-154		123.07		2.633E-02	6.089E-02	8.727E-02	1.187E-02	0.302
		247.94		1.740E-01	4.280E-01	6.880E-01	6.698E-02	0.253
		591.81		-1.403E-01	8.725E-01	1.246E+00	1.301E-01	-0.113
		723.30		2.051E-02	2.729E-01	3.969E-01	3.311E-02	0.052
		756.87		-5.178E-01	1.094E+00	1.748E+00	1.937E-01	-0.296
		873.19		3.292E-01	4.338E-01	7.663E-01	8.662E-02	0.430
		996.32		1.591E-01	6.081E-01	8.922E-01	1.514E-01	0.178

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		6.866E-02	3.308E-01	4.827E-01	4.998E-02	0.142
		1274.45	*	-1.794E-01	1.961E-01	2.844E-01	2.674E-02	-0.631
EU-155		48.70		3.810E-01	5.876E-01	8.676E-01	5.664E-02	0.439
		60.01		2.026E+00	2.567E+00	3.781E+00	2.670E-01	0.536
	+	86.54		2.741E-01	1.085E-01	1.621E-01	1.343E-02	1.691
		105.31	*	6.704E-02	1.047E-01	1.725E-01	1.701E-02	0.389
TB-160	+	86.79		7.171E-01	2.838E-01	4.224E-01	3.468E-02	1.698
		197.04		4.849E-01	6.087E-01	1.051E+00	6.498E-02	0.462
		215.65		5.870E-01	9.051E-01	1.368E+00	8.493E-02	0.429
		298.57		2.593E-01	1.555E-01	2.470E-01	1.449E-02	1.050
		879.36	*	-3.349E-02	2.111E-01	3.445E-01	2.483E-02	-0.097
		962.29		1.024E-02	9.251E-01	1.312E+00	9.138E-02	0.008
		966.15		1.076E+00	3.874E-01	6.886E-01	4.786E-02	1.562
		1177.93		-6.272E-02	5.613E-01	9.060E-01	5.145E-02	-0.069
		1271.85		7.694E-02	1.064E+00	1.743E+00	1.027E-01	0.044
HO-166M		80.57		2.570E-01	3.003E-01	3.260E-01	2.559E-02	0.788
		184.41		1.328E-01	4.615E-02	7.488E-02	4.600E-03	1.774
		280.46		-3.892E-02	1.117E-01	1.566E-01	9.148E-03	-0.249
	+	410.95		4.662E-01	3.873E-01	5.464E-01	3.040E-02	0.853
		711.68	*	-2.583E-02	8.629E-02	1.409E-01	1.024E-02	-0.183
		752.31		2.093E-01	3.913E-01	6.810E-01	4.985E-02	0.307
		810.29		2.787E-02	8.812E-02	1.504E-01	1.101E-02	0.185
TM-171		51.35		-3.169E-01	9.287E+00	1.330E+01	8.811E-01	-0.024
		52.39		1.027E+00	4.686E+00	7.462E+00	4.978E-01	0.138
		59.40		9.127E+00	1.335E+01	1.960E+01	1.381E+00	0.466
		66.72	*	-9.431E+00	2.216E+01	2.587E+01	1.872E+00	-0.365
LU-176	+	88.36		5.402E-01	2.138E-01	3.361E-01	2.794E-02	1.607
		201.83		-2.002E-02	3.266E-02	5.341E-02	3.309E-03	-0.375
		306.84	*	1.074E-02	2.899E-02	4.891E-02	2.869E-03	0.220
		401.10		-3.684E+00	8.805E+00	1.404E+01	7.680E-01	-0.262
LU-177		112.95		-2.432E-01	1.261E+00	2.015E+00	2.121E-01	-0.121
	+	208.36	*	2.814E+00	1.705E+00	1.902E+00	1.180E-01	1.479
LU-177M		52.97		-1.054E-01	4.847E-01	7.872E-01	5.273E-02	-0.134
		54.07		-4.299E-02	2.767E-01	4.503E-01	3.040E-02	-0.095
		61.30		7.391E-01	8.213E-01	1.212E+00	8.589E-02	0.610
		121.62		-1.662E-01	4.035E-01	6.135E-01	7.025E-02	-0.271
		147.16		4.922E-01	7.266E-01	1.191E+00	1.032E-01	0.413
		171.86		4.547E-01	5.117E-01	8.886E-01	5.405E-02	0.512
		218.09		3.021E-01	9.641E-01	1.593E+00	9.885E-02	0.190
	+	268.79		1.806E+00	1.883E+00	1.722E+00	1.025E-01	1.049
		319.02		-1.354E-01	2.982E-01	4.793E-01	2.803E-02	-0.283
		367.43		1.747E-01	1.114E+00	1.848E+00	1.037E-01	0.095
		413.65	*	-7.297E-02	2.457E-01	3.372E-01	1.884E-02	-0.216
HF-181		56.28		-2.144E-01	3.460E-01	5.540E-01	3.803E-02	-0.387
		57.53		-7.433E-03	2.084E-01	3.283E-01	2.277E-02	-0.023
		65.20		5.393E-01	5.845E-01	8.574E-01	6.164E-02	0.629
		133.02		2.818E-02	7.620E-02	1.087E-01	1.125E-02	0.259
		136.25		-1.037E-02	4.749E-01	7.602E-01	7.590E-02	-0.014
		345.85		-8.770E-02	2.632E-01	3.649E-01	2.099E-02	-0.240

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	-2.595E-02	5.389E-02	8.430E-02	5.199E-03	-0.308
W-181		56.28		-8.590E-02	1.387E-01	2.221E-01	1.525E-02	-0.387
		57.53		-3.043E-03	8.359E-02	1.317E-01	9.133E-03	-0.023
		65.20	*	2.147E-01	2.326E-01	3.413E-01	2.453E-02	0.629
TA-182		67.75		-1.799E-02	1.023E-01	1.034E-01	7.520E-03	-0.174
		100.10		2.465E-01	1.666E-01	2.726E-01	2.532E-02	0.904
		152.43		1.582E-01	3.811E-01	6.184E-01	4.934E-02	0.256
		222.10		-6.356E-02	3.834E-01	6.363E-01	3.947E-02	-0.100
	+	1001.68		2.726E+00	2.361E+00	5.166E+00	3.513E-01	0.528
	+	1121.28		6.233E-01	4.047E-01	5.248E-01	3.191E-02	1.188
		1189.05		-3.467E-01	5.023E-01	7.656E-01	4.369E-02	-0.453
		1221.42	*	2.459E-01	3.310E-01	5.715E-01	3.305E-02	0.430
		1230.97		-9.633E-02	7.522E-01	1.210E+00	7.024E-02	-0.080
RE-183		57.98		4.184E-02	8.677E-02	1.334E-01	9.283E-03	0.314
		59.32		3.559E-02	5.361E-02	7.865E-02	5.538E-03	0.452
		67.20		-8.669E-02	1.841E-01	1.823E-01	1.322E-02	-0.476
		162.32	*	-1.152E-01	1.127E-01	1.824E-01	1.201E-02	-0.632
	+	208.81		3.120E+00	1.891E+00	2.121E+00	1.316E-01	1.471
		291.72		-3.960E-01	1.239E+00	1.739E+00	1.019E-01	-0.228
RE-184		57.98		1.562E-01	3.239E-01	4.978E-01	3.465E-02	0.314
		59.32		1.327E-01	2.000E-01	2.934E-01	2.066E-02	0.452
		67.20		-3.235E-01	6.870E-01	6.802E-01	4.933E-02	-0.476
		161.27		-4.923E-01	3.773E-01	6.033E-01	4.067E-02	-0.816
		216.55		1.396E-01	3.334E-01	4.971E-01	3.086E-02	0.281
		252.85	*	-1.787E-01	2.726E-01	4.395E-01	2.674E-02	-0.407
		318.01		-2.049E-01	5.154E-01	8.314E-01	4.865E-02	-0.246
		792.07		4.733E-01	1.526E+00	2.600E+00	1.906E-01	0.182
		903.28		-9.989E-01	1.675E+00	2.291E+00	1.636E-01	-0.436
		920.93		-1.470E-01	6.219E-01	9.781E-01	6.942E-02	-0.150
OS-185		59.72		1.161E-01	1.474E-01	2.172E-01	1.533E-02	0.534
		61.14		8.768E-02	8.790E-02	1.302E-01	9.222E-03	0.674
		69.30		1.092E-02	2.201E-01	2.922E-01	2.141E-02	0.037
		592.07		-1.761E+00	3.475E+00	4.973E+00	3.413E-01	-0.354
		646.12	*	-4.235E-02	6.190E-02	9.310E-02	6.602E-03	-0.455
		717.42		-8.491E-02	1.300E+00	2.063E+00	1.502E-01	-0.041
		874.81		4.682E-01	8.506E-01	1.479E+00	1.067E-01	0.317
		880.27		-7.318E-02	1.193E+00	1.965E+00	1.416E-01	-0.037
RE-188		155.03	*	1.446E-01	1.957E-01	3.211E-01	2.448E-02	0.450
		477.96		1.997E+00	3.873E+00	6.449E+00	3.957E-01	0.310
		633.10		-1.172E+00	4.066E+00	6.368E+00	4.486E-01	-0.184
W-188	+	63.58		3.506E+01	3.632E+01	4.691E+01	3.350E+00	0.748
		227.08		3.465E+00	1.411E+01	2.382E+01	1.476E+00	0.145
		290.67	*	-6.445E+00	9.757E+00	1.332E+01	7.805E-01	-0.484
IR-192	+	295.96		1.043E+00	2.018E-01	3.152E-01	1.877E-02	3.308
		308.46		-5.457E-02	1.117E-01	1.796E-01	1.065E-02	-0.304
		316.51	*	7.518E-03	3.910E-02	6.533E-02	3.843E-03	0.115
		468.07		-9.568E-02	9.182E-02	1.381E-01	9.542E-03	-0.693
		604.41		2.843E-01	6.688E-01	9.744E-01	1.166E-01	0.292
		612.46		4.016E+00	1.349E+00	2.297E+00	1.951E-01	1.748

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		1.202E-01	1.078E-01	1.591E-01	1.143E-02	0.756
		66.83		-3.096E-02	7.305E-02	8.526E-02	6.173E-03	-0.363
	+	75.70		1.735E+00	2.609E-01	3.880E-01	2.950E-02	4.471
		98.88	*	2.333E-01	2.269E-01	3.358E-01	3.082E-02	0.695
	+	129.76		9.642E+00	4.780E+00	5.428E+00	5.810E-01	1.776
TL-200		367.94	*	-1.086E-05	4.780E+00	Half-Life too short		
		579.30		2.312E-04	4.780E+00	Half-Life too short		
		828.27		-7.493E-04	4.780E+00	Half-Life too short		
		1205.75		-1.258E-04	4.780E+00	Half-Life too short		
TL-201		68.90		-7.568E-01	2.390E+00	2.809E+00	2.054E-01	-0.269
		70.82		8.627E-01	1.190E+00	1.739E+00	1.285E-01	0.496
		80.30		3.974E+00	3.305E+00	3.668E+00	2.874E-01	1.083
		135.34		7.258E-01	1.771E+01	2.624E+01	2.647E+00	0.028
		167.43	*	-9.794E-01	4.434E+00	7.409E+00	4.488E-01	-0.132
TL-202		68.90		-9.997E-02	3.157E-01	3.711E-01	2.714E-02	-0.269
		70.82		1.136E-01	1.568E-01	2.291E-01	1.693E-02	0.496
		80.30		5.237E-01	4.355E-01	4.834E-01	3.787E-02	1.083
		439.56	*	-3.415E-02	8.353E-02	1.325E-01	7.711E-03	-0.258
HG-203		70.83		5.471E-01	7.488E-01	1.092E+00	1.404E-01	0.501
		72.87		2.586E+00	5.895E-01	8.222E-01	1.026E-01	3.145
	+	82.60		9.119E-01	8.938E-01	1.400E+00	1.867E-01	0.652
		279.20	*	3.861E-02	5.173E-02	7.841E-02	4.859E-03	0.492
BI-207		72.80		7.224E-01	1.577E-01	2.449E-01	1.829E-02	2.950
	+	74.97		9.704E-01	1.459E-01	1.955E-01	1.479E-02	4.963
	+	84.90		1.640E-01	1.598E-01	2.839E-01	2.298E-02	0.578
	+	569.67		1.711E-01	7.365E-02	9.691E-02	6.538E-03	1.766
		1063.62	*	-1.825E-02	7.873E-02	1.261E-01	8.153E-03	-0.145
		1770.23		-1.720E-01	9.300E-01	1.252E+00	7.074E-02	-0.137
TL-207		81.07		1.547E-01	2.403E-01	2.571E-01	2.025E-02	0.602
	+	83.78		1.082E-01	1.054E-01	1.670E-01	1.341E-02	0.648
		94.90		7.844E-01	2.476E-01	3.836E-01	3.389E-02	2.045
		122.32		-4.591E-01	1.981E+00	2.903E+00	3.473E-01	-0.158
		144.24		4.091E-01	7.506E-01	1.215E+00	1.216E-01	0.337
		154.21		2.054E-01	4.562E-01	7.409E-01	6.435E-02	0.277
	+	269.46		4.269E-01	4.452E-01	4.130E-01	2.562E-02	1.034
		323.87	*	5.839E-01	9.015E-01	1.350E+00	2.231E-01	0.433
	+	338.28		6.698E+00	2.072E+00	2.939E+00	3.093E-01	2.279
		445.03		2.208E-01	2.929E+00	4.803E+00	4.951E-01	0.046
PO-209		260.50		-6.617E+00	1.142E+01	1.846E+01	1.113E+00	-0.358
		262.80		-4.226E+01	3.507E+01	4.880E+01	2.932E+00	-0.866
		896.60	*	-6.511E+00	1.084E+01	1.685E+01	1.206E+00	-0.386
PB-211		404.84	*	-2.806E-01	1.386E+00	1.911E+00	1.191E+00	-0.147
		427.08		9.995E-01	2.724E+00	4.446E+00	2.748E+00	0.225
		831.96		-6.263E-01	1.799E+00	2.823E+00	1.765E+00	-0.222
BI-212	+	727.18	*	1.862E+00	1.019E+00	9.856E-01	8.763E-02	1.890
		785.46		5.087E-01	2.577E+00	4.359E+00	3.196E-01	0.117
		1620.62		1.781E+00	2.013E+00	3.773E+00	2.224E-01	0.472
PO-215		81.07		1.547E-01	2.403E-01	2.571E-01	2.025E-02	0.602
	+	83.78		1.082E-01	1.054E-01	1.670E-01	1.341E-02	0.648

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		7.844E-01	2.476E-01	3.836E-01	3.389E-02	2.045
		122.32		-4.591E-01	1.981E+00	2.903E+00	3.473E-01	-0.158
		144.24		4.091E-01	7.506E-01	1.215E+00	1.216E-01	0.337
		154.21		2.054E-01	4.562E-01	7.409E-01	6.435E-02	0.277
	+	269.46		4.269E-01	4.452E-01	4.130E-01	2.562E-02	1.034
		323.87	*	5.839E-01	9.015E-01	1.350E+00	2.231E-01	0.433
	+	338.28		6.698E+00	2.072E+00	2.939E+00	3.093E-01	2.279
		445.03		2.208E-01	2.929E+00	4.803E+00	4.951E-01	0.046
RN-219	+	271.23		5.477E-01	5.720E-01	5.293E-01	4.338E-02	1.035
		401.81	*	-1.347E-01	5.487E-01	8.591E-01	1.157E-01	-0.157
RN-220		549.76	*	-1.547E+01	4.096E+01	5.446E+01	3.612E+00	-0.284
RA-223		81.07		1.547E-01	2.403E-01	2.571E-01	2.025E-02	0.602
	+	83.78		1.082E-01	1.054E-01	1.670E-01	1.341E-02	0.648
		94.90		7.844E-01	2.476E-01	3.836E-01	3.389E-02	2.045
		122.32		-4.591E-01	1.981E+00	2.903E+00	3.473E-01	-0.158
		144.24		4.091E-01	7.506E-01	1.215E+00	1.216E-01	0.337
		154.21		2.054E-01	4.562E-01	7.409E-01	6.435E-02	0.277
	+	269.46		4.269E-01	4.452E-01	4.130E-01	2.562E-02	1.034
		323.87	*	5.839E-01	9.015E-01	1.350E+00	2.231E-01	0.433
	+	338.28		6.698E+00	2.072E+00	2.939E+00	3.093E-01	2.279
		445.03		2.208E-01	2.929E+00	4.803E+00	4.951E-01	0.046
AC-227		79.80		2.217E+00	1.574E+00	2.252E+00	4.772E-01	0.984
		236.00		2.486E+00	4.563E-01	6.880E-01	7.336E-02	3.614
		256.20	*	2.900E-01	4.527E-01	7.724E-01	1.087E-01	0.376
		286.10		2.291E+00	1.863E+00	3.244E+00	3.759E-01	0.706
		299.80		2.788E+00	2.023E+00	3.107E+00	5.067E-01	0.898
		304.40		-3.134E+00	2.443E+00	3.674E+00	6.364E-01	-0.853
		334.20		-3.156E-01	3.623E+00	4.480E+00	8.214E-01	-0.070
TH-227		79.80		2.217E+00	1.576E+00	2.252E+00	4.835E-01	0.984
	+	94.00		8.511E+00	3.119E+00	3.324E+00	7.258E-01	2.561
		236.00		2.486E+00	4.375E-01	6.880E-01	6.398E-02	3.614
		256.20	*	2.900E-01	4.535E-01	7.724E-01	1.312E-01	0.376
		286.10		2.291E+00	2.944E+00	3.244E+00	3.250E+00	0.706
		299.80		2.788E+00	2.023E+00	3.107E+00	5.067E-01	0.898
		304.40		-3.134E+00	2.443E+00	3.674E+00	6.364E-01	-0.853
		334.20		-3.156E-01	3.623E+00	4.480E+00	8.214E-01	-0.070
TH-229		85.43		7.026E-01	2.493E-01	2.960E-01	2.406E-02	2.373
	+	88.47		3.110E-01	1.231E-01	1.925E-01	1.602E-02	1.616
		100.00		2.610E-01	1.752E-01	2.868E-01	2.661E-02	0.910
		193.63	*	-3.014E-01	5.711E-01	9.124E-01	5.635E-02	-0.330
		210.97		1.762E+00	9.034E-01	1.606E+00	9.970E-02	1.097
PA-231		283.67	*	-2.816E-01	2.011E+00	3.004E+00	4.145E-01	-0.094
		301.29		1.101E+00	7.685E-01	1.245E+00	1.306E-01	0.884
TH-231		81.07		1.547E-01	2.403E-01	2.571E-01	2.025E-02	0.602
	+	83.78		1.082E-01	1.054E-01	1.670E-01	1.341E-02	0.648
		94.90		7.844E-01	2.476E-01	3.836E-01	3.389E-02	2.045
		122.32		-4.591E-01	1.981E+00	2.903E+00	3.473E-01	-0.158
		144.24		4.091E-01	7.506E-01	1.215E+00	1.216E-01	0.337
		154.21		2.054E-01	4.562E-01	7.409E-01	6.435E-02	0.277

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.269E-01	4.452E-01	4.130E-01	2.562E-02	1.034
		323.87	*	5.839E-01	9.015E-01	1.350E+00	2.231E-01	0.433
	+	338.28		6.698E+00	2.072E+00	2.939E+00	3.093E-01	2.279
		445.03		2.208E-01	2.929E+00	4.803E+00	4.951E-01	0.046
U-231	+	84.21		3.214E+00	3.131E+00	5.128E+00	4.130E-01	0.627
	+	92.29		5.800E+00	1.781E+00	2.420E+00	2.086E-01	2.397
		95.87	*	-1.124E-01	7.648E-01	1.072E+00	9.564E-02	-0.105
		108.00		-8.490E-02	1.407E+00	2.262E+00	2.268E-01	-0.038
PA-233	+	75.28		2.832E+01	5.574E+00	6.004E+00	8.880E-01	4.716
	+	86.59		4.459E+00	2.097E+00	2.637E+00	7.038E-01	1.691
		300.12		6.513E-01	5.653E-01	8.659E-01	1.166E-01	0.752
		311.98	*	-5.255E-02	7.430E-02	1.176E-01	7.312E-03	-0.447
		340.50		3.505E+00	1.231E+00	1.653E+00	3.795E-01	2.121
		398.62		1.741E-01	2.651E+00	4.361E+00	1.124E+00	0.040
		415.76		-1.483E+00	2.205E+00	3.174E+00	6.518E-01	-0.467
PA-234	+	63.00		1.040E+00	1.085E+00	1.399E+00	2.060E-01	0.743
	+	94.67		7.589E-01	2.426E-01	2.807E-01	3.520E-02	2.704
		98.44		7.554E-02	1.021E-01	1.367E-01	7.638E-02	0.553
		99.86		6.064E-01	4.624E-01	7.252E-01	6.720E-02	0.836
		111.00		2.011E-02	1.804E-01	2.918E-01	3.898E-02	0.069
		131.20		1.001E-01	1.317E-01	1.911E-01	2.015E-02	0.524
		152.70		2.025E-01	3.729E-01	6.060E-01	1.013E-01	0.334
	+	186.00		7.149E+00	2.966E+00	2.827E+00	8.657E-01	2.529
		226.40		2.065E-01	4.517E-01	7.681E-01	9.036E-02	0.269
		227.20		3.151E-02	4.900E-01	8.207E-01	5.084E-02	0.038
		248.90		-2.937E-01	9.292E-01	1.521E+00	3.281E-01	-0.193
		293.70		5.861E+00	1.410E+00	1.953E+00	3.146E-01	3.001
		369.80		-8.791E-01	1.102E+00	1.695E+00	3.521E-01	-0.519
	+	568.70		5.570E+00	2.397E+00	3.153E+00	2.125E-01	1.767
	+	569.50		1.519E+00	6.538E-01	8.617E-01	5.813E-02	1.763
		574.00		9.725E-01	2.082E+00	3.074E+00	2.081E-01	0.316
		699.00		-2.615E-01	9.698E-01	1.586E+00	2.934E-01	-0.165
		706.10		8.000E-01	1.490E+00	2.524E+00	1.120E+00	0.317
		733.00		1.212E-01	6.030E-01	8.889E-01	1.931E-01	0.136
		742.81		3.123E-02	1.965E+00	3.284E+00	2.203E+00	0.010
		796.30		2.243E+00	1.474E+00	2.524E+00	6.731E-01	0.889
		805.60		1.082E+00	1.457E+00	2.516E+00	7.625E-01	0.430
		819.60		4.287E-01	1.708E+00	2.892E+00	1.092E+00	0.148
		826.30		-3.243E-01	1.110E+00	1.775E+00	7.898E-01	-0.183
		831.60		-3.735E-01	9.110E-01	1.446E+00	4.265E-01	-0.258
		876.40		-4.736E-01	1.376E+00	2.061E+00	2.116E+00	-0.230
		880.51		5.969E-02	4.325E-01	7.251E-01	5.224E-02	0.082
		883.24		2.050E-01	4.659E-01	7.669E-01	5.142E-01	0.267
		899.00		-2.658E-01	1.210E+00	1.949E+00	8.469E-01	-0.136
		925.00		8.972E-01	1.635E+00	2.849E+00	2.019E-01	0.315
		926.50		-8.618E-02	2.508E-01	3.882E-01	9.626E-02	-0.222
		946.00	*	1.964E-01	4.078E-01	7.042E-01	1.274E-01	0.279
		949.00		7.230E-02	6.104E-01	1.020E+00	7.148E-02	0.071
		980.50		-1.005E-01	1.045E+00	1.703E+00	1.174E-01	-0.059

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		1.452E+00	2.049E+00	3.265E+00	2.116E+00	0.445
PA-234M		766.41		2.999E+01	3.460E+01	4.673E+01	3.577E+01	0.642
	+	1001.03	*	8.931E+00	7.762E+00	1.733E+01	1.707E+00	0.515
U-235		89.95		5.515E-01	1.691E+00	1.744E+00	5.372E-01	0.316
	+	93.35		2.648E+00	1.077E+00	1.066E+00	2.990E-01	2.484
		105.00		4.498E-01	1.036E+00	1.684E+00	5.082E-01	0.267
		143.76	*	-5.316E-02	2.353E-01	3.696E-01	6.558E-02	-0.144
		163.35		5.921E-02	4.881E-01	8.265E-01	1.504E-01	0.072
	+	185.71		2.648E-01	7.588E-02	1.043E-01	6.412E-03	2.539
		205.31		7.846E-02	6.744E-01	9.893E-01	1.792E-01	0.079
NP-236	+	94.67		5.756E-01	1.767E-01	2.130E-01	1.878E-02	2.702
		98.44		5.711E-02	7.048E-02	1.034E-01	9.447E-03	0.553
		111.00		1.521E-02	1.364E-01	2.207E-01	2.279E-02	0.069
		160.31	*	-1.047E-01	9.014E-02	1.361E-01	9.361E-03	-0.770
NP-239		99.55		1.704E-01	1.537E-01	2.395E-01	2.213E-02	0.712
		117.00	*	2.232E-01	1.909E-01	3.187E-01	3.489E-02	0.700
	+	209.75		2.517E+00	1.526E+00	1.716E+00	1.065E-01	1.467
		228.18		-2.338E-02	2.596E-01	4.318E-01	2.674E-02	-0.054
	+	277.60		2.432E-01	2.742E-01	3.622E-01	2.122E-02	0.672
		334.30		-1.788E-01	2.053E+00	2.539E+00	1.474E-01	-0.070
AM-241		59.54	*	5.621E-02	7.829E-02	1.150E-01	8.978E-03	0.489
CM-243		99.55		1.753E-01	1.581E-01	2.464E-01	2.277E-02	0.712
		103.76	*	-3.849E-02	9.445E-02	1.500E-01	1.443E-02	-0.257
		117.00		2.295E-01	1.964E-01	3.278E-01	3.589E-02	0.700
	+	209.75		2.481E+00	1.504E+00	1.691E+00	1.050E-01	1.467
		228.18		-2.363E-02	2.622E-01	4.363E-01	2.702E-02	-0.054
	+	277.60		2.451E-01	2.764E-01	3.651E-01	2.139E-02	0.672
CM-247	+	278.00		1.009E+00	1.137E+00	1.497E+00	8.764E-02	0.674
		287.40		1.153E+00	1.505E+00	2.528E+00	1.480E-01	0.456
		402.60	*	3.132E-03	5.273E-02	7.870E-02	4.317E-03	0.040
CF-249		252.85		-6.767E-01	1.032E+00	1.664E+00	1.012E-01	-0.407
		333.44		-1.135E-01	3.729E-01	3.388E-01	1.968E-02	-0.335
		387.95	*	3.146E-02	4.814E-02	8.228E-02	4.461E-03	0.382
CF-251		176.60	*	-3.666E-02	1.354E-01	2.254E-01	1.377E-02	-0.163
		227.00		1.079E-01	4.332E-01	7.312E-01	4.530E-02	0.148
		285.00		4.469E-01	2.095E+00	3.511E+00	2.055E-01	0.127

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504008      *
* Acquisition date :  7-JUL-2009 08:51:52 Detector SN#     :                *
* Detector ID        : GAM21              Sensitivity      : 5.000         *
* Geometry           : CAN                Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00    Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:09.61    Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504008           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.2820E+02 GRAM *
* Recovery           :     1.00000          Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM            :     0.000          MSD Isotope      :               *
* LCS DPM            :     0.000          LCS Isotope      :               *
* LCSD DPM           :     0.000          LCSD Isotope     :               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.055E+01	2.943E+00	8.928E-01	0.000E+00
CD-109	2.310E+00	8.958E-01	1.312E+00	0.000E+00
SN-126	2.278E-01	8.835E-02	1.330E-01	0.000E+00
TL-208	6.139E-01	1.061E-01	7.361E-02	0.000E+00
BI-210	1.603E+00	7.575E-01	1.001E+00	0.000E+00
PB-210	1.603E+00	7.575E-01	1.001E+00	0.000E+00
PO-210	1.603E+00	7.549E-01	1.001E+00	0.000E+00
BI-211	4.127E+00	5.543E-01	4.225E-01	0.000E+00
PB-212	1.869E+00	1.873E-01	1.035E-01	0.000E+00
PO-212	1.869E+00	1.873E-01	1.035E-01	0.000E+00
BI-214	1.249E+00	2.306E-01	1.530E-01	0.000E+00
PB-214	1.435E+00	2.063E-01	1.467E-01	0.000E+00
PO-214	1.435E+00	2.063E-01	1.467E-01	0.000E+00
PO-216	1.869E+00	1.873E-01	1.035E-01	0.000E+00
PO-218	1.435E+00	2.063E-01	1.467E-01	0.000E+00
RA-224	5.856E+00	1.445E+00	1.180E+00	0.000E+00
RA-226	1.249E+00	2.306E-01	1.530E-01	0.000E+00
AC-228	2.031E+00	4.388E-01	3.039E-01	0.000E+00
RA-228	2.031E+00	4.388E-01	3.039E-01	0.000E+00
TH-228	1.869E+00	1.873E-01	1.035E-01	0.000E+00
TH-230	1.249E+00	2.306E-01	1.530E-01	0.000E+00
TH-232	2.031E+00	4.388E-01	3.039E-01	0.000E+00
TH-234	8.922E-01	9.160E-01	1.124E+00	0.000E+00
U-234	1.249E+00	2.306E-01	1.530E-01	0.000E+00
NP-237	6.688E-01	2.926E-01	3.181E-01	0.000E+00
U-238	8.922E-01	9.160E-01	1.124E+00	0.000E+00
AM-243	5.406E-01	7.969E-02	6.483E-02	0.000E+00
ANH-511	1.641E-01	9.699E-02	5.776E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	4.035E-01	3.854E-01	6.903E-01	0.000E+00	NOT IDENT.
NA-22	-6.158E-02	6.881E-02	1.029E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	9.442E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.494E-02	4.542E-02	7.111E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.370E-02	7.172E-02	0.000E+00	FAIL ABUN
SC-46	8.881E-03	5.699E-02	9.839E-02	0.000E+00	FAIL ABUN
V-48	3.350E-02	8.944E-02	1.569E-01	0.000E+00	NOT IDENT.
CR-51	-4.078E-01	4.205E-01	6.625E-01	0.000E+00	NOT IDENT.
MN-52	7.511E-02	2.613E-01	4.490E-01	0.000E+00	FAIL ABUN
MN-54	3.125E-02	5.440E-02	9.717E-02	0.000E+00	NOT IDENT.
CO-56	-2.875E-02	5.168E-02	8.341E-02	0.000E+00	NOT IDENT.
CO-57	-4.262E-03	2.657E-02	4.335E-02	0.000E+00	NOT IDENT.
CO-58	1.614E-02	5.638E-02	9.883E-02	0.000E+00	NOT IDENT.
FE-59	-2.269E-03	1.298E-01	2.175E-01	0.000E+00	NOT IDENT.
CO-60	-4.151E-02	5.860E-02	8.765E-02	0.000E+00	NOT IDENT.
ZN-65	-9.109E-02	1.469E-01	1.911E-01	0.000E+00	NOT IDENT.
GE-68	-8.522E-01	1.796E+00	2.868E+00	0.000E+00	NOT IDENT.
AS-73	-6.891E-02	2.493E-01	4.336E-01	0.000E+00	NOT IDENT.
AS-74	2.172E-04	1.105E-01	1.842E-01	0.000E+00	NOT IDENT.
SE-75	1.060E-02	5.525E-02	8.471E-02	0.000E+00	NOT IDENT.
BR-77	6.289E+00	7.455E+00	1.231E+01	0.000E+00	FAIL ABUN
SR-82	-2.478E-01	4.972E-01	8.167E-01	0.000E+00	NOT IDENT.
RB-83	1.197E-01	9.069E-02	1.564E-01	0.000E+00	NOT IDENT.
RB-84	1.287E-02	9.977E-02	1.719E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.011E+01	1.965E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.064E-02	9.842E-02	0.000E+00	NOT IDENT.
RB-86	-2.010E-01	1.026E+00	1.689E+00	0.000E+00	NOT IDENT.
Y-88	9.232E-04	5.397E-02	9.099E-02	0.000E+00	NOT IDENT.
ZR-88	-3.619E-02	3.783E-02	6.053E-02	0.000E+00	NOT IDENT.
Y-91	-1.410E-01	2.742E+01	4.571E+01	0.000E+00	NOT IDENT.
NB-94	-1.811E-02	4.471E-02	7.474E-02	0.000E+00	NOT IDENT.
NB-95	3.847E-02	6.157E-02	1.104E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.805E-01	3.109E-01	0.000E+00	NOT IDENT.
ZR-95	-3.783E-02	9.683E-02	1.610E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.470E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.935E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-8.392E+00	9.287E+00	1.464E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.911E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.894E-02	3.536E-02	6.484E-02	0.000E+00	NOT IDENT.
RH-102	-2.848E-02	3.557E-02	5.617E-02	0.000E+00	NOT IDENT.
RU-103	8.801E-03	5.037E-02	8.600E-02	0.000E+00	FAIL ABUN
RH-106	-5.692E-02	4.251E-01	6.738E-01	0.000E+00	FAIL ABUN
RU-106	-5.692E-02	4.250E-01	6.738E-01	0.000E+00	FAIL ABUN
AG-108M	1.040E-02	4.362E-02	7.521E-02	0.000E+00	NOT IDENT.
AG-110M	-1.903E-02	4.800E-02	8.076E-02	0.000E+00	NOT IDENT.
IN-111	9.344E-02	7.371E-01	1.129E+00	0.000E+00	NOT IDENT.
IN-113M	-7.101E-02	5.515E-02	8.604E-02	0.000E+00	NOT IDENT.
SN-113	-7.101E-02	5.515E-02	8.604E-02	0.000E+00	NOT IDENT.
IN-114M	9.020E-02	1.987E-01	3.139E-01	0.000E+00	NOT IDENT.
CD-115	-3.657E+00	7.045E+00	1.132E+01	0.000E+00	NOT IDENT.
SN-117M	8.017E-03	5.432E-02	9.206E-02	0.000E+00	NOT IDENT.
SB-122	4.913E-01	1.942E+00	2.875E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.728E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.322E-02	3.135E-02	5.187E-02	0.000E+00	NOT IDENT.
I-124	-5.812E-01	7.537E-01	9.836E-01	0.000E+00	NOT IDENT.
SB-124	-9.577E-02	9.475E-02	1.205E-01	0.000E+00	FAIL ABUN
SB-125	9.281E-02	1.149E-01	2.056E-01	0.000E+00	NOT IDENT.
TE-125M	-5.715E+00	8.871E+00	1.477E+01	0.000E+00	NOT IDENT.
I-126	9.434E-02	2.260E-01	4.032E-01	0.000E+00	NOT IDENT.
SB-126	-1.539E-02	2.025E-01	2.986E-01	0.000E+00	FAIL ABUN
SB-127	8.987E-01	1.233E+00	2.247E+00	0.000E+00	NOT IDENT.
XE-127	-2.366E-02	5.363E-02	8.757E-02	0.000E+00	NOT IDENT.
I-131	-1.404E-02	1.171E-01	1.992E-01	0.000E+00	NOT IDENT.
TE-132	-4.829E-02	4.820E-01	8.418E-01	0.000E+00	NOT IDENT.
BA-133	1.491E-02	5.919E-02	8.987E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	1.351E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.188E-01	6.902E-02	1.324E-01	0.000E+00	FAIL ABUN
CS-135	2.611E-01	2.121E-01	3.442E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.131E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.516E-02	1.291E-01	2.089E-01	0.000E+00	FAIL ABUN
BA-137M	-7.849E-03	5.071E-02	8.696E-02	0.000E+00	NOT IDENT.
CS-137	-8.297E-03	5.361E-02	9.192E-02	0.000E+00	NOT IDENT.
CE-139	7.978E-03	3.044E-02	5.464E-02	0.000E+00	NOT IDENT.
BA-140	-1.953E-01	3.312E-01	5.205E-01	0.000E+00	NOT IDENT.
LA-140	1.905E-02	1.101E-01	1.918E-01	0.000E+00	FAIL ABUN
CE-141	8.189E-02	6.472E-02	1.141E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.690E+01	0.000E+00	0.000E+00	SHORT HLIF

CE-144	1.399E-01	2.403E-01	3.655E-01	0.000E+00	NOT IDENT.
PM-144	1.861E-02	4.630E-02	8.245E-02	0.000E+00	NOT IDENT.
PR-144	1.259E+00	3.134E+00	5.580E+00	0.000E+00	NOT IDENT.
PM-146	1.513E-02	5.571E-02	9.615E-02	0.000E+00	NOT IDENT.
ND-147	3.818E-01	6.465E-01	1.132E+00	0.000E+00	NOT IDENT.
PM-149	6.784E+01	5.415E+01	9.819E+01	0.000E+00	NOT IDENT.
EU-152	-6.119E-02	1.359E-01	1.947E-01	0.000E+00	NOT IDENT.
GD-153	-5.830E-03	7.803E-02	1.167E-01	0.000E+00	FAIL ABUN
EU-154	-1.794E-01	1.921E-01	2.850E-01	0.000E+00	NOT IDENT.
EU-155	6.704E-02	1.026E-01	1.796E-01	0.000E+00	FAIL ABUN
TB-160	-3.349E-02	2.068E-01	3.473E-01	0.000E+00	FAIL ABUN
HO-166M	-2.583E-02	8.457E-02	1.425E-01	0.000E+00	FAIL ABUN
TM-171	-9.431E+00	2.172E+01	2.711E+01	0.000E+00	NOT IDENT.
LU-176	1.074E-02	2.841E-02	5.012E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.671E+00	1.960E+00	0.000E+00	FAIL ABUN
LU-177M	-7.297E-02	2.408E-01	3.439E-01	0.000E+00	FAIL ABUN
HF-181	-2.595E-02	5.281E-02	8.578E-02	0.000E+00	NOT IDENT.
W-181	2.147E-01	2.280E-01	3.578E-01	0.000E+00	NOT IDENT.
TA-182	2.459E-01	3.244E-01	5.731E-01	0.000E+00	FAIL ABUN
RE-183	-1.152E-01	1.105E-01	1.887E-01	0.000E+00	FAIL ABUN
RE-184	-1.787E-01	2.671E-01	4.516E-01	0.000E+00	NOT IDENT.
OS-185	-4.235E-02	6.066E-02	9.431E-02	0.000E+00	NOT IDENT.
RE-188	1.446E-01	1.918E-01	3.324E-01	0.000E+00	NOT IDENT.
W-188	-6.445E+00	9.562E+00	1.366E+01	0.000E+00	FAIL ABUN
IR-192	7.518E-03	3.832E-02	6.691E-02	0.000E+00	FAIL ABUN
AU-195	2.333E-01	2.223E-01	3.499E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.343E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-9.794E-01	4.346E+00	7.661E+00	0.000E+00	NOT IDENT.
TL-202	-3.415E-02	8.185E-02	1.350E-01	0.000E+00	NOT IDENT.
HG-203	3.861E-02	5.070E-02	8.046E-02	0.000E+00	FAIL ABUN
BI-207	-1.825E-02	7.716E-02	1.267E-01	0.000E+00	FAIL ABUN
TL-207	5.839E-01	8.835E-01	1.382E+00	0.000E+00	FAIL ABUN
PO-209	-6.511E+00	1.062E+01	1.698E+01	0.000E+00	NOT IDENT.
PB-211	-2.806E-01	1.359E+00	1.950E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	9.991E-01	9.966E-01	0.000E+00	FAIL ABUN
PO-215	5.839E-01	8.835E-01	1.382E+00	0.000E+00	FAIL ABUN
RN-219	-1.347E-01	5.377E-01	8.767E-01	0.000E+00	FAIL ABUN
RN-220	-1.547E+01	4.014E+01	5.531E+01	0.000E+00	NOT IDENT.
RA-223	5.839E-01	8.835E-01	1.382E+00	0.000E+00	FAIL ABUN
AC-227	2.900E-01	4.437E-01	7.935E-01	0.000E+00	NOT IDENT.
TH-227	2.900E-01	4.445E-01	7.935E-01	0.000E+00	FAIL ABUN
TH-229	-3.014E-01	5.597E-01	9.414E-01	0.000E+00	FAIL ABUN
PA-231	-2.816E-01	1.971E+00	3.081E+00	0.000E+00	NOT IDENT.
TH-231	5.839E-01	8.835E-01	1.382E+00	0.000E+00	FAIL ABUN
U-231	-1.124E-01	7.495E-01	1.118E+00	0.000E+00	FAIL ABUN
PA-233	-5.255E-02	7.281E-02	1.205E-01	0.000E+00	FAIL ABUN
PA-234	1.964E-01	3.997E-01	7.091E-01	0.000E+00	FAIL ABUN
PA-234M	8.931E+00	7.607E+00	1.744E+01	0.000E+00	FAIL ABUN
U-235	-5.316E-02	2.306E-01	3.830E-01	0.000E+00	FAIL ABUN
NP-236	-1.047E-01	8.834E-02	1.408E-01	0.000E+00	FAIL ABUN
NP-239	2.232E-01	1.871E-01	3.313E-01	0.000E+00	FAIL ABUN
AM-241	5.621E-02	7.673E-02	1.208E-01	0.000E+00	NOT IDENT.
CM-243	-3.849E-02	9.256E-02	1.562E-01	0.000E+00	FAIL ABUN
CM-247	3.132E-03	5.167E-02	8.030E-02	0.000E+00	FAIL ABUN
CF-249	3.146E-02	4.718E-02	8.401E-02	0.000E+00	NOT IDENT.
CF-251	-3.666E-02	1.327E-01	2.329E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:54:16.36

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504008.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 08:51:52.
Sample ID         : G232504008           Sample quantity  : 1.28200E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.61  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	811	10.67*	7.284E-01	3.055E+01	3.055E+01	9.83
CD-109	88.03	239	3.72*	8.317E+00	2.265E+00	2.310E+00	39.58
SN-126	64.28	97	9.60	8.359E+00	3.532E-01	3.532E-01	104.32
	86.94	239	8.90	8.317E+00	9.469E-01	9.469E-01	56.59
	87.57	239	37.00*	8.317E+00	2.278E-01	2.278E-01	39.58
TL-208	277.35	46	6.80	3.913E+00	5.043E-01	5.043E-01	113.10
	510.84	117	21.60	2.087E+00	7.596E-01	7.596E-01	60.89
	583.14	321	84.20*	1.817E+00	6.139E-01	6.139E-01	17.64
	860.37	------	12.46	1.219E+00	------ Line Not Found		------
BI-210	46.50	167	4.05*	7.519E+00	1.601E+00	1.603E+00	48.22
PB-210	46.50	167	4.05*	7.519E+00	1.601E+00	1.603E+00	48.22
PO-210	46.50	167	4.05*	7.519E+00	1.601E+00	1.603E+00	48.05
BI-211	72.87	------	1.27	8.456E+00	------ Line Not Found		------
	351.07	563	12.94*	3.085E+00	4.127E+00	4.127E+00	13.71
PB-212	74.81	1030	10.70	8.452E+00	3.335E+00	3.335E+00	17.71
	77.11	1205	18.00	8.441E+00	2.321E+00	2.321E+00	12.79
	87.30	239	8.00	8.317E+00	1.053E+00	1.053E+00	40.82
	238.63	1286	44.60*	4.517E+00	1.869E+00	1.869E+00	10.22
	300.09	------	3.41	3.625E+00	------ Line Not Found		------
PO-212	74.81	1030	10.70	8.452E+00	3.335E+00	3.335E+00	17.71
	77.11	1205	18.00	8.441E+00	2.321E+00	2.321E+00	12.79
	87.30	239	8.00	8.317E+00	1.053E+00	1.053E+00	40.82
	115.19	------	0.60	7.596E+00	------ Line Not Found		------
	238.63	1286	44.60*	4.517E+00	1.869E+00	1.869E+00	10.22
	300.09	------	3.41	3.625E+00	------ Line Not Found		------
BI-214	609.31	343	46.30*	1.736E+00	1.249E+00	1.249E+00	18.85
	768.36	------	5.04	1.367E+00	------ Line Not Found		------
	934.06	39	3.21	1.122E+00	3.131E+00	3.131E+00	67.95
	1120.29	65	15.10	9.389E-01	1.336E+00	1.336E+00	65.26
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	41	15.80	6.086E-01	1.252E+00	1.252E+00	54.98

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	1030	6.21	8.452E+00	5.746E+00	5.746E+00	16.77
	77.11	1205	10.50	8.441E+00	3.979E+00	3.979E+00	14.89
	87.30	239	4.67	8.317E+00	1.805E+00	1.805E+00	40.32
	241.98	353	7.49	4.468E+00	3.088E+00	3.088E+00	25.80
	295.21	337	19.20	3.685E+00	1.396E+00	1.396E+00	20.32
	351.92	563	37.20*	3.085E+00	1.435E+00	1.435E+00	14.67
PO-214	74.81	1030	6.21	8.452E+00	5.746E+00	5.746E+00	16.77
	77.11	1205	10.50	8.441E+00	3.979E+00	3.979E+00	14.89
	87.30	239	4.67	8.317E+00	1.805E+00	1.805E+00	40.32
	241.98	353	7.49	4.468E+00	3.088E+00	3.088E+00	25.80
	295.21	337	19.20	3.685E+00	1.396E+00	1.396E+00	20.32
	351.92	563	37.20*	3.085E+00	1.435E+00	1.435E+00	14.67
PO-216	74.81	1030	10.70	8.452E+00	3.335E+00	3.335E+00	17.71
	77.11	1205	18.00	8.441E+00	2.321E+00	2.321E+00	12.79
	87.30	239	8.00	8.317E+00	1.053E+00	1.053E+00	40.82
	238.63	1286	44.60*	4.517E+00	1.869E+00	1.869E+00	10.22
	300.09	------	3.41	3.625E+00	------ Line Not Found		------
PO-218	74.81	1030	6.21	8.452E+00	5.746E+00	5.746E+00	16.77
	77.11	1205	10.50	8.441E+00	3.979E+00	3.979E+00	14.89
	87.30	239	4.67	8.317E+00	1.805E+00	1.805E+00	40.32
	241.98	353	7.49	4.468E+00	3.088E+00	3.088E+00	25.80
	295.21	337	19.20	3.685E+00	1.396E+00	1.396E+00	20.32
	351.92	563	37.20*	3.085E+00	1.435E+00	1.435E+00	14.67
RA-224	240.98	353	3.95*	4.468E+00	5.856E+00	5.856E+00	25.18
RA-226	609.31	343	46.30*	1.736E+00	1.249E+00	1.249E+00	18.85
	768.36	------	5.04	1.367E+00	------ Line Not Found		------
	934.06	39	3.21	1.122E+00	3.131E+00	3.131E+00	67.95
	1120.29	65	15.10	9.389E-01	1.336E+00	1.336E+00	65.26
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	41	15.80	6.086E-01	1.252E+00	1.252E+00	54.98
AC-228	338.32	201	11.40	3.211E+00	1.604E+00	1.604E+00	50.08
	911.07	221	27.70*	1.150E+00	2.031E+00	2.031E+00	22.05
	969.11	99	16.60	1.082E+00	1.619E+00	1.619E+00	44.40
RA-228	338.32	201	11.40	3.211E+00	1.604E+00	1.604E+00	50.08
	911.07	221	27.70*	1.150E+00	2.031E+00	2.031E+00	22.05
	969.11	99	16.60	1.082E+00	1.619E+00	1.619E+00	44.40
TH-228	84.40	76	1.21	8.373E+00	2.208E+00	2.208E+00	97.94
	238.60	1286	44.60*	4.517E+00	1.869E+00	1.869E+00	10.22
	300.10	------	3.41	3.625E+00	------ Line Not Found		------
TH-230	609.31	343	46.30*	1.736E+00	1.249E+00	1.249E+00	18.85
	768.36	------	5.04	1.367E+00	------ Line Not Found		------
	934.06	39	3.21	1.122E+00	3.131E+00	3.131E+00	67.95
	1120.29	65	15.10	9.389E-01	1.336E+00	1.336E+00	65.26
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	41	15.80	6.086E-01	1.252E+00	1.252E+00	54.98
TH-232	338.32	201	11.40	3.211E+00	1.604E+00	1.604E+00	29.65
	911.07	221	27.70*	1.150E+00	2.031E+00	2.031E+00	22.05

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	99	16.60	1.082E+00	1.619E+00	1.619E+00	44.40
TH-234	63.29	97	3.80*	8.359E+00	8.922E-01	8.922E-01	104.76
	92.38	333	5.41	8.189E+00	2.202E+00	2.202E+00	34.57
U-234	609.31	343	46.30*	1.736E+00	1.249E+00	1.249E+00	18.85
	768.36	------	5.04	1.367E+00	------ Line Not Found		------
	934.06	39	3.21	1.122E+00	3.131E+00	3.131E+00	67.95
	1120.29	65	15.10	9.389E-01	1.336E+00	1.336E+00	65.26
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	41	15.80	6.086E-01	1.252E+00	1.252E+00	54.98
NP-237	86.50	239	12.60*	8.317E+00	6.688E-01	6.688E-01	44.64
	95.87	------	2.60	8.129E+00	------ Line Not Found		------
U-238	63.29	97	3.80*	8.359E+00	8.922E-01	8.922E-01	104.76
	92.38	333	5.41	8.189E+00	2.202E+00	2.202E+00	30.70
AM-243	74.67	1030	66.00*	8.452E+00	5.406E-01	5.406E-01	15.04
	86.72	239	0.34	8.317E+00	2.508E+01	2.508E+01	39.58
	117.66	------	0.55	7.522E+00	------ Line Not Found		------
	142.18	------	0.13	6.781E+00	------ Line Not Found		------
ANH-511	511.00	117	100.00*	2.087E+00	1.641E-01	1.641E-01	60.32

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

Total number of lines in spectrum 32
Number of unidentified lines 1
Number of lines tentatively identified by NID 31 96.88%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.055E+01	3.055E+01	0.300E+01	9.83	
CD-109	464.00D	1.02	2.265E+00	2.310E+00	0.914E+00	39.58	
SN-126	1.00E+05Y	1.00	2.278E-01	2.278E-01	0.902E-01	39.58	
TL-208	1.41E+10Y	1.00	6.139E-01	6.139E-01	1.083E-01	17.64	
BI-210	22.26Y	1.00	1.601E+00	1.603E+00	0.773E+00	48.22	
PB-210	22.26Y	1.00	1.601E+00	1.603E+00	0.773E+00	48.22	
PO-210	22.26Y	1.00	1.601E+00	1.603E+00	0.770E+00	48.05	
BI-211	7.04E+08Y	1.00	4.127E+00	4.127E+00	0.566E+00	13.71	
PB-212	1.41E+10Y	1.00	1.869E+00	1.869E+00	0.191E+00	10.22	
PO-212	1.41E+10Y	1.00	1.869E+00	1.869E+00	0.191E+00	10.22	
BI-214	1600.00Y	1.00	1.249E+00	1.249E+00	0.235E+00	18.85	
PB-214	1600.00Y	1.00	1.435E+00	1.435E+00	0.211E+00	14.67	
PO-214	1600.00Y	1.00	1.435E+00	1.435E+00	0.211E+00	14.67	
PO-216	1.41E+10Y	1.00	1.869E+00	1.869E+00	0.191E+00	10.22	
PO-218	1600.00Y	1.00	1.435E+00	1.435E+00	0.211E+00	14.67	
RA-224	1.41E+10Y	1.00	5.856E+00	5.856E+00	1.474E+00	25.18	
RA-226	1600.00Y	1.00	1.249E+00	1.249E+00	0.235E+00	18.85	
AC-228	1.41E+10Y	1.00	2.031E+00	2.031E+00	0.448E+00	22.05	
RA-228	1.41E+10Y	1.00	2.031E+00	2.031E+00	0.448E+00	22.05	
TH-228	1.41E+10Y	1.00	1.869E+00	1.869E+00	0.191E+00	10.22	
TH-230	4.47E+09Y	1.00	1.249E+00	1.249E+00	0.235E+00	18.85	
TH-232	1.41E+10Y	1.00	2.031E+00	2.031E+00	0.448E+00	22.05	
TH-234	4.47E+09Y	1.00	8.922E-01	8.922E-01	9.347E-01	104.76	
U-234	4.47E+09Y	1.00	1.249E+00	1.249E+00	0.235E+00	18.85	
NP-237	2.14E+06Y	1.00	6.688E-01	6.688E-01	2.985E-01	44.64	
U-238	4.47E+09Y	1.00	8.922E-01	8.922E-01	9.347E-01	104.76	
AM-243	7380.00Y	1.00	5.406E-01	5.406E-01	0.813E-01	15.04	
ANH-511	1.00E+09Y	1.00	1.641E-01	1.641E-01	0.990E-01	60.32	
		Total Activity :	7.447E+01	7.452E+01			

Grand Total Activity : 7.447E+01 7.452E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	128.90	182	442	1.16	256.72	251	12	2.53E-02	48.4	7.18E+00	T
0	186.14	273	304	1.47	371.02	366	11	3.79E-02	28.0	5.59E+00	T
0	209.42	141	385	1.77	417.52	413	13	1.96E-02	60.3	5.07E+00	T
0	270.24	80	327	1.81	539.03	532	16	1.11E-02	****	4.02E+00	T
0	327.69	45	170	0.89	653.81	649	10	6.30E-03	****	3.32E+00	T
0	409.59	47	95	1.53	817.50	812	10	6.53E-03	82.9	2.64E+00	T
0	557.56	20	74	3.38	1113.31	1104	12	2.77E-03	****	1.91E+00	
0	569.28	106	87	1.95	1136.74	1130	14	1.48E-02	42.5	1.86E+00	T
0	728.20	108	113	1.93	1454.60	1444	22	1.50E-02	54.0	1.44E+00	T
0	1001.83	19	18	1.33	2002.24	1999	6	2.62E-03	86.4	1.05E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 10:54:21.96

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504008.CNF;1 *
* Acquisition date  : 7-JUL-2009 08:51:52.  Detector SN#     :             *
* Detector ID       : GAM21                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:09.61          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504008            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.28200E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.055E+01	3.003E+00	8.927E-01	5.681E-02	34.217
CD-109	2.310E+00	9.141E-01	1.257E+00	1.041E-01	1.838
SN-126	2.278E-01	9.015E-02	1.274E-01	1.052E-02	1.788
TL-208	6.139E-01	1.083E-01	7.255E-02	5.503E-03	8.462
BI-210	1.603E+00	7.729E-01	9.501E-01	7.197E-02	1.687
PB-210	1.603E+00	7.729E-01	9.501E-01	7.197E-02	1.687
PO-210	1.603E+00	7.703E-01	9.501E-01	6.140E-02	1.687
BI-211	4.127E+00	5.656E-01	4.132E-01	2.629E-02	9.988
PB-212	1.869E+00	1.911E-01	1.006E-01	7.668E-03	18.571
PO-212	1.869E+00	1.911E-01	1.006E-01	7.668E-03	18.571
BI-214	1.249E+00	2.353E-01	1.509E-01	1.307E-02	8.276
PB-214	1.435E+00	2.105E-01	1.435E-01	1.180E-02	10.006
PO-214	1.435E+00	2.105E-01	1.435E-01	1.180E-02	10.006
PO-216	1.869E+00	1.911E-01	1.006E-01	7.668E-03	18.571
PO-218	1.435E+00	2.105E-01	1.435E-01	1.180E-02	10.006
RA-224	5.856E+00	1.474E+00	1.147E+00	7.056E-02	5.104
RA-226	1.249E+00	2.353E-01	1.509E-01	1.307E-02	8.276
AC-228	2.031E+00	4.477E-01	3.016E-01	3.059E-02	6.734

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	2.031E+00	4.477E-01	3.016E-01	3.059E-02	6.734
TH-228	1.869E+00	1.911E-01	1.006E-01	7.667E-03	18.574
TH-230	1.249E+00	2.353E-01	1.509E-01	1.307E-02	8.276
TH-232	2.031E+00	4.477E-01	3.016E-01	3.059E-02	6.734
TH-234	8.922E-01	9.347E-01	1.071E+00	1.856E-01	0.833
U-234	1.249E+00	2.353E-01	1.509E-01	1.307E-02	8.276
NP-237	6.688E-01	2.985E-01	3.046E-01	6.763E-02	2.196
U-238	8.922E-01	9.347E-01	1.071E+00	1.856E-01	0.833
AM-243	5.406E-01	8.131E-02	6.196E-02	4.680E-03	8.725
ANH-511	1.641E-01	9.897E-02	5.681E-02	3.624E-03	2.888

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided.	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	4.035E-01		3.932E-01	6.783E-01	4.775E-02	0.595
NA-22	-6.158E-02		7.021E-02	1.027E-01	6.071E-03	-0.600
NA-24	-5.630E-02		4.817E-02	Half-Life too short		
AL-26	-1.494E-02		4.635E-02	7.134E-02	3.972E-03	-0.209
TI-44	4.283E-01	+	5.480E-02	6.859E-02	5.305E-03	6.244
SC-46	8.881E-03		5.816E-02	9.761E-02	7.009E-03	0.091
V-48	3.350E-02		9.127E-02	1.559E-01	1.073E-02	0.215
CR-51	-4.078E-01		4.291E-01	6.470E-01	4.208E-02	-0.630
MN-52	7.511E-02		2.666E-01	4.488E-01	2.705E-02	0.167
MN-54	3.125E-02		5.551E-02	9.630E-02	7.025E-03	0.324
CO-56	-2.875E-02		5.274E-02	8.269E-02	6.016E-03	-0.348
CO-57	-4.262E-03		2.711E-02	4.173E-02	4.802E-03	-0.102
CO-58	1.614E-02		5.753E-02	9.791E-02	7.192E-03	0.165
FE-59	-2.269E-03		1.324E-01	2.165E-01	1.553E-02	-0.010
CO-60	-4.151E-02		5.979E-02	8.752E-02	5.264E-03	-0.474
ZN-65	-9.109E-02		1.499E-01	1.902E-01	1.167E-02	-0.479
GE-68	-8.522E-01		1.833E+00	2.854E+00	1.822E-01	-0.299
AS-73	-6.891E-02		2.544E-01	4.124E-01	2.771E-02	-0.167
AS-74	2.172E-04		1.127E-01	1.817E-01	1.250E-02	0.001
SE-75	1.060E-02		5.638E-02	8.249E-02	4.990E-03	0.129
BR-77	6.289E+00		7.607E+00	1.211E+01	7.808E-01	0.519
SR-82	-2.478E-01		5.073E-01	8.086E-01	5.928E-02	-0.306
RB-83	1.197E-01		9.254E-02	1.538E-01	9.914E-03	0.778
RB-84	1.287E-02		1.018E-01	1.705E-01	1.228E-02	0.075
KR-85	2.831E+01		1.032E+01	1.933E+01	1.237E+00	1.464
SR-85	1.418E-01		5.168E-02	9.682E-02	6.197E-03	1.464
RB-86	-2.010E-01		1.047E+00	1.681E+00	1.073E-01	-0.120
Y-88	9.232E-04		5.507E-02	9.131E-02	5.039E-03	0.010
ZR-88	-3.619E-02		3.861E-02	5.930E-02	3.198E-03	-0.610
Y-91	-1.410E-01		2.798E+01	4.557E+01	2.617E+00	-0.003
NB-94	-1.811E-02		4.563E-02	7.388E-02	5.356E-03	-0.245
NB-95	3.847E-02		6.282E-02	1.093E-01	8.009E-03	0.352
NB-95M	6.552E-01		1.842E-01	3.022E-01	2.363E-02	2.168

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-3.783E-02		9.881E-02	1.594E-01	1.328E-02	-0.237
NB-97	-6.398E-03		7.499E-03	Half-Life too short		
ZR-97	4.559E-01		1.497E-01	Half-Life too short		
MO-99	-8.392E+00		9.477E+00	1.448E+01	2.097E+00	-0.580
TC-99M	-1.590E+07		4.036E+07	Half-Life too short		
RH-101	3.894E-02		3.608E-02	6.287E-02	3.890E-03	0.619
RH-102	-2.848E-02		3.630E-02	5.519E-02	3.374E-03	-0.516
RU-103	8.801E-03		5.140E-02	8.455E-02	1.088E-02	0.104
RH-106	-5.692E-02		4.337E-01	6.648E-01	8.225E-02	-0.086
RU-106	-5.692E-02		4.337E-01	6.648E-01	4.652E-02	-0.086
AG-108M	1.040E-02		4.451E-02	7.380E-02	4.627E-03	0.141
AG-110M	-1.903E-02		4.898E-02	7.975E-02	5.932E-03	-0.239
IN-111	9.344E-02		7.521E-01	1.099E+00	6.732E-02	0.085
IN-113M	-7.101E-02		5.627E-02	8.428E-02	4.887E-03	-0.842
SN-113	-7.101E-02		5.627E-02	8.428E-02	4.887E-03	-0.842
IN-114M	9.020E-02		2.028E-01	3.042E-01	1.876E-02	0.297
CD-115	-3.657E+00		7.189E+00	1.114E+01	7.236E-01	-0.328
SN-117M	8.017E-03		5.543E-02	8.897E-02	6.345E-03	0.090
SB-122	4.913E-01		1.981E+00	2.832E+00	1.902E-01	0.173
I-123	-1.572E-01		1.902E-01	Half-Life too short		
TE-123M	-1.322E-02		3.199E-02	5.012E-02	3.575E-03	-0.264
I-124	-5.812E-01		7.691E-01	9.700E-01	6.707E-02	-0.599
SB-124	-9.577E-02		9.668E-02	1.208E-01	7.600E-03	-0.793
SB-125	9.281E-02		1.172E-01	2.016E-01	1.203E-02	0.460
TE-125M	-5.715E+00		9.052E+00	1.420E+01	1.652E+00	-0.402
I-126	9.434E-02		2.306E-01	3.982E-01	2.850E-02	0.237
SB-126	-1.539E-02		2.066E-01	2.952E-01	2.150E-02	-0.052
SB-127	8.987E-01		1.258E+00	2.220E+00	2.146E-01	0.405
XE-127	-2.366E-02		5.472E-02	8.494E-02	5.264E-03	-0.279
I-131	-1.404E-02		1.195E-01	1.949E-01	1.229E-02	-0.072
TE-132	-4.829E-02		4.918E-01	8.179E-01	1.154E-01	-0.059
BA-133	1.491E-02		6.040E-02	8.791E-02	1.012E-02	0.170
I-133	-3.586E-04		6.892E-04	Half-Life too short		
CS-134	1.188E-01		7.043E-02	1.311E-01	9.704E-03	0.906
CS-135	2.611E-01		2.165E-01	3.353E-01	2.608E-02	0.779
I-135	9.681E+06		1.598E+07	Half-Life too short		
CS-136	-4.516E-02		1.317E-01	2.078E-01	1.461E-02	-0.217
BA-137M	-7.849E-03		5.175E-02	8.588E-02	6.134E-03	-0.091
CS-137	-8.297E-03		5.470E-02	9.078E-02	6.503E-03	-0.091
CE-139	7.978E-03		3.106E-02	5.284E-02	3.201E-03	0.151
BA-140	-1.953E-01		3.379E-01	5.124E-01	1.674E-01	-0.381
LA-140	1.905E-02		1.123E-01	1.920E-01	1.138E-02	0.099
CE-141	8.189E-02		6.604E-02	1.101E-01	9.953E-03	0.744
CE-143	2.800E-04		4.434E-05	Half-Life too short		
CE-144	1.399E-01		2.452E-01	3.524E-01	5.832E-02	0.397
PM-144	1.861E-02		4.725E-02	8.148E-02	5.899E-03	0.228
PR-144	1.259E+00		3.198E+00	5.515E+00	3.991E-01	0.228
PM-146	1.513E-02		5.685E-02	9.440E-02	8.230E-03	0.160

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	3.818E-01		6.597E-01	1.114E+00	1.542E-01	0.343
PM-149	6.784E+01		5.526E+01	9.573E+01	1.358E+01	0.709
EU-152	-6.119E-02		1.387E-01	1.904E-01	1.238E-02	-0.321
GD-153	-5.830E-03		7.963E-02	1.120E-01	1.014E-02	-0.052
EU-154	-1.794E-01		1.961E-01	2.844E-01	2.674E-02	-0.631
EU-155	6.704E-02		1.047E-01	1.725E-01	1.701E-02	0.389
TB-160	-3.349E-02		2.111E-01	3.445E-01	2.483E-02	-0.097
HO-166M	-2.583E-02		8.629E-02	1.409E-01	1.024E-02	-0.183
TM-171	-9.431E+00		2.216E+01	2.587E+01	1.872E+00	-0.365
LU-176	1.074E-02		2.899E-02	4.891E-02	2.869E-03	0.220
LU-177	2.814E+00	+	1.705E+00	1.902E+00	1.180E-01	1.479
LU-177M	-7.297E-02		2.457E-01	3.372E-01	1.884E-02	-0.216
HF-181	-2.595E-02		5.389E-02	8.430E-02	5.199E-03	-0.308
W-181	2.147E-01		2.326E-01	3.413E-01	2.453E-02	0.629
TA-182	2.459E-01		3.310E-01	5.715E-01	3.305E-02	0.430
RE-183	-1.152E-01		1.127E-01	1.824E-01	1.201E-02	-0.632
RE-184	-1.787E-01		2.726E-01	4.395E-01	2.674E-02	-0.407
OS-185	-4.235E-02		6.190E-02	9.310E-02	6.602E-03	-0.455
RE-188	1.446E-01		1.957E-01	3.211E-01	2.448E-02	0.450
W-188	-6.445E+00		9.757E+00	1.332E+01	7.805E-01	-0.484
IR-192	7.518E-03		3.910E-02	6.533E-02	3.843E-03	0.115
AU-195	2.333E-01		2.269E-01	3.358E-01	3.082E-02	0.695
TL-200	-1.086E-05		6.853E-05	Half-Life too short		
TL-201	-9.794E-01		4.434E+00	7.409E+00	4.488E-01	-0.132
TL-202	-3.415E-02		8.353E-02	1.325E-01	7.711E-03	-0.258
HG-203	3.861E-02		5.173E-02	7.841E-02	4.859E-03	0.492
BI-207	-1.825E-02		7.873E-02	1.261E-01	8.153E-03	-0.145
TL-207	5.839E-01		9.015E-01	1.350E+00	2.231E-01	0.433
PO-209	-6.511E+00		1.084E+01	1.685E+01	1.206E+00	-0.386
PB-211	-2.806E-01		1.386E+00	1.911E+00	1.191E+00	-0.147
BI-212	1.862E+00	+	1.019E+00	9.856E-01	8.763E-02	1.890
PO-215	5.839E-01		9.015E-01	1.350E+00	2.231E-01	0.433
RN-219	-1.347E-01		5.487E-01	8.591E-01	1.157E-01	-0.157
RN-220	-1.547E+01		4.096E+01	5.446E+01	3.612E+00	-0.284
RA-223	5.839E-01		9.015E-01	1.350E+00	2.231E-01	0.433
AC-227	2.900E-01		4.527E-01	7.724E-01	1.087E-01	0.376
TH-227	2.900E-01		4.535E-01	7.724E-01	1.312E-01	0.376
TH-229	-3.014E-01		5.711E-01	9.124E-01	5.635E-02	-0.330
PA-231	-2.816E-01		2.011E+00	3.004E+00	4.145E-01	-0.094
TH-231	5.839E-01		9.015E-01	1.350E+00	2.231E-01	0.433
U-231	-1.124E-01		7.648E-01	1.072E+00	9.564E-02	-0.105
PA-233	-5.255E-02		7.430E-02	1.176E-01	7.312E-03	-0.447
PA-234	1.964E-01		4.078E-01	7.042E-01	1.274E-01	0.279
PA-234M	8.931E+00	+	7.762E+00	1.733E+01	1.707E+00	0.515
U-235	-5.316E-02		2.353E-01	3.696E-01	6.558E-02	-0.144
NP-236	-1.047E-01		9.014E-02	1.361E-01	9.361E-03	-0.770
NP-239	2.232E-01		1.909E-01	3.187E-01	3.489E-02	0.700
AM-241	5.621E-02		7.829E-02	1.150E-01	8.978E-03	0.489

Sample ID : G232504008 Acquisition date : 7-JUL-2009 08:51:52

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.849E-02		9.445E-02	1.500E-01	1.443E-02	-0.257
CM-247	3.132E-03		5.273E-02	7.870E-02	4.317E-03	0.040
CF-249	3.146E-02		4.814E-02	8.228E-02	4.461E-03	0.382
CF-251	-3.666E-02		1.354E-01	2.254E-01	1.377E-02	-0.163

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504008           *
* Acquisition date  :  7-JUL-2009 08:51:52 Detector SN#     :               *
* Detector ID       : GAM21                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:09.61      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504008           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.2820E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.055E+01	2.943E+00	4.467E-01	1.501E+00
CD-109	2.310E+00	8.958E-01	6.562E-01	4.571E-01
SN-126	2.278E-01	8.835E-02	6.654E-02	4.508E-02
TL-208	6.139E-01	1.061E-01	3.683E-02	5.413E-02
BI-210	1.603E+00	7.575E-01	5.008E-01	3.865E-01
PB-210	1.603E+00	7.575E-01	5.008E-01	3.865E-01
PO-210	1.603E+00	7.549E-01	5.008E-01	3.852E-01
BI-211	4.127E+00	5.543E-01	2.114E-01	2.828E-01
PB-212	1.869E+00	1.873E-01	5.179E-02	9.554E-02
PO-212	1.869E+00	1.873E-01	5.179E-02	9.554E-02
BI-214	1.249E+00	2.306E-01	7.653E-02	1.177E-01
PB-214	1.435E+00	2.063E-01	7.339E-02	1.053E-01
PO-214	1.435E+00	2.063E-01	7.339E-02	1.053E-01
PO-216	1.869E+00	1.873E-01	5.179E-02	9.554E-02
PO-218	1.435E+00	2.063E-01	7.339E-02	1.053E-01
RA-224	5.856E+00	1.445E+00	5.903E-01	7.372E-01
RA-226	1.249E+00	2.306E-01	7.653E-02	1.177E-01
AC-228	2.031E+00	4.388E-01	1.520E-01	2.239E-01
RA-228	2.031E+00	4.388E-01	1.520E-01	2.239E-01
TH-228	1.869E+00	1.873E-01	5.178E-02	9.554E-02
TH-230	1.249E+00	2.306E-01	7.653E-02	1.177E-01
TH-232	2.031E+00	4.388E-01	1.520E-01	2.239E-01
TH-234	8.922E-01	9.160E-01	5.622E-01	4.674E-01
U-234	1.249E+00	2.306E-01	7.653E-02	1.177E-01
NP-237	6.688E-01	2.926E-01	1.591E-01	1.493E-01
U-238	8.922E-01	9.160E-01	5.622E-01	4.674E-01
AM-243	5.406E-01	7.969E-02	3.244E-02	4.066E-02
ANH-511	1.641E-01	9.699E-02	2.889E-02	4.949E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	4.035E-01	3.854E-01	3.454E-01	1.966E-01	NOT IDENT.
NA-22	-6.158E-02	6.881E-02	5.148E-02	3.511E-02	NOT IDENT.
NA-24	-5.630E+04	9.442E+04	0.000E+00	4.817E+04	SHORT HLIF
AL-26	-1.494E-02	4.542E-02	3.557E-02	2.317E-02	NOT IDENT.
TI-44	4.283E-01	5.370E-02	3.588E-02	2.740E-02	FAIL ABUN
SC-46	8.881E-03	5.699E-02	4.922E-02	2.908E-02	FAIL ABUN
V-48	3.350E-02	8.944E-02	7.851E-02	4.564E-02	NOT IDENT.
CR-51	-4.078E-01	4.205E-01	3.314E-01	2.145E-01	NOT IDENT.
MN-52	7.511E-02	2.613E-01	2.246E-01	1.333E-01	FAIL ABUN
MN-54	3.125E-02	5.440E-02	4.861E-02	2.775E-02	NOT IDENT.
CO-56	-2.875E-02	5.168E-02	4.173E-02	2.637E-02	NOT IDENT.
CO-57	-4.262E-03	2.657E-02	2.169E-02	1.356E-02	NOT IDENT.
CO-58	1.614E-02	5.638E-02	4.944E-02	2.876E-02	NOT IDENT.
FE-59	-2.269E-03	1.298E-01	1.088E-01	6.621E-02	NOT IDENT.
CO-60	-4.151E-02	5.860E-02	4.385E-02	2.990E-02	NOT IDENT.
ZN-65	-9.109E-02	1.469E-01	9.559E-02	7.494E-02	NOT IDENT.
GE-68	-8.522E-01	1.796E+00	1.435E+00	9.165E-01	NOT IDENT.
AS-73	-6.891E-02	2.493E-01	2.169E-01	1.272E-01	NOT IDENT.
AS-74	2.172E-04	1.105E-01	9.218E-02	5.637E-02	NOT IDENT.
SE-75	1.060E-02	5.525E-02	4.238E-02	2.819E-02	NOT IDENT.
BR-77	6.289E+00	7.455E+00	6.160E+00	3.803E+00	FAIL ABUN
SR-82	-2.478E-01	4.972E-01	4.086E-01	2.537E-01	NOT IDENT.
RB-83	1.197E-01	9.069E-02	7.823E-02	4.627E-02	NOT IDENT.
RB-84	1.287E-02	9.977E-02	8.600E-02	5.090E-02	NOT IDENT.
KR-85	2.831E+01	1.011E+01	9.833E+00	5.160E+00	NOT IDENT.
SR-85	1.418E-01	5.064E-02	4.924E-02	2.584E-02	NOT IDENT.
RB-86	-2.010E-01	1.026E+00	8.450E-01	5.235E-01	NOT IDENT.
Y-88	9.232E-04	5.397E-02	4.552E-02	2.753E-02	NOT IDENT.
ZR-88	-3.619E-02	3.783E-02	3.028E-02	1.930E-02	NOT IDENT.
Y-91	-1.410E-01	2.742E+01	2.287E+01	1.399E+01	NOT IDENT.
NB-94	-1.811E-02	4.471E-02	3.739E-02	2.281E-02	NOT IDENT.
NB-95	3.847E-02	6.157E-02	5.524E-02	3.141E-02	NOT IDENT.
NB-95M	6.552E-01	1.805E-01	1.556E-01	9.209E-02	NOT IDENT.
ZR-95	-3.783E-02	9.683E-02	8.057E-02	4.940E-02	NOT IDENT.
NB-97	-6.398E+03	1.470E+04	0.000E+00	7.499E+03	SHORT HLIF
ZR-97	4.559E+05	2.935E+05	0.000E+00	1.497E+05	SHORT HLIF
MO-99	-8.392E+00	9.287E+00	7.323E+00	4.738E+00	NOT IDENT.
TC-99M	-1.590E+13	7.911E+13	0.000E+00	4.036E+13	SHORT HLIF
RH-101	3.894E-02	3.536E-02	3.244E-02	1.804E-02	NOT IDENT.
RH-102	-2.848E-02	3.557E-02	2.810E-02	1.815E-02	NOT IDENT.
RU-103	8.801E-03	5.037E-02	4.303E-02	2.570E-02	FAIL ABUN
RH-106	-5.692E-02	4.251E-01	3.371E-01	2.169E-01	FAIL ABUN
RU-106	-5.692E-02	4.250E-01	3.371E-01	2.169E-01	FAIL ABUN
AG-108M	1.040E-02	4.362E-02	3.763E-02	2.225E-02	NOT IDENT.
AG-110M	-1.903E-02	4.800E-02	4.041E-02	2.449E-02	NOT IDENT.
IN-111	9.344E-02	7.371E-01	5.650E-01	3.761E-01	NOT IDENT.
IN-113M	-7.101E-02	5.515E-02	4.304E-02	2.814E-02	NOT IDENT.
SN-113	-7.101E-02	5.515E-02	4.304E-02	2.814E-02	NOT IDENT.
IN-114M	9.020E-02	1.987E-01	1.571E-01	1.014E-01	NOT IDENT.
CD-115	-3.657E+00	7.045E+00	5.665E+00	3.595E+00	NOT IDENT.
SN-117M	8.017E-03	5.432E-02	4.606E-02	2.771E-02	NOT IDENT.
SB-122	4.913E-01	1.942E+00	1.438E+00	9.906E-01	NOT IDENT.
I-123	-1.572E+05	3.728E+05	0.000E+00	1.902E+05	SHORT HLIF
TE-123M	-1.322E-02	3.135E-02	2.595E-02	1.600E-02	NOT IDENT.
I-124	-5.812E-01	7.537E-01	4.921E-01	3.846E-01	NOT IDENT.
SB-124	-9.577E-02	9.475E-02	6.030E-02	4.834E-02	FAIL ABUN
SB-125	9.281E-02	1.149E-01	1.028E-01	5.860E-02	NOT IDENT.
TE-125M	-5.715E+00	8.871E+00	7.392E+00	4.526E+00	NOT IDENT.
I-126	9.434E-02	2.260E-01	2.017E-01	1.153E-01	NOT IDENT.
SB-126	-1.539E-02	2.025E-01	1.494E-01	1.033E-01	FAIL ABUN
SB-127	8.987E-01	1.233E+00	1.124E+00	6.288E-01	NOT IDENT.
XE-127	-2.366E-02	5.363E-02	4.381E-02	2.736E-02	NOT IDENT.
I-131	-1.404E-02	1.171E-01	9.967E-02	5.973E-02	NOT IDENT.
TE-132	-4.829E-02	4.820E-01	4.211E-01	2.459E-01	NOT IDENT.
BA-133	1.491E-02	5.919E-02	4.496E-02	3.020E-02	FAIL ABUN
I-133	-3.586E+02	1.351E+03	0.000E+00	6.892E+02	SHORT HLIF
CS-134	1.188E-01	6.902E-02	6.622E-02	3.522E-02	FAIL ABUN
CS-135	2.611E-01	2.121E-01	1.722E-01	1.082E-01	NOT IDENT.
I-135	9.681E+12	3.131E+13	0.000E+00	1.598E+13	SHORT HLIF
CS-136	-4.516E-02	1.291E-01	1.045E-01	6.585E-02	FAIL ABUN
BA-137M	-7.849E-03	5.071E-02	4.351E-02	2.587E-02	NOT IDENT.
CS-137	-8.297E-03	5.361E-02	4.599E-02	2.735E-02	NOT IDENT.
CE-139	7.978E-03	3.044E-02	2.734E-02	1.553E-02	NOT IDENT.
BA-140	-1.953E-01	3.312E-01	2.604E-01	1.690E-01	NOT IDENT.
LA-140	1.905E-02	1.101E-01	9.593E-02	5.615E-02	FAIL ABUN
CE-141	8.189E-02	6.472E-02	5.709E-02	3.302E-02	NOT IDENT.
CE-143	2.800E+02	8.690E+01	0.000E+00	4.434E+01	SHORT HLIF

CE-144	1.399E-01	2.403E-01	1.829E-01	1.226E-01	NOT IDENT.
PM-144	1.861E-02	4.630E-02	4.125E-02	2.362E-02	NOT IDENT.
PR-144	1.259E+00	3.134E+00	2.792E+00	1.599E+00	NOT IDENT.
PM-146	1.513E-02	5.571E-02	4.810E-02	2.842E-02	NOT IDENT.
ND-147	3.818E-01	6.465E-01	5.663E-01	3.299E-01	NOT IDENT.
PM-149	6.784E+01	5.415E+01	4.912E+01	2.763E+01	NOT IDENT.
EU-152	-6.119E-02	1.359E-01	9.743E-02	6.933E-02	NOT IDENT.
GD-153	-5.830E-03	7.803E-02	5.839E-02	3.981E-02	FAIL ABUN
EU-154	-1.794E-01	1.921E-01	1.426E-01	9.803E-02	NOT IDENT.
EU-155	6.704E-02	1.026E-01	8.985E-02	5.235E-02	FAIL ABUN
TB-160	-3.349E-02	2.068E-01	1.738E-01	1.055E-01	FAIL ABUN
HO-166M	-2.583E-02	8.457E-02	7.128E-02	4.315E-02	FAIL ABUN
TM-171	-9.431E+00	2.172E+01	1.356E+01	1.108E+01	NOT IDENT.
LU-176	1.074E-02	2.841E-02	2.507E-02	1.449E-02	FAIL ABUN
LU-177	2.814E+00	1.671E+00	9.807E-01	8.527E-01	FAIL ABUN
LU-177M	-7.297E-02	2.408E-01	1.720E-01	1.229E-01	FAIL ABUN
HF-181	-2.595E-02	5.281E-02	4.292E-02	2.694E-02	NOT IDENT.
W-181	2.147E-01	2.280E-01	1.790E-01	1.163E-01	NOT IDENT.
TA-182	2.459E-01	3.244E-01	2.867E-01	1.655E-01	FAIL ABUN
RE-183	-1.152E-01	1.105E-01	9.439E-02	5.637E-02	FAIL ABUN
RE-184	-1.787E-01	2.671E-01	2.259E-01	1.363E-01	NOT IDENT.
OS-185	-4.235E-02	6.066E-02	4.718E-02	3.095E-02	NOT IDENT.
RE-188	1.446E-01	1.918E-01	1.663E-01	9.787E-02	NOT IDENT.
W-188	-6.445E+00	9.562E+00	6.833E+00	4.878E+00	FAIL ABUN
IR-192	7.518E-03	3.832E-02	3.347E-02	1.955E-02	FAIL ABUN
AU-195	2.333E-01	2.223E-01	1.750E-01	1.134E-01	FAIL ABUN
TL-200	-1.086E+01	1.343E+02	0.000E+00	6.853E+01	SHORT HLIF
TL-201	-9.794E-01	4.346E+00	3.833E+00	2.217E+00	NOT IDENT.
TL-202	-3.415E-02	8.185E-02	6.755E-02	4.176E-02	NOT IDENT.
HG-203	3.861E-02	5.070E-02	4.025E-02	2.587E-02	FAIL ABUN
BI-207	-1.825E-02	7.716E-02	6.339E-02	3.937E-02	FAIL ABUN
TL-207	5.839E-01	8.835E-01	6.914E-01	4.507E-01	FAIL ABUN
PO-209	-6.511E+00	1.062E+01	8.497E+00	5.419E+00	NOT IDENT.
PB-211	-2.806E-01	1.359E+00	9.754E-01	6.931E-01	NOT IDENT.
BI-212	1.862E+00	9.991E-01	4.986E-01	5.097E-01	FAIL ABUN
PO-215	5.839E-01	8.835E-01	6.914E-01	4.507E-01	FAIL ABUN
RN-219	-1.347E-01	5.377E-01	4.386E-01	2.743E-01	FAIL ABUN
RN-220	-1.547E+01	4.014E+01	2.767E+01	2.048E+01	NOT IDENT.
RA-223	5.839E-01	8.835E-01	6.914E-01	4.507E-01	FAIL ABUN
AC-227	2.900E-01	4.437E-01	3.970E-01	2.264E-01	NOT IDENT.
TH-227	2.900E-01	4.445E-01	3.970E-01	2.268E-01	FAIL ABUN
TH-229	-3.014E-01	5.597E-01	4.710E-01	2.856E-01	FAIL ABUN
PA-231	-2.816E-01	1.971E+00	1.542E+00	1.006E+00	NOT IDENT.
TH-231	5.839E-01	8.835E-01	6.914E-01	4.507E-01	FAIL ABUN
U-231	-1.124E-01	7.495E-01	5.593E-01	3.824E-01	FAIL ABUN
PA-233	-5.255E-02	7.281E-02	6.028E-02	3.715E-02	FAIL ABUN
PA-234	1.964E-01	3.997E-01	3.548E-01	2.039E-01	FAIL ABUN
PA-234M	8.931E+00	7.607E+00	8.725E+00	3.881E+00	FAIL ABUN
U-235	-5.316E-02	2.306E-01	1.916E-01	1.176E-01	FAIL ABUN
NP-236	-1.047E-01	8.834E-02	7.042E-02	4.507E-02	FAIL ABUN
NP-239	2.232E-01	1.871E-01	1.657E-01	9.545E-02	FAIL ABUN
AM-241	5.621E-02	7.673E-02	6.041E-02	3.915E-02	NOT IDENT.
CM-243	-3.849E-02	9.256E-02	7.813E-02	4.722E-02	FAIL ABUN
CM-247	3.132E-03	5.167E-02	4.017E-02	2.636E-02	FAIL ABUN
CF-249	3.146E-02	4.718E-02	4.203E-02	2.407E-02	NOT IDENT.
CF-251	-3.666E-02	1.327E-01	1.165E-01	6.770E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	451.9250
46.50	451.9250
46.50	451.9250
48.70	459.1953
49.72	505.3333
51.35	488.5318
52.39	485.7131
52.97	508.9602
53.15	515.2014
53.44	516.4175
54.07	521.9483
56.28	573.6185
56.28	573.6212
57.37	0.0000
57.53	578.0428
57.53	578.0439
57.60	578.0933
57.98	550.2115
57.98	550.2115
59.32	570.8673
59.32	570.8673
59.40	570.9235
59.54	571.0219
59.72	571.1479
60.01	581.2294
61.10	608.3804
61.14	608.4097
61.30	631.6146
63.00	651.0800
63.29	625.0613
63.29	625.0613
63.58	625.2766
64.28	630.5504
65.12	629.5142
65.20	639.5128
65.20	639.5128
66.05	663.3618
66.72	655.5737
66.83	655.6581
66.91	655.7183
67.20	676.6953
67.20	676.6953
67.75	648.0417
67.85	660.5793
68.90	668.2980
68.90	668.2980
69.30	647.0989
69.67	647.3694
70.82	643.6144
70.82	643.6144
70.83	643.6215
72.80	643.3500
72.87	643.3981
72.87	643.3981
74.67	644.6565
74.81	644.7528
74.81	644.7528
74.81	644.7528
74.81	644.7528
74.81	644.7528
74.81	644.7528
74.97	644.8633
75.28	645.0795
75.70	645.3685
77.11	646.3366
77.11	646.3366
77.11	646.3366

77.11	646.3366
77.11	646.3366
77.11	646.3366
78.38	647.2014
79.62	648.0379
79.80	648.1601
79.80	648.1601
80.11	648.3669
80.18	479.9947
80.30	480.0538
80.30	480.0538
80.57	480.1878
81.00	480.4000
81.07	480.4348
81.07	480.4348
81.07	480.4348
81.07	480.4348
82.60	481.1862
83.37	646.3046
83.78	633.8974
83.78	633.8974
83.78	633.8974
83.78	633.8974
84.21	587.6640
84.40	515.8901
84.90	549.9947
85.43	550.2863
86.29	550.7564
86.50	550.8694
86.54	550.8913
86.59	550.9191
86.72	862.9359
86.79	862.9918
86.94	863.1223
87.30	871.4873
87.30	871.4873
87.30	871.4873
87.30	871.4873
87.30	871.4873
87.30	871.4873
87.57	827.1760
87.88	780.7534
88.03	780.8685
88.36	772.6280
88.47	772.7113
89.95	773.8221
91.11	774.6886
92.29	775.5620
92.38	926.2069
92.38	926.2069
93.35	895.7797
94.00	632.7657
94.67	416.8403
94.67	416.8418
94.90	416.9319
94.90	416.9319
94.90	416.9319
94.90	416.9319
95.87	463.4871
95.87	463.4871
96.73	424.4911
97.43	407.6360
98.44	370.2995
98.44	370.2995
98.88	358.4431
99.55	363.2388
99.55	363.2388
99.86	357.6190
100.00	350.7158
100.10	350.7489
103.18	441.1867
103.76	426.3423
105.00	394.4765
105.31	385.9599
108.00	410.6428
109.28	422.9967
111.00	374.8672
111.00	374.8672

111.76	387.0355
112.95	376.5728
115.19	383.8059
116.30	351.5131
117.00	320.1382
117.00	320.1382
117.66	341.0136
121.11	368.1978
121.62	369.7548
121.78	369.8026
122.06	359.8895
122.32	364.5477
122.32	364.5477
122.32	364.5477
122.32	364.5477
123.07	336.1699
127.23	372.4162
129.76	343.2311
131.20	364.7592
133.02	338.8031
133.54	328.3449
135.34	353.5425
136.00	370.1435
136.25	352.6810
136.48	352.7419
140.51	347.1508
140.51	0.0000
142.18	398.6628
142.65	396.5780
143.76	375.7772
144.24	341.4330
144.24	341.4330
144.24	341.4330
144.24	341.4330
145.22	326.0953
145.44	326.1467
147.16	352.1850
152.43	357.9858
152.70	353.5785
153.22	379.4533
154.21	356.1949
154.21	356.1949
154.21	356.1949
154.21	356.1949
155.03	355.2779
156.02	328.6057
158.56	332.5551
159.00	0.0000
159.00	349.5143
160.31	359.9512
161.27	364.6903
162.32	343.3232
162.64	315.4572
163.35	304.7879
163.89	291.3683
165.85	306.2049
167.43	315.5698
171.28	304.5902
171.86	281.1286
172.10	278.4511
176.55	312.9132
176.60	304.7367
181.06	249.3516
184.41	304.7302
185.71	282.7150
186.00	282.7678
190.27	243.1453
192.34	283.4831
193.63	303.4091
197.04	280.0811
198.01	265.4947
198.60	282.1890
200.40	304.6498
201.83	322.4629
202.84	322.4256
205.31	303.9929
208.36	315.3571
208.81	301.5216

209.75	277.5513
209.75	277.5513
210.97	277.7484
215.65	232.8552
216.55	246.9527
218.09	249.7603
222.10	258.0105
223.80	250.7691
226.40	237.0748
227.00	244.6525
227.08	244.6636
227.20	251.2418
228.16	258.8780
228.18	258.8814
228.18	258.8814
231.56	0.0000
235.69	263.7100
236.00	257.4745
236.00	257.4745
238.60	221.6737
238.63	221.6780
238.63	221.6780
238.63	221.6780
239.00	221.7210
240.98	221.9548
241.98	196.8740
241.98	196.8740
241.98	196.8740
244.69	190.8460
245.39	194.0718
247.94	193.1471
248.90	210.5531
249.79	207.8040
252.40	221.3870
252.85	230.9420
252.85	230.9420
254.15	0.0000
256.20	201.8270
256.20	201.8270
260.50	222.3057
260.90	208.9910
262.80	230.6156
264.65	181.6573
268.24	196.3516
268.79	185.2267
269.46	190.0799
269.46	190.0799
269.46	190.0799
269.46	190.0799
271.23	190.2470
273.65	201.6790
276.40	201.9507
277.35	173.1797
277.60	169.9942
277.60	169.9942
278.00	160.4024
278.60	168.4717
279.20	171.7307
279.53	171.7569
280.46	186.2887
281.68	197.6453
283.67	188.8743
284.30	172.5553
285.00	181.5444
285.90	162.3009
286.10	162.3173
286.10	162.3173
287.40	167.5739
288.45	0.0000
290.67	193.6548
290.80	193.6646
291.72	190.5208
293.26	0.0000
293.70	155.1445
295.21	239.3498
295.21	239.3498
295.21	239.3498
295.96	262.0833

296.50	258.9128
297.23	215.2943
298.57	173.3155
299.80	168.5514
299.80	168.5514
300.09	178.3002
300.09	178.3002
300.09	178.3002
300.10	178.3002
300.12	178.3024
301.29	168.2044
302.84	197.6772
303.76	226.0103
303.91	226.0273
304.40	221.2059
304.40	221.2059
304.84	214.4275
306.84	149.2609
308.46	166.9442
311.98	159.3876
316.51	140.1163
318.01	150.0136
319.02	152.0446
319.41	162.8612
320.08	165.7449
323.87	140.9013
323.87	140.9013
323.87	140.9013
323.87	140.9013
325.23	150.8214
328.77	178.9678
333.44	177.6863
334.20	155.5274
334.20	155.5274
334.30	155.5332
338.28	151.6787
338.28	151.6787
338.28	151.6787
338.28	151.6787
338.32	151.6806
338.32	151.6806
338.32	151.6806
340.50	132.0199
340.57	133.6734
344.27	153.7191
345.85	150.5132
350.59	0.0000
351.07	147.5294
351.92	146.2553
351.92	146.2553
351.92	146.2553
355.39	0.0000
356.01	129.5612
364.48	133.0130
366.43	110.0994
367.43	124.1620
367.94	0.0000
369.80	146.3315
374.96	121.5258
383.85	129.0125
387.95	103.9820
388.63	96.9410
391.69	145.5855
391.69	145.5855
392.90	139.5852
398.62	119.6205
400.65	133.9159
401.10	136.9841
401.81	129.6901
402.60	124.7348
404.84	125.3251
410.95	112.0356
411.60	110.3646
413.65	110.4505
414.70	120.6936
415.30	113.6756
415.76	117.3401
417.63	0.0000

418.52	110.3111
423.70	123.8271
427.08	103.4893
427.89	94.2955
432.53	122.1769
433.93	112.9944
439.47	116.3092
439.56	122.4892
439.89	112.2093
443.98	86.6004
444.90	99.0047
445.03	99.0094
445.03	99.0094
445.03	99.0094
445.03	99.0094
453.90	97.2530
463.38	99.6539
468.07	129.9683
473.00	88.5289
475.06	94.8457
475.35	94.8546
476.78	73.0010
477.59	66.7625
477.96	77.2041
482.03	98.2054
484.57	87.8339
487.03	79.5347
490.36	0.0000
492.35	84.9195
497.08	85.0530
507.63	0.0000
510.53	0.0000
510.84	75.9467
511.00	75.9507
511.85	75.9718
511.85	75.9718
513.99	76.0254
513.99	76.0254
520.41	57.4400
520.65	66.5141
527.90	88.0335
528.96	0.0000
529.64	90.2067
529.87	0.0000
531.02	75.3820
537.32	102.1289
543.00	91.6543
546.56	0.0000
549.76	83.6595
552.65	76.6077
555.20	67.7540
563.23	88.4760
563.90	92.9635
568.70	75.1970
569.32	75.2107
569.50	75.2141
569.67	75.2192
573.80	59.1747
574.00	57.3841
574.64	60.9831
578.91	64.6538
579.30	0.0000
583.14	66.5341
585.48	68.3802
591.81	66.4481
592.07	74.3729
593.00	85.4863
595.88	73.6445
600.56	81.9398
602.52	0.0000
602.71	99.4749
602.71	99.4749
603.60	86.8379
604.41	70.5717
604.70	70.5780
609.31	79.3715
609.31	79.3715
609.31	79.3715

609.31	79.3715
610.33	79.3946
612.46	77.9935
614.37	94.3685
618.01	73.8788
621.84	60.0166
621.84	60.0166
631.29	75.4974
633.02	82.1027
633.10	82.1045
634.78	84.3334
635.90	74.4995
636.97	78.9064
645.85	80.2020
646.12	83.5035
656.30	75.2918
657.75	82.6703
657.90	0.0000
661.65	85.5187
661.65	85.5187
664.57	0.0000
666.33	76.4211
666.33	76.4211
675.00	64.6039
677.61	60.9552
685.20	60.1546
692.80	74.1862
695.00	65.8792
696.49	67.7617
696.49	67.7617
697.00	72.4125
697.49	73.3505
698.33	73.3666
698.50	75.2272
699.00	74.3083
702.63	75.3096
706.10	65.1422
706.58	0.0000
706.67	69.8044
709.31	64.2650
711.68	75.4876
713.82	73.6655
717.42	69.4412
720.50	70.4580
721.93	0.0000
722.20	76.8968
722.78	73.7040
722.78	73.7040
722.89	73.7056
722.95	73.7072
723.30	67.3037
724.18	64.1127
727.18	72.0496
733.00	62.6527
735.90	54.6606
739.58	76.0331
742.81	66.7012
744.21	59.2061
747.13	65.8329
751.79	64.9697
752.31	59.3278
753.82	60.2917
755.35	63.1424
756.15	69.7544
756.87	69.7664
763.93	70.8344
765.79	75.5908
766.41	68.0420
766.84	73.7201
768.36	69.0212
768.36	69.0212
768.36	69.0212
768.36	69.0212
776.49	68.2119
778.00	64.4459
778.57	70.1428
778.89	68.2529
783.80	59.7931

785.46	66.4638
792.07	74.1787
795.84	52.3525
796.30	51.4072
801.93	72.4483
805.60	50.5674
810.29	59.2211
810.76	60.1827
815.85	60.2558
817.79	49.7582
818.51	45.9385
819.60	48.8221
826.30	51.7764
828.27	0.0000
831.60	65.2815
831.96	65.2870
834.83	61.4870
836.80	0.0000
846.75	55.8783
848.13	54.9323
856.28	0.0000
856.80	84.9761
860.37	36.7244
867.32	62.9185
867.82	61.9570
871.10	50.3782
873.19	44.5859
874.81	48.4812
875.33	0.0000
876.40	63.0481
879.36	61.1492
880.27	61.1620
880.51	57.2811
881.50	56.3232
883.24	54.4027
884.67	53.4480
889.25	54.4756
896.60	58.4631
898.02	56.5321
899.00	53.6192
903.28	64.4048
911.07	49.8524
911.07	49.8524
911.07	49.8524
919.63	43.0914
920.93	45.9528
925.00	40.2001
925.24	41.1827
926.50	49.2191
934.06	48.8404
934.06	48.8404
934.06	48.8404
934.06	48.8404
935.52	43.8015
937.48	25.2811
944.10	47.2578
946.00	38.4128
949.00	43.3653
962.29	69.4692
964.01	61.0187
966.15	52.5677
968.20	88.2161
969.11	73.2457
969.11	73.2457
969.11	73.2457
977.42	48.7836
980.50	46.6319
983.50	41.6975
989.30	38.7659
996.32	44.3683
1001.03	41.8488
1001.68	47.8340
1004.76	39.3171
1021.30	0.0000
1024.50	0.0000
1034.80	45.1483
1037.82	43.1680
1038.57	50.2014

1038.76	0.0000
1045.16	39.2095
1046.59	41.2319
1048.07	44.2614
1050.47	47.3022
1050.47	47.3022
1063.62	51.4628
1076.63	46.5353
1077.35	51.6018
1085.78	50.6714
1099.22	49.7876
1112.02	39.7252
1112.84	41.9146
1115.52	55.9152
1120.29	48.9688
1120.29	48.9688
1120.29	48.9688
1120.29	48.9688
1120.51	48.9707
1121.28	54.2262
1124.00	0.0000
1129.67	56.8611
1131.51	0.0000
1147.95	0.0000
1167.94	51.4669
1173.22	59.7606
1175.09	52.5668
1177.93	59.8125
1189.05	72.3328
1204.90	56.9963
1205.75	0.0000
1213.00	70.5732
1221.42	64.4421
1230.97	68.7178
1235.34	78.1494
1236.41	0.0000
1238.11	63.5913
1238.11	63.5913
1238.11	63.5913
1238.11	63.5913
1238.25	66.7214
1246.25	66.8151
1260.41	0.0000
1271.85	41.9466
1274.45	55.6051
1274.54	55.6051
1291.56	45.2466
1298.22	0.0000
1312.09	32.7344
1325.50	38.1006
1325.50	38.1006
1332.49	37.0850
1333.61	33.9128
1360.21	34.0638
1362.66	0.0000
1365.15	29.8298
1368.21	33.0435
1368.53	0.0000
1376.25	17.0768
1377.67	25.6211
1377.67	25.6211
1377.67	25.6211
1377.67	25.6211
1384.27	32.0618
1394.10	20.3383
1395.20	18.2002
1407.95	16.0925
1434.06	20.4689
1436.60	17.2441
1457.56	0.0000
1460.81	25.9658
1489.15	18.6286
1509.49	9.3436
1596.49	17.9868
1620.62	14.2503
1678.03	0.0000
1691.02	14.3947
1691.02	14.3947

1706.46	0.0000
1750.46	0.0000
1764.49	11.8762
1764.49	11.8762
1764.49	11.8762
1764.49	11.8762
1770.23	16.9794
1771.40	27.1709
1791.20	0.0000
1808.65	12.6790
1836.01	12.7252

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504008

Total Uranium Activity	2.6298E+00	ug/g
Total Uranium Counting Unc.	2.7273E+00	ug/g
Total Uranium Tpu	1.3915E-06	ug/g
Total Uranium Mda	1.6748E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232504008      *
*   ANALYST       : MXR1                      DETECTOR    : GAM21           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 08:51:52.03    SAMPLE ALQT:  128.200 GRAM    *
*                                                                           *
*****************************************************************************
```

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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.957E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.653E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 4.990E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 2.437E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:12:42.45

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504009.CNF;1
Sample date      : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:12:12.
Sample ID        : G232504009           Sample quantity  : 1.45070E+02 GRAM
Detector name    : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00        Elapsed real time: 0 02:00:01.85  0.0%
Energy tolerance : 1.50000 keV          Analyst Initials : MXR1
Abundance limit  : 75.00000             Sensitivity      : 5.00000
Batch ID         : 881220               Detector SN#     :
Matrix Spike ID  :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.27*	98	509	1.99	125.67	121	9	1.36E-02	43.6	
2	2	74.85*	391	474	1.17	148.81	142	18	5.43E-02	11.1	1.71E+00
3	2	77.15*	696	448	1.10	153.41	142	18	9.67E-02	6.6	
4	0	87.30	209	534	1.41	173.71	171	7	2.90E-02	19.6	
5	4	90.09	141	416	0.93	179.29	177	13	1.96E-02	23.9	1.07E+00
6	4	92.90*	256	549	1.50	184.91	177	13	3.56E-02	18.7	
7	0	112.81	36	400	0.92	224.71	221	7	4.99E-03	93.8	
8	0	129.11	93	471	1.05	257.30	253	9	1.29E-02	43.4	
9	0	185.96*	313	416	1.11	370.95	366	11	4.35E-02	14.3	
10	0	209.53	174	384	1.30	418.08	414	9	2.42E-02	21.7	
11	0	238.71*	1444	481	1.21	476.41	472	8	2.01E-01	3.8	
12	0	241.88	201	342	1.12	482.76	481	6	2.79E-02	16.6	
13	0	270.41	134	290	1.51	539.81	535	10	1.86E-02	25.3	
14	0	278.06	95	398	1.85	555.09	546	15	1.32E-02	47.2	
15	0	295.57*	402	360	1.10	590.11	584	10	5.58E-02	10.3	
16	0	300.29	74	253	0.97	599.55	595	9	1.02E-02	40.9	
17	0	327.89	95	198	1.30	654.73	651	9	1.32E-02	28.6	
18	0	338.46*	408	224	1.49	675.86	670	13	5.67E-02	9.2	
19	0	352.02*	906	197	1.55	702.96	698	11	1.26E-01	4.6	
20	0	463.11	115	196	1.57	925.09	919	13	1.60E-02	26.9	
21	0	477.78	217	155	1.19	954.42	948	13	3.01E-02	13.7	
22	0	511.04*	281	185	2.21	1020.92	1013	18	3.91E-02	14.5	
23	0	583.20*	577	175	1.59	1165.19	1157	17	8.01E-02	6.8	
24	0	609.47*	662	159	1.56	1217.72	1212	13	9.20E-02	5.7	
25	0	727.64	105	151	1.54	1454.00	1448	15	1.46E-02	27.2	
26	0	795.11	118	76	1.82	1588.91	1583	13	1.64E-02	17.7	
27	0	860.88*	143	68	2.29	1720.43	1711	17	1.99E-02	15.9	
28	0	911.50*	422	136	2.21	1821.65	1813	20	5.86E-02	8.6	
29	2	964.79	77	131	2.17	1928.19	1920	26	1.06E-02	32.6	2.17E+00
30	2	969.15*	270	110	2.03	1936.92	1920	26	3.75E-02	10.2	
31	0	1120.50	153	107	1.53	2239.56	2232	15	2.12E-02	16.9	
32	0	1388.41	43	107	14.24	2775.32	2751	33	5.93E-03	77.8	
33	0	1461.09*	2291	53	2.07	2920.66	2910	21	3.18E-01	2.2	
34	0	1589.74	51	20	0.59	3177.94	3171	15	7.08E-03	24.5	
35	0	1730.16	54	8	4.07	3458.78	3452	15	7.43E-03	17.6	
36	0	1764.97	157	19	1.85	3528.39	3519	19	2.18E-02	10.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 11:12:45

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504009.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:12:12
Sample ID : G232504009 Sample quantity : 145.07 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.85 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	+	477.59	*	1.412E+00	3.998E-01	3.549E-01	2.572E-02	3.979
K-40	+	1460.81	*	2.936E+01	2.589E+00	3.522E-01	2.673E-02	83.350
CD-109	+	88.03	*	2.296E+00	9.245E-01	1.037E+00	9.587E-02	2.214
SN-126	+	64.28		8.582E-01	7.592E-01	7.931E-01	1.172E-01	1.082
	+	86.94		9.414E-01	5.373E-01	4.952E-01	2.054E-01	1.901
	+	87.57	*	2.265E-01	9.117E-02	1.174E-01	1.082E-02	1.929
LU-177	+	112.95		6.906E-01	1.297E+00	1.778E+00	1.146E-01	0.388
	+	208.36	*	2.149E+00	9.391E-01	1.070E+00	5.806E-02	2.007
HG-203		70.83		-6.719E-01	1.005E+00	1.442E+00	1.920E-01	-0.466
		72.87		8.425E-01	5.145E-01	8.768E-01	1.137E-01	0.961
		82.60		-1.415E+00	1.031E+00	1.393E+00	1.932E-01	-1.016
	+	279.20	*	6.151E-02	5.815E-02	4.810E-02	2.917E-03	1.279
TL-208	+	277.35		5.769E-01	5.476E-01	4.324E-01	4.541E-02	1.334
	+	510.84		7.826E-01	2.420E-01	1.429E-01	1.519E-02	5.478
	+	583.14	*	4.506E-01	7.091E-02	3.917E-02	3.070E-03	11.505
	+	860.37		1.022E+00	3.453E-01	3.398E-01	3.800E-02	3.008
BI-211		72.87		4.379E+00	2.638E+00	4.557E+00	3.763E-01	0.961
	+	351.07	*	3.324E+00	3.712E-01	2.472E-01	1.587E-02	13.446
PB-212	+	74.81		1.925E+00	4.900E-01	4.566E-01	5.723E-02	4.216
	+	77.11		1.911E+00	2.986E-01	2.554E-01	2.165E-02	7.482
	+	87.30		1.047E+00	4.345E-01	5.450E-01	7.402E-02	1.922
	+	238.63	*	1.233E+00	1.284E-01	8.473E-02	6.053E-03	14.557
	+	300.09		9.333E-01	7.667E-01	9.415E-01	7.730E-02	0.991
PO-212	+	74.81		1.925E+00	4.900E-01	4.566E-01	5.723E-02	4.216
	+	77.11		1.911E+00	2.986E-01	2.554E-01	2.165E-02	7.482
	+	87.30		1.047E+00	4.345E-01	5.450E-01	7.402E-02	1.922
		115.19		2.344E+00	3.207E+00	4.775E+00	3.008E-01	0.491
	+	238.63	*	1.233E+00	1.284E-01	8.473E-02	6.053E-03	14.557
	+	300.09		9.333E-01	7.667E-01	9.415E-01	7.730E-02	0.991
BI-214	+	609.31	*	9.715E-01	1.408E-01	8.175E-02	7.302E-03	11.884
		768.36		5.004E-01	5.494E-01	9.515E-01	1.042E-01	0.526
		934.06		1.188E+00	8.804E-01	1.543E+00	1.918E-01	0.770
	+	1120.29		1.123E+00	3.945E-01	3.168E-01	3.033E-02	3.545
		1238.11		1.283E+00	6.817E-01	1.228E+00	1.048E-01	1.045

Sample ID : G232504009 Acquisition date : 7-JUL-2009 09:12:12

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		9.464E-01	8.296E-01	1.314E+00	1.288E-01	0.720
	+	1764.49		1.518E+00	3.287E-01	1.958E-01	1.190E-02	7.752
PB-214	+	74.81		3.317E+00	8.229E-01	7.867E-01	8.782E-02	4.216
	+	77.11		3.276E+00	5.696E-01	4.379E-01	4.990E-02	7.482
	+	87.30		1.794E+00	7.355E-01	9.336E-01	1.120E-01	1.922
	+	241.98		1.029E+00	3.515E-01	5.656E-01	4.472E-02	1.820
	+	295.21		8.964E-01	1.998E-01	1.693E-01	1.436E-02	5.295
	+	351.92	*	1.156E+00	1.425E-01	8.598E-02	7.112E-03	13.450
PO-214	+	74.81		3.317E+00	8.229E-01	7.867E-01	8.782E-02	4.216
	+	77.11		3.276E+00	5.696E-01	4.379E-01	4.990E-02	7.482
	+	87.30		1.794E+00	7.355E-01	9.336E-01	1.120E-01	1.922
	+	241.98		1.029E+00	3.515E-01	5.656E-01	4.472E-02	1.820
	+	295.21		8.964E-01	1.998E-01	1.693E-01	1.436E-02	5.295
	+	351.92	*	1.156E+00	1.425E-01	8.598E-02	7.112E-03	13.450
PO-216	+	74.81		1.925E+00	4.900E-01	4.566E-01	5.723E-02	4.216
	+	77.11		1.911E+00	2.986E-01	2.554E-01	2.165E-02	7.482
	+	87.30		1.047E+00	4.345E-01	5.450E-01	7.402E-02	1.922
	+	238.63	*	1.233E+00	1.284E-01	8.473E-02	6.053E-03	14.557
	+	300.09		9.333E-01	7.667E-01	9.415E-01	7.730E-02	0.991
PO-218	+	74.81		3.317E+00	8.229E-01	7.867E-01	8.782E-02	4.216
	+	77.11		3.276E+00	5.696E-01	4.379E-01	4.990E-02	7.482
	+	87.30		1.794E+00	7.355E-01	9.336E-01	1.120E-01	1.922
	+	241.98		1.029E+00	3.515E-01	5.656E-01	4.472E-02	1.820
	+	295.21		8.964E-01	1.998E-01	1.693E-01	1.436E-02	5.295
	+	351.92	*	1.156E+00	1.425E-01	8.598E-02	7.112E-03	13.450
RA-224	+	240.98	*	1.952E+00	6.575E-01	1.101E+00	6.132E-02	1.773
RA-226	+	609.31	*	9.715E-01	1.408E-01	8.175E-02	7.302E-03	11.884
		768.36		5.004E-01	5.494E-01	9.515E-01	1.042E-01	0.526
		934.06		1.188E+00	8.804E-01	1.543E+00	1.918E-01	0.770
	+	1120.29		1.123E+00	3.945E-01	3.168E-01	3.033E-02	3.545
		1238.11		1.283E+00	6.817E-01	1.228E+00	1.048E-01	1.045
		1377.67		9.464E-01	8.296E-01	1.314E+00	1.288E-01	0.720
	+	1764.49		1.518E+00	3.287E-01	1.958E-01	1.190E-02	7.752
AC-228	+	338.32		1.660E+00	7.426E-01	2.544E-01	1.037E-01	6.527
	+	911.07	*	1.419E+00	3.083E-01	1.696E-01	2.247E-02	8.369
	+	969.11		1.595E+00	5.017E-01	2.634E-01	6.308E-02	6.057
RA-228	+	338.32		1.660E+00	7.426E-01	2.544E-01	1.037E-01	6.527
	+	911.07	*	1.419E+00	3.083E-01	1.696E-01	2.247E-02	8.369
	+	969.11		1.595E+00	5.017E-01	2.634E-01	6.308E-02	6.057
TH-228		84.40		4.487E+00	2.406E+00	3.678E+00	4.916E-01	1.220
	+	238.60	*	1.233E+00	1.284E-01	8.472E-02	6.052E-03	14.558
	+	300.10		9.333E-01	9.404E-01	9.415E-01	5.548E-01	0.991
TH-230	+	609.31	*	9.714E-01	1.408E-01	8.175E-02	7.302E-03	11.884
		768.36		5.004E-01	5.494E-01	9.515E-01	1.042E-01	0.526
		934.06		1.188E+00	8.804E-01	1.543E+00	1.918E-01	0.770
	+	1120.29		1.123E+00	3.945E-01	3.168E-01	3.033E-02	3.545
		1238.11		1.283E+00	6.817E-01	1.228E+00	1.048E-01	1.045
		1377.67		9.464E-01	8.296E-01	1.314E+00	1.288E-01	0.720
	+	1764.49		1.518E+00	3.287E-01	1.958E-01	1.190E-02	7.752

Sample ID : G232504009 Acquisition date : 7-JUL-2009 09:12:12

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	+	338.32		1.660E+00	3.204E-01	2.544E-01	1.471E-02	6.527
	+	911.07	*	1.419E+00	3.083E-01	1.696E-01	2.247E-02	8.369
	+	969.11		1.595E+00	5.017E-01	2.634E-01	6.308E-02	6.057
TH-234	+	63.29	*	2.168E+00	1.929E+00	1.967E+00	3.467E-01	1.102
	+	92.38		1.761E+00	7.310E-01	6.200E-01	1.118E-01	2.841
U-234	+	609.31	*	9.714E-01	1.408E-01	8.175E-02	7.302E-03	11.884
		768.36		5.004E-01	5.494E-01	9.515E-01	1.042E-01	0.526
		934.06		1.188E+00	8.804E-01	1.543E+00	1.918E-01	0.770
	+	1120.29		1.123E+00	3.945E-01	3.168E-01	3.033E-02	3.545
		1238.11		1.283E+00	6.817E-01	1.228E+00	1.048E-01	1.045
		1377.67		9.464E-01	8.296E-01	1.314E+00	1.288E-01	0.720
	+	1764.49		1.518E+00	3.287E-01	1.958E-01	1.190E-02	7.752
NP-237	+	86.50	*	6.650E-01	3.008E-01	3.481E-01	7.855E-02	1.910
		95.87		-4.208E-01	8.391E-01	1.179E+00	2.881E-01	-0.357
U-238	+	63.29	*	2.168E+00	1.929E+00	1.967E+00	3.467E-01	1.102
	+	92.38		1.761E+00	6.752E-01	6.200E-01	5.270E-02	2.841
AM-243	+	74.67	*	3.121E-01	7.390E-02	7.431E-02	6.201E-03	4.200
	+	86.72		2.494E+01	1.004E+01	1.316E+01	1.203E+00	1.895
		117.66		-2.842E+00	3.129E+00	4.837E+00	2.976E-01	-0.588
		142.18		1.408E-01	1.495E+01	2.374E+01	1.308E+00	0.006
ANH-511	+	511.00	*	1.690E-01	5.034E-02	3.087E-02	2.039E-03	5.476

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22		1274.54	*	3.308E-03	3.266E-02	5.404E-02	3.677E-03	0.061
NA-24		1368.53	*	1.254E-02	3.266E-02	Half-Life too short		
AL-26		1129.67		1.081E-01	1.363E+00	2.140E+00	1.429E-01	0.051
		1808.65	*	1.437E-02	2.140E-02	3.836E-02	2.240E-03	0.375
TI-44		67.85		2.705E-02	4.319E-02	7.008E-02	5.635E-03	0.386
	+	78.38	*	3.526E-01	5.510E-02	6.855E-02	5.861E-03	5.144
SC-46		889.25	*	-1.554E-02	2.995E-02	4.707E-02	5.249E-03	-0.330
	+	1120.51		1.887E-01	6.510E-02	9.045E-02	6.249E-03	2.086
V-48		944.10		1.201E-01	6.003E-01	9.901E-01	1.048E-01	0.121
		983.50	*	-1.804E-02	4.648E-02	7.283E-02	7.204E-03	-0.248
		1312.09		-1.141E-02	5.790E-02	9.330E-02	6.796E-03	-0.122
CR-51		320.08	*	1.482E-01	2.739E-01	4.527E-01	2.915E-02	0.327
MN-52		744.21		-2.144E-02	1.250E-01	2.051E-01	1.809E-02	-0.105
		848.13		-1.575E-01	3.935E+00	6.441E+00	6.739E-01	-0.024
		935.52		8.504E-02	1.485E-01	2.506E-01	2.688E-02	0.339
		1246.25		-4.630E+00	4.267E+00	6.475E+00	4.164E-01	-0.715
		1333.61		-2.447E-01	2.621E+00	4.246E+00	3.208E-01	-0.058
		1434.06	*	-6.701E-02	1.297E-01	1.982E-01	1.460E-02	-0.338
MN-54		834.83	*	-2.677E-03	2.710E-02	4.426E-02	4.534E-03	-0.060
CO-56		846.75	*	-1.316E-02	3.012E-02	4.795E-02	5.006E-03	-0.274
		977.42		-7.122E-03	2.494E+00	3.453E+00	3.454E-01	-0.002
		1037.82		-1.707E-01	2.300E-01	3.643E-01	3.375E-02	-0.469
		1175.09		-6.627E-02	1.652E+00	2.727E+00	1.513E-01	-0.024

Sample ID : G232504009 Acquisition date : 7-JUL-2009 09:12:12

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.25		1.241E-01	6.715E-02	1.214E-01	8.090E-03	1.022
		1360.21		9.835E-02	6.889E-01	1.140E+00	8.568E-02	0.086
		1771.40		6.295E-02	1.713E-01	2.582E-01	1.561E-02	0.244
CO-57		122.06	*	1.227E-03	2.069E-02	3.328E-02	1.971E-03	0.037
		136.48		-1.172E-01	1.698E-01	2.623E-01	1.717E-02	-0.447
CO-58		810.76	*	-1.967E-02	2.779E-02	4.339E-02	4.284E-03	-0.453
FE-59		142.65		-1.729E+00	2.303E+00	3.517E+00	1.935E-01	-0.492
		192.34		-4.606E-01	6.963E-01	1.092E+00	1.267E-01	-0.422
		1099.22	*	2.214E-03	6.440E-02	1.075E-01	8.847E-03	0.021
		1291.56		-2.864E-03	9.019E-02	1.475E-01	1.240E-02	-0.019
CO-60		1173.22		-1.996E-02	3.322E-02	5.266E-02	2.910E-03	-0.379
		1332.49	*	7.198E-04	2.589E-02	4.246E-02	3.208E-03	0.017
ZN-65		1115.52	*	-1.348E-02	7.791E-02	1.089E-01	7.674E-03	-0.124
GE-68		1077.35	*	4.633E-01	9.842E-01	1.663E+00	1.321E-01	0.279
AS-73		53.44	*	-1.859E-02	8.984E-01	1.474E+00	1.168E-01	-0.013
AS-74		595.88	*	8.725E-03	6.174E-02	1.008E-01	7.242E-03	0.087
		634.78		1.169E-01	2.431E-01	4.034E-01	3.003E-02	0.290
SE-75		66.05		-2.114E+00	4.812E+00	6.995E+00	6.928E-01	-0.302
		96.73		-1.751E-01	6.813E-01	9.766E-01	1.288E-01	-0.179
		121.11		-2.627E-03	1.087E-01	1.744E-01	1.628E-02	-0.015
		136.00		4.022E-03	3.098E-02	4.960E-02	2.825E-03	0.081
		198.60		4.318E-01	1.358E+00	2.276E+00	1.545E-01	0.190
		264.65	*	-2.802E-02	3.557E-02	5.133E-02	2.936E-03	-0.546
	+	279.53		1.678E-01	1.586E-01	1.325E-01	8.184E-03	1.267
		303.91		-9.135E-01	1.781E+00	2.424E+00	2.306E-01	-0.377
		400.65		-1.483E-01	1.861E-01	2.981E-01	2.716E-02	-0.497
BR-77	+	87.88		2.595E+02	1.045E+02	1.491E+02	1.377E+01	1.741
		200.40		1.351E+01	6.410E+01	1.078E+02	5.804E+00	0.125
	+	239.00		1.033E+02	9.698E+00	1.494E+01	8.311E-01	6.911
		249.79		-5.911E+00	2.460E+01	3.994E+01	2.239E+00	-0.148
		281.68		3.422E+01	3.769E+01	5.689E+01	3.247E+00	0.601
		297.23		1.323E+02	3.882E+01	5.033E+01	2.890E+00	2.628
		303.76		-3.848E+01	8.015E+01	1.095E+02	6.298E+00	-0.352
		439.47		-3.953E+00	5.531E+01	9.151E+01	5.578E+00	-0.043
		484.57		-1.782E+01	9.018E+01	1.327E+02	8.519E+00	-0.134
		520.65	*	-9.655E-01	4.108E+00	6.445E+00	4.299E-01	-0.150
		574.64		4.169E+01	8.144E+01	1.292E+02	9.096E+00	0.323
		578.91		-7.149E+00	3.785E+01	5.210E+01	3.684E+00	-0.137
		585.48		8.124E+02	1.174E+02	2.022E+02	1.438E+01	4.019
		755.35		8.133E+00	6.233E+01	1.042E+02	9.368E+00	0.078
		817.79		-4.409E+00	4.835E+01	7.910E+01	7.884E+00	-0.056
SR-82		698.33		-9.687E+00	2.357E+01	3.744E+01	3.048E+00	-0.259
		776.49	*	-3.156E-01	2.625E-01	3.965E-01	3.692E-02	-0.796
		1395.20		-1.526E+01	1.015E+01	1.077E+01	8.030E-01	-1.416
RB-83		520.41	*	-1.413E-02	5.105E-02	7.985E-02	5.326E-03	-0.177
		529.64		5.806E-03	7.134E-02	1.172E-01	7.894E-03	0.050
		552.65		4.653E-02	1.320E-01	2.200E-01	1.516E-02	0.212
RB-84		881.50	*	-2.280E-03	5.244E-02	8.101E-02	8.928E-03	-0.028
KR-85		513.99	*	2.392E+01	6.468E+00	1.115E+01	7.387E-01	2.146

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SR-85		513.99	*	1.198E-01	3.239E-02	5.584E-02	3.700E-03	2.146
RB-86		1076.63	*	1.064E-01	5.806E-01	9.637E-01	7.672E-02	0.110
Y-88		898.02		-1.767E-02	3.191E-02	4.997E-02	5.664E-03	-0.354
		1836.01	*	-8.809E-03	2.197E-02	3.364E-02	1.916E-03	-0.262
ZR-88		392.90	*	-1.322E-02	2.222E-02	3.612E-02	2.077E-03	-0.366
Y-91		1204.90	*	8.639E+00	1.382E+01	2.371E+01	1.402E+00	0.364
NB-94		702.63	*	-1.977E-02	2.424E-02	3.838E-02	3.149E-03	-0.515
		871.10		-1.413E-02	2.563E-02	4.021E-02	4.361E-03	-0.351
NB-95		765.79	*	6.313E-03	3.006E-02	5.042E-02	4.612E-03	0.125
NB-95M		235.69	*	9.946E-02	1.041E-01	1.577E-01	1.157E-02	0.631
ZR-95		724.18		4.979E-02	7.095E-02	1.080E-01	1.001E-02	0.461
		756.15	*	1.230E-02	5.017E-02	8.448E-02	8.313E-03	0.146
NB-97		657.90	*	-2.438E-04	5.017E-02	Half-Life too short		
		1024.50		3.139E-01	5.017E-02	Half-Life too short		
ZR-97		254.15		3.841E-02	5.017E-02	Half-Life too short		
		355.39		4.656E-02	5.017E-02	Half-Life too short		
		507.63	*	3.851E-01	5.017E-02	Half-Life too short		
		602.52		2.127E-01	5.017E-02	Half-Life too short		
		1021.30		-9.247E-02	5.017E-02	Half-Life too short		
		1147.95		1.259E-01	5.017E-02	Half-Life too short		
		1362.66		3.307E-02	5.017E-02	Half-Life too short		
		1750.46		1.130E-01	5.017E-02	Half-Life too short		
MO-99		140.51		-7.323E+00	1.325E+01	2.017E+01	5.424E+00	-0.363
		181.06		-1.662E+00	8.153E+00	1.194E+01	2.027E+00	-0.139
		366.43		8.144E+00	3.433E+01	5.849E+01	3.379E+00	0.139
		739.58	*	1.521E+00	4.564E+00	7.742E+00	1.181E+00	0.196
		778.00		-1.706E+01	1.474E+01	2.241E+01	2.092E+00	-0.761
TC-99M		140.51	*	-3.900E+07	1.474E+01	Half-Life too short		
RH-101		127.23		1.605E-02	2.831E-02	4.151E-02	2.398E-03	0.387
		198.01	*	1.058E-02	2.519E-02	4.240E-02	2.279E-03	0.250
		325.23		1.657E-01	1.855E-01	2.765E-01	1.598E-02	0.599
RH-102		418.52		2.196E-01	2.053E-01	3.601E-01	2.140E-02	0.610
		475.06	*	3.722E-02	2.642E-02	4.148E-02	2.635E-03	0.897
		631.29		-1.238E-02	4.028E-02	6.345E-02	4.709E-03	-0.195
		697.49		-2.273E-02	5.698E-02	9.062E-02	7.367E-03	-0.251
		766.84		8.126E-02	7.928E-02	1.385E-01	1.269E-02	0.587
		1046.59		2.186E-02	9.090E-02	1.543E-01	1.331E-02	0.142
		1112.84		-1.163E-02	1.875E-01	2.650E-01	1.881E-02	-0.044
RU-103		497.08	*	1.665E-02	2.763E-02	4.691E-02	6.091E-03	0.355
	+	610.33		1.009E+01	1.985E+00	2.036E+00	3.265E-01	4.954
RH-106	+	511.85		8.408E-01	2.504E-01	3.369E-01	2.227E-02	2.495
		621.84	*	8.687E-02	2.469E-01	4.063E-01	5.111E-02	0.214
		1050.47		5.475E-01	1.853E+00	3.154E+00	2.695E-01	0.174
RU-106	+	511.85		8.408E-01	2.504E-01	3.369E-01	2.227E-02	2.495
		621.84	*	8.687E-02	2.467E-01	4.063E-01	2.990E-02	0.214
		1050.47		5.475E-01	1.853E+00	3.154E+00	2.695E-01	0.174
AG-108M		433.93	*	2.762E-03	2.293E-02	3.837E-02	2.507E-03	0.072
		614.37		-1.785E-02	3.353E-02	4.434E-02	3.417E-03	-0.403
		722.95		9.841E-03	3.197E-02	4.716E-02	4.171E-03	0.209

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-110M		657.75	*	-1.493E-03	2.537E-02	4.245E-02	3.348E-03	-0.035
		677.61		6.574E-02	2.073E-01	3.540E-01	2.872E-02	0.186
		706.67		9.741E-03	1.482E-01	2.482E-01	2.112E-02	0.039
		763.93		-2.158E-01	1.224E-01	1.772E-01	1.657E-02	-1.218
		884.67		-7.348E-04	3.686E-02	6.018E-02	6.796E-03	-0.012
		937.48		-2.212E-02	8.294E-02	1.322E-01	1.447E-02	-0.167
		1384.27		6.164E-02	1.192E-01	2.036E-01	1.578E-02	0.303
IN-111		171.28		3.661E-01	4.330E-01	7.511E-01	3.952E-02	0.487
		245.39	*	-8.467E-02	5.047E-01	6.980E-01	3.901E-02	-0.121
IN-113M		391.69	*	-1.356E-02	3.247E-02	5.329E-02	3.269E-03	-0.254
SN-113		391.69	*	-1.356E-02	3.247E-02	5.329E-02	3.269E-03	-0.254
IN-114M		190.27	*	9.125E-02	1.423E-01	2.168E-01	1.158E-02	0.421
CD-115		260.90		2.217E+01	5.082E+01	8.471E+01	4.782E+00	0.262
		492.35		-8.025E+00	1.265E+01	1.998E+01	1.293E+00	-0.402
		527.90	*	-4.011E+00	3.814E+00	5.793E+00	3.894E-01	-0.692
SN-117M		156.02		-2.045E+00	1.530E+00	2.468E+00	1.318E-01	-0.828
		158.56	*	4.200E-03	3.800E-02	6.353E-02	3.377E-03	0.066
SB-122		563.90	*	5.027E-01	8.706E-01	1.463E+00	1.020E-01	0.344
		692.80		1.145E+01	1.721E+01	2.986E+01	2.408E+00	0.383
I-123		159.00	*	2.636E-02	1.721E+01	Half-Life too short		
		528.96		-1.311E+01	1.721E+01	Half-Life too short		
TE-123M		159.00	*	2.178E-03	2.181E-02	3.646E-02	1.967E-03	0.060
I-124		602.71	*	4.559E-02	3.971E-01	5.591E-01	4.043E-02	0.082
		722.78		5.945E-01	2.299E+00	3.377E+00	2.870E-01	0.176
		1325.50		6.632E+00	1.726E+01	2.919E+01	2.179E+00	0.227
		1376.25		1.371E+01	1.917E+01	2.892E+01	2.166E+00	0.474
		1509.49		1.254E+01	7.855E+00	1.495E+01	1.071E+00	0.839
		1691.02		9.031E-01	1.564E+00	2.809E+00	1.811E-01	0.322
SB-124		602.71		3.740E-03	3.258E-02	4.586E-02	3.317E-03	0.082
		645.85		-2.269E-01	3.889E-01	6.003E-01	4.866E-02	-0.378
		709.31		1.296E+00	1.925E+00	3.334E+00	2.768E-01	0.389
		713.82		-3.901E-01	1.119E+00	1.822E+00	2.160E-01	-0.214
		722.78		7.070E-02	2.734E-01	4.016E-01	3.489E-02	0.176
	+	968.20		1.601E+01	3.645E+00	5.656E+00	5.751E-01	2.830
		1045.16		-7.258E-01	1.933E+00	3.154E+00	2.731E-01	-0.230
		1325.50		8.423E-01	2.192E+00	3.708E+00	2.767E-01	0.227
		1368.21		7.538E-01	1.225E+00	2.114E+00	2.703E-01	0.357
		1436.60		1.279E+00	2.536E+00	4.344E+00	3.198E-01	0.295
		1691.02	*	2.533E-02	4.388E-02	7.878E-02	5.435E-03	0.322
SB-125		427.89	*	2.133E-02	6.412E-02	1.086E-01	6.786E-03	0.196
	+	463.38		6.311E-01	3.421E-01	4.138E-01	2.966E-02	1.525
		600.56		-6.371E-03	1.354E-01	2.183E-01	1.739E-02	-0.029
		635.90		5.842E-02	2.038E-01	3.340E-01	2.755E-02	0.175
TE-125M		109.28	*	1.390E+00	8.143E+00	1.184E+01	1.040E+00	0.117
I-126		388.63		2.011E-02	1.315E-01	2.221E-01	1.277E-02	0.091
		666.33	*	6.170E-02	1.176E-01	2.028E-01	1.559E-02	0.304
		753.82		9.557E-02	9.529E-01	1.591E+00	1.426E-01	0.060
SB-126		223.80		1.573E+00	2.724E+00	4.608E+00	2.533E-01	0.341
	+	278.60		3.367E+00	3.182E+00	2.878E+00	1.640E-01	1.170

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	296.50		7.877E+00	1.686E+00	2.443E+00	1.402E-01	3.225
		414.70		-4.670E-02	4.849E-02	7.674E-02	4.538E-03	-0.609
		415.30		-2.893E+00	4.010E+00	6.434E+00	3.808E-01	-0.450
		555.20		1.239E+00	2.404E+00	4.045E+00	2.794E-01	0.306
		573.80		6.239E-01	6.635E-01	1.113E+00	7.829E-02	0.561
		593.00		-4.954E-01	5.883E-01	8.959E-01	6.420E-02	-0.553
		656.30		-9.311E-02	2.192E+00	3.672E+00	2.786E-01	-0.025
		666.33		2.565E-02	4.890E-02	8.433E-02	6.483E-03	0.304
		675.00		-2.671E-01	1.190E+00	1.965E+00	1.534E-01	-0.136
		695.00		1.922E-02	4.845E-02	8.280E-02	6.702E-03	0.232
		697.00		-8.372E-02	1.809E-01	2.870E-01	2.331E-02	-0.292
		720.50	*	-4.350E-02	1.008E-01	1.449E-01	1.227E-02	-0.300
		856.80		1.125E-01	3.469E-01	5.038E-01	5.344E-02	0.223
		989.30		2.974E-01	7.478E-01	1.250E+00	1.223E-01	0.238
		1034.80		3.594E+00	6.041E+00	1.015E+01	9.014E-01	0.354
		1213.00		-9.719E-01	3.145E+00	5.083E+00	3.056E-01	-0.191
SB-127		61.10		1.486E+01	3.936E+01	6.005E+01	5.885E+00	0.248
		252.40		-3.784E-01	2.084E+00	3.380E+00	1.398E+00	-0.112
		290.80		-1.845E+01	1.357E+01	1.750E+01	1.457E+00	-1.054
		411.60		2.237E+00	5.889E+00	1.000E+01	1.393E+00	0.224
		444.90		2.529E-01	4.776E+00	7.947E+00	8.207E-01	0.032
		473.00		3.849E-01	9.077E-01	1.343E+00	1.457E-01	0.287
		543.00		2.308E+00	7.820E+00	1.299E+01	1.672E+00	0.178
		603.60		-4.594E+00	6.899E+00	9.035E+00	9.930E-01	-0.508
		685.20	*	-5.462E-02	6.316E-01	1.051E+00	1.076E-01	-0.052
		698.50		-2.012E+00	7.259E+00	1.191E+01	1.801E+00	-0.169
		722.20		8.859E+00	1.492E+01	2.258E+01	2.353E+00	0.392
		783.80		1.538E+00	1.842E+00	3.180E+00	3.959E-01	0.484
XE-127		57.60		2.043E+00	5.938E+00	1.007E+01	7.763E-01	0.203
		145.22		6.300E-02	5.638E-01	8.895E-01	4.862E-02	0.071
		172.10		9.167E-02	8.589E-02	1.500E-01	7.895E-03	0.611
		202.84	*	-4.777E-02	3.372E-02	5.300E-02	2.861E-03	-0.901
		374.96		-2.503E-03	1.325E-01	2.226E-01	1.284E-02	-0.011
I-131		80.18		3.545E+00	3.260E+00	5.030E+00	4.377E-01	0.705
		284.30		-7.468E-01	1.028E+00	1.478E+00	9.386E-02	-0.505
		364.48	*	2.605E-02	6.688E-02	1.148E-01	7.388E-03	0.227
		636.97		-3.110E-02	9.753E-01	1.565E+00	1.252E-01	-0.020
		722.89		1.289E+00	4.436E+00	6.535E+00	5.582E-01	0.197
TE-132		49.72		-4.012E+00	1.394E+01	2.326E+01	2.234E+00	-0.173
	+	111.76		9.829E+00	1.847E+01	2.605E+01	2.244E+00	0.377
		116.30		4.798E+00	1.553E+01	2.263E+01	1.900E+00	0.212
		228.16	*	2.296E-02	3.269E-01	5.419E-01	7.493E-02	0.042
BA-133		53.15		-1.988E-01	3.982E+00	6.527E+00	5.179E-01	-0.030
		79.62		1.459E+00	1.146E+00	1.758E+00	2.677E-01	0.830
		81.00		-9.868E-02	8.946E-02	1.227E-01	1.955E-02	-0.804
		276.40		3.594E-01	3.163E-01	4.777E-01	6.170E-02	0.752
		302.84		-1.667E-03	1.243E-01	1.756E-01	2.042E-02	-0.009
		356.01	*	-1.246E-02	3.611E-02	4.880E-02	5.637E-03	-0.255
		383.85		-1.293E-01	2.088E-01	3.384E-01	3.671E-02	-0.382

---- Non-Identified Nuclides ----

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I-133	+	510.53		2.882E-01	2.088E-01	Half-Life too short		
		529.87	*	7.640E-05	2.088E-01	Half-Life too short		
		706.58		1.376E-04	2.088E-01	Half-Life too short		
		856.28		6.252E-03	2.088E-01	Half-Life too short		
		875.33		-4.948E-03	2.088E-01	Half-Life too short		
		1236.41		1.088E-01	2.088E-01	Half-Life too short		
		1298.22		-1.433E-03	2.088E-01	Half-Life too short		
CS-134		475.35		4.204E+00	1.796E+00	2.949E+00	1.874E-01	1.426
		563.23		1.291E-01	2.679E-01	4.480E-01	3.165E-02	0.288
		569.32		-7.498E-02	1.490E-01	2.323E-01	1.661E-02	-0.323
		604.70		-3.240E-03	2.877E-02	3.970E-02	2.886E-03	-0.082
	+	795.84	*	1.296E-01	4.749E-02	6.982E-02	6.753E-03	1.856
		801.93		-5.214E-01	3.530E-01	4.298E-01	4.193E-02	-1.213
		1038.57		-2.964E+00	2.931E+00	4.542E+00	3.997E-01	-0.653
		1167.94		5.718E-02	1.861E+00	3.088E+00	1.751E-01	0.019
		1365.15		-5.169E-01	8.725E-01	1.332E+00	1.060E-01	-0.388
CS-135		268.24	*	1.381E-01	1.326E-01	2.012E-01	1.521E-02	0.686
I-135		288.45		2.273E+06	1.326E-01	Half-Life too short		
		417.63		4.870E+07	1.326E-01	Half-Life too short		
		546.56		5.784E+06	1.326E-01	Half-Life too short		
		836.80		2.136E+07	1.326E-01	Half-Life too short		
		1038.76		-5.270E+07	1.326E-01	Half-Life too short		
		1124.00		5.903E+07	1.326E-01	Half-Life too short		
		1131.51		1.653E+07	1.326E-01	Half-Life too short		
		1260.41	*	1.858E+06	1.326E-01	Half-Life too short		
		1457.56		2.577E+09	1.326E-01	Half-Life too short		
		1678.03		3.360E+06	1.326E-01	Half-Life too short		
		1706.46		-9.508E+06	1.326E-01	Half-Life too short		
		1791.20		-1.758E+06	1.326E-01	Half-Life too short		
CS-136		66.91		2.693E-01	7.000E-01	1.056E+00	1.594E-01	0.255
	+	86.29		2.627E+00	1.087E+00	1.511E+00	1.991E-01	1.739
		153.22		6.086E-01	4.368E-01	7.725E-01	5.316E-02	0.788
		163.89		3.233E-01	7.471E-01	1.261E+00	8.612E-02	0.256
		176.55		-6.495E-02	2.430E-01	4.049E-01	2.452E-02	-0.160
		273.65		-3.117E-01	4.855E-01	4.617E-01	3.006E-02	-0.675
		340.57		4.158E-01	1.042E-01	1.755E-01	1.079E-02	2.370
		818.51		-1.529E-02	4.619E-02	7.417E-02	7.405E-03	-0.206
		1048.07	*	4.045E-02	7.774E-02	1.340E-01	1.201E-02	0.302
		1235.34		1.081E-01	4.051E-01	6.773E-01	6.962E-02	0.160
BA-137M		661.65	*	-1.043E-02	2.645E-02	4.337E-02	3.306E-03	-0.240
CS-137		661.65	*	-1.103E-02	2.796E-02	4.585E-02	3.504E-03	-0.240
CE-139		165.85	*	2.702E-03	2.224E-02	3.774E-02	1.981E-03	0.072
BA-140		162.64		1.093E-01	5.347E-01	8.970E-01	5.437E-02	0.122
		304.84		7.504E-01	9.290E-01	1.356E+00	3.699E-01	0.553
		423.70		-7.328E-01	1.244E+00	1.971E+00	6.271E-01	-0.372
		537.32	*	-1.043E-02	1.654E-01	2.690E-01	8.801E-02	-0.039
LA-140	+	328.77		4.250E-01	2.447E-01	3.516E-01	2.278E-02	1.209
		432.53		-8.152E-01	1.302E+00	2.088E+00	1.384E-01	-0.390
		487.03		2.456E-02	8.293E-02	1.390E-01	9.916E-03	0.177

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		751.79		-7.389E-01	1.088E+00	1.720E+00	1.690E-01	-0.430
		815.85		-2.307E-03	1.942E-01	3.196E-01	3.454E-02	-0.007
		867.82		7.886E-01	9.932E-01	1.509E+00	1.684E-01	0.523
		919.63		-1.339E-01	2.033E+00	2.814E+00	3.555E-01	-0.048
		925.24		1.040E-01	7.270E-01	1.196E+00	1.355E-01	0.087
		1596.49	*	-2.427E-02	5.464E-02	7.033E-02	4.825E-03	-0.345
CE-141		145.44	*	1.141E-02	4.973E-02	7.955E-02	4.541E-03	0.143
CE-143		57.37		1.448E-04	4.973E-02	Half-Life too short		
		231.56		7.149E-05	4.973E-02	Half-Life too short		
		293.26	*	1.856E-04	4.973E-02	Half-Life too short		
	+	350.59		8.548E-03	4.973E-02	Half-Life too short		
		490.36		1.618E-04	4.973E-02	Half-Life too short		
		664.57		2.194E-04	4.973E-02	Half-Life too short		
		721.93		2.112E-04	4.973E-02	Half-Life too short		
CE-144		80.11		2.010E+00	1.812E+00	2.798E+00	2.423E-01	0.718
		133.54	*	4.755E-02	1.798E-01	2.586E-01	3.657E-02	0.184
PM-144	+	476.78		3.037E-01	8.612E-02	1.167E-01	8.661E-03	2.602
		618.01		-1.416E-02	2.613E-02	3.892E-02	2.962E-03	-0.364
		696.49	*	-4.367E-03	2.541E-02	4.098E-02	3.327E-03	-0.107
		778.57		-1.515E+00	1.722E+00	2.676E+00	2.501E-01	-0.566
PR-144		696.49	*	-2.956E-01	1.720E+00	2.774E+00	2.251E-01	-0.107
		1489.15		-3.893E+00	8.296E+00	1.261E+01	9.112E-01	-0.309
PM-146		453.90	*	-9.659E-03	3.128E-02	5.089E-02	4.528E-03	-0.190
		633.02		1.032E+00	1.074E+00	1.726E+00	6.407E-01	0.598
		735.90		-5.265E-02	1.202E-01	1.708E-01	4.890E-02	-0.308
		747.13		-4.498E-02	6.325E-02	9.932E-02	1.409E-02	-0.453
ND-147	+	91.11		4.385E-01	2.136E-01	3.614E-01	3.399E-02	1.213
		319.41		2.122E+00	2.256E+00	3.795E+00	2.192E-01	0.559
		439.89		-1.306E+00	3.782E+00	6.164E+00	3.761E-01	-0.212
		531.02	*	2.553E-01	3.381E-01	5.759E-01	8.035E-02	0.443
PM-149		285.90	*	-6.896E+00	3.460E+01	5.568E+01	7.869E+00	-0.124
EU-152		121.78		7.680E-03	5.957E-02	9.610E-02	7.406E-03	0.080
		244.69		-6.798E-02	2.815E-01	3.891E-01	2.174E-02	-0.175
		344.27	*	-2.595E-02	8.056E-02	1.096E-01	7.150E-03	-0.237
		443.98		1.725E-01	6.977E-01	1.173E+00	7.188E-02	0.147
		778.89		-7.106E-02	1.969E-01	3.180E-01	2.973E-02	-0.223
		867.32		1.115E-01	6.845E-01	9.785E-01	1.055E-01	0.114
	+	964.01		5.201E-01	3.433E-01	4.408E-01	4.515E-02	1.180
		1085.78		1.162E-01	3.076E-01	5.253E-01	4.070E-02	0.221
		1112.02		1.428E-01	2.484E-01	3.865E-01	2.752E-02	0.370
		1407.95		2.066E-02	1.524E-01	2.507E-01	1.862E-02	0.082
GD-153		69.67		-1.427E+00	1.660E+00	2.367E+00	1.921E-01	-0.603
		83.37		1.047E+01	1.349E+01	2.028E+01	1.802E+00	0.516
		97.43	*	-3.084E-02	7.316E-02	1.040E-01	8.129E-03	-0.297
		103.18		-4.303E-02	8.331E-02	1.322E-01	9.534E-03	-0.325
EU-154		123.07		5.767E-03	4.176E-02	6.735E-02	6.370E-03	0.086
		247.94		-3.449E-03	2.542E-01	4.174E-01	3.932E-02	-0.008
		591.81		-5.372E-01	4.823E-01	6.642E-01	7.065E-02	-0.809
		723.30		1.044E-01	1.307E-01	2.010E-01	1.895E-02	0.519

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		756.87		4.078E-01	5.559E-01	9.609E-01	1.178E-01	0.424
		873.19		-5.883E-02	2.227E-01	3.574E-01	4.978E-02	-0.165
		996.32		-2.472E-01	2.548E-01	3.707E-01	6.780E-02	-0.667
		1004.76		4.248E-02	1.532E-01	2.528E-01	3.108E-02	0.168
		1274.45	*	3.734E-02	8.977E-02	1.520E-01	1.518E-02	0.246
EU-155		48.70		-1.456E-01	2.959E+00	4.990E+00	3.785E-01	-0.029
		60.01		-3.753E+00	5.345E+00	7.734E+00	5.902E-01	-0.485
	+	86.54		2.725E-01	1.098E-01	1.583E-01	1.458E-02	1.721
		105.31	*	-2.802E-02	8.548E-02	1.366E-01	9.766E-03	-0.205
TB-160	+	86.79		7.131E-01	2.871E-01	4.159E-01	3.805E-02	1.714
		197.04		8.918E-02	4.164E-01	6.960E-01	3.738E-02	0.128
		215.65		2.303E-01	5.793E-01	9.445E-01	5.156E-02	0.244
		298.57		4.568E-02	1.413E-01	1.483E-01	8.521E-03	0.308
		879.36	*	-1.633E-02	1.019E-01	1.648E-01	1.810E-02	-0.099
		962.29		9.133E-01	4.672E-01	7.478E-01	7.683E-02	1.221
	+	966.15		3.497E-01	2.308E-01	4.030E-01	4.113E-02	0.868
		1177.93		1.437E-01	2.673E-01	4.575E-01	2.554E-02	0.314
		1271.85		2.199E-01	5.099E-01	8.650E-01	5.846E-02	0.254
HO-166M		80.57		3.522E-02	2.366E-01	3.509E-01	3.049E-02	0.100
		184.41		8.527E-02	3.072E-02	5.033E-02	2.674E-03	1.694
		280.46		2.524E-02	6.964E-02	1.016E-01	5.793E-03	0.249
		410.95		1.694E-01	1.758E-01	3.069E-01	1.807E-02	0.552
		711.68	*	-2.305E-02	4.361E-02	7.026E-02	5.856E-03	-0.328
		752.31		-8.851E-02	1.942E-01	3.122E-01	2.792E-02	-0.283
		810.29		-9.437E-03	4.185E-02	6.787E-02	6.682E-03	-0.139
TM-171		51.35		-2.514E+01	3.430E+01	5.619E+01	4.453E+00	-0.447
		52.39		4.731E+00	1.714E+01	2.923E+01	2.322E+00	0.162
		59.40		-2.915E+00	2.880E+01	4.304E+01	3.268E+00	-0.068
		66.72	*	1.490E+01	2.838E+01	4.311E+01	3.447E+00	0.346
LU-176	+	88.36		5.371E-01	2.162E-01	3.070E-01	2.819E-02	1.750
		201.83		-1.981E-02	2.137E-02	3.434E-02	1.852E-03	-0.577
		306.84	*	-9.379E-03	1.864E-02	2.933E-02	1.689E-03	-0.320
		401.10		-4.095E+00	4.849E+00	7.755E+00	4.508E-01	-0.528
LU-177M		52.97		3.345E-02	1.787E+00	2.937E+00	2.332E-01	0.011
		54.07		-2.525E-01	9.315E-01	1.513E+00	1.196E-01	-0.167
		61.30		8.280E-01	1.510E+00	2.321E+00	1.793E-01	0.357
		121.62		9.998E-03	3.016E-01	4.847E-01	2.875E-02	0.021
		147.16		1.043E-01	5.221E-01	8.337E-01	4.537E-02	0.125
		171.86		3.093E-01	3.585E-01	6.220E-01	3.274E-02	0.497
		218.09		-1.994E-01	6.685E-01	1.085E+00	5.933E-02	-0.184
		268.79		1.442E+00	6.821E-01	1.088E+00	6.167E-02	1.326
		319.02		1.221E-01	2.007E-01	3.327E-01	1.921E-02	0.367
		367.43		-1.256E-01	6.378E-01	1.064E+00	6.143E-02	-0.118
		413.65	*	-1.533E-01	1.273E-01	1.986E-01	1.173E-02	-0.772
HF-181		56.28		1.922E-01	9.455E-01	1.598E+00	1.245E-01	0.120
		57.53		1.927E-01	5.027E-01	8.539E-01	6.585E-02	0.226
		65.20		-9.810E-01	9.498E-01	1.340E+00	1.063E-01	-0.732
		133.02		2.795E-02	5.571E-02	8.120E-02	4.593E-03	0.344
		136.25		-1.318E-01	3.573E-01	5.602E-01	3.137E-02	-0.235

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		345.85		-4.803E-02	1.544E-01	2.102E-01	1.216E-02	-0.229
		482.03	*	7.535E-03	3.184E-02	4.642E-02	2.971E-03	0.162
W-181		56.28		7.792E-02	3.790E-01	6.406E-01	4.991E-02	0.122
		57.53		7.738E-02	2.017E-01	3.426E-01	2.642E-02	0.226
		65.20	*	-3.904E-01	3.780E-01	5.333E-01	4.230E-02	-0.732
TA-182		67.75		3.437E-02	1.040E-01	1.656E-01	1.331E-02	0.208
		100.10		6.374E-02	1.434E-01	2.369E-01	1.781E-02	0.269
		152.43		1.403E-01	2.688E-01	4.337E-01	2.333E-02	0.324
		222.10		1.993E-02	2.652E-01	4.404E-01	2.417E-02	0.045
		1001.68		3.039E-01	1.473E+00	2.389E+00	2.281E-01	0.127
	+	1121.28		5.238E-01	1.807E-01	2.509E-01	1.729E-02	2.087
		1189.05		3.026E-01	2.325E-01	4.146E-01	2.371E-02	0.730
		1221.42	*	-2.495E-02	1.450E-01	2.363E-01	1.446E-02	-0.106
		1230.97		-8.892E-02	3.528E-01	5.718E-01	3.566E-02	-0.156
RE-183		57.98		8.924E-02	2.066E-01	3.364E-01	2.584E-02	0.265
		59.32		-9.484E-03	1.164E-01	1.741E-01	1.323E-02	-0.054
		67.20		1.934E-02	1.990E-01	2.966E-01	2.378E-02	0.065
		162.32	*	2.104E-03	8.609E-02	1.436E-01	7.579E-03	0.015
	+	208.81		2.380E+00	1.040E+00	1.416E+00	7.685E-02	1.680
		291.72		-7.262E-01	8.457E-01	1.134E+00	6.499E-02	-0.640
RE-184		57.98		3.331E-01	7.714E-01	1.256E+00	9.647E-02	0.265
		59.32		-3.537E-02	4.340E-01	6.493E-01	4.933E-02	-0.054
		67.20		7.216E-02	7.424E-01	1.107E+00	8.872E-02	0.065
		161.27		-4.315E-02	2.749E-01	4.628E-01	2.447E-02	-0.093
		216.55		5.187E-02	2.019E-01	3.383E-01	1.848E-02	0.153
		252.85	*	-4.181E-02	1.667E-01	2.704E-01	1.519E-02	-0.155
		318.01		3.632E-01	3.475E-01	5.874E-01	3.390E-02	0.618
		792.07		5.342E-01	8.446E-01	1.265E+00	1.209E-01	0.422
		903.28		2.927E-01	8.979E-01	1.295E+00	1.454E-01	0.226
		920.93		8.217E-02	3.729E-01	5.329E-01	5.840E-02	0.154
OS-185		59.72		-1.807E-01	3.163E-01	4.612E-01	3.508E-02	-0.392
		61.14		6.791E-02	1.647E-01	2.517E-01	1.942E-02	0.270
		69.30		-2.905E-01	2.975E-01	4.215E-01	3.415E-02	-0.689
		592.07		-1.525E+00	1.837E+00	2.711E+00	1.941E-01	-0.563
		646.12	*	-1.750E-02	3.363E-02	5.217E-02	3.923E-03	-0.335
		717.42		1.120E-01	6.079E-01	1.025E+00	8.627E-02	0.109
		874.81		-7.681E-02	4.198E-01	6.777E-01	7.392E-02	-0.113
		880.27		-6.059E-01	6.176E-01	8.816E-01	9.698E-02	-0.687
RE-188		155.03	*	9.915E-05	1.259E-01	2.137E-01	1.143E-02	0.000
	+	477.96		1.362E+01	3.826E+00	5.290E+00	3.371E-01	2.574
		633.10		1.945E+00	2.012E+00	3.436E+00	2.554E-01	0.566
W-188	+	63.58		8.522E+01	7.463E+01	8.426E+01	6.620E+00	1.011
		227.08		-7.389E+00	9.703E+00	1.555E+01	8.570E-01	-0.475
		290.67	*	-9.116E+00	6.853E+00	8.893E+00	5.094E-01	-1.025
IR-192	+	295.96		6.694E-01	1.434E-01	2.113E-01	1.232E-02	3.168
		308.46		7.445E-03	6.861E-02	1.115E-01	6.494E-03	0.067
		316.51	*	-1.412E-02	2.762E-02	4.282E-02	2.483E-03	-0.330
		468.07		-2.001E-02	5.164E-02	7.149E-02	5.094E-03	-0.280
		604.41		-1.806E-02	3.784E-01	5.252E-01	6.382E-02	-0.034

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		612.46		3.337E+00	7.702E-01	1.284E+00	1.127E-01	2.598
AU-195		65.12		-1.850E-01	1.760E-01	2.480E-01	1.966E-02	-0.746
		66.83		3.614E-02	9.380E-02	1.417E-01	1.133E-02	0.255
	+	75.70		1.001E+00	2.371E-01	3.942E-01	3.311E-02	2.540
		98.88	*	2.270E-01	1.837E-01	3.113E-01	2.382E-02	0.729
	+	129.76		3.771E+00	3.284E+00	3.972E+00	2.273E-01	0.949
TL-200		367.94	*	-3.210E-05	3.284E+00	Half-Life too short		
		579.30		4.763E-04	3.284E+00	Half-Life too short		
		828.27		-1.055E-04	3.284E+00	Half-Life too short		
		1205.75		3.809E-04	3.284E+00	Half-Life too short		
TL-201		68.90		-8.326E-01	2.864E+00	4.204E+00	3.399E-01	-0.198
		70.82		-1.073E+00	1.604E+00	2.306E+00	1.883E-01	-0.465
		80.30		8.944E-01	2.652E+00	3.968E+00	3.440E-01	0.225
		135.34		-5.504E+00	1.231E+01	1.924E+01	1.080E+00	-0.286
		167.43	*	-3.595E+00	3.154E+00	5.097E+00	2.676E-01	-0.705
TL-202		68.90		-1.097E-01	3.774E-01	5.540E-01	4.479E-02	-0.198
		70.82		-1.411E-01	2.107E-01	3.030E-01	2.474E-02	-0.465
		80.30		1.176E-01	3.487E-01	5.216E-01	4.522E-02	0.225
		439.56	*	-4.345E-03	4.519E-02	7.467E-02	4.552E-03	-0.058
BI-207		72.80		2.135E-01	1.523E-01	2.618E-01	2.161E-02	0.816
	+	74.97		5.602E-01	1.326E-01	1.971E-01	1.647E-02	2.843
		84.90		3.698E-01	1.752E-01	2.738E-01	2.464E-02	1.351
		569.67		-1.772E-02	2.361E-02	3.620E-02	2.537E-03	-0.489
		1063.62	*	-2.895E-03	4.151E-02	6.901E-02	5.697E-03	-0.042
		1770.23		8.996E-02	5.282E-01	6.529E-01	3.950E-02	0.138
TL-207		81.07		-2.300E-01	1.950E-01	2.693E-01	2.349E-02	-0.854
		83.78		1.455E-01	1.163E-01	1.777E-01	1.584E-02	0.819
		94.90		2.372E-01	2.022E-01	3.098E-01	2.521E-02	0.766
		122.32		7.101E-02	1.438E+00	2.311E+00	1.569E-01	0.031
		144.24		5.395E-01	5.766E-01	9.372E-01	6.540E-02	0.576
		154.21		3.426E-01	2.976E-01	5.228E-01	3.479E-02	0.655
	+	269.46		4.016E-01	2.046E-01	2.694E-01	1.601E-02	1.491
		323.87	*	-2.287E-01	5.743E-01	7.818E-01	1.291E-01	-0.293
	+	338.28		6.933E+00	1.470E+00	1.883E+00	1.982E-01	3.682
		445.03		4.210E-01	1.643E+00	2.763E+00	2.891E-01	0.152
PO-209		260.50		5.960E+00	7.490E+00	1.267E+01	7.148E-01	0.471
		262.80		9.808E+00	2.032E+01	3.394E+01	1.918E+00	0.289
		896.60	*	-2.297E+00	5.823E+00	9.238E+00	1.042E+00	-0.249
BI-210		46.50	*	-1.014E+00	4.578E+00	7.687E+00	5.947E-01	-0.132
PB-210		46.50	*	-1.014E+00	4.578E+00	7.687E+00	5.947E-01	-0.132
PO-210		46.50	*	-1.014E+00	4.578E+00	7.687E+00	5.113E-01	-0.132
PB-211		404.84	*	-8.855E-02	6.806E-01	1.127E+00	7.024E-01	-0.079
		427.08		9.448E-01	1.550E+00	2.475E+00	1.530E+00	0.382
		831.96		-2.622E-01	8.804E-01	1.392E+00	8.757E-01	-0.188
BI-212	+	727.18	*	6.913E-01	3.824E-01	4.505E-01	4.487E-02	1.535
		785.46		8.822E-01	1.345E+00	2.306E+00	2.179E-01	0.383
		1620.62		1.045E+00	8.360E-01	1.581E+00	1.069E-01	0.661
PO-215		81.07		-2.300E-01	1.950E-01	2.693E-01	2.349E-02	-0.854
		83.78		1.455E-01	1.163E-01	1.777E-01	1.584E-02	0.819

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		2.372E-01	2.022E-01	3.098E-01	2.521E-02	0.766
		122.32		7.101E-02	1.438E+00	2.311E+00	1.569E-01	0.031
		144.24		5.395E-01	5.766E-01	9.372E-01	6.540E-02	0.576
		154.21		3.426E-01	2.976E-01	5.228E-01	3.479E-02	0.655
	+	269.46		4.016E-01	2.046E-01	2.694E-01	1.601E-02	1.491
		323.87	*	-2.287E-01	5.743E-01	7.818E-01	1.291E-01	-0.293
	+	338.28		6.933E+00	1.470E+00	1.883E+00	1.982E-01	3.682
		445.03		4.210E-01	1.643E+00	2.763E+00	2.891E-01	0.152
RN-219	+	271.23		5.153E-01	2.640E-01	3.481E-01	2.791E-02	1.480
		401.81	*	-1.039E-02	2.969E-01	4.958E-01	6.749E-02	-0.021
RN-220		549.76	*	-1.773E+01	1.832E+01	2.784E+01	1.913E+00	-0.637
RA-223		81.07		-2.300E-01	1.950E-01	2.693E-01	2.349E-02	-0.854
		83.78		1.455E-01	1.163E-01	1.777E-01	1.584E-02	0.819
		94.90		2.372E-01	2.022E-01	3.098E-01	2.521E-02	0.766
		122.32		7.101E-02	1.438E+00	2.311E+00	1.569E-01	0.031
		144.24		5.395E-01	5.766E-01	9.372E-01	6.540E-02	0.576
		154.21		3.426E-01	2.976E-01	5.228E-01	3.479E-02	0.655
	+	269.46		4.016E-01	2.046E-01	2.694E-01	1.601E-02	1.491
		323.87	*	-2.287E-01	5.743E-01	7.818E-01	1.291E-01	-0.293
	+	338.28		6.933E+00	1.470E+00	1.883E+00	1.982E-01	3.682
		445.03		4.210E-01	1.643E+00	2.763E+00	2.891E-01	0.152
AC-227		79.80		1.712E+00	1.459E+00	2.200E+00	4.732E-01	0.778
		236.00		5.096E-01	2.164E-01	3.384E-01	3.491E-02	1.506
		256.20	*	-1.084E-01	2.909E-01	4.683E-01	6.505E-02	-0.232
		286.10		1.972E-02	1.179E+00	1.917E+00	2.208E-01	0.010
	+	299.80		1.730E+00	1.441E+00	1.952E+00	3.175E-01	0.886
		304.40		1.952E-01	1.579E+00	2.250E+00	3.889E-01	0.087
		334.20		-3.689E-01	2.033E+00	2.600E+00	4.766E-01	-0.142
TH-227		79.80		1.712E+00	1.460E+00	2.200E+00	4.793E-01	0.778
	+	94.00		6.806E+00	2.943E+00	2.988E+00	6.466E-01	2.277
		236.00		5.096E-01	2.147E-01	3.384E-01	3.011E-02	1.506
		256.20	*	-1.084E-01	2.911E-01	4.683E-01	7.887E-02	-0.232
		286.10		1.972E-02	1.179E+00	1.917E+00	1.920E+00	0.010
	+	299.80		1.730E+00	1.441E+00	1.952E+00	3.175E-01	0.886
		304.40		1.952E-01	1.579E+00	2.250E+00	3.889E-01	0.087
		334.20		-3.689E-01	2.033E+00	2.600E+00	4.766E-01	-0.142
TH-229		85.43		3.319E-01	1.776E-01	2.752E-01	2.488E-02	1.206
	+	88.47		3.092E-01	1.245E-01	1.764E-01	1.616E-02	1.753
		100.00		7.867E-02	1.514E-01	2.507E-01	1.887E-02	0.314
		193.63	*	-3.171E-01	3.726E-01	6.022E-01	3.224E-02	-0.527
	+	210.97		1.905E+00	8.327E-01	1.067E+00	5.803E-02	1.785
PA-231		283.67	*	-4.994E-01	1.332E+00	1.845E+00	2.535E-01	-0.271
	+	301.29		6.918E-01	5.701E-01	7.653E-01	7.978E-02	0.904
TH-231		81.07		-2.300E-01	1.950E-01	2.693E-01	2.349E-02	-0.854
		83.78		1.455E-01	1.163E-01	1.777E-01	1.584E-02	0.819
		94.90		2.372E-01	2.022E-01	3.098E-01	2.521E-02	0.766
		122.32		7.101E-02	1.438E+00	2.311E+00	1.569E-01	0.031
		144.24		5.395E-01	5.766E-01	9.372E-01	6.540E-02	0.576
		154.21		3.426E-01	2.976E-01	5.228E-01	3.479E-02	0.655

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.016E-01	2.046E-01	2.694E-01	1.601E-02	1.491
		323.87	*	-2.287E-01	5.743E-01	7.818E-01	1.291E-01	-0.293
	+	338.28		6.933E+00	1.470E+00	1.883E+00	1.982E-01	3.682
		445.03		4.210E-01	1.643E+00	2.763E+00	2.891E-01	0.152
U-231		84.21		6.297E+00	3.449E+00	5.357E+00	4.792E-01	1.176
	+	92.29		4.649E+00	1.782E+00	2.222E+00	1.891E-01	2.093
		95.87	*	-3.298E-01	6.533E-01	9.244E-01	7.406E-02	-0.357
		108.00		5.442E-01	1.192E+00	1.873E+00	1.274E-01	0.291
PA-233	+	75.28		1.635E+01	4.392E+00	5.910E+00	8.990E-01	2.766
	+	86.59		4.433E+00	2.110E+00	2.581E+00	6.966E-01	1.718
	+	300.12		4.822E-01	3.994E-01	5.389E-01	7.229E-02	0.895
		311.98	*	2.058E-02	4.769E-02	7.864E-02	4.818E-03	0.262
		340.50		2.455E+00	7.930E-01	9.788E-01	2.248E-01	2.508
		398.62		-7.767E-02	1.497E+00	2.498E+00	6.458E-01	-0.031
		415.76		-4.413E-01	1.193E+00	1.946E+00	4.014E-01	-0.227
PA-234	+	63.00		2.527E+00	2.237E+00	2.588E+00	3.902E-01	0.976
		94.67		2.523E-01	1.496E-01	2.307E-01	2.790E-02	1.094
		98.44		6.395E-02	8.338E-02	1.266E-01	7.045E-02	0.505
		99.86		2.388E-01	3.849E-01	6.398E-01	4.826E-02	0.373
		111.00		1.606E-02	1.719E-01	2.485E-01	2.666E-02	0.065
		131.20		1.634E-02	9.616E-02	1.378E-01	7.843E-03	0.119
		152.70		2.841E-01	2.620E-01	4.264E-01	6.677E-02	0.666
	+	186.00		5.300E+00	2.214E+00	2.021E+00	6.156E-01	2.623
		226.40		-2.530E-01	3.120E-01	4.973E-01	5.677E-02	-0.509
		227.20		-1.394E-01	3.319E-01	5.396E-01	2.974E-02	-0.258
		248.90		3.131E-01	5.812E-01	9.719E-01	2.083E-01	0.322
		293.70		4.328E+00	1.002E+00	1.292E+00	2.075E-01	3.350
		369.80		-3.359E-02	5.957E-01	1.000E+00	2.082E-01	-0.034
		568.70		-5.632E-01	7.678E-01	1.179E+00	8.256E-02	-0.478
		569.50		-1.613E-01	2.093E-01	3.205E-01	2.246E-02	-0.503
		574.00		8.343E-01	1.088E+00	1.805E+00	1.270E-01	0.462
		699.00		2.751E-02	5.160E-01	8.644E-01	1.631E-01	0.032
		706.10		-1.875E-01	7.507E-01	1.226E+00	5.458E-01	-0.153
		733.00		1.006E-01	3.014E-01	4.441E-01	9.864E-02	0.227
		742.81		1.940E-01	9.498E-01	1.584E+00	1.065E+00	0.122
	+	796.30		2.524E+00	1.129E+00	1.353E+00	3.705E-01	1.865
		805.60		6.748E-01	7.270E-01	1.224E+00	3.793E-01	0.551
		819.60		-4.270E-01	8.830E-01	1.377E+00	5.282E-01	-0.310
		826.30		-1.794E-01	5.926E-01	9.447E-01	4.256E-01	-0.190
		831.60		-3.249E-01	4.642E-01	7.088E-01	2.150E-01	-0.458
		876.40		6.060E-03	6.181E-01	1.012E+00	1.043E+00	0.006
		880.51		-1.631E-01	2.233E-01	3.257E-01	3.585E-02	-0.501
		883.24		1.400E-01	2.298E-01	3.590E-01	2.426E-01	0.390
		899.00		-4.840E-01	7.017E-01	1.036E+00	4.592E-01	-0.467
		925.00		5.998E-03	8.586E-01	1.399E+00	1.524E-01	0.004
		926.50		-2.668E-02	1.288E-01	2.061E-01	5.386E-02	-0.129
		946.00	*	7.882E-02	2.213E-01	3.683E-01	7.265E-02	0.214
		949.00		-4.007E-02	3.328E-01	5.356E-01	5.625E-02	-0.075
		980.50		1.547E-02	5.220E-01	8.474E-01	8.428E-02	0.018

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-8.110E-01	1.202E+00	1.325E+00	8.607E-01	-0.612
PA-234M		766.41		1.231E+01	1.569E+01	2.194E+01	1.684E+01	0.561
		1001.03	*	3.066E+00	4.768E+00	7.965E+00	9.493E-01	0.385
U-235	+	89.95		2.011E+00	1.144E+00	1.588E+00	4.911E-01	1.267
	+	93.35		2.117E+00	9.888E-01	9.918E-01	2.772E-01	2.135
		105.00		-2.720E-01	8.406E-01	1.338E+00	3.937E-01	-0.203
		143.76	*	8.944E-02	1.796E-01	2.869E-01	4.646E-02	0.312
		163.35		2.193E-01	3.753E-01	6.338E-01	1.129E-01	0.346
	+	185.71		1.963E-01	5.705E-02	7.475E-02	3.975E-03	2.626
		205.31		4.884E-01	4.319E-01	6.572E-01	1.174E-01	0.743
NP-236		94.67		1.932E-01	1.123E-01	1.752E-01	1.431E-02	1.103
		98.44		4.832E-02	5.712E-02	9.569E-02	7.369E-03	0.505
		111.00		1.215E-02	1.300E-01	1.880E-01	1.237E-02	0.065
		160.31	*	1.980E-02	6.286E-02	1.058E-01	5.605E-03	0.187
NP-239		99.55		7.731E-02	1.296E-01	2.152E-01	1.631E-02	0.359
		117.00	*	-1.898E-01	1.664E-01	2.406E-01	1.489E-02	-0.789
	+	209.75		1.919E+00	8.388E-01	1.142E+00	6.203E-02	1.681
		228.18		1.374E-02	1.720E-01	2.853E-01	1.574E-02	0.048
	+	277.60		2.782E-01	2.630E-01	2.385E-01	1.358E-02	1.167
		334.30		-1.817E-01	1.153E+00	1.478E+00	8.547E-02	-0.123
AM-241		59.54	*	-2.267E-02	1.670E-01	2.491E-01	2.066E-02	-0.091
CM-243		99.55		7.954E-02	1.333E-01	2.214E-01	1.678E-02	0.359
		103.76	*	-3.067E-02	7.645E-02	1.219E-01	8.723E-03	-0.252
		117.00		-1.952E-01	1.711E-01	2.475E-01	1.532E-02	-0.789
	+	209.75		1.892E+00	8.268E-01	1.126E+00	6.114E-02	1.681
		228.18		1.389E-02	1.738E-01	2.882E-01	1.590E-02	0.048
	+	277.60		2.805E-01	2.651E-01	2.404E-01	1.369E-02	1.167
CM-247	+	278.00		1.154E+00	1.091E+00	9.896E-01	5.638E-02	1.166
		287.40		7.811E-01	9.267E-01	1.563E+00	8.942E-02	0.500
		402.60	*	1.863E-02	2.674E-02	4.620E-02	2.691E-03	0.403
CF-249		252.85		-1.583E-01	6.314E-01	1.024E+00	5.750E-02	-0.155
		333.44		1.127E-01	1.818E-01	1.974E-01	1.142E-02	0.571
		387.95	*	3.169E-02	2.816E-02	4.972E-02	2.858E-03	0.637
CF-251		176.60	*	-2.257E-02	9.438E-02	1.574E-01	8.312E-03	-0.143
		227.00		-2.383E-01	2.973E-01	4.756E-01	2.621E-02	-0.501
		285.00		-5.437E-01	1.324E+00	2.109E+00	1.205E-01	-0.258

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504009      *
* Acquisition date :  7-JUL-2009 09:12:12 Detector SN#     :                *
* Detector ID        : GAM18               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.85      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504009           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.4507E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
BE-7	1.412E+00	3.918E-01	3.661E-01	0.000E+00
K-40	2.936E+01	2.537E+00	3.541E-01	0.000E+00
CD-109	2.296E+00	9.060E-01	1.110E+00	0.000E+00
SN-126	2.265E-01	8.935E-02	1.256E-01	0.000E+00
LU-177	2.149E+00	9.203E-01	1.125E+00	0.000E+00
HG-203	6.151E-02	5.699E-02	5.021E-02	0.000E+00
TL-208	4.506E-01	6.949E-02	4.022E-02	0.000E+00
BI-211	3.324E+00	3.638E-01	2.568E-01	0.000E+00
PB-212	1.233E+00	1.258E-01	8.875E-02	0.000E+00
PO-212	1.233E+00	1.258E-01	8.875E-02	0.000E+00
BI-214	9.715E-01	1.380E-01	8.386E-02	0.000E+00
PB-214	1.156E+00	1.397E-01	8.929E-02	0.000E+00
PO-214	1.156E+00	1.397E-01	8.929E-02	0.000E+00
PO-216	1.233E+00	1.258E-01	8.875E-02	0.000E+00
PO-218	1.156E+00	1.397E-01	8.929E-02	0.000E+00
RA-224	1.952E+00	6.444E-01	1.153E+00	0.000E+00
RA-226	9.715E-01	1.380E-01	8.386E-02	0.000E+00
AC-228	1.419E+00	3.021E-01	1.724E-01	0.000E+00
RA-228	1.419E+00	3.021E-01	1.724E-01	0.000E+00
TH-228	1.233E+00	1.258E-01	8.874E-02	0.000E+00
TH-230	9.714E-01	1.380E-01	8.386E-02	0.000E+00
TH-232	1.419E+00	3.021E-01	1.724E-01	0.000E+00
TH-234	2.168E+00	1.891E+00	2.119E+00	0.000E+00
U-234	9.714E-01	1.380E-01	8.386E-02	0.000E+00
NP-237	6.650E-01	2.948E-01	3.726E-01	0.000E+00
U-238	2.168E+00	1.891E+00	2.119E+00	0.000E+00
AM-243	3.121E-01	7.242E-02	7.978E-02	0.000E+00
ANH-511	1.690E-01	4.933E-02	3.179E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

NA-22	3.308E-03	3.200E-02	5.450E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	4.473E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.437E-02	2.097E-02	3.837E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.400E-02	7.353E-02	0.000E+00	FAIL ABUN
SC-46	-1.554E-02	2.935E-02	4.787E-02	0.000E+00	FAIL ABUN
V-48	-1.804E-02	4.555E-02	7.390E-02	0.000E+00	NOT IDENT.
CR-51	1.482E-01	2.685E-01	4.712E-01	0.000E+00	NOT IDENT.
MN-52	-6.701E-02	1.271E-01	1.993E-01	0.000E+00	NOT IDENT.
MN-54	-2.677E-03	2.656E-02	4.508E-02	0.000E+00	NOT IDENT.
CO-56	-1.316E-02	2.951E-02	4.883E-02	0.000E+00	NOT IDENT.
CO-57	1.227E-03	2.028E-02	3.536E-02	0.000E+00	NOT IDENT.
CO-58	-1.967E-02	2.723E-02	4.423E-02	0.000E+00	NOT IDENT.
FE-59	2.214E-03	6.311E-02	1.088E-01	0.000E+00	NOT IDENT.
CO-60	7.198E-04	2.538E-02	4.277E-02	0.000E+00	NOT IDENT.
ZN-65	-1.348E-02	7.635E-02	1.102E-01	0.000E+00	NOT IDENT.
GE-68	4.633E-01	9.646E-01	1.684E+00	0.000E+00	NOT IDENT.
AS-73	-1.859E-02	8.804E-01	1.593E+00	0.000E+00	NOT IDENT.
AS-74	8.725E-03	6.050E-02	1.034E-01	0.000E+00	NOT IDENT.
SE-75	-2.802E-02	3.486E-02	5.365E-02	0.000E+00	FAIL ABUN
BR-77	-9.655E-01	4.026E+00	6.635E+00	0.000E+00	FAIL ABUN
SR-82	-3.156E-01	2.573E-01	4.045E-01	0.000E+00	NOT IDENT.
RB-83	-1.413E-02	5.003E-02	8.221E-02	0.000E+00	NOT IDENT.
RB-84	-2.280E-03	5.139E-02	8.241E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.339E+00	1.148E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.174E-02	5.751E-02	0.000E+00	NOT IDENT.
RB-86	1.064E-01	5.690E-01	9.758E-01	0.000E+00	NOT IDENT.
Y-88	-8.809E-03	2.153E-02	3.364E-02	0.000E+00	NOT IDENT.
ZR-88	-1.322E-02	2.177E-02	3.742E-02	0.000E+00	NOT IDENT.
Y-91	8.639E+00	1.354E+01	2.394E+01	0.000E+00	NOT IDENT.
NB-94	-1.977E-02	2.375E-02	3.925E-02	0.000E+00	NOT IDENT.
NB-95	6.313E-03	2.946E-02	5.146E-02	0.000E+00	NOT IDENT.
NB-95M	9.946E-02	1.020E-01	1.652E-01	0.000E+00	NOT IDENT.
ZR-95	1.230E-02	4.917E-02	8.624E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	7.755E+03	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.525E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.521E+00	4.473E+00	7.908E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	6.900E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.058E-02	2.469E-02	4.459E-02	0.000E+00	NOT IDENT.
RH-102	3.722E-02	2.589E-02	4.279E-02	0.000E+00	NOT IDENT.
RU-103	1.665E-02	2.708E-02	4.834E-02	0.000E+00	FAIL ABUN
RH-106	8.687E-02	2.419E-01	4.166E-01	0.000E+00	FAIL ABUN
RU-106	8.687E-02	2.418E-01	4.166E-01	0.000E+00	FAIL ABUN
AG-108M	2.762E-03	2.247E-02	3.966E-02	0.000E+00	NOT IDENT.
AG-110M	-1.493E-03	2.487E-02	4.347E-02	0.000E+00	NOT IDENT.
IN-111	-8.467E-02	4.946E-01	7.307E-01	0.000E+00	NOT IDENT.
IN-113M	-1.356E-02	3.182E-02	5.522E-02	0.000E+00	NOT IDENT.
SN-113	-1.356E-02	3.182E-02	5.522E-02	0.000E+00	NOT IDENT.
IN-114M	9.125E-02	1.395E-01	2.283E-01	0.000E+00	NOT IDENT.
CD-115	-4.011E+00	3.738E+00	5.962E+00	0.000E+00	NOT IDENT.
SN-117M	4.200E-03	3.724E-02	6.714E-02	0.000E+00	NOT IDENT.
SB-122	5.027E-01	8.532E-01	1.504E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.588E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.178E-03	2.138E-02	3.852E-02	0.000E+00	NOT IDENT.
I-124	4.559E-02	3.891E-01	5.737E-01	0.000E+00	NOT IDENT.
SB-124	2.533E-02	4.301E-02	7.893E-02	0.000E+00	FAIL ABUN
SB-125	2.133E-02	6.283E-02	1.123E-01	0.000E+00	FAIL ABUN
TE-125M	1.390E+00	7.980E+00	1.261E+01	0.000E+00	NOT IDENT.
I-126	6.170E-02	1.153E-01	2.077E-01	0.000E+00	NOT IDENT.
SB-126	-4.350E-02	9.878E-02	1.481E-01	0.000E+00	FAIL ABUN
SB-127	-5.462E-02	6.189E-01	1.075E+00	0.000E+00	NOT IDENT.
XE-127	-4.777E-02	3.304E-02	5.571E-02	0.000E+00	NOT IDENT.
I-131	2.605E-02	6.554E-02	1.191E-01	0.000E+00	NOT IDENT.
TE-132	2.296E-02	3.204E-01	5.682E-01	0.000E+00	FAIL ABUN
BA-133	-1.246E-02	3.539E-02	5.067E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	6.842E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.654E-02	7.119E-02	0.000E+00	FAIL ABUN
CS-135	1.381E-01	1.300E-01	2.102E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.550E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.045E-02	7.618E-02	1.358E-01	0.000E+00	FAIL ABUN
BA-137M	-1.043E-02	2.592E-02	4.441E-02	0.000E+00	NOT IDENT.
CS-137	-1.103E-02	2.740E-02	4.695E-02	0.000E+00	NOT IDENT.
CE-139	2.702E-03	2.180E-02	3.984E-02	0.000E+00	NOT IDENT.
BA-140	-1.043E-02	1.621E-01	2.768E-01	0.000E+00	NOT IDENT.
LA-140	-2.427E-02	5.354E-02	7.055E-02	0.000E+00	FAIL ABUN
CE-141	1.141E-02	4.874E-02	8.422E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.639E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	4.755E-02	1.762E-01	2.743E-01	0.000E+00	NOT IDENT.

PM-144	-4.367E-03	2.490E-02	4.192E-02	0.000E+00	FAIL ABUN
PR-144	-2.956E-01	1.685E+00	2.837E+00	0.000E+00	NOT IDENT.
PM-146	-9.659E-03	3.065E-02	5.256E-02	0.000E+00	NOT IDENT.
ND-147	2.553E-01	3.313E-01	5.927E-01	0.000E+00	FAIL ABUN
PM-149	-6.896E+00	3.391E+01	5.809E+01	0.000E+00	NOT IDENT.
EU-152	-2.595E-02	7.895E-02	1.138E-01	0.000E+00	FAIL ABUN
GD-153	-3.084E-02	7.169E-02	1.110E-01	0.000E+00	NOT IDENT.
EU-154	3.734E-02	8.798E-02	1.533E-01	0.000E+00	NOT IDENT.
EU-155	-2.802E-02	8.377E-02	1.456E-01	0.000E+00	FAIL ABUN
TB-160	-1.633E-02	9.986E-02	1.676E-01	0.000E+00	FAIL ABUN
HO-166M	-2.305E-02	4.274E-02	7.182E-02	0.000E+00	NOT IDENT.
TM-171	1.490E+01	2.781E+01	4.639E+01	0.000E+00	NOT IDENT.
LU-176	-9.379E-03	1.826E-02	3.056E-02	0.000E+00	FAIL ABUN
LU-177M	-1.533E-01	1.247E-01	2.055E-01	0.000E+00	NOT IDENT.
HF-181	7.535E-03	3.121E-02	4.788E-02	0.000E+00	NOT IDENT.
W-181	-3.904E-01	3.704E-01	5.742E-01	0.000E+00	NOT IDENT.
TA-182	-2.495E-02	1.421E-01	2.386E-01	0.000E+00	FAIL ABUN
RE-183	2.104E-03	8.437E-02	1.517E-01	0.000E+00	FAIL ABUN
RE-184	-4.181E-02	1.634E-01	2.828E-01	0.000E+00	NOT IDENT.
OS-185	-1.750E-02	3.296E-02	5.345E-02	0.000E+00	NOT IDENT.
RE-188	9.915E-05	1.234E-01	2.259E-01	0.000E+00	FAIL ABUN
W-188	-9.116E+00	6.716E+00	9.275E+00	0.000E+00	FAIL ABUN
IR-192	-1.412E-02	2.706E-02	4.457E-02	0.000E+00	FAIL ABUN
AU-195	2.270E-01	1.800E-01	3.323E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	7.663E+01	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.595E+00	3.091E+00	5.380E+00	0.000E+00	NOT IDENT.
TL-202	-4.345E-03	4.429E-02	7.717E-02	0.000E+00	NOT IDENT.
BI-207	-2.895E-03	4.068E-02	6.990E-02	0.000E+00	FAIL ABUN
TL-207	-2.287E-01	5.629E-01	8.135E-01	0.000E+00	FAIL ABUN
PO-209	-2.297E+00	5.707E+00	9.393E+00	0.000E+00	NOT IDENT.
BI-210	-1.014E+00	4.487E+00	8.333E+00	0.000E+00	NOT IDENT.
PB-210	-1.014E+00	4.487E+00	8.333E+00	0.000E+00	NOT IDENT.
PO-210	-1.014E+00	4.487E+00	8.333E+00	0.000E+00	NOT IDENT.
PB-211	-8.855E-02	6.670E-01	1.166E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.748E-01	4.603E-01	0.000E+00	FAIL ABUN
PO-215	-2.287E-01	5.629E-01	8.135E-01	0.000E+00	FAIL ABUN
RN-219	-1.039E-02	2.910E-01	5.134E-01	0.000E+00	FAIL ABUN
RN-220	-1.773E+01	1.795E+01	2.863E+01	0.000E+00	NOT IDENT.
RA-223	-2.287E-01	5.629E-01	8.135E-01	0.000E+00	FAIL ABUN
AC-227	-1.084E-01	2.851E-01	4.898E-01	0.000E+00	FAIL ABUN
TH-227	-1.084E-01	2.853E-01	4.898E-01	0.000E+00	FAIL ABUN
TH-229	-3.171E-01	3.652E-01	6.336E-01	0.000E+00	FAIL ABUN
PA-231	-4.994E-01	1.305E+00	1.925E+00	0.000E+00	FAIL ABUN
TH-231	-2.287E-01	5.629E-01	8.135E-01	0.000E+00	FAIL ABUN
U-231	-3.298E-01	6.402E-01	9.873E-01	0.000E+00	FAIL ABUN
PA-233	2.058E-02	4.674E-02	8.189E-02	0.000E+00	FAIL ABUN
PA-234	7.882E-02	2.169E-01	3.740E-01	0.000E+00	FAIL ABUN
PA-234M	3.066E+00	4.672E+00	8.078E+00	0.000E+00	NOT IDENT.
U-235	8.944E-02	1.760E-01	3.038E-01	0.000E+00	FAIL ABUN
NP-236	1.980E-02	6.160E-02	1.118E-01	0.000E+00	NOT IDENT.
NP-239	-1.898E-01	1.630E-01	2.559E-01	0.000E+00	FAIL ABUN
AM-241	-2.267E-02	1.637E-01	2.687E-01	0.000E+00	NOT IDENT.
CM-243	-3.067E-02	7.492E-02	1.299E-01	0.000E+00	FAIL ABUN
CM-247	1.863E-02	2.620E-02	4.784E-02	0.000E+00	FAIL ABUN
CF-249	3.169E-02	2.760E-02	5.152E-02	0.000E+00	NOT IDENT.
CF-251	-2.257E-02	9.249E-02	1.659E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:12:43.86

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504009.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:12:12.
Sample ID         : G232504009           Sample quantity  : 1.45070E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.85  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
BE-7	477.59	217	10.42*	4.505E+00	1.194E+00	1.412E+00	28.31
K-40	1460.81	2291	10.67*	1.893E+00	2.936E+01	2.936E+01	8.82
CD-109	88.03	209	3.72*	6.447E+00	2.252E+00	2.296E+00	40.26
SN-126	64.28	98	9.60	3.077E+00	8.582E-01	8.582E-01	88.46
	86.94	209	8.90	6.447E+00	9.414E-01	9.414E-01	57.07
	87.57	209	37.00*	6.447E+00	2.265E-01	2.265E-01	40.26
LU-177	112.95	36	6.40	7.996E+00	1.817E-01	6.906E-01	187.81
	208.36	174	11.00*	7.253E+00	5.654E-01	2.149E+00	43.70
HG-203	70.83	------	4.75	4.309E+00	------ Line Not Found		------
	72.87	------	8.00	4.622E+00	------ Line Not Found		------
	82.60	------	3.55	5.935E+00	------ Line Not Found		------
	279.20	95	77.30*	6.250E+00	5.075E-02	6.151E-02	94.53
TL-208	277.35	95	6.80	6.250E+00	5.769E-01	5.769E-01	94.92
	510.84	281	21.60	4.309E+00	7.826E-01	7.826E-01	30.93
	583.14	577	84.20*	3.933E+00	4.506E-01	4.506E-01	15.74
	860.37	143	12.46	2.913E+00	1.022E+00	1.022E+00	33.79
BI-211	72.87	------	1.27	4.622E+00	------ Line Not Found		------
	351.07	906	12.94*	5.450E+00	3.324E+00	3.324E+00	11.17
PB-212	74.81	391	10.70	4.914E+00	1.925E+00	1.925E+00	25.45
	77.11	696	18.00	5.239E+00	1.911E+00	1.911E+00	15.63
	87.30	209	8.00	6.447E+00	1.047E+00	1.047E+00	41.48
	238.63	1444	44.60*	6.792E+00	1.233E+00	1.233E+00	10.41
	300.09	74	3.41	5.982E+00	9.333E-01	9.333E-01	82.15
PO-212	74.81	391	10.70	4.914E+00	1.925E+00	1.925E+00	25.45
	77.11	696	18.00	5.239E+00	1.911E+00	1.911E+00	15.63
	87.30	209	8.00	6.447E+00	1.047E+00	1.047E+00	41.48
	115.19	------	0.60	8.058E+00	------ Line Not Found		------
	238.63	1444	44.60*	6.792E+00	1.233E+00	1.233E+00	10.41
	300.09	74	3.41	5.982E+00	9.333E-01	9.333E-01	82.15
BI-214	609.31	662	46.30*	3.811E+00	9.714E-01	9.715E-01	14.50
	768.36	------	5.04	3.195E+00	------ Line Not Found		------
	934.06	------	3.21	2.722E+00	------ Line Not Found		------

Sample ID : G232504009 Acquisition date : 7-JUL-2009 09:12:12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1120.29	153	15.10	2.334E+00	1.123E+00	1.123E+00	35.13
	1238.11	------	5.94	2.148E+00	------	Line Not Found	------
	1377.67	------	4.11	1.975E+00	------	Line Not Found	------
	1764.49	157	15.80	1.694E+00	1.518E+00	1.518E+00	21.66
PB-214	74.81	391	6.21	4.914E+00	3.317E+00	3.317E+00	24.81
	77.11	696	10.50	5.239E+00	3.276E+00	3.276E+00	17.39
	87.30	209	4.67	6.447E+00	1.794E+00	1.794E+00	40.99
	241.98	201	7.49	6.745E+00	1.029E+00	1.029E+00	34.15
	295.21	402	19.20	6.037E+00	8.964E-01	8.964E-01	22.29
	351.92	906	37.20*	5.450E+00	1.156E+00	1.156E+00	12.33
PO-214	74.81	391	6.21	4.914E+00	3.317E+00	3.317E+00	24.81
	77.11	696	10.50	5.239E+00	3.276E+00	3.276E+00	17.39
	87.30	209	4.67	6.447E+00	1.794E+00	1.794E+00	40.99
	241.98	201	7.49	6.745E+00	1.029E+00	1.029E+00	34.15
	295.21	402	19.20	6.037E+00	8.964E-01	8.964E-01	22.29
	351.92	906	37.20*	5.450E+00	1.156E+00	1.156E+00	12.33
PO-216	74.81	391	10.70	4.914E+00	1.925E+00	1.925E+00	25.45
	77.11	696	18.00	5.239E+00	1.911E+00	1.911E+00	15.63
	87.30	209	8.00	6.447E+00	1.047E+00	1.047E+00	41.48
	238.63	1444	44.60*	6.792E+00	1.233E+00	1.233E+00	10.41
	300.09	74	3.41	5.982E+00	9.333E-01	9.333E-01	82.15
PO-218	74.81	391	6.21	4.914E+00	3.317E+00	3.317E+00	24.81
	77.11	696	10.50	5.239E+00	3.276E+00	3.276E+00	17.39
	87.30	209	4.67	6.447E+00	1.794E+00	1.794E+00	40.99
	241.98	201	7.49	6.745E+00	1.029E+00	1.029E+00	34.15
	295.21	402	19.20	6.037E+00	8.964E-01	8.964E-01	22.29
	351.92	906	37.20*	5.450E+00	1.156E+00	1.156E+00	12.33
RA-224	240.98	201	3.95*	6.745E+00	1.952E+00	1.952E+00	33.68
RA-226	609.31	662	46.30*	3.811E+00	9.714E-01	9.715E-01	14.50
	768.36	------	5.04	3.195E+00	------	Line Not Found	------
	934.06	------	3.21	2.722E+00	------	Line Not Found	------
	1120.29	153	15.10	2.334E+00	1.123E+00	1.123E+00	35.13
	1238.11	------	5.94	2.148E+00	------	Line Not Found	------
	1377.67	------	4.11	1.975E+00	------	Line Not Found	------
	1764.49	157	15.80	1.694E+00	1.518E+00	1.518E+00	21.66
AC-228	338.32	408	11.40	5.579E+00	1.660E+00	1.660E+00	44.73
	911.07	422	27.70*	2.778E+00	1.419E+00	1.419E+00	21.72
	969.11	270	16.60	2.638E+00	1.595E+00	1.595E+00	31.45
RA-228	338.32	408	11.40	5.579E+00	1.660E+00	1.660E+00	44.73
	911.07	422	27.70*	2.778E+00	1.419E+00	1.419E+00	21.72
	969.11	270	16.60	2.638E+00	1.595E+00	1.595E+00	31.45
TH-228	84.40	------	1.21	6.141E+00	------	Line Not Found	------
	238.60	1444	44.60*	6.792E+00	1.233E+00	1.233E+00	10.41
	300.10	74	3.41	5.982E+00	9.333E-01	9.333E-01	100.77
TH-230	609.31	662	46.30*	3.811E+00	9.714E-01	9.714E-01	14.50
	768.36	------	5.04	3.195E+00	------	Line Not Found	------
	934.06	------	3.21	2.722E+00	------	Line Not Found	------
	1120.29	153	15.10	2.334E+00	1.123E+00	1.123E+00	35.13
	1238.11	------	5.94	2.148E+00	------	Line Not Found	------

Sample ID : G232504009 Acquisition date : 7-JUL-2009 09:12:12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	------	4.11	1.975E+00	------ Line Not Found		------
	1764.49	157	15.80	1.694E+00	1.518E+00	1.518E+00	21.66
TH-232	338.32	408	11.40	5.579E+00	1.660E+00	1.660E+00	19.30
	911.07	422	27.70*	2.778E+00	1.419E+00	1.419E+00	21.72
	969.11	270	16.60	2.638E+00	1.595E+00	1.595E+00	31.45
TH-234	63.29	98	3.80*	3.077E+00	2.168E+00	2.168E+00	88.99
	92.38	256	5.41	6.955E+00	1.761E+00	1.761E+00	41.50
U-234	609.31	662	46.30*	3.811E+00	9.714E-01	9.714E-01	14.50
	768.36	------	5.04	3.195E+00	------ Line Not Found		------
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	153	15.10	2.334E+00	1.123E+00	1.123E+00	35.13
	1238.11	------	5.94	2.148E+00	------ Line Not Found		------
	1377.67	------	4.11	1.975E+00	------ Line Not Found		------
	1764.49	157	15.80	1.694E+00	1.518E+00	1.518E+00	21.66
NP-237	86.50	209	12.60*	6.447E+00	6.650E-01	6.650E-01	45.24
	95.87	------	2.60	7.180E+00	------ Line Not Found		------
U-238	63.29	98	3.80*	3.077E+00	2.168E+00	2.168E+00	88.99
	92.38	256	5.41	6.955E+00	1.761E+00	1.761E+00	38.34
AM-243	74.67	391	66.00*	4.914E+00	3.121E-01	3.121E-01	23.68
	86.72	209	0.34	6.447E+00	2.494E+01	2.494E+01	40.26
	117.66	------	0.55	8.112E+00	------ Line Not Found		------
	142.18	------	0.13	8.232E+00	------ Line Not Found		------
ANH-511	511.00	281	100.00*	4.309E+00	1.690E-01	1.690E-01	29.78

Flag: "*" = Keyline

Sample ID : G232504009 Acquisition date : 7-JUL-2009 09:12:12

Total number of lines in spectrum 36
Number of unidentified lines 3
Number of lines tentatively identified by NID 33 91.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BE-7	53.44D	1.18	1.194E+00	1.412E+00	0.400E+00	28.31	
K-40	1.28E+09Y	1.00	2.936E+01	2.936E+01	0.259E+01	8.82	
CD-109	464.00D	1.02	2.252E+00	2.296E+00	0.924E+00	40.26	
SN-126	1.00E+05Y	1.00	2.265E-01	2.265E-01	0.912E-01	40.26	
LU-177	6.71D	3.80	5.654E-01	2.149E+00	0.939E+00	43.70	
HG-203	46.60D	1.21	5.075E-02	6.151E-02	5.815E-02	94.53	
TL-208	1.41E+10Y	1.00	4.506E-01	4.506E-01	0.709E-01	15.74	
BI-211	7.04E+08Y	1.00	3.324E+00	3.324E+00	0.371E+00	11.17	
PB-212	1.41E+10Y	1.00	1.233E+00	1.233E+00	0.128E+00	10.41	
PO-212	1.41E+10Y	1.00	1.233E+00	1.233E+00	0.128E+00	10.41	
BI-214	1600.00Y	1.00	9.714E-01	9.715E-01	1.408E-01	14.50	
PB-214	1600.00Y	1.00	1.156E+00	1.156E+00	0.143E+00	12.33	
PO-214	1600.00Y	1.00	1.156E+00	1.156E+00	0.143E+00	12.33	
PO-216	1.41E+10Y	1.00	1.233E+00	1.233E+00	0.128E+00	10.41	
PO-218	1600.00Y	1.00	1.156E+00	1.156E+00	0.143E+00	12.33	
RA-224	1.41E+10Y	1.00	1.952E+00	1.952E+00	0.658E+00	33.68	
RA-226	1600.00Y	1.00	9.714E-01	9.715E-01	1.408E-01	14.50	
AC-228	1.41E+10Y	1.00	1.419E+00	1.419E+00	0.308E+00	21.72	
RA-228	1.41E+10Y	1.00	1.419E+00	1.419E+00	0.308E+00	21.72	
TH-228	1.41E+10Y	1.00	1.233E+00	1.233E+00	0.128E+00	10.41	
TH-230	4.47E+09Y	1.00	9.714E-01	9.714E-01	1.408E-01	14.50	
TH-232	1.41E+10Y	1.00	1.419E+00	1.419E+00	0.308E+00	21.72	
TH-234	4.47E+09Y	1.00	2.168E+00	2.168E+00	1.929E+00	88.99	
U-234	4.47E+09Y	1.00	9.714E-01	9.714E-01	1.408E-01	14.50	
NP-237	2.14E+06Y	1.00	6.650E-01	6.650E-01	3.008E-01	45.24	
U-238	4.47E+09Y	1.00	2.168E+00	2.168E+00	1.929E+00	88.99	
AM-243	7380.00Y	1.00	3.121E-01	3.121E-01	0.739E-01	23.68	
ANH-511	1.00E+09Y	1.00	1.690E-01	1.690E-01	0.503E-01	29.78	
		Total Activity :	6.140E+01	6.326E+01			

Grand Total Activity : 6.140E+01 6.326E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232504009 Acquisition date : 7-JUL-2009 09:12:12

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	90.09	141	416	0.93	179.29	177	13	1.96E-02	47.8	6.71E+00	T
0	129.11	93	471	1.05	257.30	253	9	1.29E-02	86.9	8.25E+00	T
0	185.96	313	416	1.11	370.95	366	11	4.35E-02	28.6	7.65E+00	T
0	270.41	134	290	1.51	539.81	535	10	1.86E-02	50.6	6.35E+00	T
0	327.89	95	198	1.30	654.73	651	9	1.32E-02	57.2	5.68E+00	T
0	463.11	115	196	1.57	925.09	919	13	1.60E-02	53.7	4.60E+00	T
0	727.64	105	151	1.54	1454.00	1448	15	1.46E-02	54.4	3.34E+00	T
0	795.11	118	76	1.82	1588.91	1583	13	1.64E-02	35.4	3.11E+00	T
2	964.79	77	131	2.17	1928.19	1920	26	1.06E-02	65.2	2.65E+00	T
0	1388.41	43	107	14.24	2775.32	2751	33	5.93E-03	****	1.96E+00	
0	1589.74	51	20	0.59	3177.94	3171	15	7.08E-03	48.9	1.79E+00	
0	1730.16	54	8	4.07	3458.78	3452	15	7.43E-03	35.3	1.71E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:12:49.08

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504009.CNF;1 *
* Acquisition date  : 7-JUL-2009 09:12:12.  Detector SN#     :             *
* Detector ID       : GAM18                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.85          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504009            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.45070E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.412E+00	3.998E-01	3.549E-01	2.572E-02	3.979
K-40	2.936E+01	2.589E+00	3.522E-01	2.673E-02	83.350
CD-109	2.296E+00	9.245E-01	1.037E+00	9.587E-02	2.214
SN-126	2.265E-01	9.117E-02	1.174E-01	1.082E-02	1.929
LU-177	2.149E+00	9.391E-01	1.070E+00	5.806E-02	2.007
HG-203	6.151E-02	5.815E-02	4.810E-02	2.917E-03	1.279
TL-208	4.506E-01	7.091E-02	3.917E-02	3.070E-03	11.505
BI-211	3.324E+00	3.712E-01	2.472E-01	1.587E-02	13.446
PB-212	1.233E+00	1.284E-01	8.473E-02	6.053E-03	14.557
PO-212	1.233E+00	1.284E-01	8.473E-02	6.053E-03	14.557
BI-214	9.715E-01	1.408E-01	8.175E-02	7.302E-03	11.884
PB-214	1.156E+00	1.425E-01	8.598E-02	7.112E-03	13.450
PO-214	1.156E+00	1.425E-01	8.598E-02	7.112E-03	13.450
PO-216	1.233E+00	1.284E-01	8.473E-02	6.053E-03	14.557
PO-218	1.156E+00	1.425E-01	8.598E-02	7.112E-03	13.450
RA-224	1.952E+00	6.575E-01	1.101E+00	6.132E-02	1.773
RA-226	9.715E-01	1.408E-01	8.175E-02	7.302E-03	11.884
AC-228	1.419E+00	3.083E-01	1.696E-01	2.247E-02	8.369

Sample ID : G232504009 Acquisition date : 7-JUL-2009 09:12:12

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.419E+00	3.083E-01	1.696E-01	2.247E-02	8.369
TH-228	1.233E+00	1.284E-01	8.472E-02	6.052E-03	14.558
TH-230	9.714E-01	1.408E-01	8.175E-02	7.302E-03	11.884
TH-232	1.419E+00	3.083E-01	1.696E-01	2.247E-02	8.369
TH-234	2.168E+00	1.929E+00	1.967E+00	3.467E-01	1.102
U-234	9.714E-01	1.408E-01	8.175E-02	7.302E-03	11.884
NP-237	6.650E-01	3.008E-01	3.481E-01	7.855E-02	1.910
U-238	2.168E+00	1.929E+00	1.967E+00	3.467E-01	1.102
AM-243	3.121E-01	7.390E-02	7.431E-02	6.201E-03	4.200
ANH-511	1.690E-01	5.034E-02	3.087E-02	2.039E-03	5.476

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	3.308E-03		3.266E-02	5.404E-02	3.677E-03	0.061
NA-24	1.254E-02		2.282E-02	Half-Life too short		
AL-26	1.437E-02		2.140E-02	3.836E-02	2.240E-03	0.375
TI-44	3.526E-01	+	5.510E-02	6.855E-02	5.861E-03	5.144
SC-46	-1.554E-02		2.995E-02	4.707E-02	5.249E-03	-0.330
V-48	-1.804E-02		4.648E-02	7.283E-02	7.204E-03	-0.248
CR-51	1.482E-01		2.739E-01	4.527E-01	2.915E-02	0.327
MN-52	-6.701E-02		1.297E-01	1.982E-01	1.460E-02	-0.338
MN-54	-2.677E-03		2.710E-02	4.426E-02	4.534E-03	-0.060
CO-56	-1.316E-02		3.012E-02	4.795E-02	5.006E-03	-0.274
CO-57	1.227E-03		2.069E-02	3.328E-02	1.971E-03	0.037
CO-58	-1.967E-02		2.779E-02	4.339E-02	4.284E-03	-0.453
FE-59	2.214E-03		6.440E-02	1.075E-01	8.847E-03	0.021
CO-60	7.198E-04		2.589E-02	4.246E-02	3.208E-03	0.017
ZN-65	-1.348E-02		7.791E-02	1.089E-01	7.674E-03	-0.124
GE-68	4.633E-01		9.842E-01	1.663E+00	1.321E-01	0.279
AS-73	-1.859E-02		8.984E-01	1.474E+00	1.168E-01	-0.013
AS-74	8.725E-03		6.174E-02	1.008E-01	7.242E-03	0.087
SE-75	-2.802E-02		3.557E-02	5.133E-02	2.936E-03	-0.546
BR-77	-9.655E-01		4.108E+00	6.445E+00	4.299E-01	-0.150
SR-82	-3.156E-01		2.625E-01	3.965E-01	3.692E-02	-0.796
RB-83	-1.413E-02		5.105E-02	7.985E-02	5.326E-03	-0.177
RB-84	-2.280E-03		5.244E-02	8.101E-02	8.928E-03	-0.028
KR-85	2.392E+01		6.468E+00	1.115E+01	7.387E-01	2.146
SR-85	1.198E-01		3.239E-02	5.584E-02	3.700E-03	2.146
RB-86	1.064E-01		5.806E-01	9.637E-01	7.672E-02	0.110
Y-88	-8.809E-03		2.197E-02	3.364E-02	1.916E-03	-0.262
ZR-88	-1.322E-02		2.222E-02	3.612E-02	2.077E-03	-0.366
Y-91	8.639E+00		1.382E+01	2.371E+01	1.402E+00	0.364
NB-94	-1.977E-02		2.424E-02	3.838E-02	3.149E-03	-0.515
NB-95	6.313E-03		3.006E-02	5.042E-02	4.612E-03	0.125
NB-95M	9.946E-02		1.041E-01	1.577E-01	1.157E-02	0.631
ZR-95	1.230E-02		5.017E-02	8.448E-02	8.313E-03	0.146

Sample ID : G232504009 Acquisition date : 7-JUL-2009 09:12:12

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-2.438E-04		3.957E-03	Half-Life too short		
ZR-97	3.851E-01		7.783E-02	Half-Life too short		
MO-99	1.521E+00		4.564E+00	7.742E+00	1.181E+00	0.196
TC-99M	-3.900E+07		3.520E+07	Half-Life too short		
RH-101	1.058E-02		2.519E-02	4.240E-02	2.279E-03	0.250
RH-102	3.722E-02		2.642E-02	4.148E-02	2.635E-03	0.897
RU-103	1.665E-02		2.763E-02	4.691E-02	6.091E-03	0.355
RH-106	8.687E-02		2.469E-01	4.063E-01	5.111E-02	0.214
RU-106	8.687E-02		2.467E-01	4.063E-01	2.990E-02	0.214
AG-108M	2.762E-03		2.293E-02	3.837E-02	2.507E-03	0.072
AG-110M	-1.493E-03		2.537E-02	4.245E-02	3.348E-03	-0.035
IN-111	-8.467E-02		5.047E-01	6.980E-01	3.901E-02	-0.121
IN-113M	-1.356E-02		3.247E-02	5.329E-02	3.269E-03	-0.254
SN-113	-1.356E-02		3.247E-02	5.329E-02	3.269E-03	-0.254
IN-114M	9.125E-02		1.423E-01	2.168E-01	1.158E-02	0.421
CD-115	-4.011E+00		3.814E+00	5.793E+00	3.894E-01	-0.692
SN-117M	4.200E-03		3.800E-02	6.353E-02	3.377E-03	0.066
SB-122	5.027E-01		8.706E-01	1.463E+00	1.020E-01	0.344
I-123	2.636E-02		1.320E-01	Half-Life too short		
TE-123M	2.178E-03		2.181E-02	3.646E-02	1.967E-03	0.060
I-124	4.559E-02		3.971E-01	5.591E-01	4.043E-02	0.082
SB-124	2.533E-02		4.388E-02	7.878E-02	5.435E-03	0.322
SB-125	2.133E-02		6.412E-02	1.086E-01	6.786E-03	0.196
TE-125M	1.390E+00		8.143E+00	1.184E+01	1.040E+00	0.117
I-126	6.170E-02		1.176E-01	2.028E-01	1.559E-02	0.304
SB-126	-4.350E-02		1.008E-01	1.449E-01	1.227E-02	-0.300
SB-127	-5.462E-02		6.316E-01	1.051E+00	1.076E-01	-0.052
XE-127	-4.777E-02		3.372E-02	5.300E-02	2.861E-03	-0.901
I-131	2.605E-02		6.688E-02	1.148E-01	7.388E-03	0.227
TE-132	2.296E-02		3.269E-01	5.419E-01	7.493E-02	0.042
BA-133	-1.246E-02		3.611E-02	4.880E-02	5.637E-03	-0.255
I-133	7.640E-05		3.491E-04	Half-Life too short		
CS-134	1.296E-01	+	4.749E-02	6.982E-02	6.753E-03	1.856
CS-135	1.381E-01		1.326E-01	2.012E-01	1.521E-02	0.686
I-135	1.858E+06		7.909E+06	Half-Life too short		
CS-136	4.045E-02		7.774E-02	1.340E-01	1.201E-02	0.302
BA-137M	-1.043E-02		2.645E-02	4.337E-02	3.306E-03	-0.240
CS-137	-1.103E-02		2.796E-02	4.585E-02	3.504E-03	-0.240
CE-139	2.702E-03		2.224E-02	3.774E-02	1.981E-03	0.072
BA-140	-1.043E-02		1.654E-01	2.690E-01	8.801E-02	-0.039
LA-140	-2.427E-02		5.464E-02	7.033E-02	4.825E-03	-0.345
CE-141	1.141E-02		4.973E-02	7.955E-02	4.541E-03	0.143
CE-143	1.856E-04		2.877E-05	Half-Life too short		
CE-144	4.755E-02		1.798E-01	2.586E-01	3.657E-02	0.184
PM-144	-4.367E-03		2.541E-02	4.098E-02	3.327E-03	-0.107
PR-144	-2.956E-01		1.720E+00	2.774E+00	2.251E-01	-0.107
PM-146	-9.659E-03		3.128E-02	5.089E-02	4.528E-03	-0.190
ND-147	2.553E-01		3.381E-01	5.759E-01	8.035E-02	0.443

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	-6.896E+00		3.460E+01	5.568E+01	7.869E+00	-0.124
EU-152	-2.595E-02		8.056E-02	1.096E-01	7.150E-03	-0.237
GD-153	-3.084E-02		7.316E-02	1.040E-01	8.129E-03	-0.297
EU-154	3.734E-02		8.977E-02	1.520E-01	1.518E-02	0.246
EU-155	-2.802E-02		8.548E-02	1.366E-01	9.766E-03	-0.205
TB-160	-1.633E-02		1.019E-01	1.648E-01	1.810E-02	-0.099
HO-166M	-2.305E-02		4.361E-02	7.026E-02	5.856E-03	-0.328
TM-171	1.490E+01		2.838E+01	4.311E+01	3.447E+00	0.346
LU-176	-9.379E-03		1.864E-02	2.933E-02	1.689E-03	-0.320
LU-177M	-1.533E-01		1.273E-01	1.986E-01	1.173E-02	-0.772
HF-181	7.535E-03		3.184E-02	4.642E-02	2.971E-03	0.162
W-181	-3.904E-01		3.780E-01	5.333E-01	4.230E-02	-0.732
TA-182	-2.495E-02		1.450E-01	2.363E-01	1.446E-02	-0.106
RE-183	2.104E-03		8.609E-02	1.436E-01	7.579E-03	0.015
RE-184	-4.181E-02		1.667E-01	2.704E-01	1.519E-02	-0.155
OS-185	-1.750E-02		3.363E-02	5.217E-02	3.923E-03	-0.335
RE-188	9.915E-05		1.259E-01	2.137E-01	1.143E-02	0.000
W-188	-9.116E+00		6.853E+00	8.893E+00	5.094E-01	-1.025
IR-192	-1.412E-02		2.762E-02	4.282E-02	2.483E-03	-0.330
AU-195	2.270E-01		1.837E-01	3.113E-01	2.382E-02	0.729
TL-200	-3.210E-05		3.910E-05	Half-Life too short		
TL-201	-3.595E+00		3.154E+00	5.097E+00	2.676E-01	-0.705
TL-202	-4.345E-03		4.519E-02	7.467E-02	4.552E-03	-0.058
BI-207	-2.895E-03		4.151E-02	6.901E-02	5.697E-03	-0.042
TL-207	-2.287E-01		5.743E-01	7.818E-01	1.291E-01	-0.293
PO-209	-2.297E+00		5.823E+00	9.238E+00	1.042E+00	-0.249
BI-210	-1.014E+00		4.578E+00	7.687E+00	5.947E-01	-0.132
PB-210	-1.014E+00		4.578E+00	7.687E+00	5.947E-01	-0.132
PO-210	-1.014E+00		4.578E+00	7.687E+00	5.113E-01	-0.132
PB-211	-8.855E-02		6.806E-01	1.127E+00	7.024E-01	-0.079
BI-212	6.913E-01	+	3.824E-01	4.505E-01	4.487E-02	1.535
PO-215	-2.287E-01		5.743E-01	7.818E-01	1.291E-01	-0.293
RN-219	-1.039E-02		2.969E-01	4.958E-01	6.749E-02	-0.021
RN-220	-1.773E+01		1.832E+01	2.784E+01	1.913E+00	-0.637
RA-223	-2.287E-01		5.743E-01	7.818E-01	1.291E-01	-0.293
AC-227	-1.084E-01		2.909E-01	4.683E-01	6.505E-02	-0.232
TH-227	-1.084E-01		2.911E-01	4.683E-01	7.887E-02	-0.232
TH-229	-3.171E-01		3.726E-01	6.022E-01	3.224E-02	-0.527
PA-231	-4.994E-01		1.332E+00	1.845E+00	2.535E-01	-0.271
TH-231	-2.287E-01		5.743E-01	7.818E-01	1.291E-01	-0.293
U-231	-3.298E-01		6.533E-01	9.244E-01	7.406E-02	-0.357
PA-233	2.058E-02		4.769E-02	7.864E-02	4.818E-03	0.262
PA-234	7.882E-02		2.213E-01	3.683E-01	7.265E-02	0.214
PA-234M	3.066E+00		4.768E+00	7.965E+00	9.493E-01	0.385
U-235	8.944E-02		1.796E-01	2.869E-01	4.646E-02	0.312
NP-236	1.980E-02		6.286E-02	1.058E-01	5.605E-03	0.187
NP-239	-1.898E-01		1.664E-01	2.406E-01	1.489E-02	-0.789
AM-241	-2.267E-02		1.670E-01	2.491E-01	2.066E-02	-0.091

Sample ID : G232504009 Acquisition date : 7-JUL-2009 09:12:12

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.067E-02		7.645E-02	1.219E-01	8.723E-03	-0.252
CM-247	1.863E-02		2.674E-02	4.620E-02	2.691E-03	0.403
CF-249	3.169E-02		2.816E-02	4.972E-02	2.858E-03	0.637
CF-251	-2.257E-02		9.438E-02	1.574E-01	8.312E-03	-0.143

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504009           *
* Acquisition date  :  7-JUL-2009 09:12:12 Detector SN#     :               *
* Detector ID       : GAM18                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.85     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504009           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.4507E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
BE-7	1.412E+00	3.918E-01	1.832E-01	1.999E-01
K-40	2.936E+01	2.537E+00	1.772E-01	1.294E+00
CD-109	2.296E+00	9.060E-01	5.551E-01	4.622E-01
SN-126	2.265E-01	8.935E-02	6.284E-02	4.558E-02
LU-177	2.149E+00	9.203E-01	5.626E-01	4.695E-01
HG-203	6.151E-02	5.699E-02	2.512E-02	2.907E-02
TL-208	4.506E-01	6.949E-02	2.012E-02	3.545E-02
BI-211	3.324E+00	3.638E-01	1.285E-01	1.856E-01
PB-212	1.233E+00	1.258E-01	4.440E-02	6.419E-02
PO-212	1.233E+00	1.258E-01	4.440E-02	6.419E-02
BI-214	9.715E-01	1.380E-01	4.196E-02	7.042E-02
PB-214	1.156E+00	1.397E-01	4.467E-02	7.127E-02
PO-214	1.156E+00	1.397E-01	4.467E-02	7.127E-02
PO-216	1.233E+00	1.258E-01	4.440E-02	6.419E-02
PO-218	1.156E+00	1.397E-01	4.467E-02	7.127E-02
RA-224	1.952E+00	6.444E-01	5.767E-01	3.288E-01
RA-226	9.715E-01	1.380E-01	4.196E-02	7.042E-02
AC-228	1.419E+00	3.021E-01	8.625E-02	1.542E-01
RA-228	1.419E+00	3.021E-01	8.625E-02	1.542E-01
TH-228	1.233E+00	1.258E-01	4.440E-02	6.419E-02
TH-230	9.714E-01	1.380E-01	4.196E-02	7.042E-02
TH-232	1.419E+00	3.021E-01	8.625E-02	1.542E-01
TH-234	2.168E+00	1.891E+00	1.060E+00	9.646E-01
U-234	9.714E-01	1.380E-01	4.196E-02	7.042E-02
NP-237	6.650E-01	2.948E-01	1.864E-01	1.504E-01
U-238	2.168E+00	1.891E+00	1.060E+00	9.646E-01
AM-243	3.121E-01	7.242E-02	3.992E-02	3.695E-02
ANH-511	1.690E-01	4.933E-02	1.591E-02	2.517E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

NA-22	3.308E-03	3.200E-02	2.727E-02	1.633E-02	NOT IDENT.
NA-24	1.254E+04	4.473E+04	0.000E+00	2.282E+04	SHORT HLIF
AL-26	1.437E-02	2.097E-02	1.920E-02	1.070E-02	NOT IDENT.
TI-44	3.526E-01	5.400E-02	3.678E-02	2.755E-02	FAIL ABUN
SC-46	-1.554E-02	2.935E-02	2.395E-02	1.497E-02	FAIL ABUN
V-48	-1.804E-02	4.555E-02	3.697E-02	2.324E-02	NOT IDENT.
CR-51	1.482E-01	2.685E-01	2.357E-01	1.370E-01	NOT IDENT.
MN-52	-6.701E-02	1.271E-01	9.972E-02	6.484E-02	NOT IDENT.
MN-54	-2.677E-03	2.656E-02	2.256E-02	1.355E-02	NOT IDENT.
CO-56	-1.316E-02	2.951E-02	2.443E-02	1.506E-02	NOT IDENT.
CO-57	1.227E-03	2.028E-02	1.769E-02	1.034E-02	NOT IDENT.
CO-58	-1.967E-02	2.723E-02	2.213E-02	1.389E-02	NOT IDENT.
FE-59	2.214E-03	6.311E-02	5.442E-02	3.220E-02	NOT IDENT.
CO-60	7.198E-04	2.538E-02	2.140E-02	1.295E-02	NOT IDENT.
ZN-65	-1.348E-02	7.635E-02	5.515E-02	3.895E-02	NOT IDENT.
GE-68	4.633E-01	9.646E-01	8.423E-01	4.921E-01	NOT IDENT.
AS-73	-1.859E-02	8.804E-01	7.970E-01	4.492E-01	NOT IDENT.
AS-74	8.725E-03	6.050E-02	5.176E-02	3.087E-02	NOT IDENT.
SE-75	-2.802E-02	3.486E-02	2.684E-02	1.779E-02	FAIL ABUN
BR-77	-9.655E-01	4.026E+00	3.319E+00	2.054E+00	FAIL ABUN
SR-82	-3.156E-01	2.573E-01	2.024E-01	1.313E-01	NOT IDENT.
RB-83	-1.413E-02	5.003E-02	4.113E-02	2.552E-02	NOT IDENT.
RB-84	-2.280E-03	5.139E-02	4.123E-02	2.622E-02	NOT IDENT.
KR-85	2.392E+01	6.339E+00	5.745E+00	3.234E+00	NOT IDENT.
SR-85	1.198E-01	3.174E-02	2.877E-02	1.620E-02	NOT IDENT.
RB-86	1.064E-01	5.690E-01	4.882E-01	2.903E-01	NOT IDENT.
Y-88	-8.809E-03	2.153E-02	1.683E-02	1.099E-02	NOT IDENT.
ZR-88	-1.322E-02	2.177E-02	1.872E-02	1.111E-02	NOT IDENT.
Y-91	8.639E+00	1.354E+01	1.198E+01	6.908E+00	NOT IDENT.
NB-94	-1.977E-02	2.375E-02	1.964E-02	1.212E-02	NOT IDENT.
NB-95	6.313E-03	2.946E-02	2.574E-02	1.503E-02	NOT IDENT.
NB-95M	9.946E-02	1.020E-01	8.267E-02	5.204E-02	NOT IDENT.
ZR-95	1.230E-02	4.917E-02	4.315E-02	2.509E-02	NOT IDENT.
NB-97	-2.438E+02	7.755E+03	0.000E+00	3.957E+03	SHORT HLIF
ZR-97	3.851E+05	1.525E+05	0.000E+00	7.783E+04	SHORT HLIF
MO-99	1.521E+00	4.473E+00	3.956E+00	2.282E+00	NOT IDENT.
TC-99M	-3.900E+13	6.900E+13	0.000E+00	3.520E+13	SHORT HLIF
RH-101	1.058E-02	2.469E-02	2.231E-02	1.260E-02	NOT IDENT.
RH-102	3.722E-02	2.589E-02	2.141E-02	1.321E-02	NOT IDENT.
RU-103	1.665E-02	2.708E-02	2.419E-02	1.382E-02	FAIL ABUN
RH-106	8.687E-02	2.419E-01	2.084E-01	1.234E-01	FAIL ABUN
RU-106	8.687E-02	2.418E-01	2.084E-01	1.234E-01	FAIL ABUN
AG-108M	2.762E-03	2.247E-02	1.984E-02	1.146E-02	NOT IDENT.
AG-110M	-1.493E-03	2.487E-02	2.175E-02	1.269E-02	NOT IDENT.
IN-111	-8.467E-02	4.946E-01	3.656E-01	2.523E-01	NOT IDENT.
IN-113M	-1.356E-02	3.182E-02	2.762E-02	1.623E-02	NOT IDENT.
SN-113	-1.356E-02	3.182E-02	2.762E-02	1.623E-02	NOT IDENT.
IN-114M	9.125E-02	1.395E-01	1.142E-01	7.115E-02	NOT IDENT.
CD-115	-4.011E+00	3.738E+00	2.983E+00	1.907E+00	NOT IDENT.
SN-117M	4.200E-03	3.724E-02	3.359E-02	1.900E-02	NOT IDENT.
SB-122	5.027E-01	8.532E-01	7.522E-01	4.353E-01	NOT IDENT.
I-123	2.636E+04	2.588E+05	0.000E+00	1.320E+05	SHORT HLIF
TE-123M	2.178E-03	2.138E-02	1.927E-02	1.091E-02	NOT IDENT.
I-124	4.559E-02	3.891E-01	2.870E-01	1.985E-01	NOT IDENT.
SB-124	2.533E-02	4.301E-02	3.949E-02	2.194E-02	FAIL ABUN
SB-125	2.133E-02	6.283E-02	5.619E-02	3.206E-02	FAIL ABUN
TE-125M	1.390E+00	7.980E+00	6.307E+00	4.071E+00	NOT IDENT.
I-126	6.170E-02	1.153E-01	1.039E-01	5.881E-02	NOT IDENT.
SB-126	-4.350E-02	9.878E-02	7.411E-02	5.040E-02	FAIL ABUN
SB-127	-5.462E-02	6.189E-01	5.378E-01	3.158E-01	NOT IDENT.
XE-127	-4.777E-02	3.304E-02	2.787E-02	1.686E-02	NOT IDENT.
I-131	2.605E-02	6.554E-02	5.961E-02	3.344E-02	NOT IDENT.
TE-132	2.296E-02	3.204E-01	2.843E-01	1.635E-01	FAIL ABUN
BA-133	-1.246E-02	3.539E-02	2.535E-02	1.805E-02	NOT IDENT.
I-133	7.640E+01	6.842E+02	0.000E+00	3.491E+02	SHORT HLIF
CS-134	1.296E-01	4.654E-02	3.562E-02	2.375E-02	FAIL ABUN
CS-135	1.381E-01	1.300E-01	1.052E-01	6.632E-02	NOT IDENT.
I-135	1.858E+12	1.550E+13	0.000E+00	7.909E+12	SHORT HLIF
CS-136	4.045E-02	7.618E-02	6.794E-02	3.887E-02	FAIL ABUN
BA-137M	-1.043E-02	2.592E-02	2.222E-02	1.323E-02	NOT IDENT.
CS-137	-1.103E-02	2.740E-02	2.349E-02	1.398E-02	NOT IDENT.
CE-139	2.702E-03	2.180E-02	1.993E-02	1.112E-02	NOT IDENT.
BA-140	-1.043E-02	1.621E-01	1.385E-01	8.272E-02	NOT IDENT.
LA-140	-2.427E-02	5.354E-02	3.530E-02	2.732E-02	FAIL ABUN
CE-141	1.141E-02	4.874E-02	4.213E-02	2.486E-02	NOT IDENT.
CE-143	1.856E+02	5.639E+01	0.000E+00	2.877E+01	SHORT HLIF
CE-144	4.755E-02	1.762E-01	1.372E-01	8.992E-02	NOT IDENT.

PM-144	-4.367E-03	2.490E-02	2.097E-02	1.270E-02	FAIL ABUN
PR-144	-2.956E-01	1.685E+00	1.419E+00	8.598E-01	NOT IDENT.
PM-146	-9.659E-03	3.065E-02	2.629E-02	1.564E-02	NOT IDENT.
ND-147	2.553E-01	3.313E-01	2.965E-01	1.690E-01	FAIL ABUN
PM-149	-6.896E+00	3.391E+01	2.906E+01	1.730E+01	NOT IDENT.
EU-152	-2.595E-02	7.895E-02	5.696E-02	4.028E-02	FAIL ABUN
GD-153	-3.084E-02	7.169E-02	5.554E-02	3.658E-02	NOT IDENT.
EU-154	3.734E-02	8.798E-02	7.670E-02	4.489E-02	NOT IDENT.
EU-155	-2.802E-02	8.377E-02	7.285E-02	4.274E-02	FAIL ABUN
TB-160	-1.633E-02	9.986E-02	8.385E-02	5.095E-02	FAIL ABUN
HO-166M	-2.305E-02	4.274E-02	3.593E-02	2.181E-02	NOT IDENT.
TM-171	1.490E+01	2.781E+01	2.321E+01	1.419E+01	NOT IDENT.
LU-176	-9.379E-03	1.826E-02	1.529E-02	9.319E-03	FAIL ABUN
LU-177M	-1.533E-01	1.247E-01	1.028E-01	6.363E-02	NOT IDENT.
HF-181	7.535E-03	3.121E-02	2.395E-02	1.592E-02	NOT IDENT.
W-181	-3.904E-01	3.704E-01	2.873E-01	1.890E-01	NOT IDENT.
TA-182	-2.495E-02	1.421E-01	1.194E-01	7.249E-02	FAIL ABUN
RE-183	2.104E-03	8.437E-02	7.588E-02	4.304E-02	FAIL ABUN
RE-184	-4.181E-02	1.634E-01	1.415E-01	8.337E-02	NOT IDENT.
OS-185	-1.750E-02	3.296E-02	2.674E-02	1.682E-02	NOT IDENT.
RE-188	9.915E-05	1.234E-01	1.130E-01	6.297E-02	FAIL ABUN
W-188	-9.116E+00	6.716E+00	4.640E+00	3.426E+00	FAIL ABUN
IR-192	-1.412E-02	2.706E-02	2.230E-02	1.381E-02	FAIL ABUN
AU-195	2.270E-01	1.800E-01	1.662E-01	9.185E-02	FAIL ABUN
TL-200	-3.210E+01	7.663E+01	0.000E+00	3.910E+01	SHORT HLIF
TL-201	-3.595E+00	3.091E+00	2.692E+00	1.577E+00	NOT IDENT.
TL-202	-4.345E-03	4.429E-02	3.861E-02	2.260E-02	NOT IDENT.
BI-207	-2.895E-03	4.068E-02	3.497E-02	2.075E-02	FAIL ABUN
TL-207	-2.287E-01	5.629E-01	4.070E-01	2.872E-01	FAIL ABUN
PO-209	-2.297E+00	5.707E+00	4.699E+00	2.911E+00	NOT IDENT.
BI-210	-1.014E+00	4.487E+00	4.169E+00	2.289E+00	NOT IDENT.
PB-210	-1.014E+00	4.487E+00	4.169E+00	2.289E+00	NOT IDENT.
PO-210	-1.014E+00	4.487E+00	4.169E+00	2.289E+00	NOT IDENT.
PB-211	-8.855E-02	6.670E-01	5.836E-01	3.403E-01	NOT IDENT.
BI-212	6.913E-01	3.748E-01	2.303E-01	1.912E-01	FAIL ABUN
PO-215	-2.287E-01	5.629E-01	4.070E-01	2.872E-01	FAIL ABUN
RN-219	-1.039E-02	2.910E-01	2.568E-01	1.485E-01	FAIL ABUN
RN-220	-1.773E+01	1.795E+01	1.432E+01	9.158E+00	NOT IDENT.
RA-223	-2.287E-01	5.629E-01	4.070E-01	2.872E-01	FAIL ABUN
AC-227	-1.084E-01	2.851E-01	2.450E-01	1.455E-01	FAIL ABUN
TH-227	-1.084E-01	2.853E-01	2.450E-01	1.455E-01	FAIL ABUN
TH-229	-3.171E-01	3.652E-01	3.170E-01	1.863E-01	FAIL ABUN
PA-231	-4.994E-01	1.305E+00	9.632E-01	6.659E-01	FAIL ABUN
TH-231	-2.287E-01	5.629E-01	4.070E-01	2.872E-01	FAIL ABUN
U-231	-3.298E-01	6.402E-01	4.940E-01	3.266E-01	FAIL ABUN
PA-233	2.058E-02	4.674E-02	4.097E-02	2.385E-02	FAIL ABUN
PA-234	7.882E-02	2.169E-01	1.871E-01	1.106E-01	FAIL ABUN
PA-234M	3.066E+00	4.672E+00	4.042E+00	2.384E+00	NOT IDENT.
U-235	8.944E-02	1.760E-01	1.520E-01	8.980E-02	FAIL ABUN
NP-236	1.980E-02	6.160E-02	5.592E-02	3.143E-02	NOT IDENT.
NP-239	-1.898E-01	1.630E-01	1.280E-01	8.318E-02	FAIL ABUN
AM-241	-2.267E-02	1.637E-01	1.344E-01	8.351E-02	NOT IDENT.
CM-243	-3.067E-02	7.492E-02	6.501E-02	3.822E-02	FAIL ABUN
CM-247	1.863E-02	2.620E-02	2.393E-02	1.337E-02	FAIL ABUN
CF-249	3.169E-02	2.760E-02	2.578E-02	1.408E-02	NOT IDENT.
CF-251	-2.257E-02	9.249E-02	8.302E-02	4.719E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	318.0892
46.50	318.0892
46.50	318.0892
48.70	300.4155
49.72	290.8762
51.35	296.3658
52.39	270.3459
52.97	280.0391
53.15	283.8704
53.44	283.2729
54.07	298.5558
56.28	312.0553
56.28	312.0587
57.37	0.0000
57.53	319.9499
57.53	319.9516
57.60	321.8798
57.98	322.3197
57.98	322.3197
59.32	342.0041
59.32	342.0041
59.40	342.1003
59.54	342.2686
59.72	364.8508
60.01	365.2212
61.10	331.4906
61.14	331.5365
61.30	331.7193
63.00	365.6919
63.29	366.0491
63.29	366.0491
63.58	366.4053
64.28	421.6907
65.12	415.7461
65.20	415.8558
65.20	415.8558
66.05	384.1693
66.72	360.6735
66.83	370.8265
66.91	370.9214
67.20	389.9043
67.20	389.9043
67.75	380.2540
67.85	383.8248
68.90	426.6179
68.90	426.6179
69.30	430.0438
69.67	423.3246
70.82	416.1425
70.82	416.1425
70.83	416.1557
72.80	394.8551
72.87	394.9397
72.87	394.9397
74.67	397.0873
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77.11	399.9577

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77.11	399.9577
77.11	399.9577
78.38	401.4342
79.62	348.2899
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79.80	344.0009
80.11	344.3041
80.18	344.3728
80.30	384.7541
80.30	384.7541
80.57	385.0493
81.00	443.7915
81.07	443.8799
81.07	443.8799
81.07	443.8799
81.07	443.8799
82.60	499.8150
83.37	398.5958
83.78	393.0273
83.78	393.0273
83.78	393.0273
83.78	393.0273
84.21	373.8921
84.40	374.0851
84.90	370.0645
85.43	411.4386
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86.50	538.5398
86.54	538.5967
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86.72	550.9999
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86.94	551.3240
87.30	545.7747
87.30	545.7747
87.30	545.7747
87.30	545.7747
87.30	545.7747
87.30	545.7747
87.57	546.1663
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88.03	420.4077
88.36	420.7741
88.47	420.8962
89.95	422.5345
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92.29	371.1899
92.38	371.2763
92.38	371.2763
93.35	372.1938
94.00	318.6657
94.67	347.0896
94.67	347.0947
94.90	347.2947
94.90	347.2947
94.90	347.2947
94.90	347.2947
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95.87	365.2332
96.73	361.3442
97.43	386.9286
98.44	339.9216
98.44	339.9216
98.88	325.6729
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99.55	348.1588
99.86	342.1418
100.00	342.2583
100.10	342.3431
103.18	348.0267
103.76	337.9411
105.00	341.0392
105.31	343.4063
108.00	332.7378
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111.00	368.8194
111.00	368.8194

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112.95	396.2969
115.19	326.7216
116.30	337.2839
117.00	389.0315
117.00	389.0315
117.66	375.8557
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121.62	336.1645
121.78	336.2766
122.06	347.4685
122.32	347.6550
122.32	347.6550
122.32	347.6550
122.32	347.6550
123.07	336.0758
127.23	333.3824
129.76	340.0992
131.20	361.2312
133.02	323.7393
133.54	329.1280
135.34	364.7156
136.00	342.5641
136.25	364.2186
136.48	379.0901
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140.51	0.0000
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143.76	379.7052
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144.24	360.5199
144.24	360.5199
144.24	360.5199
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145.44	384.3256
147.16	362.4364
152.43	349.5392
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153.22	316.7721
154.21	327.8378
154.21	327.8378
154.21	327.8378
154.21	327.8378
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159.00	349.9926
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162.32	378.6197
162.64	375.2642
163.35	352.5606
163.89	351.0956
165.85	347.7649
167.43	372.8677
171.28	308.4554
171.86	312.3535
172.10	305.2475
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176.60	338.3539
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184.41	352.0232
185.71	344.0443
186.00	344.1952
190.27	292.7177
192.34	337.4703
193.63	340.6420
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198.01	305.2355
198.60	307.3733
200.40	331.7241
201.83	355.0588
202.84	370.6941
205.31	288.4720
208.36	350.6826
208.81	366.1553

209.75	332.2557
209.75	332.2557
210.97	347.3471
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216.55	320.8712
218.09	336.9808
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223.80	300.6050
226.40	340.6632
227.00	341.9037
227.08	341.9384
227.20	327.3350
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228.18	307.2012
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236.00	333.5716
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238.63	455.2061
238.63	455.2061
238.63	455.2061
239.00	595.0516
240.98	596.5027
241.98	563.7900
241.98	563.7900
241.98	563.7900
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245.39	239.8865
247.94	231.6010
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249.79	239.1476
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252.85	245.0597
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256.20	274.3753
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262.80	245.8725
264.65	269.9055
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268.79	228.4439
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269.46	225.3242
269.46	225.3242
269.46	225.3242
271.23	288.3954
273.65	289.1730
276.40	233.6999
277.35	233.9443
277.60	234.0063
277.60	234.0063
278.00	234.1096
278.60	234.2645
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279.53	252.7928
280.46	219.7561
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285.90	244.9116
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286.10	244.9616
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291.72	303.2974
293.26	0.0000
293.70	253.2715
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295.21	266.3580
295.21	266.3580
295.96	287.7217

296.50	287.8835
297.23	288.0994
298.57	288.5020
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299.80	236.1914
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300.09	254.9597
300.09	254.9597
300.10	254.9597
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304.40	218.5250
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308.46	201.4253
311.98	199.9863
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319.41	207.9580
320.08	214.5957
323.87	228.0091
323.87	228.0091
323.87	228.0091
323.87	228.0091
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334.20	204.3400
334.30	204.3599
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338.28	180.8615
338.28	180.8615
338.28	180.8615
338.32	180.8690
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338.32	180.8690
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340.57	176.8286
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351.92	209.9452
351.92	209.9452
355.39	0.0000
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364.48	169.8449
366.43	177.3762
367.43	184.7779
367.94	0.0000
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374.96	175.0453
383.85	181.8835
387.95	154.8565
388.63	184.4580
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391.69	200.6455
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398.62	179.4744
400.65	204.9180
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401.81	182.7367
402.60	169.7919
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410.95	164.3594
411.60	175.7211
413.65	205.1840
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433.93	151.0701
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439.56	171.8789
439.89	179.6063
443.98	157.9981
444.90	161.9625
445.03	154.2656
445.03	154.2656
445.03	154.2656
445.03	154.2656
453.90	162.0728
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476.78	149.6283
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477.96	137.2455
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487.03	125.1987
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492.35	145.6026
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511.85	122.2666
511.85	122.2666
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513.99	124.7997
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555.20	110.1225
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574.64	119.5847
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579.30	0.0000
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593.00	138.1631
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602.71	147.8539
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604.70	153.3730
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609.31	143.7654
609.31	143.7654

609.31	143.7654
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621.84	135.0647
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666.33	129.1593
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695.00	119.8646
696.49	132.1387
696.49	132.1387
697.00	146.2341
697.49	137.8334
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698.50	136.0260
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722.78	105.8154
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744.21	107.4746
747.13	114.3540
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768.36	131.0422
768.36	131.0422
768.36	131.0422
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810.76	113.8208
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911.07	117.7527
911.07	117.7527
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934.06	85.4817
934.06	85.4817
934.06	85.4817
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949.00	98.5707
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968.20	91.9100
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969.11	91.9437
969.11	91.9437
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983.50	91.3855
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1050.47	110.1600
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1077.35	95.1877
1085.78	98.3052
1099.22	94.9637
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1112.84	96.8378
1115.52	113.6377
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1120.29	86.0826
1120.29	86.0826
1120.29	86.0826
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1147.95	0.0000
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1238.11	106.3171
1238.11	106.3171
1238.11	106.3171
1238.25	106.3208
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1298.22	0.0000
1312.09	83.3156
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1325.50	57.1211
1332.49	50.0835
1333.61	55.2110
1360.21	49.4531
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1368.53	0.0000
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1377.67	48.9227
1377.67	48.9227
1377.67	48.9227
1377.67	48.9227
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1395.20	80.1179
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1457.56	0.0000
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1596.49	32.4171
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1691.02	15.7090
1691.02	15.7090

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1750.46	0.0000
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1764.49	18.9722
1764.49	18.9722
1764.49	18.9722
1770.23	21.3294
1771.40	19.5573
1791.20	0.0000
1808.65	19.1600
1836.01	23.3334

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504009

Total Uranium Activity	6.4913E+00	ug/g
Total Uranium Counting Unc.	5.6253E+00	ug/g
Total Uranium Tpu	2.8700E-06	ug/g
Total Uranium Mda	3.1541E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232504009      *
*   ANALYST       : MXR1                      DETECTOR    : GAM18           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 09:12:12.16    SAMPLE ALQT:  145.070 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.643E+00
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.307E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 2.208E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 1.071E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:13:43.89

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504010.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:12:43.
Sample ID         : G232504010           Sample quantity  : 1.28720E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.95  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.48*	110	691	1.43	126.34	122	9	1.53E-02	45.5	
2	2	74.87*	739	710	1.31	149.11	142	17	1.03E-01	7.5	8.71E-01
3	2	77.20*	1063	587	1.22	153.76	142	17	1.48E-01	5.2	
4	4	87.39	439	590	1.58	174.14	170	22	6.10E-02	9.9	3.89E+00
5	4	89.98	275	529	1.21	179.31	170	22	3.81E-02	15.2	
6	4	92.89*	325	539	1.34	185.15	170	22	4.52E-02	15.2	
7	0	186.02*	221	571	1.22	371.36	367	10	3.07E-02	22.1	
8	0	209.13	262	482	1.25	417.59	412	12	3.64E-02	17.9	
9	3	238.79*	2126	303	1.33	476.88	468	22	2.95E-01	2.7	1.92E+00
10	3	241.83	527	338	1.72	482.97	468	22	7.32E-02	9.3	
11	0	270.21	188	392	1.70	539.74	532	13	2.61E-02	22.9	
12	0	278.12	77	380	1.52	555.54	551	12	1.07E-02	51.9	
13	0	295.46	668	321	1.29	590.22	584	12	9.28E-02	6.6	
14	0	300.45*	130	237	1.60	600.20	596	9	1.81E-02	23.7	
15	0	328.71	127	305	1.98	656.72	650	12	1.76E-02	28.9	
16	0	338.59*	496	347	1.60	676.48	669	15	6.88E-02	9.5	
17	0	352.09*	1167	254	1.55	703.49	697	13	1.62E-01	4.1	
18	0	462.94	93	160	1.51	925.18	921	10	1.28E-02	27.5	
19	0	511.16*	147	228	2.42	1021.64	1015	14	2.04E-02	27.0	
20	0	583.28*	675	267	1.91	1165.91	1158	19	9.37E-02	7.0	
21	0	609.50*	840	200	1.91	1218.36	1211	16	1.17E-01	5.2	
22	0	727.71	149	147	1.47	1454.84	1450	14	2.06E-02	19.0	
23	0	785.89	71	88	1.78	1571.24	1565	13	9.87E-03	29.7	
24	0	794.98	110	125	1.28	1589.43	1582	18	1.53E-02	25.4	
25	0	861.67	87	138	2.54	1722.85	1716	15	1.20E-02	31.5	
26	0	911.80*	549	102	2.28	1823.15	1817	17	7.62E-02	6.1	
27	0	969.89*	213	246	1.91	1939.39	1931	15	2.96E-02	18.0	
28	0	1120.95	206	157	1.11	2241.69	2232	19	2.87E-02	16.1	
29	0	1461.39*	2753	81	3.01	2923.10	2911	23	3.82E-01	2.1	
30	0	1765.45	186	14	3.43	3531.86	3522	18	2.59E-02	8.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 11:13:46

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504010.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:12:43
Sample ID : G232504010 Sample quantity : 128.72 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.95 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.798E+01	3.086E+00	4.445E-01	3.094E-02	85.432
CD-109	+	88.03	*	4.417E+00	9.548E-01	1.179E+00	1.053E-01	3.748
SN-126	+	64.28		6.871E-01	6.325E-01	6.861E-01	9.894E-02	1.002
	+	86.94		1.811E+00	8.305E-01	4.878E-01	2.019E-01	3.713
	+	87.57	*	4.356E-01	9.416E-02	1.167E-01	1.038E-02	3.733
HG-203		70.83		6.808E-02	1.052E+00	1.489E+00	1.926E-01	0.046
		72.87		1.810E+00	6.039E-01	9.655E-01	1.216E-01	1.875
		82.60		6.422E-01	1.247E+00	1.620E+00	2.206E-01	0.396
	+	279.20	*	5.319E-02	5.532E-02	5.716E-02	3.415E-03	0.931
TL-208	+	277.35		4.989E-01	5.206E-01	5.368E-01	5.610E-02	0.929
	+	510.84		4.376E-01	2.406E-01	1.874E-01	1.978E-02	2.336
	+	583.14	*	5.673E-01	9.075E-02	4.880E-02	3.757E-03	11.625
	+	860.37		6.741E-01	4.302E-01	4.055E-01	4.229E-02	1.663
BI-211		72.87		9.410E+00	2.994E+00	5.018E+00	3.840E-01	1.875
	+	351.07	*	4.554E+00	4.723E-01	2.997E-01	1.901E-02	15.194
BI-212	+	727.18	*	1.060E+00	4.157E-01	4.139E-01	3.991E-02	2.560
	+	785.46		3.234E+00	1.940E+00	2.264E+00	2.018E-01	1.428
		1620.62		2.333E-01	1.043E+00	1.740E+00	1.099E-01	0.134
PB-212	+	74.81		3.026E+00	5.824E-01	4.828E-01	5.873E-02	6.267
	+	77.11		2.480E+00	3.235E-01	2.758E-01	2.194E-02	8.992
	+	87.30		2.015E+00	4.798E-01	5.409E-01	7.230E-02	3.725
	+	238.63	*	1.933E+00	1.716E-01	8.160E-02	5.769E-03	23.683
	+	300.09		1.758E+00	8.444E-01	1.060E+00	8.632E-02	1.659
PO-212	+	74.81		3.026E+00	5.824E-01	4.828E-01	5.873E-02	6.267
	+	77.11		2.480E+00	3.235E-01	2.758E-01	2.194E-02	8.992
	+	87.30		2.015E+00	4.798E-01	5.409E-01	7.230E-02	3.725
		115.19		2.633E+00	3.295E+00	5.620E+00	3.648E-01	0.469
	+	238.63	*	1.933E+00	1.716E-01	8.160E-02	5.769E-03	23.683
	+	300.09		1.758E+00	8.444E-01	1.060E+00	8.632E-02	1.659
BI-214	+	609.31	*	1.328E+00	1.815E-01	9.605E-02	8.447E-03	13.821
		768.36		1.382E+00	6.888E-01	1.206E+00	1.271E-01	1.146
		934.06		1.247E+00	1.006E+00	1.772E+00	2.077E-01	0.704
	+	1120.29		1.653E+00	5.557E-01	4.378E-01	4.151E-02	3.775
		1238.11		2.098E+00	8.618E-01	1.571E+00	1.313E-01	1.336

Sample ID : G232504010 Acquisition date : 7-JUL-2009 09:12:43

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		1.793E+00	9.394E-01	1.731E+00	1.600E-01	1.036
	+	1764.49		1.897E+00	3.473E-01	2.449E-01	1.435E-02	7.747
PB-214	+	74.81		5.213E+00	9.585E-01	8.319E-01	8.940E-02	6.267
	+	77.11		4.251E+00	6.422E-01	4.727E-01	5.207E-02	8.992
	+	87.30		3.451E+00	7.920E-01	9.266E-01	1.089E-01	3.725
	+	241.98		2.872E+00	5.811E-01	4.904E-01	3.845E-02	5.856
	+	295.21		1.585E+00	2.485E-01	1.731E-01	1.458E-02	9.157
	+	351.92	*	1.584E+00	1.839E-01	9.950E-02	8.173E-03	15.922
PO-214	+	74.81		5.213E+00	9.585E-01	8.319E-01	8.940E-02	6.267
	+	77.11		4.251E+00	6.422E-01	4.727E-01	5.207E-02	8.992
	+	87.30		3.451E+00	7.920E-01	9.266E-01	1.089E-01	3.725
	+	241.98		2.872E+00	5.811E-01	4.904E-01	3.845E-02	5.856
	+	295.21		1.585E+00	2.485E-01	1.731E-01	1.458E-02	9.157
	+	351.92	*	1.584E+00	1.839E-01	9.950E-02	8.173E-03	15.922
PO-216	+	74.81		3.026E+00	5.824E-01	4.828E-01	5.873E-02	6.267
	+	77.11		2.480E+00	3.235E-01	2.758E-01	2.194E-02	8.992
	+	87.30		2.015E+00	4.798E-01	5.409E-01	7.230E-02	3.725
	+	238.63	*	1.933E+00	1.716E-01	8.160E-02	5.769E-03	23.683
	+	300.09		1.758E+00	8.444E-01	1.060E+00	8.632E-02	1.659
PO-218	+	74.81		5.213E+00	9.585E-01	8.319E-01	8.940E-02	6.267
	+	77.11		4.251E+00	6.422E-01	4.727E-01	5.207E-02	8.992
	+	87.30		3.451E+00	7.920E-01	9.266E-01	1.089E-01	3.725
	+	241.98		2.872E+00	5.811E-01	4.904E-01	3.845E-02	5.856
	+	295.21		1.585E+00	2.485E-01	1.731E-01	1.458E-02	9.157
	+	351.92	*	1.584E+00	1.839E-01	9.950E-02	8.173E-03	15.922
RA-224	+	240.98	*	5.445E+00	1.059E+00	9.273E-01	5.078E-02	5.872
RA-226	+	609.31	*	1.328E+00	1.815E-01	9.605E-02	8.447E-03	13.821
		768.36		1.382E+00	6.888E-01	1.206E+00	1.271E-01	1.146
		934.06		1.247E+00	1.006E+00	1.772E+00	2.077E-01	0.704
	+	1120.29		1.653E+00	5.557E-01	4.378E-01	4.151E-02	3.775
		1238.11		2.098E+00	8.618E-01	1.571E+00	1.313E-01	1.336
		1377.67		1.793E+00	9.394E-01	1.731E+00	1.600E-01	1.036
	+	1764.49		1.897E+00	3.473E-01	2.449E-01	1.435E-02	7.747
AC-228	+	338.32		2.144E+00	9.639E-01	3.278E-01	1.336E-01	6.542
	+	911.07	*	2.013E+00	3.523E-01	1.921E-01	2.403E-02	10.479
	+	969.11		1.377E+00	5.925E-01	3.874E-01	9.165E-02	3.554
RA-228	+	338.32		2.144E+00	9.639E-01	3.278E-01	1.336E-01	6.542
	+	911.07	*	2.013E+00	3.523E-01	1.921E-01	2.403E-02	10.479
	+	969.11		1.377E+00	5.925E-01	3.874E-01	9.165E-02	3.554
TH-228		84.40		2.038E+00	2.588E+00	3.944E+00	5.172E-01	0.517
	+	238.60	*	1.933E+00	1.716E-01	8.159E-02	5.769E-03	23.685
	+	300.10		1.758E+00	1.329E+00	1.060E+00	6.245E-01	1.659
TH-230	+	609.31	*	1.328E+00	1.815E-01	9.605E-02	8.447E-03	13.821
		768.36		1.382E+00	6.888E-01	1.206E+00	1.271E-01	1.146
		934.06		1.247E+00	1.006E+00	1.772E+00	2.077E-01	0.704
	+	1120.29		1.653E+00	5.557E-01	4.378E-01	4.151E-02	3.775
		1238.11		2.098E+00	8.618E-01	1.570E+00	1.313E-01	1.336
		1377.67		1.793E+00	9.394E-01	1.731E+00	1.600E-01	1.036
	+	1764.49		1.897E+00	3.473E-01	2.449E-01	1.435E-02	7.747

Sample ID : G232504010 Acquisition date : 7-JUL-2009 09:12:43

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	+	338.32		2.144E+00	4.249E-01	3.278E-01	1.867E-02	6.542
	+	911.07	*	2.013E+00	3.523E-01	1.921E-01	2.403E-02	10.479
	+	969.11		1.377E+00	5.925E-01	3.874E-01	9.165E-02	3.554
TH-234	+	63.29	*	1.736E+00	1.607E+00	1.756E+00	3.044E-01	0.988
	+	92.38		2.107E+00	7.445E-01	7.707E-01	1.384E-01	2.734
U-234	+	609.31	*	1.328E+00	1.815E-01	9.605E-02	8.447E-03	13.821
		768.36		1.382E+00	6.888E-01	1.206E+00	1.271E-01	1.146
		934.06		1.247E+00	1.006E+00	1.772E+00	2.077E-01	0.704
	+	1120.29		1.653E+00	5.557E-01	4.378E-01	4.151E-02	3.775
		1238.11		2.098E+00	8.618E-01	1.570E+00	1.313E-01	1.336
		1377.67		1.793E+00	9.394E-01	1.731E+00	1.600E-01	1.036
	+	1764.49		1.897E+00	3.473E-01	2.449E-01	1.435E-02	7.747
NP-237	+	86.50	*	1.279E+00	3.823E-01	3.835E-01	8.601E-02	3.335
		95.87		3.363E-01	9.487E-01	1.423E+00	3.475E-01	0.236
U-238	+	63.29	*	1.736E+00	1.607E+00	1.756E+00	3.044E-01	0.988
	+	92.38		2.107E+00	6.649E-01	7.707E-01	6.448E-02	2.734
AM-243	+	74.67	*	4.905E-01	8.254E-02	7.848E-02	6.102E-03	6.251
	+	86.72		4.797E+01	1.037E+01	1.435E+01	1.264E+00	3.342
		117.66		1.015E+00	3.455E+00	5.807E+00	3.685E-01	0.175
		142.18		3.738E-01	1.665E+01	2.747E+01	1.539E+00	0.014
ANH-511	+	511.00	*	9.453E-02	5.138E-02	4.048E-02	2.624E-03	2.335

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.016E-03	2.732E-01	4.385E-01	3.137E-02	-0.002
NA-22		1274.54	*	-1.820E-03	4.046E-02	6.712E-02	4.271E-03	-0.027
NA-24		1368.53	*	-8.020E-02	4.046E-02	Half-Life too short		
AL-26		1129.67		1.445E+00	1.782E+00	2.653E+00	1.749E-01	0.545
		1808.65	*	1.136E-02	2.353E-02	4.145E-02	2.359E-03	0.274
TI-44		67.85		1.674E-02	4.728E-02	6.786E-02	4.995E-03	0.247
	+	78.38	*	4.576E-01	5.969E-02	7.555E-02	6.085E-03	6.057
SC-46		889.25	*	-2.804E-02	3.303E-02	5.157E-02	5.287E-03	-0.544
	+	1120.51		2.777E-01	9.156E-02	1.129E-01	7.661E-03	2.459
V-48		944.10		2.203E-01	7.207E-01	1.214E+00	1.189E-01	0.182
		983.50	*	-1.616E-02	5.849E-02	9.456E-02	8.732E-03	-0.171
		1312.09		-4.647E-02	6.053E-02	9.410E-02	6.228E-03	-0.494
CR-51		320.08	*	2.644E-01	2.976E-01	5.103E-01	3.244E-02	0.518
MN-52		744.21		-5.180E-02	1.492E-01	2.363E-01	1.985E-02	-0.219
		848.13		-1.042E+00	4.599E+00	7.565E+00	7.347E-01	-0.138
		935.52		8.623E-02	1.718E-01	2.926E-01	2.899E-02	0.295
		1246.25		-6.351E+00	5.545E+00	8.642E+00	5.315E-01	-0.735
		1333.61		8.221E-01	3.114E+00	5.273E+00	3.566E-01	0.156
		1434.06	*	1.005E-01	1.524E-01	2.658E-01	1.776E-02	0.378
MN-54		834.83	*	-1.046E-02	3.346E-02	5.489E-02	5.236E-03	-0.191
CO-56		846.75	*	-1.350E-02	3.516E-02	5.729E-02	5.554E-03	-0.236
		977.42		1.085E+00	2.825E+00	4.261E+00	3.974E-01	0.255
		1037.82		7.474E-02	2.701E-01	4.508E-01	3.980E-02	0.166

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1175.09		-6.764E-01	2.179E+00	3.465E+00	1.957E-01	-0.195
		1238.25		2.072E-01	8.482E-02	1.558E-01	1.004E-02	1.329
		1360.21		-2.321E-01	8.499E-01	1.373E+00	9.268E-02	-0.169
		1771.40		2.102E-01	2.132E-01	3.514E-01	2.050E-02	0.598
CO-57		122.06	*	1.813E-04	2.311E-02	3.843E-02	2.350E-03	0.005
		136.48		1.956E-02	1.907E-01	3.160E-01	2.105E-02	0.062
CO-58		810.76	*	-1.333E-02	3.122E-02	5.080E-02	4.700E-03	-0.262
FE-59		142.65		8.620E-01	2.533E+00	4.161E+00	2.328E-01	0.207
		192.34		1.667E-01	9.031E-01	1.420E+00	1.640E-01	0.117
		1099.22	*	-9.406E-02	7.987E-02	1.190E-01	9.561E-03	-0.791
		1291.56		2.521E-02	1.066E-01	1.800E-01	1.432E-02	0.140
CO-60		1173.22		2.650E-02	4.318E-02	7.256E-02	4.089E-03	0.365
		1332.49	*	-4.383E-03	3.286E-02	5.386E-02	3.642E-03	-0.081
ZN-65		1115.52	*	6.994E-02	9.501E-02	1.403E-01	9.675E-03	0.499
GE-68		1077.35	*	-8.138E-01	1.103E+00	1.705E+00	1.303E-01	-0.477
AS-73		53.44	*	-1.461E-01	6.982E-01	1.087E+00	7.552E-02	-0.134
AS-74		595.88	*	1.138E-02	7.393E-02	1.231E-01	8.646E-03	0.092
		634.78		-1.107E-01	2.730E-01	4.377E-01	3.177E-02	-0.253
SE-75		66.05		-5.488E+00	4.840E+00	6.492E+00	6.072E-01	-0.845
		96.73		-4.679E-01	7.751E-01	1.118E+00	1.473E-01	-0.419
		121.11		-6.498E-02	1.227E-01	2.003E-01	1.895E-02	-0.324
		136.00		-8.922E-03	3.560E-02	5.833E-02	3.400E-03	-0.153
		198.60		-8.102E-01	1.740E+00	2.685E+00	1.801E-01	-0.302
		264.65	*	-2.216E-02	4.357E-02	6.170E-02	3.470E-03	-0.359
	+	279.53		1.451E-01	1.509E-01	1.674E-01	1.020E-02	0.867
		303.91		4.659E-01	2.008E+00	2.933E+00	2.773E-01	0.159
		400.65		-1.178E-01	2.189E-01	3.462E-01	3.138E-02	-0.340
BR-77	+	87.88		4.992E+02	1.079E+02	1.690E+02	1.509E+01	2.953
		200.40		-4.067E+01	7.951E+01	1.259E+02	6.657E+00	-0.323
	+	239.00		1.618E+02	1.240E+01	1.834E+01	1.003E+00	8.824
		249.79		-3.875E+01	3.058E+01	4.738E+01	2.611E+00	-0.818
		281.68		1.810E+01	4.667E+01	6.914E+01	3.879E+00	0.262
		297.23		2.730E+02	4.514E+01	6.332E+01	3.575E+00	4.311
		303.76		3.523E+01	9.087E+01	1.339E+02	7.579E+00	0.263
		439.47		-1.280E+01	6.420E+01	1.026E+02	6.163E+00	-0.125
		484.57		-1.101E+01	9.732E+01	1.624E+02	1.025E+01	-0.068
		520.65	*	-2.898E+00	4.320E+00	6.934E+00	4.539E-01	-0.418
		574.64		-1.574E+01	1.013E+02	1.539E+02	1.061E+01	-0.102
		578.91		5.004E+01	4.380E+01	6.756E+01	4.673E+00	0.741
		585.48		1.226E+03	1.471E+02	2.549E+02	1.773E+01	4.810
		755.35		-5.388E+00	7.195E+01	1.160E+02	9.901E+00	-0.046
		817.79		7.875E+00	5.545E+01	9.359E+01	8.723E+00	0.084
SR-82		698.33		-1.891E+01	2.826E+01	4.423E+01	3.471E+00	-0.428
		776.49	*	-4.189E-02	3.252E-01	5.092E-01	4.480E-02	-0.082
		1395.20		-6.396E+00	8.819E+00	1.356E+01	9.118E-01	-0.472
RB-83		520.41	*	-3.836E-02	5.367E-02	8.591E-02	5.622E-03	-0.447
		529.64		2.723E-02	8.055E-02	1.368E-01	9.035E-03	0.199
		552.65		-1.893E-01	1.682E-01	2.616E-01	1.766E-02	-0.724
RB-84		881.50	*	2.433E-02	5.520E-02	9.431E-02	9.572E-03	0.258

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
KR-85		513.99	*	3.626E+01	8.140E+00	1.407E+01	9.151E-01	2.576
SR-85		513.99	*	1.816E-01	4.077E-02	7.048E-02	4.583E-03	2.576
RB-86		1076.63	*	-4.162E-01	6.387E-01	9.941E-01	7.607E-02	-0.419
Y-88		898.02		-2.777E-03	3.643E-02	6.018E-02	6.261E-03	-0.046
		1836.01	*	3.504E-03	2.088E-02	3.554E-02	1.989E-03	0.099
ZR-88		392.90	*	-9.856E-03	2.616E-02	4.183E-02	2.377E-03	-0.236
Y-91		1204.90	*	2.089E+00	1.750E+01	2.850E+01	1.670E+00	0.073
NB-94		702.63	*	1.776E-02	2.941E-02	4.953E-02	3.913E-03	0.359
		871.10		5.423E-03	3.022E-02	4.789E-02	4.795E-03	0.113
NB-95		765.79	*	6.291E-02	3.880E-02	6.764E-02	5.861E-03	0.930
NB-95M		235.69	*	2.895E-01	1.363E-01	2.062E-01	1.498E-02	1.404
ZR-95		724.18		7.645E-02	9.735E-02	1.435E-01	1.283E-02	0.533
		756.15	*	3.878E-04	5.624E-02	9.116E-02	8.594E-03	0.004
NB-97		657.90	*	-3.381E-03	5.624E-02	Half-Life too short		
		1024.50		-5.079E-01	5.624E-02	Half-Life too short		
ZR-97		254.15		4.912E-01	5.624E-02	Half-Life too short		
		355.39		1.349E+00	5.624E-02	Half-Life too short		
		507.63	*	4.486E-01	5.624E-02	Half-Life too short		
		602.52		4.967E-01	5.624E-02	Half-Life too short		
		1021.30		-1.619E-01	5.624E-02	Half-Life too short		
		1147.95		-4.877E-01	5.624E-02	Half-Life too short		
		1362.66		2.061E-01	5.624E-02	Half-Life too short		
		1750.46		-3.882E-02	5.624E-02	Half-Life too short		
MO-99		140.51		-1.235E+01	1.467E+01	2.258E+01	6.078E+00	-0.547
		181.06		3.409E+00	1.047E+01	1.508E+01	2.555E+00	0.226
		366.43		-2.776E+00	4.251E+01	6.754E+01	3.848E+00	-0.041
		739.58	*	3.120E+00	5.432E+00	9.118E+00	1.370E+00	0.342
		778.00		-1.192E+01	1.987E+01	2.712E+01	2.391E+00	-0.440
TC-99M		140.51	*	-6.585E+07	1.987E+01	Half-Life too short		
RH-101		127.23		2.080E-03	3.074E-02	5.108E-02	3.042E-03	0.041
		198.01	*	-1.130E-02	3.182E-02	4.927E-02	2.600E-03	-0.229
		325.23		-7.532E-03	2.221E-01	3.176E-01	1.806E-02	-0.024
RH-102		418.52		-2.315E-02	2.476E-01	3.997E-01	2.343E-02	-0.058
		475.06	*	3.945E-03	2.503E-02	4.055E-02	2.533E-03	0.097
		631.29		-4.127E-02	4.500E-02	6.963E-02	5.040E-03	-0.593
		697.49		-3.460E-02	6.640E-02	1.049E-01	8.222E-03	-0.330
		766.84		1.868E-01	1.022E-01	1.791E-01	1.555E-02	1.043
		1046.59		1.224E-02	1.034E-01	1.706E-01	1.400E-02	0.072
		1112.84		1.011E-01	2.311E-01	3.338E-01	2.317E-02	0.303
RU-103		497.08	*	-7.343E-03	3.187E-02	5.273E-02	6.816E-03	-0.139
	+	610.33		1.378E+01	2.630E+00	2.407E+00	3.841E-01	5.726
RH-106	+	511.85		4.702E-01	2.556E-01	3.701E-01	2.401E-02	1.271
		621.84	*	2.185E-02	2.692E-01	4.453E-01	5.556E-02	0.049
		1050.47		-1.463E+00	2.100E+00	3.272E+00	2.661E-01	-0.447
RU-106	+	511.85		4.702E-01	2.556E-01	3.701E-01	2.401E-02	1.271
		621.84	*	2.185E-02	2.692E-01	4.453E-01	3.198E-02	0.049
		1050.47		-1.463E+00	2.100E+00	3.272E+00	2.661E-01	-0.447
AG-108M		433.93	*	-1.302E-02	2.874E-02	4.534E-02	2.926E-03	-0.287
		614.37		1.165E-02	3.685E-02	5.349E-02	4.034E-03	0.218

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		722.95		1.043E-02	4.326E-02	6.142E-02	5.220E-03	0.170
AG-110M		657.75	*	-1.214E-02	2.890E-02	4.614E-02	3.550E-03	-0.263
		677.61		-2.171E-01	2.557E-01	3.946E-01	3.108E-02	-0.550
		706.67		-3.610E-02	1.857E-01	2.991E-01	2.454E-02	-0.121
		763.93		-1.809E-01	1.548E-01	2.321E-01	2.063E-02	-0.779
		884.67		-5.883E-03	4.131E-02	6.799E-02	7.089E-03	-0.087
		937.48		-3.859E-02	9.949E-02	1.604E-01	1.629E-02	-0.241
		1384.27		-2.057E-01	1.564E-01	2.297E-01	1.617E-02	-0.895
IN-111		171.28		-2.229E-01	5.376E-01	8.630E-01	4.439E-02	-0.258
		245.39	*	3.787E-01	5.689E-01	8.640E-01	4.746E-02	0.438
IN-113M		391.69	*	-1.025E-02	3.835E-02	6.169E-02	3.745E-03	-0.166
SN-113		391.69	*	-1.025E-02	3.835E-02	6.169E-02	3.745E-03	-0.166
IN-114M		190.27	*	4.184E-03	1.913E-01	2.710E-01	1.419E-02	0.015
CD-115		260.90		-2.140E+01	5.662E+01	9.356E+01	5.192E+00	-0.229
		492.35		4.575E+00	1.526E+01	2.595E+01	1.651E+00	0.176
		527.90	*	5.308E-01	4.123E+00	6.927E+00	4.567E-01	0.077
SN-117M		156.02		1.694E+00	1.876E+00	3.162E+00	1.681E-01	0.536
		158.56	*	-2.841E-02	4.638E-02	7.434E-02	3.916E-03	-0.382
SB-122		563.90	*	3.363E-01	9.388E-01	1.588E+00	1.083E-01	0.212
		692.80		9.219E+00	2.075E+01	3.474E+01	2.704E+00	0.265
I-123		159.00	*	-1.514E-01	2.075E+01	Half-Life too short		
		528.96		2.680E+00	2.075E+01	Half-Life too short		
TE-123M		159.00	*	-1.251E-02	2.635E-02	4.243E-02	2.268E-03	-0.295
I-124		602.71	*	2.481E-01	4.650E-01	6.853E-01	4.841E-02	0.362
		722.78		5.686E-01	3.111E+00	4.397E+00	3.579E-01	0.129
		1325.50		-1.996E-01	1.976E+01	3.273E+01	2.197E+00	-0.006
		1376.25		5.269E+01	1.962E+01	3.790E+01	2.554E+00	1.390
		1509.49		2.394E+00	8.207E+00	1.387E+01	9.107E-01	0.173
		1691.02		-7.445E-01	2.107E+00	3.248E+00	1.984E-01	-0.229
SB-124		602.71		2.036E-02	3.814E-02	5.622E-02	3.972E-03	0.362
		645.85		-7.438E-02	4.039E-01	6.554E-01	5.196E-02	-0.113
		709.31		-2.156E-01	2.371E+00	3.840E+00	3.064E-01	-0.056
		713.82		-1.141E+00	1.426E+00	2.199E+00	2.556E-01	-0.519
		722.78		6.762E-02	3.700E-01	5.229E-01	4.359E-02	0.129
		968.20		1.874E+01	4.149E+00	6.668E+00	6.308E-01	2.810
		1045.16		8.122E-01	2.141E+00	3.595E+00	2.958E-01	0.226
		1325.50		-2.535E-02	2.509E+00	4.157E+00	2.791E-01	-0.006
		1368.21		-1.453E+00	1.454E+00	2.164E+00	2.675E-01	-0.672
		1436.60		1.654E-01	3.169E+00	5.241E+00	3.501E-01	0.032
		1691.02	*	-2.088E-02	5.909E-02	9.110E-02	5.996E-03	-0.229
SB-125		427.89	*	7.021E-02	7.898E-02	1.336E-01	8.237E-03	0.526
	+	463.38		5.420E-01	3.003E-01	4.480E-01	3.173E-02	1.210
		600.56		6.604E-02	1.656E-01	2.666E-01	2.084E-02	0.248
		635.90		6.096E-02	2.213E-01	3.697E-01	2.987E-02	0.165
TE-125M		109.28	*	-8.110E+00	8.760E+00	1.387E+01	1.236E+00	-0.585
I-126		388.63		1.341E-01	1.596E-01	2.643E-01	1.501E-02	0.507
		666.33	*	-5.543E-02	1.431E-01	2.291E-01	1.712E-02	-0.242
		753.82		2.426E-01	1.081E+00	1.778E+00	1.514E-01	0.136
SB-126		223.80		-3.669E-01	3.449E+00	5.435E+00	2.936E-01	-0.068

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	+	278.60		2.911E+00	3.027E+00	3.414E+00	1.913E-01	0.853
	+	296.50		1.393E+01	2.003E+00	2.919E+00	1.648E-01	4.773
		414.70		-6.070E-02	6.167E-02	9.516E-02	5.553E-03	-0.638
		415.30		-1.298E+00	4.908E+00	7.860E+00	4.590E-01	-0.165
		555.20		3.162E+00	3.072E+00	5.269E+00	3.566E-01	0.600
		573.80		2.892E-01	8.080E-01	1.305E+00	8.985E-02	0.222
		593.00		-8.507E-02	7.997E-01	1.174E+00	8.224E-02	-0.072
		656.30		-6.887E-01	2.374E+00	3.820E+00	2.822E-01	-0.180
		666.33		-2.304E-02	5.949E-02	9.526E-02	7.119E-03	-0.242
		675.00		-1.490E-01	1.463E+00	2.377E+00	1.801E-01	-0.063
		695.00		1.843E-02	5.848E-02	9.715E-02	7.586E-03	0.190
		697.00		-1.096E-01	2.102E-01	3.323E-01	2.602E-02	-0.330
		720.50	*	6.641E-02	1.256E-01	1.898E-01	1.540E-02	0.350
		856.80		1.381E-01	4.124E-01	6.055E-01	5.949E-02	0.228
		989.30		-2.979E-01	9.687E-01	1.560E+00	1.427E-01	-0.191
		1034.80		-1.389E+00	7.191E+00	1.164E+01	9.785E-01	-0.119
		1213.00		2.860E-01	3.926E+00	6.374E+00	3.770E-01	0.045
SB-127		61.10		-2.193E+00	3.632E+01	5.159E+01	4.798E+00	-0.043
		252.40		1.339E+00	2.574E+00	4.306E+00	1.780E+00	0.311
		290.80		-1.314E+01	1.397E+01	1.901E+01	1.571E+00	-0.691
		411.60		9.906E+00	7.455E+00	1.264E+01	1.757E+00	0.784
		444.90		-9.732E-01	5.398E+00	8.623E+00	8.859E-01	-0.113
		473.00		-1.039E+00	1.010E+00	1.519E+00	1.639E-01	-0.684
		543.00		-4.216E+00	9.403E+00	1.525E+01	1.952E+00	-0.277
		603.60		3.260E-01	8.016E+00	1.140E+01	1.241E+00	0.029
		685.20	*	2.376E-01	7.711E-01	1.283E+00	1.287E-01	0.185
		698.50		-5.572E+00	9.061E+00	1.420E+01	2.124E+00	-0.393
		722.20		1.082E+01	2.025E+01	2.943E+01	2.982E+00	0.368
		783.80		2.174E+00	2.476E+00	3.666E+00	4.418E-01	0.593
XE-127		57.60		6.843E-01	4.873E+00	7.859E+00	5.494E-01	0.087
		145.22		6.944E-01	6.494E-01	1.088E+00	6.025E-02	0.638
		172.10		2.114E-02	1.048E-01	1.719E-01	8.849E-03	0.123
		202.84	*	3.601E-03	4.538E-02	6.779E-02	3.593E-03	0.053
		374.96		1.024E-01	1.659E-01	2.790E-01	1.588E-02	0.367
I-131		80.18		-1.860E+00	3.668E+00	5.397E+00	4.450E-01	-0.345
		284.30		-3.660E-01	1.256E+00	1.789E+00	1.121E-01	-0.205
		364.48	*	6.425E-02	8.219E-02	1.358E-01	8.642E-03	0.473
		636.97		6.166E-01	1.042E+00	1.771E+00	1.385E-01	0.348
		722.89		1.345E+00	6.005E+00	8.514E+00	6.968E-01	0.158
TE-132		49.72		-6.516E+00	9.592E+00	1.509E+01	1.335E+00	-0.432
		111.76		-3.870E+00	1.739E+01	2.864E+01	2.507E+00	-0.135
		116.30		1.348E+01	1.602E+01	2.732E+01	2.333E+00	0.494
		228.16	*	-1.990E-01	4.126E-01	6.463E-01	8.913E-02	-0.308
BA-133		53.15		7.166E-01	3.029E+00	4.789E+00	3.325E-01	0.150
		79.62		2.332E+00	1.356E+00	1.971E+00	2.950E-01	1.183
		81.00		-1.722E-01	1.016E-01	1.376E-01	2.159E-02	-1.252
		276.40		4.633E-01	4.695E-01	5.768E-01	7.426E-02	0.803
		302.84		2.787E-01	1.444E-01	2.255E-01	2.613E-02	1.236
		356.01	*	4.281E-02	4.104E-02	6.201E-02	7.137E-03	0.690

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		383.85		3.294E-02	2.644E-01	4.341E-01	4.692E-02	0.076
I-133	+	510.53		1.612E-01	2.644E-01	Half-Life too short		
		529.87	*	1.762E-04	2.644E-01	Half-Life too short		
		706.58		2.193E-04	2.644E-01	Half-Life too short		
		856.28		9.665E-03	2.644E-01	Half-Life too short		
		875.33		8.504E-03	2.644E-01	Half-Life too short		
		1236.41		1.900E-01	2.644E-01	Half-Life too short		
		1298.22		5.894E-03	2.644E-01	Half-Life too short		
CS-134		475.35		2.606E-01	1.630E+00	2.642E+00	1.650E-01	0.099
		563.23		1.463E-01	2.930E-01	4.990E-01	3.454E-02	0.293
		569.32		-3.799E-02	1.655E-01	2.666E-01	1.867E-02	-0.143
		604.70		1.835E-02	3.425E-02	5.043E-02	3.582E-03	0.364
	+	795.84	*	1.310E-01	6.769E-02	7.493E-02	6.819E-03	1.749
		801.93		-1.903E-02	4.141E-01	5.660E-01	5.187E-02	-0.034
		1038.57		4.510E-01	3.469E+00	5.734E+00	4.784E-01	0.079
		1167.94		1.371E+00	2.389E+00	4.009E+00	2.307E-01	0.342
		1365.15		-3.705E-01	1.016E+00	1.624E+00	1.176E-01	-0.228
CS-135		268.24	*	2.587E-01	1.635E-01	2.550E-01	1.909E-02	1.014
I-135		288.45		-1.817E+07	1.635E-01	Half-Life too short		
		417.63		-2.289E+07	1.635E-01	Half-Life too short		
		546.56		1.945E+07	1.635E-01	Half-Life too short		
		836.80		4.160E+07	1.635E-01	Half-Life too short		
		1038.76		8.282E+06	1.635E-01	Half-Life too short		
		1124.00		7.610E+08	1.635E-01	Half-Life too short		
		1131.51		3.499E+06	1.635E-01	Half-Life too short		
		1260.41	*	-1.478E+06	1.635E-01	Half-Life too short		
		1457.56		3.228E+09	1.635E-01	Half-Life too short		
		1678.03		1.412E+06	1.635E-01	Half-Life too short		
		1706.46		3.266E+07	1.635E-01	Half-Life too short		
		1791.20		-4.677E+07	1.635E-01	Half-Life too short		
CS-136		66.91		-5.058E-01	7.138E-01	9.755E-01	1.438E-01	-0.519
	+	86.29		5.054E+00	1.194E+00	1.702E+00	2.204E-01	2.969
		153.22		4.661E-01	5.532E-01	9.305E-01	6.405E-02	0.501
		163.89		4.202E-01	8.985E-01	1.477E+00	9.969E-02	0.284
		176.55		-2.255E-01	3.026E-01	4.787E-01	2.853E-02	-0.471
		273.65		1.774E-01	5.520E-01	5.584E-01	3.589E-02	0.318
		340.57		6.624E-01	1.332E-01	2.246E-01	1.363E-02	2.950
		818.51		2.323E-03	5.331E-02	8.940E-02	8.345E-03	0.026
		1048.07	*	5.097E-02	8.559E-02	1.455E-01	1.245E-02	0.350
		1235.34		4.395E-01	5.014E-01	8.687E-01	8.814E-02	0.506
BA-137M		661.65	*	2.570E-02	3.117E-02	5.330E-02	3.955E-03	0.482
CS-137		661.65	*	2.717E-02	3.295E-02	5.634E-02	4.191E-03	0.482
CE-139		165.85	*	-3.107E-02	2.749E-02	4.306E-02	2.206E-03	-0.722
BA-140		162.64		9.799E-01	6.287E-01	1.067E+00	6.383E-02	0.919
		304.84		6.959E-01	1.084E+00	1.599E+00	4.358E-01	0.435
		423.70		-7.484E-01	1.477E+00	2.299E+00	7.311E-01	-0.326
		537.32	*	-4.368E-02	1.875E-01	3.073E-01	1.004E-01	-0.142
LA-140	+	328.77		6.051E-01	3.521E-01	4.269E-01	2.732E-02	1.417
		432.53		-6.905E-01	1.607E+00	2.539E+00	1.663E-01	-0.272

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		487.03		-5.448E-03	1.010E-01	1.689E-01	1.188E-02	-0.032
		751.79		7.533E-01	1.247E+00	2.099E+00	1.978E-01	0.359
		815.85		-3.186E-02	2.377E-01	3.942E-01	4.030E-02	-0.081
		867.82		-2.543E-01	1.197E+00	1.669E+00	1.730E-01	-0.152
		919.63		-1.011E+00	2.529E+00	3.435E+00	4.083E-01	-0.294
		925.24		-8.830E-03	8.641E-01	1.430E+00	1.502E-01	-0.006
		1596.49	*	-8.808E-02	7.053E-02	9.988E-02	6.373E-03	-0.882
CE-141		145.44	*	7.288E-02	5.694E-02	9.717E-02	5.613E-03	0.750
CE-143		57.37		1.532E-04	5.694E-02	Half-Life too short		
		231.56		-8.337E-05	5.694E-02	Half-Life too short		
		293.26	*	2.983E-04	5.694E-02	Half-Life too short		
		350.59		1.046E-02	5.694E-02	Half-Life too short		
		490.36		-1.626E-04	5.694E-02	Half-Life too short		
		664.57		4.555E-04	5.694E-02	Half-Life too short		
		721.93		3.652E-04	5.694E-02	Half-Life too short		
CE-144		80.11		-9.169E-01	2.038E+00	3.007E+00	2.465E-01	-0.305
		133.54	*	-1.586E-01	1.933E-01	3.091E-01	4.389E-02	-0.513
PM-144		476.78		-9.520E-05	5.867E-02	9.419E-02	6.902E-03	-0.001
		618.01		9.560E-04	3.008E-02	4.444E-02	3.307E-03	0.022
		696.49	*	-3.823E-03	3.004E-02	4.865E-02	3.808E-03	-0.079
		778.57		-9.476E-01	2.402E+00	3.192E+00	2.817E-01	-0.297
PR-144		696.49	*	-2.587E-01	2.033E+00	3.293E+00	2.577E-01	-0.079
		1489.15		4.511E+00	9.710E+00	1.669E+01	1.102E+00	0.270
PM-146		453.90	*	2.804E-02	3.704E-02	6.203E-02	5.477E-03	0.452
		633.02		-1.397E+00	1.265E+00	1.755E+00	6.506E-01	-0.796
		735.90		2.956E-02	1.422E-01	2.013E-01	5.738E-02	0.147
		747.13		-1.757E-02	7.482E-02	1.193E-01	1.662E-02	-0.147
ND-147	+	91.11		7.947E-01	2.523E-01	4.287E-01	3.962E-02	1.854
		319.41		1.916E-01	2.431E+00	4.036E+00	2.294E-01	0.047
		439.89		-1.103E+00	4.344E+00	6.921E+00	4.160E-01	-0.159
		531.02	*	1.864E-01	3.799E-01	6.492E-01	9.017E-02	0.287
PM-149		285.90	*	4.471E+01	4.111E+01	6.724E+01	9.478E+00	0.665
EU-152		121.78		-5.664E-03	6.729E-02	1.115E-01	8.763E-03	-0.051
		244.69		7.010E-01	3.223E-01	5.202E-01	2.856E-02	1.348
		344.27	*	-1.343E-02	1.106E-01	1.362E-01	8.785E-03	-0.099
		443.98		-8.577E-01	8.162E-01	1.237E+00	7.466E-02	-0.694
		778.89		-1.974E-01	2.834E-01	3.651E-01	3.223E-02	-0.541
		867.32		-1.248E-01	8.135E-01	1.141E+00	1.137E-01	-0.109
		964.01		7.924E-01	3.314E-01	5.357E-01	5.100E-02	1.479
		1085.78		2.195E-02	3.701E-01	6.065E-01	4.535E-02	0.036
		1112.02		1.482E-01	3.254E-01	4.710E-01	3.277E-02	0.315
		1407.95		-3.282E-03	1.604E-01	2.641E-01	1.773E-02	-0.012
GD-153		69.67		1.465E+00	1.667E+00	2.434E+00	1.816E-01	0.602
		83.37		4.688E+00	1.488E+01	2.244E+01	1.904E+00	0.209
		97.43	*	-1.520E-02	7.826E-02	1.151E-01	9.005E-03	-0.132
		103.18		-1.253E-01	9.847E-02	1.581E-01	1.157E-02	-0.792
EU-154		123.07		3.565E-02	4.781E-02	8.111E-02	7.768E-03	0.440
		247.94		-1.236E-01	3.507E-01	5.038E-01	4.717E-02	-0.245
		591.81		-1.755E-01	6.217E-01	8.628E-01	9.084E-02	-0.203

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		723.30		7.612E-02	1.794E-01	2.584E-01	2.352E-02	0.295
		756.87		-2.612E-01	6.470E-01	1.018E+00	1.215E-01	-0.257
		873.19		-1.876E-01	2.504E-01	3.935E-01	5.226E-02	-0.477
		996.32		-8.525E-02	3.425E-01	5.540E-01	9.956E-02	-0.154
		1004.76		7.405E-02	1.934E-01	3.253E-01	3.856E-02	0.228
		1274.45	*	-1.680E-03	1.134E-01	1.884E-01	1.827E-02	-0.009
EU-155		48.70		-2.111E+00	1.945E+00	3.015E+00	2.034E-01	-0.700
		60.01		1.373E+00	4.599E+00	6.614E+00	4.649E-01	0.208
	+	86.54		5.242E-01	1.135E-01	1.753E-01	1.556E-02	2.990
		105.31	*	1.161E-01	9.981E-02	1.723E-01	1.254E-02	0.674
TB-160	+	86.79		1.372E+00	2.965E-01	4.560E-01	4.020E-02	3.008
		197.04		-4.655E-01	5.419E-01	8.241E-01	4.344E-02	-0.565
		215.65		-8.367E-02	7.324E-01	1.079E+00	5.790E-02	-0.078
		298.57		3.678E-01	1.547E-01	1.859E-01	1.050E-02	1.979
		879.36	*	-3.246E-02	1.151E-01	1.877E-01	1.900E-02	-0.173
		962.29		7.313E-01	5.567E-01	8.597E-01	8.205E-02	0.851
		966.15		1.264E+00	2.812E-01	4.634E-01	4.397E-02	2.728
		1177.93		3.027E-02	3.462E-01	5.640E-01	3.197E-02	0.054
		1271.85		-7.980E-02	6.264E-01	1.034E+00	6.546E-02	-0.077
HO-166M		80.57		-4.101E-01	2.709E-01	3.811E-01	3.139E-02	-1.076
		184.41		1.509E-01	3.972E-02	6.379E-02	3.322E-03	2.366
		280.46		1.036E-02	8.523E-02	1.245E-01	6.981E-03	0.083
		410.95		2.390E-01	2.209E-01	3.759E-01	2.184E-02	0.636
		711.68	*	-1.671E-03	5.213E-02	8.472E-02	6.783E-03	-0.020
		752.31		1.075E-01	2.252E-01	3.763E-01	3.198E-02	0.286
		810.29		-2.945E-02	4.940E-02	7.950E-02	7.334E-03	-0.370
TM-171		51.35		-3.607E+00	2.466E+01	3.958E+01	2.730E+00	-0.091
		52.39		8.911E+00	1.318E+01	2.114E+01	1.464E+00	0.421
		59.40		1.972E+01	2.457E+01	3.610E+01	2.531E+00	0.546
		66.72	*	-1.800E+01	2.863E+01	3.944E+01	2.880E+00	-0.456
LU-176	+	88.36		1.033E+00	2.233E-01	3.564E-01	3.168E-02	2.899
		201.83		-7.737E-05	2.670E-02	4.306E-02	2.280E-03	-0.002
		306.84	*	4.291E-03	2.218E-02	3.506E-02	1.986E-03	0.122
		401.10		-2.007E+00	5.860E+00	9.233E+00	5.300E-01	-0.217
LU-177		112.95		-6.178E-01	1.210E+00	1.973E+00	1.308E-01	-0.313
	+	208.36	*	3.435E+00	1.243E+00	1.495E+00	7.967E-02	2.298
LU-177M		52.97		2.978E-01	1.356E+00	2.144E+00	1.488E-01	0.139
		54.07		-1.927E-01	7.241E-01	1.124E+00	7.820E-02	-0.171
		61.30		2.159E-01	1.404E+00	2.012E+00	1.424E-01	0.107
		121.62		-5.224E-02	3.418E-01	5.654E-01	3.463E-02	-0.092
		147.16		-7.774E-01	6.224E-01	9.803E-01	5.391E-02	-0.793
		171.86		-1.382E-01	4.416E-01	7.115E-01	3.662E-02	-0.194
		218.09		6.630E-01	7.823E-01	1.294E+00	6.956E-02	0.512
	+	268.79		2.536E+00	1.170E+00	1.349E+00	7.520E-02	1.880
		319.02		-5.444E-02	2.138E-01	3.496E-01	1.986E-02	-0.156
		367.43		-7.860E-02	7.767E-01	1.266E+00	7.211E-02	-0.062
		413.65	*	-1.096E-01	1.590E-01	2.493E-01	1.453E-02	-0.440
HF-181		56.28		-5.306E-01	7.664E-01	1.200E+00	8.376E-02	-0.442
		57.53		6.407E-02	4.126E-01	6.658E-01	4.654E-02	0.096

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		65.20		-2.592E-01	9.167E-01	1.284E+00	9.288E-02	-0.202
		133.02		-7.204E-02	6.081E-02	9.660E-02	5.613E-03	-0.746
		136.25		1.252E-03	4.037E-01	6.670E-01	3.825E-02	0.002
		345.85		2.496E-01	2.162E-01	2.703E-01	1.540E-02	0.924
		482.03	*	-2.108E-02	3.469E-02	5.646E-02	3.552E-03	-0.373
W-181		56.28		-2.129E-01	3.072E-01	4.811E-01	3.357E-02	-0.442
		57.53		2.578E-02	1.655E-01	2.671E-01	1.867E-02	0.096
		65.20	*	-1.031E-01	3.648E-01	5.110E-01	3.696E-02	-0.202
TA-182		67.75		1.940E-02	1.119E-01	1.594E-01	1.172E-02	0.122
		100.10		5.221E-02	1.596E-01	2.705E-01	2.049E-02	0.193
		152.43		2.908E-01	3.107E-01	5.247E-01	2.828E-02	0.554
		222.10		-1.829E-01	3.226E-01	5.055E-01	2.727E-02	-0.362
		1001.68		1.322E+00	1.918E+00	3.232E+00	2.894E-01	0.409
	+	1121.28		7.709E-01	2.541E-01	3.109E-01	2.104E-02	2.480
		1189.05		-2.611E-01	2.874E-01	4.376E-01	2.515E-02	-0.597
		1221.42	*	-6.329E-02	1.782E-01	2.917E-01	1.743E-02	-0.217
		1230.97		-7.268E-01	4.472E-01	6.770E-01	4.091E-02	-1.074
RE-183		57.98		-1.327E-02	1.716E-01	2.612E-01	1.827E-02	-0.051
		59.32		7.426E-02	9.888E-02	1.450E-01	1.017E-02	0.512
		67.20		-1.040E-01	2.012E-01	2.785E-01	2.041E-02	-0.373
		162.32	*	1.497E-01	1.010E-01	1.713E-01	8.891E-03	0.874
	+	208.81		3.805E+00	1.377E+00	1.659E+00	8.845E-02	2.293
		291.72		-6.990E-01	9.020E-01	1.244E+00	7.011E-02	-0.562
RE-184		57.98		-4.953E-02	6.406E-01	9.750E-01	6.820E-02	-0.051
		59.32		2.770E-01	3.688E-01	5.409E-01	3.792E-02	0.512
		67.20		-3.881E-01	7.508E-01	1.039E+00	7.616E-02	-0.373
		161.27		2.166E-02	3.304E-01	5.416E-01	2.823E-02	0.040
		216.55		1.489E-01	2.435E-01	3.998E-01	2.146E-02	0.372
		252.85	*	1.341E-01	2.000E-01	3.441E-01	1.900E-02	0.390
		318.01		-1.823E-01	3.733E-01	6.039E-01	3.430E-02	-0.302
		792.07		1.934E+00	1.255E+00	1.426E+00	1.283E-01	1.356
		903.28		4.342E-01	9.463E-01	1.485E+00	1.531E-01	0.292
		920.93		-2.265E-02	4.482E-01	6.312E-01	6.371E-02	-0.036
OS-185		59.72		5.183E-02	2.736E-01	3.917E-01	2.750E-02	0.132
		61.14		-5.415E-05	1.521E-01	2.167E-01	1.532E-02	0.000
		69.30		2.119E-01	2.983E-01	4.332E-01	3.222E-02	0.489
		592.07		-8.183E-01	2.504E+00	3.464E+00	2.424E-01	-0.236
		646.12	*	2.018E-03	3.455E-02	5.691E-02	4.170E-03	0.035
		717.42		1.381E-01	7.821E-01	1.286E+00	1.038E-01	0.107
		874.81		1.393E-01	4.805E-01	8.138E-01	8.188E-02	0.171
		880.27		4.586E-01	6.340E-01	1.100E+00	1.115E-01	0.417
RE-188		155.03	*	6.004E-02	1.605E-01	2.663E-01	1.422E-02	0.225
		477.96		3.027E-01	2.604E+00	4.208E+00	2.636E-01	0.072
		633.10		-1.753E+00	2.223E+00	3.469E+00	2.515E-01	-0.505
W-188	+	63.58		6.823E+01	6.223E+01	7.726E+01	5.534E+00	0.883
		227.08		5.174E+00	1.186E+01	1.929E+01	1.045E+00	0.268
		290.67	*	-6.261E+00	7.073E+00	9.681E+00	5.453E-01	-0.647
IR-192	+	295.96		1.184E+00	1.707E-01	2.504E-01	1.437E-02	4.728
		308.46		-5.994E-02	8.066E-02	1.293E-01	7.416E-03	-0.463

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		316.51	*	-2.705E-02	2.823E-02	4.461E-02	2.546E-03	-0.606
		468.07		2.894E-02	6.501E-02	9.312E-02	6.551E-03	0.311
		604.41		-3.736E-02	4.657E-01	6.564E-01	7.911E-02	-0.057
		612.46		7.168E+00	1.105E+00	1.787E+00	1.542E-01	4.011
AU-195		65.12		-3.135E-02	1.701E-01	2.393E-01	1.730E-02	-0.131
		66.83		-5.197E-02	9.423E-02	1.302E-01	9.519E-03	-0.399
	+	75.70		1.574E+00	2.649E-01	4.403E-01	3.456E-02	3.575
		98.88	*	3.110E-01	2.243E-01	3.495E-01	2.687E-02	0.890
		129.76		5.993E+00	2.732E+00	4.777E+00	2.814E-01	1.255
TL-200		367.94	*	1.434E-05	2.732E+00	Half-Life too short		
		579.30		1.308E-03	2.732E+00	Half-Life too short		
		828.27		-2.810E-04	2.732E+00	Half-Life too short		
		1205.75		-2.921E-05	2.732E+00	Half-Life too short		
TL-201		68.90		2.798E+00	2.917E+00	4.274E+00	3.170E-01	0.655
		70.82		1.081E-01	1.682E+00	2.381E+00	1.792E-01	0.045
		80.30		-1.761E+00	2.908E+00	4.261E+00	3.500E-01	-0.413
		135.34		9.516E-01	1.405E+01	2.327E+01	1.340E+00	0.041
		167.43	*	-1.849E+00	3.861E+00	6.193E+00	3.175E-01	-0.299
TL-202		68.90		3.686E-01	3.844E-01	5.632E-01	4.176E-02	0.655
		70.82		1.421E-02	2.210E-01	3.129E-01	2.354E-02	0.045
		80.30		-2.315E-01	3.822E-01	5.601E-01	4.601E-02	-0.413
		439.56	*	-1.094E-02	5.250E-02	8.386E-02	5.037E-03	-0.131
BI-207		72.80		4.931E-01	1.725E-01	2.886E-01	2.207E-02	1.709
	+	74.97		8.804E-01	1.482E-01	2.185E-01	1.704E-02	4.029
		84.90		2.194E-01	1.935E-01	2.981E-01	2.573E-02	0.736
		569.67		8.154E-03	2.566E-02	4.258E-02	2.921E-03	0.191
		1063.62	*	5.865E-03	4.636E-02	7.648E-02	6.038E-03	0.077
		1770.23		1.413E+00	5.629E-01	1.035E+00	6.042E-02	1.365
TL-207		81.07		-3.765E-01	2.185E-01	3.041E-01	2.518E-02	-1.238
		83.78		2.834E-02	1.268E-01	1.907E-01	1.625E-02	0.149
		94.90		7.520E-01	2.408E-01	3.866E-01	3.125E-02	1.945
		122.32		-1.893E-01	1.625E+00	2.690E+00	1.872E-01	-0.070
		144.24		6.350E-01	6.626E-01	1.106E+00	7.788E-02	0.574
		154.21		-3.712E-02	3.772E-01	6.167E-01	4.101E-02	-0.060
	+	269.46		5.995E-01	2.769E-01	3.228E-01	1.888E-02	1.857
		323.87	*	1.025E-01	6.492E-01	9.392E-01	1.547E-01	0.109
	+	338.28		8.953E+00	1.941E+00	2.265E+00	2.373E-01	3.953
		445.03		3.087E-01	1.850E+00	3.014E+00	3.137E-01	0.102
PO-209		260.50		1.157E-01	8.322E+00	1.396E+01	7.748E-01	0.008
		262.80		-3.150E+01	2.725E+01	3.712E+01	2.062E+00	-0.849
		896.60	*	-5.583E-01	6.539E+00	1.080E+01	1.117E+00	-0.052
BI-210		46.50	*	1.110E+00	2.717E+00	4.433E+00	3.351E-01	0.250
PB-210		46.50	*	1.110E+00	2.717E+00	4.433E+00	3.351E-01	0.250
PO-210		46.50	*	1.110E+00	2.716E+00	4.433E+00	2.857E-01	0.250
PB-211		404.84	*	-7.531E-01	9.563E-01	1.295E+00	8.073E-01	-0.581
		427.08		1.563E+00	2.000E+00	2.967E+00	1.834E+00	0.527
		831.96		-7.882E-01	1.132E+00	1.620E+00	1.017E+00	-0.487
PO-215		81.07		-3.765E-01	2.185E-01	3.041E-01	2.518E-02	-1.238
		83.78		2.834E-02	1.268E-01	1.907E-01	1.625E-02	0.149

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		7.520E-01	2.408E-01	3.866E-01	3.125E-02	1.945
		122.32		-1.893E-01	1.625E+00	2.690E+00	1.872E-01	-0.070
		144.24		6.350E-01	6.626E-01	1.106E+00	7.788E-02	0.574
		154.21		-3.712E-02	3.772E-01	6.167E-01	4.101E-02	-0.060
	+	269.46		5.995E-01	2.769E-01	3.228E-01	1.888E-02	1.857
		323.87	*	1.025E-01	6.492E-01	9.392E-01	1.547E-01	0.109
	+	338.28		8.953E+00	1.941E+00	2.265E+00	2.373E-01	3.953
		445.03		3.087E-01	1.850E+00	3.014E+00	3.137E-01	0.102
RN-219	+	271.23		7.692E-01	3.577E-01	4.019E-01	3.195E-02	1.914
		401.81	*	-2.377E-02	3.582E-01	5.723E-01	7.773E-02	-0.042
RN-220		549.76	*	-1.385E+01	2.173E+01	3.482E+01	2.344E+00	-0.398
RA-223		81.07		-3.765E-01	2.185E-01	3.041E-01	2.518E-02	-1.238
		83.78		2.834E-02	1.268E-01	1.907E-01	1.625E-02	0.149
		94.90		7.520E-01	2.408E-01	3.866E-01	3.125E-02	1.945
		122.32		-1.893E-01	1.625E+00	2.690E+00	1.872E-01	-0.070
		144.24		6.350E-01	6.626E-01	1.106E+00	7.788E-02	0.574
		154.21		-3.712E-02	3.772E-01	6.167E-01	4.101E-02	-0.060
	+	269.46		5.995E-01	2.769E-01	3.228E-01	1.888E-02	1.857
		323.87	*	1.025E-01	6.492E-01	9.392E-01	1.547E-01	0.109
	+	338.28		8.953E+00	1.941E+00	2.265E+00	2.373E-01	3.953
		445.03		3.087E-01	1.850E+00	3.014E+00	3.137E-01	0.102
AC-227		79.80		9.780E-01	1.570E+00	2.387E+00	5.091E-01	0.410
		236.00		1.330E+00	3.090E-01	4.619E-01	4.741E-02	2.880
		256.20	*	5.529E-02	3.373E-01	5.694E-01	7.887E-02	0.097
		286.10		1.029E+00	1.364E+00	2.278E+00	2.613E-01	0.452
	+	299.80		3.258E+00	1.630E+00	2.296E+00	3.727E-01	1.419
		304.40		3.322E-01	1.805E+00	2.628E+00	4.534E-01	0.126
		334.20		5.155E-01	3.494E+00	3.391E+00	6.206E-01	0.152
TH-227		79.80		9.780E-01	1.570E+00	2.387E+00	5.158E-01	0.410
	+	94.00		8.143E+00	3.042E+00	3.646E+00	7.879E-01	2.233
		236.00		1.330E+00	3.011E-01	4.619E-01	4.083E-02	2.880
		256.20	*	5.529E-02	3.373E-01	5.694E-01	9.572E-02	0.097
		286.10		1.029E+00	1.706E+00	2.278E+00	2.281E+00	0.452
	+	299.80		3.258E+00	1.630E+00	2.296E+00	3.727E-01	1.419
		304.40		3.322E-01	1.805E+00	2.628E+00	4.534E-01	0.126
		334.20		5.155E-01	3.494E+00	3.391E+00	6.206E-01	0.152
TH-229		85.43		3.950E-01	1.969E-01	3.082E-01	2.675E-02	1.282
	+	88.47		5.947E-01	1.286E-01	2.047E-01	1.816E-02	2.906
		100.00		5.893E-02	1.680E-01	2.850E-01	2.162E-02	0.207
		193.63	*	-1.069E-01	4.823E-01	7.738E-01	4.066E-02	-0.138
		210.97		2.012E+00	7.968E-01	1.245E+00	6.651E-02	1.616
PA-231		283.67	*	-1.075E+00	1.592E+00	2.210E+00	3.028E-01	-0.486
	+	301.29		1.303E+00	6.315E-01	9.302E-01	9.648E-02	1.401
TH-231		81.07		-3.765E-01	2.185E-01	3.041E-01	2.518E-02	-1.238
		83.78		2.834E-02	1.268E-01	1.907E-01	1.625E-02	0.149
		94.90		7.520E-01	2.408E-01	3.866E-01	3.125E-02	1.945
		122.32		-1.893E-01	1.625E+00	2.690E+00	1.872E-01	-0.070
		144.24		6.350E-01	6.626E-01	1.106E+00	7.788E-02	0.574
		154.21		-3.712E-02	3.772E-01	6.167E-01	4.101E-02	-0.060

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.995E-01	2.769E-01	3.228E-01	1.888E-02	1.857
		323.87	*	1.025E-01	6.492E-01	9.392E-01	1.547E-01	0.109
	+	338.28		8.953E+00	1.941E+00	2.265E+00	2.373E-01	3.953
		445.03		3.087E-01	1.850E+00	3.014E+00	3.137E-01	0.102
U-231		84.21		1.337E+00	3.793E+00	5.725E+00	4.903E-01	0.234
	+	92.29		5.562E+00	1.755E+00	2.612E+00	2.188E-01	2.130
		95.87	*	2.636E-01	7.412E-01	1.116E+00	8.902E-02	0.236
		108.00		-8.303E-01	1.316E+00	2.157E+00	1.500E-01	-0.385
PA-233	+	75.28		2.569E+01	5.417E+00	6.689E+00	9.975E-01	3.841
	+	86.59		8.528E+00	2.844E+00	2.849E+00	7.657E-01	2.993
	+	300.12		9.084E-01	4.468E-01	6.393E-01	8.550E-02	1.421
		311.98	*	1.812E-03	5.348E-02	8.874E-02	5.359E-03	0.020
		340.50		3.766E+00	1.110E+00	1.240E+00	2.844E-01	3.037
		398.62		-3.533E-01	1.797E+00	2.894E+00	7.477E-01	-0.122
		415.76		-3.066E-01	1.467E+00	2.353E+00	4.848E-01	-0.130
PA-234	+	63.00		2.023E+00	1.864E+00	2.331E+00	3.434E-01	0.868
		94.67		7.403E-01	1.917E-01	2.906E-01	3.502E-02	2.548
		98.44		9.368E-02	1.055E-01	1.416E-01	7.883E-02	0.661
		99.86		2.254E-01	4.384E-01	7.237E-01	5.499E-02	0.311
		111.00		-2.921E-02	1.754E-01	2.850E-01	3.088E-02	-0.102
		131.20		3.627E-02	1.023E-01	1.711E-01	1.002E-02	0.212
		152.70		2.770E-01	3.080E-01	5.149E-01	8.064E-02	0.538
	+	186.00		3.977E+00	2.137E+00	2.376E+00	7.234E-01	1.674
		226.40		3.215E-01	3.783E-01	6.222E-01	7.075E-02	0.517
		227.20		1.704E-01	4.093E-01	6.652E-01	3.603E-02	0.256
		248.90		-3.568E-01	7.431E-01	1.150E+00	2.462E-01	-0.310
		293.70		6.664E+00	1.331E+00	1.523E+00	2.441E-01	4.374
		369.80		-3.163E-01	7.483E-01	1.195E+00	2.486E-01	-0.265
		568.70		-5.951E-01	8.576E-01	1.345E+00	9.218E-02	-0.442
		569.50		5.512E-02	2.268E-01	3.748E-01	2.570E-02	0.147
		574.00		4.101E-01	1.325E+00	2.134E+00	1.470E-01	0.192
		699.00		-3.683E-01	6.386E-01	1.001E+00	1.876E-01	-0.368
		706.10		2.077E-01	9.201E-01	1.511E+00	6.719E-01	0.137
		733.00		-3.976E-02	3.667E-01	5.043E-01	1.112E-01	-0.079
		742.81		-2.580E-01	1.146E+00	1.810E+00	1.216E+00	-0.143
	+	796.30		2.552E+00	1.472E+00	1.468E+00	3.990E-01	1.739
		805.60		6.953E-01	9.253E-01	1.461E+00	4.500E-01	0.476
		819.60		6.099E-01	9.914E-01	1.678E+00	6.409E-01	0.363
		826.30		-7.006E-01	7.165E-01	9.952E-01	4.469E-01	-0.704
		831.60		-1.793E-01	5.170E-01	8.402E-01	2.530E-01	-0.213
		876.40		2.407E-01	7.311E-01	1.170E+00	1.204E+00	0.206
		880.51		2.025E-01	2.336E-01	4.085E-01	4.141E-02	0.496
		883.24		-3.789E-02	2.428E-01	3.971E-01	2.678E-01	-0.095
		899.00		-4.445E-02	7.526E-01	1.244E+00	5.485E-01	-0.036
		925.00		2.231E-01	1.003E+00	1.684E+00	1.691E-01	0.133
		926.50		-1.175E-02	1.501E-01	2.471E-01	6.373E-02	-0.048
		946.00	*	-1.003E-01	2.652E-01	4.262E-01	8.234E-02	-0.235
		949.00		1.335E-02	3.878E-01	6.420E-01	6.246E-02	0.021
		980.50		7.615E-01	6.467E-01	1.140E+00	1.057E-01	0.668

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-4.148E-01	1.011E+00	1.544E+00	1.002E+00	-0.269
PA-234M		766.41		3.202E+01	2.929E+01	2.857E+01	2.191E+01	1.121
		1001.03	*	3.496E+00	6.318E+00	1.057E+01	1.209E+00	0.331
U-235	+	89.95		3.645E+00	1.577E+00	1.792E+00	5.534E-01	2.033
	+	93.35		2.533E+00	1.047E+00	1.171E+00	3.270E-01	2.163
		105.00		1.378E+00	1.057E+00	1.703E+00	5.018E-01	0.809
		143.76	*	6.076E-02	2.065E-01	3.383E-01	5.489E-02	0.180
		163.35		5.245E-01	4.500E-01	7.415E-01	1.319E-01	0.707
	+	185.71		1.473E-01	6.566E-02	8.808E-02	4.593E-03	1.672
		205.31		5.091E-01	5.484E-01	7.966E-01	1.420E-01	0.639
NP-236		94.67		5.644E-01	1.367E-01	2.206E-01	1.789E-02	2.558
		98.44		7.079E-02	6.951E-02	1.071E-01	8.274E-03	0.661
		111.00		-2.209E-02	1.327E-01	2.156E-01	1.456E-02	-0.102
		160.31	*	-8.830E-02	7.610E-02	1.194E-01	6.248E-03	-0.739
NP-239		99.55		1.416E-01	1.460E-01	2.441E-01	1.862E-02	0.580
		117.00	*	1.102E-01	1.748E-01	2.968E-01	1.894E-02	0.371
	+	209.75		3.069E+00	1.111E+00	1.309E+00	6.985E-02	2.344
		228.18		-1.078E-01	2.165E-01	3.396E-01	1.841E-02	-0.317
	+	277.60		2.406E-01	2.502E-01	2.776E-01	1.555E-02	0.867
		334.30		2.971E-01	1.980E+00	1.922E+00	1.095E-01	0.155
AM-241		59.54	*	2.928E-02	1.467E-01	2.101E-01	1.632E-02	0.139
CM-243		99.55		1.457E-01	1.502E-01	2.512E-01	1.915E-02	0.580
		103.76	*	5.201E-02	8.991E-02	1.532E-01	1.114E-02	0.340
		117.00		1.134E-01	1.798E-01	3.053E-01	1.949E-02	0.371
	+	209.75		3.025E+00	1.095E+00	1.290E+00	6.885E-02	2.344
		228.18		-1.089E-01	2.187E-01	3.431E-01	1.860E-02	-0.317
	+	277.60		2.425E-01	2.522E-01	2.799E-01	1.567E-02	0.867
CM-247	+	278.00		9.978E-01	1.037E+00	1.163E+00	6.513E-02	0.858
		287.40		3.529E-01	1.104E+00	1.815E+00	1.021E-01	0.194
		402.60	*	1.702E-02	3.175E-02	5.223E-02	3.003E-03	0.326
CF-249		252.85		5.077E-01	7.574E-01	1.303E+00	7.195E-02	0.390
		333.44		2.295E-02	2.583E-01	2.491E-01	1.419E-02	0.092
		387.95	*	1.477E-02	3.568E-02	5.800E-02	3.294E-03	0.255
CF-251		176.60	*	-8.924E-02	1.173E-01	1.855E-01	9.587E-03	-0.481
		227.00		1.639E-01	3.641E-01	5.924E-01	3.209E-02	0.277
		285.00		1.206E-01	1.685E+00	2.565E+00	1.442E-01	0.047

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504010      *
* Acquisition date :  7-JUL-2009 09:12:43 Detector SN#    :                 *
* Detector ID        : GAM22                Sensitivity     : 5.000        *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000       *
* Elapsed real time:    0 02:00:01.95       Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504010           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.2872E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.798E+01	3.024E+00	4.446E-01	0.000E+00
CD-109	4.417E+00	9.357E-01	1.231E+00	0.000E+00
SN-126	4.356E-01	9.227E-02	1.219E-01	0.000E+00
HG-203	5.319E-02	5.421E-02	5.868E-02	0.000E+00
TL-208	5.673E-01	8.894E-02	4.953E-02	0.000E+00
BI-211	4.554E+00	4.628E-01	3.066E-01	0.000E+00
BI-212	1.060E+00	4.074E-01	4.187E-01	0.000E+00
PB-212	1.933E+00	1.681E-01	8.397E-02	0.000E+00
PO-212	1.933E+00	1.681E-01	8.397E-02	0.000E+00
BI-214	1.328E+00	1.779E-01	9.742E-02	0.000E+00
PB-214	1.584E+00	1.802E-01	1.018E-01	0.000E+00
PO-214	1.584E+00	1.802E-01	1.018E-01	0.000E+00
PO-216	1.933E+00	1.681E-01	8.397E-02	0.000E+00
PO-218	1.584E+00	1.802E-01	1.018E-01	0.000E+00
RA-224	5.445E+00	1.038E+00	9.541E-01	0.000E+00
RA-226	1.328E+00	1.779E-01	9.742E-02	0.000E+00
AC-228	2.013E+00	3.453E-01	1.936E-01	0.000E+00
RA-228	2.013E+00	3.453E-01	1.936E-01	0.000E+00
TH-228	1.933E+00	1.681E-01	8.397E-02	0.000E+00
TH-230	1.328E+00	1.779E-01	9.742E-02	0.000E+00
TH-232	2.013E+00	3.453E-01	1.936E-01	0.000E+00
TH-234	1.736E+00	1.575E+00	1.843E+00	0.000E+00
U-234	1.328E+00	1.779E-01	9.742E-02	0.000E+00
NP-237	1.279E+00	3.746E-01	4.007E-01	0.000E+00
U-238	1.736E+00	1.575E+00	1.843E+00	0.000E+00
AM-243	4.905E-01	8.089E-02	8.218E-02	0.000E+00
ANH-511	9.453E-02	5.035E-02	4.117E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	-1.016E-03	2.678E-01	4.465E-01	0.000E+00	NOT IDENT.
NA-22	-1.820E-03	3.965E-02	6.729E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.284E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.136E-02	2.305E-02	4.132E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.849E-02	7.905E-02	0.000E+00	FAIL ABUN
SC-46	-2.804E-02	3.237E-02	5.199E-02	0.000E+00	FAIL ABUN
V-48	-1.616E-02	5.732E-02	9.519E-02	0.000E+00	NOT IDENT.
CR-51	2.644E-01	2.916E-01	5.228E-01	0.000E+00	NOT IDENT.
MN-52	1.005E-01	1.493E-01	2.659E-01	0.000E+00	NOT IDENT.
MN-54	-1.046E-02	3.280E-02	5.540E-02	0.000E+00	NOT IDENT.
CO-56	-1.350E-02	3.446E-02	5.781E-02	0.000E+00	NOT IDENT.
CO-57	1.813E-04	2.265E-02	3.995E-02	0.000E+00	NOT IDENT.
CO-58	-1.333E-02	3.060E-02	5.130E-02	0.000E+00	NOT IDENT.
FE-59	-9.406E-02	7.827E-02	1.195E-01	0.000E+00	NOT IDENT.
CO-60	-4.383E-03	3.220E-02	5.395E-02	0.000E+00	NOT IDENT.
ZN-65	6.994E-02	9.311E-02	1.409E-01	0.000E+00	NOT IDENT.
GE-68	-8.138E-01	1.081E+00	1.714E+00	0.000E+00	NOT IDENT.
AS-73	-1.461E-01	6.843E-01	1.144E+00	0.000E+00	NOT IDENT.
AS-74	1.138E-02	7.246E-02	1.249E-01	0.000E+00	NOT IDENT.
SE-75	-2.216E-02	4.270E-02	6.339E-02	0.000E+00	FAIL ABUN
BR-77	-2.898E+00	4.233E+00	7.050E+00	0.000E+00	FAIL ABUN
SR-82	-4.189E-02	3.187E-01	5.145E-01	0.000E+00	NOT IDENT.
RB-83	-3.836E-02	5.260E-02	8.735E-02	0.000E+00	NOT IDENT.
RB-84	2.433E-02	5.410E-02	9.510E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.977E+00	1.431E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.995E-02	7.168E-02	0.000E+00	NOT IDENT.
RB-86	-4.162E-01	6.260E-01	9.993E-01	0.000E+00	NOT IDENT.
Y-88	3.504E-03	2.046E-02	3.542E-02	0.000E+00	NOT IDENT.
ZR-88	-9.856E-03	2.564E-02	4.272E-02	0.000E+00	NOT IDENT.
Y-91	2.089E+00	1.715E+01	2.860E+01	0.000E+00	NOT IDENT.
NB-94	1.776E-02	2.883E-02	5.013E-02	0.000E+00	NOT IDENT.
NB-95	6.291E-02	3.803E-02	6.836E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.336E-01	2.122E-01	0.000E+00	NOT IDENT.
ZR-95	3.878E-04	5.512E-02	9.215E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.843E+03	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.850E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.120E+00	5.323E+00	9.220E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.629E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.130E-02	3.118E-02	5.085E-02	0.000E+00	NOT IDENT.
RH-102	3.945E-03	2.453E-02	4.129E-02	0.000E+00	NOT IDENT.
RU-103	-7.343E-03	3.123E-02	5.365E-02	0.000E+00	FAIL ABUN
RH-106	2.185E-02	2.638E-01	4.515E-01	0.000E+00	FAIL ABUN
RU-106	2.185E-02	2.638E-01	4.515E-01	0.000E+00	FAIL ABUN
AG-108M	-1.302E-02	2.816E-02	4.623E-02	0.000E+00	NOT IDENT.
AG-110M	-1.214E-02	2.832E-02	4.674E-02	0.000E+00	NOT IDENT.
IN-111	3.787E-01	5.575E-01	8.888E-01	0.000E+00	NOT IDENT.
IN-113M	-1.025E-02	3.758E-02	6.301E-02	0.000E+00	NOT IDENT.
SN-113	-1.025E-02	3.758E-02	6.301E-02	0.000E+00	NOT IDENT.
IN-114M	4.184E-03	1.875E-01	2.799E-01	0.000E+00	NOT IDENT.
CD-115	5.308E-01	4.041E+00	7.042E+00	0.000E+00	NOT IDENT.
SN-117M	-2.841E-02	4.545E-02	7.698E-02	0.000E+00	NOT IDENT.
SB-122	3.363E-01	9.200E-01	1.612E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.127E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.251E-02	2.582E-02	4.394E-02	0.000E+00	NOT IDENT.
I-124	2.481E-01	4.557E-01	6.952E-01	0.000E+00	NOT IDENT.
SB-124	-2.088E-02	5.791E-02	9.091E-02	0.000E+00	NOT IDENT.
SB-125	7.021E-02	7.740E-02	1.362E-01	0.000E+00	FAIL ABUN
TE-125M	-8.110E+00	8.585E+00	1.445E+01	0.000E+00	NOT IDENT.
I-126	-5.543E-02	1.402E-01	2.321E-01	0.000E+00	NOT IDENT.
SB-126	6.641E-02	1.231E-01	1.920E-01	0.000E+00	FAIL ABUN
SB-127	2.376E-01	7.557E-01	1.299E+00	0.000E+00	NOT IDENT.
XE-127	3.601E-03	4.447E-02	6.993E-02	0.000E+00	NOT IDENT.
I-131	6.425E-02	8.055E-02	1.388E-01	0.000E+00	NOT IDENT.
TE-132	-1.990E-01	4.043E-01	6.655E-01	0.000E+00	NOT IDENT.
BA-133	4.281E-02	4.022E-02	6.342E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.789E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.634E-02	7.568E-02	0.000E+00	FAIL ABUN
CS-135	2.587E-01	1.602E-01	2.620E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.820E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.097E-02	8.388E-02	1.463E-01	0.000E+00	FAIL ABUN
BA-137M	2.570E-02	3.055E-02	5.399E-02	0.000E+00	NOT IDENT.
CS-137	2.717E-02	3.229E-02	5.708E-02	0.000E+00	NOT IDENT.
CE-139	-3.107E-02	2.694E-02	4.455E-02	0.000E+00	NOT IDENT.
BA-140	-4.368E-02	1.837E-01	3.123E-01	0.000E+00	NOT IDENT.
LA-140	-8.808E-02	6.912E-02	9.976E-02	0.000E+00	FAIL ABUN
CE-141	7.288E-02	5.580E-02	1.008E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.887E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.586E-01	1.894E-01	3.209E-01	0.000E+00	NOT IDENT.

PM-144	-3.823E-03	2.944E-02	4.924E-02	0.000E+00	NOT IDENT.
PR-144	-2.587E-01	1.993E+00	3.333E+00	0.000E+00	NOT IDENT.
PM-146	2.804E-02	3.630E-02	6.321E-02	0.000E+00	NOT IDENT.
ND-147	1.864E-01	3.723E-01	6.599E-01	0.000E+00	FAIL ABUN
PM-149	4.471E+01	4.029E+01	6.901E+01	0.000E+00	NOT IDENT.
EU-152	-1.343E-02	1.084E-01	1.394E-01	0.000E+00	NOT IDENT.
GD-153	-1.520E-02	7.670E-02	1.200E-01	0.000E+00	NOT IDENT.
EU-154	-1.680E-03	1.111E-01	1.889E-01	0.000E+00	NOT IDENT.
EU-155	1.161E-01	9.781E-02	1.795E-01	0.000E+00	FAIL ABUN
TB-160	-3.246E-02	1.128E-01	1.893E-01	0.000E+00	FAIL ABUN
HO-166M	-1.671E-03	5.108E-02	8.572E-02	0.000E+00	NOT IDENT.
TM-171	-1.800E+01	2.806E+01	4.137E+01	0.000E+00	NOT IDENT.
LU-176	4.291E-03	2.174E-02	3.595E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.219E+00	1.542E+00	0.000E+00	FAIL ABUN
LU-177M	-1.096E-01	1.558E-01	2.544E-01	0.000E+00	FAIL ABUN
HF-181	-2.108E-02	3.400E-02	5.747E-02	0.000E+00	NOT IDENT.
W-181	-1.031E-01	3.575E-01	5.362E-01	0.000E+00	NOT IDENT.
TA-182	-6.329E-02	1.746E-01	2.926E-01	0.000E+00	FAIL ABUN
RE-183	1.497E-01	9.900E-02	1.773E-01	0.000E+00	FAIL ABUN
RE-184	1.341E-01	1.960E-01	3.538E-01	0.000E+00	NOT IDENT.
OS-185	2.018E-03	3.385E-02	5.767E-02	0.000E+00	NOT IDENT.
RE-188	6.004E-02	1.573E-01	2.758E-01	0.000E+00	NOT IDENT.
W-188	-6.261E+00	6.931E+00	9.933E+00	0.000E+00	FAIL ABUN
IR-192	-2.705E-02	2.766E-02	4.571E-02	0.000E+00	FAIL ABUN
AU-195	3.110E-01	2.198E-01	3.645E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	9.457E+01	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.849E+00	3.783E+00	6.407E+00	0.000E+00	NOT IDENT.
TL-202	-1.094E-02	5.145E-02	8.549E-02	0.000E+00	NOT IDENT.
BI-207	5.865E-03	4.544E-02	7.689E-02	0.000E+00	FAIL ABUN
TL-207	1.025E-01	6.362E-01	9.620E-01	0.000E+00	FAIL ABUN
PO-209	-5.583E-01	6.408E+00	1.088E+01	0.000E+00	NOT IDENT.
BI-210	1.110E+00	2.662E+00	4.674E+00	0.000E+00	NOT IDENT.
PB-210	1.110E+00	2.662E+00	4.674E+00	0.000E+00	NOT IDENT.
PO-210	1.110E+00	2.662E+00	4.674E+00	0.000E+00	NOT IDENT.
PB-211	-7.531E-01	9.372E-01	1.322E+00	0.000E+00	NOT IDENT.
PO-215	1.025E-01	6.362E-01	9.620E-01	0.000E+00	FAIL ABUN
RN-219	-2.377E-02	3.511E-01	5.843E-01	0.000E+00	FAIL ABUN
RN-220	-1.385E+01	2.129E+01	3.537E+01	0.000E+00	NOT IDENT.
RA-223	1.025E-01	6.362E-01	9.620E-01	0.000E+00	FAIL ABUN
AC-227	5.529E-02	3.305E-01	5.854E-01	0.000E+00	FAIL ABUN
TH-227	5.529E-02	3.306E-01	5.854E-01	0.000E+00	FAIL ABUN
TH-229	-1.069E-01	4.727E-01	7.989E-01	0.000E+00	FAIL ABUN
PA-231	-1.075E+00	1.560E+00	2.268E+00	0.000E+00	FAIL ABUN
TH-231	1.025E-01	6.362E-01	9.620E-01	0.000E+00	FAIL ABUN
U-231	2.636E-01	7.263E-01	1.164E+00	0.000E+00	FAIL ABUN
PA-233	1.812E-03	5.241E-02	9.095E-02	0.000E+00	FAIL ABUN
PA-234	-1.003E-01	2.599E-01	4.293E-01	0.000E+00	FAIL ABUN
PA-234M	3.496E+00	6.192E+00	1.063E+01	0.000E+00	NOT IDENT.
U-235	6.076E-02	2.024E-01	3.508E-01	0.000E+00	FAIL ABUN
NP-236	-8.830E-02	7.457E-02	1.236E-01	0.000E+00	NOT IDENT.
NP-239	1.102E-01	1.713E-01	3.087E-01	0.000E+00	FAIL ABUN
AM-241	2.928E-02	1.437E-01	2.207E-01	0.000E+00	NOT IDENT.
CM-243	5.201E-02	8.811E-02	1.596E-01	0.000E+00	FAIL ABUN
CM-247	1.702E-02	3.112E-02	5.331E-02	0.000E+00	FAIL ABUN
CF-249	1.477E-02	3.496E-02	5.925E-02	0.000E+00	NOT IDENT.
CF-251	-8.924E-02	1.150E-01	1.917E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:13:44.92

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*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504010.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:12:43.
Sample ID         : G232504010           Sample quantity  : 1.28720E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.95  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	2753	10.67*	1.981E+00	3.798E+01	3.798E+01	8.13
CD-109	88.03	439	3.72*	7.950E+00	4.333E+00	4.417E+00	21.61
SN-126	64.28	110	9.60	4.856E+00	6.871E-01	6.871E-01	92.06
	86.94	439	8.90	7.950E+00	1.811E+00	1.811E+00	45.86
	87.57	439	37.00*	7.950E+00	4.356E-01	4.356E-01	21.61
HG-203	70.83	------	4.75	6.082E+00	------	Line Not Found	------
	72.87	------	8.00	6.380E+00	------	Line Not Found	------
	82.60	------	3.55	7.534E+00	------	Line Not Found	------
	279.20	77	77.30*	6.624E+00	4.389E-02	5.319E-02	104.00
TL-208	277.35	77	6.80	6.624E+00	4.989E-01	4.989E-01	104.35
	510.84	147	21.60	4.532E+00	4.376E-01	4.376E-01	54.99
	583.14	675	84.20*	4.119E+00	5.673E-01	5.673E-01	16.00
	860.37	87	12.46	3.011E+00	6.741E-01	6.741E-01	63.82
BI-211	72.87	------	1.27	6.380E+00	------	Line Not Found	------
	351.07	1167	12.94*	5.776E+00	4.554E+00	4.554E+00	10.37
BI-212	727.18	149	11.80*	3.466E+00	1.060E+00	1.060E+00	39.23
	785.46	71	1.97	3.253E+00	3.234E+00	3.234E+00	59.97
	1620.62	------	2.75	1.872E+00	------	Line Not Found	------
PB-212	74.81	739	10.70	6.653E+00	3.026E+00	3.026E+00	19.25
	77.11	1063	18.00	6.947E+00	2.480E+00	2.480E+00	13.04
	87.30	439	8.00	7.950E+00	2.015E+00	2.015E+00	23.82
	238.63	2126	44.60*	7.193E+00	1.933E+00	1.933E+00	8.88
	300.09	130	3.41	6.341E+00	1.758E+00	1.758E+00	48.03
PO-212	74.81	739	10.70	6.653E+00	3.026E+00	3.026E+00	19.25
	77.11	1063	18.00	6.947E+00	2.480E+00	2.480E+00	13.04
	87.30	439	8.00	7.950E+00	2.015E+00	2.015E+00	23.82
	115.19	------	0.60	8.992E+00	------	Line Not Found	------
	238.63	2126	44.60*	7.193E+00	1.933E+00	1.933E+00	8.88
	300.09	130	3.41	6.341E+00	1.758E+00	1.758E+00	48.03
BI-214	609.31	840	46.30*	3.985E+00	1.328E+00	1.328E+00	13.67
	768.36	------	5.04	3.314E+00	------	Line Not Found	------
	934.06	------	3.21	2.811E+00	------	Line Not Found	------

Sample ID : G232504010 Acquisition date : 7-JUL-2009 09:12:43

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1120.29	206	15.10	2.411E+00	1.653E+00	1.653E+00	33.62
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	186	15.80	1.811E+00	1.897E+00	1.897E+00	18.31
PB-214	74.81	739	6.21	6.653E+00	5.213E+00	5.213E+00	18.39
	77.11	1063	10.50	6.947E+00	4.251E+00	4.251E+00	15.11
	87.30	439	4.67	7.950E+00	3.451E+00	3.451E+00	22.95
	241.98	527	7.49	7.145E+00	2.872E+00	2.872E+00	20.24
	295.21	668	19.20	6.402E+00	1.585E+00	1.585E+00	15.68
	351.92	1167	37.20*	5.776E+00	1.584E+00	1.584E+00	11.61
PO-214	74.81	739	6.21	6.653E+00	5.213E+00	5.213E+00	18.39
	77.11	1063	10.50	6.947E+00	4.251E+00	4.251E+00	15.11
	87.30	439	4.67	7.950E+00	3.451E+00	3.451E+00	22.95
	241.98	527	7.49	7.145E+00	2.872E+00	2.872E+00	20.24
	295.21	668	19.20	6.402E+00	1.585E+00	1.585E+00	15.68
	351.92	1167	37.20*	5.776E+00	1.584E+00	1.584E+00	11.61
PO-216	74.81	739	10.70	6.653E+00	3.026E+00	3.026E+00	19.25
	77.11	1063	18.00	6.947E+00	2.480E+00	2.480E+00	13.04
	87.30	439	8.00	7.950E+00	2.015E+00	2.015E+00	23.82
	238.63	2126	44.60*	7.193E+00	1.933E+00	1.933E+00	8.88
	300.09	130	3.41	6.341E+00	1.758E+00	1.758E+00	48.03
PO-218	74.81	739	6.21	6.653E+00	5.213E+00	5.213E+00	18.39
	77.11	1063	10.50	6.947E+00	4.251E+00	4.251E+00	15.11
	87.30	439	4.67	7.950E+00	3.451E+00	3.451E+00	22.95
	241.98	527	7.49	7.145E+00	2.872E+00	2.872E+00	20.24
	295.21	668	19.20	6.402E+00	1.585E+00	1.585E+00	15.68
	351.92	1167	37.20*	5.776E+00	1.584E+00	1.584E+00	11.61
RA-224	240.98	527	3.95*	7.145E+00	5.445E+00	5.445E+00	19.44
RA-226	609.31	840	46.30*	3.985E+00	1.328E+00	1.328E+00	13.67
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	206	15.10	2.411E+00	1.653E+00	1.653E+00	33.62
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	186	15.80	1.811E+00	1.897E+00	1.897E+00	18.31
AC-228	338.32	496	11.40	5.913E+00	2.144E+00	2.144E+00	44.95
	911.07	549	27.70*	2.870E+00	2.013E+00	2.013E+00	17.50
	969.11	213	16.60	2.723E+00	1.377E+00	1.377E+00	43.03
RA-228	338.32	496	11.40	5.913E+00	2.144E+00	2.144E+00	44.95
	911.07	549	27.70*	2.870E+00	2.013E+00	2.013E+00	17.50
	969.11	213	16.60	2.723E+00	1.377E+00	1.377E+00	43.03
TH-228	84.40	------	1.21	7.701E+00	------ Line Not Found		------
	238.60	2126	44.60*	7.193E+00	1.933E+00	1.933E+00	8.88
	300.10	130	3.41	6.341E+00	1.758E+00	1.758E+00	75.58
TH-230	609.31	840	46.30*	3.985E+00	1.328E+00	1.328E+00	13.67
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	206	15.10	2.411E+00	1.653E+00	1.653E+00	33.62
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------

Sample ID : G232504010 Acquisition date : 7-JUL-2009 09:12:43

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	186	15.80	1.811E+00	1.897E+00	1.897E+00	18.31
TH-232	338.32	496	11.40	5.913E+00	2.144E+00	2.144E+00	19.82
	911.07	549	27.70*	2.870E+00	2.013E+00	2.013E+00	17.50
	969.11	213	16.60	2.723E+00	1.377E+00	1.377E+00	43.03
TH-234	63.29	110	3.80*	4.856E+00	1.736E+00	1.736E+00	92.56
	92.38	325	5.41	8.322E+00	2.107E+00	2.107E+00	35.33
U-234	609.31	840	46.30*	3.985E+00	1.328E+00	1.328E+00	13.67
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	206	15.10	2.411E+00	1.653E+00	1.653E+00	33.62
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	186	15.80	1.811E+00	1.897E+00	1.897E+00	18.31
NP-237	86.50	439	12.60*	7.950E+00	1.279E+00	1.279E+00	29.88
	95.87	------	2.60	8.481E+00	------ Line Not Found		------
U-238	63.29	110	3.80*	4.856E+00	1.736E+00	1.736E+00	92.56
	92.38	325	5.41	8.322E+00	2.107E+00	2.107E+00	31.55
AM-243	74.67	739	66.00*	6.653E+00	4.905E-01	4.905E-01	16.83
	86.72	439	0.34	7.950E+00	4.797E+01	4.797E+01	21.61
	117.66	------	0.55	9.009E+00	------ Line Not Found		------
	142.18	------	0.13	8.872E+00	------ Line Not Found		------
ANH-511	511.00	147	100.00*	4.532E+00	9.453E-02	9.453E-02	54.35

Flag: "*" = Keyline

Sample ID : G232504010 Acquisition date : 7-JUL-2009 09:12:43

Total number of lines in spectrum 30
Number of unidentified lines 0
Number of lines tentatively identified by NID 30 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.798E+01	3.798E+01	0.309E+01	8.13	
CD-109	464.00D	1.02	4.333E+00	4.417E+00	0.955E+00	21.61	
SN-126	1.00E+05Y	1.00	4.356E-01	4.356E-01	0.942E-01	21.61	
HG-203	46.60D	1.21	4.389E-02	5.319E-02	5.532E-02	104.00	
TL-208	1.41E+10Y	1.00	5.673E-01	5.673E-01	0.908E-01	16.00	
BI-211	7.04E+08Y	1.00	4.554E+00	4.554E+00	0.472E+00	10.37	
BI-212	1.41E+10Y	1.00	1.060E+00	1.060E+00	0.416E+00	39.23	
PB-212	1.41E+10Y	1.00	1.933E+00	1.933E+00	0.172E+00	8.88	
PO-212	1.41E+10Y	1.00	1.933E+00	1.933E+00	0.172E+00	8.88	
BI-214	1600.00Y	1.00	1.328E+00	1.328E+00	0.182E+00	13.67	
PB-214	1600.00Y	1.00	1.584E+00	1.584E+00	0.184E+00	11.61	
PO-214	1600.00Y	1.00	1.584E+00	1.584E+00	0.184E+00	11.61	
PO-216	1.41E+10Y	1.00	1.933E+00	1.933E+00	0.172E+00	8.88	
PO-218	1600.00Y	1.00	1.584E+00	1.584E+00	0.184E+00	11.61	
RA-224	1.41E+10Y	1.00	5.445E+00	5.445E+00	1.059E+00	19.44	
RA-226	1600.00Y	1.00	1.328E+00	1.328E+00	0.182E+00	13.67	
AC-228	1.41E+10Y	1.00	2.013E+00	2.013E+00	0.352E+00	17.50	
RA-228	1.41E+10Y	1.00	2.013E+00	2.013E+00	0.352E+00	17.50	
TH-228	1.41E+10Y	1.00	1.933E+00	1.933E+00	0.172E+00	8.88	
TH-230	4.47E+09Y	1.00	1.328E+00	1.328E+00	0.182E+00	13.67	
TH-232	1.41E+10Y	1.00	2.013E+00	2.013E+00	0.352E+00	17.50	
TH-234	4.47E+09Y	1.00	1.736E+00	1.736E+00	1.607E+00	92.56	
U-234	4.47E+09Y	1.00	1.328E+00	1.328E+00	0.182E+00	13.67	
NP-237	2.14E+06Y	1.00	1.279E+00	1.279E+00	0.382E+00	29.88	
U-238	4.47E+09Y	1.00	1.736E+00	1.736E+00	1.607E+00	92.56	
AM-243	7380.00Y	1.00	4.905E-01	4.905E-01	0.825E-01	16.83	
ANH-511	1.00E+09Y	1.00	9.453E-02	9.453E-02	5.138E-02	54.35	
	Total Activity :		8.358E+01	8.368E+01			

Grand Total Activity : 8.358E+01 8.368E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232504010 Acquisition date : 7-JUL-2009 09:12:43

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	89.98	275	529	1.21	179.31	170	22	3.81E-02	30.3	8.14E+00	T
0	186.02	221	571	1.22	371.36	367	10	3.07E-02	44.3	8.11E+00	T
0	209.13	262	482	1.25	417.59	412	12	3.64E-02	35.8	7.69E+00	T
0	270.21	188	392	1.70	539.74	532	13	2.61E-02	45.8	6.73E+00	T
0	328.71	127	305	1.98	656.72	650	12	1.76E-02	57.8	6.02E+00	T
0	462.94	93	160	1.51	925.18	921	10	1.28E-02	54.9	4.85E+00	T
0	794.98	110	125	1.28	1589.43	1582	18	1.53E-02	50.9	3.22E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:13:50.17

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504010.CNF;1 *
* Acquisition date  : 7-JUL-2009 09:12:43.  Detector SN#     :             *
* Detector ID       : GAM22                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.95          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504010            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.28720E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45.3MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.798E+01	3.086E+00	4.445E-01	3.094E-02	85.432
CD-109	4.417E+00	9.548E-01	1.179E+00	1.053E-01	3.748
SN-126	4.356E-01	9.416E-02	1.167E-01	1.038E-02	3.733
HG-203	5.319E-02	5.532E-02	5.716E-02	3.415E-03	0.931
TL-208	5.673E-01	9.075E-02	4.880E-02	3.757E-03	11.625
BI-211	4.554E+00	4.723E-01	2.997E-01	1.901E-02	15.194
BI-212	1.060E+00	4.157E-01	4.139E-01	3.991E-02	2.560
PB-212	1.933E+00	1.716E-01	8.160E-02	5.769E-03	23.683
PO-212	1.933E+00	1.716E-01	8.160E-02	5.769E-03	23.683
BI-214	1.328E+00	1.815E-01	9.605E-02	8.447E-03	13.821
PB-214	1.584E+00	1.839E-01	9.950E-02	8.173E-03	15.922
PO-214	1.584E+00	1.839E-01	9.950E-02	8.173E-03	15.922
PO-216	1.933E+00	1.716E-01	8.160E-02	5.769E-03	23.683
PO-218	1.584E+00	1.839E-01	9.950E-02	8.173E-03	15.922
RA-224	5.445E+00	1.059E+00	9.273E-01	5.078E-02	5.872
RA-226	1.328E+00	1.815E-01	9.605E-02	8.447E-03	13.821
AC-228	2.013E+00	3.523E-01	1.921E-01	2.403E-02	10.479
RA-228	2.013E+00	3.523E-01	1.921E-01	2.403E-02	10.479

Sample ID : G232504010 Acquisition date : 7-JUL-2009 09:12:43

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.933E+00	1.716E-01	8.159E-02	5.769E-03	23.685
TH-230	1.328E+00	1.815E-01	9.605E-02	8.447E-03	13.821
TH-232	2.013E+00	3.523E-01	1.921E-01	2.403E-02	10.479
TH-234	1.736E+00	1.607E+00	1.756E+00	3.044E-01	0.988
U-234	1.328E+00	1.815E-01	9.605E-02	8.447E-03	13.821
NP-237	1.279E+00	3.823E-01	3.835E-01	8.601E-02	3.335
U-238	1.736E+00	1.607E+00	1.756E+00	3.044E-01	0.988
AM-243	4.905E-01	8.254E-02	7.848E-02	6.102E-03	6.251
ANH-511	9.453E-02	5.138E-02	4.048E-02	2.624E-03	2.335

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.016E-03		2.732E-01	4.385E-01	3.137E-02	-0.002
NA-22	-1.820E-03		4.046E-02	6.712E-02	4.271E-03	-0.027
NA-24	-8.020E-02		2.696E-02	Half-Life too short		
AL-26	1.136E-02		2.353E-02	4.145E-02	2.359E-03	0.274
TI-44	4.576E-01	+	5.969E-02	7.555E-02	6.085E-03	6.057
SC-46	-2.804E-02		3.303E-02	5.157E-02	5.287E-03	-0.544
V-48	-1.616E-02		5.849E-02	9.456E-02	8.732E-03	-0.171
CR-51	2.644E-01		2.976E-01	5.103E-01	3.244E-02	0.518
MN-52	1.005E-01		1.524E-01	2.658E-01	1.776E-02	0.378
MN-54	-1.046E-02		3.346E-02	5.489E-02	5.236E-03	-0.191
CO-56	-1.350E-02		3.516E-02	5.729E-02	5.554E-03	-0.236
CO-57	1.813E-04		2.311E-02	3.843E-02	2.350E-03	0.005
CO-58	-1.333E-02		3.122E-02	5.080E-02	4.700E-03	-0.262
FE-59	-9.406E-02		7.987E-02	1.190E-01	9.561E-03	-0.791
CO-60	-4.383E-03		3.286E-02	5.386E-02	3.642E-03	-0.081
ZN-65	6.994E-02		9.501E-02	1.403E-01	9.675E-03	0.499
GE-68	-8.138E-01		1.103E+00	1.705E+00	1.303E-01	-0.477
AS-73	-1.461E-01		6.982E-01	1.087E+00	7.552E-02	-0.134
AS-74	1.138E-02		7.393E-02	1.231E-01	8.646E-03	0.092
SE-75	-2.216E-02		4.357E-02	6.170E-02	3.470E-03	-0.359
BR-77	-2.898E+00		4.320E+00	6.934E+00	4.539E-01	-0.418
SR-82	-4.189E-02		3.252E-01	5.092E-01	4.480E-02	-0.082
RB-83	-3.836E-02		5.367E-02	8.591E-02	5.622E-03	-0.447
RB-84	2.433E-02		5.520E-02	9.431E-02	9.572E-03	0.258
KR-85	3.626E+01		8.140E+00	1.407E+01	9.151E-01	2.576
SR-85	1.816E-01		4.077E-02	7.048E-02	4.583E-03	2.576
RB-86	-4.162E-01		6.387E-01	9.941E-01	7.607E-02	-0.419
Y-88	3.504E-03		2.088E-02	3.554E-02	1.989E-03	0.099
ZR-88	-9.856E-03		2.616E-02	4.183E-02	2.377E-03	-0.236
Y-91	2.089E+00		1.750E+01	2.850E+01	1.670E+00	0.073
NB-94	1.776E-02		2.941E-02	4.953E-02	3.913E-03	0.359
NB-95	6.291E-02		3.880E-02	6.764E-02	5.861E-03	0.930
NB-95M	2.895E-01		1.363E-01	2.062E-01	1.498E-02	1.404
ZR-95	3.878E-04		5.624E-02	9.116E-02	8.594E-03	0.004

Sample ID : G232504010 Acquisition date : 7-JUL-2009 09:12:43

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-3.381E-03		4.512E-03	Half-Life too short		
ZR-97	4.486E-01		9.441E-02	Half-Life too short		
MO-99	3.120E+00		5.432E+00	9.118E+00	1.370E+00	0.342
TC-99M	-6.585E+07		3.892E+07	Half-Life too short		
RH-101	-1.130E-02		3.182E-02	4.927E-02	2.600E-03	-0.229
RH-102	3.945E-03		2.503E-02	4.055E-02	2.533E-03	0.097
RU-103	-7.343E-03		3.187E-02	5.273E-02	6.816E-03	-0.139
RH-106	2.185E-02		2.692E-01	4.453E-01	5.556E-02	0.049
RU-106	2.185E-02		2.692E-01	4.453E-01	3.198E-02	0.049
AG-108M	-1.302E-02		2.874E-02	4.534E-02	2.926E-03	-0.287
AG-110M	-1.214E-02		2.890E-02	4.614E-02	3.550E-03	-0.263
IN-111	3.787E-01		5.689E-01	8.640E-01	4.746E-02	0.438
IN-113M	-1.025E-02		3.835E-02	6.169E-02	3.745E-03	-0.166
SN-113	-1.025E-02		3.835E-02	6.169E-02	3.745E-03	-0.166
IN-114M	4.184E-03		1.913E-01	2.710E-01	1.419E-02	0.015
CD-115	5.308E-01		4.123E+00	6.927E+00	4.567E-01	0.077
SN-117M	-2.841E-02		4.638E-02	7.434E-02	3.916E-03	-0.382
SB-122	3.363E-01		9.388E-01	1.588E+00	1.083E-01	0.212
I-123	-1.514E-01		1.595E-01	Half-Life too short		
TE-123M	-1.251E-02		2.635E-02	4.243E-02	2.268E-03	-0.295
I-124	2.481E-01		4.650E-01	6.853E-01	4.841E-02	0.362
SB-124	-2.088E-02		5.909E-02	9.110E-02	5.996E-03	-0.229
SB-125	7.021E-02		7.898E-02	1.336E-01	8.237E-03	0.526
TE-125M	-8.110E+00		8.760E+00	1.387E+01	1.236E+00	-0.585
I-126	-5.543E-02		1.431E-01	2.291E-01	1.712E-02	-0.242
SB-126	6.641E-02		1.256E-01	1.898E-01	1.540E-02	0.350
SB-127	2.376E-01		7.711E-01	1.283E+00	1.287E-01	0.185
XE-127	3.601E-03		4.538E-02	6.779E-02	3.593E-03	0.053
I-131	6.425E-02		8.219E-02	1.358E-01	8.642E-03	0.473
TE-132	-1.990E-01		4.126E-01	6.463E-01	8.913E-02	-0.308
BA-133	4.281E-02		4.104E-02	6.201E-02	7.137E-03	0.690
I-133	1.762E-04		3.974E-04	Half-Life too short		
CS-134	1.310E-01	+	6.769E-02	7.493E-02	6.819E-03	1.749
CS-135	2.587E-01		1.635E-01	2.550E-01	1.909E-02	1.014
I-135	-1.478E+06		9.286E+06	Half-Life too short		
CS-136	5.097E-02		8.559E-02	1.455E-01	1.245E-02	0.350
BA-137M	2.570E-02		3.117E-02	5.330E-02	3.955E-03	0.482
CS-137	2.717E-02		3.295E-02	5.634E-02	4.191E-03	0.482
CE-139	-3.107E-02		2.749E-02	4.306E-02	2.206E-03	-0.722
BA-140	-4.368E-02		1.875E-01	3.073E-01	1.004E-01	-0.142
LA-140	-8.808E-02		7.053E-02	9.988E-02	6.373E-03	-0.882
CE-141	7.288E-02		5.694E-02	9.717E-02	5.613E-03	0.750
CE-143	2.983E-04		4.024E-05	Half-Life too short		
CE-144	-1.586E-01		1.933E-01	3.091E-01	4.389E-02	-0.513
PM-144	-3.823E-03		3.004E-02	4.865E-02	3.808E-03	-0.079
PR-144	-2.587E-01		2.033E+00	3.293E+00	2.577E-01	-0.079
PM-146	2.804E-02		3.704E-02	6.203E-02	5.477E-03	0.452
ND-147	1.864E-01		3.799E-01	6.492E-01	9.017E-02	0.287

Sample ID : G232504010 Acquisition date : 7-JUL-2009 09:12:43

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	4.471E+01		4.111E+01	6.724E+01	9.478E+00	0.665
EU-152	-1.343E-02		1.106E-01	1.362E-01	8.785E-03	-0.099
GD-153	-1.520E-02		7.826E-02	1.151E-01	9.005E-03	-0.132
EU-154	-1.680E-03		1.134E-01	1.884E-01	1.827E-02	-0.009
EU-155	1.161E-01		9.981E-02	1.723E-01	1.254E-02	0.674
TB-160	-3.246E-02		1.151E-01	1.877E-01	1.900E-02	-0.173
HO-166M	-1.671E-03		5.213E-02	8.472E-02	6.783E-03	-0.020
TM-171	-1.800E+01		2.863E+01	3.944E+01	2.880E+00	-0.456
LU-176	4.291E-03		2.218E-02	3.506E-02	1.986E-03	0.122
LU-177	3.435E+00	+	1.243E+00	1.495E+00	7.967E-02	2.298
LU-177M	-1.096E-01		1.590E-01	2.493E-01	1.453E-02	-0.440
HF-181	-2.108E-02		3.469E-02	5.646E-02	3.552E-03	-0.373
W-181	-1.031E-01		3.648E-01	5.110E-01	3.696E-02	-0.202
TA-182	-6.329E-02		1.782E-01	2.917E-01	1.743E-02	-0.217
RE-183	1.497E-01		1.010E-01	1.713E-01	8.891E-03	0.874
RE-184	1.341E-01		2.000E-01	3.441E-01	1.900E-02	0.390
OS-185	2.018E-03		3.455E-02	5.691E-02	4.170E-03	0.035
RE-188	6.004E-02		1.605E-01	2.663E-01	1.422E-02	0.225
W-188	-6.261E+00		7.073E+00	9.681E+00	5.453E-01	-0.647
IR-192	-2.705E-02		2.823E-02	4.461E-02	2.546E-03	-0.606
AU-195	3.110E-01		2.243E-01	3.495E-01	2.687E-02	0.890
TL-200	1.434E-05		4.825E-05	Half-Life too short		
TL-201	-1.849E+00		3.861E+00	6.193E+00	3.175E-01	-0.299
TL-202	-1.094E-02		5.250E-02	8.386E-02	5.037E-03	-0.131
BI-207	5.865E-03		4.636E-02	7.648E-02	6.038E-03	0.077
TL-207	1.025E-01		6.492E-01	9.392E-01	1.547E-01	0.109
PO-209	-5.583E-01		6.539E+00	1.080E+01	1.117E+00	-0.052
BI-210	1.110E+00		2.717E+00	4.433E+00	3.351E-01	0.250
PB-210	1.110E+00		2.717E+00	4.433E+00	3.351E-01	0.250
PO-210	1.110E+00		2.716E+00	4.433E+00	2.857E-01	0.250
PB-211	-7.531E-01		9.563E-01	1.295E+00	8.073E-01	-0.581
PO-215	1.025E-01		6.492E-01	9.392E-01	1.547E-01	0.109
RN-219	-2.377E-02		3.582E-01	5.723E-01	7.773E-02	-0.042
RN-220	-1.385E+01		2.173E+01	3.482E+01	2.344E+00	-0.398
RA-223	1.025E-01		6.492E-01	9.392E-01	1.547E-01	0.109
AC-227	5.529E-02		3.373E-01	5.694E-01	7.887E-02	0.097
TH-227	5.529E-02		3.373E-01	5.694E-01	9.572E-02	0.097
TH-229	-1.069E-01		4.823E-01	7.738E-01	4.066E-02	-0.138
PA-231	-1.075E+00		1.592E+00	2.210E+00	3.028E-01	-0.486
TH-231	1.025E-01		6.492E-01	9.392E-01	1.547E-01	0.109
U-231	2.636E-01		7.412E-01	1.116E+00	8.902E-02	0.236
PA-233	1.812E-03		5.348E-02	8.874E-02	5.359E-03	0.020
PA-234	-1.003E-01		2.652E-01	4.262E-01	8.234E-02	-0.235
PA-234M	3.496E+00		6.318E+00	1.057E+01	1.209E+00	0.331
U-235	6.076E-02		2.065E-01	3.383E-01	5.489E-02	0.180
NP-236	-8.830E-02		7.610E-02	1.194E-01	6.248E-03	-0.739
NP-239	1.102E-01		1.748E-01	2.968E-01	1.894E-02	0.371
AM-241	2.928E-02		1.467E-01	2.101E-01	1.632E-02	0.139

Sample ID : G232504010 Acquisition date : 7-JUL-2009 09:12:43

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	5.201E-02		8.991E-02	1.532E-01	1.114E-02	0.340
CM-247	1.702E-02		3.175E-02	5.223E-02	3.003E-03	0.326
CF-249	1.477E-02		3.568E-02	5.800E-02	3.294E-03	0.255
CF-251	-8.924E-02		1.173E-01	1.855E-01	9.587E-03	-0.481

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504010           *
* Acquisition date  :  7-JUL-2009 09:12:43 Detector SN#     :               *
* Detector ID       : GAM22                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.95      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504010           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.2872E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.798E+01	3.024E+00	2.225E-01	1.543E+00
CD-109	4.417E+00	9.357E-01	6.160E-01	4.774E-01
SN-126	4.356E-01	9.227E-02	6.099E-02	4.708E-02
HG-203	5.319E-02	5.421E-02	2.936E-02	2.766E-02
TL-208	5.673E-01	8.894E-02	2.478E-02	4.538E-02
BI-211	4.554E+00	4.628E-01	1.534E-01	2.361E-01
BI-212	1.060E+00	4.074E-01	2.095E-01	2.079E-01
PB-212	1.933E+00	1.681E-01	4.201E-02	8.579E-02
PO-212	1.933E+00	1.681E-01	4.201E-02	8.579E-02
BI-214	1.328E+00	1.779E-01	4.874E-02	9.075E-02
PB-214	1.584E+00	1.802E-01	5.092E-02	9.196E-02
PO-214	1.584E+00	1.802E-01	5.092E-02	9.196E-02
PO-216	1.933E+00	1.681E-01	4.201E-02	8.579E-02
PO-218	1.584E+00	1.802E-01	5.092E-02	9.196E-02
RA-224	5.445E+00	1.038E+00	4.773E-01	5.293E-01
RA-226	1.328E+00	1.779E-01	4.874E-02	9.075E-02
AC-228	2.013E+00	3.453E-01	9.685E-02	1.762E-01
RA-228	2.013E+00	3.453E-01	9.685E-02	1.762E-01
TH-228	1.933E+00	1.681E-01	4.201E-02	8.579E-02
TH-230	1.328E+00	1.779E-01	4.874E-02	9.075E-02
TH-232	2.013E+00	3.453E-01	9.685E-02	1.762E-01
TH-234	1.736E+00	1.575E+00	9.223E-01	8.034E-01
U-234	1.328E+00	1.779E-01	4.874E-02	9.075E-02
NP-237	1.279E+00	3.746E-01	2.005E-01	1.911E-01
U-238	1.736E+00	1.575E+00	9.223E-01	8.034E-01
AM-243	4.905E-01	8.089E-02	4.111E-02	4.127E-02
ANH-511	9.453E-02	5.035E-02	2.060E-02	2.569E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-1.016E-03	2.678E-01	2.234E-01	1.366E-01	NOT IDENT.
NA-22	-1.820E-03	3.965E-02	3.366E-02	2.023E-02	NOT IDENT.
NA-24	-8.020E+04	5.284E+04	0.000E+00	2.696E+04	SHORT HLIF
AL-26	1.136E-02	2.305E-02	2.067E-02	1.176E-02	NOT IDENT.
TI-44	4.576E-01	5.849E-02	3.955E-02	2.984E-02	FAIL ABUN
SC-46	-2.804E-02	3.237E-02	2.601E-02	1.652E-02	FAIL ABUN
V-48	-1.616E-02	5.732E-02	4.762E-02	2.925E-02	NOT IDENT.
CR-51	2.644E-01	2.916E-01	2.616E-01	1.488E-01	NOT IDENT.
MN-52	1.005E-01	1.493E-01	1.330E-01	7.618E-02	NOT IDENT.
MN-54	-1.046E-02	3.280E-02	2.772E-02	1.673E-02	NOT IDENT.
CO-56	-1.350E-02	3.446E-02	2.892E-02	1.758E-02	NOT IDENT.
CO-57	1.813E-04	2.265E-02	1.998E-02	1.156E-02	NOT IDENT.
CO-58	-1.333E-02	3.060E-02	2.566E-02	1.561E-02	NOT IDENT.
FE-59	-9.406E-02	7.827E-02	5.981E-02	3.994E-02	NOT IDENT.
CO-60	-4.383E-03	3.220E-02	2.699E-02	1.643E-02	NOT IDENT.
ZN-65	6.994E-02	9.311E-02	7.051E-02	4.750E-02	NOT IDENT.
GE-68	-8.138E-01	1.081E+00	8.575E-01	5.513E-01	NOT IDENT.
AS-73	-1.461E-01	6.843E-01	5.723E-01	3.491E-01	NOT IDENT.
AS-74	1.138E-02	7.246E-02	6.250E-02	3.697E-02	NOT IDENT.
SE-75	-2.216E-02	4.270E-02	3.171E-02	2.178E-02	FAIL ABUN
BR-77	-2.898E+00	4.233E+00	3.527E+00	2.160E+00	FAIL ABUN
SR-82	-4.189E-02	3.187E-01	2.574E-01	1.626E-01	NOT IDENT.
RB-83	-3.836E-02	5.260E-02	4.370E-02	2.684E-02	NOT IDENT.
RB-84	2.433E-02	5.410E-02	4.758E-02	2.760E-02	NOT IDENT.
KR-85	3.626E+01	7.977E+00	7.160E+00	4.070E+00	NOT IDENT.
SR-85	1.816E-01	3.995E-02	3.586E-02	2.038E-02	NOT IDENT.
RB-86	-4.162E-01	6.260E-01	4.999E-01	3.194E-01	NOT IDENT.
Y-88	3.504E-03	2.046E-02	1.772E-02	1.044E-02	NOT IDENT.
ZR-88	-9.856E-03	2.564E-02	2.137E-02	1.308E-02	NOT IDENT.
Y-91	2.089E+00	1.715E+01	1.431E+01	8.749E+00	NOT IDENT.
NB-94	1.776E-02	2.883E-02	2.508E-02	1.471E-02	NOT IDENT.
NB-95	6.291E-02	3.803E-02	3.420E-02	1.940E-02	NOT IDENT.
NB-95M	2.895E-01	1.336E-01	1.062E-01	6.815E-02	NOT IDENT.
ZR-95	3.878E-04	5.512E-02	4.610E-02	2.812E-02	NOT IDENT.
NB-97	-3.381E+03	8.843E+03	0.000E+00	4.512E+03	SHORT HLIF
ZR-97	4.486E+05	1.850E+05	0.000E+00	9.441E+04	SHORT HLIF
MO-99	3.120E+00	5.323E+00	4.613E+00	2.716E+00	NOT IDENT.
TC-99M	-6.585E+13	7.629E+13	0.000E+00	3.892E+13	SHORT HLIF
RH-101	-1.130E-02	3.118E-02	2.544E-02	1.591E-02	NOT IDENT.
RH-102	3.945E-03	2.453E-02	2.066E-02	1.251E-02	NOT IDENT.
RU-103	-7.343E-03	3.123E-02	2.684E-02	1.594E-02	FAIL ABUN
RH-106	2.185E-02	2.638E-01	2.259E-01	1.346E-01	FAIL ABUN
RU-106	2.185E-02	2.638E-01	2.259E-01	1.346E-01	FAIL ABUN
AG-108M	-1.302E-02	2.816E-02	2.313E-02	1.437E-02	NOT IDENT.
AG-110M	-1.214E-02	2.832E-02	2.339E-02	1.445E-02	NOT IDENT.
IN-111	3.787E-01	5.575E-01	4.446E-01	2.844E-01	NOT IDENT.
IN-113M	-1.025E-02	3.758E-02	3.152E-02	1.918E-02	NOT IDENT.
SN-113	-1.025E-02	3.758E-02	3.152E-02	1.918E-02	NOT IDENT.
IN-114M	4.184E-03	1.875E-01	1.400E-01	9.566E-02	NOT IDENT.
CD-115	5.308E-01	4.041E+00	3.523E+00	2.062E+00	NOT IDENT.
SN-117M	-2.841E-02	4.545E-02	3.851E-02	2.319E-02	NOT IDENT.
SB-122	3.363E-01	9.200E-01	8.067E-01	4.694E-01	NOT IDENT.
I-123	-1.514E+05	3.127E+05	0.000E+00	1.595E+05	SHORT HLIF
TE-123M	-1.251E-02	2.582E-02	2.198E-02	1.317E-02	NOT IDENT.
I-124	2.481E-01	4.557E-01	3.478E-01	2.325E-01	NOT IDENT.
SB-124	-2.088E-02	5.791E-02	4.548E-02	2.954E-02	NOT IDENT.
SB-125	7.021E-02	7.740E-02	6.815E-02	3.949E-02	FAIL ABUN
TE-125M	-8.110E+00	8.585E+00	7.228E+00	4.380E+00	NOT IDENT.
I-126	-5.543E-02	1.402E-01	1.161E-01	7.155E-02	NOT IDENT.
SB-126	6.641E-02	1.231E-01	9.605E-02	6.282E-02	FAIL ABUN
SB-127	2.376E-01	7.557E-01	6.497E-01	3.856E-01	NOT IDENT.
XE-127	3.601E-03	4.447E-02	3.499E-02	2.269E-02	NOT IDENT.
I-131	6.425E-02	8.055E-02	6.946E-02	4.110E-02	NOT IDENT.
TE-132	-1.990E-01	4.043E-01	3.330E-01	2.063E-01	NOT IDENT.
BA-133	4.281E-02	4.022E-02	3.173E-02	2.052E-02	NOT IDENT.
I-133	1.762E+02	7.789E+02	0.000E+00	3.974E+02	SHORT HLIF
CS-134	1.310E-01	6.634E-02	3.786E-02	3.385E-02	FAIL ABUN
CS-135	2.587E-01	1.602E-01	1.311E-01	8.173E-02	NOT IDENT.
I-135	-1.478E+12	1.820E+13	0.000E+00	9.286E+12	SHORT HLIF
CS-136	5.097E-02	8.388E-02	7.321E-02	4.279E-02	FAIL ABUN
BA-137M	2.570E-02	3.055E-02	2.701E-02	1.559E-02	NOT IDENT.
CS-137	2.717E-02	3.229E-02	2.855E-02	1.648E-02	NOT IDENT.
CE-139	-3.107E-02	2.694E-02	2.229E-02	1.375E-02	NOT IDENT.
BA-140	-4.368E-02	1.837E-01	1.563E-01	9.374E-02	NOT IDENT.
LA-140	-8.808E-02	6.912E-02	4.991E-02	3.527E-02	FAIL ABUN
CE-141	7.288E-02	5.580E-02	5.041E-02	2.847E-02	NOT IDENT.
CE-143	2.983E+02	7.887E+01	0.000E+00	4.024E+01	SHORT HLIF
CE-144	-1.586E-01	1.894E-01	1.605E-01	9.664E-02	NOT IDENT.

PM-144	-3.823E-03	2.944E-02	2.463E-02	1.502E-02	NOT IDENT.
PR-144	-2.587E-01	1.993E+00	1.667E+00	1.017E+00	NOT IDENT.
PM-146	2.804E-02	3.630E-02	3.162E-02	1.852E-02	NOT IDENT.
ND-147	1.864E-01	3.723E-01	3.301E-01	1.899E-01	FAIL ABUN
PM-149	4.471E+01	4.029E+01	3.453E+01	2.055E+01	NOT IDENT.
EU-152	-1.343E-02	1.084E-01	6.973E-02	5.530E-02	NOT IDENT.
GD-153	-1.520E-02	7.670E-02	6.006E-02	3.913E-02	NOT IDENT.
EU-154	-1.680E-03	1.111E-01	9.451E-02	5.668E-02	NOT IDENT.
EU-155	1.161E-01	9.781E-02	8.981E-02	4.990E-02	FAIL ABUN
TB-160	-3.246E-02	1.128E-01	9.469E-02	5.754E-02	FAIL ABUN
HO-166M	-1.671E-03	5.108E-02	4.288E-02	2.606E-02	NOT IDENT.
TM-171	-1.800E+01	2.806E+01	2.070E+01	1.432E+01	NOT IDENT.
LU-176	4.291E-03	2.174E-02	1.798E-02	1.109E-02	FAIL ABUN
LU-177	3.435E+00	1.219E+00	7.714E-01	6.217E-01	FAIL ABUN
LU-177M	-1.096E-01	1.558E-01	1.273E-01	7.951E-02	FAIL ABUN
HF-181	-2.108E-02	3.400E-02	2.875E-02	1.735E-02	NOT IDENT.
W-181	-1.031E-01	3.575E-01	2.683E-01	1.824E-01	NOT IDENT.
TA-182	-6.329E-02	1.746E-01	1.464E-01	8.910E-02	FAIL ABUN
RE-183	1.497E-01	9.900E-02	8.869E-02	5.051E-02	FAIL ABUN
RE-184	1.341E-01	1.960E-01	1.770E-01	1.000E-01	NOT IDENT.
OS-185	2.018E-03	3.385E-02	2.885E-02	1.727E-02	NOT IDENT.
RE-188	6.004E-02	1.573E-01	1.380E-01	8.026E-02	NOT IDENT.
W-188	-6.261E+00	6.931E+00	4.970E+00	3.536E+00	FAIL ABUN
IR-192	-2.705E-02	2.766E-02	2.287E-02	1.411E-02	FAIL ABUN
AU-195	3.110E-01	2.198E-01	1.823E-01	1.121E-01	FAIL ABUN
TL-200	1.434E+01	9.457E+01	0.000E+00	4.825E+01	SHORT HLIF
TL-201	-1.849E+00	3.783E+00	3.206E+00	1.930E+00	NOT IDENT.
TL-202	-1.094E-02	5.145E-02	4.277E-02	2.625E-02	NOT IDENT.
BI-207	5.865E-03	4.544E-02	3.847E-02	2.318E-02	FAIL ABUN
TL-207	1.025E-01	6.362E-01	4.813E-01	3.246E-01	FAIL ABUN
PO-209	-5.583E-01	6.408E+00	5.445E+00	3.270E+00	NOT IDENT.
BI-210	1.110E+00	2.662E+00	2.338E+00	1.358E+00	NOT IDENT.
PB-210	1.110E+00	2.662E+00	2.338E+00	1.358E+00	NOT IDENT.
PO-210	1.110E+00	2.662E+00	2.338E+00	1.358E+00	NOT IDENT.
PB-211	-7.531E-01	9.372E-01	6.614E-01	4.782E-01	NOT IDENT.
PO-215	1.025E-01	6.362E-01	4.813E-01	3.246E-01	FAIL ABUN
RN-219	-2.377E-02	3.511E-01	2.923E-01	1.791E-01	FAIL ABUN
RN-220	-1.385E+01	2.129E+01	1.770E+01	1.086E+01	NOT IDENT.
RA-223	1.025E-01	6.362E-01	4.813E-01	3.246E-01	FAIL ABUN
AC-227	5.529E-02	3.305E-01	2.928E-01	1.686E-01	FAIL ABUN
TH-227	5.529E-02	3.306E-01	2.928E-01	1.686E-01	FAIL ABUN
TH-229	-1.069E-01	4.727E-01	3.997E-01	2.412E-01	FAIL ABUN
PA-231	-1.075E+00	1.560E+00	1.135E+00	7.958E-01	FAIL ABUN
TH-231	1.025E-01	6.362E-01	4.813E-01	3.246E-01	FAIL ABUN
U-231	2.636E-01	7.263E-01	5.823E-01	3.706E-01	FAIL ABUN
PA-233	1.812E-03	5.241E-02	4.550E-02	2.674E-02	FAIL ABUN
PA-234	-1.003E-01	2.599E-01	2.148E-01	1.326E-01	FAIL ABUN
PA-234M	3.496E+00	6.192E+00	5.320E+00	3.159E+00	NOT IDENT.
U-235	6.076E-02	2.024E-01	1.755E-01	1.032E-01	FAIL ABUN
NP-236	-8.830E-02	7.457E-02	6.186E-02	3.805E-02	NOT IDENT.
NP-239	1.102E-01	1.713E-01	1.544E-01	8.741E-02	FAIL ABUN
AM-241	2.928E-02	1.437E-01	1.104E-01	7.333E-02	NOT IDENT.
CM-243	5.201E-02	8.811E-02	7.985E-02	4.496E-02	FAIL ABUN
CM-247	1.702E-02	3.112E-02	2.667E-02	1.588E-02	FAIL ABUN
CF-249	1.477E-02	3.496E-02	2.964E-02	1.784E-02	NOT IDENT.
CF-251	-8.924E-02	1.150E-01	9.592E-02	5.865E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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```

ENERGY	MDA COUNTS
46.50	408.6756
46.50	408.6756
46.50	408.6756
48.70	486.5167
49.72	462.5211
51.35	448.9132
52.39	420.2108
52.97	441.5710
53.15	441.8298
53.44	469.3432
54.07	469.2118
56.28	503.1279
56.28	503.1332
57.37	0.0000
57.53	483.1266
57.53	483.1299
57.60	483.2306
57.98	493.4705
57.98	493.4705
59.32	457.0639
59.32	457.0639
59.40	457.1745
59.54	500.4525
59.72	500.7232
60.01	482.9045
61.10	546.0715
61.14	546.1366
61.30	551.3918
63.00	562.5075
63.29	562.9792
63.29	562.9792
63.58	563.4503
64.28	589.7859
65.12	628.2508
65.20	628.3931
65.20	628.3931
66.05	656.9183
66.72	641.2252
66.83	641.4247
66.91	660.1900
67.20	660.7196
67.20	660.7196
67.75	631.1813
67.85	636.4489
68.90	612.7487
68.90	612.7487
69.30	632.1594
69.67	615.7397
70.82	679.2331
70.82	679.2331
70.83	679.2513
72.80	637.5103
72.87	637.6291
72.87	637.6291
74.67	640.6154
74.81	640.8474
74.81	640.8474
74.81	640.8474
74.81	640.8474
74.81	640.8474
74.81	640.8474
74.97	641.1104
75.28	641.6194
75.70	642.3094
77.11	644.6085
77.11	644.6085
77.11	644.6085

77.11	644.6085
77.11	644.6085
77.11	644.6085
78.38	610.6068
79.62	566.9877
79.80	602.2520
79.80	602.2520
80.11	661.5807
80.18	661.6945
80.30	661.8890
80.30	661.8890
80.57	731.0853
81.00	750.1129
81.07	750.2401
81.07	750.2401
81.07	750.2401
81.07	750.2401
82.60	646.3188
83.37	663.9869
83.78	664.6409
83.78	664.6409
83.78	664.6409
83.78	664.6409
84.21	672.3987
84.40	647.2084
84.90	652.2263
85.43	657.2966
86.29	718.3644
86.50	788.4525
86.54	788.5269
86.59	788.6182
86.72	788.8549
86.79	788.9800
86.94	641.9838
87.30	642.5202
87.30	642.5202
87.30	642.5202
87.30	642.5202
87.30	642.5202
87.30	642.5202
87.57	642.9190
87.88	643.3783
88.03	643.6011
88.36	644.0879
88.47	644.2502
89.95	646.4230
91.11	648.1145
92.29	649.8225
92.38	649.9518
92.38	649.9518
93.35	651.3462
94.00	652.2786
94.67	466.7723
94.67	466.7782
94.90	481.5155
94.90	481.5155
94.90	481.5155
94.90	481.5155
95.87	510.1454
95.87	510.1454
96.73	537.3044
97.43	492.8995
98.44	450.1191
98.44	450.1191
98.88	435.9105
99.55	461.4296
99.55	461.4296
99.86	479.5307
100.00	487.5273
100.10	487.6328
103.18	559.0169
103.76	483.9500
105.00	453.6917
105.31	461.3886
108.00	520.7039
109.28	531.3624
111.00	484.4311
111.00	484.4311

111.76	500.1613
112.95	500.3715
115.19	454.3448
116.30	454.3524
117.00	440.7339
117.00	440.7339
117.66	439.3806
121.11	457.4733
121.62	449.2955
121.78	447.5139
122.06	446.7857
122.32	460.3962
122.32	460.3962
122.32	460.3962
122.32	460.3962
123.07	430.3528
127.23	520.4702
129.76	454.8885
131.20	512.4210
133.02	540.3605
133.54	508.6261
135.34	456.3225
136.00	461.7325
136.25	450.1577
136.48	450.3328
140.51	509.6539
140.51	0.0000
142.18	503.1243
142.65	480.7114
143.76	495.4785
144.24	461.0830
144.24	461.0830
144.24	461.0830
144.24	461.0830
145.22	458.8229
145.44	458.9847
147.16	549.1021
152.43	442.9239
152.70	450.1580
153.22	456.5667
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154.21	492.5906
154.21	492.5906
154.21	492.5906
155.03	481.0842
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159.00	470.7643
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161.27	455.0172
162.32	389.3076
162.64	389.4937
163.35	393.9941
163.89	426.0547
165.85	479.6591
167.43	442.6698
171.28	436.8327
171.86	433.0493
172.10	408.3235
176.55	447.3780
176.60	447.4074
181.06	451.6291
184.41	457.0512
185.71	466.7182
186.00	466.9003
190.27	452.1253
192.34	441.9062
193.63	449.2011
197.04	435.1013
198.01	401.3041
198.60	417.7108
200.40	443.4205
201.83	428.0459
202.84	426.0691
205.31	395.0395
208.36	395.6562
208.81	395.8755

209.75	396.3310
209.75	396.3310
210.97	354.1745
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216.55	376.5380
218.09	367.3282
222.10	415.4755
223.80	403.0099
226.40	365.3559
227.00	386.7236
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227.20	386.8112
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228.18	418.4044
228.18	418.4044
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235.69	416.5833
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236.00	423.9127
238.60	372.8957
238.63	372.9083
238.63	372.9083
238.63	372.9083
239.00	373.0599
240.98	373.8761
241.98	374.2854
241.98	374.2854
241.98	374.2854
244.69	287.1357
245.39	284.3275
247.94	316.9591
248.90	324.4954
249.79	348.4838
252.40	303.5356
252.85	301.8521
252.85	301.8521
254.15	0.0000
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256.20	327.7029
260.50	311.6515
260.90	323.7709
262.80	349.6674
264.65	324.0961
268.24	317.5348
268.79	324.5334
269.46	324.7506
269.46	324.7506
269.46	324.7506
269.46	324.7506
271.23	316.9404
273.65	284.9993
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277.35	318.8704
277.60	323.6396
277.60	323.6396
278.00	315.3240
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279.53	311.7230
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281.68	291.9722
283.67	330.2826
284.30	310.0249
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285.90	250.6113
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286.10	270.0996
287.40	287.2743
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290.80	310.3772
291.72	315.4032
293.26	0.0000
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295.21	246.4762
295.21	246.4762
295.21	246.4762
295.96	243.4671

296.50	243.5885
297.23	243.7566
298.57	244.0616
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299.80	285.8603
300.09	285.9368
300.09	285.9368
300.09	285.9368
300.10	285.9404
300.12	285.9477
301.29	260.6700
302.84	240.2222
303.76	266.0721
303.91	266.1059
304.40	261.4161
304.40	261.4161
304.84	240.6647
306.84	253.1593
308.46	279.1256
311.98	244.1650
316.51	262.6666
318.01	255.2229
319.02	247.6531
319.41	245.7861
320.08	228.3642
323.87	257.8494
323.87	257.8494
323.87	257.8494
323.87	257.8494
325.23	277.7614
328.77	288.4456
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334.20	281.5593
334.20	281.5593
334.30	281.5836
338.28	265.6838
338.28	265.6838
338.28	265.6838
338.28	265.6838
338.32	265.6903
338.32	265.6903
338.32	265.6903
340.50	231.7497
340.57	231.7611
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351.92	248.6569
351.92	248.6569
355.39	0.0000
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364.48	190.4188
366.43	218.1022
367.43	226.3973
367.94	0.0000
369.80	238.0076
374.96	215.4817
383.85	226.2197
387.95	213.5168
388.63	197.1133
391.69	229.6353
391.69	229.6353
392.90	227.7720
398.62	218.3492
400.65	230.1319
401.10	217.7075
401.81	208.4424
402.60	190.8353
404.84	254.8656
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411.60	207.8371
413.65	252.2959
414.70	263.0066
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417.63	0.0000

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427.89	178.4016
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433.93	209.0108
439.47	194.8258
439.56	194.8369
439.89	194.8813
443.98	204.0157
444.90	176.2079
445.03	164.4040
445.03	164.4040
445.03	164.4040
445.03	164.4040
453.90	167.5502
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468.07	178.2172
473.00	212.3556
475.06	174.2770
475.35	173.2117
476.78	183.2475
477.59	183.3433
477.96	176.7973
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487.03	175.7964
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497.08	170.4224
507.63	0.0000
510.53	0.0000
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511.00	183.0930
511.85	187.4613
511.85	187.4613
513.99	168.4525
513.99	168.4525
520.41	162.5289
520.65	162.5500
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529.64	136.9700
529.87	0.0000
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543.00	174.2208
546.56	0.0000
549.76	170.1198
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555.20	142.8462
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569.32	153.6463
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569.67	141.1137
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574.00	160.4418
574.64	174.4556
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593.00	168.8641
595.88	171.5785
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602.71	173.7514
602.71	173.7514
603.60	194.0826
604.41	202.6088
604.70	182.3781
609.31	170.8319
609.31	170.8319
609.31	170.8319

609.31	170.8319
610.33	170.9234
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614.37	151.0566
618.01	153.2584
621.84	149.0906
621.84	149.0906
631.29	152.8132
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633.10	145.9554
634.78	148.0813
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646.12	133.8388
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657.75	149.7976
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661.65	145.0133
661.65	145.0133
664.57	0.0000
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666.33	173.8076
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685.20	133.3431
692.80	137.9449
695.00	144.2696
696.49	160.8718
696.49	160.8718
697.00	172.2561
697.49	165.0749
698.33	174.4291
698.50	176.5073
699.00	175.5166
702.63	147.8906
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713.82	165.2950
717.42	145.7849
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722.78	157.4774
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722.95	157.4897
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724.18	161.1600
727.18	156.0004
733.00	131.2406
735.90	117.0122
739.58	110.4431
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744.21	126.4819
747.13	122.4264
751.79	111.0455
752.31	113.1868
753.82	119.6142
755.35	124.9909
756.15	117.6168
756.87	131.4346
763.93	194.5715
765.79	144.7158
766.41	139.4327
766.84	146.9114
768.36	141.6832
768.36	141.6832
768.36	141.6832
768.36	141.6832
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778.00	152.4355
778.57	144.9068
778.89	154.0986
783.80	125.0098

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792.07	71.0273
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796.30	108.6709
801.93	124.1201
805.60	110.3942
810.29	130.1294
810.76	120.8594
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817.79	104.4277
818.51	108.1897
819.60	92.3757
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831.60	126.5860
831.96	139.7343
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836.80	0.0000
846.75	145.2881
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856.80	121.0065
860.37	126.1556
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867.82	113.2081
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873.19	120.1201
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875.33	0.0000
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879.36	114.6742
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880.51	93.6934
881.50	99.4678
883.24	111.9767
884.67	111.0804
889.25	125.6658
896.60	121.2100
898.02	125.1259
899.00	127.0970
903.28	116.1168
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911.07	126.9539
911.07	126.9539
919.63	120.5687
920.93	110.4333
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925.24	110.8550
926.50	110.9067
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934.06	100.4854
934.06	100.4854
934.06	100.4854
935.52	117.1331
937.48	131.8689
944.10	112.6055
946.00	121.5024
949.00	113.7890
962.29	136.2682
964.01	134.6266
966.15	145.0928
968.20	202.2435
969.11	166.9842
969.11	166.9842
969.11	166.9842
977.42	103.2844
980.50	93.2558
983.50	123.1480
989.30	112.4541
996.32	132.6823
1001.03	116.9123
1001.68	112.9409
1004.76	116.0627
1021.30	0.0000
1024.50	0.0000
1034.80	121.3058
1037.82	106.2524
1038.57	111.3389

1038.76	0.0000
1045.16	106.5125
1046.59	113.6680
1048.07	103.5724
1050.47	129.0597
1050.47	129.0597
1063.62	109.2093
1076.63	117.8798
1077.35	122.0090
1085.78	120.2849
1099.22	135.2628
1112.02	108.8635
1112.84	110.7040
1115.52	121.6992
1120.29	138.2556
1120.29	138.2556
1120.29	138.2556
1120.29	138.2556
1120.51	138.2649
1121.28	138.2974
1124.00	0.0000
1129.67	107.6469
1131.51	0.0000
1147.95	0.0000
1167.94	130.8202
1173.22	132.0844
1175.09	156.4757
1177.93	147.0912
1189.05	156.0747
1204.90	147.2170
1205.75	0.0000
1213.00	149.7070
1221.42	159.4580
1230.97	200.3505
1235.34	169.5245
1236.41	0.0000
1238.11	139.4998
1238.11	139.4998
1238.11	139.4998
1238.11	139.4998
1238.25	139.5043
1246.25	184.2348
1260.41	0.0000
1271.85	109.4479
1274.45	115.2432
1274.54	115.2469
1291.56	95.7031
1298.22	0.0000
1312.09	86.6245
1325.50	70.5205
1325.50	70.5205
1332.49	72.5922
1333.61	63.8992
1360.21	71.1866
1362.66	0.0000
1365.15	63.4686
1368.21	73.2925
1368.53	0.0000
1376.25	48.9655
1377.67	64.6586
1377.67	64.6586
1377.67	64.6586
1377.67	64.6586
1384.27	100.1012
1394.10	61.0048
1395.20	68.8956
1407.95	67.1492
1434.06	48.7129
1436.60	56.7025
1457.56	0.0000
1460.81	48.0439
1489.15	40.3198
1509.49	40.5225
1596.49	70.3325
1620.62	39.5226
1678.03	0.0000
1691.02	32.7578
1691.02	32.7578

1706.46	0.0000
1750.46	0.0000
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1764.49	26.7232
1764.49	26.7232
1764.49	26.7232
1770.23	29.2403
1771.40	24.0864
1791.20	0.0000
1808.65	23.1198
1836.01	16.4697

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504010

Total Uranium Activity	5.1922E+00	ug/g
Total Uranium Counting Unc.	4.6853E+00	ug/g
Total Uranium Tpu	2.3905E-06	ug/g
Total Uranium Mda	2.7450E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232504010      *
*   ANALYST       : MXR1                      DETECTOR    : GAM22           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 09:12:43.85    SAMPLE ALQT:  128.720 GRAM    *
*                                                                           *
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GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.084E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.247E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.081E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.014E+00
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VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:14:41.69

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504011.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:13:19.
Sample ID         : G232504011           Sample quantity  : 1.46410E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.96  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.99*	56	456	0.88	126.15	122	9	7.75E-03	71.1	
2	3	74.88*	439	343	0.98	149.94	144	14	6.09E-02	8.3	1.89E+00
3	3	77.17*	592	260	0.88	154.51	144	14	8.23E-02	5.9	
4	6	87.30	232	341	1.08	174.77	171	20	3.22E-02	14.0	1.45E+00
5	6	89.96	145	270	0.85	180.11	171	20	2.02E-02	18.8	
6	6	92.94*	235	360	1.25	186.07	171	20	3.26E-02	15.7	
7	0	105.58	70	367	1.09	211.34	208	8	9.72E-03	48.8	
8	0	129.15	78	327	0.99	258.49	255	8	1.08E-02	42.0	
9	0	186.08*	156	383	1.15	372.38	367	10	2.17E-02	25.3	
10	0	209.38	104	313	1.28	418.99	415	9	1.44E-02	32.2	
11	6	238.76*	1241	172	0.97	477.78	473	16	1.72E-01	3.3	1.19E+00
12	6	241.63	342	190	1.95	483.52	473	16	4.75E-02	11.0	
13	0	270.50	136	241	1.37	541.28	536	13	1.88E-02	25.1	
14	0	278.03	82	180	1.27	556.34	552	10	1.14E-02	32.7	
15	0	295.19*	379	223	0.92	590.66	585	12	5.27E-02	9.4	
16	0	300.15	89	206	1.15	600.58	596	12	1.24E-02	33.9	
17	0	327.82	62	149	1.63	655.94	653	9	8.54E-03	37.9	
18	0	338.57	223	173	1.27	677.46	671	10	3.09E-02	12.9	
19	0	351.91*	603	190	1.27	704.14	698	13	8.38E-02	6.3	
20	0	410.19	54	122	1.78	820.75	817	12	7.44E-03	43.6	
21	0	463.17	86	82	0.90	926.76	922	10	1.20E-02	22.4	
22	0	511.00*	123	142	1.36	1022.45	1015	15	1.70E-02	25.8	
23	0	583.55*	351	150	1.54	1167.61	1162	12	4.88E-02	8.9	
24	0	609.63	419	138	1.40	1219.79	1214	12	5.81E-02	7.5	
25	0	727.17	98	45	1.21	1454.98	1449	12	1.36E-02	17.0	
26	0	861.09	53	52	1.30	1722.97	1717	11	7.37E-03	29.7	
27	0	911.23	280	47	1.71	1823.31	1814	17	3.88E-02	8.2	
28	0	969.73	117	123	1.41	1940.38	1932	15	1.63E-02	23.1	
29	0	1120.87	87	46	2.20	2242.86	2238	10	1.21E-02	18.2	
30	0	1240.13	23	109	1.27	2481.54	2470	15	3.26E-03	98.9	
31	0	1461.12*	1205	61	2.01	2923.88	2913	20	1.67E-01	3.3	
32	0	1765.04	77	0	1.75	3532.26	3525	15	1.07E-02	11.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 11:14:44

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504011.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:13:19
Sample ID : G232504011 Sample quantity : 146.41 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA23 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:03.96 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.905E+01	2.895E+00	6.180E-01	4.623E-02	47.006
CD-109	+	88.03	*	3.116E+00	9.226E-01	1.067E+00	1.042E-01	2.920
SN-126	+	64.28		5.852E-01	8.363E-01	7.507E-01	1.143E-01	0.779
	+	86.94		1.278E+00	6.404E-01	4.435E-01	1.844E-01	2.881
	+	87.57	*	3.073E-01	9.099E-02	1.058E-01	1.030E-02	2.903
EU-155		48.70		-1.941E+00	2.659E+00	4.188E+00	3.378E-01	-0.463
		60.01		-1.163E+00	4.748E+00	6.991E+00	6.072E-01	-0.166
	+	86.54		3.698E-01	1.096E-01	1.290E-01	1.254E-02	2.866
	+	105.31	*	1.423E-01	1.392E-01	1.452E-01	1.071E-02	0.980
HG-203		70.83		5.079E-01	9.781E-01	1.481E+00	2.028E-01	0.343
		72.87		4.700E-01	5.128E-01	8.453E-01	1.127E-01	0.556
		82.60		-6.076E-01	9.027E-01	1.374E+00	1.952E-01	-0.442
	+	279.20	*	7.963E-02	5.238E-02	5.670E-02	3.502E-03	1.405
TL-208	+	277.35		7.469E-01	4.954E-01	5.221E-01	5.516E-02	1.431
	+	510.84		5.728E-01	3.014E-01	2.105E-01	2.139E-02	2.721
	+	583.14	*	4.702E-01	8.947E-02	6.103E-02	3.962E-03	7.705
	+	860.37		6.792E-01	4.083E-01	5.171E-01	4.674E-02	1.314
BI-211		72.87		2.443E+00	2.654E+00	4.393E+00	3.875E-01	0.556
	+	351.07	*	3.477E+00	4.905E-01	2.867E-01	1.868E-02	12.128
PB-212	+	74.81		2.587E+00	5.429E-01	4.572E-01	5.898E-02	5.658
	+	77.11		1.955E+00	2.913E-01	2.569E-01	2.312E-02	7.610
	+	87.30		1.421E+00	4.442E-01	4.911E-01	6.844E-02	2.894
	+	238.63	*	1.541E+00	1.513E-01	7.674E-02	5.518E-03	20.075
	+	300.09		1.723E+00	1.177E+00	1.068E+00	8.866E-02	1.614
PO-212	+	74.81		2.587E+00	5.429E-01	4.572E-01	5.898E-02	5.658
	+	77.11		1.955E+00	2.913E-01	2.569E-01	2.312E-02	7.610
	+	87.30		1.421E+00	4.442E-01	4.911E-01	6.844E-02	2.894
		115.19		1.351E+00	2.800E+00	4.864E+00	3.103E-01	0.278
	+	238.63	*	1.541E+00	1.513E-01	7.674E-02	5.518E-03	20.075
	+	300.09		1.723E+00	1.177E+00	1.068E+00	8.866E-02	1.614
BI-214	+	609.31	*	1.058E+00	1.771E-01	1.196E-01	8.992E-03	8.845
		768.36		9.843E-01	7.876E-01	1.389E+00	1.251E-01	0.709
		934.06		2.165E+00	1.280E+00	2.370E+00	2.557E-01	0.913
	+	1120.29		1.176E+00	4.423E-01	4.660E-01	4.330E-02	2.524

Sample ID : G232504011 Acquisition date : 7-JUL-2009 09:13:19

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.711E+00	1.072E+00	1.916E+00	1.633E-01	0.893
		1377.67		1.207E+00	1.098E+00	2.014E+00	1.947E-01	0.599
	+	1764.49		1.430E+00	3.378E-01	2.817E-01	1.751E-02	5.077
PB-214	+	74.81		4.457E+00	9.002E-01	7.878E-01	9.118E-02	5.658
	+	77.11		3.352E+00	5.610E-01	4.405E-01	5.193E-02	7.610
	+	87.30		2.435E+00	7.449E-01	8.413E-01	1.043E-01	2.894
	+	241.98		2.551E+00	5.976E-01	4.629E-01	3.681E-02	5.511
	+	295.21		1.283E+00	2.662E-01	1.950E-01	1.672E-02	6.578
	+	351.92	*	1.210E+00	1.819E-01	9.997E-02	8.344E-03	12.100
PO-214	+	74.81		4.457E+00	9.002E-01	7.878E-01	9.118E-02	5.658
	+	77.11		3.352E+00	5.610E-01	4.405E-01	5.193E-02	7.610
	+	87.30		2.435E+00	7.449E-01	8.413E-01	1.043E-01	2.894
	+	241.98		2.551E+00	5.976E-01	4.629E-01	3.681E-02	5.511
	+	295.21		1.283E+00	2.662E-01	1.950E-01	1.672E-02	6.578
	+	351.92	*	1.210E+00	1.819E-01	9.997E-02	8.344E-03	12.100
PO-216	+	74.81		2.587E+00	5.429E-01	4.572E-01	5.898E-02	5.658
	+	77.11		1.955E+00	2.913E-01	2.569E-01	2.312E-02	7.610
	+	87.30		1.421E+00	4.442E-01	4.911E-01	6.844E-02	2.894
	+	238.63	*	1.541E+00	1.513E-01	7.674E-02	5.518E-03	20.075
	+	300.09		1.723E+00	1.177E+00	1.068E+00	8.866E-02	1.614
PO-218	+	74.81		4.457E+00	9.002E-01	7.878E-01	9.118E-02	5.658
	+	77.11		3.352E+00	5.610E-01	4.405E-01	5.193E-02	7.610
	+	87.30		2.435E+00	7.449E-01	8.413E-01	1.043E-01	2.894
	+	241.98		2.551E+00	5.976E-01	4.629E-01	3.681E-02	5.511
	+	295.21		1.283E+00	2.662E-01	1.950E-01	1.672E-02	6.578
	+	351.92	*	1.210E+00	1.819E-01	9.997E-02	8.344E-03	12.100
RA-224	+	240.98	*	4.837E+00	1.100E+00	8.743E-01	4.926E-02	5.532
RA-226	+	609.31	*	1.058E+00	1.771E-01	1.196E-01	8.992E-03	8.845
		768.36		9.843E-01	7.876E-01	1.389E+00	1.251E-01	0.709
		934.06		2.165E+00	1.280E+00	2.370E+00	2.557E-01	0.913
	+	1120.29		1.176E+00	4.423E-01	4.660E-01	4.330E-02	2.524
		1238.11		1.711E+00	1.072E+00	1.916E+00	1.633E-01	0.893
		1377.67		1.207E+00	1.098E+00	2.014E+00	1.947E-01	0.599
	+	1764.49		1.430E+00	3.378E-01	2.817E-01	1.751E-02	5.077
AC-228	+	338.32		1.414E+00	6.816E-01	3.341E-01	1.363E-01	4.231
	+	911.07	*	1.697E+00	3.402E-01	2.283E-01	2.634E-02	7.433
	+	969.11		1.259E+00	6.505E-01	4.424E-01	1.030E-01	2.845
RA-228	+	338.32		1.414E+00	6.816E-01	3.341E-01	1.363E-01	4.231
	+	911.07	*	1.697E+00	3.402E-01	2.283E-01	2.634E-02	7.433
	+	969.11		1.259E+00	6.505E-01	4.424E-01	1.030E-01	2.845
TH-228		84.40		1.300E+00	2.411E+00	3.572E+00	4.897E-01	0.364
	+	238.60	*	1.541E+00	1.513E-01	7.674E-02	5.517E-03	20.077
	+	300.10		1.723E+00	1.548E+00	1.068E+00	6.294E-01	1.614
TH-230	+	609.31	*	1.058E+00	1.771E-01	1.196E-01	8.992E-03	8.845
		768.36		9.843E-01	7.876E-01	1.389E+00	1.251E-01	0.709
		934.06		2.165E+00	1.280E+00	2.370E+00	2.557E-01	0.913
	+	1120.29		1.176E+00	4.423E-01	4.660E-01	4.330E-02	2.524
		1238.11		1.711E+00	1.072E+00	1.916E+00	1.633E-01	0.893
		1377.67		1.207E+00	1.098E+00	2.014E+00	1.947E-01	0.599

Sample ID : G232504011 Acquisition date : 7-JUL-2009 09:13:19

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1764.49		1.430E+00	3.378E-01	2.817E-01	1.751E-02	5.077
TH-232	+	338.32		1.414E+00	3.730E-01	3.341E-01	1.973E-02	4.231
	+	911.07	*	1.697E+00	3.402E-01	2.283E-01	2.634E-02	7.433
	+	969.11		1.259E+00	6.505E-01	4.424E-01	1.030E-01	2.845
TH-234	+	63.29	*	1.478E+00	2.118E+00	1.861E+00	3.353E-01	0.795
	+	92.38		1.985E+00	7.218E-01	6.883E-01	1.255E-01	2.884
U-234	+	609.31	*	1.058E+00	1.771E-01	1.196E-01	8.992E-03	8.845
		768.36		9.843E-01	7.876E-01	1.389E+00	1.251E-01	0.709
		934.06		2.165E+00	1.280E+00	2.370E+00	2.557E-01	0.913
	+	1120.29		1.176E+00	4.423E-01	4.660E-01	4.330E-02	2.524
		1238.11		1.711E+00	1.072E+00	1.916E+00	1.633E-01	0.893
		1377.67		1.207E+00	1.098E+00	2.014E+00	1.947E-01	0.599
	+	1764.49		1.430E+00	3.378E-01	2.817E-01	1.751E-02	5.077
U-235	+	89.95		2.543E+00	1.241E+00	1.412E+00	4.388E-01	1.801
	+	93.35		2.387E+00	1.007E+00	8.206E-01	2.304E-01	2.908
	+	105.00		1.396E+00	1.423E+00	1.426E+00	4.204E-01	0.979
		143.76	*	1.395E-01	1.796E-01	3.064E-01	4.956E-02	0.455
		163.35		4.989E-01	3.924E-01	6.712E-01	1.193E-01	0.743
	+	185.71		1.355E-01	6.892E-02	6.000E-02	3.142E-03	2.258
		205.31		2.217E-01	4.895E-01	7.289E-01	1.301E-01	0.304
NP-237	+	86.50	*	9.024E-01	3.257E-01	3.150E-01	7.174E-02	2.865
		95.87		1.746E-02	8.352E-01	1.200E+00	2.946E-01	0.015
U-238	+	63.29	*	1.478E+00	2.118E+00	1.861E+00	3.353E-01	0.795
	+	92.38		1.985E+00	6.491E-01	6.883E-01	6.150E-02	2.884
AM-243	+	74.67	*	4.194E-01	7.880E-02	7.440E-02	6.611E-03	5.637
	+	86.72		3.384E+01	1.002E+01	1.178E+01	1.137E+00	2.873
		117.66		-2.689E+00	2.922E+00	4.759E+00	2.947E-01	-0.565
		142.18		-5.555E+00	1.449E+01	2.388E+01	1.300E+00	-0.233
ANH-511	+	511.00	*	1.237E-01	6.428E-02	4.549E-02	2.642E-03	2.720

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.156E-01	3.143E-01	5.315E-01	3.612E-02	0.406
NA-22		1274.54	*	-3.090E-02	5.375E-02	8.186E-02	5.497E-03	-0.378
NA-24		1368.53	*	-2.563E-02	5.375E-02	Half-Life too short		
AL-26		1129.67		7.953E-01	1.634E+00	2.800E+00	1.784E-01	0.284
		1808.65	*	4.071E-03	3.396E-02	5.777E-02	3.472E-03	0.070
TI-44		67.85		-4.514E-02	4.304E-02	6.556E-02	5.709E-03	-0.688
	+	78.38	*	3.608E-01	5.376E-02	6.164E-02	5.587E-03	5.854
SC-46		889.25	*	-6.016E-03	3.912E-02	6.465E-02	5.776E-03	-0.093
	+	1120.51		1.977E-01	7.317E-02	1.286E-01	8.376E-03	1.538
V-48		944.10		-5.401E-02	7.935E-01	1.313E+00	1.144E-01	-0.041
		983.50	*	-2.763E-02	6.551E-02	1.042E-01	8.669E-03	-0.265
		1312.09		-4.364E-03	7.411E-02	1.231E-01	8.754E-03	-0.035
CR-51		320.08	*	-9.439E-02	3.132E-01	5.157E-01	3.381E-02	-0.183
MN-52		744.21		1.952E-03	1.685E-01	2.751E-01	1.752E-02	0.007
		848.13		2.484E+00	5.344E+00	8.965E+00	7.315E-01	0.277

Sample ID : G232504011 Acquisition date : 7-JUL-2009 09:13:19

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		935.52		4.597E-01	2.187E-01	4.148E-01	3.647E-02	1.108
		1246.25		-2.874E+00	6.793E+00	9.256E+00	5.924E-01	-0.311
		1333.61		-1.920E-01	4.170E+00	6.923E+00	5.082E-01	-0.028
		1434.06	*	-7.184E-03	1.867E-01	3.076E-01	2.226E-02	-0.023
MN-54		834.83	*	1.066E-02	3.978E-02	6.555E-02	5.190E-03	0.163
CO-56		846.75	*	-6.287E-03	4.057E-02	6.430E-02	5.231E-03	-0.098
		977.42		-1.108E+00	2.863E+00	4.197E+00	3.519E-01	-0.264
		1037.82		-5.888E-02	3.176E-01	5.093E-01	4.175E-02	-0.116
		1175.09		2.247E+00	2.577E+00	4.487E+00	2.540E-01	0.501
		1238.25		1.669E-01	1.059E-01	1.897E-01	1.262E-02	0.880
		1360.21		-3.345E-01	9.156E-01	1.449E+00	1.061E-01	-0.231
		1771.40		-9.275E-02	2.010E-01	2.200E-01	1.361E-02	-0.422
CO-57		122.06	*	6.300E-03	1.987E-02	3.416E-02	2.014E-03	0.184
		136.48		6.395E-02	1.628E-01	2.784E-01	1.811E-02	0.230
CO-58		810.76	*	-3.393E-02	4.204E-02	6.283E-02	4.720E-03	-0.540
FE-59		142.65		-1.637E+00	2.219E+00	3.582E+00	1.948E-01	-0.457
		192.34		4.419E-01	7.998E-01	1.339E+00	1.549E-01	0.330
		1099.22	*	-2.183E-02	9.936E-02	1.596E-01	1.230E-02	-0.137
		1291.56		-2.230E-02	1.219E-01	2.003E-01	1.662E-02	-0.111
CO-60		1173.22		3.588E-03	5.350E-02	8.756E-02	4.940E-03	0.041
		1332.49	*	4.202E-02	4.138E-02	7.612E-02	5.588E-03	0.552
ZN-65		1115.52	*	5.898E-02	1.106E-01	1.655E-01	1.093E-02	0.356
GE-68		1077.35	*	5.774E-01	1.316E+00	2.249E+00	1.609E-01	0.257
AS-73		53.44	*	-1.370E-02	7.938E-01	1.295E+00	1.144E-01	-0.011
AS-74		595.88	*	-2.209E-02	8.420E-02	1.378E-01	7.600E-03	-0.160
		634.78		1.520E-02	3.187E-01	5.302E-01	2.807E-02	0.029
SE-75		66.05		4.988E-01	4.670E+00	7.013E+00	7.360E-01	0.071
		96.73		-2.860E-01	6.864E-01	9.548E-01	1.280E-01	-0.300
		121.11		-3.287E-02	1.048E-01	1.753E-01	1.635E-02	-0.187
		136.00		-1.809E-03	3.048E-02	5.114E-02	2.888E-03	-0.035
		198.60		-3.889E-01	1.587E+00	2.548E+00	1.720E-01	-0.153
		264.65	*	-2.323E-02	4.138E-02	5.978E-02	3.480E-03	-0.389
	+	279.53		2.172E-01	1.429E-01	1.603E-01	1.008E-02	1.355
		303.91		7.786E-01	1.900E+00	2.914E+00	2.795E-01	0.267
		400.65		3.475E-02	2.302E-01	3.816E-01	3.472E-02	0.091
BR-77	+	87.88		3.522E+02	1.043E+02	1.516E+02	1.480E+01	2.323
		200.40		-1.060E+01	7.476E+01	1.207E+02	6.454E+00	-0.088
	+	239.00		1.290E+02	1.127E+01	1.865E+01	1.049E+00	6.917
		249.79		-7.955E+00	3.047E+01	4.781E+01	2.718E+00	-0.166
		281.68		2.426E+01	4.292E+01	6.701E+01	3.906E+00	0.362
		297.23		1.153E+02	3.746E+01	5.409E+01	3.176E+00	2.132
		303.76		1.599E+01	8.681E+01	1.308E+02	7.701E+00	0.122
		439.47		-4.319E+01	7.088E+01	1.099E+02	6.433E+00	-0.393
		484.57		2.538E+01	1.109E+02	1.819E+02	1.064E+01	0.139
		520.65	*	-3.494E+00	5.607E+00	8.502E+00	4.921E-01	-0.411
		574.64		-4.311E+01	1.036E+02	1.681E+02	9.434E+00	-0.257
		578.91		5.361E+01	4.994E+01	8.012E+01	4.482E+00	0.669
		585.48		8.781E+02	1.442E+02	2.749E+02	1.530E+01	3.195
		755.35		6.922E+01	8.817E+01	1.529E+02	1.001E+01	0.453

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		817.79		-2.489E+01	6.654E+01	1.032E+02	7.857E+00	-0.241
SR-82		698.33		4.009E+00	3.454E+01	5.719E+01	3.231E+00	0.070
		776.49	*	-9.445E-02	3.557E-01	5.633E-01	3.886E-02	-0.168
		1395.20		1.594E+00	8.793E+00	1.499E+01	1.093E+00	0.106
RB-83		520.41	*	-4.111E-02	6.997E-02	1.065E-01	6.163E-03	-0.386
		529.64		4.853E-02	9.648E-02	1.606E-01	9.259E-03	0.302
		552.65		-3.255E-02	1.893E-01	3.141E-01	1.790E-02	-0.104
RB-84		881.50	*	-1.221E-02	6.726E-02	1.110E-01	9.750E-03	-0.110
KR-85		513.99	*	1.364E+01	7.874E+00	1.279E+01	7.422E-01	1.066
SR-85		513.99	*	6.830E-02	3.943E-02	6.406E-02	3.717E-03	1.066
RB-86		1076.63	*	-7.646E-02	7.806E-01	1.271E+00	9.106E-02	-0.060
Y-88		898.02		-1.458E-02	4.197E-02	6.810E-02	6.227E-03	-0.214
		1836.01	*	9.862E-03	3.409E-02	5.971E-02	3.516E-03	0.165
ZR-88		392.90	*	-6.298E-03	2.832E-02	4.587E-02	2.648E-03	-0.137
Y-91		1204.90	*	-4.333E+00	2.193E+01	3.501E+01	2.089E+00	-0.124
NB-94		702.63	*	4.778E-03	3.553E-02	5.888E-02	3.364E-03	0.081
		871.10		-2.390E-02	3.470E-02	5.461E-02	4.690E-03	-0.438
NB-95		765.79	*	-4.971E-02	4.507E-02	6.660E-02	4.475E-03	-0.746
NB-95M		235.69	*	1.198E-02	1.254E-01	1.802E-01	1.329E-02	0.067
ZR-95		724.18		-9.231E-03	1.102E-01	1.544E-01	1.092E-02	-0.060
		756.15	*	3.842E-02	7.285E-02	1.237E-01	9.489E-03	0.311
NB-97		657.90	*	-8.271E-04	7.285E-02	Half-Life too short		
		1024.50		1.836E-01	7.285E-02	Half-Life too short		
ZR-97		254.15		4.322E-01	7.285E-02	Half-Life too short		
		355.39		2.730E-02	7.285E-02	Half-Life too short		
		507.63	*	2.915E-01	7.285E-02	Half-Life too short		
		602.52		-5.062E-01	7.285E-02	Half-Life too short		
		1021.30		1.248E-01	7.285E-02	Half-Life too short		
		1147.95		2.011E-01	7.285E-02	Half-Life too short		
		1362.66		1.398E-01	7.285E-02	Half-Life too short		
		1750.46		-3.513E-01	7.285E-02	Half-Life too short		
MO-99		140.51		-8.238E+00	1.258E+01	1.986E+01	5.337E+00	-0.415
		181.06		-4.582E+00	9.456E+00	1.343E+01	2.275E+00	-0.341
		366.43		-7.313E+00	4.365E+01	7.145E+01	4.187E+00	-0.102
		739.58	*	1.057E+00	6.399E+00	1.060E+01	1.483E+00	0.100
		778.00		-1.666E+01	1.985E+01	2.967E+01	2.054E+00	-0.562
TC-99M		140.51	*	-4.396E+07	1.985E+01	Half-Life too short		
RH-101		127.23		5.902E-03	2.756E-02	4.245E-02	2.438E-03	0.139
		198.01	*	6.967E-03	2.906E-02	4.777E-02	2.547E-03	0.146
		325.23		9.384E-02	2.176E-01	3.318E-01	1.960E-02	0.283
RH-102		418.52		2.912E-01	2.834E-01	4.929E-01	2.872E-02	0.591
		475.06	*	-1.493E-02	2.913E-02	4.514E-02	2.643E-03	-0.331
		631.29		8.698E-03	5.150E-02	8.658E-02	4.602E-03	0.100
		697.49		3.615E-03	8.243E-02	1.358E-01	7.653E-03	0.027
		766.84		3.887E-02	1.148E-01	1.915E-01	1.290E-02	0.203
		1046.59		4.748E-02	1.164E-01	1.991E-01	1.508E-02	0.238
		1112.84		-5.120E-02	2.609E-01	3.988E-01	2.646E-02	-0.128
RU-103		497.08	*	-4.290E-03	3.542E-02	5.628E-02	7.125E-03	-0.076
	+	610.33		1.098E+01	2.349E+00	2.790E+00	4.264E-01	3.937

---- Non-Identified Nuclides ----

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RH-106	+	511.85		6.154E-01	3.197E-01	4.164E-01	2.418E-02	1.478
		621.84	*	-1.951E-01	3.073E-01	4.831E-01	5.572E-02	-0.404
		1050.47		1.172E-02	2.286E+00	3.767E+00	2.833E-01	0.003
RU-106	+	511.85		6.154E-01	3.197E-01	4.164E-01	2.418E-02	1.478
		621.84	*	-1.951E-01	3.066E-01	4.831E-01	2.596E-02	-0.404
		1050.47		1.172E-02	2.286E+00	3.767E+00	2.833E-01	0.003
AG-108M		433.93	*	-1.724E-02	3.062E-02	4.772E-02	3.025E-03	-0.361
		614.37		1.724E-02	4.164E-02	6.281E-02	3.731E-03	0.274
		722.95		4.395E-02	4.371E-02	6.929E-02	4.505E-03	0.634
AG-110M		657.75	*	-1.009E-03	3.350E-02	5.521E-02	3.068E-03	-0.018
		677.61		3.162E-01	3.037E-01	5.400E-01	3.091E-02	0.585
		706.67		-1.766E-01	2.053E-01	3.116E-01	1.909E-02	-0.567
		763.93		-2.146E-01	1.773E-01	2.585E-01	1.809E-02	-0.830
		884.67		-2.607E-02	4.694E-02	7.445E-02	6.787E-03	-0.350
		937.48		2.789E-02	1.237E-01	2.098E-01	1.905E-02	0.133
		1384.27		-1.444E-01	1.748E-01	2.606E-01	1.977E-02	-0.554
IN-111		171.28		-3.328E-01	4.745E-01	7.555E-01	3.876E-02	-0.441
		245.39	*	-8.442E-01	5.895E-01	7.310E-01	4.138E-02	-1.155
IN-113M		391.69	*	-1.516E-02	4.088E-02	6.554E-02	4.038E-03	-0.231
SN-113		391.69	*	-1.516E-02	4.088E-02	6.554E-02	4.038E-03	-0.231
IN-114M		190.27	*	7.331E-02	1.753E-01	2.627E-01	1.385E-02	0.279
CD-115		260.90		3.201E+01	6.044E+01	9.899E+01	5.685E+00	0.323
		492.35		2.297E+00	1.653E+01	2.688E+01	1.569E+00	0.085
		527.90	*	-2.608E+00	5.471E+00	8.381E+00	4.837E-01	-0.311
SN-117M		156.02		-1.386E+00	1.704E+00	2.729E+00	1.428E-01	-0.508
		158.56	*	3.390E-02	4.072E-02	7.010E-02	3.643E-03	0.484
SB-122		563.90	*	5.295E-01	1.130E+00	1.940E+00	1.097E-01	0.273
		692.80		8.474E+00	2.402E+01	4.058E+01	2.258E+00	0.209
I-123		159.00	*	1.104E-01	2.402E+01	Half-Life too short		
		528.96		1.082E+00	2.402E+01	Half-Life too short		
TE-123M		159.00	*	9.113E-03	2.321E-02	3.923E-02	2.070E-03	0.232
I-124		602.71	*	-2.037E-01	5.044E-01	7.361E-01	4.034E-02	-0.277
		722.78		3.463E+00	3.176E+00	5.073E+00	3.057E-01	0.683
		1325.50		-3.773E+00	2.516E+01	4.132E+01	3.001E+00	-0.091
		1376.25		2.373E+01	2.314E+01	4.237E+01	3.096E+00	0.560
		1509.49		7.521E+00	1.110E+01	1.990E+01	1.411E+00	0.378
		1691.02		-7.018E-01	2.879E+00	4.477E+00	2.922E-01	-0.157
SB-124		602.71		-1.671E-02	4.137E-02	6.038E-02	3.310E-03	-0.277
		645.85		1.371E-01	4.712E-01	7.978E-01	4.816E-02	0.172
		709.31		-8.668E-01	2.683E+00	4.279E+00	2.489E-01	-0.203
		713.82		1.260E+00	1.611E+00	2.796E+00	2.868E-01	0.451
		722.78		4.117E-01	3.777E-01	6.033E-01	3.794E-02	0.683
		968.20		1.504E+01	3.901E+00	7.391E+00	6.267E-01	2.035
		1045.16		8.730E-01	2.386E+00	4.070E+00	3.090E-01	0.215
		1325.50		-4.792E-01	3.196E+00	5.247E+00	3.811E-01	-0.091
		1368.21		-7.766E-01	1.750E+00	2.744E+00	3.479E-01	-0.283
		1436.60		2.056E+00	3.594E+00	6.402E+00	4.629E-01	0.321
		1691.02	*	-1.968E-02	8.076E-02	1.256E-01	8.754E-03	-0.157
SB-125		427.89	*	-1.050E-02	8.263E-02	1.334E-01	8.117E-03	-0.079

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	+	463.38		7.821E-01	3.546E-01	5.220E-01	3.556E-02	1.498
		600.56		-8.701E-02	1.721E-01	2.761E-01	1.779E-02	-0.315
		635.90		4.937E-02	2.627E-01	4.418E-01	2.809E-02	0.112
TE-125M		109.28	*	-1.630E+00	7.805E+00	1.190E+01	1.061E+00	-0.137
I-126		388.63		8.691E-02	1.624E-01	2.768E-01	1.601E-02	0.314
		666.33	*	7.995E-02	1.628E-01	2.784E-01	1.441E-02	0.287
		753.82		6.486E-01	1.343E+00	2.275E+00	1.484E-01	0.285
SB-126		223.80		-1.729E-01	3.220E+00	5.175E+00	2.858E-01	-0.033
	+	278.60		4.359E+00	2.866E+00	3.556E+00	2.069E-01	1.226
	+	296.50		1.128E+01	2.230E+00	3.031E+00	1.779E-01	3.720
		414.70		-1.093E-01	7.522E-02	9.192E-02	5.350E-03	-1.189
		415.30		-7.947E+00	6.252E+00	7.815E+00	4.549E-01	-1.017
		555.20		-5.708E-01	3.321E+00	5.507E+00	3.132E-01	-0.104
		573.80		-1.737E-01	8.728E-01	1.440E+00	8.087E-02	-0.121
		593.00		7.312E-01	7.865E-01	1.400E+00	7.739E-02	0.522
		656.30		-8.629E-01	2.855E+00	4.600E+00	2.368E-01	-0.188
		666.33		3.324E-02	6.770E-02	1.158E-01	5.990E-03	0.287
		675.00		5.131E-01	1.682E+00	2.841E+00	1.506E-01	0.181
		695.00		-4.935E-02	7.182E-02	1.116E-01	6.246E-03	-0.442
		697.00		-1.887E-02	2.558E-01	4.177E-01	2.351E-02	-0.045
		720.50	*	9.365E-02	1.456E-01	2.214E-01	1.326E-02	0.423
		856.80		2.787E-01	4.985E-01	7.397E-01	6.155E-02	0.377
		989.30		1.175E+00	1.192E+00	2.136E+00	1.763E-01	0.550
		1034.80		2.620E+00	8.058E+00	1.369E+01	1.058E+00	0.191
		1213.00		-2.612E+00	4.939E+00	7.655E+00	4.631E-01	-0.341
SB-127		61.10		1.963E+01	3.449E+01	5.336E+01	5.647E+00	0.368
		252.40		1.762E-01	2.521E+00	4.032E+00	1.668E+00	0.044
		290.80		1.120E+00	1.332E+01	2.001E+01	1.684E+00	0.056
	+	411.60		1.348E+01	1.190E+01	1.283E+01	1.783E+00	1.050
		444.90		-2.048E+00	6.085E+00	9.623E+00	9.780E-01	-0.213
		473.00		-8.055E-01	1.100E+00	1.668E+00	1.764E-01	-0.483
		543.00		-9.857E+00	1.031E+01	1.597E+01	1.969E+00	-0.617
		603.60		-2.216E+00	8.971E+00	1.266E+01	1.256E+00	-0.175
		685.20	*	-1.822E-01	8.698E-01	1.405E+00	1.186E-01	-0.130
		698.50		3.343E+00	1.082E+01	1.815E+01	2.528E+00	0.184
		722.20		2.201E+01	2.163E+01	3.419E+01	2.915E+00	0.644
		783.80		9.019E-01	2.478E+00	4.142E+00	4.451E-01	0.218
XE-127		57.60		3.542E+00	5.395E+00	9.052E+00	7.930E-01	0.391
		145.22		-1.598E-01	5.647E-01	9.289E-01	5.011E-02	-0.172
		172.10		-6.232E-02	9.354E-02	1.492E-01	7.660E-03	-0.418
		202.84	*	-2.636E-02	3.878E-02	6.085E-02	3.267E-03	-0.433
		374.96		-8.584E-03	1.711E-01	2.817E-01	1.644E-02	-0.030
I-131		80.18		-3.624E-01	3.242E+00	4.698E+00	4.326E-01	-0.077
		284.30		-1.030E-02	1.080E+00	1.770E+00	1.144E-01	-0.006
		364.48	*	3.189E-02	8.573E-02	1.453E-01	9.465E-03	0.219
		636.97		-3.331E-01	1.249E+00	2.026E+00	1.218E-01	-0.164
		722.89		6.355E+00	6.091E+00	9.691E+00	5.896E-01	0.656
TE-132		49.72		6.447E+00	1.269E+01	2.137E+01	2.160E+00	0.302
		111.76		7.729E+00	1.441E+01	2.511E+01	2.189E+00	0.308

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		116.30		1.299E+01	1.325E+01	2.341E+01	1.977E+00	0.555
		228.16	*	3.270E-01	3.836E-01	6.408E-01	8.870E-02	0.510
BA-133		53.15		-1.050E+00	3.537E+00	5.682E+00	5.012E-01	-0.185
		79.62		-2.161E-01	1.093E+00	1.576E+00	2.446E-01	-0.137
		81.00		-3.830E-02	7.822E-02	1.204E-01	1.952E-02	-0.318
		276.40		2.920E-01	4.903E-01	5.754E-01	7.461E-02	0.507
		302.84		4.763E-02	1.325E-01	2.024E-01	2.368E-02	0.235
		356.01	*	2.657E-03	4.388E-02	6.332E-02	7.346E-03	0.042
		383.85		1.468E-02	2.758E-01	4.561E-01	4.960E-02	0.032
I-133	+	510.53		2.111E-01	2.758E-01	Half-Life too short		
		529.87	*	-1.281E-04	2.758E-01	Half-Life too short		
		706.58		-5.989E-02	2.758E-01	Half-Life too short		
		856.28		3.340E-02	2.758E-01	Half-Life too short		
		875.33		1.173E-02	2.758E-01	Half-Life too short		
		1236.41		1.362E-01	2.758E-01	Half-Life too short		
		1298.22		-2.889E-02	2.758E-01	Half-Life too short		
CS-134		475.35		-2.377E-01	1.872E+00	2.990E+00	1.750E-01	-0.079
		563.23		8.327E-02	3.441E-01	5.818E-01	3.365E-02	0.143
		569.32		-8.017E-02	1.998E-01	3.087E-01	1.794E-02	-0.260
		604.70		1.016E-02	3.956E-02	5.865E-02	3.228E-03	0.173
		795.84	*	3.014E-02	5.171E-02	8.750E-02	6.391E-03	0.344
		801.93		1.156E-01	4.476E-01	7.394E-01	5.465E-02	0.156
		1038.57		-1.085E+00	4.069E+00	6.472E+00	4.968E-01	-0.168
		1167.94		4.880E-01	2.980E+00	4.918E+00	2.820E-01	0.099
		1365.15		2.068E-01	1.197E+00	2.035E+00	1.583E-01	0.102
CS-135		268.24	*	9.204E-02	1.508E-01	2.228E-01	1.702E-02	0.413
I-135		288.45		1.512E+06	1.508E-01	Half-Life too short		
		417.63		1.053E+08	1.508E-01	Half-Life too short		
		546.56		3.079E+07	1.508E-01	Half-Life too short		
		836.80		5.016E+07	1.508E-01	Half-Life too short		
		1038.76		-1.428E+07	1.508E-01	Half-Life too short		
		1124.00		1.690E+08	1.508E-01	Half-Life too short		
		1131.51		-2.507E+06	1.508E-01	Half-Life too short		
		1260.41	*	5.603E+06	1.508E-01	Half-Life too short		
		1457.56		2.095E+09	1.508E-01	Half-Life too short		
		1678.03		4.965E+05	1.508E-01	Half-Life too short		
		1706.46		9.926E+06	1.508E-01	Half-Life too short		
		1791.20		1.208E+07	1.508E-01	Half-Life too short		
CS-136		66.91		-6.360E-02	6.803E-01	1.009E+00	1.562E-01	-0.063
	+	86.29		3.565E+00	1.109E+00	1.474E+00	1.995E-01	2.419
		153.22		5.287E-01	4.864E-01	8.459E-01	5.756E-02	0.625
		163.89		6.941E-01	7.922E-01	1.362E+00	9.152E-02	0.510
		176.55		-2.261E-01	2.749E-01	4.338E-01	2.585E-02	-0.521
		273.65		-2.042E-02	4.957E-01	5.409E-01	3.576E-02	-0.038
		340.57		2.411E-01	1.190E-01	1.981E-01	1.240E-02	1.217
		818.51		-7.697E-03	6.223E-02	9.918E-02	7.569E-03	-0.078
		1048.07	*	4.637E-02	9.262E-02	1.601E-01	1.275E-02	0.290
		1235.34		2.730E-01	7.689E-01	1.103E+00	1.133E-01	0.248
BA-137M		661.65	*	1.745E-03	3.613E-02	5.987E-02	3.058E-03	0.029

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CS-137		661.65	*	1.844E-03	3.819E-02	6.328E-02	3.250E-03	0.029
CE-139		165.85	*	-2.212E-02	2.474E-02	3.920E-02	1.998E-03	-0.564
BA-140		162.64		4.006E-01	5.496E-01	9.404E-01	5.590E-02	0.426
		304.84		5.786E-02	1.060E+00	1.580E+00	4.315E-01	0.037
		423.70		-4.826E-01	1.516E+00	2.402E+00	7.635E-01	-0.201
		537.32	*	7.117E-02	2.025E-01	3.480E-01	1.131E-01	0.205
LA-140	+	328.77		4.262E-01	3.245E-01	4.345E-01	2.865E-02	0.981
		432.53		1.874E-01	1.667E+00	2.738E+00	1.765E-01	0.068
		487.03		-2.674E-02	1.099E-01	1.731E-01	1.143E-02	-0.154
		751.79		-1.408E+00	1.556E+00	2.323E+00	1.782E-01	-0.606
		815.85		1.429E-01	2.824E-01	4.779E-01	4.154E-02	0.299
		867.82		-2.833E-01	1.322E+00	1.942E+00	1.746E-01	-0.146
		919.63		4.371E-01	2.825E+00	4.447E+00	4.847E-01	0.098
		925.24		2.130E-01	1.035E+00	1.758E+00	1.654E-01	0.121
		1596.49	*	-2.311E-02	8.337E-02	1.309E-01	8.981E-03	-0.177
CE-141		145.44	*	-2.488E-02	5.054E-02	8.234E-02	4.644E-03	-0.302
CE-143		57.37		2.073E-04	5.054E-02	Half-Life too short		
		231.56		-7.826E-04	5.054E-02	Half-Life too short		
		293.26	*	8.499E-05	5.054E-02	Half-Life too short		
	+	350.59		8.944E-03	5.054E-02	Half-Life too short		
		490.36		-2.295E-04	5.054E-02	Half-Life too short		
		664.57		1.000E-04	5.054E-02	Half-Life too short		
		721.93		4.495E-04	5.054E-02	Half-Life too short		
CE-144		80.11		-1.710E-01	1.801E+00	2.613E+00	2.395E-01	-0.065
		133.54	*	-2.274E-02	1.706E-01	2.721E-01	3.842E-02	-0.084
PM-144		476.78		5.575E-02	6.635E-02	1.134E-01	7.924E-03	0.491
		618.01		-4.188E-03	3.072E-02	5.052E-02	2.914E-03	-0.083
		696.49	*	-2.871E-03	3.564E-02	5.816E-02	3.271E-03	-0.049
		778.57		-1.658E+00	2.325E+00	3.521E+00	2.442E-01	-0.471
PR-144		696.49	*	-1.943E-01	2.412E+00	3.937E+00	2.213E-01	-0.049
		1489.15		-1.213E+01	1.105E+01	1.459E+01	1.041E+00	-0.831
PM-146		453.90	*	2.028E-03	4.204E-02	6.839E-02	5.923E-03	0.030
		633.02		-3.783E-01	1.354E+00	2.183E+00	8.023E-01	-0.173
		735.90		4.371E-03	1.460E-01	2.390E-01	6.687E-02	0.018
		747.13		3.833E-02	8.519E-02	1.445E-01	1.850E-02	0.265
ND-147	+	91.11		5.545E-01	2.160E-01	3.298E-01	3.242E-02	1.681
		319.41		1.677E+00	2.516E+00	4.375E+00	2.585E-01	0.383
		439.89		-3.714E+00	4.680E+00	7.134E+00	4.175E-01	-0.521
		531.02	*	-1.797E-02	4.318E-01	7.260E-01	9.805E-02	-0.025
PM-149		285.90	*	-3.369E+00	3.907E+01	6.583E+01	9.338E+00	-0.051
EU-152		121.78		1.047E-02	5.778E-02	9.881E-02	7.597E-03	0.106
		244.69		-3.416E-01	3.064E-01	3.926E-01	2.221E-02	-0.870
		344.27	*	2.038E-02	8.536E-02	1.442E-01	9.555E-03	0.141
		443.98		1.220E-01	9.040E-01	1.483E+00	8.682E-02	0.082
		778.89		-1.868E-01	2.678E-01	4.061E-01	2.818E-02	-0.460
		867.32		-2.238E-02	9.172E-01	1.326E+00	1.129E-01	-0.017
		964.01		1.964E-01	3.902E-01	5.861E-01	4.994E-02	0.335
		1085.78		-4.854E-02	4.505E-01	7.322E-01	5.152E-02	-0.066
		1112.02		-6.383E-02	3.548E-01	5.716E-01	3.799E-02	-0.112

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		1407.95		3.012E-01	1.840E-01	3.612E-01	2.626E-02	0.834
GD-153		69.67		1.146E+00	1.577E+00	2.419E+00	2.113E-01	0.474
		83.37		1.007E+01	1.363E+01	2.045E+01	1.920E+00	0.492
		97.43	*	-3.542E-02	6.680E-02	1.010E-01	8.252E-03	-0.351
		103.18		-9.323E-03	9.725E-02	1.376E-01	1.028E-02	-0.068
EU-154		123.07		1.582E-02	4.076E-02	7.022E-02	6.628E-03	0.225
		247.94		4.632E-01	3.102E-01	5.349E-01	5.063E-02	0.866
		591.81		2.211E-01	5.940E-01	1.018E+00	9.795E-02	0.217
		723.30		2.991E-02	1.989E-01	2.863E-01	2.083E-02	0.104
		756.87		-5.690E-02	8.283E-01	1.341E+00	1.421E-01	-0.042
		873.19		1.314E-01	3.073E-01	5.333E-01	6.533E-02	0.246
		996.32		-2.614E-01	3.974E-01	6.147E-01	1.079E-01	-0.425
		1004.76		-8.359E-02	2.288E-01	3.659E-01	4.115E-02	-0.228
		1274.45	*	-8.641E-02	1.504E-01	2.289E-01	2.273E-02	-0.377
TB-160	+	86.79		9.677E-01	2.865E-01	4.293E-01	4.148E-02	2.254
		197.04		1.323E-01	4.752E-01	7.830E-01	4.168E-02	0.169
		215.65		-4.011E-02	6.609E-01	1.066E+00	5.822E-02	-0.038
		298.57		1.611E-01	1.370E-01	1.715E-01	1.008E-02	0.940
		879.36	*	1.738E-02	1.443E-01	2.445E-01	2.138E-02	0.071
		962.29		1.249E-01	6.823E-01	9.951E-01	8.497E-02	0.126
		966.15		7.106E-01	2.932E-01	4.976E-01	4.230E-02	1.428
		1177.93		-2.039E-01	4.137E-01	6.440E-01	3.664E-02	-0.317
		1271.85		8.045E-01	7.744E-01	1.374E+00	9.168E-02	0.586
HO-166M		80.57		-1.169E-01	2.343E-01	3.309E-01	3.042E-02	-0.353
		184.41		3.849E-02	3.307E-02	5.279E-02	2.759E-03	0.729
		280.46		1.039E-02	7.736E-02	1.171E-01	6.820E-03	0.089
	+	410.95		4.027E-01	3.520E-01	4.130E-01	2.401E-02	0.975
		711.68	*	3.063E-02	6.052E-02	1.032E-01	6.041E-03	0.297
		752.31		-1.073E-01	2.784E-01	4.380E-01	2.846E-02	-0.245
		810.29		-5.409E-02	6.452E-02	9.609E-02	7.187E-03	-0.563
TM-171		51.35		-5.209E-01	3.192E+01	5.223E+01	4.540E+00	-0.010
		52.39		-1.101E+01	1.592E+01	2.499E+01	2.196E+00	-0.441
		59.40		-7.676E+00	2.582E+01	3.790E+01	3.293E+00	-0.203
		66.72	*	1.735E+00	2.767E+01	4.142E+01	3.602E+00	0.042
LU-176	+	88.36		7.288E-01	2.158E-01	2.930E-01	2.840E-02	2.487
		201.83		-4.641E-03	2.470E-02	3.980E-02	2.134E-03	-0.117
		306.84	*	-5.798E-03	2.290E-02	3.513E-02	2.069E-03	-0.165
		401.10		-4.852E-01	6.112E+00	9.975E+00	5.778E-01	-0.049
LU-177		112.95		-2.678E-01	1.009E+00	1.703E+00	1.116E-01	-0.157
	+	208.36	*	1.813E+00	1.171E+00	1.424E+00	7.706E-02	1.273
LU-177M		52.97		-7.384E-01	1.602E+00	2.549E+00	2.246E-01	-0.290
		54.07		1.483E-01	8.275E-01	1.363E+00	1.205E-01	0.109
		61.30		1.185E-01	1.357E+00	2.039E+00	1.771E-01	0.058
		121.62		1.361E-02	2.916E-01	4.958E-01	2.930E-02	0.027
		147.16		3.488E-02	5.249E-01	8.800E-01	4.720E-02	0.040
		171.86		-2.595E-01	3.894E-01	6.210E-01	3.188E-02	-0.418
		218.09		1.906E-01	7.562E-01	1.237E+00	6.784E-02	0.154
		268.79		8.038E-01	8.119E-01	1.228E+00	7.094E-02	0.655
		319.02		8.889E-02	2.252E-01	3.861E-01	2.280E-02	0.230

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		367.43		-4.592E-01	8.174E-01	1.302E+00	7.623E-02	-0.353
		413.65	*	-1.099E-01	1.791E-01	2.403E-01	1.398E-02	-0.457
HF-181		56.28		-1.849E-01	8.808E-01	1.417E+00	1.248E-01	-0.130
		57.53		2.986E-01	4.571E-01	7.670E-01	6.720E-02	0.389
		65.20		-3.138E-01	8.934E-01	1.298E+00	1.128E-01	-0.242
		133.02		5.851E-03	5.550E-02	8.457E-02	4.748E-03	0.069
		136.25		-1.977E-03	3.511E-01	5.904E-01	3.277E-02	-0.003
		345.85		1.863E-02	1.840E-01	2.717E-01	1.603E-02	0.069
		482.03	*	-1.961E-02	4.084E-02	6.331E-02	3.703E-03	-0.310
W-181		56.28		-7.380E-02	3.530E-01	5.680E-01	5.002E-02	-0.130
		57.53		1.198E-01	1.834E-01	3.077E-01	2.696E-02	0.389
		65.20	*	-1.249E-01	3.555E-01	5.166E-01	4.488E-02	-0.242
TA-182		67.75		-8.664E-02	1.006E-01	1.548E-01	1.348E-02	-0.560
		100.10		-3.832E-02	1.580E-01	2.394E-01	1.874E-02	-0.160
		152.43		-2.682E-03	2.688E-01	4.479E-01	2.367E-02	-0.006
		222.10		-2.229E-02	3.114E-01	5.004E-01	2.757E-02	-0.045
		1001.68		4.575E-01	2.131E+00	3.592E+00	2.917E-01	0.127
	+	1121.28		5.487E-01	2.031E-01	3.509E-01	2.282E-02	1.564
		1189.05		-2.942E-01	3.403E-01	5.068E-01	2.941E-02	-0.580
		1221.42	*	-1.405E-02	2.225E-01	3.586E-01	2.201E-02	-0.039
		1230.97		5.042E-01	6.339E-01	9.566E-01	5.967E-02	0.527
RE-183		57.98		-9.237E-03	1.826E-01	2.958E-01	2.587E-02	-0.031
		59.32		-2.984E-02	1.043E-01	1.532E-01	1.332E-02	-0.195
		67.20		-5.251E-02	1.919E-01	2.816E-01	2.450E-02	-0.186
		162.32	*	3.752E-02	8.844E-02	1.495E-01	7.688E-03	0.251
	+	208.81		2.008E+00	1.297E+00	1.610E+00	8.715E-02	1.247
		291.72		1.915E-01	8.533E-01	1.295E+00	7.586E-02	0.148
RE-184		57.98		-3.448E-02	6.817E-01	1.104E+00	9.656E-02	-0.031
		59.32		-1.113E-01	3.889E-01	5.715E-01	4.967E-02	-0.195
		67.20		-1.960E-01	7.162E-01	1.051E+00	9.143E-02	-0.186
		161.27		-2.821E-01	2.924E-01	4.626E-01	2.387E-02	-0.610
		216.55		1.707E-02	2.362E-01	3.833E-01	2.097E-02	0.045
		252.85	*	1.057E-02	1.997E-01	3.192E-01	1.820E-02	0.033
		318.01		1.499E-01	3.946E-01	6.758E-01	3.990E-02	0.222
		792.07		-8.113E-01	1.079E+00	1.635E+00	1.171E-01	-0.496
		903.28		6.824E-01	1.151E+00	1.779E+00	1.613E-01	0.384
		920.93		5.336E-01	4.703E-01	8.547E-01	7.623E-02	0.624
OS-185		59.72		-8.476E-02	2.779E-01	4.076E-01	3.540E-02	-0.208
		61.14		8.179E-02	1.440E-01	2.230E-01	1.937E-02	0.367
		69.30		9.559E-02	2.612E-01	4.253E-01	3.713E-02	0.225
		592.07		1.704E+00	2.312E+00	4.071E+00	2.253E-01	0.419
		646.12	*	5.714E-04	4.141E-02	6.860E-02	3.580E-03	0.008
		717.42		-6.223E-01	9.197E-01	1.420E+00	8.438E-02	-0.438
		874.81		4.949E-01	6.038E-01	1.077E+00	9.329E-02	0.459
		880.27		1.554E-01	7.852E-01	1.339E+00	1.173E-01	0.116
RE-188		155.03	*	3.373E-02	1.422E-01	2.392E-01	1.255E-02	0.141
		477.96		2.430E+00	2.992E+00	5.106E+00	2.988E-01	0.476
		633.10		-1.091E+00	2.688E+00	4.312E+00	2.287E-01	-0.253
W-188	+	63.58		5.811E+01	8.273E+01	8.236E+01	7.153E+00	0.706

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		227.08		5.470E+00	1.115E+01	1.841E+01	1.021E+00	0.297
		290.67	*	6.635E-01	6.749E+00	1.015E+01	5.943E-01	0.065
IR-192	+	295.96		9.581E-01	1.898E-01	2.638E-01	1.572E-02	3.632
		308.46		6.123E-03	7.799E-02	1.317E-01	7.850E-03	0.046
		316.51	*	1.759E-02	2.929E-02	5.081E-02	3.014E-03	0.346
		468.07		-2.419E-02	6.684E-02	9.039E-02	6.089E-03	-0.268
		604.41		7.000E-02	5.209E-01	7.636E-01	8.542E-02	0.092
		612.46		2.269E+00	8.775E-01	1.516E+00	1.105E-01	1.497
AU-195		65.12		-6.133E-02	1.655E-01	2.401E-01	2.086E-02	-0.255
		66.83		-6.556E-03	9.131E-02	1.356E-01	1.180E-02	-0.048
	+	75.70		1.346E+00	2.529E-01	3.759E-01	3.357E-02	3.580
		98.88	*	1.111E-01	1.958E-01	3.096E-01	2.470E-02	0.359
	+	129.76		4.096E+00	3.445E+00	4.179E+00	2.375E-01	0.980
TL-200		367.94	*	-2.772E-05	3.445E+00	Half-Life too short		
		579.30		1.021E-03	3.445E+00	Half-Life too short		
		828.27		-8.472E-06	3.445E+00	Half-Life too short		
		1205.75		2.105E-04	3.445E+00	Half-Life too short		
TL-201		68.90		-5.754E-01	2.597E+00	4.121E+00	3.595E-01	-0.140
		70.82		8.220E-01	1.563E+00	2.370E+00	2.077E-01	0.347
		80.30		-3.618E-01	2.571E+00	3.719E+00	3.413E-01	-0.097
		135.34		-1.325E+00	1.225E+01	2.052E+01	1.143E+00	-0.065
		167.43	*	2.605E-01	3.514E+00	5.831E+00	2.976E-01	0.045
TL-202		68.90		-7.582E-02	3.422E-01	5.429E-01	4.736E-02	-0.140
		70.82		1.080E-01	2.053E-01	3.114E-01	2.729E-02	0.347
		80.30		-4.755E-02	3.380E-01	4.888E-01	4.486E-02	-0.097
		439.56	*	-3.679E-02	5.789E-02	8.958E-02	5.241E-03	-0.411
BI-207		72.80		1.319E-01	1.545E-01	2.552E-01	2.251E-02	0.517
	+	74.97		7.527E-01	1.414E-01	2.087E-01	1.858E-02	3.606
		84.90		1.484E-01	1.754E-01	2.638E-01	2.508E-02	0.562
		569.67		-1.015E-02	3.138E-02	4.883E-02	2.751E-03	-0.208
		1063.62	*	9.935E-03	5.128E-02	8.596E-02	6.316E-03	0.116
		1770.23		-1.261E-02	5.431E-01	7.158E-01	4.432E-02	-0.018
TL-207		81.07		-3.409E-02	1.704E-01	2.669E-01	2.463E-02	-0.128
		83.78		1.493E-01	1.149E-01	1.766E-01	1.664E-02	0.845
		94.90		1.199E-01	2.041E-01	3.035E-01	2.589E-02	0.395
		122.32		5.435E-01	1.387E+00	2.391E+00	1.618E-01	0.227
		144.24		5.309E-01	5.678E-01	9.805E-01	6.789E-02	0.541
		154.21		3.895E-01	3.281E-01	5.726E-01	3.764E-02	0.680
	+	269.46		6.054E-01	3.062E-01	3.153E-01	1.906E-02	1.920
		323.87	*	7.101E-02	6.532E-01	9.716E-01	1.608E-01	0.073
	+	338.28		5.903E+00	1.642E+00	2.302E+00	2.438E-01	2.564
		445.03		-9.268E-01	2.128E+00	3.338E+00	3.438E-01	-0.278
PO-209		260.50		8.573E+00	8.628E+00	1.451E+01	8.332E-01	0.591
		262.80		1.499E+01	2.429E+01	3.998E+01	2.300E+00	0.375
		896.60	*	-3.568E+00	7.633E+00	1.224E+01	1.111E+00	-0.291
BI-210		46.50	*	2.005E+00	4.066E+00	6.720E+00	5.232E-01	0.298
PB-210		46.50	*	2.005E+00	4.066E+00	6.720E+00	5.232E-01	0.298
PO-210		46.50	*	2.005E+00	4.065E+00	6.720E+00	4.509E-01	0.298
PB-211		404.84	*	3.313E-03	9.710E-01	1.473E+00	9.186E-01	0.002

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		427.08		-1.516E-01	1.842E+00	2.981E+00	1.843E+00	-0.051
		831.96		-1.080E+00	1.436E+00	1.879E+00	1.175E+00	-0.575
BI-212	+	727.18	*	1.133E+00	3.965E-01	6.305E-01	5.005E-02	1.797
		785.46		1.546E+00	1.764E+00	3.071E+00	2.165E-01	0.503
		1620.62		-4.689E-02	1.328E+00	2.158E+00	1.463E-01	-0.022
PO-215		81.07		-3.409E-02	1.704E-01	2.669E-01	2.463E-02	-0.128
		83.78		1.493E-01	1.149E-01	1.766E-01	1.664E-02	0.845
		94.90		1.199E-01	2.041E-01	3.035E-01	2.589E-02	0.395
		122.32		5.435E-01	1.387E+00	2.391E+00	1.618E-01	0.227
		144.24		5.309E-01	5.678E-01	9.805E-01	6.789E-02	0.541
		154.21		3.895E-01	3.281E-01	5.726E-01	3.764E-02	0.680
	+	269.46		6.054E-01	3.062E-01	3.153E-01	1.906E-02	1.920
		323.87	*	7.101E-02	6.532E-01	9.716E-01	1.608E-01	0.073
	+	338.28		5.903E+00	1.642E+00	2.302E+00	2.438E-01	2.564
		445.03		-9.268E-01	2.128E+00	3.338E+00	3.438E-01	-0.278
RN-219	+	271.23		7.768E-01	3.951E-01	4.111E-01	3.329E-02	1.889
		401.81	*	-1.730E-01	3.836E-01	6.087E-01	8.281E-02	-0.284
RN-220		549.76	*	1.687E+01	2.483E+01	4.370E+01	2.494E+00	0.386
RA-223		81.07		-3.409E-02	1.704E-01	2.669E-01	2.463E-02	-0.128
		83.78		1.493E-01	1.149E-01	1.766E-01	1.664E-02	0.845
		94.90		1.199E-01	2.041E-01	3.035E-01	2.589E-02	0.395
		122.32		5.435E-01	1.387E+00	2.391E+00	1.618E-01	0.227
		144.24		5.309E-01	5.678E-01	9.805E-01	6.789E-02	0.541
		154.21		3.895E-01	3.281E-01	5.726E-01	3.764E-02	0.680
	+	269.46		6.054E-01	3.062E-01	3.153E-01	1.906E-02	1.920
		323.87	*	7.101E-02	6.532E-01	9.716E-01	1.608E-01	0.073
	+	338.28		5.903E+00	1.642E+00	2.302E+00	2.438E-01	2.564
		445.03		-9.268E-01	2.128E+00	3.338E+00	3.438E-01	-0.278
AC-227		79.80		-8.252E-02	1.393E+00	2.026E+00	4.401E-01	-0.041
		236.00		7.085E-02	2.369E-01	3.447E-01	3.566E-02	0.206
		256.20	*	-7.931E-02	3.502E-01	5.493E-01	7.650E-02	-0.144
		286.10		-5.028E-02	1.322E+00	2.234E+00	2.587E-01	-0.023
	+	299.80		3.193E+00	2.227E+00	2.430E+00	3.964E-01	1.314
		304.40		2.876E-01	1.791E+00	2.692E+00	4.665E-01	0.107
		334.20		-5.632E-02	2.506E+00	3.426E+00	6.293E-01	-0.016
TH-227		79.80		-8.252E-02	1.393E+00	2.026E+00	4.456E-01	-0.041
	+	94.00		7.671E+00	2.940E+00	3.078E+00	6.710E-01	2.492
		236.00		7.085E-02	2.369E-01	3.447E-01	3.079E-02	0.206
		256.20	*	-7.931E-02	3.503E-01	5.493E-01	9.268E-02	-0.144
		286.10		-5.028E-02	1.323E+00	2.234E+00	2.237E+00	-0.023
	+	299.80		3.193E+00	2.227E+00	2.430E+00	3.964E-01	1.314
		304.40		2.876E-01	1.791E+00	2.692E+00	4.665E-01	0.107
		334.20		-5.632E-02	2.506E+00	3.426E+00	6.293E-01	-0.016
TH-229		85.43		-8.745E-02	1.789E-01	2.506E-01	2.393E-02	-0.349
	+	88.47		4.196E-01	1.242E-01	1.655E-01	1.600E-02	2.535
		100.00		-4.032E-02	1.663E-01	2.520E-01	1.975E-02	-0.160
		193.63	*	-4.348E-01	4.453E-01	6.912E-01	3.661E-02	-0.629
		210.97		1.116E+00	7.567E-01	1.191E+00	6.466E-02	0.937
PA-231		283.67	*	-2.165E-02	1.399E+00	2.201E+00	3.036E-01	-0.010

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	301.29		1.277E+00	8.765E-01	9.505E-01	9.978E-02	1.344
TH-231		81.07		-3.409E-02	1.704E-01	2.669E-01	2.463E-02	-0.128
		83.78		1.493E-01	1.149E-01	1.766E-01	1.664E-02	0.845
		94.90		1.199E-01	2.041E-01	3.035E-01	2.589E-02	0.395
		122.32		5.435E-01	1.387E+00	2.391E+00	1.618E-01	0.227
		144.24		5.309E-01	5.678E-01	9.805E-01	6.789E-02	0.541
		154.21		3.895E-01	3.281E-01	5.726E-01	3.764E-02	0.680
	+	269.46		6.054E-01	3.062E-01	3.153E-01	1.906E-02	1.920
		323.87	*	7.101E-02	6.532E-01	9.716E-01	1.608E-01	0.073
	+	338.28		5.903E+00	1.642E+00	2.302E+00	2.438E-01	2.564
		445.03		-9.268E-01	2.128E+00	3.338E+00	3.438E-01	-0.278
U-231		84.21		1.875E+00	3.530E+00	5.236E+00	4.949E-01	0.358
	+	92.29		5.241E+00	1.714E+00	2.305E+00	2.063E-01	2.273
		95.87	*	1.369E-02	6.547E-01	9.407E-01	7.890E-02	0.015
		108.00		9.679E-02	1.246E+00	1.933E+00	1.351E-01	0.050
PA-233	+	75.28		2.197E+01	4.982E+00	6.058E+00	9.399E-01	3.626
	+	86.59		6.016E+00	2.347E+00	2.612E+00	7.095E-01	2.303
	+	300.12		8.903E-01	6.155E-01	6.747E-01	9.089E-02	1.320
		311.98	*	-4.793E-03	5.297E-02	8.849E-02	5.532E-03	-0.054
		340.50		1.487E+00	7.365E-01	1.108E+00	2.547E-01	1.342
		398.62		-1.120E+00	1.974E+00	3.080E+00	7.963E-01	-0.364
		415.76		-1.614E+00	1.893E+00	2.446E+00	5.037E-01	-0.660
PA-234	+	63.00		1.723E+00	2.463E+00	2.470E+00	3.838E-01	0.698
		94.67		1.882E-01	1.514E-01	2.311E-01	2.857E-02	0.815
		98.44		1.374E-02	7.909E-02	1.221E-01	6.800E-02	0.113
		99.86		9.020E-02	4.116E-01	6.391E-01	5.021E-02	0.141
		111.00		5.121E-02	1.421E-01	2.462E-01	2.663E-02	0.208
		131.20		-1.314E-02	9.006E-02	1.354E-01	7.651E-03	-0.097
		152.70		9.014E-02	2.661E-01	4.495E-01	7.024E-02	0.201
	+	186.00		3.658E+00	2.160E+00	2.293E+00	6.982E-01	1.595
		226.40		2.107E-01	3.607E-01	5.973E-01	6.828E-02	0.353
		227.20		1.755E-01	3.845E-01	6.337E-01	3.514E-02	0.277
		248.90		7.065E-01	7.200E-01	1.192E+00	2.557E-01	0.593
	+	293.70		6.158E+00	1.529E+00	1.472E+00	2.370E-01	4.185
		369.80		1.732E-01	7.729E-01	1.295E+00	2.699E-01	0.134
		568.70		-8.375E-01	1.040E+00	1.561E+00	8.801E-02	-0.536
		569.50		-1.003E-01	2.778E-01	4.307E-01	2.427E-02	-0.233
		574.00		-4.086E-01	1.418E+00	2.324E+00	1.305E-01	-0.176
		699.00		5.141E-01	7.581E-01	1.297E+00	2.327E-01	0.396
		706.10		-9.376E-01	1.112E+00	1.563E+00	6.899E-01	-0.600
		733.00		-1.821E-02	4.297E-01	6.038E-01	1.290E-01	-0.030
		742.81		-6.666E-01	1.381E+00	2.030E+00	1.359E+00	-0.328
		796.30		3.750E-01	1.015E+00	1.683E+00	4.484E-01	0.223
		805.60		1.799E-01	1.132E+00	1.855E+00	5.627E-01	0.097
		819.60		-4.866E-01	1.171E+00	1.782E+00	6.741E-01	-0.273
		826.30		6.392E-01	8.533E-01	1.389E+00	6.192E-01	0.460
		831.60		-7.653E-01	6.975E-01	9.452E-01	2.801E-01	-0.810
		876.40		7.180E-01	1.154E+00	1.585E+00	1.629E+00	0.453
		880.51		3.798E-02	2.868E-01	4.864E-01	4.265E-02	0.078

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		883.24		-5.466E-02	2.826E-01	4.615E-01	3.104E-01	-0.118
		899.00		-4.978E-01	8.936E-01	1.378E+00	6.037E-01	-0.361
		925.00		2.121E-01	1.210E+00	2.050E+00	1.821E-01	0.103
		926.50		-5.282E-02	1.769E-01	2.863E-01	7.262E-02	-0.185
		946.00	*	-1.590E-01	3.126E-01	4.940E-01	9.286E-02	-0.322
		949.00		6.053E-01	4.555E-01	8.389E-01	7.271E-02	0.722
		980.50		-1.543E-02	6.705E-01	1.110E+00	9.267E-02	-0.014
		1394.10		3.742E-01	1.068E+00	1.816E+00	1.179E+00	0.206
PA-234M		766.41		1.976E-01	1.829E+01	2.977E+01	2.277E+01	0.007
		1001.03	*	1.811E+00	7.007E+00	1.185E+01	1.280E+00	0.153
NP-236		94.67		1.446E-01	1.142E-01	1.755E-01	1.504E-02	0.824
		98.44		1.033E-02	5.951E-02	9.228E-02	7.415E-03	0.112
		111.00		3.874E-02	1.074E-01	1.862E-01	1.252E-02	0.208
		160.31	*	-6.464E-02	6.681E-02	1.058E-01	5.473E-03	-0.611
NP-239		99.55		4.651E-02	1.381E-01	2.158E-01	1.704E-02	0.216
		117.00	*	-1.083E-01	1.481E-01	2.438E-01	1.522E-02	-0.444
	+	209.75		1.619E+00	1.046E+00	1.294E+00	7.013E-02	1.251
		228.18		1.724E-01	2.006E-01	3.371E-01	1.871E-02	0.511
	+	277.60		3.602E-01	2.368E-01	2.913E-01	1.694E-02	1.236
		334.30		1.128E-02	1.422E+00	1.950E+00	1.152E-01	0.006
AM-241		59.54	*	-4.747E-02	1.498E-01	2.196E-01	2.044E-02	-0.216
CM-243		99.55		4.786E-02	1.421E-01	2.220E-01	1.753E-02	0.216
		103.76	*	-1.226E-02	8.380E-02	1.288E-01	9.547E-03	-0.095
		117.00		-1.114E-01	1.524E-01	2.508E-01	1.565E-02	-0.444
	+	209.75		1.596E+00	1.031E+00	1.275E+00	6.912E-02	1.251
		228.18		1.741E-01	2.026E-01	3.405E-01	1.891E-02	0.511
	+	277.60		3.631E-01	2.387E-01	2.937E-01	1.707E-02	1.236
CM-247	+	278.00		1.494E+00	9.821E-01	1.223E+00	7.111E-02	1.222
		287.40		6.217E-02	1.056E+00	1.793E+00	1.048E-01	0.035
		402.60	*	-1.519E-02	3.500E-02	5.572E-02	3.230E-03	-0.273
CF-249		252.85		4.002E-02	7.563E-01	1.209E+00	6.893E-02	0.033
		333.44		-1.837E-01	2.668E-01	2.575E-01	1.521E-02	-0.713
		387.95	*	3.528E-04	3.707E-02	6.107E-02	3.534E-03	0.006
CF-251		176.60	*	-8.744E-02	1.066E-01	1.683E-01	8.698E-03	-0.520
		227.00		1.762E-01	3.425E-01	5.661E-01	3.139E-02	0.311
		285.00		-7.636E-01	1.504E+00	2.476E+00	1.446E-01	-0.308

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
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*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504011      *
* Acquisition date :  7-JUL-2009 09:13:19 Detector SN#     :               *
* Detector ID        : GAM23               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:03.96     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232504011           Analyst initials: MXR1         *
* Batch Number       : 881220               Sample Quantity : 1.4641E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :  0.00000                                               *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.905E+01	2.838E+00	6.215E-01	0.000E+00
CD-109	3.116E+00	9.042E-01	1.144E+00	0.000E+00
SN-126	3.073E-01	8.917E-02	1.135E-01	0.000E+00
EU-155	1.423E-01	1.365E-01	1.551E-01	0.000E+00
HG-203	7.963E-02	5.133E-02	5.927E-02	0.000E+00
TL-208	4.702E-01	8.768E-02	6.274E-02	0.000E+00
BI-211	3.477E+00	4.807E-01	2.981E-01	0.000E+00
PB-212	1.541E+00	1.483E-01	8.050E-02	0.000E+00
PO-212	1.541E+00	1.483E-01	8.050E-02	0.000E+00
BI-214	1.058E+00	1.736E-01	1.228E-01	0.000E+00
PB-214	1.210E+00	1.783E-01	1.040E-01	0.000E+00
PO-214	1.210E+00	1.783E-01	1.040E-01	0.000E+00
PO-216	1.541E+00	1.483E-01	8.050E-02	0.000E+00
PO-218	1.210E+00	1.783E-01	1.040E-01	0.000E+00
RA-224	4.837E+00	1.078E+00	9.169E-01	0.000E+00
RA-226	1.058E+00	1.736E-01	1.228E-01	0.000E+00
AC-228	1.697E+00	3.334E-01	2.322E-01	0.000E+00
RA-228	1.697E+00	3.334E-01	2.322E-01	0.000E+00
TH-228	1.541E+00	1.483E-01	8.049E-02	0.000E+00
TH-230	1.058E+00	1.736E-01	1.228E-01	0.000E+00
TH-232	1.697E+00	3.334E-01	2.322E-01	0.000E+00
TH-234	1.478E+00	2.075E+00	2.008E+00	0.000E+00
U-234	1.058E+00	1.736E-01	1.228E-01	0.000E+00
U-235	1.395E-01	1.760E-01	3.250E-01	0.000E+00
NP-237	9.024E-01	3.192E-01	3.378E-01	0.000E+00
U-238	1.478E+00	2.075E+00	2.008E+00	0.000E+00
AM-243	4.194E-01	7.722E-02	8.003E-02	0.000E+00
ANH-511	1.237E-01	6.299E-02	4.690E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	2.156E-01	3.080E-01	5.489E-01	0.000E+00	NOT IDENT.
NA-22	-3.090E-02	5.267E-02	8.260E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.267E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	4.071E-03	3.328E-02	5.780E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.268E-02	6.624E-02	0.000E+00	FAIL ABUN
SC-46	-6.016E-03	3.834E-02	6.580E-02	0.000E+00	FAIL ABUN
V-48	-2.763E-02	6.420E-02	1.058E-01	0.000E+00	NOT IDENT.
CR-51	-9.439E-02	3.070E-01	5.374E-01	0.000E+00	NOT IDENT.
MN-52	-7.184E-03	1.830E-01	3.095E-01	0.000E+00	NOT IDENT.
MN-54	1.066E-02	3.898E-02	6.682E-02	0.000E+00	NOT IDENT.
CO-56	-6.287E-03	3.976E-02	6.552E-02	0.000E+00	NOT IDENT.
CO-57	6.300E-03	1.947E-02	3.636E-02	0.000E+00	NOT IDENT.
CO-58	-3.393E-02	4.120E-02	6.409E-02	0.000E+00	NOT IDENT.
FE-59	-2.183E-02	9.738E-02	1.617E-01	0.000E+00	NOT IDENT.
CO-60	4.202E-02	4.055E-02	7.673E-02	0.000E+00	NOT IDENT.
ZN-65	5.898E-02	1.084E-01	1.676E-01	0.000E+00	NOT IDENT.
GE-68	5.774E-01	1.290E+00	2.278E+00	0.000E+00	NOT IDENT.
AS-73	-1.370E-02	7.779E-01	1.403E+00	0.000E+00	NOT IDENT.
AS-74	-2.209E-02	8.252E-02	1.416E-01	0.000E+00	NOT IDENT.
SE-75	-2.323E-02	4.055E-02	6.256E-02	0.000E+00	FAIL ABUN
BR-77	-3.494E+00	5.495E+00	8.762E+00	0.000E+00	FAIL ABUN
SR-82	-9.445E-02	3.485E-01	5.752E-01	0.000E+00	NOT IDENT.
RB-83	-4.111E-02	6.857E-02	1.097E-01	0.000E+00	NOT IDENT.
RB-84	-1.221E-02	6.591E-02	1.130E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.716E+00	1.319E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.864E-02	6.604E-02	0.000E+00	NOT IDENT.
RB-86	-7.646E-02	7.650E-01	1.287E+00	0.000E+00	NOT IDENT.
Y-88	9.862E-03	3.341E-02	5.972E-02	0.000E+00	NOT IDENT.
ZR-88	-6.298E-03	2.775E-02	4.758E-02	0.000E+00	NOT IDENT.
Y-91	-4.333E+00	2.149E+01	3.538E+01	0.000E+00	NOT IDENT.
NB-94	4.778E-03	3.482E-02	6.026E-02	0.000E+00	NOT IDENT.
NB-95	-4.971E-02	4.417E-02	6.802E-02	0.000E+00	NOT IDENT.
NB-95M	1.198E-02	1.229E-01	1.891E-01	0.000E+00	NOT IDENT.
ZR-95	3.842E-02	7.139E-02	1.264E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.019E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.109E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.057E+00	6.271E+00	1.083E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	6.559E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	6.967E-03	2.848E-02	5.032E-02	0.000E+00	NOT IDENT.
RH-102	-1.493E-02	2.855E-02	4.662E-02	0.000E+00	NOT IDENT.
RU-103	-4.290E-03	3.471E-02	5.807E-02	0.000E+00	FAIL ABUN
RH-106	-1.951E-01	3.011E-01	4.959E-01	0.000E+00	FAIL ABUN
RU-106	-1.951E-01	3.005E-01	4.959E-01	0.000E+00	FAIL ABUN
AG-108M	-1.724E-02	3.001E-02	4.938E-02	0.000E+00	NOT IDENT.
AG-110M	-1.009E-03	3.283E-02	5.659E-02	0.000E+00	NOT IDENT.
IN-111	-8.442E-01	5.777E-01	7.663E-01	0.000E+00	NOT IDENT.
IN-113M	-1.516E-02	4.006E-02	6.799E-02	0.000E+00	NOT IDENT.
SN-113	-1.516E-02	4.006E-02	6.799E-02	0.000E+00	NOT IDENT.
IN-114M	7.331E-02	1.718E-01	2.770E-01	0.000E+00	NOT IDENT.
CD-115	-2.608E+00	5.361E+00	8.634E+00	0.000E+00	NOT IDENT.
SN-117M	3.390E-02	3.991E-02	7.419E-02	0.000E+00	NOT IDENT.
SB-122	5.295E-01	1.108E+00	1.996E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.756E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	9.113E-03	2.275E-02	4.152E-02	0.000E+00	NOT IDENT.
I-124	-2.037E-01	4.943E-01	7.560E-01	0.000E+00	NOT IDENT.
SB-124	-1.968E-02	7.914E-02	1.258E-01	0.000E+00	NOT IDENT.
SB-125	-1.050E-02	8.097E-02	1.381E-01	0.000E+00	FAIL ABUN
TE-125M	-1.630E+00	7.648E+00	1.270E+01	0.000E+00	NOT IDENT.
I-126	7.995E-02	1.596E-01	2.853E-01	0.000E+00	NOT IDENT.
SB-126	9.365E-02	1.427E-01	2.265E-01	0.000E+00	FAIL ABUN
SB-127	-1.822E-01	8.524E-01	1.439E+00	0.000E+00	FAIL ABUN
XE-127	-2.636E-02	3.801E-02	6.406E-02	0.000E+00	NOT IDENT.
I-131	3.189E-02	8.401E-02	1.510E-01	0.000E+00	NOT IDENT.
TE-132	3.270E-01	3.759E-01	6.728E-01	0.000E+00	NOT IDENT.
BA-133	2.657E-03	4.300E-02	6.583E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	9.591E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.014E-02	5.068E-02	8.929E-02	0.000E+00	NOT IDENT.
CS-135	9.204E-02	1.477E-01	2.331E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.356E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.637E-02	9.077E-02	1.623E-01	0.000E+00	FAIL ABUN
BA-137M	1.745E-03	3.541E-02	6.135E-02	0.000E+00	NOT IDENT.
CS-137	1.844E-03	3.743E-02	6.486E-02	0.000E+00	NOT IDENT.
CE-139	-2.212E-02	2.425E-02	4.145E-02	0.000E+00	NOT IDENT.
BA-140	7.117E-02	1.985E-01	3.584E-01	0.000E+00	NOT IDENT.
LA-140	-2.311E-02	8.170E-02	1.314E-01	0.000E+00	FAIL ABUN
CE-141	-2.488E-02	4.953E-02	8.732E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	4.698E+01	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-2.274E-02	1.672E-01	2.891E-01	0.000E+00	NOT IDENT.
PM-144	-2.871E-03	3.492E-02	5.954E-02	0.000E+00	NOT IDENT.
PR-144	-1.943E-01	2.364E+00	4.030E+00	0.000E+00	NOT IDENT.
PM-146	2.028E-03	4.120E-02	7.070E-02	0.000E+00	NOT IDENT.
ND-147	-1.797E-02	4.231E-01	7.479E-01	0.000E+00	FAIL ABUN
PM-149	-3.369E+00	3.829E+01	6.878E+01	0.000E+00	NOT IDENT.
EU-152	2.038E-02	8.365E-02	1.500E-01	0.000E+00	NOT IDENT.
GD-153	-3.542E-02	6.547E-02	1.081E-01	0.000E+00	NOT IDENT.
EU-154	-8.641E-02	1.474E-01	2.310E-01	0.000E+00	NOT IDENT.
TB-160	1.738E-02	1.414E-01	2.489E-01	0.000E+00	FAIL ABUN
HO-166M	3.063E-02	5.931E-02	1.056E-01	0.000E+00	FAIL ABUN
TM-171	1.735E+00	2.712E+01	4.466E+01	0.000E+00	NOT IDENT.
LU-176	-5.798E-03	2.244E-02	3.664E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.148E+00	1.499E+00	0.000E+00	FAIL ABUN
LU-177M	-1.099E-01	1.755E-01	2.490E-01	0.000E+00	NOT IDENT.
HF-181	-1.961E-02	4.002E-02	6.536E-02	0.000E+00	NOT IDENT.
W-181	-1.249E-01	3.484E-01	5.574E-01	0.000E+00	NOT IDENT.
TA-182	-1.405E-02	2.180E-01	3.622E-01	0.000E+00	FAIL ABUN
RE-183	3.752E-02	8.667E-02	1.581E-01	0.000E+00	FAIL ABUN
RE-184	1.057E-02	1.957E-01	3.344E-01	0.000E+00	NOT IDENT.
OS-185	5.714E-04	4.058E-02	7.034E-02	0.000E+00	NOT IDENT.
RE-188	3.373E-02	1.394E-01	2.533E-01	0.000E+00	NOT IDENT.
W-188	6.635E-01	6.614E+00	1.060E+01	0.000E+00	FAIL ABUN
IR-192	1.759E-02	2.870E-02	5.296E-02	0.000E+00	FAIL ABUN
AU-195	1.111E-01	1.919E-01	3.310E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	9.881E+01	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.605E-01	3.443E+00	6.165E+00	0.000E+00	NOT IDENT.
TL-202	-3.679E-02	5.673E-02	9.268E-02	0.000E+00	NOT IDENT.
BI-207	9.935E-03	5.025E-02	8.712E-02	0.000E+00	FAIL ABUN
TL-207	7.101E-02	6.402E-01	1.012E+00	0.000E+00	FAIL ABUN
PO-209	-3.568E+00	7.480E+00	1.246E+01	0.000E+00	NOT IDENT.
BI-210	2.005E+00	3.984E+00	7.301E+00	0.000E+00	NOT IDENT.
PB-210	2.005E+00	3.984E+00	7.301E+00	0.000E+00	NOT IDENT.
PO-210	2.005E+00	3.983E+00	7.301E+00	0.000E+00	NOT IDENT.
PB-211	3.313E-03	9.515E-01	1.527E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.886E-01	6.448E-01	0.000E+00	FAIL ABUN
PO-215	7.101E-02	6.402E-01	1.012E+00	0.000E+00	FAIL ABUN
RN-219	-1.730E-01	3.759E-01	6.311E-01	0.000E+00	FAIL ABUN
RN-220	1.687E+01	2.433E+01	4.498E+01	0.000E+00	NOT IDENT.
RA-223	7.101E-02	6.402E-01	1.012E+00	0.000E+00	FAIL ABUN
AC-227	-7.931E-02	3.432E-01	5.753E-01	0.000E+00	FAIL ABUN
TH-227	-7.931E-02	3.433E-01	5.753E-01	0.000E+00	FAIL ABUN
TH-229	-4.348E-01	4.364E-01	7.284E-01	0.000E+00	FAIL ABUN
PA-231	-2.165E-02	1.371E+00	2.300E+00	0.000E+00	FAIL ABUN
TH-231	7.101E-02	6.402E-01	1.012E+00	0.000E+00	FAIL ABUN
U-231	1.369E-02	6.416E-01	1.007E+00	0.000E+00	FAIL ABUN
PA-233	-4.793E-03	5.191E-02	9.226E-02	0.000E+00	FAIL ABUN
PA-234	-1.590E-01	3.063E-01	5.020E-01	0.000E+00	FAIL ABUN
PA-234M	1.811E+00	6.867E+00	1.203E+01	0.000E+00	NOT IDENT.
NP-236	-6.464E-02	6.548E-02	1.120E-01	0.000E+00	NOT IDENT.
NP-239	-1.083E-01	1.451E-01	2.598E-01	0.000E+00	FAIL ABUN
AM-241	-4.747E-02	1.468E-01	2.374E-01	0.000E+00	NOT IDENT.
CM-243	-1.226E-02	8.213E-02	1.376E-01	0.000E+00	FAIL ABUN
CM-247	-1.519E-02	3.430E-02	5.776E-02	0.000E+00	FAIL ABUN
CF-249	3.528E-04	3.633E-02	6.336E-02	0.000E+00	NOT IDENT.
CF-251	-8.744E-02	1.045E-01	1.777E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:14:42.66

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504011.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:13:19.
Sample ID         : G232504011           Sample quantity  : 1.46410E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.96  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1205	10.67*	9.965E-01	2.905E+01	2.905E+01	9.97
CD-109	88.03	232	3.72*	5.232E+00	3.056E+00	3.116E+00	29.61
SN-126	64.28	56	9.60	2.548E+00	5.852E-01	5.852E-01	142.92
	86.94	232	8.90	5.232E+00	1.278E+00	1.278E+00	50.13
	87.57	232	37.00*	5.232E+00	3.073E-01	3.073E-01	29.61
EU-155	48.70	------	4.60	7.840E-01	------	Line Not Found	------
	60.01	------	1.11	2.144E+00	------	Line Not Found	------
	86.54	232	30.90	5.232E+00	3.680E-01	3.698E-01	29.63
	105.31	70	20.70*	6.120E+00	1.416E-01	1.423E-01	97.86
HG-203	70.83	------	4.75	3.580E+00	------	Line Not Found	------
	72.87	------	8.00	3.829E+00	------	Line Not Found	------
	82.60	------	3.55	4.848E+00	------	Line Not Found	------
	279.20	82	77.30*	4.132E+00	6.571E-02	7.963E-02	65.78
TL-208	277.35	82	6.80	4.132E+00	7.469E-01	7.469E-01	66.33
	510.84	123	21.60	2.543E+00	5.728E-01	5.728E-01	52.62
	583.14	351	84.20*	2.275E+00	4.702E-01	4.702E-01	19.03
	860.37	53	12.46	1.608E+00	6.792E-01	6.792E-01	60.11
BI-211	72.87	------	1.27	3.829E+00	------	Line Not Found	------
	351.07	603	12.94*	3.438E+00	3.477E+00	3.477E+00	14.10
PB-212	74.81	439	10.70	4.064E+00	2.587E+00	2.587E+00	20.98
	77.11	592	18.00	4.316E+00	1.955E+00	1.955E+00	14.90
	87.30	232	8.00	5.232E+00	1.421E+00	1.421E+00	31.25
	238.63	1241	44.60*	4.632E+00	1.541E+00	1.541E+00	9.82
	300.09	89	3.41	3.895E+00	1.723E+00	1.723E+00	68.32
PO-212	74.81	439	10.70	4.064E+00	2.587E+00	2.587E+00	20.98
	77.11	592	18.00	4.316E+00	1.955E+00	1.955E+00	14.90
	87.30	232	8.00	5.232E+00	1.421E+00	1.421E+00	31.25
	115.19	------	0.60	6.293E+00	------	Line Not Found	------
	238.63	1241	44.60*	4.632E+00	1.541E+00	1.541E+00	9.82
	300.09	89	3.41	3.895E+00	1.723E+00	1.723E+00	68.32
BI-214	609.31	419	46.30*	2.191E+00	1.058E+00	1.058E+00	16.74
	768.36	------	5.04	1.785E+00	------	Line Not Found	------

Sample ID : G232504011 Acquisition date : 7-JUL-2009 09:13:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	934.06	------	3.21	1.491E+00	------ Line Not Found		------
	1120.29	87	15.10	1.257E+00	1.176E+00	1.176E+00	37.60
	1238.11	------	5.94	1.148E+00	------ Line Not Found		------
	1377.67	------	4.11	1.046E+00	------ Line Not Found		------
	1764.49	77	15.80	8.738E-01	1.430E+00	1.430E+00	23.62
PB-214	74.81	439	6.21	4.064E+00	4.457E+00	4.457E+00	20.20
	77.11	592	10.50	4.316E+00	3.352E+00	3.352E+00	16.73
	87.30	232	4.67	5.232E+00	2.435E+00	2.435E+00	30.60
	241.98	342	7.49	4.592E+00	2.551E+00	2.551E+00	23.43
	295.21	379	19.20	3.946E+00	1.283E+00	1.283E+00	20.75
	351.92	603	37.20*	3.438E+00	1.210E+00	1.210E+00	15.04
PO-214	74.81	439	6.21	4.064E+00	4.457E+00	4.457E+00	20.20
	77.11	592	10.50	4.316E+00	3.352E+00	3.352E+00	16.73
	87.30	232	4.67	5.232E+00	2.435E+00	2.435E+00	30.60
	241.98	342	7.49	4.592E+00	2.551E+00	2.551E+00	23.43
	295.21	379	19.20	3.946E+00	1.283E+00	1.283E+00	20.75
	351.92	603	37.20*	3.438E+00	1.210E+00	1.210E+00	15.04
PO-216	74.81	439	10.70	4.064E+00	2.587E+00	2.587E+00	20.98
	77.11	592	18.00	4.316E+00	1.955E+00	1.955E+00	14.90
	87.30	232	8.00	5.232E+00	1.421E+00	1.421E+00	31.25
	238.63	1241	44.60*	4.632E+00	1.541E+00	1.541E+00	9.82
	300.09	89	3.41	3.895E+00	1.723E+00	1.723E+00	68.32
PO-218	74.81	439	6.21	4.064E+00	4.457E+00	4.457E+00	20.20
	77.11	592	10.50	4.316E+00	3.352E+00	3.352E+00	16.73
	87.30	232	4.67	5.232E+00	2.435E+00	2.435E+00	30.60
	241.98	342	7.49	4.592E+00	2.551E+00	2.551E+00	23.43
	295.21	379	19.20	3.946E+00	1.283E+00	1.283E+00	20.75
	351.92	603	37.20*	3.438E+00	1.210E+00	1.210E+00	15.04
RA-224	240.98	342	3.95*	4.592E+00	4.837E+00	4.837E+00	22.75
RA-226	609.31	419	46.30*	2.191E+00	1.058E+00	1.058E+00	16.74
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	------	3.21	1.491E+00	------ Line Not Found		------
	1120.29	87	15.10	1.257E+00	1.176E+00	1.176E+00	37.60
	1238.11	------	5.94	1.148E+00	------ Line Not Found		------
	1377.67	------	4.11	1.046E+00	------ Line Not Found		------
	1764.49	77	15.80	8.738E-01	1.430E+00	1.430E+00	23.62
AC-228	338.32	223	11.40	3.545E+00	1.414E+00	1.414E+00	48.21
	911.07	280	27.70*	1.525E+00	1.697E+00	1.697E+00	20.05
	969.11	117	16.60	1.439E+00	1.259E+00	1.259E+00	51.68
RA-228	338.32	223	11.40	3.545E+00	1.414E+00	1.414E+00	48.21
	911.07	280	27.70*	1.525E+00	1.697E+00	1.697E+00	20.05
	969.11	117	16.60	1.439E+00	1.259E+00	1.259E+00	51.68
TH-228	84.40	------	1.21	5.004E+00	------ Line Not Found		------
	238.60	1241	44.60*	4.632E+00	1.541E+00	1.541E+00	9.82
	300.10	89	3.41	3.895E+00	1.723E+00	1.723E+00	89.85
TH-230	609.31	419	46.30*	2.191E+00	1.058E+00	1.058E+00	16.74
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	------	3.21	1.491E+00	------ Line Not Found		------
	1120.29	87	15.10	1.257E+00	1.176E+00	1.176E+00	37.60

Sample ID : G232504011 Acquisition date : 7-JUL-2009 09:13:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1238.11	------	5.94	1.148E+00	------	Line Not Found	------
	1377.67	------	4.11	1.046E+00	------	Line Not Found	------
	1764.49	77	15.80	8.738E-01	1.430E+00	1.430E+00	23.62
TH-232	338.32	223	11.40	3.545E+00	1.414E+00	1.414E+00	26.39
	911.07	280	27.70*	1.525E+00	1.697E+00	1.697E+00	20.05
	969.11	117	16.60	1.439E+00	1.259E+00	1.259E+00	51.68
TH-234	63.29	56	3.80*	2.548E+00	1.478E+00	1.478E+00	143.25
	92.38	235	5.41	5.602E+00	1.985E+00	1.985E+00	36.36
U-234	609.31	419	46.30*	2.191E+00	1.058E+00	1.058E+00	16.74
	768.36	------	5.04	1.785E+00	------	Line Not Found	------
	934.06	------	3.21	1.491E+00	------	Line Not Found	------
	1120.29	87	15.10	1.257E+00	1.176E+00	1.176E+00	37.60
	1238.11	------	5.94	1.148E+00	------	Line Not Found	------
	1377.67	------	4.11	1.046E+00	------	Line Not Found	------
	1764.49	77	15.80	8.738E-01	1.430E+00	1.430E+00	23.62
U-235	89.95	145	2.70	5.418E+00	2.543E+00	2.543E+00	48.81
	93.35	235	4.50	5.602E+00	2.387E+00	2.387E+00	42.19
	105.00	70	2.10	6.120E+00	1.396E+00	1.396E+00	101.93
	143.76	------	10.50*	6.189E+00	------	Line Not Found	------
	163.35	------	4.70	5.886E+00	------	Line Not Found	------
	185.71	156	54.00	5.484E+00	1.355E-01	1.355E-01	50.88
	205.31	------	4.70	5.150E+00	------	Line Not Found	------
NP-237	86.50	232	12.60*	5.232E+00	9.024E-01	9.024E-01	36.09
	95.87	------	2.60	5.757E+00	------	Line Not Found	------
U-238	63.29	56	3.80*	2.548E+00	1.478E+00	1.478E+00	143.25
	92.38	235	5.41	5.602E+00	1.985E+00	1.985E+00	32.70
AM-243	74.67	439	66.00*	4.064E+00	4.194E-01	4.194E-01	18.79
	86.72	232	0.34	5.232E+00	3.384E+01	3.384E+01	29.61
	117.66	------	0.55	6.314E+00	------	Line Not Found	------
	142.18	------	0.13	6.209E+00	------	Line Not Found	------
ANH-511	511.00	123	100.00*	2.543E+00	1.237E-01	1.237E-01	51.96

Flag: "*" = Keyline

Sample ID : G232504011 Acquisition date : 7-JUL-2009 09:13:19

Total number of lines in spectrum 32
Number of unidentified lines 1
Number of lines tentatively identified by NID 31 96.88%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.905E+01	2.905E+01	0.290E+01	9.97	
CD-109	464.00D	1.02	3.056E+00	3.116E+00	0.923E+00	29.61	
SN-126	1.00E+05Y	1.00	3.073E-01	3.073E-01	0.910E-01	29.61	
EU-155	4.96Y	1.00	1.416E-01	1.423E-01	1.392E-01	97.86	
HG-203	46.60D	1.21	6.571E-02	7.963E-02	5.238E-02	65.78	
TL-208	1.41E+10Y	1.00	4.702E-01	4.702E-01	0.895E-01	19.03	
BI-211	7.04E+08Y	1.00	3.477E+00	3.477E+00	0.490E+00	14.10	
PB-212	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.151E+00	9.82	
PO-212	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.151E+00	9.82	
BI-214	1600.00Y	1.00	1.058E+00	1.058E+00	0.177E+00	16.74	
PB-214	1600.00Y	1.00	1.210E+00	1.210E+00	0.182E+00	15.04	
PO-214	1600.00Y	1.00	1.210E+00	1.210E+00	0.182E+00	15.04	
PO-216	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.151E+00	9.82	
PO-218	1600.00Y	1.00	1.210E+00	1.210E+00	0.182E+00	15.04	
RA-224	1.41E+10Y	1.00	4.837E+00	4.837E+00	1.100E+00	22.75	
RA-226	1600.00Y	1.00	1.058E+00	1.058E+00	0.177E+00	16.74	
AC-228	1.41E+10Y	1.00	1.697E+00	1.697E+00	0.340E+00	20.05	
RA-228	1.41E+10Y	1.00	1.697E+00	1.697E+00	0.340E+00	20.05	
TH-228	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.151E+00	9.82	
TH-230	4.47E+09Y	1.00	1.058E+00	1.058E+00	0.177E+00	16.74	
TH-232	1.41E+10Y	1.00	1.697E+00	1.697E+00	0.340E+00	20.05	
TH-234	4.47E+09Y	1.00	1.478E+00	1.478E+00	2.118E+00	143.25	
U-234	4.47E+09Y	1.00	1.058E+00	1.058E+00	0.177E+00	16.74	
U-235	7.04E+08Y	1.00	1.355E-01	1.355E-01	0.689E-01	50.88	K
NP-237	2.14E+06Y	1.00	9.024E-01	9.024E-01	3.257E-01	36.09	
U-238	4.47E+09Y	1.00	1.478E+00	1.478E+00	2.118E+00	143.25	
AM-243	7380.00Y	1.00	4.194E-01	4.194E-01	0.788E-01	18.79	
ANH-511	1.00E+09Y	1.00	1.237E-01	1.237E-01	0.643E-01	51.96	
	Total Activity :		6.506E+01	6.513E+01			

Grand Total Activity : 6.506E+01 6.513E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G232504011 Acquisition date : 7-JUL-2009 09:13:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	129.15	78	327	0.99	258.49	255	8	1.08E-02	83.9	6.32E+00	T
0	209.38	104	313	1.28	418.99	415	9	1.44E-02	64.4	5.08E+00	T
0	270.50	136	241	1.37	541.28	536	13	1.88E-02	50.2	4.22E+00	T
0	327.82	62	149	1.63	655.94	653	9	8.54E-03	75.9	3.64E+00	T
0	410.19	54	122	1.78	820.75	817	12	7.44E-03	87.2	3.04E+00	T
0	463.17	86	82	0.90	926.76	922	10	1.20E-02	44.8	2.76E+00	T
0	727.17	98	45	1.21	1454.98	1449	12	1.36E-02	34.1	1.88E+00	T
0	1240.13	23	109	1.27	2481.54	2470	15	3.26E-03	****	1.15E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:14:47.66

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504011.CNF;1 *
* Acquisition date  : 7-JUL-2009 09:13:19.  Detector SN#     :             *
* Detector ID       : GAM23                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:03.96          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504011            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.46410E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 2-JUN-2009 11:17:00.62MS Isotope      :                *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.905E+01	2.895E+00	6.180E-01	4.623E-02	47.006
CD-109	3.116E+00	9.226E-01	1.067E+00	1.042E-01	2.920
SN-126	3.073E-01	9.099E-02	1.058E-01	1.030E-02	2.903
EU-155	1.423E-01	1.392E-01	1.452E-01	1.071E-02	0.980
HG-203	7.963E-02	5.238E-02	5.670E-02	3.502E-03	1.405
TL-208	4.702E-01	8.947E-02	6.103E-02	3.962E-03	7.705
BI-211	3.477E+00	4.905E-01	2.867E-01	1.868E-02	12.128
PB-212	1.541E+00	1.513E-01	7.674E-02	5.518E-03	20.075
PO-212	1.541E+00	1.513E-01	7.674E-02	5.518E-03	20.075
BI-214	1.058E+00	1.771E-01	1.196E-01	8.992E-03	8.845
PB-214	1.210E+00	1.819E-01	9.997E-02	8.344E-03	12.100
PO-214	1.210E+00	1.819E-01	9.997E-02	8.344E-03	12.100
PO-216	1.541E+00	1.513E-01	7.674E-02	5.518E-03	20.075
PO-218	1.210E+00	1.819E-01	9.997E-02	8.344E-03	12.100
RA-224	4.837E+00	1.100E+00	8.743E-01	4.926E-02	5.532
RA-226	1.058E+00	1.771E-01	1.196E-01	8.992E-03	8.845
AC-228	1.697E+00	3.402E-01	2.283E-01	2.634E-02	7.433
RA-228	1.697E+00	3.402E-01	2.283E-01	2.634E-02	7.433

Sample ID : G232504011 Acquisition date : 7-JUL-2009 09:13:19

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.541E+00	1.513E-01	7.674E-02	5.517E-03	20.077
TH-230	1.058E+00	1.771E-01	1.196E-01	8.992E-03	8.845
TH-232	1.697E+00	3.402E-01	2.283E-01	2.634E-02	7.433
TH-234	1.478E+00	2.118E+00	1.861E+00	3.353E-01	0.795
U-234	1.058E+00	1.771E-01	1.196E-01	8.992E-03	8.845
U-235	1.355E-01	6.892E-02	3.064E-01	4.956E-02	0.442
NP-237	9.024E-01	3.257E-01	3.150E-01	7.174E-02	2.865
U-238	1.478E+00	2.118E+00	1.861E+00	3.353E-01	0.795
AM-243	4.194E-01	7.880E-02	7.440E-02	6.611E-03	5.637
ANH-511	1.237E-01	6.428E-02	4.549E-02	2.642E-03	2.720

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.156E-01		3.143E-01	5.315E-01	3.612E-02	0.406
NA-22	-3.090E-02		5.375E-02	8.186E-02	5.497E-03	-0.378
NA-24	-2.563E-02		3.197E-02	Half-Life too short		
AL-26	4.071E-03		3.396E-02	5.777E-02	3.472E-03	0.070
TI-44	3.608E-01	+	5.376E-02	6.164E-02	5.587E-03	5.854
SC-46	-6.016E-03		3.912E-02	6.465E-02	5.776E-03	-0.093
V-48	-2.763E-02		6.551E-02	1.042E-01	8.669E-03	-0.265
CR-51	-9.439E-02		3.132E-01	5.157E-01	3.381E-02	-0.183
MN-52	-7.184E-03		1.867E-01	3.076E-01	2.226E-02	-0.023
MN-54	1.066E-02		3.978E-02	6.555E-02	5.190E-03	0.163
CO-56	-6.287E-03		4.057E-02	6.430E-02	5.231E-03	-0.098
CO-57	6.300E-03		1.987E-02	3.416E-02	2.014E-03	0.184
CO-58	-3.393E-02		4.204E-02	6.283E-02	4.720E-03	-0.540
FE-59	-2.183E-02		9.936E-02	1.596E-01	1.230E-02	-0.137
CO-60	4.202E-02		4.138E-02	7.612E-02	5.588E-03	0.552
ZN-65	5.898E-02		1.106E-01	1.655E-01	1.093E-02	0.356
GE-68	5.774E-01		1.316E+00	2.249E+00	1.609E-01	0.257
AS-73	-1.370E-02		7.938E-01	1.295E+00	1.144E-01	-0.011
AS-74	-2.209E-02		8.420E-02	1.378E-01	7.600E-03	-0.160
SE-75	-2.323E-02		4.138E-02	5.978E-02	3.480E-03	-0.389
BR-77	-3.494E+00		5.607E+00	8.502E+00	4.921E-01	-0.411
SR-82	-9.445E-02		3.557E-01	5.633E-01	3.886E-02	-0.168
RB-83	-4.111E-02		6.997E-02	1.065E-01	6.163E-03	-0.386
RB-84	-1.221E-02		6.726E-02	1.110E-01	9.750E-03	-0.110
KR-85	1.364E+01		7.874E+00	1.279E+01	7.422E-01	1.066
SR-85	6.830E-02		3.943E-02	6.406E-02	3.717E-03	1.066
RB-86	-7.646E-02		7.806E-01	1.271E+00	9.106E-02	-0.060
Y-88	9.862E-03		3.409E-02	5.971E-02	3.516E-03	0.165
ZR-88	-6.298E-03		2.832E-02	4.587E-02	2.648E-03	-0.137
Y-91	-4.333E+00		2.193E+01	3.501E+01	2.089E+00	-0.124
NB-94	4.778E-03		3.553E-02	5.888E-02	3.364E-03	0.081
NB-95	-4.971E-02		4.507E-02	6.660E-02	4.475E-03	-0.746
NB-95M	1.198E-02		1.254E-01	1.802E-01	1.329E-02	0.067

Sample ID : G232504011 Acquisition date : 7-JUL-2009 09:13:19

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	3.842E-02		7.285E-02	1.237E-01	9.489E-03	0.311
NB-97	-8.271E-04		5.198E-03	Half-Life too short		
ZR-97	2.915E-01		1.076E-01	Half-Life too short		
MO-99	1.057E+00		6.399E+00	1.060E+01	1.483E+00	0.100
TC-99M	-4.396E+07		3.346E+07	Half-Life too short		
RH-101	6.967E-03		2.906E-02	4.777E-02	2.547E-03	0.146
RH-102	-1.493E-02		2.913E-02	4.514E-02	2.643E-03	-0.331
RU-103	-4.290E-03		3.542E-02	5.628E-02	7.125E-03	-0.076
RH-106	-1.951E-01		3.073E-01	4.831E-01	5.572E-02	-0.404
RU-106	-1.951E-01		3.066E-01	4.831E-01	2.596E-02	-0.404
AG-108M	-1.724E-02		3.062E-02	4.772E-02	3.025E-03	-0.361
AG-110M	-1.009E-03		3.350E-02	5.521E-02	3.068E-03	-0.018
IN-111	-8.442E-01		5.895E-01	7.310E-01	4.138E-02	-1.155
IN-113M	-1.516E-02		4.088E-02	6.554E-02	4.038E-03	-0.231
SN-113	-1.516E-02		4.088E-02	6.554E-02	4.038E-03	-0.231
IN-114M	7.331E-02		1.753E-01	2.627E-01	1.385E-02	0.279
CD-115	-2.608E+00		5.471E+00	8.381E+00	4.837E-01	-0.311
SN-117M	3.390E-02		4.072E-02	7.010E-02	3.643E-03	0.484
SB-122	5.295E-01		1.130E+00	1.940E+00	1.097E-01	0.273
I-123	1.104E-01		1.406E-01	Half-Life too short		
TE-123M	9.113E-03		2.321E-02	3.923E-02	2.070E-03	0.232
I-124	-2.037E-01		5.044E-01	7.361E-01	4.034E-02	-0.277
SB-124	-1.968E-02		8.076E-02	1.256E-01	8.754E-03	-0.157
SB-125	-1.050E-02		8.263E-02	1.334E-01	8.117E-03	-0.079
TE-125M	-1.630E+00		7.805E+00	1.190E+01	1.061E+00	-0.137
I-126	7.995E-02		1.628E-01	2.784E-01	1.441E-02	0.287
SB-126	9.365E-02		1.456E-01	2.214E-01	1.326E-02	0.423
SB-127	-1.822E-01		8.698E-01	1.405E+00	1.186E-01	-0.130
XE-127	-2.636E-02		3.878E-02	6.085E-02	3.267E-03	-0.433
I-131	3.189E-02		8.573E-02	1.453E-01	9.465E-03	0.219
TE-132	3.270E-01		3.836E-01	6.408E-01	8.870E-02	0.510
BA-133	2.657E-03		4.388E-02	6.332E-02	7.346E-03	0.042
I-133	-1.281E-04		4.893E-04	Half-Life too short		
CS-134	3.014E-02		5.171E-02	8.750E-02	6.391E-03	0.344
CS-135	9.204E-02		1.508E-01	2.228E-01	1.702E-02	0.413
I-135	5.603E+06		1.202E+07	Half-Life too short		
CS-136	4.637E-02		9.262E-02	1.601E-01	1.275E-02	0.290
BA-137M	1.745E-03		3.613E-02	5.987E-02	3.058E-03	0.029
CS-137	1.844E-03		3.819E-02	6.328E-02	3.250E-03	0.029
CE-139	-2.212E-02		2.474E-02	3.920E-02	1.998E-03	-0.564
BA-140	7.117E-02		2.025E-01	3.480E-01	1.131E-01	0.205
LA-140	-2.311E-02		8.337E-02	1.309E-01	8.981E-03	-0.177
CE-141	-2.488E-02		5.054E-02	8.234E-02	4.644E-03	-0.302
CE-143	8.499E-05		2.397E-05	Half-Life too short		
CE-144	-2.274E-02		1.706E-01	2.721E-01	3.842E-02	-0.084
PM-144	-2.871E-03		3.564E-02	5.816E-02	3.271E-03	-0.049
PR-144	-1.943E-01		2.412E+00	3.937E+00	2.213E-01	-0.049
PM-146	2.028E-03		4.204E-02	6.839E-02	5.923E-03	0.030

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-1.797E-02		4.318E-01	7.260E-01	9.805E-02	-0.025
PM-149	-3.369E+00		3.907E+01	6.583E+01	9.338E+00	-0.051
EU-152	2.038E-02		8.536E-02	1.442E-01	9.555E-03	0.141
GD-153	-3.542E-02		6.680E-02	1.010E-01	8.252E-03	-0.351
EU-154	-8.641E-02		1.504E-01	2.289E-01	2.273E-02	-0.377
TB-160	1.738E-02		1.443E-01	2.445E-01	2.138E-02	0.071
HO-166M	3.063E-02		6.052E-02	1.032E-01	6.041E-03	0.297
TM-171	1.735E+00		2.767E+01	4.142E+01	3.602E+00	0.042
LU-176	-5.798E-03		2.290E-02	3.513E-02	2.069E-03	-0.165
LU-177	1.813E+00	+	1.171E+00	1.424E+00	7.706E-02	1.273
LU-177M	-1.099E-01		1.791E-01	2.403E-01	1.398E-02	-0.457
HF-181	-1.961E-02		4.084E-02	6.331E-02	3.703E-03	-0.310
W-181	-1.249E-01		3.555E-01	5.166E-01	4.488E-02	-0.242
TA-182	-1.405E-02		2.225E-01	3.586E-01	2.201E-02	-0.039
RE-183	3.752E-02		8.844E-02	1.495E-01	7.688E-03	0.251
RE-184	1.057E-02		1.997E-01	3.192E-01	1.820E-02	0.033
OS-185	5.714E-04		4.141E-02	6.860E-02	3.580E-03	0.008
RE-188	3.373E-02		1.422E-01	2.392E-01	1.255E-02	0.141
W-188	6.635E-01		6.749E+00	1.015E+01	5.943E-01	0.065
IR-192	1.759E-02		2.929E-02	5.081E-02	3.014E-03	0.346
AU-195	1.111E-01		1.958E-01	3.096E-01	2.470E-02	0.359
TL-200	-2.772E-05		5.041E-05	Half-Life too short		
TL-201	2.605E-01		3.514E+00	5.831E+00	2.976E-01	0.045
TL-202	-3.679E-02		5.789E-02	8.958E-02	5.241E-03	-0.411
BI-207	9.935E-03		5.128E-02	8.596E-02	6.316E-03	0.116
TL-207	7.101E-02		6.532E-01	9.716E-01	1.608E-01	0.073
PO-209	-3.568E+00		7.633E+00	1.224E+01	1.111E+00	-0.291
BI-210	2.005E+00		4.066E+00	6.720E+00	5.232E-01	0.298
PB-210	2.005E+00		4.066E+00	6.720E+00	5.232E-01	0.298
PO-210	2.005E+00		4.065E+00	6.720E+00	4.509E-01	0.298
PB-211	3.313E-03		9.710E-01	1.473E+00	9.186E-01	0.002
BI-212	1.133E+00	+	3.965E-01	6.305E-01	5.005E-02	1.797
PO-215	7.101E-02		6.532E-01	9.716E-01	1.608E-01	0.073
RN-219	-1.730E-01		3.836E-01	6.087E-01	8.281E-02	-0.284
RN-220	1.687E+01		2.483E+01	4.370E+01	2.494E+00	0.386
RA-223	7.101E-02		6.532E-01	9.716E-01	1.608E-01	0.073
AC-227	-7.931E-02		3.502E-01	5.493E-01	7.650E-02	-0.144
TH-227	-7.931E-02		3.503E-01	5.493E-01	9.268E-02	-0.144
TH-229	-4.348E-01		4.453E-01	6.912E-01	3.661E-02	-0.629
PA-231	-2.165E-02		1.399E+00	2.201E+00	3.036E-01	-0.010
TH-231	7.101E-02		6.532E-01	9.716E-01	1.608E-01	0.073
U-231	1.369E-02		6.547E-01	9.407E-01	7.890E-02	0.015
PA-233	-4.793E-03		5.297E-02	8.849E-02	5.532E-03	-0.054
PA-234	-1.590E-01		3.126E-01	4.940E-01	9.286E-02	-0.322
PA-234M	1.811E+00		7.007E+00	1.185E+01	1.280E+00	0.153
NP-236	-6.464E-02		6.681E-02	1.058E-01	5.473E-03	-0.611
NP-239	-1.083E-01		1.481E-01	2.438E-01	1.522E-02	-0.444
AM-241	-4.747E-02		1.498E-01	2.196E-01	2.044E-02	-0.216

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.226E-02		8.380E-02	1.288E-01	9.547E-03	-0.095
CM-247	-1.519E-02		3.500E-02	5.572E-02	3.230E-03	-0.273
CF-249	3.528E-04		3.707E-02	6.107E-02	3.534E-03	0.006
CF-251	-8.744E-02		1.066E-01	1.683E-01	8.698E-03	-0.520

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504011           *
* Acquisition date  :  7-JUL-2009 09:13:19 Detector SN#     :               *
* Detector ID       : GAM23                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:03.96     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504011           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.4641E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.905E+01	2.838E+00	3.110E-01	1.448E+00
CD-109	3.116E+00	9.042E-01	5.724E-01	4.613E-01
SN-126	3.073E-01	8.917E-02	5.677E-02	4.549E-02
EU-155	1.423E-01	1.365E-01	7.760E-02	6.962E-02
HG-203	7.963E-02	5.133E-02	2.965E-02	2.619E-02
TL-208	4.702E-01	8.768E-02	3.139E-02	4.474E-02
BI-211	3.477E+00	4.807E-01	1.492E-01	2.452E-01
PB-212	1.541E+00	1.483E-01	4.028E-02	7.564E-02
PO-212	1.541E+00	1.483E-01	4.028E-02	7.564E-02
BI-214	1.058E+00	1.736E-01	6.145E-02	8.855E-02
PB-214	1.210E+00	1.783E-01	5.201E-02	9.096E-02
PO-214	1.210E+00	1.783E-01	5.201E-02	9.096E-02
PO-216	1.541E+00	1.483E-01	4.028E-02	7.564E-02
PO-218	1.210E+00	1.783E-01	5.201E-02	9.096E-02
RA-224	4.837E+00	1.078E+00	4.587E-01	5.501E-01
RA-226	1.058E+00	1.736E-01	6.145E-02	8.855E-02
AC-228	1.697E+00	3.334E-01	1.162E-01	1.701E-01
RA-228	1.697E+00	3.334E-01	1.162E-01	1.701E-01
TH-228	1.541E+00	1.483E-01	4.027E-02	7.564E-02
TH-230	1.058E+00	1.736E-01	6.145E-02	8.855E-02
TH-232	1.697E+00	3.334E-01	1.162E-01	1.701E-01
TH-234	1.478E+00	2.075E+00	1.005E+00	1.059E+00
U-234	1.058E+00	1.736E-01	6.145E-02	8.855E-02
U-235	1.395E-01	1.760E-01	1.626E-01	8.981E-02
NP-237	9.024E-01	3.192E-01	1.690E-01	1.628E-01
U-238	1.478E+00	2.075E+00	1.005E+00	1.059E+00
AM-243	4.194E-01	7.722E-02	4.004E-02	3.940E-02
ANH-511	1.237E-01	6.299E-02	2.346E-02	3.214E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	2.156E-01	3.080E-01	2.746E-01	1.572E-01	NOT IDENT.
NA-22	-3.090E-02	5.267E-02	4.132E-02	2.687E-02	NOT IDENT.
NA-24	-2.563E+04	6.267E+04	0.000E+00	3.197E+04	SHORT HLIF
AL-26	4.071E-03	3.328E-02	2.892E-02	1.698E-02	NOT IDENT.
TI-44	3.608E-01	5.268E-02	3.314E-02	2.688E-02	FAIL ABUN
SC-46	-6.016E-03	3.834E-02	3.292E-02	1.956E-02	FAIL ABUN
V-48	-2.763E-02	6.420E-02	5.293E-02	3.275E-02	NOT IDENT.
CR-51	-9.439E-02	3.070E-01	2.688E-01	1.566E-01	NOT IDENT.
MN-52	-7.184E-03	1.830E-01	1.548E-01	9.337E-02	NOT IDENT.
MN-54	1.066E-02	3.898E-02	3.343E-02	1.989E-02	NOT IDENT.
CO-56	-6.287E-03	3.976E-02	3.278E-02	2.028E-02	NOT IDENT.
CO-57	6.300E-03	1.947E-02	1.819E-02	9.933E-03	NOT IDENT.
CO-58	-3.393E-02	4.120E-02	3.206E-02	2.102E-02	NOT IDENT.
FE-59	-2.183E-02	9.738E-02	8.088E-02	4.968E-02	NOT IDENT.
CO-60	4.202E-02	4.055E-02	3.839E-02	2.069E-02	NOT IDENT.
ZN-65	5.898E-02	1.084E-01	8.384E-02	5.529E-02	NOT IDENT.
GE-68	5.774E-01	1.290E+00	1.140E+00	6.582E-01	NOT IDENT.
AS-73	-1.370E-02	7.779E-01	7.020E-01	3.969E-01	NOT IDENT.
AS-74	-2.209E-02	8.252E-02	7.083E-02	4.210E-02	NOT IDENT.
SE-75	-2.323E-02	4.055E-02	3.130E-02	2.069E-02	FAIL ABUN
BR-77	-3.494E+00	5.495E+00	4.384E+00	2.803E+00	FAIL ABUN
SR-82	-9.445E-02	3.485E-01	2.878E-01	1.778E-01	NOT IDENT.
RB-83	-4.111E-02	6.857E-02	5.489E-02	3.499E-02	NOT IDENT.
RB-84	-1.221E-02	6.591E-02	5.652E-02	3.363E-02	NOT IDENT.
KR-85	1.364E+01	7.716E+00	6.597E+00	3.937E+00	NOT IDENT.
SR-85	6.830E-02	3.864E-02	3.304E-02	1.972E-02	NOT IDENT.
RB-86	-7.646E-02	7.650E-01	6.440E-01	3.903E-01	NOT IDENT.
Y-88	9.862E-03	3.341E-02	2.988E-02	1.705E-02	NOT IDENT.
ZR-88	-6.298E-03	2.775E-02	2.380E-02	1.416E-02	NOT IDENT.
Y-91	-4.333E+00	2.149E+01	1.770E+01	1.097E+01	NOT IDENT.
NB-94	4.778E-03	3.482E-02	3.015E-02	1.776E-02	NOT IDENT.
NB-95	-4.971E-02	4.417E-02	3.403E-02	2.253E-02	NOT IDENT.
NB-95M	1.198E-02	1.229E-01	9.460E-02	6.272E-02	NOT IDENT.
ZR-95	3.842E-02	7.139E-02	6.321E-02	3.643E-02	NOT IDENT.
NB-97	-8.271E+02	1.019E+04	0.000E+00	5.198E+03	SHORT HLIF
ZR-97	2.915E+05	2.109E+05	0.000E+00	1.076E+05	SHORT HLIF
MO-99	1.057E+00	6.271E+00	5.419E+00	3.199E+00	NOT IDENT.
TC-99M	-4.396E+13	6.559E+13	0.000E+00	3.346E+13	SHORT HLIF
RH-101	6.967E-03	2.848E-02	2.517E-02	1.453E-02	NOT IDENT.
RH-102	-1.493E-02	2.855E-02	2.333E-02	1.456E-02	NOT IDENT.
RU-103	-4.290E-03	3.471E-02	2.905E-02	1.771E-02	FAIL ABUN
RH-106	-1.951E-01	3.011E-01	2.481E-01	1.536E-01	FAIL ABUN
RU-106	-1.951E-01	3.005E-01	2.481E-01	1.533E-01	FAIL ABUN
AG-108M	-1.724E-02	3.001E-02	2.471E-02	1.531E-02	NOT IDENT.
AG-110M	-1.009E-03	3.283E-02	2.831E-02	1.675E-02	NOT IDENT.
IN-111	-8.442E-01	5.777E-01	3.834E-01	2.947E-01	NOT IDENT.
IN-113M	-1.516E-02	4.006E-02	3.401E-02	2.044E-02	NOT IDENT.
SN-113	-1.516E-02	4.006E-02	3.401E-02	2.044E-02	NOT IDENT.
IN-114M	7.331E-02	1.718E-01	1.386E-01	8.764E-02	NOT IDENT.
CD-115	-2.608E+00	5.361E+00	4.320E+00	2.735E+00	NOT IDENT.
SN-117M	3.390E-02	3.991E-02	3.712E-02	2.036E-02	NOT IDENT.
SB-122	5.295E-01	1.108E+00	9.984E-01	5.651E-01	NOT IDENT.
I-123	1.104E+05	2.756E+05	0.000E+00	1.406E+05	SHORT HLIF
TE-123M	9.113E-03	2.275E-02	2.077E-02	1.161E-02	NOT IDENT.
I-124	-2.037E-01	4.943E-01	3.782E-01	2.522E-01	NOT IDENT.
SB-124	-1.968E-02	7.914E-02	6.295E-02	4.038E-02	NOT IDENT.
SB-125	-1.050E-02	8.097E-02	6.910E-02	4.131E-02	FAIL ABUN
TE-125M	-1.630E+00	7.648E+00	6.352E+00	3.902E+00	NOT IDENT.
I-126	7.995E-02	1.596E-01	1.427E-01	8.142E-02	NOT IDENT.
SB-126	9.365E-02	1.427E-01	1.133E-01	7.280E-02	FAIL ABUN
SB-127	-1.822E-01	8.524E-01	7.197E-01	4.349E-01	FAIL ABUN
XE-127	-2.636E-02	3.801E-02	3.205E-02	1.939E-02	NOT IDENT.
I-131	3.189E-02	8.401E-02	7.554E-02	4.286E-02	NOT IDENT.
TE-132	3.270E-01	3.759E-01	3.366E-01	1.918E-01	NOT IDENT.
BA-133	2.657E-03	4.300E-02	3.293E-02	2.194E-02	NOT IDENT.
I-133	-1.281E+02	9.591E+02	0.000E+00	4.893E+02	SHORT HLIF
CS-134	3.014E-02	5.068E-02	4.467E-02	2.586E-02	NOT IDENT.
CS-135	9.204E-02	1.477E-01	1.166E-01	7.538E-02	NOT IDENT.
I-135	5.603E+12	2.356E+13	0.000E+00	1.202E+13	SHORT HLIF
CS-136	4.637E-02	9.077E-02	8.118E-02	4.631E-02	FAIL ABUN
BA-137M	1.745E-03	3.541E-02	3.070E-02	1.807E-02	NOT IDENT.
CS-137	1.844E-03	3.743E-02	3.245E-02	1.910E-02	NOT IDENT.
CE-139	-2.212E-02	2.425E-02	2.074E-02	1.237E-02	NOT IDENT.
BA-140	7.117E-02	1.985E-01	1.793E-01	1.013E-01	NOT IDENT.
LA-140	-2.311E-02	8.170E-02	6.573E-02	4.168E-02	FAIL ABUN
CE-141	-2.488E-02	4.953E-02	4.369E-02	2.527E-02	NOT IDENT.
CE-143	8.499E+01	4.698E+01	0.000E+00	2.397E+01	SHORT HLIF

CE-144	-2.274E-02	1.672E-01	1.446E-01	8.529E-02	NOT IDENT.
PM-144	-2.871E-03	3.492E-02	2.979E-02	1.782E-02	NOT IDENT.
PR-144	-1.943E-01	2.364E+00	2.016E+00	1.206E+00	NOT IDENT.
PM-146	2.028E-03	4.120E-02	3.537E-02	2.102E-02	NOT IDENT.
ND-147	-1.797E-02	4.231E-01	3.742E-01	2.159E-01	FAIL ABUN
PM-149	-3.369E+00	3.829E+01	3.441E+01	1.954E+01	NOT IDENT.
EU-152	2.038E-02	8.365E-02	7.504E-02	4.268E-02	NOT IDENT.
GD-153	-3.542E-02	6.547E-02	5.406E-02	3.340E-02	NOT IDENT.
EU-154	-8.641E-02	1.474E-01	1.156E-01	7.522E-02	NOT IDENT.
TB-160	1.738E-02	1.414E-01	1.245E-01	7.217E-02	FAIL ABUN
HO-166M	3.063E-02	5.931E-02	5.283E-02	3.026E-02	FAIL ABUN
TM-171	1.735E+00	2.712E+01	2.235E+01	1.384E+01	NOT IDENT.
LU-176	-5.798E-03	2.244E-02	1.833E-02	1.145E-02	FAIL ABUN
LU-177	1.813E+00	1.148E+00	7.498E-01	5.855E-01	FAIL ABUN
LU-177M	-1.099E-01	1.755E-01	1.246E-01	8.955E-02	NOT IDENT.
HF-181	-1.961E-02	4.002E-02	3.270E-02	2.042E-02	NOT IDENT.
W-181	-1.249E-01	3.484E-01	2.789E-01	1.778E-01	NOT IDENT.
TA-182	-1.405E-02	2.180E-01	1.812E-01	1.112E-01	FAIL ABUN
RE-183	3.752E-02	8.667E-02	7.910E-02	4.422E-02	FAIL ABUN
RE-184	1.057E-02	1.957E-01	1.673E-01	9.985E-02	NOT IDENT.
OS-185	5.714E-04	4.058E-02	3.519E-02	2.070E-02	NOT IDENT.
RE-188	3.373E-02	1.394E-01	1.267E-01	7.111E-02	NOT IDENT.
W-188	6.635E-01	6.614E+00	5.302E+00	3.374E+00	FAIL ABUN
IR-192	1.759E-02	2.870E-02	2.650E-02	1.464E-02	FAIL ABUN
AU-195	1.111E-01	1.919E-01	1.656E-01	9.790E-02	FAIL ABUN
TL-200	-2.772E+01	9.881E+01	0.000E+00	5.041E+01	SHORT HLIF
TL-201	2.605E-01	3.443E+00	3.084E+00	1.757E+00	NOT IDENT.
TL-202	-3.679E-02	5.673E-02	4.637E-02	2.894E-02	NOT IDENT.
BI-207	9.935E-03	5.025E-02	4.359E-02	2.564E-02	FAIL ABUN
TL-207	7.101E-02	6.402E-01	5.064E-01	3.266E-01	FAIL ABUN
PO-209	-3.568E+00	7.480E+00	6.232E+00	3.816E+00	NOT IDENT.
BI-210	2.005E+00	3.984E+00	3.653E+00	2.033E+00	NOT IDENT.
PB-210	2.005E+00	3.984E+00	3.653E+00	2.033E+00	NOT IDENT.
PO-210	2.005E+00	3.983E+00	3.653E+00	2.032E+00	NOT IDENT.
PB-211	3.313E-03	9.515E-01	7.641E-01	4.855E-01	NOT IDENT.
BI-212	1.133E+00	3.886E-01	3.226E-01	1.983E-01	FAIL ABUN
PO-215	7.101E-02	6.402E-01	5.064E-01	3.266E-01	FAIL ABUN
RN-219	-1.730E-01	3.759E-01	3.157E-01	1.918E-01	FAIL ABUN
RN-220	1.687E+01	2.433E+01	2.250E+01	1.242E+01	NOT IDENT.
RA-223	7.101E-02	6.402E-01	5.064E-01	3.266E-01	FAIL ABUN
AC-227	-7.931E-02	3.432E-01	2.878E-01	1.751E-01	FAIL ABUN
TH-227	-7.931E-02	3.433E-01	2.878E-01	1.751E-01	FAIL ABUN
TH-229	-4.348E-01	4.364E-01	3.644E-01	2.226E-01	FAIL ABUN
PA-231	-2.165E-02	1.371E+00	1.151E+00	6.993E-01	FAIL ABUN
TH-231	7.101E-02	6.402E-01	5.064E-01	3.266E-01	FAIL ABUN
U-231	1.369E-02	6.416E-01	5.036E-01	3.273E-01	FAIL ABUN
PA-233	-4.793E-03	5.191E-02	4.616E-02	2.649E-02	FAIL ABUN
PA-234	-1.590E-01	3.063E-01	2.512E-01	1.563E-01	FAIL ABUN
PA-234M	1.811E+00	6.867E+00	6.017E+00	3.503E+00	NOT IDENT.
NP-236	-6.464E-02	6.548E-02	5.602E-02	3.341E-02	NOT IDENT.
NP-239	-1.083E-01	1.451E-01	1.300E-01	7.406E-02	FAIL ABUN
AM-241	-4.747E-02	1.468E-01	1.188E-01	7.491E-02	NOT IDENT.
CM-243	-1.226E-02	8.213E-02	6.886E-02	4.190E-02	FAIL ABUN
CM-247	-1.519E-02	3.430E-02	2.890E-02	1.750E-02	FAIL ABUN
CF-249	3.528E-04	3.633E-02	3.170E-02	1.854E-02	NOT IDENT.
CF-251	-8.744E-02	1.045E-01	8.892E-02	5.330E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	147.2221
46.50	147.2221
46.50	147.2221
48.70	186.0873
49.72	157.9619
51.35	176.6179
52.39	185.7602
52.97	181.2072
53.15	176.2537
53.44	169.3355
54.07	171.9461
56.28	194.6999
56.28	194.7027
57.37	0.0000
57.53	174.9555
57.53	174.9574
57.60	175.0154
57.98	197.3891
57.98	197.3891
59.32	202.8955
59.32	202.8955
59.40	202.9731
59.54	203.1086
59.72	201.8713
60.01	203.5627
61.10	177.6117
61.14	177.6447
61.30	199.1109
63.00	235.4360
63.29	235.7476
63.29	235.7476
63.58	236.0572
64.28	271.0442
65.12	260.4858
65.20	260.5774
65.20	260.5774
66.05	249.9323
66.72	253.5783
66.83	259.5344
66.91	259.6250
67.20	265.7925
67.20	265.7925
67.75	287.6499
67.85	296.5629
68.90	287.9658
68.90	287.9658
69.30	271.8759
69.67	259.7586
70.82	275.8383
70.82	275.8383
70.83	275.8497
72.80	274.7296
72.87	274.8063
72.87	274.8063
74.67	276.8045
74.81	276.9577
74.81	276.9577
74.81	276.9577
74.81	276.9577
74.81	276.9577
74.81	276.9577
74.97	277.1353
75.28	277.4755
75.70	277.9372
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77.11	279.4737
77.11	279.4737

77.11	279.4737
77.11	279.4737
77.11	279.4737
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79.80	245.8708
79.80	245.8708
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80.18	250.8407
80.30	250.9534
80.30	250.9534
80.57	265.0792
81.00	267.4357
81.07	255.9241
81.07	255.9241
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81.07	255.9241
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83.78	246.4041
83.78	246.4041
84.21	288.9609
84.40	287.5973
84.90	272.4573
85.43	329.4537
86.29	380.8206
86.50	296.4578
86.54	296.4999
86.59	296.5516
86.72	296.6895
86.79	296.7603
86.94	296.9193
87.30	297.2965
87.30	297.2965
87.30	297.2965
87.30	297.2965
87.30	297.2965
87.30	297.2965
87.57	297.5780
87.88	297.9016
88.03	298.0568
88.36	298.3995
88.47	298.5144
89.95	300.0445
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92.38	302.5282
92.38	302.5282
93.35	303.5125
94.00	229.4384
94.67	234.8005
94.67	234.8049
94.90	234.9819
94.90	234.9819
94.90	234.9819
94.90	234.9819
95.87	225.9740
95.87	225.9740
96.73	236.3905
97.43	246.3167
98.44	217.6080
98.44	217.6093
98.88	217.9145
99.55	224.5466
99.55	224.5466
99.86	224.7659
100.00	245.8684
100.10	245.9488
103.18	227.9292
103.76	233.7514
105.00	235.0528
105.31	235.2729
108.00	238.0150
109.28	235.1004
111.00	216.2710
111.00	216.2710

111.76	220.1585
112.95	238.0352
115.19	218.8665
116.30	196.2085
117.00	234.6949
117.00	234.6949
117.66	231.6531
121.11	220.7025
121.62	213.9890
121.78	214.0808
122.06	212.4848
122.32	212.6313
122.32	212.6313
122.32	212.6313
122.32	212.6313
123.07	211.2964
127.23	221.6212
129.76	227.5417
131.20	213.0864
133.02	215.4152
133.54	224.6476
135.34	232.5521
136.00	221.0988
136.25	224.8764
136.48	209.5161
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140.51	0.0000
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142.65	266.2500
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144.24	216.2071
144.24	216.2071
144.24	216.2071
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145.44	253.0991
147.16	235.4169
152.43	228.7779
152.70	227.0239
153.22	215.9209
154.21	210.6972
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154.21	210.6972
154.21	210.6972
155.03	243.4063
156.02	261.0838
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159.00	217.6964
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162.32	214.4099
162.64	208.7556
163.35	188.7416
163.89	208.3337
165.85	247.1296
167.43	221.5804
171.28	220.3724
171.86	218.6577
172.10	218.7639
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176.60	233.6517
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184.41	207.4190
185.71	222.5983
186.00	222.7214
190.27	229.5982
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193.63	244.3601
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198.01	208.0030
198.60	223.7585
200.40	217.2002
201.83	217.7466
202.84	227.5246
205.31	198.1055
208.36	213.3682
208.81	215.1147

209.75	215.4572
209.75	215.4572
210.97	200.0281
215.65	215.4654
216.55	208.3083
218.09	201.3392
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223.80	204.2924
226.40	185.6049
227.00	185.7823
227.08	185.8066
227.20	185.8414
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228.18	175.2437
228.18	175.2437
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235.69	231.2640
236.00	226.4171
236.00	226.4171
238.60	176.9857
238.63	176.9938
238.63	176.9938
238.63	176.9938
239.00	177.0931
240.98	177.6237
241.98	177.8906
241.98	177.8906
241.98	177.8906
244.69	170.7974
245.39	181.0322
247.94	123.3852
248.90	133.6692
249.79	161.9604
252.40	149.0277
252.85	149.1244
252.85	149.1244
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256.20	171.4118
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260.90	156.5583
262.80	146.6641
264.65	164.0434
268.24	136.8035
268.79	154.2372
269.46	142.2363
269.46	142.2363
269.46	142.2363
269.46	142.2363
271.23	142.5791
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277.35	151.9391
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277.60	146.3106
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286.10	148.0820
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295.21	153.5852
295.21	153.5852
295.96	153.7289

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298.57	122.5216
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299.80	150.1398
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300.09	141.5282
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303.76	126.2137
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304.40	132.1211
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306.84	135.9144
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319.02	124.6777
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323.87	130.7754
323.87	130.7754
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334.20	140.9798
334.30	140.9958
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338.28	128.4110
338.28	128.4110
338.28	128.4110
338.32	128.4172
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338.32	128.4172
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340.57	125.7097
344.27	117.8621
345.85	118.8300
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351.92	115.0177
351.92	115.0177
351.92	115.0177
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356.01	112.4442
364.48	106.8529
366.43	115.8314
367.43	122.7719
367.94	0.0000
369.80	109.4006
374.96	111.9456
383.85	111.9672
387.95	115.4106
388.63	99.5590
391.69	119.8334
391.69	119.8334
392.90	118.9764
398.62	121.6517
400.65	105.7722
401.10	109.8499
401.81	119.0011
402.60	123.1281
404.84	121.3715
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411.60	111.9722
413.65	109.3330
414.70	140.4744
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427.89	95.0715
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433.93	105.9828
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439.56	108.6068
439.89	105.5047
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444.90	98.6271
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445.03	100.7373
445.03	100.7373
445.03	100.7373
453.90	99.4031
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475.35	99.0696
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477.59	91.7016
477.96	87.4122
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484.57	81.3766
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510.53	0.0000
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511.00	94.1853
511.85	94.2476
511.85	94.2476
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513.99	79.9656
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520.65	102.7026
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528.96	0.0000
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529.87	0.0000
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546.56	0.0000
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552.65	90.5405
555.20	85.2099
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563.90	77.4457
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569.50	92.5635
569.67	92.5732
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579.30	0.0000
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593.00	68.6781
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602.71	101.4614
602.71	101.4614
603.60	102.6495
604.41	101.1250
604.70	101.1458
609.31	103.6751
609.31	103.6751
609.31	103.6751

609.31	103.6751
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614.37	76.3457
618.01	81.3124
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621.84	85.3518
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633.10	82.1093
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661.65	83.5930
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666.33	77.9161
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696.49	87.3696
697.00	94.4291
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713.82	64.9219
717.42	87.4193
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722.78	54.3789
722.78	54.3789
722.89	54.3828
722.95	54.3841
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724.18	88.4377
727.18	81.7734
733.00	70.0767
735.90	65.7391
739.58	61.7563
742.81	68.0544
744.21	58.8202
747.13	53.7469
751.79	81.8622
752.31	74.6297
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755.35	61.2572
756.15	68.5540
756.87	78.9725
763.93	102.2229
765.79	105.4582
766.41	87.7365
766.84	84.6229
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768.36	75.2818
768.36	75.2818
768.36	75.2818
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778.00	77.7723
778.57	75.6932
778.89	74.6557
783.80	67.4703

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792.07	92.1146
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796.30	80.6461
801.93	77.6890
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810.76	81.2491
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831.96	77.8008
834.83	71.4205
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848.13	56.6414
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867.82	57.7346
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880.27	59.0013
880.51	59.0078
881.50	60.8800
883.24	57.2382
884.67	58.1999
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911.07	65.4669
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934.06	50.0875
934.06	50.0875
935.52	46.3373
937.48	69.0940
944.10	53.1608
946.00	64.6064
949.00	42.8110
962.29	86.9439
964.01	88.6521
966.15	80.5188
968.20	78.6718
969.11	78.7018
969.11	78.7018
969.11	78.7018
977.42	46.2354
980.50	44.3678
983.50	58.9113
989.30	48.4070
996.32	69.9141
1001.03	61.2966
1001.68	61.3132
1004.76	66.2651
1021.30	0.0000
1024.50	0.0000
1034.80	50.3214
1037.82	50.3837
1038.57	52.3746

1038.76	0.0000
1045.16	46.5697
1046.59	48.5793
1048.07	42.6571
1050.47	50.6431
1050.47	50.6431
1063.62	46.9159
1076.63	59.1993
1077.35	52.1904
1085.78	65.4549
1099.22	67.8206
1112.02	69.1732
1112.84	68.3812
1115.52	59.3719
1120.29	55.1052
1120.29	55.1052
1120.29	55.1052
1120.29	55.1052
1120.51	55.1096
1121.28	64.3125
1124.00	0.0000
1129.67	44.0358
1131.51	0.0000
1147.95	0.0000
1167.94	74.7891
1173.22	75.9734
1175.09	63.5268
1177.93	80.2741
1189.05	77.4567
1204.90	84.2122
1205.75	0.0000
1213.00	89.7314
1221.42	78.3510
1230.97	72.8460
1235.34	100.3129
1236.41	0.0000
1238.11	74.5488
1238.11	74.5488
1238.11	74.5488
1238.11	74.5488
1238.25	74.5516
1246.25	67.2810
1260.41	0.0000
1271.85	42.0151
1274.45	71.1643
1274.54	71.1670
1291.56	46.4765
1298.22	0.0000
1312.09	40.2420
1325.50	40.4175
1325.50	40.4175
1332.49	29.2052
1333.61	41.4664
1360.21	29.4647
1362.66	0.0000
1365.15	26.6553
1368.21	34.3037
1368.53	0.0000
1376.25	31.5245
1377.67	32.4952
1377.67	32.4952
1377.67	32.4952
1377.67	32.4952
1384.27	42.1385
1394.10	19.2125
1395.20	19.2194
1407.95	16.4006
1434.06	28.2010
1436.60	20.4368
1457.56	0.0000
1460.81	30.3880
1489.15	25.6998
1509.49	20.8799
1596.49	27.5085
1620.62	21.5361
1678.03	0.0000
1691.02	18.8055
1691.02	18.8055

1706.46	0.0000
1750.46	0.0000
1764.49	10.6438
1764.49	10.6438
1764.49	10.6438
1764.49	10.6438
1770.23	7.4614
1771.40	9.3295
1791.20	0.0000
1808.65	16.0055
1836.01	12.3204

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504011

Total Uranium Activity	4.4626E+00	ug/g
Total Uranium Counting Unc.	6.1746E+00	ug/g
Total Uranium Tpu	3.1503E-06	ug/g
Total Uranium Mda	2.9903E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                              2040 SAVAGE ROAD                             *
*                            CHARLESTON ,SC 29417                           *
*                             GROSS GAMMA REPORT                            *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232504011      *
*   ANALYST       : MXR1                      DETECTOR    : GAM23           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME  :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 09:13:19.45    SAMPLE ALQT:  146.410 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.720E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.435E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.187E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.050E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:44:06.89

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504012.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:43:44.
Sample ID         : G232504012           Sample quantity  : 1.38230E+02 GRAM
Detector name     : GAM09                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.67  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.67*	39	432	0.76	126.30	123	7	5.36E-03	94.1	
2	3	74.99	376	480	1.12	148.94	144	18	5.22E-02	11.1	4.57E-01
3	3	77.27	604	366	0.95	153.50	144	18	8.39E-02	6.5	
4	0	87.15	138	515	1.13	173.25	171	7	1.91E-02	28.5	
5	0	92.93*	331	488	1.31	184.80	182	8	4.60E-02	13.5	
6	0	128.91	84	322	0.78	256.76	253	8	1.17E-02	38.4	
7	0	186.42*	162	499	1.07	371.73	366	12	2.25E-02	29.7	
8	0	209.23	103	298	1.48	417.34	414	9	1.43E-02	31.9	
9	5	238.80*	1215	241	1.12	476.48	472	22	1.69E-01	3.6	2.15E+00
10	5	241.72	288	258	1.73	482.31	472	22	3.99E-02	15.3	
11	0	270.05	139	247	1.14	538.97	533	12	1.94E-02	24.1	
12	0	295.35	361	239	1.09	589.55	585	11	5.02E-02	9.8	
13	0	300.14	61	162	1.27	599.13	595	8	8.51E-03	38.3	
14	0	328.03	59	160	1.08	654.92	652	8	8.20E-03	39.2	
15	0	338.50	245	202	1.35	675.85	671	11	3.40E-02	12.9	
16	0	352.06*	649	195	1.13	702.96	696	14	9.01E-02	6.1	
17	0	463.22	92	113	1.53	925.27	920	11	1.28E-02	24.6	
18	0	510.68*	112	131	1.64	1020.20	1014	15	1.56E-02	27.6	
19	0	583.37*	347	159	1.64	1165.60	1159	16	4.82E-02	9.8	
20	0	609.49*	436	110	1.48	1217.85	1210	14	6.06E-02	7.1	
21	0	661.82	325	64	1.56	1322.51	1318	10	4.52E-02	7.2	
22	0	727.66	87	69	1.80	1454.22	1449	10	1.21E-02	20.9	
23	0	795.88	19	75	0.58	1590.70	1584	10	2.59E-03	90.0	
24	0	860.85*	61	62	1.30	1720.68	1714	13	8.52E-03	29.9	
25	0	911.38*	311	35	1.49	1821.77	1816	14	4.32E-02	7.2	
26	1	964.38*	49	43	1.77	1927.82	1921	23	6.85E-03	32.2	1.18E+00
27	1	968.92*	131	54	1.77	1936.91	1921	23	1.82E-02	14.1	
28	0	1002.22	36	52	1.19	2003.53	1997	14	4.98E-03	46.0	
29	0	1120.14*	102	73	1.85	2239.49	2232	14	1.41E-02	20.7	
30	0	1238.84	26	72	1.69	2477.06	2473	12	3.67E-03	68.9	
31	0	1460.65*	1228	18	2.01	2921.02	2912	18	1.71E-01	3.0	
32	0	1589.03	16	25	1.78	3178.00	3173	9	2.19E-03	62.3	
33	0	1764.31*	93	6	2.06	3528.94	3523	13	1.30E-02	12.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 11:44:09

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504012.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:43:44
Sample ID : G232504012 Sample quantity : 138.23 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA9 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.67 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.733E+01	2.622E+00	5.542E-01	4.158E-02	49.322
CD-109	+	88.03	*	1.865E+00	1.073E+00	1.397E+00	1.154E-01	1.335
SN-126	+	64.28		3.815E-01	7.200E-01	7.894E-01	1.138E-01	0.483
	+	86.94		7.648E-01	5.377E-01	5.338E-01	2.203E-01	1.433
	+	87.57	*	1.840E-01	1.058E-01	1.342E-01	1.104E-02	1.371
BA-137M	+	661.65	*	4.289E-01	6.731E-02	5.409E-02	3.432E-03	7.929
CS-137	+	661.65	*	4.534E-01	7.120E-02	5.718E-02	3.641E-03	7.929
TL-208		277.35		2.641E-02	3.517E-01	5.647E-01	5.952E-02	0.047
	+	510.84		4.985E-01	2.795E-01	1.813E-01	1.867E-02	2.750
	+	583.14	*	4.397E-01	9.202E-02	5.342E-02	3.780E-03	8.231
	+	860.37		7.328E-01	4.433E-01	4.003E-01	3.778E-02	1.830
BI-211		72.87		1.884E+00	3.031E+00	4.812E+00	3.557E-01	0.391
	+	351.07	*	3.611E+00	4.953E-01	2.766E-01	1.757E-02	13.052
PB-212	+	74.81		2.202E+00	5.535E-01	5.020E-01	6.005E-02	4.386
	+	77.11		1.985E+00	3.002E-01	2.823E-01	2.137E-02	7.031
	+	87.30		8.508E-01	4.966E-01	6.227E-01	8.057E-02	1.366
	+	238.63	*	1.480E+00	1.501E-01	8.258E-02	5.949E-03	17.928
	+	300.09		1.150E+00	8.861E-01	1.075E+00	8.859E-02	1.070
PO-212	+	74.81		2.202E+00	5.535E-01	5.020E-01	6.005E-02	4.386
	+	77.11		1.985E+00	3.002E-01	2.823E-01	2.137E-02	7.031
	+	87.30		8.508E-01	4.966E-01	6.227E-01	8.057E-02	1.366
		115.19		-2.589E+00	3.105E+00	5.035E+00	3.117E-01	-0.514
	+	238.63	*	1.480E+00	1.501E-01	8.258E-02	5.949E-03	17.928
	+	300.09		1.150E+00	8.861E-01	1.075E+00	8.859E-02	1.070
BI-214	+	609.31	*	1.042E+00	1.714E-01	9.684E-02	7.894E-03	10.763
		768.36		1.632E+00	7.334E-01	1.344E+00	1.300E-01	1.214
		934.06		6.456E-01	9.746E-01	1.719E+00	1.879E-01	0.375
	+	1120.29		1.272E+00	5.391E-01	4.180E-01	3.860E-02	3.044
	+	1238.11		9.198E-01	1.271E+00	1.151E+00	9.745E-02	0.799
		1377.67		7.228E-01	8.775E-01	1.559E+00	1.514E-01	0.464
	+	1764.49		1.607E+00	4.074E-01	2.866E-01	1.744E-02	5.606
PB-214	+	74.81		3.794E+00	9.289E-01	8.650E-01	9.097E-02	4.386
	+	77.11		3.403E+00	5.763E-01	4.840E-01	5.197E-02	7.031
	+	87.30		1.457E+00	8.457E-01	1.067E+00	1.201E-01	1.366

Sample ID : G232504012 Acquisition date : 7-JUL-2009 09:43:44

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.105E+00	6.661E-01	4.973E-01	3.960E-02	4.232
	+	295.21		1.190E+00	2.541E-01	1.985E-01	1.691E-02	5.996
	+	351.92	*	1.256E+00	1.843E-01	9.643E-02	7.926E-03	13.024
PO-214	+	74.81		3.794E+00	9.289E-01	8.650E-01	9.097E-02	4.386
	+	77.11		3.403E+00	5.763E-01	4.840E-01	5.197E-02	7.031
	+	87.30		1.457E+00	8.457E-01	1.067E+00	1.201E-01	1.366
	+	241.98		2.105E+00	6.661E-01	4.973E-01	3.960E-02	4.232
	+	295.21		1.190E+00	2.541E-01	1.985E-01	1.691E-02	5.996
	+	351.92	*	1.256E+00	1.843E-01	9.643E-02	7.926E-03	13.024
PO-216	+	74.81		2.202E+00	5.535E-01	5.020E-01	6.005E-02	4.386
	+	77.11		1.985E+00	3.002E-01	2.823E-01	2.137E-02	7.031
	+	87.30		8.508E-01	4.966E-01	6.227E-01	8.057E-02	1.366
	+	238.63	*	1.480E+00	1.501E-01	8.258E-02	5.949E-03	17.928
	+	300.09		1.150E+00	8.861E-01	1.075E+00	8.859E-02	1.070
PO-218	+	74.81		3.794E+00	9.289E-01	8.650E-01	9.097E-02	4.386
	+	77.11		3.403E+00	5.763E-01	4.840E-01	5.197E-02	7.031
	+	87.30		1.457E+00	8.457E-01	1.067E+00	1.201E-01	1.366
	+	241.98		2.105E+00	6.661E-01	4.973E-01	3.960E-02	4.232
	+	295.21		1.190E+00	2.541E-01	1.985E-01	1.691E-02	5.996
	+	351.92	*	1.256E+00	1.843E-01	9.643E-02	7.926E-03	13.024
RA-224	+	240.98	*	3.991E+00	1.243E+00	9.398E-01	5.309E-02	4.247
RA-226	+	609.31	*	1.042E+00	1.714E-01	9.684E-02	7.894E-03	10.763
		768.36		1.632E+00	7.334E-01	1.344E+00	1.300E-01	1.214
		934.06		6.456E-01	9.746E-01	1.719E+00	1.879E-01	0.375
	+	1120.29		1.272E+00	5.391E-01	4.180E-01	3.860E-02	3.044
	+	1238.11		9.198E-01	1.271E+00	1.151E+00	9.745E-02	0.799
		1377.67		7.228E-01	8.775E-01	1.559E+00	1.514E-01	0.464
	+	1764.49		1.607E+00	4.074E-01	2.866E-01	1.744E-02	5.606
AC-228	+	338.32		1.503E+00	7.252E-01	3.363E-01	1.371E-01	4.469
	+	911.07	*	1.760E+00	3.251E-01	1.808E-01	2.115E-02	9.732
	+	969.11		1.310E+00	4.799E-01	3.646E-01	8.506E-02	3.594
RA-228	+	338.32		1.503E+00	7.252E-01	3.363E-01	1.371E-01	4.469
	+	911.07	*	1.760E+00	3.251E-01	1.808E-01	2.115E-02	9.732
	+	969.11		1.310E+00	4.799E-01	3.646E-01	8.506E-02	3.594
TH-228		84.40		3.583E+00	2.501E+00	3.997E+00	5.093E-01	0.896
	+	238.60	*	1.480E+00	1.501E-01	8.257E-02	5.948E-03	17.929
	+	300.10		1.150E+00	1.112E+00	1.075E+00	6.336E-01	1.070
TH-230	+	609.31	*	1.042E+00	1.714E-01	9.684E-02	7.894E-03	10.763
		768.36		1.632E+00	7.333E-01	1.344E+00	1.300E-01	1.214
		934.06		6.456E-01	9.746E-01	1.719E+00	1.879E-01	0.375
	+	1120.29		1.272E+00	5.391E-01	4.180E-01	3.860E-02	3.044
	+	1238.11		9.198E-01	1.270E+00	1.151E+00	9.745E-02	0.799
		1377.67		7.227E-01	8.775E-01	1.559E+00	1.514E-01	0.464
	+	1764.49		1.607E+00	4.074E-01	2.866E-01	1.744E-02	5.606
TH-232	+	338.32		1.503E+00	3.974E-01	3.363E-01	1.933E-02	4.469
	+	911.07	*	1.760E+00	3.251E-01	1.808E-01	2.115E-02	9.732
	+	969.11		1.310E+00	4.799E-01	3.646E-01	8.506E-02	3.594
TH-234	+	63.29	*	9.639E-01	1.821E+00	2.016E+00	3.497E-01	0.478
	+	92.38		2.826E+00	9.137E-01	8.996E-01	1.589E-01	3.141

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.042E+00	1.714E-01	9.684E-02	7.894E-03	10.763
		768.36		1.632E+00	7.333E-01	1.344E+00	1.300E-01	1.214
		934.06		6.456E-01	9.746E-01	1.719E+00	1.879E-01	0.375
	+	1120.29		1.272E+00	5.391E-01	4.180E-01	3.860E-02	3.044
	+	1238.11		9.198E-01	1.270E+00	1.151E+00	9.745E-02	0.799
		1377.67		7.227E-01	8.775E-01	1.559E+00	1.514E-01	0.464
	+	1764.49		1.607E+00	4.074E-01	2.866E-01	1.744E-02	5.606
NP-237	+	86.50	*	5.402E-01	3.300E-01	3.798E-01	8.426E-02	1.422
		95.87		4.597E-02	8.868E-01	1.357E+00	3.287E-01	0.034
U-238	+	63.29	*	9.639E-01	1.821E+00	2.016E+00	3.497E-01	0.478
	+	92.38		2.826E+00	7.956E-01	8.996E-01	6.939E-02	3.141
AM-243	+	74.67	*	3.570E-01	8.330E-02	8.168E-02	6.093E-03	4.370
	+	86.72		2.026E+01	1.165E+01	1.418E+01	1.158E+00	1.429
		117.66		-1.030E+00	3.315E+00	5.495E+00	3.352E-01	-0.187
		142.18		-1.258E+01	1.560E+01	2.507E+01	1.390E+00	-0.502
ANH-511	+	511.00	*	1.077E-01	5.970E-02	3.916E-02	2.371E-03	2.750

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	8.461E-02	2.955E-01	4.989E-01	3.426E-02	0.170
NA-22		1274.54	*	4.104E-02	3.516E-02	6.484E-02	4.346E-03	0.633
NA-24		1368.53	*	3.198E-02	3.516E-02	Half-Life too short		
AL-26		1129.67		3.141E-01	1.586E+00	2.647E+00	1.660E-01	0.119
		1808.65	*	-5.436E-03	2.703E-02	4.261E-02	2.494E-03	-0.128
TI-44		67.85		-1.992E-02	4.386E-02	6.655E-02	4.826E-03	-0.299
	+	78.38	*	3.663E-01	5.540E-02	7.172E-02	5.474E-03	5.107
SC-46		889.25	*	-3.413E-02	3.704E-02	5.668E-02	5.217E-03	-0.602
	+	1120.51		2.139E-01	8.951E-02	1.221E-01	7.850E-03	1.752
V-48		944.10		-4.532E-02	6.809E-01	1.124E+00	9.978E-02	-0.040
		983.50	*	-1.411E-02	5.178E-02	8.316E-02	7.010E-03	-0.170
		1312.09		-2.132E-02	5.138E-02	7.722E-02	5.533E-03	-0.276
CR-51		320.08	*	2.100E-01	3.253E-01	5.365E-01	3.458E-02	0.391
MN-52		744.21		-4.769E-02	1.615E-01	2.508E-01	1.837E-02	-0.190
		848.13		1.299E+00	4.249E+00	7.327E+00	6.339E-01	0.177
		935.52		2.193E-01	1.609E-01	3.003E-01	2.692E-02	0.730
		1246.25		3.461E+00	5.612E+00	8.892E+00	5.639E-01	0.389
		1333.61		5.609E-01	3.831E+00	6.293E+00	4.673E-01	0.089
		1434.06	*	1.437E-01	1.487E-01	2.817E-01	2.048E-02	0.510
MN-54		834.83	*	-3.152E-02	3.418E-02	5.277E-02	4.472E-03	-0.597
CO-56		846.75	*	-1.356E-02	3.321E-02	5.353E-02	4.622E-03	-0.253
		977.42		-6.547E-01	2.656E+00	4.297E+00	3.653E-01	-0.152
		1037.82		-5.072E-02	2.679E-01	4.331E-01	3.564E-02	-0.117
		1175.09		-8.415E-01	2.093E+00	3.283E+00	1.805E-01	-0.256
	+	1238.25		9.139E-02	1.261E-01	1.630E-01	1.073E-02	0.561
		1360.21		-2.507E-01	8.445E-01	1.299E+00	9.603E-02	-0.193
		1771.40		-2.731E-01	2.280E-01	2.876E-01	1.740E-02	-0.950
CO-57		122.06	*	-3.448E-03	2.188E-02	3.645E-02	2.175E-03	-0.095

Sample ID : G232504012 Acquisition date : 7-JUL-2009 09:43:44

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-9.874E-02	1.820E-01	2.905E-01	1.913E-02	-0.340
CO-58		810.76	*	3.609E-03	2.985E-02	5.081E-02	4.158E-03	0.071
FE-59		142.65		-1.614E+00	2.411E+00	3.820E+00	2.116E-01	-0.423
		192.34		-1.088E-01	8.239E-01	1.340E+00	1.556E-01	-0.081
		1099.22	*	7.983E-03	7.825E-02	1.298E-01	9.937E-03	0.061
		1291.56		-1.147E-03	1.061E-01	1.716E-01	1.427E-02	-0.007
CO-60		1173.22		1.966E-02	4.191E-02	7.145E-02	3.913E-03	0.275
		1332.49	*	8.550E-03	3.948E-02	6.537E-02	4.855E-03	0.131
ZN-65		1115.52	*	-6.814E-03	9.899E-02	1.392E-01	9.086E-03	-0.049
GE-68		1077.35	*	-1.134E-01	1.177E+00	1.917E+00	1.368E-01	-0.059
AS-73		53.44	*	1.055E+00	9.171E-01	1.519E+00	1.121E-01	0.695
AS-74		595.88	*	6.203E-02	7.394E-02	1.286E-01	8.063E-03	0.482
		634.78		-1.055E-01	2.989E-01	4.697E-01	2.971E-02	-0.225
SE-75		66.05		6.547E-02	5.051E+00	7.222E+00	6.726E-01	0.009
		96.73		-5.371E-01	7.440E-01	1.088E+00	1.395E-01	-0.494
		121.11		-3.732E-02	1.187E-01	1.964E-01	1.836E-02	-0.190
		136.00		-1.579E-02	3.363E-02	5.384E-02	3.089E-03	-0.293
		198.60	*	2.612E-01	1.536E+00	2.529E+00	1.725E-01	0.103
		264.65	*	5.705E-03	4.281E-02	6.118E-02	3.545E-03	0.093
		279.53		-4.531E-02	1.047E-01	1.632E-01	1.018E-02	-0.278
		303.91		2.533E+00	1.880E+00	2.959E+00	2.821E-01	0.856
		400.65		6.186E-02	2.311E-01	3.937E-01	3.527E-02	0.157
BR-77	+	87.88		2.122E+02	1.220E+02	1.627E+02	1.343E+01	1.304
		200.40		4.793E+00	7.519E+01	1.231E+02	6.688E+00	0.039
	+	239.00		1.247E+02	1.134E+01	1.824E+01	1.029E+00	6.838
		249.79		1.127E+01	3.418E+01	5.027E+01	2.857E+00	0.224
		281.68		-3.146E+00	4.589E+01	7.301E+01	4.214E+00	-0.043
		297.23		9.879E+01	3.831E+01	5.350E+01	3.096E+00	1.847
		303.76		1.147E+02	8.466E+01	1.339E+02	7.755E+00	0.856
		439.47		1.883E+01	7.069E+01	1.198E+02	6.910E+00	0.157
		484.57		-1.191E+02	1.095E+02	1.662E+02	9.908E+00	-0.717
		520.65	*	-3.953E+00	4.795E+00	7.357E+00	4.477E-01	-0.537
		574.64		3.501E+01	1.046E+02	1.752E+02	1.091E+01	0.200
		578.91		-2.649E+01	4.919E+01	6.628E+01	4.134E+00	-0.400
		585.48		4.540E+02	1.101E+02	2.120E+02	1.325E+01	2.141
		755.35		2.446E+01	7.814E+01	1.288E+02	9.608E+00	0.190
		817.79		-4.694E+00	5.907E+01	9.858E+01	8.136E+00	-0.048
SR-82		698.33		1.212E+01	2.862E+01	4.779E+01	3.236E+00	0.254
		776.49	*	-7.572E-02	2.945E-01	4.565E-01	3.526E-02	-0.166
		1395.20		-3.771E+00	8.110E+00	1.194E+01	8.765E-01	-0.316
RB-83		520.41	*	-6.133E-02	5.840E-02	8.753E-02	5.327E-03	-0.701
		529.64		6.338E-03	9.574E-02	1.583E-01	9.675E-03	0.040
		552.65		8.643E-02	1.628E-01	2.787E-01	1.721E-02	0.310
RB-84		881.50	*	-8.750E-03	6.707E-02	1.109E-01	1.009E-02	-0.079
KR-85		513.99	*	1.048E+00	7.700E+00	1.128E+01	6.839E-01	0.093
SR-85		513.99	*	5.249E-03	3.857E-02	5.649E-02	3.426E-03	0.093
RB-86		1076.63	*	-3.158E-02	6.610E-01	1.082E+00	7.730E-02	-0.029
Y-88		898.02		1.155E-02	3.427E-02	5.904E-02	5.529E-03	0.196
		1836.01	*	6.274E-03	2.117E-02	3.763E-02	2.151E-03	0.167

Sample ID : G232504012 Acquisition date : 7-JUL-2009 09:43:44

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	1.493E-02	2.596E-02	4.514E-02	2.494E-03	0.331
Y-91		1204.90	*	1.784E+01	1.794E+01	3.170E+01	1.853E+00	0.563
NB-94		702.63	*	-7.677E-04	2.951E-02	4.738E-02	3.233E-03	-0.016
		871.10		-4.476E-03	2.921E-02	4.814E-02	4.313E-03	-0.093
NB-95		765.79	*	-1.483E-02	4.151E-02	6.430E-02	4.881E-03	-0.231
NB-95M		235.69	*	-1.135E-01	1.228E-01	1.655E-01	1.224E-02	-0.685
ZR-95		724.18		3.817E-02	9.062E-02	1.336E-01	1.065E-02	0.286
		756.15	*	3.933E-02	6.238E-02	1.057E-01	8.945E-03	0.372
NB-97		657.90	*	-3.366E-04	6.238E-02	Half-Life too short		
		1024.50		-5.645E-01	6.238E-02	Half-Life too short		
ZR-97		254.15		2.611E-01	6.238E-02	Half-Life too short		
		355.39		7.770E-03	6.238E-02	Half-Life too short		
		507.63	*	5.959E-02	6.238E-02	Half-Life too short		
		602.52		8.098E-01	6.238E-02	Half-Life too short		
		1021.30		1.546E-01	6.238E-02	Half-Life too short		
		1147.95		1.527E-01	6.238E-02	Half-Life too short		
		1362.66		3.119E-01	6.238E-02	Half-Life too short		
		1750.46		2.307E-02	6.238E-02	Half-Life too short		
MO-99		140.51		3.748E+00	1.321E+01	2.174E+01	5.848E+00	0.172
		181.06		-5.172E+00	9.397E+00	1.326E+01	2.251E+00	-0.390
		366.43		-5.199E+00	4.263E+01	7.139E+01	4.035E+00	-0.073
		739.58	*	3.412E+00	5.951E+00	1.003E+01	1.450E+00	0.340
		778.00		-1.382E+01	1.652E+01	2.381E+01	1.844E+00	-0.580
TC-99M		140.51	*	2.109E+07	1.652E+01	Half-Life too short		
RH-101		127.23		-7.481E-03	2.962E-02	4.383E-02	2.553E-03	-0.171
		198.01	*	-1.546E-03	2.854E-02	4.650E-02	2.520E-03	-0.033
		325.23		5.620E-02	2.180E-01	3.133E-01	1.809E-02	0.179
RH-102		418.52		-9.944E-02	2.535E-01	4.130E-01	2.339E-02	-0.241
		475.06	*	-2.181E-02	2.683E-02	4.185E-02	2.479E-03	-0.521
		631.29		-5.344E-03	4.938E-02	7.797E-02	4.928E-03	-0.069
		697.49		5.127E-02	6.679E-02	1.148E-01	7.761E-03	0.447
		766.84		1.381E-01	1.100E-01	1.921E-01	1.461E-02	0.719
		1046.59		3.993E-02	9.454E-02	1.629E-01	1.237E-02	0.245
		1112.84		-8.701E-02	2.649E-01	3.599E-01	2.361E-02	-0.242
RU-103		497.08	*	-2.559E-02	3.379E-02	5.221E-02	6.652E-03	-0.490
	+	610.33		1.082E+01	2.290E+00	2.603E+00	4.063E-01	4.159
RH-106	+	511.85		5.356E-01	2.969E-01	3.882E-01	2.351E-02	1.380
		621.84	*	2.340E-01	3.041E-01	5.221E-01	6.263E-02	0.448
		1050.47		-1.616E+00	1.998E+00	2.994E+00	2.257E-01	-0.540
RU-106	+	511.85		5.356E-01	2.969E-01	3.882E-01	2.351E-02	1.380
		621.84	*	2.340E-01	3.032E-01	5.221E-01	3.294E-02	0.448
		1050.47		-1.616E+00	1.998E+00	2.994E+00	2.257E-01	-0.540
AG-108M		433.93	*	1.428E-02	2.921E-02	5.028E-02	3.139E-03	0.284
		614.37		8.617E-03	3.909E-02	5.702E-02	3.852E-03	0.151
		722.95		5.490E-04	4.169E-02	5.850E-02	4.372E-03	0.009
AG-110M		657.75	*	-3.778E-03	3.443E-02	4.799E-02	3.210E-03	-0.079
		677.61		-2.059E-02	2.742E-01	4.396E-01	3.009E-02	-0.047
		706.67		-2.638E-02	1.973E-01	3.136E-01	2.248E-02	-0.084
		763.93		-1.786E-01	1.538E-01	2.173E-01	1.705E-02	-0.822

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		2.261E-02	4.938E-02	8.550E-02	8.041E-03	0.264
		937.48		6.446E-04	9.128E-02	1.519E-01	1.405E-02	0.004
		1384.27		8.052E-02	1.300E-01	2.290E-01	1.751E-02	0.352
IN-111		171.28		-6.633E-02	5.132E-01	8.403E-01	4.421E-02	-0.079
		245.39	*	-8.263E-01	5.541E-01	8.134E-01	4.610E-02	-1.016
IN-113M		391.69	*	-1.497E-02	3.687E-02	6.027E-02	3.571E-03	-0.248
SN-113		391.69	*	-1.497E-02	3.687E-02	6.027E-02	3.571E-03	-0.248
IN-114M		190.27	*	1.191E-01	1.749E-01	2.663E-01	1.430E-02	0.447
CD-115		260.90		-4.276E+01	5.861E+01	8.842E+01	5.060E+00	-0.484
		492.35		5.477E+00	1.509E+01	2.565E+01	1.537E+00	0.214
		527.90	*	3.363E+00	4.890E+00	8.456E+00	5.165E-01	0.398
SN-117M		156.02		3.009E-01	1.704E+00	2.843E+00	1.523E-01	0.106
		158.56	*	1.544E-02	4.073E-02	6.852E-02	3.648E-03	0.225
SB-122		563.90	*	6.384E-01	1.102E+00	1.880E+00	1.166E-01	0.340
		692.80		-1.691E+01	2.222E+01	3.320E+01	2.227E+00	-0.509
I-123		159.00	*	8.970E-02	2.222E+01	Half-Life too short		
		528.96		1.855E+01	2.222E+01	Half-Life too short		
TE-123M		159.00	*	7.209E-03	2.327E-02	3.902E-02	2.108E-03	0.185
I-124		602.71	*	4.586E-01	4.469E-01	7.089E-01	4.453E-02	0.647
		722.78		7.800E-02	3.021E+00	4.246E+00	2.999E-01	0.018
		1325.50		7.408E+00	2.242E+01	3.771E+01	2.767E+00	0.196
		1376.25		1.540E+01	1.931E+01	3.420E+01	2.522E+00	0.450
		1509.49		4.186E+00	9.113E+00	1.607E+01	1.139E+00	0.261
		1691.02		3.117E-01	2.261E+00	3.790E+00	2.438E-01	0.082
SB-124		602.71		3.750E-02	3.654E-02	5.796E-02	3.642E-03	0.647
		645.85		1.387E-01	4.299E-01	7.166E-01	5.032E-02	0.194
		709.31		-1.590E-01	2.675E+00	4.280E+00	2.954E-01	-0.037
		713.82		8.770E-01	1.543E+00	2.595E+00	2.831E-01	0.338
		722.78		9.245E-03	3.580E-01	5.032E-01	3.668E-02	0.018
	+	968.20		1.315E+01	3.881E+00	6.440E+00	5.544E-01	2.042
		1045.16		5.246E-01	2.046E+00	3.465E+00	2.638E-01	0.151
		1325.50		9.377E-01	2.838E+00	4.773E+00	3.502E-01	0.196
		1368.21		1.042E+00	1.760E+00	3.034E+00	3.860E-01	0.343
		1436.60		-4.472E-01	3.228E+00	5.315E+00	3.862E-01	-0.084
		1691.02	*	8.714E-03	6.322E-02	1.059E-01	7.293E-03	0.082
SB-125		427.89	*	3.773E-02	7.918E-02	1.364E-01	8.129E-03	0.277
	+	463.38		7.973E-01	3.968E-01	5.240E-01	3.578E-02	1.521
		600.56		-2.491E-02	1.601E-01	2.575E-01	1.835E-02	-0.097
		635.90		-4.312E-02	2.462E-01	3.932E-01	2.849E-02	-0.110
TE-125M		109.28	*	8.346E+00	7.888E+00	1.378E+01	1.185E+00	0.605
I-126		388.63		-8.113E-02	1.511E-01	2.448E-01	1.355E-02	-0.331
		666.33	*	-7.159E-02	1.685E-01	2.253E-01	1.442E-02	-0.318
		753.82		-1.962E-01	1.228E+00	1.935E+00	1.440E-01	-0.101
SB-126		223.80		2.980E-01	3.224E+00	5.252E+00	2.923E-01	0.057
		278.60		7.737E-01	2.064E+00	3.367E+00	1.942E-01	0.230
	+	296.50		1.047E+01	2.137E+00	2.893E+00	1.674E-01	3.620
		414.70		2.735E-02	5.768E-02	9.943E-02	5.612E-03	0.275
		415.30		-9.680E-02	4.855E+00	8.113E+00	4.582E-01	-0.012
		555.20		-3.785E+00	3.165E+00	4.649E+00	2.875E-01	-0.814

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		573.80		-3.148E-01	8.955E-01	1.425E+00	8.874E-02	-0.221
		593.00		-2.159E-01	7.588E-01	1.209E+00	7.571E-02	-0.179
		656.30		-1.879E+00	3.132E+00	4.093E+00	2.596E-01	-0.459
		666.33		-2.977E-02	7.006E-02	9.368E-02	5.995E-03	-0.318
		675.00		8.899E-01	1.591E+00	2.695E+00	1.751E-01	0.330
		695.00		6.968E-03	6.013E-02	9.788E-02	6.590E-03	0.071
		697.00		1.412E-01	2.089E-01	3.562E-01	2.407E-02	0.396
		720.50	*	-6.488E-03	1.121E-01	1.791E-01	1.260E-02	-0.036
		856.80		9.126E-02	3.917E-01	5.888E-01	5.162E-02	0.155
		989.30		3.117E-01	9.523E-01	1.630E+00	1.362E-01	0.191
		1034.80		2.284E+00	6.972E+00	1.188E+01	9.223E-01	0.192
		1213.00		1.258E+00	3.584E+00	6.037E+00	3.587E-01	0.208
SB-127		61.10		-4.045E+01	4.472E+01	6.051E+01	5.669E+00	-0.668
		252.40		-1.534E+00	2.604E+00	3.913E+00	1.619E+00	-0.392
		290.80		-2.429E+00	1.451E+01	2.027E+01	1.697E+00	-0.120
		411.60		-7.029E-01	7.490E+00	1.247E+01	1.723E+00	-0.056
		444.90		-6.297E-01	5.676E+00	9.378E+00	9.505E-01	-0.067
		473.00		-2.097E-01	9.931E-01	1.621E+00	1.720E-01	-0.129
		543.00		9.567E+00	9.540E+00	1.680E+01	2.106E+00	0.570
		603.60		5.800E+00	7.594E+00	1.172E+01	1.218E+00	0.495
		685.20	*	-3.888E-02	8.460E-01	1.359E+00	1.256E-01	-0.029
		698.50		3.234E-01	9.229E+00	1.490E+01	2.151E+00	0.022
		722.20		-1.248E+00	2.025E+01	2.814E+01	2.616E+00	-0.044
		783.80		1.400E+00	2.143E+00	3.790E+00	4.278E-01	0.369
XE-127		57.60		4.667E+00	6.133E+00	9.954E+00	7.178E-01	0.469
		145.22		2.456E-01	6.122E-01	1.013E+00	5.573E-02	0.242
		172.10		5.405E-02	1.011E-01	1.704E-01	8.974E-03	0.317
		202.84	*	-3.749E-02	4.111E-02	6.409E-02	3.491E-03	-0.585
		374.96		2.289E-02	1.666E-01	2.829E-01	1.587E-02	0.081
I-131		80.18		-2.470E+00	3.419E+00	5.070E+00	3.942E-01	-0.487
		284.30		-1.260E-01	1.178E+00	1.868E+00	1.197E-01	-0.067
		364.48	*	-6.224E-02	8.218E-02	1.320E-01	8.355E-03	-0.472
		636.97		1.984E-01	1.205E+00	1.982E+00	1.377E-01	0.100
		722.89		1.024E-01	5.805E+00	8.150E+00	5.798E-01	0.013
TE-132		49.72		-1.137E+01	1.410E+01	2.115E+01	1.951E+00	-0.538
		111.76		-1.770E+00	1.650E+01	2.766E+01	2.345E+00	-0.064
		116.30		-1.889E+01	1.489E+01	2.354E+01	1.963E+00	-0.803
		228.16	*	8.641E-02	3.830E-01	6.272E-01	8.694E-02	0.138
BA-133		53.15		3.631E+00	4.004E+00	6.570E+00	4.854E-01	0.553
		79.62		-1.015E+00	1.078E+00	1.762E+00	2.594E-01	-0.576
		81.00		-1.609E-01	9.541E-02	1.299E-01	2.005E-02	-1.239
		276.40		2.334E-01	3.404E-01	5.633E-01	7.293E-02	0.414
		302.84		-1.025E-02	1.409E-01	1.977E-01	2.303E-02	-0.052
		356.01	*	9.963E-03	3.845E-02	5.868E-02	6.753E-03	0.170
		383.85		-6.945E-03	2.691E-01	4.519E-01	4.857E-02	-0.015
I-133	+	510.53		1.868E-01	2.691E-01	Half-Life too short		
		529.87	*	-3.225E-04	2.691E-01	Half-Life too short		
		706.58		4.489E-03	2.691E-01	Half-Life too short		
		856.28		3.865E-02	2.691E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		875.33		-2.652E-03	2.691E-01	Half-Life too short		
		1236.41		2.242E-01	2.691E-01	Half-Life too short		
		1298.22		-1.577E-02	2.691E-01	Half-Life too short		
CS-134		475.35		-1.200E+00	1.726E+00	2.714E+00	1.608E-01	-0.442
		563.23		2.947E-01	3.398E-01	5.906E-01	3.731E-02	0.499
		569.32		8.748E-02	1.808E-01	3.066E-01	1.955E-02	0.285
		604.70		-1.238E-02	3.409E-02	4.657E-02	2.940E-03	-0.266
	+	795.84	*	3.411E-02	6.144E-02	8.031E-02	6.455E-03	0.425
		801.93		-2.390E-01	3.697E-01	5.579E-01	4.519E-02	-0.428
		1038.57		8.266E-01	3.293E+00	5.574E+00	4.297E-01	0.148
		1167.94		-1.323E+00	2.300E+00	3.535E+00	1.971E-01	-0.374
		1365.15		-1.189E+00	1.192E+00	1.632E+00	1.280E-01	-0.728
CS-135		268.24	*	1.529E-01	1.492E-01	2.294E-01	1.747E-02	0.667
I-135		288.45		-2.036E+07	1.492E-01	Half-Life too short		
		417.63		-2.857E+07	1.492E-01	Half-Life too short		
		546.56		1.138E+07	1.492E-01	Half-Life too short		
		836.80		3.581E+07	1.492E-01	Half-Life too short		
		1038.76		3.251E+06	1.492E-01	Half-Life too short		
		1124.00		-5.321E+07	1.492E-01	Half-Life too short		
		1131.51		-6.100E+06	1.492E-01	Half-Life too short		
		1260.41	*	-3.185E+06	1.492E-01	Half-Life too short		
		1457.56		1.553E+09	1.492E-01	Half-Life too short		
		1678.03		5.931E+06	1.492E-01	Half-Life too short		
		1706.46		3.160E+07	1.492E-01	Half-Life too short		
		1791.20		7.227E+06	1.492E-01	Half-Life too short		
CS-136		66.91		2.949E-01	6.991E-01	1.022E+00	1.503E-01	0.289
	+	86.29		2.137E+00	1.245E+00	1.561E+00	1.955E-01	1.369
		153.22		4.167E-01	5.076E-01	8.689E-01	5.993E-02	0.480
		163.89		6.813E-01	8.259E-01	1.411E+00	9.627E-02	0.483
		176.55		-6.910E-02	2.840E-01	4.617E-01	2.800E-02	-0.150
		273.65		1.369E-01	3.847E-01	5.632E-01	3.702E-02	0.243
		340.57		2.403E-01	1.111E-01	1.895E-01	1.158E-02	1.268
		818.51		3.290E-02	5.475E-02	9.700E-02	8.021E-03	0.339
		1048.07	*	2.247E-03	7.967E-02	1.317E-01	1.052E-02	0.017
		1235.34		3.971E-01	5.373E-01	8.237E-01	8.426E-02	0.482
CE-139		165.85	*	4.259E-03	2.546E-02	4.233E-02	2.218E-03	0.101
BA-140		162.64		-1.501E-01	5.731E-01	9.353E-01	5.668E-02	-0.160
		304.84		-2.888E-01	1.053E+00	1.553E+00	4.238E-01	-0.186
		423.70		8.445E-02	1.508E+00	2.529E+00	8.034E-01	0.033
		537.32	*	3.224E-02	2.083E-01	3.458E-01	1.127E-01	0.093
LA-140	+	328.77		3.969E-01	3.121E-01	4.459E-01	2.884E-02	0.890
		432.53		1.325E+00	1.592E+00	2.801E+00	1.778E-01	0.473
		487.03		1.199E-02	1.050E-01	1.753E-01	1.177E-02	0.068
		751.79		-3.565E-01	1.455E+00	2.275E+00	1.927E-01	-0.157
		815.85		-1.059E-01	2.345E-01	3.767E-01	3.490E-02	-0.281
		867.82		-2.452E-01	1.120E+00	1.727E+00	1.616E-01	-0.142
		919.63		2.124E+00	2.400E+00	4.199E+00	4.644E-01	0.506
		925.24		9.941E-03	9.050E-01	1.508E+00	1.446E-01	0.007
		1596.49	*	-7.691E-02	7.564E-02	1.026E-01	6.994E-03	-0.750

---- Non-Identified Nuclides ----

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CE-141		145.44	*	2.425E-02	5.293E-02	8.956E-02	5.142E-03	0.271
CE-143		57.37		7.612E-05	5.293E-02	Half-Life too short		
		231.56		2.352E-04	5.293E-02	Half-Life too short		
		293.26	*	9.702E-05	5.293E-02	Half-Life too short		
	+	350.59		9.387E-03	5.293E-02	Half-Life too short		
		490.36		-7.847E-04	5.293E-02	Half-Life too short		
		664.57		9.383E-04	5.293E-02	Half-Life too short		
		721.93		1.220E-04	5.293E-02	Half-Life too short		
CE-144		80.11		-1.334E+00	1.896E+00	2.815E+00	2.175E-01	-0.474
		133.54	*	3.073E-03	1.842E-01	2.937E-01	4.158E-02	0.010
PM-144		476.78		1.696E-02	6.273E-02	1.059E-01	7.464E-03	0.160
		618.01		-8.085E-04	2.920E-02	4.737E-02	3.138E-03	-0.017
		696.49	*	1.374E-02	3.063E-02	5.126E-02	3.462E-03	0.268
		778.57		-1.040E+00	1.881E+00	2.809E+00	2.178E-01	-0.370
PR-144		696.49	*	9.302E-01	2.073E+00	3.469E+00	2.342E-01	0.268
		1489.15		-1.890E+00	9.629E+00	1.559E+01	1.114E+00	-0.121
PM-146		453.90	*	2.679E-03	3.846E-02	6.427E-02	5.556E-03	0.042
		633.02		-4.263E-01	1.238E+00	1.930E+00	7.125E-01	-0.221
		735.90		-7.029E-02	1.363E-01	2.051E-01	5.785E-02	-0.343
		747.13		-1.582E-02	8.456E-02	1.329E-01	1.768E-02	-0.119
ND-147		91.11		3.830E-01	3.127E-01	4.091E-01	3.532E-02	0.936
		319.41		-2.234E-01	2.686E+00	4.230E+00	2.446E-01	-0.053
		439.89		2.567E+00	4.802E+00	8.268E+00	4.772E-01	0.311
		531.02	*	-1.618E-01	4.622E-01	7.393E-01	1.010E-01	-0.219
PM-149		285.90	*	-1.254E+00	4.248E+01	6.767E+01	9.581E+00	-0.019
EU-152		121.78		-1.140E-02	6.413E-02	1.067E-01	8.257E-03	-0.107
		244.69		-3.725E-01	2.944E-01	4.396E-01	2.490E-02	-0.847
		344.27	*	2.829E-03	8.559E-02	1.351E-01	8.756E-03	0.021
		443.98		-1.692E-01	8.579E-01	1.410E+00	8.160E-02	-0.120
		778.89		-1.411E-01	2.160E-01	3.181E-01	2.467E-02	-0.444
		867.32		-7.631E-02	7.758E-01	1.168E+00	1.040E-01	-0.065
	+	964.01		5.660E-01	3.681E-01	5.397E-01	4.672E-02	1.049
		1085.78		3.173E-02	3.567E-01	5.915E-01	4.142E-02	0.054
		1112.02		8.949E-02	3.317E-01	5.274E-01	3.467E-02	0.170
		1407.95		1.581E-01	1.829E-01	3.255E-01	2.383E-02	0.486
GD-153		69.67		-2.750E-01	1.571E+00	2.415E+00	1.762E-01	-0.114
		83.37		1.561E+01	1.552E+01	2.296E+01	1.820E+00	0.680
		97.43	*	-4.881E-02	7.890E-02	1.150E-01	8.304E-03	-0.425
		103.18		-2.981E-02	8.831E-02	1.471E-01	1.000E-02	-0.203
EU-154		123.07		-9.913E-03	4.482E-02	7.440E-02	7.058E-03	-0.133
		247.94		1.678E-01	3.481E-01	5.178E-01	4.902E-02	0.324
		591.81		-1.053E-01	5.936E-01	9.199E-01	9.250E-02	-0.114
		723.30		-7.822E-02	1.845E-01	2.443E-01	1.992E-02	-0.320
		756.87		5.361E-01	7.054E-01	1.205E+00	1.348E-01	0.445
		873.19		-2.513E-02	2.616E-01	4.337E-01	5.423E-02	-0.058
		996.32		-1.411E-02	3.597E-01	5.134E-01	9.036E-02	-0.027
		1004.76		6.961E-02	1.932E-01	2.926E-01	3.308E-02	0.238
		1274.45	*	1.159E-01	9.883E-02	1.817E-01	1.802E-02	0.638
EU-155		48.70		-3.171E+00	2.934E+00	4.338E+00	3.114E-01	-0.731

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		60.01		-3.857E+00	5.820E+00	8.018E+00	5.720E-01	-0.481
	+	86.54		2.214E-01	1.273E-01	1.669E-01	1.376E-02	1.326
		105.31	*	5.207E-02	9.276E-02	1.600E-01	1.088E-02	0.326
TB-160	+	86.79		5.794E-01	3.332E-01	4.440E-01	3.628E-02	1.305
		197.04		-1.405E-01	4.750E-01	7.650E-01	4.141E-02	-0.184
		215.65		3.375E-01	6.227E-01	1.040E+00	5.741E-02	0.325
		298.57		1.051E-01	1.410E-01	1.704E-01	9.864E-03	0.617
		879.36	*	4.960E-02	1.283E-01	2.215E-01	2.009E-02	0.224
		962.29		-1.008E-01	5.727E-01	8.207E-01	7.120E-02	-0.123
		966.15		5.518E-01	2.230E-01	4.200E-01	3.626E-02	1.314
		1177.93		-2.164E-01	3.374E-01	5.157E-01	2.852E-02	-0.420
		1271.85		-8.680E-01	6.272E-01	8.337E-01	5.551E-02	-1.041
HO-166M		80.57		-2.720E-01	2.463E-01	3.573E-01	2.770E-02	-0.761
		184.41		4.832E-02	3.386E-02	5.343E-02	2.851E-03	0.904
		280.46		-5.212E-03	8.319E-02	1.325E-01	7.642E-03	-0.039
		410.95		-2.446E-02	2.241E-01	3.727E-01	2.096E-02	-0.066
		711.68	*	4.251E-02	5.982E-02	1.017E-01	7.048E-03	0.418
		752.31		-1.293E-01	2.636E-01	4.021E-01	2.985E-02	-0.322
		810.29		-2.009E-02	4.688E-02	7.550E-02	6.158E-03	-0.266
TM-171		51.35		-1.108E+01	3.485E+01	5.383E+01	3.980E+00	-0.206
		52.39		-2.400E+00	1.842E+01	2.874E+01	2.127E+00	-0.084
		59.40		4.866E+00	2.839E+01	4.473E+01	3.189E+00	0.109
		66.72	*	1.468E+01	2.860E+01	4.208E+01	3.043E+00	0.349
LU-176	+	88.36		4.363E-01	2.509E-01	3.268E-01	2.684E-02	1.335
		201.83		-1.308E-02	2.541E-02	4.041E-02	2.199E-03	-0.324
		306.84	*	-4.791E-03	2.203E-02	3.447E-02	1.995E-03	-0.139
		401.10		4.179E-01	6.220E+00	1.047E+01	5.834E-01	0.040
LU-177		112.95		7.834E-01	1.133E+00	1.956E+00	1.229E-01	0.401
	+	208.36	*	1.773E+00	1.135E+00	1.415E+00	7.753E-02	1.253
LU-177M		52.97		3.512E-01	1.838E+00	2.915E+00	2.155E-01	0.120
		54.07		1.062E+00	9.359E-01	1.549E+00	1.141E-01	0.685
		61.30		-1.550E+00	1.697E+00	2.297E+00	1.644E-01	-0.675
		121.62		-9.686E-02	3.276E-01	5.426E-01	3.238E-02	-0.179
		147.16		-4.685E-01	5.728E-01	9.176E-01	5.022E-02	-0.511
		171.86		1.835E-01	4.190E-01	7.034E-01	3.703E-02	0.261
		218.09		-2.374E-01	7.369E-01	1.177E+00	6.513E-02	-0.202
	+	268.79		2.569E+00	1.245E+00	1.274E+00	7.320E-02	2.016
		319.02		-8.683E-02	2.435E-01	3.764E-01	2.177E-02	-0.231
		367.43		4.023E-01	7.942E-01	1.379E+00	7.786E-02	0.292
		413.65	*	1.912E-02	1.554E-01	2.620E-01	1.477E-02	0.073
HF-181		56.28		-1.414E+00	1.006E+00	1.450E+00	1.054E-01	-0.975
		57.53		4.576E-02	5.331E-01	8.378E-01	6.044E-02	0.055
		65.20		1.885E-01	9.673E-01	1.399E+00	1.008E-01	0.135
		133.02		2.096E-02	6.003E-02	9.166E-02	5.228E-03	0.229
		136.25		-1.093E-01	3.814E-01	6.156E-01	3.474E-02	-0.177
		345.85		-1.219E-01	1.754E-01	2.467E-01	1.413E-02	-0.494
		482.03	*	9.395E-03	3.796E-02	6.393E-02	3.804E-03	0.147
W-181		56.28		-5.653E-01	4.033E-01	5.811E-01	4.226E-02	-0.973
		57.53		1.807E-02	2.138E-01	3.360E-01	2.424E-02	0.054

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		65.20	*	7.501E-02	3.848E-01	5.565E-01	4.010E-02	0.135
TA-182		67.75		-3.797E-02	1.037E-01	1.582E-01	1.147E-02	-0.240
		100.10		4.909E-03	1.563E-01	2.593E-01	1.818E-02	0.019
		152.43		-1.975E-01	2.890E-01	4.644E-01	2.509E-02	-0.425
		222.10		-2.740E-02	3.038E-01	4.905E-01	2.726E-02	-0.056
	+	1001.68		3.166E+00	2.925E+00	3.428E+00	2.812E-01	0.924
	+	1121.28		5.936E-01	2.484E-01	3.357E-01	2.154E-02	1.768
		1189.05		-7.186E-02	2.852E-01	4.538E-01	2.568E-02	-0.158
		1221.42	*	-6.035E-02	1.723E-01	2.704E-01	1.634E-02	-0.223
		1230.97		-2.415E-01	3.965E-01	6.028E-01	3.711E-02	-0.401
RE-183		57.98		2.367E-01	2.094E-01	3.447E-01	2.480E-02	0.687
		59.32		2.038E-02	1.147E-01	1.807E-01	1.289E-02	0.113
		67.20		-3.112E-02	2.029E-01	2.870E-01	2.077E-02	-0.108
		162.32	*	-6.115E-02	9.297E-02	1.489E-01	7.859E-03	-0.411
	+	208.81		1.960E+00	1.254E+00	1.583E+00	8.680E-02	1.238
		291.72		-7.916E-03	9.000E-01	1.274E+00	7.370E-02	-0.006
RE-184		57.98		8.834E-01	7.816E-01	1.287E+00	9.255E-02	0.687
		59.32		7.601E-02	4.276E-01	6.739E-01	4.806E-02	0.113
		67.20		-1.161E-01	7.570E-01	1.071E+00	7.751E-02	-0.108
		161.27		-4.666E-02	2.948E-01	4.836E-01	2.558E-02	-0.096
		216.55		7.541E-02	2.249E-01	3.717E-01	2.054E-02	0.203
		252.85	*	-9.238E-02	2.012E-01	3.147E-01	1.792E-02	-0.294
		318.01		1.088E-01	4.101E-01	6.611E-01	3.823E-02	0.165
		792.07		2.547E-01	9.235E-01	1.403E+00	1.111E-01	0.182
		903.28		3.385E-01	8.720E-01	1.505E+00	1.397E-01	0.225
		920.93		2.800E-01	4.363E-01	7.653E-01	6.973E-02	0.366
OS-185		59.72		-2.450E-01	3.486E-01	4.794E-01	3.418E-02	-0.511
		61.14		-1.687E-01	1.860E-01	2.519E-01	1.802E-02	-0.670
		69.30		-1.347E-01	2.788E-01	4.222E-01	3.076E-02	-0.319
		592.07		-9.901E-01	2.316E+00	3.644E+00	2.282E-01	-0.272
		646.12	*	7.677E-03	3.714E-02	6.129E-02	3.883E-03	0.125
		717.42		-8.072E-01	8.164E-01	1.183E+00	8.281E-02	-0.682
		874.81		-1.486E-01	5.287E-01	8.476E-01	7.636E-02	-0.175
		880.27		4.397E-01	7.401E-01	1.297E+00	1.178E-01	0.339
RE-188		155.03	*	1.187E-01	1.466E-01	2.507E-01	1.346E-02	0.473
		477.96		1.372E+00	2.850E+00	4.872E+00	2.892E-01	0.282
		633.10		-8.764E-01	2.428E+00	3.810E+00	2.409E-01	-0.230
W-188	+	63.58		3.789E+01	7.135E+01	9.209E+01	6.615E+00	0.412
		227.08		1.473E+00	1.117E+01	1.822E+01	1.017E+00	0.081
		290.67	*	-1.551E+00	7.302E+00	1.016E+01	5.878E-01	-0.153
IR-192	+	295.96		8.891E-01	1.817E-01	2.556E-01	1.503E-02	3.479
		308.46		4.468E-02	8.328E-02	1.369E-01	8.016E-03	0.326
		316.51	*	-2.436E-03	3.181E-02	5.014E-02	2.915E-03	-0.049
		468.07		1.044E-02	6.821E-02	1.009E-01	6.832E-03	0.103
		604.41		-6.774E-02	4.587E-01	6.430E-01	7.462E-02	-0.105
		612.46		2.296E-01	7.160E-01	1.054E+00	8.390E-02	0.218
AU-195	+	65.12		1.326E-01	2.498E-01	2.604E-01	1.876E-02	0.509
		66.83		4.311E-02	9.368E-02	1.374E-01	9.938E-03	0.314
	+	75.70		1.146E+00	2.673E-01	3.992E-01	2.996E-02	2.870

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	1.318E-01	2.021E-01	3.432E-01	2.438E-02	0.384
	+	129.76		4.452E+00	3.433E+00	4.316E+00	2.490E-01	1.032
TL-200		367.94	*	6.307E-05	3.433E+00	Half-Life too short		
		579.30		-6.491E-04	3.433E+00	Half-Life too short		
		828.27		1.108E-04	3.433E+00	Half-Life too short		
		1205.75		2.857E-04	3.433E+00	Half-Life too short		
TL-201		68.90		-3.184E+00	2.820E+00	4.124E+00	3.000E-01	-0.772
		70.82		1.450E+00	1.562E+00	2.517E+00	1.844E-01	0.576
		80.30		-2.053E+00	2.720E+00	4.026E+00	3.115E-01	-0.510
		135.34		-9.026E+00	1.346E+01	2.137E+01	1.210E+00	-0.422
		167.43	*	-1.641E+00	3.604E+00	5.816E+00	3.049E-01	-0.282
TL-202		68.90		-4.180E-01	3.702E-01	5.414E-01	3.939E-02	-0.772
		70.82		1.898E-01	2.044E-01	3.296E-01	2.414E-02	0.576
		80.30		-2.689E-01	3.562E-01	5.272E-01	4.079E-02	-0.510
		439.56	*	1.777E-02	5.771E-02	9.804E-02	5.655E-03	0.181
HG-203		70.83		9.076E-01	9.766E-01	1.567E+00	2.010E-01	0.579
		72.87		3.625E-01	5.846E-01	9.261E-01	1.152E-01	0.391
		82.60		-4.625E-01	1.026E+00	1.543E+00	2.051E-01	-0.300
		279.20	*	1.195E-02	3.718E-02	6.049E-02	3.707E-03	0.197
BI-207		72.80		1.002E-01	1.767E-01	2.799E-01	2.068E-02	0.358
	+	74.97		6.407E-01	1.495E-01	2.153E-01	1.608E-02	2.976
		84.90		1.945E-01	1.838E-01	2.928E-01	2.352E-02	0.664
		569.67		1.763E-02	2.772E-02	4.753E-02	2.955E-03	0.371
		1063.62	*	1.868E-02	4.937E-02	8.418E-02	6.183E-03	0.222
		1770.23		-1.558E-01	3.899E-01	5.312E-01	3.217E-02	-0.293
TL-207		81.07		-3.494E-01	2.053E-01	2.874E-01	2.237E-02	-1.216
		83.78		2.030E-01	1.317E-01	1.992E-01	1.585E-02	1.019
		94.90		3.430E-01	2.168E-01	3.537E-01	2.636E-02	0.970
		122.32		-4.062E-01	1.533E+00	2.542E+00	1.736E-01	-0.160
		144.24		1.140E-01	6.266E-01	1.028E+00	7.206E-02	0.111
		154.21		4.065E-01	3.406E-01	5.910E-01	3.941E-02	0.688
	+	269.46		6.072E-01	2.945E-01	3.290E-01	1.978E-02	1.846
		323.87	*	-3.318E-01	6.962E-01	9.333E-01	1.541E-01	-0.355
	+	338.28		6.277E+00	1.749E+00	2.309E+00	2.425E-01	2.719
		445.03		-1.408E+00	2.025E+00	3.200E+00	3.285E-01	-0.440
PO-209		260.50		-6.369E+00	8.492E+00	1.278E+01	7.314E-01	-0.498
		262.80		2.045E+01	2.310E+01	3.844E+01	2.202E+00	0.532
		896.60	*	-1.385E+00	6.322E+00	1.032E+01	9.606E-01	-0.134
BI-210		46.50	*	5.566E+00	4.646E+00	7.557E+00	5.784E-01	0.737
PB-210		46.50	*	5.566E+00	4.646E+00	7.557E+00	5.784E-01	0.737
PO-210		46.50	*	5.566E+00	4.640E+00	7.557E+00	4.953E-01	0.737
PB-211		404.84	*	-1.581E-02	8.827E-01	1.478E+00	9.211E-01	-0.011
		427.08		2.144E+00	2.209E+00	3.187E+00	1.970E+00	0.673
		831.96		2.557E-01	1.035E+00	1.755E+00	1.100E+00	0.146
BI-212	+	727.18	*	9.465E-01	4.048E-01	6.226E-01	5.446E-02	1.520
		785.46		1.291E+00	1.612E+00	2.879E+00	2.256E-01	0.449
		1620.62		8.599E-01	1.200E+00	2.194E+00	1.475E-01	0.392
PO-215		81.07		-3.494E-01	2.053E-01	2.874E-01	2.237E-02	-1.216
		83.78		2.030E-01	1.317E-01	1.992E-01	1.585E-02	1.019

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		3.430E-01	2.168E-01	3.537E-01	2.636E-02	0.970
		122.32		-4.062E-01	1.533E+00	2.542E+00	1.736E-01	-0.160
		144.24		1.140E-01	6.266E-01	1.028E+00	7.206E-02	0.111
		154.21		4.065E-01	3.406E-01	5.910E-01	3.941E-02	0.688
	+	269.46		6.072E-01	2.945E-01	3.290E-01	1.978E-02	1.846
		323.87	*	-3.318E-01	6.962E-01	9.333E-01	1.541E-01	-0.355
	+	338.28		6.277E+00	1.749E+00	2.309E+00	2.425E-01	2.719
		445.03		-1.408E+00	2.025E+00	3.200E+00	3.285E-01	-0.440
RN-219	+	271.23		7.791E-01	3.802E-01	4.116E-01	3.321E-02	1.893
		401.81	*	-1.071E-01	3.821E-01	6.296E-01	8.507E-02	-0.170
RN-220		549.76	*	7.973E+00	2.192E+01	3.705E+01	2.285E+00	0.215
RA-223		81.07		-3.494E-01	2.053E-01	2.874E-01	2.237E-02	-1.216
		83.78		2.030E-01	1.317E-01	1.992E-01	1.585E-02	1.019
		94.90		3.430E-01	2.168E-01	3.537E-01	2.636E-02	0.970
		122.32		-4.062E-01	1.533E+00	2.542E+00	1.736E-01	-0.160
		144.24		1.140E-01	6.266E-01	1.028E+00	7.206E-02	0.111
		154.21		4.065E-01	3.406E-01	5.910E-01	3.941E-02	0.688
	+	269.46		6.072E-01	2.945E-01	3.290E-01	1.978E-02	1.846
		323.87	*	-3.318E-01	6.962E-01	9.333E-01	1.541E-01	-0.355
	+	338.28		6.277E+00	1.749E+00	2.309E+00	2.425E-01	2.719
		445.03		-1.408E+00	2.025E+00	3.200E+00	3.285E-01	-0.440
AC-227		79.80		-1.407E+00	1.380E+00	2.217E+00	4.689E-01	-0.635
		236.00		-1.048E-01	2.285E-01	3.187E-01	3.301E-02	-0.329
		256.20	*	5.065E-02	3.282E-01	5.323E-01	7.411E-02	0.095
		286.10		7.165E-02	1.410E+00	2.257E+00	2.607E-01	0.032
	+	299.80		2.132E+00	1.669E+00	2.297E+00	3.740E-01	0.928
		304.40		5.365E-01	1.795E+00	2.599E+00	4.495E-01	0.206
		334.20		-5.181E-02	2.254E+00	3.375E+00	6.183E-01	-0.015
TH-227		79.80		-1.407E+00	1.381E+00	2.217E+00	4.751E-01	-0.635
	+	94.00		1.092E+01	3.771E+00	3.678E+00	7.861E-01	2.970
		236.00		-1.048E-01	2.285E-01	3.187E-01	2.851E-02	-0.329
		256.20	*	5.065E-02	3.282E-01	5.323E-01	8.979E-02	0.095
		286.10		7.165E-02	1.412E+00	2.257E+00	2.261E+00	0.032
	+	299.80		2.132E+00	1.669E+00	2.297E+00	3.740E-01	0.928
		304.40		5.365E-01	1.795E+00	2.599E+00	4.495E-01	0.206
		334.20		-5.181E-02	2.254E+00	3.375E+00	6.183E-01	-0.015
TH-229		85.43		1.124E-01	1.807E-01	2.833E-01	2.286E-02	0.397
	+	88.47		2.512E-01	1.444E-01	1.865E-01	1.529E-02	1.347
		100.00		1.465E-02	1.649E-01	2.741E-01	1.924E-02	0.053
		193.63	*	-1.867E-01	4.634E-01	7.284E-01	3.927E-02	-0.256
		210.97		8.803E-01	7.263E-01	1.134E+00	6.232E-02	0.776
PA-231		283.67	*	6.816E-02	1.482E+00	2.372E+00	3.266E-01	0.029
	+	301.29		8.526E-01	6.592E-01	8.998E-01	9.400E-02	0.948
TH-231		81.07		-3.494E-01	2.053E-01	2.874E-01	2.237E-02	-1.216
		83.78		2.030E-01	1.317E-01	1.992E-01	1.585E-02	1.019
		94.90		3.430E-01	2.168E-01	3.537E-01	2.636E-02	0.970
		122.32		-4.062E-01	1.533E+00	2.542E+00	1.736E-01	-0.160
		144.24		1.140E-01	6.266E-01	1.028E+00	7.206E-02	0.111
		154.21		4.065E-01	3.406E-01	5.910E-01	3.941E-02	0.688

---- Non-Identified Nuclides ----

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	+	269.46		6.072E-01	2.945E-01	3.290E-01	1.978E-02	1.846
		323.87	*	-3.318E-01	6.962E-01	9.333E-01	1.541E-01	-0.355
	+	338.28		6.277E+00	1.749E+00	2.309E+00	2.425E-01	2.719
		445.03		-1.408E+00	2.025E+00	3.200E+00	3.285E-01	-0.440
U-231		84.21		5.523E+00	3.647E+00	5.901E+00	4.712E-01	0.936
	+	92.29		7.487E+00	2.108E+00	2.867E+00	2.214E-01	2.611
		95.87	*	3.616E-02	6.975E-01	1.067E+00	7.857E-02	0.034
		108.00		-2.081E-01	1.248E+00	2.090E+00	1.362E-01	-0.100
PA-233	+	75.28		1.870E+01	4.968E+00	6.299E+00	9.285E-01	2.968
	+	86.59		3.601E+00	2.264E+00	2.724E+00	7.266E-01	1.322
	+	300.12		5.942E-01	4.621E-01	6.323E-01	8.494E-02	0.940
		311.98	*	-2.553E-02	5.672E-02	8.709E-02	5.354E-03	-0.293
		340.50		1.311E+00	6.934E-01	1.065E+00	2.444E-01	1.231
		398.62		-1.164E+00	1.915E+00	3.053E+00	7.879E-01	-0.381
		415.76		-6.933E-01	1.466E+00	2.366E+00	4.860E-01	-0.293
PA-234	+	63.00		1.124E+00	2.120E+00	2.804E+00	4.135E-01	0.401
		94.67		3.459E-01	1.626E-01	2.649E-01	3.083E-02	1.306
		98.44		3.138E-02	8.440E-02	1.390E-01	7.725E-02	0.226
		99.86		4.089E-02	4.203E-01	6.992E-01	4.913E-02	0.058
		111.00		-7.835E-02	1.637E-01	2.702E-01	2.865E-02	-0.290
		131.20		-1.620E-02	9.849E-02	1.462E-01	8.393E-03	-0.111
		152.70		-1.591E-01	2.844E-01	4.582E-01	7.178E-02	-0.347
	+	186.00		3.763E+00	2.509E+00	2.379E+00	7.249E-01	1.582
		226.40		-1.263E-02	3.645E-01	5.895E-01	6.751E-02	-0.021
		227.20		6.419E-02	3.866E-01	6.315E-01	3.526E-02	0.102
		248.90		9.285E-01	8.113E-01	1.230E+00	2.639E-01	0.755
		293.70		2.786E+00	8.753E-01	1.315E+00	2.115E-01	2.118
		369.80		1.656E-01	7.911E-01	1.326E+00	2.755E-01	0.125
		568.70		1.098E-01	9.085E-01	1.500E+00	9.325E-02	0.073
		569.50		1.629E-01	2.465E-01	4.234E-01	2.632E-02	0.385
		574.00		2.312E-02	1.422E+00	2.329E+00	1.450E-01	0.010
		699.00		-2.821E-01	6.635E-01	1.025E+00	1.878E-01	-0.275
		706.10		6.900E-02	9.721E-01	1.573E+00	6.965E-01	0.044
		733.00		-9.023E-02	3.856E-01	5.554E-01	1.204E-01	0.162
		742.81		9.471E-02	1.221E+00	1.969E+00	1.321E+00	0.048
	+	796.30		6.643E-01	1.208E+00	1.554E+00	4.172E-01	0.428
		805.60		8.310E-01	8.701E-01	1.522E+00	4.642E-01	0.546
		819.60		6.588E-01	1.048E+00	1.812E+00	6.878E-01	0.364
		826.30		2.545E-01	7.224E-01	1.236E+00	5.525E-01	0.206
		831.60		7.668E-02	5.245E-01	8.914E-01	2.656E-01	0.086
		876.40		-2.036E-01	8.029E-01	1.246E+00	1.281E+00	-0.163
		880.51		1.785E-01	2.777E-01	4.877E-01	4.432E-02	0.366
		883.24		9.972E-02	2.963E-01	4.959E-01	3.337E-01	0.201
		899.00		-9.464E-02	7.028E-01	1.155E+00	5.066E-01	-0.082
		925.00		-1.282E-01	1.066E+00	1.754E+00	1.591E-01	-0.073
		926.50		-6.321E-03	1.540E-01	2.553E-01	6.492E-02	-0.025
		946.00	*	-7.490E-02	2.592E-01	4.176E-01	7.881E-02	-0.179
		949.00		1.957E-01	3.871E-01	6.739E-01	5.946E-02	0.290
		980.50		8.363E-03	6.071E-01	1.008E+00	8.530E-02	0.008

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-1.637E-01	8.986E-01	1.386E+00	9.002E-01	-0.118
PA-234M		766.41		1.237E+01	1.962E+01	2.905E+01	2.224E+01	0.426
	+	1001.03	*	1.037E+01	9.611E+00	1.105E+01	1.201E+00	0.939
U-235		89.95		1.024E+00	1.428E+00	1.785E+00	5.478E-01	0.573
	+	93.35		3.398E+00	1.317E+00	1.290E+00	3.578E-01	2.634
		105.00		5.069E-01	9.205E-01	1.567E+00	4.599E-01	0.323
		143.76	*	3.960E-02	1.934E-01	3.176E-01	5.147E-02	0.125
		163.35		4.068E-01	4.071E-01	6.914E-01	1.232E-01	0.588
	+	185.71		1.394E-01	8.301E-02	8.712E-02	4.656E-03	1.600
		205.31		6.011E-01	5.143E-01	7.864E-01	1.406E-01	0.764
NP-236		94.67		2.641E-01	1.212E-01	2.012E-01	1.504E-02	1.313
		98.44		2.371E-02	6.245E-02	1.051E-01	7.501E-03	0.226
		111.00		-5.927E-02	1.238E-01	2.044E-01	1.302E-02	-0.290
		160.31	*	-1.526E-02	6.654E-02	1.088E-01	5.770E-03	-0.140
NP-239		99.55		5.138E-02	1.409E-01	2.368E-01	1.670E-02	0.217
		117.00	*	-5.102E-02	1.643E-01	2.724E-01	1.668E-02	-0.187
	+	209.75		1.580E+00	1.011E+00	1.280E+00	7.023E-02	1.235
		228.18		4.367E-02	2.004E-01	3.282E-01	1.834E-02	0.133
		277.60		1.650E-02	1.715E-01	2.756E-01	1.589E-02	0.060
		334.30		-1.181E-01	1.273E+00	1.895E+00	1.091E-01	-0.062
AM-241		59.54	*	-3.357E-02	1.678E-01	2.596E-01	2.043E-02	-0.129
CM-243		99.55		5.287E-02	1.450E-01	2.437E-01	1.718E-02	0.217
		103.76	*	-3.318E-02	8.278E-02	1.375E-01	9.296E-03	-0.241
		117.00		-5.248E-02	1.690E-01	2.802E-01	1.716E-02	-0.187
	+	209.75		1.558E+00	9.969E-01	1.261E+00	6.922E-02	1.235
		228.18		4.412E-02	2.025E-01	3.315E-01	1.853E-02	0.133
		277.60		1.663E-02	1.728E-01	2.778E-01	1.601E-02	0.060
CM-247		278.00		4.077E-01	7.062E-01	1.165E+00	6.713E-02	0.350
		287.40		-3.717E-01	1.142E+00	1.785E+00	1.031E-01	-0.208
		402.60	*	1.792E-02	3.478E-02	6.002E-02	3.348E-03	0.299
CF-249		252.85		-3.498E-01	7.619E-01	1.192E+00	6.787E-02	-0.294
		333.44		2.024E-02	1.973E-01	2.537E-01	1.461E-02	0.080
		387.95	*	-8.390E-03	3.387E-02	5.602E-02	3.104E-03	-0.150
CF-251		176.60	*	-2.600E-02	1.101E-01	1.790E-01	9.470E-03	-0.145
		227.00		3.699E-02	3.424E-01	5.577E-01	3.114E-02	0.066
		285.00		-1.529E-01	1.672E+00	2.654E+00	1.533E-01	-0.058

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504012      *
* Acquisition date :  7-JUL-2009 09:43:44 Detector SN#     :                *
* Detector ID        : GAM09               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.67     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504012           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.3823E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 16-MAR-2009 10:48:05 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.733E+01	2.569E+00	5.560E-01	0.000E+00
CD-109	1.865E+00	1.051E+00	1.480E+00	0.000E+00
SN-126	1.840E-01	1.037E-01	1.422E-01	0.000E+00
BA-137M	4.289E-01	6.596E-02	5.514E-02	0.000E+00
CS-137	4.534E-01	6.977E-02	5.829E-02	0.000E+00
TL-208	4.397E-01	9.018E-02	5.459E-02	0.000E+00
BI-211	3.611E+00	4.854E-01	2.855E-01	0.000E+00
PB-212	1.480E+00	1.471E-01	8.587E-02	0.000E+00
PO-212	1.480E+00	1.471E-01	8.587E-02	0.000E+00
BI-214	1.042E+00	1.679E-01	9.888E-02	0.000E+00
PB-214	1.256E+00	1.806E-01	9.952E-02	0.000E+00
PO-214	1.256E+00	1.806E-01	9.952E-02	0.000E+00
PO-216	1.480E+00	1.471E-01	8.587E-02	0.000E+00
PO-218	1.256E+00	1.806E-01	9.952E-02	0.000E+00
RA-224	3.991E+00	1.218E+00	9.771E-01	0.000E+00
RA-226	1.042E+00	1.679E-01	9.888E-02	0.000E+00
AC-228	1.760E+00	3.186E-01	1.831E-01	0.000E+00
RA-228	1.760E+00	3.186E-01	1.831E-01	0.000E+00
TH-228	1.480E+00	1.471E-01	8.586E-02	0.000E+00
TH-230	1.042E+00	1.679E-01	9.887E-02	0.000E+00
TH-232	1.760E+00	3.186E-01	1.831E-01	0.000E+00
TH-234	9.639E-01	1.785E+00	2.149E+00	0.000E+00
U-234	1.042E+00	1.679E-01	9.887E-02	0.000E+00
NP-237	5.402E-01	3.234E-01	4.025E-01	0.000E+00
U-238	9.639E-01	1.785E+00	2.149E+00	0.000E+00
AM-243	3.570E-01	8.164E-02	8.680E-02	0.000E+00
ANH-511	1.077E-01	5.850E-02	4.012E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	8.461E-02	2.895E-01	5.119E-01	0.000E+00	NOT IDENT.
NA-22	4.104E-02	3.446E-02	6.523E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.432E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-5.436E-03	2.649E-02	4.256E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.429E-02	7.614E-02	0.000E+00	FAIL ABUN
SC-46	-3.413E-02	3.630E-02	5.744E-02	0.000E+00	FAIL ABUN
V-48	-1.411E-02	5.075E-02	8.411E-02	0.000E+00	NOT IDENT.
CR-51	2.100E-01	3.188E-01	5.547E-01	0.000E+00	NOT IDENT.
MN-52	1.437E-01	1.457E-01	2.827E-01	0.000E+00	NOT IDENT.
MN-54	-3.152E-02	3.349E-02	5.354E-02	0.000E+00	NOT IDENT.
CO-56	-1.356E-02	3.255E-02	5.430E-02	0.000E+00	FAIL ABUN
CO-57	-3.448E-03	2.145E-02	3.838E-02	0.000E+00	NOT IDENT.
CO-58	3.609E-03	2.925E-02	5.158E-02	0.000E+00	NOT IDENT.
FE-59	7.983E-03	7.669E-02	1.310E-01	0.000E+00	NOT IDENT.
CO-60	8.550E-03	3.869E-02	6.570E-02	0.000E+00	NOT IDENT.
ZN-65	-6.814E-03	9.701E-02	1.404E-01	0.000E+00	NOT IDENT.
GE-68	-1.134E-01	1.153E+00	1.935E+00	0.000E+00	NOT IDENT.
AS-73	1.055E+00	8.987E-01	1.624E+00	0.000E+00	NOT IDENT.
AS-74	6.203E-02	7.246E-02	1.314E-01	0.000E+00	NOT IDENT.
SE-75	5.705E-03	4.195E-02	6.349E-02	0.000E+00	NOT IDENT.
BR-77	-3.953E+00	4.699E+00	7.535E+00	0.000E+00	FAIL ABUN
SR-82	-7.572E-02	2.886E-01	4.638E-01	0.000E+00	NOT IDENT.
RB-83	-6.133E-02	5.723E-02	8.966E-02	0.000E+00	NOT IDENT.
RB-84	-8.750E-03	6.573E-02	1.124E-01	0.000E+00	NOT IDENT.
KR-85	1.048E+00	7.546E+00	1.155E+01	0.000E+00	NOT IDENT.
SR-85	5.249E-03	3.780E-02	5.788E-02	0.000E+00	NOT IDENT.
RB-86	-3.158E-02	6.477E-01	1.092E+00	0.000E+00	NOT IDENT.
Y-88	6.274E-03	2.075E-02	3.757E-02	0.000E+00	NOT IDENT.
ZR-88	1.493E-02	2.544E-02	4.649E-02	0.000E+00	NOT IDENT.
Y-91	1.784E+01	1.758E+01	3.193E+01	0.000E+00	NOT IDENT.
NB-94	-7.677E-04	2.892E-02	4.824E-02	0.000E+00	NOT IDENT.
NB-95	-1.483E-02	4.068E-02	6.535E-02	0.000E+00	NOT IDENT.
NB-95M	-1.135E-01	1.204E-01	1.722E-01	0.000E+00	NOT IDENT.
ZR-95	3.933E-02	6.114E-02	1.074E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.080E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.863E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.412E+00	5.832E+00	1.020E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.280E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.546E-03	2.797E-02	4.852E-02	0.000E+00	NOT IDENT.
RH-102	-2.181E-02	2.630E-02	4.294E-02	0.000E+00	NOT IDENT.
RU-103	-2.559E-02	3.311E-02	5.352E-02	0.000E+00	FAIL ABUN
RH-106	2.340E-01	2.980E-01	5.328E-01	0.000E+00	FAIL ABUN
RU-106	2.340E-01	2.971E-01	5.328E-01	0.000E+00	FAIL ABUN
AG-108M	1.428E-02	2.863E-02	5.168E-02	0.000E+00	NOT IDENT.
AG-110M	-3.778E-03	3.374E-02	4.893E-02	0.000E+00	NOT IDENT.
IN-111	-8.263E-01	5.430E-01	8.453E-01	0.000E+00	NOT IDENT.
IN-113M	-1.497E-02	3.613E-02	6.207E-02	0.000E+00	NOT IDENT.
SN-113	-1.497E-02	3.613E-02	6.207E-02	0.000E+00	NOT IDENT.
IN-114M	1.191E-01	1.714E-01	2.781E-01	0.000E+00	NOT IDENT.
CD-115	3.363E+00	4.792E+00	8.659E+00	0.000E+00	NOT IDENT.
SN-117M	1.544E-02	3.991E-02	7.180E-02	0.000E+00	NOT IDENT.
SB-122	6.384E-01	1.080E+00	1.922E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.837E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	7.209E-03	2.280E-02	4.089E-02	0.000E+00	NOT IDENT.
I-124	4.586E-01	4.379E-01	7.240E-01	0.000E+00	NOT IDENT.
SB-124	8.714E-03	6.196E-02	1.060E-01	0.000E+00	FAIL ABUN
SB-125	3.773E-02	7.759E-02	1.402E-01	0.000E+00	FAIL ABUN
TE-125M	8.346E+00	7.730E+00	1.455E+01	0.000E+00	NOT IDENT.
I-126	-7.159E-02	1.651E-01	2.297E-01	0.000E+00	NOT IDENT.
SB-126	-6.488E-03	1.099E-01	1.823E-01	0.000E+00	FAIL ABUN
SB-127	-3.888E-02	8.291E-01	1.384E+00	0.000E+00	NOT IDENT.
XE-127	-3.749E-02	4.029E-02	6.684E-02	0.000E+00	NOT IDENT.
I-131	-6.224E-02	8.053E-02	1.361E-01	0.000E+00	NOT IDENT.
TE-132	8.641E-02	3.754E-01	6.528E-01	0.000E+00	NOT IDENT.
BA-133	9.963E-03	3.769E-02	6.055E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	9.419E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.411E-02	6.021E-02	8.156E-02	0.000E+00	FAIL ABUN
CS-135	1.529E-01	1.462E-01	2.380E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.858E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.247E-03	7.807E-02	1.330E-01	0.000E+00	FAIL ABUN
CE-139	4.259E-03	2.496E-02	4.432E-02	0.000E+00	NOT IDENT.
BA-140	3.224E-02	2.041E-01	3.540E-01	0.000E+00	NOT IDENT.
LA-140	-7.691E-02	7.413E-02	1.028E-01	0.000E+00	FAIL ABUN
CE-141	2.425E-02	5.187E-02	9.400E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	4.780E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.073E-03	1.805E-01	3.088E-01	0.000E+00	NOT IDENT.
PM-144	1.374E-02	3.001E-02	5.220E-02	0.000E+00	NOT IDENT.
PR-144	9.302E-01	2.031E+00	3.533E+00	0.000E+00	NOT IDENT.

PM-146	2.679E-03	3.769E-02	6.600E-02	0.000E+00	NOT IDENT.
ND-147	-1.618E-01	4.530E-01	7.569E-01	0.000E+00	NOT IDENT.
PM-149	-1.254E+00	4.163E+01	7.012E+01	0.000E+00	NOT IDENT.
EU-152	2.829E-03	8.388E-02	1.395E-01	0.000E+00	FAIL ABUN
GD-153	-4.881E-02	7.732E-02	1.216E-01	0.000E+00	NOT IDENT.
EU-154	1.159E-01	9.685E-02	1.828E-01	0.000E+00	NOT IDENT.
EU-155	5.207E-02	9.091E-02	1.689E-01	0.000E+00	FAIL ABUN
TB-160	4.960E-02	1.257E-01	2.245E-01	0.000E+00	FAIL ABUN
HO-166M	4.251E-02	5.862E-02	1.035E-01	0.000E+00	NOT IDENT.
TM-171	1.468E+01	2.803E+01	4.481E+01	0.000E+00	NOT IDENT.
LU-176	-4.791E-03	2.159E-02	3.567E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.112E+00	1.475E+00	0.000E+00	FAIL ABUN
LU-177M	1.912E-02	1.522E-01	2.696E-01	0.000E+00	FAIL ABUN
HF-181	9.395E-03	3.720E-02	6.558E-02	0.000E+00	NOT IDENT.
W-181	7.501E-02	3.772E-01	5.928E-01	0.000E+00	NOT IDENT.
TA-182	-6.035E-02	1.688E-01	2.722E-01	0.000E+00	FAIL ABUN
RE-183	-6.115E-02	9.111E-02	1.560E-01	0.000E+00	FAIL ABUN
RE-184	-9.238E-02	1.972E-01	3.269E-01	0.000E+00	NOT IDENT.
OS-185	7.677E-03	3.640E-02	6.251E-02	0.000E+00	NOT IDENT.
RE-188	1.187E-01	1.436E-01	2.629E-01	0.000E+00	NOT IDENT.
W-188	-1.551E+00	7.156E+00	1.053E+01	0.000E+00	FAIL ABUN
IR-192	-2.436E-03	3.117E-02	5.186E-02	0.000E+00	FAIL ABUN
AU-195	1.318E-01	1.980E-01	3.628E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	9.833E+01	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.641E+00	3.532E+00	6.089E+00	0.000E+00	NOT IDENT.
TL-202	1.777E-02	5.655E-02	1.008E-01	0.000E+00	NOT IDENT.
HG-203	1.195E-02	3.643E-02	6.271E-02	0.000E+00	NOT IDENT.
BI-207	1.868E-02	4.838E-02	8.500E-02	0.000E+00	FAIL ABUN
TL-207	-3.318E-01	6.823E-01	9.648E-01	0.000E+00	FAIL ABUN
PO-209	-1.385E+00	6.195E+00	1.046E+01	0.000E+00	NOT IDENT.
BI-210	5.566E+00	4.553E+00	8.099E+00	0.000E+00	NOT IDENT.
PB-210	5.566E+00	4.553E+00	8.099E+00	0.000E+00	NOT IDENT.
PO-210	5.566E+00	4.547E+00	8.099E+00	0.000E+00	NOT IDENT.
PB-211	-1.581E-02	8.651E-01	1.521E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.967E-01	6.335E-01	0.000E+00	FAIL ABUN
PO-215	-3.318E-01	6.823E-01	9.648E-01	0.000E+00	FAIL ABUN
RN-219	-1.071E-01	3.745E-01	6.482E-01	0.000E+00	FAIL ABUN
RN-220	7.973E+00	2.148E+01	3.790E+01	0.000E+00	NOT IDENT.
RA-223	-3.318E-01	6.823E-01	9.648E-01	0.000E+00	FAIL ABUN
AC-227	5.065E-02	3.216E-01	5.528E-01	0.000E+00	FAIL ABUN
TH-227	5.065E-02	3.217E-01	5.528E-01	0.000E+00	FAIL ABUN
TH-229	-1.867E-01	4.541E-01	7.604E-01	0.000E+00	FAIL ABUN
PA-231	6.816E-02	1.452E+00	2.458E+00	0.000E+00	FAIL ABUN
TH-231	-3.318E-01	6.823E-01	9.648E-01	0.000E+00	FAIL ABUN
U-231	3.616E-02	6.836E-01	1.129E+00	0.000E+00	FAIL ABUN
PA-233	-2.553E-02	5.559E-02	9.010E-02	0.000E+00	FAIL ABUN
PA-234	-7.490E-02	2.540E-01	4.227E-01	0.000E+00	FAIL ABUN
PA-234M	1.037E+01	9.419E+00	1.117E+01	0.000E+00	FAIL ABUN
U-235	3.960E-02	1.895E-01	3.334E-01	0.000E+00	FAIL ABUN
NP-236	-1.526E-02	6.521E-02	1.140E-01	0.000E+00	NOT IDENT.
NP-239	-5.102E-02	1.610E-01	2.871E-01	0.000E+00	FAIL ABUN
AM-241	-3.357E-02	1.645E-01	2.770E-01	0.000E+00	NOT IDENT.
CM-243	-3.318E-02	8.112E-02	1.453E-01	0.000E+00	FAIL ABUN
CM-247	1.792E-02	3.408E-02	6.178E-02	0.000E+00	NOT IDENT.
CF-249	-8.390E-03	3.319E-02	5.771E-02	0.000E+00	NOT IDENT.
CF-251	-2.600E-02	1.079E-01	1.872E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:44:07.91

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504012.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:43:44.
Sample ID         : G232504012           Sample quantity  : 1.38230E+02 GRAM
Detector name     : GAM09                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.67  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1228	10.67*	1.143E+00	2.733E+01	2.733E+01	9.59
CD-109	88.03	138	3.72*	5.498E+00	1.830E+00	1.865E+00	57.51
SN-126	64.28	39	9.60	2.863E+00	3.815E-01	3.815E-01	188.71
	86.94	138	8.90	5.498E+00	7.648E-01	7.648E-01	70.31
	87.57	138	37.00*	5.498E+00	1.840E-01	1.840E-01	57.51
BA-137M	661.65	325	89.98*	2.291E+00	4.285E-01	4.289E-01	15.69
CS-137	661.65	325	85.12*	2.291E+00	4.530E-01	4.534E-01	15.70
TL-208	277.35	------	6.80	4.495E+00	------ Line Not Found		------
	510.84	112	21.60	2.831E+00	4.985E-01	4.985E-01	56.06
	583.14	347	84.20*	2.544E+00	4.397E-01	4.397E-01	20.93
	860.37	61	12.46	1.823E+00	7.328E-01	7.328E-01	60.50
BI-211	72.87	------	1.27	4.083E+00	------ Line Not Found		------
	351.07	649	12.94*	3.769E+00	3.611E+00	3.611E+00	13.72
PB-212	74.81	376	10.70	4.334E+00	2.202E+00	2.202E+00	25.14
	77.11	604	18.00	4.589E+00	1.985E+00	1.985E+00	15.12
	87.30	138	8.00	5.498E+00	8.508E-01	8.508E-01	58.37
	238.63	1215	44.60*	4.995E+00	1.480E+00	1.480E+00	10.14
	300.09	61	3.41	4.243E+00	1.150E+00	1.150E+00	77.04
PO-212	74.81	376	10.70	4.334E+00	2.202E+00	2.202E+00	25.14
	77.11	604	18.00	4.589E+00	1.985E+00	1.985E+00	15.12
	87.30	138	8.00	5.498E+00	8.508E-01	8.508E-01	58.37
	115.19	------	0.60	6.606E+00	------ Line Not Found		------
	238.63	1215	44.60*	4.995E+00	1.480E+00	1.480E+00	10.14
	300.09	61	3.41	4.243E+00	1.150E+00	1.150E+00	77.04
BI-214	609.31	436	46.30*	2.454E+00	1.042E+00	1.042E+00	16.44
	768.36	------	5.04	2.016E+00	------ Line Not Found		------
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	102	15.10	1.437E+00	1.272E+00	1.272E+00	42.37
	1238.11	26	5.94	1.314E+00	9.198E-01	9.198E-01	138.13
	1377.67	------	4.11	1.199E+00	------ Line Not Found		------
	1764.49	93	15.80	9.997E-01	1.607E+00	1.607E+00	25.36
PB-214	74.81	376	6.21	4.334E+00	3.794E+00	3.794E+00	24.48

Sample ID : G232504012 Acquisition date : 7-JUL-2009 09:43:44

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	604	10.50	4.589E+00	3.403E+00	3.403E+00	16.94
	87.30	138	4.67	5.498E+00	1.457E+00	1.457E+00	58.02
	241.98	288	7.49	4.954E+00	2.105E+00	2.105E+00	31.65
	295.21	361	19.20	4.294E+00	1.190E+00	1.190E+00	21.34
	351.92	649	37.20*	3.769E+00	1.256E+00	1.256E+00	14.68
PO-214	74.81	376	6.21	4.334E+00	3.794E+00	3.794E+00	24.48
	77.11	604	10.50	4.589E+00	3.403E+00	3.403E+00	16.94
	87.30	138	4.67	5.498E+00	1.457E+00	1.457E+00	58.02
	241.98	288	7.49	4.954E+00	2.105E+00	2.105E+00	31.65
	295.21	361	19.20	4.294E+00	1.190E+00	1.190E+00	21.34
	351.92	649	37.20*	3.769E+00	1.256E+00	1.256E+00	14.68
PO-216	74.81	376	10.70	4.334E+00	2.202E+00	2.202E+00	25.14
	77.11	604	18.00	4.589E+00	1.985E+00	1.985E+00	15.12
	87.30	138	8.00	5.498E+00	8.508E-01	8.508E-01	58.37
	238.63	1215	44.60*	4.995E+00	1.480E+00	1.480E+00	10.14
	300.09	61	3.41	4.243E+00	1.150E+00	1.150E+00	77.04
PO-218	74.81	376	6.21	4.334E+00	3.794E+00	3.794E+00	24.48
	77.11	604	10.50	4.589E+00	3.403E+00	3.403E+00	16.94
	87.30	138	4.67	5.498E+00	1.457E+00	1.457E+00	58.02
	241.98	288	7.49	4.954E+00	2.105E+00	2.105E+00	31.65
	295.21	361	19.20	4.294E+00	1.190E+00	1.190E+00	21.34
	351.92	649	37.20*	3.769E+00	1.256E+00	1.256E+00	14.68
RA-224	240.98	288	3.95*	4.954E+00	3.991E+00	3.991E+00	31.15
RA-226	609.31	436	46.30*	2.454E+00	1.042E+00	1.042E+00	16.44
	768.36	------	5.04	2.016E+00	------ Line Not Found		------
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	102	15.10	1.437E+00	1.272E+00	1.272E+00	42.37
	1238.11	26	5.94	1.314E+00	9.198E-01	9.198E-01	138.13
	1377.67	------	4.11	1.199E+00	------ Line Not Found		------
	1764.49	93	15.80	9.997E-01	1.607E+00	1.607E+00	25.36
AC-228	338.32	245	11.40	3.882E+00	1.503E+00	1.503E+00	48.24
	911.07	311	27.70*	1.733E+00	1.760E+00	1.760E+00	18.48
	969.11	131	16.60	1.639E+00	1.310E+00	1.310E+00	36.62
RA-228	338.32	245	11.40	3.882E+00	1.503E+00	1.503E+00	48.24
	911.07	311	27.70*	1.733E+00	1.760E+00	1.760E+00	18.48
	969.11	131	16.60	1.639E+00	1.310E+00	1.310E+00	36.62
TH-228	84.40	------	1.21	5.277E+00	------ Line Not Found		------
	238.60	1215	44.60*	4.995E+00	1.480E+00	1.480E+00	10.14
	300.10	61	3.41	4.243E+00	1.150E+00	1.150E+00	96.65
TH-230	609.31	436	46.30*	2.454E+00	1.042E+00	1.042E+00	16.44
	768.36	------	5.04	2.016E+00	------ Line Not Found		------
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	102	15.10	1.437E+00	1.272E+00	1.272E+00	42.37
	1238.11	26	5.94	1.314E+00	9.198E-01	9.198E-01	138.13
	1377.67	------	4.11	1.199E+00	------ Line Not Found		------
	1764.49	93	15.80	9.997E-01	1.607E+00	1.607E+00	25.36
TH-232	338.32	245	11.40	3.882E+00	1.503E+00	1.503E+00	26.44
	911.07	311	27.70*	1.733E+00	1.760E+00	1.760E+00	18.48
	969.11	131	16.60	1.639E+00	1.310E+00	1.310E+00	36.62

Sample ID : G232504012 Acquisition date : 7-JUL-2009 09:43:44

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-234	63.29	39	3.80*	2.863E+00	9.639E-01	9.639E-01	188.95
	92.38	331	5.41	5.886E+00	2.826E+00	2.826E+00	32.33
U-234	609.31	436	46.30*	2.454E+00	1.042E+00	1.042E+00	16.44
	768.36	------	5.04	2.016E+00	------ Line Not Found		------
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	102	15.10	1.437E+00	1.272E+00	1.272E+00	42.37
	1238.11	26	5.94	1.314E+00	9.198E-01	9.198E-01	138.13
	1377.67	------	4.11	1.199E+00	------ Line Not Found		------
	1764.49	93	15.80	9.997E-01	1.607E+00	1.607E+00	25.36
NP-237	86.50	138	12.60*	5.498E+00	5.402E-01	5.402E-01	61.10
	95.87	------	2.60	6.046E+00	------ Line Not Found		------
U-238	63.29	39	3.80*	2.863E+00	9.639E-01	9.639E-01	188.95
	92.38	331	5.41	5.886E+00	2.826E+00	2.826E+00	28.15
AM-243	74.67	376	66.00*	4.334E+00	3.570E-01	3.570E-01	23.34
	86.72	138	0.34	5.498E+00	2.026E+01	2.026E+01	57.51
	117.66	------	0.55	6.630E+00	------ Line Not Found		------
	142.18	------	0.13	6.551E+00	------ Line Not Found		------
ANH-511	511.00	112	100.00*	2.831E+00	1.077E-01	1.077E-01	55.44

Flag: "*" = Keyline

Sample ID : G232504012 Acquisition date : 7-JUL-2009 09:43:44

Total number of lines in spectrum 33
Number of unidentified lines 1
Number of lines tentatively identified by NID 32 96.97%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.733E+01	2.733E+01	0.262E+01	9.59	
CD-109	464.00D	1.02	1.830E+00	1.865E+00	1.073E+00	57.51	
SN-126	1.00E+05Y	1.00	1.840E-01	1.840E-01	1.058E-01	57.51	
BA-137M	30.17Y	1.00	4.285E-01	4.289E-01	0.673E-01	15.69	
CS-137	30.17Y	1.00	4.530E-01	4.534E-01	0.712E-01	15.70	
TL-208	1.41E+10Y	1.00	4.397E-01	4.397E-01	0.920E-01	20.93	
BI-211	7.04E+08Y	1.00	3.611E+00	3.611E+00	0.495E+00	13.72	
PB-212	1.41E+10Y	1.00	1.480E+00	1.480E+00	0.150E+00	10.14	
PO-212	1.41E+10Y	1.00	1.480E+00	1.480E+00	0.150E+00	10.14	
BI-214	1600.00Y	1.00	1.042E+00	1.042E+00	0.171E+00	16.44	
PB-214	1600.00Y	1.00	1.256E+00	1.256E+00	0.184E+00	14.68	
PO-214	1600.00Y	1.00	1.256E+00	1.256E+00	0.184E+00	14.68	
PO-216	1.41E+10Y	1.00	1.480E+00	1.480E+00	0.150E+00	10.14	
PO-218	1600.00Y	1.00	1.256E+00	1.256E+00	0.184E+00	14.68	
RA-224	1.41E+10Y	1.00	3.991E+00	3.991E+00	1.243E+00	31.15	
RA-226	1600.00Y	1.00	1.042E+00	1.042E+00	0.171E+00	16.44	
AC-228	1.41E+10Y	1.00	1.760E+00	1.760E+00	0.325E+00	18.48	
RA-228	1.41E+10Y	1.00	1.760E+00	1.760E+00	0.325E+00	18.48	
TH-228	1.41E+10Y	1.00	1.480E+00	1.480E+00	0.150E+00	10.14	
TH-230	4.47E+09Y	1.00	1.042E+00	1.042E+00	0.171E+00	16.44	
TH-232	1.41E+10Y	1.00	1.760E+00	1.760E+00	0.325E+00	18.48	
TH-234	4.47E+09Y	1.00	9.639E-01	9.639E-01	18.21E-01	188.95	
U-234	4.47E+09Y	1.00	1.042E+00	1.042E+00	0.171E+00	16.44	
NP-237	2.14E+06Y	1.00	5.402E-01	5.402E-01	3.300E-01	61.10	
U-238	4.47E+09Y	1.00	9.639E-01	9.639E-01	18.21E-01	188.95	
AM-243	7380.00Y	1.00	3.570E-01	3.570E-01	0.833E-01	23.34	
ANH-511	1.00E+09Y	1.00	1.077E-01	1.077E-01	0.597E-01	55.44	
	Total Activity :		6.034E+01	6.038E+01			

Grand Total Activity : 6.034E+01 6.038E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232504012 Acquisition date : 7-JUL-2009 09:43:44

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	128.91	84	322	0.78	256.76	253	8	1.17E-02	76.9	6.65E+00	T
0	186.42	162	499	1.07	371.73	366	12	2.25E-02	59.3	5.84E+00	T
0	209.23	103	298	1.48	417.34	414	9	1.43E-02	63.8	5.45E+00	T
0	270.05	139	247	1.14	538.97	533	12	1.94E-02	48.1	4.58E+00	T
0	328.03	59	160	1.08	654.92	652	8	8.20E-03	78.4	3.97E+00	T
0	463.22	92	113	1.53	925.27	920	11	1.28E-02	49.3	3.06E+00	T
0	727.66	87	69	1.80	1454.22	1449	10	1.21E-02	41.9	2.11E+00	T
0	795.88	19	75	0.58	1590.70	1584	10	2.59E-03	****	1.95E+00	T
1	964.38	49	43	1.77	1927.82	1921	23	6.85E-03	64.5	1.65E+00	T
0	1002.22	36	52	1.19	2003.53	1997	14	4.98E-03	92.0	1.59E+00	T
0	1589.03	16	25	1.78	3178.00	3173	9	2.19E-03	****	1.07E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:44:12.91

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504012.CNF;1 *
* Acquisition date  : 7-JUL-2009 09:43:44.  Detector SN#     :             *
* Detector ID       : GAM09                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.67          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504012            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.38230E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 10:48:05.3MS Isotope       :              *
* MSD ID           :                      MSD Isotope      :              *
* LCS ID           : 1032-A               LCS Isotope      :              *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.733E+01	2.622E+00	5.542E-01	4.158E-02	49.322
CD-109	1.865E+00	1.073E+00	1.397E+00	1.154E-01	1.335
SN-126	1.840E-01	1.058E-01	1.342E-01	1.104E-02	1.371
BA-137M	4.289E-01	6.731E-02	5.409E-02	3.432E-03	7.929
CS-137	4.534E-01	7.120E-02	5.718E-02	3.641E-03	7.929
TL-208	4.397E-01	9.202E-02	5.342E-02	3.780E-03	8.231
BI-211	3.611E+00	4.953E-01	2.766E-01	1.757E-02	13.052
PB-212	1.480E+00	1.501E-01	8.258E-02	5.949E-03	17.928
PO-212	1.480E+00	1.501E-01	8.258E-02	5.949E-03	17.928
BI-214	1.042E+00	1.714E-01	9.684E-02	7.894E-03	10.763
PB-214	1.256E+00	1.843E-01	9.643E-02	7.926E-03	13.024
PO-214	1.256E+00	1.843E-01	9.643E-02	7.926E-03	13.024
PO-216	1.480E+00	1.501E-01	8.258E-02	5.949E-03	17.928
PO-218	1.256E+00	1.843E-01	9.643E-02	7.926E-03	13.024
RA-224	3.991E+00	1.243E+00	9.398E-01	5.309E-02	4.247
RA-226	1.042E+00	1.714E-01	9.684E-02	7.894E-03	10.763
AC-228	1.760E+00	3.251E-01	1.808E-01	2.115E-02	9.732
RA-228	1.760E+00	3.251E-01	1.808E-01	2.115E-02	9.732

Sample ID : G232504012 Acquisition date : 7-JUL-2009 09:43:44

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.480E+00	1.501E-01	8.257E-02	5.948E-03	17.929
TH-230	1.042E+00	1.714E-01	9.684E-02	7.894E-03	10.763
TH-232	1.760E+00	3.251E-01	1.808E-01	2.115E-02	9.732
TH-234	9.639E-01	1.821E+00	2.016E+00	3.497E-01	0.478
U-234	1.042E+00	1.714E-01	9.684E-02	7.894E-03	10.763
NP-237	5.402E-01	3.300E-01	3.798E-01	8.426E-02	1.422
U-238	9.639E-01	1.821E+00	2.016E+00	3.497E-01	0.478
AM-243	3.570E-01	8.330E-02	8.168E-02	6.093E-03	4.370
ANH-511	1.077E-01	5.970E-02	3.916E-02	2.371E-03	2.750

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	8.461E-02		2.955E-01	4.989E-01	3.426E-02	0.170
NA-22	4.104E-02		3.516E-02	6.484E-02	4.346E-03	0.633
NA-24	3.198E-02		3.282E-02	Half-Life too short		
AL-26	-5.436E-03		2.703E-02	4.261E-02	2.494E-03	-0.128
TI-44	3.663E-01	+	5.540E-02	7.172E-02	5.474E-03	5.107
SC-46	-3.413E-02		3.704E-02	5.668E-02	5.217E-03	-0.602
V-48	-1.411E-02		5.178E-02	8.316E-02	7.010E-03	-0.170
CR-51	2.100E-01		3.253E-01	5.365E-01	3.458E-02	0.391
MN-52	1.437E-01		1.487E-01	2.817E-01	2.048E-02	0.510
MN-54	-3.152E-02		3.418E-02	5.277E-02	4.472E-03	-0.597
CO-56	-1.356E-02		3.321E-02	5.353E-02	4.622E-03	-0.253
CO-57	-3.448E-03		2.188E-02	3.645E-02	2.175E-03	-0.095
CO-58	3.609E-03		2.985E-02	5.081E-02	4.158E-03	0.071
FE-59	7.983E-03		7.825E-02	1.298E-01	9.937E-03	0.061
CO-60	8.550E-03		3.948E-02	6.537E-02	4.855E-03	0.131
ZN-65	-6.814E-03		9.899E-02	1.392E-01	9.086E-03	-0.049
GE-68	-1.134E-01		1.177E+00	1.917E+00	1.368E-01	-0.059
AS-73	1.055E+00		9.171E-01	1.519E+00	1.121E-01	0.695
AS-74	6.203E-02		7.394E-02	1.286E-01	8.063E-03	0.482
SE-75	5.705E-03		4.281E-02	6.118E-02	3.545E-03	0.093
BR-77	-3.953E+00		4.795E+00	7.357E+00	4.477E-01	-0.537
SR-82	-7.572E-02		2.945E-01	4.565E-01	3.526E-02	-0.166
RB-83	-6.133E-02		5.840E-02	8.753E-02	5.327E-03	-0.701
RB-84	-8.750E-03		6.707E-02	1.109E-01	1.009E-02	-0.079
KR-85	1.048E+00		7.700E+00	1.128E+01	6.839E-01	0.093
SR-85	5.249E-03		3.857E-02	5.649E-02	3.426E-03	0.093
RB-86	-3.158E-02		6.610E-01	1.082E+00	7.730E-02	-0.029
Y-88	6.274E-03		2.117E-02	3.763E-02	2.151E-03	0.167
ZR-88	1.493E-02		2.596E-02	4.514E-02	2.494E-03	0.331
Y-91	1.784E+01		1.794E+01	3.170E+01	1.853E+00	0.563
NB-94	-7.677E-04		2.951E-02	4.738E-02	3.233E-03	-0.016
NB-95	-1.483E-02		4.151E-02	6.430E-02	4.881E-03	-0.231
NB-95M	-1.135E-01		1.228E-01	1.655E-01	1.224E-02	-0.685
ZR-95	3.933E-02		6.238E-02	1.057E-01	8.945E-03	0.372

Sample ID : G232504012 Acquisition date : 7-JUL-2009 09:43:44

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-3.366E-04		5.509E-03	Half-Life too short		
ZR-97	5.959E-02		9.504E-02	Half-Life too short		
MO-99	3.412E+00		5.951E+00	1.003E+01	1.450E+00	0.340
TC-99M	2.109E+07		3.714E+07	Half-Life too short		
RH-101	-1.546E-03		2.854E-02	4.650E-02	2.520E-03	-0.033
RH-102	-2.181E-02		2.683E-02	4.185E-02	2.479E-03	-0.521
RU-103	-2.559E-02		3.379E-02	5.221E-02	6.652E-03	-0.490
RH-106	2.340E-01		3.041E-01	5.221E-01	6.263E-02	0.448
RU-106	2.340E-01		3.032E-01	5.221E-01	3.294E-02	0.448
AG-108M	1.428E-02		2.921E-02	5.028E-02	3.139E-03	0.284
AG-110M	-3.778E-03		3.443E-02	4.799E-02	3.210E-03	-0.079
IN-111	-8.263E-01		5.541E-01	8.134E-01	4.610E-02	-1.016
IN-113M	-1.497E-02		3.687E-02	6.027E-02	3.571E-03	-0.248
SN-113	-1.497E-02		3.687E-02	6.027E-02	3.571E-03	-0.248
IN-114M	1.191E-01		1.749E-01	2.663E-01	1.430E-02	0.447
CD-115	3.363E+00		4.890E+00	8.456E+00	5.165E-01	0.398
SN-117M	1.544E-02		4.073E-02	6.852E-02	3.648E-03	0.225
SB-122	6.384E-01		1.102E+00	1.880E+00	1.166E-01	0.340
I-123	8.970E-02		1.448E-01	Half-Life too short		
TE-123M	7.209E-03		2.327E-02	3.902E-02	2.108E-03	0.185
I-124	4.586E-01		4.469E-01	7.089E-01	4.453E-02	0.647
SB-124	8.714E-03		6.322E-02	1.059E-01	7.293E-03	0.082
SB-125	3.773E-02		7.918E-02	1.364E-01	8.129E-03	0.277
TE-125M	8.346E+00		7.888E+00	1.378E+01	1.185E+00	0.605
I-126	-7.159E-02		1.685E-01	2.253E-01	1.442E-02	-0.318
SB-126	-6.488E-03		1.121E-01	1.791E-01	1.260E-02	-0.036
SB-127	-3.888E-02		8.460E-01	1.359E+00	1.256E-01	-0.029
XE-127	-3.749E-02		4.111E-02	6.409E-02	3.491E-03	-0.585
I-131	-6.224E-02		8.218E-02	1.320E-01	8.355E-03	-0.472
TE-132	8.641E-02		3.830E-01	6.272E-01	8.694E-02	0.138
BA-133	9.963E-03		3.845E-02	5.868E-02	6.753E-03	0.170
I-133	-3.225E-04		4.805E-04	Half-Life too short		
CS-134	3.411E-02	+	6.144E-02	8.031E-02	6.455E-03	0.425
CS-135	1.529E-01		1.492E-01	2.294E-01	1.747E-02	0.667
I-135	-3.185E+06		9.478E+06	Half-Life too short		
CS-136	2.247E-03		7.967E-02	1.317E-01	1.052E-02	0.017
CE-139	4.259E-03		2.546E-02	4.233E-02	2.218E-03	0.101
BA-140	3.224E-02		2.083E-01	3.458E-01	1.127E-01	0.093
LA-140	-7.691E-02		7.564E-02	1.026E-01	6.994E-03	-0.750
CE-141	2.425E-02		5.293E-02	8.956E-02	5.142E-03	0.271
CE-143	9.702E-05		2.439E-05	Half-Life too short		
CE-144	3.073E-03		1.842E-01	2.937E-01	4.158E-02	0.010
PM-144	1.374E-02		3.063E-02	5.126E-02	3.462E-03	0.268
PR-144	9.302E-01		2.073E+00	3.469E+00	2.342E-01	0.268
PM-146	2.679E-03		3.846E-02	6.427E-02	5.556E-03	0.042
ND-147	-1.618E-01		4.622E-01	7.393E-01	1.010E-01	-0.219
PM-149	-1.254E+00		4.248E+01	6.767E+01	9.581E+00	-0.019
EU-152	2.829E-03		8.559E-02	1.351E-01	8.756E-03	0.021

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-4.881E-02		7.890E-02	1.150E-01	8.304E-03	-0.425
EU-154	1.159E-01		9.883E-02	1.817E-01	1.802E-02	0.638
EU-155	5.207E-02		9.276E-02	1.600E-01	1.088E-02	0.326
TB-160	4.960E-02		1.283E-01	2.215E-01	2.009E-02	0.224
HO-166M	4.251E-02		5.982E-02	1.017E-01	7.048E-03	0.418
TM-171	1.468E+01		2.860E+01	4.208E+01	3.043E+00	0.349
LU-176	-4.791E-03		2.203E-02	3.447E-02	1.995E-03	-0.139
LU-177	1.773E+00	+	1.135E+00	1.415E+00	7.753E-02	1.253
LU-177M	1.912E-02		1.554E-01	2.620E-01	1.477E-02	0.073
HF-181	9.395E-03		3.796E-02	6.393E-02	3.804E-03	0.147
W-181	7.501E-02		3.848E-01	5.565E-01	4.010E-02	0.135
TA-182	-6.035E-02		1.723E-01	2.704E-01	1.634E-02	-0.223
RE-183	-6.115E-02		9.297E-02	1.489E-01	7.859E-03	-0.411
RE-184	-9.238E-02		2.012E-01	3.147E-01	1.792E-02	-0.294
OS-185	7.677E-03		3.714E-02	6.129E-02	3.883E-03	0.125
RE-188	1.187E-01		1.466E-01	2.507E-01	1.346E-02	0.473
W-188	-1.551E+00		7.302E+00	1.016E+01	5.878E-01	-0.153
IR-192	-2.436E-03		3.181E-02	5.014E-02	2.915E-03	-0.049
AU-195	1.318E-01		2.021E-01	3.432E-01	2.438E-02	0.384
TL-200	6.307E-05		5.017E-05	Half-Life too short		
TL-201	-1.641E+00		3.604E+00	5.816E+00	3.049E-01	-0.282
TL-202	1.777E-02		5.771E-02	9.804E-02	5.655E-03	0.181
HG-203	1.195E-02		3.718E-02	6.049E-02	3.707E-03	0.197
BI-207	1.868E-02		4.937E-02	8.418E-02	6.183E-03	0.222
TL-207	-3.318E-01		6.962E-01	9.333E-01	1.541E-01	-0.355
PO-209	-1.385E+00		6.322E+00	1.032E+01	9.606E-01	-0.134
BI-210	5.566E+00		4.646E+00	7.557E+00	5.784E-01	0.737
PB-210	5.566E+00		4.646E+00	7.557E+00	5.784E-01	0.737
PO-210	5.566E+00		4.640E+00	7.557E+00	4.953E-01	0.737
PB-211	-1.581E-02		8.827E-01	1.478E+00	9.211E-01	-0.011
BI-212	9.465E-01	+	4.048E-01	6.226E-01	5.446E-02	1.520
PO-215	-3.318E-01		6.962E-01	9.333E-01	1.541E-01	-0.355
RN-219	-1.071E-01		3.821E-01	6.296E-01	8.507E-02	-0.170
RN-220	7.973E+00		2.192E+01	3.705E+01	2.285E+00	0.215
RA-223	-3.318E-01		6.962E-01	9.333E-01	1.541E-01	-0.355
AC-227	5.065E-02		3.282E-01	5.323E-01	7.411E-02	0.095
TH-227	5.065E-02		3.282E-01	5.323E-01	8.979E-02	0.095
TH-229	-1.867E-01		4.634E-01	7.284E-01	3.927E-02	-0.256
PA-231	6.816E-02		1.482E+00	2.372E+00	3.266E-01	0.029
TH-231	-3.318E-01		6.962E-01	9.333E-01	1.541E-01	-0.355
U-231	3.616E-02		6.975E-01	1.067E+00	7.857E-02	0.034
PA-233	-2.553E-02		5.672E-02	8.709E-02	5.354E-03	-0.293
PA-234	-7.490E-02		2.592E-01	4.176E-01	7.881E-02	-0.179
PA-234M	1.037E+01	+	9.611E+00	1.105E+01	1.201E+00	0.939
U-235	3.960E-02		1.934E-01	3.176E-01	5.147E-02	0.125
NP-236	-1.526E-02		6.654E-02	1.088E-01	5.770E-03	-0.140
NP-239	-5.102E-02		1.643E-01	2.724E-01	1.668E-02	-0.187
AM-241	-3.357E-02		1.678E-01	2.596E-01	2.043E-02	-0.129

Sample ID : G232504012 Acquisition date : 7-JUL-2009 09:43:44

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.318E-02		8.278E-02	1.375E-01	9.296E-03	-0.241
CM-247	1.792E-02		3.478E-02	6.002E-02	3.348E-03	0.299
CF-249	-8.390E-03		3.387E-02	5.602E-02	3.104E-03	-0.150
CF-251	-2.600E-02		1.101E-01	1.790E-01	9.470E-03	-0.145

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504012           *
* Acquisition date  :  7-JUL-2009 09:43:44 Detector SN#     :               *
* Detector ID       : GAM09                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.67     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504012           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.3823E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 10:48:05 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.733E+01	2.569E+00	2.782E-01	1.311E+00
CD-109	1.865E+00	1.051E+00	7.404E-01	5.364E-01
SN-126	1.840E-01	1.037E-01	7.113E-02	5.289E-02
BA-137M	4.289E-01	6.596E-02	2.759E-02	3.366E-02
CS-137	4.534E-01	6.977E-02	2.916E-02	3.560E-02
TL-208	4.397E-01	9.018E-02	2.731E-02	4.601E-02
BI-211	3.611E+00	4.854E-01	1.428E-01	2.476E-01
PB-212	1.480E+00	1.471E-01	4.296E-02	7.504E-02
PO-212	1.480E+00	1.471E-01	4.296E-02	7.504E-02
BI-214	1.042E+00	1.679E-01	4.947E-02	8.568E-02
PB-214	1.256E+00	1.806E-01	4.979E-02	9.217E-02
PO-214	1.256E+00	1.806E-01	4.979E-02	9.217E-02
PO-216	1.480E+00	1.471E-01	4.296E-02	7.504E-02
PO-218	1.256E+00	1.806E-01	4.979E-02	9.217E-02
RA-224	3.991E+00	1.218E+00	4.888E-01	6.216E-01
RA-226	1.042E+00	1.679E-01	4.947E-02	8.568E-02
AC-228	1.760E+00	3.186E-01	9.162E-02	1.626E-01
RA-228	1.760E+00	3.186E-01	9.162E-02	1.626E-01
TH-228	1.480E+00	1.471E-01	4.295E-02	7.504E-02
TH-230	1.042E+00	1.679E-01	4.947E-02	8.568E-02
TH-232	1.760E+00	3.186E-01	9.162E-02	1.626E-01
TH-234	9.639E-01	1.785E+00	1.075E+00	9.106E-01
U-234	1.042E+00	1.679E-01	4.947E-02	8.568E-02
NP-237	5.402E-01	3.234E-01	2.014E-01	1.650E-01
U-238	9.639E-01	1.785E+00	1.075E+00	9.106E-01
AM-243	3.570E-01	8.164E-02	4.343E-02	4.165E-02
ANH-511	1.077E-01	5.850E-02	2.007E-02	2.985E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	8.461E-02	2.895E-01	2.561E-01	1.477E-01	NOT IDENT.
NA-22	4.104E-02	3.446E-02	3.264E-02	1.758E-02	NOT IDENT.
NA-24	3.198E+04	6.432E+04	0.000E+00	3.282E+04	SHORT HLIF
AL-26	-5.436E-03	2.649E-02	2.129E-02	1.352E-02	NOT IDENT.
TI-44	3.663E-01	5.429E-02	3.809E-02	2.770E-02	FAIL ABUN
SC-46	-3.413E-02	3.630E-02	2.873E-02	1.852E-02	FAIL ABUN
V-48	-1.411E-02	5.075E-02	4.208E-02	2.589E-02	NOT IDENT.
CR-51	2.100E-01	3.188E-01	2.775E-01	1.627E-01	NOT IDENT.
MN-52	1.437E-01	1.457E-01	1.414E-01	7.435E-02	NOT IDENT.
MN-54	-3.152E-02	3.349E-02	2.679E-02	1.709E-02	NOT IDENT.
CO-56	-1.356E-02	3.255E-02	2.717E-02	1.661E-02	FAIL ABUN
CO-57	-3.448E-03	2.145E-02	1.920E-02	1.094E-02	NOT IDENT.
CO-58	3.609E-03	2.925E-02	2.581E-02	1.492E-02	NOT IDENT.
FE-59	7.983E-03	7.669E-02	6.553E-02	3.913E-02	NOT IDENT.
CO-60	8.550E-03	3.869E-02	3.287E-02	1.974E-02	NOT IDENT.
ZN-65	-6.814E-03	9.701E-02	7.026E-02	4.950E-02	NOT IDENT.
GE-68	-1.134E-01	1.153E+00	9.680E-01	5.883E-01	NOT IDENT.
AS-73	1.055E+00	8.987E-01	8.126E-01	4.585E-01	NOT IDENT.
AS-74	6.203E-02	7.246E-02	6.573E-02	3.697E-02	NOT IDENT.
SE-75	5.705E-03	4.195E-02	3.176E-02	2.140E-02	NOT IDENT.
BR-77	-3.953E+00	4.699E+00	3.770E+00	2.397E+00	FAIL ABUN
SR-82	-7.572E-02	2.886E-01	2.321E-01	1.472E-01	NOT IDENT.
RB-83	-6.133E-02	5.723E-02	4.485E-02	2.920E-02	NOT IDENT.
RB-84	-8.750E-03	6.573E-02	5.623E-02	3.353E-02	NOT IDENT.
KR-85	1.048E+00	7.546E+00	5.780E+00	3.850E+00	NOT IDENT.
SR-85	5.249E-03	3.780E-02	2.896E-02	1.929E-02	NOT IDENT.
RB-86	-3.158E-02	6.477E-01	5.463E-01	3.305E-01	NOT IDENT.
Y-88	6.274E-03	2.075E-02	1.880E-02	1.059E-02	NOT IDENT.
ZR-88	1.493E-02	2.544E-02	2.326E-02	1.298E-02	NOT IDENT.
Y-91	1.784E+01	1.758E+01	1.597E+01	8.970E+00	NOT IDENT.
NB-94	-7.677E-04	2.892E-02	2.414E-02	1.476E-02	NOT IDENT.
NB-95	-1.483E-02	4.068E-02	3.270E-02	2.075E-02	NOT IDENT.
NB-95M	-1.135E-01	1.204E-01	8.614E-02	6.140E-02	NOT IDENT.
ZR-95	3.933E-02	6.114E-02	5.375E-02	3.119E-02	NOT IDENT.
NB-97	-3.366E+02	1.080E+04	0.000E+00	5.509E+03	SHORT HLIF
ZR-97	5.959E+04	1.863E+05	0.000E+00	9.504E+04	SHORT HLIF
MO-99	3.412E+00	5.832E+00	5.105E+00	2.976E+00	NOT IDENT.
TC-99M	2.109E+13	7.280E+13	0.000E+00	3.714E+13	SHORT HLIF
RH-101	-1.546E-03	2.797E-02	2.428E-02	1.427E-02	NOT IDENT.
RH-102	-2.181E-02	2.630E-02	2.148E-02	1.342E-02	NOT IDENT.
RU-103	-2.559E-02	3.311E-02	2.678E-02	1.689E-02	FAIL ABUN
RH-106	2.340E-01	2.980E-01	2.666E-01	1.520E-01	FAIL ABUN
RU-106	2.340E-01	2.971E-01	2.666E-01	1.516E-01	FAIL ABUN
AG-108M	1.428E-02	2.863E-02	2.586E-02	1.461E-02	NOT IDENT.
AG-110M	-3.778E-03	3.374E-02	2.448E-02	1.722E-02	NOT IDENT.
IN-111	-8.263E-01	5.430E-01	4.229E-01	2.770E-01	NOT IDENT.
IN-113M	-1.497E-02	3.613E-02	3.106E-02	1.844E-02	NOT IDENT.
SN-113	-1.497E-02	3.613E-02	3.106E-02	1.844E-02	NOT IDENT.
IN-114M	1.191E-01	1.714E-01	1.391E-01	8.744E-02	NOT IDENT.
CD-115	3.363E+00	4.792E+00	4.332E+00	2.445E+00	NOT IDENT.
SN-117M	1.544E-02	3.991E-02	3.592E-02	2.036E-02	NOT IDENT.
SB-122	6.384E-01	1.080E+00	9.617E-01	5.508E-01	NOT IDENT.
I-123	8.970E+04	2.837E+05	0.000E+00	1.448E+05	SHORT HLIF
TE-123M	7.209E-03	2.280E-02	2.046E-02	1.163E-02	NOT IDENT.
I-124	4.586E-01	4.379E-01	3.622E-01	2.234E-01	NOT IDENT.
SB-124	8.714E-03	6.196E-02	5.301E-02	3.161E-02	FAIL ABUN
SB-125	3.773E-02	7.759E-02	7.016E-02	3.959E-02	FAIL ABUN
TE-125M	8.346E+00	7.730E+00	7.277E+00	3.944E+00	NOT IDENT.
I-126	-7.159E-02	1.651E-01	1.149E-01	8.425E-02	NOT IDENT.
SB-126	-6.488E-03	1.099E-01	9.119E-02	5.607E-02	FAIL ABUN
SB-127	-3.888E-02	8.291E-01	6.924E-01	4.230E-01	NOT IDENT.
XE-127	-3.749E-02	4.029E-02	3.344E-02	2.056E-02	NOT IDENT.
I-131	-6.224E-02	8.053E-02	6.810E-02	4.109E-02	NOT IDENT.
TE-132	8.641E-02	3.754E-01	3.266E-01	1.915E-01	NOT IDENT.
BA-133	9.963E-03	3.769E-02	3.029E-02	1.923E-02	NOT IDENT.
I-133	-3.225E+02	9.419E+02	0.000E+00	4.805E+02	SHORT HLIF
CS-134	3.411E-02	6.021E-02	4.080E-02	3.072E-02	FAIL ABUN
CS-135	1.529E-01	1.462E-01	1.191E-01	7.460E-02	NOT IDENT.
I-135	-3.185E+12	1.858E+13	0.000E+00	9.478E+12	SHORT HLIF
CS-136	2.247E-03	7.807E-02	6.656E-02	3.983E-02	FAIL ABUN
CE-139	4.259E-03	2.496E-02	2.217E-02	1.273E-02	NOT IDENT.
BA-140	3.224E-02	2.041E-01	1.771E-01	1.041E-01	NOT IDENT.
LA-140	-7.691E-02	7.413E-02	5.141E-02	3.782E-02	FAIL ABUN
CE-141	2.425E-02	5.187E-02	4.703E-02	2.646E-02	NOT IDENT.
CE-143	9.702E+01	4.780E+01	0.000E+00	2.439E+01	SHORT HLIF
CE-144	3.073E-03	1.805E-01	1.545E-01	9.208E-02	NOT IDENT.
PM-144	1.374E-02	3.001E-02	2.612E-02	1.531E-02	NOT IDENT.
PR-144	9.302E-01	2.031E+00	1.768E+00	1.036E+00	NOT IDENT.

PM-146	2.679E-03	3.769E-02	3.302E-02	1.923E-02	NOT IDENT.
ND-147	-1.618E-01	4.530E-01	3.787E-01	2.311E-01	NOT IDENT.
PM-149	-1.254E+00	4.163E+01	3.508E+01	2.124E+01	NOT IDENT.
EU-152	2.829E-03	8.388E-02	6.981E-02	4.280E-02	FAIL ABUN
GD-153	-4.881E-02	7.732E-02	6.083E-02	3.945E-02	NOT IDENT.
EU-154	1.159E-01	9.685E-02	9.146E-02	4.941E-02	NOT IDENT.
EU-155	5.207E-02	9.091E-02	8.450E-02	4.638E-02	FAIL ABUN
TB-160	4.960E-02	1.257E-01	1.123E-01	6.414E-02	FAIL ABUN
HO-166M	4.251E-02	5.862E-02	5.179E-02	2.991E-02	NOT IDENT.
TM-171	1.468E+01	2.803E+01	2.242E+01	1.430E+01	NOT IDENT.
LU-176	-4.791E-03	2.159E-02	1.784E-02	1.102E-02	FAIL ABUN
LU-177	1.773E+00	1.112E+00	7.378E-01	5.674E-01	FAIL ABUN
LU-177M	1.912E-02	1.522E-01	1.349E-01	7.768E-02	FAIL ABUN
HF-181	9.395E-03	3.720E-02	3.281E-02	1.898E-02	NOT IDENT.
W-181	7.501E-02	3.772E-01	2.966E-01	1.924E-01	NOT IDENT.
TA-182	-6.035E-02	1.688E-01	1.362E-01	8.614E-02	FAIL ABUN
RE-183	-6.115E-02	9.111E-02	7.804E-02	4.648E-02	FAIL ABUN
RE-184	-9.238E-02	1.972E-01	1.635E-01	1.006E-01	NOT IDENT.
OS-185	7.677E-03	3.640E-02	3.127E-02	1.857E-02	NOT IDENT.
RE-188	1.187E-01	1.436E-01	1.315E-01	7.328E-02	NOT IDENT.
W-188	-1.551E+00	7.156E+00	5.268E+00	3.651E+00	FAIL ABUN
IR-192	-2.436E-03	3.117E-02	2.594E-02	1.590E-02	FAIL ABUN
AU-195	1.318E-01	1.980E-01	1.815E-01	1.010E-01	FAIL ABUN
TL-200	6.307E+01	9.833E+01	0.000E+00	5.017E+01	SHORT HLIF
TL-201	-1.641E+00	3.532E+00	3.046E+00	1.802E+00	NOT IDENT.
TL-202	1.777E-02	5.655E-02	5.041E-02	2.885E-02	NOT IDENT.
HG-203	1.195E-02	3.643E-02	3.137E-02	1.859E-02	NOT IDENT.
BI-207	1.868E-02	4.838E-02	4.252E-02	2.468E-02	FAIL ABUN
TL-207	-3.318E-01	6.823E-01	4.827E-01	3.481E-01	FAIL ABUN
PO-209	-1.385E+00	6.195E+00	5.232E+00	3.161E+00	NOT IDENT.
BI-210	5.566E+00	4.553E+00	4.052E+00	2.323E+00	NOT IDENT.
PB-210	5.566E+00	4.553E+00	4.052E+00	2.323E+00	NOT IDENT.
PO-210	5.566E+00	4.547E+00	4.052E+00	2.320E+00	NOT IDENT.
PB-211	-1.581E-02	8.651E-01	7.611E-01	4.414E-01	NOT IDENT.
BI-212	9.465E-01	3.967E-01	3.169E-01	2.024E-01	FAIL ABUN
PO-215	-3.318E-01	6.823E-01	4.827E-01	3.481E-01	FAIL ABUN
RN-219	-1.071E-01	3.745E-01	3.243E-01	1.911E-01	FAIL ABUN
RN-220	7.973E+00	2.148E+01	1.896E+01	1.096E+01	NOT IDENT.
RA-223	-3.318E-01	6.823E-01	4.827E-01	3.481E-01	FAIL ABUN
AC-227	5.065E-02	3.216E-01	2.766E-01	1.641E-01	FAIL ABUN
TH-227	5.065E-02	3.217E-01	2.766E-01	1.641E-01	FAIL ABUN
TH-229	-1.867E-01	4.541E-01	3.804E-01	2.317E-01	FAIL ABUN
PA-231	6.816E-02	1.452E+00	1.230E+00	7.408E-01	FAIL ABUN
TH-231	-3.318E-01	6.823E-01	4.827E-01	3.481E-01	FAIL ABUN
U-231	3.616E-02	6.836E-01	5.649E-01	3.488E-01	FAIL ABUN
PA-233	-2.553E-02	5.559E-02	4.507E-02	2.836E-02	FAIL ABUN
PA-234	-7.490E-02	2.540E-01	2.115E-01	1.296E-01	FAIL ABUN
PA-234M	1.037E+01	9.419E+00	5.589E+00	4.806E+00	FAIL ABUN
U-235	3.960E-02	1.895E-01	1.668E-01	9.668E-02	FAIL ABUN
NP-236	-1.526E-02	6.521E-02	5.704E-02	3.327E-02	NOT IDENT.
NP-239	-5.102E-02	1.610E-01	1.436E-01	8.216E-02	FAIL ABUN
AM-241	-3.357E-02	1.645E-01	1.386E-01	8.391E-02	NOT IDENT.
CM-243	-3.318E-02	8.112E-02	7.267E-02	4.139E-02	FAIL ABUN
CM-247	1.792E-02	3.408E-02	3.091E-02	1.739E-02	NOT IDENT.
CF-249	-8.390E-03	3.319E-02	2.887E-02	1.693E-02	NOT IDENT.
CF-251	-2.600E-02	1.079E-01	9.365E-02	5.504E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	212.7578
46.50	212.7578
46.50	212.7578
48.70	250.7307
49.72	236.1702
51.35	229.0344
52.39	246.4118
52.97	233.7175
53.15	208.7865
53.44	208.9641
54.07	206.9554
56.28	280.4997
56.28	280.5023
57.37	0.0000
57.53	256.1179
57.53	256.1195
57.60	228.3762
57.98	233.4555
57.98	233.4555
59.32	275.5972
59.32	275.5972
59.40	275.6570
59.54	293.9848
59.72	319.2473
60.01	308.1460
61.10	325.3174
61.14	325.3520
61.30	325.4913
63.00	290.5859
63.29	290.8065
63.29	290.8065
63.58	291.0271
64.28	313.2899
65.12	290.9560
65.20	291.0154
65.20	291.0154
66.05	298.2383
66.72	264.0836
66.83	264.1569
66.91	264.2106
67.20	295.8023
67.20	295.8023
67.75	300.3454
67.85	300.4211
68.90	342.2792
68.90	342.2792
69.30	317.7004
69.67	313.0032
70.82	296.3730
70.82	296.3730
70.83	296.3802
72.80	354.3288
72.87	354.3890
72.87	354.3890
74.67	336.5458
74.81	336.6557
74.81	336.6557
74.81	336.6557
74.81	336.6557
74.81	336.6557
74.81	336.6557
74.97	336.7818
75.28	337.0259
75.70	337.3555
77.11	338.4542
77.11	338.4542
77.11	338.4542

77.11	338.4542
77.11	338.4542
77.11	338.4542
78.38	339.4348
79.62	340.3849
79.80	340.5212
79.80	340.5212
80.11	322.0156
80.18	322.0656
80.30	322.1521
80.30	322.1521
80.57	337.6961
81.00	380.2707
81.07	380.3296
81.07	380.3296
81.07	380.3296
81.07	380.3296
82.60	361.0539
83.37	324.3343
83.78	305.7311
83.78	305.7311
83.78	305.7311
83.78	305.7311
84.21	312.0325
84.40	312.1599
84.90	329.2829
85.43	345.1697
86.29	426.1021
86.50	426.2928
86.54	426.3280
86.59	425.0772
86.72	425.1948
86.79	425.2549
86.94	425.3925
87.30	472.4402
87.30	472.4402
87.30	472.4402
87.30	472.4402
87.30	472.4402
87.30	472.4402
87.57	472.7096
87.88	473.0150
88.03	504.3627
88.36	504.7090
88.47	504.8275
89.95	415.0216
91.11	434.3265
92.29	508.8060
92.38	508.9007
92.38	508.9007
93.35	394.2513
94.00	276.3348
94.67	268.7975
94.67	268.7990
94.90	268.9220
94.90	268.9220
94.90	268.9220
94.90	268.9220
95.87	282.6481
95.87	282.6481
96.73	313.5578
97.43	302.0628
98.44	265.4877
98.44	265.4877
98.88	259.5150
99.55	262.5109
99.55	262.5109
99.86	267.1044
100.00	263.6259
100.10	263.6772
103.18	265.2196
103.76	271.7659
105.00	253.5784
105.31	254.6203
108.00	282.9095
109.28	248.3459
111.00	295.3115
111.00	295.3115

111.76	291.1757
112.95	260.8835
115.19	289.2854
116.30	288.9273
117.00	265.4749
117.00	265.4749
117.66	269.4417
121.11	271.0223
121.62	267.5635
121.78	262.0970
122.06	259.4499
122.32	266.0273
122.32	266.0273
122.32	266.0273
122.32	266.0273
123.07	260.8107
127.23	255.6118
129.76	267.8746
131.20	254.4318
133.02	246.7052
133.54	259.6063
135.34	256.5633
136.00	244.5488
136.25	238.0316
136.48	251.3449
140.51	249.0924
140.51	0.0000
142.18	302.1406
142.65	287.0927
143.76	263.6830
144.24	263.8711
144.24	263.8711
144.24	263.8711
144.24	263.8711
145.22	256.5962
145.44	266.2555
147.16	295.7338
152.43	275.7401
152.70	275.8444
153.22	239.2436
154.21	225.0285
154.21	225.0285
154.21	225.0285
154.21	225.0285
155.03	241.7988
156.02	236.3011
158.56	218.5973
159.00	0.0000
159.00	218.7295
160.31	233.7971
161.27	233.1264
162.32	259.9455
162.64	248.2825
163.35	214.1414
163.89	227.0781
165.85	237.5335
167.43	241.9868
171.28	242.2278
171.86	228.5026
172.10	228.5751
176.55	237.8911
176.60	237.9056
181.06	245.7908
184.41	245.3088
185.71	246.7154
186.00	246.8048
190.27	227.2536
192.34	245.6605
193.63	235.8313
197.04	232.6921
198.01	228.8527
198.60	222.8497
200.40	226.4095
201.83	243.2790
202.84	266.2698
205.31	203.3762
208.36	286.6549
208.81	272.7726

209.75	226.7729
209.75	226.7729
210.97	195.3144
215.65	186.3890
216.55	190.7682
218.09	209.9894
222.10	208.8019
223.80	210.2411
226.40	211.8876
227.00	202.4828
227.08	202.5003
227.20	202.5256
228.16	196.3649
228.18	196.3687
228.18	196.3687
231.56	0.0000
235.69	251.9484
236.00	235.9770
236.00	235.9770
238.60	212.4657
238.63	212.4738
238.63	212.4738
238.63	212.4738
239.00	212.5533
240.98	212.9833
241.98	213.2009
241.98	213.2009
241.98	213.2009
244.69	213.7870
245.39	213.9380
247.94	152.7385
248.90	139.8734
249.79	159.5326
252.40	169.7363
252.85	169.8125
252.85	169.8125
254.15	0.0000
256.20	153.9878
256.20	153.9878
260.50	165.5956
260.90	168.9513
262.80	128.5924
264.65	145.3364
268.24	137.5447
268.79	141.4844
269.46	141.5729
269.46	141.5729
269.46	141.5729
269.46	141.5729
271.23	164.5186
273.65	153.2313
276.40	164.7506
277.35	183.8358
277.60	187.2227
277.60	187.2227
278.00	175.0279
278.60	178.4700
279.20	174.1035
279.53	199.8309
280.46	191.0634
281.68	184.5642
283.67	174.8113
284.30	171.5460
285.00	171.6550
285.90	160.5637
286.10	156.1007
286.10	156.1007
287.40	165.2793
288.45	0.0000
290.67	158.9922
290.80	159.0123
291.72	148.9834
293.26	0.0000
293.70	145.8520
295.21	168.1199
295.21	168.1199
295.21	168.1199
295.96	168.2317

296.50	168.3103
297.23	149.7058
298.57	149.8804
299.80	151.7438
299.80	151.7438
300.09	151.7818
300.09	151.7818
300.09	151.7818
300.10	151.7845
300.12	141.5544
301.29	136.5747
302.84	140.1768
303.76	97.5165
303.91	97.5287
304.40	124.9586
304.40	124.9586
304.84	142.4719
306.84	137.2241
308.46	122.5280
311.98	135.5252
316.51	144.1091
318.01	132.7441
319.02	151.3382
319.41	140.9880
320.08	127.1897
323.87	151.3632
323.87	151.3632
323.87	151.3632
323.87	151.3632
325.23	125.4045
328.77	146.7257
333.44	144.9391
334.20	145.9605
334.20	145.9605
334.30	145.9732
338.28	139.0432
338.28	139.0432
338.28	139.0432
338.28	139.0432
338.32	139.0456
338.32	139.0456
338.32	139.0456
340.50	131.1741
340.57	118.4880
344.27	116.7085
345.85	131.7235
350.59	0.0000
351.07	114.6564
351.92	114.7312
351.92	114.7312
351.92	114.7312
355.39	0.0000
356.01	99.9226
364.48	126.5979
366.43	121.3879
367.43	112.4783
367.94	0.0000
369.80	123.4915
374.96	115.8164
383.85	121.1157
387.95	112.3377
388.63	112.3922
391.69	110.8028
391.69	110.8028
392.90	100.8154
398.62	129.7456
400.65	118.8707
401.10	126.2822
401.81	130.9539
402.60	121.7983
404.84	133.0774
410.95	126.2092
411.60	124.4084
413.65	111.5643
414.70	98.6180
415.30	107.9659
415.76	115.4478
417.63	0.0000

418.52	112.8633
423.70	106.7010
427.08	80.6736
427.89	91.0411
432.53	85.6694
433.93	95.1699
439.47	108.7513
439.56	108.7583
439.89	105.9434
443.98	103.3767
444.90	94.8959
445.03	108.1901
445.03	108.1901
445.03	108.1901
445.03	108.1901
453.90	95.4376
463.38	91.2035
468.07	101.6732
473.00	93.6742
475.06	110.2288
475.35	105.4125
476.78	97.7605
477.59	99.7451
477.96	96.8613
482.03	94.1856
484.57	108.9153
487.03	81.8069
490.36	0.0000
492.35	71.3180
497.08	91.1098
507.63	0.0000
510.53	0.0000
510.84	77.0252
511.00	77.0312
511.85	77.0693
511.85	77.0693
513.99	113.9634
513.99	113.9634
520.41	90.3529
520.65	90.3640
527.90	73.7809
528.96	0.0000
529.64	86.8274
529.87	0.0000
531.02	95.8828
537.32	81.1829
543.00	60.3223
546.56	0.0000
549.76	65.5891
552.65	62.6603
555.20	94.1182
563.23	79.2759
563.90	82.3546
568.70	82.5635
569.32	79.5306
569.50	74.4414
569.67	74.4481
573.80	99.1373
574.00	89.9470
574.64	85.8867
578.91	100.0156
579.30	0.0000
583.14	82.1582
585.48	82.2583
591.81	82.5244
592.07	86.6609
593.00	83.6054
595.88	64.0889
600.56	83.9268
602.52	0.0000
602.71	63.0637
602.71	63.0637
603.60	68.0744
604.41	88.0323
604.70	88.0452
609.31	75.9696
609.31	75.9696
609.31	75.9696

609.31	75.9696
610.33	69.9686
612.46	83.3838
614.37	75.1157
618.01	77.3423
621.84	71.2041
621.84	71.2041
631.29	61.0126
633.02	71.5922
633.10	71.5942
634.78	75.8672
635.90	72.7440
636.97	73.8367
645.85	61.4391
646.12	63.5651
656.30	80.0515
657.75	66.4714
657.90	0.0000
661.65	77.9034
661.65	77.9034
664.57	0.0000
666.33	78.7144
666.33	78.7144
675.00	61.2044
677.61	66.6526
685.20	70.1198
692.80	77.9370
695.00	65.0116
696.49	63.9713
696.49	63.9713
697.00	59.6477
697.49	57.4916
698.33	65.1086
698.50	71.6255
699.00	80.3255
702.63	67.4076
706.10	72.9561
706.58	0.0000
706.67	78.4204
709.31	81.7818
711.68	69.8594
713.82	67.7406
717.42	78.7896
720.50	63.5543
721.93	0.0000
722.20	66.6726
722.78	64.9343
722.78	64.9343
722.89	64.9361
722.95	64.9379
723.30	77.2363
724.18	61.4602
727.18	76.9257
733.00	59.9316
735.90	67.2865
739.58	53.0303
742.81	58.6335
744.21	61.9900
747.13	65.3901
751.79	71.0723
752.31	74.4201
753.82	67.7985
755.35	56.7198
756.15	53.4009
756.87	53.4170
763.93	84.8251
765.79	89.3579
766.41	75.9750
766.84	72.6350
768.36	55.9082
768.36	55.9082
768.36	55.9082
768.36	55.9082
776.49	51.6068
778.00	59.4972
778.57	53.8975
778.89	53.9033
783.80	57.6125

785.46	60.3540
792.07	54.1919
795.84	60.3044
796.30	52.7763
801.93	62.4659
805.60	42.6798
810.29	50.9482
810.76	43.6770
815.85	52.8825
817.79	52.0104
818.51	42.8978
819.60	42.0031
826.30	50.3527
828.27	0.0000
831.60	52.2908
831.96	52.2978
834.83	78.9915
836.80	0.0000
846.75	57.2077
848.13	45.2365
856.28	0.0000
856.80	47.8560
860.37	51.9395
867.32	50.4794
867.82	52.3169
871.10	50.2849
873.19	52.1883
874.81	54.0847
875.33	0.0000
876.40	55.0489
879.36	54.1753
880.27	55.1281
880.51	57.0013
881.50	68.2397
883.24	62.6718
884.67	60.8328
889.25	66.5590
896.60	49.8182
898.02	43.2609
899.00	47.9793
903.28	48.9963
911.07	47.2437
911.07	47.2437
911.07	47.2437
919.63	47.3889
920.93	53.1002
925.00	53.1768
925.24	51.2815
926.50	49.4038
934.06	41.9149
934.06	41.9149
934.06	41.9149
934.06	41.9149
935.52	32.4054
937.48	44.8267
944.10	44.9300
946.00	49.7428
949.00	43.0917
962.29	70.5457
964.01	61.6031
966.15	61.6469
968.20	61.6906
969.11	61.7094
969.11	61.7094
969.11	61.7094
977.42	54.1488
980.50	41.6216
983.50	41.6636
989.30	40.7736
996.32	45.4100
1001.03	50.3548
1001.68	42.8914
1004.76	35.7795
1021.30	0.0000
1024.50	0.0000
1034.80	43.3576
1037.82	47.3461
1038.57	40.4515

1038.76	0.0000
1045.16	40.5355
1046.59	36.5989
1048.07	40.5736
1050.47	52.4902
1050.47	52.4902
1063.62	48.7296
1076.63	48.9306
1077.35	53.9341
1085.78	46.0651
1099.22	46.2561
1112.02	58.0447
1112.84	69.0007
1115.52	62.3171
1120.29	51.6126
1120.29	51.6126
1120.29	51.6126
1120.29	51.6126
1120.51	51.6176
1121.28	47.2409
1124.00	0.0000
1129.67	51.7595
1131.51	0.0000
1147.95	0.0000
1167.94	59.5321
1173.22	50.3709
1175.09	61.7139
1177.93	64.8519
1189.05	59.8946
1204.90	52.9050
1205.75	0.0000
1213.00	47.8283
1221.42	58.3652
1230.97	57.4761
1235.34	54.0583
1236.41	0.0000
1238.11	50.6084
1238.11	50.6084
1238.11	50.6084
1238.11	50.6084
1238.25	50.6108
1246.25	46.4740
1260.41	0.0000
1271.85	52.8394
1274.45	23.2665
1274.54	23.2665
1291.56	37.1841
1298.22	0.0000
1312.09	23.5007
1325.50	31.0886
1325.50	31.0886
1332.49	36.5151
1333.61	36.5251
1360.21	27.0422
1362.66	0.0000
1365.15	37.9070
1368.21	29.2649
1368.53	0.0000
1376.25	24.9811
1377.67	23.9035
1377.67	23.9035
1377.67	23.9035
1377.67	23.9035
1384.27	17.4133
1394.10	18.5473
1395.20	21.8262
1407.95	25.1798
1434.06	14.6914
1436.60	24.8071
1457.56	0.0000
1460.81	28.6500
1489.15	18.6100
1509.49	15.8939
1596.49	31.2132
1620.62	16.3007
1678.03	0.0000
1691.02	8.7623
1691.02	8.7623

1706.46	0.0000
1750.46	0.0000
1764.49	12.8524
1764.49	12.8524
1764.49	12.8524
1764.49	12.8524
1770.23	8.4839
1771.40	23.7607
1791.20	0.0000
1808.65	12.9677
1836.01	5.0149

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504012

Total Uranium Activity	2.8858E+00	ug/g
Total Uranium Counting Unc.	5.3106E+00	ug/g
Total Uranium Tpu	2.7095E-06	ug/g
Total Uranium Mda	3.1994E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232504012      *
*   ANALYST       : MXR1                      DETECTOR    : GAM09           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 09:43:44.54    SAMPLE ALQT:  138.230 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.820E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.461E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.925E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.413E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:45:05.48

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504013.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:44:19.
Sample ID         : G232504013           Sample quantity  : 1.45060E+02 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.90  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.26*	161	721	2.19	126.25	123	9	2.23E-02	31.5	
2	2	74.79*	817	832	1.58	149.30	143	17	1.13E-01	7.7	1.43E+00
3	2	77.13	1118	654	1.19	153.97	143	17	1.55E-01	5.1	
4	2	87.28*	367	650	1.16	174.25	171	21	5.10E-02	12.2	3.85E+00
5	2	89.88	293	785	1.61	179.44	171	21	4.07E-02	19.5	
6	2	92.83*	410	524	1.37	185.34	171	21	5.70E-02	12.1	
7	0	128.89	143	523	1.56	257.39	253	9	1.98E-02	30.1	
8	0	186.03*	421	647	1.54	371.56	364	15	5.85E-02	14.2	
9	0	208.80	181	473	1.15	417.06	412	11	2.51E-02	24.5	
10	4	238.37*	2066	310	1.32	476.17	469	19	2.87E-01	2.7	7.57E-01
11	4	241.35	483	351	1.70	482.11	469	19	6.71E-02	10.5	
12	0	270.17	157	354	1.54	539.71	535	12	2.18E-02	25.3	
13	0	277.51	62	308	1.42	554.40	549	10	8.66E-03	54.3	
14	0	294.82	655	235	1.54	588.98	585	9	9.10E-02	5.6	
15	0	299.72	118	204	1.49	598.78	595	9	1.65E-02	23.7	
16	0	327.70	144	249	1.28	654.69	648	12	2.00E-02	23.4	
17	0	337.96	379	229	1.48	675.21	671	11	5.27E-02	9.3	
18	0	351.51*	1048	264	1.57	702.29	696	13	1.46E-01	4.5	
19	0	409.56	96	174	1.43	818.32	814	11	1.33E-02	28.7	
20	0	462.61	125	182	1.62	924.37	919	13	1.74E-02	24.0	
21	0	510.61*	150	251	1.78	1020.31	1013	16	2.08E-02	27.2	
22	0	567.63*	173	197	3.20	1134.30	1127	16	2.40E-02	20.0	
23	0	582.71*	581	186	1.59	1164.47	1158	15	8.07E-02	6.6	
24	0	608.95*	767	175	1.64	1216.91	1208	17	1.06E-01	5.4	
25	0	727.22	138	129	1.48	1453.40	1446	14	1.92E-02	19.4	
26	0	769.87	118	143	4.92	1538.68	1528	21	1.63E-02	27.3	
27	0	795.10	79	64	1.05	1589.15	1584	10	1.10E-02	22.2	
28	0	860.69	70	102	1.92	1720.32	1712	14	9.78E-03	32.6	
29	0	911.16*	456	121	1.80	1821.25	1813	17	6.33E-02	7.4	
30	0	934.43	50	64	0.97	1867.79	1863	11	7.00E-03	33.6	
31	0	969.00*	212	178	1.45	1936.94	1928	15	2.95E-02	15.7	
32	0	1120.41*	131	76	1.71	2239.82	2235	14	1.82E-02	16.7	
33	0	1237.63	51	83	1.11	2474.34	2469	11	7.01E-03	37.6	
34	0	1377.84	41	37	1.97	2754.92	2749	13	5.69E-03	34.9	
35	0	1460.47*	1683	23	2.10	2920.28	2911	19	2.34E-01	2.5	
36	0	1729.16	31	5	1.50	3458.12	3452	11	4.31E-03	23.0	
37	0	1763.76	150	8	2.53	3527.38	3519	16	2.08E-02	9.2	
38	0	1847.42	20	13	1.33	3694.90	3689	13	2.78E-03	43.4	

Sample ID : G232504013 Acquisition date : 7-JUL-2009 09:44:19

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 11:45:08

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504013.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:44:19
Sample ID : G232504013 Sample quantity : 145.06 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA14 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.90 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.369E+01	2.987E+00	5.459E-01	3.964E-02	61.714
CD-109	+	88.03	*	3.694E+00	9.551E-01	1.268E+00	1.108E-01	2.915
SN-126	+	64.28		9.381E-01	6.052E-01	7.264E-01	1.035E-01	1.291
	+	86.94		1.515E+00	7.271E-01	5.903E-01	2.442E-01	2.566
	+	87.57	*	3.643E-01	9.419E-02	1.254E-01	1.091E-02	2.905
TL-208	+	277.35		4.746E-01	5.176E-01	5.699E-01	6.027E-02	0.833
	+	510.84		5.807E-01	3.209E-01	2.169E-01	2.211E-02	2.677
	+	583.14	*	6.466E-01	9.642E-02	5.684E-02	3.887E-03	11.377
	+	860.37		7.527E-01	4.958E-01	4.582E-01	4.311E-02	1.643
BI-211		72.87		1.392E+01	3.623E+00	5.628E+00	4.148E-01	2.473
	+	351.07	*	5.012E+00	5.501E-01	3.113E-01	1.972E-02	16.101
PB-212	+	74.81		3.248E+00	6.354E-01	5.124E-01	6.145E-02	6.339
	+	77.11		2.548E+00	3.267E-01	2.942E-01	2.265E-02	8.662
	+	87.30		1.685E+00	4.671E-01	6.550E-01	8.670E-02	2.573
	+	238.63	*	2.152E+00	1.952E-01	8.757E-02	6.379E-03	24.574
	+	300.09		1.904E+00	9.157E-01	1.143E+00	9.449E-02	1.667
PO-212	+	74.81		3.248E+00	6.354E-01	5.124E-01	6.145E-02	6.339
	+	77.11		2.548E+00	3.267E-01	2.942E-01	2.265E-02	8.662
	+	87.30		1.685E+00	4.671E-01	6.550E-01	8.670E-02	2.573
		115.19		-1.198E+00	3.578E+00	5.787E+00	4.211E-01	-0.207
	+	238.63	*	2.152E+00	1.952E-01	8.757E-02	6.379E-03	24.574
	+	300.09		1.904E+00	9.157E-01	1.143E+00	9.449E-02	1.667
BI-214	+	609.31	*	1.613E+00	2.160E-01	1.074E-01	8.499E-03	15.025
		768.36		1.239E+00	7.962E-01	1.393E+00	1.323E-01	0.890
	+	934.06		2.257E+00	1.539E+00	1.893E+00	2.079E-01	1.192
	+	1120.29		1.476E+00	5.111E-01	5.205E-01	4.823E-02	2.836
	+	1238.11		1.579E+00	1.194E+00	1.434E+00	1.205E-01	1.101
	+	1377.67		2.032E+00	1.432E+00	1.496E+00	1.421E-01	1.359
	+	1764.49		2.320E+00	4.485E-01	2.603E-01	1.561E-02	8.911
PB-214	+	74.81		5.597E+00	1.047E+00	8.829E-01	9.317E-02	6.339
	+	77.11		4.368E+00	6.514E-01	5.043E-01	5.463E-02	8.662
	+	87.30		2.886E+00	7.787E-01	1.122E+00	1.302E-01	2.573
	+	241.98		3.021E+00	6.808E-01	4.801E-01	3.857E-02	6.293
	+	295.21		1.846E+00	2.596E-01	2.197E-01	1.878E-02	8.404

Sample ID : G232504013 Acquisition date : 7-JUL-2009 09:44:19

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.743E+00	2.119E-01	1.085E-01	8.903E-03	16.067
PO-214	+	74.81		5.597E+00	1.047E+00	8.829E-01	9.317E-02	6.339
	+	77.11		4.368E+00	6.514E-01	5.043E-01	5.463E-02	8.662
	+	87.30		2.886E+00	7.787E-01	1.122E+00	1.302E-01	2.573
	+	241.98		3.021E+00	6.808E-01	4.801E-01	3.857E-02	6.293
	+	295.21		1.846E+00	2.596E-01	2.197E-01	1.878E-02	8.404
	+	351.92	*	1.743E+00	2.119E-01	1.085E-01	8.903E-03	16.067
PO-216	+	74.81		3.248E+00	6.354E-01	5.124E-01	6.145E-02	6.339
	+	77.11		2.548E+00	3.267E-01	2.942E-01	2.265E-02	8.662
	+	87.30		1.685E+00	4.671E-01	6.550E-01	8.670E-02	2.573
	+	238.63	*	2.152E+00	1.952E-01	8.757E-02	6.379E-03	24.574
	+	300.09		1.904E+00	9.157E-01	1.143E+00	9.449E-02	1.667
PO-218	+	74.81		5.597E+00	1.047E+00	8.829E-01	9.317E-02	6.339
	+	77.11		4.368E+00	6.514E-01	5.043E-01	5.463E-02	8.662
	+	87.30		2.886E+00	7.787E-01	1.122E+00	1.302E-01	2.573
	+	241.98		3.021E+00	6.808E-01	4.801E-01	3.857E-02	6.293
	+	295.21		1.846E+00	2.596E-01	2.197E-01	1.878E-02	8.404
	+	351.92	*	1.743E+00	2.119E-01	1.085E-01	8.903E-03	16.067
RA-224	+	240.98	*	5.729E+00	1.250E+00	9.962E-01	5.726E-02	5.751
RA-226	+	609.31	*	1.613E+00	2.160E-01	1.074E-01	8.499E-03	15.025
		768.36		1.239E+00	7.962E-01	1.393E+00	1.323E-01	0.890
	+	934.06		2.257E+00	1.539E+00	1.893E+00	2.079E-01	1.192
	+	1120.29		1.476E+00	5.111E-01	5.205E-01	4.823E-02	2.836
	+	1238.11		1.579E+00	1.194E+00	1.434E+00	1.205E-01	1.101
	+	1377.67		2.032E+00	1.432E+00	1.496E+00	1.421E-01	1.359
	+	1764.49		2.320E+00	4.485E-01	2.603E-01	1.561E-02	8.911
AC-228	+	338.32		1.997E+00	8.944E-01	3.616E-01	1.474E-01	5.525
	+	911.07	*	2.310E+00	4.367E-01	2.138E-01	2.511E-02	10.805
	+	969.11		1.899E+00	7.419E-01	3.095E-01	7.228E-02	6.134
RA-228	+	338.32		1.997E+00	8.944E-01	3.616E-01	1.474E-01	5.525
	+	911.07	*	2.310E+00	4.367E-01	2.138E-01	2.511E-02	10.805
	+	969.11		1.899E+00	7.419E-01	3.095E-01	7.228E-02	6.134
TH-228		84.40		3.243E+00	2.892E+00	4.295E+00	5.575E-01	0.755
	+	238.60	*	2.152E+00	1.952E-01	8.756E-02	6.378E-03	24.576
	+	300.10		1.904E+00	1.440E+00	1.143E+00	6.734E-01	1.667
TH-230	+	609.31	*	1.613E+00	2.160E-01	1.074E-01	8.499E-03	15.025
		768.36		1.239E+00	7.962E-01	1.393E+00	1.323E-01	0.890
	+	934.06		2.257E+00	1.539E+00	1.893E+00	2.079E-01	1.192
	+	1120.29		1.476E+00	5.111E-01	5.205E-01	4.823E-02	2.836
	+	1238.11		1.579E+00	1.194E+00	1.434E+00	1.205E-01	1.101
	+	1377.67		2.032E+00	1.431E+00	1.496E+00	1.421E-01	1.359
	+	1764.49		2.320E+00	4.485E-01	2.603E-01	1.561E-02	8.911
TH-232	+	338.32		1.997E+00	3.877E-01	3.616E-01	2.077E-02	5.525
	+	911.07	*	2.310E+00	4.367E-01	2.138E-01	2.511E-02	10.805
	+	969.11		1.899E+00	7.419E-01	3.095E-01	7.228E-02	6.134
TH-234	+	63.29	*	2.370E+00	1.546E+00	1.765E+00	3.034E-01	1.343
	+	92.38		2.681E+00	8.071E-01	8.328E-01	1.496E-01	3.219
U-234	+	609.31	*	1.613E+00	2.160E-01	1.074E-01	8.499E-03	15.025
		768.36		1.239E+00	7.962E-01	1.393E+00	1.323E-01	0.890

Sample ID : G232504013 Acquisition date : 7-JUL-2009 09:44:19

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	934.06		2.257E+00	1.539E+00	1.893E+00	2.079E-01	1.192
	+	1120.29		1.476E+00	5.111E-01	5.205E-01	4.823E-02	2.836
	+	1238.11		1.579E+00	1.194E+00	1.434E+00	1.205E-01	1.101
	+	1377.67		2.032E+00	1.431E+00	1.496E+00	1.421E-01	1.359
	+	1764.49		2.320E+00	4.485E-01	2.603E-01	1.561E-02	8.911
NP-237	+	86.50	*	1.070E+00	3.539E-01	4.066E-01	9.087E-02	2.631
		95.87		-3.275E-01	1.038E+00	1.471E+00	3.597E-01	-0.223
U-238	+	63.29	*	2.370E+00	1.546E+00	1.765E+00	3.034E-01	1.343
	+	92.38		2.681E+00	6.854E-01	8.328E-01	6.967E-02	3.219
AM-243	+	74.67	*	5.266E-01	9.049E-02	8.326E-02	6.248E-03	6.325
	+	86.72		4.012E+01	1.037E+01	1.522E+01	1.311E+00	2.636
		117.66		-1.082E+00	3.880E+00	6.283E+00	4.530E-01	-0.172
		142.18		1.889E+01	1.829E+01	3.064E+01	1.926E+00	0.617
ANH-511	+	511.00	*	1.254E-01	6.851E-02	4.686E-02	2.753E-03	2.677

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.765E-02	3.029E-01	5.017E-01	3.381E-02	0.055
NA-22		1274.54	*	1.195E-02	4.387E-02	7.368E-02	4.813E-03	0.162
NA-24		1368.53	*	-3.387E-02	4.387E-02	Half-Life too short		
AL-26		1129.67		8.595E-01	1.735E+00	2.787E+00	1.760E-01	0.308
		1808.65	*	3.801E-03	2.409E-02	4.140E-02	2.400E-03	0.092
TI-44		67.85		-1.937E-02	5.111E-02	6.815E-02	4.796E-03	-0.284
	+	78.38	*	4.702E-01	6.028E-02	8.136E-02	6.353E-03	5.779
SC-46		889.25	*	-1.302E-02	3.873E-02	6.314E-02	5.835E-03	-0.206
	+	1120.51		2.481E-01	8.433E-02	1.225E-01	7.931E-03	2.026
V-48		944.10		-7.097E-01	8.640E-01	1.349E+00	1.206E-01	-0.526
		983.50	*	-1.302E-03	6.310E-02	1.048E-01	8.902E-03	-0.012
		1312.09		-5.466E-02	8.021E-02	1.230E-01	8.498E-03	-0.445
CR-51		320.08	*	1.496E-01	3.517E-01	5.684E-01	3.673E-02	0.263
MN-52		744.21		-2.000E-02	1.732E-01	2.768E-01	1.953E-02	-0.072
		848.13		9.899E-01	5.294E+00	8.989E+00	7.724E-01	0.110
	+	935.52		3.817E-01	2.592E-01	3.902E-01	3.522E-02	0.978
		1246.25		2.445E+00	5.831E+00	9.875E+00	6.153E-01	0.248
		1333.61		-1.245E+00	3.701E+00	5.831E+00	4.155E-01	-0.213
		1434.06	*	-2.506E-01	1.584E-01	1.919E-01	1.345E-02	-1.306
MN-54		834.83	*	1.856E-02	3.879E-02	6.699E-02	5.619E-03	0.277
CO-56		846.75	*	-5.620E-03	3.970E-02	6.593E-02	5.651E-03	-0.085
		977.42		1.634E+00	2.785E+00	4.760E+00	4.077E-01	0.343
		1037.82		1.080E-01	3.160E-01	5.379E-01	4.456E-02	0.201
		1175.09		1.485E+00	2.305E+00	3.976E+00	2.197E-01	0.373
	+	1238.25		1.569E-01	1.183E-01	1.726E-01	1.121E-02	0.909
		1360.21		-3.938E-01	9.519E-01	1.480E+00	1.052E-01	-0.266
		1771.40		-9.626E-03	2.428E-01	3.442E-01	2.054E-02	-0.028
CO-57		122.06	*	-2.131E-03	2.606E-02	4.243E-02	3.019E-03	-0.050
		136.48		3.940E-02	2.115E-01	3.464E-01	2.543E-02	0.114
CO-58		810.76	*	-2.149E-02	3.991E-02	6.123E-02	4.927E-03	-0.351

Sample ID : G232504013 Acquisition date : 7-JUL-2009 09:44:19

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		4.679E-02	2.800E+00	4.496E+00	2.819E-01	0.010
		192.34		9.324E-01	1.049E+00	1.535E+00	1.792E-01	0.607
		1099.22	*	-5.697E-02	9.353E-02	1.473E-01	1.134E-02	-0.387
		1291.56		4.088E-02	1.262E-01	2.126E-01	1.731E-02	0.192
CO-60		1173.22		1.650E-03	4.776E-02	7.891E-02	4.347E-03	0.021
		1332.49	*	-3.141E-02	3.850E-02	5.721E-02	4.077E-03	-0.549
ZN-65		1115.52	*	-2.412E-02	1.062E-01	1.470E-01	9.665E-03	-0.164
GE-68		1077.35	*	-1.468E-01	1.330E+00	2.184E+00	1.570E-01	-0.067
AS-73		53.44	*	3.760E-01	6.118E-01	1.035E+00	6.746E-02	0.363
AS-74		595.88	*	-3.709E-02	8.615E-02	1.366E-01	8.167E-03	-0.272
		634.78		3.555E-02	3.107E-01	5.093E-01	3.042E-02	0.070
SE-75		66.05		7.381E-01	4.689E+00	6.862E+00	6.240E-01	0.108
		96.73		-7.848E-01	8.383E-01	1.149E+00	1.526E-01	-0.683
		121.11		3.669E-02	1.393E-01	2.294E-01	2.321E-02	0.160
		136.00		1.795E-03	3.994E-02	6.510E-02	4.300E-03	0.028
		198.60		-4.623E-01	1.834E+00	2.923E+00	2.024E-01	-0.158
		264.65	*	1.907E-02	4.645E-02	6.981E-02	4.098E-03	0.273
		279.53		6.619E-02	1.178E-01	1.779E-01	1.121E-02	0.372
		303.91		-1.609E-01	2.203E+00	3.201E+00	3.059E-01	-0.050
		400.65		-2.597E-03	2.670E-01	4.428E-01	3.944E-02	-0.006
BR-77	+	87.88		4.202E+02	1.086E+02	1.831E+02	1.599E+01	2.295
		200.40		9.306E+00	8.949E+01	1.445E+02	8.035E+00	0.064
	+	239.00		1.813E+02	1.430E+01	2.106E+01	1.209E+00	8.611
		249.79		-8.387E-01	3.369E+01	5.372E+01	3.103E+00	-0.016
		281.68		-2.203E+01	5.274E+01	7.533E+01	4.393E+00	-0.292
		297.23		2.003E+02	4.699E+01	6.351E+01	3.704E+00	3.155
		303.76		1.472E+01	9.803E+01	1.444E+02	8.417E+00	0.102
		439.47		3.979E+01	7.353E+01	1.250E+02	7.070E+00	0.318
		484.57		-4.980E+01	1.243E+02	1.998E+02	1.161E+01	-0.249
		520.65	*	1.536E+00	5.615E+00	9.362E+00	5.519E-01	0.164
		574.64		-2.457E+01	1.271E+02	1.655E+02	9.878E+00	-0.149
		578.91		5.875E+01	4.869E+01	7.618E+01	4.550E+00	0.771
		585.48		6.964E+02	1.321E+02	2.370E+02	1.417E+01	2.938
		755.35		7.611E+01	9.319E+01	1.585E+02	1.143E+01	0.480
		817.79		5.399E+01	6.918E+01	1.179E+02	9.586E+00	0.458
SR-82		698.33		5.420E+00	3.285E+01	5.375E+01	3.455E+00	0.101
		776.49	*	4.612E-01	3.401E-01	5.501E-01	4.136E-02	0.838
		1395.20		-1.166E+01	9.690E+00	1.320E+01	9.326E-01	-0.883
RB-83		520.41	*	1.409E-02	6.920E-02	1.149E-01	6.774E-03	0.123
		529.64		-7.944E-02	1.000E-01	1.552E-01	9.178E-03	-0.512
		552.65		-3.354E-02	1.883E-01	3.044E-01	1.811E-02	-0.110
RB-84		881.50	*	-2.045E-02	6.239E-02	1.016E-01	9.266E-03	-0.201
KR-85		513.99	*	6.561E+00	8.059E+00	1.217E+01	7.160E-01	0.539
SR-85		513.99	*	3.286E-02	4.037E-02	6.098E-02	3.587E-03	0.539
RB-86		1076.63	*	-7.095E-02	7.730E-01	1.271E+00	9.153E-02	-0.056
Y-88		898.02		-4.520E-02	4.098E-02	6.232E-02	5.870E-03	-0.725
		1836.01	*	4.573E-03	3.554E-02	6.034E-02	3.427E-03	0.076
ZR-88		392.90	*	-1.942E-03	3.036E-02	5.025E-02	2.736E-03	-0.039
Y-91		1204.90	*	4.791E+00	1.941E+01	3.251E+01	1.891E+00	0.147

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	1.042E-02	3.368E-02	5.565E-02	3.609E-03	0.187
		871.10		2.261E-02	3.173E-02	5.594E-02	5.008E-03	0.404
NB-95		765.79	*	6.514E-02	5.002E-02	7.761E-02	5.715E-03	0.839
NB-95M		235.69	*	1.051E+00	1.796E-01	2.857E-01	2.135E-02	3.679
ZR-95		724.18		1.273E-01	1.217E-01	1.839E-01	1.417E-02	0.692
		756.15	*	1.888E-02	7.395E-02	1.213E-01	1.001E-02	0.156
NB-97		657.90	*	-1.188E-03	7.395E-02	Half-Life too short		
		1024.50		5.148E-02	7.395E-02	Half-Life too short		
ZR-97		254.15		1.600E-01	7.395E-02	Half-Life too short		
		355.39		2.319E-01	7.395E-02	Half-Life too short		
		507.63	*	6.584E-01	7.395E-02	Half-Life too short		
		602.52		-7.239E-01	7.395E-02	Half-Life too short		
		1021.30		-1.211E-01	7.395E-02	Half-Life too short		
		1147.95		1.690E-02	7.395E-02	Half-Life too short		
		1362.66		2.186E-01	7.395E-02	Half-Life too short		
		1750.46		-1.145E-01	7.395E-02	Half-Life too short		
MO-99		140.51		-9.621E+00	1.582E+01	2.488E+01	6.735E+00	-0.387
		181.06		9.432E-01	1.128E+01	1.596E+01	2.718E+00	0.059
		366.43		-7.405E+00	4.459E+01	7.360E+01	4.131E+00	-0.101
		739.58	*	4.249E+00	6.917E+00	1.161E+01	1.663E+00	0.366
		778.00		-6.219E+00	2.139E+01	2.861E+01	2.157E+00	-0.217
TC-99M		140.51	*	-5.419E+07	2.139E+01	Half-Life too short		
RH-101		127.23		4.725E-02	3.763E-02	5.643E-02	3.883E-03	0.837
		198.01	*	-1.343E-02	3.356E-02	5.319E-02	2.951E-03	-0.253
		325.23		1.516E-01	2.499E-01	3.768E-01	2.181E-02	0.402
RH-102		418.52		-1.278E-01	2.833E-01	4.578E-01	2.548E-02	-0.279
		475.06	*	8.737E-03	2.816E-02	4.723E-02	2.730E-03	0.185
		631.29		-1.244E-02	5.258E-02	8.404E-02	5.021E-03	-0.148
		697.49		-2.187E-03	7.957E-02	1.285E-01	8.247E-03	-0.017
		766.84		1.243E-01	1.369E-01	2.051E-01	1.514E-02	0.606
		1046.59		-7.143E-02	1.153E-01	1.813E-01	1.388E-02	-0.394
		1112.84		-1.773E-01	2.646E-01	3.801E-01	2.511E-02	-0.466
RU-103		497.08	*	1.296E-02	3.517E-02	5.915E-02	7.491E-03	0.219
	+	610.33		1.675E+01	3.164E+00	2.973E+00	4.605E-01	5.635
RH-106	+	511.85		6.239E-01	3.408E-01	4.027E-01	2.367E-02	1.549
		621.84	*	2.154E-01	3.264E-01	5.524E-01	6.533E-02	0.390
		1050.47		6.785E-01	2.334E+00	3.957E+00	3.006E-01	0.171
RU-106	+	511.85		6.239E-01	3.408E-01	4.027E-01	2.367E-02	1.549
		621.84	*	2.154E-01	3.257E-01	5.524E-01	3.303E-02	0.390
		1050.47		6.785E-01	2.334E+00	3.957E+00	3.006E-01	0.171
AG-108M		433.93	*	-1.592E-02	3.194E-02	5.133E-02	3.153E-03	-0.310
		614.37		-7.459E-03	4.379E-02	6.060E-02	3.915E-03	-0.123
		722.95		2.866E-02	4.869E-02	7.170E-02	5.153E-03	0.400
AG-110M		657.75	*	-2.603E-03	3.670E-02	5.928E-02	3.745E-03	-0.044
		677.61		-2.212E-02	2.942E-01	4.742E-01	3.077E-02	-0.047
		706.67		3.841E-02	2.118E-01	3.468E-01	2.376E-02	0.111
		763.93		2.448E-02	1.934E-01	2.719E-01	2.072E-02	0.090
		884.67		-1.560E-02	4.751E-02	7.744E-02	7.301E-03	-0.201
		937.48		1.727E-02	1.378E-01	2.006E-01	1.867E-02	0.086

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1384.27		1.163E-01	1.761E-01	2.819E-01	2.078E-02	0.413
IN-111		171.28		-2.618E-01	5.926E-01	9.424E-01	5.083E-02	-0.278
		245.39	*	-3.249E-01	6.830E-01	9.214E-01	5.310E-02	-0.353
IN-113M		391.69	*	3.707E-02	4.335E-02	7.490E-02	4.383E-03	0.495
SN-113		391.69	*	3.707E-02	4.335E-02	7.490E-02	4.383E-03	0.495
IN-114M		190.27	*	8.920E-02	2.020E-01	2.906E-01	1.599E-02	0.307
CD-115		260.90		-9.122E+00	6.172E+01	1.034E+02	6.002E+00	-0.088
		492.35		-2.007E+01	1.715E+01	2.599E+01	1.515E+00	-0.772
		527.90	*	-4.105E+00	5.324E+00	8.286E+00	4.896E-01	-0.495
SN-117M		156.02		1.721E+00	2.043E+00	3.403E+00	1.959E-01	0.506
		158.56	*	-4.692E-02	4.932E-02	7.710E-02	4.361E-03	-0.609
SB-122		563.90	*	3.451E-01	1.493E+00	2.150E+00	1.282E-01	0.161
		692.80		6.783E+00	2.497E+01	4.117E+01	2.616E+00	0.165
I-123		159.00	*	-4.140E-01	2.497E+01	Half-Life too short		
		528.96		-1.922E+01	2.497E+01	Half-Life too short		
TE-123M		159.00	*	-3.326E-02	2.852E-02	4.420E-02	2.528E-03	-0.752
I-124		602.71	*	-4.584E-01	5.541E-01	7.209E-01	4.312E-02	-0.636
		722.78		1.369E+00	3.568E+00	5.155E+00	3.485E-01	0.266
		1325.50		-3.898E+00	2.380E+01	3.828E+01	2.700E+00	-0.102
		1376.25		3.364E+01	2.669E+01	4.339E+01	3.075E+00	0.775
		1509.49		1.052E+01	1.082E+01	1.956E+01	1.342E+00	0.538
		1691.02		1.050E-01	2.580E+00	4.188E+00	2.639E-01	0.025
SB-124		602.71		-3.747E-02	4.530E-02	5.893E-02	3.527E-03	-0.636
		645.85		-6.943E-01	5.250E-01	7.717E-01	5.163E-02	-0.900
		709.31		6.538E-01	2.833E+00	4.652E+00	3.059E-01	0.141
		713.82		-1.164E+00	1.667E+00	2.552E+00	2.733E-01	-0.456
		722.78		1.622E-01	4.228E-01	6.110E-01	4.274E-02	0.266
	+	968.20		1.905E+01	6.194E+00	7.758E+00	6.727E-01	2.456
		1045.16		-2.250E+00	2.440E+00	3.732E+00	2.864E-01	-0.603
		1325.50		-4.934E-01	3.012E+00	4.845E+00	3.417E-01	-0.102
		1368.21		-1.160E+00	1.818E+00	2.752E+00	3.455E-01	-0.422
		1436.60		-1.612E+00	3.151E+00	4.743E+00	3.322E-01	-0.340
		1691.02	*	2.934E-03	7.212E-02	1.171E-01	7.913E-03	0.025
SB-125		427.89	*	-1.443E-02	8.814E-02	1.445E-01	8.470E-03	-0.100
	+	463.38		9.399E-01	4.552E-01	5.596E-01	3.756E-02	1.680
		600.56		1.965E-01	1.916E-01	3.058E-01	2.100E-02	0.642
		635.90		-1.968E-02	2.677E-01	4.329E-01	3.004E-02	-0.045
TE-125M		109.28	*	-6.740E+00	9.281E+00	1.482E+01	1.390E+00	-0.455
I-126		388.63		4.153E-03	1.806E-01	3.004E-01	1.641E-02	0.014
		666.33	*	-3.371E-02	1.797E-01	2.881E-01	1.730E-02	-0.117
		753.82		1.815E+00	1.383E+00	2.422E+00	1.742E-01	0.749
SB-126		223.80		-2.326E+00	3.676E+00	5.737E+00	3.258E-01	-0.405
	+	278.60		2.773E+00	3.014E+00	3.780E+00	2.204E-01	0.734
		296.50		1.449E+01	2.285E+00	3.281E+00	1.914E-01	4.416
		414.70		2.138E-02	7.176E-02	1.056E-01	5.858E-03	0.203
		415.30		1.449E+00	6.029E+00	8.828E+00	4.902E-01	0.164
		555.20		-2.011E+00	3.552E+00	5.596E+00	3.330E-01	-0.359
		573.80		-3.968E-01	1.011E+00	1.372E+00	8.192E-02	-0.289
		593.00		2.336E-02	8.072E-01	1.319E+00	7.889E-02	0.018

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		656.30		-2.997E+00	3.208E+00	4.877E+00	2.903E-01	-0.615
		666.33		-1.402E-02	7.473E-02	1.198E-01	7.194E-03	-0.117
		675.00		6.126E-01	1.717E+00	2.854E+00	1.746E-01	0.215
		695.00		1.694E-02	7.124E-02	1.171E-01	7.476E-03	0.145
		697.00		-5.972E-02	2.488E-01	3.960E-01	2.539E-02	-0.151
		720.50	*	1.704E-01	1.398E-01	2.189E-01	1.473E-02	0.779
		856.80		5.615E-02	4.615E-01	6.760E-01	5.900E-02	0.083
		989.30		5.025E-02	1.082E+00	1.807E+00	1.522E-01	0.028
		1034.80		8.937E-01	8.027E+00	1.344E+01	1.051E+00	0.067
		1213.00		-2.194E+00	4.356E+00	6.897E+00	4.068E-01	-0.318
SB-127		61.10		3.881E+01	3.563E+01	5.381E+01	4.857E+00	0.721
		252.40		-1.070E+00	2.942E+00	4.562E+00	1.888E+00	-0.235
		290.80		-1.145E+01	1.597E+01	2.231E+01	1.876E+00	-0.513
		411.60		9.203E+00	9.444E+00	1.439E+01	1.983E+00	0.640
		444.90		-2.674E+00	6.370E+00	1.026E+01	1.033E+00	-0.261
		473.00		-7.979E-01	1.125E+00	1.771E+00	1.866E-01	-0.450
		543.00		3.309E-01	1.115E+01	1.829E+01	2.274E+00	0.018
		603.60		-8.102E+00	9.483E+00	1.229E+01	1.255E+00	-0.659
		685.20	*	8.075E-02	8.895E-01	1.450E+00	1.304E-01	0.056
		698.50		1.675E+00	1.049E+01	1.716E+01	2.449E+00	0.098
		722.20		9.250E+00	2.301E+01	3.334E+01	3.023E+00	0.277
		783.80		5.487E+00	2.641E+00	4.729E+00	5.275E-01	1.160
XE-127		57.60		1.264E+00	4.881E+00	7.834E+00	5.159E-01	0.161
		145.22		1.073E+00	6.784E-01	1.153E+00	7.116E-02	0.930
		172.10		-2.957E-02	1.150E-01	1.842E-01	9.941E-03	-0.161
		202.84	*	4.022E-02	5.367E-02	7.807E-02	4.352E-03	0.515
		374.96		1.921E-01	1.835E-01	3.203E-01	1.780E-02	0.600
I-131		80.18		-3.641E+00	4.219E+00	5.910E+00	4.734E-01	-0.616
		284.30		7.291E-01	1.236E+00	2.074E+00	1.339E-01	0.352
		364.48	*	-6.480E-02	8.852E-02	1.416E-01	8.916E-03	-0.458
		636.97		-4.150E-01	1.287E+00	2.044E+00	1.355E-01	-0.203
		722.89		2.844E+00	6.872E+00	9.956E+00	6.782E-01	0.286
TE-132		49.72		-1.719E+01	8.845E+00	1.349E+01	1.154E+00	-1.275
		111.76		3.677E-01	1.862E+01	3.049E+01	2.832E+00	0.012
		116.30		-4.823E+00	1.758E+01	2.848E+01	2.614E+00	-0.169
		228.16	*	-3.118E-01	4.501E-01	6.831E-01	9.498E-02	-0.456
BA-133		53.15		2.149E+00	2.684E+00	4.561E+00	2.971E-01	0.471
		79.62		2.942E+00	1.505E+00	2.226E+00	3.303E-01	1.322
		81.00		-2.274E-01	1.167E-01	1.495E-01	2.329E-02	-1.521
	+	276.40		4.688E-01	5.125E-01	6.528E-01	8.471E-02	0.718
		302.84		1.005E-02	1.499E-01	2.197E-01	2.564E-02	0.046
		356.01	*	1.211E-02	4.666E-02	6.879E-02	7.907E-03	0.176
		383.85		-4.256E-02	2.837E-01	4.679E-01	5.013E-02	-0.091
I-133	+	510.53		2.177E-01	2.837E-01	Half-Life too short		
		529.87	*	-3.361E-04	2.837E-01	Half-Life too short		
		706.58		-1.950E-02	2.837E-01	Half-Life too short		
		856.28		-1.104E-02	2.837E-01	Half-Life too short		
		875.33		-1.493E-03	2.837E-01	Half-Life too short		
	+	1236.41		1.978E-01	2.837E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1298.22		-9.215E-03	2.837E-01	Half-Life too short		
CS-134		475.35		1.101E+00	1.821E+00	3.104E+00	1.794E-01	0.355
		563.23		-3.002E-02	4.386E-01	6.166E-01	3.748E-02	-0.049
		569.32		9.122E-01	2.687E-01	4.601E-01	2.822E-02	1.983
		604.70		8.485E-04	3.875E-02	5.468E-02	3.288E-03	0.016
	+	795.84	*	1.295E-01	5.843E-02	9.144E-02	7.197E-03	1.416
		801.93		-6.103E-01	4.502E-01	5.892E-01	4.681E-02	-1.036
		1038.57		3.451E+00	3.938E+00	6.954E+00	5.402E-01	0.496
		1167.94		-5.149E-01	2.614E+00	4.245E+00	2.381E-01	-0.121
		1365.15		6.168E-01	1.203E+00	2.076E+00	1.572E-01	0.297
CS-135		268.24	*	3.758E-01	1.810E-01	2.902E-01	2.226E-02	1.295
I-135		288.45		-4.952E+07	1.810E-01	Half-Life too short		
		417.63		-6.842E+07	1.810E-01	Half-Life too short		
		546.56		-3.969E+07	1.810E-01	Half-Life too short		
		836.80		9.388E+07	1.810E-01	Half-Life too short		
		1038.76		4.526E+07	1.810E-01	Half-Life too short		
		1124.00		1.950E+08	1.810E-01	Half-Life too short		
		1131.51		-2.111E+06	1.810E-01	Half-Life too short		
		1260.41	*	-8.233E+06	1.810E-01	Half-Life too short		
		1457.56		3.500E+09	1.810E-01	Half-Life too short		
		1678.03		6.567E+06	1.810E-01	Half-Life too short		
		1706.46		1.448E+07	1.810E-01	Half-Life too short		
		1791.20		-8.076E+06	1.810E-01	Half-Life too short		
CS-136		66.91		-3.279E-01	7.028E-01	1.003E+00	1.463E-01	-0.327
	+	86.29		4.232E+00	1.166E+00	1.853E+00	2.374E-01	2.284
		153.22		2.777E-01	6.005E-01	9.886E-01	7.190E-02	0.281
		163.89		8.970E-01	9.686E-01	1.598E+00	1.114E-01	0.561
		176.55		-1.150E-02	3.285E-01	5.299E-01	3.276E-02	-0.022
		273.65		-3.137E-01	6.794E-01	6.365E-01	4.223E-02	-0.493
		340.57		2.930E-01	1.275E-01	2.076E-01	1.267E-02	1.411
		818.51		7.935E-02	6.735E-02	1.176E-01	9.583E-03	0.674
		1048.07	*	3.351E-02	9.310E-02	1.589E-01	1.277E-02	0.211
		1235.34		4.255E-01	7.019E-01	1.041E+00	1.060E-01	0.409
BA-137M		661.65	*	6.655E-04	4.003E-02	6.502E-02	3.866E-03	0.010
CS-137		661.65	*	7.035E-04	4.232E-02	6.873E-02	4.103E-03	0.010
CE-139		165.85	*	-5.952E-03	3.007E-02	4.832E-02	2.594E-03	-0.123
BA-140		162.64		3.328E-01	6.772E-01	1.103E+00	6.899E-02	0.302
		304.84		-3.526E-01	1.237E+00	1.768E+00	4.826E-01	-0.199
		423.70		8.485E-01	1.670E+00	2.802E+00	8.894E-01	0.303
		537.32	*	-3.894E-02	2.339E-01	3.788E-01	1.233E-01	-0.103
LA-140	+	328.77		8.318E-01	3.933E-01	4.916E-01	3.184E-02	1.692
		432.53		-2.881E-01	1.771E+00	2.902E+00	1.814E-01	-0.099
		487.03		9.409E-02	1.243E-01	2.130E-01	1.401E-02	0.442
		751.79		1.391E+00	1.558E+00	2.668E+00	2.201E-01	0.522
		815.85		-1.758E-02	2.827E-01	4.514E-01	4.130E-02	-0.039
		867.82		-3.229E-01	1.284E+00	1.949E+00	1.821E-01	-0.166
		919.63		-2.668E+00	2.962E+00	4.204E+00	4.670E-01	-0.635
		925.24		4.070E-01	1.058E+00	1.813E+00	1.748E-01	0.224
		1596.49	*	-7.053E-02	8.157E-02	1.165E-01	7.721E-03	-0.605

---- Non-Identified Nuclides ----

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CE-141		145.44	*	7.363E-02	6.126E-02	1.031E-01	6.579E-03	0.714
CE-143		57.37		-2.956E-05	6.126E-02	Half-Life too short		
		231.56		-5.819E-05	6.126E-02	Half-Life too short		
		293.26	*	5.445E-04	6.126E-02	Half-Life too short		
	+	350.59		1.303E-02	6.126E-02	Half-Life too short		
		490.36		3.091E-05	6.126E-02	Half-Life too short		
		664.57		5.612E-05	6.126E-02	Half-Life too short		
		721.93		5.045E-04	6.126E-02	Half-Life too short		
CE-144		80.11		-1.790E+00	2.341E+00	3.293E+00	2.621E-01	-0.544
		133.54	*	-5.021E-02	2.372E-01	3.347E-01	4.872E-02	-0.150
PM-144		476.78		-1.557E-02	6.534E-02	1.061E-01	7.352E-03	-0.147
		618.01		9.037E-03	3.235E-02	5.361E-02	3.387E-03	0.169
		696.49	*	9.736E-04	3.615E-02	5.861E-02	3.754E-03	0.017
		778.57		-3.372E+00	2.653E+00	3.332E+00	2.516E-01	-1.012
PR-144		696.49	*	6.590E-02	2.447E+00	3.967E+00	2.540E-01	0.017
		1489.15		-1.053E+01	1.082E+01	1.486E+01	1.026E+00	-0.709
PM-146		453.90	*	4.936E-02	4.514E-02	7.840E-02	6.712E-03	0.630
		633.02		1.073E-01	1.326E+00	2.168E+00	7.988E-01	0.050
		735.90		8.919E-02	1.518E-01	2.523E-01	7.101E-02	0.353
		747.13		-9.328E-02	8.758E-02	1.271E-01	1.672E-02	-0.734
ND-147	+	91.11		8.526E-01	3.414E-01	4.553E-01	4.185E-02	1.873
		319.41		1.069E-01	2.808E+00	4.588E+00	2.663E-01	0.023
		439.89		9.023E-01	4.968E+00	8.293E+00	4.692E-01	0.109
		531.02	*	-9.117E-02	4.599E-01	7.438E-01	1.009E-01	-0.123
PM-149		285.90	*	2.726E+01	4.510E+01	7.732E+01	1.097E+01	0.353
EU-152		121.78		9.417E-03	7.587E-02	1.244E-01	1.076E-02	0.076
		244.69		2.711E-01	3.552E-01	5.175E-01	2.981E-02	0.524
		344.27	*	-2.095E-02	1.350E-01	1.518E-01	9.819E-03	-0.138
		443.98		-6.234E-01	9.257E-01	1.469E+00	8.332E-02	-0.424
		778.89		-4.336E-01	3.051E-01	3.746E-01	2.829E-02	-1.158
		867.32		-8.369E-02	8.981E-01	1.338E+00	1.190E-01	-0.063
		964.01		4.010E-01	3.959E-01	6.127E-01	5.343E-02	0.655
		1085.78		-6.411E-02	4.071E-01	6.654E-01	4.694E-02	-0.096
		1112.02		-1.237E-01	3.532E-01	5.555E-01	3.678E-02	-0.223
		1407.95		2.415E-01	1.788E-01	3.330E-01	2.347E-02	0.725
GD-153		69.67		3.899E-01	1.798E+00	2.456E+00	1.756E-01	0.159
		83.37		1.762E+01	1.913E+01	2.435E+01	2.013E+00	0.724
		97.43	*	-2.404E-03	8.405E-02	1.209E-01	9.693E-03	-0.020
		103.18		-1.166E-01	1.060E-01	1.673E-01	1.291E-02	-0.697
EU-154		123.07		6.584E-03	5.757E-02	8.730E-02	8.932E-03	0.075
		247.94		9.174E-02	3.579E-01	5.581E-01	5.315E-02	0.164
		591.81		6.189E-03	6.161E-01	9.785E-01	9.669E-02	0.006
		723.30		1.496E-01	2.054E-01	3.058E-01	2.413E-02	0.489
		756.87		2.258E-01	8.129E-01	1.336E+00	1.472E-01	0.169
		873.19		-1.193E-01	2.754E-01	4.443E-01	5.555E-02	-0.269
		996.32		-2.645E-01	3.621E-01	5.615E-01	9.897E-02	-0.471
		1004.76		-2.278E-01	2.026E-01	3.015E-01	3.422E-02	-0.755
		1274.45	*	3.730E-02	1.231E-01	2.071E-01	2.031E-02	0.180
EU-155		48.70		-1.819E+00	1.700E+00	2.699E+00	1.729E-01	-0.674

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		60.01		2.706E+00	4.540E+00	6.741E+00	4.481E-01	0.401
	+	86.54		4.384E-01	1.135E-01	1.905E-01	1.654E-02	2.301
		105.31	*	8.765E-02	1.079E-01	1.809E-01	1.400E-02	0.485
TB-160	+	86.79		1.147E+00	2.966E-01	4.934E-01	4.252E-02	2.325
		197.04		-4.756E-01	5.711E-01	8.771E-01	4.861E-02	-0.542
		215.65		4.847E-02	7.759E-01	1.204E+00	6.792E-02	0.040
	+	298.57		2.713E-01	1.295E-01	1.961E-01	1.143E-02	1.384
		879.36	*	9.026E-02	1.231E-01	2.176E-01	1.977E-02	0.415
		962.29		6.121E-01	6.694E-01	1.034E+00	9.036E-02	0.592
		966.15		1.292E+00	3.377E-01	5.734E-01	4.986E-02	2.253
		1177.93		-1.705E-01	3.800E-01	6.014E-01	3.340E-02	-0.283
		1271.85		6.835E-01	7.018E-01	1.244E+00	8.079E-02	0.549
HO-166M		80.57		-5.207E-01	3.071E-01	4.141E-01	3.314E-02	-1.257
		184.41		1.529E-01	3.964E-02	7.009E-02	3.833E-03	2.181
		280.46		-3.612E-03	9.212E-02	1.346E-01	7.850E-03	-0.027
	+	410.95		5.965E-01	3.441E-01	4.453E-01	2.464E-02	1.340
		711.68	*	7.560E-02	6.094E-02	1.067E-01	7.051E-03	0.709
		752.31		3.370E-01	2.828E-01	4.931E-01	3.536E-02	0.683
		810.29		-2.578E-02	6.041E-02	9.356E-02	7.500E-03	-0.276
TM-171		51.35		1.422E+01	2.187E+01	3.706E+01	2.403E+00	0.384
		52.39		1.046E+01	1.156E+01	1.970E+01	1.281E+00	0.531
		59.40		2.109E+01	2.436E+01	3.651E+01	2.419E+00	0.577
		66.72	*	-1.292E+01	2.857E+01	4.088E+01	2.850E+00	-0.316
LU-176	+	88.36		8.641E-01	2.234E-01	3.833E-01	3.340E-02	2.254
		201.83		1.247E-02	3.181E-02	5.009E-02	2.790E-03	0.249
		306.84	*	1.251E-02	2.424E-02	4.053E-02	2.360E-03	0.309
		401.10		-8.412E-01	7.125E+00	1.176E+01	6.449E-01	-0.072
LU-177		112.95		5.806E-01	1.281E+00	2.125E+00	1.561E-01	0.273
	+	208.36	*	2.662E+00	1.313E+00	1.611E+00	9.029E-02	1.652
LU-177M		52.97		9.817E-01	1.201E+00	2.043E+00	1.330E-01	0.481
		54.07		-4.270E-02	6.490E-01	1.077E+00	7.031E-02	-0.040
		61.30		1.767E+00	1.365E+00	2.077E+00	1.392E-01	0.851
		121.62		6.332E-02	3.860E-01	6.335E-01	4.505E-02	0.100
		147.16		-9.058E-01	6.715E-01	1.038E+00	6.328E-02	-0.873
		171.86		-1.192E-01	4.790E-01	7.671E-01	4.140E-02	-0.155
		218.09		9.403E-02	8.785E-01	1.415E+00	7.998E-02	0.066
	+	268.79		2.478E+00	1.264E+00	1.504E+00	8.749E-02	1.648
		319.02		4.927E-02	2.420E-01	4.088E-01	2.372E-02	0.121
		367.43		-2.014E-01	8.279E-01	1.361E+00	7.628E-02	-0.148
		413.65	*	2.815E-02	1.934E-01	2.812E-01	1.559E-02	0.100
HF-181		56.28		-7.553E-01	7.295E-01	1.174E+00	7.702E-02	-0.643
		57.53		9.054E-02	4.124E-01	6.612E-01	4.354E-02	0.137
		65.20		5.546E-01	9.040E-01	1.343E+00	9.254E-02	0.413
		133.02		-1.053E-02	7.334E-02	1.038E-01	6.900E-03	-0.101
		136.25		8.368E-02	4.514E-01	7.392E-01	4.817E-02	0.113
		345.85		-9.976E-02	2.174E-01	2.870E-01	1.640E-02	-0.348
		482.03	*	4.711E-03	4.094E-02	6.785E-02	3.935E-03	0.069
W-181		56.28		-3.026E-01	2.924E-01	4.704E-01	3.087E-02	-0.643
		57.53		3.612E-02	1.654E-01	2.652E-01	1.746E-02	0.136

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20	*	2.207E-01	3.597E-01	5.344E-01	3.682E-02	0.413
TA-182		67.75		-3.002E-02	1.196E-01	1.603E-01	1.127E-02	-0.187
		100.10		1.467E-01	1.718E-01	2.887E-01	2.272E-02	0.508
		152.43		2.394E-01	3.405E-01	5.648E-01	3.330E-02	0.424
		222.10		-2.579E-01	3.545E-01	5.513E-01	3.127E-02	-0.468
		1001.68		1.431E-01	1.913E+00	3.180E+00	2.628E-01	0.045
	+	1121.28		6.886E-01	2.341E-01	3.454E-01	2.232E-02	1.994
		1189.05		-1.392E-01	3.397E-01	5.431E-01	3.075E-02	-0.256
		1221.42	*	1.141E-01	2.190E-01	3.723E-01	2.227E-02	0.306
		1230.97		3.755E-01	5.942E-01	8.894E-01	5.405E-02	0.422
RE-183		57.98		1.007E-01	1.703E-01	2.656E-01	1.751E-02	0.379
		59.32		8.854E-02	9.828E-02	1.475E-01	9.768E-03	0.600
		67.20		-5.728E-02	1.973E-01	2.840E-01	1.988E-02	-0.202
		162.32	*	3.134E-02	1.094E-01	1.770E-01	9.751E-03	0.177
	+	208.81		2.942E+00	1.452E+00	1.774E+00	9.944E-02	1.659
		291.72		8.232E-01	1.037E+00	1.581E+00	9.226E-02	0.521
RE-184		57.98		3.757E-01	6.355E-01	9.912E-01	6.536E-02	0.379
		59.32		3.302E-01	3.665E-01	5.500E-01	3.643E-02	0.600
		67.20		-2.137E-01	7.362E-01	1.060E+00	7.417E-02	-0.202
		161.27		-2.396E-01	3.548E-01	5.605E-01	3.111E-02	-0.427
		216.55		9.432E-02	2.711E-01	4.407E-01	2.488E-02	0.214
		252.85	*	-8.923E-02	2.310E-01	3.620E-01	2.094E-02	-0.246
		318.01		-1.336E-01	4.256E-01	7.022E-01	4.076E-02	-0.190
		792.07		9.605E-01	1.186E+00	1.775E+00	1.375E-01	0.541
		903.28		1.616E-01	1.164E+00	1.702E+00	1.589E-01	0.095
		920.93		-2.954E-01	4.955E-01	7.718E-01	7.077E-02	-0.383
OS-185		59.72		2.325E-01	2.632E-01	3.948E-01	2.620E-02	0.589
		61.14		1.680E-01	1.483E-01	2.248E-01	1.505E-02	0.747
		69.30		1.551E-01	3.485E-01	4.364E-01	3.110E-02	0.356
		592.07		6.516E-02	2.422E+00	3.958E+00	2.367E-01	0.016
		646.12	*	-4.286E-02	4.432E-02	6.706E-02	3.999E-03	-0.639
		717.42		-1.110E+00	9.058E-01	1.323E+00	8.847E-02	-0.839
		874.81		-8.209E-02	5.306E-01	8.772E-01	7.904E-02	-0.094
		880.27		-1.556E-01	7.018E-01	1.153E+00	1.049E-01	-0.135
RE-188		155.03	*	1.780E-01	1.728E-01	2.893E-01	1.676E-02	0.615
		477.96		-3.374E-01	2.958E+00	4.839E+00	2.801E-01	-0.070
		633.10		2.997E-01	2.628E+00	4.309E+00	2.574E-01	0.070
W-188	+	63.58		9.317E+01	5.897E+01	7.588E+01	5.165E+00	1.228
		227.08		9.115E+00	1.239E+01	2.042E+01	1.163E+00	0.446
		290.67	*	-5.291E+00	8.063E+00	1.132E+01	6.608E-01	-0.467
IR-192	+	295.96		1.379E+00	1.742E-01	2.903E-01	1.720E-02	4.750
		308.46		-1.366E-02	9.083E-02	1.512E-01	8.903E-03	-0.090
		316.51	*	-1.695E-02	3.233E-02	5.282E-02	3.083E-03	-0.321
		468.07		5.744E-02	6.894E-02	1.053E-01	7.000E-03	0.546
		604.41		-1.860E-02	5.128E-01	7.197E-01	8.237E-02	-0.026
		612.46		1.312E+00	8.425E-01	1.326E+00	1.022E-01	0.990
AU-195		65.12		1.112E-01	1.675E-01	2.493E-01	1.716E-02	0.446
		66.83		-4.320E-02	9.390E-02	1.343E-01	9.373E-03	-0.322
	+	75.70		1.690E+00	2.904E-01	4.698E-01	3.563E-02	3.597

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	2.720E-01	2.450E-01	3.679E-01	2.920E-02	0.739
	+	129.76		6.310E+00	3.819E+00	5.130E+00	3.476E-01	1.230
TL-200		367.94	*	-4.899E-05	3.819E+00	Half-Life too short		
		579.30		1.604E-03	3.819E+00	Half-Life too short		
		828.27		-1.103E-04	3.819E+00	Half-Life too short		
		1205.75		3.413E-04	3.819E+00	Half-Life too short		
TL-201		68.90		1.197E+00	3.469E+00	4.324E+00	3.071E-01	0.277
		70.82		3.130E-01	1.698E+00	2.483E+00	1.794E-01	0.126
		80.30		-3.463E+00	3.354E+00	4.663E+00	3.721E-01	-0.743
		135.34		1.113E+00	1.559E+01	2.544E+01	1.667E+00	0.044
		167.43	*	-2.091E+00	4.332E+00	6.887E+00	3.699E-01	-0.304
TL-202		68.90		1.572E-01	4.553E-01	5.676E-01	4.031E-02	0.277
		70.82		4.097E-02	2.223E-01	3.250E-01	2.348E-02	0.126
		80.30		-4.535E-01	4.392E-01	6.107E-01	4.872E-02	-0.743
		439.56	*	2.996E-02	5.970E-02	1.013E-01	5.730E-03	0.296
HG-203		70.83		1.985E-01	1.057E+00	1.545E+00	1.973E-01	0.128
		72.87		2.679E+00	7.471E-01	1.083E+00	1.346E-01	2.473
		82.60		-1.503E-01	1.669E+00	1.733E+00	2.336E-01	-0.087
		279.20	*	3.762E-02	4.358E-02	6.681E-02	4.134E-03	0.563
BI-207		72.80		8.533E-01	2.078E-01	3.241E-01	2.386E-02	2.633
	+	74.97		9.452E-01	1.624E-01	2.380E-01	1.792E-02	3.971
		84.90		3.983E-01	2.172E-01	3.293E-01	2.773E-02	1.209
		569.67		1.251E-01	4.071E-02	6.931E-02	4.135E-03	1.805
		1063.62	*	6.346E-02	5.242E-02	9.459E-02	7.000E-03	0.671
		1770.23		-1.388E-01	4.966E-01	6.620E-01	3.954E-02	-0.210
TL-207		81.07		-5.025E-01	2.489E-01	3.301E-01	2.657E-02	-1.522
		83.78		7.992E-02	1.516E-01	2.085E-01	1.732E-02	0.383
		94.90		7.572E-01	2.600E-01	4.049E-01	3.313E-02	1.870
		122.32		-1.633E-01	1.812E+00	2.949E+00	2.314E-01	-0.055
		144.24		5.484E-01	7.229E-01	1.186E+00	8.968E-02	0.463
		154.21		3.738E-01	4.084E-01	6.811E-01	4.791E-02	0.549
	+	269.46		5.856E-01	2.990E-01	3.555E-01	2.162E-02	1.647
		323.87	*	-4.551E-01	7.179E-01	9.949E-01	1.643E-01	-0.457
	+	338.28		8.341E+00	1.777E+00	2.466E+00	2.590E-01	3.382
		445.03		-8.776E-01	2.212E+00	3.569E+00	3.641E-01	-0.246
PO-209		260.50		-2.447E+00	9.066E+00	1.512E+01	8.772E-01	-0.162
		262.80		-1.901E+01	2.641E+01	4.200E+01	2.439E+00	-0.453
		896.60	*	-5.209E+00	7.396E+00	1.168E+01	1.093E+00	-0.446
BI-210		46.50	*	8.769E-01	2.291E+00	3.894E+00	2.887E-01	0.225
PB-210		46.50	*	8.769E-01	2.291E+00	3.894E+00	2.887E-01	0.225
PO-210		46.50	*	8.769E-01	2.291E+00	3.894E+00	2.443E-01	0.225
PB-211		404.84	*	-2.911E-01	1.192E+00	1.668E+00	1.039E+00	-0.175
		427.08		-1.185E+00	2.160E+00	3.257E+00	2.013E+00	-0.364
		831.96		-8.897E-01	1.362E+00	1.985E+00	1.243E+00	-0.448
BI-212	+	727.18	*	1.336E+00	5.313E-01	6.972E-01	5.931E-02	1.916
		785.46		4.356E+00	1.902E+00	3.482E+00	2.663E-01	1.251
		1620.62		2.181E+00	1.347E+00	2.595E+00	1.700E-01	0.840
PO-215		81.07		-5.025E-01	2.489E-01	3.301E-01	2.657E-02	-1.522
		83.78		7.992E-02	1.516E-01	2.085E-01	1.732E-02	0.383

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		7.572E-01	2.600E-01	4.049E-01	3.313E-02	1.870
		122.32		-1.633E-01	1.812E+00	2.949E+00	2.314E-01	-0.055
		144.24		5.484E-01	7.229E-01	1.186E+00	8.968E-02	0.463
		154.21		3.738E-01	4.084E-01	6.811E-01	4.791E-02	0.549
	+	269.46		5.856E-01	2.990E-01	3.555E-01	2.162E-02	1.647
		323.87	*	-4.551E-01	7.179E-01	9.949E-01	1.643E-01	-0.457
	+	338.28		8.341E+00	1.777E+00	2.466E+00	2.590E-01	3.382
		445.03		-8.776E-01	2.212E+00	3.569E+00	3.641E-01	-0.246
RN-219	+	271.23		7.514E-01	3.858E-01	4.540E-01	3.686E-02	1.655
		401.81	*	-1.630E-02	4.409E-01	7.302E-01	9.840E-02	-0.022
RN-220		549.76	*	-7.342E-01	2.561E+01	4.185E+01	2.487E+00	-0.018
RA-223		81.07		-5.025E-01	2.489E-01	3.301E-01	2.657E-02	-1.522
		83.78		7.992E-02	1.516E-01	2.085E-01	1.732E-02	0.383
		94.90		7.572E-01	2.600E-01	4.049E-01	3.313E-02	1.870
		122.32		-1.633E-01	1.812E+00	2.949E+00	2.314E-01	-0.055
		144.24		5.484E-01	7.229E-01	1.186E+00	8.968E-02	0.463
		154.21		3.738E-01	4.084E-01	6.811E-01	4.791E-02	0.549
	+	269.46		5.856E-01	2.990E-01	3.555E-01	2.162E-02	1.647
		323.87	*	-4.551E-01	7.179E-01	9.949E-01	1.643E-01	-0.457
	+	338.28		8.341E+00	1.777E+00	2.466E+00	2.590E-01	3.382
		445.03		-8.776E-01	2.212E+00	3.569E+00	3.641E-01	-0.246
AC-227		79.80		1.788E+00	1.825E+00	2.674E+00	5.678E-01	0.669
		236.00		3.396E+00	4.977E-01	6.535E-01	6.806E-02	5.196
		256.20	*	1.629E-01	3.627E-01	6.210E-01	8.667E-02	0.262
		286.10		1.033E+00	1.516E+00	2.608E+00	3.019E-01	0.396
	+	299.80		3.529E+00	1.768E+00	2.505E+00	4.082E-01	1.409
		304.40		-5.962E-02	2.025E+00	2.949E+00	5.104E-01	-0.020
		334.20		-7.219E-01	2.828E+00	3.513E+00	6.436E-01	-0.205
TH-227		79.80		1.788E+00	1.826E+00	2.674E+00	5.753E-01	0.669
	+	94.00		1.036E+01	3.363E+00	3.722E+00	8.051E-01	2.784
		236.00		3.396E+00	4.651E-01	6.535E-01	5.890E-02	5.196
		256.20	*	1.629E-01	3.630E-01	6.210E-01	1.049E-01	0.262
		286.10		1.033E+00	1.831E+00	2.608E+00	2.612E+00	0.396
	+	299.80		3.529E+00	1.768E+00	2.505E+00	4.082E-01	1.409
		304.40		-5.962E-02	2.025E+00	2.949E+00	5.104E-01	-0.020
		334.20		-7.219E-01	2.828E+00	3.513E+00	6.436E-01	-0.205
TH-229		85.43		7.063E-01	2.264E-01	3.476E-01	2.946E-02	2.032
	+	88.47		4.974E-01	1.286E-01	2.203E-01	1.917E-02	2.258
		100.00		1.566E-01	1.808E-01	3.039E-01	2.393E-02	0.515
		193.63	*	2.173E-01	5.384E-01	8.500E-01	4.694E-02	0.256
		210.97		1.044E+00	8.867E-01	1.313E+00	7.378E-02	0.795
PA-231		283.67	*	-3.034E-01	1.604E+00	2.525E+00	3.483E-01	-0.120
		301.29		9.150E-01	6.294E-01	9.840E-01	1.030E-01	0.930
TH-231		81.07		-5.025E-01	2.489E-01	3.301E-01	2.657E-02	-1.522
		83.78		7.992E-02	1.516E-01	2.085E-01	1.732E-02	0.383
		94.90		7.572E-01	2.600E-01	4.049E-01	3.313E-02	1.870
		122.32		-1.633E-01	1.812E+00	2.949E+00	2.314E-01	-0.055
		144.24		5.484E-01	7.229E-01	1.186E+00	8.968E-02	0.463
		154.21		3.738E-01	4.084E-01	6.811E-01	4.791E-02	0.549

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.856E-01	2.990E-01	3.555E-01	2.162E-02	1.647
		323.87	*	-4.551E-01	7.179E-01	9.949E-01	1.643E-01	-0.457
	+	338.28		8.341E+00	1.777E+00	2.466E+00	2.590E-01	3.382
		445.03		-8.776E-01	2.212E+00	3.569E+00	3.641E-01	-0.246
U-231		84.21		3.725E+00	4.218E+00	6.266E+00	5.233E-01	0.594
	+	92.29		7.103E+00	1.816E+00	2.739E+00	2.293E-01	2.593
		95.87	*	-2.576E-01	8.141E-01	1.157E+00	9.391E-02	-0.223
		108.00		-8.246E-01	1.443E+00	2.320E+00	1.743E-01	-0.356
PA-233	+	75.28		2.758E+01	5.894E+00	7.344E+00	1.085E+00	3.756
	+	86.59		7.132E+00	2.585E+00	3.093E+00	8.293E-01	2.306
	+	300.12		9.838E-01	4.845E-01	6.981E-01	9.391E-02	1.409
		311.98	*	-4.108E-02	6.153E-02	9.990E-02	6.168E-03	-0.411
		340.50		1.750E+00	8.016E-01	1.151E+00	2.641E-01	1.521
		398.62		6.389E-01	2.111E+00	3.544E+00	9.139E-01	0.180
		415.76		5.085E-01	1.822E+00	2.671E+00	5.481E-01	0.190
PA-234	+	63.00		2.763E+00	1.784E+00	2.265E+00	3.298E-01	1.219
		94.67		7.128E-01	2.037E-01	3.032E-01	3.672E-02	2.351
		98.44		1.185E-01	1.198E-01	1.512E-01	8.422E-02	0.784
		99.86		3.915E-01	4.739E-01	7.705E-01	6.072E-02	0.508
		111.00		3.285E-02	1.853E-01	3.049E-01	3.432E-02	0.108
		131.20		6.840E-02	1.240E-01	1.811E-01	1.216E-02	0.378
		152.70		1.355E-01	3.339E-01	5.479E-01	8.679E-02	0.247
	+	186.00		8.342E+00	3.482E+00	2.614E+00	7.972E-01	3.191
		226.40		4.113E-01	4.031E-01	6.679E-01	7.685E-02	0.616
		227.20		2.939E-01	4.269E-01	7.026E-01	4.001E-02	0.418
		248.90		-5.682E-02	7.945E-01	1.264E+00	2.715E-01	-0.045
	+	293.70		8.862E+00	1.736E+00	1.874E+00	3.016E-01	4.729
		369.80		-3.939E-02	7.870E-01	1.306E+00	2.713E-01	-0.030
	+	568.70		5.273E+00	2.128E+00	2.442E+00	1.457E-01	2.159
		569.50		1.273E+00	3.600E-01	6.264E-01	3.737E-02	2.032
		574.00		-5.522E-01	1.648E+00	2.251E+00	1.344E-01	-0.245
		699.00		1.490E-01	7.319E-01	1.200E+00	2.183E-01	0.124
		706.10		-9.860E-01	1.180E+00	1.662E+00	7.353E-01	-0.593
		733.00		-5.462E-02	4.178E-01	5.727E-01	1.236E-01	-0.095
		742.81		2.757E-01	1.346E+00	2.185E+00	1.465E+00	0.126
	+	796.30		2.522E+00	1.309E+00	1.778E+00	4.765E-01	1.418
		805.60		1.245E+00	1.106E+00	1.818E+00	5.539E-01	0.685
		819.60		6.953E-01	1.295E+00	2.124E+00	8.054E-01	0.327
		826.30		5.720E-01	8.616E-01	1.447E+00	6.464E-01	0.395
		831.60		-4.771E-01	6.576E-01	1.024E+00	3.047E-01	-0.466
		876.40		-4.405E-01	8.874E-01	1.217E+00	1.251E+00	-0.362
		880.51		-1.514E-01	2.621E-01	4.177E-01	3.801E-02	-0.362
		883.24		-1.064E-02	2.716E-01	4.529E-01	3.048E-01	-0.023
		899.00		-7.082E-01	8.974E-01	1.318E+00	5.782E-01	-0.537
		925.00		4.851E-01	1.253E+00	2.147E+00	1.961E-01	0.226
		926.50		8.416E-02	1.892E-01	3.108E-01	7.910E-02	0.271
		946.00	*	-5.065E-01	3.292E-01	4.599E-01	8.693E-02	-1.101
		949.00		4.836E-01	4.529E-01	8.098E-01	7.195E-02	0.597
		980.50		-1.308E-01	7.260E-01	1.191E+00	1.016E-01	-0.110

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-3.901E-01	1.032E+00	1.544E+00	1.002E+00	-0.253
PA-234M		766.41		2.559E+01	2.905E+01	3.300E+01	2.526E+01	0.775
		1001.03	*	2.181E+00	6.328E+00	1.073E+01	1.171E+00	0.203
U-235	+	89.95		3.905E+00	1.940E+00	1.903E+00	5.871E-01	2.051
	+	93.35		3.223E+00	1.191E+00	1.208E+00	3.374E-01	2.668
		105.00		9.602E-01	1.097E+00	1.785E+00	5.278E-01	0.538
		143.76	*	1.291E-01	2.248E-01	3.655E-01	6.017E-02	0.353
		163.35		5.458E-01	4.866E-01	7.941E-01	1.420E-01	0.687
	+	185.71		3.090E-01	8.965E-02	9.655E-02	5.288E-03	3.200
		205.31		2.348E-01	6.212E-01	8.857E-01	1.587E-01	0.265
NP-236		94.67		5.435E-01	1.470E-01	2.302E-01	1.887E-02	2.361
		98.44		8.960E-02	7.594E-02	1.143E-01	9.101E-03	0.784
		111.00		2.484E-02	1.402E-01	2.306E-01	1.708E-02	0.108
		160.31	*	-8.353E-02	8.036E-02	1.251E-01	6.992E-03	-0.668
NP-239		99.55		1.480E-01	1.587E-01	2.587E-01	2.044E-02	0.572
		117.00	*	-5.467E-02	1.933E-01	3.130E-01	2.262E-02	-0.175
	+	209.75		2.373E+00	1.170E+00	1.406E+00	7.892E-02	1.687
		228.18		-1.642E-01	2.347E-01	3.575E-01	2.037E-02	-0.459
	+	277.60		2.289E-01	2.488E-01	3.155E-01	1.839E-02	0.726
		334.30		-3.590E-01	1.602E+00	1.999E+00	1.151E-01	-0.180
AM-241		59.54	*	1.321E-01	1.412E-01	2.120E-01	1.574E-02	0.623
CM-243		99.55		1.523E-01	1.633E-01	2.662E-01	2.103E-02	0.572
		103.76	*	-7.834E-03	9.764E-02	1.597E-01	1.228E-02	-0.049
		117.00		-5.624E-02	1.989E-01	3.220E-01	2.327E-02	-0.175
	+	209.75		2.339E+00	1.154E+00	1.386E+00	7.778E-02	1.687
		228.18		-1.659E-01	2.371E-01	3.612E-01	2.058E-02	-0.459
	+	277.60		2.307E-01	2.508E-01	3.180E-01	1.854E-02	0.726
CM-247	+	278.00		9.492E-01	1.032E+00	1.306E+00	7.613E-02	0.727
		287.40		-1.380E-01	1.220E+00	2.040E+00	1.191E-01	-0.068
		402.60	*	2.023E-02	4.056E-02	6.712E-02	3.687E-03	0.301
CF-249		252.85		-3.379E-01	8.748E-01	1.371E+00	7.929E-02	-0.246
		333.44		8.818E-02	2.588E-01	2.641E-01	1.522E-02	0.334
		387.95	*	-9.119E-03	3.979E-02	6.535E-02	3.573E-03	-0.140
CF-251		176.60	*	-5.762E-03	1.272E-01	2.052E-01	1.113E-02	-0.028
		227.00		2.925E-01	3.805E-01	6.280E-01	3.576E-02	0.466
		285.00		1.130E+00	1.715E+00	2.955E+00	1.724E-01	0.382

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504013      *
* Acquisition date :  7-JUL-2009 09:44:19 Detector SN#    :                 *
* Detector ID        : GAM14                Sensitivity     : 5.000         *
* Geometry           : CAN                  Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.90      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504013           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.4506E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  6-MAR-2009 11:43:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.369E+01	2.927E+00	5.489E-01	0.000E+00
CD-109	3.694E+00	9.360E-01	1.356E+00	0.000E+00
SN-126	3.643E-01	9.230E-02	1.342E-01	0.000E+00
TL-208	6.466E-01	9.449E-02	5.836E-02	0.000E+00
BI-211	5.012E+00	5.391E-01	3.233E-01	0.000E+00
PB-212	2.152E+00	1.913E-01	9.173E-02	0.000E+00
PO-212	2.152E+00	1.913E-01	9.173E-02	0.000E+00
BI-214	1.613E+00	2.117E-01	1.101E-01	0.000E+00
PB-214	1.743E+00	2.076E-01	1.127E-01	0.000E+00
PO-214	1.743E+00	2.076E-01	1.127E-01	0.000E+00
PO-216	2.152E+00	1.913E-01	9.173E-02	0.000E+00
PO-218	1.743E+00	2.076E-01	1.127E-01	0.000E+00
RA-224	5.729E+00	1.225E+00	1.043E+00	0.000E+00
RA-226	1.613E+00	2.117E-01	1.101E-01	0.000E+00
AC-228	2.310E+00	4.280E-01	2.174E-01	0.000E+00
RA-228	2.310E+00	4.280E-01	2.174E-01	0.000E+00
TH-228	2.152E+00	1.913E-01	9.172E-02	0.000E+00
TH-230	1.613E+00	2.117E-01	1.101E-01	0.000E+00
TH-232	2.310E+00	4.280E-01	2.174E-01	0.000E+00
TH-234	2.370E+00	1.515E+00	1.902E+00	0.000E+00
U-234	1.613E+00	2.117E-01	1.101E-01	0.000E+00
NP-237	1.070E+00	3.468E-01	4.352E-01	0.000E+00
U-238	2.370E+00	1.515E+00	1.902E+00	0.000E+00
AM-243	5.266E-01	8.868E-02	8.939E-02	0.000E+00
ANH-511	1.254E-01	6.714E-02	4.827E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	2.765E-02	2.969E-01	5.175E-01	0.000E+00	NOT IDENT.
NA-22	1.195E-02	4.300E-02	7.431E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	6.569E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.801E-03	2.360E-02	4.141E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.907E-02	8.726E-02	0.000E+00	FAIL ABUN
SC-46	-1.302E-02	3.796E-02	6.422E-02	0.000E+00	FAIL ABUN
V-48	-1.302E-03	6.183E-02	1.064E-01	0.000E+00	NOT IDENT.
CR-51	1.496E-01	3.447E-01	5.916E-01	0.000E+00	NOT IDENT.
MN-52	-2.506E-01	1.552E-01	1.930E-01	0.000E+00	FAIL ABUN
MN-54	1.856E-02	3.802E-02	6.823E-02	0.000E+00	NOT IDENT.
CO-56	-5.620E-03	3.891E-02	6.713E-02	0.000E+00	FAIL ABUN
CO-57	-2.131E-03	2.553E-02	4.509E-02	0.000E+00	NOT IDENT.
CO-58	-2.149E-02	3.911E-02	6.241E-02	0.000E+00	NOT IDENT.
FE-59	-5.697E-02	9.166E-02	1.490E-01	0.000E+00	NOT IDENT.
CO-60	-3.141E-02	3.773E-02	5.764E-02	0.000E+00	NOT IDENT.
ZN-65	-2.412E-02	1.040E-01	1.488E-01	0.000E+00	NOT IDENT.
GE-68	-1.468E-01	1.303E+00	2.211E+00	0.000E+00	NOT IDENT.
AS-73	3.760E-01	5.996E-01	1.119E+00	0.000E+00	NOT IDENT.
AS-74	-3.709E-02	8.443E-02	1.402E-01	0.000E+00	NOT IDENT.
SE-75	1.907E-02	4.552E-02	7.295E-02	0.000E+00	NOT IDENT.
BR-77	1.536E+00	5.503E+00	9.638E+00	0.000E+00	FAIL ABUN
SR-82	4.612E-01	3.333E-01	5.612E-01	0.000E+00	NOT IDENT.
RB-83	1.409E-02	6.782E-02	1.183E-01	0.000E+00	NOT IDENT.
RB-84	-2.045E-02	6.114E-02	1.034E-01	0.000E+00	NOT IDENT.
KR-85	6.561E+00	7.898E+00	1.254E+01	0.000E+00	NOT IDENT.
SR-85	3.286E-02	3.956E-02	6.280E-02	0.000E+00	NOT IDENT.
RB-86	-7.095E-02	7.576E-01	1.287E+00	0.000E+00	NOT IDENT.
Y-88	4.573E-03	3.482E-02	6.033E-02	0.000E+00	NOT IDENT.
ZR-88	-1.942E-03	2.975E-02	5.206E-02	0.000E+00	NOT IDENT.
Y-91	4.791E+00	1.902E+01	3.283E+01	0.000E+00	NOT IDENT.
NB-94	1.042E-02	3.301E-02	5.690E-02	0.000E+00	NOT IDENT.
NB-95	6.514E-02	4.902E-02	7.921E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.761E-01	2.993E-01	0.000E+00	NOT IDENT.
ZR-95	1.888E-02	7.247E-02	1.239E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.142E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.386E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.249E+00	6.778E+00	1.186E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	8.715E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.343E-02	3.289E-02	5.594E-02	0.000E+00	NOT IDENT.
RH-102	8.737E-03	2.760E-02	4.873E-02	0.000E+00	NOT IDENT.
RU-103	1.296E-02	3.447E-02	6.096E-02	0.000E+00	FAIL ABUN
RH-106	2.154E-01	3.199E-01	5.664E-01	0.000E+00	FAIL ABUN
RU-106	2.154E-01	3.192E-01	5.664E-01	0.000E+00	FAIL ABUN
AG-108M	-1.592E-02	3.130E-02	5.306E-02	0.000E+00	NOT IDENT.
AG-110M	-2.603E-03	3.596E-02	6.071E-02	0.000E+00	NOT IDENT.
IN-111	-3.249E-01	6.693E-01	9.646E-01	0.000E+00	NOT IDENT.
IN-113M	3.707E-02	4.248E-02	7.760E-02	0.000E+00	NOT IDENT.
SN-113	3.707E-02	4.248E-02	7.760E-02	0.000E+00	NOT IDENT.
IN-114M	8.920E-02	1.980E-01	3.059E-01	0.000E+00	NOT IDENT.
CD-115	-4.105E+00	5.218E+00	8.528E+00	0.000E+00	NOT IDENT.
SN-117M	-4.692E-02	4.834E-02	8.147E-02	0.000E+00	NOT IDENT.
SB-122	3.451E-01	1.463E+00	2.209E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.480E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-3.326E-02	2.795E-02	4.671E-02	0.000E+00	NOT IDENT.
I-124	-4.584E-01	5.430E-01	7.397E-01	0.000E+00	NOT IDENT.
SB-124	2.934E-03	7.068E-02	1.173E-01	0.000E+00	FAIL ABUN
SB-125	-1.443E-02	8.638E-02	1.495E-01	0.000E+00	FAIL ABUN
TE-125M	-6.740E+00	9.095E+00	1.579E+01	0.000E+00	NOT IDENT.
I-126	-3.371E-02	1.761E-01	2.950E-01	0.000E+00	NOT IDENT.
SB-126	1.704E-01	1.370E-01	2.237E-01	0.000E+00	FAIL ABUN
SB-127	8.075E-02	8.717E-01	1.484E+00	0.000E+00	NOT IDENT.
XE-127	4.022E-02	5.259E-02	8.206E-02	0.000E+00	NOT IDENT.
I-131	-6.480E-02	8.675E-02	1.470E-01	0.000E+00	NOT IDENT.
TE-132	-3.118E-01	4.411E-01	7.162E-01	0.000E+00	NOT IDENT.
BA-133	1.211E-02	4.573E-02	7.143E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	9.423E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.727E-02	9.324E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.774E-01	3.032E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.076E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.351E-02	9.123E-02	1.609E-01	0.000E+00	FAIL ABUN
BA-137M	6.655E-04	3.923E-02	6.657E-02	0.000E+00	NOT IDENT.
CS-137	7.035E-04	4.147E-02	7.038E-02	0.000E+00	NOT IDENT.
CE-139	-5.952E-03	2.947E-02	5.101E-02	0.000E+00	NOT IDENT.
BA-140	-3.894E-02	2.292E-01	3.897E-01	0.000E+00	NOT IDENT.
LA-140	-7.053E-02	7.994E-02	1.169E-01	0.000E+00	FAIL ABUN
CE-141	7.363E-02	6.003E-02	1.091E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.290E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-5.021E-02	2.325E-01	3.550E-01	0.000E+00	NOT IDENT.
PM-144	9.736E-04	3.543E-02	5.994E-02	0.000E+00	NOT IDENT.
PR-144	6.590E-02	2.398E+00	4.057E+00	0.000E+00	NOT IDENT.

PM-146	4.936E-02	4.423E-02	8.097E-02	0.000E+00	NOT IDENT.
ND-147	-9.117E-02	4.507E-01	7.654E-01	0.000E+00	FAIL ABUN
PM-149	2.726E+01	4.420E+01	8.067E+01	0.000E+00	NOT IDENT.
EU-152	-2.095E-02	1.323E-01	1.577E-01	0.000E+00	NOT IDENT.
GD-153	-2.404E-03	8.237E-02	1.290E-01	0.000E+00	NOT IDENT.
EU-154	3.730E-02	1.206E-01	2.089E-01	0.000E+00	NOT IDENT.
EU-155	8.765E-02	1.057E-01	1.928E-01	0.000E+00	FAIL ABUN
TB-160	9.026E-02	1.207E-01	2.214E-01	0.000E+00	FAIL ABUN
HO-166M	7.560E-02	5.972E-02	1.091E-01	0.000E+00	FAIL ABUN
TM-171	-1.292E+01	2.800E+01	4.399E+01	0.000E+00	NOT IDENT.
LU-176	1.251E-02	2.376E-02	4.222E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.287E+00	1.693E+00	0.000E+00	FAIL ABUN
LU-177M	2.815E-02	1.896E-01	2.910E-01	0.000E+00	FAIL ABUN
HF-181	4.711E-03	4.012E-02	6.998E-02	0.000E+00	NOT IDENT.
W-181	2.207E-01	3.525E-01	5.754E-01	0.000E+00	NOT IDENT.
TA-182	1.141E-01	2.146E-01	3.758E-01	0.000E+00	FAIL ABUN
RE-183	3.134E-02	1.072E-01	1.870E-01	0.000E+00	FAIL ABUN
RE-184	-8.923E-02	2.264E-01	3.787E-01	0.000E+00	NOT IDENT.
OS-185	-4.286E-02	4.343E-02	6.871E-02	0.000E+00	NOT IDENT.
RE-188	1.780E-01	1.694E-01	3.058E-01	0.000E+00	NOT IDENT.
W-188	-5.291E+00	7.902E+00	1.181E+01	0.000E+00	FAIL ABUN
IR-192	-1.695E-02	3.168E-02	5.498E-02	0.000E+00	FAIL ABUN
AU-195	2.720E-01	2.401E-01	3.927E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.020E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.091E+00	4.245E+00	7.269E+00	0.000E+00	NOT IDENT.
TL-202	2.996E-02	5.851E-02	1.047E-01	0.000E+00	NOT IDENT.
HG-203	3.762E-02	4.271E-02	6.974E-02	0.000E+00	NOT IDENT.
BI-207	6.346E-02	5.137E-02	9.581E-02	0.000E+00	FAIL ABUN
TL-207	-4.551E-01	7.036E-01	1.035E+00	0.000E+00	FAIL ABUN
PO-209	-5.209E+00	7.248E+00	1.187E+01	0.000E+00	NOT IDENT.
BI-210	8.769E-01	2.245E+00	4.221E+00	0.000E+00	NOT IDENT.
PB-210	8.769E-01	2.245E+00	4.221E+00	0.000E+00	NOT IDENT.
PO-210	8.769E-01	2.245E+00	4.221E+00	0.000E+00	NOT IDENT.
PB-211	-2.911E-01	1.168E+00	1.727E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.207E-01	7.123E-01	0.000E+00	FAIL ABUN
PO-215	-4.551E-01	7.036E-01	1.035E+00	0.000E+00	FAIL ABUN
RN-219	-1.630E-02	4.321E-01	7.561E-01	0.000E+00	FAIL ABUN
RN-220	-7.342E-01	2.510E+01	4.303E+01	0.000E+00	NOT IDENT.
RA-223	-4.551E-01	7.036E-01	1.035E+00	0.000E+00	FAIL ABUN
AC-227	1.629E-01	3.554E-01	6.494E-01	0.000E+00	FAIL ABUN
TH-227	1.629E-01	3.557E-01	6.494E-01	0.000E+00	FAIL ABUN
TH-229	2.173E-01	5.277E-01	8.944E-01	0.000E+00	FAIL ABUN
PA-231	-3.034E-01	1.572E+00	2.635E+00	0.000E+00	NOT IDENT.
TH-231	-4.551E-01	7.036E-01	1.035E+00	0.000E+00	FAIL ABUN
U-231	-2.576E-01	7.979E-01	1.236E+00	0.000E+00	FAIL ABUN
PA-233	-4.108E-02	6.030E-02	1.040E-01	0.000E+00	FAIL ABUN
PA-234	-5.065E-01	3.226E-01	4.671E-01	0.000E+00	FAIL ABUN
PA-234M	2.181E+00	6.201E+00	1.089E+01	0.000E+00	NOT IDENT.
U-235	1.291E-01	2.203E-01	3.871E-01	0.000E+00	FAIL ABUN
NP-236	-8.353E-02	7.875E-02	1.322E-01	0.000E+00	NOT IDENT.
NP-239	-5.467E-02	1.894E-01	3.329E-01	0.000E+00	FAIL ABUN
AM-241	1.321E-01	1.384E-01	2.287E-01	0.000E+00	NOT IDENT.
CM-243	-7.834E-03	9.568E-02	1.703E-01	0.000E+00	FAIL ABUN
CM-247	2.023E-02	3.975E-02	6.950E-02	0.000E+00	FAIL ABUN
CF-249	-9.119E-03	3.899E-02	6.773E-02	0.000E+00	NOT IDENT.
CF-251	-5.762E-03	1.247E-01	2.163E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:45:06.50

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504013.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:44:19.
Sample ID         : G232504013           Sample quantity  : 1.45060E+02 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.90  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1683	10.67*	1.211E+00	3.369E+01	3.369E+01	8.87
CD-109	88.03	367	3.72*	7.053E+00	3.624E+00	3.694E+00	25.85
SN-126	64.28	161	9.60	4.623E+00	9.381E-01	9.381E-01	64.52
	86.94	367	8.90	7.053E+00	1.515E+00	1.515E+00	48.01
	87.57	367	37.00*	7.053E+00	3.643E-01	3.643E-01	25.85
TL-208	277.35	62	6.80	4.999E+00	4.746E-01	4.746E-01	109.05
	510.84	150	21.60	3.090E+00	5.807E-01	5.807E-01	55.25
	583.14	581	84.20*	2.760E+00	6.466E-01	6.466E-01	14.91
	860.37	70	12.46	1.944E+00	7.527E-01	7.527E-01	65.86
BI-211	72.87	------	1.27	5.875E+00	------ Line Not Found		------
	351.07	1048	12.94*	4.181E+00	5.012E+00	5.012E+00	10.98
PB-212	74.81	817	10.70	6.080E+00	3.248E+00	3.248E+00	19.56
	77.11	1118	18.00	6.307E+00	2.548E+00	2.548E+00	12.82
	87.30	367	8.00	7.053E+00	1.685E+00	1.685E+00	27.72
	238.63	2066	44.60*	5.571E+00	2.152E+00	2.152E+00	9.07
	300.09	118	3.41	4.722E+00	1.904E+00	1.904E+00	48.09
PO-212	74.81	817	10.70	6.080E+00	3.248E+00	3.248E+00	19.56
	77.11	1118	18.00	6.307E+00	2.548E+00	2.548E+00	12.82
	87.30	367	8.00	7.053E+00	1.685E+00	1.685E+00	27.72
	115.19	------	0.60	7.689E+00	------ Line Not Found		------
	238.63	2066	44.60*	5.571E+00	2.152E+00	2.152E+00	9.07
	300.09	118	3.41	4.722E+00	1.904E+00	1.904E+00	48.09
BI-214	609.31	767	46.30*	2.656E+00	1.613E+00	1.613E+00	13.39
	768.36	------	5.04	2.157E+00	------ Line Not Found		------
	934.06	50	3.21	1.801E+00	2.257E+00	2.257E+00	68.18
	1120.29	131	15.10	1.524E+00	1.476E+00	1.476E+00	34.63
	1238.11	51	5.94	1.393E+00	1.579E+00	1.579E+00	75.60
	1377.67	41	4.11	1.270E+00	2.032E+00	2.032E+00	70.44
	1764.49	150	15.80	1.059E+00	2.320E+00	2.320E+00	19.33
PB-214	74.81	817	6.21	6.080E+00	5.597E+00	5.597E+00	18.71
	77.11	1118	10.50	6.307E+00	4.368E+00	4.368E+00	14.91
	87.30	367	4.67	7.053E+00	2.886E+00	2.886E+00	26.98

Sample ID : G232504013 Acquisition date : 7-JUL-2009 09:44:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	483	7.49	5.524E+00	3.021E+00	3.021E+00	22.53
	295.21	655	19.20	4.781E+00	1.846E+00	1.846E+00	14.06
	351.92	1048	37.20*	4.181E+00	1.743E+00	1.743E+00	12.15
PO-214	74.81	817	6.21	6.080E+00	5.597E+00	5.597E+00	18.71
	77.11	1118	10.50	6.307E+00	4.368E+00	4.368E+00	14.91
	87.30	367	4.67	7.053E+00	2.886E+00	2.886E+00	26.98
	241.98	483	7.49	5.524E+00	3.021E+00	3.021E+00	22.53
	295.21	655	19.20	4.781E+00	1.846E+00	1.846E+00	14.06
	351.92	1048	37.20*	4.181E+00	1.743E+00	1.743E+00	12.15
PO-216	74.81	817	10.70	6.080E+00	3.248E+00	3.248E+00	19.56
	77.11	1118	18.00	6.307E+00	2.548E+00	2.548E+00	12.82
	87.30	367	8.00	7.053E+00	1.685E+00	1.685E+00	27.72
	238.63	2066	44.60*	5.571E+00	2.152E+00	2.152E+00	9.07
	300.09	118	3.41	4.722E+00	1.904E+00	1.904E+00	48.09
PO-218	74.81	817	6.21	6.080E+00	5.597E+00	5.597E+00	18.71
	77.11	1118	10.50	6.307E+00	4.368E+00	4.368E+00	14.91
	87.30	367	4.67	7.053E+00	2.886E+00	2.886E+00	26.98
	241.98	483	7.49	5.524E+00	3.021E+00	3.021E+00	22.53
	295.21	655	19.20	4.781E+00	1.846E+00	1.846E+00	14.06
	351.92	1048	37.20*	4.181E+00	1.743E+00	1.743E+00	12.15
RA-224	240.98	483	3.95*	5.524E+00	5.729E+00	5.729E+00	21.82
RA-226	609.31	767	46.30*	2.656E+00	1.613E+00	1.613E+00	13.39
	768.36	------	5.04	2.157E+00	------ Line Not Found		------
	934.06	50	3.21	1.801E+00	2.257E+00	2.257E+00	68.18
	1120.29	131	15.10	1.524E+00	1.476E+00	1.476E+00	34.63
	1238.11	51	5.94	1.393E+00	1.579E+00	1.579E+00	75.60
	1377.67	41	4.11	1.270E+00	2.032E+00	2.032E+00	70.44
	1764.49	150	15.80	1.059E+00	2.320E+00	2.320E+00	19.33
AC-228	338.32	379	11.40	4.310E+00	1.997E+00	1.997E+00	44.78
	911.07	456	27.70*	1.844E+00	2.310E+00	2.310E+00	18.90
	969.11	212	16.60	1.742E+00	1.899E+00	1.899E+00	39.08
RA-228	338.32	379	11.40	4.310E+00	1.997E+00	1.997E+00	44.78
	911.07	456	27.70*	1.844E+00	2.310E+00	2.310E+00	18.90
	969.11	212	16.60	1.742E+00	1.899E+00	1.899E+00	39.08
TH-228	84.40	------	1.21	6.878E+00	------ Line Not Found		------
	238.60	2066	44.60*	5.571E+00	2.152E+00	2.152E+00	9.07
	300.10	118	3.41	4.722E+00	1.904E+00	1.904E+00	75.62
TH-230	609.31	767	46.30*	2.656E+00	1.613E+00	1.613E+00	13.39
	768.36	------	5.04	2.157E+00	------ Line Not Found		------
	934.06	50	3.21	1.801E+00	2.257E+00	2.257E+00	68.18
	1120.29	131	15.10	1.524E+00	1.476E+00	1.476E+00	34.63
	1238.11	51	5.94	1.393E+00	1.579E+00	1.579E+00	75.60
	1377.67	41	4.11	1.270E+00	2.032E+00	2.032E+00	70.44
	1764.49	150	15.80	1.059E+00	2.320E+00	2.320E+00	19.33
TH-232	338.32	379	11.40	4.310E+00	1.997E+00	1.997E+00	19.41
	911.07	456	27.70*	1.844E+00	2.310E+00	2.310E+00	18.90
	969.11	212	16.60	1.742E+00	1.899E+00	1.899E+00	39.08
TH-234	63.29	161	3.80*	4.623E+00	2.370E+00	2.370E+00	65.23
	92.38	410	5.41	7.316E+00	2.681E+00	2.681E+00	30.11

Sample ID : G232504013 Acquisition date : 7-JUL-2009 09:44:19

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	767	46.30*	2.656E+00	1.613E+00	1.613E+00	13.39
	768.36	------	5.04	2.157E+00	------ Line Not Found		------
	934.06	50	3.21	1.801E+00	2.257E+00	2.257E+00	68.18
	1120.29	131	15.10	1.524E+00	1.476E+00	1.476E+00	34.63
	1238.11	51	5.94	1.393E+00	1.579E+00	1.579E+00	75.60
	1377.67	41	4.11	1.270E+00	2.032E+00	2.032E+00	70.44
	1764.49	150	15.80	1.059E+00	2.320E+00	2.320E+00	19.33
NP-237	86.50	367	12.60*	7.053E+00	1.070E+00	1.070E+00	33.08
	95.87	------	2.60	7.425E+00	------ Line Not Found		------
U-238	63.29	161	3.80*	4.623E+00	2.370E+00	2.370E+00	65.23
	92.38	410	5.41	7.316E+00	2.681E+00	2.681E+00	25.57
AM-243	74.67	817	66.00*	6.080E+00	5.266E-01	5.266E-01	17.18
	86.72	367	0.34	7.053E+00	4.012E+01	4.012E+01	25.85
	117.66	------	0.55	7.685E+00	------ Line Not Found		------
	142.18	------	0.13	7.399E+00	------ Line Not Found		------
ANH-511	511.00	150	100.00*	3.090E+00	1.254E-01	1.254E-01	54.62

Flag: "*" = Keyline

Sample ID : G232504013 Acquisition date : 7-JUL-2009 09:44:19

Total number of lines in spectrum	38	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	35	92.11%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.369E+01	3.369E+01	0.299E+01	8.87	
CD-109	464.00D	1.02	3.624E+00	3.694E+00	0.955E+00	25.85	
SN-126	1.00E+05Y	1.00	3.643E-01	3.643E-01	0.942E-01	25.85	
TL-208	1.41E+10Y	1.00	6.466E-01	6.466E-01	0.964E-01	14.91	
BI-211	7.04E+08Y	1.00	5.012E+00	5.012E+00	0.550E+00	10.98	
PB-212	1.41E+10Y	1.00	2.152E+00	2.152E+00	0.195E+00	9.07	
PO-212	1.41E+10Y	1.00	2.152E+00	2.152E+00	0.195E+00	9.07	
BI-214	1600.00Y	1.00	1.613E+00	1.613E+00	0.216E+00	13.39	
PB-214	1600.00Y	1.00	1.743E+00	1.743E+00	0.212E+00	12.15	
PO-214	1600.00Y	1.00	1.743E+00	1.743E+00	0.212E+00	12.15	
PO-216	1.41E+10Y	1.00	2.152E+00	2.152E+00	0.195E+00	9.07	
PO-218	1600.00Y	1.00	1.743E+00	1.743E+00	0.212E+00	12.15	
RA-224	1.41E+10Y	1.00	5.729E+00	5.729E+00	1.250E+00	21.82	
RA-226	1600.00Y	1.00	1.613E+00	1.613E+00	0.216E+00	13.39	
AC-228	1.41E+10Y	1.00	2.310E+00	2.310E+00	0.437E+00	18.90	
RA-228	1.41E+10Y	1.00	2.310E+00	2.310E+00	0.437E+00	18.90	
TH-228	1.41E+10Y	1.00	2.152E+00	2.152E+00	0.195E+00	9.07	
TH-230	4.47E+09Y	1.00	1.613E+00	1.613E+00	0.216E+00	13.39	
TH-232	1.41E+10Y	1.00	2.310E+00	2.310E+00	0.437E+00	18.90	
TH-234	4.47E+09Y	1.00	2.370E+00	2.370E+00	1.546E+00	65.23	
U-234	4.47E+09Y	1.00	1.613E+00	1.613E+00	0.216E+00	13.39	
NP-237	2.14E+06Y	1.00	1.070E+00	1.070E+00	0.354E+00	33.08	
U-238	4.47E+09Y	1.00	2.370E+00	2.370E+00	1.546E+00	65.23	
AM-243	7380.00Y	1.00	5.266E-01	5.266E-01	0.905E-01	17.18	
ANH-511	1.00E+09Y	1.00	1.254E-01	1.254E-01	0.685E-01	54.62	
		Total Activity :	8.275E+01	8.282E+01			

Grand Total Activity : 8.275E+01 8.282E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232504013
Acquisition date : 7-JUL-2009 09:44:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.88	293	785	1.61	179.44	171	21	4.07E-02	39.0	7.19E+00	T
0	128.89	143	523	1.56	257.39	253	9	1.98E-02	60.1	7.60E+00	T
0	186.03	421	647	1.54	371.56	364	15	5.85E-02	28.5	6.53E+00	T
0	208.80	181	473	1.15	417.06	412	11	2.51E-02	49.0	6.08E+00	T
0	270.17	157	354	1.54	539.71	535	12	2.18E-02	50.7	5.10E+00	T
0	327.70	144	249	1.28	654.69	648	12	2.00E-02	46.8	4.41E+00	T
0	409.56	96	174	1.43	818.32	814	11	1.33E-02	57.4	3.70E+00	T
0	462.61	125	182	1.62	924.37	919	13	1.74E-02	48.0	3.35E+00	T
0	567.63	173	197	3.20	1134.30	1127	16	2.40E-02	39.9	2.82E+00	T
0	727.22	138	129	1.48	1453.40	1446	14	1.92E-02	38.8	2.27E+00	T
0	769.87	118	143	4.92	1538.68	1528	21	1.63E-02	54.6	2.15E+00	
0	795.10	79	64	1.05	1589.15	1584	10	1.10E-02	44.4	2.09E+00	T
0	1729.16	31	5	1.50	3458.12	3452	11	4.31E-03	46.0	1.07E+00	
0	1847.42	20	13	1.33	3694.90	3689	13	2.78E-03	86.7	1.03E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:45:11.51

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504013.CNF;1 *
* Acquisition date  : 7-JUL-2009 09:44:19.  Detector SN#     :             *
* Detector ID       : GAM14                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.90          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504013            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.45060E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 6-MAR-2009 11:43:06.61MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1032-A                LCS Isotope     :               *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.369E+01	2.987E+00	5.459E-01	3.964E-02	61.714
CD-109	3.694E+00	9.551E-01	1.268E+00	1.108E-01	2.915
SN-126	3.643E-01	9.419E-02	1.254E-01	1.091E-02	2.905
TL-208	6.466E-01	9.642E-02	5.684E-02	3.887E-03	11.377
BI-211	5.012E+00	5.501E-01	3.113E-01	1.972E-02	16.101
PB-212	2.152E+00	1.952E-01	8.757E-02	6.379E-03	24.574
PO-212	2.152E+00	1.952E-01	8.757E-02	6.379E-03	24.574
BI-214	1.613E+00	2.160E-01	1.074E-01	8.499E-03	15.025
PB-214	1.743E+00	2.119E-01	1.085E-01	8.903E-03	16.067
PO-214	1.743E+00	2.119E-01	1.085E-01	8.903E-03	16.067
PO-216	2.152E+00	1.952E-01	8.757E-02	6.379E-03	24.574
PO-218	1.743E+00	2.119E-01	1.085E-01	8.903E-03	16.067
RA-224	5.729E+00	1.250E+00	9.962E-01	5.726E-02	5.751
RA-226	1.613E+00	2.160E-01	1.074E-01	8.499E-03	15.025
AC-228	2.310E+00	4.367E-01	2.138E-01	2.511E-02	10.805
RA-228	2.310E+00	4.367E-01	2.138E-01	2.511E-02	10.805
TH-228	2.152E+00	1.952E-01	8.756E-02	6.378E-03	24.576
TH-230	1.613E+00	2.160E-01	1.074E-01	8.499E-03	15.025

Sample ID : G232504013 Acquisition date : 7-JUL-2009 09:44:19

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	2.310E+00	4.367E-01	2.138E-01	2.511E-02	10.805
TH-234	2.370E+00	1.546E+00	1.765E+00	3.034E-01	1.343
U-234	1.613E+00	2.160E-01	1.074E-01	8.499E-03	15.025
NP-237	1.070E+00	3.539E-01	4.066E-01	9.087E-02	2.631
U-238	2.370E+00	1.546E+00	1.765E+00	3.034E-01	1.343
AM-243	5.266E-01	9.049E-02	8.326E-02	6.248E-03	6.325
ANH-511	1.254E-01	6.851E-02	4.686E-02	2.753E-03	2.677

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.765E-02		3.029E-01	5.017E-01	3.381E-02	0.055
NA-22	1.195E-02		4.387E-02	7.368E-02	4.813E-03	0.162
NA-24	-3.387E-02		3.351E-02	Half-Life too short		
AL-26	3.801E-03		2.409E-02	4.140E-02	2.400E-03	0.092
TI-44	4.702E-01	+	6.028E-02	8.136E-02	6.353E-03	5.779
SC-46	-1.302E-02		3.873E-02	6.314E-02	5.835E-03	-0.206
V-48	-1.302E-03		6.310E-02	1.048E-01	8.902E-03	-0.012
CR-51	1.496E-01		3.517E-01	5.684E-01	3.673E-02	0.263
MN-52	-2.506E-01		1.584E-01	1.919E-01	1.345E-02	-1.306
MN-54	1.856E-02		3.879E-02	6.699E-02	5.619E-03	0.277
CO-56	-5.620E-03		3.970E-02	6.593E-02	5.651E-03	-0.085
CO-57	-2.131E-03		2.606E-02	4.243E-02	3.019E-03	-0.050
CO-58	-2.149E-02		3.991E-02	6.123E-02	4.927E-03	-0.351
FE-59	-5.697E-02		9.353E-02	1.473E-01	1.134E-02	-0.387
CO-60	-3.141E-02		3.850E-02	5.721E-02	4.077E-03	-0.549
ZN-65	-2.412E-02		1.062E-01	1.470E-01	9.665E-03	-0.164
GE-68	-1.468E-01		1.330E+00	2.184E+00	1.570E-01	-0.067
AS-73	3.760E-01		6.118E-01	1.035E+00	6.746E-02	0.363
AS-74	-3.709E-02		8.615E-02	1.366E-01	8.167E-03	-0.272
SE-75	1.907E-02		4.645E-02	6.981E-02	4.098E-03	0.273
BR-77	1.536E+00		5.615E+00	9.362E+00	5.519E-01	0.164
SR-82	4.612E-01		3.401E-01	5.501E-01	4.136E-02	0.838
RB-83	1.409E-02		6.920E-02	1.149E-01	6.774E-03	0.123
RB-84	-2.045E-02		6.239E-02	1.016E-01	9.266E-03	-0.201
KR-85	6.561E+00		8.059E+00	1.217E+01	7.160E-01	0.539
SR-85	3.286E-02		4.037E-02	6.098E-02	3.587E-03	0.539
RB-86	-7.095E-02		7.730E-01	1.271E+00	9.153E-02	-0.056
Y-88	4.573E-03		3.554E-02	6.034E-02	3.427E-03	0.076
ZR-88	-1.942E-03		3.036E-02	5.025E-02	2.736E-03	-0.039
Y-91	4.791E+00		1.941E+01	3.251E+01	1.891E+00	0.147
NB-94	1.042E-02		3.368E-02	5.565E-02	3.609E-03	0.187
NB-95	6.514E-02		5.002E-02	7.761E-02	5.715E-03	0.839
NB-95M	1.051E+00		1.796E-01	2.857E-01	2.135E-02	3.679
ZR-95	1.888E-02		7.395E-02	1.213E-01	1.001E-02	0.156
NB-97	-1.188E-03		5.828E-03	Half-Life too short		
ZR-97	6.584E-01		1.217E-01	Half-Life too short		

Sample ID : G232504013 Acquisition date : 7-JUL-2009 09:44:19

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	4.249E+00		6.917E+00	1.161E+01	1.663E+00	0.366
TC-99M	-5.419E+07		4.446E+07	Half-Life too short		
RH-101	-1.343E-02		3.356E-02	5.319E-02	2.951E-03	-0.253
RH-102	8.737E-03		2.816E-02	4.723E-02	2.730E-03	0.185
RU-103	1.296E-02		3.517E-02	5.915E-02	7.491E-03	0.219
RH-106	2.154E-01		3.264E-01	5.524E-01	6.533E-02	0.390
RU-106	2.154E-01		3.257E-01	5.524E-01	3.303E-02	0.390
AG-108M	-1.592E-02		3.194E-02	5.133E-02	3.153E-03	-0.310
AG-110M	-2.603E-03		3.670E-02	5.928E-02	3.745E-03	-0.044
IN-111	-3.249E-01		6.830E-01	9.214E-01	5.310E-02	-0.353
IN-113M	3.707E-02		4.335E-02	7.490E-02	4.383E-03	0.495
SN-113	3.707E-02		4.335E-02	7.490E-02	4.383E-03	0.495
IN-114M	8.920E-02		2.020E-01	2.906E-01	1.599E-02	0.307
CD-115	-4.105E+00		5.324E+00	8.286E+00	4.896E-01	-0.495
SN-117M	-4.692E-02		4.932E-02	7.710E-02	4.361E-03	-0.609
SB-122	3.451E-01		1.493E+00	2.150E+00	1.282E-01	0.161
I-123	-4.140E-01		1.775E-01	Half-Life too short		
TE-123M	-3.326E-02		2.852E-02	4.420E-02	2.528E-03	-0.752
I-124	-4.584E-01		5.541E-01	7.209E-01	4.312E-02	-0.636
SB-124	2.934E-03		7.212E-02	1.171E-01	7.913E-03	0.025
SB-125	-1.443E-02		8.814E-02	1.445E-01	8.470E-03	-0.100
TE-125M	-6.740E+00		9.281E+00	1.482E+01	1.390E+00	-0.455
I-126	-3.371E-02		1.797E-01	2.881E-01	1.730E-02	-0.117
SB-126	1.704E-01		1.398E-01	2.189E-01	1.473E-02	0.779
SB-127	8.075E-02		8.895E-01	1.450E+00	1.304E-01	0.056
XE-127	4.022E-02		5.367E-02	7.807E-02	4.352E-03	0.515
I-131	-6.480E-02		8.852E-02	1.416E-01	8.916E-03	-0.458
TE-132	-3.118E-01		4.501E-01	6.831E-01	9.498E-02	-0.456
BA-133	1.211E-02		4.666E-02	6.879E-02	7.907E-03	0.176
I-133	-3.361E-04		4.808E-04	Half-Life too short		
CS-134	1.295E-01	+	5.843E-02	9.144E-02	7.197E-03	1.416
CS-135	3.758E-01		1.810E-01	2.902E-01	2.226E-02	1.295
I-135	-8.233E+06		1.059E+07	Half-Life too short		
CS-136	3.351E-02		9.310E-02	1.589E-01	1.277E-02	0.211
BA-137M	6.655E-04		4.003E-02	6.502E-02	3.866E-03	0.010
CS-137	7.035E-04		4.232E-02	6.873E-02	4.103E-03	0.010
CE-139	-5.952E-03		3.007E-02	4.832E-02	2.594E-03	-0.123
BA-140	-3.894E-02		2.339E-01	3.788E-01	1.233E-01	-0.103
LA-140	-7.053E-02		8.157E-02	1.165E-01	7.721E-03	-0.605
CE-141	7.363E-02		6.126E-02	1.031E-01	6.579E-03	0.714
CE-143	5.445E-04		6.580E-05	Half-Life too short		
CE-144	-5.021E-02		2.372E-01	3.347E-01	4.872E-02	-0.150
PM-144	9.736E-04		3.615E-02	5.861E-02	3.754E-03	0.017
PR-144	6.590E-02		2.447E+00	3.967E+00	2.540E-01	0.017
PM-146	4.936E-02		4.514E-02	7.840E-02	6.712E-03	0.630
ND-147	-9.117E-02		4.599E-01	7.438E-01	1.009E-01	-0.123
PM-149	2.726E+01		4.510E+01	7.732E+01	1.097E+01	0.353
EU-152	-2.095E-02		1.350E-01	1.518E-01	9.819E-03	-0.138

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-2.404E-03		8.405E-02	1.209E-01	9.693E-03	-0.020
EU-154	3.730E-02		1.231E-01	2.071E-01	2.031E-02	0.180
EU-155	8.765E-02		1.079E-01	1.809E-01	1.400E-02	0.485
TB-160	9.026E-02		1.231E-01	2.176E-01	1.977E-02	0.415
HO-166M	7.560E-02		6.094E-02	1.067E-01	7.051E-03	0.709
TM-171	-1.292E+01		2.857E+01	4.088E+01	2.850E+00	-0.316
LU-176	1.251E-02		2.424E-02	4.053E-02	2.360E-03	0.309
LU-177	2.662E+00	+	1.313E+00	1.611E+00	9.029E-02	1.652
LU-177M	2.815E-02		1.934E-01	2.812E-01	1.559E-02	0.100
HF-181	4.711E-03		4.094E-02	6.785E-02	3.935E-03	0.069
W-181	2.207E-01		3.597E-01	5.344E-01	3.682E-02	0.413
TA-182	1.141E-01		2.190E-01	3.723E-01	2.227E-02	0.306
RE-183	3.134E-02		1.094E-01	1.770E-01	9.751E-03	0.177
RE-184	-8.923E-02		2.310E-01	3.620E-01	2.094E-02	-0.246
OS-185	-4.286E-02		4.432E-02	6.706E-02	3.999E-03	-0.639
RE-188	1.780E-01		1.728E-01	2.893E-01	1.676E-02	0.615
W-188	-5.291E+00		8.063E+00	1.132E+01	6.608E-01	-0.467
IR-192	-1.695E-02		3.233E-02	5.282E-02	3.083E-03	-0.321
AU-195	2.720E-01		2.450E-01	3.679E-01	2.920E-02	0.739
TL-200	-4.899E-05		5.203E-05	Half-Life too short		
TL-201	-2.091E+00		4.332E+00	6.887E+00	3.699E-01	-0.304
TL-202	2.996E-02		5.970E-02	1.013E-01	5.730E-03	0.296
HG-203	3.762E-02		4.358E-02	6.681E-02	4.134E-03	0.563
BI-207	6.346E-02		5.242E-02	9.459E-02	7.000E-03	0.671
TL-207	-4.551E-01		7.179E-01	9.949E-01	1.643E-01	-0.457
PO-209	-5.209E+00		7.396E+00	1.168E+01	1.093E+00	-0.446
BI-210	8.769E-01		2.291E+00	3.894E+00	2.887E-01	0.225
PB-210	8.769E-01		2.291E+00	3.894E+00	2.887E-01	0.225
PO-210	8.769E-01		2.291E+00	3.894E+00	2.443E-01	0.225
PB-211	-2.911E-01		1.192E+00	1.668E+00	1.039E+00	-0.175
BI-212	1.336E+00	+	5.313E-01	6.972E-01	5.931E-02	1.916
PO-215	-4.551E-01		7.179E-01	9.949E-01	1.643E-01	-0.457
RN-219	-1.630E-02		4.409E-01	7.302E-01	9.840E-02	-0.022
RN-220	-7.342E-01		2.561E+01	4.185E+01	2.487E+00	-0.018
RA-223	-4.551E-01		7.179E-01	9.949E-01	1.643E-01	-0.457
AC-227	1.629E-01		3.627E-01	6.210E-01	8.667E-02	0.262
TH-227	1.629E-01		3.630E-01	6.210E-01	1.049E-01	0.262
TH-229	2.173E-01		5.384E-01	8.500E-01	4.694E-02	0.256
PA-231	-3.034E-01		1.604E+00	2.525E+00	3.483E-01	-0.120
TH-231	-4.551E-01		7.179E-01	9.949E-01	1.643E-01	-0.457
U-231	-2.576E-01		8.141E-01	1.157E+00	9.391E-02	-0.223
PA-233	-4.108E-02		6.153E-02	9.990E-02	6.168E-03	-0.411
PA-234	-5.065E-01		3.292E-01	4.599E-01	8.693E-02	-1.101
PA-234M	2.181E+00		6.328E+00	1.073E+01	1.171E+00	0.203
U-235	1.291E-01		2.248E-01	3.655E-01	6.017E-02	0.353
NP-236	-8.353E-02		8.036E-02	1.251E-01	6.992E-03	-0.668
NP-239	-5.467E-02		1.933E-01	3.130E-01	2.262E-02	-0.175
AM-241	1.321E-01		1.412E-01	2.120E-01	1.574E-02	0.623

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-7.834E-03		9.764E-02	1.597E-01	1.228E-02	-0.049
CM-247	2.023E-02		4.056E-02	6.712E-02	3.687E-03	0.301
CF-249	-9.119E-03		3.979E-02	6.535E-02	3.573E-03	-0.140
CF-251	-5.762E-03		1.272E-01	2.052E-01	1.113E-02	-0.028

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504013           *
* Acquisition date  :  7-JUL-2009 09:44:19 Detector SN#     :               *
* Detector ID       : GAM14                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.90     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504013           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.4506E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  6-MAR-2009 11:43:06 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.369E+01	2.927E+00	2.746E-01	1.494E+00
CD-109	3.694E+00	9.360E-01	6.785E-01	4.775E-01
SN-126	3.643E-01	9.230E-02	6.714E-02	4.709E-02
TL-208	6.466E-01	9.449E-02	2.920E-02	4.821E-02
BI-211	5.012E+00	5.391E-01	1.617E-01	2.751E-01
PB-212	2.152E+00	1.913E-01	4.589E-02	9.762E-02
PO-212	2.152E+00	1.913E-01	4.589E-02	9.762E-02
BI-214	1.613E+00	2.117E-01	5.511E-02	1.080E-01
PB-214	1.743E+00	2.076E-01	5.638E-02	1.059E-01
PO-214	1.743E+00	2.076E-01	5.638E-02	1.059E-01
PO-216	2.152E+00	1.913E-01	4.589E-02	9.762E-02
PO-218	1.743E+00	2.076E-01	5.638E-02	1.059E-01
RA-224	5.729E+00	1.225E+00	5.219E-01	6.252E-01
RA-226	1.613E+00	2.117E-01	5.511E-02	1.080E-01
AC-228	2.310E+00	4.280E-01	1.087E-01	2.183E-01
RA-228	2.310E+00	4.280E-01	1.087E-01	2.183E-01
TH-228	2.152E+00	1.913E-01	4.589E-02	9.762E-02
TH-230	1.613E+00	2.117E-01	5.510E-02	1.080E-01
TH-232	2.310E+00	4.280E-01	1.087E-01	2.183E-01
TH-234	2.370E+00	1.515E+00	9.513E-01	7.730E-01
U-234	1.613E+00	2.117E-01	5.510E-02	1.080E-01
NP-237	1.070E+00	3.468E-01	2.177E-01	1.769E-01
U-238	2.370E+00	1.515E+00	9.513E-01	7.730E-01
AM-243	5.266E-01	8.868E-02	4.472E-02	4.524E-02
ANH-511	1.254E-01	6.714E-02	2.415E-02	3.426E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	2.765E-02	2.969E-01	2.589E-01	1.515E-01 NOT IDENT.
NA-22	1.195E-02	4.300E-02	3.718E-02	2.194E-02 NOT IDENT.

NA-24	-3.387E+04	6.569E+04	0.000E+00	3.351E+04	SHORT HLIF
AL-26	3.801E-03	2.360E-02	2.072E-02	1.204E-02	NOT IDENT.
TI-44	4.702E-01	5.907E-02	4.366E-02	3.014E-02	FAIL ABUN
SC-46	-1.302E-02	3.796E-02	3.213E-02	1.937E-02	FAIL ABUN
V-48	-1.302E-03	6.183E-02	5.322E-02	3.155E-02	NOT IDENT.
CR-51	1.496E-01	3.447E-01	2.960E-01	1.759E-01	NOT IDENT.
MN-52	-2.506E-01	1.552E-01	9.656E-02	7.919E-02	FAIL ABUN
MN-54	1.856E-02	3.802E-02	3.413E-02	1.940E-02	NOT IDENT.
CO-56	-5.620E-03	3.891E-02	3.358E-02	1.985E-02	FAIL ABUN
CO-57	-2.131E-03	2.553E-02	2.256E-02	1.303E-02	NOT IDENT.
CO-58	-2.149E-02	3.911E-02	3.122E-02	1.996E-02	NOT IDENT.
FE-59	-5.697E-02	9.166E-02	7.457E-02	4.676E-02	NOT IDENT.
CO-60	-3.141E-02	3.773E-02	2.884E-02	1.925E-02	NOT IDENT.
ZN-65	-2.412E-02	1.040E-01	7.442E-02	5.308E-02	NOT IDENT.
GE-68	-1.468E-01	1.303E+00	1.106E+00	6.649E-01	NOT IDENT.
AS-73	3.760E-01	5.996E-01	5.596E-01	3.059E-01	NOT IDENT.
AS-74	-3.709E-02	8.443E-02	7.012E-02	4.308E-02	NOT IDENT.
SE-75	1.907E-02	4.552E-02	3.650E-02	2.323E-02	NOT IDENT.
BR-77	1.536E+00	5.503E+00	4.822E+00	2.808E+00	FAIL ABUN
SR-82	4.612E-01	3.333E-01	2.808E-01	1.701E-01	NOT IDENT.
RB-83	1.409E-02	6.782E-02	5.919E-02	3.460E-02	NOT IDENT.
RB-84	-2.045E-02	6.114E-02	5.172E-02	3.119E-02	NOT IDENT.
KR-85	6.561E+00	7.898E+00	6.272E+00	4.029E+00	NOT IDENT.
SR-85	3.286E-02	3.956E-02	3.142E-02	2.019E-02	NOT IDENT.
RB-86	-7.095E-02	7.576E-01	6.440E-01	3.865E-01	NOT IDENT.
Y-88	4.573E-03	3.482E-02	3.018E-02	1.777E-02	NOT IDENT.
ZR-88	-1.942E-03	2.975E-02	2.605E-02	1.518E-02	NOT IDENT.
Y-91	4.791E+00	1.902E+01	1.643E+01	9.706E+00	NOT IDENT.
NB-94	1.042E-02	3.301E-02	2.847E-02	1.684E-02	NOT IDENT.
NB-95	6.514E-02	4.902E-02	3.963E-02	2.501E-02	NOT IDENT.
NB-95M	1.051E+00	1.761E-01	1.497E-01	8.982E-02	NOT IDENT.
ZR-95	1.888E-02	7.247E-02	6.196E-02	3.698E-02	NOT IDENT.
NB-97	-1.188E+03	1.142E+04	0.000E+00	5.828E+03	SHORT HLIF
ZR-97	6.584E+05	2.386E+05	0.000E+00	1.217E+05	SHORT HLIF
MO-99	4.249E+00	6.778E+00	5.933E+00	3.458E+00	NOT IDENT.
TC-99M	-5.419E+13	8.715E+13	0.000E+00	4.446E+13	SHORT HLIF
RH-101	-1.343E-02	3.289E-02	2.799E-02	1.678E-02	NOT IDENT.
RH-102	8.737E-03	2.760E-02	2.438E-02	1.408E-02	NOT IDENT.
RU-103	1.296E-02	3.447E-02	3.050E-02	1.758E-02	FAIL ABUN
RH-106	2.154E-01	3.199E-01	2.834E-01	1.632E-01	FAIL ABUN
RU-106	2.154E-01	3.192E-01	2.834E-01	1.628E-01	FAIL ABUN
AG-108M	-1.592E-02	3.130E-02	2.655E-02	1.597E-02	NOT IDENT.
AG-110M	-2.603E-03	3.596E-02	3.037E-02	1.835E-02	NOT IDENT.
IN-111	-3.249E-01	6.693E-01	4.826E-01	3.415E-01	NOT IDENT.
IN-113M	3.707E-02	4.248E-02	3.883E-02	2.167E-02	NOT IDENT.
SN-113	3.707E-02	4.248E-02	3.883E-02	2.167E-02	NOT IDENT.
IN-114M	8.920E-02	1.980E-01	1.530E-01	1.010E-01	NOT IDENT.
CD-115	-4.105E+00	5.218E+00	4.266E+00	2.662E+00	NOT IDENT.
SN-117M	-4.692E-02	4.834E-02	4.076E-02	2.466E-02	NOT IDENT.
SB-122	3.451E-01	1.463E+00	1.105E+00	7.463E-01	NOT IDENT.
I-123	-4.140E+05	3.480E+05	0.000E+00	1.775E+05	SHORT HLIF
TE-123M	-3.326E-02	2.795E-02	2.337E-02	1.426E-02	NOT IDENT.
I-124	-4.584E-01	5.430E-01	3.701E-01	2.770E-01	NOT IDENT.
SB-124	2.934E-03	7.068E-02	5.867E-02	3.606E-02	FAIL ABUN
SB-125	-1.443E-02	8.638E-02	7.477E-02	4.407E-02	FAIL ABUN
TE-125M	-6.740E+00	9.095E+00	7.898E+00	4.640E+00	NOT IDENT.
I-126	-3.371E-02	1.761E-01	1.476E-01	8.987E-02	NOT IDENT.
SB-126	1.704E-01	1.370E-01	1.119E-01	6.990E-02	FAIL ABUN
SB-127	8.075E-02	8.717E-01	7.424E-01	4.447E-01	NOT IDENT.
XE-127	4.022E-02	5.259E-02	4.106E-02	2.683E-02	NOT IDENT.
I-131	-6.480E-02	8.675E-02	7.352E-02	4.426E-02	NOT IDENT.
TE-132	-3.118E-01	4.411E-01	3.583E-01	2.250E-01	NOT IDENT.
BA-133	1.211E-02	4.573E-02	3.574E-02	2.333E-02	FAIL ABUN
I-133	-3.361E+02	9.423E+02	0.000E+00	4.808E+02	SHORT HLIF
CS-134	1.295E-01	5.727E-02	4.665E-02	2.922E-02	FAIL ABUN
CS-135	3.758E-01	1.774E-01	1.517E-01	9.050E-02	NOT IDENT.
I-135	-8.233E+12	2.076E+13	0.000E+00	1.059E+13	SHORT HLIF
CS-136	3.351E-02	9.123E-02	8.052E-02	4.655E-02	FAIL ABUN
BA-137M	6.655E-04	3.923E-02	3.331E-02	2.002E-02	NOT IDENT.
CS-137	7.035E-04	4.147E-02	3.521E-02	2.116E-02	NOT IDENT.
CE-139	-5.952E-03	2.947E-02	2.552E-02	1.503E-02	NOT IDENT.
BA-140	-3.894E-02	2.292E-01	1.950E-01	1.170E-01	NOT IDENT.
LA-140	-7.053E-02	7.994E-02	5.846E-02	4.079E-02	FAIL ABUN
CE-141	7.363E-02	6.003E-02	5.461E-02	3.063E-02	NOT IDENT.
CE-143	5.445E+02	1.290E+02	0.000E+00	6.580E+01	SHORT HLIF
CE-144	-5.021E-02	2.325E-01	1.776E-01	1.186E-01	NOT IDENT.
PM-144	9.736E-04	3.543E-02	2.999E-02	1.807E-02	NOT IDENT.
PR-144	6.590E-02	2.398E+00	2.030E+00	1.223E+00	NOT IDENT.

PM-146	4.936E-02	4.423E-02	4.051E-02	2.257E-02	NOT IDENT.
ND-147	-9.117E-02	4.507E-01	3.829E-01	2.299E-01	FAIL ABUN
PM-149	2.726E+01	4.420E+01	4.036E+01	2.255E+01	NOT IDENT.
EU-152	-2.095E-02	1.323E-01	7.890E-02	6.750E-02	NOT IDENT.
GD-153	-2.404E-03	8.237E-02	6.456E-02	4.202E-02	NOT IDENT.
EU-154	3.730E-02	1.206E-01	1.045E-01	6.153E-02	NOT IDENT.
EU-155	8.765E-02	1.057E-01	9.646E-02	5.395E-02	FAIL ABUN
TB-160	9.026E-02	1.207E-01	1.108E-01	6.157E-02	FAIL ABUN
HO-166M	7.560E-02	5.972E-02	5.457E-02	3.047E-02	FAIL ABUN
TM-171	-1.292E+01	2.800E+01	2.201E+01	1.429E+01	NOT IDENT.
LU-176	1.251E-02	2.376E-02	2.112E-02	1.212E-02	FAIL ABUN
LU-177	2.662E+00	1.287E+00	8.468E-01	6.567E-01	FAIL ABUN
LU-177M	2.815E-02	1.896E-01	1.456E-01	9.671E-02	FAIL ABUN
HF-181	4.711E-03	4.012E-02	3.501E-02	2.047E-02	NOT IDENT.
W-181	2.207E-01	3.525E-01	2.878E-01	1.798E-01	NOT IDENT.
TA-182	1.141E-01	2.146E-01	1.880E-01	1.095E-01	FAIL ABUN
RE-183	3.134E-02	1.072E-01	9.355E-02	5.471E-02	FAIL ABUN
RE-184	-8.923E-02	2.264E-01	1.895E-01	1.155E-01	NOT IDENT.
OS-185	-4.286E-02	4.343E-02	3.437E-02	2.216E-02	NOT IDENT.
RE-188	1.780E-01	1.694E-01	1.530E-01	8.641E-02	NOT IDENT.
W-188	-5.291E+00	7.902E+00	5.909E+00	4.031E+00	FAIL ABUN
IR-192	-1.695E-02	3.168E-02	2.751E-02	1.616E-02	FAIL ABUN
AU-195	2.720E-01	2.401E-01	1.965E-01	1.225E-01	FAIL ABUN
TL-200	-4.899E+01	1.020E+02	0.000E+00	5.203E+01	SHORT HLIF
TL-201	-2.091E+00	4.245E+00	3.637E+00	2.166E+00	NOT IDENT.
TL-202	2.996E-02	5.851E-02	5.240E-02	2.985E-02	NOT IDENT.
HG-203	3.762E-02	4.271E-02	3.489E-02	2.179E-02	NOT IDENT.
BI-207	6.346E-02	5.137E-02	4.793E-02	2.621E-02	FAIL ABUN
TL-207	-4.551E-01	7.036E-01	5.179E-01	3.590E-01	FAIL ABUN
PO-209	-5.209E+00	7.248E+00	5.939E+00	3.698E+00	NOT IDENT.
BI-210	8.769E-01	2.245E+00	2.112E+00	1.146E+00	NOT IDENT.
PB-210	8.769E-01	2.245E+00	2.112E+00	1.146E+00	NOT IDENT.
PO-210	8.769E-01	2.245E+00	2.112E+00	1.146E+00	NOT IDENT.
PB-211	-2.911E-01	1.168E+00	8.639E-01	5.958E-01	NOT IDENT.
BI-212	1.336E+00	5.207E-01	3.564E-01	2.656E-01	FAIL ABUN
PO-215	-4.551E-01	7.036E-01	5.179E-01	3.590E-01	FAIL ABUN
RN-219	-1.630E-02	4.321E-01	3.783E-01	2.205E-01	FAIL ABUN
RN-220	-7.342E-01	2.510E+01	2.153E+01	1.281E+01	NOT IDENT.
RA-223	-4.551E-01	7.036E-01	5.179E-01	3.590E-01	FAIL ABUN
AC-227	1.629E-01	3.554E-01	3.249E-01	1.813E-01	FAIL ABUN
TH-227	1.629E-01	3.557E-01	3.249E-01	1.815E-01	FAIL ABUN
TH-229	2.173E-01	5.277E-01	4.475E-01	2.692E-01	FAIL ABUN
PA-231	-3.034E-01	1.572E+00	1.318E+00	8.021E-01	NOT IDENT.
TH-231	-4.551E-01	7.036E-01	5.179E-01	3.590E-01	FAIL ABUN
U-231	-2.576E-01	7.979E-01	6.182E-01	4.071E-01	FAIL ABUN
PA-233	-4.108E-02	6.030E-02	5.204E-02	3.076E-02	FAIL ABUN
PA-234	-5.065E-01	3.226E-01	2.337E-01	1.646E-01	FAIL ABUN
PA-234M	2.181E+00	6.201E+00	5.446E+00	3.164E+00	NOT IDENT.
U-235	1.291E-01	2.203E-01	1.937E-01	1.124E-01	FAIL ABUN
NP-236	-8.353E-02	7.875E-02	6.614E-02	4.018E-02	NOT IDENT.
NP-239	-5.467E-02	1.894E-01	1.666E-01	9.666E-02	FAIL ABUN
AM-241	1.321E-01	1.384E-01	1.144E-01	7.060E-02	NOT IDENT.
CM-243	-7.834E-03	9.568E-02	8.518E-02	4.882E-02	FAIL ABUN
CM-247	2.023E-02	3.975E-02	3.477E-02	2.028E-02	FAIL ABUN
CF-249	-9.119E-03	3.899E-02	3.388E-02	1.989E-02	NOT IDENT.
CF-251	-5.762E-03	1.247E-01	1.082E-01	6.362E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	501.6004
46.50	501.6004
46.50	501.6004
48.70	568.6638
49.72	611.2870
51.35	504.2737
52.39	506.9326
52.97	521.6557
53.15	521.7892
53.44	528.6832
54.07	569.2675
56.28	635.2009
56.28	635.2034
57.37	0.0000
57.53	579.1136
57.53	579.1160
57.60	579.1689
57.98	569.7715
57.98	569.7715
59.32	571.0499
59.32	571.0499
59.40	571.1099
59.54	561.9784
59.72	562.1121
60.01	583.8969
61.10	612.5029
61.14	612.5356
61.30	612.6628
63.00	665.0493
63.29	665.2967
63.29	665.2967
63.58	708.1072
64.28	765.2817
65.12	725.7742
65.20	725.8463
65.20	725.8463
66.05	721.9619
66.72	775.3962
66.83	775.5028
66.91	775.5789
67.20	766.5286
67.20	766.5286
67.75	774.0491
67.85	787.7620
68.90	742.6795
68.90	742.6795
69.30	730.0500
69.67	752.4735
70.82	788.6526
70.82	788.6526
70.83	788.6618
72.80	745.1155
72.87	798.4034
72.87	798.4034
74.67	767.7280
74.81	767.8534
74.81	767.8534
74.81	767.8534
74.81	767.8534
74.81	767.8534
74.81	767.8534
74.97	767.9968
75.28	768.2715
75.70	768.6449
77.11	769.8875
77.11	769.8875
77.11	769.8875

77.11	769.8875
77.11	769.8875
77.11	769.8875
78.38	719.9926
79.62	754.1249
79.80	754.2766
79.80	754.2766
80.11	846.0942
80.18	846.1596
80.30	846.2741
80.30	846.2741
80.57	898.6442
81.00	929.0967
81.07	929.1685
81.07	929.1685
81.07	929.1685
81.07	929.1685
82.60	823.0974
83.37	739.2953
83.78	788.4968
83.78	788.4968
83.78	788.4968
83.78	788.4968
84.21	775.3862
84.40	762.8564
84.90	760.0939
85.43	766.8804
86.29	797.7798
86.50	890.1519
86.54	890.1895
86.59	890.2373
86.72	890.3604
86.79	890.4253
86.94	943.0488
87.30	943.4107
87.30	943.4107
87.30	943.4107
87.30	943.4107
87.30	943.4107
87.30	943.4107
87.57	742.9678
87.88	743.2129
88.03	743.3298
88.36	743.5891
88.47	743.6746
89.95	744.8257
91.11	745.7205
92.29	746.6267
92.38	746.6979
92.38	746.6979
93.35	747.4360
94.00	511.0347
94.67	533.8223
94.67	533.8243
94.90	533.9483
94.90	533.9483
94.90	533.9483
94.90	533.9483
95.87	581.0162
95.87	581.0162
96.73	578.3027
97.43	514.4043
98.44	485.9539
98.44	485.9539
98.88	486.1649
99.55	502.8236
99.55	502.8236
99.86	502.9760
100.00	500.5984
100.10	500.6496
103.18	583.9797
103.76	543.8676
105.00	505.0380
105.31	505.1865
108.00	559.2437
109.28	573.1202
111.00	516.0165
111.00	516.0165

111.76	524.5242
112.95	491.4453
115.19	516.9599
116.30	522.5886
117.00	510.6344
117.00	510.6344
117.66	511.9572
121.11	496.0523
121.62	496.2715
121.78	496.3397
122.06	504.6843
122.32	504.7966
122.32	504.7966
122.32	504.7966
122.32	504.7966
123.07	495.1797
127.23	487.3055
129.76	463.5107
131.20	498.8730
133.02	492.9830
133.54	496.5145
135.34	482.2772
136.00	493.9751
136.25	481.5946
136.48	477.5233
140.51	539.6053
140.51	0.0000
142.18	487.0189
142.65	517.5196
143.76	491.8125
144.24	479.4338
144.24	479.4338
144.24	479.4338
144.24	479.4338
145.22	443.1379
145.44	456.8333
147.16	547.6715
152.43	459.2916
152.70	472.0283
153.22	467.9967
154.21	455.6876
154.21	455.6876
154.21	455.6876
154.21	455.6876
155.03	449.6349
156.02	433.0694
158.56	468.8083
159.00	0.0000
159.00	482.7222
160.31	472.5922
161.27	461.2582
162.32	423.4109
162.64	415.0169
163.35	390.8063
163.89	400.5222
165.85	452.1526
167.43	459.0555
171.28	435.7474
171.86	419.8982
172.10	419.9702
176.55	413.7679
176.60	413.7826
181.06	430.1025
184.41	428.9237
185.71	429.2972
186.00	429.3822
190.27	396.4115
192.34	372.6833
193.63	402.7390
197.04	444.4605
198.01	429.5149
198.60	436.2044
200.40	425.8157
201.83	439.7510
202.84	406.6265
205.31	426.4877
208.36	380.8958
208.81	381.0020

209.75	336.5297
209.75	336.5297
210.97	384.1429
215.65	378.2105
216.55	372.9176
218.09	383.1765
222.10	395.1405
223.80	384.4934
226.40	314.2651
227.00	317.6987
227.08	317.7140
227.20	317.7359
228.16	365.5474
228.18	365.5499
228.18	365.5499
231.56	0.0000
235.69	343.5668
236.00	381.0177
236.00	381.0177
238.60	326.5312
238.63	326.5379
238.63	326.5379
238.63	326.5379
239.00	326.6072
240.98	326.9760
241.98	271.5553
241.98	271.5553
241.98	271.5553
244.69	266.6031
245.39	298.9263
247.94	261.1989
248.90	274.6287
249.79	271.4007
252.40	292.0081
252.85	295.4516
252.85	295.4516
254.15	0.0000
256.20	275.5111
256.20	275.5111
260.50	282.4718
260.90	278.0196
262.80	301.1963
264.65	256.2728
268.24	271.8640
268.79	265.9014
269.46	282.6191
269.46	282.6191
269.46	282.6191
269.46	282.6191
271.23	296.9325
273.65	331.7125
276.40	332.1892
277.35	259.5093
277.60	259.5441
277.60	259.5441
278.00	267.1869
278.60	271.8286
279.20	264.3170
279.53	265.8788
280.46	267.5270
281.68	285.9473
283.67	282.0547
284.30	253.8418
285.00	254.1331
285.90	256.0811
286.10	256.1050
286.10	256.1050
287.40	278.2424
288.45	0.0000
290.67	288.7872
290.80	288.8064
291.72	269.0667
293.26	0.0000
293.70	237.1955
295.21	280.2560
295.21	280.2560
295.21	280.2560
295.96	220.6113

296.50	220.6699
297.23	220.7520
298.57	220.8984
299.80	224.1031
299.80	224.1031
300.09	233.3468
300.09	233.3468
300.09	233.3468
300.10	233.3468
300.12	233.3499
301.29	236.5551
302.84	227.5133
303.76	223.0018
303.91	235.3209
304.40	239.9922
304.40	239.9922
304.84	247.7399
306.84	221.7949
308.46	239.5434
311.98	243.6570
316.51	234.9021
318.01	230.4232
319.02	213.8029
319.41	219.0074
320.08	209.2593
323.87	234.4782
323.87	234.4782
323.87	234.4782
323.87	234.4782
325.23	234.6288
328.77	194.5496
333.44	196.5289
334.20	227.0240
334.20	227.0240
334.30	227.0359
338.28	217.6020
338.28	217.6020
338.28	217.6020
338.28	217.6020
338.32	217.6048
338.32	217.6048
338.32	217.6048
340.50	209.6831
340.57	209.6913
344.27	210.0429
345.85	220.2319
350.59	0.0000
351.07	196.2188
351.92	196.2924
351.92	196.2924
351.92	196.2924
355.39	0.0000
356.01	189.0869
364.48	188.8387
366.43	174.7528
367.43	176.7295
367.94	0.0000
369.80	173.1044
374.96	166.8161
383.85	178.9260
387.95	201.2791
388.63	195.5830
391.69	172.7930
391.69	172.7930
392.90	197.8500
398.62	188.6907
400.65	215.8242
401.10	221.6473
401.81	221.7119
402.60	209.9966
404.84	238.0701
410.95	177.3804
411.60	172.5884
413.65	171.1156
414.70	156.6521
415.30	159.9203
415.76	161.5662
417.63	0.0000

418.52	183.4167
423.70	158.5091
427.08	180.1401
427.89	161.6919
432.53	161.0079
433.93	168.9052
439.47	149.6980
439.56	149.7036
439.89	156.5723
443.98	164.6593
444.90	160.7949
445.03	160.8029
445.03	160.8029
445.03	160.8029
445.03	160.8029
453.90	151.5054
463.38	138.2192
468.07	121.9753
473.00	163.4793
475.06	136.8309
475.35	128.9114
476.78	147.8305
477.59	140.9270
477.96	147.8941
482.03	146.1225
484.57	165.1611
487.03	138.4197
490.36	0.0000
492.35	145.6667
497.08	109.9329
507.63	0.0000
510.53	0.0000
510.84	144.6073
511.00	144.6143
511.85	144.6583
511.85	144.6583
513.99	147.4464
513.99	147.4464
520.41	138.0335
520.65	138.0435
527.90	139.3948
528.96	0.0000
529.64	136.4436
529.87	0.0000
531.02	120.3306
537.32	138.8262
543.00	129.9531
546.56	0.0000
549.76	124.1386
552.65	122.2178
555.20	138.6297
563.23	148.1931
563.90	156.7437
568.70	131.0500
569.32	107.5225
569.50	107.5302
569.67	117.7767
573.80	121.3523
574.00	121.3610
574.64	116.9391
578.91	99.2957
579.30	0.0000
583.14	120.3420
585.48	113.2253
591.81	113.4509
592.07	114.4931
593.00	116.5892
595.88	137.3478
600.56	109.3301
602.52	0.0000
602.71	155.2332
602.71	155.2332
603.60	162.1783
604.41	136.3342
604.70	136.3438
609.31	120.2934
609.31	120.2934
609.31	120.2934

609.31	120.2934
610.33	108.9196
612.46	126.2915
614.37	124.6348
618.01	117.4941
621.84	110.3451
621.84	110.3451
631.29	106.4824
633.02	100.2727
633.10	100.2750
634.78	98.2341
635.90	108.7201
636.97	116.0758
645.85	144.6911
646.12	135.2673
656.30	145.1358
657.75	126.2578
657.90	0.0000
661.65	143.2549
661.65	143.2549
664.57	0.0000
666.33	145.5603
666.33	145.5603
675.00	96.2254
677.61	98.4129
685.20	97.5658
692.80	108.4024
695.00	115.9136
696.49	123.4114
696.49	123.4114
697.00	126.6205
697.49	121.3170
698.33	116.0227
698.50	117.0925
699.00	114.9794
702.63	107.6355
706.10	134.4103
706.58	0.0000
706.67	110.9596
709.31	113.1762
711.68	86.5391
713.82	121.8681
717.42	124.1279
720.50	78.5379
721.93	0.0000
722.20	101.7910
722.78	108.9516
722.78	108.9516
722.89	108.9541
722.95	103.5981
723.30	103.6075
724.18	132.2220
727.18	104.0761
733.00	93.1349
735.90	89.2655
739.58	93.6588
742.81	88.3522
744.21	88.3862
747.13	99.2425
751.79	87.4844
752.31	84.2575
753.82	87.5318
755.35	97.2971
756.15	104.8884
756.87	101.6627
763.93	106.5486
765.79	99.3719
766.41	110.2324
766.84	119.2813
768.36	106.3094
768.36	106.3094
768.36	106.3094
768.36	106.3094
776.49	48.9199
778.00	85.1894
778.57	116.5388
778.89	116.5466
783.80	77.3304

785.46	75.1841
792.07	94.5949
795.84	58.2682
796.30	60.0958
801.93	118.9984
805.60	78.8572
810.29	94.3040
810.76	98.7012
815.85	81.2573
817.79	70.3109
818.51	69.2246
819.60	79.1367
826.30	80.7365
828.27	0.0000
831.60	112.0766
831.96	112.0865
834.83	102.9720
836.80	0.0000
846.75	96.8204
848.13	91.3180
856.28	0.0000
856.80	83.9844
860.37	85.1138
867.32	82.0145
867.82	82.7958
871.10	63.0735
873.19	76.0976
874.81	72.4125
875.33	0.0000
876.40	76.1560
879.36	58.5511
880.27	72.5077
880.51	79.0182
881.50	76.2477
883.24	74.4189
884.67	80.9589
889.25	87.5666
896.60	90.5191
898.02	97.0832
899.00	95.2369
903.28	86.5202
911.07	82.3979
911.07	82.3979
911.07	82.3979
919.63	110.0812
920.93	101.3555
925.00	84.5416
925.24	82.6683
926.50	77.8053
934.06	82.8348
934.06	82.8348
934.06	82.8348
934.06	82.8348
935.52	104.9222
937.48	93.6654
944.10	100.0058
946.00	108.5425
949.00	68.0039
962.29	110.4312
964.01	125.0928
966.15	130.0307
968.20	100.5482
969.11	55.2986
969.11	55.2986
969.11	55.2986
977.42	61.1777
980.50	77.0433
983.50	73.2872
989.30	70.5207
996.32	83.9914
1001.03	64.0134
1001.68	65.9341
1004.76	83.1891
1021.30	0.0000
1024.50	0.0000
1034.80	76.0266
1037.82	75.1118
1038.57	65.4932

1038.76	0.0000
1045.16	87.7675
1046.59	82.9696
1048.07	65.6260
1050.47	73.3838
1050.47	73.3838
1063.62	59.0615
1076.63	84.4618
1077.35	86.4143
1085.78	78.7852
1099.22	92.6536
1112.02	98.1380
1112.84	103.0146
1115.52	90.5826
1120.29	99.0645
1120.29	99.0645
1120.29	99.0645
1120.29	99.0645
1120.51	99.0686
1121.28	83.2707
1124.00	0.0000
1129.67	64.1105
1131.51	0.0000
1147.95	0.0000
1167.94	89.9706
1173.22	90.0632
1175.09	79.2057
1177.93	95.0977
1189.05	108.2105
1204.90	91.6069
1205.75	0.0000
1213.00	102.7192
1221.42	103.8815
1230.97	99.4933
1235.34	121.8926
1236.41	0.0000
1238.11	97.1934
1238.11	97.1934
1238.11	97.1934
1238.11	97.1934
1238.25	92.7560
1246.25	81.2834
1260.41	0.0000
1271.85	53.4356
1274.45	61.5312
1274.54	61.5312
1291.56	62.7341
1298.22	0.0000
1312.09	72.1065
1325.50	49.8813
1325.50	49.8813
1332.49	54.0201
1333.61	47.9141
1360.21	44.0411
1362.66	0.0000
1365.15	34.8536
1368.21	52.3074
1368.53	0.0000
1376.25	44.0168
1377.67	42.1194
1377.67	42.1194
1377.67	42.1194
1377.67	42.1194
1384.27	26.4467
1394.10	30.9058
1395.20	44.3070
1407.95	26.8485
1434.06	39.4132
1436.60	30.0903
1457.56	0.0000
1460.81	34.3790
1489.15	32.4456
1509.49	26.2522
1596.49	41.5184
1620.62	18.1649
1678.03	0.0000
1691.02	19.4377
1691.02	19.4377

1706.46	0.0000
1750.46	0.0000
1764.49	13.0977
1764.49	13.0977
1764.49	13.0977
1764.49	13.0977
1770.23	19.6626
1771.40	18.0267
1791.20	0.0000
1808.65	11.2969
1836.01	20.7900

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504013

Total Uranium Activity	7.1103E+00	ug/g
Total Uranium Counting Unc.	4.5085E+00	ug/g
Total Uranium Tpu	2.3003E-06	ug/g
Total Uranium Mda	2.8316E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232504013      *
*   ANALYST       : MXR1                      DETECTOR    : GAM14           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 09:44:19.92    SAMPLE ALQT:  145.060 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.200E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.549E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 4.529E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 2.214E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:48:22.68

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504014.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:47:57.
Sample ID         : G232504014           Sample quantity  : 1.66760E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.80  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.77*	79	346	1.16	127.70	124	8	1.10E-02	43.4	
2	1	75.02*	264	276	1.08	150.17	143	23	3.67E-02	12.0	2.56E+00
3	1	77.33	385	263	1.02	154.80	143	23	5.35E-02	8.5	
4	0	87.44	116	396	1.10	174.99	172	7	1.60E-02	30.0	
5	0	93.13*	236	333	1.55	186.37	183	9	3.28E-02	16.3	
6	0	186.10*	116	416	1.01	372.15	367	11	1.62E-02	36.4	
7	0	209.45	112	288	1.43	418.81	414	10	1.55E-02	29.9	
8	8	237.95*	125	297	2.59	475.76	470	21	1.74E-02	36.9	6.62E+00
9	8	238.90*	780	170	1.10	477.67	470	21	1.08E-01	4.8	
10	8	241.89	306	218	1.67	483.64	470	21	4.24E-02	11.5	
11	0	270.14	94	179	1.02	540.10	536	9	1.31E-02	27.6	
12	0	295.61*	297	254	1.16	591.01	585	12	4.13E-02	12.3	
13	0	328.20	27	232	1.66	656.14	651	12	3.79E-03	113.0	
14	0	338.93	152	218	1.20	677.58	672	12	2.11E-02	21.3	
15	0	352.08*	486	220	0.99	703.87	698	12	6.75E-02	7.7	
16	0	463.82	100	114	2.00	927.20	920	14	1.39E-02	24.8	
17	0	511.47*	84	98	1.88	1022.45	1017	13	1.16E-02	31.9	
18	0	583.46*	276	65	1.59	1166.36	1161	10	3.84E-02	8.3	
19	0	609.54	420	86	1.59	1218.49	1212	15	5.84E-02	6.9	
20	0	727.09	80	83	2.16	1453.51	1445	15	1.10E-02	27.3	
21	0	911.52*	189	62	1.68	1822.29	1815	14	2.63E-02	11.8	
22	0	968.98	103	50	1.44	1937.18	1933	11	1.42E-02	16.6	
23	0	1120.39*	52	66	0.67	2239.98	2235	10	7.19E-03	33.2	
24	0	1460.86*	1286	8	2.04	2921.02	2913	18	1.79E-01	2.9	
25	0	1662.17	11	8	1.04	3323.80	3317	11	1.52E-03	59.1	
26	0	1764.63*	67	3	2.46	3528.83	3523	11	9.32E-03	14.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 11:48:25

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504014.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:47:57
Sample ID : G232504014 Sample quantity : 166.76 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA10 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.80 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.451E+01	2.536E+00	4.149E-01	3.573E-02	59.072
CD-109	+	88.03	*	1.347E+00	8.231E-01	1.081E+00	1.225E-01	1.246
SN-126	+	64.28		7.884E-01	6.972E-01	7.454E-01	1.275E-01	1.058
	+	86.94		5.521E-01	4.047E-01	4.234E-01	1.778E-01	1.304
	+	87.57	*	1.328E-01	8.117E-02	1.072E-01	1.213E-02	1.238
TL-208		277.35		2.790E-01	2.728E-01	4.683E-01	5.107E-02	0.596
	+	510.84		2.984E-01	1.927E-01	1.517E-01	1.595E-02	1.967
	+	583.14	*	2.812E-01	5.052E-02	4.102E-02	2.756E-03	6.856
		860.37		1.976E-01	2.158E-01	3.811E-01	3.721E-02	0.519
BI-211		72.87		2.660E+00	2.613E+00	4.436E+00	4.878E-01	0.600
	+	351.07	*	2.176E+00	3.707E-01	2.323E-01	1.694E-02	9.369
PB-212	+	74.81		1.418E+00	3.980E-01	4.479E-01	6.447E-02	3.167
	+	77.11		1.143E+00	2.307E-01	2.482E-01	2.713E-02	4.605
	+	87.30		6.142E-01	3.804E-01	4.981E-01	7.515E-02	1.233
	+	238.63	*	7.700E-01	9.437E-02	6.275E-02	4.760E-03	12.272
		300.09		8.809E-01	6.066E-01	9.737E-01	8.557E-02	0.905
PO-212	+	74.81		1.418E+00	3.980E-01	4.479E-01	6.447E-02	3.167
	+	77.11		1.143E+00	2.307E-01	2.482E-01	2.713E-02	4.605
	+	87.30		6.142E-01	3.804E-01	4.981E-01	7.515E-02	1.233
		115.19		1.279E+00	2.528E+00	4.200E+00	3.005E-01	0.304
	+	238.63	*	7.700E-01	9.437E-02	6.275E-02	4.760E-03	12.272
		300.09		8.809E-01	6.066E-01	9.737E-01	8.557E-02	0.905
BI-214	+	609.31	*	8.075E-01	1.266E-01	7.406E-02	5.636E-03	10.903
		768.36		7.112E-01	5.936E-01	1.057E+00	9.735E-02	0.673
		934.06		6.190E-01	9.721E-01	1.666E+00	1.933E-01	0.372
	+	1120.29		5.453E-01	3.664E-01	3.443E-01	3.365E-02	1.584
		1238.11		5.505E-01	7.181E-01	1.264E+00	1.158E-01	0.436
		1377.67		1.096E+00	7.945E-01	1.496E+00	1.598E-01	0.732
	+	1764.49		9.793E-01	2.914E-01	1.977E-01	1.320E-02	4.953
PB-214	+	74.81		2.444E+00	6.715E-01	7.717E-01	1.020E-01	3.167
	+	77.11		1.959E+00	4.226E-01	4.254E-01	5.669E-02	4.605
	+	87.30		1.052E+00	6.482E-01	8.533E-01	1.167E-01	1.233
	+	241.98		1.812E+00	4.441E-01	3.778E-01	3.143E-02	4.797
	+	295.21		7.914E-01	2.075E-01	1.511E-01	1.365E-02	5.237

Sample ID : G232504014 Acquisition date : 7-JUL-2009 09:47:57

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	7.570E-01	1.349E-01	8.097E-02	7.261E-03	9.349
PO-214	+	74.81		2.444E+00	6.715E-01	7.717E-01	1.020E-01	3.167
	+	77.11		1.959E+00	4.226E-01	4.254E-01	5.669E-02	4.605
	+	87.30		1.052E+00	6.482E-01	8.533E-01	1.167E-01	1.233
	+	241.98		1.812E+00	4.441E-01	3.778E-01	3.143E-02	4.797
	+	295.21		7.914E-01	2.075E-01	1.511E-01	1.365E-02	5.237
	+	351.92	*	7.570E-01	1.349E-01	8.097E-02	7.261E-03	9.349
PO-216	+	74.81		1.418E+00	3.980E-01	4.479E-01	6.447E-02	3.167
	+	77.11		1.143E+00	2.307E-01	2.482E-01	2.713E-02	4.605
	+	87.30		6.142E-01	3.804E-01	4.981E-01	7.515E-02	1.233
	+	238.63	*	7.700E-01	9.437E-02	6.275E-02	4.760E-03	12.272
		300.09		8.809E-01	6.066E-01	9.737E-01	8.557E-02	0.905
PO-218	+	74.81		2.444E+00	6.715E-01	7.717E-01	1.020E-01	3.167
	+	77.11		1.959E+00	4.226E-01	4.254E-01	5.669E-02	4.605
	+	87.30		1.052E+00	6.482E-01	8.533E-01	1.167E-01	1.233
	+	241.98		1.812E+00	4.441E-01	3.778E-01	3.143E-02	4.797
	+	295.21		7.914E-01	2.075E-01	1.511E-01	1.365E-02	5.237
	+	351.92	*	7.570E-01	1.349E-01	8.097E-02	7.261E-03	9.349
RA-224	+	240.98	*	3.436E+00	8.197E-01	7.140E-01	4.383E-02	4.813
RA-226	+	609.31	*	8.075E-01	1.266E-01	7.406E-02	5.636E-03	10.903
		768.36		7.112E-01	5.936E-01	1.057E+00	9.735E-02	0.673
		934.06		6.190E-01	9.721E-01	1.666E+00	1.933E-01	0.372
	+	1120.29		5.453E-01	3.664E-01	3.443E-01	3.365E-02	1.584
		1238.11		5.505E-01	7.181E-01	1.264E+00	1.158E-01	0.436
		1377.67		1.096E+00	7.945E-01	1.496E+00	1.598E-01	0.732
	+	1764.49		9.793E-01	2.914E-01	1.977E-01	1.320E-02	4.953
AC-228	+	338.32		7.499E-01	4.430E-01	2.655E-01	1.086E-01	2.825
	+	911.07	*	8.853E-01	2.350E-01	1.462E-01	1.804E-02	6.055
	+	969.11		8.497E-01	3.461E-01	3.575E-01	8.453E-02	2.377
RA-228	+	338.32		7.499E-01	4.430E-01	2.655E-01	1.086E-01	2.825
	+	911.07	*	8.853E-01	2.350E-01	1.462E-01	1.804E-02	6.055
	+	969.11		8.497E-01	3.461E-01	3.575E-01	8.453E-02	2.377
TH-228		84.40		1.091E+00	2.599E+00	3.176E+00	4.735E-01	0.343
	+	238.60	*	7.700E-01	9.437E-02	6.274E-02	4.759E-03	12.273
		300.10		8.809E-01	7.952E-01	9.737E-01	5.746E-01	0.905
TH-230	+	609.31	*	8.075E-01	1.266E-01	7.406E-02	5.636E-03	10.903
		768.36		7.112E-01	5.936E-01	1.057E+00	9.735E-02	0.673
		934.06		6.190E-01	9.721E-01	1.666E+00	1.933E-01	0.372
	+	1120.29		5.453E-01	3.664E-01	3.443E-01	3.364E-02	1.584
		1238.11		5.505E-01	7.181E-01	1.264E+00	1.158E-01	0.436
		1377.67		1.096E+00	7.945E-01	1.496E+00	1.598E-01	0.732
	+	1764.49		9.793E-01	2.914E-01	1.977E-01	1.320E-02	4.953
TH-232	+	338.32		7.499E-01	3.235E-01	2.655E-01	1.780E-02	2.825
	+	911.07	*	8.853E-01	2.350E-01	1.462E-01	1.804E-02	6.055
	+	969.11		8.497E-01	3.461E-01	3.575E-01	8.453E-02	2.377
TH-234	+	63.29	*	1.992E+00	1.772E+00	2.010E+00	3.962E-01	0.991
	+	92.38		1.708E+00	6.417E-01	6.868E-01	1.300E-01	2.487
U-234	+	609.31	*	8.075E-01	1.266E-01	7.406E-02	5.636E-03	10.903
		768.36		7.112E-01	5.936E-01	1.057E+00	9.735E-02	0.673

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		6.190E-01	9.721E-01	1.666E+00	1.933E-01	0.372
	+	1120.29		5.453E-01	3.664E-01	3.443E-01	3.364E-02	1.584
		1238.11		5.505E-01	7.181E-01	1.264E+00	1.158E-01	0.436
		1377.67		1.096E+00	7.945E-01	1.496E+00	1.598E-01	0.732
	+	1764.49		9.793E-01	2.914E-01	1.977E-01	1.320E-02	4.953
NP-237	+	86.50	*	3.900E-01	2.516E-01	3.006E-01	7.065E-02	1.297
		95.87		-3.306E-02	7.065E-01	1.031E+00	2.576E-01	-0.032
U-238	+	63.29	*	1.992E+00	1.772E+00	2.010E+00	3.962E-01	0.991
	+	92.38		1.708E+00	5.814E-01	6.868E-01	7.057E-02	2.487
AM-243	+	74.67	*	2.299E-01	6.084E-02	7.294E-02	7.988E-03	3.153
	+	86.72		1.462E+01	8.939E+00	1.126E+01	1.268E+00	1.299
		117.66		-1.104E+00	2.715E+00	4.320E+00	2.997E-01	-0.256
		142.18		1.680E+00	1.233E+01	1.997E+01	1.192E+00	0.084
ANH-511	+	511.00	*	6.445E-02	4.127E-02	3.277E-02	2.100E-03	1.966

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.127E-01	2.432E-01	4.056E-01	3.017E-02	0.278
NA-22		1274.54	*	2.844E-02	3.391E-02	6.096E-02	4.722E-03	0.467
NA-24		1368.53	*	-8.388E-04	3.391E-02	Half-Life too short		
AL-26		1129.67		8.642E-02	1.348E+00	2.276E+00	1.597E-01	0.038
		1808.65	*	1.254E-02	2.353E-02	4.208E-02	2.668E-03	0.298
TI-44		67.85		-2.800E-02	4.541E-02	6.510E-02	7.349E-03	-0.430
	+	78.38	*	2.109E-01	4.256E-02	6.026E-02	6.593E-03	3.500
SC-46		889.25	*	1.809E-02	2.871E-02	4.973E-02	4.922E-03	0.364
	+	1120.51		9.166E-02	6.128E-02	9.707E-02	6.972E-03	0.944
V-48		944.10		-1.024E-01	6.577E-01	1.054E+00	1.021E-01	-0.097
		983.50	*	-2.271E-02	5.139E-02	7.950E-02	7.352E-03	-0.286
		1312.09		-9.500E-03	6.108E-02	9.970E-02	8.325E-03	-0.095
CR-51		320.08	*	-2.162E-02	2.413E-01	3.974E-01	2.870E-02	-0.054
MN-52		744.21		-9.766E-03	1.334E-01	2.196E-01	1.432E-02	-0.044
		848.13		-2.755E+00	3.910E+00	5.965E+00	5.287E-01	-0.462
		935.52		1.540E-01	1.641E-01	2.876E-01	2.812E-02	0.535
		1246.25		7.879E-01	4.777E+00	8.068E+00	5.876E-01	0.098
		1333.61		1.686E+00	3.135E+00	5.501E+00	4.779E-01	0.307
		1434.06	*	-1.808E-02	1.316E-01	2.123E-01	1.794E-02	-0.085
MN-54		834.83	*	1.413E-02	3.097E-02	5.265E-02	4.498E-03	0.268
CO-56		846.75	*	3.178E-03	2.826E-02	4.686E-02	4.138E-03	0.068
		977.42		-5.571E-01	2.151E+00	3.392E+00	3.162E-01	-0.164
		1037.82		1.145E-01	2.443E-01	4.129E-01	3.712E-02	0.277
		1175.09		1.749E+00	1.716E+00	3.116E+00	1.930E-01	0.561
		1238.25		5.799E-02	7.159E-02	1.264E-01	9.427E-03	0.459
		1360.21		-4.108E-01	6.757E-01	1.014E+00	8.761E-02	-0.405
		1771.40		-3.452E-01	2.306E-01	2.717E-01	1.801E-02	-1.270
CO-57		122.06	*	-2.541E-03	1.789E-02	2.880E-02	1.899E-03	-0.088
		136.48		-1.706E-02	1.506E-01	2.414E-01	1.688E-02	-0.071
CO-58		810.76	*	-9.680E-03	3.025E-02	4.837E-02	3.870E-03	-0.200

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		6.633E-01	1.855E+00	3.032E+00	1.807E-01	0.219
		192.34		-3.992E-01	6.993E-01	1.073E+00	1.261E-01	-0.372
		1099.22	*	-3.929E-02	7.217E-02	1.093E-01	9.120E-03	-0.360
		1291.56		1.815E-02	9.684E-02	1.640E-01	1.517E-02	0.111
CO-60		1173.22		-2.767E-02	3.661E-02	5.715E-02	3.524E-03	-0.484
		1332.49	*	1.667E-02	3.111E-02	5.466E-02	4.750E-03	0.305
ZN-65		1115.52	*	2.168E-02	7.830E-02	1.127E-01	8.208E-03	0.192
GE-68		1077.35	*	-9.054E-01	9.983E-01	1.443E+00	1.143E-01	-0.627
AS-73		53.44	*	2.223E-01	1.072E+00	1.809E+00	2.394E-01	0.123
AS-74		595.88	*	-3.424E-02	6.141E-02	9.903E-02	5.657E-03	-0.346
		634.78		2.496E-01	2.223E-01	4.049E-01	2.137E-02	0.617
SE-75		66.05		-8.931E-01	4.641E+00	6.832E+00	8.801E-01	-0.131
		96.73		3.498E-01	5.768E-01	8.724E-01	1.235E-01	0.401
		121.11		2.436E-02	9.408E-02	1.544E-01	1.512E-02	0.158
		136.00		1.787E-03	2.794E-02	4.518E-02	2.806E-03	0.040
		198.60		-2.482E-01	1.307E+00	2.021E+00	1.432E-01	-0.123
		264.65	*	4.952E-03	3.147E-02	4.941E-02	3.152E-03	0.100
		279.53		1.402E-02	7.821E-02	1.296E-01	8.878E-03	0.108
		303.91		-1.347E+00	1.562E+00	2.450E+00	2.456E-01	-0.550
		400.65		-6.936E-02	1.680E-01	2.657E-01	2.595E-02	-0.261
BR-77	+	87.88		1.533E+02	9.370E+01	1.324E+02	1.501E+01	1.158
		200.40		-5.055E+01	6.322E+01	9.549E+01	5.507E+00	-0.529
	+	239.00		6.494E+01	7.406E+00	1.282E+01	7.846E-01	5.066
		249.79		6.126E+00	2.408E+01	4.095E+01	2.543E+00	0.150
		281.68		-2.411E+01	3.344E+01	5.355E+01	3.448E+00	-0.450
		297.23		7.312E+01	2.823E+01	4.660E+01	3.042E+00	1.569
		303.76		-6.704E+01	7.073E+01	1.106E+02	7.258E+00	-0.606
		439.47		2.644E+01	5.513E+01	9.256E+01	6.224E+00	0.286
		484.57		-6.020E+01	8.812E+01	1.342E+02	8.790E+00	-0.449
		520.65	*	-1.337E+00	3.950E+00	6.156E+00	3.906E-01	-0.217
		574.64		-1.369E+01	7.386E+01	1.228E+02	7.266E+00	-0.112
		578.91		6.344E+00	3.139E+01	4.721E+01	2.775E+00	0.134
		585.48		4.468E+02	9.033E+01	1.732E+02	1.008E+01	2.579
		755.35		-1.868E+00	6.764E+01	1.117E+02	7.544E+00	-0.017
		817.79		-8.483E+00	5.128E+01	8.302E+01	6.759E+00	-0.102
SR-82		698.33		1.498E+01	2.430E+01	4.224E+01	2.370E+00	0.355
		776.49	*	-8.958E-02	2.686E-01	4.305E-01	3.104E-02	-0.208
		1395.20		4.968E+00	7.920E+00	1.414E+01	1.210E+00	0.351
RB-83		520.41	*	-1.744E-02	4.879E-02	7.589E-02	4.816E-03	-0.230
		529.64		-3.550E-02	7.579E-02	1.166E-01	7.325E-03	-0.304
		552.65		3.313E-02	1.410E-01	2.300E-01	1.405E-02	0.144
RB-84		881.50	*	3.903E-02	5.270E-02	9.182E-02	8.903E-03	0.425
KR-85		513.99	*	7.077E+00	5.781E+00	9.091E+00	5.807E-01	0.778
SR-85		513.99	*	3.545E-02	2.896E-02	4.554E-02	2.909E-03	0.778
RB-86		1076.63	*	-6.708E-01	5.859E-01	8.188E-01	6.496E-02	-0.819
Y-88		898.02		-1.185E-02	3.182E-02	5.006E-02	5.086E-03	-0.237
		1836.01	*	-4.013E-03	2.463E-02	3.826E-02	2.347E-03	-0.105
ZR-88		392.90	*	3.495E-03	2.036E-02	3.371E-02	2.291E-03	0.104
Y-91		1204.90	*	9.754E-01	1.472E+01	2.474E+01	1.643E+00	0.039

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	-3.703E-03	2.571E-02	4.230E-02	2.408E-03	-0.088
		871.10		-7.390E-04	2.422E-02	3.952E-02	3.728E-03	-0.019
NB-95		765.79	*	-2.957E-02	3.274E-02	5.019E-02	3.502E-03	-0.589
NB-95M		235.69	*	5.010E-02	9.197E-02	1.420E-01	1.102E-02	0.353
ZR-95		724.18		3.849E-02	7.012E-02	1.077E-01	7.674E-03	0.358
		756.15	*	8.033E-03	5.322E-02	8.914E-02	7.002E-03	0.090
NB-97		657.90	*	-5.563E-03	5.322E-02	Half-Life too short		
		1024.50		-8.069E-01	5.322E-02	Half-Life too short		
ZR-97		254.15		-1.856E-01	5.322E-02	Half-Life too short		
		355.39		-2.662E-02	5.322E-02	Half-Life too short		
		507.63	*	7.370E-03	5.322E-02	Half-Life too short		
		602.52		-5.037E-03	5.322E-02	Half-Life too short		
		1021.30		-2.431E-01	5.322E-02	Half-Life too short		
		1147.95		-6.460E-02	5.322E-02	Half-Life too short		
		1362.66		3.465E-01	5.322E-02	Half-Life too short		
		1750.46		4.114E-01	5.322E-02	Half-Life too short		
MO-99		140.51		7.805E-01	1.053E+01	1.701E+01	4.590E+00	0.046
		181.06		1.883E+00	8.115E+00	1.162E+01	1.984E+00	0.162
		366.43		-2.269E+00	3.382E+01	5.531E+01	3.745E+00	-0.041
		739.58	*	1.928E+00	4.498E+00	7.733E+00	1.087E+00	0.249
		778.00		1.262E+00	1.416E+01	2.357E+01	1.707E+00	0.054
TC-99M		140.51	*	4.425E+06	1.416E+01	Half-Life too short		
RH-101		127.23		-5.670E-03	2.303E-02	3.682E-02	2.353E-03	-0.154
		198.01	*	-9.097E-03	2.462E-02	3.772E-02	2.167E-03	-0.241
		325.23		3.874E-02	1.659E-01	2.460E-01	1.638E-02	0.157
RH-102		418.52		1.500E-01	1.961E-01	3.369E-01	2.281E-02	0.445
		475.06	*	-2.223E-02	2.265E-02	3.378E-02	2.228E-03	-0.658
		631.29		1.388E-02	3.630E-02	6.273E-02	3.338E-03	0.221
		697.49		5.459E-02	5.877E-02	1.042E-01	5.831E-03	0.524
		766.84		4.879E-03	8.888E-02	1.475E-01	1.033E-02	0.033
		1046.59		3.767E-02	9.392E-02	1.575E-01	1.323E-02	0.239
		1112.84		6.178E-02	1.802E-01	2.920E-01	2.137E-02	0.212
RU-103		497.08	*	2.640E-02	2.777E-02	4.721E-02	6.125E-03	0.559
	+	610.33		8.387E+00	1.725E+00	1.983E+00	3.039E-01	4.230
RH-106	+	511.85		3.206E-01	2.053E-01	2.956E-01	1.892E-02	1.085
		621.84	*	1.240E-01	2.104E-01	3.689E-01	4.264E-02	0.336
		1050.47		-9.826E-01	2.091E+00	3.210E+00	2.678E-01	-0.306
RU-106	+	511.85		3.206E-01	2.053E-01	2.956E-01	1.892E-02	1.085
		621.84	*	1.240E-01	2.100E-01	3.689E-01	2.003E-02	0.336
		1050.47		-9.826E-01	2.091E+00	3.210E+00	2.678E-01	-0.306
AG-108M		433.93	*	1.019E-02	2.302E-02	3.863E-02	2.770E-03	0.264
		614.37		1.379E-02	2.697E-02	4.182E-02	2.522E-03	0.330
		722.95		1.218E-02	3.235E-02	4.875E-02	3.198E-03	0.250
AG-110M		657.75	*	-1.775E-02	2.511E-02	3.955E-02	2.142E-03	-0.449
		677.61		3.594E-02	2.298E-01	3.879E-01	2.177E-02	0.093
		706.67		-4.616E-02	1.654E-01	2.694E-01	1.649E-02	-0.171
		763.93		-1.258E-01	1.343E-01	2.055E-01	1.488E-02	-0.612
		884.67		-8.732E-03	3.776E-02	6.034E-02	6.048E-03	-0.145
		937.48		-3.552E-02	9.679E-02	1.524E-01	1.529E-02	-0.233

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1384.27		-7.429E-03	1.235E-01	2.024E-01	1.788E-02	-0.037
IN-111		171.28		1.471E-01	4.302E-01	6.971E-01	3.834E-02	0.211
		245.39	*	-1.646E-01	4.630E-01	6.682E-01	4.126E-02	-0.246
IN-113M		391.69	*	-3.385E-02	3.038E-02	4.550E-02	3.244E-03	-0.744
SN-113		391.69	*	-3.385E-02	3.038E-02	4.550E-02	3.244E-03	-0.744
IN-114M		190.27	*	-6.577E-02	1.532E-01	2.091E-01	1.186E-02	-0.315
CD-115		260.90		-2.085E+01	4.422E+01	7.216E+01	4.543E+00	-0.289
		492.35		7.384E-03	1.275E+01	2.054E+01	1.338E+00	0.000
		527.90	*	1.564E+00	3.896E+00	6.459E+00	4.066E-01	0.242
SN-117M		156.02		3.812E-01	1.491E+00	2.415E+00	1.367E-01	0.158
		158.56	*	-3.025E-03	3.626E-02	5.778E-02	3.240E-03	-0.052
SB-122		563.90	*	8.142E-02	8.585E-01	1.381E+00	8.308E-02	0.059
		692.80		-1.582E+01	1.864E+01	2.893E+01	1.592E+00	-0.547
I-123		159.00	*	-8.707E-02	1.864E+01	Half-Life too short		
		528.96		-5.513E+00	1.864E+01	Half-Life too short		
TE-123M		159.00	*	-6.972E-03	2.097E-02	3.300E-02	1.874E-03	-0.211
I-124		602.71	*	-7.820E-03	3.680E-01	5.624E-01	3.173E-02	-0.014
		722.78		7.887E-01	2.335E+00	3.504E+00	2.133E-01	0.225
		1325.50		-1.215E+01	1.795E+01	2.713E+01	2.326E+00	-0.448
		1376.25		2.385E+01	1.671E+01	3.181E+01	2.738E+00	0.750
		1509.49		6.525E+00	8.255E+00	1.504E+01	1.230E+00	0.434
		1691.02		-7.467E-01	1.600E+00	2.275E+00	1.636E-01	-0.328
SB-124		602.71		-6.391E-04	3.007E-02	4.596E-02	2.594E-03	-0.014
		645.85		-8.247E-02	3.428E-01	5.621E-01	3.354E-02	-0.147
		709.31		1.068E+00	2.135E+00	3.677E+00	2.141E-01	0.290
		713.82		-7.946E-01	1.231E+00	1.934E+00	1.987E-01	-0.411
		722.78		9.344E-02	2.767E-01	4.151E-01	2.636E-02	0.225
	+	968.20		8.528E+00	2.940E+00	4.813E+00	4.537E-01	1.772
		1045.16		3.543E-01	1.930E+00	3.174E+00	2.673E-01	0.112
		1325.50		-1.538E+00	2.272E+00	3.433E+00	2.943E-01	-0.448
		1368.21		-7.943E-02	1.272E+00	2.086E+00	2.811E-01	-0.038
		1436.60		8.237E-01	2.872E+00	4.918E+00	4.152E-01	0.167
		1691.02	*	-2.086E-02	4.470E-02	6.357E-02	4.830E-03	-0.328
SB-125		427.89	*	-3.012E-02	6.886E-02	1.085E-01	7.555E-03	-0.278
	+	463.38		6.948E-01	3.491E-01	4.186E-01	3.139E-02	1.660
		600.56		6.576E-02	1.333E-01	2.314E-01	1.526E-02	0.284
		635.90		-4.466E-03	1.876E-01	3.135E-01	1.988E-02	-0.014
TE-125M		109.28	*	-2.587E+00	6.557E+00	1.048E+01	1.005E+00	-0.247
I-126		388.63		-2.338E-02	1.249E-01	2.017E-01	1.370E-02	-0.116
		666.33	*	-1.304E-02	1.132E-01	1.872E-01	9.389E-03	-0.070
		753.82		1.863E-01	9.688E-01	1.629E+00	1.095E-01	0.114
SB-126		223.80		9.745E-01	2.548E+00	4.374E+00	2.619E-01	0.223
		278.60		1.289E+00	1.610E+00	2.748E+00	1.764E-01	0.469
	+	296.50		6.964E+00	1.773E+00	2.364E+00	1.543E-01	2.946
		414.70		-2.498E-03	4.726E-02	7.675E-02	5.200E-03	-0.033
		415.30		-1.369E+00	3.961E+00	6.295E+00	4.265E-01	-0.218
		555.20		-1.185E+00	2.691E+00	4.139E+00	2.520E-01	-0.286
		573.80		1.536E-01	6.298E-01	1.081E+00	6.406E-02	0.142
		593.00		-1.084E-01	5.506E-01	9.118E-01	5.235E-02	-0.119

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		656.30		1.033E+00	2.103E+00	3.648E+00	1.826E-01	0.283
		666.33		-5.423E-03	4.705E-02	7.782E-02	3.903E-03	-0.070
		675.00		3.226E-01	1.231E+00	2.097E+00	1.085E-01	0.154
		695.00		-1.383E-02	5.179E-02	8.443E-02	4.683E-03	-0.164
		697.00		1.364E-01	1.785E-01	3.136E-01	1.751E-02	0.435
		720.50	*	-6.350E-02	1.062E-01	1.417E-01	8.561E-03	-0.448
		856.80		-4.301E-01	3.258E-01	4.632E-01	4.204E-02	-0.929
		989.30		1.531E-01	8.669E-01	1.431E+00	1.313E-01	0.107
		1034.80		-2.646E+00	6.579E+00	1.019E+01	8.736E-01	-0.260
		1213.00		-4.034E+00	3.214E+00	4.727E+00	3.198E-01	-0.853
SB-127		61.10		1.004E+01	4.090E+01	6.193E+01	8.396E+00	0.162
		252.40		5.692E-01	2.012E+00	3.402E+00	1.410E+00	0.167
		290.80		-8.625E+00	1.137E+01	1.562E+01	1.387E+00	-0.552
		411.60		3.663E+00	6.030E+00	1.019E+01	1.460E+00	0.360
		444.90		-1.527E+00	4.349E+00	6.846E+00	7.315E-01	-0.223
		473.00		3.590E-01	8.007E-01	1.338E+00	1.473E-01	0.268
		543.00		-1.479E+00	8.234E+00	1.297E+01	1.629E+00	-0.114
		603.60		-4.097E+00	6.504E+00	8.879E+00	8.892E-01	-0.461
		685.20	*	-3.399E-01	7.066E-01	1.132E+00	9.504E-02	-0.300
		698.50		2.006E+00	7.871E+00	1.333E+01	1.856E+00	0.150
		722.20		1.486E+00	1.584E+01	2.309E+01	1.981E+00	0.064
		783.80		1.207E+00	1.834E+00	3.182E+00	3.495E-01	0.379
XE-127		57.60		-2.572E+00	6.262E+00	1.025E+01	1.303E+00	-0.251
		145.22		1.168E-01	4.823E-01	7.698E-01	4.539E-02	0.152
		172.10		6.807E-02	8.395E-02	1.390E-01	7.654E-03	0.490
		202.84	*	-3.796E-03	3.076E-02	5.189E-02	3.005E-03	-0.073
		374.96		-5.075E-02	1.260E-01	2.006E-01	1.361E-02	-0.253
I-131		80.18		-6.289E-01	2.887E+00	4.720E+00	5.194E-01	-0.133
		284.30		-1.247E-01	8.360E-01	1.382E+00	9.709E-02	-0.090
		364.48	*	5.019E-03	6.580E-02	1.087E-01	7.974E-03	0.046
		636.97		-5.112E-01	9.112E-01	1.455E+00	8.716E-02	-0.351
		722.89		1.632E+00	4.498E+00	6.769E+00	4.161E-01	0.241
TE-132		49.72		-1.436E+00	1.798E+01	3.005E+01	4.165E+00	-0.048
		111.76		-1.425E+00	1.336E+01	2.163E+01	2.025E+00	-0.066
		116.30		4.078E+00	1.234E+01	2.034E+01	1.837E+00	0.200
		228.16	*	-6.065E-02	3.033E-01	5.070E-01	7.119E-02	-0.120
BA-133		53.15		1.398E+00	4.759E+00	8.059E+00	1.067E+00	0.173
		79.62		-1.074E-01	9.909E-01	1.628E+00	2.712E-01	-0.066
		81.00		-6.710E-02	7.266E-02	1.137E-01	1.965E-02	-0.590
		276.40		1.103E-01	2.666E-01	4.536E-01	6.009E-02	0.243
		302.84		-1.259E-01	1.098E-01	1.686E-01	2.032E-02	-0.747
		356.01	*	-4.743E-03	3.544E-02	5.056E-02	6.100E-03	-0.094
		383.85		2.013E-02	2.117E-01	3.490E-01	3.989E-02	0.058
I-133	+	510.53		1.121E-01	2.117E-01	Half-Life too short		
		529.87	*	-6.094E-04	2.117E-01	Half-Life too short		
		706.58		-1.723E-02	2.117E-01	Half-Life too short		
		856.28		-6.534E-02	2.117E-01	Half-Life too short		
		875.33		1.934E-03	2.117E-01	Half-Life too short		
		1236.41		1.187E-01	2.117E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		1298.22		-1.673E-02	2.117E-01	Half-Life too short		
CS-134		475.35		-7.004E-01	1.436E+00	2.233E+00	1.473E-01	-0.314
		563.23		1.178E-01	2.630E-01	4.355E-01	2.673E-02	0.271
		569.32		-7.352E-02	1.472E-01	2.201E-01	1.350E-02	-0.334
		604.70		-1.544E-02	2.682E-02	3.680E-02	2.081E-03	-0.420
		795.84	*	2.948E-02	3.462E-02	6.097E-02	4.700E-03	0.484
		801.93		-8.980E-02	3.014E-01	4.833E-01	3.784E-02	-0.186
		1038.57		1.798E+00	3.035E+00	5.194E+00	4.423E-01	0.346
		1167.94		1.107E+00	2.035E+00	3.560E+00	2.233E-01	0.311
		1365.15		4.322E-01	8.963E-01	1.578E+00	1.424E-01	0.274
CS-135		268.24	*	1.061E-01	1.222E-01	1.906E-01	1.541E-02	0.556
I-135		288.45		3.709E+07	1.222E-01	Half-Life too short		
		417.63		9.570E+06	1.222E-01	Half-Life too short		
		546.56		1.559E+07	1.222E-01	Half-Life too short		
		836.80		6.533E+07	1.222E-01	Half-Life too short		
		1038.76		2.699E+07	1.222E-01	Half-Life too short		
		1124.00		-2.091E+07	1.222E-01	Half-Life too short		
		1131.51		5.688E+06	1.222E-01	Half-Life too short		
		1260.41	*	-6.841E+06	1.222E-01	Half-Life too short		
		1457.56		1.552E+09	1.222E-01	Half-Life too short		
		1678.03		2.990E+06	1.222E-01	Half-Life too short		
		1706.46		7.191E+07	1.222E-01	Half-Life too short		
		1791.20		-2.921E+07	1.222E-01	Half-Life too short		
CS-136		66.91		-5.237E-01	6.848E-01	9.669E-01	1.656E-01	-0.542
	+	86.29		1.543E+00	9.543E-01	1.321E+00	1.946E-01	1.168
		153.22		2.217E-01	4.185E-01	6.871E-01	4.917E-02	0.323
		163.89		3.417E-02	7.071E-01	1.132E+00	7.936E-02	0.030
		176.55		-1.364E-01	2.376E-01	3.665E-01	2.305E-02	-0.372
		273.65		-1.810E-01	3.212E-01	4.531E-01	3.231E-02	-0.400
		340.57		1.650E-01	9.395E-02	1.526E-01	1.072E-02	1.082
		818.51		-2.124E-02	4.815E-02	7.573E-02	6.182E-03	-0.281
		1048.07	*	6.628E-03	7.952E-02	1.294E-01	1.133E-02	0.051
		1235.34		-3.639E-02	4.118E-01	6.819E-01	7.365E-02	-0.053
BA-137M		661.65	*	-4.349E-03	2.544E-02	4.192E-02	2.068E-03	-0.104
CS-137		661.65	*	-4.598E-03	2.689E-02	4.431E-02	2.199E-03	-0.104
CE-139		165.85	*	-1.455E-03	2.150E-02	3.420E-02	1.868E-03	-0.043
BA-140		162.64		1.585E-01	4.934E-01	8.003E-01	5.026E-02	0.198
		304.84		2.326E-01	8.050E-01	1.354E+00	3.720E-01	0.172
		423.70		2.457E-01	1.191E+00	1.963E+00	6.276E-01	0.125
		537.32	*	2.406E-02	1.636E-01	2.651E-01	8.642E-02	0.091
LA-140	+	328.77		1.479E-01	3.345E-01	3.439E-01	2.505E-02	0.430
		432.53		6.433E-01	1.332E+00	2.238E+00	1.627E-01	0.287
		487.03		-1.134E-02	8.588E-02	1.370E-01	9.900E-03	-0.083
		751.79		-9.826E-01	1.166E+00	1.786E+00	1.399E-01	-0.550
		815.85		7.544E-02	2.176E-01	3.690E-01	3.375E-02	0.204
		867.82		-9.089E-01	8.678E-01	1.260E+00	1.231E-01	-0.721
		919.63		2.434E-01	1.950E+00	3.134E+00	3.678E-01	0.078
		925.24		1.798E-01	7.995E-01	1.331E+00	1.378E-01	0.135
		1596.49	*	-2.746E-02	6.233E-02	9.472E-02	7.350E-03	-0.290

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CE-141		145.44	*	-1.931E-03	4.400E-02	6.930E-02	4.241E-03	-0.028
CE-143		57.37		-1.487E-04	4.400E-02	Half-Life too short		
		231.56		-7.617E-05	4.400E-02	Half-Life too short		
		293.26	*	8.485E-05	4.400E-02	Half-Life too short		
	+	350.59		5.666E-03	4.400E-02	Half-Life too short		
		490.36		-2.077E-04	4.400E-02	Half-Life too short		
		664.57		-1.563E-04	4.400E-02	Half-Life too short		
		721.93		-4.159E-05	4.400E-02	Half-Life too short		
CE-144		80.11		-3.349E-01	1.601E+00	2.618E+00	2.873E-01	-0.128
		133.54	*	-9.046E-02	1.496E-01	2.337E-01	3.358E-02	-0.387
PM-144		476.78		4.195E-02	5.105E-02	8.721E-02	6.639E-03	0.481
		618.01		-4.945E-04	2.132E-02	3.479E-02	2.032E-03	-0.014
		696.49	*	1.601E-02	2.553E-02	4.446E-02	2.480E-03	0.360
		778.57		9.666E-01	1.640E+00	2.845E+00	2.065E-01	0.340
PR-144		696.49	*	1.083E+00	1.728E+00	3.009E+00	1.678E-01	0.360
		1489.15		5.576E+00	8.532E+00	1.545E+01	1.276E+00	0.361
PM-146		453.90	*	3.593E-02	3.172E-02	5.533E-02	5.110E-03	0.649
		633.02		7.310E-01	9.935E-01	1.699E+00	6.243E-01	0.430
		735.90		-8.263E-02	1.036E-01	1.542E-01	4.319E-02	-0.536
		747.13		4.768E-02	6.828E-02	1.191E-01	1.535E-02	0.400
ND-147		91.11		3.678E-01	2.394E-01	3.070E-01	3.422E-02	1.198
		319.41		7.402E-01	1.961E+00	3.323E+00	2.205E-01	0.223
		439.89		3.878E+00	3.541E+00	6.198E+00	4.168E-01	0.626
		531.02	*	-3.535E-02	3.686E-01	5.862E-01	8.050E-02	-0.060
PM-149		285.90	*	-1.585E+01	3.151E+01	5.089E+01	7.355E+00	-0.311
EU-152		121.78		-2.882E-04	5.195E-02	8.417E-02	6.937E-03	-0.003
		244.69		-4.812E-02	2.411E-01	3.521E-01	2.172E-02	-0.137
		344.27	*	8.083E-03	7.971E-02	1.164E-01	8.574E-03	0.069
		443.98		-2.118E-01	6.576E-01	1.040E+00	6.977E-02	-0.204
		778.89		3.943E-02	1.926E-01	3.237E-01	2.350E-02	0.122
		867.32		-7.194E-01	5.787E-01	8.158E-01	7.618E-02	-0.882
		964.01		2.242E-01	2.610E-01	4.032E-01	3.820E-02	0.556
		1085.78		-1.665E-02	3.340E-01	5.348E-01	4.164E-02	-0.031
		1112.02		8.338E-02	2.499E-01	4.150E-01	3.044E-02	0.201
		1407.95		-1.254E-02	1.369E-01	2.230E-01	1.902E-02	-0.056
GD-153		69.67		1.222E+00	1.509E+00	2.331E+00	2.599E-01	0.524
		83.37		-1.749E+01	1.620E+01	1.733E+01	1.920E+00	-1.010
		97.43	*	-1.402E-02	6.355E-02	9.169E-02	8.537E-03	-0.153
		103.18		-3.374E-02	7.712E-02	1.221E-01	1.033E-02	-0.276
EU-154		123.07		-1.831E-03	3.721E-02	6.014E-02	5.943E-03	-0.030
		247.94		-8.973E-02	2.875E-01	4.161E-01	4.073E-02	-0.216
		591.81		-8.055E-02	3.984E-01	6.589E-01	6.423E-02	-0.122
		723.30		8.223E-02	1.308E-01	2.030E-01	1.488E-02	0.405
		756.87		4.517E-01	5.890E-01	1.031E+00	1.107E-01	0.438
		873.19		1.073E-02	2.180E-01	3.586E-01	4.615E-02	0.030
		996.32		2.031E-01	2.948E-01	5.058E-01	9.103E-02	0.402
		1004.76		-9.724E-03	1.760E-01	2.835E-01	3.377E-02	-0.034
		1274.45	*	8.393E-02	9.451E-02	1.703E-01	1.814E-02	0.493
EU-155		48.70		-2.459E+00	3.809E+00	6.190E+00	7.436E-01	-0.397

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		1.643E+00	5.358E+00	8.150E+00	1.004E+00	0.202
	+	86.54		1.598E-01	9.770E-02	1.399E-01	1.583E-02	1.143
		105.31	*	4.892E-02	7.843E-02	1.313E-01	1.089E-02	0.373
TB-160	+	86.79		4.183E-01	2.557E-01	3.694E-01	4.162E-02	1.132
		197.04		6.318E-02	3.980E-01	6.346E-01	3.639E-02	0.100
		215.65		-1.595E-01	4.875E-01	8.124E-01	4.803E-02	-0.196
		298.57		3.126E-02	8.772E-02	1.316E-01	8.603E-03	0.238
		879.36	*	2.930E-02	1.111E-01	1.861E-01	1.794E-02	0.157
		962.29		9.857E-02	4.180E-01	6.554E-01	6.222E-02	0.150
		966.15		4.282E-01	1.865E-01	3.209E-01	3.033E-02	1.334
		1177.93		1.202E-01	2.841E-01	4.923E-01	3.070E-02	0.244
		1271.85		5.505E-03	5.561E-01	9.262E-01	7.125E-02	0.006
HO-166M		80.57		-1.156E-01	2.025E-01	3.256E-01	3.577E-02	-0.355
		184.41		3.504E-02	3.011E-02	4.626E-02	2.598E-03	0.758
		280.46		-2.417E-02	5.998E-02	9.792E-02	6.297E-03	-0.247
		410.95		1.715E-01	1.774E-01	3.070E-01	2.082E-02	0.559
		711.68	*	-6.805E-03	4.711E-02	7.741E-02	4.543E-03	-0.088
		752.31		-1.410E-01	2.058E-01	3.201E-01	2.142E-02	-0.441
		810.29		-2.147E-02	4.735E-02	7.483E-02	5.962E-03	-0.287
TM-171		51.35		1.384E+00	4.320E+01	7.249E+01	9.533E+00	0.019
		52.39		1.127E+01	2.134E+01	3.645E+01	4.827E+00	0.309
		59.40		-1.849E+00	2.960E+01	4.411E+01	5.479E+00	-0.042
		66.72	*	-1.393E+01	2.734E+01	3.945E+01	4.494E+00	-0.353
LU-176	+	88.36		3.150E-01	1.925E-01	2.701E-01	3.038E-02	1.166
		201.83		-4.210E-03	1.943E-02	3.268E-02	1.889E-03	-0.129
		306.84	*	1.456E-02	1.681E-02	2.927E-02	1.926E-03	0.497
		401.10		-2.142E+00	4.610E+00	7.275E+00	4.941E-01	-0.294
LU-177		112.95		4.000E-01	9.220E-01	1.528E+00	1.125E-01	0.262
	+	208.36	*	1.567E+00	9.412E-01	1.128E+00	6.593E-02	1.389
LU-177M		52.97		5.794E-01	2.143E+00	3.626E+00	4.804E-01	0.160
		54.07		4.591E-01	1.071E+00	1.821E+00	2.402E-01	0.252
		61.30		4.804E-01	1.553E+00	2.360E+00	2.855E-01	0.204
		121.62		-7.183E-02	2.668E-01	4.267E-01	2.823E-02	-0.168
		147.16		-5.597E-02	4.600E-01	7.344E-01	4.298E-02	-0.076
		171.86		2.300E-01	3.512E-01	5.772E-01	3.178E-02	0.399
		218.09		1.672E-02	5.773E-01	9.777E-01	5.802E-02	0.017
	+	268.79		1.401E+00	7.788E-01	1.011E+00	6.423E-02	1.386
		319.02		7.026E-02	1.777E-01	3.013E-01	1.998E-02	0.233
		367.43		-3.792E-02	6.097E-01	9.971E-01	6.753E-02	-0.038
		413.65	*	-5.253E-02	1.298E-01	2.057E-01	1.394E-02	-0.255
HF-181		56.28		-2.675E-01	1.043E+00	1.723E+00	2.225E-01	-0.155
		57.53		-2.570E-01	5.350E-01	8.724E-01	1.110E-01	-0.295
	+	65.20		1.485E+00	1.300E+00	1.383E+00	1.598E-01	1.074
		133.02		-1.101E-02	4.569E-02	7.290E-02	4.527E-03	-0.151
		136.25		-5.891E-02	3.231E-01	5.164E-01	3.160E-02	-0.114
		345.85		4.616E-02	1.502E-01	2.230E-01	1.500E-02	0.207
		482.03	*	-8.562E-03	3.114E-02	4.919E-02	3.229E-03	-0.174
W-181		56.28		-1.067E-01	4.181E-01	6.903E-01	8.917E-02	-0.155
		57.53		-1.028E-01	2.146E-01	3.499E-01	4.453E-02	-0.294

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	65.20	*	5.907E-01	5.171E-01	5.502E-01	6.357E-02	1.074
TA-182		67.75		-6.329E-02	1.072E-01	1.540E-01	1.740E-02	-0.411
		100.10		-4.902E-02	1.259E-01	2.021E-01	1.796E-02	-0.243
		152.43		-3.040E-02	2.373E-01	3.780E-01	2.169E-02	-0.080
		222.10		8.979E-02	2.442E-01	4.190E-01	2.502E-02	0.214
		1001.68		-3.369E-02	1.637E+00	2.630E+00	2.372E-01	-0.013
	+	1121.28		2.544E-01	1.701E-01	2.718E-01	1.948E-02	0.936
		1189.05		1.684E-01	2.449E-01	4.326E-01	2.770E-02	0.389
		1221.42	*	2.370E-02	1.699E-01	2.866E-01	1.976E-02	0.083
		1230.97		-2.136E-01	3.713E-01	5.885E-01	4.146E-02	-0.363
RE-183		57.98		-9.748E-02	2.072E-01	3.379E-01	4.275E-02	-0.289
		59.32		-1.028E-02	1.195E-01	1.779E-01	2.212E-02	-0.058
		67.20		-1.338E-01	1.907E-01	2.717E-01	3.083E-02	-0.493
		162.32	*	4.509E-02	7.882E-02	1.293E-01	7.153E-03	0.349
	+	208.81		1.732E+00	1.040E+00	1.276E+00	7.463E-02	1.357
		291.72		-5.379E-01	7.155E-01	9.840E-01	6.395E-02	-0.547
RE-184		57.98		-3.638E-01	7.732E-01	1.261E+00	1.596E-01	-0.289
		59.32		-3.834E-02	4.458E-01	6.634E-01	8.250E-02	-0.058
		67.20		-4.994E-01	7.114E-01	1.014E+00	1.150E-01	-0.493
		161.27		6.852E-02	2.611E-01	4.225E-01	2.346E-02	0.162
		216.55		-3.698E-02	1.787E-01	2.994E-01	1.773E-02	-0.123
		252.85	*	-4.558E-03	1.585E-01	2.656E-01	1.656E-02	-0.017
		318.01		3.802E-02	3.112E-01	5.193E-01	3.442E-02	0.073
		792.07		-4.413E-01	7.190E-01	1.119E+00	8.456E-02	-0.394
		903.28		2.941E-01	7.944E-01	1.272E+00	1.282E-01	0.231
		920.93		1.586E-01	3.394E-01	5.784E-01	5.736E-02	0.274
OS-185		59.72		-2.945E-02	3.218E-01	4.787E-01	5.920E-02	-0.062
		61.14		4.315E-02	1.702E-01	2.578E-01	3.126E-02	0.167
		69.30		1.046E-01	2.733E-01	4.141E-01	4.629E-02	0.252
		592.07		-9.804E-02	1.621E+00	2.713E+00	1.561E-01	-0.036
		646.12	*	-5.597E-03	3.055E-02	5.037E-02	2.588E-03	-0.111
		717.42		1.013E-01	6.411E-01	1.079E+00	6.452E-02	0.094
		874.81		-9.071E-02	4.276E-01	6.849E-01	6.525E-02	-0.132
		880.27		5.519E-01	6.081E-01	1.072E+00	1.036E-01	0.515
RE-188		155.03	*	9.552E-03	1.236E-01	1.986E-01	1.129E-02	0.048
		477.96		1.736E+00	2.332E+00	3.961E+00	2.608E-01	0.438
		633.10		1.486E+00	1.898E+00	3.372E+00	1.787E-01	0.441
W-188	+	63.58		7.831E+01	6.855E+01	8.694E+01	1.022E+01	0.901
		227.08		-2.714E+00	8.925E+00	1.486E+01	8.939E-01	-0.183
		290.67	*	-2.344E+00	5.568E+00	7.881E+00	5.117E-01	-0.297
IR-192	+	295.96		5.911E-01	1.506E-01	2.023E-01	1.336E-02	2.921
		308.46		-9.432E-02	6.567E-02	9.884E-02	6.567E-03	-0.954
		316.51	*	1.642E-03	2.406E-02	4.003E-02	2.661E-03	0.041
		468.07		-1.716E-02	5.160E-02	7.014E-02	5.200E-03	-0.245
		604.41		-2.050E-01	3.565E-01	4.884E-01	5.500E-02	-0.420
		612.46		1.260E+00	5.889E-01	1.017E+00	7.497E-02	1.240
AU-195	+	65.12		2.741E-01	2.400E-01	2.573E-01	2.975E-02	1.066
		66.83		-7.130E-02	9.134E-02	1.295E-01	1.474E-02	-0.551
	+	75.70		7.379E-01	1.953E-01	3.316E-01	3.627E-02	2.225

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	2.868E-02	1.618E-01	2.651E-01	2.406E-02	0.108
		129.76		3.058E+00	2.055E+00	3.522E+00	2.222E-01	0.868
TL-200		367.94	*	-1.366E-05	2.055E+00	Half-Life too short		
		579.30		1.985E-05	2.055E+00	Half-Life too short		
		828.27		-3.931E-04	2.055E+00	Half-Life too short		
		1205.75		1.999E-04	2.055E+00	Half-Life too short		
TL-201		68.90		4.139E-01	2.696E+00	4.040E+00	4.527E-01	0.102
		70.82		9.558E-01	1.489E+00	2.280E+00	2.527E-01	0.419
		80.30		-7.265E-01	2.290E+00	3.728E+00	4.092E-01	-0.195
		135.34		8.620E+00	1.090E+01	1.820E+01	1.119E+00	0.474
		167.43	*	-2.876E-02	3.049E+00	4.862E+00	2.659E-01	-0.006
TL-202		68.90		5.430E-02	3.537E-01	5.301E-01	5.940E-02	0.102
		70.82		1.251E-01	1.948E-01	2.983E-01	3.307E-02	0.419
		80.30		-9.509E-02	2.998E-01	4.879E-01	5.356E-02	-0.195
		439.56	*	3.685E-02	4.385E-02	7.543E-02	5.072E-03	0.489
HG-203		70.83		6.029E-01	9.282E-01	1.419E+00	2.169E-01	0.425
		72.87		5.120E-01	5.056E-01	8.538E-01	1.269E-01	0.600
		82.60		-1.289E+00	9.219E-01	1.223E+00	1.882E-01	-1.054
		279.20	*	2.221E-02	2.863E-02	4.880E-02	3.293E-03	0.455
BI-207		72.80		1.311E-01	1.515E-01	2.564E-01	2.820E-02	0.511
	+	74.97		4.127E-01	1.092E-01	1.757E-01	1.923E-02	2.349
		84.90		-1.054E-01	2.068E-01	2.340E-01	2.611E-02	-0.451
		569.67		-1.209E-02	2.295E-02	3.422E-02	2.041E-03	-0.353
		1063.62	*	1.005E-02	4.372E-02	7.207E-02	5.867E-03	0.139
		1770.23		-1.726E+00	6.166E-01	5.591E-01	3.710E-02	-3.086
TL-207		81.07		-1.571E-01	1.588E-01	2.495E-01	2.744E-02	-0.630
		83.78		-1.509E-02	1.291E-01	1.514E-01	1.681E-02	-0.100
		94.90		1.922E-01	1.787E-01	2.762E-01	2.697E-02	0.696
		122.32		-9.468E-01	1.277E+00	1.993E+00	1.471E-01	-0.475
		144.24		-1.690E-01	5.050E-01	7.849E-01	5.753E-02	-0.215
		154.21		8.562E-02	2.870E-01	4.663E-01	3.231E-02	0.184
	+	269.46		3.312E-01	1.842E-01	2.541E-01	1.677E-02	1.303
		323.87	*	4.846E-02	5.045E-01	7.395E-01	1.245E-01	0.066
	+	338.28		3.132E+00	1.379E+00	1.640E+00	1.813E-01	1.910
		445.03		-5.292E-01	1.508E+00	2.374E+00	2.566E-01	-0.223
PO-209		260.50		-2.207E+00	6.686E+00	1.081E+01	6.802E-01	-0.204
		262.80		-5.314E+00	1.808E+01	2.979E+01	1.880E+00	-0.178
		896.60	*	-3.598E+00	5.834E+00	8.935E+00	9.013E-01	-0.403
BI-210		46.50	*	-5.900E-01	6.126E+00	1.025E+01	1.006E+00	-0.058
PB-210		46.50	*	-5.900E-01	6.126E+00	1.025E+01	1.006E+00	-0.058
PO-210		46.50	*	-5.900E-01	6.126E+00	1.025E+01	9.204E-01	-0.058
PB-211		404.84	*	5.369E-01	7.294E-01	1.118E+00	6.978E-01	0.480
		427.08		7.747E-01	1.554E+00	2.495E+00	1.544E+00	0.311
		831.96		-4.381E-02	9.778E-01	1.600E+00	1.002E+00	-0.027
BI-212	+	727.18	*	7.016E-01	3.873E-01	4.567E-01	3.653E-02	1.536
		785.46		1.143E+00	1.364E+00	2.396E+00	1.775E-01	0.477
		1620.62		1.024E+00	8.085E-01	1.619E+00	1.234E-01	0.633
PO-215		81.07		-1.571E-01	1.588E-01	2.495E-01	2.744E-02	-0.630
		83.78		-1.509E-02	1.291E-01	1.514E-01	1.681E-02	-0.100

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		1.922E-01	1.787E-01	2.762E-01	2.697E-02	0.696
		122.32		-9.468E-01	1.277E+00	1.993E+00	1.471E-01	-0.475
		144.24		-1.690E-01	5.050E-01	7.849E-01	5.753E-02	-0.215
		154.21		8.562E-02	2.870E-01	4.663E-01	3.231E-02	0.184
	+	269.46		3.312E-01	1.842E-01	2.541E-01	1.677E-02	1.303
		323.87	*	4.846E-02	5.045E-01	7.395E-01	1.245E-01	0.066
	+	338.28		3.132E+00	1.379E+00	1.640E+00	1.813E-01	1.910
		445.03		-5.292E-01	1.508E+00	2.374E+00	2.566E-01	-0.223
RN-219	+	271.23		4.250E-01	2.374E-01	3.287E-01	2.801E-02	1.293
		401.81	*	1.058E-01	2.867E-01	4.798E-01	6.744E-02	0.220
RN-220		549.76	*	-9.363E+00	1.927E+01	2.949E+01	1.808E+00	-0.318
RA-223		81.07		-1.571E-01	1.588E-01	2.495E-01	2.744E-02	-0.630
		83.78		-1.509E-02	1.291E-01	1.514E-01	1.681E-02	-0.100
		94.90		1.922E-01	1.787E-01	2.762E-01	2.697E-02	0.696
		122.32		-9.468E-01	1.277E+00	1.993E+00	1.471E-01	-0.475
		144.24		-1.690E-01	5.050E-01	7.849E-01	5.753E-02	-0.215
		154.21		8.562E-02	2.870E-01	4.663E-01	3.231E-02	0.184
	+	269.46		3.312E-01	1.842E-01	2.541E-01	1.677E-02	1.303
		323.87	*	4.846E-02	5.045E-01	7.395E-01	1.245E-01	0.066
	+	338.28		3.132E+00	1.379E+00	1.640E+00	1.813E-01	1.910
		445.03		-5.292E-01	1.508E+00	2.374E+00	2.566E-01	-0.223
AC-227		79.80		-2.458E-01	1.252E+00	2.047E+00	4.615E-01	-0.120
		236.00		9.711E-02	1.742E-01	2.690E-01	2.856E-02	0.361
		256.20	*	-9.112E-03	2.644E-01	4.426E-01	6.266E-02	-0.021
		286.10		-3.231E-01	1.059E+00	1.733E+00	2.064E-01	-0.186
		299.80		1.460E+00	1.153E+00	1.803E+00	2.987E-01	0.810
		304.40		-1.898E-01	1.354E+00	2.232E+00	3.921E-01	-0.085
		334.20		-2.749E+00	2.907E+00	2.587E+00	4.821E-01	-1.062
TH-227		79.80		-2.458E-01	1.252E+00	2.047E+00	4.669E-01	-0.120
	+	94.00		6.600E+00	2.606E+00	2.782E+00	6.214E-01	2.372
		236.00		9.711E-02	1.741E-01	2.690E-01	2.488E-02	0.361
		256.20	*	-9.112E-03	2.644E-01	4.426E-01	7.552E-02	-0.021
		286.10		-3.231E-01	1.106E+00	1.733E+00	1.737E+00	-0.186
		299.80		1.460E+00	1.153E+00	1.803E+00	2.987E-01	0.810
		304.40		-1.898E-01	1.354E+00	2.232E+00	3.921E-01	-0.085
		334.20		-2.749E+00	2.907E+00	2.587E+00	4.821E-01	-1.062
TH-229		85.43		-4.017E-03	1.744E-01	2.358E-01	2.637E-02	-0.017
	+	88.47		1.813E-01	1.108E-01	1.550E-01	1.739E-02	1.170
		100.00		-8.548E-02	1.354E-01	2.132E-01	1.898E-02	-0.401
		193.63	*	2.539E-01	3.757E-01	6.147E-01	3.505E-02	0.413
		210.97		1.056E+00	5.953E-01	9.753E-01	5.723E-02	1.083
PA-231		283.67	*	-4.467E-02	1.029E+00	1.712E+00	2.409E-01	-0.026
		301.29		5.794E-01	4.445E-01	7.329E-01	7.978E-02	0.791
TH-231		81.07		-1.571E-01	1.588E-01	2.495E-01	2.744E-02	-0.630
		83.78		-1.509E-02	1.291E-01	1.514E-01	1.681E-02	-0.100
		94.90		1.922E-01	1.787E-01	2.762E-01	2.697E-02	0.696
		122.32		-9.468E-01	1.277E+00	1.993E+00	1.471E-01	-0.475
		144.24		-1.690E-01	5.050E-01	7.849E-01	5.753E-02	-0.215
		154.21		8.562E-02	2.870E-01	4.663E-01	3.231E-02	0.184

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		3.312E-01	1.842E-01	2.541E-01	1.677E-02	1.303
		323.87	*	4.846E-02	5.045E-01	7.395E-01	1.245E-01	0.066
	+	338.28		3.132E+00	1.379E+00	1.640E+00	1.813E-01	1.910
		445.03		-5.292E-01	1.508E+00	2.374E+00	2.566E-01	-0.223
U-231		84.21		1.749E+00	3.822E+00	4.689E+00	5.215E-01	0.373
	+	92.29		4.527E+00	1.541E+00	2.046E+00	2.107E-01	2.212
		95.87	*	-2.602E-02	5.560E-01	8.114E-01	7.776E-02	-0.032
		108.00		-2.246E-01	1.036E+00	1.671E+00	1.315E-01	-0.134
PA-233	+	75.28		1.204E+01	3.535E+00	5.142E+00	8.620E-01	2.342
	+	86.59		2.600E+00	1.721E+00	2.285E+00	6.347E-01	1.138
		300.12		4.552E-01	3.172E-01	5.031E-01	6.930E-02	0.905
		311.98	*	4.029E-04	4.370E-02	7.252E-02	5.018E-03	0.006
		340.50		1.001E+00	5.631E-01	8.476E-01	1.968E-01	1.181
		398.62		-1.655E+00	1.482E+00	2.112E+00	5.512E-01	-0.784
		415.76		-1.108E-01	1.178E+00	1.907E+00	3.982E-01	-0.058
PA-234	+	63.00		2.322E+00	2.054E+00	2.626E+00	4.594E-01	0.884
		94.67		2.419E-01	1.325E-01	2.077E-01	2.754E-02	1.164
		98.44		2.586E-02	7.056E-02	1.094E-01	6.110E-02	0.236
		99.86		-2.040E-01	3.434E-01	5.419E-01	4.836E-02	-0.376
		111.00		4.978E-02	1.321E-01	2.184E-01	2.480E-02	0.228
		131.20		-4.728E-02	7.788E-02	1.222E-01	7.654E-03	-0.387
		152.70		5.813E-02	2.289E-01	3.711E-01	5.857E-02	0.157
	+	186.00		2.192E+00	1.732E+00	1.852E+00	5.654E-01	1.183
		226.40		-5.744E-02	2.842E-01	4.752E-01	5.544E-02	-0.121
		227.20		-1.345E-01	3.088E-01	5.109E-01	3.074E-02	-0.263
		248.90		2.472E-02	5.834E-01	9.503E-01	2.053E-01	0.026
		293.70		2.614E+00	7.426E-01	1.106E+00	1.808E-01	2.365
		369.80		2.720E-01	5.817E-01	9.810E-01	2.072E-01	0.277
		568.70		-1.862E-01	7.255E-01	1.108E+00	6.620E-02	-0.168
		569.50		-1.047E-01	2.038E-01	3.044E-01	1.816E-02	-0.344
		574.00		1.650E-01	1.016E+00	1.734E+00	1.027E-01	0.095
		699.00		-3.923E-02	5.562E-01	9.205E-01	1.650E-01	-0.043
		706.10		-3.541E-01	8.364E-01	1.322E+00	5.834E-01	-0.268
		733.00		2.136E-01	2.813E-01	4.400E-01	9.416E-02	0.485
		742.81		-8.441E-01	1.217E+00	1.625E+00	1.089E+00	-0.519
		796.30		5.751E-01	7.002E-01	1.203E+00	3.220E-01	0.478
		805.60		1.459E-01	7.823E-01	1.280E+00	3.896E-01	0.114
		819.60		-3.909E-01	9.205E-01	1.432E+00	5.432E-01	-0.273
		826.30		-1.937E-01	6.111E-01	9.638E-01	4.307E-01	-0.201
		831.60		-1.869E-01	4.987E-01	7.877E-01	2.347E-01	-0.237
		876.40		-1.208E-01	6.749E-01	1.067E+00	1.098E+00	-0.113
		880.51		1.881E-01	2.220E-01	3.900E-01	3.772E-02	0.482
		883.24		1.278E-01	2.423E-01	3.897E-01	2.626E-01	0.328
		899.00		1.562E-01	6.463E-01	1.079E+00	4.752E-01	0.145
		925.00		3.959E-01	9.196E-01	1.560E+00	1.541E-01	0.254
		926.50		-2.623E-02	1.366E-01	2.181E-01	5.612E-02	-0.120
		946.00	*	-1.224E-01	2.363E-01	3.623E-01	6.980E-02	-0.338
		949.00		-6.171E-02	3.451E-01	5.512E-01	5.312E-02	-0.112
		980.50		1.142E-01	5.426E-01	9.001E-01	8.356E-02	0.127

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		4.270E-01	9.302E-01	1.562E+00	1.016E+00	0.273
PA-234M		766.41		-1.313E+00	1.384E+01	2.266E+01	1.734E+01	-0.058
		1001.03	*	-2.629E+00	5.561E+00	8.540E+00	9.820E-01	-0.308
U-235		89.95		2.566E-01	1.144E+00	1.348E+00	4.252E-01	0.190
	+	93.35		2.053E+00	8.879E-01	9.265E-01	2.641E-01	2.216
		105.00		4.956E-01	7.870E-01	1.297E+00	3.856E-01	0.382
		143.76	*	-4.898E-03	1.545E-01	2.437E-01	3.984E-02	-0.020
		163.35		1.535E-02	3.491E-01	5.589E-01	9.999E-02	0.027
	+	185.71		8.117E-02	5.934E-02	6.805E-02	3.830E-03	1.193
		205.31		-4.373E-02	4.019E-01	5.953E-01	1.071E-01	-0.073
NP-236		94.67		1.855E-01	9.924E-02	1.578E-01	1.548E-02	1.175
		98.44		1.957E-02	5.224E-02	8.268E-02	7.561E-03	0.237
		111.00		3.766E-02	9.987E-02	1.652E-01	1.248E-02	0.228
		160.31	*	-3.602E-02	6.027E-02	9.358E-02	5.214E-03	-0.385
NP-239		99.55		-2.076E-02	1.139E-01	1.836E-01	1.647E-02	-0.113
		117.00	*	2.725E-03	1.358E-01	2.206E-01	1.543E-02	0.012
	+	209.75		1.396E+00	8.386E-01	1.032E+00	6.043E-02	1.353
		228.18		-3.142E-02	1.587E-01	2.653E-01	1.599E-02	-0.118
		277.60		1.324E-01	1.300E-01	2.240E-01	1.436E-02	0.591
		334.30		-1.552E+00	1.625E+00	1.467E+00	9.817E-02	-1.058
AM-241		59.54	*	-3.676E-03	1.718E-01	2.567E-01	3.297E-02	-0.014
CM-243		99.55		-2.136E-02	1.172E-01	1.889E-01	1.694E-02	-0.113
		103.76	*	-3.280E-03	7.022E-02	1.144E-01	9.582E-03	-0.029
		117.00		2.803E-03	1.397E-01	2.270E-01	1.588E-02	0.012
	+	209.75		1.376E+00	8.266E-01	1.017E+00	5.956E-02	1.353
		228.18		-3.174E-02	1.603E-01	2.681E-01	1.616E-02	-0.118
		277.60		1.334E-01	1.310E-01	2.258E-01	1.448E-02	0.591
CM-247		278.00		5.545E-01	5.413E-01	9.331E-01	5.986E-02	0.594
		287.40		6.938E-01	8.253E-01	1.438E+00	9.311E-02	0.482
		402.60	*	1.596E-02	2.565E-02	4.365E-02	2.964E-03	0.366
CF-249		252.85		-1.726E-02	6.002E-01	1.006E+00	6.271E-02	-0.017
		333.44		-8.034E-02	1.916E-01	1.880E-01	1.257E-02	-0.427
		387.95	*	4.405E-03	2.758E-02	4.564E-02	3.101E-03	0.097
CF-251		176.60	*	-4.479E-02	9.170E-02	1.421E-01	7.882E-03	-0.315
		227.00		-8.856E-02	2.741E-01	4.559E-01	2.743E-02	-0.194
		285.00		-9.649E-01	1.195E+00	1.896E+00	1.225E-01	-0.509

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504014      *
* Acquisition date :  7-JUL-2009 09:47:57 Detector SN#     :                *
* Detector ID        : GAM10               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.80      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232504014           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.6676E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.451E+01	2.485E+00	4.198E-01	0.000E+00
CD-109	1.347E+00	8.067E-01	1.192E+00	0.000E+00
SN-126	1.328E-01	7.955E-02	1.183E-01	0.000E+00
TL-208	2.812E-01	4.951E-02	4.276E-02	0.000E+00
BI-211	2.176E+00	3.632E-01	2.460E-01	0.000E+00
PB-212	7.700E-01	9.249E-02	6.723E-02	0.000E+00
PO-212	7.700E-01	9.249E-02	6.723E-02	0.000E+00
BI-214	8.075E-01	1.241E-01	7.710E-02	0.000E+00
PB-214	7.570E-01	1.322E-01	8.574E-02	0.000E+00
PO-214	7.570E-01	1.322E-01	8.574E-02	0.000E+00
PO-216	7.700E-01	9.249E-02	6.723E-02	0.000E+00
PO-218	7.570E-01	1.322E-01	8.574E-02	0.000E+00
RA-224	3.436E+00	8.033E-01	7.647E-01	0.000E+00
RA-226	8.075E-01	1.241E-01	7.710E-02	0.000E+00
AC-228	8.853E-01	2.303E-01	1.503E-01	0.000E+00
RA-228	8.853E-01	2.303E-01	1.503E-01	0.000E+00
TH-228	7.700E-01	9.249E-02	6.722E-02	0.000E+00
TH-230	8.075E-01	1.241E-01	7.710E-02	0.000E+00
TH-232	8.853E-01	2.303E-01	1.503E-01	0.000E+00
TH-234	1.992E+00	1.736E+00	2.237E+00	0.000E+00
U-234	8.075E-01	1.241E-01	7.710E-02	0.000E+00
NP-237	3.900E-01	2.465E-01	3.316E-01	0.000E+00
U-238	1.992E+00	1.736E+00	2.237E+00	0.000E+00
AM-243	2.299E-01	5.963E-02	8.080E-02	0.000E+00
ANH-511	6.445E-02	4.044E-02	3.431E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.127E-01	2.384E-01	4.255E-01	0.000E+00	NOT IDENT.
NA-22	2.844E-02	3.324E-02	6.197E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	4.683E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.254E-02	2.306E-02	4.229E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.171E-02	6.666E-02	0.000E+00	FAIL ABUN
SC-46	1.809E-02	2.814E-02	5.116E-02	0.000E+00	FAIL ABUN
V-48	-2.271E-02	5.036E-02	8.151E-02	0.000E+00	NOT IDENT.
CR-51	-2.162E-02	2.364E-01	4.220E-01	0.000E+00	NOT IDENT.
MN-52	-1.808E-02	1.290E-01	2.150E-01	0.000E+00	NOT IDENT.
MN-54	1.413E-02	3.036E-02	5.427E-02	0.000E+00	NOT IDENT.
CO-56	3.178E-03	2.769E-02	4.828E-02	0.000E+00	NOT IDENT.
CO-57	-2.541E-03	1.754E-02	3.146E-02	0.000E+00	NOT IDENT.
CO-58	-9.680E-03	2.964E-02	4.991E-02	0.000E+00	NOT IDENT.
FE-59	-3.929E-02	7.073E-02	1.116E-01	0.000E+00	NOT IDENT.
CO-60	1.667E-02	3.048E-02	5.549E-02	0.000E+00	NOT IDENT.
ZN-65	2.168E-02	7.674E-02	1.151E-01	0.000E+00	NOT IDENT.
GE-68	-9.054E-01	9.784E-01	1.475E+00	0.000E+00	NOT IDENT.
AS-73	2.223E-01	1.051E+00	2.023E+00	0.000E+00	NOT IDENT.
AS-74	-3.424E-02	6.019E-02	1.032E-01	0.000E+00	NOT IDENT.
SE-75	4.952E-03	3.084E-02	5.278E-02	0.000E+00	NOT IDENT.
BR-77	-1.337E+00	3.871E+00	6.441E+00	0.000E+00	FAIL ABUN
SR-82	-8.958E-02	2.632E-01	4.448E-01	0.000E+00	NOT IDENT.
RB-83	-1.744E-02	4.781E-02	7.940E-02	0.000E+00	NOT IDENT.
RB-84	3.903E-02	5.165E-02	9.447E-02	0.000E+00	NOT IDENT.
KR-85	7.077E+00	5.665E+00	9.515E+00	0.000E+00	NOT IDENT.
SR-85	3.545E-02	2.838E-02	4.767E-02	0.000E+00	NOT IDENT.
RB-86	-6.708E-01	5.742E-01	8.370E-01	0.000E+00	NOT IDENT.
Y-88	-4.013E-03	2.414E-02	3.842E-02	0.000E+00	NOT IDENT.
ZR-88	3.495E-03	1.995E-02	3.558E-02	0.000E+00	NOT IDENT.
Y-91	9.754E-01	1.443E+01	2.519E+01	0.000E+00	NOT IDENT.
NB-94	-3.703E-03	2.520E-02	4.384E-02	0.000E+00	NOT IDENT.
NB-95	-2.957E-02	3.208E-02	5.187E-02	0.000E+00	NOT IDENT.
NB-95M	5.010E-02	9.013E-02	1.522E-01	0.000E+00	NOT IDENT.
ZR-95	8.033E-03	5.216E-02	9.217E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	7.858E+03	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.507E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.928E+00	4.408E+00	8.001E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	5.850E+13	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-9.097E-03	2.413E-02	4.063E-02	0.000E+00	NOT IDENT.
RH-102	-2.223E-02	2.219E-02	3.544E-02	0.000E+00	NOT IDENT.
RU-103	2.640E-02	2.722E-02	4.947E-02	0.000E+00	FAIL ABUN
RH-106	1.240E-01	2.062E-01	3.838E-01	0.000E+00	FAIL ABUN
RU-106	1.240E-01	2.058E-01	3.838E-01	0.000E+00	FAIL ABUN
AG-108M	1.019E-02	2.256E-02	4.064E-02	0.000E+00	NOT IDENT.
AG-110M	-1.775E-02	2.461E-02	4.107E-02	0.000E+00	NOT IDENT.
IN-111	-1.646E-01	4.537E-01	7.153E-01	0.000E+00	NOT IDENT.
IN-113M	-3.385E-02	2.978E-02	4.802E-02	0.000E+00	NOT IDENT.
SN-113	-3.385E-02	2.978E-02	4.802E-02	0.000E+00	NOT IDENT.
IN-114M	-6.577E-02	1.501E-01	2.255E-01	0.000E+00	NOT IDENT.
CD-115	1.564E+00	3.818E+00	6.755E+00	0.000E+00	NOT IDENT.
SN-117M	-3.025E-03	3.553E-02	6.265E-02	0.000E+00	NOT IDENT.
SB-122	8.142E-02	8.413E-01	1.442E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.566E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-6.972E-03	2.055E-02	3.578E-02	0.000E+00	NOT IDENT.
I-124	-7.820E-03	3.606E-01	5.857E-01	0.000E+00	NOT IDENT.
SB-124	-2.086E-02	4.381E-02	6.402E-02	0.000E+00	FAIL ABUN
SB-125	-3.012E-02	6.748E-02	1.142E-01	0.000E+00	FAIL ABUN
TE-125M	-2.587E+00	6.426E+00	1.148E+01	0.000E+00	NOT IDENT.
I-126	-1.304E-02	1.109E-01	1.943E-01	0.000E+00	NOT IDENT.
SB-126	-6.350E-02	1.041E-01	1.467E-01	0.000E+00	FAIL ABUN
SB-127	-3.399E-01	6.925E-01	1.174E+00	0.000E+00	NOT IDENT.
XE-127	-3.796E-03	3.015E-02	5.586E-02	0.000E+00	NOT IDENT.
I-131	5.019E-03	6.448E-02	1.150E-01	0.000E+00	NOT IDENT.
TE-132	-6.065E-02	2.973E-01	5.439E-01	0.000E+00	NOT IDENT.
BA-133	-4.743E-03	3.473E-02	5.352E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.588E+02	0.000E+00	0.000E+00	SHORT HLIF
CS-134	2.948E-02	3.393E-02	6.293E-02	0.000E+00	NOT IDENT.
CS-135	1.061E-01	1.198E-01	2.035E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.724E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	6.628E-03	7.793E-02	1.324E-01	0.000E+00	FAIL ABUN
BA-137M	-4.349E-03	2.493E-02	4.353E-02	0.000E+00	NOT IDENT.
CS-137	-4.598E-03	2.636E-02	4.601E-02	0.000E+00	NOT IDENT.
CE-139	-1.455E-03	2.107E-02	3.704E-02	0.000E+00	NOT IDENT.
BA-140	2.406E-02	1.603E-01	2.771E-01	0.000E+00	NOT IDENT.
LA-140	-2.746E-02	6.108E-02	9.558E-02	0.000E+00	FAIL ABUN
CE-141	-1.931E-03	4.312E-02	7.533E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	3.861E+01	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-9.046E-02	1.466E-01	2.547E-01	0.000E+00	NOT IDENT.
PM-144	1.601E-02	2.502E-02	4.609E-02	0.000E+00	NOT IDENT.
PR-144	1.083E+00	1.693E+00	3.120E+00	0.000E+00	NOT IDENT.

PM-146	3.593E-02	3.109E-02	5.813E-02	0.000E+00	NOT IDENT.
ND-147	-3.535E-02	3.612E-01	6.129E-01	0.000E+00	NOT IDENT.
PM-149	-1.585E+01	3.088E+01	5.423E+01	0.000E+00	NOT IDENT.
EU-152	8.083E-03	7.812E-02	1.233E-01	0.000E+00	NOT IDENT.
GD-153	-1.402E-02	6.228E-02	1.008E-01	0.000E+00	NOT IDENT.
EU-154	8.393E-02	9.262E-02	1.732E-01	0.000E+00	NOT IDENT.
EU-155	4.892E-02	7.686E-02	1.441E-01	0.000E+00	FAIL ABUN
TB-160	2.930E-02	1.089E-01	1.915E-01	0.000E+00	FAIL ABUN
HO-166M	-6.805E-03	4.617E-02	8.019E-02	0.000E+00	NOT IDENT.
TM-171	-1.393E+01	2.679E+01	4.383E+01	0.000E+00	NOT IDENT.
LU-176	1.456E-02	1.647E-02	3.113E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	9.224E-01	1.214E+00	0.000E+00	FAIL ABUN
LU-177M	-5.253E-02	1.272E-01	2.168E-01	0.000E+00	FAIL ABUN
HF-181	-8.562E-03	3.051E-02	5.158E-02	0.000E+00	FAIL ABUN
W-181	5.907E-01	5.068E-01	6.117E-01	0.000E+00	FAIL ABUN
TA-182	2.370E-02	1.665E-01	2.917E-01	0.000E+00	FAIL ABUN
RE-183	4.509E-02	7.724E-02	1.401E-01	0.000E+00	FAIL ABUN
RE-184	-4.558E-03	1.553E-01	2.841E-01	0.000E+00	NOT IDENT.
OS-185	-5.597E-03	2.994E-02	5.234E-02	0.000E+00	NOT IDENT.
RE-188	9.552E-03	1.211E-01	2.155E-01	0.000E+00	NOT IDENT.
W-188	-2.344E+00	5.457E+00	8.394E+00	0.000E+00	FAIL ABUN
IR-192	1.642E-03	2.358E-02	4.252E-02	0.000E+00	FAIL ABUN
AU-195	2.868E-02	1.586E-01	2.913E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	7.623E+01	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.876E-02	2.988E+00	5.263E+00	0.000E+00	NOT IDENT.
TL-202	3.685E-02	4.298E-02	7.934E-02	0.000E+00	NOT IDENT.
HG-203	2.221E-02	2.805E-02	5.203E-02	0.000E+00	NOT IDENT.
BI-207	1.005E-02	4.285E-02	7.370E-02	0.000E+00	FAIL ABUN
TL-207	4.846E-02	4.944E-01	7.850E-01	0.000E+00	FAIL ABUN
PO-209	-3.598E+00	5.717E+00	9.188E+00	0.000E+00	NOT IDENT.
BI-210	-5.900E-01	6.004E+00	1.151E+01	0.000E+00	NOT IDENT.
PB-210	-5.900E-01	6.004E+00	1.151E+01	0.000E+00	NOT IDENT.
PO-210	-5.900E-01	6.004E+00	1.151E+01	0.000E+00	NOT IDENT.
PB-211	5.369E-01	7.148E-01	1.178E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.796E-01	4.728E-01	0.000E+00	FAIL ABUN
PO-215	4.846E-02	4.944E-01	7.850E-01	0.000E+00	FAIL ABUN
RN-219	1.058E-01	2.810E-01	5.060E-01	0.000E+00	FAIL ABUN
RN-220	-9.363E+00	1.888E+01	3.080E+01	0.000E+00	NOT IDENT.
RA-223	4.846E-02	4.944E-01	7.850E-01	0.000E+00	FAIL ABUN
AC-227	-9.112E-03	2.591E-01	4.732E-01	0.000E+00	NOT IDENT.
TH-227	-9.112E-03	2.591E-01	4.732E-01	0.000E+00	FAIL ABUN
TH-229	2.539E-01	3.681E-01	6.626E-01	0.000E+00	FAIL ABUN
PA-231	-4.467E-02	1.009E+00	1.825E+00	0.000E+00	NOT IDENT.
TH-231	4.846E-02	4.944E-01	7.850E-01	0.000E+00	FAIL ABUN
U-231	-2.602E-02	5.449E-01	8.925E-01	0.000E+00	FAIL ABUN
PA-233	4.029E-04	4.282E-02	7.707E-02	0.000E+00	FAIL ABUN
PA-234	-1.224E-01	2.316E-01	3.719E-01	0.000E+00	FAIL ABUN
PA-234M	-2.629E+00	5.450E+00	8.751E+00	0.000E+00	NOT IDENT.
U-235	-4.898E-03	1.514E-01	2.650E-01	0.000E+00	FAIL ABUN
NP-236	-3.602E-02	5.907E-02	1.014E-01	0.000E+00	NOT IDENT.
NP-239	2.725E-03	1.331E-01	2.413E-01	0.000E+00	FAIL ABUN
AM-241	-3.676E-03	1.684E-01	2.861E-01	0.000E+00	NOT IDENT.
CM-243	-3.280E-03	6.881E-02	1.255E-01	0.000E+00	FAIL ABUN
CM-247	1.596E-02	2.514E-02	4.604E-02	0.000E+00	NOT IDENT.
CF-249	4.405E-03	2.703E-02	4.819E-02	0.000E+00	NOT IDENT.
CF-251	-4.479E-02	8.987E-02	1.536E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:48:23.77

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504014.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 09:47:57.
Sample ID         : G232504014           Sample quantity  : 1.66760E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.80  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1286	10.67*	1.107E+00	2.451E+01	2.451E+01	10.35
CD-109	88.03	116	3.72*	5.293E+00	1.321E+00	1.347E+00	61.13
SN-126	64.28	79	9.60	2.346E+00	7.884E-01	7.884E-01	88.42
	86.94	116	8.90	5.293E+00	5.521E-01	5.521E-01	73.30
	87.57	116	37.00*	5.293E+00	1.328E-01	1.328E-01	61.13
TL-208	277.35	------	6.80	4.610E+00	------ Line Not Found		------
	510.84	84	21.60	2.926E+00	2.984E-01	2.984E-01	64.57
	583.14	276	84.20*	2.626E+00	2.812E-01	2.812E-01	17.97
	860.37	------	12.46	1.841E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.633E+00	------ Line Not Found		------
	351.07	486	12.94*	3.886E+00	2.176E+00	2.176E+00	17.03
PB-212	74.81	264	10.70	3.918E+00	1.418E+00	1.418E+00	28.06
	77.11	385	18.00	4.212E+00	1.143E+00	1.143E+00	20.18
	87.30	116	8.00	5.293E+00	6.142E-01	6.142E-01	61.94
	238.63	780	44.60*	5.110E+00	7.700E-01	7.700E-01	12.26
	300.09	------	3.41	4.359E+00	------ Line Not Found		------
PO-212	74.81	264	10.70	3.918E+00	1.418E+00	1.418E+00	28.06
	77.11	385	18.00	4.212E+00	1.143E+00	1.143E+00	20.18
	87.30	116	8.00	5.293E+00	6.142E-01	6.142E-01	61.94
	115.19	------	0.60	6.657E+00	------ Line Not Found		------
	238.63	780	44.60*	5.110E+00	7.700E-01	7.700E-01	12.26
	300.09	------	3.41	4.359E+00	------ Line Not Found		------
BI-214	609.31	420	46.30*	2.530E+00	8.075E-01	8.075E-01	15.68
	768.36	------	5.04	2.053E+00	------ Line Not Found		------
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	52	15.10	1.415E+00	5.453E-01	5.453E-01	67.19
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	------	4.11	1.163E+00	------ Line Not Found		------
	1764.49	67	15.80	9.764E-01	9.793E-01	9.793E-01	29.76
PB-214	74.81	264	6.21	3.918E+00	2.444E+00	2.444E+00	27.48
	77.11	385	10.50	4.212E+00	1.959E+00	1.959E+00	21.57
	87.30	116	4.67	5.293E+00	1.052E+00	1.052E+00	61.61

Sample ID : G232504014 Acquisition date : 7-JUL-2009 09:47:57

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	306	7.49	5.067E+00	1.812E+00	1.812E+00	24.50
	295.21	297	19.20	4.406E+00	7.914E-01	7.914E-01	26.22
	351.92	486	37.20*	3.886E+00	7.570E-01	7.570E-01	17.81
PO-214	74.81	264	6.21	3.918E+00	2.444E+00	2.444E+00	27.48
	77.11	385	10.50	4.212E+00	1.959E+00	1.959E+00	21.57
	87.30	116	4.67	5.293E+00	1.052E+00	1.052E+00	61.61
	241.98	306	7.49	5.067E+00	1.812E+00	1.812E+00	24.50
	295.21	297	19.20	4.406E+00	7.914E-01	7.914E-01	26.22
	351.92	486	37.20*	3.886E+00	7.570E-01	7.570E-01	17.81
PO-216	74.81	264	10.70	3.918E+00	1.418E+00	1.418E+00	28.06
	77.11	385	18.00	4.212E+00	1.143E+00	1.143E+00	20.18
	87.30	116	8.00	5.293E+00	6.142E-01	6.142E-01	61.94
	238.63	780	44.60*	5.110E+00	7.700E-01	7.700E-01	12.26
	300.09	------	3.41	4.359E+00	------ Line Not Found		------
PO-218	74.81	264	6.21	3.918E+00	2.444E+00	2.444E+00	27.48
	77.11	385	10.50	4.212E+00	1.959E+00	1.959E+00	21.57
	87.30	116	4.67	5.293E+00	1.052E+00	1.052E+00	61.61
	241.98	306	7.49	5.067E+00	1.812E+00	1.812E+00	24.50
	295.21	297	19.20	4.406E+00	7.914E-01	7.914E-01	26.22
	351.92	486	37.20*	3.886E+00	7.570E-01	7.570E-01	17.81
RA-224	240.98	306	3.95*	5.067E+00	3.436E+00	3.436E+00	23.85
RA-226	609.31	420	46.30*	2.530E+00	8.075E-01	8.075E-01	15.68
	768.36	------	5.04	2.053E+00	------ Line Not Found		------
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	52	15.10	1.415E+00	5.453E-01	5.453E-01	67.19
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	------	4.11	1.163E+00	------ Line Not Found		------
	1764.49	67	15.80	9.764E-01	9.793E-01	9.793E-01	29.76
AC-228	338.32	152	11.40	3.995E+00	7.499E-01	7.499E-01	59.07
	911.07	189	27.70*	1.739E+00	8.853E-01	8.853E-01	26.54
	969.11	103	16.60	1.636E+00	8.497E-01	8.497E-01	40.73
RA-228	338.32	152	11.40	3.995E+00	7.499E-01	7.499E-01	59.07
	911.07	189	27.70*	1.739E+00	8.853E-01	8.853E-01	26.54
	969.11	103	16.60	1.636E+00	8.497E-01	8.497E-01	40.73
TH-228	84.40	------	1.21	5.004E+00	------ Line Not Found		------
	238.60	780	44.60*	5.110E+00	7.700E-01	7.700E-01	12.26
	300.10	------	3.41	4.359E+00	------ Line Not Found		------
TH-230	609.31	420	46.30*	2.530E+00	8.075E-01	8.075E-01	15.68
	768.36	------	5.04	2.053E+00	------ Line Not Found		------
	934.06	------	3.21	1.697E+00	------ Line Not Found		------
	1120.29	52	15.10	1.415E+00	5.453E-01	5.453E-01	67.19
	1238.11	------	5.94	1.283E+00	------ Line Not Found		------
	1377.67	------	4.11	1.163E+00	------ Line Not Found		------
	1764.49	67	15.80	9.764E-01	9.793E-01	9.793E-01	29.76
TH-232	338.32	152	11.40	3.995E+00	7.499E-01	7.499E-01	43.14
	911.07	189	27.70*	1.739E+00	8.853E-01	8.853E-01	26.54
	969.11	103	16.60	1.636E+00	8.497E-01	8.497E-01	40.73
TH-234	63.29	79	3.80*	2.346E+00	1.992E+00	1.992E+00	88.95
	92.38	236	5.41	5.750E+00	1.708E+00	1.708E+00	37.57

Sample ID : G232504014 Acquisition date : 7-JUL-2009 09:47:57

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	420	46.30*	2.530E+00	8.075E-01	8.075E-01	15.68
	768.36	------	5.04	2.053E+00	------	Line Not Found	------
	934.06	------	3.21	1.697E+00	------	Line Not Found	------
	1120.29	52	15.10	1.415E+00	5.453E-01	5.453E-01	67.19
	1238.11	------	5.94	1.283E+00	------	Line Not Found	------
	1377.67	------	4.11	1.163E+00	------	Line Not Found	------
	1764.49	67	15.80	9.764E-01	9.793E-01	9.793E-01	29.76
NP-237	86.50	116	12.60*	5.293E+00	3.900E-01	3.900E-01	64.52
	95.87	------	2.60	5.933E+00	------	Line Not Found	------
U-238	63.29	79	3.80*	2.346E+00	1.992E+00	1.992E+00	88.95
	92.38	236	5.41	5.750E+00	1.708E+00	1.708E+00	34.04
AM-243	74.67	264	66.00*	3.918E+00	2.299E-01	2.299E-01	26.46
	86.72	116	0.34	5.293E+00	1.462E+01	1.462E+01	61.13
	117.66	------	0.55	6.694E+00	------	Line Not Found	------
	142.18	------	0.13	6.676E+00	------	Line Not Found	------
ANH-511	511.00	84	100.00*	2.926E+00	6.445E-02	6.445E-02	64.03

Flag: "*" = Keyline

Sample ID : G232504014 Acquisition date : 7-JUL-2009 09:47:57

Total number of lines in spectrum 26
Number of unidentified lines 2
Number of lines tentatively identified by NID 24 92.31%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.451E+01	2.451E+01	0.254E+01	10.35	
CD-109	464.00D	1.02	1.321E+00	1.347E+00	0.823E+00	61.13	
SN-126	1.00E+05Y	1.00	1.328E-01	1.328E-01	0.812E-01	61.13	
TL-208	1.41E+10Y	1.00	2.812E-01	2.812E-01	0.505E-01	17.97	
BI-211	7.04E+08Y	1.00	2.176E+00	2.176E+00	0.371E+00	17.03	
PB-212	1.41E+10Y	1.00	7.700E-01	7.700E-01	0.944E-01	12.26	
PO-212	1.41E+10Y	1.00	7.700E-01	7.700E-01	0.944E-01	12.26	
BI-214	1600.00Y	1.00	8.075E-01	8.075E-01	1.266E-01	15.68	
PB-214	1600.00Y	1.00	7.570E-01	7.570E-01	1.349E-01	17.81	
PO-214	1600.00Y	1.00	7.570E-01	7.570E-01	1.349E-01	17.81	
PO-216	1.41E+10Y	1.00	7.700E-01	7.700E-01	0.944E-01	12.26	
PO-218	1600.00Y	1.00	7.570E-01	7.570E-01	1.349E-01	17.81	
RA-224	1.41E+10Y	1.00	3.436E+00	3.436E+00	0.820E+00	23.85	
RA-226	1600.00Y	1.00	8.075E-01	8.075E-01	1.266E-01	15.68	
AC-228	1.41E+10Y	1.00	8.853E-01	8.853E-01	2.350E-01	26.54	
RA-228	1.41E+10Y	1.00	8.853E-01	8.853E-01	2.350E-01	26.54	
TH-228	1.41E+10Y	1.00	7.700E-01	7.700E-01	0.944E-01	12.26	
TH-230	4.47E+09Y	1.00	8.075E-01	8.075E-01	1.266E-01	15.68	
TH-232	1.41E+10Y	1.00	8.853E-01	8.853E-01	2.350E-01	26.54	
TH-234	4.47E+09Y	1.00	1.992E+00	1.992E+00	1.772E+00	88.95	
U-234	4.47E+09Y	1.00	8.075E-01	8.075E-01	1.266E-01	15.68	
NP-237	2.14E+06Y	1.00	3.900E-01	3.900E-01	2.516E-01	64.52	
U-238	4.47E+09Y	1.00	1.992E+00	1.992E+00	1.772E+00	88.95	
AM-243	7380.00Y	1.00	2.299E-01	2.299E-01	0.608E-01	26.46	
ANH-511	1.00E+09Y	1.00	6.445E-02	6.445E-02	4.127E-02	64.03	
	Total Activity :		4.776E+01	4.779E+01			

Grand Total Activity : 4.776E+01 4.779E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232504014 Acquisition date : 7-JUL-2009 09:47:57

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	186.10	116	416	1.01	372.15	367	11	1.62E-02	72.9	5.97E+00	T
0	209.45	112	288	1.43	418.81	414	10	1.55E-02	59.8	5.57E+00	T
8	237.95	125	297	2.59	475.76	470	21	1.74E-02	73.8	5.12E+00	
0	270.14	94	179	1.02	540.10	536	9	1.31E-02	55.2	4.70E+00	T
0	328.20	27	232	1.66	656.14	651	12	3.79E-03	****	4.09E+00	T
0	463.82	100	114	2.00	927.20	920	14	1.39E-02	49.7	3.16E+00	T
0	727.09	80	83	2.16	1453.51	1445	15	1.10E-02	54.6	2.16E+00	T
0	1662.17	11	8	1.04	3323.80	3317	11	1.52E-03	****	1.01E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:48:29.06

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232504014.CNF;1 *
* Acquisition date  : 7-JUL-2009 09:47:57.  Detector SN#     :             *
* Detector ID       : GAM10                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.80          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232504014            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.66760E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08.8MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.451E+01	2.536E+00	4.149E-01	3.573E-02	59.072
CD-109	1.347E+00	8.231E-01	1.081E+00	1.225E-01	1.246
SN-126	1.328E-01	8.117E-02	1.072E-01	1.213E-02	1.238
TL-208	2.812E-01	5.052E-02	4.102E-02	2.756E-03	6.856
BI-211	2.176E+00	3.707E-01	2.323E-01	1.694E-02	9.369
PB-212	7.700E-01	9.437E-02	6.275E-02	4.760E-03	12.272
PO-212	7.700E-01	9.437E-02	6.275E-02	4.760E-03	12.272
BI-214	8.075E-01	1.266E-01	7.406E-02	5.636E-03	10.903
PB-214	7.570E-01	1.349E-01	8.097E-02	7.261E-03	9.349
PO-214	7.570E-01	1.349E-01	8.097E-02	7.261E-03	9.349
PO-216	7.700E-01	9.437E-02	6.275E-02	4.760E-03	12.272
PO-218	7.570E-01	1.349E-01	8.097E-02	7.261E-03	9.349
RA-224	3.436E+00	8.197E-01	7.140E-01	4.383E-02	4.813
RA-226	8.075E-01	1.266E-01	7.406E-02	5.636E-03	10.903
AC-228	8.853E-01	2.350E-01	1.462E-01	1.804E-02	6.055
RA-228	8.853E-01	2.350E-01	1.462E-01	1.804E-02	6.055
TH-228	7.700E-01	9.437E-02	6.274E-02	4.759E-03	12.273
TH-230	8.075E-01	1.266E-01	7.406E-02	5.636E-03	10.903

Sample ID : G232504014 Acquisition date : 7-JUL-2009 09:47:57

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	8.853E-01	2.350E-01	1.462E-01	1.804E-02	6.055
TH-234	1.992E+00	1.772E+00	2.010E+00	3.962E-01	0.991
U-234	8.075E-01	1.266E-01	7.406E-02	5.636E-03	10.903
NP-237	3.900E-01	2.516E-01	3.006E-01	7.065E-02	1.297
U-238	1.992E+00	1.772E+00	2.010E+00	3.962E-01	0.991
AM-243	2.299E-01	6.084E-02	7.294E-02	7.988E-03	3.153
ANH-511	6.445E-02	4.127E-02	3.277E-02	2.100E-03	1.966

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.127E-01		2.432E-01	4.056E-01	3.017E-02	0.278
NA-22	2.844E-02		3.391E-02	6.096E-02	4.722E-03	0.467
NA-24	-8.388E-04		2.389E-02	Half-Life too short		
AL-26	1.254E-02		2.353E-02	4.208E-02	2.668E-03	0.298
TI-44	2.109E-01	+	4.256E-02	6.026E-02	6.593E-03	3.500
SC-46	1.809E-02		2.871E-02	4.973E-02	4.922E-03	0.364
V-48	-2.271E-02		5.139E-02	7.950E-02	7.352E-03	-0.286
CR-51	-2.162E-02		2.413E-01	3.974E-01	2.870E-02	-0.054
MN-52	-1.808E-02		1.316E-01	2.123E-01	1.794E-02	-0.085
MN-54	1.413E-02		3.097E-02	5.265E-02	4.498E-03	0.268
CO-56	3.178E-03		2.826E-02	4.686E-02	4.138E-03	0.068
CO-57	-2.541E-03		1.789E-02	2.880E-02	1.899E-03	-0.088
CO-58	-9.680E-03		3.025E-02	4.837E-02	3.870E-03	-0.200
FE-59	-3.929E-02		7.217E-02	1.093E-01	9.120E-03	-0.360
CO-60	1.667E-02		3.111E-02	5.466E-02	4.750E-03	0.305
ZN-65	2.168E-02		7.830E-02	1.127E-01	8.208E-03	0.192
GE-68	-9.054E-01		9.983E-01	1.443E+00	1.143E-01	-0.627
AS-73	2.223E-01		1.072E+00	1.809E+00	2.394E-01	0.123
AS-74	-3.424E-02		6.141E-02	9.903E-02	5.657E-03	-0.346
SE-75	4.952E-03		3.147E-02	4.941E-02	3.152E-03	0.100
BR-77	-1.337E+00		3.950E+00	6.156E+00	3.906E-01	-0.217
SR-82	-8.958E-02		2.686E-01	4.305E-01	3.104E-02	-0.208
RB-83	-1.744E-02		4.879E-02	7.589E-02	4.816E-03	-0.230
RB-84	3.903E-02		5.270E-02	9.182E-02	8.903E-03	0.425
KR-85	7.077E+00		5.781E+00	9.091E+00	5.807E-01	0.778
SR-85	3.545E-02		2.896E-02	4.554E-02	2.909E-03	0.778
RB-86	-6.708E-01		5.859E-01	8.188E-01	6.496E-02	-0.819
Y-88	-4.013E-03		2.463E-02	3.826E-02	2.347E-03	-0.105
ZR-88	3.495E-03		2.036E-02	3.371E-02	2.291E-03	0.104
Y-91	9.754E-01		1.472E+01	2.474E+01	1.643E+00	0.039
NB-94	-3.703E-03		2.571E-02	4.230E-02	2.408E-03	-0.088
NB-95	-2.957E-02		3.274E-02	5.019E-02	3.502E-03	-0.589
NB-95M	5.010E-02		9.197E-02	1.420E-01	1.102E-02	0.353
ZR-95	8.033E-03		5.322E-02	8.914E-02	7.002E-03	0.090
NB-97	-5.563E-03		4.009E-03	Half-Life too short		
ZR-97	7.370E-03		7.691E-02	Half-Life too short		

Sample ID : G232504014 Acquisition date : 7-JUL-2009 09:47:57

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	1.928E+00		4.498E+00	7.733E+00	1.087E+00	0.249
TC-99M	4.425E+06		2.984E+07	Half-Life too short		
RH-101	-9.097E-03		2.462E-02	3.772E-02	2.167E-03	-0.241
RH-102	-2.223E-02		2.265E-02	3.378E-02	2.228E-03	-0.658
RU-103	2.640E-02		2.777E-02	4.721E-02	6.125E-03	0.559
RH-106	1.240E-01		2.104E-01	3.689E-01	4.264E-02	0.336
RU-106	1.240E-01		2.100E-01	3.689E-01	2.003E-02	0.336
AG-108M	1.019E-02		2.302E-02	3.863E-02	2.770E-03	0.264
AG-110M	-1.775E-02		2.511E-02	3.955E-02	2.142E-03	-0.449
IN-111	-1.646E-01		4.630E-01	6.682E-01	4.126E-02	-0.246
IN-113M	-3.385E-02		3.038E-02	4.550E-02	3.244E-03	-0.744
SN-113	-3.385E-02		3.038E-02	4.550E-02	3.244E-03	-0.744
IN-114M	-6.577E-02		1.532E-01	2.091E-01	1.186E-02	-0.315
CD-115	1.564E+00		3.896E+00	6.459E+00	4.066E-01	0.242
SN-117M	-3.025E-03		3.626E-02	5.778E-02	3.240E-03	-0.052
SB-122	8.142E-02		8.585E-01	1.381E+00	8.308E-02	0.059
I-123	-8.707E-02		1.309E-01	Half-Life too short		
TE-123M	-6.972E-03		2.097E-02	3.300E-02	1.874E-03	-0.211
I-124	-7.820E-03		3.680E-01	5.624E-01	3.173E-02	-0.014
SB-124	-2.086E-02		4.470E-02	6.357E-02	4.830E-03	-0.328
SB-125	-3.012E-02		6.886E-02	1.085E-01	7.555E-03	-0.278
TE-125M	-2.587E+00		6.557E+00	1.048E+01	1.005E+00	-0.247
I-126	-1.304E-02		1.132E-01	1.872E-01	9.389E-03	-0.070
SB-126	-6.350E-02		1.062E-01	1.417E-01	8.561E-03	-0.448
SB-127	-3.399E-01		7.066E-01	1.132E+00	9.504E-02	-0.300
XE-127	-3.796E-03		3.076E-02	5.189E-02	3.005E-03	-0.073
I-131	5.019E-03		6.580E-02	1.087E-01	7.974E-03	0.046
TE-132	-6.065E-02		3.033E-01	5.070E-01	7.119E-02	-0.120
BA-133	-4.743E-03		3.544E-02	5.056E-02	6.100E-03	-0.094
I-133	-6.094E-04		3.871E-04	Half-Life too short		
CS-134	2.948E-02		3.462E-02	6.097E-02	4.700E-03	0.484
CS-135	1.061E-01		1.222E-01	1.906E-01	1.541E-02	0.556
I-135	-6.841E+06		8.796E+06	Half-Life too short		
CS-136	6.628E-03		7.952E-02	1.294E-01	1.133E-02	0.051
BA-137M	-4.349E-03		2.544E-02	4.192E-02	2.068E-03	-0.104
CS-137	-4.598E-03		2.689E-02	4.431E-02	2.199E-03	-0.104
CE-139	-1.455E-03		2.150E-02	3.420E-02	1.868E-03	-0.043
BA-140	2.406E-02		1.636E-01	2.651E-01	8.642E-02	0.091
LA-140	-2.746E-02		6.233E-02	9.472E-02	7.350E-03	-0.290
CE-141	-1.931E-03		4.400E-02	6.930E-02	4.241E-03	-0.028
CE-143	8.485E-05		1.970E-05	Half-Life too short		
CE-144	-9.046E-02		1.496E-01	2.337E-01	3.358E-02	-0.387
PM-144	1.601E-02		2.553E-02	4.446E-02	2.480E-03	0.360
PR-144	1.083E+00		1.728E+00	3.009E+00	1.678E-01	0.360
PM-146	3.593E-02		3.172E-02	5.533E-02	5.110E-03	0.649
ND-147	-3.535E-02		3.686E-01	5.862E-01	8.050E-02	-0.060
PM-149	-1.585E+01		3.151E+01	5.089E+01	7.355E+00	-0.311
EU-152	8.083E-03		7.971E-02	1.164E-01	8.574E-03	0.069

Sample ID : G232504014 Acquisition date : 7-JUL-2009 09:47:57

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-1.402E-02		6.355E-02	9.169E-02	8.537E-03	-0.153
EU-154	8.393E-02		9.451E-02	1.703E-01	1.814E-02	0.493
EU-155	4.892E-02		7.843E-02	1.313E-01	1.089E-02	0.373
TB-160	2.930E-02		1.111E-01	1.861E-01	1.794E-02	0.157
HO-166M	-6.805E-03		4.711E-02	7.741E-02	4.543E-03	-0.088
TM-171	-1.393E+01		2.734E+01	3.945E+01	4.494E+00	-0.353
LU-176	1.456E-02		1.681E-02	2.927E-02	1.926E-03	0.497
LU-177	1.567E+00	+	9.412E-01	1.128E+00	6.593E-02	1.389
LU-177M	-5.253E-02		1.298E-01	2.057E-01	1.394E-02	-0.255
HF-181	-8.562E-03		3.114E-02	4.919E-02	3.229E-03	-0.174
W-181	5.907E-01	+	5.171E-01	5.502E-01	6.357E-02	1.074
TA-182	2.370E-02		1.699E-01	2.866E-01	1.976E-02	0.083
RE-183	4.509E-02		7.882E-02	1.293E-01	7.153E-03	0.349
RE-184	-4.558E-03		1.585E-01	2.656E-01	1.656E-02	-0.017
OS-185	-5.597E-03		3.055E-02	5.037E-02	2.588E-03	-0.111
RE-188	9.552E-03		1.236E-01	1.986E-01	1.129E-02	0.048
W-188	-2.344E+00		5.568E+00	7.881E+00	5.117E-01	-0.297
IR-192	1.642E-03		2.406E-02	4.003E-02	2.661E-03	0.041
AU-195	2.868E-02		1.618E-01	2.651E-01	2.406E-02	0.108
TL-200	-1.366E-05		3.889E-05	Half-Life too short		
TL-201	-2.876E-02		3.049E+00	4.862E+00	2.659E-01	-0.006
TL-202	3.685E-02		4.385E-02	7.543E-02	5.072E-03	0.489
HG-203	2.221E-02		2.863E-02	4.880E-02	3.293E-03	0.455
BI-207	1.005E-02		4.372E-02	7.207E-02	5.867E-03	0.139
TL-207	4.846E-02		5.045E-01	7.395E-01	1.245E-01	0.066
PO-209	-3.598E+00		5.834E+00	8.935E+00	9.013E-01	-0.403
BI-210	-5.900E-01		6.126E+00	1.025E+01	1.006E+00	-0.058
PB-210	-5.900E-01		6.126E+00	1.025E+01	1.006E+00	-0.058
PO-210	-5.900E-01		6.126E+00	1.025E+01	9.204E-01	-0.058
PB-211	5.369E-01		7.294E-01	1.118E+00	6.978E-01	0.480
BI-212	7.016E-01	+	3.873E-01	4.567E-01	3.653E-02	1.536
PO-215	4.846E-02		5.045E-01	7.395E-01	1.245E-01	0.066
RN-219	1.058E-01		2.867E-01	4.798E-01	6.744E-02	0.220
RN-220	-9.363E+00		1.927E+01	2.949E+01	1.808E+00	-0.318
RA-223	4.846E-02		5.045E-01	7.395E-01	1.245E-01	0.066
AC-227	-9.112E-03		2.644E-01	4.426E-01	6.266E-02	-0.021
TH-227	-9.112E-03		2.644E-01	4.426E-01	7.552E-02	-0.021
TH-229	2.539E-01		3.757E-01	6.147E-01	3.505E-02	0.413
PA-231	-4.467E-02		1.029E+00	1.712E+00	2.409E-01	-0.026
TH-231	4.846E-02		5.045E-01	7.395E-01	1.245E-01	0.066
U-231	-2.602E-02		5.560E-01	8.114E-01	7.776E-02	-0.032
PA-233	4.029E-04		4.370E-02	7.252E-02	5.018E-03	0.006
PA-234	-1.224E-01		2.363E-01	3.623E-01	6.980E-02	-0.338
PA-234M	-2.629E+00		5.561E+00	8.540E+00	9.820E-01	-0.308
U-235	-4.898E-03		1.545E-01	2.437E-01	3.984E-02	-0.020
NP-236	-3.602E-02		6.027E-02	9.358E-02	5.214E-03	-0.385
NP-239	2.725E-03		1.358E-01	2.206E-01	1.543E-02	0.012
AM-241	-3.676E-03		1.718E-01	2.567E-01	3.297E-02	-0.014

Sample ID : G232504014 Acquisition date : 7-JUL-2009 09:47:57

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.280E-03		7.022E-02	1.144E-01	9.582E-03	-0.029
CM-247	1.596E-02		2.565E-02	4.365E-02	2.964E-03	0.366
CF-249	4.405E-03		2.758E-02	4.564E-02	3.101E-03	0.097
CF-251	-4.479E-02		9.170E-02	1.421E-01	7.882E-03	-0.315

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232504014           *
* Acquisition date  :  7-JUL-2009 09:47:57 Detector SN#     :               *
* Detector ID       : GAM10                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.80     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232504014           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.6676E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.451E+01	2.485E+00	2.100E-01	1.268E+00
CD-109	1.347E+00	8.067E-01	5.963E-01	4.116E-01
SN-126	1.328E-01	7.955E-02	5.916E-02	4.059E-02
TL-208	2.812E-01	4.951E-02	2.139E-02	2.526E-02
BI-211	2.176E+00	3.632E-01	1.231E-01	1.853E-01
PB-212	7.700E-01	9.249E-02	3.363E-02	4.719E-02
PO-212	7.700E-01	9.249E-02	3.363E-02	4.719E-02
BI-214	8.075E-01	1.241E-01	3.857E-02	6.330E-02
PB-214	7.570E-01	1.322E-01	4.290E-02	6.743E-02
PO-214	7.570E-01	1.322E-01	4.290E-02	6.743E-02
PO-216	7.700E-01	9.249E-02	3.363E-02	4.719E-02
PO-218	7.570E-01	1.322E-01	4.290E-02	6.743E-02
RA-224	3.436E+00	8.033E-01	3.826E-01	4.098E-01
RA-226	8.075E-01	1.241E-01	3.857E-02	6.330E-02
AC-228	8.853E-01	2.303E-01	7.518E-02	1.175E-01
RA-228	8.853E-01	2.303E-01	7.518E-02	1.175E-01
TH-228	7.700E-01	9.249E-02	3.363E-02	4.719E-02
TH-230	8.075E-01	1.241E-01	3.857E-02	6.329E-02
TH-232	8.853E-01	2.303E-01	7.518E-02	1.175E-01
TH-234	1.992E+00	1.736E+00	1.119E+00	8.858E-01
U-234	8.075E-01	1.241E-01	3.857E-02	6.329E-02
NP-237	3.900E-01	2.465E-01	1.659E-01	1.258E-01
U-238	1.992E+00	1.736E+00	1.119E+00	8.858E-01
AM-243	2.299E-01	5.963E-02	4.042E-02	3.042E-02
ANH-511	6.445E-02	4.044E-02	1.717E-02	2.063E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.127E-01	2.384E-01	2.129E-01	1.216E-01 NOT IDENT.
NA-22	2.844E-02	3.324E-02	3.100E-02	1.696E-02 NOT IDENT.

NA-24	-8.388E+02	4.683E+04	0.000E+00	2.389E+04	SHORT HLIF
AL-26	1.254E-02	2.306E-02	2.116E-02	1.176E-02	NOT IDENT.
Tl-44	2.109E-01	4.171E-02	3.335E-02	2.128E-02	FAIL ABUN
SC-46	1.809E-02	2.814E-02	2.559E-02	1.436E-02	FAIL ABUN
V-48	-2.271E-02	5.036E-02	4.078E-02	2.570E-02	NOT IDENT.
CR-51	-2.162E-02	2.364E-01	2.111E-01	1.206E-01	NOT IDENT.
MN-52	-1.808E-02	1.290E-01	1.076E-01	6.580E-02	NOT IDENT.
MN-54	1.413E-02	3.036E-02	2.715E-02	1.549E-02	NOT IDENT.
CO-56	3.178E-03	2.769E-02	2.415E-02	1.413E-02	NOT IDENT.
CO-57	-2.541E-03	1.754E-02	1.574E-02	8.947E-03	NOT IDENT.
CO-58	-9.680E-03	2.964E-02	2.497E-02	1.512E-02	NOT IDENT.
FE-59	-3.929E-02	7.073E-02	5.584E-02	3.609E-02	NOT IDENT.
CO-60	1.667E-02	3.048E-02	2.776E-02	1.555E-02	NOT IDENT.
ZN-65	2.168E-02	7.674E-02	5.757E-02	3.915E-02	NOT IDENT.
GE-68	-9.054E-01	9.784E-01	7.381E-01	4.992E-01	NOT IDENT.
AS-73	2.223E-01	1.051E+00	1.012E+00	5.361E-01	NOT IDENT.
AS-74	-3.424E-02	6.019E-02	5.162E-02	3.071E-02	NOT IDENT.
SE-75	4.952E-03	3.084E-02	2.640E-02	1.573E-02	NOT IDENT.
BR-77	-1.337E+00	3.871E+00	3.222E+00	1.975E+00	FAIL ABUN
SR-82	-8.958E-02	2.632E-01	2.225E-01	1.343E-01	NOT IDENT.
RB-83	-1.744E-02	4.781E-02	3.972E-02	2.439E-02	NOT IDENT.
RB-84	3.903E-02	5.165E-02	4.726E-02	2.635E-02	NOT IDENT.
KR-85	7.077E+00	5.665E+00	4.761E+00	2.890E+00	NOT IDENT.
SR-85	3.545E-02	2.838E-02	2.385E-02	1.448E-02	NOT IDENT.
RB-86	-6.708E-01	5.742E-01	4.187E-01	2.929E-01	NOT IDENT.
Y-88	-4.013E-03	2.414E-02	1.922E-02	1.231E-02	NOT IDENT.
ZR-88	3.495E-03	1.995E-02	1.780E-02	1.018E-02	NOT IDENT.
Y-91	9.754E-01	1.443E+01	1.260E+01	7.361E+00	NOT IDENT.
NB-94	-3.703E-03	2.520E-02	2.193E-02	1.286E-02	NOT IDENT.
NB-95	-2.957E-02	3.208E-02	2.595E-02	1.637E-02	NOT IDENT.
NB-95M	5.010E-02	9.013E-02	7.615E-02	4.598E-02	NOT IDENT.
ZR-95	8.033E-03	5.216E-02	4.611E-02	2.661E-02	NOT IDENT.
NB-97	-5.563E+03	7.858E+03	0.000E+00	4.009E+03	SHORT HLIF
ZR-97	7.370E+03	1.507E+05	0.000E+00	7.691E+04	SHORT HLIF
MO-99	1.928E+00	4.408E+00	4.003E+00	2.249E+00	NOT IDENT.
TC-99M	4.425E+12	5.850E+13	0.000E+00	2.984E+13	SHORT HLIF
RH-101	-9.097E-03	2.413E-02	2.033E-02	1.231E-02	NOT IDENT.
RH-102	-2.223E-02	2.219E-02	1.773E-02	1.132E-02	NOT IDENT.
RU-103	2.640E-02	2.722E-02	2.475E-02	1.389E-02	FAIL ABUN
RH-106	1.240E-01	2.062E-01	1.920E-01	1.052E-01	FAIL ABUN
RU-106	1.240E-01	2.058E-01	1.920E-01	1.050E-01	FAIL ABUN
AG-108M	1.019E-02	2.256E-02	2.033E-02	1.151E-02	NOT IDENT.
AG-110M	-1.775E-02	2.461E-02	2.055E-02	1.256E-02	NOT IDENT.
IN-111	-1.646E-01	4.537E-01	3.579E-01	2.315E-01	NOT IDENT.
IN-113M	-3.385E-02	2.978E-02	2.402E-02	1.519E-02	NOT IDENT.
SN-113	-3.385E-02	2.978E-02	2.402E-02	1.519E-02	NOT IDENT.
IN-114M	-6.577E-02	1.501E-01	1.128E-01	7.660E-02	NOT IDENT.
CD-115	1.564E+00	3.818E+00	3.380E+00	1.948E+00	NOT IDENT.
SN-117M	-3.025E-03	3.553E-02	3.134E-02	1.813E-02	NOT IDENT.
SB-122	8.142E-02	8.413E-01	7.212E-01	4.292E-01	NOT IDENT.
I-123	-8.707E+04	2.566E+05	0.000E+00	1.309E+05	SHORT HLIF
TE-123M	-6.972E-03	2.055E-02	1.790E-02	1.048E-02	NOT IDENT.
I-124	-7.820E-03	3.606E-01	2.930E-01	1.840E-01	NOT IDENT.
SB-124	-2.086E-02	4.381E-02	3.203E-02	2.235E-02	FAIL ABUN
SB-125	-3.012E-02	6.748E-02	5.714E-02	3.443E-02	FAIL ABUN
TE-125M	-2.587E+00	6.426E+00	5.745E+00	3.278E+00	NOT IDENT.
I-126	-1.304E-02	1.109E-01	9.721E-02	5.658E-02	NOT IDENT.
SB-126	-6.350E-02	1.041E-01	7.341E-02	5.312E-02	FAIL ABUN
SB-127	-3.399E-01	6.925E-01	5.876E-01	3.533E-01	NOT IDENT.
XE-127	-3.796E-03	3.015E-02	2.795E-02	1.538E-02	NOT IDENT.
I-131	5.019E-03	6.448E-02	5.752E-02	3.290E-02	NOT IDENT.
TE-132	-6.065E-02	2.973E-01	2.721E-01	1.517E-01	NOT IDENT.
BA-133	-4.743E-03	3.473E-02	2.677E-02	1.772E-02	NOT IDENT.
I-133	-6.094E+02	7.588E+02	0.000E+00	3.871E+02	SHORT HLIF
CS-134	2.948E-02	3.393E-02	3.149E-02	1.731E-02	NOT IDENT.
CS-135	1.061E-01	1.198E-01	1.018E-01	6.110E-02	NOT IDENT.
I-135	-6.841E+12	1.724E+13	0.000E+00	8.796E+12	SHORT HLIF
CS-136	6.628E-03	7.793E-02	6.624E-02	3.976E-02	FAIL ABUN
BA-137M	-4.349E-03	2.493E-02	2.178E-02	1.272E-02	NOT IDENT.
CS-137	-4.598E-03	2.636E-02	2.302E-02	1.345E-02	NOT IDENT.
CE-139	-1.455E-03	2.107E-02	1.853E-02	1.075E-02	NOT IDENT.
BA-140	2.406E-02	1.603E-01	1.386E-01	8.180E-02	NOT IDENT.
LA-140	-2.746E-02	6.108E-02	4.782E-02	3.117E-02	FAIL ABUN
CE-141	-1.931E-03	4.312E-02	3.769E-02	2.200E-02	NOT IDENT.
CE-143	8.485E+01	3.861E+01	0.000E+00	1.970E+01	SHORT HLIF
CE-144	-9.046E-02	1.466E-01	1.274E-01	7.482E-02	NOT IDENT.
PM-144	1.601E-02	2.502E-02	2.306E-02	1.276E-02	NOT IDENT.
PR-144	1.083E+00	1.693E+00	1.561E+00	8.640E-01	NOT IDENT.

PM-146	3.593E-02	3.109E-02	2.908E-02	1.586E-02	NOT IDENT.
ND-147	-3.535E-02	3.612E-01	3.066E-01	1.843E-01	NOT IDENT.
PM-149	-1.585E+01	3.088E+01	2.713E+01	1.576E+01	NOT IDENT.
EU-152	8.083E-03	7.812E-02	6.169E-02	3.986E-02	NOT IDENT.
GD-153	-1.402E-02	6.228E-02	5.044E-02	3.178E-02	NOT IDENT.
EU-154	8.393E-02	9.262E-02	8.663E-02	4.725E-02	NOT IDENT.
EU-155	4.892E-02	7.686E-02	7.207E-02	3.922E-02	FAIL ABUN
TB-160	2.930E-02	1.089E-01	9.579E-02	5.556E-02	FAIL ABUN
HO-166M	-6.805E-03	4.617E-02	4.012E-02	2.355E-02	NOT IDENT.
TM-171	-1.393E+01	2.679E+01	2.193E+01	1.367E+01	NOT IDENT.
LU-176	1.456E-02	1.647E-02	1.557E-02	8.403E-03	FAIL ABUN
LU-177	1.567E+00	9.224E-01	6.072E-01	4.706E-01	FAIL ABUN
LU-177M	-5.253E-02	1.272E-01	1.085E-01	6.491E-02	FAIL ABUN
HF-181	-8.562E-03	3.051E-02	2.581E-02	1.557E-02	FAIL ABUN
W-181	5.907E-01	5.068E-01	3.060E-01	2.585E-01	FAIL ABUN
TA-182	2.370E-02	1.665E-01	1.459E-01	8.494E-02	FAIL ABUN
RE-183	4.509E-02	7.724E-02	7.011E-02	3.941E-02	FAIL ABUN
RE-184	-4.558E-03	1.553E-01	1.421E-01	7.925E-02	NOT IDENT.
OS-185	-5.597E-03	2.994E-02	2.619E-02	1.528E-02	NOT IDENT.
RE-188	9.552E-03	1.211E-01	1.078E-01	6.178E-02	NOT IDENT.
W-188	-2.344E+00	5.457E+00	4.199E+00	2.784E+00	FAIL ABUN
IR-192	1.642E-03	2.358E-02	2.128E-02	1.203E-02	FAIL ABUN
AU-195	2.868E-02	1.586E-01	1.458E-01	8.092E-02	FAIL ABUN
TL-200	-1.366E+01	7.623E+01	0.000E+00	3.889E+01	SHORT HLIF
TL-201	-2.876E-02	2.988E+00	2.633E+00	1.524E+00	NOT IDENT.
TL-202	3.685E-02	4.298E-02	3.969E-02	2.193E-02	NOT IDENT.
HG-203	2.221E-02	2.805E-02	2.603E-02	1.431E-02	NOT IDENT.
BI-207	1.005E-02	4.285E-02	3.687E-02	2.186E-02	FAIL ABUN
TL-207	4.846E-02	4.944E-01	3.927E-01	2.522E-01	FAIL ABUN
PO-209	-3.598E+00	5.717E+00	4.597E+00	2.917E+00	NOT IDENT.
BI-210	-5.900E-01	6.004E+00	5.757E+00	3.063E+00	NOT IDENT.
PB-210	-5.900E-01	6.004E+00	5.757E+00	3.063E+00	NOT IDENT.
PO-210	-5.900E-01	6.004E+00	5.757E+00	3.063E+00	NOT IDENT.
PB-211	5.369E-01	7.148E-01	5.895E-01	3.647E-01	NOT IDENT.
BI-212	7.016E-01	3.796E-01	2.365E-01	1.937E-01	FAIL ABUN
PO-215	4.846E-02	4.944E-01	3.927E-01	2.522E-01	FAIL ABUN
RN-219	1.058E-01	2.810E-01	2.531E-01	1.434E-01	FAIL ABUN
RN-220	-9.363E+00	1.888E+01	1.541E+01	9.634E+00	NOT IDENT.
RA-223	4.846E-02	4.944E-01	3.927E-01	2.522E-01	FAIL ABUN
AC-227	-9.112E-03	2.591E-01	2.367E-01	1.322E-01	NOT IDENT.
TH-227	-9.112E-03	2.591E-01	2.367E-01	1.322E-01	FAIL ABUN
TH-229	2.539E-01	3.681E-01	3.315E-01	1.878E-01	FAIL ABUN
PA-231	-4.467E-02	1.009E+00	9.131E-01	5.147E-01	NOT IDENT.
TH-231	4.846E-02	4.944E-01	3.927E-01	2.522E-01	FAIL ABUN
U-231	-2.602E-02	5.449E-01	4.465E-01	2.780E-01	FAIL ABUN
PA-233	4.029E-04	4.282E-02	3.856E-02	2.185E-02	FAIL ABUN
PA-234	-1.224E-01	2.316E-01	1.861E-01	1.181E-01	FAIL ABUN
PA-234M	-2.629E+00	5.450E+00	4.378E+00	2.781E+00	NOT IDENT.
U-235	-4.898E-03	1.514E-01	1.326E-01	7.725E-02	FAIL ABUN
NP-236	-3.602E-02	5.907E-02	5.075E-02	3.014E-02	NOT IDENT.
NP-239	2.725E-03	1.331E-01	1.207E-01	6.789E-02	FAIL ABUN
AM-241	-3.676E-03	1.684E-01	1.432E-01	8.592E-02	NOT IDENT.
CM-243	-3.280E-03	6.881E-02	6.280E-02	3.511E-02	FAIL ABUN
CM-247	1.596E-02	2.514E-02	2.303E-02	1.282E-02	NOT IDENT.
CF-249	4.405E-03	2.703E-02	2.411E-02	1.379E-02	NOT IDENT.
CF-251	-4.479E-02	8.987E-02	7.686E-02	4.585E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	236.5887
46.50	236.5887
46.50	236.5887
48.70	244.4408
49.72	230.3626
51.35	237.8251
52.39	227.3286
52.97	237.8867
53.15	238.9251
53.44	242.8217
54.07	231.0935
56.28	242.6663
56.28	242.6683
57.37	0.0000
57.53	247.1651
57.53	247.1661
57.60	242.5069
57.98	245.5511
57.98	245.5511
59.32	239.2570
59.32	239.2570
59.40	239.3021
59.54	239.3814
59.72	245.1515
60.01	229.7202
61.10	245.9435
61.14	245.9659
61.30	246.0570
63.00	264.1531
63.29	276.2337
63.29	276.2337
63.58	276.4151
64.28	273.5104
65.12	255.3739
65.20	255.4190
65.20	255.4190
66.05	270.2773
66.72	279.3131
66.83	295.2224
66.91	295.2740
67.20	294.0204
67.20	294.0204
67.75	301.5872
67.85	301.6526
68.90	283.5310
68.90	283.5310
69.30	285.2226
69.67	266.6127
70.82	281.7864
70.82	281.7864
70.83	281.7923
72.80	316.0157
72.87	316.0620
72.87	316.0620
74.67	317.2324
74.81	317.3233
74.81	317.3233
74.81	317.3233
74.81	317.3233
74.81	317.3233
74.81	317.3233
74.97	317.4258
75.28	317.6258
75.70	317.8953
77.11	318.7962
77.11	318.7962
77.11	318.7962

77.11	318.7962
77.11	318.7962
77.11	318.7962
78.38	319.6012
79.62	320.3798
79.80	320.4922
79.80	320.4922
80.11	320.6872
80.18	320.7302
80.30	320.8046
80.30	320.8046
80.57	320.9732
81.00	321.2410
81.07	321.2840
81.07	321.2840
81.07	321.2840
81.07	321.2840
82.60	352.4677
83.37	351.4937
83.78	295.1284
83.78	295.1284
83.78	295.1284
83.78	295.1284
84.21	283.4330
84.40	283.5345
84.90	352.5110
85.43	336.9118
86.29	354.9214
86.50	355.0606
86.54	355.0859
86.59	355.1185
86.72	356.7040
86.79	356.7476
86.94	356.8475
87.30	404.0966
87.30	404.0966
87.30	404.0966
87.30	404.0966
87.30	404.0966
87.30	404.0966
87.57	404.2959
87.88	405.5273
88.03	405.6386
88.36	384.8379
88.47	384.9141
89.95	349.7665
91.11	299.1300
92.29	408.7614
92.38	408.8274
92.38	408.8274
93.35	319.5328
94.00	319.8976
94.67	234.1206
94.67	234.1230
94.90	244.8632
94.90	244.8632
94.90	244.8632
94.90	244.8632
95.87	233.0871
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96.73	219.7024
97.43	252.0432
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98.44	230.1371
98.88	236.8428
99.55	246.3089
99.55	246.3089
99.86	258.7084
100.00	258.7701
100.10	258.8152
103.18	259.1124
103.76	255.2429
105.00	246.4785
105.31	244.5401
108.00	266.3267
109.28	268.9460
111.00	244.6853
111.00	244.6853

111.76	261.6562
112.95	243.3412
115.19	235.7975
116.30	241.4445
117.00	243.8025
117.00	243.8025
117.66	252.4609
121.11	225.2150
121.62	246.5480
121.78	236.0222
122.06	241.4127
122.32	266.9258
122.32	266.9258
122.32	266.9258
122.32	266.9258
123.07	247.0730
127.23	268.8311
129.76	236.6087
131.20	287.5090
133.02	262.4246
133.54	276.6049
135.34	228.7372
136.00	251.6226
136.25	264.6715
136.48	258.2724
140.51	246.6394
140.51	0.0000
142.18	247.1890
142.65	248.4310
143.76	257.5248
144.24	268.6046
144.24	268.6046
144.24	268.6046
144.24	268.6046
145.22	241.6176
145.44	253.7170
147.16	255.3794
152.43	251.5876
152.70	237.3237
153.22	237.4789
154.21	248.8312
154.21	248.8312
154.21	248.8312
154.21	248.8312
155.03	261.2651
156.02	254.9363
158.56	256.8484
159.00	0.0000
159.00	266.9995
160.31	279.6838
161.27	249.8900
162.32	237.9219
162.64	248.0698
163.35	253.8740
163.89	255.1571
165.85	245.6599
167.43	236.0065
171.28	231.4300
171.86	223.6785
172.10	218.0910
176.55	243.0597
176.60	239.6652
181.06	243.1590
184.41	238.9105
185.71	277.6929
186.00	277.7816
190.27	259.4719
192.34	260.0510
193.63	217.5873
197.04	223.0215
198.01	219.7598
198.60	208.2616
200.40	244.7885
201.83	228.5184
202.84	221.7456
205.31	219.3217
208.36	235.5165
208.81	222.2207

209.75	222.4322
209.75	222.4322
210.97	199.3742
215.65	205.9878
216.55	209.7266
218.09	205.5934
222.10	212.6533
223.80	210.3170
226.40	216.2256
227.00	223.5305
227.08	222.6498
227.20	226.2678
228.16	212.0943
228.18	212.0979
228.18	212.0979
231.56	0.0000
235.69	198.3925
236.00	198.4510
236.00	198.4510
238.60	186.9484
238.63	186.9531
238.63	186.9531
238.63	186.9531
239.00	187.0160
240.98	187.3555
241.98	187.5268
241.98	187.5268
241.98	187.5268
244.69	167.9124
245.39	173.8617
247.94	183.0460
248.90	169.5938
249.79	165.9314
252.40	159.8832
252.85	167.3008
252.85	167.3008
254.15	0.0000
256.20	169.6362
256.20	169.6362
260.50	157.3154
260.90	163.8498
262.80	160.4083
264.65	149.8296
268.24	153.5143
268.79	168.4986
269.46	168.5924
269.46	168.5924
269.46	168.5924
269.46	168.5924
271.23	159.8783
273.65	190.1465
276.40	174.4488
277.35	153.9352
277.60	151.1512
277.60	151.1512
278.00	152.1395
278.60	162.5518
279.20	153.2303
279.53	165.4968
280.46	172.2103
281.68	175.2066
283.67	142.4680
284.30	145.3737
285.00	158.6792
285.90	155.0137
286.10	153.1480
286.10	153.1480
287.40	124.9162
288.45	0.0000
290.67	154.8477
290.80	168.5271
291.72	165.6129
293.26	0.0000
293.70	135.4382
295.21	149.5017
295.21	149.5017
295.21	149.5017
295.96	149.5903

296.50	195.2156
297.23	210.5881
298.57	158.8717
299.80	139.1460
299.80	139.1460
300.09	133.0594
300.09	133.0594
300.09	133.0594
300.10	133.0594
300.12	133.0616
301.29	137.7751
302.84	189.6704
303.76	180.2173
303.91	178.3228
304.40	159.2066
304.40	159.2066
304.84	144.8712
306.84	116.2661
308.46	159.7031
311.98	128.2978
316.51	136.4797
318.01	130.8183
319.02	124.1289
319.41	119.3139
320.08	129.0792
323.87	124.5742
323.87	124.5742
323.87	124.5742
323.87	124.5742
325.23	120.0230
328.77	133.8141
333.44	148.9663
334.20	188.2734
334.20	188.2734
334.30	188.2852
338.28	133.7484
338.28	133.7484
338.28	133.7484
338.28	133.7484
338.32	133.7526
338.32	133.7526
338.32	133.7526
340.50	130.8081
340.57	130.8142
344.27	131.1566
345.85	124.9747
350.59	0.0000
351.07	125.0329
351.92	125.1079
351.92	125.1079
351.92	125.1079
355.39	0.0000
356.01	129.0443
364.48	107.1567
366.43	111.3100
367.43	105.3637
367.94	0.0000
369.80	97.4899
374.96	104.8839
383.85	108.5380
387.95	103.7416
388.63	107.8568
391.69	120.3029
391.69	120.3029
392.90	96.9279
398.62	115.7122
400.65	101.5061
401.10	109.7397
401.81	99.5280
402.60	95.4706
404.84	93.5480
410.95	100.0949
411.60	107.3611
413.65	123.0002
414.70	105.4972
415.30	110.7095
415.76	105.5657
417.63	0.0000

418.52	83.9725
423.70	95.6752
427.08	93.7848
427.89	115.7255
432.53	94.0910
433.93	87.8901
439.47	94.4756
439.56	85.0329
439.89	76.6491
443.98	91.5680
444.90	85.2974
445.03	85.3049
445.03	85.3049
445.03	85.3049
445.03	85.3049
453.90	80.4485
463.38	88.3319
468.07	90.4856
473.00	81.3182
475.06	117.8317
475.35	104.9938
476.78	87.9208
477.59	97.6137
477.96	92.2700
482.03	101.0784
484.57	99.0640
487.03	84.1021
490.36	0.0000
492.35	80.0184
497.08	61.7915
507.63	0.0000
510.53	0.0000
510.84	84.0819
511.00	84.0889
511.85	84.1253
511.85	84.1253
513.99	80.5006
513.99	80.5006
520.41	84.5007
520.65	84.5101
527.90	72.7072
528.96	0.0000
529.64	87.1054
529.87	0.0000
531.02	87.1657
537.32	74.1605
543.00	83.2512
546.56	0.0000
549.76	85.7591
552.65	73.6115
555.20	90.4551
563.23	75.1153
563.90	79.6258
568.70	75.3137
569.32	83.2071
569.50	83.2139
569.67	83.2206
573.80	73.9201
574.00	73.9261
574.64	76.6556
578.91	60.2441
579.30	0.0000
583.14	75.1539
585.48	55.8990
591.81	66.3683
592.07	66.3773
593.00	71.8638
595.88	91.9998
600.56	86.7200
602.52	0.0000
602.71	90.0692
602.71	90.0692
603.60	99.0314
604.41	91.4478
604.70	91.4600
609.31	68.7396
609.31	68.7396
609.31	68.7396

609.31	68.7396
610.33	68.7708
612.46	67.3070
614.37	55.1177
618.01	64.4099
621.84	57.1472
621.84	57.1472
631.29	58.3135
633.02	58.3581
633.10	58.3611
634.78	51.9148
635.90	67.7086
636.97	77.9481
645.85	70.7991
646.12	75.4649
656.30	65.5054
657.75	83.3375
657.90	0.0000
661.65	75.9731
661.65	75.9731
664.57	0.0000
666.33	73.3040
666.33	73.3040
675.00	63.1985
677.61	73.6544
685.20	85.2561
692.80	90.2755
695.00	83.7010
696.49	70.4265
696.49	70.4265
697.00	70.4427
697.49	71.4075
698.33	74.2904
698.50	81.9163
699.00	87.6493
702.63	84.9172
706.10	91.7250
706.58	0.0000
706.67	91.7461
709.31	77.4938
711.68	81.3975
713.82	85.3018
717.42	66.2289
720.50	75.2801
721.93	0.0000
722.20	64.1113
722.78	59.3165
722.78	59.3165
722.89	59.3195
722.95	59.3210
723.30	52.9160
724.18	57.7456
727.18	72.2681
733.00	45.0705
735.90	64.7836
739.58	50.3521
742.81	75.6234
744.21	65.9647
747.13	58.2700
751.79	80.7528
752.31	75.9034
753.82	64.2630
755.35	73.0682
756.15	69.1938
756.87	60.4394
763.93	100.6790
765.79	96.8368
766.41	90.0122
766.84	93.9398
768.36	76.3699
768.36	76.3699
768.36	76.3699
768.36	76.3699
776.49	69.7311
778.00	59.9441
778.57	53.0771
778.89	58.9805
783.80	61.0600

785.46	62.0833
792.07	72.1142
795.84	57.3770
796.30	59.3643
801.93	68.4121
805.60	55.5967
810.29	73.5935
810.76	69.6274
815.85	55.8045
817.79	56.8414
818.51	58.8516
819.60	59.8726
826.30	59.0158
828.27	0.0000
831.60	73.1586
831.96	72.1652
834.83	74.2457
836.80	0.0000
846.75	53.4011
848.13	65.5237
856.28	0.0000
856.80	78.8665
860.37	49.6065
867.32	53.7854
867.82	52.7795
871.10	47.7585
873.19	49.8266
874.81	53.9239
875.33	0.0000
876.40	61.0796
879.36	59.1031
880.27	48.9281
880.51	48.9316
881.50	49.9678
883.24	52.0384
884.67	57.1676
889.25	44.9872
896.60	63.5485
898.02	60.5024
899.00	49.2387
903.28	51.3635
911.07	45.3170
911.07	45.3170
911.07	45.3170
919.63	51.6431
920.93	46.4985
925.00	49.6652
925.24	53.8078
926.50	55.8998
934.06	60.1892
934.06	60.1892
934.06	60.1892
934.06	60.1892
935.52	56.0646
937.48	74.8002
944.10	59.3448
946.00	59.3810
949.00	55.2670
962.29	61.5226
964.01	59.3741
966.15	48.9294
968.20	92.6767
969.11	86.0560
969.11	86.0560
969.11	86.0560
977.42	49.4544
980.50	44.2353
983.50	57.9823
989.30	48.5819
996.32	47.6290
1001.03	64.6576
1001.68	55.1281
1004.76	59.4248
1021.30	0.0000
1024.50	0.0000
1034.80	61.0384
1037.82	47.1604
1038.57	43.9549

1038.76	0.0000
1045.16	50.4860
1046.59	50.5089
1048.07	54.8300
1050.47	69.9321
1050.47	69.9321
1063.62	54.0015
1076.63	62.8796
1077.35	60.7250
1085.78	56.5246
1099.22	60.0166
1112.02	49.2825
1112.84	48.6849
1115.52	49.3308
1120.29	49.3967
1120.29	49.3967
1120.29	49.3967
1120.29	49.3967
1120.51	47.2055
1121.28	58.5625
1124.00	0.0000
1129.67	56.8649
1131.51	0.0000
1147.95	0.0000
1167.94	55.6128
1173.22	70.5449
1175.09	45.5048
1177.93	55.7642
1189.05	54.0658
1204.90	62.7198
1205.75	0.0000
1213.00	74.1107
1221.42	76.1550
1230.97	72.5729
1235.34	71.7139
1236.41	0.0000
1238.11	66.0978
1238.11	66.0978
1238.11	66.0978
1238.11	66.0978
1238.25	66.1007
1246.25	65.2911
1260.41	0.0000
1271.85	46.6692
1274.45	35.2641
1274.54	36.2172
1291.56	43.0737
1298.22	0.0000
1312.09	44.2555
1325.50	36.6795
1325.50	36.6795
1332.49	29.9732
1333.61	31.9164
1360.21	27.2549
1362.66	0.0000
1365.15	21.4396
1368.21	26.3320
1368.53	0.0000
1376.25	21.4960
1377.67	23.4580
1377.67	23.4580
1377.67	23.4580
1377.67	23.4580
1384.27	28.3899
1394.10	21.5873
1395.20	21.5927
1407.95	26.5792
1434.06	22.7782
1436.60	22.7913
1457.56	0.0000
1460.81	21.9212
1489.15	14.0382
1509.49	17.1231
1596.49	25.6561
1620.62	6.1885
1678.03	0.0000
1691.02	10.4626
1691.02	10.4626

1706.46	0.0000
1750.46	0.0000
1764.49	8.4915
1764.49	8.4915
1764.49	8.4915
1764.49	8.4915
1770.23	63.7573
1771.40	32.9489
1791.20	0.0000
1808.65	9.6339
1836.01	11.8352

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232504014

Total Uranium Activity	5.9234E+00	ug/g
Total Uranium Counting Unc.	5.1658E+00	ug/g
Total Uranium Tpu	2.6356E-06	ug/g
Total Uranium Mda	3.3302E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID  : G232504014       *
*   ANALYST       : MXR1                      DETECTOR   : GAM10            *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 09:47:57.68    SAMPLE ALQT:  166.760 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 5.869E+00
GROSS GAMMA ERROR (pCi/GRAM) : 1.010E+00
GROSS GAMMA MDA (pCi/GRAM) : 1.662E+00
GROSS GAMMA DLC (pCi/GRAM) : 8.006E-01

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:11:20.59

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511001.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:10:39.
Sample ID         : G232511001           Sample quantity  : 1.44920E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:15.65  0.2%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.45*	11	1292	0.82	94.11	93	5	1.56E-03	491.4	
2	0	50.16	284	3110	1.14	101.51	98	10	3.95E-02	37.1	
3	0	59.80*	8185	2841	0.87	120.79	116	10	1.14E+00	1.7	
4	0	63.83*	241	1695	0.91	128.83	126	8	3.34E-02	30.6	
5	5	75.06*	678	1235	0.82	151.29	147	14	9.41E-02	8.7	5.19E-01
6	5	77.37*	1041	1175	0.80	155.90	147	14	1.45E-01	6.0	
7	0	87.67*	282	1727	1.09	176.48	172	8	3.92E-02	26.3	
8	0	185.65*	452	2594	1.19	372.29	366	13	6.27E-02	23.8	
9	0	238.80*	1348	1252	1.08	478.54	475	7	1.87E-01	5.2	
10	0	295.28*	405	1254	1.12	591.41	587	9	5.63E-02	16.6	
11	0	338.24*	262	1430	1.04	677.29	672	10	3.63E-02	27.8	
12	0	352.02*	658	1308	1.19	704.81	700	10	9.14E-02	11.0	
13	0	510.80*	34	1067	1.53	1022.19	1015	12	4.79E-03	194.1	
14	0	583.17*	397	367	1.11	1166.86	1161	11	5.51E-02	10.8	
15	0	609.12*	497	366	1.44	1218.72	1213	13	6.90E-02	9.2	
16	0	661.50	38921	387	1.41	1323.43	1315	16	5.41E+00	0.5	
17	0	727.34*	109	86	1.82	1455.05	1448	17	1.51E-02	22.0	
18	0	860.10	64	63	1.32	1720.46	1713	14	8.89E-03	29.1	
19	0	910.89*	257	51	1.58	1821.98	1816	12	3.56E-02	8.5	
20	1	964.22	67	55	2.10	1928.61	1921	26	9.31E-03	25.7	2.45E+00
21	1	968.61*	150	46	1.99	1937.39	1921	26	2.08E-02	12.1	
22	0	1119.81	89	70	1.43	2239.70	2233	14	1.24E-02	22.6	
23	0	1456.11	11	21	1.05	2912.14	2900	14	1.53E-03	93.4	
24	0	1460.04*	1060	7	2.03	2920.01	2913	13	1.47E-01	3.1	
25	0	1587.53	21	15	1.94	3174.95	3169	12	2.97E-03	42.1	
26	0	1763.64	68	8	1.86	3527.14	3521	15	9.37E-03	15.0	
27	0	1846.00	21	7	0.59	3691.87	3683	15	2.85E-03	36.5	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 12:11:23

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:10:39
Sample ID : G232511001 Sample quantity : 144.92 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:15.65 0.2%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.224E+01	2.828E+00	5.753E-01	3.537E-02	56.034
CD-109	+	88.03	*	3.048E+00	1.620E+00	2.097E+00	1.689E-01	1.453
SN-126	+	64.28		9.769E-01	6.163E-01	7.555E-01	1.159E-01	1.293
	+	86.94		1.249E+00	8.345E-01	8.843E-01	3.648E-01	1.413
	+	87.57	*	3.005E-01	1.597E-01	2.119E-01	1.709E-02	1.418
BA-137M	+	661.65	*	6.933E+01	5.270E+00	1.289E-01	9.709E-03	537.743
CS-137	+	661.65	*	7.329E+01	5.585E+00	1.363E-01	1.029E-02	537.743
TL-208		277.35		1.073E-01	1.129E+00	1.805E+00	2.083E-01	0.059
	+	510.84		1.995E-01	7.748E-01	7.737E-01	8.300E-02	0.258
	+	583.14	*	6.695E-01	1.536E-01	1.470E-01	1.166E-02	4.554
	+	860.37		1.050E+00	6.174E-01	6.044E-01	4.932E-02	1.737
BI-210	+	46.50	*	1.094E-01	1.075E+00	1.808E+00	1.447E-01	0.060
PB-210	+	46.50	*	1.094E-01	1.075E+00	1.808E+00	1.447E-01	0.060
PO-210	+	46.50	*	1.094E-01	1.075E+00	1.808E+00	1.258E-01	0.060
BI-211		72.87		8.545E+00	4.228E+00	6.388E+00	5.462E-01	1.338
	+	351.07	*	4.459E+00	1.035E+00	1.129E+00	8.114E-02	3.948
PB-212	+	74.81		2.467E+00	5.312E-01	7.125E-01	8.990E-02	3.462
	+	77.11		2.256E+00	3.288E-01	4.247E-01	3.567E-02	5.311
	+	87.30		1.390E+00	7.517E-01	9.796E-01	1.259E-01	1.419
	+	238.63	*	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
		300.09		4.076E+00	2.614E+00	3.941E+00	3.685E-01	1.034
PO-212	+	74.81		2.467E+00	5.312E-01	7.125E-01	8.990E-02	3.462
	+	77.11		2.256E+00	3.288E-01	4.247E-01	3.567E-02	5.311
	+	87.30		1.390E+00	7.517E-01	9.796E-01	1.259E-01	1.419
		115.19		2.880E+00	7.593E+00	1.259E+01	1.310E+00	0.229
	+	238.63	*	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
		300.09		4.076E+00	2.614E+00	3.941E+00	3.685E-01	1.034
BI-214	+	609.31	*	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
		768.36		1.047E+00	1.043E+00	1.791E+00	1.730E-01	0.584
		934.06		1.014E+00	1.595E+00	2.781E+00	2.639E-01	0.365
	+	1120.29		1.522E+00	7.006E-01	7.143E-01	6.378E-02	2.130
		1238.11		8.703E-01	1.193E+00	2.069E+00	1.658E-01	0.421
		1377.67		1.084E+00	1.379E+00	2.425E+00	2.072E-01	0.447
	+	1764.49		1.636E+00	5.011E-01	3.594E-01	2.066E-02	4.552

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-214	+	74.81		4.250E+00	8.827E-01	1.228E+00	1.382E-01	3.462
	+	77.11		3.867E+00	6.360E-01	7.281E-01	8.256E-02	5.311
	+	87.30		2.381E+00	1.279E+00	1.678E+00	1.873E-01	1.419
		241.98		2.679E+00	1.149E+00	1.666E+00	1.566E-01	1.608
	+	295.21		1.578E+00	5.444E-01	6.839E-01	6.584E-02	2.308
	+	351.92	*	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
PO-214	+	74.81		4.250E+00	8.827E-01	1.228E+00	1.382E-01	3.462
	+	77.11		3.867E+00	6.360E-01	7.281E-01	8.256E-02	5.311
	+	87.30		2.381E+00	1.279E+00	1.678E+00	1.873E-01	1.419
		241.98		2.679E+00	1.149E+00	1.666E+00	1.566E-01	1.608
	+	295.21		1.578E+00	5.444E-01	6.839E-01	6.584E-02	2.308
	+	351.92	*	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
PO-216	+	74.81		2.467E+00	5.312E-01	7.125E-01	8.990E-02	3.462
	+	77.11		2.256E+00	3.288E-01	4.247E-01	3.567E-02	5.311
	+	87.30		1.390E+00	7.517E-01	9.796E-01	1.259E-01	1.419
	+	238.63	*	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
		300.09		4.076E+00	2.614E+00	3.941E+00	3.685E-01	1.034
PO-218	+	74.81		4.250E+00	8.827E-01	1.228E+00	1.382E-01	3.462
	+	77.11		3.867E+00	6.360E-01	7.281E-01	8.256E-02	5.311
	+	87.30		2.381E+00	1.279E+00	1.678E+00	1.873E-01	1.419
		241.98		2.679E+00	1.149E+00	1.666E+00	1.566E-01	1.608
	+	295.21		1.578E+00	5.444E-01	6.839E-01	6.584E-02	2.308
	+	351.92	*	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
RA-226	+	609.31	*	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
		768.36		1.047E+00	1.043E+00	1.791E+00	1.730E-01	0.584
		934.06		1.014E+00	1.595E+00	2.781E+00	2.639E-01	0.365
	+	1120.29		1.522E+00	7.006E-01	7.143E-01	6.378E-02	2.130
		1238.11		8.703E-01	1.193E+00	2.069E+00	1.658E-01	0.421
		1377.67		1.084E+00	1.379E+00	2.425E+00	2.072E-01	0.447
	+	1764.49		1.636E+00	5.011E-01	3.594E-01	2.066E-02	4.552
AC-228	+	338.32		1.939E+00	1.338E+00	1.289E+00	5.275E-01	1.504
	+	911.07	*	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
	+	969.11		2.054E+00	6.840E-01	5.276E-01	1.202E-01	3.892
RA-228	+	338.32		1.939E+00	1.338E+00	1.289E+00	5.275E-01	1.504
	+	911.07	*	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
	+	969.11		2.054E+00	6.840E-01	5.276E-01	1.202E-01	3.892
TH-228		84.40		-9.882E-01	4.254E+00	6.173E+00	7.928E-01	-0.160
	+	238.60	*	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.941
		300.10		4.064E+00	3.529E+00	3.941E+00	2.329E+00	1.031
TH-230	+	609.31	*	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
		768.36		1.047E+00	1.043E+00	1.791E+00	1.730E-01	0.584
		934.06		1.014E+00	1.595E+00	2.781E+00	2.639E-01	0.365
	+	1120.29		1.522E+00	7.006E-01	7.143E-01	6.378E-02	2.130
		1238.11		8.703E-01	1.193E+00	2.068E+00	1.658E-01	0.421
		1377.67		1.084E+00	1.379E+00	2.424E+00	2.072E-01	0.447
	+	1764.49		1.636E+00	5.011E-01	3.594E-01	2.066E-02	4.552
TH-232	+	338.32		1.939E+00	1.086E+00	1.289E+00	8.802E-02	1.504
	+	911.07	*	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
	+	969.11		2.054E+00	6.840E-01	5.276E-01	1.202E-01	3.892

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-234	+	609.31	*	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
		768.36		1.047E+00	1.043E+00	1.791E+00	1.730E-01	0.584
		934.06		1.014E+00	1.595E+00	2.781E+00	2.639E-01	0.365
	+	1120.29		1.522E+00	7.006E-01	7.143E-01	6.378E-02	2.130
		1238.11		8.703E-01	1.193E+00	2.068E+00	1.658E-01	0.421
		1377.67		1.084E+00	1.379E+00	2.424E+00	2.072E-01	0.447
	+	1764.49		1.636E+00	5.011E-01	3.594E-01	2.066E-02	4.552
NP-237	+	86.50	*	8.826E-01	5.032E-01	5.909E-01	1.310E-01	1.494
		95.87		-5.738E+00	2.293E+00	2.829E+00	6.974E-01	-2.029
AM-241	+	59.54	*	8.899E+00	9.113E-01	2.473E-01	2.400E-02	35.982
AM-243	+	74.67	*	3.999E-01	7.759E-02	1.155E-01	9.798E-03	3.463
	+	86.72		3.310E+01	1.759E+01	2.274E+01	1.839E+00	1.456
		117.66		-9.927E+00	8.366E+00	1.337E+01	1.423E+00	-0.743
		142.18		3.227E+01	4.063E+01	6.727E+01	6.378E+00	0.480
ANH-511	+	511.00	*	4.310E-02	1.673E-01	1.625E-01	1.098E-02	0.265

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.095E+00	1.472E+00	2.389E+00	1.761E-01	-0.458
NA-22		1274.54	*	1.308E-02	5.871E-02	9.784E-02	5.545E-03	0.134
NA-24		1368.53	*	4.251E-02	5.871E-02	Half-Life too short		
AL-26		1129.67		-1.547E+00	2.479E+00	3.825E+00	2.260E-01	-0.404
		1808.65	*	1.595E-03	4.387E-02	7.304E-02	4.176E-03	0.022
TI-44		67.85		9.847E-03	5.466E-02	8.078E-02	7.064E-03	0.122
	+	78.38	*	4.162E-01	6.067E-02	9.858E-02	8.236E-03	4.222
SC-46		889.25	*	1.729E-02	4.891E-02	8.405E-02	6.160E-03	0.206
	+	1120.51		2.558E-01	1.165E-01	1.624E-01	9.723E-03	1.575
V-48		944.10		-1.792E-01	1.078E+00	1.763E+00	1.255E-01	-0.102
		983.50	*	6.582E-02	9.265E-02	1.623E-01	1.124E-02	0.406
		1312.09		-2.406E-02	9.445E-02	1.490E-01	8.478E-03	-0.162
CR-51		320.08	*	4.360E-01	1.116E+00	1.886E+00	1.438E-01	0.231
MN-52		744.21		9.682E-03	2.495E-01	4.026E-01	3.067E-02	0.024
		848.13		1.580E+00	6.923E+00	1.178E+01	8.796E-01	0.134
		935.52		1.747E-01	2.612E-01	4.577E-01	3.274E-02	0.382
		1246.25		4.584E+00	7.231E+00	1.249E+01	7.020E-01	0.367
		1333.61		8.865E+00	5.694E+00	1.067E+01	6.095E-01	0.831
		1434.06	*	-3.070E-02	2.326E-01	3.688E-01	2.131E-02	-0.083
MN-54		834.83	*	1.296E-02	5.457E-02	9.275E-02	6.959E-03	0.140
CO-56		846.75	*	2.176E-02	5.138E-02	8.875E-02	6.631E-03	0.245
		977.42		-1.929E+00	4.732E+00	6.697E+00	4.658E-01	-0.288
		1037.82		-1.096E-01	4.107E-01	6.611E-01	4.753E-02	-0.166
		1175.09		2.772E+00	3.261E+00	5.699E+00	3.147E-01	0.486
		1238.25		8.783E-02	1.186E-01	2.048E-01	1.226E-02	0.429
		1360.21		-9.958E-01	1.247E+00	1.790E+00	1.026E-01	-0.556
		1771.40		2.328E-01	2.615E-01	4.741E-01	2.723E-02	0.491
CO-57		122.06	*	6.475E-02	5.776E-02	9.616E-02	1.067E-02	0.673
		136.48		-1.189E-01	4.867E-01	7.937E-01	8.348E-02	-0.150

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-58		810.76	*	-2.680E-02	5.521E-02	8.903E-02	6.747E-03	-0.301
FE-59		142.65		3.863E-01	6.080E+00	9.940E+00	9.384E-01	0.039
		192.34		1.495E-01	2.864E+00	4.290E+00	5.446E-01	0.035
		1099.22	*	-9.336E-02	1.285E-01	1.977E-01	1.404E-02	-0.472
		1291.56		-2.603E-02	1.473E-01	2.349E-01	1.720E-02	-0.111
CO-60		1173.22		7.010E-02	6.589E-02	1.169E-01	6.454E-03	0.599
		1332.49	*	4.083E-02	5.810E-02	1.013E-01	5.785E-03	0.403
ZN-65		1115.52	*	9.126E-02	1.453E-01	2.234E-01	1.350E-02	0.408
GE-68		1077.35	*	2.627E-01	1.627E+00	2.722E+00	1.722E-01	0.097
AS-73		53.44	*	-4.795E-01	7.224E-01	9.830E-01	7.976E-02	-0.488
AS-74		595.88	*	1.753E-02	2.188E-01	3.574E-01	2.595E-02	0.049
		634.78		1.199E-01	8.821E-01	1.439E+00	1.070E-01	0.083
SE-75		66.05		-2.861E+00	5.356E+00	7.775E+00	8.243E-01	-0.368
		96.73		-4.906E+00	1.606E+00	2.275E+00	3.119E-01	-2.157
		121.11		1.560E-01	3.067E-01	5.080E-01	6.671E-02	0.307
		136.00		-1.210E-02	9.039E-02	1.478E-01	1.484E-02	-0.082
		198.60		-2.897E-01	5.025E+00	8.119E+00	6.928E-01	-0.036
		264.65	*	-8.491E-02	1.326E-01	2.089E-01	1.576E-02	-0.406
		279.53		-5.485E-02	3.087E-01	5.190E-01	4.049E-02	-0.106
		303.91		-8.296E+00	6.392E+00	1.039E+01	1.089E+00	-0.799
		400.65		6.111E-01	1.012E+00	1.696E+00	1.551E-01	0.360
BR-77	+	87.88		3.485E+02	1.852E+02	2.561E+02	2.063E+01	1.361
		200.40		-1.188E+02	2.459E+02	3.940E+02	2.943E+01	-0.301
	+	239.00		1.605E+02	2.057E+01	3.049E+01	2.300E+00	5.265
		249.79		-8.298E+01	1.064E+02	1.676E+02	1.263E+01	-0.495
		281.68		-3.592E+01	1.393E+02	2.338E+02	1.734E+01	-0.154
		297.23		1.394E+02	9.917E+01	1.493E+02	1.091E+01	0.934
		303.76		-3.793E+02	2.895E+02	4.728E+02	3.427E+01	-0.802
		439.47		-3.090E+01	3.518E+02	5.810E+02	3.605E+01	-0.053
		484.57		-6.969E+02	5.096E+02	8.116E+02	5.330E+01	-0.859
		520.65	*	1.336E+01	1.938E+01	3.232E+01	2.205E+00	0.413
		574.64		-5.567E+01	2.991E+02	4.847E+02	3.466E+01	-0.115
		578.91		-4.248E+00	1.400E+02	1.970E+02	1.414E+01	-0.022
		585.48		1.130E+03	2.878E+02	4.612E+02	3.325E+01	2.449
		755.35		1.417E+02	1.150E+02	2.036E+02	1.551E+01	0.696
		817.79		3.641E+01	9.347E+01	1.613E+02	1.217E+01	0.226
SR-82		698.33		1.641E+01	4.577E+01	7.583E+01	5.758E+00	0.216
		776.49	*	-1.965E-01	4.364E-01	7.043E-01	5.354E-02	-0.279
		1395.20		-3.168E+00	1.196E+01	1.856E+01	1.069E+00	-0.171
RB-83		520.41	*	3.743E-03	2.405E-01	3.945E-01	2.692E-02	0.009
		529.64		-9.845E-02	3.522E-01	5.726E-01	3.941E-02	-0.172
		552.65		6.784E-02	5.596E-01	9.185E-01	6.454E-02	0.074
RB-84		881.50	*	-4.688E-02	8.212E-02	1.293E-01	9.514E-03	-0.363
KR-85		513.99	*	2.261E+01	2.695E+01	3.937E+01	2.669E+00	0.574
SR-85		513.99	*	1.133E-01	1.350E-01	1.973E-01	1.337E-02	0.574
RB-86		1076.63	*	-1.472E-01	9.791E-01	1.590E+00	1.007E-01	-0.093
Y-88		898.02		2.111E-02	5.776E-02	9.899E-02	7.270E-03	0.213
		1836.01	*	-2.761E-02	5.210E-02	6.845E-02	3.908E-03	-0.403
ZR-88		392.90	*	-8.963E-02	1.169E-01	1.911E-01	1.106E-02	-0.469

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91		1204.90	*	1.932E+01	2.656E+01	4.593E+01	2.557E+00	0.421
NB-94		702.63	*	-4.375E-03	4.557E-02	7.297E-02	5.544E-03	-0.060
		871.10		-3.212E-02	4.634E-02	7.256E-02	5.366E-03	-0.443
NB-95		765.79	*	7.228E-03	5.990E-02	9.715E-02	7.394E-03	0.074
NB-95M		235.69	*	1.056E-02	3.791E-01	5.318E-01	4.755E-02	0.020
ZR-95		724.18		1.468E-01	1.427E-01	2.199E-01	1.858E-02	0.668
		756.15	*	1.108E-01	9.113E-02	1.610E-01	1.384E-02	0.688
NB-97		657.90	*	1.139E+00	9.113E-02	Half-Life too short		
		1024.50		8.231E-02	9.113E-02	Half-Life too short		
ZR-97		254.15		-3.473E-01	9.113E-02	Half-Life too short		
		355.39		5.703E-01	9.113E-02	Half-Life too short		
		507.63	*	4.297E-02	9.113E-02	Half-Life too short		
		602.52		1.374E-01	9.113E-02	Half-Life too short		
		1021.30		3.576E-01	9.113E-02	Half-Life too short		
		1147.95		-1.050E-01	9.113E-02	Half-Life too short		
		1362.66		-7.336E-01	9.113E-02	Half-Life too short		
		1750.46		1.305E+00	9.113E-02	Half-Life too short		
MO-99		140.51		-2.562E+01	3.572E+01	5.643E+01	1.581E+01	-0.454
		181.06		2.603E+01	2.825E+01	4.053E+01	7.189E+00	0.642
		366.43		1.231E+01	1.763E+02	2.944E+02	1.866E+01	0.042
		739.58	*	3.126E+00	9.325E+00	1.541E+01	2.255E+00	0.203
		778.00		5.275E+00	2.391E+01	4.087E+01	3.107E+00	0.129
TC-99M		140.51	*	-1.511E+08	2.391E+01	Half-Life too short		
RH-101		127.23		2.132E-02	7.286E-02	1.202E-01	1.286E-02	0.177
		198.01	*	-1.539E-02	9.304E-02	1.501E-01	1.120E-02	-0.103
		325.23		-3.740E-01	7.008E-01	1.162E+00	8.149E-02	-0.322
RH-102		418.52		-6.497E-01	1.216E+00	1.996E+00	1.202E-01	-0.326
		475.06	*	7.740E-02	1.421E-01	2.361E-01	1.533E-02	0.328
		631.29		-1.837E-01	1.499E-01	2.304E-01	1.709E-02	-0.797
		697.49		6.129E-02	1.107E-01	1.858E-01	1.411E-02	0.330
		766.84		5.754E-02	1.568E-01	2.585E-01	1.967E-02	0.223
		1046.59		8.929E-02	1.669E-01	2.876E-01	1.882E-02	0.310
		1112.84		1.591E-01	3.504E-01	5.234E-01	3.167E-02	0.304
RU-103		497.08	*	1.194E-02	1.520E-01	2.503E-01	3.269E-02	0.048
	+	610.33		1.651E+01	4.025E+00	4.324E+00	6.942E-01	3.818
RH-106	+	511.85		2.144E-01	8.322E-01	9.585E-01	6.484E-02	0.224
		621.84	*	-1.580E-01	8.087E-01	1.303E+00	1.641E-01	-0.121
		1050.47		-1.590E+00	3.171E+00	4.988E+00	3.251E-01	-0.319
RU-106	+	511.85		2.144E-01	8.322E-01	9.585E-01	6.484E-02	0.224
		621.84	*	-1.580E-01	8.085E-01	1.303E+00	9.616E-02	-0.121
		1050.47		-1.590E+00	3.171E+00	4.988E+00	3.251E-01	-0.319
AG-108M		433.93	*	-5.453E-02	1.485E-01	2.441E-01	1.618E-02	-0.223
		614.37		2.132E-02	1.104E-01	1.568E-01	1.214E-02	0.136
		722.95		2.139E-03	6.129E-02	8.545E-02	6.831E-03	0.025
AG-110M		657.75	*	2.415E+00	2.546E-01	3.397E-01	2.654E-02	7.108
		677.61		5.821E-01	4.187E-01	7.458E-01	5.846E-02	0.780
		706.67		-2.363E-01	2.770E-01	4.132E-01	3.252E-02	-0.572
		763.93		-3.109E-01	2.405E-01	3.433E-01	2.707E-02	-0.906
		884.67		4.306E-03	6.171E-02	1.035E-01	7.940E-03	0.042

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		937.48		-7.708E-02	1.512E-01	2.399E-01	1.803E-02	-0.321
		1384.27		-3.043E-02	2.065E-01	3.279E-01	2.003E-02	-0.093
IN-111		171.28		-5.846E-01	1.465E+00	2.364E+00	1.734E-01	-0.247
		245.39	*	-3.758E+00	1.929E+00	2.944E+00	2.220E-01	-1.277
IN-113M		391.69	*	3.476E-03	1.693E-01	2.816E-01	1.737E-02	0.012
SN-113		391.69	*	3.476E-03	1.693E-01	2.816E-01	1.737E-02	0.012
IN-114M		190.27	*	5.155E-01	5.774E-01	8.330E-01	6.188E-02	0.619
CD-115		260.90		-1.564E+02	2.021E+02	3.177E+02	2.385E+01	-0.492
		492.35		7.622E+00	7.340E+01	1.210E+02	8.015E+00	0.063
		527.90	*	-6.717E+00	1.873E+01	3.039E+01	2.088E+00	-0.221
SN-117M		156.02		-2.577E+00	4.801E+00	7.748E+00	6.396E-01	-0.333
		158.56	*	-2.162E-02	1.178E-01	1.915E-01	1.535E-02	-0.113
SB-122		563.90	*	8.890E-01	3.174E+00	5.233E+00	3.711E-01	0.170
		692.80		-1.864E+01	3.579E+01	5.543E+01	4.205E+00	-0.336
I-123		159.00	*	-1.291E-03	3.579E+01	Half-Life too short		
		528.96		-3.495E+01	3.579E+01	Half-Life too short		
TE-123M		159.00	*	-1.013E-04	6.725E-02	1.097E-01	8.808E-03	-0.001
I-124		602.71	*	-1.404E-01	1.313E+00	1.834E+00	1.338E-01	-0.077
		722.78		1.217E-01	4.448E+00	6.196E+00	4.717E-01	0.020
		1325.50		6.123E+00	3.534E+01	5.851E+01	3.338E+00	0.105
		1376.25		1.598E+01	2.788E+01	4.829E+01	2.774E+00	0.331
		1509.49		8.999E+00	1.222E+01	2.206E+01	1.281E+00	0.408
		1691.02		-1.349E+00	3.176E+00	4.835E+00	2.798E-01	-0.279
SB-124		602.71		-1.145E-02	1.070E-01	1.496E-01	1.091E-02	-0.077
		645.85		1.077E-02	1.349E+00	2.188E+00	1.765E-01	0.005
		709.31		1.976E+00	3.489E+00	5.891E+00	4.480E-01	0.335
		713.82		7.124E-01	2.163E+00	3.579E+00	4.057E-01	0.199
		722.78		1.438E-02	5.257E-01	7.323E-01	5.729E-02	0.020
	+	968.20		2.061E+01	5.211E+00	8.530E+00	5.973E-01	2.417
		1045.16		2.952E+00	3.423E+00	6.052E+00	3.966E-01	0.488
		1325.50		7.728E-01	4.460E+00	7.385E+00	4.213E-01	0.105
		1368.21		1.392E+00	2.116E+00	3.729E+00	4.416E-01	0.373
		1436.60		3.116E+00	4.475E+00	7.976E+00	4.611E-01	0.391
		1691.02	*	-3.761E-02	8.852E-02	1.348E-01	8.469E-03	-0.279
SB-125		427.89	*	-2.056E-01	4.041E-01	6.628E-01	4.202E-02	-0.310
		463.38		1.455E+00	1.370E+00	2.292E+00	1.670E-01	0.635
		600.56		-9.130E-02	4.395E-01	7.094E-01	5.694E-02	-0.129
		635.90		3.851E-01	7.284E-01	1.205E+00	9.926E-02	0.319
TE-125M		109.28	*	-1.789E+00	1.855E+01	3.056E+01	3.474E+00	-0.059
I-126		388.63		6.143E-01	6.977E-01	1.177E+00	6.887E-02	0.522
		666.33	*	1.384E-01	2.705E-01	3.972E-01	2.996E-02	0.348
		753.82		7.643E-01	1.732E+00	2.890E+00	2.201E-01	0.264
SB-126		223.80		3.250E+00	1.024E+01	1.658E+01	1.249E+00	0.196
		278.60		1.122E+00	6.583E+00	1.054E+01	7.834E-01	0.106
	+	296.50		1.390E+01	4.715E+00	6.559E+00	4.796E-01	2.119
		414.70		3.367E-01	2.769E-01	4.678E-01	2.801E-02	0.720
		415.30		1.778E+01	2.309E+01	3.877E+01	2.324E+00	0.459
		555.20		-1.213E+01	9.997E+00	1.559E+01	1.098E+00	-0.778
		573.80		1.625E-01	2.467E+00	4.034E+00	2.883E-01	0.040

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		593.00		2.050E-01	2.134E+00	3.489E+00	2.528E-01	0.059
		656.30		1.104E+00	9.885E+00	1.390E+01	1.044E+00	0.079
		666.33		5.753E-02	1.125E-01	1.652E-01	1.246E-02	0.348
		675.00		5.799E-01	2.492E+00	4.103E+00	3.101E-01	0.141
		695.00		-3.074E-04	9.952E-02	1.606E-01	1.219E-02	-0.002
		697.00		1.791E-01	3.427E-01	5.741E-01	4.358E-02	0.312
		720.50	*	1.522E-02	1.997E-01	2.798E-01	2.130E-02	0.054
		856.80		-1.231E-01	5.934E-01	8.308E-01	6.183E-02	-0.148
		989.30		-1.036E+00	1.562E+00	2.429E+00	1.674E-01	-0.427
		1034.80		-4.009E+00	1.065E+01	1.696E+01	1.123E+00	-0.236
		1213.00		3.088E+00	6.268E+00	1.063E+01	5.930E-01	0.290
SB-127	+	61.10		2.322E+03	2.652E+02	1.267E+02	1.379E+01	18.332
		252.40		-3.417E+00	9.007E+00	1.414E+01	5.890E+00	-0.242
		290.80		2.603E+01	4.872E+01	7.238E+01	6.900E+00	0.360
		411.60		-1.994E+01	3.353E+01	5.484E+01	7.659E+00	-0.364
		444.90		1.061E+01	3.168E+01	5.262E+01	5.477E+00	0.202
		473.00		3.149E+00	5.730E+00	9.511E+00	1.041E+00	0.331
		543.00		-8.118E+00	3.565E+01	5.791E+01	7.506E+00	-0.140
		603.60		-6.846E+00	2.176E+01	3.002E+01	3.315E+00	-0.228
		685.20	*	2.999E-01	1.225E+00	2.019E+00	2.011E-01	0.149
		698.50		6.951E+00	1.451E+01	2.420E+01	3.590E+00	0.287
		722.20		-6.721E+00	3.018E+01	4.073E+01	3.964E+00	-0.165
		783.80		1.152E+00	3.094E+00	5.337E+00	5.945E-01	0.216
XE-127		57.60		6.237E+01	8.746E+00	1.149E+01	1.011E+00	5.426
		145.22		-6.512E-02	1.565E+00	2.552E+00	2.353E-01	-0.026
		172.10		-1.319E-01	2.873E-01	4.629E-01	3.397E-02	-0.285
		202.84	*	1.274E-02	1.280E-01	2.073E-01	1.550E-02	0.061
		374.96		1.210E-01	7.002E-01	1.170E+00	7.209E-02	0.103
I-131		80.18		2.125E+00	5.916E+00	8.732E+00	7.279E-01	0.243
		284.30		-4.152E-01	3.708E+00	6.237E+00	4.930E-01	-0.067
		364.48	*	-1.786E-01	3.476E-01	5.739E-01	4.004E-02	-0.311
		636.97		3.099E+00	3.428E+00	5.746E+00	4.585E-01	0.539
		722.89		2.272E-01	8.540E+00	1.189E+01	9.110E-01	0.019
TE-132	+	49.72		1.347E+01	1.007E+01	1.087E+01	1.020E+00	1.239
		111.76		-3.419E+00	3.898E+01	6.419E+01	7.414E+00	-0.053
		116.30		1.665E+00	3.722E+01	6.136E+01	7.321E+00	0.027
		228.16	*	-2.454E-01	1.246E+00	1.997E+00	2.947E-01	-0.123
BA-133		53.15		-1.665E+00	2.907E+00	4.258E+00	3.434E-01	-0.391
		79.62		4.299E+00	2.113E+00	3.089E+00	4.650E-01	1.392
		81.00		-1.233E-01	1.573E-01	2.244E-01	3.520E-02	-0.549
		276.40		-3.176E-02	1.115E+00	1.777E+00	2.449E-01	-0.018
		302.84		-2.823E-01	4.375E-01	7.245E-01	9.018E-02	-0.390
		356.01	*	-2.272E-02	1.727E-01	2.498E-01	2.984E-02	-0.091
		383.85		1.527E-01	1.135E+00	1.893E+00	2.074E-01	0.081
I-133	+	510.53		7.591E-02	1.135E+00	Half-Life too short		
		529.87	*	-1.015E-03	1.135E+00	Half-Life too short		
		706.58		-7.937E-02	1.135E+00	Half-Life too short		
		856.28		-1.095E-02	1.135E+00	Half-Life too short		
		875.33		1.109E-02	1.135E+00	Half-Life too short		

---- Non-Identified Nuclides ----

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		1236.41		1.788E-01	1.135E+00	Half-Life too short		
		1298.22		-2.968E-02	1.135E+00	Half-Life too short		
CS-134		475.35		3.981E+00	9.262E+00	1.537E+01	9.983E-01	0.259
		563.23		5.628E-04	9.722E-01	1.588E+00	1.141E-01	0.000
		569.32		-1.069E-01	5.269E-01	8.537E-01	6.201E-02	-0.125
		604.70		3.633E-02	9.213E-02	1.323E-01	9.700E-03	0.274
		795.84	*	1.128E-01	6.156E-02	1.157E-01	8.848E-03	0.975
		801.93		-4.568E-01	5.326E-01	8.361E-01	6.375E-02	-0.546
		1038.57		-2.795E+00	5.430E+00	8.541E+00	5.634E-01	-0.327
		1167.94		-3.232E+00	3.558E+00	5.352E+00	2.980E-01	-0.604
		1365.15		2.420E-01	1.532E+00	2.540E+00	1.603E-01	0.095
CS-135		268.24	*	5.563E-01	4.711E-01	7.664E-01	6.898E-02	0.726
I-135		288.45		1.623E+08	4.711E-01	Half-Life too short		
		417.63		-4.137E+08	4.711E-01	Half-Life too short		
		546.56		6.188E+07	4.711E-01	Half-Life too short		
		836.80		5.977E+07	4.711E-01	Half-Life too short		
		1038.76		-2.010E+07	4.711E-01	Half-Life too short		
		1124.00		1.520E+08	4.711E-01	Half-Life too short		
		1131.51		-4.181E+06	4.711E-01	Half-Life too short		
		1260.41	*	-1.537E+07	4.711E-01	Half-Life too short		
	+	1457.56		6.135E+07	4.711E-01	Half-Life too short		
		1678.03		4.933E+06	4.711E-01	Half-Life too short		
		1706.46		1.443E+08	4.711E-01	Half-Life too short		
		1791.20		5.085E+07	4.711E-01	Half-Life too short		
CS-136		66.91		-3.906E-03	7.941E-01	1.168E+00	1.814E-01	-0.003
	+	86.29		3.494E+00	1.887E+00	2.552E+00	3.192E-01	1.369
		153.22		7.001E-01	1.369E+00	2.254E+00	2.150E-01	0.311
		163.89		2.146E-01	2.334E+00	3.809E+00	3.304E-01	0.056
		176.55		-4.133E-01	8.286E-01	1.332E+00	1.058E-01	-0.310
		273.65		-1.052E+00	1.218E+00	1.905E+00	1.545E-01	-0.552
		340.57		7.340E-01	4.187E-01	6.317E-01	4.490E-02	1.162
		818.51		6.897E-02	8.507E-02	1.516E-01	1.144E-02	0.455
		1048.07	*	2.445E-02	1.346E-01	2.256E-01	1.581E-02	0.108
		1235.34		3.012E-01	7.252E-01	1.229E+00	1.213E-01	0.245
CE-139		165.85	*	7.161E-03	7.265E-02	1.185E-01	8.667E-03	0.060
BA-140		162.64		4.550E-02	1.634E+00	2.663E+00	2.181E-01	0.017
		304.84		-4.387E+00	3.681E+00	5.707E+00	1.577E+00	-0.769
		423.70		3.795E+00	7.356E+00	1.213E+01	3.862E+00	0.313
		537.32	*	-2.618E-01	7.666E-01	1.235E+00	4.044E-01	-0.212
LA-140		328.77		5.533E-01	8.165E-01	1.383E+00	1.045E-01	0.400
		432.53		3.082E+00	8.260E+00	1.375E+01	9.244E-01	0.224
		487.03		2.966E-02	4.962E-01	8.176E-01	5.943E-02	0.036
		751.79		-1.661E+00	2.060E+00	3.058E+00	2.644E-01	-0.543
		815.85		1.883E-01	3.782E-01	6.581E-01	5.701E-02	0.286
		867.82		6.011E-01	1.756E+00	2.814E+00	2.233E-01	0.214
		919.63		-1.307E+00	3.337E+00	5.353E+00	5.111E-01	-0.244
		925.24		2.749E-01	1.309E+00	2.218E+00	1.738E-01	0.124
		1596.49	*	-1.089E-01	9.472E-02	1.178E-01	6.847E-03	-0.924
CE-141		145.44	*	-3.980E-02	1.417E-01	2.301E-01	2.151E-02	-0.173

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CE-143		57.37		1.178E-03	1.417E-01	Half-Life too short		
		231.56		-6.023E-04	1.417E-01	Half-Life too short		
		293.26	*	1.947E-04	1.417E-01	Half-Life too short		
	+	350.59		1.170E-02	1.417E-01	Half-Life too short		
		490.36		6.997E-04	1.417E-01	Half-Life too short		
		664.57		2.074E-01	1.417E-01	Half-Life too short		
		721.93		-9.055E-05	1.417E-01	Half-Life too short		
CE-144		80.11		1.235E+00	3.270E+00	4.829E+00	4.006E-01	0.256
		133.54	*	-3.680E-01	4.786E-01	7.678E-01	1.266E-01	-0.479
PM-144		476.78		-2.852E-01	3.230E-01	5.225E-01	3.942E-02	-0.546
		618.01		-3.587E-02	8.206E-02	1.309E-01	1.000E-02	-0.274
		696.49	*	2.320E-02	4.937E-02	8.242E-02	6.258E-03	0.281
		778.57		9.660E-01	2.696E+00	4.662E+00	3.544E-01	0.207
PR-144		696.49	*	1.570E+00	3.342E+00	5.579E+00	4.235E-01	0.281
		1489.15		-5.853E+00	1.163E+01	1.664E+01	9.653E-01	-0.352
PM-146		453.90	*	1.285E-01	2.156E-01	3.590E-01	3.225E-02	0.358
		633.02		-1.915E-02	3.726E+00	6.046E+00	2.244E+00	-0.003
		735.90		2.564E-02	2.227E-01	3.280E-01	9.289E-02	0.078
		747.13		9.837E-02	1.183E-01	2.031E-01	2.731E-02	0.484
ND-147		91.11		5.076E-01	4.455E-01	6.613E-01	5.973E-02	0.768
		319.41		-2.016E+00	9.141E+00	1.527E+01	1.082E+00	-0.132
		439.89		-3.135E+00	2.369E+01	3.909E+01	2.428E+00	-0.080
		531.02	*	-5.381E-01	1.653E+00	2.682E+00	3.761E-01	-0.201
PM-149		285.90	*	-4.394E+01	1.389E+02	2.325E+02	3.462E+01	-0.189
EU-152		121.78		1.954E-01	1.689E-01	2.807E-01	3.399E-02	0.696
		244.69		-1.205E+00	1.002E+00	1.564E+00	1.179E-01	-0.770
		344.27	*	-3.327E-02	3.494E-01	5.508E-01	4.065E-02	-0.060
		443.98		1.808E+00	4.612E+00	7.671E+00	4.789E-01	0.236
		778.89		-2.440E-02	3.189E-01	5.318E-01	4.042E-02	-0.046
		867.32		2.378E-01	1.219E+00	1.866E+00	1.382E-01	0.127
	+	964.01		1.056E+00	5.488E-01	7.881E-01	5.535E-02	1.340
		1085.78		-1.429E-01	5.215E-01	8.357E-01	5.234E-02	-0.171
		1112.02		2.230E-01	4.856E-01	7.520E-01	4.554E-02	0.297
		1407.95		8.920E-02	2.327E-01	3.962E-01	2.284E-02	0.225
GD-153		69.67		-1.257E+00	2.073E+00	3.002E+00	2.604E-01	-0.419
		83.37		-3.483E+00	2.599E+01	3.527E+01	2.889E+00	-0.099
		97.43	*	-1.847E-01	1.485E-01	2.391E-01	2.105E-02	-0.772
		103.18		4.349E-02	2.081E-01	3.452E-01	3.210E-02	0.126
EU-154		123.07		7.974E-02	1.197E-01	1.983E-01	2.633E-02	0.402
		247.94		1.596E-01	1.086E+00	1.746E+00	1.866E-01	0.091
		591.81		4.158E-01	1.617E+00	2.658E+00	2.842E-01	0.156
		723.30		-1.064E-02	2.610E-01	3.605E-01	3.111E-02	-0.030
		756.87		3.681E-01	1.065E+00	1.761E+00	1.985E-01	0.209
		873.19		5.979E-02	3.844E-01	6.499E-01	7.415E-02	0.092
		996.32		-6.768E-02	4.807E-01	7.852E-01	1.333E-01	-0.086
		1004.76		-2.448E-01	3.006E-01	4.595E-01	4.764E-02	-0.533
		1274.45	*	3.657E-02	1.642E-01	2.736E-01	2.531E-02	0.134
EU-155	+	48.70		2.444E+00	1.822E+00	1.913E+00	1.402E-01	1.278
	+	60.01		2.892E+02	2.800E+01	1.656E+01	1.505E+00	17.461

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.54		3.617E-01	1.923E-01	2.636E-01	2.159E-02	1.372
		105.31	*	-1.574E-01	2.172E-01	3.533E-01	3.386E-02	-0.446
TB-160	+	86.79		9.468E-01	5.032E-01	6.901E-01	5.581E-02	1.372
		197.04		2.503E-01	1.554E+00	2.522E+00	1.880E-01	0.099
		215.65		2.136E+00	2.088E+00	3.420E+00	2.571E-01	0.625
		298.57		6.497E-01	3.677E-01	5.588E-01	4.077E-02	1.163
		879.36	*	-5.707E-02	1.638E-01	2.638E-01	1.943E-02	-0.216
		962.29		1.354E+00	8.873E-01	1.451E+00	1.020E-01	0.933
		966.15		1.361E+00	3.571E-01	6.922E-01	4.854E-02	1.966
		1177.93		-1.852E-01	5.241E-01	8.332E-01	4.605E-02	-0.222
		1271.85		-6.238E-02	9.305E-01	1.506E+00	8.511E-02	-0.041
HO-166M		80.57		-2.067E-01	4.292E-01	6.208E-01	5.141E-02	-0.333
	+	184.41		3.287E-01	1.583E-01	1.509E-01	1.117E-02	2.178
		280.46		-3.732E-02	2.471E-01	4.156E-01	3.085E-02	-0.090
		410.95		-3.151E-01	9.860E-01	1.626E+00	9.683E-02	-0.194
		711.68	*	-1.007E-03	8.167E-02	1.315E-01	1.000E-02	-0.008
		752.31		-1.380E-01	3.698E-01	5.741E-01	4.373E-02	-0.240
		810.29		-2.323E-02	8.436E-02	1.383E-01	1.045E-02	-0.168
TM-171	+	51.35		3.907E+01	2.913E+01	3.241E+01	2.518E+00	1.205
		52.39		5.673E+00	1.197E+01	1.788E+01	1.420E+00	0.317
	+	59.40		1.519E+03	1.470E+02	8.777E+01	7.982E+00	17.308
		66.72	*	4.263E+00	3.199E+01	4.723E+01	4.152E+00	0.090
LU-176	+	88.36		7.128E-01	3.789E-01	5.358E-01	4.329E-02	1.330
		201.83		-1.180E-02	8.180E-02	1.319E-01	9.859E-03	-0.089
		306.84	*	-7.069E-03	7.676E-02	1.287E-01	9.295E-03	-0.055
		401.10		1.150E+01	2.684E+01	4.490E+01	2.633E+00	0.256
LU-177		112.95		1.299E+00	2.718E+00	4.515E+00	4.601E-01	0.288
		208.36	*	1.043E+00	2.403E+00	3.907E+00	2.929E-01	0.267
LU-177M		52.97		-5.866E-01	1.289E+00	1.892E+00	1.521E-01	-0.310
		54.07		-4.612E-01	8.649E-01	1.068E+00	8.777E-02	-0.432
	+	61.30		8.892E+01	8.607E+00	4.574E+00	4.130E-01	19.440
		121.62		7.831E-01	8.566E-01	1.425E+00	1.573E-01	0.550
		147.16		3.639E-01	1.511E+00	2.481E+00	2.246E-01	0.147
		171.86		-5.541E-01	1.196E+00	1.926E+00	1.413E-01	-0.288
		218.09		-9.134E-01	2.423E+00	3.877E+00	2.916E-01	-0.236
		268.79		3.797E+00	2.360E+00	3.865E+00	2.892E-01	0.982
		319.02		-4.298E-01	8.113E-01	1.346E+00	9.543E-02	-0.319
		367.43		-3.283E-01	3.272E+00	5.445E+00	3.440E-01	-0.060
		413.65	*	3.115E-01	7.189E-01	1.201E+00	7.181E-02	0.259
HF-181		56.28		-7.007E-01	1.078E+00	1.325E+00	1.137E-01	-0.529
		57.53		4.196E+00	6.724E-01	9.304E-01	8.175E-02	4.510
	+	65.20		1.840E+00	1.138E+00	1.526E+00	1.351E-01	1.206
		133.02		-1.193E-01	1.485E-01	2.393E-01	2.450E-02	-0.498
		136.25		-3.076E-01	1.033E+00	1.683E+00	1.679E-01	-0.183
		345.85		-3.231E-01	6.960E-01	1.047E+00	7.025E-02	-0.309
		482.03	*	-2.001E-02	1.782E-01	2.928E-01	1.917E-02	-0.068
W-181		56.28		-2.800E-01	4.319E-01	5.309E-01	4.555E-02	-0.528
		57.53		1.670E+00	2.689E-01	3.726E-01	3.273E-02	4.482
	+	65.20	*	7.320E-01	4.526E-01	6.069E-01	5.375E-02	1.206

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		67.75		4.295E-02	1.279E-01	1.895E-01	1.658E-02	0.227
		100.10		-8.613E-02	3.397E-01	5.595E-01	5.053E-02	-0.154
		152.43		1.335E-01	7.768E-01	1.272E+00	1.092E-01	0.105
		222.10		3.442E-01	9.776E-01	1.584E+00	1.193E-01	0.217
		1001.68		1.326E+00	2.619E+00	4.526E+00	3.088E-01	0.293
	+	1121.28		7.099E-01	3.235E-01	4.541E-01	2.715E-02	1.564
		1189.05		-1.569E-01	4.346E-01	6.894E-01	3.821E-02	-0.228
		1221.42	*	3.004E-03	2.789E-01	4.562E-01	2.550E-02	0.007
		1230.97		1.106E-01	6.534E-01	1.082E+00	6.061E-02	0.102
RE-183		57.98		5.341E+00	5.425E-01	4.933E-01	4.371E-02	10.826
	+	59.32		6.105E+00	5.909E-01	3.530E-01	3.206E-02	17.293
		67.20		-4.446E-03	2.254E-01	3.314E-01	2.907E-02	-0.013
		162.32	*	-1.215E-02	2.627E-01	4.277E-01	3.275E-02	-0.028
		208.81		1.539E+00	2.648E+00	4.315E+00	3.236E-01	0.357
		291.72		-2.158E-01	3.098E+00	4.537E+00	3.334E-01	-0.048
RE-184		57.98		1.993E+01	2.025E+00	1.841E+00	1.631E-01	10.826
	+	59.32		2.276E+01	2.203E+00	1.316E+00	1.195E-01	17.293
		67.20		-1.659E-02	8.408E-01	1.237E+00	1.085E-01	-0.013
		161.27		-1.230E-01	8.533E-01	1.387E+00	1.076E-01	-0.089
		216.55		7.336E-01	7.512E-01	1.229E+00	9.243E-02	0.597
		252.85	*	-2.381E-01	7.022E-01	1.117E+00	8.408E-02	-0.213
		318.01		-6.677E-01	1.399E+00	2.325E+00	1.651E-01	-0.287
		792.07		-2.632E-02	1.260E+00	2.109E+00	1.600E-01	-0.012
		903.28		3.174E-01	1.546E+00	2.435E+00	1.772E-01	0.130
		920.93		6.318E-02	5.902E-01	9.909E-01	7.146E-02	0.064
OS-185	+	59.72		1.675E+01	1.621E+00	9.636E-01	8.769E-02	17.379
	+	61.14		9.661E+00	9.351E-01	5.211E-01	4.709E-02	18.538
		69.30		-3.533E-01	3.946E-01	5.268E-01	4.576E-02	-0.671
		592.07		3.120E+00	6.438E+00	1.068E+01	7.732E-01	0.292
		646.12	*	-7.296E-03	1.166E-01	1.886E-01	1.410E-02	-0.039
		717.42		5.158E-02	1.208E+00	1.953E+00	1.487E-01	0.026
		874.81		7.164E-01	6.980E-01	1.269E+00	9.368E-02	0.565
		880.27		-7.477E-01	9.445E-01	1.452E+00	1.069E-01	-0.515
RE-188		155.03	*	1.499E-01	3.933E-01	6.461E-01	5.393E-02	0.232
		477.96		-5.080E-01	1.401E+01	2.305E+01	1.502E+00	-0.022
		633.10		4.058E-01	7.390E+00	1.202E+01	8.927E-01	0.034
W-188	+	63.58		9.704E+01	6.001E+01	8.084E+01	7.216E+00	1.200
		227.08		-1.273E+01	3.599E+01	5.750E+01	4.334E+00	-0.221
		290.67	*	1.358E+01	2.449E+01	3.642E+01	2.680E+00	0.373
IR-192	+	295.96		1.179E+00	4.001E-01	5.556E-01	4.106E-02	2.122
		308.46		-8.938E-02	2.956E-01	4.937E-01	3.583E-02	-0.181
		316.51	*	-1.045E-01	1.068E-01	1.754E-01	1.253E-02	-0.596
		468.07		-1.245E-01	3.329E-01	5.454E-01	3.953E-02	-0.228
		604.41		2.154E-01	1.230E+00	1.745E+00	2.127E-01	0.123
		612.46		2.966E+00	1.980E+00	2.980E+00	2.624E-01	0.996
AU-195	+	65.12		3.397E-01	2.100E-01	2.831E-01	2.508E-02	1.200
		66.83		-7.825E-04	1.060E-01	1.559E-01	1.370E-02	-0.005
	+	75.70		1.283E+00	2.490E-01	5.113E-01	4.319E-02	2.510
		98.88	*	-1.183E-01	4.261E-01	7.016E-01	6.264E-02	-0.169

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		129.76		5.829E+00	6.482E+00	1.076E+01	1.129E+00	0.542
TL-200		367.94	*	2.312E-05	6.482E+00	Half-Life too short		
		579.30		7.976E-04	6.482E+00	Half-Life too short		
		828.27		1.332E-03	6.482E+00	Half-Life too short		
		1205.75		1.469E-04	6.482E+00	Half-Life too short		
TL-201		68.90		-2.933E+00	3.853E+00	5.167E+00	4.497E-01	-0.568
		70.82		-4.941E-02	2.125E+00	3.123E+00	2.694E-01	-0.016
		80.30		-1.600E+00	4.805E+00	6.979E+00	5.785E-01	-0.229
		135.34		-7.872E+00	3.569E+01	5.827E+01	5.854E+00	-0.135
		167.43	*	-1.094E+00	1.052E+01	1.709E+01	1.250E+00	-0.064
TL-202		68.90		-3.839E-01	5.042E-01	6.761E-01	5.884E-02	-0.568
		70.82		-6.449E-03	2.774E-01	4.075E-01	3.516E-02	-0.016
		80.30		-2.088E-01	6.273E-01	9.110E-01	7.552E-02	-0.229
		439.56	*	-8.373E-02	2.862E-01	4.709E-01	2.922E-02	-0.178
HG-203		70.83		-2.428E-02	1.318E+00	1.936E+00	2.635E-01	-0.013
		72.87		1.645E+00	8.304E-01	1.230E+00	1.618E-01	1.338
		82.60		5.733E-01	2.056E+00	2.561E+00	3.456E-01	0.224
		279.20	*	-1.570E-02	1.132E-01	1.904E-01	1.469E-02	-0.082
BI-207		72.80		3.979E-01	2.437E-01	3.672E-01	3.140E-02	1.084
	+	74.97		7.177E-01	1.393E-01	2.560E-01	2.169E-02	2.803
		84.90		2.831E-03	3.161E-01	4.614E-01	3.758E-02	0.006
		569.67		-2.576E-02	8.243E-02	1.330E-01	9.477E-03	-0.194
		1063.62	*	1.031E-02	7.933E-02	1.322E-01	8.493E-03	0.078
		1770.23		2.196E-02	5.928E-01	8.495E-01	4.881E-02	0.026
TL-207		81.07		-2.783E-01	3.458E-01	4.955E-01	4.095E-02	-0.562
		83.78		-9.528E-02	2.091E-01	3.019E-01	2.469E-02	-0.316
		94.90		6.111E-01	4.137E-01	6.968E-01	5.991E-02	0.877
		122.32		2.612E+00	4.038E+00	6.699E+00	7.752E-01	0.390
		144.24		2.925E-01	1.590E+00	2.604E+00	2.672E-01	0.112
		154.21		9.399E-01	9.256E-01	1.533E+00	1.425E-01	0.613
		269.46		5.144E-01	5.584E-01	9.064E-01	6.965E-02	0.568
		323.87	*	6.468E-01	2.098E+00	3.532E+00	6.000E-01	0.183
	+	338.28		8.096E+00	4.590E+00	5.740E+00	6.390E-01	1.410
		445.03		2.018E+00	1.096E+01	1.817E+01	1.914E+00	0.111
PO-209		260.50		-1.284E+01	2.938E+01	4.656E+01	3.497E+00	-0.276
		262.80		-5.727E+00	8.122E+01	1.297E+02	9.732E+00	-0.044
		896.60	*	-3.628E+00	1.010E+01	1.630E+01	1.190E+00	-0.223
PB-211		404.84	*	-1.227E+00	3.811E+00	6.161E+00	3.841E+00	-0.199
		427.08		-2.792E+00	9.179E+00	1.485E+01	9.182E+00	-0.188
		831.96		-3.441E-01	1.717E+00	2.806E+00	1.754E+00	-0.123
BI-212	+	727.18	*	1.616E+00	7.273E-01	8.721E-01	7.986E-02	1.853
		785.46		1.354E+00	2.170E+00	3.818E+00	2.898E-01	0.355
		1620.62		1.763E+00	1.547E+00	3.003E+00	1.744E-01	0.587
PO-215		81.07		-2.783E-01	3.458E-01	4.955E-01	4.095E-02	-0.562
		83.78		-9.528E-02	2.091E-01	3.019E-01	2.469E-02	-0.316
		94.90		6.111E-01	4.137E-01	6.968E-01	5.991E-02	0.877
		122.32		2.612E+00	4.038E+00	6.699E+00	7.752E-01	0.390
		144.24		2.925E-01	1.590E+00	2.604E+00	2.672E-01	0.112
		154.21		9.399E-01	9.256E-01	1.533E+00	1.425E-01	0.613

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		5.144E-01	5.584E-01	9.064E-01	6.965E-02	0.568
		323.87	*	6.468E-01	2.098E+00	3.532E+00	6.000E-01	0.183
	+	338.28		8.096E+00	4.590E+00	5.740E+00	6.390E-01	1.410
		445.03		2.018E+00	1.096E+01	1.817E+01	1.914E+00	0.111
RN-219		271.23		-9.926E-03	7.267E-01	1.160E+00	1.088E-01	-0.009
		401.81	*	7.009E-01	1.653E+00	2.761E+00	3.764E-01	0.254
RN-220		549.76	*	1.546E+01	7.862E+01	1.294E+02	9.068E+00	0.119
RA-223		81.07		-2.783E-01	3.458E-01	4.955E-01	4.095E-02	-0.562
		83.78		-9.528E-02	2.091E-01	3.019E-01	2.469E-02	-0.316
		94.90		6.111E-01	4.137E-01	6.968E-01	5.991E-02	0.877
		122.32		2.612E+00	4.038E+00	6.699E+00	7.752E-01	0.390
		144.24		2.925E-01	1.590E+00	2.604E+00	2.672E-01	0.112
		154.21		9.399E-01	9.256E-01	1.533E+00	1.425E-01	0.613
		269.46		5.144E-01	5.584E-01	9.064E-01	6.965E-02	0.568
		323.87	*	6.468E-01	2.098E+00	3.532E+00	6.000E-01	0.183
	+	338.28		8.096E+00	4.590E+00	5.740E+00	6.390E-01	1.410
		445.03		2.018E+00	1.096E+01	1.817E+01	1.914E+00	0.111
RA-224		240.98	*	1.606E+01	2.602E+00	3.732E+00	2.815E-01	4.303
AC-227		79.80		3.154E+00	2.653E+00	3.863E+00	8.259E-01	0.816
		236.00		5.552E-01	7.237E-01	1.031E+00	1.186E-01	0.539
		256.20	*	4.778E-01	1.168E+00	1.882E+00	2.778E-01	0.254
		286.10		-2.441E+00	4.642E+00	7.732E+00	9.614E-01	-0.316
		299.80		7.998E+00	4.961E+00	7.294E+00	1.231E+00	1.096
		304.40		-6.759E+00	5.861E+00	9.433E+00	1.682E+00	-0.717
		334.20		-7.873E-01	8.394E+00	1.220E+01	2.281E+00	-0.065
TH-227		79.80		3.154E+00	2.655E+00	3.863E+00	8.366E-01	0.816
		94.00		6.173E+00	3.676E+00	5.885E+00	1.279E+00	1.049
		236.00		5.552E-01	7.231E-01	1.031E+00	1.058E-01	0.539
		256.20	*	4.778E-01	1.169E+00	1.882E+00	3.306E-01	0.254
		286.10		-2.441E+00	5.239E+00	7.732E+00	7.753E+00	-0.316
		299.80		7.998E+00	4.961E+00	7.294E+00	1.231E+00	1.096
		304.40		-6.759E+00	5.861E+00	9.433E+00	1.682E+00	-0.717
		334.20		-7.873E-01	8.394E+00	1.220E+01	2.281E+00	-0.065
TH-229		85.43		3.339E-01	3.155E-01	4.699E-01	3.820E-02	0.710
	+	88.47		4.103E-01	2.181E-01	3.100E-01	2.508E-02	1.324
		100.00		-1.128E-01	3.567E-01	5.868E-01	5.294E-02	-0.192
		193.63	*	-5.486E-01	1.473E+00	2.369E+00	1.764E-01	-0.232
		210.97		2.589E+00	2.111E+00	3.467E+00	2.602E-01	0.747
PA-231		283.67	*	7.391E-01	4.553E+00	7.695E+00	1.118E+00	0.096
		301.29		9.144E-01	1.787E+00	2.867E+00	3.250E-01	0.319
TH-231		81.07		-2.783E-01	3.458E-01	4.955E-01	4.095E-02	-0.562
		83.78		-9.528E-02	2.091E-01	3.019E-01	2.469E-02	-0.316
		94.90		6.111E-01	4.137E-01	6.968E-01	5.991E-02	0.877
		122.32		2.612E+00	4.038E+00	6.699E+00	7.752E-01	0.390
		144.24		2.925E-01	1.590E+00	2.604E+00	2.672E-01	0.112
		154.21		9.399E-01	9.256E-01	1.533E+00	1.425E-01	0.613
		269.46		5.144E-01	5.584E-01	9.064E-01	6.965E-02	0.568
		323.87	*	6.468E-01	2.098E+00	3.532E+00	6.000E-01	0.183
	+	338.28		8.096E+00	4.590E+00	5.740E+00	6.390E-01	1.410

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		2.018E+00	1.096E+01	1.817E+01	1.914E+00	0.111
U-231		84.21		-1.614E+00	6.243E+00	9.055E+00	7.394E-01	-0.178
		92.29		4.590E+00	2.556E+00	4.066E+00	3.410E-01	1.129
		95.87	*	-4.528E+00	1.477E+00	2.232E+00	1.937E-01	-2.029
		108.00		-1.398E-01	2.897E+00	4.778E+00	4.649E-01	-0.029
PA-233	+	75.28		2.095E+01	4.857E+00	7.687E+00	1.173E+00	2.725
	+	86.59		5.884E+00	3.466E+00	4.287E+00	1.143E+00	1.372
		300.12		1.806E+00	1.367E+00	2.035E+00	2.878E-01	0.887
		311.98	*	1.309E-01	2.017E-01	3.424E-01	2.554E-02	0.382
		340.50		4.145E+00	2.461E+00	3.449E+00	8.015E-01	1.202
		398.62		8.337E+00	8.594E+00	1.407E+01	3.638E+00	0.593
		415.76		3.943E+00	6.938E+00	1.154E+01	2.382E+00	0.342
PA-234	+	63.00		2.877E+00	1.817E+00	2.411E+00	3.782E-01	1.193
		94.67		6.439E-01	3.067E-01	5.082E-01	6.289E-02	1.267
		98.44		-4.249E-02	1.762E-01	2.879E-01	1.607E-01	-0.148
		99.86		-3.610E-01	9.013E-01	1.480E+00	1.333E-01	-0.244
		111.00		-3.097E-02	3.837E-01	6.321E-01	8.288E-02	-0.049
		131.20		2.368E-01	2.420E-01	4.020E-01	4.173E-02	0.589
		152.70		1.154E-01	7.604E-01	1.245E+00	2.118E-01	0.093
	+	186.00		1.183E+01	6.714E+00	5.701E+00	1.762E+00	2.076
		226.40		-7.360E-02	1.154E+00	1.855E+00	2.322E-01	-0.040
		227.20		-1.932E-01	1.238E+00	1.985E+00	1.497E-01	-0.097
		248.90		-3.908E-01	2.454E+00	3.919E+00	8.629E-01	-0.100
		293.70		4.603E+00	2.402E+00	3.501E+00	5.846E-01	1.315
		369.80		-9.449E-01	3.137E+00	5.190E+00	1.088E+00	-0.182
		568.70		-4.762E-01	2.673E+00	4.336E+00	3.087E-01	-0.110
		569.50		-3.025E-01	7.363E-01	1.184E+00	8.433E-02	-0.256
		574.00		-6.452E-01	4.034E+00	6.544E+00	4.678E-01	-0.099
		699.00		5.421E-01	1.010E+00	1.687E+00	3.145E-01	0.321
		706.10		-7.744E-01	1.417E+00	2.111E+00	9.372E-01	-0.367
		733.00		-2.670E-01	5.865E-01	7.599E-01	1.659E-01	-0.351
		742.81		2.907E-01	1.912E+00	3.098E+00	2.079E+00	0.094
		796.30		1.833E+00	1.283E+00	2.210E+00	5.909E-01	0.829
		805.60		9.327E-01	1.432E+00	2.465E+00	7.487E-01	0.378
		819.60		3.317E-01	1.598E+00	2.714E+00	1.026E+00	0.122
		826.30		-2.405E-01	1.107E+00	1.811E+00	8.067E-01	-0.133
		831.60		-5.632E-01	9.266E-01	1.455E+00	4.299E-01	-0.387
		876.40		-4.310E-02	1.033E+00	1.715E+00	1.761E+00	-0.025
		880.51		-2.881E-01	3.459E-01	5.289E-01	3.894E-02	-0.545
		883.24		7.919E-02	3.562E-01	5.994E-01	4.020E-01	0.132
		899.00		1.729E-01	1.194E+00	2.007E+00	8.727E-01	0.086
		925.00		-4.113E-01	1.565E+00	2.541E+00	1.828E-01	-0.162
		926.50		5.722E-02	2.330E-01	3.950E-01	9.807E-02	0.145
		946.00	*	1.003E-01	4.073E-01	6.900E-01	1.250E-01	0.145
		949.00		2.414E-01	6.044E-01	1.037E+00	7.358E-02	0.233
		980.50		6.092E-01	1.078E+00	1.866E+00	1.295E-01	0.327
		1394.10		1.037E+00	1.450E+00	2.345E+00	1.519E+00	0.442
PA-234M		766.41		4.640E+00	2.527E+01	4.077E+01	3.122E+01	0.114
		1001.03	*	-1.083E+00	8.561E+00	1.400E+01	1.381E+00	-0.077

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-234	+	63.29	*	2.468E+00	1.575E+00	2.060E+00	3.737E-01	1.198
		92.38		1.634E+00	9.939E-01	1.525E+00	2.742E-01	1.071
U-235		89.95		-5.205E+00	2.650E+00	2.909E+00	8.943E-01	-1.790
		93.35		1.448E+00	1.144E+00	1.826E+00	5.110E-01	0.793
		105.00		-4.215E-01	2.123E+00	3.489E+00	1.050E+00	-0.121
		143.76	*	7.247E-02	4.921E-01	8.052E-01	1.439E-01	0.090
		163.35		5.778E-01	1.158E+00	1.895E+00	3.530E-01	0.305
	+	185.71		4.383E-01	2.111E-01	2.107E-01	1.561E-02	2.080
		205.31		-5.318E-02	1.470E+00	2.367E+00	4.401E-01	-0.022
NP-236		94.67		4.922E-01	2.286E-01	3.857E-01	3.308E-02	1.276
		98.44		-3.210E-02	1.320E-01	2.176E-01	1.935E-02	-0.147
		111.00		-2.343E-02	2.902E-01	4.781E-01	4.784E-02	-0.049
		160.31	*	1.690E-02	1.927E-01	3.147E-01	2.471E-02	0.054
U-238	+	63.29	*	2.468E+00	1.575E+00	2.060E+00	3.737E-01	1.198
		92.38		1.634E+00	9.594E-01	1.525E+00	1.281E-01	1.071
NP-239		99.55		-2.579E-01	3.028E-01	4.921E-01	4.421E-02	-0.524
		117.00	*	-2.557E-01	4.148E-01	6.740E-01	7.132E-02	-0.379
		209.75		2.418E+00	2.137E+00	3.506E+00	2.630E-01	0.690
		228.18		-1.330E-01	6.498E-01	1.041E+00	7.848E-02	-0.128
		277.60		1.656E-02	5.455E-01	8.707E-01	6.479E-02	0.019
		334.30		-4.132E-01	4.757E+00	6.913E+00	4.761E-01	-0.060
CM-243		99.55		-2.653E-01	3.116E-01	5.063E-01	4.549E-02	-0.524
		103.76	*	2.061E-01	1.931E-01	3.237E-01	3.027E-02	0.637
		117.00		-2.631E-01	4.267E-01	6.934E-01	7.336E-02	-0.379
		209.75		2.383E+00	2.107E+00	3.455E+00	2.592E-01	0.690
		228.18		-1.343E-01	6.565E-01	1.052E+00	7.929E-02	-0.128
		277.60		1.669E-02	5.498E-01	8.777E-01	6.531E-02	0.019
CM-247		278.00		-1.484E-01	2.261E+00	3.602E+00	2.679E-01	-0.041
		287.40		6.536E-01	3.726E+00	6.296E+00	4.647E-01	0.104
		402.60	*	-1.913E-02	1.479E-01	2.450E-01	1.440E-02	-0.078
CF-249		252.85		-9.014E-01	2.659E+00	4.228E+00	3.183E-01	-0.213
		333.44		-3.702E-01	6.255E-01	8.961E-01	6.183E-02	-0.413
		387.95	*	9.651E-02	1.536E-01	2.583E-01	1.515E-02	0.374
CF-251		176.60	*	-1.643E-01	3.206E-01	5.155E-01	3.796E-02	-0.319
		227.00		-3.983E-01	1.104E+00	1.763E+00	1.329E-01	-0.226
		285.00		-4.132E+00	5.253E+00	8.712E+00	6.444E-01	-0.474

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511001      *
* Acquisition date :  7-JUL-2009 10:10:39 Detector SN#     :               *
* Detector ID        : GAM17               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:15.65     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232511001           Analyst initials: MXR1          *
* Batch Number       : 881220               Sample Quantity : 1.4492E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.224E+01	2.771E+00	5.784E-01	0.000E+00
CD-109	3.048E+00	1.587E+00	2.244E+00	0.000E+00
SN-126	3.005E-01	1.565E-01	2.267E-01	0.000E+00
BA-137M	6.933E+01	5.165E+00	1.320E-01	0.000E+00
CS-137	7.329E+01	5.473E+00	1.395E-01	0.000E+00
TL-208	6.695E-01	1.506E-01	1.510E-01	0.000E+00
BI-210	1.094E-01	1.053E+00	1.959E+00	0.000E+00
PB-210	1.094E-01	1.053E+00	1.959E+00	0.000E+00
PO-210	1.094E-01	1.053E+00	1.959E+00	0.000E+00
BI-211	4.459E+00	1.015E+00	1.173E+00	0.000E+00
PB-212	1.895E+00	2.521E-01	2.859E-01	0.000E+00
PO-212	1.895E+00	2.521E-01	2.859E-01	0.000E+00
BI-214	1.589E+00	3.181E-01	2.887E-01	0.000E+00
PB-214	1.551E+00	3.617E-01	4.114E-01	0.000E+00
PO-214	1.551E+00	3.617E-01	4.114E-01	0.000E+00
PO-216	1.895E+00	2.521E-01	2.859E-01	0.000E+00
PO-218	1.551E+00	3.617E-01	4.114E-01	0.000E+00
RA-226	1.589E+00	3.181E-01	2.887E-01	0.000E+00
AC-228	1.993E+00	3.876E-01	3.040E-01	0.000E+00
RA-228	1.993E+00	3.876E-01	3.040E-01	0.000E+00
TH-228	1.895E+00	2.521E-01	2.859E-01	0.000E+00
TH-230	1.589E+00	3.181E-01	2.887E-01	0.000E+00
TH-232	1.993E+00	3.876E-01	3.040E-01	0.000E+00
U-234	1.589E+00	3.181E-01	2.887E-01	0.000E+00
NP-237	8.826E-01	4.931E-01	6.323E-01	0.000E+00
AM-241	8.899E+00	8.931E-01	2.667E-01	0.000E+00
AM-243	3.999E-01	7.604E-02	1.240E-01	0.000E+00
ANH-511	4.310E-02	1.640E-01	1.674E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-1.095E+00	1.443E+00	2.464E+00	0.000E+00	NOT IDENT.
NA-22	1.308E-02	5.753E-02	9.868E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.036E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.595E-03	4.299E-02	7.306E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.946E-02	1.057E-01	0.000E+00	FAIL ABUN
SC-46	1.729E-02	4.793E-02	8.548E-02	0.000E+00	FAIL ABUN
V-48	6.582E-02	9.080E-02	1.647E-01	0.000E+00	NOT IDENT.
CR-51	4.360E-01	1.094E+00	1.962E+00	0.000E+00	NOT IDENT.
MN-52	-3.070E-02	2.279E-01	3.709E-01	0.000E+00	NOT IDENT.
MN-54	1.296E-02	5.348E-02	9.447E-02	0.000E+00	NOT IDENT.
CO-56	2.176E-02	5.035E-02	9.036E-02	0.000E+00	NOT IDENT.
CO-57	6.475E-02	5.661E-02	1.022E-01	0.000E+00	NOT IDENT.
CO-58	-2.680E-02	5.411E-02	9.074E-02	0.000E+00	NOT IDENT.
FE-59	-9.336E-02	1.260E-01	2.000E-01	0.000E+00	NOT IDENT.
CO-60	4.083E-02	5.694E-02	1.021E-01	0.000E+00	NOT IDENT.
ZN-65	9.126E-02	1.424E-01	2.260E-01	0.000E+00	NOT IDENT.
GE-68	2.627E-01	1.595E+00	2.756E+00	0.000E+00	NOT IDENT.
AS-73	-4.795E-01	7.080E-01	1.062E+00	0.000E+00	NOT IDENT.
AS-74	1.753E-02	2.145E-01	3.668E-01	0.000E+00	NOT IDENT.
SE-75	-8.491E-02	1.299E-01	2.183E-01	0.000E+00	NOT IDENT.
BR-77	1.336E+01	1.900E+01	3.327E+01	0.000E+00	FAIL ABUN
SR-82	-1.965E-01	4.276E-01	7.185E-01	0.000E+00	NOT IDENT.
RB-83	3.743E-03	2.357E-01	4.062E-01	0.000E+00	NOT IDENT.
RB-84	-4.688E-02	8.048E-02	1.315E-01	0.000E+00	NOT IDENT.
KR-85	2.261E+01	2.641E+01	4.054E+01	0.000E+00	NOT IDENT.
SR-85	1.133E-01	1.323E-01	2.031E-01	0.000E+00	NOT IDENT.
RB-86	-1.472E-01	9.595E-01	1.610E+00	0.000E+00	NOT IDENT.
Y-88	-2.761E-02	5.106E-02	6.844E-02	0.000E+00	NOT IDENT.
ZR-88	-8.963E-02	1.145E-01	1.980E-01	0.000E+00	NOT IDENT.
Y-91	1.932E+01	2.602E+01	4.638E+01	0.000E+00	NOT IDENT.
NB-94	-4.375E-03	4.466E-02	7.460E-02	0.000E+00	NOT IDENT.
NB-95	7.228E-03	5.870E-02	9.914E-02	0.000E+00	NOT IDENT.
NB-95M	1.056E-02	3.716E-01	5.571E-01	0.000E+00	NOT IDENT.
ZR-95	1.108E-01	8.931E-02	1.644E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.038E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.686E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.126E+00	9.138E+00	1.573E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.058E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.539E-02	9.118E-02	1.578E-01	0.000E+00	NOT IDENT.
RH-102	7.740E-02	1.392E-01	2.436E-01	0.000E+00	NOT IDENT.
RU-103	1.194E-02	1.489E-01	2.579E-01	0.000E+00	FAIL ABUN
RH-106	-1.580E-01	7.925E-01	1.336E+00	0.000E+00	FAIL ABUN
RU-106	-1.580E-01	7.924E-01	1.336E+00	0.000E+00	FAIL ABUN
AG-108M	-5.453E-02	1.455E-01	2.523E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	2.495E-01	3.479E-01	0.000E+00	NOT IDENT.
IN-111	-3.758E+00	1.890E+00	3.081E+00	0.000E+00	NOT IDENT.
IN-113M	3.476E-03	1.659E-01	2.918E-01	0.000E+00	NOT IDENT.
SN-113	3.476E-03	1.659E-01	2.918E-01	0.000E+00	NOT IDENT.
IN-114M	5.155E-01	5.659E-01	8.767E-01	0.000E+00	NOT IDENT.
CD-115	-6.717E+00	1.836E+01	3.128E+01	0.000E+00	NOT IDENT.
SN-117M	-2.162E-02	1.155E-01	2.023E-01	0.000E+00	NOT IDENT.
SB-122	8.890E-01	3.110E+00	5.378E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.397E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.013E-04	6.590E-02	1.159E-01	0.000E+00	NOT IDENT.
I-124	-1.404E-01	1.287E+00	1.882E+00	0.000E+00	NOT IDENT.
SB-124	-3.761E-02	8.675E-02	1.350E-01	0.000E+00	FAIL ABUN
SB-125	-2.056E-01	3.960E-01	6.854E-01	0.000E+00	NOT IDENT.
TE-125M	-1.789E+00	1.818E+01	3.255E+01	0.000E+00	NOT IDENT.
I-126	1.384E-01	2.651E-01	4.067E-01	0.000E+00	NOT IDENT.
SB-126	1.522E-02	1.957E-01	2.860E-01	0.000E+00	FAIL ABUN
SB-127	2.999E-01	1.201E+00	2.066E+00	0.000E+00	FAIL ABUN
XE-127	1.274E-02	1.255E-01	2.178E-01	0.000E+00	NOT IDENT.
I-131	-1.786E-01	3.406E-01	5.955E-01	0.000E+00	NOT IDENT.
TE-132	-2.454E-01	1.222E+00	2.093E+00	0.000E+00	FAIL ABUN
BA-133	-2.272E-02	1.692E-01	2.593E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.483E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.128E-01	6.033E-02	1.179E-01	0.000E+00	NOT IDENT.
CS-135	5.563E-01	4.616E-01	8.006E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.889E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.445E-02	1.319E-01	2.286E-01	0.000E+00	FAIL ABUN
CE-139	7.161E-03	7.120E-02	1.251E-01	0.000E+00	NOT IDENT.
BA-140	-2.618E-01	7.512E-01	1.270E+00	0.000E+00	NOT IDENT.
LA-140	-1.089E-01	9.282E-02	1.182E-01	0.000E+00	NOT IDENT.
CE-141	-3.980E-02	1.389E-01	2.435E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.502E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.680E-01	4.690E-01	8.142E-01	0.000E+00	NOT IDENT.
PM-144	2.320E-02	4.838E-02	8.429E-02	0.000E+00	NOT IDENT.

PR-144	1.570E+00	3.275E+00	5.705E+00	0.000E+00	NOT IDENT.
PM-146	1.285E-01	2.113E-01	3.707E-01	0.000E+00	NOT IDENT.
ND-147	-5.381E-01	1.620E+00	2.759E+00	0.000E+00	NOT IDENT.
PM-149	-4.394E+01	1.361E+02	2.425E+02	0.000E+00	NOT IDENT.
EU-152	-3.327E-02	3.424E-01	5.722E-01	0.000E+00	FAIL ABUN
GD-153	-1.847E-01	1.456E-01	2.552E-01	0.000E+00	NOT IDENT.
EU-154	3.657E-02	1.609E-01	2.759E-01	0.000E+00	NOT IDENT.
EU-155	-1.574E-01	2.129E-01	3.766E-01	0.000E+00	FAIL ABUN
TB-160	-5.707E-02	1.605E-01	2.684E-01	0.000E+00	FAIL ABUN
HO-166M	-1.007E-03	8.003E-02	1.345E-01	0.000E+00	FAIL ABUN
TM-171	4.263E+00	3.135E+01	5.081E+01	0.000E+00	FAIL ABUN
LU-176	-7.069E-03	7.522E-02	1.341E-01	0.000E+00	FAIL ABUN
LU-177	1.043E+00	2.355E+00	4.104E+00	0.000E+00	NOT IDENT.
LU-177M	3.115E-01	7.046E-01	1.243E+00	0.000E+00	FAIL ABUN
HF-181	-2.001E-02	1.747E-01	3.019E-01	0.000E+00	FAIL ABUN
W-181	0.000E+00	4.436E-01	6.533E-01	0.000E+00	FAIL ABUN
TA-182	3.004E-03	2.733E-01	4.606E-01	0.000E+00	FAIL ABUN
RE-183	-1.215E-02	2.575E-01	4.517E-01	0.000E+00	FAIL ABUN
RE-184	-2.381E-01	6.881E-01	1.168E+00	0.000E+00	FAIL ABUN
OS-185	-7.296E-03	1.143E-01	1.932E-01	0.000E+00	FAIL ABUN
RE-188	1.499E-01	3.854E-01	6.830E-01	0.000E+00	NOT IDENT.
W-188	1.358E+01	2.400E+01	3.798E+01	0.000E+00	FAIL ABUN
IR-192	-1.045E-01	1.046E-01	1.826E-01	0.000E+00	FAIL ABUN
AU-195	-1.183E-01	4.176E-01	7.487E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.049E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.094E+00	1.031E+01	1.803E+01	0.000E+00	NOT IDENT.
TL-202	-8.373E-02	2.805E-01	4.866E-01	0.000E+00	NOT IDENT.
HG-203	-1.570E-02	1.109E-01	1.988E-01	0.000E+00	NOT IDENT.
BI-207	1.031E-02	7.774E-02	1.339E-01	0.000E+00	FAIL ABUN
TL-207	6.468E-01	2.056E+00	3.675E+00	0.000E+00	FAIL ABUN
PO-209	-3.628E+00	9.898E+00	1.657E+01	0.000E+00	NOT IDENT.
PB-211	-1.227E+00	3.734E+00	6.378E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	7.128E-01	8.911E-01	0.000E+00	FAIL ABUN
PO-215	6.468E-01	2.056E+00	3.675E+00	0.000E+00	FAIL ABUN
RN-219	7.009E-01	1.620E+00	2.858E+00	0.000E+00	NOT IDENT.
RN-220	1.546E+01	7.705E+01	1.330E+02	0.000E+00	NOT IDENT.
RA-223	6.468E-01	2.056E+00	3.675E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	2.550E+00	3.908E+00	0.000E+00	NOT IDENT.
AC-227	4.778E-01	1.145E+00	1.968E+00	0.000E+00	NOT IDENT.
TH-227	4.778E-01	1.146E+00	1.968E+00	0.000E+00	NOT IDENT.
TH-229	-5.486E-01	1.444E+00	2.493E+00	0.000E+00	FAIL ABUN
PA-231	7.391E-01	4.462E+00	8.029E+00	0.000E+00	NOT IDENT.
TH-231	6.468E-01	2.056E+00	3.675E+00	0.000E+00	FAIL ABUN
U-231	-4.528E+00	1.448E+00	2.384E+00	0.000E+00	NOT IDENT.
PA-233	1.309E-01	1.977E-01	3.565E-01	0.000E+00	FAIL ABUN
PA-234	1.003E-01	3.991E-01	7.007E-01	0.000E+00	FAIL ABUN
PA-234M	-1.083E+00	8.390E+00	1.420E+01	0.000E+00	NOT IDENT.
TH-234	0.000E+00	1.543E+00	2.218E+00	0.000E+00	FAIL ABUN
U-235	7.247E-02	4.822E-01	8.525E-01	0.000E+00	FAIL ABUN
NP-236	1.690E-02	1.889E-01	3.324E-01	0.000E+00	NOT IDENT.
U-238	0.000E+00	1.543E+00	2.218E+00	0.000E+00	FAIL ABUN
NP-239	-2.557E-01	4.065E-01	7.168E-01	0.000E+00	NOT IDENT.
CM-243	2.061E-01	1.893E-01	3.451E-01	0.000E+00	NOT IDENT.
CM-247	-1.913E-02	1.449E-01	2.537E-01	0.000E+00	NOT IDENT.
CF-249	9.651E-02	1.506E-01	2.676E-01	0.000E+00	NOT IDENT.
CF-251	-1.643E-01	3.142E-01	5.434E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:11:21.51

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511001.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 10:10:39.
Sample ID         : G232511001           Sample quantity  : 1.44920E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:15.65  0.2%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1060	10.67*	7.985E-01	3.224E+01	3.224E+01	8.77
CD-109	88.03	282	3.72*	6.571E+00	2.989E+00	3.048E+00	53.15
SN-126	64.28	241	9.60	6.651E+00	9.769E-01	9.769E-01	63.08
	86.94	282	8.90	6.571E+00	1.249E+00	1.249E+00	66.79
	87.57	282	37.00*	6.571E+00	3.005E-01	3.005E-01	53.15
BA-137M	661.65	38921	89.98*	1.617E+00	6.927E+01	6.933E+01	7.60
CS-137	661.65	38921	85.12*	1.617E+00	7.323E+01	7.329E+01	7.62
TL-208	277.35	------	6.80	3.655E+00	------	Line Not Found	------
	510.84	34	21.60	2.072E+00	1.995E-01	1.995E-01	388.29
	583.14	397	84.20*	1.824E+00	6.695E-01	6.695E-01	22.95
	860.37	64	12.46	1.268E+00	1.050E+00	1.050E+00	58.79
BI-210	46.50	11	4.05*	6.558E+00	1.092E-01	1.094E-01	982.74
PB-210	46.50	11	4.05*	6.558E+00	1.092E-01	1.094E-01	982.74
PO-210	46.50	11	4.05*	6.558E+00	1.092E-01	1.094E-01	982.73
BI-211	72.87	------	1.27	6.655E+00	------	Line Not Found	------
	351.07	658	12.94*	2.955E+00	4.459E+00	4.459E+00	23.22
PB-212	74.81	678	10.70	6.649E+00	2.467E+00	2.467E+00	21.54
	77.11	1041	18.00	6.641E+00	2.256E+00	2.256E+00	14.58
	87.30	282	8.00	6.571E+00	1.390E+00	1.390E+00	54.08
	238.63	1348	44.60*	4.131E+00	1.895E+00	1.895E+00	13.57
	300.09	------	3.41	3.414E+00	------	Line Not Found	------
PO-212	74.81	678	10.70	6.649E+00	2.467E+00	2.467E+00	21.54
	77.11	1041	18.00	6.641E+00	2.256E+00	2.256E+00	14.58
	87.30	282	8.00	6.571E+00	1.390E+00	1.390E+00	54.08
	115.19	------	0.60	6.204E+00	------	Line Not Found	------
	238.63	1348	44.60*	4.131E+00	1.895E+00	1.895E+00	13.57
	300.09	------	3.41	3.414E+00	------	Line Not Found	------
BI-214	609.31	497	46.30*	1.749E+00	1.589E+00	1.589E+00	20.43
	768.36	------	5.04	1.406E+00	------	Line Not Found	------
	934.06	------	3.21	1.177E+00	------	Line Not Found	------
	1120.29	89	15.10	1.003E+00	1.522E+00	1.522E+00	46.04
	1238.11	------	5.94	9.200E-01	------	Line Not Found	------

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	68	15.80	6.764E-01	1.636E+00	1.636E+00	30.63
PB-214	74.81	678	6.21	6.649E+00	4.250E+00	4.250E+00	20.77
	77.11	1041	10.50	6.641E+00	3.867E+00	3.867E+00	16.45
	87.30	282	4.67	6.571E+00	2.381E+00	2.381E+00	53.70
	241.98	------	7.49	4.088E+00	------ Line Not Found		------
	295.21	405	19.20	3.463E+00	1.578E+00	1.578E+00	34.50
	351.92	658	37.20*	2.955E+00	1.551E+00	1.551E+00	23.80
PO-214	74.81	678	6.21	6.649E+00	4.250E+00	4.250E+00	20.77
	77.11	1041	10.50	6.641E+00	3.867E+00	3.867E+00	16.45
	87.30	282	4.67	6.571E+00	2.381E+00	2.381E+00	53.70
	241.98	------	7.49	4.088E+00	------ Line Not Found		------
	295.21	405	19.20	3.463E+00	1.578E+00	1.578E+00	34.50
	351.92	658	37.20*	2.955E+00	1.551E+00	1.551E+00	23.80
PO-216	74.81	678	10.70	6.649E+00	2.467E+00	2.467E+00	21.54
	77.11	1041	18.00	6.641E+00	2.256E+00	2.256E+00	14.58
	87.30	282	8.00	6.571E+00	1.390E+00	1.390E+00	54.08
	238.63	1348	44.60*	4.131E+00	1.895E+00	1.895E+00	13.57
	300.09	------	3.41	3.414E+00	------ Line Not Found		------
PO-218	74.81	678	6.21	6.649E+00	4.250E+00	4.250E+00	20.77
	77.11	1041	10.50	6.641E+00	3.867E+00	3.867E+00	16.45
	87.30	282	4.67	6.571E+00	2.381E+00	2.381E+00	53.70
	241.98	------	7.49	4.088E+00	------ Line Not Found		------
	295.21	405	19.20	3.463E+00	1.578E+00	1.578E+00	34.50
	351.92	658	37.20*	2.955E+00	1.551E+00	1.551E+00	23.80
RA-226	609.31	497	46.30*	1.749E+00	1.589E+00	1.589E+00	20.43
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	89	15.10	1.003E+00	1.522E+00	1.522E+00	46.04
	1238.11	------	5.94	9.200E-01	------ Line Not Found		------
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	68	15.80	6.764E-01	1.636E+00	1.636E+00	30.63
AC-228	338.32	262	11.40	3.066E+00	1.939E+00	1.939E+00	69.03
	911.07	257	27.70*	1.204E+00	1.993E+00	1.993E+00	19.84
	969.11	150	16.60	1.139E+00	2.054E+00	2.054E+00	33.31
RA-228	338.32	262	11.40	3.066E+00	1.939E+00	1.939E+00	69.03
	911.07	257	27.70*	1.204E+00	1.993E+00	1.993E+00	19.84
	969.11	150	16.60	1.139E+00	2.054E+00	2.054E+00	33.31
TH-228	84.40	------	1.21	6.598E+00	------ Line Not Found		------
	238.60	1348	44.60*	4.131E+00	1.895E+00	1.895E+00	13.57
	300.10	------	3.41	3.414E+00	------ Line Not Found		------
TH-230	609.31	497	46.30*	1.749E+00	1.589E+00	1.589E+00	20.43
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	89	15.10	1.003E+00	1.522E+00	1.522E+00	46.04
	1238.11	------	5.94	9.200E-01	------ Line Not Found		------
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	68	15.80	6.764E-01	1.636E+00	1.636E+00	30.63
TH-232	338.32	262	11.40	3.066E+00	1.939E+00	1.939E+00	56.01

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	911.07	257	27.70*	1.204E+00	1.993E+00	1.993E+00	19.84
	969.11	150	16.60	1.139E+00	2.054E+00	2.054E+00	33.31
U-234	609.31	497	46.30*	1.749E+00	1.589E+00	1.589E+00	20.43
	768.36	------	5.04	1.406E+00	------	Line Not Found	------
	934.06	------	3.21	1.177E+00	------	Line Not Found	------
	1120.29	89	15.10	1.003E+00	1.522E+00	1.522E+00	46.04
	1238.11	------	5.94	9.200E-01	------	Line Not Found	------
	1377.67	------	4.11	8.394E-01	------	Line Not Found	------
	1764.49	68	15.80	6.764E-01	1.636E+00	1.636E+00	30.63
NP-237	86.50	282	12.60*	6.571E+00	8.826E-01	8.826E-01	57.01
	95.87	------	2.60	6.484E+00	------	Line Not Found	------
AM-241	59.54	8185	35.90*	6.636E+00	8.899E+00	8.899E+00	10.24
AM-243	74.67	678	66.00*	6.649E+00	3.999E-01	3.999E-01	19.40
	86.72	282	0.34	6.571E+00	3.310E+01	3.310E+01	53.15
	117.66	------	0.55	6.163E+00	------	Line Not Found	------
	142.18	------	0.13	5.726E+00	------	Line Not Found	------
ANH-511	511.00	34	100.00*	2.072E+00	4.310E-02	4.310E-02	388.20

Flag: "*" = Keyline

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

Total number of lines in spectrum 27
Number of unidentified lines 2
Number of lines tentatively identified by NID 25 92.59%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.224E+01	3.224E+01	0.283E+01	8.77	
CD-109	464.00D	1.02	2.989E+00	3.048E+00	1.620E+00	53.15	
SN-126	1.00E+05Y	1.00	3.005E-01	3.005E-01	1.597E-01	53.15	
BA-137M	30.17Y	1.00	6.927E+01	6.933E+01	0.527E+01	7.60	
CS-137	30.17Y	1.00	7.323E+01	7.329E+01	0.558E+01	7.62	
TL-208	1.41E+10Y	1.00	6.695E-01	6.695E-01	1.536E-01	22.95	
BI-210	22.26Y	1.00	1.092E-01	1.094E-01	10.75E-01	982.74	
PB-210	22.26Y	1.00	1.092E-01	1.094E-01	10.75E-01	982.74	
PO-210	22.26Y	1.00	1.092E-01	1.094E-01	10.75E-01	982.73	
BI-211	7.04E+08Y	1.00	4.459E+00	4.459E+00	1.035E+00	23.22	
PB-212	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.257E+00	13.57	
PO-212	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.257E+00	13.57	
BI-214	1600.00Y	1.00	1.589E+00	1.589E+00	0.325E+00	20.43	
PB-214	1600.00Y	1.00	1.551E+00	1.551E+00	0.369E+00	23.80	
PO-214	1600.00Y	1.00	1.551E+00	1.551E+00	0.369E+00	23.80	
PO-216	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.257E+00	13.57	
PO-218	1600.00Y	1.00	1.551E+00	1.551E+00	0.369E+00	23.80	
RA-226	1600.00Y	1.00	1.589E+00	1.589E+00	0.325E+00	20.43	
AC-228	1.41E+10Y	1.00	1.993E+00	1.993E+00	0.395E+00	19.84	
RA-228	1.41E+10Y	1.00	1.993E+00	1.993E+00	0.395E+00	19.84	
TH-228	1.41E+10Y	1.00	1.895E+00	1.895E+00	0.257E+00	13.57	
TH-230	4.47E+09Y	1.00	1.589E+00	1.589E+00	0.325E+00	20.43	
TH-232	1.41E+10Y	1.00	1.993E+00	1.993E+00	0.395E+00	19.84	
U-234	4.47E+09Y	1.00	1.589E+00	1.589E+00	0.325E+00	20.43	
NP-237	2.14E+06Y	1.00	8.826E-01	8.826E-01	5.032E-01	57.01	
AM-241	432.20Y	1.00	8.899E+00	8.899E+00	0.911E+00	10.24	
AM-243	7380.00Y	1.00	3.999E-01	3.999E-01	0.776E-01	19.40	
ANH-511	1.00E+09Y	1.00	4.310E-02	4.310E-02	16.73E-02	388.20	
	Total Activity :		2.183E+02	2.185E+02			

Grand Total Activity : 2.183E+02 2.185E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

Jt	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	50.16	284	3110	1.14	101.51	98	10	3.95E-02	74.2	6.58E+00	T
0	185.65	452	2594	1.19	372.29	366	13	6.27E-02	47.6	4.94E+00	T
0	727.34	109	86	1.82	1455.05	1448	17	1.51E-02	44.1	1.48E+00	T
1	964.22	67	55	2.10	1928.61	1921	26	9.31E-03	51.5	1.14E+00	T
0	1456.11	11	21	1.05	2912.14	2900	14	1.53E-03	****	8.00E-01	T
0	1587.53	21	15	1.94	3174.95	3169	12	2.97E-03	84.3	7.43E-01	
0	1846.00	21	7	0.59	3691.87	3683	15	2.85E-03	73.0	6.49E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:11:26.53

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232511001.CNF;1 *
* Acquisition date  : 7-JUL-2009 10:10:39.  Detector SN#     :             *
* Detector ID       : GAM17                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:15.65          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232511001            Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.44920E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14.8MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1032-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.224E+01	2.828E+00	5.753E-01	3.537E-02	56.034
CD-109	3.048E+00	1.620E+00	2.097E+00	1.689E-01	1.453
SN-126	3.005E-01	1.597E-01	2.119E-01	1.709E-02	1.418
BA-137M	6.933E+01	5.270E+00	1.289E-01	9.709E-03	537.743
CS-137	7.329E+01	5.585E+00	1.363E-01	1.029E-02	537.743
TL-208	6.695E-01	1.536E-01	1.470E-01	1.166E-02	4.554
BI-210	1.094E-01	1.075E+00	1.808E+00	1.447E-01	0.060
PB-210	1.094E-01	1.075E+00	1.808E+00	1.447E-01	0.060
PO-210	1.094E-01	1.075E+00	1.808E+00	1.258E-01	0.060
BI-211	4.459E+00	1.035E+00	1.129E+00	8.114E-02	3.948
PB-212	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
PO-212	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
BI-214	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
PB-214	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
PO-214	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
PO-216	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.940
PO-218	1.551E+00	3.691E-01	3.961E-01	3.513E-02	3.915
RA-226	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
RA-228	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
TH-228	1.895E+00	2.572E-01	2.730E-01	2.396E-02	6.941
TH-230	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
TH-232	1.993E+00	3.955E-01	2.991E-01	3.060E-02	6.663
U-234	1.589E+00	3.246E-01	2.814E-01	2.525E-02	5.646
NP-237	8.826E-01	5.032E-01	5.909E-01	1.310E-01	1.494
AM-241	8.899E+00	9.113E-01	2.473E-01	2.400E-02	35.982
AM-243	3.999E-01	7.759E-02	1.155E-01	9.798E-03	3.463
ANH-511	4.310E-02	1.673E-01	1.625E-01	1.098E-02	0.265

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.095E+00		1.472E+00	2.389E+00	1.761E-01	-0.458
NA-22	1.308E-02		5.871E-02	9.784E-02	5.545E-03	0.134
NA-24	4.251E-02		4.100E-02	Half-Life too short		
AL-26	1.595E-03		4.387E-02	7.304E-02	4.176E-03	0.022
TI-44	4.162E-01	+	6.067E-02	9.858E-02	8.236E-03	4.222
SC-46	1.729E-02		4.891E-02	8.405E-02	6.160E-03	0.206
V-48	6.582E-02		9.265E-02	1.623E-01	1.124E-02	0.406
CR-51	4.360E-01		1.116E+00	1.886E+00	1.438E-01	0.231
MN-52	-3.070E-02		2.326E-01	3.688E-01	2.131E-02	-0.083
MN-54	1.296E-02		5.457E-02	9.275E-02	6.959E-03	0.140
CO-56	2.176E-02		5.138E-02	8.875E-02	6.631E-03	0.245
CO-57	6.475E-02		5.776E-02	9.616E-02	1.067E-02	0.673
CO-58	-2.680E-02		5.521E-02	8.903E-02	6.747E-03	-0.301
FE-59	-9.336E-02		1.285E-01	1.977E-01	1.404E-02	-0.472
CO-60	4.083E-02		5.810E-02	1.013E-01	5.785E-03	0.403
ZN-65	9.126E-02		1.453E-01	2.234E-01	1.350E-02	0.408
GE-68	2.627E-01		1.627E+00	2.722E+00	1.722E-01	0.097
AS-73	-4.795E-01		7.224E-01	9.830E-01	7.976E-02	-0.488
AS-74	1.753E-02		2.188E-01	3.574E-01	2.595E-02	0.049
SE-75	-8.491E-02		1.326E-01	2.089E-01	1.576E-02	-0.406
BR-77	1.336E+01		1.938E+01	3.232E+01	2.205E+00	0.413
SR-82	-1.965E-01		4.364E-01	7.043E-01	5.354E-02	-0.279
RB-83	3.743E-03		2.405E-01	3.945E-01	2.692E-02	0.009
RB-84	-4.688E-02		8.212E-02	1.293E-01	9.514E-03	-0.363
KR-85	2.261E+01		2.695E+01	3.937E+01	2.669E+00	0.574
SR-85	1.133E-01		1.350E-01	1.973E-01	1.337E-02	0.574
RB-86	-1.472E-01		9.791E-01	1.590E+00	1.007E-01	-0.093
Y-88	-2.761E-02		5.210E-02	6.845E-02	3.908E-03	-0.403
ZR-88	-8.963E-02		1.169E-01	1.911E-01	1.106E-02	-0.469
Y-91	1.932E+01		2.656E+01	4.593E+01	2.557E+00	0.421
NB-94	-4.375E-03		4.557E-02	7.297E-02	5.544E-03	-0.060
NB-95	7.228E-03		5.990E-02	9.715E-02	7.394E-03	0.074
NB-95M	1.056E-02		3.791E-01	5.318E-01	4.755E-02	0.020

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	1.108E-01		9.113E-02	1.610E-01	1.384E-02	0.688
NB-97	1.139E+00		5.296E-02	Half-Life too short		
ZR-97	4.297E-02		3.921E-01	Half-Life too short		
MO-99	3.126E+00		9.325E+00	1.541E+01	2.255E+00	0.203
TC-99M	-1.511E+08		1.050E+08	Half-Life too short		
RH-101	-1.539E-02		9.304E-02	1.501E-01	1.120E-02	-0.103
RH-102	7.740E-02		1.421E-01	2.361E-01	1.533E-02	0.328
RU-103	1.194E-02		1.520E-01	2.503E-01	3.269E-02	0.048
RH-106	-1.580E-01		8.087E-01	1.303E+00	1.641E-01	-0.121
RU-106	-1.580E-01		8.085E-01	1.303E+00	9.616E-02	-0.121
AG-108M	-5.453E-02		1.485E-01	2.441E-01	1.618E-02	-0.223
AG-110M	2.415E+00		2.546E-01	3.397E-01	2.654E-02	7.108
IN-111	-3.758E+00		1.929E+00	2.944E+00	2.220E-01	-1.277
IN-113M	3.476E-03		1.693E-01	2.816E-01	1.737E-02	0.012
SN-113	3.476E-03		1.693E-01	2.816E-01	1.737E-02	0.012
IN-114M	5.155E-01		5.774E-01	8.330E-01	6.188E-02	0.619
CD-115	-6.717E+00		1.873E+01	3.039E+01	2.088E+00	-0.221
SN-117M	-2.162E-02		1.178E-01	1.915E-01	1.535E-02	-0.113
SB-122	8.890E-01		3.174E+00	5.233E+00	3.711E-01	0.170
I-123	-1.291E-03		4.284E-01	Half-Life too short		
TE-123M	-1.013E-04		6.725E-02	1.097E-01	8.808E-03	-0.001
I-124	-1.404E-01		1.313E+00	1.834E+00	1.338E-01	-0.077
SB-124	-3.761E-02		8.852E-02	1.348E-01	8.469E-03	-0.279
SB-125	-2.056E-01		4.041E-01	6.628E-01	4.202E-02	-0.310
TE-125M	-1.789E+00		1.855E+01	3.056E+01	3.474E+00	-0.059
I-126	1.384E-01		2.705E-01	3.972E-01	2.996E-02	0.348
SB-126	1.522E-02		1.997E-01	2.798E-01	2.130E-02	0.054
SB-127	2.999E-01		1.225E+00	2.019E+00	2.011E-01	0.149
XE-127	1.274E-02		1.280E-01	2.073E-01	1.550E-02	0.061
I-131	-1.786E-01		3.476E-01	5.739E-01	4.004E-02	-0.311
TE-132	-2.454E-01		1.246E+00	1.997E+00	2.947E-01	-0.123
BA-133	-2.272E-02		1.727E-01	2.498E-01	2.984E-02	-0.091
I-133	-1.015E-03		1.777E-03	Half-Life too short		
CS-134	1.128E-01		6.156E-02	1.157E-01	8.848E-03	0.975
CS-135	5.563E-01		4.711E-01	7.664E-01	6.898E-02	0.726
I-135	-1.537E+07		1.474E+07	Half-Life too short		
CS-136	2.445E-02		1.346E-01	2.256E-01	1.581E-02	0.108
CE-139	7.161E-03		7.265E-02	1.185E-01	8.667E-03	0.060
BA-140	-2.618E-01		7.666E-01	1.235E+00	4.044E-01	-0.212
LA-140	-1.089E-01		9.472E-02	1.178E-01	6.847E-03	-0.924
CE-141	-3.980E-02		1.417E-01	2.301E-01	2.151E-02	-0.173
CE-143	1.947E-04		7.665E-05	Half-Life too short		
CE-144	-3.680E-01		4.786E-01	7.678E-01	1.266E-01	-0.479
PM-144	2.320E-02		4.937E-02	8.242E-02	6.258E-03	0.281
PR-144	1.570E+00		3.342E+00	5.579E+00	4.235E-01	0.281
PM-146	1.285E-01		2.156E-01	3.590E-01	3.225E-02	0.358
ND-147	-5.381E-01		1.653E+00	2.682E+00	3.761E-01	-0.201
PM-149	-4.394E+01		1.389E+02	2.325E+02	3.462E+01	-0.189

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-3.327E-02		3.494E-01	5.508E-01	4.065E-02	-0.060
GD-153	-1.847E-01		1.485E-01	2.391E-01	2.105E-02	-0.772
EU-154	3.657E-02		1.642E-01	2.736E-01	2.531E-02	0.134
EU-155	-1.574E-01		2.172E-01	3.533E-01	3.386E-02	-0.446
TB-160	-5.707E-02		1.638E-01	2.638E-01	1.943E-02	-0.216
HO-166M	-1.007E-03		8.167E-02	1.315E-01	1.000E-02	-0.008
TM-171	4.263E+00		3.199E+01	4.723E+01	4.152E+00	0.090
LU-176	-7.069E-03		7.676E-02	1.287E-01	9.295E-03	-0.055
LU-177	1.043E+00		2.403E+00	3.907E+00	2.929E-01	0.267
LU-177M	3.115E-01		7.189E-01	1.201E+00	7.181E-02	0.259
HF-181	-2.001E-02		1.782E-01	2.928E-01	1.917E-02	-0.068
W-181	7.320E-01	+	4.526E-01	6.069E-01	5.375E-02	1.206
TA-182	3.004E-03		2.789E-01	4.562E-01	2.550E-02	0.007
RE-183	-1.215E-02		2.627E-01	4.277E-01	3.275E-02	-0.028
RE-184	-2.381E-01		7.022E-01	1.117E+00	8.408E-02	-0.213
OS-185	-7.296E-03		1.166E-01	1.886E-01	1.410E-02	-0.039
RE-188	1.499E-01		3.933E-01	6.461E-01	5.393E-02	0.232
W-188	1.358E+01		2.449E+01	3.642E+01	2.680E+00	0.373
IR-192	-1.045E-01		1.068E-01	1.754E-01	1.253E-02	-0.596
AU-195	-1.183E-01		4.261E-01	7.016E-01	6.264E-02	-0.169
TL-200	2.312E-05		2.066E-04	Half-Life too short		
TL-201	-1.094E+00		1.052E+01	1.709E+01	1.250E+00	-0.064
TL-202	-8.373E-02		2.862E-01	4.709E-01	2.922E-02	-0.178
HG-203	-1.570E-02		1.132E-01	1.904E-01	1.469E-02	-0.082
BI-207	1.031E-02		7.933E-02	1.322E-01	8.493E-03	0.078
TL-207	6.468E-01		2.098E+00	3.532E+00	6.000E-01	0.183
PO-209	-3.628E+00		1.010E+01	1.630E+01	1.190E+00	-0.223
PB-211	-1.227E+00		3.811E+00	6.161E+00	3.841E+00	-0.199
BI-212	1.616E+00	+	7.273E-01	8.721E-01	7.986E-02	1.853
PO-215	6.468E-01		2.098E+00	3.532E+00	6.000E-01	0.183
RN-219	7.009E-01		1.653E+00	2.761E+00	3.764E-01	0.254
RN-220	1.546E+01		7.862E+01	1.294E+02	9.068E+00	0.119
RA-223	6.468E-01		2.098E+00	3.532E+00	6.000E-01	0.183
RA-224	1.606E+01		2.602E+00	3.732E+00	2.815E-01	4.303
AC-227	4.778E-01		1.168E+00	1.882E+00	2.778E-01	0.254
TH-227	4.778E-01		1.169E+00	1.882E+00	3.306E-01	0.254
TH-229	-5.486E-01		1.473E+00	2.369E+00	1.764E-01	-0.232
PA-231	7.391E-01		4.553E+00	7.695E+00	1.118E+00	0.096
TH-231	6.468E-01		2.098E+00	3.532E+00	6.000E-01	0.183
U-231	-4.528E+00		1.477E+00	2.232E+00	1.937E-01	-2.029
PA-233	1.309E-01		2.017E-01	3.424E-01	2.554E-02	0.382
PA-234	1.003E-01		4.073E-01	6.900E-01	1.250E-01	0.145
PA-234M	-1.083E+00		8.561E+00	1.400E+01	1.381E+00	-0.077
TH-234	2.468E+00	+	1.575E+00	2.060E+00	3.737E-01	1.198
U-235	7.247E-02		4.921E-01	8.052E-01	1.439E-01	0.090
NP-236	1.690E-02		1.927E-01	3.147E-01	2.471E-02	0.054
U-238	2.468E+00	+	1.575E+00	2.060E+00	3.737E-01	1.198
NP-239	-2.557E-01		4.148E-01	6.740E-01	7.132E-02	-0.379

Sample ID : G232511001 Acquisition date : 7-JUL-2009 10:10:39

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	2.061E-01		1.931E-01	3.237E-01	3.027E-02	0.637
CM-247	-1.913E-02		1.479E-01	2.450E-01	1.440E-02	-0.078
CF-249	9.651E-02		1.536E-01	2.583E-01	1.515E-02	0.374
CF-251	-1.643E-01		3.206E-01	5.155E-01	3.796E-02	-0.319

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232511001           *
* Acquisition date  :  7-JUL-2009 10:10:39 Detector SN#     :               *
* Detector ID       : GAM17                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:15.65      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232511001           Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.4492E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.224E+01	2.771E+00	2.894E-01	1.414E+00
CD-109	3.048E+00	1.587E+00	1.122E+00	8.099E-01
SN-126	3.005E-01	1.565E-01	1.134E-01	7.987E-02
BA-137M	6.933E+01	5.165E+00	6.604E-02	2.635E+00
CS-137	7.329E+01	5.473E+00	6.981E-02	2.792E+00
TL-208	6.695E-01	1.506E-01	7.553E-02	7.682E-02
BI-210	1.094E-01	1.053E+00	9.803E-01	5.373E-01
PB-210	1.094E-01	1.053E+00	9.803E-01	5.373E-01
PO-210	1.094E-01	1.053E+00	9.803E-01	5.373E-01
BI-211	4.459E+00	1.015E+00	5.868E-01	5.176E-01
PB-212	1.895E+00	2.521E-01	1.431E-01	1.286E-01
PO-212	1.895E+00	2.521E-01	1.431E-01	1.286E-01
BI-214	1.589E+00	3.181E-01	1.444E-01	1.623E-01
PB-214	1.551E+00	3.617E-01	2.058E-01	1.845E-01
PO-214	1.551E+00	3.617E-01	2.058E-01	1.845E-01
PO-216	1.895E+00	2.521E-01	1.431E-01	1.286E-01
PO-218	1.551E+00	3.617E-01	2.058E-01	1.845E-01
RA-226	1.589E+00	3.181E-01	1.444E-01	1.623E-01
AC-228	1.993E+00	3.876E-01	1.521E-01	1.977E-01
RA-228	1.993E+00	3.876E-01	1.521E-01	1.977E-01
TH-228	1.895E+00	2.521E-01	1.430E-01	1.286E-01
TH-230	1.589E+00	3.181E-01	1.444E-01	1.623E-01
TH-232	1.993E+00	3.876E-01	1.521E-01	1.977E-01
U-234	1.589E+00	3.181E-01	1.444E-01	1.623E-01
NP-237	8.826E-01	4.931E-01	3.163E-01	2.516E-01
AM-241	8.899E+00	8.931E-01	1.334E-01	4.557E-01
AM-243	3.999E-01	7.604E-02	6.202E-02	3.880E-02
ANH-511	4.310E-02	1.640E-01	8.374E-02	8.365E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-1.095E+00	1.443E+00	1.233E+00	7.361E-01	NOT IDENT.
NA-22	1.308E-02	5.753E-02	4.937E-02	2.935E-02	NOT IDENT.
NA-24	4.251E+04	8.036E+04	0.000E+00	4.100E+04	SHORT HLIF
AL-26	1.595E-03	4.299E-02	3.655E-02	2.193E-02	NOT IDENT.
TI-44	4.162E-01	5.946E-02	5.289E-02	3.033E-02	FAIL ABUN
SC-46	1.729E-02	4.793E-02	4.276E-02	2.445E-02	FAIL ABUN
V-48	6.582E-02	9.080E-02	8.238E-02	4.633E-02	NOT IDENT.
CR-51	4.360E-01	1.094E+00	9.816E-01	5.582E-01	NOT IDENT.
MN-52	-3.070E-02	2.279E-01	1.855E-01	1.163E-01	NOT IDENT.
MN-54	1.296E-02	5.348E-02	4.726E-02	2.728E-02	NOT IDENT.
CO-56	2.176E-02	5.035E-02	4.521E-02	2.569E-02	NOT IDENT.
CO-57	6.475E-02	5.661E-02	5.111E-02	2.888E-02	NOT IDENT.
CO-58	-2.680E-02	5.411E-02	4.540E-02	2.761E-02	NOT IDENT.
FE-59	-9.336E-02	1.260E-01	1.001E-01	6.427E-02	NOT IDENT.
CO-60	4.083E-02	5.694E-02	5.106E-02	2.905E-02	NOT IDENT.
ZN-65	9.126E-02	1.424E-01	1.131E-01	7.265E-02	NOT IDENT.
GE-68	2.627E-01	1.595E+00	1.379E+00	8.136E-01	NOT IDENT.
AS-73	-4.795E-01	7.080E-01	5.315E-01	3.612E-01	NOT IDENT.
AS-74	1.753E-02	2.145E-01	1.835E-01	1.094E-01	NOT IDENT.
SE-75	-8.491E-02	1.299E-01	1.092E-01	6.630E-02	NOT IDENT.
BR-77	1.336E+01	1.900E+01	1.664E+01	9.692E+00	FAIL ABUN
SR-82	-1.965E-01	4.276E-01	3.595E-01	2.182E-01	NOT IDENT.
RB-83	3.743E-03	2.357E-01	2.032E-01	1.202E-01	NOT IDENT.
RB-84	-4.688E-02	8.048E-02	6.580E-02	4.106E-02	NOT IDENT.
KR-85	2.261E+01	2.641E+01	2.028E+01	1.348E+01	NOT IDENT.
SR-85	1.133E-01	1.323E-01	1.016E-01	6.752E-02	NOT IDENT.
RB-86	-1.472E-01	9.595E-01	8.056E-01	4.896E-01	NOT IDENT.
Y-88	-2.761E-02	5.106E-02	3.424E-02	2.605E-02	NOT IDENT.
ZR-88	-8.963E-02	1.145E-01	9.905E-02	5.844E-02	NOT IDENT.
Y-91	1.932E+01	2.602E+01	2.321E+01	1.328E+01	NOT IDENT.
NB-94	-4.375E-03	4.466E-02	3.732E-02	2.279E-02	NOT IDENT.
NB-95	7.228E-03	5.870E-02	4.960E-02	2.995E-02	NOT IDENT.
NB-95M	1.056E-02	3.716E-01	2.787E-01	1.896E-01	NOT IDENT.
ZR-95	1.108E-01	8.931E-02	8.224E-02	4.557E-02	NOT IDENT.
NB-97	1.139E+06	1.038E+05	0.000E+00	5.296E+04	SHORT HLIF
ZR-97	4.297E+04	7.686E+05	0.000E+00	3.921E+05	SHORT HLIF
MO-99	3.126E+00	9.138E+00	7.871E+00	4.662E+00	NOT IDENT.
TC-99M	-1.511E+14	2.058E+14	0.000E+00	1.050E+14	SHORT HLIF
RH-101	-1.539E-02	9.118E-02	7.895E-02	4.652E-02	NOT IDENT.
RH-102	7.740E-02	1.392E-01	1.219E-01	7.104E-02	NOT IDENT.
RU-103	1.194E-02	1.489E-01	1.290E-01	7.599E-02	FAIL ABUN
RH-106	-1.580E-01	7.925E-01	6.683E-01	4.043E-01	FAIL ABUN
RU-106	-1.580E-01	7.924E-01	6.683E-01	4.043E-01	FAIL ABUN
AG-108M	-5.453E-02	1.455E-01	1.262E-01	7.426E-02	NOT IDENT.
AG-110M	2.415E+00	2.495E-01	1.741E-01	1.273E-01	NOT IDENT.
IN-111	-3.758E+00	1.890E+00	1.541E+00	9.643E-01	NOT IDENT.
IN-113M	3.476E-03	1.659E-01	1.460E-01	8.467E-02	NOT IDENT.
SN-113	3.476E-03	1.659E-01	1.460E-01	8.467E-02	NOT IDENT.
IN-114M	5.155E-01	5.659E-01	4.386E-01	2.887E-01	NOT IDENT.
CD-115	-6.717E+00	1.836E+01	1.565E+01	9.367E+00	NOT IDENT.
SN-117M	-2.162E-02	1.155E-01	1.012E-01	5.891E-02	NOT IDENT.
SB-122	8.890E-01	3.110E+00	2.690E+00	1.587E+00	NOT IDENT.
I-123	-1.291E+03	8.397E+05	0.000E+00	4.284E+05	SHORT HLIF
TE-123M	-1.013E-04	6.590E-02	5.796E-02	3.362E-02	NOT IDENT.
I-124	-1.404E-01	1.287E+00	9.417E-01	6.564E-01	NOT IDENT.
SB-124	-3.761E-02	8.675E-02	6.754E-02	4.426E-02	FAIL ABUN
SB-125	-2.056E-01	3.960E-01	3.429E-01	2.021E-01	NOT IDENT.
TE-125M	-1.789E+00	1.818E+01	1.628E+01	9.276E+00	NOT IDENT.
I-126	1.384E-01	2.651E-01	2.035E-01	1.353E-01	NOT IDENT.
SB-126	1.522E-02	1.957E-01	1.431E-01	9.986E-02	FAIL ABUN
SB-127	2.999E-01	1.201E+00	1.033E+00	6.125E-01	FAIL ABUN
XE-127	1.274E-02	1.255E-01	1.090E-01	6.402E-02	NOT IDENT.
I-131	-1.786E-01	3.406E-01	2.979E-01	1.738E-01	NOT IDENT.
TE-132	-2.454E-01	1.222E+00	1.047E+00	6.232E-01	FAIL ABUN
BA-133	-2.272E-02	1.692E-01	1.297E-01	8.634E-02	NOT IDENT.
I-133	-1.015E+03	3.483E+03	0.000E+00	1.777E+03	SHORT HLIF
CS-134	1.128E-01	6.033E-02	5.900E-02	3.078E-02	NOT IDENT.
CS-135	5.563E-01	4.616E-01	4.005E-01	2.355E-01	NOT IDENT.
I-135	-1.537E+13	2.889E+13	0.000E+00	1.474E+13	SHORT HLIF
CS-136	2.445E-02	1.319E-01	1.144E-01	6.729E-02	FAIL ABUN
CE-139	7.161E-03	7.120E-02	6.259E-02	3.633E-02	NOT IDENT.
BA-140	-2.618E-01	7.512E-01	6.356E-01	3.833E-01	NOT IDENT.
LA-140	-1.089E-01	9.282E-02	5.912E-02	4.736E-02	NOT IDENT.
CE-141	-3.980E-02	1.389E-01	1.218E-01	7.087E-02	NOT IDENT.
CE-143	1.947E+02	1.502E+02	0.000E+00	7.665E+01	SHORT HLIF
CE-144	-3.680E-01	4.690E-01	4.073E-01	2.393E-01	NOT IDENT.
PM-144	2.320E-02	4.838E-02	4.217E-02	2.468E-02	NOT IDENT.

PR-144	1.570E+00	3.275E+00	2.854E+00	1.671E+00	NOT IDENT.
PM-146	1.285E-01	2.113E-01	1.855E-01	1.078E-01	NOT IDENT.
ND-147	-5.381E-01	1.620E+00	1.380E+00	8.267E-01	NOT IDENT.
PM-149	-4.394E+01	1.361E+02	1.213E+02	6.945E+01	NOT IDENT.
EU-152	-3.327E-02	3.424E-01	2.863E-01	1.747E-01	FAIL ABUN
GD-153	-1.847E-01	1.456E-01	1.277E-01	7.427E-02	NOT IDENT.
EU-154	3.657E-02	1.609E-01	1.380E-01	8.209E-02	NOT IDENT.
EU-155	-1.574E-01	2.129E-01	1.884E-01	1.086E-01	FAIL ABUN
TB-160	-5.707E-02	1.605E-01	1.343E-01	8.191E-02	FAIL ABUN
HO-166M	-1.007E-03	8.003E-02	6.727E-02	4.083E-02	FAIL ABUN
TM-171	4.263E+00	3.135E+01	2.542E+01	1.600E+01	FAIL ABUN
LU-176	-7.069E-03	7.522E-02	6.709E-02	3.838E-02	FAIL ABUN
LU-177	1.043E+00	2.355E+00	2.053E+00	1.202E+00	NOT IDENT.
LU-177M	3.115E-01	7.046E-01	6.217E-01	3.595E-01	FAIL ABUN
HF-181	-2.001E-02	1.747E-01	1.510E-01	8.912E-02	FAIL ABUN
W-181	7.320E-01	4.436E-01	3.268E-01	2.263E-01	FAIL ABUN
TA-182	3.004E-03	2.733E-01	2.304E-01	1.394E-01	FAIL ABUN
RE-183	-1.215E-02	2.575E-01	2.260E-01	1.314E-01	FAIL ABUN
RE-184	-2.381E-01	6.881E-01	5.844E-01	3.511E-01	FAIL ABUN
OS-185	-7.296E-03	1.143E-01	9.665E-02	5.830E-02	FAIL ABUN
RE-188	1.499E-01	3.854E-01	3.417E-01	1.966E-01	NOT IDENT.
W-188	1.358E+01	2.400E+01	1.900E+01	1.224E+01	FAIL ABUN
IR-192	-1.045E-01	1.046E-01	9.136E-02	5.339E-02	FAIL ABUN
AU-195	-1.183E-01	4.176E-01	3.746E-01	2.130E-01	FAIL ABUN
TL-200	2.312E+01	4.049E+02	0.000E+00	2.066E+02	SHORT HLIF
TL-201	-1.094E+00	1.031E+01	9.022E+00	5.260E+00	NOT IDENT.
TL-202	-8.373E-02	2.805E-01	2.434E-01	1.431E-01	NOT IDENT.
HG-203	-1.570E-02	1.109E-01	9.944E-02	5.659E-02	NOT IDENT.
BI-207	1.031E-02	7.774E-02	6.697E-02	3.966E-02	FAIL ABUN
TL-207	6.468E-01	2.056E+00	1.838E+00	1.049E+00	FAIL ABUN
PO-209	-3.628E+00	9.898E+00	8.290E+00	5.050E+00	NOT IDENT.
PB-211	-1.227E+00	3.734E+00	3.191E+00	1.905E+00	NOT IDENT.
BI-212	1.616E+00	7.128E-01	4.458E-01	3.637E-01	FAIL ABUN
PO-215	6.468E-01	2.056E+00	1.838E+00	1.049E+00	FAIL ABUN
RN-219	7.009E-01	1.620E+00	1.430E+00	8.263E-01	NOT IDENT.
RN-220	1.546E+01	7.705E+01	6.654E+01	3.931E+01	NOT IDENT.
RA-223	6.468E-01	2.056E+00	1.838E+00	1.049E+00	FAIL ABUN
RA-224	1.606E+01	2.550E+00	1.955E+00	1.301E+00	NOT IDENT.
AC-227	4.778E-01	1.145E+00	9.846E-01	5.841E-01	NOT IDENT.
TH-227	4.778E-01	1.146E+00	9.846E-01	5.845E-01	NOT IDENT.
TH-229	-5.486E-01	1.444E+00	1.247E+00	7.367E-01	FAIL ABUN
PA-231	7.391E-01	4.462E+00	4.017E+00	2.276E+00	NOT IDENT.
TH-231	6.468E-01	2.056E+00	1.838E+00	1.049E+00	FAIL ABUN
U-231	-4.528E+00	1.448E+00	1.192E+00	7.387E-01	NOT IDENT.
PA-233	1.309E-01	1.977E-01	1.784E-01	1.009E-01	FAIL ABUN
PA-234	1.003E-01	3.991E-01	3.506E-01	2.036E-01	FAIL ABUN
PA-234M	-1.083E+00	8.390E+00	7.106E+00	4.281E+00	NOT IDENT.
TH-234	2.468E+00	1.543E+00	1.110E+00	7.875E-01	FAIL ABUN
U-235	7.247E-02	4.822E-01	4.265E-01	2.460E-01	FAIL ABUN
NP-236	1.690E-02	1.889E-01	1.663E-01	9.637E-02	NOT IDENT.
U-238	2.468E+00	1.543E+00	1.110E+00	7.875E-01	FAIL ABUN
NP-239	-2.557E-01	4.065E-01	3.586E-01	2.074E-01	NOT IDENT.
CM-243	2.061E-01	1.893E-01	1.727E-01	9.657E-02	NOT IDENT.
CM-247	-1.913E-02	1.449E-01	1.269E-01	7.395E-02	NOT IDENT.
CF-249	9.651E-02	1.506E-01	1.339E-01	7.682E-02	NOT IDENT.
CF-251	-1.643E-01	3.142E-01	2.719E-01	1.603E-01	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	1585.8960
46.50	1585.8960
46.50	1585.8960
48.70	1997.4927
49.72	2001.0953
51.35	2473.6868
52.39	2451.8269
52.97	2569.6494
53.15	2570.4331
53.44	2573.1514
54.07	2583.1924
56.28	2688.1030
56.28	2688.1140
57.37	0.0000
57.53	2553.7402
57.53	2553.7456
57.60	2554.0261
57.98	2555.5881
57.98	2555.5881
59.32	2391.2947
59.32	2391.2947
59.40	2391.5962
59.54	2392.1252
59.72	2392.8074
60.01	2393.8950
61.10	1557.9460
61.14	1558.0424
61.30	1558.4310
63.00	1562.5103
63.29	1563.2024
63.29	1563.2024
63.58	1563.8914
64.28	1604.9664
65.12	1633.8029
65.20	1633.9969
65.20	1633.9969
66.05	1712.1274
66.72	1630.2218
66.83	1652.8853
66.91	1653.0812
67.20	1653.7839
67.20	1653.7839
67.75	1625.2123
67.85	1659.8477
68.90	1778.4523
68.90	1778.4523
69.30	1809.4443
69.67	1769.1862
70.82	1760.0815
70.82	1760.0815
70.83	1760.1030
72.80	1730.3657
72.87	1730.5341
72.87	1730.5341
74.67	1771.2942
74.81	1771.6378
74.81	1771.6378
74.81	1771.6378
74.81	1771.6378
74.81	1771.6378
74.81	1771.6378
74.97	1772.0245
75.28	1772.7834
75.70	1773.8002
77.11	1777.2013
77.11	1777.2013
77.11	1777.2013

77.11	1777.2013
77.11	1777.2013
77.11	1777.2013
78.38	1667.7581
79.62	1591.4731
79.80	1646.5845
79.80	1646.5845
80.11	1647.2587
80.18	1647.4139
80.30	1732.8734
80.30	1732.8734
80.57	1733.4921
81.00	1752.7460
81.07	1752.9075
81.07	1752.9075
81.07	1752.9075
81.07	1752.9075
82.60	1650.6045
83.37	1684.0647
83.78	1714.7616
83.78	1714.7616
83.78	1714.7616
83.78	1714.7616
84.21	1688.1820
84.40	1688.5931
84.90	1675.9034
85.43	1643.3391
86.29	1654.3262
86.50	1654.7675
86.54	1654.8530
86.59	1654.9518
86.72	1741.1346
86.79	1846.7542
86.94	1847.1068
87.30	1829.7144
87.30	1829.7144
87.30	1829.7144
87.30	1829.7144
87.30	1829.7144
87.30	1829.7144
87.57	1830.3326
87.88	1740.5907
88.03	1740.9226
88.36	1715.5026
88.47	1715.7410
89.95	2171.7046
91.11	1799.9963
92.29	1672.0608
92.38	1672.2391
92.38	1672.2391
93.35	1708.0334
94.00	1660.0315
94.67	1599.3920
94.67	1599.3982
94.90	1599.8394
94.90	1599.8394
94.90	1599.8394
94.90	1599.8394
95.87	1941.0183
95.87	1941.0183
96.73	1883.8015
97.43	1636.6825
98.44	1560.8132
98.44	1560.8195
98.88	1548.9668
99.55	1589.1213
99.55	1589.1213
99.86	1543.9094
100.00	1544.1572
100.10	1544.3447
103.18	1510.6692
103.76	1436.3209
105.00	1519.6479
105.31	1555.4591
108.00	1498.1702
109.28	1511.1035
111.00	1516.8905
111.00	1516.8905

111.76	1540.8373
112.95	1486.4725
115.19	1482.0925
116.30	1497.7135
117.00	1538.5173
117.00	1538.5173
117.66	1566.4001
121.11	1534.1155
121.62	1514.9728
121.78	1490.2784
122.06	1490.7059
122.32	1547.9884
122.32	1547.9884
122.32	1547.9884
122.32	1547.9884
123.07	1554.1659
127.23	1599.7854
129.76	1578.6482
131.20	1517.4397
133.02	1652.2590
133.54	1627.8660
135.34	1558.8939
136.00	1552.8009
136.25	1569.3593
136.48	1569.7083
140.51	1594.9745
140.51	0.0000
142.18	1508.9326
142.65	1552.3418
143.76	1563.1066
144.24	1547.4863
144.24	1547.4863
144.24	1547.4863
144.24	1547.4863
145.22	1569.2828
145.44	1591.0311
147.16	1533.2108
152.43	1485.0205
152.70	1494.6187
153.22	1460.3650
154.21	1416.3752
154.21	1416.3752
154.21	1416.3752
154.21	1416.3752
155.03	1463.7252
156.02	1529.8938
158.56	1500.2354
159.00	0.0000
159.00	1480.1428
160.31	1502.4968
161.27	1516.1575
162.32	1537.1909
162.64	1537.6097
163.35	1502.2520
163.89	1528.8679
165.85	1525.1646
167.43	1532.3933
171.28	1519.5511
171.86	1526.5381
172.10	1526.8392
176.55	1550.1899
176.60	1550.2577
181.06	1476.0620
184.41	1793.0077
185.71	1794.8364
186.00	1795.2515
190.27	1863.0680
192.34	1907.3492
193.63	1933.3057
197.04	1834.9861
198.01	1850.1820
198.60	1845.6587
200.40	1856.6829
201.83	1837.2836
202.84	1808.7115
205.31	1822.7040
208.36	1775.2169
208.81	1755.3856

209.75	1704.9694
209.75	1704.9694
210.97	1665.5834
215.65	1602.0660
216.55	1593.3740
218.09	1676.2142
222.10	1587.6569
223.80	1583.0188
226.40	1588.0308
227.00	1610.4508
227.08	1610.5411
227.20	1587.8113
228.16	1588.8575
228.18	1588.8799
228.18	1588.8799
231.56	0.0000
235.69	1598.9314
236.00	1579.9974
236.00	1579.9974
238.60	1745.9263
238.63	1745.9626
238.63	1745.9626
238.63	1745.9626
239.00	1747.4847
240.98	1507.8994
241.98	1468.4462
241.98	1468.4462
241.98	1468.4462
244.69	1687.9702
245.39	1735.0090
247.94	1447.6824
248.90	1439.7505
249.79	1505.7556
252.40	1464.0189
252.85	1467.7535
252.85	1467.7535
254.15	0.0000
256.20	1432.0652
256.20	1432.0652
260.50	1432.6091
260.90	1451.8762
262.80	1380.0928
264.65	1407.3295
268.24	1335.5679
268.79	1321.4716
269.46	1367.8879
269.46	1367.8879
269.46	1367.8879
269.46	1367.8879
271.23	1447.7394
273.65	1494.7230
276.40	1389.3789
277.35	1376.6857
277.60	1382.5114
277.60	1382.5114
278.00	1382.8491
278.60	1352.9712
279.20	1355.4919
279.53	1355.7494
280.46	1360.1060
281.68	1361.1013
283.67	1326.6068
284.30	1355.0959
285.00	1387.2563
285.90	1373.5293
286.10	1389.9637
286.10	1389.9637
287.40	1355.7605
288.45	0.0000
290.67	1319.9797
290.80	1320.0864
291.72	1358.5779
293.26	0.0000
293.70	1388.8784
295.21	1425.5261
295.21	1425.5261
295.21	1425.5261
295.96	1492.1893

296.50	1501.7424
297.23	1456.8872
298.57	1244.0972
299.80	1255.5923
299.80	1255.5923
300.09	1267.9423
300.09	1267.9423
300.09	1267.9423
300.10	1267.9592
300.12	1292.2554
301.29	1332.2490
302.84	1374.2618
303.76	1404.1948
303.91	1404.3074
304.40	1389.1750
304.40	1389.1750
304.84	1391.3364
306.84	1289.5682
308.46	1319.1167
311.98	1245.5739
316.51	1307.5387
318.01	1272.7247
319.02	1290.9285
319.41	1274.6248
320.08	1247.4419
323.87	1286.0254
323.87	1286.0254
323.87	1286.0254
323.87	1286.0254
325.23	1343.3348
328.77	1277.3928
333.44	1351.7198
334.20	1313.5906
334.20	1313.5906
334.30	1313.6597
338.28	1398.6028
338.28	1398.6028
338.28	1398.6028
338.28	1398.6028
338.32	1398.6211
338.32	1398.6211
338.32	1398.6211
340.50	1322.6003
340.57	1321.0999
344.27	1341.5497
345.85	1371.6587
350.59	0.0000
351.07	1292.4023
351.92	1307.9662
351.92	1307.9662
351.92	1307.9662
355.39	0.0000
356.01	1333.2261
364.48	1362.5017
366.43	1313.8019
367.43	1336.1663
367.94	0.0000
369.80	1362.3185
374.96	1336.4019
383.85	1367.8865
387.95	1391.5710
388.63	1369.1357
391.69	1406.4860
391.69	1406.4860
392.90	1442.6681
398.62	1413.9618
400.65	1454.6531
401.10	1473.2028
401.81	1466.0094
402.60	1494.4021
404.84	1513.2649
410.95	1527.1909
411.60	1554.6591
413.65	1493.3687
414.70	1442.8990
415.30	1471.3162
415.76	1475.4786
417.63	0.0000

418.52	1562.4810
423.70	1510.8721
427.08	1591.8226
427.89	1603.0902
432.53	1593.7570
433.93	1647.3627
439.47	1698.2633
439.56	1722.7423
439.89	1706.3959
443.98	1749.5641
444.90	1740.4736
445.03	1754.2875
445.03	1754.2875
445.03	1754.2875
445.03	1754.2875
453.90	1795.4200
463.38	1844.1317
468.07	1937.7490
473.00	1756.5081
475.06	1622.1604
475.35	1622.3601
476.78	1650.1094
477.59	1574.2483
477.96	1497.0471
482.03	1284.7766
484.57	1255.2584
487.03	1096.0925
490.36	0.0000
492.35	1042.5599
497.08	973.5107
507.63	0.0000
510.53	0.0000
510.84	826.6265
511.00	781.4070
511.85	773.2855
511.85	773.2855
513.99	772.2585
513.99	772.2585
520.41	762.4283
520.65	723.0970
527.90	706.9125
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529.64	695.2281
529.87	0.0000
531.02	683.4288
537.32	652.5485
543.00	592.8557
546.56	0.0000
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552.65	461.0748
555.20	484.0282
563.23	423.8896
563.90	412.7076
568.70	417.5476
569.32	418.6754
569.50	431.0401
569.67	422.8403
573.80	401.8447
574.00	414.2386
574.64	418.4595
578.91	412.9102
579.30	0.0000
583.14	351.5132
585.48	336.2830
591.81	351.5635
592.07	339.1507
593.00	351.7125
595.88	362.4624
600.56	350.5754
602.52	0.0000
602.71	348.7648
602.71	348.7648
603.60	347.1354
604.41	333.3438
604.70	324.7010
609.31	357.9225
609.31	357.9225
609.31	357.9225

609.31	357.9225
610.33	356.6563
612.46	320.3528
614.37	331.0233
618.01	348.5362
621.84	324.8945
621.84	324.8945
631.29	389.0330
633.02	344.0206
633.10	344.0286
634.78	341.0701
635.90	327.5067
636.97	312.8796
645.85	352.9098
646.12	359.2827
656.30	390.5448
657.75	364.2133
657.90	0.0000
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661.65	242.1721
664.57	0.0000
666.33	95.7415
666.33	95.7415
675.00	87.4793
677.61	65.1312
685.20	75.9939
692.80	104.0737
695.00	98.7787
696.49	91.3065
696.49	91.3065
697.00	91.3210
697.49	91.3356
698.33	92.4353
698.50	89.2149
699.00	87.0790
702.63	88.2541
706.10	87.2747
706.58	0.0000
706.67	92.6789
709.31	67.9480
711.68	79.8716
713.82	75.6038
717.42	80.0143
720.50	79.3687
721.93	0.0000
722.20	79.4116
722.78	74.0105
722.78	74.0105
722.89	74.0122
722.95	74.0139
723.30	77.6331
724.18	74.0422
727.18	67.2418
733.00	76.0532
735.90	73.0129
739.58	74.0280
742.81	76.2805
744.21	75.2228
747.13	56.7392
751.79	83.0434
752.31	77.5921
753.82	65.6001
755.35	54.6924
756.15	54.7058
756.87	72.2262
763.93	107.4722
765.79	89.9738
766.41	91.0893
766.84	93.2946
768.36	82.3553
768.36	82.3553
768.36	82.3553
768.36	82.3553
776.49	68.7943
778.00	60.5658
778.57	55.0696
778.89	62.4177
783.80	67.1038

785.46	59.7777
792.07	73.7142
795.84	53.5006
796.30	57.1979
801.93	78.5444
805.60	71.2256
810.29	83.3624
810.76	87.0789
815.85	60.3014
817.79	62.1909
818.51	52.9191
819.60	60.3649
826.30	70.7135
828.27	0.0000
831.60	94.1142
831.96	82.9414
834.83	88.6025
836.80	0.0000
846.75	61.7595
848.13	64.5906
856.28	0.0000
856.80	61.1258
860.37	62.7956
867.32	60.6958
867.82	58.9782
871.10	72.5321
873.19	56.5503
874.81	40.5452
875.33	0.0000
876.40	53.7692
879.36	53.8121
880.27	61.3792
880.51	61.3832
881.50	58.5652
883.24	50.0875
884.67	53.8886
889.25	52.0604
896.60	68.2852
898.02	65.4638
899.00	69.2766
903.28	73.4723
911.07	68.5444
911.07	68.5444
911.07	68.5444
919.63	65.8344
920.93	57.2668
925.00	62.1052
925.24	54.4638
926.50	56.3940
934.06	61.2917
934.06	61.2917
934.06	61.2917
934.06	61.2917
935.52	56.5249
937.48	70.9302
944.10	60.4891
946.00	58.5961
949.00	57.6794
962.29	72.7553
964.01	68.5126
966.15	68.5487
968.20	68.5848
969.11	68.6007
969.11	68.6007
969.11	68.6007
977.42	74.0674
980.50	62.9807
983.50	58.1787
989.30	69.9141
996.32	58.3618
1001.03	60.3766
1001.68	53.5688
1004.76	75.0527
1021.30	0.0000
1024.50	0.0000
1034.80	61.8516
1037.82	59.9302
1038.57	67.8011

1038.76	0.0000
1045.16	54.1294
1046.59	61.0388
1048.07	60.0742
1050.47	66.0213
1050.47	66.0213
1063.62	71.1650
1076.63	58.4934
1077.35	52.5536
1085.78	56.6289
1099.22	76.7337
1112.02	58.4667
1112.84	56.5484
1115.52	60.0122
1120.29	80.6731
1120.29	80.6731
1120.29	80.6731
1120.29	80.6731
1120.51	80.6763
1121.28	73.8253
1124.00	0.0000
1129.67	75.2533
1131.51	0.0000
1147.95	0.0000
1167.94	79.9354
1173.22	60.7788
1175.09	64.8568
1177.93	80.1058
1189.05	76.2329
1204.90	67.3105
1205.75	0.0000
1213.00	78.6637
1221.42	77.7813
1230.97	73.8340
1235.34	72.8750
1236.41	0.0000
1238.11	65.7266
1238.11	65.7266
1238.11	65.7266
1238.11	65.7266
1238.25	68.8102
1246.25	50.4076
1260.41	0.0000
1271.85	49.6387
1274.45	47.5947
1274.54	47.5966
1291.56	40.4917
1298.22	0.0000
1312.09	40.6583
1325.50	43.9021
1325.50	43.9021
1332.49	38.7284
1333.61	30.3617
1360.21	35.7805
1362.66	0.0000
1365.15	26.3346
1368.21	22.1339
1368.53	0.0000
1376.25	30.6131
1377.67	33.7891
1377.67	33.7891
1377.67	33.7891
1377.67	33.7891
1384.27	30.6603
1394.10	14.8294
1395.20	24.3673
1407.95	25.4883
1434.06	26.6795
1436.60	18.1510
1457.56	0.0000
1460.81	16.5467
1489.15	15.0920
1509.49	14.0653
1596.49	26.3633
1620.62	11.3450
1678.03	0.0000
1691.02	15.3047
1691.02	15.3047

1706.46	0.0000
1750.46	0.0000
1764.49	10.1627
1764.49	10.1627
1764.49	10.1627
1764.49	10.1627
1770.23	10.1719
1771.40	5.0869
1791.20	0.0000
1808.65	15.5938
1836.01	17.8128

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232511001

Total Uranium Activity	7.3756E+00	ug/g
Total Uranium Counting Unc.	4.5973E+00	ug/g
Total Uranium Tpu	2.3456E-06	ug/g
Total Uranium Mda	3.3075E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G232511001      *
*   ANALYST       : MXR1                      DETECTOR    : GAM17           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 10:10:39.77    SAMPLE ALQT:  144.920 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.553E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 7.932E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 9.281E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 4.585E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:59:42.85

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871426.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:59:05.
Sample ID         : G1201871426          Sample quantity  : 1.66760E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.45  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	163.06	35	90	6.35	324.93	310	18	4.90E-03	65.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 12:59:45

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871426.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:59:05
Sample ID : G1201871426 Sample quantity : 166.76 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.45 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.607E-02	1.582E-01	2.526E-01	1.778E-02	0.143
NA-22		1274.54	*	-5.846E-03	2.266E-02	3.431E-02	2.029E-03	-0.170
NA-24		1368.53	*	-6.687E-05	2.266E-02	Half-Life too short		
AL-26		1129.67		5.837E-02	1.013E+00	1.675E+00	1.008E-01	0.035
		1808.65	*	1.319E-02	2.311E-02	4.466E-02	2.486E-03	0.295
K-40		1460.81	*	-3.939E-03	3.004E-01	4.827E-01	3.072E-02	-0.008
TI-44		67.85		1.344E-05	6.215E-03	1.012E-02	7.364E-04	0.001
		78.38	*	-2.838E-03	7.067E-03	1.056E-02	8.170E-04	-0.269
SC-46		889.25	*	-5.505E-03	2.075E-02	3.257E-02	2.338E-03	-0.169
		1120.51		1.135E-02	2.852E-02	4.992E-02	3.038E-03	0.227
V-48		944.10		-1.758E-01	3.718E-01	5.549E-01	3.900E-02	-0.317
		983.50	*	-1.429E-02	2.911E-02	4.297E-02	2.956E-03	-0.333
		1312.09		-2.955E-03	3.812E-02	6.075E-02	3.631E-03	-0.049
CR-51		320.08	*	-3.714E-02	1.410E-01	2.257E-01	1.468E-02	-0.165
MN-52		744.21		-5.530E-03	5.854E-02	9.638E-02	7.049E-03	-0.057
		848.13		-6.748E-01	1.597E+00	2.453E+00	1.785E-01	-0.275
		935.52		-2.272E-02	6.038E-02	9.028E-02	6.370E-03	-0.252
		1246.25		-7.167E-01	1.313E+00	1.814E+00	1.059E-01	-0.395
		1333.61		2.137E-01	1.234E+00	2.081E+00	1.252E-01	0.103
		1434.06	*	2.747E-02	7.133E-02	1.249E-01	7.529E-03	0.220
MN-54		834.83	*	1.938E-03	2.269E-02	3.816E-02	2.784E-03	0.051
CO-56		846.75	*	-1.369E-02	2.223E-02	3.280E-02	2.386E-03	-0.417
		977.42		2.994E-01	1.400E+00	2.413E+00	1.667E-01	0.124
		1037.82		-8.826E-02	1.887E-01	2.824E-01	2.035E-02	-0.313
		1175.09		5.902E-02	1.034E+00	1.710E+00	9.699E-02	0.035
		1238.25		1.549E-02	3.832E-02	6.785E-02	4.197E-03	0.228
		1360.21		3.230E-01	7.088E-01	1.254E+00	7.557E-02	0.258
		1771.40		6.315E-02	1.774E-01	3.217E-01	1.817E-02	0.196
CO-57		122.06	*	-8.053E-03	8.442E-03	1.220E-02	1.404E-03	-0.660
		136.48		4.857E-02	7.422E-02	1.257E-01	1.322E-02	0.387
CO-58		810.76	*	-5.482E-03	1.816E-02	2.833E-02	2.081E-03	-0.194
FE-59		142.65		1.283E-01	8.475E-01	1.308E+00	1.207E-01	0.098
		192.34		-4.089E-02	2.898E-01	4.798E-01	5.757E-02	-0.085
		1099.22	*	-3.620E-02	4.690E-02	6.351E-02	4.555E-03	-0.570

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1291.56		-8.612E-03	5.732E-02	8.927E-02	6.720E-03	-0.096
CO-60		1173.22		-3.581E-03	2.653E-02	4.213E-02	2.388E-03	-0.085
		1332.49	*	1.017E-02	2.467E-02	4.379E-02	2.634E-03	0.232
ZN-65		1115.52	*	-6.141E-02	5.987E-02	7.961E-02	4.884E-03	-0.771
GE-68		1077.35	*	-8.675E-01	6.478E-01	6.675E-01	4.260E-02	-1.300
AS-73		53.44	*	1.087E-02	6.193E-02	1.030E-01	6.920E-03	0.106
AS-74		595.88	*	-9.241E-03	4.130E-02	6.428E-02	4.423E-03	-0.144
		634.78		2.206E-02	1.505E-01	2.478E-01	1.747E-02	0.089
SE-75		66.05		-5.764E-01	6.854E-01	9.407E-01	8.756E-02	-0.613
		96.73		-1.988E-01	1.887E-01	2.686E-01	3.725E-02	-0.740
		121.11		-4.830E-02	4.338E-02	6.097E-02	8.214E-03	-0.792
		136.00		8.062E-03	1.339E-02	2.261E-02	2.275E-03	0.357
		198.60		5.472E-01	6.107E-01	1.104E+00	8.216E-02	0.496
		264.65	*	-5.787E-03	1.716E-02	2.747E-02	1.662E-03	-0.211
		279.53		7.905E-03	4.264E-02	7.216E-02	4.551E-03	0.110
		303.91		2.098E-01	9.278E-01	1.571E+00	1.505E-01	0.134
		400.65		-9.420E-03	1.102E-01	1.783E-01	1.586E-02	-0.053
BR-77		87.88		-3.904E-01	4.050E+00	6.502E+00	5.381E-01	-0.060
		200.40		-4.474E-01	6.453E+00	1.075E+01	6.659E-01	-0.042
		239.00		-8.716E-02	4.874E-01	7.903E-01	4.867E-02	-0.110
		249.79		1.659E+00	3.131E+00	5.466E+00	3.336E-01	0.303
		281.68		-3.414E+00	4.244E+00	6.422E+00	3.754E-01	-0.532
		297.23		-1.128E-01	2.433E+00	4.010E+00	2.352E-01	-0.028
		303.76		2.285E+00	8.880E+00	1.508E+01	8.847E-01	0.152
		439.47		3.577E+00	6.836E+00	1.204E+01	7.006E-01	0.297
		484.57		6.356E+00	1.282E+01	2.231E+01	1.380E+00	0.285
		520.65	*	-2.755E-01	6.468E-01	9.819E-01	6.329E-02	-0.281
		574.64		-2.916E+00	1.380E+01	2.159E+01	1.462E+00	-0.135
		578.91		-2.867E+00	5.373E+00	7.945E+00	5.399E-01	-0.361
		585.48		2.220E+00	1.001E+01	1.667E+01	1.139E+00	0.133
		755.35		1.311E+00	1.092E+01	1.854E+01	1.358E+00	0.071
		817.79		-2.199E+00	7.819E+00	1.230E+01	8.998E-01	-0.179
SR-82		698.33		-4.114E+00	1.358E+01	2.154E+01	1.560E+00	-0.191
		776.49	*	3.535E-03	1.707E-01	2.854E-01	2.092E-02	0.012
		1395.20		2.066E+00	5.341E+00	9.536E+00	5.750E-01	0.217
RB-83		520.41	*	-2.310E-02	3.880E-02	5.742E-02	3.700E-03	-0.402
		529.64		-2.017E-02	5.401E-02	8.225E-02	5.350E-03	-0.245
		552.65		1.223E-02	1.026E-01	1.690E-01	1.124E-02	0.072
RB-84		881.50	*	-3.085E-02	3.525E-02	4.814E-02	3.467E-03	-0.641
KR-85		513.99	*	-5.908E+00	6.052E+00	8.916E+00	5.707E-01	-0.663
SR-85		513.99	*	-2.795E-02	2.863E-02	4.218E-02	2.700E-03	-0.663
RB-86		1076.63	*	-3.878E-01	3.063E-01	3.227E-01	2.061E-02	-1.202
Y-88		898.02		1.095E-02	2.453E-02	4.358E-02	3.140E-03	0.251
		1836.01	*	8.547E-03	2.788E-02	4.994E-02	2.756E-03	0.171
ZR-88		392.90	*	1.440E-02	1.301E-02	2.436E-02	1.314E-03	0.591
Y-91		1204.90	*	-4.015E+00	8.154E+00	1.162E+01	6.673E-01	-0.346
NB-94		702.63	*	9.502E-04	1.860E-02	3.138E-02	2.275E-03	0.030
		871.10		-1.053E-02	2.196E-02	3.336E-02	2.411E-03	-0.316
NB-95		765.79	*	5.798E-03	2.096E-02	3.645E-02	2.672E-03	0.159

---- Non-Identified Nuclides ----

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NB-95M		235.69	*	-1.108E-02	4.704E-02	7.688E-02	6.010E-03	-0.144
ZR-95		724.18		-4.030E-02	4.779E-02	6.877E-02	5.609E-03	-0.586
		756.15	*	1.266E-02	3.865E-02	6.764E-02	5.638E-03	0.187
NB-97		657.90	*	-5.767E-07	3.865E-02	Half-Life too short		
		1024.50		-1.071E-03	3.865E-02	Half-Life too short		
ZR-97		254.15		6.631E-04	3.865E-02	Half-Life too short		
		355.39		-7.426E-05	3.865E-02	Half-Life too short		
		507.63	*	-1.295E-03	3.865E-02	Half-Life too short		
		602.52		1.580E-04	3.865E-02	Half-Life too short		
		1021.30		-1.086E-03	3.865E-02	Half-Life too short		
		1147.95		2.723E-04	3.865E-02	Half-Life too short		
		1362.66		2.514E-03	3.865E-02	Half-Life too short		
		1750.46		-7.746E-04	3.865E-02	Half-Life too short		
MO-99		140.51		-6.989E-01	1.349E+00	2.027E+00	5.670E-01	-0.345
		181.06		1.309E-01	9.005E-01	1.532E+00	2.644E-01	0.085
		366.43		-4.584E+00	5.583E+00	8.112E+00	4.558E-01	-0.565
		739.58	*	4.701E-01	9.694E-01	1.735E+00	2.512E-01	0.271
		778.00		6.965E-01	2.871E+00	4.966E+00	3.641E-01	0.140
TC-99M		140.51	*	-4.498E+00	2.871E+00	Half-Life too short		
RH-101		127.23		1.376E-03	1.084E-02	1.760E-02	1.931E-03	0.078
		198.01	*	8.788E-03	1.177E-02	2.102E-02	1.300E-03	0.418
		325.23		2.827E-02	9.675E-02	1.650E-01	9.629E-03	0.171
RH-102		418.52		1.081E-01	1.305E-01	2.377E-01	1.339E-02	0.455
		475.06	*	3.539E-03	1.431E-02	2.415E-02	1.476E-03	0.147
		631.29		-2.782E-02	3.271E-02	4.465E-02	3.142E-03	-0.623
		697.49		-1.240E-02	3.756E-02	5.927E-02	4.291E-03	-0.209
		766.84		4.282E-02	5.409E-02	1.014E-01	7.434E-03	0.422
		1046.59		-1.993E-02	6.390E-02	9.782E-02	6.424E-03	-0.204
		1112.84		6.175E-02	1.371E-01	2.424E-01	1.489E-02	0.255
RU-103		497.08	*	1.167E-03	2.172E-02	3.551E-02	4.571E-03	0.033
		610.33		-5.985E-02	4.544E-01	7.149E-01	1.136E-01	-0.084
RH-106		511.85		-1.279E-01	1.473E-01	2.623E-01	1.675E-02	-0.488
		621.84	*	-2.183E-01	2.244E-01	2.749E-01	3.401E-02	-0.794
		1050.47		6.380E-01	1.321E+00	2.369E+00	1.551E-01	0.269
RU-106		511.85		-1.279E-01	1.473E-01	2.623E-01	1.675E-02	-0.488
		621.84	*	-2.183E-01	2.233E-01	2.749E-01	1.924E-02	-0.794
		1050.47		6.380E-01	1.321E+00	2.369E+00	1.551E-01	0.269
AG-108M		433.93	*	-6.749E-04	1.564E-02	2.537E-02	1.591E-03	-0.027
		614.37		-1.837E-02	2.546E-02	3.665E-02	2.705E-03	-0.501
		722.95		-2.211E-02	2.359E-02	3.333E-02	2.561E-03	-0.664
CD-109		88.03	*	-2.770E-02	1.721E-01	2.746E-01	2.276E-02	-0.101
AG-110M		657.75	*	7.571E-05	1.849E-02	3.105E-02	2.310E-03	0.002
		677.61		-5.256E-02	1.645E-01	2.616E-01	1.956E-02	-0.201
		706.67		5.117E-02	1.140E-01	2.031E-01	1.531E-02	0.252
		763.93		-4.878E-02	8.507E-02	1.274E-01	9.701E-03	-0.383
		884.67		2.653E-02	2.589E-02	5.081E-02	3.822E-03	0.522
		937.48		1.190E-02	5.570E-02	9.602E-02	7.132E-03	0.124
		1384.27		-2.931E-02	1.330E-01	2.072E-01	1.320E-02	-0.141
IN-111		171.28		1.260E-02	5.247E-02	9.025E-02	5.486E-03	0.140

---- Non-Identified Nuclides ----

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		245.39	*	-5.371E-02	6.396E-02	9.696E-02	5.942E-03	-0.554
IN-113M		391.69	*	1.217E-02	2.038E-02	3.591E-02	2.082E-03	0.339
SN-113		391.69	*	1.217E-02	2.038E-02	3.591E-02	2.082E-03	0.339
IN-114M		190.27	*	-2.880E-02	6.040E-02	9.707E-02	5.984E-03	-0.297
CD-115		260.90		3.220E-01	5.114E+00	8.560E+00	5.156E-01	0.038
		492.35		-2.819E-01	1.804E+00	2.863E+00	1.788E-01	-0.098
		527.90	*	-3.067E-01	5.542E-01	8.183E-01	5.314E-02	-0.375
SN-117M		156.02		1.176E-01	6.489E-01	9.243E-01	6.922E-02	0.127
		158.56	*	-6.078E-03	1.446E-02	2.213E-02	1.578E-03	-0.275
SB-122		563.90	*	-5.193E-02	1.696E-01	2.612E-01	1.754E-02	-0.199
		692.80		3.495E-01	2.815E+00	4.819E+00	3.484E-01	0.073
I-123		159.00	*	-3.356E-05	2.815E+00	Half-Life too short		
		528.96		-3.678E-03	2.815E+00	Half-Life too short		
TE-123M		159.00	*	-2.599E-03	1.076E-02	1.678E-02	1.197E-03	-0.155
I-124		602.71	*	2.309E-03	1.159E-01	1.871E-01	1.293E-02	0.012
		722.78		-6.665E-01	7.048E-01	9.981E-01	7.273E-02	-0.668
		1325.50		-2.256E+00	6.682E+00	9.986E+00	5.994E-01	-0.226
		1376.25		9.558E-01	5.151E+00	8.721E+00	5.257E-01	0.110
		1509.49		-1.027E+00	3.150E+00	4.863E+00	2.917E-01	-0.211
		1691.02		-5.605E-01	9.199E-01	1.268E+00	7.348E-02	-0.442
SB-124		602.71		4.376E-04	2.196E-02	3.545E-02	2.452E-03	0.012
		645.85		1.187E-01	2.980E-01	5.063E-01	3.904E-02	0.234
		709.31		-1.510E+00	1.429E+00	1.962E+00	1.425E-01	-0.770
		713.82		6.676E-02	8.866E-01	1.495E+00	1.662E-01	0.045
		722.78		-1.831E-01	1.936E-01	2.742E-01	2.058E-02	-0.668
		968.20		1.432E+00	1.293E+00	2.517E+00	1.747E-01	0.569
		1045.16		-3.323E-01	1.278E+00	1.982E+00	1.303E-01	-0.168
		1325.50		-6.619E-01	1.961E+00	2.930E+00	1.759E-01	-0.226
		1368.21		-6.287E-01	1.044E+00	1.397E+00	1.674E-01	-0.450
		1436.60		2.694E+00	2.636E+00	5.177E+00	3.120E-01	0.520
		1691.02	*	-3.632E-02	5.961E-02	8.216E-02	5.169E-03	-0.442
SB-125		427.89	*	4.049E-04	4.593E-02	7.513E-02	4.482E-03	0.005
		463.38		-8.123E-02	1.345E-01	1.986E-01	1.381E-02	-0.409
		600.56		-3.021E-02	1.109E-01	1.715E-01	1.318E-02	-0.176
		635.90		1.504E-01	1.528E-01	2.834E-01	2.236E-02	0.531
TE-125M		109.28	*	1.741E+00	2.359E+00	4.066E+00	4.727E-01	0.428
I-126		388.63		-4.458E-02	6.562E-02	9.774E-02	5.293E-03	-0.456
		666.33	*	1.129E-02	6.326E-02	1.090E-01	7.801E-03	0.104
		753.82		1.843E-01	5.604E-01	9.824E-01	7.193E-02	0.188
SB-126		223.80		-5.842E-02	1.058E+00	1.759E+00	1.091E-01	-0.033
		278.60		1.979E-01	6.660E-01	1.139E+00	6.661E-02	0.174
		296.50		-2.836E-01	4.398E-01	6.182E-01	3.626E-02	-0.459
		414.70		-1.973E-02	2.399E-02	3.460E-02	1.937E-03	-0.570
		415.30		-1.105E+00	1.928E+00	2.888E+00	1.619E-01	-0.383
		555.20		3.947E-01	1.433E+00	2.413E+00	1.608E-01	0.164
		573.80		-1.606E-01	4.245E-01	6.474E-01	4.382E-02	-0.248
		593.00		7.032E-02	3.696E-01	6.123E-01	4.205E-02	0.115
		656.30		-5.419E-02	1.229E+00	2.051E+00	1.461E-01	-0.026
		666.33		4.637E-03	2.597E-02	4.475E-02	3.203E-03	0.104

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		675.00		-2.049E-01	7.903E-01	1.276E+00	9.167E-02	-0.161
		695.00		7.538E-03	2.340E-02	4.138E-02	2.994E-03	0.182
		697.00		2.280E-02	8.271E-02	1.450E-01	1.049E-02	0.157
		720.50	*	-6.238E-03	5.397E-02	8.864E-02	6.456E-03	-0.070
		856.80		-7.619E-02	1.724E-01	2.622E-01	1.903E-02	-0.291
		989.30		-1.890E-01	4.819E-01	7.296E-01	5.002E-02	-0.259
		1034.80		1.784E+00	4.018E+00	7.074E+00	4.693E-01	0.252
		1213.00		2.717E-01	1.336E+00	2.286E+00	1.318E-01	0.119
SN-126		64.28		1.118E-02	6.071E-02	1.006E-01	1.450E-02	0.111
		86.94		-4.665E-02	7.988E-02	1.137E-01	4.693E-02	-0.410
		87.57	*	-1.388E-02	1.888E-02	2.730E-02	2.254E-03	-0.509
SB-127		61.10		-3.988E-01	1.585E+00	2.523E+00	1.994E-01	-0.158
		252.40		1.360E-01	5.290E-01	8.954E-01	3.683E-01	0.152
		290.80		8.024E-01	2.423E+00	4.149E+00	2.833E-01	0.193
		411.60		9.572E-02	1.398E+00	2.309E+00	2.976E-01	0.041
		444.90		-5.617E-01	1.305E+00	2.000E+00	1.780E-01	-0.281
		473.00		5.014E-02	2.123E-01	3.575E-01	3.399E-02	0.140
		543.00		-1.044E+00	2.634E+00	3.998E+00	4.703E-01	-0.261
		603.60		1.038E-01	1.801E+00	2.924E+00	2.805E-01	0.035
		685.20	*	-4.623E-02	1.709E-01	2.728E-01	2.271E-02	-0.169
		698.50		-7.096E-01	1.915E+00	3.000E+00	4.139E-01	-0.237
		722.20		-2.877E+00	4.433E+00	6.673E+00	5.395E-01	-0.431
		783.80		6.199E-03	5.509E-01	9.191E-01	8.990E-02	0.007
XE-127		57.60		1.485E-01	4.831E-01	8.134E-01	5.644E-02	0.183
		145.22		7.982E-02	1.920E-01	3.201E-01	2.853E-02	0.249
		172.10		3.309E-03	3.575E-02	6.069E-02	3.692E-03	0.055
		202.84	*	-8.514E-03	1.530E-02	2.434E-02	1.509E-03	-0.350
		374.96		-2.932E-02	8.815E-02	1.390E-01	7.709E-03	-0.211
I-131		80.18		-1.211E-01	4.517E-01	7.148E-01	5.606E-02	-0.169
		284.30		-4.418E-02	3.573E-01	5.851E-01	3.767E-02	-0.076
		364.48	*	-6.106E-04	2.793E-02	4.578E-02	2.871E-03	-0.013
		636.97		1.340E-01	4.796E-01	8.044E-01	6.107E-02	0.167
		722.89		-1.905E+00	2.055E+00	2.912E+00	2.127E-01	-0.654
TE-132		49.72		-7.798E-02	2.171E-01	3.422E-01	2.508E-02	-0.228
		111.76		-6.152E-01	1.699E+00	2.633E+00	2.871E-01	-0.234
		116.30		1.296E+00	1.612E+00	2.788E+00	3.165E-01	0.465
		228.16	*	-4.061E-03	5.271E-02	8.737E-02	1.166E-02	-0.046
BA-133		53.15		-4.738E-02	2.788E-01	4.486E-01	3.008E-02	-0.106
		79.62		-9.064E-02	2.471E-01	3.871E-01	5.720E-02	-0.234
		81.00		-2.086E-02	2.250E-02	2.941E-02	4.553E-03	-0.710
		276.40		7.168E-02	1.527E-01	2.652E-01	3.447E-02	0.270
		302.84		5.032E-02	6.614E-02	1.174E-01	1.372E-02	0.429
		356.01	*	-1.452E-02	2.288E-02	3.487E-02	4.013E-03	-0.417
		383.85		-7.581E-02	1.383E-01	2.093E-01	2.238E-02	-0.362
I-133		510.53		-2.907E-04	1.383E-01	Half-Life too short		
		529.87	*	-1.195E-06	1.383E-01	Half-Life too short		
		706.58		2.405E-04	1.383E-01	Half-Life too short		
		856.28		-4.540E-04	1.383E-01	Half-Life too short		
		875.33		1.801E-04	1.383E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1236.41		-4.713E-05	1.383E-01	Half-Life too short		
		1298.22		6.047E-05	1.383E-01	Half-Life too short		
CS-134		475.35		7.866E-02	9.541E-01	1.571E+00	9.609E-02	0.050
		563.23		-1.652E-01	2.176E-01	3.110E-01	2.119E-02	-0.531
		569.32		8.532E-02	1.243E-01	2.184E-01	1.506E-02	0.391
		604.70		-3.545E-03	2.217E-02	3.494E-02	2.429E-03	-0.101
		795.84	*	-1.385E-02	2.491E-02	3.727E-02	2.759E-03	-0.372
		801.93		2.231E-01	2.489E-01	4.663E-01	3.443E-02	0.478
		1038.57		-9.644E-01	2.369E+00	3.575E+00	2.364E-01	-0.270
		1167.94		7.865E-02	1.470E+00	2.424E+00	1.384E-01	0.032
		1365.15		1.254E-02	9.031E-01	1.466E+00	9.637E-02	0.009
CS-135		268.24	*	2.832E-02	6.274E-02	1.091E-01	8.483E-03	0.260
I-135		288.45		1.315E+01	6.274E-02	Half-Life too short		
		417.63		4.520E+01	6.274E-02	Half-Life too short		
		546.56		3.383E+01	6.274E-02	Half-Life too short		
		836.80		-3.617E+00	6.274E-02	Half-Life too short		
		1038.76		-2.073E+01	6.274E-02	Half-Life too short		
		1124.00		-9.168E-01	6.274E-02	Half-Life too short		
		1131.51		-3.568E+00	6.274E-02	Half-Life too short		
		1260.41	*	-8.841E-01	6.274E-02	Half-Life too short		
		1457.56		-6.660E+00	6.274E-02	Half-Life too short		
		1678.03		-2.806E+01	6.274E-02	Half-Life too short		
		1706.46		7.884E+01	6.274E-02	Half-Life too short		
		1791.20		7.833E+00	6.274E-02	Half-Life too short		
CS-136		66.91		-9.552E-02	8.081E-02	1.051E-01	1.546E-02	-0.909
		86.29		-1.168E-01	1.614E-01	2.324E-01	2.918E-02	-0.503
		153.22		1.322E-01	1.725E-01	2.647E-01	2.374E-02	0.499
	+	163.89		4.135E-01	5.405E-01	4.483E-01	3.450E-02	0.922
		176.55		-8.190E-02	8.268E-02	1.253E-01	8.500E-03	-0.654
		273.65		-4.458E-04	1.210E-01	2.009E-01	1.345E-02	-0.002
		340.57		-2.813E-02	3.808E-02	5.725E-02	3.514E-03	-0.491
		818.51		-8.713E-03	2.604E-02	4.038E-02	2.954E-03	-0.216
		1048.07	*	7.310E-03	4.099E-02	6.971E-02	4.898E-03	0.105
		1235.34		-5.650E-02	1.978E-01	3.018E-01	3.016E-02	-0.187
BA-137M		661.65	*	-3.520E-03	1.854E-02	3.017E-02	2.155E-03	-0.117
CS-137		661.65	*	-3.721E-03	1.960E-02	3.189E-02	2.285E-03	-0.117
CE-139		165.85	*	7.198E-03	1.079E-02	1.719E-02	1.041E-03	0.419
BA-140	+	162.64		2.878E-01	3.760E-01	3.020E-01	2.171E-02	0.953
		304.84		-1.594E-02	4.029E-01	6.639E-01	1.813E-01	-0.024
		423.70		-5.052E-02	6.025E-01	9.728E-01	3.090E-01	-0.052
		537.32	*	-3.248E-03	8.285E-02	1.331E-01	4.349E-02	-0.024
LA-140		328.77		5.976E-03	8.885E-02	1.477E-01	9.627E-03	0.040
		432.53		-2.860E-01	6.799E-01	1.043E+00	6.641E-02	-0.274
		487.03		1.756E-02	4.991E-02	8.504E-02	5.890E-03	0.206
		751.79		-3.853E-01	7.315E-01	1.125E+00	9.431E-02	-0.343
		815.85		-5.349E-02	1.164E-01	1.762E-01	1.491E-02	-0.304
		867.82		-1.527E-01	5.883E-01	9.325E-01	7.248E-02	-0.164
		919.63		-1.804E-01	9.549E-01	1.514E+00	1.432E-01	-0.119
		925.24		-1.576E-01	4.399E-01	6.760E-01	5.229E-02	-0.233

---- Non-Identified Nuclides ----

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		1596.49	*	1.473E-02	4.871E-02	8.606E-02	5.099E-03	0.171
CE-141		145.44	*	7.482E-03	1.716E-02	2.867E-02	2.591E-03	0.261
CE-143		57.37		1.096E+00	2.088E+00	3.583E+00	2.975E-01	0.306
		231.56		-1.755E+01	2.330E+01	3.367E+01	1.043E+01	-0.521
		293.26	*	-4.448E-01	1.220E+00	1.940E+00	3.968E-01	-0.229
		350.59		-3.701E+00	1.979E+01	3.136E+01	9.507E+00	-0.118
		490.36		8.362E+00	3.237E+01	5.439E+01	1.685E+01	0.154
		664.57		-3.427E+00	1.404E+01	2.256E+01	7.203E+00	-0.152
		721.93		-1.180E+01	1.785E+01	2.636E+01	7.583E+00	-0.448
CE-144		80.11		-1.817E-01	4.008E-01	6.231E-01	4.875E-02	-0.292
		133.54	*	-2.722E-02	7.077E-02	1.090E-01	1.805E-02	-0.250
PM-144		476.78		1.760E-02	3.526E-02	5.840E-02	4.214E-03	0.301
		618.01		-5.129E-04	1.820E-02	2.913E-02	2.118E-03	-0.018
		696.49	*	3.397E-03	1.587E-02	2.756E-02	1.995E-03	0.123
		778.57		-1.498E-01	1.338E+00	2.189E+00	1.605E-01	-0.068
PR-144		696.49	*	2.293E-01	1.071E+00	1.860E+00	1.346E-01	0.123
		1489.15		-1.726E+00	8.648E+00	1.379E+01	8.284E-01	-0.125
PM-146		453.90	*	-1.091E-02	2.053E-02	3.058E-02	2.666E-03	-0.357
		633.02		-2.846E-01	8.593E-01	1.296E+00	4.799E-01	-0.220
		735.90		-2.244E-02	8.744E-02	1.397E-01	3.946E-02	-0.161
		747.13		9.558E-03	5.658E-02	9.674E-02	1.285E-02	0.099
ND-147		91.11		3.587E-02	3.626E-02	6.357E-02	5.877E-03	0.564
		319.41		1.134E-01	9.437E-01	1.580E+00	9.240E-02	0.072
		439.89		2.287E-01	1.665E+00	2.774E+00	1.616E-01	0.082
		531.02	*	8.613E-02	1.724E-01	3.012E-01	4.170E-02	0.286
PM-149		285.90	*	2.269E+00	3.797E+00	6.647E+00	9.422E-01	0.341
EU-152		121.78		-2.108E-02	2.430E-02	3.537E-02	4.416E-03	-0.596
		244.69		-1.614E-01	1.314E-01	1.900E-01	1.165E-02	-0.850
		344.27	*	-2.644E-04	4.964E-02	8.173E-02	5.315E-03	-0.003
		443.98		-2.735E-01	4.986E-01	7.495E-01	4.391E-02	-0.365
		778.89		-2.093E-02	1.560E-01	2.543E-01	1.864E-02	-0.082
		867.32		2.242E-01	4.892E-01	8.738E-01	6.322E-02	0.257
		964.01		4.280E-02	1.537E-01	2.661E-01	1.851E-02	0.161
		1085.78		4.905E-02	2.307E-01	3.940E-01	2.493E-02	0.124
		1112.02		9.883E-02	1.969E-01	3.508E-01	2.156E-02	0.282
		1407.95		-5.486E-02	1.312E-01	1.898E-01	1.145E-02	-0.289
GD-153		69.67		-4.045E-02	2.416E-01	3.872E-01	2.843E-02	-0.104
		83.37		6.223E-01	2.809E+00	4.648E+00	3.721E-01	0.134
		97.43	*	-3.662E-03	1.916E-02	3.035E-02	2.747E-03	-0.121
		103.18		2.312E-03	2.834E-02	4.609E-02	4.410E-03	0.050
EU-154		123.07		1.560E-03	1.713E-02	2.776E-02	3.775E-03	0.056
		247.94		-6.583E-02	1.499E-01	2.384E-01	2.321E-02	-0.276
		591.81		-4.599E-02	3.689E-01	5.829E-01	6.086E-02	-0.079
		723.30		-8.506E-02	9.736E-02	1.391E-01	1.160E-02	-0.612
		756.87		3.209E-02	4.365E-01	7.367E-01	8.162E-02	0.044
		873.19		1.143E-01	1.790E-01	3.277E-01	3.704E-02	0.349
		996.32		-8.484E-02	2.344E-01	3.595E-01	6.099E-02	-0.236
		1004.76		-1.087E-01	1.344E-01	1.854E-01	1.920E-02	-0.586
		1274.45	*	-1.501E-02	6.387E-02	9.738E-02	9.159E-03	-0.154

---- Non-Identified Nuclides ----

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EU-155		48.70		-7.492E-02	1.342E-01	2.075E-01	1.355E-02	-0.361
		60.01		-3.476E-01	5.235E-01	7.967E-01	5.626E-02	-0.436
		86.54		-2.064E-02	2.277E-02	3.234E-02	2.680E-03	-0.638
		105.31	*	-1.566E-02	3.018E-02	4.604E-02	4.540E-03	-0.340
TB-160		86.79		-4.322E-02	5.657E-02	8.160E-02	6.698E-03	-0.530
		197.04		3.825E-02	1.910E-01	3.261E-01	2.017E-02	0.117
		215.65		-4.044E-02	2.630E-01	4.335E-01	2.691E-02	-0.093
		298.57		1.471E-03	4.616E-02	7.667E-02	4.498E-03	0.019
		879.36	*	-7.600E-02	8.236E-02	1.130E-01	8.141E-03	-0.673
		962.29		-1.096E-01	2.469E-01	3.694E-01	2.573E-02	-0.297
		966.15		4.927E-02	9.573E-02	1.725E-01	1.199E-02	0.286
		1177.93		-1.631E-01	1.708E-01	2.093E-01	1.189E-02	-0.779
		1271.85		3.673E-02	3.535E-01	5.887E-01	3.470E-02	0.062
HO-166M		80.57		-3.927E-02	6.052E-02	8.208E-02	6.443E-03	-0.478
		184.41		9.168E-03	1.409E-02	2.328E-02	1.430E-03	0.394
		280.46		-1.262E-02	3.513E-02	5.595E-02	3.269E-03	-0.226
		410.95		5.007E-02	1.101E-01	1.914E-01	1.065E-02	0.262
		711.68	*	-3.172E-02	3.530E-02	5.040E-02	3.663E-03	-0.629
		752.31		-2.684E-02	1.724E-01	2.811E-01	2.058E-02	-0.095
		810.29		-1.171E-02	2.888E-02	4.389E-02	3.213E-03	-0.267
TM-171		51.35		7.334E-01	2.082E+00	3.521E+00	2.333E-01	0.208
		52.39		3.592E-01	1.127E+00	1.900E+00	1.268E-01	0.189
		59.40		-2.439E+00	2.815E+00	4.194E+00	2.956E-01	-0.581
		66.72	*	-5.696E+00	4.362E+00	5.689E+00	4.117E-01	-1.001
LU-176		88.36		-1.682E-02	4.075E-02	6.343E-02	5.272E-03	-0.265
		201.83		-9.809E-03	1.062E-02	1.622E-02	1.005E-03	-0.605
		306.84	*	-3.910E-03	1.180E-02	1.883E-02	1.104E-03	-0.208
		401.10		-2.380E-01	3.013E+00	4.880E+00	2.670E-01	-0.049
LU-177		112.95		-1.875E-01	2.225E-01	3.260E-01	3.431E-02	-0.575
		208.36	*	2.943E-02	1.819E-01	3.089E-01	1.917E-02	0.095
LU-177M		52.97		-4.781E-02	1.227E-01	1.931E-01	1.293E-02	-0.248
		54.07		-1.156E-02	6.929E-02	1.115E-01	7.526E-03	-0.104
		61.30		5.944E-03	1.571E-01	2.572E-01	1.823E-02	0.023
		121.62		-1.098E-01	1.201E-01	1.739E-01	1.991E-02	-0.631
		147.16		-5.176E-02	2.087E-01	3.250E-01	2.817E-02	-0.159
		171.86		7.045E-02	1.585E-01	2.774E-01	1.687E-02	0.254
		218.09		-1.021E-01	3.136E-01	5.080E-01	3.153E-02	-0.201
		268.79		1.199E-01	3.000E-01	5.193E-01	3.091E-02	0.231
		319.02		2.687E-02	1.154E-01	1.956E-01	1.144E-02	0.137
		367.43		-8.035E-02	3.826E-01	6.103E-01	3.425E-02	-0.132
		413.65	*	-8.206E-02	8.217E-02	1.147E-01	6.408E-03	-0.716
HF-181		56.28		8.642E-02	7.236E-02	1.316E-01	9.035E-03	0.657
		57.53		1.552E-02	4.164E-02	7.054E-02	4.892E-03	0.220
		65.20		-5.775E-02	1.185E-01	1.692E-01	1.216E-02	-0.341
		133.02		1.232E-02	1.995E-02	3.377E-02	3.494E-03	0.365
		136.25		9.005E-02	1.457E-01	2.461E-01	2.457E-02	0.366
		345.85		3.796E-02	8.697E-02	1.498E-01	8.616E-03	0.253
		482.03	*	-4.337E-03	1.877E-02	2.941E-02	1.814E-03	-0.147
W-181		56.28		3.669E-02	3.073E-02	5.589E-02	3.837E-03	0.656

---- Non-Identified Nuclides ----

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		57.53		6.631E-03	1.770E-02	2.998E-02	2.079E-03	0.221
		65.20	*	-2.435E-02	4.997E-02	7.134E-02	5.128E-03	-0.341
TA-182		67.75		-3.453E-03	1.433E-02	2.278E-02	1.656E-03	-0.152
		100.10		-1.930E-03	4.589E-02	7.379E-02	6.854E-03	-0.026
		152.43		8.525E-02	1.250E-01	1.902E-01	1.518E-02	0.448
		222.10		9.162E-02	1.271E-01	2.263E-01	1.404E-02	0.405
		1001.68		1.025E+00	1.169E+00	2.208E+00	1.502E-01	0.464
		1121.28		3.450E-02	8.067E-02	1.418E-01	8.620E-03	0.243
		1189.05		1.250E-02	1.282E-01	2.143E-01	1.223E-02	0.058
		1221.42	*	1.852E-02	8.723E-02	1.491E-01	8.620E-03	0.124
		1230.97		6.280E-02	2.228E-01	3.847E-01	2.233E-02	0.163
RE-183		57.98		-1.117E-02	1.829E-02	2.801E-02	1.950E-03	-0.399
		59.32		-9.178E-03	1.079E-02	1.611E-02	1.134E-03	-0.570
		67.20		-3.315E-02	2.833E-02	3.725E-02	2.701E-03	-0.890
	+	162.32	*	5.911E-02	7.722E-02	6.164E-02	4.060E-03	0.959
		208.81		7.465E-02	3.342E-01	5.707E-01	3.541E-02	0.131
		291.72		2.392E-03	3.846E-01	6.376E-01	3.738E-02	0.004
RE-184		57.98		-4.302E-02	7.044E-02	1.079E-01	7.512E-03	-0.399
		59.32		-3.533E-02	4.153E-02	6.201E-02	4.366E-03	-0.570
		67.20		-1.276E-01	1.091E-01	1.434E-01	1.040E-02	-0.890
		161.27		-3.021E-02	1.207E-01	1.992E-01	1.343E-02	-0.152
		216.55		1.082E-02	9.697E-02	1.639E-01	1.017E-02	0.066
		252.85	*	3.656E-02	1.058E-01	1.815E-01	1.104E-02	0.201
		318.01		7.459E-02	2.011E-01	3.457E-01	2.023E-02	0.216
		792.07		-1.933E-01	4.866E-01	7.488E-01	5.489E-02	-0.258
		903.28		-8.573E-02	5.470E-01	8.778E-01	6.269E-02	-0.098
		920.93		-6.718E-02	2.330E-01	3.612E-01	2.564E-02	-0.186
OS-185		59.72		-2.576E-02	2.968E-02	4.418E-02	3.118E-03	-0.583
		61.14		-6.197E-04	1.667E-02	2.709E-02	1.919E-03	-0.023
		69.30		-3.940E-03	4.103E-02	6.619E-02	4.850E-03	-0.060
		592.07		-5.755E-01	1.465E+00	2.218E+00	1.522E-01	-0.259
		646.12	*	1.438E-02	2.615E-02	4.532E-02	3.214E-03	0.317
		717.42		3.421E-01	5.106E-01	9.324E-01	6.786E-02	0.367
		874.81		3.565E-01	3.167E-01	6.234E-01	4.499E-02	0.572
		880.27		-1.779E-01	4.282E-01	6.527E-01	4.703E-02	-0.273
RE-188		155.03	*	-2.243E-02	6.707E-02	8.896E-02	6.784E-03	-0.252
		477.96		-1.086E-01	1.519E+00	2.311E+00	1.418E-01	-0.047
		633.10		-4.790E-01	1.609E+00	2.461E+00	1.733E-01	-0.195
W-188		63.58		3.841E+00	5.619E+00	9.740E+00	6.957E-01	0.394
		227.08		-8.905E-01	4.746E+00	7.788E+00	4.825E-01	-0.114
		290.67	*	8.515E-01	3.068E+00	5.227E+00	3.063E-01	0.163
IR-192		295.96		-4.144E-02	4.787E-02	6.525E-02	3.886E-03	-0.635
		308.46		-1.489E-02	4.087E-02	6.480E-02	3.842E-03	-0.230
		316.51	*	-6.886E-03	1.491E-02	2.333E-02	1.372E-03	-0.295
		468.07		3.828E-04	3.196E-02	5.212E-02	3.602E-03	0.007
		604.41		1.028E-01	2.618E-01	4.435E-01	5.305E-02	0.232
		612.46		3.669E-02	3.995E-01	6.512E-01	5.530E-02	0.056
AU-195		65.12		-7.882E-03	2.323E-02	3.364E-02	2.417E-03	-0.234
		66.83		-1.639E-02	1.395E-02	1.841E-02	1.333E-03	-0.890

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		75.70		-2.972E-02	3.547E-02	4.917E-02	3.738E-03	-0.604
		98.88	*	1.218E-02	5.565E-02	9.185E-02	8.431E-03	0.133
		129.76		-3.007E-01	9.156E-01	1.421E+00	1.521E-01	-0.212
TL-200		367.94	*	-4.418E-01	1.501E+00	2.364E+00	1.325E-01	-0.187
		579.30		-1.154E+01	1.497E+01	2.108E+01	1.433E+00	-0.548
		828.27		3.572E+00	2.080E+01	3.560E+01	2.600E+00	0.100
		1205.75		-6.626E+00	9.380E+00	1.259E+01	7.235E-01	-0.526
TL-201		68.90		-1.248E-03	1.220E-01	1.985E-01	1.451E-02	-0.006
		70.82		4.246E-02	7.399E-02	1.263E-01	9.327E-03	0.336
		80.30		-4.126E-02	1.671E-01	2.650E-01	2.076E-02	-0.156
		135.34		-4.906E-01	1.635E+00	2.547E+00	2.570E-01	-0.193
		167.43	*	1.846E-01	4.597E-01	7.103E-01	4.302E-02	0.260
TL-202		68.90		-4.161E-04	4.067E-02	6.614E-02	4.837E-03	-0.006
		70.82		1.411E-02	2.459E-02	4.197E-02	3.100E-03	0.336
		80.30		-1.372E-02	5.557E-02	8.812E-02	6.903E-03	-0.156
		439.56	*	1.020E-02	1.997E-02	3.512E-02	2.044E-03	0.290
HG-203		70.83		8.463E-02	1.471E-01	2.507E-01	3.223E-02	0.338
		72.87		-1.291E-02	8.992E-02	1.444E-01	1.802E-02	-0.089
		82.60		-1.523E-01	2.294E-01	3.096E-01	4.130E-02	-0.492
		279.20	*	1.986E-03	1.530E-02	2.574E-02	1.595E-03	0.077
BI-207		72.80		-4.752E-03	2.948E-02	4.726E-02	3.530E-03	-0.101
		74.97		-1.583E-02	1.997E-02	2.772E-02	2.098E-03	-0.571
		84.90		-2.372E-02	4.201E-02	6.176E-02	4.999E-03	-0.384
		569.67		5.928E-03	1.994E-02	3.344E-02	2.256E-03	0.177
		1063.62	*	-7.777E-03	3.213E-02	5.020E-02	3.247E-03	-0.155
		1770.23		2.701E-03	4.251E-01	7.052E-01	3.985E-02	0.004
TL-207		81.07		-4.616E-02	4.938E-02	6.505E-02	5.123E-03	-0.710
		83.78		7.694E-03	2.451E-02	4.088E-02	3.282E-03	0.188
		94.90		-3.281E-02	5.539E-02	8.422E-02	7.443E-03	-0.390
		122.32		-4.592E-01	5.941E-01	8.778E-01	1.050E-01	-0.523
		144.24		-9.112E-02	2.454E-01	3.584E-01	3.589E-02	-0.254
		154.21		4.826E-02	1.576E-01	2.286E-01	1.986E-02	0.211
		269.46		1.547E-02	7.553E-02	1.281E-01	7.947E-03	0.121
		323.87	*	-1.001E-01	3.094E-01	4.917E-01	8.127E-02	-0.203
		338.28		6.330E-02	4.395E-01	7.364E-01	7.751E-02	0.086
		445.03		-4.782E-01	1.213E+00	1.869E+00	1.927E-01	-0.256
TL-208		277.35		5.947E-02	1.519E-01	2.623E-01	2.779E-02	0.227
		510.84		-6.388E-02	1.375E-01	2.514E-01	2.639E-02	-0.254
		583.14	*	3.919E-03	2.458E-02	3.396E-02	2.576E-03	0.115
		860.37		-1.092E-01	1.644E-01	2.384E-01	1.906E-02	-0.458
PO-209		260.50		1.031E-01	4.190E+00	6.986E+00	4.210E-01	0.015
		262.80		-1.210E+01	1.118E+01	1.632E+01	9.807E-01	-0.741
		896.60	*	8.616E-01	4.559E+00	7.789E+00	5.576E-01	0.111
BI-210		46.50	*	-2.500E-02	1.479E-01	2.384E-01	1.806E-02	-0.105
PB-210		46.50	*	-2.500E-02	1.479E-01	2.384E-01	1.806E-02	-0.105
PO-210		46.50	*	-2.500E-02	1.479E-01	2.384E-01	1.541E-02	-0.105
BI-211		72.87		-7.277E-02	5.066E-01	8.134E-01	6.078E-02	-0.089
		351.07	*	4.770E-03	1.169E-01	1.898E-01	1.208E-02	0.025
PB-211		404.84	*	-1.092E-01	4.549E-01	7.126E-01	4.440E-01	-0.153

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		427.08		-1.184E-02	1.026E+00	1.673E+00	1.034E+00	-0.007
		831.96		1.137E-01	7.771E-01	1.314E+00	8.209E-01	0.087
BI-212		727.18	*	1.033E-01	1.604E-01	2.930E-01	2.605E-02	0.353
		785.46		2.571E-01	1.004E+00	1.740E+00	1.276E-01	0.148
		1620.62		2.479E-02	6.843E-01	1.153E+00	6.800E-02	0.021
PB-212		74.81		-5.760E-02	6.865E-02	9.439E-02	1.135E-02	-0.610
		77.11		-2.031E-02	3.811E-02	5.621E-02	4.311E-03	-0.361
		87.30		-5.564E-02	8.635E-02	1.255E-01	1.627E-02	-0.443
		238.63	*	5.060E-04	2.824E-02	4.650E-02	3.543E-03	0.011
		300.09		-6.523E-02	3.351E-01	5.432E-01	4.506E-02	-0.120
PO-212		74.81		-5.760E-02	6.865E-02	9.439E-02	1.135E-02	-0.610
		77.11		-2.031E-02	3.811E-02	5.621E-02	4.311E-03	-0.361
		87.30		-5.564E-02	8.635E-02	1.255E-01	1.627E-02	-0.443
		115.19		-1.569E-01	1.086E+00	1.722E+00	1.852E-01	-0.091
		238.63	*	5.060E-04	2.824E-02	4.650E-02	3.543E-03	0.011
		300.09		-6.523E-02	3.351E-01	5.432E-01	4.506E-02	-0.120
BI-214		609.31	*	3.147E-02	4.734E-02	8.196E-02	7.102E-03	0.384
		768.36		3.049E-01	3.674E-01	6.911E-01	6.525E-02	0.441
		934.06		-1.733E-01	6.426E-01	1.005E+00	9.459E-02	-0.172
		1120.29		1.124E-01	1.734E-01	3.158E-01	2.840E-02	0.356
		1238.11		2.098E-01	3.941E-01	7.164E-01	5.848E-02	0.293
		1377.67		6.910E-02	5.765E-01	9.610E-01	8.398E-02	0.072
		1764.49		-1.317E-01	1.686E-01	2.434E-01	1.378E-02	-0.541
PB-214		74.81		-9.924E-02	1.181E-01	1.626E-01	1.721E-02	-0.610
		77.11		-3.481E-02	6.539E-02	9.636E-02	1.042E-02	-0.361
		87.30		-9.532E-02	1.478E-01	2.150E-01	2.427E-02	-0.443
		241.98		-3.839E-03	1.435E-01	2.387E-01	1.986E-02	-0.016
		295.21		-3.537E-04	6.573E-02	9.919E-02	8.502E-03	-0.004
		351.92	*	-1.316E-02	4.123E-02	6.454E-02	5.309E-03	-0.204
PO-214		74.81		-9.924E-02	1.181E-01	1.626E-01	1.721E-02	-0.610
		77.11		-3.481E-02	6.539E-02	9.636E-02	1.042E-02	-0.361
		87.30		-9.532E-02	1.478E-01	2.150E-01	2.427E-02	-0.443
		241.98		-3.839E-03	1.435E-01	2.387E-01	1.986E-02	-0.016
		295.21		-3.537E-04	6.573E-02	9.919E-02	8.502E-03	-0.004
		351.92	*	-1.316E-02	4.123E-02	6.454E-02	5.309E-03	-0.204
PO-215		81.07		-4.616E-02	4.938E-02	6.505E-02	5.123E-03	-0.710
		83.78		7.694E-03	2.451E-02	4.088E-02	3.282E-03	0.188
		94.90		-3.281E-02	5.539E-02	8.422E-02	7.443E-03	-0.390
		122.32		-4.592E-01	5.941E-01	8.778E-01	1.050E-01	-0.523
		144.24		-9.112E-02	2.454E-01	3.584E-01	3.589E-02	-0.254
		154.21		4.826E-02	1.576E-01	2.286E-01	1.986E-02	0.211
		269.46		1.547E-02	7.553E-02	1.281E-01	7.947E-03	0.121
		323.87	*	-1.001E-01	3.094E-01	4.917E-01	8.127E-02	-0.203
		338.28		6.330E-02	4.395E-01	7.364E-01	7.751E-02	0.086
		445.03		-4.782E-01	1.213E+00	1.869E+00	1.927E-01	-0.256
PO-216		74.81		-5.760E-02	6.865E-02	9.439E-02	1.135E-02	-0.610
		77.11		-2.031E-02	3.811E-02	5.621E-02	4.311E-03	-0.361
		87.30		-5.564E-02	8.635E-02	1.255E-01	1.627E-02	-0.443
		238.63	*	5.060E-04	2.824E-02	4.650E-02	3.543E-03	0.011

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		300.09		-6.523E-02	3.351E-01	5.432E-01	4.506E-02	-0.120
PO-218		74.81		-9.924E-02	1.181E-01	1.626E-01	1.721E-02	-0.610
		77.11		-3.481E-02	6.539E-02	9.636E-02	1.042E-02	-0.361
		87.30		-9.532E-02	1.478E-01	2.150E-01	2.427E-02	-0.443
		241.98		-3.839E-03	1.435E-01	2.387E-01	1.986E-02	-0.016
		295.21		-3.537E-04	6.573E-02	9.919E-02	8.502E-03	-0.004
		351.92	*	-1.316E-02	4.123E-02	6.454E-02	5.309E-03	-0.204
RN-219		271.23		-5.105E-02	9.753E-02	1.527E-01	1.252E-02	-0.334
		401.81	*	2.498E-02	1.840E-01	3.071E-01	4.137E-02	0.081
RN-220		549.76	*	-1.005E+01	1.466E+01	2.103E+01	1.394E+00	-0.478
RA-223		81.07		-4.616E-02	4.938E-02	6.505E-02	5.123E-03	-0.710
		83.78		7.694E-03	2.451E-02	4.088E-02	3.282E-03	0.188
		94.90		-3.281E-02	5.539E-02	8.422E-02	7.443E-03	-0.390
		122.32		-4.592E-01	5.941E-01	8.778E-01	1.050E-01	-0.523
		144.24		-9.112E-02	2.454E-01	3.584E-01	3.589E-02	-0.254
		154.21		4.826E-02	1.576E-01	2.286E-01	1.986E-02	0.211
		269.46		1.547E-02	7.553E-02	1.281E-01	7.947E-03	0.121
		323.87	*	-1.001E-01	3.094E-01	4.917E-01	8.127E-02	-0.203
		338.28		6.330E-02	4.395E-01	7.364E-01	7.751E-02	0.086
		445.03		-4.782E-01	1.213E+00	1.869E+00	1.927E-01	-0.256
RA-224		240.98	*	2.386E-01	2.769E-01	4.944E-01	3.041E-02	0.483
RA-226		609.31	*	3.147E-02	4.734E-02	8.196E-02	7.102E-03	0.384
		768.36		3.049E-01	3.674E-01	6.911E-01	6.525E-02	0.441
		934.06		-1.733E-01	6.426E-01	1.005E+00	9.459E-02	-0.172
		1120.29		1.124E-01	1.734E-01	3.158E-01	2.840E-02	0.356
		1238.11		2.098E-01	3.941E-01	7.164E-01	5.848E-02	0.293
		1377.67		6.910E-02	5.765E-01	9.610E-01	8.398E-02	0.072
		1764.49		-1.317E-01	1.686E-01	2.434E-01	1.378E-02	-0.541
AC-227		79.80		-1.203E-01	3.149E-01	4.917E-01	1.042E-01	-0.245
		236.00		3.590E-03	9.532E-02	1.595E-01	1.701E-02	0.023
		256.20	*	-4.733E-02	1.816E-01	2.949E-01	4.149E-02	-0.161
		286.10		6.010E-01	6.847E-01	1.230E+00	1.425E-01	0.489
		299.80		-2.796E-02	6.304E-01	1.039E+00	1.694E-01	-0.027
		304.40		5.689E-02	8.743E-01	1.456E+00	2.522E-01	0.039
		334.20		5.356E-02	1.046E+00	1.734E+00	3.180E-01	0.031
TH-227		79.80		-1.203E-01	3.150E-01	4.917E-01	1.056E-01	-0.245
		94.00		-1.212E-01	4.938E-01	7.317E-01	1.598E-01	-0.166
		236.00		3.590E-03	9.532E-02	1.595E-01	1.483E-02	0.023
		256.20	*	-4.733E-02	1.816E-01	2.949E-01	5.010E-02	-0.161
		286.10		6.010E-01	9.091E-01	1.230E+00	1.232E+00	0.489
		299.80		-2.796E-02	6.304E-01	1.039E+00	1.694E-01	-0.027
		304.40		5.689E-02	8.743E-01	1.456E+00	2.522E-01	0.039
		334.20		5.356E-02	1.046E+00	1.734E+00	3.180E-01	0.031
AC-228		338.32		1.369E-02	1.052E-01	1.758E-01	7.167E-02	0.078
		911.07	*	2.715E-02	6.515E-02	1.168E-01	1.184E-02	0.233
		969.11		8.910E-02	1.359E-01	2.472E-01	5.628E-02	0.361
RA-228		338.32		1.369E-02	1.052E-01	1.758E-01	7.167E-02	0.078
		911.07	*	2.715E-02	6.515E-02	1.168E-01	1.184E-02	0.233
		969.11		8.910E-02	1.359E-01	2.472E-01	5.628E-02	0.361

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228		84.40		2.267E-01	5.121E-01	8.620E-01	1.102E-01	0.263
		238.60	*	7.737E-04	2.826E-02	4.656E-02	3.548E-03	0.017
		300.10		-6.232E-02	3.374E-01	5.443E-01	3.208E-01	-0.114
TH-229		85.43		-3.475E-02	4.183E-02	5.978E-02	4.858E-03	-0.581
		88.47		-9.027E-03	2.352E-02	3.672E-02	3.055E-03	-0.246
		100.00		-2.097E-03	4.985E-02	8.016E-02	7.438E-03	-0.026
		193.63	*	-1.397E-01	1.837E-01	2.859E-01	1.766E-02	-0.489
		210.97		-7.417E-02	2.813E-01	4.595E-01	2.852E-02	-0.161
TH-230		609.31	*	3.147E-02	4.734E-02	8.196E-02	7.102E-03	0.384
		768.36		3.049E-01	3.674E-01	6.911E-01	6.525E-02	0.441
		934.06		-1.733E-01	6.426E-01	1.005E+00	9.459E-02	-0.172
		1120.29		1.124E-01	1.734E-01	3.158E-01	2.840E-02	0.356
		1238.11		2.098E-01	3.941E-01	7.164E-01	5.848E-02	0.293
		1377.67		6.909E-02	5.764E-01	9.610E-01	8.398E-02	0.072
		1764.49		-1.317E-01	1.686E-01	2.434E-01	1.378E-02	-0.541
PA-231		283.67	*	-3.980E-01	6.675E-01	1.031E+00	1.422E-01	-0.386
		301.29		1.538E-01	2.605E-01	4.554E-01	4.777E-02	0.338
TH-231		81.07		-4.616E-02	4.938E-02	6.505E-02	5.123E-03	-0.710
		83.78		7.694E-03	2.451E-02	4.088E-02	3.282E-03	0.188
		94.90		-3.281E-02	5.539E-02	8.422E-02	7.443E-03	-0.390
		122.32		-4.592E-01	5.941E-01	8.778E-01	1.050E-01	-0.523
		144.24		-9.112E-02	2.454E-01	3.584E-01	3.589E-02	-0.254
		154.21		4.826E-02	1.576E-01	2.286E-01	1.986E-02	0.211
		269.46		1.547E-02	7.553E-02	1.281E-01	7.947E-03	0.121
		323.87	*	-1.001E-01	3.094E-01	4.917E-01	8.127E-02	-0.203
		338.28		6.330E-02	4.395E-01	7.364E-01	7.751E-02	0.086
		445.03		-4.782E-01	1.213E+00	1.869E+00	1.927E-01	-0.256
U-231		84.21		1.538E-01	3.039E-01	5.148E-01	4.146E-02	0.299
		92.29		5.482E-02	1.401E-01	2.212E-01	1.907E-02	0.248
		95.87	*	-8.188E-02	7.833E-02	1.130E-01	1.008E-02	-0.725
		108.00		6.246E-02	1.621E-01	2.711E-01	2.718E-02	0.230
TH-232		338.32		1.369E-02	1.051E-01	1.758E-01	1.018E-02	0.078
		911.07	*	2.715E-02	6.515E-02	1.168E-01	1.184E-02	0.233
		969.11		8.910E-02	1.359E-01	2.472E-01	5.628E-02	0.361
PA-233		75.28		-5.105E-01	5.934E-01	8.147E-01	1.205E-01	-0.627
		86.59		-3.308E-01	3.810E-01	5.290E-01	1.412E-01	-0.625
		300.12		-2.919E-02	1.737E-01	2.823E-01	3.802E-02	-0.103
		311.98	*	1.125E-02	2.923E-02	5.035E-02	3.130E-03	0.223
		340.50		-2.034E-01	2.802E-01	4.159E-01	9.550E-02	-0.489
		398.62		-2.301E-01	8.835E-01	1.387E+00	3.574E-01	-0.166
		415.76		-1.611E-03	7.686E-01	1.257E+00	2.581E-01	-0.001
PA-234		63.00		2.176E-01	1.749E-01	3.136E-01	4.618E-02	0.694
		94.67		-1.546E-02	3.949E-02	6.134E-02	7.693E-03	-0.252
		98.44		3.762E-03	2.314E-02	3.784E-02	2.114E-02	0.099
		99.86		2.581E-02	1.231E-01	2.029E-01	1.880E-02	0.127
		111.00		2.784E-02	5.263E-02	8.902E-02	1.189E-02	0.313
		131.20		2.322E-03	3.522E-02	5.685E-02	5.997E-03	0.041
		152.70		1.002E-01	1.261E-01	1.933E-01	3.232E-02	0.518
		186.00		6.921E-02	5.041E-01	7.990E-01	2.447E-01	0.087

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		226.40		-2.101E-02	1.605E-01	2.648E-01	3.115E-02	-0.079
		227.20		-3.046E-02	1.733E-01	2.847E-01	1.764E-02	-0.107
		248.90		9.430E-02	3.437E-01	5.867E-01	1.266E-01	0.161
		293.70		-4.317E-02	2.834E-01	4.619E-01	7.439E-02	-0.093
		369.80		-8.886E-02	3.650E-01	5.780E-01	1.200E-01	-0.154
		568.70		5.715E-01	6.292E-01	1.134E+00	7.641E-02	0.504
		569.50		6.382E-02	1.784E-01	3.013E-01	2.032E-02	0.212
		574.00		-3.542E-01	9.529E-01	1.456E+00	9.860E-02	-0.243
		699.00		-1.504E-01	3.659E-01	5.686E-01	1.052E-01	-0.264
		706.10		7.090E-01	6.395E-01	1.103E+00	4.892E-01	0.643
		733.00		-8.919E-02	2.224E-01	3.469E-01	7.534E-02	-0.257
		742.81		-1.966E-01	8.569E-01	1.364E+00	9.150E-01	-0.144
		796.30		-2.567E-01	5.091E-01	7.656E-01	2.042E-01	-0.335
		805.60		3.230E-02	5.946E-01	9.976E-01	3.024E-01	0.032
		819.60		9.853E-02	6.393E-01	1.092E+00	4.123E-01	0.090
		826.30		-7.659E-01	6.142E-01	6.080E-01	2.706E-01	-1.260
		831.60		1.736E-01	3.934E-01	6.915E-01	2.039E-01	0.251
		876.40		2.690E-01	5.647E-01	8.928E-01	9.168E-01	0.301
		880.51		-1.073E-02	1.578E-01	2.579E-01	1.858E-02	-0.042
		883.24		4.786E-02	1.701E-01	2.908E-01	1.950E-01	0.165
		899.00		4.658E-01	5.378E-01	9.529E-01	4.141E-01	0.489
		925.00		-1.843E-01	7.042E-01	1.106E+00	7.835E-02	-0.167
		926.50		3.809E-02	1.031E-01	1.811E-01	4.489E-02	0.210
		946.00	*	9.770E-02	1.898E-01	3.391E-01	6.134E-02	0.288
		949.00		2.496E-01	2.894E-01	5.423E-01	3.802E-02	0.460
		980.50		2.127E-01	3.847E-01	7.052E-01	4.861E-02	0.302
		1394.10		-1.453E-01	7.735E-01	1.177E+00	7.624E-01	-0.123
PA-234M		766.41		4.041E+00	9.472E+00	1.600E+01	1.225E+01	0.253
		1001.03	*	4.666E+00	3.929E+00	7.717E+00	7.598E-01	0.605
TH-234		63.29	*	1.156E-01	1.533E-01	2.653E-01	4.597E-02	0.436
		92.38		7.145E-02	1.287E-01	2.050E-01	3.707E-02	0.349
U-234		609.31	*	3.147E-02	4.734E-02	8.196E-02	7.102E-03	0.384
		768.36		3.049E-01	3.674E-01	6.911E-01	6.525E-02	0.441
		934.06		-1.733E-01	6.426E-01	1.005E+00	9.459E-02	-0.172
		1120.29		1.124E-01	1.734E-01	3.158E-01	2.840E-02	0.356
		1238.11		2.098E-01	3.941E-01	7.164E-01	5.848E-02	0.293
		1377.67		6.909E-02	5.764E-01	9.610E-01	8.398E-02	0.072
		1764.49		-1.317E-01	1.686E-01	2.434E-01	1.378E-02	-0.541
U-235		89.95		2.291E-02	2.430E-01	3.965E-01	1.221E-01	0.058
		93.35		-2.099E-02	1.556E-01	2.338E-01	6.559E-02	-0.090
		105.00		-9.303E-02	2.944E-01	4.574E-01	1.381E-01	-0.203
		143.76	*	8.844E-03	7.290E-02	1.119E-01	1.986E-02	0.079
	+	163.35		2.732E-01	3.600E-01	2.975E-01	5.413E-02	0.919
		185.71		5.573E-03	1.887E-02	3.036E-02	1.867E-03	0.184
		205.31		8.201E-02	1.909E-01	3.311E-01	5.997E-02	0.248
NP-236		94.67		-1.166E-02	2.994E-02	4.655E-02	4.104E-03	-0.250
		98.44		2.849E-03	1.742E-02	2.861E-02	2.615E-03	0.100
		111.00		2.106E-02	3.977E-02	6.734E-02	6.952E-03	0.313
		160.31	*	-1.922E-02	3.066E-02	4.582E-02	3.153E-03	-0.420

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237		86.50	*	-5.114E-02	5.662E-02	7.888E-02	1.751E-02	-0.648
		95.87		-2.558E-01	2.517E-01	3.530E-01	8.734E-02	-0.725
U-238		63.29	*	1.156E-01	1.533E-01	2.653E-01	4.597E-02	0.436
		92.38		7.145E-02	1.281E-01	2.050E-01	1.769E-02	0.349
NP-239		99.55		9.556E-03	4.108E-02	6.785E-02	6.268E-03	0.141
		117.00	*	6.943E-02	5.633E-02	1.008E-01	1.104E-02	0.689
		209.75		3.700E-02	2.807E-01	4.755E-01	2.951E-02	0.078
		228.18		-6.060E-03	8.800E-02	1.460E-01	9.042E-03	-0.042
		277.60		3.826E-02	7.178E-02	1.258E-01	7.373E-03	0.304
		334.30		5.080E-02	5.948E-01	9.904E-01	5.749E-02	0.051
AM-241		59.54	*	-1.478E-02	1.654E-02	2.455E-02	1.916E-03	-0.602
AM-243		74.67	*	-6.706E-03	1.096E-02	1.545E-02	1.167E-03	-0.434
		86.72		-1.624E+00	2.081E+00	2.996E+00	2.458E-01	-0.542
		117.66		1.149E+00	1.105E+00	1.953E+00	2.152E-01	0.588
		142.18		-6.450E-01	5.973E+00	9.457E+00	8.782E-01	-0.068
CM-243		99.55		9.829E-03	4.225E-02	6.978E-02	6.446E-03	0.141
		103.76	*	-2.397E-03	2.616E-02	4.181E-02	4.023E-03	-0.057
		117.00		7.139E-02	5.792E-02	1.037E-01	1.135E-02	0.689
		209.75		3.646E-02	2.766E-01	4.685E-01	2.908E-02	0.078
		228.18		-6.120E-03	8.888E-02	1.475E-01	9.132E-03	-0.042
		277.60		3.855E-02	7.233E-02	1.268E-01	7.429E-03	0.304
CM-247		278.00		8.293E-02	3.003E-01	5.131E-01	3.004E-02	0.162
		287.40		5.843E-01	5.888E-01	1.065E+00	6.237E-02	0.549
		402.60	*	1.080E-02	1.606E-02	2.875E-02	1.577E-03	0.376
CF-249		252.85		1.416E-01	4.097E-01	7.027E-01	4.275E-02	0.201
		333.44		-2.496E-02	7.907E-02	1.257E-01	7.302E-03	-0.199
		387.95	*	-1.220E-02	1.879E-02	2.805E-02	1.521E-03	-0.435
CF-251		176.60	*	-4.235E-02	4.266E-02	6.466E-02	3.949E-03	-0.655
		227.00		-3.132E-02	1.535E-01	2.515E-01	1.558E-02	-0.125
		285.00		3.056E-01	8.033E-01	1.382E+00	8.089E-02	0.221
ANH-511		511.00	*	-1.415E-02	2.967E-02	5.425E-02	3.461E-03	-0.261

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871426    *
* Acquisition date :  7-JUL-2009 10:59:05 Detector SN#    :                *
* Detector ID        : GAM21               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:08.45      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 30-JUN-2009 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201871426          Analyst initials: MXR1         *
* Batch Number       : 881220               Sample Quantity : 1.6676E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)	
BE-7	3.607E-02	1.551E-01	2.650E-01	0.000E+00 NOT IDENT.
NA-22	-5.846E-03	2.220E-02	3.488E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	9.445E+01	0.000E+00	0.000E+00 SHORT HLIF
AL-26	1.319E-02	2.265E-02	4.487E-02	0.000E+00 NOT IDENT.
K-40	-3.939E-03	2.944E-01	4.885E-01	0.000E+00 NOT IDENT.
TI-44	-2.838E-03	6.926E-03	1.169E-02	0.000E+00 NOT IDENT.
SC-46	-5.505E-03	2.034E-02	3.350E-02	0.000E+00 NOT IDENT.
V-48	-1.429E-02	2.853E-02	4.405E-02	0.000E+00 NOT IDENT.
CR-51	-3.714E-02	1.381E-01	2.397E-01	0.000E+00 NOT IDENT.
MN-52	2.747E-02	6.991E-02	1.265E-01	0.000E+00 NOT IDENT.
MN-54	1.938E-03	2.223E-02	3.933E-02	0.000E+00 NOT IDENT.
CO-56	-1.369E-02	2.178E-02	3.379E-02	0.000E+00 NOT IDENT.
CO-57	-8.053E-03	8.273E-03	1.333E-02	0.000E+00 NOT IDENT.
CO-58	-5.482E-03	1.780E-02	2.923E-02	0.000E+00 NOT IDENT.
FE-59	-3.620E-02	4.596E-02	6.487E-02	0.000E+00 NOT IDENT.
CO-60	1.017E-02	2.417E-02	4.445E-02	0.000E+00 NOT IDENT.
ZN-65	-6.141E-02	5.867E-02	8.129E-02	0.000E+00 NOT IDENT.
GE-68	-8.675E-01	6.348E-01	6.823E-01	0.000E+00 NOT IDENT.
AS-73	1.087E-02	6.070E-02	1.151E-01	0.000E+00 NOT IDENT.
AS-74	-9.241E-03	4.048E-02	6.696E-02	0.000E+00 NOT IDENT.
SE-75	-5.787E-03	1.682E-02	2.935E-02	0.000E+00 NOT IDENT.
BR-77	-2.755E-01	6.339E-01	1.027E+00	0.000E+00 NOT IDENT.
SR-82	3.535E-03	1.673E-01	2.948E-01	0.000E+00 NOT IDENT.
RB-83	-2.310E-02	3.802E-02	6.007E-02	0.000E+00 NOT IDENT.
RB-84	-3.085E-02	3.454E-02	4.953E-02	0.000E+00 NOT IDENT.
KR-85	-5.908E+00	5.930E+00	9.332E+00	0.000E+00 NOT IDENT.

SR-85	-2.795E-02	2.805E-02	4.415E-02	0.000E+00	NOT IDENT.
RB-86	-3.878E-01	3.002E-01	3.299E-01	0.000E+00	NOT IDENT.
Y-88	8.547E-03	2.732E-02	5.015E-02	0.000E+00	NOT IDENT.
ZR-88	1.440E-02	1.275E-02	2.570E-02	0.000E+00	NOT IDENT.
Y-91	-4.015E+00	7.991E+00	1.183E+01	0.000E+00	NOT IDENT.
NB-94	9.502E-04	1.823E-02	3.252E-02	0.000E+00	NOT IDENT.
NB-95	5.798E-03	2.054E-02	3.768E-02	0.000E+00	NOT IDENT.
NB-95M	-1.108E-02	4.610E-02	8.239E-02	0.000E+00	NOT IDENT.
ZR-95	1.266E-02	3.788E-02	6.994E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.733E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.382E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.701E-01	9.500E-01	1.795E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	8.449E+06	0.000E+00	0.000E+00	SHORT HLIF
RH-101	8.788E-03	1.153E-02	2.264E-02	0.000E+00	NOT IDENT.
RH-102	3.539E-03	1.402E-02	2.534E-02	0.000E+00	NOT IDENT.
RU-103	1.167E-03	2.128E-02	3.721E-02	0.000E+00	NOT IDENT.
RH-106	-2.183E-01	2.199E-01	2.860E-01	0.000E+00	NOT IDENT.
RU-106	-2.183E-01	2.188E-01	2.860E-01	0.000E+00	NOT IDENT.
AG-108M	-6.749E-04	1.533E-02	2.670E-02	0.000E+00	NOT IDENT.
CD-109	-2.770E-02	1.687E-01	3.028E-01	0.000E+00	NOT IDENT.
AG-110M	7.571E-05	1.812E-02	3.225E-02	0.000E+00	NOT IDENT.
IN-111	-5.371E-02	6.268E-02	1.038E-01	0.000E+00	NOT IDENT.
IN-113M	1.217E-02	1.998E-02	3.790E-02	0.000E+00	NOT IDENT.
SN-113	1.217E-02	1.998E-02	3.790E-02	0.000E+00	NOT IDENT.
IN-114M	-2.880E-02	5.919E-02	1.047E-01	0.000E+00	NOT IDENT.
CD-115	-3.067E-01	5.431E-01	8.558E-01	0.000E+00	NOT IDENT.
SN-117M	-6.078E-03	1.417E-02	2.400E-02	0.000E+00	NOT IDENT.
SB-122	-5.193E-02	1.662E-01	2.726E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.362E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.599E-03	1.055E-02	1.819E-02	0.000E+00	NOT IDENT.
I-124	2.309E-03	1.135E-01	1.948E-01	0.000E+00	NOT IDENT.
SB-124	-3.632E-02	5.842E-02	8.274E-02	0.000E+00	NOT IDENT.
SB-125	4.049E-04	4.501E-02	7.908E-02	0.000E+00	NOT IDENT.
TE-125M	1.741E+00	2.312E+00	4.456E+00	0.000E+00	NOT IDENT.
I-126	1.129E-02	6.199E-02	1.131E-01	0.000E+00	NOT IDENT.
SB-126	-6.238E-03	5.289E-02	9.179E-02	0.000E+00	NOT IDENT.
SN-126	-1.388E-02	1.851E-02	3.011E-02	0.000E+00	NOT IDENT.
SB-127	-4.623E-02	1.675E-01	2.829E-01	0.000E+00	NOT IDENT.
XE-127	-8.514E-03	1.500E-02	2.620E-02	0.000E+00	NOT IDENT.
I-131	-6.106E-04	2.737E-02	4.843E-02	0.000E+00	NOT IDENT.
TE-132	-4.061E-03	5.165E-02	9.373E-02	0.000E+00	NOT IDENT.
BA-133	-1.452E-02	2.242E-02	3.691E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	6.763E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	-1.385E-02	2.441E-02	3.848E-02	0.000E+00	NOT IDENT.
CS-135	2.832E-02	6.148E-02	1.164E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.448E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	7.310E-03	4.017E-02	7.133E-02	0.000E+00	FAIL ABUN
BA-137M	-3.520E-03	1.817E-02	3.133E-02	0.000E+00	NOT IDENT.
CS-137	-3.721E-03	1.920E-02	3.312E-02	0.000E+00	NOT IDENT.
CE-139	7.198E-03	1.058E-02	1.861E-02	0.000E+00	NOT IDENT.
BA-140	-3.248E-03	8.119E-02	1.392E-01	0.000E+00	FAIL ABUN
LA-140	1.473E-02	4.774E-02	8.683E-02	0.000E+00	NOT IDENT.
CE-141	7.482E-03	1.682E-02	3.116E-02	0.000E+00	NOT IDENT.
CE-143	-4.448E-01	1.196E+00	2.066E+00	0.000E+00	NOT IDENT.
CE-144	-2.722E-02	6.935E-02	1.188E-01	0.000E+00	NOT IDENT.
PM-144	3.397E-03	1.555E-02	2.857E-02	0.000E+00	NOT IDENT.
PR-144	2.293E-01	1.050E+00	1.928E+00	0.000E+00	NOT IDENT.
PM-146	-1.091E-02	2.012E-02	3.213E-02	0.000E+00	NOT IDENT.
ND-147	8.613E-02	1.690E-01	3.150E-01	0.000E+00	NOT IDENT.
PM-149	2.269E+00	3.721E+00	7.083E+00	0.000E+00	NOT IDENT.
EU-152	-2.644E-04	4.864E-02	8.660E-02	0.000E+00	NOT IDENT.
GD-153	-3.662E-03	1.878E-02	3.337E-02	0.000E+00	NOT IDENT.
EU-154	-1.501E-02	6.259E-02	9.900E-02	0.000E+00	NOT IDENT.
EU-155	-1.566E-02	2.957E-02	5.051E-02	0.000E+00	NOT IDENT.
TB-160	-7.600E-02	8.071E-02	1.162E-01	0.000E+00	NOT IDENT.
HO-166M	-3.172E-02	3.459E-02	5.221E-02	0.000E+00	NOT IDENT.
TM-171	-5.696E+00	4.275E+00	6.322E+00	0.000E+00	NOT IDENT.
LU-176	-3.910E-03	1.156E-02	2.002E-02	0.000E+00	NOT IDENT.
LU-177	2.943E-02	1.782E-01	3.323E-01	0.000E+00	NOT IDENT.
LU-177M	-8.206E-02	8.053E-02	1.208E-01	0.000E+00	NOT IDENT.
HF-181	-4.337E-03	1.839E-02	3.084E-02	0.000E+00	NOT IDENT.
W-181	-2.435E-02	4.897E-02	7.932E-02	0.000E+00	NOT IDENT.
TA-182	1.852E-02	8.549E-02	1.518E-01	0.000E+00	NOT IDENT.
RE-183	5.911E-02	7.567E-02	6.680E-02	0.000E+00	FAIL ABUN
RE-184	3.656E-02	1.037E-01	1.941E-01	0.000E+00	NOT IDENT.
OS-185	1.438E-02	2.562E-02	4.710E-02	0.000E+00	NOT IDENT.
RE-188	-2.243E-02	6.573E-02	9.652E-02	0.000E+00	NOT IDENT.
W-188	8.515E-01	3.007E+00	5.567E+00	0.000E+00	NOT IDENT.

IR-192	-6.886E-03	1.461E-02	2.478E-02	0.000E+00	NOT IDENT.
AU-195	1.218E-02	5.454E-02	1.009E-01	0.000E+00	NOT IDENT.
TL-200	-4.418E-01	1.471E+00	2.500E+00	0.000E+00	NOT IDENT.
TL-201	1.846E-01	4.505E-01	7.690E-01	0.000E+00	NOT IDENT.
TL-202	1.020E-02	1.957E-02	3.694E-02	0.000E+00	NOT IDENT.
HG-203	1.986E-03	1.500E-02	2.744E-02	0.000E+00	NOT IDENT.
BI-207	-7.777E-03	3.149E-02	5.134E-02	0.000E+00	NOT IDENT.
TL-207	-1.001E-01	3.032E-01	5.220E-01	0.000E+00	NOT IDENT.
TL-208	3.919E-03	2.408E-02	3.540E-02	0.000E+00	NOT IDENT.
PO-209	8.616E-01	4.468E+00	8.009E+00	0.000E+00	NOT IDENT.
BI-210	-2.500E-02	1.450E-01	2.675E-01	0.000E+00	NOT IDENT.
PB-210	-2.500E-02	1.450E-01	2.675E-01	0.000E+00	NOT IDENT.
PO-210	-2.500E-02	1.450E-01	2.675E-01	0.000E+00	NOT IDENT.
BI-211	4.770E-03	1.146E-01	2.010E-01	0.000E+00	NOT IDENT.
PB-211	-1.092E-01	4.458E-01	7.513E-01	0.000E+00	NOT IDENT.
BI-212	1.033E-01	1.572E-01	3.033E-01	0.000E+00	NOT IDENT.
PB-212	5.060E-04	2.768E-02	4.982E-02	0.000E+00	NOT IDENT.
PO-212	5.060E-04	2.768E-02	4.982E-02	0.000E+00	NOT IDENT.
BI-214	3.147E-02	4.640E-02	8.533E-02	0.000E+00	NOT IDENT.
PB-214	-1.316E-02	4.041E-02	6.834E-02	0.000E+00	NOT IDENT.
PO-214	-1.316E-02	4.041E-02	6.834E-02	0.000E+00	NOT IDENT.
PO-215	-1.001E-01	3.032E-01	5.220E-01	0.000E+00	NOT IDENT.
PO-216	5.060E-04	2.768E-02	4.982E-02	0.000E+00	NOT IDENT.
PO-218	-1.316E-02	4.041E-02	6.834E-02	0.000E+00	NOT IDENT.
RN-219	2.498E-02	1.803E-01	3.239E-01	0.000E+00	NOT IDENT.
RN-220	-1.005E+01	1.437E+01	2.196E+01	0.000E+00	NOT IDENT.
RA-223	-1.001E-01	3.032E-01	5.220E-01	0.000E+00	NOT IDENT.
RA-224	2.386E-01	2.714E-01	5.296E-01	0.000E+00	NOT IDENT.
RA-226	3.147E-02	4.640E-02	8.533E-02	0.000E+00	NOT IDENT.
AC-227	-4.733E-02	1.779E-01	3.153E-01	0.000E+00	NOT IDENT.
TH-227	-4.733E-02	1.780E-01	3.153E-01	0.000E+00	NOT IDENT.
AC-228	2.715E-02	6.385E-02	1.200E-01	0.000E+00	NOT IDENT.
RA-228	2.715E-02	6.385E-02	1.200E-01	0.000E+00	NOT IDENT.
TH-228	7.737E-04	2.770E-02	4.989E-02	0.000E+00	NOT IDENT.
TH-229	-1.397E-01	1.801E-01	3.082E-01	0.000E+00	NOT IDENT.
TH-230	3.147E-02	4.640E-02	8.533E-02	0.000E+00	NOT IDENT.
PA-231	-3.980E-01	6.541E-01	1.098E+00	0.000E+00	NOT IDENT.
TH-231	-1.001E-01	3.032E-01	5.220E-01	0.000E+00	NOT IDENT.
U-231	-8.188E-02	7.676E-02	1.243E-01	0.000E+00	NOT IDENT.
TH-232	2.715E-02	6.385E-02	1.200E-01	0.000E+00	NOT IDENT.
PA-233	1.125E-02	2.865E-02	5.351E-02	0.000E+00	NOT IDENT.
PA-234	9.770E-02	1.860E-01	3.482E-01	0.000E+00	NOT IDENT.
PA-234M	4.666E+00	3.850E+00	7.907E+00	0.000E+00	NOT IDENT.
TH-234	1.156E-01	1.502E-01	2.953E-01	0.000E+00	NOT IDENT.
U-234	3.147E-02	4.640E-02	8.533E-02	0.000E+00	NOT IDENT.
U-235	8.844E-03	7.144E-02	1.217E-01	0.000E+00	FAIL ABUN
NP-236	-1.922E-02	3.004E-02	4.967E-02	0.000E+00	NOT IDENT.
NP-237	-5.114E-02	5.548E-02	8.702E-02	0.000E+00	NOT IDENT.
U-238	1.156E-01	1.502E-01	2.953E-01	0.000E+00	NOT IDENT.
NP-239	6.943E-02	5.520E-02	1.103E-01	0.000E+00	NOT IDENT.
AM-241	-1.478E-02	1.621E-02	2.737E-02	0.000E+00	NOT IDENT.
AM-243	-6.706E-03	1.074E-02	1.711E-02	0.000E+00	NOT IDENT.
CM-243	-2.397E-03	2.564E-02	4.589E-02	0.000E+00	NOT IDENT.
CM-247	1.080E-02	1.574E-02	3.032E-02	0.000E+00	NOT IDENT.
CF-249	-1.220E-02	1.842E-02	2.962E-02	0.000E+00	NOT IDENT.
CF-251	-4.235E-02	4.180E-02	6.989E-02	0.000E+00	NOT IDENT.
ANH-511	-1.415E-02	2.907E-02	5.679E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:59:43.89

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871426.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:59:05.
Sample ID         : G1201871426          Sample quantity  : 1.66760E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.45  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Flag: "*" = Keyline

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	163.06	35	90	6.35	324.93	310	18	4.90E-03	****	6.19E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 12:59:49.07

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871426.CNF;1  *
* Acquisition date  : 7-JUL-2009 10:59:05.  Detector SN#     :             *
* Detector ID       : GAM21                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:08.45          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201871426           Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.66760E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.607E-02		1.582E-01	2.526E-01	1.778E-02	0.143
NA-22	-5.846E-03		2.266E-02	3.431E-02	2.029E-03	-0.170
NA-24	-6.687E-05		4.819E-05	Half-Life too short		
AL-26	1.319E-02		2.311E-02	4.466E-02	2.486E-03	0.295
K-40	-3.939E-03		3.004E-01	4.827E-01	3.072E-02	-0.008
TI-44	-2.838E-03		7.067E-03	1.056E-02	8.170E-04	-0.269
SC-46	-5.505E-03		2.075E-02	3.257E-02	2.338E-03	-0.169
V-48	-1.429E-02		2.911E-02	4.297E-02	2.956E-03	-0.333
CR-51	-3.714E-02		1.410E-01	2.257E-01	1.468E-02	-0.165
MN-52	2.747E-02		7.133E-02	1.249E-01	7.529E-03	0.220
MN-54	1.938E-03		2.269E-02	3.816E-02	2.784E-03	0.051
CO-56	-1.369E-02		2.223E-02	3.280E-02	2.386E-03	-0.417
CO-57	-8.053E-03		8.442E-03	1.220E-02	1.404E-03	-0.660
CO-58	-5.482E-03		1.816E-02	2.833E-02	2.081E-03	-0.194
FE-59	-3.620E-02		4.690E-02	6.351E-02	4.555E-03	-0.570
CO-60	1.017E-02		2.467E-02	4.379E-02	2.634E-03	0.232
ZN-65	-6.141E-02		5.987E-02	7.961E-02	4.884E-03	-0.771

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	-8.675E-01		6.478E-01	6.675E-01	4.260E-02	-1.300
AS-73	1.087E-02		6.193E-02	1.030E-01	6.920E-03	0.106
AS-74	-9.241E-03		4.130E-02	6.428E-02	4.423E-03	-0.144
SE-75	-5.787E-03		1.716E-02	2.747E-02	1.662E-03	-0.211
BR-77	-2.755E-01		6.468E-01	9.819E-01	6.329E-02	-0.281
SR-82	3.535E-03		1.707E-01	2.854E-01	2.092E-02	0.012
RB-83	-2.310E-02		3.880E-02	5.742E-02	3.700E-03	-0.402
RB-84	-3.085E-02		3.525E-02	4.814E-02	3.467E-03	-0.641
KR-85	-5.908E+00		6.052E+00	8.916E+00	5.707E-01	-0.663
SR-85	-2.795E-02		2.863E-02	4.218E-02	2.700E-03	-0.663
RB-86	-3.878E-01		3.063E-01	3.227E-01	2.061E-02	-1.202
Y-88	8.547E-03		2.788E-02	4.994E-02	2.756E-03	0.171
ZR-88	1.440E-02		1.301E-02	2.436E-02	1.314E-03	0.591
Y-91	-4.015E+00		8.154E+00	1.162E+01	6.673E-01	-0.346
NB-94	9.502E-04		1.860E-02	3.138E-02	2.275E-03	0.030
NB-95	5.798E-03		2.096E-02	3.645E-02	2.672E-03	0.159
NB-95M	-1.108E-02		4.704E-02	7.688E-02	6.010E-03	-0.144
ZR-95	1.266E-02		3.865E-02	6.764E-02	5.638E-03	0.187
NB-97	-5.767E-07		1.394E-05	Half-Life too short		
ZR-97	-1.295E-03		3.766E-04	Half-Life too short		
MO-99	4.701E-01		9.694E-01	1.735E+00	2.512E-01	0.271
TC-99M	-4.498E+00		4.311E+00	Half-Life too short		
RH-101	8.788E-03		1.177E-02	2.102E-02	1.300E-03	0.418
RH-102	3.539E-03		1.431E-02	2.415E-02	1.476E-03	0.147
RU-103	1.167E-03		2.172E-02	3.551E-02	4.571E-03	0.033
RH-106	-2.183E-01		2.244E-01	2.749E-01	3.401E-02	-0.794
RU-106	-2.183E-01		2.233E-01	2.749E-01	1.924E-02	-0.794
AG-108M	-6.749E-04		1.564E-02	2.537E-02	1.591E-03	-0.027
CD-109	-2.770E-02		1.721E-01	2.746E-01	2.276E-02	-0.101
AG-110M	7.571E-05		1.849E-02	3.105E-02	2.310E-03	0.002
IN-111	-5.371E-02		6.396E-02	9.696E-02	5.942E-03	-0.554
IN-113M	1.217E-02		2.038E-02	3.591E-02	2.082E-03	0.339
SN-113	1.217E-02		2.038E-02	3.591E-02	2.082E-03	0.339
IN-114M	-2.880E-02		6.040E-02	9.707E-02	5.984E-03	-0.297
CD-115	-3.067E-01		5.542E-01	8.183E-01	5.314E-02	-0.375
SN-117M	-6.078E-03		1.446E-02	2.213E-02	1.578E-03	-0.275
SB-122	-5.193E-02		1.696E-01	2.612E-01	1.754E-02	-0.199
I-123	-3.356E-05		6.950E-05	Half-Life too short		
TE-123M	-2.599E-03		1.076E-02	1.678E-02	1.197E-03	-0.155
I-124	2.309E-03		1.159E-01	1.871E-01	1.293E-02	0.012
SB-124	-3.632E-02		5.961E-02	8.216E-02	5.169E-03	-0.442
SB-125	4.049E-04		4.593E-02	7.513E-02	4.482E-03	0.005
TE-125M	1.741E+00		2.359E+00	4.066E+00	4.727E-01	0.428
I-126	1.129E-02		6.326E-02	1.090E-01	7.801E-03	0.104
SB-126	-6.238E-03		5.397E-02	8.864E-02	6.456E-03	-0.070
SN-126	-1.388E-02		1.888E-02	2.730E-02	2.254E-03	-0.509
SB-127	-4.623E-02		1.709E-01	2.728E-01	2.271E-02	-0.169
XE-127	-8.514E-03		1.530E-02	2.434E-02	1.509E-03	-0.350

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	-6.106E-04		2.793E-02	4.578E-02	2.871E-03	-0.013
TE-132	-4.061E-03		5.271E-02	8.737E-02	1.166E-02	-0.046
BA-133	-1.452E-02		2.288E-02	3.487E-02	4.013E-03	-0.417
I-133	-1.195E-06		3.451E-06	Half-Life too short		
CS-134	-1.385E-02		2.491E-02	3.727E-02	2.759E-03	-0.372
CS-135	2.832E-02		6.274E-02	1.091E-01	8.483E-03	0.260
I-135	-8.841E-01		7.388E+00	Half-Life too short		
CS-136	7.310E-03		4.099E-02	6.971E-02	4.898E-03	0.105
BA-137M	-3.520E-03		1.854E-02	3.017E-02	2.155E-03	-0.117
CS-137	-3.721E-03		1.960E-02	3.189E-02	2.285E-03	-0.117
CE-139	7.198E-03		1.079E-02	1.719E-02	1.041E-03	0.419
BA-140	-3.248E-03		8.285E-02	1.331E-01	4.349E-02	-0.024
LA-140	1.473E-02		4.871E-02	8.606E-02	5.099E-03	0.171
CE-141	7.482E-03		1.716E-02	2.867E-02	2.591E-03	0.261
CE-143	-4.448E-01		1.220E+00	1.940E+00	3.968E-01	-0.229
CE-144	-2.722E-02		7.077E-02	1.090E-01	1.805E-02	-0.250
PM-144	3.397E-03		1.587E-02	2.756E-02	1.995E-03	0.123
PR-144	2.293E-01		1.071E+00	1.860E+00	1.346E-01	0.123
PM-146	-1.091E-02		2.053E-02	3.058E-02	2.666E-03	-0.357
ND-147	8.613E-02		1.724E-01	3.012E-01	4.170E-02	0.286
PM-149	2.269E+00		3.797E+00	6.647E+00	9.422E-01	0.341
EU-152	-2.644E-04		4.964E-02	8.173E-02	5.315E-03	-0.003
GD-153	-3.662E-03		1.916E-02	3.035E-02	2.747E-03	-0.121
EU-154	-1.501E-02		6.387E-02	9.738E-02	9.159E-03	-0.154
EU-155	-1.566E-02		3.018E-02	4.604E-02	4.540E-03	-0.340
TB-160	-7.600E-02		8.236E-02	1.130E-01	8.141E-03	-0.673
HO-166M	-3.172E-02		3.530E-02	5.040E-02	3.663E-03	-0.629
TM-171	-5.696E+00		4.362E+00	5.689E+00	4.117E-01	-1.001
LU-176	-3.910E-03		1.180E-02	1.883E-02	1.104E-03	-0.208
LU-177	2.943E-02		1.819E-01	3.089E-01	1.917E-02	0.095
LU-177M	-8.206E-02		8.217E-02	1.147E-01	6.408E-03	-0.716
HF-181	-4.337E-03		1.877E-02	2.941E-02	1.814E-03	-0.147
W-181	-2.435E-02		4.997E-02	7.134E-02	5.128E-03	-0.341
TA-182	1.852E-02		8.723E-02	1.491E-01	8.620E-03	0.124
RE-183	5.911E-02	+	7.722E-02	6.164E-02	4.060E-03	0.959
RE-184	3.656E-02		1.058E-01	1.815E-01	1.104E-02	0.201
OS-185	1.438E-02		2.615E-02	4.532E-02	3.214E-03	0.317
RE-188	-2.243E-02		6.707E-02	8.896E-02	6.784E-03	-0.252
W-188	8.515E-01		3.068E+00	5.227E+00	3.063E-01	0.163
IR-192	-6.886E-03		1.491E-02	2.333E-02	1.372E-03	-0.295
AU-195	1.218E-02		5.565E-02	9.185E-02	8.431E-03	0.133
TL-200	-4.418E-01		1.501E+00	2.364E+00	1.325E-01	-0.187
TL-201	1.846E-01		4.597E-01	7.103E-01	4.302E-02	0.260
TL-202	1.020E-02		1.997E-02	3.512E-02	2.044E-03	0.290
HG-203	1.986E-03		1.530E-02	2.574E-02	1.595E-03	0.077
BI-207	-7.777E-03		3.213E-02	5.020E-02	3.247E-03	-0.155
TL-207	-1.001E-01		3.094E-01	4.917E-01	8.127E-02	-0.203
TL-208	3.919E-03		2.458E-02	3.396E-02	2.576E-03	0.115

Sample ID : G1201871426 Acquisition date : 7-JUL-2009 10:59:05

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	8.616E-01		4.559E+00	7.789E+00	5.576E-01	0.111
BI-210	-2.500E-02		1.479E-01	2.384E-01	1.806E-02	-0.105
PB-210	-2.500E-02		1.479E-01	2.384E-01	1.806E-02	-0.105
PO-210	-2.500E-02		1.479E-01	2.384E-01	1.541E-02	-0.105
BI-211	4.770E-03		1.169E-01	1.898E-01	1.208E-02	0.025
PB-211	-1.092E-01		4.549E-01	7.126E-01	4.440E-01	-0.153
BI-212	1.033E-01		1.604E-01	2.930E-01	2.605E-02	0.353
PB-212	5.060E-04		2.824E-02	4.650E-02	3.543E-03	0.011
PO-212	5.060E-04		2.824E-02	4.650E-02	3.543E-03	0.011
BI-214	3.147E-02		4.734E-02	8.196E-02	7.102E-03	0.384
PB-214	-1.316E-02		4.123E-02	6.454E-02	5.309E-03	-0.204
PO-214	-1.316E-02		4.123E-02	6.454E-02	5.309E-03	-0.204
PO-215	-1.001E-01		3.094E-01	4.917E-01	8.127E-02	-0.203
PO-216	5.060E-04		2.824E-02	4.650E-02	3.543E-03	0.011
PO-218	-1.316E-02		4.123E-02	6.454E-02	5.309E-03	-0.204
RN-219	2.498E-02		1.840E-01	3.071E-01	4.137E-02	0.081
RN-220	-1.005E+01		1.466E+01	2.103E+01	1.394E+00	-0.478
RA-223	-1.001E-01		3.094E-01	4.917E-01	8.127E-02	-0.203
RA-224	2.386E-01		2.769E-01	4.944E-01	3.041E-02	0.483
RA-226	3.147E-02		4.734E-02	8.196E-02	7.102E-03	0.384
AC-227	-4.733E-02		1.816E-01	2.949E-01	4.149E-02	-0.161
TH-227	-4.733E-02		1.816E-01	2.949E-01	5.010E-02	-0.161
AC-228	2.715E-02		6.515E-02	1.168E-01	1.184E-02	0.233
RA-228	2.715E-02		6.515E-02	1.168E-01	1.184E-02	0.233
TH-228	7.737E-04		2.826E-02	4.656E-02	3.548E-03	0.017
TH-229	-1.397E-01		1.837E-01	2.859E-01	1.766E-02	-0.489
TH-230	3.147E-02		4.734E-02	8.196E-02	7.102E-03	0.384
PA-231	-3.980E-01		6.675E-01	1.031E+00	1.422E-01	-0.386
TH-231	-1.001E-01		3.094E-01	4.917E-01	8.127E-02	-0.203
U-231	-8.188E-02		7.833E-02	1.130E-01	1.008E-02	-0.725
TH-232	2.715E-02		6.515E-02	1.168E-01	1.184E-02	0.233
PA-233	1.125E-02		2.923E-02	5.035E-02	3.130E-03	0.223
PA-234	9.770E-02		1.898E-01	3.391E-01	6.134E-02	0.288
PA-234M	4.666E+00		3.929E+00	7.717E+00	7.598E-01	0.605
TH-234	1.156E-01		1.533E-01	2.653E-01	4.597E-02	0.436
U-234	3.147E-02		4.734E-02	8.196E-02	7.102E-03	0.384
U-235	8.844E-03		7.290E-02	1.119E-01	1.986E-02	0.079
NP-236	-1.922E-02		3.066E-02	4.582E-02	3.153E-03	-0.420
NP-237	-5.114E-02		5.662E-02	7.888E-02	1.751E-02	-0.648
U-238	1.156E-01		1.533E-01	2.653E-01	4.597E-02	0.436
NP-239	6.943E-02		5.633E-02	1.008E-01	1.104E-02	0.689
AM-241	-1.478E-02		1.654E-02	2.455E-02	1.916E-03	-0.602
AM-243	-6.706E-03		1.096E-02	1.545E-02	1.167E-03	-0.434
CM-243	-2.397E-03		2.616E-02	4.181E-02	4.023E-03	-0.057
CM-247	1.080E-02		1.606E-02	2.875E-02	1.577E-03	0.376
CF-249	-1.220E-02		1.879E-02	2.805E-02	1.521E-03	-0.435
CF-251	-4.235E-02		4.266E-02	6.466E-02	3.949E-03	-0.655
ANH-511	-1.415E-02		2.967E-02	5.425E-02	3.461E-03	-0.261

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871426          *
* Acquisition date  :  7-JUL-2009 10:59:05 Detector SN#     :               *
* Detector ID       : GAM21                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:08.45      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871426          Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.6676E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	3.607E-02	1.551E-01	1.326E-01	7.912E-02 NOT IDENT.
NA-22	-5.846E-03	2.220E-02	1.745E-02	1.133E-02 NOT IDENT.
NA-24	-6.687E+01	9.445E+01	0.000E+00	4.819E+01 SHORT HLIF
AL-26	1.319E-02	2.265E-02	2.245E-02	1.155E-02 NOT IDENT.
K-40	-3.939E-03	2.944E-01	2.444E-01	1.502E-01 NOT IDENT.
TI-44	-2.838E-03	6.926E-03	5.847E-03	3.533E-03 NOT IDENT.
SC-46	-5.505E-03	2.034E-02	1.676E-02	1.038E-02 NOT IDENT.
V-48	-1.429E-02	2.853E-02	2.204E-02	1.456E-02 NOT IDENT.
CR-51	-3.714E-02	1.381E-01	1.199E-01	7.048E-02 NOT IDENT.
MN-52	2.747E-02	6.991E-02	6.328E-02	3.567E-02 NOT IDENT.
MN-54	1.938E-03	2.223E-02	1.968E-02	1.134E-02 NOT IDENT.
CO-56	-1.369E-02	2.178E-02	1.690E-02	1.111E-02 NOT IDENT.
CO-57	-8.053E-03	8.273E-03	6.667E-03	4.221E-03 NOT IDENT.
CO-58	-5.482E-03	1.780E-02	1.462E-02	9.082E-03 NOT IDENT.
FE-59	-3.620E-02	4.596E-02	3.246E-02	2.345E-02 NOT IDENT.
CO-60	1.017E-02	2.417E-02	2.224E-02	1.233E-02 NOT IDENT.
ZN-65	-6.141E-02	5.867E-02	4.067E-02	2.994E-02 NOT IDENT.
GE-68	-8.675E-01	6.348E-01	3.414E-01	3.239E-01 NOT IDENT.
AS-73	1.087E-02	6.070E-02	5.761E-02	3.097E-02 NOT IDENT.
AS-74	-9.241E-03	4.048E-02	3.350E-02	2.065E-02 NOT IDENT.
SE-75	-5.787E-03	1.682E-02	1.468E-02	8.581E-03 NOT IDENT.
BR-77	-2.755E-01	6.339E-01	5.139E-01	3.234E-01 NOT IDENT.
SR-82	3.535E-03	1.673E-01	1.475E-01	8.535E-02 NOT IDENT.
RB-83	-2.310E-02	3.802E-02	3.005E-02	1.940E-02 NOT IDENT.
RB-84	-3.085E-02	3.454E-02	2.478E-02	1.762E-02 NOT IDENT.
KR-85	-5.908E+00	5.930E+00	4.669E+00	3.026E+00 NOT IDENT.

SR-85	-2.795E-02	2.805E-02	2.209E-02	1.431E-02	NOT IDENT.
RB-86	-3.878E-01	3.002E-01	1.650E-01	1.531E-01	NOT IDENT.
Y-88	8.547E-03	2.732E-02	2.509E-02	1.394E-02	NOT IDENT.
ZR-88	1.440E-02	1.275E-02	1.286E-02	6.505E-03	NOT IDENT.
Y-91	-4.015E+00	7.991E+00	5.920E+00	4.077E+00	NOT IDENT.
NB-94	9.502E-04	1.823E-02	1.627E-02	9.302E-03	NOT IDENT.
NB-95	5.798E-03	2.054E-02	1.885E-02	1.048E-02	NOT IDENT.
NB-95M	-1.108E-02	4.610E-02	4.122E-02	2.352E-02	NOT IDENT.
ZR-95	1.266E-02	3.788E-02	3.499E-02	1.933E-02	NOT IDENT.
NB-97	-5.767E-01	2.733E+01	0.000E+00	1.394E+01	SHORT HLIF
ZR-97	-1.295E+03	7.382E+02	0.000E+00	3.766E+02	SHORT HLIF
MO-99	4.701E-01	9.500E-01	8.982E-01	4.847E-01	NOT IDENT.
TC-99M	-4.498E+06	8.449E+06	0.000E+00	4.311E+06	SHORT HLIF
RH-101	8.788E-03	1.153E-02	1.133E-02	5.883E-03	NOT IDENT.
RH-102	3.539E-03	1.402E-02	1.268E-02	7.155E-03	NOT IDENT.
RU-103	1.167E-03	2.128E-02	1.861E-02	1.086E-02	NOT IDENT.
RH-106	-2.183E-01	2.199E-01	1.431E-01	1.122E-01	NOT IDENT.
RU-106	-2.183E-01	2.188E-01	1.431E-01	1.116E-01	NOT IDENT.
AG-108M	-6.749E-04	1.533E-02	1.336E-02	7.819E-03	NOT IDENT.
CD-109	-2.770E-02	1.687E-01	1.515E-01	8.607E-02	NOT IDENT.
AG-110M	7.571E-05	1.812E-02	1.613E-02	9.243E-03	NOT IDENT.
IN-111	-5.371E-02	6.268E-02	5.193E-02	3.198E-02	NOT IDENT.
IN-113M	1.217E-02	1.998E-02	1.896E-02	1.019E-02	NOT IDENT.
SN-113	1.217E-02	1.998E-02	1.896E-02	1.019E-02	NOT IDENT.
IN-114M	-2.880E-02	5.919E-02	5.238E-02	3.020E-02	NOT IDENT.
CD-115	-3.067E-01	5.431E-01	4.281E-01	2.771E-01	NOT IDENT.
SN-117M	-6.078E-03	1.417E-02	1.201E-02	7.231E-03	NOT IDENT.
SB-122	-5.193E-02	1.662E-01	1.364E-01	8.480E-02	NOT IDENT.
I-123	-3.356E+01	1.362E+02	0.000E+00	6.950E+01	SHORT HLIF
TE-123M	-2.599E-03	1.055E-02	9.101E-03	5.381E-03	NOT IDENT.
I-124	2.309E-03	1.135E-01	9.747E-02	5.793E-02	NOT IDENT.
SB-124	-3.632E-02	5.842E-02	4.139E-02	2.981E-02	NOT IDENT.
SB-125	4.049E-04	4.501E-02	3.956E-02	2.296E-02	NOT IDENT.
TE-125M	1.741E+00	2.312E+00	2.229E+00	1.179E+00	NOT IDENT.
I-126	1.129E-02	6.199E-02	5.661E-02	3.163E-02	NOT IDENT.
SB-126	-6.238E-03	5.289E-02	4.592E-02	2.699E-02	NOT IDENT.
SN-126	-1.388E-02	1.851E-02	1.506E-02	9.442E-03	NOT IDENT.
SB-127	-4.623E-02	1.675E-01	1.415E-01	8.547E-02	NOT IDENT.
XE-127	-8.514E-03	1.500E-02	1.311E-02	7.653E-03	NOT IDENT.
I-131	-6.106E-04	2.737E-02	2.423E-02	1.396E-02	NOT IDENT.
TE-132	-4.061E-03	5.165E-02	4.690E-02	2.635E-02	NOT IDENT.
BA-133	-1.452E-02	2.242E-02	1.847E-02	1.144E-02	NOT IDENT.
I-133	-1.195E+00	6.763E+00	0.000E+00	3.451E+00	SHORT HLIF
CS-134	-1.385E-02	2.441E-02	1.925E-02	1.246E-02	NOT IDENT.
CS-135	2.832E-02	6.148E-02	5.826E-02	3.137E-02	NOT IDENT.
I-135	-8.841E+05	1.448E+07	0.000E+00	7.388E+06	SHORT HLIF
CS-136	7.310E-03	4.017E-02	3.568E-02	2.050E-02	FAIL ABUN
BA-137M	-3.520E-03	1.817E-02	1.567E-02	9.268E-03	NOT IDENT.
CS-137	-3.721E-03	1.920E-02	1.657E-02	9.798E-03	NOT IDENT.
CE-139	7.198E-03	1.058E-02	9.313E-03	5.397E-03	NOT IDENT.
BA-140	-3.248E-03	8.119E-02	6.962E-02	4.143E-02	FAIL ABUN
LA-140	1.473E-02	4.774E-02	4.344E-02	2.436E-02	NOT IDENT.
CE-141	7.482E-03	1.682E-02	1.559E-02	8.581E-03	NOT IDENT.
CE-143	-4.448E-01	1.196E+00	1.034E+00	6.101E-01	NOT IDENT.
CE-144	-2.722E-02	6.935E-02	5.944E-02	3.538E-02	NOT IDENT.
PM-144	3.397E-03	1.555E-02	1.429E-02	7.935E-03	NOT IDENT.
PR-144	2.293E-01	1.050E+00	9.647E-01	5.355E-01	NOT IDENT.
PM-146	-1.091E-02	2.012E-02	1.607E-02	1.027E-02	NOT IDENT.
ND-147	8.613E-02	1.690E-01	1.576E-01	8.620E-02	NOT IDENT.
PM-149	2.269E+00	3.721E+00	3.543E+00	1.898E+00	NOT IDENT.
EU-152	-2.644E-04	4.864E-02	4.333E-02	2.482E-02	NOT IDENT.
GD-153	-3.662E-03	1.878E-02	1.669E-02	9.579E-03	NOT IDENT.
EU-154	-1.501E-02	6.259E-02	4.953E-02	3.193E-02	NOT IDENT.
EU-155	-1.566E-02	2.957E-02	2.527E-02	1.509E-02	NOT IDENT.
TB-160	-7.600E-02	8.071E-02	5.815E-02	4.118E-02	NOT IDENT.
HO-166M	-3.172E-02	3.459E-02	2.612E-02	1.765E-02	NOT IDENT.
TM-171	-5.696E+00	4.275E+00	3.163E+00	2.181E+00	NOT IDENT.
LU-176	-3.910E-03	1.156E-02	1.001E-02	5.900E-03	NOT IDENT.
LU-177	2.943E-02	1.782E-01	1.662E-01	9.093E-02	NOT IDENT.
LU-177M	-8.206E-02	8.053E-02	6.045E-02	4.109E-02	NOT IDENT.
HF-181	-4.337E-03	1.839E-02	1.543E-02	9.385E-03	NOT IDENT.
W-181	-2.435E-02	4.897E-02	3.968E-02	2.498E-02	NOT IDENT.
TA-182	1.852E-02	8.549E-02	7.592E-02	4.362E-02	NOT IDENT.
RE-183	5.911E-02	7.567E-02	3.342E-02	3.861E-02	FAIL ABUN
RE-184	3.656E-02	1.037E-01	9.711E-02	5.291E-02	NOT IDENT.
OS-185	1.438E-02	2.562E-02	2.356E-02	1.307E-02	NOT IDENT.
RE-188	-2.243E-02	6.573E-02	4.829E-02	3.353E-02	NOT IDENT.
W-188	8.515E-01	3.007E+00	2.785E+00	1.534E+00	NOT IDENT.

IR-192	-6.886E-03	1.461E-02	1.240E-02	7.455E-03	NOT IDENT.
AU-195	1.218E-02	5.454E-02	5.050E-02	2.782E-02	NOT IDENT.
TL-200	-4.418E-01	1.471E+00	1.251E+00	7.506E-01	NOT IDENT.
TL-201	1.846E-01	4.505E-01	3.847E-01	2.299E-01	NOT IDENT.
TL-202	1.020E-02	1.957E-02	1.848E-02	9.985E-03	NOT IDENT.
HG-203	1.986E-03	1.500E-02	1.373E-02	7.651E-03	NOT IDENT.
BI-207	-7.777E-03	3.149E-02	2.568E-02	1.607E-02	NOT IDENT.
TL-207	-1.001E-01	3.032E-01	2.611E-01	1.547E-01	NOT IDENT.
TL-208	3.919E-03	2.408E-02	1.771E-02	1.229E-02	NOT IDENT.
PO-209	8.616E-01	4.468E+00	4.007E+00	2.280E+00	NOT IDENT.
BI-210	-2.500E-02	1.450E-01	1.338E-01	7.397E-02	NOT IDENT.
PB-210	-2.500E-02	1.450E-01	1.338E-01	7.397E-02	NOT IDENT.
PO-210	-2.500E-02	1.450E-01	1.338E-01	7.397E-02	NOT IDENT.
BI-211	4.770E-03	1.146E-01	1.005E-01	5.845E-02	NOT IDENT.
PB-211	-1.092E-01	4.458E-01	3.759E-01	2.274E-01	NOT IDENT.
BI-212	1.033E-01	1.572E-01	1.517E-01	8.019E-02	NOT IDENT.
PB-212	5.060E-04	2.768E-02	2.492E-02	1.412E-02	NOT IDENT.
PO-212	5.060E-04	2.768E-02	2.492E-02	1.412E-02	NOT IDENT.
BI-214	3.147E-02	4.640E-02	4.269E-02	2.367E-02	NOT IDENT.
PB-214	-1.316E-02	4.041E-02	3.419E-02	2.062E-02	NOT IDENT.
PO-214	-1.316E-02	4.041E-02	3.419E-02	2.062E-02	NOT IDENT.
PO-215	-1.001E-01	3.032E-01	2.611E-01	1.547E-01	NOT IDENT.
PO-216	5.060E-04	2.768E-02	2.492E-02	1.412E-02	NOT IDENT.
PO-218	-1.316E-02	4.041E-02	3.419E-02	2.062E-02	NOT IDENT.
RN-219	2.498E-02	1.803E-01	1.620E-01	9.200E-02	NOT IDENT.
RN-220	-1.005E+01	1.437E+01	1.099E+01	7.332E+00	NOT IDENT.
RA-223	-1.001E-01	3.032E-01	2.611E-01	1.547E-01	NOT IDENT.
RA-224	2.386E-01	2.714E-01	2.649E-01	1.385E-01	NOT IDENT.
RA-226	3.147E-02	4.640E-02	4.269E-02	2.367E-02	NOT IDENT.
AC-227	-4.733E-02	1.779E-01	1.577E-01	9.078E-02	NOT IDENT.
TH-227	-4.733E-02	1.780E-01	1.577E-01	9.081E-02	NOT IDENT.
AC-228	2.715E-02	6.385E-02	6.003E-02	3.257E-02	NOT IDENT.
RA-228	2.715E-02	6.385E-02	6.003E-02	3.257E-02	NOT IDENT.
TH-228	7.737E-04	2.770E-02	2.496E-02	1.413E-02	NOT IDENT.
TH-229	-1.397E-01	1.801E-01	1.542E-01	9.186E-02	NOT IDENT.
TH-230	3.147E-02	4.640E-02	4.269E-02	2.367E-02	NOT IDENT.
PA-231	-3.980E-01	6.541E-01	5.496E-01	3.337E-01	NOT IDENT.
TH-231	-1.001E-01	3.032E-01	2.611E-01	1.547E-01	NOT IDENT.
U-231	-8.188E-02	7.676E-02	6.219E-02	3.916E-02	NOT IDENT.
TH-232	2.715E-02	6.385E-02	6.003E-02	3.257E-02	NOT IDENT.
PA-233	1.125E-02	2.865E-02	2.677E-02	1.462E-02	NOT IDENT.
PA-234	9.770E-02	1.860E-01	1.742E-01	9.491E-02	NOT IDENT.
PA-234M	4.666E+00	3.850E+00	3.956E+00	1.964E+00	NOT IDENT.
TH-234	1.156E-01	1.502E-01	1.477E-01	7.664E-02	NOT IDENT.
U-234	3.147E-02	4.640E-02	4.269E-02	2.367E-02	NOT IDENT.
U-235	8.844E-03	7.144E-02	6.088E-02	3.645E-02	FAIL ABUN
NP-236	-1.922E-02	3.004E-02	2.485E-02	1.533E-02	NOT IDENT.
NP-237	-5.114E-02	5.548E-02	4.353E-02	2.831E-02	NOT IDENT.
U-238	1.156E-01	1.502E-01	1.477E-01	7.664E-02	NOT IDENT.
NP-239	6.943E-02	5.520E-02	5.517E-02	2.816E-02	NOT IDENT.
AM-241	-1.478E-02	1.621E-02	1.369E-02	8.271E-03	NOT IDENT.
AM-243	-6.706E-03	1.074E-02	8.562E-03	5.479E-03	NOT IDENT.
CM-243	-2.397E-03	2.564E-02	2.296E-02	1.308E-02	NOT IDENT.
CM-247	1.080E-02	1.574E-02	1.517E-02	8.028E-03	NOT IDENT.
CF-249	-1.220E-02	1.842E-02	1.482E-02	9.397E-03	NOT IDENT.
CF-251	-4.235E-02	4.180E-02	3.496E-02	2.133E-02	NOT IDENT.
ANH-511	-1.415E-02	2.907E-02	2.841E-02	1.483E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	51.5619
46.50	51.5619
46.50	51.5619
48.70	60.8474
49.72	52.8081
51.35	50.8887
52.39	48.9207
52.97	61.1976
53.15	57.1312
53.44	54.0912
54.07	59.2427
56.28	36.8755
56.28	36.8756
57.37	46.1579
57.53	46.1672
57.53	46.1673
57.60	46.1712
57.98	61.5908
57.98	61.5908
59.32	67.8625
59.32	67.8625
59.40	67.8691
59.54	67.8809
59.72	66.8671
60.01	62.7744
61.10	59.7664
61.14	55.6472
61.30	55.6579
63.00	40.2794
63.29	48.5585
63.29	48.5585
63.58	48.5752
64.28	55.8559
65.12	56.9462
65.20	60.0579
65.20	60.0579
66.05	66.3362
66.72	75.7229
66.83	71.5829
66.91	71.5895
67.20	69.5377
67.20	69.5377
67.75	60.2346
67.85	56.0869
68.90	63.4328
68.90	63.4328
69.30	63.4615
69.67	65.5696
70.82	60.4431
70.82	60.4431
70.83	60.4437
72.80	73.1079
72.87	73.1134
72.87	73.1134
74.67	61.7447
74.81	66.9873
74.81	66.9873
74.81	66.9873
74.81	66.9873
74.81	66.9873
74.81	66.9873
74.97	66.9988
75.28	70.1629
75.70	70.1943
77.11	65.0534
77.11	65.0534
77.11	65.0534

77.11	65.0534
77.11	65.0534
77.11	65.0534
78.38	64.0897
79.62	71.5367
79.80	71.5501
79.80	71.5501
80.11	72.6255
80.18	68.4203
80.30	68.4287
80.30	68.4287
80.57	67.3948
81.00	73.7456
81.07	73.7510
81.07	73.7510
81.07	73.7510
81.07	73.7510
82.60	67.5349
83.37	59.1390
83.78	58.1073
83.78	58.1073
83.78	58.1073
83.78	58.1073
84.21	58.1322
84.40	59.2005
84.90	63.4609
85.43	67.7275
86.29	64.6080
86.50	70.9774
86.54	70.9802
86.59	70.9838
86.72	68.8738
86.79	68.8783
86.94	64.6494
87.30	64.6724
87.30	64.6724
87.30	64.6724
87.30	64.6724
87.30	64.6724
87.30	64.6724
87.57	67.8708
87.88	67.8916
88.03	67.9016
88.36	71.1072
88.47	71.1149
89.95	69.0913
91.11	53.2066
92.29	55.3973
92.38	51.1403
92.38	51.1403
93.35	60.7850
94.00	59.7553
94.67	65.1313
94.67	65.1315
94.90	67.2815
94.90	67.2815
94.90	67.2815
94.90	67.2815
95.87	74.8249
95.87	74.8249
96.73	69.5361
97.43	55.6646
98.44	51.4305
98.44	51.4305
98.88	51.4512
99.55	53.6278
99.55	53.6278
99.86	53.6428
100.00	59.0147
100.10	59.0202
103.18	55.9554
103.76	54.9077
105.00	59.2793
105.31	62.5298
108.00	50.7900
109.28	45.4370
111.00	48.7544
111.00	48.7544

111.76	60.7115
112.95	68.3691
115.19	59.7998
116.30	45.7076
117.00	39.2006
117.00	39.2006
117.66	39.2220
121.11	73.2025
121.62	69.9536
121.78	69.9626
122.06	74.3522
122.32	72.1805
122.32	72.1805
122.32	72.1805
122.32	72.1805
123.07	60.1867
127.23	64.7776
129.76	66.0060
131.20	60.5729
133.02	56.2466
133.54	69.5085
135.34	74.0230
136.00	58.5850
136.25	59.7015
136.48	59.7118
140.51	69.8738
140.51	0.0000
142.18	61.0765
142.65	51.0997
143.76	48.9177
144.24	58.9445
144.24	58.9445
144.24	58.9445
144.24	58.9445
145.22	47.8570
145.44	47.8645
147.16	56.8400
152.43	48.3281
152.70	46.5470
153.22	48.3551
154.21	53.7653
154.21	53.7653
154.21	53.7653
154.21	53.7653
155.03	66.3484
156.02	61.0107
158.56	71.9038
159.00	0.0000
159.00	71.9258
160.31	71.9902
161.27	63.0329
162.32	58.5722
162.64	57.0827
163.35	55.6073
163.89	49.6138
165.85	45.1630
167.43	46.7176
171.28	49.8585
171.86	47.1571
172.10	52.6064
176.55	60.0357
176.60	60.0377
181.06	58.3848
184.41	55.7656
185.71	60.3857
186.00	60.3970
190.27	63.3095
192.34	50.5282
193.63	61.6012
197.04	53.4365
198.01	45.1710
198.60	42.4206
200.40	55.3909
201.83	64.6774
202.84	62.8672
205.31	49.9968
208.36	54.7237
208.81	53.8100

209.75	52.9111
209.75	52.9111
210.97	57.5933
215.65	53.0910
216.55	49.3905
218.09	54.0975
222.10	43.0017
223.80	55.2066
226.40	54.3492
227.00	55.3046
227.08	55.3071
227.20	55.3107
228.16	50.6501
228.18	50.6507
228.18	50.6507
231.56	56.3829
235.69	64.9857
236.00	63.1127
236.00	63.1127
238.60	57.5408
238.63	57.5419
238.63	57.5419
238.63	57.5419
239.00	60.3836
240.98	51.0024
241.98	58.5897
241.98	58.5897
241.98	58.5897
244.69	59.6197
245.39	53.0147
247.94	51.1899
248.90	44.5766
249.79	46.4950
252.40	57.9597
252.85	54.1716
252.85	54.1716
254.15	0.0000
256.20	61.8809
256.20	61.8809
260.50	47.7051
260.90	44.8520
262.80	53.4919
264.65	43.9802
268.24	37.3547
268.79	36.4066
269.46	41.2106
269.46	41.2106
269.46	41.2106
269.46	41.2106
271.23	47.9614
273.65	42.2565
276.40	38.4668
277.35	37.5223
277.60	34.6403
277.60	34.6403
278.00	37.5342
278.60	39.4705
279.20	41.4080
279.53	38.5249
280.46	43.3603
281.68	52.0627
283.67	47.2875
284.30	48.2672
285.00	42.4891
285.90	39.6091
286.10	34.7823
286.10	34.7823
287.40	39.6377
288.45	0.0000
290.67	42.6041
290.80	42.6062
291.72	44.5625
293.26	50.4112
293.70	45.5737
295.21	38.8135
295.21	38.8135
295.21	38.8135
295.96	50.4753

296.50	48.5461
297.23	43.7064
298.57	44.7057
299.80	44.7310
299.80	44.7310
300.09	44.7371
300.09	44.7371
300.09	44.7371
300.10	44.7371
300.12	44.7377
301.29	40.8695
302.84	37.0036
303.76	41.8898
303.91	41.8930
304.40	43.8514
304.40	43.8514
304.84	46.7842
306.84	46.8270
308.46	42.9564
311.98	35.2022
316.51	43.1127
318.01	35.2973
319.02	36.2945
319.41	37.2815
320.08	40.2368
323.87	43.2534
323.87	43.2534
323.87	43.2534
323.87	43.2534
325.23	33.4430
328.77	39.4058
333.44	42.4473
334.20	37.5241
334.20	37.5241
334.30	37.5255
338.28	35.6115
338.28	35.6115
338.28	35.6115
338.28	35.6115
338.32	35.6120
338.32	35.6120
338.32	35.6120
340.50	45.5468
340.57	45.5480
344.27	42.6446
345.85	38.7034
350.59	44.7468
351.07	40.7778
351.92	45.7670
351.92	45.7670
351.92	45.7670
355.39	0.0000
356.01	48.8346
364.48	31.0030
366.43	35.0316
367.43	28.0366
367.94	28.0424
369.80	27.0613
374.96	39.1695
383.85	32.2531
387.95	34.3241
388.63	36.3529
391.69	25.2753
391.69	25.2753
392.90	18.2068
398.62	24.3296
400.65	26.3774
401.10	26.3821
401.81	24.3592
402.60	19.2904
404.84	31.5006
410.95	22.4071
411.60	25.4688
413.65	35.6840
414.70	34.6782
415.30	30.6050
415.76	25.5087
417.63	0.0000

418.52	18.3852
423.70	26.6075
427.08	27.6654
427.89	27.6737
432.53	29.7742
433.93	24.6533
439.47	17.4978
439.56	17.4985
439.89	21.6183
443.98	31.9597
444.90	31.9703
445.03	31.9718
445.03	31.9718
445.03	31.9718
445.03	31.9718
453.90	25.8652
463.38	29.0657
468.07	25.9937
473.00	21.8718
475.06	20.8452
475.35	22.9319
476.78	16.6859
477.59	19.8201
477.96	20.8660
482.03	24.0290
484.57	20.9128
487.03	24.0697
490.36	23.0490
492.35	26.2097
497.08	31.5011
507.63	0.0000
510.53	0.0000
510.84	23.2059
511.00	23.2072
511.85	29.5446
511.85	29.5446
513.99	82.3608
513.99	82.3608
520.41	32.8013
520.65	29.6290
527.90	27.5768
528.96	0.0000
529.64	25.4701
529.87	0.0000
531.02	15.9258
537.32	18.0853
543.00	24.5122
546.56	0.0000
549.76	27.7678
552.65	21.3789
555.20	20.3262
563.23	33.2455
563.90	27.8891
568.70	22.5591
569.32	24.7121
569.50	29.0112
569.67	29.0131
573.80	31.2012
574.00	32.2786
574.64	29.0566
578.91	29.0942
579.30	29.0975
583.14	17.2629
585.48	22.6734
591.81	24.8794
592.07	28.1265
593.00	23.8063
595.88	27.0752
600.56	30.3659
602.52	0.0000
602.71	28.2147
602.71	28.2147
603.60	28.2223
604.41	26.0572
604.70	34.7461
609.31	20.6583
609.31	20.6583
609.31	20.6583

609.31	20.6583
610.33	28.2775
612.46	27.2070
614.37	35.9326
618.01	21.8003
621.84	28.3715
621.84	28.3715
631.29	27.3541
633.02	25.1781
633.10	25.1787
634.78	18.6191
635.90	13.1470
636.97	19.7266
645.85	21.9731
646.12	20.8759
656.30	21.1184
657.75	19.2897
657.90	0.0000
661.65	19.3107
661.65	19.3107
664.57	19.3260
666.33	17.4940
666.33	17.4940
675.00	19.3812
677.61	20.3184
685.20	16.6582
692.80	12.9826
695.00	12.0624
696.49	12.9954
696.49	12.9954
697.00	12.9971
697.49	17.6413
698.33	17.6451
698.50	18.5746
699.00	19.5059
702.63	19.5247
706.10	10.2366
706.58	0.0000
706.67	16.7531
709.31	26.0785
711.68	26.0945
713.82	17.7170
717.42	16.8003
720.50	20.5503
721.93	27.0990
722.20	26.1663
722.78	27.1049
722.78	27.1049
722.89	26.1708
722.95	26.1714
723.30	25.2389
724.18	25.2444
727.18	14.9714
733.00	22.4907
735.90	20.6317
739.58	15.0189
742.81	22.5469
744.21	22.5547
747.13	19.7499
751.79	26.3645
752.31	22.6011
753.82	16.0150
755.35	19.7909
756.15	16.9673
756.87	16.9702
763.93	19.8336
765.79	16.0630
766.41	14.1754
766.84	11.3416
768.36	11.3459
768.36	11.3459
768.36	11.3459
768.36	11.3459
776.49	16.1056
778.00	16.1115
778.57	18.9575
778.89	18.9591
783.80	19.9310

785.46	16.1412
792.07	16.1672
795.84	19.0373
796.30	19.9917
801.93	14.2990
805.60	17.1738
810.29	13.3725
810.76	13.3739
815.85	16.2595
817.79	15.3102
818.51	14.3558
819.60	11.4875
826.30	26.8470
828.27	13.4298
831.60	16.3204
831.96	19.2021
834.83	19.2147
836.80	0.0000
846.75	20.2318
848.13	19.2745
856.28	0.0000
856.80	17.3815
860.37	19.3286
867.32	12.5837
867.82	19.3616
871.10	20.3450
873.19	11.6311
874.81	7.7570
875.33	0.0000
876.40	11.6396
879.36	22.3243
880.27	16.5040
880.51	13.5921
881.50	19.4218
883.24	12.6292
884.67	6.8025
889.25	14.5917
896.60	14.6158
898.02	13.6457
899.00	9.7489
903.28	14.6375
911.07	8.7975
911.07	8.7975
911.07	8.7975
919.63	11.7522
920.93	12.7350
925.00	15.6878
925.24	15.6886
926.50	11.7698
934.06	14.7363
934.06	14.7363
934.06	14.7363
934.06	14.7363
935.52	11.7927
937.48	9.8315
944.10	15.7526
946.00	12.8043
949.00	11.8269
962.29	14.8257
964.01	12.8535
966.15	10.8809
968.20	8.9064
969.11	10.8879
969.11	10.8879
969.11	10.8879
977.42	8.9238
980.50	7.9373
983.50	14.8920
989.30	14.9100
996.32	17.9180
1001.03	7.9712
1001.68	9.9654
1004.76	19.9434
1021.30	0.0000
1024.50	0.0000
1034.80	15.0494
1037.82	18.0703
1038.57	16.0645

1038.76	0.0000
1045.16	13.0698
1046.59	13.0735
1048.07	11.0653
1050.47	10.0643
1050.47	10.0643
1063.62	15.1361
1076.63	15.1746
1077.35	16.1888
1085.78	11.1477
1099.22	16.2572
1112.02	12.2231
1112.84	12.2251
1115.52	25.4822
1120.29	11.2220
1120.29	11.2220
1120.29	11.2220
1120.29	11.2220
1120.51	13.2629
1121.28	13.2650
1124.00	0.0000
1129.67	13.2862
1131.51	0.0000
1147.95	0.0000
1167.94	13.3814
1173.22	14.4250
1175.09	9.2765
1177.93	14.4375
1189.05	7.2333
1204.90	11.3993
1205.75	13.4740
1213.00	7.2649
1221.42	8.3151
1230.97	9.3706
1235.34	13.5459
1236.41	0.0000
1238.11	7.2974
1238.11	7.2974
1238.11	7.2974
1238.11	7.2974
1238.25	8.3402
1246.25	10.4399
1260.41	0.0000
1271.85	8.3893
1274.45	9.4424
1274.54	9.4424
1291.56	8.4180
1298.22	0.0000
1312.09	11.6154
1325.50	12.7002
1325.50	12.7002
1332.49	7.4170
1333.61	8.4782
1360.21	9.5804
1362.66	0.0000
1365.15	10.6535
1368.21	10.6592
1368.53	0.0000
1376.25	7.4711
1377.67	7.4728
1377.67	7.4728
1377.67	7.4728
1377.67	7.4728
1384.27	9.6185
1394.10	8.5635
1395.20	5.3530
1407.95	11.8012
1434.06	8.6185
1436.60	5.3888
1457.56	0.0000
1460.81	12.9829
1489.15	9.3143
1509.49	10.2780
1596.49	9.4667
1620.62	3.8001
1678.03	0.0000
1691.02	9.5965
1691.02	9.5965

1706.46	0.0000
1750.46	0.0000
1764.49	6.7864
1764.49	6.7864
1764.49	6.7864
1764.49	6.7864
1770.23	7.7620
1771.40	4.8519
1791.20	0.0000
1808.65	2.9259
1836.01	4.8943

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871426

Total Uranium Activity	3.4789E-01	ug/g
Total Uranium Counting Unc.	4.4813E-01	ug/g
Total Uranium Tpu	2.2864E-07	ug/g
Total Uranium Mda	4.4038E-01	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC.                            *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID  : G1201871426      *
*   ANALYST       : MXR1                      DETECTOR   : GAM21            *
*   SAMPLE DATE   : 30-JUN-2009 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 10:59:05.71    SAMPLE ALQT:  166.760 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 1.284E-02
GROSS GAMMA ERROR (pCi/GRAM) : 8.378E-03
GROSS GAMMA MDA (pCi/GRAM) : 1.314E-02
GROSS GAMMA DLC (pCi/GRAM) : 6.079E-03

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 13:21:29.44

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871427.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 11:20:58.
Sample ID         : G1201871427          Sample quantity  : 1.44910E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.14  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	3	57.84	136	1711	1.00	114.80	112	12	1.88E-02	50.1	1.14E+00
2	3	59.62	2777	1605	1.02	118.37	112	12	3.86E-01	3.0	
3	4	74.88*	488	2039	1.32	148.88	142	16	6.78E-02	17.1	1.24E+00
4	4	77.14*	767	1542	1.03	153.39	142	16	1.07E-01	9.0	
5	0	87.23	324	1792	1.30	173.57	171	7	4.49E-02	22.4	
6	0	93.08*	304	2126	1.47	185.26	182	8	4.23E-02	27.2	
7	0	186.22*	132	2334	1.31	371.48	367	7	1.83E-02	61.8	
8	4	238.77*	2121	1804	1.13	476.55	472	15	2.95E-01	4.0	1.80E+00
9	4	241.77	490	2176	1.80	482.54	472	15	6.81E-02	18.4	
10	0	295.39*	664	1857	1.30	589.75	586	9	9.22E-02	12.4	
11	0	338.33*	314	1872	1.26	675.59	671	9	4.36E-02	25.6	
12	0	352.22*	1197	2376	1.61	703.37	698	12	1.66E-01	8.7	
13	0	510.99*	173	1577	2.20	1020.82	1016	12	2.40E-02	47.8	
14	0	583.24*	747	910	1.53	1165.27	1158	14	1.04E-01	9.4	
15	0	609.47*	886	820	1.58	1217.73	1210	15	1.23E-01	7.9	
16	0	661.86	82100	772	1.67	1322.48	1313	18	1.14E+01	0.4	
17	0	727.23	209	146	2.20	1453.19	1447	15	2.91E-02	14.3	
18	0	769.16	78	220	1.58	1537.03	1530	16	1.09E-02	43.8	
19	0	786.22	26	122	0.67	1571.14	1566	10	3.57E-03	82.9	
20	0	795.46	125	105	1.03	1589.61	1583	15	1.74E-02	20.0	
21	0	861.01*	77	96	1.09	1720.68	1715	11	1.06E-02	28.0	
22	0	911.57*	535	163	2.11	1821.78	1814	16	7.44E-02	7.0	
23	1	964.98	108	135	2.32	1928.58	1921	30	1.51E-02	23.5	2.77E+00
24	1	969.40	331	94	2.02	1937.42	1921	30	4.60E-02	8.1	
25	0	1120.27	240	81	1.64	2239.12	2230	15	3.33E-02	10.5	
26	0	1237.80	110	149	3.16	2474.14	2465	17	1.53E-02	27.1	
27	0	1378.59	63	64	1.54	2755.68	2747	18	8.80E-03	32.0	
28	0	1461.24*	2670	64	2.56	2920.96	2908	23	3.71E-01	2.1	
29	0	1588.87	59	17	2.40	3176.21	3171	11	8.12E-03	18.8	
30	0	1730.22	53	13	2.92	3458.89	3452	17	7.30E-03	20.9	
31	0	1765.51	155	34	2.27	3529.47	3519	20	2.15E-02	12.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 13:21:32

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871427.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 11:20:58
Sample ID : G1201871427 Sample quantity : 144.91 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.14 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.425E+01	2.968E+00	4.208E-01	3.193E-02	81.387
CD-109	+	88.03	*	3.567E+00	1.630E+00	2.200E+00	2.034E-01	1.621
SN-126		64.28		-7.793E-01	9.864E-01	1.435E+00	2.121E-01	-0.543
	+	86.94		1.462E+00	8.923E-01	8.660E-01	3.592E-01	1.688
	+	87.57	*	3.517E-01	1.607E-01	2.127E-01	1.960E-02	1.654
BA-137M	+	661.65	*	6.596E+01	5.052E+00	7.634E-02	5.819E-03	863.985
CS-137	+	661.65	*	6.972E+01	5.353E+00	8.070E-02	6.167E-03	863.984
TL-208		277.35		7.881E-01	7.586E-01	1.250E+00	1.312E-01	0.631
	+	510.84		4.812E-01	4.629E-01	4.911E-01	5.222E-02	0.980
	+	583.14	*	5.844E-01	1.187E-01	9.827E-02	7.704E-03	5.947
	+	860.37		5.466E-01	3.119E-01	3.530E-01	3.948E-02	1.549
BI-211		72.87		7.765E+00	4.949E+00	8.345E+00	6.890E-01	0.930
	+	351.07	*	4.399E+00	8.140E-01	7.216E-01	4.632E-02	6.097
BI-212	+	727.18	*	1.376E+00	4.156E-01	3.323E-01	3.309E-02	4.142
	+	785.46		1.078E+00	1.790E+00	2.188E+00	2.068E-01	0.493
		1620.62		1.096E+00	9.846E-01	1.808E+00	1.223E-01	0.606
PB-212	+	74.81		2.403E+00	8.735E-01	8.841E-01	1.108E-01	2.718
	+	77.11		2.108E+00	4.200E-01	4.946E-01	4.192E-02	4.263
	+	87.30		1.627E+00	7.608E-01	9.875E-01	1.341E-01	1.647
	+	238.63	*	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
		300.09		2.855E+00	1.769E+00	2.579E+00	2.118E-01	1.107
PO-212	+	74.81		2.403E+00	8.735E-01	8.841E-01	1.108E-01	2.718
	+	77.11		2.108E+00	4.200E-01	4.946E-01	4.192E-02	4.263
	+	87.30		1.627E+00	7.608E-01	9.875E-01	1.341E-01	1.647
		115.19		1.266E+00	6.293E+00	1.017E+01	6.409E-01	0.124
	+	238.63	*	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
		300.09		2.855E+00	1.769E+00	2.579E+00	2.118E-01	1.107
BI-214	+	609.31	*	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
	+	768.36		1.261E+00	1.114E+00	8.935E-01	9.780E-02	1.411
		934.06		5.902E-01	9.037E-01	1.530E+00	1.901E-01	0.386
	+	1120.29		1.761E+00	4.058E-01	4.125E-01	3.949E-02	4.270
	+	1238.11		2.238E+00	1.227E+00	1.168E+00	9.963E-02	1.916
	+	1377.67		2.023E+00	1.309E+00	1.120E+00	1.097E-01	1.807
	+	1764.49		1.500E+00	3.804E-01	2.203E-01	1.339E-02	6.809

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-214	+	74.81		4.140E+00	1.487E+00	1.523E+00	1.701E-01	2.718
	+	77.11		3.614E+00	7.708E-01	8.479E-01	9.664E-02	4.263
	+	87.30		2.787E+00	1.291E+00	1.692E+00	2.029E-01	1.647
	+	241.98		2.513E+00	9.435E-01	1.042E+00	8.240E-02	2.411
	+	295.21		1.483E+00	3.891E-01	4.407E-01	3.739E-02	3.365
	+	351.92	*	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
PO-214	+	74.81		4.140E+00	1.487E+00	1.523E+00	1.701E-01	2.718
	+	77.11		3.614E+00	7.708E-01	8.479E-01	9.664E-02	4.263
	+	87.30		2.787E+00	1.291E+00	1.692E+00	2.029E-01	1.647
	+	241.98		2.513E+00	9.435E-01	1.042E+00	8.240E-02	2.411
	+	295.21		1.483E+00	3.891E-01	4.407E-01	3.739E-02	3.365
	+	351.92	*	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
PO-216	+	74.81		2.403E+00	8.735E-01	8.841E-01	1.108E-01	2.718
	+	77.11		2.108E+00	4.200E-01	4.946E-01	4.192E-02	4.263
	+	87.30		1.627E+00	7.608E-01	9.875E-01	1.341E-01	1.647
	+	238.63	*	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
		300.09		2.855E+00	1.769E+00	2.579E+00	2.118E-01	1.107
PO-218	+	74.81		4.140E+00	1.487E+00	1.523E+00	1.701E-01	2.718
	+	77.11		3.614E+00	7.708E-01	8.479E-01	9.664E-02	4.263
	+	87.30		2.787E+00	1.291E+00	1.692E+00	2.029E-01	1.647
	+	241.98		2.513E+00	9.435E-01	1.042E+00	8.240E-02	2.411
	+	295.21		1.483E+00	3.891E-01	4.407E-01	3.739E-02	3.365
	+	351.92	*	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
RA-224	+	240.98	*	4.764E+00	1.769E+00	1.997E+00	1.112E-01	2.386
RA-226	+	609.31	*	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
	+	768.36		1.261E+00	1.114E+00	8.935E-01	9.780E-02	1.411
		934.06		5.902E-01	9.037E-01	1.530E+00	1.901E-01	0.386
	+	1120.29		1.761E+00	4.058E-01	4.125E-01	3.949E-02	4.270
	+	1238.11		2.238E+00	1.227E+00	1.168E+00	9.963E-02	1.916
	+	1377.67		2.023E+00	1.309E+00	1.120E+00	1.097E-01	1.807
	+	1764.49		1.500E+00	3.804E-01	2.203E-01	1.339E-02	6.809
AC-228	+	338.32		1.279E+00	8.362E-01	7.959E-01	3.244E-01	1.607
	+	911.07	*	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390
	+	969.11		1.960E+00	5.669E-01	2.784E-01	6.668E-02	7.038
RA-228	+	338.32		1.279E+00	8.362E-01	7.959E-01	3.244E-01	1.607
	+	911.07	*	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390
	+	969.11		1.960E+00	5.669E-01	2.784E-01	6.668E-02	7.038
TH-228		84.40		5.461E+00	4.416E+00	6.569E+00	8.780E-01	0.831
	+	238.60	*	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.328
		300.10		2.851E+00	2.429E+00	2.579E+00	1.520E+00	1.105
TH-230	+	609.31	*	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
	+	768.36		1.261E+00	1.114E+00	8.935E-01	9.780E-02	1.411
		934.06		5.902E-01	9.036E-01	1.530E+00	1.901E-01	0.386
	+	1120.29		1.761E+00	4.058E-01	4.125E-01	3.949E-02	4.270
	+	1238.11		2.238E+00	1.227E+00	1.168E+00	9.963E-02	1.916
	+	1377.67		2.023E+00	1.309E+00	1.120E+00	1.097E-01	1.807
	+	1764.49		1.500E+00	3.804E-01	2.203E-01	1.339E-02	6.809
TH-232	+	338.32		1.279E+00	6.579E-01	7.959E-01	4.604E-02	1.607
	+	911.07	*	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	969.11		1.960E+00	5.669E-01	2.784E-01	6.668E-02	7.038
U-234	+	609.31	*	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
	+	768.36		1.261E+00	1.114E+00	8.935E-01	9.780E-02	1.411
		934.06		5.902E-01	9.036E-01	1.530E+00	1.901E-01	0.386
	+	1120.29		1.761E+00	4.058E-01	4.125E-01	3.949E-02	4.270
	+	1238.11		2.238E+00	1.227E+00	1.168E+00	9.963E-02	1.916
	+	1377.67		2.023E+00	1.309E+00	1.120E+00	1.097E-01	1.807
	+	1764.49		1.500E+00	3.804E-01	2.203E-01	1.339E-02	6.809
NP-237	+	86.50	*	1.033E+00	5.178E-01	6.140E-01	1.385E-01	1.682
		95.87		-5.535E-01	1.748E+00	2.515E+00	6.143E-01	-0.220
AM-241	+	59.54	*	8.100E+00	8.284E-01	5.365E-01	4.450E-02	15.097
AM-243	+	74.67	*	3.895E-01	1.369E-01	1.439E-01	1.201E-02	2.707
	+	86.72		3.873E+01	1.770E+01	2.301E+01	2.104E+00	1.683
		117.66		-2.082E-01	6.802E+00	1.093E+01	6.726E-01	-0.019
		142.18		1.063E+01	3.058E+01	4.887E+01	2.692E+00	0.217
ANH-511	+	511.00	*	1.039E-01	9.960E-02	1.035E-01	6.834E-03	1.004

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.781E-01	8.710E-01	1.429E+00	1.036E-01	-0.195
NA-22		1274.54	*	-3.270E-02	3.581E-02	5.480E-02	3.729E-03	-0.597
NA-24		1368.53	*	6.152E-03	3.581E-02	Half-Life too short		
AL-26		1129.67		-7.705E-01	1.396E+00	2.189E+00	1.462E-01	-0.352
		1808.65	*	7.638E-03	2.266E-02	3.886E-02	2.269E-03	0.197
TI-44		67.85		4.435E-02	7.846E-02	1.316E-01	1.058E-02	0.337
	+	78.38	*	3.890E-01	7.749E-02	1.036E-01	8.855E-03	3.756
SC-46		889.25	*	-1.419E-02	3.093E-02	4.890E-02	5.454E-03	-0.290
	+	1120.51		2.962E-01	6.536E-02	1.006E-01	6.948E-03	2.945
V-48		944.10		-2.331E-01	6.535E-01	1.035E+00	1.095E-01	-0.225
		983.50	*	-9.048E-03	5.091E-02	8.133E-02	8.044E-03	-0.111
		1312.09		-1.004E-02	5.830E-02	9.414E-02	6.857E-03	-0.107
CR-51		320.08	*	-7.873E-01	7.753E-01	1.223E+00	7.876E-02	-0.644
MN-52		744.21		8.955E-02	1.511E-01	2.589E-01	2.283E-02	0.346
		848.13		2.411E+00	4.158E+00	7.064E+00	7.390E-01	0.341
		935.52		1.458E-01	1.562E-01	2.684E-01	2.879E-02	0.543
		1246.25		2.963E+00	5.400E+00	8.208E+00	5.278E-01	0.361
		1333.61		4.706E+00	3.236E+00	5.846E+00	4.416E-01	0.805
		1434.06	*	-2.064E-02	1.417E-01	2.266E-01	1.670E-02	-0.091
MN-54		834.83	*	7.727E-03	3.087E-02	5.146E-02	5.271E-03	0.150
CO-56		846.75	*	-4.380E-02	3.266E-02	4.849E-02	5.062E-03	-0.903
		977.42		-5.265E-01	2.661E+00	3.607E+00	3.608E-01	-0.146
		1037.82		1.091E-02	2.375E-01	3.987E-01	3.694E-02	0.027
		1175.09		2.251E+00	1.950E+00	3.426E+00	1.901E-01	0.657
	+	1238.25		2.225E-01	1.214E-01	1.422E-01	9.479E-03	1.564
		1360.21		-6.573E-01	6.732E-01	9.774E-01	7.345E-02	-0.673
		1771.40		1.380E-01	1.744E-01	2.832E-01	1.711E-02	0.488
CO-57		122.06	*	-5.826E-02	4.542E-02	7.091E-02	4.201E-03	-0.822

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		136.48		-7.943E-02	3.675E-01	5.828E-01	3.815E-02	-0.136
CO-58		810.76	*	-6.722E-03	2.943E-02	4.777E-02	4.716E-03	-0.141
FE-59		142.65		5.671E-01	4.578E+00	7.269E+00	3.999E-01	0.078
		192.34		-1.550E-01	1.844E+00	3.081E+00	3.572E-01	-0.050
		1099.22	*	-3.905E-02	6.609E-02	1.054E-01	8.676E-03	-0.371
		1291.56		3.134E-02	9.418E-02	1.582E-01	1.330E-02	0.198
CO-60		1173.22		6.280E-02	4.069E-02	7.265E-02	4.015E-03	0.864
		1332.49	*	4.299E-02	3.364E-02	6.000E-02	4.534E-03	0.716
ZN-65		1115.52	*	4.617E-02	7.744E-02	1.163E-01	8.192E-03	0.397
GE-68		1077.35	*	5.711E-01	1.026E+00	1.742E+00	1.384E-01	0.328
AS-73		53.44	*	-9.449E-01	2.109E+00	3.344E+00	2.651E-01	-0.283
AS-74		595.88	*	2.040E-02	1.385E-01	2.250E-01	1.617E-02	0.091
		634.78		-5.868E-02	5.364E-01	8.601E-01	6.403E-02	-0.068
SE-75		66.05		-7.096E+00	8.297E+00	1.350E+01	1.337E+00	-0.526
		96.73		-8.845E-01	1.418E+00	2.022E+00	2.667E-01	-0.437
		121.11		-4.240E-02	2.403E-01	3.845E-01	3.589E-02	-0.110
		136.00		-7.768E-03	6.836E-02	1.087E-01	6.188E-03	-0.071
		198.60		-1.469E+00	3.503E+00	5.804E+00	3.938E-01	-0.253
		264.65	*	3.498E-02	8.864E-02	1.458E-01	8.340E-03	0.240
		279.53		6.550E-02	2.191E-01	3.585E-01	2.215E-02	0.183
		303.91		-6.667E+00	4.451E+00	6.938E+00	6.599E-01	-0.961
		400.65		-4.158E-01	6.015E-01	9.937E-01	9.053E-02	-0.418
BR-77	+	87.88		4.137E+02	1.890E+02	2.550E+02	2.356E+01	1.622
		200.40		-2.255E+01	1.725E+02	2.872E+02	1.547E+01	-0.079
	+	239.00		1.559E+02	1.511E+01	2.231E+01	1.241E+00	6.989
		249.79		-1.059E+02	7.216E+01	1.152E+02	6.458E+00	-0.919
		281.68		-8.321E+01	9.933E+01	1.591E+02	9.080E+00	-0.523
		297.23		9.713E+01	6.924E+01	1.008E+02	5.788E+00	0.964
		303.76		-2.489E+02	2.035E+02	3.213E+02	1.848E+01	-0.775
		439.47		-2.434E+02	2.135E+02	3.480E+02	2.121E+01	-0.699
		484.57		3.231E+01	3.074E+02	5.073E+02	3.256E+01	0.064
		520.65	*	-2.011E+01	1.181E+01	1.851E+01	1.235E+00	-1.087
		574.64		-5.780E+01	1.952E+02	3.055E+02	2.151E+01	-0.189
		578.91		5.674E+01	8.787E+01	1.260E+02	8.909E+00	0.450
		585.48		1.167E+03	2.014E+02	3.099E+02	2.205E+01	3.765
		755.35		6.009E+00	6.781E+01	1.131E+02	1.016E+01	0.053
		817.79		-2.740E+00	5.388E+01	8.843E+01	8.813E+00	-0.031
SR-82		698.33		-7.834E+00	2.515E+01	4.037E+01	3.287E+00	-0.194
		776.49	*	-5.860E-02	3.333E-01	4.669E-01	4.348E-02	-0.126
		1395.20		-9.966E+00	8.038E+00	1.135E+01	8.457E-01	-0.878
RB-83		520.41	*	-2.217E-01	1.437E-01	2.264E-01	1.510E-02	-0.979
		529.64		-3.293E-02	2.093E-01	3.410E-01	2.296E-02	-0.097
		552.65		2.230E-02	3.516E-01	5.737E-01	3.954E-02	0.039
RB-84		881.50	*	-5.361E-03	5.730E-02	8.901E-02	9.810E-03	-0.060
KR-85		513.99	*	3.201E+01	1.680E+01	2.489E+01	1.649E+00	1.286
SR-85		513.99	*	1.605E-01	8.421E-02	1.248E-01	8.265E-03	1.286
RB-86		1076.63	*	-3.097E-02	6.101E-01	9.990E-01	7.953E-02	-0.031
Y-88		898.02		-1.308E-02	3.412E-02	5.427E-02	6.152E-03	-0.241
		1836.01	*	2.049E-02	2.617E-02	4.705E-02	2.680E-03	0.436

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	-4.192E-02	7.214E-02	1.197E-01	6.887E-03	-0.350
Y-91		1204.90	*	1.226E+01	1.537E+01	2.651E+01	1.568E+00	0.462
NB-94		702.63	*	-1.584E-02	2.541E-02	4.085E-02	3.351E-03	-0.388
		871.10		3.610E-03	2.862E-02	4.723E-02	5.122E-03	0.076
NB-95		765.79	*	7.065E-02	3.780E-02	6.088E-02	5.569E-03	1.160
NB-95M		235.69	*	3.814E-02	2.506E-01	3.638E-01	2.669E-02	0.105
ZR-95		724.18		2.854E-02	8.620E-02	1.267E-01	1.174E-02	0.225
		756.15	*	1.630E-02	5.299E-02	8.947E-02	8.804E-03	0.182
NB-97		657.90	*	1.373E+00	5.299E-02	Half-Life too short		
		1024.50		2.385E-01	5.299E-02	Half-Life too short		
ZR-97		254.15		8.755E-01	5.299E-02	Half-Life too short		
		355.39		5.138E-01	5.299E-02	Half-Life too short		
		507.63	*	2.151E-01	5.299E-02	Half-Life too short		
		602.52		6.054E-02	5.299E-02	Half-Life too short		
		1021.30		3.220E-01	5.299E-02	Half-Life too short		
		1147.95		7.085E-02	5.299E-02	Half-Life too short		
		1362.66		-3.038E-01	5.299E-02	Half-Life too short		
		1750.46		-2.935E-01	5.299E-02	Half-Life too short		
MO-99		140.51		1.122E+01	2.687E+01	4.266E+01	1.147E+01	0.263
		181.06		4.612E+00	1.996E+01	2.968E+01	5.039E+00	0.155
		366.43		2.347E+01	1.113E+02	1.881E+02	1.087E+01	0.125
		739.58	*	-1.393E-01	5.410E+00	8.976E+00	1.370E+00	-0.016
		778.00		-1.162E-01	1.815E+01	2.580E+01	2.409E+00	-0.005
TC-99M		140.51	*	7.481E+07	1.815E+01	Half-Life too short		
RH-101		127.23		-3.647E-02	5.701E-02	9.010E-02	5.205E-03	-0.405
		198.01	*	-2.124E-02	6.501E-02	1.079E-01	5.800E-03	-0.197
		325.23		-4.030E-02	4.735E-01	7.605E-01	4.394E-02	-0.053
RH-102		418.52		-1.711E-01	7.254E-01	1.205E+00	7.160E-02	-0.142
		475.06	*	5.809E-02	8.444E-02	1.406E-01	8.927E-03	0.413
		631.29		1.083E-01	9.096E-02	1.510E-01	1.121E-02	0.717
		697.49		2.013E-02	5.957E-02	9.914E-02	8.060E-03	0.203
		766.84		1.925E-01	1.046E-01	1.668E-01	1.528E-02	1.154
		1046.59		-7.224E-02	8.697E-02	1.368E-01	1.180E-02	-0.528
		1112.84		3.986E-02	1.909E-01	2.773E-01	1.969E-02	0.144
RU-103		497.08	*	6.379E-02	9.018E-02	1.496E-01	1.942E-02	0.427
	+	610.33		1.352E+01	3.040E+00	2.706E+00	4.339E-01	4.996
RH-106	+	511.85		5.170E-01	4.955E-01	5.855E-01	3.870E-02	0.883
		621.84	*	4.348E-01	5.334E-01	8.756E-01	1.102E-01	0.497
		1050.47		-1.424E+00	1.721E+00	2.705E+00	2.311E-01	-0.527
RU-106	+	511.85		5.170E-01	4.955E-01	5.855E-01	3.870E-02	0.883
		621.84	*	4.348E-01	5.315E-01	8.756E-01	6.443E-02	0.497
		1050.47		-1.424E+00	1.721E+00	2.705E+00	2.311E-01	-0.527
AG-108M		433.93	*	6.122E-02	8.891E-02	1.491E-01	9.741E-03	0.411
		614.37		-3.478E-02	7.026E-02	9.559E-02	7.365E-03	-0.364
		722.95		-1.089E-02	3.703E-02	5.178E-02	4.579E-03	-0.210
AG-110M		657.75	*	2.899E+00	2.559E-01	2.409E-01	1.900E-02	12.038
		677.61		1.068E-02	2.414E-01	4.052E-01	3.287E-02	0.026
		706.67		9.280E-02	1.554E-01	2.676E-01	2.277E-02	0.347
		763.93		8.674E-02	1.442E-01	2.157E-01	2.017E-02	0.402

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		884.67		1.546E-02	3.897E-02	6.536E-02	7.381E-03	0.237
		937.48		5.233E-02	8.619E-02	1.457E-01	1.595E-02	0.359
		1384.27		-3.420E-03	1.502E-01	2.075E-01	1.608E-02	-0.016
IN-111		171.28		8.629E-02	1.015E+00	1.714E+00	9.019E-02	0.050
		245.39	*	1.132E+00	1.401E+00	2.047E+00	1.144E-01	0.553
IN-113M		391.69	*	5.172E-02	1.039E-01	1.753E-01	1.075E-02	0.295
SN-113		391.69	*	5.172E-02	1.039E-01	1.753E-01	1.075E-02	0.295
IN-114M		190.27	*	-6.233E-02	3.809E-01	5.903E-01	3.151E-02	-0.106
CD-115		260.90		1.840E+01	1.384E+02	2.270E+02	1.282E+01	0.081
		492.35		-3.097E+01	4.357E+01	7.068E+01	4.575E+00	-0.438
		527.90	*	4.484E-01	1.147E+01	1.878E+01	1.262E+00	0.024
SN-117M		156.02		1.318E+00	3.373E+00	5.753E+00	3.073E-01	0.229
		158.56	*	3.626E-02	8.233E-02	1.399E-01	7.436E-03	0.259
SB-122		563.90	*	-1.149E+00	2.030E+00	3.248E+00	2.263E-01	-0.354
		692.80		5.122E+00	1.907E+01	3.233E+01	2.607E+00	0.158
I-123		159.00	*	2.900E-01	1.907E+01	Half-Life too short		
		528.96		-4.862E+00	1.907E+01	Half-Life too short		
TE-123M		159.00	*	2.141E-02	4.697E-02	7.982E-02	4.306E-03	0.268
I-124		602.71	*	1.618E-01	8.588E-01	1.206E+00	8.723E-02	0.134
		722.78		-8.913E-01	2.706E+00	3.772E+00	3.206E-01	-0.236
		1325.50		-2.335E+01	2.122E+01	3.156E+01	2.355E+00	-0.740
		1376.25		4.825E+01	1.892E+01	3.367E+01	2.521E+00	1.433
		1509.49		1.016E+01	8.241E+00	1.524E+01	1.092E+00	0.667
		1691.02		-2.039E+00	1.960E+00	2.763E+00	1.782E-01	-0.738
SB-124		602.71		1.309E-02	6.949E-02	9.761E-02	7.060E-03	0.134
		645.85		-9.248E-01	8.041E-01	1.239E+00	1.004E-01	-0.746
		709.31		8.579E-01	2.111E+00	3.598E+00	2.987E-01	0.238
		713.82		-7.501E-01	1.281E+00	2.059E+00	2.442E-01	-0.364
		722.78		-1.045E-01	3.174E-01	4.424E-01	3.843E-02	-0.236
	+	968.20		1.968E+01	3.768E+00	5.947E+00	6.047E-01	3.310
		1045.16		-3.218E-01	1.808E+00	2.988E+00	2.587E-01	-0.108
		1325.50		-2.925E+00	2.658E+00	3.954E+00	2.951E-01	-0.740
		1368.21		2.329E-01	1.215E+00	1.902E+00	2.433E-01	0.122
		1436.60		-8.243E-01	2.900E+00	4.570E+00	3.365E-01	-0.180
		1691.02	*	-5.641E-02	5.425E-02	7.643E-02	5.273E-03	-0.738
SB-125		427.89	*	5.772E-02	2.401E-01	4.009E-01	2.505E-02	0.144
		463.38		2.896E-01	8.123E-01	1.349E+00	9.671E-02	0.215
		600.56		-8.744E-02	2.922E-01	4.551E-01	3.625E-02	-0.192
		635.90		-6.529E-01	4.506E-01	6.869E-01	5.665E-02	-0.951
TE-125M		109.28	*	-3.622E+00	1.543E+01	2.482E+01	2.180E+00	-0.146
I-126		388.63		-1.659E-02	4.263E-01	7.144E-01	4.106E-02	-0.023
		666.33	*	2.378E+00	3.001E-01	4.826E-01	3.710E-02	4.927
		753.82		7.294E-01	9.976E-01	1.724E+00	1.545E-01	0.423
SB-126		223.80		3.840E+00	7.018E+00	1.171E+01	6.435E-01	0.328
		278.60		2.296E+00	4.435E+00	7.282E+00	4.149E-01	0.315
	+	296.50		1.310E+01	3.338E+00	4.495E+00	2.580E-01	2.914
		414.70		7.598E-02	1.670E-01	2.804E-01	1.658E-02	0.271
		415.30		4.890E+00	1.392E+01	2.334E+01	1.381E+00	0.210
		555.20		-4.586E-01	6.400E+00	1.040E+01	7.187E-01	-0.044

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		573.80		-1.096E-01	1.567E+00	2.540E+00	1.787E-01	-0.043
		593.00		-8.418E-01	1.407E+00	2.237E+00	1.603E-01	-0.376
		656.30		7.698E+00	5.833E+00	8.813E+00	6.687E-01	0.873
		666.33		9.888E-01	1.248E-01	2.007E-01	1.543E-02	4.927
		675.00		-3.426E-01	1.392E+00	2.300E+00	1.796E-01	-0.149
		695.00		4.125E-02	5.244E-02	9.120E-02	7.381E-03	0.452
		697.00		6.502E-02	1.872E-01	3.118E-01	2.532E-02	0.209
		720.50	*	6.145E-02	1.156E-01	1.729E-01	1.464E-02	0.355
		856.80		-2.710E-01	3.920E-01	5.137E-01	5.448E-02	-0.528
		989.30		-1.091E-01	8.527E-01	1.366E+00	1.336E-01	-0.080
		1034.80		-8.265E-01	6.366E+00	1.016E+01	9.017E-01	-0.081
		1213.00		-2.927E-01	3.467E+00	5.692E+00	3.423E-01	-0.051
SB-127	+	61.10		2.132E+03	2.436E+02	1.659E+02	1.630E+01	12.856
		252.40		-7.999E-02	5.993E+00	9.830E+00	4.066E+00	-0.008
		290.80		1.389E+01	3.322E+01	4.760E+01	3.978E+00	0.292
		411.60		6.965E+00	2.035E+01	3.411E+01	4.757E+00	0.204
		444.90		-2.644E-01	1.892E+01	3.138E+01	3.248E+00	-0.008
		473.00		2.755E+00	3.413E+00	5.674E+00	6.167E-01	0.485
		543.00		-6.683E+00	2.169E+01	3.510E+01	4.526E+00	-0.190
		603.60		1.182E+01	1.403E+01	2.015E+01	2.219E+00	0.587
		685.20	*	-2.732E-02	7.416E-01	1.238E+00	1.271E-01	-0.022
		698.50		-2.461E+00	7.823E+00	1.282E+01	1.940E+00	-0.192
		722.20		5.057E+00	1.706E+01	2.509E+01	2.621E+00	0.202
		783.80		1.658E+00	2.279E+00	3.423E+00	4.269E-01	0.484
XE-127	+	57.60		1.572E+01	1.579E+01	2.406E+01	1.854E+00	0.653
		145.22		-1.214E-02	1.160E+00	1.835E+00	1.003E-01	-0.007
		172.10		-1.325E-02	1.991E-01	3.352E-01	1.765E-02	-0.040
		202.84	*	-3.527E-02	8.893E-02	1.474E-01	7.955E-03	-0.239
		374.96		2.037E-02	4.321E-01	7.271E-01	4.193E-02	0.028
I-131		80.18		3.436E-01	6.565E+00	9.683E+00	8.427E-01	0.035
		284.30		-7.121E-02	2.564E+00	4.166E+00	2.646E-01	-0.017
		364.48	*	-2.192E-03	2.193E-01	3.694E-01	2.378E-02	-0.006
		636.97		-4.056E+00	2.149E+00	3.212E+00	2.569E-01	-1.263
		722.89		-1.588E+00	5.181E+00	7.236E+00	6.181E-01	-0.219
TE-132		49.72		1.258E+00	3.210E+01	5.420E+01	5.218E+00	0.023
		111.76		1.957E+01	3.275E+01	5.336E+01	4.611E+00	0.367
		116.30		-2.049E+01	3.137E+01	4.981E+01	4.195E+00	-0.411
		228.16	*	-2.759E-01	8.488E-01	1.395E+00	1.931E-01	-0.198
BA-133		53.15		-4.239E+00	8.928E+00	1.482E+01	1.176E+00	-0.286
		79.62		3.820E-03	2.242E+00	3.304E+00	5.031E-01	0.001
		81.00		-1.258E-01	1.707E-01	2.450E-01	3.903E-02	-0.514
		276.40		7.603E-01	7.462E-01	1.226E+00	1.584E-01	0.620
		302.84		-1.237E-01	3.002E-01	4.815E-01	5.602E-02	-0.257
		356.01	*	3.021E-03	1.127E-01	1.570E-01	1.813E-02	0.019
		383.85		-4.711E-02	6.984E-01	1.171E+00	1.270E-01	-0.040
I-133	+	510.53		1.903E-01	6.984E-01	Half-Life too short		
		529.87	*	-1.349E-04	6.984E-01	Half-Life too short		
		706.58		3.381E-02	6.984E-01	Half-Life too short		
		856.28		-7.821E-02	6.984E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		875.33		2.702E-03	6.984E-01	Half-Life too short		
	+	1236.41		2.957E-01	6.984E-01	Half-Life too short		
		1298.22		-1.454E-02	6.984E-01	Half-Life too short		
CS-134		475.35		3.189E+00	5.496E+00	9.137E+00	5.805E-01	0.349
		563.23		-4.476E-01	6.076E-01	9.671E-01	6.833E-02	-0.463
		569.32		-8.467E-02	3.322E-01	5.349E-01	3.824E-02	-0.158
		604.70		4.994E-02	6.061E-02	8.715E-02	6.336E-03	0.573
	+	795.84	*	1.372E-01	5.640E-02	7.317E-02	7.077E-03	1.875
		801.93		-3.379E-01	3.754E-01	4.946E-01	4.825E-02	-0.683
		1038.57		9.199E-01	3.013E+00	5.140E+00	4.523E-01	0.179
		1167.94		-3.336E+00	2.250E+00	3.389E+00	1.921E-01	-0.984
		1365.15		8.162E-01	7.866E-01	1.422E+00	1.132E-01	0.574
CS-135		268.24	*	-1.319E-01	3.159E-01	5.121E-01	3.871E-02	-0.258
I-135		288.45		-1.149E+08	3.159E-01	Half-Life too short		
		417.63		-4.482E+07	3.159E-01	Half-Life too short		
		546.56		3.865E+07	3.159E-01	Half-Life too short		
		836.80		2.683E+07	3.159E-01	Half-Life too short		
		1038.76		8.821E+06	3.159E-01	Half-Life too short		
		1124.00		7.548E+08	3.159E-01	Half-Life too short		
		1131.51		-1.773E+07	3.159E-01	Half-Life too short		
		1260.41	*	1.603E+06	3.159E-01	Half-Life too short		
		1457.56		3.349E+09	3.159E-01	Half-Life too short		
		1678.03		8.090E+06	3.159E-01	Half-Life too short		
		1706.46		-1.651E+07	3.159E-01	Half-Life too short		
		1791.20		2.363E+07	3.159E-01	Half-Life too short		
CS-136		66.91		4.698E-01	1.189E+00	1.981E+00	2.991E-01	0.237
	+	86.29		4.100E+00	1.914E+00	2.552E+00	3.364E-01	1.606
		153.22		1.855E-01	9.786E-01	1.666E+00	1.146E-01	0.111
		163.89		6.486E-02	1.617E+00	2.726E+00	1.861E-01	0.024
		176.55		-1.549E-01	5.812E-01	9.737E-01	5.898E-02	-0.159
		273.65		-1.476E+00	8.163E-01	1.282E+00	8.347E-02	-1.151
		340.57		3.598E-01	2.736E-01	3.934E-01	2.419E-02	0.915
		818.51		1.997E-02	4.969E-02	8.396E-02	8.382E-03	0.238
		1048.07	*	-6.551E-02	7.260E-02	1.134E-01	1.016E-02	-0.578
		1235.34		6.427E-01	5.120E-01	7.849E-01	8.067E-02	0.819
CE-139		165.85	*	4.709E-03	4.963E-02	8.396E-02	4.408E-03	0.056
BA-140		162.64		1.098E-02	1.126E+00	1.899E+00	1.151E-01	0.006
		304.84		-2.410E+00	2.520E+00	3.866E+00	1.055E+00	-0.623
		423.70		-1.029E+00	4.353E+00	7.205E+00	2.292E+00	-0.143
		537.32	*	-6.247E-02	4.493E-01	7.305E-01	2.390E-01	-0.086
LA-140		328.77		5.612E-02	5.638E-01	9.076E-01	5.881E-02	0.062
		432.53		-1.412E+00	4.967E+00	8.224E+00	5.452E-01	-0.172
		487.03		-6.021E-02	3.001E-01	4.924E-01	3.513E-02	-0.122
		751.79		-6.813E-01	1.183E+00	1.891E+00	1.858E-01	-0.360
		815.85		1.850E-02	2.213E-01	3.665E-01	3.961E-02	0.050
		867.82		2.950E-01	1.138E+00	1.702E+00	1.900E-01	0.173
		919.63		1.280E+00	2.206E+00	3.370E+00	4.257E-01	0.380
		925.24		-9.419E-01	8.130E-01	1.201E+00	1.360E-01	-0.784
		1596.49	*	1.659E-02	5.994E-02	9.124E-02	6.260E-03	0.182

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	2.354E-03	1.042E-01	1.652E-01	9.431E-03	0.014
CE-143	+	57.37		9.626E-04	1.042E-01	Half-Life too short		
		231.56		4.451E-04	1.042E-01	Half-Life too short		
		293.26	*	2.542E-04	1.042E-01	Half-Life too short		
		350.59		1.101E-02	1.042E-01	Half-Life too short		
		490.36		-3.557E-04	1.042E-01	Half-Life too short		
		664.57		4.435E-01	1.042E-01	Half-Life too short		
		721.93		1.869E-04	1.042E-01	Half-Life too short		
CE-144		80.11		2.264E-01	3.619E+00	5.340E+00	4.623E-01	0.042
		133.54	*	8.166E-02	3.638E-01	5.823E-01	8.233E-02	0.140
PM-144		476.78		3.631E-03	1.895E-01	3.126E-01	2.320E-02	0.012
		618.01		6.160E-03	5.405E-02	8.481E-02	6.455E-03	0.073
		696.49	*	1.075E-02	2.692E-02	4.496E-02	3.650E-03	0.239
		778.57		-6.634E-01	2.108E+00	2.913E+00	2.723E-01	-0.228
PR-144		696.49	*	7.273E-01	1.822E+00	3.043E+00	2.470E-01	0.239
		1489.15		-6.584E+00	9.600E+00	1.433E+01	1.035E+00	-0.459
PM-146		453.90	*	9.551E-03	1.275E-01	2.113E-01	1.880E-02	0.045
		633.02		2.484E+00	2.472E+00	3.810E+00	1.414E+00	0.652
		735.90		-9.939E-02	1.283E-01	1.813E-01	5.189E-02	-0.548
		747.13		-4.437E-03	7.267E-02	1.202E-01	1.706E-02	-0.037
ND-147		91.11		8.653E-01	5.240E-01	6.320E-01	5.944E-02	1.369
		319.41		-2.787E+00	6.343E+00	1.013E+01	5.853E-01	-0.275
		439.89		-1.866E+01	1.426E+01	2.316E+01	1.413E+00	-0.806
		531.02	*	5.684E-03	9.826E-01	1.606E+00	2.241E-01	0.004
PM-149		285.90	*	-1.314E+01	9.687E+01	1.570E+02	2.219E+01	-0.084
EU-152		121.78		-1.006E-01	1.312E-01	2.072E-01	1.597E-02	-0.485
		244.69		-3.601E-02	7.385E-01	1.060E+00	5.920E-02	-0.034
		344.27	*	-8.539E-02	2.237E-01	3.427E-01	2.236E-02	-0.249
		443.98		2.510E+00	2.714E+00	4.554E+00	2.791E-01	0.551
		778.89		-6.350E-02	2.326E-01	3.367E-01	3.148E-02	-0.189
		867.32		-9.685E-02	7.927E-01	1.101E+00	1.187E-01	-0.088
	+	964.01		7.380E-01	3.547E-01	4.436E-01	4.544E-02	1.664
		1085.78		-1.333E-01	3.086E-01	4.992E-01	3.869E-02	-0.267
		1112.02		-8.702E-03	2.779E-01	3.942E-01	2.806E-02	-0.022
		1407.95		1.813E-01	1.693E-01	2.970E-01	2.206E-02	0.610
GD-153		69.67		-9.640E-01	3.075E+00	4.536E+00	3.682E-01	-0.213
		83.37		2.055E+01	2.538E+01	3.782E+01	3.359E+00	0.543
		97.43	*	-1.492E-02	1.460E-01	2.116E-01	1.654E-02	-0.071
		103.18		-2.030E-01	1.799E-01	2.845E-01	2.052E-02	-0.714
EU-154		123.07		-7.395E-02	9.238E-02	1.455E-01	1.376E-02	-0.508
		247.94		3.523E-01	7.267E-01	1.202E+00	1.132E-01	0.293
		591.81		5.823E-02	1.038E+00	1.683E+00	1.790E-01	0.035
		723.30		-4.223E-02	1.575E-01	2.208E-01	2.081E-02	-0.191
		756.87		3.105E-01	5.990E-01	1.022E+00	1.253E-01	0.304
		873.19		1.847E-01	2.470E-01	4.213E-01	5.868E-02	0.439
		996.32		-3.828E-01	2.924E-01	4.109E-01	7.513E-02	-0.932
		1004.76		6.406E-02	1.758E-01	2.908E-01	3.576E-02	0.220
		1274.45	*	-5.434E-02	9.776E-02	1.537E-01	1.536E-02	-0.353
EU-155		48.70		-1.961E+00	6.436E+00	1.081E+01	8.202E-01	-0.181

---- Non-Identified Nuclides ----

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	+	60.01		2.633E+02	2.545E+01	2.789E+01	2.128E+00	9.440
	+	86.54		4.232E-01	1.935E-01	2.639E-01	2.431E-02	1.604
		105.31	*	1.706E-01	1.847E-01	3.036E-01	2.171E-02	0.562
TB-160	+	86.79		1.108E+00	5.065E-01	6.916E-01	6.327E-02	1.603
		197.04		4.978E-01	1.089E+00	1.828E+00	9.816E-02	0.272
		215.65		-1.890E-01	1.438E+00	2.381E+00	1.300E-01	-0.079
		298.57		6.225E-02	2.537E-01	3.612E-01	2.075E-02	0.172
		879.36	*	-1.781E-03	1.120E-01	1.831E-01	2.011E-02	-0.010
		962.29		9.069E-01	4.675E-01	7.479E-01	7.683E-02	1.213
	+	966.15		4.966E-01	2.387E-01	3.936E-01	4.017E-02	1.262
		1177.93		-2.763E-01	3.049E-01	4.765E-01	2.660E-02	-0.580
		1271.85		1.674E-01	5.550E-01	9.309E-01	6.291E-02	0.180
HO-166M		80.57		-1.534E-01	4.689E-01	6.848E-01	5.950E-02	-0.224
		184.41		2.284E-01	7.084E-02	1.097E-01	5.826E-03	2.083
		280.46		-1.572E-02	1.742E-01	2.831E-01	1.615E-02	-0.056
		410.95		-2.486E-02	5.948E-01	9.925E-01	5.842E-02	-0.025
		711.68	*	-9.427E-03	4.767E-02	7.859E-02	6.551E-03	-0.120
		752.31		-7.540E-02	2.122E-01	3.443E-01	3.079E-02	-0.219
		810.29		-1.200E-02	4.513E-02	7.307E-02	7.194E-03	-0.164
TM-171		51.35		2.719E+01	7.798E+01	1.322E+02	1.048E+01	0.206
		52.39		4.366E+00	3.957E+01	6.676E+01	5.304E+00	0.065
	+	59.40		1.383E+03	1.337E+02	1.541E+02	1.170E+01	8.973
		66.72	*	1.204E+01	4.826E+01	8.035E+01	6.424E+00	0.150
LU-176	+	88.36		8.342E-01	3.812E-01	5.112E-01	4.694E-02	1.632
		201.83		-3.045E-02	5.640E-02	9.329E-02	5.031E-03	-0.326
		306.84	*	3.690E-02	5.322E-02	8.698E-02	5.008E-03	0.424
		401.10		-1.486E+01	1.599E+01	2.633E+01	1.531E+00	-0.564
LU-177		112.95		1.127E+00	2.289E+00	3.723E+00	2.399E-01	0.303
		208.36	*	1.480E+00	1.697E+00	2.854E+00	1.548E-01	0.519
LU-177M		52.97		-1.210E+00	4.009E+00	6.678E+00	5.301E-01	-0.181
		54.07		-9.558E-01	2.301E+00	3.431E+00	2.712E-01	-0.279
		61.30		2.183E+01	3.773E+00	5.729E+00	4.427E-01	3.810
		121.62		-4.605E-01	6.674E-01	1.056E+00	6.265E-02	-0.436
		147.16		-5.194E-01	1.135E+00	1.781E+00	9.694E-02	-0.292
		171.86		-6.445E-02	8.252E-01	1.389E+00	7.312E-02	-0.046
		218.09		-6.691E-01	1.662E+00	2.735E+00	1.496E-01	-0.245
		268.79		5.284E-01	1.575E+00	2.585E+00	1.466E-01	0.204
		319.02		-2.243E-02	5.599E-01	9.013E-01	5.203E-02	-0.025
		367.43		6.289E-01	2.040E+00	3.451E+00	1.993E-01	0.182
		413.65	*	-1.175E-01	4.329E-01	7.195E-01	4.249E-02	-0.163
HF-181		56.28		9.059E-01	2.346E+00	3.564E+00	2.776E-01	0.254
	+	57.53		1.326E+00	1.331E+00	2.013E+00	1.552E-01	0.658
		65.20		-2.334E+00	1.596E+00	2.559E+00	2.030E-01	-0.912
		133.02		9.338E-03	1.140E-01	1.822E-01	1.031E-02	0.051
		136.25		-2.006E-01	7.821E-01	1.239E+00	6.940E-02	-0.162
		345.85		-4.173E-01	4.492E-01	6.482E-01	3.750E-02	-0.644
		482.03	*	-4.149E-02	1.068E-01	1.748E-01	1.119E-02	-0.237
W-181		56.28		3.631E-01	9.393E-01	1.427E+00	1.112E-01	0.254
	+	57.53		5.312E-01	5.335E-01	8.065E-01	6.219E-02	0.659

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20	*	-9.279E-01	6.343E-01	1.017E+00	8.070E-02	-0.912
TA-182		67.75		6.285E-02	1.864E-01	3.105E-01	2.496E-02	0.202
		100.10		2.192E-01	2.945E-01	4.846E-01	3.643E-02	0.452
		152.43		-3.200E-02	6.003E-01	9.476E-01	5.098E-02	-0.034
		222.10		6.210E-02	6.740E-01	1.118E+00	6.136E-02	0.056
		1001.68		1.002E+00	1.663E+00	2.766E+00	2.641E-01	0.362
	+	1121.28		8.220E-01	1.814E-01	2.807E-01	1.934E-02	2.929
		1189.05		-1.230E-01	2.388E-01	3.815E-01	2.181E-02	-0.322
		1221.42	*	2.798E-02	1.522E-01	2.538E-01	1.552E-02	0.110
		1230.97		2.937E-01	4.134E-01	6.185E-01	3.857E-02	0.475
RE-183	+	57.98		5.346E-01	5.369E-01	9.044E-01	6.948E-02	0.591
	+	59.32		5.559E+00	5.373E-01	6.239E-01	4.740E-02	8.910
		67.20		1.738E-01	3.329E-01	5.563E-01	4.459E-02	0.313
		162.32	*	5.552E-02	1.802E-01	3.053E-01	1.611E-02	0.182
		208.81		2.091E+00	1.860E+00	3.136E+00	1.702E-01	0.667
		291.72		2.791E-01	2.110E+00	3.003E+00	1.721E-01	0.093
RE-184	+	57.98		1.994E+00	2.003E+00	3.374E+00	2.592E-01	0.591
	+	59.32		2.072E+01	2.003E+00	2.326E+00	1.767E-01	8.910
		67.20		6.484E-01	1.242E+00	2.075E+00	1.663E-01	0.313
		161.27		-4.583E-01	5.908E-01	9.870E-01	5.220E-02	-0.464
		216.55		-3.042E-01	5.162E-01	8.485E-01	4.635E-02	-0.359
		252.85	*	2.757E-02	4.679E-01	7.684E-01	4.316E-02	0.036
		318.01		5.858E-01	9.701E-01	1.579E+00	9.114E-02	0.371
		792.07		3.922E-01	1.338E+00	1.254E+00	1.198E-01	0.313
		903.28		7.893E-02	9.162E-01	1.345E+00	1.510E-01	0.059
		920.93		2.131E-01	3.784E-01	6.117E-01	6.703E-02	0.348
OS-185	+	59.72		1.525E+01	1.474E+00	1.653E+00	1.258E-01	9.222
		61.14		3.129E+00	4.568E-01	6.721E-01	5.186E-02	4.656
		69.30		-1.716E-01	5.490E-01	8.102E-01	6.564E-02	-0.212
		592.07		4.870E-01	4.162E+00	6.761E+00	4.840E-01	0.072
		646.12	*	-7.018E-02	6.875E-02	1.065E-01	8.012E-03	-0.659
		717.42		2.610E-01	7.122E-01	1.210E+00	1.019E-01	0.216
		874.81		-8.500E-02	4.789E-01	7.746E-01	8.450E-02	-0.110
		880.27		-1.898E-01	6.601E-01	1.012E+00	1.113E-01	-0.187
RE-188		155.03	*	1.861E-02	2.788E-01	4.735E-01	2.534E-02	0.039
		477.96		-4.005E+00	8.330E+00	1.363E+01	8.686E-01	-0.294
		633.10		5.330E+00	4.538E+00	7.531E+00	5.598E-01	0.708
W-188		63.58		-1.167E+01	1.002E+02	1.493E+02	1.173E+01	-0.078
		227.08		-1.682E+01	2.452E+01	4.008E+01	2.209E+00	-0.420
		290.67	*	7.654E+00	1.657E+01	2.378E+01	1.362E+00	0.322
IR-192	+	295.96		1.108E+00	2.827E-01	3.828E-01	2.232E-02	2.895
		308.46		2.465E-02	2.035E-01	3.294E-01	1.919E-02	0.075
		316.51	*	2.293E-02	7.417E-02	1.200E-01	6.959E-03	0.191
		468.07		-1.376E-01	1.972E-01	3.223E-01	2.297E-02	-0.427
		604.41		6.584E-01	7.987E-01	1.145E+00	1.392E-01	0.575
		612.46		4.142E+00	1.363E+00	2.042E+00	1.792E-01	2.028
AU-195		65.12		-4.454E-01	2.953E-01	4.730E-01	3.750E-02	-0.942
		66.83		5.608E-02	1.585E-01	2.642E-01	2.114E-02	0.212
	+	75.70		1.250E+00	4.393E-01	5.666E-01	4.759E-02	2.207

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	1.081E-01	3.758E-01	6.144E-01	4.701E-02	0.176
		129.76		1.757E+00	5.038E+00	8.099E+00	4.634E-01	0.217
TL-200		367.94	*	1.520E-05	5.038E+00	Half-Life too short		
		579.30		9.570E-04	5.038E+00	Half-Life too short		
		828.27		3.044E-04	5.038E+00	Half-Life too short		
		1205.75		4.204E-04	5.038E+00	Half-Life too short		
TL-201		68.90		1.199E+00	5.466E+00	8.175E+00	6.609E-01	0.147
		70.82		-8.639E-01	3.042E+00	4.487E+00	3.663E-01	-0.193
		80.30		-1.765E+00	5.330E+00	7.785E+00	6.750E-01	-0.227
		135.34		-5.888E+00	2.777E+01	4.408E+01	2.475E+00	-0.134
		167.43	*	-3.181E+00	7.285E+00	1.221E+01	6.411E-01	-0.260
TL-202		68.90		1.556E-01	7.093E-01	1.061E+00	8.576E-02	0.147
		70.82		-1.118E-01	3.937E-01	5.807E-01	4.741E-02	-0.193
		80.30		-2.285E-01	6.900E-01	1.008E+00	8.738E-02	-0.227
		439.56	*	-1.974E-01	1.710E-01	2.786E-01	1.699E-02	-0.709
HG-203		70.83		-5.249E-01	1.867E+00	2.752E+00	3.667E-01	-0.191
		72.87		1.496E+00	9.651E-01	1.608E+00	2.085E-01	0.930
		82.60		-4.700E-01	1.666E+00	2.723E+00	3.779E-01	-0.173
		279.20	*	6.106E-02	8.013E-02	1.320E-01	8.006E-03	0.463
BI-207		72.80		4.113E-01	2.879E-01	4.851E-01	4.004E-02	0.848
	+	74.97		6.991E-01	2.456E-01	3.033E-01	2.536E-02	2.305
		84.90		5.012E-01	3.234E-01	4.863E-01	4.376E-02	1.031
		569.67		-5.708E-03	5.176E-02	8.368E-02	5.864E-03	-0.068
		1063.62	*	-2.452E-02	4.223E-02	6.782E-02	5.599E-03	-0.362
		1770.23		3.149E-01	5.656E-01	7.581E-01	4.586E-02	0.415
TL-207		81.07		-2.924E-01	3.747E-01	5.398E-01	4.707E-02	-0.542
		83.78		1.591E-01	2.182E-01	3.245E-01	2.892E-02	0.490
		94.90		8.038E-01	4.132E-01	6.223E-01	5.065E-02	1.292
		122.32		-4.146E+00	3.159E+00	4.922E+00	3.343E-01	-0.842
		144.24		-8.266E-01	1.196E+00	1.866E+00	1.302E-01	-0.443
		154.21		-2.819E-01	6.637E-01	1.119E+00	7.444E-02	-0.252
		269.46		4.661E-01	3.735E-01	6.206E-01	3.687E-02	0.751
		323.87	*	-8.104E-01	1.437E+00	2.278E+00	3.761E-01	-0.356
	+	338.28		5.341E+00	2.787E+00	3.688E+00	3.882E-01	1.448
		445.03		-1.643E-01	6.490E+00	1.076E+01	1.126E+00	-0.015
PO-209		260.50		8.403E+00	1.985E+01	3.271E+01	1.846E+00	0.257
		262.80		-1.071E+01	5.510E+01	8.983E+01	5.077E+00	-0.119
		896.60	*	-5.520E-01	6.047E+00	9.814E+00	1.107E+00	-0.056
BI-210		46.50	*	-6.867E+00	9.628E+00	1.607E+01	1.243E+00	-0.427
PB-210		46.50	*	-6.867E+00	9.628E+00	1.607E+01	1.243E+00	-0.427
PO-210		46.50	*	-6.867E+00	9.624E+00	1.607E+01	1.069E+00	-0.427
PB-211		404.84	*	-2.970E-01	2.233E+00	3.712E+00	2.314E+00	-0.080
		427.08		1.644E+00	5.430E+00	8.918E+00	5.514E+00	0.184
		831.96		1.781E-01	9.745E-01	1.610E+00	1.013E+00	0.111
PO-215		81.07		-2.924E-01	3.747E-01	5.398E-01	4.707E-02	-0.542
		83.78		1.591E-01	2.182E-01	3.245E-01	2.892E-02	0.490
		94.90		8.038E-01	4.132E-01	6.223E-01	5.065E-02	1.292
		122.32		-4.146E+00	3.159E+00	4.922E+00	3.343E-01	-0.842
		144.24		-8.266E-01	1.196E+00	1.866E+00	1.302E-01	-0.443

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		154.21		-2.819E-01	6.637E-01	1.119E+00	7.444E-02	-0.252
		269.46		4.661E-01	3.735E-01	6.206E-01	3.687E-02	0.751
		323.87	*	-8.104E-01	1.437E+00	2.278E+00	3.761E-01	-0.356
	+	338.28		5.341E+00	2.787E+00	3.688E+00	3.882E-01	1.448
		445.03		-1.643E-01	6.490E+00	1.076E+01	1.126E+00	-0.015
RN-219		271.23		8.738E-01	4.820E-01	8.016E-01	6.426E-02	1.090
		401.81	*	-1.181E+00	9.976E-01	1.617E+00	2.201E-01	-0.730
RN-220		549.76	*	-3.044E+01	4.792E+01	7.677E+01	5.276E+00	-0.396
RA-223		81.07		-2.924E-01	3.747E-01	5.398E-01	4.707E-02	-0.542
		83.78		1.591E-01	2.182E-01	3.245E-01	2.892E-02	0.490
		94.90		8.038E-01	4.132E-01	6.223E-01	5.065E-02	1.292
		122.32		-4.146E+00	3.159E+00	4.922E+00	3.343E-01	-0.842
		144.24		-8.266E-01	1.196E+00	1.866E+00	1.302E-01	-0.443
		154.21		-2.819E-01	6.637E-01	1.119E+00	7.444E-02	-0.252
		269.46		4.661E-01	3.735E-01	6.206E-01	3.687E-02	0.751
		323.87	*	-8.104E-01	1.437E+00	2.278E+00	3.761E-01	-0.356
	+	338.28		5.341E+00	2.787E+00	3.688E+00	3.882E-01	1.448
		445.03		-1.643E-01	6.490E+00	1.076E+01	1.126E+00	-0.015
AC-227		79.80		3.048E-01	2.825E+00	4.173E+00	8.977E-01	0.073
		236.00		5.563E-01	4.814E-01	7.091E-01	7.315E-02	0.784
		256.20	*	-4.715E-01	7.877E-01	1.274E+00	1.769E-01	-0.370
		286.10		-9.157E-01	3.172E+00	5.126E+00	5.904E-01	-0.179
		299.80		2.831E+00	3.337E+00	4.773E+00	7.765E-01	0.593
		304.40		-5.794E+00	4.120E+00	6.300E+00	1.089E+00	-0.920
		334.20		-2.110E+00	5.796E+00	8.025E+00	1.471E+00	-0.263
TH-227		79.80		3.048E-01	2.825E+00	4.173E+00	9.092E-01	0.073
	+	94.00		8.083E+00	4.735E+00	5.352E+00	1.158E+00	1.510
		236.00		5.563E-01	4.806E-01	7.091E-01	6.311E-02	0.784
		256.20	*	-4.715E-01	7.889E-01	1.274E+00	2.145E-01	-0.370
		286.10		-9.157E-01	3.300E+00	5.126E+00	5.134E+00	-0.179
		299.80		2.831E+00	3.337E+00	4.773E+00	7.765E-01	0.593
		304.40		-5.794E+00	4.120E+00	6.300E+00	1.089E+00	-0.920
		334.20		-2.110E+00	5.796E+00	8.025E+00	1.471E+00	-0.263
TH-229		85.43		4.553E-01	3.205E-01	4.809E-01	4.347E-02	0.947
	+	88.47		4.802E-01	2.194E-01	2.938E-01	2.691E-02	1.635
		100.00		2.545E-01	3.103E-01	5.111E-01	3.848E-02	0.498
		193.63	*	-2.763E-01	1.022E+00	1.703E+00	9.117E-02	-0.162
		210.97		4.354E-01	1.471E+00	2.455E+00	1.335E-01	0.177
PA-231		283.67	*	-5.554E-01	3.165E+00	5.129E+00	7.049E-01	-0.108
		301.29		1.167E+00	1.256E+00	1.906E+00	1.987E-01	0.612
TH-231		81.07		-2.924E-01	3.747E-01	5.398E-01	4.707E-02	-0.542
		83.78		1.591E-01	2.182E-01	3.245E-01	2.892E-02	0.490
		94.90		8.038E-01	4.132E-01	6.223E-01	5.065E-02	1.292
		122.32		-4.146E+00	3.159E+00	4.922E+00	3.343E-01	-0.842
		144.24		-8.266E-01	1.196E+00	1.866E+00	1.302E-01	-0.443
		154.21		-2.819E-01	6.637E-01	1.119E+00	7.444E-02	-0.252
		269.46		4.661E-01	3.735E-01	6.206E-01	3.687E-02	0.751
		323.87	*	-8.104E-01	1.437E+00	2.278E+00	3.761E-01	-0.356
	+	338.28		5.341E+00	2.787E+00	3.688E+00	3.882E-01	1.448

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-1.643E-01	6.490E+00	1.076E+01	1.126E+00	-0.015
U-231		84.21		7.661E+00	6.498E+00	9.733E+00	8.706E-01	0.787
	+	92.29		5.604E+00	3.085E+00	3.869E+00	3.294E-01	1.448
		95.87	*	-4.403E-01	1.386E+00	2.000E+00	1.603E-01	-0.220
		108.00		-2.457E+00	2.490E+00	3.944E+00	2.682E-01	-0.623
PA-233	+	75.28		2.040E+01	7.623E+00	8.933E+00	1.359E+00	2.284
	+	86.59		6.885E+00	3.599E+00	4.295E+00	1.159E+00	1.603
		300.12		1.469E+00	9.273E-01	1.332E+00	1.787E-01	1.103
		311.98	*	1.354E-03	1.394E-01	2.250E-01	1.379E-02	0.006
		340.50		2.183E+00	1.566E+00	2.148E+00	4.932E-01	1.017
		398.62		2.160E+00	5.010E+00	8.386E+00	2.168E+00	0.258
		415.76		2.312E+00	4.169E+00	6.965E+00	1.436E+00	0.332
PA-234		63.00		6.413E-01	3.049E+00	4.581E+00	6.905E-01	0.140
		94.67		6.874E-01	3.050E-01	4.512E-01	5.457E-02	1.524
		98.44		2.188E-02	1.545E-01	2.513E-01	1.399E-01	0.087
		99.86		7.260E-01	7.879E-01	1.300E+00	9.804E-02	0.559
		111.00		-8.557E-02	3.212E-01	5.157E-01	5.533E-02	-0.166
		131.20		1.578E-01	1.887E-01	3.056E-01	1.740E-02	0.516
		152.70		1.634E-01	5.807E-01	9.214E-01	1.443E-01	0.177
	+	186.00		2.238E+00	2.850E+00	4.106E+00	1.251E+00	0.545
		226.40		4.314E-02	7.815E-01	1.294E+00	1.477E-01	0.033
		227.20		-1.311E-01	8.379E-01	1.382E+00	7.617E-02	-0.095
		248.90		-1.913E-01	1.653E+00	2.710E+00	5.808E-01	-0.071
		293.70		5.585E+00	1.812E+00	2.407E+00	3.865E-01	2.321
		369.80		-6.295E-01	1.943E+00	3.246E+00	6.758E-01	-0.194
		568.70		-4.431E-01	1.691E+00	2.723E+00	1.906E-01	-0.163
		569.50		-5.864E-02	4.591E-01	7.419E-01	5.198E-02	-0.079
		574.00		-5.174E-01	2.538E+00	4.097E+00	2.883E-01	-0.126
		699.00		-3.619E-01	5.483E-01	8.746E-01	1.650E-01	-0.414
		706.10		4.152E-01	8.083E-01	1.352E+00	6.018E-01	0.307
		733.00		-5.398E-03	3.190E-01	4.561E-01	1.013E-01	-0.012
		742.81		1.189E-01	1.118E+00	1.863E+00	1.253E+00	0.064
	+	796.30		2.672E+00	1.294E+00	1.413E+00	3.870E-01	1.891
		805.60		5.106E-01	7.934E-01	1.334E+00	4.135E-01	0.383
		819.60		7.038E-02	9.473E-01	1.567E+00	6.011E-01	0.045
		826.30		-3.131E-01	6.403E-01	9.927E-01	4.472E-01	-0.315
		831.60		-2.712E-02	5.014E-01	8.216E-01	2.492E-01	-0.033
		876.40		-6.359E-02	7.102E-01	1.151E+00	1.186E+00	-0.055
		880.51		-1.855E-02	2.399E-01	3.731E-01	4.105E-02	-0.050
		883.24		1.685E-02	2.295E-01	3.767E-01	2.545E-01	0.045
		899.00		-5.018E-01	7.453E-01	1.108E+00	4.912E-01	-0.453
		925.00		-1.272E+00	9.570E-01	1.391E+00	1.516E-01	-0.914
		926.50		-5.338E-02	1.340E-01	2.105E-01	5.500E-02	-0.254
		946.00	*	1.740E-01	2.409E-01	4.068E-01	8.025E-02	0.428
		949.00		1.652E-01	3.663E-01	6.123E-01	6.430E-02	0.270
		980.50		-5.466E-02	6.412E-01	9.181E-01	9.132E-02	-0.060
		1394.10		-8.452E-01	1.049E+00	1.311E+00	8.515E-01	-0.645
PA-234M		766.41		2.969E+01	2.808E+01	2.647E+01	2.032E+01	1.122
		1001.03	*	3.838E+00	5.417E+00	9.054E+00	1.079E+00	0.424

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-234		63.29	*	-3.133E-01	2.585E+00	3.852E+00	6.791E-01	-0.081
	+	92.38		2.092E+00	1.199E+00	1.445E+00	2.604E-01	1.448
U-235		89.95		8.832E-01	2.426E+00	2.818E+00	8.718E-01	0.313
	+	93.35		2.515E+00	1.538E+00	1.718E+00	4.800E-01	1.464
		105.00		1.780E+00	1.879E+00	2.977E+00	8.762E-01	0.598
		143.76	*	-1.078E-01	3.672E-01	5.774E-01	9.352E-02	-0.187
		163.35		-8.663E-02	7.967E-01	1.340E+00	2.388E-01	-0.065
	+	185.71		8.287E-02	1.026E-01	1.511E-01	8.037E-03	0.548
		205.31		1.694E-01	1.022E+00	1.705E+00	3.046E-01	0.099
NP-236		94.67		5.239E-01	2.267E-01	3.424E-01	2.797E-02	1.530
		98.44		1.648E-02	1.165E-01	1.900E-01	1.463E-02	0.087
		111.00		-6.473E-02	2.429E-01	3.901E-01	2.566E-02	-0.166
		160.31	*	-1.261E-01	1.346E-01	2.235E-01	1.184E-02	-0.564
U-238		63.29	*	-3.133E-01	2.585E+00	3.852E+00	6.791E-01	-0.081
	+	92.38		2.092E+00	1.152E+00	1.445E+00	1.228E-01	1.448
NP-239		99.55		3.136E-01	2.629E-01	4.352E-01	3.298E-02	0.721
		117.00	*	-1.006E-01	3.413E-01	5.461E-01	3.380E-02	-0.184
		209.75		6.109E-01	1.487E+00	2.486E+00	1.350E-01	0.246
		228.18		-1.439E-01	4.377E-01	7.197E-01	3.970E-02	-0.200
		277.60		3.921E-01	3.648E-01	6.037E-01	3.438E-02	0.649
		334.30		-1.250E+00	3.277E+00	4.544E+00	2.628E-01	-0.275
CM-243		99.55		3.226E-01	2.705E-01	4.478E-01	3.393E-02	0.721
		103.76	*	3.941E-02	1.649E-01	2.685E-01	1.922E-02	0.147
		117.00		-1.035E-01	3.511E-01	5.618E-01	3.477E-02	-0.184
		209.75		6.022E-01	1.465E+00	2.450E+00	1.331E-01	0.246
		228.18		-1.454E-01	4.422E-01	7.271E-01	4.011E-02	-0.200
		277.60		3.952E-01	3.677E-01	6.085E-01	3.466E-02	0.649
CM-247		278.00		1.314E+00	1.513E+00	2.497E+00	1.423E-01	0.526
		287.40		2.692E+00	2.520E+00	4.163E+00	2.381E-01	0.647
		402.60	*	-9.939E-02	8.847E-02	1.451E-01	8.452E-03	-0.685
CF-249		252.85		1.044E-01	1.771E+00	2.909E+00	1.634E-01	0.036
		333.44		1.232E-01	4.246E-01	5.988E-01	3.463E-02	0.206
		387.95	*	-2.275E-02	9.327E-02	1.558E-01	8.959E-03	-0.146
CF-251		176.60	*	-6.152E-02	2.243E-01	3.758E-01	1.985E-02	-0.164
		227.00		-5.012E-01	7.518E-01	1.230E+00	6.776E-02	-0.408
		285.00		-4.252E-01	3.624E+00	5.880E+00	3.360E-01	-0.072

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871427    *
* Acquisition date :  7-JUL-2009 11:20:58 Detector SN#     :               *
* Detector ID        : GAM18              Sensitivity      : 5.000         *
* Geometry           : CAN                Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:08.14     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 24-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201871427          Analyst initials: MXR1         *
* Batch Number       : 881220               Sample Quantity : 1.4491E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.425E+01	2.909E+00	4.231E-01	0.000E+00
CD-109	3.567E+00	1.597E+00	2.353E+00	0.000E+00
SN-126	3.517E-01	1.575E-01	2.275E-01	0.000E+00
BA-137M	6.596E+01	4.951E+00	7.816E-02	0.000E+00
CS-137	6.972E+01	5.246E+00	8.263E-02	0.000E+00
TL-208	5.844E-01	1.163E-01	1.009E-01	0.000E+00
BI-211	4.399E+00	7.977E-01	7.494E-01	0.000E+00
BI-212	1.376E+00	4.073E-01	3.395E-01	0.000E+00
PB-212	1.814E+00	1.899E-01	1.840E-01	0.000E+00
PO-212	1.814E+00	1.899E-01	1.840E-01	0.000E+00
BI-214	1.300E+00	2.309E-01	1.797E-01	0.000E+00
PB-214	1.530E+00	2.883E-01	2.604E-01	0.000E+00
PO-214	1.530E+00	2.883E-01	2.604E-01	0.000E+00
PO-216	1.814E+00	1.899E-01	1.840E-01	0.000E+00
PO-218	1.530E+00	2.883E-01	2.604E-01	0.000E+00
RA-224	4.764E+00	1.734E+00	2.091E+00	0.000E+00
RA-226	1.300E+00	2.309E-01	1.797E-01	0.000E+00
AC-228	1.802E+00	3.395E-01	1.763E-01	0.000E+00
RA-228	1.802E+00	3.395E-01	1.763E-01	0.000E+00
TH-228	1.814E+00	1.899E-01	1.840E-01	0.000E+00
TH-230	1.300E+00	2.309E-01	1.797E-01	0.000E+00
TH-232	1.802E+00	3.395E-01	1.763E-01	0.000E+00
U-234	1.300E+00	2.309E-01	1.797E-01	0.000E+00
NP-237	1.033E+00	5.074E-01	6.571E-01	0.000E+00
AM-241	8.100E+00	8.118E-01	5.786E-01	0.000E+00
AM-243	3.895E-01	1.341E-01	1.545E-01	0.000E+00
ANH-511	1.039E-01	9.761E-02	1.066E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-2.781E-01	8.535E-01	1.474E+00	0.000E+00	NOT IDENT.
NA-22	-3.270E-02	3.510E-02	5.526E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	4.944E+04	0.000E+00	0.000E+00	SHORT HLIF
AL-26	7.638E-03	2.221E-02	3.887E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.594E-02	1.111E-01	0.000E+00	FAIL ABUN
SC-46	-1.419E-02	3.031E-02	4.973E-02	0.000E+00	FAIL ABUN
V-48	-9.048E-03	4.989E-02	8.252E-02	0.000E+00	NOT IDENT.
CR-51	-7.873E-01	7.597E-01	1.273E+00	0.000E+00	NOT IDENT.
MN-52	-2.064E-02	1.389E-01	2.279E-01	0.000E+00	NOT IDENT.
MN-54	7.727E-03	3.025E-02	5.240E-02	0.000E+00	NOT IDENT.
CO-56	-4.380E-02	3.201E-02	4.937E-02	0.000E+00	FAIL ABUN
CO-57	-5.826E-02	4.451E-02	7.534E-02	0.000E+00	NOT IDENT.
CO-58	-6.722E-03	2.884E-02	4.869E-02	0.000E+00	NOT IDENT.
FE-59	-3.905E-02	6.477E-02	1.067E-01	0.000E+00	NOT IDENT.
CO-60	4.299E-02	3.297E-02	6.045E-02	0.000E+00	NOT IDENT.
ZN-65	4.617E-02	7.589E-02	1.177E-01	0.000E+00	NOT IDENT.
GE-68	5.711E-01	1.006E+00	1.764E+00	0.000E+00	NOT IDENT.
AS-73	-9.449E-01	2.067E+00	3.614E+00	0.000E+00	NOT IDENT.
AS-74	2.040E-02	1.357E-01	2.309E-01	0.000E+00	NOT IDENT.
SE-75	3.498E-02	8.687E-02	1.524E-01	0.000E+00	NOT IDENT.
BR-77	-2.011E+01	1.157E+01	1.905E+01	0.000E+00	FAIL ABUN
SR-82	-5.860E-02	3.266E-01	4.763E-01	0.000E+00	NOT IDENT.
RB-83	-2.217E-01	1.408E-01	2.330E-01	0.000E+00	NOT IDENT.
RB-84	-5.361E-03	5.615E-02	9.054E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.646E+01	2.563E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	8.253E-02	1.285E-01	0.000E+00	NOT IDENT.
RB-86	-3.097E-02	5.979E-01	1.011E+00	0.000E+00	NOT IDENT.
Y-88	2.049E-02	2.565E-02	4.705E-02	0.000E+00	NOT IDENT.
ZR-88	-4.192E-02	7.070E-02	1.240E-01	0.000E+00	NOT IDENT.
Y-91	1.226E+01	1.507E+01	2.677E+01	0.000E+00	NOT IDENT.
NB-94	-1.584E-02	2.490E-02	4.177E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	3.705E-02	6.213E-02	0.000E+00	NOT IDENT.
NB-95M	3.814E-02	2.455E-01	3.812E-01	0.000E+00	NOT IDENT.
ZR-95	1.630E-02	5.193E-02	9.133E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.110E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.974E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.393E-01	5.301E+00	9.167E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.754E+14	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.124E-02	6.371E-02	1.135E-01	0.000E+00	NOT IDENT.
RH-102	5.809E-02	8.275E-02	1.450E-01	0.000E+00	NOT IDENT.
RU-103	6.379E-02	8.838E-02	1.541E-01	0.000E+00	FAIL ABUN
RH-106	4.348E-01	5.227E-01	8.977E-01	0.000E+00	FAIL ABUN
RU-106	4.348E-01	5.209E-01	8.977E-01	0.000E+00	FAIL ABUN
AG-108M	6.122E-02	8.713E-02	1.541E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	2.508E-01	2.466E-01	0.000E+00	NOT IDENT.
IN-111	1.132E+00	1.373E+00	2.143E+00	0.000E+00	NOT IDENT.
IN-113M	5.172E-02	1.018E-01	1.816E-01	0.000E+00	NOT IDENT.
SN-113	5.172E-02	1.018E-01	1.816E-01	0.000E+00	NOT IDENT.
IN-114M	-6.233E-02	3.733E-01	6.212E-01	0.000E+00	NOT IDENT.
CD-115	4.484E-01	1.124E+01	1.933E+01	0.000E+00	NOT IDENT.
SN-117M	3.626E-02	8.068E-02	1.478E-01	0.000E+00	NOT IDENT.
SB-122	-1.149E+00	1.989E+00	3.337E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	6.237E+05	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.141E-02	4.603E-02	8.433E-02	0.000E+00	NOT IDENT.
I-124	1.618E-01	8.416E-01	1.238E+00	0.000E+00	NOT IDENT.
SB-124	-5.641E-02	5.317E-02	7.657E-02	0.000E+00	FAIL ABUN
SB-125	5.772E-02	2.353E-01	4.145E-01	0.000E+00	NOT IDENT.
TE-125M	-3.622E+00	1.512E+01	2.643E+01	0.000E+00	NOT IDENT.
I-126	0.000E+00	2.941E-01	4.941E-01	0.000E+00	NOT IDENT.
SB-126	6.145E-02	1.133E-01	1.767E-01	0.000E+00	FAIL ABUN
SB-127	-2.732E-02	7.268E-01	1.267E+00	0.000E+00	FAIL ABUN
XE-127	-3.527E-02	8.715E-02	1.549E-01	0.000E+00	FAIL ABUN
I-131	-2.192E-03	2.149E-01	3.833E-01	0.000E+00	NOT IDENT.
TE-132	-2.759E-01	8.318E-01	1.462E+00	0.000E+00	NOT IDENT.
BA-133	3.021E-03	1.105E-01	1.629E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.138E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.528E-02	7.460E-02	0.000E+00	FAIL ABUN
CS-135	-1.319E-01	3.096E-01	5.349E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.169E+13	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-6.551E-02	7.115E-02	1.149E-01	0.000E+00	FAIL ABUN
CE-139	4.709E-03	4.863E-02	8.862E-02	0.000E+00	NOT IDENT.
BA-140	-6.247E-02	4.403E-01	7.515E-01	0.000E+00	NOT IDENT.
LA-140	1.659E-02	5.874E-02	9.153E-02	0.000E+00	NOT IDENT.
CE-141	2.354E-03	1.021E-01	1.749E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.139E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	8.166E-02	3.565E-01	6.175E-01	0.000E+00	NOT IDENT.
PM-144	1.075E-02	2.639E-02	4.598E-02	0.000E+00	NOT IDENT.
PR-144	7.273E-01	1.786E+00	3.112E+00	0.000E+00	NOT IDENT.

PM-146	9.551E-03	1.249E-01	2.182E-01	0.000E+00	NOT IDENT.
ND-147	5.684E-03	9.629E-01	1.653E+00	0.000E+00	NOT IDENT.
PM-149	-1.314E+01	9.493E+01	1.638E+02	0.000E+00	NOT IDENT.
EU-152	-8.539E-02	2.193E-01	3.560E-01	0.000E+00	FAIL ABUN
GD-153	-1.492E-02	1.431E-01	2.259E-01	0.000E+00	NOT IDENT.
EU-154	-5.434E-02	9.580E-02	1.550E-01	0.000E+00	NOT IDENT.
EU-155	1.706E-01	1.810E-01	3.236E-01	0.000E+00	FAIL ABUN
TB-160	-1.781E-03	1.098E-01	1.862E-01	0.000E+00	FAIL ABUN
HO-166M	-9.427E-03	4.672E-02	8.033E-02	0.000E+00	NOT IDENT.
TM-171	1.204E+01	4.730E+01	8.645E+01	0.000E+00	FAIL ABUN
LU-176	3.690E-02	5.215E-02	9.060E-02	0.000E+00	FAIL ABUN
LU-177	1.480E+00	1.663E+00	2.998E+00	0.000E+00	NOT IDENT.
LU-177M	-1.175E-01	4.243E-01	7.444E-01	0.000E+00	NOT IDENT.
HF-181	-4.149E-02	1.046E-01	1.803E-01	0.000E+00	FAIL ABUN
W-181	-9.279E-01	6.217E-01	1.095E+00	0.000E+00	FAIL ABUN
TA-182	2.798E-02	1.492E-01	2.562E-01	0.000E+00	FAIL ABUN
RE-183	5.552E-02	1.766E-01	3.224E-01	0.000E+00	FAIL ABUN
RE-184	2.757E-02	4.586E-01	8.037E-01	0.000E+00	FAIL ABUN
OS-185	-7.018E-02	6.738E-02	1.091E-01	0.000E+00	FAIL ABUN
RE-188	1.861E-02	2.732E-01	5.006E-01	0.000E+00	NOT IDENT.
W-188	7.654E+00	1.624E+01	2.479E+01	0.000E+00	NOT IDENT.
IR-192	2.293E-02	7.268E-02	1.249E-01	0.000E+00	FAIL ABUN
AU-195	1.081E-01	3.683E-01	6.556E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.607E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.181E+00	7.139E+00	1.289E+01	0.000E+00	NOT IDENT.
TL-202	-1.974E-01	1.676E-01	2.879E-01	0.000E+00	NOT IDENT.
HG-203	6.106E-02	7.853E-02	1.378E-01	0.000E+00	NOT IDENT.
BI-207	-2.452E-02	4.139E-02	6.869E-02	0.000E+00	FAIL ABUN
TL-207	-8.104E-01	1.408E+00	2.370E+00	0.000E+00	FAIL ABUN
PO-209	-5.520E-01	5.926E+00	9.979E+00	0.000E+00	NOT IDENT.
BI-210	-6.867E+00	9.435E+00	1.742E+01	0.000E+00	NOT IDENT.
PB-210	-6.867E+00	9.435E+00	1.742E+01	0.000E+00	NOT IDENT.
PO-210	-6.867E+00	9.432E+00	1.742E+01	0.000E+00	NOT IDENT.
PB-211	-2.970E-01	2.188E+00	3.843E+00	0.000E+00	NOT IDENT.
PO-215	-8.104E-01	1.408E+00	2.370E+00	0.000E+00	FAIL ABUN
RN-219	-1.181E+00	9.777E-01	1.674E+00	0.000E+00	NOT IDENT.
RN-220	-3.044E+01	4.696E+01	7.894E+01	0.000E+00	NOT IDENT.
RA-223	-8.104E-01	1.408E+00	2.370E+00	0.000E+00	FAIL ABUN
AC-227	-4.715E-01	7.719E-01	1.332E+00	0.000E+00	NOT IDENT.
TH-227	-4.715E-01	7.732E-01	1.332E+00	0.000E+00	FAIL ABUN
TH-229	-2.763E-01	1.002E+00	1.791E+00	0.000E+00	FAIL ABUN
PA-231	-5.554E-01	3.101E+00	5.352E+00	0.000E+00	NOT IDENT.
TH-231	-8.104E-01	1.408E+00	2.370E+00	0.000E+00	FAIL ABUN
U-231	-4.403E-01	1.359E+00	2.136E+00	0.000E+00	FAIL ABUN
PA-233	1.354E-03	1.366E-01	2.343E-01	0.000E+00	FAIL ABUN
PA-234	1.740E-01	2.361E-01	4.132E-01	0.000E+00	FAIL ABUN
PA-234M	3.838E+00	5.308E+00	9.183E+00	0.000E+00	NOT IDENT.
TH-234	-3.133E-01	2.533E+00	4.149E+00	0.000E+00	FAIL ABUN
U-235	-1.078E-01	3.598E-01	6.114E-01	0.000E+00	FAIL ABUN
NP-236	-1.261E-01	1.319E-01	2.361E-01	0.000E+00	NOT IDENT.
U-238	-3.133E-01	2.533E+00	4.149E+00	0.000E+00	FAIL ABUN
NP-239	-1.006E-01	3.345E-01	5.807E-01	0.000E+00	NOT IDENT.
CM-243	3.941E-02	1.616E-01	2.862E-01	0.000E+00	NOT IDENT.
CM-247	-9.939E-02	8.670E-02	1.502E-01	0.000E+00	NOT IDENT.
CF-249	-2.275E-02	9.141E-02	1.615E-01	0.000E+00	NOT IDENT.
CF-251	-6.152E-02	2.198E-01	3.962E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 13:21:30.54

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871427.CNF;1
Sample date       : 24-JUN-2009 12:00:00 Acquisition date : 7-JUL-2009 11:20:58.
Sample ID         : G1201871427          Sample quantity  : 1.44910E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.14  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 881220                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	2670	10.67*	1.892E+00	3.425E+01	3.425E+01	8.67
CD-109	88.03	324	3.72*	6.440E+00	3.498E+00	3.567E+00	45.69
SN-126	64.28	------	9.60	3.245E+00	------ Line Not Found		------
	86.94	324	8.90	6.440E+00	1.462E+00	1.462E+00	61.02
	87.57	324	37.00*	6.440E+00	3.517E-01	3.517E-01	45.69
BA-137M	661.65	82100	89.98*	3.586E+00	6.590E+01	6.596E+01	7.66
CS-137	661.65	82100	85.12*	3.586E+00	6.967E+01	6.972E+01	7.68
TL-208	277.35	------	6.80	6.258E+00	------ Line Not Found		------
	510.84	173	21.60	4.309E+00	4.812E-01	4.812E-01	96.20
	583.14	747	84.20*	3.933E+00	5.844E-01	5.844E-01	20.31
	860.37	77	12.46	2.913E+00	5.466E-01	5.466E-01	57.05
BI-211	72.87	------	1.27	4.622E+00	------ Line Not Found		------
	351.07	1197	12.94*	5.448E+00	4.399E+00	4.399E+00	18.50
BI-212	727.18	209	11.80*	3.337E+00	1.376E+00	1.376E+00	30.20
	785.46	26	1.97	3.137E+00	1.078E+00	1.078E+00	166.07
	1620.62	------	2.75	1.770E+00	------ Line Not Found		------
PB-212	74.81	488	10.70	4.920E+00	2.403E+00	2.403E+00	36.36
	77.11	767	18.00	5.237E+00	2.108E+00	2.108E+00	19.92
	87.30	324	8.00	6.440E+00	1.627E+00	1.627E+00	46.77
	238.63	2121	44.60*	6.791E+00	1.814E+00	1.814E+00	10.68
	300.09	------	3.41	5.984E+00	------ Line Not Found		------
PO-212	74.81	488	10.70	4.920E+00	2.403E+00	2.403E+00	36.36
	77.11	767	18.00	5.237E+00	2.108E+00	2.108E+00	19.92
	87.30	324	8.00	6.440E+00	1.627E+00	1.627E+00	46.77
	115.19	------	0.60	8.058E+00	------ Line Not Found		------
	238.63	2121	44.60*	6.791E+00	1.814E+00	1.814E+00	10.68
	300.09	------	3.41	5.984E+00	------ Line Not Found		------
BI-214	609.31	886	46.30*	3.811E+00	1.300E+00	1.300E+00	18.12
	768.36	78	5.04	3.193E+00	1.261E+00	1.261E+00	88.32
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	240	15.10	2.334E+00	1.761E+00	1.761E+00	23.04
	1238.11	110	5.94	2.149E+00	2.238E+00	2.238E+00	54.82

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1377.67	63	4.11	1.974E+00	2.023E+00	2.023E+00	64.70
	1764.49	155	15.80	1.694E+00	1.500E+00	1.500E+00	25.36
PB-214	74.81	488	6.21	4.920E+00	4.140E+00	4.140E+00	35.91
	77.11	767	10.50	5.237E+00	3.614E+00	3.614E+00	21.33
	87.30	324	4.67	6.440E+00	2.786E+00	2.787E+00	46.34
	241.98	490	7.49	6.747E+00	2.512E+00	2.513E+00	37.55
	295.21	664	19.20	6.039E+00	1.483E+00	1.483E+00	26.24
	351.92	1197	37.20*	5.448E+00	1.530E+00	1.530E+00	19.23
PO-214	74.81	488	6.21	4.920E+00	4.140E+00	4.140E+00	35.91
	77.11	767	10.50	5.237E+00	3.614E+00	3.614E+00	21.33
	87.30	324	4.67	6.440E+00	2.786E+00	2.787E+00	46.34
	241.98	490	7.49	6.747E+00	2.512E+00	2.513E+00	37.55
	295.21	664	19.20	6.039E+00	1.483E+00	1.483E+00	26.24
	351.92	1197	37.20*	5.448E+00	1.530E+00	1.530E+00	19.23
PO-216	74.81	488	10.70	4.920E+00	2.403E+00	2.403E+00	36.36
	77.11	767	18.00	5.237E+00	2.108E+00	2.108E+00	19.92
	87.30	324	8.00	6.440E+00	1.627E+00	1.627E+00	46.77
	238.63	2121	44.60*	6.791E+00	1.814E+00	1.814E+00	10.68
	300.09	------	3.41	5.984E+00	------ Line Not Found		------
PO-218	74.81	488	6.21	4.920E+00	4.140E+00	4.140E+00	35.91
	77.11	767	10.50	5.237E+00	3.614E+00	3.614E+00	21.33
	87.30	324	4.67	6.440E+00	2.786E+00	2.787E+00	46.34
	241.98	490	7.49	6.747E+00	2.512E+00	2.513E+00	37.55
	295.21	664	19.20	6.039E+00	1.483E+00	1.483E+00	26.24
	351.92	1197	37.20*	5.448E+00	1.530E+00	1.530E+00	19.23
RA-224	240.98	490	3.95*	6.747E+00	4.764E+00	4.764E+00	37.13
RA-226	609.31	886	46.30*	3.811E+00	1.300E+00	1.300E+00	18.12
	768.36	78	5.04	3.193E+00	1.261E+00	1.261E+00	88.32
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	240	15.10	2.334E+00	1.761E+00	1.761E+00	23.04
	1238.11	110	5.94	2.149E+00	2.238E+00	2.238E+00	54.82
	1377.67	63	4.11	1.974E+00	2.023E+00	2.023E+00	64.70
	1764.49	155	15.80	1.694E+00	1.500E+00	1.500E+00	25.36
AC-228	338.32	314	11.40	5.580E+00	1.279E+00	1.279E+00	65.37
	911.07	535	27.70*	2.778E+00	1.802E+00	1.802E+00	19.22
	969.11	331	16.60	2.638E+00	1.960E+00	1.960E+00	28.93
RA-228	338.32	314	11.40	5.580E+00	1.279E+00	1.279E+00	65.37
	911.07	535	27.70*	2.778E+00	1.802E+00	1.802E+00	19.22
	969.11	331	16.60	2.638E+00	1.960E+00	1.960E+00	28.93
TH-228	84.40	------	1.21	6.141E+00	------ Line Not Found		------
	238.60	2121	44.60*	6.791E+00	1.814E+00	1.814E+00	10.68
	300.10	------	3.41	5.984E+00	------ Line Not Found		------
TH-230	609.31	886	46.30*	3.811E+00	1.300E+00	1.300E+00	18.12
	768.36	78	5.04	3.193E+00	1.261E+00	1.261E+00	88.32
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	240	15.10	2.334E+00	1.761E+00	1.761E+00	23.04
	1238.11	110	5.94	2.149E+00	2.238E+00	2.238E+00	54.82
	1377.67	63	4.11	1.974E+00	2.023E+00	2.023E+00	64.70
	1764.49	155	15.80	1.694E+00	1.500E+00	1.500E+00	25.36

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TH-232	338.32	314	11.40	5.580E+00	1.279E+00	1.279E+00	51.43
	911.07	535	27.70*	2.778E+00	1.802E+00	1.802E+00	19.22
	969.11	331	16.60	2.638E+00	1.960E+00	1.960E+00	28.93
U-234	609.31	886	46.30*	3.811E+00	1.300E+00	1.300E+00	18.12
	768.36	78	5.04	3.193E+00	1.261E+00	1.261E+00	88.32
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	240	15.10	2.334E+00	1.761E+00	1.761E+00	23.04
	1238.11	110	5.94	2.149E+00	2.238E+00	2.238E+00	54.82
	1377.67	63	4.11	1.974E+00	2.023E+00	2.023E+00	64.70
	1764.49	155	15.80	1.694E+00	1.500E+00	1.500E+00	25.36
NP-237	86.50	324	12.60*	6.440E+00	1.033E+00	1.033E+00	50.14
	95.87	------	2.60	7.180E+00	------ Line Not Found		------
AM-241	59.54	2777	35.90*	2.474E+00	8.099E+00	8.100E+00	10.23
AM-243	74.67	488	66.00*	4.920E+00	3.895E-01	3.895E-01	35.14
	86.72	324	0.34	6.440E+00	3.873E+01	3.873E+01	45.69
	117.66	------	0.55	8.112E+00	------ Line Not Found		------
	142.18	------	0.13	8.232E+00	------ Line Not Found		------
ANH-511	511.00	173	100.00*	4.309E+00	1.039E-01	1.039E-01	95.84

Flag: "*" = Keyline

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

Total number of lines in spectrum 31
Number of unidentified lines 2
Number of lines tentatively identified by NID 29 93.55%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.425E+01	3.425E+01	0.297E+01	8.67	
CD-109	464.00D	1.02	3.498E+00	3.567E+00	1.630E+00	45.69	
SN-126	1.00E+05Y	1.00	3.517E-01	3.517E-01	1.607E-01	45.69	
BA-137M	30.17Y	1.00	6.590E+01	6.596E+01	0.505E+01	7.66	
CS-137	30.17Y	1.00	6.967E+01	6.972E+01	0.535E+01	7.68	
TL-208	1.41E+10Y	1.00	5.844E-01	5.844E-01	1.187E-01	20.31	
BI-211	7.04E+08Y	1.00	4.399E+00	4.399E+00	0.814E+00	18.50	
BI-212	1.41E+10Y	1.00	1.376E+00	1.376E+00	0.416E+00	30.20	
PB-212	1.41E+10Y	1.00	1.814E+00	1.814E+00	0.194E+00	10.68	
PO-212	1.41E+10Y	1.00	1.814E+00	1.814E+00	0.194E+00	10.68	
BI-214	1600.00Y	1.00	1.300E+00	1.300E+00	0.236E+00	18.12	
PB-214	1600.00Y	1.00	1.530E+00	1.530E+00	0.294E+00	19.23	
PO-214	1600.00Y	1.00	1.530E+00	1.530E+00	0.294E+00	19.23	
PO-216	1.41E+10Y	1.00	1.814E+00	1.814E+00	0.194E+00	10.68	
PO-218	1600.00Y	1.00	1.530E+00	1.530E+00	0.294E+00	19.23	
RA-224	1.41E+10Y	1.00	4.764E+00	4.764E+00	1.769E+00	37.13	
RA-226	1600.00Y	1.00	1.300E+00	1.300E+00	0.236E+00	18.12	
AC-228	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.346E+00	19.22	
RA-228	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.346E+00	19.22	
TH-228	1.41E+10Y	1.00	1.814E+00	1.814E+00	0.194E+00	10.68	
TH-230	4.47E+09Y	1.00	1.300E+00	1.300E+00	0.236E+00	18.12	
TH-232	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.346E+00	19.22	
U-234	4.47E+09Y	1.00	1.300E+00	1.300E+00	0.236E+00	18.12	
NP-237	2.14E+06Y	1.00	1.033E+00	1.033E+00	0.518E+00	50.14	
AM-241	432.20Y	1.00	8.099E+00	8.100E+00	0.828E+00	10.23	
AM-243	7380.00Y	1.00	3.895E-01	3.895E-01	1.369E-01	35.14	
ANH-511	1.00E+09Y	1.00	1.039E-01	1.039E-01	0.996E-01	95.84	
	Total Activity :		2.169E+02	2.171E+02			

Grand Total Activity : 2.169E+02 2.171E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	57.84	136	1711	1.00	114.80	112	12	1.88E-02	****	2.19E+00	T
0	93.08	304	2126	1.47	185.26	182	8	4.23E-02	54.4	6.97E+00	T
0	186.22	132	2334	1.31	371.48	367	7	1.83E-02	****	7.64E+00	T
0	795.46	125	105	1.03	1589.61	1583	15	1.74E-02	40.0	3.11E+00	T
1	964.98	108	135	2.32	1928.58	1921	30	1.51E-02	47.0	2.65E+00	T
0	1588.87	59	17	2.40	3176.21	3171	11	8.12E-03	37.5	1.79E+00	
0	1730.22	53	13	2.92	3458.89	3452	17	7.30E-03	41.7	1.71E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 13:21:35.87

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871427.CNF;1  *
* Acquisition date  : 7-JUL-2009 11:20:58.  Detector SN#     :             *
* Detector ID       : GAM18                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:08.14          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201871427           Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.44910E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.425E+01	2.968E+00	4.208E-01	3.193E-02	81.387
CD-109	3.567E+00	1.630E+00	2.200E+00	2.034E-01	1.621
SN-126	3.517E-01	1.607E-01	2.127E-01	1.960E-02	1.654
BA-137M	6.596E+01	5.052E+00	7.634E-02	5.819E-03	863.985
CS-137	6.972E+01	5.353E+00	8.070E-02	6.167E-03	863.984
TL-208	5.844E-01	1.187E-01	9.827E-02	7.704E-03	5.947
BI-211	4.399E+00	8.140E-01	7.216E-01	4.632E-02	6.097
BI-212	1.376E+00	4.156E-01	3.323E-01	3.309E-02	4.142
PB-212	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
PO-212	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
BI-214	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
PB-214	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
PO-214	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
PO-216	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.327
PO-218	1.530E+00	2.942E-01	2.508E-01	2.075E-02	6.102
RA-224	4.764E+00	1.769E+00	1.997E+00	1.112E-01	2.386
RA-226	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
AC-228	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390

Sample ID : G1201871427 Acquisition date : 7-JUL-2009 11:20:58

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390
TH-228	1.814E+00	1.937E-01	1.757E-01	1.255E-02	10.328
TH-230	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
TH-232	1.802E+00	3.465E-01	1.735E-01	2.298E-02	10.390
U-234	1.300E+00	2.357E-01	1.752E-01	1.565E-02	7.422
NP-237	1.033E+00	5.178E-01	6.140E-01	1.385E-01	1.682
AM-241	8.100E+00	8.284E-01	5.365E-01	4.450E-02	15.097
AM-243	3.895E-01	1.369E-01	1.439E-01	1.201E-02	2.707
ANH-511	1.039E-01	9.960E-02	1.035E-01	6.834E-03	1.004

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.781E-01		8.710E-01	1.429E+00	1.036E-01	-0.195
NA-22	-3.270E-02		3.581E-02	5.480E-02	3.729E-03	-0.597
NA-24	6.152E-03		2.523E-02	Half-Life too short		
AL-26	7.638E-03		2.266E-02	3.886E-02	2.269E-03	0.197
TI-44	3.890E-01	+	7.749E-02	1.036E-01	8.855E-03	3.756
SC-46	-1.419E-02		3.093E-02	4.890E-02	5.454E-03	-0.290
V-48	-9.048E-03		5.091E-02	8.133E-02	8.044E-03	-0.111
CR-51	-7.873E-01		7.753E-01	1.223E+00	7.876E-02	-0.644
MN-52	-2.064E-02		1.417E-01	2.266E-01	1.670E-02	-0.091
MN-54	7.727E-03		3.087E-02	5.146E-02	5.271E-03	0.150
CO-56	-4.380E-02		3.266E-02	4.849E-02	5.062E-03	-0.903
CO-57	-5.826E-02		4.542E-02	7.091E-02	4.201E-03	-0.822
CO-58	-6.722E-03		2.943E-02	4.777E-02	4.716E-03	-0.141
FE-59	-3.905E-02		6.609E-02	1.054E-01	8.676E-03	-0.371
CO-60	4.299E-02		3.364E-02	6.000E-02	4.534E-03	0.716
ZN-65	4.617E-02		7.744E-02	1.163E-01	8.192E-03	0.397
GE-68	5.711E-01		1.026E+00	1.742E+00	1.384E-01	0.328
AS-73	-9.449E-01		2.109E+00	3.344E+00	2.651E-01	-0.283
AS-74	2.040E-02		1.385E-01	2.250E-01	1.617E-02	0.091
SE-75	3.498E-02		8.864E-02	1.458E-01	8.340E-03	0.240
BR-77	-2.011E+01		1.181E+01	1.851E+01	1.235E+00	-1.087
SR-82	-5.860E-02		3.333E-01	4.669E-01	4.348E-02	-0.126
RB-83	-2.217E-01		1.437E-01	2.264E-01	1.510E-02	-0.979
RB-84	-5.361E-03		5.730E-02	8.901E-02	9.810E-03	-0.060
KR-85	3.201E+01		1.680E+01	2.489E+01	1.649E+00	1.286
SR-85	1.605E-01		8.421E-02	1.248E-01	8.265E-03	1.286
RB-86	-3.097E-02		6.101E-01	9.990E-01	7.953E-02	-0.031
Y-88	2.049E-02		2.617E-02	4.705E-02	2.680E-03	0.436
ZR-88	-4.192E-02		7.214E-02	1.197E-01	6.887E-03	-0.350
Y-91	1.226E+01		1.537E+01	2.651E+01	1.568E+00	0.462
NB-94	-1.584E-02		2.541E-02	4.085E-02	3.351E-03	-0.388
NB-95	7.065E-02		3.780E-02	6.088E-02	5.569E-03	1.160
NB-95M	3.814E-02		2.506E-01	3.638E-01	2.669E-02	0.105
ZR-95	1.630E-02		5.299E-02	8.947E-02	8.804E-03	0.182

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	1.373E+00		5.664E-02	Half-Life too short		
ZR-97	2.151E-01		2.538E-01	Half-Life too short		
MO-99	-1.393E-01		5.410E+00	8.976E+00	1.370E+00	-0.016
TC-99M	7.481E+07		8.947E+07	Half-Life too short		
RH-101	-2.124E-02		6.501E-02	1.079E-01	5.800E-03	-0.197
RH-102	5.809E-02		8.444E-02	1.406E-01	8.927E-03	0.413
RU-103	6.379E-02		9.018E-02	1.496E-01	1.942E-02	0.427
RH-106	4.348E-01		5.334E-01	8.756E-01	1.102E-01	0.497
RU-106	4.348E-01		5.315E-01	8.756E-01	6.443E-02	0.497
AG-108M	6.122E-02		8.891E-02	1.491E-01	9.741E-03	0.411
AG-110M	2.899E+00		2.559E-01	2.409E-01	1.900E-02	12.038
IN-111	1.132E+00		1.401E+00	2.047E+00	1.144E-01	0.553
IN-113M	5.172E-02		1.039E-01	1.753E-01	1.075E-02	0.295
SN-113	5.172E-02		1.039E-01	1.753E-01	1.075E-02	0.295
IN-114M	-6.233E-02		3.809E-01	5.903E-01	3.151E-02	-0.106
CD-115	4.484E-01		1.147E+01	1.878E+01	1.262E+00	0.024
SN-117M	3.626E-02		8.233E-02	1.399E-01	7.436E-03	0.259
SB-122	-1.149E+00		2.030E+00	3.248E+00	2.263E-01	-0.354
I-123	2.900E-01		3.182E-01	Half-Life too short		
TE-123M	2.141E-02		4.697E-02	7.982E-02	4.306E-03	0.268
I-124	1.618E-01		8.588E-01	1.206E+00	8.723E-02	0.134
SB-124	-5.641E-02		5.425E-02	7.643E-02	5.273E-03	-0.738
SB-125	5.772E-02		2.401E-01	4.009E-01	2.505E-02	0.144
TE-125M	-3.622E+00		1.543E+01	2.482E+01	2.180E+00	-0.146
I-126	2.378E+00		3.001E-01	4.826E-01	3.710E-02	4.927
SB-126	6.145E-02		1.156E-01	1.729E-01	1.464E-02	0.355
SB-127	-2.732E-02		7.416E-01	1.238E+00	1.271E-01	-0.022
XE-127	-3.527E-02		8.893E-02	1.474E-01	7.955E-03	-0.239
I-131	-2.192E-03		2.193E-01	3.694E-01	2.378E-02	-0.006
TE-132	-2.759E-01		8.488E-01	1.395E+00	1.931E-01	-0.198
BA-133	3.021E-03		1.127E-01	1.570E-01	1.813E-02	0.019
I-133	-1.349E-04		1.091E-03	Half-Life too short		
CS-134	1.372E-01	+	5.640E-02	7.317E-02	7.077E-03	1.875
CS-135	-1.319E-01		3.159E-01	5.121E-01	3.871E-02	-0.258
I-135	1.603E+06		1.107E+07	Half-Life too short		
CS-136	-6.551E-02		7.260E-02	1.134E-01	1.016E-02	-0.578
CE-139	4.709E-03		4.963E-02	8.396E-02	4.408E-03	0.056
BA-140	-6.247E-02		4.493E-01	7.305E-01	2.390E-01	-0.086
LA-140	1.659E-02		5.994E-02	9.124E-02	6.260E-03	0.182
CE-141	2.354E-03		1.042E-01	1.652E-01	9.431E-03	0.014
CE-143	2.542E-04		5.810E-05	Half-Life too short		
CE-144	8.166E-02		3.638E-01	5.823E-01	8.233E-02	0.140
PM-144	1.075E-02		2.692E-02	4.496E-02	3.650E-03	0.239
PR-144	7.273E-01		1.822E+00	3.043E+00	2.470E-01	0.239
PM-146	9.551E-03		1.275E-01	2.113E-01	1.880E-02	0.045
ND-147	5.684E-03		9.826E-01	1.606E+00	2.241E-01	0.004
PM-149	-1.314E+01		9.687E+01	1.570E+02	2.219E+01	-0.084
EU-152	-8.539E-02		2.237E-01	3.427E-01	2.236E-02	-0.249

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-1.492E-02		1.460E-01	2.116E-01	1.654E-02	-0.071
EU-154	-5.434E-02		9.776E-02	1.537E-01	1.536E-02	-0.353
EU-155	1.706E-01		1.847E-01	3.036E-01	2.171E-02	0.562
TB-160	-1.781E-03		1.120E-01	1.831E-01	2.011E-02	-0.010
HO-166M	-9.427E-03		4.767E-02	7.859E-02	6.551E-03	-0.120
TM-171	1.204E+01		4.826E+01	8.035E+01	6.424E+00	0.150
LU-176	3.690E-02		5.322E-02	8.698E-02	5.008E-03	0.424
LU-177	1.480E+00		1.697E+00	2.854E+00	1.548E-01	0.519
LU-177M	-1.175E-01		4.329E-01	7.195E-01	4.249E-02	-0.163
HF-181	-4.149E-02		1.068E-01	1.748E-01	1.119E-02	-0.237
W-181	-9.279E-01		6.343E-01	1.017E+00	8.070E-02	-0.912
TA-182	2.798E-02		1.522E-01	2.538E-01	1.552E-02	0.110
RE-183	5.552E-02		1.802E-01	3.053E-01	1.611E-02	0.182
RE-184	2.757E-02		4.679E-01	7.684E-01	4.316E-02	0.036
OS-185	-7.018E-02		6.875E-02	1.065E-01	8.012E-03	-0.659
RE-188	1.861E-02		2.788E-01	4.735E-01	2.534E-02	0.039
W-188	7.654E+00		1.657E+01	2.378E+01	1.362E+00	0.322
IR-192	2.293E-02		7.417E-02	1.200E-01	6.959E-03	0.191
AU-195	1.081E-01		3.758E-01	6.144E-01	4.701E-02	0.176
TL-200	1.520E-05		1.330E-04	Half-Life too short		
TL-201	-3.181E+00		7.285E+00	1.221E+01	6.411E-01	-0.260
TL-202	-1.974E-01		1.710E-01	2.786E-01	1.699E-02	-0.709
HG-203	6.106E-02		8.013E-02	1.320E-01	8.006E-03	0.463
BI-207	-2.452E-02		4.223E-02	6.782E-02	5.599E-03	-0.362
TL-207	-8.104E-01		1.437E+00	2.278E+00	3.761E-01	-0.356
PO-209	-5.520E-01		6.047E+00	9.814E+00	1.107E+00	-0.056
BI-210	-6.867E+00		9.628E+00	1.607E+01	1.243E+00	-0.427
PB-210	-6.867E+00		9.628E+00	1.607E+01	1.243E+00	-0.427
PO-210	-6.867E+00		9.624E+00	1.607E+01	1.069E+00	-0.427
PB-211	-2.970E-01		2.233E+00	3.712E+00	2.314E+00	-0.080
PO-215	-8.104E-01		1.437E+00	2.278E+00	3.761E-01	-0.356
RN-219	-1.181E+00		9.976E-01	1.617E+00	2.201E-01	-0.730
RN-220	-3.044E+01		4.792E+01	7.677E+01	5.276E+00	-0.396
RA-223	-8.104E-01		1.437E+00	2.278E+00	3.761E-01	-0.356
AC-227	-4.715E-01		7.877E-01	1.274E+00	1.769E-01	-0.370
TH-227	-4.715E-01		7.889E-01	1.274E+00	2.145E-01	-0.370
TH-229	-2.763E-01		1.022E+00	1.703E+00	9.117E-02	-0.162
PA-231	-5.554E-01		3.165E+00	5.129E+00	7.049E-01	-0.108
TH-231	-8.104E-01		1.437E+00	2.278E+00	3.761E-01	-0.356
U-231	-4.403E-01		1.386E+00	2.000E+00	1.603E-01	-0.220
PA-233	1.354E-03		1.394E-01	2.250E-01	1.379E-02	0.006
PA-234	1.740E-01		2.409E-01	4.068E-01	8.025E-02	0.428
PA-234M	3.838E+00		5.417E+00	9.054E+00	1.079E+00	0.424
TH-234	-3.133E-01		2.585E+00	3.852E+00	6.791E-01	-0.081
U-235	-1.078E-01		3.672E-01	5.774E-01	9.352E-02	-0.187
NP-236	-1.261E-01		1.346E-01	2.235E-01	1.184E-02	-0.564
U-238	-3.133E-01		2.585E+00	3.852E+00	6.791E-01	-0.081
NP-239	-1.006E-01		3.413E-01	5.461E-01	3.380E-02	-0.184

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	3.941E-02		1.649E-01	2.685E-01	1.922E-02	0.147
CM-247	-9.939E-02		8.847E-02	1.451E-01	8.452E-03	-0.685
CF-249	-2.275E-02		9.327E-02	1.558E-01	8.959E-03	-0.146
CF-251	-6.152E-02		2.243E-01	3.758E-01	1.985E-02	-0.164

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871427          *
* Acquisition date  :  7-JUL-2009 11:20:58 Detector SN#     :               *
* Detector ID       : GAM18                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:08.14     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 24-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871427          Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.4491E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.425E+01	2.909E+00	2.117E-01	1.484E+00
CD-109	3.567E+00	1.597E+00	1.177E+00	8.149E-01
SN-126	3.517E-01	1.575E-01	1.138E-01	8.035E-02
BA-137M	6.596E+01	4.951E+00	3.911E-02	2.526E+00
CS-137	6.972E+01	5.246E+00	4.134E-02	2.677E+00
TL-208	5.844E-01	1.163E-01	5.048E-02	5.934E-02
BI-211	4.399E+00	7.977E-01	3.749E-01	4.070E-01
BI-212	1.376E+00	4.073E-01	1.698E-01	2.078E-01
PB-212	1.814E+00	1.899E-01	9.205E-02	9.686E-02
PO-212	1.814E+00	1.899E-01	9.205E-02	9.686E-02
BI-214	1.300E+00	2.309E-01	8.990E-02	1.178E-01
PB-214	1.530E+00	2.883E-01	1.303E-01	1.471E-01
PO-214	1.530E+00	2.883E-01	1.303E-01	1.471E-01
PO-216	1.814E+00	1.899E-01	9.205E-02	9.686E-02
PO-218	1.530E+00	2.883E-01	1.303E-01	1.471E-01
RA-224	4.764E+00	1.734E+00	1.046E+00	8.845E-01
RA-226	1.300E+00	2.309E-01	8.990E-02	1.178E-01
AC-228	1.802E+00	3.395E-01	8.821E-02	1.732E-01
RA-228	1.802E+00	3.395E-01	8.821E-02	1.732E-01
TH-228	1.814E+00	1.899E-01	9.204E-02	9.686E-02
TH-230	1.300E+00	2.309E-01	8.990E-02	1.178E-01
TH-232	1.802E+00	3.395E-01	8.821E-02	1.732E-01
U-234	1.300E+00	2.309E-01	8.990E-02	1.178E-01
NP-237	1.033E+00	5.074E-01	3.287E-01	2.589E-01
AM-241	8.100E+00	8.118E-01	2.895E-01	4.142E-01
AM-243	3.895E-01	1.341E-01	7.727E-02	6.843E-02
ANH-511	1.039E-01	9.761E-02	5.332E-02	4.980E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-2.781E-01	8.535E-01	7.375E-01	4.355E-01	NOT IDENT.
NA-22	-3.270E-02	3.510E-02	2.765E-02	1.791E-02	NOT IDENT.
NA-24	6.152E+03	4.944E+04	0.000E+00	2.523E+04	SHORT HLIF
AL-26	7.638E-03	2.221E-02	1.945E-02	1.133E-02	NOT IDENT.
TI-44	3.890E-01	7.594E-02	5.556E-02	3.875E-02	FAIL ABUN
SC-46	-1.419E-02	3.031E-02	2.488E-02	1.547E-02	FAIL ABUN
V-48	-9.048E-03	4.989E-02	4.128E-02	2.546E-02	NOT IDENT.
CR-51	-7.873E-01	7.597E-01	6.368E-01	3.876E-01	NOT IDENT.
MN-52	-2.064E-02	1.389E-01	1.140E-01	7.085E-02	NOT IDENT.
MN-54	7.727E-03	3.025E-02	2.622E-02	1.543E-02	NOT IDENT.
CO-56	-4.380E-02	3.201E-02	2.470E-02	1.633E-02	FAIL ABUN
CO-57	-5.826E-02	4.451E-02	3.769E-02	2.271E-02	NOT IDENT.
CO-58	-6.722E-03	2.884E-02	2.436E-02	1.472E-02	NOT IDENT.
FE-59	-3.905E-02	6.477E-02	5.336E-02	3.305E-02	NOT IDENT.
CO-60	4.299E-02	3.297E-02	3.024E-02	1.682E-02	NOT IDENT.
ZN-65	4.617E-02	7.589E-02	5.886E-02	3.872E-02	NOT IDENT.
GE-68	5.711E-01	1.006E+00	8.825E-01	5.131E-01	NOT IDENT.
AS-73	-9.449E-01	2.067E+00	1.808E+00	1.054E+00	NOT IDENT.
AS-74	2.040E-02	1.357E-01	1.155E-01	6.925E-02	NOT IDENT.
SE-75	3.498E-02	8.687E-02	7.624E-02	4.432E-02	NOT IDENT.
BR-77	-2.011E+01	1.157E+01	9.533E+00	5.905E+00	FAIL ABUN
SR-82	-5.860E-02	3.266E-01	2.383E-01	1.667E-01	NOT IDENT.
RB-83	-2.217E-01	1.408E-01	1.166E-01	7.185E-02	NOT IDENT.
RB-84	-5.361E-03	5.615E-02	4.530E-02	2.865E-02	NOT IDENT.
KR-85	3.201E+01	1.646E+01	1.282E+01	8.399E+00	NOT IDENT.
SR-85	1.605E-01	8.253E-02	6.427E-02	4.211E-02	NOT IDENT.
RB-86	-3.097E-02	5.979E-01	5.060E-01	3.051E-01	NOT IDENT.
Y-88	2.049E-02	2.565E-02	2.354E-02	1.309E-02	NOT IDENT.
ZR-88	-4.192E-02	7.070E-02	6.206E-02	3.607E-02	NOT IDENT.
Y-91	1.226E+01	1.507E+01	1.340E+01	7.687E+00	NOT IDENT.
NB-94	-1.584E-02	2.490E-02	2.090E-02	1.271E-02	NOT IDENT.
NB-95	7.065E-02	3.705E-02	3.108E-02	1.890E-02	NOT IDENT.
NB-95M	3.814E-02	2.455E-01	1.907E-01	1.253E-01	NOT IDENT.
ZR-95	1.630E-02	5.193E-02	4.569E-02	2.649E-02	NOT IDENT.
NB-97	1.373E+06	1.110E+05	0.000E+00	5.664E+04	SHORT HLIF
ZR-97	2.151E+05	4.974E+05	0.000E+00	2.538E+05	SHORT HLIF
MO-99	-1.393E-01	5.301E+00	4.586E+00	2.705E+00	NOT IDENT.
TC-99M	7.481E+13	1.754E+14	0.000E+00	8.947E+13	SHORT HLIF
RH-101	-2.124E-02	6.371E-02	5.677E-02	3.250E-02	NOT IDENT.
RH-102	5.809E-02	8.275E-02	7.254E-02	4.222E-02	NOT IDENT.
RU-103	6.379E-02	8.838E-02	7.710E-02	4.509E-02	FAIL ABUN
RH-106	4.348E-01	5.227E-01	4.491E-01	2.667E-01	FAIL ABUN
RU-106	4.348E-01	5.209E-01	4.491E-01	2.658E-01	FAIL ABUN
AG-108M	6.122E-02	8.713E-02	7.710E-02	4.446E-02	NOT IDENT.
AG-110M	2.899E+00	2.508E-01	1.234E-01	1.280E-01	NOT IDENT.
IN-111	1.132E+00	1.373E+00	1.072E+00	7.004E-01	NOT IDENT.
IN-113M	5.172E-02	1.018E-01	9.086E-02	5.194E-02	NOT IDENT.
SN-113	5.172E-02	1.018E-01	9.086E-02	5.194E-02	NOT IDENT.
IN-114M	-6.233E-02	3.733E-01	3.108E-01	1.904E-01	NOT IDENT.
CD-115	4.484E-01	1.124E+01	9.669E+00	5.737E+00	NOT IDENT.
SN-117M	3.626E-02	8.068E-02	7.395E-02	4.117E-02	NOT IDENT.
SB-122	-1.149E+00	1.989E+00	1.670E+00	1.015E+00	NOT IDENT.
I-123	2.900E+05	6.237E+05	0.000E+00	3.182E+05	SHORT HLIF
TE-123M	2.141E-02	4.603E-02	4.219E-02	2.349E-02	NOT IDENT.
I-124	1.618E-01	8.416E-01	6.192E-01	4.294E-01	NOT IDENT.
SB-124	-5.641E-02	5.317E-02	3.831E-02	2.713E-02	FAIL ABUN
SB-125	5.772E-02	2.353E-01	2.074E-01	1.200E-01	NOT IDENT.
TE-125M	-3.622E+00	1.512E+01	1.322E+01	7.714E+00	NOT IDENT.
I-126	2.378E+00	2.941E-01	2.472E-01	1.501E-01	NOT IDENT.
SB-126	6.145E-02	1.133E-01	8.841E-02	5.781E-02	FAIL ABUN
SB-127	-2.732E-02	7.268E-01	6.337E-01	3.708E-01	FAIL ABUN
XE-127	-3.527E-02	8.715E-02	7.749E-02	4.447E-02	FAIL ABUN
I-131	-2.192E-03	2.149E-01	1.918E-01	1.096E-01	NOT IDENT.
TE-132	-2.759E-01	8.318E-01	7.314E-01	4.244E-01	NOT IDENT.
BA-133	3.021E-03	1.105E-01	8.152E-02	5.637E-02	NOT IDENT.
I-133	-1.349E+02	2.138E+03	0.000E+00	1.091E+03	SHORT HLIF
CS-134	1.372E-01	5.528E-02	3.732E-02	2.820E-02	FAIL ABUN
CS-135	-1.319E-01	3.096E-01	2.676E-01	1.579E-01	NOT IDENT.
I-135	1.603E+12	2.169E+13	0.000E+00	1.107E+13	SHORT HLIF
CS-136	-6.551E-02	7.115E-02	5.747E-02	3.630E-02	FAIL ABUN
CE-139	4.709E-03	4.863E-02	4.434E-02	2.481E-02	NOT IDENT.
BA-140	-6.247E-02	4.403E-01	3.760E-01	2.246E-01	NOT IDENT.
LA-140	1.659E-02	5.874E-02	4.579E-02	2.997E-02	NOT IDENT.
CE-141	2.354E-03	1.021E-01	8.748E-02	5.208E-02	NOT IDENT.
CE-143	2.542E+02	1.139E+02	0.000E+00	5.810E+01	SHORT HLIF
CE-144	8.166E-02	3.565E-01	3.089E-01	1.819E-01	NOT IDENT.
PM-144	1.075E-02	2.639E-02	2.300E-02	1.346E-02	NOT IDENT.
PR-144	7.273E-01	1.786E+00	1.557E+00	9.112E-01	NOT IDENT.

PM-146	9.551E-03	1.249E-01	1.092E-01	6.373E-02	NOT IDENT.
ND-147	5.684E-03	9.629E-01	8.269E-01	4.913E-01	NOT IDENT.
PM-149	-1.314E+01	9.493E+01	8.195E+01	4.843E+01	NOT IDENT.
EU-152	-8.539E-02	2.193E-01	1.781E-01	1.119E-01	FAIL ABUN
GD-153	-1.492E-02	1.431E-01	1.130E-01	7.299E-02	NOT IDENT.
EU-154	-5.434E-02	9.580E-02	7.757E-02	4.888E-02	NOT IDENT.
EU-155	1.706E-01	1.810E-01	1.619E-01	9.233E-02	FAIL ABUN
TB-160	-1.781E-03	1.098E-01	9.317E-02	5.601E-02	FAIL ABUN
HO-166M	-9.427E-03	4.672E-02	4.019E-02	2.384E-02	NOT IDENT.
TM-171	1.204E+01	4.730E+01	4.325E+01	2.413E+01	FAIL ABUN
LU-176	3.690E-02	5.215E-02	4.533E-02	2.661E-02	FAIL ABUN
LU-177	1.480E+00	1.663E+00	1.500E+00	8.485E-01	NOT IDENT.
LU-177M	-1.175E-01	4.243E-01	3.724E-01	2.165E-01	NOT IDENT.
HF-181	-4.149E-02	1.046E-01	9.019E-02	5.339E-02	FAIL ABUN
W-181	-9.279E-01	6.217E-01	5.479E-01	3.172E-01	FAIL ABUN
TA-182	2.798E-02	1.492E-01	1.282E-01	7.610E-02	FAIL ABUN
RE-183	5.552E-02	1.766E-01	1.613E-01	9.011E-02	FAIL ABUN
RE-184	2.757E-02	4.586E-01	4.021E-01	2.340E-01	FAIL ABUN
OS-185	-7.018E-02	6.738E-02	5.460E-02	3.438E-02	FAIL ABUN
RE-188	1.861E-02	2.732E-01	2.504E-01	1.394E-01	NOT IDENT.
W-188	7.654E+00	1.624E+01	1.240E+01	8.284E+00	NOT IDENT.
IR-192	2.293E-02	7.268E-02	6.248E-02	3.708E-02	FAIL ABUN
AU-195	1.081E-01	3.683E-01	3.280E-01	1.879E-01	FAIL ABUN
TL-200	1.520E+01	2.607E+02	0.000E+00	1.330E+02	SHORT HLIF
TL-201	-3.181E+00	7.139E+00	6.448E+00	3.642E+00	NOT IDENT.
TL-202	-1.974E-01	1.676E-01	1.440E-01	8.550E-02	NOT IDENT.
HG-203	6.106E-02	7.853E-02	6.893E-02	4.007E-02	NOT IDENT.
BI-207	-2.452E-02	4.139E-02	3.436E-02	2.112E-02	FAIL ABUN
TL-207	-8.104E-01	1.408E+00	1.186E+00	7.183E-01	FAIL ABUN
PO-209	-5.520E-01	5.926E+00	4.992E+00	3.023E+00	NOT IDENT.
BI-210	-6.867E+00	9.435E+00	8.715E+00	4.814E+00	NOT IDENT.
PB-210	-6.867E+00	9.435E+00	8.715E+00	4.814E+00	NOT IDENT.
PO-210	-6.867E+00	9.432E+00	8.715E+00	4.812E+00	NOT IDENT.
PB-211	-2.970E-01	2.188E+00	1.922E+00	1.116E+00	NOT IDENT.
PO-215	-8.104E-01	1.408E+00	1.186E+00	7.183E-01	FAIL ABUN
RN-219	-1.181E+00	9.777E-01	8.375E-01	4.988E-01	NOT IDENT.
RN-220	-3.044E+01	4.696E+01	3.949E+01	2.396E+01	NOT IDENT.
RA-223	-8.104E-01	1.408E+00	1.186E+00	7.183E-01	FAIL ABUN
AC-227	-4.715E-01	7.719E-01	6.664E-01	3.938E-01	NOT IDENT.
TH-227	-4.715E-01	7.732E-01	6.664E-01	3.945E-01	FAIL ABUN
TH-229	-2.763E-01	1.002E+00	8.962E-01	5.111E-01	FAIL ABUN
PA-231	-5.554E-01	3.101E+00	2.677E+00	1.582E+00	NOT IDENT.
TH-231	-8.104E-01	1.408E+00	1.186E+00	7.183E-01	FAIL ABUN
U-231	-4.403E-01	1.359E+00	1.069E+00	6.932E-01	FAIL ABUN
PA-233	1.354E-03	1.366E-01	1.172E-01	6.970E-02	FAIL ABUN
PA-234	1.740E-01	2.361E-01	2.067E-01	1.204E-01	FAIL ABUN
PA-234M	3.838E+00	5.308E+00	4.594E+00	2.708E+00	NOT IDENT.
TH-234	-3.133E-01	2.533E+00	2.076E+00	1.292E+00	FAIL ABUN
U-235	-1.078E-01	3.598E-01	3.059E-01	1.836E-01	FAIL ABUN
NP-236	-1.261E-01	1.319E-01	1.181E-01	6.731E-02	NOT IDENT.
U-238	-3.133E-01	2.533E+00	2.076E+00	1.292E+00	FAIL ABUN
NP-239	-1.006E-01	3.345E-01	2.905E-01	1.707E-01	NOT IDENT.
CM-243	3.941E-02	1.616E-01	1.432E-01	8.244E-02	NOT IDENT.
CM-247	-9.939E-02	8.670E-02	7.517E-02	4.424E-02	NOT IDENT.
CF-249	-2.275E-02	9.141E-02	8.079E-02	4.664E-02	NOT IDENT.
CF-251	-6.152E-02	2.198E-01	1.982E-01	1.122E-01	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	1413.2374
46.50	1413.2374
46.50	1413.2374
48.70	1427.8678
49.72	1443.6079
51.35	1454.7224
52.39	1503.2322
52.97	1528.3951
53.15	1546.7296
53.44	1546.6156
54.07	1559.8856
56.28	1546.4685
56.28	1546.4856
57.37	0.0000
57.53	1588.1904
57.53	1588.1992
57.60	1537.2537
57.98	1539.3542
57.98	1539.3542
59.32	1546.6960
59.32	1546.6960
59.40	1547.1313
59.54	1547.8922
59.72	1548.8685
60.01	1550.4409
61.10	1435.5228
61.14	1435.7217
61.30	1374.6671
63.00	1361.4484
63.29	1388.2506
63.29	1388.2506
63.58	1389.6016
64.28	1443.9713
65.12	1484.5363
65.20	1484.9281
65.20	1484.9281
66.05	1476.6954
66.72	1392.1233
66.83	1387.8552
66.91	1388.2102
67.20	1387.6006
67.20	1387.6006
67.75	1421.6447
67.85	1419.2324
68.90	1451.3655
68.90	1451.3655
69.30	1483.5068
69.67	1480.9136
70.82	1481.8735
70.82	1481.8735
70.83	1481.9203
72.80	1477.3026
72.87	1477.6194
72.87	1477.6194
74.67	1485.6544
74.81	1486.2764
74.81	1486.2764
74.81	1486.2764
74.81	1486.2764
74.81	1486.2764
74.81	1486.2764
74.97	1486.9834
75.28	1488.3585
75.70	1490.2128
77.11	1496.3937
77.11	1496.3937
77.11	1496.3937

77.11	1496.3937
77.11	1496.3937
77.11	1496.3937
78.38	1527.6254
79.62	1509.2565
79.80	1487.6924
79.80	1487.6924
80.11	1489.0033
80.18	1489.3005
80.30	1537.5250
80.30	1537.5250
80.57	1538.7048
81.00	1570.4541
81.07	1570.7667
81.07	1570.7667
81.07	1570.7667
81.07	1570.7667
82.60	1571.9908
83.37	1492.1021
83.78	1526.9337
83.78	1526.9337
83.78	1526.9337
83.78	1526.9337
84.21	1471.4463
84.40	1472.2058
84.90	1451.5593
85.43	1502.0535
86.29	1670.8073
86.50	1671.7489
86.54	1671.9255
86.59	1672.1525
86.72	1681.8401
86.79	1682.1444
86.94	1682.8291
87.30	1787.8301
87.30	1787.8301
87.30	1787.8301
87.30	1787.8301
87.30	1787.8301
87.30	1787.8301
87.57	1789.1132
87.88	1886.5087
88.03	1887.2649
88.36	1803.0270
88.47	1803.5504
89.95	1729.9418
91.11	1652.2386
92.29	1908.3164
92.38	1908.7606
92.38	1908.7606
93.35	1752.3480
94.00	1477.3093
94.67	1444.1406
94.67	1444.1620
94.90	1444.9939
94.90	1444.9939
94.90	1444.9939
94.90	1444.9939
95.87	1558.8466
95.87	1558.8466
96.73	1555.9604
97.43	1502.4686
98.44	1502.5369
98.44	1502.5369
98.88	1493.7111
99.55	1421.9100
99.55	1421.9100
99.86	1444.9478
100.00	1445.4395
100.10	1445.7976
103.18	1610.4147
103.76	1509.1182
105.00	1490.1929
105.31	1502.9323
108.00	1653.0244
109.28	1574.4069
111.00	1640.6292
111.00	1640.6292

111.76	1607.9113
112.95	1643.4191
115.19	1654.7393
116.30	1733.6718
117.00	1696.0295
117.00	1696.0295
117.66	1667.9279
121.11	1652.6949
121.62	1680.8226
121.78	1681.3829
122.06	1740.6415
122.32	1741.5754
122.32	1741.5754
122.32	1741.5754
122.32	1741.5754
123.07	1693.6018
127.23	1806.9327
129.76	1785.9396
131.20	1722.7090
133.02	1762.5804
133.54	1717.0914
135.34	1735.5040
136.00	1685.6866
136.25	1705.7194
136.48	1703.0763
140.51	1671.6194
140.51	0.0000
142.18	1700.8440
142.65	1717.2089
143.76	1734.4841
144.24	1771.5995
144.24	1771.5995
144.24	1771.5995
144.24	1771.5995
145.22	1701.1570
145.44	1701.8490
147.16	1756.7780
152.43	1809.4479
152.70	1757.8453
153.22	1766.7483
154.21	1821.5159
154.21	1821.5159
154.21	1821.5159
154.21	1821.5159
155.03	1757.4014
156.02	1724.3580
158.56	1681.5432
159.00	0.0000
159.00	1676.6057
160.31	1798.1340
161.27	1785.0759
162.32	1703.7887
162.64	1738.4871
163.35	1756.5709
163.89	1753.6959
165.85	1736.1426
167.43	1780.9810
171.28	1735.2874
171.86	1779.3315
172.10	1791.7485
176.55	1889.0001
176.60	1889.1427
181.06	1944.5765
184.41	2042.9128
185.71	2335.4431
186.00	2278.3320
190.27	2444.2668
192.34	2412.5935
193.63	2417.1582
197.04	2302.4990
198.01	2346.0869
198.60	2344.3091
200.40	2321.1265
201.83	2339.9888
202.84	2347.0989
205.31	2352.3757
208.36	2323.2725
208.81	2286.5635

209.75	2294.2827
209.75	2294.2827
210.97	2273.2493
215.65	2161.5898
216.55	2170.9397
218.09	2140.6484
222.10	2100.5520
223.80	2031.2727
226.40	2016.6482
227.00	2095.3811
227.08	2095.5940
227.20	2024.5916
228.16	2017.3059
228.18	2017.3531
228.18	2017.3531
231.56	0.0000
235.69	1989.5950
236.00	1971.3925
236.00	1971.3925
238.60	1952.7908
238.63	1952.8660
238.63	1952.8660
238.63	1952.8660
239.00	1953.7527
240.98	1958.5172
241.98	1909.5597
241.98	1909.5597
241.98	1909.5597
244.69	1946.2279
245.39	1827.9349
247.94	1851.8052
248.90	1892.0757
249.79	1984.5231
252.40	1880.8202
252.85	1877.7828
252.85	1877.7828
254.15	0.0000
256.20	1973.2748
256.20	1973.2748
260.50	1882.4066
260.90	1902.6235
262.80	1896.5851
264.65	1812.6609
268.24	1932.9655
268.79	1887.9493
269.46	1830.7590
269.46	1830.7590
269.46	1830.7590
269.46	1830.7590
271.23	1771.5717
273.65	2061.3901
276.40	1803.5088
277.35	1819.9127
277.60	1820.3948
277.60	1820.3948
278.00	1833.6508
278.60	1850.4402
279.20	1800.7218
279.53	1841.8948
280.46	1853.1520
281.68	1880.6031
283.67	1793.8126
284.30	1772.0322
285.00	1788.0167
285.90	1787.6455
286.10	1788.0104
286.10	1788.0104
287.40	1669.9568
288.45	0.0000
290.67	1713.4014
290.80	1713.6499
291.72	1767.5497
293.26	0.0000
293.70	1803.2930
295.21	1801.0876
295.21	1801.0876
295.21	1801.0876
295.96	1826.1864

296.50	1981.3162
297.23	2004.8326
298.57	1819.2593
299.80	1785.8789
299.80	1785.8789
300.09	1684.4338
300.09	1684.4338
300.09	1684.4338
300.10	1684.4338
300.12	1684.4822
301.29	1765.6244
302.84	1836.6167
303.76	1917.2612
303.91	1942.0647
304.40	1935.5681
304.40	1935.5681
304.84	1912.9688
306.84	1736.0522
308.46	1776.3997
311.98	1779.4482
316.51	1751.8125
318.01	1727.3704
319.02	1775.6323
319.41	1805.5521
320.08	1851.1587
323.87	1835.1686
323.87	1835.1686
323.87	1835.1686
323.87	1835.1686
325.23	1793.9926
328.77	1862.3979
333.44	1839.0748
334.20	1907.1736
334.20	1907.1736
334.30	1907.3590
338.28	1766.7076
338.28	1766.7076
338.28	1766.7076
338.28	1766.7076
338.32	1766.7809
338.32	1766.7809
338.32	1766.7809
340.50	1778.7731
340.57	1778.8959
344.27	1775.6082
345.85	1821.3269
350.59	0.0000
351.07	1790.7322
351.92	1782.3007
351.92	1782.3007
351.92	1782.3007
355.39	0.0000
356.01	1778.9883
364.48	1874.6177
366.43	1811.7709
367.43	1825.1345
367.94	0.0000
369.80	1868.8340
374.96	1844.3577
383.85	1913.4512
387.95	1955.0640
388.63	1949.7211
391.69	1929.7107
391.69	1929.7107
392.90	2032.5332
398.62	1943.5316
400.65	2016.5791
401.10	2053.6855
401.81	2074.4351
402.60	2070.1548
404.84	2017.8427
410.95	2100.0439
411.60	2091.7390
413.65	2126.1956
414.70	2076.1506
415.30	2081.8584
415.76	2056.2156
417.63	0.0000

418.52	2120.1855
423.70	2146.8113
427.08	2131.4941
427.89	2157.5796
432.53	2305.6470
433.93	2246.9294
439.47	2474.3228
439.56	2474.4800
439.89	2505.8438
443.98	2380.5696
444.90	2469.9282
445.03	2476.9275
445.03	2476.9275
445.03	2476.9275
445.03	2476.9275
453.90	2590.2527
463.38	2735.1750
468.07	2809.1130
473.00	2513.9553
475.06	2374.7268
475.35	2366.3567
476.78	2298.6851
477.59	2257.5471
477.96	2230.4866
482.03	1940.7876
484.57	1771.6108
487.03	1694.1565
490.36	0.0000
492.35	1551.7644
497.08	1410.7057
507.63	0.0000
510.53	0.0000
510.84	1440.6338
511.00	1370.4259
511.85	1269.8208
511.85	1269.8208
513.99	1244.6243
513.99	1244.6243
520.41	1248.8633
520.65	1249.0732
527.90	1106.8921
528.96	0.0000
529.64	1070.3121
529.87	0.0000
531.02	1039.5397
537.32	985.1993
543.00	959.8665
546.56	0.0000
549.76	879.0549
552.65	820.4694
555.20	830.0744
563.23	775.7239
563.90	781.2546
568.70	744.7968
569.32	740.8828
569.50	731.5197
569.67	731.6049
573.80	742.8851
574.00	748.2258
574.64	749.9230
578.91	699.1398
579.30	0.0000
583.14	730.1387
585.48	643.6808
591.81	681.8428
592.07	676.6414
593.00	730.1387
595.88	669.6332
600.56	682.0014
602.52	0.0000
602.71	671.5773
602.71	671.5773
603.60	614.8822
604.41	629.4420
604.70	643.8098
609.31	658.7458
609.31	658.7458
609.31	658.7458

609.31	658.7458
610.33	592.2201
612.46	639.5088
614.37	649.1725
618.01	639.7310
621.84	621.2976
621.84	621.2976
631.29	582.2326
633.02	581.6949
633.10	573.0225
634.78	607.3018
635.90	663.2094
636.97	677.7766
645.85	632.8931
646.12	625.3259
656.30	666.9955
657.75	631.3036
657.90	0.0000
661.65	417.8108
661.65	417.8108
664.57	0.0000
666.33	162.8989
666.33	162.8989
675.00	153.8485
677.61	147.5615
685.20	152.8058
692.80	139.3722
695.00	132.0383
696.49	138.6988
696.49	138.6988
697.00	140.6097
697.49	137.8334
698.33	152.8987
698.50	152.9120
699.00	160.4586
702.63	156.0539
706.10	132.7842
706.58	0.0000
706.67	129.0563
709.31	140.5454
711.68	150.1559
713.82	160.7170
717.42	144.9067
720.50	136.5908
721.93	0.0000
722.20	126.9404
722.78	151.3975
722.78	151.3975
722.89	151.4039
722.95	151.4072
723.30	156.3214
724.18	164.5336
727.18	118.0084
733.00	122.7094
735.90	146.5483
739.58	140.7464
742.81	144.8036
744.21	139.1412
747.13	139.3389
751.79	141.5748
752.31	137.7574
753.82	115.6836
755.35	127.3459
756.15	123.5339
756.87	123.5755
763.93	129.5248
765.79	121.3289
766.41	141.3149
766.84	143.0044
768.36	142.6904
768.36	142.6904
768.36	142.6904
768.36	142.6904
776.49	140.3115
778.00	132.0506
778.57	138.7743
778.89	136.0772
783.80	130.7300

785.46	126.2180
792.07	117.7686
795.84	117.9712
796.30	117.9956
801.93	136.8881
805.60	113.5564
810.29	119.7322
810.76	119.7593
815.85	113.0862
817.79	110.2073
818.51	101.3027
819.60	111.2891
826.30	118.5957
828.27	0.0000
831.60	132.8566
831.96	128.8819
834.83	145.0472
836.80	0.0000
846.75	156.8601
848.13	112.6859
856.28	0.0000
856.80	138.4961
860.37	113.2783
867.32	125.2040
867.82	120.2310
871.10	123.9534
873.19	109.8259
874.81	126.1822
875.33	0.0000
876.40	129.3203
879.36	120.3047
880.27	119.3304
880.51	113.2222
881.50	114.2900
883.24	112.3297
884.67	105.2443
889.25	120.8016
896.60	119.1129
898.02	130.4856
899.00	140.8158
903.28	125.1016
911.07	122.9173
911.07	122.9173
911.07	122.9173
919.63	101.0567
920.93	103.2880
925.00	130.8783
925.24	126.7358
926.50	104.9741
934.06	103.2036
934.06	103.2036
934.06	103.2036
934.06	103.2036
935.52	101.1778
937.48	99.1690
944.10	115.1272
946.00	97.4067
949.00	110.1056
962.29	97.5737
964.01	101.2559
966.15	102.3955
968.20	102.4744
969.11	102.5119
969.11	102.5119
969.11	102.5119
977.42	105.4122
980.50	101.8965
983.50	105.1996
989.30	96.9115
996.32	120.6579
1001.03	95.1999
1001.68	98.4313
1004.76	110.3281
1021.30	0.0000
1024.50	0.0000
1034.80	107.2178
1037.82	105.0113
1038.57	101.3207

1038.76	0.0000
1045.16	101.5640
1046.59	112.8045
1048.07	111.9308
1050.47	110.1600
1050.47	110.1600
1063.62	122.8673
1076.63	114.9537
1077.35	102.7273
1085.78	110.5934
1099.22	108.2587
1112.02	105.1551
1112.84	96.8378
1115.52	101.9397
1120.29	145.6230
1120.29	145.6230
1120.29	145.6230
1120.29	145.6230
1120.51	145.6337
1121.28	123.9039
1124.00	0.0000
1129.67	128.1312
1131.51	0.0000
1147.95	0.0000
1167.94	178.7955
1173.22	127.5139
1175.09	128.5656
1177.93	156.9570
1189.05	128.1673
1204.90	127.8327
1205.75	0.0000
1213.00	144.9236
1221.42	125.5339
1230.97	112.7740
1235.34	140.7266
1236.41	0.0000
1238.11	153.0171
1238.11	153.0171
1238.11	153.0171
1238.11	153.0171
1238.25	153.0225
1246.25	128.6113
1260.41	0.0000
1271.85	92.3626
1274.45	105.4944
1274.54	115.5455
1291.56	83.8192
1298.22	0.0000
1312.09	83.3156
1325.50	104.0420
1325.50	104.0420
1332.49	67.4594
1333.61	61.3456
1360.21	57.6953
1362.66	0.0000
1365.15	30.9521
1368.21	42.0554
1368.53	0.0000
1376.25	38.0356
1377.67	56.9470
1377.67	56.9470
1377.67	56.9470
1377.67	56.9470
1384.27	63.5358
1394.10	63.4509
1395.20	69.7130
1407.95	69.9584
1434.06	54.6860
1436.60	56.8288
1457.56	0.0000
1460.81	49.7851
1489.15	55.4967
1509.49	37.5525
1596.49	35.3176
1620.62	32.8244
1678.03	0.0000
1691.02	37.3088
1691.02	37.3088

1706.46	0.0000
1750.46	0.0000
1764.49	23.9648
1764.49	23.9648
1764.49	23.9648
1764.49	23.9648
1770.23	24.8843
1771.40	17.7794
1791.20	0.0000
1808.65	24.2021
1836.01	23.3334

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871427

Total Uranium Activity	-9.8189E-01	ug/g
Total Uranium Counting Unc.	7.5371E+00	ug/g
Total Uranium Tpu	3.8455E-06	ug/g
Total Uranium Mda	6.1764E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G1201871427     *
*   ANALYST       : MXR1                      DETECTOR    : GAM18           *
*   SAMPLE DATE   : 24-JUN-2009 12:00:00.00   COUNT TIME  :    0 02:00:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 11:20:58.27    SAMPLE ALQT:  144.910 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 7.238E+01
GROSS GAMMA ERROR   (pCi/GRAM  )  : 4.267E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 4.540E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 2.236E+00
```

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:31:08.98

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871428.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:00:37.
Sample ID         : G1201871428          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM01                Detector geometry: CAN
Elapsed live time: 0 01:30:00.00         Elapsed real time: 0 01:30:01.87  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.52	3572	1155	1.06	119.80	114	12	6.62E-01	2.6	
2	0	77.28	202	821	1.10	155.32	152	8	3.74E-02	26.0	
3	0	88.06*	2518	951	1.15	176.89	171	12	4.66E-01	3.2	
4	0	92.94*	109	510	1.31	186.64	183	9	2.02E-02	40.0	
5	0	122.06	657	600	1.11	244.88	238	13	1.22E-01	8.6	
6	0	136.78	60	468	1.00	274.32	269	9	1.10E-02	66.6	
7	0	186.23*	84	514	1.30	373.21	368	10	1.56E-02	52.9	
8	0	209.57	90	387	1.08	419.88	416	10	1.67E-02	42.4	
9	2	238.99*	582	322	1.14	478.72	475	14	1.08E-01	6.6	1.03E+00
10	2	241.98*	132	388	1.46	484.70	475	14	2.44E-02	30.1	
11	0	295.12	242	353	1.41	590.96	585	13	4.47E-02	17.2	
12	0	339.09	155	397	1.59	678.89	671	15	2.87E-02	29.3	
13	0	352.08*	348	386	1.50	704.86	697	15	6.45E-02	13.5	
14	0	510.64*	48	314	1.73	1021.91	1014	17	8.83E-03	89.5	
15	0	583.52*	203	189	1.34	1167.63	1161	13	3.76E-02	15.7	
16	0	609.59*	182	200	1.67	1219.76	1213	14	3.38E-02	18.3	
17	0	661.98	2954	150	1.52	1324.49	1318	12	5.47E-01	2.0	
18	0	727.30	37	143	1.31	1455.09	1448	12	6.79E-03	67.5	
19	0	796.68	25	155	0.89	1593.80	1585	11	4.64E-03	99.3	
20	0	911.94*	156	186	1.79	1824.23	1819	14	2.90E-02	20.3	
21	0	970.42	71	254	1.54	1941.15	1933	16	1.32E-02	52.0	
22	0	1173.58	2414	146	1.82	2347.26	2338	19	4.47E-01	2.4	
23	0	1332.85	2305	46	1.83	2665.62	2658	18	4.27E-01	2.2	
24	0	1765.64*	22	16	1.72	3530.60	3523	13	4.05E-03	46.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 7-JUL-2009 11:31:12

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871428.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:00:37
Sample ID : G1201871428 Sample quantity : 155.44 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA1 Detector geometry: CAN
Elapsed live time: 0 01:30:00.00 Elapsed real time: 0 01:30:01.87 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	4.139E-01	7.575E-02	5.410E-02	3.322E-03	7.651
	+	136.48		3.069E-01	4.096E-01	4.537E-01	3.047E-02	0.676
CO-60	+	1173.22		6.675E+00	4.846E-01	1.008E-01	5.551E-03	66.201
	+	1332.49	*	7.138E+00	5.853E-01	7.565E-02	5.243E-03	94.349
CD-109	+	88.03	*	4.243E+01	4.740E+00	1.865E+00	1.716E-01	22.750
SN-126		64.28		2.881E-01	8.357E-01	1.246E+00	1.874E-01	0.231
	+	86.94		1.754E+01	7.359E+00	7.810E-01	3.238E-01	22.455
	+	87.57	*	4.218E+00	4.713E-01	1.864E-01	1.710E-02	22.627
BA-137M	+	661.65	*	5.402E+00	3.493E-01	9.339E-02	4.716E-03	57.840
CS-137	+	661.65	*	5.710E+00	3.705E-01	9.872E-02	5.013E-03	57.840
TL-208		277.35		2.620E-01	5.761E-01	9.667E-01	1.023E-01	0.271
	+	510.84		2.916E-01	5.230E-01	3.793E-01	3.795E-02	0.769
	+	583.14	*	3.558E-01	1.143E-01	9.808E-02	6.214E-03	3.628
		860.37		5.734E-01	6.038E-01	1.038E+00	7.842E-02	0.552
BI-211		72.87		-8.158E-01	5.229E+00	7.474E+00	6.260E-01	-0.109
	+	351.07	*	2.629E+00	7.270E-01	5.293E-01	3.352E-02	4.967
PB-212		74.81		6.563E-01	6.409E-01	9.481E-01	1.193E-01	0.692
	+	77.11		8.339E-01	4.388E-01	5.145E-01	4.383E-02	1.621
	+	87.30		1.951E+01	2.925E+00	8.650E-01	1.173E-01	22.554
	+	238.63	*	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
		300.09		1.796E-01	1.336E+00	1.942E+00	1.608E-01	0.092
PO-212		74.81		6.563E-01	6.409E-01	9.481E-01	1.193E-01	0.692
	+	77.11		8.339E-01	4.388E-01	5.145E-01	4.383E-02	1.621
	+	87.30		1.951E+01	2.925E+00	8.650E-01	1.173E-01	22.554
		115.19		2.278E+00	5.178E+00	7.979E+00	5.188E-01	0.286
	+	238.63	*	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
		300.09		1.796E-01	1.336E+00	1.942E+00	1.608E-01	0.092
PB-214		74.81		1.131E+00	1.102E+00	1.634E+00	1.833E-01	0.692
	+	77.11		1.430E+00	7.601E-01	8.820E-01	1.008E-01	1.621
	+	87.30		3.342E+01	4.537E+00	1.482E+00	1.773E-01	22.554
	+	241.98		1.287E+00	7.823E-01	8.300E-01	6.670E-02	1.551
	+	295.21		1.070E+00	3.803E-01	3.216E-01	2.753E-02	3.328
	+	351.92	*	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
PO-214		74.81		1.131E+00	1.102E+00	1.634E+00	1.833E-01	0.692

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		1.430E+00	7.601E-01	8.820E-01	1.008E-01	1.621
	+	87.30		3.342E+01	4.537E+00	1.482E+00	1.773E-01	22.554
	+	241.98		1.287E+00	7.823E-01	8.300E-01	6.670E-02	1.551
	+	295.21		1.070E+00	3.803E-01	3.216E-01	2.753E-02	3.328
	+	351.92	*	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
PO-216		74.81		6.563E-01	6.409E-01	9.481E-01	1.193E-01	0.692
	+	77.11		8.339E-01	4.388E-01	5.145E-01	4.383E-02	1.621
	+	87.30		1.951E+01	2.925E+00	8.650E-01	1.173E-01	22.554
	+	238.63	*	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
		300.09		1.796E-01	1.336E+00	1.942E+00	1.608E-01	0.092
PO-218		74.81		1.131E+00	1.102E+00	1.634E+00	1.833E-01	0.692
	+	77.11		1.430E+00	7.601E-01	8.820E-01	1.008E-01	1.621
	+	87.30		3.342E+01	4.537E+00	1.482E+00	1.773E-01	22.554
	+	241.98		1.287E+00	7.823E-01	8.300E-01	6.670E-02	1.551
	+	295.21		1.070E+00	3.803E-01	3.216E-01	2.753E-02	3.328
	+	351.92	*	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
RA-224	+	240.98	*	2.441E+00	1.477E+00	1.604E+00	9.225E-02	1.522
AC-228	+	338.32		1.288E+00	9.192E-01	6.058E-01	2.469E-01	2.126
	+	911.07	*	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
	+	969.11		9.976E-01	1.062E+00	8.569E-01	1.949E-01	1.164
RA-228	+	338.32		1.288E+00	9.192E-01	6.058E-01	2.469E-01	2.126
	+	911.07	*	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
	+	969.11		9.976E-01	1.062E+00	8.569E-01	1.949E-01	1.164
TH-228		84.40		4.209E+00	4.260E+00	6.267E+00	8.366E-01	0.672
	+	238.60	*	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
		300.10		1.831E-01	1.341E+00	1.942E+00	1.145E+00	0.094
TH-232	+	338.32		1.288E+00	7.582E-01	6.058E-01	3.483E-02	2.126
	+	911.07	*	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
	+	969.11		9.976E-01	1.062E+00	8.569E-01	1.949E-01	1.164
AM-241	+	59.54	*	1.440E+01	1.508E+00	4.916E-01	4.492E-02	29.303
ANH-511	+	511.00	*	6.299E-02	1.128E-01	8.195E-02	4.538E-03	0.769

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.044E-01	5.708E-01	8.981E-01	5.870E-02	-0.228
NA-22		1274.54	*	-8.165E-03	4.457E-02	7.265E-02	4.657E-03	-0.112
NA-24		1368.53	*	1.171E-05	4.457E-02	Half-Life too short		
AL-26		1129.67		3.656E-02	2.789E+00	4.490E+00	2.633E-01	0.008
		1808.65	*	-1.762E-02	3.594E-02	5.154E-02	2.972E-03	-0.342
K-40		1460.81	*	3.594E-01	5.073E-01	9.317E-01	6.622E-02	0.386
TI-44		67.85		-1.185E-02	6.814E-02	1.096E-01	9.110E-03	-0.108
	+	78.38	*	1.538E-01	8.095E-02	9.555E-02	8.196E-03	1.610
SC-46		889.25	*	2.051E-02	7.184E-02	1.196E-01	8.401E-03	0.172
		1120.51		9.086E-02	9.846E-02	1.672E-01	9.922E-03	0.544
V-48		944.10		-1.530E-01	1.546E+00	2.503E+00	1.740E-01	-0.061
		983.50	*	-7.843E-03	1.093E-01	1.766E-01	1.197E-02	-0.044
		1312.09		4.085E-02	6.003E-02	1.088E-01	7.333E-03	0.375

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CR-51		320.08	*	1.412E-01	4.983E-01	8.266E-01	5.350E-02	0.171
MN-52		744.21		-1.851E-02	1.542E-01	2.528E-01	1.451E-02	-0.073
		848.13		3.818E+00	5.434E+00	9.255E+00	6.156E-01	0.413
		935.52		2.776E-02	2.203E-01	3.614E-01	2.523E-02	0.077
		1246.25		-2.909E-01	2.963E+00	4.899E+00	3.009E-01	-0.059
	+	1333.61		3.535E+02	2.899E+01	3.438E+01	2.382E+00	10.283
		1434.06	*	-8.258E-02	1.022E-01	1.458E-01	9.970E-03	-0.567
MN-54		834.83	*	3.695E-02	6.837E-02	1.157E-01	7.561E-03	0.319
CO-56		846.75	*	3.518E-02	7.580E-02	1.275E-01	8.469E-03	0.276
		977.42		-4.872E-01	7.147E+00	9.964E+00	6.784E-01	-0.049
		1037.82		-5.859E-01	5.767E-01	8.620E-01	6.113E-02	-0.680
		1175.09		2.968E+02	2.074E+01	2.919E+01	1.612E+00	10.170
		1238.25		8.901E-02	8.206E-02	1.518E-01	9.744E-03	0.587
		1360.21		1.815E-01	1.055E+00	1.795E+00	1.241E-01	0.101
		1771.40		-4.033E-01	3.606E-01	4.755E-01	2.816E-02	-0.848
CO-58		810.76	*	-5.083E-02	6.976E-02	1.093E-01	6.940E-03	-0.465
FE-59		142.65		2.319E+00	3.107E+00	5.391E+00	3.064E-01	0.430
		192.34		-5.187E-02	1.178E+00	1.972E+00	2.300E-01	-0.026
		1099.22	*	-1.446E-02	1.710E-01	2.740E-01	1.931E-02	-0.053
		1291.56		7.583E-03	1.169E-01	1.965E-01	1.576E-02	0.039
ZN-65		1115.52	*	-1.136E-01	1.873E-01	2.898E-01	1.735E-02	-0.392
GE-68		1077.35	*	7.092E-01	2.542E+00	4.177E+00	2.608E-01	0.170
AS-73		53.44	*	-1.704E+00	1.842E+00	2.764E+00	2.353E-01	-0.616
AS-74		595.88	*	-3.990E-02	1.028E-01	1.681E-01	8.993E-03	-0.237
		634.78		3.317E-01	4.474E-01	7.775E-01	4.034E-02	0.427
SE-75		66.05		-2.331E+00	6.944E+00	1.111E+01	1.133E+00	-0.210
		96.73		1.573E-01	1.056E+00	1.515E+00	2.006E-01	0.104
	+	121.11		2.171E+00	4.267E-01	4.632E-01	4.389E-02	4.687
	+	136.00		5.628E-02	7.509E-02	9.004E-02	5.304E-03	0.625
		198.60		7.556E-01	2.444E+00	4.100E+00	2.832E-01	0.184
		264.65	*	1.247E-02	6.610E-02	1.101E-01	6.477E-03	0.113
		279.53		1.242E-01	1.577E-01	2.683E-01	1.694E-02	0.463
		303.91		-1.234E+00	3.240E+00	5.231E+00	5.005E-01	-0.236
		400.65		2.191E-01	4.340E-01	7.191E-01	6.381E-02	0.305
BR-77	+	87.88		9.786E+02	1.093E+02	9.915E+01	9.121E+00	9.871
		200.40		-1.078E+01	2.468E+01	4.064E+01	2.252E+00	-0.265
	+	239.00		1.603E+01	2.311E+00	3.940E+00	2.263E-01	4.070
		249.79		8.313E+00	1.132E+01	1.925E+01	1.113E+00	0.432
		281.68		-1.489E+01	1.505E+01	2.373E+01	1.388E+00	-0.628
		297.23		1.779E+01	1.043E+01	1.632E+01	9.548E-01	1.090
		303.76		-4.506E+00	3.025E+01	4.936E+01	2.884E+00	-0.091
		439.47		-6.322E+00	2.984E+01	4.759E+01	2.624E+00	-0.133
		484.57		-2.638E+00	4.443E+01	7.096E+01	3.937E+00	-0.037
		520.65	*	1.020E+00	1.972E+00	3.240E+00	1.791E-01	0.315
		574.64		-7.072E+00	3.571E+01	5.926E+01	3.211E+00	-0.119
		578.91		-3.498E+00	1.614E+01	2.320E+01	1.254E+00	-0.151
		585.48		1.021E+02	3.892E+01	6.532E+01	3.518E+00	1.563
		755.35		-1.147E+01	3.052E+01	4.919E+01	2.870E+00	-0.233
		817.79		-1.611E+00	2.681E+01	4.389E+01	2.800E+00	-0.037

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SR-82		698.33		-2.385E+01	4.328E+01	6.925E+01	3.706E+00	-0.344
		776.49	*	2.392E-01	5.660E-01	9.563E-01	5.754E-02	0.250
		1395.20		2.929E+00	9.773E+00	1.693E+01	1.166E+00	0.173
RB-83		520.41	*	5.707E-02	1.159E-01	1.902E-01	1.052E-02	0.300
		529.64		-1.137E-01	1.702E-01	2.768E-01	1.527E-02	-0.411
		552.65		1.117E-01	3.049E-01	5.228E-01	2.862E-02	0.214
RB-84		881.50	*	5.884E-02	1.233E-01	2.072E-01	1.442E-02	0.284
KR-85		513.99	*	6.157E+00	1.371E+01	1.975E+01	1.093E+00	0.312
SR-85		513.99	*	2.911E-02	6.484E-02	9.336E-02	5.168E-03	0.312
RB-86		1076.63	*	2.050E-01	1.240E+00	2.023E+00	1.264E-01	0.101
Y-88		898.02		5.246E-02	8.613E-02	1.454E-01	1.041E-02	0.361
		1836.01	*	5.930E-02	4.517E-02	8.996E-02	5.092E-03	0.659
ZR-88		392.90	*	7.813E-02	5.081E-02	8.804E-02	4.760E-03	0.887
Y-91		1204.90	*	-1.756E+00	1.999E+01	3.321E+01	1.919E+00	-0.053
NB-94		702.63	*	3.064E-03	5.373E-02	8.944E-02	4.819E-03	0.034
		871.10		-3.061E-02	7.369E-02	1.176E-01	8.070E-03	-0.260
NB-95		765.79	*	-4.655E-02	6.634E-02	1.046E-01	6.199E-03	-0.445
NB-95M		235.69	*	3.040E-02	1.905E-01	2.805E-01	2.097E-02	0.108
ZR-95		724.18		-1.653E-02	1.637E-01	2.331E-01	1.553E-02	-0.071
		756.15	*	-2.249E-02	1.156E-01	1.886E-01	1.333E-02	-0.119
NB-97		657.90	*	4.221E-06	1.156E-01	Half-Life too short		
		1024.50		8.027E-03	1.156E-01	Half-Life too short		
ZR-97		254.15		-2.748E-03	1.156E-01	Half-Life too short		
		355.39		1.013E-03	1.156E-01	Half-Life too short		
		507.63	*	1.194E-03	1.156E-01	Half-Life too short		
		602.52		3.342E-03	1.156E-01	Half-Life too short		
		1021.30		-3.198E-03	1.156E-01	Half-Life too short		
		1147.95		-2.338E-03	1.156E-01	Half-Life too short		
		1362.66		8.449E-04	1.156E-01	Half-Life too short		
		1750.46		9.334E-04	1.156E-01	Half-Life too short		
MO-99		140.51		-4.938E+00	5.770E+00	8.061E+00	2.171E+00	-0.613
		181.06		-2.026E+00	3.882E+00	5.581E+00	9.496E-01	-0.363
		366.43		9.947E-01	2.081E+01	3.394E+01	1.900E+00	0.029
		739.58	*	2.806E-01	2.616E+00	4.358E+00	5.987E-01	0.064
		778.00		9.258E+00	8.790E+00	1.538E+01	9.274E-01	0.602
TC-99M		140.51	*	-2.798E+01	8.790E+00	Half-Life too short		
RH-101		127.23		1.581E-02	4.817E-02	6.895E-02	4.131E-03	0.229
		198.01	*	2.464E-02	4.670E-02	7.891E-02	4.362E-03	0.312
		325.23		-6.339E-02	3.554E-01	5.774E-01	3.347E-02	-0.110
RH-102		418.52		-8.098E-02	4.966E-01	7.953E-01	4.355E-02	-0.102
		475.06	*	3.878E-03	5.847E-02	9.409E-02	5.219E-03	0.041
		631.29		-1.850E-03	9.234E-02	1.540E-01	8.014E-03	-0.012
		697.49		-3.232E-02	1.187E-01	1.936E-01	1.034E-02	-0.167
		766.84		2.255E-02	1.785E-01	2.968E-01	1.761E-02	0.076
		1046.59		3.770E-02	2.354E-01	3.845E-01	2.476E-02	0.098
		1112.84		1.497E-02	4.649E-01	7.498E-01	4.494E-02	0.020
RU-103		497.08	*	1.396E-02	6.626E-02	1.072E-01	1.343E-02	0.130
	+	610.33		5.692E+00	2.253E+00	2.667E+00	4.063E-01	2.134
RH-106	+	511.85		3.101E-01	5.555E-01	5.148E-01	2.850E-02	0.602

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		621.84	*	5.850E-01	5.292E-01	9.315E-01	1.069E-01	0.628
		1050.47		-3.222E+00	4.665E+00	7.175E+00	4.604E-01	-0.449
RU-106	+	511.85		3.101E-01	5.555E-01	5.148E-01	2.850E-02	0.602
		621.84	*	5.850E-01	5.258E-01	9.315E-01	4.889E-02	0.628
		1050.47		-3.222E+00	4.665E+00	7.175E+00	4.604E-01	-0.449
AG-108M		433.93	*	-5.310E-02	6.299E-02	9.717E-02	5.856E-03	-0.547
		614.37		1.551E-02	6.591E-02	9.781E-02	5.689E-03	0.159
		722.95		-1.511E-02	7.839E-02	1.107E-01	6.715E-03	-0.137
AG-110M		657.75	*	-2.627E-02	6.723E-02	9.403E-02	5.168E-03	-0.279
		677.61		8.229E-02	4.998E-01	8.392E-01	4.678E-02	0.098
		706.67		5.773E-02	3.385E-01	5.671E-01	3.284E-02	0.102
		763.93		-1.015E-01	2.724E-01	4.390E-01	2.747E-02	-0.231
		884.67		-4.704E-02	9.833E-02	1.558E-01	1.141E-02	-0.302
		937.48		2.983E-02	2.541E-01	4.165E-01	3.064E-02	0.072
		1384.27		-8.543E-02	1.870E-01	2.899E-01	2.086E-02	-0.295
IN-111		171.28		-2.478E-02	2.002E-01	3.355E-01	1.800E-02	-0.074
		245.39	*	-1.416E-01	2.863E-01	4.062E-01	2.343E-02	-0.349
IN-113M		391.69	*	2.981E-02	7.517E-02	1.241E-01	7.222E-03	0.240
SN-113		391.69	*	2.981E-02	7.517E-02	1.241E-01	7.222E-03	0.240
IN-114M		190.27	*	8.895E-02	2.532E-01	3.806E-01	2.086E-02	0.234
CD-115		260.90		7.213E+00	1.858E+01	3.120E+01	1.815E+00	0.231
		492.35		1.665E+00	5.992E+00	9.740E+00	5.404E-01	0.171
		527.90	*	-3.516E-01	1.663E+00	2.773E+00	1.530E-01	-0.127
SN-117M		156.02		5.498E-01	1.990E+00	3.393E+00	1.859E-01	0.162
		158.56	*	2.460E-03	4.853E-02	8.207E-02	4.466E-03	0.030
SB-122		563.90	*	1.672E-01	4.592E-01	7.865E-01	4.285E-02	0.213
		692.80		-3.130E+00	9.560E+00	1.554E+01	8.244E-01	-0.201
I-123		159.00	*	-7.237E-05	9.560E+00	Half-Life too short		
		528.96		-3.385E-02	9.560E+00	Half-Life too short		
TE-123M		159.00	*	-5.975E-03	3.592E-02	6.028E-02	3.326E-03	-0.099
I-124		602.71	*	1.657E-01	3.263E-01	4.953E-01	2.638E-02	0.334
		722.78		-1.222E+00	2.340E+00	3.204E+00	1.780E-01	-0.382
		1325.50		7.079E-01	1.093E+01	1.589E+01	1.091E+00	0.045
		1376.25		3.319E+00	9.901E+00	1.714E+01	1.183E+00	0.194
		1509.49		4.405E+00	5.026E+00	9.364E+00	6.289E-01	0.470
		1691.02		-5.199E-01	1.268E+00	1.890E+00	1.176E-01	-0.275
SB-124		602.71		3.164E-02	6.232E-02	9.460E-02	5.040E-03	0.334
		645.85		1.235E-02	8.347E-01	1.393E+00	8.302E-02	0.009
		709.31		1.449E+00	4.241E+00	7.097E+00	3.863E-01	0.204
		713.82		-9.703E-01	2.471E+00	3.989E+00	4.002E-01	-0.243
		722.78		-3.385E-01	6.480E-01	8.872E-01	5.182E-02	-0.382
		968.20		4.294E+00	6.451E+00	9.480E+00	6.494E-01	0.453
		1045.16		4.819E+00	4.621E+00	7.961E+00	5.134E-01	0.605
		1325.50		2.093E-01	3.231E+00	4.700E+00	3.226E-01	0.045
		1368.21		5.090E-01	1.682E+00	2.921E+00	3.637E-01	0.174
		1436.60		-3.242E+00	3.870E+00	5.480E+00	3.746E-01	-0.592
		1691.02	*	-3.395E-02	8.278E-02	1.234E-01	8.256E-03	-0.275
SB-125		427.89	*	1.141E-01	1.641E-01	2.738E-01	1.575E-02	0.417
		463.38		2.339E-01	5.377E-01	8.813E-01	5.766E-02	0.265

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		600.56		-3.162E-02	2.735E-01	4.547E-01	2.869E-02	-0.070
		635.90		6.148E-02	4.694E-01	7.889E-01	4.949E-02	0.078
TE-125M		109.28	*	1.589E+01	1.169E+01	1.936E+01	1.726E+00	0.821
I-126		388.63		-2.840E-01	2.391E-01	3.643E-01	1.978E-02	-0.780
		666.33	*	2.030E-01	2.083E-01	3.271E-01	1.664E-02	0.621
		753.82		5.311E-01	1.674E+00	2.819E+00	1.641E-01	0.188
SB-126		223.80		-3.965E+00	3.955E+00	6.332E+00	3.594E-01	-0.626
		278.60		1.876E+00	2.423E+00	4.120E+00	2.408E-01	0.455
	+	296.50		6.924E+00	2.422E+00	2.748E+00	1.607E-01	2.520
		414.70		4.640E-02	8.980E-02	1.487E-01	8.126E-03	0.312
		415.30		1.513E+00	7.363E+00	1.202E+01	6.572E-01	0.126
		555.20		-2.663E+00	4.207E+00	6.818E+00	3.728E-01	-0.391
		573.80		1.539E-01	1.081E+00	1.829E+00	9.916E-02	0.084
		593.00		-8.531E-01	9.549E-01	1.511E+00	8.103E-02	-0.564
		656.30		-2.656E+00	4.268E+00	5.843E+00	2.968E-01	-0.454
		666.33		8.335E-02	8.553E-02	1.343E-01	6.831E-03	0.621
		675.00		-3.943E-01	2.128E+00	3.497E+00	1.804E-01	-0.113
		695.00		7.595E-02	7.788E-02	1.370E-01	7.294E-03	0.554
		697.00		6.697E-02	2.708E-01	4.565E-01	2.438E-02	0.147
		720.50	*	-7.898E-02	1.841E-01	2.543E-01	1.408E-02	-0.311
		856.80		-3.299E-01	6.421E-01	1.021E+00	6.869E-02	-0.323
		989.30		-3.800E-01	1.733E+00	2.772E+00	1.872E-01	-0.137
		1034.80		2.628E+00	1.145E+01	1.881E+01	1.225E+00	0.140
		1213.00		-6.673E-01	3.405E+00	5.592E+00	3.271E-01	-0.119
SB-127		61.10		6.461E+02	7.121E+01	7.987E+01	7.295E+00	8.089
		252.40		-5.767E-01	1.741E+00	2.820E+00	1.158E+00	-0.205
		290.80		-6.929E+00	9.106E+00	1.250E+01	8.509E-01	-0.555
		411.60		4.617E+00	5.616E+00	9.376E+00	1.203E+00	0.492
		444.90		-1.841E+00	4.786E+00	7.557E+00	6.550E-01	-0.244
		473.00		7.469E-01	8.537E-01	1.423E+00	1.303E-01	0.525
		543.00		-6.742E+00	6.898E+00	1.092E+01	1.221E+00	-0.617
		603.60		1.032E+00	5.067E+00	7.501E+00	6.380E-01	0.138
		685.20	*	9.651E-02	5.579E-01	9.367E-01	6.258E-02	0.103
		698.50		-3.657E+00	5.995E+00	9.530E+00	1.229E+00	-0.384
		722.20		-4.341E+00	1.413E+01	1.974E+01	1.294E+00	-0.220
		783.80		9.319E-01	1.545E+00	2.639E+00	2.341E-01	0.353
XE-127		57.60		1.211E+02	1.859E+01	2.704E+01	2.308E+00	4.477
		145.22		-4.661E-01	7.843E-01	1.281E+00	7.231E-02	-0.364
		172.10		-9.512E-02	1.367E-01	2.240E-01	1.203E-02	-0.425
		202.84	*	1.010E-03	5.775E-02	9.663E-02	5.370E-03	0.010
		374.96		1.586E-01	2.888E-01	4.816E-01	2.667E-02	0.329
I-131		80.18		3.074E-01	3.814E+00	5.486E+00	4.764E-01	0.056
		284.30		-1.031E+00	1.231E+00	1.952E+00	1.257E-01	-0.528
		364.48	*	-1.920E-02	1.044E-01	1.685E-01	1.053E-02	-0.114
		636.97		-1.097E+00	1.425E+00	2.271E+00	1.337E-01	-0.483
		722.89		-3.518E+00	6.978E+00	9.571E+00	5.339E-01	-0.368
TE-132		49.72		8.257E+00	8.154E+00	1.364E+01	1.194E+00	0.605
		111.76		-5.125E+00	8.162E+00	1.259E+01	9.390E-01	-0.407
		116.30		2.206E+00	8.531E+00	1.221E+01	8.798E-01	0.181

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		228.16	*	2.171E-01	2.033E-01	3.479E-01	4.564E-02	0.624
BA-133		53.15		-8.185E+00	8.113E+00	1.279E+01	1.088E+00	-0.640
		79.62		1.435E+00	2.058E+00	3.023E+00	4.606E-01	0.475
		81.00		-1.348E-01	1.617E-01	2.212E-01	3.524E-02	-0.609
		276.40		2.235E-01	5.597E-01	9.373E-01	1.217E-01	0.238
		302.84		1.050E-01	2.318E-01	3.875E-01	4.525E-02	0.271
		356.01	*	-2.556E-02	8.420E-02	1.176E-01	1.352E-02	-0.217
		383.85		-5.151E-02	5.252E-01	8.484E-01	9.077E-02	-0.061
I-133	+	510.53		1.345E-03	5.252E-01	Half-Life too short		
		529.87	*	-1.390E-05	5.252E-01	Half-Life too short		
		706.58		-6.565E-05	5.252E-01	Half-Life too short		
		856.28		-5.898E-04	5.252E-01	Half-Life too short		
		875.33		-2.560E-04	5.252E-01	Half-Life too short		
		1236.41		5.311E-05	5.252E-01	Half-Life too short		
		1298.22		1.770E-04	5.252E-01	Half-Life too short		
CS-134		475.35		-4.785E-03	3.794E+00	6.084E+00	3.375E-01	-0.001
		563.23		1.323E-01	5.702E-01	9.700E-01	5.412E-02	0.136
		569.32		-8.733E-02	3.184E-01	5.265E-01	2.957E-02	-0.166
		604.70		5.259E-03	5.919E-02	8.680E-02	4.647E-03	0.061
	+	795.84	*	6.354E-02	1.262E-01	1.467E-01	9.203E-03	0.433
		801.93		1.437E-01	7.676E-01	1.207E+00	7.611E-02	0.119
		1038.57		-6.423E+00	7.714E+00	1.172E+01	7.607E-01	-0.548
		1167.94		-2.175E+00	4.562E+00	6.268E+00	3.479E-01	-0.347
		1365.15		6.122E-01	1.347E+00	2.383E+00	1.762E-01	0.257
CS-135		268.24	*	-1.581E-01	2.428E-01	3.901E-01	2.997E-02	-0.405
I-135		288.45		4.017E+01	2.428E-01	Half-Life too short		
		417.63		1.287E+01	2.428E-01	Half-Life too short		
		546.56		-4.316E+00	2.428E-01	Half-Life too short		
		836.80		8.087E+01	2.428E-01	Half-Life too short		
		1038.76		-1.051E+02	2.428E-01	Half-Life too short		
		1124.00		-1.211E+02	2.428E-01	Half-Life too short		
		1131.51		3.085E-01	2.428E-01	Half-Life too short		
		1260.41	*	-1.196E+01	2.428E-01	Half-Life too short		
		1457.56		-5.471E+01	2.428E-01	Half-Life too short		
		1678.03		1.130E+01	2.428E-01	Half-Life too short		
		1706.46		-1.470E+02	2.428E-01	Half-Life too short		
		1791.20		3.876E+01	2.428E-01	Half-Life too short		
CS-136		66.91		-3.516E-01	7.758E-01	1.233E+00	1.883E-01	-0.285
		86.29		1.526E+01	2.540E+00	2.831E+00	3.725E-01	5.390
		153.22		1.056E-01	5.749E-01	9.778E-01	6.837E-02	0.108
		163.89		4.294E-01	9.885E-01	1.690E+00	1.167E-01	0.254
		176.55		-6.022E-02	3.352E-01	5.601E-01	3.446E-02	-0.108
		273.65		-7.001E-01	4.609E-01	7.087E-01	4.708E-02	-0.988
	+	340.57		4.481E-01	2.640E-01	2.378E-01	1.451E-02	1.884
		818.51		-2.913E-02	9.555E-02	1.540E-01	9.838E-03	-0.189
		1048.07	*	-5.409E-02	1.480E-01	2.332E-01	1.611E-02	-0.232
		1235.34		-2.153E-01	3.666E-01	5.710E-01	5.782E-02	-0.377
CE-139		165.85	*	1.927E-02	3.998E-02	6.845E-02	3.656E-03	0.281
BA-140		162.64		-2.423E-01	6.840E-01	1.140E+00	7.015E-02	-0.213

---- Non-Identified Nuclides ----

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		304.84		4.995E-01	1.357E+00	2.252E+00	6.147E-01	0.222
		423.70		4.232E-01	2.207E+00	3.592E+00	1.140E+00	0.118
		537.32	*	7.318E-02	2.967E-01	5.042E-01	1.637E-01	0.145
LA-140		328.77		2.619E-01	2.946E-01	5.008E-01	3.247E-02	0.523
		432.53		-1.865E+00	2.543E+00	3.944E+00	2.422E-01	-0.473
		487.03		-1.723E-02	1.626E-01	2.589E-01	1.642E-02	-0.067
		751.79		-5.464E-01	1.970E+00	3.197E+00	2.270E-01	-0.171
		815.85		-2.576E-01	4.038E-01	6.358E-01	4.867E-02	-0.405
		867.82		2.092E+00	1.960E+00	3.391E+00	2.509E-01	0.617
		919.63		3.653E+00	4.500E+00	6.763E+00	6.366E-01	0.540
		925.24		-8.648E-01	1.721E+00	2.722E+00	2.089E-01	-0.318
		1596.49	*	-2.910E-02	6.841E-02	1.041E-01	6.786E-03	-0.279
CE-141		145.44	*	-3.866E-02	7.004E-02	1.146E-01	6.735E-03	-0.337
CE-143		57.37		2.710E+02	6.506E+01	9.800E+01	9.480E+00	2.766
		231.56		-7.507E+01	8.359E+01	1.290E+02	3.983E+01	-0.582
		293.26	*	5.366E+00	4.659E+00	6.989E+00	1.428E+00	0.768
	+	350.59		4.275E+02	1.733E+02	1.212E+02	3.674E+01	3.526
		490.36		-3.622E+01	1.056E+02	1.647E+02	5.080E+01	-0.220
		664.57		1.507E+03	4.861E+02	2.219E+02	6.993E+01	6.794
		721.93		-1.466E+01	5.443E+01	7.608E+01	2.159E+01	-0.193
CE-144		80.11		3.701E-01	3.353E+00	4.829E+00	4.186E-01	0.077
		133.54	*	-1.099E-01	3.156E-01	4.335E-01	6.165E-02	-0.254
PM-144		476.78		-6.493E-02	1.332E-01	2.083E-01	1.402E-02	-0.312
		618.01		-1.432E-02	5.024E-02	8.252E-02	4.657E-03	-0.174
		696.49	*	9.801E-03	5.255E-02	8.824E-02	4.710E-03	0.111
		778.57		-4.588E-02	4.136E+00	6.813E+00	4.112E-01	-0.007
PR-144		696.49	*	6.614E-01	3.546E+00	5.955E+00	3.178E-01	0.111
		1489.15		-1.063E+01	1.376E+01	1.958E+01	1.323E+00	-0.543
PM-146		453.90	*	7.127E-02	8.821E-02	1.469E-01	1.240E-02	0.485
		633.02		-1.502E-01	2.394E+00	3.980E+00	1.462E+00	-0.038
		735.90		1.304E-03	2.417E-01	3.999E-01	1.114E-01	0.003
		747.13		-4.994E-02	1.606E-01	2.605E-01	3.253E-02	-0.192
ND-147		91.11		5.642E-01	3.057E-01	3.822E-01	3.599E-02	1.476
		319.41		-1.833E-01	3.330E+00	5.441E+00	3.164E-01	-0.034
		439.89		-7.589E-01	7.003E+00	1.122E+01	6.190E-01	-0.068
		531.02	*	8.381E-02	6.022E-01	1.022E+00	1.369E-01	0.082
PM-149		285.90	*	1.999E+01	1.307E+01	2.239E+01	3.173E+00	0.893
EU-152	+	121.78		1.224E+00	2.319E-01	2.652E-01	2.088E-02	4.616
		244.69		-7.348E-02	5.845E-01	8.466E-01	4.882E-02	-0.087
		344.27	*	1.313E-01	1.873E-01	2.623E-01	1.697E-02	0.501
		443.98		1.109E-01	1.859E+00	3.002E+00	1.658E-01	0.037
		778.89		-1.198E-01	4.769E-01	7.738E-01	4.672E-02	-0.155
		867.32		1.057E+00	1.791E+00	3.027E+00	2.066E-01	0.349
		964.01		4.415E-01	7.304E-01	1.071E+00	7.355E-02	0.412
		1085.78		3.894E-01	8.072E-01	1.343E+00	8.313E-02	0.290
		1112.02		7.352E-02	6.614E-01	1.072E+00	6.433E-02	0.069
		1407.95		-2.462E-02	2.124E-01	3.462E-01	2.379E-02	-0.071
GD-153		69.67		-4.920E-01	2.396E+00	3.846E+00	3.201E-01	-0.128
		83.37		-3.106E+00	2.455E+01	3.482E+01	3.086E+00	-0.089

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		97.43	*	-6.568E-02	1.149E-01	1.586E-01	1.255E-02	-0.414
		103.18		-4.641E-02	1.412E-01	2.223E-01	1.635E-02	-0.209
EU-154	+	123.07		8.587E-01	1.695E-01	1.815E-01	1.742E-02	4.731
		247.94		-3.112E-02	5.834E-01	9.654E-01	9.198E-02	-0.032
		591.81		-4.332E-01	9.943E-01	1.622E+00	1.545E-01	-0.267
		723.30		-5.207E-02	3.279E-01	4.643E-01	3.197E-02	-0.112
		756.87		3.352E-01	1.352E+00	2.265E+00	2.303E-01	0.148
		873.19		-3.237E-01	6.368E-01	1.009E+00	1.119E-01	-0.321
		996.32		1.923E-01	8.012E-01	1.317E+00	2.229E-01	0.146
		1004.76		-3.582E-02	4.246E-01	6.844E-01	7.038E-02	-0.052
		1274.45	*	-2.138E-02	1.252E-01	2.044E-01	1.988E-02	-0.105
EU-155		48.70		-4.488E-01	5.240E+00	8.530E+00	6.712E-01	-0.053
	+	60.01		4.672E+02	4.634E+01	3.730E+01	3.165E+00	12.524
		86.54		3.242E+00	3.748E-01	4.425E-01	4.060E-02	7.327
		105.31	*	-8.985E-02	1.479E-01	2.297E-01	1.678E-02	-0.391
TB-160	+	86.79		1.260E+01	1.408E+00	1.198E+00	1.091E-01	10.523
		197.04		9.164E-02	7.363E-01	1.238E+00	6.837E-02	0.074
		215.65		2.020E-01	1.071E+00	1.671E+00	9.412E-02	0.121
		298.57		-1.579E-01	1.859E-01	2.539E-01	1.485E-02	-0.622
		879.36	*	8.318E-02	2.770E-01	4.588E-01	3.182E-02	0.181
		962.29		5.116E-03	1.197E+00	1.764E+00	1.213E-01	0.003
		966.15		3.493E-01	4.684E-01	6.931E-01	4.754E-02	0.504
		1177.93		9.555E-01	5.378E-01	9.283E-01	5.148E-02	1.029
		1271.85		6.317E-02	6.232E-01	1.055E+00	6.721E-02	0.060
HO-166M		80.57		-3.405E-01	4.470E-01	6.181E-01	5.373E-02	-0.551
		184.41		1.155E-01	5.384E-02	8.670E-02	4.720E-03	1.332
		280.46		-1.172E-02	1.327E-01	2.180E-01	1.275E-02	-0.054
		410.95		3.023E-01	4.402E-01	7.344E-01	4.008E-02	0.412
		711.68	*	-4.323E-02	1.027E-01	1.657E-01	9.054E-03	-0.261
		752.31		-1.573E-01	4.810E-01	7.781E-01	4.519E-02	-0.202
		810.29		-1.930E-02	1.106E-01	1.799E-01	1.136E-02	-0.107
TM-171		51.35		2.280E+01	6.694E+01	1.101E+02	9.221E+00	0.207
		52.39		-1.419E+01	3.530E+01	5.684E+01	4.809E+00	-0.250
	+	59.40		2.446E+03	2.426E+02	2.061E+02	1.753E+01	11.867
		66.72	*	-1.656E+01	4.216E+01	6.730E+01	5.599E+00	-0.246
LU-176	+	88.36		1.000E+01	1.118E+00	1.003E+00	9.177E-02	9.973
		201.83		-2.909E-02	4.098E-02	6.675E-02	3.706E-03	-0.436
		306.84	*	-3.295E-02	4.115E-02	6.511E-02	3.802E-03	-0.506
		401.10		4.906E+00	1.186E+01	1.957E+01	1.063E+00	0.251
LU-177		112.95		-1.101E+00	1.046E+00	1.581E+00	1.050E-01	-0.696
	+	208.36	*	1.168E+00	9.920E-01	1.178E+00	6.583E-02	0.992
LU-177M		52.97		-3.193E+00	3.572E+00	5.658E+00	4.805E-01	-0.564
		54.07		1.850E-01	2.080E+00	3.032E+00	2.586E-01	0.061
		61.30		4.383E+01	5.111E+00	6.837E+00	5.768E-01	6.410
	+	121.62		6.078E+00	1.112E+00	1.318E+00	8.104E-02	4.612
		147.16		2.767E-01	8.079E-01	1.383E+00	7.763E-02	0.200
		171.86		-3.311E-01	6.190E-01	1.021E+00	5.483E-02	-0.324
		218.09		-6.853E-01	1.216E+00	1.984E+00	1.120E-01	-0.345
		268.79		-1.348E-01	1.178E+00	1.937E+00	1.130E-01	-0.070

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		319.02		-9.146E-02	4.144E-01	6.722E-01	3.909E-02	-0.136
		367.43		-8.428E-01	1.513E+00	2.393E+00	1.338E-01	-0.352
		413.65	*	1.325E-02	3.156E-01	5.113E-01	2.793E-02	0.026
HF-181		56.28		2.887E+00	2.118E+00	3.196E+00	2.731E-01	0.903
		57.53		8.927E+00	1.507E+00	2.239E+00	1.910E-01	3.987
		65.20		5.380E-01	1.307E+00	2.045E+00	1.705E-01	0.263
		133.02		-1.150E-02	9.086E-02	1.266E-01	7.421E-03	-0.091
	+	136.25		6.048E-01	8.069E-01	9.709E-01	5.630E-02	0.623
		345.85		-1.375E-01	3.806E-01	4.417E-01	2.525E-02	-0.311
		482.03	*	9.878E-03	7.044E-02	1.134E-01	6.293E-03	0.087
W-181		56.28		1.229E+00	9.000E-01	1.358E+00	1.160E-01	0.905
		57.53		3.777E+00	6.398E-01	9.508E-01	8.113E-02	3.973
		65.20	*	2.269E-01	5.512E-01	8.627E-01	7.191E-02	0.263
TA-182		67.75		-4.129E-02	1.556E-01	2.495E-01	2.074E-02	-0.166
		100.10		2.205E-02	2.270E-01	3.640E-01	2.781E-02	0.061
		152.43		2.104E-01	4.168E-01	7.166E-01	3.964E-02	0.294
		222.10		2.460E-01	4.888E-01	8.289E-01	4.697E-02	0.297
		1001.68		-1.150E+00	3.931E+00	6.318E+00	4.228E-01	-0.182
		1121.28		2.836E-01	2.724E-01	4.657E-01	2.762E-02	0.609
		1189.05		-4.200E-02	3.774E-01	6.267E-01	3.535E-02	-0.067
		1221.42	*	1.170E-01	2.067E-01	3.648E-01	2.161E-02	0.321
		1230.97		-3.518E-01	4.249E-01	6.388E-01	3.837E-02	-0.551
RE-183		57.98		9.281E+00	9.764E-01	1.173E+00	1.001E-01	7.909
	+	59.32		9.356E+00	9.280E-01	7.933E-01	6.751E-02	11.793
		67.20		-1.460E-01	2.761E-01	4.385E-01	3.647E-02	-0.333
		162.32	*	-4.505E-02	1.403E-01	2.341E-01	1.261E-02	-0.192
	+	208.81		2.158E+00	1.832E+00	2.166E+00	1.211E-01	0.996
		291.72		2.139E-01	1.439E+00	2.097E+00	1.227E-01	0.102
RE-184		57.98		3.576E+01	3.762E+00	4.522E+00	3.856E-01	7.909
	+	59.32		3.602E+01	3.573E+00	3.055E+00	2.599E-01	11.793
		67.20		-5.623E-01	1.064E+00	1.689E+00	1.405E-01	-0.333
		161.27		-4.445E-02	4.621E-01	7.771E-01	4.198E-02	-0.057
		216.55		7.102E-02	3.730E-01	6.264E-01	3.531E-02	0.113
		252.85	*	-1.059E-01	3.553E-01	5.816E-01	3.370E-02	-0.182
		318.01		-6.052E-01	7.196E-01	1.133E+00	6.590E-02	-0.534
		792.07		8.669E-02	1.969E+00	2.819E+00	1.735E-01	0.031
		903.28		-1.247E+00	2.138E+00	3.372E+00	2.391E-01	-0.370
		920.93		-2.183E-01	9.773E-01	1.528E+00	1.075E-01	-0.143
OS-185	+	59.72		2.602E+01	2.581E+00	2.135E+00	1.814E-01	12.190
		61.14		6.479E+00	6.898E-01	8.363E-01	7.059E-02	7.747
		69.30		-1.429E-01	4.139E-01	6.613E-01	5.501E-02	-0.216
		592.07		-2.171E+00	3.808E+00	6.161E+00	3.305E-01	-0.352
		646.12	*	-2.832E-03	7.376E-02	1.227E-01	6.298E-03	-0.023
		717.42		4.639E-01	1.431E+00	2.417E+00	1.332E-01	0.192
		874.81		-9.100E-01	1.182E+00	1.841E+00	1.270E-01	-0.494
		880.27		1.246E+00	1.542E+00	2.637E+00	1.831E-01	0.472
RE-188		155.03	*	5.139E-02	2.080E-01	3.544E-01	1.947E-02	0.145
		477.96		-5.131E-01	5.512E+00	8.795E+00	4.879E-01	-0.058
		633.10		-3.684E-01	4.486E+00	7.451E+00	3.872E-01	-0.049

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
W-188		63.58		-4.200E+01	8.223E+01	1.182E+02	9.891E+00	-0.355
		227.08		1.581E+01	1.773E+01	3.042E+01	1.731E+00	0.520
		290.67	*	-8.963E+00	1.169E+01	1.605E+01	9.389E-01	-0.559
IR-192	+	295.96		7.592E-01	2.657E-01	3.045E-01	1.809E-02	2.493
		308.46		5.425E-02	1.479E-01	2.465E-01	1.455E-02	0.220
		316.51	*	1.755E-03	5.326E-02	8.743E-02	5.114E-03	0.020
		468.07		-4.732E-02	1.227E-01	1.931E-01	1.248E-02	-0.245
		604.41		6.765E-02	7.500E-01	1.100E+00	1.222E-01	0.062
		612.46		9.588E-01	1.226E+00	1.887E+00	1.356E-01	0.508
AU-195		65.12		1.136E-01	2.596E-01	4.067E-01	3.390E-02	0.279
		66.83		-5.694E-02	1.359E-01	2.167E-01	1.803E-02	-0.263
		75.70		1.015E+00	3.436E-01	5.274E-01	4.464E-02	1.925
		98.88	*	-2.829E-01	2.950E-01	4.512E-01	3.502E-02	-0.627
		129.76		2.628E+00	3.830E+00	6.221E+00	3.691E-01	0.422
TL-200		367.94	*	-2.860E+00	5.854E+00	9.294E+00	5.193E-01	-0.308
		579.30		-4.909E+00	4.526E+01	6.567E+01	3.550E+00	-0.075
		828.27		-4.640E+01	6.994E+01	1.099E+02	7.117E+00	-0.422
		1205.75		2.680E+00	2.102E+01	3.565E+01	2.063E+00	0.075
TL-201		68.90		-1.646E-01	1.232E+00	1.983E+00	1.649E-01	-0.083
		70.82		-2.369E-01	6.936E-01	1.108E+00	9.234E-02	-0.214
		80.30		-8.778E-01	1.434E+00	1.999E+00	1.734E-01	-0.439
	+	135.34		6.566E+00	8.760E+00	1.040E+01	6.049E-01	0.631
		167.43	*	6.070E-01	1.648E+00	2.811E+00	1.502E-01	0.216
TL-202		68.90		-5.533E-02	4.142E-01	6.666E-01	5.545E-02	-0.083
		70.82		-7.943E-02	2.326E-01	3.714E-01	3.096E-02	-0.214
		80.30		-2.944E-01	4.810E-01	6.703E-01	5.817E-02	-0.439
		439.56	*	-1.943E-02	8.839E-02	1.409E-01	7.770E-03	-0.138
HG-203		70.83		-4.626E-01	1.392E+00	2.223E+00	2.984E-01	-0.208
		72.87		-1.447E-01	9.275E-01	1.325E+00	1.729E-01	-0.109
		82.60		-4.225E-01	1.636E+00	2.314E+00	3.209E-01	-0.183
		279.20	*	4.423E-02	5.560E-02	9.458E-02	5.866E-03	0.468
BI-207		72.80		-7.927E-02	3.046E-01	4.334E-01	3.630E-02	-0.183
		74.97		2.531E-01	1.868E-01	2.799E-01	2.362E-02	0.904
		84.90		3.260E-01	3.167E-01	4.684E-01	4.202E-02	0.696
		569.67		2.022E-03	5.029E-02	8.462E-02	4.597E-03	0.024
		1063.62	*	1.656E-02	1.124E-01	1.831E-01	1.160E-02	0.090
		1770.23		1.546E-01	6.407E-01	9.594E-01	5.686E-02	0.161
TL-207		81.07		-4.145E-01	3.616E-01	4.899E-01	4.273E-02	-0.846
		83.78		1.070E-01	2.111E-01	3.069E-01	2.729E-02	0.349
		94.90		4.008E-01	3.220E-01	4.858E-01	3.987E-02	0.825
	+	122.32		2.918E+01	5.428E+00	6.285E+00	4.388E-01	4.643
		144.24		-1.254E-01	8.954E-01	1.488E+00	1.060E-01	-0.084
		154.21		1.777E-01	5.125E-01	8.762E-01	5.933E-02	0.203
		269.46		1.580E-01	2.822E-01	4.763E-01	2.903E-02	0.332
		323.87	*	-8.459E-01	1.082E+00	1.695E+00	2.799E-01	-0.499
	+	338.28		5.377E+00	3.201E+00	3.085E+00	3.240E-01	1.743
		445.03		-1.378E+00	4.483E+00	7.106E+00	7.188E-01	-0.194
PO-209		260.50		6.748E+00	1.498E+01	2.521E+01	1.466E+00	0.268
		262.80		-3.294E+01	4.243E+01	6.789E+01	3.951E+00	-0.485

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		896.60	*	1.009E+01	1.602E+01	2.709E+01	1.922E+00	0.372
BI-210		46.50	*	-1.153E+01	7.398E+00	1.136E+01	8.996E-01	-1.015
PB-210		46.50	*	-1.153E+01	7.398E+00	1.136E+01	8.996E-01	-1.015
PO-210		46.50	*	-1.153E+01	7.384E+00	1.136E+01	7.798E-01	-1.015
PB-211		404.84	*	-3.102E-01	1.661E+00	2.645E+00	1.648E+00	-0.117
		427.08		3.955E-01	3.755E+00	6.078E+00	3.755E+00	0.065
		831.96		-1.640E+00	2.520E+00	3.613E+00	2.255E+00	-0.454
BI-212	+	727.18	*	5.545E-01	7.499E-01	8.713E-01	6.587E-02	0.636
		785.46		2.134E+00	2.992E+00	5.147E+00	3.137E-01	0.415
		1620.62		5.995E-01	1.512E+00	2.647E+00	1.706E-01	0.226
BI-214	+	609.31	*	6.038E-01	2.251E-01	2.826E-01	2.095E-02	2.137
		768.36		8.276E-01	1.231E+00	2.107E+00	1.773E-01	0.393
		934.06		-2.332E-01	2.612E+00	4.235E+00	3.965E-01	-0.055
		1120.29		6.595E-01	6.111E-01	1.044E+00	9.284E-02	0.632
		1238.11		8.994E-01	8.633E-01	1.589E+00	1.326E-01	0.566
		1377.67		1.644E+00	1.140E+00	2.205E+00	2.064E-01	0.746
	+	1764.49		5.325E-01	4.932E-01	7.631E-01	4.541E-02	0.698
PO-215		81.07		-4.145E-01	3.616E-01	4.899E-01	4.273E-02	-0.846
		83.78		1.070E-01	2.111E-01	3.069E-01	2.729E-02	0.349
		94.90		4.008E-01	3.220E-01	4.858E-01	3.987E-02	0.825
	+	122.32		2.918E+01	5.428E+00	6.285E+00	4.388E-01	4.643
		144.24		-1.254E-01	8.954E-01	1.488E+00	1.060E-01	-0.084
		154.21		1.777E-01	5.125E-01	8.762E-01	5.933E-02	0.203
		269.46		1.580E-01	2.822E-01	4.763E-01	2.903E-02	0.332
		323.87	*	-8.459E-01	1.082E+00	1.695E+00	2.799E-01	-0.499
	+	338.28		5.377E+00	3.201E+00	3.085E+00	3.240E-01	1.743
		445.03		-1.378E+00	4.483E+00	7.106E+00	7.188E-01	-0.194
RN-219		271.23		2.170E-01	3.607E-01	6.095E-01	4.955E-02	0.356
		401.81	*	3.744E-03	7.354E-01	1.191E+00	1.602E-01	0.003
RN-220		549.76	*	1.924E+00	4.322E+01	7.289E+01	3.995E+00	0.026
RA-223		81.07		-4.145E-01	3.616E-01	4.899E-01	4.273E-02	-0.846
		83.78		1.070E-01	2.111E-01	3.069E-01	2.729E-02	0.349
		94.90		4.008E-01	3.220E-01	4.858E-01	3.987E-02	0.825
	+	122.32		2.918E+01	5.428E+00	6.285E+00	4.388E-01	4.643
		144.24		-1.254E-01	8.954E-01	1.488E+00	1.060E-01	-0.084
		154.21		1.777E-01	5.125E-01	8.762E-01	5.933E-02	0.203
		269.46		1.580E-01	2.822E-01	4.763E-01	2.903E-02	0.332
		323.87	*	-8.459E-01	1.082E+00	1.695E+00	2.799E-01	-0.499
	+	338.28		5.377E+00	3.201E+00	3.085E+00	3.240E-01	1.743
		445.03		-1.378E+00	4.483E+00	7.106E+00	7.188E-01	-0.194
RA-226	+	609.31	*	6.038E-01	2.251E-01	2.826E-01	2.095E-02	2.137
		768.36		8.276E-01	1.231E+00	2.107E+00	1.773E-01	0.393
		934.06		-2.332E-01	2.612E+00	4.235E+00	3.965E-01	-0.055
		1120.29		6.595E-01	6.111E-01	1.044E+00	9.284E-02	0.632
		1238.11		8.994E-01	8.633E-01	1.589E+00	1.326E-01	0.566
		1377.67		1.644E+00	1.140E+00	2.205E+00	2.064E-01	0.746
	+	1764.49		5.325E-01	4.932E-01	7.631E-01	4.541E-02	0.698
AC-227		79.80		5.173E-01	2.657E+00	3.838E+00	8.258E-01	0.135
		236.00		1.042E-01	3.840E-01	5.683E-01	5.919E-02	0.183

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		256.20	*	-1.188E-01	5.927E-01	9.730E-01	1.359E-01	-0.122
		286.10		3.121E+00	2.431E+00	4.174E+00	4.836E-01	0.748
		299.80		-2.357E-01	2.490E+00	3.568E+00	5.817E-01	-0.066
		304.40		1.565E-02	3.004E+00	4.935E+00	8.543E-01	0.003
		334.20		8.610E-01	3.989E+00	5.789E+00	1.061E+00	0.149
TH-227		79.80		5.173E-01	2.657E+00	3.838E+00	8.364E-01	0.135
	+	94.00		4.593E+00	3.808E+00	4.451E+00	9.641E-01	1.032
		236.00		1.042E-01	3.840E-01	5.683E-01	5.122E-02	0.183
		256.20	*	-1.188E-01	5.928E-01	9.730E-01	1.645E-01	-0.122
		286.10		3.121E+00	3.943E+00	4.174E+00	4.182E+00	0.748
		299.80		-2.357E-01	2.490E+00	3.568E+00	5.817E-01	-0.066
		304.40		1.565E-02	3.004E+00	4.935E+00	8.543E-01	0.003
		334.20		8.610E-01	3.989E+00	5.789E+00	1.061E+00	0.149
TH-229		85.43		6.201E-01	3.309E-01	4.984E-01	4.491E-02	1.244
	+	88.47		5.759E+00	6.435E-01	5.757E-01	5.255E-02	10.005
		100.00		-9.023E-02	2.513E-01	3.951E-01	3.022E-02	-0.228
		193.63	*	-2.551E-01	7.166E-01	1.185E+00	6.520E-02	-0.215
	+	210.97		1.824E+00	1.549E+00	1.763E+00	9.880E-02	1.035
TH-230	+	609.31	*	6.038E-01	2.251E-01	2.826E-01	2.095E-02	2.137
		768.36		8.276E-01	1.231E+00	2.107E+00	1.773E-01	0.393
		934.06		-2.332E-01	2.612E+00	4.235E+00	3.965E-01	-0.055
		1120.29		6.595E-01	6.111E-01	1.044E+00	9.284E-02	0.632
		1238.11		8.994E-01	8.633E-01	1.589E+00	1.326E-01	0.566
		1377.67		1.644E+00	1.140E+00	2.205E+00	2.064E-01	0.746
	+	1764.49		5.325E-01	4.932E-01	7.631E-01	4.541E-02	0.698
PA-231		283.67	*	-1.155E+00	2.422E+00	3.902E+00	5.385E-01	-0.296
		301.29		4.115E-01	9.969E-01	1.470E+00	1.541E-01	0.280
TH-231		81.07		-4.145E-01	3.616E-01	4.899E-01	4.273E-02	-0.846
		83.78		1.070E-01	2.111E-01	3.069E-01	2.729E-02	0.349
		94.90		4.008E-01	3.220E-01	4.858E-01	3.987E-02	0.825
	+	122.32		2.918E+01	5.428E+00	6.285E+00	4.388E-01	4.643
		144.24		-1.254E-01	8.954E-01	1.488E+00	1.060E-01	-0.084
		154.21		1.777E-01	5.125E-01	8.762E-01	5.933E-02	0.203
		269.46		1.580E-01	2.822E-01	4.763E-01	2.903E-02	0.332
		323.87	*	-8.459E-01	1.082E+00	1.695E+00	2.799E-01	-0.499
	+	338.28		5.377E+00	3.201E+00	3.085E+00	3.240E-01	1.743
		445.03		-1.378E+00	4.483E+00	7.106E+00	7.188E-01	-0.194
U-231		84.21		2.429E+00	2.510E+00	3.708E+00	3.308E-01	0.655
	+	92.29		1.271E+00	1.022E+00	1.314E+00	1.123E-01	0.967
		95.87	*	3.341E-01	4.240E-01	6.280E-01	5.081E-02	0.532
		108.00		-7.495E-01	8.207E-01	1.250E+00	8.719E-02	-0.600
PA-233		75.28		9.749E+00	5.714E+00	8.420E+00	1.284E+00	1.158
	+	86.59		8.258E+01	2.291E+01	7.371E+00	1.988E+00	11.204
		300.12		9.825E-02	6.909E-01	1.004E+00	1.351E-01	0.098
		311.98	*	-5.482E-02	1.074E-01	1.721E-01	1.065E-02	-0.319
	+	340.50		3.262E+00	2.053E+00	1.750E+00	4.017E-01	1.864
		398.62		3.372E-01	3.742E+00	6.086E+00	1.569E+00	0.055
		415.76		-3.006E-01	2.994E+00	4.813E+00	9.866E-01	-0.062
PA-234		63.00		-3.024E+00	2.704E+00	3.726E+00	5.728E-01	-0.811

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.67		2.848E-01	2.371E-01	3.547E-01	4.305E-02	0.803
		98.44		-7.837E-02	1.356E-01	1.897E-01	1.056E-01	-0.413
		99.86		-2.381E-01	6.360E-01	9.994E-01	7.658E-02	-0.238
		111.00		5.313E-04	2.600E-01	4.139E-01	4.488E-02	0.001
		131.20		-3.217E-02	1.693E-01	2.352E-01	1.388E-02	-0.137
		152.70		2.882E-01	4.262E-01	7.330E-01	1.152E-01	0.393
	+	186.00		2.585E+00	2.848E+00	3.270E+00	9.970E-01	0.791
		226.40		3.315E-01	6.036E-01	1.023E+00	1.177E-01	0.324
		227.20		5.679E-01	6.465E-01	1.109E+00	6.311E-02	0.512
		248.90		9.682E-01	1.335E+00	2.246E+00	4.826E-01	0.431
	+	293.70		5.137E+00	1.955E+00	1.875E+00	3.019E-01	2.739
		369.80		-1.054E-01	1.476E+00	2.392E+00	4.967E-01	-0.044
		568.70		-5.053E-01	1.616E+00	2.666E+00	1.449E-01	-0.190
		569.50		-7.440E-02	4.465E-01	7.428E-01	4.036E-02	-0.100
		574.00		3.113E-01	2.388E+00	4.036E+00	2.188E-01	0.077
		699.00		-6.236E-01	1.125E+00	1.791E+00	3.195E-01	-0.348
		706.10		2.580E-02	1.742E+00	2.892E+00	1.275E+00	0.009
		733.00		-1.577E-01	6.991E-01	1.030E+00	2.186E-01	-0.153
		742.81		-8.929E-01	2.338E+00	3.638E+00	2.434E+00	-0.245
	+	796.30		1.244E+00	2.491E+00	2.888E+00	7.618E-01	0.431
		805.60		2.169E+00	1.983E+00	3.292E+00	9.900E-01	0.659
		819.60		-8.113E-01	2.472E+00	3.949E+00	1.484E+00	-0.205
		826.30		-2.998E-01	1.632E+00	2.641E+00	1.172E+00	-0.114
		831.60		-9.265E-01	1.218E+00	1.854E+00	5.433E-01	-0.500
		876.40		-7.303E-03	1.754E+00	2.868E+00	2.945E+00	-0.003
		880.51		5.394E-01	5.857E-01	1.008E+00	7.002E-02	0.535
		883.24		-4.596E-02	5.983E-01	9.725E-01	6.518E-01	-0.047
		899.00		5.619E-01	1.864E+00	3.071E+00	1.334E+00	0.183
		925.00		-7.900E-01	2.720E+00	4.359E+00	3.061E-01	-0.181
		926.50		3.942E-01	4.077E-01	6.811E-01	1.687E-01	0.579
		946.00	*	-2.053E-01	7.149E-01	1.144E+00	2.065E-01	-0.180
		949.00		1.269E-01	1.048E+00	1.717E+00	1.190E-01	0.074
		980.50		9.991E-01	1.631E+00	2.742E+00	1.863E-01	0.364
		1394.10		-4.118E-01	1.300E+00	2.000E+00	1.298E+00	-0.206
PA-234M		766.41		-1.809E+01	3.234E+01	4.640E+01	3.546E+01	-0.390
		1001.03	*	-8.881E-01	1.359E+01	2.216E+01	2.165E+00	-0.040
TH-234		63.29	*	-1.680E+00	2.242E+00	3.163E+00	5.653E-01	-0.531
	+	92.38		1.189E+00	9.749E-01	1.226E+00	2.212E-01	0.970
U-234	+	609.31	*	6.038E-01	2.251E-01	2.826E-01	2.095E-02	2.137
		768.36		8.276E-01	1.231E+00	2.107E+00	1.773E-01	0.393
		934.06		-2.332E-01	2.612E+00	4.235E+00	3.965E-01	-0.055
		1120.29		6.595E-01	6.111E-01	1.044E+00	9.284E-02	0.632
		1238.11		8.994E-01	8.633E-01	1.589E+00	1.326E-01	0.566
		1377.67		1.644E+00	1.140E+00	2.205E+00	2.064E-01	0.746
	+	1764.49		5.325E-01	4.932E-01	7.631E-01	4.541E-02	0.698
U-235		89.95		1.705E+01	5.735E+00	3.572E+00	1.105E+00	4.772
	+	93.35		1.429E+00	1.211E+00	1.469E+00	4.106E-01	0.973
		105.00		-2.912E-01	1.441E+00	2.276E+00	6.705E-01	-0.128
		143.76	*	4.765E-02	2.763E-01	4.641E-01	7.545E-02	0.103

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		163.35		-1.304E-01	6.507E-01	1.089E+00	1.944E-01	-0.120
	+	185.71		9.573E-02	1.015E-01	1.204E-01	6.565E-03	0.795
		205.31		4.596E-01	8.181E-01	1.232E+00	2.206E-01	0.373
NP-236		94.67		2.174E-01	1.789E-01	2.692E-01	2.217E-02	0.808
		98.44		-5.920E-02	9.714E-02	1.434E-01	1.119E-02	-0.413
		111.00		4.019E-04	1.967E-01	3.131E-01	2.118E-02	0.001
		160.31	*	-3.415E-02	1.071E-01	1.787E-01	9.682E-03	-0.191
NP-237		86.50	*	7.171E+00	1.712E+00	1.063E+00	2.397E-01	6.746
		95.87		1.052E+00	1.358E+00	1.978E+00	4.838E-01	0.532
U-238		63.29	*	-1.680E+00	2.242E+00	3.163E+00	5.653E-01	-0.531
	+	92.38		1.189E+00	9.564E-01	1.226E+00	1.046E-01	0.970
NP-239		99.55		-7.294E-02	2.106E-01	3.313E-01	2.549E-02	-0.220
		117.00	*	-3.272E-03	3.010E-01	4.245E-01	2.716E-02	-0.008
	+	209.75		1.838E+00	1.560E+00	1.839E+00	1.030E-01	0.999
		228.18		3.656E-01	3.400E-01	5.867E-01	3.342E-02	0.623
		277.60		7.258E-02	2.797E-01	4.662E-01	2.725E-02	0.156
		334.30		6.541E-01	2.266E+00	3.305E+00	1.906E-01	0.198
AM-243		74.67	*	8.943E-02	1.033E-01	1.528E-01	1.287E-02	0.585
	+	86.72		4.645E+02	5.190E+01	4.366E+01	3.976E+00	10.639
		117.66		-4.349E+00	6.209E+00	8.421E+00	5.356E-01	-0.516
		142.18		1.327E+01	2.240E+01	3.871E+01	2.204E+00	0.343
CM-243		99.55		-7.502E-02	2.166E-01	3.408E-01	2.622E-02	-0.220
		103.76	*	4.435E-02	1.305E-01	2.109E-01	1.541E-02	0.210
		117.00		-3.365E-03	3.095E-01	4.365E-01	2.793E-02	-0.008
	+	209.75		1.811E+00	1.537E+00	1.812E+00	1.014E-01	0.999
		228.18		3.692E-01	3.434E-01	5.925E-01	3.375E-02	0.623
		277.60		7.313E-02	2.819E-01	4.698E-01	2.746E-02	0.156
CM-247		278.00		4.833E-01	1.144E+00	1.919E+00	1.122E-01	0.252
		287.40		-4.229E-02	1.946E+00	3.201E+00	1.873E-01	-0.013
		402.60	*	-3.222E-02	6.645E-02	1.050E-01	5.707E-03	-0.307
CF-249		252.85		-4.101E-01	1.376E+00	2.252E+00	1.305E-01	-0.182
		333.44		-2.570E-01	3.025E-01	4.078E-01	2.353E-02	-0.630
		387.95	*	-8.495E-02	7.055E-02	1.074E-01	5.837E-03	-0.791
CF-251		176.60	*	4.099E-02	1.716E-01	2.909E-01	1.570E-02	0.141
		227.00		5.177E-01	5.748E-01	9.865E-01	5.614E-02	0.525
		285.00		2.312E+00	2.743E+00	4.674E+00	2.734E-01	0.495

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871428    *
* Acquisition date :  7-JUL-2009 10:00:37 Detector SN#     :               *
* Detector ID        : GAM01               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 01:30:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 01:30:01.87     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 30-JUN-2009 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201871428          Analyst initials: MXR1         *
* Batch Number       : 881220               Sample Quantity : 1.5544E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	4.139E-01	7.423E-02	5.826E-02	0.000E+00
CO-60	7.138E+00	5.736E-01	7.650E-02	0.000E+00
CD-109	4.243E+01	4.646E+00	2.025E+00	0.000E+00
SN-126	4.218E+00	4.619E-01	2.024E-01	0.000E+00
BA-137M	5.402E+00	3.423E-01	9.627E-02	0.000E+00
CS-137	5.710E+00	3.631E-01	1.018E-01	0.000E+00
TL-208	3.558E-01	1.120E-01	1.014E-01	0.000E+00
BI-211	2.629E+00	7.125E-01	5.550E-01	0.000E+00
PB-212	9.460E-01	1.400E-01	1.579E-01	0.000E+00
PO-212	9.460E-01	1.400E-01	1.579E-01	0.000E+00
PB-214	9.145E-01	2.522E-01	1.935E-01	0.000E+00
PO-214	9.145E-01	2.522E-01	1.935E-01	0.000E+00
PO-216	9.460E-01	1.400E-01	1.579E-01	0.000E+00
PO-218	9.145E-01	2.522E-01	1.935E-01	0.000E+00
RA-224	2.441E+00	1.448E+00	1.698E+00	0.000E+00
AC-228	1.236E+00	5.056E-01	4.764E-01	0.000E+00
RA-228	1.236E+00	5.056E-01	4.764E-01	0.000E+00
TH-228	9.460E-01	1.400E-01	1.579E-01	0.000E+00
TH-232	1.236E+00	5.056E-01	4.764E-01	0.000E+00
AM-241	1.440E+01	1.478E+00	5.388E-01	0.000E+00
ANH-511	6.299E-02	1.106E-01	8.507E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-2.044E-01	5.594E-01	9.340E-01	0.000E+00	NOT IDENT.
NA-22	-8.165E-03	4.368E-02	7.355E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.487E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.762E-02	3.522E-02	5.167E-02	0.000E+00	NOT IDENT.
K-40	3.594E-01	4.971E-01	9.397E-01	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.933E-02	1.040E-01	0.000E+00	FAIL ABUN

SC-46	2.051E-02	7.041E-02	1.223E-01	0.000E+00	NOT IDENT.
V-48	-7.843E-03	1.071E-01	1.801E-01	0.000E+00	NOT IDENT.
CR-51	1.412E-01	4.883E-01	8.687E-01	0.000E+00	NOT IDENT.
MN-52	-8.258E-02	1.001E-01	1.471E-01	0.000E+00	FAIL ABUN
MN-54	3.695E-02	6.700E-02	1.186E-01	0.000E+00	NOT IDENT.
CO-56	3.518E-02	7.429E-02	1.306E-01	0.000E+00	NOT IDENT.
CO-58	-5.083E-02	6.836E-02	1.121E-01	0.000E+00	NOT IDENT.
FE-59	-1.446E-02	1.676E-01	2.786E-01	0.000E+00	NOT IDENT.
ZN-65	-1.136E-01	1.836E-01	2.945E-01	0.000E+00	NOT IDENT.
GE-68	7.092E-01	2.492E+00	4.249E+00	0.000E+00	NOT IDENT.
AS-73	-1.704E+00	1.805E+00	3.038E+00	0.000E+00	NOT IDENT.
AS-74	-3.990E-02	1.008E-01	1.737E-01	0.000E+00	NOT IDENT.
SE-75	1.247E-02	6.477E-02	1.163E-01	0.000E+00	FAIL ABUN
BR-77	1.020E+00	1.932E+00	3.362E+00	0.000E+00	FAIL ABUN
SR-82	2.392E-01	5.547E-01	9.815E-01	0.000E+00	NOT IDENT.
RB-83	5.707E-02	1.136E-01	1.974E-01	0.000E+00	NOT IDENT.
RB-84	5.884E-02	1.208E-01	2.120E-01	0.000E+00	NOT IDENT.
KR-85	6.157E+00	1.344E+01	2.050E+01	0.000E+00	NOT IDENT.
SR-85	2.911E-02	6.354E-02	9.690E-02	0.000E+00	NOT IDENT.
RB-86	2.050E-01	1.215E+00	2.058E+00	0.000E+00	NOT IDENT.
Y-88	5.930E-02	4.427E-02	9.014E-02	0.000E+00	NOT IDENT.
ZR-88	7.813E-02	4.980E-02	9.203E-02	0.000E+00	NOT IDENT.
Y-91	-1.756E+00	1.959E+01	3.368E+01	0.000E+00	NOT IDENT.
NB-94	3.064E-03	5.266E-02	9.206E-02	0.000E+00	NOT IDENT.
NB-95	-4.655E-02	6.501E-02	1.074E-01	0.000E+00	NOT IDENT.
NB-95M	3.040E-02	1.867E-01	2.971E-01	0.000E+00	NOT IDENT.
ZR-95	-2.249E-02	1.133E-01	1.938E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.329E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.670E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.806E-01	2.564E+00	4.479E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.145E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.464E-02	4.576E-02	8.396E-02	0.000E+00	NOT IDENT.
RH-102	3.878E-03	5.730E-02	9.786E-02	0.000E+00	NOT IDENT.
RU-103	1.396E-02	6.494E-02	1.114E-01	0.000E+00	FAIL ABUN
RH-106	5.850E-01	5.186E-01	9.619E-01	0.000E+00	FAIL ABUN
RU-106	5.850E-01	5.153E-01	9.619E-01	0.000E+00	FAIL ABUN
AG-108M	-5.310E-02	6.173E-02	1.013E-01	0.000E+00	NOT IDENT.
AG-110M	-2.627E-02	6.588E-02	9.695E-02	0.000E+00	NOT IDENT.
IN-111	-1.416E-01	2.806E-01	4.298E-01	0.000E+00	NOT IDENT.
IN-113M	2.981E-02	7.366E-02	1.298E-01	0.000E+00	NOT IDENT.
SN-113	2.981E-02	7.366E-02	1.298E-01	0.000E+00	NOT IDENT.
IN-114M	8.895E-02	2.482E-01	4.054E-01	0.000E+00	NOT IDENT.
CD-115	-3.516E-01	1.630E+00	2.876E+00	0.000E+00	NOT IDENT.
SN-117M	2.460E-03	4.756E-02	8.782E-02	0.000E+00	NOT IDENT.
SB-122	1.672E-01	4.500E-01	8.143E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.264E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-5.975E-03	3.520E-02	6.450E-02	0.000E+00	NOT IDENT.
I-124	1.657E-01	3.198E-01	5.119E-01	0.000E+00	NOT IDENT.
SB-124	-3.395E-02	8.113E-02	1.240E-01	0.000E+00	NOT IDENT.
SB-125	1.141E-01	1.608E-01	2.856E-01	0.000E+00	NOT IDENT.
TE-125M	1.589E+01	1.145E+01	2.091E+01	0.000E+00	NOT IDENT.
I-126	2.030E-01	2.042E-01	3.371E-01	0.000E+00	NOT IDENT.
SB-126	-7.898E-02	1.804E-01	2.616E-01	0.000E+00	FAIL ABUN
SB-127	9.651E-02	5.468E-01	9.647E-01	0.000E+00	NOT IDENT.
XE-127	1.010E-03	5.659E-02	1.028E-01	0.000E+00	NOT IDENT.
I-131	-1.920E-02	1.023E-01	1.765E-01	0.000E+00	NOT IDENT.
TE-132	2.171E-01	1.992E-01	3.688E-01	0.000E+00	NOT IDENT.
BA-133	-2.556E-02	8.252E-02	1.233E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.148E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.354E-02	1.237E-01	1.505E-01	0.000E+00	FAIL ABUN
CS-135	-1.581E-01	2.380E-01	4.119E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.170E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.409E-02	1.450E-01	2.374E-01	0.000E+00	FAIL ABUN
CE-139	1.927E-02	3.918E-02	7.316E-02	0.000E+00	NOT IDENT.
BA-140	7.318E-02	2.907E-01	5.227E-01	0.000E+00	NOT IDENT.
LA-140	-2.910E-02	6.704E-02	1.048E-01	0.000E+00	NOT IDENT.
CE-141	-3.866E-02	6.864E-02	1.229E-01	0.000E+00	NOT IDENT.
CE-143	5.366E+00	4.566E+00	7.362E+00	0.000E+00	FAIL ABUN
CE-144	-1.099E-01	3.093E-01	4.659E-01	0.000E+00	NOT IDENT.
PM-144	9.801E-03	5.150E-02	9.084E-02	0.000E+00	NOT IDENT.
PR-144	6.614E-01	3.475E+00	6.131E+00	0.000E+00	NOT IDENT.
PM-146	7.127E-02	8.645E-02	1.530E-01	0.000E+00	NOT IDENT.
ND-147	8.381E-02	5.902E-01	1.060E+00	0.000E+00	NOT IDENT.
PM-149	1.999E+01	1.281E+01	2.360E+01	0.000E+00	NOT IDENT.
EU-152	1.313E-01	1.835E-01	2.751E-01	0.000E+00	FAIL ABUN
GD-153	-6.568E-02	1.126E-01	1.717E-01	0.000E+00	NOT IDENT.
EU-154	-2.138E-02	1.227E-01	2.069E-01	0.000E+00	FAIL ABUN
EU-155	-8.985E-02	1.449E-01	2.483E-01	0.000E+00	FAIL ABUN

TB-160	8.318E-02	2.715E-01	4.693E-01	0.000E+00	FAIL ABUN
HO-166M	-4.323E-02	1.006E-01	1.705E-01	0.000E+00	NOT IDENT.
TM-171	-1.656E+01	4.132E+01	7.357E+01	0.000E+00	FAIL ABUN
LU-176	-3.295E-02	4.032E-02	6.850E-02	0.000E+00	FAIL ABUN
LU-177	1.168E+00	9.722E-01	1.251E+00	0.000E+00	FAIL ABUN
LU-177M	1.325E-02	3.093E-01	5.337E-01	0.000E+00	FAIL ABUN
HF-181	9.878E-03	6.903E-02	1.179E-01	0.000E+00	FAIL ABUN
W-181	2.269E-01	5.402E-01	9.435E-01	0.000E+00	NOT IDENT.
TA-182	1.170E-01	2.026E-01	3.698E-01	0.000E+00	NOT IDENT.
RE-183	-4.505E-02	1.375E-01	2.503E-01	0.000E+00	FAIL ABUN
RE-184	-1.059E-01	3.482E-01	6.150E-01	0.000E+00	FAIL ABUN
OS-185	-2.832E-03	7.229E-02	1.266E-01	0.000E+00	FAIL ABUN
RE-188	5.139E-02	2.038E-01	3.794E-01	0.000E+00	NOT IDENT.
W-188	-8.963E+00	1.146E+01	1.691E+01	0.000E+00	NOT IDENT.
IR-192	1.755E-03	5.220E-02	9.191E-02	0.000E+00	FAIL ABUN
AU-195	-2.829E-01	2.891E-01	4.885E-01	0.000E+00	NOT IDENT.
TL-200	-2.860E+00	5.737E+00	9.732E+00	0.000E+00	NOT IDENT.
TL-201	6.070E-01	1.615E+00	3.004E+00	0.000E+00	FAIL ABUN
TL-202	-1.943E-02	8.662E-02	1.468E-01	0.000E+00	NOT IDENT.
HG-203	4.423E-02	5.449E-02	9.975E-02	0.000E+00	NOT IDENT.
BI-207	1.656E-02	1.101E-01	1.864E-01	0.000E+00	NOT IDENT.
TL-207	-8.459E-01	1.060E+00	1.780E+00	0.000E+00	FAIL ABUN
PO-209	1.009E+01	1.570E+01	2.770E+01	0.000E+00	NOT IDENT.
BI-210	-1.153E+01	7.250E+00	1.252E+01	0.000E+00	NOT IDENT.
PB-210	-1.153E+01	7.250E+00	1.252E+01	0.000E+00	NOT IDENT.
PO-210	-1.153E+01	7.236E+00	1.252E+01	0.000E+00	NOT IDENT.
PB-211	-3.102E-01	1.628E+00	2.763E+00	0.000E+00	NOT IDENT.
BI-212	5.545E-01	7.349E-01	8.959E-01	0.000E+00	FAIL ABUN
BI-214	0.000E+00	2.206E-01	2.920E-01	0.000E+00	FAIL ABUN
PO-215	-8.459E-01	1.060E+00	1.780E+00	0.000E+00	FAIL ABUN
RN-219	3.744E-03	7.207E-01	1.244E+00	0.000E+00	NOT IDENT.
RN-220	1.924E+00	4.236E+01	7.551E+01	0.000E+00	NOT IDENT.
RA-223	-8.459E-01	1.060E+00	1.780E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	2.206E-01	2.920E-01	0.000E+00	FAIL ABUN
AC-227	-1.188E-01	5.809E-01	1.029E+00	0.000E+00	NOT IDENT.
TH-227	-1.188E-01	5.810E-01	1.029E+00	0.000E+00	FAIL ABUN
TH-229	-2.551E-01	7.023E-01	1.262E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.206E-01	2.920E-01	0.000E+00	FAIL ABUN
PA-231	-1.155E+00	2.374E+00	4.113E+00	0.000E+00	NOT IDENT.
TH-231	-8.459E-01	1.060E+00	1.780E+00	0.000E+00	FAIL ABUN
U-231	3.341E-01	4.155E-01	6.804E-01	0.000E+00	FAIL ABUN
PA-233	-5.482E-02	1.052E-01	1.810E-01	0.000E+00	FAIL ABUN
PA-234	-2.053E-01	7.006E-01	1.167E+00	0.000E+00	FAIL ABUN
PA-234M	-8.881E-01	1.331E+01	2.258E+01	0.000E+00	NOT IDENT.
TH-234	-1.680E+00	2.198E+00	3.462E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	2.206E-01	2.920E-01	0.000E+00	FAIL ABUN
U-235	4.765E-02	2.708E-01	4.978E-01	0.000E+00	FAIL ABUN
NP-236	-3.415E-02	1.050E-01	1.912E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	1.677E+00	1.155E+00	0.000E+00	NOT IDENT.
U-238	-1.680E+00	2.198E+00	3.462E+00	0.000E+00	FAIL ABUN
NP-239	-3.272E-03	2.949E-01	4.577E-01	0.000E+00	FAIL ABUN
AM-243	8.943E-02	1.012E-01	1.665E-01	0.000E+00	FAIL ABUN
CM-243	4.435E-02	1.278E-01	2.281E-01	0.000E+00	FAIL ABUN
CM-247	-3.222E-02	6.512E-02	1.097E-01	0.000E+00	NOT IDENT.
CF-249	-8.495E-02	6.914E-02	1.123E-01	0.000E+00	NOT IDENT.
CF-251	4.099E-02	1.681E-01	3.104E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:31:10.23

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871428.CNF;1
Sample date       : 30-JUN-2009 00:00:00 Acquisition date : 7-JUL-2009 10:00:37.
Sample ID         : G1201871428          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM01                Detector geometry: CAN
Elapsed live time: 0 01:30:00.00         Elapsed real time: 0 01:30:01.87  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 881220               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	657	85.51*	6.096E+00	4.061E-01	4.139E-01	18.30
	136.48	60	10.60	6.019E+00	3.011E-01	3.069E-01	133.46
CO-60	1173.22	2414	100.00	1.168E+00	6.657E+00	6.675E+00	7.26
	1332.49	2305	100.00*	1.042E+00	7.119E+00	7.138E+00	8.20
CD-109	88.03	2518	3.72*	5.194E+00	4.196E+01	4.243E+01	11.17
SN-126	64.28	------	9.60	2.844E+00	------ Line Not Found		------
	86.94	2518	8.90	5.194E+00	1.754E+01	1.754E+01	41.96
	87.57	2518	37.00*	5.194E+00	4.218E+00	4.218E+00	11.17
BA-137M	661.65	2954	89.98*	1.958E+00	5.399E+00	5.402E+00	6.47
CS-137	661.65	2954	85.12*	1.958E+00	5.707E+00	5.710E+00	6.49
TL-208	277.35	------	6.80	3.972E+00	------ Line Not Found		------
	510.84	48	21.60	2.438E+00	2.916E-01	2.916E-01	179.34
	583.14	203	84.20*	2.181E+00	3.558E-01	3.558E-01	32.11
	860.37	------	12.46	1.552E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.875E+00	------ Line Not Found		------
	351.07	348	12.94*	3.295E+00	2.629E+00	2.629E+00	27.65
PB-212	74.81	------	10.70	4.083E+00	------ Line Not Found		------
	77.11	202	18.00	4.331E+00	8.339E-01	8.339E-01	52.62
	87.30	2518	8.00	5.194E+00	1.951E+01	1.951E+01	14.99
	238.63	582	44.60*	4.443E+00	9.460E-01	9.460E-01	15.10
	300.09	------	3.41	3.737E+00	------ Line Not Found		------
PO-212	74.81	------	10.70	4.083E+00	------ Line Not Found		------
	77.11	202	18.00	4.331E+00	8.339E-01	8.339E-01	52.62
	87.30	2518	8.00	5.194E+00	1.951E+01	1.951E+01	14.99
	115.19	------	0.60	6.067E+00	------ Line Not Found		------
	238.63	582	44.60*	4.443E+00	9.460E-01	9.460E-01	15.10
	300.09	------	3.41	3.737E+00	------ Line Not Found		------
PB-214	74.81	------	6.21	4.083E+00	------ Line Not Found		------
	77.11	202	10.50	4.331E+00	1.429E+00	1.430E+00	53.17
	87.30	2518	4.67	5.194E+00	3.342E+01	3.342E+01	13.57
	241.98	132	7.49	4.402E+00	1.287E+00	1.287E+00	60.77
	295.21	242	19.20	3.786E+00	1.070E+00	1.070E+00	35.53

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	348	37.20*	3.295E+00	9.145E-01	9.145E-01	28.14
PO-214	74.81	------	6.21	4.083E+00	------ Line Not Found		------
	77.11	202	10.50	4.331E+00	1.429E+00	1.430E+00	53.17
	87.30	2518	4.67	5.194E+00	3.342E+01	3.342E+01	13.57
	241.98	132	7.49	4.402E+00	1.287E+00	1.287E+00	60.77
	295.21	242	19.20	3.786E+00	1.070E+00	1.070E+00	35.53
	351.92	348	37.20*	3.295E+00	9.145E-01	9.145E-01	28.14
PO-216	74.81	------	10.70	4.083E+00	------ Line Not Found		------
	77.11	202	18.00	4.331E+00	8.339E-01	8.339E-01	52.62
	87.30	2518	8.00	5.194E+00	1.951E+01	1.951E+01	14.99
	238.63	582	44.60*	4.443E+00	9.460E-01	9.460E-01	15.10
	300.09	------	3.41	3.737E+00	------ Line Not Found		------
PO-218	74.81	------	6.21	4.083E+00	------ Line Not Found		------
	77.11	202	10.50	4.331E+00	1.429E+00	1.430E+00	53.17
	87.30	2518	4.67	5.194E+00	3.342E+01	3.342E+01	13.57
	241.98	132	7.49	4.402E+00	1.287E+00	1.287E+00	60.77
	295.21	242	19.20	3.786E+00	1.070E+00	1.070E+00	35.53
	351.92	348	37.20*	3.295E+00	9.145E-01	9.145E-01	28.14
RA-224	240.98	132	3.95*	4.402E+00	2.441E+00	2.441E+00	60.51
AC-228	338.32	155	11.40	3.395E+00	1.288E+00	1.288E+00	71.38
	911.07	156	27.70*	1.471E+00	1.236E+00	1.236E+00	41.74
	969.11	71	16.60	1.390E+00	9.976E-01	9.976E-01	106.42
RA-228	338.32	155	11.40	3.395E+00	1.288E+00	1.288E+00	71.38
	911.07	156	27.70*	1.471E+00	1.236E+00	1.236E+00	41.74
	969.11	71	16.60	1.390E+00	9.976E-01	9.976E-01	106.42
TH-228	84.40	------	1.21	4.941E+00	------ Line Not Found		------
	238.60	582	44.60*	4.443E+00	9.460E-01	9.460E-01	15.10
	300.10	------	3.41	3.737E+00	------ Line Not Found		------
TH-232	338.32	155	11.40	3.395E+00	1.288E+00	1.288E+00	58.88
	911.07	156	27.70*	1.471E+00	1.236E+00	1.236E+00	41.74
	969.11	71	16.60	1.390E+00	9.976E-01	9.976E-01	106.42
AM-241	59.54	3572	35.90*	2.224E+00	1.440E+01	1.440E+01	10.47
ANH-511	511.00	48	100.00*	2.438E+00	6.299E-02	6.299E-02	179.15

Flag: "*" = Keyline

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

Total number of lines in spectrum 24
Number of unidentified lines 0
Number of lines tentatively identified by NID 24 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	4.061E-01	4.139E-01	0.757E-01	18.30	
CO-60	5.27Y	1.00	7.119E+00	7.138E+00	0.585E+00	8.20	
CD-109	464.00D	1.01	4.196E+01	4.243E+01	0.474E+01	11.17	
SN-126	1.00E+05Y	1.00	4.218E+00	4.218E+00	0.471E+00	11.17	
BA-137M	30.17Y	1.00	5.399E+00	5.402E+00	0.349E+00	6.47	
CS-137	30.17Y	1.00	5.707E+00	5.710E+00	0.370E+00	6.49	
TL-208	1.41E+10Y	1.00	3.558E-01	3.558E-01	1.143E-01	32.11	
BI-211	7.04E+08Y	1.00	2.629E+00	2.629E+00	0.727E+00	27.65	
PB-212	1.41E+10Y	1.00	9.460E-01	9.460E-01	1.428E-01	15.10	
PO-212	1.41E+10Y	1.00	9.460E-01	9.460E-01	1.428E-01	15.10	
PB-214	1600.00Y	1.00	9.145E-01	9.145E-01	2.574E-01	28.14	
PO-214	1600.00Y	1.00	9.145E-01	9.145E-01	2.574E-01	28.14	
PO-216	1.41E+10Y	1.00	9.460E-01	9.460E-01	1.428E-01	15.10	
PO-218	1600.00Y	1.00	9.145E-01	9.145E-01	2.574E-01	28.14	
RA-224	1.41E+10Y	1.00	2.441E+00	2.441E+00	1.477E+00	60.51	
AC-228	1.41E+10Y	1.00	1.236E+00	1.236E+00	0.516E+00	41.74	
RA-228	1.41E+10Y	1.00	1.236E+00	1.236E+00	0.516E+00	41.74	
TH-228	1.41E+10Y	1.00	9.460E-01	9.460E-01	1.428E-01	15.10	
TH-232	1.41E+10Y	1.00	1.236E+00	1.236E+00	0.516E+00	41.74	
AM-241	432.20Y	1.00	1.440E+01	1.440E+01	0.151E+01	10.47	
ANH-511	1.00E+09Y	1.00	6.299E-02	6.299E-02	11.28E-02	179.15	
	Total Activity :		9.493E+01	9.544E+01			

Grand Total Activity : 9.493E+01 9.544E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	92.94	109	510	1.31	186.64	183	9	2.02E-02	80.0	5.47E+00	T
0	186.23	84	514	1.30	373.21	368	10	1.56E-02	****	5.26E+00	T
0	209.57	90	387	1.08	419.88	416	10	1.67E-02	84.7	4.88E+00	T
0	609.59	182	200	1.67	1219.76	1213	14	3.38E-02	36.5	2.10E+00	T
0	727.30	37	143	1.31	1455.09	1448	12	6.79E-03	****	1.80E+00	T
0	796.68	25	155	0.89	1593.80	1585	11	4.64E-03	****	1.66E+00	T
0	1765.64	22	16	1.72	3530.60	3523	13	4.05E-03	92.4	8.36E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 7-JUL-2009 11:31:15.83

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201871428.CNF;1  *
* Acquisition date  : 7-JUL-2009 10:00:37.  Detector SN#     :             *
* Detector ID       : GAM01                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 01:30:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 01:30:01.87          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201871428           Analyst initials: MXR1         *
* Batch Number      : 881220                Sample Quantity : 1.55440E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56.1MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	4.139E-01	7.575E-02	5.410E-02	3.322E-03	7.651
CO-60	7.138E+00	5.853E-01	7.565E-02	5.243E-03	94.349
CD-109	4.243E+01	4.740E+00	1.865E+00	1.716E-01	22.750
SN-126	4.218E+00	4.713E-01	1.864E-01	1.710E-02	22.627
BA-137M	5.402E+00	3.493E-01	9.339E-02	4.716E-03	57.840
CS-137	5.710E+00	3.705E-01	9.872E-02	5.013E-03	57.840
TL-208	3.558E-01	1.143E-01	9.808E-02	6.214E-03	3.628
BI-211	2.629E+00	7.270E-01	5.293E-01	3.352E-02	4.967
PB-212	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
PO-212	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
PB-214	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
PO-214	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
PO-216	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346
PO-218	9.145E-01	2.574E-01	1.845E-01	1.514E-02	4.956
RA-224	2.441E+00	1.477E+00	1.604E+00	9.225E-02	1.522
AC-228	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
RA-228	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
TH-228	9.460E-01	1.428E-01	1.491E-01	1.086E-02	6.346

Sample ID : G1201871428 Acquisition date : 7-JUL-2009 10:00:37

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.236E+00	5.159E-01	4.662E-01	4.711E-02	2.651
AM-241	1.440E+01	1.508E+00	4.916E-01	4.492E-02	29.303
ANH-511	6.299E-02	1.128E-01	8.195E-02	4.538E-03	0.769

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.044E-01		5.708E-01	8.981E-01	5.870E-02	-0.228
NA-22	-8.165E-03		4.457E-02	7.265E-02	4.657E-03	-0.112
NA-24	1.171E-05		7.588E-05	Half-Life too short		
AL-26	-1.762E-02		3.594E-02	5.154E-02	2.972E-03	-0.342
K-40	3.594E-01		5.073E-01	9.317E-01	6.622E-02	0.386
TI-44	1.538E-01	+	8.095E-02	9.555E-02	8.196E-03	1.610
SC-46	2.051E-02		7.184E-02	1.196E-01	8.401E-03	0.172
V-48	-7.843E-03		1.093E-01	1.766E-01	1.197E-02	-0.044
CR-51	1.412E-01		4.983E-01	8.266E-01	5.350E-02	0.171
MN-52	-8.258E-02		1.022E-01	1.458E-01	9.970E-03	-0.567
MN-54	3.695E-02		6.837E-02	1.157E-01	7.561E-03	0.319
CO-56	3.518E-02		7.580E-02	1.275E-01	8.469E-03	0.276
CO-58	-5.083E-02		6.976E-02	1.093E-01	6.940E-03	-0.465
FE-59	-1.446E-02		1.710E-01	2.740E-01	1.931E-02	-0.053
ZN-65	-1.136E-01		1.873E-01	2.898E-01	1.735E-02	-0.392
GE-68	7.092E-01		2.542E+00	4.177E+00	2.608E-01	0.170
AS-73	-1.704E+00		1.842E+00	2.764E+00	2.353E-01	-0.616
AS-74	-3.990E-02		1.028E-01	1.681E-01	8.993E-03	-0.237
SE-75	1.247E-02		6.610E-02	1.101E-01	6.477E-03	0.113
BR-77	1.020E+00		1.972E+00	3.240E+00	1.791E-01	0.315
SR-82	2.392E-01		5.660E-01	9.563E-01	5.754E-02	0.250
RB-83	5.707E-02		1.159E-01	1.902E-01	1.052E-02	0.300
RB-84	5.884E-02		1.233E-01	2.072E-01	1.442E-02	0.284
KR-85	6.157E+00		1.371E+01	1.975E+01	1.093E+00	0.312
SR-85	2.911E-02		6.484E-02	9.336E-02	5.168E-03	0.312
RB-86	2.050E-01		1.240E+00	2.023E+00	1.264E-01	0.101
Y-88	5.930E-02		4.517E-02	8.996E-02	5.092E-03	0.659
ZR-88	7.813E-02		5.081E-02	8.804E-02	4.760E-03	0.887
Y-91	-1.756E+00		1.999E+01	3.321E+01	1.919E+00	-0.053
NB-94	3.064E-03		5.373E-02	8.944E-02	4.819E-03	0.034
NB-95	-4.655E-02		6.634E-02	1.046E-01	6.199E-03	-0.445
NB-95M	3.040E-02		1.905E-01	2.805E-01	2.097E-02	0.108
ZR-95	-2.249E-02		1.156E-01	1.886E-01	1.333E-02	-0.119
NB-97	4.221E-06		4.760E-05	Half-Life too short		
ZR-97	1.194E-03		8.519E-04	Half-Life too short		
MO-99	2.806E-01		2.616E+00	4.358E+00	5.987E-01	0.064
TC-99M	-2.798E+01		1.604E+01	Half-Life too short		
RH-101	2.464E-02		4.670E-02	7.891E-02	4.362E-03	0.312
RH-102	3.878E-03		5.847E-02	9.409E-02	5.219E-03	0.041
RU-103	1.396E-02		6.626E-02	1.072E-01	1.343E-02	0.130

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-106	5.850E-01		5.292E-01	9.315E-01	1.069E-01	0.628
RU-106	5.850E-01		5.258E-01	9.315E-01	4.889E-02	0.628
AG-108M	-5.310E-02		6.299E-02	9.717E-02	5.856E-03	-0.547
AG-110M	-2.627E-02		6.723E-02	9.403E-02	5.168E-03	-0.279
IN-111	-1.416E-01		2.863E-01	4.062E-01	2.343E-02	-0.349
IN-113M	2.981E-02		7.517E-02	1.241E-01	7.222E-03	0.240
SN-113	2.981E-02		7.517E-02	1.241E-01	7.222E-03	0.240
IN-114M	8.895E-02		2.532E-01	3.806E-01	2.086E-02	0.234
CD-115	-3.516E-01		1.663E+00	2.773E+00	1.530E-01	-0.127
SN-117M	2.460E-03		4.853E-02	8.207E-02	4.466E-03	0.030
SB-122	1.672E-01		4.592E-01	7.865E-01	4.285E-02	0.213
I-123	-7.237E-05		2.175E-04	Half-Life too short		
TE-123M	-5.975E-03		3.592E-02	6.028E-02	3.326E-03	-0.099
I-124	1.657E-01		3.263E-01	4.953E-01	2.638E-02	0.334
SB-124	-3.395E-02		8.278E-02	1.234E-01	8.256E-03	-0.275
SB-125	1.141E-01		1.641E-01	2.738E-01	1.575E-02	0.417
TE-125M	1.589E+01		1.169E+01	1.936E+01	1.726E+00	0.821
I-126	2.030E-01		2.083E-01	3.271E-01	1.664E-02	0.621
SB-126	-7.898E-02		1.841E-01	2.543E-01	1.408E-02	-0.311
SB-127	9.651E-02		5.579E-01	9.367E-01	6.258E-02	0.103
XE-127	1.010E-03		5.775E-02	9.663E-02	5.370E-03	0.010
I-131	-1.920E-02		1.044E-01	1.685E-01	1.053E-02	-0.114
TE-132	2.171E-01		2.033E-01	3.479E-01	4.564E-02	0.624
BA-133	-2.556E-02		8.420E-02	1.176E-01	1.352E-02	-0.217
I-133	-1.390E-05		1.096E-05	Half-Life too short		
CS-134	6.354E-02	+	1.262E-01	1.467E-01	9.203E-03	0.433
CS-135	-1.581E-01		2.428E-01	3.901E-01	2.997E-02	-0.405
I-135	-1.196E+01		1.107E+01	Half-Life too short		
CS-136	-5.409E-02		1.480E-01	2.332E-01	1.611E-02	-0.232
CE-139	1.927E-02		3.998E-02	6.845E-02	3.656E-03	0.281
BA-140	7.318E-02		2.967E-01	5.042E-01	1.637E-01	0.145
LA-140	-2.910E-02		6.841E-02	1.041E-01	6.786E-03	-0.279
CE-141	-3.866E-02		7.004E-02	1.146E-01	6.735E-03	-0.337
CE-143	5.366E+00		4.659E+00	6.989E+00	1.428E+00	0.768
CE-144	-1.099E-01		3.156E-01	4.335E-01	6.165E-02	-0.254
PM-144	9.801E-03		5.255E-02	8.824E-02	4.710E-03	0.111
PR-144	6.614E-01		3.546E+00	5.955E+00	3.178E-01	0.111
PM-146	7.127E-02		8.821E-02	1.469E-01	1.240E-02	0.485
ND-147	8.381E-02		6.022E-01	1.022E+00	1.369E-01	0.082
PM-149	1.999E+01		1.307E+01	2.239E+01	3.173E+00	0.893
EU-152	1.313E-01		1.873E-01	2.623E-01	1.697E-02	0.501
GD-153	-6.568E-02		1.149E-01	1.586E-01	1.255E-02	-0.414
EU-154	-2.138E-02		1.252E-01	2.044E-01	1.988E-02	-0.105
EU-155	-8.985E-02		1.479E-01	2.297E-01	1.678E-02	-0.391
TB-160	8.318E-02		2.770E-01	4.588E-01	3.182E-02	0.181
HO-166M	-4.323E-02		1.027E-01	1.657E-01	9.054E-03	-0.261
TM-171	-1.656E+01		4.216E+01	6.730E+01	5.599E+00	-0.246
LU-176	-3.295E-02		4.115E-02	6.511E-02	3.802E-03	-0.506

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	1.168E+00	+	9.920E-01	1.178E+00	6.583E-02	0.992
LU-177M	1.325E-02		3.156E-01	5.113E-01	2.793E-02	0.026
HF-181	9.878E-03		7.044E-02	1.134E-01	6.293E-03	0.087
W-181	2.269E-01		5.512E-01	8.627E-01	7.191E-02	0.263
TA-182	1.170E-01		2.067E-01	3.648E-01	2.161E-02	0.321
RE-183	-4.505E-02		1.403E-01	2.341E-01	1.261E-02	-0.192
RE-184	-1.059E-01		3.553E-01	5.816E-01	3.370E-02	-0.182
OS-185	-2.832E-03		7.376E-02	1.227E-01	6.298E-03	-0.023
RE-188	5.139E-02		2.080E-01	3.544E-01	1.947E-02	0.145
W-188	-8.963E+00		1.169E+01	1.605E+01	9.389E-01	-0.559
IR-192	1.755E-03		5.326E-02	8.743E-02	5.114E-03	0.020
AU-195	-2.829E-01		2.950E-01	4.512E-01	3.502E-02	-0.627
TL-200	-2.860E+00		5.854E+00	9.294E+00	5.193E-01	-0.308
TL-201	6.070E-01		1.648E+00	2.811E+00	1.502E-01	0.216
TL-202	-1.943E-02		8.839E-02	1.409E-01	7.770E-03	-0.138
HG-203	4.423E-02		5.560E-02	9.458E-02	5.866E-03	0.468
BI-207	1.656E-02		1.124E-01	1.831E-01	1.160E-02	0.090
TL-207	-8.459E-01		1.082E+00	1.695E+00	2.799E-01	-0.499
PO-209	1.009E+01		1.602E+01	2.709E+01	1.922E+00	0.372
BI-210	-1.153E+01		7.398E+00	1.136E+01	8.996E-01	-1.015
PB-210	-1.153E+01		7.398E+00	1.136E+01	8.996E-01	-1.015
PO-210	-1.153E+01		7.384E+00	1.136E+01	7.798E-01	-1.015
PB-211	-3.102E-01		1.661E+00	2.645E+00	1.648E+00	-0.117
BI-212	5.545E-01	+	7.499E-01	8.713E-01	6.587E-02	0.636
BI-214	6.038E-01	+	2.251E-01	2.826E-01	2.095E-02	2.137
PO-215	-8.459E-01		1.082E+00	1.695E+00	2.799E-01	-0.499
RN-219	3.744E-03		7.354E-01	1.191E+00	1.602E-01	0.003
RN-220	1.924E+00		4.322E+01	7.289E+01	3.995E+00	0.026
RA-223	-8.459E-01		1.082E+00	1.695E+00	2.799E-01	-0.499
RA-226	6.038E-01	+	2.251E-01	2.826E-01	2.095E-02	2.137
AC-227	-1.188E-01		5.927E-01	9.730E-01	1.359E-01	-0.122
TH-227	-1.188E-01		5.928E-01	9.730E-01	1.645E-01	-0.122
TH-229	-2.551E-01		7.166E-01	1.185E+00	6.520E-02	-0.215
TH-230	6.038E-01	+	2.251E-01	2.826E-01	2.095E-02	2.137
PA-231	-1.155E+00		2.422E+00	3.902E+00	5.385E-01	-0.296
TH-231	-8.459E-01		1.082E+00	1.695E+00	2.799E-01	-0.499
U-231	3.341E-01		4.240E-01	6.280E-01	5.081E-02	0.532
PA-233	-5.482E-02		1.074E-01	1.721E-01	1.065E-02	-0.319
PA-234	-2.053E-01		7.149E-01	1.144E+00	2.065E-01	-0.180
PA-234M	-8.881E-01		1.359E+01	2.216E+01	2.165E+00	-0.040
TH-234	-1.680E+00		2.242E+00	3.163E+00	5.653E-01	-0.531
U-234	6.038E-01	+	2.251E-01	2.826E-01	2.095E-02	2.137
U-235	4.765E-02		2.763E-01	4.641E-01	7.545E-02	0.103
NP-236	-3.415E-02		1.071E-01	1.787E-01	9.682E-03	-0.191
NP-237	7.171E+00		1.712E+00	1.063E+00	2.397E-01	6.746
U-238	-1.680E+00		2.242E+00	3.163E+00	5.653E-01	-0.531
NP-239	-3.272E-03		3.010E-01	4.245E-01	2.716E-02	-0.008
AM-243	8.943E-02		1.033E-01	1.528E-01	1.287E-02	0.585

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.435E-02		1.305E-01	2.109E-01	1.541E-02	0.210
CM-247	-3.222E-02		6.645E-02	1.050E-01	5.707E-03	-0.307
CF-249	-8.495E-02		7.055E-02	1.074E-01	5.837E-03	-0.791
CF-251	4.099E-02		1.716E-01	2.909E-01	1.570E-02	0.141

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
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*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201871428          *
* Acquisition date :  7-JUL-2009 10:00:37 Detector SN#     :                *
* Detector ID       : GAM01               Sensitivity      : 5.000         *
* Geometry          : CAN                 Energy tolerance: 1.500          *
* Elapsed live time:    0 01:30:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 01:30:01.87     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 30-JUN-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201871428          Analyst initials: MXR1           *
* Batch Number      : 881220               Sample Quantity : 1.5544E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 29-JAN-2009 10:38:56 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	4.139E-01	7.423E-02	2.915E-02	3.787E-02
CO-60	7.138E+00	5.736E-01	3.827E-02	2.927E-01
CD-109	4.243E+01	4.646E+00	1.013E+00	2.370E+00
SN-126	4.218E+00	4.619E-01	1.013E-01	2.357E-01
BA-137M	5.402E+00	3.423E-01	4.817E-02	1.746E-01
CS-137	5.710E+00	3.631E-01	5.092E-02	1.852E-01
TL-208	3.558E-01	1.120E-01	5.075E-02	5.713E-02
BI-211	2.629E+00	7.125E-01	2.777E-01	3.635E-01
PB-212	9.460E-01	1.400E-01	7.898E-02	7.141E-02
PO-212	9.460E-01	1.400E-01	7.898E-02	7.141E-02
PB-214	9.145E-01	2.522E-01	9.678E-02	1.287E-01
PO-214	9.145E-01	2.522E-01	9.678E-02	1.287E-01
PO-216	9.460E-01	1.400E-01	7.898E-02	7.141E-02
PO-218	9.145E-01	2.522E-01	9.678E-02	1.287E-01
RA-224	2.441E+00	1.448E+00	8.494E-01	7.386E-01
AC-228	1.236E+00	5.056E-01	2.384E-01	2.580E-01
RA-228	1.236E+00	5.056E-01	2.384E-01	2.580E-01
TH-228	9.460E-01	1.400E-01	7.897E-02	7.141E-02
TH-232	1.236E+00	5.056E-01	2.384E-01	2.580E-01
AM-241	1.440E+01	1.478E+00	2.695E-01	7.538E-01
ANH-511	6.299E-02	1.106E-01	4.256E-02	5.642E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-2.044E-01	5.594E-01	4.673E-01	2.854E-01	NOT IDENT.
NA-22	-8.165E-03	4.368E-02	3.680E-02	2.228E-02	NOT IDENT.
NA-24	1.171E+01	1.487E+02	0.000E+00	7.588E+01	SHORT HLIF
AL-26	-1.762E-02	3.522E-02	2.585E-02	1.797E-02	NOT IDENT.
K-40	3.594E-01	4.971E-01	4.701E-01	2.536E-01	NOT IDENT.
TI-44	1.538E-01	7.933E-02	5.205E-02	4.047E-02	FAIL ABUN

SC-46	2.051E-02	7.041E-02	6.116E-02	3.592E-02	NOT IDENT.
V-48	-7.843E-03	1.071E-01	9.008E-02	5.463E-02	NOT IDENT.
CR-51	1.412E-01	4.883E-01	4.346E-01	2.492E-01	NOT IDENT.
MN-52	-8.258E-02	1.001E-01	7.358E-02	5.109E-02	FAIL ABUN
MN-54	3.695E-02	6.700E-02	5.932E-02	3.418E-02	NOT IDENT.
CO-56	3.518E-02	7.429E-02	6.534E-02	3.790E-02	NOT IDENT.
CO-58	-5.083E-02	6.836E-02	5.608E-02	3.488E-02	NOT IDENT.
FE-59	-1.446E-02	1.676E-01	1.394E-01	8.552E-02	NOT IDENT.
ZN-65	-1.136E-01	1.836E-01	1.473E-01	9.366E-02	NOT IDENT.
GE-68	7.092E-01	2.492E+00	2.126E+00	1.271E+00	NOT IDENT.
AS-73	-1.704E+00	1.805E+00	1.520E+00	9.208E-01	NOT IDENT.
AS-74	-3.990E-02	1.008E-01	8.692E-02	5.141E-02	NOT IDENT.
SE-75	1.247E-02	6.477E-02	5.817E-02	3.305E-02	FAIL ABUN
BR-77	1.020E+00	1.932E+00	1.682E+00	9.858E-01	FAIL ABUN
SR-82	2.392E-01	5.547E-01	4.910E-01	2.830E-01	NOT IDENT.
RB-83	5.707E-02	1.136E-01	9.875E-02	5.795E-02	NOT IDENT.
RB-84	5.884E-02	1.208E-01	1.061E-01	6.163E-02	NOT IDENT.
KR-85	6.157E+00	1.344E+01	1.025E+01	6.857E+00	NOT IDENT.
SR-85	2.911E-02	6.354E-02	4.848E-02	3.242E-02	NOT IDENT.
RB-86	2.050E-01	1.215E+00	1.029E+00	6.201E-01	NOT IDENT.
Y-88	5.930E-02	4.427E-02	4.510E-02	2.259E-02	NOT IDENT.
ZR-88	7.813E-02	4.980E-02	4.604E-02	2.541E-02	NOT IDENT.
Y-91	-1.756E+00	1.959E+01	1.685E+01	9.995E+00	NOT IDENT.
NB-94	3.064E-03	5.266E-02	4.606E-02	2.687E-02	NOT IDENT.
NB-95	-4.655E-02	6.501E-02	5.375E-02	3.317E-02	NOT IDENT.
NB-95M	3.040E-02	1.867E-01	1.487E-01	9.524E-02	NOT IDENT.
ZR-95	-2.249E-02	1.133E-01	9.694E-02	5.782E-02	NOT IDENT.
NB-97	4.221E+00	9.329E+01	0.000E+00	4.760E+01	SHORT HLIF
ZR-97	1.194E+03	1.670E+03	0.000E+00	8.519E+02	SHORT HLIF
MO-99	2.806E-01	2.564E+00	2.241E+00	1.308E+00	NOT IDENT.
TC-99M	-2.798E+07	3.145E+07	0.000E+00	1.604E+07	SHORT HLIF
RH-101	2.464E-02	4.576E-02	4.200E-02	2.335E-02	NOT IDENT.
RH-102	3.878E-03	5.730E-02	4.896E-02	2.923E-02	NOT IDENT.
RU-103	1.396E-02	6.494E-02	5.572E-02	3.313E-02	FAIL ABUN
RH-106	5.850E-01	5.186E-01	4.812E-01	2.646E-01	FAIL ABUN
RU-106	5.850E-01	5.153E-01	4.812E-01	2.629E-01	FAIL ABUN
AG-108M	-5.310E-02	6.173E-02	5.068E-02	3.149E-02	NOT IDENT.
AG-110M	-2.627E-02	6.588E-02	4.850E-02	3.361E-02	NOT IDENT.
IN-111	-1.416E-01	2.806E-01	2.150E-01	1.431E-01	NOT IDENT.
IN-113M	2.981E-02	7.366E-02	6.493E-02	3.758E-02	NOT IDENT.
SN-113	2.981E-02	7.366E-02	6.493E-02	3.758E-02	NOT IDENT.
IN-114M	8.895E-02	2.482E-01	2.028E-01	1.266E-01	NOT IDENT.
CD-115	-3.516E-01	1.630E+00	1.439E+00	8.314E-01	NOT IDENT.
SN-117M	2.460E-03	4.756E-02	4.394E-02	2.426E-02	NOT IDENT.
SB-122	1.672E-01	4.500E-01	4.074E-01	2.296E-01	NOT IDENT.
I-123	-7.237E+01	4.264E+02	0.000E+00	2.175E+02	SHORT HLIF
TE-123M	-5.975E-03	3.520E-02	3.227E-02	1.796E-02	NOT IDENT.
I-124	1.657E-01	3.198E-01	2.561E-01	1.631E-01	NOT IDENT.
SB-124	-3.395E-02	8.113E-02	6.203E-02	4.139E-02	NOT IDENT.
SB-125	1.141E-01	1.608E-01	1.429E-01	8.203E-02	NOT IDENT.
TE-125M	1.589E+01	1.145E+01	1.046E+01	5.843E+00	NOT IDENT.
I-126	2.030E-01	2.042E-01	1.686E-01	1.042E-01	NOT IDENT.
SB-126	-7.898E-02	1.804E-01	1.309E-01	9.204E-02	FAIL ABUN
SB-127	9.651E-02	5.468E-01	4.827E-01	2.790E-01	NOT IDENT.
XE-127	1.010E-03	5.659E-02	5.141E-02	2.887E-02	NOT IDENT.
I-131	-1.920E-02	1.023E-01	8.828E-02	5.221E-02	NOT IDENT.
TE-132	2.171E-01	1.992E-01	1.845E-01	1.016E-01	NOT IDENT.
BA-133	-2.556E-02	8.252E-02	6.168E-02	4.210E-02	NOT IDENT.
I-133	-1.390E+01	2.148E+01	0.000E+00	1.096E+01	SHORT HLIF
CS-134	6.354E-02	1.237E-01	7.528E-02	6.312E-02	FAIL ABUN
CS-135	-1.581E-01	2.380E-01	2.061E-01	1.214E-01	NOT IDENT.
I-135	-1.196E+07	2.170E+07	0.000E+00	1.107E+07	SHORT HLIF
CS-136	-5.409E-02	1.450E-01	1.188E-01	7.399E-02	FAIL ABUN
CE-139	1.927E-02	3.918E-02	3.660E-02	1.999E-02	NOT IDENT.
BA-140	7.318E-02	2.907E-01	2.615E-01	1.483E-01	NOT IDENT.
LA-140	-2.910E-02	6.704E-02	5.242E-02	3.420E-02	NOT IDENT.
CE-141	-3.866E-02	6.864E-02	6.149E-02	3.502E-02	NOT IDENT.
CE-143	5.366E+00	4.566E+00	3.683E+00	2.330E+00	FAIL ABUN
CE-144	-1.099E-01	3.093E-01	2.331E-01	1.578E-01	NOT IDENT.
PM-144	9.801E-03	5.150E-02	4.545E-02	2.627E-02	NOT IDENT.
PR-144	6.614E-01	3.475E+00	3.067E+00	1.773E+00	NOT IDENT.
PM-146	7.127E-02	8.645E-02	7.652E-02	4.411E-02	NOT IDENT.
ND-147	8.381E-02	5.902E-01	5.301E-01	3.011E-01	NOT IDENT.
PM-149	1.999E+01	1.281E+01	1.180E+01	6.535E+00	NOT IDENT.
EU-152	1.313E-01	1.835E-01	1.377E-01	9.364E-02	FAIL ABUN
GD-153	-6.568E-02	1.126E-01	8.592E-02	5.744E-02	NOT IDENT.
EU-154	-2.138E-02	1.227E-01	1.035E-01	6.260E-02	FAIL ABUN
EU-155	-8.985E-02	1.449E-01	1.242E-01	7.393E-02	FAIL ABUN

TB-160	8.318E-02	2.715E-01	2.348E-01	1.385E-01	FAIL ABUN
HO-166M	-4.323E-02	1.006E-01	8.531E-02	5.134E-02	NOT IDENT.
TM-171	-1.656E+01	4.132E+01	3.680E+01	2.108E+01	FAIL ABUN
LU-176	-3.295E-02	4.032E-02	3.427E-02	2.057E-02	FAIL ABUN
LU-177	1.168E+00	9.722E-01	6.260E-01	4.960E-01	FAIL ABUN
LU-177M	1.325E-02	3.093E-01	2.670E-01	1.578E-01	FAIL ABUN
HF-181	9.878E-03	6.903E-02	5.900E-02	3.522E-02	FAIL ABUN
W-181	2.269E-01	5.402E-01	4.720E-01	2.756E-01	NOT IDENT.
TA-182	1.170E-01	2.026E-01	1.850E-01	1.034E-01	NOT IDENT.
RE-183	-4.505E-02	1.375E-01	1.252E-01	7.016E-02	FAIL ABUN
RE-184	-1.059E-01	3.482E-01	3.077E-01	1.777E-01	FAIL ABUN
OS-185	-2.832E-03	7.229E-02	6.332E-02	3.688E-02	FAIL ABUN
RE-188	5.139E-02	2.038E-01	1.898E-01	1.040E-01	NOT IDENT.
W-188	-8.963E+00	1.146E+01	8.458E+00	5.846E+00	NOT IDENT.
IR-192	1.755E-03	5.220E-02	4.598E-02	2.663E-02	FAIL ABUN
AU-195	-2.829E-01	2.891E-01	2.444E-01	1.475E-01	NOT IDENT.
TL-200	-2.860E+00	5.737E+00	4.869E+00	2.927E+00	NOT IDENT.
TL-201	6.070E-01	1.615E+00	1.503E+00	8.240E-01	FAIL ABUN
TL-202	-1.943E-02	8.662E-02	7.347E-02	4.419E-02	NOT IDENT.
HG-203	4.423E-02	5.449E-02	4.990E-02	2.780E-02	NOT IDENT.
BI-207	1.656E-02	1.101E-01	9.323E-02	5.618E-02	NOT IDENT.
TL-207	-8.459E-01	1.060E+00	8.907E-01	5.410E-01	FAIL ABUN
PO-209	1.009E+01	1.570E+01	1.386E+01	8.010E+00	NOT IDENT.
BI-210	-1.153E+01	7.250E+00	6.264E+00	3.699E+00	NOT IDENT.
PB-210	-1.153E+01	7.250E+00	6.264E+00	3.699E+00	NOT IDENT.
PO-210	-1.153E+01	7.236E+00	6.264E+00	3.692E+00	NOT IDENT.
PB-211	-3.102E-01	1.628E+00	1.382E+00	8.304E-01	NOT IDENT.
BI-212	5.545E-01	7.349E-01	4.482E-01	3.749E-01	FAIL ABUN
BI-214	6.038E-01	2.206E-01	1.461E-01	1.125E-01	FAIL ABUN
PO-215	-8.459E-01	1.060E+00	8.907E-01	5.410E-01	FAIL ABUN
RN-219	3.744E-03	7.207E-01	6.225E-01	3.677E-01	NOT IDENT.
RN-220	1.924E+00	4.236E+01	3.778E+01	2.161E+01	NOT IDENT.
RA-223	-8.459E-01	1.060E+00	8.907E-01	5.410E-01	FAIL ABUN
RA-226	6.038E-01	2.206E-01	1.461E-01	1.125E-01	FAIL ABUN
AC-227	-1.188E-01	5.809E-01	5.146E-01	2.964E-01	NOT IDENT.
TH-227	-1.188E-01	5.810E-01	5.146E-01	2.964E-01	FAIL ABUN
TH-229	-2.551E-01	7.023E-01	6.313E-01	3.583E-01	FAIL ABUN
TH-230	6.038E-01	2.206E-01	1.461E-01	1.125E-01	FAIL ABUN
PA-231	-1.155E+00	2.374E+00	2.058E+00	1.211E+00	NOT IDENT.
TH-231	-8.459E-01	1.060E+00	8.907E-01	5.410E-01	FAIL ABUN
U-231	3.341E-01	4.155E-01	3.404E-01	2.120E-01	FAIL ABUN
PA-233	-5.482E-02	1.052E-01	9.055E-02	5.369E-02	FAIL ABUN
PA-234	-2.053E-01	7.006E-01	5.841E-01	3.575E-01	FAIL ABUN
PA-234M	-8.881E-01	1.331E+01	1.130E+01	6.793E+00	NOT IDENT.
TH-234	-1.680E+00	2.198E+00	1.732E+00	1.121E+00	FAIL ABUN
U-234	6.038E-01	2.206E-01	1.461E-01	1.125E-01	FAIL ABUN
U-235	4.765E-02	2.708E-01	2.491E-01	1.382E-01	FAIL ABUN
NP-236	-3.415E-02	1.050E-01	9.566E-02	5.356E-02	NOT IDENT.
NP-237	7.171E+00	1.677E+00	5.776E-01	8.558E-01	NOT IDENT.
U-238	-1.680E+00	2.198E+00	1.732E+00	1.121E+00	FAIL ABUN
NP-239	-3.272E-03	2.949E-01	2.290E-01	1.505E-01	FAIL ABUN
AM-243	8.943E-02	1.012E-01	8.332E-02	5.163E-02	FAIL ABUN
CM-243	4.435E-02	1.278E-01	1.141E-01	6.523E-02	FAIL ABUN
CM-247	-3.222E-02	6.512E-02	5.488E-02	3.322E-02	NOT IDENT.
CF-249	-8.495E-02	6.914E-02	5.618E-02	3.528E-02	NOT IDENT.
CF-251	4.099E-02	1.681E-01	1.553E-01	8.578E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                              2040 SAVAGE ROAD                             *
*                             CHARLESTON ,SC 29417                          *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	572.4896
46.50	572.4896
46.50	572.4896
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49.72	561.9010
51.35	628.9204
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52.97	747.1692
53.15	747.4329
53.44	745.3630
54.07	720.6942
56.28	737.8438
56.28	737.8492
57.37	784.8854
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57.53	800.8263
57.60	800.9275
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57.98	687.2939
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59.32	688.9955
59.40	689.0973
59.54	689.2725
59.72	689.4994
60.01	689.8647
61.10	508.9362
61.14	508.9731
61.30	474.3347
63.00	510.6627
63.29	485.5362
63.29	485.5362
63.58	485.7842
64.28	448.2327
65.12	481.3594
65.20	481.4263
65.20	481.4263
66.05	516.5703
66.72	519.2893
66.83	517.2575
66.91	517.3292
67.20	522.9088
67.20	522.9088
67.75	505.2740
67.85	501.0962
68.90	526.5457
68.90	526.5457
69.30	526.8967
69.67	528.2922
70.82	551.7951
70.82	551.7951
70.83	551.8029
72.80	615.9237
72.87	615.9937
72.87	615.9937
74.67	675.9908
74.81	676.1406
74.81	676.1406
74.81	676.1406
74.81	676.1406
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74.81	676.1406
74.97	676.3129
75.28	699.3105
75.70	677.0942
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77.11	712.1439
77.11	712.1439

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77.11	712.1439
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80.30	582.4183
80.57	582.6580
81.00	581.4035
81.07	609.2326
81.07	609.2326
81.07	609.2326
81.07	609.2326
82.60	576.2566
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83.78	564.1493
83.78	564.1493
83.78	564.1493
83.78	564.1493
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84.40	538.4028
84.90	551.9396
85.43	590.1786
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86.50	638.8508
86.54	564.7886
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86.72	564.9365
86.79	564.9927
86.94	565.1157
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87.88	565.8825
88.03	566.0055
88.36	566.2724
88.47	566.3614
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91.11	404.4042
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92.38	405.1228
92.38	405.1228
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94.67	349.7752
94.67	349.7768
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94.90	331.5599
94.90	331.5599
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98.44	361.6128
98.88	376.3431
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99.55	357.6774
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100.00	364.6027
100.10	352.3483
103.18	376.2343
103.76	343.9232
105.00	366.9888
105.31	385.1536
108.00	409.0746
109.28	316.9212
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111.00	385.6578

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116.30	371.6095
117.00	366.7806
117.00	366.7806
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121.62	341.2189
121.78	341.2823
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123.07	341.7959
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144.24	365.7655
144.24	365.7655
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152.70	339.5490
153.22	355.7795
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154.21	340.0665
154.21	340.0665
154.21	340.0665
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163.35	383.6672
163.89	369.4479
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167.43	349.9068
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171.86	344.1078
172.10	345.9992
176.55	354.7215
176.60	335.5889
181.06	389.6939
184.41	349.7223
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186.00	368.7938
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193.63	366.6335
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198.60	348.6671
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201.83	382.2511
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205.31	332.1247
208.36	347.9604
208.81	339.0855

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209.75	322.8307
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216.55	334.9901
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227.08	319.7040
227.20	319.7322
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228.18	315.2142
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236.00	366.3422
236.00	366.3422
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238.63	390.1064
238.63	390.1064
238.63	390.1064
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240.98	349.0585
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241.98	334.1143
241.98	334.1143
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249.79	314.5512
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252.85	321.0679
252.85	321.0679
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256.20	308.2268
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268.24	320.6532
268.79	306.0586
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269.46	281.6660
269.46	281.6660
269.46	281.6660
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277.60	291.1334
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279.20	260.8217
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283.67	287.3671
284.30	301.3652
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290.80	270.8005
291.72	240.6784
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293.70	242.5877
295.21	243.6240
295.21	243.6240
295.21	243.6240
295.96	243.7431

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297.23	279.9316
298.57	304.1902
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299.80	273.9883
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300.09	266.0255
300.09	266.0255
300.10	266.0255
300.12	266.0296
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303.76	276.0868
303.91	285.1484
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304.40	270.1698
304.84	261.2061
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308.46	260.7942
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319.02	264.5405
319.41	253.4523
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323.87	268.3748
323.87	268.3748
323.87	268.3748
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338.28	246.0901
338.28	246.0901
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345.85	247.1814
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351.92	228.4087
351.92	228.4087
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366.43	228.2063
367.43	242.9299
367.94	245.0869
369.80	233.8540
374.96	208.3463
383.85	233.5512
387.95	261.4792
388.63	261.5776
391.69	225.0255
391.69	225.0255
392.90	196.6288
398.62	233.2733
400.65	220.7842
401.10	222.9616
401.81	234.7248
402.60	248.6357
404.84	236.1595
410.95	225.1695
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413.65	244.7172
414.70	225.6009
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427.89	196.9702
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433.93	254.7796
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439.56	252.2377
439.89	244.7011
443.98	234.3417
444.90	247.4685
445.03	247.4859
445.03	247.4859
445.03	247.4859
445.03	247.4859
453.90	234.3755
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468.07	246.9246
473.00	221.0951
475.06	233.4180
475.35	232.3492
476.78	242.4176
477.59	229.2805
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487.03	181.5621
490.36	181.8374
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497.08	185.7243
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510.53	0.0000
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511.00	177.9252
511.85	177.9907
511.85	177.9907
513.99	172.1063
513.99	172.1063
520.41	156.1841
520.65	156.2011
527.90	165.9324
528.96	0.0000
529.64	179.5956
529.87	0.0000
531.02	168.8661
537.32	163.8854
543.00	169.7244
546.56	0.0000
549.76	149.2696
552.65	139.4257
555.20	154.1671
563.23	139.1193
563.90	139.1564
568.70	152.2734
569.32	153.2274
569.50	153.2396
569.67	149.5811
573.80	137.8821
574.00	137.8931
574.64	147.1211
578.91	136.6289
579.30	133.5798
583.14	144.8570
585.48	164.6927
591.81	140.7262
592.07	140.7410
593.00	143.5718
595.88	127.9701
600.56	134.7091
602.52	0.0000
602.71	122.4249
602.71	122.4249
603.60	131.7680
604.41	138.0123
604.70	138.0268
609.31	132.3692
609.31	132.3692
609.31	132.3692

609.31	132.3692
610.33	132.4212
612.46	141.5543
614.37	116.7511
618.01	132.8130
621.84	118.0204
621.84	118.0204
631.29	137.2457
633.02	142.9787
633.10	142.9824
634.78	123.3050
635.90	140.3095
636.97	163.9151
645.85	153.1169
646.12	155.9685
656.30	147.0646
657.75	145.5581
657.90	0.0000
661.65	120.7337
661.65	120.7337
664.57	126.8880
666.33	98.4013
666.33	98.4013
675.00	126.0929
677.61	121.4282
685.20	117.9221
692.80	124.0082
695.00	98.1277
696.49	111.6557
696.49	111.6557
697.00	111.6755
697.49	120.3613
698.33	128.1002
698.50	130.0331
699.00	127.1660
702.63	121.5396
706.10	130.3792
706.58	0.0000
706.67	125.5757
709.31	115.0546
711.68	134.5001
713.82	125.8835
717.42	119.2523
720.50	135.8779
721.93	131.0911
722.20	131.1010
722.78	139.2216
722.78	139.2216
722.89	139.2286
722.95	127.8960
723.30	127.9121
724.18	132.8096
727.18	131.3251
733.00	125.3163
735.90	109.2711
739.58	99.6368
742.81	118.3265
744.21	117.4014
747.13	127.3086
751.79	129.4670
752.31	131.4515
753.82	116.7949
755.35	130.6037
756.15	131.6184
756.87	121.8264
763.93	133.9248
765.79	145.8284
766.41	145.8609
766.84	129.1226
768.36	126.2281
768.36	126.2281
768.36	126.2281
768.36	126.2281
776.49	128.5400
778.00	110.7941
778.57	132.5835
778.89	132.5965
783.80	111.9930

785.46	108.0872
792.07	130.8373
795.84	130.9948
796.30	135.9893
801.93	127.0953
805.60	113.7690
810.29	130.9264
810.76	145.9394
815.85	138.1617
817.79	129.2299
818.51	136.2723
819.60	144.3375
826.30	141.6231
828.27	143.7192
831.60	148.8961
831.96	148.9106
834.83	128.9000
836.80	0.0000
846.75	141.4971
848.13	139.5330
856.28	0.0000
856.80	170.3133
860.37	145.1227
867.32	146.4398
867.82	134.2559
871.10	159.8403
873.19	157.9025
874.81	162.0550
875.33	0.0000
876.40	143.7746
879.36	138.7990
880.27	129.6479
880.51	125.5735
881.50	131.7368
883.24	142.0203
884.67	141.0592
889.25	118.7301
896.60	139.4963
898.02	144.6833
899.00	153.9624
903.28	174.7065
911.07	161.3674
911.07	161.3674
911.07	161.3674
919.63	129.0649
920.93	151.4899
925.00	171.6576
925.24	174.7722
926.50	141.7294
934.06	174.1687
934.06	174.1687
934.06	174.1687
934.06	174.1687
935.52	164.9082
937.48	174.3369
944.10	182.9781
946.00	180.9923
949.00	171.7756
962.29	191.0625
964.01	179.4537
966.15	177.8152
968.20	205.8230
969.11	174.8200
969.11	174.8200
969.11	174.8200
977.42	152.1332
980.50	137.5596
983.50	139.7734
989.30	135.7807
996.32	142.3630
1001.03	133.0383
1001.68	130.9508
1004.76	123.6584
1021.30	0.0000
1024.50	0.0000
1034.80	110.7895
1037.82	128.9997
1038.57	129.0233

1038.76	0.0000
1045.16	105.7434
1046.59	121.8152
1048.07	129.3424
1050.47	133.6975
1050.47	133.6975
1063.62	132.0028
1076.63	123.8215
1077.35	120.6133
1085.78	111.1575
1099.22	133.1859
1112.02	132.5201
1112.84	133.6364
1115.52	159.8123
1120.29	120.8155
1120.29	120.8155
1120.29	120.8155
1120.29	120.8155
1120.51	125.1804
1121.28	118.6706
1124.00	0.0000
1129.67	81.8188
1131.51	0.0000
1147.95	0.0000
1167.94	91.2238
1173.22	61.5475
1175.09	61.5748
1177.93	47.2956
1189.05	59.0104
1204.90	49.9724
1205.75	47.2065
1213.00	48.2126
1221.42	39.9451
1230.97	40.9618
1235.34	41.9348
1236.41	0.0000
1238.11	30.7710
1238.11	30.7710
1238.11	30.7710
1238.11	30.7710
1238.25	30.7723
1246.25	38.3007
1260.41	0.0000
1271.85	23.4884
1274.45	30.0820
1274.54	30.0833
1291.56	28.3081
1298.22	0.0000
1312.09	19.9045
1325.50	19.5544
1325.50	19.5544
1332.49	27.6076
1333.61	27.6135
1360.21	22.0239
1362.66	0.0000
1365.15	18.2130
1368.21	17.2654
1368.53	0.0000
1376.25	24.9801
1377.67	16.3380
1377.67	16.3380
1377.67	16.3380
1377.67	16.3380
1384.27	27.9097
1394.10	21.2158
1395.20	18.3266
1407.95	24.1770
1434.06	24.3052
1436.60	24.3174
1457.56	0.0000
1460.81	22.4806
1489.15	22.6069
1509.49	13.8149
1596.49	21.0658
1620.62	14.1065
1678.03	0.0000
1691.02	14.2860
1691.02	14.2860

1706.46	0.0000
1750.46	0.0000
1764.49	9.3018
1764.49	9.3018
1764.49	9.3018
1764.49	9.3018
1770.23	10.6410
1771.40	30.0077
1791.20	0.0000
1808.65	12.4951
1836.01	7.3221

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201871428

Total Uranium Activity	-4.9767E+00	ug/g
Total Uranium Counting Unc.	6.5391E+00	ug/g
Total Uranium Tpu	3.3363E-06	ug/g
Total Uranium Mda	5.1534E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 881220                    SAMPLE ID   : G1201871428     *
*   ANALYST       : MXR1                      DETECTOR    : GAM01           *
*   SAMPLE DATE   : 30-JUN-2009 00:00:00.00   COUNT TIME  :    0 01:30:00.00 *
*   ANALYSIS DATE:  7-JUL-2009 10:00:37.53    SAMPLE ALQT:  155.440 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 2.863E+01
GROSS GAMMA ERROR (pCi/GRAM) : 3.612E+00
GROSS GAMMA MDA (pCi/GRAM) : 4.257E+00
GROSS GAMMA DLC (pCi/GRAM) : 2.084E+00

Radiochemistry Batch Checklist, Rev 9

Batch# 883018 Product: H3 Date: 7-15-09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			
Batch non-conformances second reviewed and disposition verified to be completed.			
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature]

Secondary Review Performed By: [signature] 7/15/09

~~LAL~~ [signature] 7/15/09

LANL 7-15-09

Tritium Que Sheet

08-JUL-09

Batch #: 883018 **Analyst:** KXK2 **First Client Due Date** 20-JUL-09 **Internal Due Date:** 09-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** ——— **Expiration Date:** ——— **Vol:** ———

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.2

Prep Date: 7/10/09 **Initials:** KXK2 **Pipet ID:** 2970968 **Witness:** MS 7-10-09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Total Moisture ~~Dist Vol (mL)~~ KKG 7/10/09
232504001-1	CAMO-09-10375	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-2	1		630.83	610.01	20.82
232504002-1	CAMO-09-10376	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-3	2		429.44	410.12	19.32
232504003-1	CAMO-09-10373	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-4	3		593.78	526.68	67.10
232504004-1	CAMO-09-10367	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-5	4		624.68	533.48	91.20
232504005-1	CAMO-09-10377	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-6	5		634.81	593.55	41.26
232504006-1	CAMO-09-10370	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-7	6		718.49	689.75	28.74
232504007-1	CAMO-09-10374	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-8	7		696.46	671.39	25.07
232504008-1	CAMO-09-10371	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-9	8		561.17	482.05	~~79.02~~ 79.12
232504009-1	CAMO-09-10368	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-10	9		708.73	670.46	38.27
232504010-1	CAMO-09-10369	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-11	10		561.73	497.13	64.60
232504011-1	CAMO-09-10366	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	58-12	11		671.15	614.77	56.38
232504012-1	CAMO-09-10372	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-1	12		517.76	467.02	50.74
232504013-1	CAMO-09-10378	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-2	13		574.73	556.34	18.39
232504014-1	CAMO-09-10379	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-3	14	KKG 7/13/09	765.91	732.98	32.93
232511001-1	CAMO-09-6519	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-4	15		671.40	532.42	138.98
232511002-1	CAMO-09-6518	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-5	16		553.17	469.64	83.53
232511003-1	CAMO-09-6527	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-6	17		576.61	543.17	33.44
232511004-1	CAMO-09-6529	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-7	18		580.85	552.97	27.88
232511005-1	CAMO-09-6528	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-8	19		554.23	522.64	31.59
232511006-1	CAMO-09-6531	SAMPLE		.25 pCi/mL	SOIL	LANL010	24-JUN-09	10	34-9	20		567.54	482.98	84.56
1201875580-1	MB for batch 883018	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	34-10	21		40.00	0	40.00
1201875581-1	~~CAMO-09-[illegible]DUP~~ CAMO-09-6519 (232511002DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	24-JUN-09	10	34-11	16		553.17	469.64	83.53
1201875582-1	LCS for batch 883018	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	34-12	22		40.00	0	40.00

Bkg Rack #: 58 Y

daities

1708

Comments:

Bkg prepared with dead water? Yes No

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656*

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Econscint Ultra)*

Data Reviewed By: [signature] 7-15-09

GEL Laboratories LLC, Radiochemistry Division

DATE	7/10/2009	INITIALS	KXK2		BATCH NUMBER	883018

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232504001	630.83	0.033	20.82	610.01	10	102
232504002	429.44	0.045	19.32	410.12	10	209
232504003	593.78	0.113	67.10	526.68	10	73
232504004	624.68	0.146	91.20	533.48	10	98
232504005	634.81	0.065	41.26	593.55	10	201
232504006	718.49	0.040	28.74	689.75	10	210
232504007	696.46	0.036	25.07	671.39	10	136
232504008	561.17	0.141	79.12	482.05	10	48
232504009	708.73	0.054	38.27	670.46	10	413
232504010	561.73	0.115	64.60	497.13	10	402
232504011	671.15	0.084	56.38	614.77	10	49
232504012	517.76	0.098	50.74	467.02	10	75
232504013	574.73	0.032	18.39	556.34	10	914
232504014	765.91	0.043	32.93	732.98	10	408
232511001	671.40	0.207	138.98	532.42	10	706
232511002	553.17	0.151	83.53	469.64	10	111
232511003	576.61	0.058	33.44	543.17	10	206
232511004	580.85	0.048	27.88	552.97	10	203
232511005	554.23	0.057	31.59	522.64	10	74
232511006	567.54	0.149	84.56	482.98	10	6101
MB	40	1	40	0	10	912
LSC	40	1	40	0	10	151

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.5

Batch : 883018
Analyst : KXK2
Prep Date : 7/10/2009

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2545.47
LCS Volume Added: 0.20

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL Ecoscint Ultra

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1.0 ml Stdev : +/- 0.005480 ml
Pipet, 5.0 ml Stdev : +/- 0.025729 ml

Procedure Code : LSC_VH3S
Parmname : Tritium
Required MDC : 250 pCi/L
Halflife of Tritium : 12.28 years

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232504001.1	630.83	0.0208	0.0100	2.5729E-05	610.01	3.30%	1	6/24/2009 12:00
2	232504002.1	429.44	0.0193	0.0100	2.5729E-05	410.12	4.50%	2	6/24/2009 12:00
3	232504003.1	593.78	0.0671	0.0100	2.5729E-05	526.68	11.30%	3	6/24/2009 12:00
4	232504004.1	624.88	0.0912	0.0100	2.5729E-05	533.48	14.60%	4	6/24/2009 12:00
5	232504005.1	634.81	0.0413	0.0100	2.5729E-05	593.55	6.50%	5	6/24/2009 12:00
6	232504006.1	718.49	0.0287	0.0100	2.5729E-05	689.75	4.00%	6	6/24/2009 12:00
7	232504007.1	696.46	0.0251	0.0100	2.5729E-05	671.39	3.60%	7	6/24/2009 12:00
8	232504008.1	561.17	0.0791	0.0100	2.5729E-05	482.05	14.10%	8	6/24/2009 12:00
9	232504009.1	708.73	0.0383	0.0100	2.5729E-05	670.46	5.40%	9	6/24/2009 12:00
10	232504010.1	561.73	0.0646	0.0100	2.5729E-05	497.13	11.50%	10	6/24/2009 12:00
11	232504011.1	671.15	0.0564	0.0100	2.5729E-05	614.77	8.40%	11	6/24/2009 12:00
12	232504012.1	517.76	0.0507	0.0100	2.5729E-05	467.02	9.80%	12	6/24/2009 12:00
13	232504013.1	574.73	0.0184	0.0100	2.5729E-05	556.34	3.20%	13	6/24/2009 12:00
14	232504014.1	765.91	0.0329	0.0100	2.5729E-05	732.98	4.30%	14	6/24/2009 12:00
15	232511001.1	671.40	0.1390	0.0100	2.5729E-05	532.42	20.70%	15	6/24/2009 12:00
16	232511002.1	553.17	0.0835	0.0100	2.5729E-05	469.64	15.10%	16	6/24/2009 12:00
17	232511003.1	576.61	0.0334	0.0100	2.5729E-05	543.17	5.80%	17	6/24/2009 12:00
18	232511004.1	580.85	0.0279	0.0100	2.5729E-05	552.97	4.80%	18	6/24/2009 12:00
19	232511005.1	554.23	0.0318	0.0100	2.5729E-05	522.64	5.70%	19	6/24/2009 12:00
20	232511006.1	567.54	0.0846	0.0100	2.5729E-05	482.98	14.90%	20	6/24/2009 12:00
21	1201875580.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	21	7/10/2009 0:00
22	1201875581.1	553.17	0.0835	0.0100	2.5729E-05	469.64	15.10%	16	6/24/2009 12:00
23	1201875582.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	22	7/10/2009 0:00

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	58-2	120	145	3.42	3.11	120	7/13/2009 23:10	0.997	LSCGREEN	8/6/2008	8/31/2009	0.1870	0.00792	58-1	7/13/2009 21:06
2	58-3	120	120.6	3.55	3.11	120	7/14/2009 1:14	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2102	0.00792	58-1	7/13/2009 21:06
3	58-4	89.4	118.8	3.12	3.11	120	7/14/2009 5:46	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2115	0.00792	58-1	7/13/2009 21:06
4	58-5	45	121.4	3.62	3.11	120	7/14/2009 7:54	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2096	0.00792	58-1	7/13/2009 21:06
5	58-6	45	129.8	3.31	3.11	120	7/14/2009 8:41	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2627	0.00792	58-1	7/13/2009 21:06
6	58-7	45	121.7	2.93	3.11	120	7/14/2009 9:28	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2094	0.00792	58-1	7/13/2009 21:06
7	58-8	45	123.1	3.47	3.11	120	7/14/2009 10:15	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2084	0.00792	58-1	7/13/2009 21:06
8	58-9	45	121.5	3.36	3.11	120	7/14/2009 11:02	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2096	0.00792	58-1	7/13/2009 21:06
9	58-10	45	120.6	3.56	3.11	120	7/14/2009 11:49	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2102	0.00792	58-1	7/13/2009 21:06
10	58-11	45	122.7	4.8	3.11	120	7/14/2009 12:36	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2087	0.00792	58-1	7/13/2009 21:06
11	58-12	45	120.5	3.58	3.11	120	7/14/2009 13:23	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2103	0.00792	58-1	7/13/2009 21:06
12	34-1	45	120.4	3.36	3.11	120	7/14/2009 14:10	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2104	0.00792	58-1	7/13/2009 21:06
13	34-2	45	122.1	3.58	3.11	120	7/14/2009 14:57	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2091	0.00792	58-1	7/13/2009 21:06
14	34-3	45	121.2	4.11	3.11	120	7/14/2009 15:44	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2098	0.00792	58-1	7/13/2009 21:06
15	34-4	45	118.6	7.71	3.11	120	7/14/2009 16:31	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2116	0.00792	58-1	7/13/2009 21:06
16	34-5	45	121.1	4	3.11	120	7/14/2009 17:18	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2099	0.00792	58-1	7/13/2009 21:06
17	34-6	45	120.4	4.24	3.11	120	7/14/2009 18:05	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2104	0.00792	58-1	7/13/2009 21:06
18	34-7	45	178.7	48.22	3.11	120	7/14/2009 18:52	0.997	LSCGREEN	8/6/2008	8/31/2009	0.1444	0.00792	58-1	7/13/2009 21:06
19	34-8	45	120.2	4.56	3.11	120	7/14/2009 19:39	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2105	0.00792	58-1	7/13/2009 21:06
20	34-9	45	117.8	51.71	3.11	120	7/14/2009 20:26	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2122	0.00792	58-1	7/13/2009 21:06
21	34-10	45	120.5	2.82	3.11	120	7/14/2009 21:13	0.999	LSCGREEN	8/6/2008	8/31/2009	0.2103	0.00792	58-1	7/13/2009 21:06
22	34-11	45	121	3.8	3.11	120	7/14/2009 22:00	0.997	LSCGREEN	8/6/2008	8/31/2009	0.2099	0.00792	58-1	7/13/2009 21:06
23	34-12	45	120.3	28.53	3.11	120	7/14/2009 22:47	0.999	LSCGREEN	8/6/2008	8/31/2009	0.2104	0.00792	58-1	7/13/2009 21:06

1711

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

* - RPD changed to 0% due to activity below MDC for 1201875581.1

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	128.1602	90.4822	250	187.0044	**74.8953**	0.753	0.310	0.233	56.3584	56.5993		SAMPLE				
2	114.0061	80.4893	250	166.3514	**94.5628**	0.535	0.440	0.236	50.6307	51.0573		SAMPLE				
3	122.6426	86.5867	250	180.3424	**2.1364**	24.661	0.010	0.247	52.6848	52.6850		SAMPLE				
4	154.8020	109.2916	250	232.9514	**109.9172**	0.640	0.510	0.326	70.2889	70.7046		SAMPLE				
5	160.1168	113.0438	250	240.9492	**44.5847**	1.577	0.200	0.315	70.3083	70.3768		SAMPLE				
6	154.9686	109.4092	250	233.2020	**-38.6360**	1.676	-0.160	0.302	65.0953	65.0961		SAMPLE				
7	155.7835	109.9704	250	234.3983	**78.0705**	0.892	0.360	0.321	69.6084	69.8205		SAMPLE				
8	154.8599	109.3324	250	233.0385	**53.9011**	1.269	0.250	0.317	68.3787	68.4617		SAMPLE				
9	154.3748	108.9900	250	232.3085	**96.7181**	0.720	0.450	0.324	69.6542	69.9792		SAMPLE				
10	155.5349	109.8090	250	234.0543	**365.9898**	0.216	1.690	0.364	78.8481	82.8654		SAMPLE				
11	154.3234	108.9536	250	232.2311	**100.9830**	0.691	0.470	0.325	69.7782	70.1317		SAMPLE				
12	154.2714	108.9189	250	232.1529	**53.8983**	1.269	0.250	0.317	68.1188	68.2214		SAMPLE				
13	155.1969	109.5704	250	233.5456	**101.5846**	0.691	0.470	0.325	70.1731	70.5287		SAMPLE				
14	154.7008	109.2201	250	232.7991	**215.3830**	0.343	1.000	0.342	73.7510	75.2611		SAMPLE				
15	153.3584	108.2724	250	230.7790	**982.1846**	0.097	4.600	0.444	94.8276	116.9255		SAMPLE				
16	154.6482	109.1830	250	232.7199	**191.6257**	0.381	0.890	0.339	72.9533	74.1841		SAMPLE				
17	154.2753	108.9197	250	232.1588	**242.7134**	0.307	1.130	0.347	74.4487	76.3437		SAMPLE				
18	224.7655	158.6864	250	338.2348	**14116.3143**	0.025	45.110	1.048	327.8274	1036.3815		SAMPLE				
19	154.1719	108.8487	250	232.0032	**311.2376**	0.246	1.450	0.357	76.5690	79.5783		SAMPLE				
20	152.9765	108.0028	250	230.2043	**10350.9430**	0.024	48.600	1.084	230.8701	756.9828		SAMPLE				
21	153.9620	108.6985	250	231.6872	**-62.1627**	1.026	-0.290	0.298	63.7982	63.7990		MB				
22	154.5989	109.1482	250	232.6457	**148.5164**	0.482	0.690	0.332	71.5045	72.2488	232511002.1	DUP	0.0%	0.1472		
23	153.8584	108.6254	250	231.5314	**5445.2219**	0.033	25.420	0.812	174.0142	417.2632		LCS			5733.0311	95.0%

1712

ID: TRITIUM 13 JUL 2009 21:13

USER: 2 COMMENT: GREEN

PRESET TIME :	120.00						
DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STD
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0	RWM LIST	: OFF
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 10.0 - 230.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	58-1	120.00	120.3	3.11	11.41	35.67	3.09	1.54	123.50
2	58-2	120.00	145.0	3.42	11.93	35.47	3.13	3.55	247.89
3	58-3	120.00	120.6	3.55	10.18	35.85	3.06	0.88	371.64
~~4~~	~~58-4~~	~~73.47~~	~~118.7~~	~~3.33~~	~~13.26~~	~~34.52~~	~~3.99~~	~~0.86~~	~~447.75~~
5	58-5	SAMPLE TERMINATED:							
6	58-6	SAMPLE TERMINATED:							
7	58-7	SAMPLE TERMINATED:							
8	58-8	SAMPLE TERMINATED:							
9	58-9	SAMPLE TERMINATED:							
10	58-10	SAMPLE TERMINATED:							
11	58-11	SAMPLE TERMINATED:							
12	58-12	SAMPLE TERMINATED:							

7-15-09

INSTRUMENT CALIBRATION: Mini 14 JUL 2009 04:45
Calibration successful

ID: TRITIUM 14 JUL 2009 05:54

USER: 2 COMMENT: GREEN

PRESET TIME :	120.00						
DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STD
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0	RWM LIST	: OFF
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 10.0 - 230.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
4	58-4	89.40	118.8	3.12	12.37	35.66	3.55	0.55	91.92
~~5~~	~~58-5~~	~~0.05~~	~~121.3~~	~~0.00~~	~~0.00~~	~~80.00~~	~~100.00~~	~~3.78~~	~~92.72~~
6	58-6	0.05	130.0	0.00	0.00	80.00	100.00	5.44	93.57
7	58-7	0.05	121.1	0.00	0.00	20.00	200.00	20.57	94.42
8	58-8	0.05	124.0	0.00	0.00	40.00	141.42	12.43	95.28
9	58-9	0.05	182.0	0.00	0.00	40.00	141.42	5.59	96.17
10	58-10	0.05	121.2	0.00	0.00	0.00	0.00	0.00	97.03
11	58-11	0.05	123.1	20.00	200.00	60.00	115.47	10.04	97.88
12	58-12	0.05	121.4	80.00	100.00	120.00	81.65	3.50	98.75
13	34-1	0.05	120.9	0.00	0.00	40.00	141.42	9.34	99.73
14	34-2	0.05	123.5	0.00	0.00	60.00	115.47	10.60	100.60
15	34-3	0.05	121.7	0.00	0.00	0.00	0.00	0.00	101.49
16	34-4	0.05	120.4	20.00	200.00	60.00	115.47	6.06	102.33
17	34-5	0.05	122.7	0.00	0.00	100.00	89.44	8.80	103.30
18	34-6	0.05	122.0	0.00	0.00	20.00	200.00	29.91	104.15
19	34-7	0.05	179.3	20.00	200.00	60.00	115.47	5.46	105.43
20	34-8	0.05	121.0	0.00	0.00	80.00	100.00	8.21	106.28
21	34-9	0.05	118.5	20.00	200.00	40.00	141.42	8.17	107.60
22	34-10	0.05	121.4	20.00	200.00	20.00	200.00	12.00	108.47
23	34-11	0.05	122.3	20.00	200.00	100.00	89.44	3.77	109.73
~~24~~	~~34-12~~	~~0.05~~	~~121.8~~	~~40.00~~	~~141.42~~	~~60.00~~	~~115.47~~	~~5.61~~	~~110.60~~

5T 7-15-09

ID: TRITIUM 14 JUL 2009 08:02

USER: 2 COMMENT: GREEN

PRESET TIME :	45.00						
DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STD
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0	RWM LIST	: OFF
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 10.0 - 230.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
5	58-5	45.00	121.4	3.62	16.32	35.31	5.04	0.83	46.56
6	58-6	45.00	129.8	3.31	17.96	36.33	4.99	1.56	93.65
7	58-7	45.00	121.7	2.93	18.31	35.62	5.02	0.81	140.63
8	58-8	45.00	123.1	3.47	16.52	35.38	5.03	0.66	187.61
9	58-9	45.00	121.5	3.36	16.70	34.36	5.10	0.52	234.57
10	58-10	45.00	120.6	3.56	16.54	34.51	5.10	0.91	281.59
11	58-11	45.00	122.7	4.80	14.13	37.62	4.89	0.93	328.61
12	58-12	45.00	120.5	3.58	16.39	37.24	4.90	0.73	375.59
13	34-1	45.00	120.4	3.36	17.17	36.91	4.93	0.88	422.71
14	34-2	45.00	122.1	3.58	17.57	35.09	5.09	1.98	469.84
15	34-3	45.00	121.2	4.11	16.25	36.89	4.97	2.09	517.00
16	34-4	45.00	118.6	7.71	11.09	41.29	4.67	1.13	564.09
17	34-5	45.00	121.1	4.00	15.48	37.38	4.90	0.81	611.10
18	34-6	45.00	120.4	4.24	15.28	36.53	4.97	1.20	658.16
19	34-7	45.00	178.7	48.22	4.31	103.00	2.94	0.31	705.18
20	34-8	45.00	120.2	4.56	14.37	36.69	4.94	0.74	752.17
21	34-9	45.00	117.8	51.71	4.16	101.82	2.96	0.46	799.22
22	34-10	45.00	120.5	2.82	18.23	33.42	5.17	0.50	846.17
23	34-11	45.00	121.0	3.80	15.82	37.02	4.92	0.71	893.16
24	34-12	45.00	120.3	28.53	5.59	68.53	3.60	0.25	940.10

INSTRUMENT CALIBRATION: Mini 14 JUL 2009 23:46
Calibration successful

Sample Count Start Time:	13 Jul 2009 21:06:21		
Data Capture Date	13 Jul 2009 23:06:45		
User Filename	S02071358-1A.XLS		
	U02071358-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	58-1	120.00
H#, Total Counts:	120.3	4334	
Start, End, X-Axis:	0	990	Channel Number

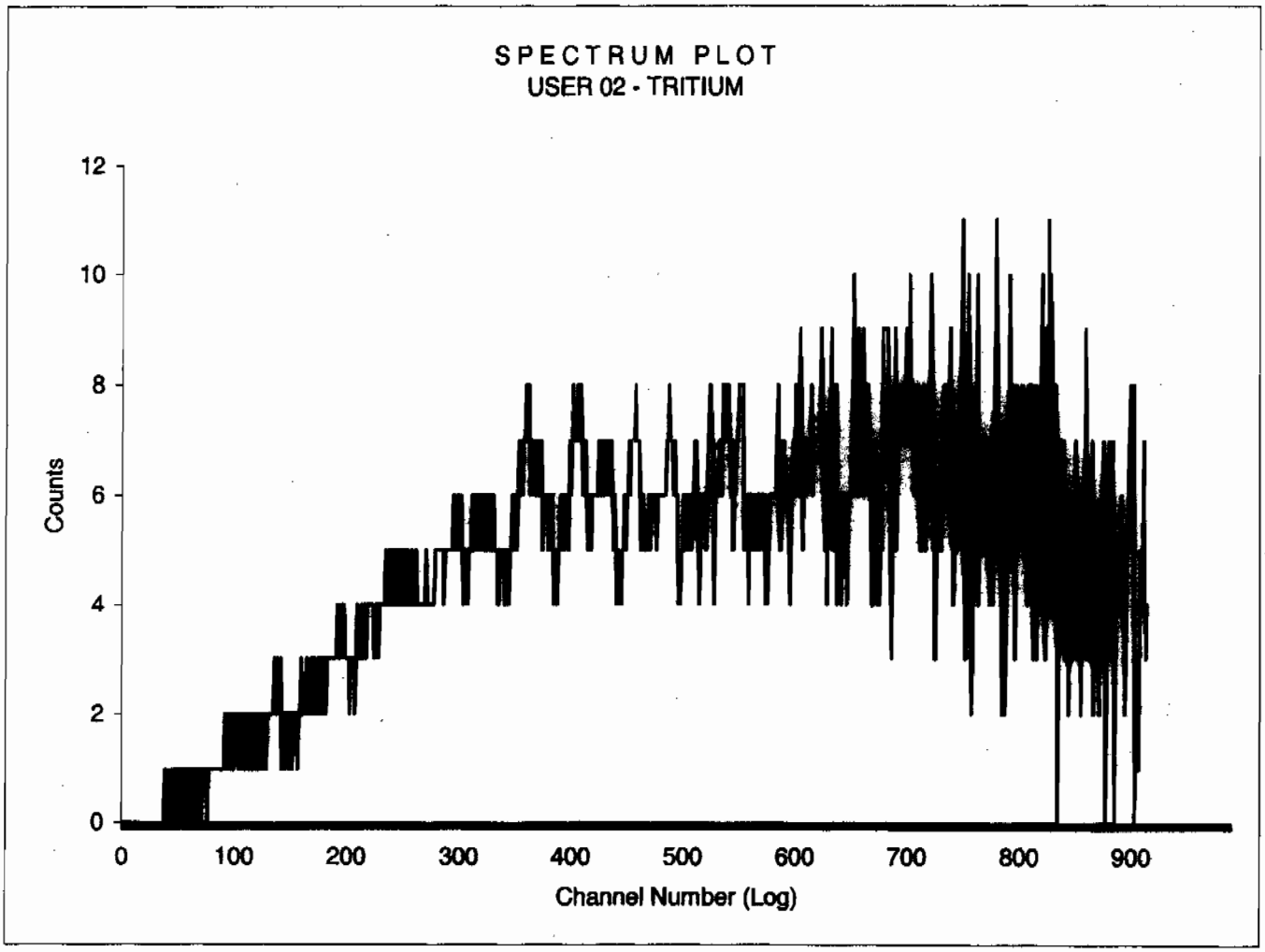

Sample Count Start Time:	13 Jul 2009 23:10:44		
Data Capture Date	14 Jul 2009 01:11:09		
User Filename	S02071458-2A.XLS		
	U02071358-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	58-2	120.00
H#, Total Counts:	145.0	4315	
Start, End, X-Axis:	0	990	Channel Number

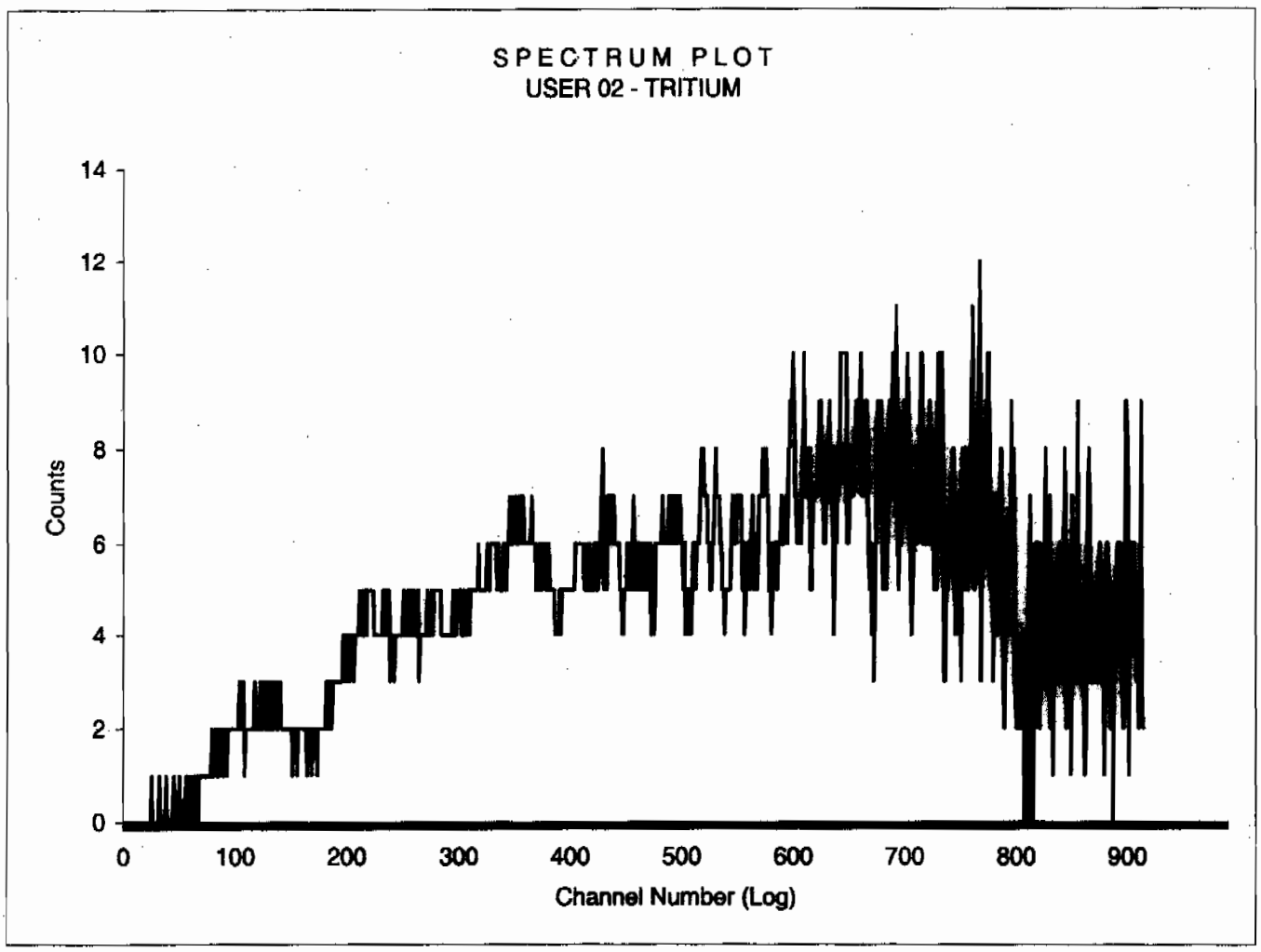

Sample Count Start Time:	14 Jul 2009 01:14:29		
Data Capture Date	14 Jul 2009 03:14:55		
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	U02071358-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	58-3	120.00
H#, Total Counts:	120.6	4361	
Start, End, X-Axis:	0	990	Channel Number

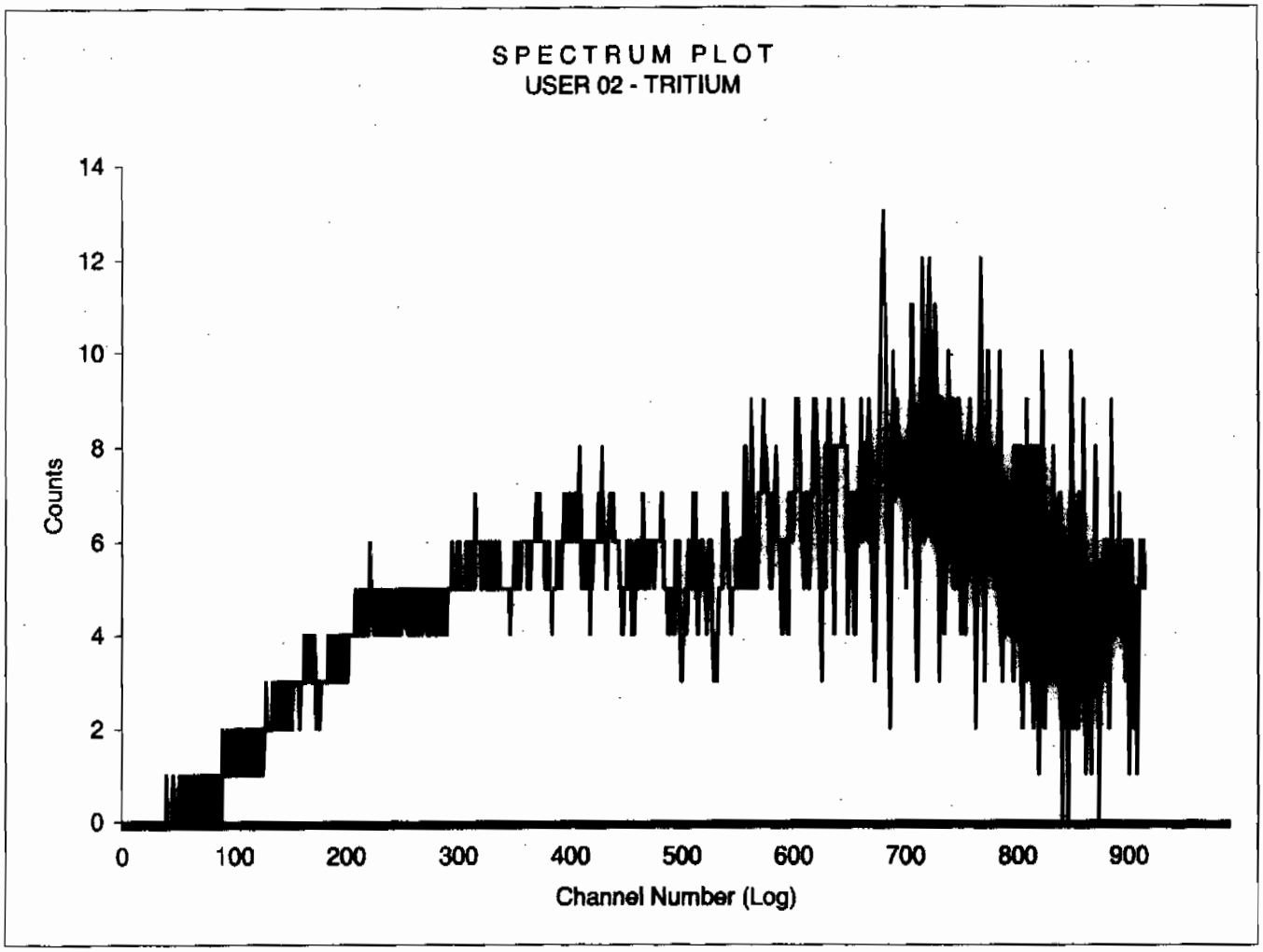

Sample Count Start Time:	14 Jul 2009 05:46:28		
Data Capture Date	14 Jul 2009 07:16:15		
User Filename	S02071458-4B.XLS		
	U02071458-4A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	58-4	89.40
H#, Total Counts:	118.8	3239	
Start, End, X-Axis:	0	990	Channel Number

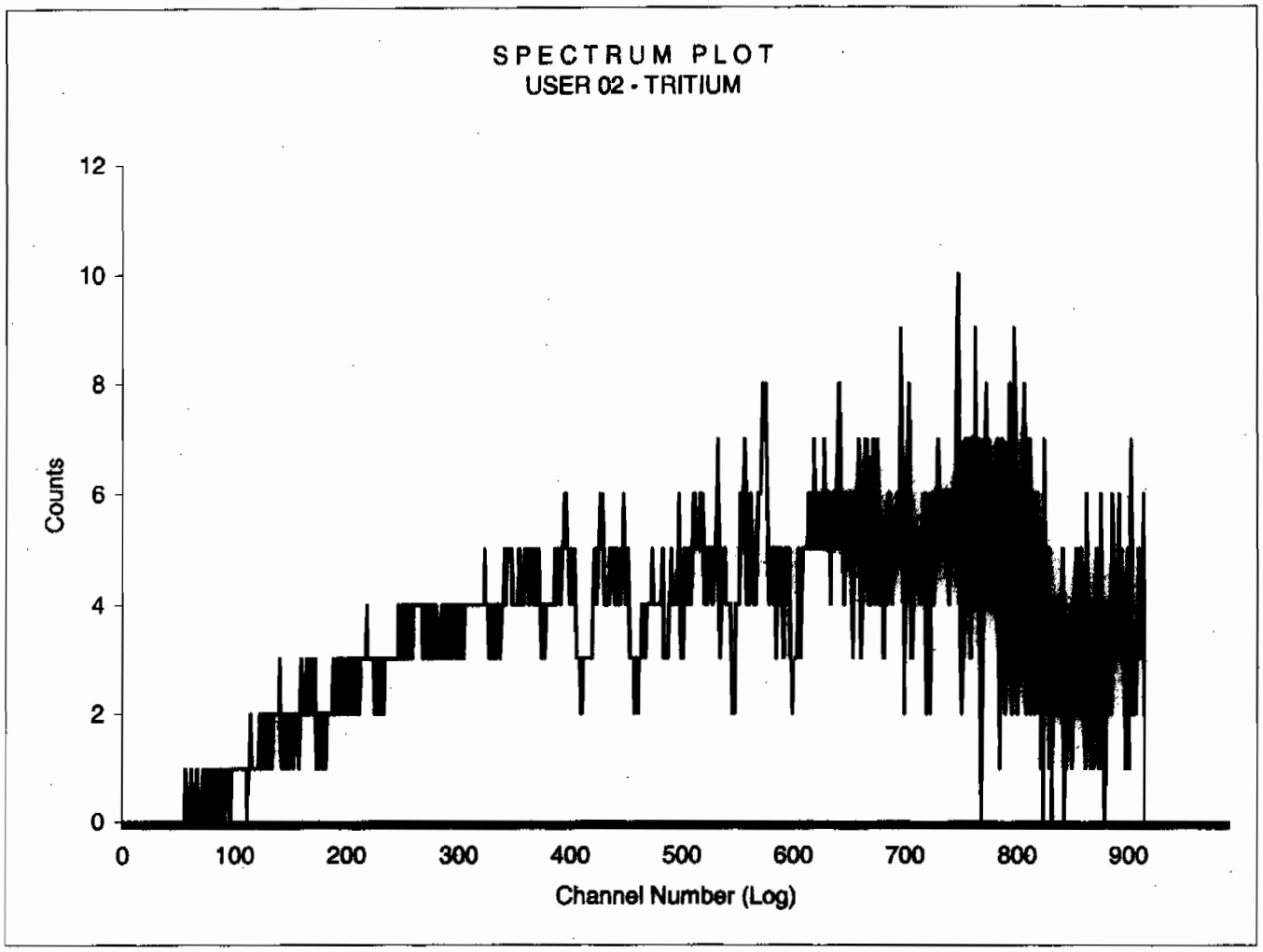

Sample Count Start Time:	14 Jul 2009 07:54:04		
Data Capture Date	14 Jul 2009 08:39:27		
User Filename	S02071458-5B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	58-5	45.00
H#, Total Counts:	121.4	1611	
Start, End, X-Axis:	0	990	Channel Number

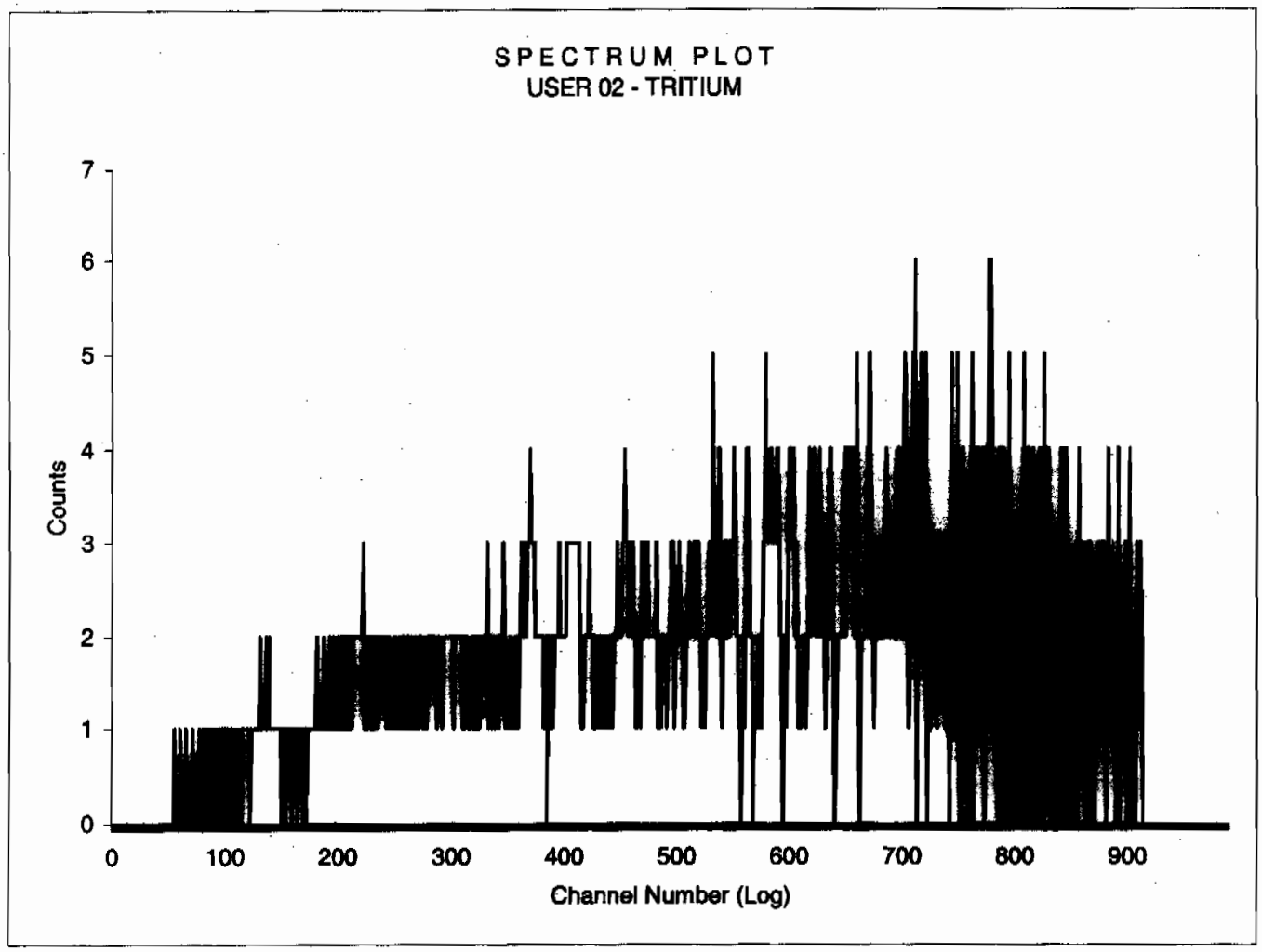

Sample Count Start Time:	14 Jul 2009 08:41:09		
Data Capture Date	14 Jul 2009 09:26:33		
User Filename	S02071458-6B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	58-6	45.00
H#, Total Counts:	129.8	1656	
Start, End, X-Axis:	0	990	Channel Number

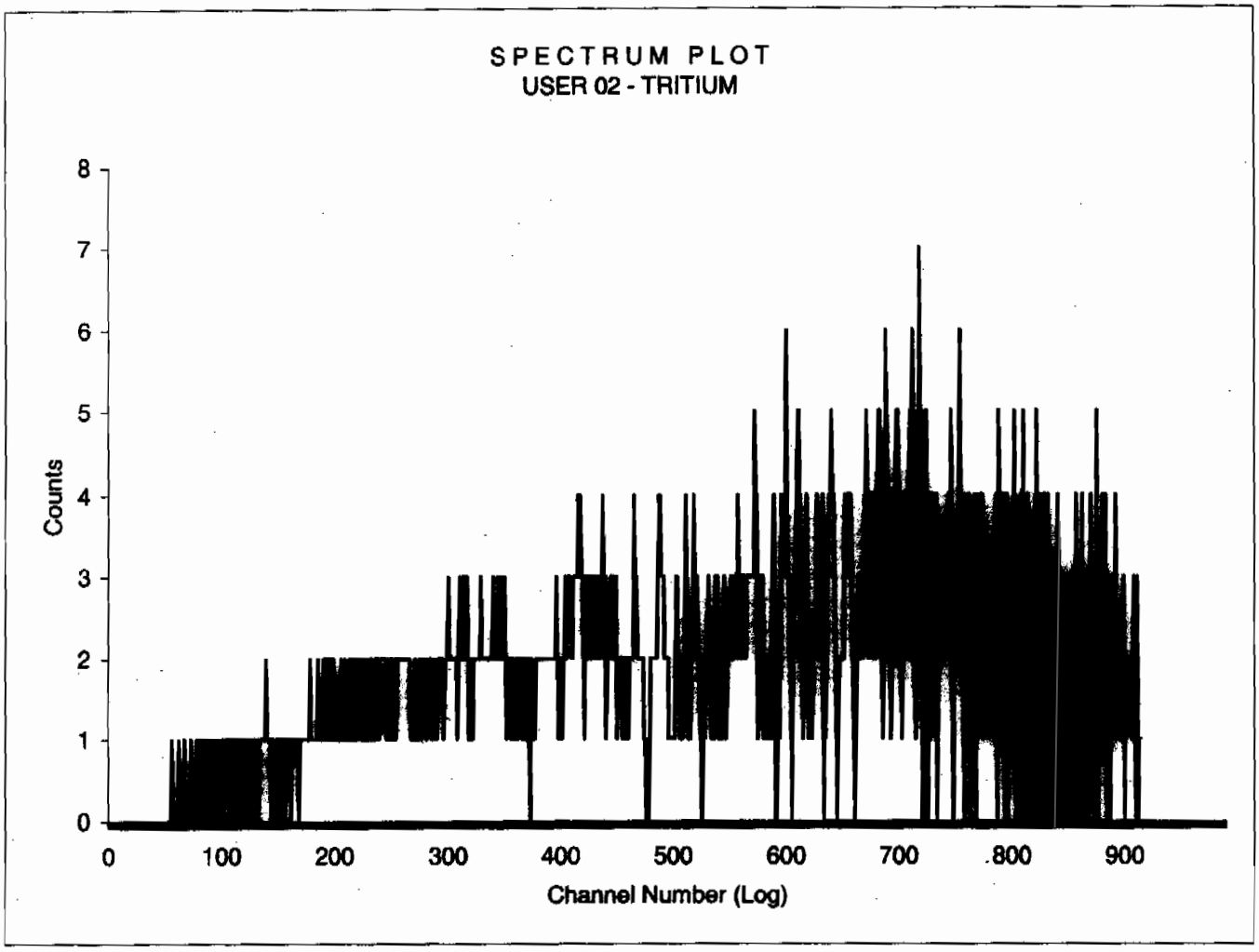

Sample Count Start Time:	14 Jul 2009 09:28:08		
Data Capture Date	14 Jul 2009 10:13:32		
User Filename	S02071458-7B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	58-7	45.00
H#, Total Counts:	121.7	1624	
Start, End, X-Axis:	0	990	Channel Number

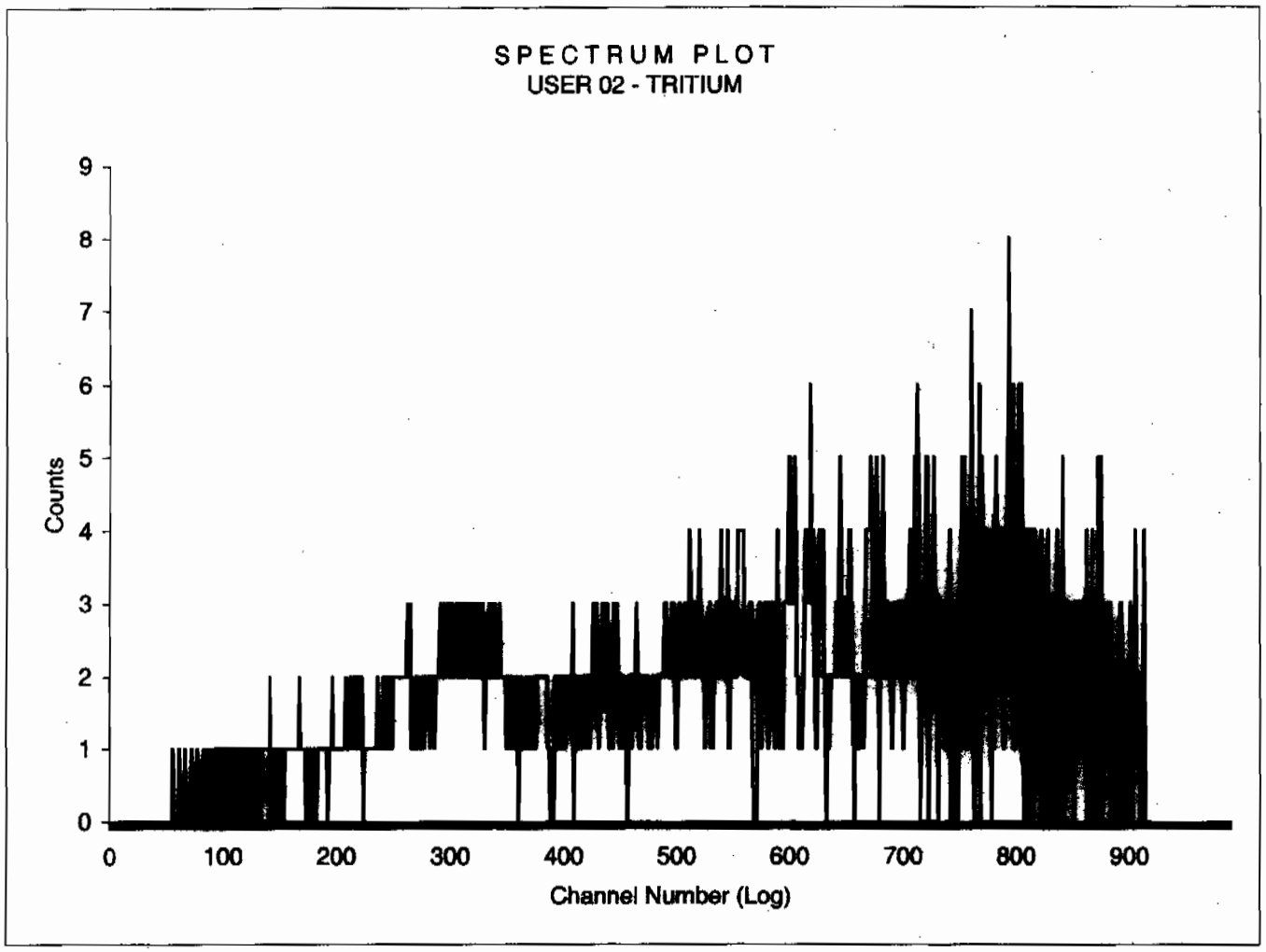

Sample Count Start Time:	14 Jul 2009 10:15:07		
Data Capture Date	14 Jul 2009 11:00:31		
User Filename	S02071458-8B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	58-8	45.00
H#, Total Counts:	123.1	1622	
Start, End, X-Axis:	0	990	Channel Number

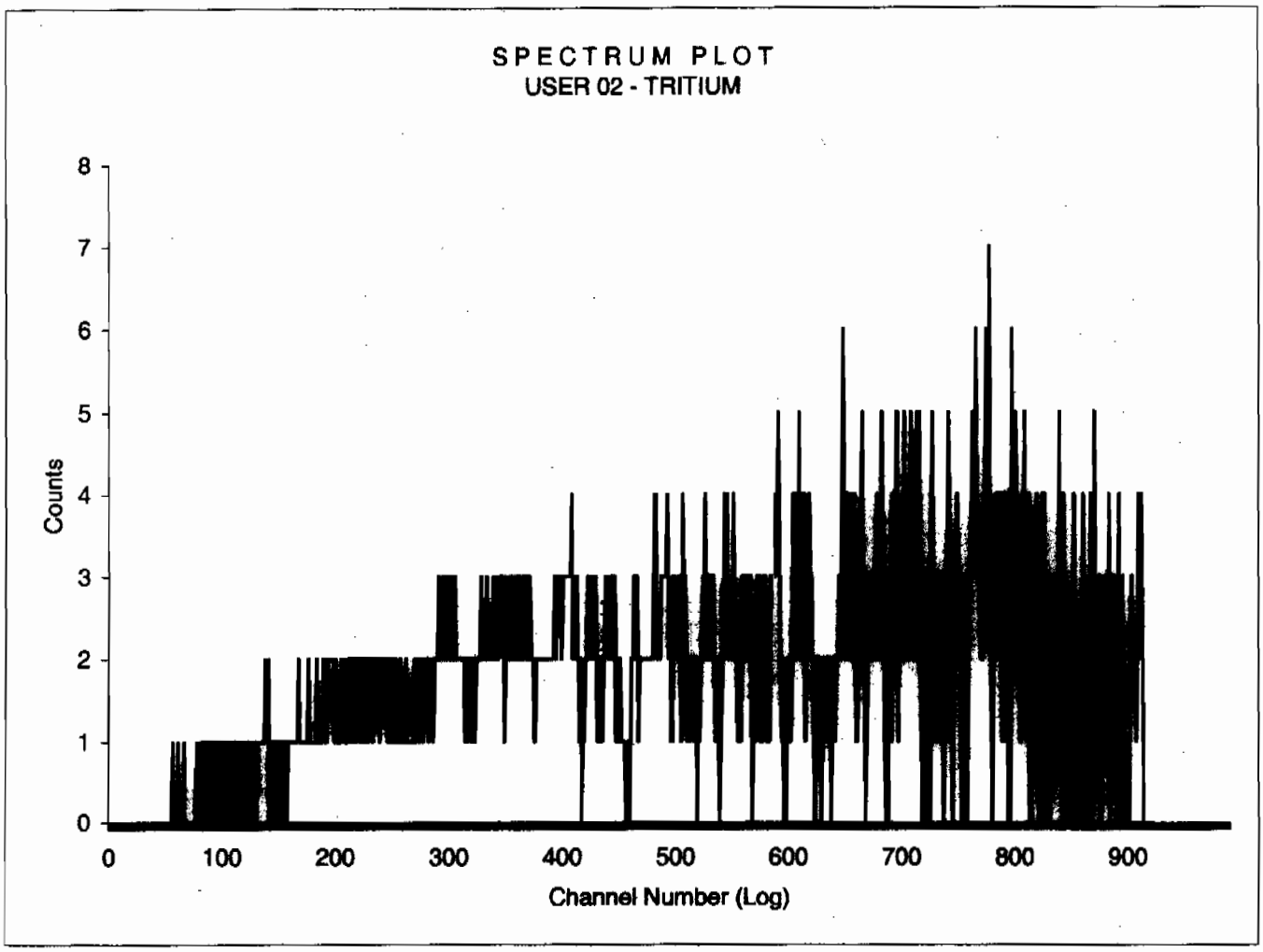

Sample Count Start Time:	14 Jul 2009 11:02:04		
Data Capture Date	14 Jul 2009 11:47:29		
User Filename	S02071458-9B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	58-9	45.00
H#, Total Counts:	121.5	1570	
Start, End, X-Axis:	0	990	Channel Number

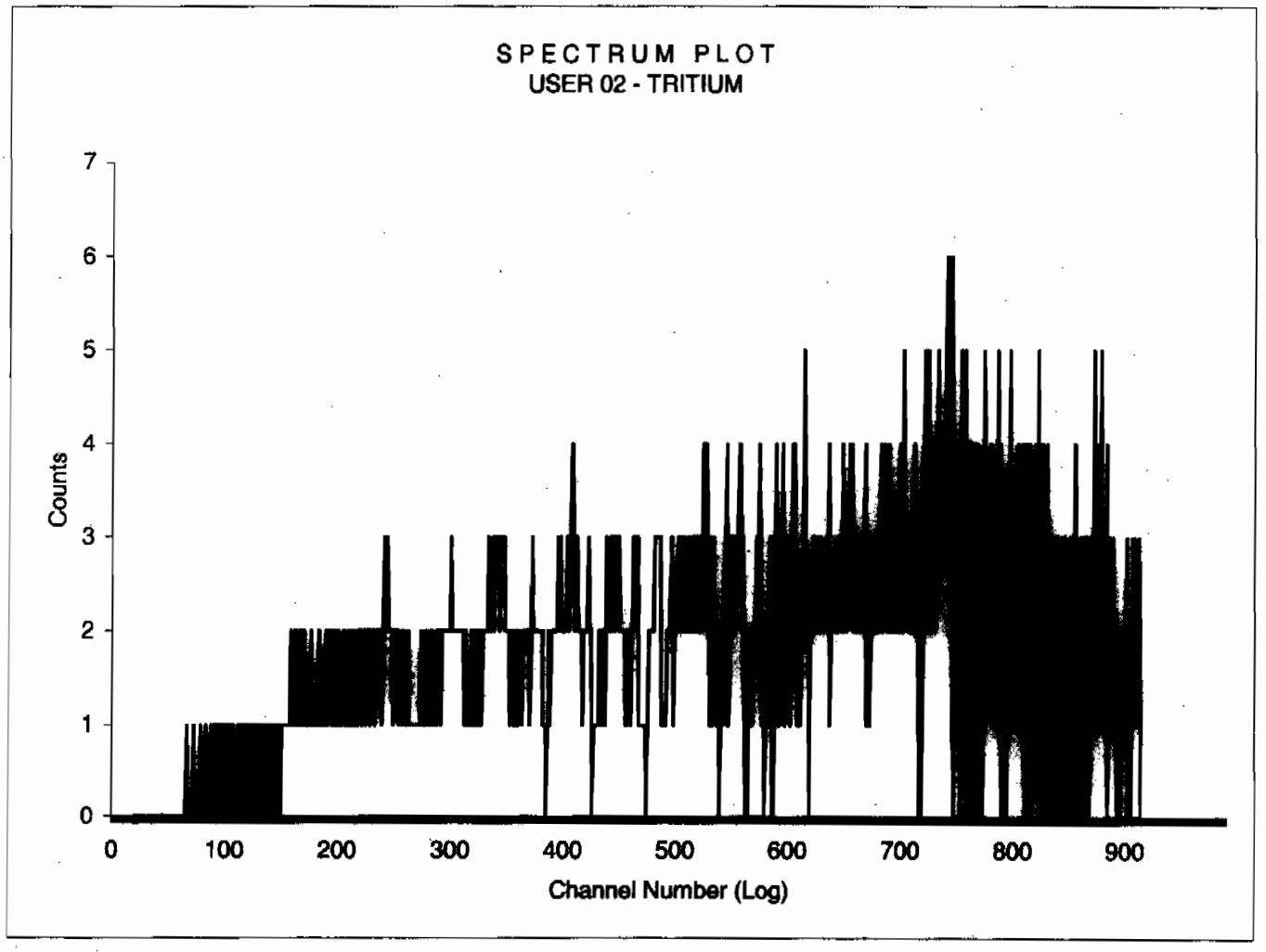

Sample Count Start Time:	14 Jul 2009 11:49:05		
Data Capture Date	14 Jul 2009 12:34:29		
User Filename	S02071458-10B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	58-10	45.00
H#, Total Counts:	120.6	1581	
Start, End, X-Axis:	0	990	Channel Number

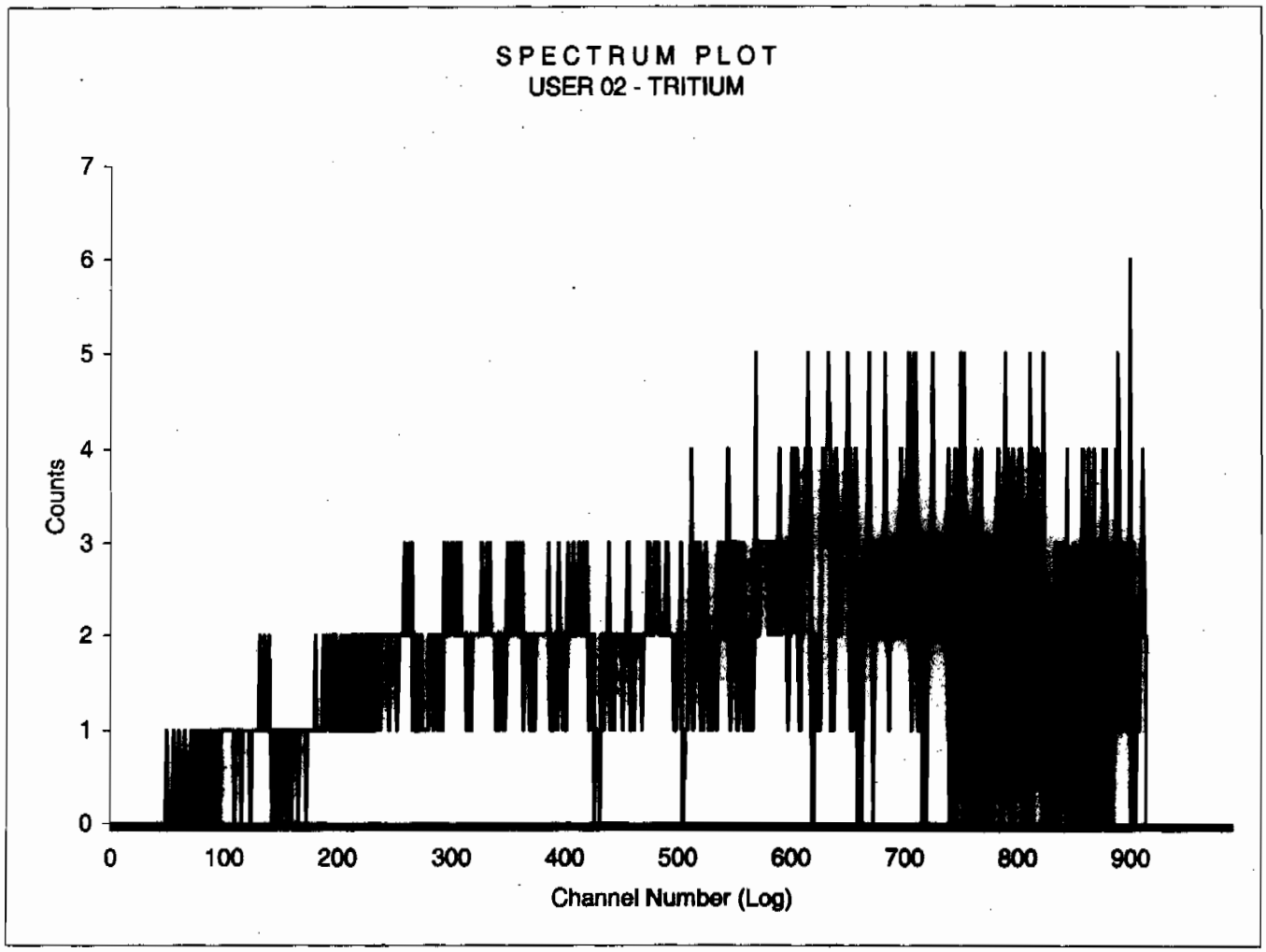

Sample Count Start Time:	14 Jul 2009 12:36:07		
Data Capture Date	14 Jul 2009 13:21:31		
User Filename	S02071458-11B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	58-11	45.00
H#, Total Counts:	122.7	1724	
Start, End, X-Axis:	0	990	Channel Number

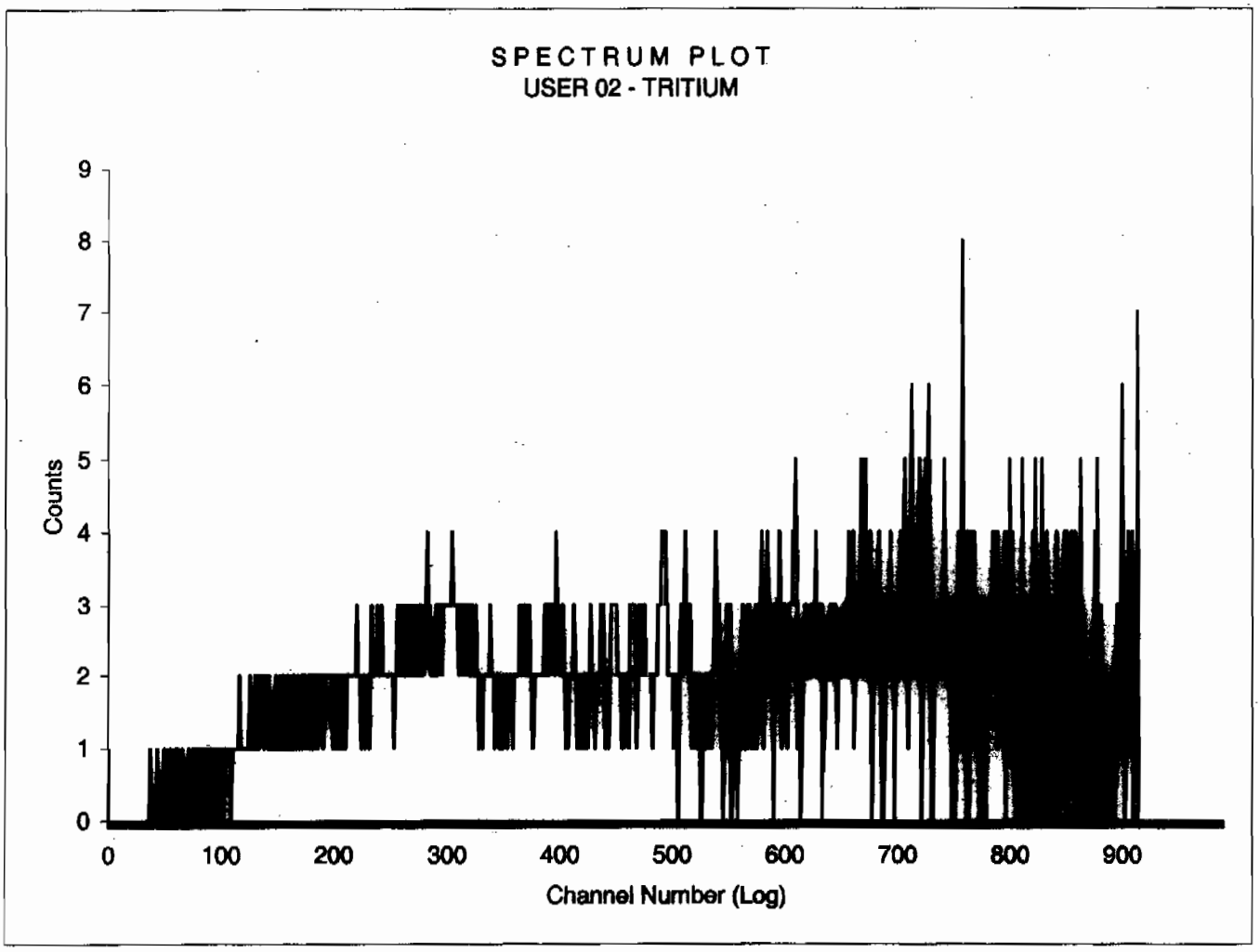

Sample Count Start Time:	14 Jul 2009 13:23:05		
Data Capture Date	14 Jul 2009 14:08:30		
User Filename	S02071458-12B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	12	58-12	45.00
H#, Total Counts:	120.5	1716	
Start, End, X-Axis:	0	990	Channel Number

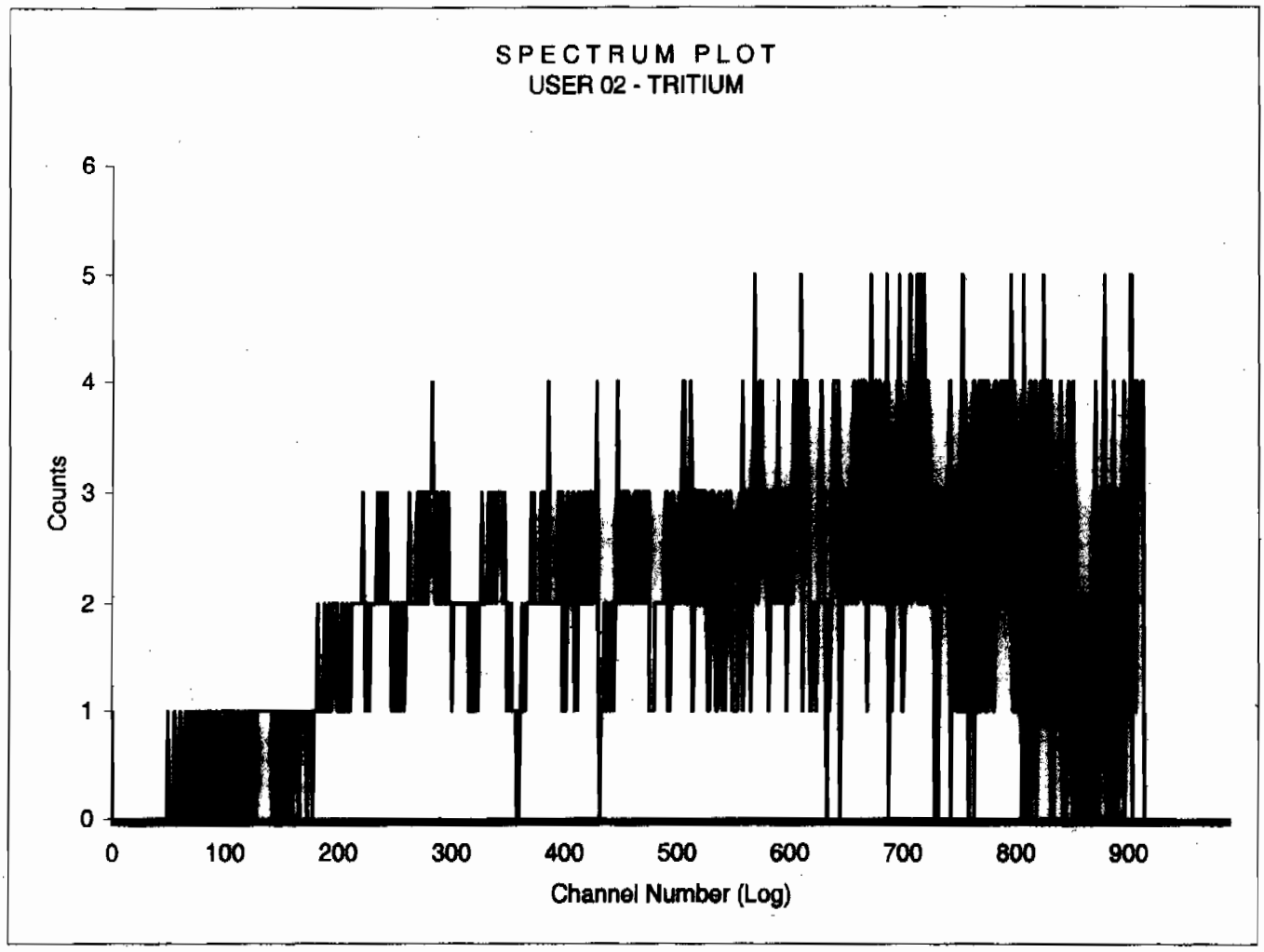

Sample Count Start Time:	14 Jul 2009 14:10:13		
Data Capture Date	14 Jul 2009 14:55:38		
User Filename	S02071434-1B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	13	34-1	45.00
H#, Total Counts:	120.4	1689	
Start, End, X-Axis:	0	990	Channel Number

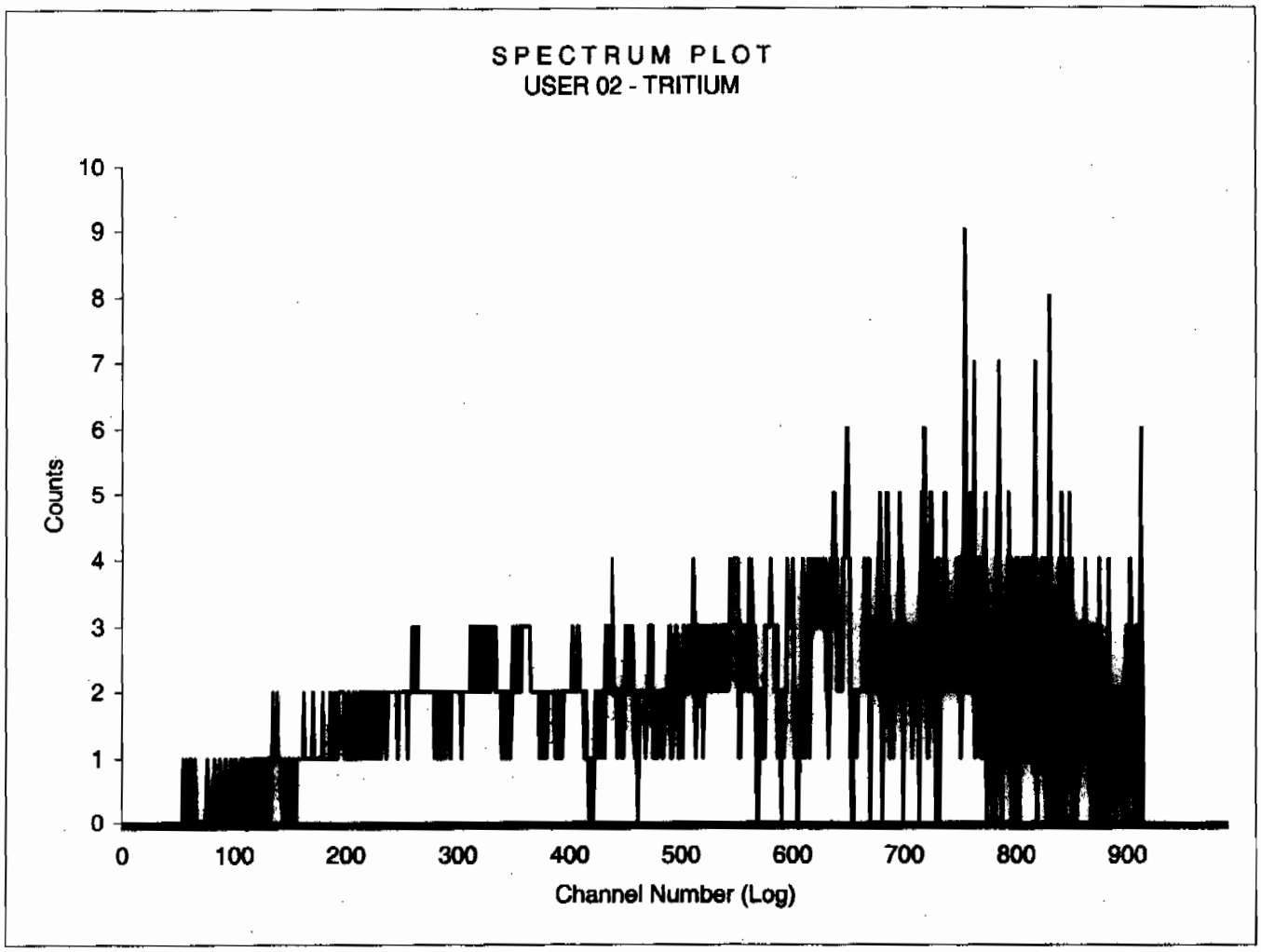

Sample Count Start Time:	14 Jul 2009 14:57:20		
Data Capture Date	14 Jul 2009 15:42:46		
User Filename	S02071434-2B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	14	34-2	45.00
H#, Total Counts:	122.1	1607	
Start, End, X-Axis:	0	990	Channel Number

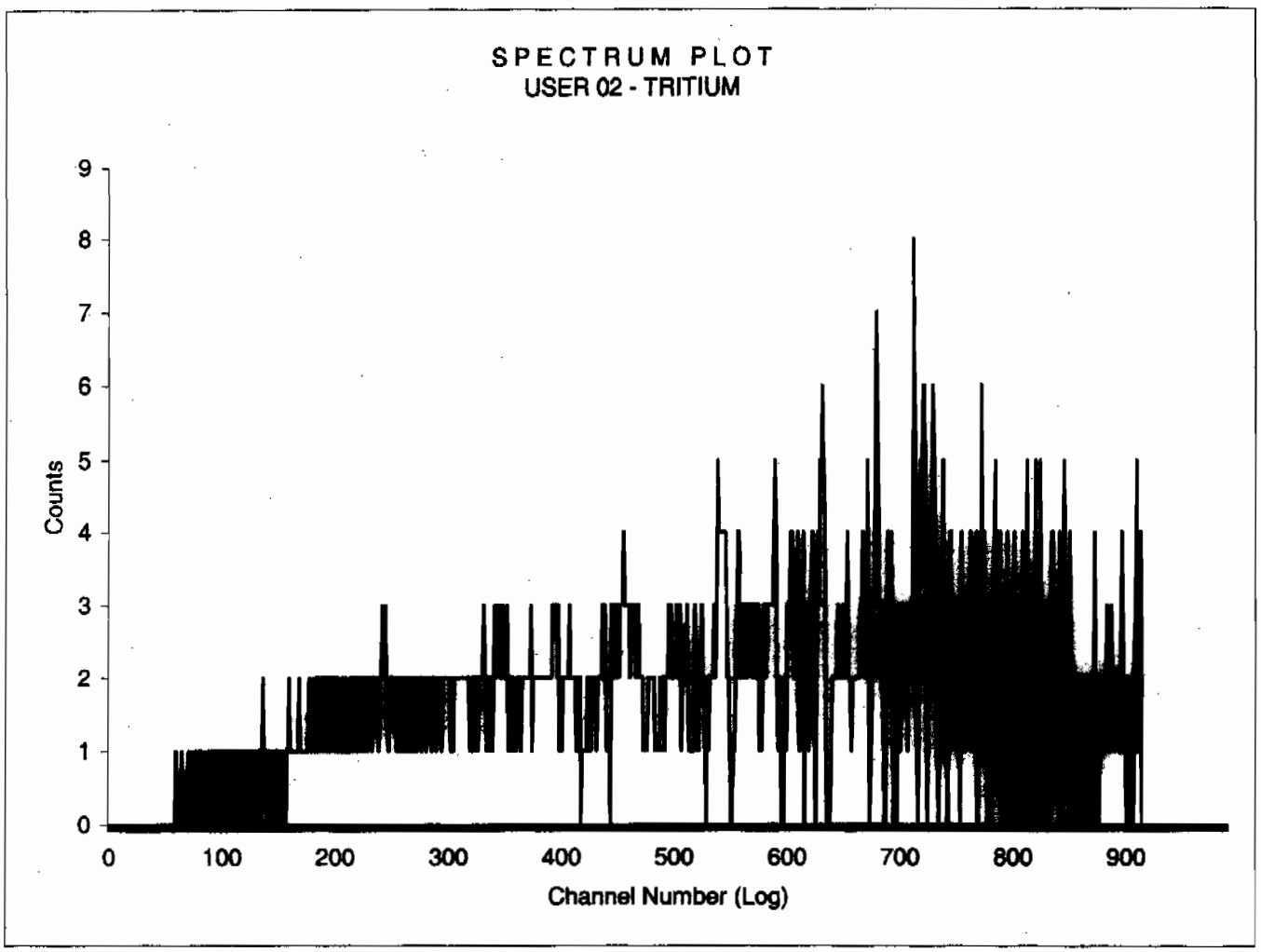

Sample Count Start Time:	14 Jul 2009 15:44:30		
Data Capture Date	14 Jul 2009 16:29:55		
User Filename	S02071434-3B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	15	34-3	45.00
H#, Total Counts:	121.2	1684	
Start, End, X-Axis:	0	990	Channel Number

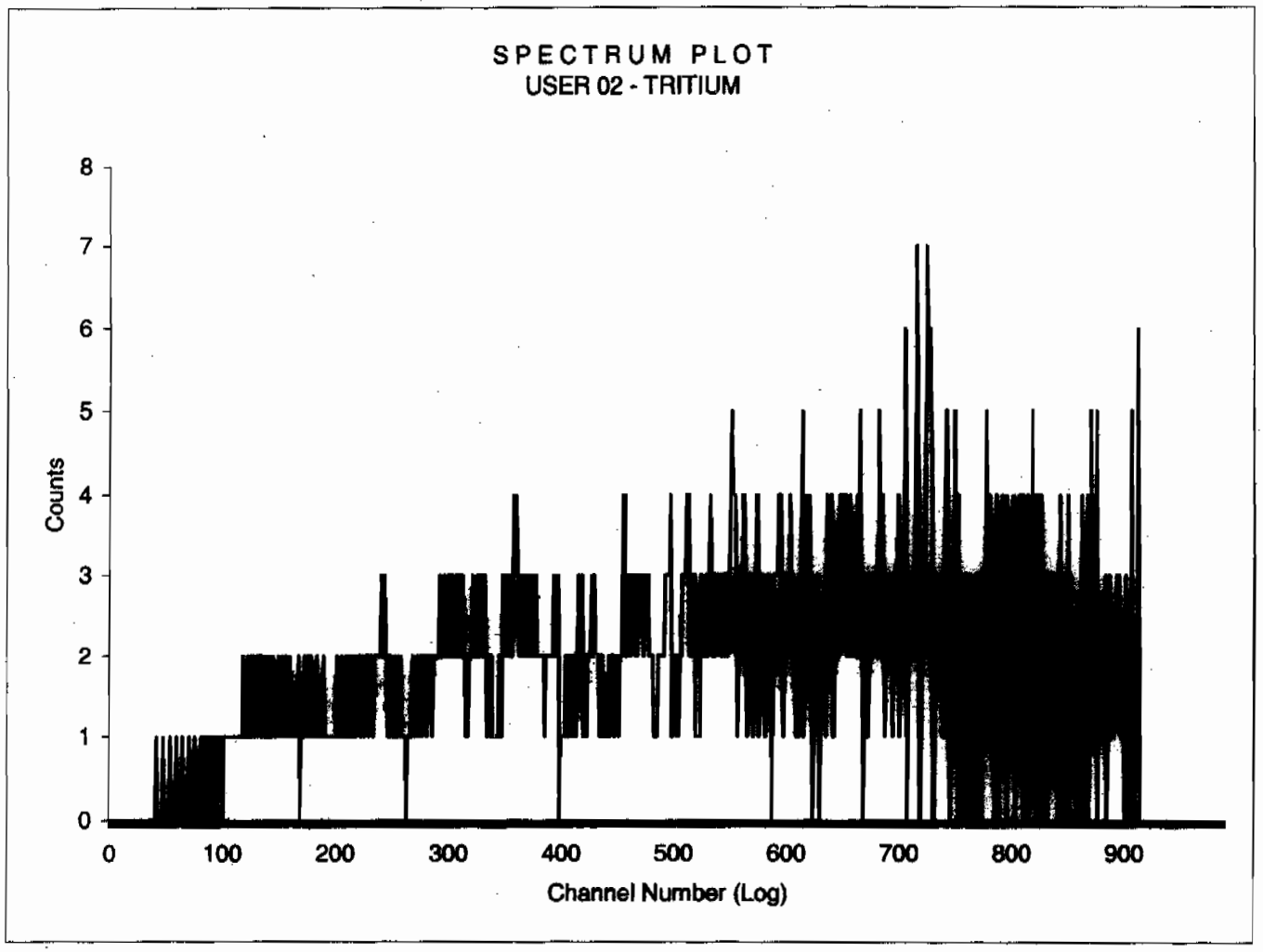

Sample Count Start Time:	14 Jul 2009 16:31:35		
Data Capture Date	14 Jul 2009 17:17:00		
User Filename	S02071434-4B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	16	34-4	45.00
H#, Total Counts:	118.6	1881	
Start, End, X-Axis:	0	990	Channel Number

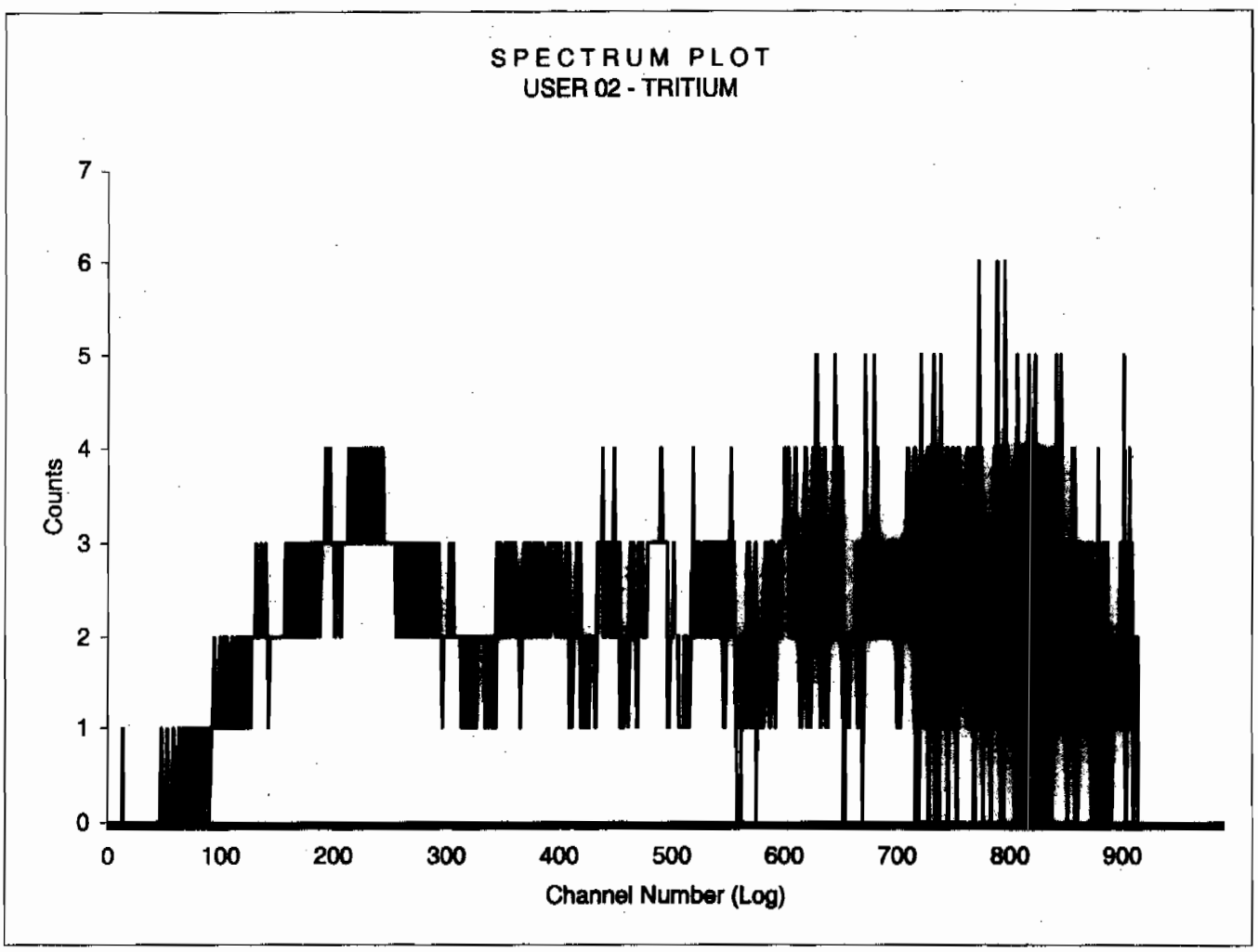

Sample Count Start Time:	14 Jul 2009 17:18:36		
Data Capture Date	14 Jul 2009 18:04:01		
User Filename	S02071434-5B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	17	34-5	45.00
H#, Total Counts:	121.1	1702	
Start, End, X-Axis:	0	990	Channel Number

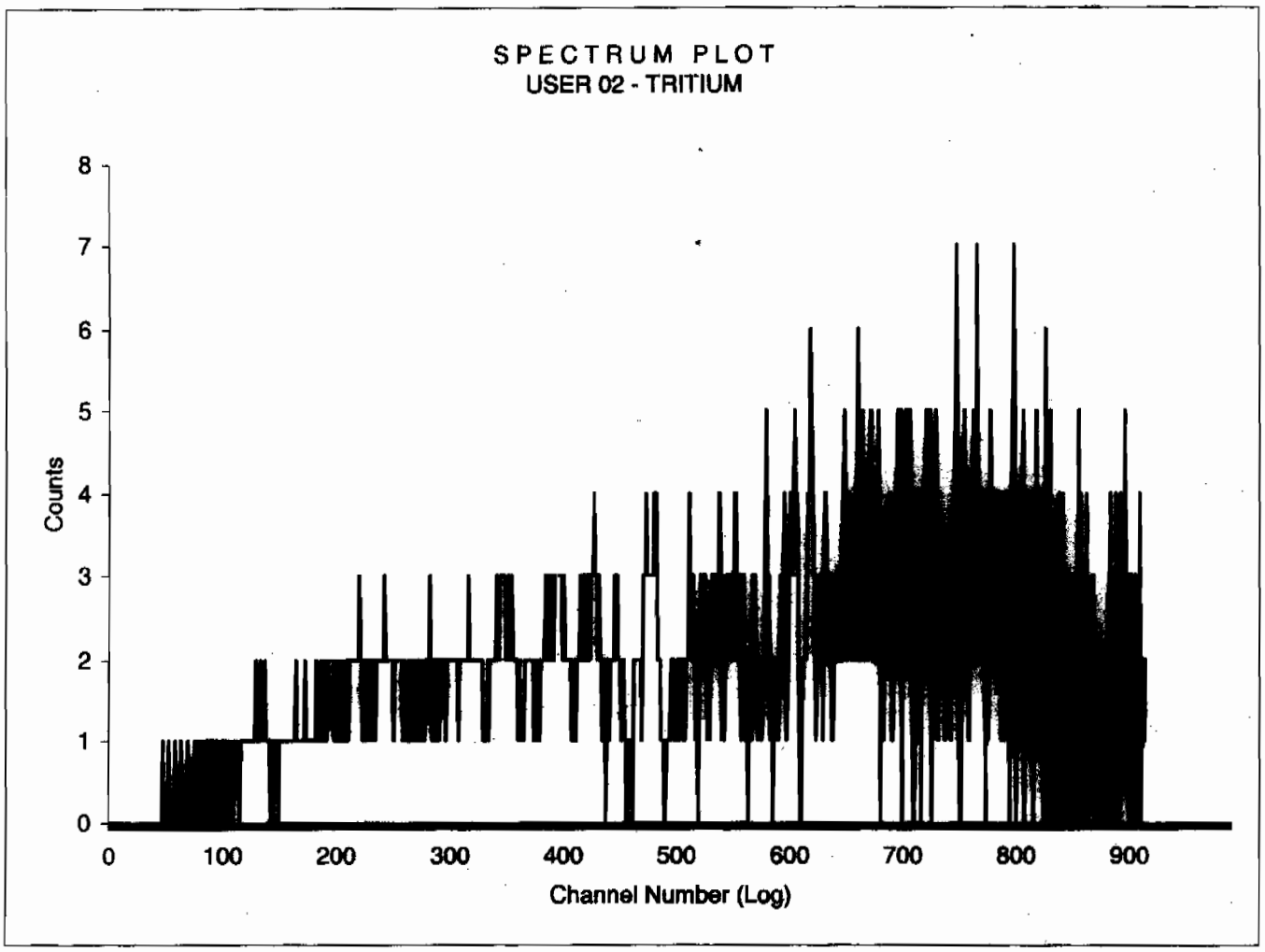

Sample Count Start Time:	14 Jul 2009 18:05:40		
Data Capture Date	14 Jul 2009 18:51:05		
User Filename	S02071434-6B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	18	34-6	45.00
H#, Total Counts:	120.4	1671	
Start, End, X-Axis:	0	990	Channel Number

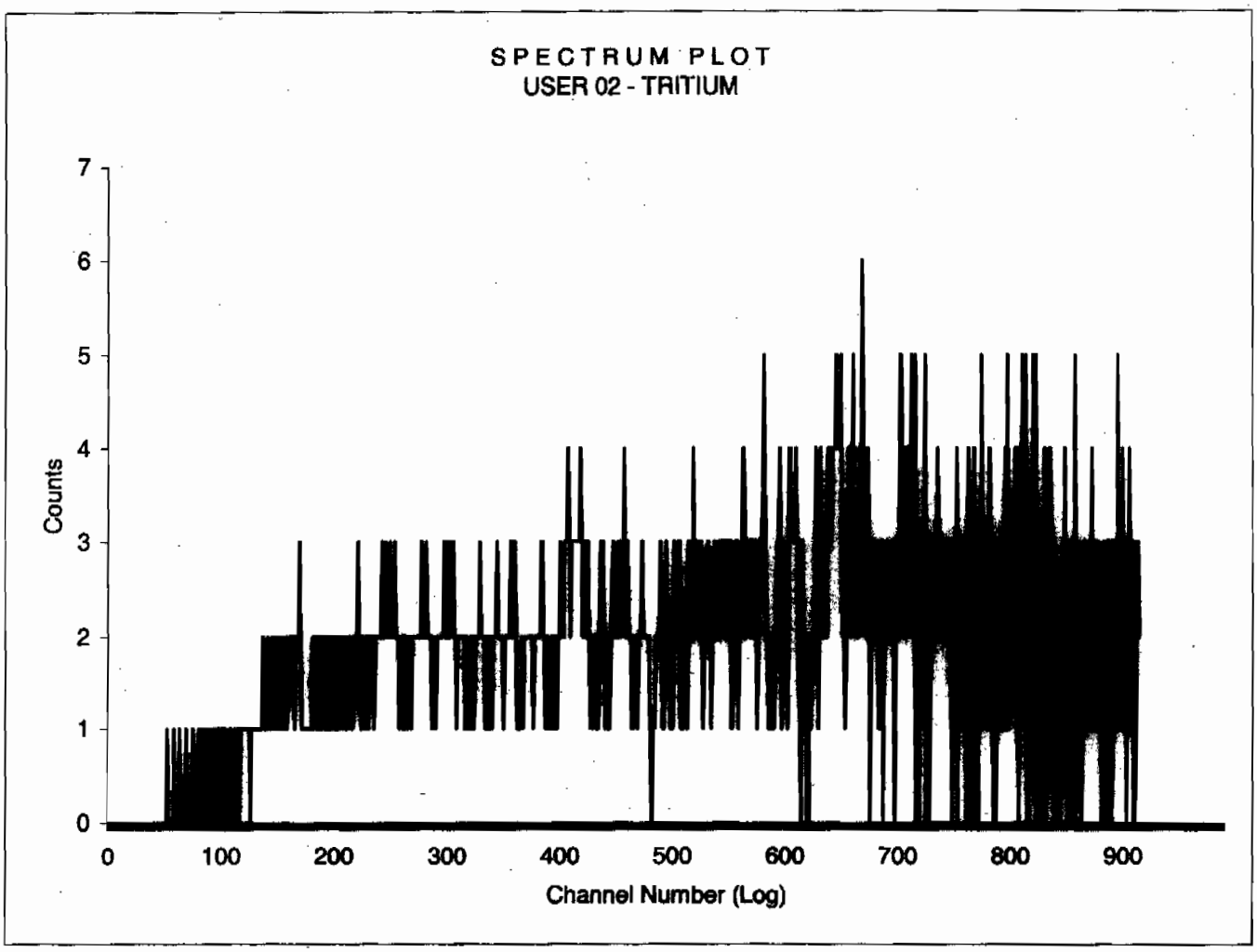

Sample Count Start Time:	14 Jul 2009 18:52:41		
Data Capture Date	14 Jul 2009 19:38:06		
User Filename	S02071434-7B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	19	34-7	45.00
H#, Total Counts:	178.7	4643	
Start, End, X-Axis:	0	990	Channel Number

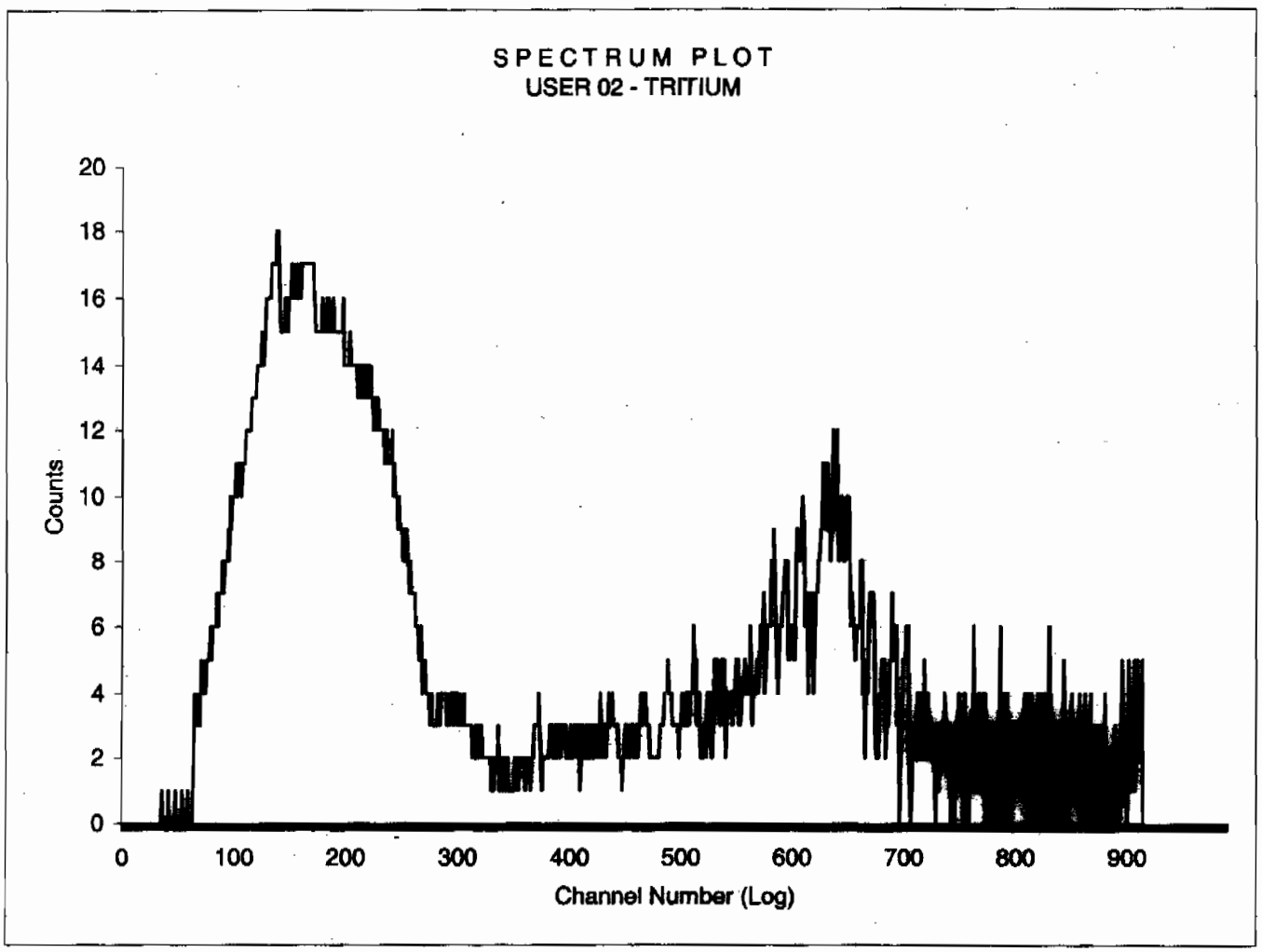

Sample Count Start Time:	14 Jul 2009 19:39:40		
Data Capture Date	14 Jul 2009 20:25:06		
User Filename	S02071434-8B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	20	34-8	45.00
H#, Total Counts:	120.2	1680	
Start, End, X-Axis:	0	990	Channel Number

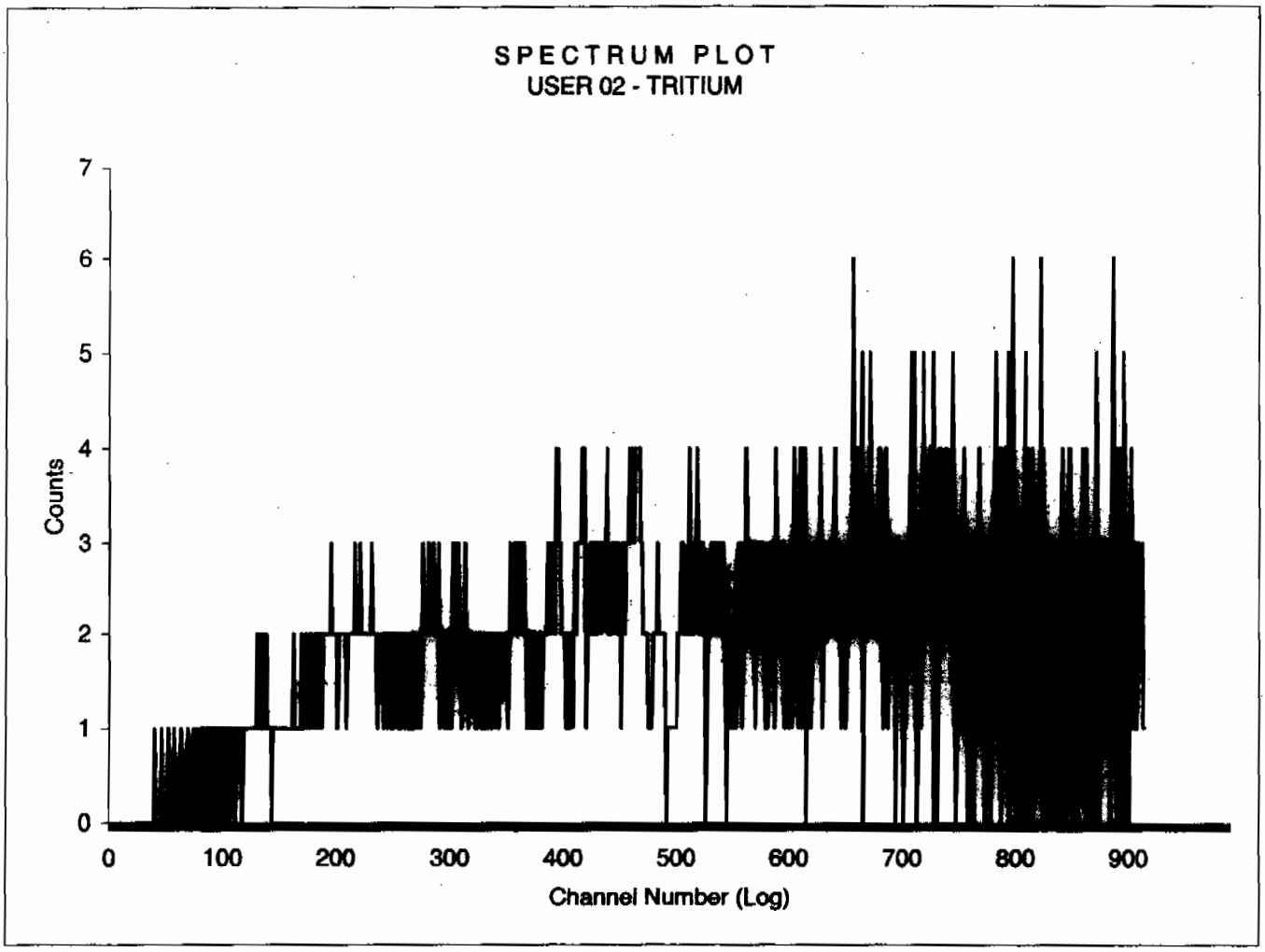

Sample Count Start Time:	14 Jul 2009 20:26:43		
Data Capture Date	14 Jul 2009 21:12:09		
User Filename	S02071434-9B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	21	34-9	45.00
H#, Total Counts:	117.8	4607	
Start, End, X-Axis:	0	990	Channel Number

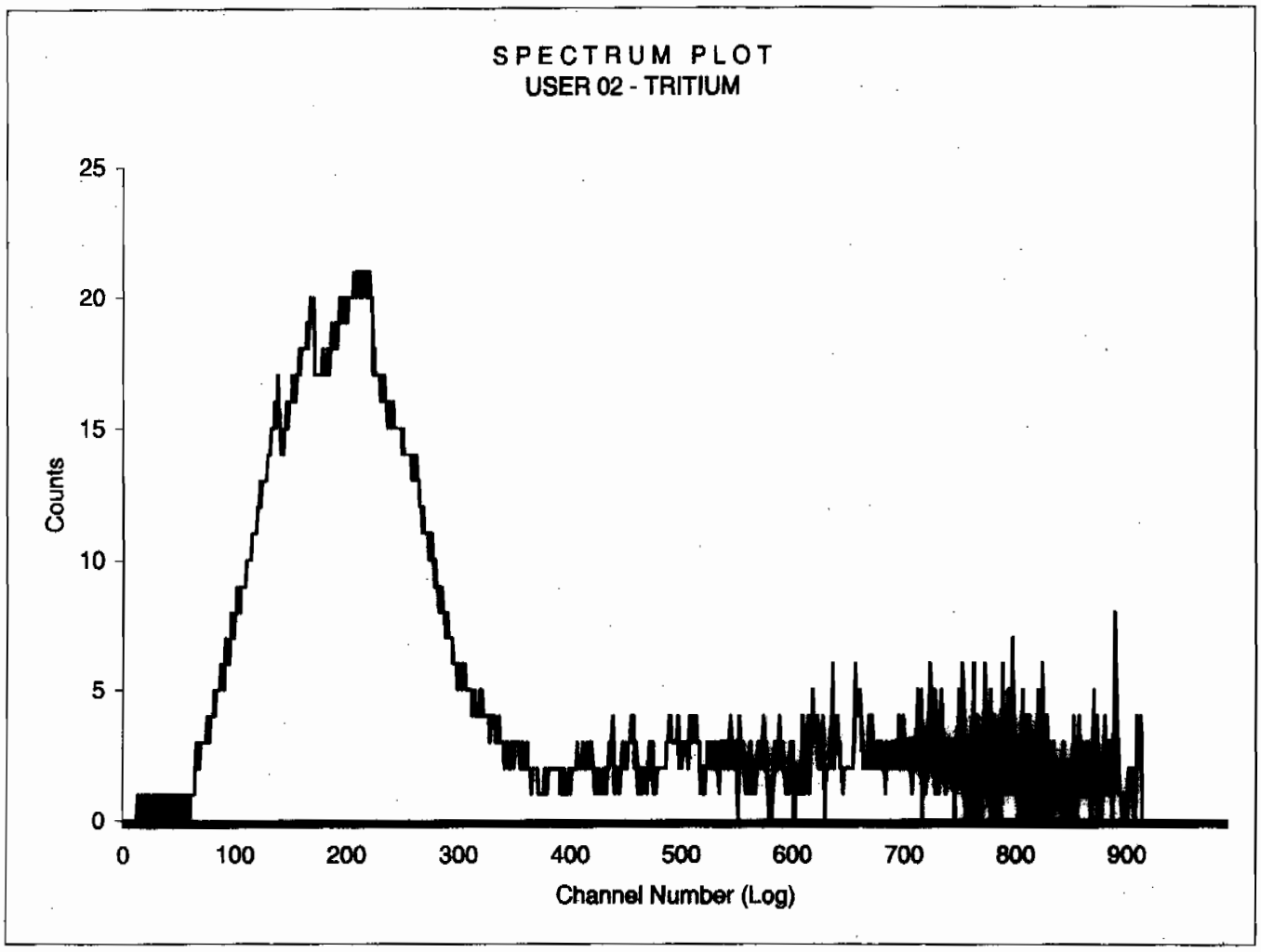

Sample Count Start Time:	14 Jul 2009 21:13:40		
Data Capture Date	14 Jul 2009 21:59:06		
User Filename	S02071434-10B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	22	34-10	45.00
H#, Total Counts:	120.5	1536	
Start, End, X-Axis:	0	990	Channel Number

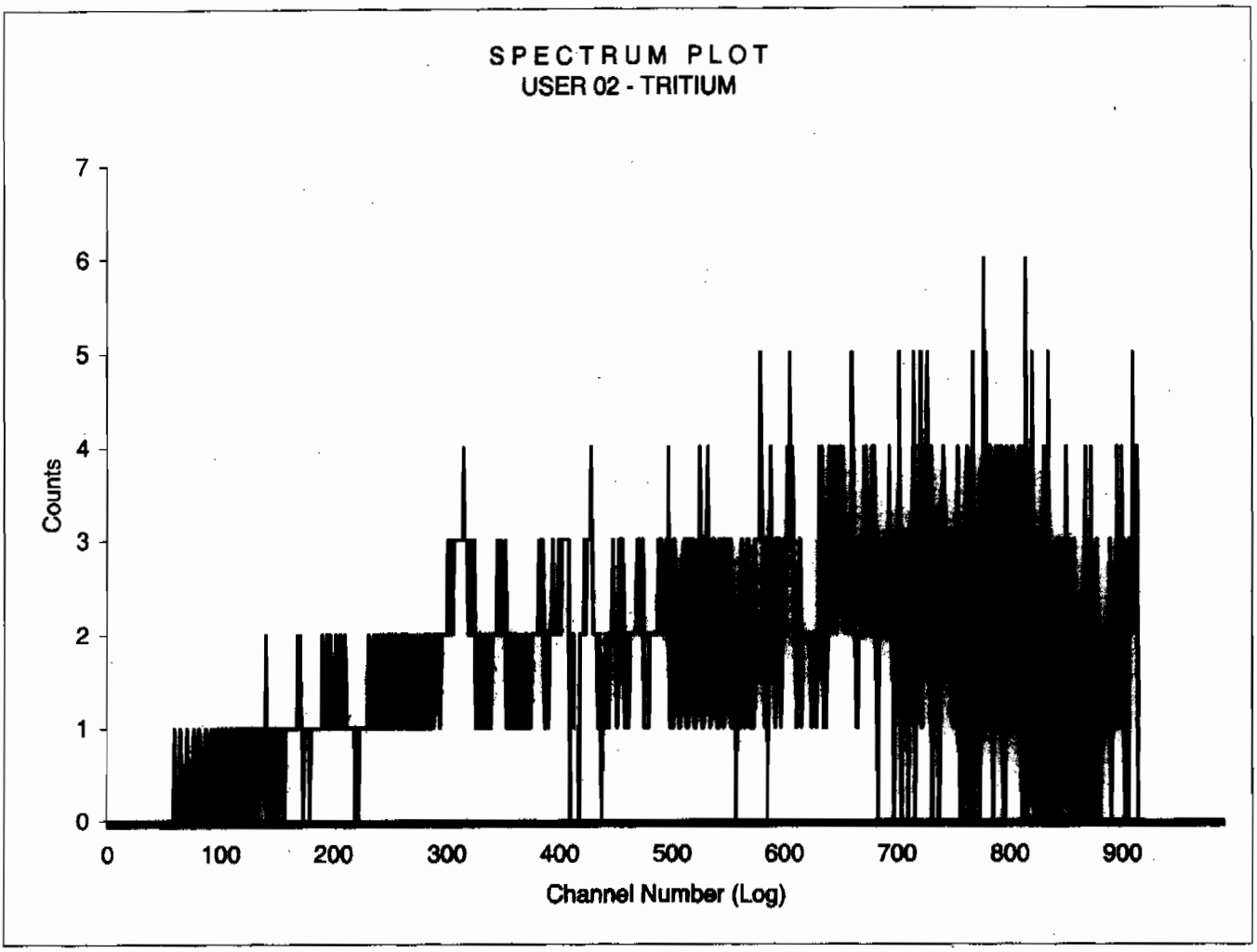

Sample Count Start Time:	14 Jul 2009 22:00:40		
Data Capture Date	14 Jul 2009 22:46:05		
User Filename	S02071434-11B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	23	34-11	45.00
H#, Total Counts:	121.0	1690	
Start, End, X-Axis:	0	990	Channel Number

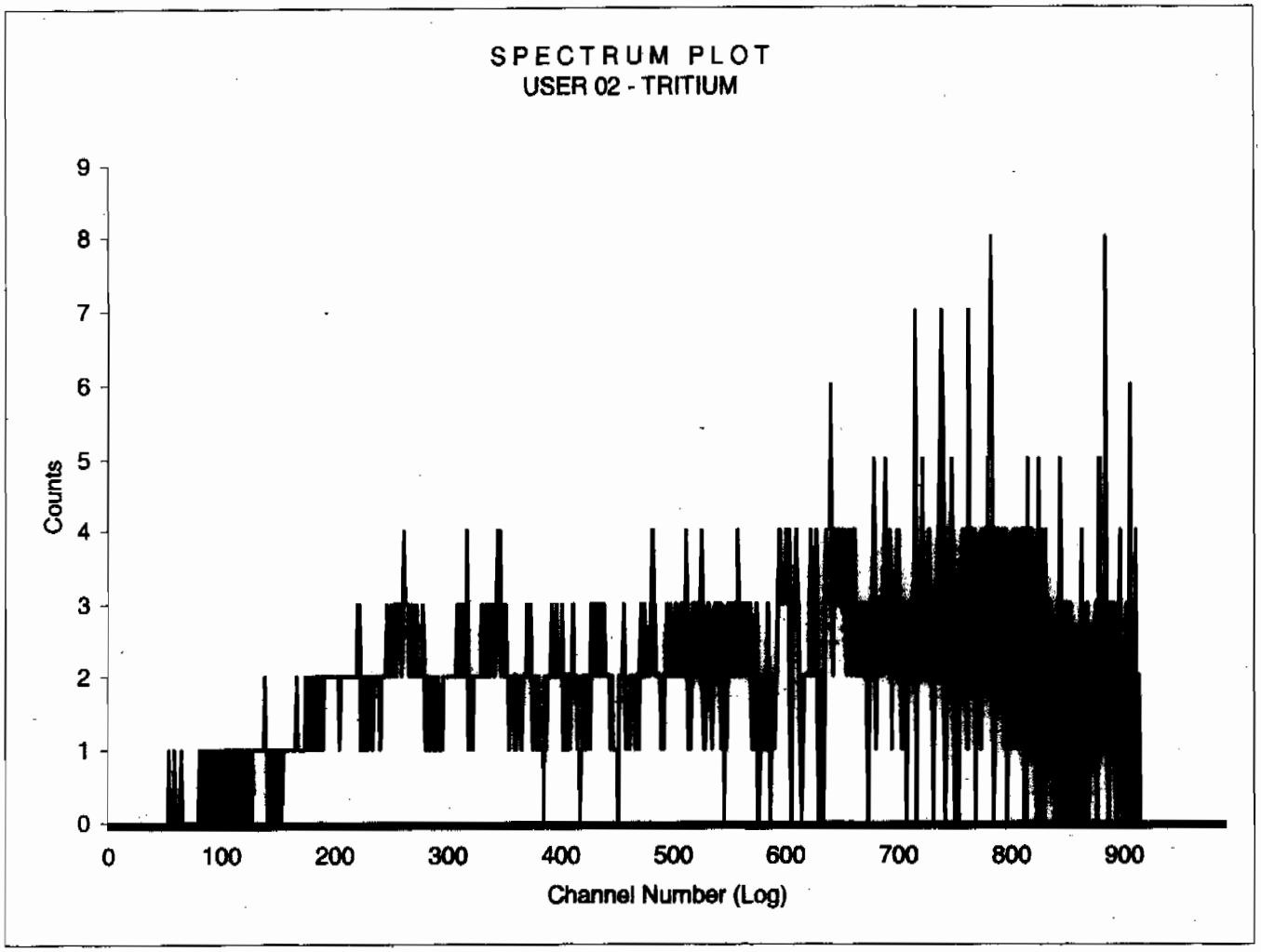

Sample Count Start Time:	14 Jul 2009 22:47:36		
Data Capture Date	14 Jul 2009 23:33:02		
User Filename	S02071434-12B.XLS		
	U02071458-5A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	24	34-12	45.00
H#, Total Counts:	120.3	3113	
Start, End, X-Axis:	0	990	Channel Number

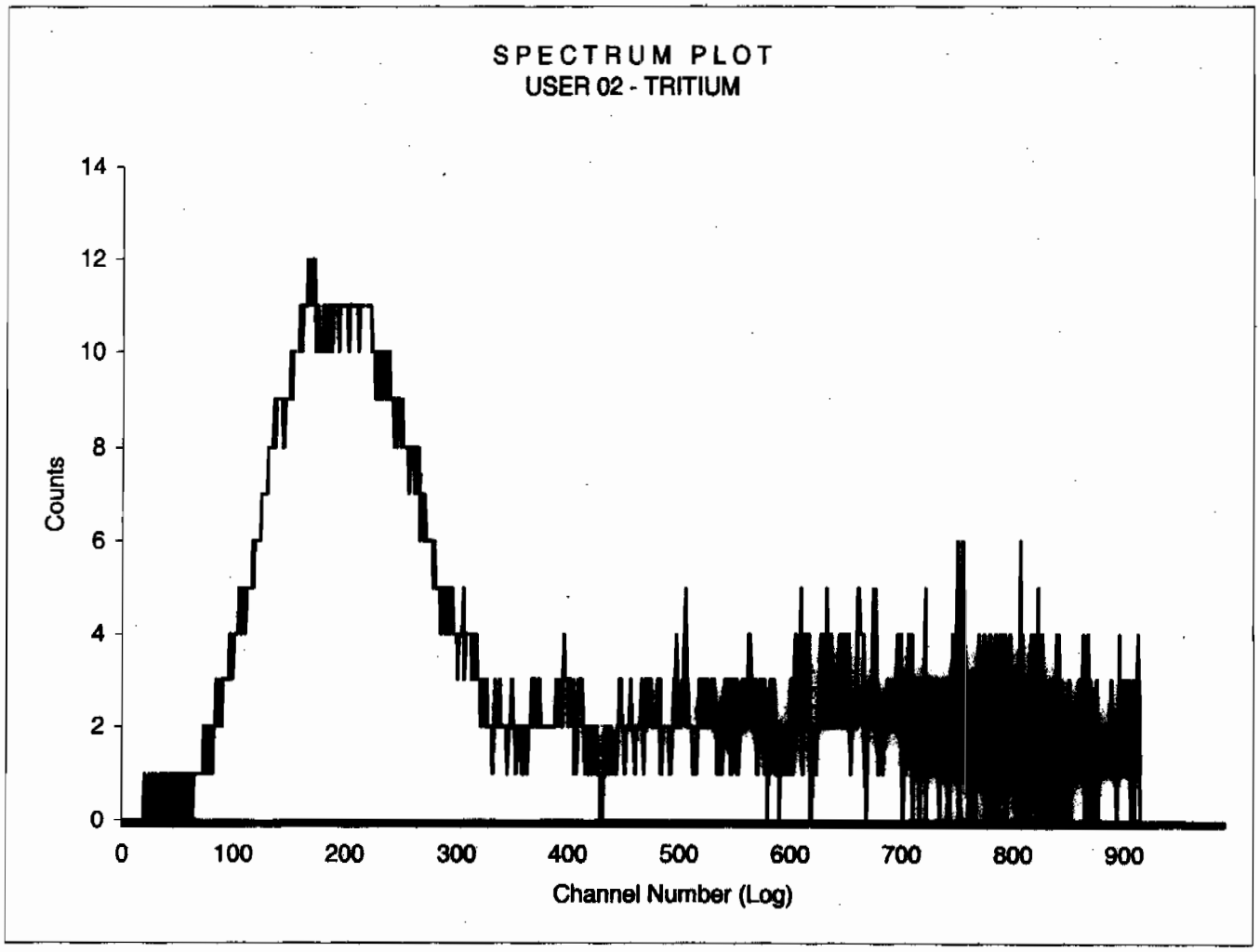

BACKGROUND AND EFFICIENCY DATA

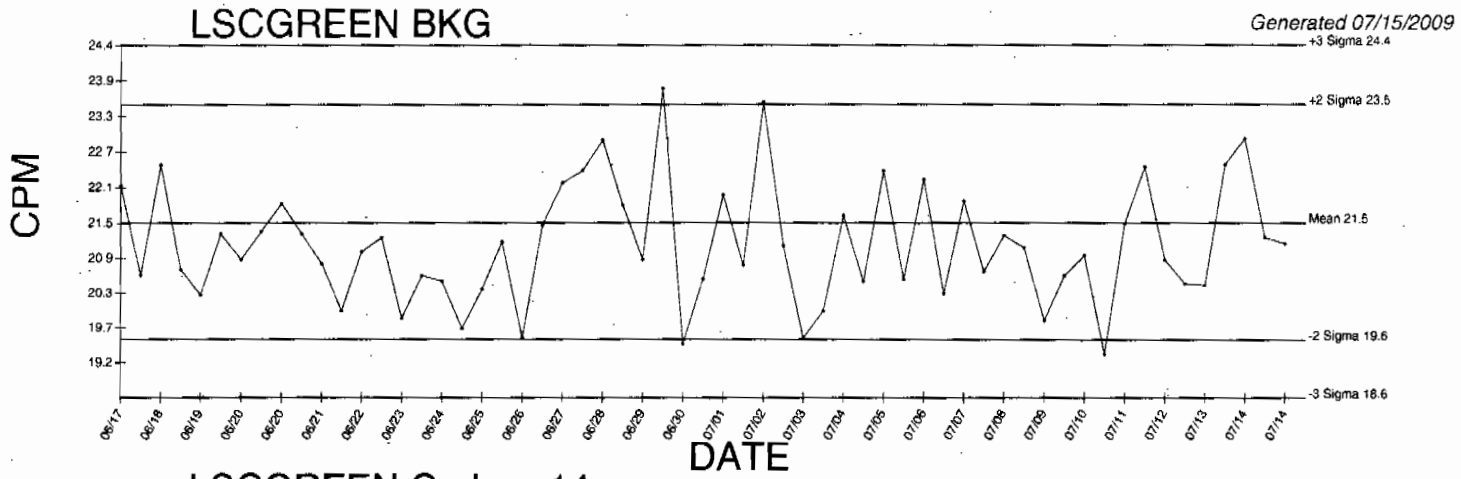

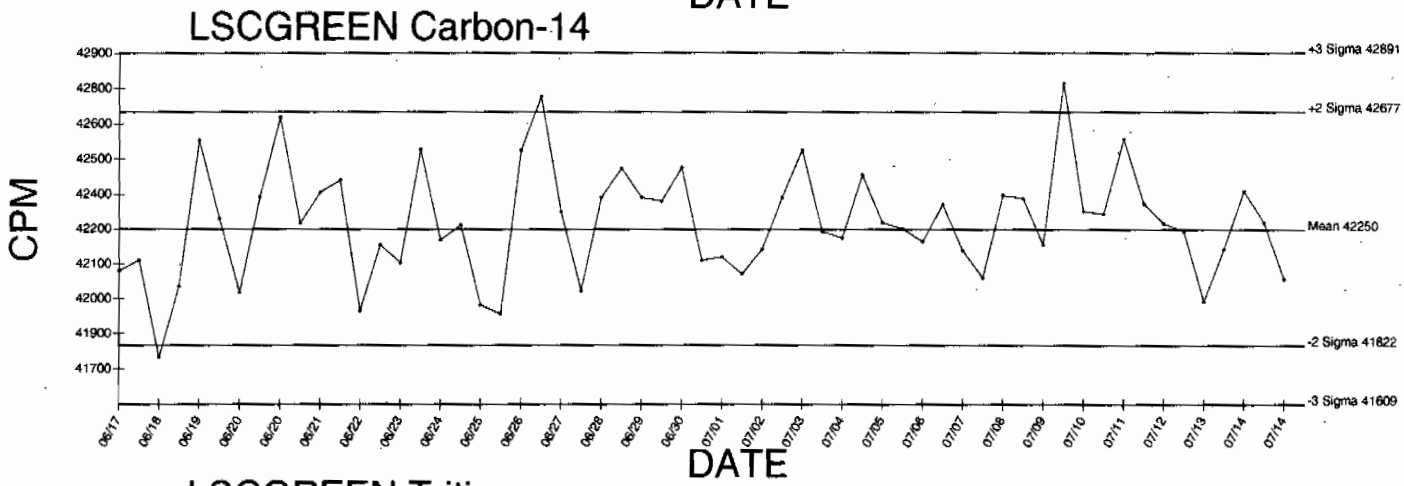

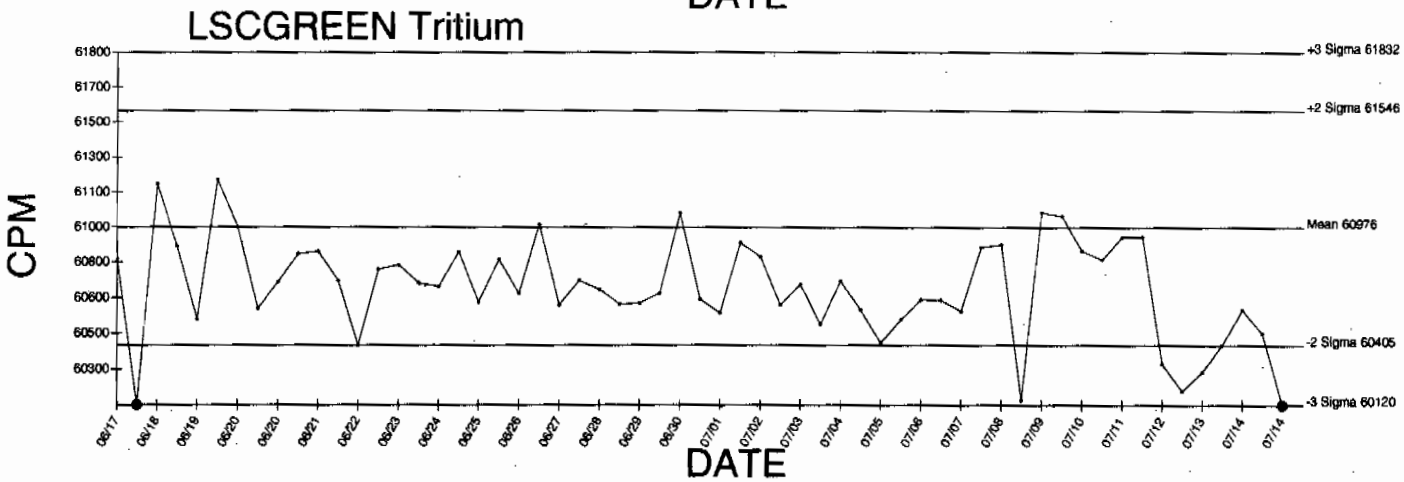

● Denotes Outlier

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:01:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

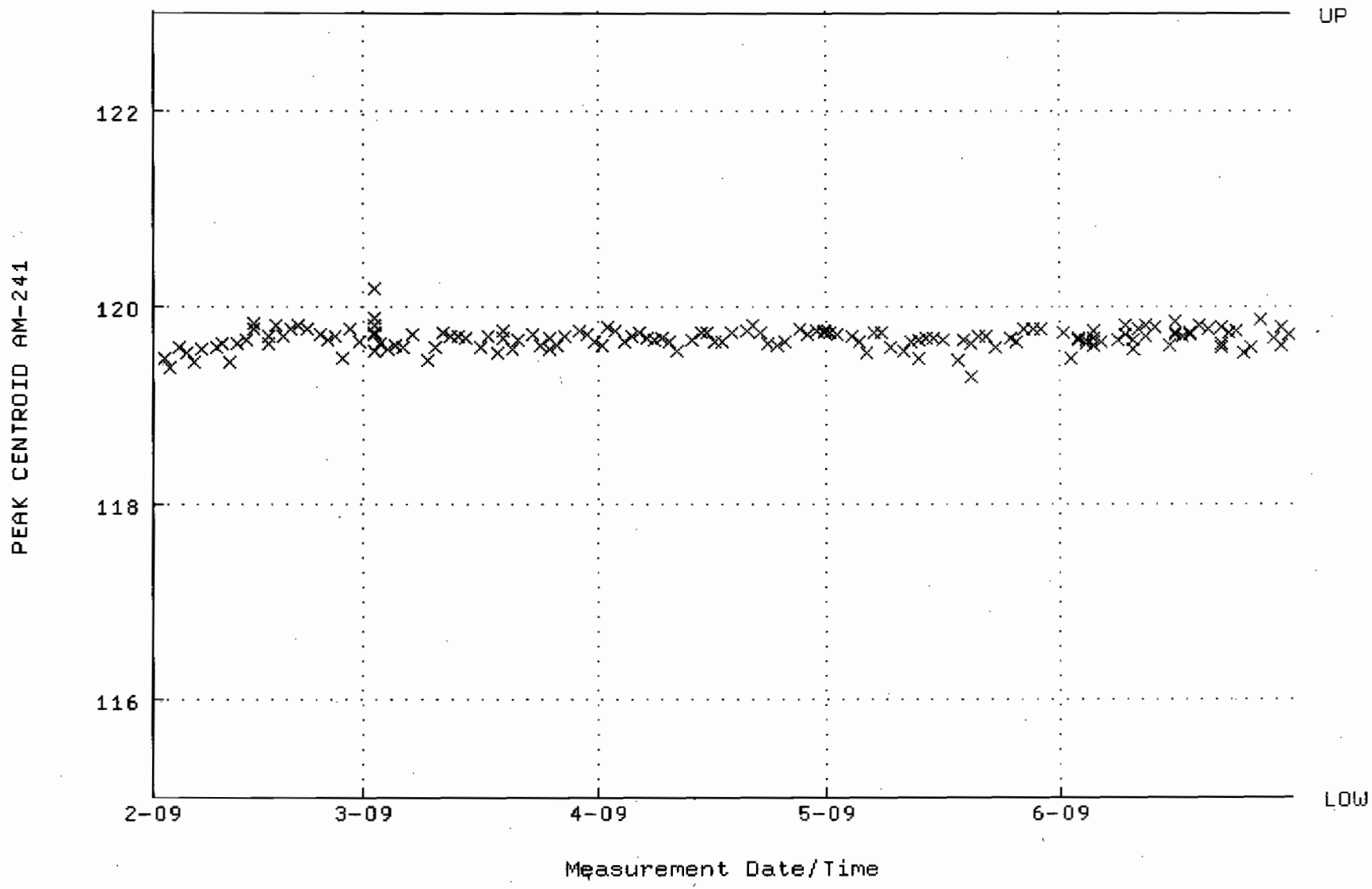

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM01.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:08:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.59940 through 1.87060

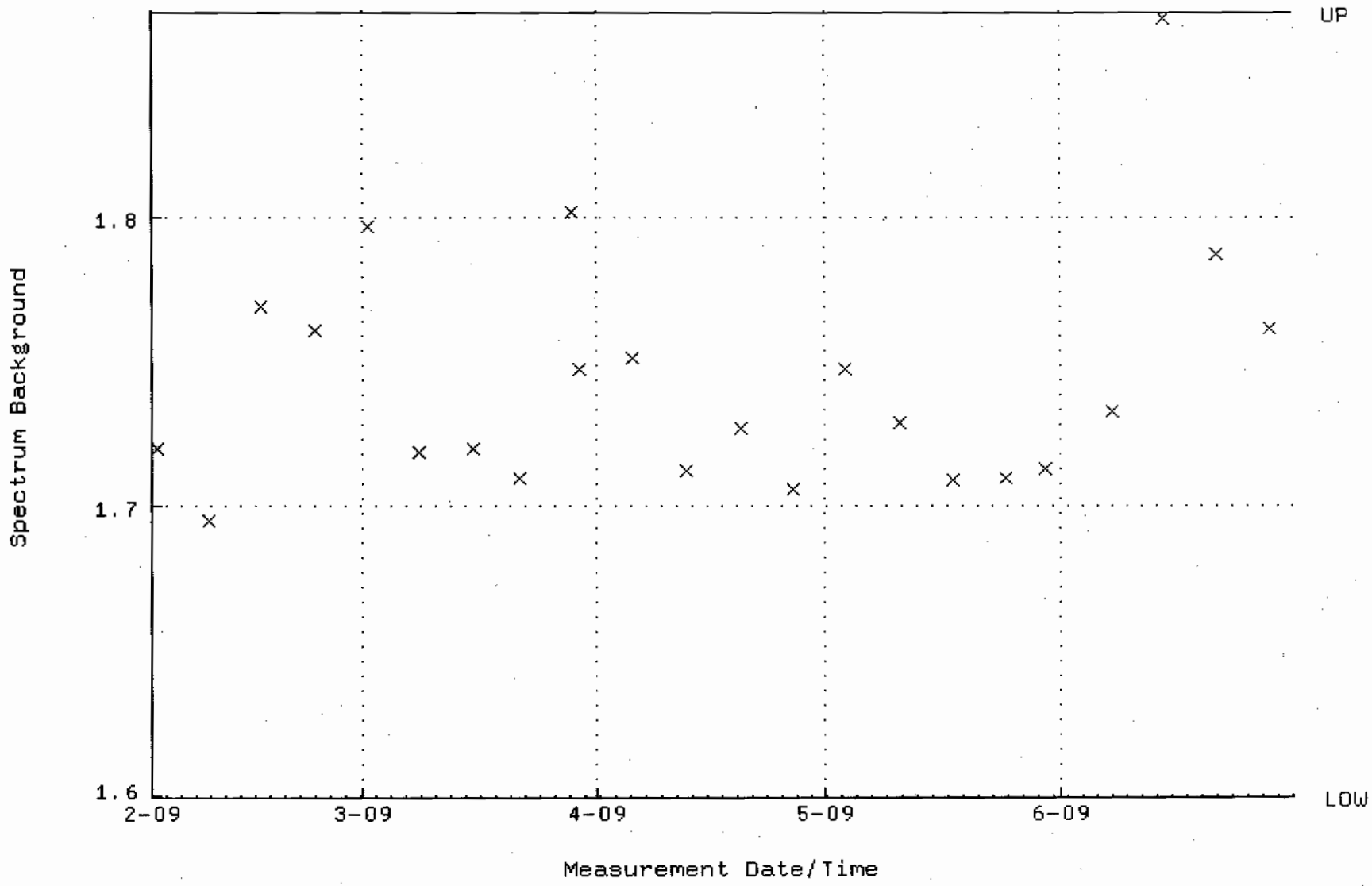

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM06_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 5-FEB-2009 05:58:08 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

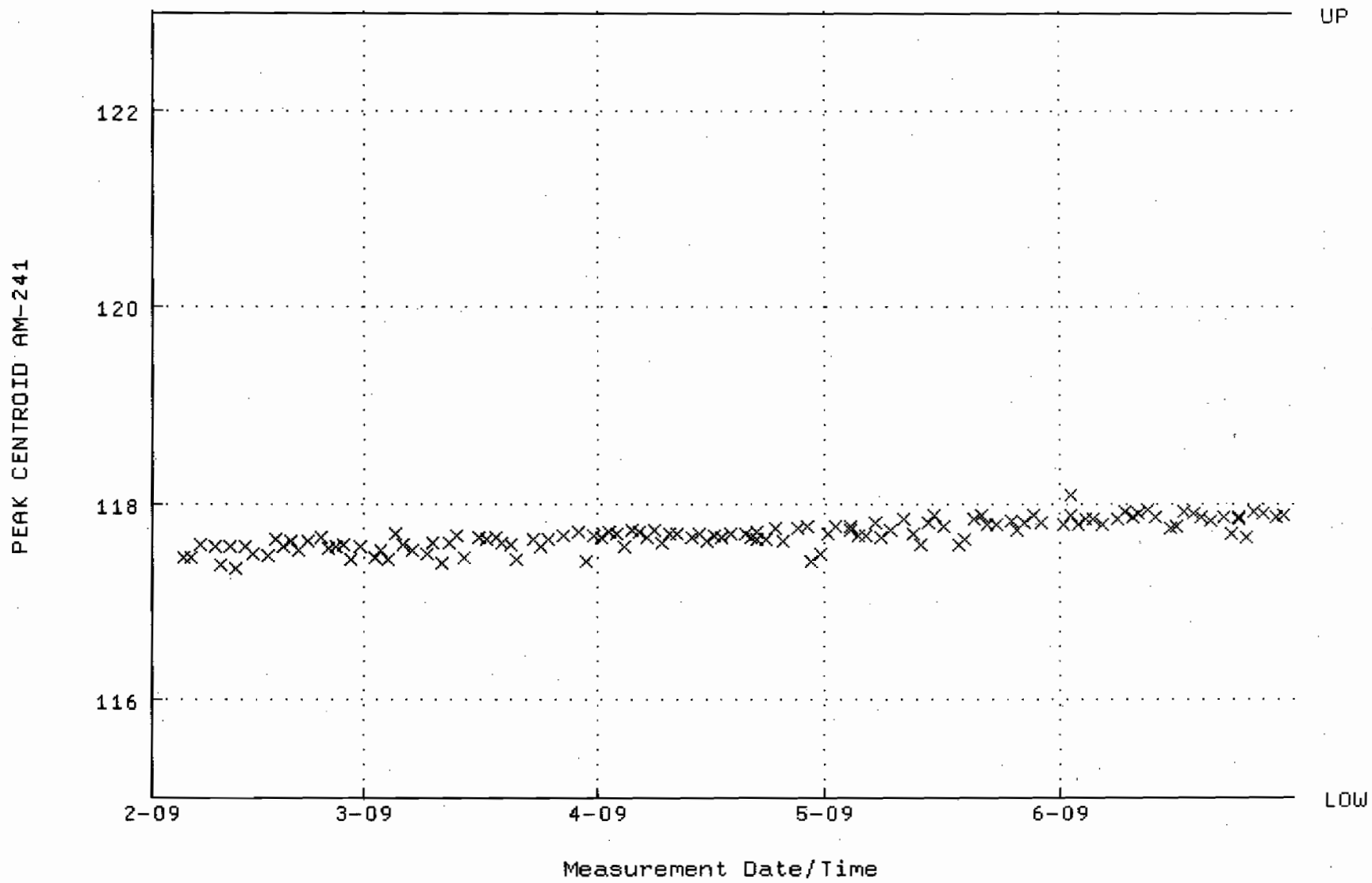

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM06.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.51800 through 1.70270

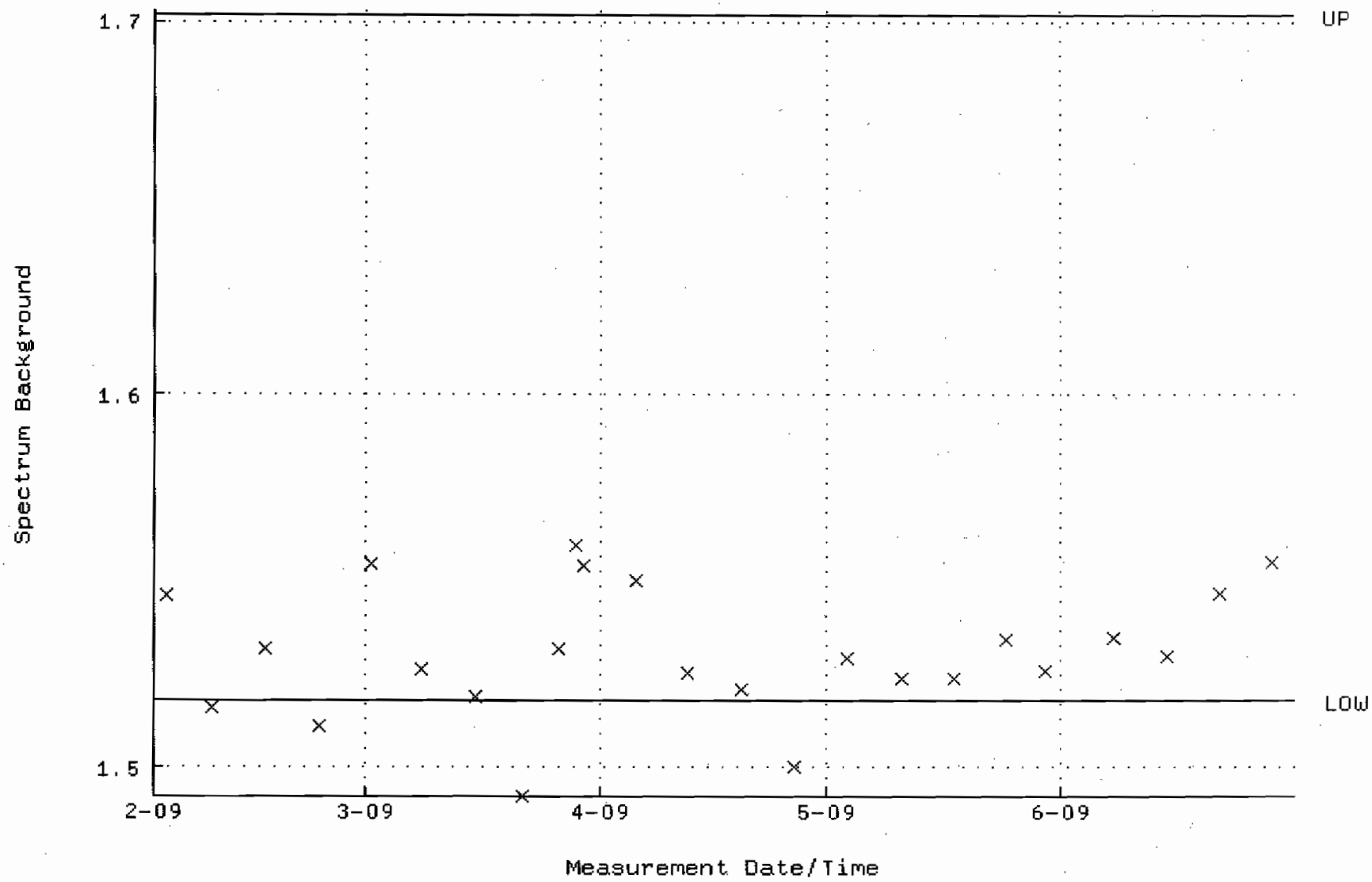

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM08_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-FEB-2009 12:14:25 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

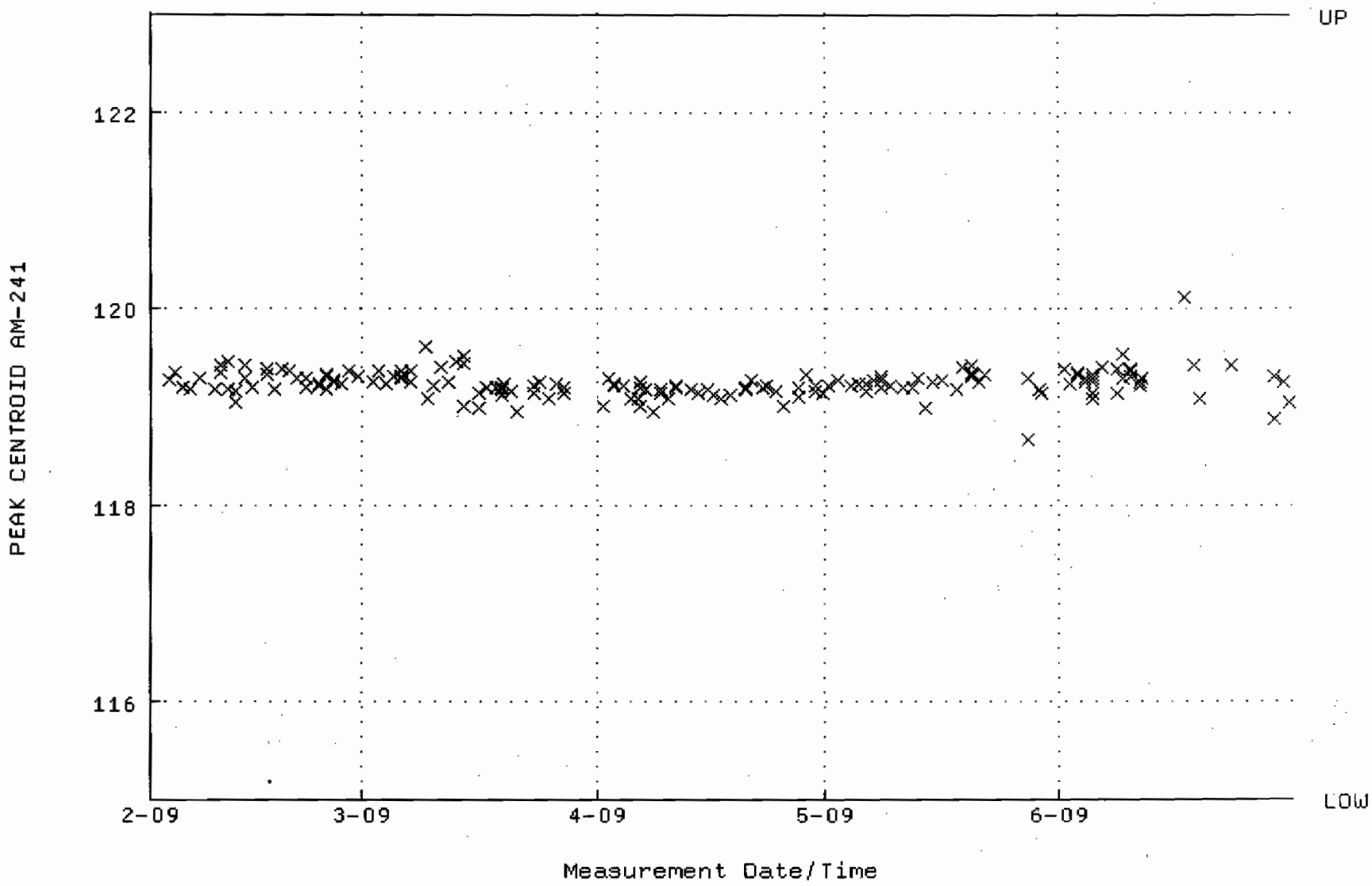

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM08.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.31400 through 1.60600

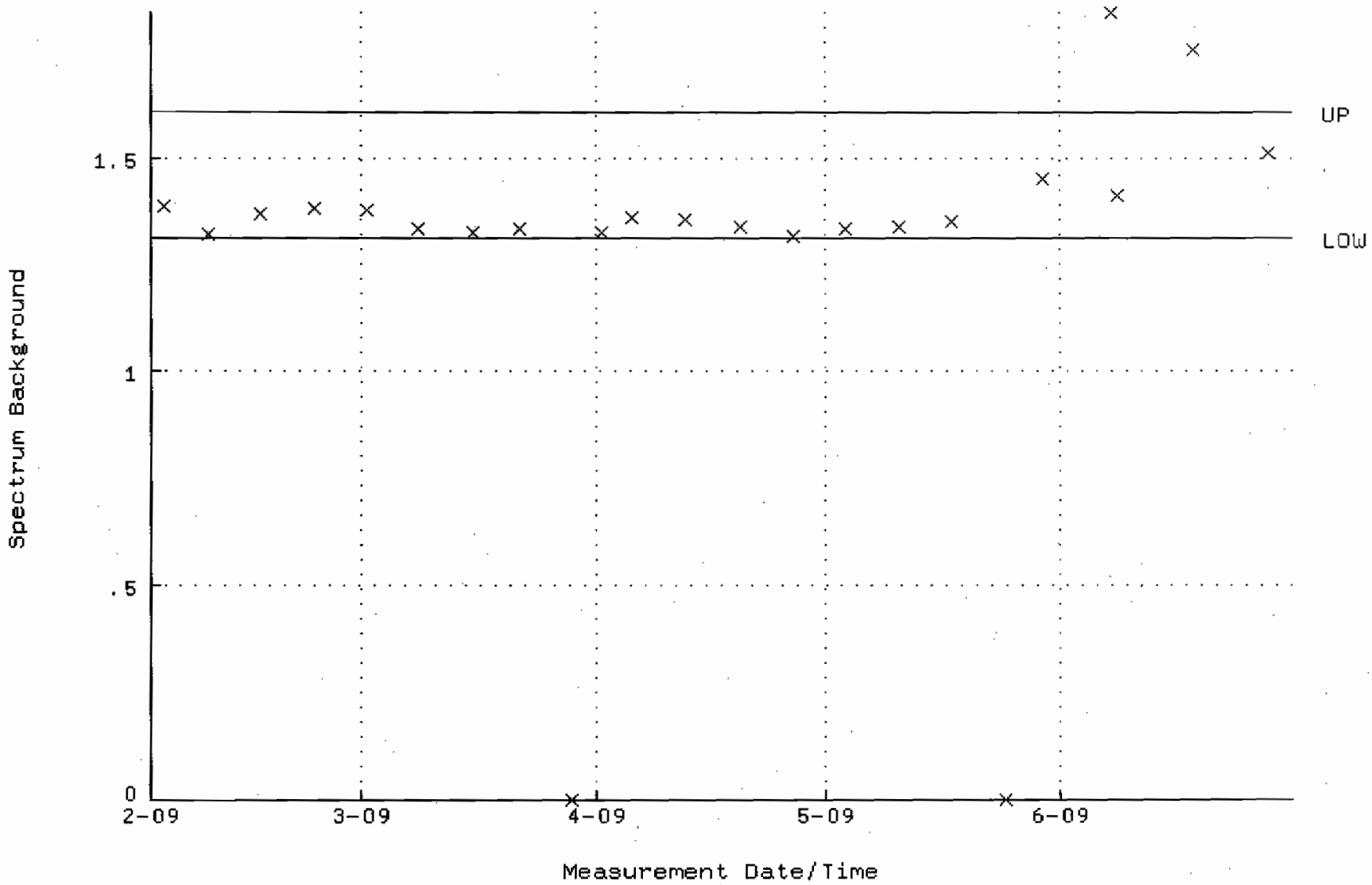

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM09_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:16 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

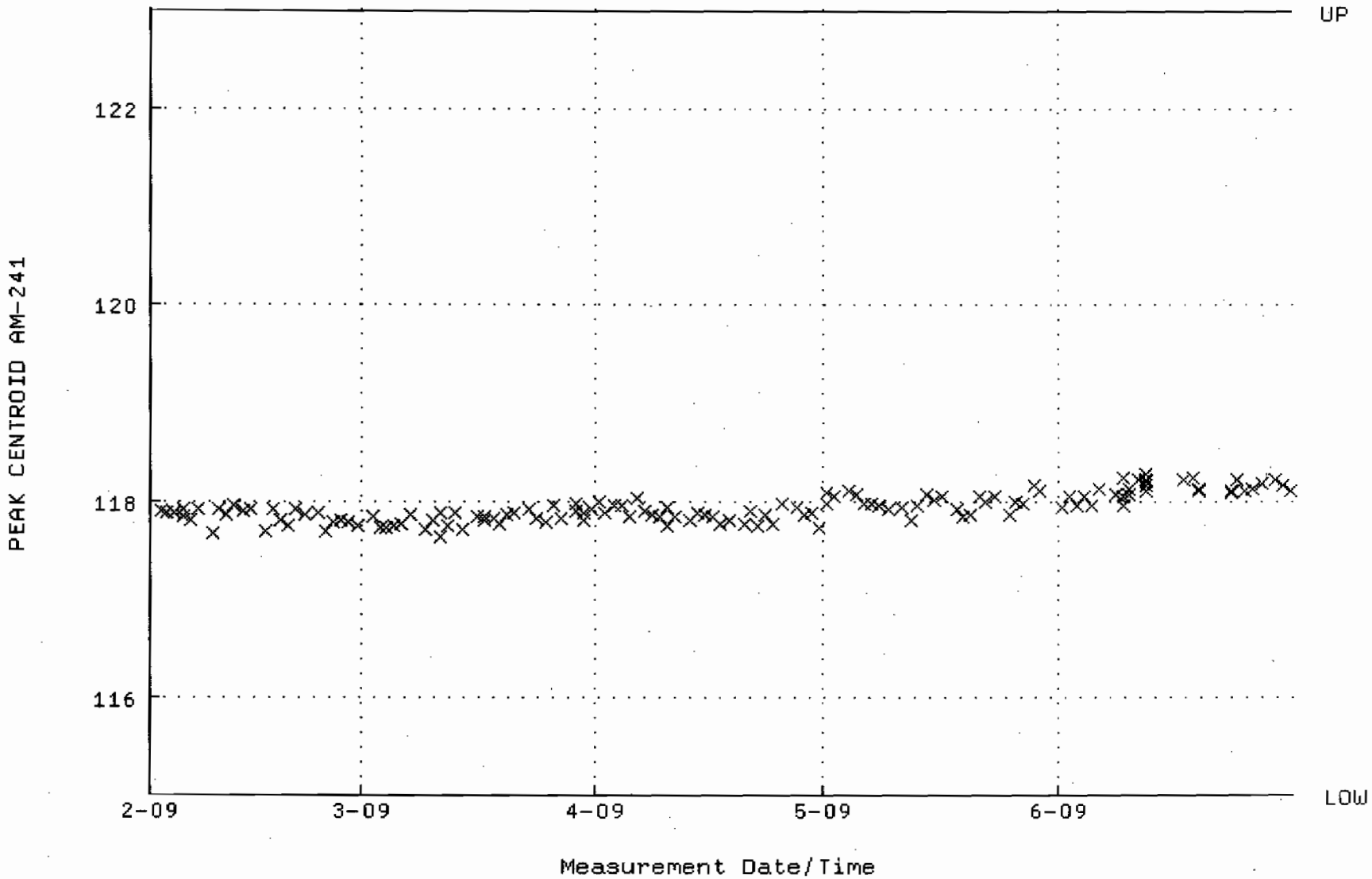

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM09.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.63773 through 2.00167

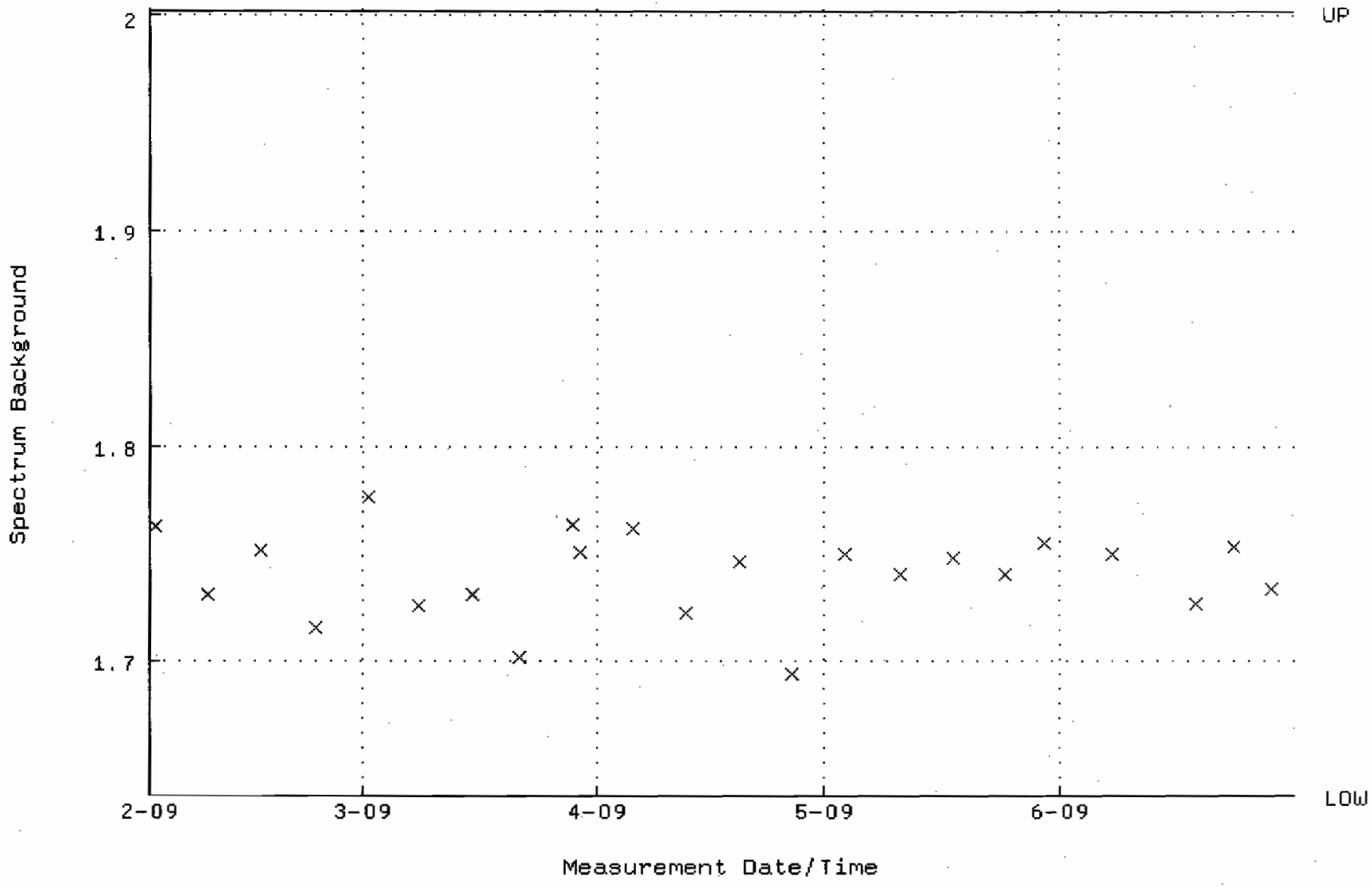

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM10_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:33 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

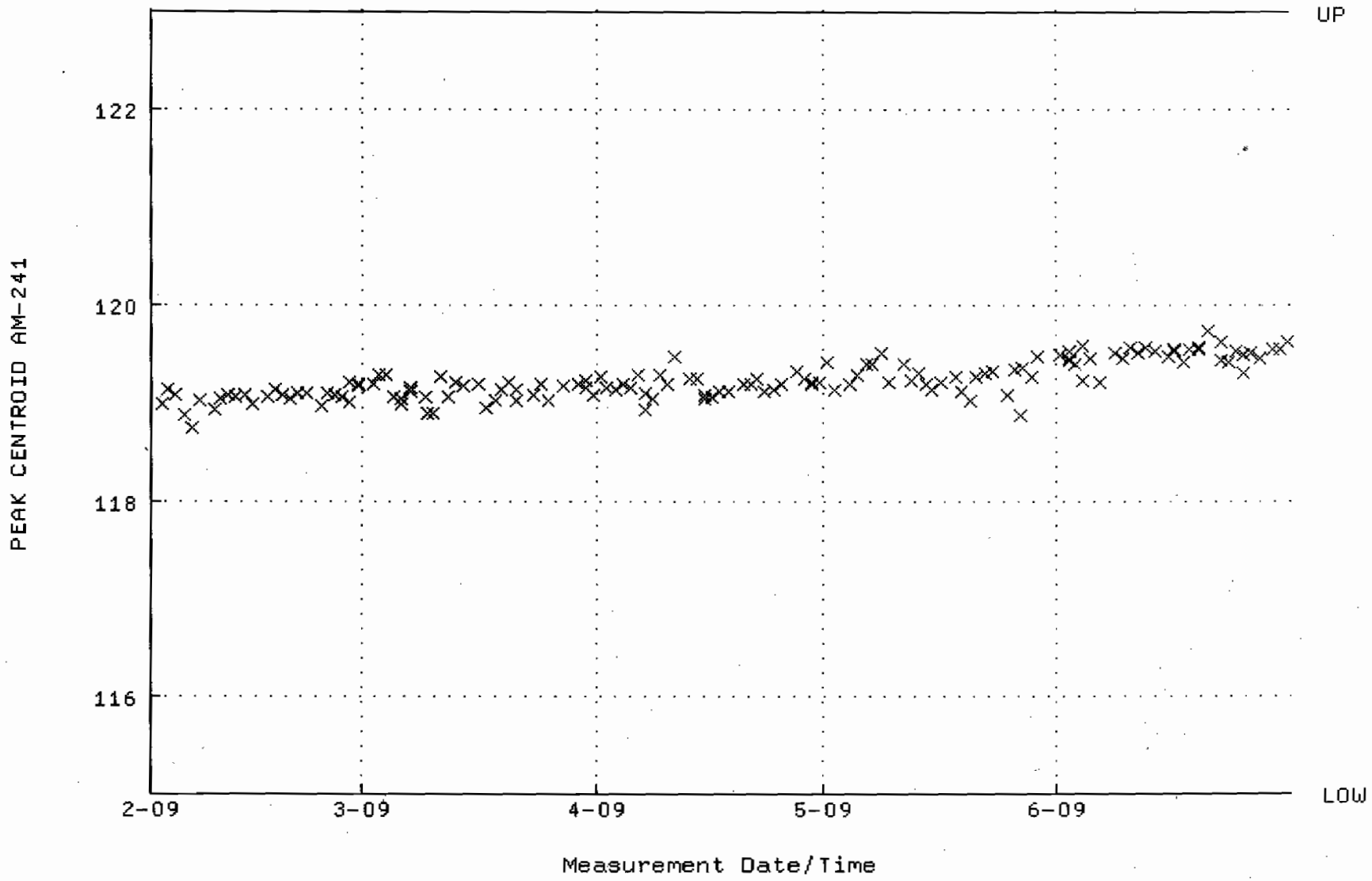

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM10.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.36818 through 1.67222

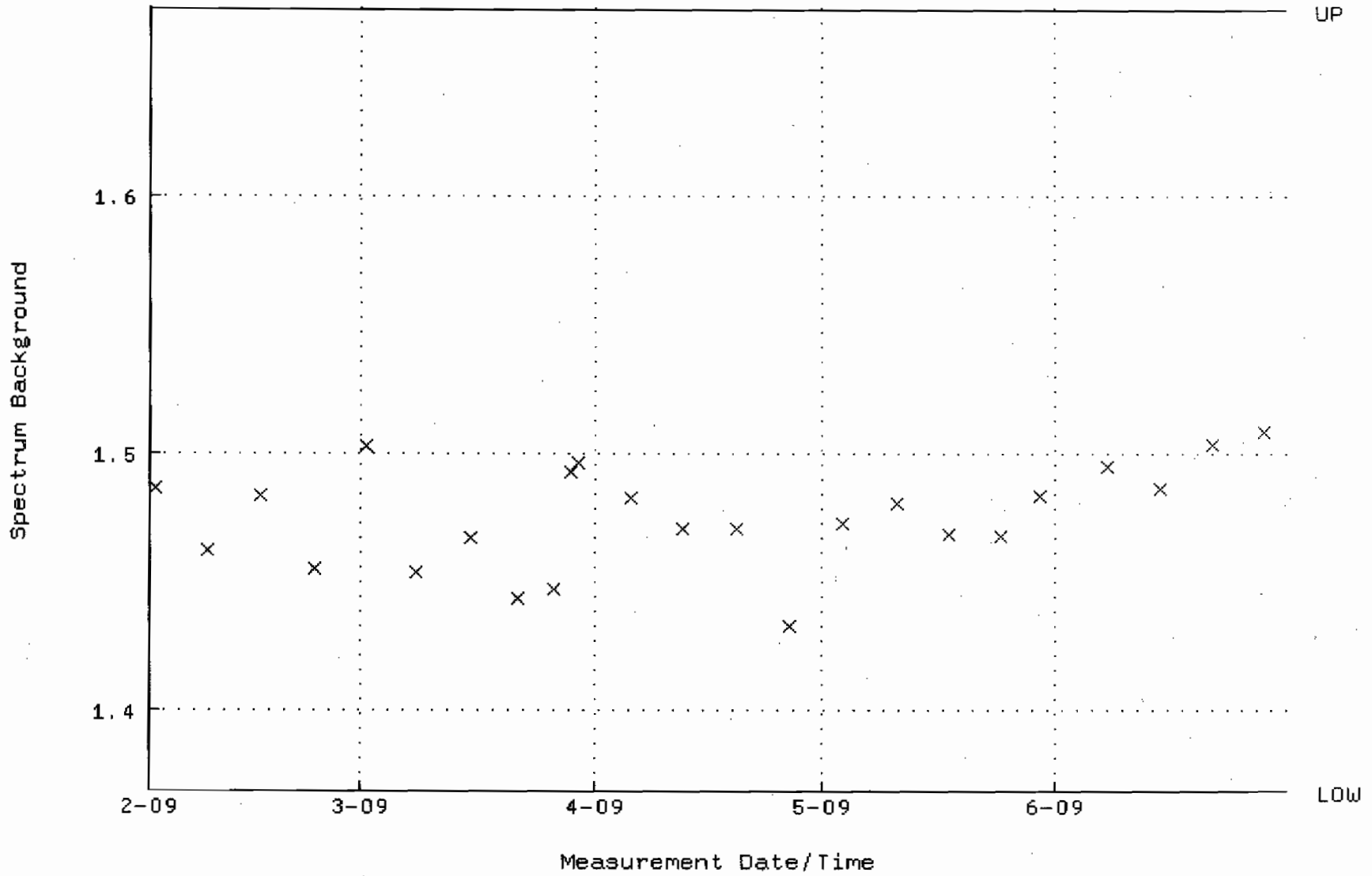

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM11_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:41 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

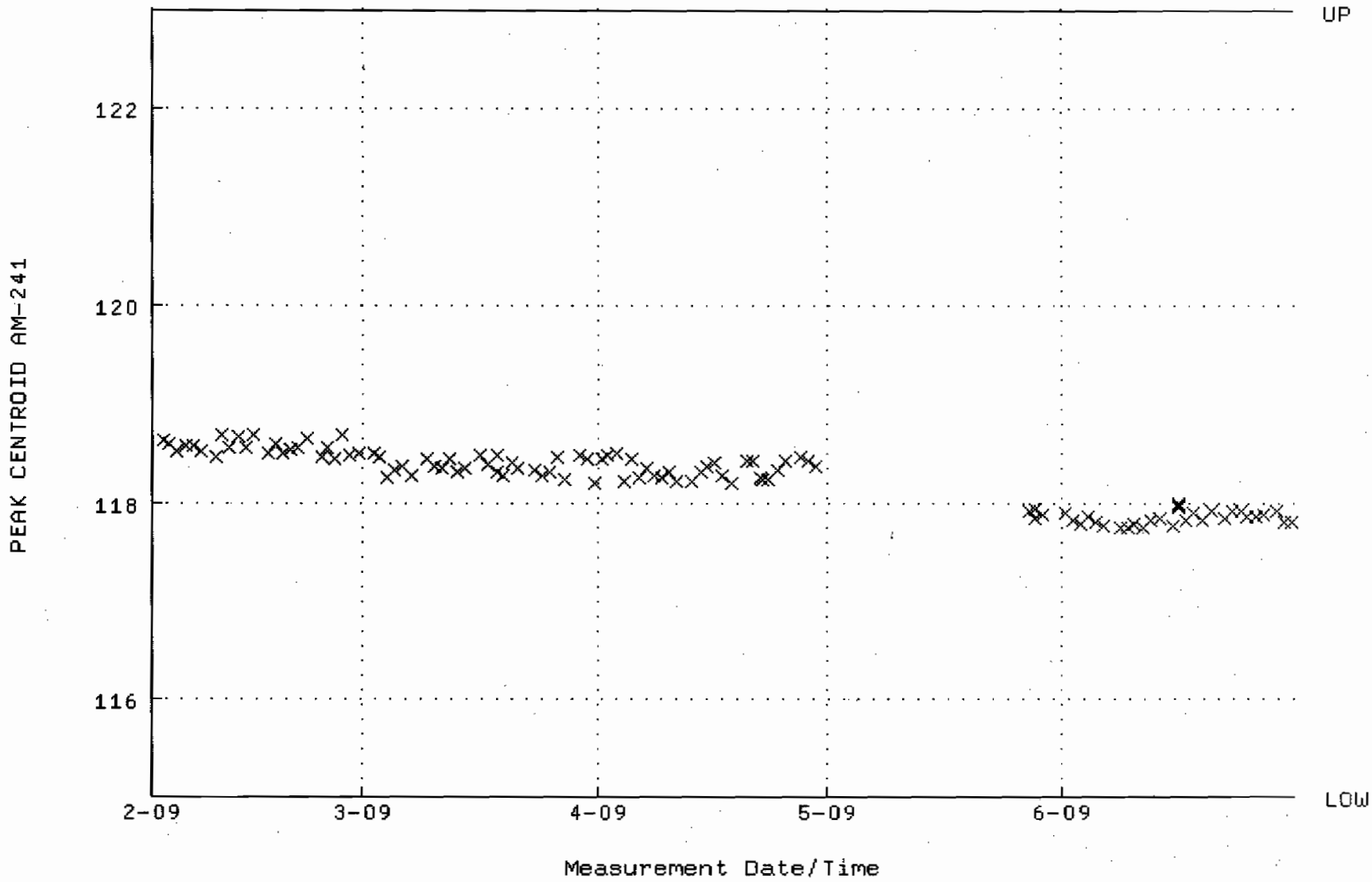

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM11.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:39 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.47699 through 1.80520

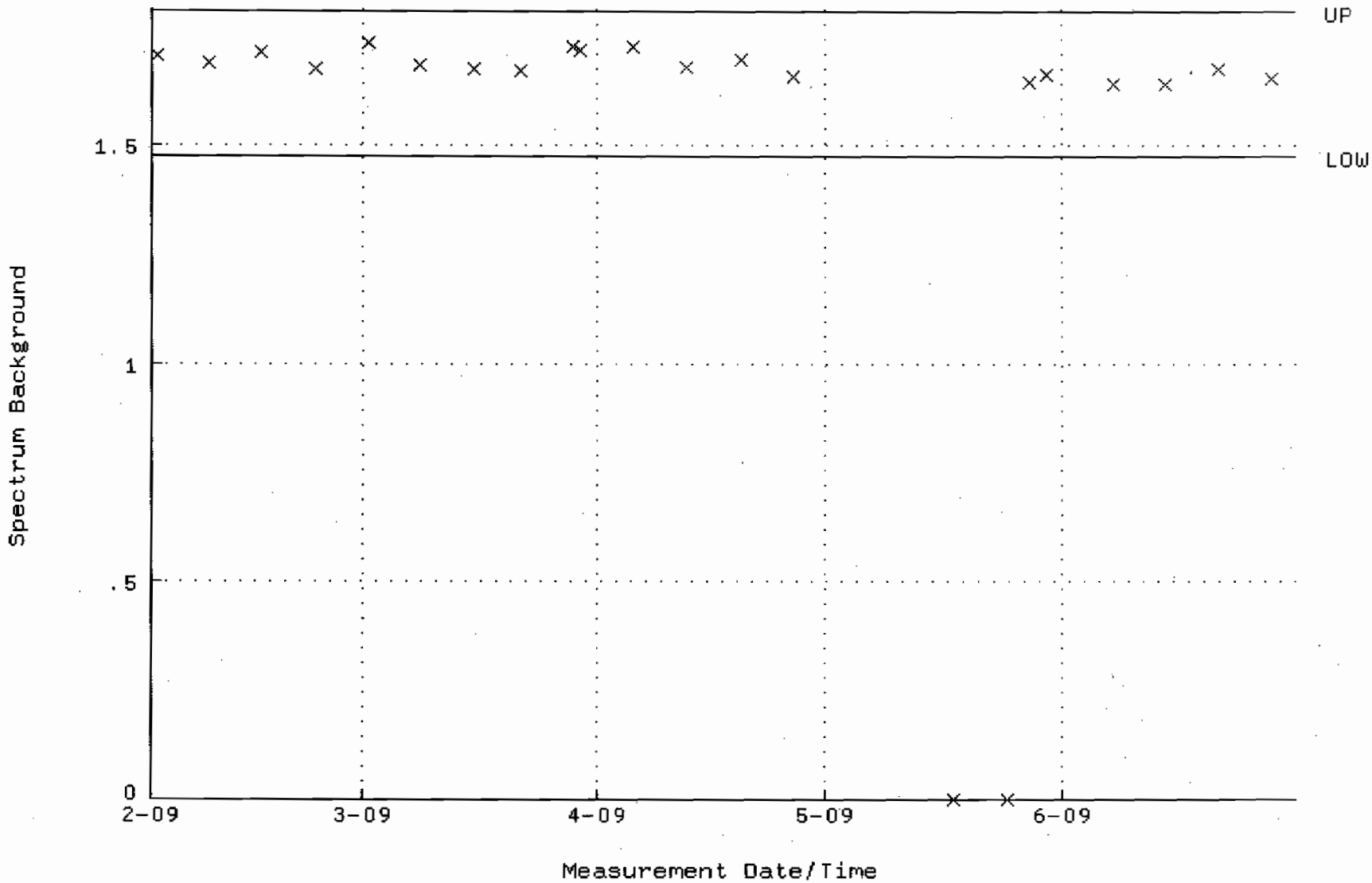

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM12_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:49 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

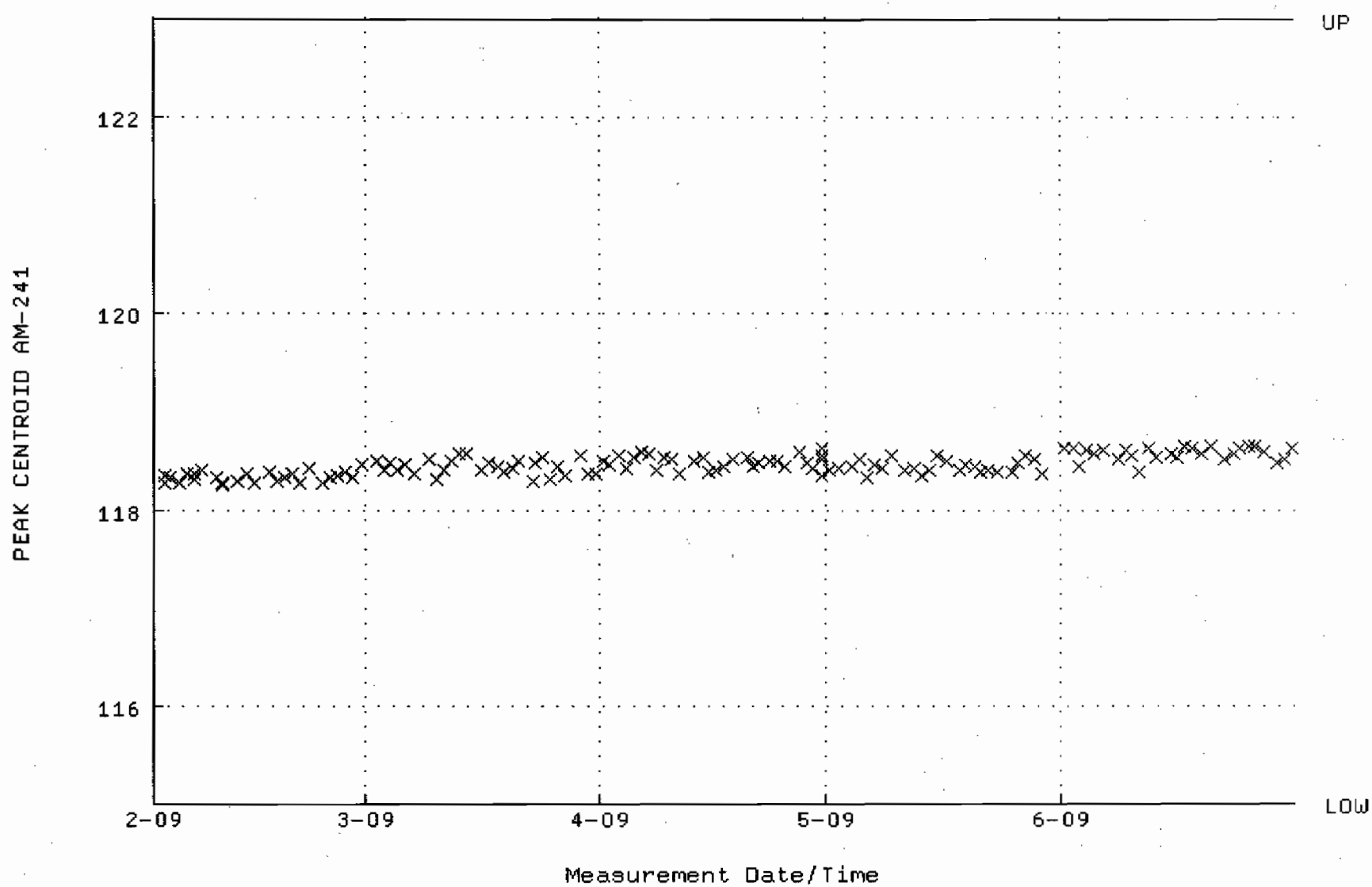

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM12.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:10:52 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.40364 through 1.71556

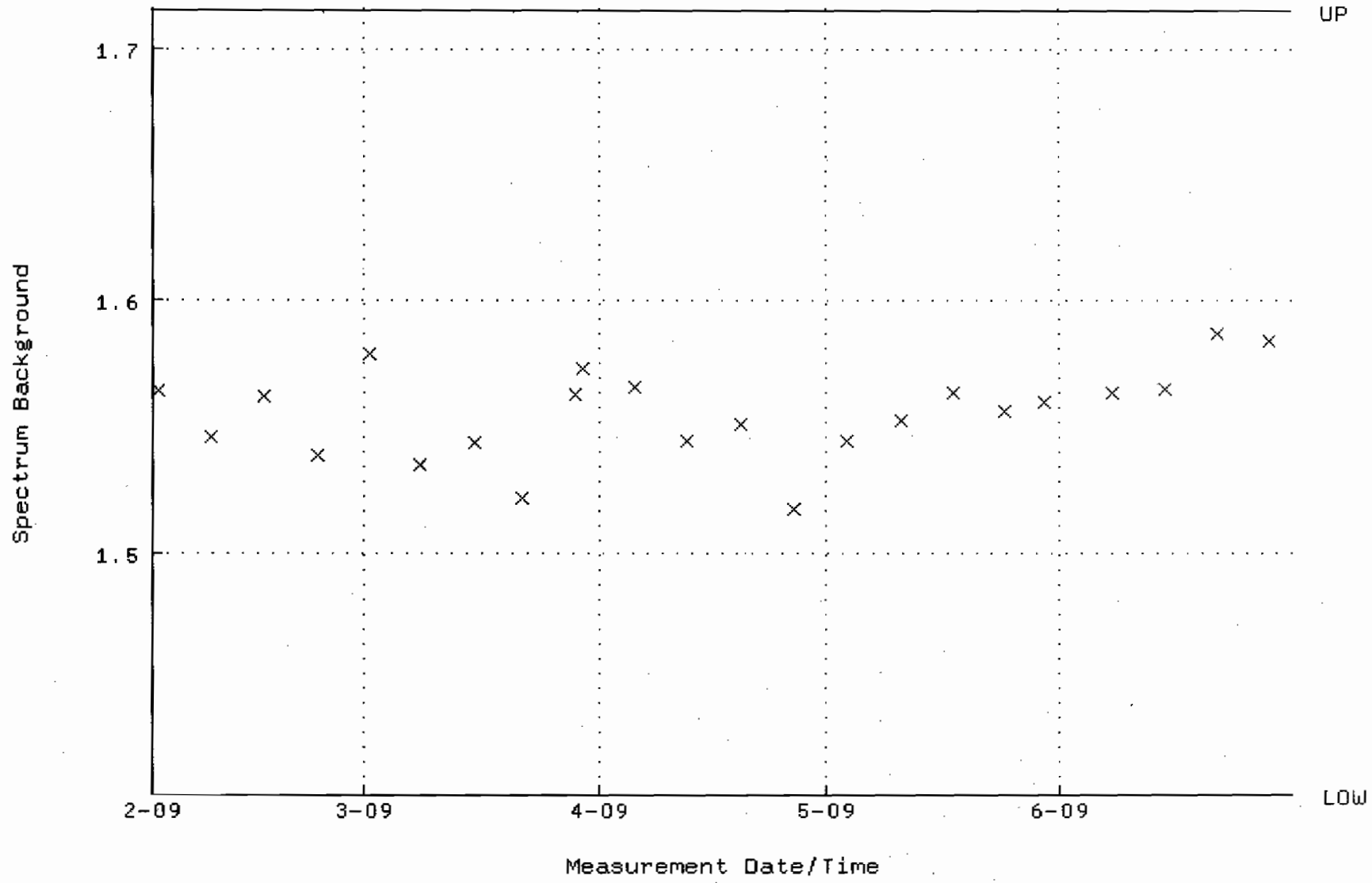

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-FEB-2009 16:33:12 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

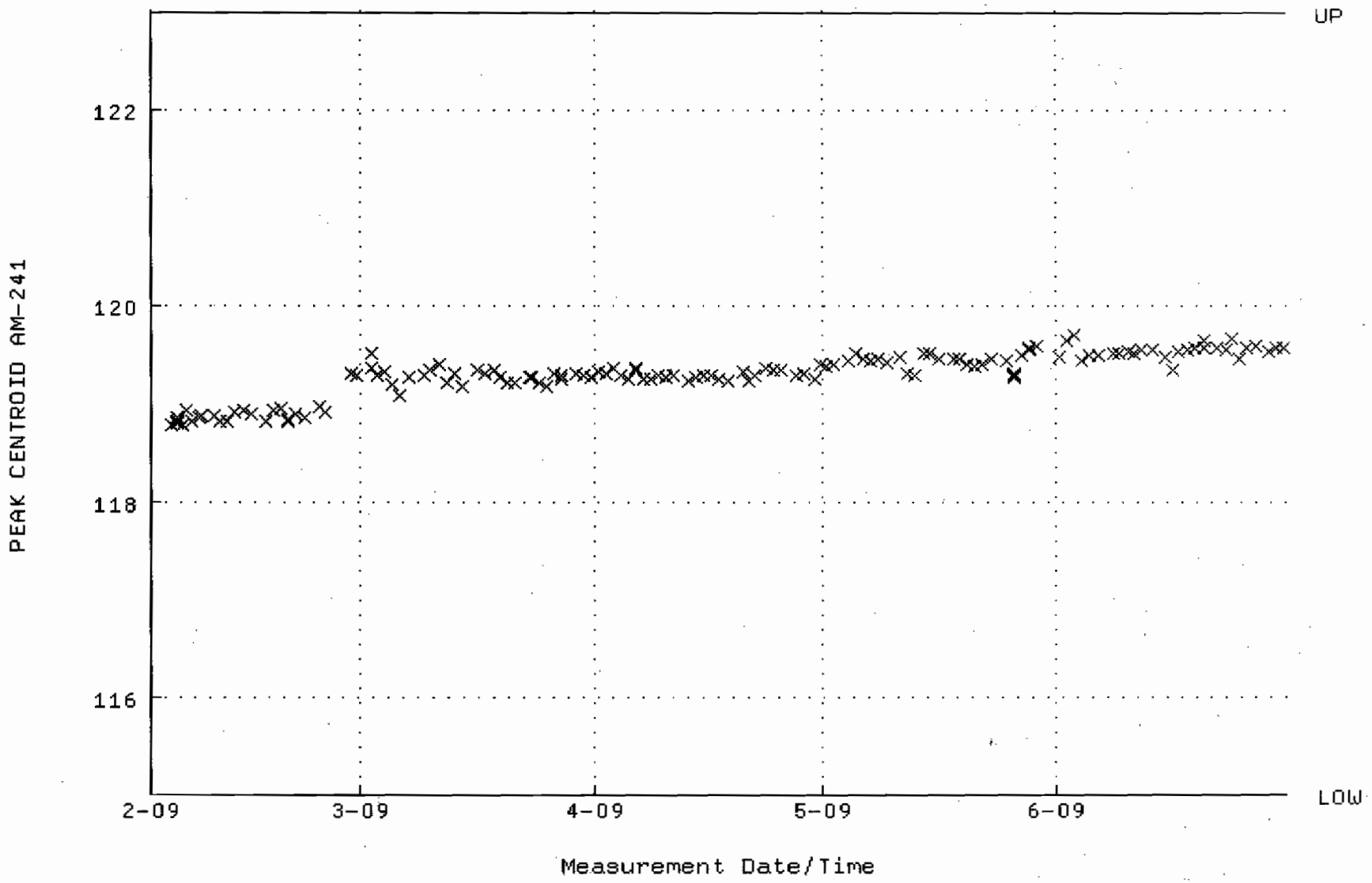

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM13.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:24 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.98827 through 3.65233

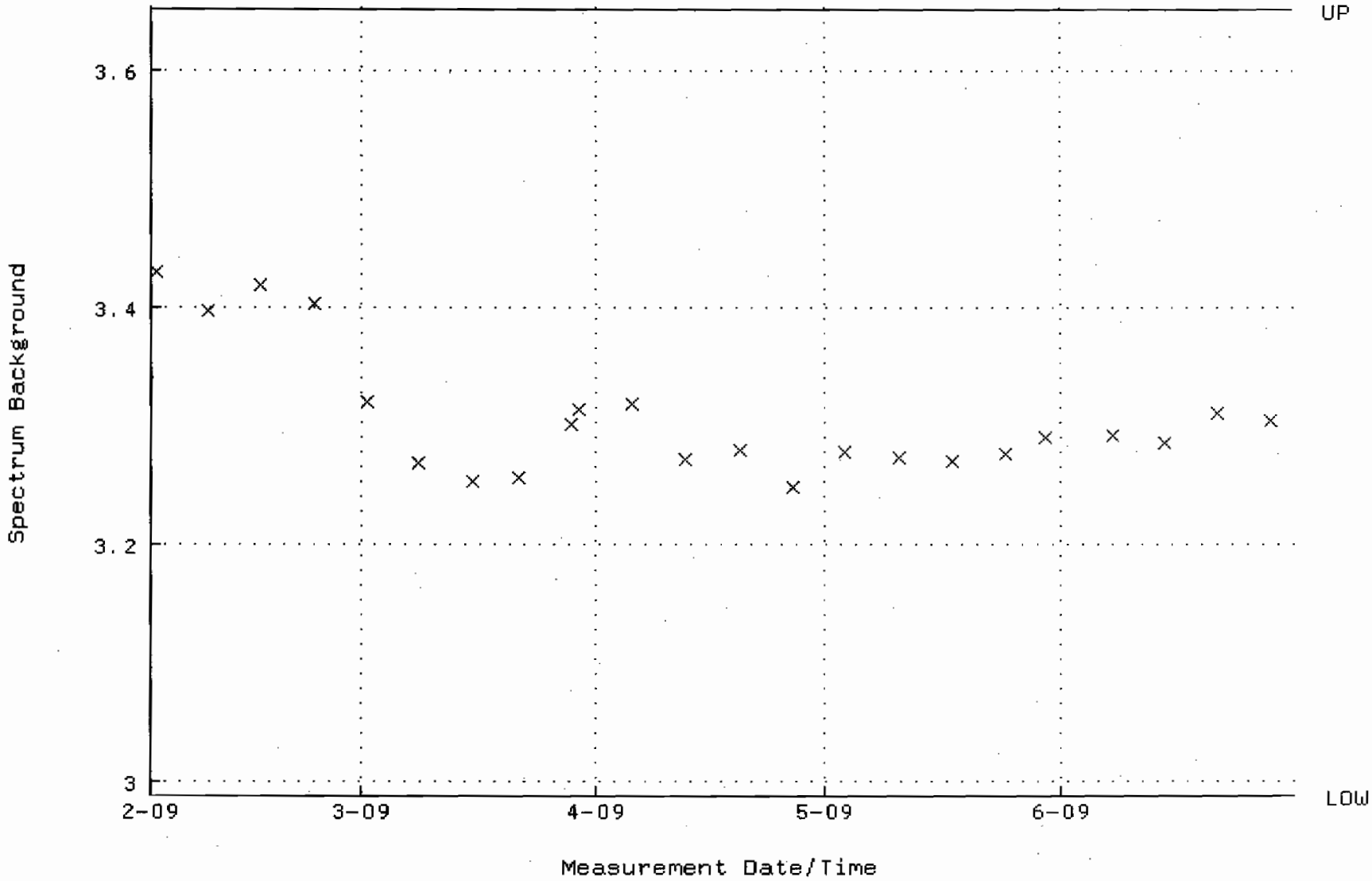

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM14_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:24 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

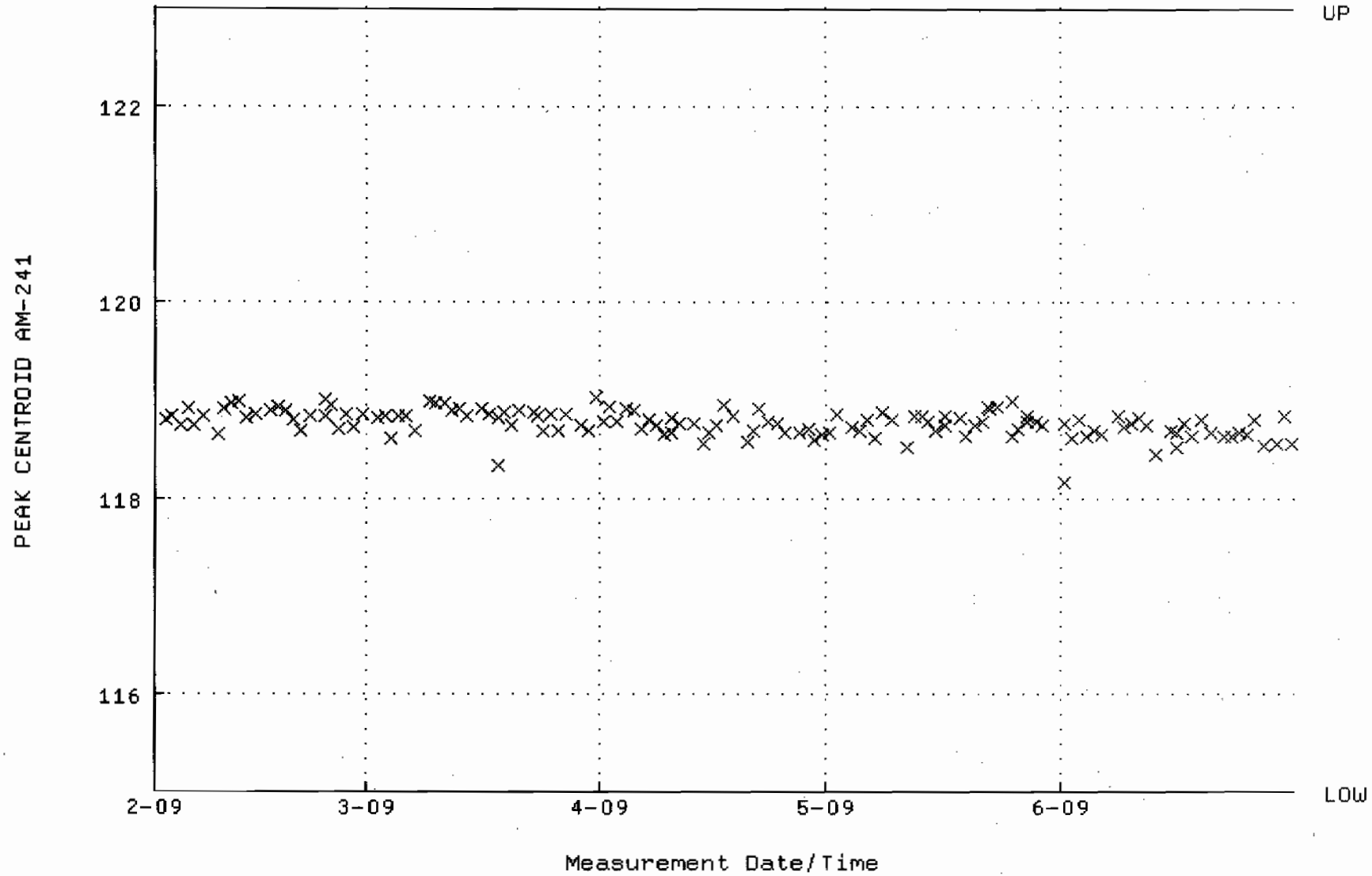

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM14.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:40 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.34064 through 1.63856

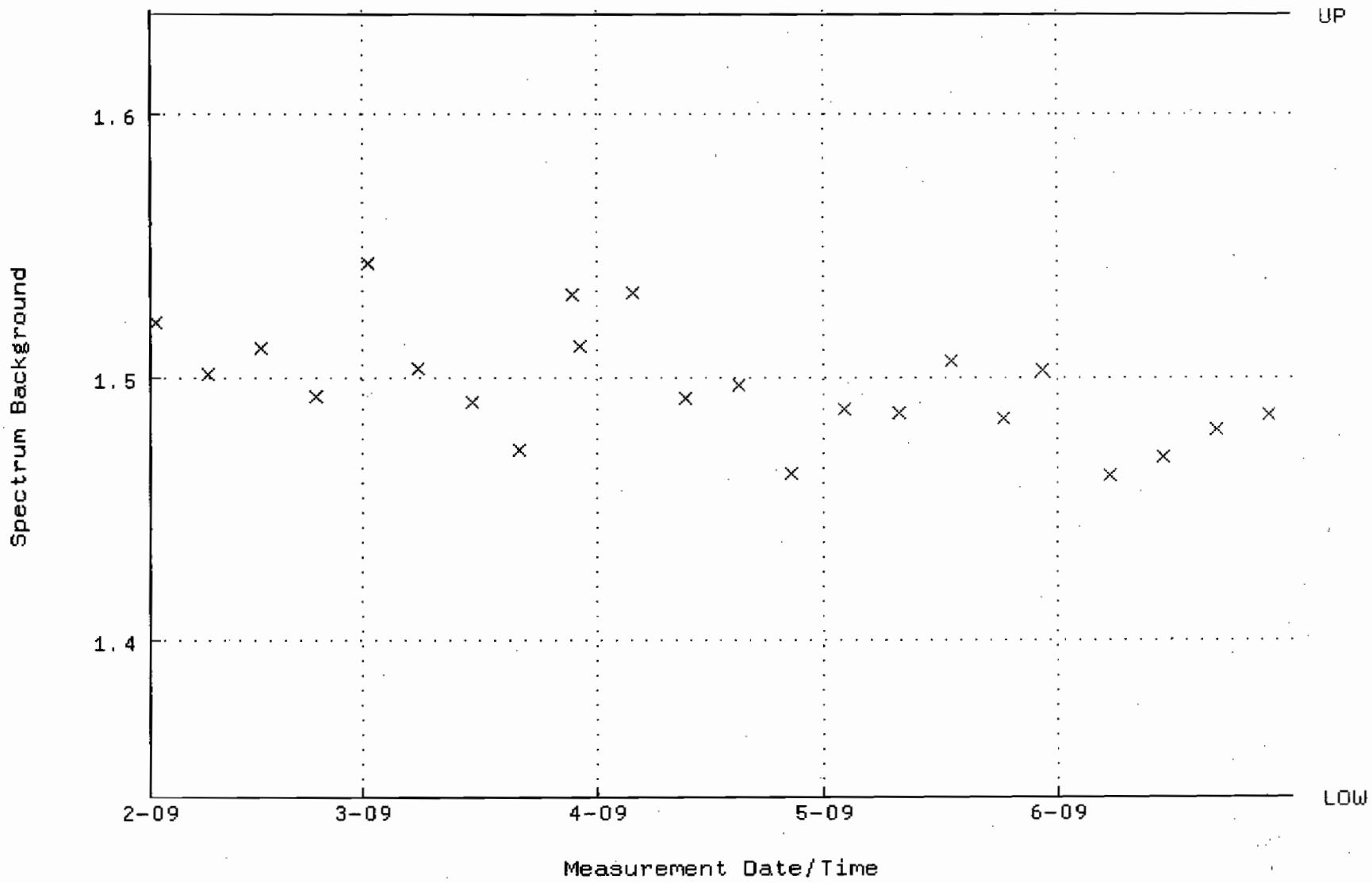

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM15_CAN.QAF;1
Parameter Name : PSCENTRO-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:28:58 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

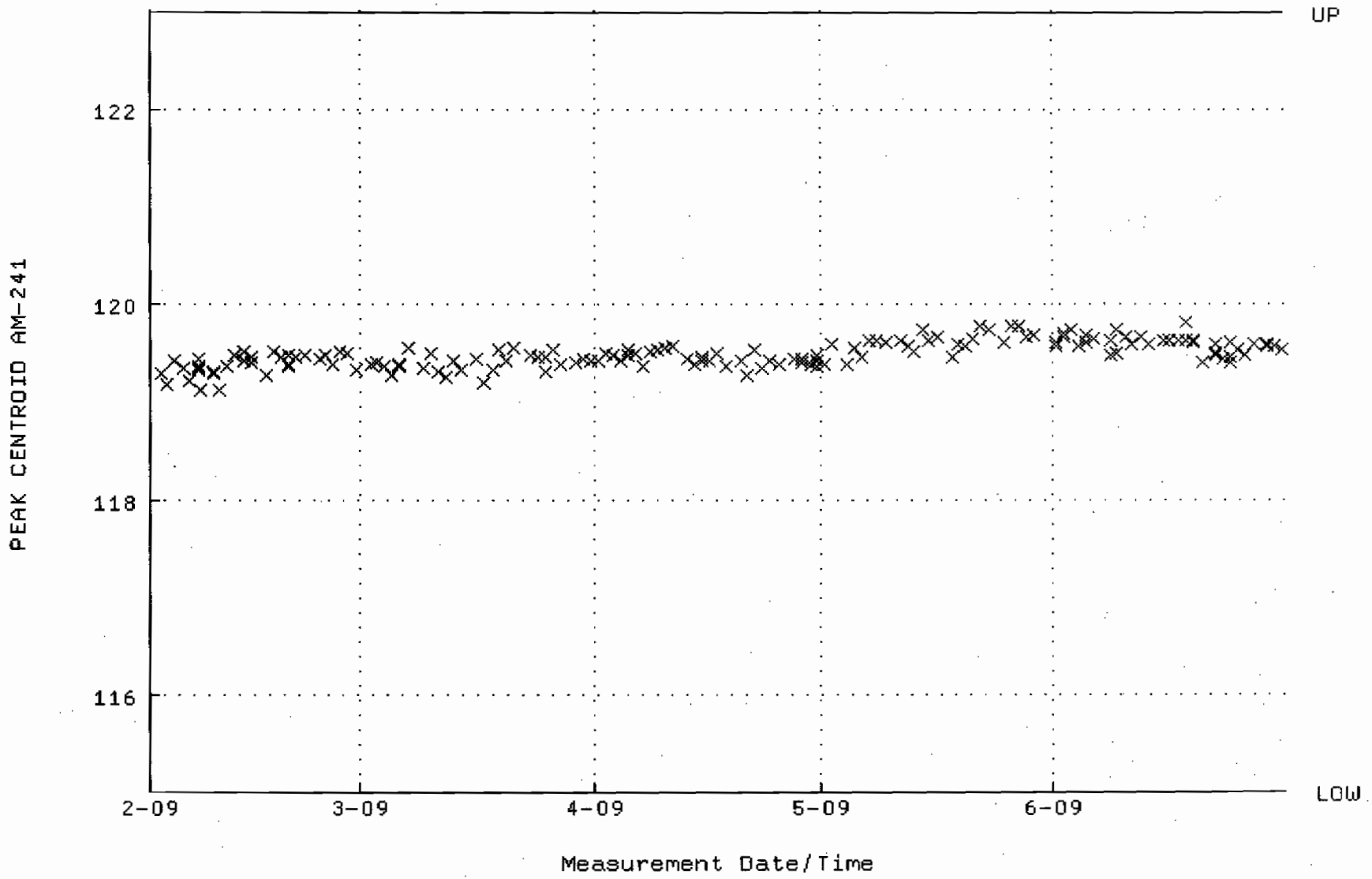

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM15.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:53 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.53342 through 1.87418

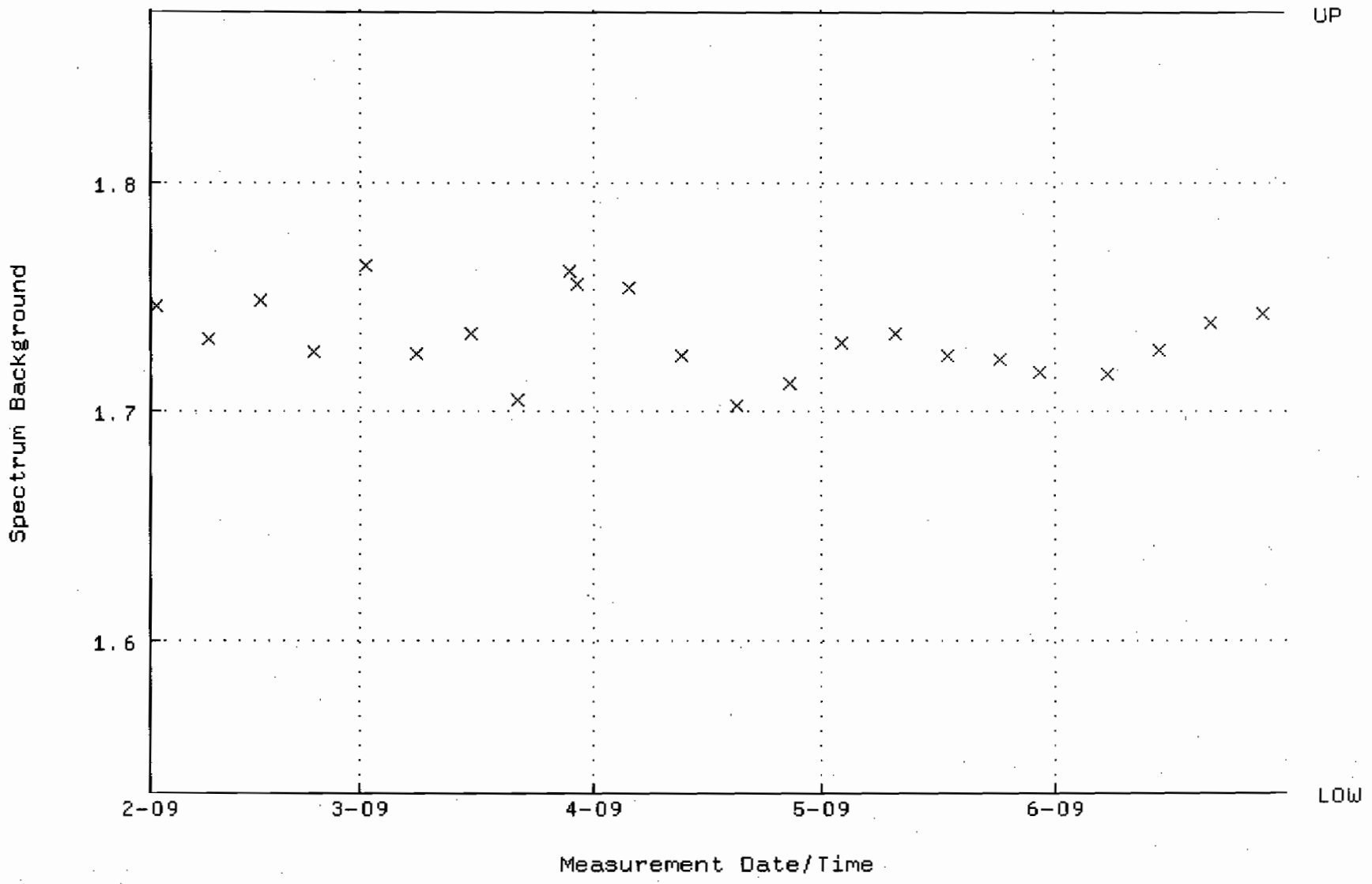

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

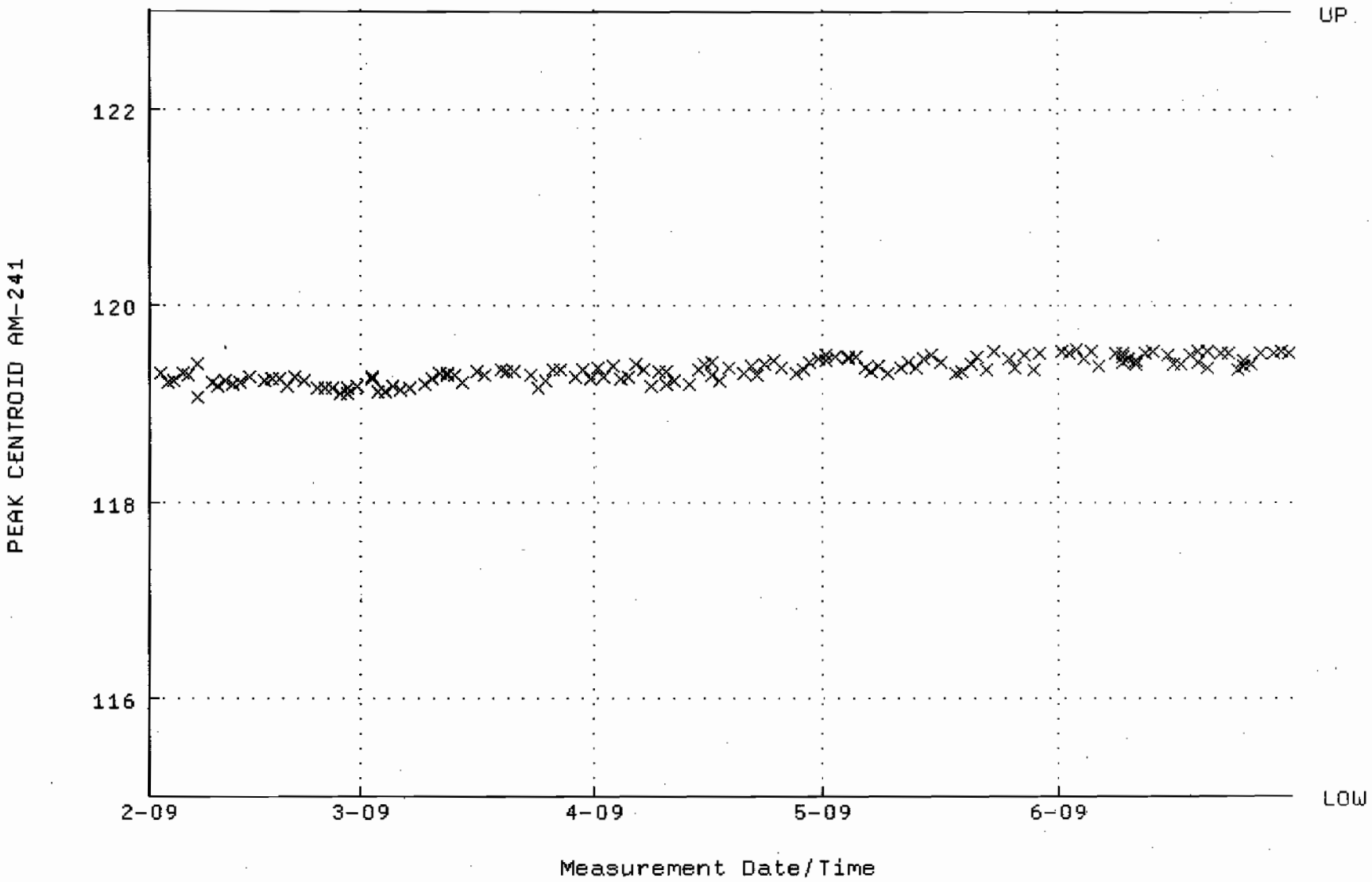

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM16.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:06 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.55150 through 1.89585

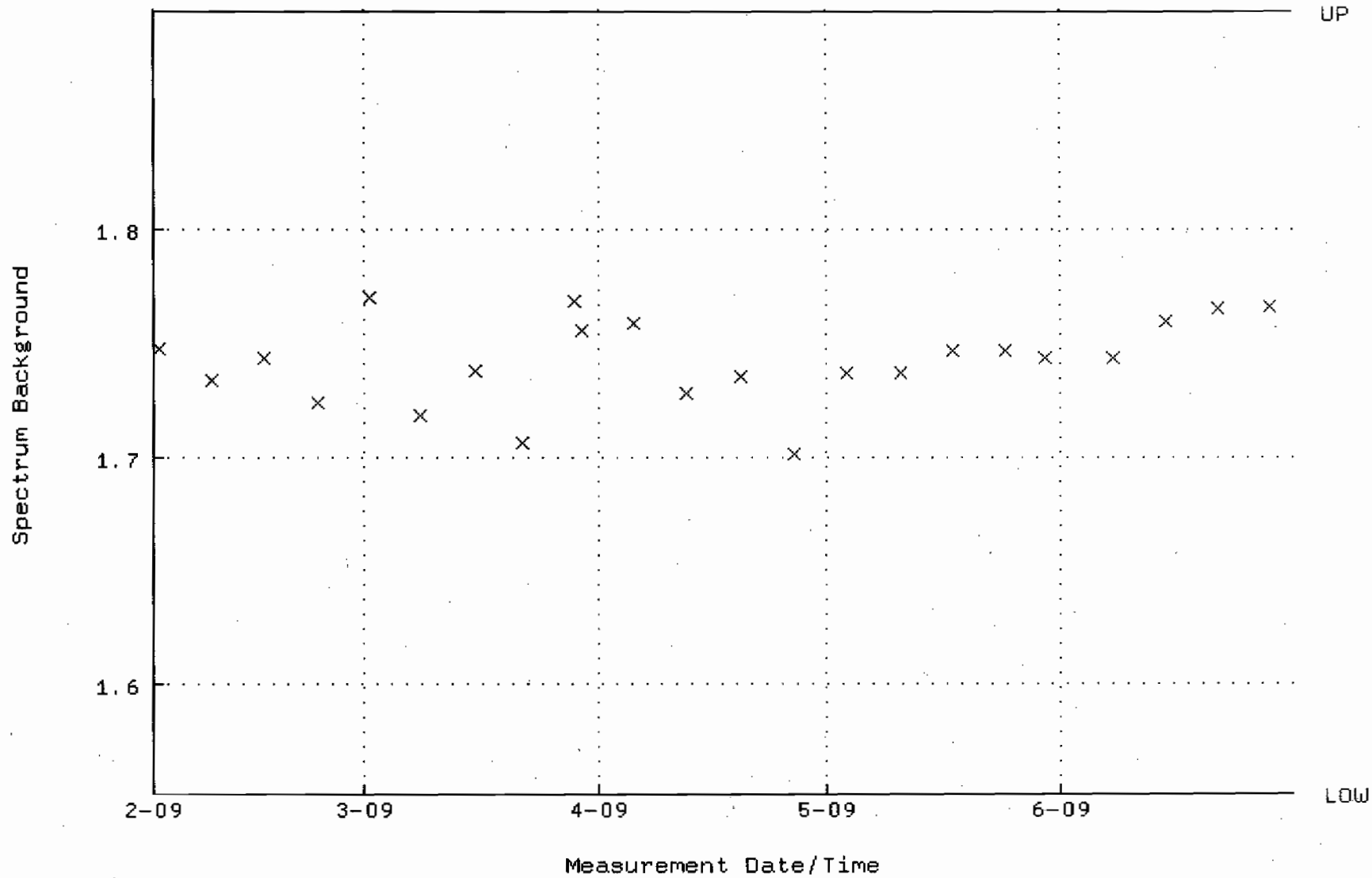

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:14:08 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

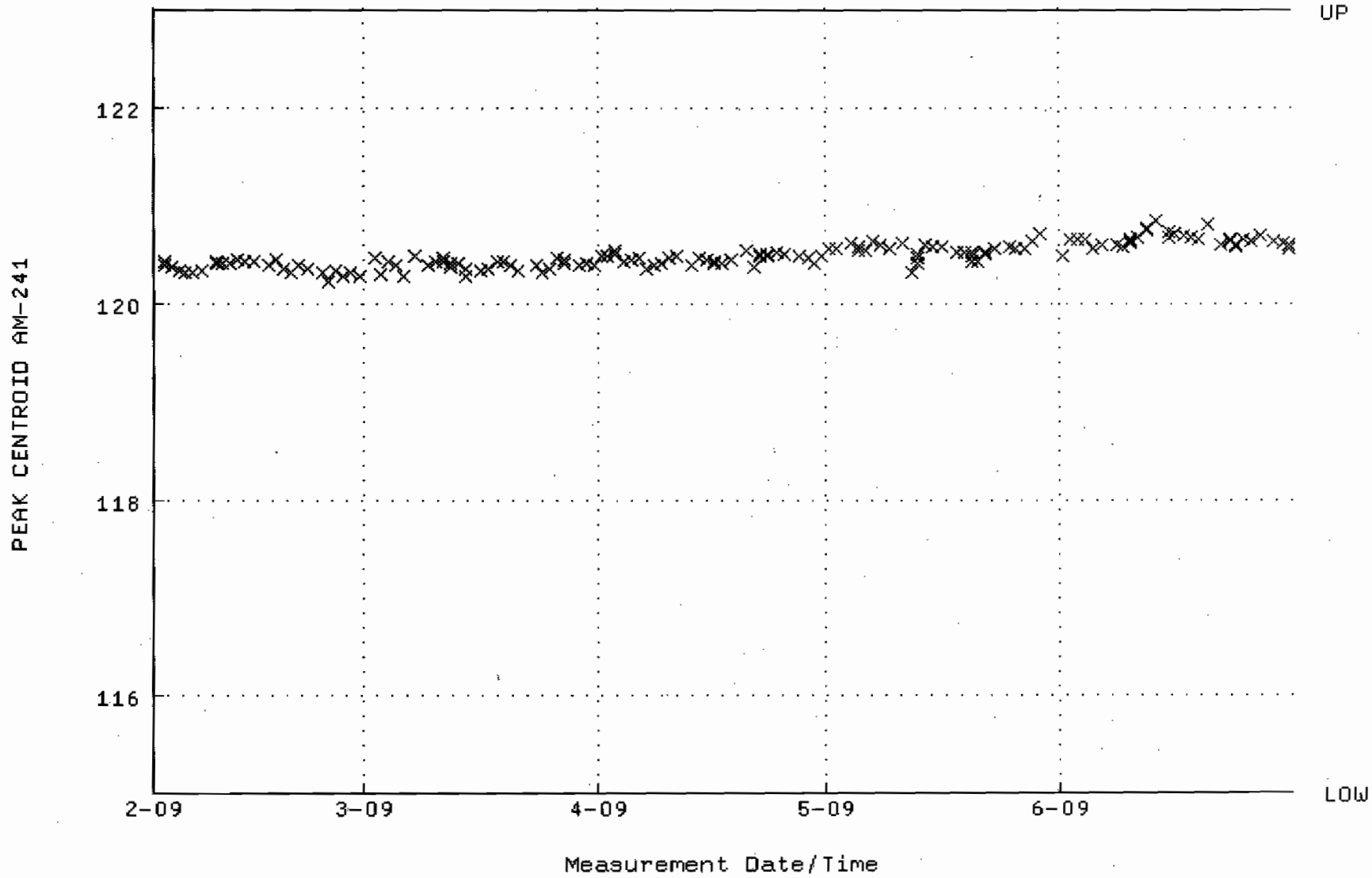

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM17.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 2-FEB-2009 19:20:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.31148 through 1.60292

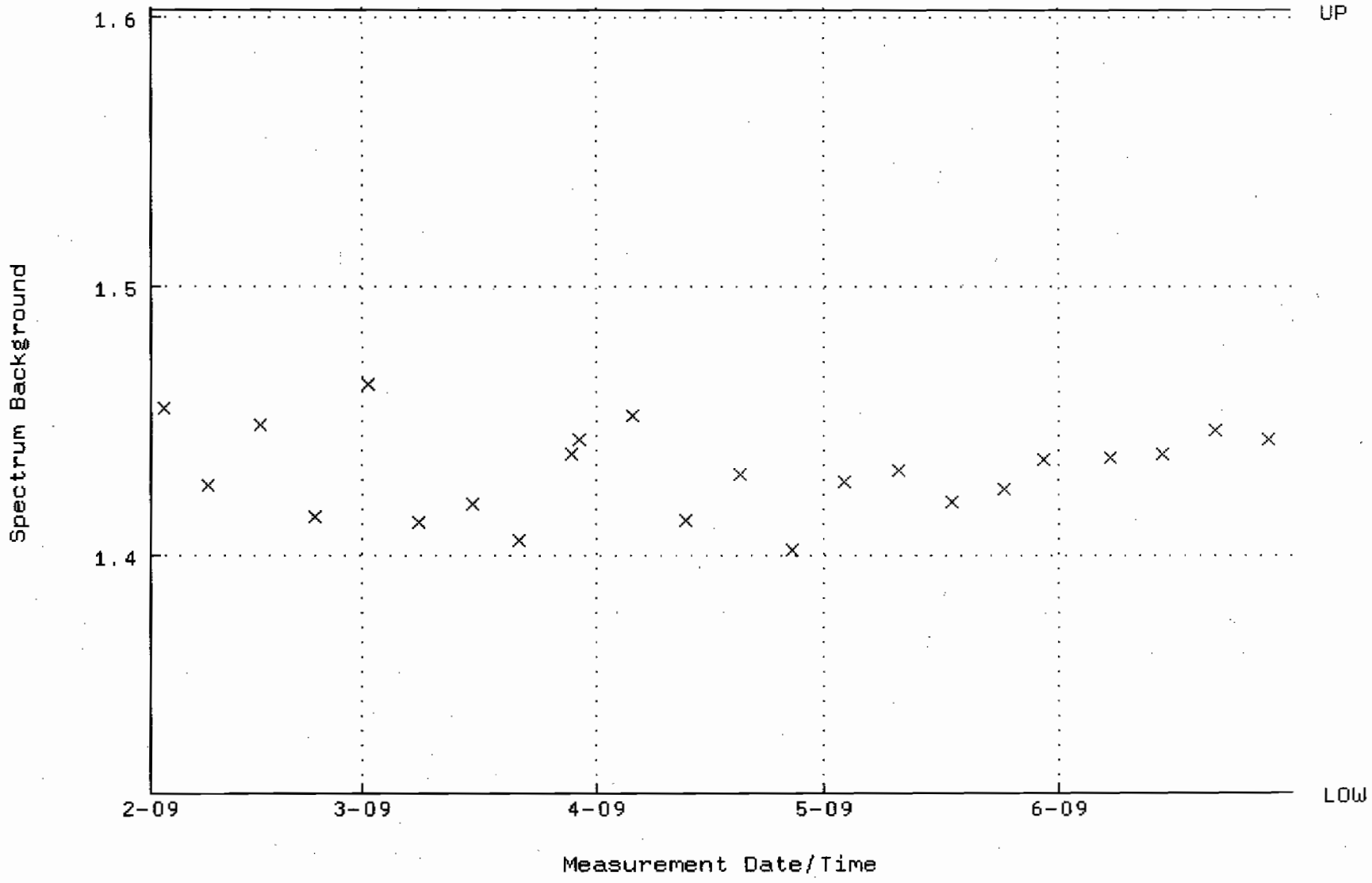

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:24:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

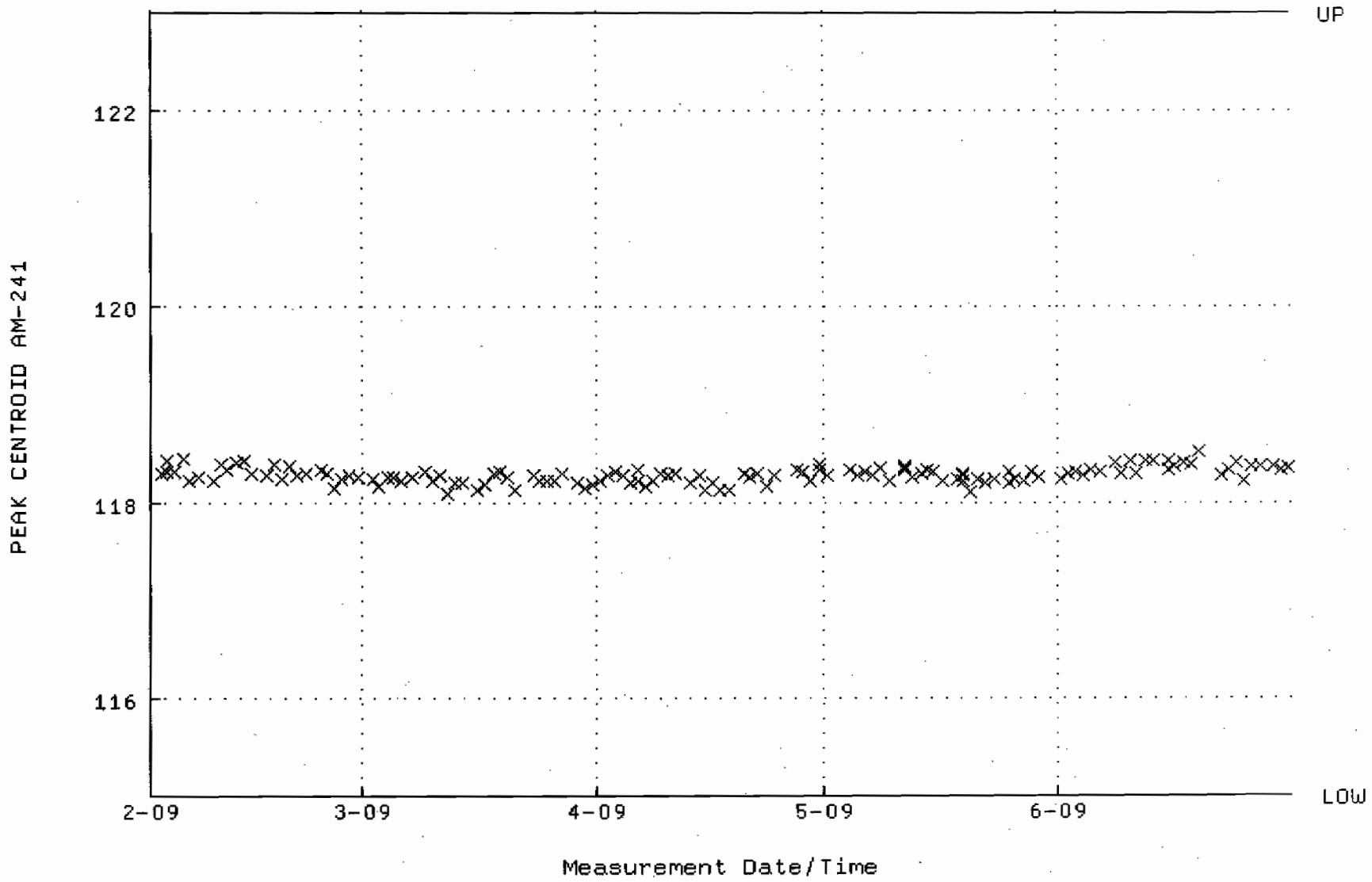

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.22710 through 2.72210

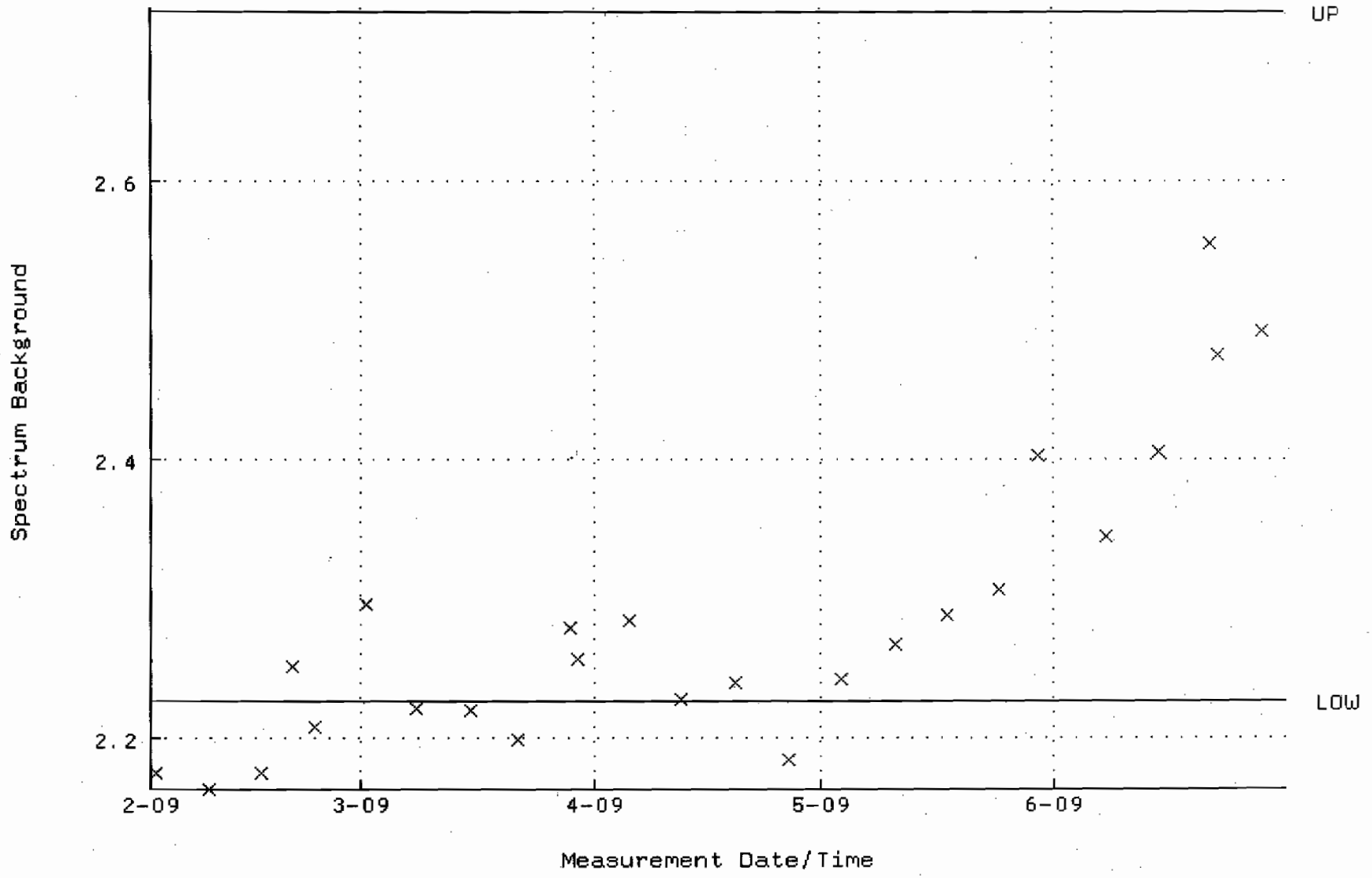

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:33:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

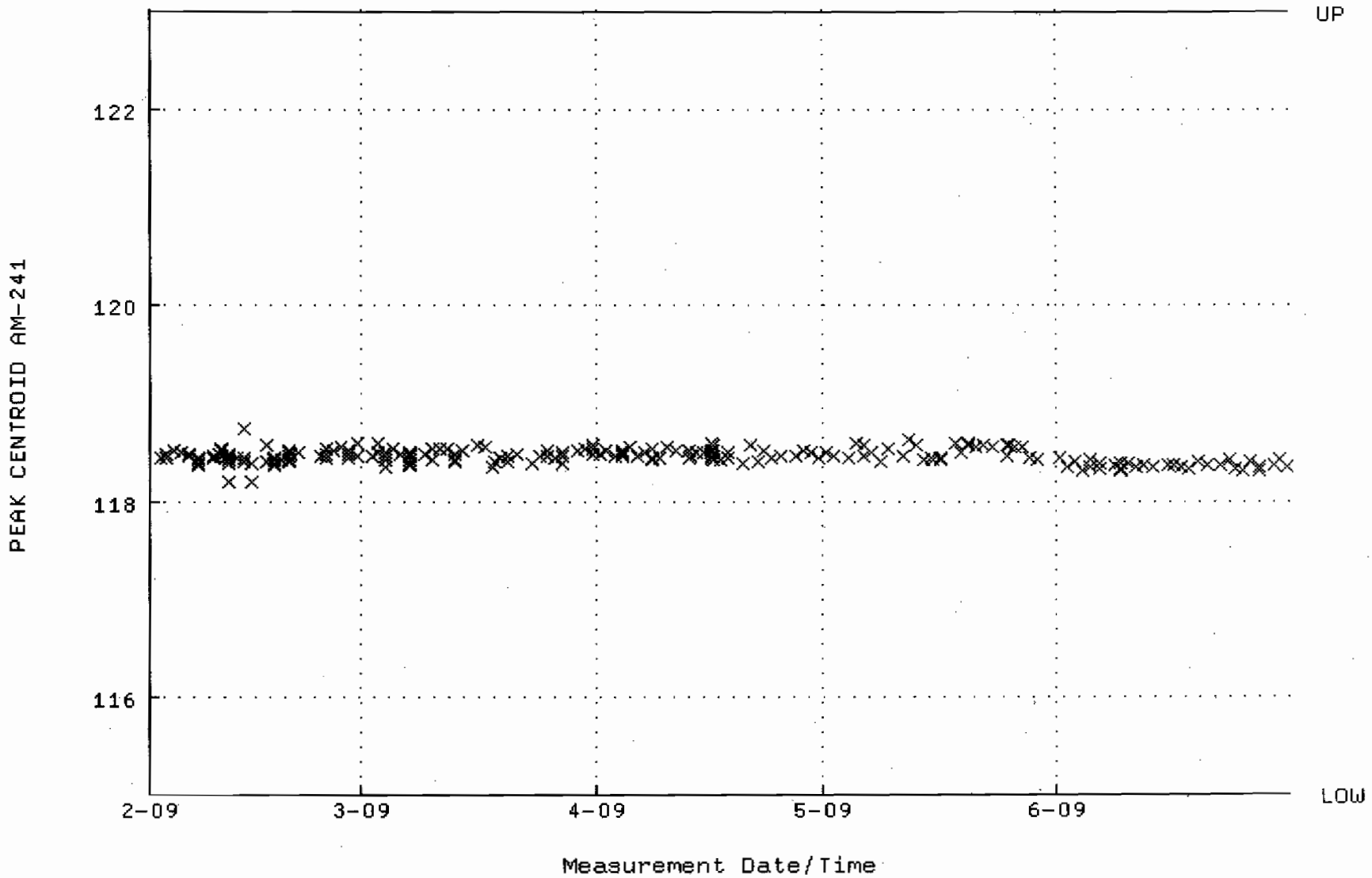

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM21.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:00 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.71450 through 2.09550

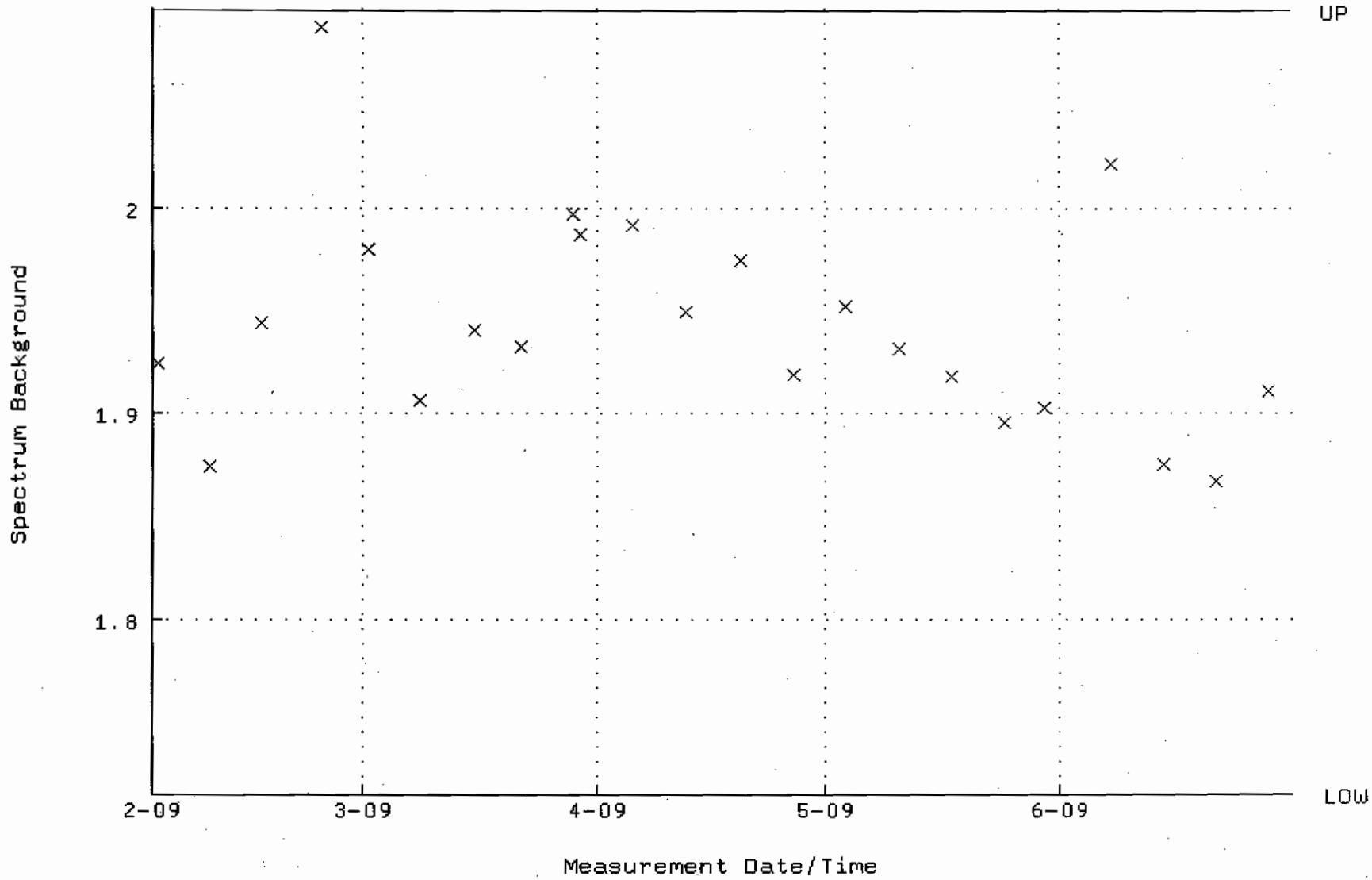

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

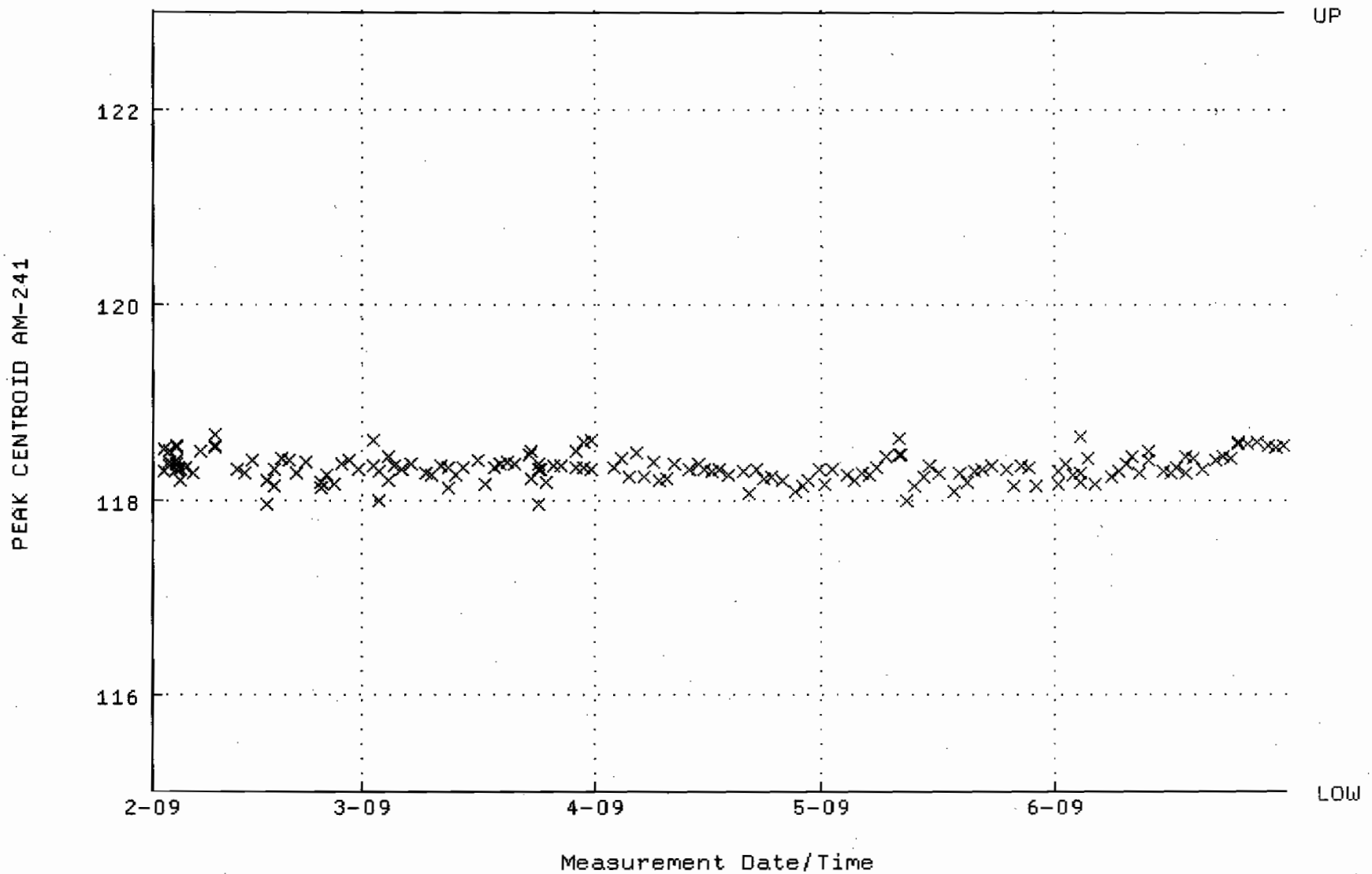

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM22.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.23300 through 2.45570

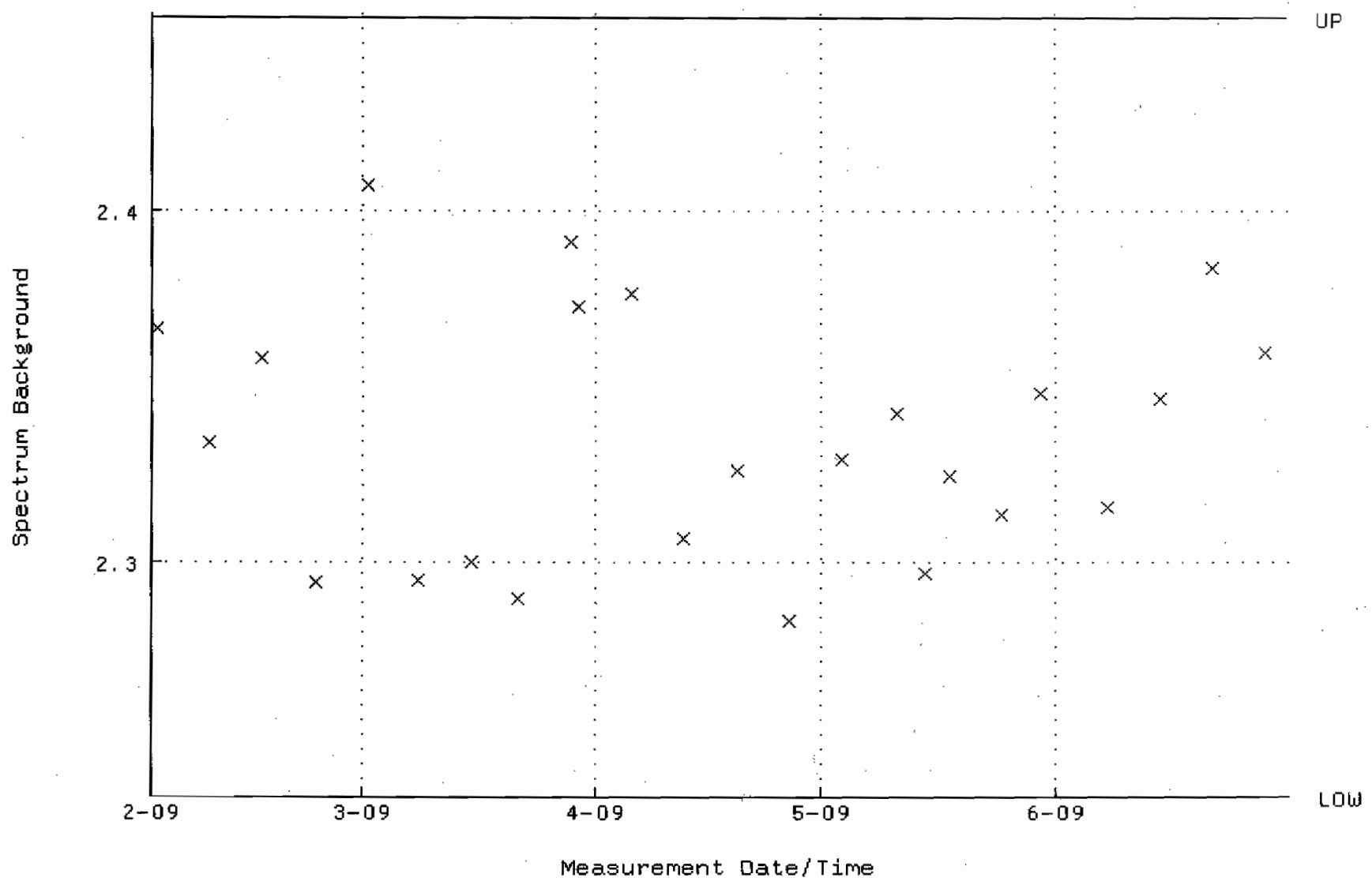

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:29:05 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

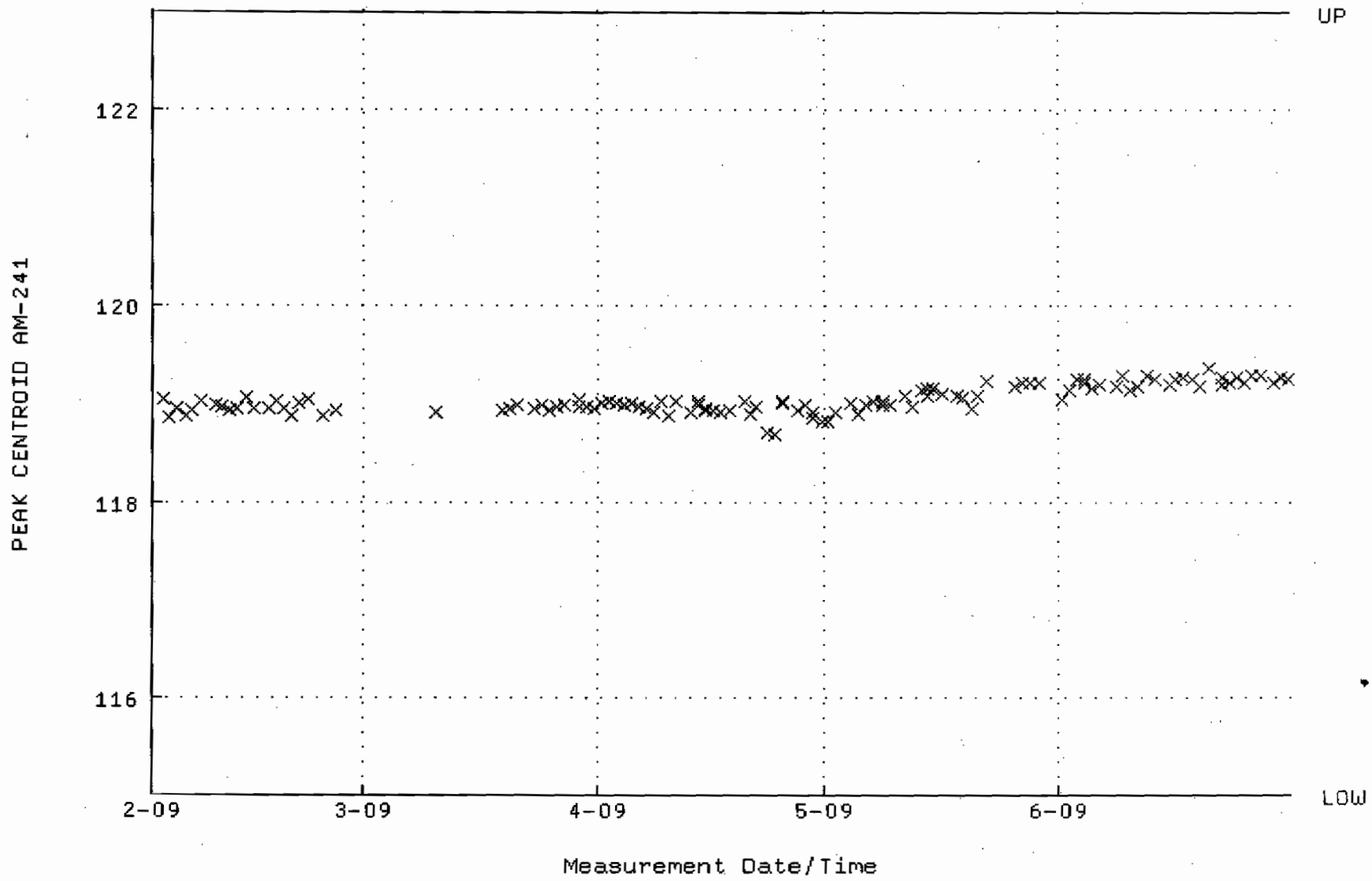

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM23.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.26405 through 1.54495

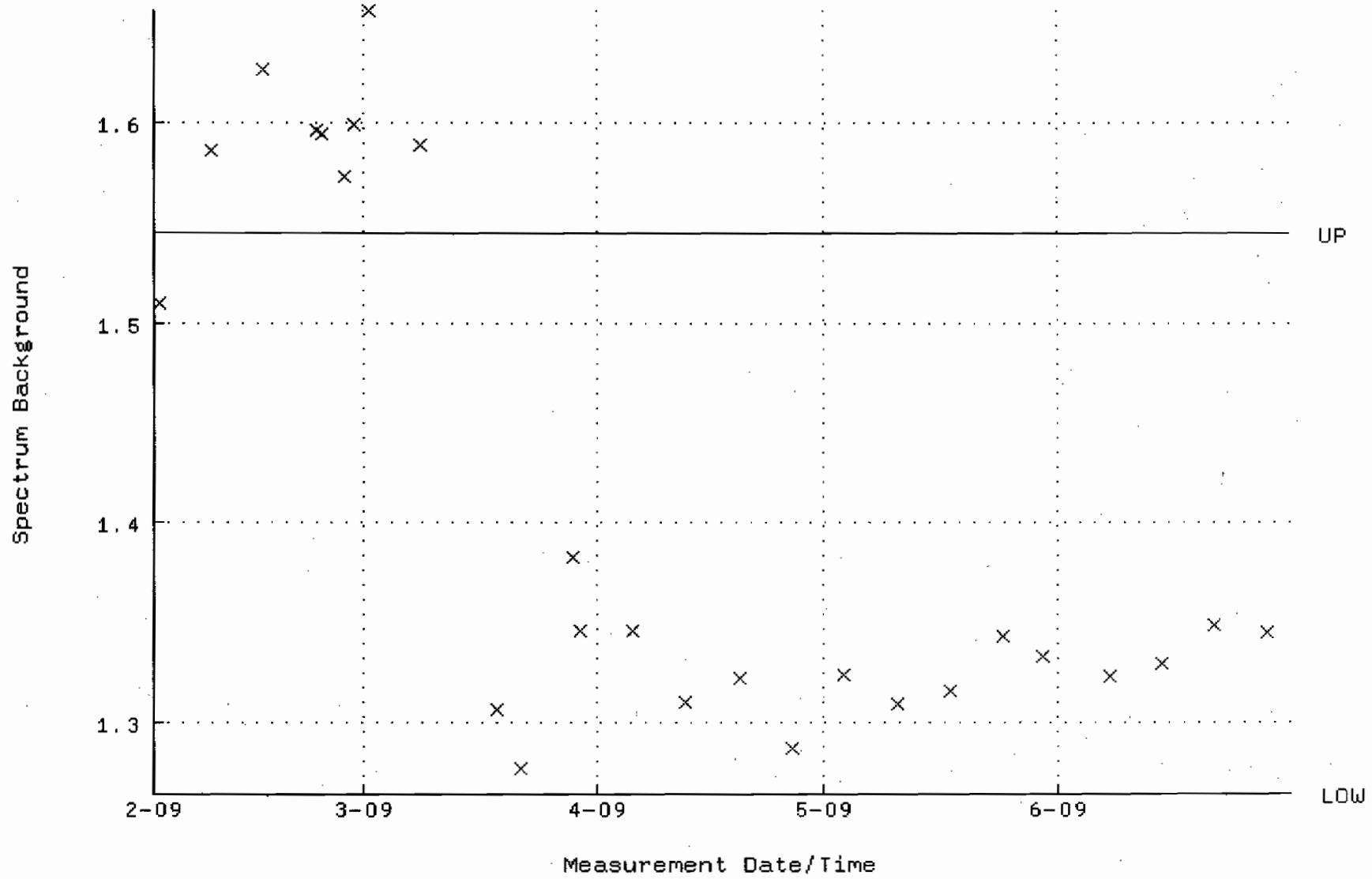

STANDARDS DATA

Amersham International plc
Amersham Laboratories

0134

NAMAS
CALIBRATION
No. 0146

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

RC-5-024-061

W. F. Case

W.F. Case

1775

Amersham
The Health Science Group

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

Mary L. Adams 4/9/09
Amanda L. Fehr 4/9/09

ANALYTICS
Isotope Products Laboratories Company

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Atlanta, Georgia 30318
Tel 404·352·8677
Fax 404·352·2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

Rec'd 11/30/06
RC-S-045-073-0

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318

Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info

Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info

Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David Dry 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

	Isotope	Result	
	Mixed Gamma N1	440.7	pCi/L
	Mixed Gamma N2	461.1	pCi/L
	Mixed Gamma N3	467.4	pCi/L
Mean Value (Counting) =	456.40	102.71	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**
Certificate Value =	444.3738739	pCi/L	
Lower Limit =	428.4865624	pCi/L	
Upper Limit =	484.3134376	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	27.91343762		
10 % of Mean =	45.64000000		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David [illegible] 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr 12/4/2008	**Isotope**	**Result** **pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L	**Rule 3 (Pass/Fail)**	
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

12/4/08
Amanda L. Fehr
12/14/08

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 881220**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232504001	SAMPLE	MXR1	GAM06	07-JUL-09 08:39	DONE	CAN	04-FEB-09 00:00
232504002	SAMPLE	MXR1	GAM08	07-JUL-09 08:43	DONE	CAN	30-JAN-09 00:00
232504003	SAMPLE	MXR1	GAM11	07-JUL-09 08:48	DONE	CAN	01-NOV-08 00:00
232504004	SAMPLE	MXR1	GAM12	07-JUL-09 08:49	DONE	CAN	10-FEB-09 00:00
232504005	SAMPLE	MXR1	GAM13	07-JUL-09 08:50	DONE	CAN	02-FEB-09 00:00
232504006	SAMPLE	MXR1	GAM15	07-JUL-09 08:50	DONE	CAN	16-FEB-09 00:00
232504007	SAMPLE	MXR1	GAM16	07-JUL-09 08:51	DONE	CAN	13-NOV-08 00:00
232504008	SAMPLE	MXR1	GAM21	07-JUL-09 08:51	DONE	CAN	25-JUL-08 00:00
232504009	SAMPLE	MXR1	GAM18	07-JUL-09 09:12	DONE	CAN	23-APR-09 00:00
232504010	SAMPLE	MXR1	GAM22	07-JUL-09 09:12	DONE	CAN	18-FEB-09 00:00
232504011	SAMPLE	MXR1	GAM23	07-JUL-09 09:13	DONE	CAN	02-JUN-09 00:00
232504012	SAMPLE	MXR1	GAM09	07-JUL-09 09:43	DONE	CAN	16-MAR-09 00:00
232504013	SAMPLE	MXR1	GAM14	07-JUL-09 09:44	DONE	CAN	06-MAR-09 00:00
232504014	SAMPLE	MXR1	GAM10	07-JUL-09 09:47	DONE	CAN	16-MAR-09 00:00
1201871428	LCS	MXR1	GAM01	07-JUL-09 10:00	DONE	CAN	30-JAN-09 00:00
232511001	SAMPLE	MXR1	GAM17	07-JUL-09 10:10	DONE	CAN	27-JAN-09 00:00
232511002	SAMPLE	MXR1	GAM02	07-JUL-09 10:19	DONE	CAN	01-NOV-08 00:00
232511003	SAMPLE	MXR1	GAM08	07-JUL-09 10:50	DONE	CAN	30-JAN-09 00:00
232511004	SAMPLE	MXR1	GAM12	07-JUL-09 10:53	DONE	CAN	10-FEB-09 00:00
232511005	SAMPLE	MXR1	GAM13	07-JUL-09 10:54	DONE	CAN	02-FEB-09 00:00
232511006	SAMPLE	MXR1	GAM16	07-JUL-09 10:58	DONE	CAN	13-NOV-08 00:00
1201871426	MB	MXR1	GAM21	07-JUL-09 10:59	DONE	CAN	25-JUL-08 00:00
1201871427	DUP	MXR1	GAM18	07-JUL-09 11:20	DONE	CAN	23-APR-09 00:00

Instrument Run Log

Instrument Type: LSC **Batch ID: 883018**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232504001	SAMPLE	KXK2	LSCGREEN	13-JUL-09 23:10	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504002	SAMPLE	KXK2	LSCGREEN	14-JUL-09 01:14	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504003	SAMPLE	KXK2	LSCGREEN	14-JUL-09 05:46	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504004	SAMPLE	KXK2	LSCGREEN	14-JUL-09 07:54	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504005	SAMPLE	KXK2	LSCGREEN	14-JUL-09 08:41	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504006	SAMPLE	KXK2	LSCGREEN	14-JUL-09 09:28	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504007	SAMPLE	KXK2	LSCGREEN	14-JUL-09 10:15	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504008	SAMPLE	KXK2	LSCGREEN	14-JUL-09 11:02	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504009	SAMPLE	KXK2	LSCGREEN	14-JUL-09 11:49	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504010	SAMPLE	KXK2	LSCGREEN	14-JUL-09 12:36	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504011	SAMPLE	KXK2	LSCGREEN	14-JUL-09 13:23	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504012	SAMPLE	KXK2	LSCGREEN	14-JUL-09 14:10	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504013	SAMPLE	KXK2	LSCGREEN	14-JUL-09 14:57	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232504014	SAMPLE	KXK2	LSCGREEN	14-JUL-09 15:44	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511001	SAMPLE	KXK2	LSCGREEN	14-JUL-09 16:31	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511002	SAMPLE	KXK2	LSCGREEN	14-JUL-09 17:18	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511003	SAMPLE	KXK2	LSCGREEN	14-JUL-09 18:05	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511004	SAMPLE	KXK2	LSCGREEN	14-JUL-09 18:52	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511005	SAMPLE	KXK2	LSCGREEN	14-JUL-09 19:39	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232511006	SAMPLE	KXK2	LSCGREEN	14-JUL-09 20:26	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875580	MB	KXK2	LSCGREEN	14-JUL-09 21:13	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875581	DUP	KXK2	LSCGREEN	14-JUL-09 22:00	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875582	LCS	KXK2	LSCGREEN	14-JUL-09 22:47	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2514

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2514
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/30/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-9941	R	6/26/2009	
		2	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		2	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		2	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		2	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2514

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	2	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2514

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2514

REQUEST NUMBER: 09-2514

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9942	1	GLASS	8290	Ice	R
CAMO-09-9942	2	GLASS	8290	Ice	R
CAMO-09-9941	1	GLASS	8290	Ice	R
CAMO-09-9941	2	GLASS	8290	Ice	R
CAMO-09-9943	1	GLASS	8290	Ice	R
CAMO-09-9943	2	GLASS	8290	Ice	R
CAMO-09-10030	1	GLASS	8290	Ice	R
CAMO-09-10030	2	GLASS	8290	Ice	R
CAMO-09-9989	1	GLASS	8290	Ice	R
CAMO-09-9989	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		6/30/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9941

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009 (26 DG 6.26.09)	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		1100 0929 (AG 6.26.09)	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605457	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	~~2.0~~ 3.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	~~3.0~~ 5.0	SCREEN/PORT DESC:		
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		NA

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Reg~~ 15-DAY (DG 6.26.09)	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown crushed tuff fill

FD: CAMO-09-10030

SAMPLE COMMENTS: Depth required for duplicate

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 19 dpm

β/γ ≤ 1059 dpm

PID Ambient Readings: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9942

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	QBT4	Qbt 3
TIME COLLECTED (HH:MM)		0938	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	NA
LOCATION ID:	MO-605457	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	5.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	6.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Indurated Brown/gray tuff

SAMPLE COMMENTS: Interface @ 5.0' bgs

LOCATION DESC: 50-004(a).09

FIELD SCREENING/MEASUREMENT RESULTS:

α: 19 dpm

β/γ: 1373 dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9943

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	QBT4	qbt3
TIME COLLECTED (HH:MM)		1105	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605457	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	10.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	11.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Purple/gray tuff indurated

FR: CAMO-09-10024

SAMPLE COMMENTS: Advanced to depth w/ power auger, sample taken by hand auger 10.0 – 11.0' bgs

LOCATION DESC: 50-004(a) 09

FIELD SCREENING/MEASUREMENT RESULTS:

AG 6.25.09 α ≤ 25

β/γ ≤ 1168

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A Goumas	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9989

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	OBT4	M 6.26.09 ~~Fill~~ Sed
TIME COLLECTED (HH:MM)		1110	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605473	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	2.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	3.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown wet sediment w/ organic material (bark & roots) FTB: CAMO-09-10013

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a)-11, below drainage culvert (N) of WES MDAC

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 35 dpm

β/γ ≤ 937 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gurney

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gurney (Signature) [signature]	6.26.09 1146	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/26/09 11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10013

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1110	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	m0-605473	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
NA 6.26.09 1 ~~2~~	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package

SAMPLE DESC: QC Sample of CAMO-09-9989

SAMPLE COMMENTS: NONE

LOCATION DESC: 50-004(a)-11

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gourmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gourmas (Signature) [signature]	6.26.09 1145	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/26/09 11:50
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10024

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1120	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-405457	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	Full Data Package
1		NO3NO2	~~250~~ ML POLY 500 AG 6.26.09	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-3943

SAMPLE COMMENTS: NONE

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gomas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomas (Signature) [signature]	6.26.09 1145	(Printed Name) Sherri Sherwood (Signature) [signature]	6/26/09 11:50
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10030

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		0929	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	UNK	MD-605457	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	5.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: QC Sample of CAMO-09-9941
Brown crushed tuff

SAMPLE COMMENTS: Depth required for duplicate

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 19$ dpm

$\beta/\gamma \leq 1059$ dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-9941 —> 9943
-10030
-9989

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10024
-10013

Reason: QC of Samples.

Print Last Name Branch **Signature** [signature] **Date** 6/26/09

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-9941	ARS Sample ID:	ARS2-09-00077-001
Sample Collection Date:	06/26/09 09:29	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 12:16

Analysis Description	Analysis Results	Analysis Error +/- 1 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	9.95	51.11	121.29	51.12	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	44.04	19.17	19.29	17.05		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.60	0.11	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	19.69	7.90	1.78	7.93		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	11.66	0.12	11.66	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	15.25	0.07	15.25	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.00	12.12	0.14	12.12	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.38	0.53	0.16	0.52		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA-226	1.87	0.82	0.81	0.83		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	0.27	0.31	0.30	0.31	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.95	3.08	1.20	3.28		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.52	0.37	0.12	0.37		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.11

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00077
Client Sample ID: CAMO-09-9942
Sample Collection Date: 06/25/09 09:38
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00077-002
Date Received: 06/29/09 00:00
Report Date: 08/25/09 15:18

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	108.05	93.47	105.46	93.41		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	40.58	16.76	19.75	17.48		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	-0.51	-12.91	3.86	-12.91	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	11.98	0.12	11.98	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.05	0.09	0.09	0.09	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	15.68	0.08	15.68	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.00	12.46	0.14	12.46	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.53	0.57	0.18	0.57		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA-226	1.29	0.67	0.32	0.67		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	1.23	0.75	0.29	0.75		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.81	4.27	1.72	4.41		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.21	0.49	0.20	0.49		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.33

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-9943	ARS Sample ID:	ARS2-09-00077-003
Sample Collection Date:	06/26/09 11:05	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.84	86.53	128.32	86.99	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	31.80	16.53	21.48	16.99		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.08	0.15	0.13	0.15	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	-0.95	-18.05	3.58	-18.05	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	12.09	0.13	12.09	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	0.03	0.15	0.10	0.15	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.45	0.41	0.18	0.41	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.50	0.63	0.23	0.64		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA-228	1.10	1.03	0.34	1.03		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	-0.08	145.55	0.33	145.55	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	3.99	3.70	1.46	3.95		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.31	0.27	0.10	0.27		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.24

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00077

Client Sample ID: CAMO-09-9989

Sample Collection Date: 06/26/09 11:10

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-09-00077-004

Date Received: 06/29/09 00:00

Report Date: 06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	17.51	8.18	128.00	88.22	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	21.49	13.98	20.31	14.22		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	0.65	4.90	2.76	4.90	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.15	0.13	0.09	0.13		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.16	0.10	0.07	0.10	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	0.82	0.34	0.06	0.34		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.33	0.30	0.10	0.30	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	0.76	0.35	0.12	0.35		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA 228	1.42	0.78	0.24	0.73		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	1.45	0.96	0.31	0.96		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	1.69	2.35	1.08	2.39		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	1.13	0.39	0.11	0.39		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 0.89

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-10030	ARS Sample ID:	ARS2-09-00077-005
Sample Collection Date:	06/26/09 09:29	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	10.00	51.07	121.29	51.09	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	37.43	15.41	19.29	16.08		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	26.64	9.76	2.03	9.80		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	10.30	0.13	10.30	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	41.30	0.09	41.30	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.46	0.53	0.20	0.53	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.49	0.56	0.15	0.56		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA 220	2.50	1.70	0.64	1.71		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	2.44	1.56	0.44	1.56		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.31	3.99	1.69	4.11		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.86	0.46	0.13	0.46		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 0.98

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 3065B NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5123-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2514 VALIDATION DATE: 8/3/09 LAB CODE: ALTC

CONTRACT LABORATORY NAME: Vista Analytical Laboratory

VALIDATOR: Eric Mink ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☒ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The 2,3,7,8-TCDF result for the sample -9943 was a detect; however, the result was not confirmed on a second column nor was TCDF GC resolution data provided. Thus, the associated sample result was qualified U,DF8c. It should be noted that the 2,3,7,8-TCDF result for sample -9989 was also a detect and was confirmed on a second column. No explanation was provided by the laboratory as to why one of the sample results was confirmed and the other was not.
2. The ICV %D was >20% with positive bias for 1,2,3,4,7,8-HxCDD. The associated sample results were NDs and, thus, were not qualified. It should be noted that ICV standards were not available for 13C-OCDF and 13C-1,2,3,4-TCDF, which are used in the quantitation of OCDF; 13C-2,3,7,8-TCDF; 13C-1,2,3,7,8-PeCDF and 13C-2,3,4,7,8-PeCDF. Thus, ICV %Ds could not be evaluated for these compounds. No sample data were qualified.
3. It should be noted that laboratory ion abundance limits were used for evaluation of the PeCDD compounds, since the laboratory uses an alternate ion for these masses due to interferences.

DATA VALIDATION COVER SHEET

5123-1

Records Use only

Data Validation Cover Sheet

4. It should be noted that the samples were not analyzed within 30 days of the primary ICAL. No sample data were qualified, based on professional judgment.
5. A MS and MSD were not analyzed. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 08/04/09

VALIDATOR'S SIGNATURE: Eric T. Mik DATE: 8/3/09

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time and qualitative criteria for target compound identification were not met.	R, DF0	R, DF0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF0b	R, DF0b
☐	☒	☐	3. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF1d	R, DF1d
☐	☒	☐	4. The sample result is ≤5 times the concentration of the related analyte in the method blank.	N/A	U, DF4
☐	☒	☐	5. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, DF4a
☐	☐	☒	6. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	N/A	U, DF4d
☐	☒	☐	7. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF4e	R, DF4e
☐	☒	☐	8. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, DF7	J, DF7
☐	☒	☐	9. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria.	UJ, R, DF7a	J, DF7a
☐	☒	☐	10. The affected analytes were analyzed with an out of range ion abundance in the initial calibration and/or CCV.	R, DF7b	R, DF7b
☒	☐	☐	11. The ICV and/or CCV were recovered outside the method specific limits.	UJ, R, DF7c	J, R, DF7c
☐	☒	☐	12. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DF7d	J, DF7d

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DF7f	R, DF7f
☐	☒	☐	14. The affected analyte is considered rejected because the ion abundances did not meet specifications.	N/A	R, DF8
☐	☒	☐	15. The ion abundance documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF8a	R, DF8a
☐	☒	☐	16. If GC column performance was not evaluated at the required frequency or if method criteria were not met, qualify all associated detects as J and all associated non-detects as UJ.	UJ, DF8b	J, DF8b
☒	☐	☐	17. If 2, 3, 7, 8-TCDF was detected in a sample and the result was not confirmed on a second column with successful analysis of the GC column performance mix, qualify all associated detects as U.	N/A	U, DF8c
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, DF9	J-, DF9
☐	☒	☐	19. The holding time was >2 times the applicable holding time requirement.	R, DF9a	J-, DF9a
☐	☒	☐	20. The LCS percent recovery was <10%.	R, DF12	J-, DF12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, DF12a	J-, DF12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DF12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12c	R, DF12c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2 Dioxin/Furan Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	24. The MS/MSD percent recovery was <10%.	R, DF12d	R, DF12d
☐	☐	☒	25. The MS/MSD percent recovery was >10% but <70%.	UJ, DF12e	J, DF12e
☐	☐	☒	26. The MS/MSD percent recovery was >70%	N/A	J+, DF12f
☐	☐	☒	27. The MS/MSD relative percent difference was >30%.	UJ, DF12g	J, DF12g
☐	☒	☐	28. The fortification sample percent recovery was <10%.	R, DF12h	J-, DF12h
☐	☒	☐	29. The fortification sample percent recovery was <40% but >10%	UJ, DF12i	J-, DF12i
☐	☒	☐	30. The fortification sample percent recovery was >135%.	N/A	J+, DF12j
☐	☒	☐	31. The fortification sample documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12k	R, DF12k
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference.	R, DF15	UJ, DF15
☐	☒	☐	33. Sample clean-up was not performed. If run log notations, spectral data and/or internal standard or labeled compound recoveries indicate interferences and extract cleanup was not performed, qualify all associated detects as J and all non-detects as UJ.	RJ, DF15a	J, DF15a
☐	☒	☐	34. The instrument performance sample did not pass method acceptance criteria.	R, DF16	R, DF16
☐	☒	☐	35. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, DF16c	R, DF16c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 **Dioxin/Furan Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, DF19	J, R, DR19
☐	☒	☐	37. Duplicate, dilution, or reanalysis.	UJ, DF88	J, DF88

Sample ID: CAMO-09-9941 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31850-001	Date Received:	1-Jul-09
Project:	09-2514	Sample Size:	11.2 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	26-Jun-09	%Solids:	89.5	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	0929						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0540		
1,2,3,7,8-PeCDD	ND	0.0735		
1,2,3,4,7,8-HxCDD	ND	0.241		
1,2,3,6,7,8-HxCDD	ND	0.246		
1,2,3,7,8,9-HxCDD	ND	0.234		
1,2,3,4,6,7,8-HpCDD	2.84			
OCDD	22.6			
2,3,7,8-TCDF	ND		0.0842	
1,2,3,7,8-PeCDF	ND	0.0642		
2,3,4,7,8-PeCDF	ND	0.0567		
1,2,3,4,7,8-HxCDF	ND	0.0955		
1,2,3,6,7,8-HxCDF	ND	0.108		
2,3,4,6,7,8-HxCDF	ND	0.128		
1,2,3,7,8,9-HxCDF	ND	0.157		
1,2,3,4,6,7,8-HpCDF	0.462			J
1,2,3,4,7,8,9-HpCDF	ND	0.129		
OCDF	1.27			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	99.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	82.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	109	40 - 135	
	13C-OCDD	123	40 - 135	
	13C-2,3,7,8-TCDF	99.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	87.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	92.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	76.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	81.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	82.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	93.8	40 - 135	
	13C-OCDF	98.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	93.0	40 - 135	

Totals			
Total TCDD	ND	0.0540	
Total PeCDD	ND	0.0735	
Total HxCDD	0.447		
Total HpCDD	5.39		
Total TCDF	0.168		0.319
Total PeCDF	0.152		0.278
Total HxCDF	0.275		0.410
Total HpCDF	1.16		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0569

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

ETM
8/3/09

Sample ID: **CAMO-09-9942** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31850-002	Date Received:	1-Jul-09
Project:	09-2514	Sample Size:	11.3 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	26-Jun-09	%Solids:	88.4	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	0938						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0477		
1,2,3,7,8-PeCDD	ND	0.0990		
1,2,3,4,7,8-HxCDD	ND	0.267		
1,2,3,6,7,8-HxCDD	ND	0.272		
1,2,3,7,8,9-HxCDD	ND	0.260		
1,2,3,4,6,7,8-HpCDD	5.29			
OCDD	52.7			
2,3,7,8-TCDF	ND	0.0587		
1,2,3,7,8-PeCDF	ND	0.0600		
2,3,4,7,8-PeCDF	ND	0.0596		
1,2,3,4,7,8-HxCDF	ND	0.0972		
1,2,3,6,7,8-HxCDF	ND	0.107		
2,3,4,6,7,8-HxCDF	ND	0.125		
1,2,3,7,8,9-HxCDF	ND	0.157		
1,2,3,4,6,7,8-HpCDF	0.935			J
1,2,3,4,7,8,9-HpCDF	ND	0.183		
OCDF	3.46			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	100	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	86.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	132	40 - 135	
	13C-2,3,7,8-TCDF	100	40 - 135	
	13C-1,2,3,7,8-PeCDF	90.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	90.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	94.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	79.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	84.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	92.7	40 - 135	
	13C-OCDF	96.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.0	40 - 135	

Totals		
Total TCDD	ND	0.0477
Total PeCDD	ND	0.0990
Total HxCDD	0.812	
Total HpCDD	9.26	
Total TCDF	ND	0.0587
Total PeCDF	0.187	
Total HxCDF	0.920	
Total HpCDF	2.71	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.118

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

ETM
8/3/09

Sample ID: CAMO-09-9943 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31850-003	Date Received:	1-Jul-09
Project:	09-2514	Sample Size:	11.8 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	26-Jun-09	%Solids:	86.3	Date Analyzed DB-5:	3-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1105						

Analyte	Conc. (pg/g)		DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.0603		
1,2,3,7,8-PeCDD	ND		0.0975		
1,2,3,4,7,8-HxCDD	ND		0.299		
1,2,3,6,7,8-HxCDD	ND		0.301		
1,2,3,7,8,9-HxCDD	ND		0.289		
1,2,3,4,6,7,8-HpCDD	6.35				
OCDD	55.6				
2,3,7,8-TCDF	0.109	U,DF8c			J
1,2,3,7,8-PeCDF	ND		0.0677		
2,3,4,7,8-PeCDF	ND		0.0649		
1,2,3,4,7,8-HxCDF	ND		0.0969		
1,2,3,6,7,8-HxCDF	ND		0.113		
2,3,4,6,7,8-HxCDF	ND		0.132		
1,2,3,7,8,9-HxCDF	ND		0.169		
1,2,3,4,6,7,8-HpCDF	1.08				J
1,2,3,4,7,8,9-HpCDF	ND		0.181		
OCDF	3.38				J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	101	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	96.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	88.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	106	40 - 135	
	13C-OCDD	132	40 - 135	
	13C-2,3,7,8-TCDF	105	40 - 135	
	13C-1,2,3,7,8-PeCDF	95.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	97.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.2	40 - 135	
	13C-OCDF	97.9	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.5	40 - 135	

Totals			
Total TCDD	ND	0.0603	
Total PeCDD	ND	0.0975	
Total HxCDD	ND		0.870
Total HpCDD	10.9		
Total TCDF	0.217		
Total PeCDF	0.199		0.470
Total HxCDF	1.11		
Total HpCDF	2.83		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.144

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

ETM
8/3/09

Sample ID: CAMO-09-9989 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31850-004	Date Received:	1-Jul-09
Project:	09-2514	Sample Size:	12.5 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	26-Jun-09	%Solids:	83.7	Date Analyzed DB-5:	3-Jul-09	Dates Analyzed DB-225:	7-Jul-09
Time Collected:	1110						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0521		
1,2,3,7,8-PeCDD	ND	0.116		
1,2,3,4,7,8-HxCDD	ND		0.193	
1,2,3,6,7,8-HxCDD	ND		0.404	
1,2,3,7,8,9-HxCDD	0.398			J
1,2,3,4,6,7,8-HpCDD	12.1			
OCDD	117			
2,3,7,8-TCDF	0.688			
1,2,3,7,8-PeCDF	0.236			J
2,3,4,7,8-PeCDF	1.24			J
1,2,3,4,7,8-HxCDF	0.657			J
1,2,3,6,7,8-HxCDF	0.321			J
2,3,4,6,7,8-HxCDF	0.500			J
1,2,3,7,8,9-HxCDF	ND	0.160		
1,2,3,4,6,7,8-HpCDF	2.34			J
1,2,3,4,7,8,9-HpCDF	0.266			J
OCDF	6.85			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	102	40 - 135	
	13C-1,2,3,7,8-PeCDD	92.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	101	40 - 135	
	13C-OCDD	103	40 - 135	
	13C-2,3,7,8-TCDF	102	40 - 135	
	13C-1,2,3,7,8-PeCDF	94.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	92.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	94.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	79.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.4	40 - 135	
	13C-OCDF	89.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.0	40 - 135	

Totals			
Total TCDD	ND		0.118
Total PeCDD	ND	0.116	
Total HxCDD	2.51		3.11
Total HpCDD	22.8		
Total TCDF	5.07		
Total PeCDF	9.82		10.0
Total HxCDF	6.66		
Total HpCDF	6.62		6.83

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 1.16

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

ETM
8/3/09

Sample ID: CAMO-09-10030 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31850-005	Date Received:	1-Jul-09
Project:	09-2514	Sample Size:	11.2 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	26-Jun-09	%Solids:	90.5	Date Analyzed DB-5:	3-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	0929						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0495		
1,2,3,7,8-PeCDD	ND	0.0902		
1,2,3,4,7,8-HxCDD	ND	0.250		
1,2,3,6,7,8-HxCDD	ND	0.250		
1,2,3,7,8,9-HxCDD	ND	0.241		
1,2,3,4,6,7,8-HpCDD	3.47			
OCDD	24.5			
2,3,7,8-TCDF	ND	0.0542		
1,2,3,7,8-PeCDF	ND	0.0632		
2,3,4,7,8-PeCDF	ND	0.0617		
1,2,3,4,7,8-HxCDF	ND	0.106		
1,2,3,6,7,8-HxCDF	ND	0.115		
2,3,4,6,7,8-HxCDF	ND	0.132		
1,2,3,7,8,9-HxCDF	ND	0.170		
1,2,3,4,6,7,8-HpCDF	0.446			J
1,2,3,4,7,8,9-HpCDF	ND	0.150		
OCDF	1.47			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	100	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	104	40 - 135	
	13C-1,2,3,7,8-PeCDF	94.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	95.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	80.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	84.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.8	40 - 135	
	13C-OCDF	90.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.9	40 - 135	

Totals			
Total TCDD	ND	0.0495	
Total PeCDD	ND	0.0902	
Total HxCDD	0.312		
Total HpCDD	6.23		
Total TCDF	ND		0.111
Total PeCDF	0.125		
Total HxCDF	ND		0.266
Total HpCDF	0.446		1.16

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0651

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

ETM
8/3/09

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2514

LOS ALAMOS
NATIONAL LABORATORY

31850
1.4°C

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2514
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/30/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-9941	R	6/26/2009	
		2	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		2	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		2	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		2	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2514

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	2	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2514

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2514

REQUEST NUMBER: 09-2514

31850

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9942	1	GLASS	8290	Ice	R
CAMO-09-9942	2	GLASS	8290	Ice	R
CAMO-09-9941	1	GLASS	8290	Ice	R
CAMO-09-9941	2	GLASS	8290	Ice	R
CAMO-09-9943	1	GLASS	8290	Ice	R
CAMO-09-9943	2	GLASS	8290	Ice	R
CAMO-09-10030	1	GLASS	8290	Ice	R
CAMO-09-10030	2	GLASS	8290	Ice	R
CAMO-09-9989	1	GLASS	8290	Ice	R
CAMO-09-9989	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/30/09	1400	B. Benedict	Bettina L Benedict	7/1/09	0937
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Vista
Analytical Laboratory

July 07, 2009

Vista Project I.D.: 31850

Mr. Keith Greene
Los Alamos National Laboratory
ER Sample Management Office
TA-3, Building 271, DP O1-U
Los Alamos, NM 87545

Dear Mr. Greene,

Enclosed are the results for the five soil samples received at Vista Analytical Laboratory on July 01, 2009 under your Project Name "09-2514". These samples were extracted and analyzed using EPA Method 8290 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

For

Martha M. Maier
Laboratory Director

ACCREDITED IN ACCORDANCE WITH nelac

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Vista

Section I: Sample Inventory Report

Date Received: **7/1/2009**

Vista Lab. ID	Client Sample ID
31850-001	CAMO-09-9941
31850-002	CAMO-09-9942
31850-003	CAMO-09-9943
31850-004	CAMO-09-9989
31850-005	CAMO-09-10030

SECTION II

Vista

Method Blank **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2214	Lab Sample:	0-MB001
Sample Size:	10.0 g	Date Extracted:	1-Jul-09	Date Analyzed DB-5:	2-Jul-09
				Date Analyzed DB-225:	NA

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0500		
1,2,3,7,8-PeCDD	ND	0.0717		
1,2,3,4,7,8-HxCDD	ND	0.133		
1,2,3,6,7,8-HxCDD	ND	0.133		
1,2,3,7,8,9-HxCDD	ND	0.128		
1,2,3,4,6,7,8-HpCDD	ND	0.247		
OCDD	ND	0.188		
2,3,7,8-TCDF	ND	0.0365		
1,2,3,7,8-PeCDF	ND	0.0403		
2,3,4,7,8-PeCDF	ND	0.0429		
1,2,3,4,7,8-HxCDF	ND	0.0470		
1,2,3,6,7,8-HxCDF	ND	0.0479		
2,3,4,6,7,8-HxCDF	ND	0.0614		
1,2,3,7,8,9-HxCDF	ND	0.0813		
1,2,3,4,6,7,8-HpCDF	ND	0.131		
1,2,3,4,7,8,9-HpCDF	ND	0.122		
OCDF	ND	0.109		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	97.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	96.3	40 - 135	
	13C-OCDD	91.5	40 - 135	
	13C-2,3,7,8-TCDF	99.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	96.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	91.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	96.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	87.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	83.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	90.6	40 - 135	
	13C-OCDF	86.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.0	40 - 135	

Totals		
Total TCDD	ND	0.0500
Total PeCDD	ND	0.0717
Total HxCDD	ND	0.131
Total HpCDD	ND	0.247
Total TCDF	ND	0.0365
Total PeCDF	ND	0.0416
Total HxCDF	ND	0.0594
Total HpCDF	ND	0.126

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

Vista

OPR Results **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2214	Lab Sample:	0-OPR001		
Sample Size:	10.0 g	Date Extracted:	1-Jul-09	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits
2,3,7,8-TCDD	10.0	9.32	7 - 13
1,2,3,7,8-PeCDD	50.0	45.6	35 - 65
1,2,3,4,7,8-HxCDD	50.0	45.9	35 - 65
1,2,3,6,7,8-HxCDD	50.0	44.8	35 - 65
1,2,3,7,8,9-HxCDD	50.0	46.6	35 - 65
1,2,3,4,6,7,8-HpCDD	50.0	44.2	35 - 65
OCDD	100	88.9	70 - 130
2,3,7,8-TCDF	10.0	8.40	7 - 13
1,2,3,7,8-PeCDF	50.0	41.6	35 - 65
2,3,4,7,8-PeCDF	50.0	41.3	35 - 65
1,2,3,4,7,8-HxCDF	50.0	44.3	35 - 65
1,2,3,6,7,8-HxCDF	50.0	43.7	35 - 65
2,3,4,6,7,8-HxCDF	50.0	44.7	35 - 65
1,2,3,7,8,9-HxCDF	50.0	44.9	35 - 65
1,2,3,4,6,7,8-HpCDF	50.0	44.9	35 - 65
1,2,3,4,7,8,9-HpCDF	50.0	45.9	35 - 65
OCDF	100	88.0	70 - 130

	Labeled Standard	%R	LCL-UCL	Qualifier
IS	13C-2,3,7,8-TCDD	99.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	96.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	87.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	99.9	40 - 135	
	13C-OCDD	94.2	40 - 135	
	13C-2,3,7,8-TCDF	102	40 - 135	
	13C-1,2,3,7,8-PeCDF	95.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	91.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	95.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	85.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	84.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	93.4	40 - 135	
	13C-OCDF	89.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	92.8	40 - 135	

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

Vista

Sample ID: CAMO-09-9941 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31850-001	Date Received:	1-Jul-09
Project:	09-2514	Sample Size:	11.2 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	26-Jun-09	%Solids:	89.5	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	0929						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0540		
1,2,3,7,8-PeCDD	ND	0.0735		
1,2,3,4,7,8-HxCDD	ND	0.241		
1,2,3,6,7,8-HxCDD	ND	0.246		
1,2,3,7,8,9-HxCDD	ND	0.234		
1,2,3,4,6,7,8-HpCDD	2.84			
OCDD	22.6			
2,3,7,8-TCDF	ND		0.0842	
1,2,3,7,8-PeCDF	ND	0.0642		
2,3,4,7,8-PeCDF	ND	0.0567		
1,2,3,4,7,8-HxCDF	ND	0.0955		
1,2,3,6,7,8-HxCDF	ND	0.108		
2,3,4,6,7,8-HxCDF	ND	0.128		
1,2,3,7,8,9-HxCDF	ND	0.157		
1,2,3,4,6,7,8-HpCDF	0.462			J
1,2,3,4,7,8,9-HpCDF	ND	0.129		
OCDF	1.27			J

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	99.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	82.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	109	40 - 135	
	13C-OCDD	123	40 - 135	
	13C-2,3,7,8-TCDF	99.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	87.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	92.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	76.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	81.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	82.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	93.8	40 - 135	
	13C-OCDF	98.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	93.0	40 - 135	

Totals			
Total TCDD	ND	0.0540	
Total PeCDD	ND	0.0735	
Total HxCDD	0.447		
Total HpCDD	5.39		
Total TCDF	0.168		0.319
Total PeCDF	0.152		0.278
Total HxCDF	0.275		0.410
Total HpCDF	1.16		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0569

a Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c Method detection limit.

d. Lower control limit - upper control limit.

e TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

Vista

Sample ID: CAMO-09-9942 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31850-002	Date Received:	1-Jul-09
Project:	09-2514	Sample Size:	11.3 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	26-Jun-09	%Solids:	88.4	Date Analyzed DB-5:	2-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	0938						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0477		
1,2,3,7,8-PeCDD	ND	0.0990		
1,2,3,4,7,8-HxCDD	ND	0.267		
1,2,3,6,7,8-HxCDD	ND	0.272		
1,2,3,7,8,9-HxCDD	ND	0.260		
1,2,3,4,6,7,8-HpCDD	5.29			
OCDD	52.7			
2,3,7,8-TCDF	ND	0.0587		
1,2,3,7,8-PeCDF	ND	0.0600		
2,3,4,7,8-PeCDF	ND	0.0596		
1,2,3,4,7,8-HxCDF	ND	0.0972		
1,2,3,6,7,8-HxCDF	ND	0.107		
2,3,4,6,7,8-HxCDF	ND	0.125		
1,2,3,7,8,9-HxCDF	ND	0.157		
1,2,3,4,6,7,8-HpCDF	0.935			J
1,2,3,4,7,8,9-HpCDF	ND	0.183		
OCDF	3.46			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	100	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	86.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	132	40 - 135	
	13C-2,3,7,8-TCDF	100	40 - 135	
	13C-1,2,3,7,8-PeCDF	90.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	90.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	94.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	79.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	84.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	92.7	40 - 135	
	13C-OCDF	96.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.0	40 - 135	

Totals		
Total TCDD	ND	0.0477
Total PeCDD	ND	0.0990
Total HxCDD	0.812	
Total HpCDD	9.26	
Total TCDF	ND	0.0587
Total PeCDF	0.187	
Total HxCDF	0.920	
Total HpCDF	2.71	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.118

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

Vista

Sample ID: CAMO-09-9943 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31850-003	Date Received:	1-Jul-09
Project:	09-2514	Sample Size:	11.8 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	26-Jun-09	%Solids:	86.3	Date Analyzed DB-5:	3-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1105						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0603		
1,2,3,7,8-PeCDD	ND	0.0975		
1,2,3,4,7,8-HxCDD	ND	0.299		
1,2,3,6,7,8-HxCDD	ND	0.301		
1,2,3,7,8,9-HxCDD	ND	0.289		
1,2,3,4,6,7,8-HpCDD	6.35			
OCDD	55.6			
2,3,7,8-TCDF	0.109			J
1,2,3,7,8-PeCDF	ND	0.0677		
2,3,4,7,8-PeCDF	ND	0.0649		
1,2,3,4,7,8-HxCDF	ND	0.0969		
1,2,3,6,7,8-HxCDF	ND	0.113		
2,3,4,6,7,8-HxCDF	ND	0.132		
1,2,3,7,8,9-HxCDF	ND	0.169		
1,2,3,4,6,7,8-HpCDF	1.08			J
1,2,3,4,7,8,9-HpCDF	ND	0.181		
OCDF	3.38			J

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	101	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	96.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	88.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	106	40 - 135	
	13C-OCDD	132	40 - 135	
	13C-2,3,7,8-TCDF	105	40 - 135	
	13C-1,2,3,7,8-PeCDF	95.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	97.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.2	40 - 135	
	13C-OCDF	97.9	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.5	40 - 135	

Totals			
Total TCDD	ND	0.0603	
Total PeCDD	ND	0.0975	
Total HxCDD	ND		0.870
Total HpCDD	10.9		
Total TCDF	0.217		
Total PeCDF	0.199		0.470
Total HxCDF	1.11		
Total HpCDF	2.83		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.144

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e TEQ based on (1989) International Toxic Equivalent Factors (ITEF)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

Vista

Sample ID: CAMO-09-9989 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31850-004	Date Received:	1-Jul-09
Project:	09-2514	Sample Size:	12.5 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	26-Jun-09	%Solids:	83.7	Date Analyzed DB-5:	3-Jul-09	Dates Analyzed DB-225:	7-Jul-09
Time Collected:	1110						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0521		
1,2,3,7,8-PeCDD	ND	0.116		
1,2,3,4,7,8-HxCDD	ND		0.193	
1,2,3,6,7,8-HxCDD	ND		0.404	
1,2,3,7,8,9-HxCDD	0.398			J
1,2,3,4,6,7,8-HpCDD	12.1			
OCDD	117			
2,3,7,8-TCDF	0.688			
1,2,3,7,8-PeCDF	0.236			J
2,3,4,7,8-PeCDF	1.24			J
1,2,3,4,7,8-HxCDF	0.657			J
1,2,3,6,7,8-HxCDF	0.321			J
2,3,4,6,7,8-HxCDF	0.500			J
1,2,3,7,8,9-HxCDF	ND	0.160		
1,2,3,4,6,7,8-HpCDF	2.34			J
1,2,3,4,7,8,9-HpCDF	0.266			J
OCDF	6.85			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	102	40 - 135	
	13C-1,2,3,7,8-PeCDD	92.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	101	40 - 135	
	13C-OCDD	103	40 - 135	
	13C-2,3,7,8-TCDF	102	40 - 135	
	13C-1,2,3,7,8-PeCDF	94.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	92.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	94.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	79.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.4	40 - 135	
	13C-OCDF	89.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.0	40 - 135	

Totals			
Total TCDD	ND		0.118
Total PeCDD	ND	0.116	
Total HxCDD	2.51		3.11
Total HpCDD	22.8		
Total TCDF	5.07		
Total PeCDF	9.82		10.0
Total HxCDF	6.66		
Total HpCDF	6.62		6.83

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 1.16

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

Vista

Sample ID: CAMO-09-10030 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31850-005	Date Received:	1-Jul-09
Project:	09-2514	Sample Size:	11.2 g	QC Batch No.:	2214	Date Extracted:	1-Jul-09
Date Collected:	26-Jun-09	%Solids:	90.5	Date Analyzed DB-5:	3-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	0929						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0495		
1,2,3,7,8-PeCDD	ND	0.0902		
1,2,3,4,7,8-HxCDD	ND	0.250		
1,2,3,6,7,8-HxCDD	ND	0.250		
1,2,3,7,8,9-HxCDD	ND	0.241		
1,2,3,4,6,7,8-HpCDD	3.47			
OCDD	24.5			
2,3,7,8-TCDF	ND	0.0542		
1,2,3,7,8-PeCDF	ND	0.0632		
2,3,4,7,8-PeCDF	ND	0.0617		
1,2,3,4,7,8-HxCDF	ND	0.106		
1,2,3,6,7,8-HxCDF	ND	0.115		
2,3,4,6,7,8-HxCDF	ND	0.132		
1,2,3,7,8,9-HxCDF	ND	0.170		
1,2,3,4,6,7,8-HpCDF	0.446			J
1,2,3,4,7,8,9-HpCDF	ND	0.150		
OCDF	1.47			J

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	100	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	104	40 - 135	
	13C-1,2,3,7,8-PeCDF	94.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	95.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	80.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	84.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	94.8	40 - 135	
	13C-OCDF	90.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.9	40 - 135	

Totals

Total TCDD	ND	0.0495	
Total PeCDD	ND	0.0902	
Total HxCDD	0.312		
Total HpCDD	6.23		
Total TCDF	ND		0.111
Total PeCDF	0.125		
Total HxCDF	ND		0.266
Total HpCDF	0.446		1.16

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0651

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:39

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2514

LOS ALAMOS
NATIONAL LABORATORY

31850

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on: 1.4°C
LANL Request Number:09-2514
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/30/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Received
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-9941	R	6/26/2009	
		2	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		2	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		2	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		2	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2514

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	2	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2514

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2514

REQUEST NUMBER: 09-2514

31850

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9942	1	GLASS	8290	Ice	R
CAMO-09-9942	2	GLASS	8290	Ice	R
CAMO-09-9941	1	GLASS	8290	Ice	R
CAMO-09-9941	2	GLASS	8290	Ice	R
CAMO-09-9943	1	GLASS	8290	Ice	R
CAMO-09-9943	2	GLASS	8290	Ice	R
CAMO-09-10030	1	GLASS	8290	Ice	R
CAMO-09-10030	2	GLASS	8290	Ice	R
CAMO-09-9989	1	GLASS	8290	Ice	R
CAMO-09-9989	2	GLASS	8290	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/30/09	1400	B. Benedict	Bettina L Benedict	7/1/09	0937
Printed Name	Signature			Printed Name	Signature	BLB 7/1/09	
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31850 TAT 15

Samples Arrival:	Date/Time 7/1/09 0900	Initials: LBB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 7/1/09 0938	Initials: LBB	Location: WR-2 Shelf/Rack: G 3

Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C 1.4°C	Time: 0905	Thermometer ID: IR-1				

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7209 7847 5848	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?	✓		
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	None		
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

	date	time	
CAMO-09-9941	6/26/09	0929	A & B jars
-9942		0938	
-9943		1105	
-9989		1110	
-10030		0929	

Sample Login 3/2007 rmh

EXTRACTION INFORMATION

PROCESS SHEET

Project No.-AR: 31850-1 of 1

RUSH

Prep Due: 7/9/2009

Hold Due: 7/26/2009

Client: Los Alamos National Laboratory(LOANM01F

Client Manager: Martha M. Maier

Method: EPA Method 8290 | PCDD/F (Tetra - Octa)

Project Due: 7/15/2009

TAT: 14

2214

Split Type:

Matrix: Soil

LabID	Recon	Client-ID	Description	Date Received	SLoc	Shelf
001	☑	CAMO-09-9941		7/1/2009	WR-2	G-3
002	☑	CAMO-09-9942		7/1/2009	WR-2	G-3
003	☑	CAMO-09-9943		7/1/2009	WR-2	G-3
004	☑	CAMO-09-9989		7/1/2009	WR-2	G-3
005	☑	CAMO-09-10030		7/1/2009	WR-2	G-3

% Solid DB 7/1/09

Instructions:

Report Options

Report Level:

EDD Type:

Report Group: Dioxins NoMDL with %Solid

TEQ Type: EPA(Default) : Min

Samples Reconciled By: DB 7/1/09

Vial Box ID: ICE COLD

Date Requested 7/8/2009

Percent Solids

Vista Analytical Laboratory

Project: 31850

Sample ID	Chemist/Date DB 7/1/09 Boat Wt.	Sample + Boat Wt.	Chemist/Date CSLB 7/2/09 Residue + Boat Wt.	Comments
001	1.34	5.14	4.74	
002	1.33	6.24	5.67	
003	1.33	8.40	7.43	
004	1.34	9.31	8.01	
005	DB ~~1.30~~ 1.33	6.49	6.00	

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

%Solids 3/2007 rmh

Project: 31850

Extraction Set: 2214

Chemist: M. Caliso 7/1/09

Method(s): EPA Method 8290 | PCDD/F (Tetra - Octa)

C	ALTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/ WIT DATE	CRS CHEM/WIT DATE	AP CHEM/Date	ABSG CHEM/Date	AA CHEM/Date	Florisil CHEM/Date	RS CHEM/WIT DATE
☐	0_2214_MB001	10.00	10.00	MC TEH 7/1/09	MC FEB 7/2/09	N/A	MC 7/2/09	MC 7/2/09	MC 7/2/09	MC FEB 7/2/09
☐	0_2214_OPR001	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	31850_2214_001	N/A	11.19	↓	↓	↓	↓	↓	↓	↓
☐	31850_2214_002	↓	11.32	↓	↓	↓	↓	↓	↓	↓
☐	31850_2214_003	↓	11.85	↓	↓	↓	↓	↓	↓	↓
☐	31850_2214_004	↓	12.48	↓	↓	↓	↓	↓	↓	↓
☐	31850_2214_005	↓	11.22	↓	↓	↓	↓	↓	↓	↓

IS Name (V4)	NS Name (V4)	CRS Name (16)	RS Name (V4)
PCDD/F 0809 10A 10µl	PCDD/F 0809 16B 10µl	PCDD/F 0809 10C 10µl	PCDD/F 0809 10D 10µl
PCB	PCB	PCB	PCB
PAH	PAH	PAH	PAH

Cycle Time: 7/1 Start: 1505; 7/2 Stop: 0705

APP.: SEFUN SOX (SDS)

SOLV: Toluene

Other: N/A

Final Volume(s): 20µl C14

Check Out: Chemist: MC 7/1/09

Check-In: Chemist: / /

Comments:

hrmsgenprepL.rpt

SAMPLE DATA

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qid

Last Altered: Tuesday, July 07, 2009 09:13:21 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:13:43 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1	2,3,7,8-TCDD			NO	1.08	10.000					0.0500
2	1,2,3,7,8-PeCDD			NO	1.03	10.000					0.0717
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.133
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.133
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.128
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.247
7	OCDD			NO	1.18	10.000					0.188
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0365
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.0403
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0429
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.0470
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.0479
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.0614
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.0813
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.131
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.122
17	OCDF			NO	1.10	10.000					0.109
18	13C-2,3,7,8-TCDD	8.70e5	0.79	NO	1.01	10.000	26.05	1.023	194.77	97.4	0.279
19	13C-1,2,3,7,8-PeCDD	6.60e5	0.62	NO	0.827	10.000	30.69	1.205	181.17	90.6	0.232
20	13C-1,2,3,4,7,8-HxCDD	5.57e5	1.27	NO	0.916	10.000	34.14	0.988	188.94	94.5	0.468
21	13C-1,2,3,6,7,8-HxCDD	5.03e5	1.22	NO	0.921	10.000	34.25	0.991	169.85	84.9	0.466
22	13C-1,2,3,4,6,7,8-HpCDD	4.39e5	1.05	NO	0.708	10.000	38.18	1.105	192.67	96.3	0.850
23	13C-OCDD	5.92e5	0.89	NO	0.503	10.000	41.63	1.205	365.82	91.5	0.545
24	13C-2,3,7,8-TCDF	1.18e6	0.78	NO	0.977	10.000	25.28	0.993	198.95	99.5	0.209
25	13C-1,2,3,7,8-PeCDF	1.05e6	1.55	NO	0.896	10.000	29.47	1.157	193.06	96.5	0.352
26	13C-2,3,4,7,8-PeCDF	9.93e5	1.59	NO	0.900	10.000	30.42	1.194	182.51	91.3	0.350
27	13C-1,2,3,4,7,8-HxCDF	7.24e5	0.52	NO	1.17	10.000	33.21	0.961	192.47	96.2	0.586
28	13C-1,2,3,6,7,8-HxCDF	8.07e5	0.52	NO	1.52	10.000	33.34	0.965	165.10	82.6	0.451
29	13C-2,3,4,6,7,8-HxCDF	6.84e5	0.52	NO	1.25	10.000	33.96	0.983	170.14	85.1	0.548
30	13C-1,2,3,7,8,9-HxCDF	5.95e5	0.52	NO	1.05	10.000	34.95	1.012	175.67	87.8	0.651

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Tuesday, July 07, 2009 09:13:21 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:13:43 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

31	13C-1,2,3,4,6,7,8-HpCDF	4.67e5	0.44	NO	0.868	10.000	36.83	1.066	166.99	83.5	0.836
32	13C-1,2,3,4,7,8,9-HpCDF	4.24e5	0.43	NO	0.727	10.000	38.76	1.122	181.28	90.6	0.999
33	13C-OCDF	8.44e5	0.88	NO	0.760	10.000	41.86	1.212	345.35	86.3	0.289
34	37Cl-2,3,7,8-TCDD	2.21e5			0.668	10.000	26.06	1.023	75.231	94.0	0.0751
35	13C-1,2,3,4-TCDD	8.81e5	0.78	NO	1.00	10.000	25.47	0.000	200.00	100	0.283
36	13C-1,2,3,4-TCDF	1.21e6	0.77	NO	1.00	10.000	24.04	0.000	200.00	100	0.204
37	13C-1,2,3,7,8,9-HxCDD	6.44e5	1.25	NO	1.00	10.000	34.55	0.000	200.00	100	0.429
38	Total Tetra-Dioxins				1.08	10.000					0.0223
39	Total Penta-Dioxins				1.03	10.000					0.0296
40	Total Hexa-Dioxins				1.13	10.000					0.0693
41	Total Hepta-Dioxins				1.06	10.000					0.151
42	Total Tetra-Furans				1.09	10.000					0.0155
43	1st Func. Penta-Furans				1.16	10.000					0.0141
44	Total Penta-Furans				1.16	10.000					0.0139
45	Total Hexa-Furans				1.28	10.000					0.0344
46	Total Hepta-Furans				1.69	10.000					0.0735

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-4.qld

Last Altered: Monday, July 06, 2009 13:14:30 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

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2,3,7,8-TCDD

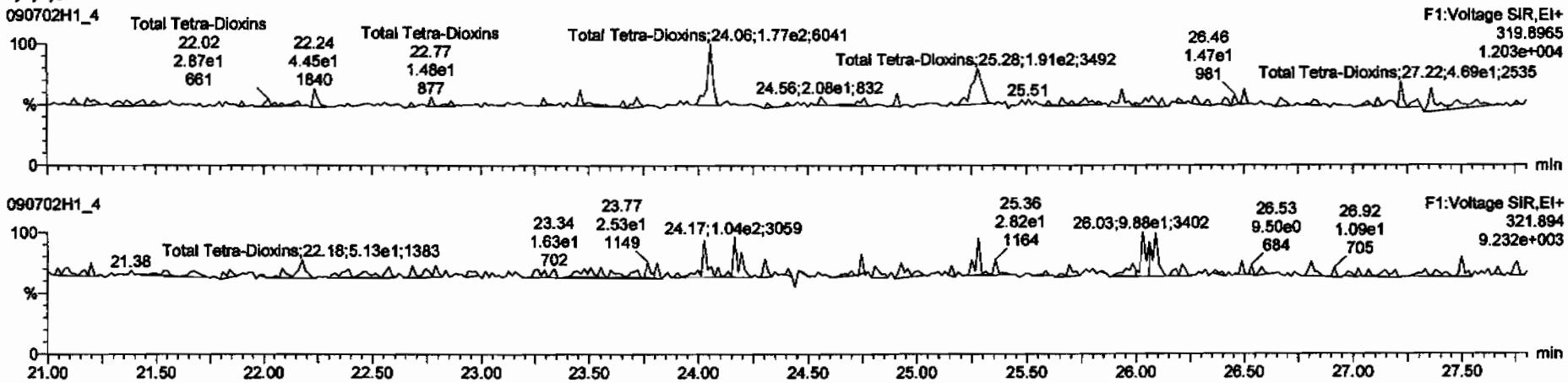

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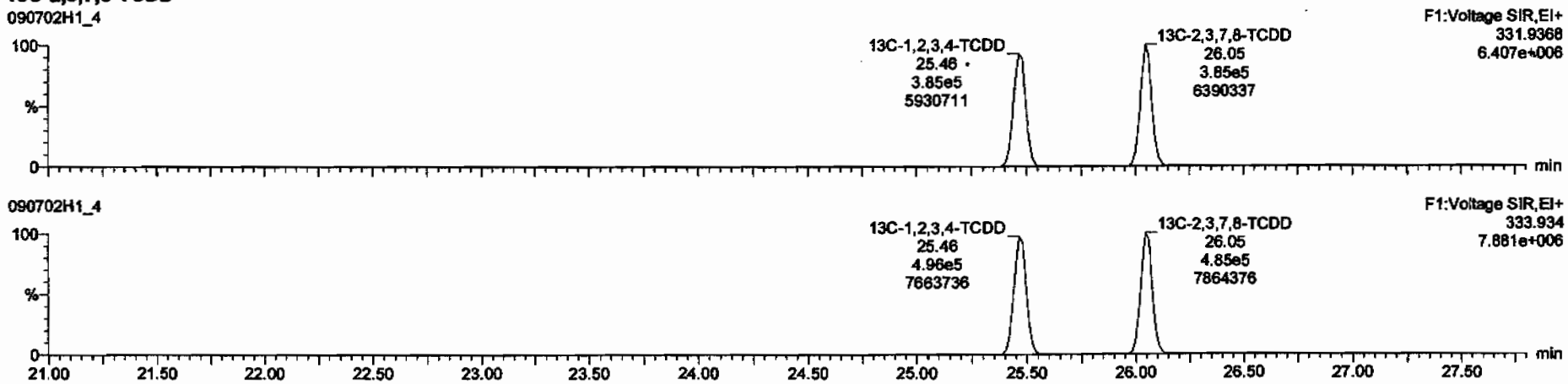

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Printed: Monday, July 06, 2009 13:14:47 Pacific Daylight Time

Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

37Cl-2,3,7,8-TCDD

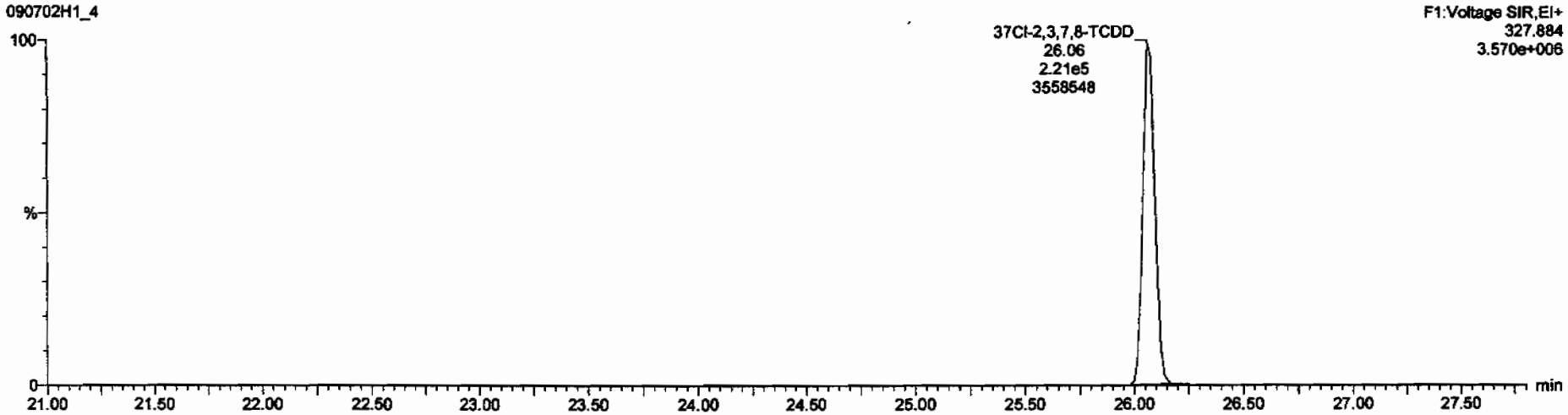

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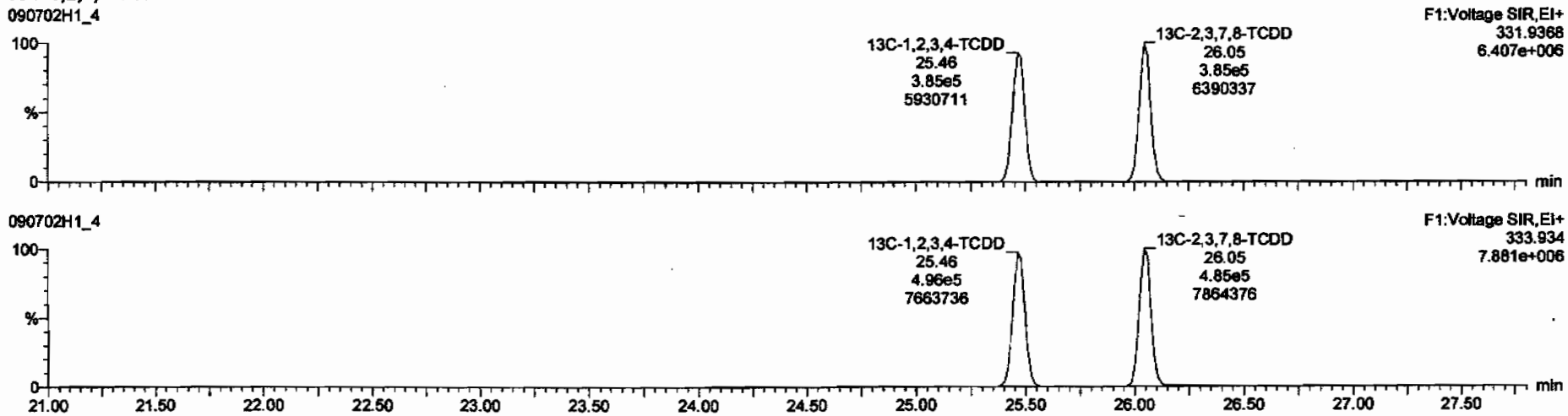

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1,2,3,7,8-PeCDD

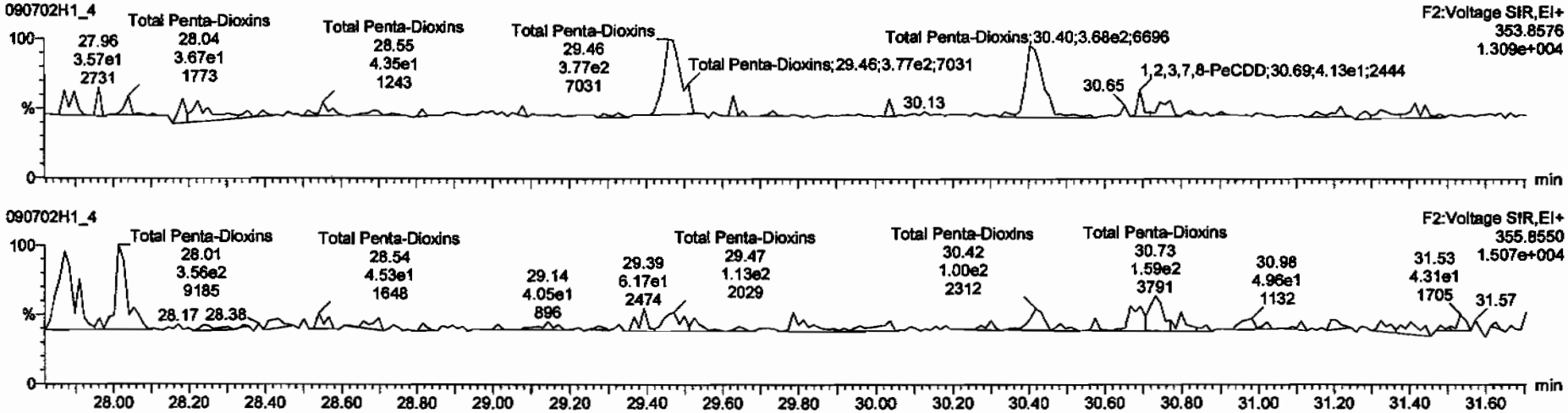

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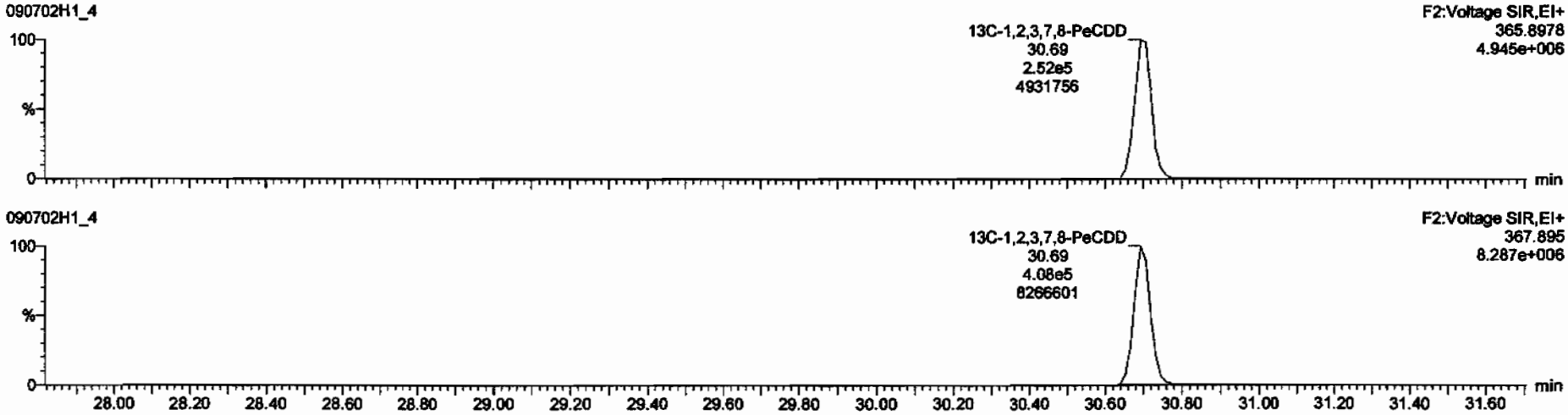

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,4,7,8-HxCDD

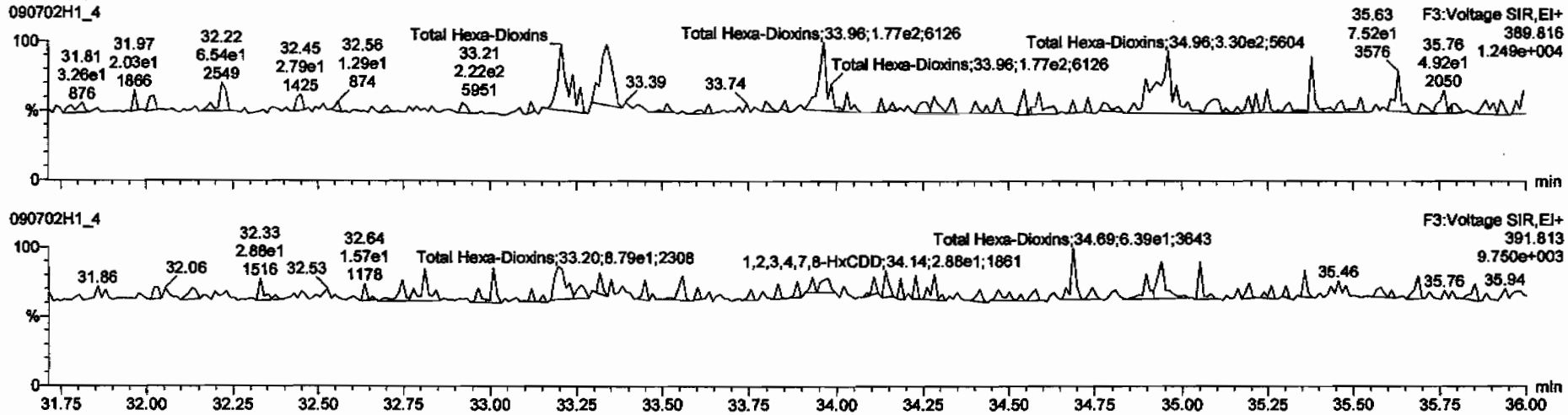

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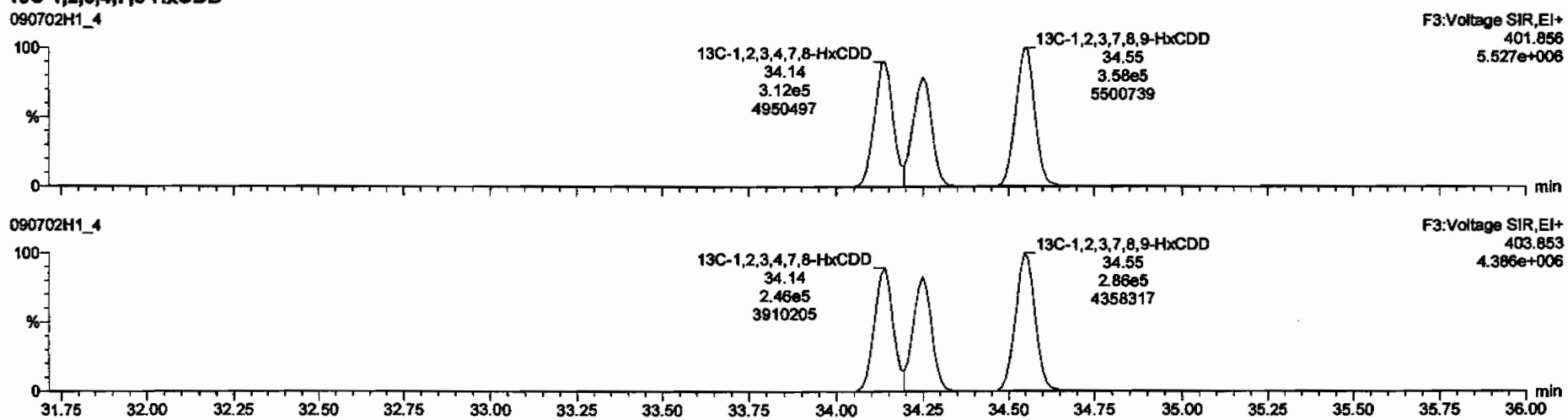

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Name: 090702H1_4, Date: 02-Jul-2009, Time: 16:52:06, ID: 0_2214_MB001, Description: 0_2214_MB001

1,2,3,4,6,7,8-HpCDD

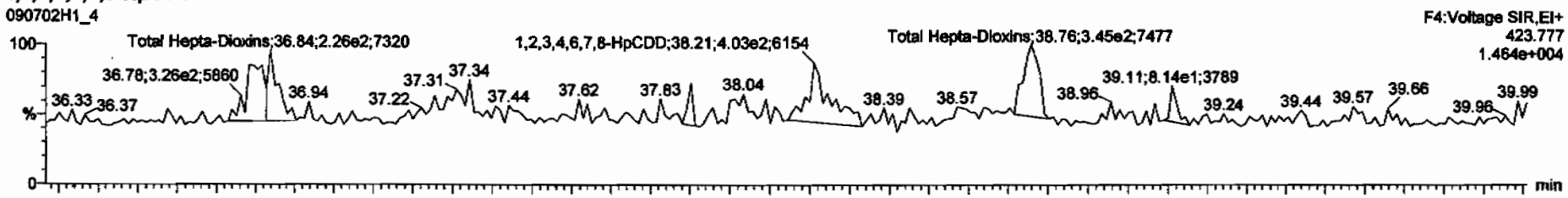

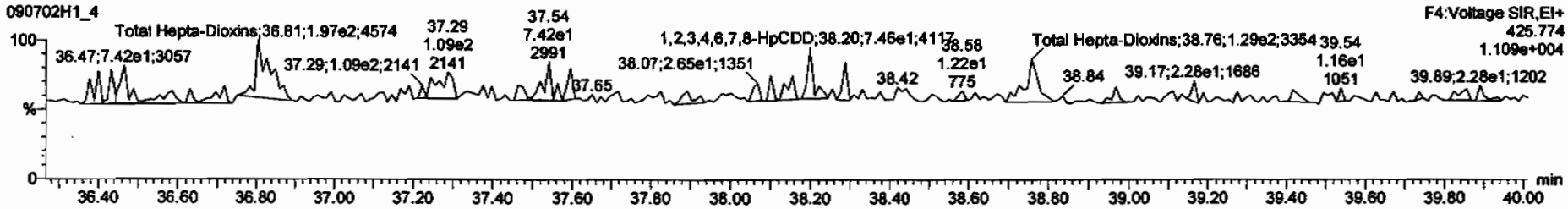

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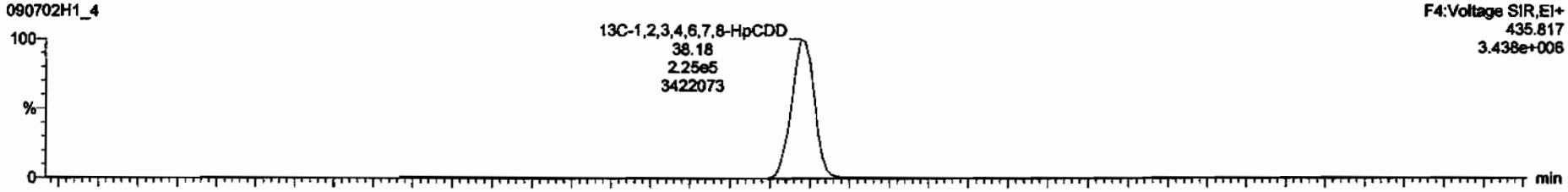

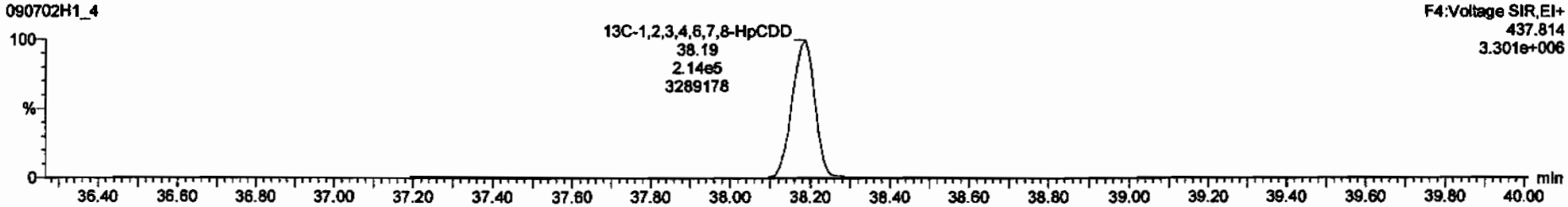

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OCDD

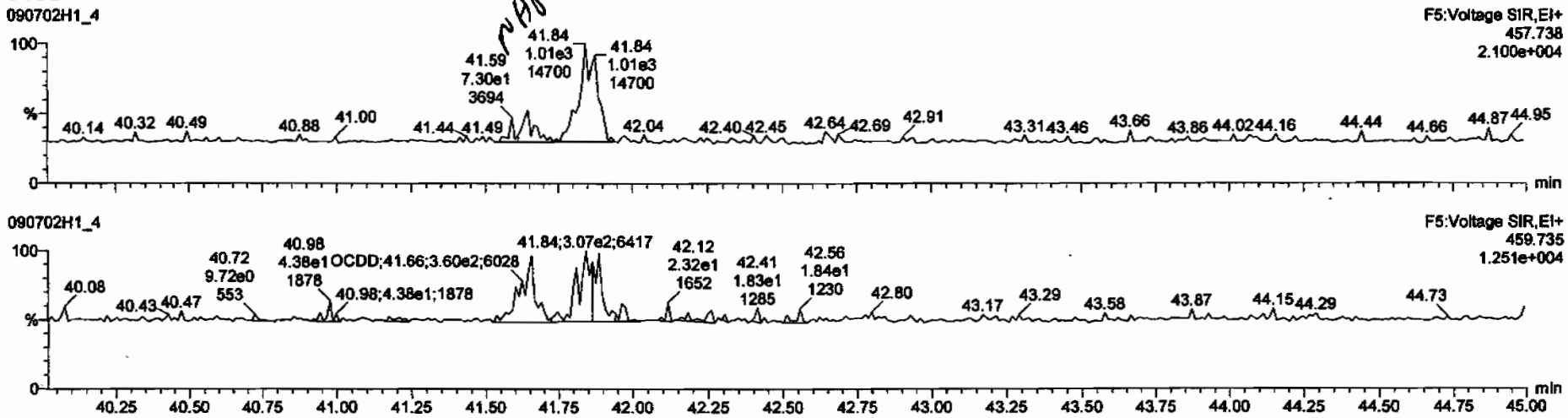

13C-OCDD

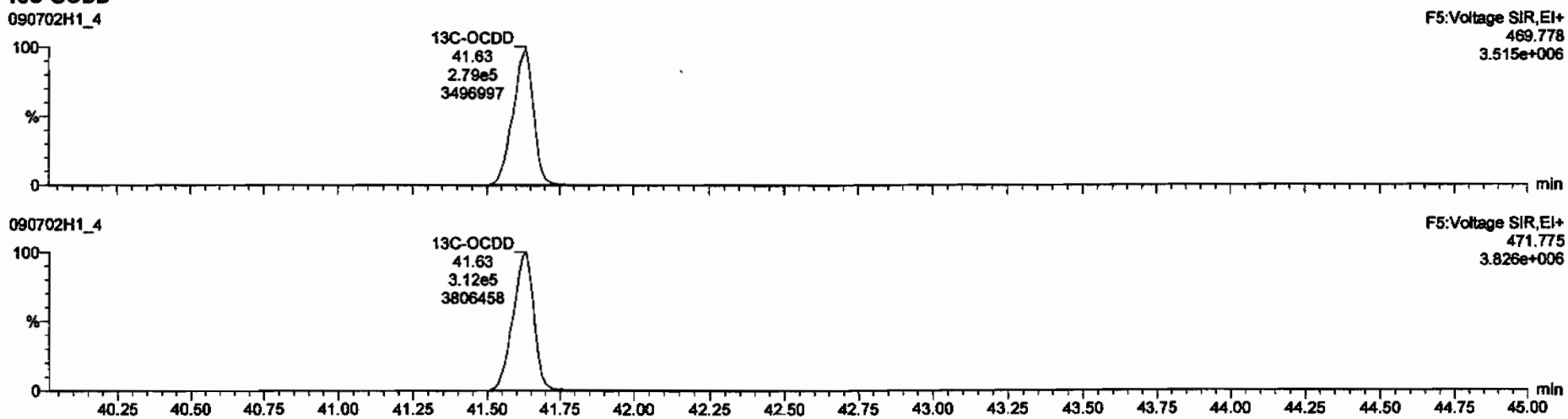

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2,3,7,8-TCDF

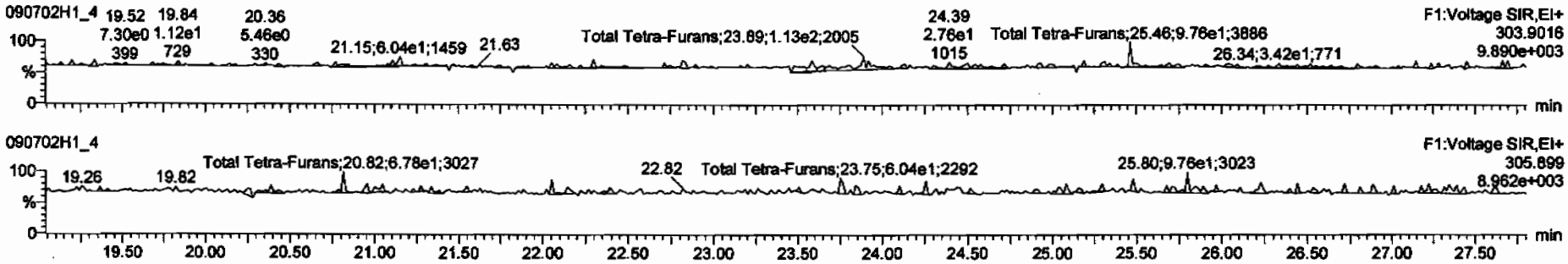

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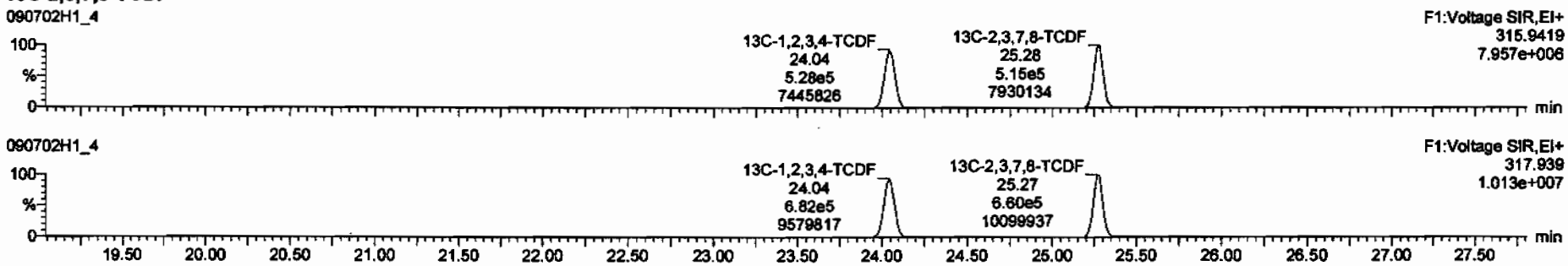

DPE1

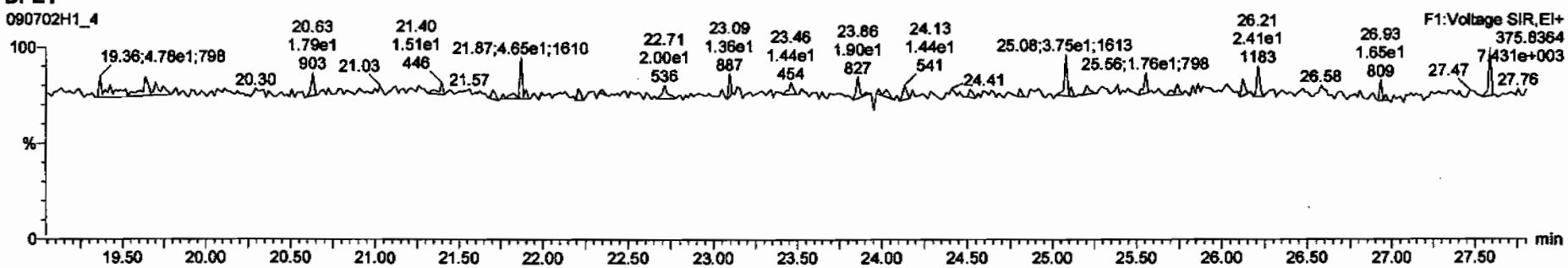

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1st Func. Penta-Furans

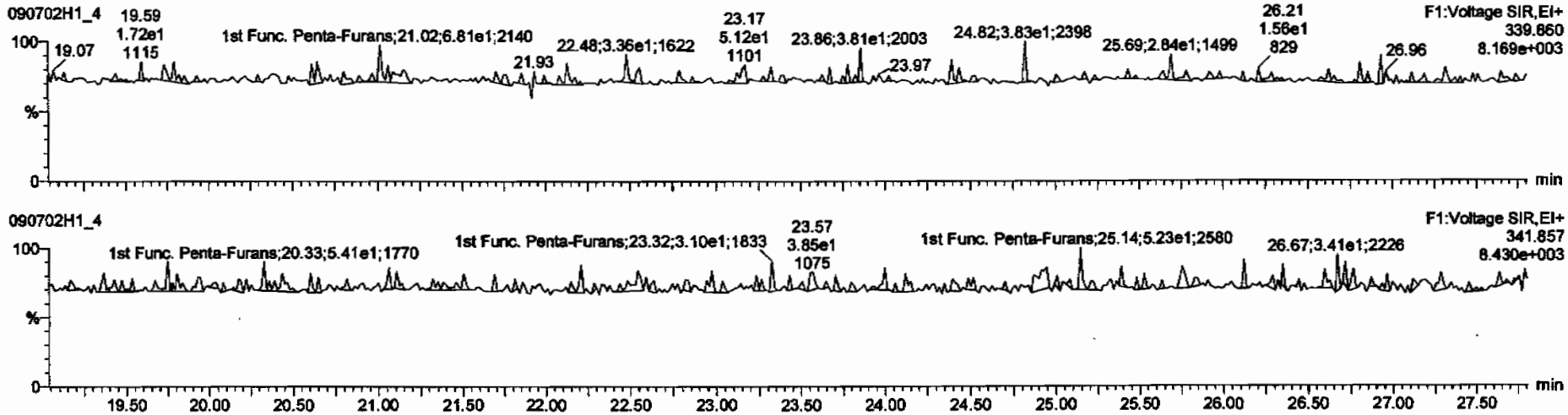

DPE6

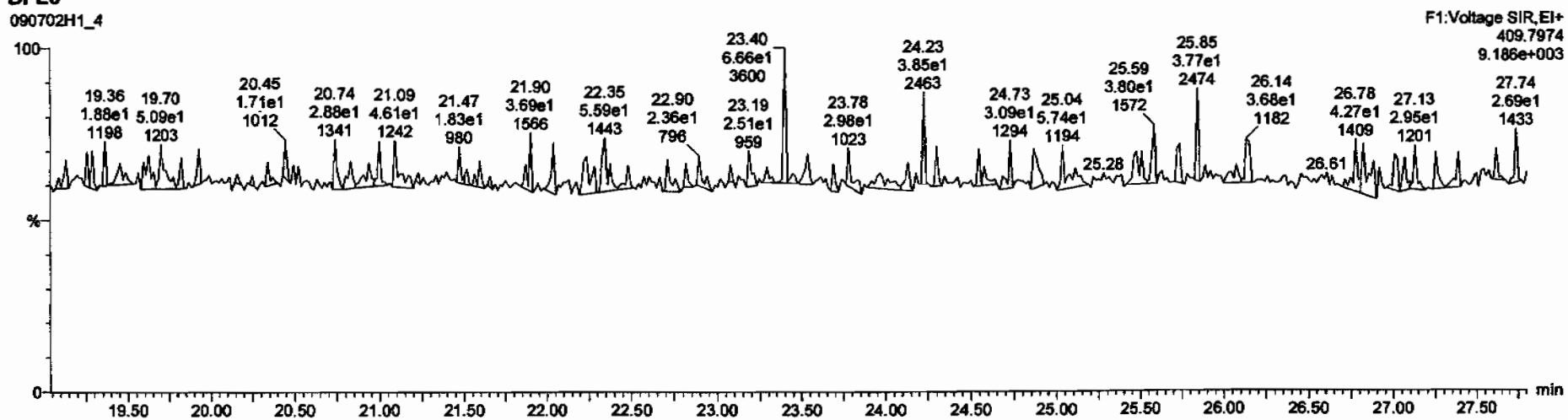

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1,2,3,7,8-PeCDF

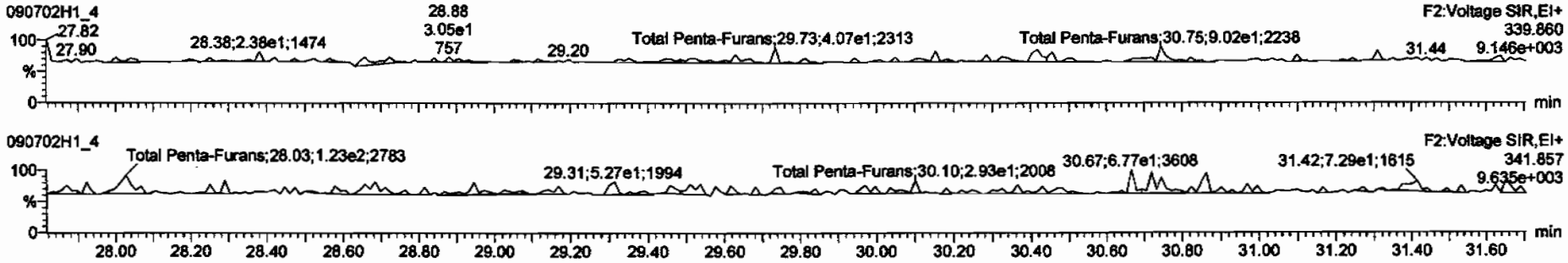

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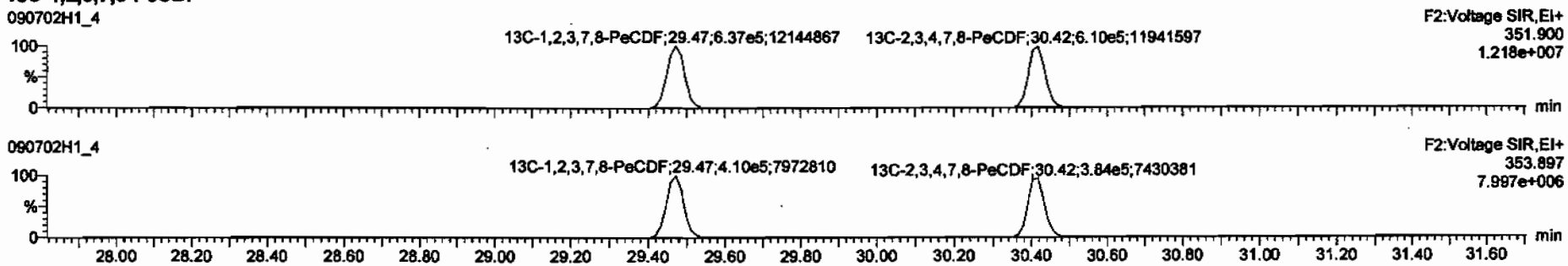

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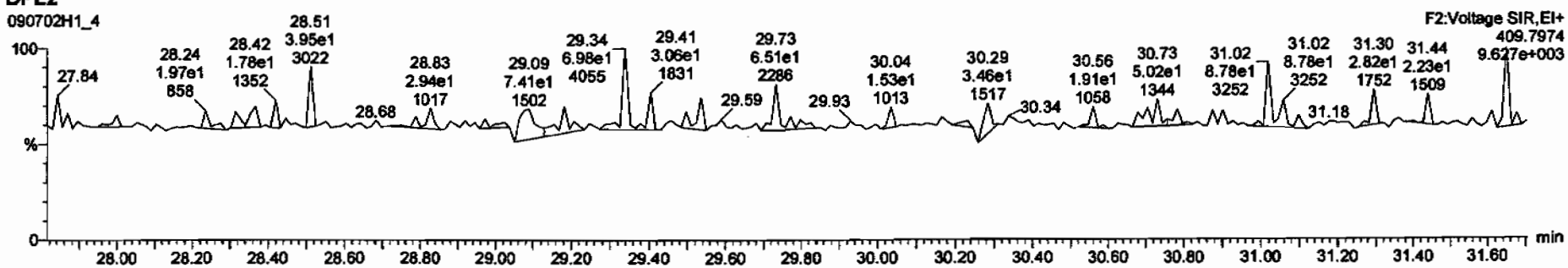

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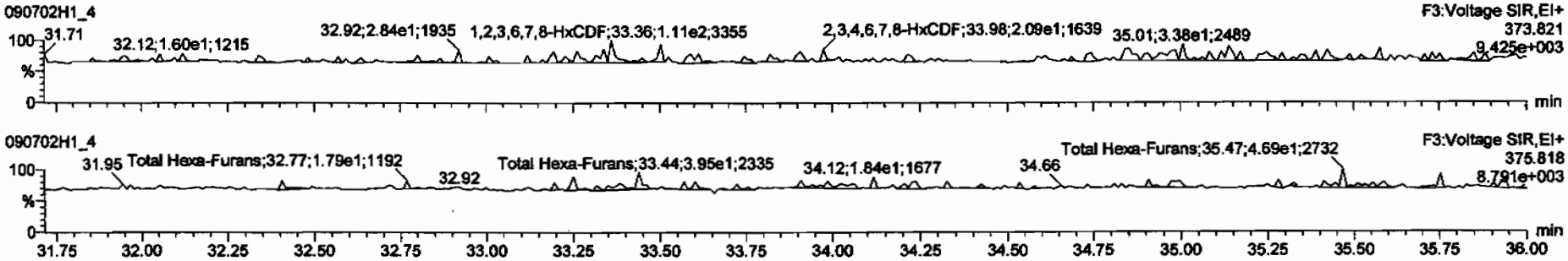

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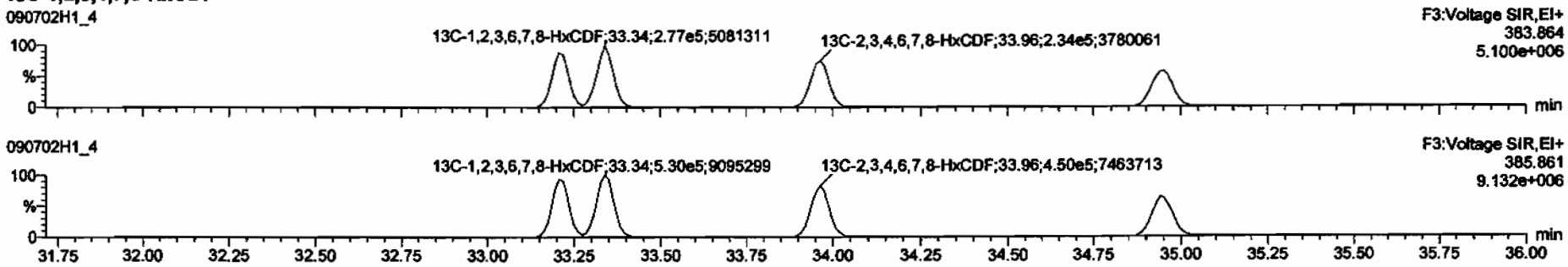

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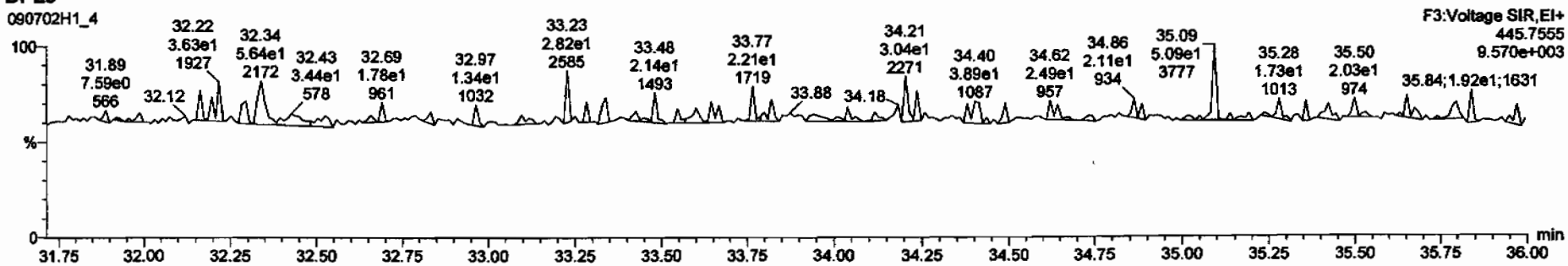

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1,2,3,4,6,7,8-HpCDF

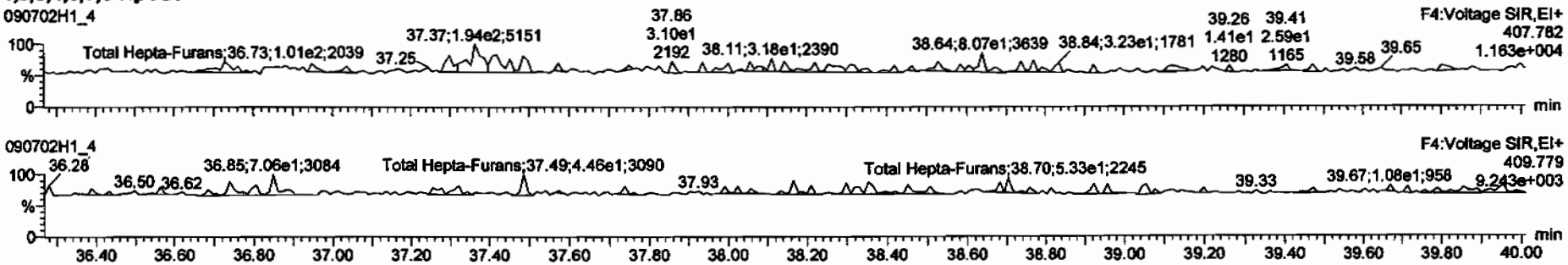

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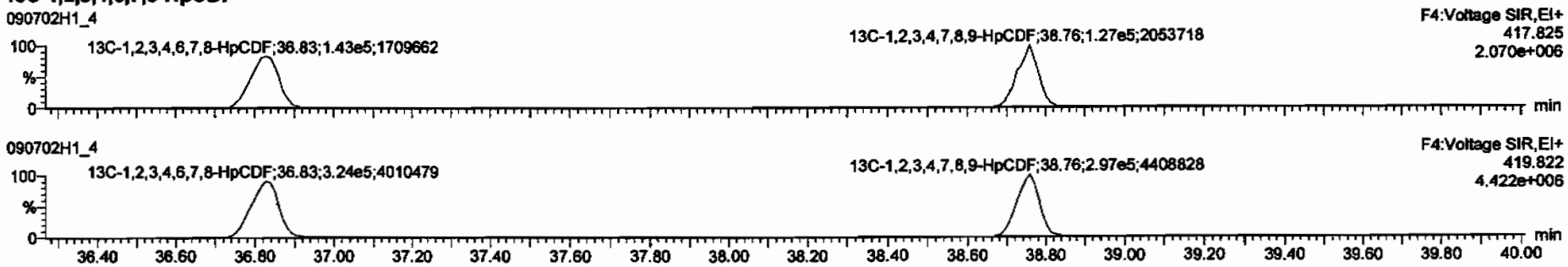

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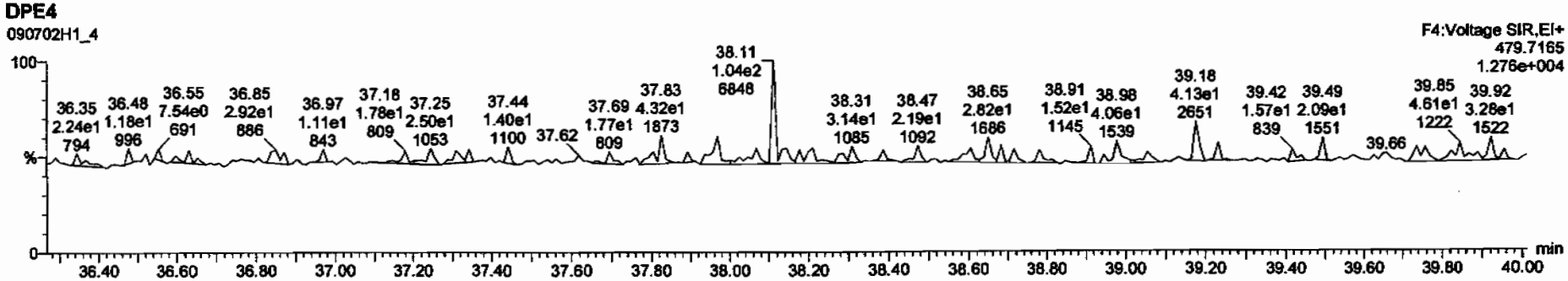

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OCDF

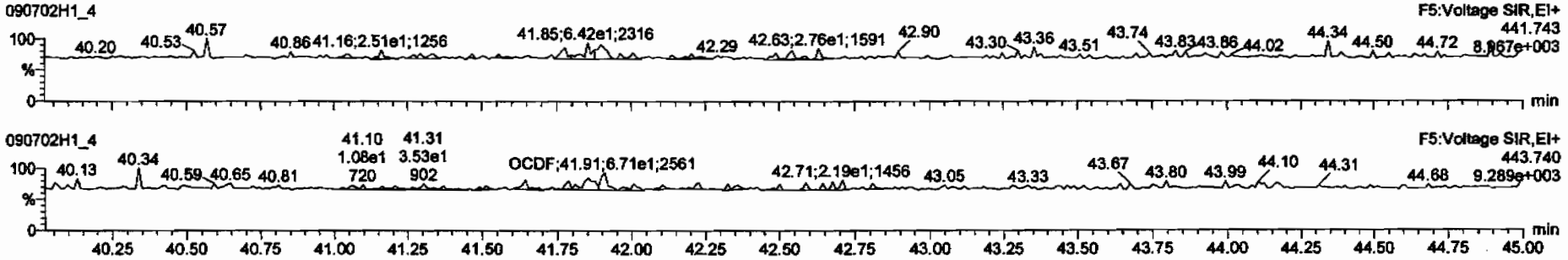

13C-OCDF

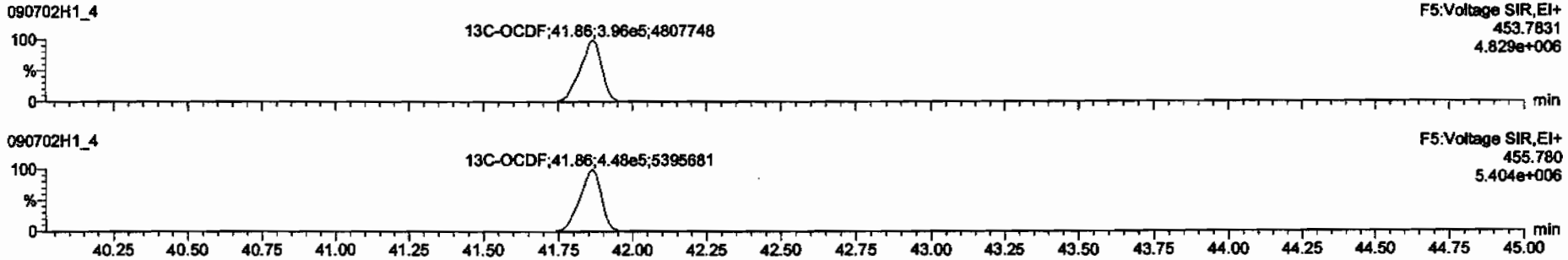

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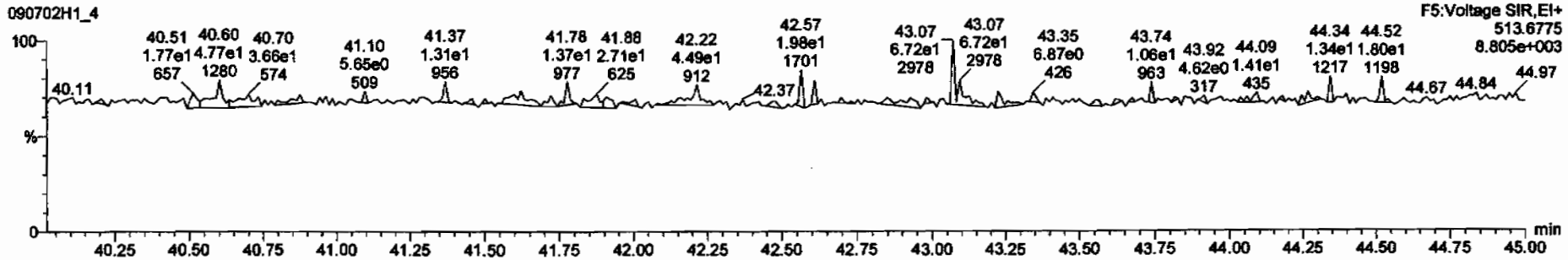

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PFK1

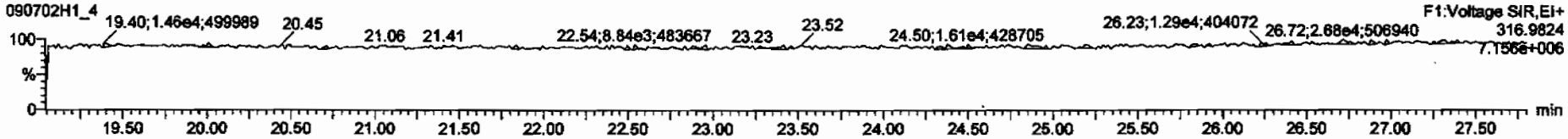

PFK2

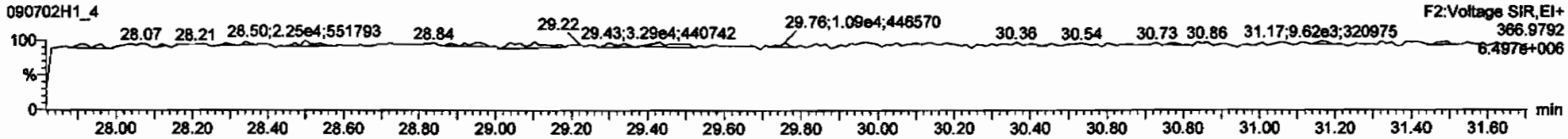

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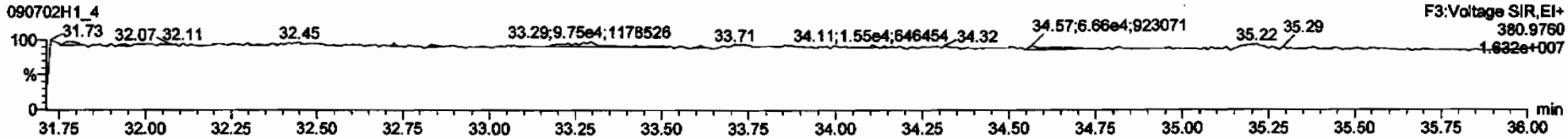

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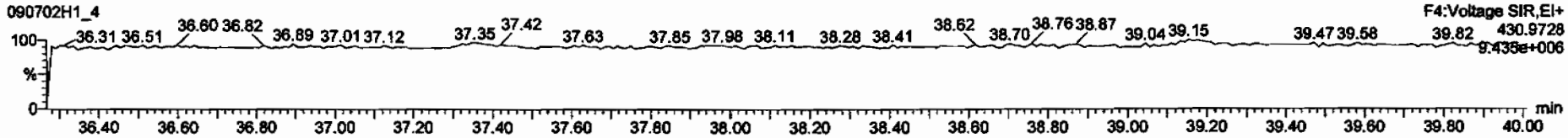

PFK5

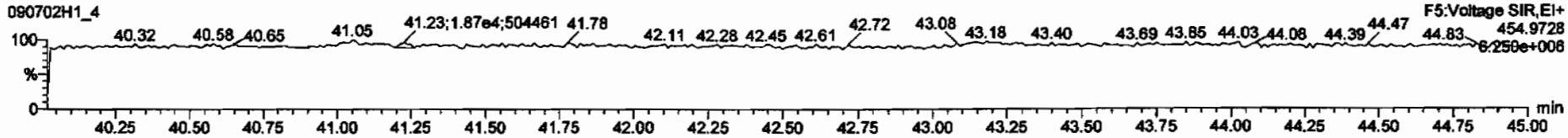

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:07:14 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1	2,3,7,8-TCDD	8.41e4	0.78	NO	1.08	1.000	26.08	1.001	9.3160	93.2	0.0208	9.3160
2	1,2,3,7,8-PeCDD	3.04e5	0.62	NO	1.03	1.000	30.72	1.000	45.641	91.3	0.0578	45.641
3	1,2,3,4,7,8-HxCDD	2.50e5	1.26	NO	1.00	1.000	34.15	1.001	45.851	91.7	0.121	45.851
4	1,2,3,6,7,8-HxCDD	2.50e5	1.26	NO	1.13	1.000	34.26	1.000	44.751	89.5	0.123	44.751
5	1,2,3,7,8,9-HxCDD	2.67e5	1.23	NO	1.10	1.000	34.56	1.009	46.597	93.2	0.117	46.597
6	1,2,3,4,6,7,8-HpCDD	2.06e5	1.04	NO	1.06	1.000	38.19	1.000	44.249	88.5	0.226	44.249
7	OCDD	3.06e5	0.87	NO	1.18	1.000	41.65	1.000	88.869	88.9	0.142	88.869
8	2,3,7,8-TCDF	1.08e5	0.74	NO	1.09	1.000	25.31	1.001	8.4016	84.0	0.0196	8.4020
9	1,2,3,7,8-PeCDF	4.85e5	1.61	NO	1.16	1.000	29.49	1.000	41.587	83.2	0.0590	41.587
10	2,3,4,7,8-PeCDF	4.47e5	1.59	NO	1.12	1.000	30.43	1.000	41.315	82.6	0.0623	41.315
11	1,2,3,4,7,8-HxCDF	4.30e5	1.25	NO	1.41	1.000	33.23	1.000	44.258	88.5	0.0866	44.258
12	1,2,3,6,7,8-HxCDF	4.27e5	1.28	NO	1.22	1.000	33.36	1.001	43.689	87.4	0.0913	43.689
13	2,3,4,6,7,8-HxCDF	3.81e5	1.26	NO	1.28	1.000	33.97	1.000	44.683	89.4	0.108	44.683
14	1,2,3,7,8,9-HxCDF	3.33e5	1.28	NO	1.26	1.000	34.96	1.000	44.873	89.7	0.139	44.873
15	1,2,3,4,6,7,8-HpCDF	3.45e5	1.05	NO	1.69	1.000	36.85	1.001	44.914	89.8	0.198	44.914
16	1,2,3,4,7,8,9-HpCDF	2.85e5	1.05	NO	1.48	1.000	38.77	1.000	45.881	91.8	0.215	45.881
17	OCDF	4.04e5	0.91	NO	1.10	1.000	41.89	1.000	88.020	88.0	0.122	88.020
18	13C-2,3,7,8-TCDD	8.37e5	0.78	NO	1.01	1.000	26.06	1.023	99.620	99.6	0.121	
19	13C-1,2,3,7,8-PeCDD	6.44e5	0.62	NO	0.827	1.000	30.71	1.205	94.026	94.0	0.122	
20	13C-1,2,3,4,7,8-HxCDD	5.43e5	1.20	NO	0.916	1.000	34.13	0.988	96.107	96.1	0.239	
21	13C-1,2,3,6,7,8-HxCDD	4.97e5	1.33	NO	0.921	1.000	34.25	0.991	87.429	87.4	0.238	
22	13C-1,2,3,4,6,7,8-HpCDD	4.37e5	1.05	NO	0.708	1.000	38.18	1.105	99.866	99.9	0.463	
23	13C-OCDD	5.84e5	0.89	NO	0.503	1.000	41.62	1.205	188.32	94.2	0.275	
24	13C-2,3,7,8-TCDF	1.18e6	0.79	NO	0.977	1.000	25.28	0.992	102.41	102	0.0965	
25	13C-1,2,3,7,8-PeCDF	1.01e6	1.55	NO	0.896	1.000	29.47	1.157	95.404	95.4	0.205	
26	13C-2,3,4,7,8-PeCDF	9.68e5	1.55	NO	0.900	1.000	30.42	1.194	91.426	91.4	0.204	
27	13C-1,2,3,4,7,8-HxCDF	6.88e5	0.52	NO	1.17	1.000	33.22	0.962	95.390	95.4	0.321	
28	13C-1,2,3,6,7,8-HxCDF	8.00e5	0.52	NO	1.52	1.000	33.34	0.965	85.317	85.3	0.247	
29	13C-2,3,4,6,7,8-HxCDF	6.67e5	0.52	NO	1.25	1.000	33.97	0.983	86.459	86.5	0.301	
30	13C-1,2,3,7,8,9-HxCDF	5.91e5	0.51	NO	1.05	1.000	34.95	1.012	90.906	90.9	0.357	

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Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 09:07:14 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

31	13C-1,2,3,4,6,7,8-HpCDF	4.55e5	0.44	NO	0.868	1.000	36.83	1.066	84.855	84.9	0.521
32	13C-1,2,3,4,7,8,9-HpCDF	4.19e5	0.44	NO	0.727	1.000	38.76	1.122	93.449	93.4	0.623
33	13C-OCDF	8.37e5	0.88	NO	0.760	1.000	41.88	1.212	178.53	89.3	0.154
34	37Cl-2,3,7,8-TCDD	2.05e5			0.668	1.000	26.08	1.023	37.129	92.8	0.0420
35	13C-1,2,3,4-TCDD	8.28e5	0.79	NO	1.00	1.000	25.48	0.000	100.00	100	0.123
36	13C-1,2,3,4-TCDF	1.18e6	0.76	NO	1.00	1.000	24.06	0.000	100.00	100	0.0943
37	13C-1,2,3,7,8,9-HxCDD	6.17e5	1.25	NO	1.00	1.000	34.55	0.000	100.00	100	0.219

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

2,3,7,8-TCDD

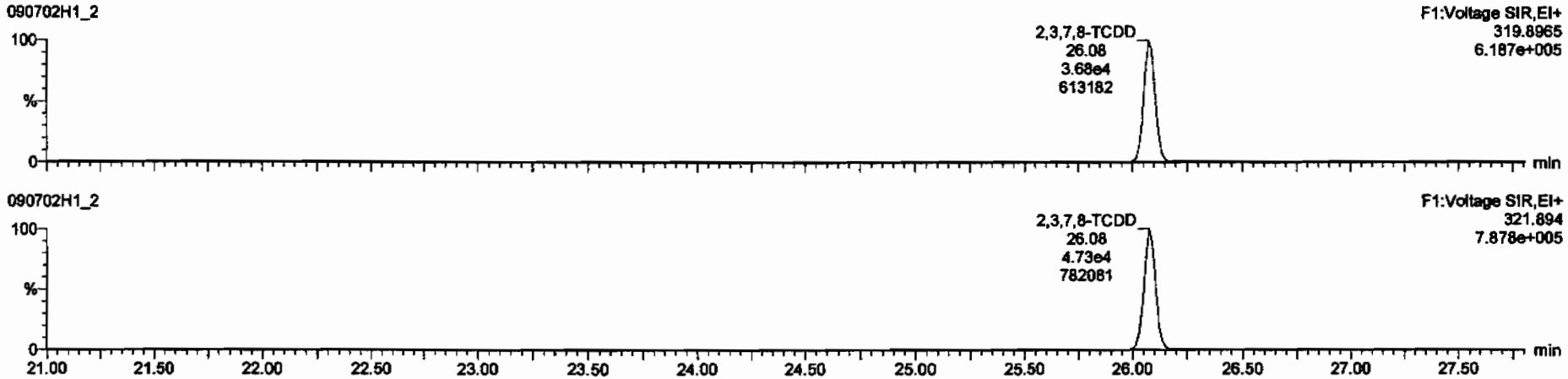

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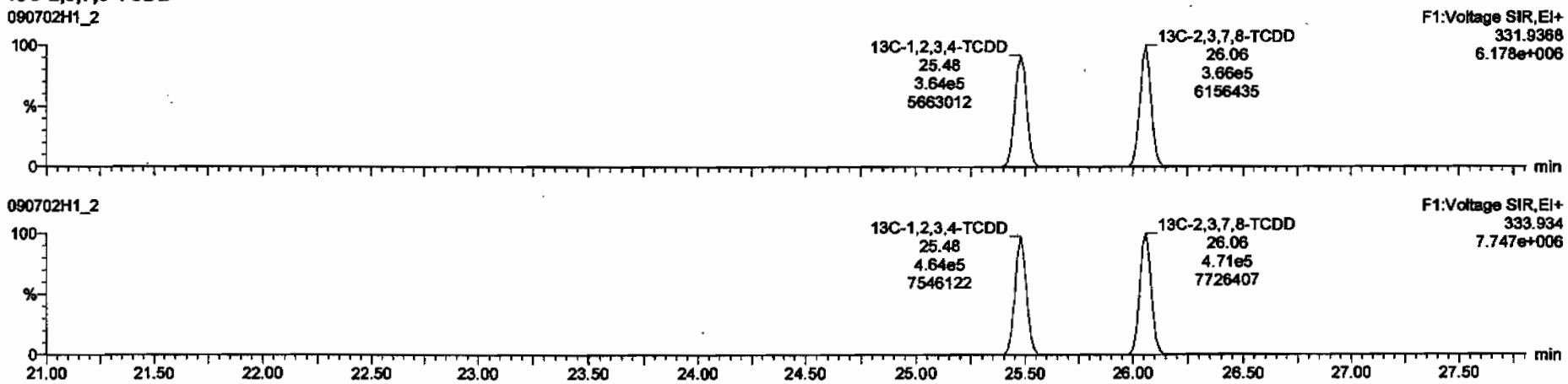

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Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

37Cl-2,3,7,8-TCDD

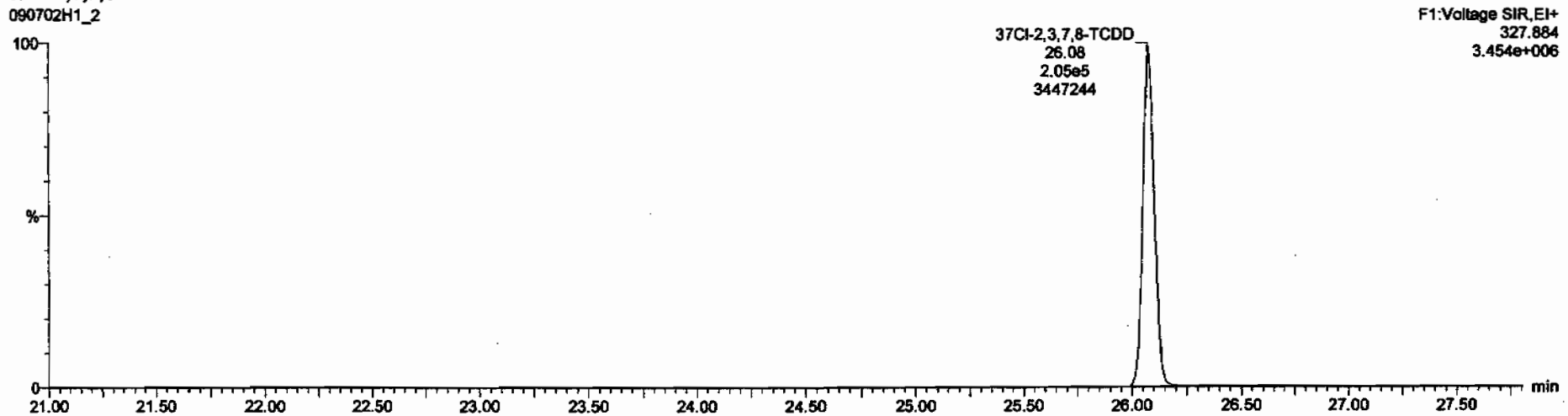

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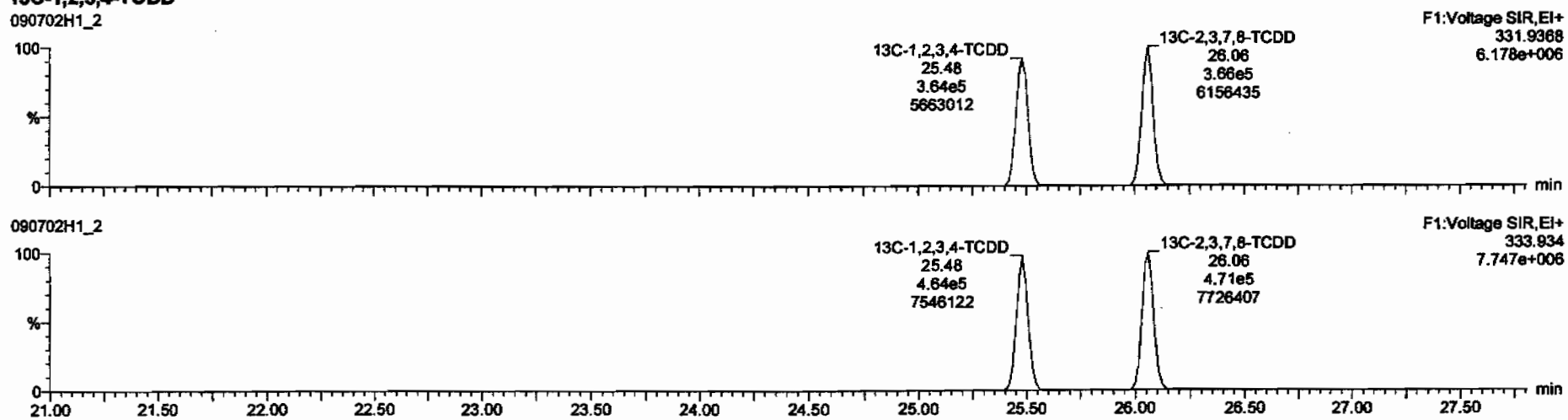

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Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,7,8-PeCDD

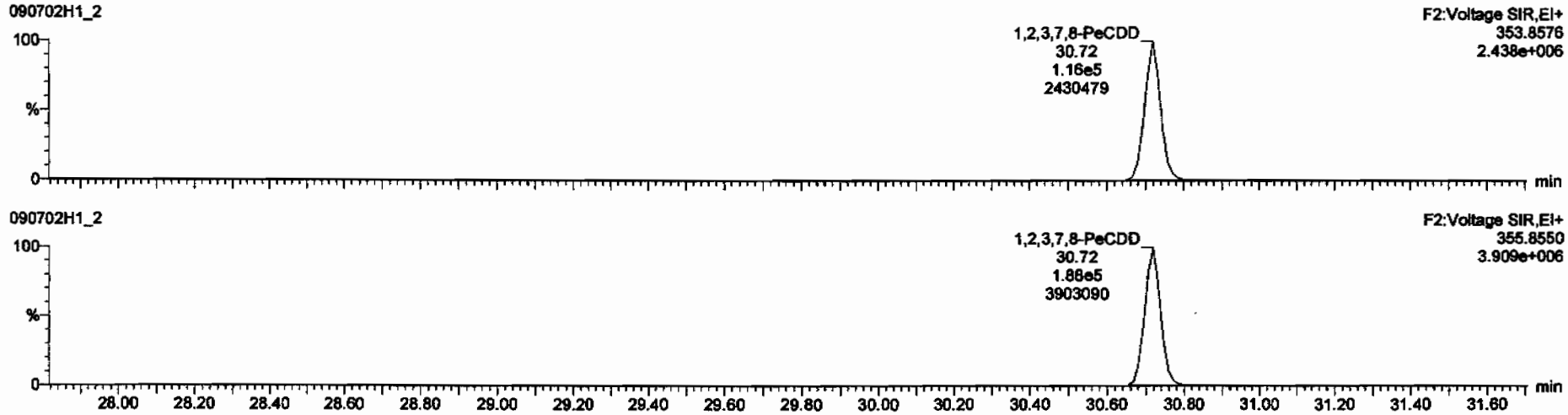

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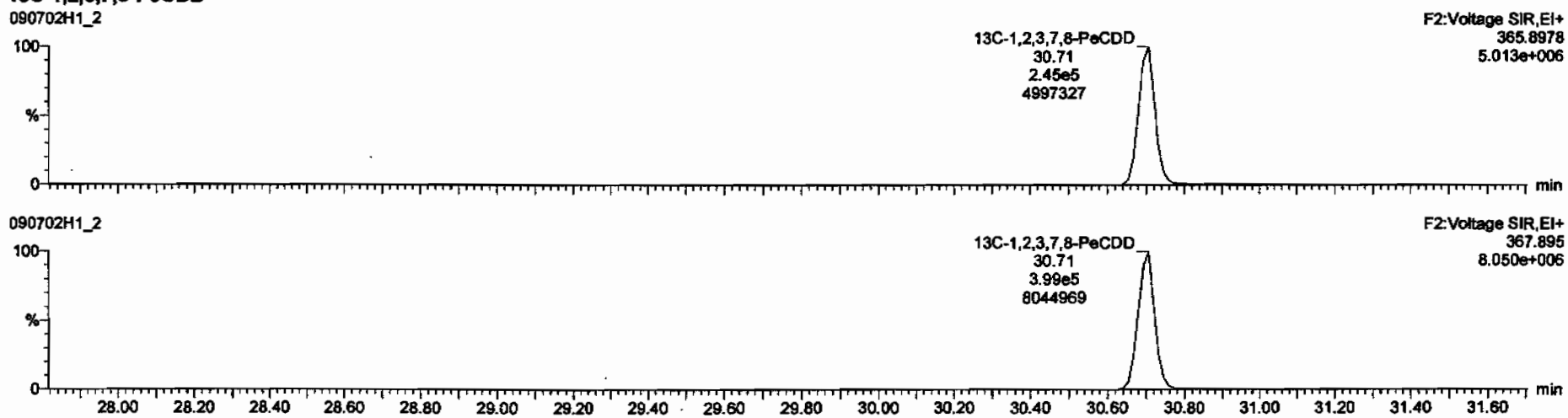

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,7,8-HxCDD

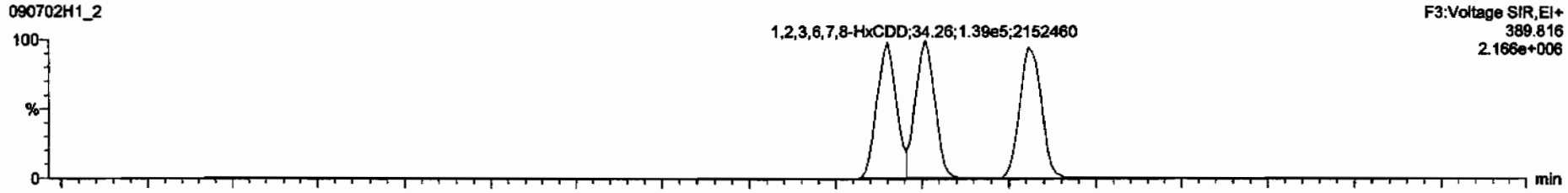

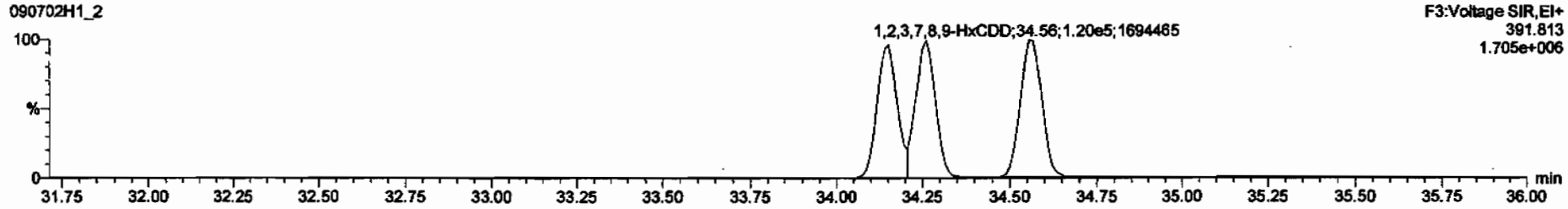

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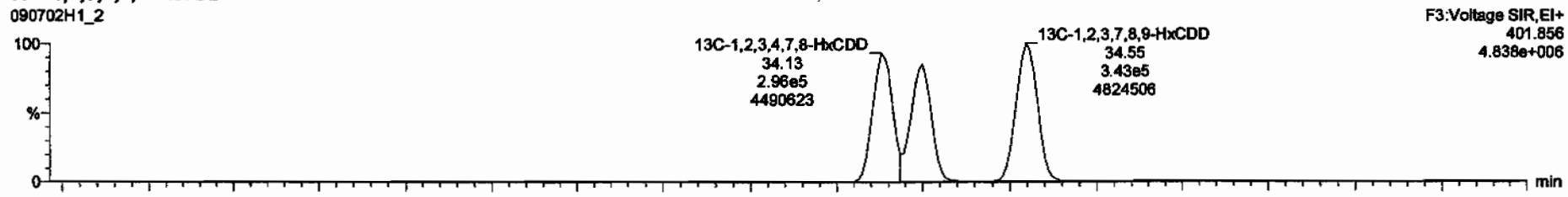

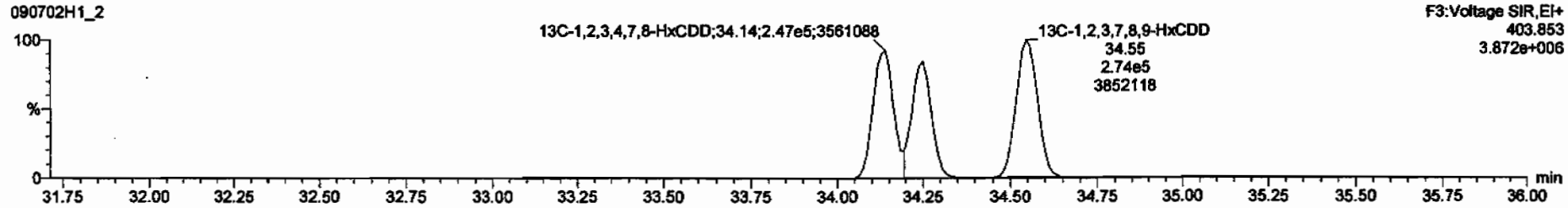

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,6,7,8-HpCDD

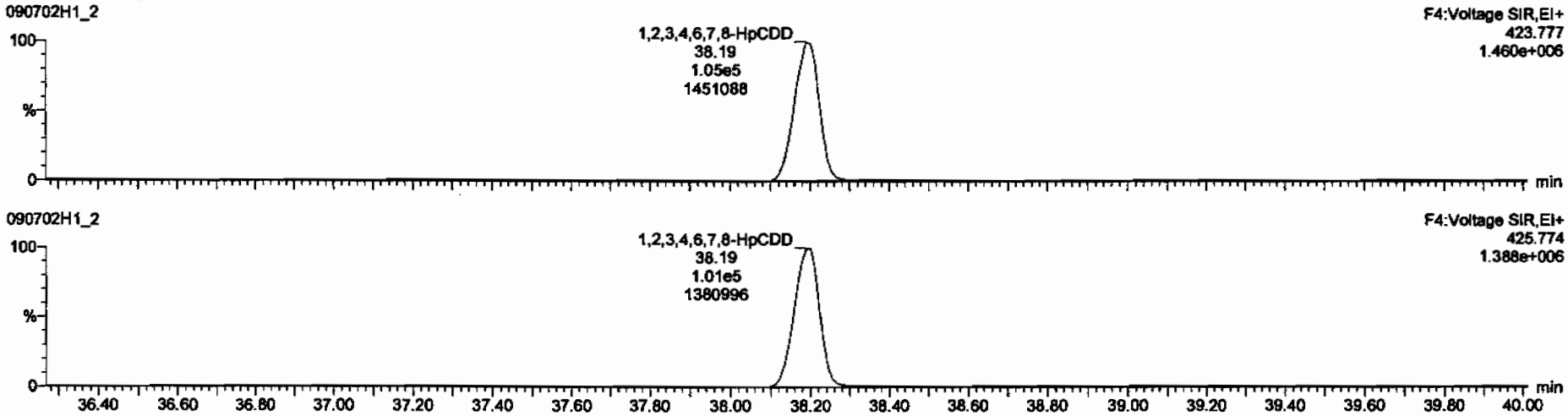

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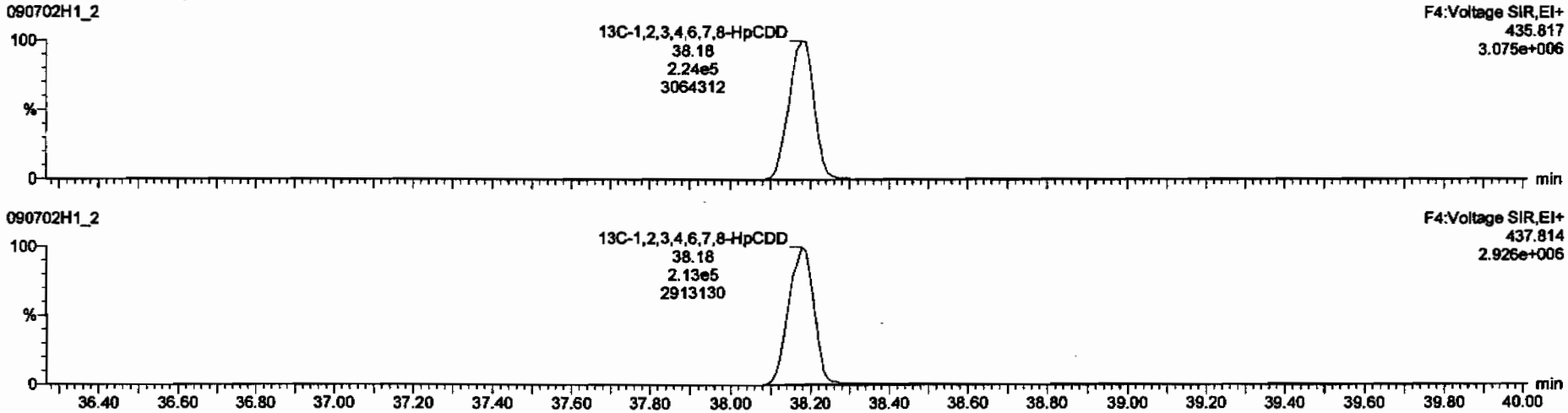

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

OCDD

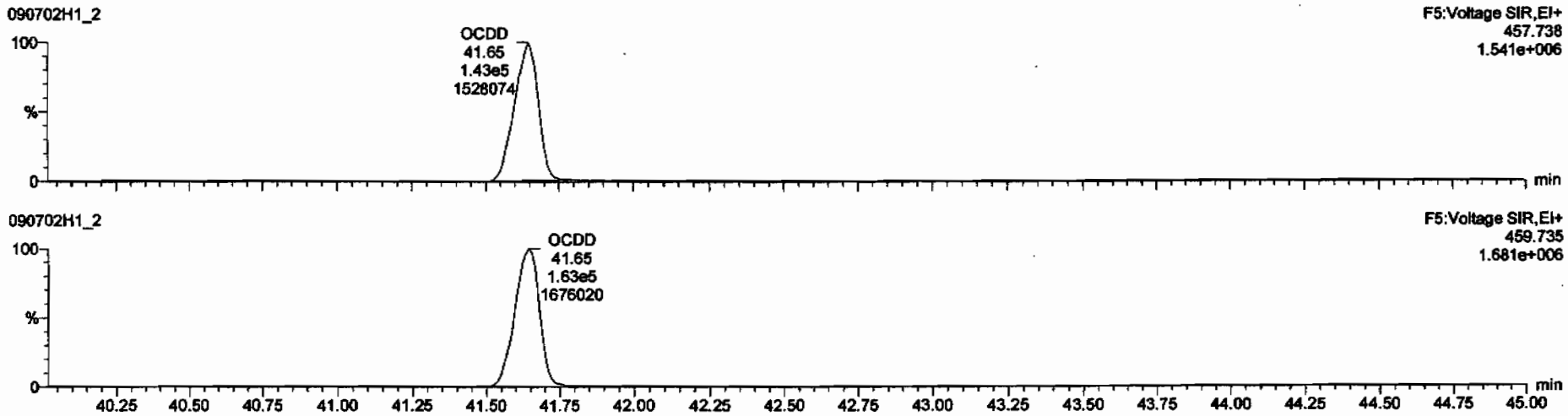

13C-OCDD

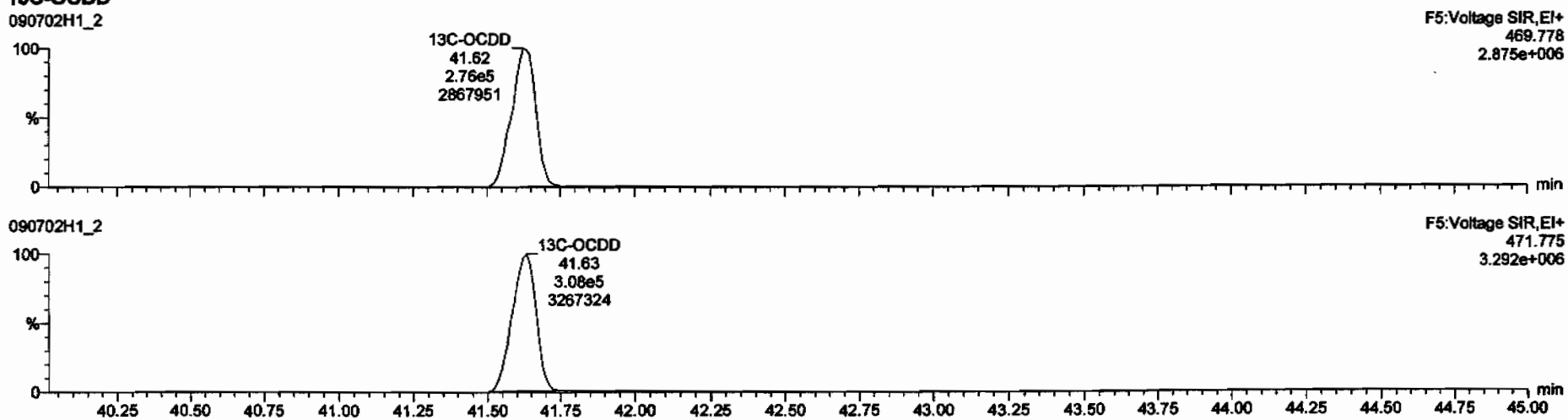

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Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

2,3,7,8-TCDF

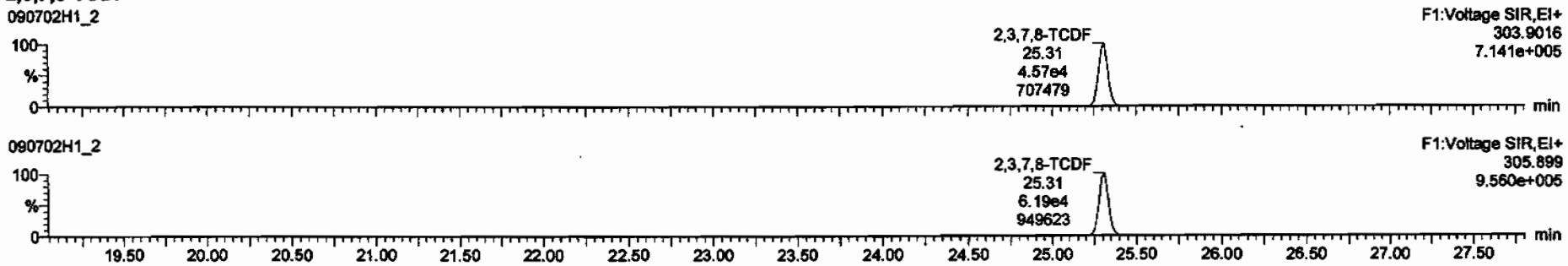

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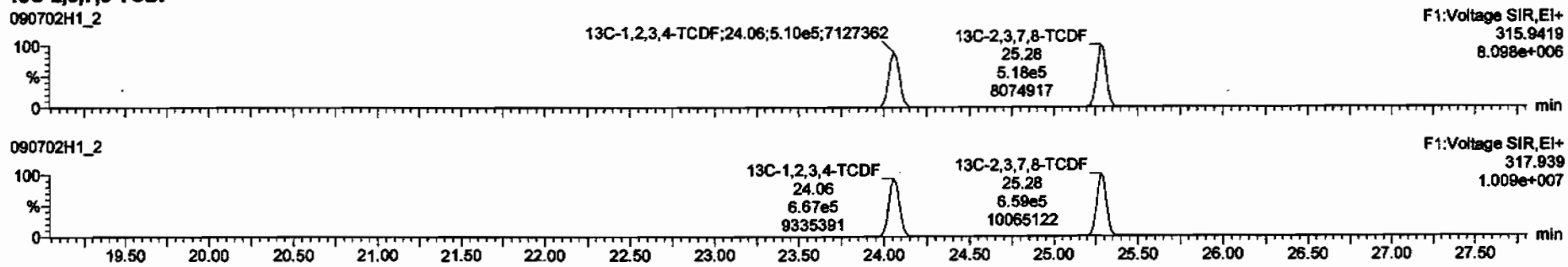

DPE1

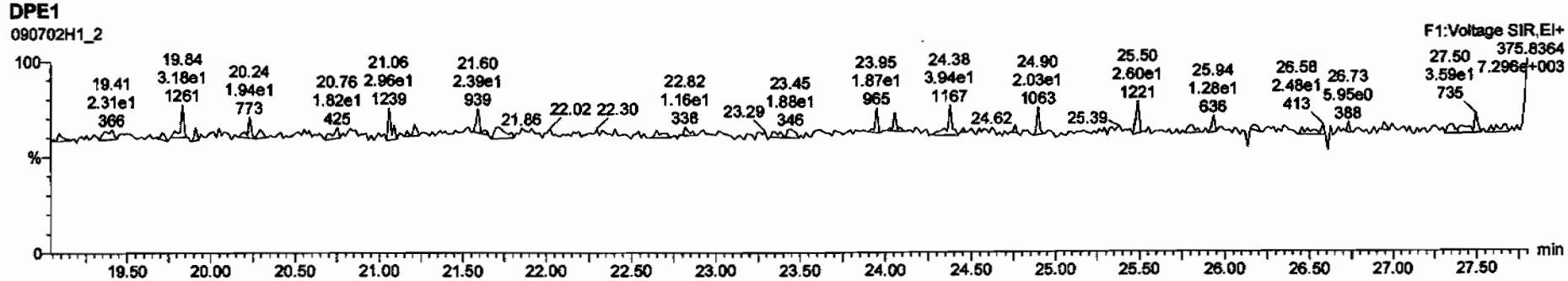

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

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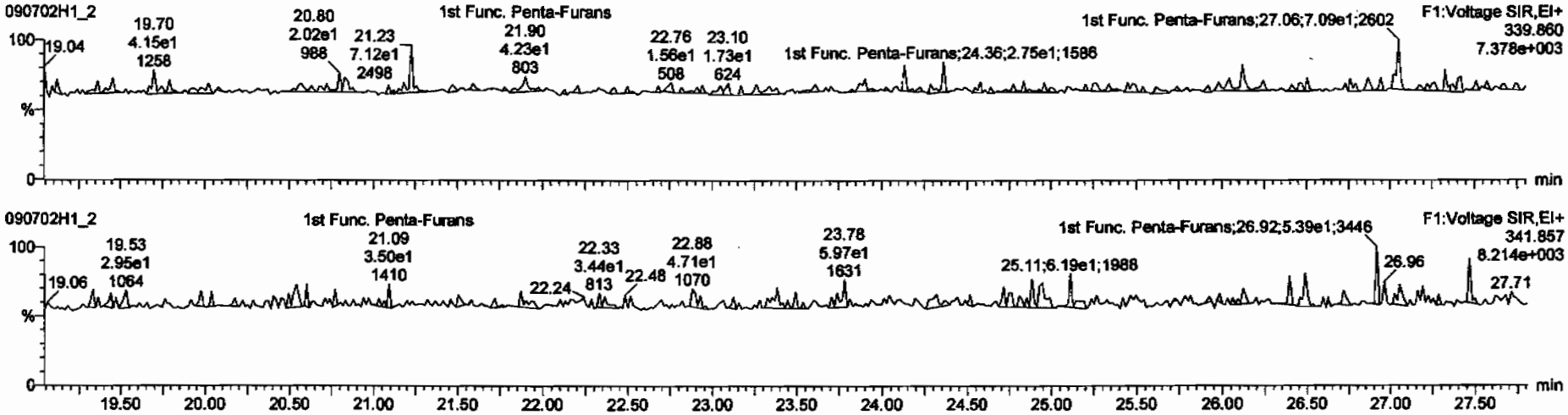

DPE6

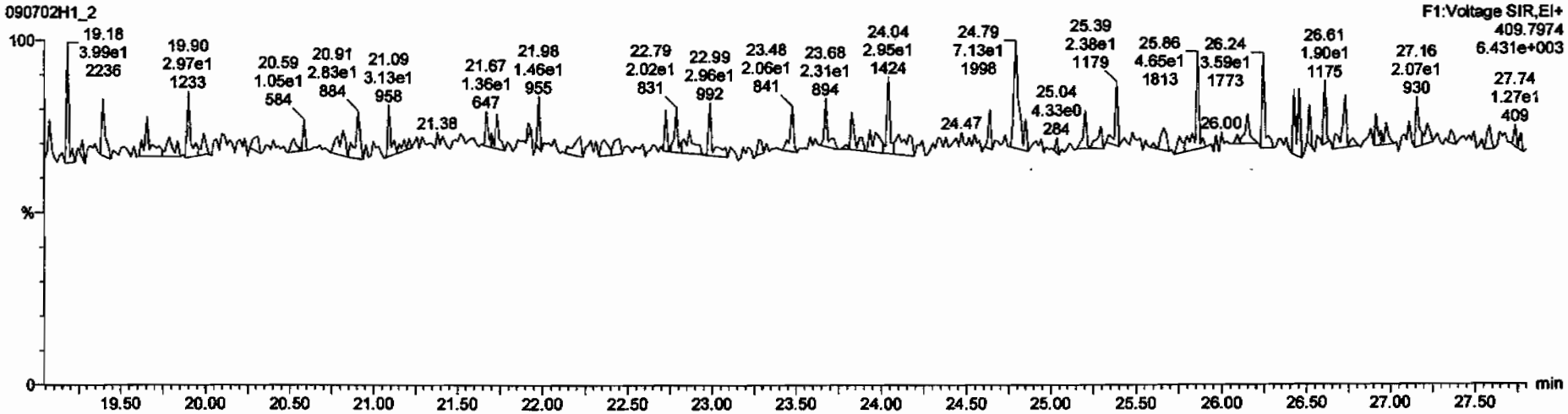

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,7,8-PeCDF

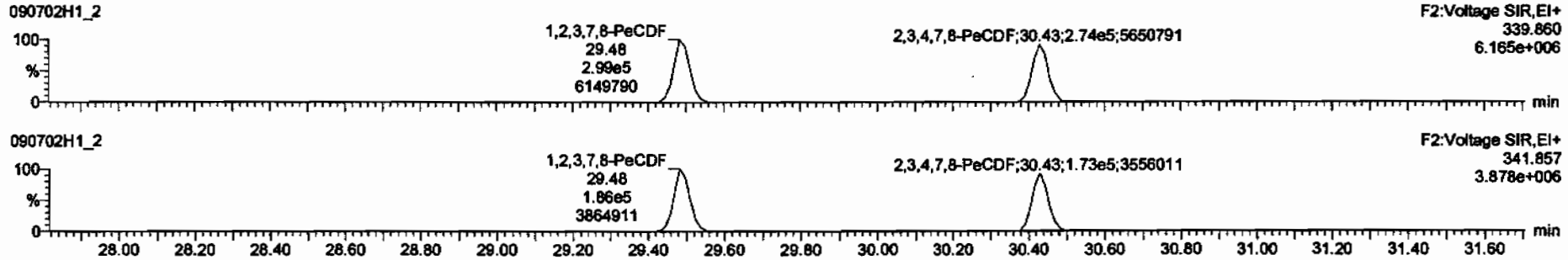

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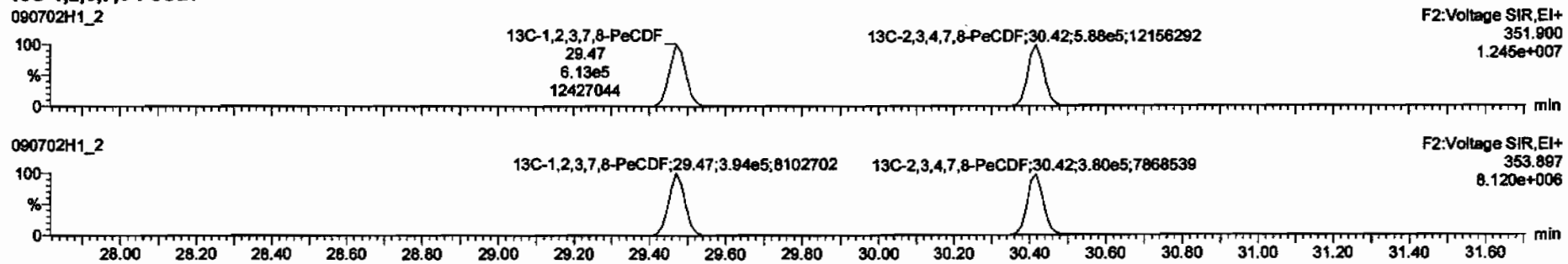

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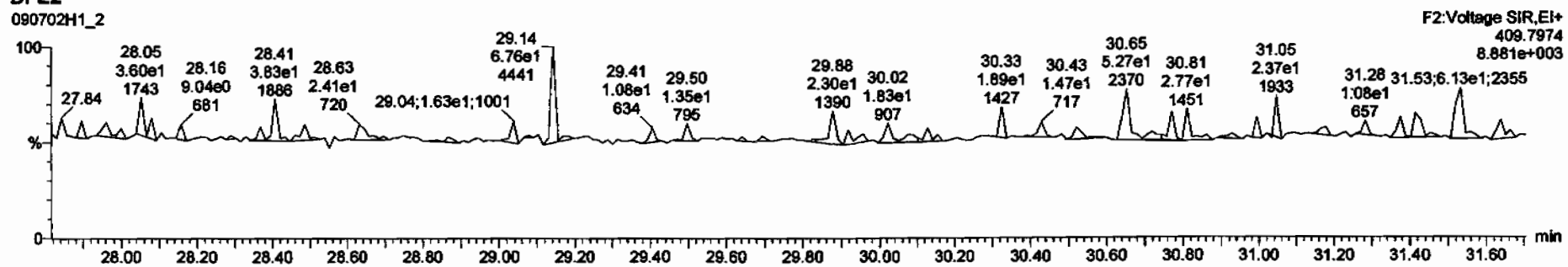

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Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,7,8-HxCDF

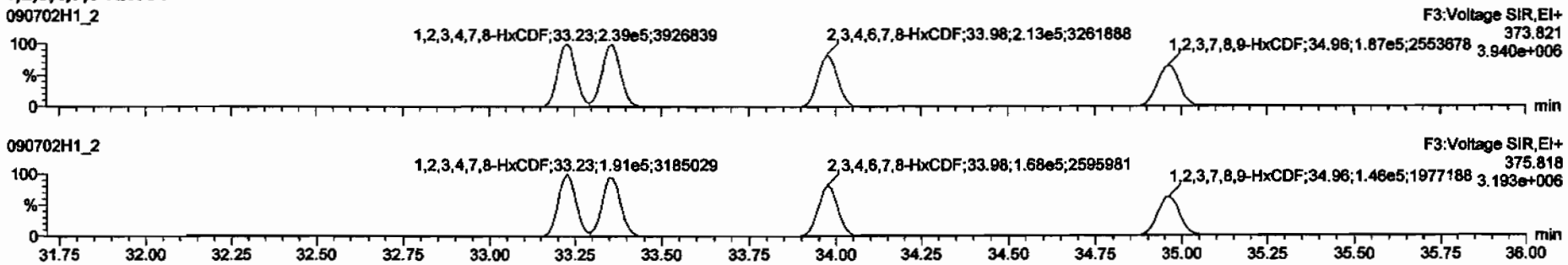

13C-1,2,3,4,7,8-HxCDF

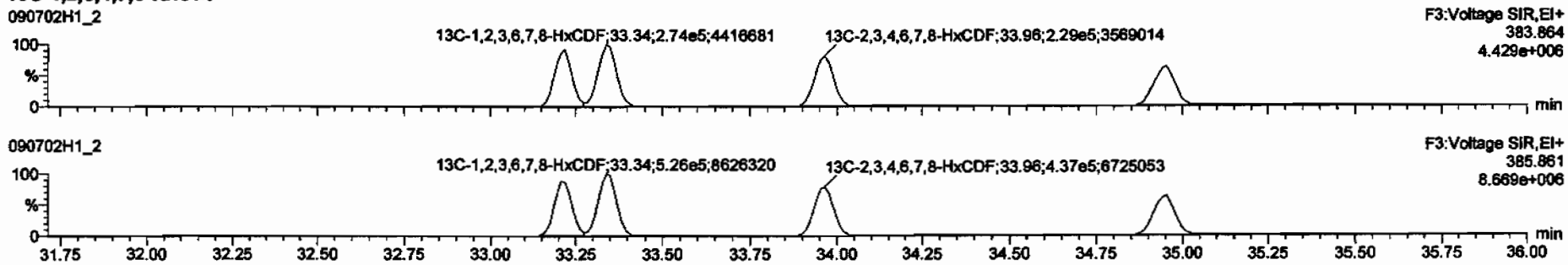

DPE3

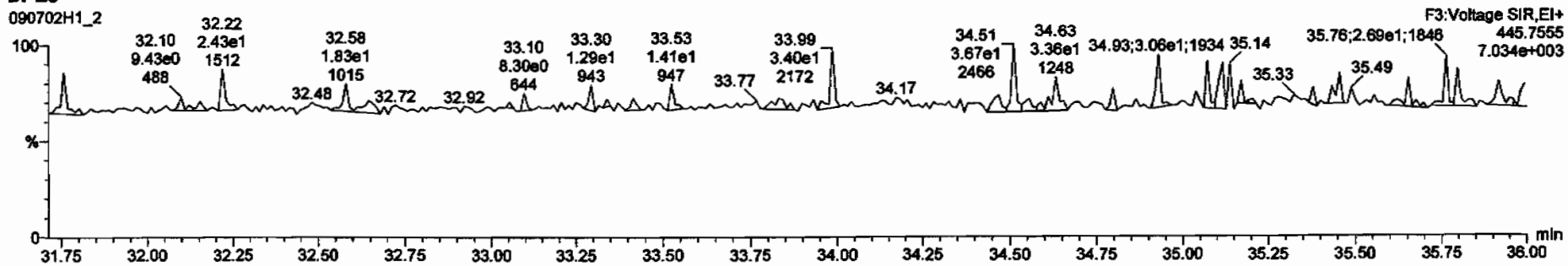

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

1,2,3,4,6,7,8-HpCDF

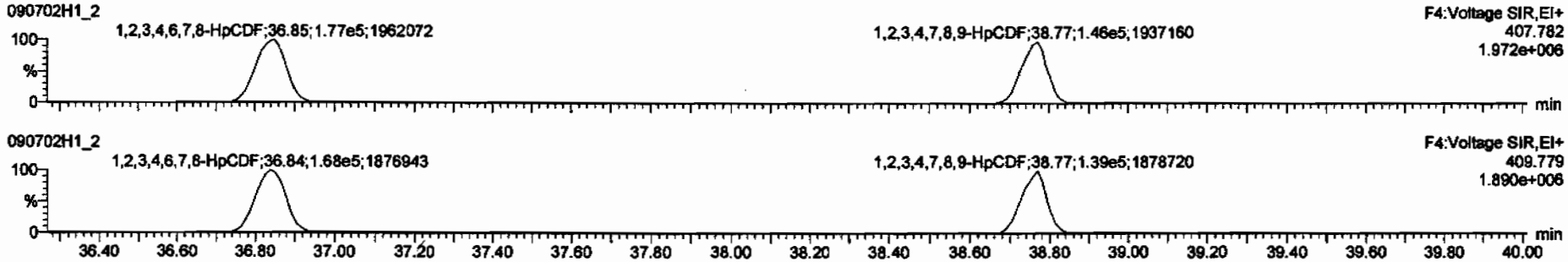

13C-1,2,3,4,6,7,8-HpCDF

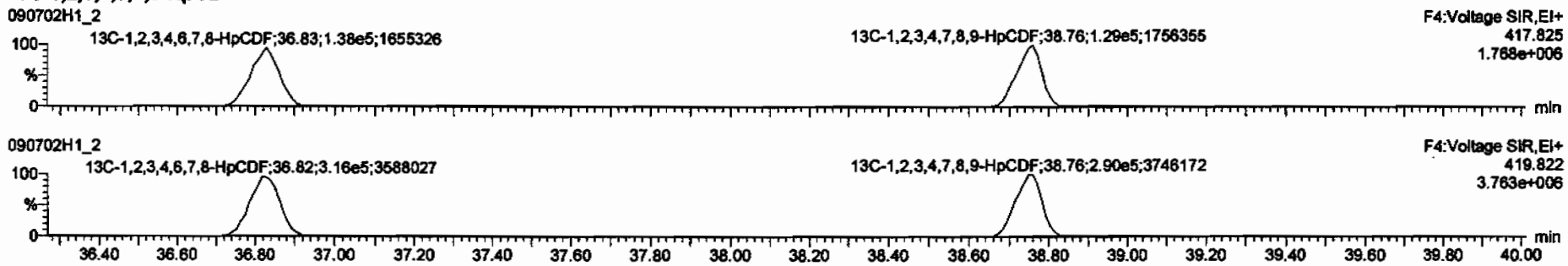

DPE4

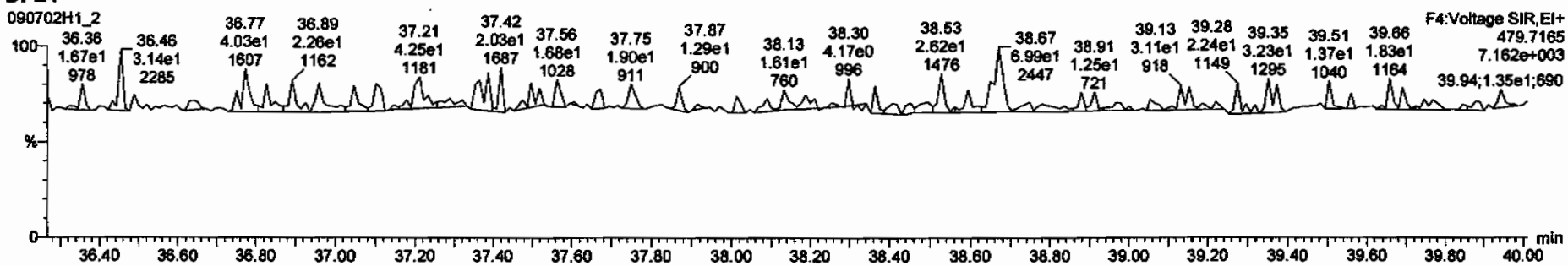

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Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

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OCDF

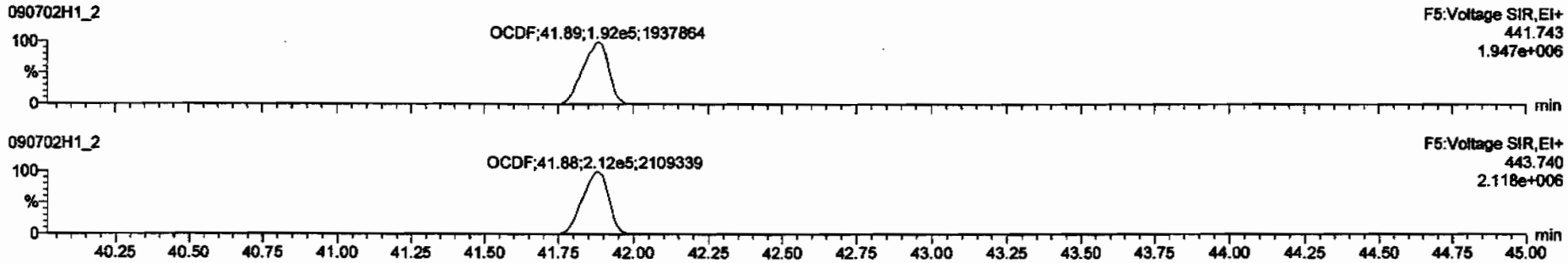

13C-OCDF

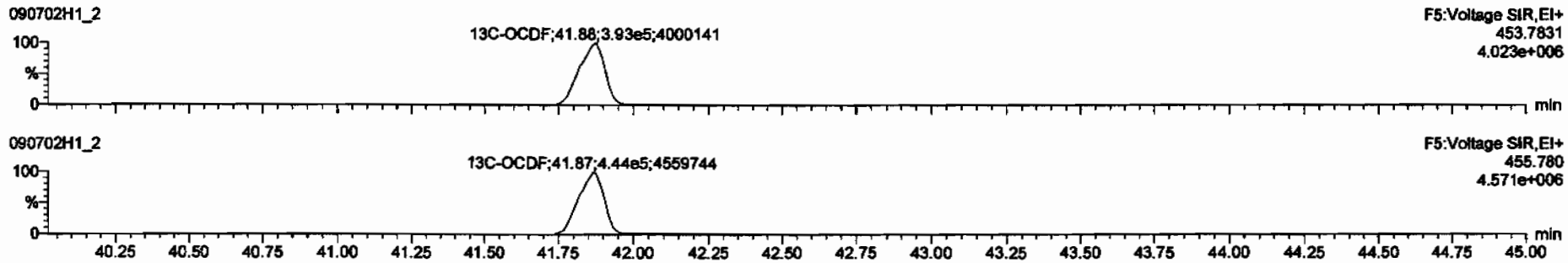

DPE5

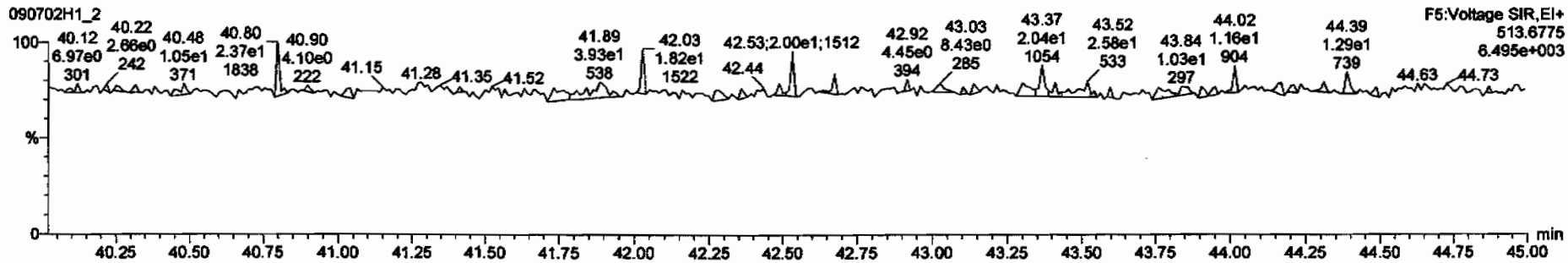

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-2.qld

Last Altered: Monday, July 06, 2009 13:13:59 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:14:19 Pacific Daylight Time

Name: 090702H1_2, Date: 02-Jul-2009, Time: 15:13:01, ID: 0_2214_OPR001, Description: 0_2214_OPR001

PFK1

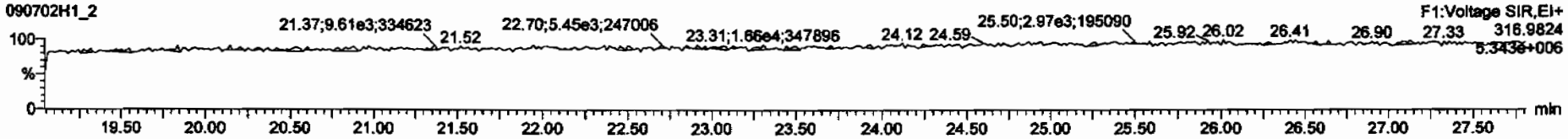

PFK2

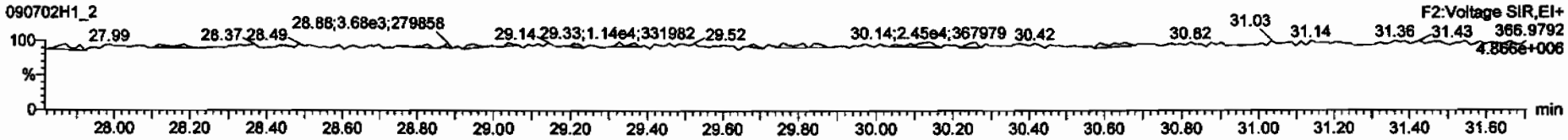

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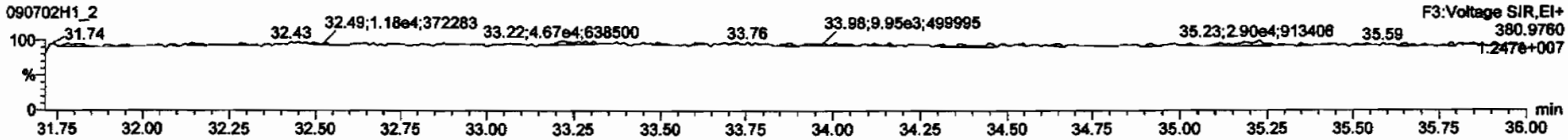

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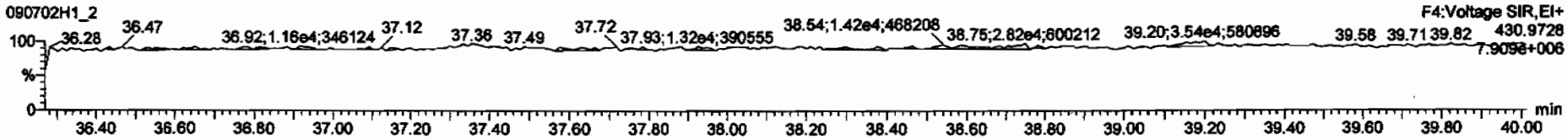

PFK5

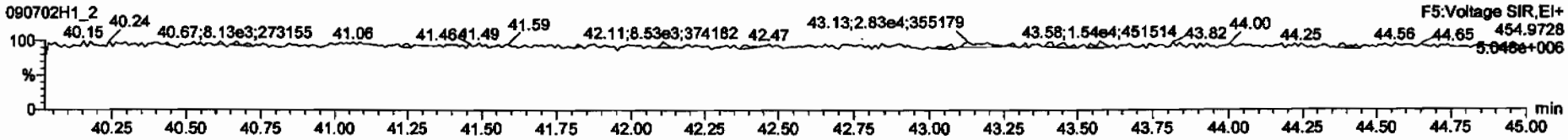

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Tuesday, July 07, 2009 10:55:53 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:56:16 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

1	2,3,7,8-TCDD			NO	1.08	10.010					0.0540	
2	1,2,3,7,8-PeCDD			NO	1.03	10.010					0.0735	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.010					0.241	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.010					0.246	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.010					0.234	
6	1,2,3,4,6,7,8-HpCDD	8.48e3	1.10	NO	1.06	10.010	38.20	1.000	2.8408		0.232	~~2.8408~~
7	OCDD	5.98e4	0.88	NO	1.18	10.010	41.68	1.001	22.607		0.115	~~22.607~~
8	2,3,7,8-TCDF	6.55e2	0.97	YES	1.09	10.010	25.30	1.001	~~0.093693~~ N		0.0613	0.084159 ✓
9	1,2,3,7,8-PeCDF			NO	1.16	10.010					0.0642	
10	2,3,4,7,8-PeCDF			NO	1.12	10.010					0.0567	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.010					0.0955	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.010					0.108	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.010					0.128	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.010					0.157	
15	1,2,3,4,6,7,8-HpCDF	2.03e3	1.16	NO	1.69	10.010	36.85	1.000	0.46158		0.123	~~0.46158~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.010					0.129	
17	OCDF	3.76e3	0.91	NO	1.10	10.010	41.89	1.000	1.2653		0.155	~~1.2653~~
18	13C-2,3,7,8-TCDD	9.51e5	0.78	NO	1.01	10.010	26.05	1.023	199.54	99.9	0.264	
19	13C-1,2,3,7,8-PeCDD	7.49e5	0.61	NO	0.827	10.010	30.71	1.206	192.63	96.4	0.266	
20	13C-1,2,3,4,7,8-HxCDD	6.05e5	1.25	NO	0.916	10.010	34.14	0.988	182.47	91.3	0.465	
21	13C-1,2,3,6,7,8-HxCDD	5.49e5	1.28	NO	0.921	10.010	34.25	0.991	164.55	82.4	0.462	
22	13C-1,2,3,4,6,7,8-HpCDD	5.60e5	1.05	NO	0.708	10.010	38.19	1.105	218.46	109	0.727	
23	13C-OCDD	8.97e5	0.89	NO	0.503	10.010	41.66	1.205	492.86	123	0.641	
24	13C-2,3,7,8-TCDF	1.28e6	0.78	NO	0.977	10.010	25.27	0.992	198.72	99.5	0.222	
25	13C-1,2,3,7,8-PeCDF	1.04e6	1.54	NO	0.896	10.010	29.47	1.157	175.65	87.9	0.397	
26	13C-2,3,4,7,8-PeCDF	1.14e6	1.55	NO	0.900	10.010	30.42	1.194	192.18	96.2	0.395	
27	13C-1,2,3,4,7,8-HxCDF	7.86e5	0.52	NO	1.17	10.010	33.22	0.961	185.71	92.9	0.547	
28	13C-1,2,3,6,7,8-HxCDF	8.38e5	0.52	NO	1.52	10.010	33.35	0.965	152.37	76.3	0.421	
29	13C-2,3,4,6,7,8-HxCDF	7.39e5	0.51	NO	1.25	10.010	33.97	0.983	163.34	81.7	0.512	
30	13C-1,2,3,7,8,9-HxCDF	6.73e5	0.52	NO	1.05	10.010	34.95	1.011	176.43	88.3	0.607	

JL 7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Tuesday, July 07, 2009 10:55:53 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:56:16 AM Pacific Daylight Time

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

31	13C-1,2,3,4,6,7,8-HpCDF	5.21e5	0.44	NO	0.868	10.010	36.84	1.066	165.56	82.9	0.910	
32	13C-1,2,3,4,7,8,9-HpCDF	4.93e5	0.43	NO	0.727	10.010	38.77	1.122	187.32	93.8	1.09	
33	13C-OCDF	1.08e6	0.89	NO	0.760	10.010	41.89	1.212	393.60	98.5	0.344	
34	37Cl-2,3,7,8-TCDD	2.33e5			0.668	10.010	26.06	1.023	74.348	93.0	0.102	
35	13C-1,2,3,4-TCDD	9.39e5	0.80	NO	1.00	10.010	25.47	0.000	199.80	100	0.268	
36	13C-1,2,3,4-TCDF	1.32e6	0.77	NO	1.00	10.010	24.04	0.000	199.80	100	0.217	
37	13C-1,2,3,7,8,9-HxCDD	7.24e5	1.24	NO	1.00	10.010	34.56	0.000	199.80	100	0.426	
38	Total Tetra-Dioxins				1.08	10.010					0.0257	
39	Total Penta-Dioxins				1.03	10.010					0.0303	
40	Total Hexa-Dioxins				1.13	10.010			0.44699		0.230	~~0.44699~~
41	Total Hepta-Dioxins				1.06	10.010			5.3915		0.232	~~5.3915~~
42	Total Tetra-Furans				1.09	10.010			0.16832		0.0613	0.31854
43	1st Func. Penta-Furans				1.16	10.010			~~0.15175~~ 0.152		0.0327	0.15175
44	Total Penta-Furans				1.16	10.010			~~0.00000~~		0.0226	0.12600 0.278
45	Total Hexa-Furans				1.28	10.010			0.27460		0.121	0.40966
46	Total Hepta-Furans				1.69	10.010			1.1594		0.118	~~6.1594~~

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Tuesday, July 07, 2009 10:55:53 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:56:16 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Total Hexa-Dioxins	32.55	1.375e4	1.121e4	7.592e2	6.938e2	1.09	NO	1.453e3	0.44699	0.44699	0.230

Hepta-Dioxins

Total Hepta-Dioxins	37.27	4.977e4	5.061e4	3.788e3	3.825e3	0.99	NO	7.613e3	2.5507	2.5507	0.232
1,2,3,4,6,7,8-HpCDD	38.20	7.470e4	6.784e4	4.444e3	4.034e3	1.10	NO	8.479e3	2.8408	2.8408	0.232

Tetra-Furans

Total Tetra-Furans	21.81	6.245e3	7.837e3	4.872e2	6.875e2	0.71	NO	1.175e3	0.16832	0.16832	0.0613
2,3,7,8-TCDF	25.30	5.283e3	5.143e3	3.234e2	3.318e2	0.97	YES	6.553e2	0.00000	0.084159	0.0613
Total Tetra-Furans	25.60	3.771e3	7.200e3	2.006e2	3.636e2	0.55	YES	0.000e0	0.00000	0.066065	0.0613

Penta-Furans function 1

1st Func. Penta-Furans	27.04	1.107e4	5.537e3	6.038e2	3.563e2	1.69	NO	9.599e2	0.15175	0.15175	0.0327

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Tuesday, July 07, 2009 10:55:53 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 10:56:16 AM Pacific Daylight Time

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

Penta-Furans

	Total Penta-Furans	28.53	7.324e3	9.536e3	4.845e2	5.382e2	0.90	YES	0.000e0	0.00000	0.12600	0.0592

Hexa-Furans

	Total Hexa-Furans	32.19	1.380e4	9.330e3	7.726e2	5.629e2	1.37	NO	1.335e3	0.27460	0.27460	0.121
	Total Hexa-Furans	32.74	8.807e3	8.862e3	3.636e2	3.838e2	0.95	YES	0.000e0	0.00000	0.13506	0.121

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.85	1.822e4	1.228e4	1.091e3	9.399e2	1.16	NO	2.031e3	0.46158	0.46158	0.123
	Total Hepta-Furans	37.51	2.210e4	2.587e4	1.524e3	1.465e3	1.04	NO	2.989e3	0.69778	0.69778	0.118

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Monday, July 06, 2009 13:17:26 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:40 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

2,3,7,8-TCDD

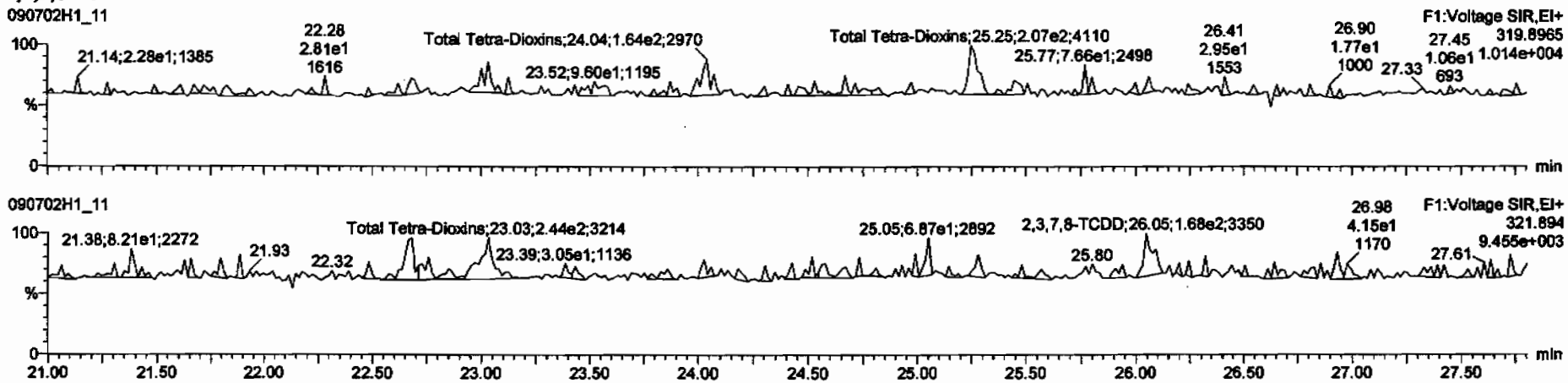

13C-2,3,7,8-TCDD

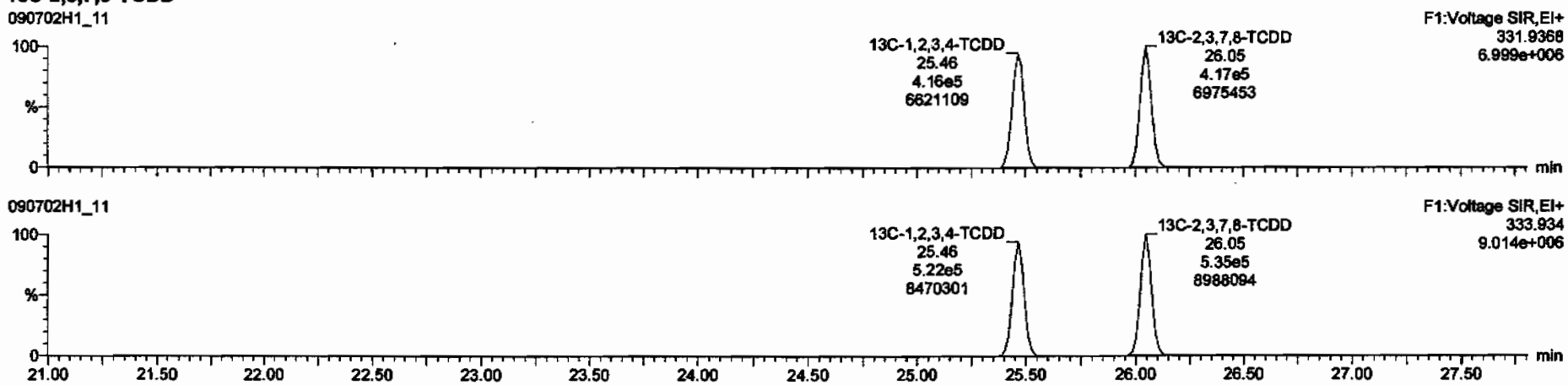

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qid

Last Altered: Monday, July 06, 2009 13:17:26 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:40 Pacific Daylight Time

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

37Cl-2,3,7,8-TCDD

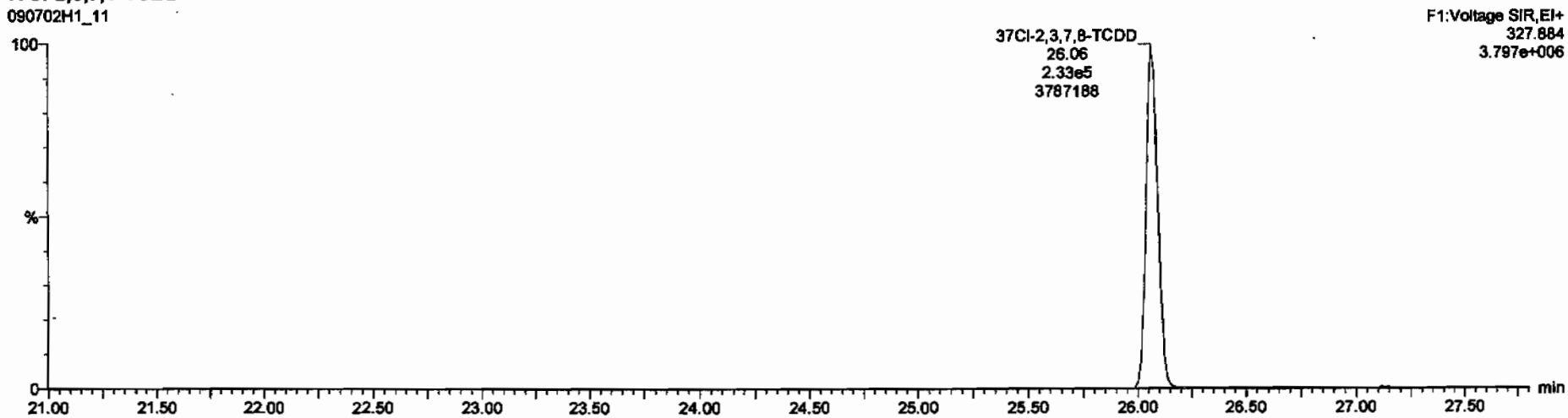

13C-1,2,3,4-TCDD

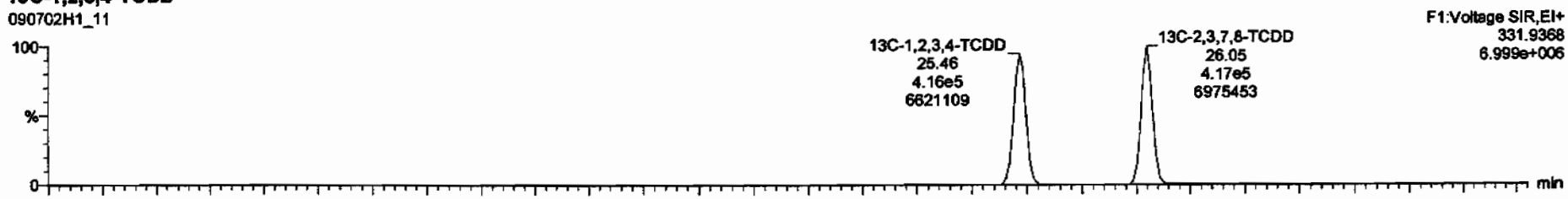

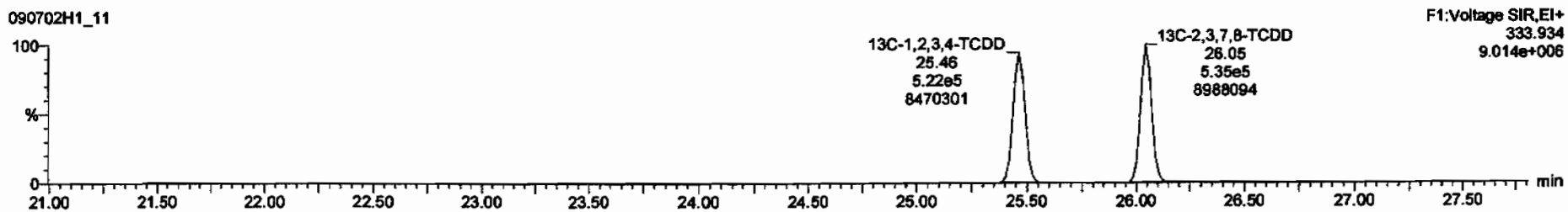

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Monday, July 06, 2009 13:17:26 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:40 Pacific Daylight Time

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

1,2,3,7,8-PeCDD

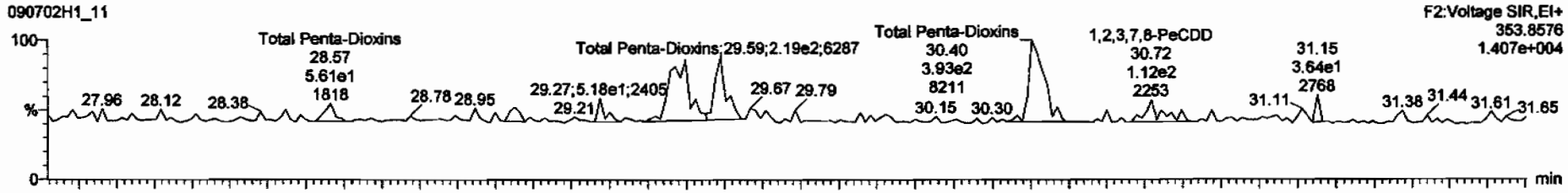

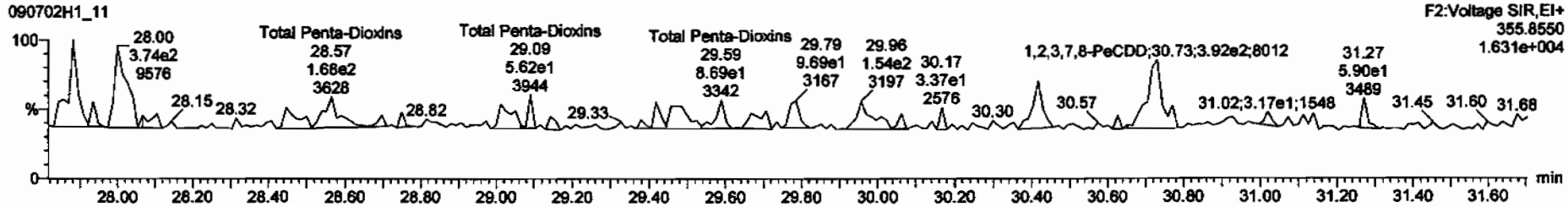

13C-1,2,3,7,8-PeCDD

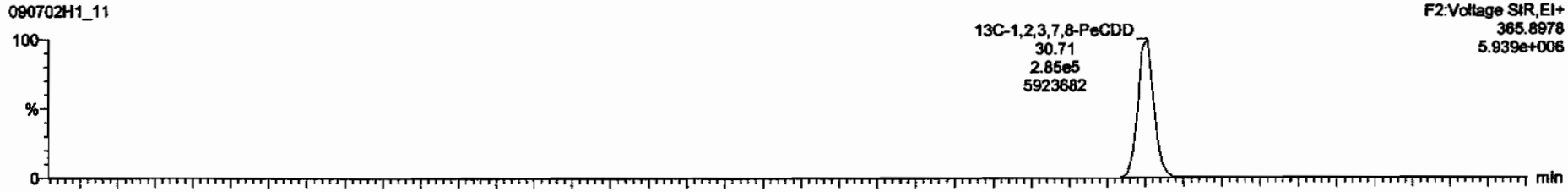

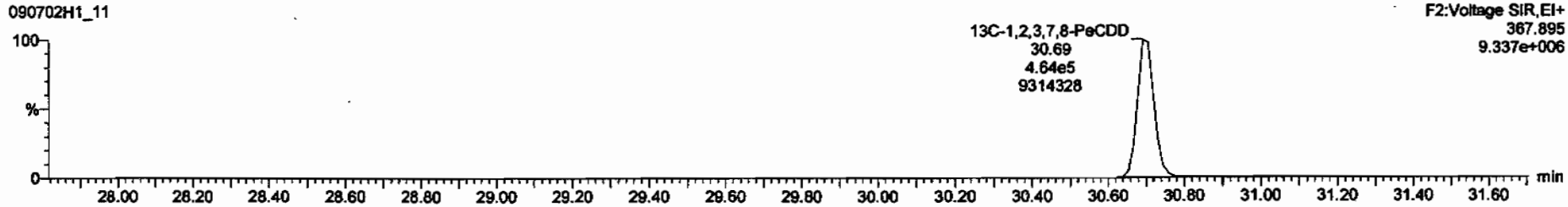

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Monday, July 06, 2009 13:17:26 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:40 Pacific Daylight Time

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

1,2,3,4,7,8-HxCDD

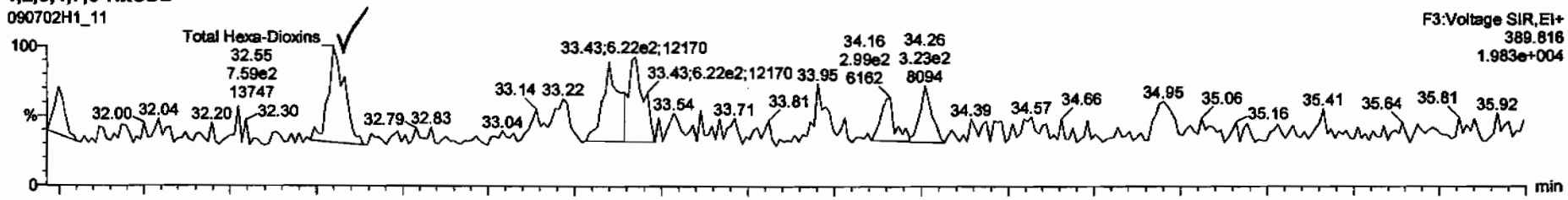

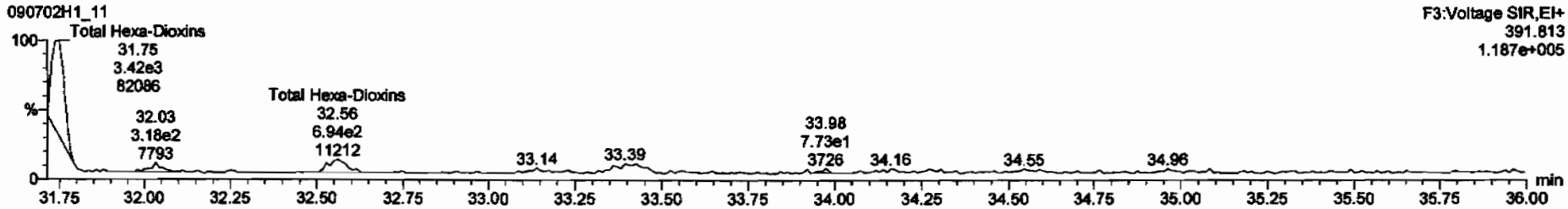

13C-1,2,3,4,7,8-HxCDD

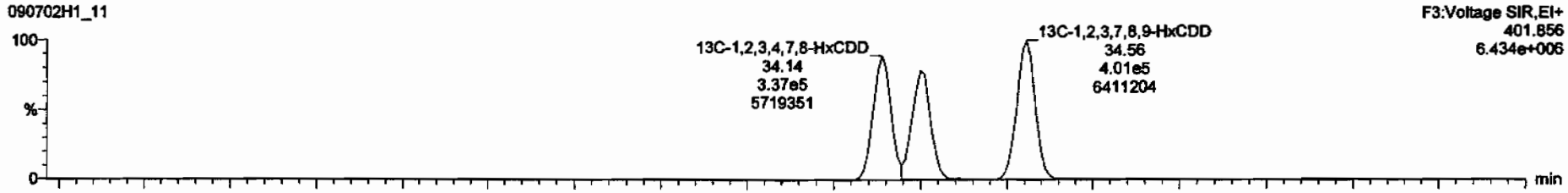

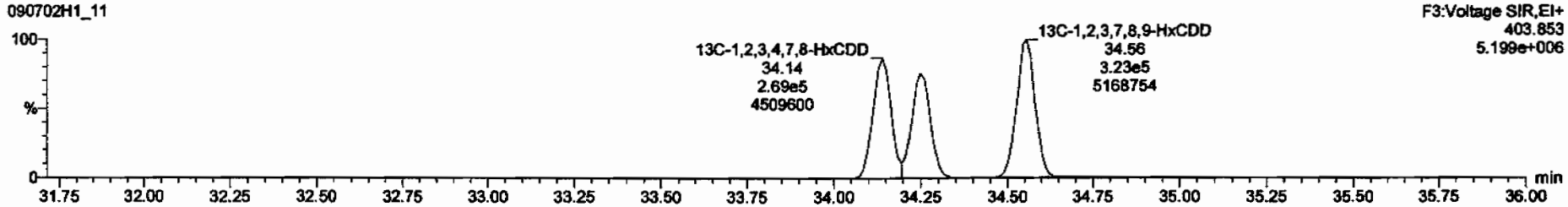

TargetLynx - 090702h1-11.qld * - [Chromatogram]

090702H1_11 - 31850_2214_001 CAMO-09-9941 11.19 - CAMO-09-9941

	1						
Total Hexa-Dioxins	32.55	7.592e2	6.938e2	1.09	NO	0.44699	0.44699

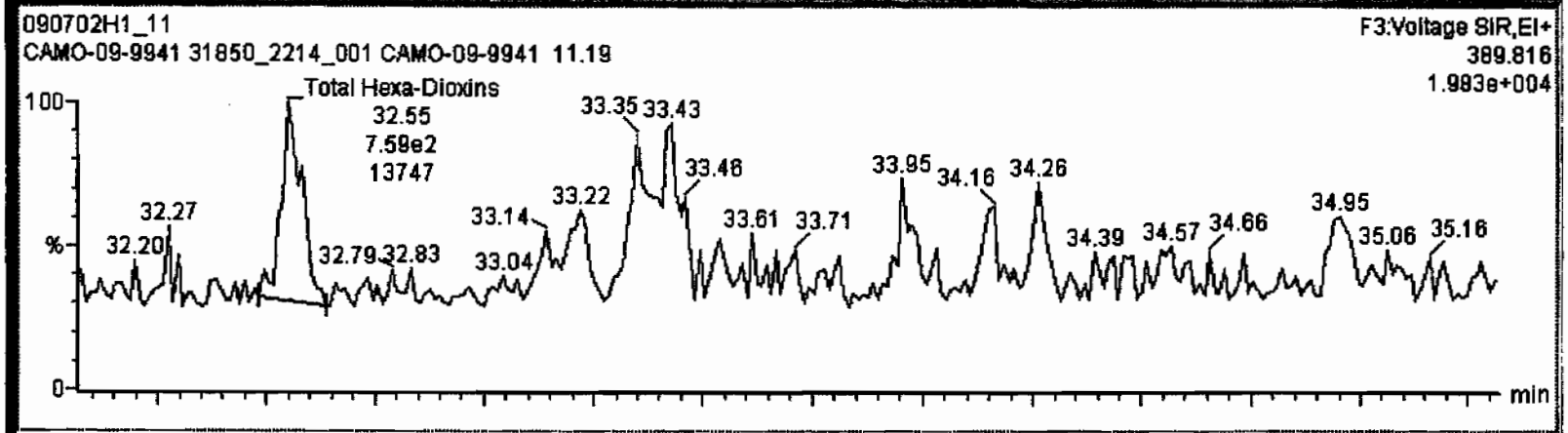

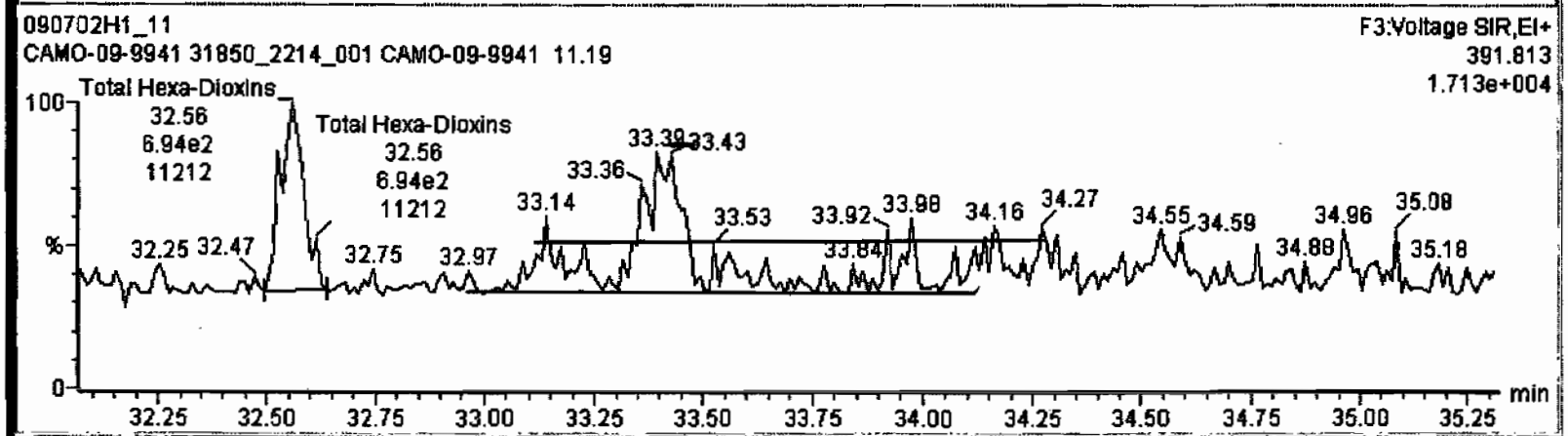

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Last Altered: Monday, July 06, 2009 13:17:26 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:40 Pacific Daylight Time

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

1,2,3,4,6,7,8-HpCDD

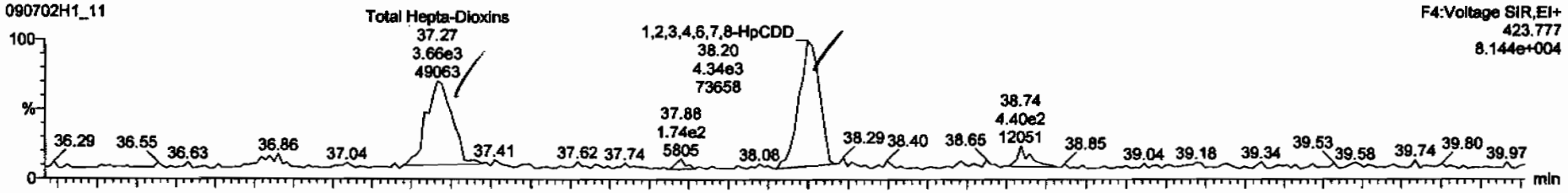

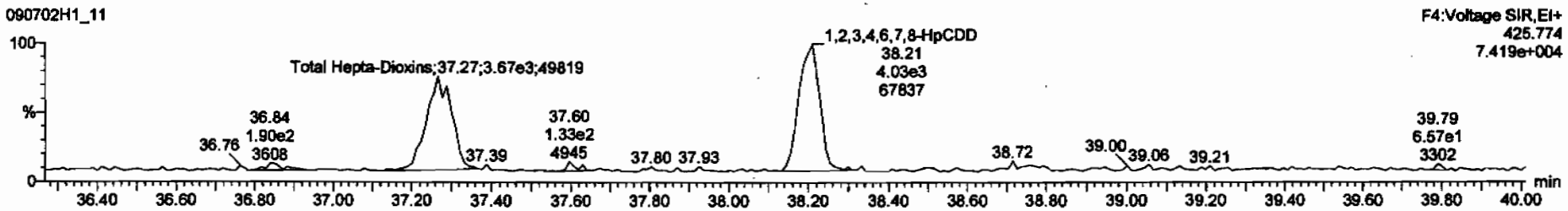

13C-1,2,3,4,6,7,8-HpCDD

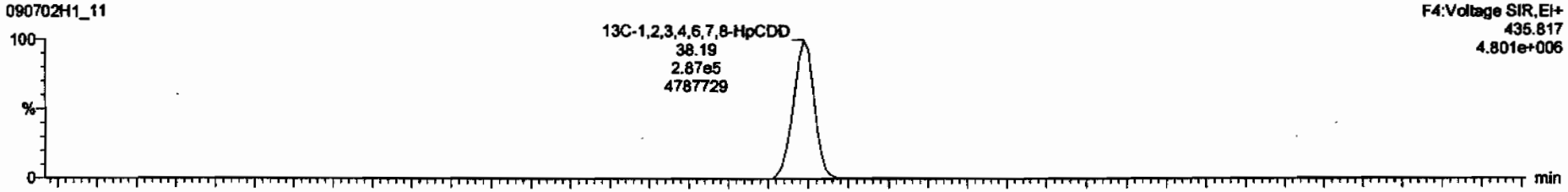

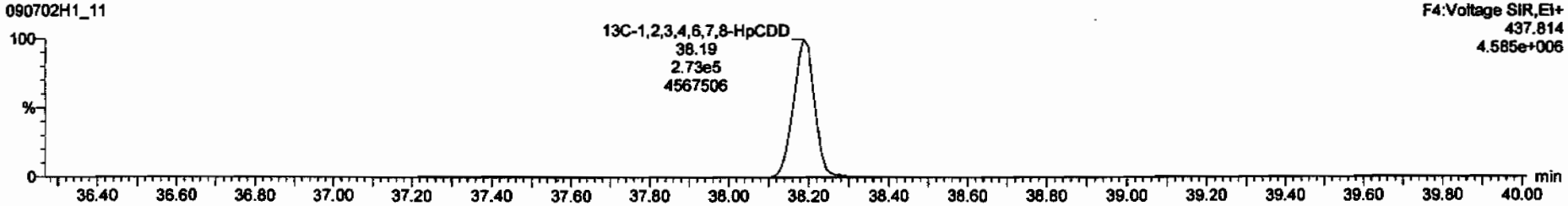

Targetlynx - 090702h1-11.qld * - [Chromatogram]

090702H1_11 - 31850_2214_001 CAMO-09-9941 11.19 - CAMO-09-9941

Total Hepta-Dioxins	37.27	3.788e3	3.825e3	0.99	NO	2.5507	2.5507
1,2,3,4,6,7,8-HpCDD	38.20	4.444e3	4.034e3	1.10	NO	2.8408	2.8408

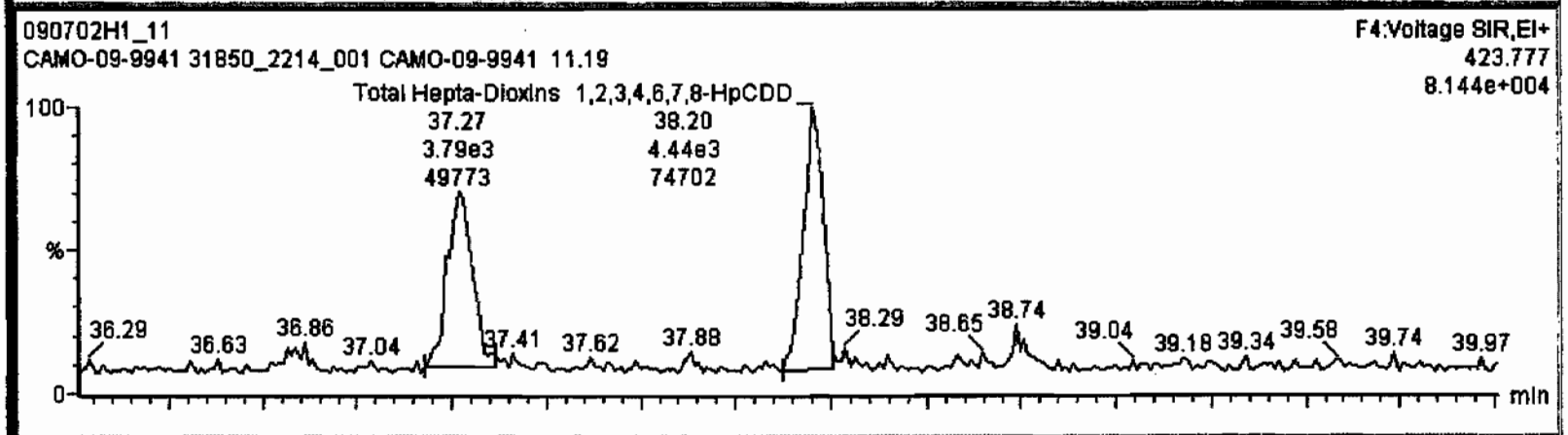

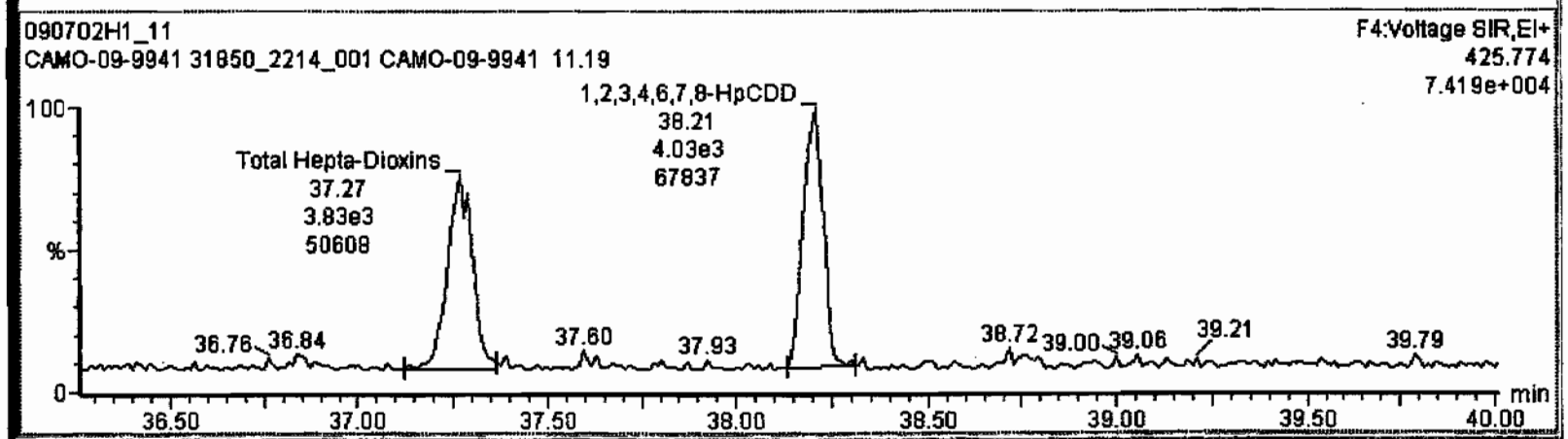

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Monday, July 06, 2009 13:17:26 Pacific Daylight Time
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Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

OCDD

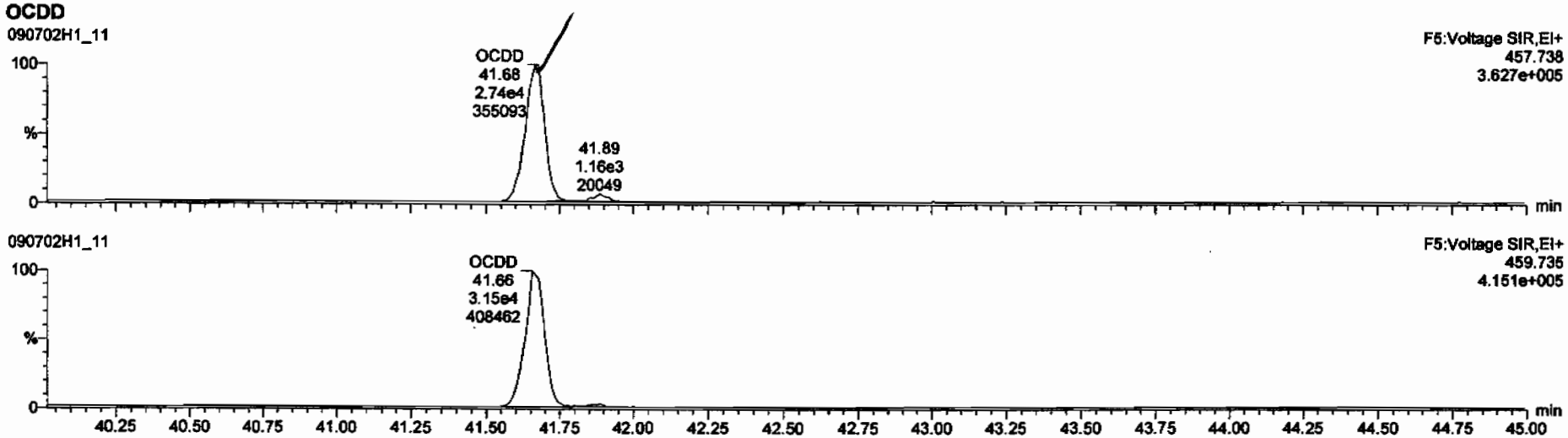

13C-OCDD

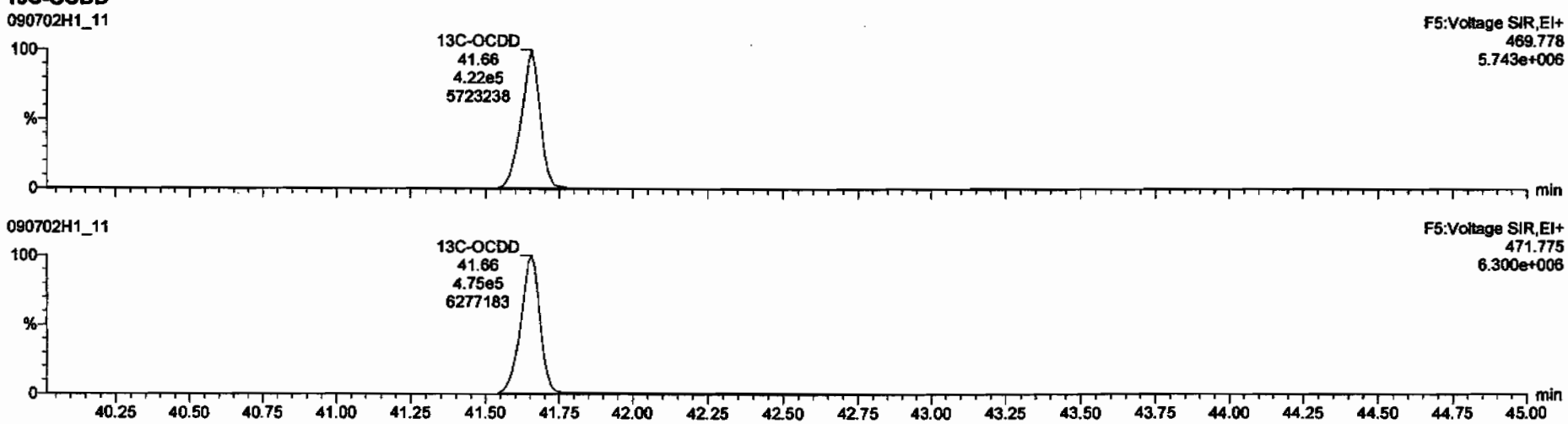

TargetLynx - 090702h1-11.qld * - [Chromatogram]

090702H1_11 - 31850_2214_001 CAMO-09-9941 11.19 - CAMO-09-9941

2,3,7,8-TCDF	6.80e2	1.05	YES	1.09	10.010	25.30	1.001	0.0974		0.0613	0.0642
1,2,3,7,8-PeCDF			NO	1.16	10.010					0.0642	
2,3,4,7,8-PeCDF	4.04e2	0.68	YES	1.12	10.010	30.42	1.000	0.0633		0.0567	0.0488
1,2,3,4,7,8-HxCDF	3.68e2	1.90	YES	1.41	10.010	33.23	1.000	0.0663		0.0955	0.0513

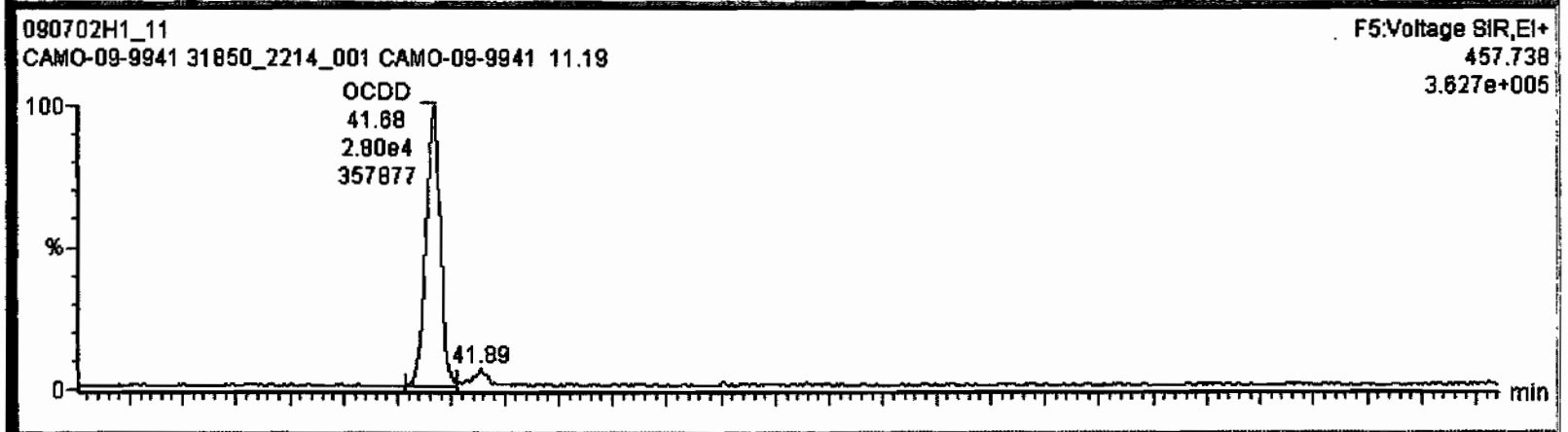

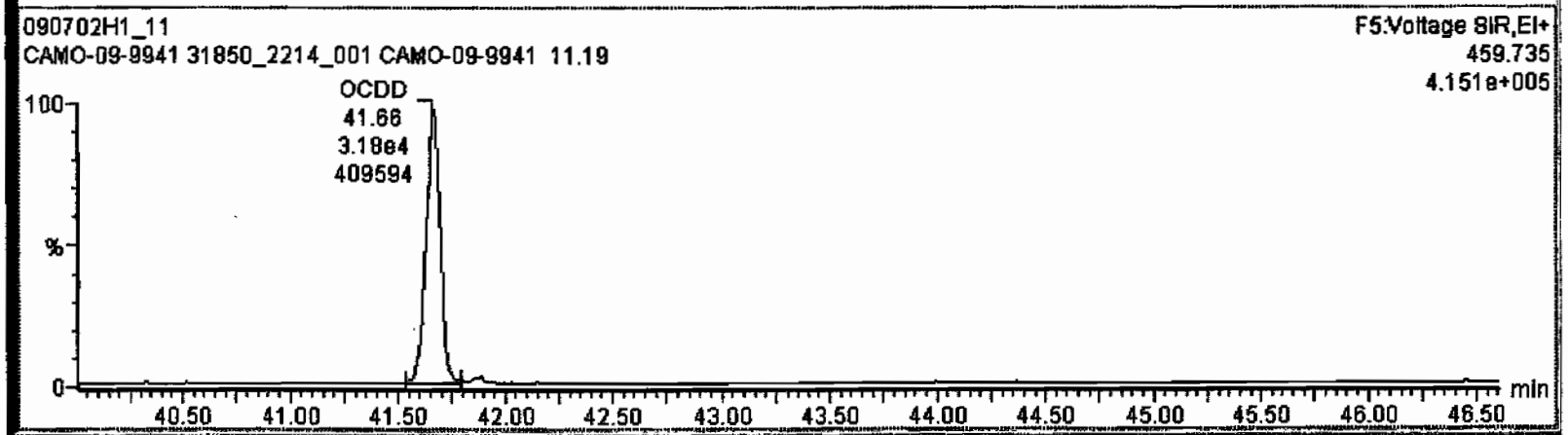

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Monday, July 06, 2009 13:17:26 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:40 Pacific Daylight Time

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

2,3,7,8-TCDF

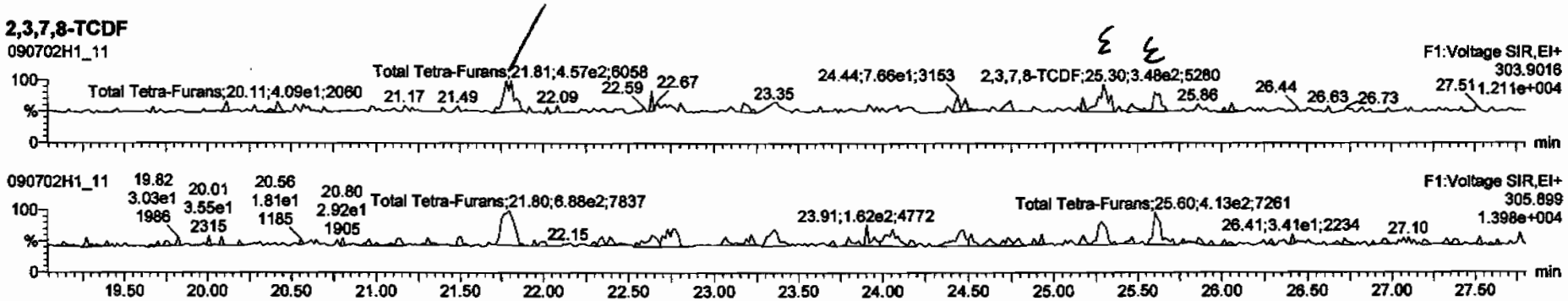

13C-2,3,7,8-TCDF

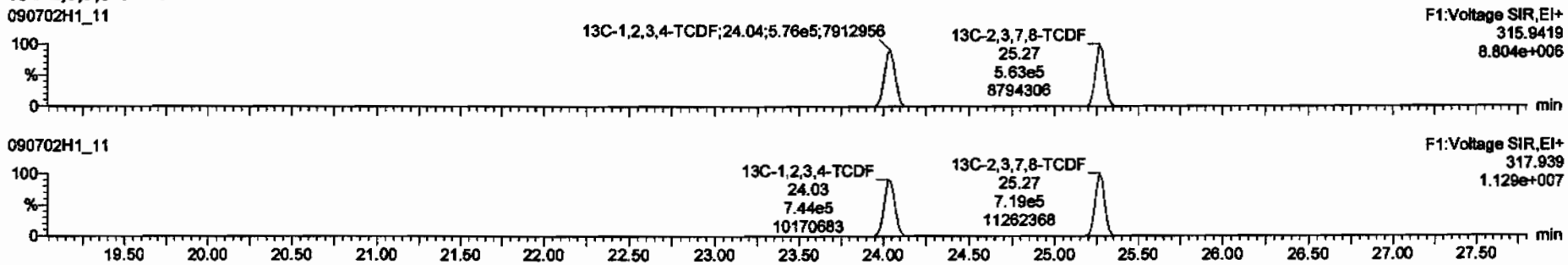

DPE1

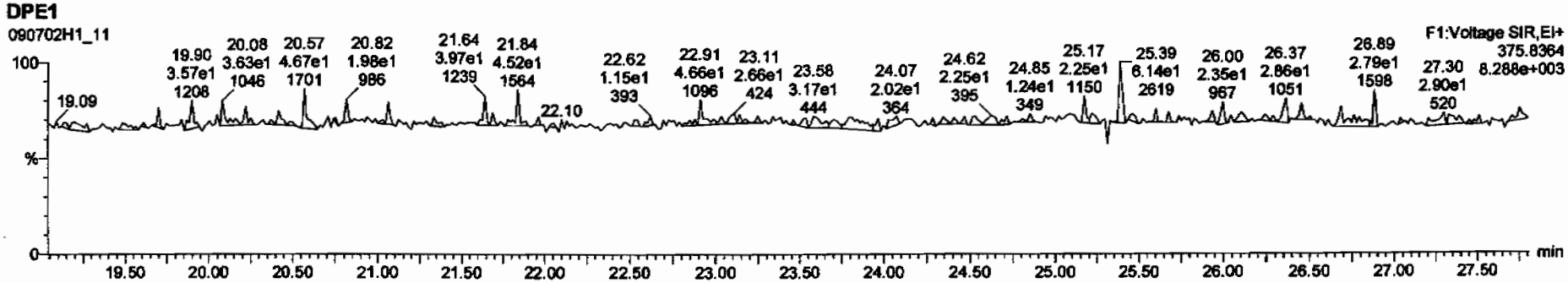

TargetLynx - 090702h1-11.qld * - [Chromatogram]

090702H1_11 - 31850_2214_001 CAMO-09-9941 11.19 - CAMO-09-9941

Total Tetra-Furans	21.81	4.872e2	6.875e2	0.71	NO	0.16832	0.16832
2,3,7,8-TCDF	25.30	3.234e2	3.318e2	0.97	YES	0.084159	0.00000
Total Tetra-Furans	25.60	2.006e2	3.636e2	0.55	YES	0.066065	0.00000

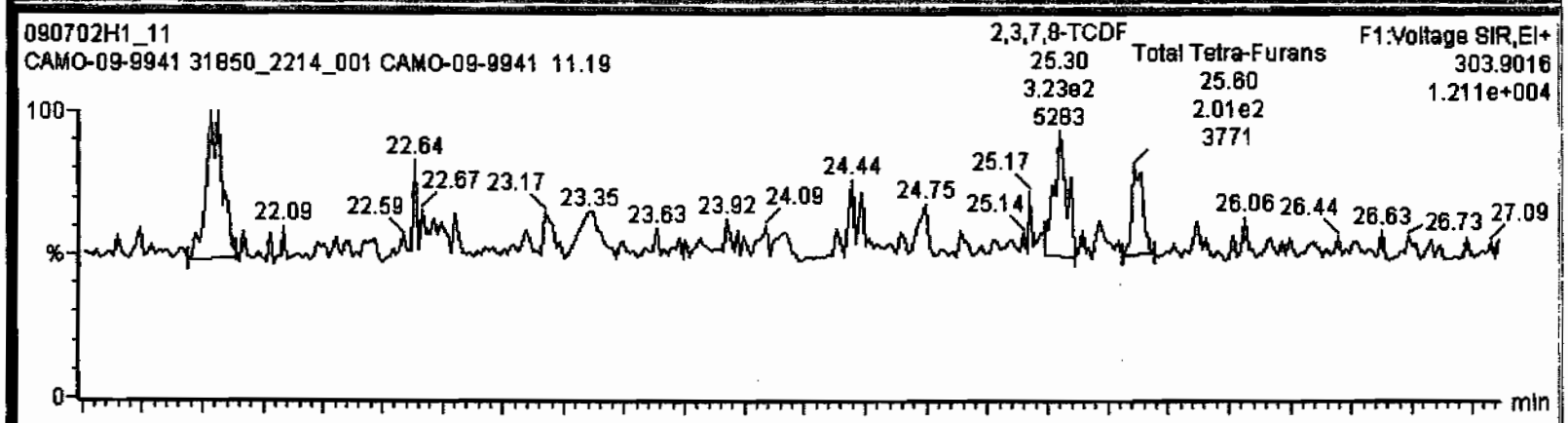

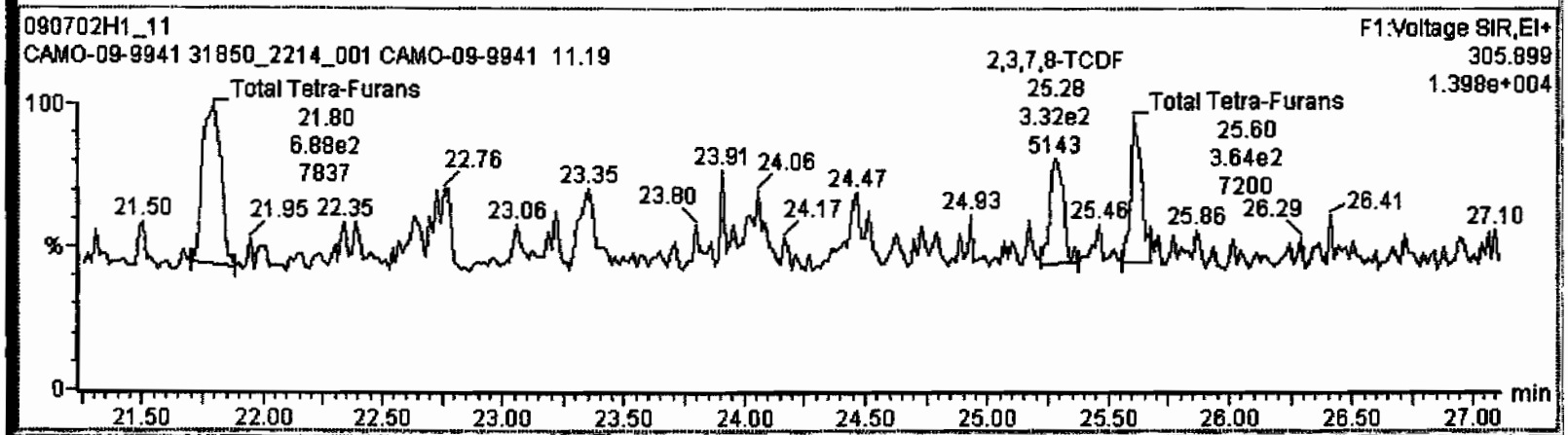

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Monday, July 06, 2009 13:17:26 Pacific Daylight Time
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Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

1st Func. Penta-Furans

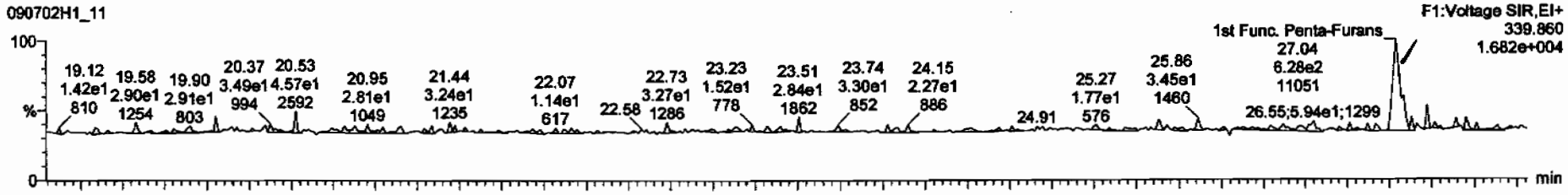

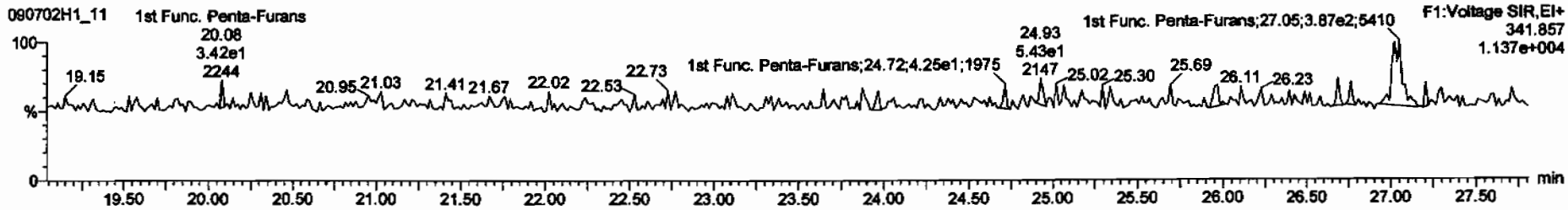

DPE6

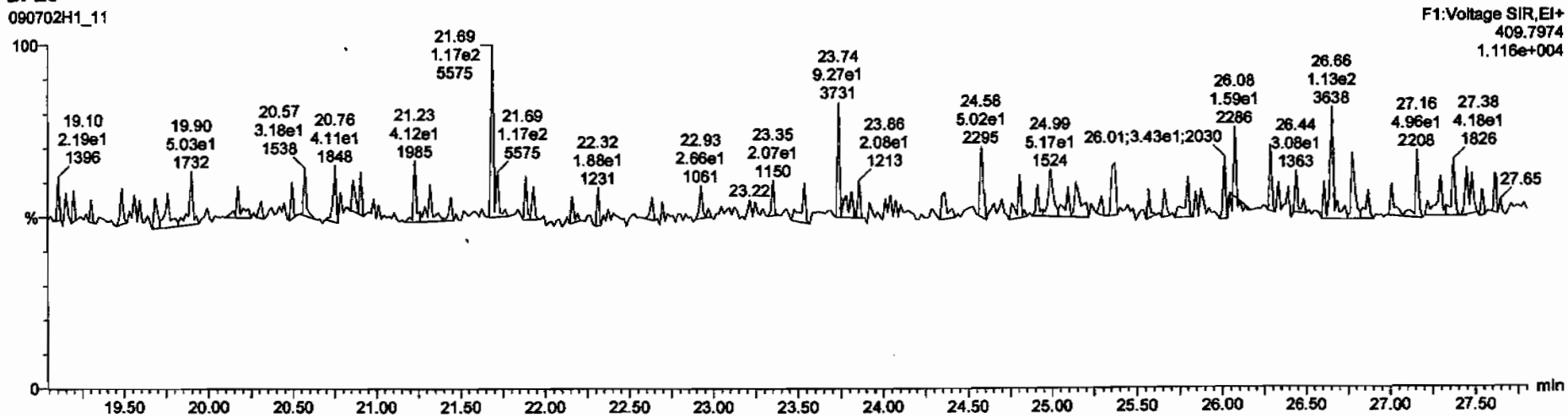

TargetLynx - 090702h1-11.qld * - [Chromatogram]

1st Func. Penta-Furans	27.04	6.036e2	3.563e2	1.69	NO	0.15175	0.15175

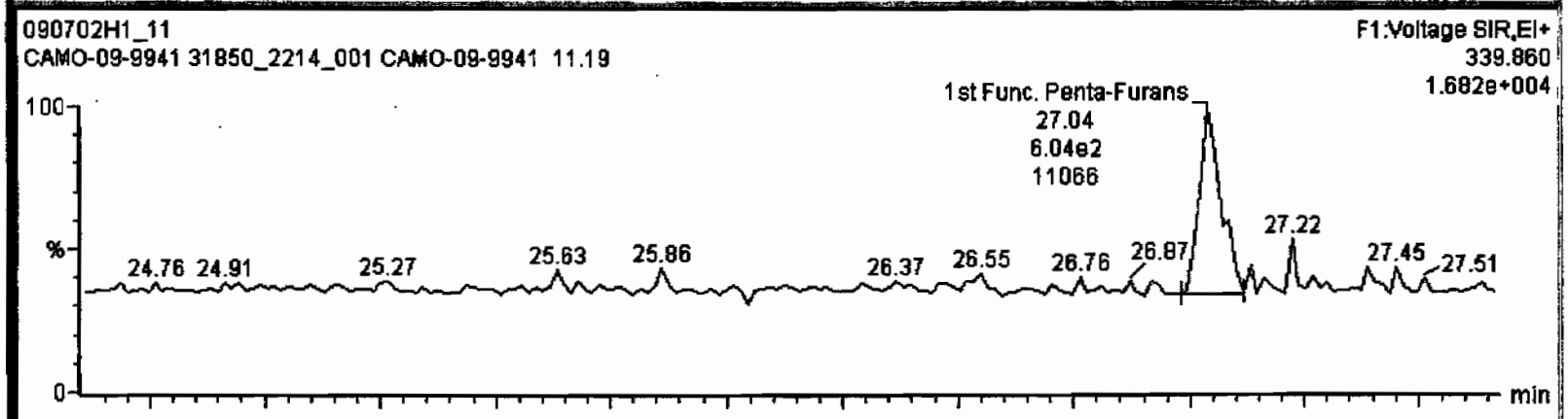

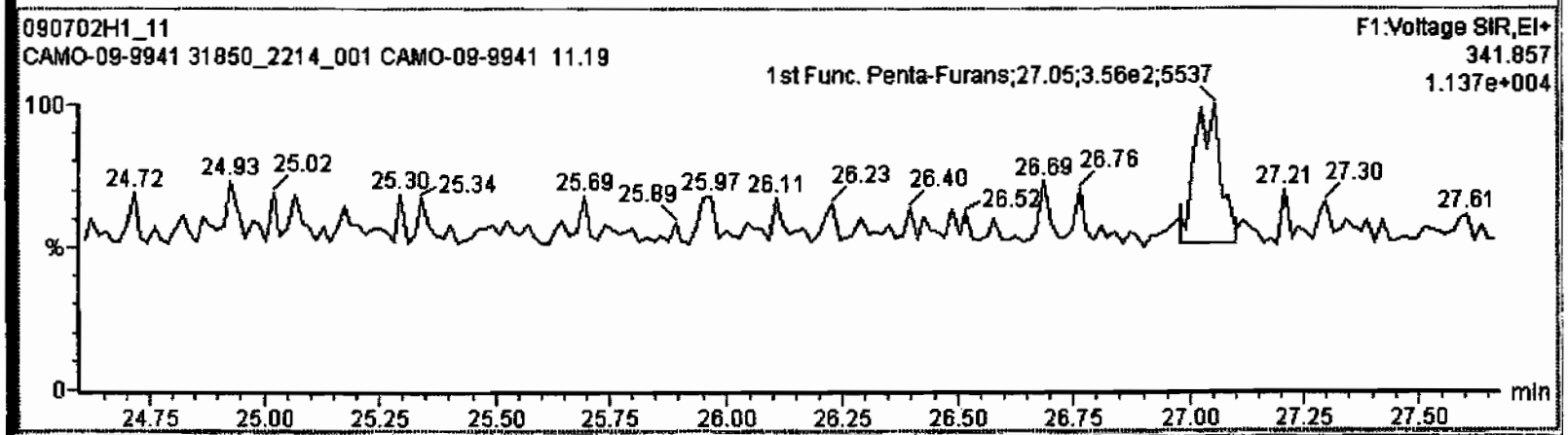

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qid

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Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

1,2,3,7,8-PeCDF

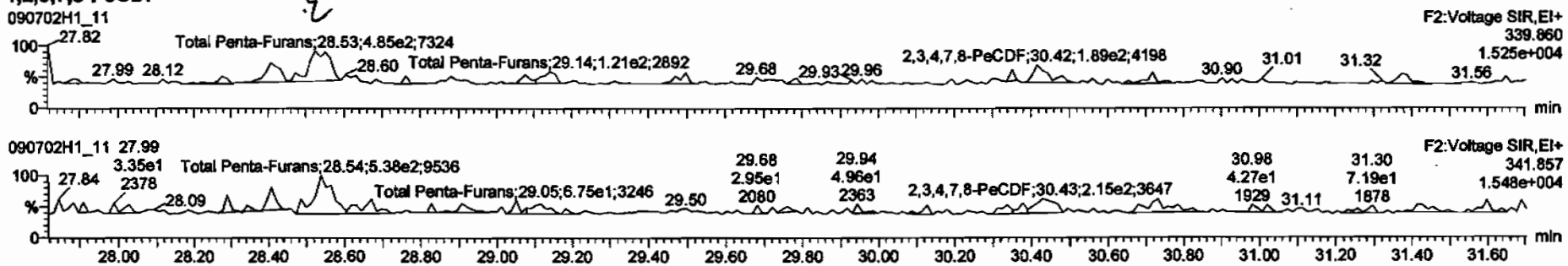

13C-1,2,3,7,8-PeCDF

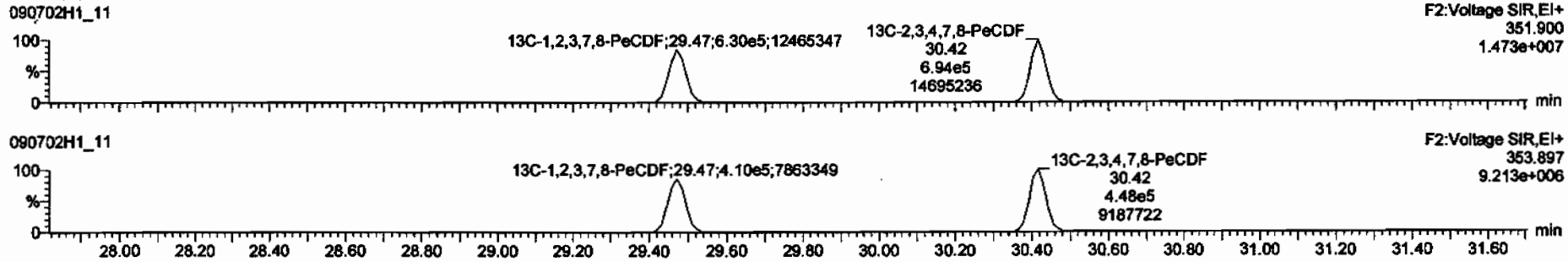

DPE2

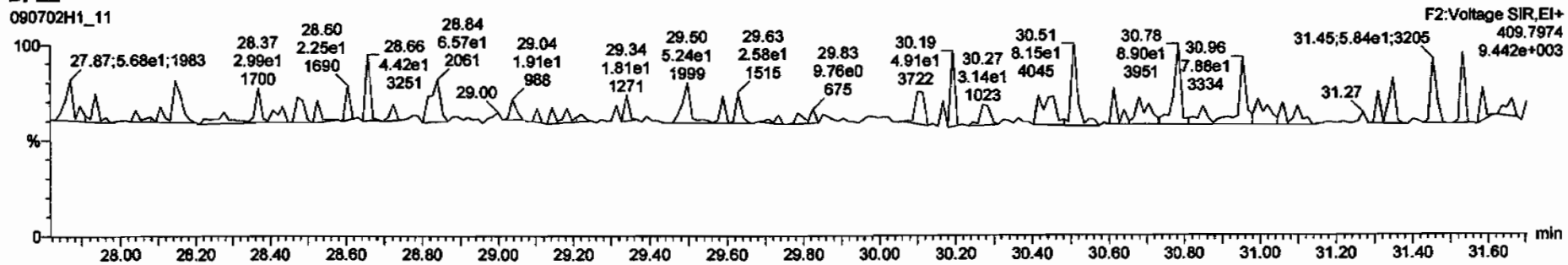

TargetLynx - 090702h1-11.qld * - [Chromatogram]

090702H1_11 - 31850_2214_001 CAMO-09-9941 11.19 - CAMO-09-9941

Total Penta-Furans	28.53	4.845e2	5.382e2	0.90	YES	0.12600	0.00000

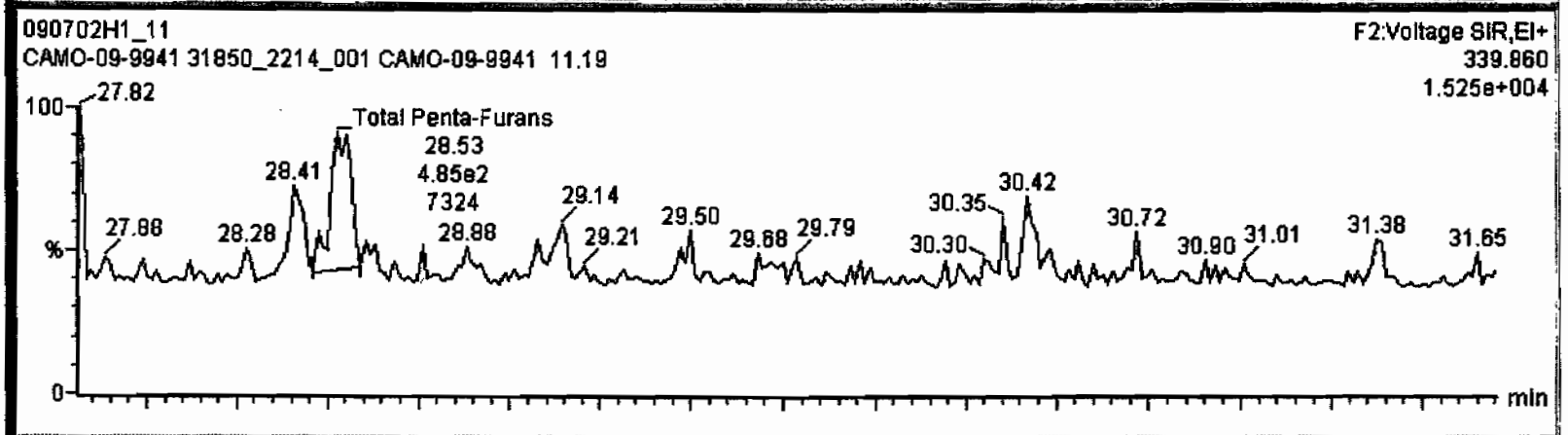

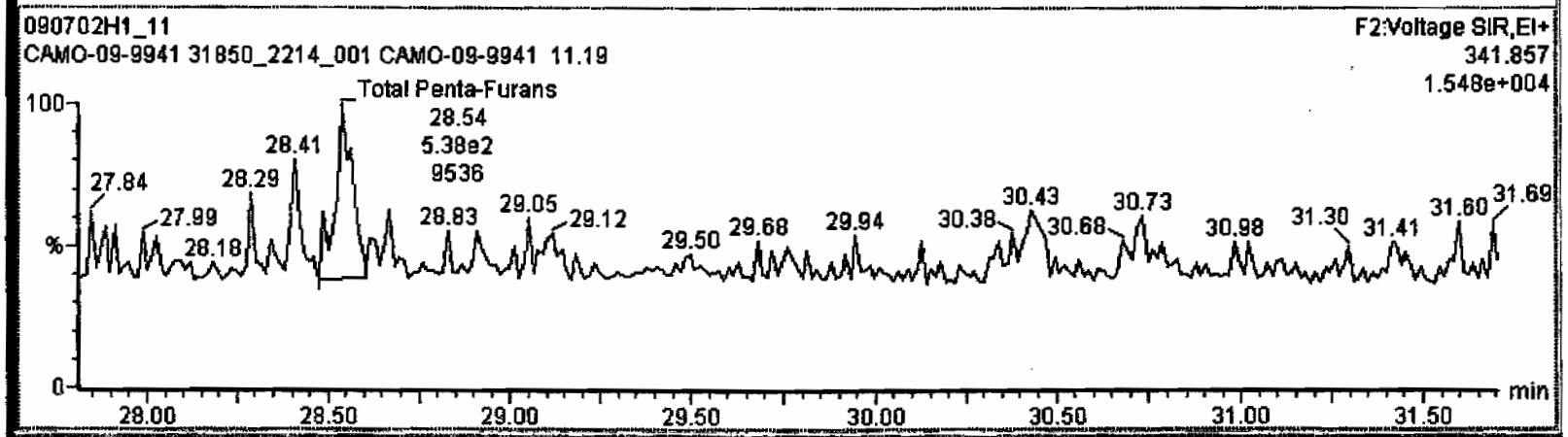

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Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

1,2,3,4,7,8-HxCDF

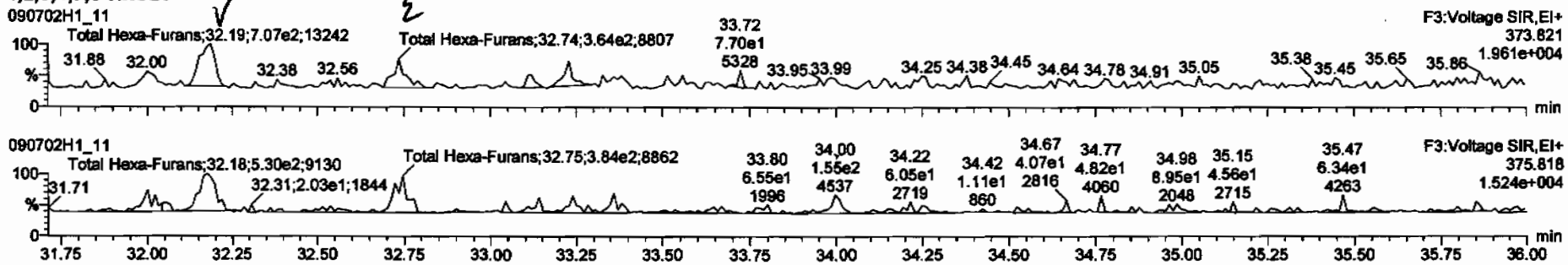

13C-1,2,3,4,7,8-HxCDF

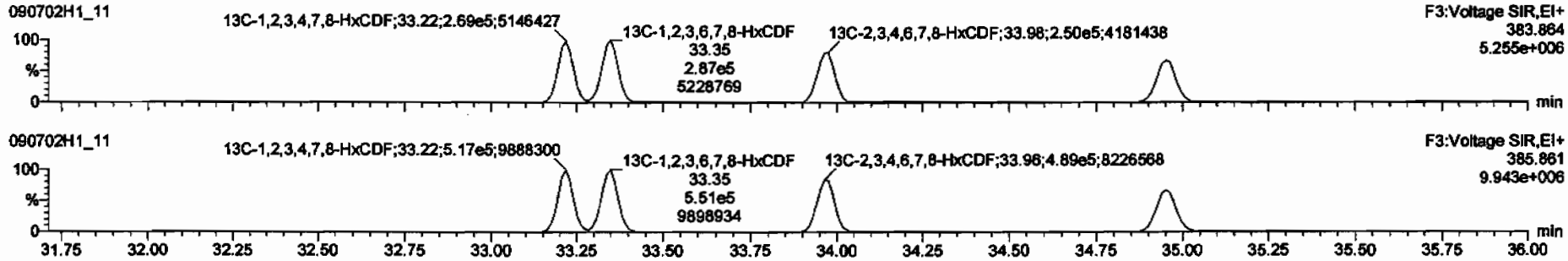

DPE3

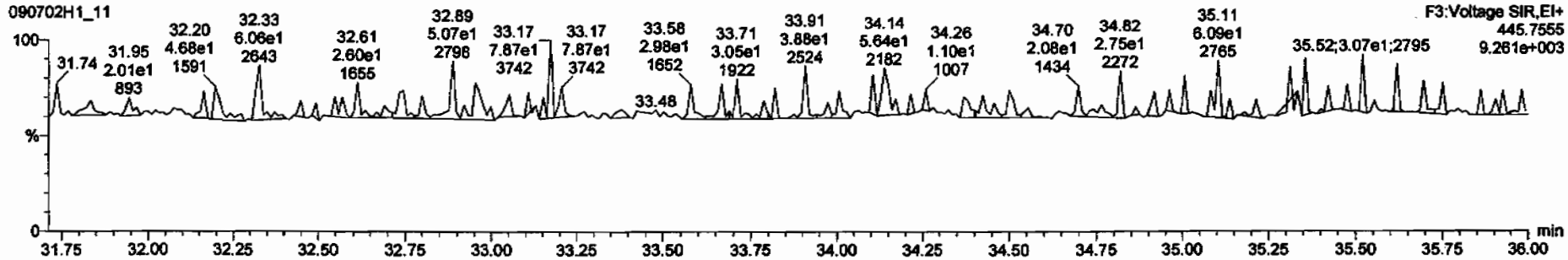

TargetLynx - 090702h1-11.qld * - [Chromatogram]

090702H1_11 - 31850_2214_001 CAMO-09-9941 11.19 - CAMO-09-9941

Total Hexa-Furans	32.19	7.726e2	5.629e2	1.37	NO	0.27460	0.27460
Total Hexa-Furans	32.74	3.636e2	3.838e2	0.95	YES	0.13506	0.00000

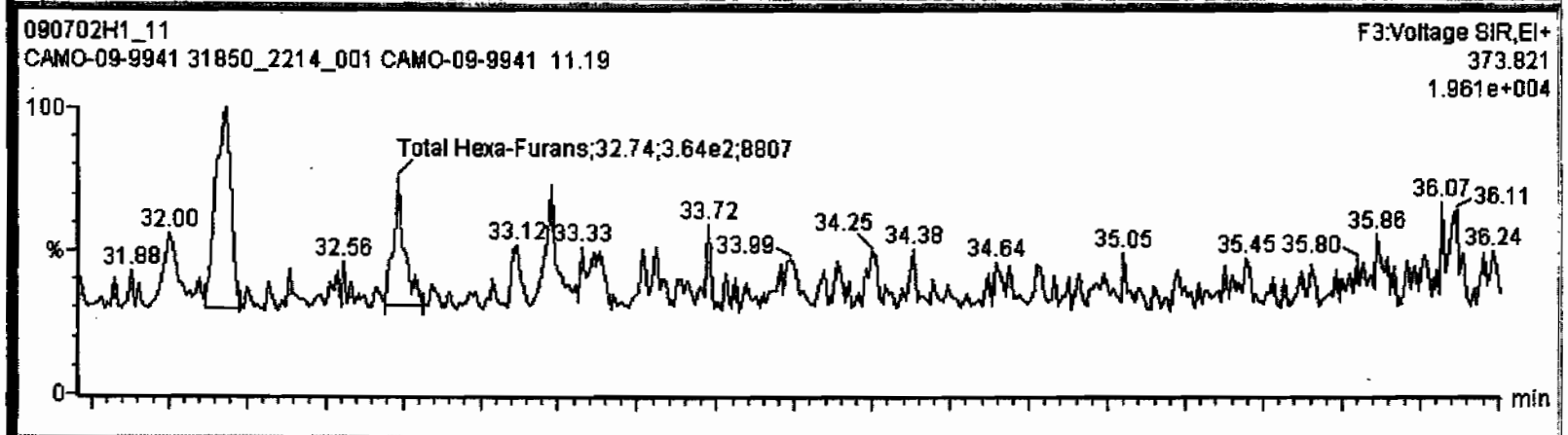

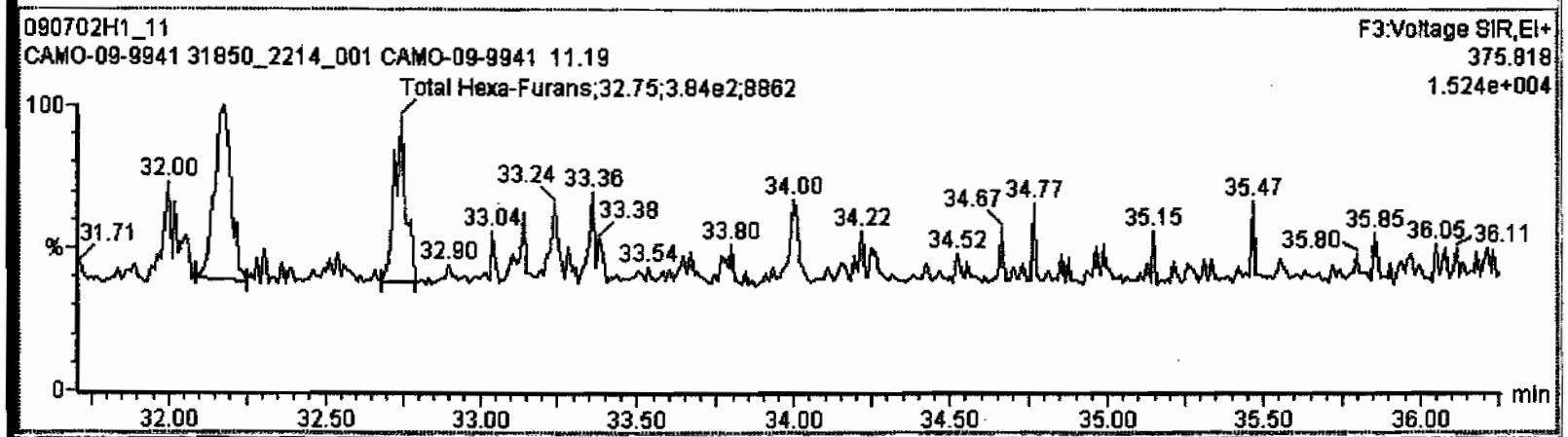

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Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

1,2,3,4,6,7,8-HpCDF

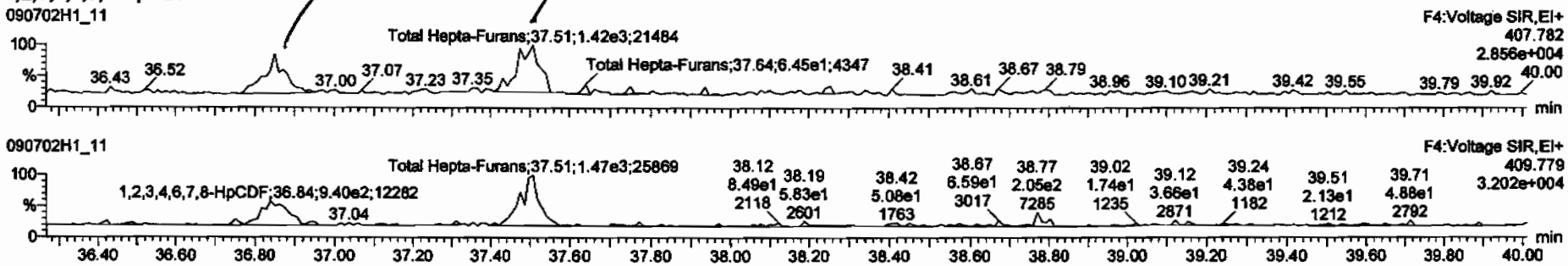

13C-1,2,3,4,6,7,8-HpCDF

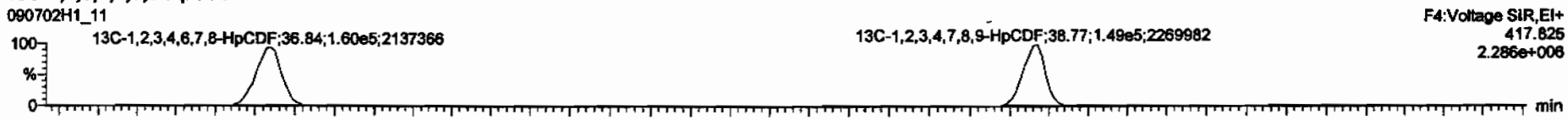

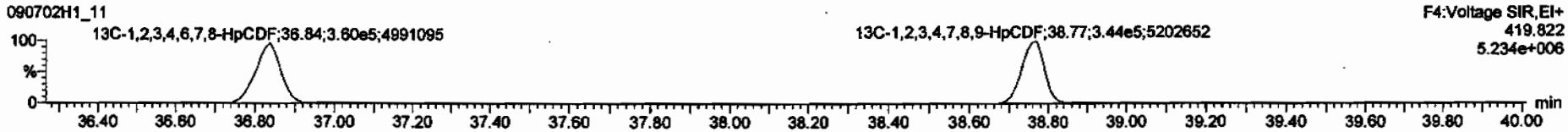

DPE4

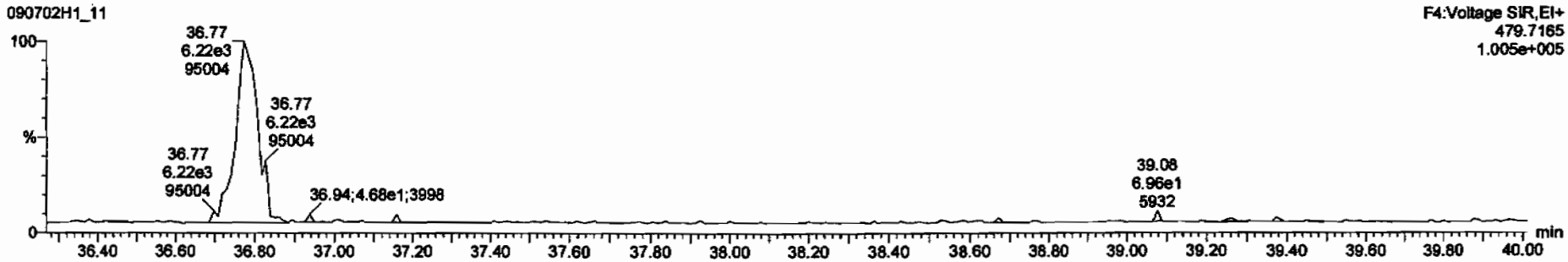

TargetLynx - 090702h1-11.qld * - [Chromatogram]

090702H1_11 - 31850_2214_001 CAMO-09-9941 11.19 - CAMO-09-9941

1,2,3,4,6,7,8-HpCDF	36.85	1.091e3	9.399e2	1.16	NO	0.46158	0.46158
Total Hepta-Furans	37.51	1.524e3	1.465e3	1.04	NO	0.69778	0.69778

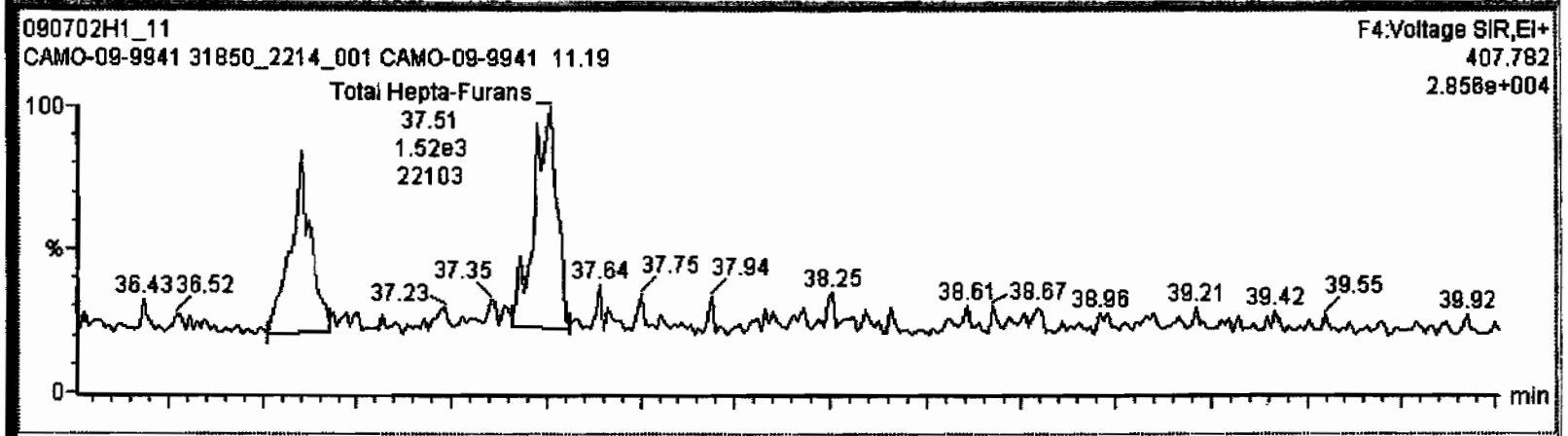

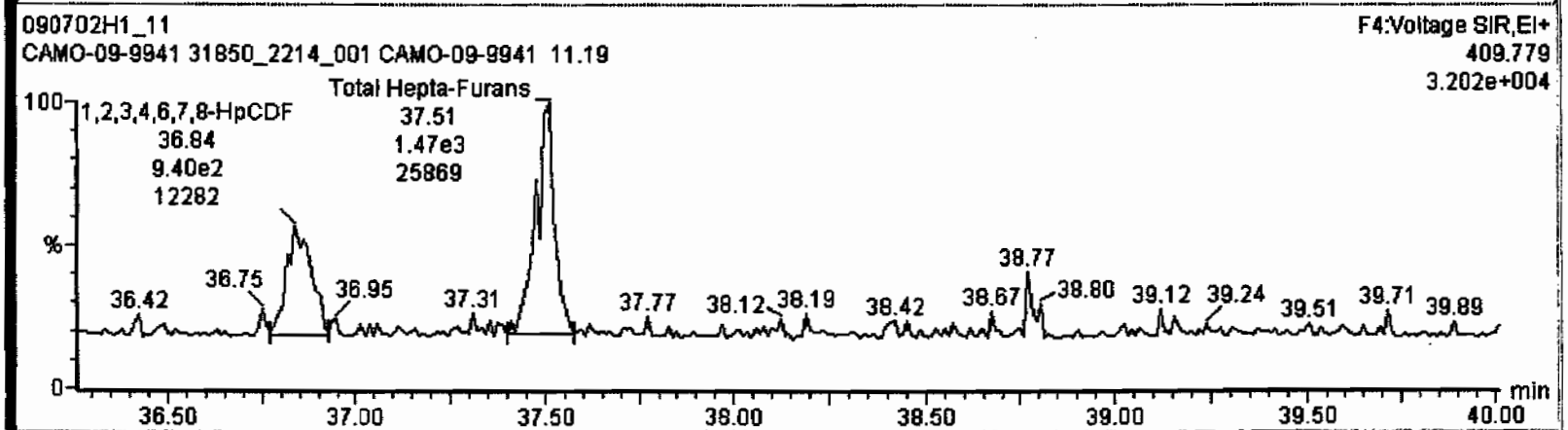

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Monday, July 06, 2009 13:17:26 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:40 Pacific Daylight Time

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

OCDF

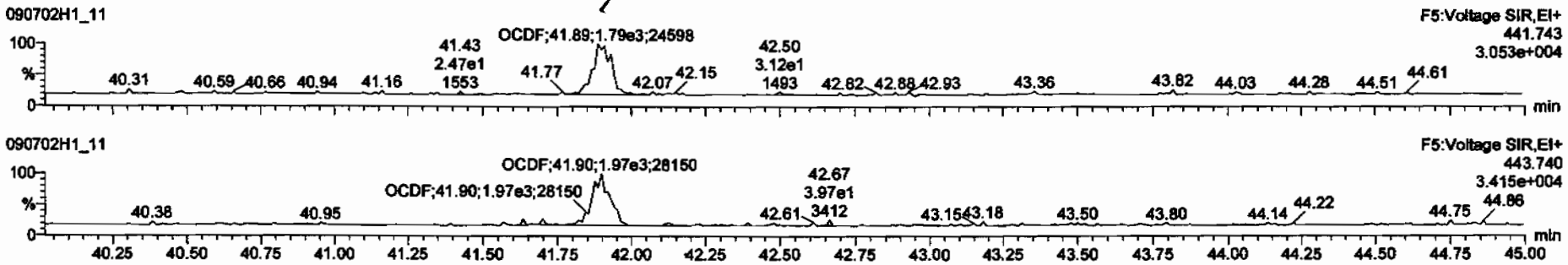

13C-OCDF

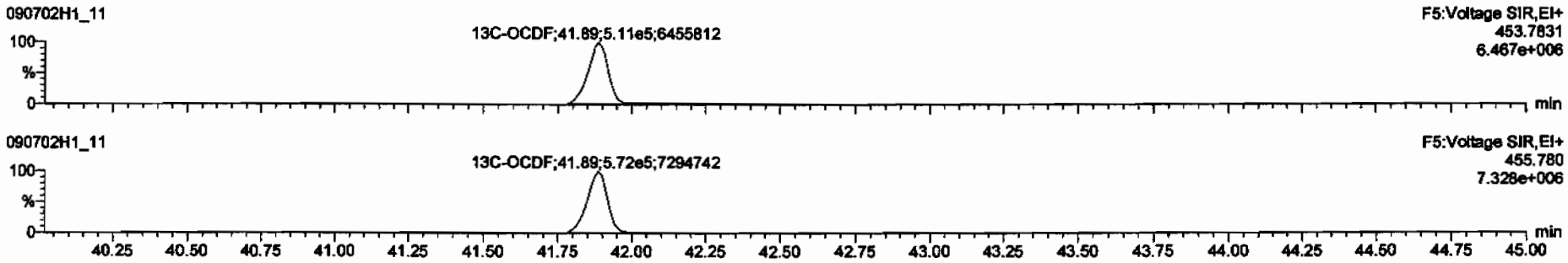

DPE5

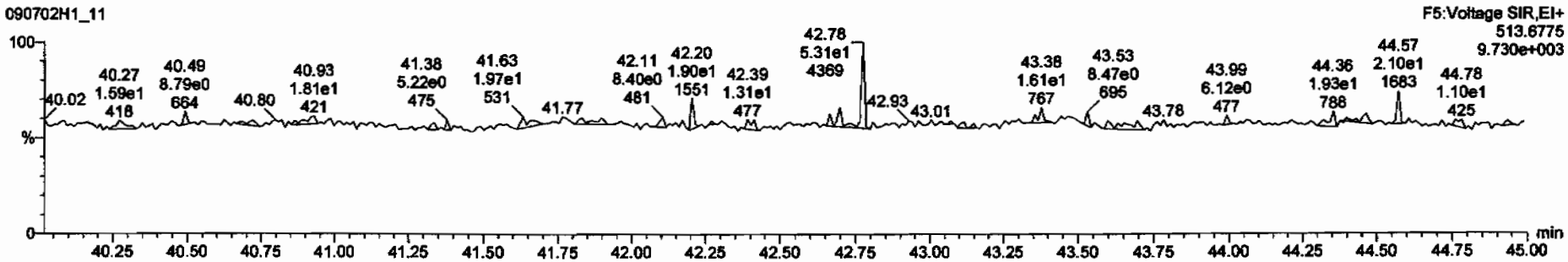

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-11.qld

Last Altered: Monday, July 06, 2009 13:17:26 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:17:40 Pacific Daylight Time

Name: 090702H1_11, Date: 02-Jul-2009, Time: 22:38:41, ID: 31850_2214_001 CAMO-09-9941 11.19, Description: CAMO-09-9941

PFK1

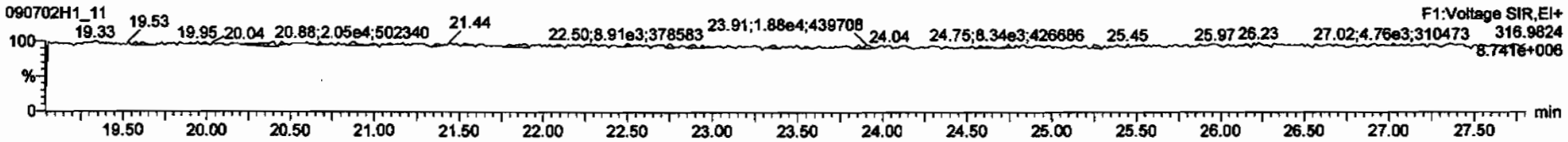

PFK2

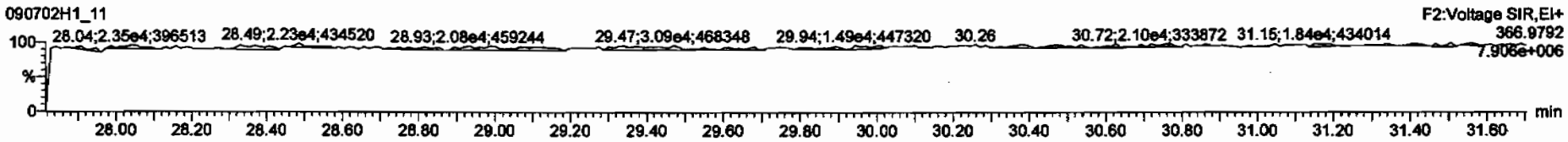

PFK3

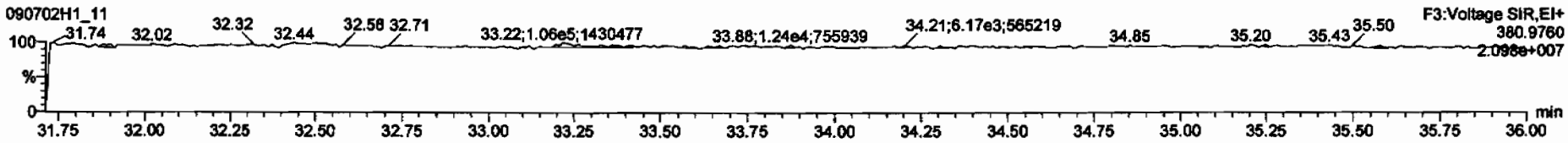

PFK4

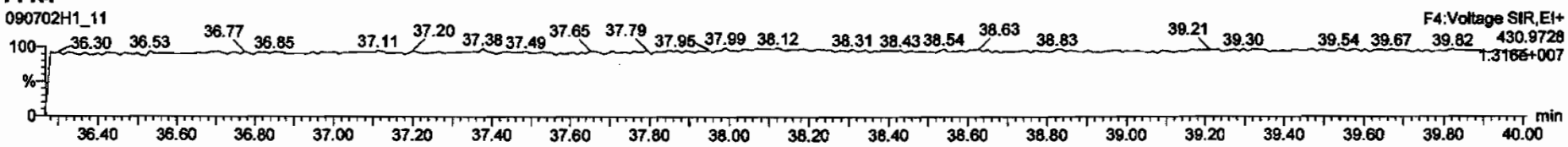

PFK5

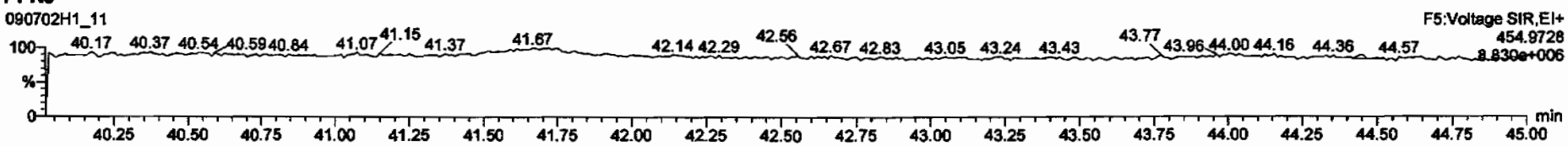

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Tuesday, July 07, 2009 11:10:56 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:11:19 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

1	2,3,7,8-TCDD			NO	1.08	10.010					0.0477	
2	1,2,3,7,8-PeCDD			NO	1.03	10.010					0.0990	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.010					0.267	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.010					0.272	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.010					0.260	
6	1,2,3,4,6,7,8-HpCDD	1.45e4	1.08	NO	1.06	10.010	38.20	1.001	5.2929		0.302	~~5.2929~~
7	OCDD	1.48e5	0.87	NO	1.18	10.010	41.66	1.000	52.706		0.135	~~52.706~~
8	2,3,7,8-TCDF			NO	1.09	10.010					0.0587	
9	1,2,3,7,8-PeCDF			NO	1.16	10.010					0.0600	
10	2,3,4,7,8-PeCDF			NO	1.12	10.010					0.0596	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.010					0.0972	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.010					0.107	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.010					0.125	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.010					0.157	
15	1,2,3,4,6,7,8-HpCDF	4.23e3	1.19	NO	1.69	10.010	36.84	1.000	0.93453		0.175	~~0.93453~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.010					0.183	
17	OCDF	1.00e4	0.91	NO	1.10	10.010	41.90	1.000	3.4650		0.106	~~3.4650~~
18	13C-2,3,7,8-TCDD	9.84e5	0.79	NO	1.01	10.010	26.03	1.022	200.23	100	0.298	
19	13C-1,2,3,7,8-PeCDD	7.27e5	0.63	NO	0.827	10.010	30.69	1.205	181.46	90.8	0.240	
20	13C-1,2,3,4,7,8-HxCDD	6.15e5	1.26	NO	0.916	10.010	34.14	0.988	187.48	93.8	0.450	
21	13C-1,2,3,6,7,8-HxCDD	5.68e5	1.25	NO	0.921	10.010	34.25	0.991	172.20	86.2	0.447	
22	13C-1,2,3,4,6,7,8-HpCDD	5.15e5	1.06	NO	0.708	10.010	38.18	1.105	202.87	102	0.910	
23	13C-OCDD	9.53e5	0.89	NO	0.503	10.010	41.65	1.205	529.58	133	0.584	
24	13C-2,3,7,8-TCDF	1.33e6	0.78	NO	0.977	10.010	25.27	0.992	199.81	100	0.260	
25	13C-1,2,3,7,8-PeCDF	1.11e6	1.54	NO	0.896	10.010	29.46	1.157	181.59	90.9	0.323	
26	13C-2,3,4,7,8-PeCDF	1.11e6	1.53	NO	0.900	10.010	30.40	1.194	181.66	90.9	0.322	
27	13C-1,2,3,4,7,8-HxCDF	7.93e5	0.53	NO	1.17	10.010	33.21	0.961	189.37	94.8	0.627	
28	13C-1,2,3,6,7,8-HxCDF	8.68e5	0.53	NO	1.52	10.010	33.34	0.965	159.58	79.9	0.483	
29	13C-2,3,4,6,7,8-HxCDF	7.57e5	0.52	NO	1.25	10.010	33.96	0.983	169.24	84.7	0.587	
30	13C-1,2,3,7,8,9-HxCDF	6.69e5	0.53	NO	1.05	10.010	34.94	1.011	177.23	88.7	0.696	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Tuesday, July 07, 2009 11:10:56 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:11:19 AM Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

31	13C-1,2,3,4,6,7,8-HpCDF	5.36e5	0.45	NO	0.868	10.010	36.83	1.066	172.35	86.3	0.960	
32	13C-1,2,3,4,7,8,9-HpCDF	4.82e5	0.43	NO	0.727	10.010	38.76	1.122	185.13	92.7	1.15	
33	13C-OCDF	1.05e6	0.90	NO	0.760	10.010	41.89	1.212	386.74	96.8	0.410	
34	37Cl-2,3,7,8-TCDD	2.43e5			0.668	10.010	26.06	1.023	75.127	94.0	0.0910	
35	13C-1,2,3,4-TCDD	9.68e5	0.79	NO	1.00	10.010	25.47	0.000	199.80	100	0.302	
36	13C-1,2,3,4-TCDF	1.36e6	0.77	NO	1.00	10.010	24.03	0.000	199.80	100	0.253	
37	13C-1,2,3,7,8,9-HxCDD	7.16e5	1.25	NO	1.00	10.010	34.55	0.000	199.80	100	0.412	
38	Total Tetra-Dioxins				1.08	10.010					0.0212	
39	Total Penta-Dioxins				1.03	10.010					0.0239	
40	Total Hexa-Dioxins				1.13	10.010			0.81211		0.254	~~0.81211~~
41	Total Hepta-Dioxins				1.06	10.010			9.2570		0.302	~~9.2570~~
42	Total Tetra-Furans				1.09	10.010					0.0230	
43	1st Func. Penta-Furans				1.16	10.010			~~0.10718~~		0.0318	~~0.10718~~
44	Total Penta-Furans				1.18	10.010			0.187		0.0236	
45	Total Hexa-Furans				1.28	10.010			0.92017		0.120	~~0.92017~~
46	Total Hepta-Furans				1.69	10.010			2.7130		0.168	~~2.7130~~

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Tuesday, July 07, 2009 11:10:56 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:11:19 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Total Hexa-Dioxins	32.56	1.191e4	9.948e3	6.003e2	5.017e2	1.20	NO	1.102e3	0.33065	0.33065	0.254
Total Hexa-Dioxins	33.42	1.285e4	1.154e4	9.112e2	6.934e2	1.31	NO	1.605e3	0.48146	0.48146	0.254

Hepta-Dioxins

Total Hepta-Dioxins	37.27	7.543e4	6.649e4	5.870e3	4.998e3	1.17	NO	1.087e4	3.9641	3.9641	0.302
1,2,3,4,6,7,8-HpCDD	38.20	1.230e5	1.138e5	7.544e3	6.967e3	1.08	NO	1.451e4	5.2929	5.2929	0.302

Tetra-Furans

Penta-Furans function 1

1st Func. Penta-Furans	27.02	1.253e4	7.399e3	7.405e2	4.639e2	1.60	NO	1.204e3	0.18718	0.18718	0.0318

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Tuesday, July 07, 2009 11:10:56 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:11:19 AM Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

Penta-Furans

Hexa-Furans

	Total Hexa-Furans	32.01	9.656e3	5.900e3	4.108e2	3.347e2	1.23	NO	7.455e2	0.15075	0.15075	0.120
	Total Hexa-Furans	32.17	2.749e4	2.215e4	1.359e3	1.067e3	1.27	NO	2.426e3	0.49058	0.49058	0.120
	Total Hexa-Furans	32.72	1.609e4	9.982e3	7.803e2	5.988e2	1.30	NO	1.379e3	0.27884	0.27884	0.120

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.84	3.071e4	2.687e4	2.302e3	1.932e3	1.19	NO	4.235e3	0.93453	0.93453	0.175
	Total Hepta-Furans	37.48	5.529e4	5.093e4	3.961e3	3.690e3	1.07	NO	7.651e3	1.7785	1.7785	0.168

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

2,3,7,8-TCDD

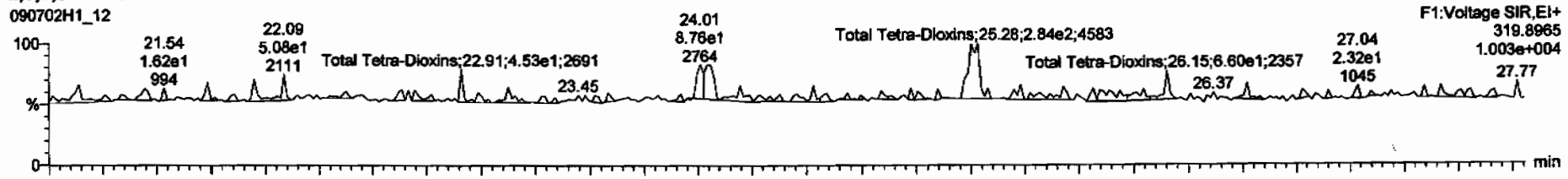

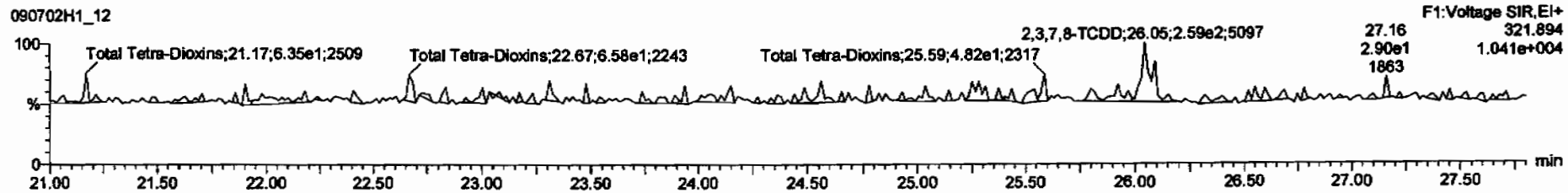

13C-2,3,7,8-TCDD

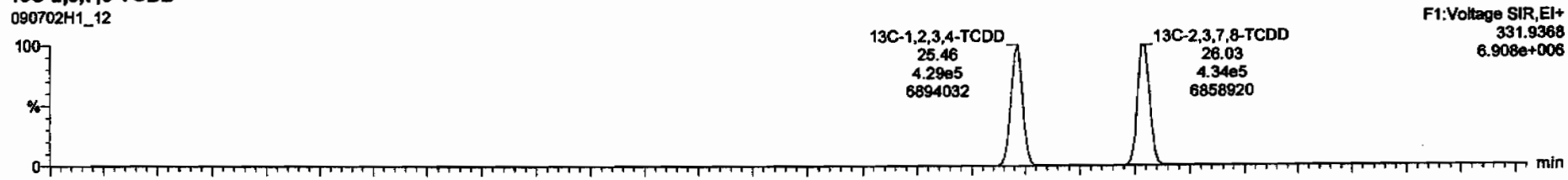

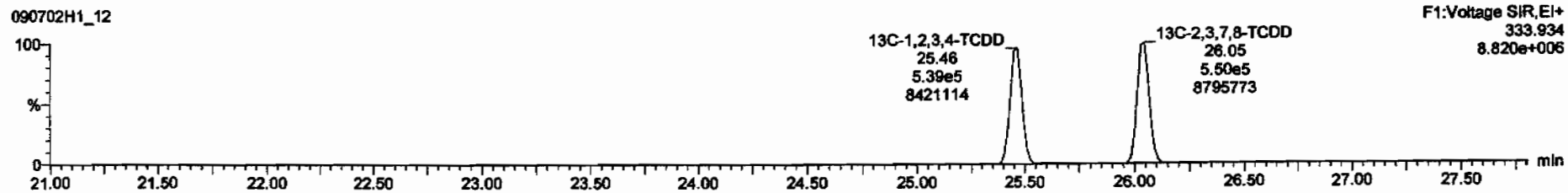

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

37Cl-2,3,7,8-TCDD

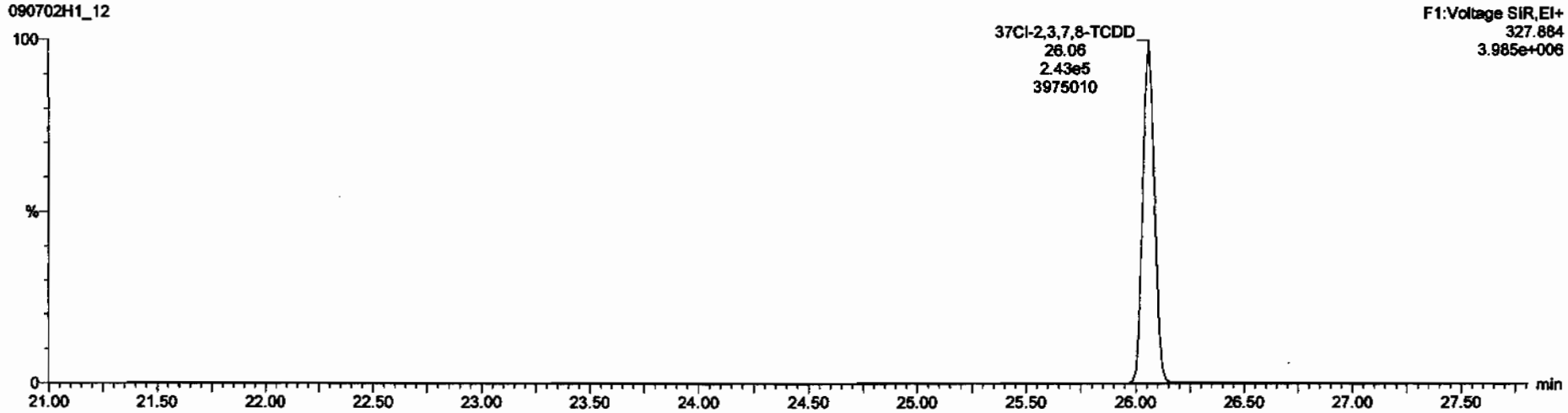

13C-1,2,3,4-TCDD

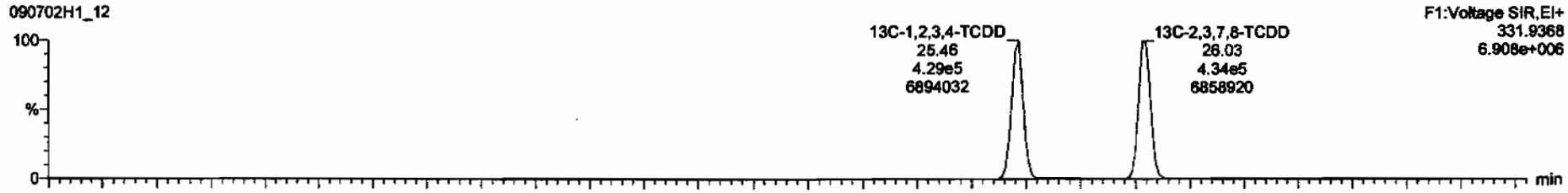

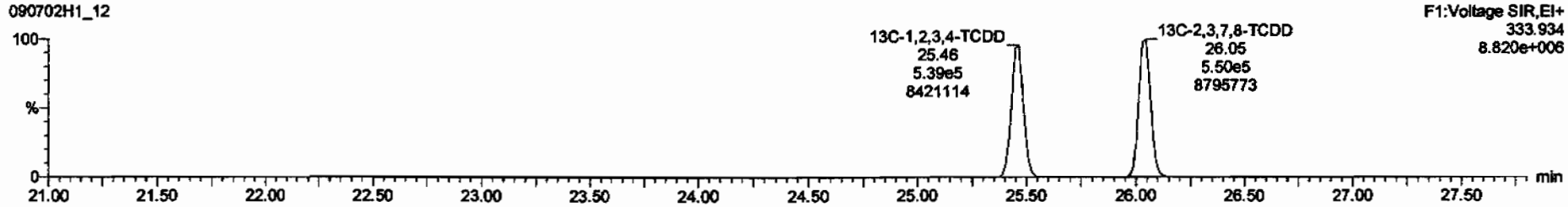

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

1,2,3,7,8-PeCDD

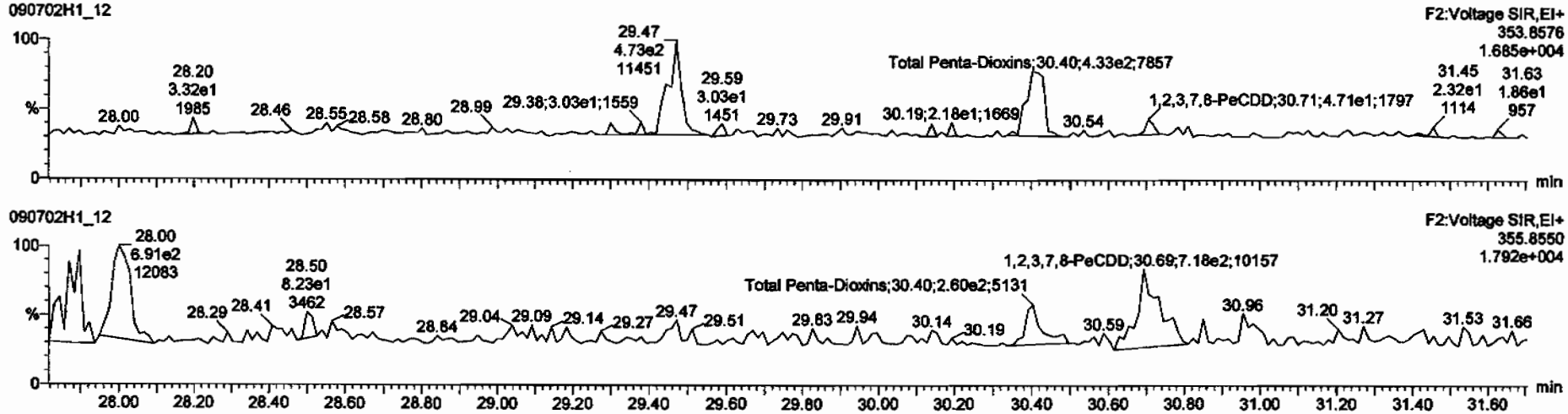

13C-1,2,3,7,8-PeCDD

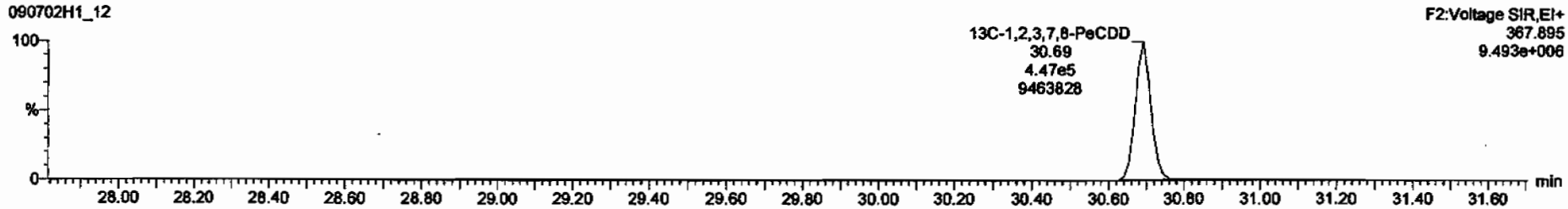

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Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

1,2,3,4,7,8-HxCDD

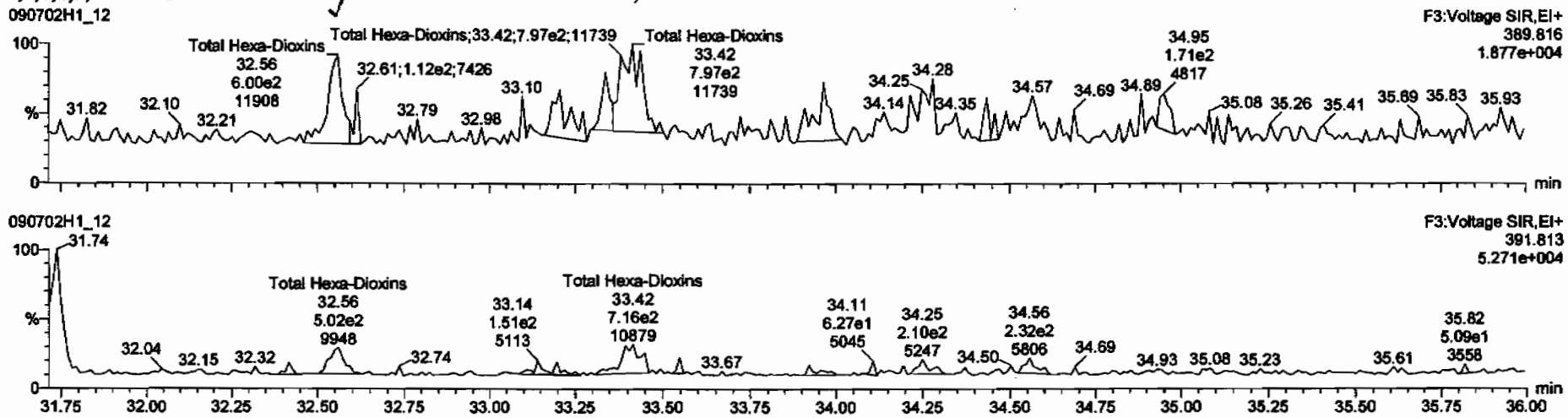

13C-1,2,3,4,7,8-HxCDD

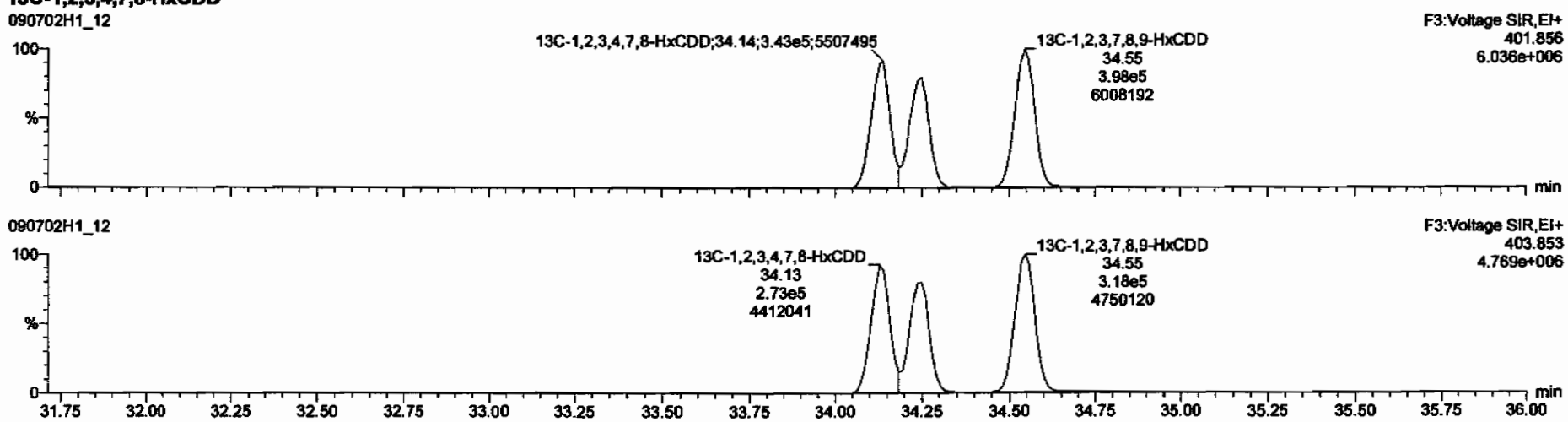

TargetLynx - 090702h1-12.qld * - [Chromatogram]

090702H1_12 - 31850_2214_002 CAMO-09-9942 11.32 - CAMO-09-9942

Total Hexa-Dioxins	33.42	9.112e2	6.934e2	1.31	NO	0.48146	0.48146
Total Hexa-Dioxins	32.56	6.003e2	5.017e2	1.20	NO	0.33065	0.33065

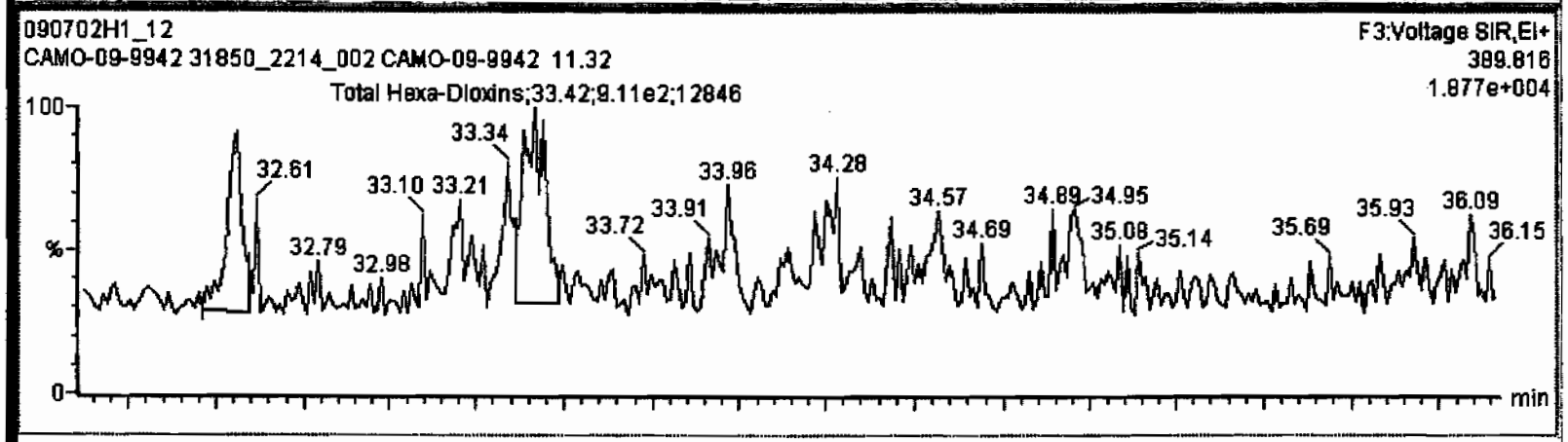

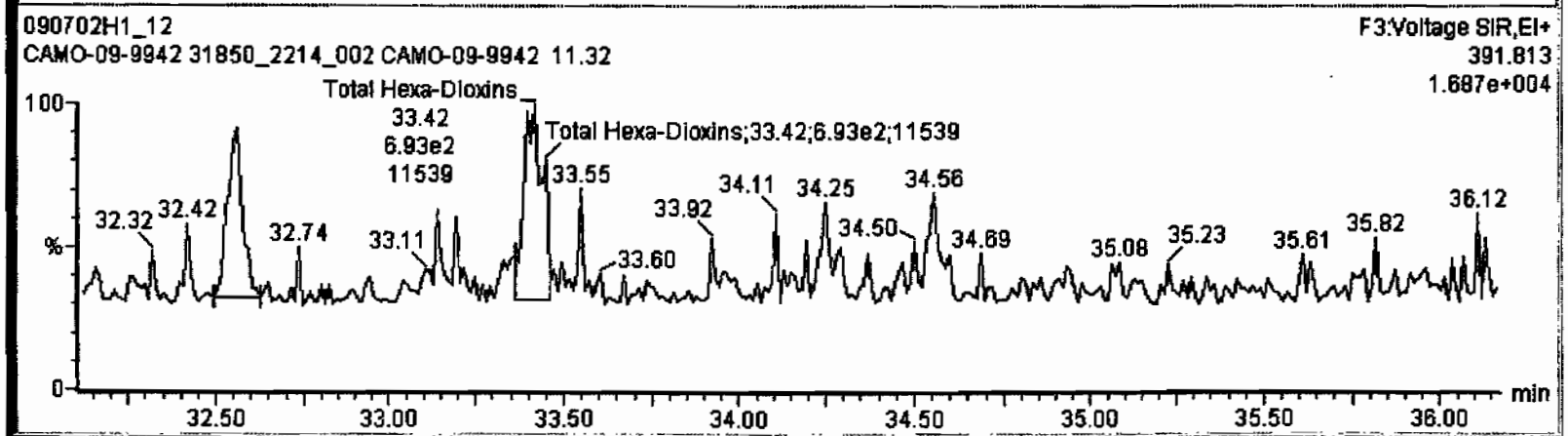

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

1,2,3,4,6,7,8-HpCDD

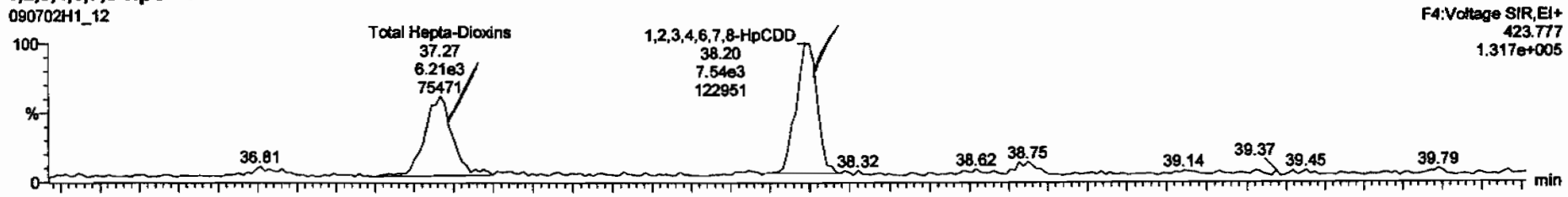

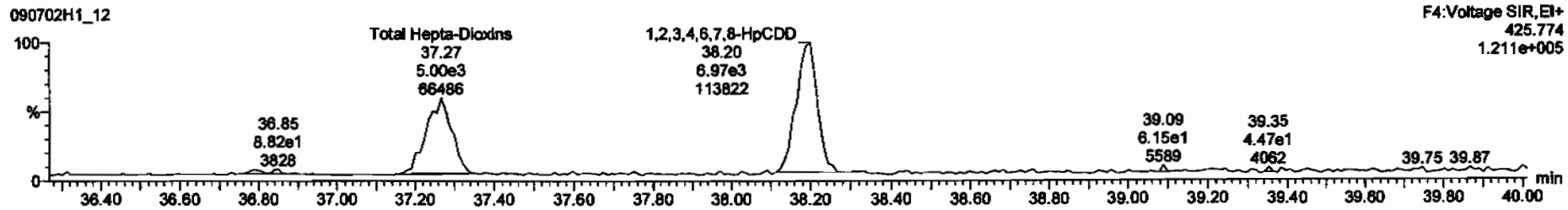

13C-1,2,3,4,6,7,8-HpCDD

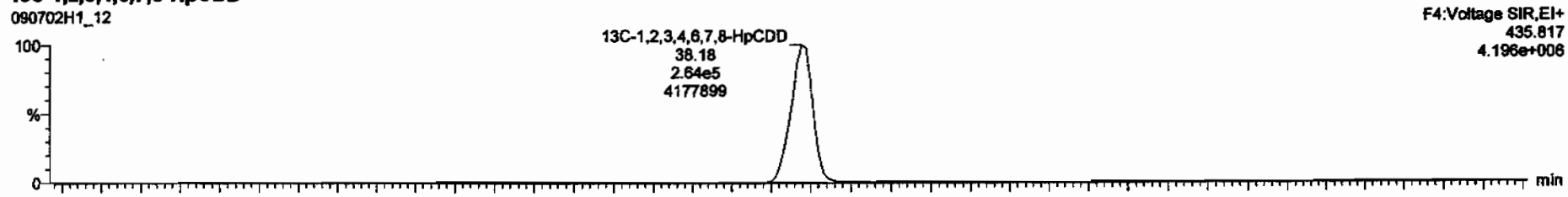

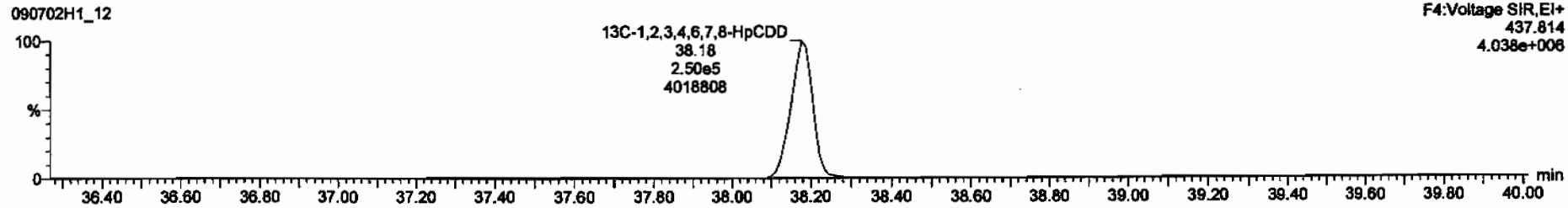

TargetLynx - 090702h1-12.qld * - [Chromatogram]

090702H1_12 - 31850_2214_002 CAMO-09-9942 11.32 - CAMO-09-9942

Total Hepta-Dioxins	37.27	5.870e3	4.998e3	1.17	NO	3.9641	3.9641
1,2,3,4,6,7,8-HpCDD	38.20	7.544e3	6.967e3	1.08	NO	5.2929	5.2929

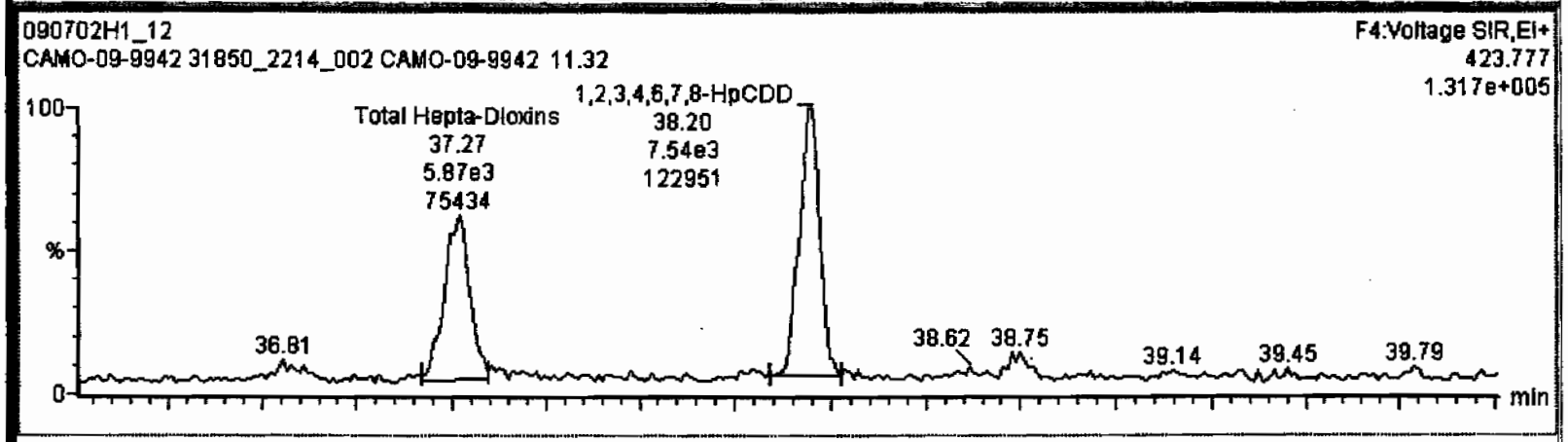

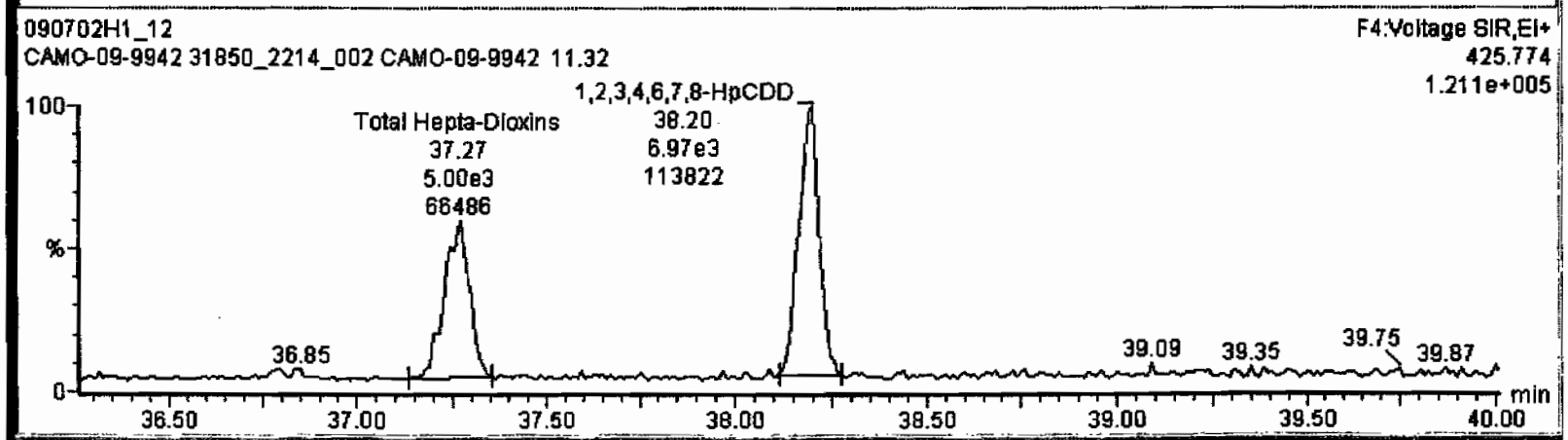

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

OCDD

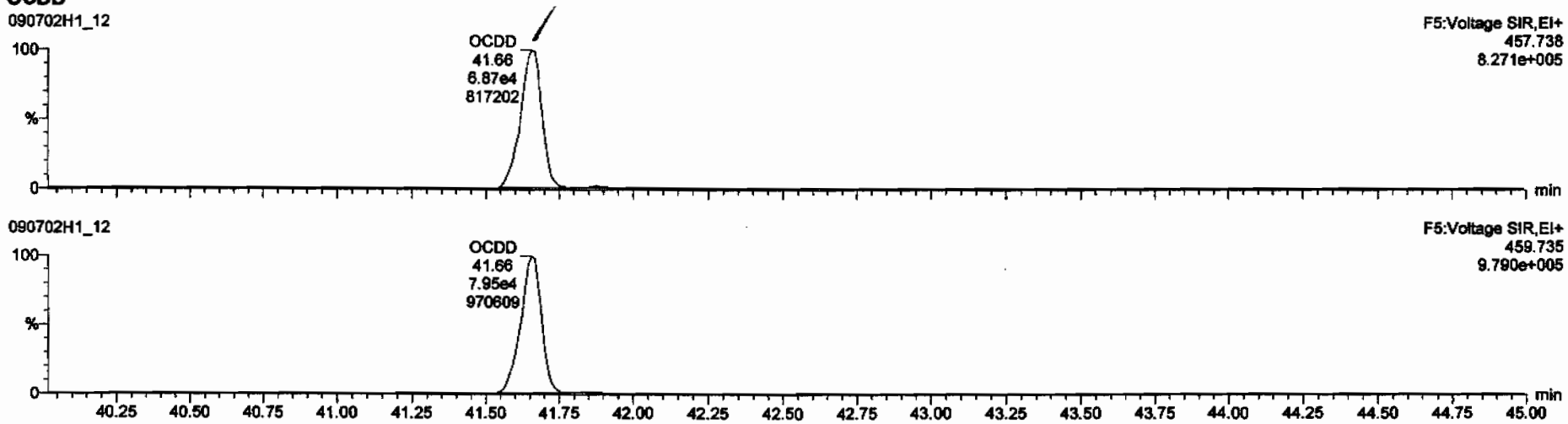

13C-OCDD

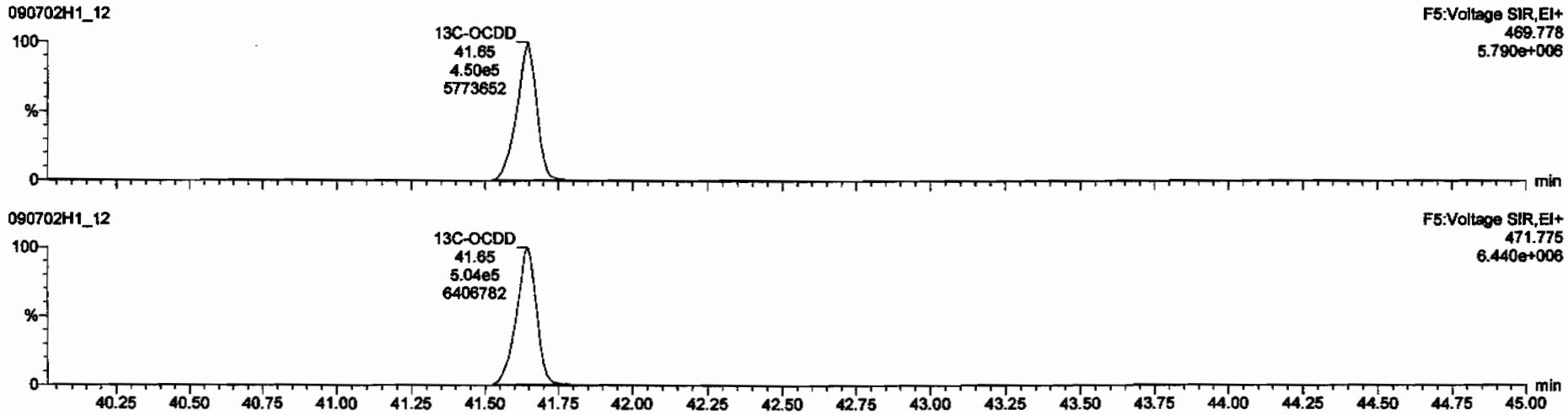

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

2,3,7,8-TCDF

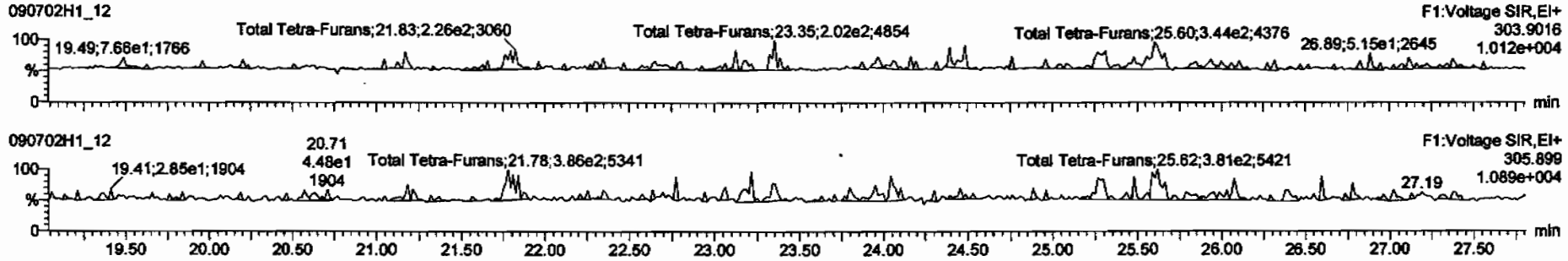

13C-2,3,7,8-TCDF

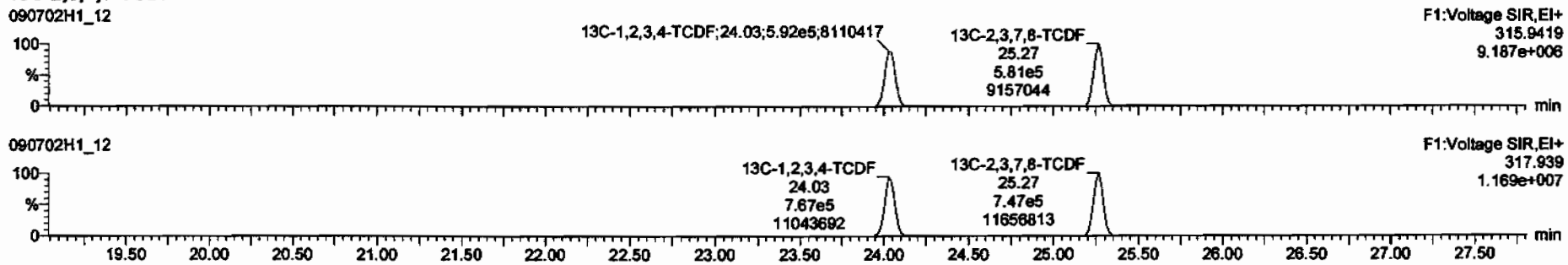

DPE1

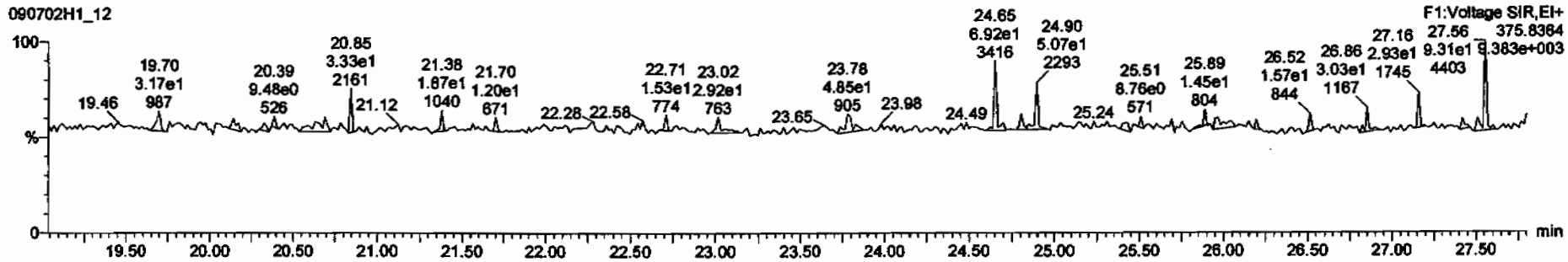

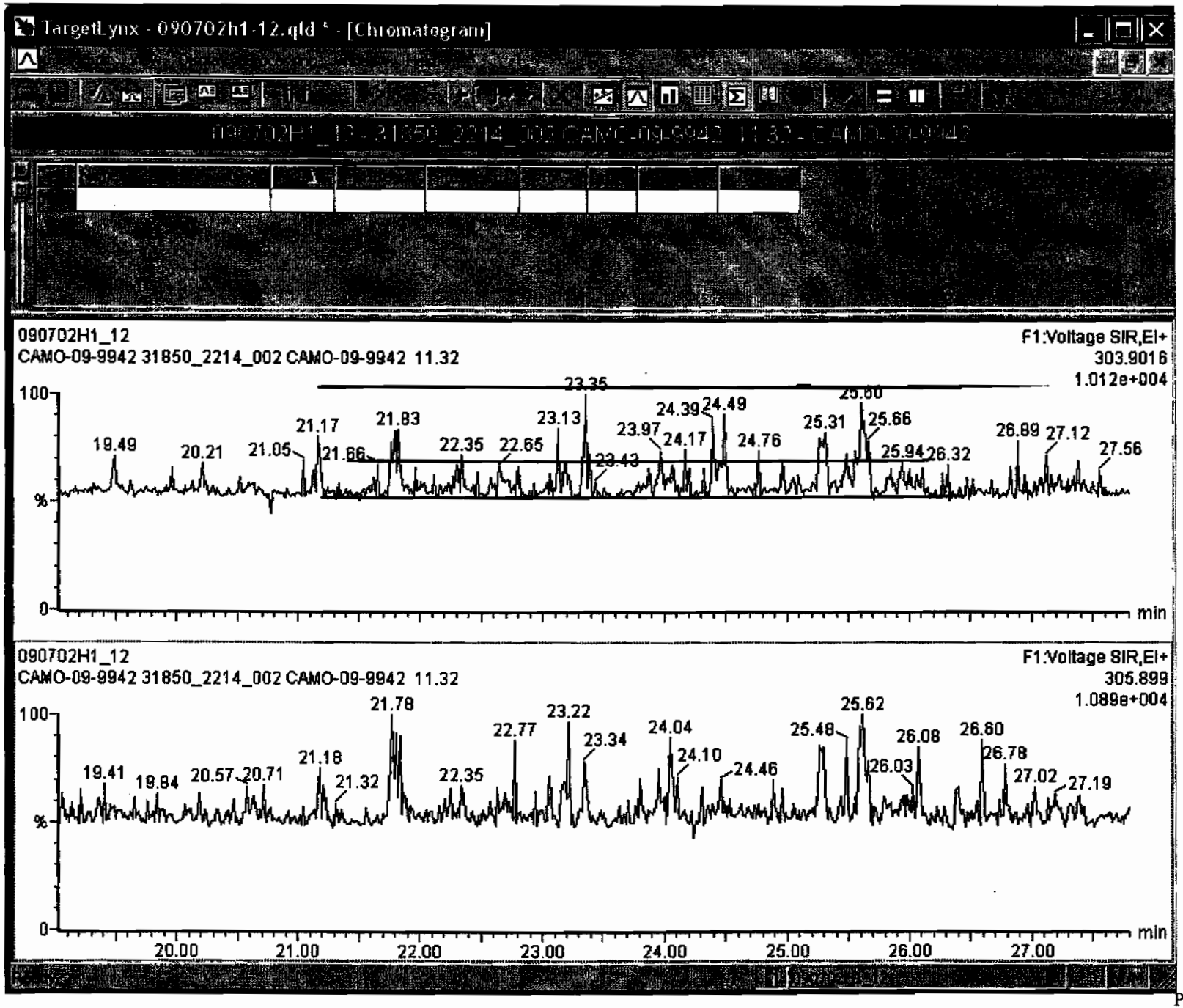
TargetLynx - 090702h1-12.qld * - [Chromatogram]
090702H1_12
CAMO-09-9942 31850_2214_002 CAMO-09-9942 11.32
F1:Voltage SIR,EI+
303.9016
1.012e+004
100
%
0
min
19.49
20.21
21.05
21.17
21.66
21.83
22.35
22.65
23.13
23.35
23.43
23.97
24.17
24.39
24.49
24.76
25.31
25.60
25.66
25.94
26.32
26.89
27.12
27.56
090702H1_12
CAMO-09-9942 31850_2214_002 CAMO-09-9942 11.32
F1:Voltage SIR,EI+
305.899
1.089e+004
100
%
0
min
19.41
19.84
20.57
20.71
21.18
21.32
21.78
22.35
22.77
23.22
23.34
24.04
24.10
24.46
25.48
25.62
26.03
26.08
26.60
26.78
27.02
27.19
20.00
21.00
22.00
23.00
24.00
25.00
26.00
27.00

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
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Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

1st Func. Penta-Furans

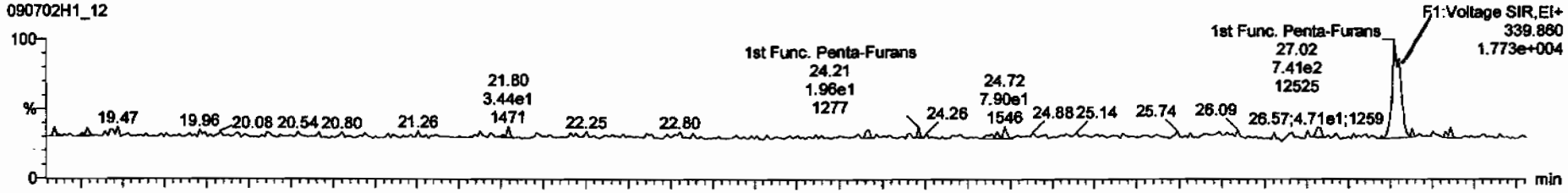

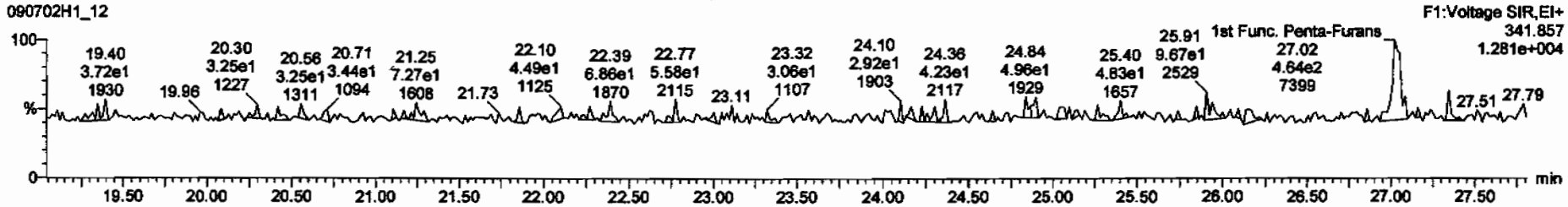

DPE6

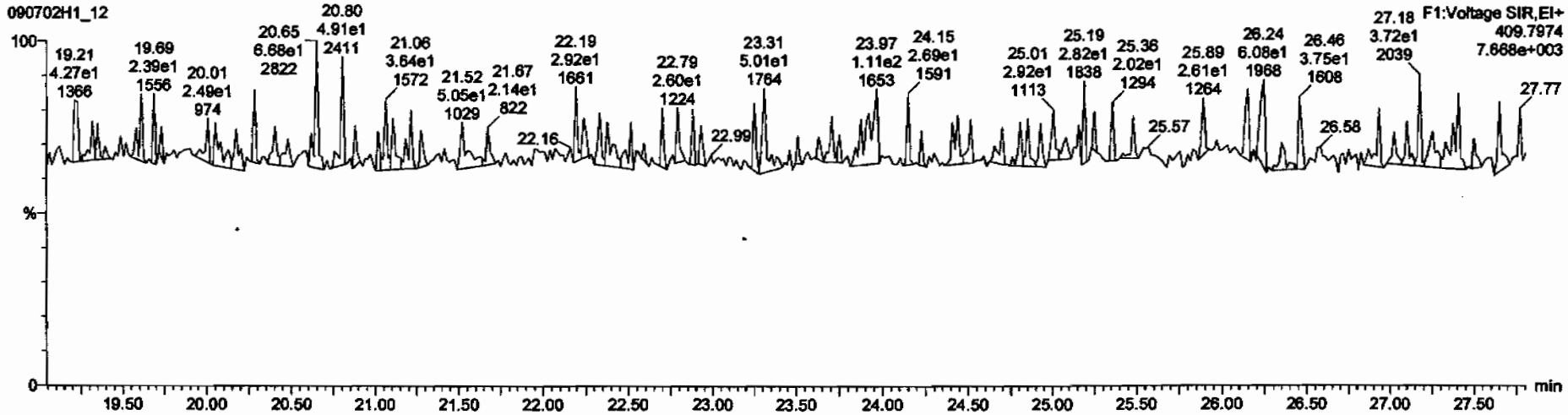

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

1,2,3,7,8-PeCDF

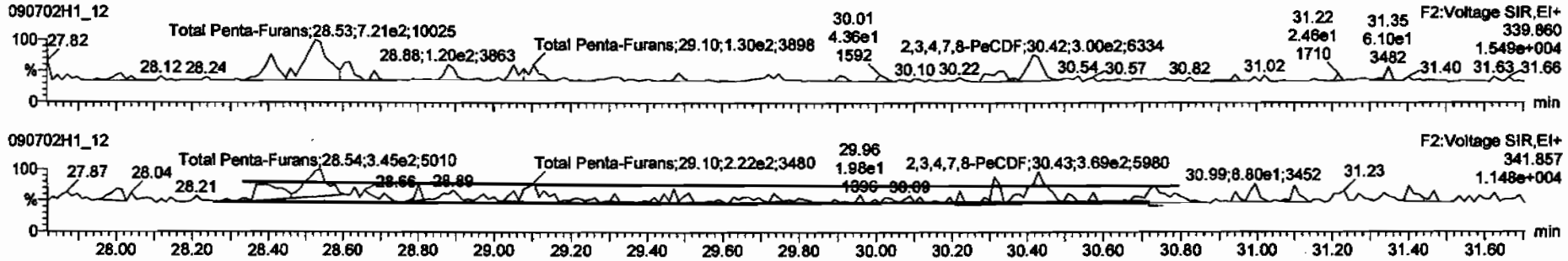

13C-1,2,3,7,8-PeCDF

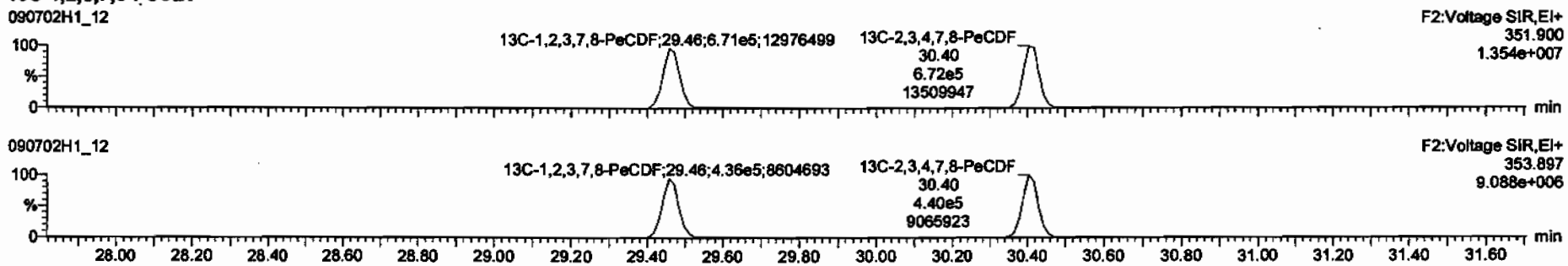

DPE2

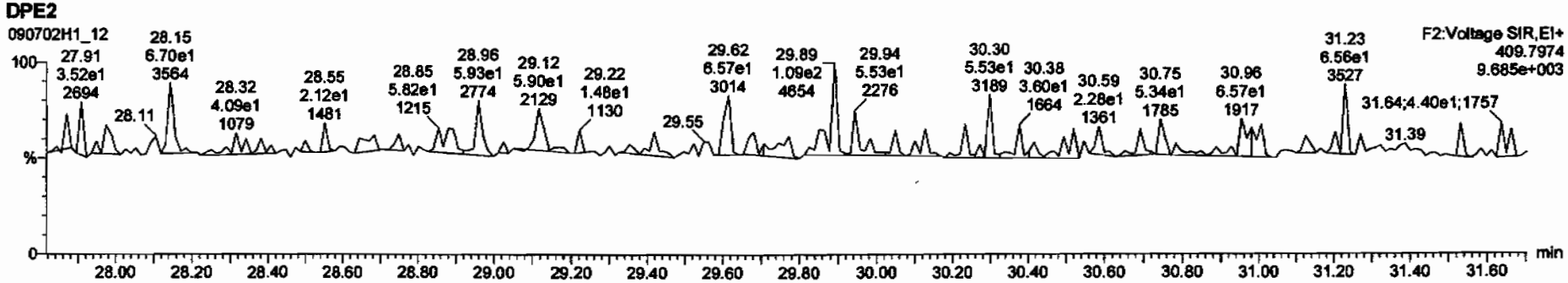

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

1,2,3,4,7,8-HxCDF

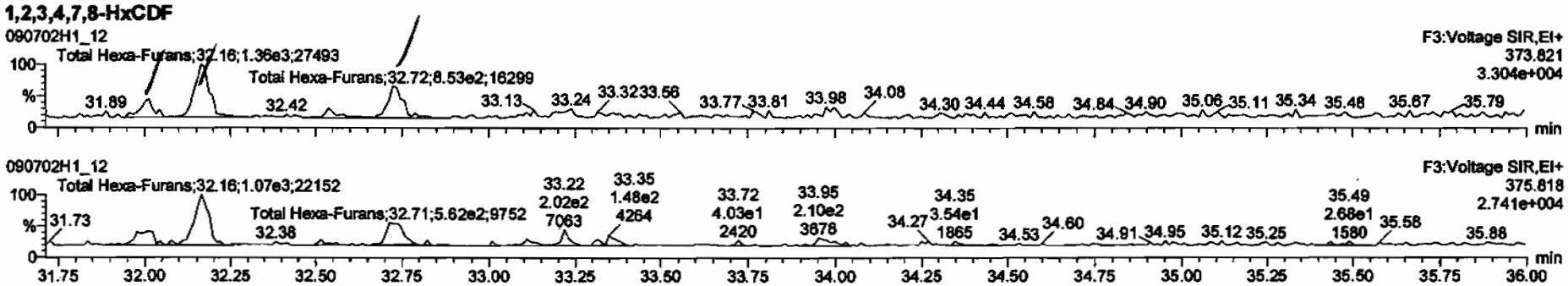

13C-1,2,3,4,7,8-HxCDF

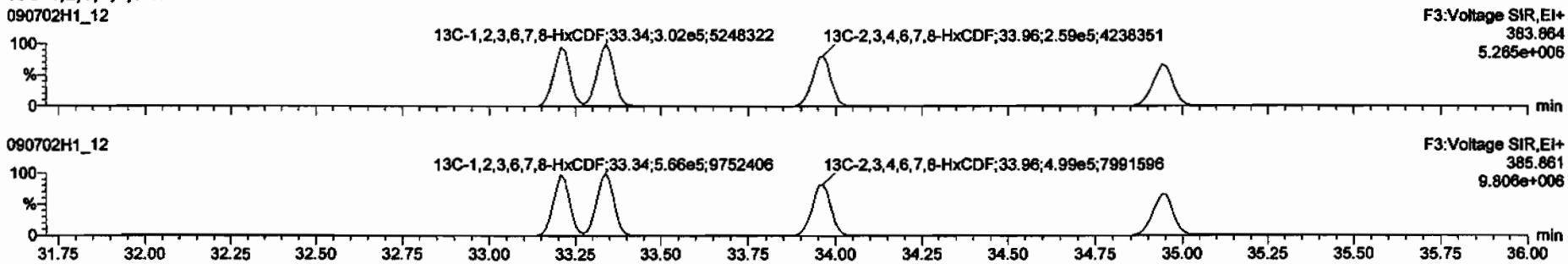

DPE3

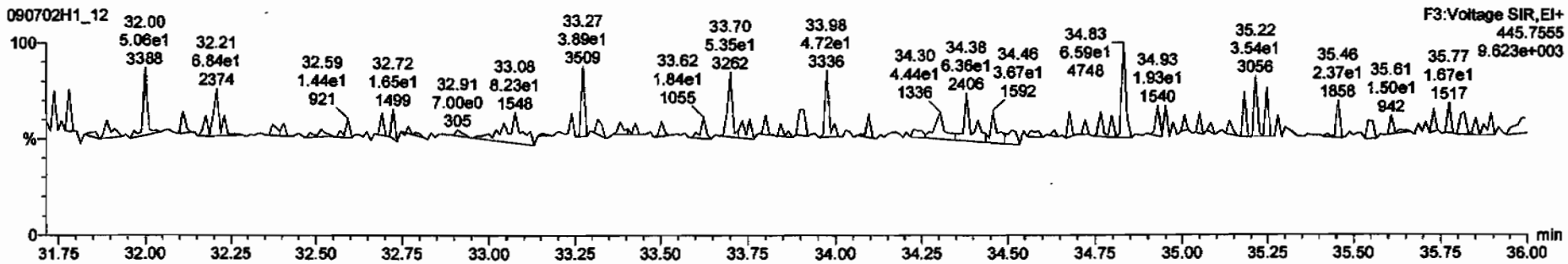

TargetLynx - 090702h1-12.qld * - [Chromatogram]

090702H1_12 - 31850_2214_002 CAMO-09-9942 11.32 - CAMO-09-9942

Total Hexa-Furans	32.01	4.108e2	3.347e2	1.23	NO	0.15075	0.00000
Total Hexa-Furans	32.17	1.359e3	1.067e3	1.27	NO	0.49058	0.49058
Total Hexa-Furans	32.72	7.803e2	5.986e2	1.30	NO	0.27884	0.27884

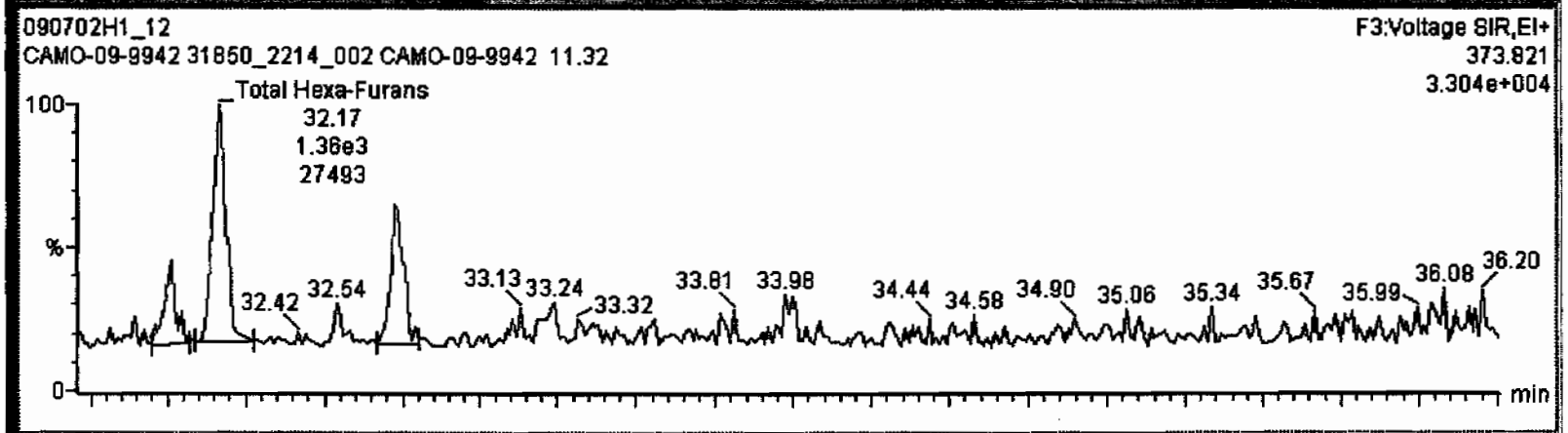

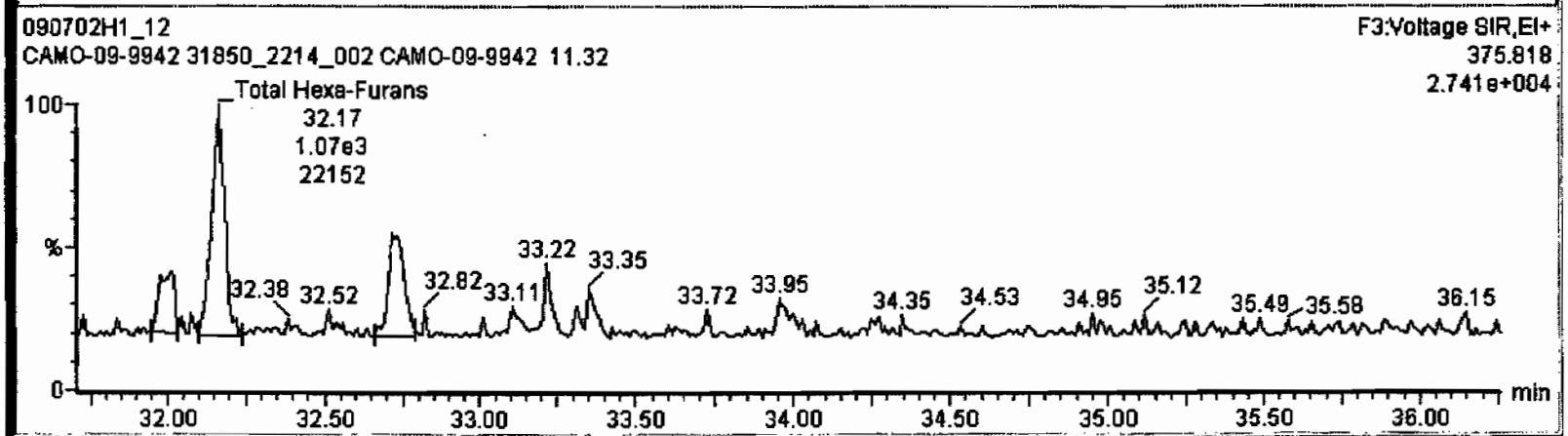

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

1,2,3,4,6,7,8-HpCDF

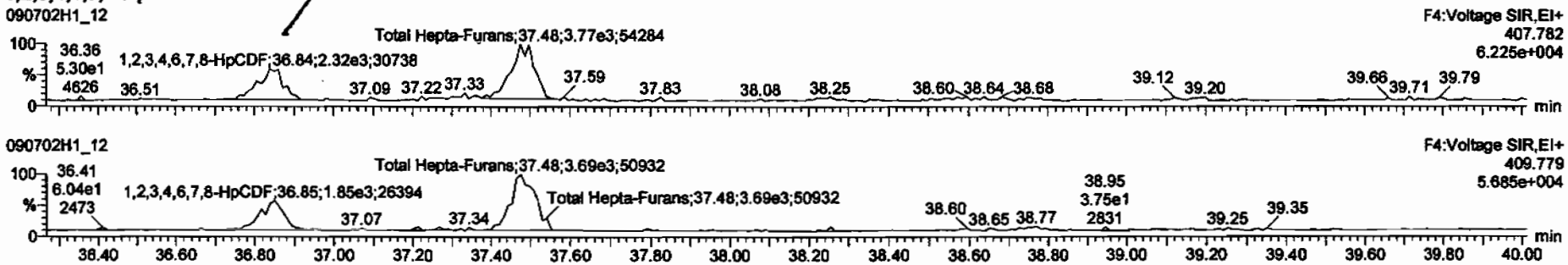

13C-1,2,3,4,6,7,8-HpCDF

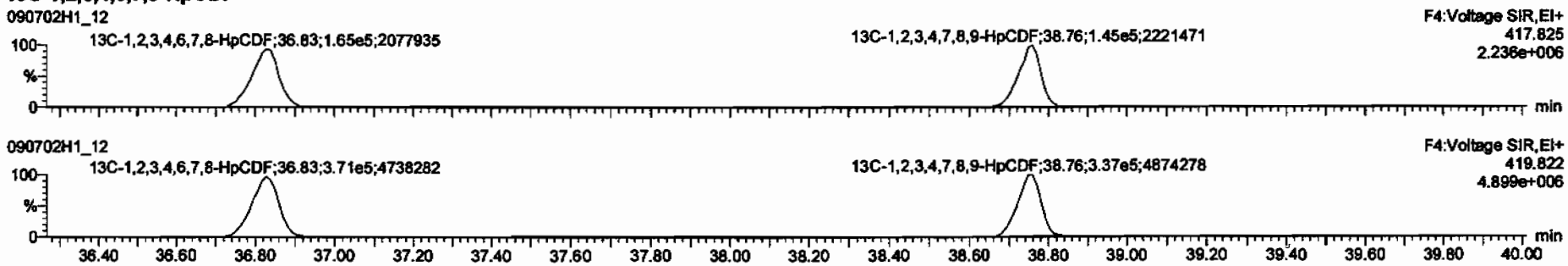

DPE4

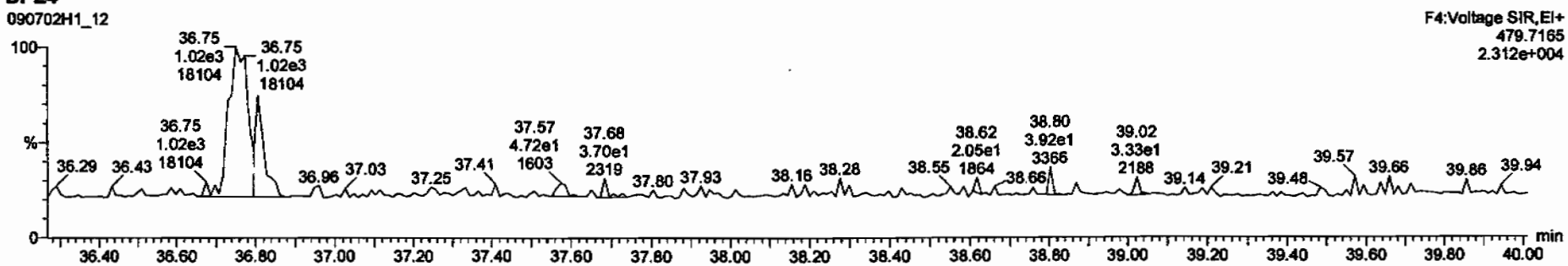

TargetLynx - 090702h1-12.qld * - [Chromatogram]

090702H1_12 - 31850_2214_002 CAMO-09-9942 11.32 - CAMO-09-9942

1,2,3,4,6,7,8-HpCDF	36.84	2.302e3	1.932e3	1.19	NO	0.93453	0.93453
Total Hepta-Furans	37.48	3.961e3	3.690e3	1.07	NO	1.7785	1.7785

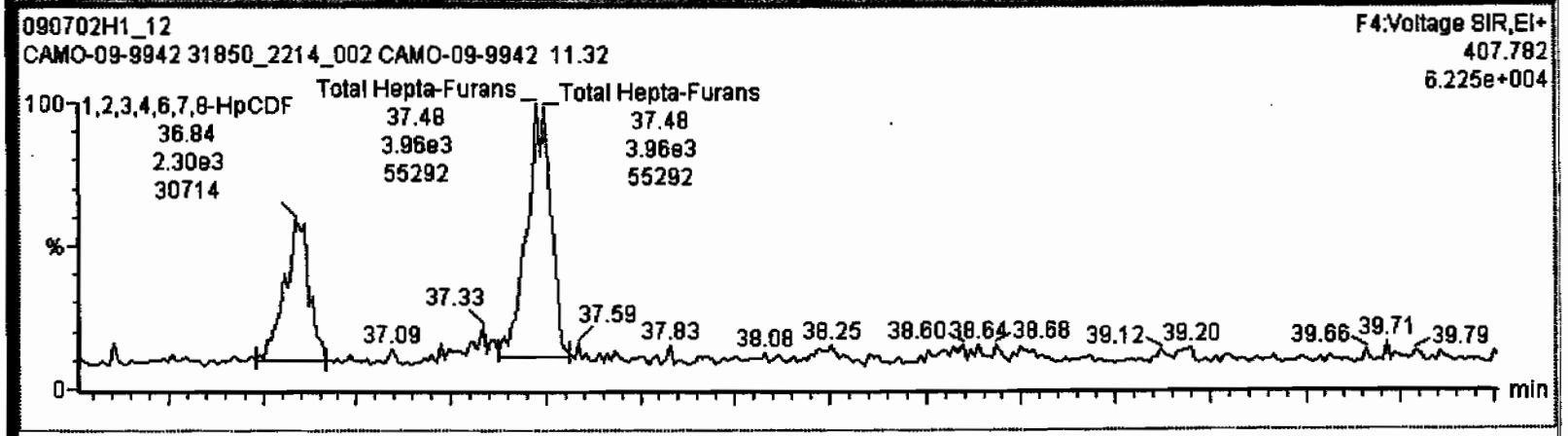

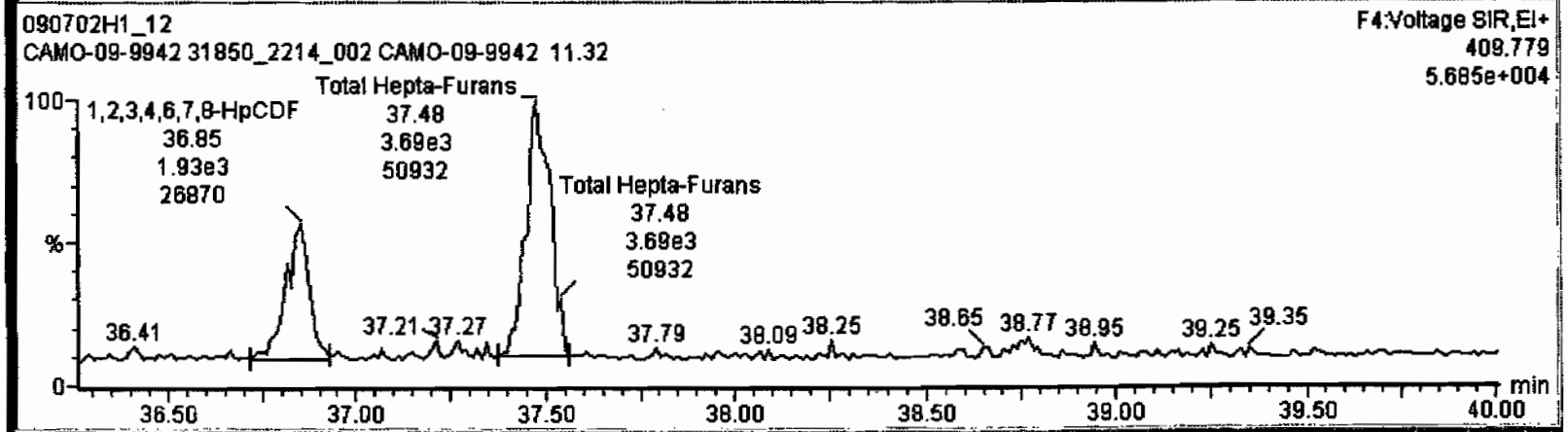

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

OCDF

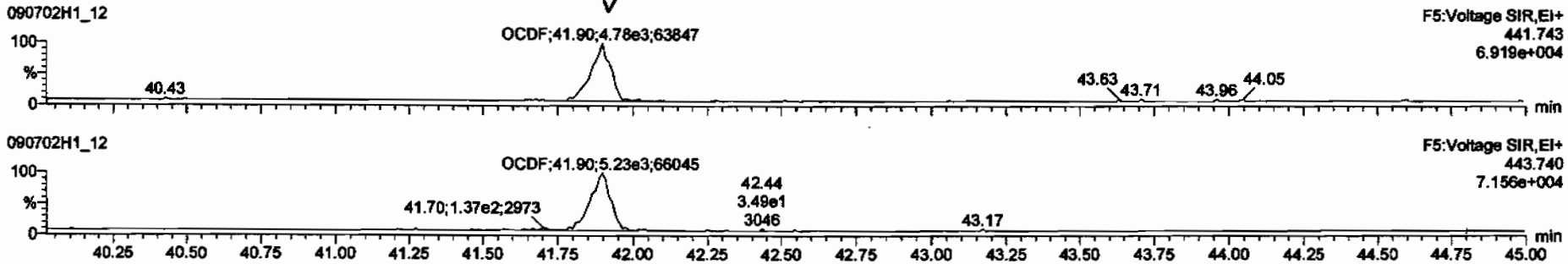

13C-OCDF

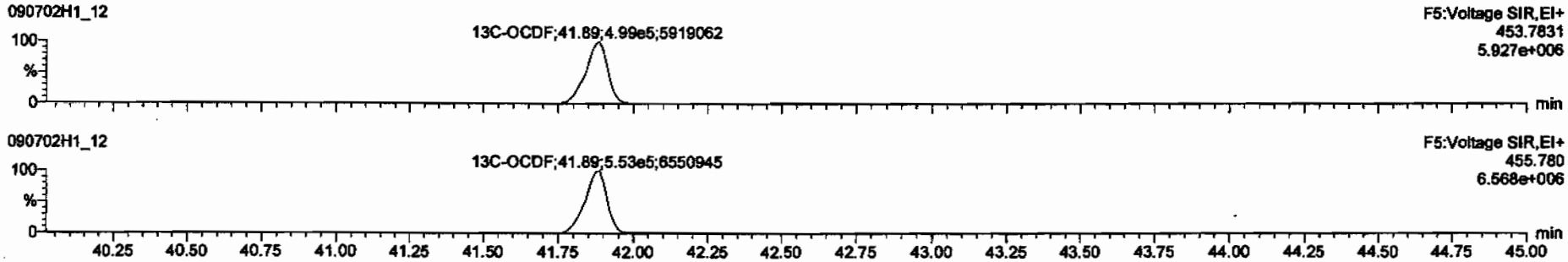

DPE5

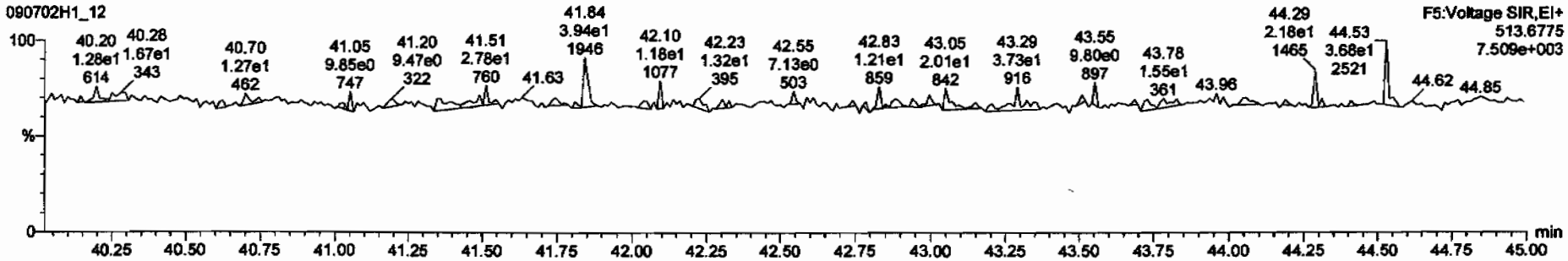

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-12.qld

Last Altered: Monday, July 06, 2009 13:17:49 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:04 Pacific Daylight Time

Name: 090702H1_12, Date: 02-Jul-2009, Time: 23:28:16, ID: 31850_2214_002 CAMO-09-9942 11.32, Description: CAMO-09-9942

PFK1

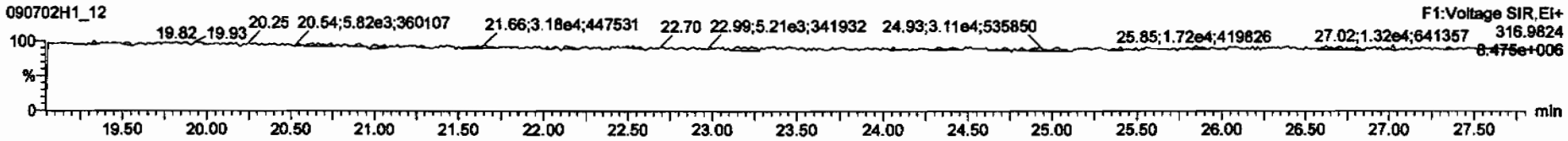

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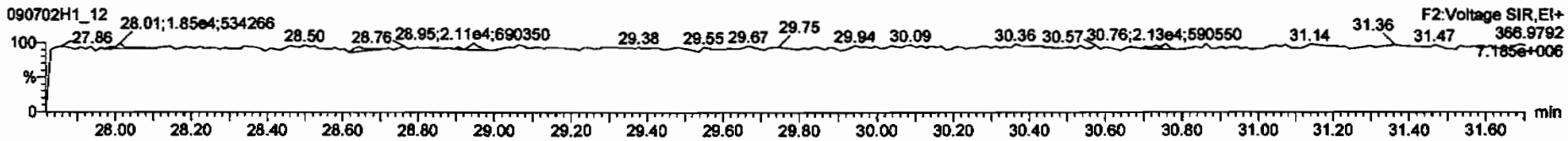

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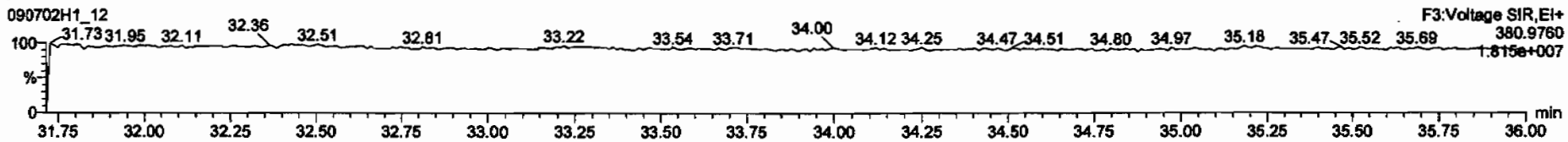

PFK4

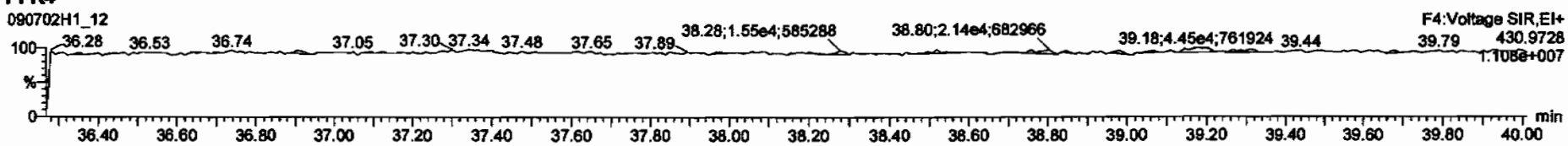

PFK5

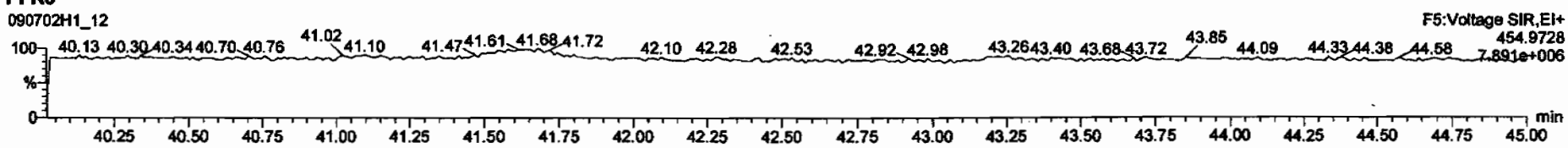

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Tuesday, July 07, 2009 11:16:55 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:17:24 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

1	2,3,7,8-TCDD			NO	1.08	10.220					0.0603	
2	1,2,3,7,8-PeCDD			NO	1.03	10.220					0.0975	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.220					0.299	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.220					0.301	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.220					0.289	
6	1,2,3,4,6,7,8-HpCDD	1.59e4	1.05	NO	1.06	10.220	38.20	1.001	6.3526		0.272	~~6.3526~~
7	OCDD	1.36e5	0.90	NO	1.18	10.220	41.67	1.001	55.808		0.243	~~55.808~~
8	2,3,7,8-TCDF	7.09e2	0.79	NO	1.09	10.220	25.27	1.000	0.10938		0.0441	~~0.10938~~
9	1,2,3,7,8-PeCDF			NO	1.16	10.220					0.0677	
10	2,3,4,7,8-PeCDF			NO	1.12	10.220					0.0649	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.220					0.0969	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.220					0.113	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.220					0.132	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.220					0.169	
15	1,2,3,4,6,7,8-HpCDF	4.27e3	1.04	NO	1.69	10.220	36.83	1.000	1.0814		0.176	~~1.0814~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.220					0.181	
17	OCDF	8.65e3	0.88	NO	1.10	10.220	41.90	1.001	3.3849		0.113	~~3.3849~~
18	13C-2,3,7,8-TCDD	8.38e5	0.79	NO	1.01	10.220	26.03	1.022	198.37	101	0.273	
19	13C-1,2,3,7,8-PeCDD	6.47e5	0.62	NO	0.827	10.220	30.69	1.205	187.94	96.0	0.338	
20	13C-1,2,3,4,7,8-HxCDD	5.40e5	1.25	NO	0.916	10.220	34.13	0.988	188.18	96.2	0.597	
21	13C-1,2,3,6,7,8-HxCDD	4.98e5	1.26	NO	0.921	10.220	34.24	0.991	172.62	88.2	0.594	
22	13C-1,2,3,4,6,7,8-HpCDD	4.60e5	1.04	NO	0.708	10.220	38.18	1.105	207.36	106	1.03	
23	13C-OCDD	8.13e5	0.90	NO	0.503	10.220	41.65	1.205	516.46	132	0.602	
24	13C-2,3,7,8-TCDF	1.17e6	0.78	NO	0.977	10.220	25.27	0.992	206.31	105	0.232	
25	13C-1,2,3,7,8-PeCDF	9.66e5	1.56	NO	0.896	10.220	29.46	1.157	186.19	95.1	0.517	
26	13C-2,3,4,7,8-PeCDF	1.00e6	1.53	NO	0.900	10.220	30.40	1.194	192.96	98.6	0.515	
27	13C-1,2,3,4,7,8-HxCDF	7.01e5	0.52	NO	1.17	10.220	33.21	0.961	191.46	97.8	0.636	
28	13C-1,2,3,6,7,8-HxCDF	7.64e5	0.52	NO	1.52	10.220	33.34	0.965	160.52	82.0	0.490	
29	13C-2,3,4,6,7,8-HxCDF	6.63e5	0.52	NO	1.25	10.220	33.96	0.983	169.38	86.6	0.595	
30	13C-1,2,3,7,8,9-HxCDF	5.84e5	0.52	NO	1.05	10.220	34.94	1.011	177.09	90.5	0.706	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Tuesday, July 07, 2009 11:16:55 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:17:24 AM Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

31	13C-1,2,3,4,6,7,8-HpCDF	4.57e5	0.45	NO	0.868	10.220	36.83	1.066	168.20	85.9	1.08	
32	13C-1,2,3,4,7,8,9-HpCDF	4.24e5	0.44	NO	0.727	10.220	38.76	1.122	186.22	95.2	1.29	
33	13C-OCDF	9.12e5	0.92	NO	0.760	10.220	41.88	1.212	383.34	97.9	0.295	
34	37Cl-2,3,7,8-TCDD	2.06e5			0.668	10.220	26.06	1.023	73.982	94.5	0.100	
35	13C-1,2,3,4-TCDD	8.15e5	0.77	NO	1.00	10.220	25.47	0.000	195.69	100	0.277	
36	13C-1,2,3,4-TCDF	1.13e6	0.77	NO	1.00	10.220	24.03	0.000	195.69	100	0.227	
37	13C-1,2,3,7,8,9-HxCDD	6.13e5	1.24	NO	1.00	10.220	34.55	0.000	195.69	100	0.547	
38	Total Tetra-Dioxins				1.08	10.220					0.0272	
39	Total Penta-Dioxins				1.03	10.220					0.0330	
40	Total Hexa-Dioxins				1.13	10.220			~~0.00000~~	NO	0.168	0.86998
41	Total Hepta-Dioxins				1.06	10.220			10.921		0.272	~~10.921~~
42	Total Tetra-Furans				1.09	10.220			0.21727		0.0441	~~0.21727~~
43	1st Func. Penta-Furans				1.16	10.220			~~0.19937~~	0.199	0.0349	~~0.19937~~ 0.470
44	Total Penta-Furans				1.16	10.220			~~0.00000~~		0.0293	~~0.27017~~
45	Total Hexa-Furans				1.28	10.220			1.1113		0.126	~~1.1113~~
46	Total Hepta-Furans				1.69	10.220			2.8268		0.167	~~2.8268~~

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Tuesday, July 07, 2009 11:16:55 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:17:24 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Total Hexa-Dioxins	32.55	1.337e4	1.378e4	5.523e2	6.254e2	0.88	YES	0.000e0	0.00000	0.33426	0.283
Total Hexa-Dioxins	33.43	1.790e4	1.054e4	1.074e3	7.138e2	1.51	YES	0.000e0	0.00000	0.53573	0.283

Hepta-Dioxins

Total Hepta-Dioxins	37.27	7.414e4	8.504e4	5.742e3	5.688e3	1.01	NO	1.143e4	4.5687	4.5687	0.272
1,2,3,4,6,7,8-HpCDD	38.20	1.302e5	1.407e5	8.123e3	7.771e3	1.05	NO	1.589e4	6.3526	6.3526	0.272

Tetra-Furans

2,3,7,8-TCDF	25.27	6.494e3	6.282e3	3.134e2	3.960e2	0.79	NO	7.093e2	0.10938	0.10938	0.0441
Total Tetra-Furans	25.63	4.360e3	8.008e3	3.014e2	3.983e2	0.76	NO	6.996e2	0.10788	0.10788	0.0441

Penta-Furans function 1

1st Func. Penta-Furans	27.04	1.069e4	6.762e3	7.431e2	4.202e2	1.77	NO	1.163e3	0.19937	0.19937	0.0349

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Tuesday, July 07, 2009 11:16:55 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:17:24 AM Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

Penta-Furans

	Total Penta-Furans	28.54	1.261e4	1.144e4	9.583e2	8.138e2	1.18	YES	0.000e0	0.00000	0.27017	0.0651

Hexa-Furans

	Total Hexa-Furans	32.01	8.007e3	6.747e3	4.122e2	3.044e2	1.35	NO	7.167e2	0.16160	0.16160	0.126
	Total Hexa-Furans	32.16	3.492e4	3.107e4	1.551e3	1.141e3	1.36	NO	2.692e3	0.60712	0.60712	0.126
	Total Hexa-Furans	32.74	1.513e4	1.268e4	8.443e2	6.752e2	1.25	NO	1.520e3	0.34263	0.34263	0.126

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.83	2.700e4	3.664e4	2.176e3	2.093e3	1.04	NO	4.269e3	1.0814	1.0814	0.176
	Total Hepta-Furans	37.47	4.605e4	4.673e4	3.191e3	3.446e3	0.93	NO	6.637e3	1.7454	1.7454	0.167

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

2,3,7,8-TCDD

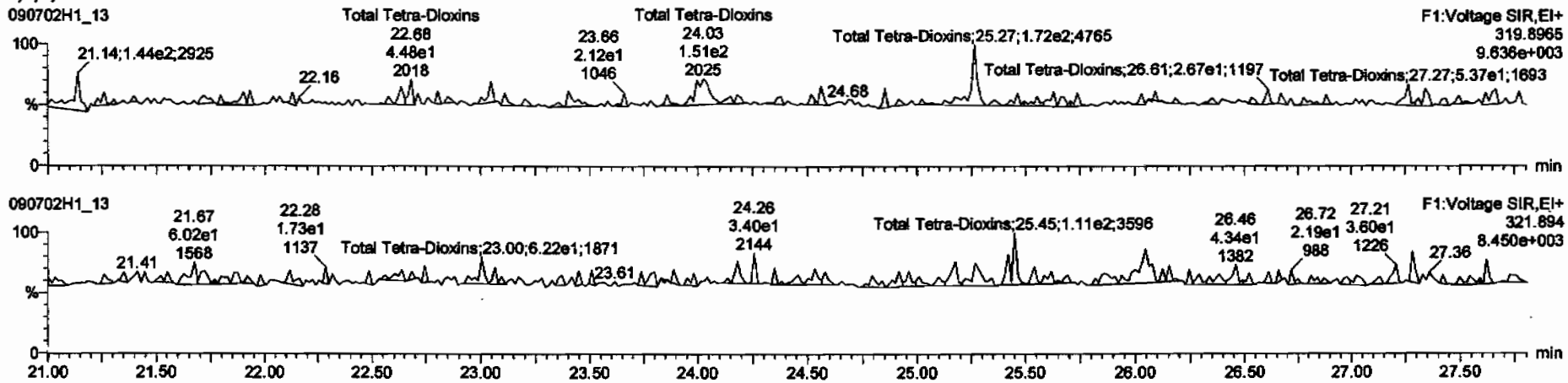

13C-2,3,7,8-TCDD

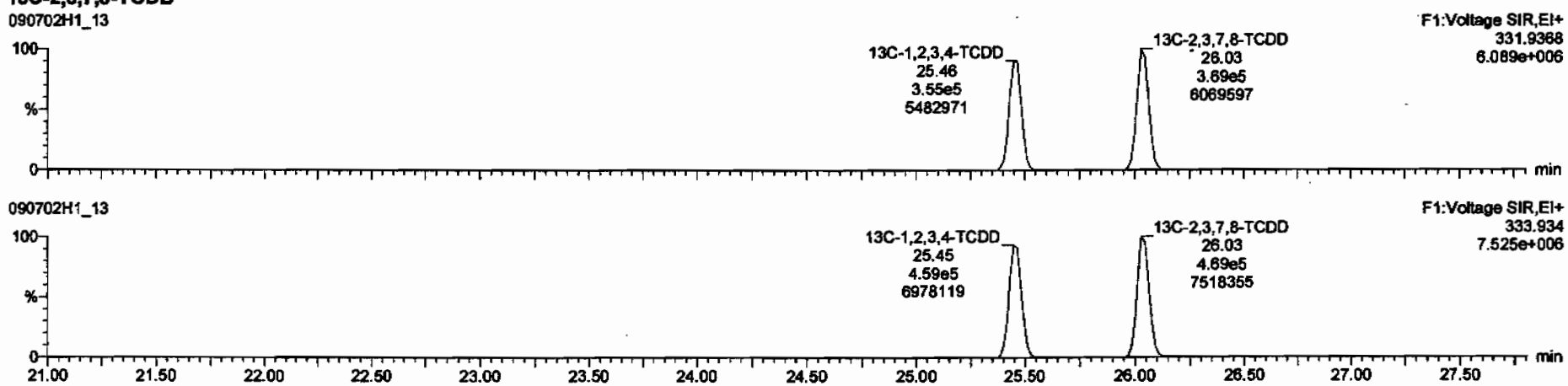

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

37Cl-2,3,7,8-TCDD

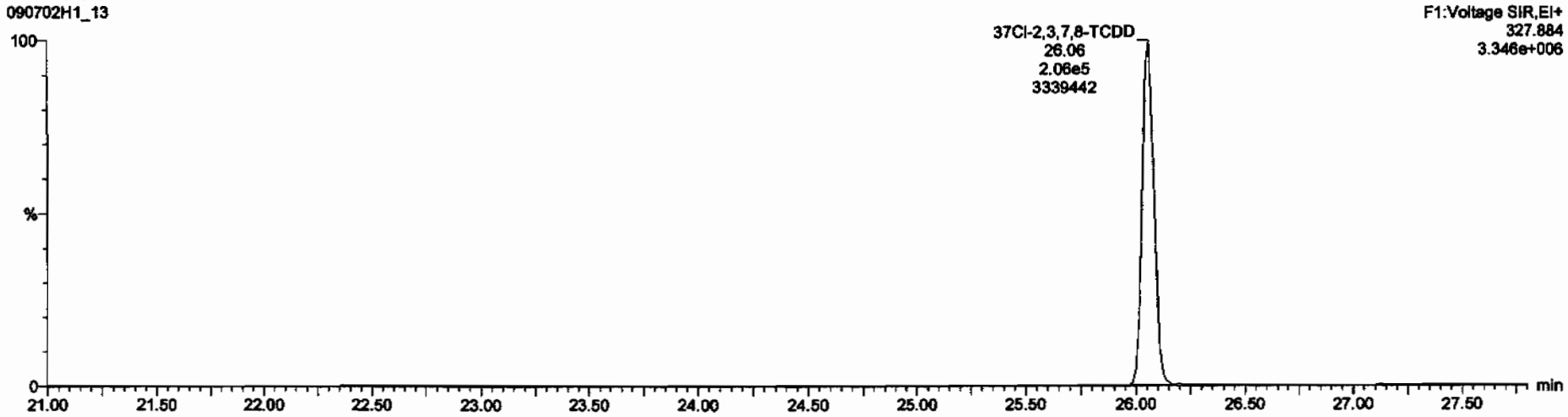

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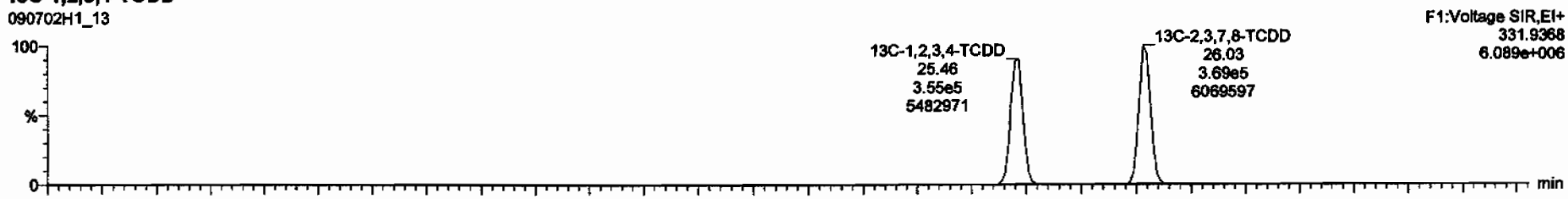

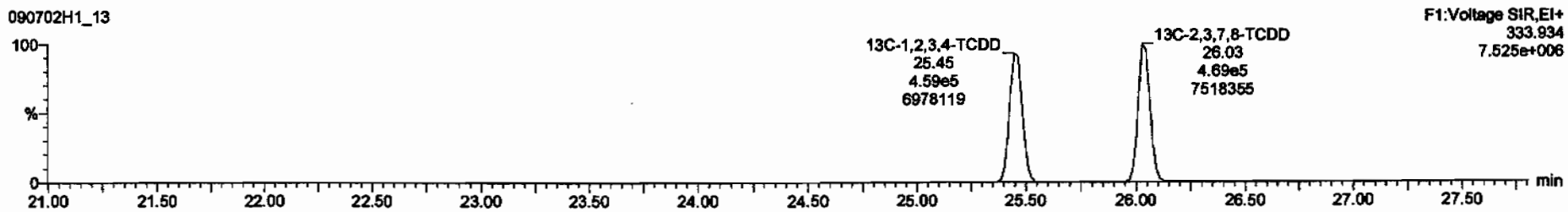

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

1,2,3,7,8-PeCDD

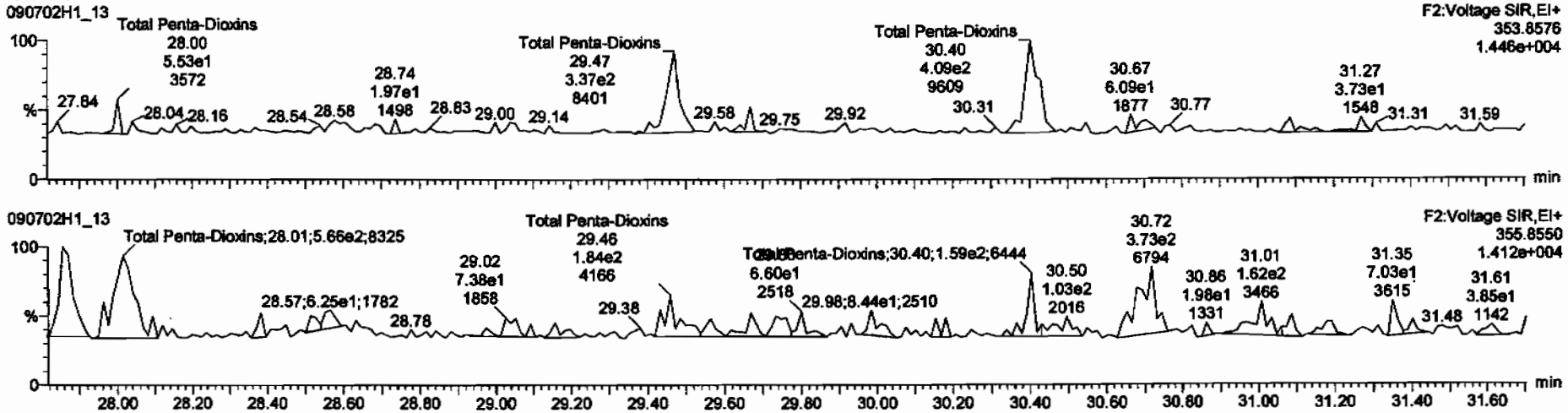

13C-1,2,3,7,8-PeCDD

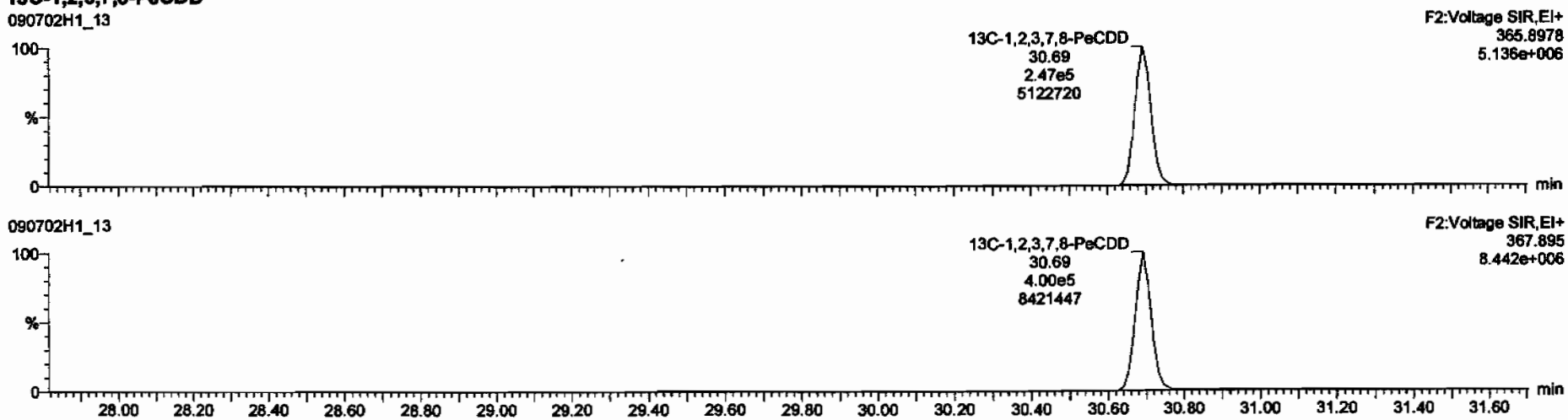

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

1,2,3,4,7,8-HxCDD

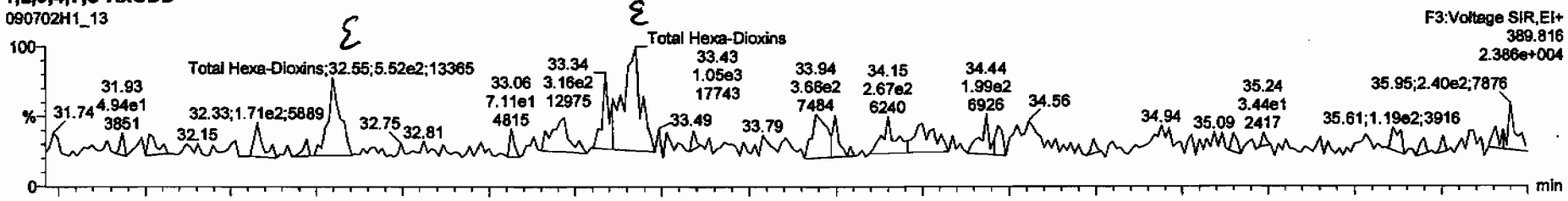

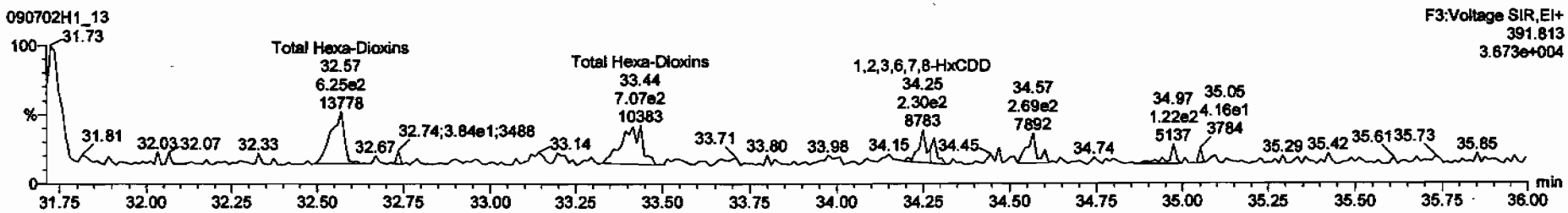

13C-1,2,3,4,7,8-HxCDD

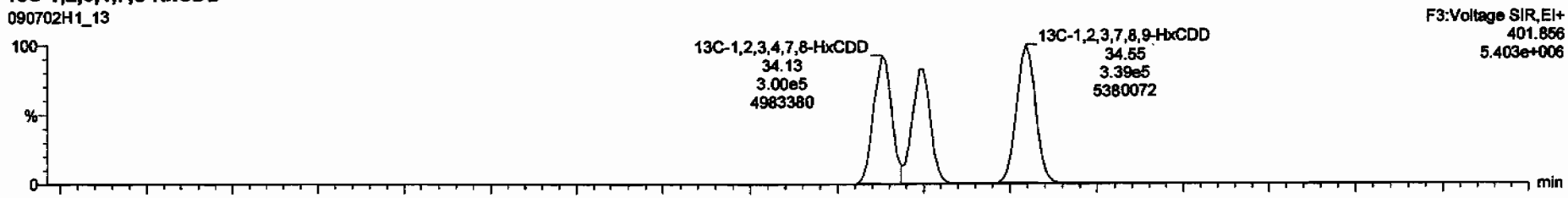

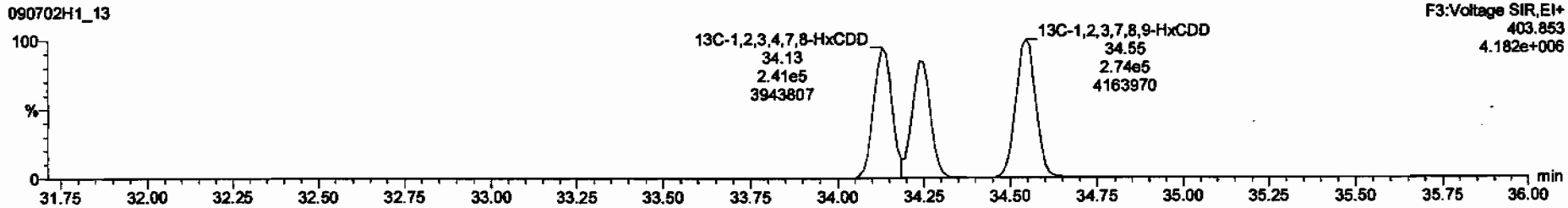

TargetLynx - 090702h1-13.qld * - [Chromatogram]

1,2,3,6,7,8-HxCDD			1.248e2	0.00	YES		
Total Hexa-Dioxins	32.55	5.523e2	6.254e2	0.88	YES	0.33426	0.00000
Total Hexa-Dioxins	33.43	1.074e3	7.138e2	1.51	YES	0.53573	0.00000

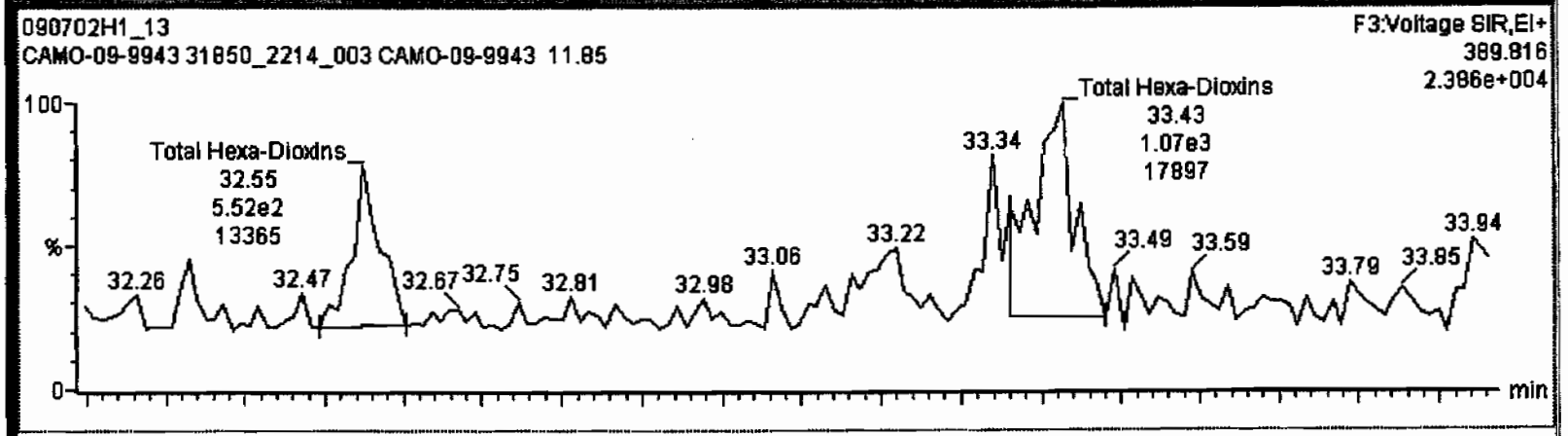

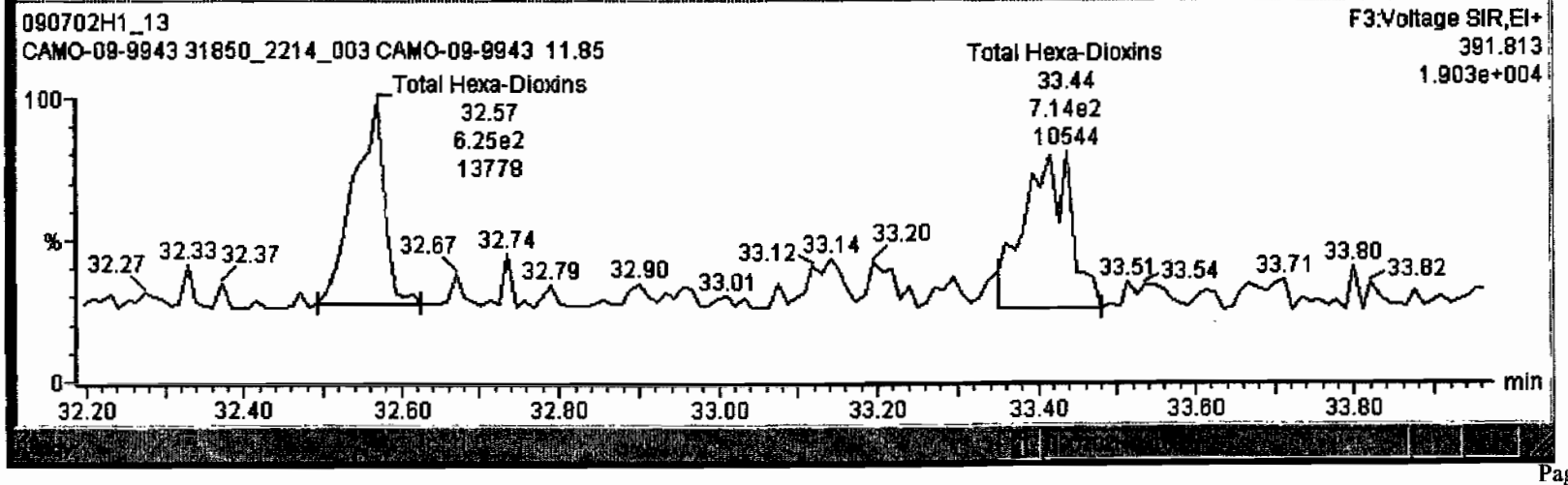

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

1,2,3,4,6,7,8-HpCDD

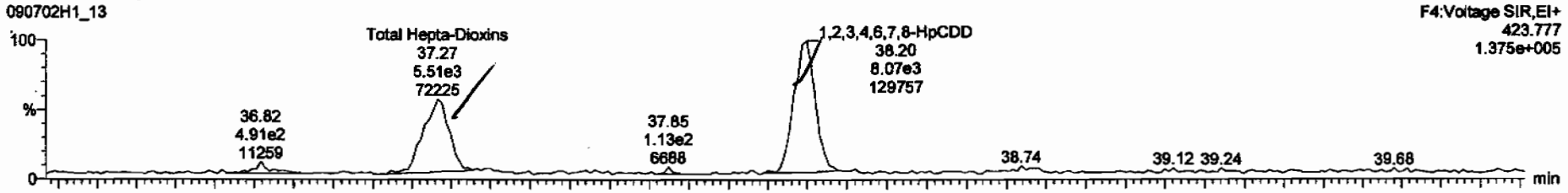

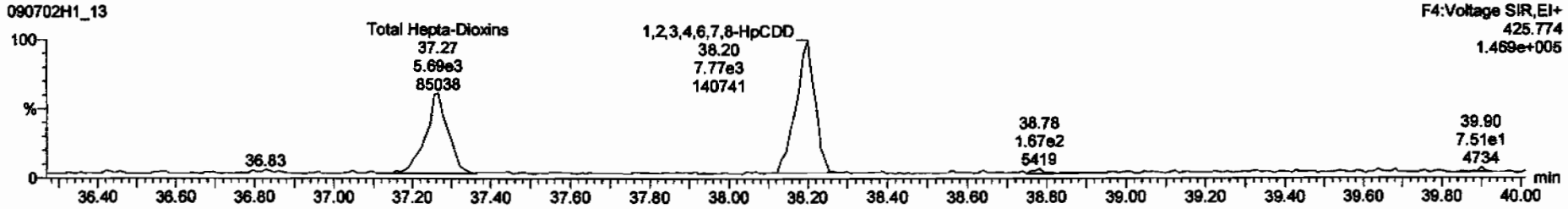

13C-1,2,3,4,6,7,8-HpCDD

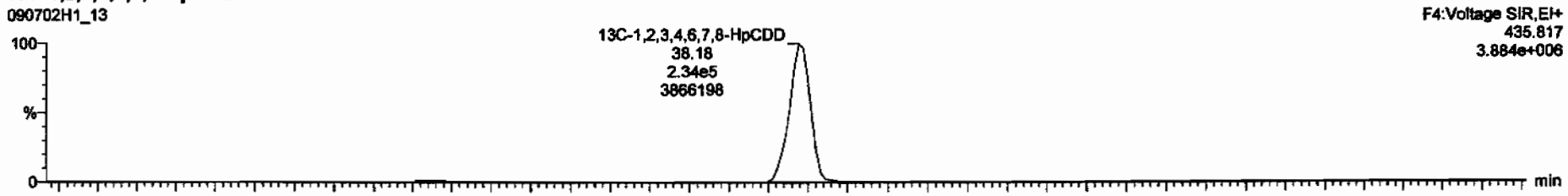

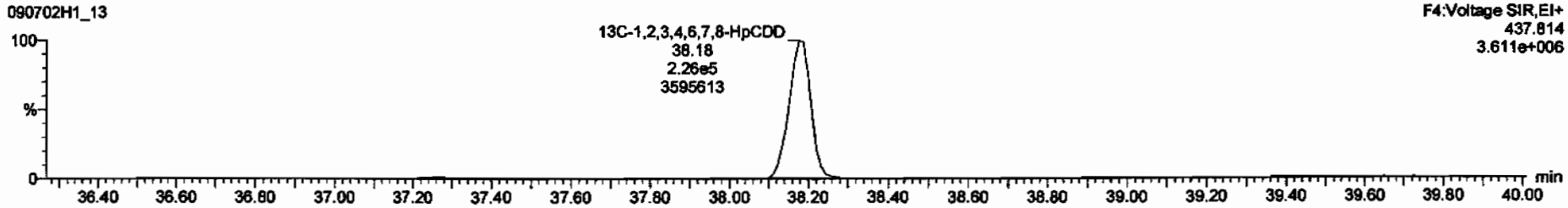

Target1.ynx - 090702h1-13.qld * - [Chromatogram]

090702H1_13 - 31850_2214_003 CAMO-09-9943 11.85 - CAMO-09-9943

Total Hepta-Dioxins	37.27	5.742e3	5.688e3	1.01	NO	4.5687	4.5687
1,2,3,4,6,7,8-HpCDD	38.20	8.123e3	7.771e3	1.05	NO	6.3526	6.3526

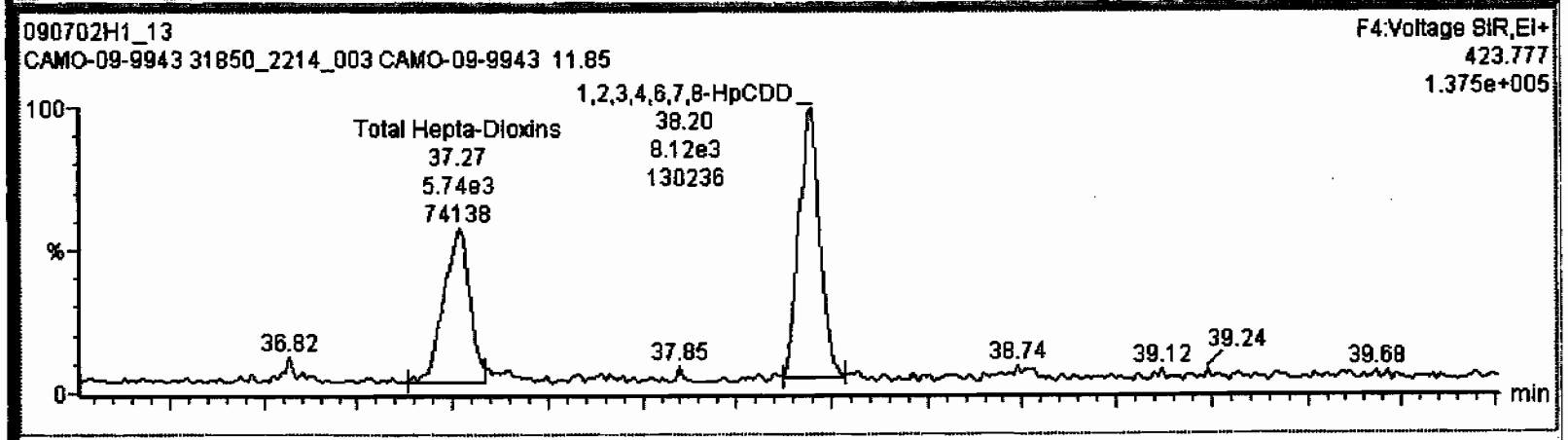

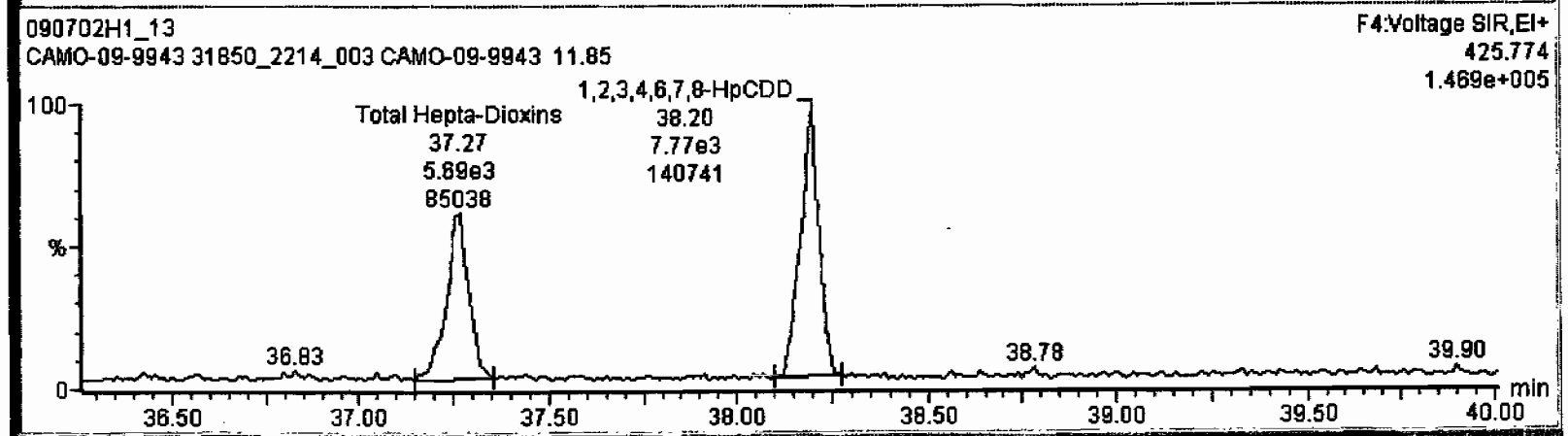

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

OCDD

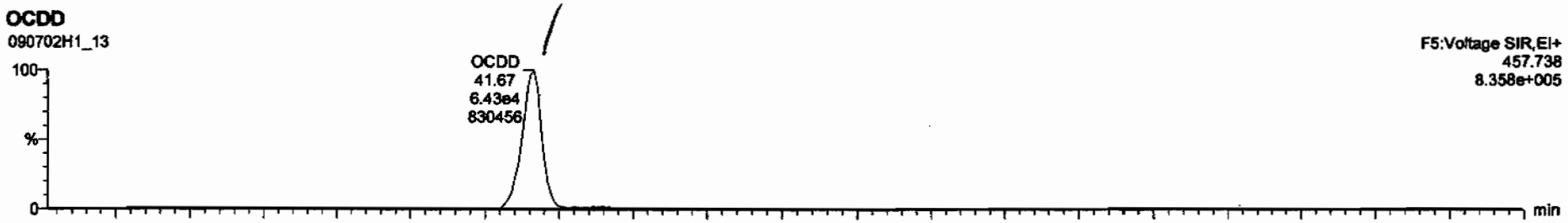

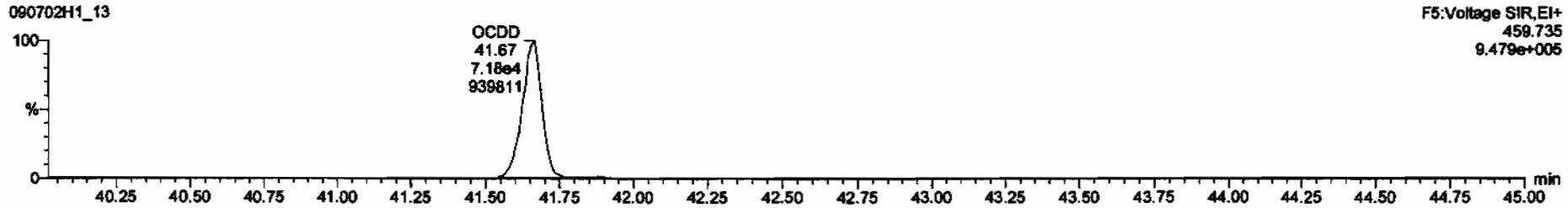

13C-OCDD

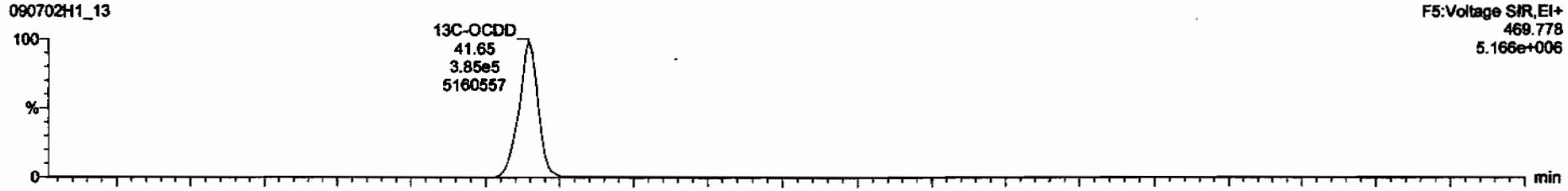

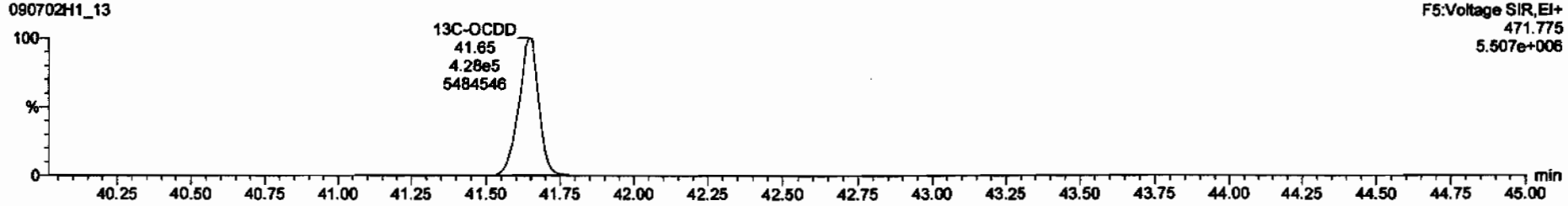

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

2,3,7,8-TCDF

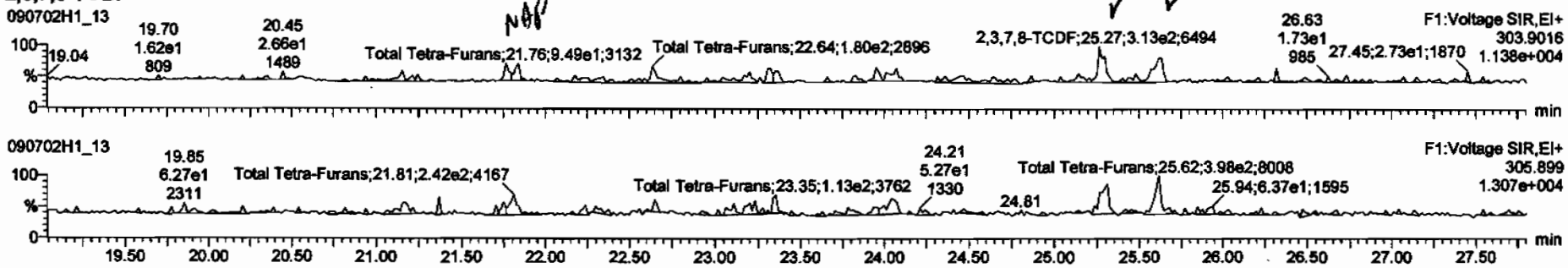

13C-2,3,7,8-TCDF

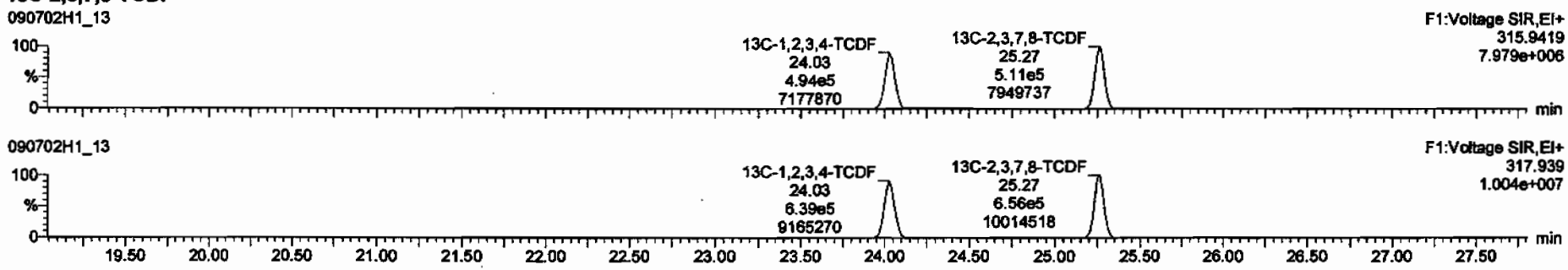

DPE1

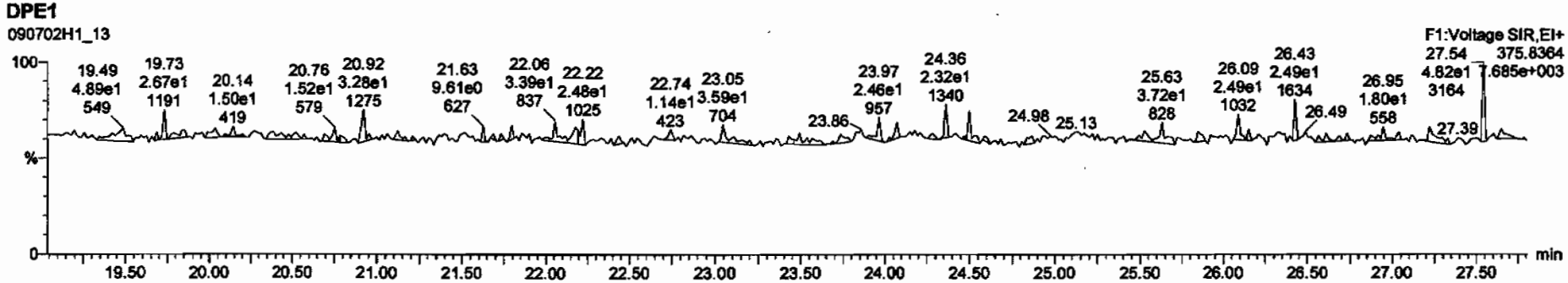

TargetLynx - 090702h1-13.qld * - [Chromatogram]

090702H1_13 - 31850_2214_003 CAMO-09-9943 11.85 - CAMO-09-9943

2,3,7,8-TCDF	25.27	3.134e2	3.960e2	0.79	NO	0.10938	0.10938
Total Tetra-Furans	25.63	3.014e2	3.983e2	0.76	NO	0.10788	0.10788

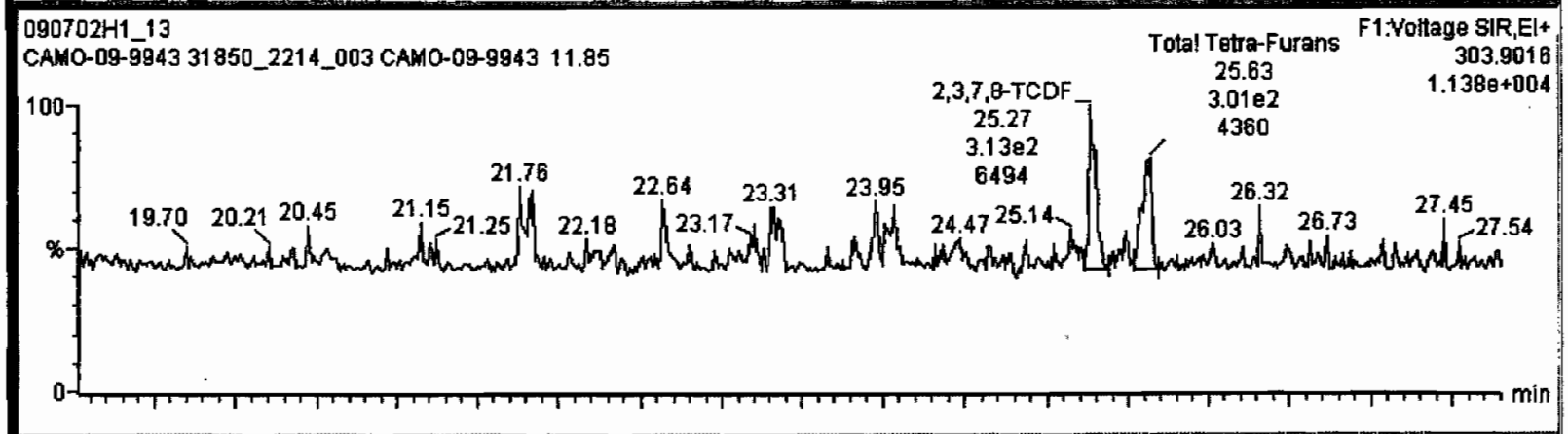

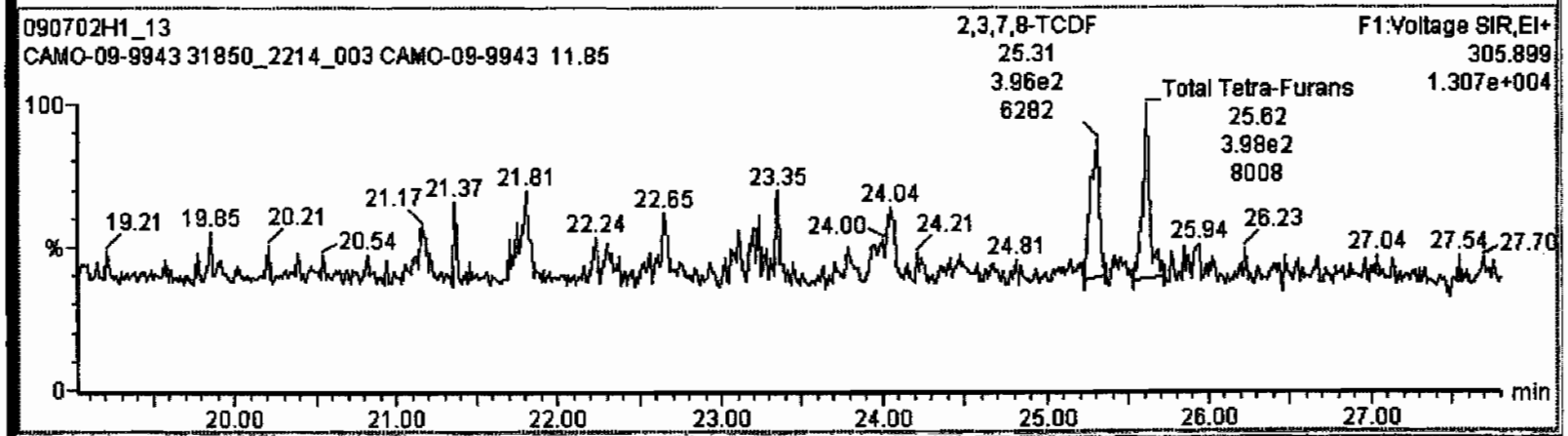

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

1st Func. Penta-Furans

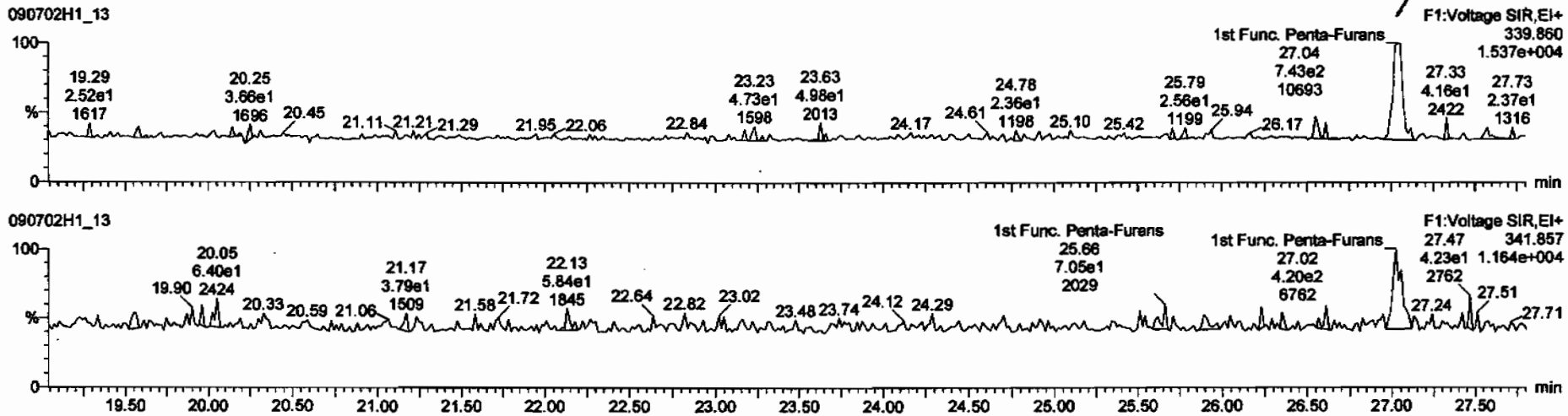

DPE6

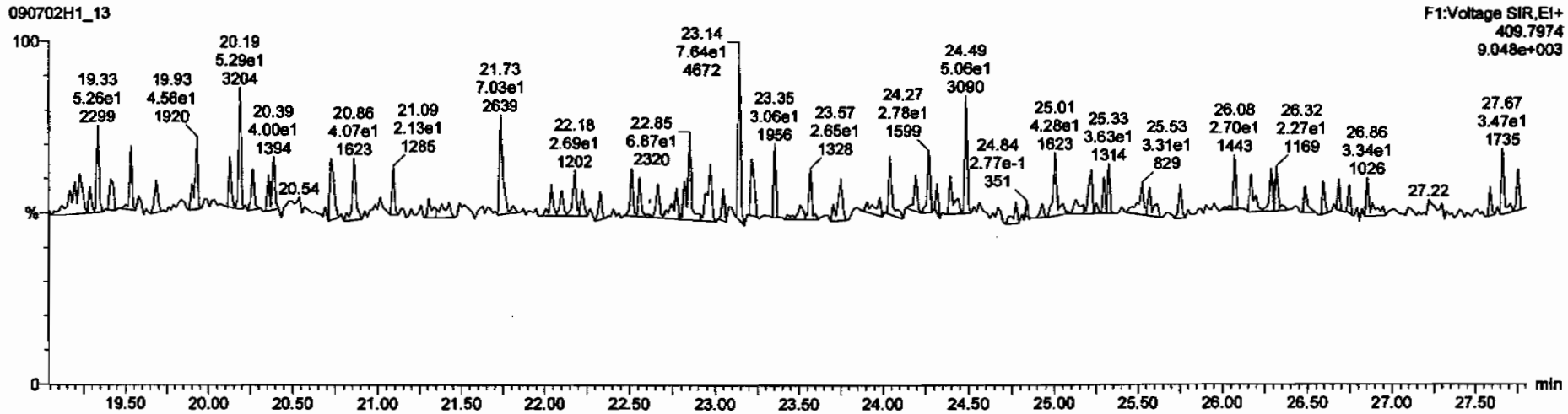

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

1,2,3,7,8-PeCDF

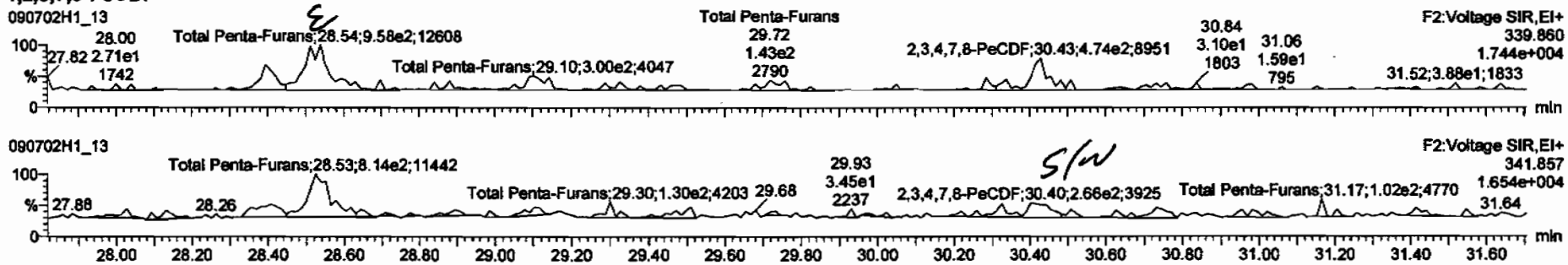

13C-1,2,3,7,8-PeCDF

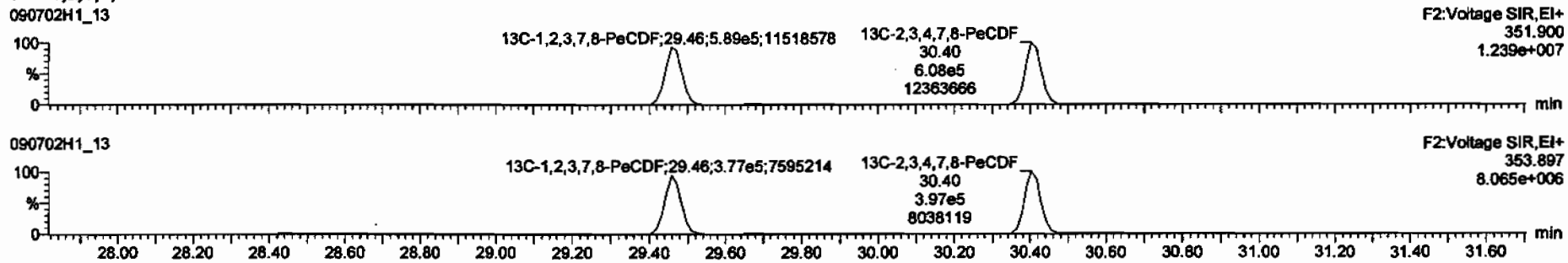

DPE2

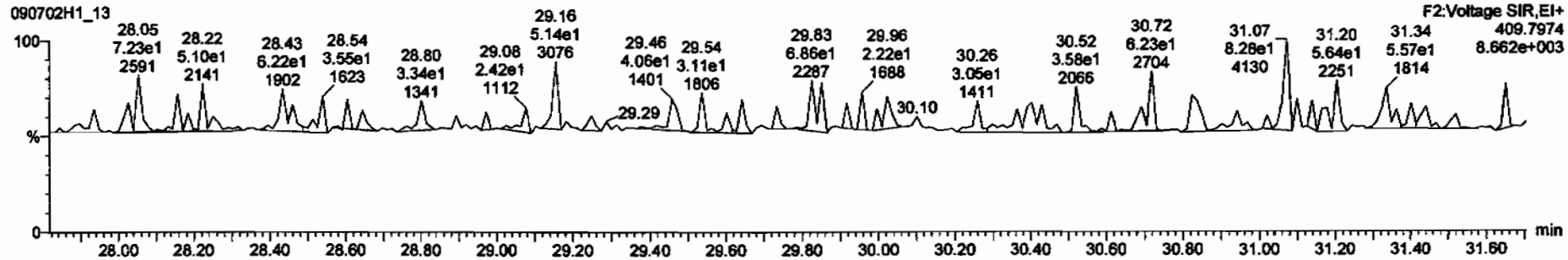

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

1,2,3,4,7,8-HxCDF

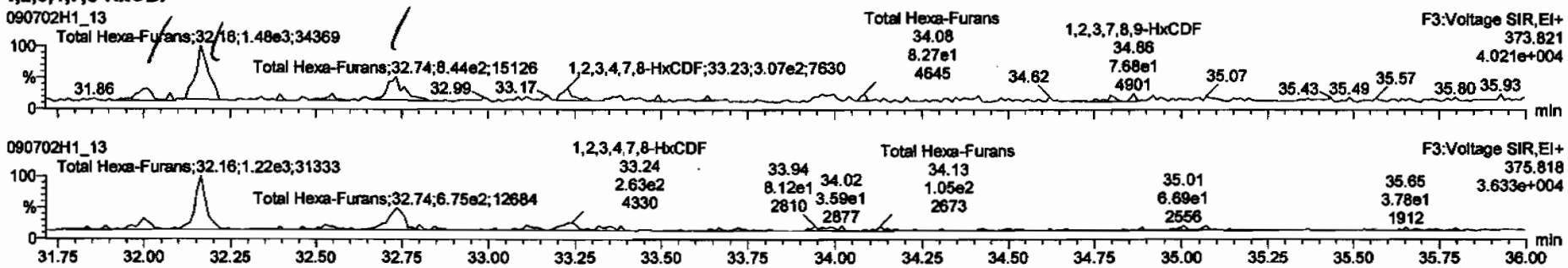

13C-1,2,3,4,7,8-HxCDF

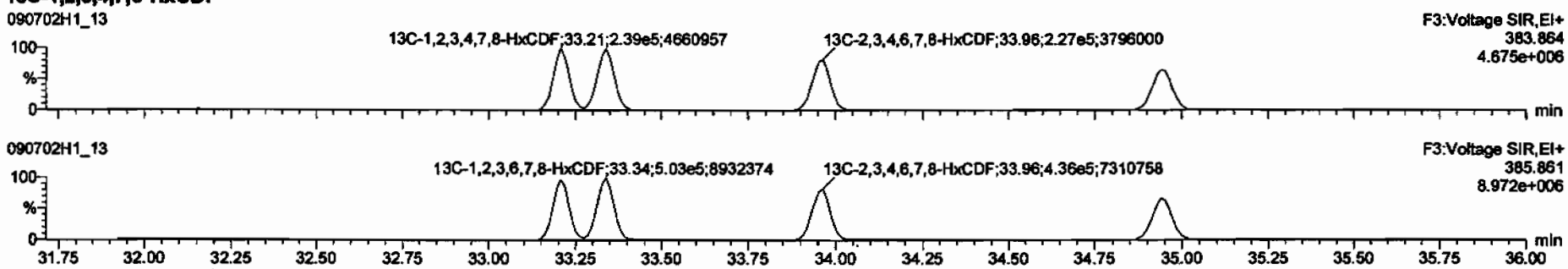

DPE3

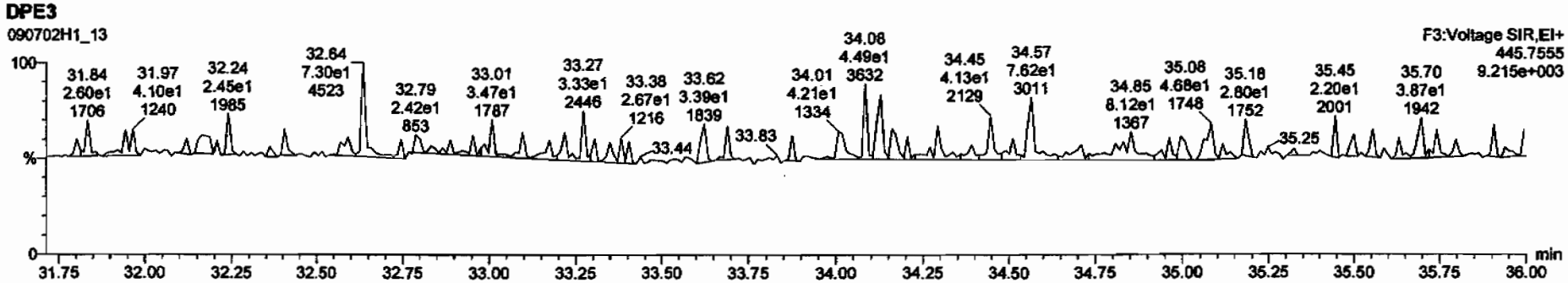

TargetLynx - 090702h1-13.qld * - [Chromatogram]

Total Hexa-Furans	32.01	4.122e2	3.044e2	1.35	NO	0.16160	0.16160
Total Hexa-Furans	32.16	1.551e3	1.141e3	1.36	NO	0.60712	0.60712
Total Hexa-Furans	32.74	8.443e2	6.752e2	1.25	NO	0.34263	0.34263

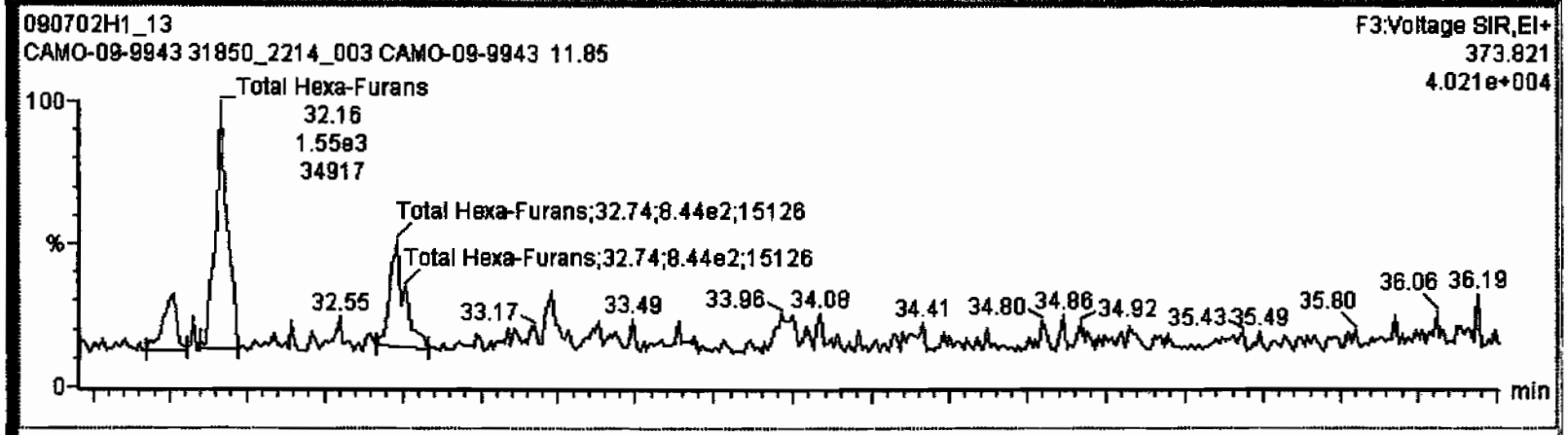

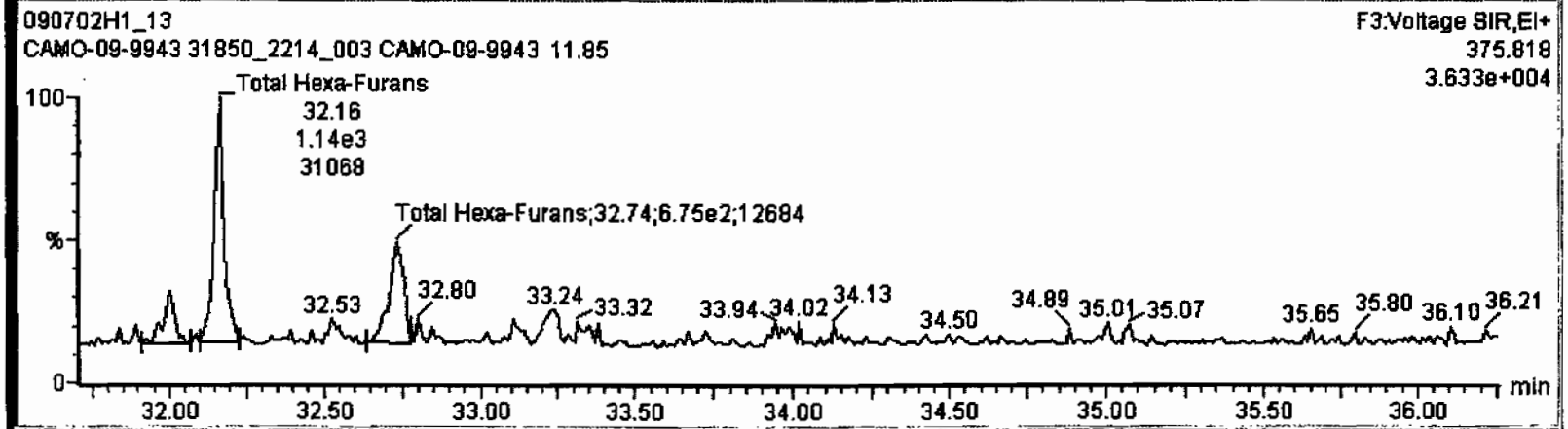

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

1,2,3,4,6,7,8-HpCDF

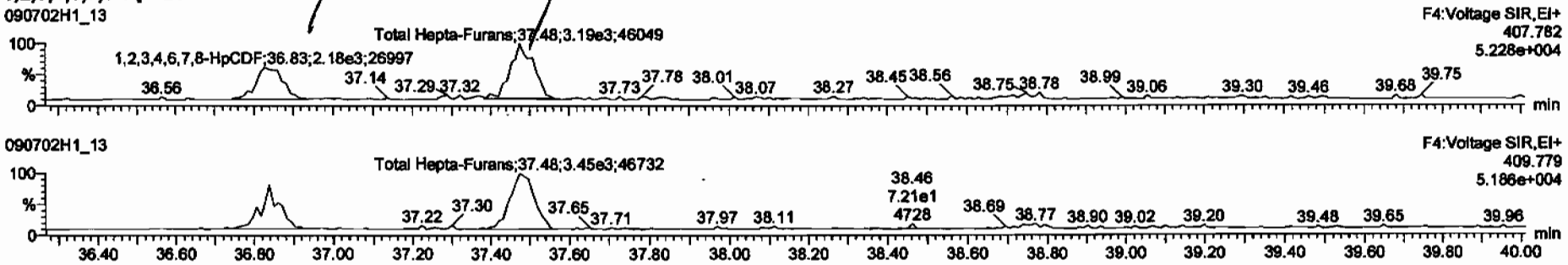

13C-1,2,3,4,6,7,8-HpCDF

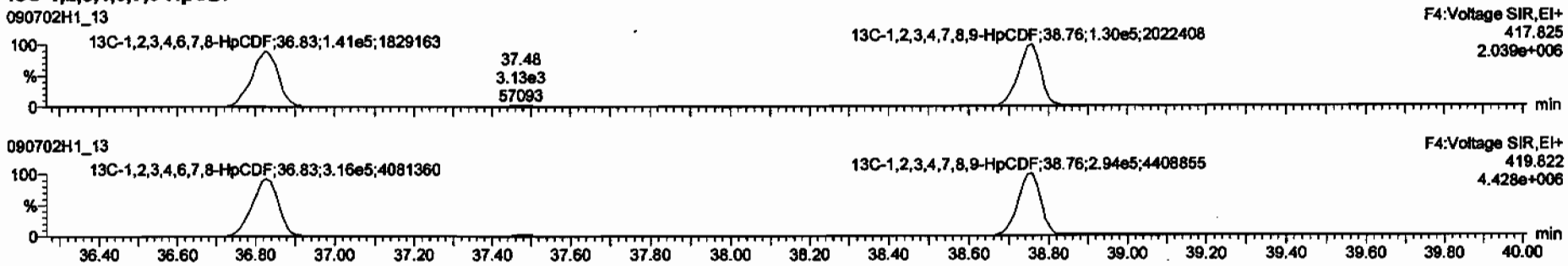

DPE4

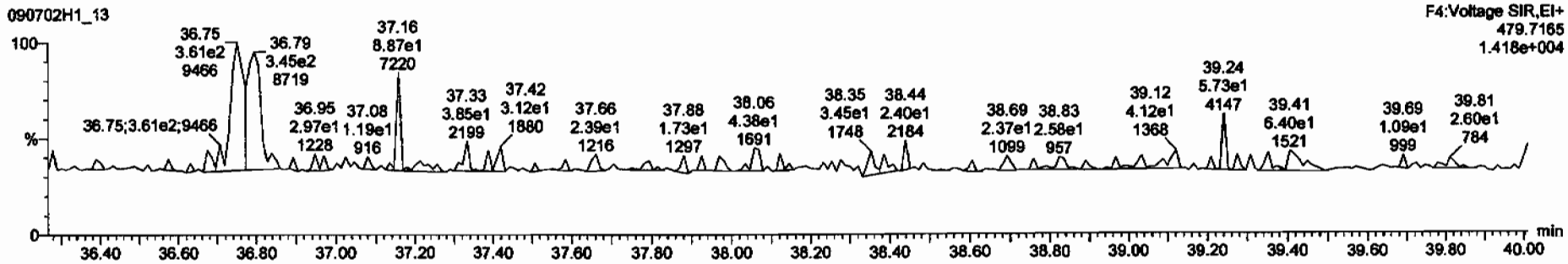

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

OCDF

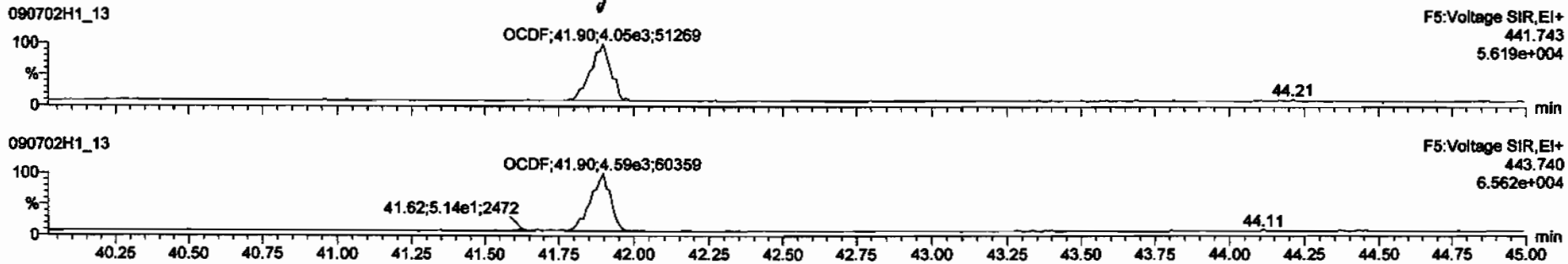

13C-OCDF

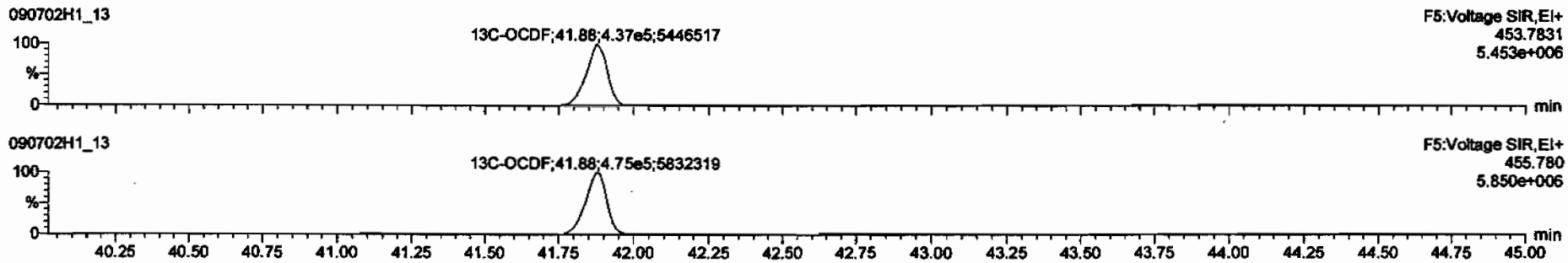

DPE5

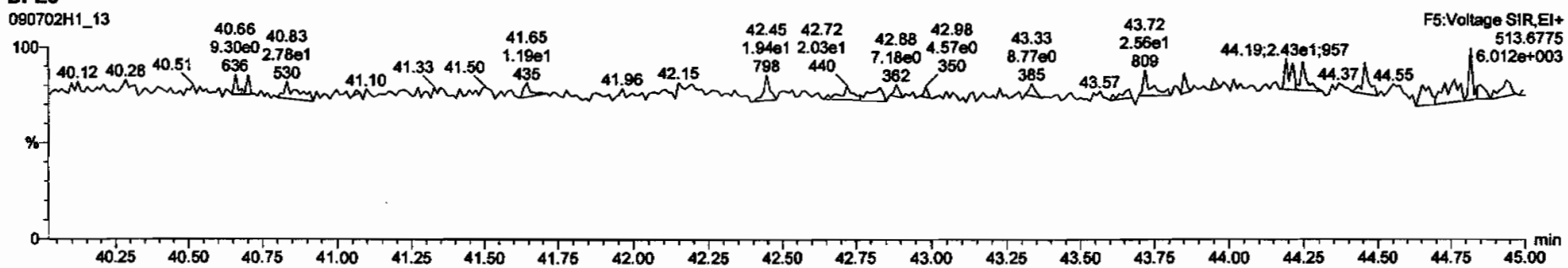

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-13.qld

Last Altered: Monday, July 06, 2009 13:18:10 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:18:42 Pacific Daylight Time

Name: 090702H1_13, Date: 03-Jul-2009, Time: 00:17:49, ID: 31850_2214_003 CAMO-09-9943 11.85, Description: CAMO-09-9943

PFK1

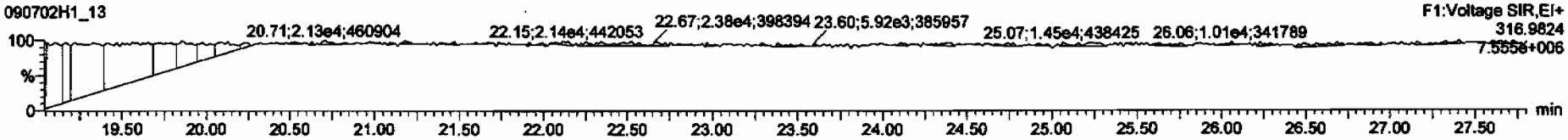

PFK2

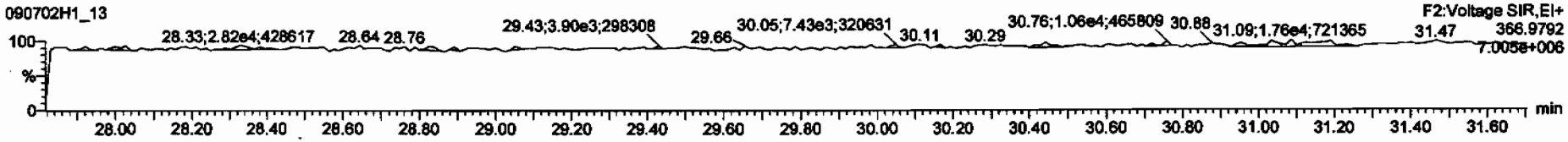

PFK3

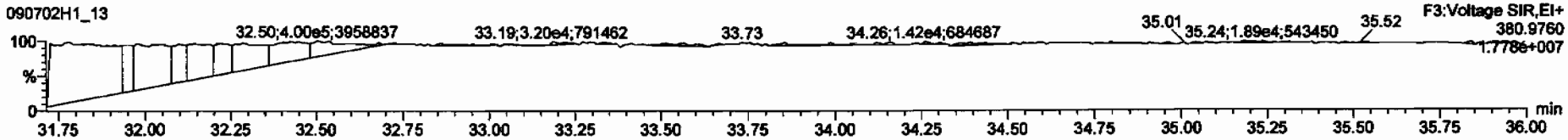

PFK4

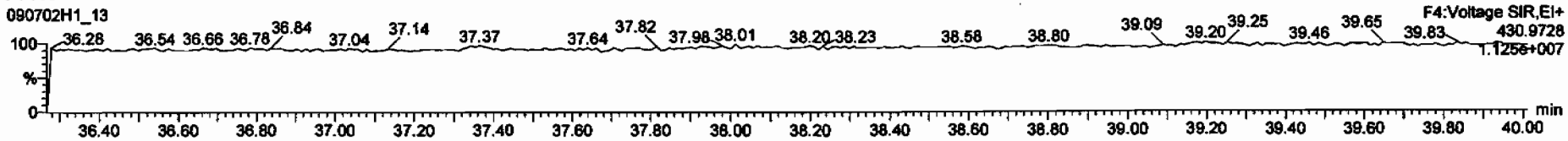

PFK5

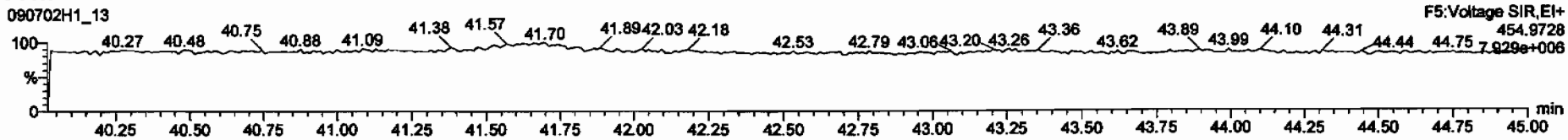

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-14.qld

Last Altered: Tuesday, July 07, 2009 11:29:26 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:30:08 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

1	2,3,7,8-TCDD			NO	1.08	10.440					0.0521	
2	1,2,3,7,8-PeCDD			NO	1.03	10.440					0.116	
3	1,2,3,4,7,8-HxCDD	6.77e2	1.55	YES	1.00	10.440	34.13	1.000	~~0.21966~~	ND	0.246	0.19295
4	1,2,3,6,7,8-HxCDD	1.41e3	1.52	YES	1.13	10.440	34.25	1.000	~~0.45895~~	ND	0.248	0.40391
5	1,2,3,7,8,9-HxCDD	1.28e3	1.38	NO	1.10	10.440	34.55	1.009	0.39837		0.237	~~0.39837~~
6	1,2,3,4,6,7,8-HpCDD	3.29e4	1.06	NO	1.06	10.440	38.19	1.000	12.106		0.310	12.106
7	OCDD	2.55e5	0.89	NO	1.18	10.440	41.66	1.001	117.47		0.195	117.47
8	2,3,7,8-TCDF	4.94e3	0.82	NO	1.09	10.440	25.28	1.001	0.68782	OK	0.0826	0.68782
9	1,2,3,7,8-PeCDF	1.53e3	1.35	NO	1.16	10.440	29.49	1.001	0.23561		0.0636	0.23561
10	2,3,4,7,8-PeCDF	7.66e3	1.54	NO	1.12	10.440	30.42	1.000	1.2433		0.0618	1.2433
11	1,2,3,4,7,8-HxCDF	3.64e3	1.28	NO	1.41	10.440	33.22	1.000	0.65714		0.0981	0.65714
12	1,2,3,6,7,8-HxCDF	1.68e3	1.25	NO	1.22	10.440	33.35	1.000	0.32064		0.108	0.32064
13	2,3,4,6,7,8-HxCDF	2.40e3	1.35	NO	1.28	10.440	33.97	1.001	0.50026		0.123	0.50026
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.440					0.160	
15	1,2,3,4,6,7,8-HpCDF	1.05e4	1.06	NO	1.69	10.440	36.84	1.000	2.3431		0.132	2.3431
16	1,2,3,4,7,8,9-HpCDF	9.64e2	0.96	NO	1.48	10.440	38.76	1.000	0.26568		0.149	0.26568
17	OCDF	1.82e4	0.95	NO	1.10	10.440	41.89	1.001	6.8462		0.123	~~6.8462~~
18	13C-2,3,7,8-TCDD	9.40e5	0.79	NO	1.01	10.440	28.05	1.023	195.91	102	0.228	
19	13C-1,2,3,7,8-PeCDD	6.90e5	0.62	NO	0.827	10.440	30.69	1.205	176.38	92.1	0.237	
20	13C-1,2,3,4,7,8-HxCDD	5.89e5	1.25	NO	0.916	10.440	34.13	0.988	179.95	93.9	0.575	
21	13C-1,2,3,6,7,8-HxCDD	5.28e5	1.27	NO	0.921	10.440	34.24	0.991	160.59	83.8	0.572	
22	13C-1,2,3,4,6,7,8-HpCDD	4.89e5	1.05	NO	0.708	10.440	38.18	1.105	193.27	101	0.924	
23	13C-OCDD	7.07e5	0.90	NO	0.503	10.440	41.63	1.205	393.56	103	0.581	
24	13C-2,3,7,8-TCDF	1.27e6	0.77	NO	0.977	10.440	25.27	0.992	195.02	102	0.208	
25	13C-1,2,3,7,8-PeCDF	1.08e6	1.58	NO	0.896	10.440	29.46	1.157	180.84	94.4	0.421	
26	13C-2,3,4,7,8-PeCDF	1.06e6	1.56	NO	0.900	10.440	30.40	1.194	176.65	92.2	0.419	
27	13C-1,2,3,4,7,8-HxCDF	7.52e5	0.52	NO	1.17	10.440	33.21	0.961	180.08	94.0	0.606	
28	13C-1,2,3,6,7,8-HxCDF	8.23e5	0.53	NO	1.52	10.440	33.34	0.965	151.56	79.1	0.467	
29	13C-2,3,4,6,7,8-HxCDF	7.17e5	0.52	NO	1.25	10.440	33.95	0.983	160.64	83.9	0.567	
30	13C-1,2,3,7,8,9-HxCDF	6.43e5	0.51	NO	1.05	10.440	34.94	1.011	170.96	89.2	0.673	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-14.qld

Last Altered: Tuesday, July 07, 2009 11:29:26 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:30:08 AM Pacific Daylight Time

Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

31	13C-1,2,3,4,6,7,8-HpCDF	5.09e5	0.44	NO	0.868	10.440	36.83	1.066	164.07	85.6	0.962	
32	13C-1,2,3,4,7,8,9-HpCDF	4.69e5	0.44	NO	0.727	10.440	38.75	1.122	180.82	94.4	1.15	
33	13C-OCDF	9.30e5	0.87	NO	0.760	10.440	41.87	1.212	342.66	89.4	0.334	
34	37Cl-2,3,7,8-TCDD	2.28e5			0.668	10.440	26.06	1.023	72.050	94.0	0.127	
35	13C-1,2,3,4-TCDD	9.05e5	0.80	NO	1.00	10.440	25.47	0.000	191.57	100	0.231	
36	13C-1,2,3,4-TCDF	1.27e6	0.77	NO	1.00	10.440	24.03	0.000	191.57	100	0.204	
37	13C-1,2,3,7,8,9-HxCDD	6.85e5	1.24	NO	1.00	10.440	34.55	0.000	191.57	100	0.527	
38	Total Tetra-Dioxins				1.08	10.440			~~0.00000~~ ND		0.0200	0.11831
39	Total Penta-Dioxins				1.03	10.440					0.0465	
40	Total Hexa-Dioxins				1.13	10.440			2.5138		0.232	3.1107
41	Total Hepta-Dioxins				1.06	10.440			22.837		0.310	~~22.837~~
42	Total Tetra-Furans				1.09	10.440			5.0728		0.0826	~~5.0728~~
43	1st Func. Penta-Furans				1.16	10.440			~~1.2621~~ 9.82		0.0296	~~1.2621~~ 10.0
44	Total Penta-Furans				1.16	10.440			~~8.5561~~		0.0617	~~8.7542~~
45	Total Hexa-Furans				1.28	10.440			6.6582		0.121	~~6.6582~~
46	Total Hepta-Furans				1.69	10.440			6.6242		0.131	6.8312

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-14.qld

Last Altered: Tuesday, July 07, 2009 11:29:26 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:30:08 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

Tetra-Dioxins

Total Tetra-Dioxins	22.67	3.644e3	5.375e3	2.722e2	4.388e2	0.62	YES	0.000e0	0.00000	0.11831	0.0521

Penta-Dioxins

Hexa-Dioxins

Total Hexa-Dioxins	32.54	3.334e4	2.106e4	1.543e3	1.151e3	1.34	NO	2.694e3	0.82056	0.82056	0.232
Total Hexa-Dioxins	33.40	3.544e4	2.781e4	2.427e3	1.824e3	1.33	NO	4.251e3	1.2949	1.2949	0.232
1,2,3,4,7,8-HxCDD	34.13	7.347e3	7.851e3	4.113e2	2.653e2	1.55	YES	6.766e2	0.00000	0.19295	0.246
1,2,3,6,7,8-HxCDD	34.25	1.375e4	9.044e3	8.495e2	5.598e2	1.52	YES	1.409e3	0.00000	0.40391	0.248
1,2,3,7,8,9-HxCDD	34.55	1.141e4	7.574e3	7.431e2	5.375e2	1.38	NO	1.281e3	0.39837	0.39837	0.237

Hepta-Dioxins

Total Hepta-Dioxins	37.26	1.789e5	1.909e5	1.479e4	1.437e4	1.03	NO	2.916e4	10.731	10.731	0.310
1,2,3,4,6,7,8-HpCDD	38.19	2.668e5	2.684e5	1.690e4	1.600e4	1.06	NO	3.290e4	12.106	12.106	0.310

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-14.qld

Last Altered: Tuesday, July 07, 2009 11:29:26 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:30:08 AM Pacific Daylight Time

Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

Tetra-Furans

	Total Tetra-Furans	20.60	5.441e3	6.399e3	2.954e2	3.763e2	0.79	NO	6.717e2	0.093484	0.093484	0.0826
	Total Tetra-Furans	21.15	1.047e4	1.529e4	1.006e3	1.162e3	0.87	NO	2.168e3	0.30176	0.30176	0.0826
	Total Tetra-Furans	21.80	1.364e4	1.589e4	8.988e2	1.156e3	0.78	NO	2.055e3	0.28605	0.28605	0.0826
	Total Tetra-Furans	22.28	4.905e3	7.116e3	6.894e2	9.126e2	0.76	NO	1.602e3	0.22297	0.22297	0.0826
	Total Tetra-Furans	22.68	1.282e4	2.043e4	1.728e3	2.153e3	0.80	NO	3.881e3	0.54012	0.54012	0.0826
	Total Tetra-Furans	23.20	1.130e4	1.276e4	8.347e2	1.194e3	0.70	NO	2.029e3	0.28239	0.28239	0.0826
	Total Tetra-Furans	23.37	2.375e4	3.004e4	1.808e3	2.296e3	0.79	NO	4.103e3	0.57110	0.57110	0.0826
	Total Tetra-Furans	23.83	8.844e3	1.115e4	5.574e2	7.405e2	0.75	NO	1.298e3	0.18065	0.18065	0.0826
	Total Tetra-Furans	23.95	1.626e4	1.889e4	1.142e3	1.357e3	0.84	NO	2.499e3	0.34783	0.34783	0.0826
	Total Tetra-Furans	24.07	1.204e4	1.465e4	9.605e2	1.345e3	0.71	NO	2.306e3	0.32089	0.32089	0.0826
	Total Tetra-Furans	24.46	8.818e3	1.010e4	5.858e2	7.276e2	0.81	NO	1.313e3	0.18281	0.18281	0.0826
	Total Tetra-Furans	24.73	7.929e3	1.019e4	3.987e2	4.731e2	0.84	NO	8.718e2	0.12134	0.12134	0.0826
	Total Tetra-Furans	25.19	9.323e3	1.121e4	4.571e2	6.813e2	0.67	NO	1.138e3	0.15845	0.15845	0.0826
	2,3,7,8-TCDF	25.28	3.481e4	4.709e4	2.228e3	2.714e3	0.82	NO	4.942e3	0.68782	0.68782	0.0826
	Total Tetra-Furans	25.60	3.186e4	4.267e4	2.454e3	3.115e3	0.79	NO	5.569e3	0.77510	0.77510	0.0826

Penta-Furans function 1

	1st Func. Penta-Furans	27.04	8.182e4	5.114e4	4.860e3	3.279e3	1.48	NO	8.139e3	1.2621	1.2621	0.0296

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-14.qld

Last Altered: Tuesday, July 07, 2009 11:29:26 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:30:08 AM Pacific Daylight Time

Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

Penta-Furans

Total Penta-Furans	28.41	9.687e4	6.636e4	5.806e3	3.724e3	1.56	NO	9.530e3	1.4779	1.4779	0.0617
Total Penta-Furans	28.53	2.135e5	1.293e5	1.225e4	7.352e3	1.67	NO	1.960e4	3.0395	3.0395	0.0617
Total Penta-Furans	28.59	5.284e4	3.713e4	2.484e3	1.703e3	1.46	NO	4.187e3	0.64931	0.64931	0.0617
Total Penta-Furans	28.89	3.358e4	2.022e4	1.812e3	1.078e3	1.68	NO	2.889e3	0.44810	0.44810	0.0617
Total Penta-Furans	29.12	4.052e4	3.131e4	2.787e3	2.026e3	1.38	NO	4.813e3	0.74634	0.74634	0.0617
Total Penta-Furans	29.30	6.881e3	7.571e3	3.134e2	2.884e2	1.09	YES	0.000e0	0.00000	0.079960	0.0617
1,2,3,7,8-PeCDF	29.49	1.627e4	1.622e4	8.805e2	6.536e2	1.35	NO	1.534e3	0.23561	0.23561	0.0636
Total Penta-Furans	29.73	2.145e4	1.463e4	1.263e3	8.706e2	1.45	NO	2.133e3	0.33086	0.33086	0.0617
Total Penta-Furans	30.21	9.072e3	8.762e3	4.433e2	3.691e2	1.20	YES	0.000e0	0.00000	0.11311	0.0617
Total Penta-Furans	30.31	2.789e4	1.949e4	1.479e3	1.017e3	1.45	NO	2.497e3	0.38718	0.38718	0.0617
2,3,4,7,8-PeCDF	30.42	8.523e4	5.157e4	4.647e3	3.012e3	1.54	NO	7.659e3	1.2433	1.2433	0.0618

Hexa-Furans

Total Hexa-Furans	32.00	2.136e4	1.663e4	1.045e3	8.006e2	1.31	NO	1.846e3	0.37638	0.37638	0.121
Total Hexa-Furans	32.17	1.551e5	1.413e5	8.186e3	6.615e3	1.24	NO	1.480e4	3.0181	3.0181	0.121
Total Hexa-Furans	32.53	1.674e4	1.503e4	1.013e3	7.483e2	1.35	NO	1.761e3	0.35916	0.35916	0.121
Total Hexa-Furans	32.74	4.905e4	4.153e4	2.522e3	2.114e3	1.19	NO	4.637e3	0.94545	0.94545	0.121
Total Hexa-Furans	33.11	2.199e4	2.174e4	1.226e3	1.133e3	1.08	NO	2.359e3	0.48110	0.48110	0.121
1,2,3,4,7,8-HxCDF	33.22	3.521e4	3.231e4	2.047e3	1.594e3	1.28	NO	3.641e3	0.65714	0.65714	0.0981
1,2,3,6,7,8-HxCDF	33.35	1.605e4	1.165e4	9.361e2	7.470e2	1.25	NO	1.683e3	0.32064	0.32064	0.108
2,3,4,6,7,8-HxCDF	33.97	2.322e4	1.965e4	1.375e3	1.022e3	1.35	NO	2.397e3	0.50026	0.50026	0.123

Hepta-Furans

1,2,3,4,6,7,8-HpCDF	36.84	7.200e4	6.631e4	5.401e3	5.115e3	1.06	NO	1.052e4	2.3431	2.3431	0.132
Total Hepta-Furans	37.28	9.230e3	7.742e3	6.278e2	4.377e2	1.43	YES	0.000e0	0.00000	0.20701	0.131
Total Hepta-Furans	37.47	1.180e5	1.168e5	8.753e3	8.566e3	1.02	NO	1.732e4	4.0153	4.0153	0.131
1,2,3,4,7,8,9-HpCDF	38.76	9.209e3	9.803e3	4.715e2	4.924e2	0.96	NO	9.639e2	0.26568	0.26568	0.149

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-14.qld

Last Altered: Monday, July 06, 2009 13:20:11 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:20:30 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

2,3,7,8-TCDD

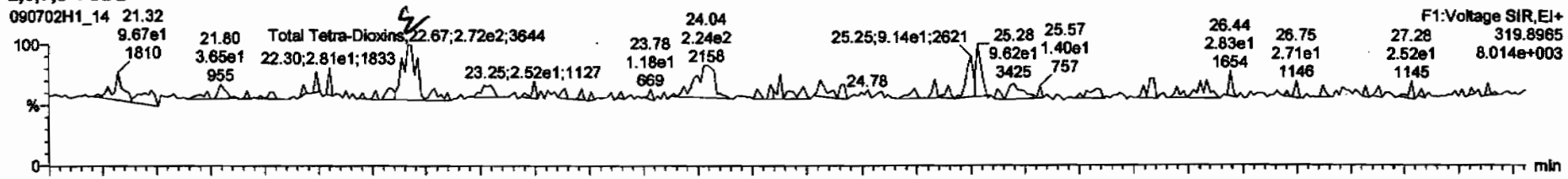

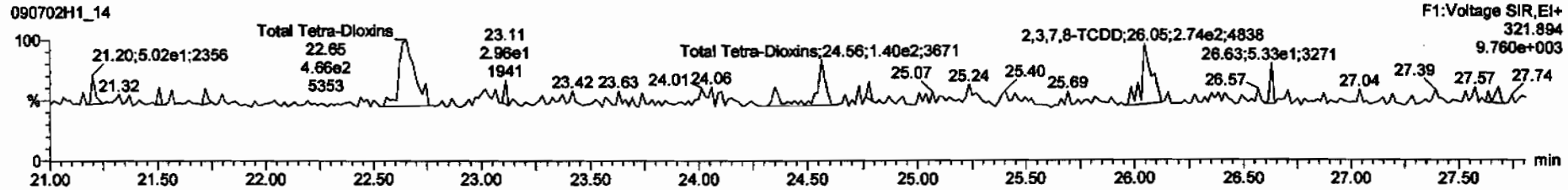

13C-2,3,7,8-TCDD

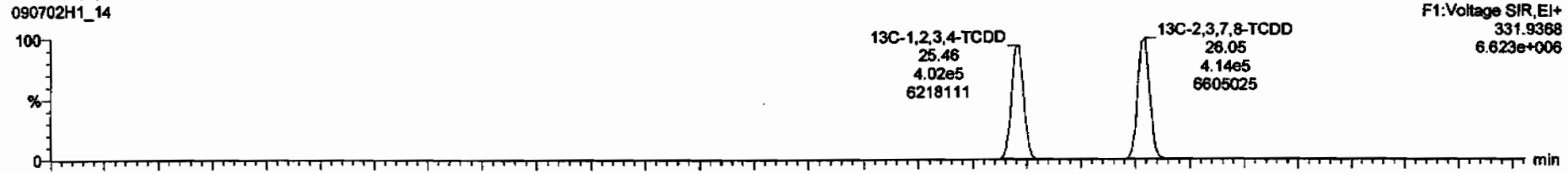

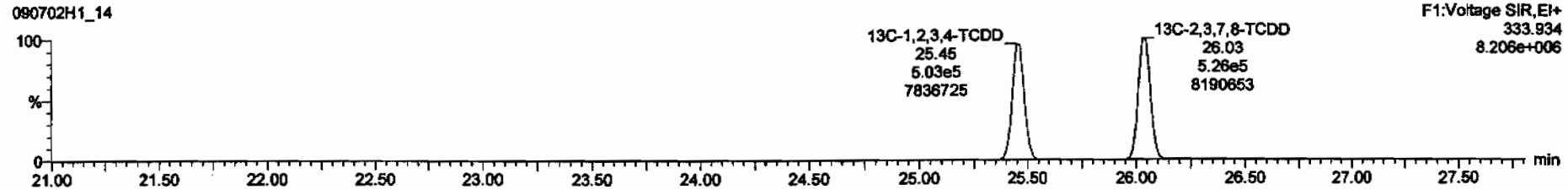

TargetLynx - 090702h1-14.qld * - [Chromatogram]

090702H1_14 - 31850_2214_004 CAMO-09-9989 12.48 - CAMO-09-9989

Total Tetra-Dioxins	22.67	2.722e2	4.388e2	0.62	YES	0.11831	0.00000

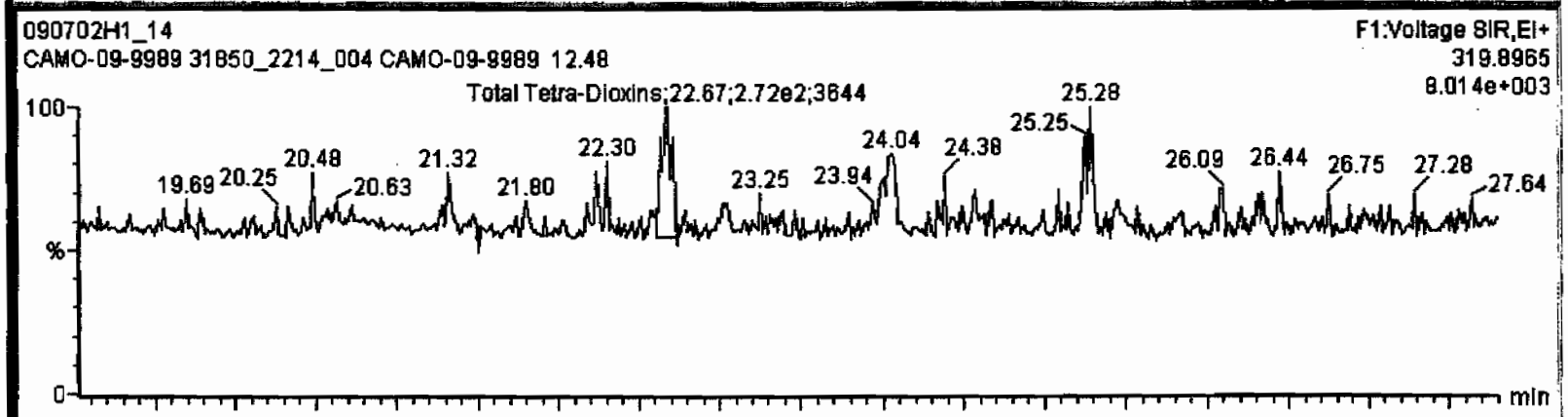

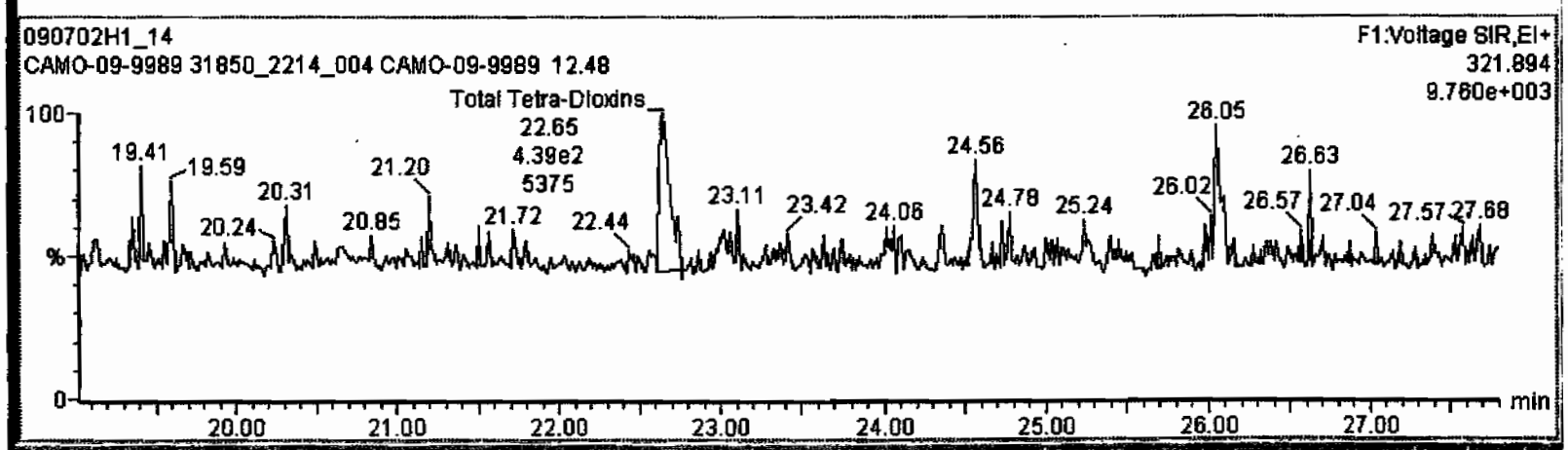

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Last Altered: Monday, July 06, 2009 13:20:11 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:20:30 Pacific Daylight Time

Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

37Cl-2,3,7,8-TCDD

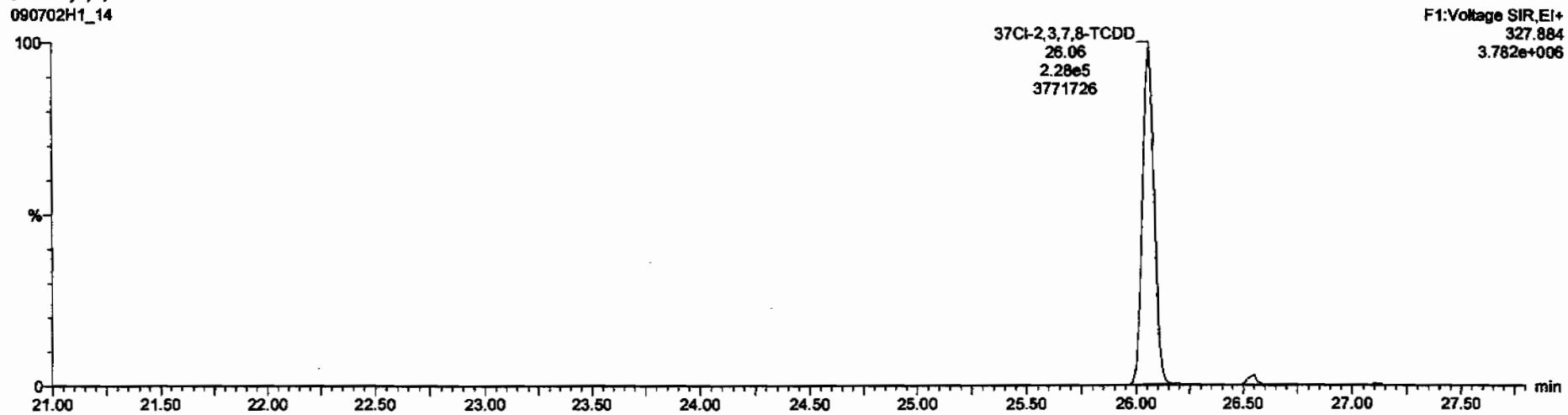

13C-1,2,3,4-TCDD

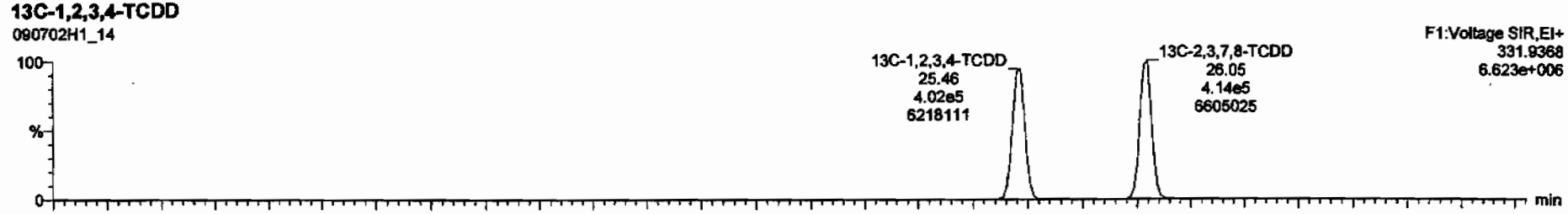

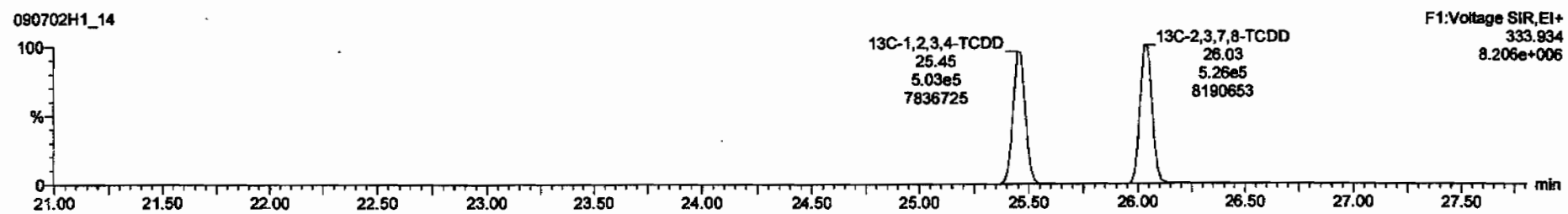

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Last Altered: Monday, July 06, 2009 13:20:11 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:20:30 Pacific Daylight Time

Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

1,2,3,7,8-PeCDD

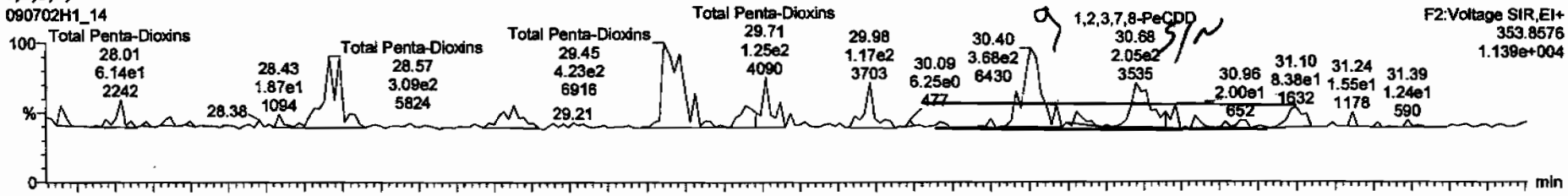

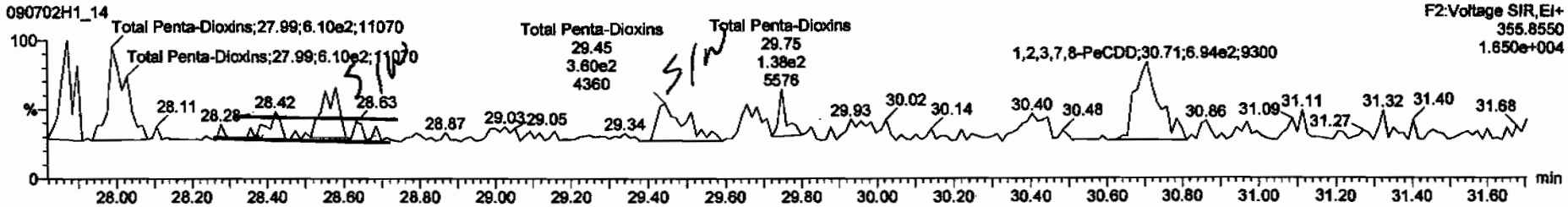

13C-1,2,3,7,8-PeCDD

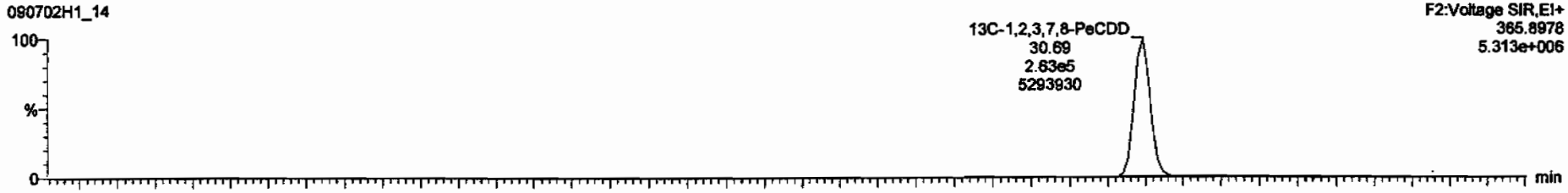

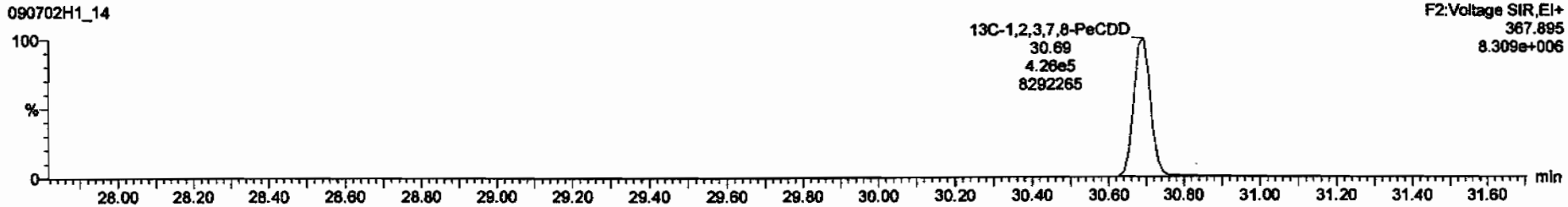

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Last Altered: Monday, July 06, 2009 13:20:11 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:20:30 Pacific Daylight Time

Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

1,2,3,4,7,8-HxCDD

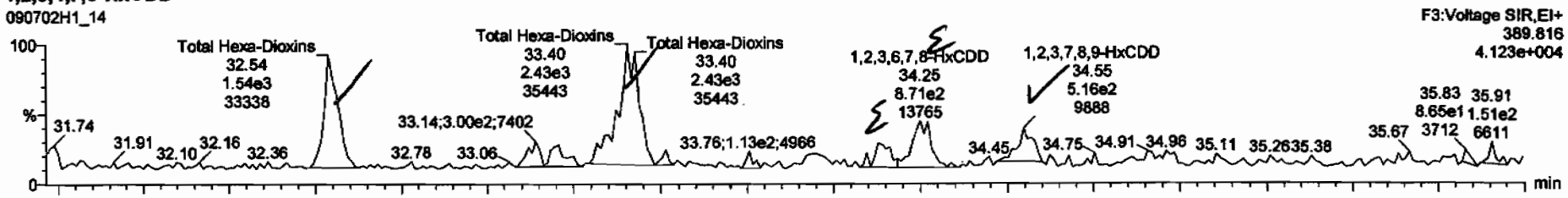

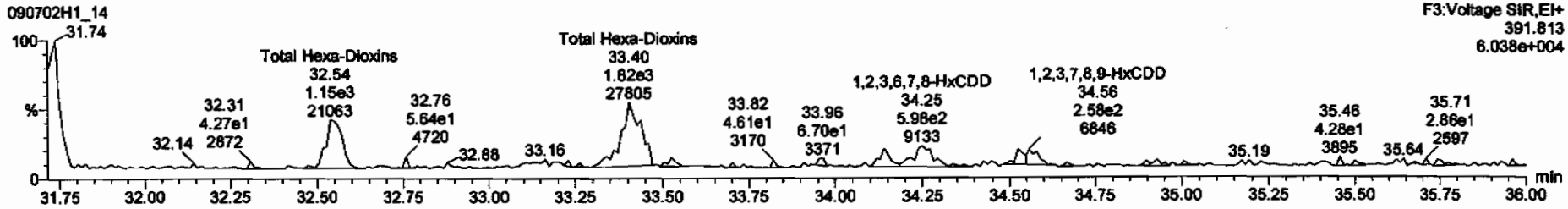

13C-1,2,3,4,7,8-HxCDD

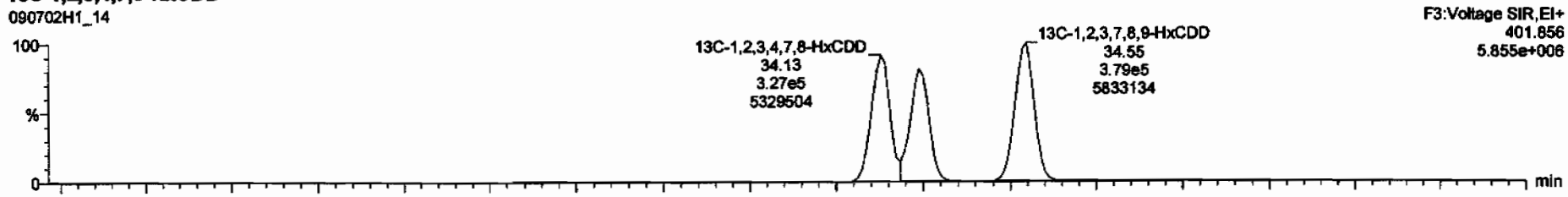

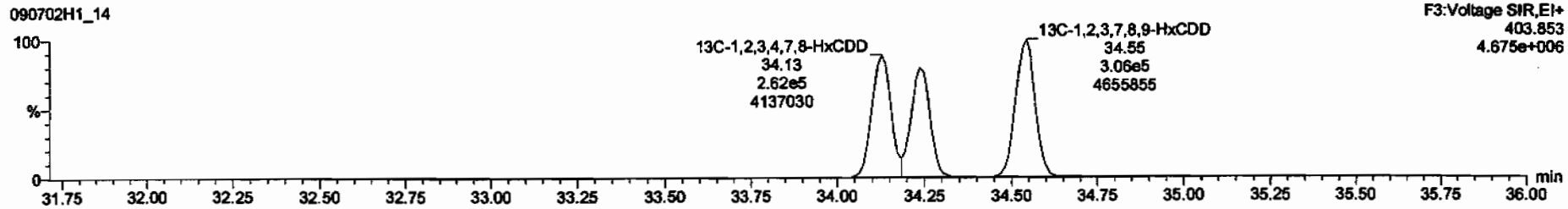

TargetLynx - 090702h1-14.qld * - [Chromatogram]

090702H1_14 - 31850_2214_004 CAMO-09-9989 12.48 - CAMO-09-9989

Total Hexa-Dioxins	32.54	1.543e3	1.151e3	1.34	NO	0.82056	0.82056
Total Hexa-Dioxins	33.40	2.427e3	1.824e3	1.33	NO	1.2949	1.2949
1,2,3,4,7,8-HxCDD	34.13	4.113e2	2.653e2	1.55	YES	0.19295	0.00000
1,2,3,6,7,8-HxCDD	34.25	8.495e2	5.598e2	1.52	YES	0.40391	0.00000
1,2,3,7,8,9-HxCDD	34.55	7.431e2	5.375e2	1.38	NO	0.39637	0.39637

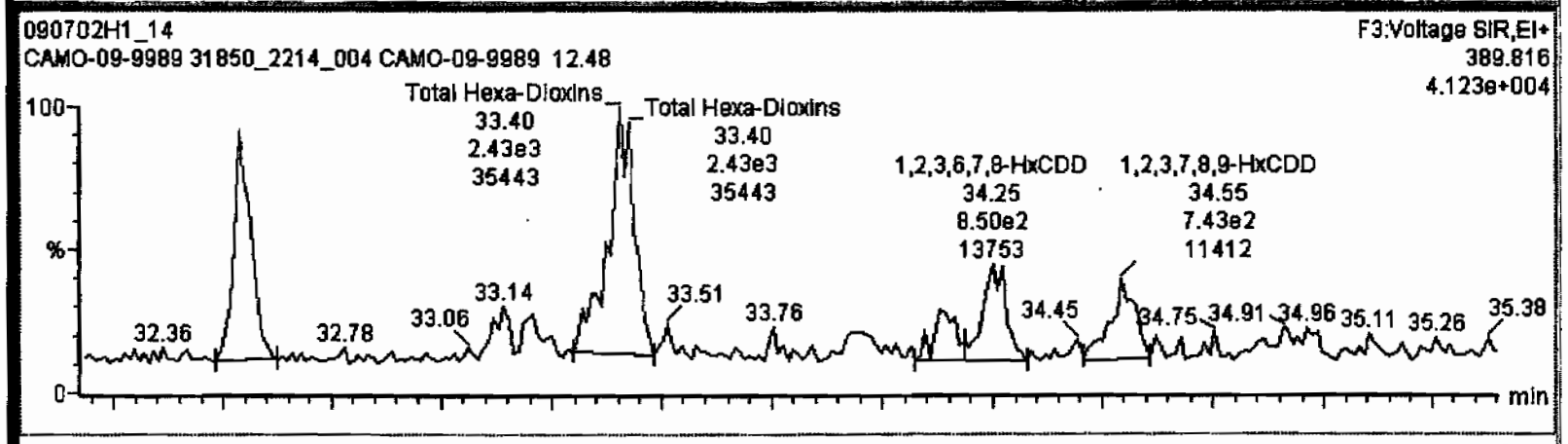

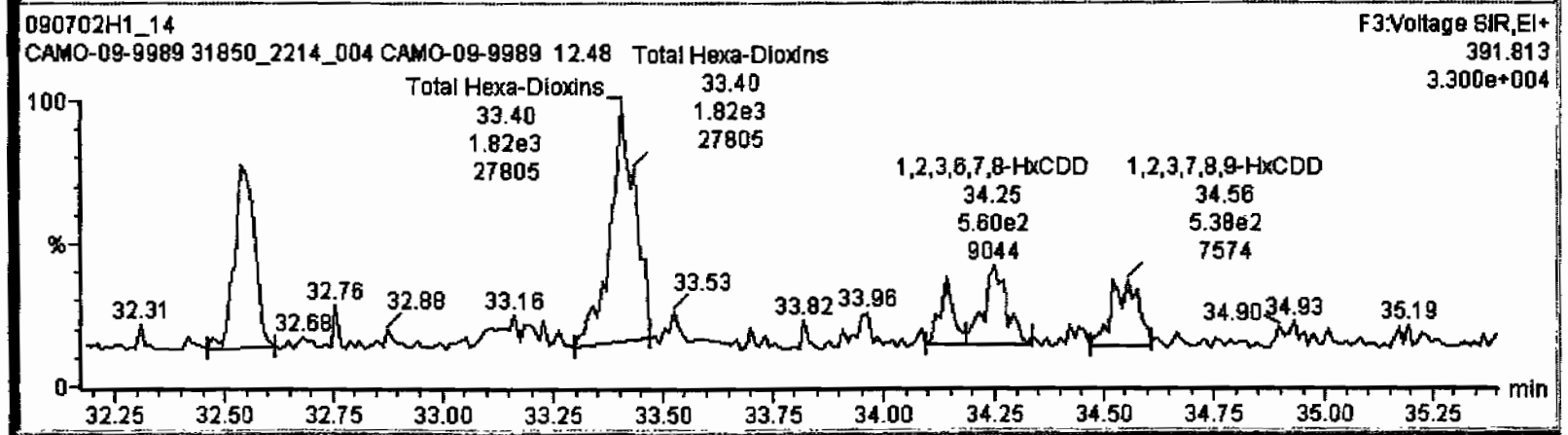

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Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

1,2,3,4,6,7,8-HpCDD

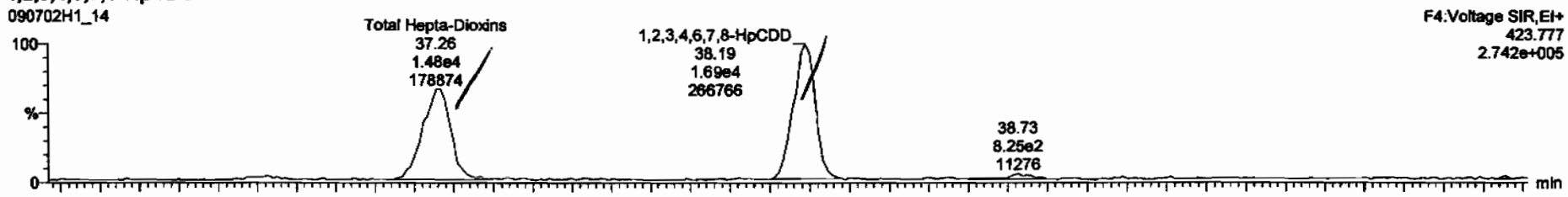

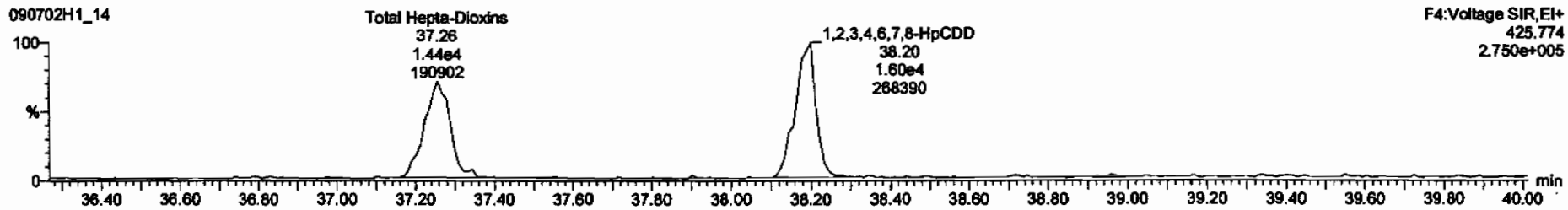

13C-1,2,3,4,6,7,8-HpCDD

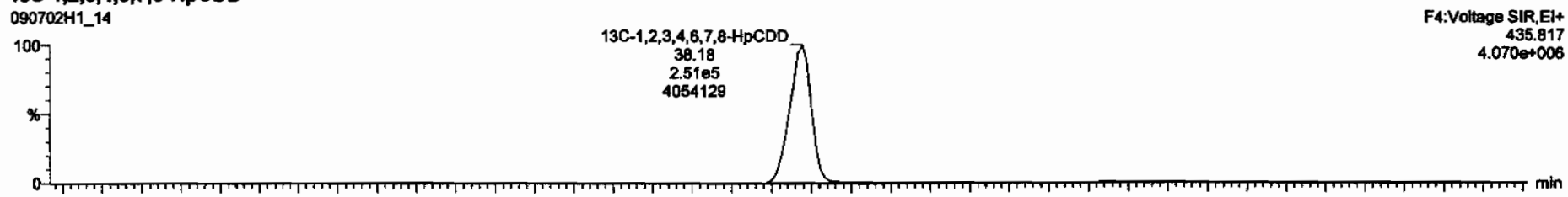

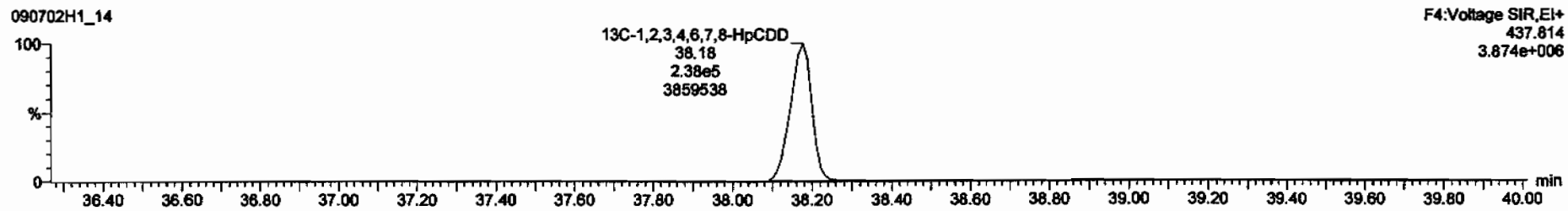

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Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

OCDD

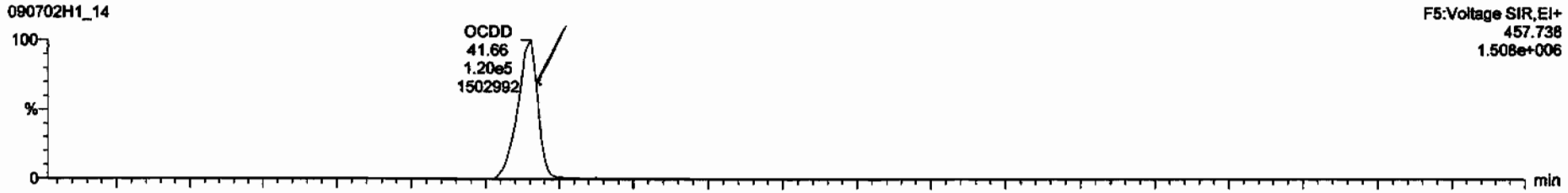

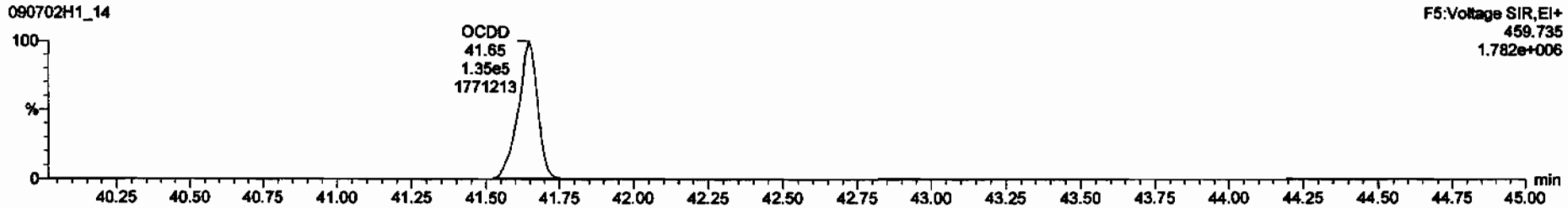

13C-OCDD

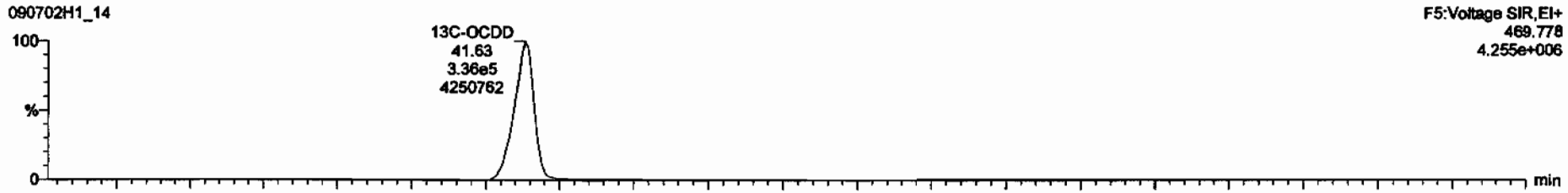

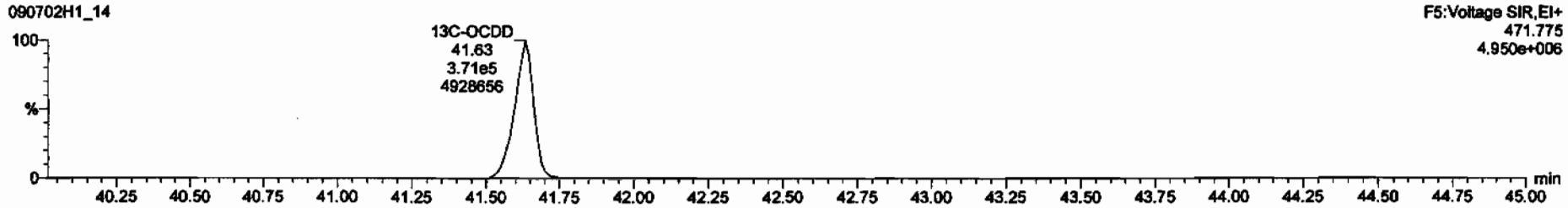

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Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

2,3,7,8-TCDF

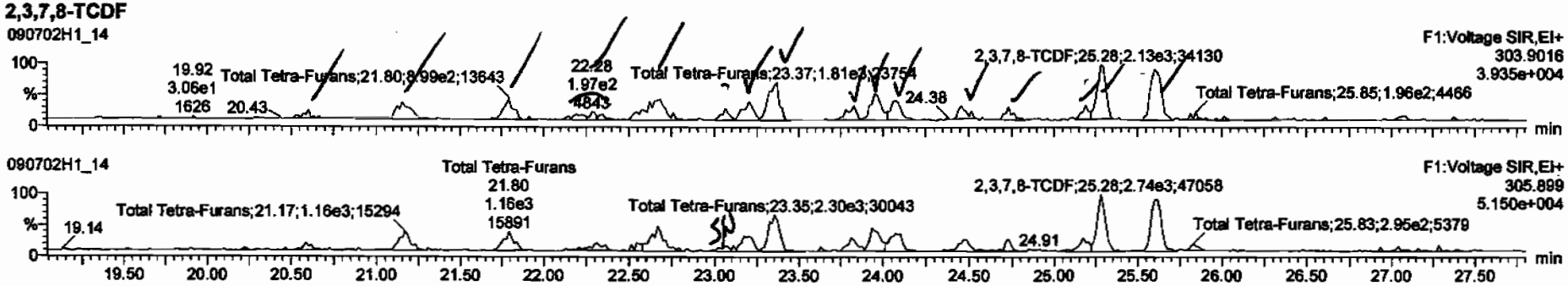

13C-2,3,7,8-TCDF

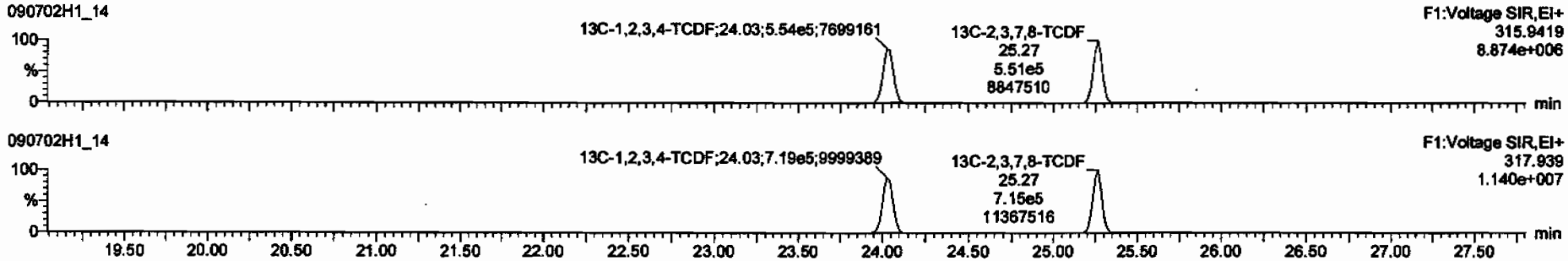

DPE1

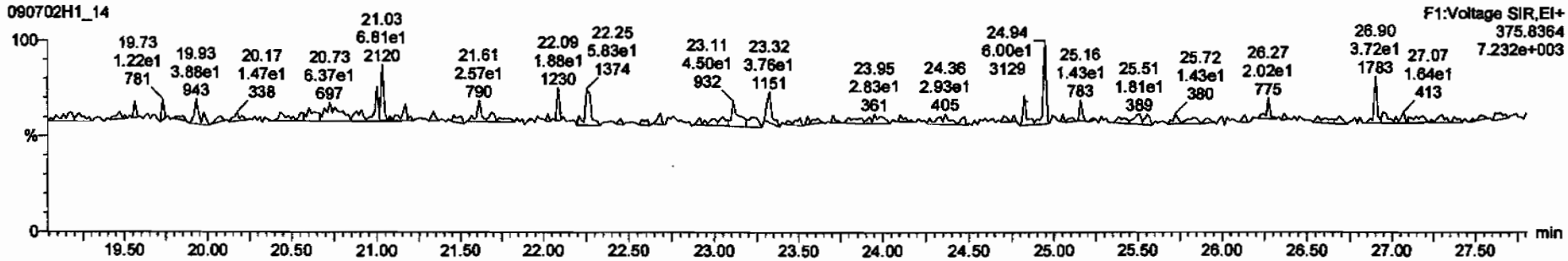

TargetLynx - 090702h1-14.qld * - [Chromatogram]

090702H1_14 - 31850_2214_004 CAMO-09-9989 12.48 - CAMO-09-9989

Total Tetra-Furans	20.60	2.954e2	3.763e2	0.79	NO	0.093484	0.093484
Total Tetra-Furans	21.15	1.006e3	1.162e3	0.87	NO	0.30176	0.30176
Total Tetra-Furans	21.80	8.988e2	1.156e3	0.78	NO	0.28605	0.28605
Total Tetra-Furans	22.26	6.894e2	9.126e2	0.76	NO	0.22297	0.22297
Total Tetra-Furans	22.68	1.726e3	2.153e3	0.80	NO	0.54012	0.54012

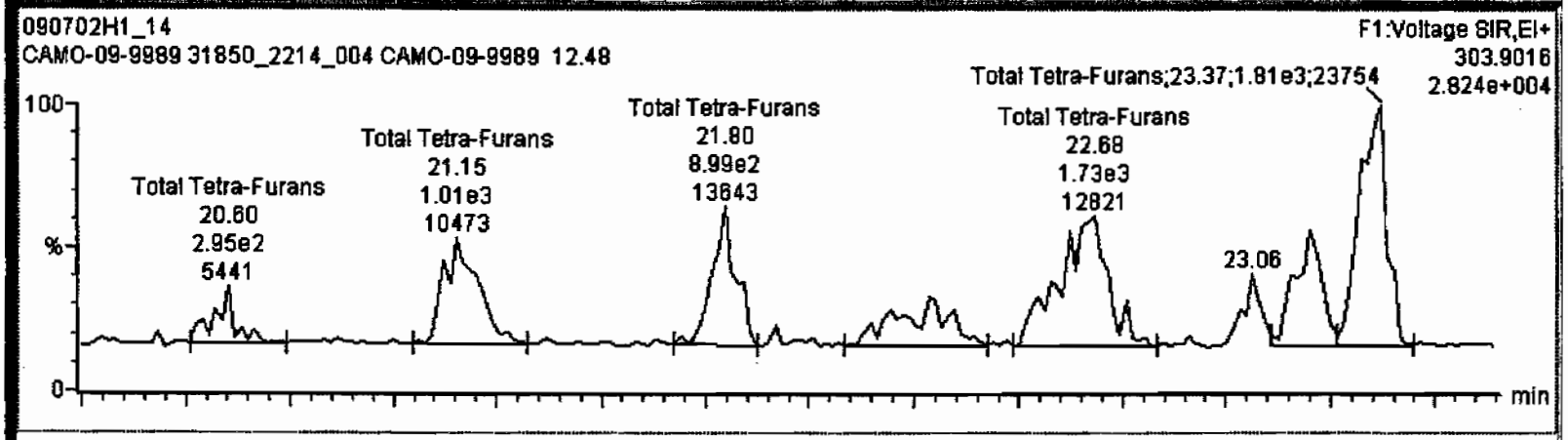

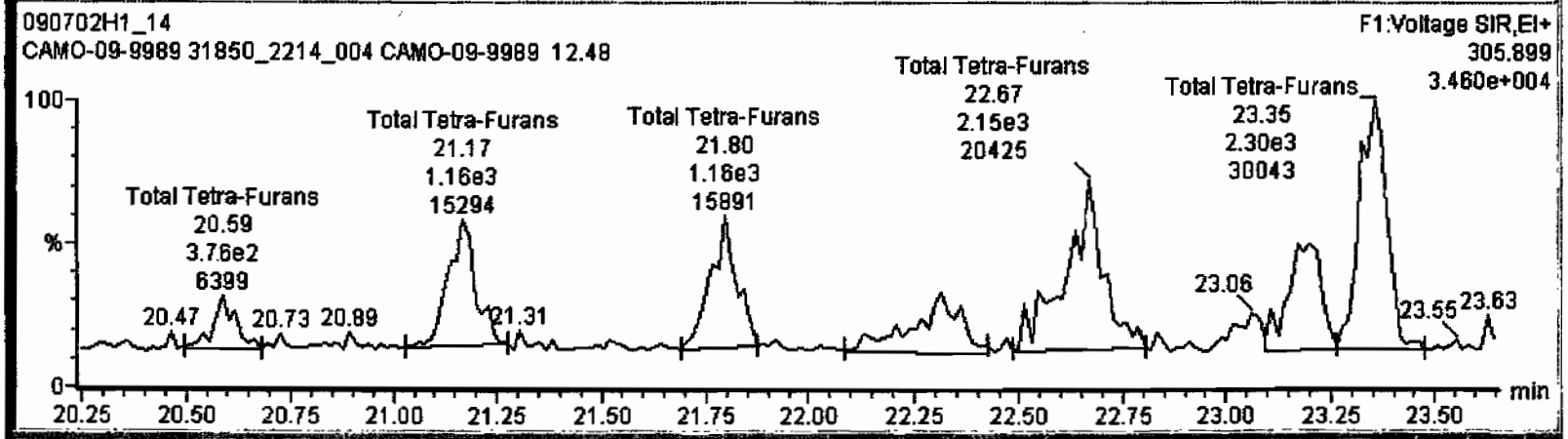

TargetLynx - 090702h1-14.qld * - [Chromatogram]

090702H1_14 - 31850_2214_004 CAMO-09-9989 12.48 - CAMO-09-9989

Total Tetra-Furans	24.73	3.987e2	4.731e2	0.84	NO	0.12134	0.12134
Total Tetra-Furans	25.19	4.571e2	6.813e2	0.67	NO	0.15845	0.15845
2,3,7,8-TCDF	25.28	2.228e3	2.714e3	0.82	NO	0.68782	0.68782
Total Tetra-Furans	25.60	2.454e3	3.115e3	0.79	NO	0.77510	0.77510

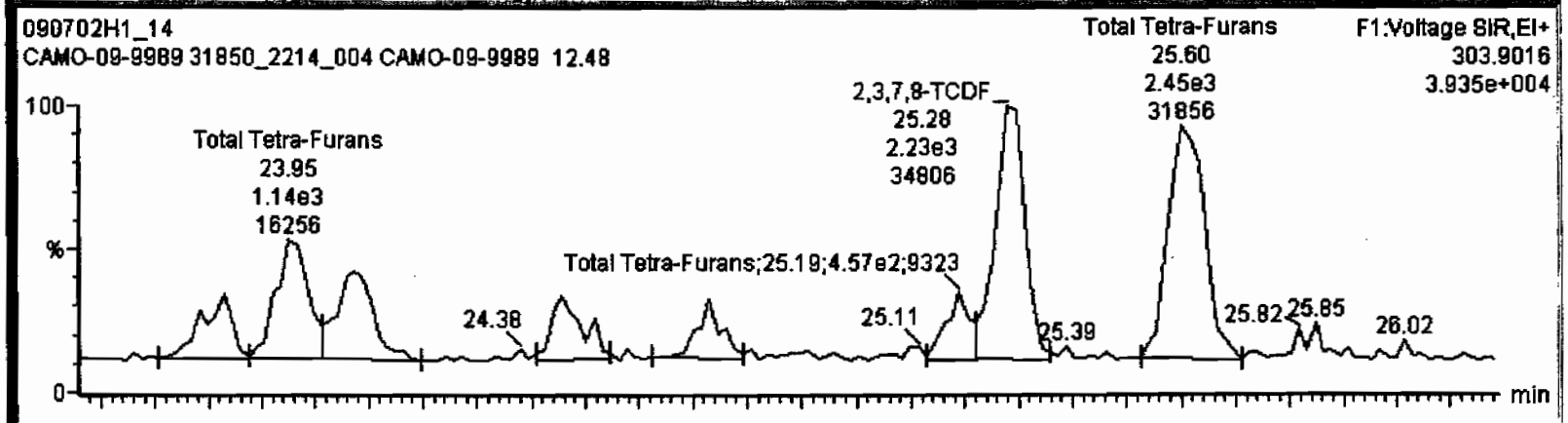

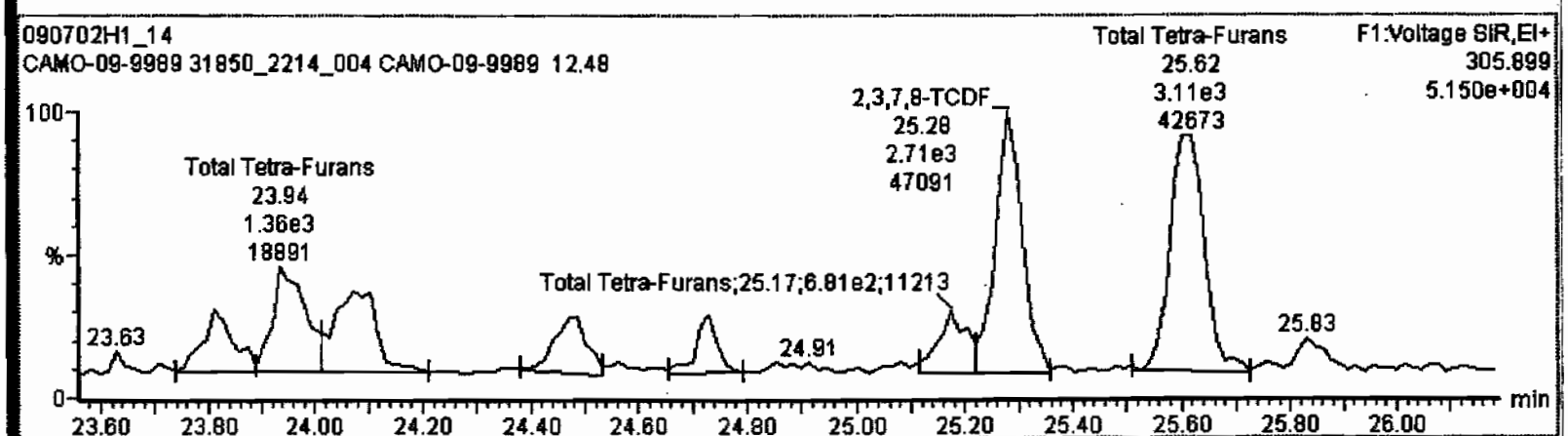

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Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

1st Func. Penta-Furans

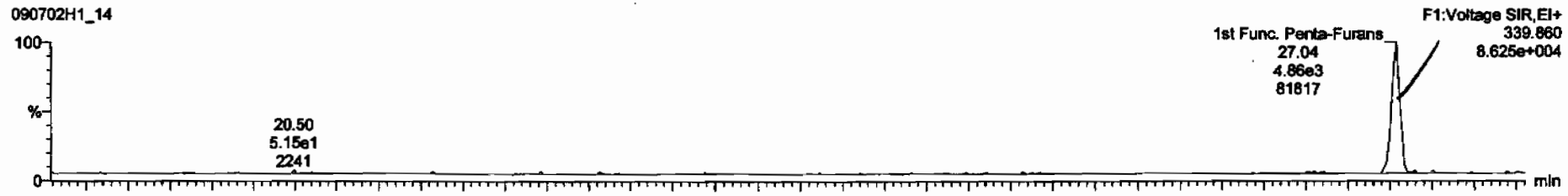

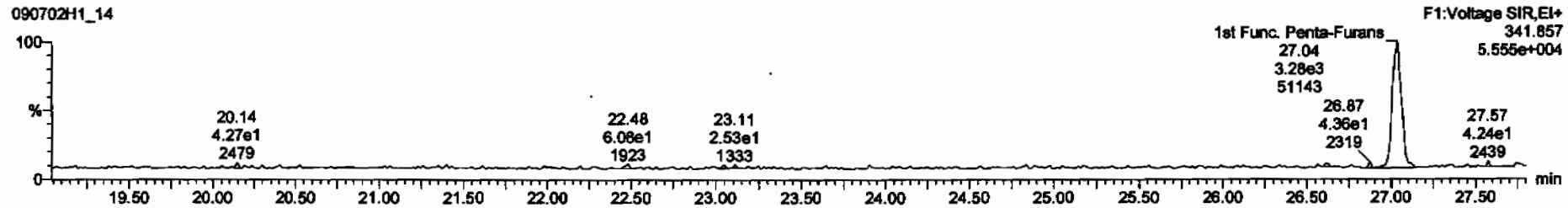

DPE6

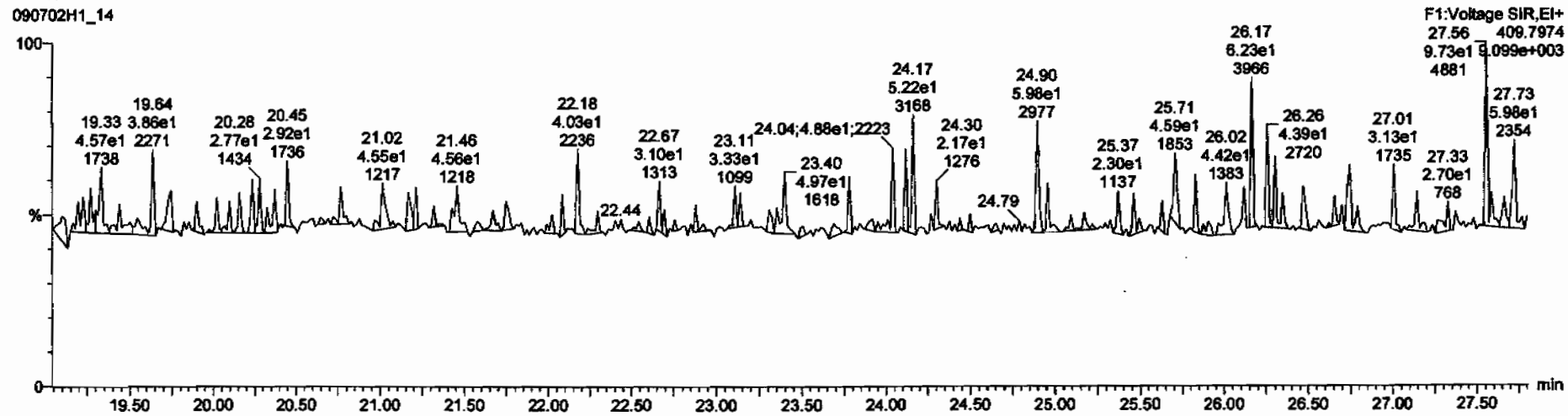

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Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

1,2,3,7,8-PeCDF

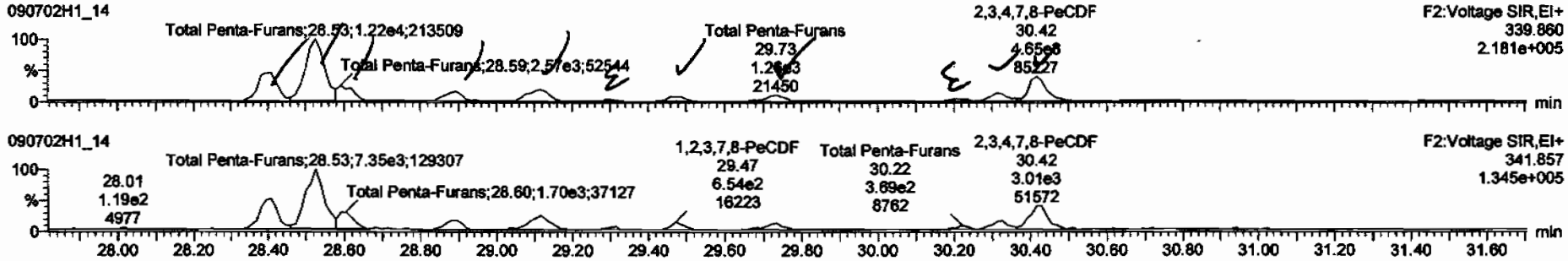

13C-1,2,3,7,8-PeCDF

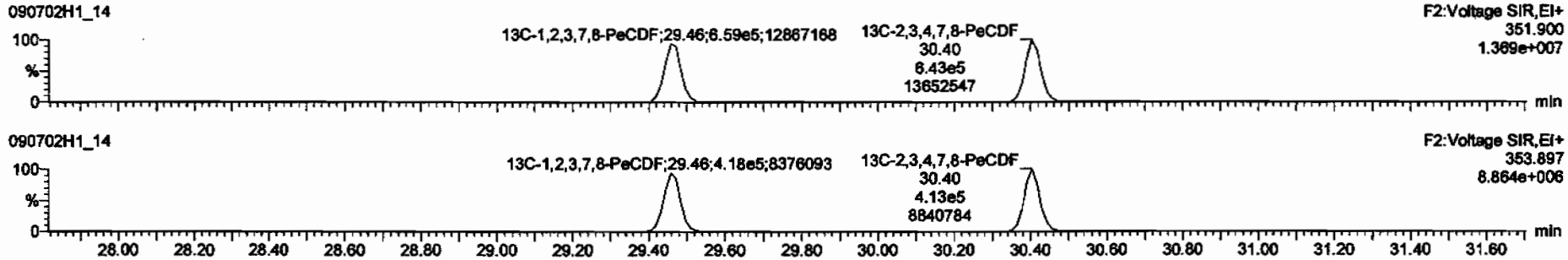

DPE2

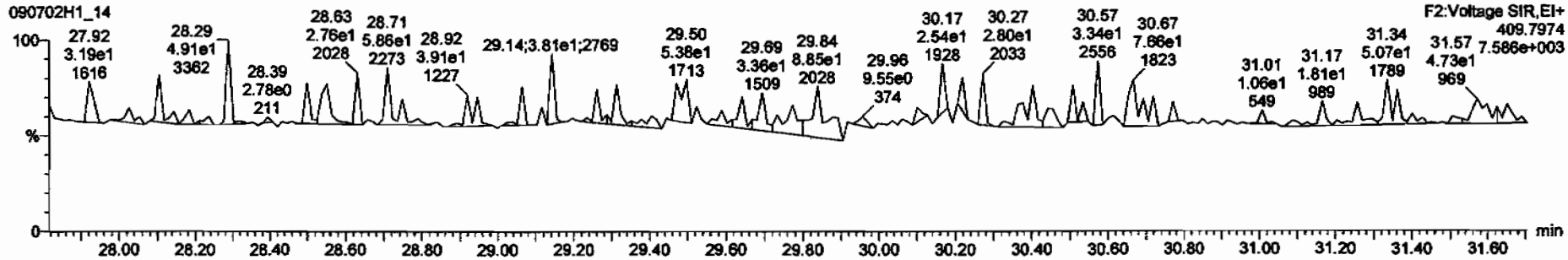

TargetLynx - 090702h1-14.qld * - [Chromatogram]

090702H1_14 - 31850_2214_004 CAMO-09-9989 12.48 - CAMO-09-9989

Total Penta-Furans	29.30	3.134e2	2.884e2	1.09	YES	0.079960	0.00000
1,2,3,7,8-PeCDF	29.49	8.805e2	6.536e2	1.35	NO	0.23561	0.23561
Total Penta-Furans	29.73	1.263e3	8.706e2	1.45	NO	0.33086	0.33086
Total Penta-Furans	30.21	4.433e2	3.691e2	1.20	YES	0.11311	0.00000
Total Penta-Furans	30.31	1.479e3	1.017e3	1.45	NO	0.38718	0.38718

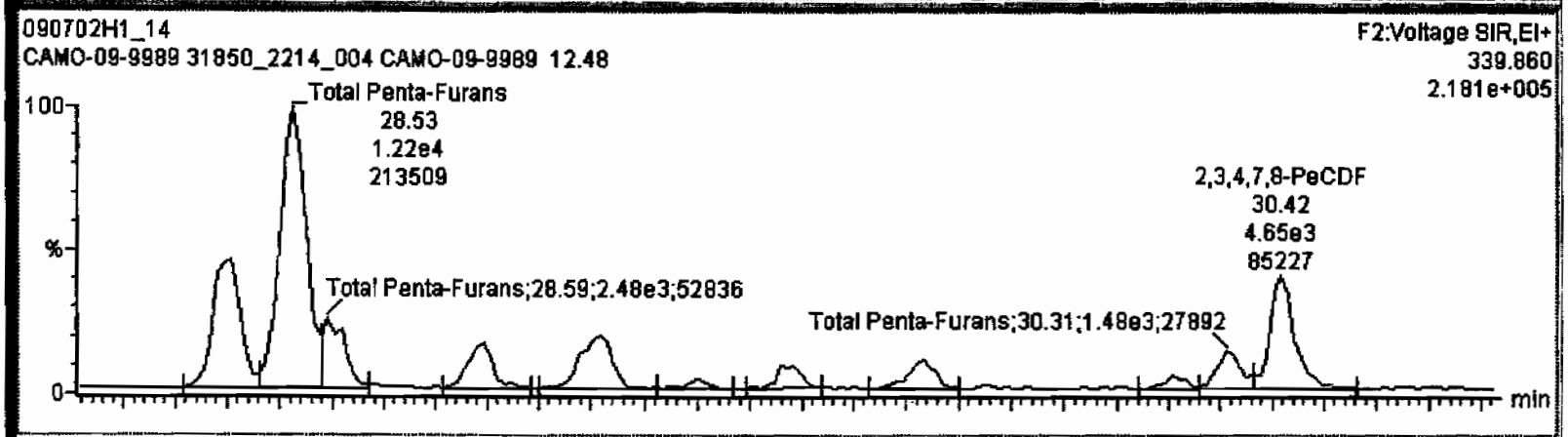

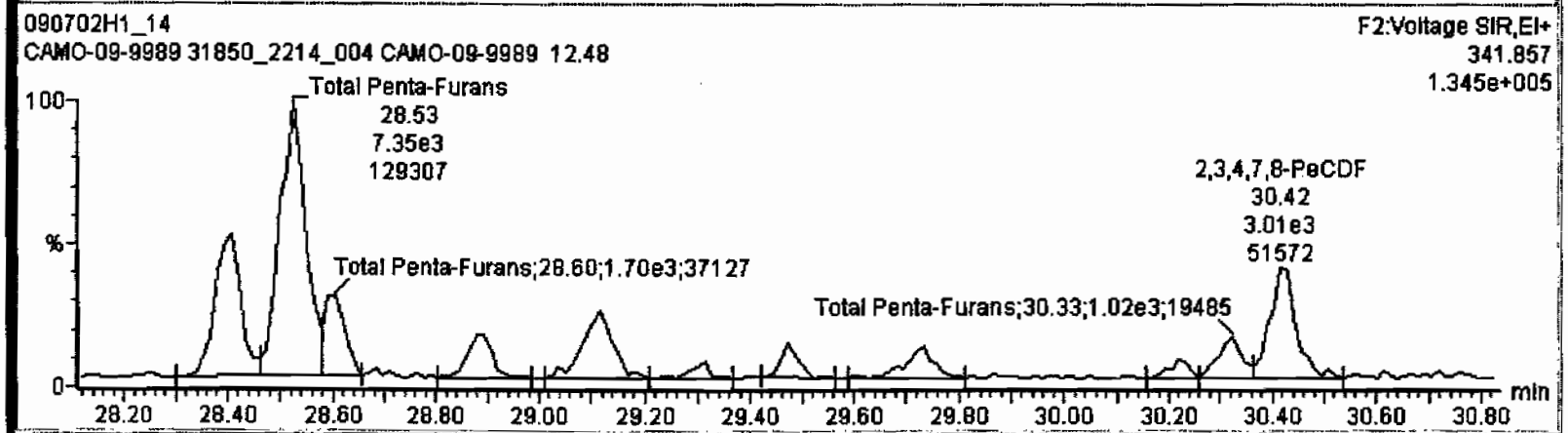

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1,2,3,4,7,8-HxCDF

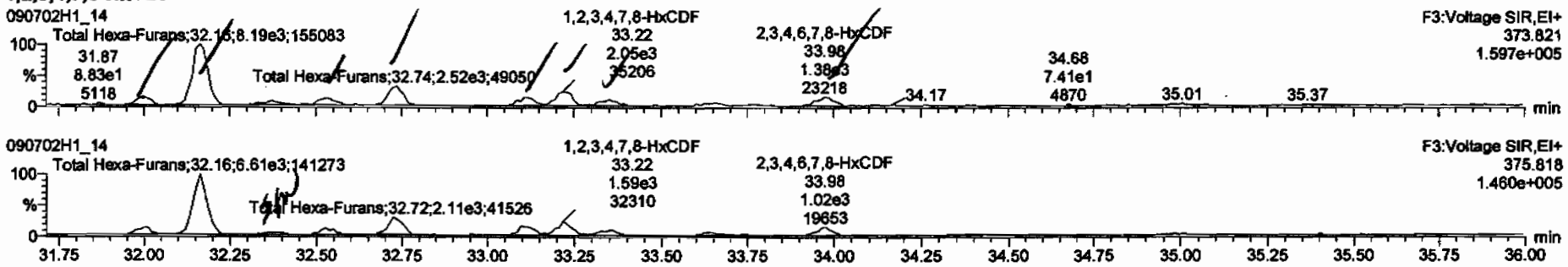

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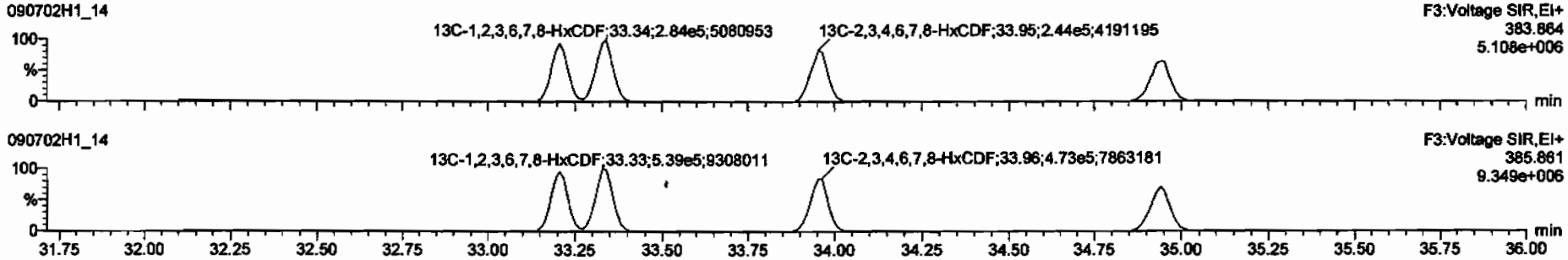

DPE3

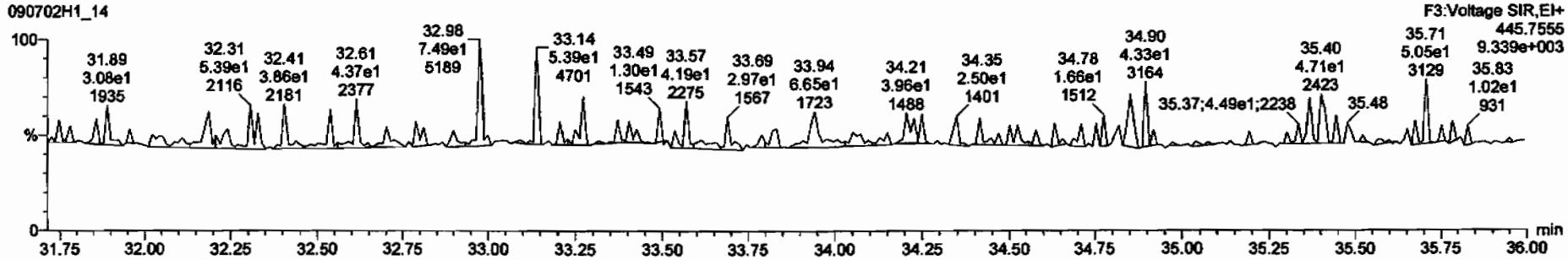

TargetLynx - 090702h1-14.qld * - [Chromatogram]

090702H1_14 - 31850_2214_004 CAMO-09-9989 12.48 - CAMO-09-9989

Total Hexa-Furans	33.11	1.226e3	1.133e3	1.08	NO	0.48110	0.48110
1,2,3,4,7,8-HxCDF	33.22	2.047e3	1.594e3	1.28	NO	0.65714	0.65714
1,2,3,6,7,8-HxCDF	33.35	9.361e2	7.470e2	1.25	NO	0.32064	0.32064
2,3,4,6,7,8-HxCDF	33.97	1.375e3	1.022e3	1.35	NO	0.50026	0.50026

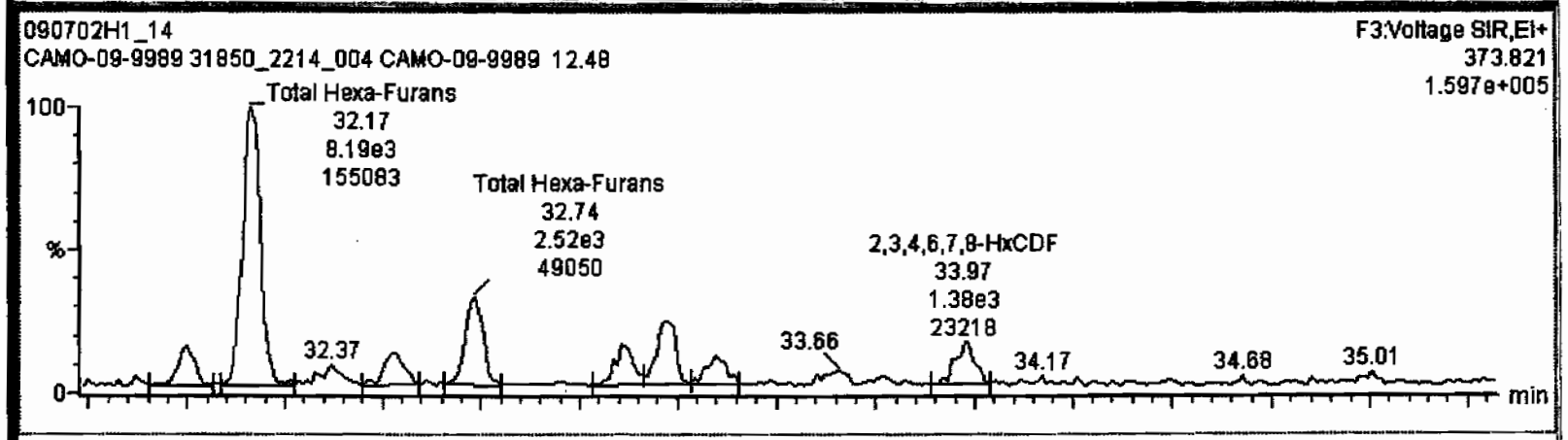

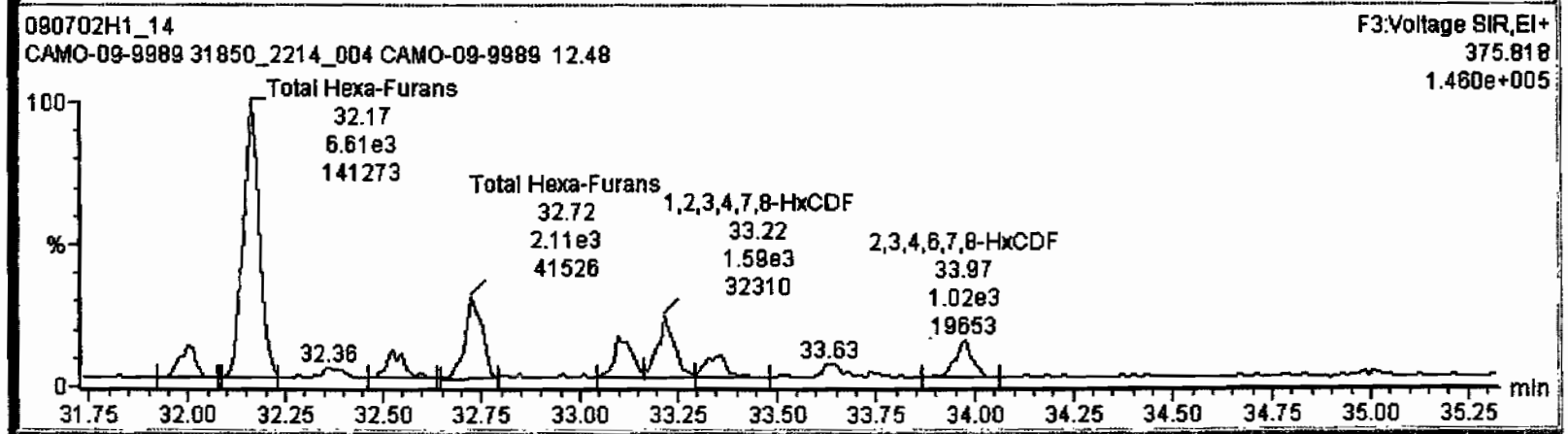

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1,2,3,4,6,7,8-HpCDF

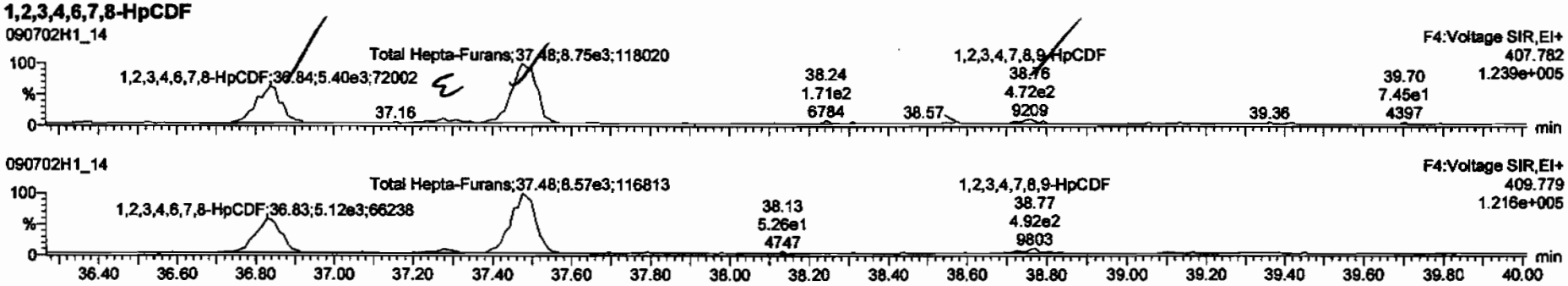

13C-1,2,3,4,6,7,8-HpCDF

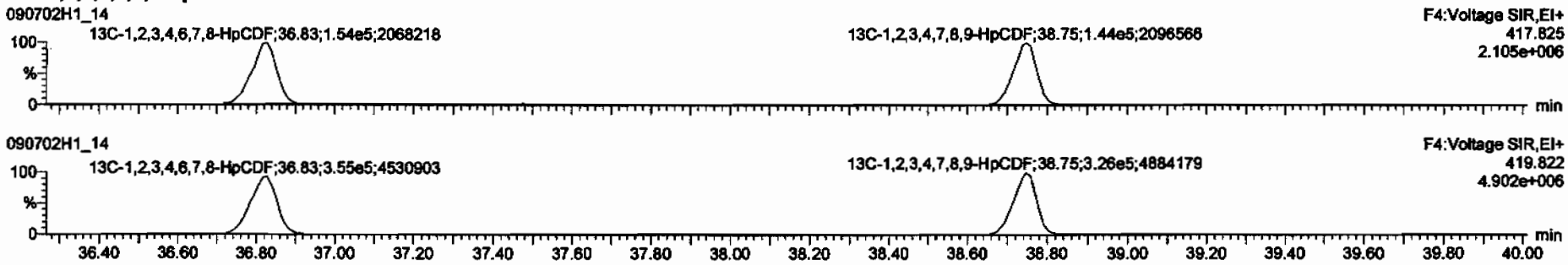

DPE4

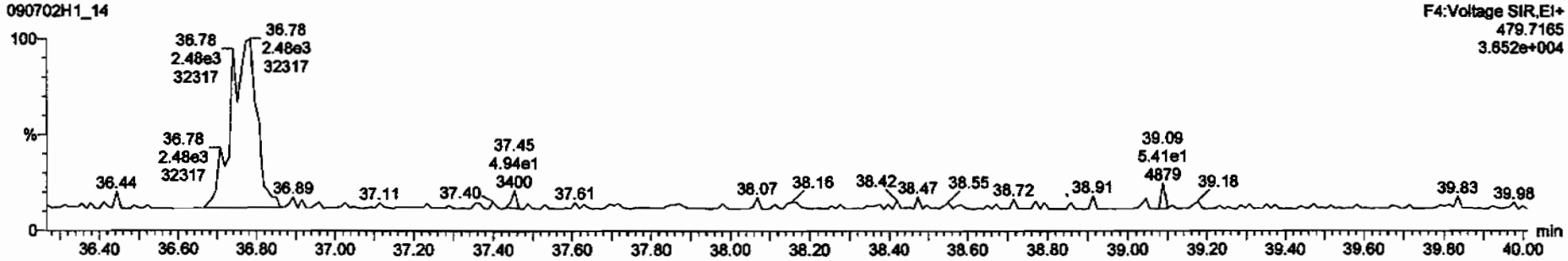

TargetLynx - 090702h1-14.qld * - [Chromatogram]

090702H1_14 - 31850_2214_004 CAMO-09-9989 12.48 - CAMO-09-9989

1,2,3,4,6,7,8-HpCDF	36.84	5.401e3	5.115e3	1.06	NO	2.3431	2.3431
Total Hepta-Furans	37.28	6.278e2	4.377e2	1.43	YES	0.20701	0.00000
Total Hepta-Furans	37.47	8.753e3	8.566e3	1.02	NO	4.0153	4.0153
1,2,3,4,7,8,9-HpCDF	38.76	4.715e2	4.924e2	0.96	NO	0.26568	0.26568

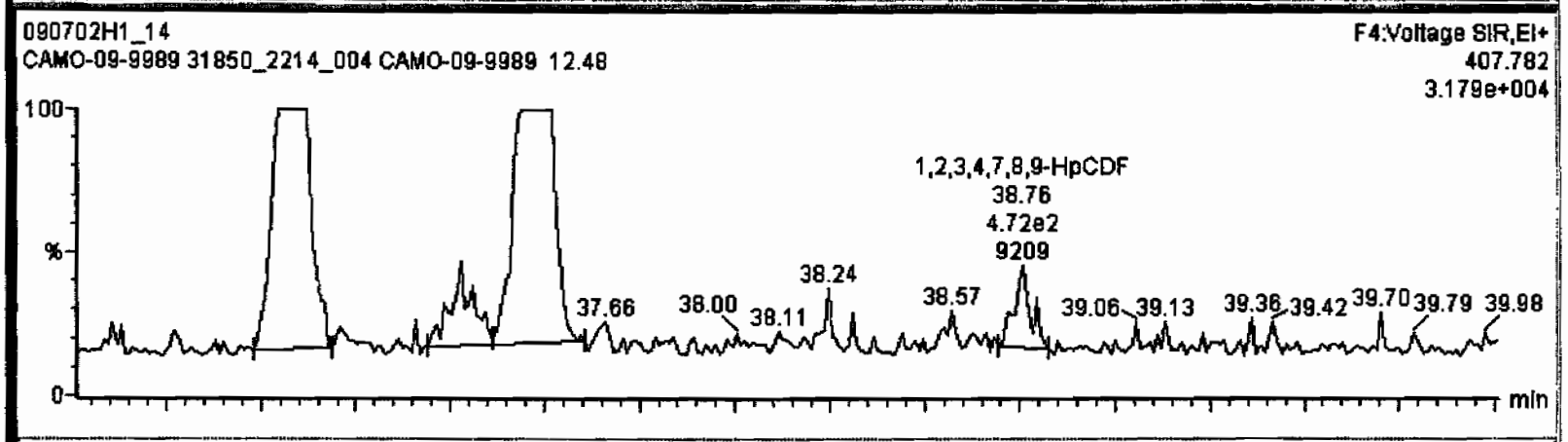

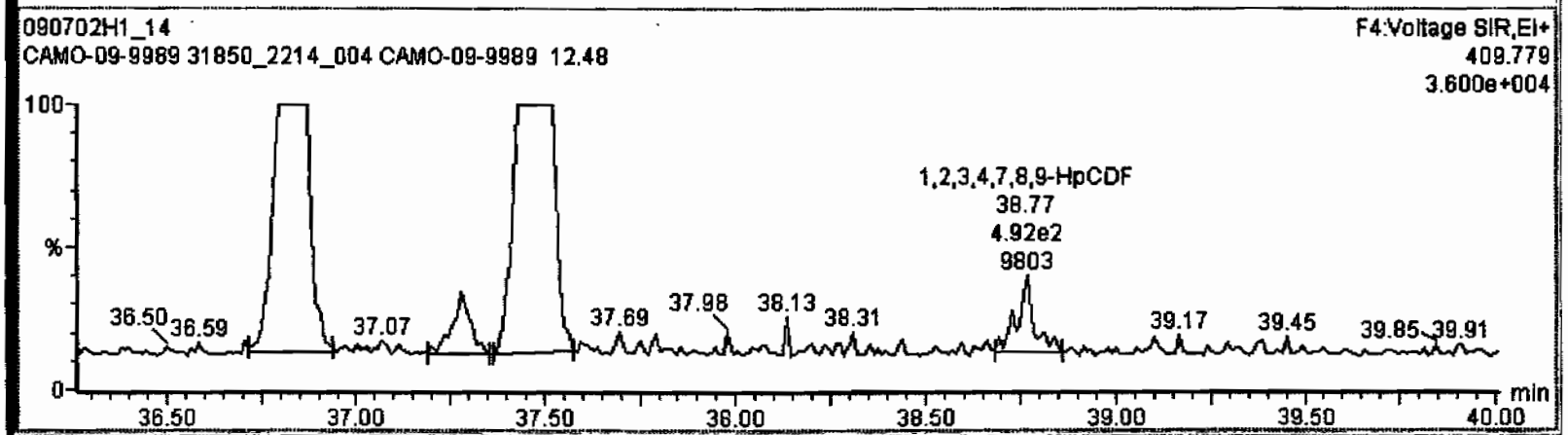

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Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

OCDF

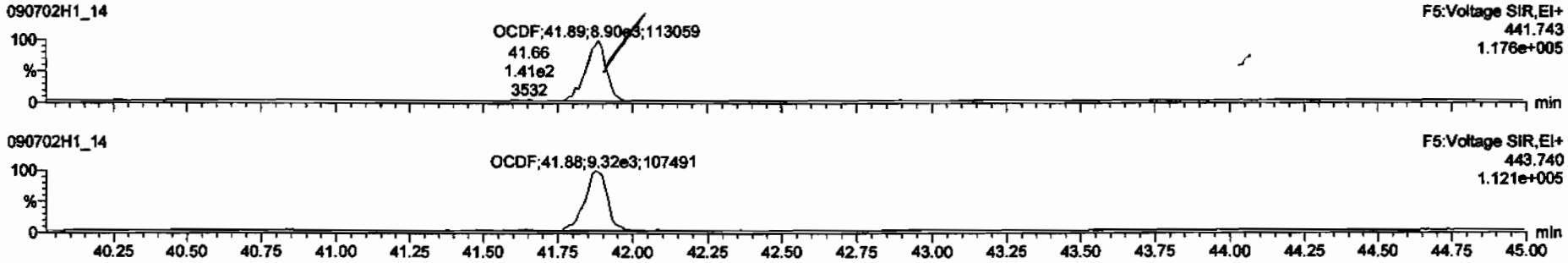

13C-OCDF

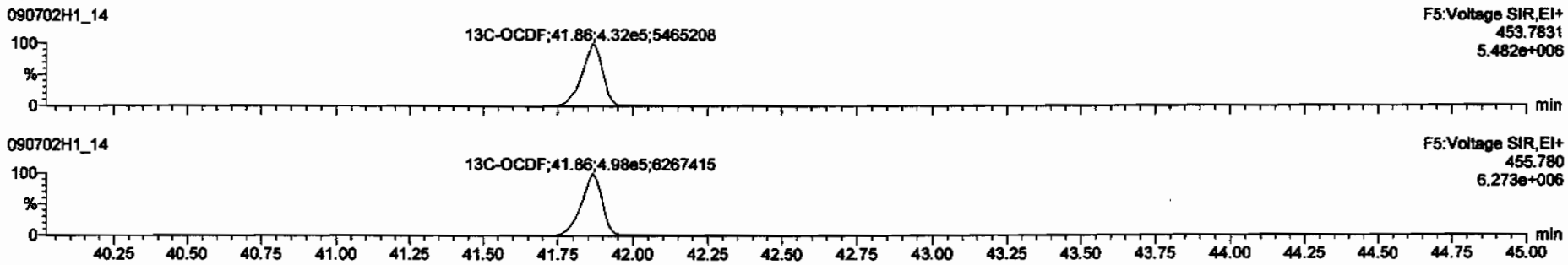

DPE5

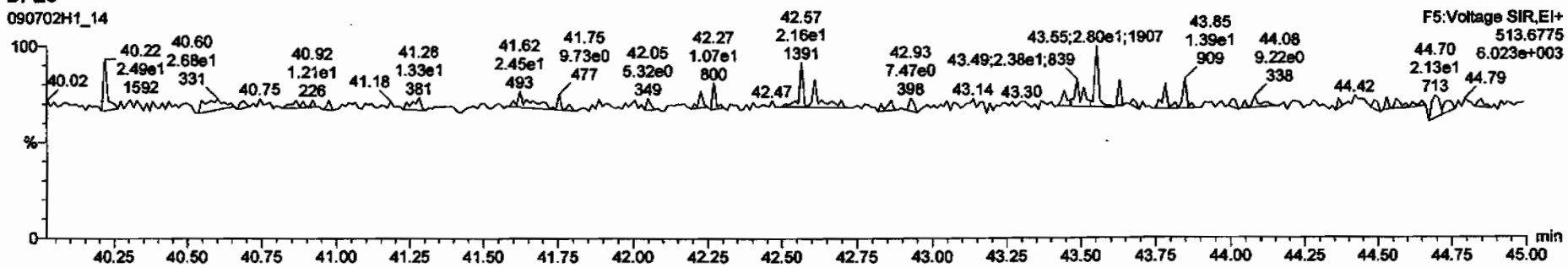

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Name: 090702H1_14, Date: 03-Jul-2009, Time: 01:07:22, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

PFK1

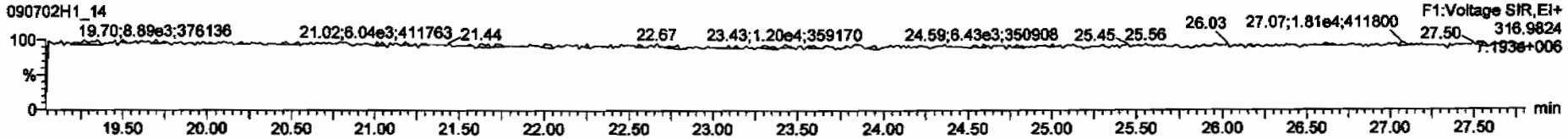

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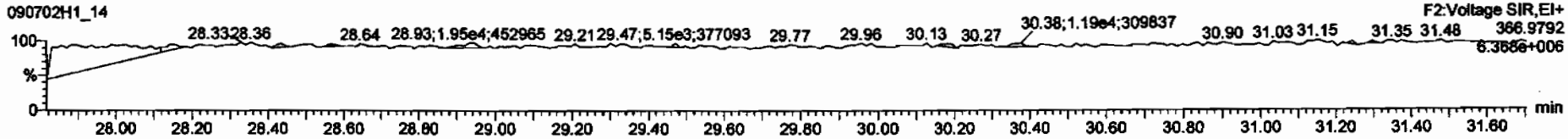

PFK3

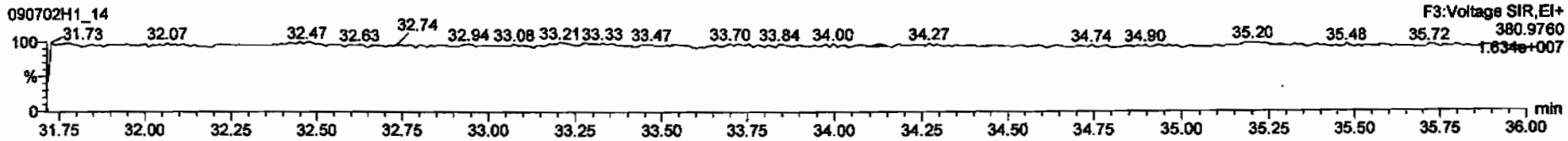

PFK4

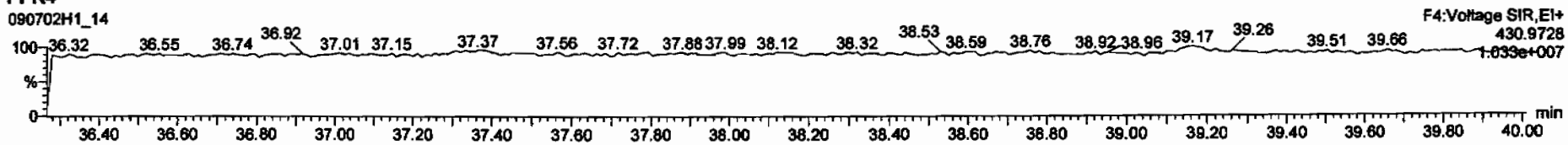

PFK5

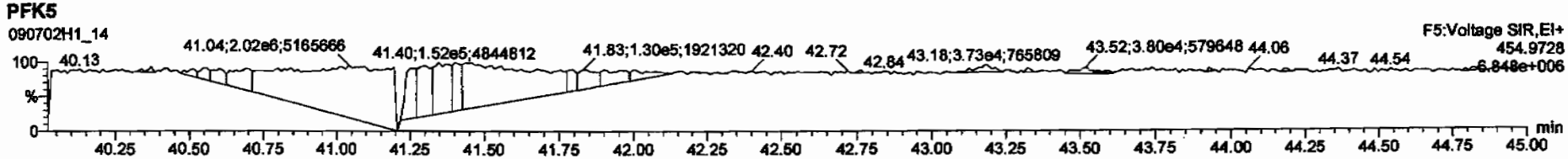

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Tuesday, July 07, 2009 11:41:45 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:42:03 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

1	2,3,7,8-TCDD			NO	1.08	10.150					0.0495	
2	1,2,3,7,8-PeCDD			NO	1.03	10.150					0.0902	
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.150					0.250	
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.150					0.250	
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.150					0.241	
6	1,2,3,4,6,7,8-HpCDD	8.30e3	1.07	NO	1.06	10.150	38.21	1.001	3.4685		0.252	~~3.4685~~
7	OCDD	4.85e4	0.89	NO	1.18	10.150	41.66	1.000	24.494		0.169	~~24.494~~
8	2,3,7,8-TCDF			NO	1.09	10.150					0.0542	
9	1,2,3,7,8-PeCDF			NO	1.16	10.150					0.0632	
10	2,3,4,7,8-PeCDF			NO	1.12	10.150					0.0617	
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.150					0.106	
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.150					0.115	
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.150					0.132	
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.150					0.170	
15	1,2,3,4,6,7,8-HpCDF	1.73e3	0.95	NO	1.69	10.150	36.87	1.001	0.44619		0.153	~~0.44619~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.150					0.150	
17	OCDF	3.44e3	0.93	NO	1.10	10.150	41.90	1.001	1.4698		0.111	~~1.4698~~
18	13C-2,3,7,8-TCDD	8.15e5	0.78	NO	1.01	10.150	26.05	1.023	197.58	100	0.295	
19	13C-1,2,3,7,8-PeCDD	6.25e5	0.62	NO	0.827	10.150	30.71	1.206	185.76	94.3	0.237	
20	13C-1,2,3,4,7,8-HxCDD	5.28e5	1.26	NO	0.916	10.150	34.14	0.988	185.49	94.1	0.480	
21	13C-1,2,3,6,7,8-HxCDD	4.76e5	1.26	NO	0.921	10.150	34.25	0.991	166.40	84.4	0.478	
22	13C-1,2,3,4,6,7,8-HpCDD	4.43e5	1.04	NO	0.708	10.150	38.19	1.105	201.47	102	0.809	
23	13C-OCDD	6.62e5	0.87	NO	0.503	10.150	41.65	1.205	424.02	108	0.707	
24	13C-2,3,7,8-TCDF	1.14e6	0.79	NO	0.977	10.150	25.27	0.992	204.91	104	0.218	
25	13C-1,2,3,7,8-PeCDF	9.54e5	1.58	NO	0.896	10.150	29.47	1.157	187.09	94.9	0.391	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.56	NO	0.900	10.150	30.42	1.194	188.66	95.7	0.389	
27	13C-1,2,3,4,7,8-HxCDF	6.71e5	0.52	NO	1.17	10.150	33.22	0.961	184.79	93.8	0.588	
28	13C-1,2,3,6,7,8-HxCDF	7.46e5	0.53	NO	1.52	10.150	33.35	0.965	158.09	80.2	0.453	
29	13C-2,3,4,6,7,8-HxCDF	6.44e5	0.51	NO	1.25	10.150	33.96	0.983	165.91	84.2	0.551	
30	13C-1,2,3,7,8,9-HxCDF	5.79e5	0.52	NO	1.05	10.150	34.95	1.011	177.05	89.9	0.653	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Tuesday, July 07, 2009 11:41:45 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:42:03 AM Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

31	13C-1,2,3,4,6,7,8-HpCDF	4.53e5	0.44	NO	0.868	10.150	36.83	1.066	167.94	85.2	0.979	
32	13C-1,2,3,4,7,8,9-HpCDF	4.21e5	0.45	NO	0.727	10.150	38.76	1.122	186.74	94.8	1.17	
33	13C-OCDF	8.41e5	0.90	NO	0.760	10.150	41.88	1.212	356.41	90.4	0.416	
34	37Cl-2,3,7,8-TCDD	2.03e5			0.668	10.150	26.06	1.023	74.819	94.9	0.0901	
35	13C-1,2,3,4-TCDD	8.01e5	0.79	NO	1.00	10.150	25.47	0.000	197.04	100	0.300	
36	13C-1,2,3,4-TCDF	1.12e6	0.77	NO	1.00	10.150	24.04	0.000	197.04	100	0.213	
37	13C-1,2,3,7,8,9-HxCDD	6.12e5	1.25	NO	1.00	10.150	34.56	0.000	197.04	100	0.440	
38	Total Tetra-Dioxins				1.08	10.150					0.0245	
39	Total Penta-Dioxins				1.03	10.150					0.0285	
40	Total Hexa-Dioxins				1.13	10.150			0.31224		0.236	~~0.31224~~
41	Total Hepta-Dioxins				1.06	10.150			6.2318		0.252	~~6.2318~~
42	Total Tetra-Furans				1.09	10.150			~~0.00000~~ ND		0.0257	0.11072
43	1st Func. Penta-Furans				1.16	10.150			~~0.12546~~		0.0351	~~0.12546~~
44	Total Penta-Furans				1.16	10.150			0.125		0.0315	
45	Total Hexa-Furans				1.28	10.150			0.~~00000~~ ND		0.0898	0.26624
46	Total Hepta-Furans				1.69	10.150			0.44619		0.143	1.1601

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Tuesday, July 07, 2009 11:41:45 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:42:03 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Total Hexa-Dioxins	32.57	8.301e3	7.846e3	5.016e2	3.933e2	1.28	NO	8.949e2	0.31224	0.31224	0.236

Hepta-Dioxins

Total Hepta-Dioxins	37.27	4.743e4	4.200e4	3.473e3	3.141e3	1.11	NO	6.614e3	2.7634	2.7634	0.252
1,2,3,4,6,7,8-HpCDD	38.21	7.025e4	6.564e4	4.295e3	4.006e3	1.07	NO	8.301e3	3.4685	3.4685	0.252

Tetra-Furans

Total Tetra-Furans	21.80	6.361e3	6.007e3	4.137e2	3.931e2	1.05	YES	0.000e0	0.00000	0.11072	0.0542

Penta-Furans function 1

1st Func. Penta-Furans	27.05	9.939e3	5.948e3	4.287e2	2.792e2	1.54	NO	7.078e2	0.12546	0.12546	0.0351

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Tuesday, July 07, 2009 11:41:45 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 11:42:03 AM Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

Penta-Furans

Hexa-Furans

	Total Hexa-Furans	32.19	1.463e4	1.113e4	7.884e2	5.095e2	1.55	YES	0.000e0	0.00000	0.26624	0.129

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.87	1.462e4	1.290e4	8.448e2	8.870e2	0.95	NO	1.732e3	0.44619	0.44619	0.153
	Total Hepta-Furans	37.51	2.939e4	2.053e4	1.679e3	1.311e3	1.28	YES	0.000e0	0.00000	0.71395	0.143

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

2,3,7,8-TCDD

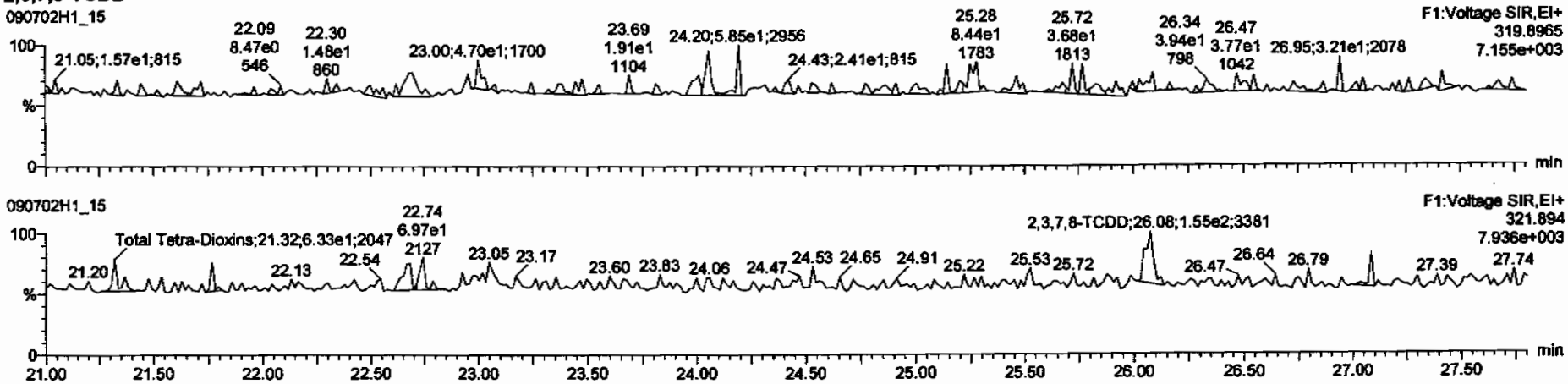

13C-2,3,7,8-TCDD

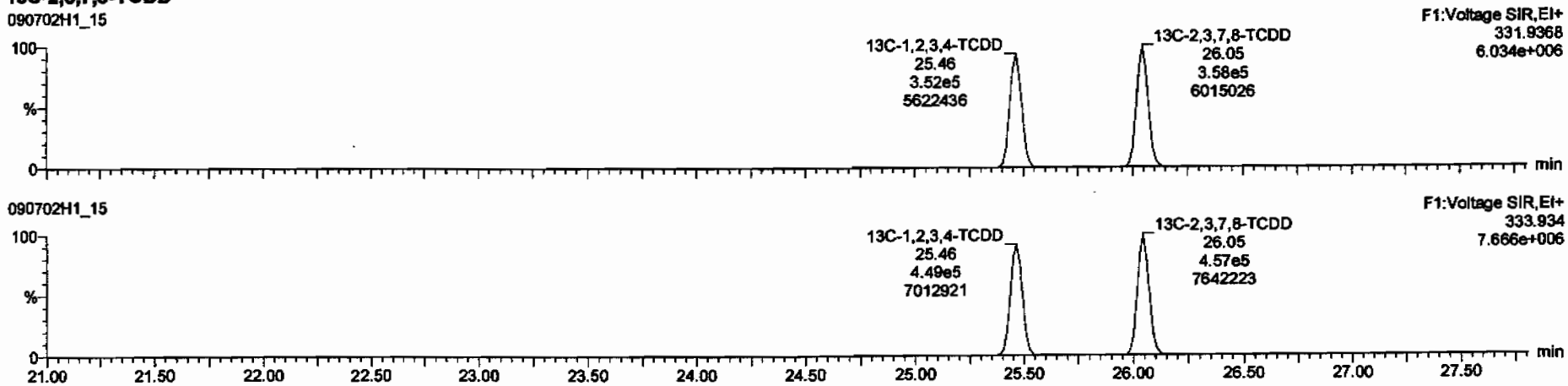

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Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

37Cl-2,3,7,8-TCDD

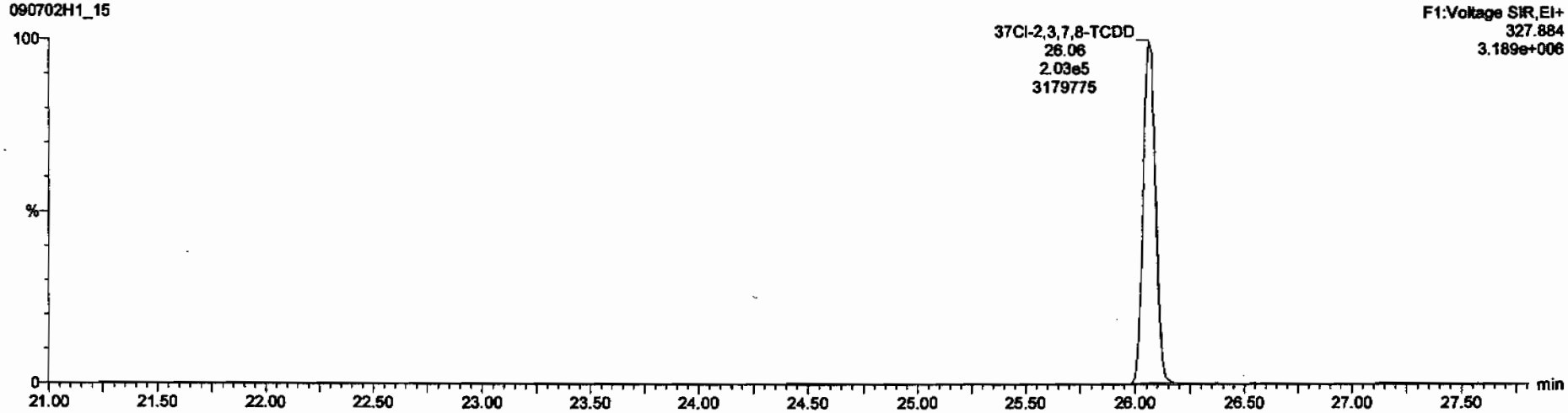

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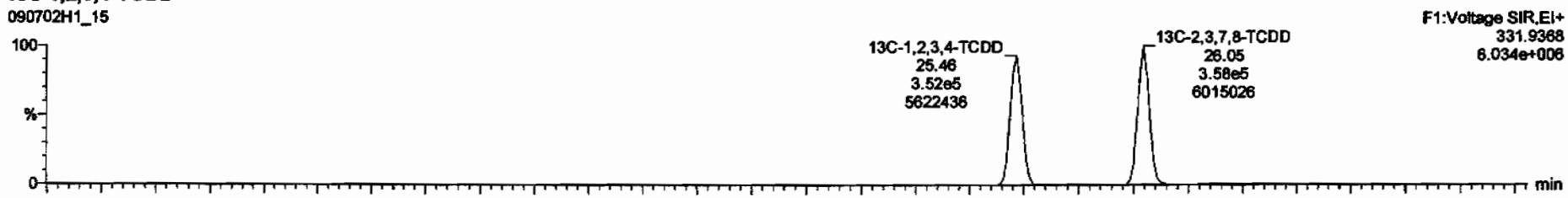

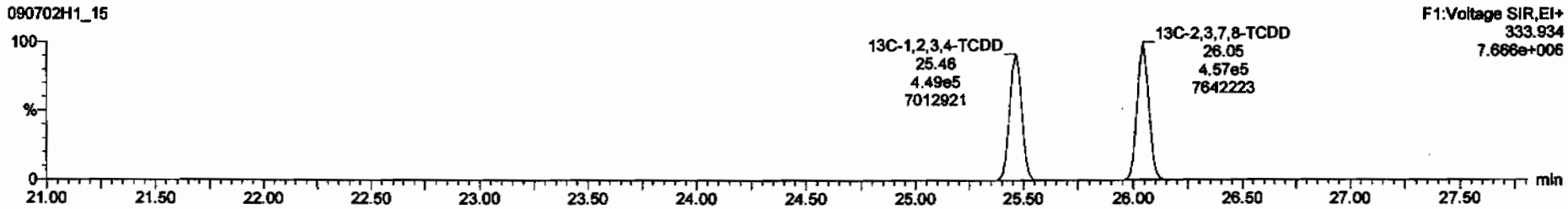

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

1,2,3,7,8-PeCDD

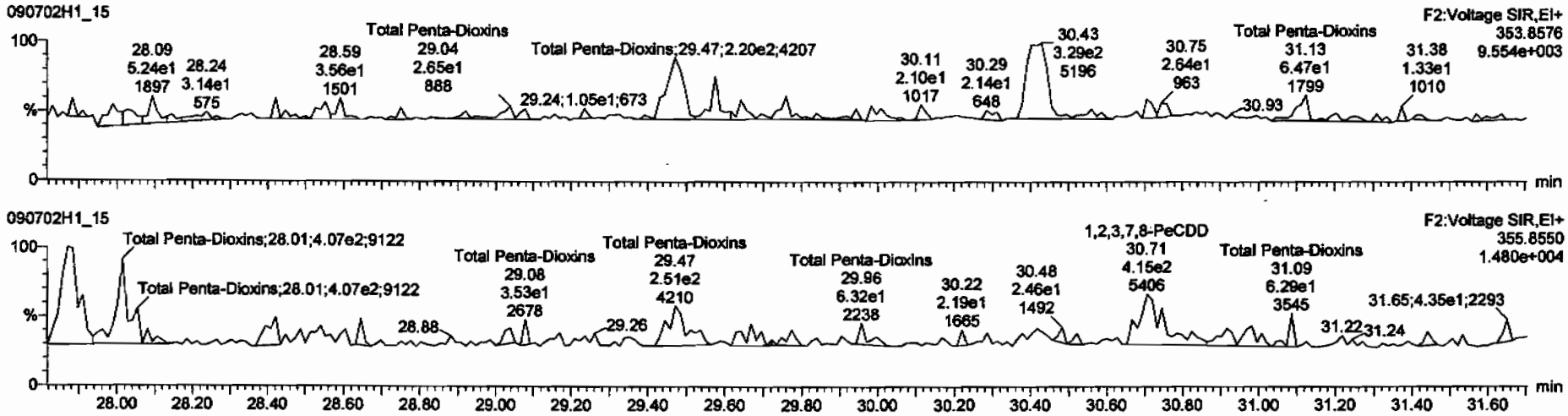

13C-1,2,3,7,8-PeCDD

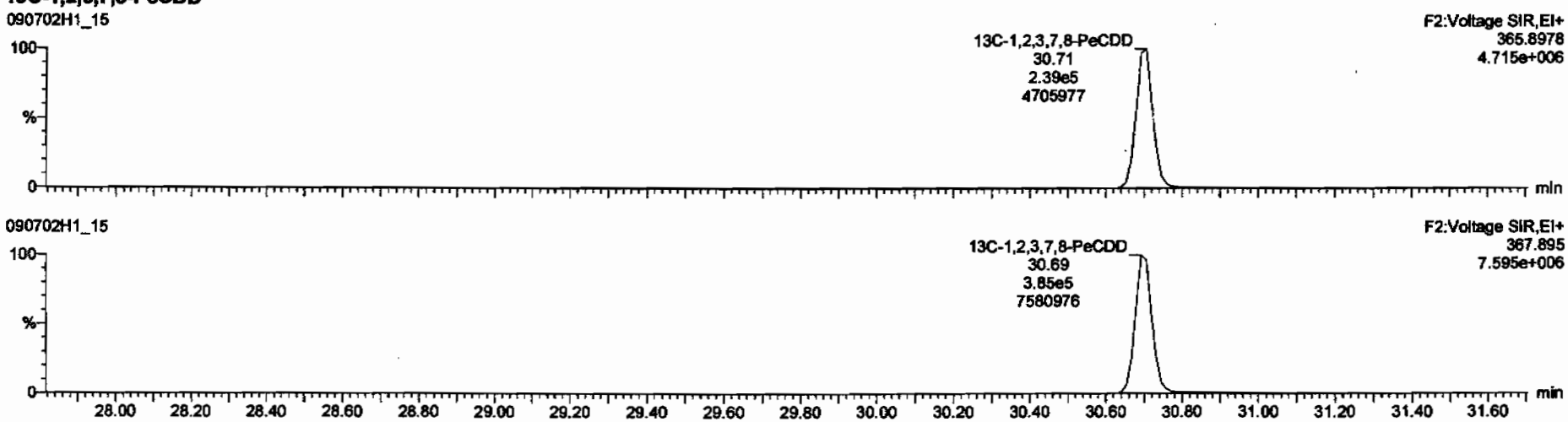

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Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

1,2,3,4,7,8-HxCDD

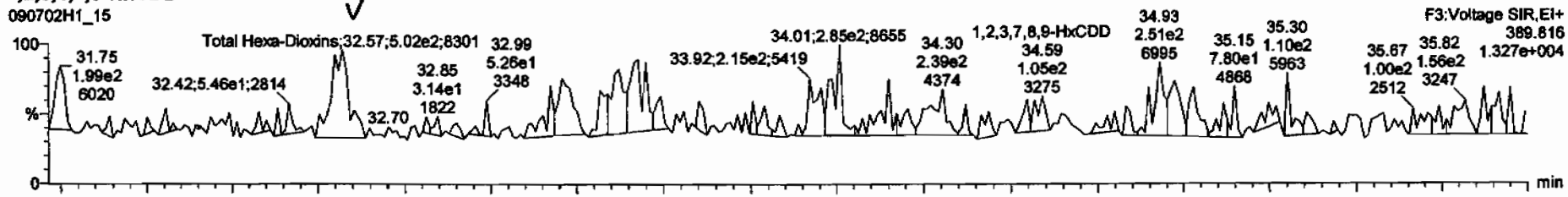

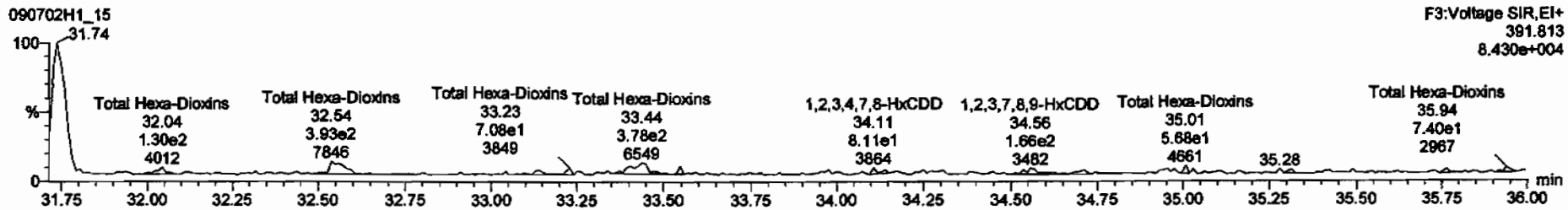

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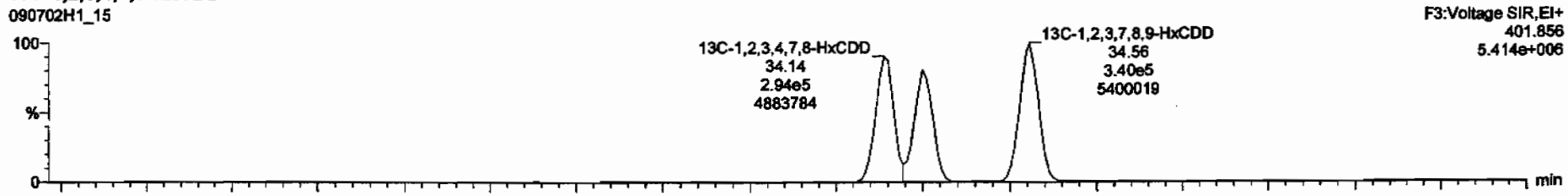

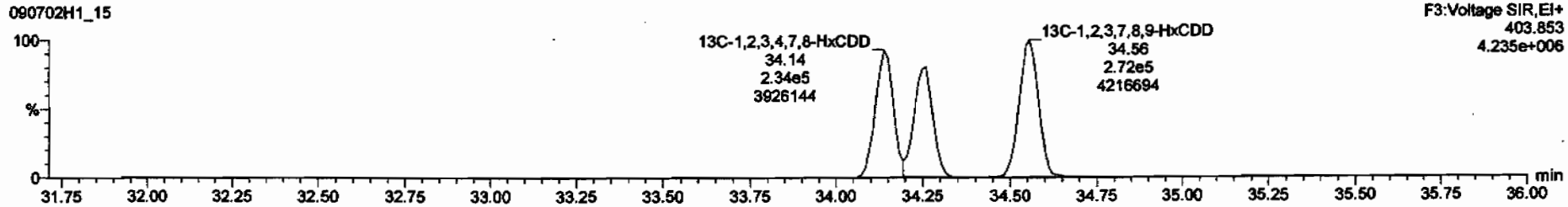

TargetLynx - 090702h1-15.qld * - [Chromatogram]

090702H1_15 - 31850_2214_005 CAMO-09-10030 11.22 - CAMO-09-10030

Total Hexa-Dioxins	32.57	5.016e2	3.933e2	1.28	NO	0.31224	0.31224

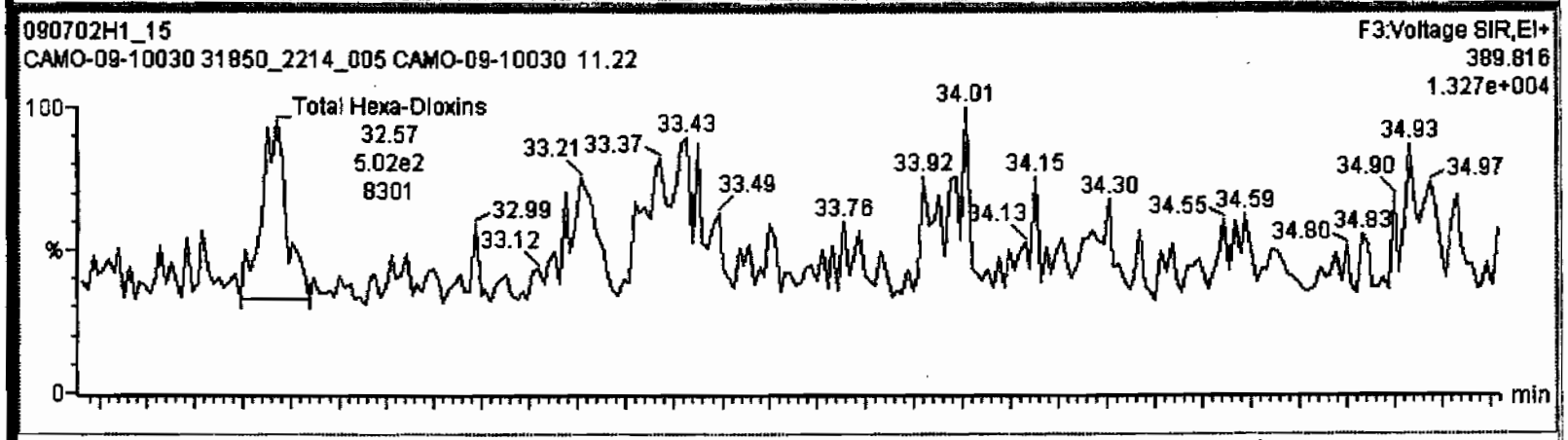

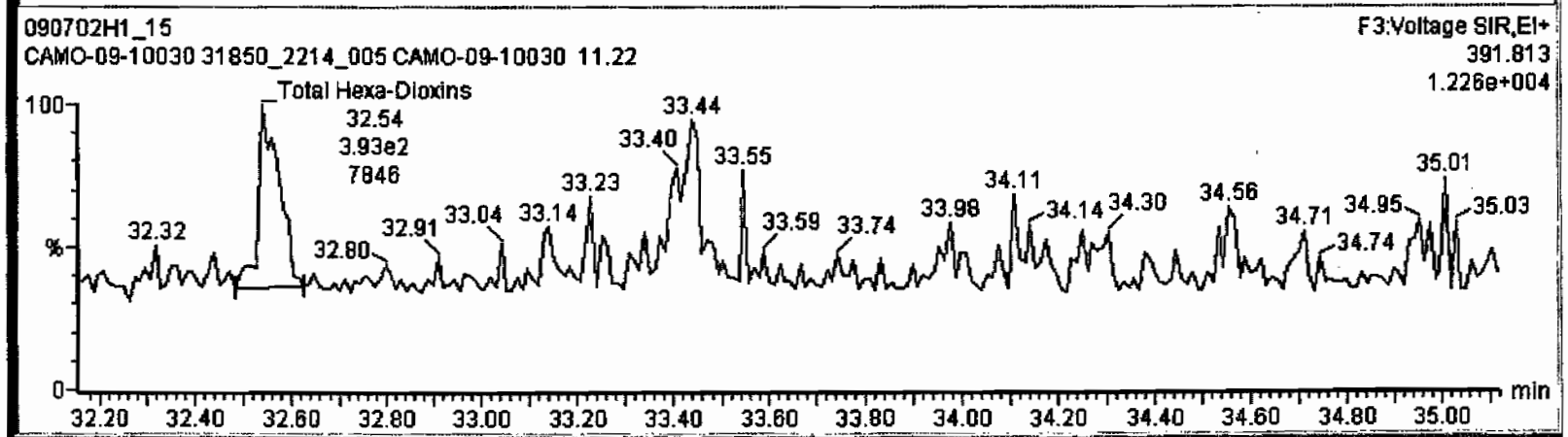

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

1,2,3,4,6,7,8-HpCDD

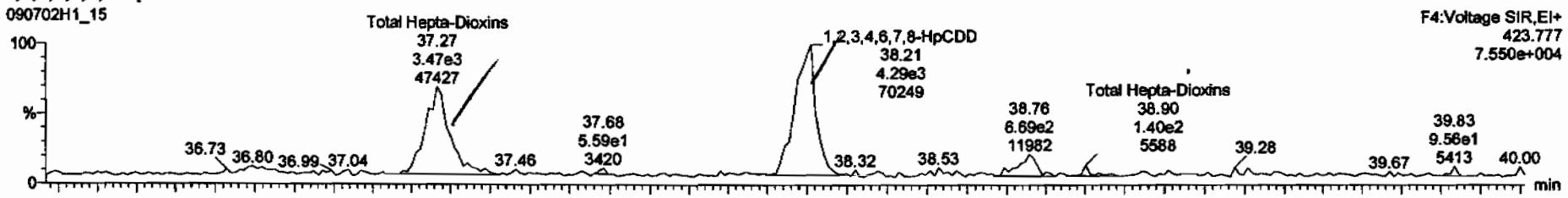

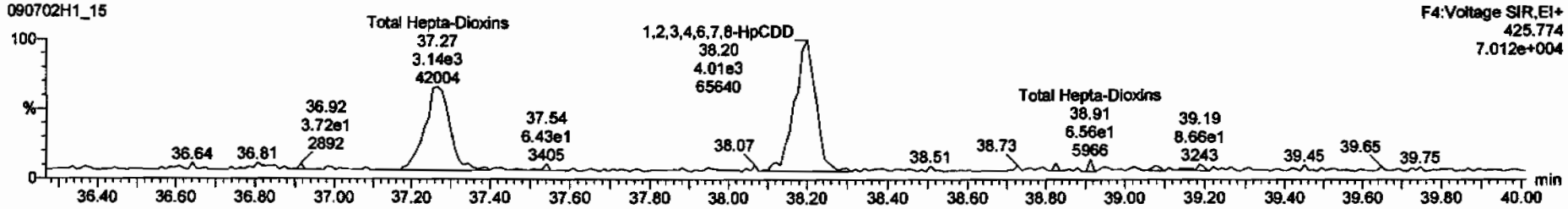

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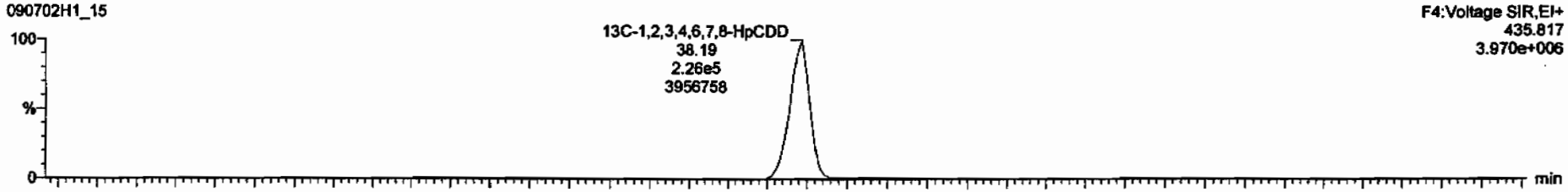

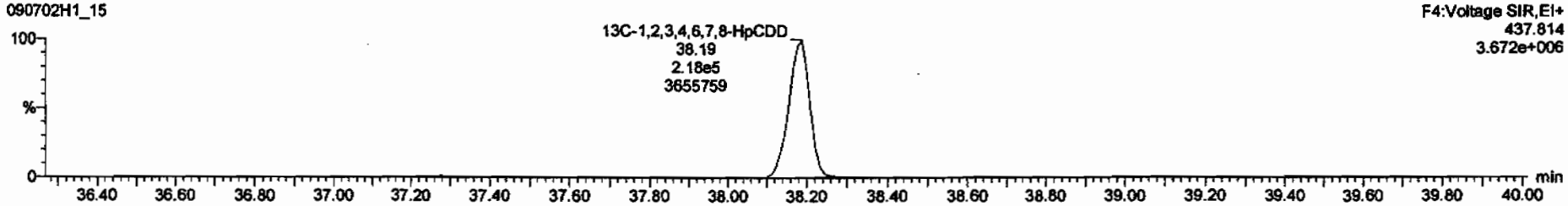

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

OCDD

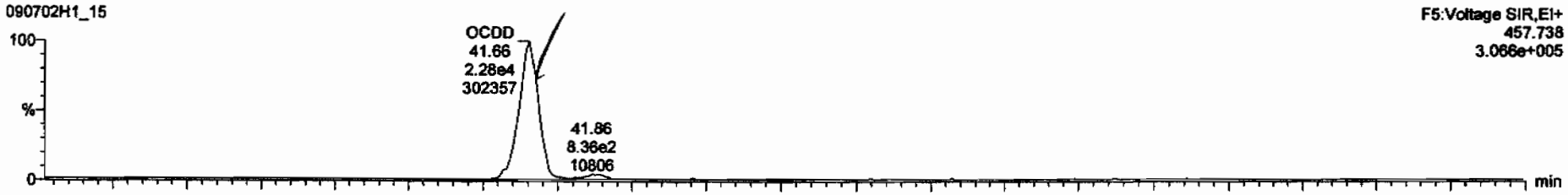

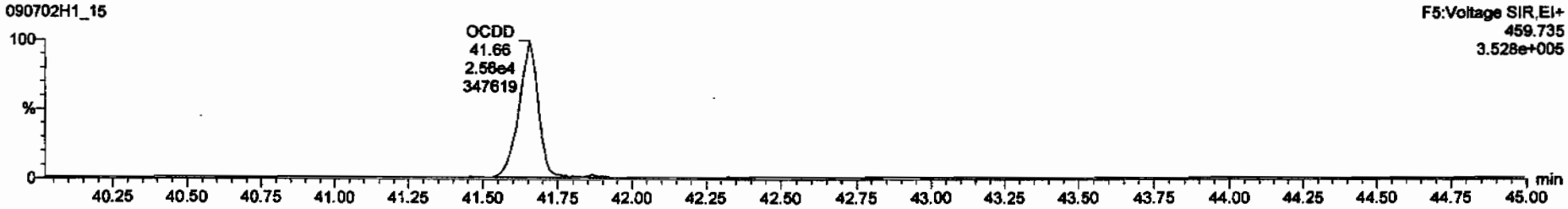

13C-OCDD

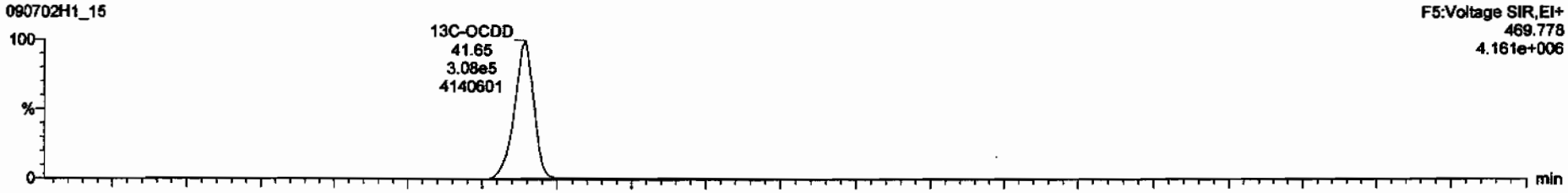

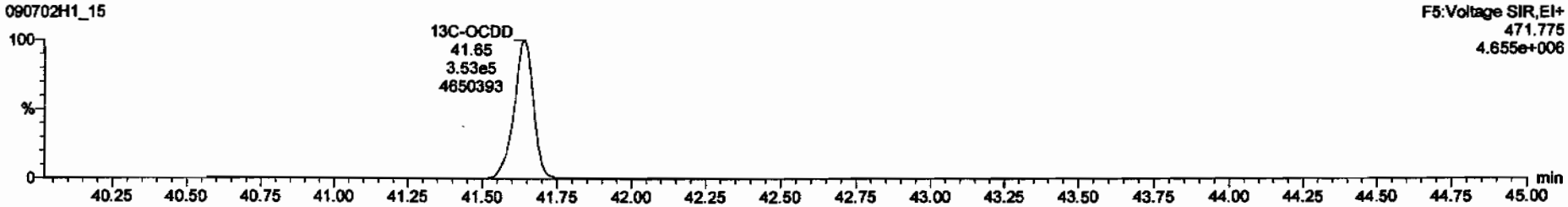

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

2,3,7,8-TCDF

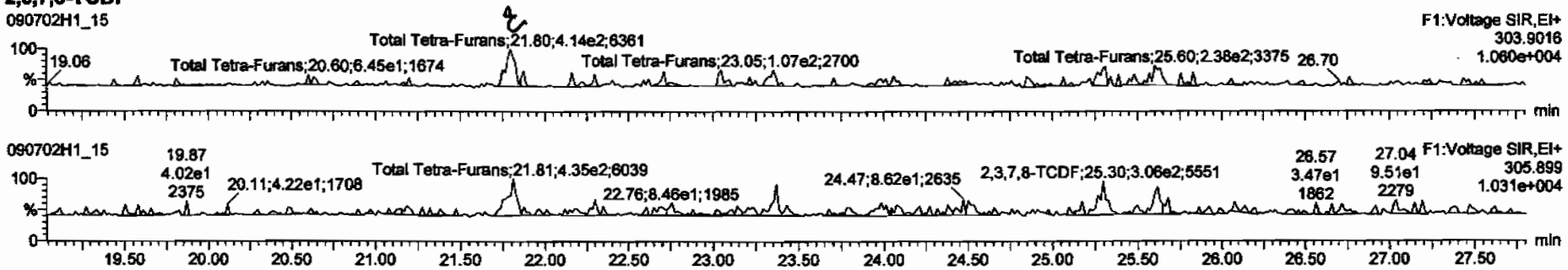

13C-2,3,7,8-TCDF

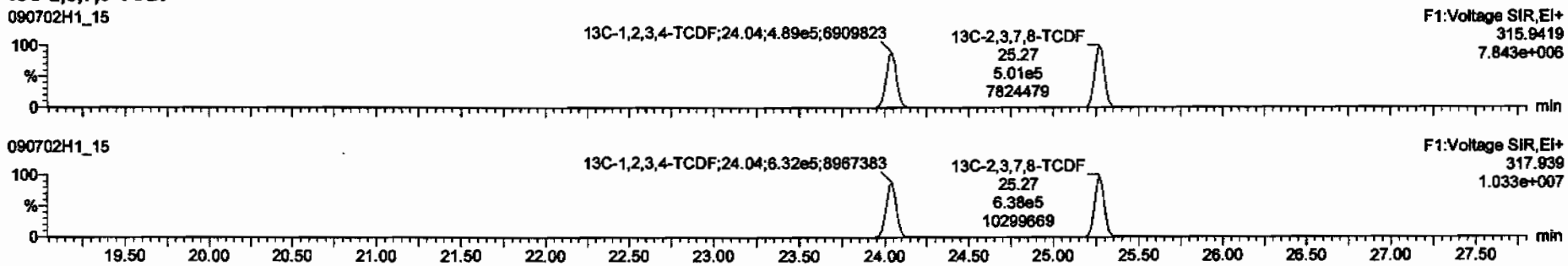

DPE1

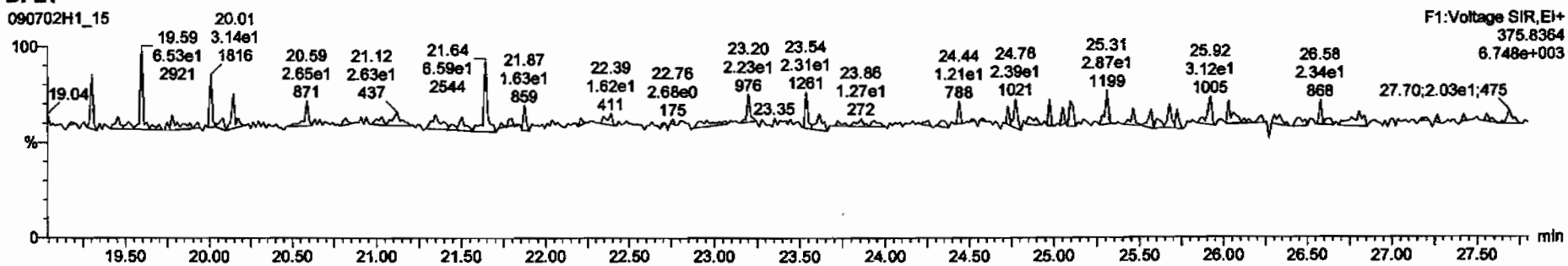

TargetLynx - 090702h1-15.qld * - [Chromatogram]

090702H1_15 - 31850_2214_005 CAMO-09-10030 11.22 - CAMO-09-1003

Total Tetra-Furans	21.80	4.137e2	3.931e2	1.05	YES	0.11072	0.00000

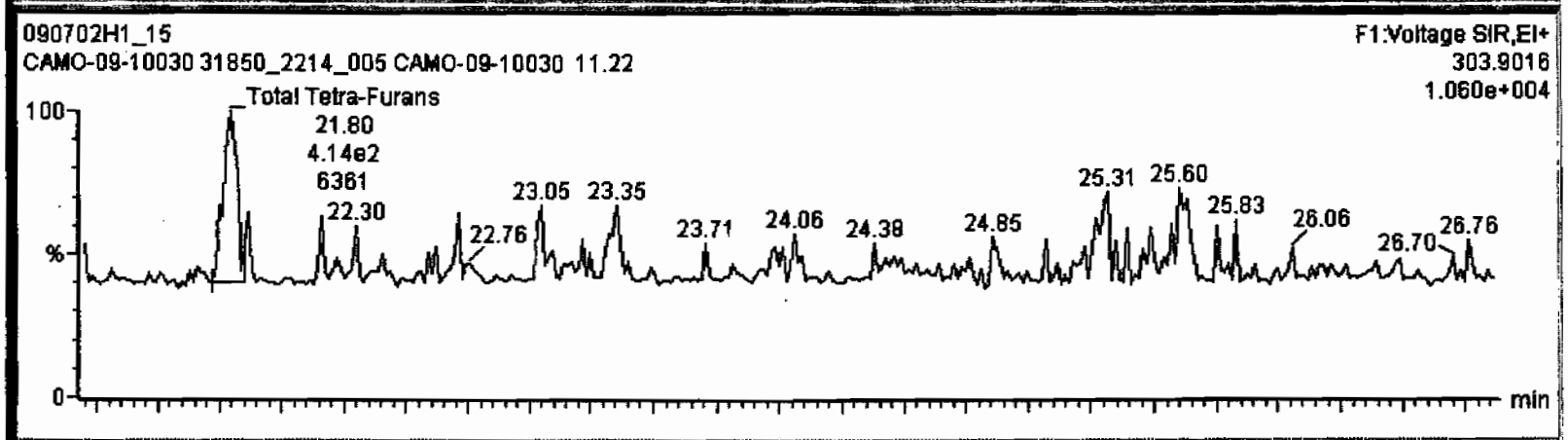

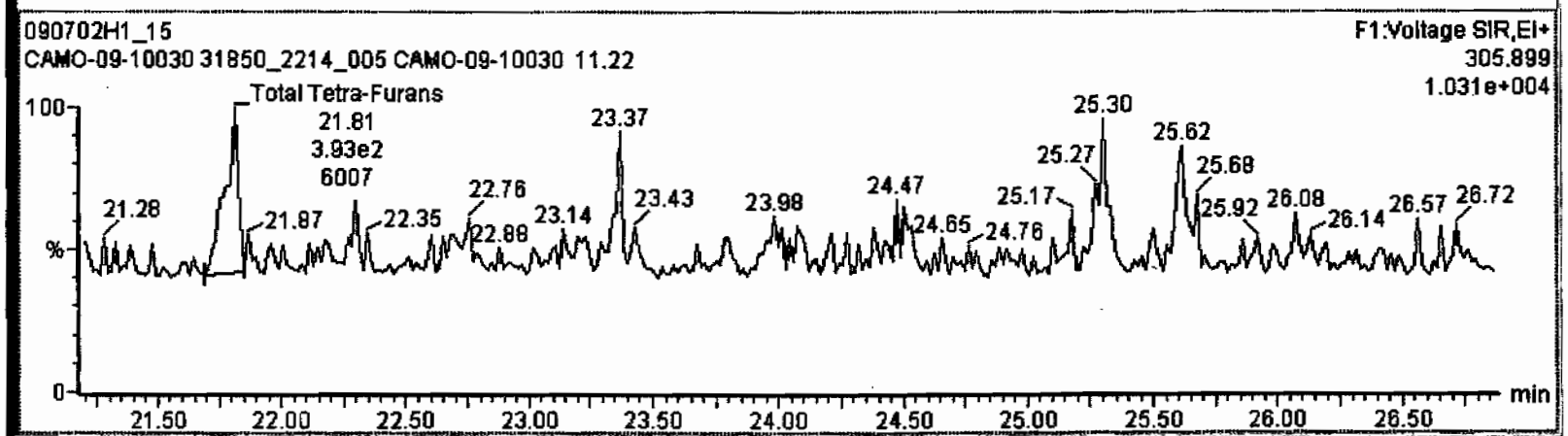

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

1st Func. Penta-Furans

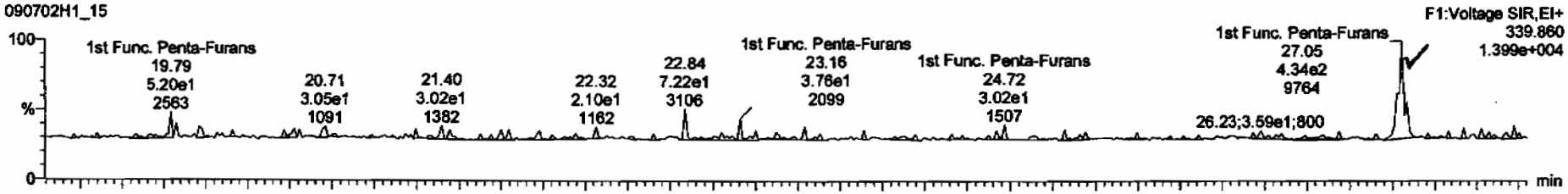

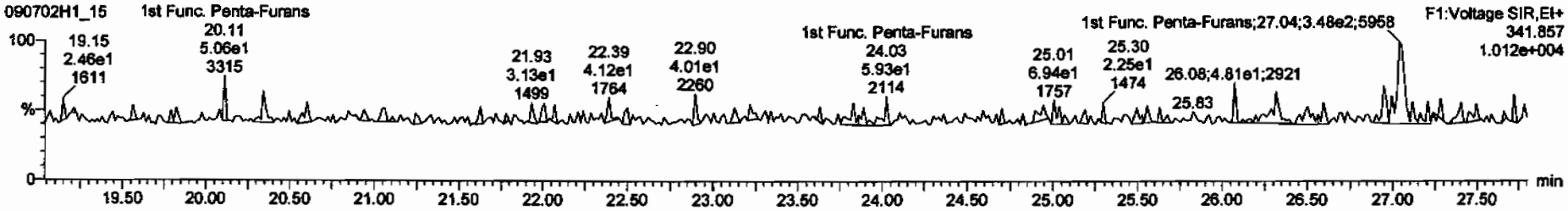

DPE6

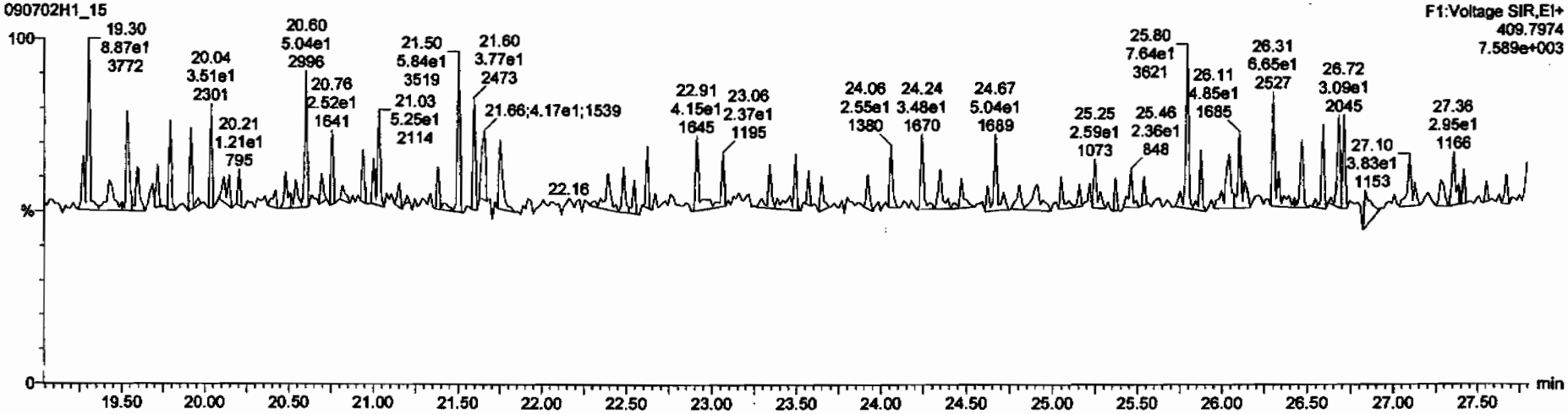

TargetLynx - 090702h1-15.qld * - [Chromatogram]

090702H1_15 - 31850_2214_005 CAMO-09-10030 11.22 - CAMO-09-10030

1st Func. Penta-Furans	27.05	4.287e2	2.792e2	1.54	NO	0.12546	0.12546

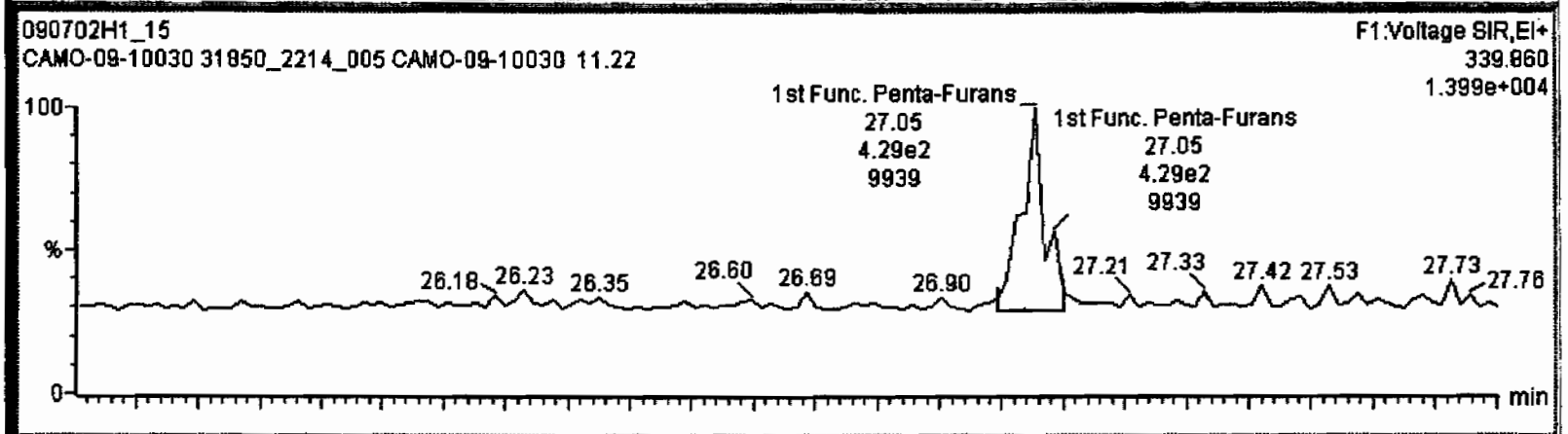

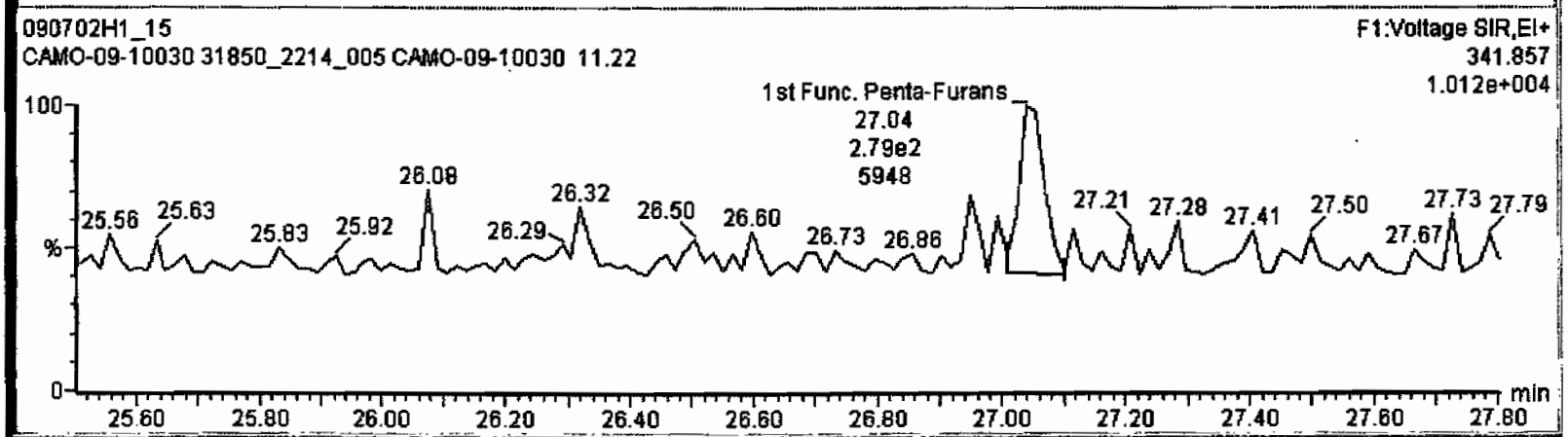

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

1,2,3,7,8-PeCDF

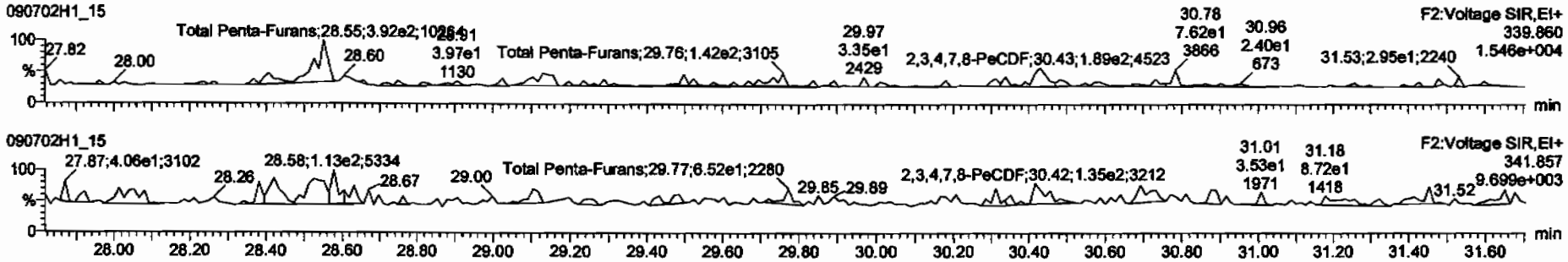

13C-1,2,3,7,8-PeCDF

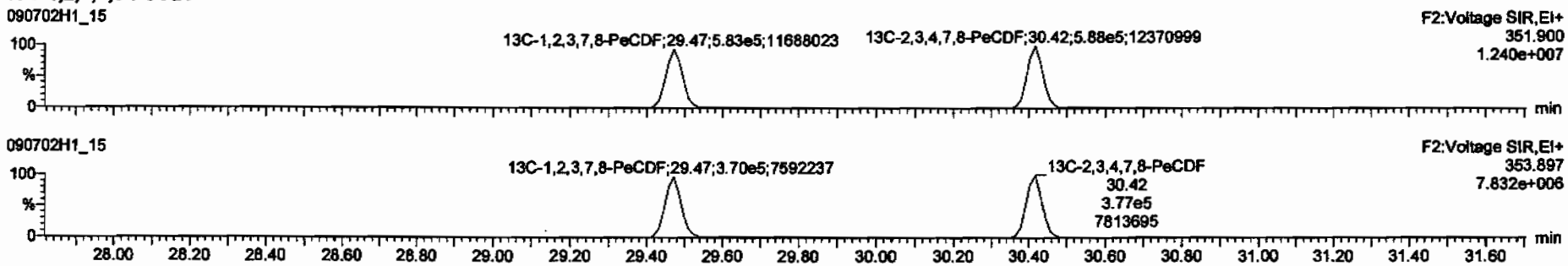

DPE2

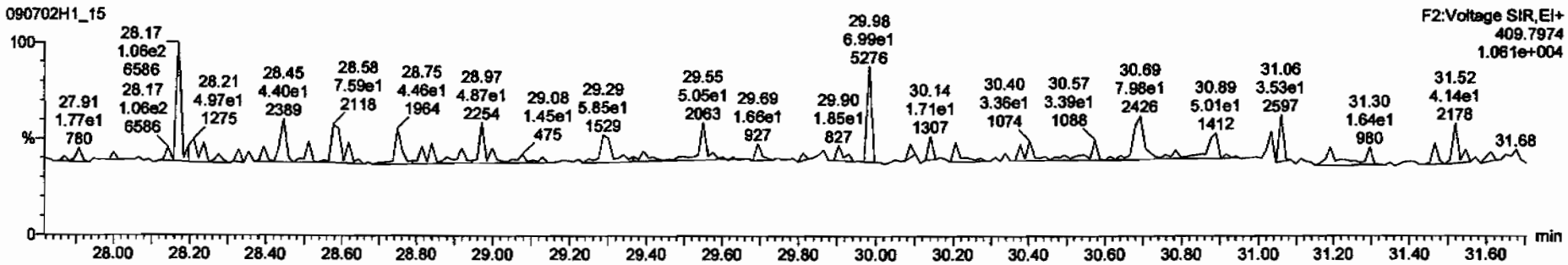

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

1,2,3,4,7,8-HxCDF

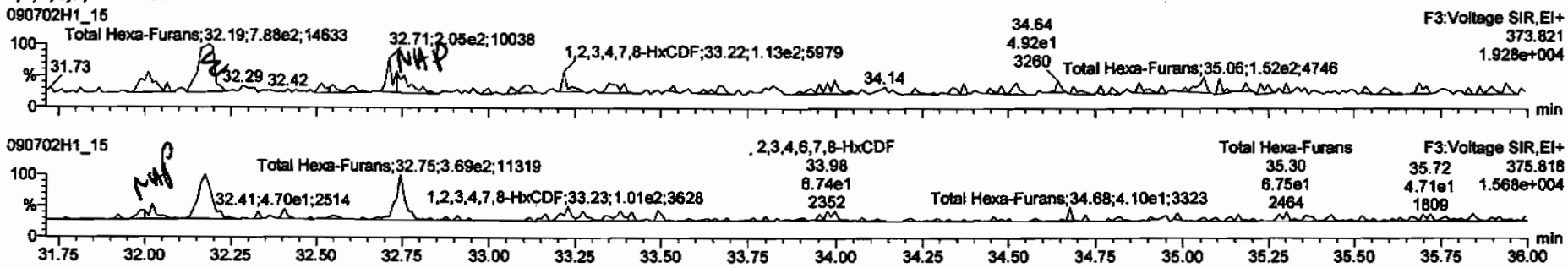

13C-1,2,3,4,7,8-HxCDF

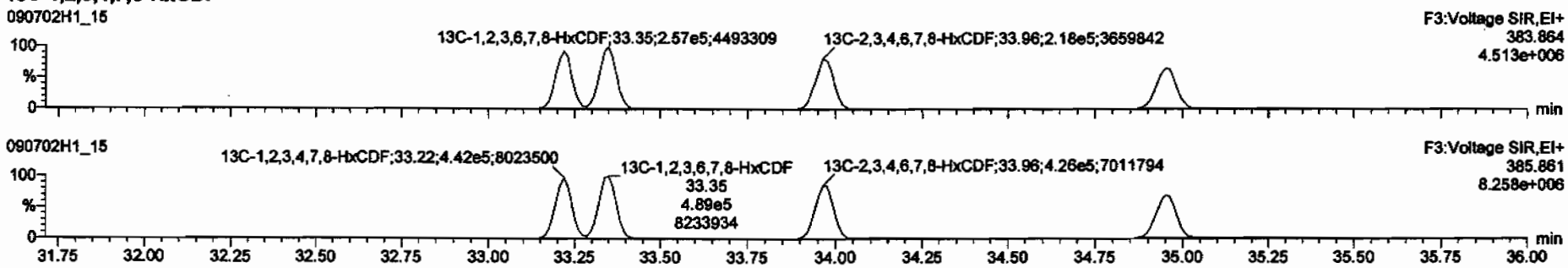

DPE3

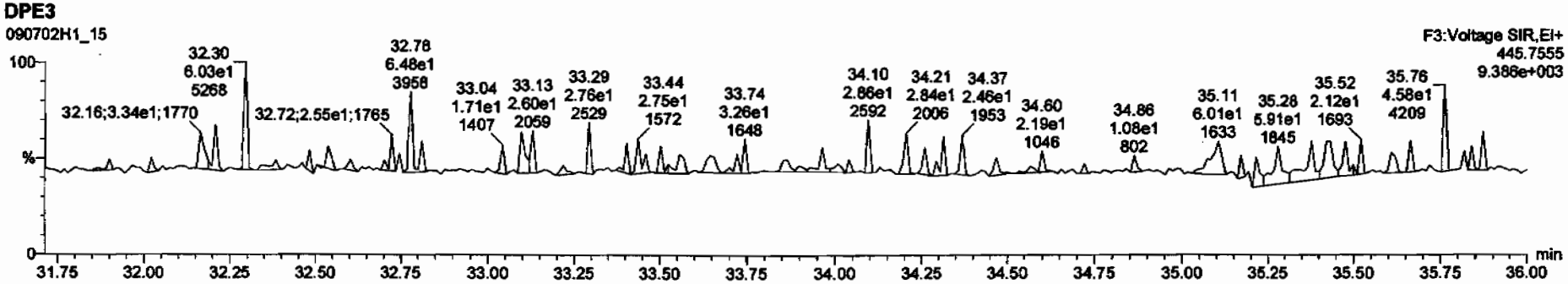

TargetLynx - 090702h1-15.qld * - [Chromatogram]

Total Hexa-Furans	32.19	7.884e2	5.095e2	1.55	YES	0.26624	0.00000

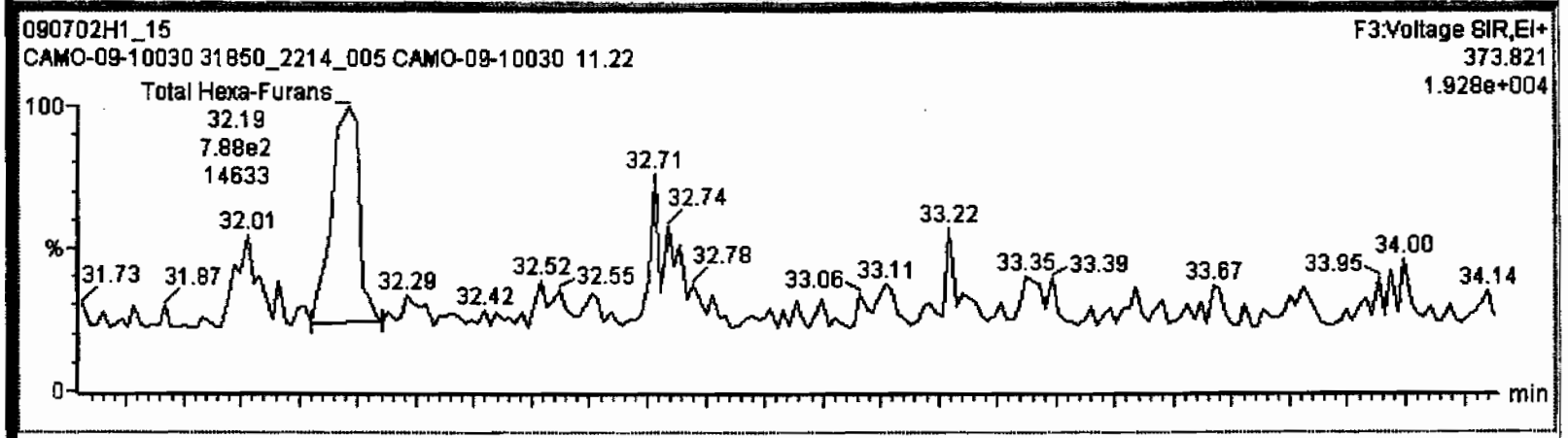

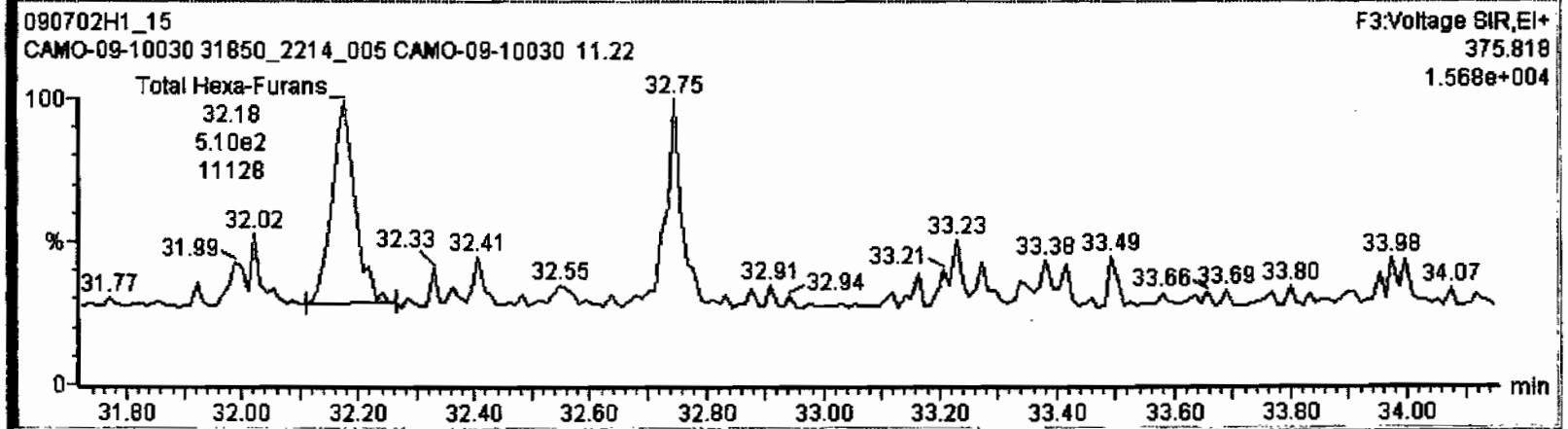

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

1,2,3,4,6,7,8-HpCDF

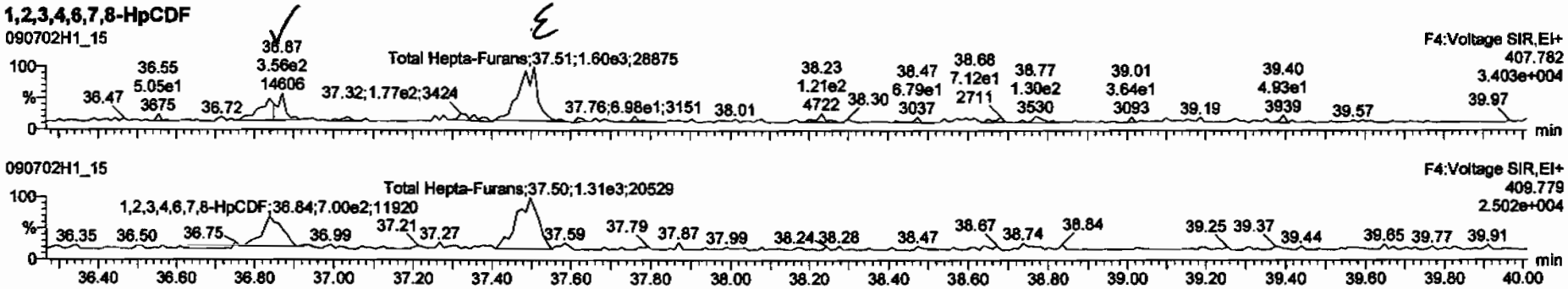

13C-1,2,3,4,6,7,8-HpCDF

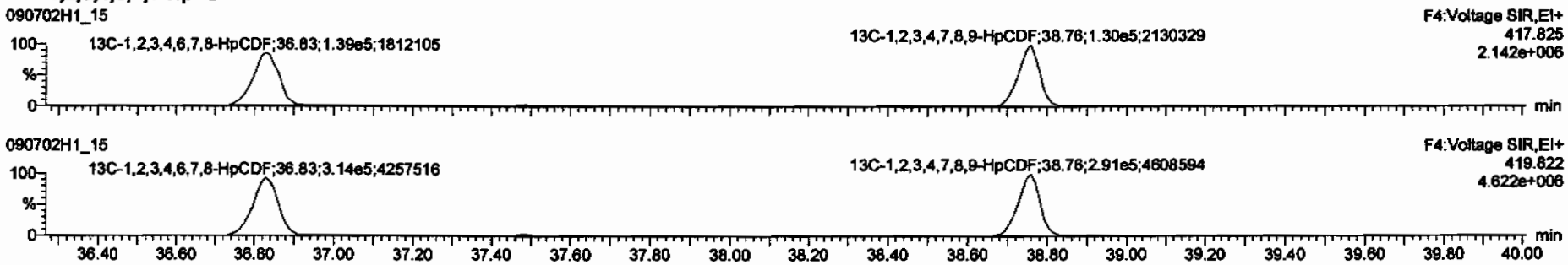

DPE4

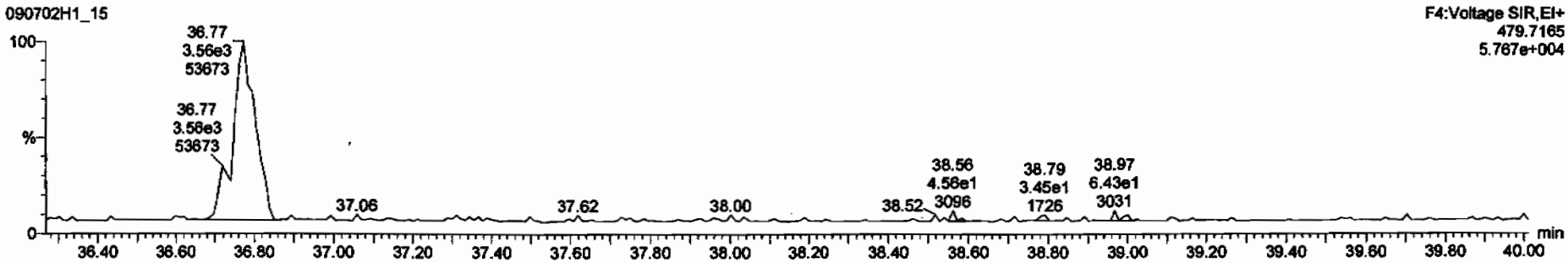

TargetLynx - 090702h1-15.qld * - [Chromatogram]

090702H1_15 - 31850_2214_005 CAMO-09-10030 11.22 - CAMO-09-10030

1,2,3,4,6,7,8-HpCDF	36.87	8.448e2	8.870e2	0.95	NO	0.44619	0.44619
Total Hepta-Furans	37.51	1.679e3	1.311e3	1.28	YES	0.71395	0.00000

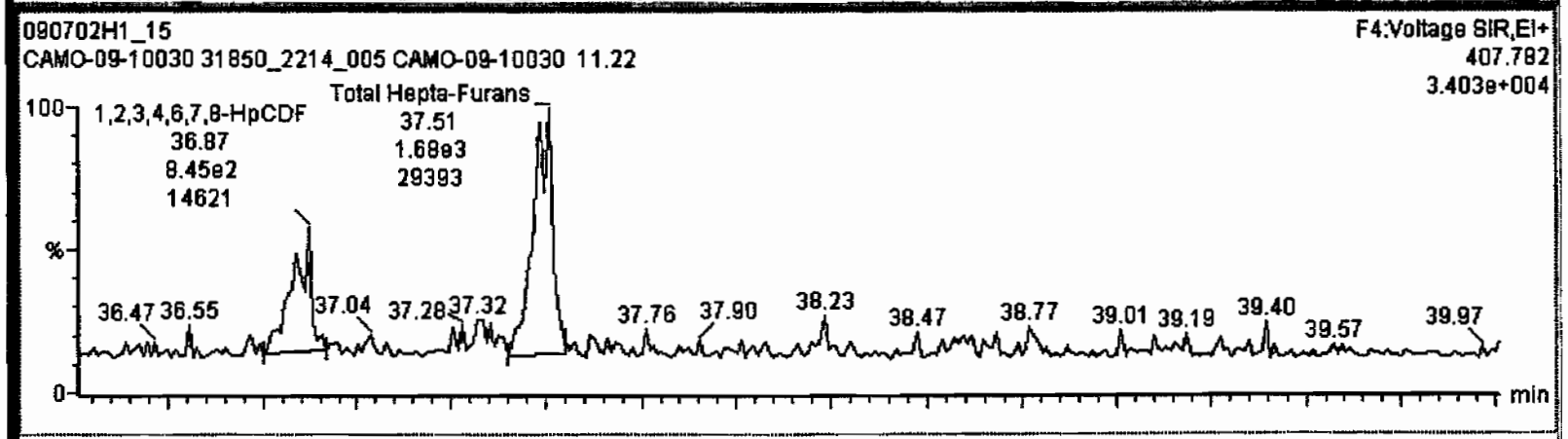

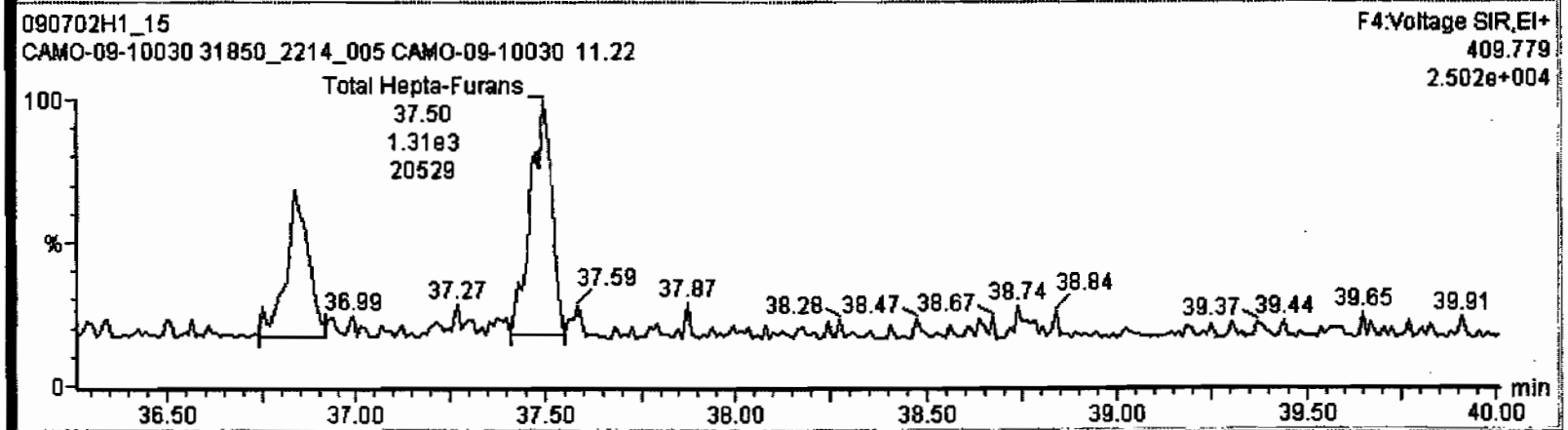

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

OCDF

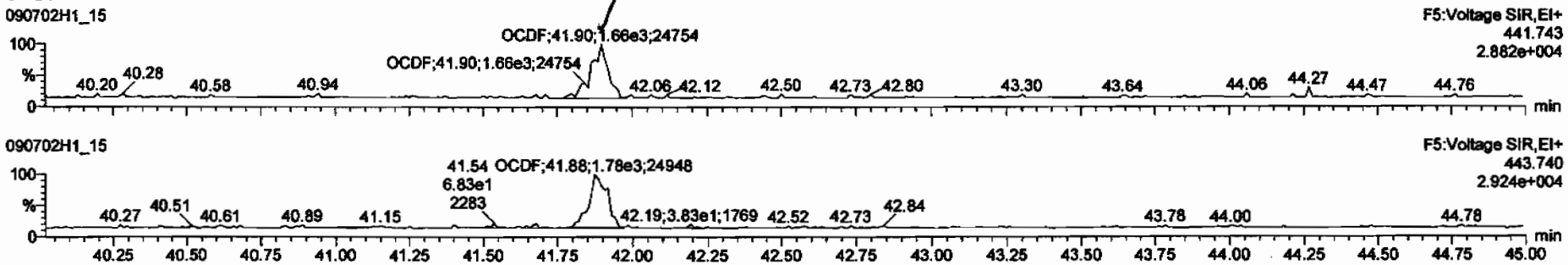

13C-OCDF

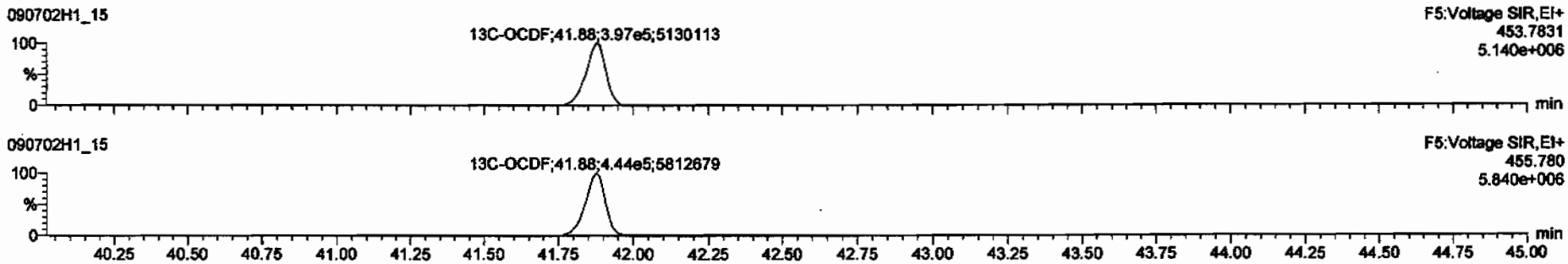

DPE5

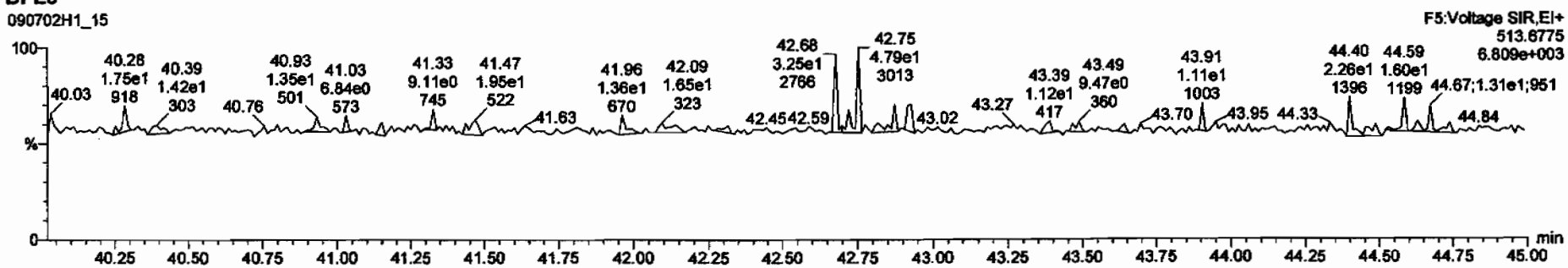

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-15.qld

Last Altered: Monday, July 06, 2009 13:20:46 Pacific Daylight Time
Printed: Monday, July 06, 2009 13:21:00 Pacific Daylight Time

Name: 090702H1_15, Date: 03-Jul-2009, Time: 01:56:54, ID: 31850_2214_005 CAMO-09-10030 11.22, Description: CAMO-09-10030

PFK1

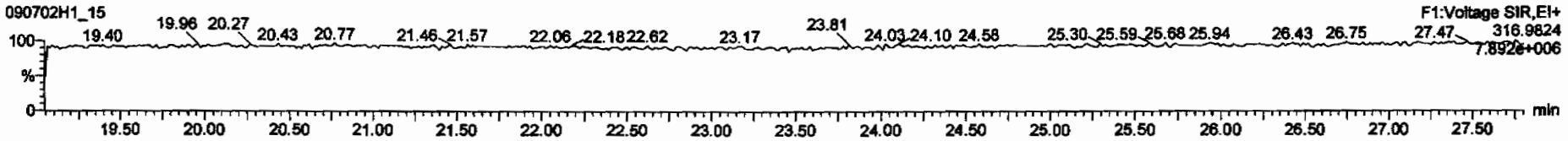

PFK2

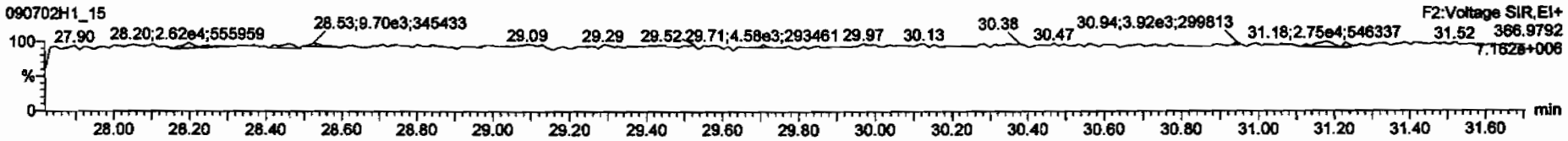

PFK3

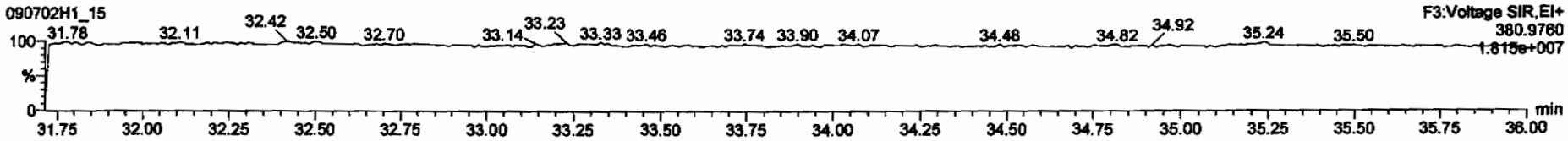

PFK4

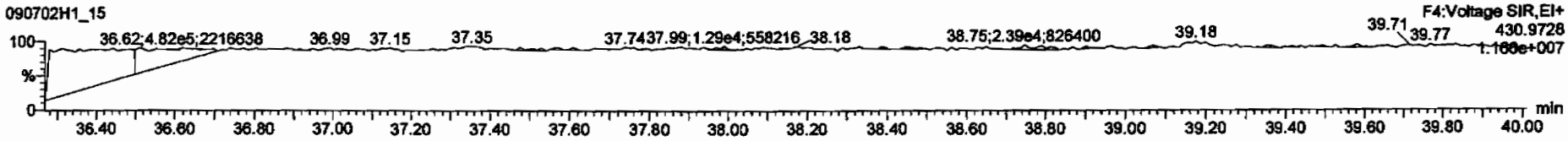

PFK5

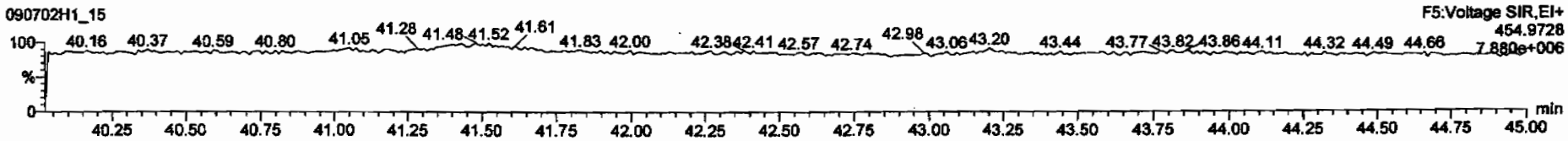

CONFIRMATION

Quantify Sample Summary Report **MassLynx 4.1**

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 12:16:02 Pacific Standard Time
Printed: Tuesday, July 07, 2009 12:16:17 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 30 Jun 2009 11:52:43
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090707F1_4, Date: 07-Jul-2009, Time: 10:34:17, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

	Name	Resp	RA	Dfy	RRF M	wt/vol	RT	Conc	%Rec	
1	2,3,7,8-TCDF	4.92e3	0.71	NO	0.857	10.440	17.42	0.78550		0.0632
2	13C-2,3,7,8-TCDF	1.40e6	0.77	NO	1.06	10.440	17.40	186.13	97.2	0.218
3	13C-1,2,3,4-TCDF	1.36e6	0.77	NO	1.00	10.440	15.31	191.57	100	0.230

7/7/09
7/7/09

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 12:16:02 Pacific Standard Time
Printed: Tuesday, July 07, 2009 12:16:17 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 30 Jun 2009 11:52:43
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090707F1_4, Date: 07-Jul-2009, Time: 10:34:17, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

2,3,7,8-TCDF

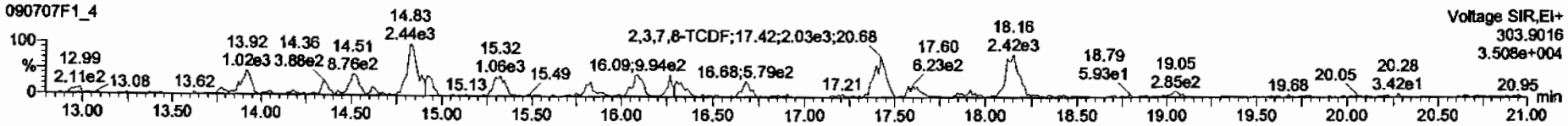

2,3,7,8-TCDF

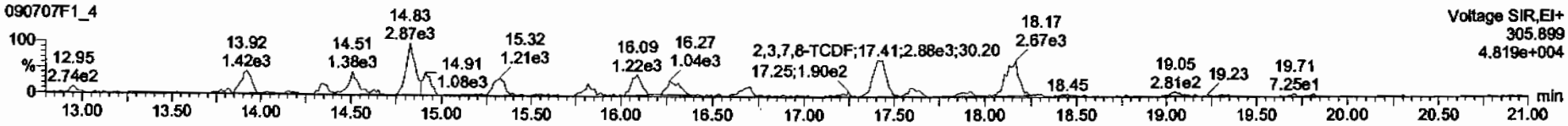

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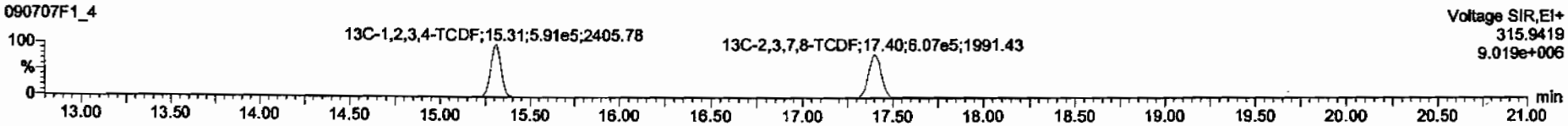

13C-2,3,7,8-TCDF

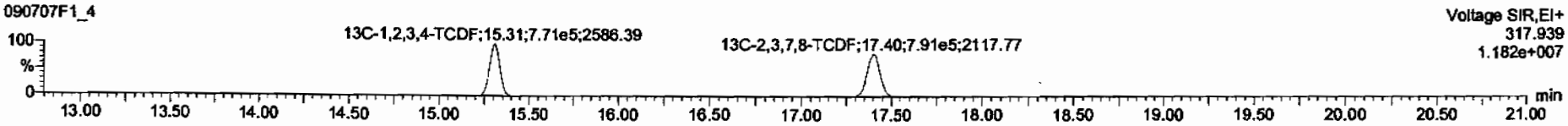

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 12:16:02 Pacific Standard Time
Printed: Tuesday, July 07, 2009 12:16:17 Pacific Standard Time

Name: 090707F1_4, Date: 07-Jul-2009, Time: 10:34:17, ID: 31850_2214_004 CAMO-09-9989 12.48, Description: CAMO-09-9989

PFK1

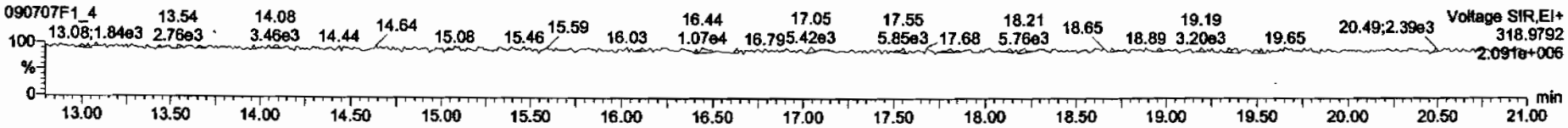

DPE1

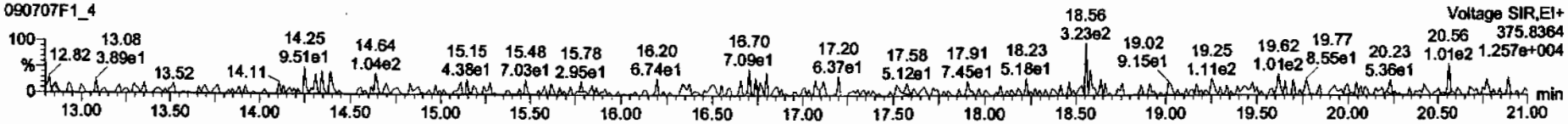

CALIBRATION DATA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

CCAL ID: ST090702H1-1

GC Column ID: DB-5
Analysis Date: 02-Jul-09 Analysis Time: 14:22:39

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	9.09	7.8 8.2	12.9 12.3 (4)	Yes	8.00	12.0	Yes
1,2,3,7,8-PeCDD	M/M+2	0.61	0.54-0.72	NO	45.5	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	45.5	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	45.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	47.0	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	NO	43.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	90.1	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	NO	8.34	8.4 8.6	12.0 11.6 (4)	No	8.00	12.0	Yes
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	41.5	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	41.7	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	44.0	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.7	44.0	57.0	No	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.8	44.0	57.0	No	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.8	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	44.4	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	45.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.90	0.76-1.02	NO	87.8	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/2/09

8290 only

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_1

CCAL ID: ST090702H1-1

GC Column ID: DB-5
Analysis Date: 02-Jul-09 Analysis Time: 14:22:39

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	NO	107	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	99.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	93.1	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	NO	105	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.90	0.76-1.02	NO	226	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	NO	103	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	NO	97.5	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	104	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	93.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	94.8	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	NO	96.5	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	NO	93.4	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	98.9	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.89	0.76-1.02	NO	206	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.96	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 7/2/09

8290 only

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:05:37 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:05:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.70
2	1,2,8,9-TCDD (Last)	26.95
3	1,2,4,7,9-PeCDD (First)	28.58
4	1,2,3,8,9-PeCDD (Last)	31.09
5	12,4,6,7,9-HxCDD (First)	32.56
6	1,2,3,7,8,9-HxCDD (Last)	34.57
7	1,2,3,4,6,7,9-HpCDD (First)	37.27
8	1,2,3,4,6,7,8-HpCDD (Last)	38.20
9	1,3,6,8-TCDF (First)	20.60
10	1,2,8,9-TCDF (Last)	27.12
11	1,3,4,6,8-PeCDF (First)	27.02
12	1,2,3,8,9-PeCDF (Last)	31.35
13	1,2,3,4,6,8-HxCDF (First)	32.01
14	1,2,3,4,8,9-HxCDF (Last)	34.96
15	1,2,3,4,6,7,8-HpCDF (First)	36.84
16	1,2,3,4,7,8,9-HpCDF (Last)	38.77

7/2/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090702H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090702H1_1

Analysis Date: 02-Jul-09

Analysis Time: 14:22:39

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.205	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.157	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.194	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/2/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090702H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090702H1_1

Analysis Date: 02-Jul-09

Analysis Time: 14:22:39

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.962	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.012	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/2/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:16:13 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	6.17e4	0.79	NO	1.08	1.000	26.08	1.001	9.0888	90.9	0.0376	9.0888
2	1,2,3,7,8-PeCDD	2.25e5	0.61	NO	1.03	1.000	30.72	1.000	45.521	91.0	0.0790	45.521
3	1,2,3,4,7,8-HxCDD	1.91e5	1.23	NO	1.00	1.000	34.15	1.001	45.479	91.0	0.198	45.479
4	1,2,3,6,7,8-HxCDD	1.96e5	1.26	NO	1.13	1.000	34.26	1.000	45.639	91.3	0.208	45.639
5	1,2,3,7,8,9-HxCDD	2.08e5	1.23	NO	1.10	1.000	34.57	1.009	47.045	94.1	0.196	47.045
6	1,2,3,4,6,7,8-HpCDD	1.54e5	1.02	NO	1.06	1.000	38.20	1.000	43.741	87.5	0.248	43.741
7	OCDD	2.69e5	0.90	NO	1.18	1.000	41.66	1.001	90.062	90.1	0.200	90.062
8	2,3,7,8-TCDF	8.19e4	0.75	NO	1.09	1.000	25.30	1.001	8.3365	83.4	0.0318	8.3365
9	1,2,3,7,8-PeCDF	3.82e5	1.58	NO	1.16	1.000	29.48	1.000	41.481	83.0	0.0940	41.481
10	2,3,4,7,8-PeCDF	3.53e5	1.57	NO	1.12	1.000	30.43	1.000	41.664	83.3	0.0968	41.664
11	1,2,3,4,7,8-HxCDF	3.37e5	1.25	NO	1.41	1.000	33.23	1.000	44.011	88.0	0.103	44.011
12	1,2,3,6,7,8-HxCDF	3.36e5	1.26	NO	1.22	1.000	33.36	1.001	43.657	87.3	0.108	43.657
13	2,3,4,6,7,8-HxCDF	2.96e5	1.27	NO	1.28	1.000	33.98	1.000	43.754	87.5	0.132	43.754
14	1,2,3,7,8,9-HxCDF	2.56e5	1.26	NO	1.26	1.000	34.96	1.000	44.823	89.6	0.172	44.823
15	1,2,3,4,6,7,8-HpCDF	2.71e5	1.05	NO	1.69	1.000	36.84	1.000	44.449	88.9	0.201	44.449
16	1,2,3,4,7,8,9-HpCDF	2.16e5	1.05	NO	1.48	1.000	38.77	1.000	45.539	91.1	0.218	45.539
17	OCDF	3.35e5	0.90	NO	1.10	1.000	41.89	1.001	87.818	87.8	0.124	87.818
18	13C-2,3,7,8-TCDD	6.30e5	0.79	NO	1.01	1.000	26.05	1.022	106.82	107	0.144	
19	13C-1,2,3,7,8-PeCDD	4.79e5	0.63	NO	0.827	1.000	30.71	1.205	99.713	99.7	0.123	
20	13C-1,2,3,4,7,8-HxCDD	4.20e5	1.27	NO	0.916	1.000	34.13	0.988	102.85	103	0.305	
21	13C-1,2,3,6,7,8-HxCDD	3.82e5	1.25	NO	0.921	1.000	34.25	0.991	93.129	93.1	0.303	
22	13C-1,2,3,4,6,7,8-HpCDD	3.31e5	1.05	NO	0.708	1.000	38.19	1.105	104.78	105	0.497	
23	13C-OCDD	5.07e5	0.90	NO	0.503	1.000	41.63	1.205	226.08	113	0.384	
24	13C-2,3,7,8-TCDF	9.03e5	0.78	NO	0.977	1.000	25.28	0.992	106.98	107	0.123	
25	13C-1,2,3,7,8-PeCDF	7.95e5	1.55	NO	0.896	1.000	29.47	1.157	102.56	103	0.208	
26	13C-2,3,4,7,8-PeCDF	7.58e5	1.54	NO	0.900	1.000	30.42	1.194	97.527	97.5	0.208	
27	13C-1,2,3,4,7,8-HxCDF	5.42e5	0.52	NO	1.17	1.000	33.22	0.962	104.03	104	0.386	
28	13C-1,2,3,6,7,8-HxCDF	6.30e5	0.51	NO	1.52	1.000	33.34	0.965	93.007	93.0	0.297	
29	13C-2,3,4,6,7,8-HxCDF	5.28e5	0.52	NO	1.25	1.000	33.96	0.983	94.807	94.8	0.361	
30	13C-1,2,3,7,8,9-HxCDF	4.53e5	0.51	NO	1.05	1.000	34.95	1.012	96.548	96.5	0.428	

JZ 7/2/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

Last Altered: Thursday, July 02, 2009 15:15:17 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:16:13 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	3.62e5	0.45	NO	0.868	1.000	36.83	1.066	93.417	93.4	0.449
32	13C-1,2,3,4,7,8,9-HpCDF	3.20e5	0.45	NO	0.727	1.000	38.76	1.122	98.909	98.9	0.536
33	13C-OCDF	6.97e5	0.89	NO	0.760	1.000	41.86	1.212	205.67	103	0.232
34	37Cl-2,3,7,8-TCDD	3.86e4			0.668	1.000	26.08	1.023	9.9558	99.6	0.0608
35	13C-1,2,3,4-TCDD	5.81e5	0.78	NO	1.00	1.000	25.48	0.000	100.00	100	0.146
36	13C-1,2,3,4-TCDF	8.64e5	0.79	NO	1.00	1.000	24.06	0.000	100.00	100	0.120
37	13C-1,2,3,7,8,9-HxCDD	4.46e5	1.25	NO	1.00	1.000	34.55	0.000	100.00	100	0.279

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 06:54:46 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:05:01 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 2,3,7,8-TCDD

	090702H1_1	ST090702H1-1 1613 CS3 080917I	02-Jul-09	14:22:39
	090702H1_2	0_2214_OPR001	02-Jul-09	15:13:01
	090702H1_3	solvent blank	02-Jul-09	16:02:37
	090702H1_4	0_2214_MB001	02-Jul-09	16:52:06
	090702H1_5	31845_2214_001 CAMO-09-10464 10.61	02-Jul-09	17:41:36
	090702H1_6	31845_2214_002 CAMO-09-10465 10.5	02-Jul-09	18:31:05
	090702H1_7	31846_2214_001 CAMO-09-9946 12.7	02-Jul-09	19:20:36
	090702H1_8	31847_2214_001 CAMO-09-6518 11.68	02-Jul-09	20:10:06
	090702H1_9	31847_2214_002 CAMO-09-6519 13.07	02-Jul-09	20:59:34
	090702H1_10	31847_2214_003 CAMO-09-6531 11.58	02-Jul-09	21:49:03
	090702H1_11	31850_2214_001 CAMO-09-9941 11.19	02-Jul-09	22:38:41
	090702H1_12	31850_2214_002 CAMO-09-9942 11.32	02-Jul-09	23:28:16
	090702H1_13	31850_2214_003 CAMO-09-9943 11.85	03-Jul-09	00:17:49
	090702H1_14	31850_2214_004 CAMO-09-9989 12.48	03-Jul-09	01:07:22
	090702H1_15	31850_2214_005 CAMO-09-10030 11.22	03-Jul-09	01:56:54
	090702H1_16	solvent blank	03-Jul-09	02:46:25
	090702H1_17	ST090702H1-2 1613 CS3 080917I	03-Jul-09	03:35:57

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090702HI-1

End Calibration ID: ST090702HI-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range?	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits	NA	
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments: 8290 only

Reviewed by: DMS 7/3/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 mh

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:20:01 Pacific Daylight Time

M 292.9824 R 14449

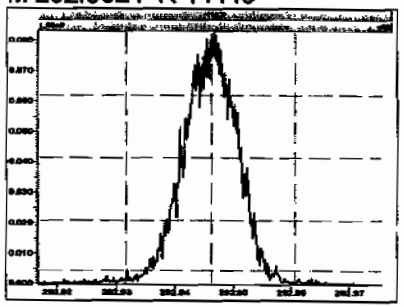

M 304.9824 R 14701

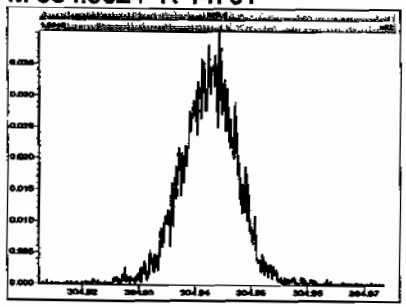

M 318.9792 R 14971

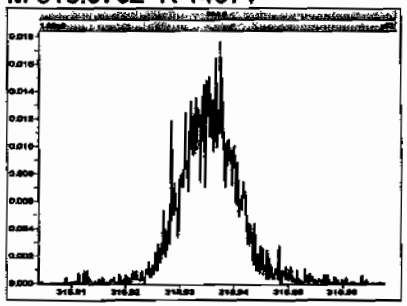

M 330.9792 R 13659

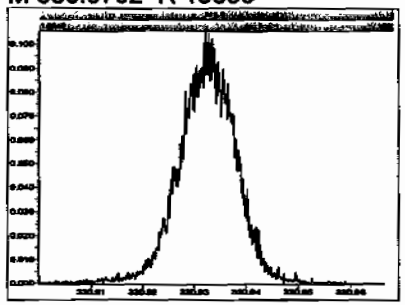

M 342.9792 R 12955

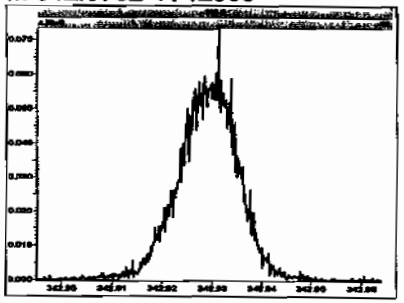

M 354.9792 R 13227

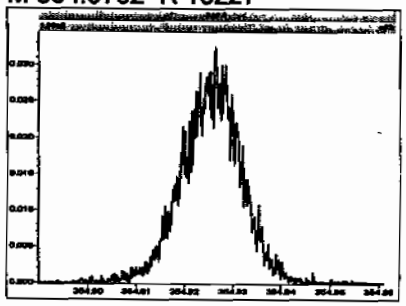

M 366.9792 R 13295

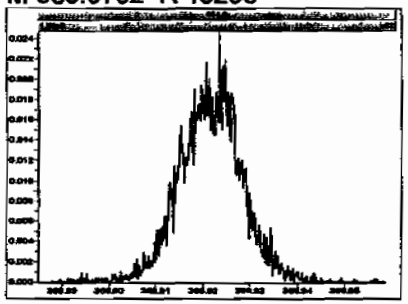

M 380.9760 R 13022

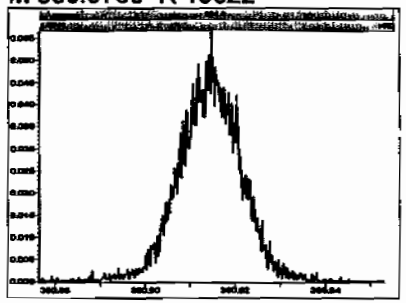

M 392.9760 R 12376

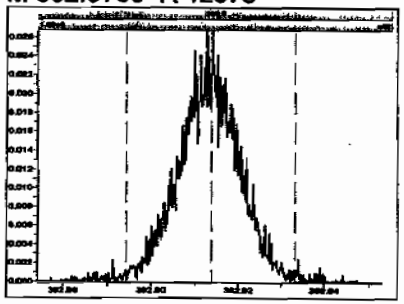

M 404.9760 R 13511

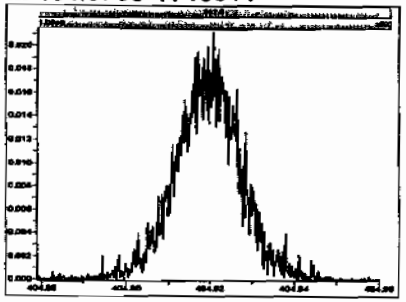

M 416.9760 R 12687

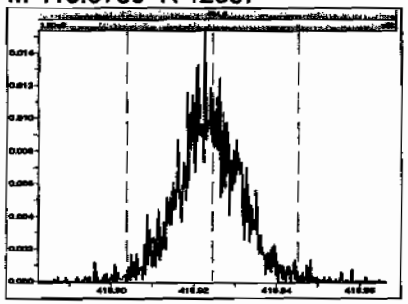

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:20:44 Pacific Daylight Time

M 330.9792 R 14285

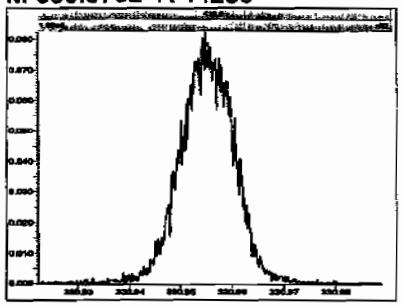

M 342.9792 R 14790

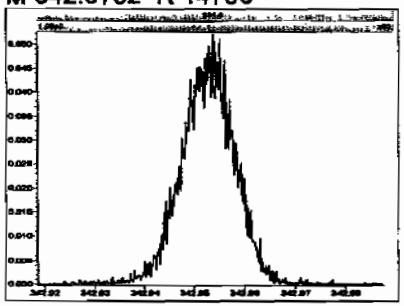

M 354.9792 R 14286

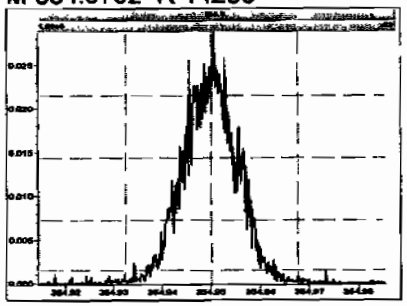

M 366.9792 R 14533

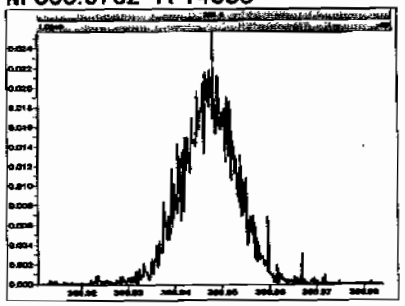

M 380.9760 R 14796

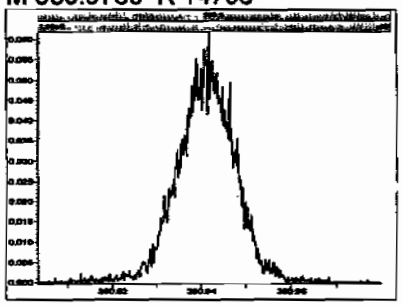

M 392.9760 R 13514

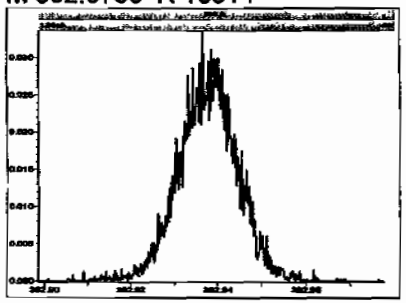

M 404.9760 R 13965

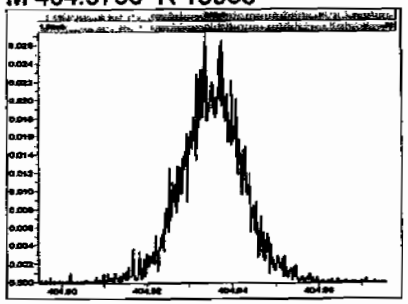

M 416.9760 R 14702

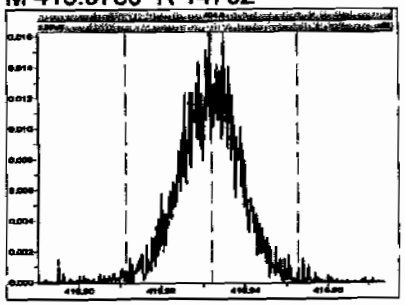

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:21:14 Pacific Daylight Time

M 366.9792 R 15527

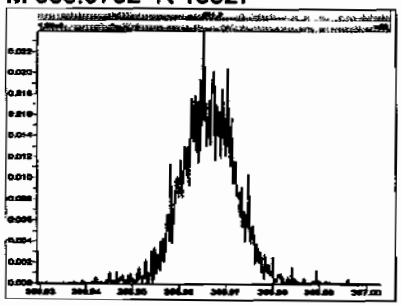

M 380.9760 R 14208

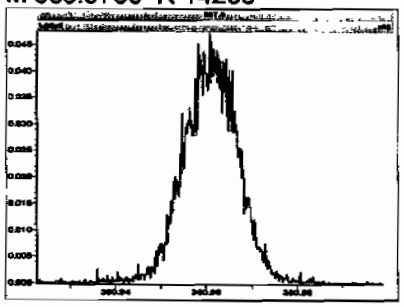

M 392.9760 R 14281

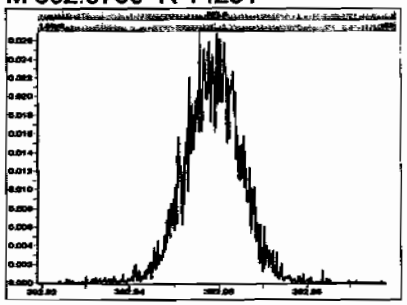

M 404.9760 R 16666

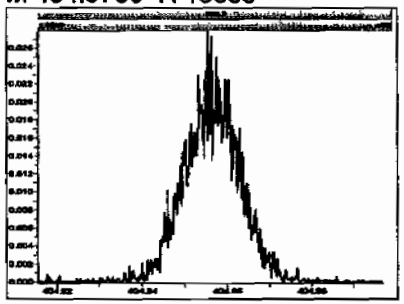

M 416.9760 R 13891

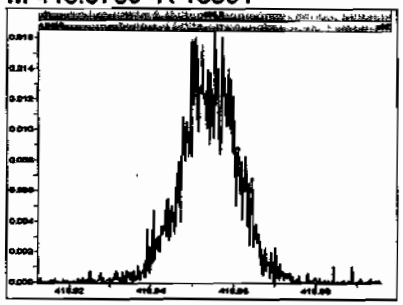

M 430.9728 R 13967

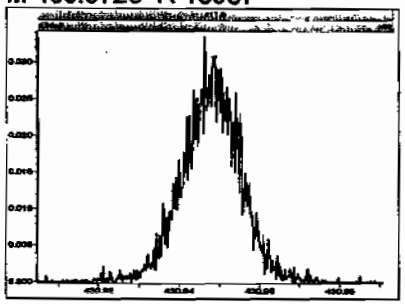

M 442.9728 R 14044

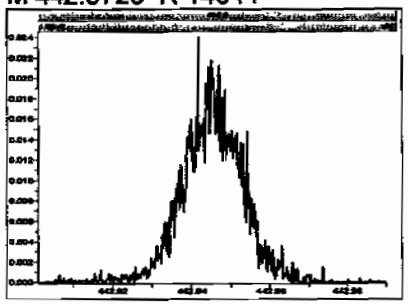

M 454.9728 R 15246

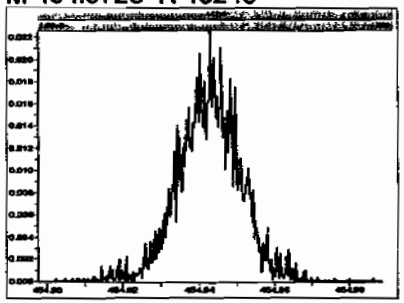

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:21:36 Pacific Daylight Time

M 404.9760 R 16887

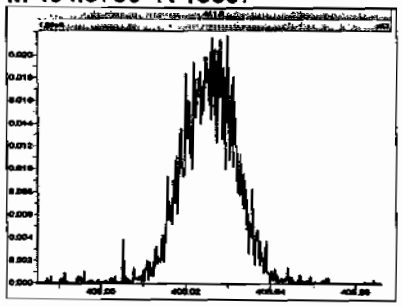

M 416.9760 R 16025

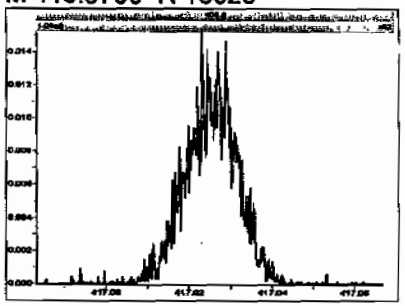

M 430.9728 R 15242

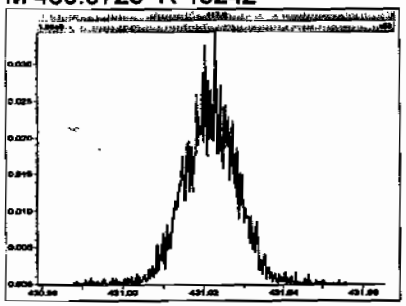

M 442.9728 R 15434

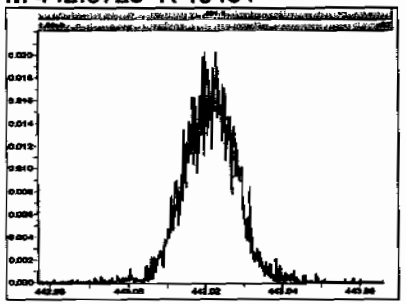

M 454.9728 R 15723

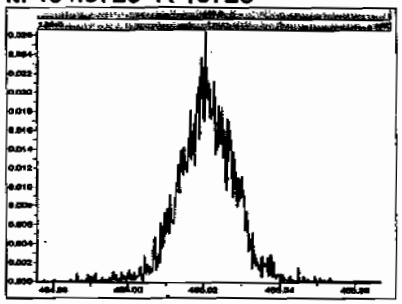

M 466.9728 R 16132

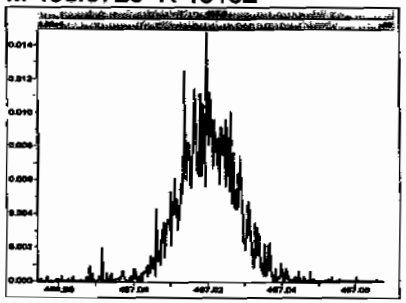

M 480.9696 R 16027

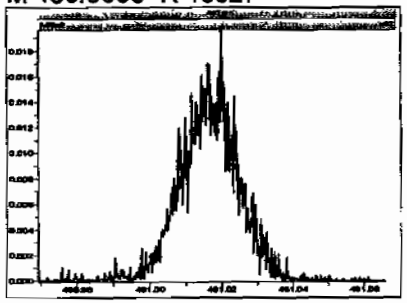

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, July 02, 2009 14:22:01 Pacific Daylight Time

M 430.9728 R 16025

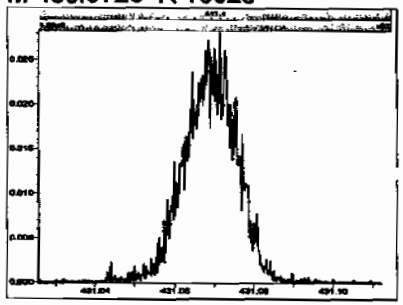

M 442.9728 R 14704

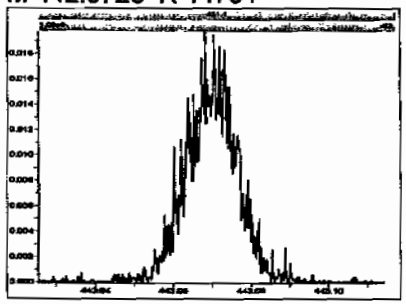

M 454.9728 R 16780

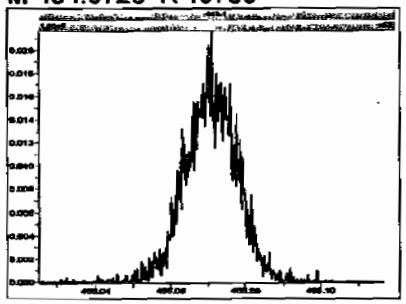

M 466.9728 R 17006

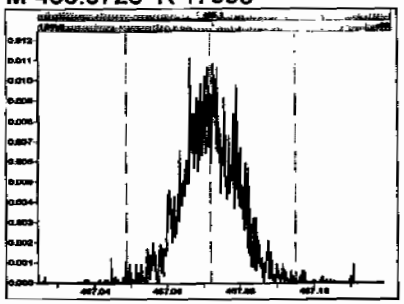

M 480.9696 R 14449

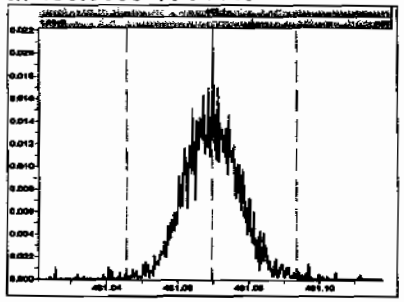

M 492.9696 R 14365

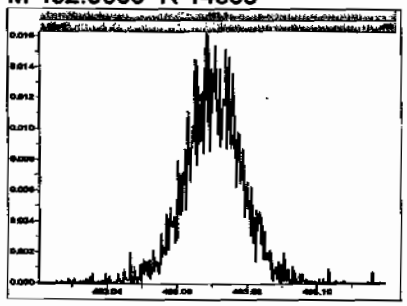

M 504.9696 R 16025

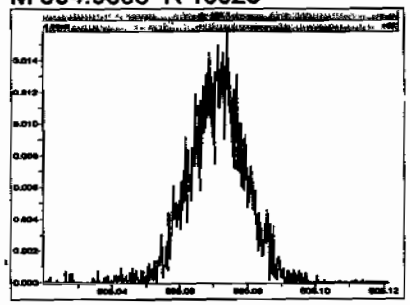

M 516.9697 R 15618

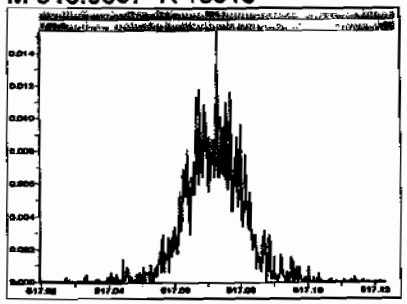

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Thursday, July 02, 2009 15:05:37 Pacific Daylight Time
Printed: Thursday, July 02, 2009 15:05:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

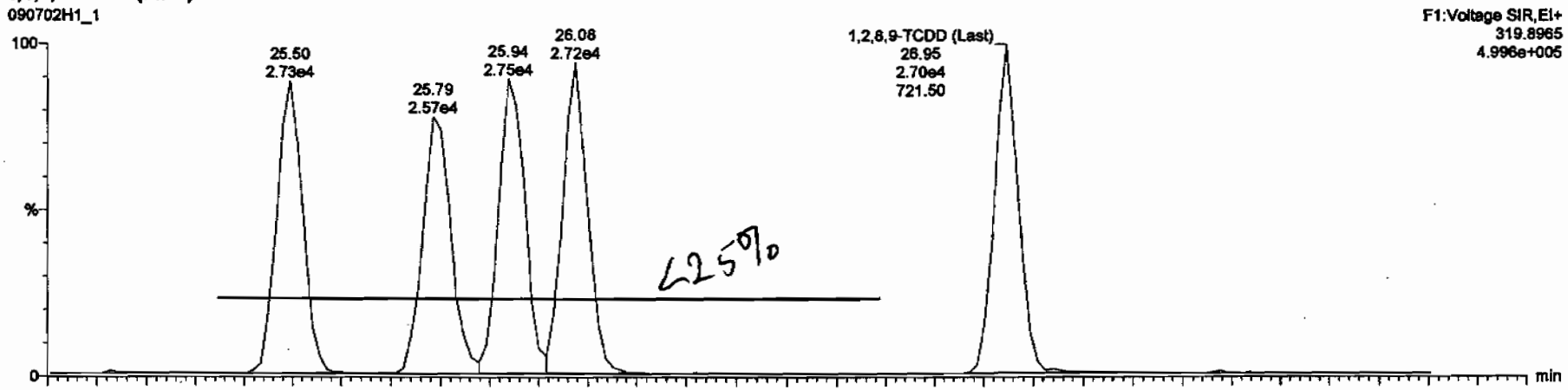

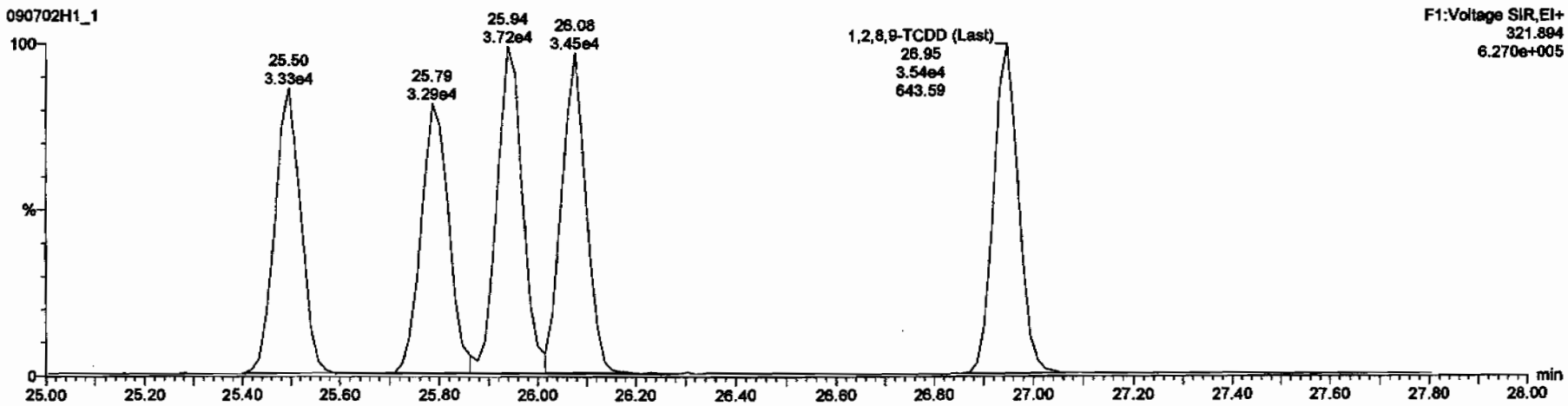

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090702h1-1.qld

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Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 27 May 2009 16:37:09
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

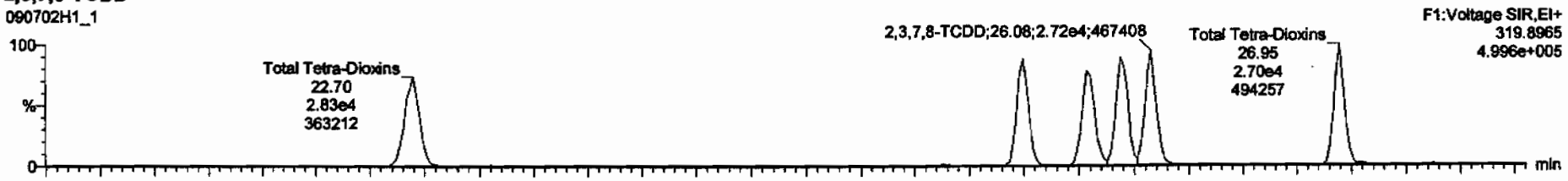

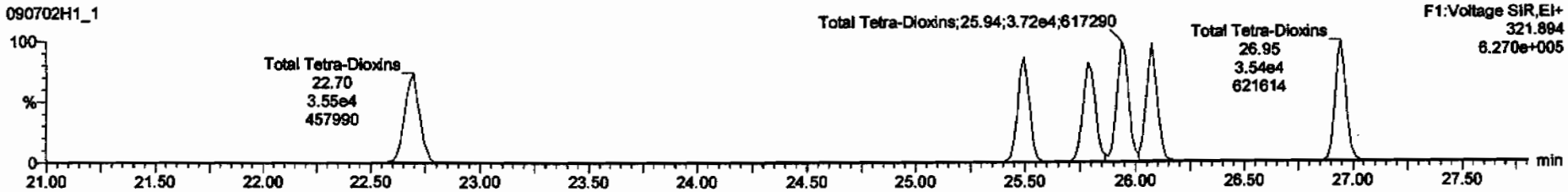

13C-2,3,7,8-TCDD

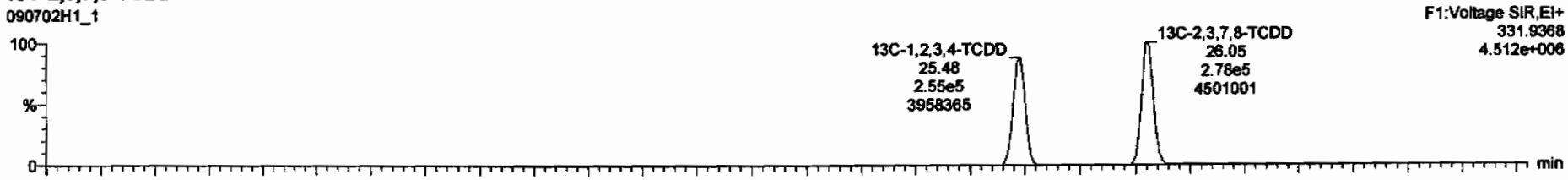

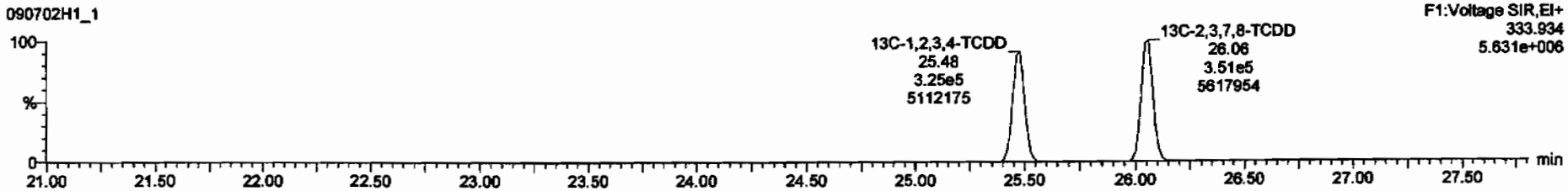

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Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

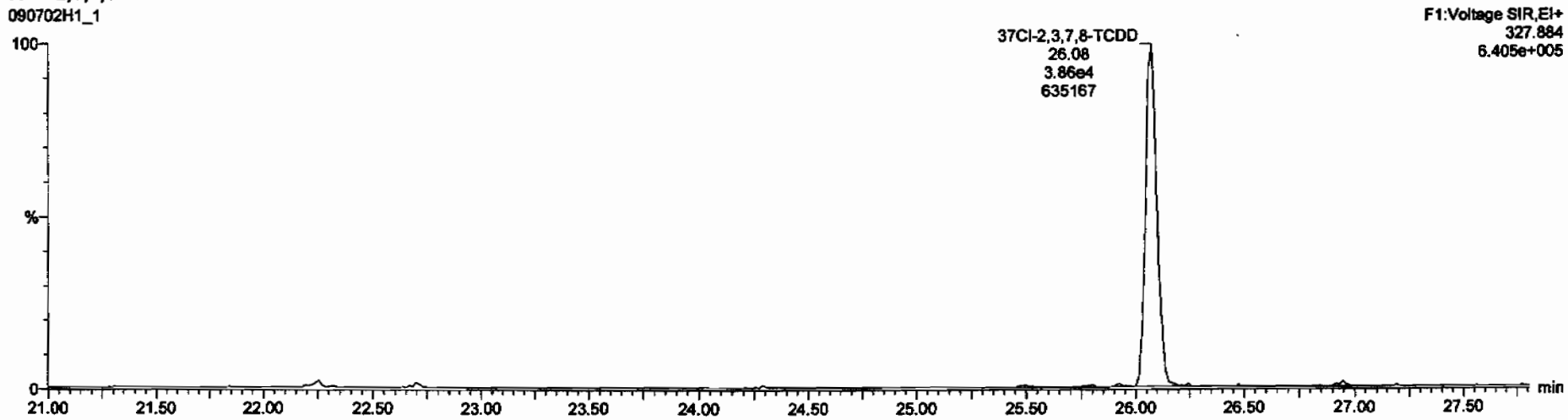

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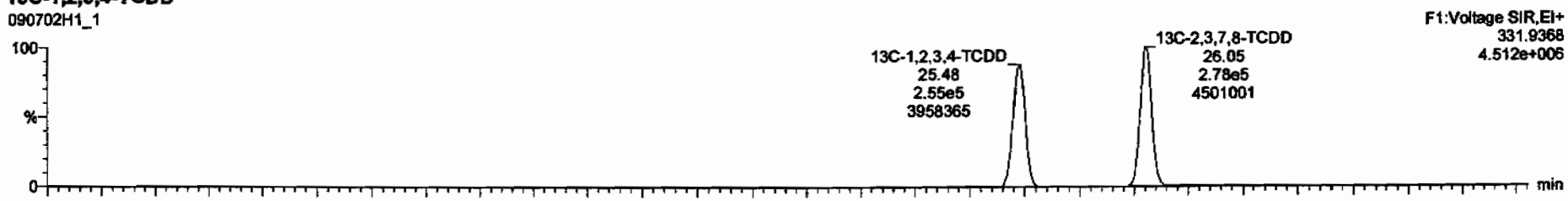

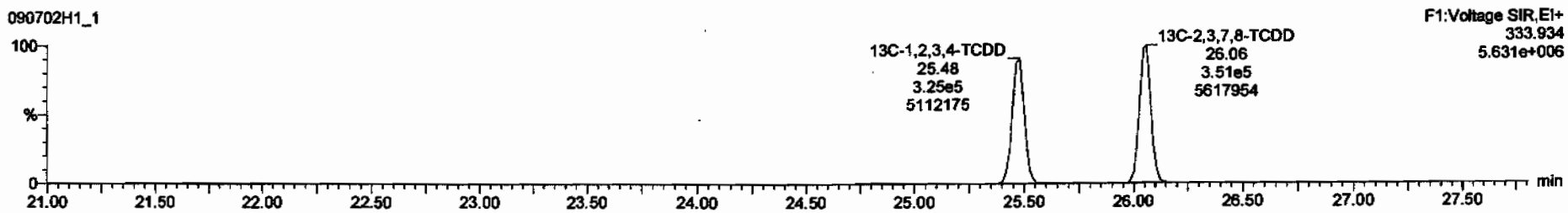

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1,2,3,7,8-PeCDD

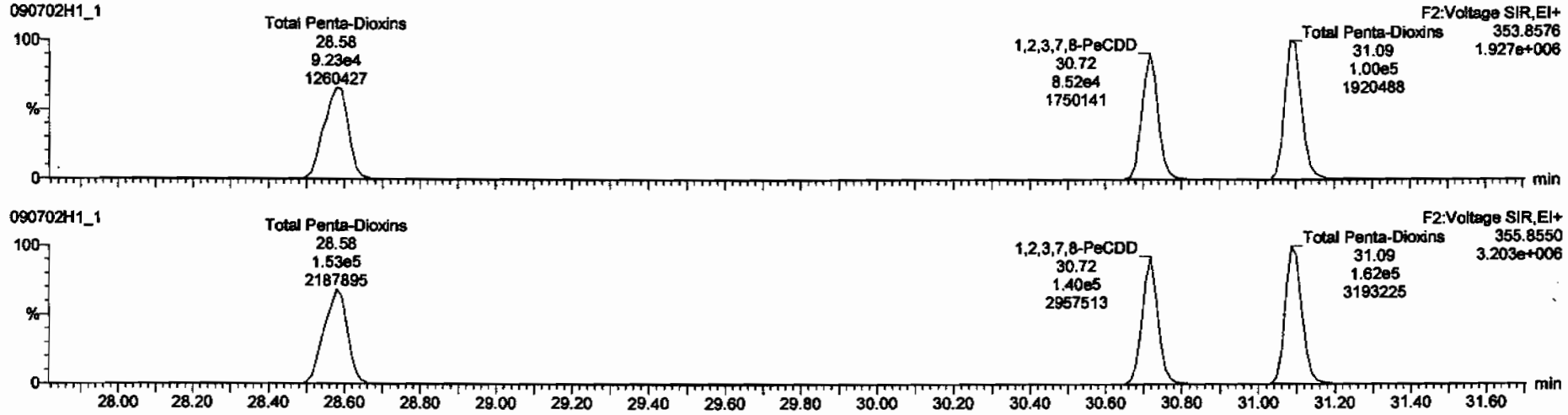

13C-1,2,3,7,8-PeCDD

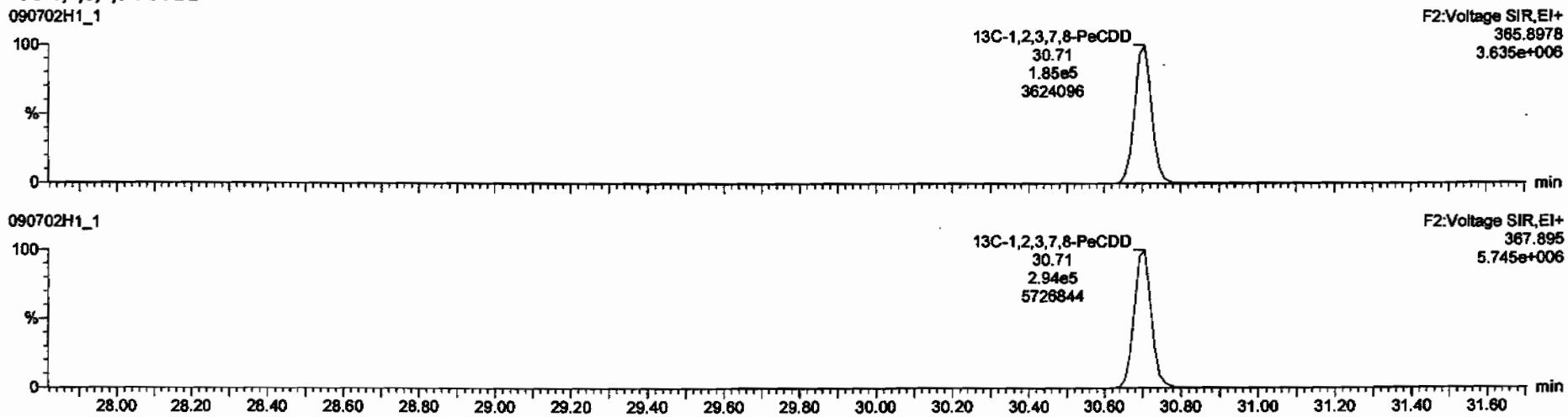

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1,2,3,4,7,8-HxCDD

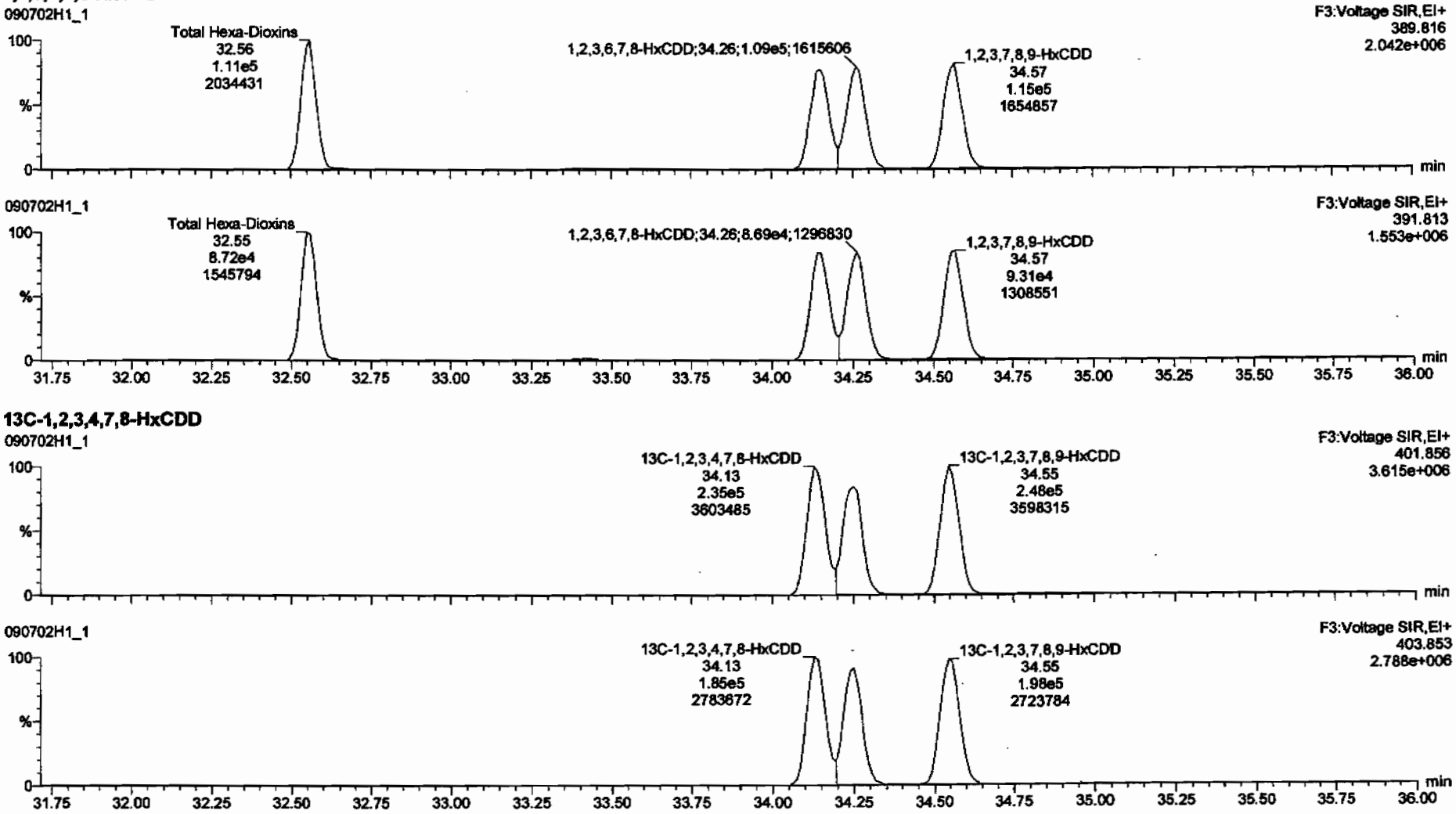

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1,2,3,4,6,7,8-HpCDD

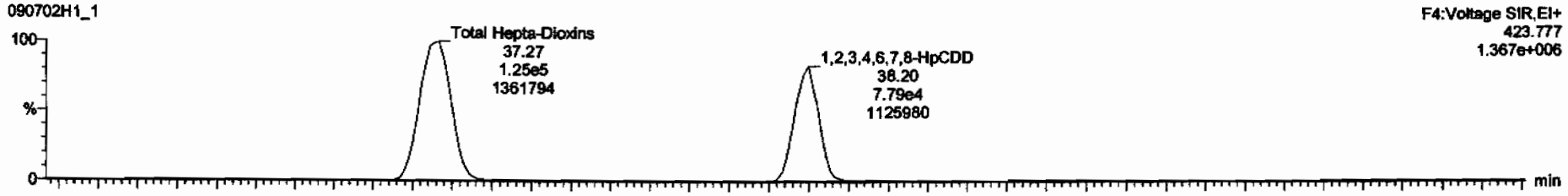

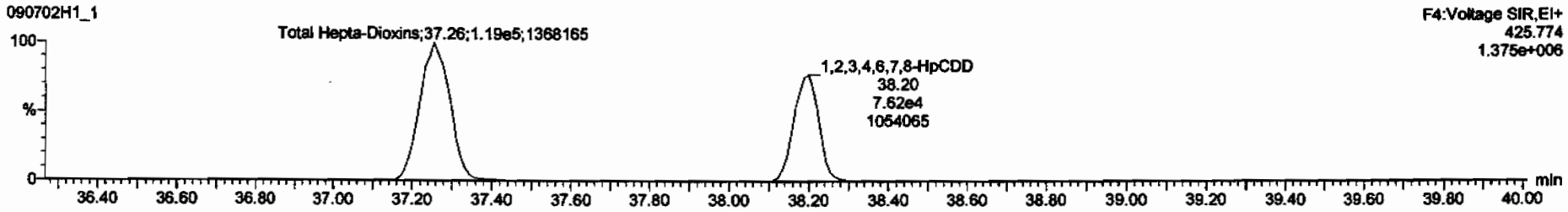

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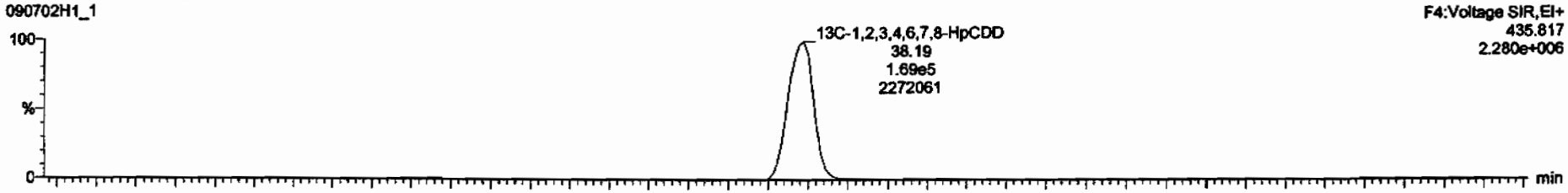

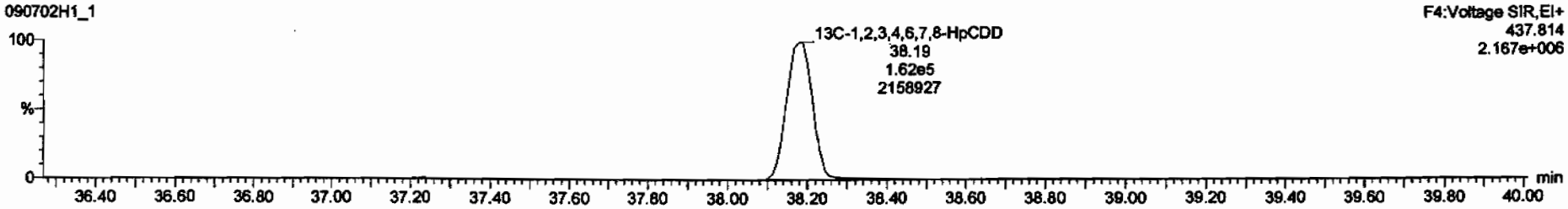

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Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

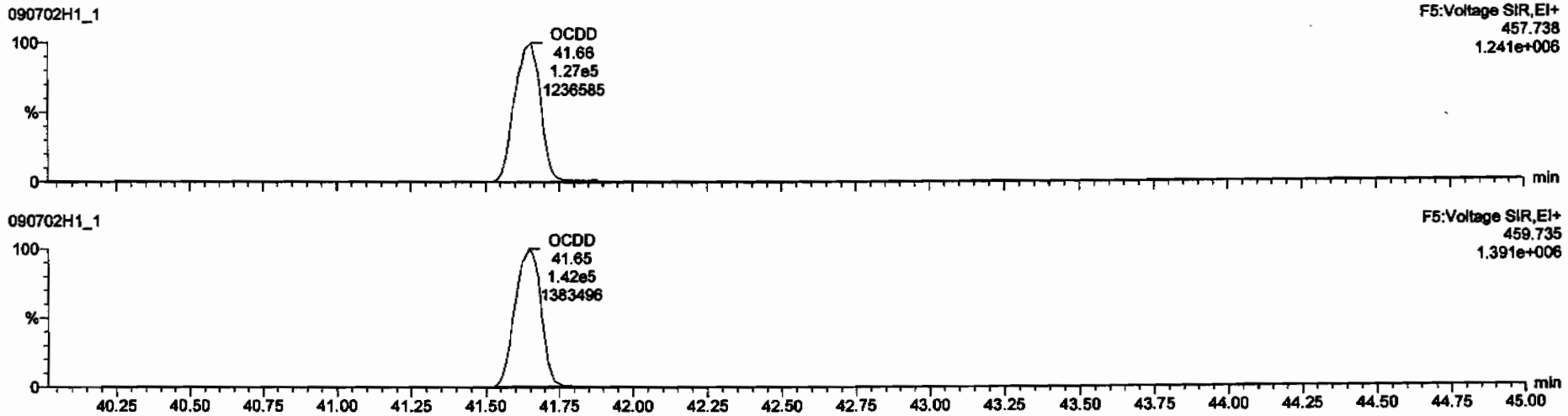

13C-OCDD

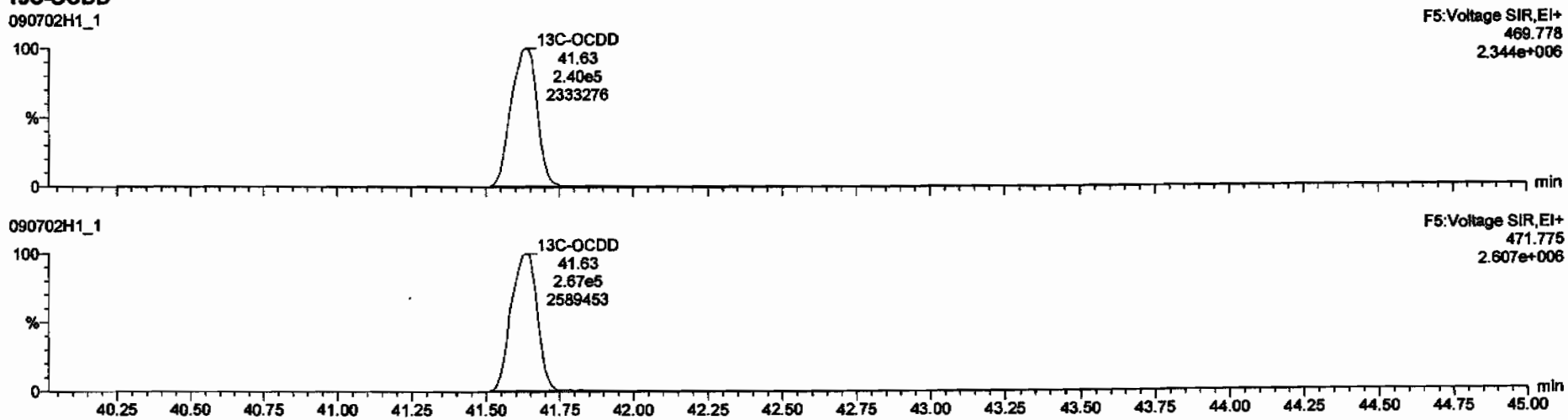

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2,3,7,8-TCDF

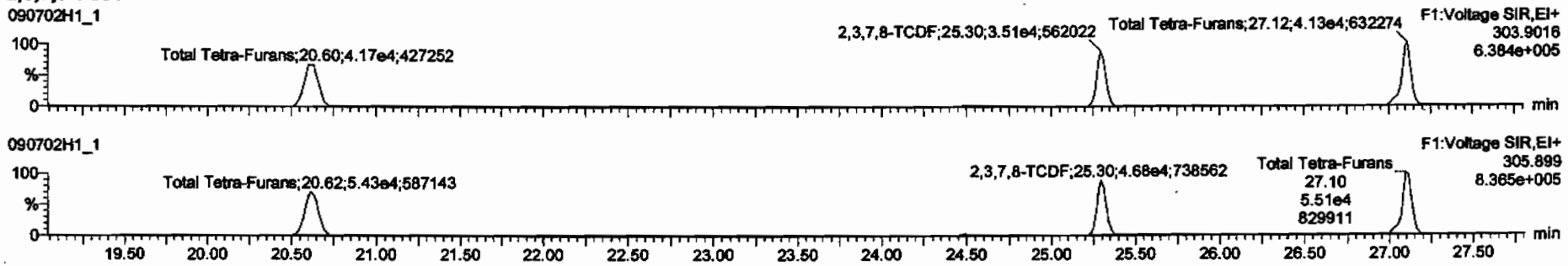

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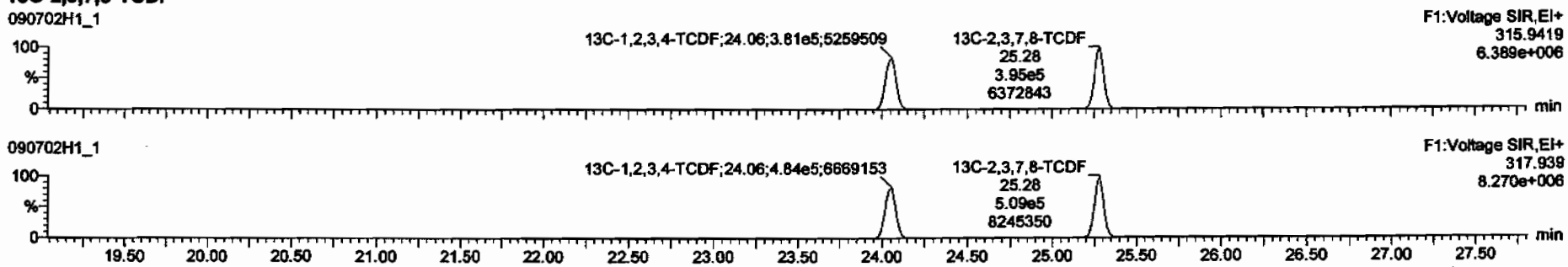

DPE1

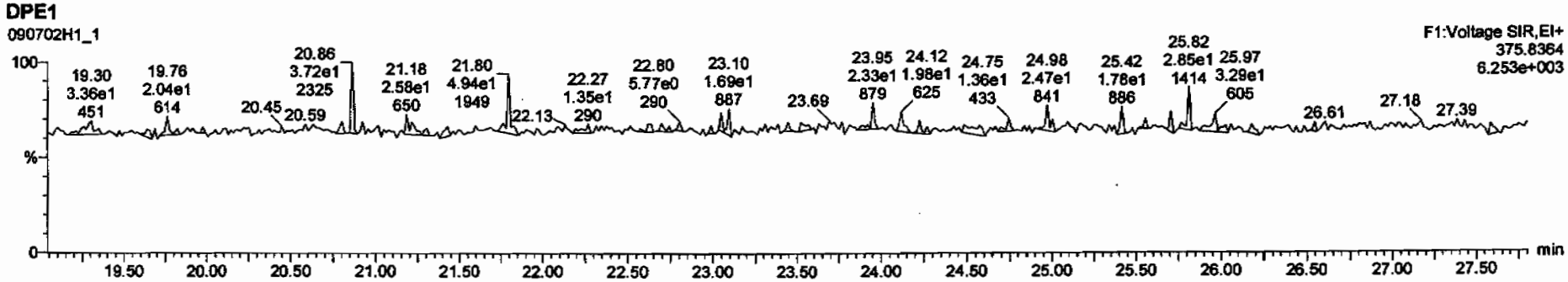

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Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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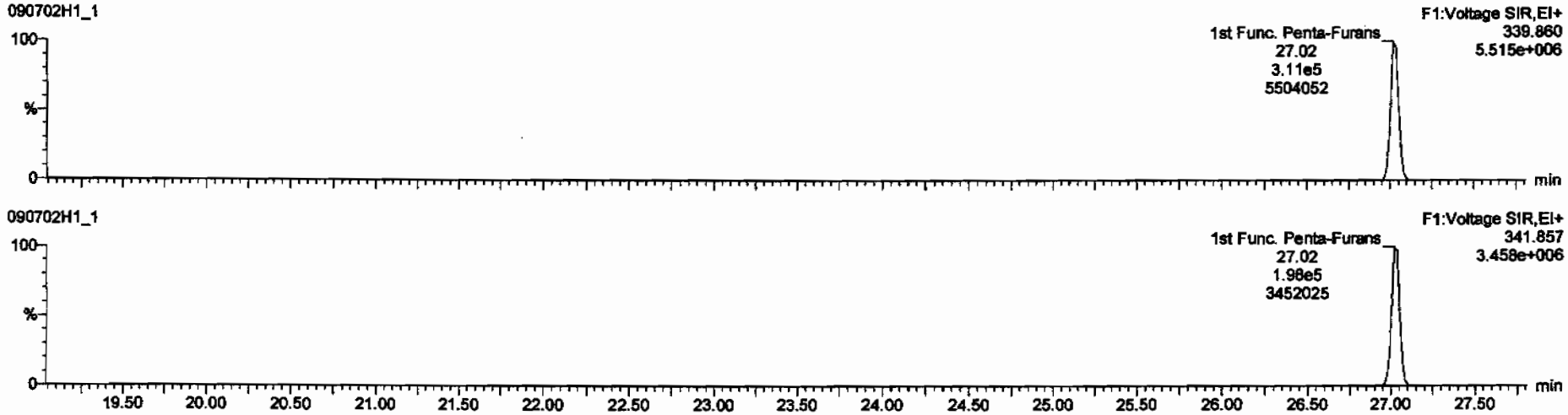

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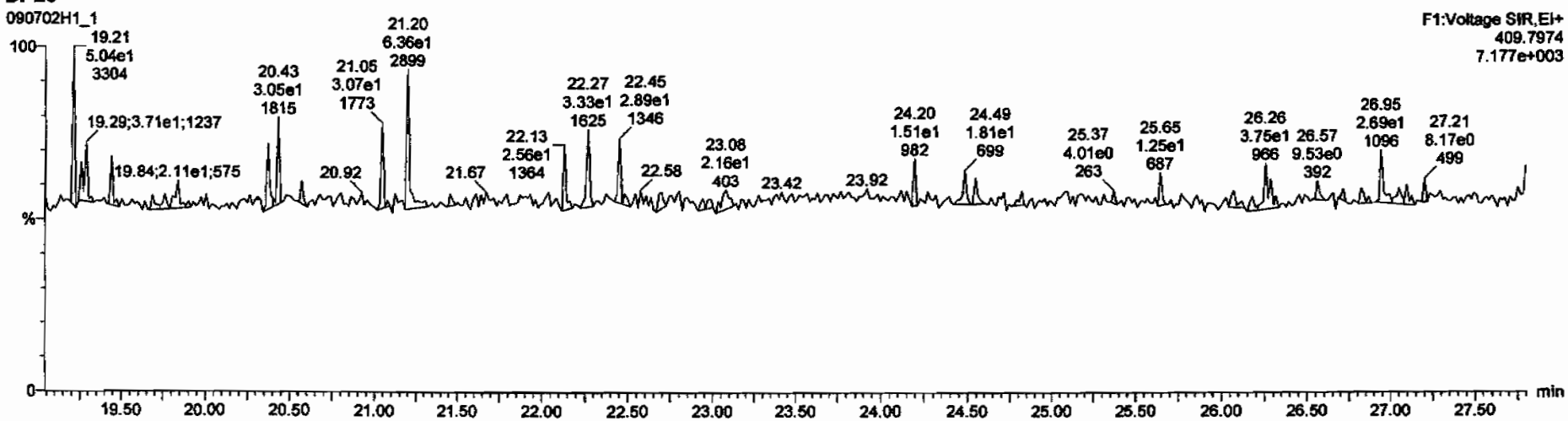

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1,2,3,7,8-PeCDF

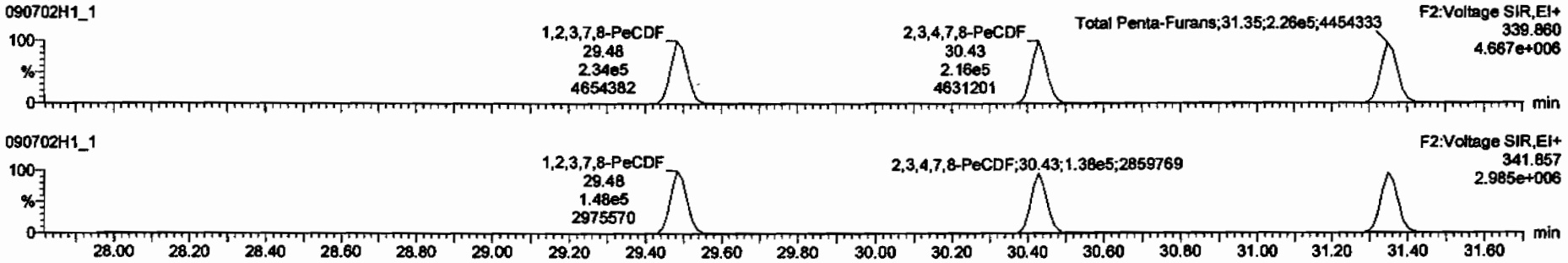

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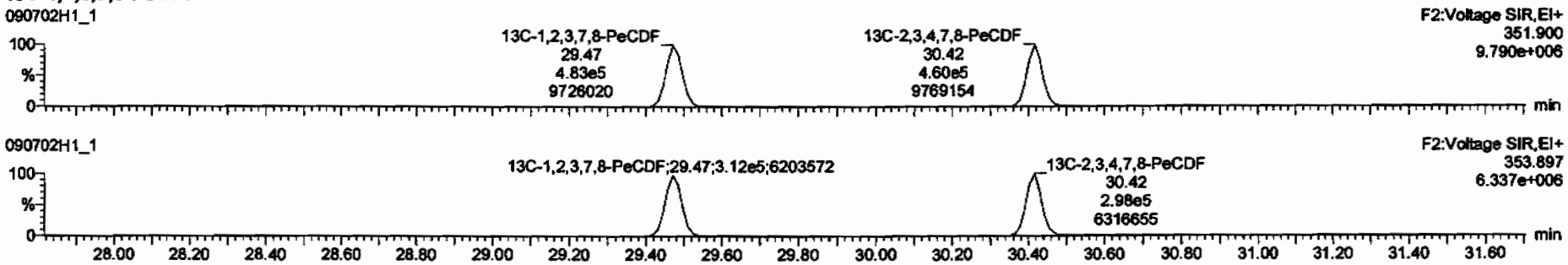

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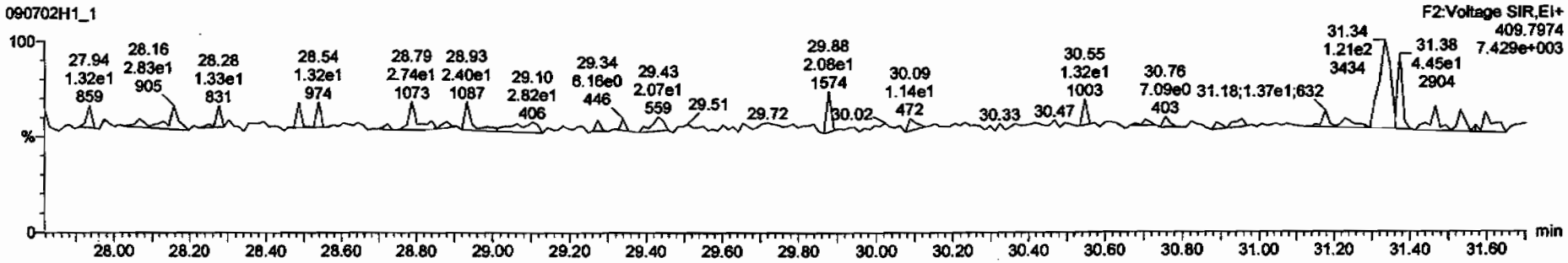

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1,2,3,4,7,8-HxCDF

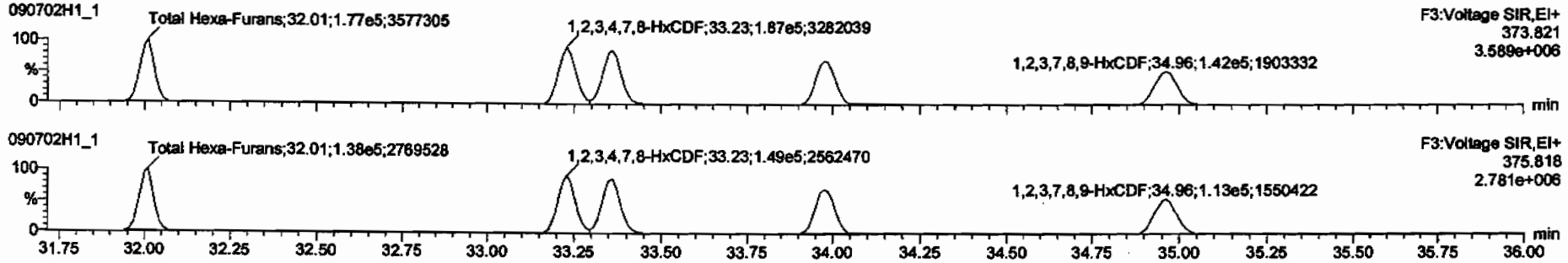

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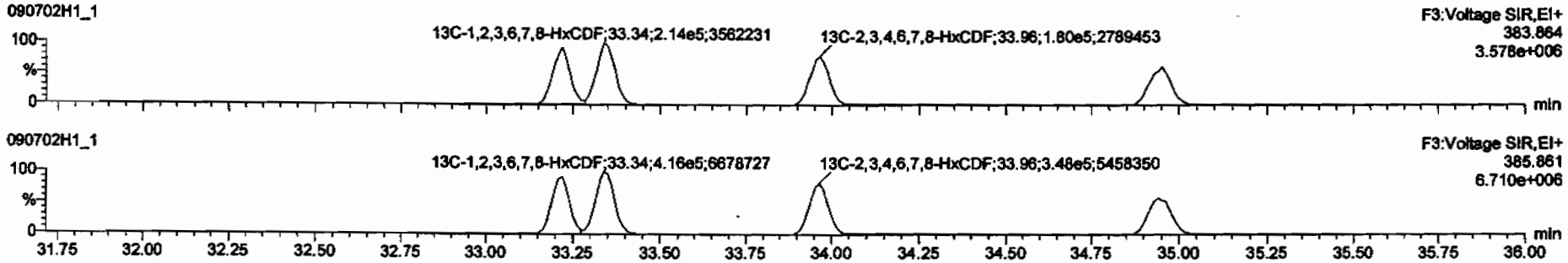

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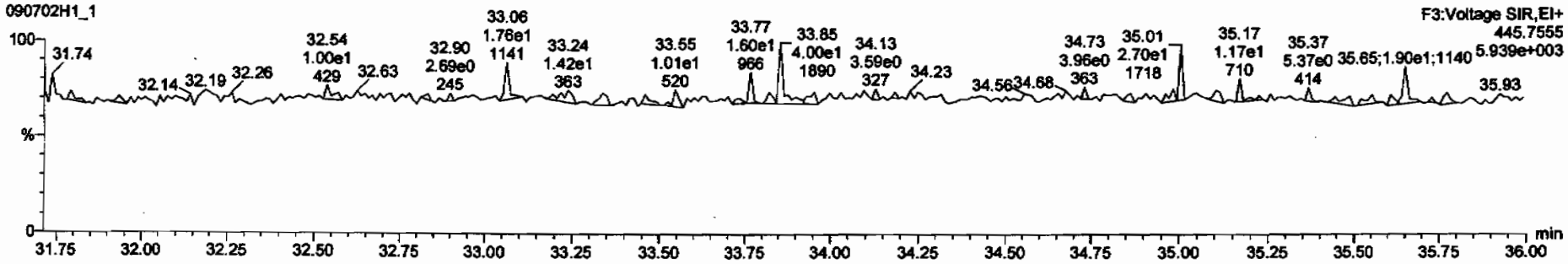

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Printed: Thursday, July 02, 2009 15:15:58 Pacific Daylight Time

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1,2,3,4,6,7,8-HpCDF

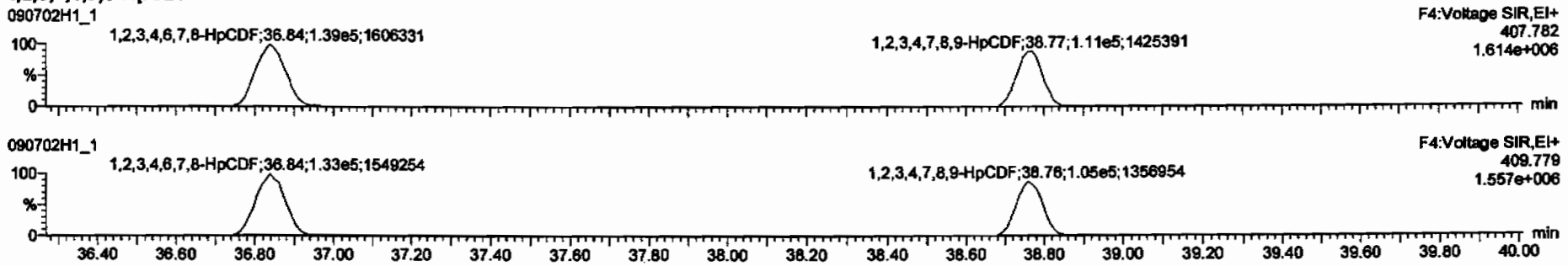

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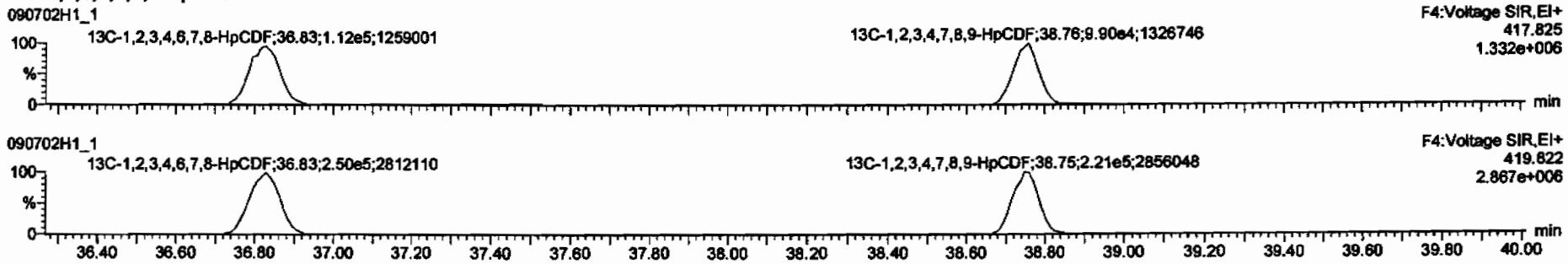

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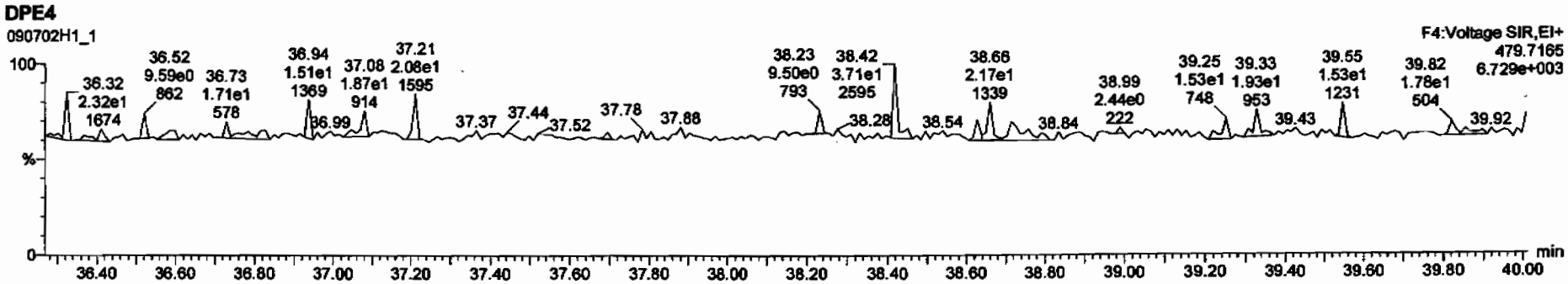

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OCDF

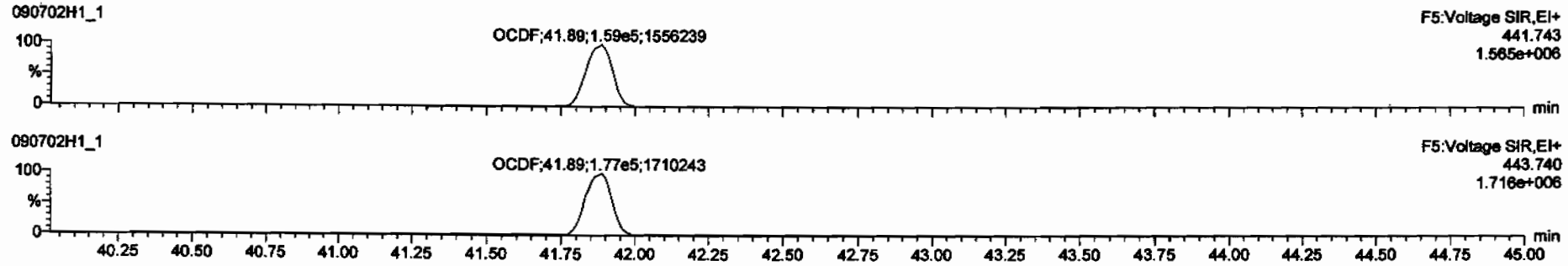

13C-OCDF

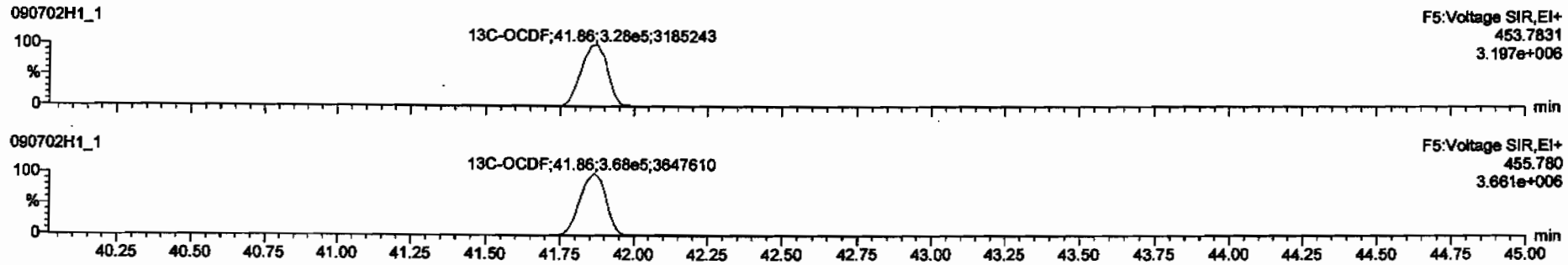

DPE5

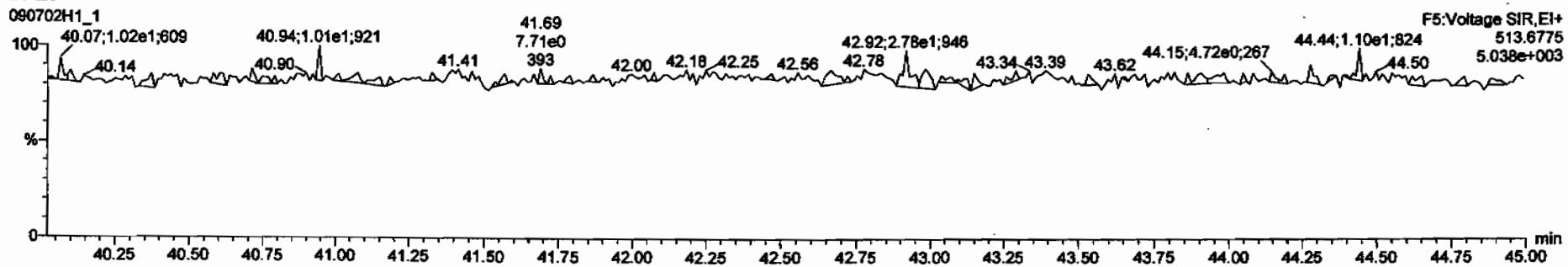

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Name: 090702H1_1, Date: 02-Jul-2009, Time: 14:22:39, ID: ST090702H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

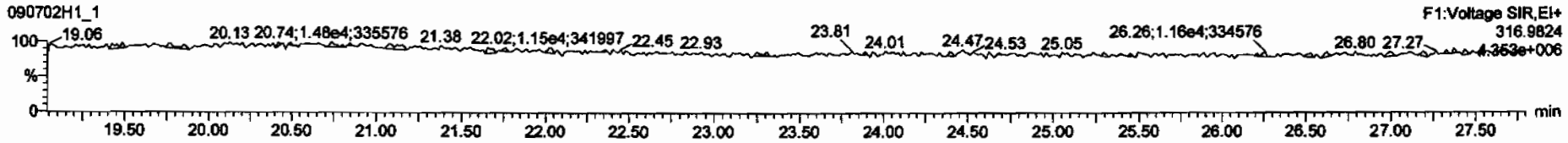

PFK2

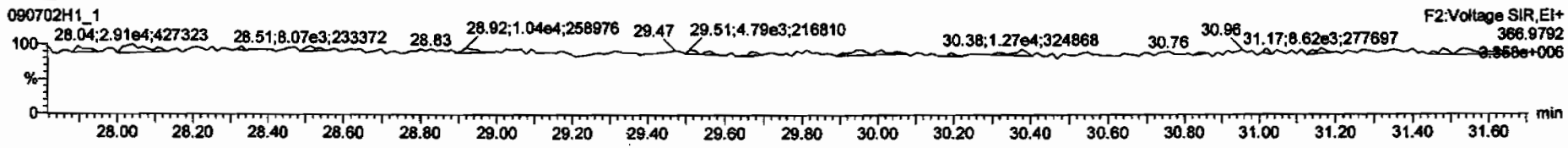

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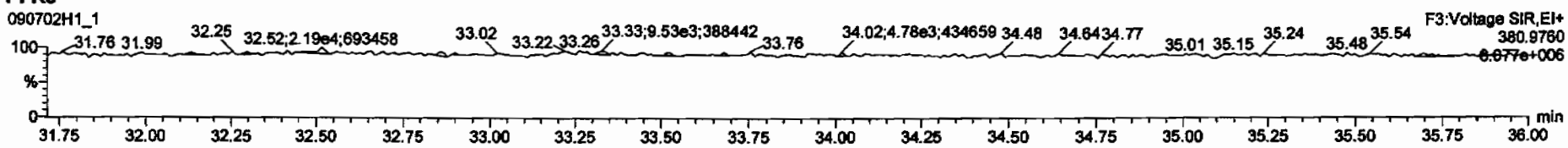

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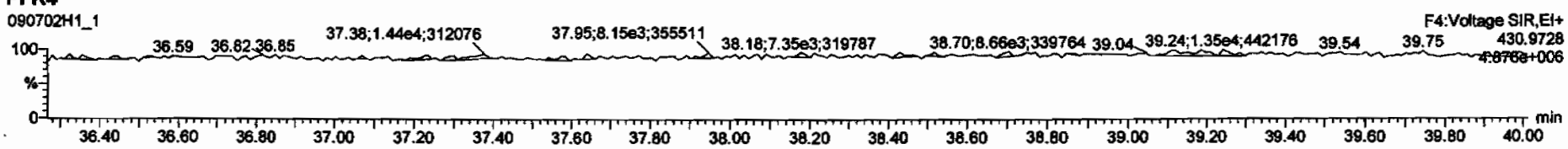

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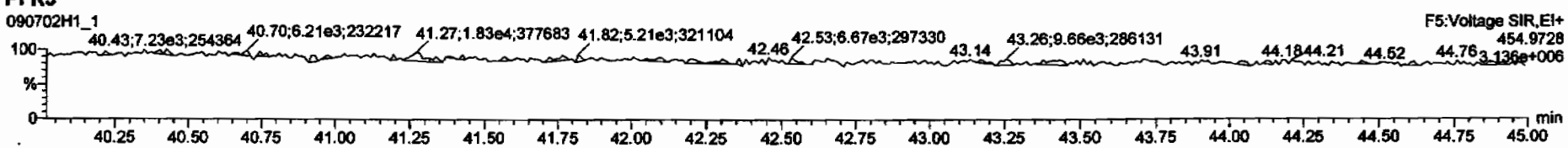

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090702H1_17

CCAL ID: ST090702H1-2

GC Column ID: DB-5
Analysis Date: 03-Jul-09 Analysis Time: 03:35:57

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	9.05	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	45.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	45.7	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	NO	45.3	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	47.9	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	43.9	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	88.2	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	NO	8.40	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	41.5	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	40.7	41.0	60.0	No	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.2	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	44.4	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	43.9	44.0	57.0	No	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	44.7	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	43.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	45.3	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	86.1	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [illegible]
Date: 7/3/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
CCAL ID: ST090702H1-2
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
GC Column ID: DB-5
VER Data file name: 090702H1_17
Analysis Date: 03-Jul-09
Analysis Time: 03:35:57

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	97.1	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	101	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	93.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	NO	109	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.88	0.76-1.02	NO	238	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	99.2	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	102	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	87.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	93.1	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	NO	97.5	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	97.0	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.42	0.37-0.51	NO	98.5	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.88	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.33	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [illegible]

Date: 7/3/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 07:06:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:06:49 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 28 May 2009 11:14:07
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.67
2	1,2,8,9-TCDD (Last)	26.93
3	1,2,4,7,9-PeCDD (First)	28.57
4	1,2,3,8,9-PeCDD (Last)	31.09
5	12,4,6,7,9-HxCDD (First)	32.55
6	1,2,3,7,8,9-HxCDD (Last)	34.56
7	1,2,3,4,6,7,9-HpCDD (First)	37.26
8	1,2,3,4,6,7,8-HpCDD (Last)	38.20
9	1,3,6,8-TCDF (First)	20.57
10	1,2,8,9-TCDF (Last)	27.10
11	1,3,4,6,8-PeCDF (First)	27.01
12	1,2,3,8,9-PeCDF (Last)	31.35
13	1,2,3,4,6,8-HxCDF (First)	32.00
14	1,2,3,4,8,9-HxCDF (Last)	34.95
15	1,2,3,4,6,7,8-HpCDF (First)	36.84
16	1,2,3,4,7,8,9-HpCDF (Last)	38.76

7/3/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory | CCAL ID: ST090702H1-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10 | GC Column ID: DB-5

VER Data file name: 090702H1_17 | Analysis Date: 03-Jul-09 | Analysis Time: 03:35:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.206	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.993	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [illegible]

Date: 7/3/09

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090702H1-2

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090702H1_17

Analysis Date: 03-Jul-09

Analysis Time: 03:35:57

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [signature]

Date: 7/3/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:48:20 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	6.08e4	0.78	NO	1.08	1.000	26.06	1.001	9.0452	90.5	0.0442	9.0452
2	1,2,3,7,8-PeCDD	2.25e5	0.62	NO	1.03	1.000	30.71	1.000	45.583	91.2	0.0902	45.583
3	1,2,3,4,7,8-HxCDD	1.92e5	1.27	NO	1.00	1.000	34.14	1.000	45.738	91.5	0.174	45.738
4	1,2,3,6,7,8-HxCDD	1.99e5	1.23	NO	1.13	1.000	34.26	1.001	45.298	90.6	0.168	45.298
5	1,2,3,7,8,9-HxCDD	2.14e5	1.25	NO	1.10	1.000	34.56	1.009	47.933	95.9	0.165	47.933
6	1,2,3,4,6,7,8-HpCDD	1.63e5	1.06	NO	1.06	1.000	38.20	1.001	43.917	87.8	0.199	43.917
7	OCDD	2.80e5	0.90	NO	1.18	1.000	41.66	1.000	88.239	88.2	0.0848	88.239
8	2,3,7,8-TCDF	8.10e4	0.76	NO	1.09	1.000	25.28	1.001	8.3960	84.0	0.0417	8.3960
9	1,2,3,7,8-PeCDF	3.61e5	1.57	NO	1.16	1.000	29.47	1.000	41.481	83.0	0.0753	41.481
10	2,3,4,7,8-PeCDF	3.33e5	1.58	NO	1.12	1.000	30.42	1.000	40.676	81.4	0.0736	40.676
11	1,2,3,4,7,8-HxCDF	3.29e5	1.27	NO	1.41	1.000	33.23	1.001	43.246	86.5	0.113	43.246
12	1,2,3,6,7,8-HxCDF	3.24e5	1.26	NO	1.22	1.000	33.35	1.000	44.446	88.9	0.116	44.446
13	2,3,4,6,7,8-HxCDF	2.95e5	1.27	NO	1.28	1.000	33.98	1.001	43.942	87.9	0.137	43.942
14	1,2,3,7,8,9-HxCDF	2.60e5	1.27	NO	1.26	1.000	34.95	1.000	44.729	89.5	0.172	44.729
15	1,2,3,4,6,7,8-HpCDF	2.81e5	1.06	NO	1.69	1.000	36.84	1.001	43.814	87.6	0.148	43.814
16	1,2,3,4,7,8,9-HpCDF	2.16e5	1.05	NO	1.48	1.000	38.76	1.000	45.270	90.5	0.166	45.270
17	OCDF	3.27e5	0.91	NO	1.10	1.000	41.89	1.000	86.142	86.1	0.107	86.142
18	13C-2,3,7,8-TCDD	6.24e5	0.78	NO	1.01	1.000	26.03	1.023	103.21	103	0.218	
19	13C-1,2,3,7,8-PeCDD	4.78e5	0.63	NO	0.827	1.000	30.69	1.206	97.071	97.1	0.178	
20	13C-1,2,3,4,7,8-HxCDD	4.19e5	1.25	NO	0.916	1.000	34.13	0.988	101.40	101	0.303	
21	13C-1,2,3,6,7,8-HxCDD	3.90e5	1.24	NO	0.921	1.000	34.24	0.991	93.814	93.8	0.302	
22	13C-1,2,3,4,6,7,8-HpCDD	3.48e5	1.06	NO	0.708	1.000	38.18	1.105	108.99	109	0.409	
23	13C-OCDD	5.39e5	0.88	NO	0.503	1.000	41.65	1.206	237.82	119	0.343	
24	13C-2,3,7,8-TCDF	8.87e5	0.78	NO	0.977	1.000	25.27	0.993	107.45	107	0.134	
25	13C-1,2,3,7,8-PeCDF	7.51e5	1.59	NO	0.896	1.000	29.47	1.158	99.231	99.2	0.217	
26	13C-2,3,4,7,8-PeCDF	7.31e5	1.57	NO	0.900	1.000	30.40	1.195	96.255	96.3	0.216	
27	13C-1,2,3,4,7,8-HxCDF	5.39e5	0.52	NO	1.17	1.000	33.21	0.961	102.08	102	0.347	
28	13C-1,2,3,6,7,8-HxCDF	5.97e5	0.52	NO	1.52	1.000	33.34	0.965	87.045	87.0	0.267	
29	13C-2,3,4,6,7,8-HxCDF	5.25e5	0.52	NO	1.25	1.000	33.95	0.983	93.072	93.1	0.325	
30	13C-1,2,3,7,8,9-HxCDF	4.63e5	0.52	NO	1.05	1.000	34.94	1.011	97.471	97.5	0.385	

7/3/09

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:48:20 Pacific Daylight Time

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

	31 13C-1,2,3,4,6,7,8-HpCDF	3.80e5	0.44	NO	0.868	1.000	36.82	1.066	96.972	97.0	0.382
	32 13C-1,2,3,4,7,8,9-HpCDF	3.23e5	0.42	NO	0.727	1.000	38.75	1.122	98.492	98.5	0.457
	33 13C-OCDF	6.92e5	0.88	NO	0.760	1.000	41.88	1.212	202.05	101	0.195

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 06:54:46 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:05:08 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 2,3,7,8-TCDD

	090702H1_1	ST090702H1-1 1613 CS3 080917I	02-Jul-09	14:22:39
	090702H1_2	0_2214_OPR001	02-Jul-09	15:13:01
	090702H1_3	solvent blank	02-Jul-09	16:02:37
	090702H1_4	0_2214_MB001	02-Jul-09	16:52:06
	090702H1_5	31845_2214_001 CAMO-09-10464 10.61	02-Jul-09	17:41:36
	090702H1_6	31845_2214_002 CAMO-09-10465 10.5	02-Jul-09	18:31:05
	090702H1_7	31846_2214_001 CAMO-09-9946 12.7	02-Jul-09	19:20:36
	090702H1_8	31847_2214_001 CAMO-09-6518 11.68	02-Jul-09	20:10:06
	090702H1_9	31847_2214_002 CAMO-09-6519 13.07	02-Jul-09	20:59:34
	090702H1_10	31847_2214_003 CAMO-09-6531 11.58	02-Jul-09	21:49:03
	090702H1_11	31850_2214_001 CAMO-09-9941 11.19	02-Jul-09	22:38:41
	090702H1_12	31850_2214_002 CAMO-09-9942 11.32	02-Jul-09	23:28:16
	090702H1_13	31850_2214_003 CAMO-09-9943 11.85	03-Jul-09	00:17:49
	090702H1_14	31850_2214_004 CAMO-09-9989 12.48	03-Jul-09	01:07:22
	090702H1_15	31850_2214_005 CAMO-09-10030 11.22	03-Jul-09	01:56:54
	090702H1_16	solvent blank	03-Jul-09	02:46:25
	090702H1_17	ST090702H1-2 1613 CS3 080917I	03-Jul-09	03:35:57

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, July 03, 2009 07:06:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 07:06:49 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

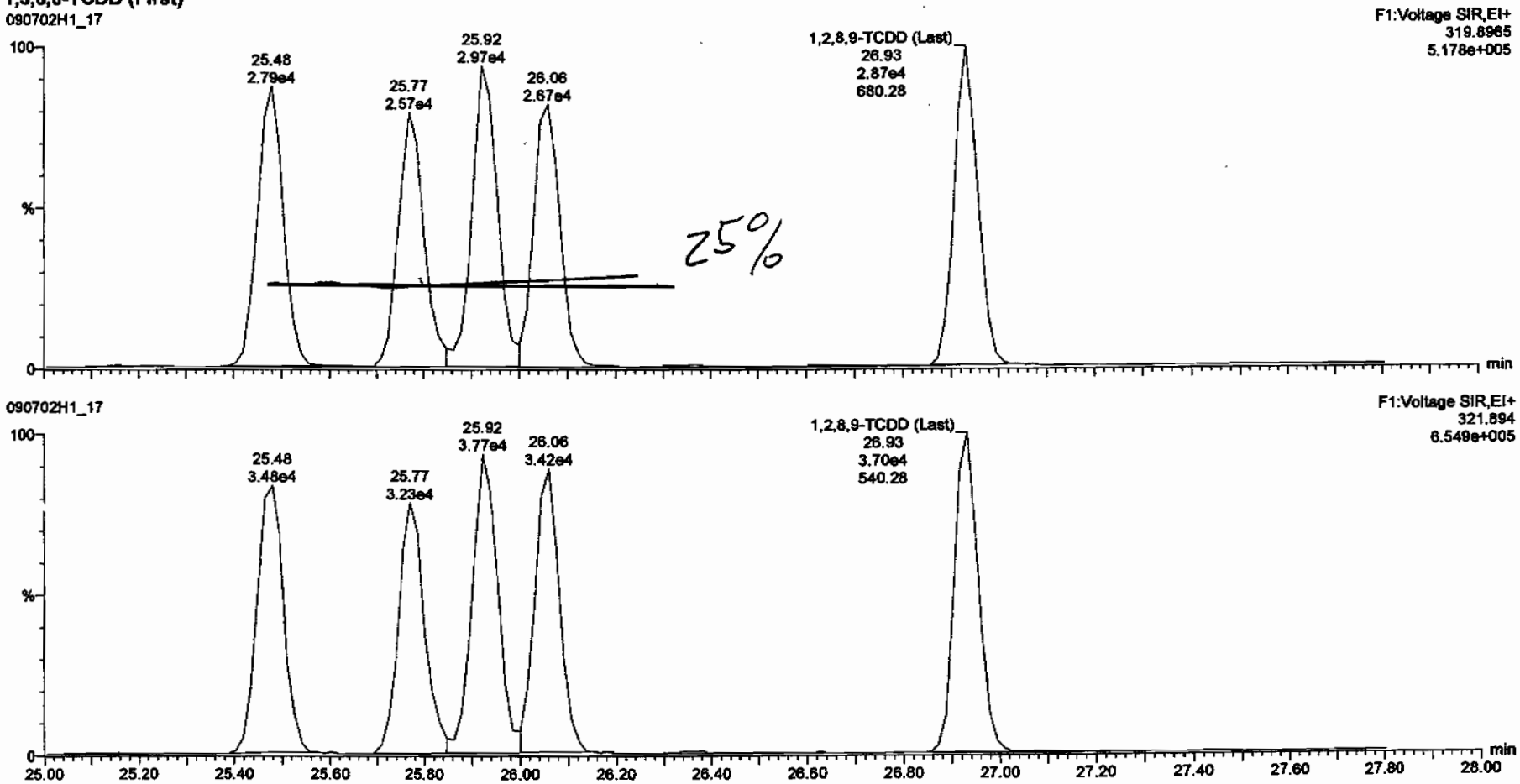

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090702h1\090702h1-17.qld

Last Altered: Friday, July 03, 2009 06:47:28 Pacific Daylight Time
Printed: Friday, July 03, 2009 06:49:25 Pacific Daylight Time

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

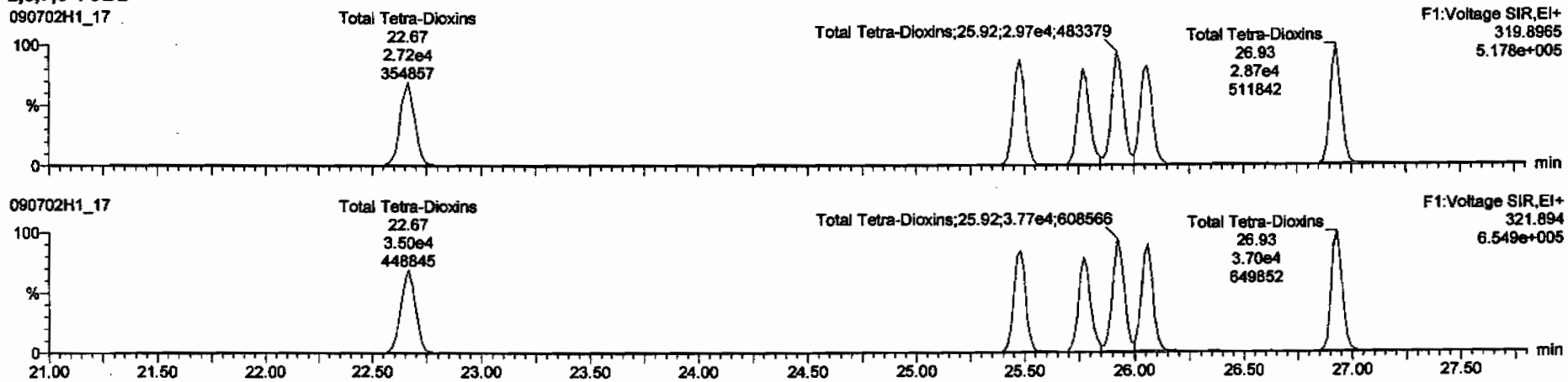

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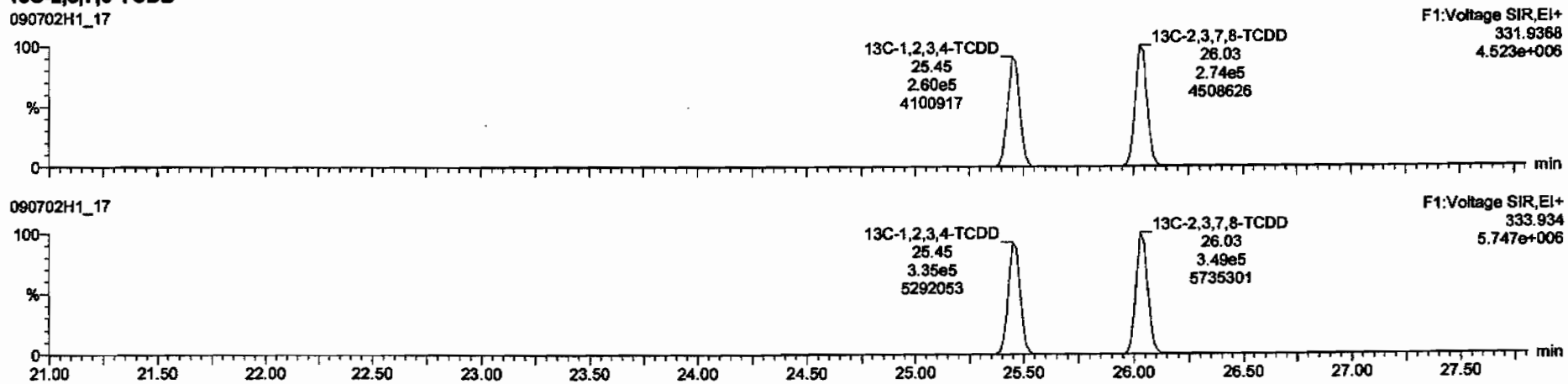

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37Cl-2,3,7,8-TCDD

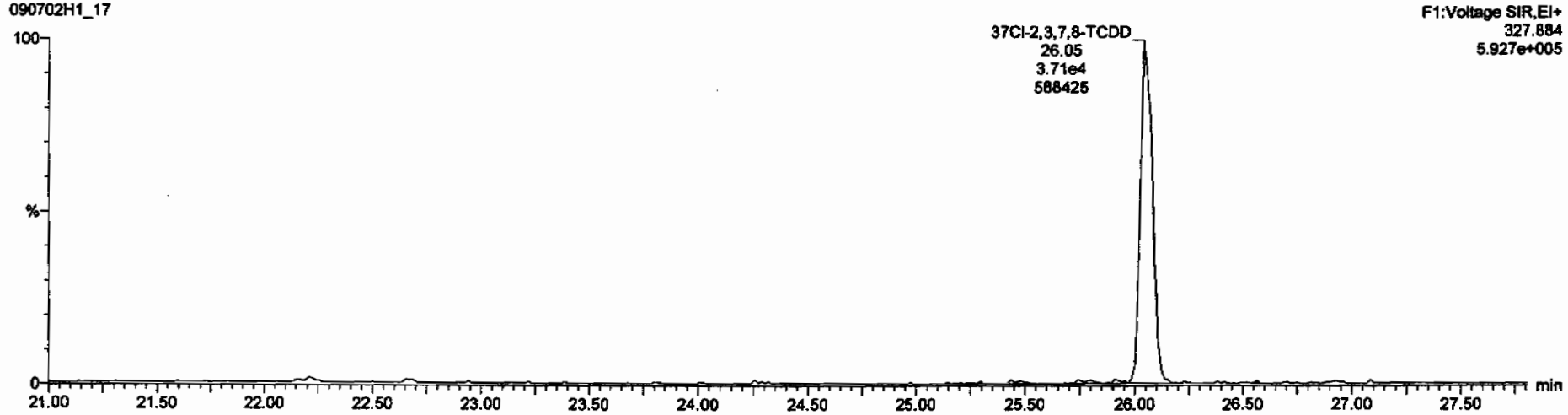

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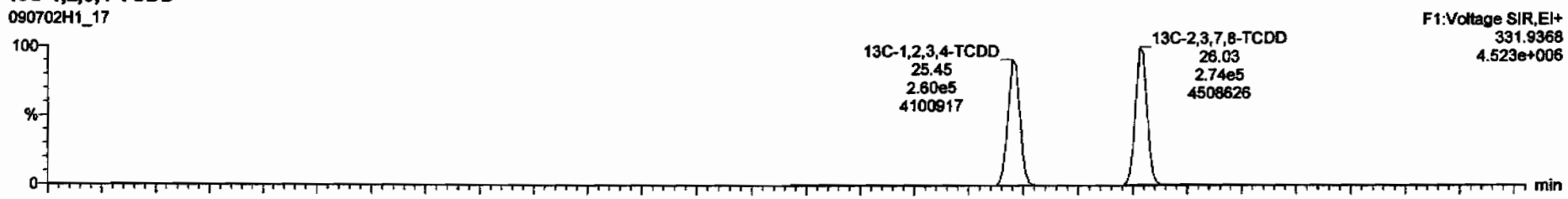

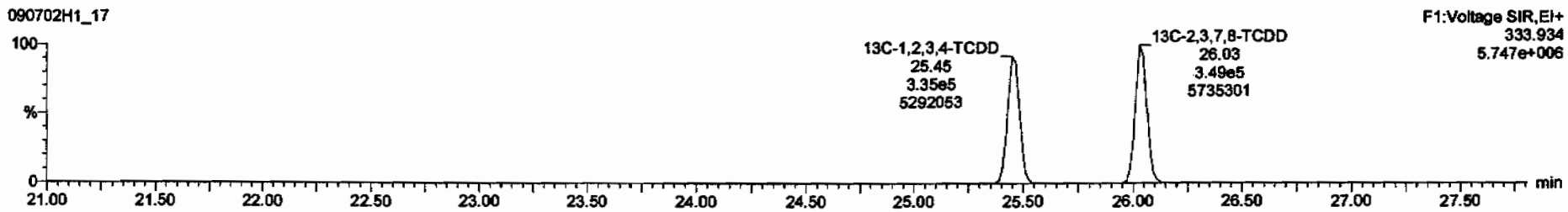

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Printed: Friday, July 03, 2009 06:49:25 Pacific Daylight Time

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

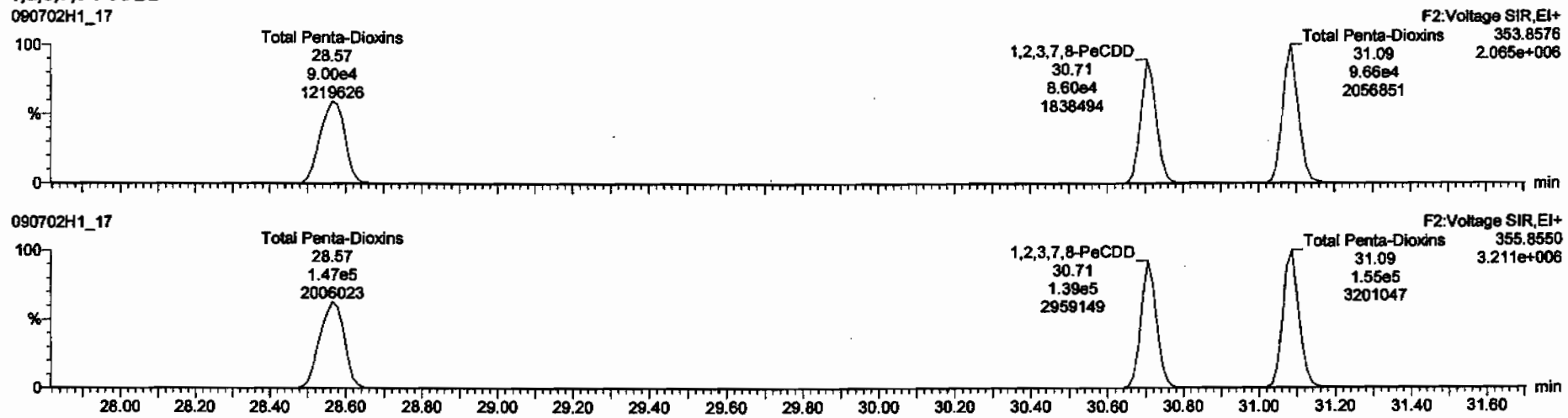

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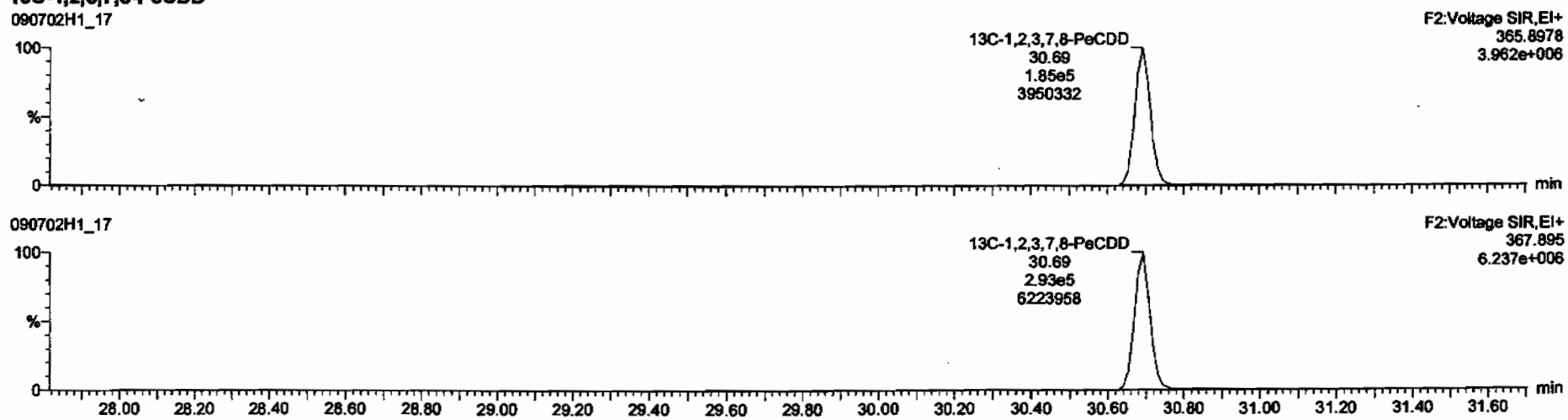

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

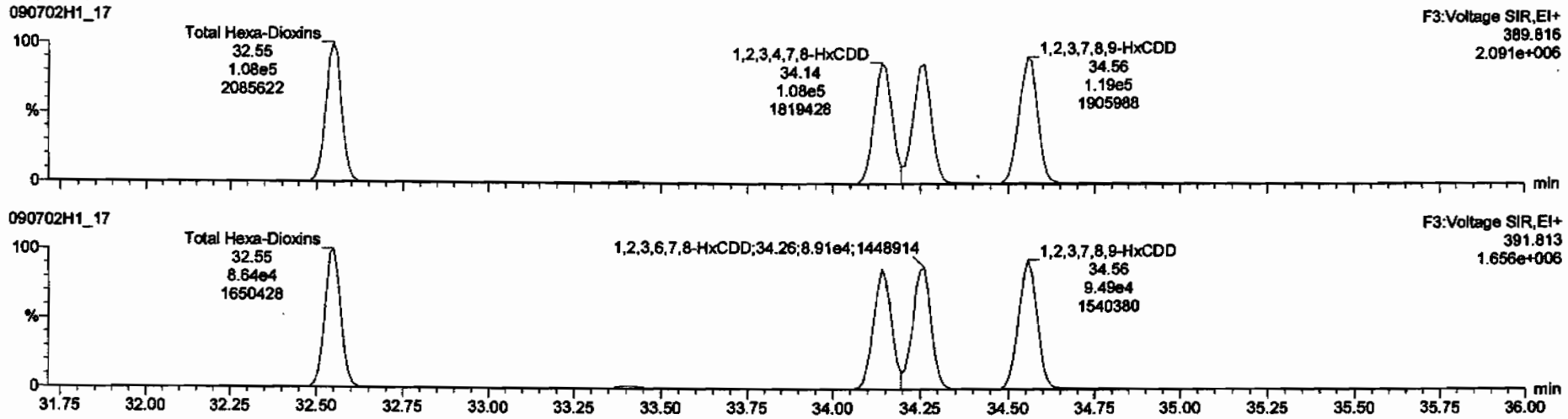

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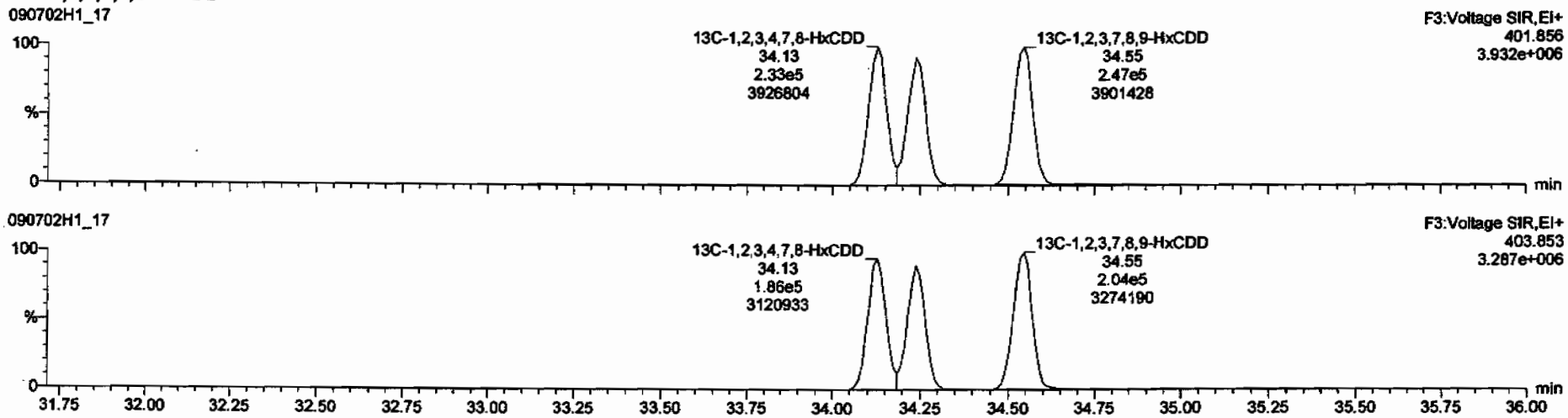

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1,2,3,4,6,7,8-HpCDD

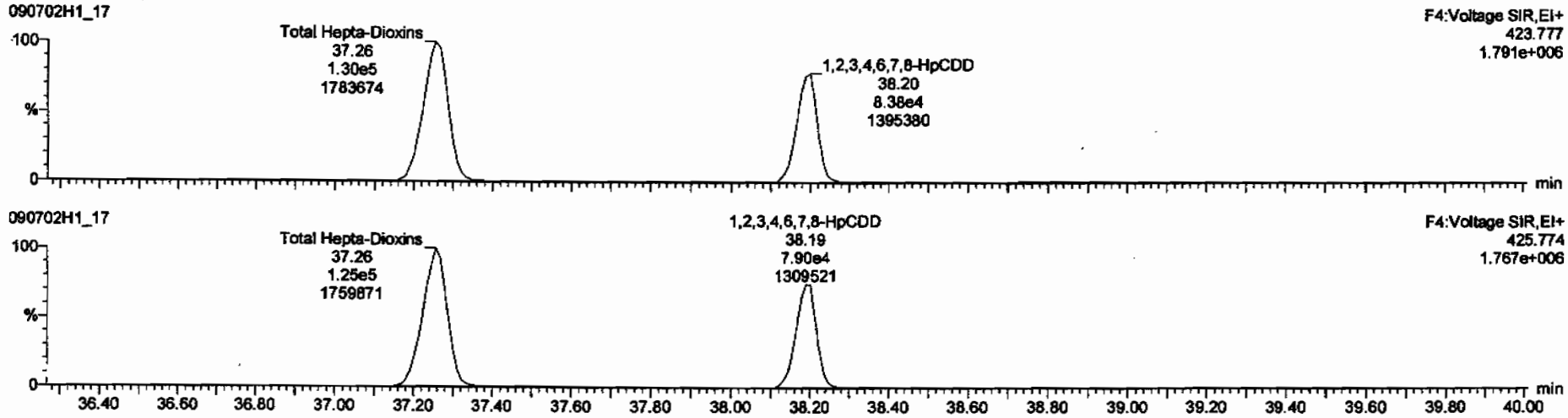

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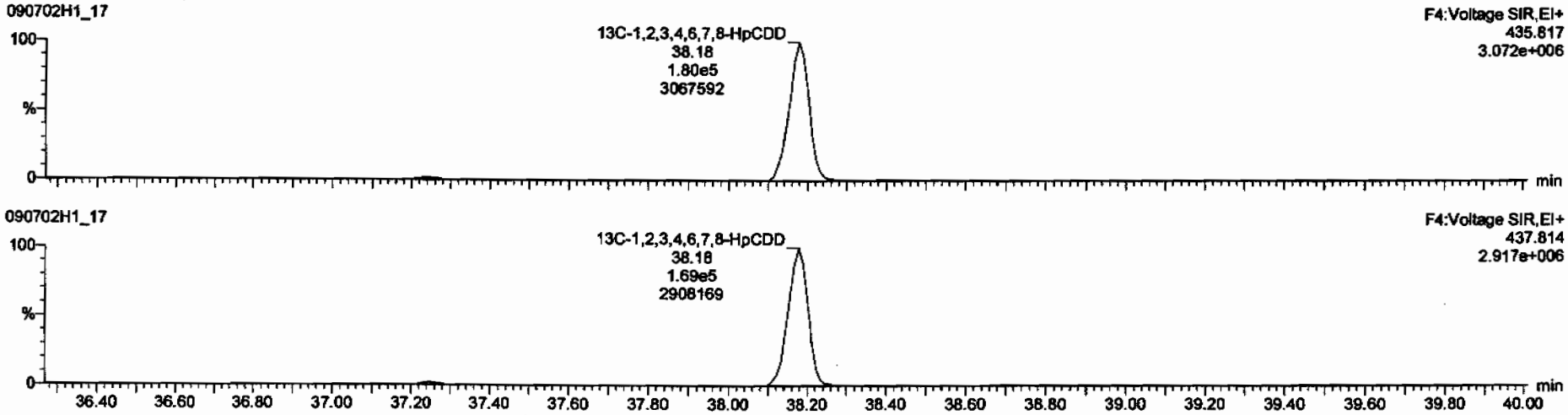

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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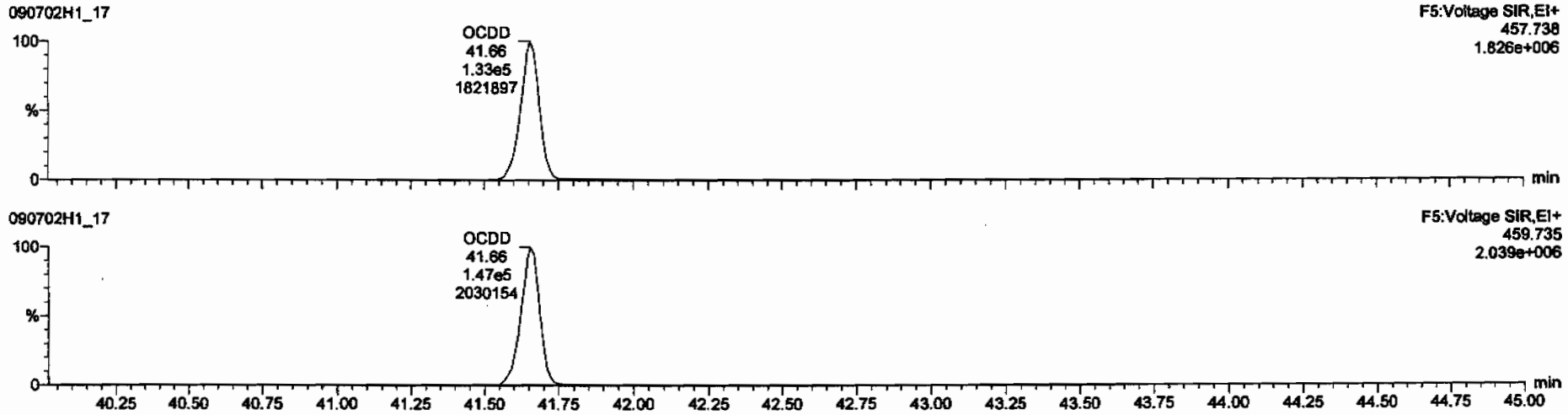

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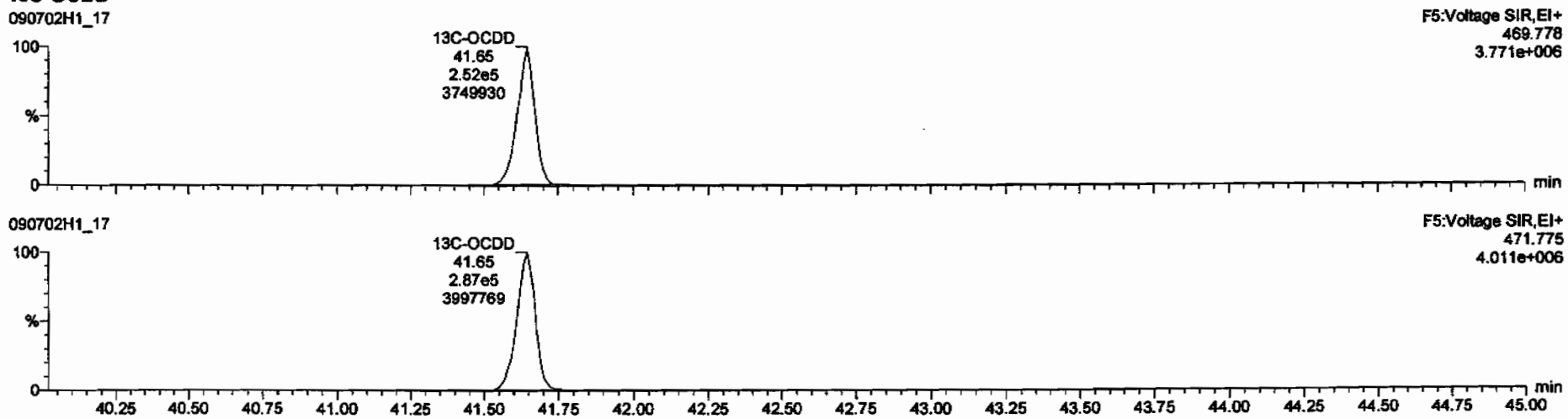

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

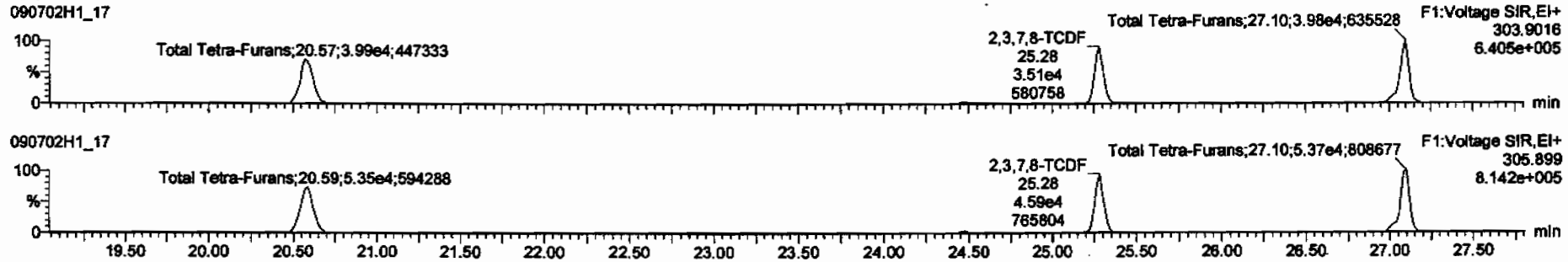

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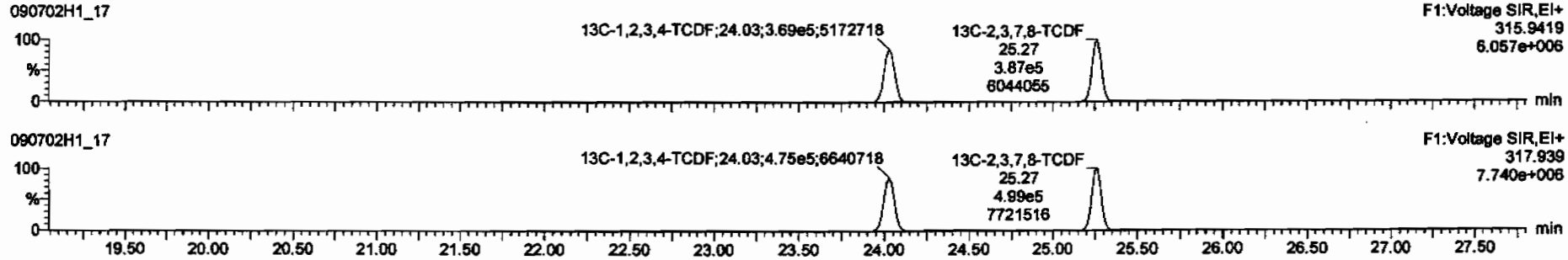

DPE1

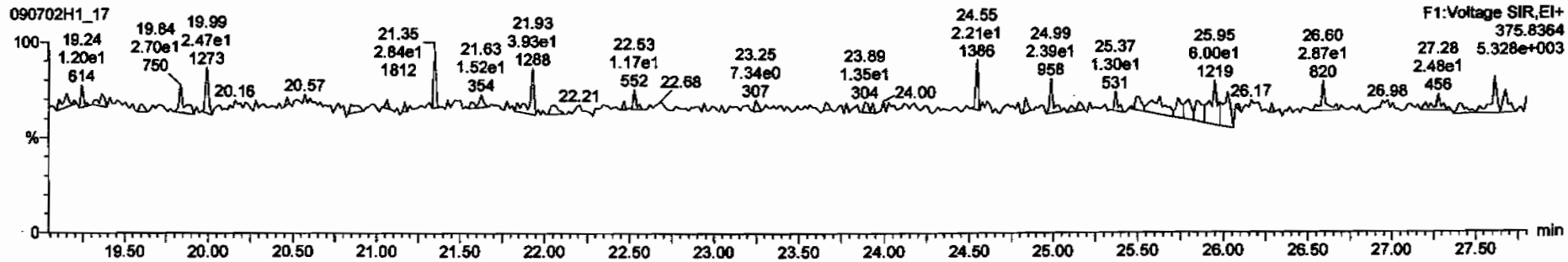

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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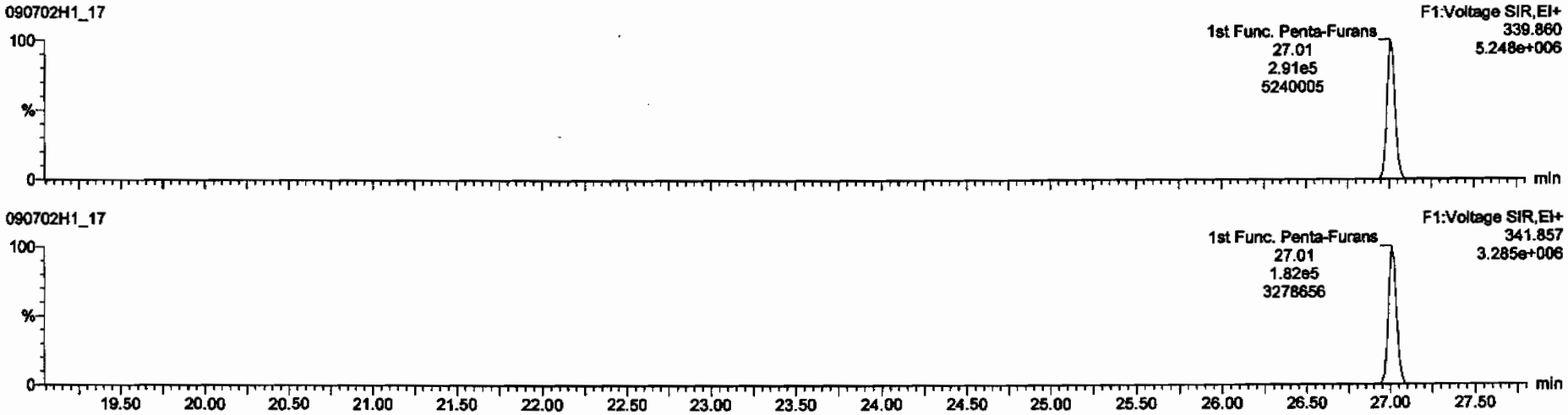

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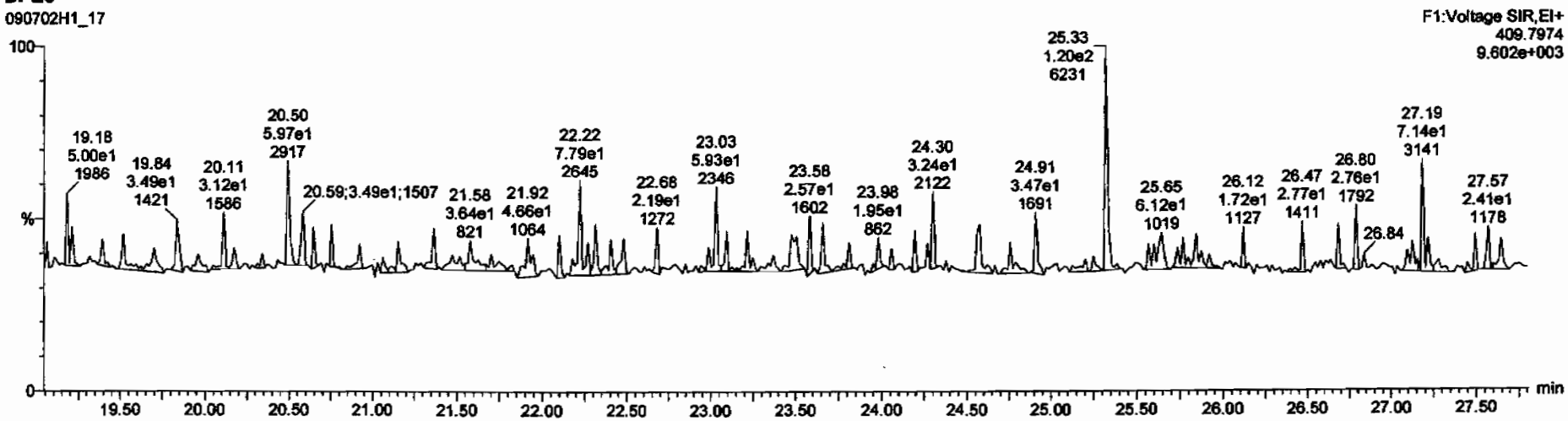

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Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

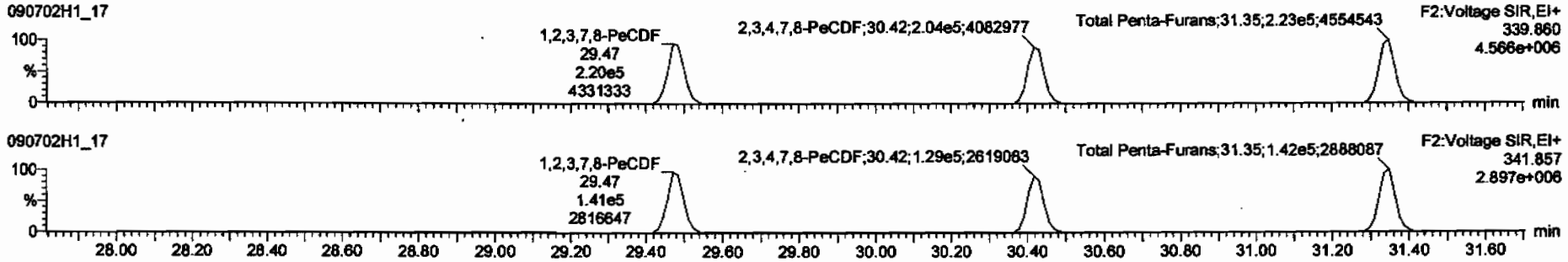

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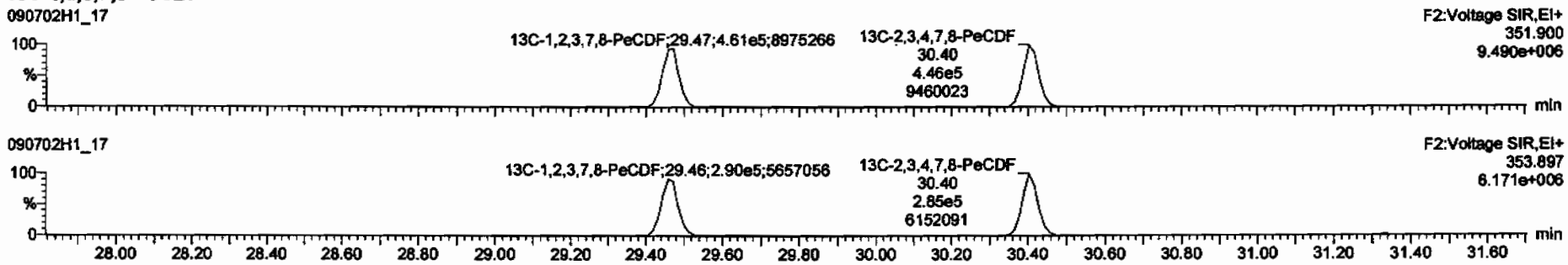

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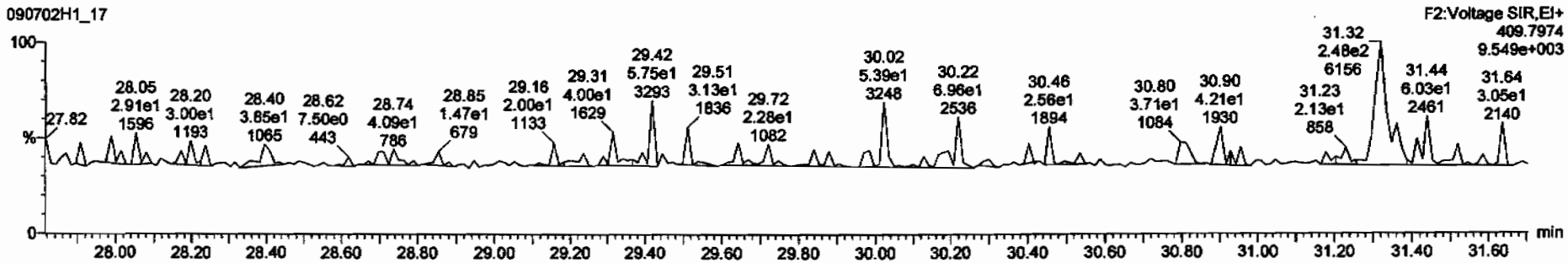

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1,2,3,4,7,8-HxCDF

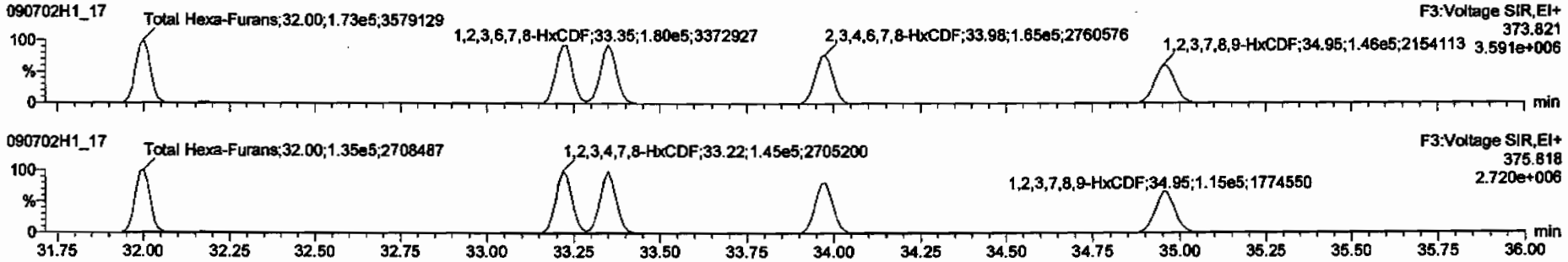

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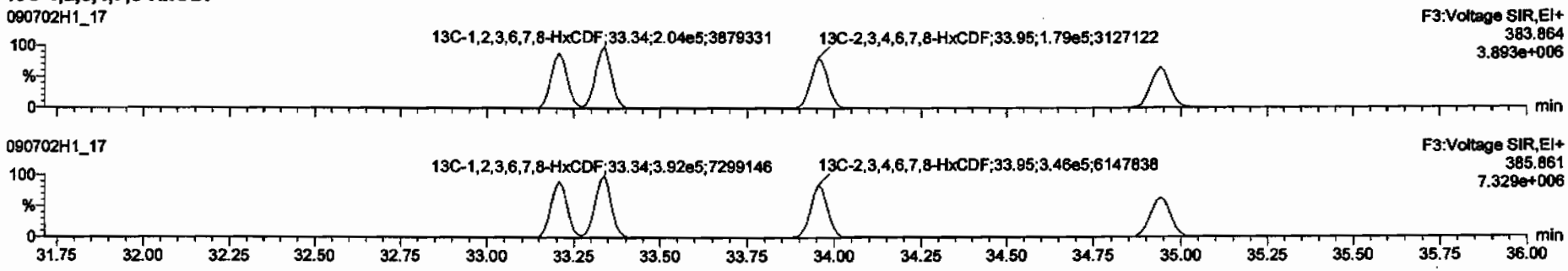

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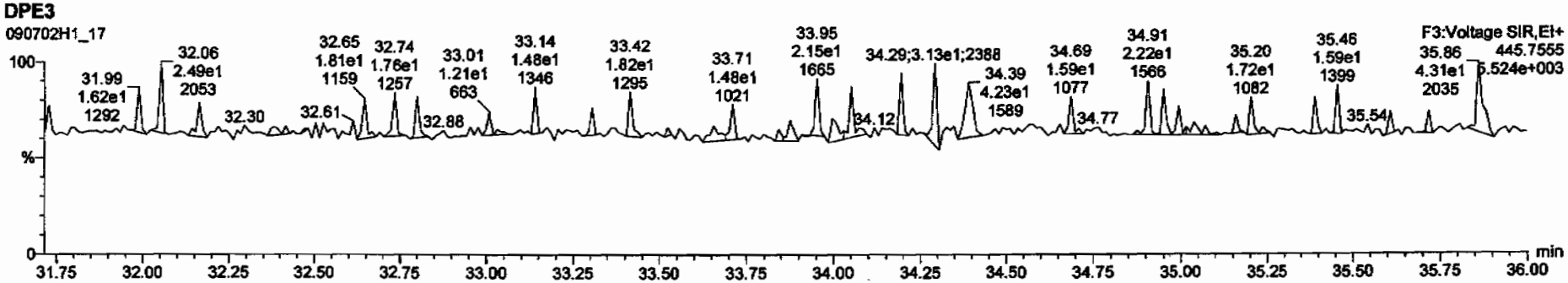

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1,2,3,4,6,7,8-HpCDF

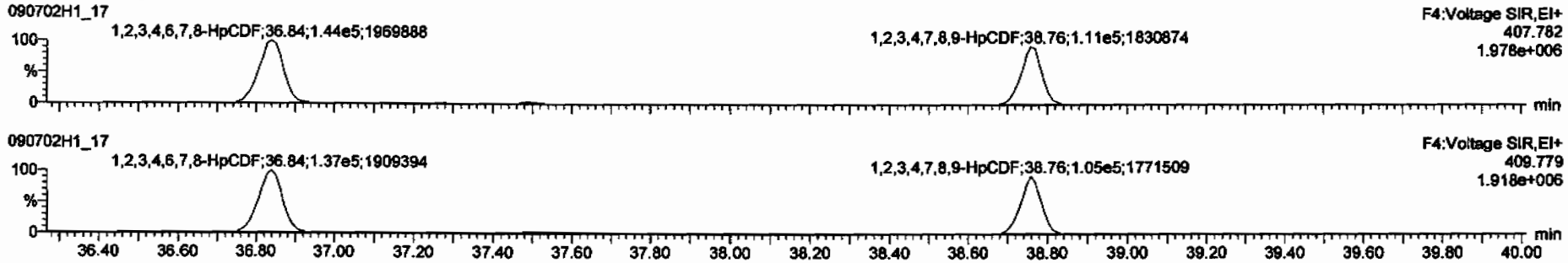

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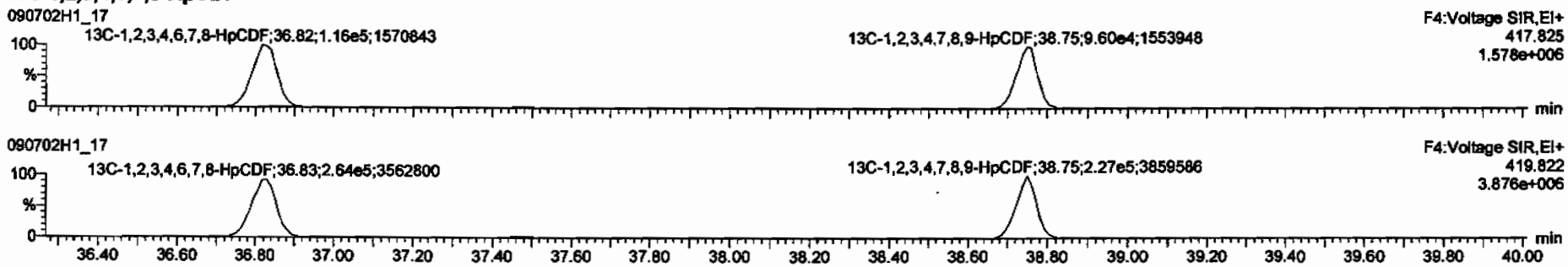

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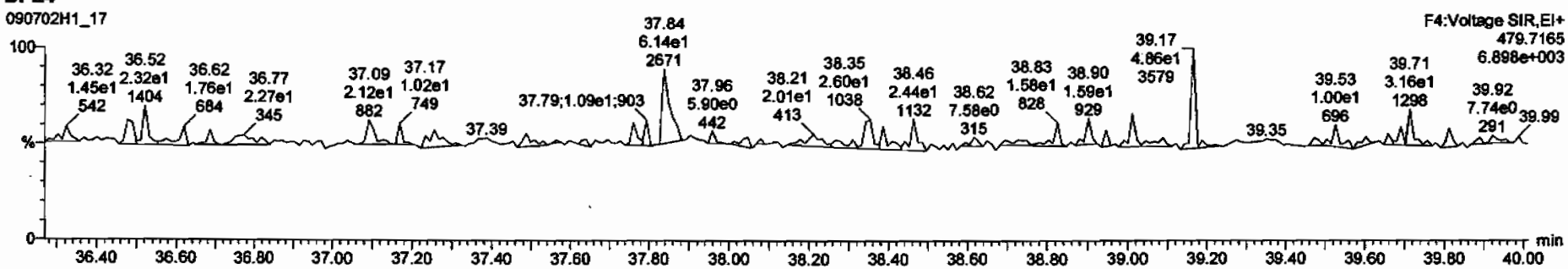

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OCDF

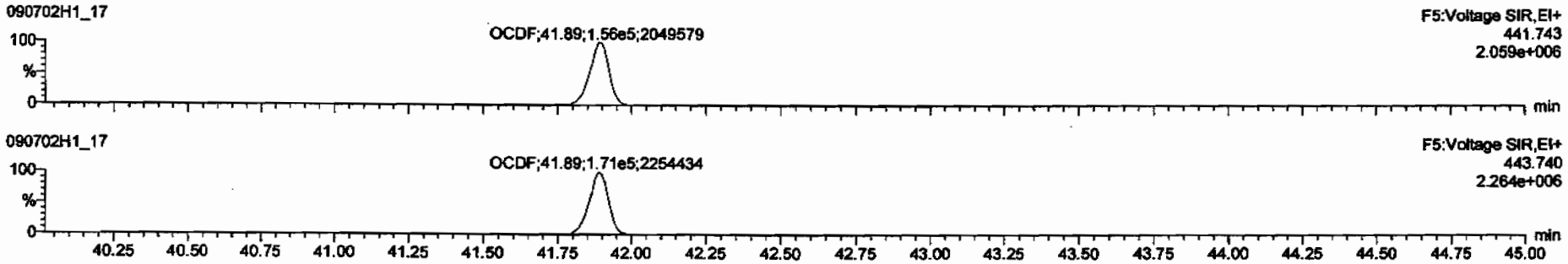

13C-OCDF

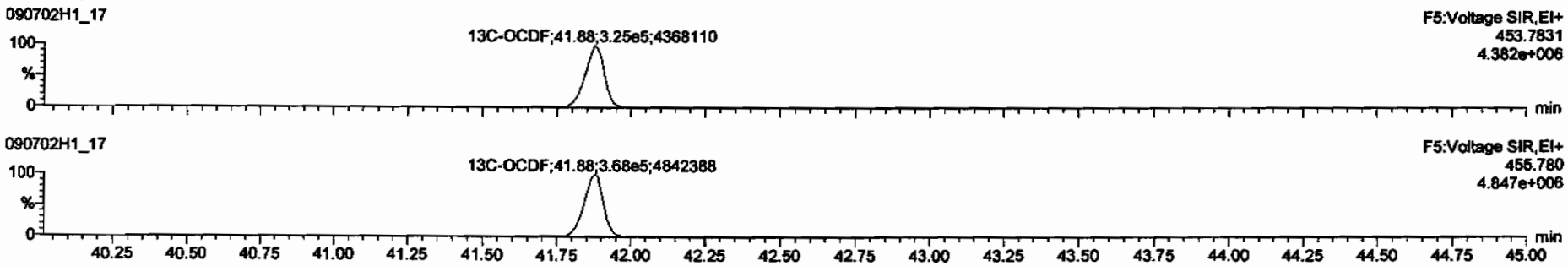

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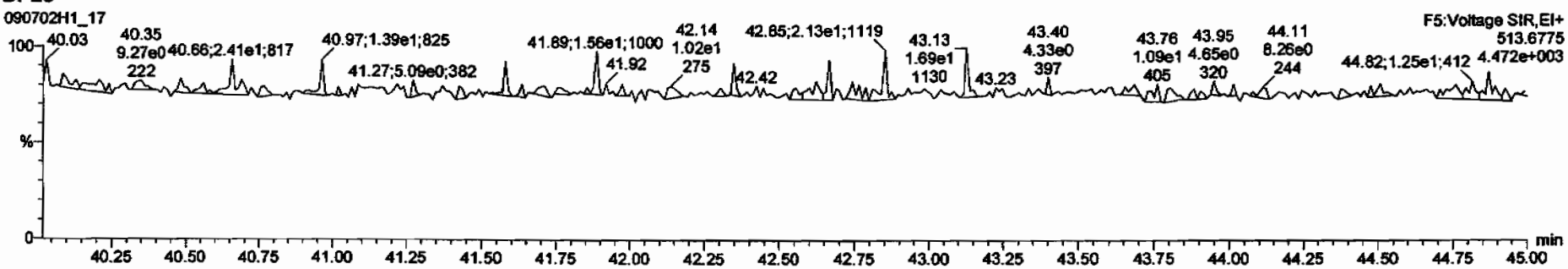

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Printed: Friday, July 03, 2009 06:49:25 Pacific Daylight Time

Name: 090702H1_17, Date: 03-Jul-2009, Time: 03:35:57, ID: ST090702H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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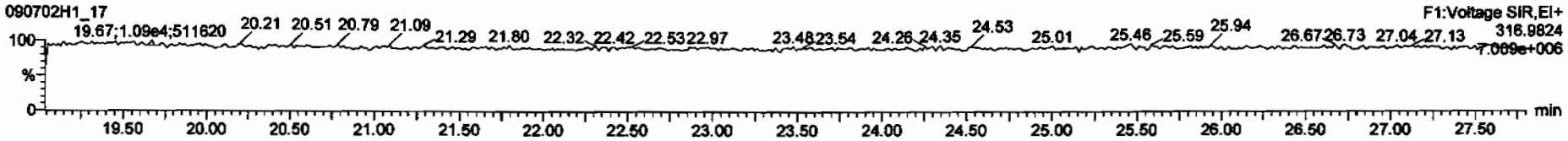

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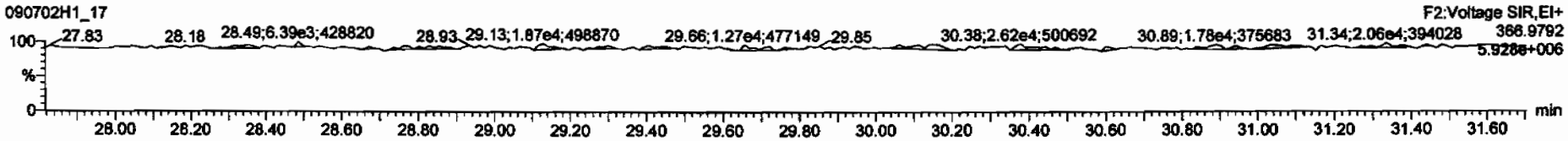

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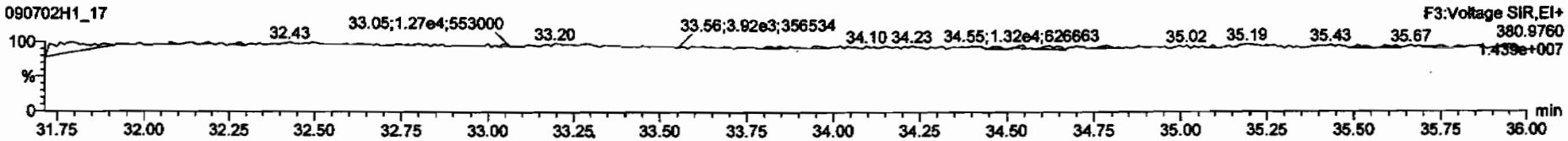

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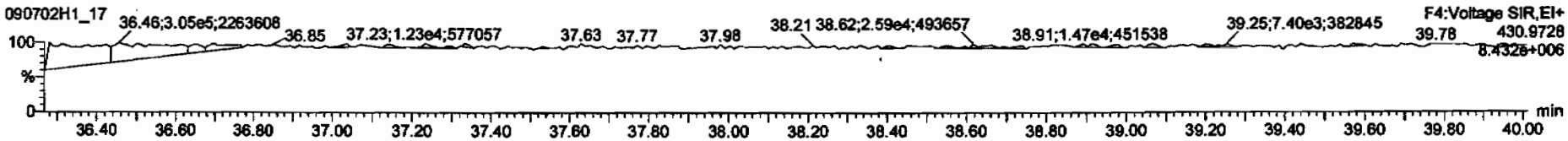

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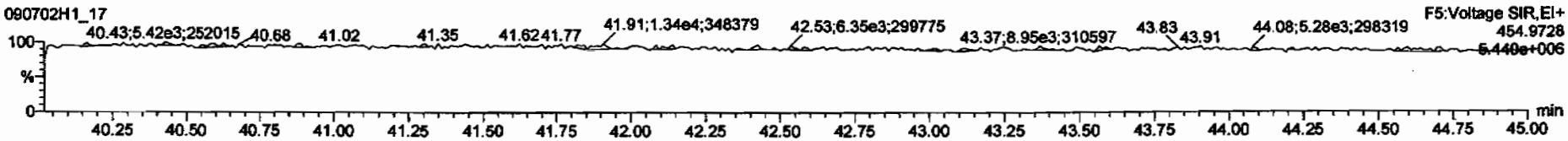

Printed: Friday, July 03, 2009 04:34:05 Pacific Daylight Time

M 292.9824 R 13746

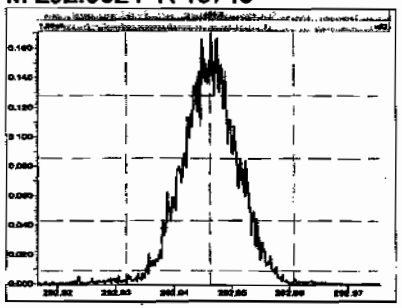

M 304.9824 R 14519

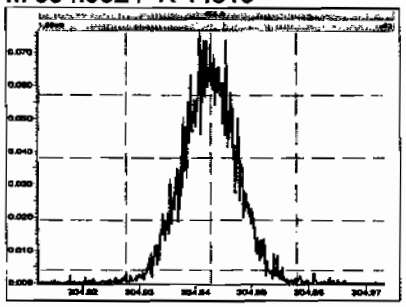

M 318.9792 R 15155

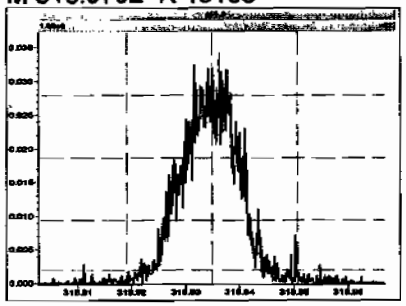

M 330.9792 R 13516

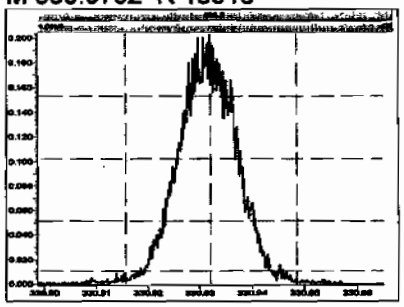

M 342.9792 R 13042

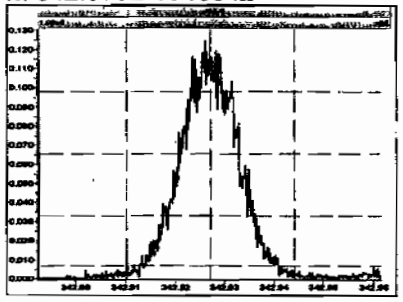

M 354.9792 R 13349

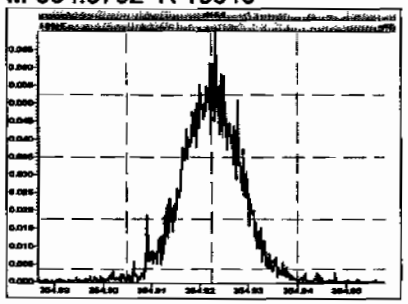

M 366.9792 R 13371

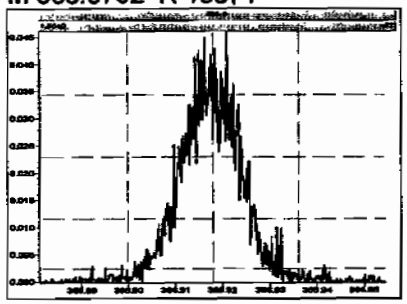

M 380.9760 R 12533

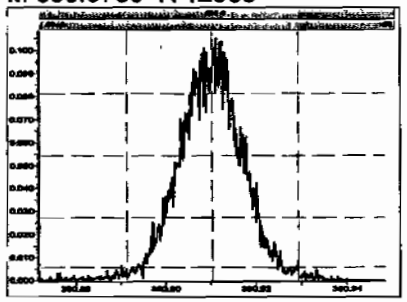

M 392.9760 R 13065

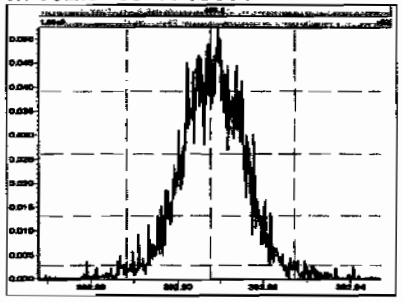

M 404.9760 R 13262

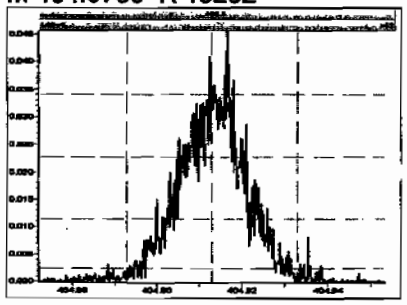

M 416.9760 R 13290

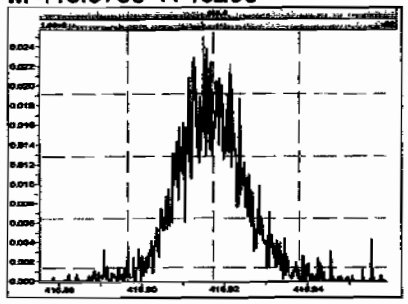

M 330.9792 R 14285

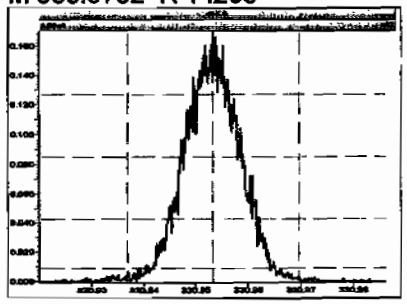

Printed: Friday, July 03, 2009 04:34:05 Pacific Daylight Time

M 342.9792 R 13624

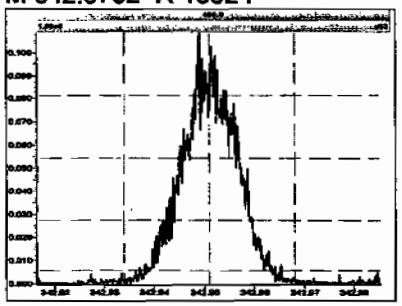

M 354.9792 R 14454

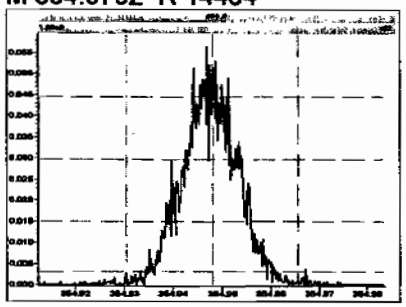

M 366.9792 R 14751

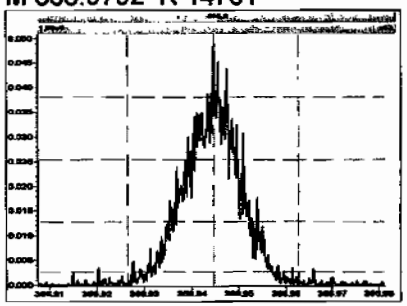

M 380.9760 R 13552

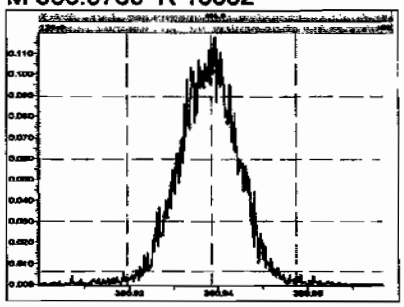

M 392.9760 R 13138

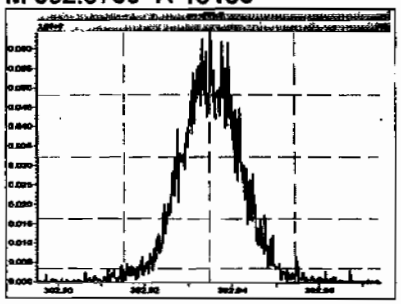

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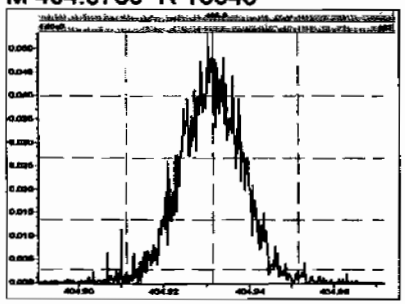

M 416.9760 R 14014

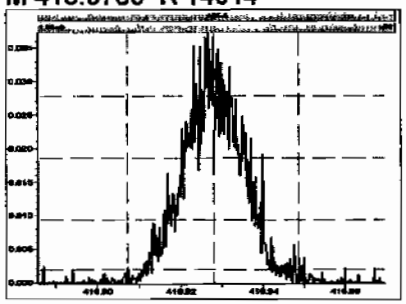

M 366.9792 R 15339

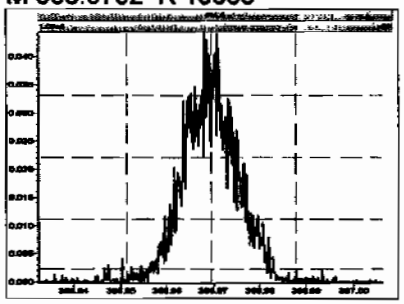

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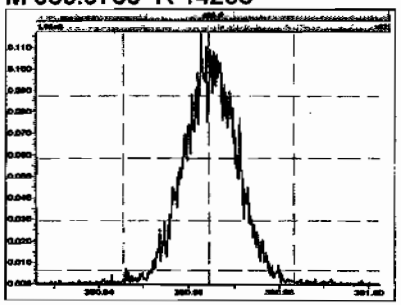

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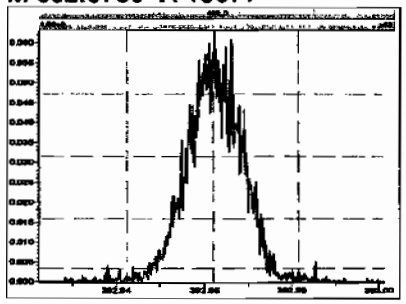

M 404.9760 R 14124

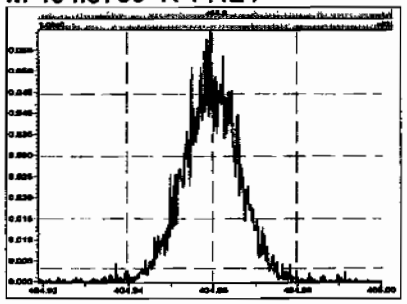

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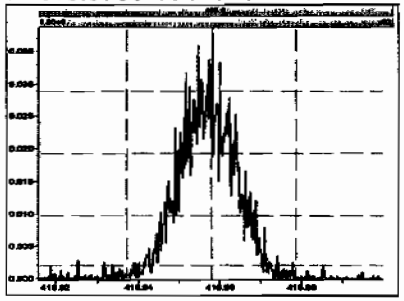

M 430.9728 R 13320

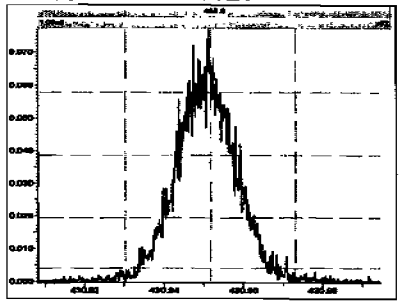

M 442.9728 R 14253

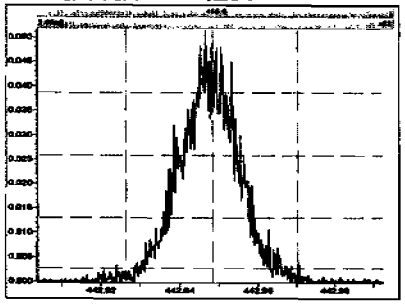

M 454.9728 R 13858

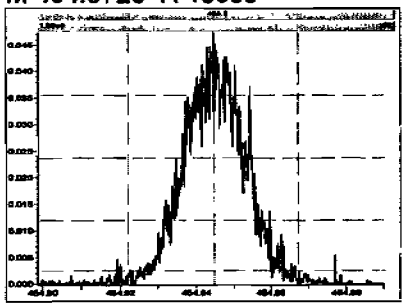

M 404.9760 R 15774

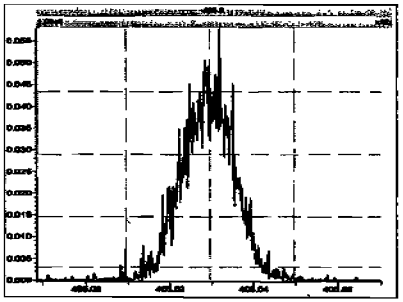

M 416.9760 R 16340

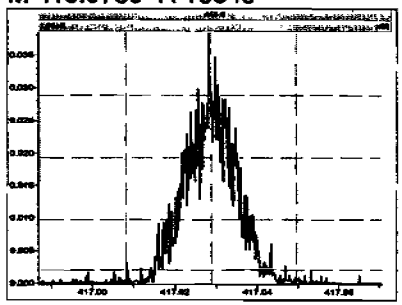

M 430.9728 R 15159

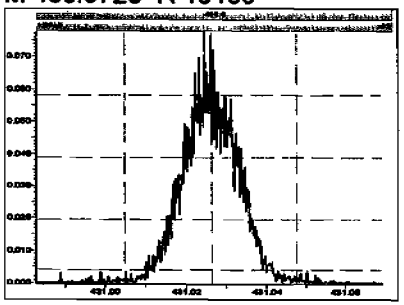

M 442.9728 R 15073

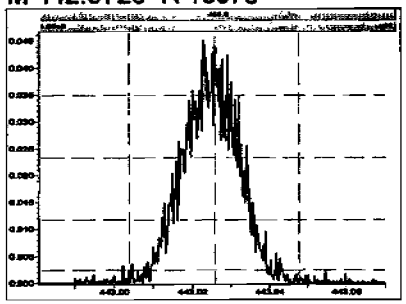

M 454.9728 R 14287

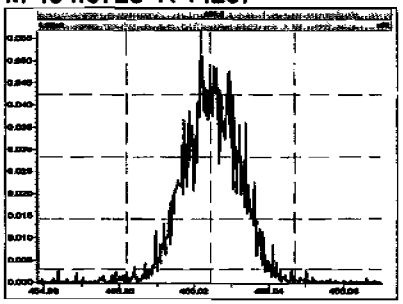

M 466.9728 R 15433

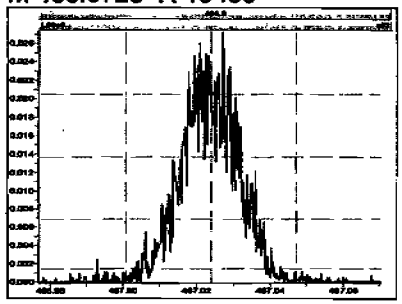

M 480.9696 R 14098

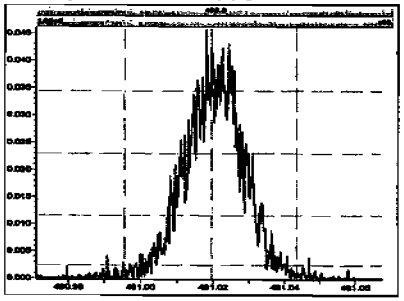

M 430.9728 R 14292

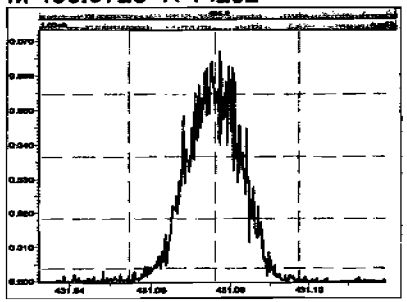

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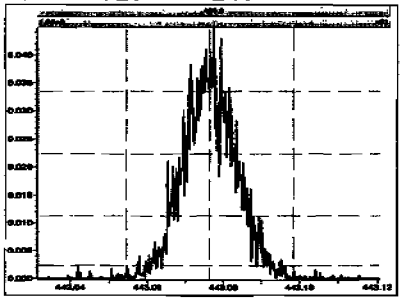

M 454.9728 R 15214

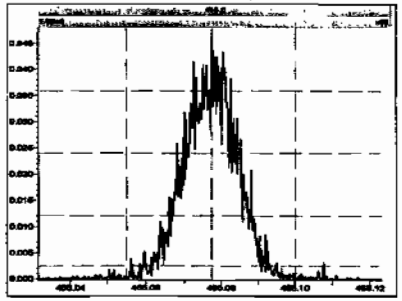

M 466.9728 R 16342

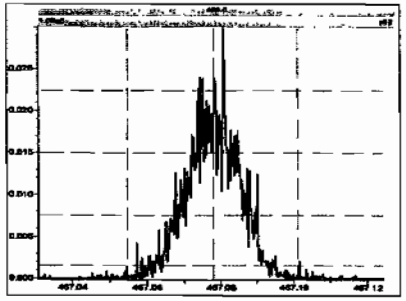

M 480.9696 R 14621

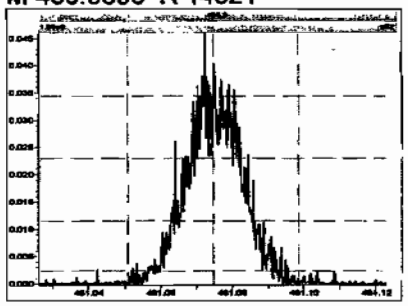

M 492.9696 R 16201

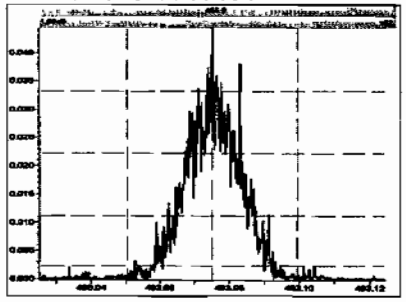

M 504.9696 R 15271

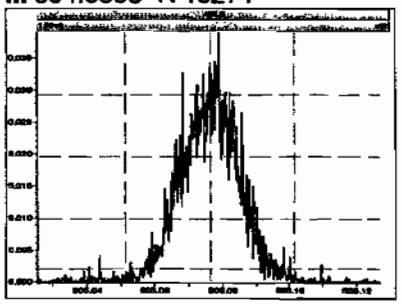

M 516.9697 R 16350

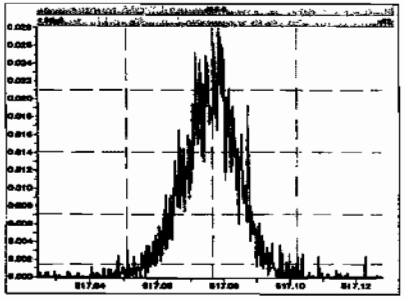

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
CCAL ID: ST090707F1-1
Initial Calibration Date: 06/04/2009
Instrument ID: VG-9
GC Column ID: DB-225
VER Data file name: 090707F1_2
Analysis Date: 07-Jul-09
Analysis Time: 09:23:23

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	NO	9.49	8.4 8.6	12.0 11.6 (4)	Yes	8.00	12.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: _____
Date: 7/7/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 06/04/2009
Instrument ID: VG-9
VER Data file name: 090707F1_2

CCAL ID: ST090707F1-1

GC Column ID: DB-225
Analysis Date: 07-Jul-09 Analysis Time: 09:23:23

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	101	71.0 76.0	140.0 131.0 (5)	Yes	70.0	130.0	Yes

7/7/09

Quantify Sample Summary Report **MassLynx 4.1**

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 10:40:29 Pacific Standard Time
Printed: Tuesday, July 07, 2009 10:40:44 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\tcdf.mdb 30 Jun 2009 11:52:43
Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090707F1_2, Date: 07-Jul-2009, Time: 09:23:23, ID: ST090707F1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	Name	Resp	RA	Int	RRF/RT	Wt/vol	RT	Conc	%Rec	DL
1	1 2,3,7,8-TCDF	1.05e5	0.76	NO	0.857	1.000	17.45	9.4943	94.9	0.0434
2	2 13C-2,3,7,8-TCDF	1.29e6	0.77	NO	1.06	1.000	17.42	100.95	101	0.113
3	3 13C-1,2,3,4-TCDF	1.21e6	0.76	NO	1.00	1.000	15.32	100.00	100	0.119

7/7/09

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 1:35:44 PM Pacific Standard Time
Printed: Tuesday, July 07, 2009 1:36:05 PM Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 30 Jun 2009 11:52:43
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Compound name: 2,3,7,8-TCDF

	Name	ID	Acq.Date	Acq.Time
	090707F1_1	CP090707F1-1 DB-225 CPSM	07-Jul-09	08:47:57
	090707F1_2	ST090707F1-1 1613 CS3 080917I	07-Jul-09	09:23:23
	090707F1_3	SOLVENT BLANK	07-Jul-09	09:58:50
	090707F1_4	31850_2214_004 CAMO-09-9989 12.48	07-Jul-09	10:34:17
	090707F1_5	31807_2217_001 CAMO-6155 12.68	07-Jul-09	11:09:43
	090707F1_6	31807_2217_002 CAMO-6156 11.95	07-Jul-09	11:45:09
	090707F1_7	SOLVENT BLANK	07-Jul-09	12:20:34
	090707F1_8	ST090707F1-2 1613 CS3 080917I	07-Jul-09	12:55:59

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090707F1-1

End Calibration ID: ST090707F1-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range?	✓	✓
First and last eluters present?	NA	NA
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	NA
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits		NA
-S/N > 2.5:1		
-CS1 within 12-hour clock		✓

Comments:

Reviewed by: MS 7/7/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 rmh

File: Experiment: tcdf_db225.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Tuesday, July 07, 2009 08:47:40 Pacific Standard Time

M 292.9824 R 11263

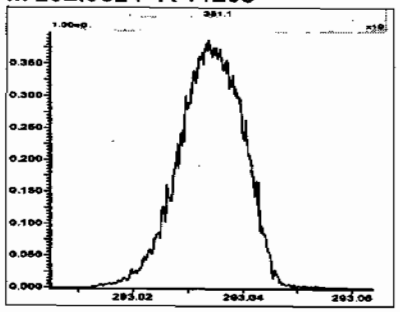

M 304.9824 R 11628

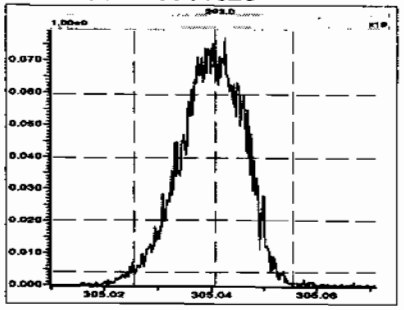

M 318.9792 R 12254

M 330.9792 R 11315

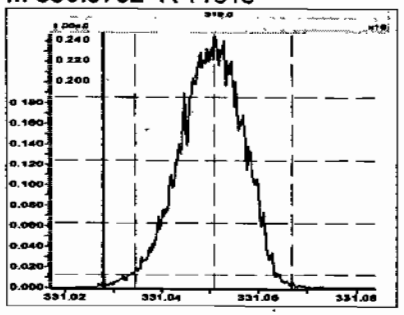

M 342.9792 R 10823

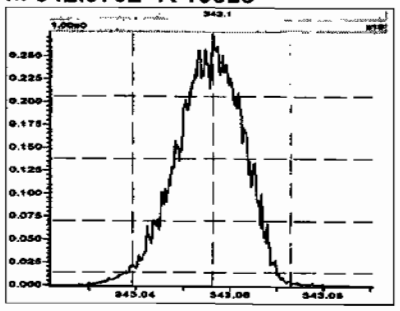

M 354.9792 R 10548

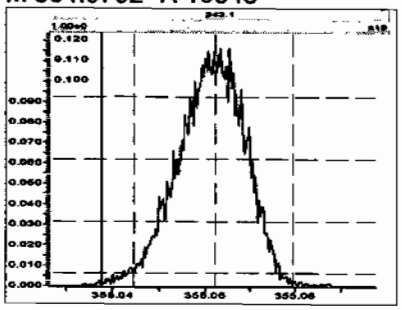

M 366.9792 R 11310

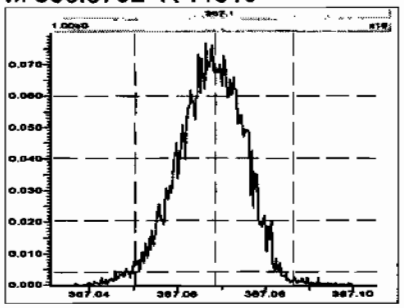

M 380.9760 R 10243

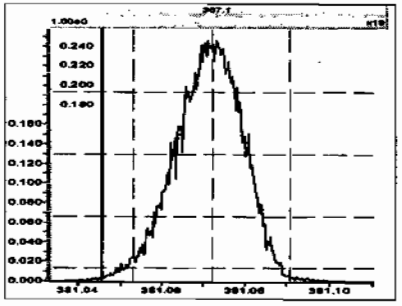

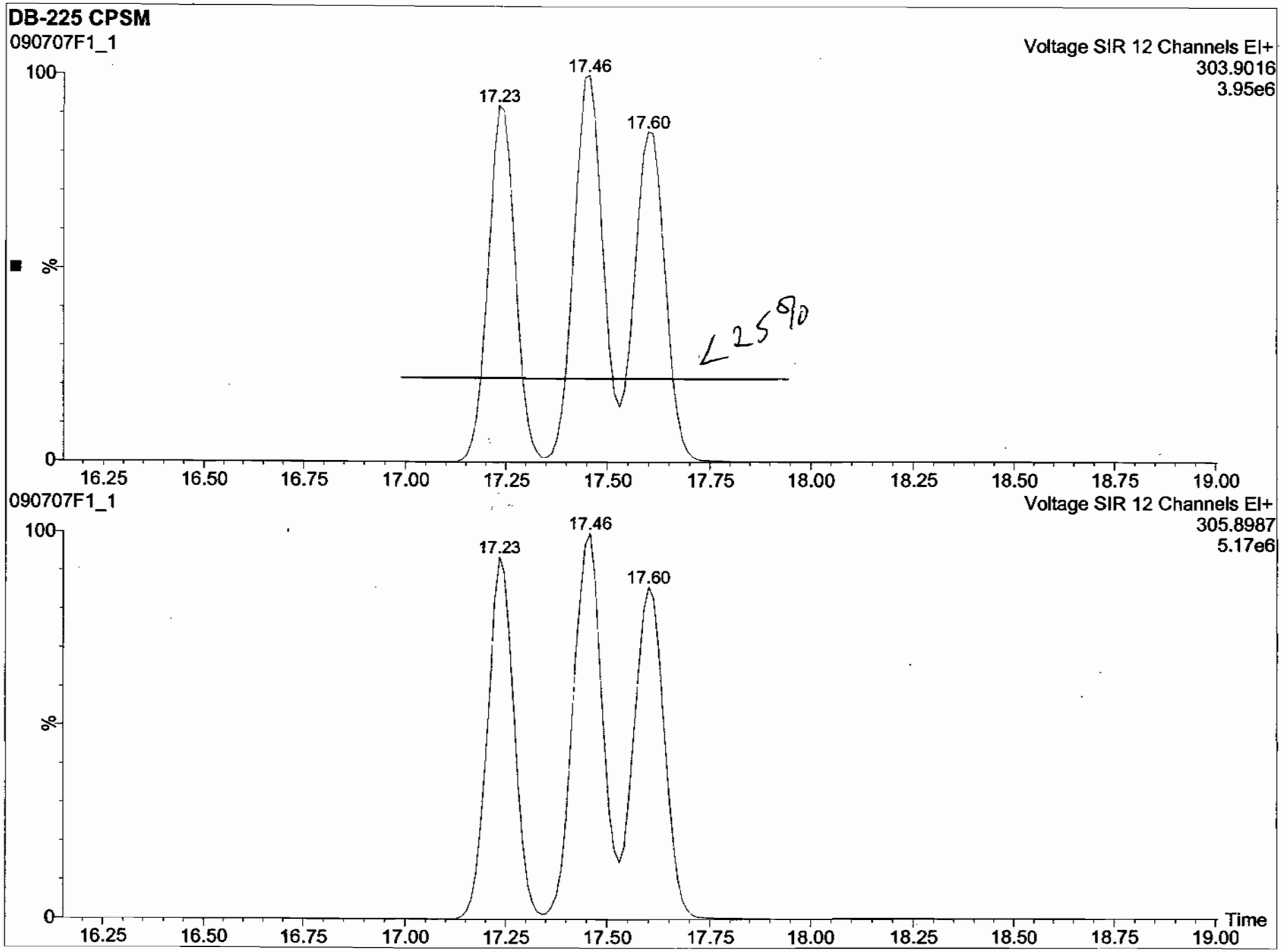
DB-225 CPSM
090707F1_1
Voltage SIR 12 Channels EI+
303.9016
3.95e6
17.23
17.46
17.60
L25%
100
%
0
16.25
16.50
16.75
17.00
17.25
17.50
17.75
18.00
18.25
18.50
18.75
19.00
090707F1_1
Voltage SIR 12 Channels EI+
305.8987
5.17e6
17.23
17.46
17.60
100
%
0
Time
16.25
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16.75
17.00
17.25
17.50
17.75
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18.25
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18.75
19.00

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 10:40:29 Pacific Standard Time
Printed: Tuesday, July 07, 2009 10:40:44 Pacific Standard Time

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Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090707F1_2, Date: 07-Jul-2009, Time: 09:23:23, ID: ST090707F1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

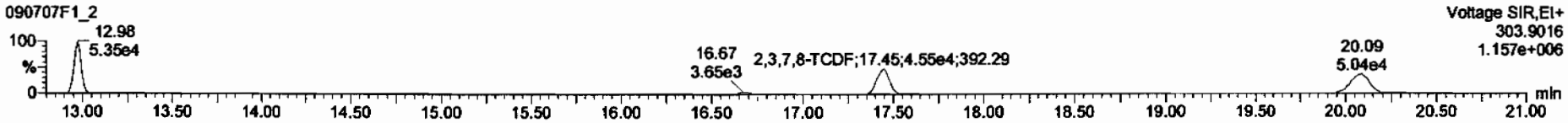

2,3,7,8-TCDF

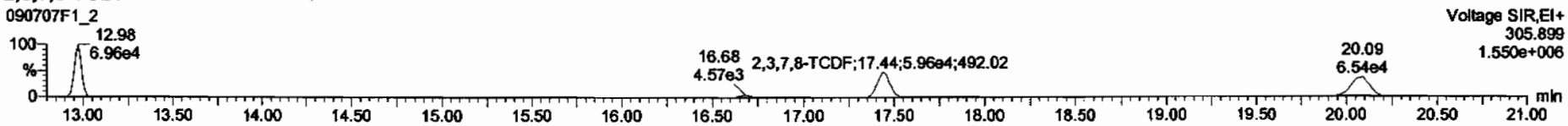

13C-2,3,7,8-TCDF

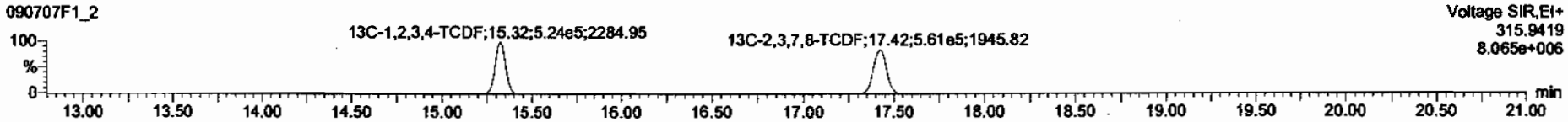

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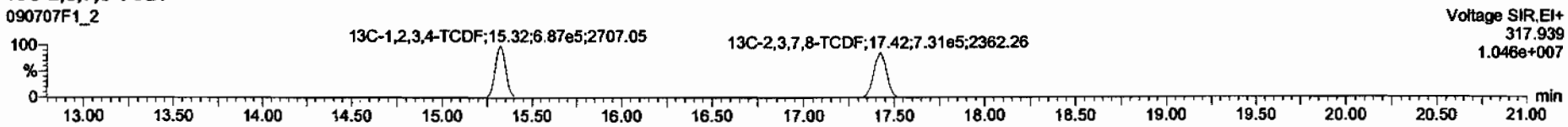

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Printed: Tuesday, July 07, 2009 10:40:44 Pacific Standard Time

Name: 090707F1_2, Date: 07-Jul-2009, Time: 09:23:23, ID: ST090707F1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

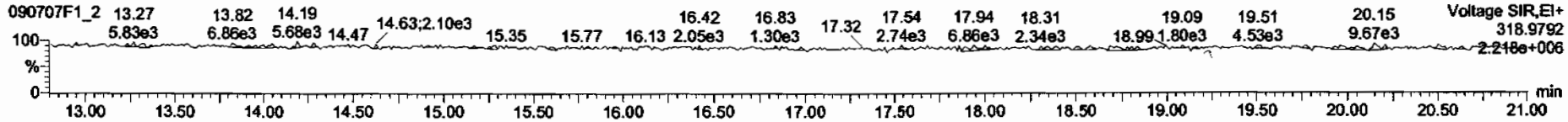

DPE1

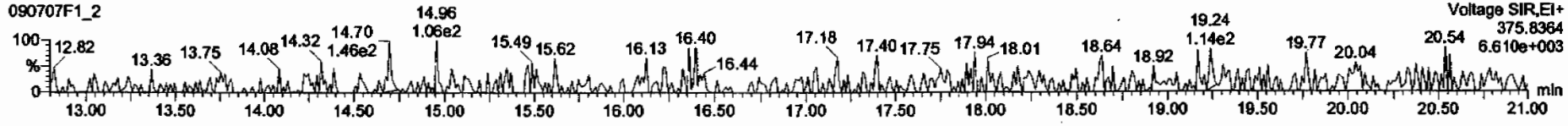

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 06/04/2009
Instrument ID: VG-9
VER Data file name: 090707F1_8

CCAL ID: ST090707F1-2
GC Column ID: DB-225
Analysis Date: 07-Jul-09
Analysis Time: 12:55:59

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	NO	9.37	8.4 8.6	12.0 11.6 (4)	Yes	8.00	12.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: _____
Date: 7/7/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 06/04/2009
Instrument ID: VG-9
VER Data file name: 090707F1_8

CCAL ID: ST090707F1-2

GC Column ID: DB-225
Analysis Date: 07-Jul-09 Analysis Time: 12:55:59

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	102	71.0 76.0	140.0 131.0 (5)	Yes	70.0	130.0	Yes

7/7/09

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 13:34:22 Pacific Standard Time
Printed: Tuesday, July 07, 2009 13:34:34 Pacific Standard Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090707F1_8, Date: 07-Jul-2009, Time: 12:55:59, ID: ST090707F1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

#	Name	Resp	IsRAT	Only	RRF Mt	Wt/Vol	RT	Conc	%Rec	Ion
1	2,3,7,8-TCDF	8.54e4	0.76	NO	0.857	1.000	17.41	9.3733	93.7	0.0443
2	13C-2,3,7,8-TCDF	1.06e6	0.77	NO	1.06	1.000	17.40	101.73	102	0.174
3	13C-1,2,3,4-TCDF	9.88e5	0.77	NO	1.00	1.000	15.30	100.00	100	0.184

7/7/09

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 1:35:44 PM Pacific Standard Time
Printed: Tuesday, July 07, 2009 1:36:05 PM Pacific Standard Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Compound name: 2,3,7,8-TCDF

	Name	ID	Acq.Date	Acq.Time
1	090707F1_1	CP090707F1-1 DB-225 CPSM	07-Jul-09	08:47:57
2	090707F1_2	ST090707F1-1 1613 CS3 080917I	07-Jul-09	09:23:23
3	090707F1_3	SOLVENT BLANK	07-Jul-09	09:58:50
4	090707F1_4	31850_2214_004 CAMO-09-9989 12.48	07-Jul-09	10:34:17
5	090707F1_5	31807_2217_001 CAMO-6155 12.68	07-Jul-09	11:09:43
6	090707F1_6	31807_2217_002 CAMO-6156 11.95	07-Jul-09	11:45:09
7	090707F1_7	SOLVENT BLANK	07-Jul-09	12:20:34
8	090707F1_8	ST090707F1-2 1613 CS3 080917I	07-Jul-09	12:55:59

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 13:34:22 Pacific Standard Time
Printed: Tuesday, July 07, 2009 13:34:34 Pacific Standard Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090707F1_8, Date: 07-Jul-2009, Time: 12:55:59, ID: ST090707F1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

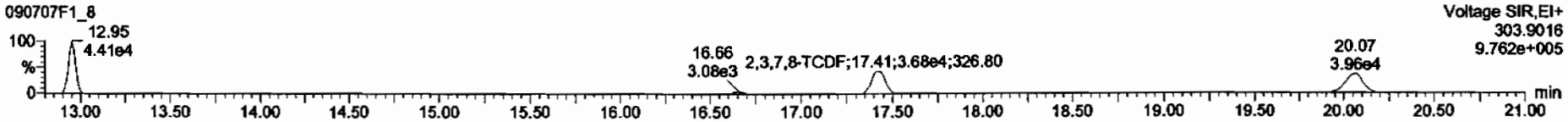

2,3,7,8-TCDF

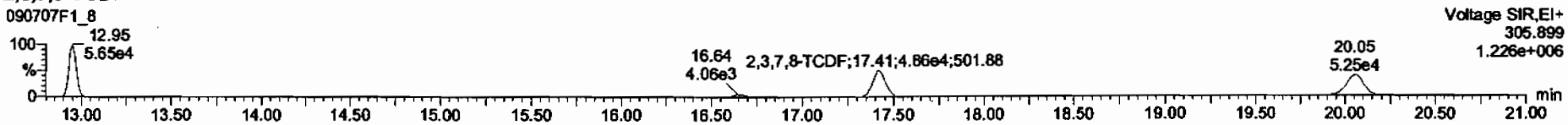

13C-2,3,7,8-TCDF

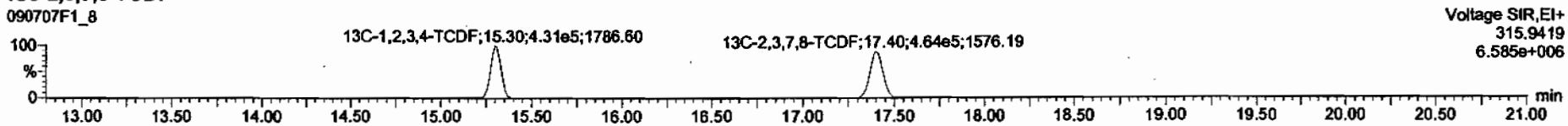

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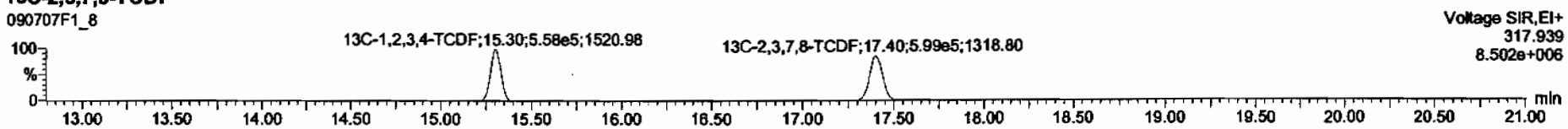

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PFK1

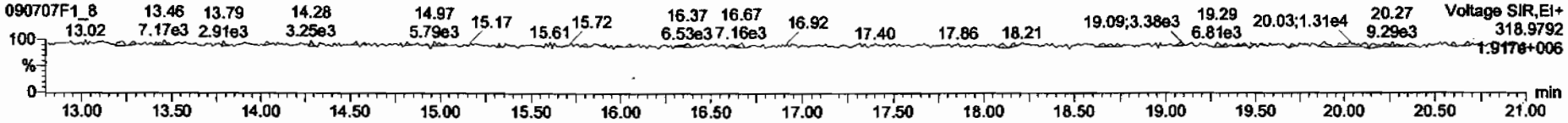

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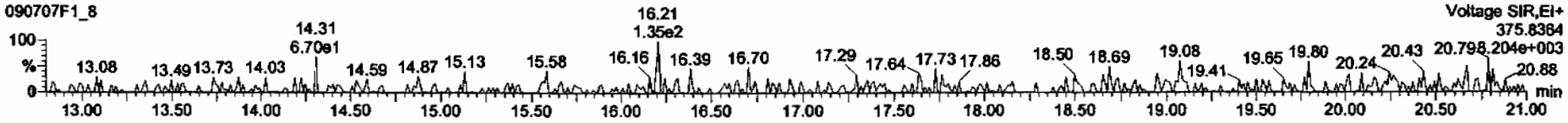

Printed: Tuesday, July 07, 2009 13:33:13 Pacific Standard Time

M 292.9824 R 11337

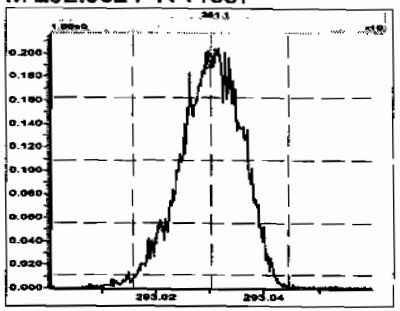

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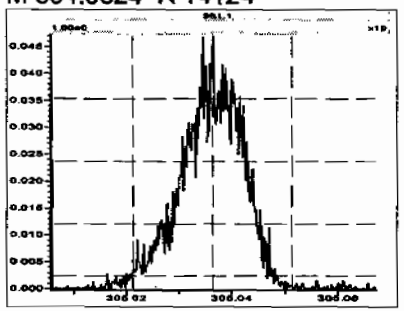

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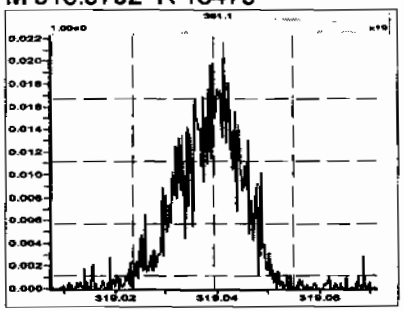

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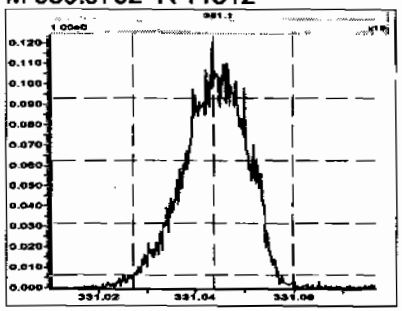

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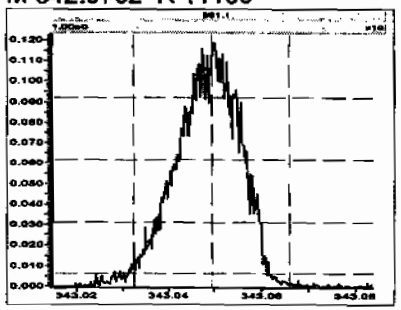

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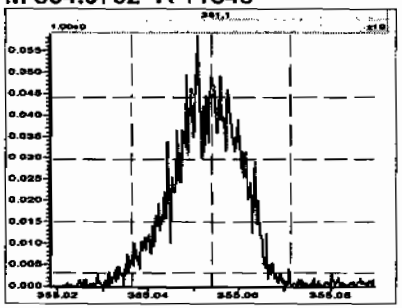

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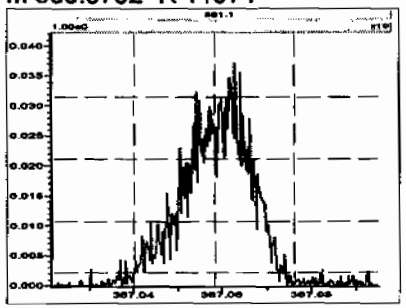

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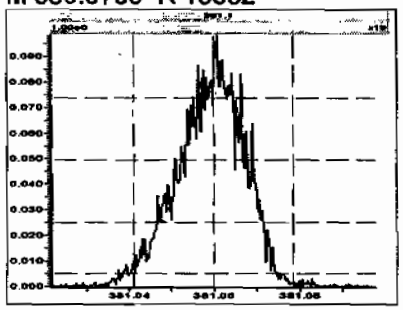

ICAL

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Compound name: 2,3,7,8-TCDD
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IS	RT	RRT	Response	IS Response	Conc.	%Dev.	RRF
090212H1_1	10.0	0.82	NO	25.98	1.001	7.90e4	7.49e5	9.78	-2.2	1.05
090212H1_3	0.250	0.85	NO	26.00	1.001	1.54e3	5.94e5	0.240	-4.1	1.03
090212H1_4	0.500	0.71	NO	25.98	1.001	3.65e3	6.33e5	0.536	7.1	1.16
090212H1_5	2.00	0.72	NO	26.00	1.001	1.40e4	6.64e5	1.95	-2.5	1.05
090212H1_6	40.0	0.77	NO	25.98	1.001	3.33e5	7.81e5	39.5	-1.3	1.06
090212H1_7	200	0.78	NO	26.00	1.001	1.92e6	8.66e5	206	3.0	1.11

Compound name: 1,2,3,7,8-PeCDD
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std. Conc.	RA	IS	RT	RRT	Response	IS Response	Conc.	%Dev.	RRF
090212H1_1	50.0	0.63	NO	30.65	1.000	3.03e5	6.02e5	48.6	-2.7	1.01
090212H1_3	1.25	0.69	NO	30.67	1.000	6.36e3	4.83e5	1.27	1.9	1.05
090212H1_4	2.50	0.60	NO	30.67	1.000	1.30e4	4.97e5	2.53	1.1	1.04
090212H1_5	10.0	0.61	NO	30.67	1.000	5.28e4	5.23e5	9.77	-2.3	1.01
090212H1_6	200	0.63	NO	30.67	1.000	1.31e6	6.35e5	200	-0.1	1.03
090212H1_7	1000	0.63	NO	30.67	1.000	8.09e6	7.66e5	1020	2.2	1.06

2/13/09
MS 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.00153
RRF SD: 0.0317187, Relative SD: 3.16702
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA		RT	RRT	Resp	ISResp	Conc	%Dev	RRF
090212H1_1	50.0	1.26	NO	34.10	1.000	2.54e5	5.27e5	48.0	-3.9	0.962
090212H1_3	1.25	1.42	NO	34.11	1.000	5.16e3	4.08e5	1.26	1.0	1.01
090212H1_4	2.50	1.28	NO	34.11	1.001	1.10e4	4.22e5	2.61	4.2	1.04
090212H1_5	10.0	1.32	NO	34.12	1.000	4.31e4	4.47e5	9.64	-3.6	0.965
090212H1_6	200	1.27	NO	34.11	1.000	1.12e6	5.53e5	203	1.4	1.02
090212H1_7	1000	1.25	NO	34.12	1.000	7.63e6	7.54e5	1010	1.0	1.01

Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA		RT	RRT	Resp	ISResp	Conc	%Dev	RRF
090212H1_1	50.0	1.27	NO	34.21	1.000	2.90e5	5.42e5	47.6	-4.8	1.07
090212H1_3	1.25	1.20	NO	34.23	1.001	6.02e3	4.14e5	1.29	3.4	1.16
090212H1_4	2.50	1.24	NO	34.23	1.001	1.23e4	4.20e5	2.60	3.9	1.17
090212H1_5	10.0	1.26	NO	34.24	1.001	4.91e4	4.60e5	9.48	-5.2	1.07
090212H1_6	200	1.30	NO	34.22	1.000	1.29e6	5.59e5	205	2.7	1.16
090212H1_7	1000	1.26	NO	34.23	1.000	8.08e6	7.18e5	1000	0.0	1.13

Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.10201
RRF SD: 0.0447729, Relative SD: 4.06282
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA		RT	RRT	Resp	ISResp	Conc	%Dev	RRF
090212H1_1	50.0	1.28	NO	34.51	1.009	2.83e5	0.00e0	48.1	-3.9	1.06
090212H1_3	1.25	1.27	NO	34.53	1.010	5.79e3	0.00e0	1.28	2.4	1.13

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Compound name: 1,2,3,7,8,9-HxCDD

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	2.50	1.28	NO	34.52	1.009	1.21e4	0.00e0	2.60	4.0	1.15
090212H1_5	10.0	1.22	NO	34.53	1.009	4.70e4	0.00e0	9.41	-5.9	1.04
090212H1_6	200	1.32	NO	34.52	1.009	1.26e6	0.00e0	207	3.3	1.14
090212H1_7	1000	1.25	NO	34.53	1.009	8.13e6	0.00e0	1000	0.2	1.10

Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.03	NO	38.17	1.000	2.11e5	4.13e5	48.0	-4.0	1.02
090212H1_3	1.25	1.15	NO	38.18	1.000	4.52e3	3.21e5	1.32	5.7	1.12
090212H1_4	2.50	1.07	NO	38.18	1.000	8.68e3	3.21e5	2.54	1.7	1.08
090212H1_5	10.0	1.07	NO	38.19	1.001	3.41e4	3.36e5	9.55	-4.5	1.02
090212H1_6	200	1.07	NO	38.19	1.000	9.19e5	4.29e5	201	0.7	1.07
090212H1_7	1000	1.05	NO	38.19	1.001	6.29e6	5.88e5	1000	0.5	1.07

Compound name: OCDD
Response Factor: 1.17831
RRF SD: 0.0736447, Relative SD: 6.25001
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.91	NO	41.63	1.000	3.30e5	5.87e5	95.3	-4.7	1.12
090212H1_3	2.50	0.89	NO	41.67	1.001	7.09e3	4.40e5	2.74	9.5	1.29
090212H1_4	5.00	0.87	NO	41.65	1.000	1.25e4	4.37e5	4.85	-3.0	1.14
090212H1_5	20.0	0.85	NO	41.66	1.000	5.10e4	4.67e5	18.5	-7.3	1.09
090212H1_6	400	0.92	NO	41.68	1.000	1.48e6	6.21e5	404	1.1	1.19
090212H1_7	2000	0.89	NO	41.67	1.001	1.10e7	8.92e5	2090	4.4	1.23

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Compound name: 2,3,7,8-TCDF
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IT	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0	0.78	NO	25.19	1.001	1.14e5	1.07e6	9.75	-2.5	1.06
090212H1_3	0.250	0.83	NO	25.19	1.001	2.44e3	8.63e5	0.260	4.1	1.13
090212H1_4	0.500	0.84	NO	25.20	1.001	4.98e3	9.06e5	0.506	1.2	1.10
090212H1_5	2.00	0.81	NO	25.20	1.001	1.97e4	9.70e5	1.87	-6.4	1.02
090212H1_6	40.0	0.79	NO	25.20	1.001	4.71e5	1.08e6	40.1	0.3	1.09
090212H1_7	200	0.79	NO	25.20	1.001	2.66e6	1.18e6	207	3.4	1.12

Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IT	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.61	NO	29.42	1.000	5.65e5	9.82e5	49.6	-0.7	1.15
090212H1_3	1.25	1.63	NO	29.43	1.000	1.11e4	7.63e5	1.25	0.1	1.16
090212H1_4	2.50	1.74	NO	29.43	1.000	2.29e4	7.80e5	2.53	1.3	1.17
090212H1_5	10.0	1.61	NO	29.43	1.000	9.64e4	8.78e5	9.48	-5.2	1.10
090212H1_6	200	1.62	NO	29.43	1.000	2.36e6	9.96e5	204	2.0	1.18
090212H1_7	1000	1.60	NO	29.45	1.000	1.42e7	1.20e6	1030	2.5	1.19

Compound name: 2,3,4,7,8-PeCDF
Response Factor: 1.11789
RRF SD: 0.0264655, Relative SD: 2.36745
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IT	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.56	NO	30.35	1.000	5.35e5	9.65e5	49.6	-0.8	1.11
090212H1_3	1.25	1.51	NO	30.36	1.000	1.08e4	7.68e5	1.25	0.4	1.12

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Compound name: 2,3,4,7,8-PeCDF

	Name	Std Conc.	RA	Flag	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
1	090212H1_4	2.50	1.61	NO	30.36	1.000	2.28e4	7.94e5	2.57	2.6	1.15
2	090212H1_5	10.0	1.64	NO	30.38	1.000	9.28e4	8.67e5	9.58	-4.2	1.07
3	090212H1_6	200	1.60	NO	30.36	1.000	2.28e6	1.01e6	203	1.5	1.13
4	090212H1_7	1000	1.59	NO	30.38	1.000	1.37e7	1.22e6	1010	0.5	1.12

Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.41088
RRF SD: 0.0512913, Relative SD: 3.6354
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc.	RA	Flag	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
1	090212H1_1	50.0	1.27	NO	33.19	1.001	4.59e5	6.74e5	48.3	-3.3	1.36
2	090212H1_3	1.25	1.35	NO	33.19	1.000	9.88e3	5.28e5	1.33	6.0	1.50
3	090212H1_4	2.50	1.32	NO	33.19	1.000	1.96e4	5.45e5	2.54	1.8	1.44
4	090212H1_5	10.0	1.31	NO	33.20	1.000	7.94e4	5.86e5	9.61	-3.9	1.36
5	090212H1_6	200	1.27	NO	33.20	1.001	1.99e6	7.08e5	199	-0.5	1.40
6	090212H1_7	1000	1.27	NO	33.20	1.000	1.28e7	9.05e5	1000	-0.0	1.41

Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.22218
RRF SD: 0.0229408, Relative SD: 1.87703
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc.	RA	Flag	RT	RRT	Resp.	IS Resp.	Conc.	Dev.	RRF
1	090212H1_1	50.0	1.25	NO	33.31	1.000	5.49e5	9.02e5	49.8	-0.4	1.22
2	090212H1_3	1.25	1.21	NO	33.32	1.000	1.07e4	6.79e5	1.29	3.1	1.26
3	090212H1_4	2.50	1.37	NO	33.31	1.000	2.16e4	6.99e5	2.52	1.0	1.23
4	090212H1_5	10.0	1.34	NO	33.33	1.000	8.96e4	7.51e5	9.76	-2.4	1.19
5	090212H1_6	200	1.27	NO	33.32	1.000	2.27e6	9.34e5	199	-0.5	1.22
6	090212H1_7	1000	1.27	NO	33.33	1.001	1.41e7	1.17e6	992	-0.8	1.21

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Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.29	NO	33.92	1.000	4.53e5	7.19e5	49.2	-1.6	1.26
090212H1_3	1.25	1.38	NO	33.93	1.000	9.11e3	5.78e5	1.23	-1.5	1.26
090212H1_4	2.50	1.28	NO	33.93	1.001	1.91e4	5.74e5	2.60	3.9	1.33
090212H1_5	10.0	1.25	NO	33.94	1.000	7.70e4	6.20e5	9.71	-2.9	1.24
090212H1_6	200	1.26	NO	33.93	1.000	1.95e6	7.64e5	200	-0.2	1.28
090212H1_7	1000	1.30	NO	33.94	1.000	1.26e7	9.59e5	1020	2.3	1.31

Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.25756
RRF SD: 0.0204635, Relative SD: 1.62723
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.25	NO	34.91	1.000	3.76e5	6.05e5	49.5	-1.0	1.24
090212H1_3	1.25	1.37	NO	34.91	1.000	7.41e3	4.73e5	1.24	-0.4	1.25
090212H1_4	2.50	1.24	NO	34.92	1.001	1.51e4	4.79e5	2.50	0.2	1.26
090212H1_5	10.0	1.28	NO	34.93	1.000	6.29e4	5.10e5	9.81	-1.9	1.23
090212H1_6	200	1.25	NO	34.92	1.001	1.68e6	6.50e5	206	2.9	1.29
090212H1_7	1000	1.28	NO	34.92	1.000	1.08e7	8.57e5	1000	0.3	1.26

Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Qv	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.05	NO	36.81	1.000	4.18e5	5.07e5	48.8	-2.3	1.65
090212H1_3	1.25	1.05	NO	36.84	1.001	8.84e3	3.97e5	1.32	5.5	1.78

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Compound name: 1,2,3,4,6,7,8-HpCDF

Name	Std Conc.	RA	IsO	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF
090212H1_4	2.50	1.04	NO	36.82	1.000	1.73e4	3.94e5	2.60	4.0	1.76
090212H1_5	10.0	1.05	NO	36.84	1.001	6.64e4	4.25e5	9.25	-7.5	1.56
090212H1_6	200	1.06	NO	36.83	1.000	1.78e6	5.26e5	200	-0.1	1.69
090212H1_7	1000	1.06	NO	36.83	1.000	1.17e7	6.89e5	1010	0.5	1.70

Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.48054
RRF SD: 0.0286004, Relative SD: 1.93175
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IsO	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF
090212H1_1	50.0	1.05	NO	38.73	1.000	3.09e5	4.20e5	49.7	-0.5	1.47
090212H1_3	1.25	0.89	NO	38.75	1.001	6.11e3	3.26e5	1.27	1.3	1.50
090212H1_4	2.50	0.99	NO	38.73	1.000	1.20e4	3.25e5	2.49	-0.4	1.47
090212H1_5	10.0	1.07	NO	38.74	1.000	4.97e4	3.47e5	9.66	-3.4	1.43
090212H1_6	200	1.04	NO	38.75	1.000	1.34e6	4.47e5	202	0.9	1.49
090212H1_7	1000	1.03	NO	38.75	1.000	9.18e6	6.08e5	1020	2.1	1.51

Compound name: OCDF
Response Factor: 1.09622
RRF SD: 0.0644136, Relative SD: 5.87597
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IsO	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF
090212H1_1	100	0.93	NO	41.88	1.001	4.66e5	8.78e5	96.7	-3.3	1.06
090212H1_3	2.50	0.90	NO	41.89	1.001	1.01e4	6.65e5	2.76	10.6	1.21
090212H1_4	5.00	0.84	NO	41.88	1.001	1.79e4	6.44e5	5.08	1.6	1.11
090212H1_5	20.0	0.95	NO	41.88	1.000	7.14e4	6.95e5	18.8	-6.2	1.03
090212H1_6	400	0.94	NO	41.90	1.000	2.10e6	9.52e5	402	0.4	1.10
090212H1_7	2000	0.92	NO	41.89	1.000	1.48e7	1.39e6	1940	-3.1	1.06

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Compound name: 13C-2,3,7,8-TCDD
Response Factor: 1.01489
RRF SD: 0.0275825, Relative SD: 2.71777
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.95	1.022	7.49e5	7.37e5	100	0.1	1.02
090212H1_3	100	0.80	NO	25.97	1.022	5.94e5	6.03e5	97.2	-2.8	0.986
090212H1_4	100	0.78	NO	25.97	1.022	6.33e5	6.33e5	98.5	-1.5	1.00
090212H1_5	100	0.78	NO	25.97	1.022	6.64e5	6.68e5	97.9	-2.1	0.994
090212H1_6	100	0.79	NO	25.97	1.022	7.81e5	7.54e5	102	2.0	1.04
090212H1_7	100	0.79	NO	25.97	1.022	8.66e5	8.18e5	104	4.3	1.06

Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.827461
RRF SD: 0.0577323, Relative SD: 6.97704
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.64	NO	30.64	1.207	6.02e5	7.37e5	98.7	-1.3	0.817
090212H1_3	100	0.63	NO	30.65	1.207	4.83e5	6.03e5	96.8	-3.2	0.801
090212H1_4	100	0.61	NO	30.65	1.207	4.97e5	6.33e5	94.9	-5.1	0.786
090212H1_5	100	0.64	NO	30.65	1.207	5.23e5	6.68e5	94.6	-5.4	0.783
090212H1_6	100	0.65	NO	30.65	1.207	6.35e5	7.54e5	102	1.7	0.842
090212H1_7	100	0.64	NO	30.65	1.207	7.66e5	8.18e5	113	13.2	0.937

Compound name: 13C-1,2,3,4,7,8-HxCDD
Response Factor: 0.916247
RRF SD: 0.0122736, Relative SD: 1.33955
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.08	0.988	5.27e5	5.79e5	99.4	-0.6	0.911
090212H1_3	100	1.26	NO	34.10	0.988	4.08e5	4.37e5	102	2.0	0.934

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Compound name: 13C-1,2,3,4,7,8-HxCDD

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	100	1.26	NO	34.08	0.988	4.22e5	4.66e5	98.7	-1.3	0.904
090212H1_5	100	1.24	NO	34.11	0.988	4.47e5	4.90e5	99.6	-0.4	0.913
090212H1_6	100	1.25	NO	34.10	0.988	5.53e5	6.10e5	98.9	-1.1	0.907
090212H1_7	100	1.25	NO	34.11	0.988	7.54e5	8.12e5	101	1.4	0.929

Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.920893
RRF SD: 0.0250009, Relative SD: 2.71486
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.19	0.991	5.42e5	5.79e5	102	1.7	0.936
090212H1_3	100	1.23	NO	34.21	0.991	4.14e5	4.37e5	103	2.9	0.948
090212H1_4	100	1.29	NO	34.21	0.991	4.20e5	4.66e5	97.7	-2.3	0.900
090212H1_5	100	1.25	NO	34.22	0.991	4.60e5	4.90e5	102	2.1	0.940
090212H1_6	100	1.27	NO	34.21	0.991	5.59e5	6.10e5	99.5	-0.5	0.916
090212H1_7	100	1.23	NO	34.22	0.991	7.18e5	8.12e5	96.0	-4.0	0.884

Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.708388
RRF SD: 0.019948, Relative SD: 2.81596
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.07	NO	38.16	1.106	4.13e5	5.79e5	101	0.7	0.713
090212H1_3	100	1.09	NO	38.17	1.106	3.21e5	4.37e5	104	3.9	0.736
090212H1_4	100	1.05	NO	38.17	1.106	3.21e5	4.66e5	97.1	-2.9	0.688
090212H1_5	100	1.06	NO	38.17	1.106	3.36e5	4.90e5	96.8	-3.2	0.686
090212H1_6	100	1.06	NO	38.18	1.106	4.29e5	6.10e5	99.3	-0.7	0.703
090212H1_7	100	1.04	NO	38.17	1.106	5.88e5	8.12e5	102	2.2	0.724

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Compound name: 13C-OCDD
Response Factor: 0.502588
RRF SD: 0.0283515, Relative SD: 5.6411
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	200	0.89	NO	41.62	1.206	5.87e5	5.79e5	202	0.9	0.507
090212H1_3	200	0.92	NO	41.65	1.207	4.40e5	4.37e5	200	0.2	0.504
090212H1_4	200	0.90	NO	41.63	1.206	4.37e5	4.66e5	187	-6.7	0.469
090212H1_5	200	0.89	NO	41.65	1.206	4.67e5	4.90e5	190	-5.0	0.477
090212H1_6	200	0.91	NO	41.67	1.207	6.21e5	6.10e5	203	1.4	0.510
090212H1_7	200	0.93	NO	41.65	1.206	8.92e5	8.12e5	219	9.3	0.549

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.976814
RRF SD: 0.0185774, Relative SD: 1.90184
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.16	0.991	1.07e6	1.11e6	98.8	-1.2	0.965
090212H1_3	100	0.79	NO	25.17	0.991	8.63e5	9.05e5	97.5	-2.5	0.953
090212H1_4	100	0.78	NO	25.17	0.991	9.06e5	9.34e5	99.3	-0.7	0.970
090212H1_5	100	0.79	NO	25.17	0.991	9.70e5	9.83e5	101	1.1	0.987
090212H1_6	100	0.77	NO	25.17	0.991	1.08e6	1.10e6	100	0.4	0.980
090212H1_7	100	0.76	NO	25.17	0.991	1.18e6	1.18e6	103	2.9	1.01

Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 0.896189
RRF SD: 0.0663113, Relative SD: 7.39926
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	Flag	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.58	NO	29.41	1.158	9.82e5	1.11e6	98.4	-1.6	0.882
090212H1_3	100	1.57	NO	29.42	1.158	7.63e5	9.05e5	94.0	-6.0	0.842

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Compound name: 13C-1,2,3,7,8-PeCDF

	Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_4	100	1.57	NO	29.42	1.158	7.80e5	9.34e5	93.1	-6.9	0.835
	090212H1_5	100	1.58	NO	29.42	1.158	8.78e5	9.83e5	99.7	-0.3	0.894
	090212H1_6	100	1.56	NO	29.42	1.158	9.96e5	1.10e6	101	1.0	0.905
	090212H1_7	100	1.52	NO	29.43	1.159	1.20e6	1.18e6	114	13.7	1.02

Compound name: 13C-2,3,4,7,8-PeCDF
Response Factor: 0.899625
RRF SD: 0.0716088, Relative SD: 7.95986
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	100	1.57	NO	30.34	1.195	9.65e5	1.11e6	96.3	-3.7	0.866
	090212H1_3	100	1.54	NO	30.35	1.195	7.68e5	9.05e5	94.2	-5.8	0.848
	090212H1_4	100	1.52	NO	30.35	1.195	7.94e5	9.34e5	94.5	-5.5	0.850
	090212H1_5	100	1.59	NO	30.36	1.195	8.67e5	9.83e5	98.1	-1.9	0.882
	090212H1_6	100	1.55	NO	30.35	1.195	1.01e6	1.10e6	102	1.6	0.914
	090212H1_7	100	1.54	NO	30.36	1.195	1.22e6	1.18e6	115	15.3	1.04

Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.16919
RRF SD: 0.0331609, Relative SD: 2.83622
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	IN	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
	090212H1_1	100	0.54	NO	33.16	0.961	6.74e5	5.79e5	99.5	-0.5	1.16
	090212H1_3	100	0.54	NO	33.17	0.961	5.28e5	4.37e5	104	3.5	1.21
	090212H1_4	100	0.52	NO	33.17	0.961	5.45e5	4.66e5	99.9	-0.1	1.17
	090212H1_5	100	0.54	NO	33.19	0.961	5.86e5	4.90e5	102	2.3	1.20
	090212H1_6	100	0.53	NO	33.17	0.961	7.08e5	6.10e5	99.4	-0.6	1.16
	090212H1_7	100	0.53	NO	33.19	0.961	9.05e5	8.12e5	95.3	-4.7	1.11

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Compound name: 13C-1,2,3,6,7,8-HxCDF
Response Factor: 1.51914
RRF SD: 0.0457416, Relative SD: 3.01103
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IW	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.55	NO	33.29	0.965	9.02e5	5.79e5	103	2.5	1.56
090212H1_3	100	0.52	NO	33.31	0.965	6.79e5	4.37e5	102	2.4	1.56
090212H1_4	100	0.53	NO	33.29	0.965	6.99e5	4.66e5	98.7	-1.3	1.50
090212H1_5	100	0.53	NO	33.32	0.965	7.51e5	4.90e5	101	1.0	1.53
090212H1_6	100	0.52	NO	33.31	0.965	9.34e5	6.10e5	101	0.8	1.53
090212H1_7	100	0.54	NO	33.31	0.965	1.17e6	8.12e5	94.6	-5.4	1.44

Compound name: 13C-2,3,4,6,7,8-HxCDF
Response Factor: 1.24921
RRF SD: 0.0473005, Relative SD: 3.78643
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IW	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.54	NO	33.91	0.983	7.19e5	5.79e5	99.3	-0.7	1.24
090212H1_3	100	0.53	NO	33.92	0.983	5.78e5	4.37e5	106	6.0	1.32
090212H1_4	100	0.55	NO	33.91	0.983	5.74e5	4.66e5	98.4	-1.6	1.23
090212H1_5	100	0.55	NO	33.93	0.983	6.20e5	4.90e5	101	1.3	1.27
090212H1_6	100	0.53	NO	33.92	0.983	7.64e5	6.10e5	100	0.4	1.25
090212H1_7	100	0.53	NO	33.93	0.983	9.59e5	8.12e5	94.5	-5.5	1.18

Compound name: 13C-1,2,3,7,8,9-HxCDF
Response Factor: 1.05297
RRF SD: 0.0198461, Relative SD: 1.88477
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IW	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.53	NO	34.90	1.011	6.05e5	5.79e5	99.2	-0.8	1.04
090212H1_3	100	0.52	NO	34.90	1.011	4.73e5	4.37e5	103	2.9	1.08

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Compound name: 13C-1,2,3,7,8,9-HxCDF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_4	100	0.53	NO	34.90	1.011	4.79e5	4.66e5	97.6	-2.4	1.03
090212H1_5	100	0.54	NO	34.92	1.011	5.10e5	4.90e5	98.9	-1.1	1.04
090212H1_6	100	0.52	NO	34.90	1.011	6.50e5	6.10e5	101	1.2	1.07
090212H1_7	100	0.53	NO	34.91	1.011	8.57e5	8.12e5	100	0.2	1.05

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 0.868264
RRF SD: 0.0231201, Relative SD: 2.6628
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	100	0.46	NO	36.80	1.066	5.07e5	5.79e5	101	0.8	0.875
090212H1_3	100	0.44	NO	36.81	1.066	3.97e5	4.37e5	105	4.7	0.909
090212H1_4	100	0.44	NO	36.81	1.066	3.94e5	4.66e5	97.3	-2.7	0.845
090212H1_5	100	0.44	NO	36.82	1.066	4.25e5	4.90e5	99.9	-0.1	0.868
090212H1_6	100	0.46	NO	36.82	1.066	5.26e5	6.10e5	99.5	-0.5	0.864
090212H1_7	100	0.45	NO	36.82	1.066	6.89e5	8.12e5	97.7	-2.3	0.849

Compound name: 13C-1,2,3,4,7,8,9-HpCDF
Response Factor: 0.726514
RRF SD: 0.0207066, Relative SD: 2.85014
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	100	0.46	NO	38.72	1.122	4.20e5	5.79e5	99.8	-0.2	0.725
090212H1_3	100	0.45	NO	38.73	1.122	3.26e5	4.37e5	103	2.8	0.747
090212H1_4	100	0.45	NO	38.72	1.122	3.25e5	4.66e5	95.9	-4.1	0.696
090212H1_5	100	0.44	NO	38.73	1.122	3.47e5	4.90e5	97.6	-2.4	0.709
090212H1_6	100	0.45	NO	38.74	1.122	4.47e5	6.10e5	101	1.0	0.734
090212H1_7	100	0.44	NO	38.74	1.122	6.08e5	8.12e5	103	3.0	0.748

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Compound name: 13C-OCDF
Response Factor: 0.759527
RRF SD: 0.058777, Relative SD: 7.73863
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	200	0.91	NO	41.85	1.213	8.78e5	5.79e5	200	-0.2	0.758
090212H1_3	200	0.88	NO	41.86	1.213	6.65e5	4.37e5	200	0.2	0.761
090212H1_4	200	0.90	NO	41.85	1.213	6.44e5	4.66e5	182	-9.1	0.690
090212H1_5	200	0.90	NO	41.86	1.213	6.95e5	4.90e5	187	-6.6	0.710
090212H1_6	200	0.90	NO	41.89	1.213	9.52e5	6.10e5	206	2.8	0.781
090212H1_7	200	0.90	NO	41.88	1.213	1.39e6	8.12e5	226	12.8	0.857

Compound name: 37Cl-2,3,7,8-TCDD
Response Factor: 0.668396
RRF SD: 0.0327668, Relative SD: 4.90231
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0			25.98	1.023	4.66e4	7.37e5	9.46	-5.4	0.632
090212H1_3	0.250			25.97	1.022	1.08e3	6.03e5	0.269	7.5	0.718
090212H1_4	0.500			25.98	1.023	2.17e3	6.33e5	0.512	2.4	0.685
090212H1_5	2.00			25.98	1.023	8.69e3	6.68e5	1.95	-2.7	0.650
090212H1_6	40.0			25.98	1.023	1.93e5	7.54e5	38.4	-4.1	0.641
090212H1_7	200			25.98	1.023	1.12e6	8.18e5	205	2.3	0.684

Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.81	NO	25.39	0.000	7.37e5	7.37e5	100	0.0	1.00
090212H1_3	100	0.79	NO	25.40	0.000	6.03e5	6.03e5	100	0.0	1.00

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Compound name: 13C-1,2,3,4-TCDD

Name	Std Conc	RA		RT	RRT	Area	IS Area	Conc	Dev	RRF
090212H1_4	100	0.79	NO	25.40	0.000	6.33e5	6.33e5	100	0.0	1.00
090212H1_5	100	0.78	NO	25.40	0.000	6.68e5	6.68e5	100	0.0	1.00
090212H1_6	100	0.78	NO	25.40	0.000	7.54e5	7.54e5	100	0.0	1.00
090212H1_7	100	0.79	NO	25.40	0.000	8.18e5	8.18e5	100	0.0	1.00

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 4.96507e-017, Relative SD: 4.96507e-015
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA		RT	RRT	Area	IS Area	Conc	Dev	RRF
090212H1_1	100	0.78	NO	23.95	0.000	1.11e6	1.11e6	100	0.0	1.00
090212H1_3	100	0.77	NO	23.95	0.000	9.05e5	9.05e5	100	0.0	1.00
090212H1_4	100	0.77	NO	23.95	0.000	9.34e5	9.34e5	100	0.0	1.00
090212H1_5	100	0.76	NO	23.97	0.000	9.83e5	9.83e5	100	0.0	1.00
090212H1_6	100	0.77	NO	23.97	0.000	1.10e6	1.10e6	100	-0.0	1.00
090212H1_7	100	0.78	NO	23.97	0.000	1.18e6	1.18e6	100	0.0	1.00

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA		RT	RRT	Area	IS Area	Conc	Dev	RRF
090212H1_1	100	1.22	NO	34.50	0.000	5.79e5	5.79e5	100	0.0	1.00
090212H1_3	100	1.23	NO	34.51	0.000	4.37e5	4.37e5	100	0.0	1.00
090212H1_4	100	1.25	NO	34.51	0.000	4.66e5	4.66e5	100	0.0	1.00
090212H1_5	100	1.18	NO	34.52	0.000	4.90e5	4.90e5	100	0.0	1.00
090212H1_6	100	1.26	NO	34.52	0.000	6.10e5	6.10e5	100	0.0	1.00
090212H1_7	100	1.22	NO	34.52	0.000	8.12e5	8.12e5	100	0.0	1.00

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Compound name: Total Tetra-Dioxins
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	RES	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0					7.49e5	60.1		
090212H1_3	0.250					5.94e5	0.240		
090212H1_4	0.500					6.33e5	0.536		
090212H1_5	2.00					6.64e5	1.95		
090212H1_6	40.0					7.81e5	39.5		
090212H1_7	200					8.66e5	206		

Compound name: Total Penta-Dioxins
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	RES	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0					6.02e5	159		
090212H1_3	1.25					4.83e5	1.30		
090212H1_4	2.50					4.97e5	2.53		
090212H1_5	10.0					5.23e5	9.77		
090212H1_6	200					6.35e5	200		
090212H1_7	1000					7.66e5	1020		

Compound name: Total Hexa-Dioxins
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	RES	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0					0.00e0	191		
090212H1_3	1.25					0.00e0	3.85		

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Compound name: Total Hexa-Dioxins

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	2.50					0.00e0	7.81		
090212H1_5	10.0					0.00e0	28.5		
090212H1_6	200					0.00e0	615		
090212H1_7	1000					0.00e0	3010		

Compound name: Total Hepta-Dioxins
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0					4.13e5	127		
090212H1_3	1.25					3.21e5	1.38		
090212H1_4	2.50					3.21e5	2.60		
090212H1_5	10.0					3.36e5	9.55		
090212H1_6	200					4.29e5	203		
090212H1_7	1000					5.88e5	1010		

Compound name: Total Tetra-Furans
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0					1.07e6	35.3		
090212H1_3	0.250					8.63e5	0.269		
090212H1_4	0.500					9.06e5	0.506		
090212H1_5	2.00					9.70e5	1.88		
090212H1_6	40.0					1.08e6	40.6		
090212H1_7	200					1.18e6	209		

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1st Func. Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	R1	RR1	Resp	IS Resp	Conc	ID	RRF
090212H1_1	50.0					0.00e0	46.2		
090212H1_3	1.25					0.00e0	0.00241		
090212H1_4	2.50					0.00e0	0.0270		
090212H1_5	10.0					0.00e0	0.0198		
090212H1_6	200					0.00e0	0.00694		
090212H1_7	1000					0.00e0	0.00731		

Compound name: Total Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	R1	RR1	Resp	IS Resp	Conc	ID	RRF
090212H1_1	50.0					0.00e0	147		
090212H1_3	1.25					0.00e0	2.51		
090212H1_4	2.50					0.00e0	5.10		
090212H1_5	10.0					0.00e0	19.1		
090212H1_6	200					0.00e0	412		
090212H1_7	1000					0.00e0	2040		

Compound name: Total Hexa-Furans
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	R1	RR1	Resp	IS Resp	Conc	ID	RRF
090212H1_1	50.0					0.00e0	250		
090212H1_3	1.25					0.00e0	5.09		

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: Total Hexa-Furans

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50					0.00e0	10.2		
090212H1_5	10.0					0.00e0	38.9		
090212H1_6	200					0.00e0	804		
090212H1_7	1000					0.00e0	4020		

Compound name: Total Hepta-Furans
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0					0.00e0	98.6		
090212H1_3	1.25					0.00e0	2.59		
090212H1_4	2.50					0.00e0	5.09		
090212H1_5	10.0					0.00e0	18.9		
090212H1_6	200					0.00e0	403		
090212H1_7	1000					0.00e0	2030		

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: PFK2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: PFK4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: PFK4

Name	Std Conc	PA	IV	RT	RRT	RespR	SPRC	ICRC	ADV	RRF
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: PFK5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	PA	IV	RT	RRT	RespR	SPRC	ICRC	ADV	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	PA	IV	RT	RRT	RespR	SPRC	ICRC	ADV	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	Y	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	Y	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RA	Y	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE4

Name	Std Conc	Rt	RT	RRT	Resp	IS Resp	Conc	ID	RRF
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: DPE5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	Rt	RT	RRT	Resp	IS Resp	Conc	ID	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

Compound name: DPE6
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	Rt	RT	RRT	Resp	IS Resp	Conc	ID	RRF
090212H1_1	1.00								
090212H1_3	1.00								
090212H1_4	1.00								
090212H1_5	1.00								
090212H1_6	1.00								
090212H1_7	1.00								

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	NO	9.78	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	48.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	48.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	48.1	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	48.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.91	0.76-1.02	NO	95.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	9.75	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	48.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	49.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	48.8	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	49.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.93	0.76-1.02	NO	96.7	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	100	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	98.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	99.4	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	102	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	98.8	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.5	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	NO	103	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	99.2	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	101	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	99.8	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	200	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.46	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/12/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.58
2	1,2,8,9-TCDD (Last)	26.86
3	1,2,4,7,9-PeCDD (First)	28.51
4	1,2,3,8,9-PeCDD (Last)	31.03
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.01
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.28
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.91
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

2/13/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [illegible]

Date: 2/13/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [illegible]

Date: 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	7.90e4	0.82	NO	1.08	1.000	25.98	1.001	9.7764	97.8	0.0390	9.7764
2	1,2,3,7,8-PeCDD	3.03e5	0.63	NO	1.03	1.000	30.65	1.000	48.635	97.3	0.124	48.635
3	1,2,3,4,7,8-HxCDD	2.54e5	1.26	NO	1.00	1.000	34.10	1.000	48.035	96.1	0.187	48.035
4	1,2,3,6,7,8-HxCDD	2.90e5	1.27	NO	1.13	1.000	34.21	1.000	47.595	95.2	0.184	47.595
5	1,2,3,7,8,9-HxCDD	2.83e5	1.28	NO	1.10	1.000	34.51	1.009	48.051	96.1	0.180	48.051
6	1,2,3,4,6,7,8-HpCDD	2.11e5	1.03	NO	1.06	1.000	38.17	1.000	47.989	96.0	0.341	47.989
7	OCDD	3.30e5	0.91	NO	1.18	1.000	41.63	1.000	95.331	95.3	0.179	95.331
8	2,3,7,8-TCDF	1.14e5	0.78	NO	1.09	1.000	25.19	1.001	9.7515	97.5	0.0409	9.7515
9	1,2,3,7,8-PeCDF	5.65e5	1.61	NO	1.16	1.000	29.42	1.000	49.643	99.3	0.123	49.643
10	2,3,4,7,8-PeCDF	5.35e5	1.56	NO	1.12	1.000	30.35	1.000	49.591	99.2	0.120	49.591
11	1,2,3,4,7,8-HxCDF	4.59e5	1.27	NO	1.41	1.000	33.19	1.001	48.331	96.7	0.150	48.331
12	1,2,3,6,7,8-HxCDF	5.49e5	1.25	NO	1.22	1.000	33.31	1.000	49.809	99.6	0.137	49.809
13	2,3,4,6,7,8-HxCDF	4.53e5	1.29	NO	1.28	1.000	33.92	1.000	49.224	98.4	0.172	49.224
14	1,2,3,7,8,9-HxCDF	3.76e5	1.25	NO	1.26	1.000	34.91	1.000	49.483	99.0	0.252	49.483
15	1,2,3,4,6,7,8-HpCDF	4.18e5	1.05	NO	1.69	1.000	36.81	1.000	48.842	97.7	0.180	48.842
16	1,2,3,4,7,8,9-HpCDF	3.09e5	1.05	NO	1.48	1.000	38.73	1.000	49.738	99.5	0.251	49.738
17	OCDF	4.66e5	0.93	NO	1.10	1.000	41.88	1.001	96.743	96.7	0.177	96.743
18	13C-2,3,7,8-TCDD	7.49e5	0.77	NO	1.01	1.000	25.95	1.022	100.15	100	0.141	
19	13C-1,2,3,7,8-PeCDD	6.02e5	0.64	NO	0.827	1.000	30.64	1.207	98.735	98.7	0.269	
20	13C-1,2,3,4,7,8-HxCDD	5.27e5	1.26	NO	0.916	1.000	34.08	0.988	99.432	99.4	0.335	
21	13C-1,2,3,6,7,8-HxCDD	5.42e5	1.26	NO	0.921	1.000	34.19	0.991	101.67	102	0.334	
22	13C-1,2,3,4,6,7,8-HpCDD	4.13e5	1.07	NO	0.708	1.000	38.16	1.106	100.67	101	0.425	
23	13C-OCDD	5.87e5	0.89	NO	0.503	1.000	41.62	1.206	201.71	101	0.424	
24	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	0.977	1.000	25.16	0.991	98.780	98.8	0.129	
25	13C-1,2,3,7,8-PeCDF	9.82e5	1.58	NO	0.896	1.000	29.41	1.158	98.441	98.4	0.304	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.57	NO	0.900	1.000	30.34	1.195	96.306	96.3	0.303	
27	13C-1,2,3,4,7,8-HxCDF	6.74e5	0.54	NO	1.17	1.000	33.16	0.961	99.512	99.5	0.469	
28	13C-1,2,3,6,7,8-HxCDF	9.02e5	0.55	NO	1.52	1.000	33.29	0.965	102.54	103	0.361	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.54	NO	1.25	1.000	33.91	0.983	99.345	99.3	0.439	
30	13C-1,2,3,7,8,9-HxCDF	6.05e5	0.53	NO	1.05	1.000	34.90	1.011	99.208	99.2	0.521	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.46	NO	0.868	1.000	36.80	1.066	100.83	101	0.602
32	13C-1,2,3,4,7,8,9-HpCDF	4.20e5	0.46	NO	0.727	1.000	38.72	1.122	99.796	99.8	0.719
33	13C-OCDF	8.78e5	0.91	NO	0.760	1.000	41.85	1.213	199.65	99.8	0.296
34	37Cl-2,3,7,8-TCDD	4.66e4			0.668	1.000	25.98	1.023	9.4592	94.6	0.0533
35	13C-1,2,3,4-TCDD	7.37e5	0.81	NO	1.00	1.000	25.39	0.000	100.00	100	0.144
36	13C-1,2,3,4-TCDF	1.11e6	0.78	NO	1.00	1.000	23.95	0.000	100.00	100	0.126
37	13C-1,2,3,7,8,9-HxCDD	5.79e5	1.22	NO	1.00	1.000	34.50	0.000	100.00	100	0.307

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 7:21:09 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:21:55 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Compound name: 1,3,6,8-TCDD (First)

Name	ID	Date	Time
090212H1_1	ST090212H1-1 1613 CS3 080917I	12-Feb-09	11:10:11
090212H1_2	solvent blank	12-Feb-09	11:59:18
090212H1_3	ST090212H1-2 1613 CS0 080917F	12-Feb-09	12:49:08
090212H1_4	ST090212H1-3 1613 CS1 080917CG	12-Feb-09	13:38:34
090212H1_5	ST090212H1-4 1613 CS2 080917H	12-Feb-09	14:28:11
090212H1_6	ST090212H1-5 1613 CS4 080917J	12-Feb-09	15:17:39
090212H1_7	ST090212H1-6 1613 CS5 080917K	12-Feb-09	16:07:03
090212H1_8	solvent blank	12-Feb-09	16:56:26
090212H1_9	SSS090212H1-1 Sec Src Std L070913A	12-Feb-09	17:45:49

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:13 Pacific Standard Time

M 292.9824 R 13157

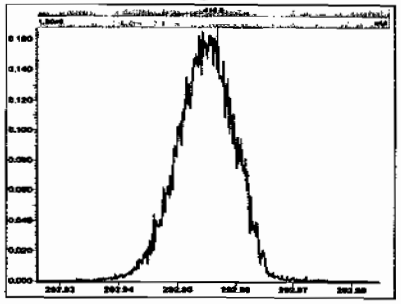

M 304.9824 R 14289

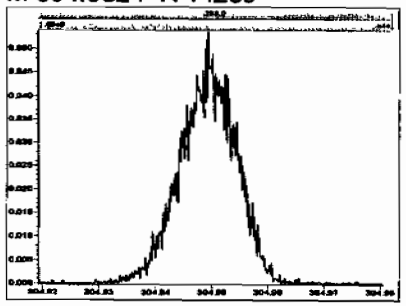

M 318.9792 R 13655

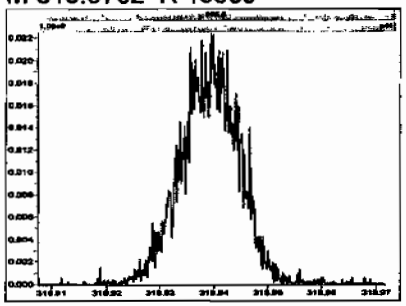

M 330.9792 R 12819

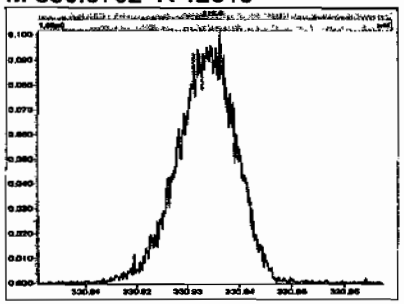

M 342.9792 R 13085

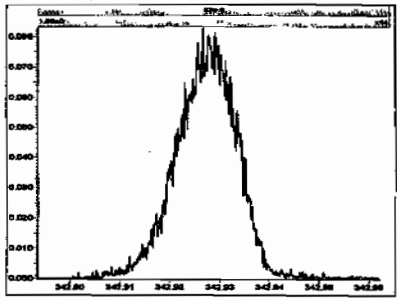

M 354.9792 R 13440

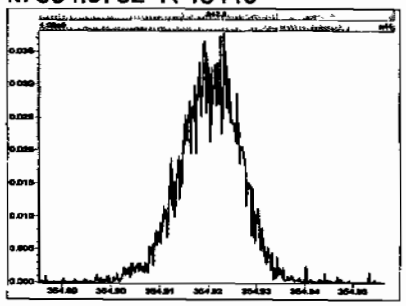

M 366.9792 R 11572

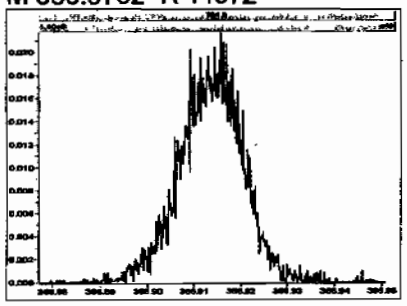

M 380.9760 R 13365

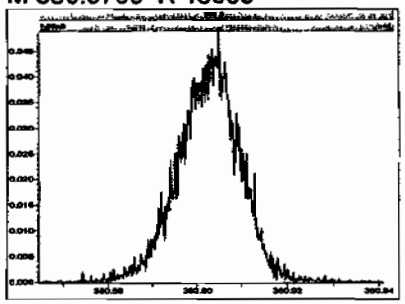

M 392.9760 R 13660

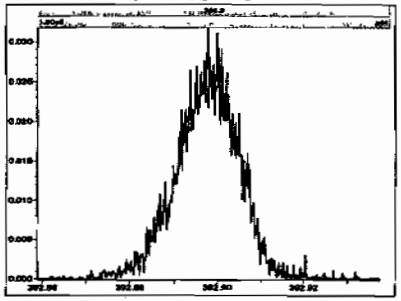

M 404.9760 R 13160

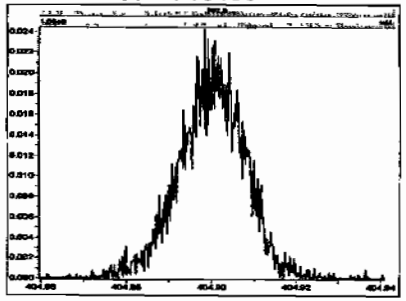

M 416.9760 R 15061

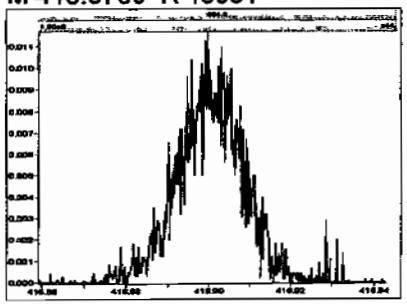

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:36 Pacific Standard Time

M 330.9792 R 13661

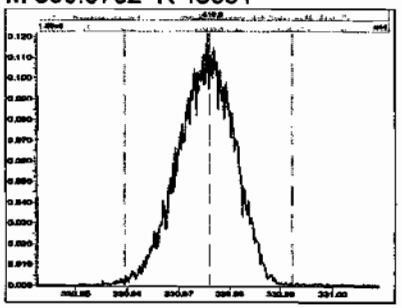

M 342.9792 R 12688

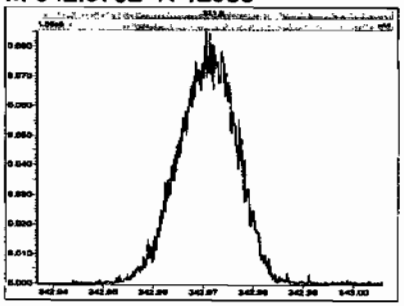

M 354.9792 R 13813

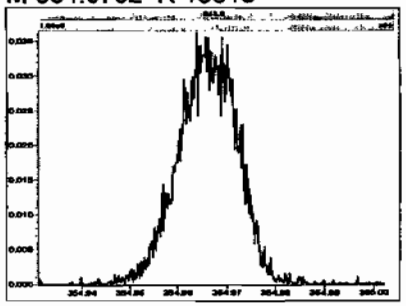

M 366.9792 R 13735

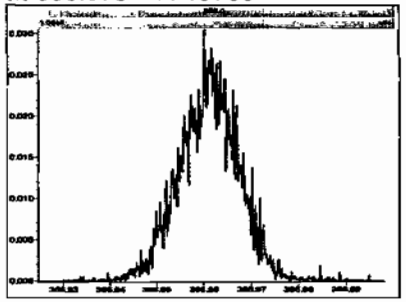

M 380.9760 R 13225

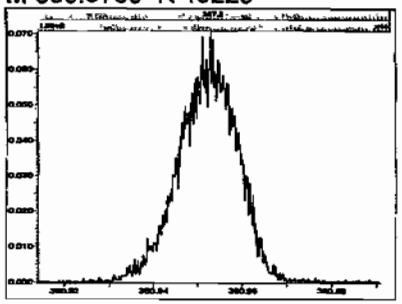

M 392.9760 R 13090

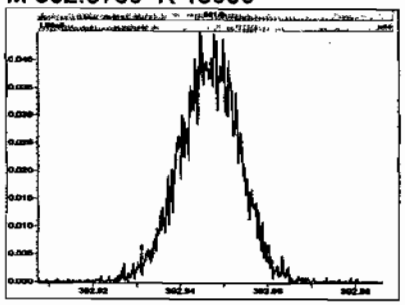

M 404.9760 R 13368

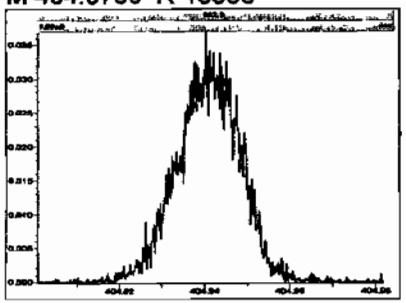

M 416.9760 R 13510

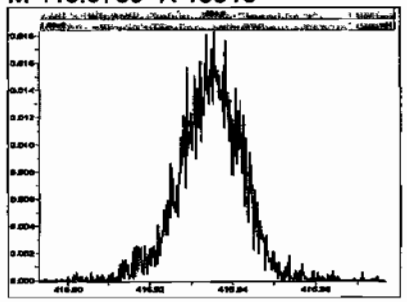

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:57 Pacific Standard Time

M 366.9792 R 13441

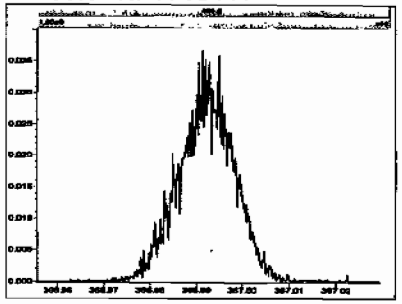

M 380.9760 R 13367

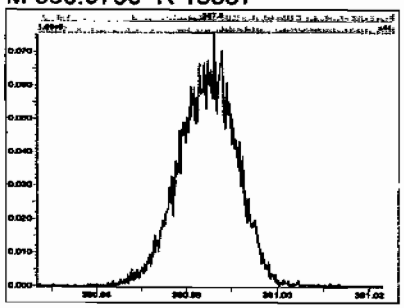

M 392.9760 R 13733

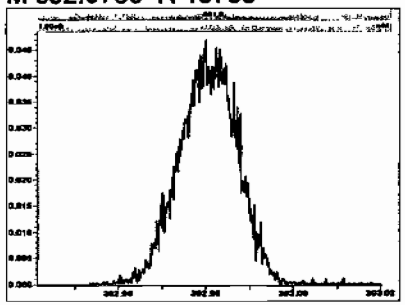

M 404.9760 R 12136

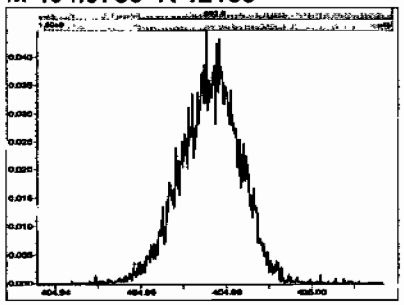

M 416.9760 R 13887

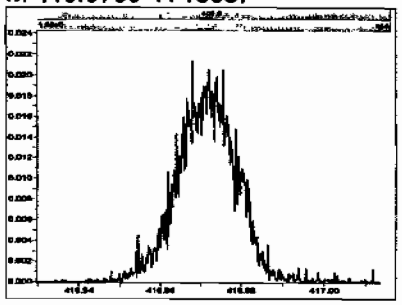

M 430.9728 R 13515

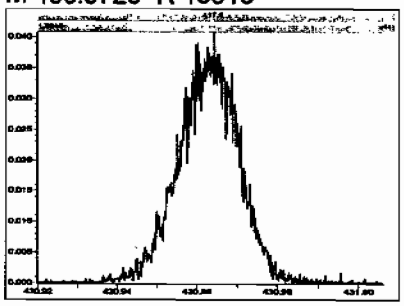

M 442.9728 R 14124

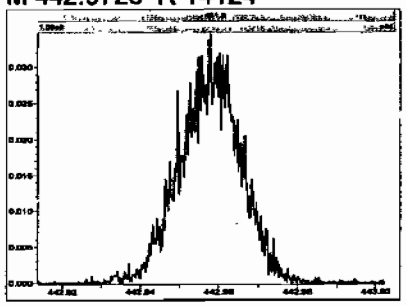

M 454.9728 R 13225

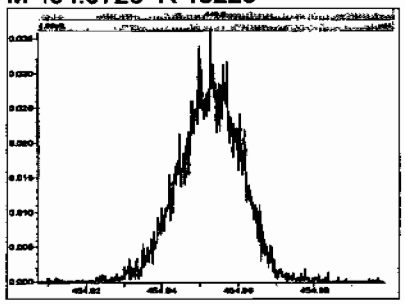

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:16 Pacific Standard Time

M 404.9760 R 13299

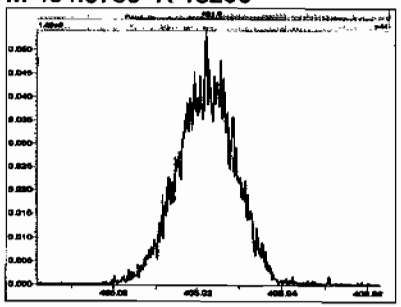

M 416.9760 R 14124

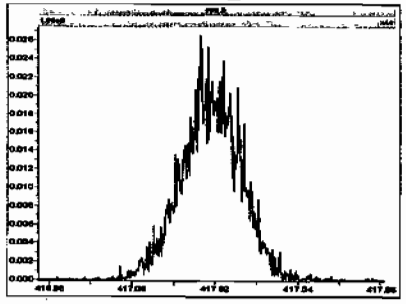

M 430.9728 R 13019

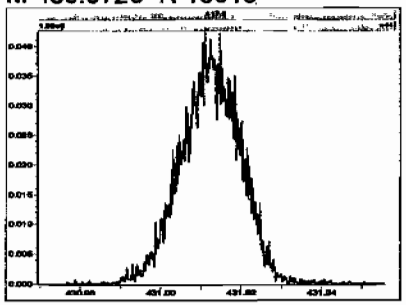

M 442.9728 R 13022

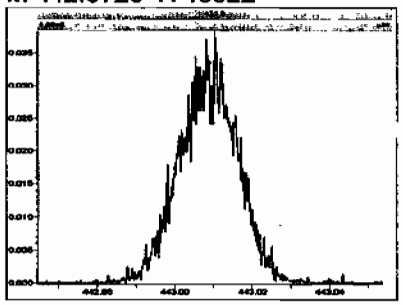

M 454.9728 R 12953

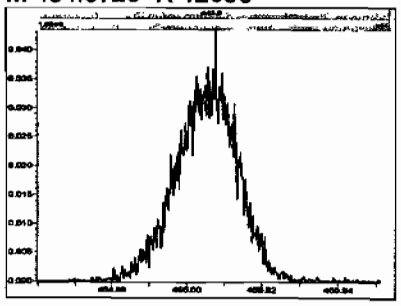

M 466.9728 R 12692

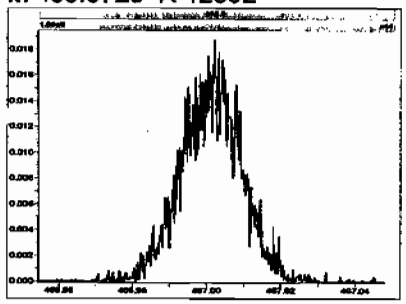

M 480.9696 R 14882

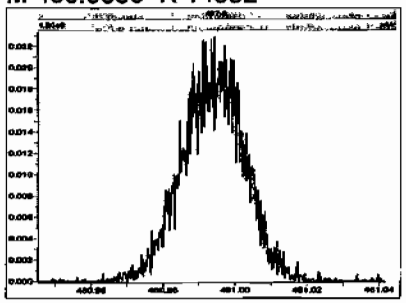

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:41 Pacific Standard Time

M 430.9728 R 12434

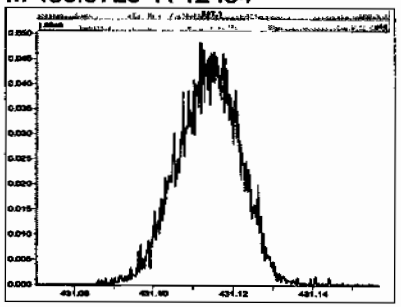

M 442.9728 R 12886

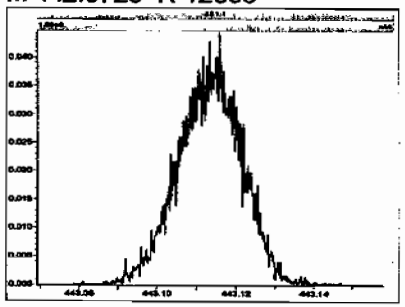

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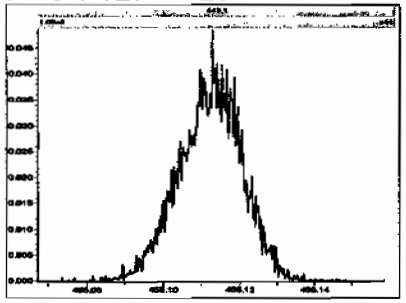

M 466.9728 R 12954

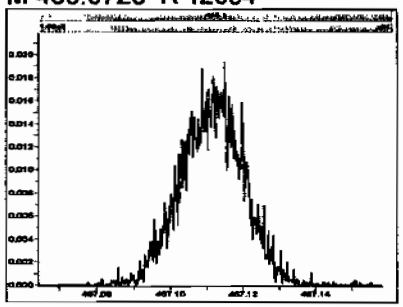

M 480.9696 R 11520

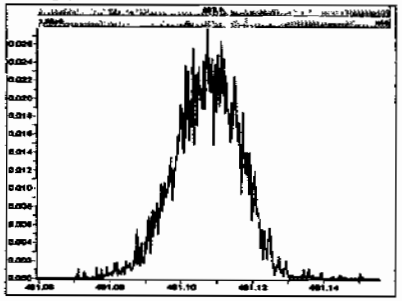

M 492.9696 R 12757

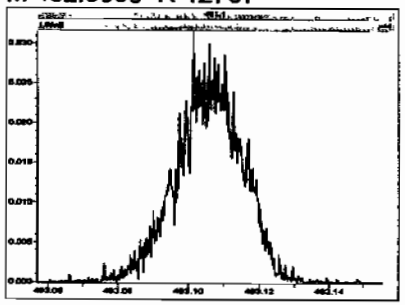

M 504.9696 R 11211

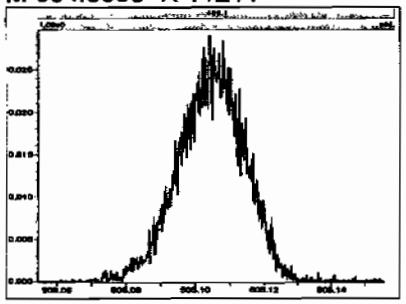

M 516.9697 R 11516

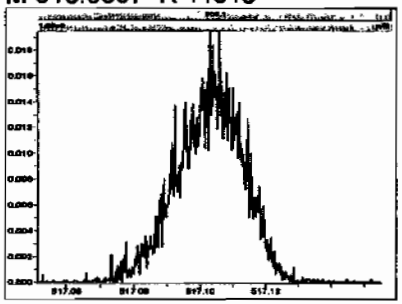

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

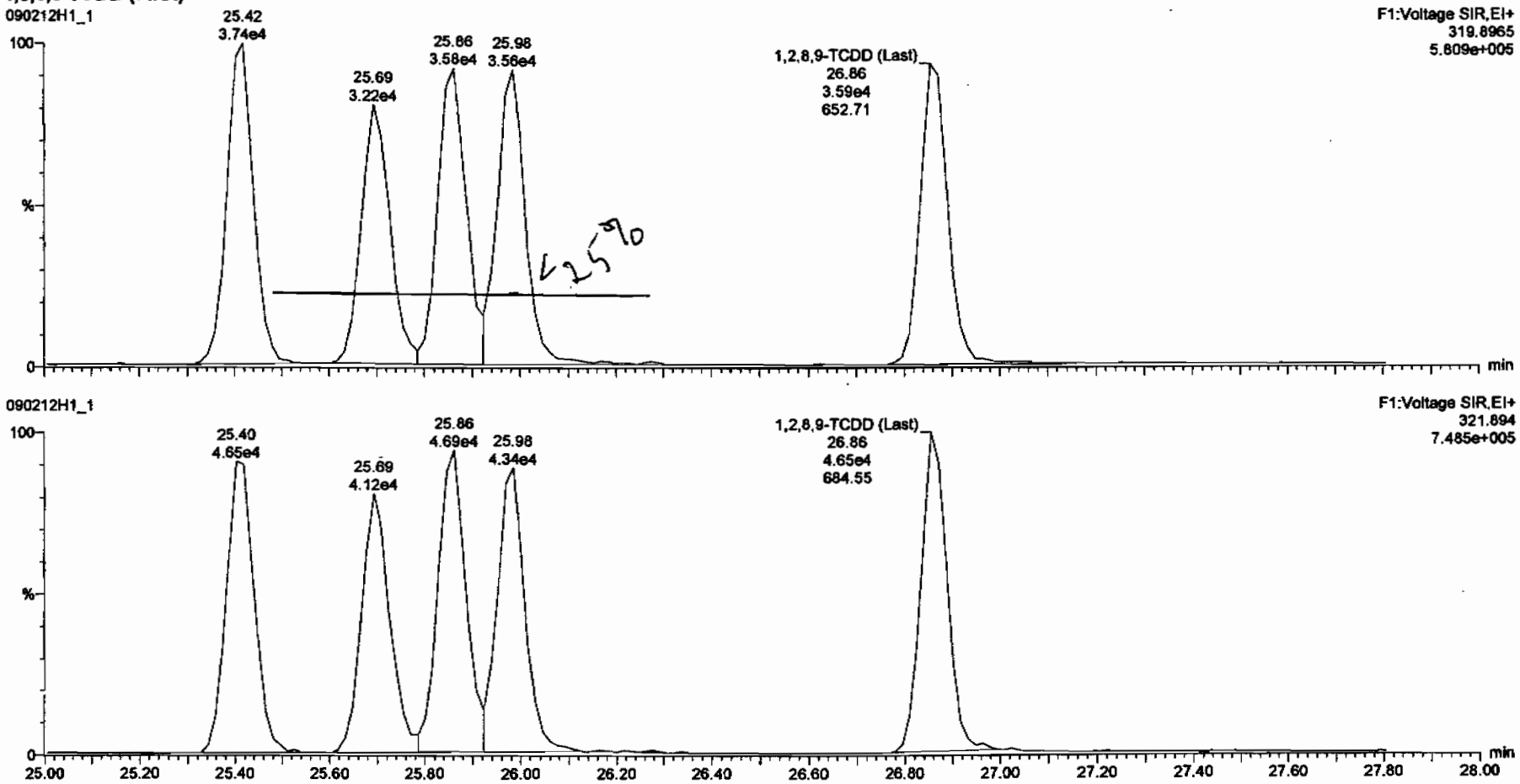

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
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Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

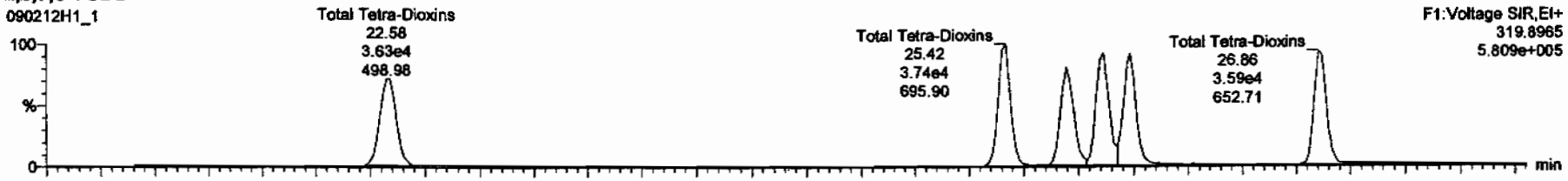

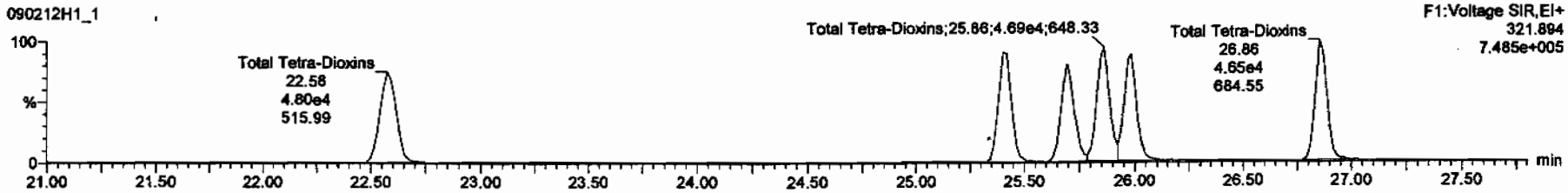

13C-2,3,7,8-TCDD

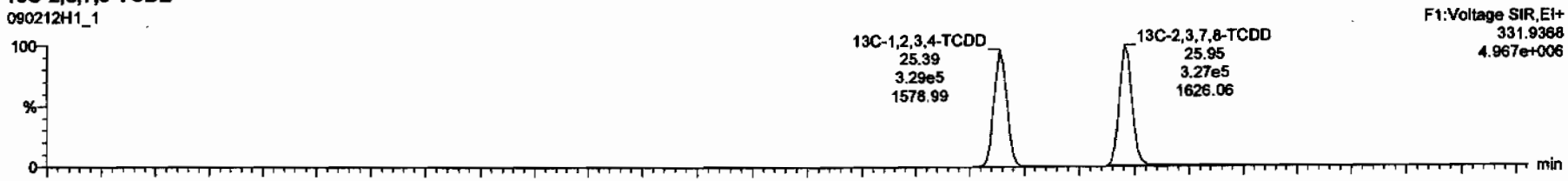

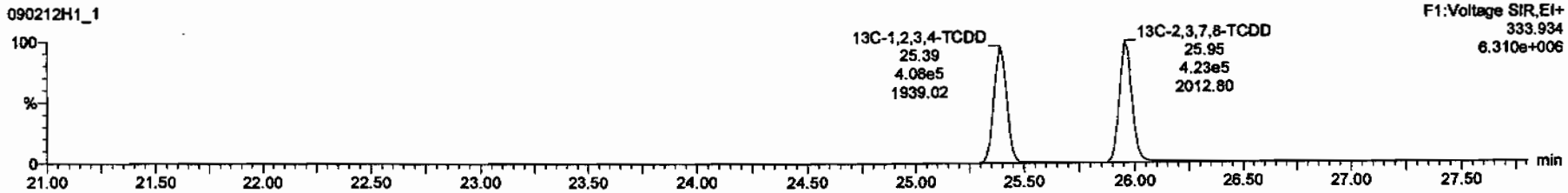

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37Cl-2,3,7,8-TCDD

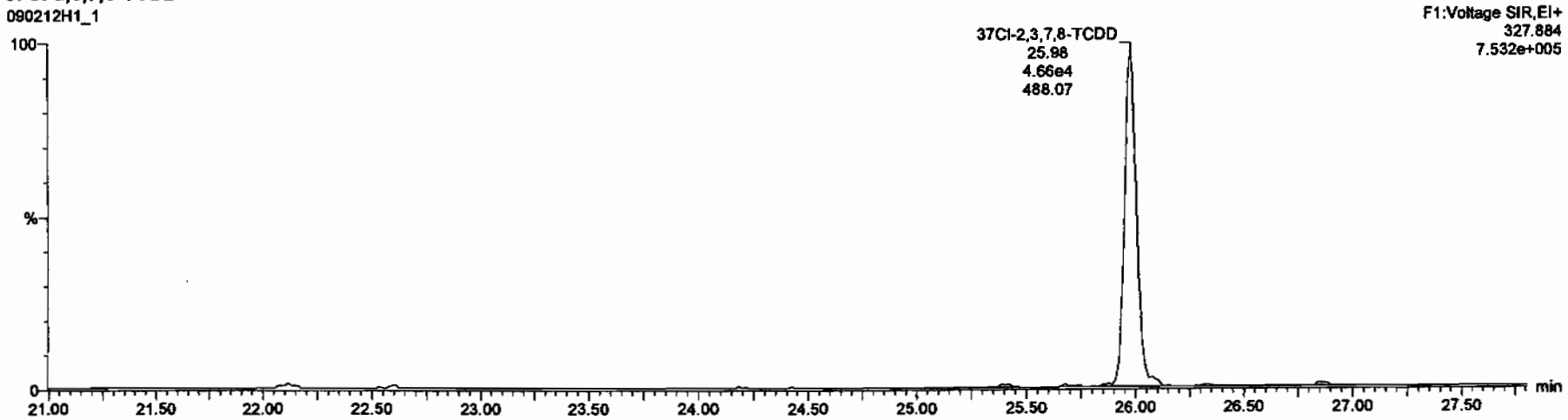

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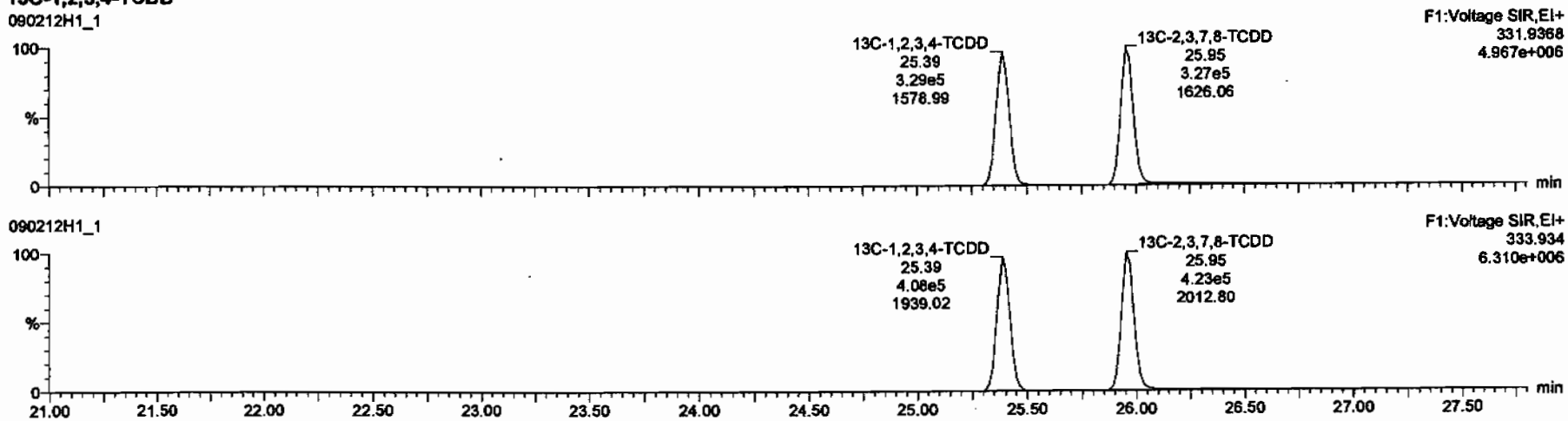

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1,2,3,7,8-PeCDD

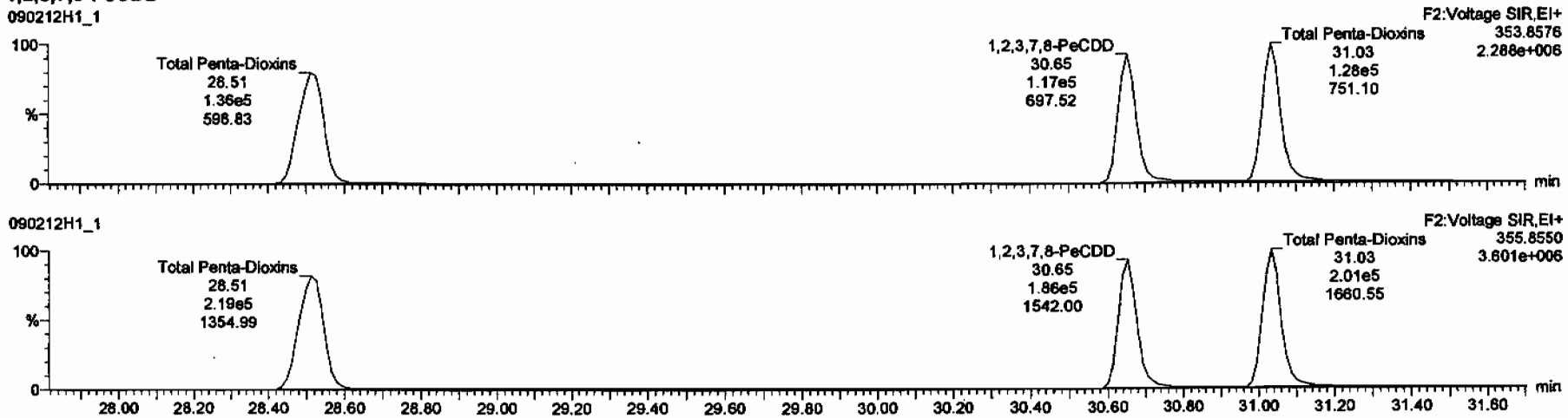

13C-1,2,3,7,8-PeCDD

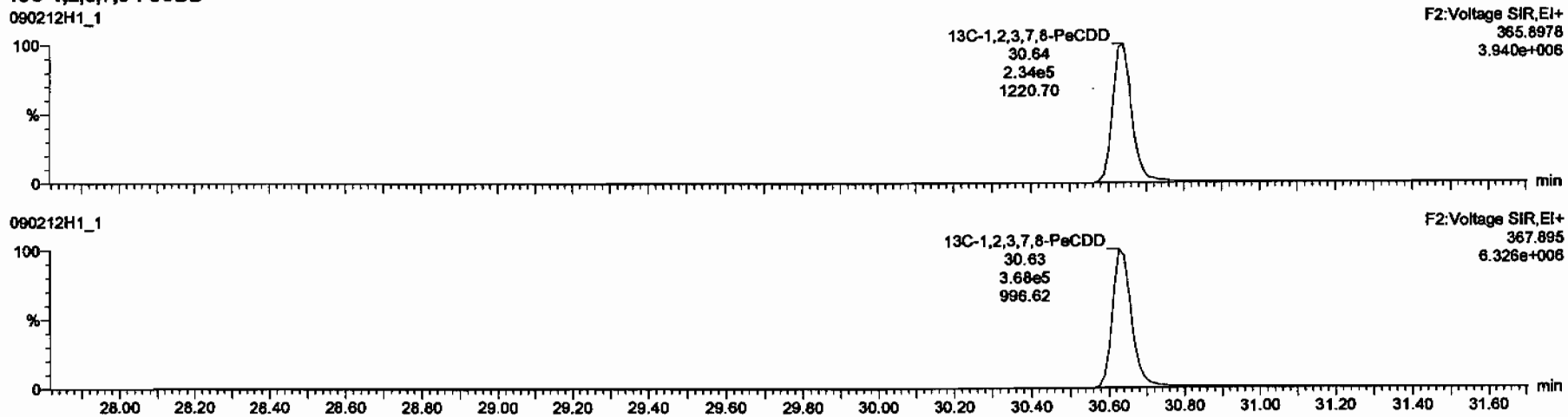

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1,2,3,4,7,8-HxCDD

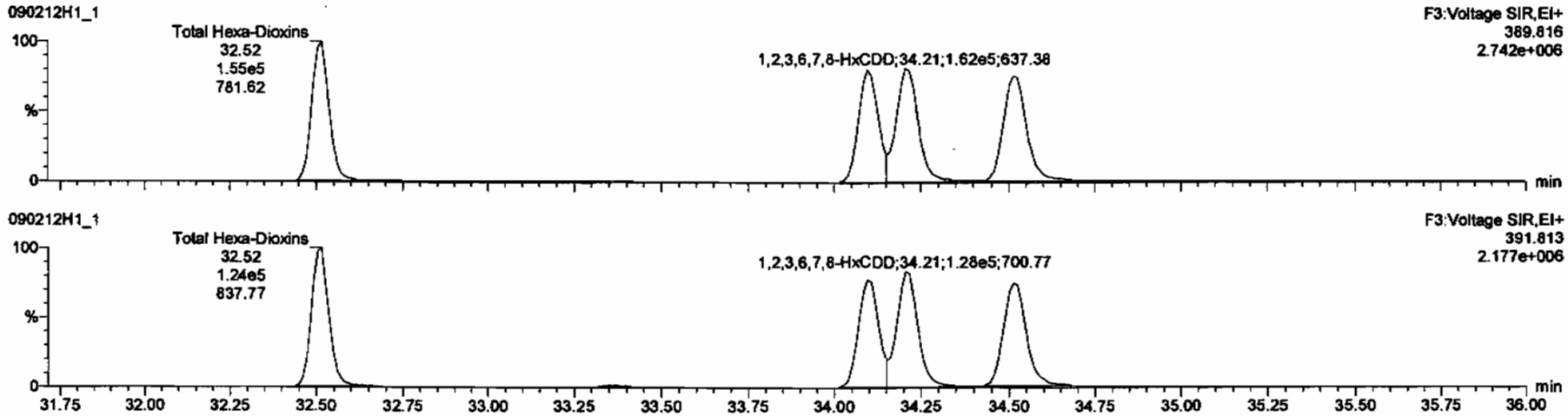

13C-1,2,3,4,7,8-HxCDD

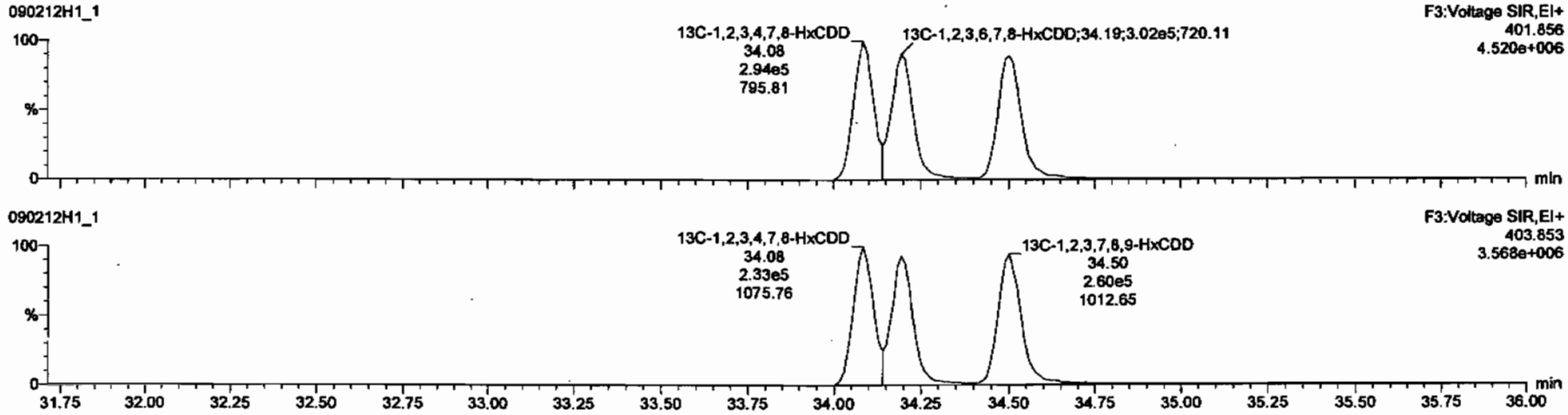

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1,2,3,4,6,7,8-HpCDD

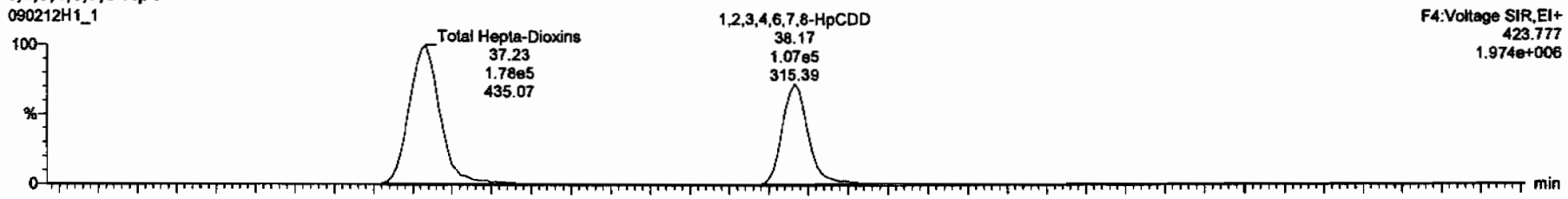

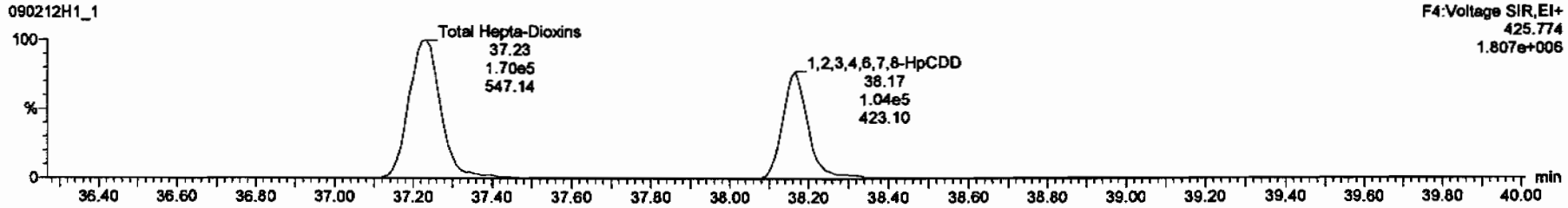

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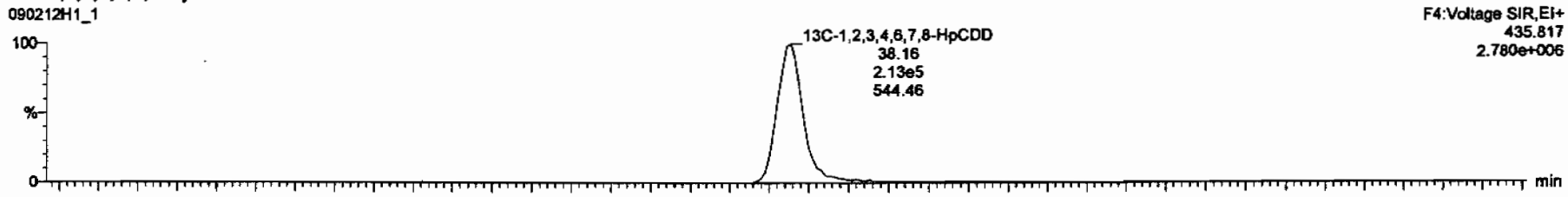

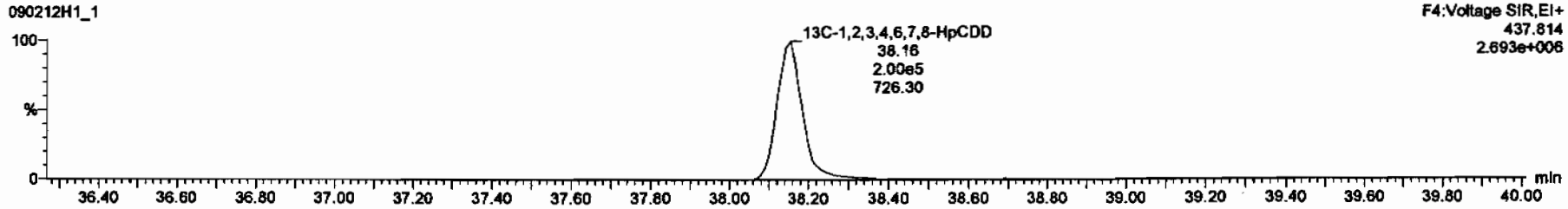

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OCDD

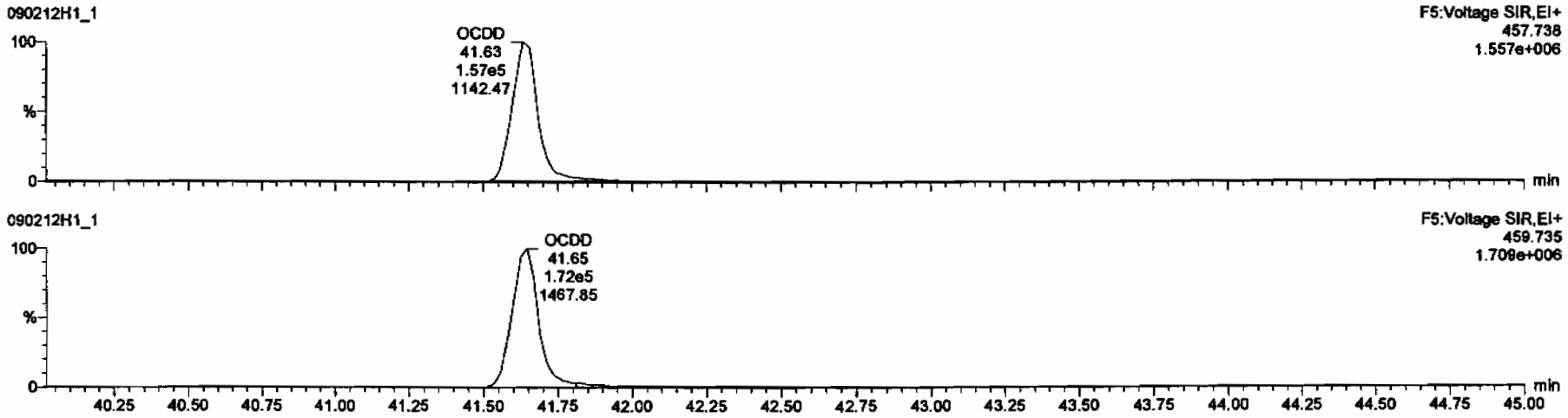

13C-OCDD

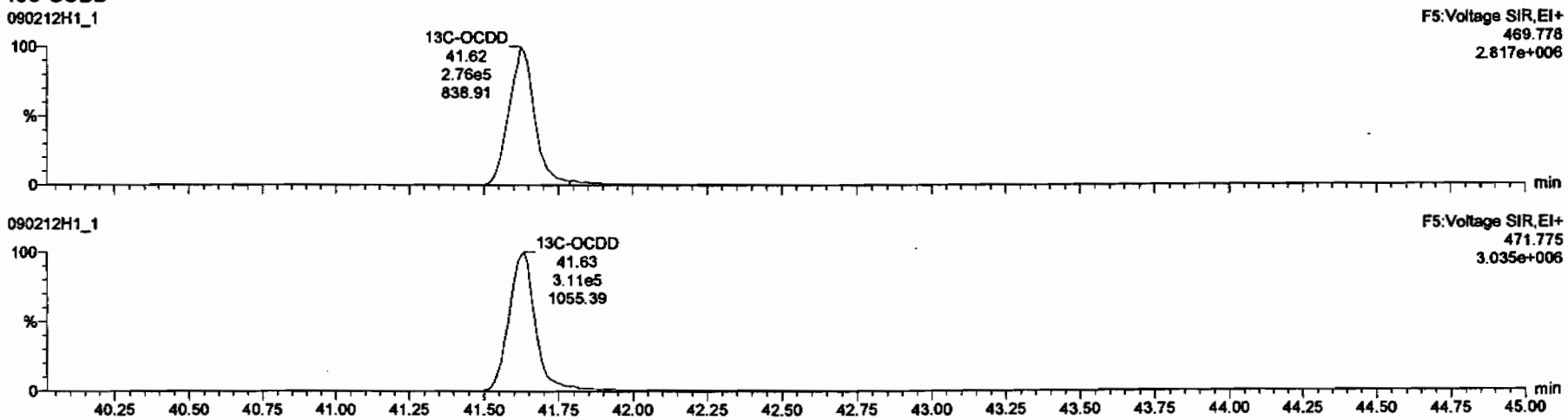

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2,3,7,8-TCDF

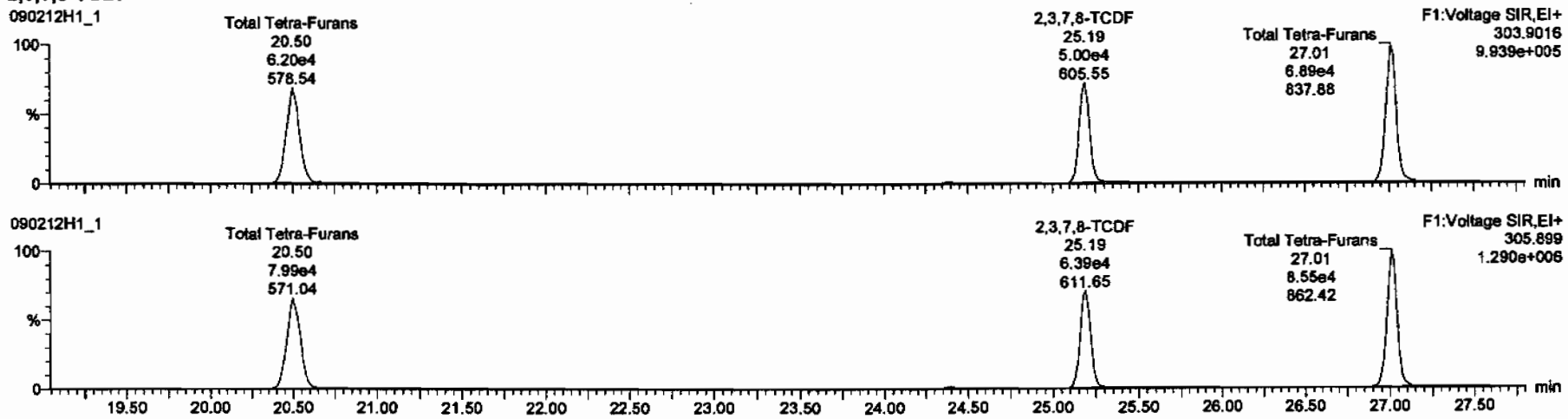

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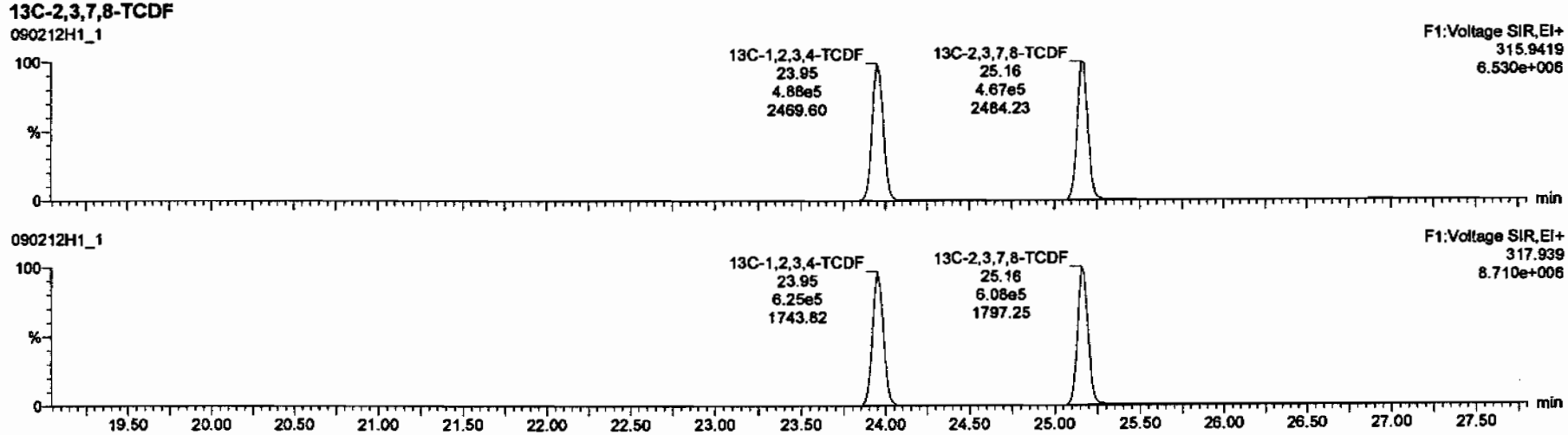

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1st Func. Penta-Furans

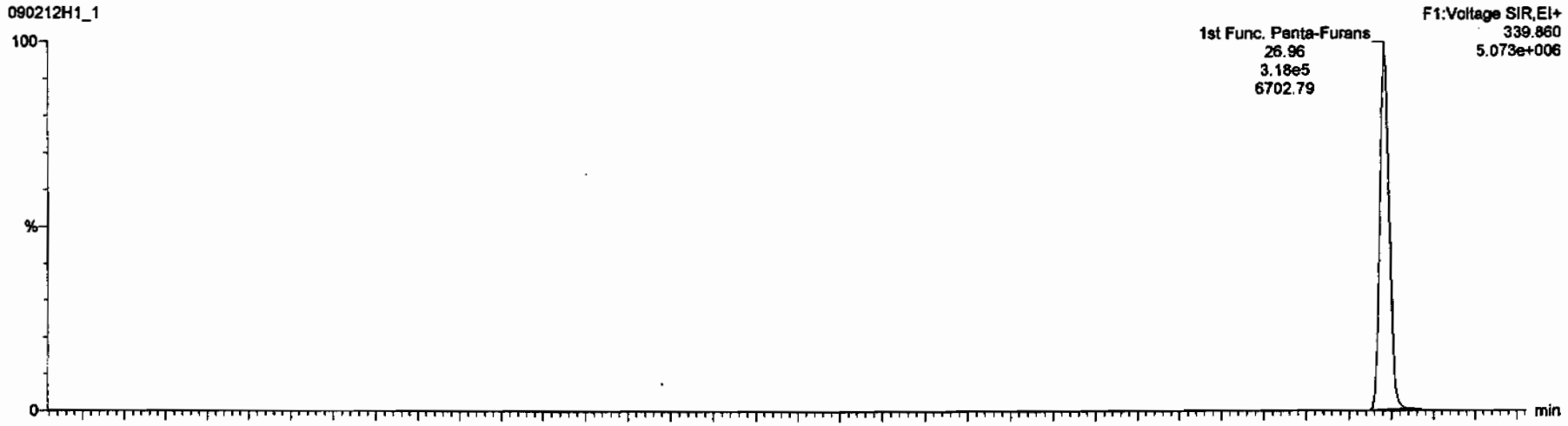

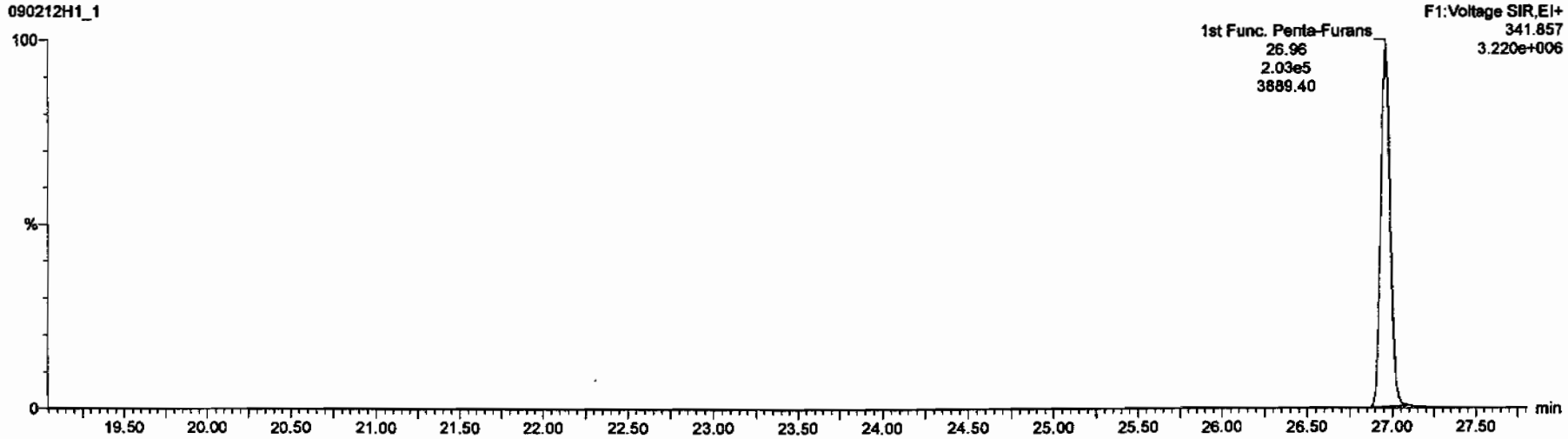

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1,2,3,7,8-PeCDF

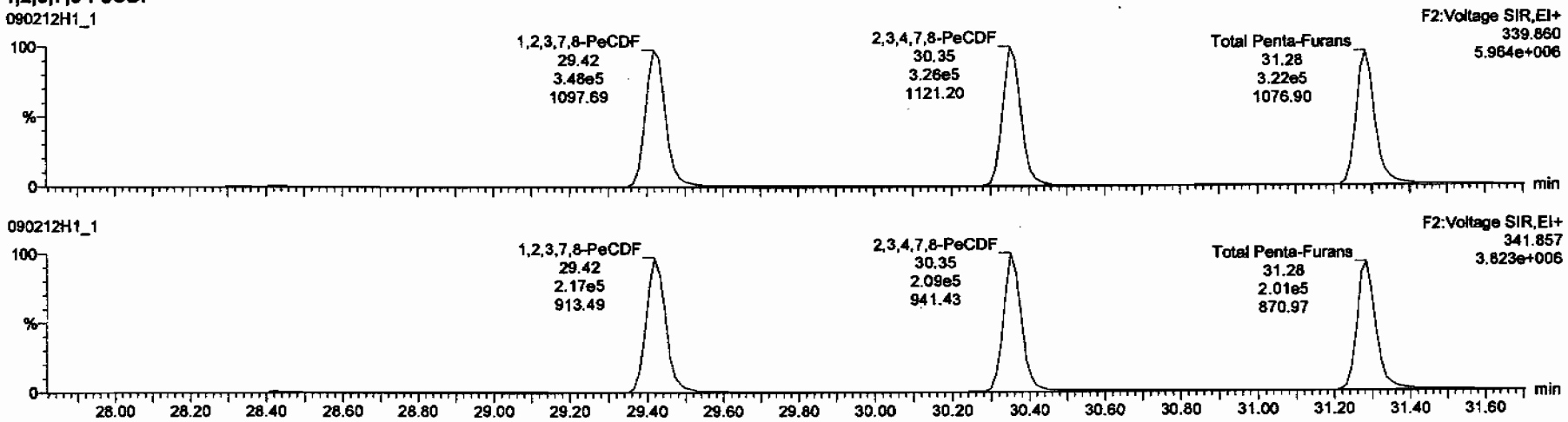

13C-1,2,3,7,8-PeCDF

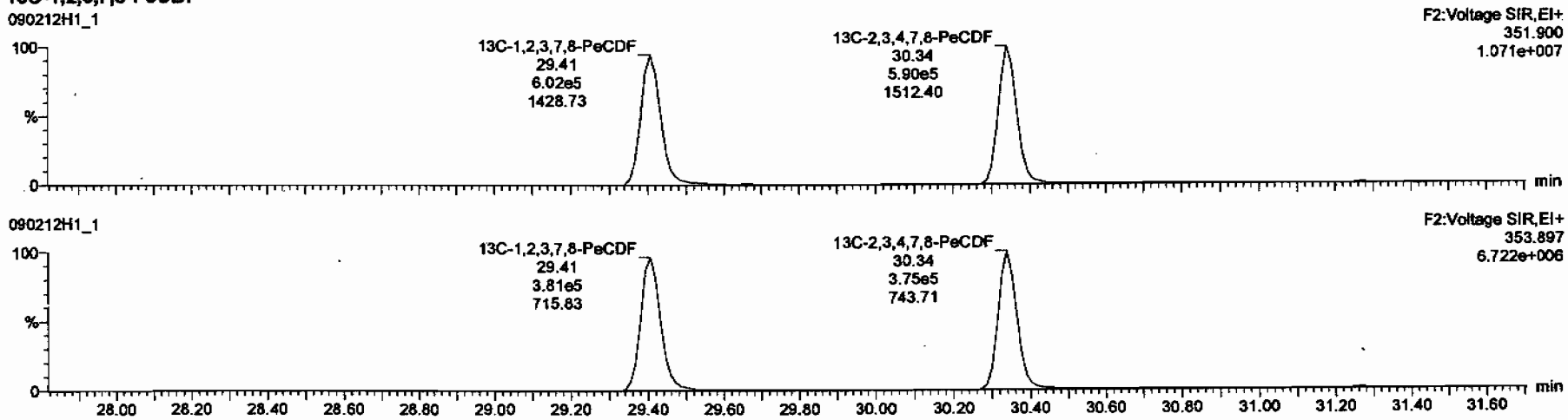

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1,2,3,4,7,8-HxCDF

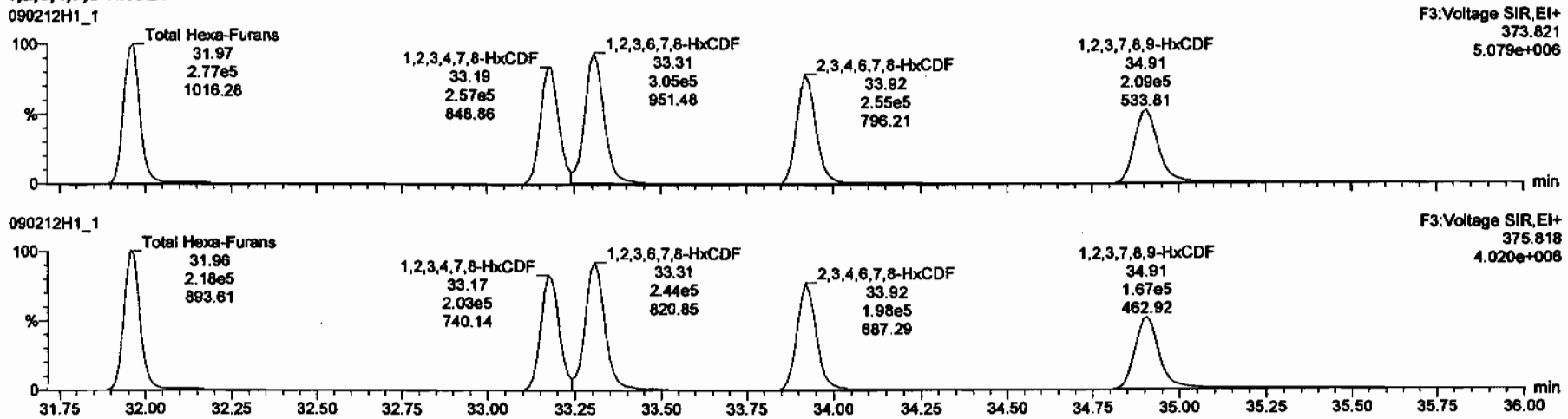

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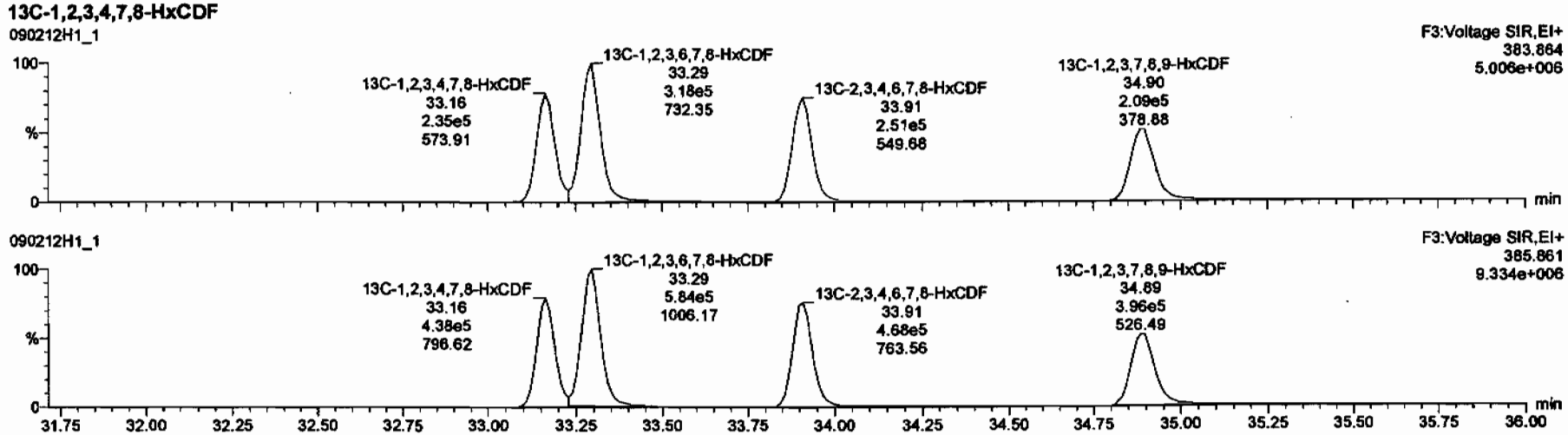

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDF

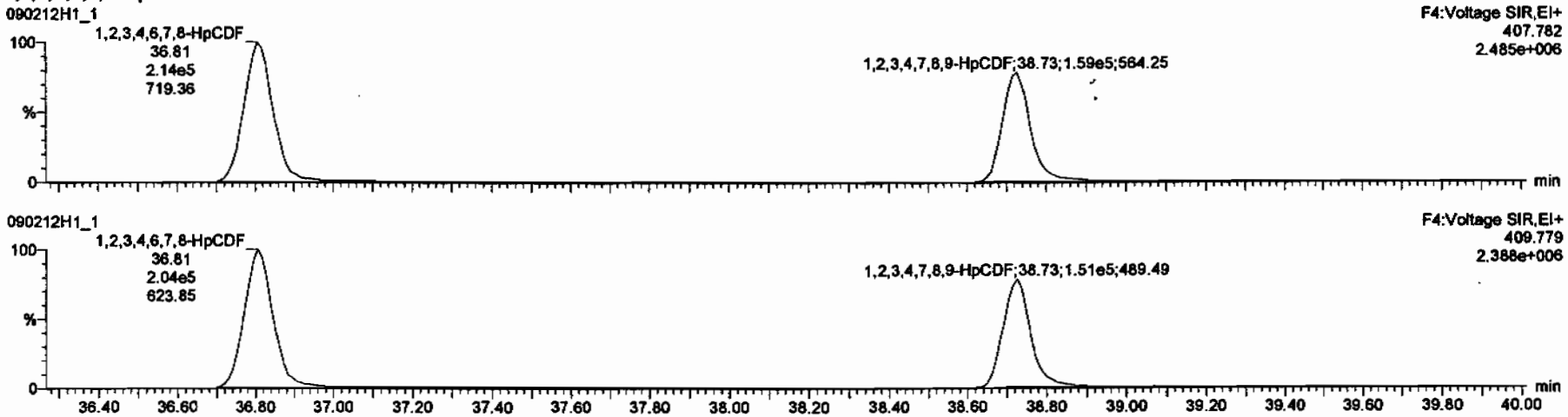

13C-1,2,3,4,6,7,8-HpCDF

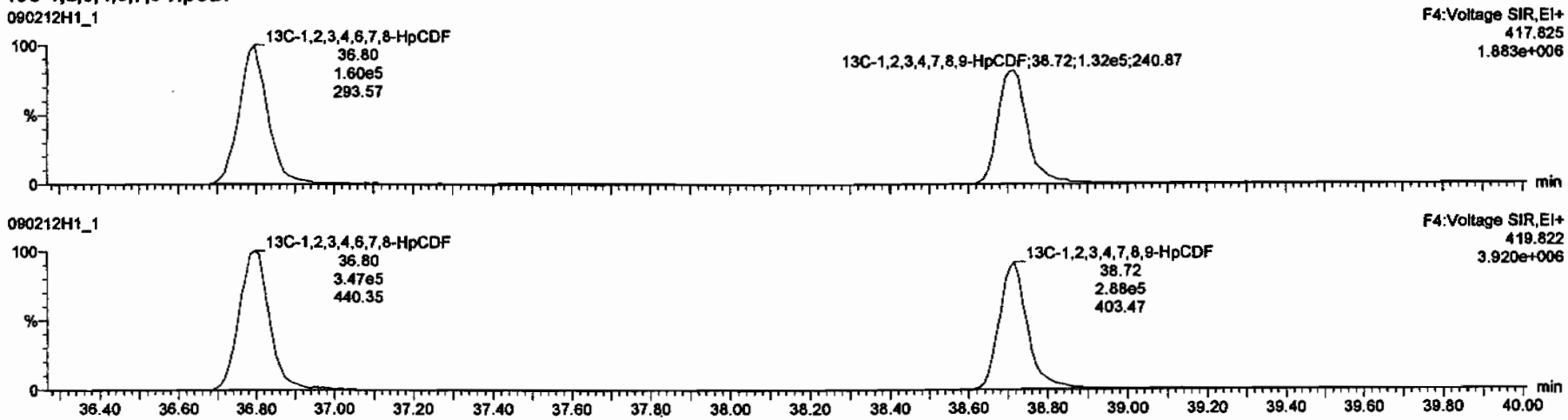

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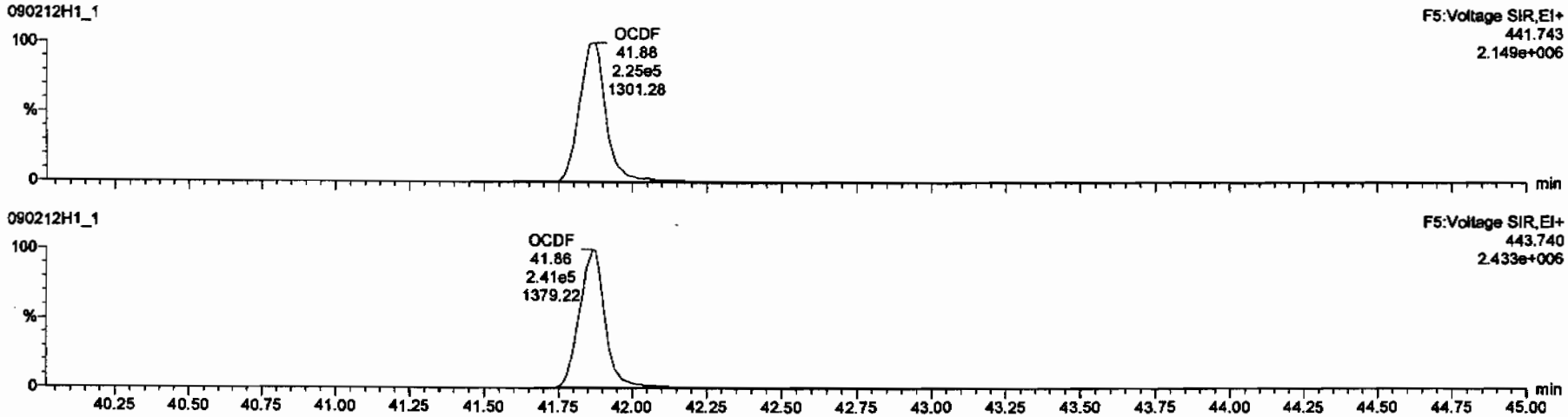

13C-OCDF

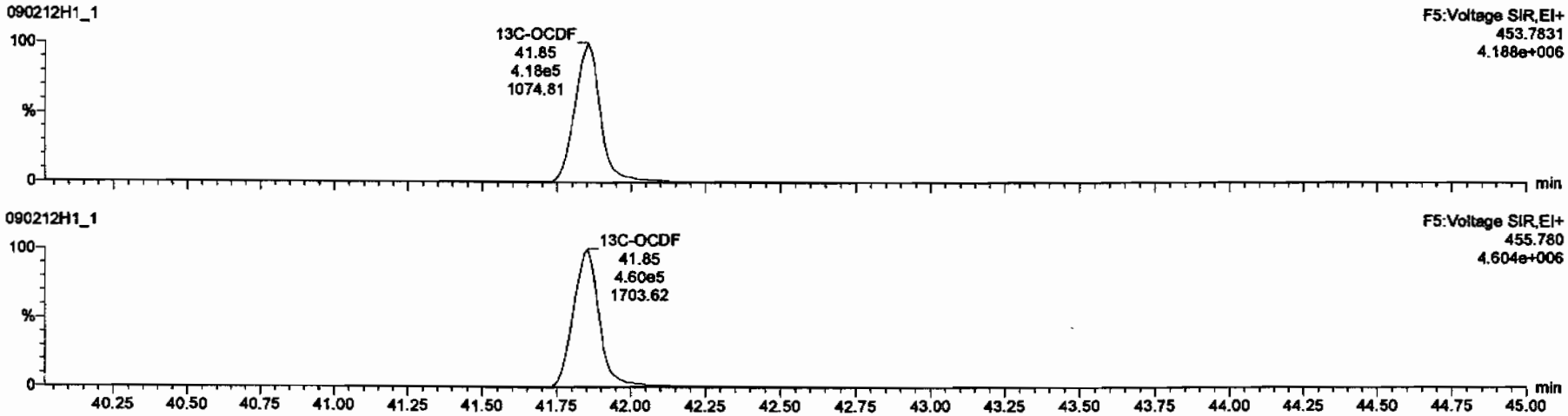

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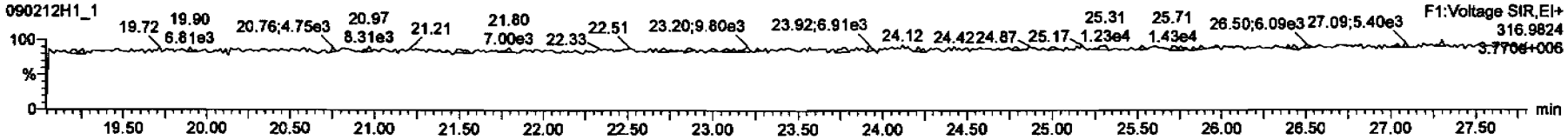

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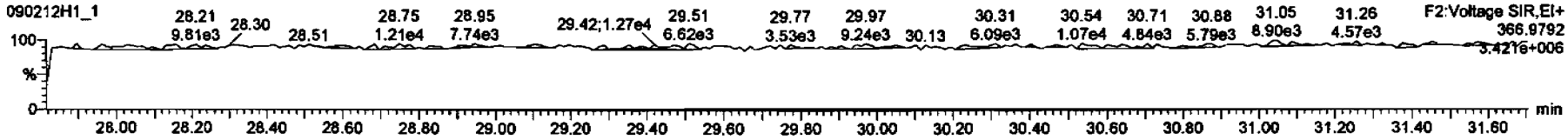

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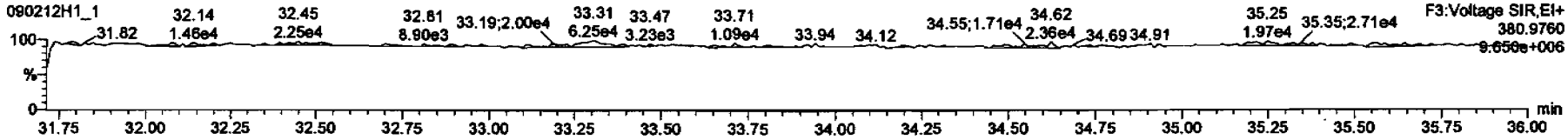

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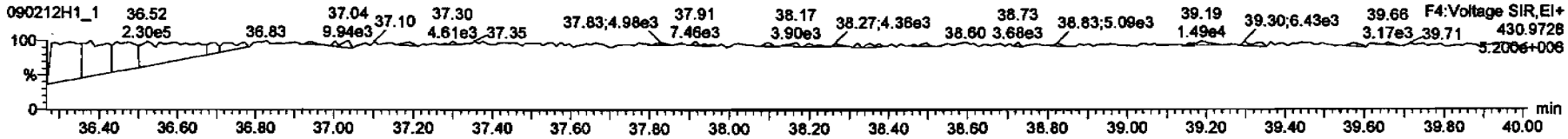

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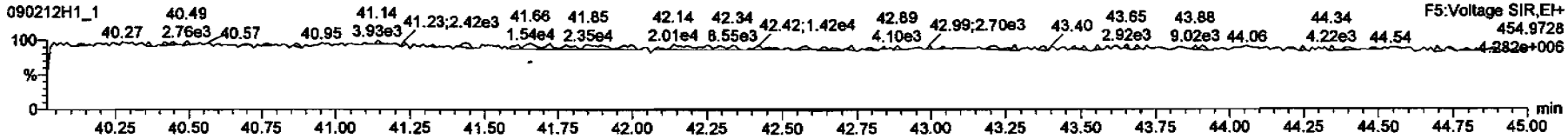

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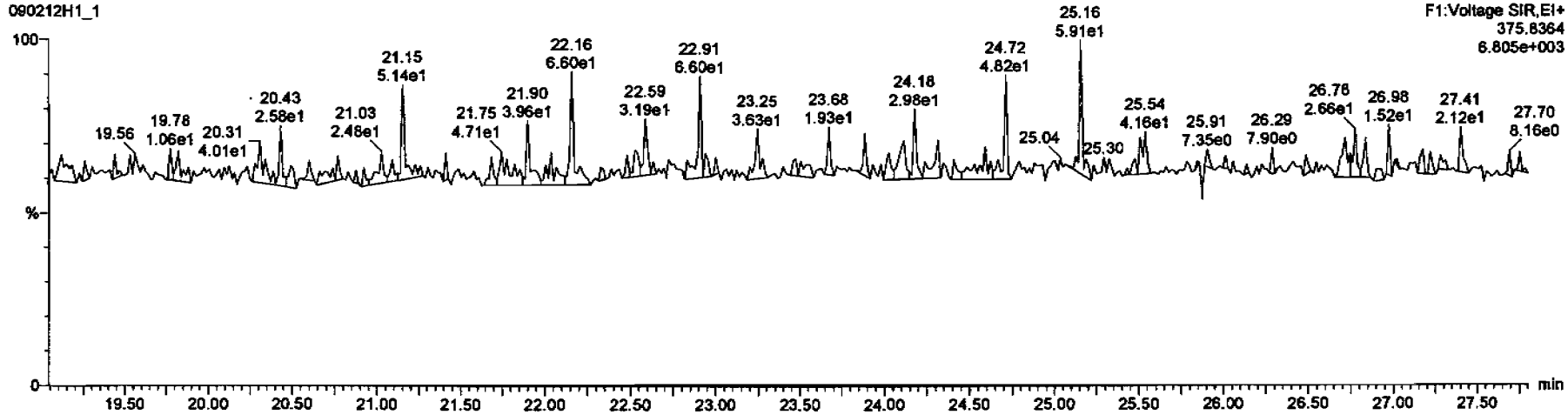

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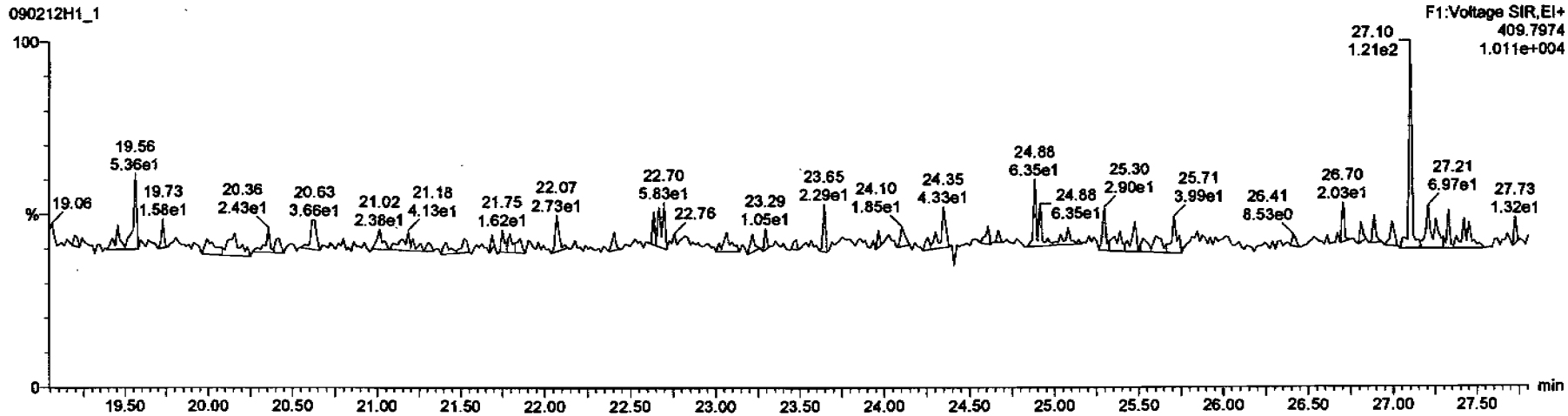

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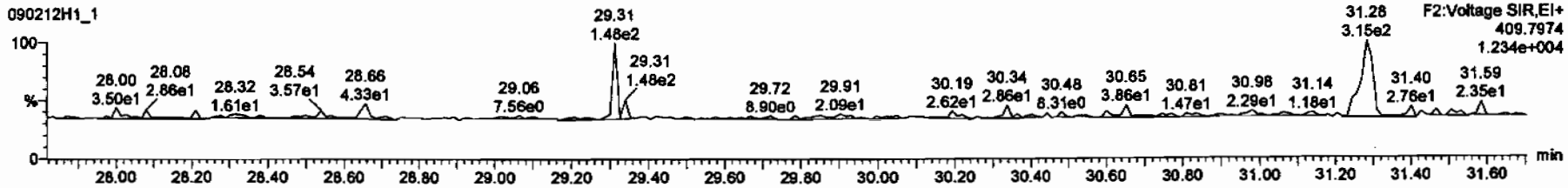

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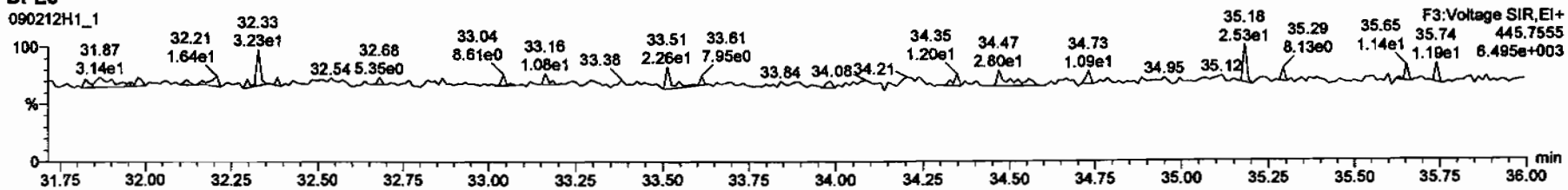

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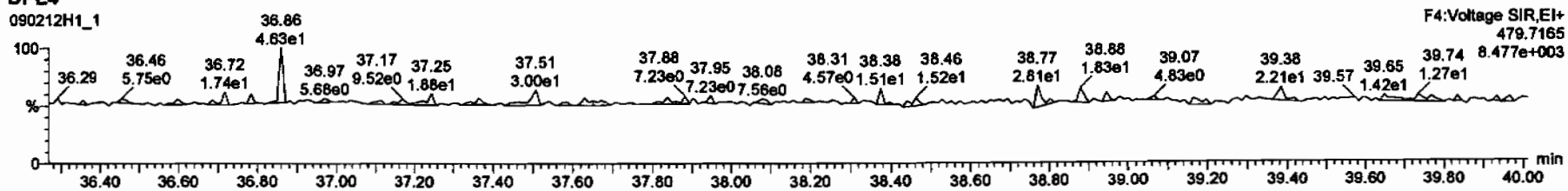

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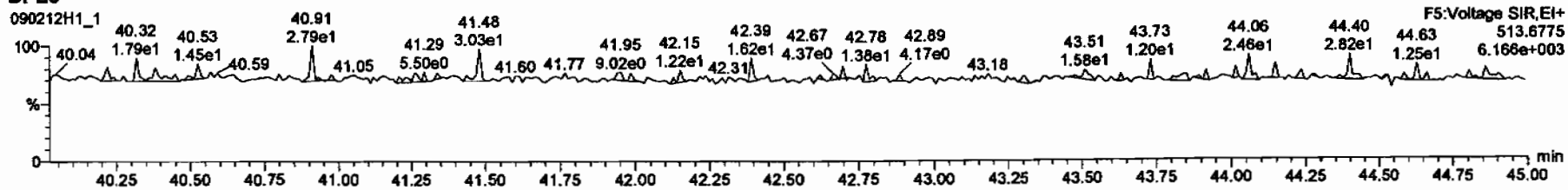

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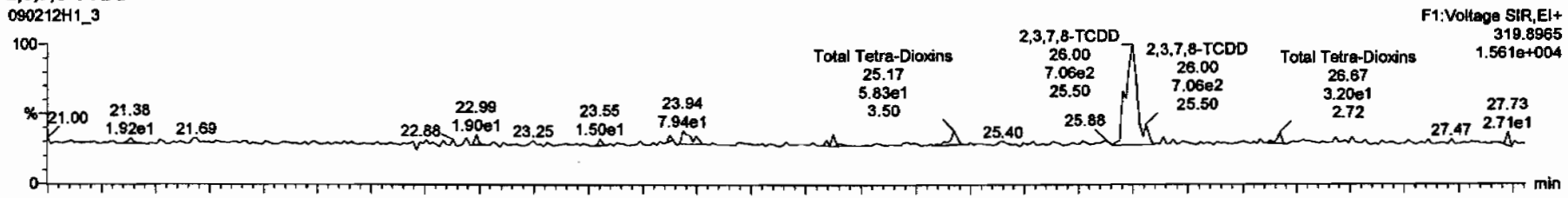

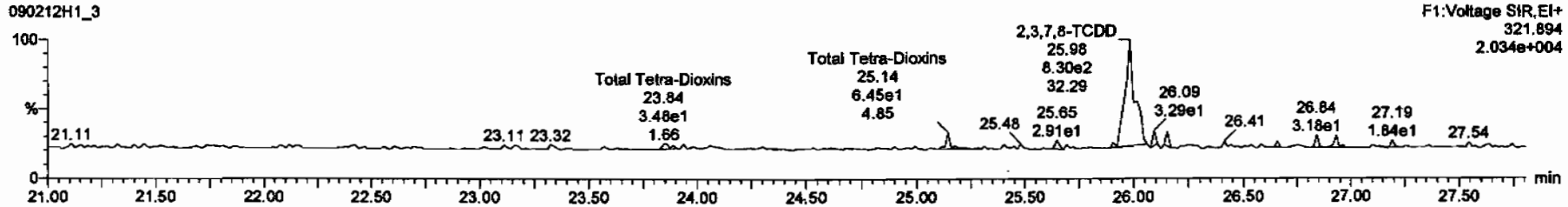

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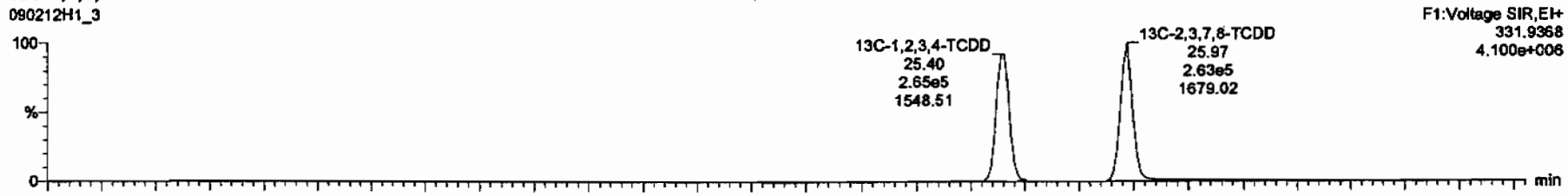

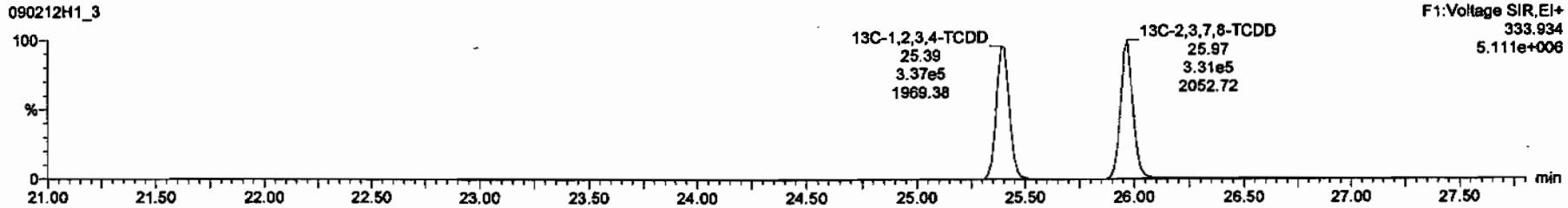

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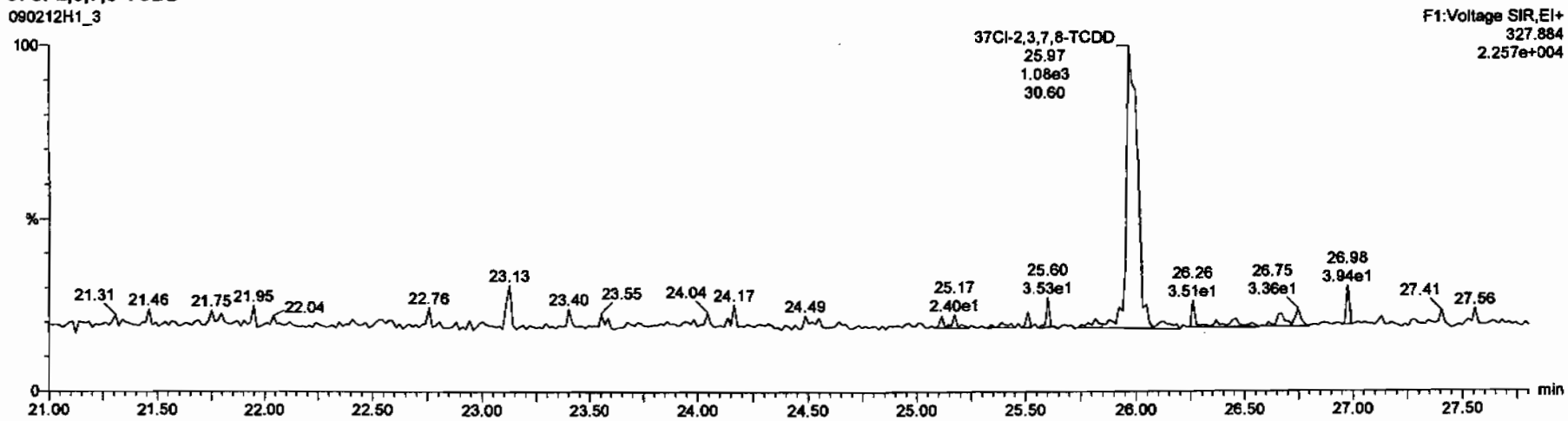

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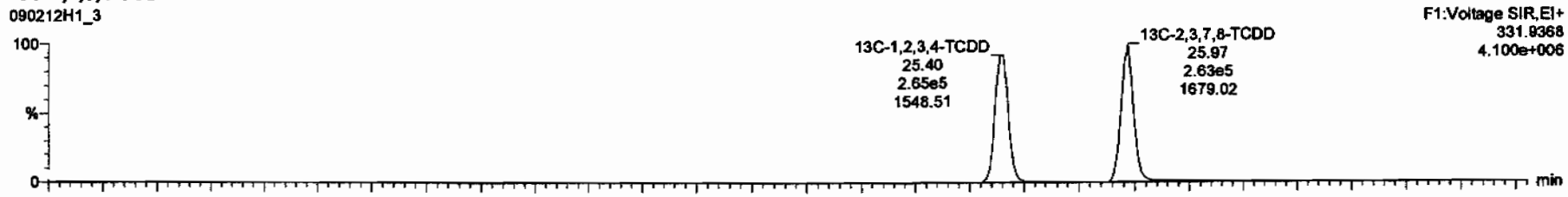

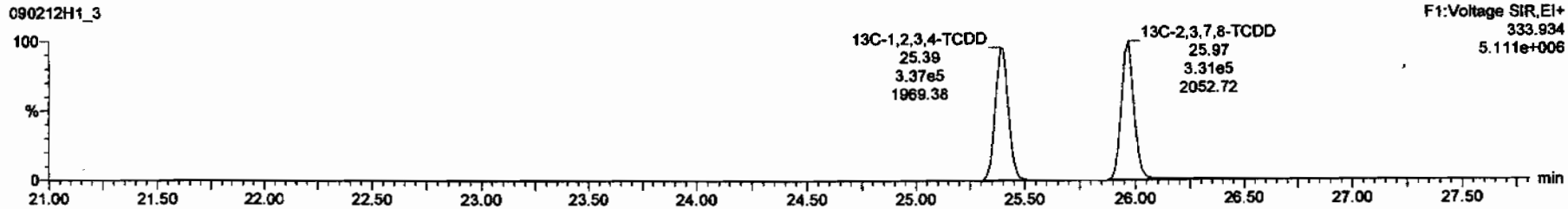

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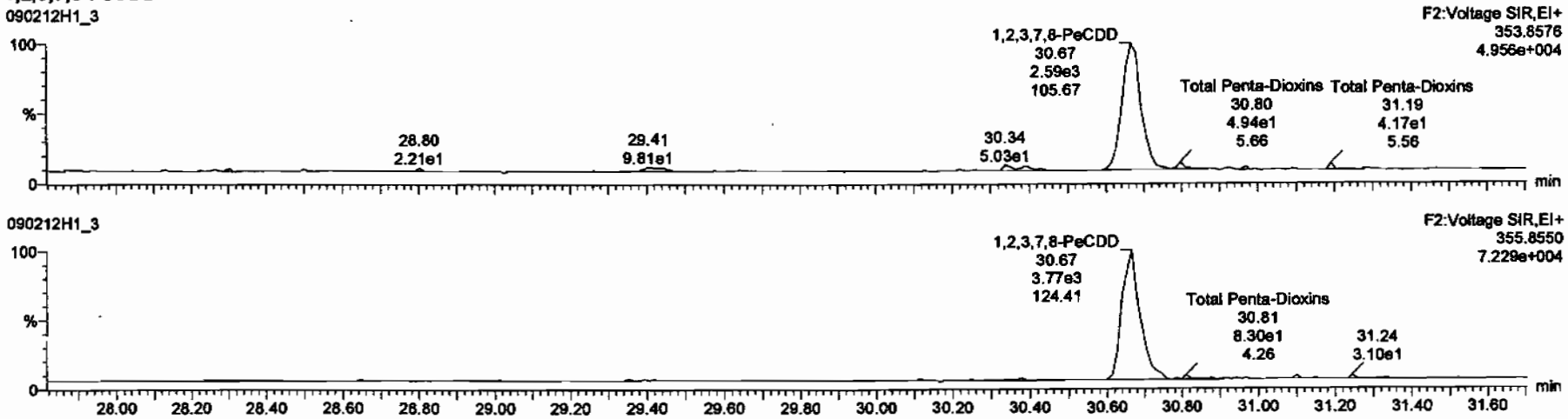

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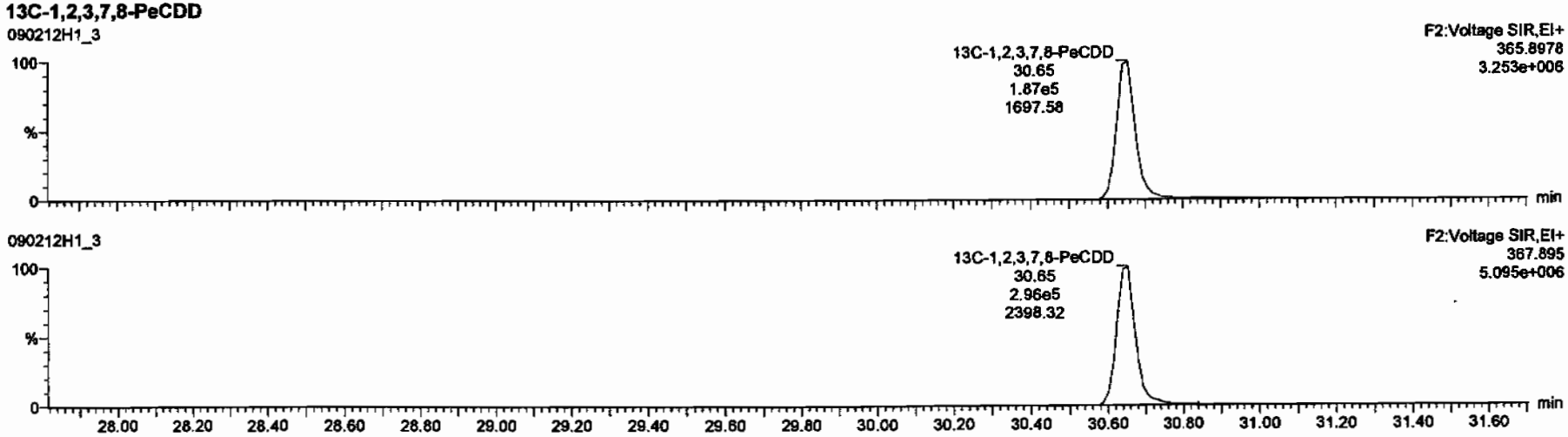

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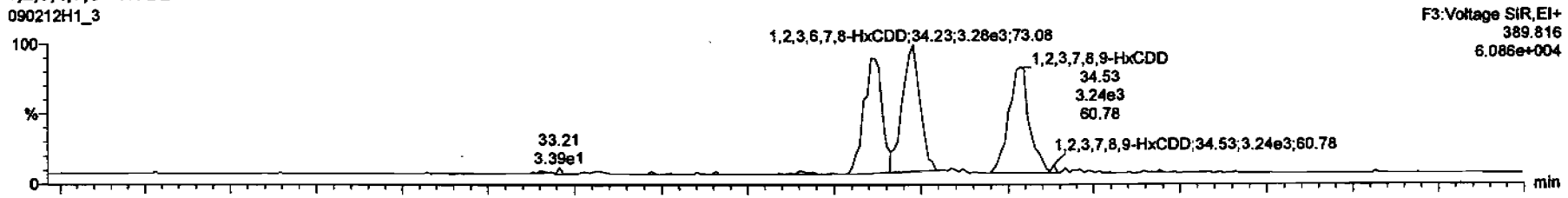

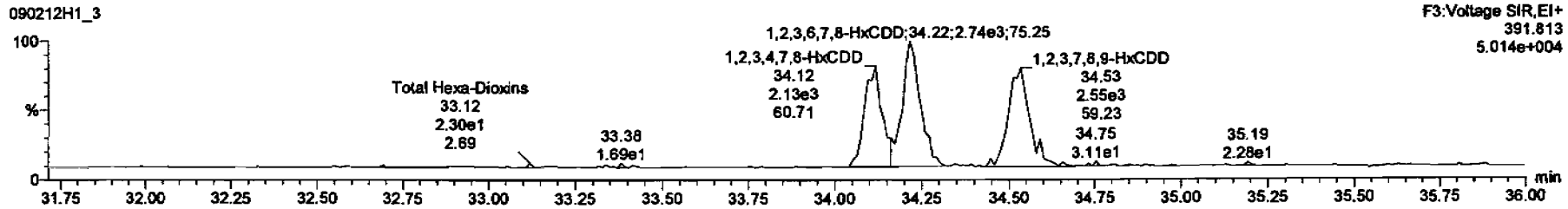

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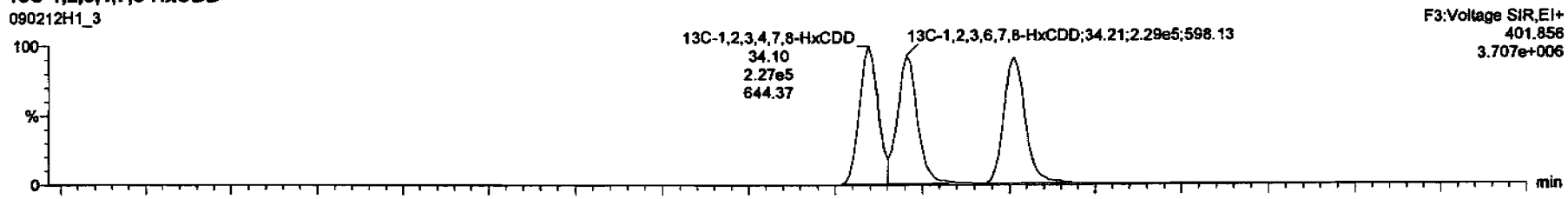

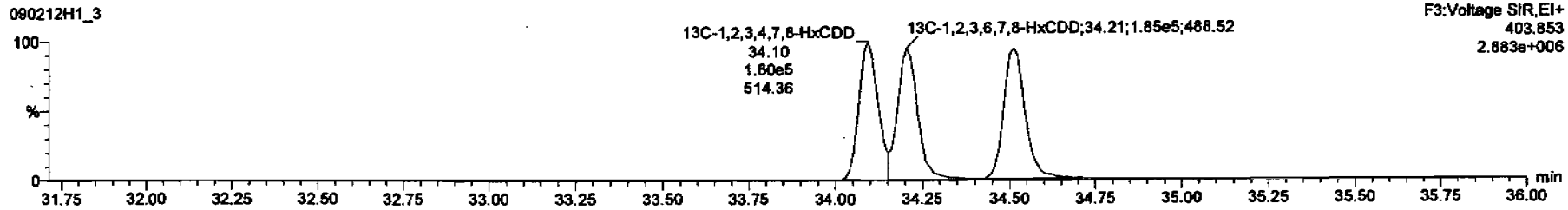

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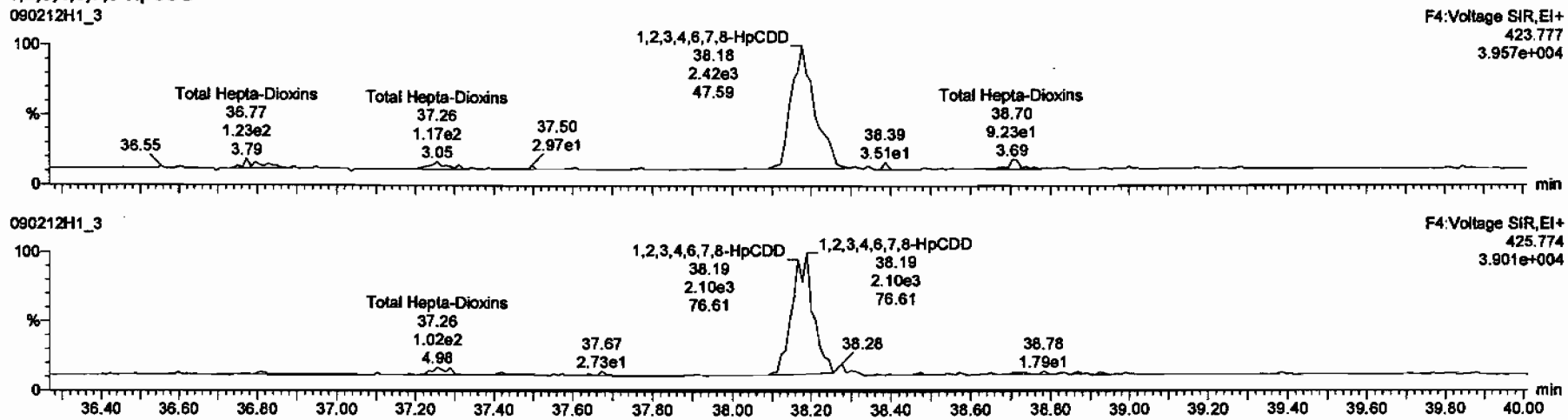

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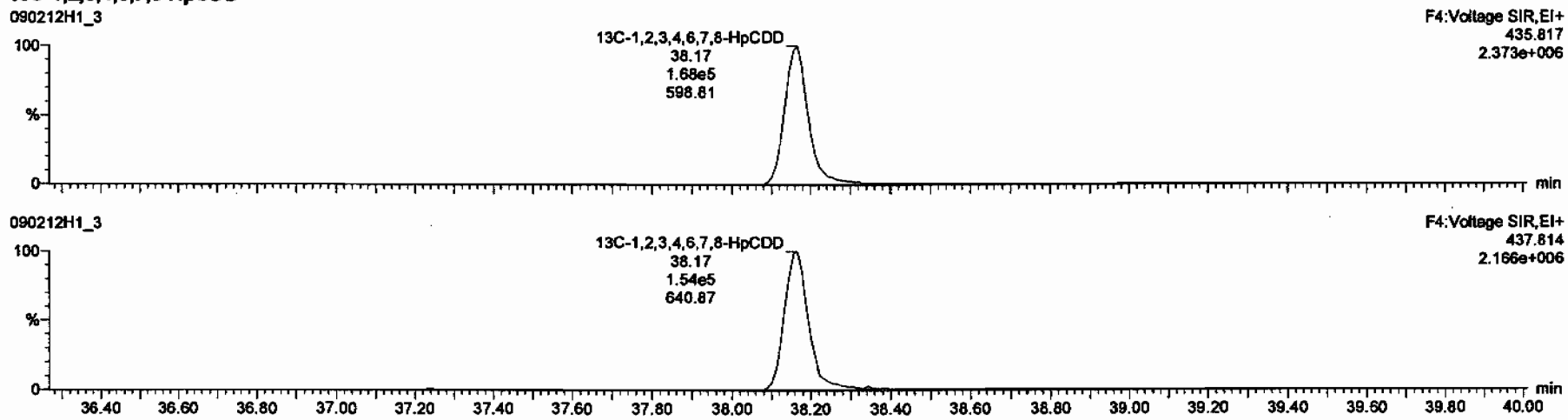

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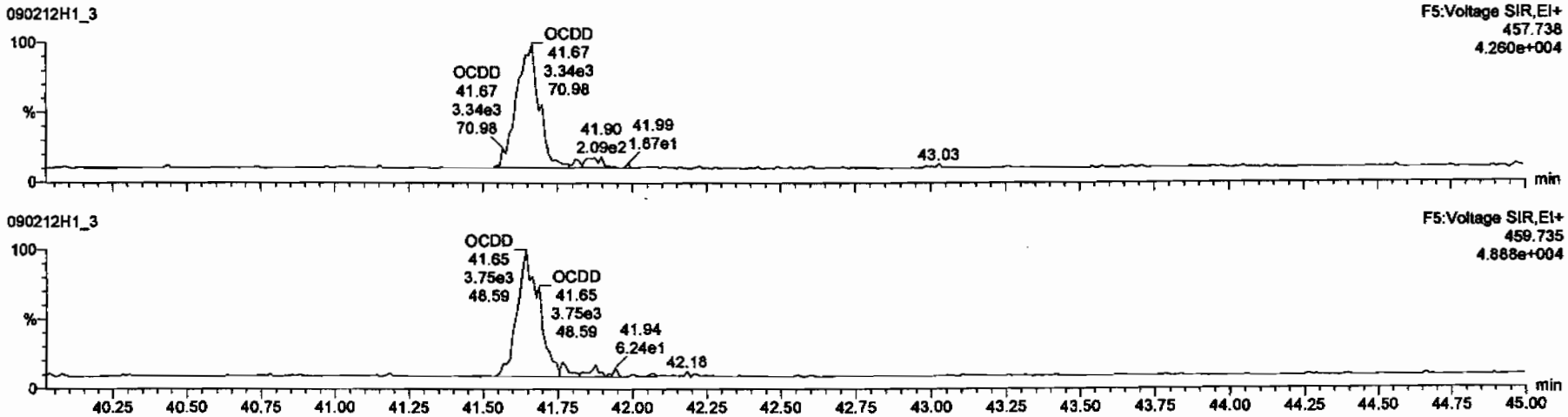

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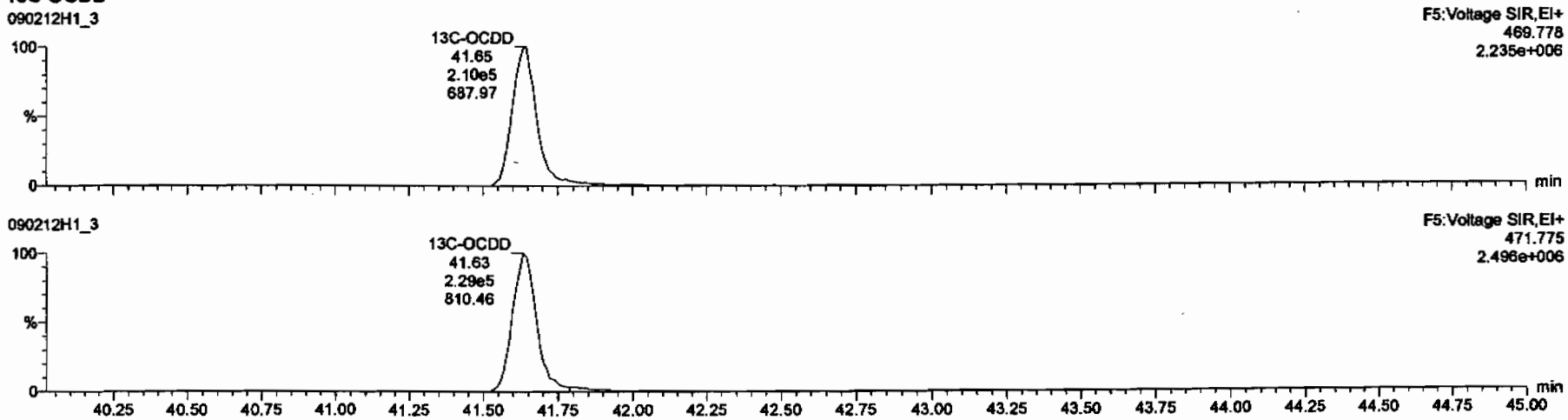

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2,3,7,8-TCDF

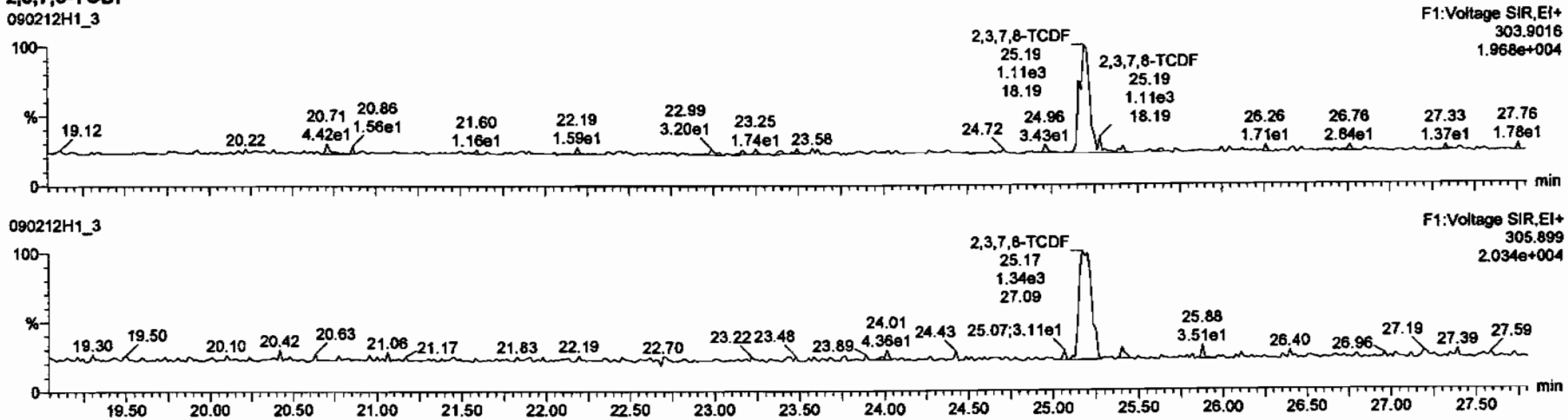

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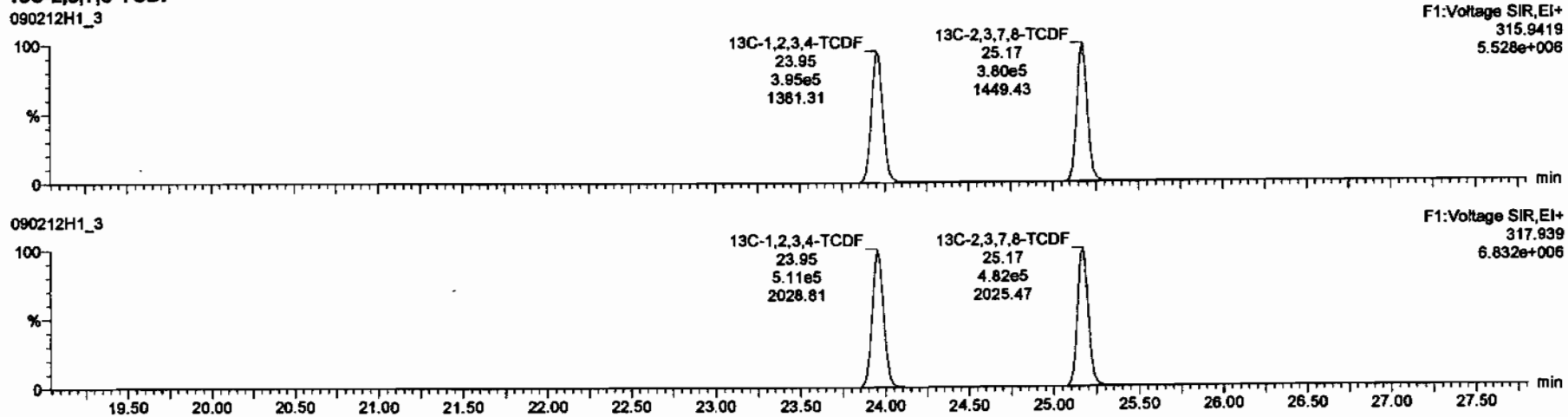

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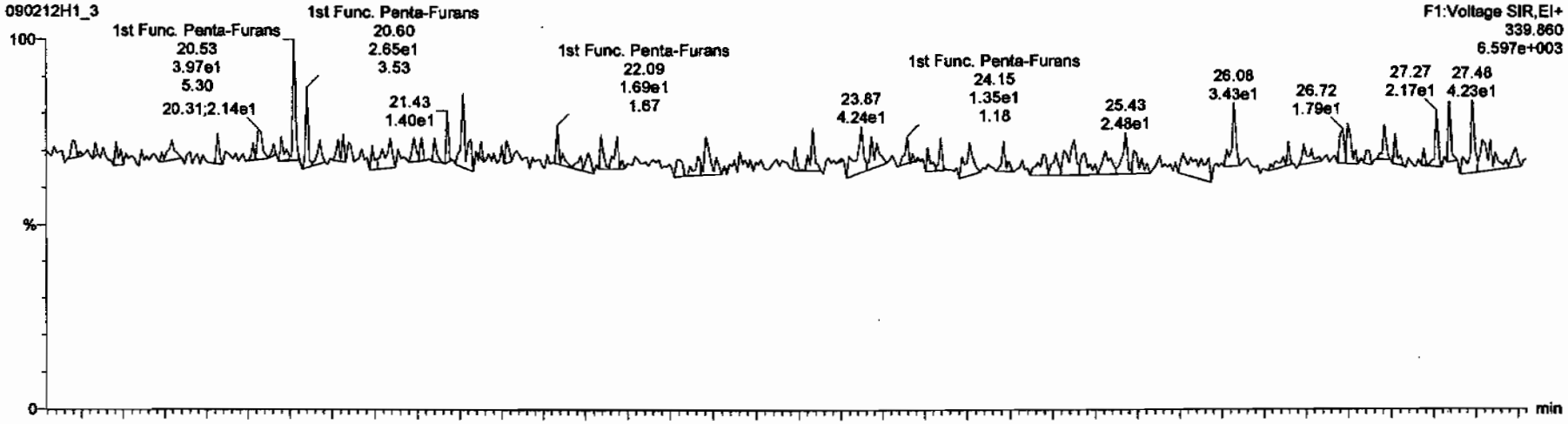

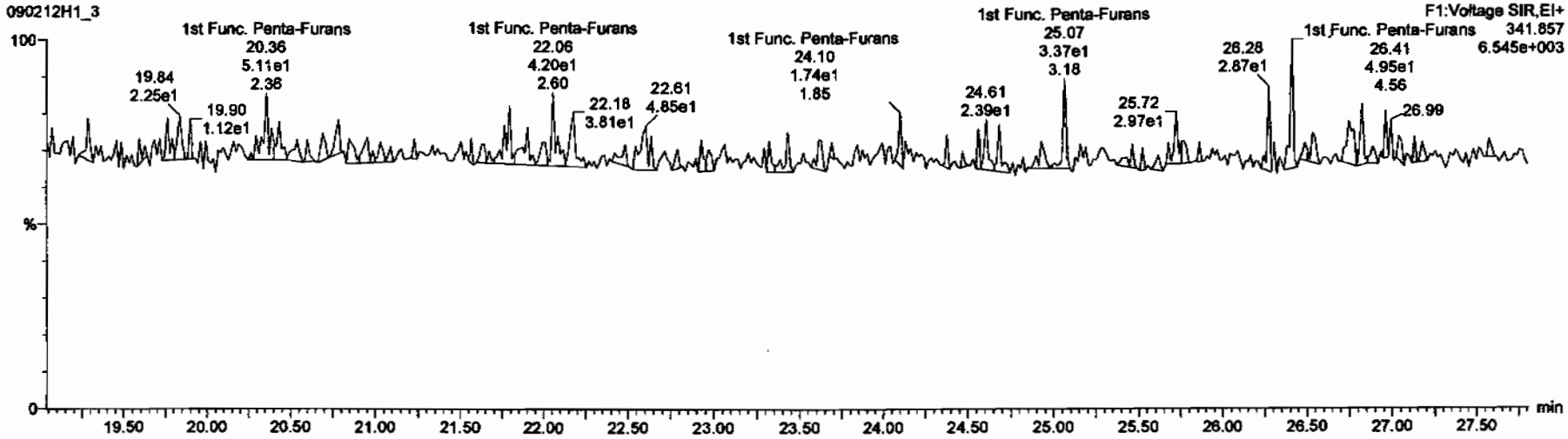

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1,2,3,7,8-PeCDF

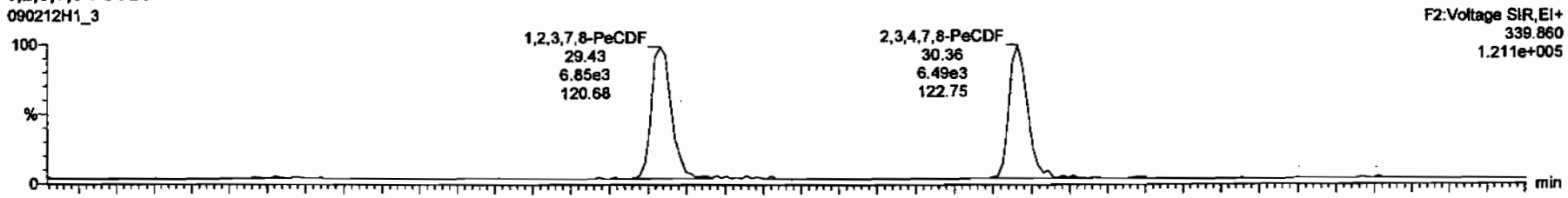

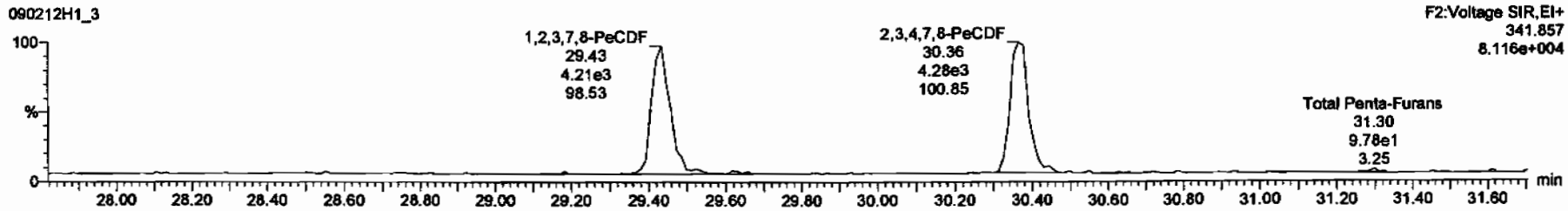

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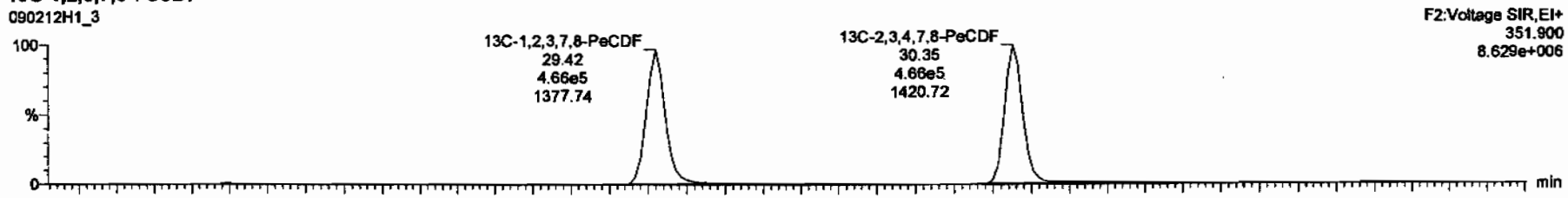

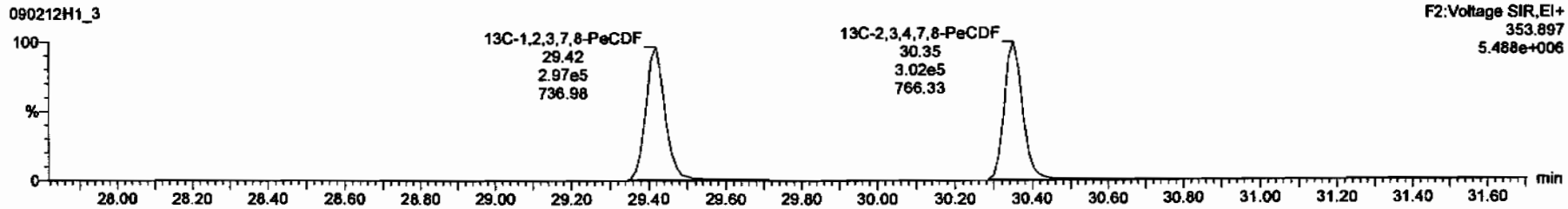

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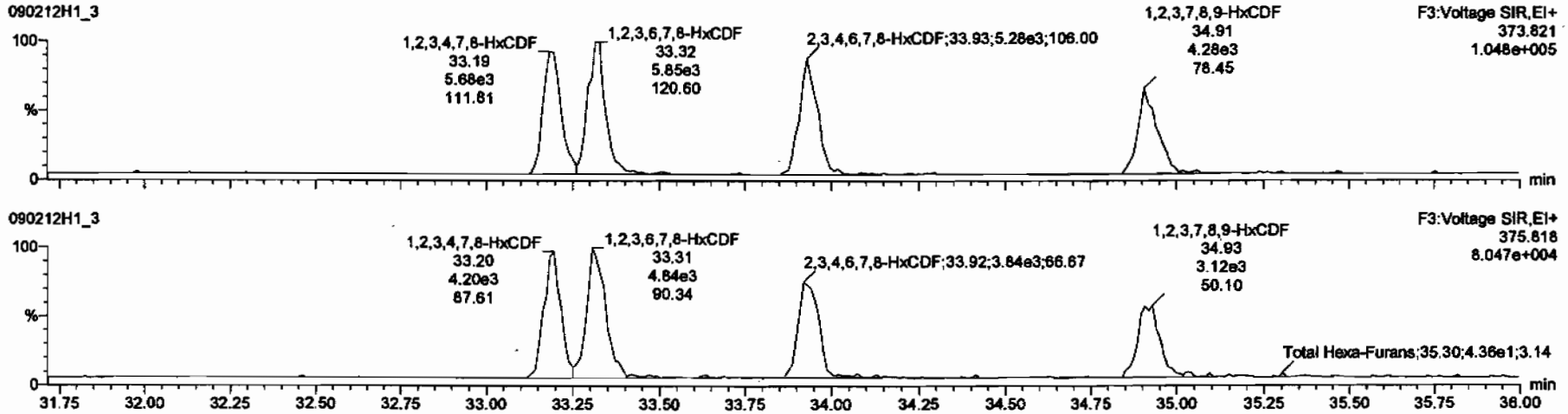

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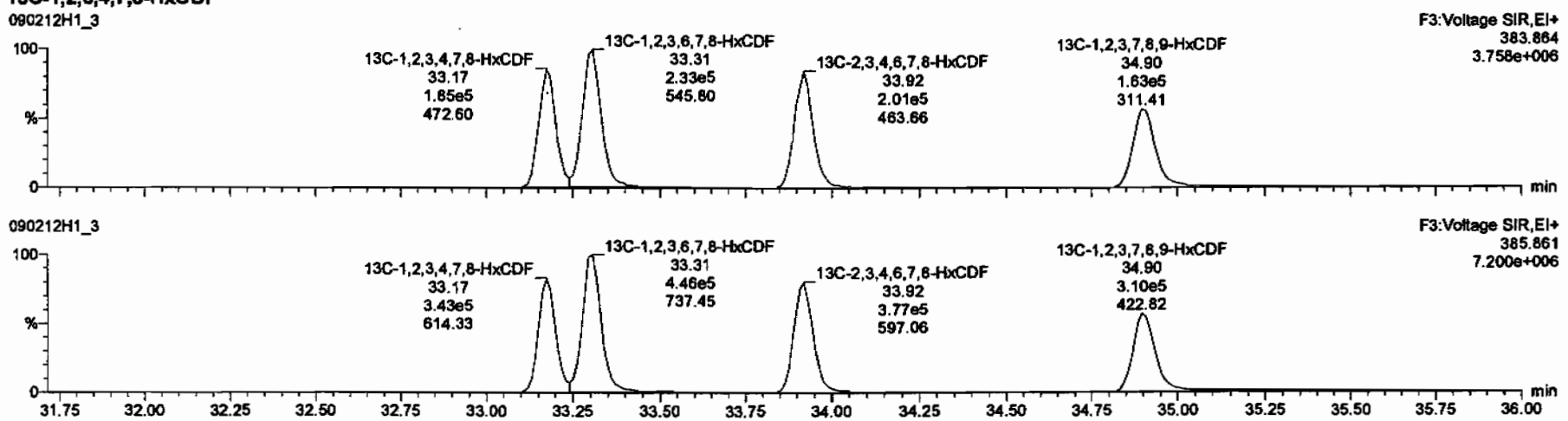

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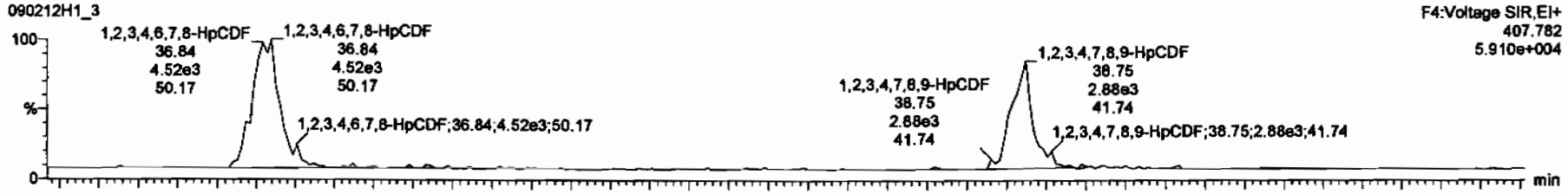

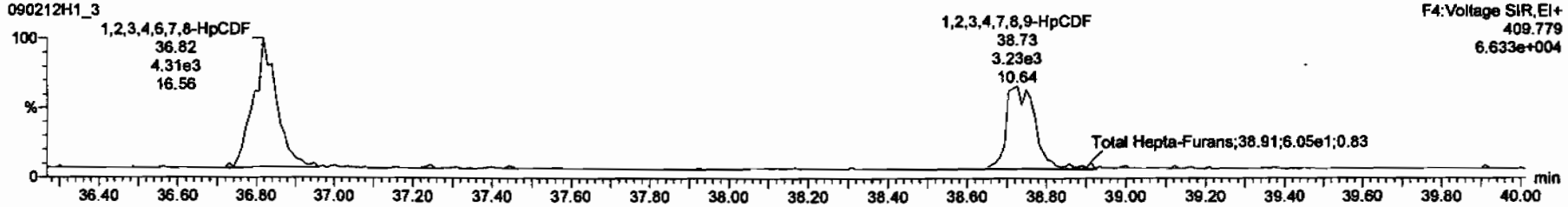

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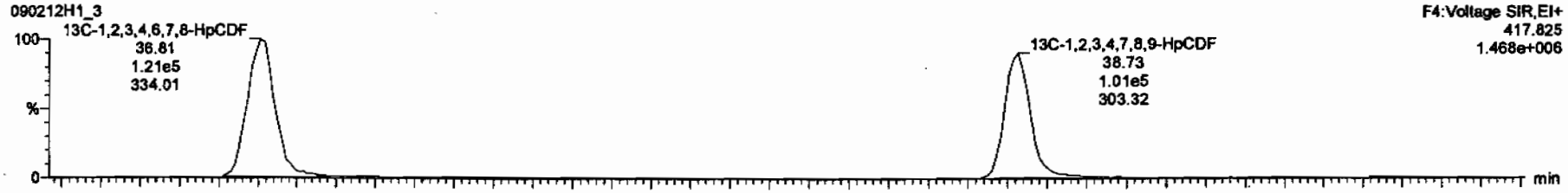

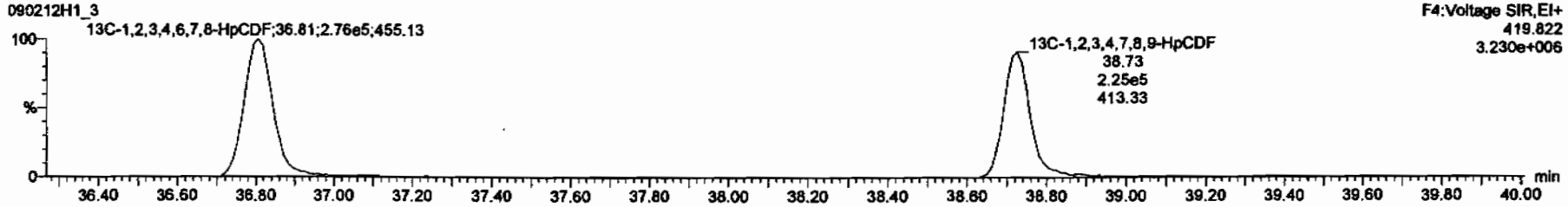

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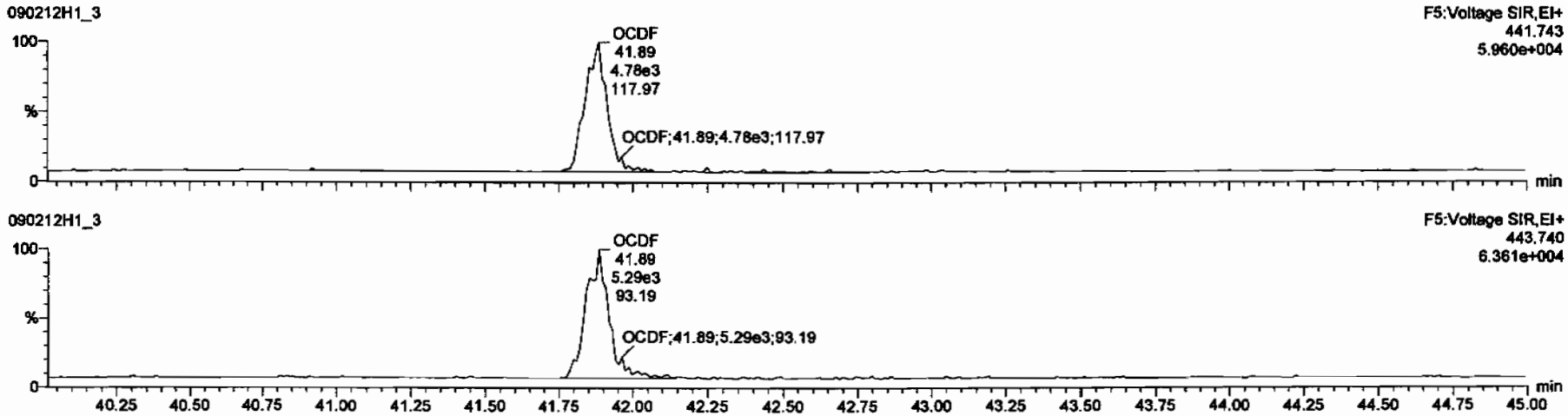

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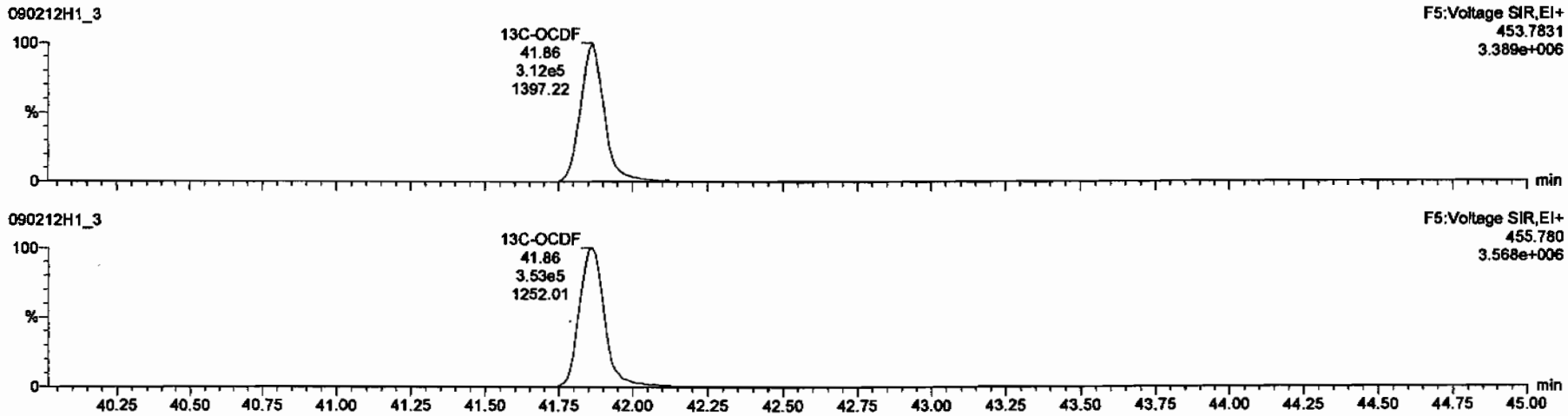

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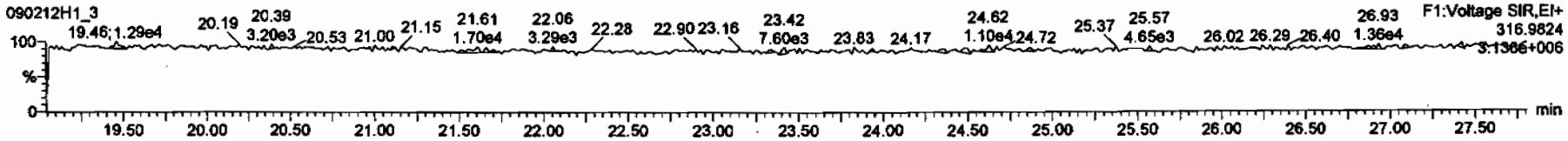

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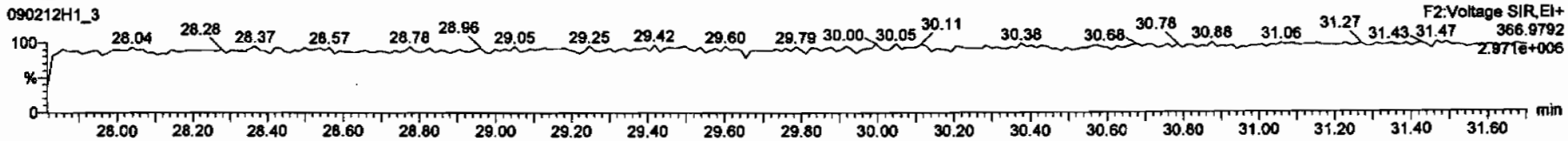

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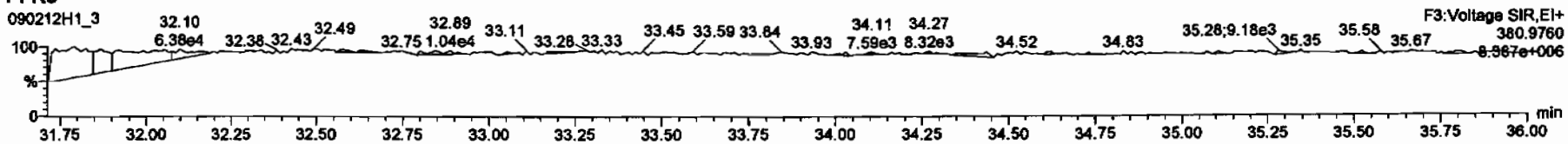

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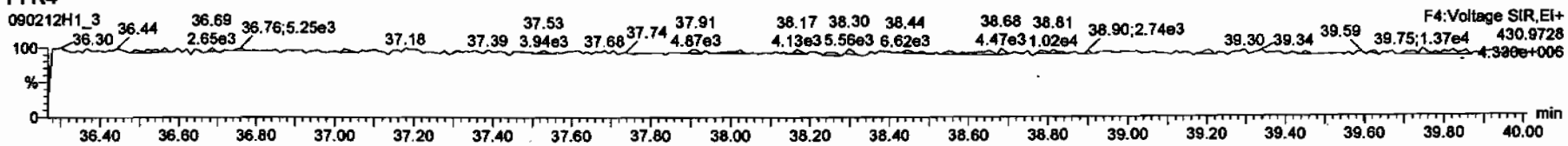

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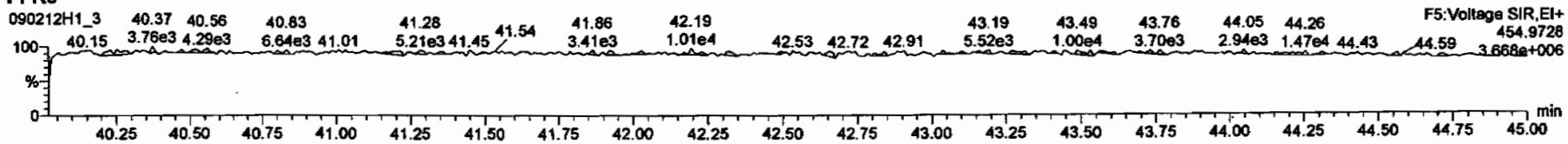

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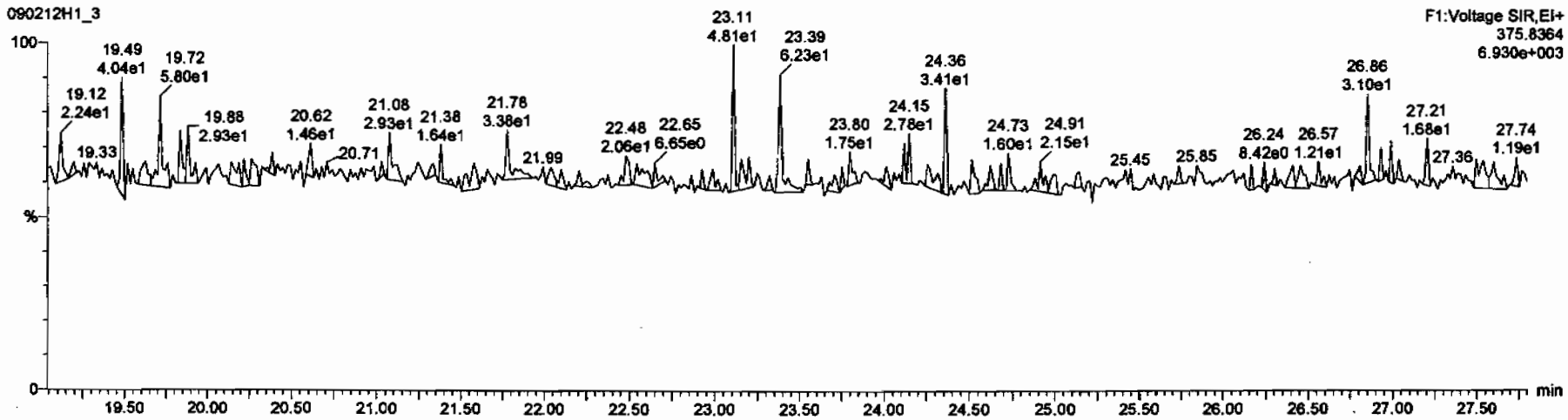

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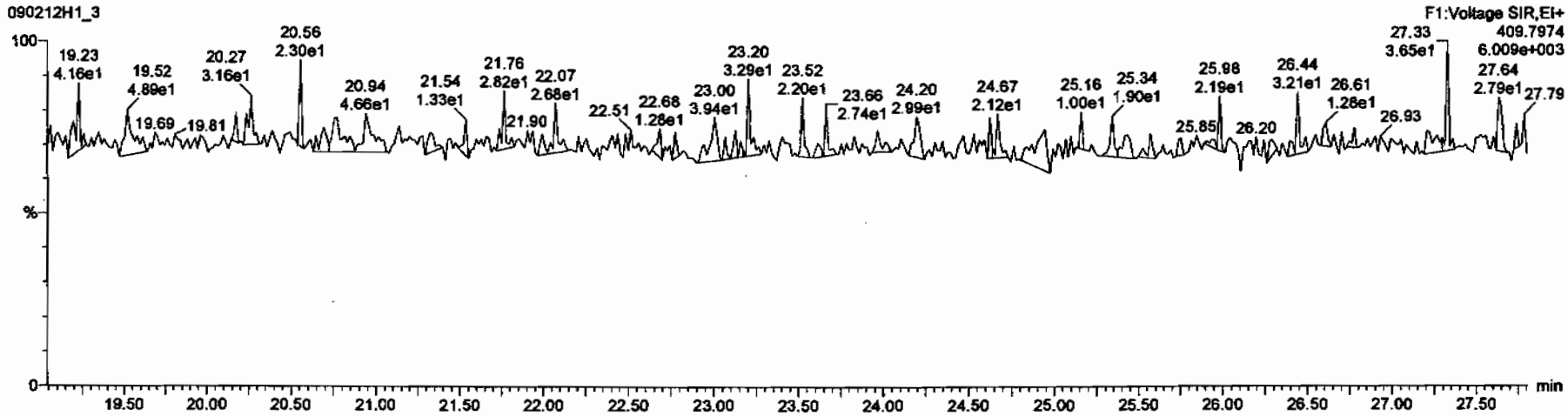

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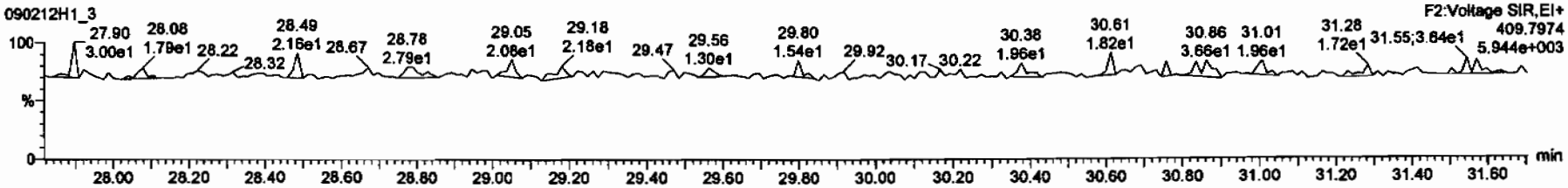

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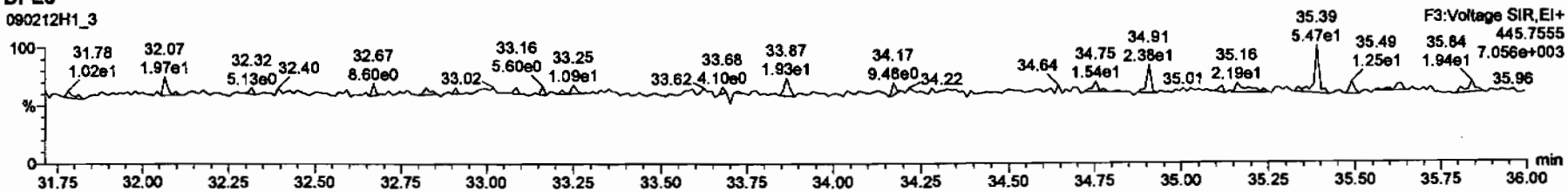

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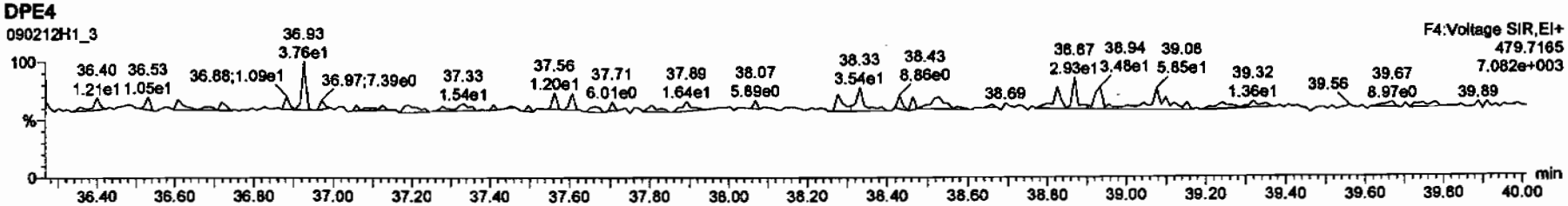

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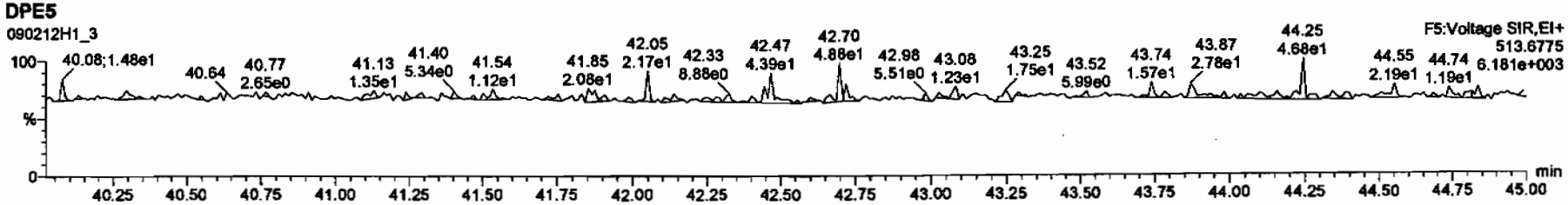

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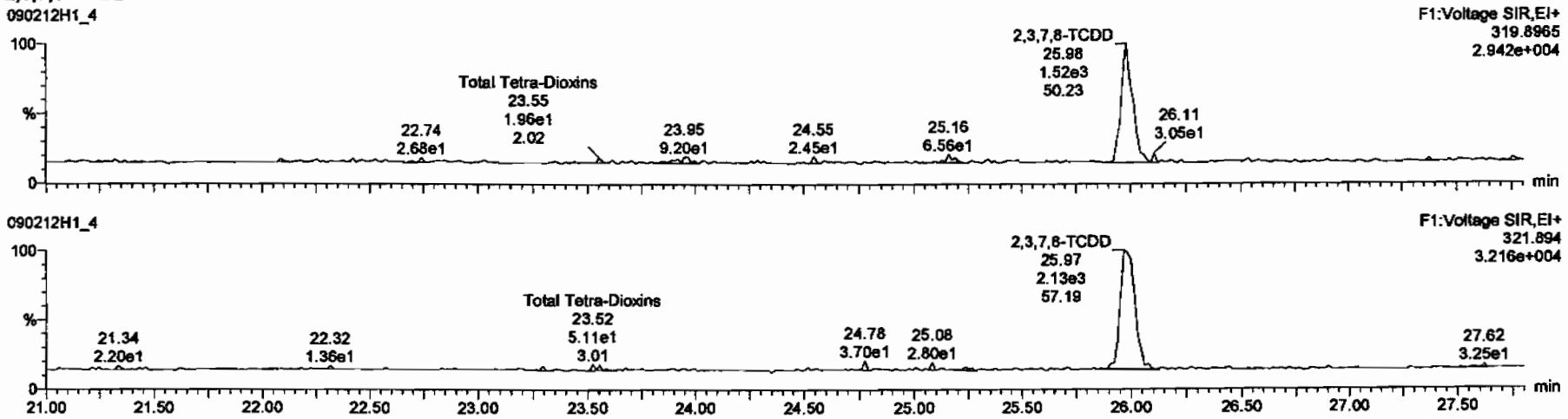

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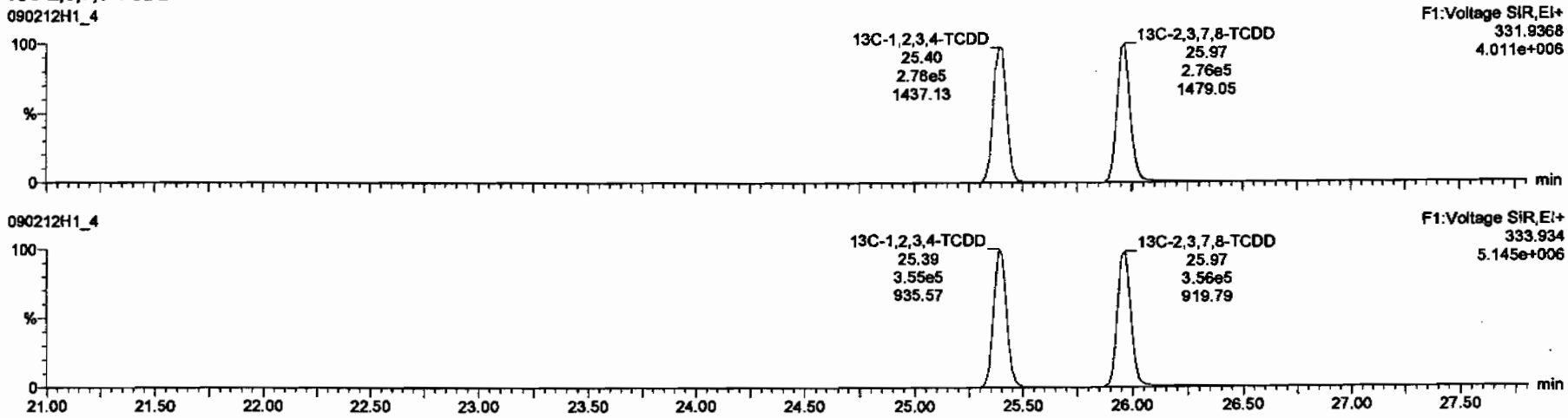

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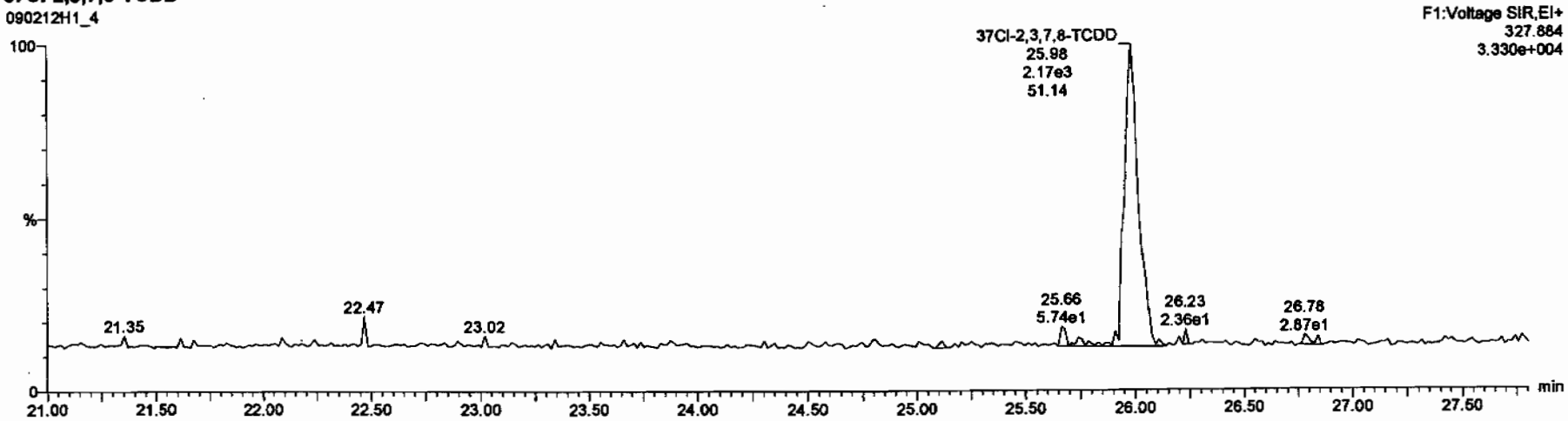

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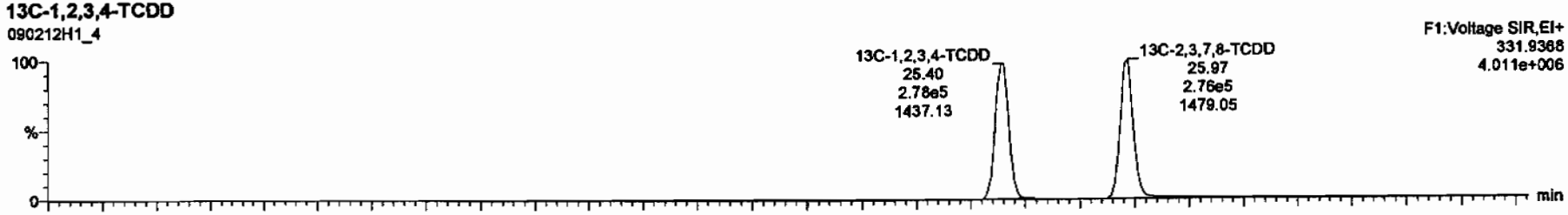

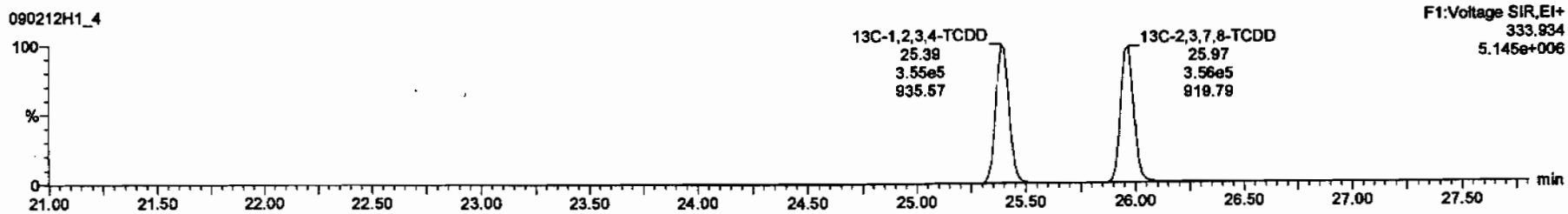

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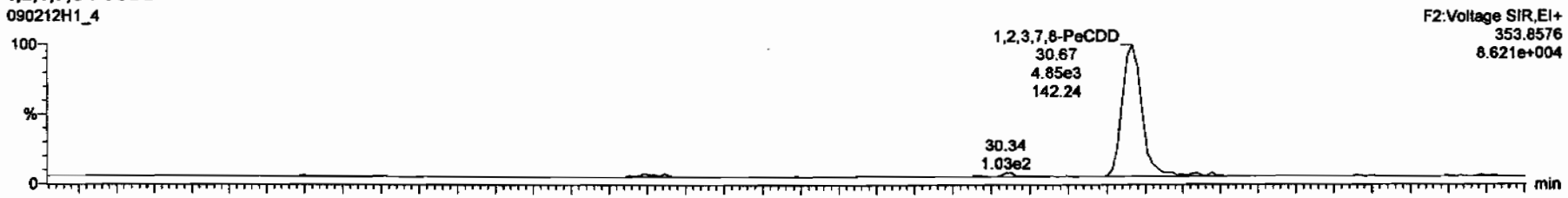

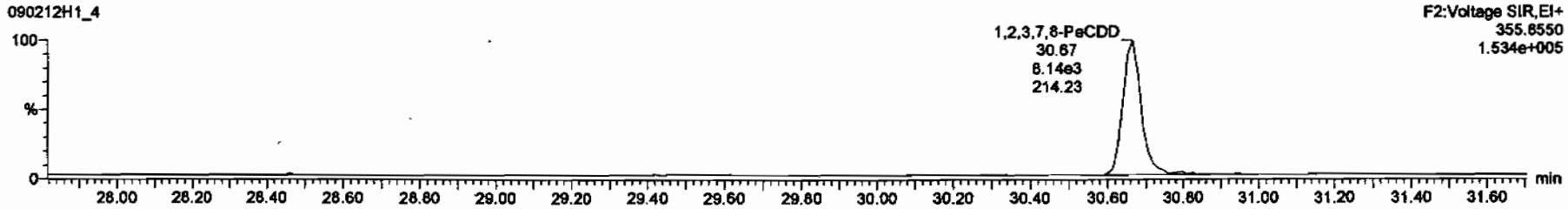

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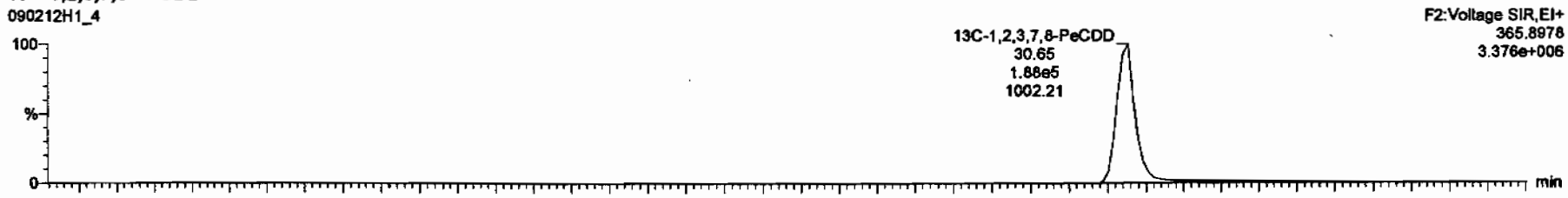

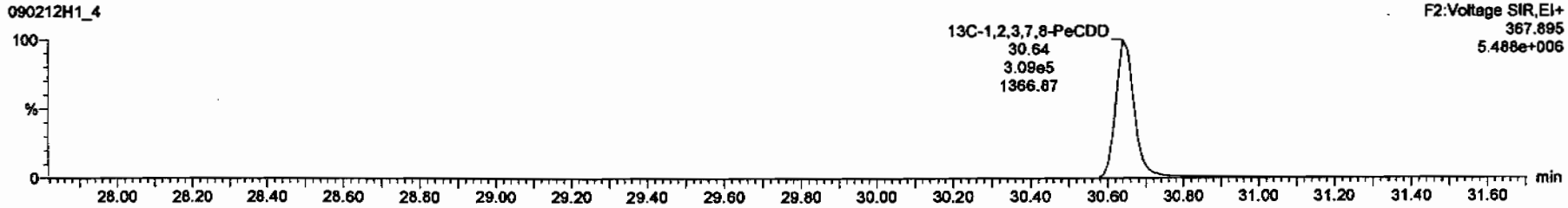

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1,2,3,4,7,8-HxCDD

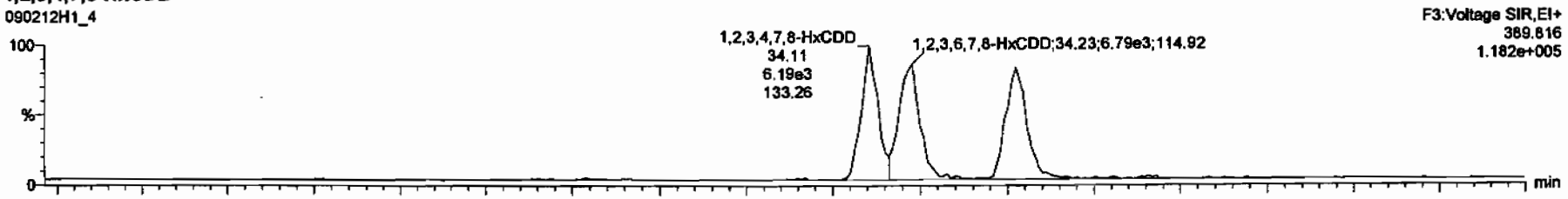

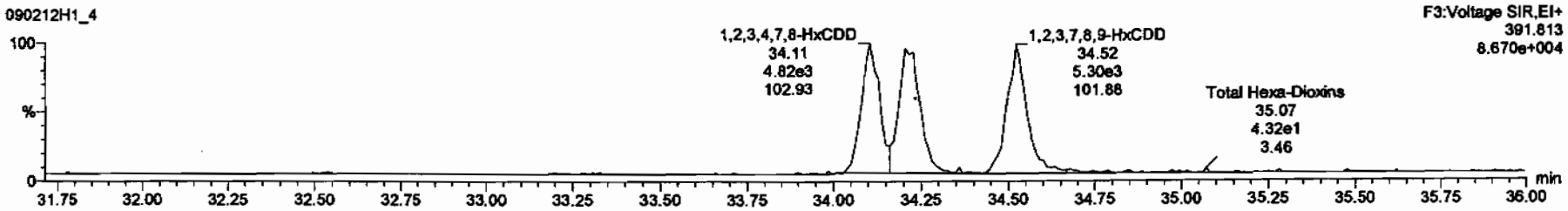

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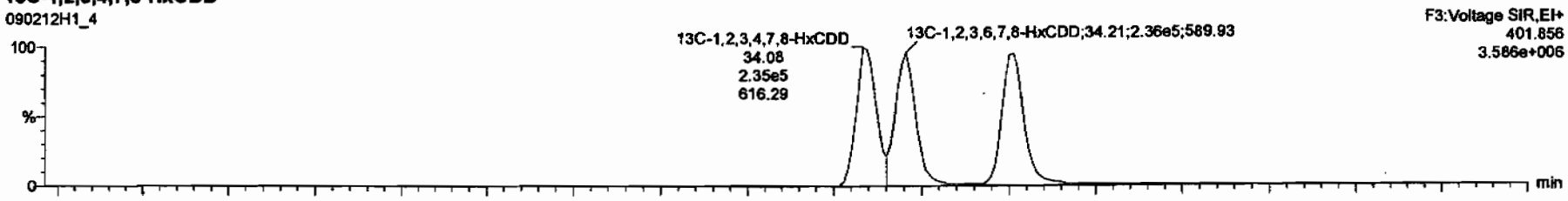

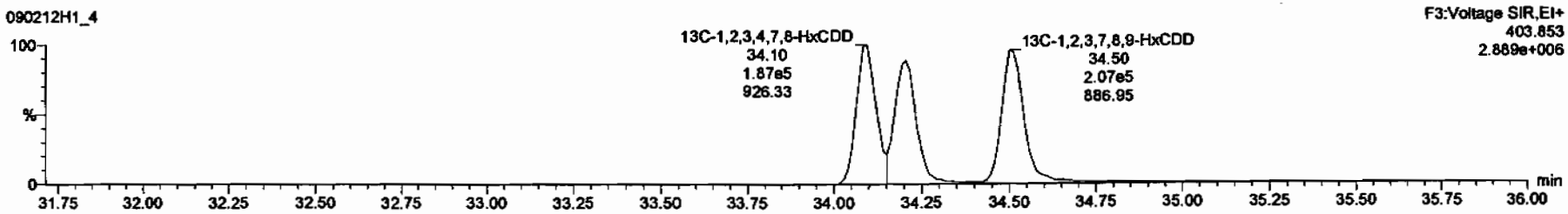

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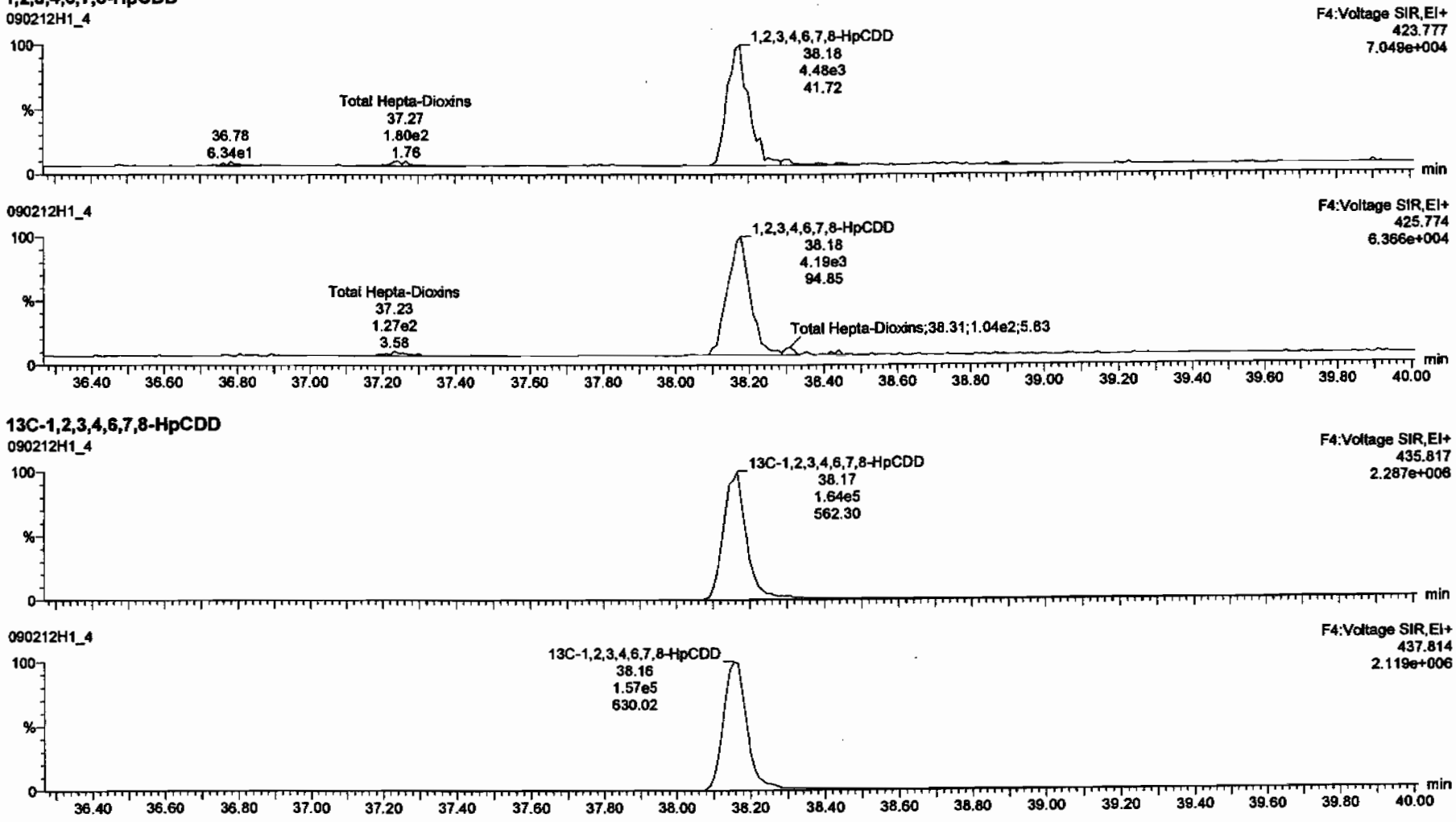

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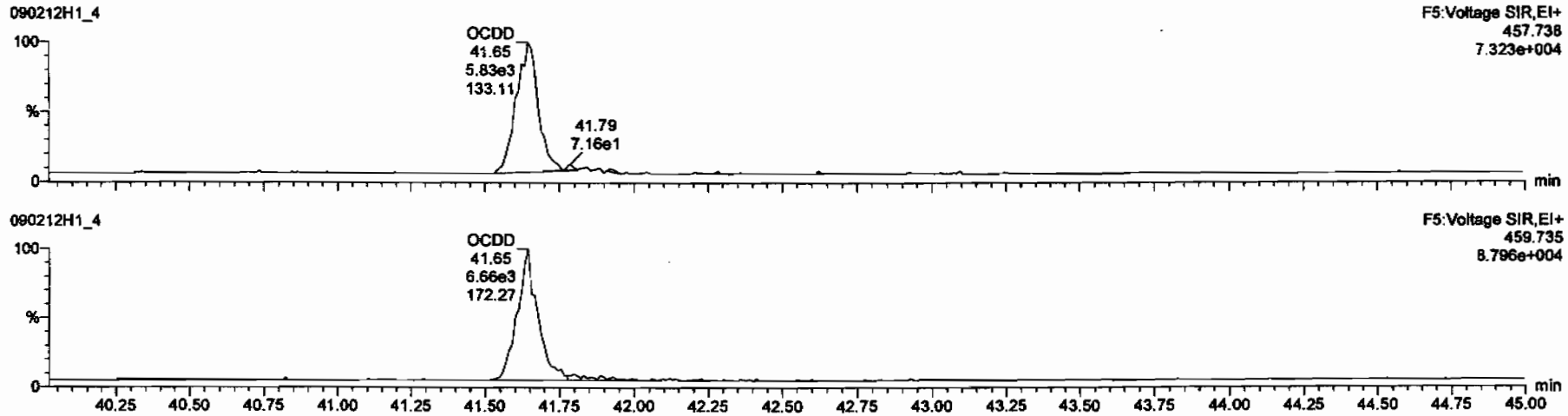

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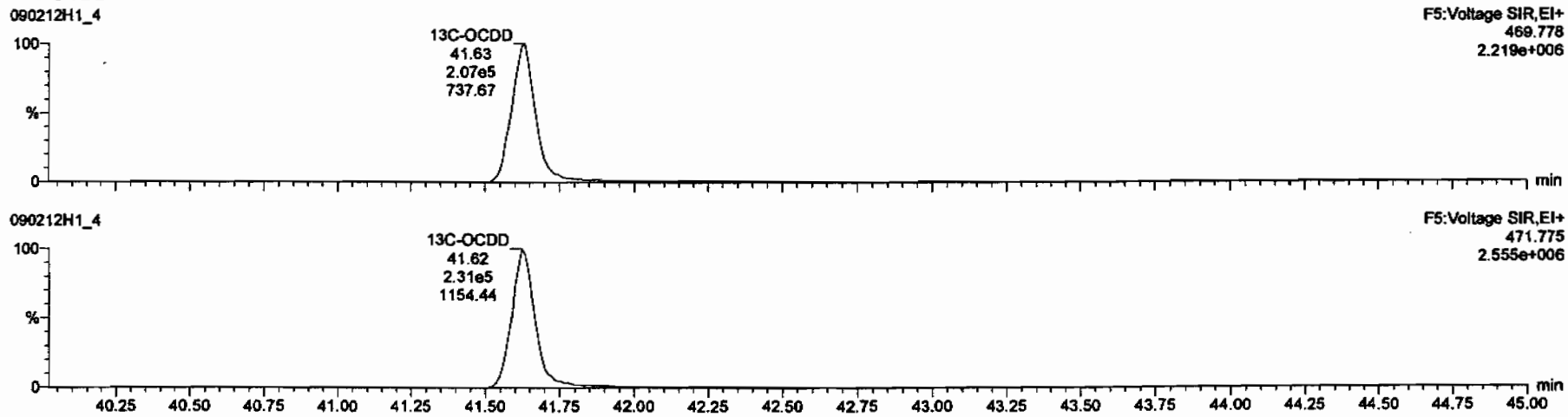

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2,3,7,8-TCDF

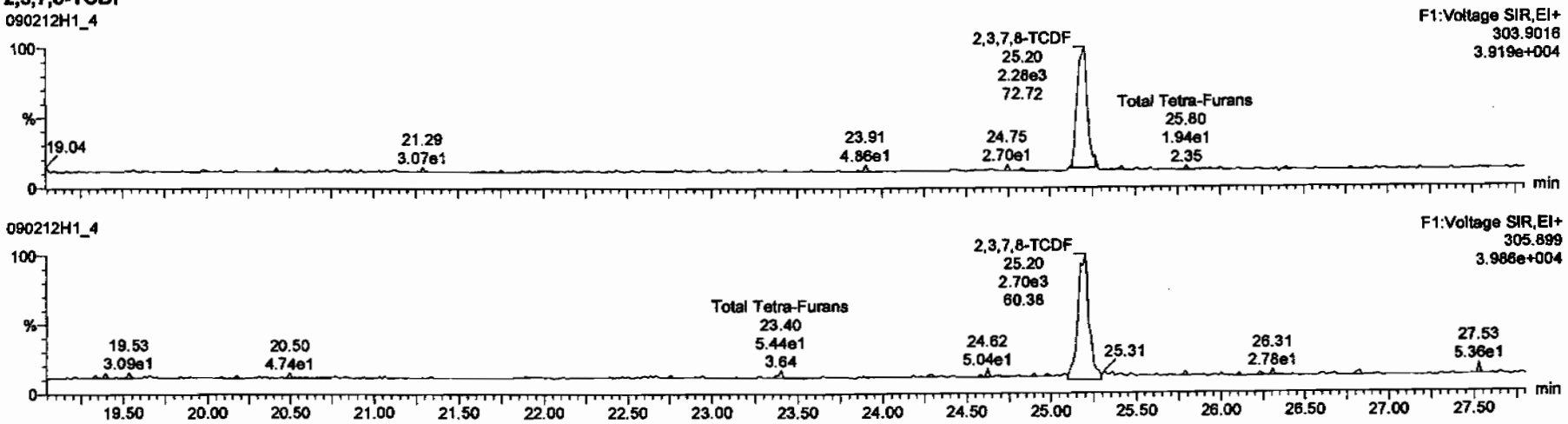

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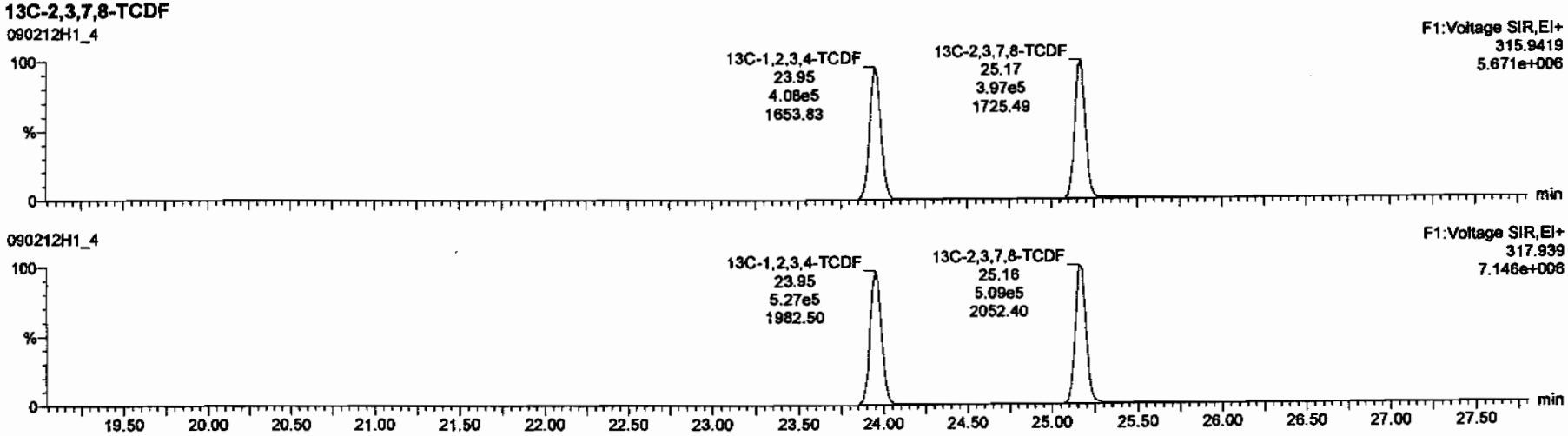

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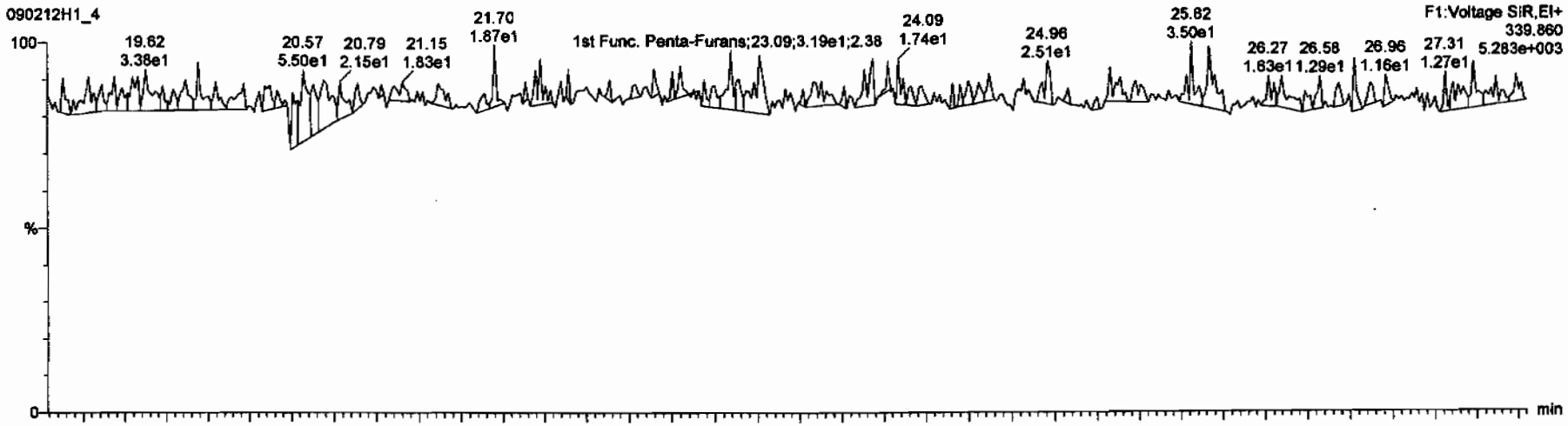

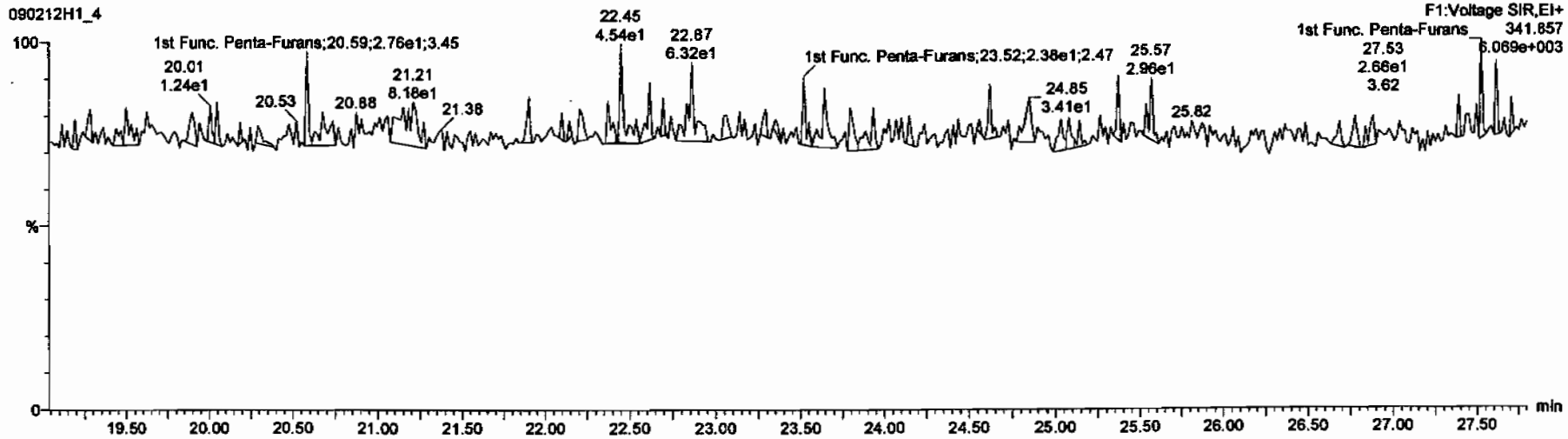

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1,2,3,7,8-PeCDF

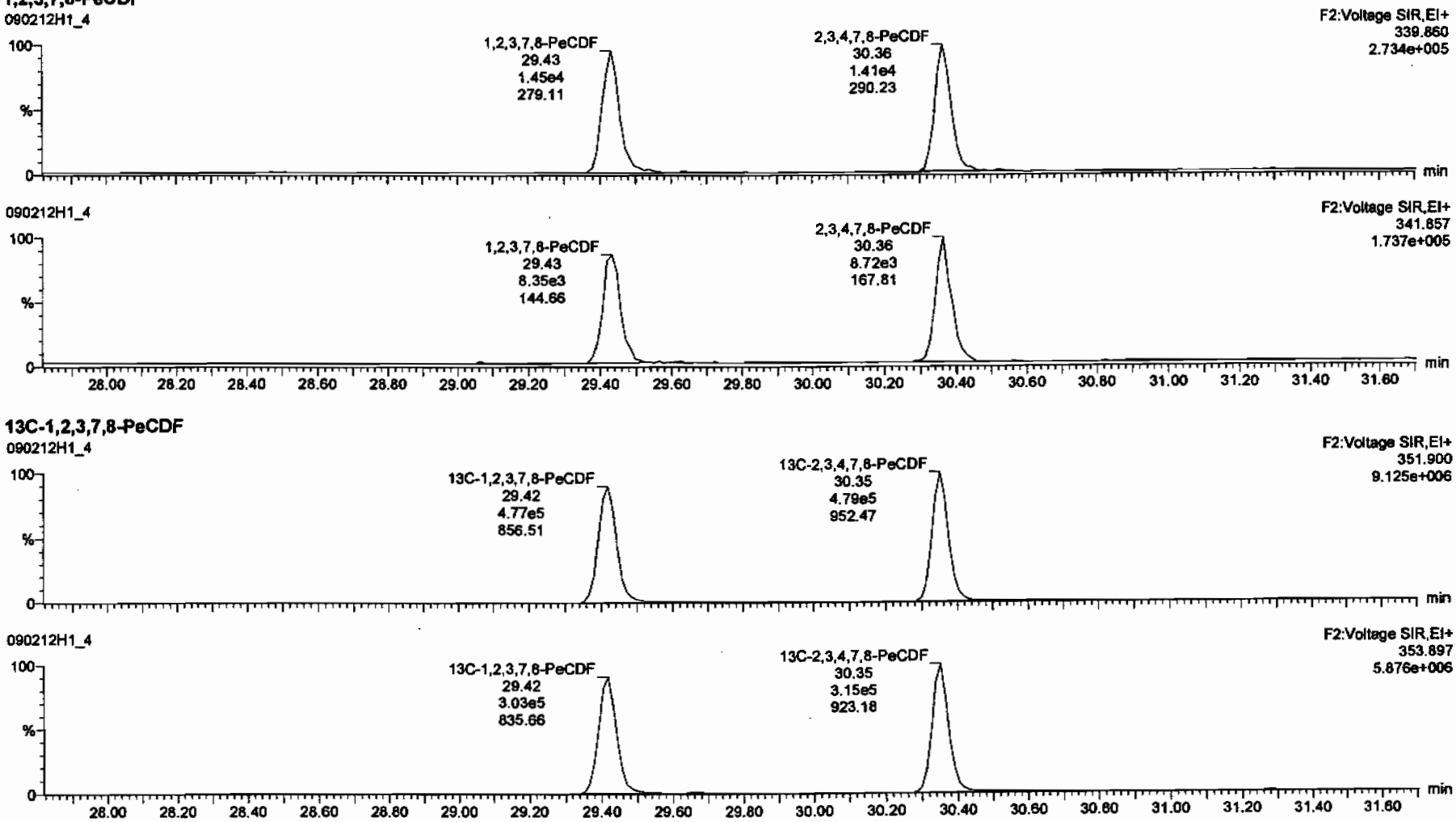

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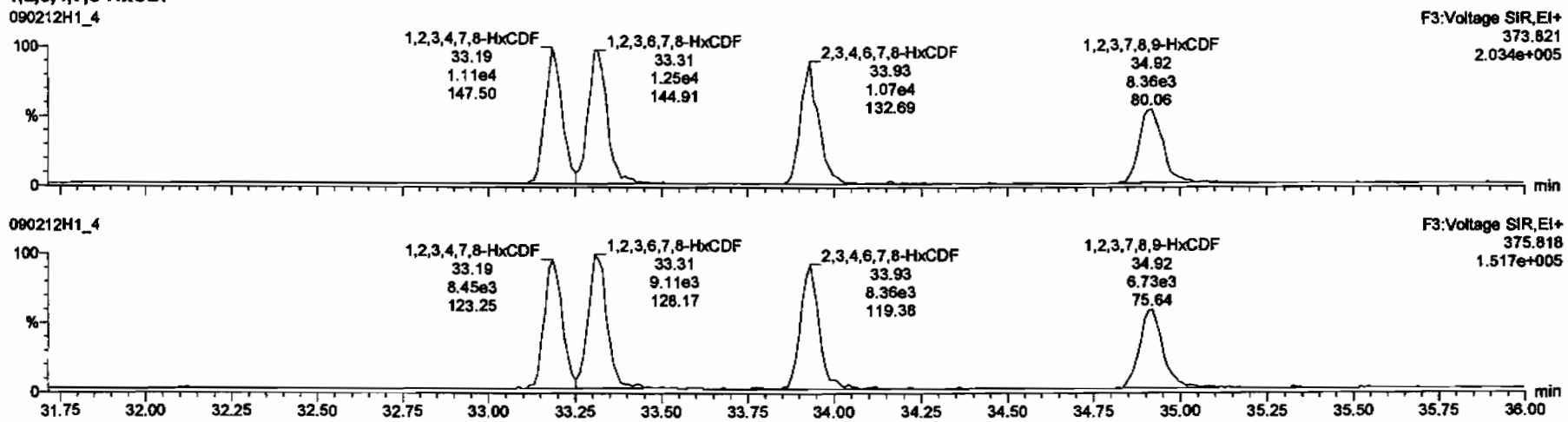

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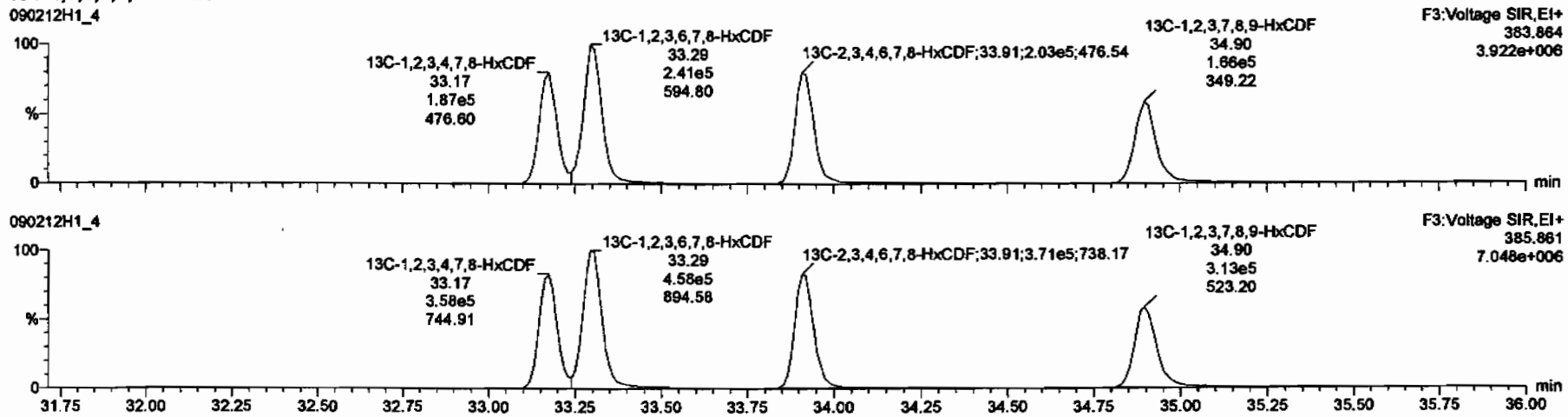

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_4, Date: 12-Feb-2009, Time: 13:38:34, ID: ST090212H1-3 1613 CS1 080917CG, Description: 1613 CS1 080917G

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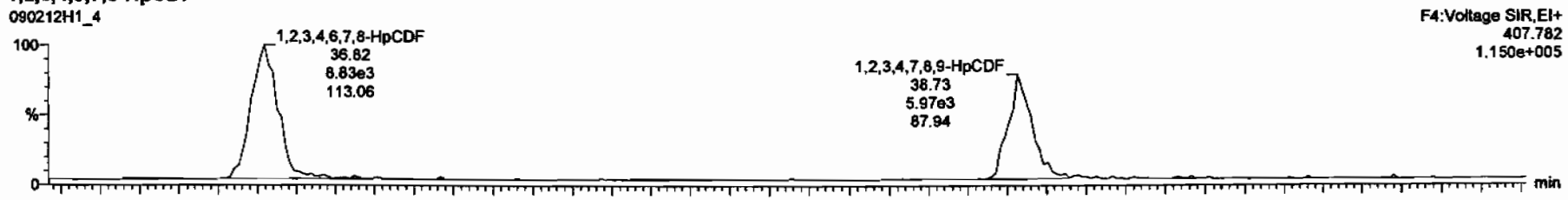

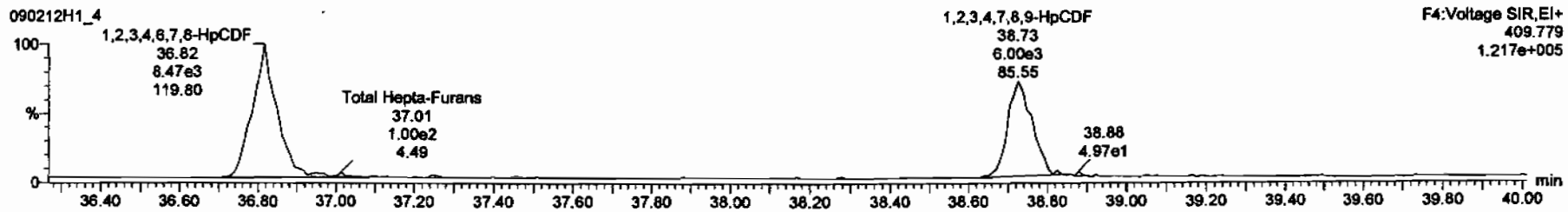

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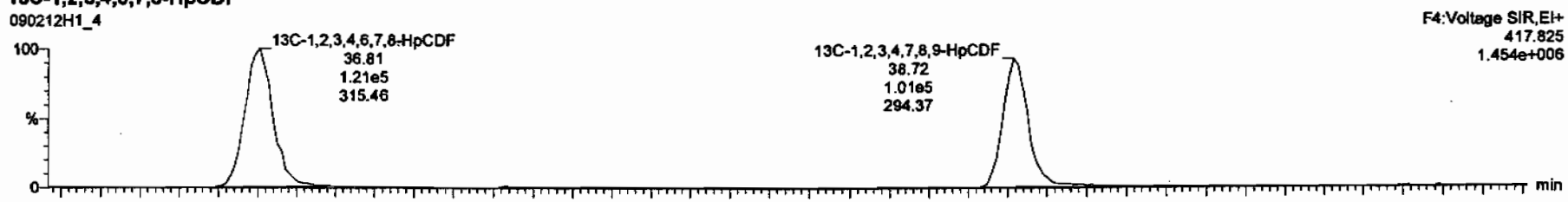

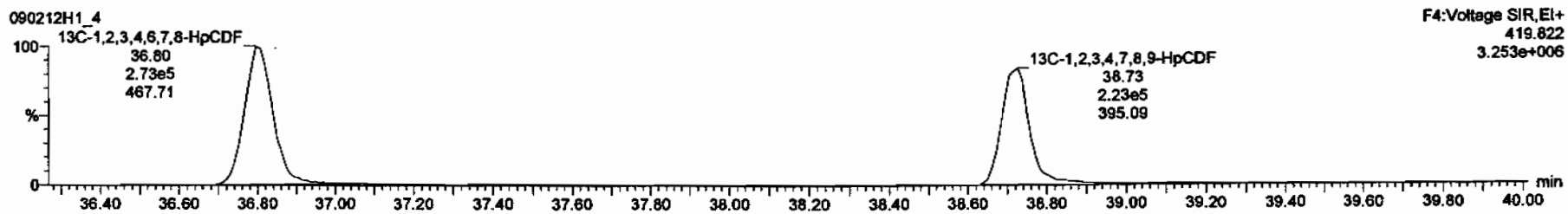

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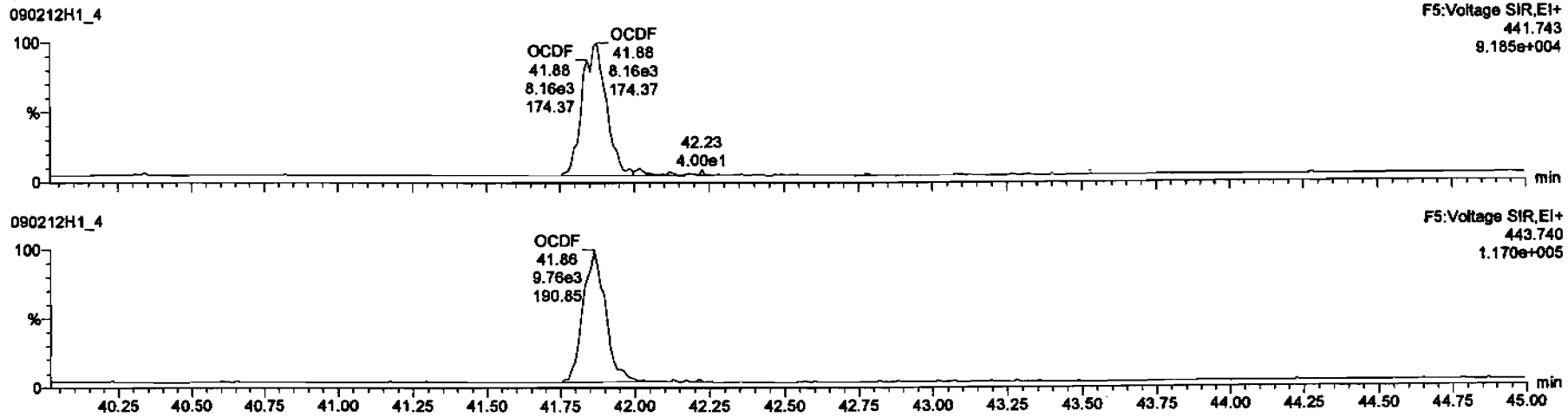

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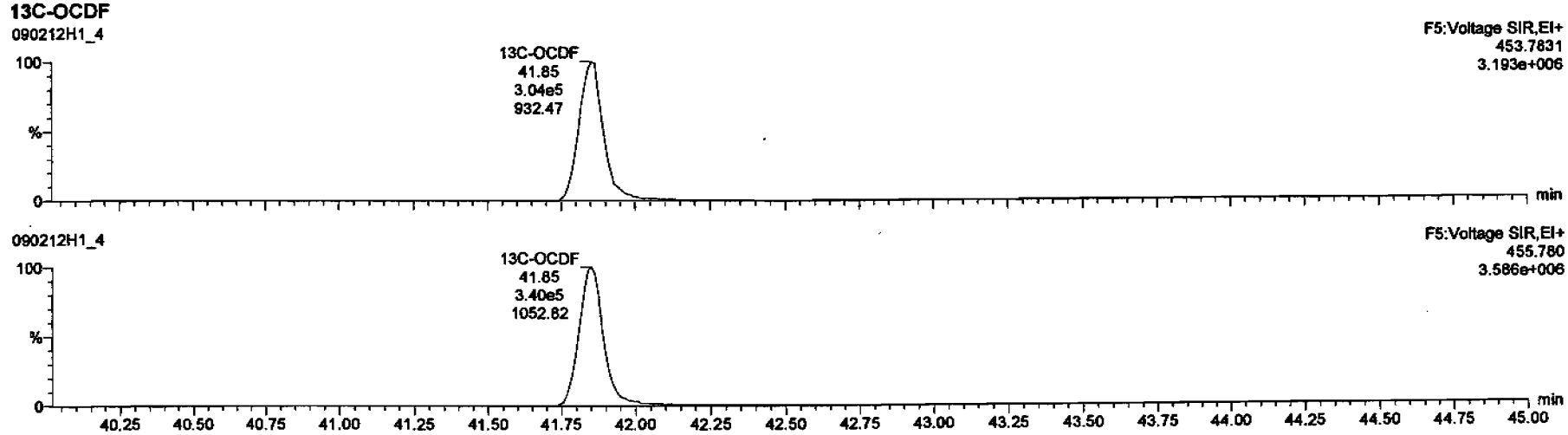

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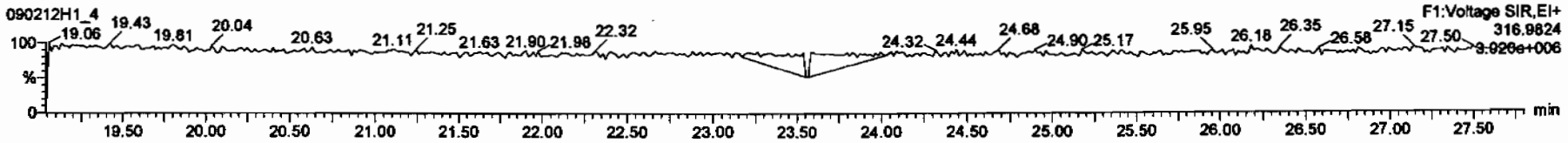

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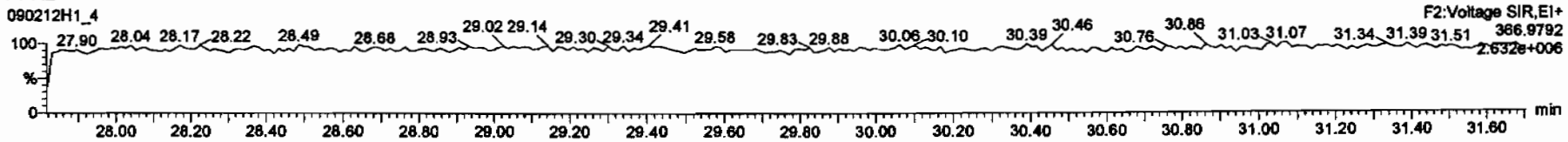

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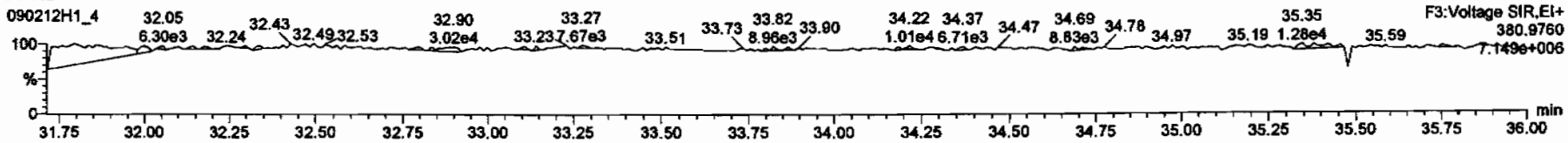

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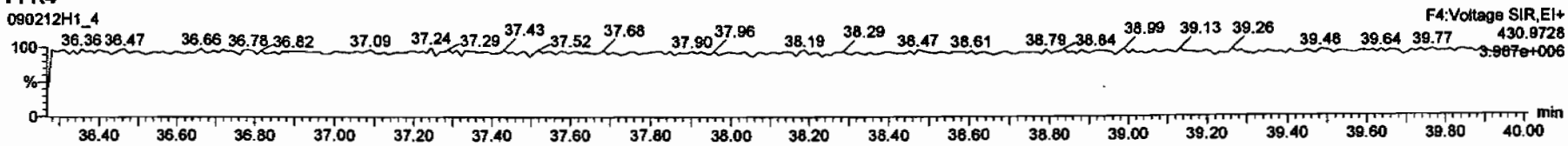

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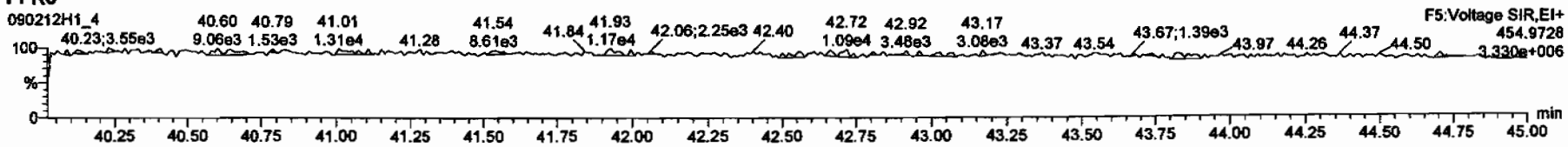

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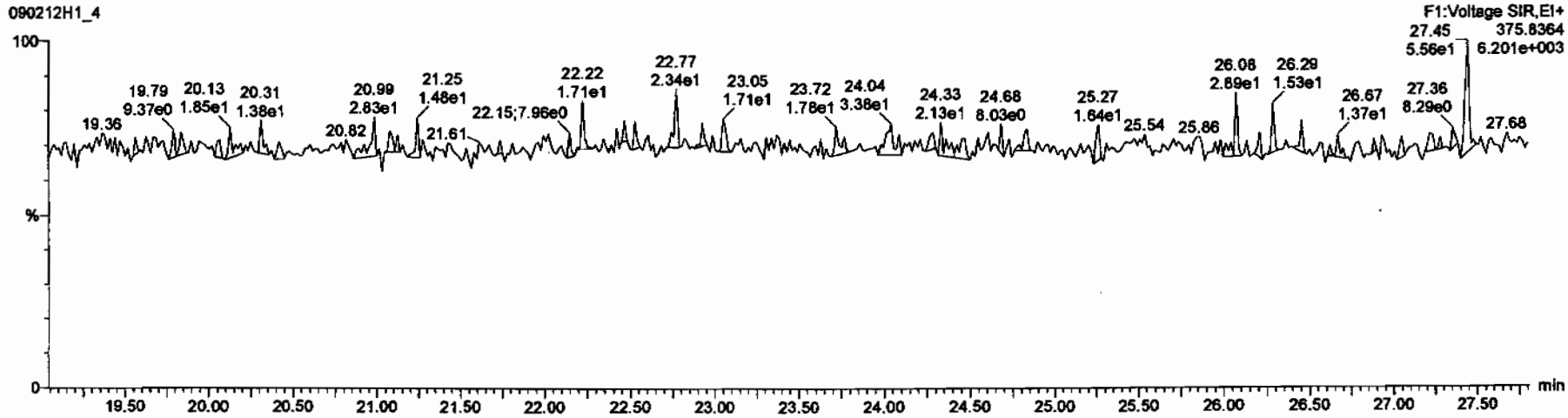

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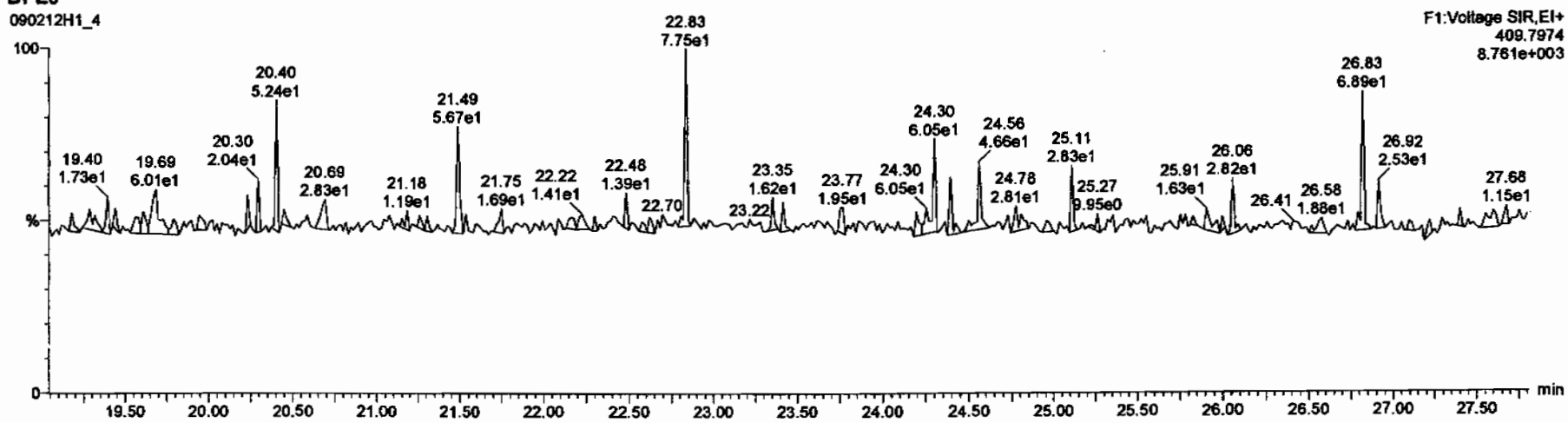

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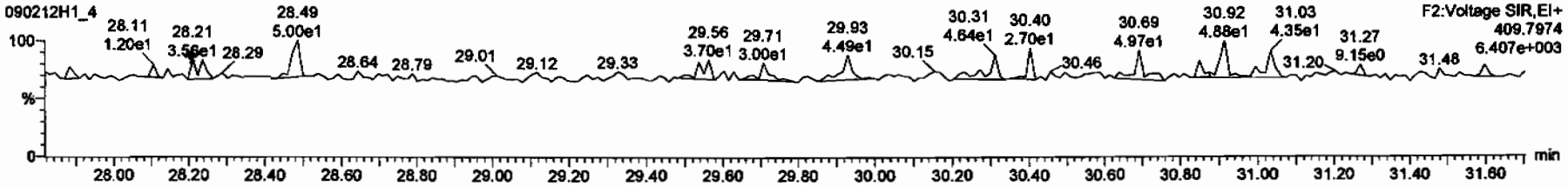

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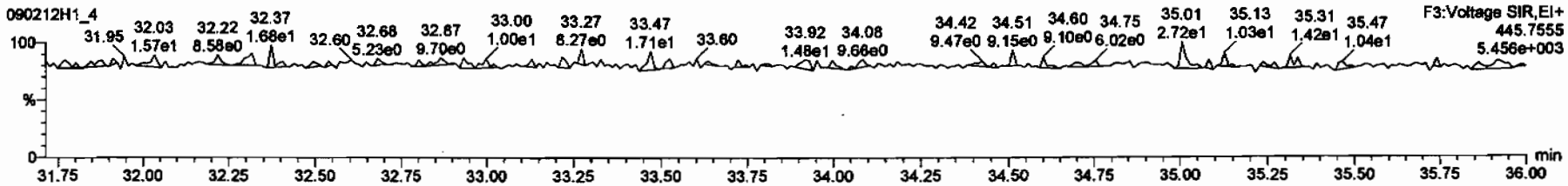

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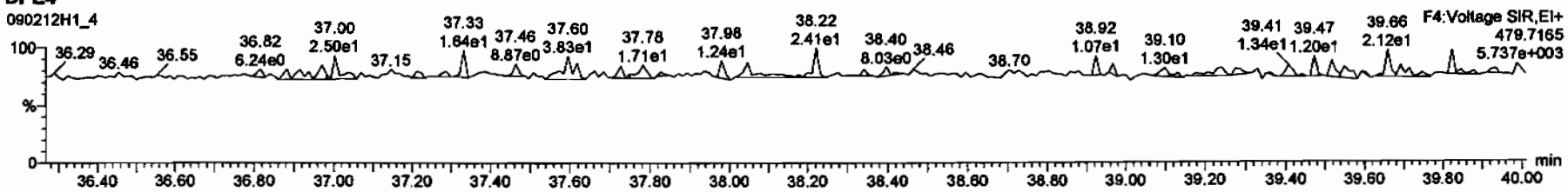

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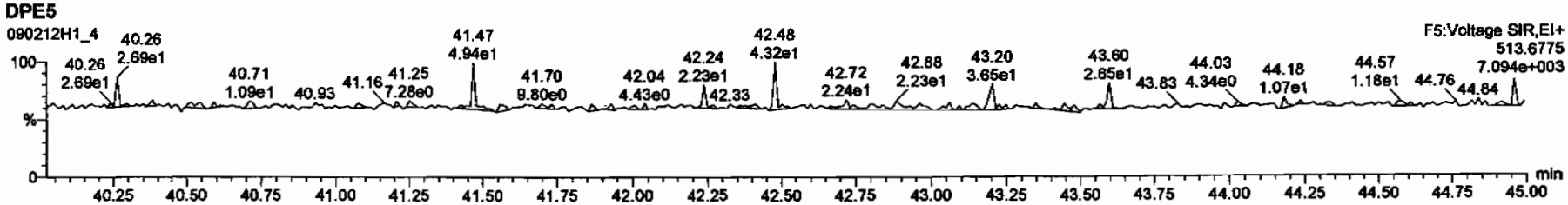

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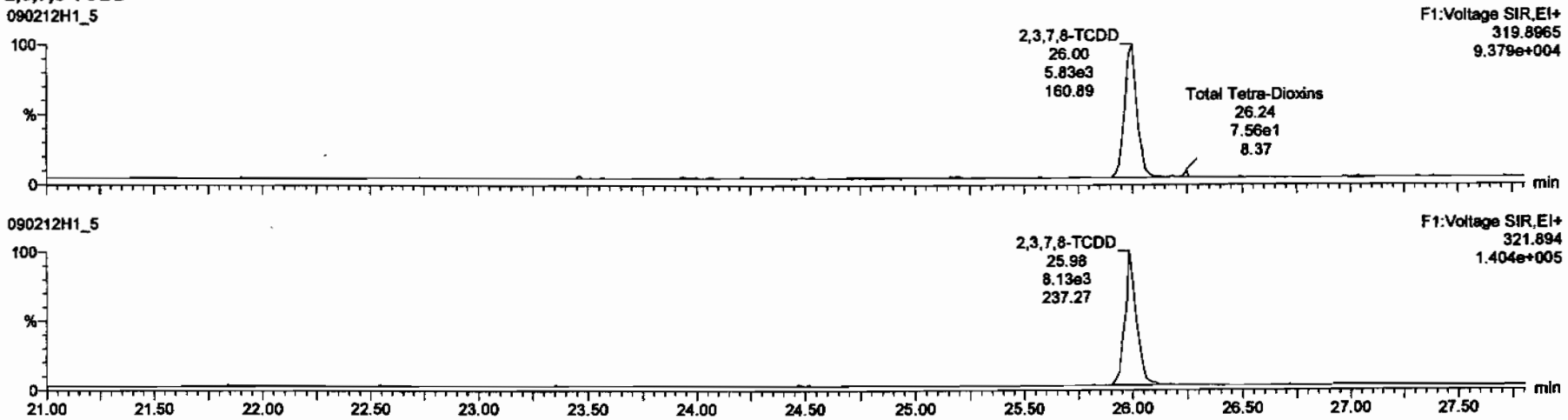

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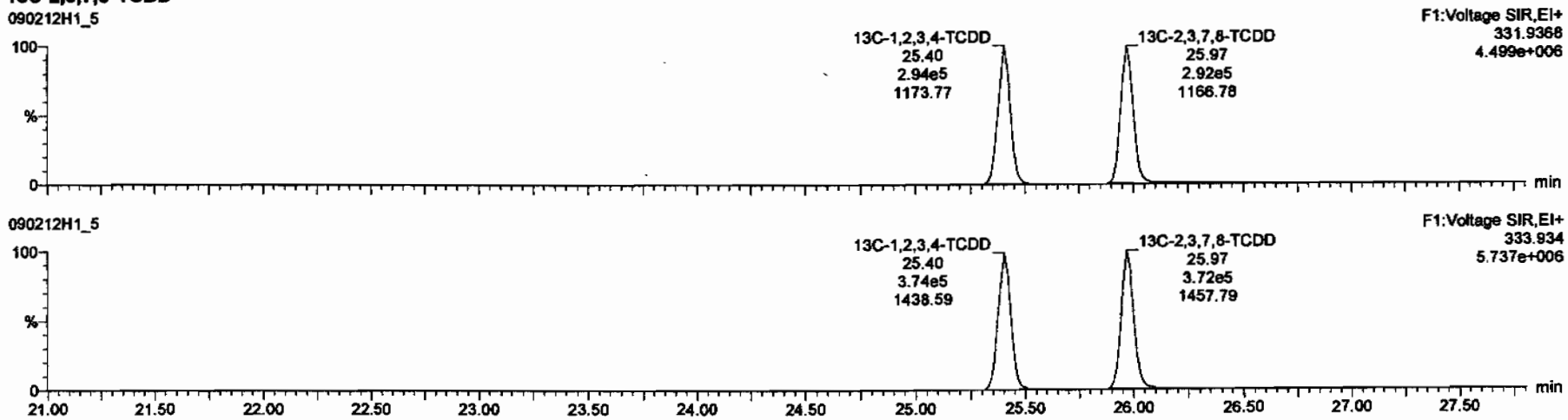

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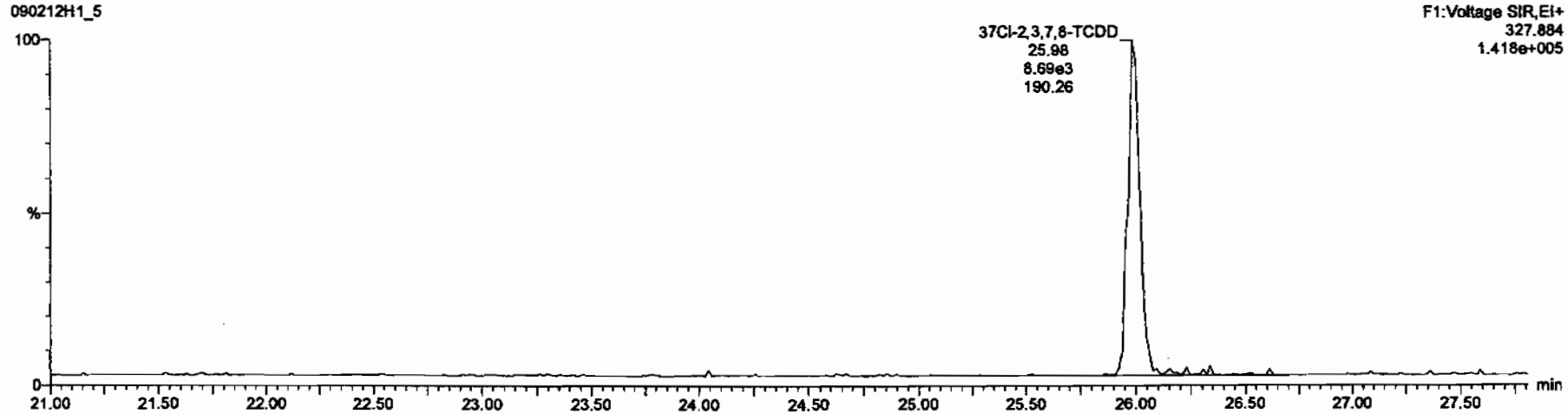

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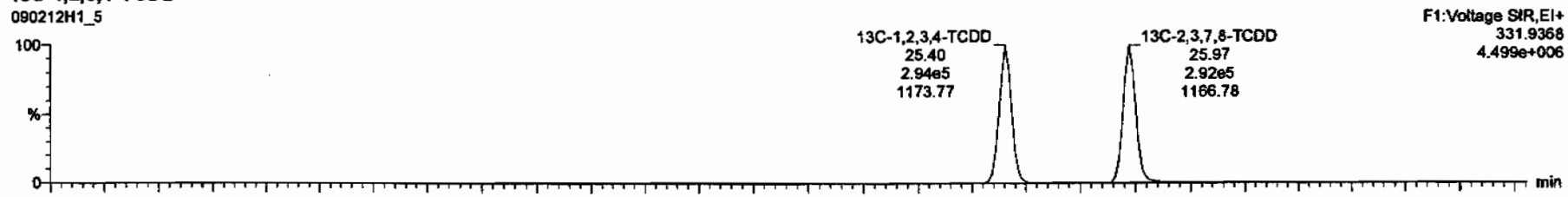

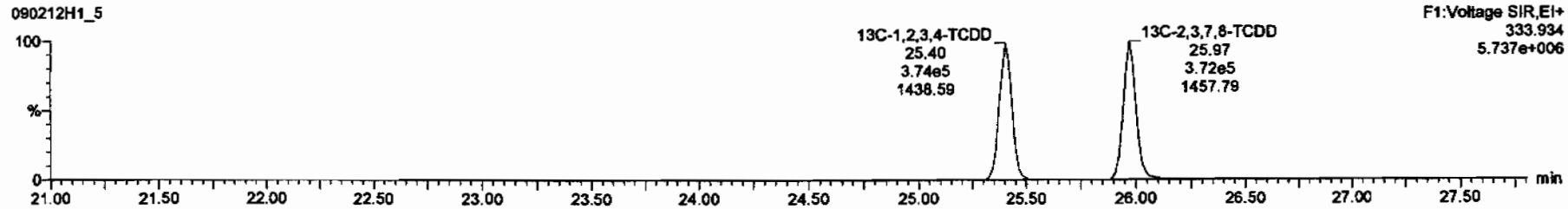

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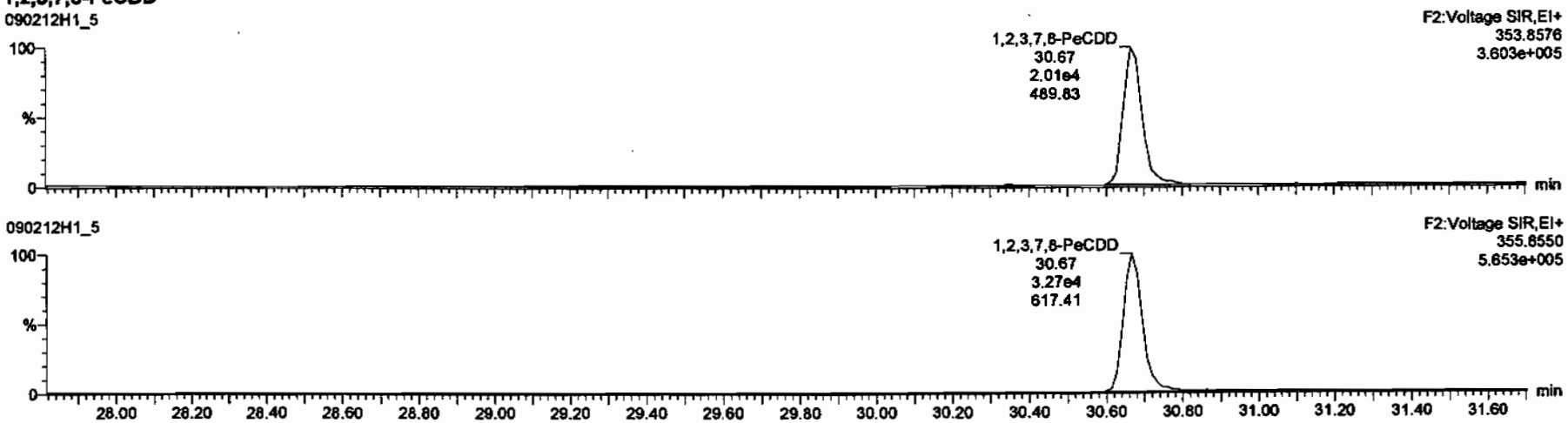

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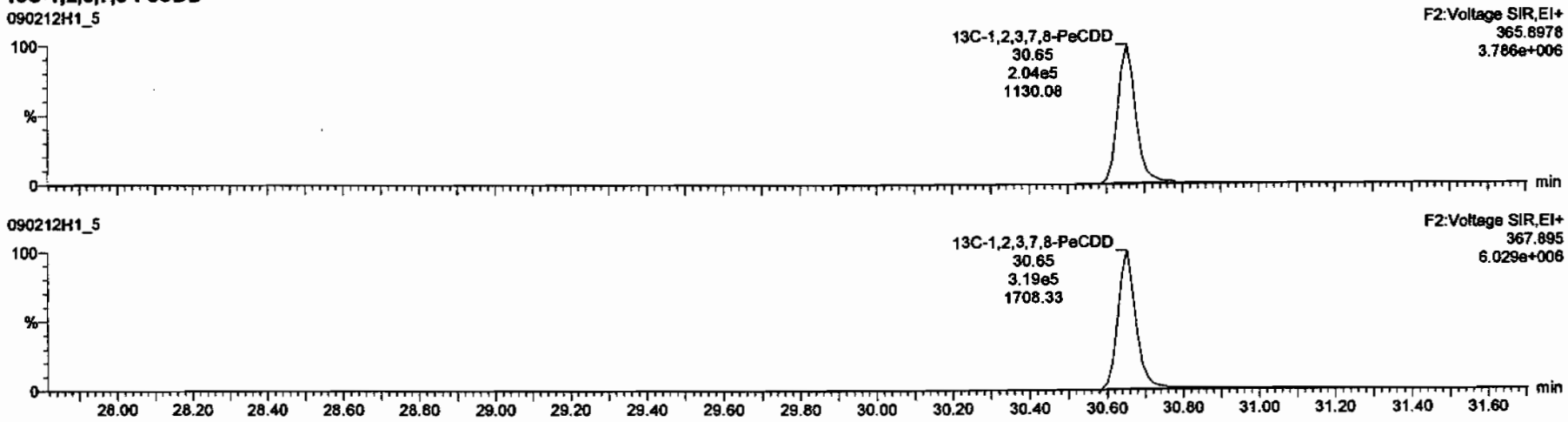

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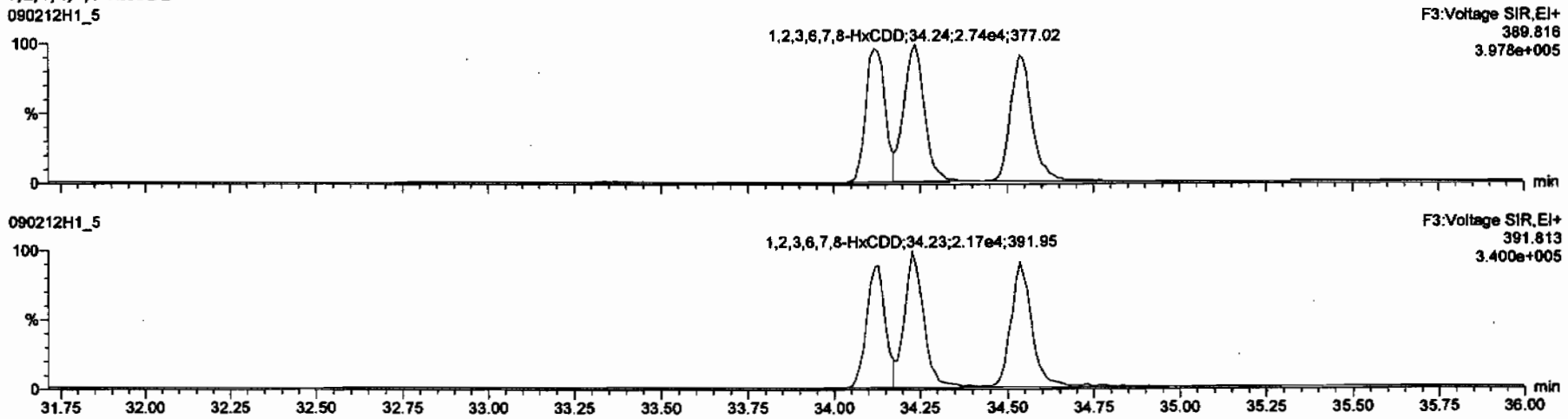

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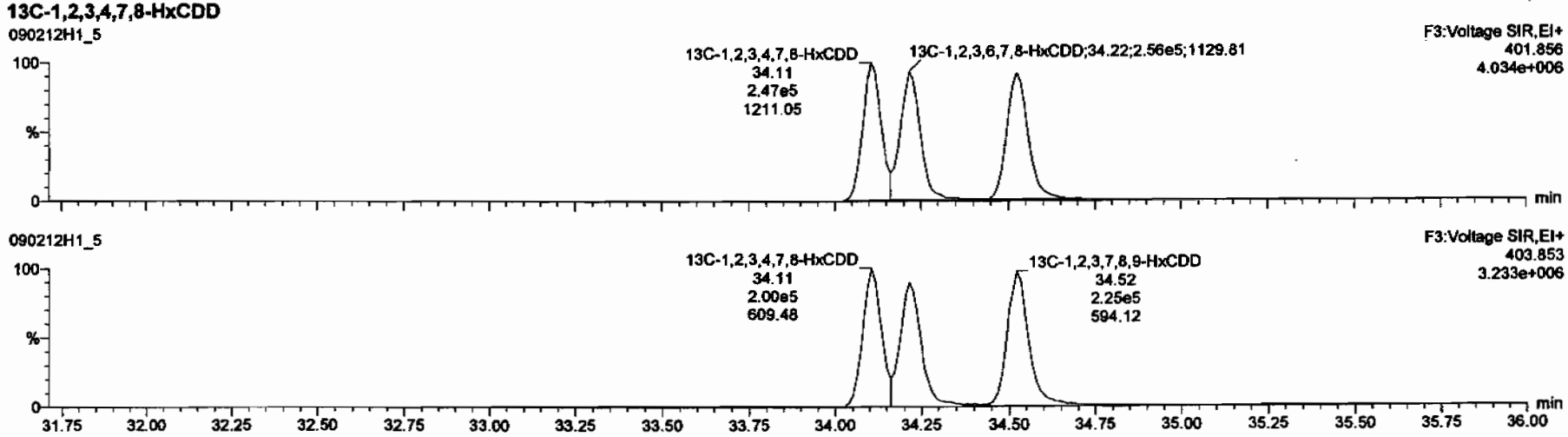

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1,2,3,4,6,7,8-HpCDD

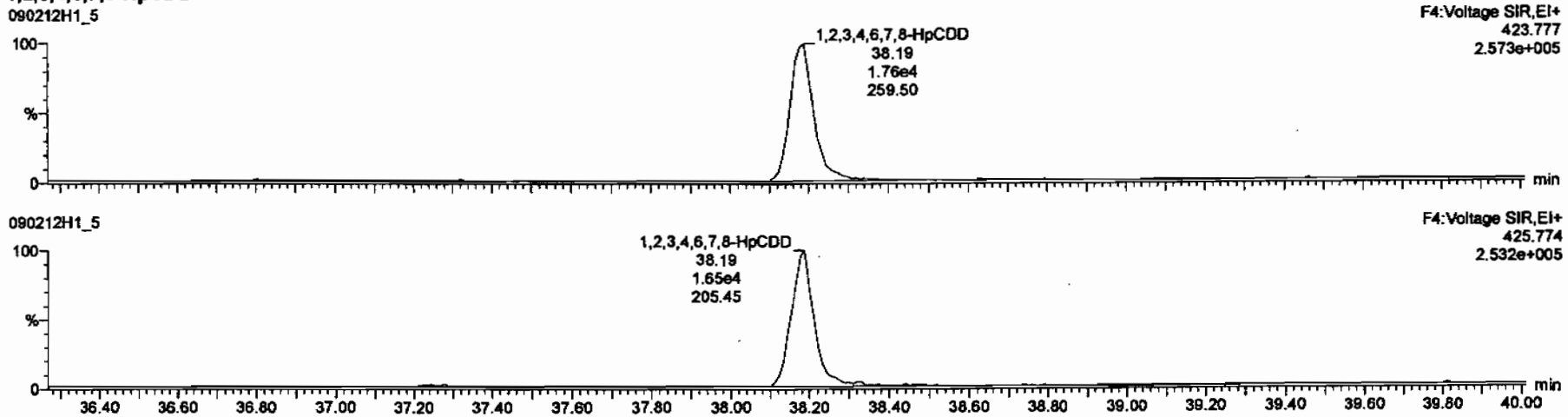

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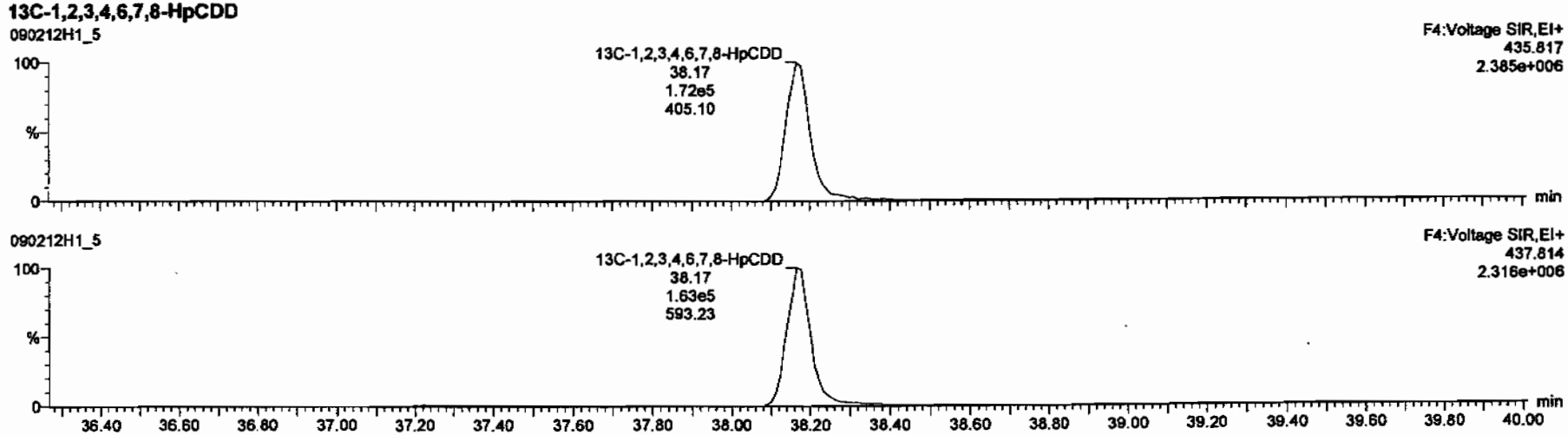

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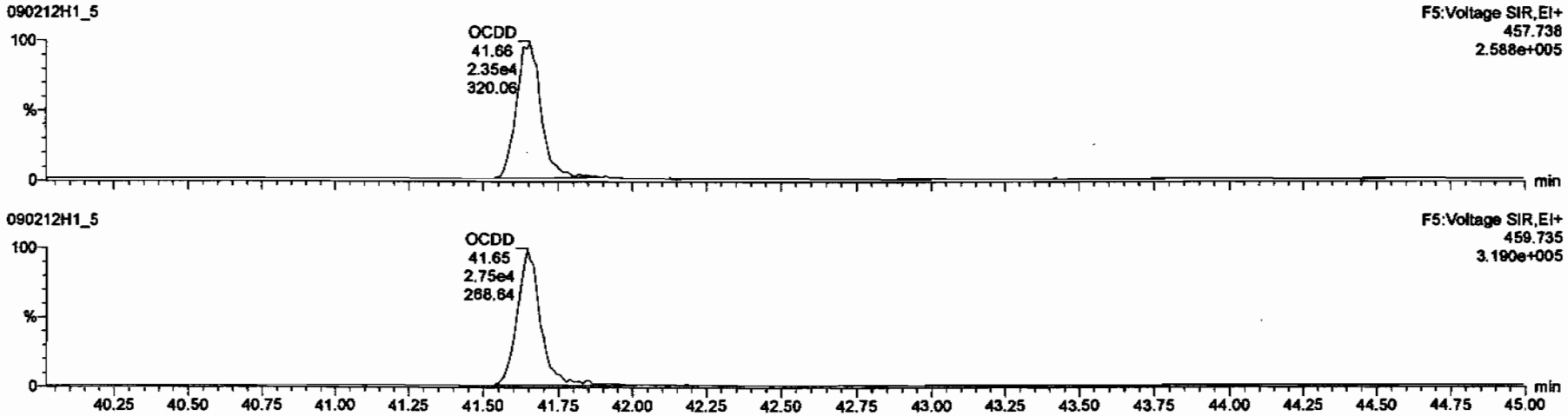

13C-OCDD

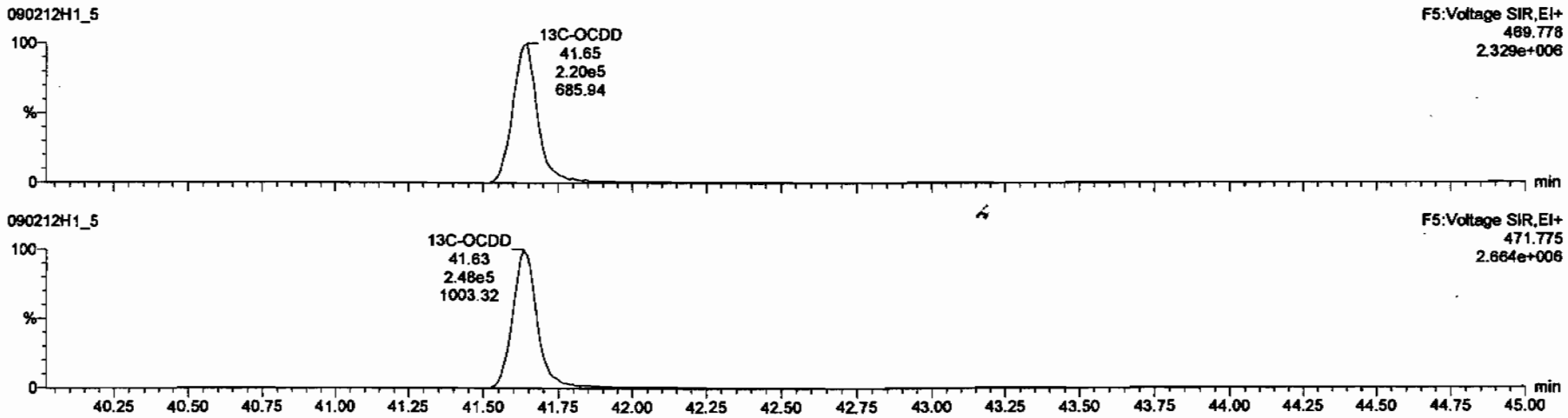

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2,3,7,8-TCDF

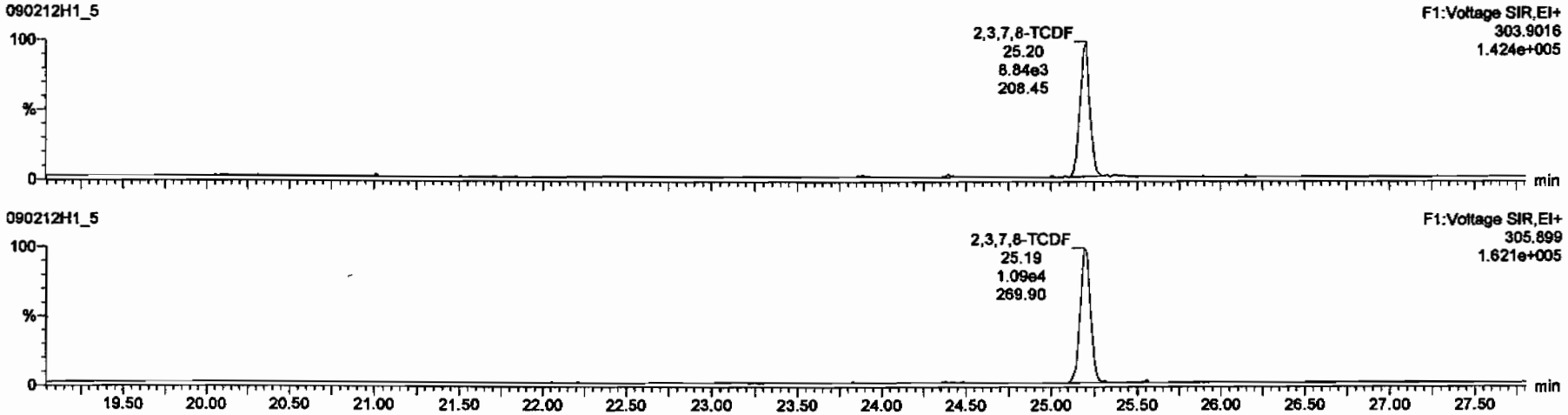

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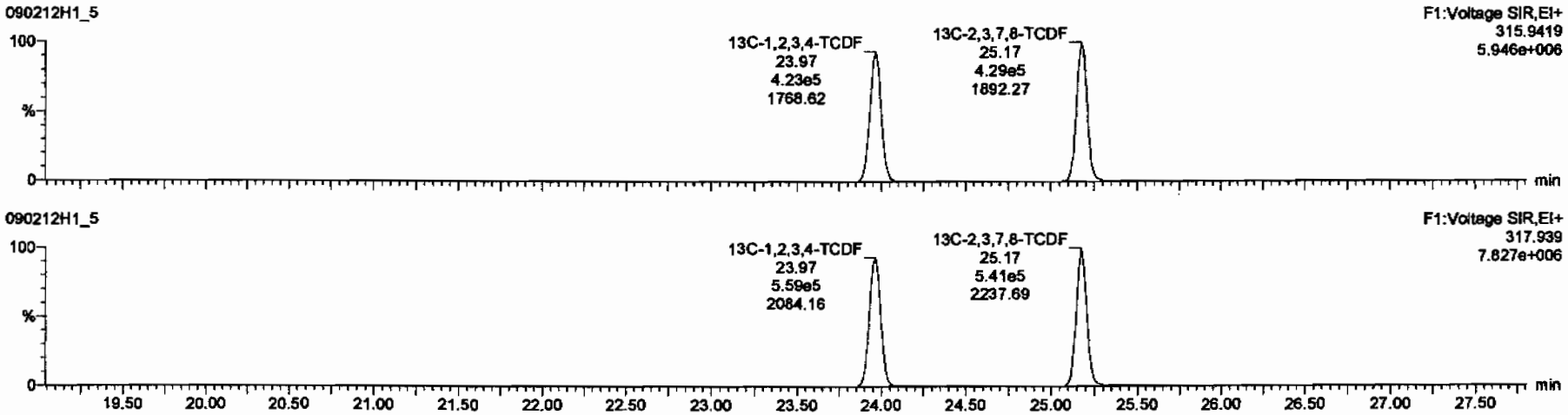

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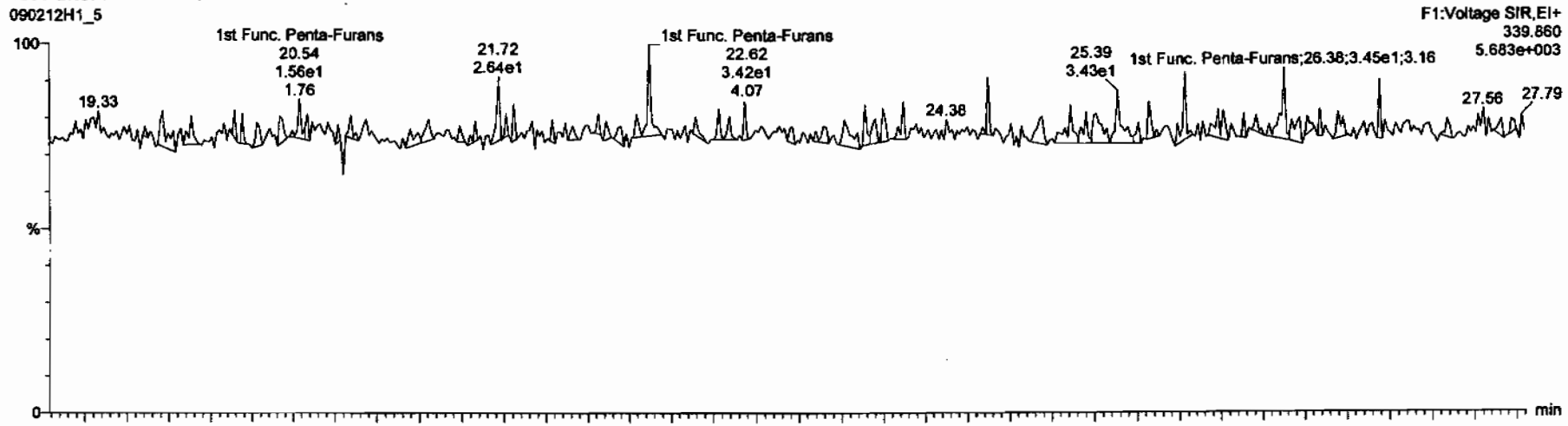

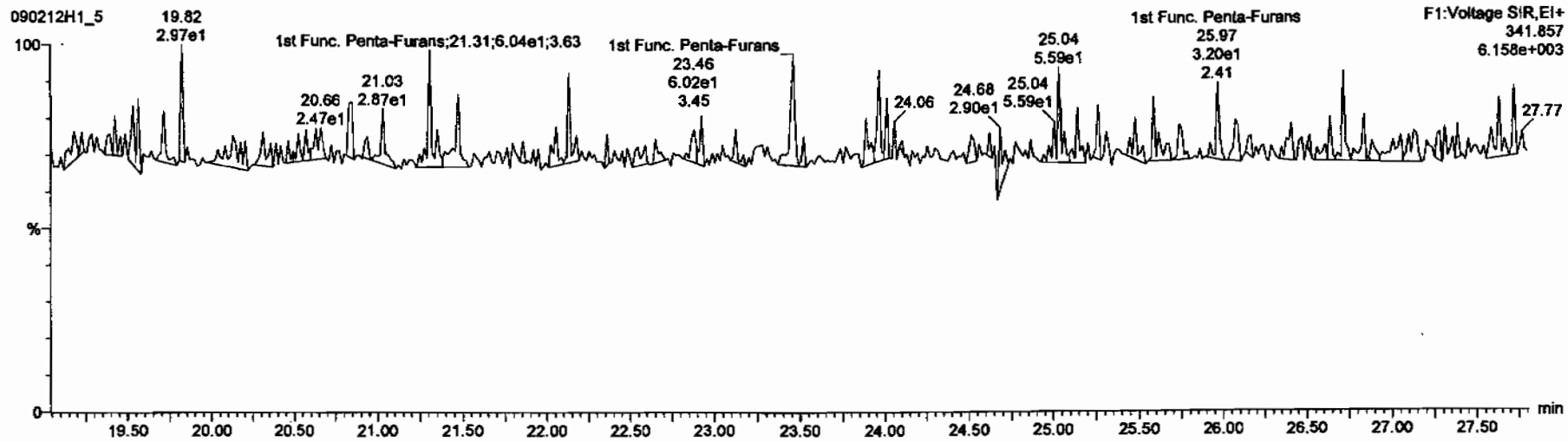

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1,2,3,7,8-PeCDF

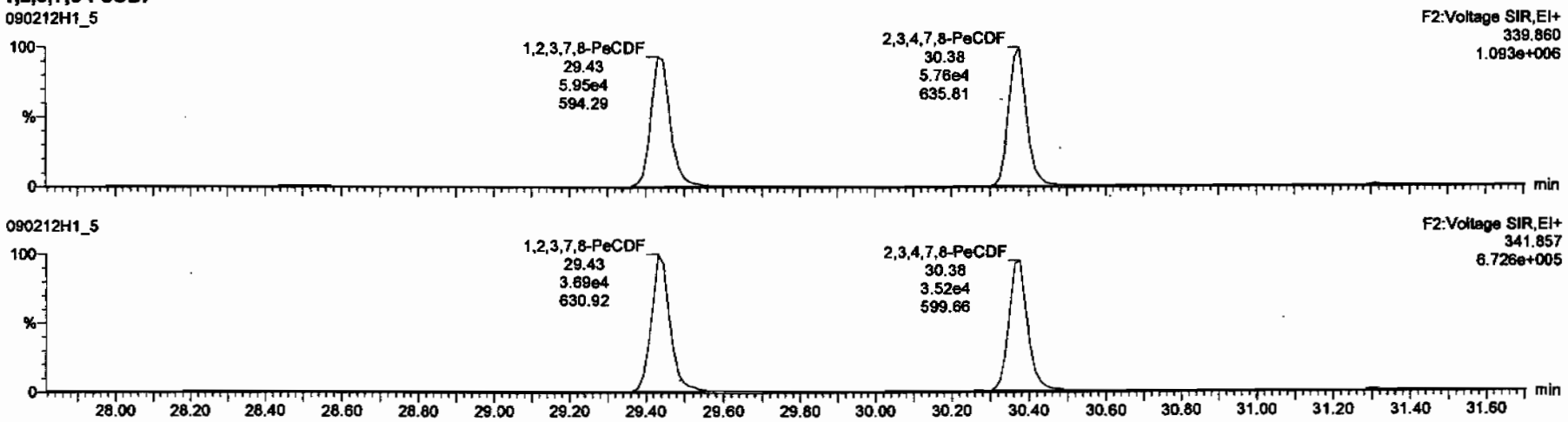

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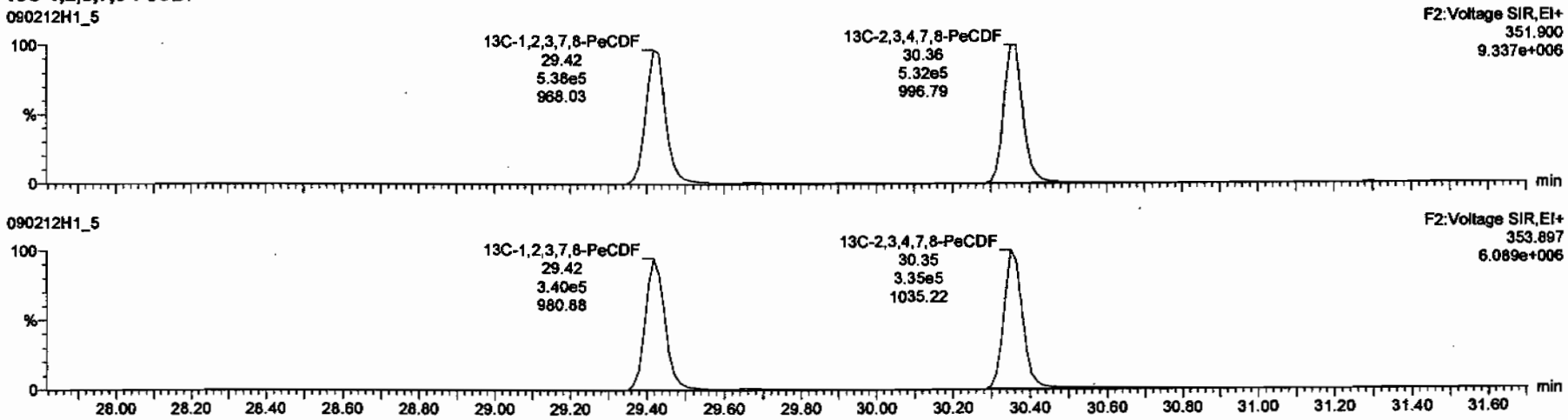

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1,2,3,4,7,8-HxCDF

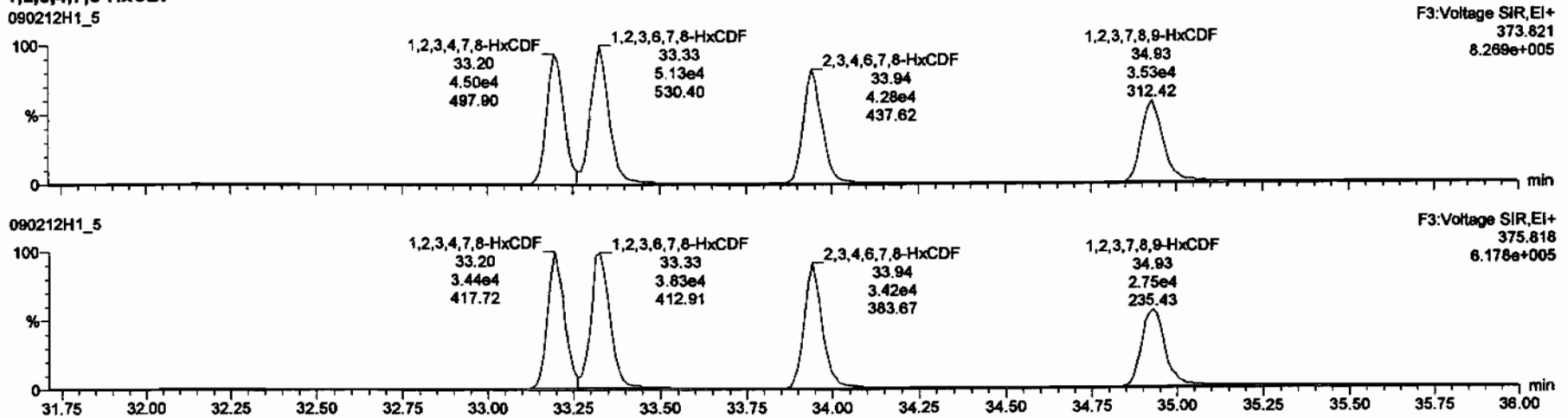

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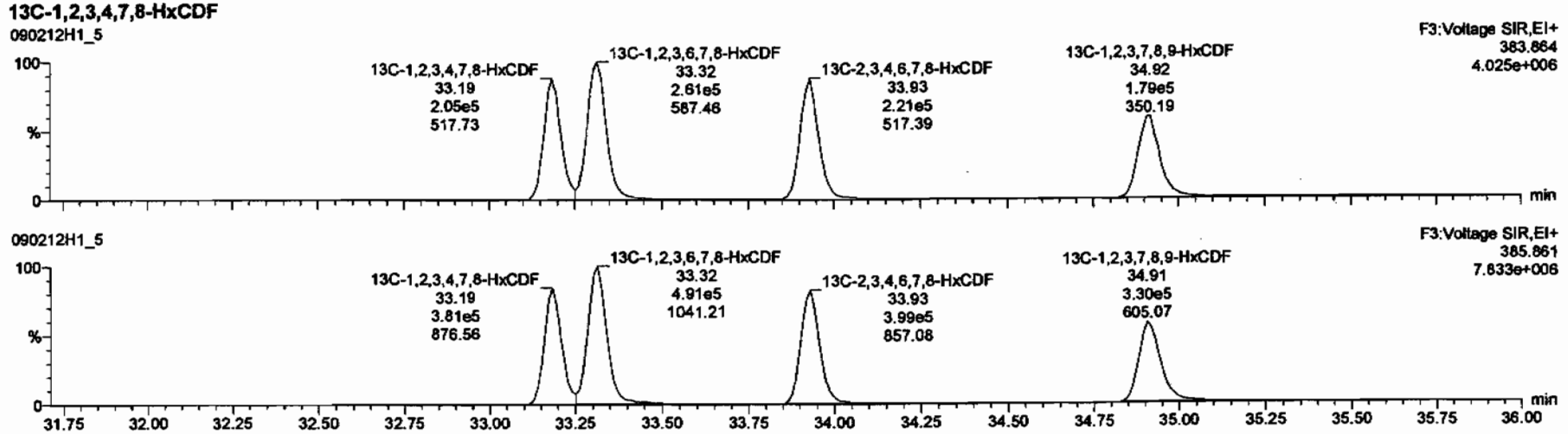

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Name: 090212H1_5, Date: 12-Feb-2009, Time: 14:28:11, ID: ST090212H1-4 1613 CS2 080917H, Description: 1613 CS2 080917H

1,2,3,4,6,7,8-HpCDF

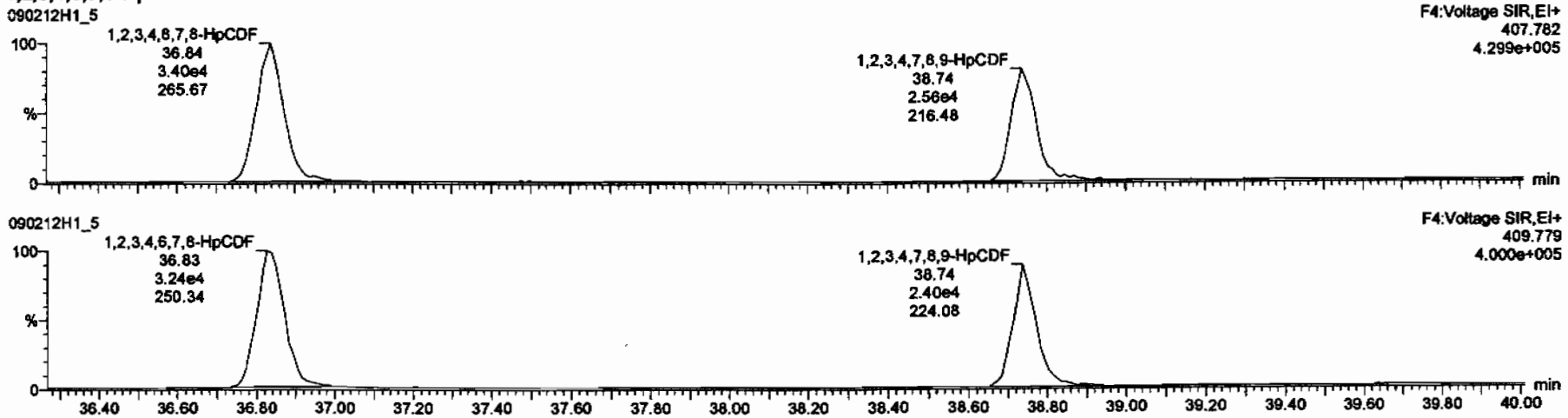

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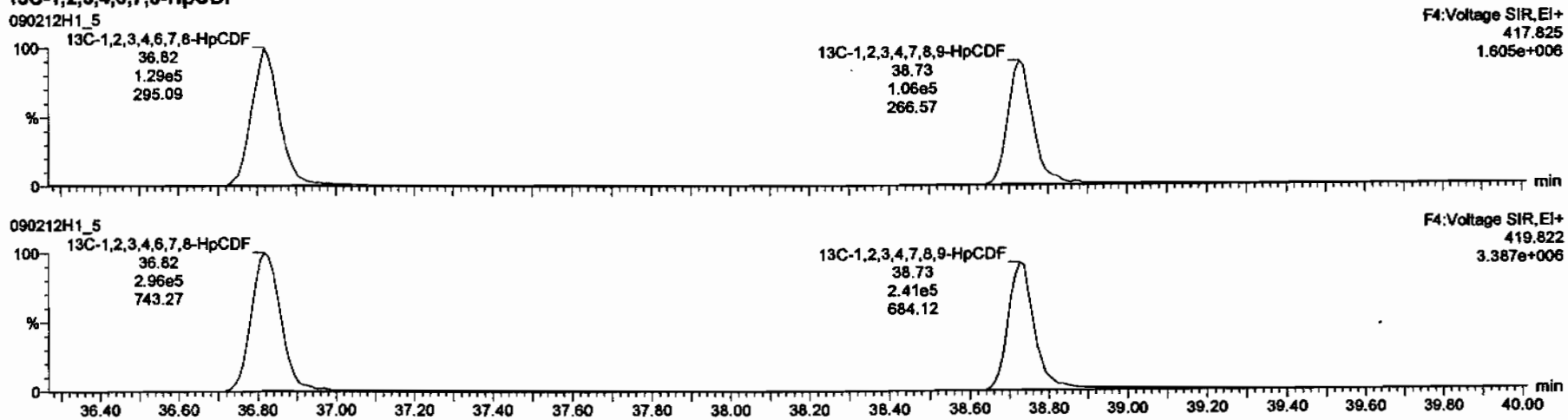

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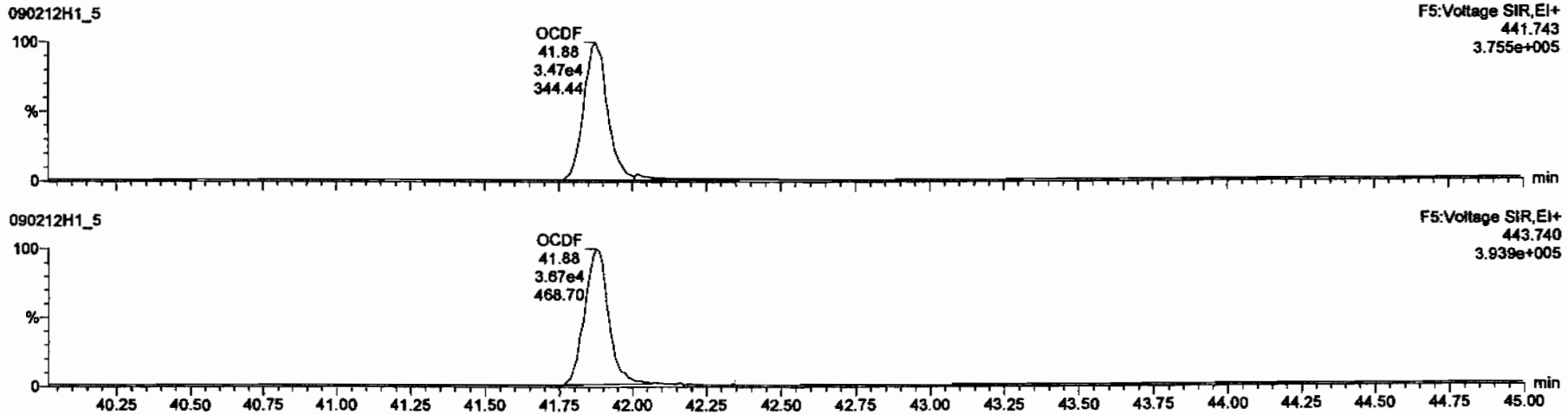

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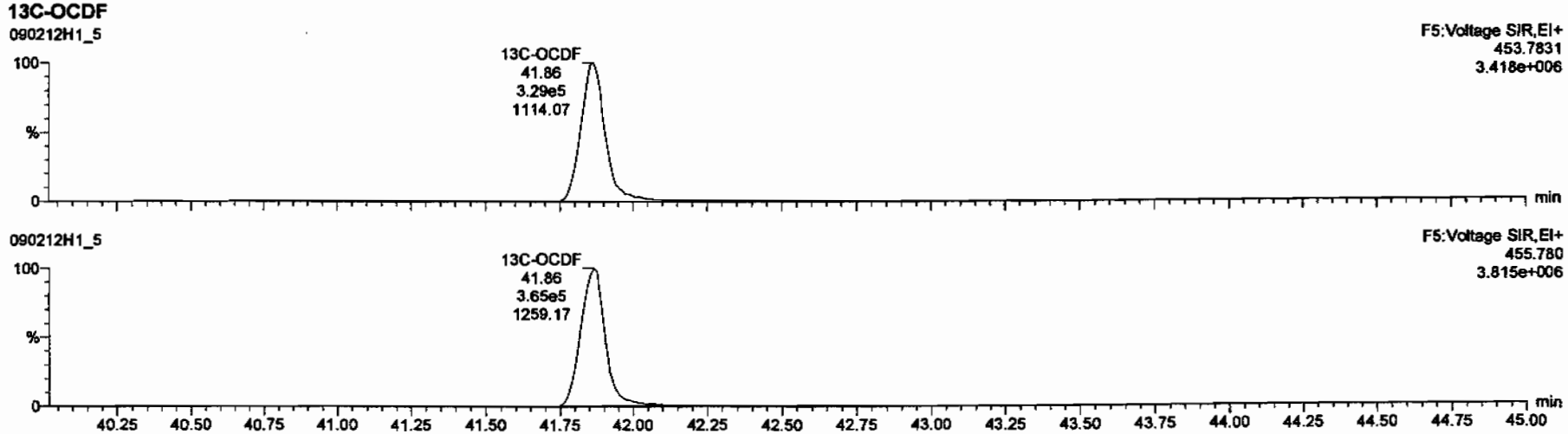

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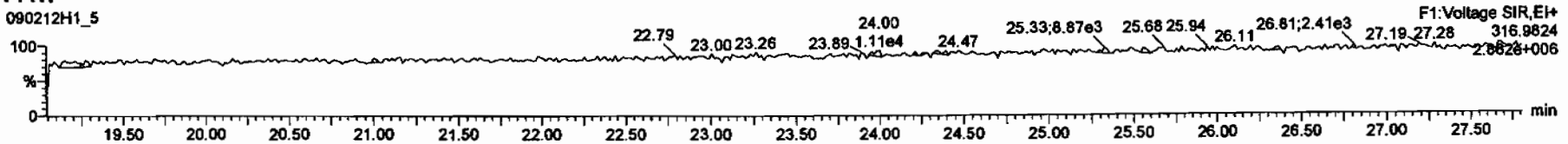

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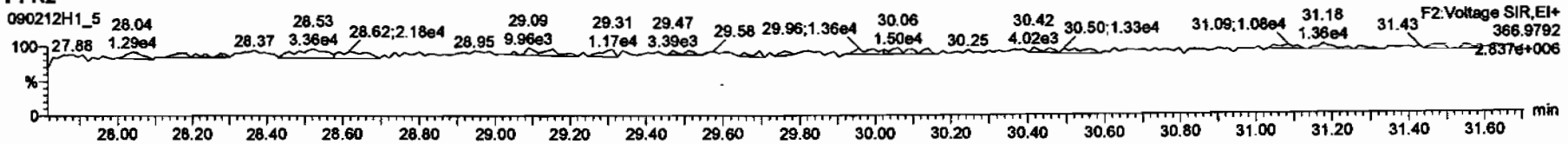

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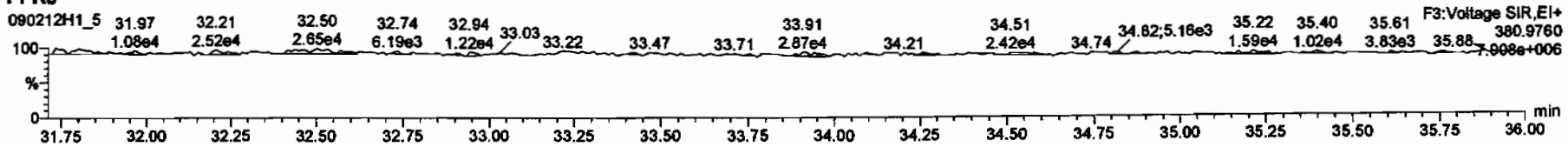

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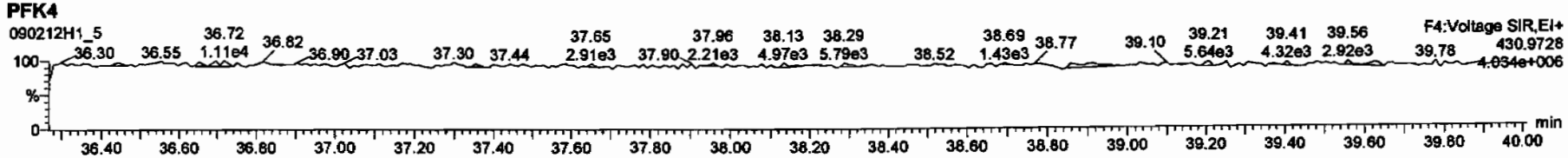

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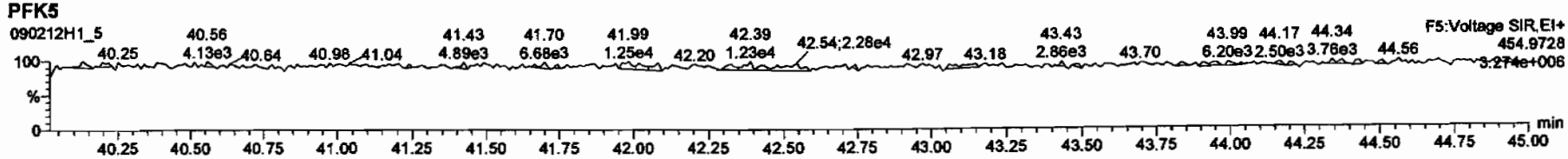

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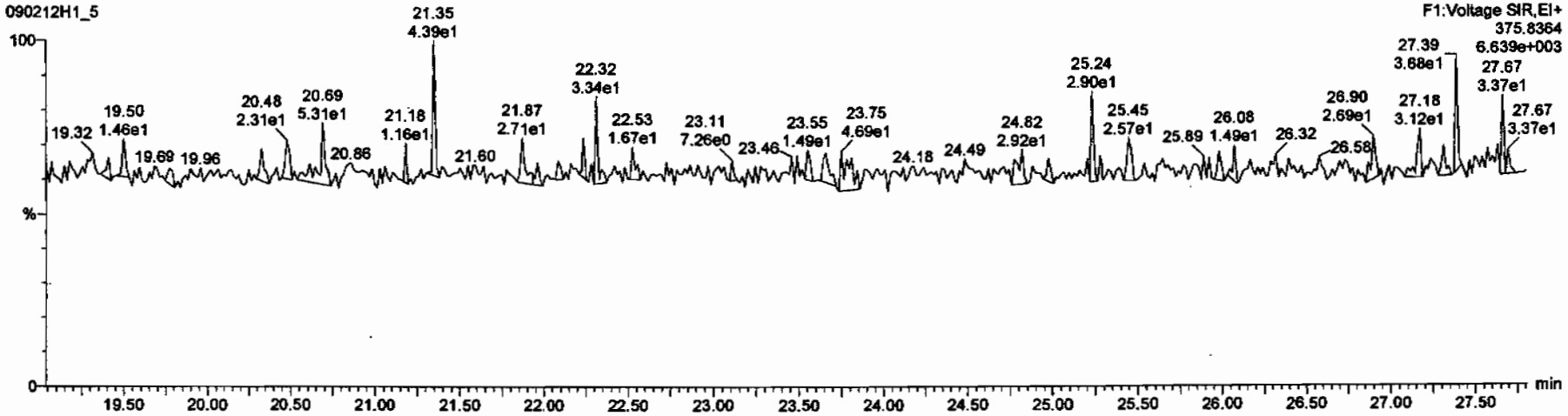

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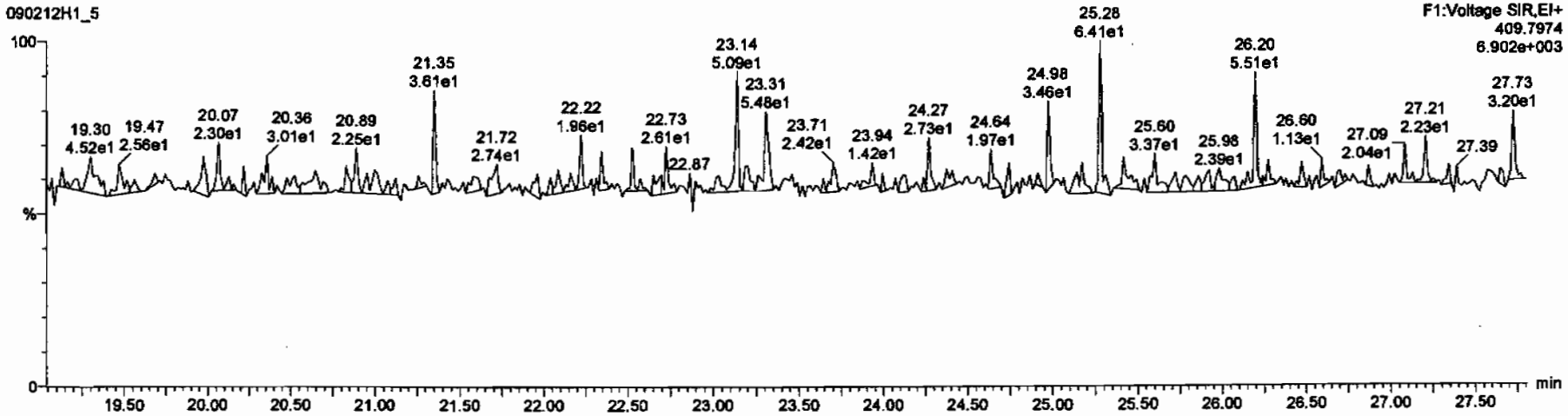

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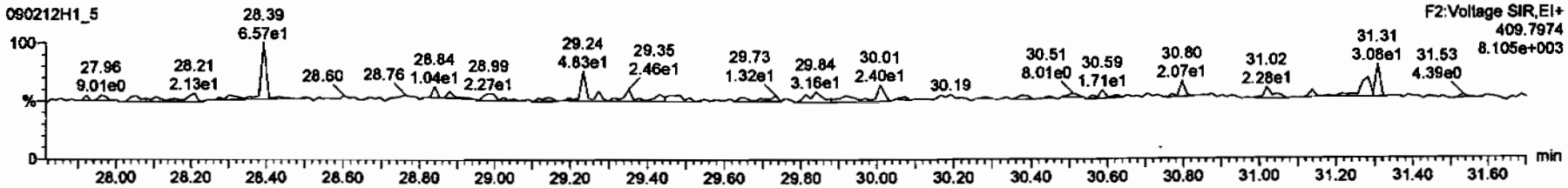

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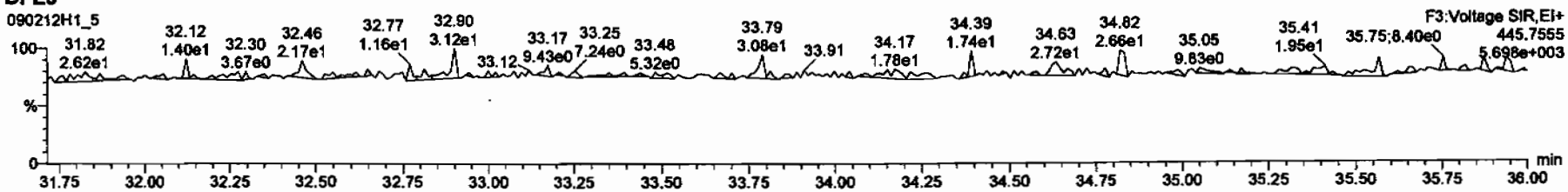

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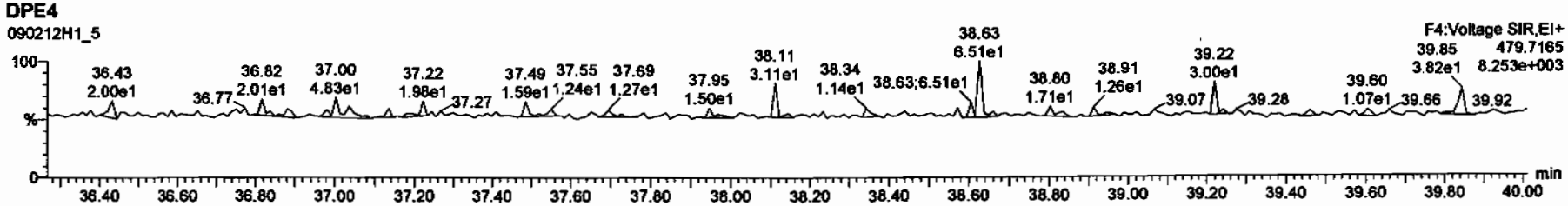

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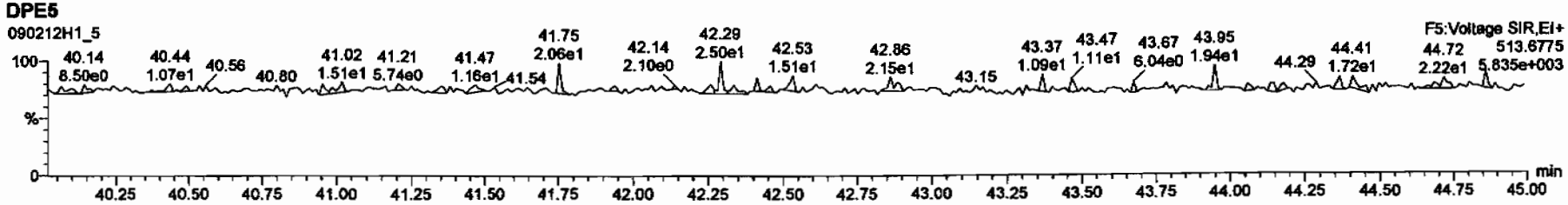

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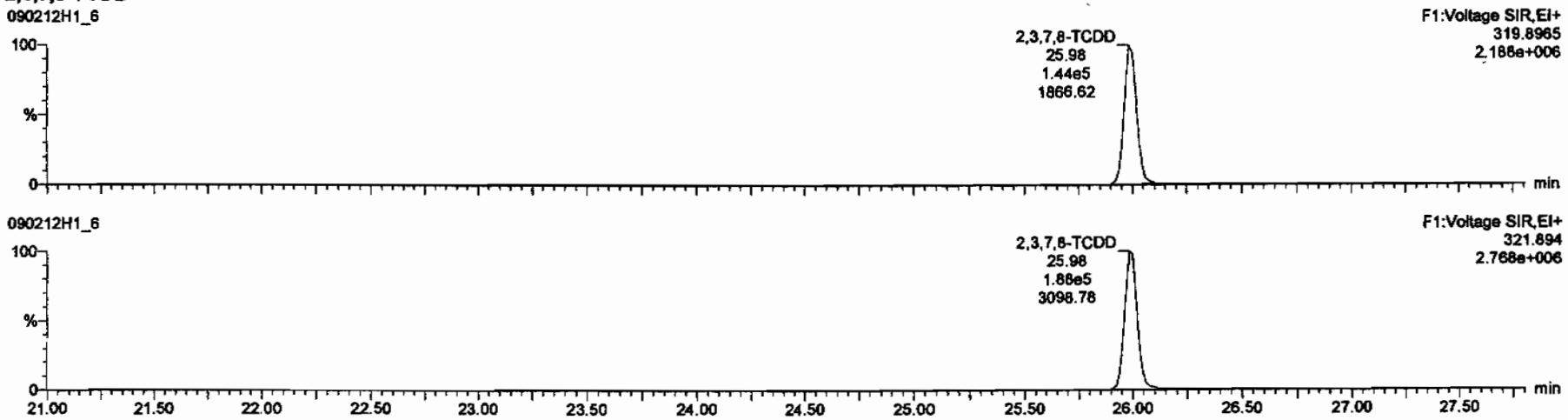

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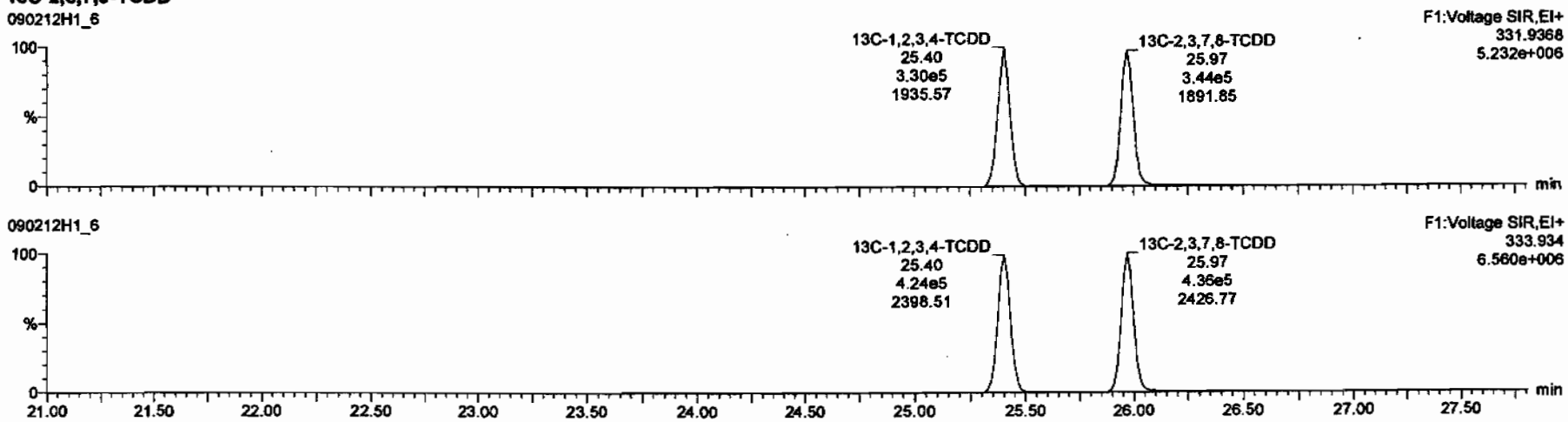

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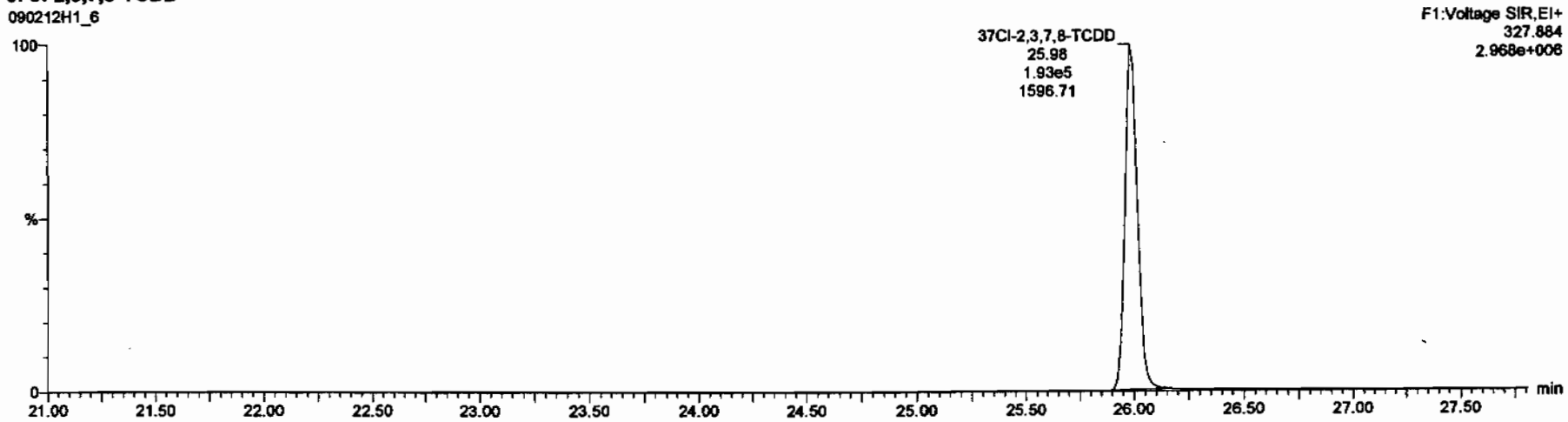

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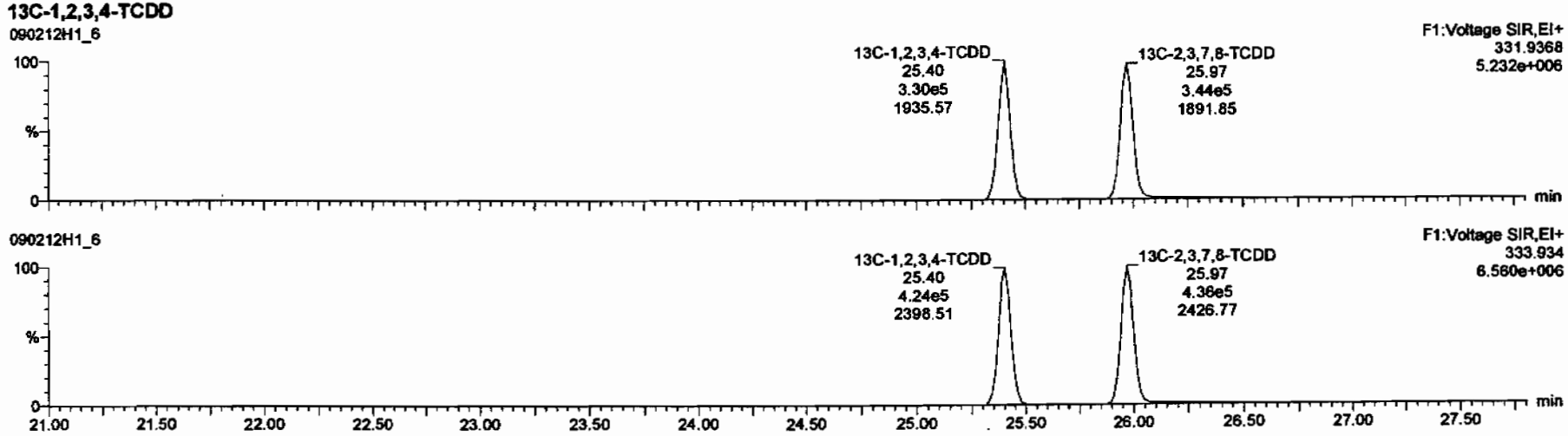

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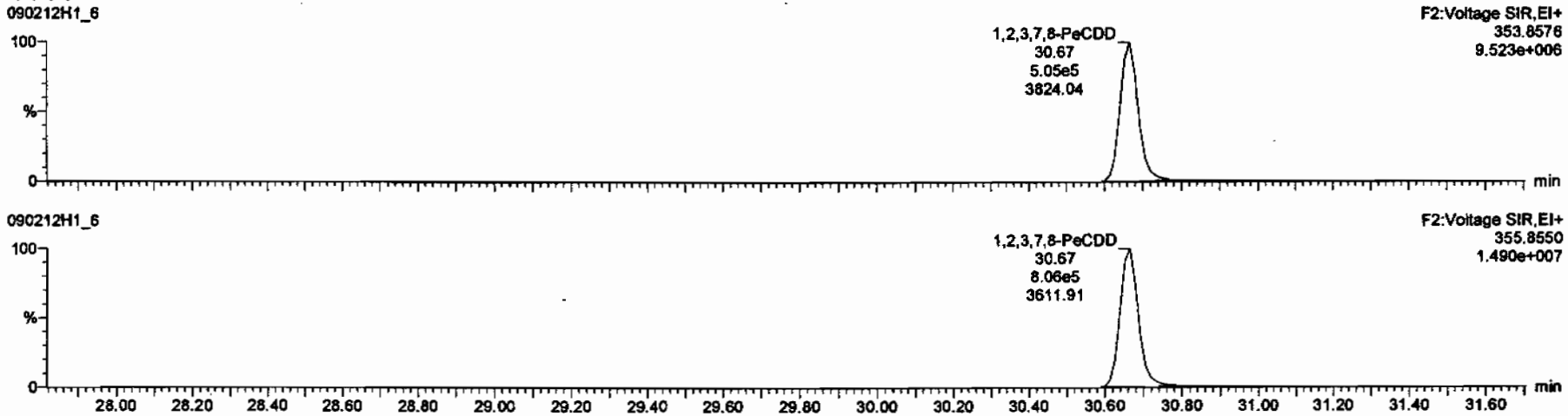

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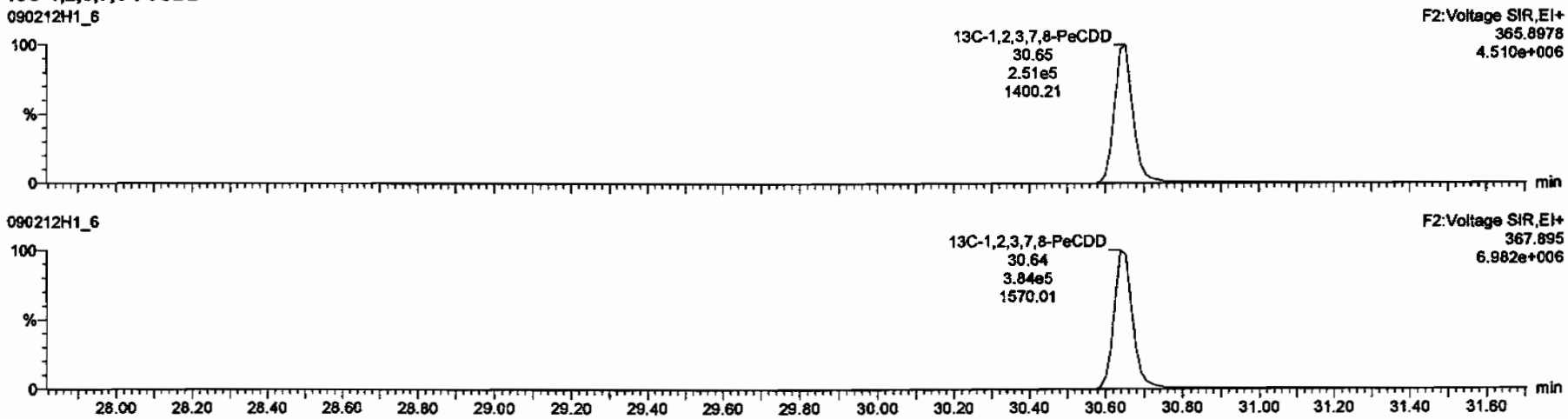

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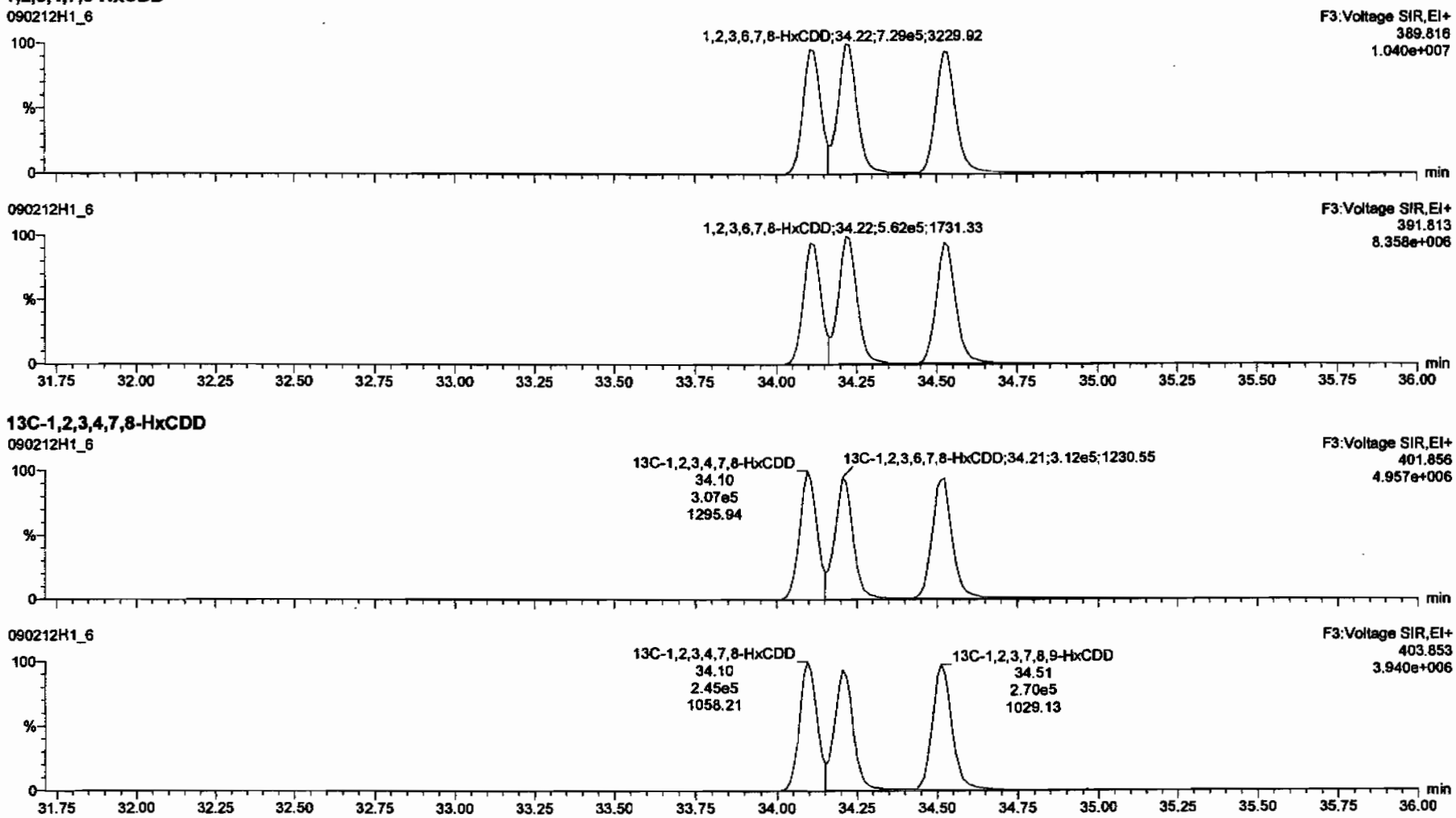

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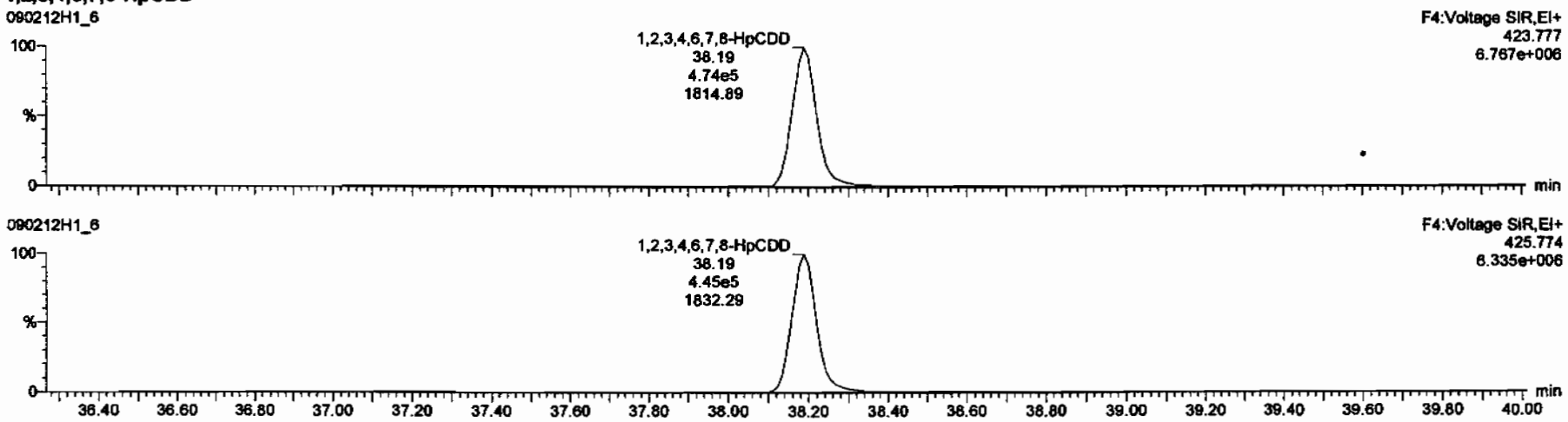

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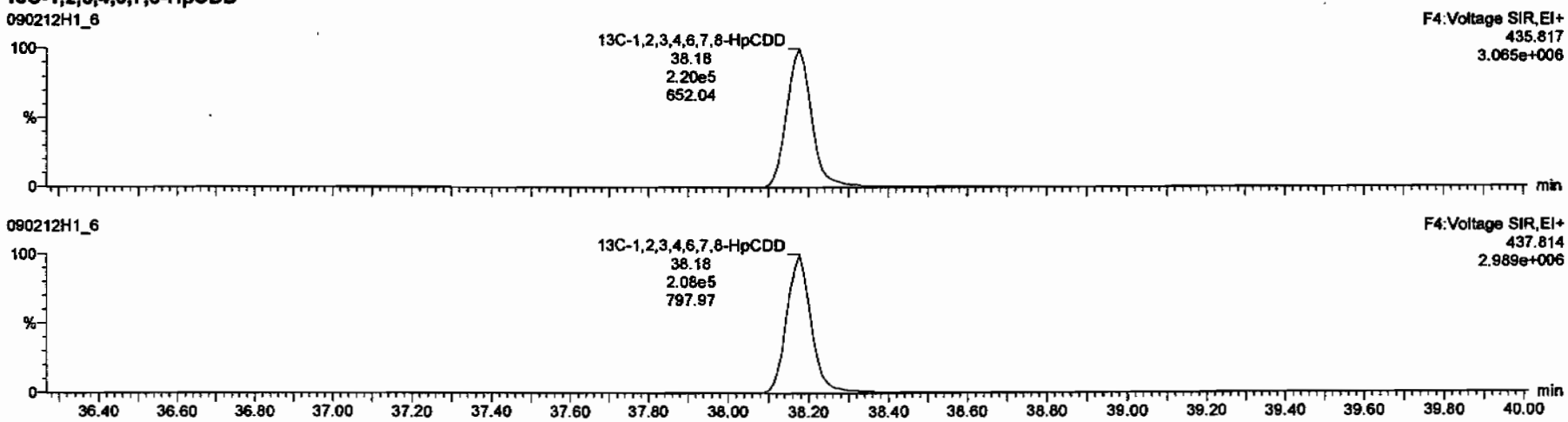

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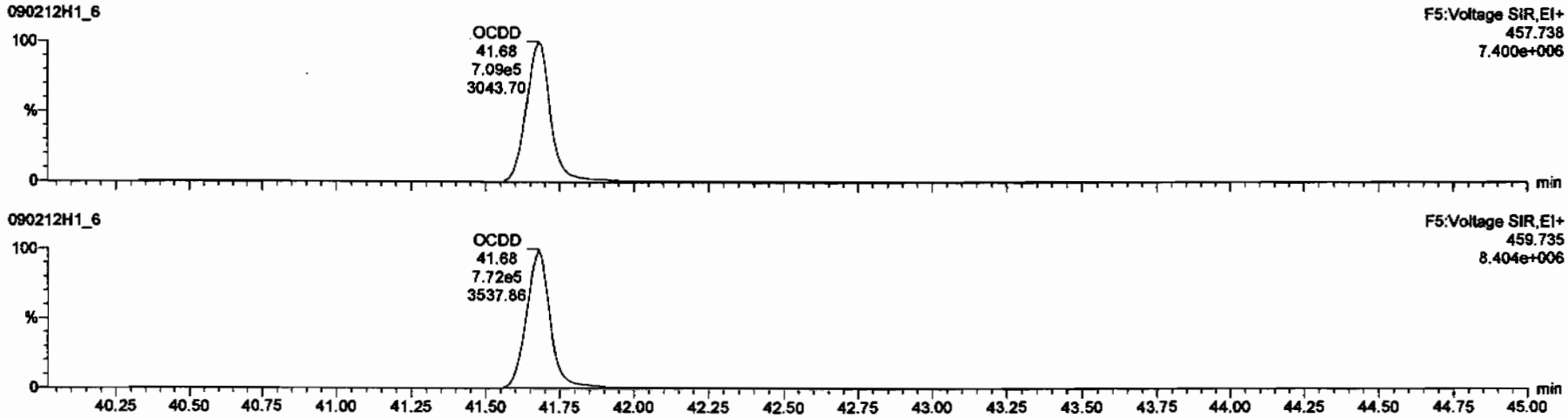

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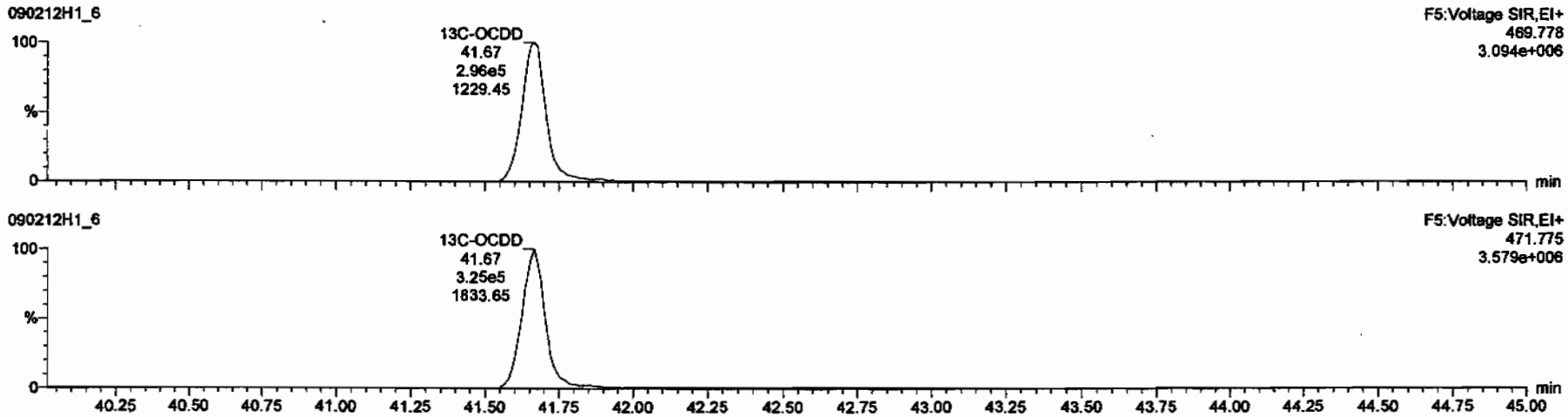

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2,3,7,8-TCDF

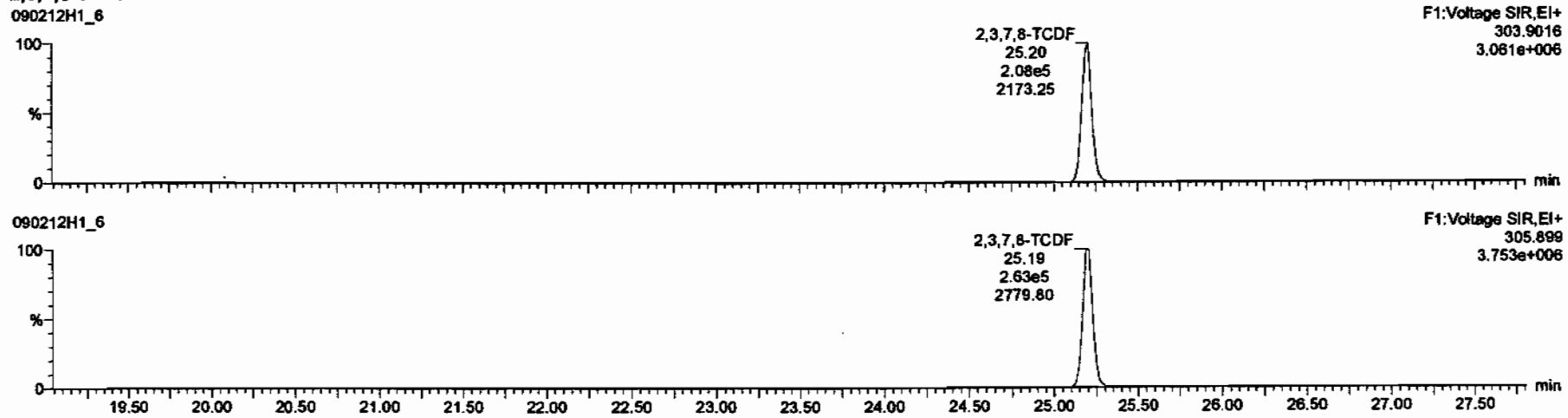

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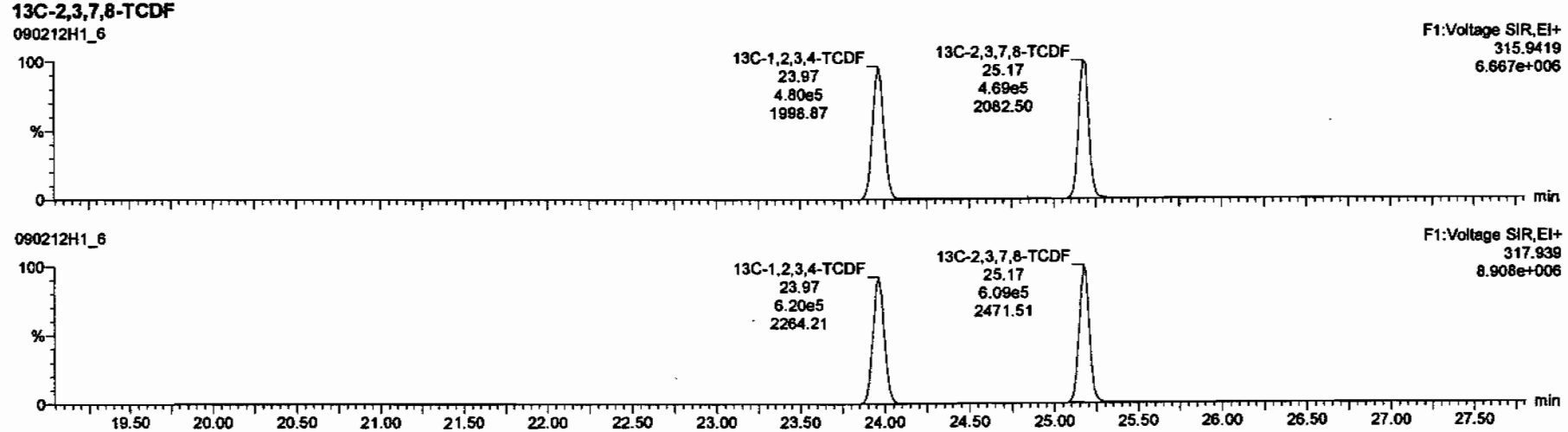

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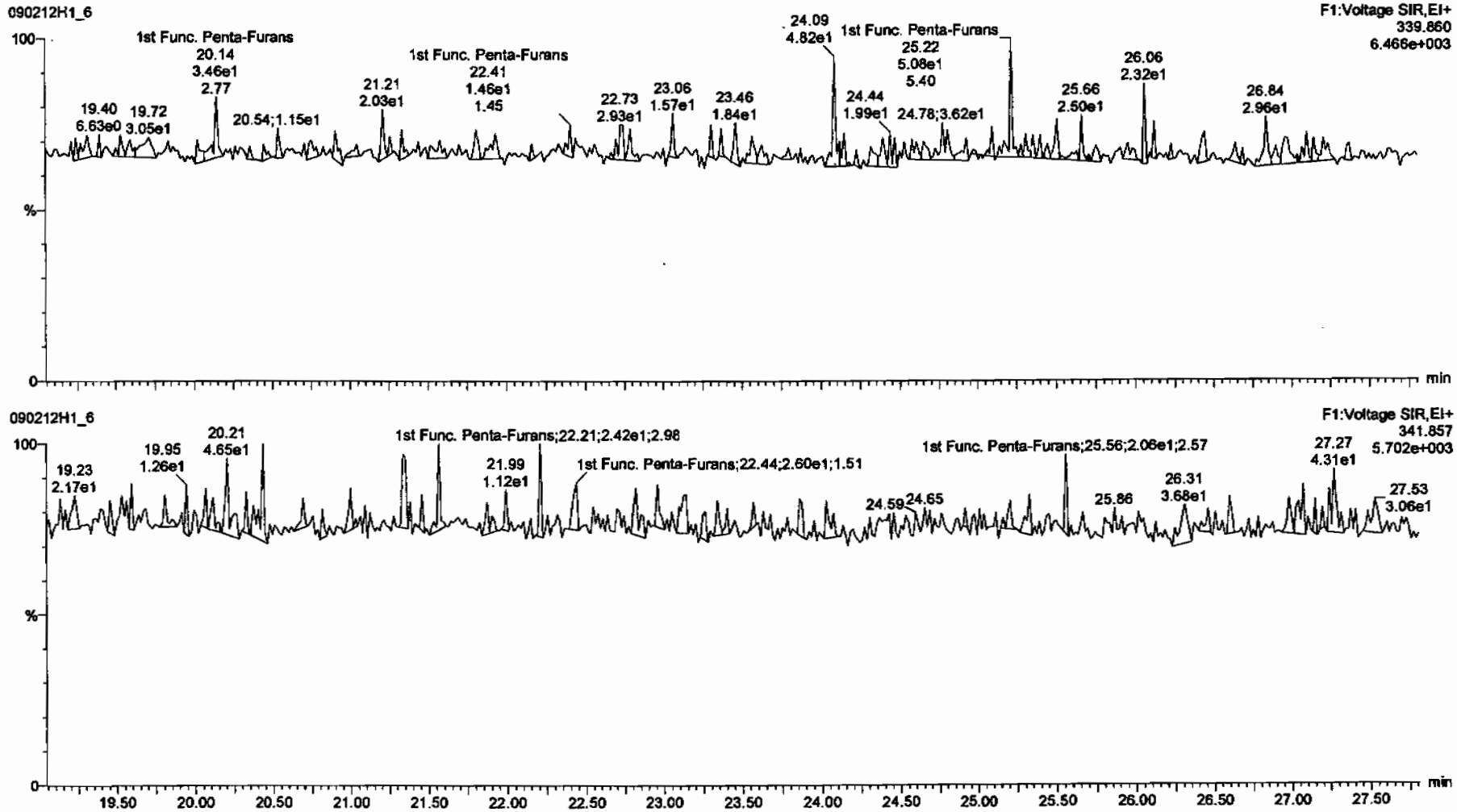

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1,2,3,7,8-PeCDF

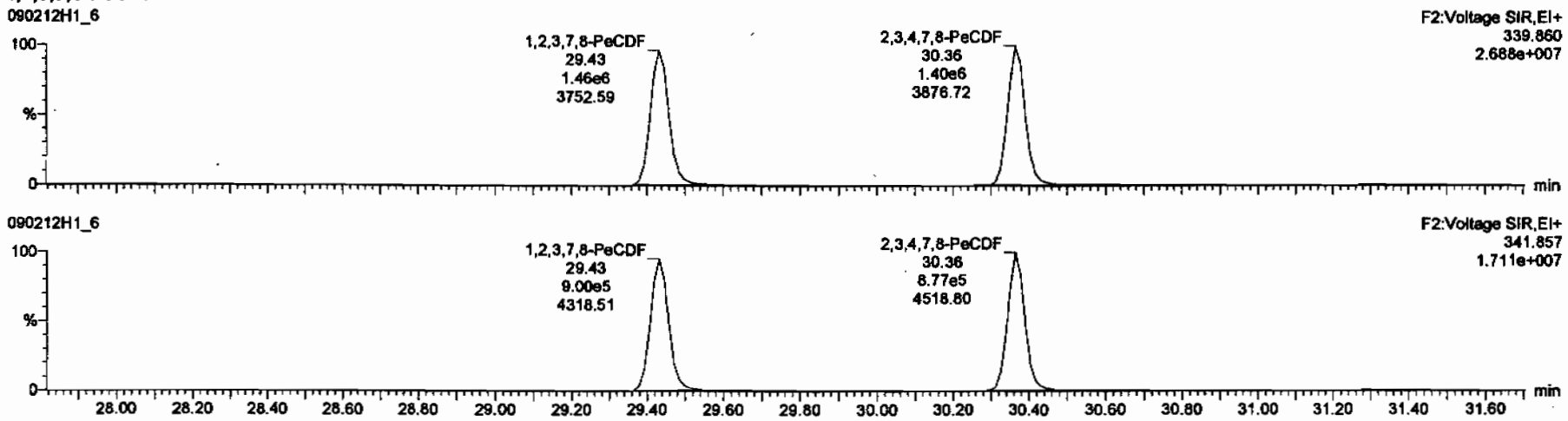

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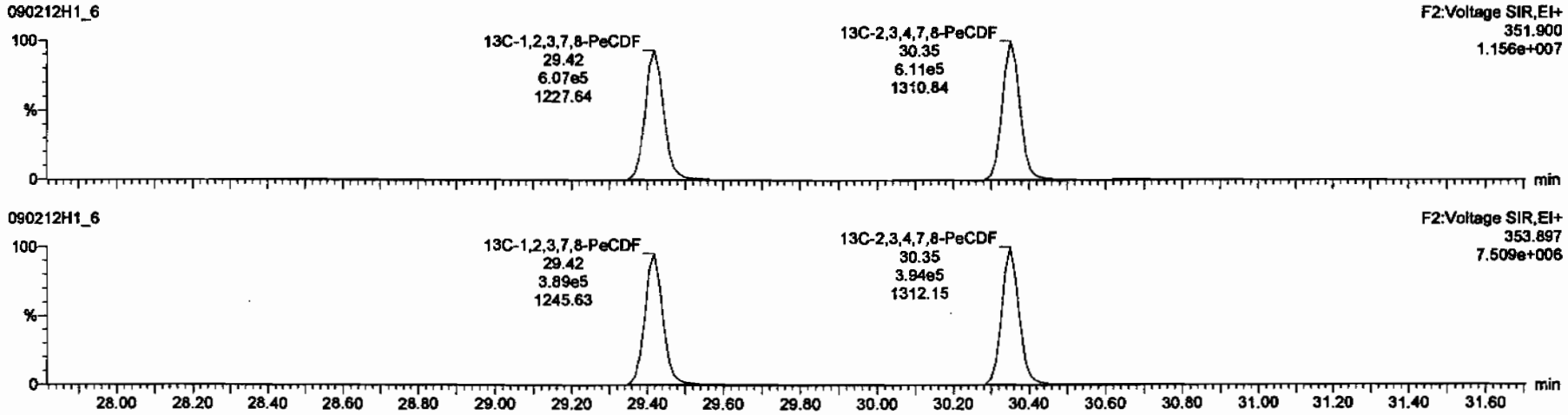

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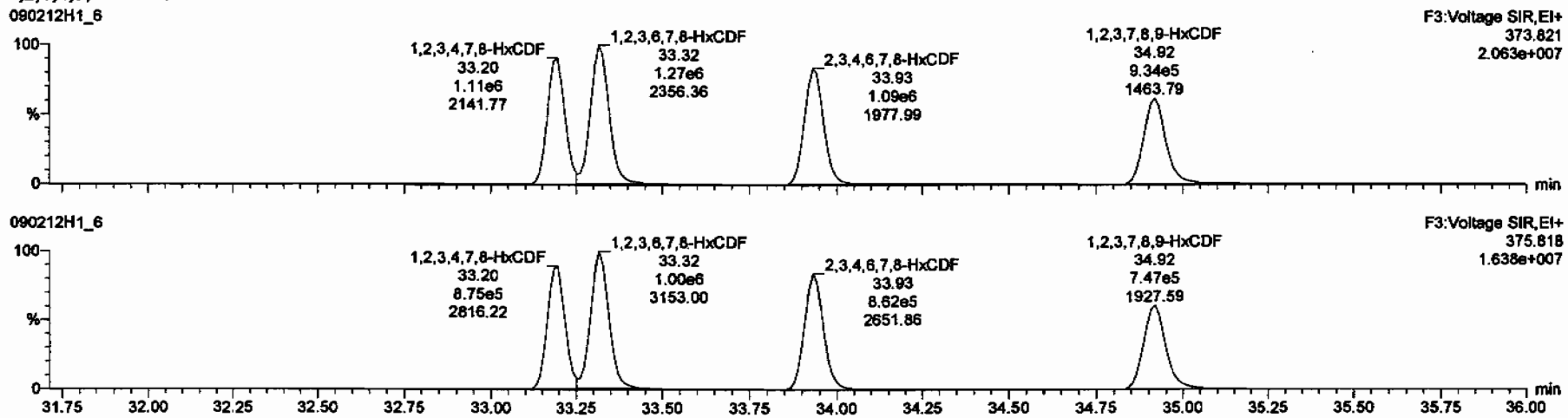

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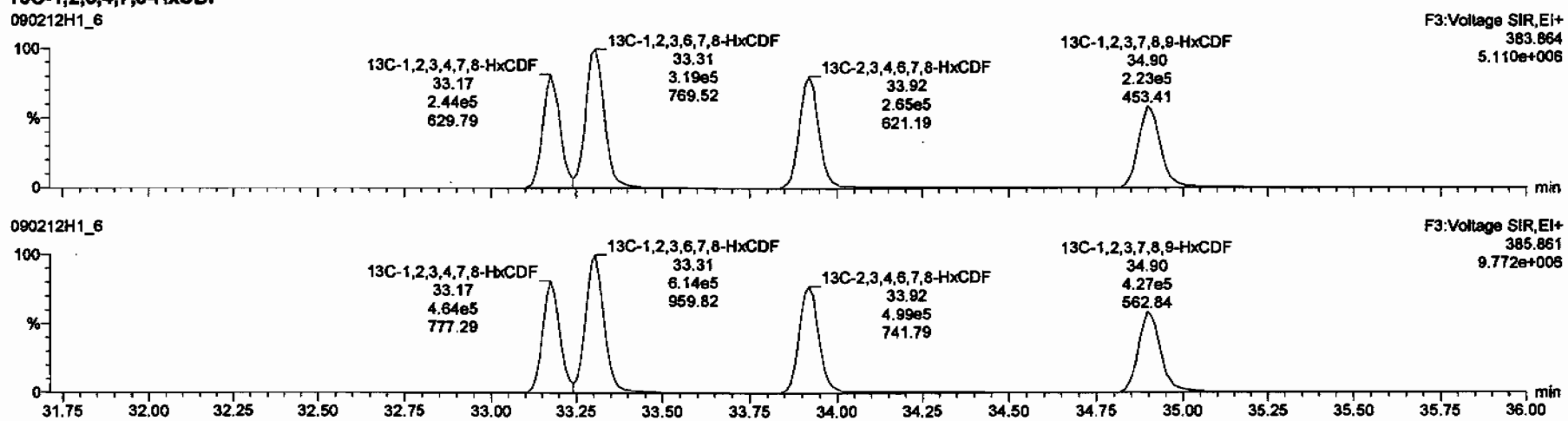

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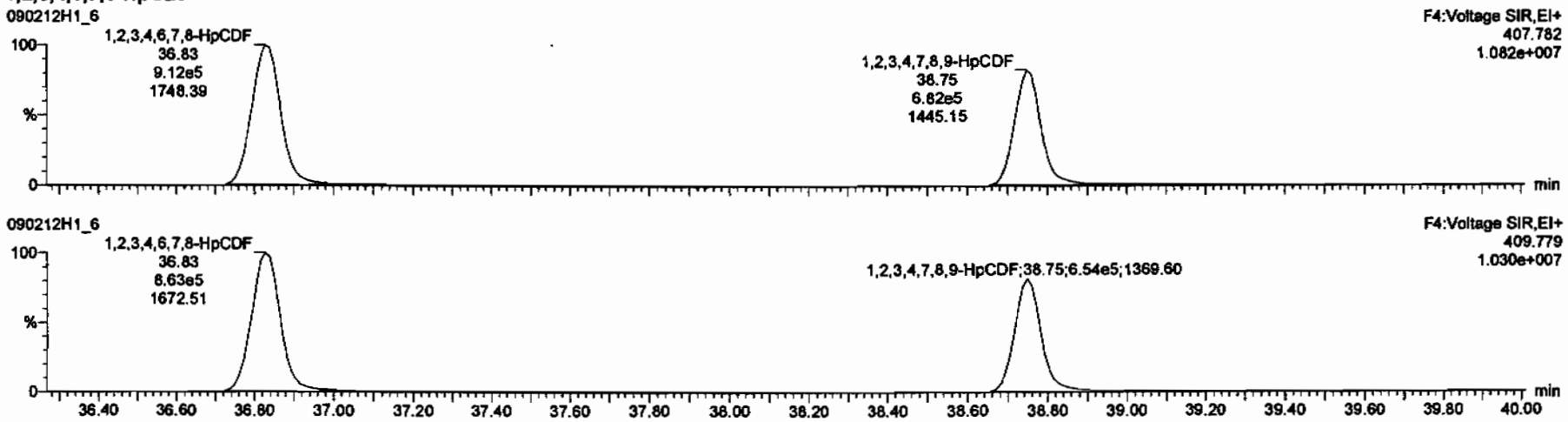

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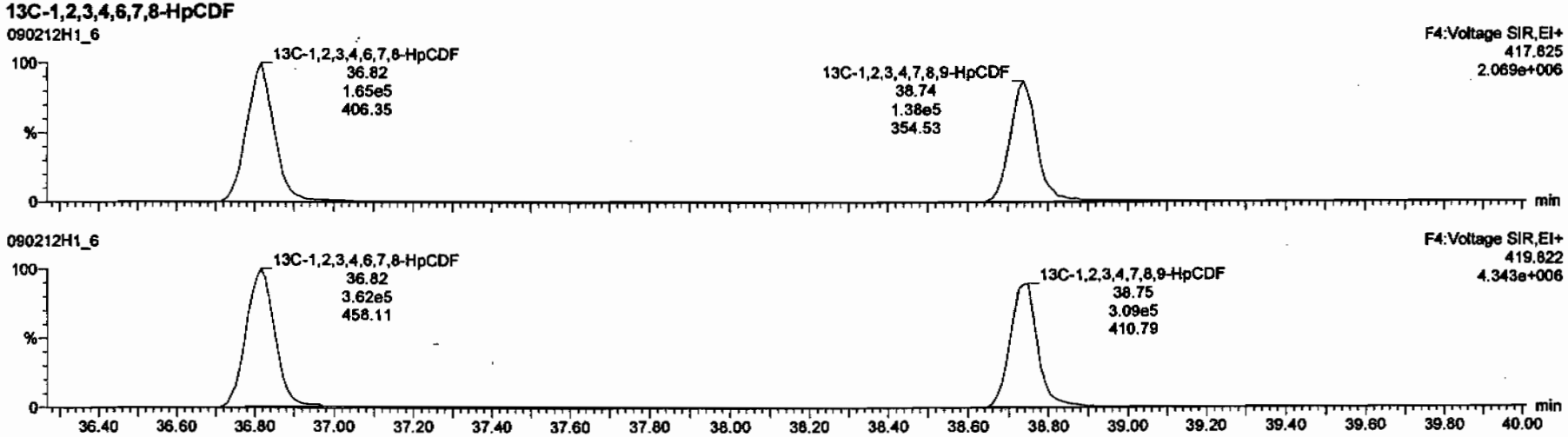

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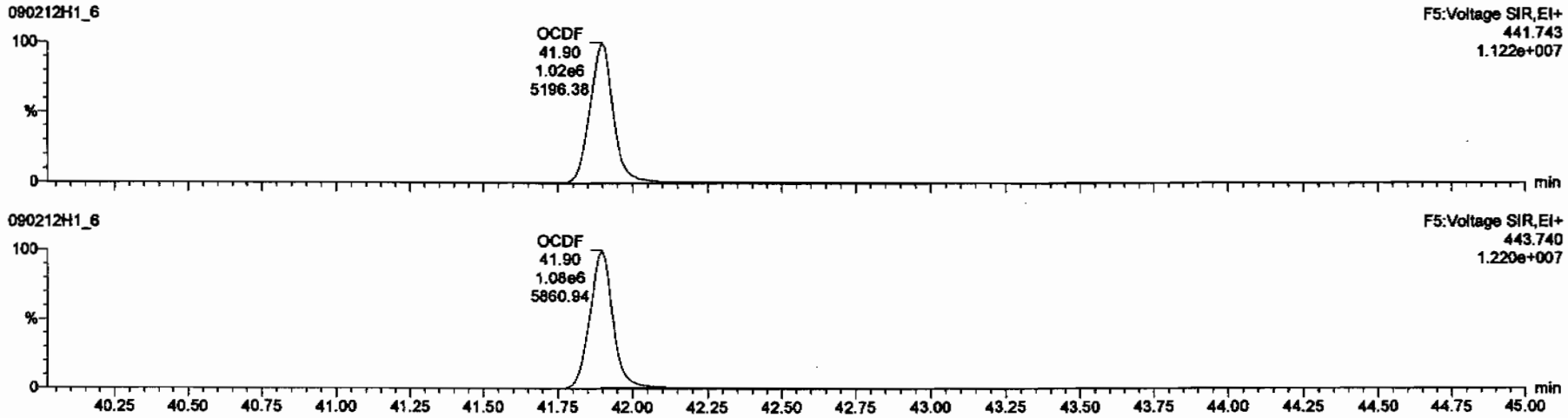

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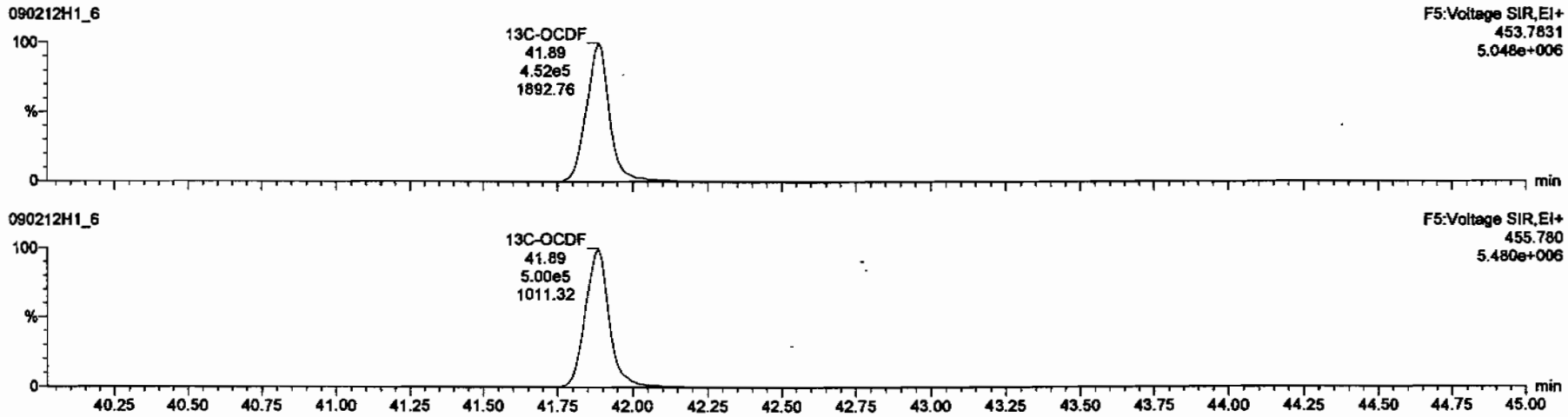

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PFK1

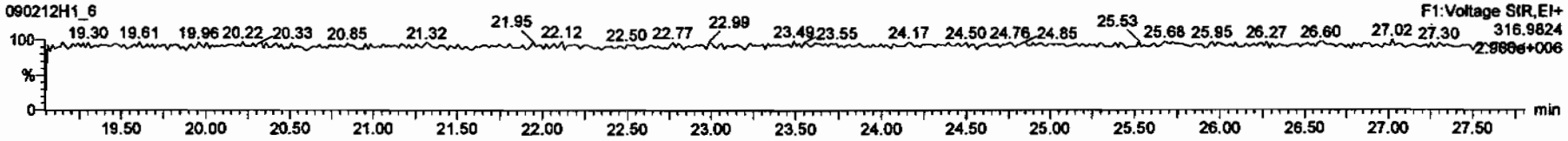

PFK2

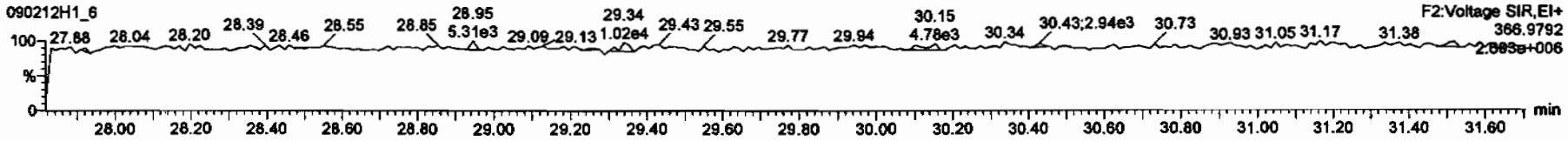

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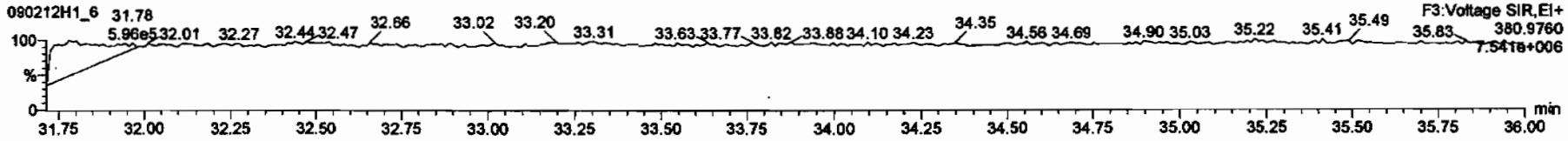

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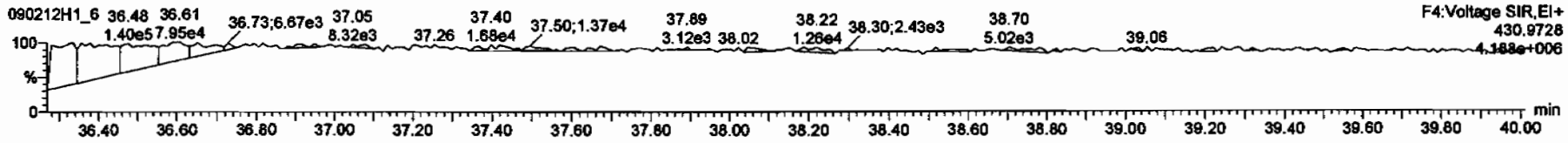

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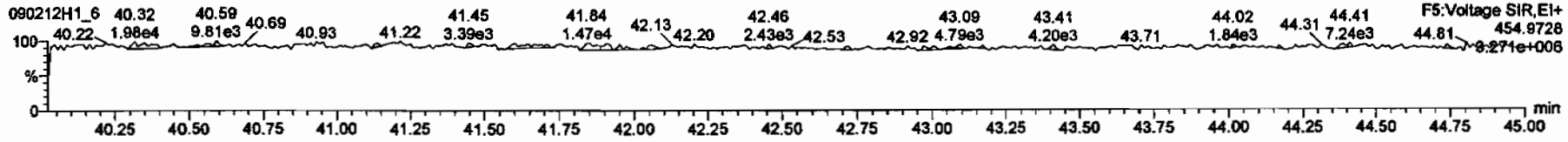

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_6, Date: 12-Feb-2009, Time: 15:17:39, ID: ST090212H1-5 1613 CS4 080917J, Description: 1613 CS4 080917J

DPE1

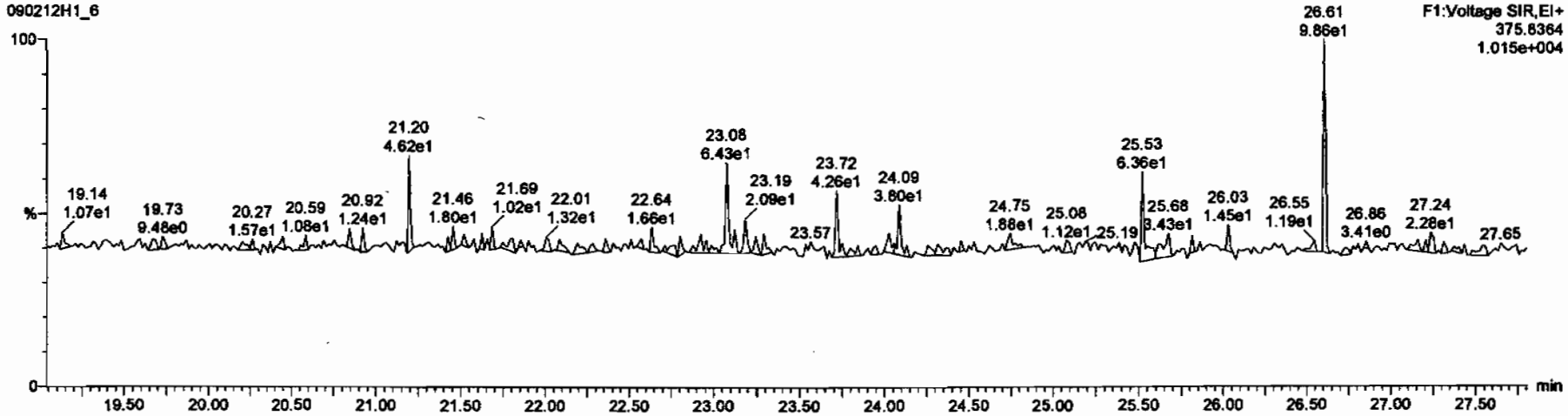

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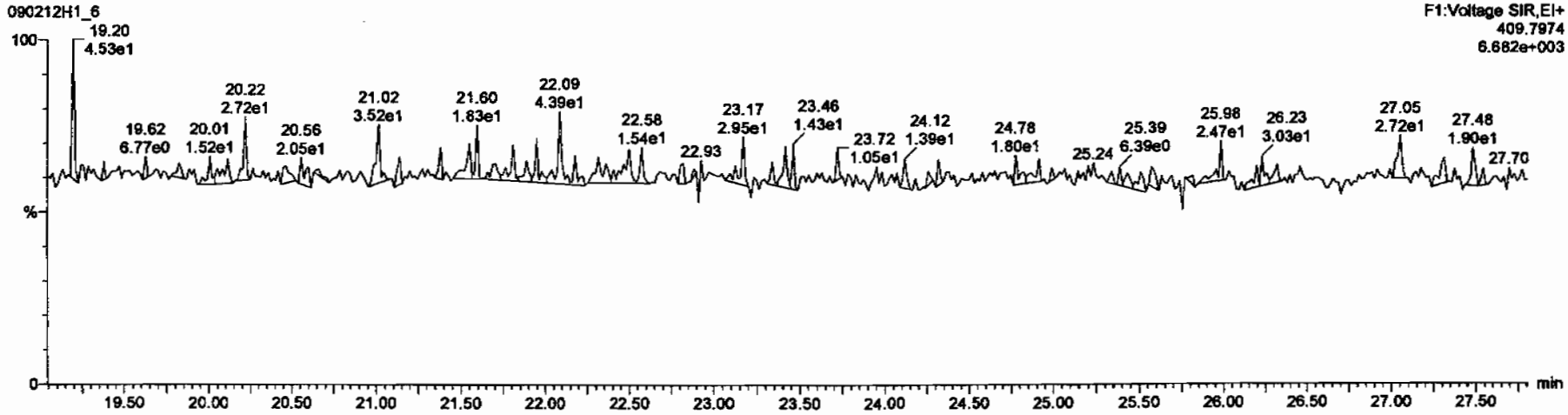

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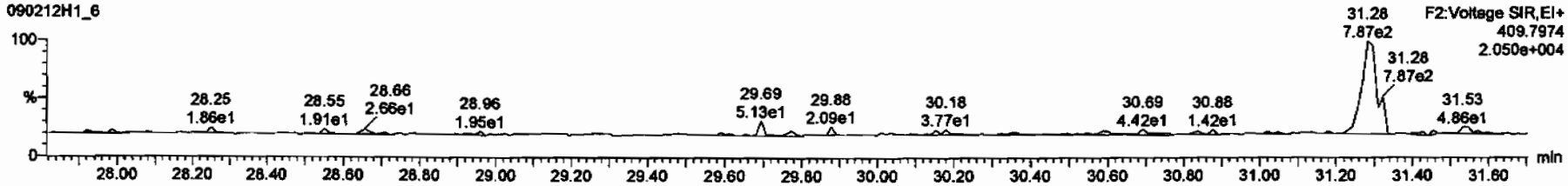

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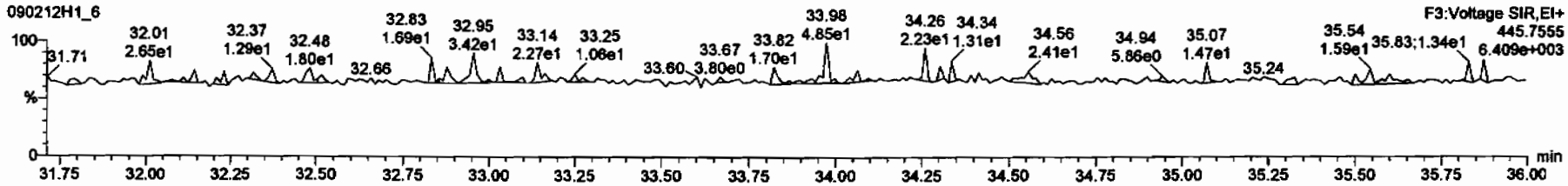

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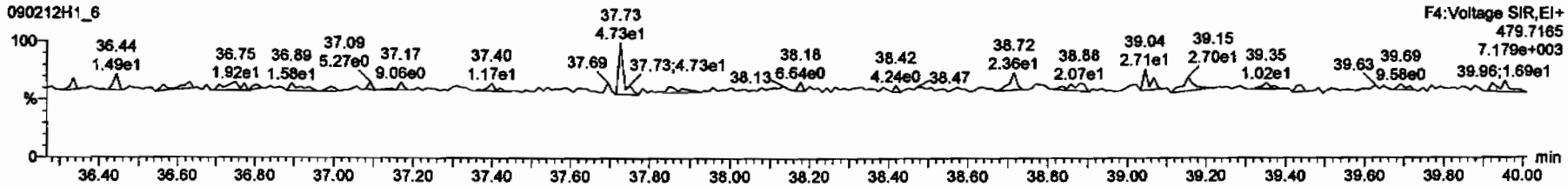

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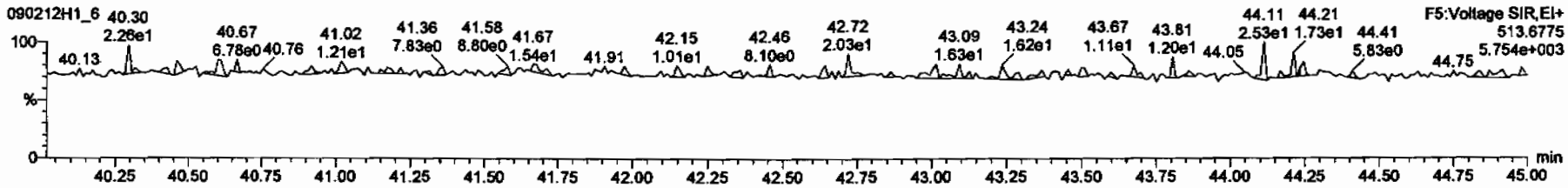

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2,3,7,8-TCDD

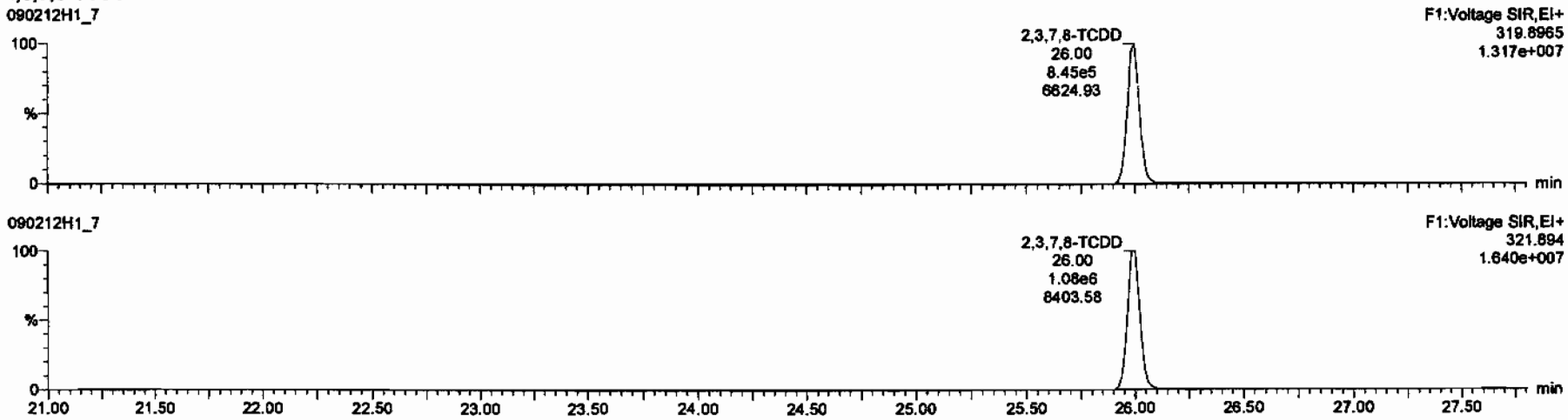

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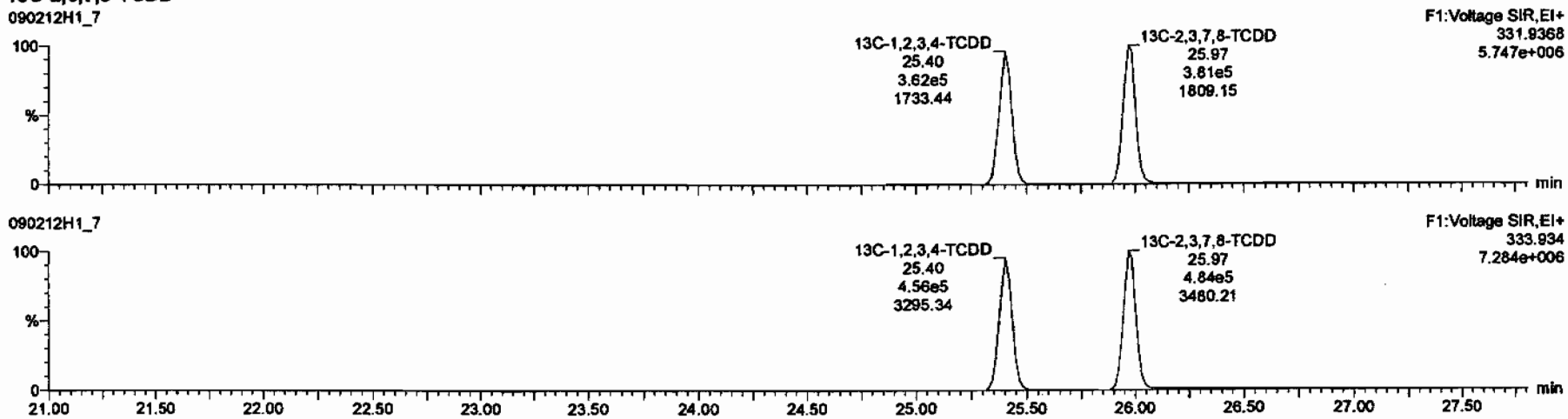

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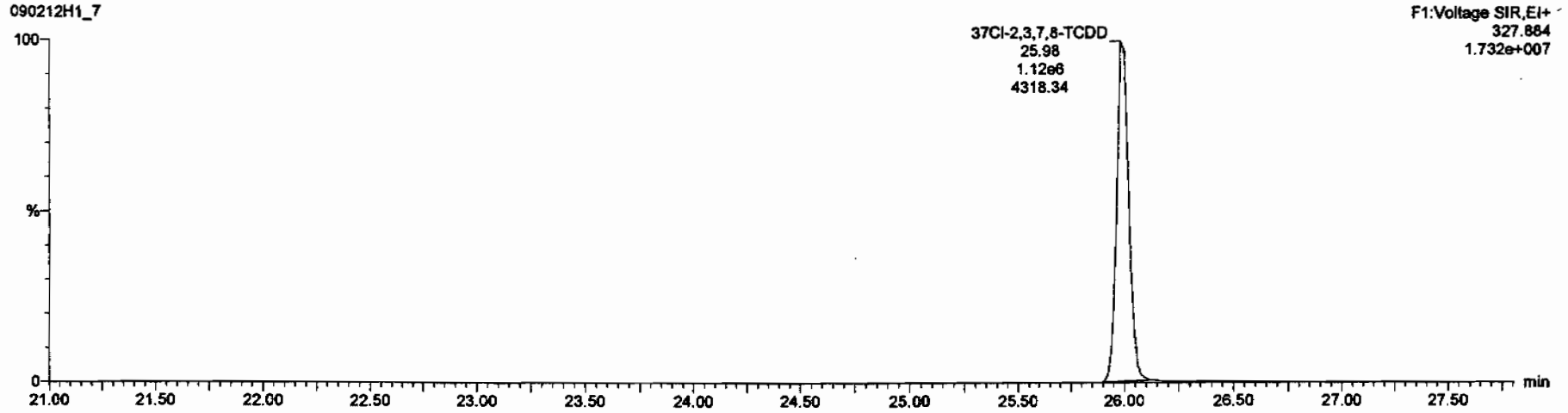

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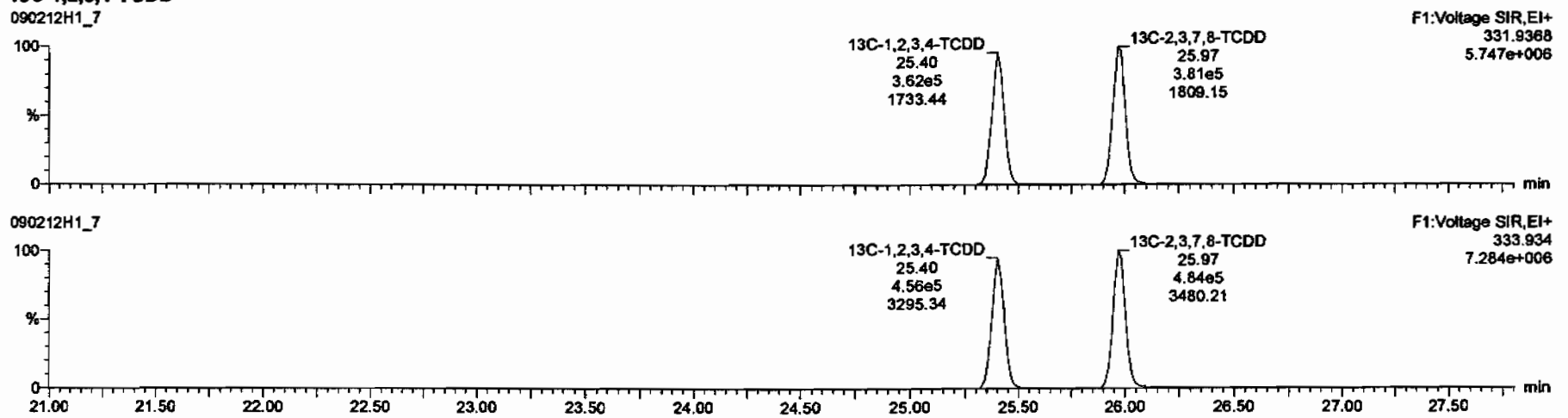

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1,2,3,7,8-PeCDD

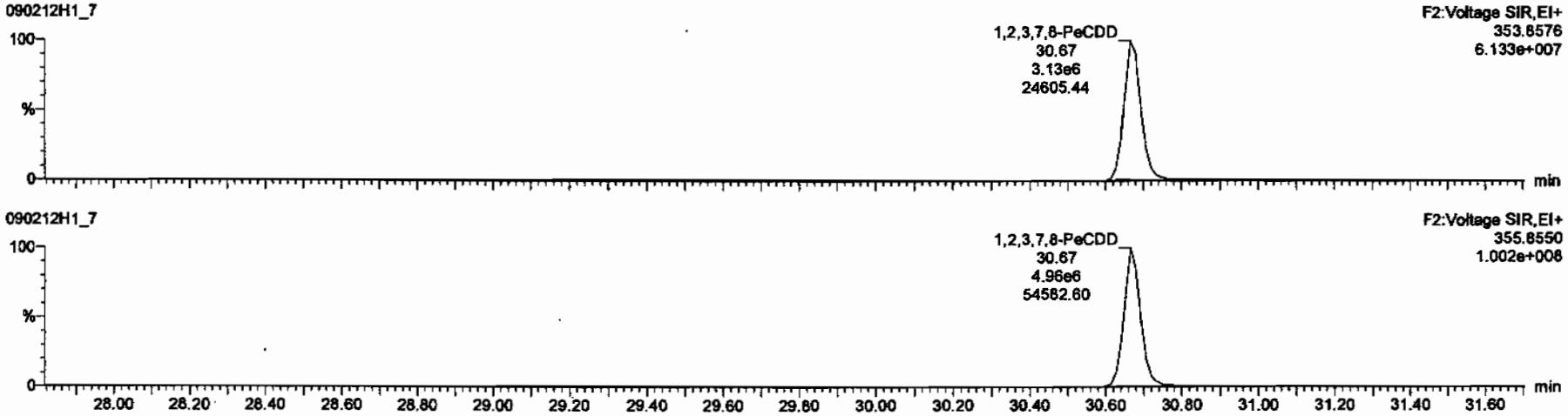

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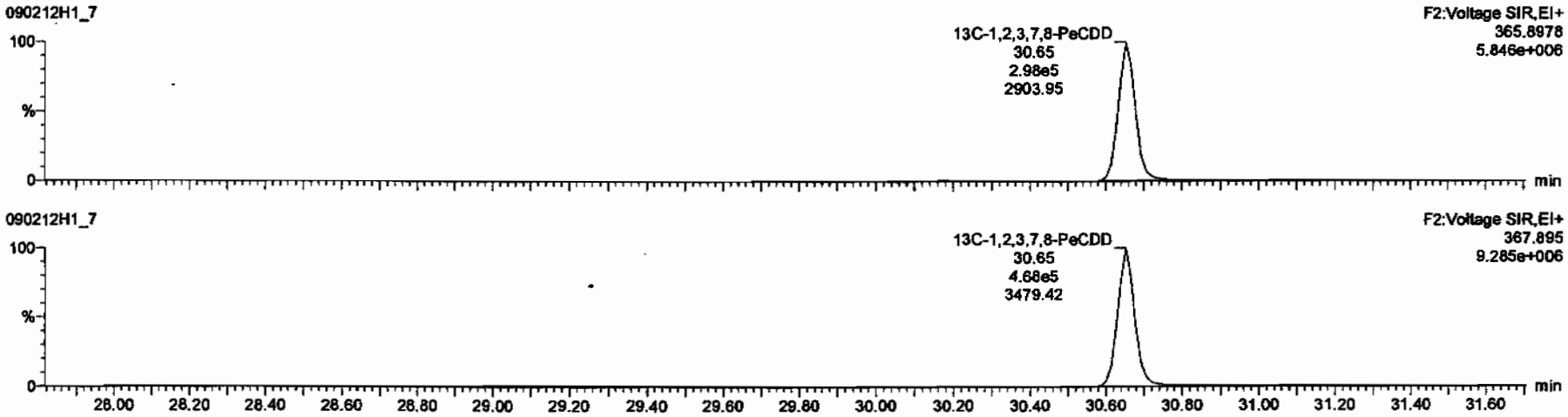

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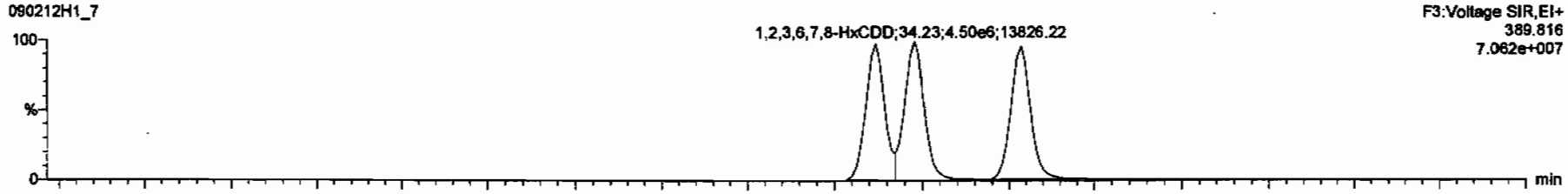

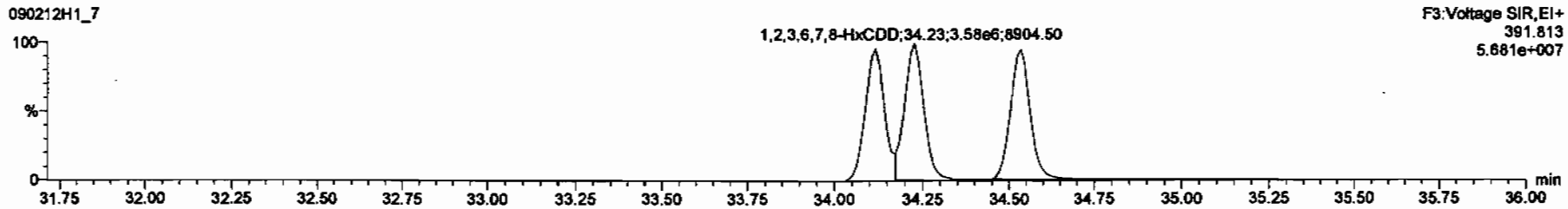

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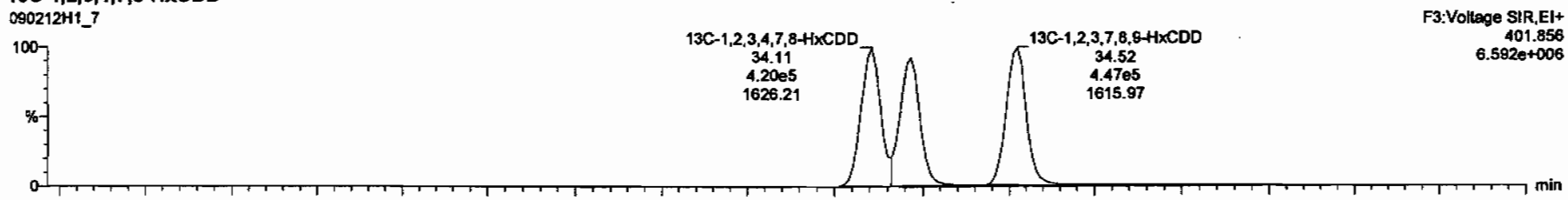

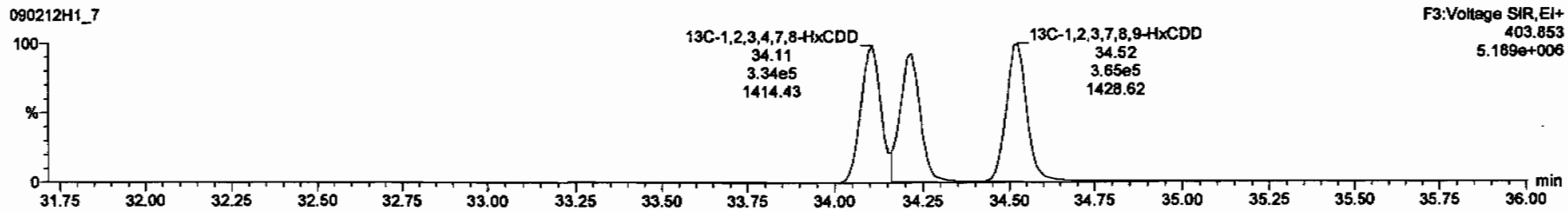

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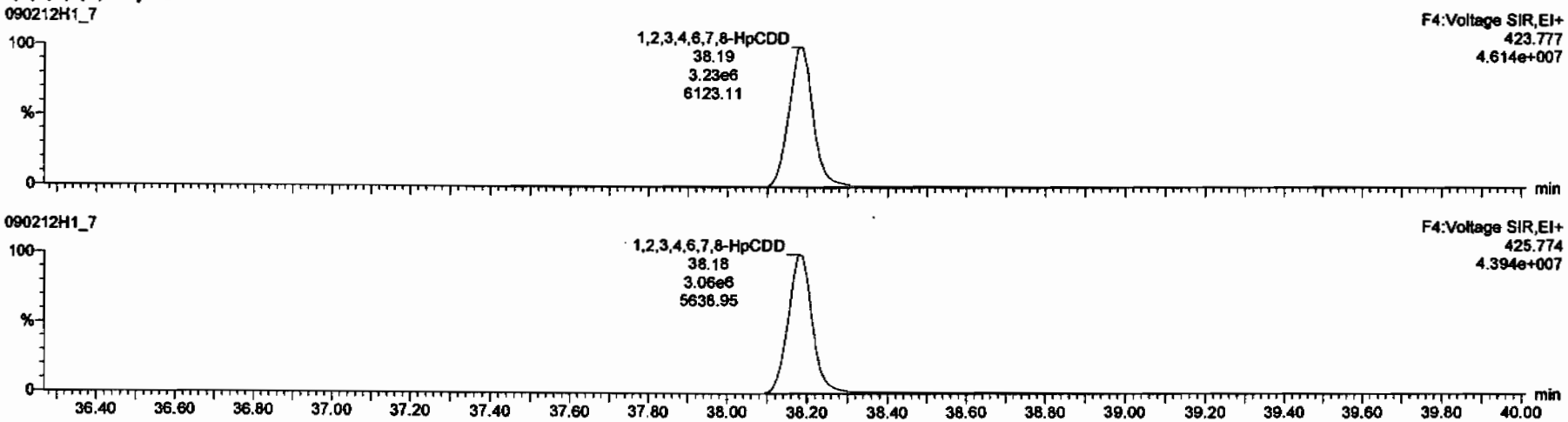

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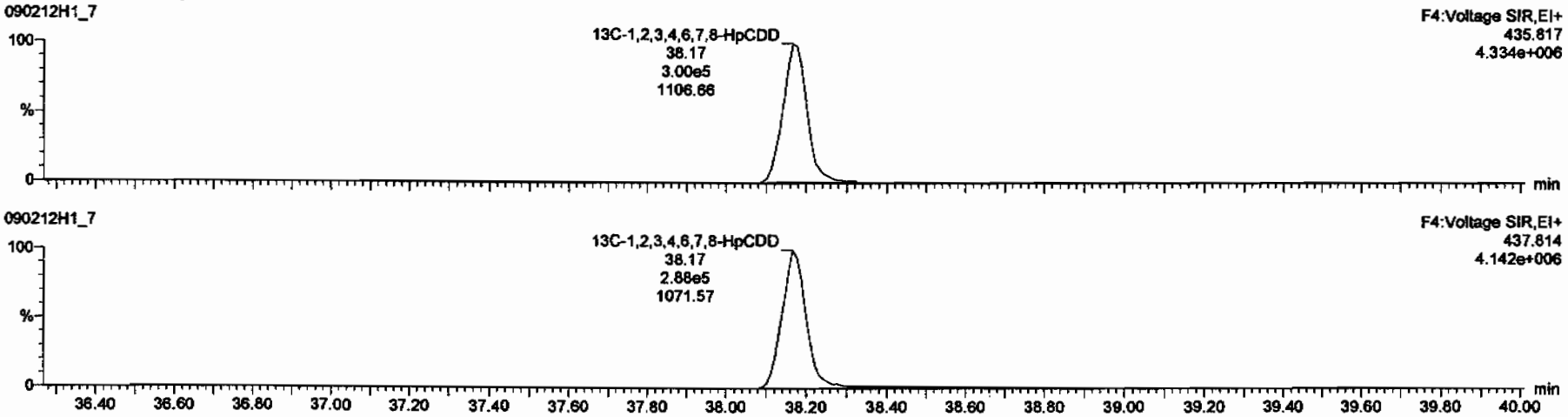

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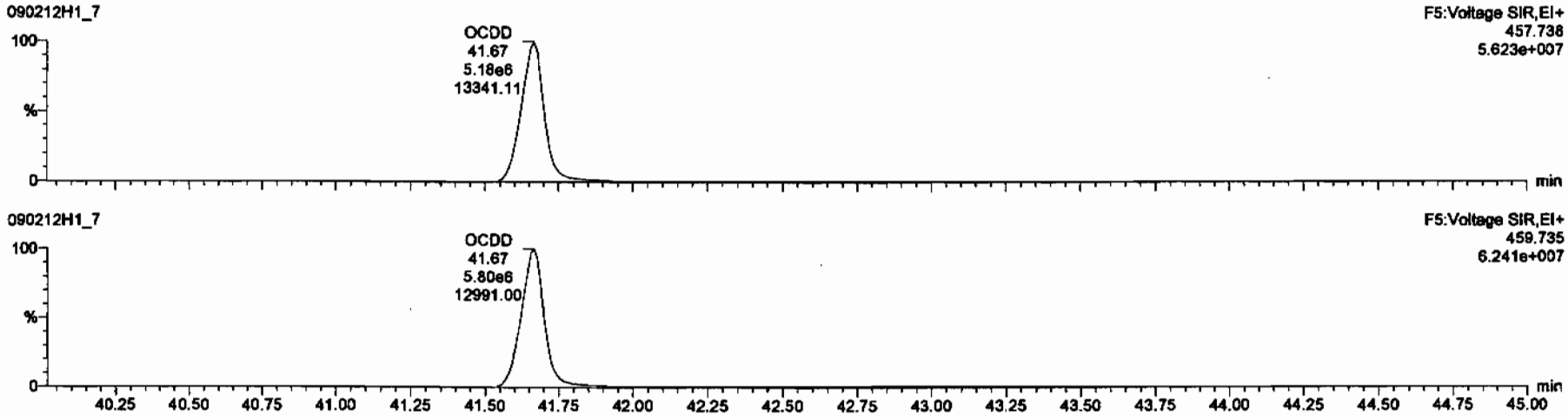

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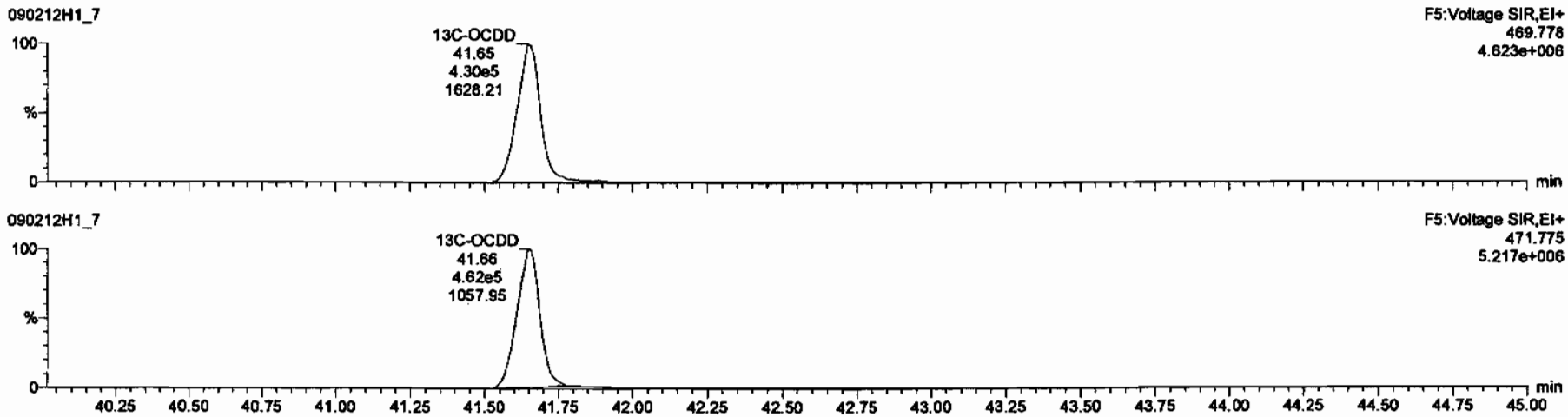

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2,3,7,8-TCDF

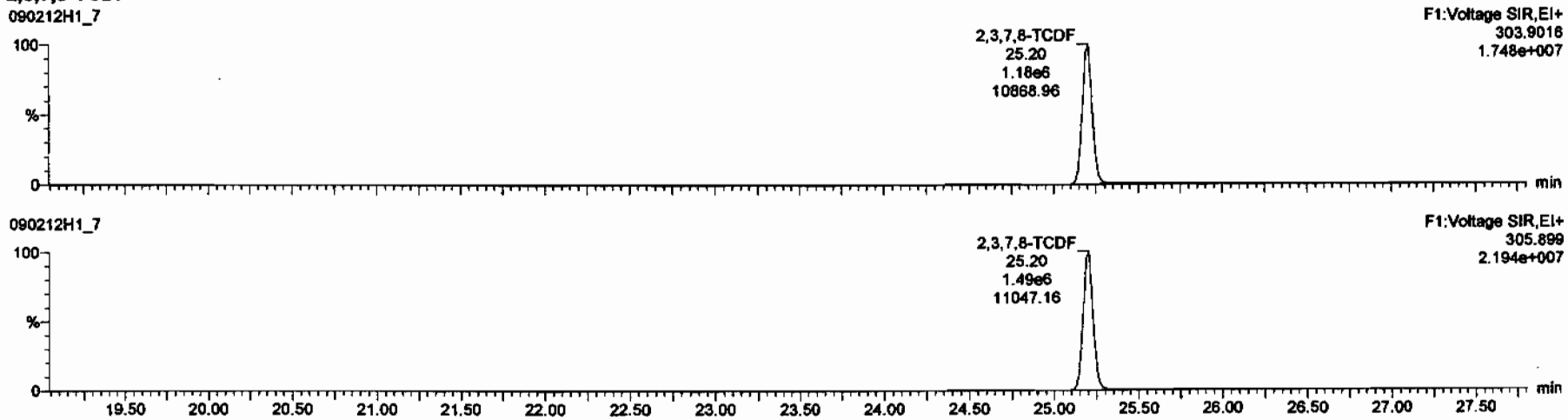

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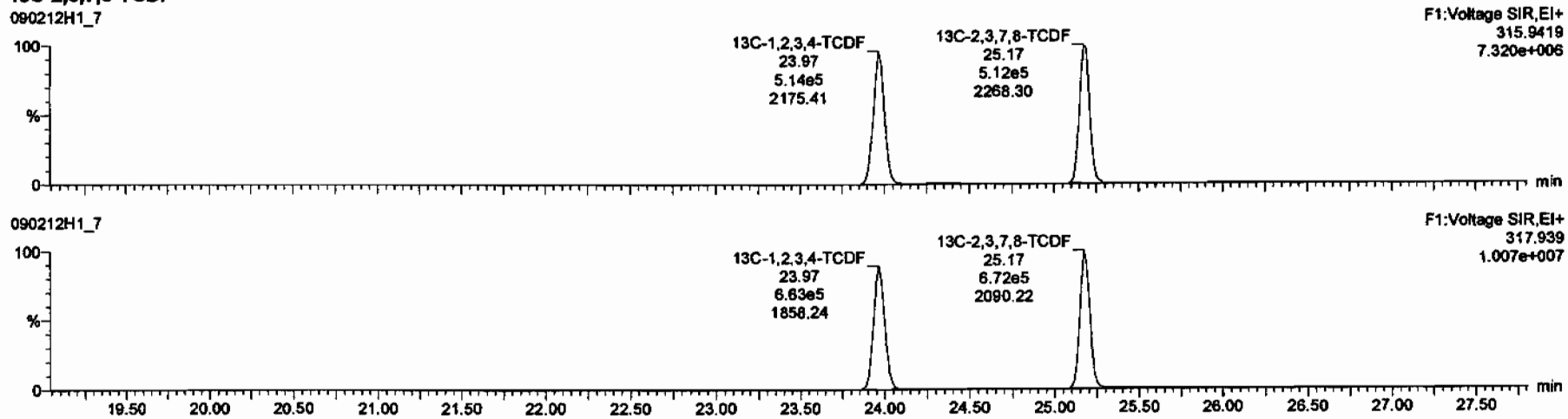

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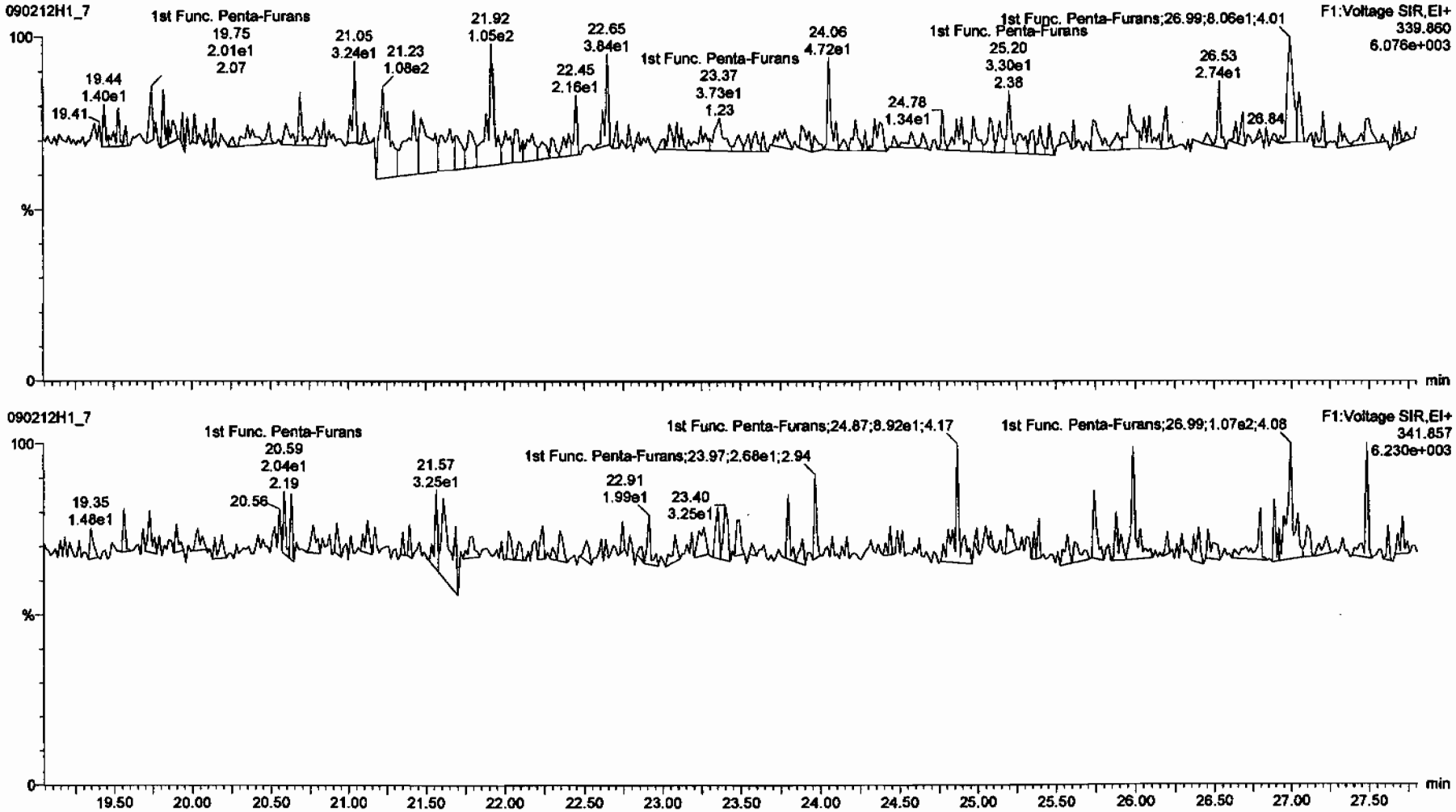

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1,2,3,7,8-PeCDF

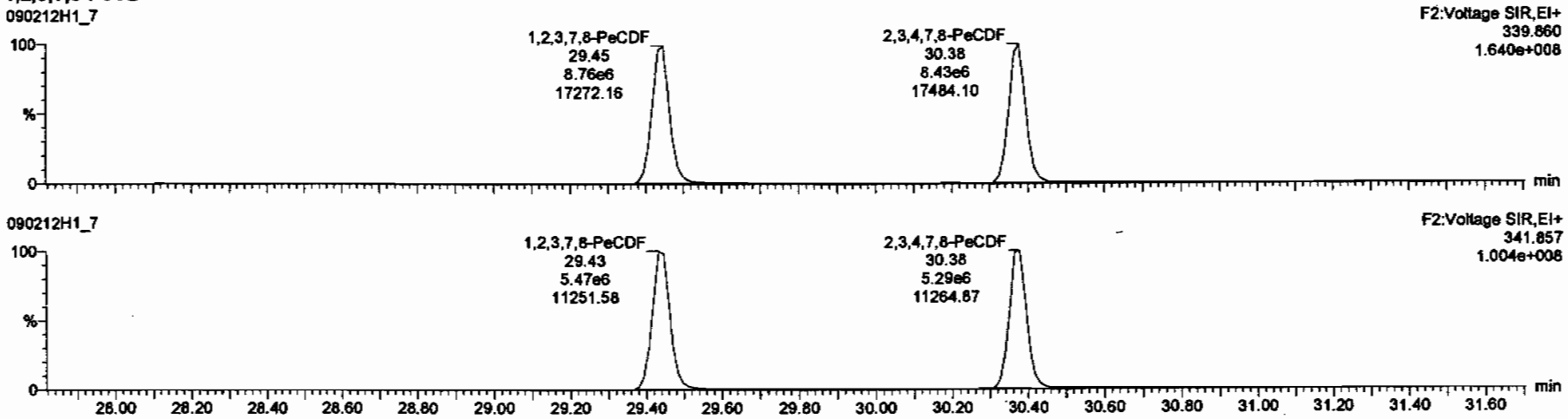

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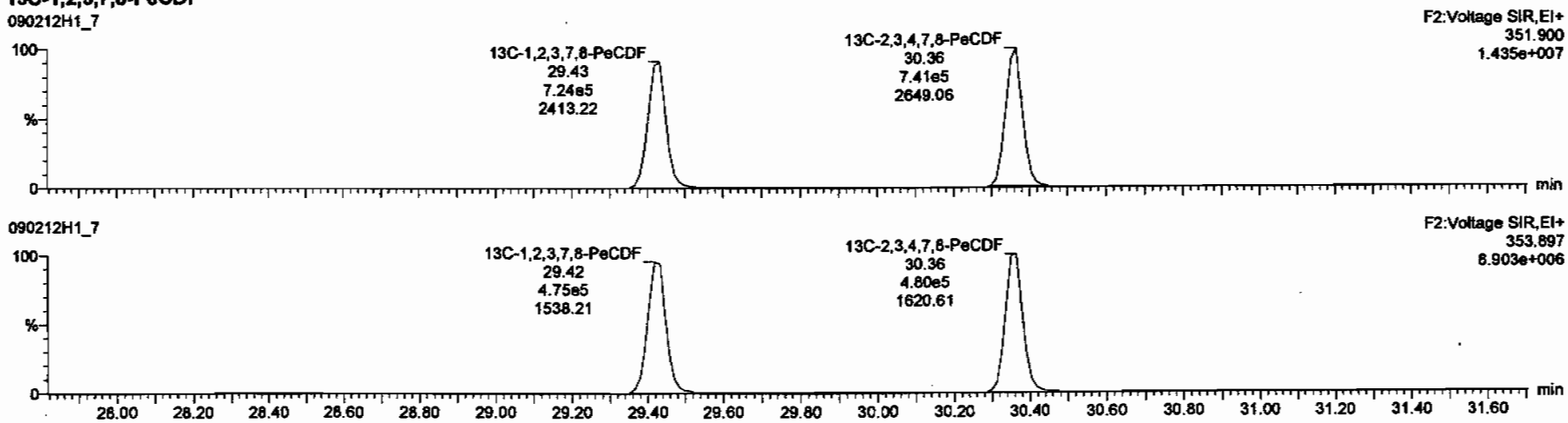

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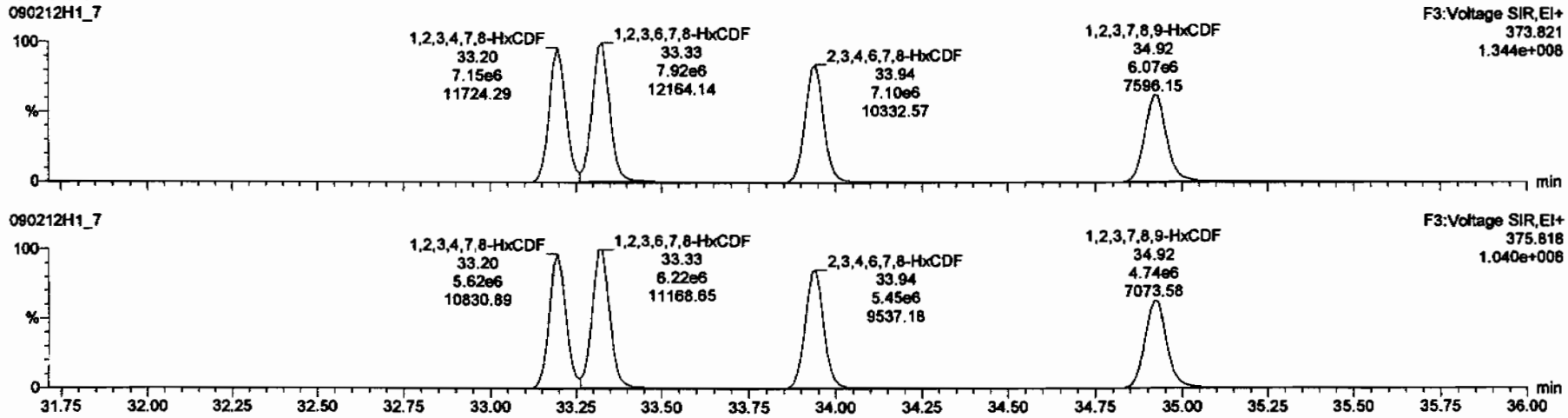

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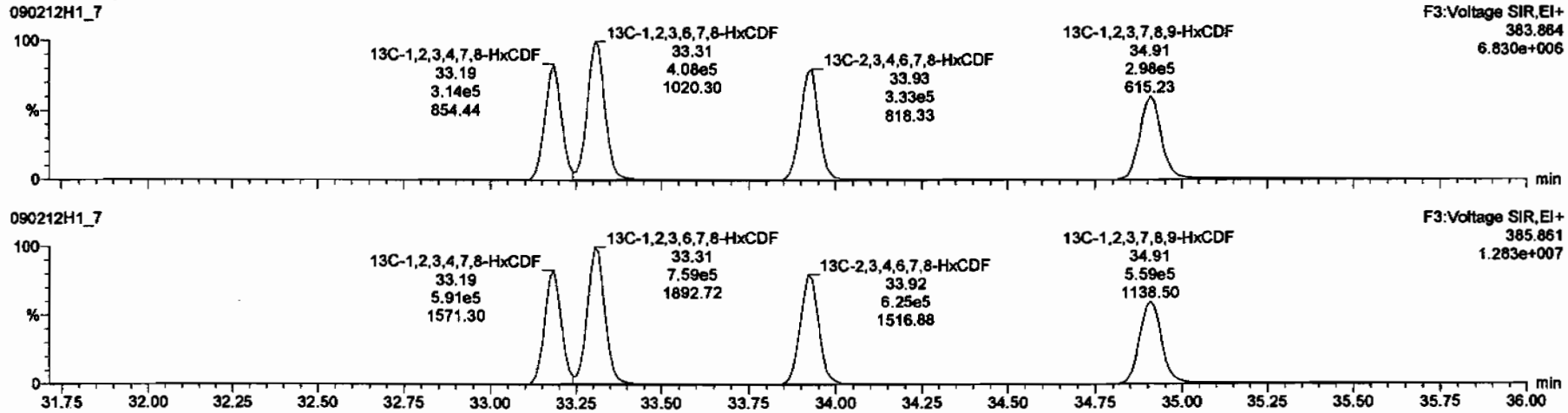

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1,2,3,4,6,7,8-HpCDF

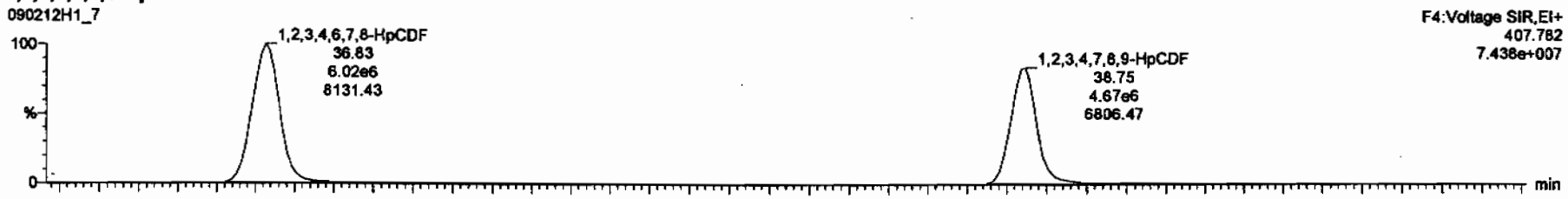

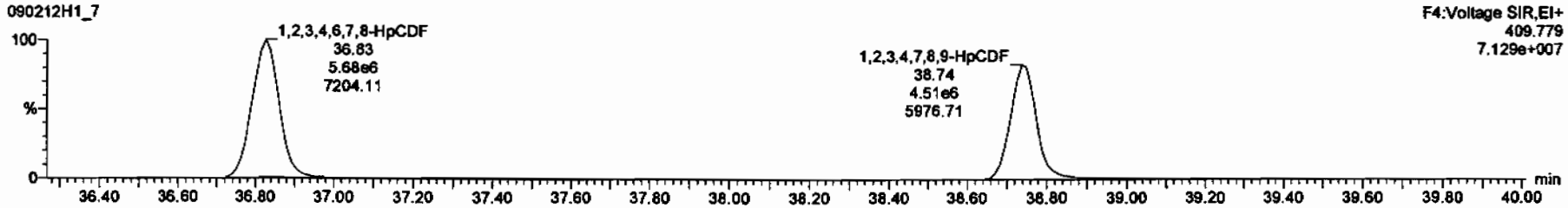

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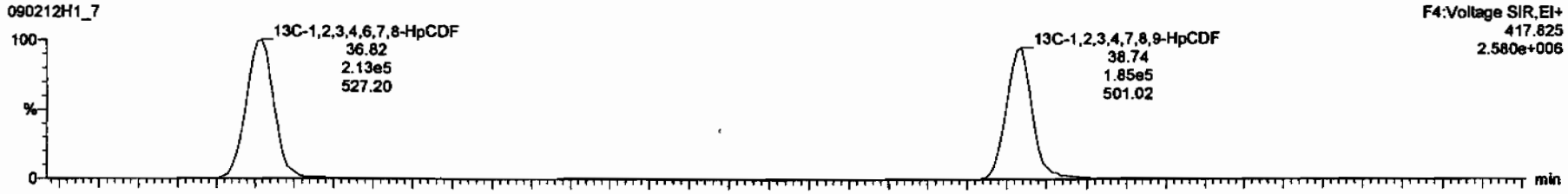

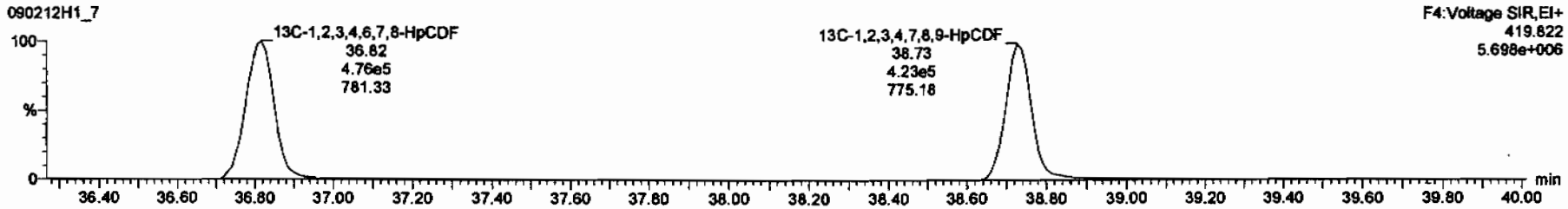

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OCDF

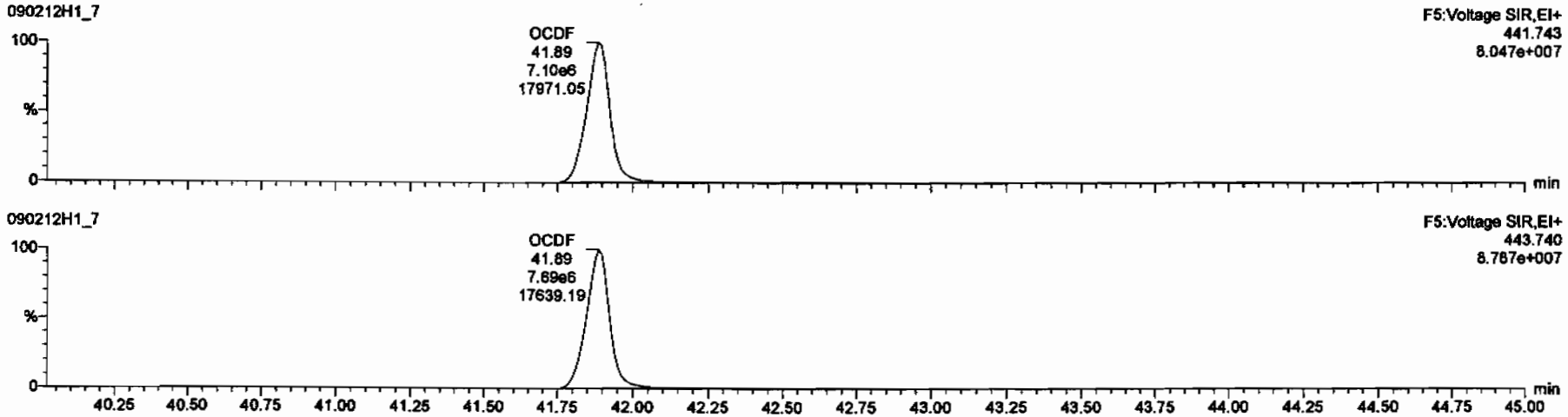

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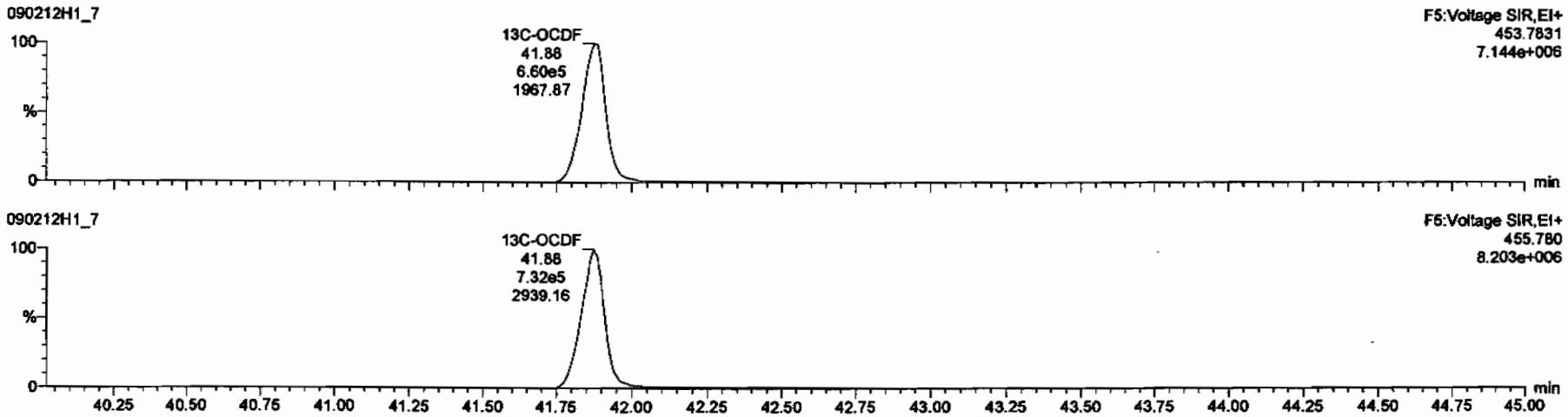

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PFK1

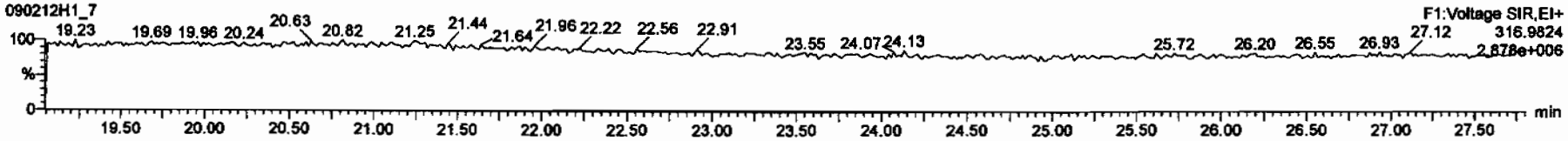

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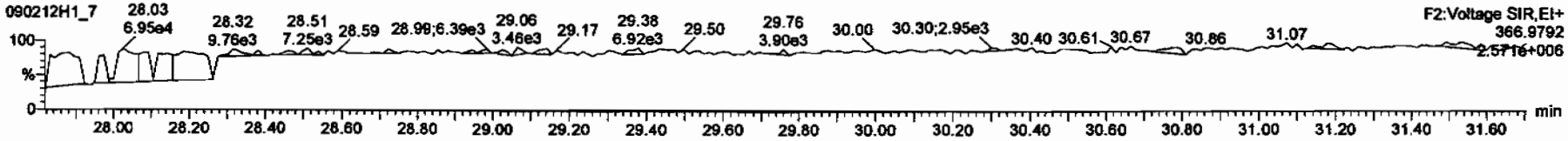

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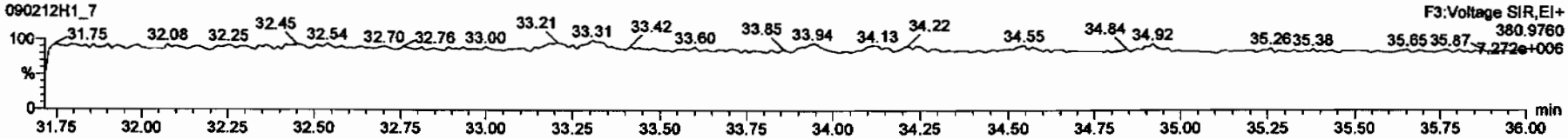

PFK4

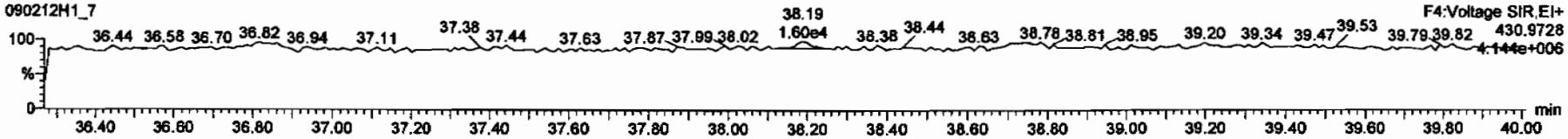

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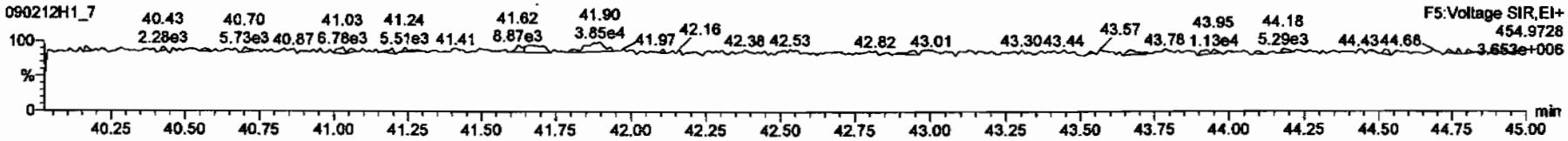

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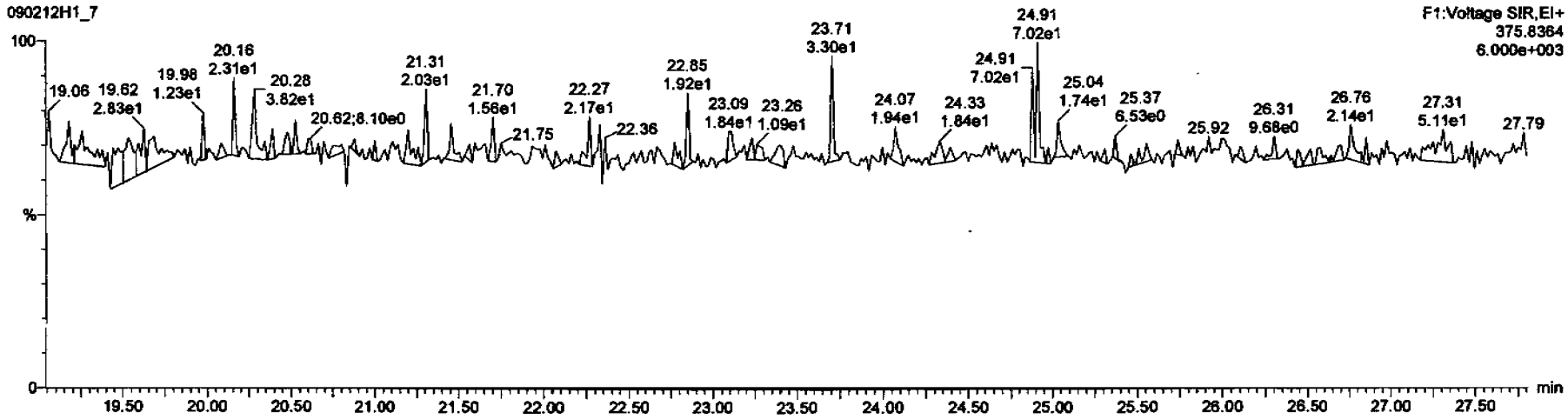

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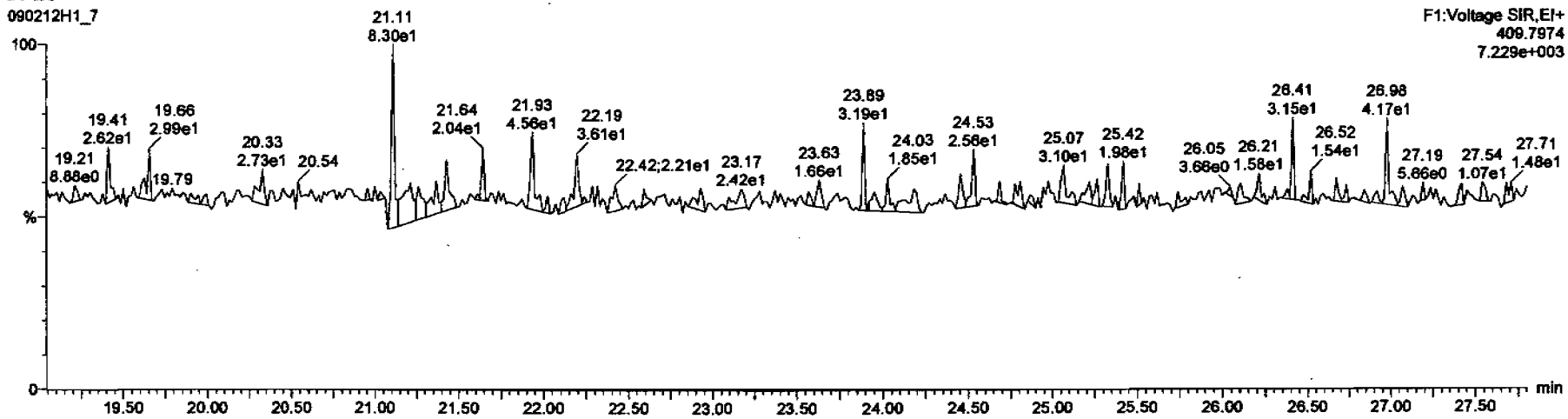

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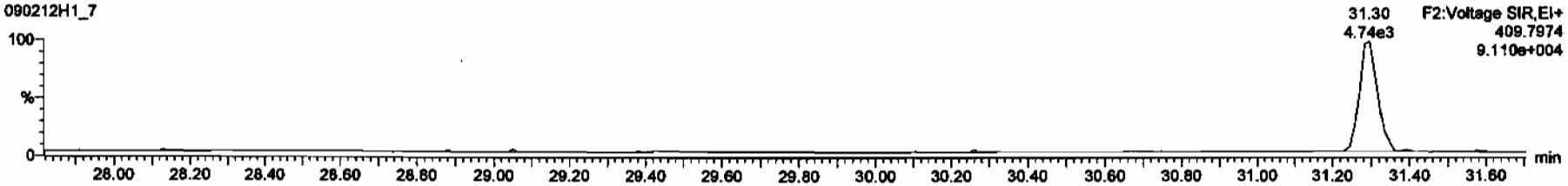

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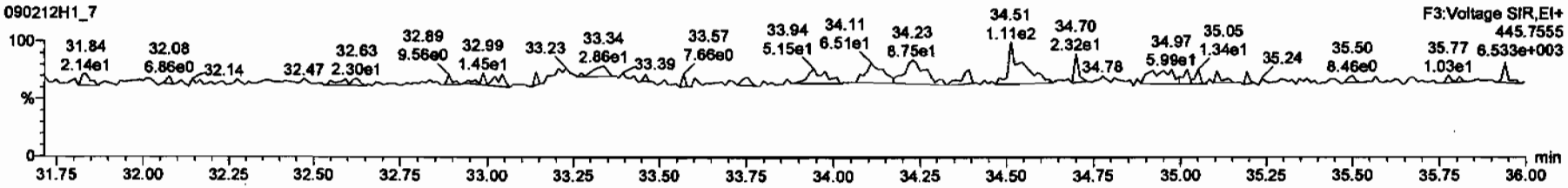

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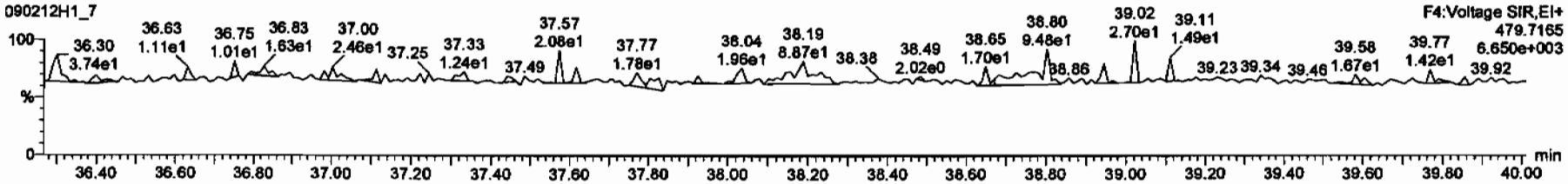

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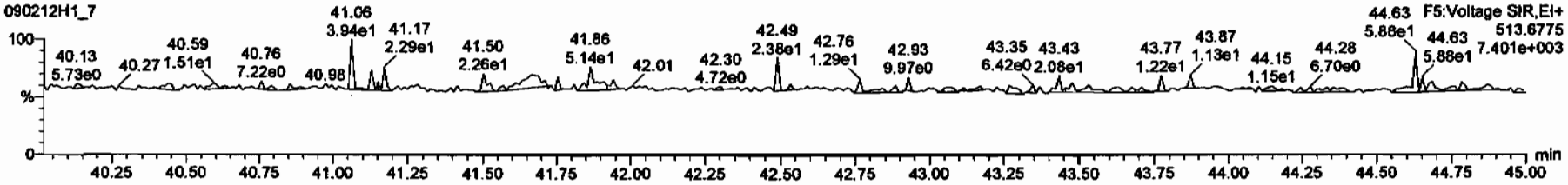

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M 292.9824 R 13769

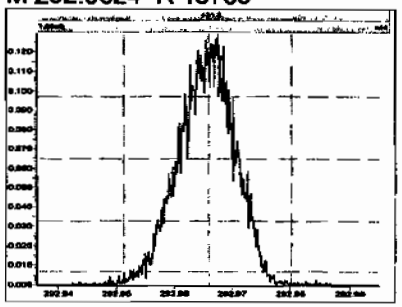

M 304.9824 R 14205

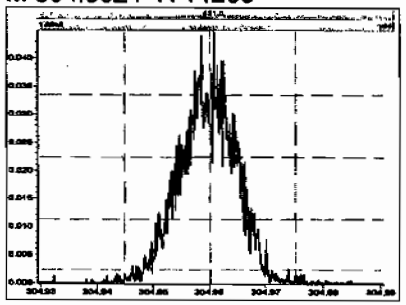

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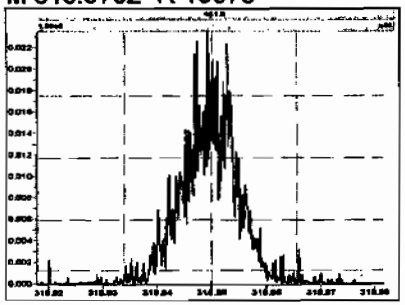

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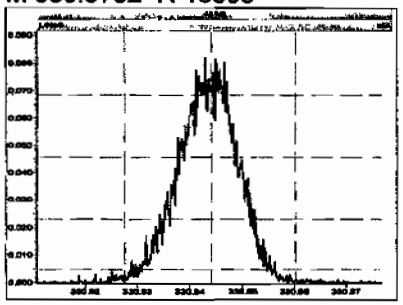

M 342.9792 R 13710

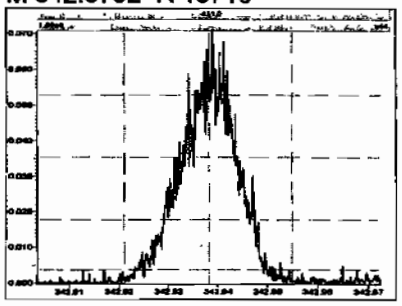

M 354.9792 R 14492

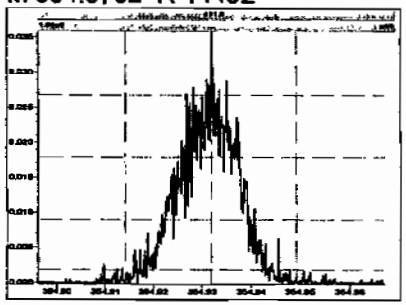

M 366.9792 R 14631

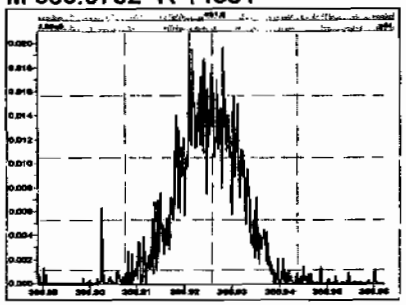

M 380.9760 R 13026

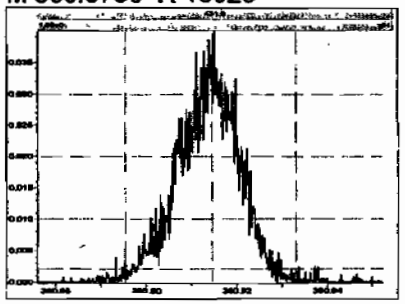

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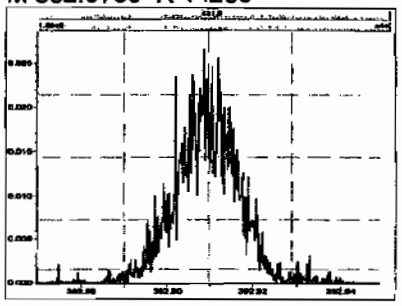

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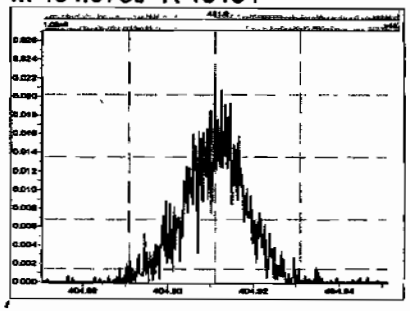

M 416.9760 R 15880

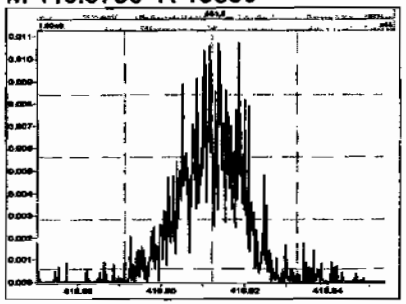

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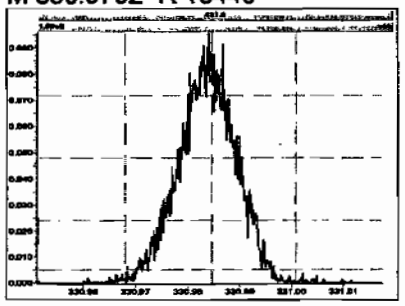

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M 342.9792 R 13880

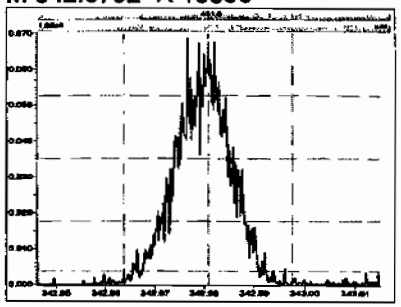

M 354.9792 R 14292

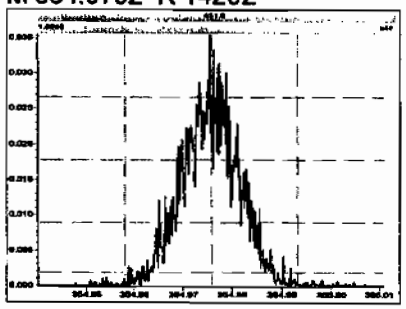

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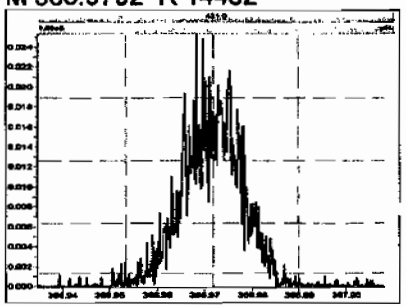

M 380.9760 R 13928

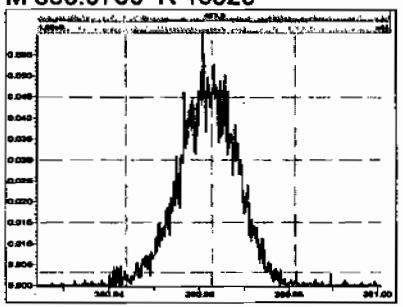

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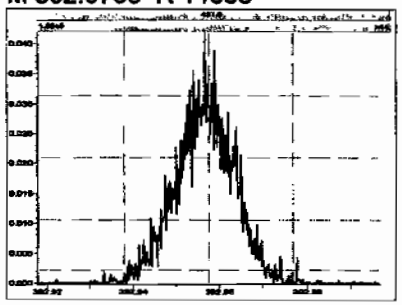

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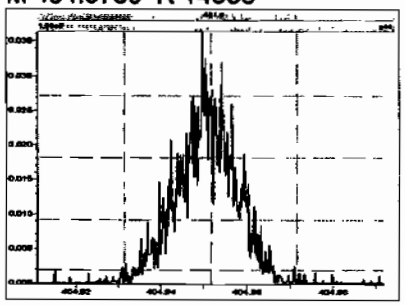

M 416.9760 R 15053

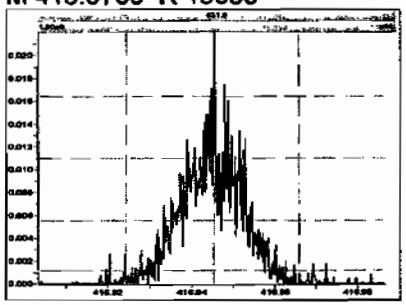

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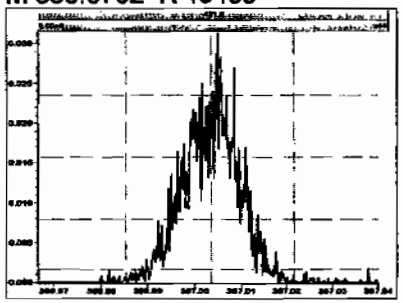

M 380.9760 R 14220

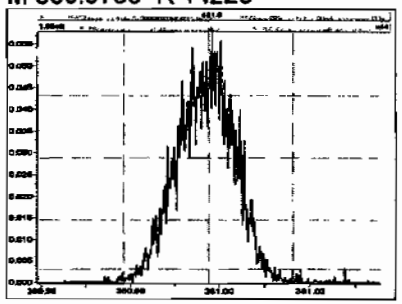

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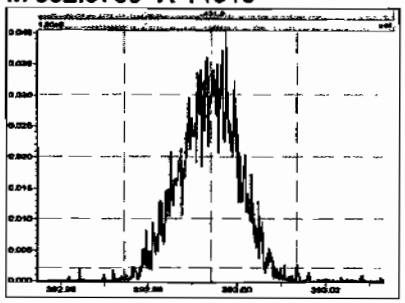

M 404.9760 R 14971

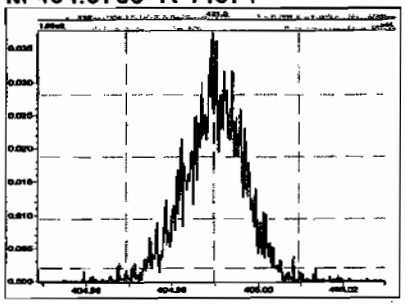

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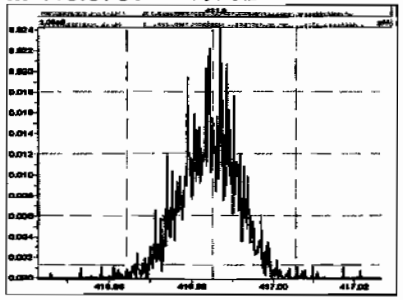

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M 430.9728 R 14874

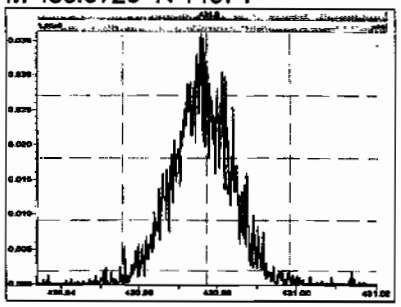

M 442.9728 R 15394

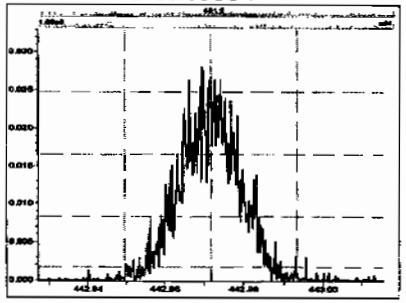

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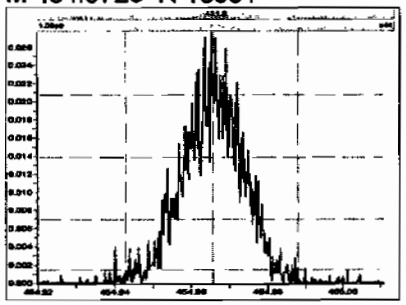

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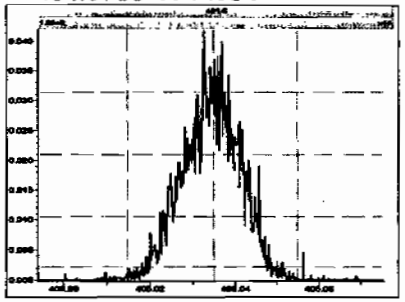

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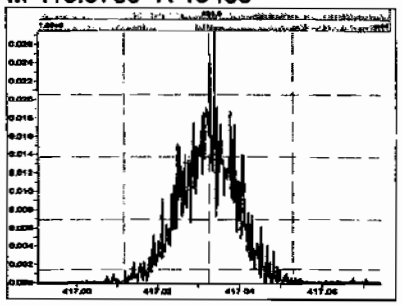

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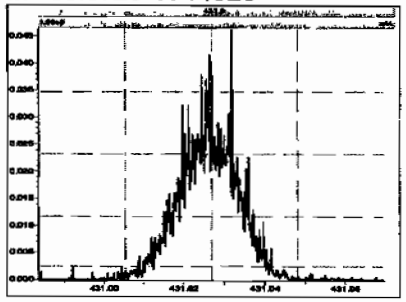

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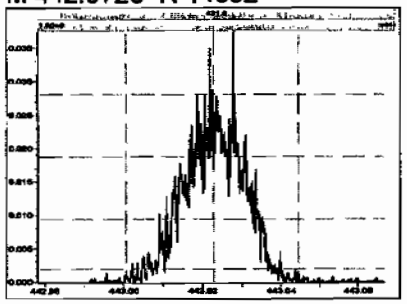

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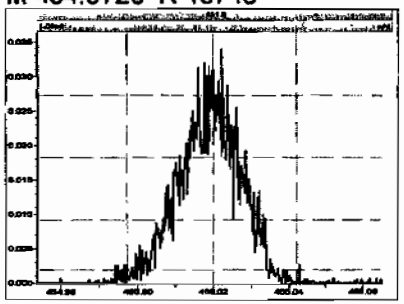

M 466.9728 R 16090

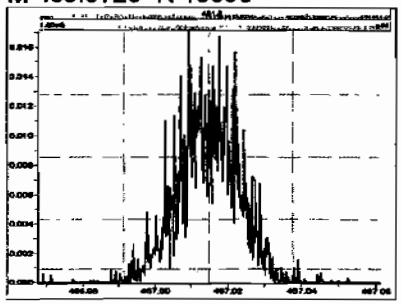

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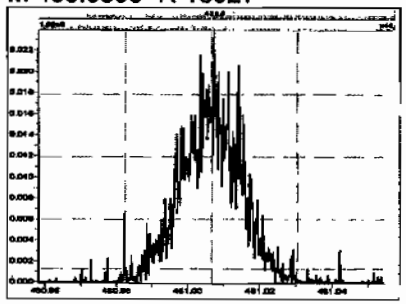

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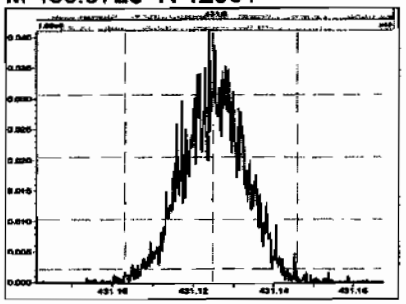

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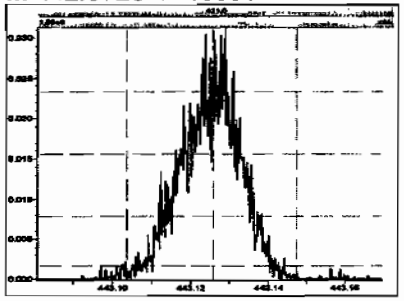

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M 454.9728 R 12791

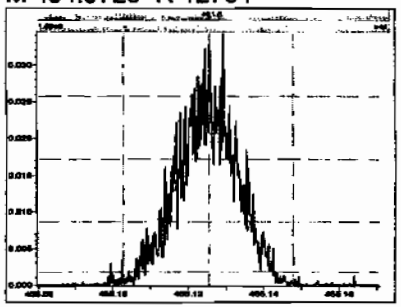

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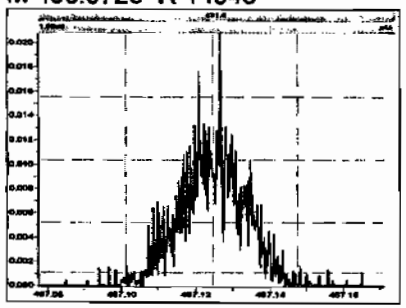

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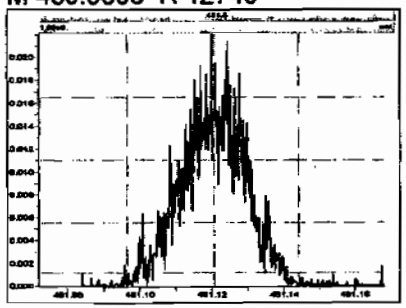

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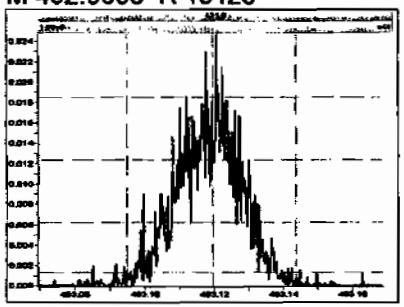

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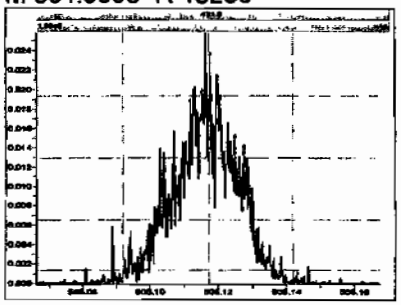

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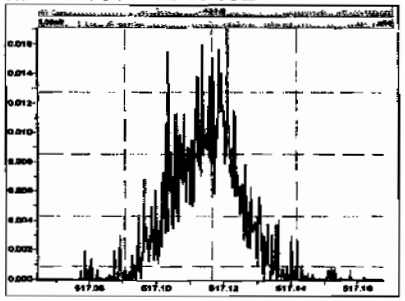

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
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Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1	2,3,7,8-TCDD	2.66e4	0.81	NO	1.08	1.000	25.98	1.001	9.5090		0.0723	9.5090
2	1,2,3,7,8-PeCDD	1.01e5	0.61	NO	1.03	1.000	30.65	1.000	47.444		0.172	47.444
3	1,2,3,4,7,8-HxCDD	9.43e4	1.26	NO	1.00	1.000	34.11	1.001	60.533		0.392	60.533
4	1,2,3,6,7,8-HxCDD	8.97e4	1.28	NO	1.13	1.000	34.22	1.000	41.292		0.312	41.292
5	1,2,3,7,8,9-HxCDD	9.40e4	1.29	NO	1.10	1.000	34.52	1.009	48.966		0.335	48.966
6	1,2,3,4,6,7,8-HpCDD	7.06e4	1.02	NO	1.06	1.000	36.18	1.001	47.757		0.360	47.757
7	OCDD	1.05e5	0.91	NO	1.18	1.000	41.66	1.000	87.851		0.375	87.851
8	2,3,7,8-TCDF	3.59e4	0.80	NO	1.09	1.000	25.20	1.001	9.2692		0.0713	9.2692
9	1,2,3,7,8-PeCDF	1.90e5	1.60	NO	1.16	1.000	29.43	1.001	47.569		0.197	47.569
10	2,3,4,7,8-PeCDF	1.76e5	1.60	NO	1.12	1.000	30.36	1.001	49.959		0.207	49.959
11	1,2,3,4,7,8-HxCDF	1.51e5	1.22	NO	1.41	1.000	33.19	1.000	47.242		0.234	47.242
12	1,2,3,6,7,8-HxCDF	1.99e5	1.24	NO	1.22	1.000	33.31	1.000	52.247		0.205	52.247
13	2,3,4,6,7,8-HxCDF	1.49e5	1.26	NO	1.28	1.000	33.93	1.001	48.194		0.285	48.194
14	1,2,3,7,8,9-HxCDF	1.18e5	1.28	NO	1.28	1.000	34.91	1.000	50.089		0.402	50.089
15	1,2,3,4,6,7,8-HpCDF	1.26e5	1.05	NO	1.69	1.000	36.81	1.000	45.609		0.324	45.609
16	1,2,3,4,7,8,9-HpCDF	9.92e4	1.09	NO	1.48	1.000	38.74	1.000	53.044		0.451	53.044
17	OCDF	1.36e5	0.92	NO	1.10	1.000	41.88	1.001	~~77825~~		102	77825
18	13C-2,3,7,8-TCDD	2.60e5	0.79	NO	1.01	1.000	25.97	1.022	100.68	101	0.251	
19	13C-1,2,3,7,8-PeCDD	2.07e5	0.62	NO	0.827	1.000	30.64	1.206	98.194	98.2	0.366	
20	13C-1,2,3,4,7,8-HxCDD	1.56e5	1.23	NO	0.916	1.000	34.08	0.988	96.272	96.3	1.12	
21	13C-1,2,3,6,7,8-HxCDD	1.93e5	1.30	NO	0.921	1.000	34.21	0.991	118.79	119	1.12	
22	13C-1,2,3,4,6,7,8-HpCDD	1.39e5	1.04	NO	0.708	1.000	38.16	1.106	111.12	111	0.936	
23	13C-OCDD	2.03e5	0.90	NO	0.503	1.000	41.65	1.207	229.27	115	1.10	
24	13C-2,3,7,8-TCDF	3.56e5	0.77	NO	0.977	1.000	25.17	0.991	47241	~~47200~~	47.8	
25	13C-1,2,3,7,8-PeCDF	3.45e5	1.53	NO	0.896	1.000	29.41	1.158	49875	~~49900~~	135	
26	13C-2,3,4,7,8-PeCDF	3.15e5	1.57	NO	0.900	1.000	30.34	1.194	45355	~~45400~~	135	
27	13C-1,2,3,4,7,8-HxCDF	2.27e5	0.52	NO	1.17	1.000	33.17	0.962	110.01	110	1.09	
28	13C-1,2,3,6,7,8-HxCDF	3.11e5	0.53	NO	1.52	1.000	33.29	0.965	116.12	116	0.841	
29	13C-2,3,4,6,7,8-HxCDF	2.41e5	0.53	NO	1.25	1.000	33.91	0.983	109.27	109	1.02	
30	13C-1,2,3,7,8,9-HxCDF	1.87e5	0.53	NO	1.05	1.000	34.90	1.011	100.48	100	1.21	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	Name	Resp	R/		RRF	M/	RT	RRT	Conc	R	
	31 13C-1,2,3,4,6,7,8-HpCDF	1.64e5	0.42	NO	0.868	1.000	36.80	1.066	107.17	107	0.875
	32 13C-1,2,3,4,7,8,9-HpCDF	1.26e5	0.43	NO	0.727	1.000	38.73	1.122	98.571	98.6	1.05
	33 13C-OCDF	3.18e2	0.17	YES	0.760	1.000	41.82	1.212	0.23753	~~8.419~~	0.197
	34 37Cl-2,3,7,8-TCDD	2.82e4			0.668	1.000	25.98	1.023	16.616	166	0.0976
	35 13C-1,2,3,4-TCDD	2.54e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.254
	36 13C-1,2,3,4-TCDF	7.72e2	0.44	YES	1.00	1.000	23.92	0.000	100.00	100	46.7
	37 13C-1,2,3,7,8,9-HxCDD	1.76e5	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	1.03

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qid

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDD

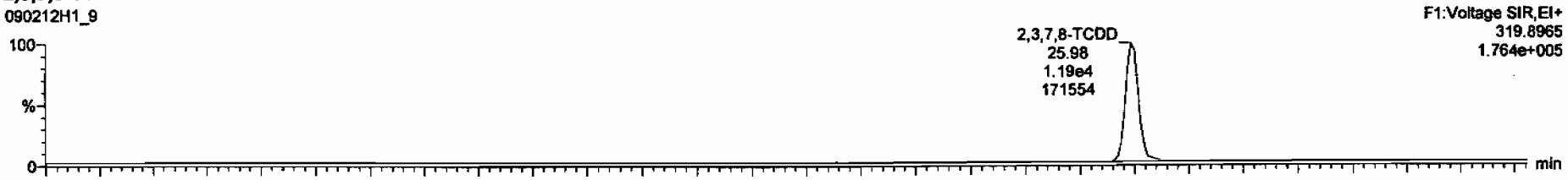

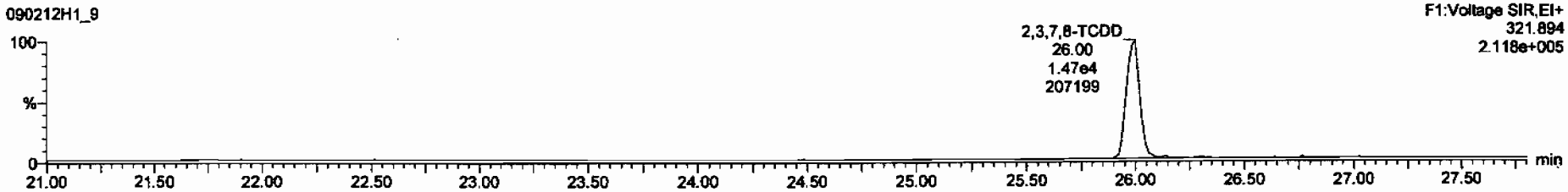

13C-2,3,7,8-TCDD

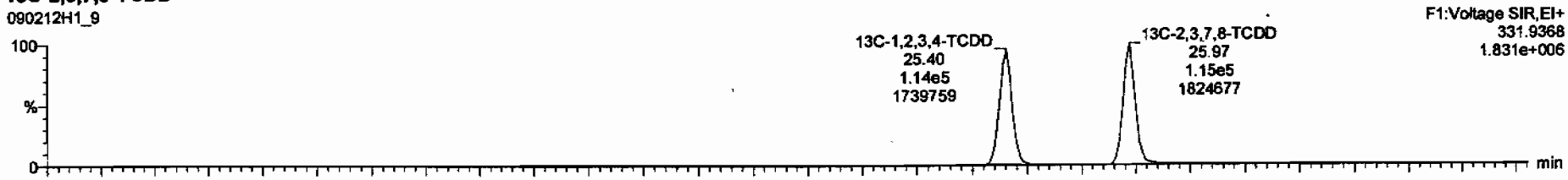

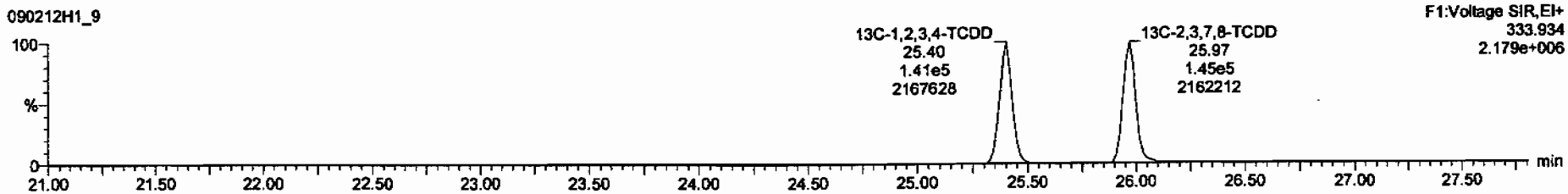

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

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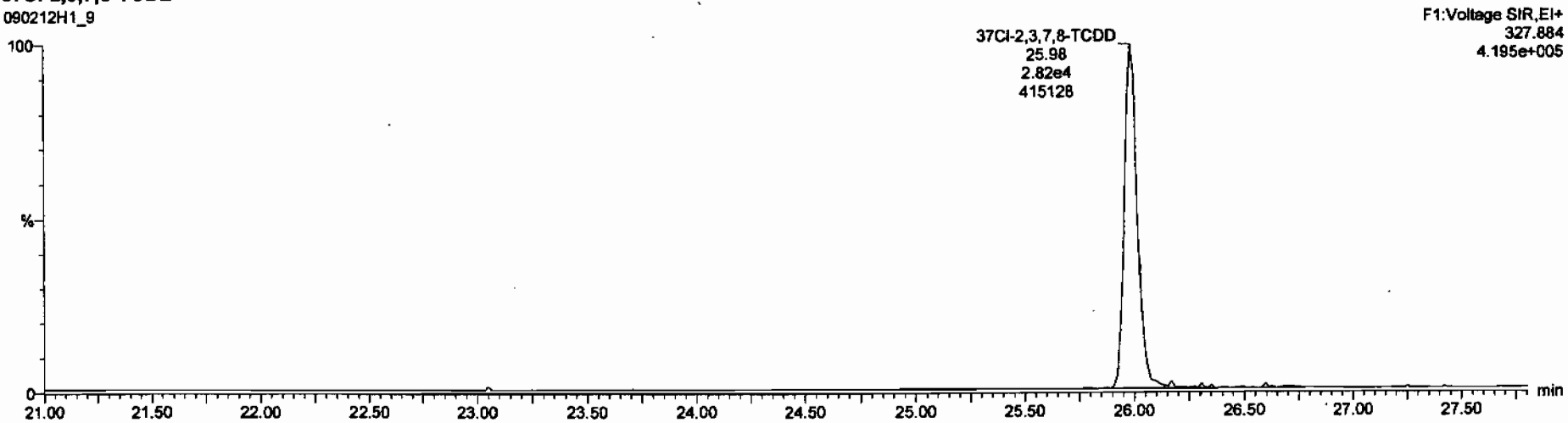

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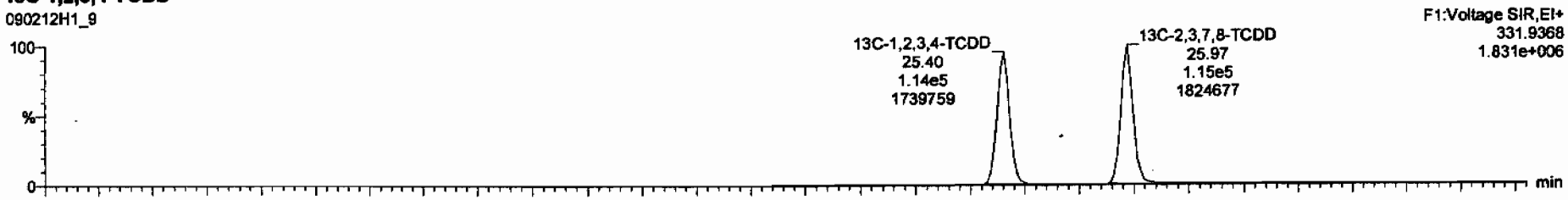

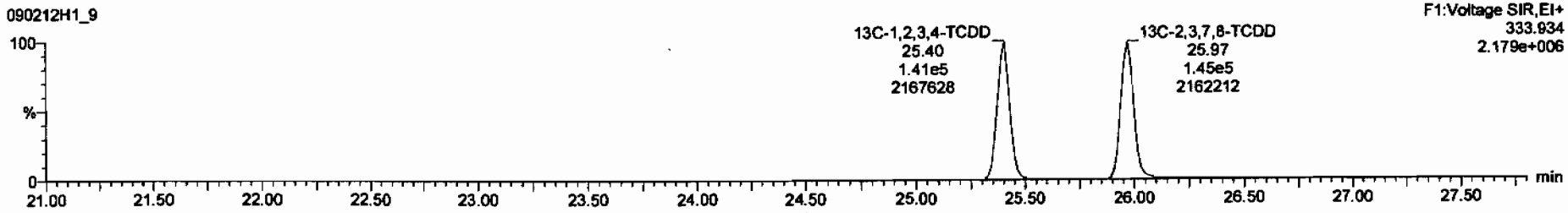

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,7,8-PeCDD

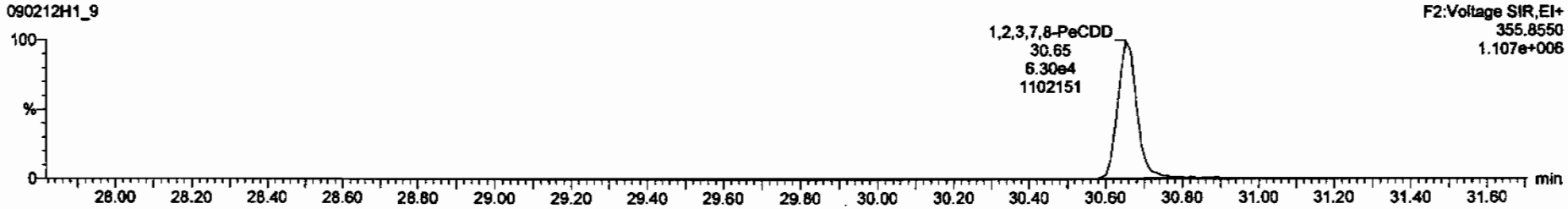

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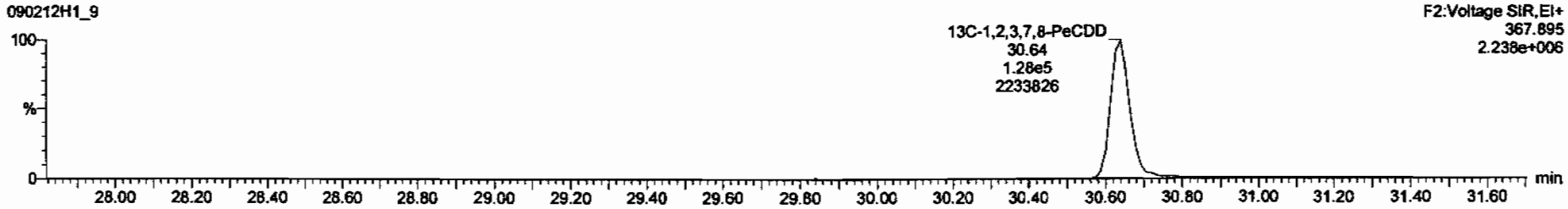

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,7,8-HxCDD

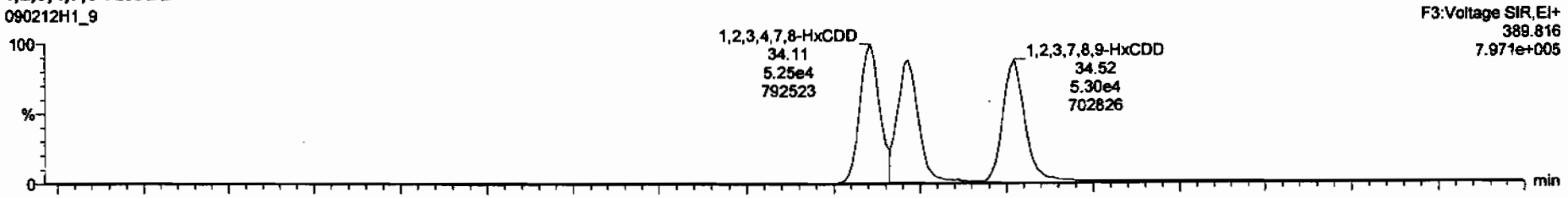

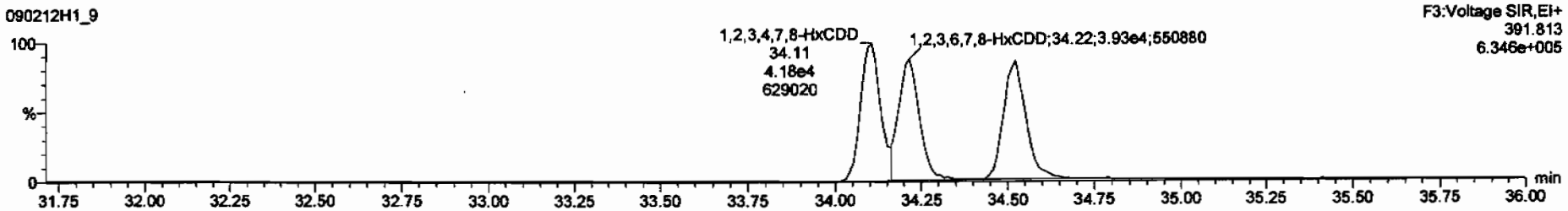

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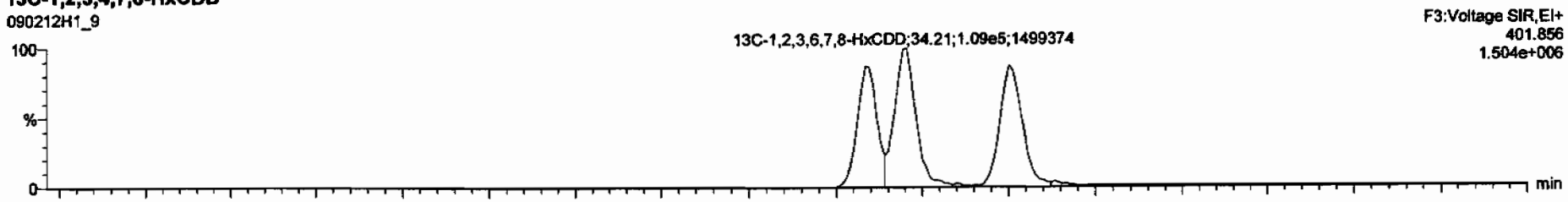

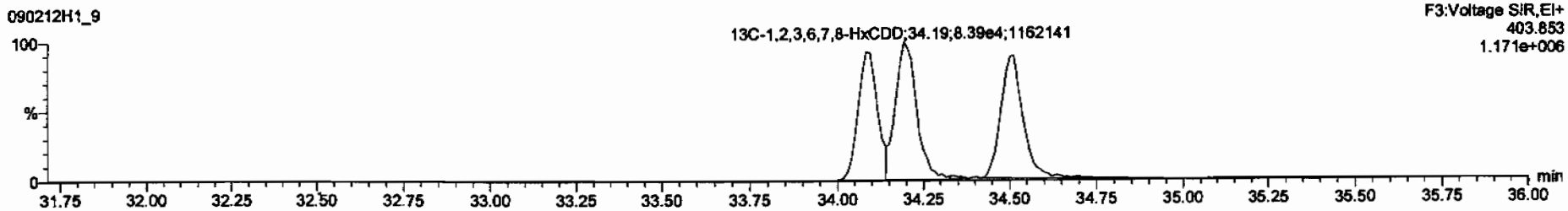

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1,2,3,4,6,7,8-HpCDD

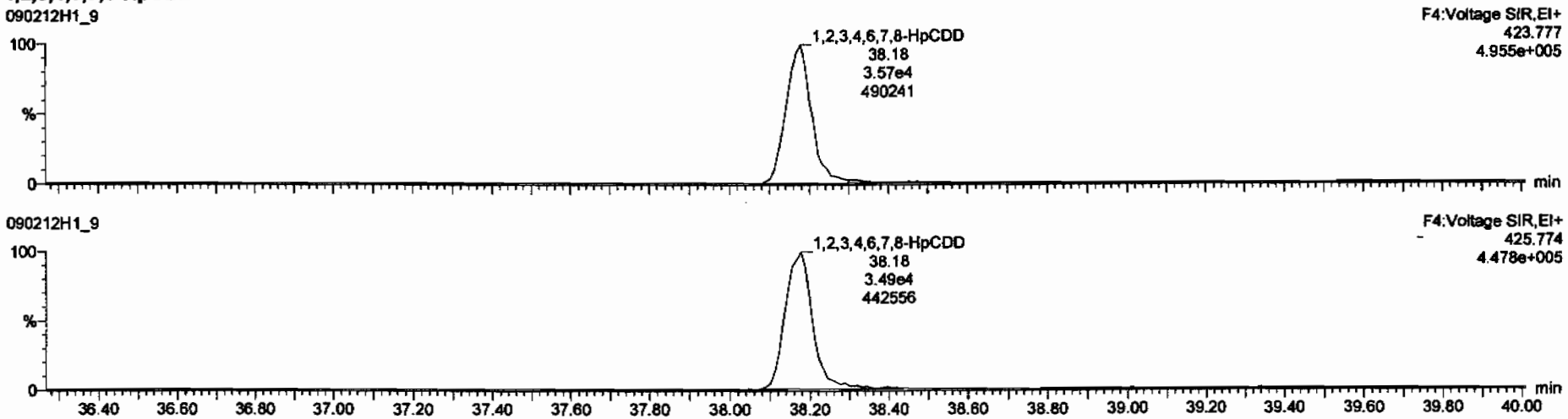

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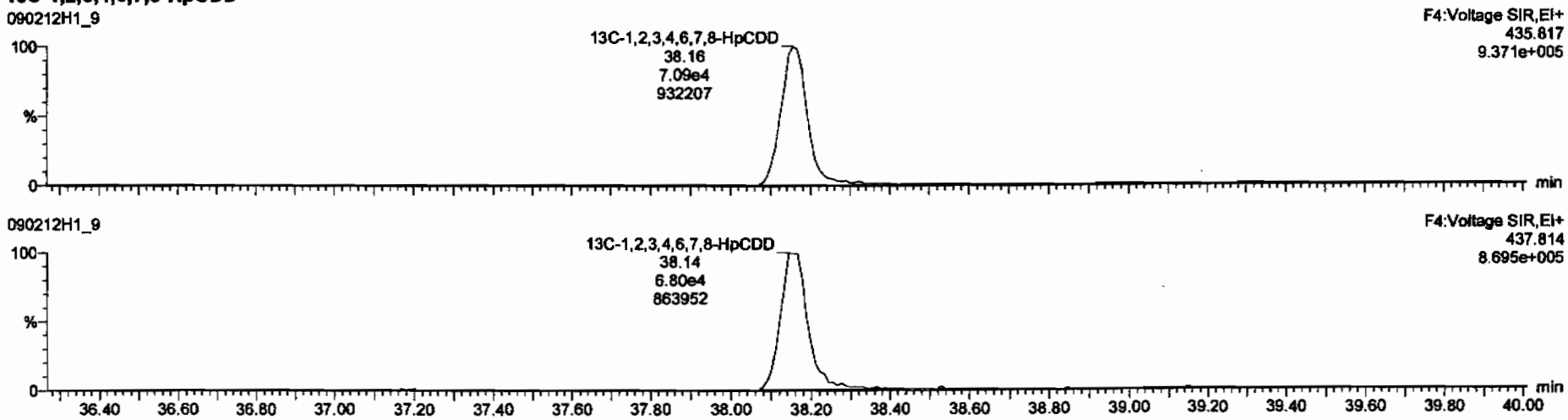

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

OCDD

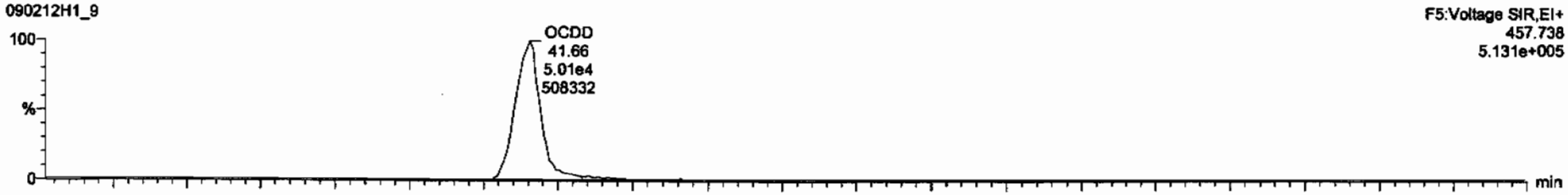

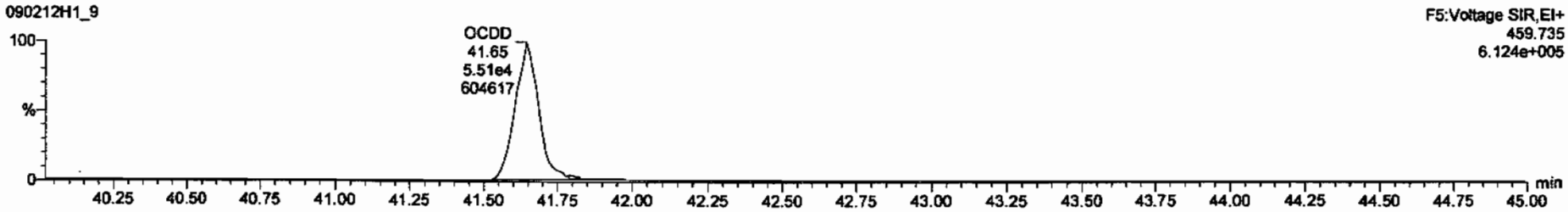

13C-OCDD

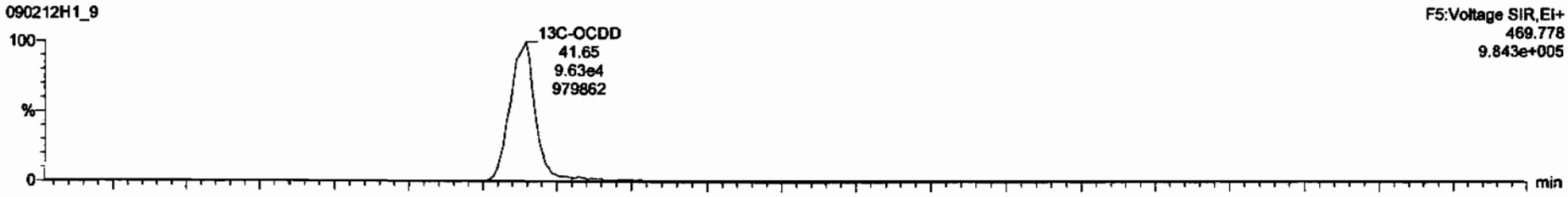

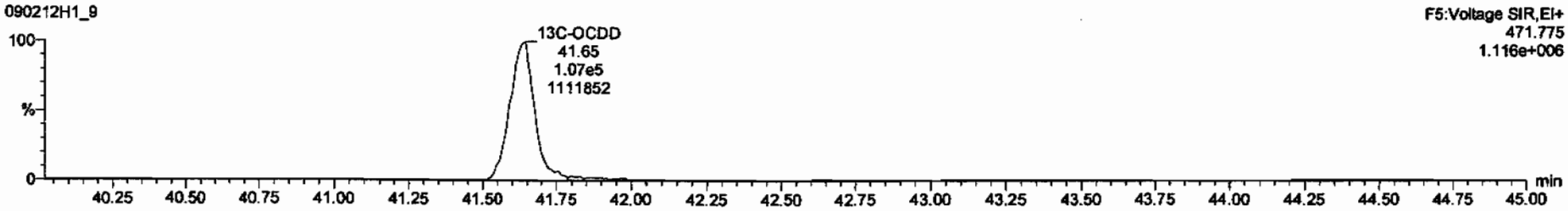

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDF

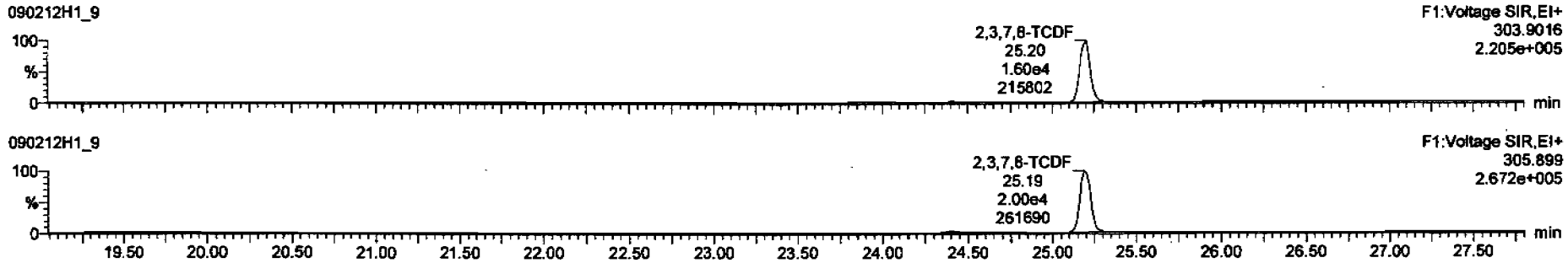

13C-2,3,7,8-TCDF

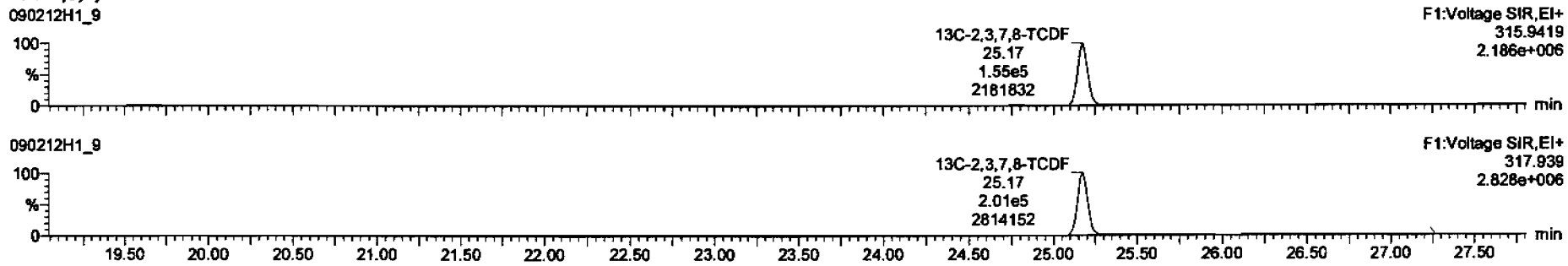

DPE1

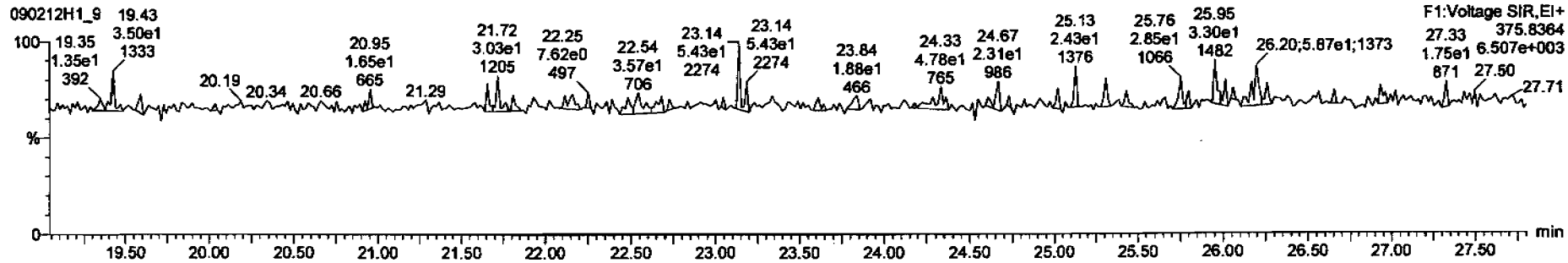

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1st Func. Penta-Furans

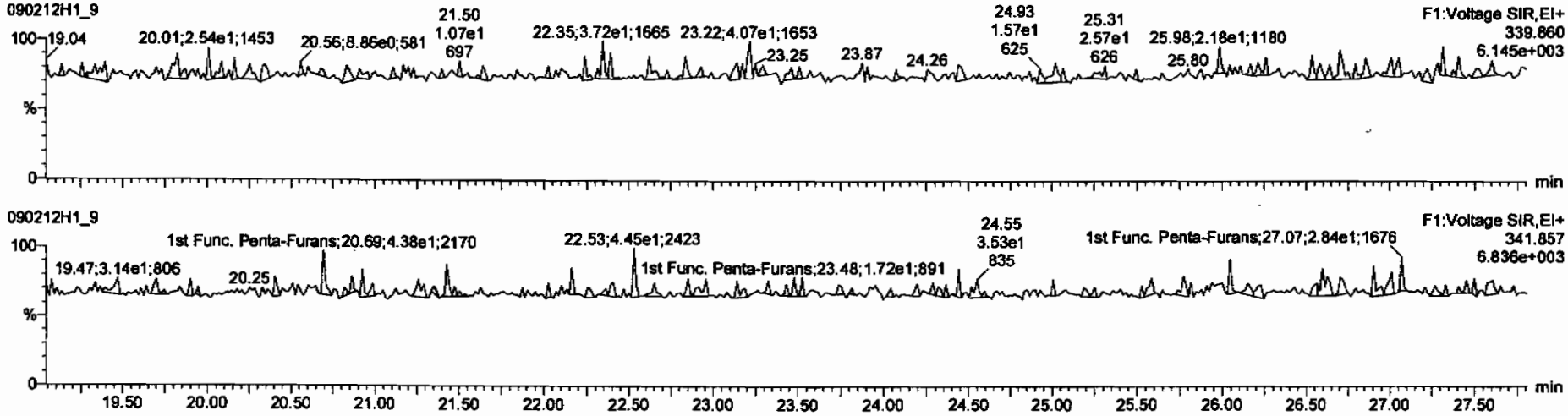

DPE6

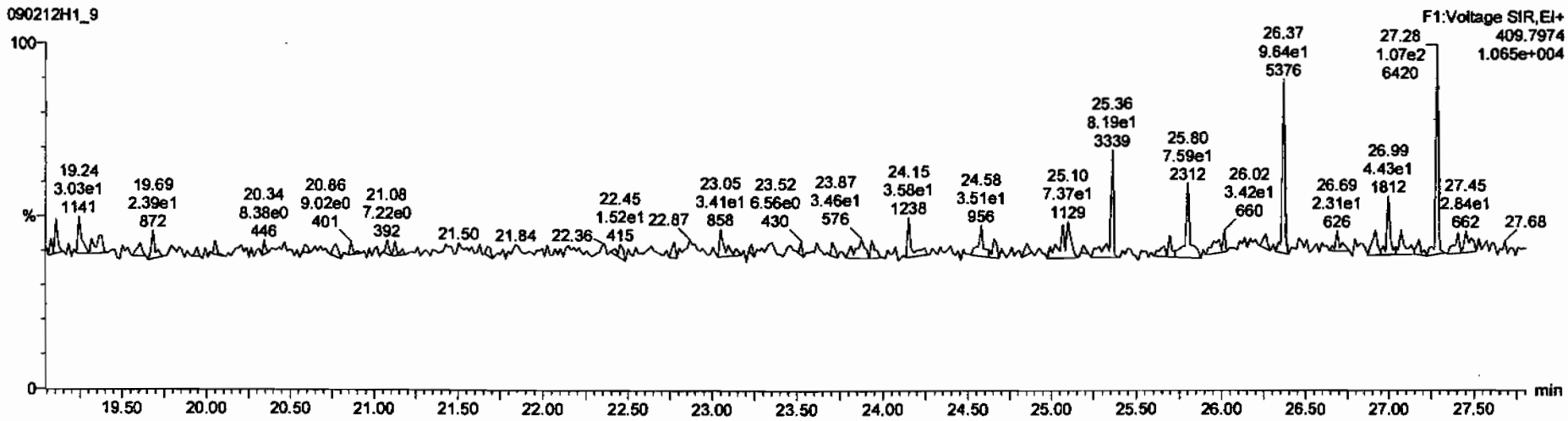

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Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,7,8-PeCDF

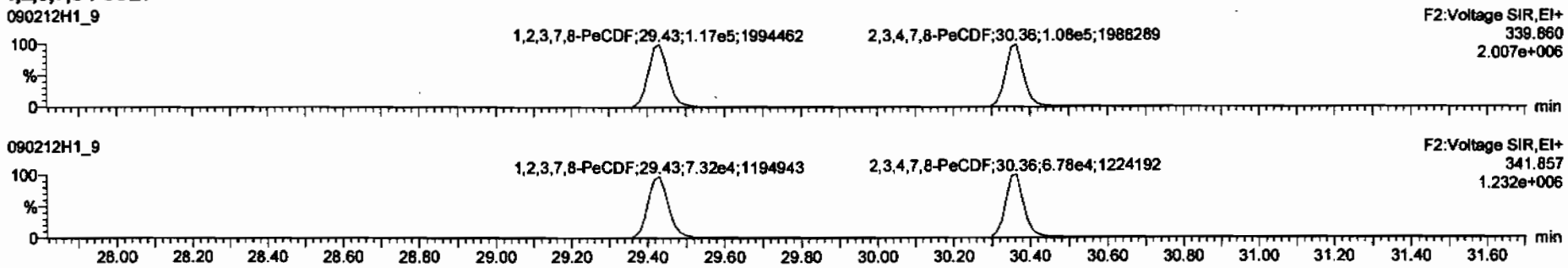

13C-1,2,3,7,8-PeCDF

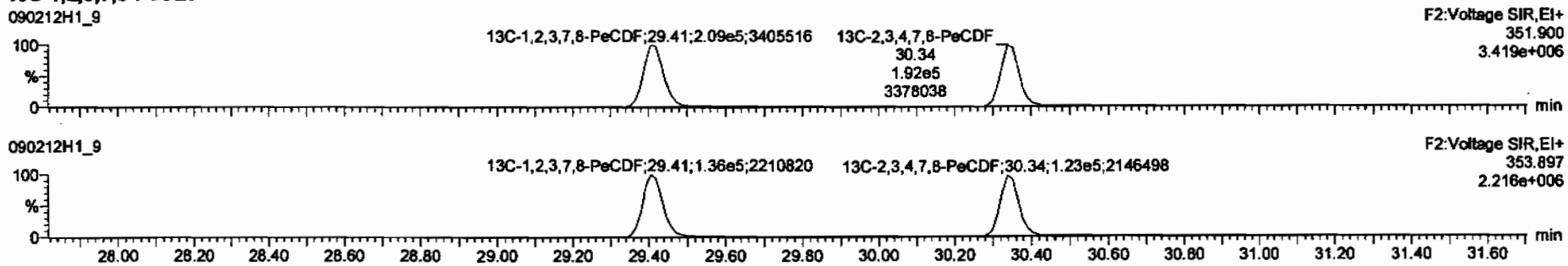

DPE2

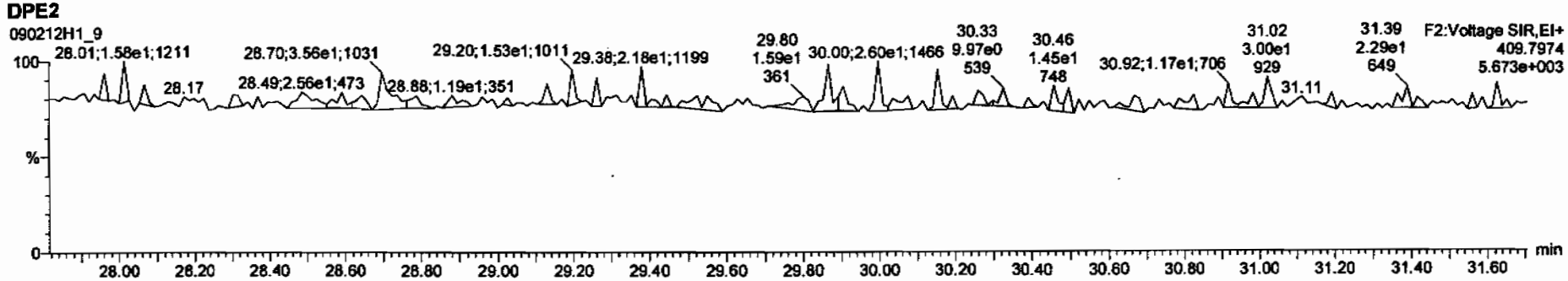

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,7,8-HxCDF

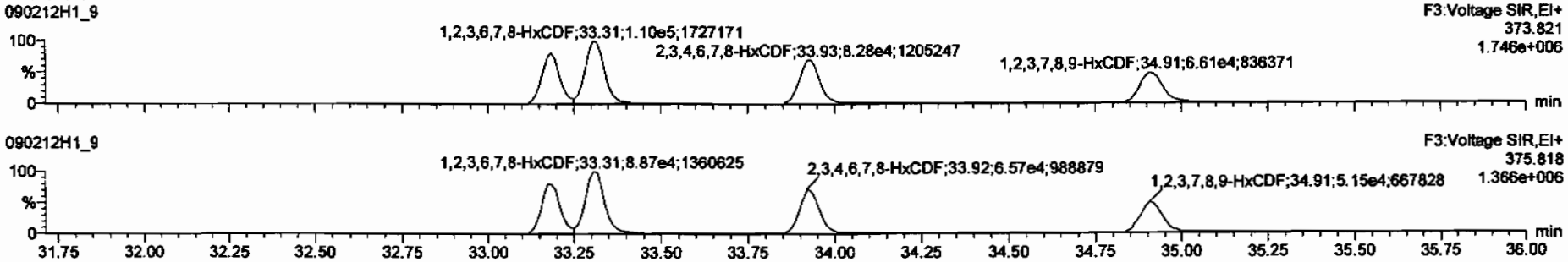

13C-1,2,3,4,7,8-HxCDF

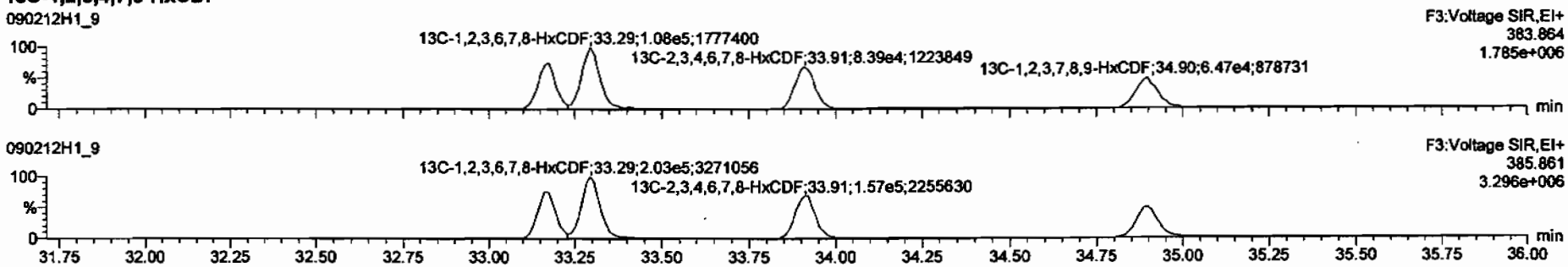

DPE3

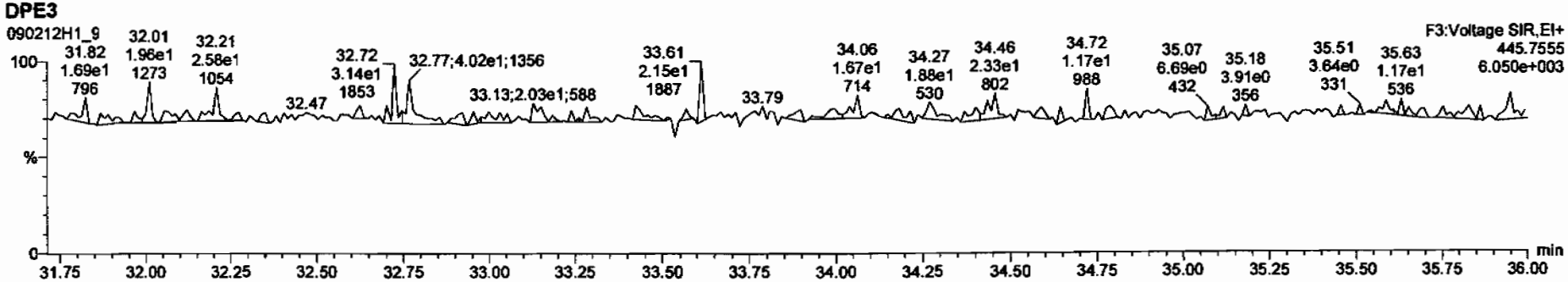

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,6,7,8-HpCDF

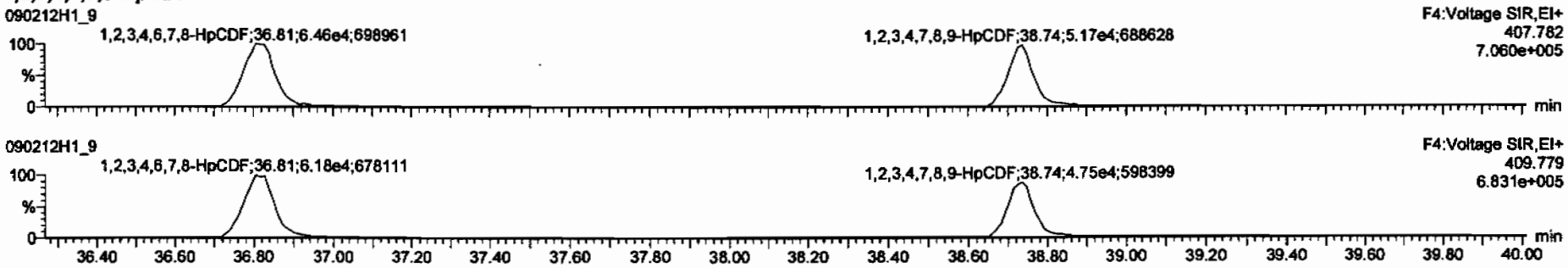

13C-1,2,3,4,6,7,8-HpCDF

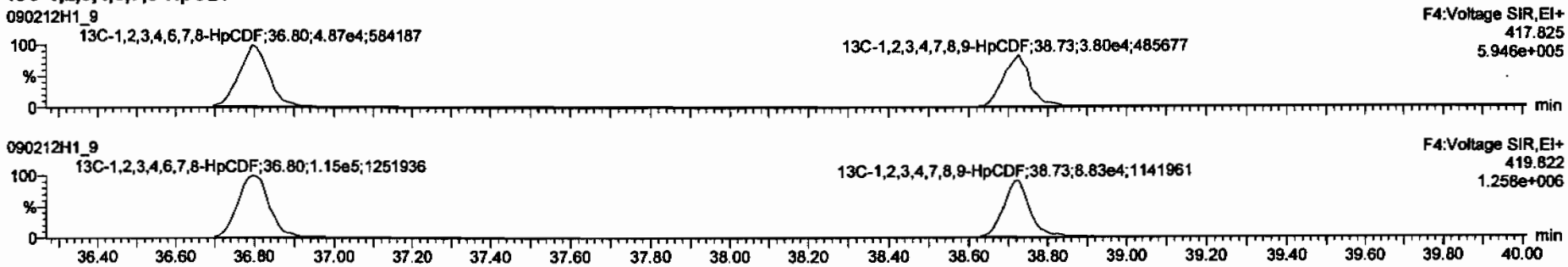

DPE4

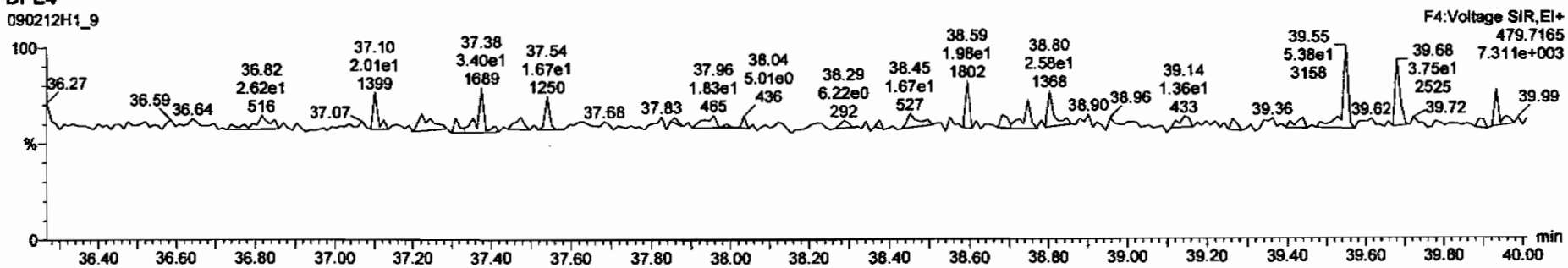

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

OCDF

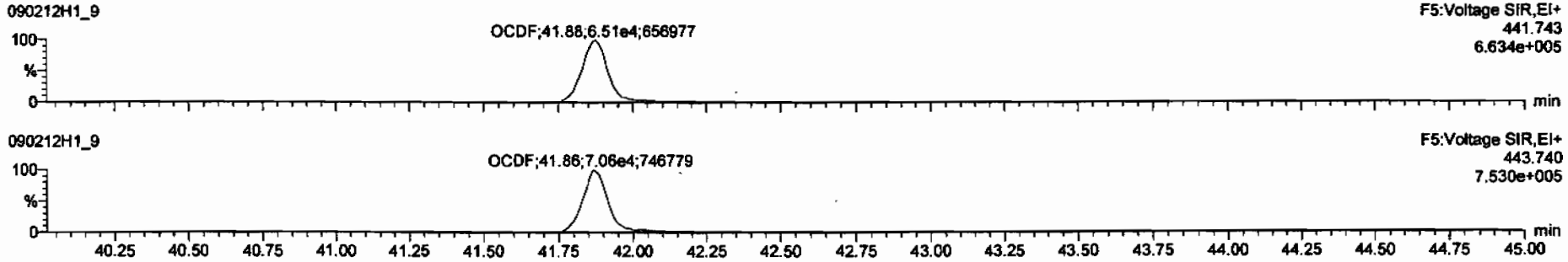

13C-OCDF

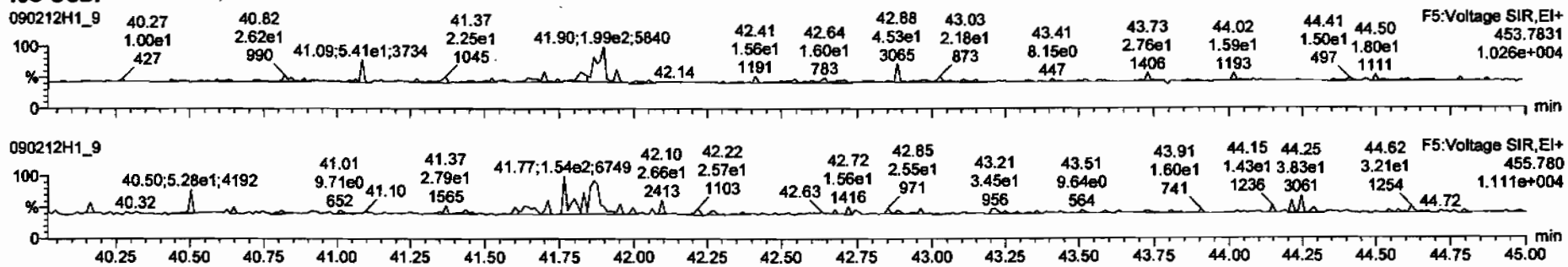

DPE5

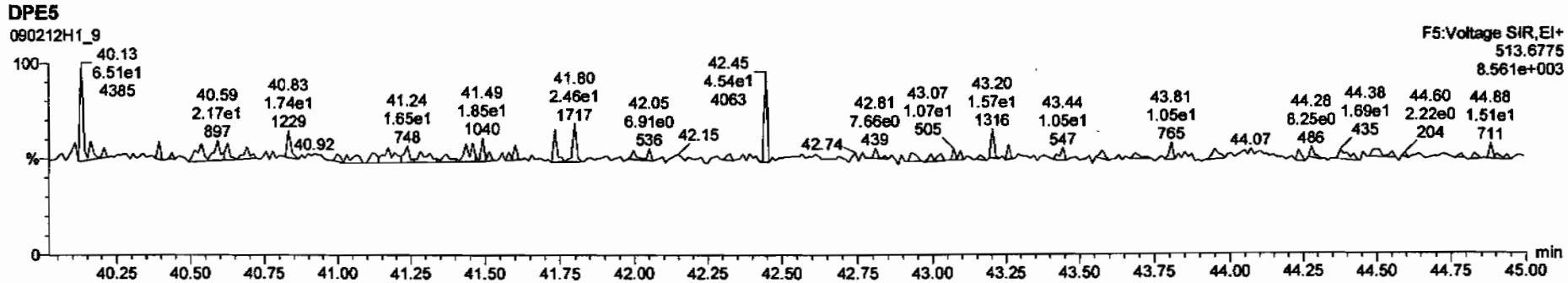

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

PFK1

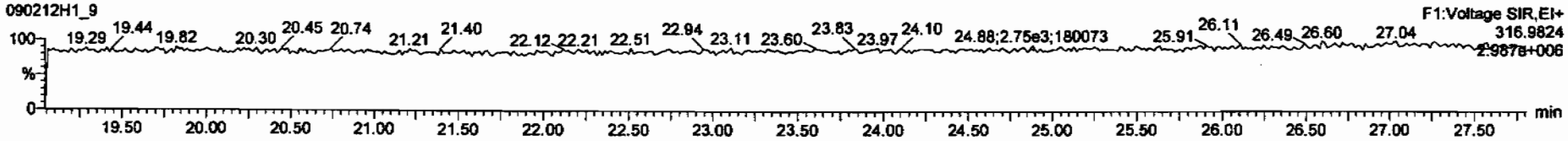

PFK2

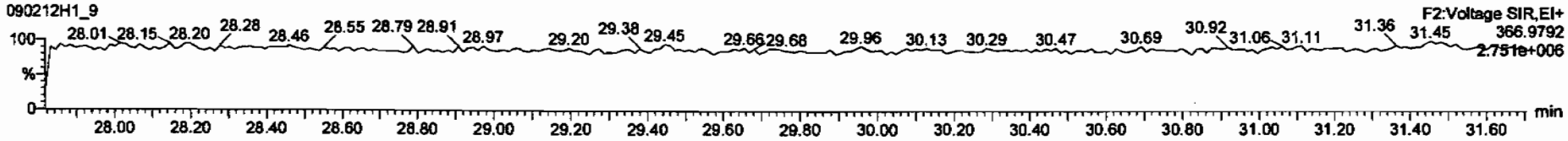

PFK3

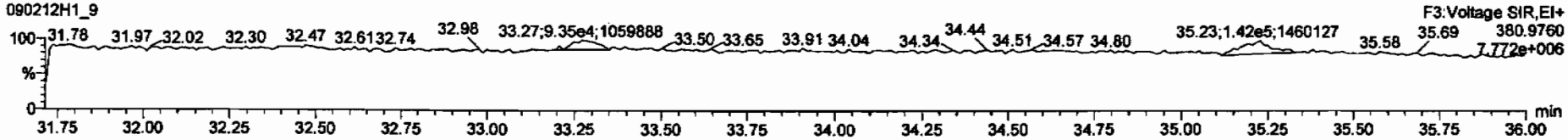

PFK4

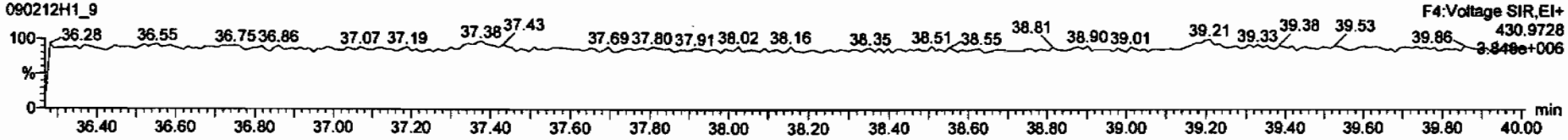

PFK5

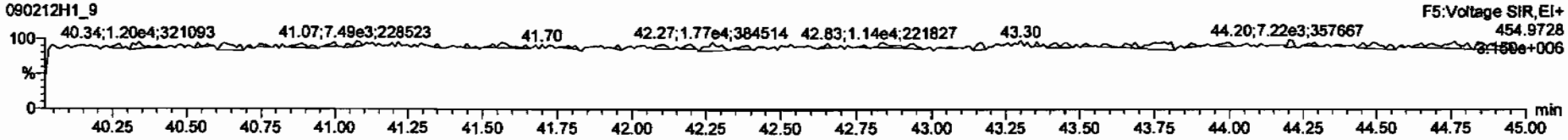

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Compound name: 2,3,7,8-TCDF
Response Factor: 0.857366
RRF SD: 0.11136, Relative SD: 12.9886
Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std Conc	RA	n/y	RT	Resp	IS Resp	Conc	RRF
1	1	090604F1-3	0.250	0.79	NO	17.68	1.73e3	7.39e5	0.273	0.935
2	2	090604F1-4	0.500	0.77	NO	17.69	2.34e3	4.66e5	0.585	1.00
3	3	090604F1-5	2.00	0.81	NO	17.68	1.01e4	6.95e5	1.70	0.728
4	4	090604F1-6	10.0	0.78	NO	17.68	6.35e4	8.49e5	8.73	0.748
5	5	090604F1-7	40.0	0.76	NO	17.69	2.15e5	6.64e5	37.8	0.810
6	6	090604F1-8	200	0.78	NO	17.69	1.17e6	6.34e5	214	0.919

MS 6/5/09

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 1.05695
RRF SD: 0.0199226, Relative SD: 1.88492
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: RF

OK'D DMS 6/5/09

	#	Name	Std Conc	RA	n/y	RT	Resp	IS Resp	Conc	RRF
1	1	090604F1-3	100	0.77	NO	17.66	7.39e5	7.05e5	99.2	1.05
2	2	090604F1-4	100	0.75	NO	17.66	4.66e5	4.54e5	97.1	1.03
3	3	090604F1-5	100	0.77	NO	17.67	6.95e5	6.55e5	100	1.06
4	4	090604F1-6	100	0.76	NO	17.67	8.49e5	7.82e5	103	1.09
5	5	090604F1-7	100	0.76	NO	17.67	6.64e5	6.32e5	99.4	1.05
6	6	090604F1-8	100	0.75	NO	17.68	6.34e5	5.94e5	101	1.07

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc.	RA	n/y	RT	Resp.	IS Resp.	Conc.	RRF
1	1	090604F1-3	100	0.75	NO	15.43	7.05e5	7.05e5	100	1.00
2	2	090604F1-4	100	0.73	NO	15.43	4.54e5	4.54e5	100	1.00
3	3	090604F1-5	100	0.75	NO	15.43	6.55e5	6.55e5	100	1.00
4	4	090604F1-6	100	0.76	NO	15.44	7.82e5	7.82e5	100	1.00
5	5	090604F1-7	100	0.75	NO	15.44	6.32e5	6.32e5	100	1.00
6	6	090604F1-8	100	0.76	NO	15.44	5.94e5	5.94e5	100	1.00

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

	#	Name	Std. Conc.	RA	n/y	RT	Resp.	IS Resp.	Conc.	RRF
1	1	090604F1-3	1.00							
2	2	090604F1-4	1.00							
3	3	090604F1-5	1.00							
4	4	090604F1-6	1.00							
5	5	090604F1-7	1.00							
6	6	090604F1-8	1.00							

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

	#	Name	Std. Conc.	RA	n/y	RT	Resp.	IS Resp.	Conc.	RRF
1	1	090604F1-3	1.00							
2	2	090604F1-4	1.00							
3	3	090604F1-5	1.00							
4	4	090604F1-6	1.00							

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Compound name: DPE1

#	Name	Std. Conc.	RA	RT	Resp.	IS Resp.	Conc.	RRF
5	5 090604F1-7	1.00						
6	6 090604F1-8	1.00						

Quantify Sample Summary Report **MassLynx 4.1**

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1-6.qld

Last Altered: Friday, June 05, 2009 9:28:52 AM Pacific Standard Time
Printed: Friday, June 05, 2009 10:34:20 AM Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090604F1-6, Date: 04-Jun-2009, Time: 14:04:16, ID: ST090604F1-4 1613 CS3 080917I, Description: 1613 CS3 080917I

	Name	Resp	RA	n/y	RRF	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	6.35e4	0.78	NO	0.857	1.000	17.68	8.7302	87.3	0.132
2	2 13C-2,3,7,8-TCDF	8.49e5	0.76	NO	1.06	1.000	17.67	102.70	103	0.226
3	3 13C-1,2,3,4-TCDF	7.82e5	0.76	NO	1.00	1.000	15.44	100.00	100	0.239

8.6-11.6
76.0-131.0

6/5/09

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-9

Dataset: Untitled

Last Altered: Friday, June 05, 2009 9:30:12 AM Pacific Standard Time
Printed: Friday, June 05, 2009 9:30:34 AM Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Compound name: 2,3,7,8-TCDF

	Name	ID	Acq Date	Acq Time
1	090604F1-1	CP090604F1-1 DB-225 CPSM	04-Jun-09	11:06:21
2	090604F1-2	SOLVENT BLANK	04-Jun-09	11:42:10
3	090604F1-3	ST090604F1-1 1613 CS0 080917F	04-Jun-09	12:17:41
4	090604F1-4	ST090604F1-2 1613 CS1 080917G	04-Jun-09	12:53:12
5	090604F1-5	ST090604F1-3 1613 CS2 080917H	04-Jun-09	13:28:44
6	090604F1-6	ST090604F1-4 1613 CS3 080917I	04-Jun-09	14:04:16
7	090604F1-7	ST090604F1-5 1613 CS4 080917J	04-Jun-09	14:39:42
8	090604F1-8	ST090604F1-6 1613 CS5 080917K	04-Jun-09	15:15:08
9	090604F1-9	SOLVENT BLANK	04-Jun-09	15:50:34
10	090604F1-10	SS090604F1-1 Second Source 090219C	04-Jun-09	16:26:00
11	090604F1-11	SOLVENT BLANK	04-Jun-09	17:01:32

File: Experiment: tcdf_db225.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, June 04, 2009 11:05:34 Pacific Standard Time

M 292.9824 R 10634

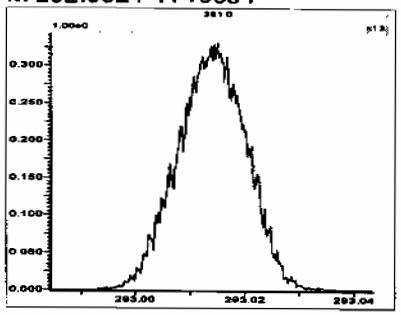

M 304.9824 R 10504

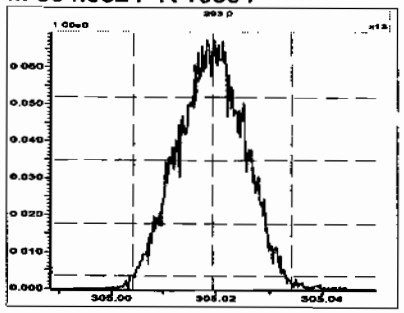

M 318.9792 R 10642

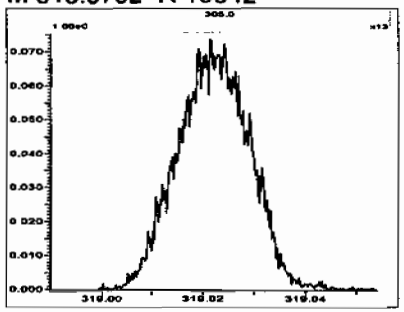

M 330.9792 R 10871

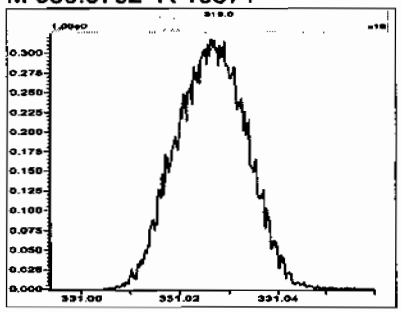

M 342.9792 R 10373

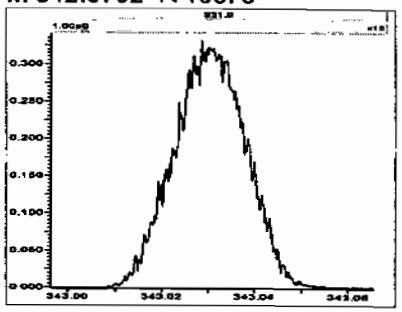

M 354.9792 R 10551

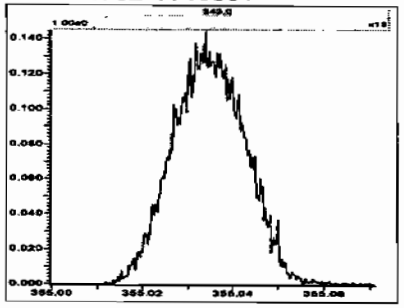

M 366.9792 R 10205

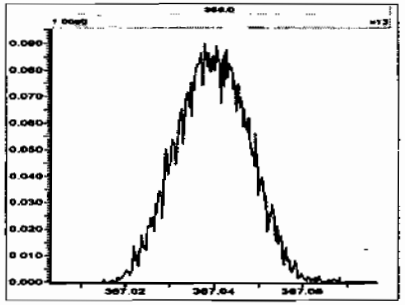

M 380.9760 R 10204

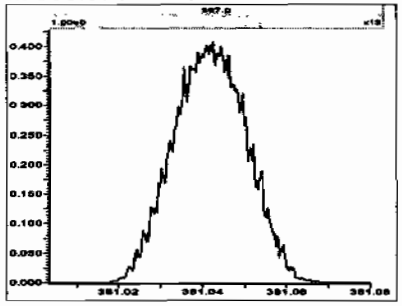

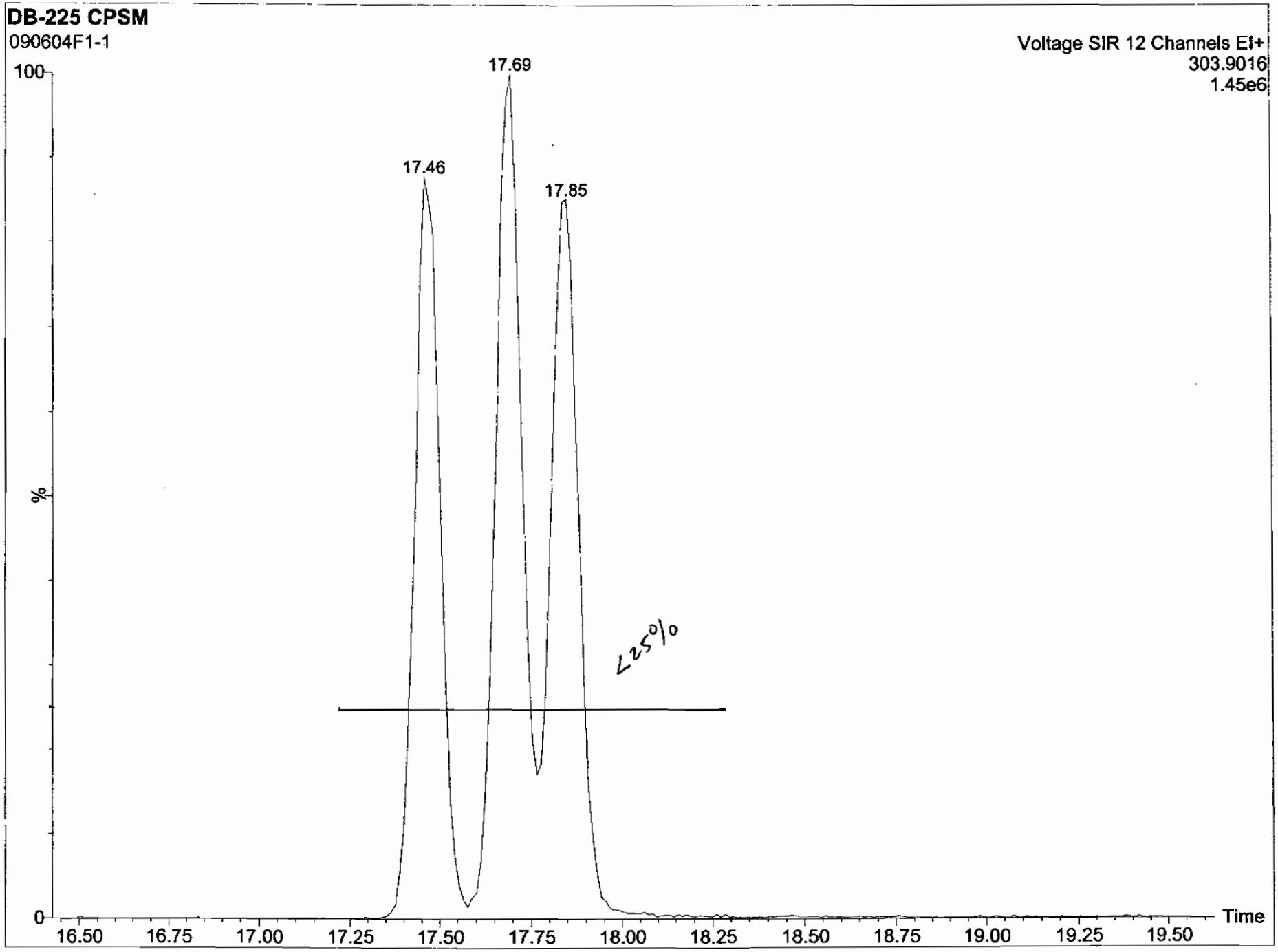
DB-225 CPSM
090604F1-1
Voltage SIR 12 Channels EI+
303.9016
1.45e6
100
%
0
17.46
17.69
17.85
<25%
16.50
16.75
17.00
17.25
17.50
17.75
18.00
18.25
18.50
18.75
19.00
19.25
19.50
Time

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\Default.pro\Curvedb\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090604F1-3, Date: 04-Jun-2009, Time: 12:17:41, ID: ST090604F1-1 1613 CS0 080917F, Description: 1613 CS0 080917F

2,3,7,8-TCDF
090604F1-3

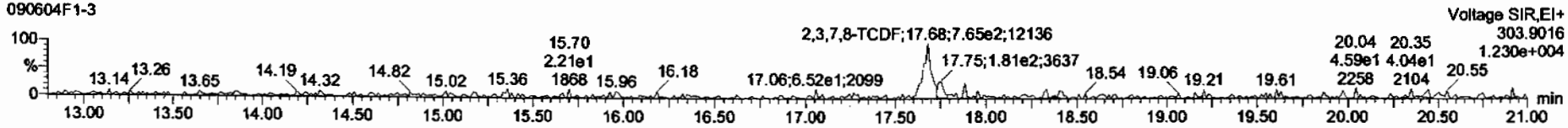

2,3,7,8-TCDF
090604F1-3

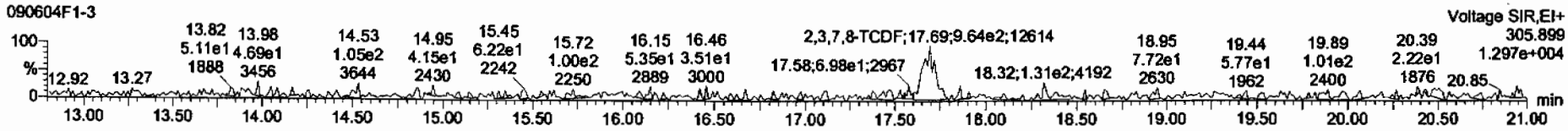

13C-2,3,7,8-TCDF
090604F1-3

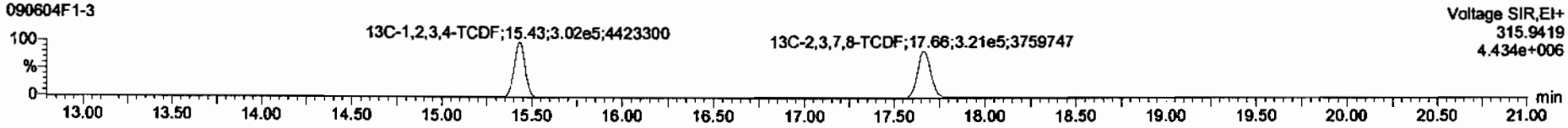

13C-2,3,7,8-TCDF
090604F1-3

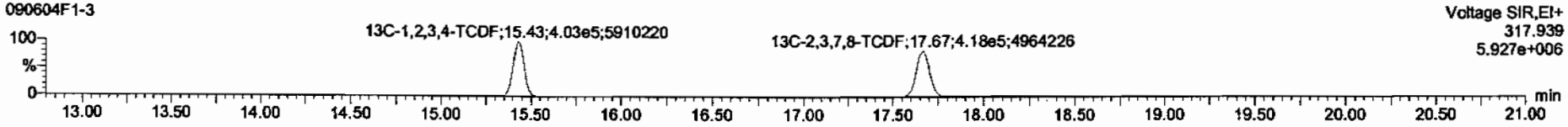

TargetLynx - 090604F1 * - [Chromatogram]

File Edit View Display Processing Window Help

090604F1-3 - ST090604F1-1 1613 CS0 080917F - 1613 CS0 080917F

	#	Name	Resp	RA	rw	RRF	wt/vol	RT	Conc	%Recov	DL
1	1	2,3,7,8-TCDF	1.73e3	0.79	NO	0.81	1.000	17.68	0.290	116	0.112
2	2	13C-2,3,7,8-TCDF	7.39e5	0.77	NO	1.06	1.000	17.66	99.2	99.2	0.255
3	3	13C-1,2,3,4-TCDF	7.05e5	0.75	NO	1.00	1.000	15.43	100	100	0.269
4	4	PFK1					1.000				
5	5	DPE1					1.000				

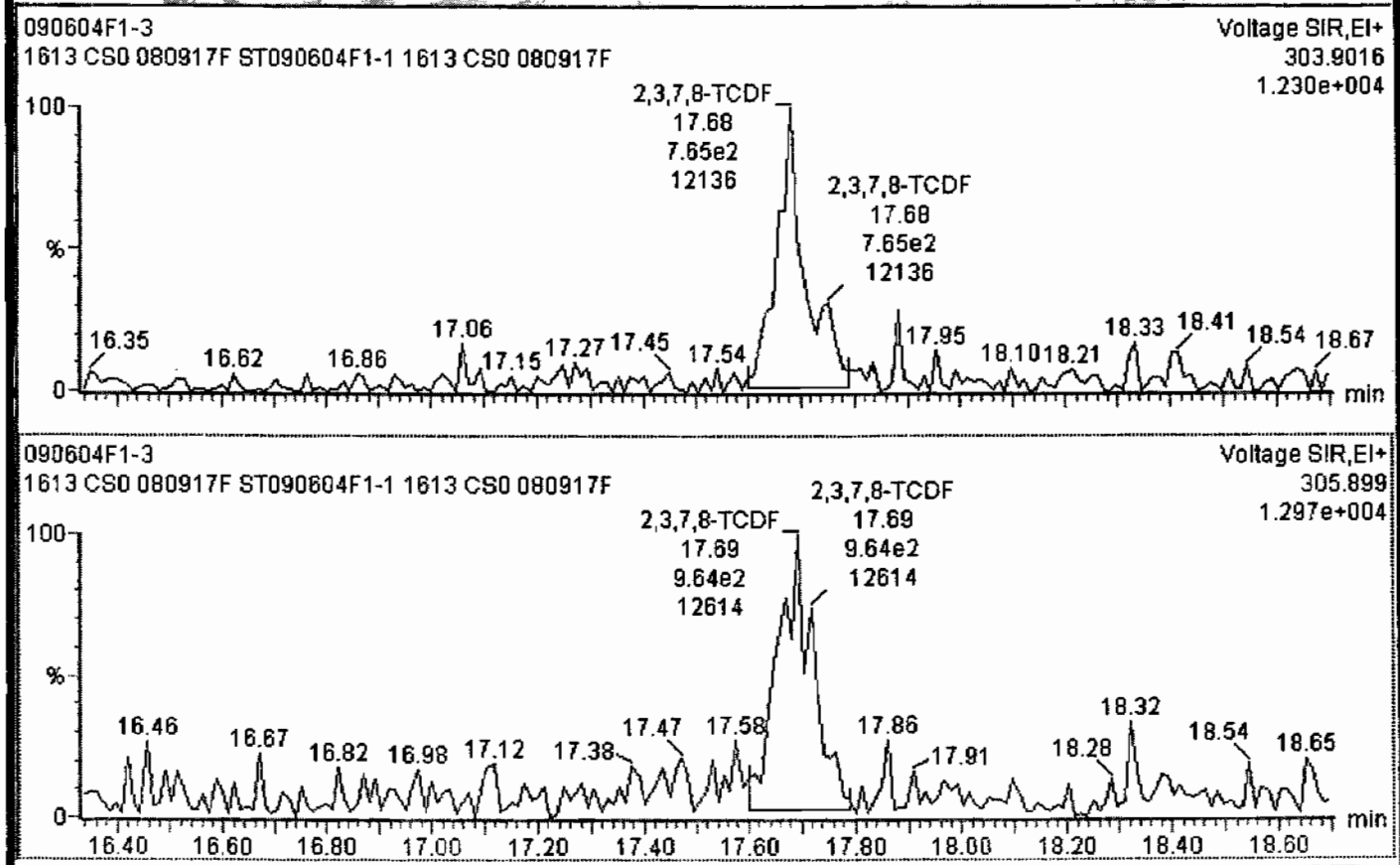

wt/vol	
1.000	tcc
1.000	tcc
1.000	tcc
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1.000	tcc
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10.050	tcc
10.000	tcc
10.100	tcc
1.000	tcc

Ready 090604F1-3 CAP NUM

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1.qld

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Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-3, Date: 04-Jun-2009, Time: 12:17:41, ID: ST090604F1-1 1613 CS0 080917F, Description: 1613 CS0 080917F

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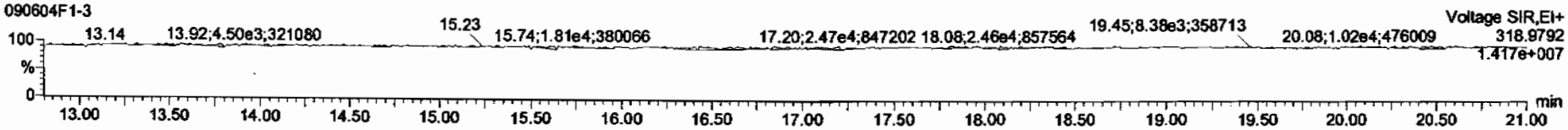

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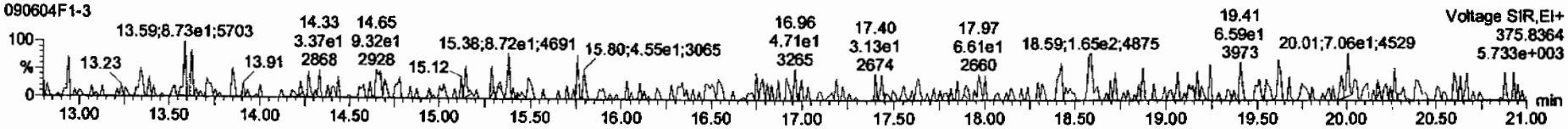

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Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-4, Date: 04-Jun-2009, Time: 12:53:12, ID: ST090604F1-2 1613 CS1 080917G, Description: 1613 CS1 080917G

2,3,7,8-TCDF

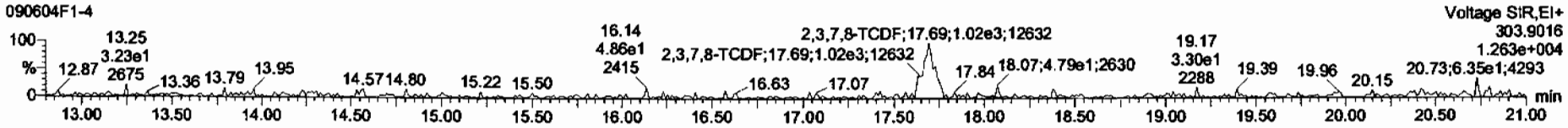

2,3,7,8-TCDF

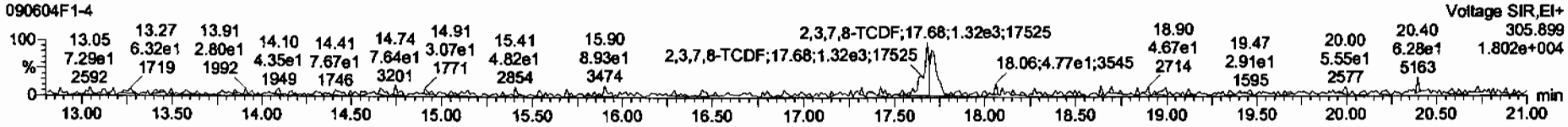

13C-2,3,7,8-TCDF

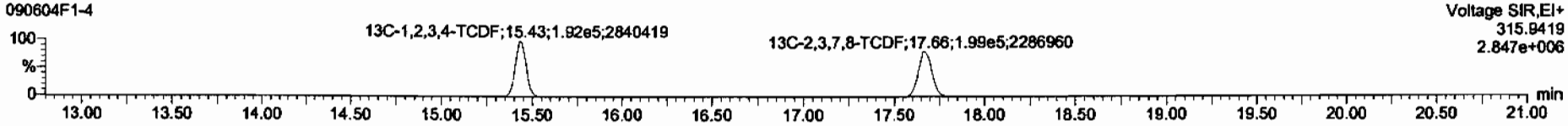

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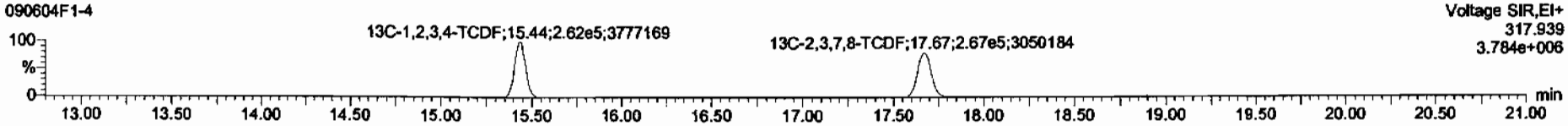

TargetLynx - 090604F1 * - [Chromatogram]

File Edit View Display Processing Window Help

090604F1-4 - ST090604F1-2 1613 CS1 080917G - 1613 CS1 080917G

	X	Name	Resp	RA	n/y	RRF	wt/vol	RT	Conc.	%Rec	DL
1	1	2,3,7,8-TCDF	2.34e3	0.77	NO	0.86	1.000	17.69	0.585	117	0.200
2	2	13C-2,3,7,8-TCDF	4.66e5	0.75	NO	1.06	1.000	17.66	97.1	97.1	0.441
3	3	13C-1,2,3,4-TCDF	4.54e5	0.73	NO	1.00	1.000	15.43	100	100	0.466
4	4	PFK1					1.000				
5	5	DPE1					1.000				

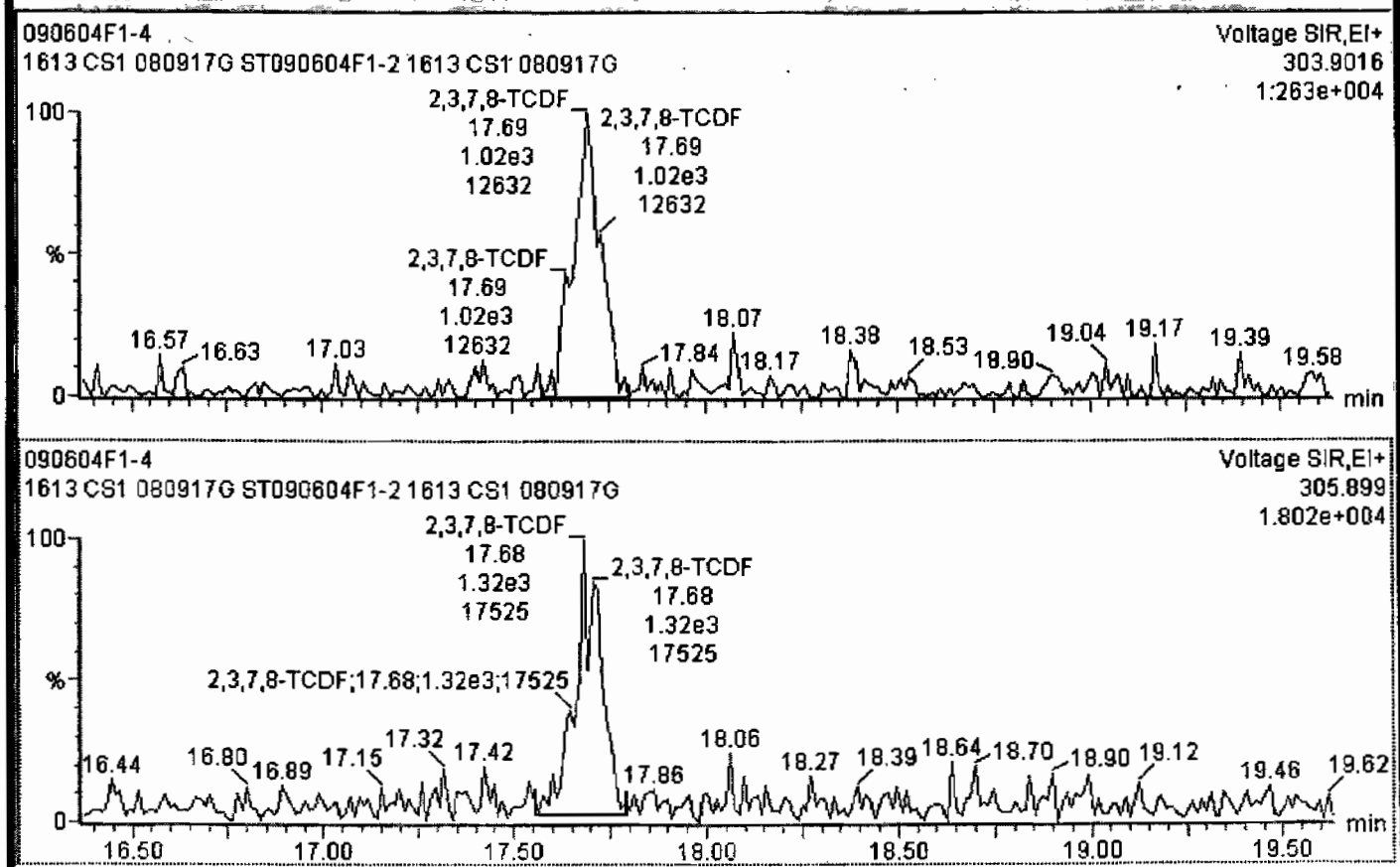

Ready 090604F1-4 CAP NUM

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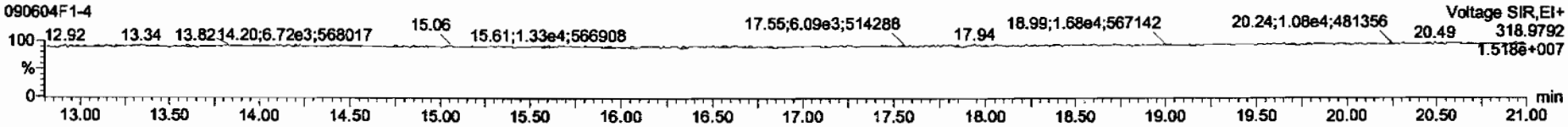

DPE1

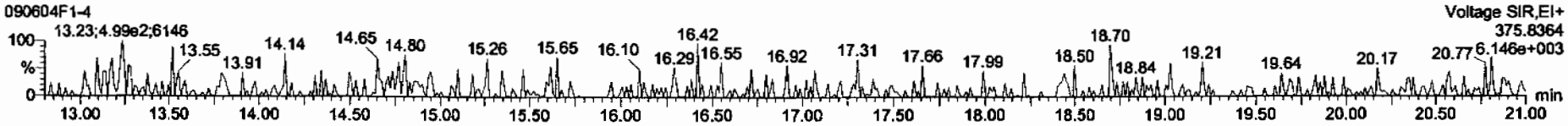

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Last Altered: Friday, June 05, 2009 09:18:11 Pacific Standard Time
Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-5, Date: 04-Jun-2009, Time: 13:28:44, ID: ST090604F1-3 1613 CS2 080917H, Description: 1613 CS2 080917H

2,3,7,8-TCDF

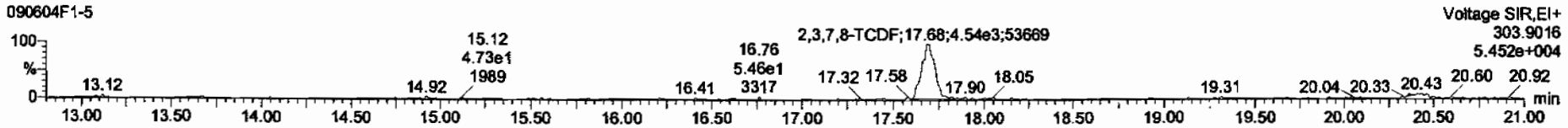

2,3,7,8-TCDF

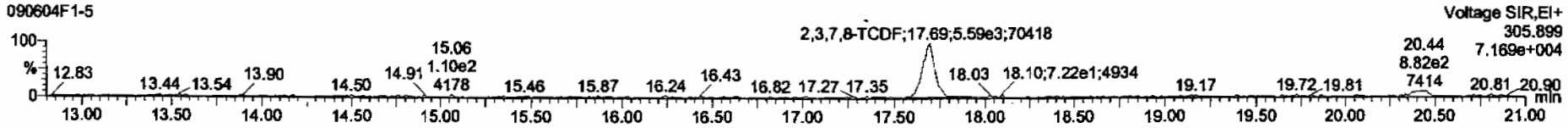

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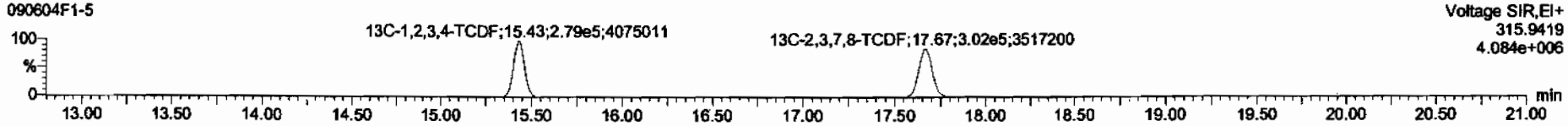

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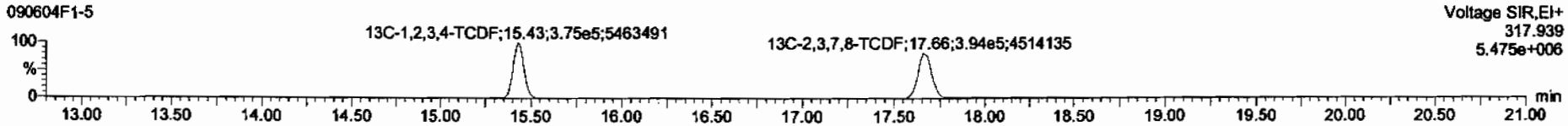

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Printed: Friday, June 05, 2009 09:24:15 Pacific Standard Time

Name: 090604F1-5, Date: 04-Jun-2009, Time: 13:28:44, ID: ST090604F1-3 1613 CS2 080917H, Description: 1613 CS2 080917H

PFK1

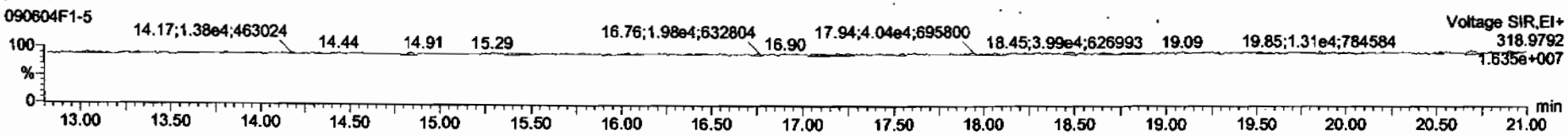

DPE1

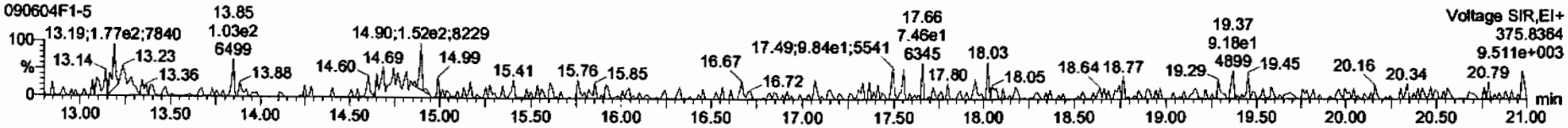

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Name: 090604F1-6, Date: 04-Jun-2009, Time: 14:04:16, ID: ST090604F1-4 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

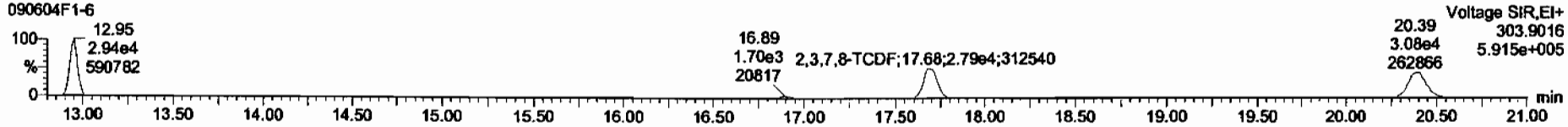

2,3,7,8-TCDF

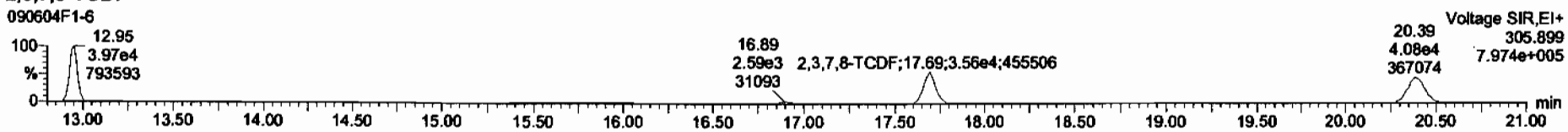

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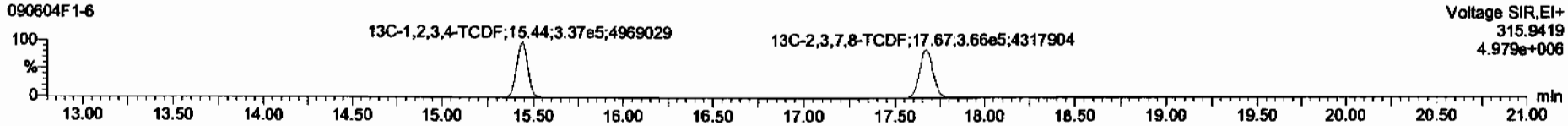

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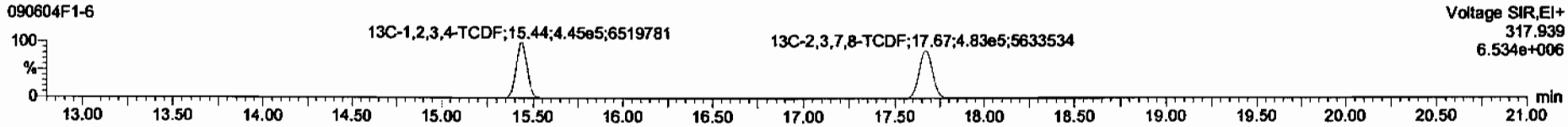

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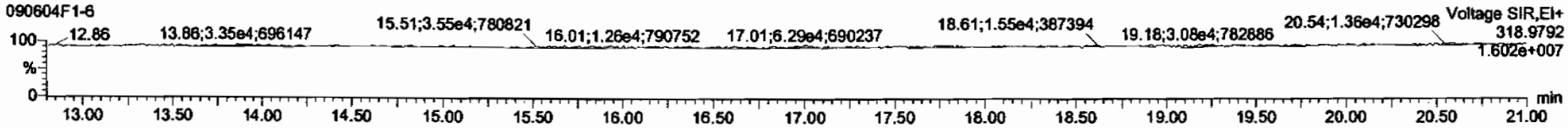

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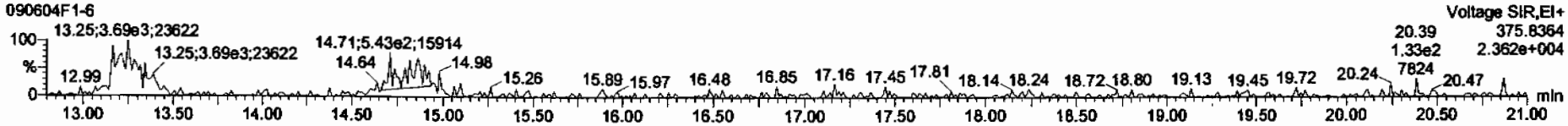

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2,3,7,8-TCDF

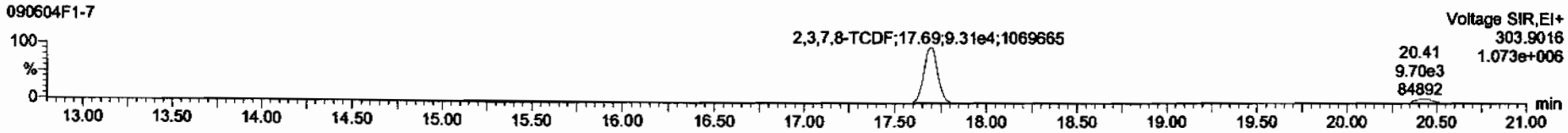

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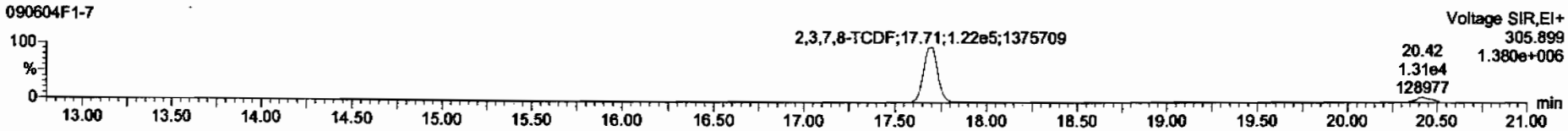

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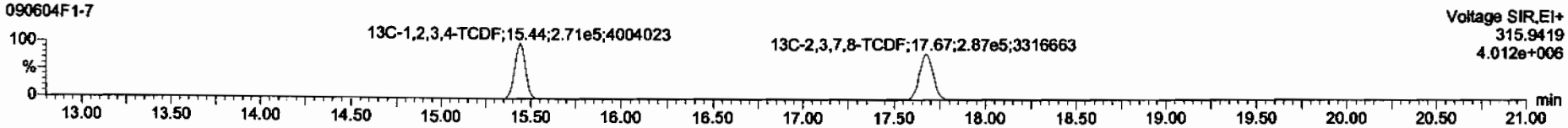

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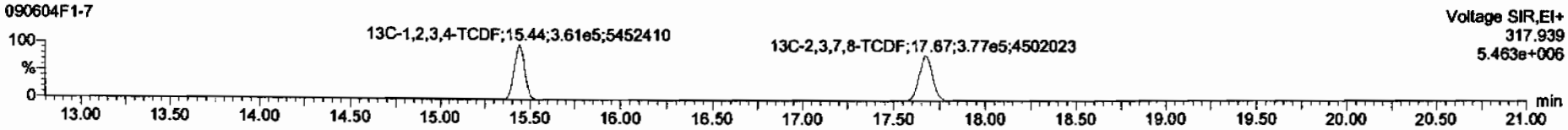

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PFK1

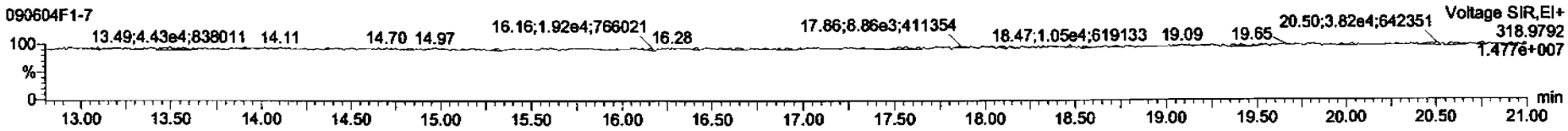

DPE1

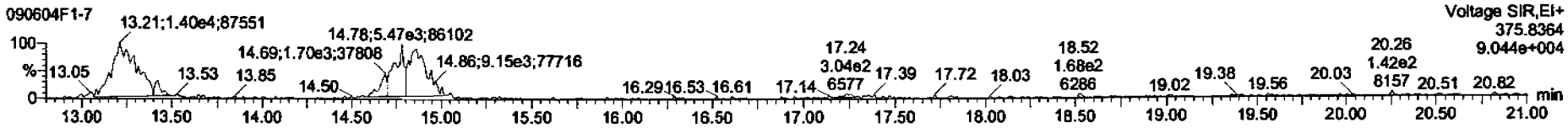

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2,3,7,8-TCDF
090604F1-8

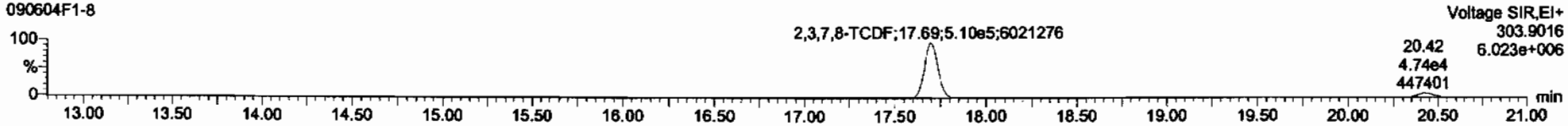

2,3,7,8-TCDF
090604F1-8

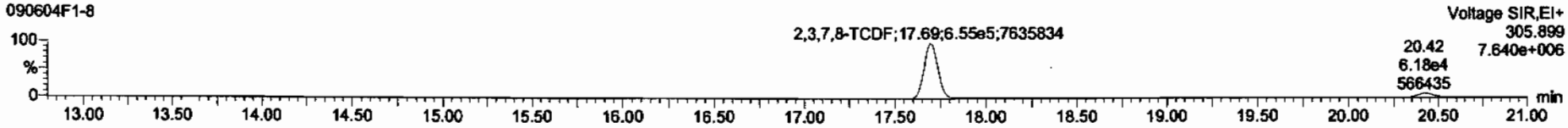

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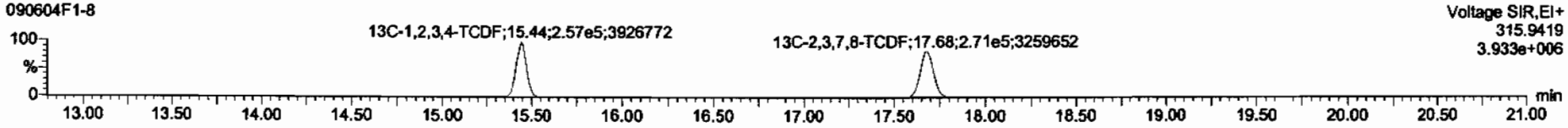

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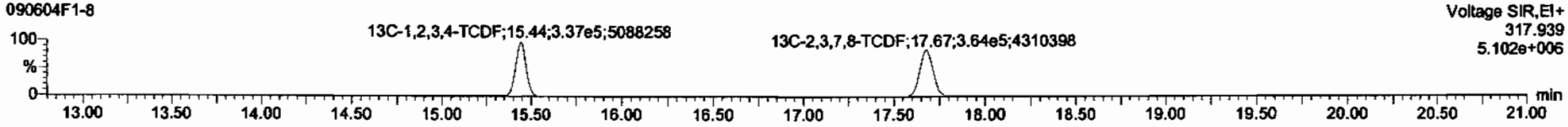

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PFK1

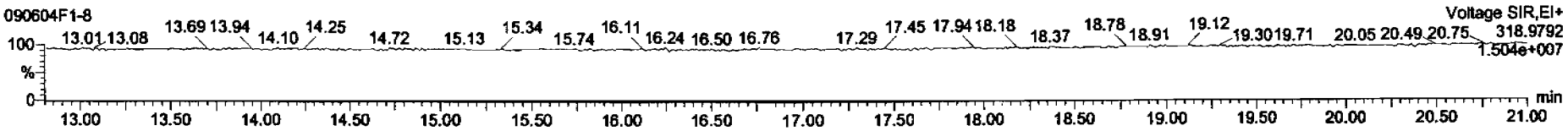

DPE1

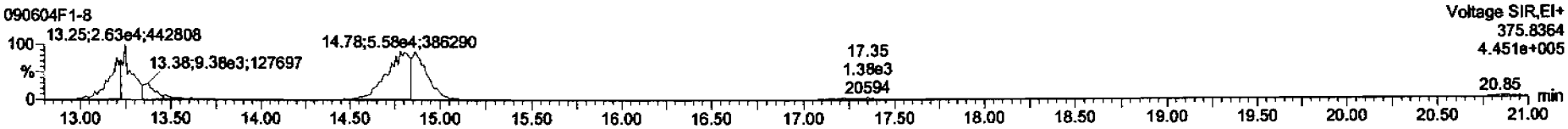

Printed: Thursday, June 04, 2009 20:36:08 Pacific Standard Time

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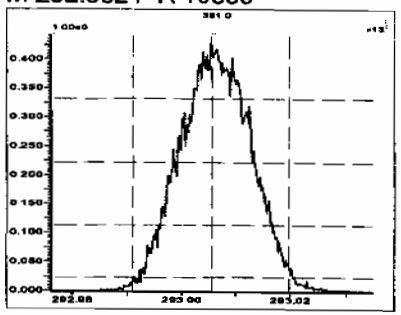

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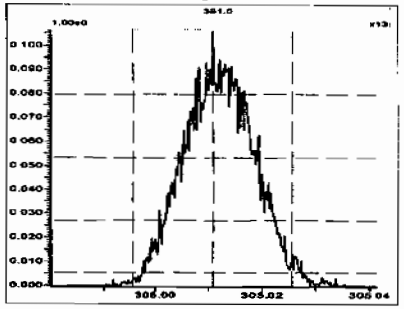

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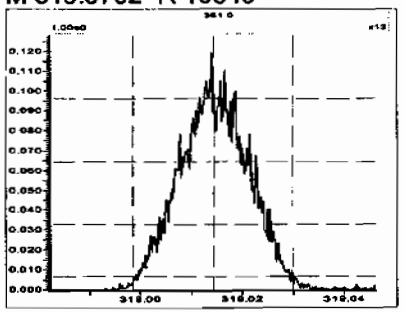

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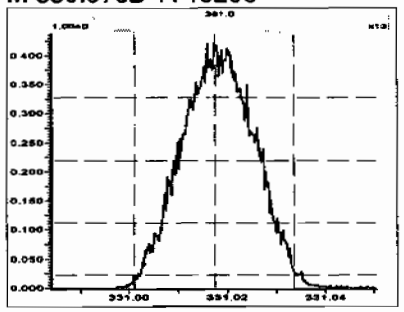

M 342.9792 R 9881

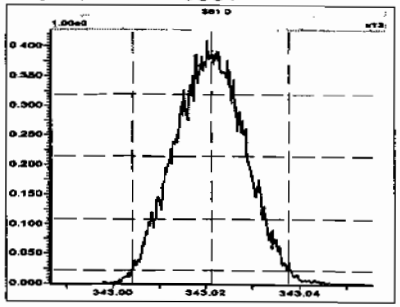

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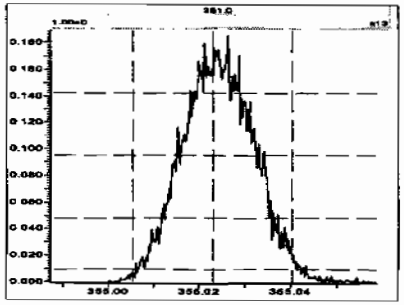

M 366.9792 R 10460

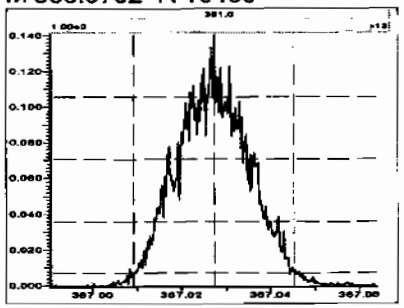

M 380.9760 R 9542

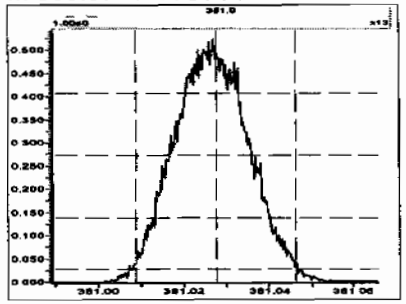

Quantify Sample Summary Report **MassLynx 4.1**

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1-10.qld

Last Altered: Friday, June 05, 2009 9:31:37 AM Pacific Standard Time
Printed: Friday, June 05, 2009 9:32:15 AM Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090604F1-10, Date: 04-Jun-2009, Time: 16:26:00, ID: SS090604F1-1 Second Source 090219C, Description: Second Source 090219C

	Name	Resp.	RA	n/y	RRF M	wt/vol	RT	Act. Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	6.66e4	0.77	NO	0.857	1.000	17.68	8.1466	81.5	0.0996
2	2 13C-2,3,7,8-TCDF	9.54e5	0.75	NO	1.06	1.000	17.66	103.55	104	0.226
3	3 13C-1,2,3,4-TCDF	8.71e5	0.77	NO	1.00	1.000	15.43	100.00	100	0.239

MS 6/4/09

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1-10.qld

Last Altered: Friday, June 05, 2009 9:31:37 AM Pacific Standard Time
Printed: Friday, June 05, 2009 9:32:15 AM Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\tcdf.mdb 22 May 2009 13:24:48
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-225_1613tcdfvg9-6-4-09.cdb 05 Jun 2009 09:18:11

Name: 090604F1-10, Date: 04-Jun-2009, Time: 16:26:00, ID: SS090604F1-1 Second Source 090219C, Description: Second Source 090219C

2,3,7,8-TCDF

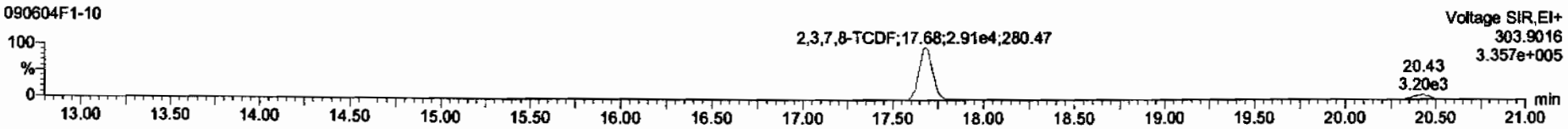

2,3,7,8-TCDF

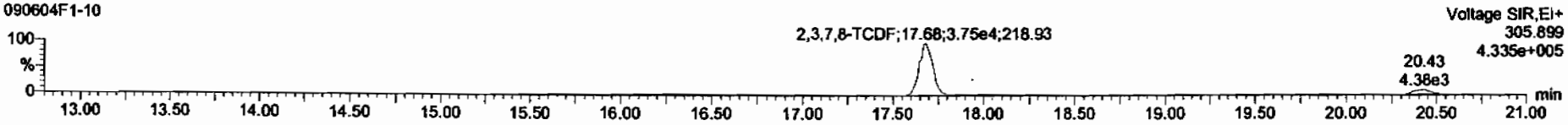

13C-2,3,7,8-TCDF

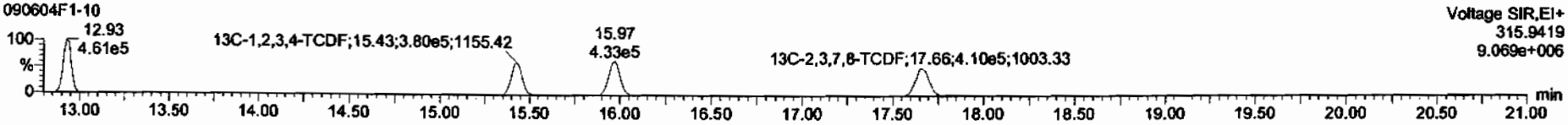

13C-2,3,7,8-TCDF

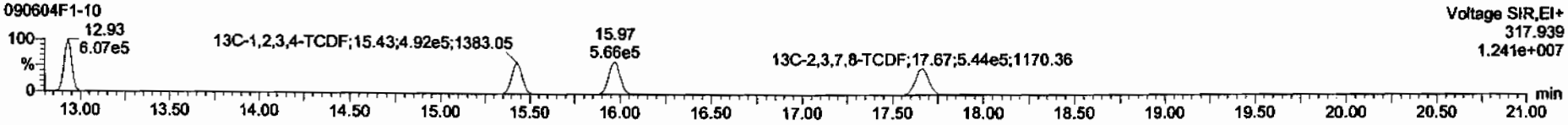

Dataset: C:\MassLynx\Default.pro\Results\090604F1\090604F1-10.qld

Last Altered: Friday, June 05, 2009 9:31:37 AM Pacific Standard Time
Printed: Friday, June 05, 2009 9:32:15 AM Pacific Standard Time

Name: 090604F1-10, Date: 04-Jun-2009, Time: 16:26:00, ID: SS090604F1-1 Second Source 090219C, Description: Second Source 090219C

PFK1

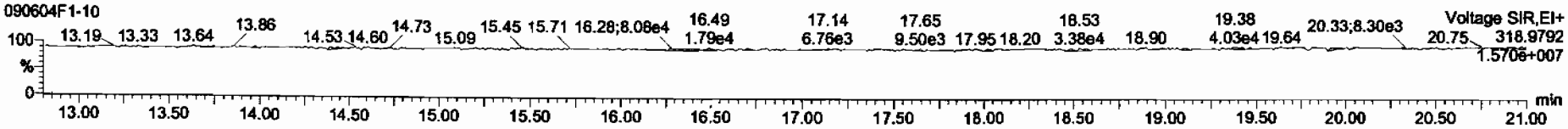

DPE1

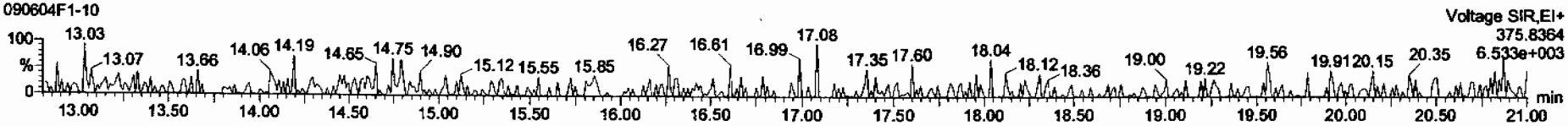

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2524

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2524
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:8260B	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2524

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8260B	1	CAMO-09-10014	S	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:8270C	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2524

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2524C

REQUEST NUMBER: 09-2524

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10014	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-9956	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9956	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9950	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9950	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9952	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9952	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9958	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9958	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9957	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9957	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9951	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9951	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10031	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10031	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-9990	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9990	1	AMBER GLASS	8270C+8082	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[signature]		7/1/09	3:00				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9950

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	OBT4	Fill
TIME COLLECTED (HH:MM)		12:18	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	4.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+ N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown fill with cobbles & concrete

FD: CAMO-09-10031

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) 14, (5) of 50 building 001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 5 dpm

β/γ 674 dpm

PID Ambient Reading = 0.0 / 0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.29.09 1617	(Printed Name) Sheri Sherwood	6/29/09 4:30
(Signature) A. Goumas		(Signature) Sheri Sherwood	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9951

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	OBT4	Qbt3
TIME COLLECTED (HH:MM)		1243	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	4.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	5.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Dry indurated Purple/brown tuff w/ lithics

SAMPLE COMMENTS: Interface @ 4.5' bgs

LOCATION DESC: 50-004(a) - 14 (S) of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 10$ dpm

$\beta/\gamma \leq 879$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature) A. Gowmas	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	4/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9952

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Qbt3
TIME COLLECTED (HH:MM)		1202	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	9.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	10.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: ND

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Gray/brown indurated tuff w/ lithics

FTB: CAMO-09-10014

SAMPLE COMMENTS: Advance w/ power auger sample w/ hand auger @ 9.5' bgs

LOCATION DESC: 50-004(a)-14 (S) of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 33 dpm

β/γ ≤ 742 dpm

PID Ambient / Reading = 0.0 / 0.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) A. Goumas	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9956

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	9.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	AG 6.29.09 ~~10~~ 10.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown crushed tuff fill w/ cobbles

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) 16 (5) of bldg 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 22 dpm

β/γ ≤ 722 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gournas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gournas	6.29.09 1617	(Printed Name) Sherri Sherwood	4/29/09 4:30
(Signature) [signature]		(Signature) Sherri Sherwood	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9957

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBt3
TIME COLLECTED (HH:MM)		1510	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	10.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	11.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+ N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Purple/gray indurated tuff

FR: CAMO-09-10025

SAMPLE COMMENTS: Interface @ 10.0' bgs

LOCATION DESC: 50-004(a)-16, South of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 28 dpm

β/γ ≤ 1022 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gournas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gournas	6-29-09	(Printed Name) Sherri Sherwood	6/29/09
(Signature) [signature]	1617	(Signature) Sherri Sherwood	4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9958

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		1541	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	H.A.
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	15.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	16.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Grey / Purple, indurated, slightly moist tuff.

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 50-004(a)-00-16 (5) of bldg. 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 39$ dpm

$\beta/\gamma \leq 606$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/29/09 1617	(Printed Name) Sherri Sherwood	6/29/09 4:30
(Signature) [signature]		(Signature) [signature]	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9990

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	OBT4	QBT3
TIME COLLECTED (HH:MM)		J.B ~~0000~~ 0930	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	H.A.
LOCATION ID:	MO-605473	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	✓
TOP DEPTH:	0	3.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	4.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Regular~~ 15-Day J.B 8/29/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	✓	✓

SAMPLE DESC: Brown/Purple, indurated, wet tuff

SAMPLE COMMENTS: S/T interface @ 3.0' bgs. Saturation zone encountered @ ~~4.0'~~ 3.0' bgs. Final depth not collected to avoid contamination from saturation zone. J.B 8/29/09

LOCATION DESC: 50-004(a)-00-11

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 16$ dpm

$\beta/\gamma \leq 1049$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/29/09 1617	(Printed Name) Sheri Sherwood	4/29/09 4:30
(Signature) [signature]		(Signature) Sherwood, Sheri	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10014

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1302	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605460	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA AG 6.29.09 BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
2 1	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package

SAMPLE DESC: QC Sample of CAMO-09-9952

SAMPLE COMMENTS: none

LOCATION DESC: 50-004(a)-14

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gowman

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowman (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 1730
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10025

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1518	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	mo-05462	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	Full Data Package
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-9958

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a)-16

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) [signature]	6/29/09 4:30
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10031

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	OBT4	Fill
TIME COLLECTED (HH:MM)		12:18	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	UNK	MO-605460	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	4.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C+~~8082~~	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+ N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: QC Sample of CAMO-09-9950

Brown Fill with cobbles & concrete

SAMPLE COMMENTS: None

LOCATION DESC: 50-004-84, (5) of building 01 @ 50

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 5 dpm

β/γ ≤ 674 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gaumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gaumas	6.29.09	(Printed Name) Sherri Sherwood	6/29/09
(Signature) A. Gaumas	1617	(Signature) Sherri Sherwood	4:30

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-9990
-9950 —> 9952
-9956 —> 9958
-10031

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10014
-10025

Reason: QC of Samples.

Print Last Name Branch Signature [signature] Date 6/29/09

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00078	Request or PO Number:	
Client Sample ID:	CAMO-09-9990	ARS Sample ID:	ARS2-09-00078-001
Sample Collection Date:	06/29/09 09:30	Date Received:	06/30/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/30/09 14:55

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	63.33	79.39	121.29	79.77	U	pCi/g	EPA 900.0M	6/30/2009	ME	N/A
GROSS BETA	51.75	17.38	19.29	18.50		pCi/g	EPA 900.0M	6/30/2009	ME	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
K-40	-0.87	-11.06	2.22	-11.06	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CO-60	0.00	0.16	0.09	0.16	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CS-134	0.16	0.13	0.07	0.13	SI	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CS-137	-0.01	11.97	0.04	11.97	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
EU-152	0.00	9.51	0.11	9.51	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
PB-212	1.11	0.40	0.11	0.40		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
RA 228	1.24	0.61	0.34	0.61		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
U-235	1.10	0.54	0.14	0.54		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
U-238	2.61	3.60	1.50	3.65		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
AM-241	0.36	0.28	0.09	0.28		pCi/g	EPA 901.1M	6/30/2009	ME	N/A

NOTES: % Moisture: 2.31

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2524 VALIDATION DATE: 7/27/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Linda Thal ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ HIGH EXPLOSIVES
- ☐ DIOXIN FURANS
- ☐ LCMSMS PERCHLORATES
- ☐ TPH-DRO
- ☐ METALS
- ☐ PCB CONGENERS
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ GENERAL CHEMISTRY
- ☐ RADIOCHEMISTRY
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ OTHER (DESCRIBE): VOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw ICAL standards data were not provided in the data package. No sample data were qualified as a result.
2. In the FTB, sample CAMO-09-10013 located in RN 09-2515, associated with sample -9990, acetone was detected. The associated sample result was an ND and, thus, was not qualified. In the FTB, sample -10014 associated with samples -9950 though -9952 and -10031, acetone was detected. The associated result for sample -9951 was an ND and, thus, was not qualified. The remaining associated sample results were detects ≤10X the FR blank concentration and, thus, were qualified U,V4d.
3. The ICV and/or CCV %Ds for dichlorodifluoromethane, trichlorofluoromethane, acetone, 2-butanone and 2-hexanone were >20%. The acetone result for sample -10014 was a detect and, thus, was qualified J,V7c. The remaining associated sample results were NDs and, thus, were qualified UJ,V7c.

DATA VALIDATION COVER SHEET

5114-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

4. It should be noted that MS/MSD was not spiked with trichlorotrifluoroethane. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/28/09

VALIDATOR'S SIGNATURE: K Neal DATE: 7/27/09

Form 5114-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☐	☒	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☒	☐	☐	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☐	☒	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☐	☒	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☐	☒	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☒	☐	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☒	☐	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☒	☐	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**S**
Lab Sample ID:	**232741001**	**Date Received:**	**07/02/2009 08:40**		
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10014**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/09/2009 14:21**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 12:16**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t413.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00	UJ,V7c
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00	
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00	
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00	
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00	
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00	UJ,V7c
67-64-1	Acetone	J	4.34	ug/kg	1.66	5.00	J,V7c
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00	
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00	
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00	
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00	
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00	
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00	
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00	
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00	
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00	
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00	
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00	
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00	
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00	
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00	
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00	
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00	
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00	
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00	
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00	
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00	
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00	
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00	
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**S**
Lab Sample ID:	**232741001**	**Date Received:**	**07/02/2009 08:40**		
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10014**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/09/2009 14:21**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 12:16**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**lt413.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 17:55	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:23	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t420.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.383	1.13	UJ,V7c
74-87-3	Chloromethane	U	1.13	ug/kg	0.338	1.13	
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.338	1.13	
74-83-9	Bromomethane	U	1.13	ug/kg	0.338	1.13	
75-00-3	Chloroethane	U	1.13	ug/kg	0.338	1.13	
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.643	1.13	UJ,V7c
67-64-1	Acetone	J	2.46	ug/kg	1.87	5.64	U,V4d
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.338	1.13	
74-88-4	Iodomethane	U	5.64	ug/kg	1.80	5.64	
75-09-2	Methylene chloride	U	5.64	ug/kg	2.25	5.64	
75-15-0	Carbon disulfide	U	5.64	ug/kg	1.41	5.64	
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13	
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.338	1.13	
78-93-3	2-Butanone	U	5.64	ug/kg	1.69	5.64	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13	
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13	
67-66-3	Chloroform	U	1.13	ug/kg	0.338	1.13	
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.372	1.13	
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.338	1.13	
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.338	1.13	
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.338	1.13	
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.338	1.13	
71-43-2	Benzene	U	1.13	ug/kg	0.338	1.13	
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.372	1.13	
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13	
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.338	1.13	
74-95-3	Dibromomethane	U	1.13	ug/kg	0.338	1.13	
108-10-1	4-Methyl-2-pentanone	U	5.64	ug/kg	1.41	5.64	
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13	
108-88-3	Toluene	J	0.438	ug/kg	0.338	1.13	
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13	
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.338	1.13	
591-78-6	2-Hexanone	U	5.64	ug/kg	1.69	5.64	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.338	1.13	
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.338	1.13	
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.338	1.13	
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.338	1.13	
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.338	1.13	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 17:55	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:23	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t420.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.338	1.13
179601-23-1	m,p-Xylenes	U	2.25	ug/kg	0.338	2.25
95-47-6	o-Xylene	U	1.13	ug/kg	0.338	1.13
100-42-5	Styrene	U	1.13	ug/kg	0.338	1.13
75-25-2	Bromoform	U	1.13	ug/kg	0.338	1.13
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.338	1.13
108-86-1	Bromobenzene	U	1.13	ug/kg	0.338	1.13
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.338	1.13
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.338	1.13
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.338	1.13
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.338	1.13
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.338	1.13
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.338	1.13
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.338	1.13
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.338	1.13
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.338	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.64	ug/kg	1.80	5.64
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	8.6	ug/kg		J
	Unknown Hydrocarbon	20	14.9	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741003	Date Received:	07/02/2009 08:40	%Moisture:	10.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9950	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883695	Inst:	VOA1.I	Dilution:	1
Run Date:	07/09/2009 15:22	Analyst:	RXM4	Purge Vol:	5 mL
Prep Date:	07/09/2009 12:18	Aliquot:	5 g	Final Volume:	5 mL
Data File:	1t415.d	Column:	RTX-Volatiles	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.380	1.12 UJ,V7c
74-87-3	Chloromethane	U	1.12	ug/kg	0.335	1.12
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.335	1.12
74-83-9	Bromomethane	U	1.12	ug/kg	0.335	1.12
75-00-3	Chloroethane	U	1.12	ug/kg	0.335	1.12
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.637	1.12 UJ,V7c
67-64-1	Acetone	J	2.61	ug/kg	1.86	5.59 U,V4d
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
74-88-4	Iodomethane	U	5.59	ug/kg	1.79	5.59
75-09-2	Methylene chloride	U	5.59	ug/kg	2.24	5.59
75-15-0	Carbon disulfide	U	5.59	ug/kg	1.40	5.59
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.335	1.12
78-93-3	2-Butanone	U	5.59	ug/kg	1.68	5.59 UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
67-66-3	Chloroform	U	1.12	ug/kg	0.335	1.12
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.369	1.12
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.335	1.12
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.335	1.12
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.335	1.12
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.335	1.12
71-43-2	Benzene	U	1.12	ug/kg	0.335	1.12
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.369	1.12
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.335	1.12
74-95-3	Dibromomethane	U	1.12	ug/kg	0.335	1.12
108-10-1	4-Methyl-2-pentanone	U	5.59	ug/kg	1.40	5.59
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
108-88-3	Toluene	U	1.12	ug/kg	0.335	1.12
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.335	1.12
591-78-6	2-Hexanone	U	5.59	ug/kg	1.68	5.59 UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.335	1.12
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.335	1.12
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.335	1.12
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.335	1.12
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.335	1.12

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232741003**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**10.6**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9950**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/09/2009 15:22**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 12:18**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t415.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.335	1.12
179601-23-1	m,p-Xylenes	U	2.24	ug/kg	0.335	2.24
95-47-6	o-Xylene	U	1.12	ug/kg	0.335	1.12
100-42-5	Styrene	U	1.12	ug/kg	0.335	1.12
75-25-2	Bromoform	U	1.12	ug/kg	0.335	1.12
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.335	1.12
108-86-1	Bromobenzene	U	1.12	ug/kg	0.335	1.12
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.335	1.12
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.335	1.12
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.335	1.12
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.335	1.12
99-87-6	4-Isopropyltoluene	U	1.12	ug/kg	0.335	1.12
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.335	1.12
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.335	1.12
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.59	ug/kg	1.79	5.59
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Hydrocarbon	20	16.7	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232741007**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**10.2**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9951**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/09/2009 17:24**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 12:22**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t419.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.378	1.11	UJ,V7c
74-87-3	Chloromethane	U	1.11	ug/kg	0.334	1.11	
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.334	1.11	
74-83-9	Bromomethane	U	1.11	ug/kg	0.334	1.11	
75-00-3	Chloroethane	U	1.11	ug/kg	0.334	1.11	
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.635	1.11	UJ,V7c
67-64-1	Acetone	U	5.57	ug/kg	1.85	5.57	UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.334	1.11	
74-88-4	Iodomethane	U	5.57	ug/kg	1.78	5.57	
75-09-2	Methylene chloride	U	5.57	ug/kg	2.23	5.57	
75-15-0	Carbon disulfide	U	5.57	ug/kg	1.39	5.57	
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11	
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.334	1.11	
78-93-3	2-Butanone	U	5.57	ug/kg	1.67	5.57	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11	
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11	
67-66-3	Chloroform	U	1.11	ug/kg	0.334	1.11	
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.367	1.11	
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.334	1.11	
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.334	1.11	
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.334	1.11	
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.334	1.11	
71-43-2	Benzene	U	1.11	ug/kg	0.334	1.11	
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.367	1.11	
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11	
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.334	1.11	
74-95-3	Dibromomethane	U	1.11	ug/kg	0.334	1.11	
108-10-1	4-Methyl-2-pentanone	U	5.57	ug/kg	1.39	5.57	
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11	
108-88-3	Toluene	U	1.11	ug/kg	0.334	1.11	
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11	
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.334	1.11	
591-78-6	2-Hexanone	U	5.57	ug/kg	1.67	5.57	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.334	1.11	
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.334	1.11	
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.334	1.11	
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.334	1.11	
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.334	1.11	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232741007**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**10.2**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9951**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/09/2009 17:24**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 12:22**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t419.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.334	1.11
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.334	2.23
95-47-6	o-Xylene	U	1.11	ug/kg	0.334	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.334	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.334	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.334	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.334	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.334	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.334	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.334	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.334	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.334	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.334	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.334	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.57	ug/kg	1.78	5.57
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	40.6	ug/kg		J
	Unknown Hydrocarbon	20	72.3	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741004	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9952	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 15:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:19	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t416.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.380	1.12	UJ,V7c
74-87-3	Chloromethane	U	1.12	ug/kg	0.335	1.12	
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.335	1.12	
74-83-9	Bromomethane	U	1.12	ug/kg	0.335	1.12	
75-00-3	Chloroethane	U	1.12	ug/kg	0.335	1.12	
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.636	1.12	UJ,V7c
67-64-1	Acetone	J	2.19	ug/kg	1.85	5.58	U,V4d
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.335	1.12	
74-88-4	Iodomethane	U	5.58	ug/kg	1.79	5.58	
75-09-2	Methylene chloride	U	5.58	ug/kg	2.23	5.58	
75-15-0	Carbon disulfide	U	5.58	ug/kg	1.40	5.58	
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12	
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.335	1.12	
78-93-3	2-Butanone	U	5.58	ug/kg	1.67	5.58	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12	
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12	
67-66-3	Chloroform	U	1.12	ug/kg	0.335	1.12	
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.368	1.12	
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.335	1.12	
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.335	1.12	
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.335	1.12	
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.335	1.12	
71-43-2	Benzene	U	1.12	ug/kg	0.335	1.12	
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.368	1.12	
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12	
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.335	1.12	
74-95-3	Dibromomethane	U	1.12	ug/kg	0.335	1.12	
108-10-1	4-Methyl-2-pentanone	U	5.58	ug/kg	1.40	5.58	
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12	
108-88-3	Toluene	U	1.12	ug/kg	0.335	1.12	
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12	
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.335	1.12	
591-78-6	2-Hexanone	U	5.58	ug/kg	1.67	5.58	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.335	1.12	
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.335	1.12	
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.335	1.12	
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.335	1.12	
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.335	1.12	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741004	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9952	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 15:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:19	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	lt416.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.335	1.12
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.335	2.23
95-47-6	o-Xylene	U	1.12	ug/kg	0.335	1.12
100-42-5	Styrene	U	1.12	ug/kg	0.335	1.12
75-25-2	Bromoform	U	1.12	ug/kg	0.335	1.12
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.335	1.12
108-86-1	Bromobenzene	U	1.12	ug/kg	0.335	1.12
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.335	1.12
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.335	1.12
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.335	1.12
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.335	1.12
99-87-6	4-Isopropyltoluene	U	1.12	ug/kg	0.335	1.12
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.335	1.12
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.335	1.12
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.58	ug/kg	1.79	5.58
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	88.7	ug/kg		J
	Unknown Hydrocarbon	20	107	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9956	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 14:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:17	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t414.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.16	ug/kg	0.396	1.16	UJ,V7c
74-87-3	Chloromethane	U	1.16	ug/kg	0.349	1.16	
75-01-4	Vinyl chloride	U	1.16	ug/kg	0.349	1.16	
74-83-9	Bromomethane	U	1.16	ug/kg	0.349	1.16	
75-00-3	Chloroethane	U	1.16	ug/kg	0.349	1.16	
75-69-4	Trichlorofluoromethane	U	1.16	ug/kg	0.663	1.16	UJ,V7c
67-64-1	Acetone	U	5.82	ug/kg	1.93	5.82	UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.16	ug/kg	0.349	1.16	
74-88-4	Iodomethane	U	5.82	ug/kg	1.86	5.82	
75-09-2	Methylene chloride	U	5.82	ug/kg	2.33	5.82	
75-15-0	Carbon disulfide	U	5.82	ug/kg	1.45	5.82	
156-60-5	trans-1,2-Dichloroethylene	U	1.16	ug/kg	0.349	1.16	
75-34-3	1,1-Dichloroethane	U	1.16	ug/kg	0.349	1.16	
78-93-3	2-Butanone	U	5.82	ug/kg	1.75	5.82	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.16	ug/kg	0.349	1.16	
594-20-7	2,2-Dichloropropane	U	1.16	ug/kg	0.349	1.16	
67-66-3	Chloroform	U	1.16	ug/kg	0.349	1.16	
74-97-5	Bromochloromethane	U	1.16	ug/kg	0.384	1.16	
71-55-6	1,1,1-Trichloroethane	U	1.16	ug/kg	0.349	1.16	
563-58-6	1,1-Dichloropropene	U	1.16	ug/kg	0.349	1.16	
56-23-5	Carbon tetrachloride	U	1.16	ug/kg	0.349	1.16	
107-06-2	1,2-Dichloroethane	U	1.16	ug/kg	0.349	1.16	
71-43-2	Benzene	U	1.16	ug/kg	0.349	1.16	
79-01-6	Trichloroethylene	U	1.16	ug/kg	0.384	1.16	
78-87-5	1,2-Dichloropropane	U	1.16	ug/kg	0.349	1.16	
75-27-4	Bromodichloromethane	U	1.16	ug/kg	0.349	1.16	
74-95-3	Dibromomethane	U	1.16	ug/kg	0.349	1.16	
108-10-1	4-Methyl-2-pentanone	U	5.82	ug/kg	1.45	5.82	
10061-01-5	cis-1,3-Dichloropropylene	U	1.16	ug/kg	0.349	1.16	
108-88-3	Toluene	J	0.434	ug/kg	0.349	1.16	
10061-02-6	trans-1,3-Dichloropropylene	U	1.16	ug/kg	0.349	1.16	
79-00-5	1,1,2-Trichloroethane	U	1.16	ug/kg	0.349	1.16	
591-78-6	2-Hexanone	U	5.82	ug/kg	1.75	5.82	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.16	ug/kg	0.349	1.16	
127-18-4	Tetrachloroethylene	U	1.16	ug/kg	0.349	1.16	
124-48-1	Dibromochloromethane	U	1.16	ug/kg	0.349	1.16	
106-93-4	1,2-Dibromoethane	U	1.16	ug/kg	0.349	1.16	
108-90-7	Chlorobenzene	U	1.16	ug/kg	0.349	1.16	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9956	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 14:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:17	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t414.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.16	ug/kg	0.349	1.16
179601-23-1	m,p-Xylenes	U	2.33	ug/kg	0.349	2.33
95-47-6	o-Xylene	U	1.16	ug/kg	0.349	1.16
100-42-5	Styrene	U	1.16	ug/kg	0.349	1.16
75-25-2	Bromoform	U	1.16	ug/kg	0.349	1.16
79-34-5	1,1,2,2-Tetrachloroethane	U	1.16	ug/kg	0.349	1.16
96-18-4	1,2,3-Trichloropropane	U	1.16	ug/kg	0.349	1.16
108-86-1	Bromobenzene	U	1.16	ug/kg	0.349	1.16
103-65-1	n-Propylbenzene	U	1.16	ug/kg	0.349	1.16
95-49-8	2-Chlorotoluene	U	1.16	ug/kg	0.349	1.16
98-82-8	Isopropylbenzene	U	1.16	ug/kg	0.349	1.16
108-67-8	1,3,5-Trimethylbenzene	U	1.16	ug/kg	0.349	1.16
106-43-4	4-Chlorotoluene	U	1.16	ug/kg	0.349	1.16
98-06-6	tert-Butylbenzene	U	1.16	ug/kg	0.349	1.16
95-63-6	1,2,4-Trimethylbenzene	U	1.16	ug/kg	0.349	1.16
135-98-8	sec-Butylbenzene	U	1.16	ug/kg	0.349	1.16
99-87-6	4-Isopropyltoluene	U	1.16	ug/kg	0.349	1.16
541-73-1	1,3-Dichlorobenzene	U	1.16	ug/kg	0.349	1.16
106-46-7	1,4-Dichlorobenzene	U	1.16	ug/kg	0.349	1.16
104-51-8	n-Butylbenzene	U	1.16	ug/kg	0.349	1.16
96-12-8	1,2-Dibromo-3-chloropropane	U	1.16	ug/kg	0.349	1.16
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.82	ug/kg	1.86	5.82
630-20-6	1,1,1,2-Tetrachloroethane	U	1.16	ug/kg	0.349	1.16
95-50-1	1,2-Dichlorobenzene	U	1.16	ug/kg	0.349	1.16

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741006	Date Received:	07/02/2009 08:40	%Moisture:	10.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9957	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	883695	Inst:	VOA1.I	Dilution:	1
Run Date:	07/09/2009 16:54	Analyst:	RXM4	Purge Vol:	5 mL
Prep Date:	07/09/2009 12:21	Aliquot:	5 g	Final Volume:	5 mL
Data File:	1t418.d	Column:	RTX-Volatiles	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.378	1.11	UJ,V7c
74-87-3	Chloromethane	U	1.11	ug/kg	0.334	1.11	
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.334	1.11	
74-83-9	Bromomethane	U	1.11	ug/kg	0.334	1.11	
75-00-3	Chloroethane	U	1.11	ug/kg	0.334	1.11	
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.634	1.11	UJ,V7c
67-64-1	Acetone	U	5.56	ug/kg	1.85	5.56	UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.334	1.11	
74-88-4	Iodomethane	U	5.56	ug/kg	1.78	5.56	
75-09-2	Methylene chloride	U	5.56	ug/kg	2.23	5.56	
75-15-0	Carbon disulfide	U	5.56	ug/kg	1.39	5.56	
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11	
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.334	1.11	
78-93-3	2-Butanone	U	5.56	ug/kg	1.67	5.56	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11	
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11	
67-66-3	Chloroform	U	1.11	ug/kg	0.334	1.11	
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.367	1.11	
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.334	1.11	
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.334	1.11	
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.334	1.11	
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.334	1.11	
71-43-2	Benzene	U	1.11	ug/kg	0.334	1.11	
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.367	1.11	
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11	
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.334	1.11	
74-95-3	Dibromomethane	U	1.11	ug/kg	0.334	1.11	
108-10-1	4-Methyl-2-pentanone	U	5.56	ug/kg	1.39	5.56	
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11	
108-88-3	Toluene	U	1.11	ug/kg	0.334	1.11	
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11	
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.334	1.11	
591-78-6	2-Hexanone	U	5.56	ug/kg	1.67	5.56	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.334	1.11	
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.334	1.11	
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.334	1.11	
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.334	1.11	
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.334	1.11	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741006	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9957	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:54	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t418.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.334	1.11
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.334	2.23
95-47-6	o-Xylene	U	1.11	ug/kg	0.334	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.334	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.334	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.334	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.334	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.334	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.334	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.334	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.334	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.334	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.334	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.334	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.56	ug/kg	1.78	5.56
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Siloxane	18.09	13.7	ug/kg		J
	Unknown Hydrocarbon	20	16.6	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741005	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9958	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:20	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t417.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.379	1.11 UJ,V7c
74-87-3	Chloromethane	U	1.11	ug/kg	0.334	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.334	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.334	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.334	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.635	1.11 UJ,V7c
67-64-1	Acetone	U	5.57	ug/kg	1.85	5.57 UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
74-88-4	Iodomethane	U	5.57	ug/kg	1.78	5.57
75-09-2	Methylene chloride	U	5.57	ug/kg	2.23	5.57
75-15-0	Carbon disulfide	U	5.57	ug/kg	1.39	5.57
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.334	1.11
78-93-3	2-Butanone	U	5.57	ug/kg	1.67	5.57 UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.334	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.368	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.334	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.334	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.334	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.334	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.334	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.368	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.334	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.334	1.11
108-10-1	4-Methyl-2-pentanone	U	5.57	ug/kg	1.39	5.57
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.334	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.334	1.11
591-78-6	2-Hexanone	U	5.57	ug/kg	1.67	5.57 UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.334	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.334	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.334	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.334	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.334	1.11

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741005	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9958	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:20	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t417.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.334	1.11
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.334	2.23
95-47-6	o-Xylene	U	1.11	ug/kg	0.334	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.334	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.334	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.334	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.334	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.334	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.334	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.334	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.334	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.334	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.334	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.334	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.57	ug/kg	1.78	5.57
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	13.1	ug/kg		J
	Unknown Hydrocarbon	20.01	7.73	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 18:25	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:24	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t421.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.24	ug/kg	0.423	1.24 UJ,V7c
74-87-3	Chloromethane	U	1.24	ug/kg	0.373	1.24
75-01-4	Vinyl chloride	U	1.24	ug/kg	0.373	1.24
74-83-9	Bromomethane	U	1.24	ug/kg	0.373	1.24
75-00-3	Chloroethane	U	1.24	ug/kg	0.373	1.24
75-69-4	Trichlorofluoromethane	U	1.24	ug/kg	0.709	1.24 UJ,V7c
67-64-1	Acetone	U	6.22	ug/kg	2.07	6.22 UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.24	ug/kg	0.373	1.24
74-88-4	Iodomethane	U	6.22	ug/kg	1.99	6.22
75-09-2	Methylene chloride	U	6.22	ug/kg	2.49	6.22
75-15-0	Carbon disulfide	U	6.22	ug/kg	1.56	6.22
156-60-5	trans-1,2-Dichloroethylene	U	1.24	ug/kg	0.373	1.24
75-34-3	1,l-Dichloroethane	U	1.24	ug/kg	0.373	1.24
78-93-3	2-Butanone	U	6.22	ug/kg	1.87	6.22 UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.24	ug/kg	0.373	1.24
594-20-7	2,2-Dichloropropane	U	1.24	ug/kg	0.373	1.24
67-66-3	Chloroform	U	1.24	ug/kg	0.373	1.24
74-97-5	Bromochloromethane	U	1.24	ug/kg	0.411	1.24
71-55-6	1,1,1-Trichloroethane	U	1.24	ug/kg	0.373	1.24
563-58-6	1,1-Dichloropropene	U	1.24	ug/kg	0.373	1.24
56-23-5	Carbon tetrachloride	U	1.24	ug/kg	0.373	1.24
107-06-2	1,2-Dichloroethane	U	1.24	ug/kg	0.373	1.24
71-43-2	Benzene	U	1.24	ug/kg	0.373	1.24
79-01-6	Trichloroethylene	U	1.24	ug/kg	0.411	1.24
78-87-5	1,2-Dichloropropane	U	1.24	ug/kg	0.373	1.24
75-27-4	Bromodichloromethane	U	1.24	ug/kg	0.373	1.24
74-95-3	Dibromomethane	U	1.24	ug/kg	0.373	1.24
108-10-1	4-Methyl-2-pentanone	U	6.22	ug/kg	1.56	6.22
10061-01-5	cis-1,3-Dichloropropylene	U	1.24	ug/kg	0.373	1.24
108-88-3	Toluene	U	1.24	ug/kg	0.373	1.24
10061-02-6	trans-1,3-Dichloropropylene	U	1.24	ug/kg	0.373	1.24
79-00-5	1,1,2-Trichloroethane	U	1.24	ug/kg	0.373	1.24
591-78-6	2-Hexanone	U	6.22	ug/kg	1.87	6.22 UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.24	ug/kg	0.373	1.24
127-18-4	Tetrachloroethylene	U	1.24	ug/kg	0.373	1.24
124-48-1	Dibromochloromethane	U	1.24	ug/kg	0.373	1.24
106-93-4	1,2-Dibromoethane	U	1.24	ug/kg	0.373	1.24
108-90-7	Chlorobenzene	U	1.24	ug/kg	0.373	1.24

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 18:25	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:24	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t421.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.24	ug/kg	0.373	1.24
179601-23-1	m,p-Xylenes	U	2.49	ug/kg	0.373	2.49
95-47-6	o-Xylene	U	1.24	ug/kg	0.373	1.24
100-42-5	Styrene	U	1.24	ug/kg	0.373	1.24
75-25-2	Bromoform	U	1.24	ug/kg	0.373	1.24
79-34-5	1,1,2,2-Tetrachloroethane	U	1.24	ug/kg	0.373	1.24
96-18-4	1,2,3-Trichloropropane	U	1.24	ug/kg	0.373	1.24
108-86-1	Bromobenzene	U	1.24	ug/kg	0.373	1.24
103-65-1	n-Propylbenzene	U	1.24	ug/kg	0.373	1.24
95-49-8	2-Chlorotoluene	U	1.24	ug/kg	0.373	1.24
98-82-8	Isopropylbenzene	U	1.24	ug/kg	0.373	1.24
108-67-8	1,3,5-Trimethylbenzene	U	1.24	ug/kg	0.373	1.24
106-43-4	4-Chlorotoluene	U	1.24	ug/kg	0.373	1.24
98-06-6	tert-Butylbenzene	U	1.24	ug/kg	0.373	1.24
95-63-6	1,2,4-Trimethylbenzene	U	1.24	ug/kg	0.373	1.24
135-98-8	sec-Butylbenzene	U	1.24	ug/kg	0.373	1.24
99-87-6	4-Isopropyltoluene	U	1.24	ug/kg	0.373	1.24
541-73-1	1,3-Dichlorobenzene	U	1.24	ug/kg	0.373	1.24
106-46-7	1,4-Dichlorobenzene	U	1.24	ug/kg	0.373	1.24
104-51-8	n-Butylbenzene	U	1.24	ug/kg	0.373	1.24
96-12-8	1,2-Dibromo-3-chloropropane	U	1.24	ug/kg	0.373	1.24
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.22	ug/kg	1.99	6.22
630-20-6	1,1,1,2-Tetrachloroethane	U	1.24	ug/kg	0.373	1.24
95-50-1	1,2-Dichlorobenzene	U	1.24	ug/kg	0.373	1.24

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

LT 7/27/09

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2524 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Linda Thal ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): SVOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw ICAL standards data were not provided in the data package. No sample data were qualified as a result.
2. The ICAL r^2 values for 4-chloroaniline, hexachlorocyclopentadiene and 2,4-dinitrophenol were <0.995. The associated sample results were NDs and, thus, were qualified UJ,SV7a.
3. The ICV and/or CCV %Ds for benzoic acid, 4-chloroaniline, 3-nitroaniline and 2-methyl-4,6-dinitrophenol were >20%. The associated sample results were NDs and, thus, were qualified UJ,SV7c.

Reviewed by: JEJ Level: 1 Date: 7/28/09

VALIDATOR'S SIGNATURE: K Neal	DATE: 7/28/09
Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☒	☐	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☐	☒	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☒	☐	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☒	☐	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 15:21	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0719.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.1	376	
108-95-2	Phenol	U	376	ug/kg	75.1	376	
95-57-8	2-Chlorophenol	U	376	ug/kg	75.1	376	
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.1	376	
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.1	376	
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	75.1	376	
83-32-9	Acenaphthene	U	37.6	ug/kg	12.4	37.6	
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376	
100-02-7	4-Nitrophenol	U	376	ug/kg	124	376	
87-86-5	Pentachlorophenol	U	376	ug/kg	93.9	376	
129-00-0	Pyrene		90.3	ug/kg	11.3	37.6	
110-86-1	Pyridine	U	376	ug/kg	75.1	376	
62-53-3	Aniline	U	376	ug/kg	113	376	
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.1	376	
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.1	376	
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376	
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.1	376	
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.1	376	
95-48-7	o-Cresol	U	376	ug/kg	75.1	376	
65794-96-9	m,p-Cresols	U	376	ug/kg	113	376	
67-72-1	Hexachloroethane	U	376	ug/kg	75.1	376	
98-95-3	Nitrobenzene	U	376	ug/kg	75.1	376	
78-59-1	Isophorone	U	376	ug/kg	75.1	376	
88-75-5	2-Nitrophenol	U	376	ug/kg	75.1	376	
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	131	376	
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.1	376	
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.1	376	
65-85-0	Benzoic acid	U	751	ug/kg	188	751	UJ,SV7c
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6	
106-47-8	4-Chloroaniline	U	376	ug/kg	75.1	376	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.1	376	
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.51	37.6	
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.1	376	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.1	376	
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.1	376	
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	12.4	37.6	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	376	ug/kg	75.1	376	
99-09-2	3-Nitroaniline	U	376	ug/kg	75.1	376	UJ,SV7c

LT 7/28/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741008	Date Received:	07/02/2009 08:40	%Moisture:	11.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10031	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 15:21	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0719.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	376	ug/kg	75.1	376
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751 UJ,SV7a
132-64-9	Dibenzofuran	U	376	ug/kg	75.1	376
84-66-2	Diethylphthalate	U	376	ug/kg	75.1	376
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	75.1	376
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.1	376 UJ,SV7c
100-01-6	4-Nitroaniline	U	376	ug/kg	113	376
	p-Nitroaniline					
122-39-4	Diphenylamine	U	376	ug/kg	75.1	376
122-66-7	Azobenzene	U	376	ug/kg	75.1	376
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	75.1	376
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.1	376
85-01-8	Phenanthrene		72.2	ug/kg	11.3	37.6
120-12-7	Anthracene	J	14.9	ug/kg	7.51	37.6
84-74-2	Di-n-butylphthalate	U	376	ug/kg	75.1	376
206-44-0	Fluoranthene		100	ug/kg	11.3	37.6
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.1	376
56-55-3	Benzo(a)anthracene		44.3	ug/kg	11.3	37.6
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376
218-01-9	Chrysene		38.4	ug/kg	11.3	37.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.1	376
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.1	376
205-99-2	Benzo(b)fluoranthene		49.2	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	J	17.2	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene		40.0	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	J	21.9	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	J	25.8	ug/kg	11.3	37.6
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.1	376

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	327	ug/kg		JA

LT 7/28/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9950	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:00	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0714.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	372	ug/kg	74.5	372
108-95-2	Phenol	U	372	ug/kg	74.5	372
95-57-8	2-Chlorophenol	U	372	ug/kg	74.5	372
106-46-7	1,4-Dichlorobenzene	U	372	ug/kg	74.5	372
621-64-7	N-Nitrosodipropylamine	U	372	ug/kg	74.5	372
59-50-7	4-Chloro-3-methylphenol	U	372	ug/kg	74.5	372
83-32-9	Acenaphthene	U	37.2	ug/kg	12.3	37.2
121-14-2	2,4-Dinitrotoluene	U	372	ug/kg	37.2	372
100-02-7	4-Nitrophenol	U	372	ug/kg	123	372
87-86-5	Pentachlorophenol	U	372	ug/kg	93.1	372
129-00-0	Pyrene		41.0	ug/kg	11.2	37.2
110-86-1	Pyridine	U	372	ug/kg	74.5	372
62-53-3	Aniline	U	372	ug/kg	112	372
111-44-4	bis(2-Chloroethyl) ether	U	372	ug/kg	74.5	372
541-73-1	1,3-Dichlorobenzene	U	372	ug/kg	74.5	372
100-51-6	Benzyl alcohol	U	372	ug/kg	112	372
95-50-1	1,2-Dichlorobenzene	U	372	ug/kg	74.5	372
108-60-1	bis(2-Chloroisopropyl)ether	U	372	ug/kg	74.5	372
95-48-7	o-Cresol	U	372	ug/kg	74.5	372
65794-96-9	m,p-Cresols	U	372	ug/kg	112	372
67-72-1	Hexachloroethane	U	372	ug/kg	74.5	372
98-95-3	Nitrobenzene	U	372	ug/kg	74.5	372
78-59-1	Isophorone	U	372	ug/kg	74.5	372
88-75-5	2-Nitrophenol	U	372	ug/kg	74.5	372
105-67-9	2,4-Dimethylphenol	U	372	ug/kg	130	372
111-91-1	bis(2-Chloroethoxy)methane	U	372	ug/kg	74.5	372
120-83-2	2,4-Dichlorophenol	U	372	ug/kg	74.5	372
65-85-0	Benzoic acid	U	745	ug/kg	186	745 UJ,SV7c
91-20-3	Naphthalene	U	37.2	ug/kg	11.2	37.2
106-47-8	4-Chloroaniline	U	372	ug/kg	74.5	372 UJ,SV7a
87-68-3	Hexachlorobutadiene	U	372	ug/kg	74.5	372
91-57-6	2-Methylnaphthalene	U	37.2	ug/kg	7.45	37.2
77-47-4	Hexachlorocyclopentadiene	U	372	ug/kg	74.5	372 UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	372	ug/kg	74.5	372
95-95-4	2,4,5-Trichlorophenol	U	372	ug/kg	74.5	372
91-58-7	2-Chloronaphthalene	U	37.2	ug/kg	12.3	37.2
88-74-4	2-Nitroaniline	U	372	ug/kg	74.5	372
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	372	ug/kg	74.5	372 UJ,SV7c

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9950	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:00	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0714.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	372	ug/kg	74.5	372	
606-20-2	2,6-Dinitrotoluene	U	372	ug/kg	37.2	372	
208-96-8	Acenaphthylene	U	37.2	ug/kg	11.2	37.2	
51-28-5	2,4-Dinitrophenol	U	745	ug/kg	142	745	UJ,SV7a
132-64-9	Dibenzofuran	U	372	ug/kg	74.5	372	
84-66-2	Diethylphthalate	U	372	ug/kg	74.5	372	
86-73-7	Fluorene	U	37.2	ug/kg	11.2	37.2	
7005-72-3	4-Chlorophenylphenylether	U	372	ug/kg	74.5	372	
534-52-1	2-Methyl-4,6-dinitrophenol	U	372	ug/kg	74.5	372	UJ,SV7c
100-01-6	4-Nitroaniline	U	372	ug/kg	112	372	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	372	ug/kg	74.5	372	
122-66-7	Azobenzene	U	372	ug/kg	74.5	372	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	372	ug/kg	74.5	372	
118-74-1	Hexachlorobenzene	U	372	ug/kg	74.5	372	
85-01-8	Phenanthrene	J	29.8	ug/kg	11.2	37.2	
120-12-7	Anthracene	U	37.2	ug/kg	7.45	37.2	
84-74-2	Di-n-butylphthalate	U	372	ug/kg	74.5	372	
206-44-0	Fluoranthene		42.3	ug/kg	11.2	37.2	
85-68-7	Butylbenzylphthalate	U	372	ug/kg	74.5	372	
56-55-3	Benzo(a)anthracene	J	21.7	ug/kg	11.2	37.2	
91-94-1	3,3'-Dichlorobenzidine	U	372	ug/kg	112	372	
218-01-9	Chrysene	J	16.1	ug/kg	11.2	37.2	
117-81-7	bis(2-Ethylhexyl)phthalate	U	372	ug/kg	74.5	372	
117-84-0	Di-n-octylphthalate	U	372	ug/kg	74.5	372	
205-99-2	Benzo(b)fluoranthene	J	21.8	ug/kg	11.2	37.2	
207-08-9	Benzo(k)fluoranthene	U	37.2	ug/kg	11.2	37.2	
50-32-8	Benzo(a)pyrene	J	17.0	ug/kg	11.2	37.2	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.2	ug/kg	11.2	37.2	
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.2	37.2	
191-24-2	Benzo(ghi)perylene	J	15.0	ug/kg	11.2	37.2	
120-82-1	1,2,4-Trichlorobenzene	U	372	ug/kg	74.5	372	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	352	ug/kg		JA

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741007	Date Received:	07/02/2009 08:40	%Moisture:	10.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9951	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 16:18	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0721.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	371	ug/kg	74.2	371	
108-95-2	Phenol	U	371	ug/kg	74.2	371	
95-57-8	2-Chlorophenol	U	371	ug/kg	74.2	371	
106-46-7	1,4-Dichlorobenzene	U	371	ug/kg	74.2	371	
621-64-7	N-Nitrosodipropylamine	U	371	ug/kg	74.2	371	
59-50-7	4-Chloro-3-methylphenol	U	371	ug/kg	74.2	371	
83-32-9	Acenaphthene	U	37.1	ug/kg	12.2	37.1	
121-14-2	2,4-Dinitrotoluene	U	371	ug/kg	37.1	371	
100-02-7	4-Nitrophenol	U	371	ug/kg	122	371	
87-86-5	Pentachlorophenol	U	371	ug/kg	92.8	371	
129-00-0	Pyrene		40.4	ug/kg	11.1	37.1	
110-86-1	Pyridine	U	371	ug/kg	74.2	371	
62-53-3	Aniline	U	371	ug/kg	111	371	
111-44-4	bis(2-Chloroethyl) ether	U	371	ug/kg	74.2	371	
541-73-1	1,3-Dichlorobenzene	U	371	ug/kg	74.2	371	
100-51-6	Benzyl alcohol	U	371	ug/kg	111	371	
95-50-1	1,2-Dichlorobenzene	U	371	ug/kg	74.2	371	
108-60-1	bis(2-Chloroisopropyl)ether	U	371	ug/kg	74.2	371	
95-48-7	o-Cresol	U	371	ug/kg	74.2	371	
65794-96-9	m,p-Cresols	U	371	ug/kg	111	371	
67-72-1	Hexachloroethane	U	371	ug/kg	74.2	371	
98-95-3	Nitrobenzene	U	371	ug/kg	74.2	371	
78-59-1	Isophorone	U	371	ug/kg	74.2	371	
88-75-5	2-Nitrophenol	U	371	ug/kg	74.2	371	
105-67-9	2,4-Dimethylphenol	U	371	ug/kg	130	371	
111-91-1	bis(2-Chloroethoxy)methane	U	371	ug/kg	74.2	371	
120-83-2	2,4-Dichlorophenol	U	371	ug/kg	74.2	371	
65-85-0	Benzoic acid	U	742	ug/kg	186	742	UJ,SV7c
91-20-3	Naphthalene	U	37.1	ug/kg	11.1	37.1	
106-47-8	4-Chloroaniline	U	371	ug/kg	74.2	371	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	371	ug/kg	74.2	371	
91-57-6	2-Methylnaphthalene	U	37.1	ug/kg	7.42	37.1	
77-47-4	Hexachlorocyclopentadiene	U	371	ug/kg	74.2	371	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	371	ug/kg	74.2	371	
95-95-4	2,4,5-Trichlorophenol	U	371	ug/kg	74.2	371	
91-58-7	2-Chloronaphthalene	U	37.1	ug/kg	12.2	37.1	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	371	ug/kg	74.2	371	
99-09-2	3-Nitroaniline	U	371	ug/kg	74.2	371	UJ,SV7c

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Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741007	Date Received:	07/02/2009 08:40	%Moisture:	10.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9951	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 16:18	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0721.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	371	ug/kg	74.2	371
606-20-2	2,6-Dinitrotoluene	U	371	ug/kg	37.1	371
208-96-8	Acenaphthylene	U	37.1	ug/kg	11.1	37.1
51-28-5	2,4-Dinitrophenol	U	742	ug/kg	141	742 UJ,SV7a
132-64-9	Dibenzofuran	U	371	ug/kg	74.2	371
84-66-2	Diethylphthalate	U	371	ug/kg	74.2	371
86-73-7	Fluorene	U	37.1	ug/kg	11.1	37.1
7005-72-3	4-Chlorophenylphenylether	U	371	ug/kg	74.2	371
534-52-1	2-Methyl-4,6-dinitrophenol	U	371	ug/kg	74.2	371 UJ,SV7c
100-01-6	4-Nitroaniline	U	371	ug/kg	111	371
	p-Nitroaniline					
122-39-4	Diphenylamine	U	371	ug/kg	74.2	371
122-66-7	Azobenzene	U	371	ug/kg	74.2	371
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	371	ug/kg	74.2	371
118-74-1	Hexachlorobenzene	U	371	ug/kg	74.2	371
85-01-8	Phenanthrene	J	12.5	ug/kg	11.1	37.1
120-12-7	Anthracene	U	37.1	ug/kg	7.42	37.1
84-74-2	Di-n-butylphthalate	U	371	ug/kg	74.2	371
206-44-0	Fluoranthene		38.3	ug/kg	11.1	37.1
85-68-7	Butylbenzylphthalate	U	371	ug/kg	74.2	371
56-55-3	Benzo(a)anthracene		39.9	ug/kg	11.1	37.1
91-94-1	3,3'-Dichlorobenzidine	U	371	ug/kg	111	371
218-01-9	Chrysene	J	35.5	ug/kg	11.1	37.1
117-81-7	bis(2-Ethylhexyl)phthalate	U	371	ug/kg	74.2	371
117-84-0	Di-n-octylphthalate	U	371	ug/kg	74.2	371
205-99-2	Benzo(b)fluoranthene		44.3	ug/kg	11.1	37.1
207-08-9	Benzo(k)fluoranthene	J	21.9	ug/kg	11.1	37.1
50-32-8	Benzo(a)pyrene	J	34.4	ug/kg	11.1	37.1
193-39-5	Indeno(1,2,3-cd)pyrene	J	16.7	ug/kg	11.1	37.1
53-70-3	Dibenzo(a,h)anthracene	U	37.1	ug/kg	11.1	37.1
191-24-2	Benzo(ghi)perylene	J	15.8	ug/kg	11.1	37.1
120-82-1	1,2,4-Trichlorobenzene	U	371	ug/kg	74.2	371

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	303	ug/kg		JA

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741004	Date Received:	07/02/2009 08:40	%Moisture:	10.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9952	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 13:28	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0715.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	372	ug/kg	74.4	372	
108-95-2	Phenol	U	372	ug/kg	74.4	372	
95-57-8	2-Chlorophenol	U	372	ug/kg	74.4	372	
106-46-7	1,4-Dichlorobenzene	U	372	ug/kg	74.4	372	
621-64-7	N-Nitrosodipropylamine	U	372	ug/kg	74.4	372	
59-50-7	4-Chloro-3-methylphenol	U	372	ug/kg	74.4	372	
83-32-9	Acenaphthene	U	37.2	ug/kg	12.3	37.2	
121-14-2	2,4-Dinitrotoluene	U	372	ug/kg	37.2	372	
100-02-7	4-Nitrophenol	U	372	ug/kg	123	372	
87-86-5	Pentachlorophenol	U	372	ug/kg	92.9	372	
129-00-0	Pyrene	U	37.2	ug/kg	11.2	37.2	
110-86-1	Pyridine	U	372	ug/kg	74.4	372	
62-53-3	Aniline	U	372	ug/kg	112	372	
111-44-4	bis(2-Chloroethyl) ether	U	372	ug/kg	74.4	372	
541-73-1	1,3-Dichlorobenzene	U	372	ug/kg	74.4	372	
100-51-6	Benzyl alcohol	U	372	ug/kg	112	372	
95-50-1	1,2-Dichlorobenzene	U	372	ug/kg	74.4	372	
108-60-1	bis(2-Chloroisopropyl)ether	U	372	ug/kg	74.4	372	
95-48-7	o-Cresol	U	372	ug/kg	74.4	372	
65794-96-9	m,p-Cresols	U	372	ug/kg	112	372	
67-72-1	Hexachloroethane	U	372	ug/kg	74.4	372	
98-95-3	Nitrobenzene	U	372	ug/kg	74.4	372	
78-59-1	Isophorone	U	372	ug/kg	74.4	372	
88-75-5	2-Nitrophenol	U	372	ug/kg	74.4	372	
105-67-9	2,4-Dimethylphenol	U	372	ug/kg	130	372	
111-91-1	bis(2-Chloroethoxy)methane	U	372	ug/kg	74.4	372	
120-83-2	2,4-Dichlorophenol	U	372	ug/kg	74.4	372	
65-85-0	Benzoic acid	U	744	ug/kg	186	744	UJ,SV7c
91-20-3	Naphthalene	U	37.2	ug/kg	11.2	37.2	
106-47-8	4-Chloroaniline	U	372	ug/kg	74.4	372	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	372	ug/kg	74.4	372	
91-57-6	2-Methylnaphthalene	U	37.2	ug/kg	7.44	37.2	
77-47-4	Hexachlorocyclopentadiene	U	372	ug/kg	74.4	372	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	372	ug/kg	74.4	372	
95-95-4	2,4,5-Trichlorophenol	U	372	ug/kg	74.4	372	
91-58-7	2-Chloronaphthalene	U	37.2	ug/kg	12.3	37.2	
88-74-4	2-Nitroaniline	U	372	ug/kg	74.4	372	
	o-Nitroaniline						
99-09-2	3-Nitroaniline	U	372	ug/kg	74.4	372	UJ,SV7c

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741004	Date Received:	07/02/2009 08:40	%Moisture:	10.4
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9952	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 13:28	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0715.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	372	ug/kg	74.4	372	
606-20-2	2,6-Dinitrotoluene	U	372	ug/kg	37.2	372	
208-96-8	Acenaphthylene	U	37.2	ug/kg	11.2	37.2	
51-28-5	2,4-Dinitrophenol	U	744	ug/kg	141	744	UJ,SV7a
132-64-9	Dibenzofuran	U	372	ug/kg	74.4	372	
84-66-2	Diethylphthalate	U	372	ug/kg	74.4	372	
86-73-7	Fluorene	U	37.2	ug/kg	11.2	37.2	
7005-72-3	4-Chlorophenylphenylether	U	372	ug/kg	74.4	372	
534-52-1	2-Methyl-4,6-dinitrophenol	U	372	ug/kg	74.4	372	UJ,SV7c
100-01-6	4-Nitroaniline	U	372	ug/kg	112	372	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	372	ug/kg	74.4	372	
122-66-7	Azobenzene	U	372	ug/kg	74.4	372	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	372	ug/kg	74.4	372	
118-74-1	Hexachlorobenzene	U	372	ug/kg	74.4	372	
85-01-8	Phenanthrene	U	37.2	ug/kg	11.2	37.2	
120-12-7	Anthracene	U	37.2	ug/kg	7.44	37.2	
84-74-2	Di-n-butylphthalate	U	372	ug/kg	74.4	372	
206-44-0	Fluoranthene	U	37.2	ug/kg	11.2	37.2	
85-68-7	Butylbenzylphthalate	U	372	ug/kg	74.4	372	
56-55-3	Benzo(a)anthracene	U	37.2	ug/kg	11.2	37.2	
91-94-1	3,3'-Dichlorobenzidine	U	372	ug/kg	112	372	
218-01-9	Chrysene	U	37.2	ug/kg	11.2	37.2	
117-81-7	bis(2-Ethylhexyl)phthalate	U	372	ug/kg	74.4	372	
117-84-0	Di-n-octylphthalate	U	372	ug/kg	74.4	372	
205-99-2	Benzo(b)fluoranthene	U	37.2	ug/kg	11.2	37.2	
207-08-9	Benzo(k)fluoranthene	U	37.2	ug/kg	11.2	37.2	
50-32-8	Benzo(a)pyrene	U	37.2	ug/kg	11.2	37.2	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.2	ug/kg	11.2	37.2	
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.2	37.2	
191-24-2	Benzo(ghi)perylene	U	37.2	ug/kg	11.2	37.2	
120-82-1	1,2,4-Trichlorobenzene	U	372	ug/kg	74.4	372	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	349	ug/kg		JA

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9956	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 11:35	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0711.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	388	ug/kg	77.6	388	
108-95-2	Phenol	U	388	ug/kg	77.6	388	
95-57-8	2-Chlorophenol	U	388	ug/kg	77.6	388	
106-46-7	1,4-Dichlorobenzene	U	388	ug/kg	77.6	388	
621-64-7	N-Nitrosodipropylamine	U	388	ug/kg	77.6	388	
59-50-7	4-Chloro-3-methylphenol	U	388	ug/kg	77.6	388	
83-32-9	Acenaphthene	U	38.8	ug/kg	12.8	38.8	
121-14-2	2,4-Dinitrotoluene	U	388	ug/kg	38.8	388	
100-02-7	4-Nitrophenol	U	388	ug/kg	128	388	
87-86-5	Pentachlorophenol	U	388	ug/kg	96.9	388	
129-00-0	Pyrene	J	24.6	ug/kg	11.6	38.8	
110-86-1	Pyridine	U	388	ug/kg	77.6	388	
62-53-3	Aniline	U	388	ug/kg	116	388	
111-44-4	bis(2-Chloroethyl) ether	U	388	ug/kg	77.6	388	
541-73-1	1,3-Dichlorobenzene	U	388	ug/kg	77.6	388	
100-51-6	Benzyl alcohol	U	388	ug/kg	116	388	
95-50-1	1,2-Dichlorobenzene	U	388	ug/kg	77.6	388	
108-60-1	bis(2-Chloroisopropyl)ether	U	388	ug/kg	77.6	388	
95-48-7	o-Cresol	U	388	ug/kg	77.6	388	
65794-96-9	m,p-Cresols	U	388	ug/kg	116	388	
67-72-1	Hexachloroethane	U	388	ug/kg	77.6	388	
98-95-3	Nitrobenzene	U	388	ug/kg	77.6	388	
78-59-1	Isophorone	U	388	ug/kg	77.6	388	
88-75-5	2-Nitrophenol	U	388	ug/kg	77.6	388	
105-67-9	2,4-Dimethylphenol	U	388	ug/kg	136	388	
111-91-1	bis(2-Chloroethoxy)methane	U	388	ug/kg	77.6	388	
120-83-2	2,4-Dichlorophenol	U	388	ug/kg	77.6	388	
65-85-0	Benzoic acid	U	776	ug/kg	194	776	UJ,SV7c
91-20-3	Naphthalene	U	38.8	ug/kg	11.6	38.8	
106-47-8	4-Chloroaniline	U	388	ug/kg	77.6	388	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	388	ug/kg	77.6	388	
91-57-6	2-Methylnaphthalene	U	38.8	ug/kg	7.76	38.8	
77-47-4	Hexachlorocyclopentadiene	U	388	ug/kg	77.6	388	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	388	ug/kg	77.6	388	
95-95-4	2,4,5-Trichlorophenol	U	388	ug/kg	77.6	388	
91-58-7	2-Chloronaphthalene	U	38.8	ug/kg	12.8	38.8	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	388	ug/kg	77.6	388	
99-09-2	3-Nitroaniline	U	388	ug/kg	77.6	388	UJ,SV7c

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741002	Date Received:	07/02/2009 08:40	%Moisture:	14.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9956	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 11:35	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5g0711.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	388	ug/kg	77.6	388	
606-20-2	2,6-Dinitrotoluene	U	388	ug/kg	38.8	388	
208-96-8	Acenaphthylene	U	38.8	ug/kg	11.6	38.8	
51-28-5	2,4-Dinitrophenol	U	776	ug/kg	147	776	UJ,SV7a
132-64-9	Dibenzofuran	U	388	ug/kg	77.6	388	
84-66-2	Diethylphthalate	U	388	ug/kg	77.6	388	
86-73-7	Fluorene	U	38.8	ug/kg	11.6	38.8	
7005-72-3	4-Chlorophenylphenylether	U	388	ug/kg	77.6	388	
534-52-1	2-Methyl-4,6-dinitrophenol	U	388	ug/kg	77.6	388	UJ,SV7c
100-01-6	4-Nitroaniline	U	388	ug/kg	116	388	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	388	ug/kg	77.6	388	
122-66-7	Azobenzene	U	388	ug/kg	77.6	388	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	388	ug/kg	77.6	388	
118-74-1	Hexachlorobenzene	U	388	ug/kg	77.6	388	
85-01-8	Phenanthrene	J	14.1	ug/kg	11.6	38.8	
120-12-7	Anthracene	U	38.8	ug/kg	7.76	38.8	
84-74-2	Di-n-butylphthalate	U	388	ug/kg	77.6	388	
206-44-0	Fluoranthene	J	25.6	ug/kg	11.6	38.8	
85-68-7	Butylbenzylphthalate	U	388	ug/kg	77.6	388	
56-55-3	Benzo(a)anthracene	U	38.8	ug/kg	11.6	38.8	
91-94-1	3,3'-Dichlorobenzidine	U	388	ug/kg	116	388	
218-01-9	Chrysene	U	38.8	ug/kg	11.6	38.8	
117-81-7	bis(2-Ethylhexyl)phthalate	U	388	ug/kg	77.6	388	
117-84-0	Di-n-octylphthalate	U	388	ug/kg	77.6	388	
205-99-2	Benzo(b)fluoranthene	J	13.2	ug/kg	11.6	38.8	
207-08-9	Benzo(k)fluoranthene	U	38.8	ug/kg	11.6	38.8	
50-32-8	Benzo(a)pyrene	U	38.8	ug/kg	11.6	38.8	
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.8	ug/kg	11.6	38.8	
53-70-3	Dibenzo(a,h)anthracene	U	38.8	ug/kg	11.6	38.8	
191-24-2	Benzo(ghi)perylene	U	38.8	ug/kg	11.6	38.8	
120-82-1	1,2,4-Trichlorobenzene	U	388	ug/kg	77.6	388	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	8.98	ug/kg		JA
	Unknown	13.48	4.56	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232741006**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**10.1**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9957**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 14:24**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0717.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	371	ug/kg	74.1	371	
108-95-2	Phenol	U	371	ug/kg	74.1	371	
95-57-8	2-Chlorophenol	U	371	ug/kg	74.1	371	
106-46-7	1,4-Dichlorobenzene	U	371	ug/kg	74.1	371	
621-64-7	N-Nitrosodipropylamine	U	371	ug/kg	74.1	371	
59-50-7	4-Chloro-3-methylphenol	U	371	ug/kg	74.1	371	
83-32-9	Acenaphthene	U	37.1	ug/kg	12.2	37.1	
121-14-2	2,4-Dinitrotoluene	U	371	ug/kg	37.1	371	
100-02-7	4-Nitrophenol	U	371	ug/kg	122	371	
87-86-5	Pentachlorophenol	U	371	ug/kg	92.6	371	
129-00-0	Pyrene	U	37.1	ug/kg	11.1	37.1	
110-86-1	Pyridine	U	371	ug/kg	74.1	371	
62-53-3	Aniline	U	371	ug/kg	111	371	
111-44-4	bis(2-Chloroethyl) ether	U	371	ug/kg	74.1	371	
541-73-1	1,3-Dichlorobenzene	U	371	ug/kg	74.1	371	
100-51-6	Benzyl alcohol	U	371	ug/kg	111	371	
95-50-1	1,2-Dichlorobenzene	U	371	ug/kg	74.1	371	
108-60-1	bis(2-Chloroisopropyl)ether	U	371	ug/kg	74.1	371	
95-48-7	o-Cresol	U	371	ug/kg	74.1	371	
65794-96-9	m,p-Cresols	U	371	ug/kg	111	371	
67-72-1	Hexachloroethane	U	371	ug/kg	74.1	371	
98-95-3	Nitrobenzene	U	371	ug/kg	74.1	371	
78-59-1	Isophorone	U	371	ug/kg	74.1	371	
88-75-5	2-Nitrophenol	U	371	ug/kg	74.1	371	
105-67-9	2,4-Dimethylphenol	U	371	ug/kg	130	371	
111-91-1	bis(2-Chloroethoxy)methane	U	371	ug/kg	74.1	371	
120-83-2	2,4-Dichlorophenol	U	371	ug/kg	74.1	371	
65-85-0	Benzoic acid	U	741	ug/kg	185	741	UJ,SV7c
91-20-3	Naphthalene	U	37.1	ug/kg	11.1	37.1	
106-47-8	4-Chloroaniline	U	371	ug/kg	74.1	371	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	371	ug/kg	74.1	371	
91-57-6	2-Methylnaphthalene	U	37.1	ug/kg	7.41	37.1	
77-47-4	Hexachlorocyclopentadiene	U	371	ug/kg	74.1	371	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	371	ug/kg	74.1	371	
95-95-4	2,4,5-Trichlorophenol	U	371	ug/kg	74.1	371	
91-58-7	2-Chloronaphthalene	U	37.1	ug/kg	12.2	37.1	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	371	ug/kg	74.1	371	
99-09-2	3-Nitroaniline	U	371	ug/kg	74.1	371	UJ,SV7c

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232741006**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**10.1**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9957**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 14:24**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0717.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	371	ug/kg	74.1	371	
606-20-2	2,6-Dinitrotoluene	U	371	ug/kg	37.1	371	
208-96-8	Acenaphthylene	U	37.1	ug/kg	11.1	37.1	
51-28-5	2,4-Dinitrophenol	U	741	ug/kg	141	741	UJ,SV7a
132-64-9	Dibenzofuran	U	371	ug/kg	74.1	371	
84-66-2	Diethylphthalate	U	371	ug/kg	74.1	371	
86-73-7	Fluorene	U	37.1	ug/kg	11.1	37.1	
7005-72-3	4-Chlorophenylphenylether	U	371	ug/kg	74.1	371	
534-52-1	2-Methyl-4,6-dinitrophenol	U	371	ug/kg	74.1	371	UJ,SV7c
100-01-6	4-Nitroaniline	U	371	ug/kg	111	371	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	371	ug/kg	74.1	371	
122-66-7	Azobenzene	U	371	ug/kg	74.1	371	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	371	ug/kg	74.1	371	
118-74-1	Hexachlorobenzene	U	371	ug/kg	74.1	371	
85-01-8	Phenanthrene	U	37.1	ug/kg	11.1	37.1	
120-12-7	Anthracene	U	37.1	ug/kg	7.41	37.1	
84-74-2	Di-n-butylphthalate	U	371	ug/kg	74.1	371	
206-44-0	Fluoranthene	U	37.1	ug/kg	11.1	37.1	
85-68-7	Butylbenzylphthalate	U	371	ug/kg	74.1	371	
56-55-3	Benzo(a)anthracene	U	37.1	ug/kg	11.1	37.1	
91-94-1	3,3'-Dichlorobenzidine	U	371	ug/kg	111	371	
218-01-9	Chrysene	U	37.1	ug/kg	11.1	37.1	
117-81-7	bis(2-Ethylhexyl)phthalate	U	371	ug/kg	74.1	371	
117-84-0	Di-n-octylphthalate	U	371	ug/kg	74.1	371	
205-99-2	Benzo(b)fluoranthene	U	37.1	ug/kg	11.1	37.1	
207-08-9	Benzo(k)fluoranthene	U	37.1	ug/kg	11.1	37.1	
50-32-8	Benzo(a)pyrene	U	37.1	ug/kg	11.1	37.1	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.1	ug/kg	11.1	37.1	
53-70-3	Dibenzo(a,h)anthracene	U	37.1	ug/kg	11.1	37.1	
191-24-2	Benzo(ghi)perylene	U	37.1	ug/kg	11.1	37.1	
120-82-1	1,2,4-Trichlorobenzene	U	371	ug/kg	74.1	371	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Aldol Condensate	3.02	394	ug/kg		JA
5131-66-8	2-Propanol, 1-butoxy-	3.54	1860	ug/kg	90	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741005	Date Received:	07/02/2009 08:40	%Moisture:	10.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9958	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 13:56	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0716.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	372	ug/kg	74.3	372
108-95-2	Phenol	U	372	ug/kg	74.3	372
95-57-8	2-Chlorophenol	U	372	ug/kg	74.3	372
106-46-7	1,4-Dichlorobenzene	U	372	ug/kg	74.3	372
621-64-7	N-Nitrosodipropylamine	U	372	ug/kg	74.3	372
59-50-7	4-Chloro-3-methylphenol	U	372	ug/kg	74.3	372
83-32-9	Acenaphthene	U	37.2	ug/kg	12.3	37.2
121-14-2	2,4-Dinitrotoluene	U	372	ug/kg	37.2	372
100-02-7	4-Nitrophenol	U	372	ug/kg	123	372
87-86-5	Pentachlorophenol	U	372	ug/kg	92.9	372
129-00-0	Pyrene		80.1	ug/kg	11.1	37.2
110-86-1	Pyridine	U	372	ug/kg	74.3	372
62-53-3	Aniline	U	372	ug/kg	111	372
111-44-4	bis(2-Chloroethyl) ether	U	372	ug/kg	74.3	372
541-73-1	1,3-Dichlorobenzene	U	372	ug/kg	74.3	372
100-51-6	Benzyl alcohol	U	372	ug/kg	111	372
95-50-1	1,2-Dichlorobenzene	U	372	ug/kg	74.3	372
108-60-1	bis(2-Chloroisopropyl)ether	U	372	ug/kg	74.3	372
95-48-7	o-Cresol	U	372	ug/kg	74.3	372
65794-96-9	m,p-Cresols	U	372	ug/kg	111	372
67-72-1	Hexachloroethane	U	372	ug/kg	74.3	372
98-95-3	Nitrobenzene	U	372	ug/kg	74.3	372
78-59-1	Isophorone	U	372	ug/kg	74.3	372
88-75-5	2-Nitrophenol	U	372	ug/kg	74.3	372
105-67-9	2,4-Dimethylphenol	U	372	ug/kg	130	372
111-91-1	bis(2-Chloroethoxy)methane	U	372	ug/kg	74.3	372
120-83-2	2,4-Dichlorophenol	U	372	ug/kg	74.3	372
65-85-0	Benzoic acid	U	743	ug/kg	186	743 UJ,SV7c
91-20-3	Naphthalene	U	37.2	ug/kg	11.1	37.2
106-47-8	4-Chloroaniline	U	372	ug/kg	74.3	372 UJ,SV7a
87-68-3	Hexachlorobutadiene	U	372	ug/kg	74.3	372
91-57-6	2-Methylnaphthalene	U	37.2	ug/kg	7.43	37.2
77-47-4	Hexachlorocyclopentadiene	U	372	ug/kg	74.3	372 UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	372	ug/kg	74.3	372
95-95-4	2,4,5-Trichlorophenol	U	372	ug/kg	74.3	372
91-58-7	2-Chloronaphthalene	U	37.2	ug/kg	12.3	37.2
88-74-4	2-Nitroaniline	U	372	ug/kg	74.3	372
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	372	ug/kg	74.3	372 UJ,SV7c

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741005	Date Received:	07/02/2009 08:40	%Moisture:	10.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9958	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 13:56	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Allquot:	30 g	Final Volume:	1 mL
Data File:	s5g0716.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	372	ug/kg	74.3	372
606-20-2	2,6-Dinitrotoluene	U	372	ug/kg	37.2	372
208-96-8	Acenaphthylene	U	37.2	ug/kg	11.1	37.2
51-28-5	2,4-Dinitrophenol	U	743	ug/kg	141	743 UJ,SV7a
132-64-9	Dibenzofuran	U	372	ug/kg	74.3	372
84-66-2	Diethylphthalate	U	372	ug/kg	74.3	372
86-73-7	Fluorene	U	37.2	ug/kg	11.1	37.2
7005-72-3	4-Chlorophenylphenylether	U	372	ug/kg	74.3	372
534-52-1	2-Methyl-4,6-dinitrophenol	U	372	ug/kg	74.3	372 UJ,SV7c
100-01-6	4-Nitroaniline	U	372	ug/kg	111	372
	p-Nitroaniline					
122-39-4	Diphenylamine	U	372	ug/kg	74.3	372
122-66-7	Azobenzene	U	372	ug/kg	74.3	372
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	372	ug/kg	74.3	372
118-74-1	Hexachlorobenzene	U	372	ug/kg	74.3	372
85-01-8	Phenanthrene		43.3	ug/kg	11.1	37.2
120-12-7	Anthracene	J	12.4	ug/kg	7.43	37.2
84-74-2	Di-n-butylphthalate	J	75.5	ug/kg	74.3	372
206-44-0	Fluoranthene		78.0	ug/kg	11.1	37.2
85-68-7	Butylbenzylphthalate	U	372	ug/kg	74.3	372
56-55-3	Benzo(a)anthracene	J	35.2	ug/kg	11.1	37.2
91-94-1	3,3'-Dichlorobenzidine	U	372	ug/kg	111	372
218-01-9	Chrysene	J	35.3	ug/kg	11.1	37.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	372	ug/kg	74.3	372
117-84-0	Di-n-octylphthalate	U	372	ug/kg	74.3	372
205-99-2	Benzo(b)fluoranthene		46.3	ug/kg	11.1	37.2
207-08-9	Benzo(k)fluoranthene	J	21.1	ug/kg	11.1	37.2
50-32-8	Benzo(a)pyrene		40.2	ug/kg	11.1	37.2
193-39-5	Indeno(1,2,3-cd)pyrene	J	25.9	ug/kg	11.1	37.2
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.1	37.2
191-24-2	Benzo(ghi)perylene	J	30.6	ug/kg	11.1	37.2
120-82-1	1,2,4-Trichlorobenzene	U	372	ug/kg	74.3	372

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	355	ug/kg		JA
5131-66-8	2-Propanol, 1-butoxy-	3.54	1360	ug/kg	83	NJ

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741005	Date Received:	07/02/2009 08:40	%Moisture:	10.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9958	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 13:56	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0716.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	3.61	353	ug/kg		J

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741009	Date Received:	07/02/2009 08:40	%Moisture:	19.6
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9990	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 15:50	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.05 g	Final Volume:	1 mL
Data File:	s5g0720.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	414	ug/kg	82.8	414	
108-95-2	Phenol	U	414	ug/kg	82.8	414	
95-57-8	2-Chlorophenol	U	414	ug/kg	82.8	414	
106-46-7	1,4-Dichlorobenzene	U	414	ug/kg	82.8	414	
621-64-7	N-Nitrosodipropylamine	U	414	ug/kg	82.8	414	
59-50-7	4-Chloro-3-methylphenol	U	414	ug/kg	82.8	414	
83-32-9	Acenaphthene	U	41.4	ug/kg	13.7	41.4	
121-14-2	2,4-Dinitrotoluene	U	414	ug/kg	41.4	414	
100-02-7	4-Nitrophenol	U	414	ug/kg	137	414	
87-86-5	Pentachlorophenol	U	414	ug/kg	104	414	
129-00-0	Pyrene	U	41.4	ug/kg	12.4	41.4	
110-86-1	Pyridine	U	414	ug/kg	82.8	414	
62-53-3	Aniline	U	414	ug/kg	124	414	
111-44-4	bis(2-Chloroethyl) ether	U	414	ug/kg	82.8	414	
541-73-1	1,3-Dichlorobenzene	U	414	ug/kg	82.8	414	
100-51-6	Benzyl alcohol	U	414	ug/kg	124	414	
95-50-1	1,2-Dichlorobenzene	U	414	ug/kg	82.8	414	
108-60-1	bis(2-Chloroisopropyl)ether	U	414	ug/kg	82.8	414	
95-48-7	o-Cresol	U	414	ug/kg	82.8	414	
65794-96-9	m,p-Cresols	U	414	ug/kg	124	414	
67-72-1	Hexachloroethane	U	414	ug/kg	82.8	414	
98-95-3	Nitrobenzene	U	414	ug/kg	82.8	414	
78-59-1	Isophorone	U	414	ug/kg	82.8	414	
88-75-5	2-Nitrophenol	U	414	ug/kg	82.8	414	
105-67-9	2,4-Dimethylphenol	U	414	ug/kg	145	414	
111-91-1	bis(2-Chloroethoxy)methane	U	414	ug/kg	82.8	414	
120-83-2	2,4-Dichlorophenol	U	414	ug/kg	82.8	414	
65-85-0	Benzoic acid	U	828	ug/kg	207	828	UJ,SV7c
91-20-3	Naphthalene	U	41.4	ug/kg	12.4	41.4	
106-47-8	4-Chloroaniline	U	414	ug/kg	82.8	414	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	414	ug/kg	82.8	414	
91-57-6	2-Methylnaphthalene	U	41.4	ug/kg	8.28	41.4	
77-47-4	Hexachlorocyclopentadiene	U	414	ug/kg	82.8	414	UJ,SV7a
88-06-2	2,4,6-Trichlorophenol	U	414	ug/kg	82.8	414	
95-95-4	2,4,5-Trichlorophenol	U	414	ug/kg	82.8	414	
91-58-7	2-Chloronaphthalene	U	41.4	ug/kg	13.7	41.4	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	414	ug/kg	82.8	414	
99-09-2	3-Nitroaniline	U	414	ug/kg	82.8	414	UJ,SV7c

LT 7/28/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 15:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0720.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	414	ug/kg	82.8	414	
606-20-2	2,6-Dinitrotoluene	U	414	ug/kg	41.4	414	
208-96-8	Acenaphthylene	U	41.4	ug/kg	12.4	41.4	
51-28-5	2,4-Dinitrophenol	U	828	ug/kg	157	828	UJ,SV7a
132-64-9	Dibenzofuran	U	414	ug/kg	82.8	414	
84-66-2	Diethylphthalate	U	414	ug/kg	82.8	414	
86-73-7	Fluorene	U	41.4	ug/kg	12.4	41.4	
7005-72-3	4-Chlorophenylphenylether	U	414	ug/kg	82.8	414	
534-52-1	2-Methyl-4,6-dinitrophenol	U	414	ug/kg	82.8	414	UJ,SV7c
100-01-6	4-Nitroaniline	U	414	ug/kg	124	414	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	414	ug/kg	82.8	414	
122-66-7	Azobenzene	U	414	ug/kg	82.8	414	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	414	ug/kg	82.8	414	
118-74-1	Hexachlorobenzene	U	414	ug/kg	82.8	414	
85-01-8	Phenanthrene	U	41.4	ug/kg	12.4	41.4	
120-12-7	Anthracene	U	41.4	ug/kg	8.28	41.4	
84-74-2	Di-n-butylphthalate	U	414	ug/kg	82.8	414	
206-44-0	Fluoranthene	U	41.4	ug/kg	12.4	41.4	
85-68-7	Butylbenzylphthalate	U	414	ug/kg	82.8	414	
56-55-3	Benzo(a)anthracene	U	41.4	ug/kg	12.4	41.4	
91-94-1	3,3'-Dichlorobenzidine	U	414	ug/kg	124	414	
218-01-9	Chrysene	U	41.4	ug/kg	12.4	41.4	
117-81-7	bis(2-Ethylhexyl)phthalate	U	414	ug/kg	82.8	414	
117-84-0	Di-n-octylphthalate	U	414	ug/kg	82.8	414	
205-99-2	Benzo(b)fluoranthene	U	41.4	ug/kg	12.4	41.4	
207-08-9	Benzo(k)fluoranthene	U	41.4	ug/kg	12.4	41.4	
50-32-8	Benzo(a)pyrene	U	41.4	ug/kg	12.4	41.4	
193-39-5	Indeno(1,2,3-cd)pyrene	U	41.4	ug/kg	12.4	41.4	
53-70-3	Dibenzo(a,h)anthracene	U	41.4	ug/kg	12.4	41.4	
191-24-2	Benzo(ghi)perylene	U	41.4	ug/kg	12.4	41.4	
120-82-1	1,2,4-Trichlorobenzene	U	414	ug/kg	82.8	414	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.07	239	ug/kg		J
	Unknown Aldol Condensate	3.02	449	ug/kg		JA

LT 7/28/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 15:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0720.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
506-30-9	Eicosanoic acid	9.06	241	ug/kg	98	NJ
1599-67-3	1-Docosene	10.21	237	ug/kg	94	NJ
	Unknown	13.37	206	ug/kg		J
83-47-6	.gamma.-Sitosterol	14.05	3000	ug/kg	99	NJ
1000143-61-3	N-(4-Methoxyphenyl)-2-hydroxyimino-aceta	14.4	321	ug/kg	92	NJ
1058-61-3	Stigmast-4-en-3-one	15.33	693	ug/kg	91	NJ
	Unknown	16.7	415	ug/kg		J
	Unknown	17.71	168	ug/kg		J
62906-36-9	1,2-Dicarbadodecaborane(12), 1-[(propylt	18.63	4040	ug/kg	90	NJ
	Unknown	19.41	4170	ug/kg		J
	Unknown	19.52	173	ug/kg		J

LT 7/28/09

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2524 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Linda Thal ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☒ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☒ OTHER (DESCRIBE): PCBs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw ICAL standards data were not provided in the data package. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/28/09

VALIDATOR'S SIGNATURE: L Thal DATE: 7/28/09

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, P9	J-, P9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, P9b	R, P9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, P7	J, P7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, P7a	J, P7a
☐	☒	☐	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, P7d	J, P7d
☐	☒	☐	8. The multicomponent standard was not analyzed within 72 hours of the initial analysis.	R, P7e	J, P7e
☐	☒	☐	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
☐	☐	☒	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	11. The breakdown criteria have been exceeded. This can cause high bias in the reported results and potential false positive results for the breakdown products Endrin ketone, Endrin aldehyde, DDD, and DDE.	UJ, P13a	J+, P13a
☐	☐	☒	12. The breakdown documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P13b	R, P13b
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, P4	N/A
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X.	N/A	J, P4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	UJ, P4b	N/A
☐	☐	☒	16. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, P4d	N/A
☐	☒	☐	17. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P4e	R, P4e
☐	☒	☐	18. The analyte RT shifted by more than 0.05 minutes from the mid-level standard of the initial calibration.	R, P0	J, P0
☐	☒	☐	19. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P0b	R, P0b
☐	☒	☐	20. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, P3	J-, P3

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, P3a	J-, P3a
☐	☒	☐	22. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P3b
☐	☒	☐	23. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, P3c	J, P3c
☐	☒	☐	24. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P3d	R, P3d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, P12	J-, P12
☐	☒	☐	26. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, P12a	J-, P12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P12c	R, P12c
☐	☒	☐	29. The analyte was not confirmed on a second dissimilar column.	N/A	R, P8
☐	☒	☐	30. The second dissimilar column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P8a	R, P8a
☐	☒	☐	31. Duplicate, Dilution, or reanalysis.	UJ, P88	J, P88

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST	
5116-2 **Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, P15	R, P15
☒	☐	☐	33. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, P19	J, R, P19

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	882941	**Inst:**	ECD2A.I	**Dilution:**	5
Run Date:	07/08/2009 15:53	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/07/2009 23:44	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	040f4001.d	**Column:**	1 CLP1	**Level:**	LOW
	040b4001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	18.8	ug/kg	6.26	18.8	1
11104-28-2	Aroclor-1221	U	18.8	ug/kg	6.26	18.8	1
11141-16-5	Aroclor-1232	U	18.8	ug/kg	6.26	18.8	1
53469-21-9	Aroclor-1242	U	18.8	ug/kg	6.26	18.8	1
12672-29-6	Aroclor-1248	U	18.8	ug/kg	6.26	18.8	1
11097-69-1	Aroclor-1254	U	18.8	ug/kg	6.26	18.8	1
11096-82-5	Aroclor-1260		34.2	ug/kg	6.26	18.8	1

LT 7/28/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	882941	**Inst:**	ECD2A.I	**Dilution:**	1
Run Date:	07/08/2009 16:04	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/07/2009 23:44	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	041f4101.d	**Column:**	1 CLP1	**Level:**	LOW
	041b4101.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.14	ug/kg	1.38	4.14	1
11104-28-2	Aroclor-1221	U	4.14	ug/kg	1.38	4.14	1
11141-16-5	Aroclor-1232	U	4.14	ug/kg	1.38	4.14	1
53469-21-9	Aroclor-1242	U	4.14	ug/kg	1.38	4.14	1
12672-29-6	Aroclor-1248	U	4.14	ug/kg	1.38	4.14	1
11097-69-1	Aroclor-1254	U	4.14	ug/kg	1.38	4.14	1
11096-82-5	Aroclor-1260		5.80	ug/kg	1.38	4.14	1

LT 7/28/09

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2524C

REQUEST NUMBER: 09-2524

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

P.D. 7/2/09

LAB REQUEST COMMENTS: 2374 232741 1.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10014	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-9958	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9956	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9950	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9950	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9952	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9952	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9958	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9958	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9957	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9957	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9951	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9951	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10031	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10031	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-9990	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9990	1	AMBER GLASS	8270C+8082	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00	Patricia Dent P. Dent	7/2/09	0840
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name / Signature

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2524

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2524
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:8260B	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2524

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8260B	1	CAMO-09-10014	S	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:8270C	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2524

GEL Laboratories LLC

a member of The GEL Group LLC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 06, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232741
SDG: 09-2524

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on July 02, 2009, and analyzed for GC Semivolatile PCB, GC/MS Semivolatile and GC/MS Volatile. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2524
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232741
SDG: 09-2524

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232741
SDG # : 09-2524

July 06, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on July 02, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232741001	CAMO-09-10014
232741002	CAMO-09-9956
232741003	CAMO-09-9950
232741004	CAMO-09-9952
232741005	CAMO-09-9958
232741006	CAMO-09-9957
232741007	CAMO-09-9951
232741008	CAMO-09-10031
232741009	CAMO-09-9990

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC Semivolatile PCB, GC/MS Semivolatile and GC/MS Volatile.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis
Project Manager

List of current GEL Certifications as of 06 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2524C

REQUEST NUMBER: 09-2524

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

P.D. 7/2/09

LAB REQUEST COMMENTS: 2374 232741 °/.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10014	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-9956	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9956	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9950	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9950	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9952	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9952	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9958	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9958	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9957	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9957	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9951	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9951	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10031	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10031	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-9990	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9990	1	AMBER GLASS	8270C+8082	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00	Patricia Dent P. Dent	7/2/09	0840
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name / Signature

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2524

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2524
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:8260B	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2524

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8260B	1	CAMO-09-10014	S	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:8270C	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2524

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2524**
Received By: Patricia Dent	**Date Received: JULY 2, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40-C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **BLUE ICE** dry ice none other (describe) 2,3,4,6 C 24°C
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5930 6C
7209 7847 5860 24C
7209 7847 5881 3C
7209 7847 5892 2C
7209 7847 5940 6C
7209 7847 5951 4C
7209 7847 5918 4C
7209 7847 5929 2C
7209 7847 5870 4C

 PM review: Initials pol Date 7-3-09

Page 9 of 18

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TRAB BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 55.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018amr2a8512bgdo

[redacted]

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5882 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TRAB BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 55.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018amr2a8512bgdo

[redacted]

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5881 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 WRIT V3 04-08

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 57.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 0b018aur-1a0130djbe

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5928

Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V2 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 35.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 0b018auw0111550000

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5951

Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9958
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA88 BLDG 1237 DPU 93

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
Actwgt: 28.0 LB MAN
System#: 9014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2940 SAVAGE RD

CHARLESTON, SC 29407

(843) 558-8171
FedEx Express

Ref: Sb018aue5111550000

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5948 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9958
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA88 BLDG 1237 DPU 93

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
Actwgt: 55.0 LB MAN
System#: 9014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2940 SAVAGE RD

CHARLESTON, SC 29407

(843) 558-8171
FedEx Express

Ref: Sb018aur1a0130djbo

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5818 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 62.0 LB MAN
SystemR: 8014176/CAFE2361
Account: S **********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 0b018aur811[illegible]

[redacted]

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7288 7847 5838 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 1561[illegible]-434 NRGT V23.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 78.0 LB MAN
SystemR: 8014176/CAFE2361
Account: S **********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 0b018aur2a0512bgsb

[redacted]

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7288 7847 5888 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 1561[illegible]-434 NRGT V23.04-09

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLD6 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 55.0 LB MAN
System#: 0014170/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 0u018amr2a0512bgdo

Delivery Address Barcode

4C

BILL SENDER

RAD II

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7209 7847 5679 Form 0201

CHS A1

29407 -SC-US XX CHSA

-6-43c NAHT V3.04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

GC/MS Volatile Organics
Los Alamos National Laboratory (LANL)
SDG 09-2524

Method/Analysis Information

Procedure:	Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
Analytical Method:	SW846 8260B
Prep Method:	SW846 5030
Analytical Batch Number:	883695
Prep Batch Number:	883694

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232741001	CAMO-09-10014
232741002	CAMO-09-9956
232741003	CAMO-09-9950
232741004	CAMO-09-9952
232741005	CAMO-09-9958
232741006	CAMO-09-9957
232741007	CAMO-09-9951
232741008	CAMO-09-10031
232741009	CAMO-09-9990
1201877298	Method Blank (MB)
1201877301	Laboratory Control Sample (LCS)
1201877302	Laboratory Control Sample (LCS)
1201878422	Method Blank (MB)
1201878423	Laboratory Control Sample (LCS)
1201878424	Laboratory Control Sample (LCS)
1201877299	232741002(CAMO-09-9956) Post Spike (PS)
1201877300	232741002(CAMO-09-9956) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

Samples 232741 002, 003, 004, 005, 006, 007, 008 and 009 in this SDG were analyzed on an "dry weight" basis. Samples 232741 001 in this SDG were analyzed on a "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 19.1.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232741002 (CAMO-09-9956) was designated for spike analysis in this SDG.

Matrix Spike (PS) Recovery Statement
The spike recoveries for this SDG were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement
The spike duplicate recoveries for this SDG were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-analyses were not required for samples in this SDG.

Miscellaneous Information

Electronic Package Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
A nonconformance report was not required for this SDG.

Manual Integrations
Data files associated with the initial calibration, continuing calibration check, and samples did not require manual integrations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA1.I	Gas Chromatograph/Mass Spectrometer	HP6890/HP5973	RTX-624	Restek, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: _____ Date: 07/22/09

Roadmap for LANL 09-2524 VOA

This roadmap was analyzed by ron01469 on 07-13-2009, 14:24.
This roadmap was reviewed by sar00518 on 07-13-2009, 21:00.

Sample

exclude	manual	datafile	smpid	clientid	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA1.i/070909v1/1t413.d	232741001	CAMO-09-10014	09-JUL-2009	14:21	09-2524.sub	1	883695	
☐	N	/chem/VOA1.i/070909v1/1t414.d	232741002	CAMO-09-9956	09-JUL-2009	14:51	09-2524.sub	1	883695	
☐	N	/chem/VOA1.i/070909v1/1t415.d	232741003	CAMO-09-9950	09-JUL-2009	15:22	09-2524.sub	1	883695	
☐	N	/chem/VOA1.i/070909v1/1t416.d	232741004	CAMO-09-9952	09-JUL-2009	15:53	09-2524.sub	1	883695	
☐	N	/chem/VOA1.i/070909v1/1t417.d	232741005	CAMO-09-9958	09-JUL-2009	16:24	09-2524.sub	1	883695	
☐	N	/chem/VOA1.i/070909v1/1t418.d	232741006	CAMO-09-9957	09-JUL-2009	16:54	09-2524.sub	1	883695	
☐	N	/chem/VOA1.i/070909v1/1t419.d	232741007	CAMO-09-9951	09-JUL-2009	17:24	09-2524.sub	1	883695	
☐	N	/chem/VOA1.i/070909v1/1t420.d	232741008	CAMO-09-10031	09-JUL-2009	17:55	09-2524.sub	1	883695	
☐	N	/chem/VOA1.i/070909v1/1t421.d	232741009	CAMO-09-9990	09-JUL-2009	18:25	09-2524.sub	1	883695	

QC Sample

exclude	manual	datafile	smpid	clientid	sampletype	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA1.i/070909v1/1t403LA.d	1201877301	LCS	lcs	09-JUL-2009	08:45	all.sub	1	883695	
☐	N	/chem/VOA1.i/070909v1/1t405sLA.d	1201877302	LCS	lcs	09-JUL-2009	10:19	all.sub	1	883695	
☐	N	/chem/VOA1.i/070909v1/1t407BA.d	1201877298	BLANK	mb	09-JUL-2009	11:19	all.sub	1	883695	
■	N	/chem/VOA1.i/070909v1/1t434.d	1201877299	CAPA-09-8102MS	ms	10-JUL-2009	00:53	CALsubL+.sub	1	883695	
■	N	/chem/VOA1.i/070909v1/1t435.d	1201877300	CAPA-09-8102MSD	msd	10-JUL-2009	01:24	CALsubL+.sub	1	883695	
■	N	/chem/VOA1.i/070909v1/1t439.d	1201877299	CAPA-09-8102MS	ms	10-JUL-2009	03:26	09-2520.sub	1	883695	
■	N	/chem/VOA1.i/070909v1/1t440.d	1201877300	CAPA-09-8102MSD	msd	10-JUL-2009	03:56	09-2520.sub	1	883695	
☐	N	/chem/VOA1.i/071009v1/1t505LA.d	1201878423	LCS	lcs	10-JUL-2009	11:46	all.sub	1	883695	

☐	N	/chem/VOA1.i/071009v1/1t507sLA.d	1201878424	LCS	lcs	10-JUL-2009	12:47	all.sub	1	883695	
☐	N	/chem/VOA1.i/071009v1/1t509BA.d	1201878422	BLANK	mb	10-JUL-2009	13:48	all.sub	1	883695	
☐	N	/chem/VOA1.i/071009v1/1t522.d	1201877299	CAMO-09-9956MS	ms	10-JUL-2009	20:22	09-2524.sub	1	883695	
☐	N	/chem/VOA1.i/071009v1/1t523.d	1201877300	CAMO-09-9956MSD	msd	10-JUL-2009	20:52	09-2524.sub	1	883695	

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	S
Lab Sample ID:	232741001	**Date Received:**	07/02/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10014	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 14:21	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:16	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t413.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	J	4.34	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	S
Lab Sample ID:	232741001	**Date Received:**	07/02/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10014	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 14:21	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:16	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t413.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 17:55	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:23	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t420.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.383	1.13
74-87-3	Chloromethane	U	1.13	ug/kg	0.338	1.13
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.338	1.13
74-83-9	Bromomethane	U	1.13	ug/kg	0.338	1.13
75-00-3	Chloroethane	U	1.13	ug/kg	0.338	1.13
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.643	1.13
67-64-1	Acetone	J	2.46	ug/kg	1.87	5.64
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
74-88-4	Iodomethane	U	5.64	ug/kg	1.80	5.64
75-09-2	Methylene chloride	U	5.64	ug/kg	2.25	5.64
75-15-0	Carbon disulfide	U	5.64	ug/kg	1.41	5.64
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.338	1.13
78-93-3	2-Butanone	U	5.64	ug/kg	1.69	5.64
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13
67-66-3	Chloroform	U	1.13	ug/kg	0.338	1.13
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.372	1.13
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.338	1.13
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.338	1.13
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.338	1.13
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.338	1.13
71-43-2	Benzene	U	1.13	ug/kg	0.338	1.13
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.372	1.13
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.338	1.13
74-95-3	Dibromomethane	U	1.13	ug/kg	0.338	1.13
108-10-1	4-Methyl-2-pentanone	U	5.64	ug/kg	1.41	5.64
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13
108-88-3	Toluene	J	0.438	ug/kg	0.338	1.13
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.338	1.13
591-78-6	2-Hexanone	U	5.64	ug/kg	1.69	5.64
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.338	1.13
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.338	1.13
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.338	1.13
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.338	1.13
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.338	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 17:55	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:23	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t420.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.338	1.13
179601-23-1	m,p-Xylenes	U	2.25	ug/kg	0.338	2.25
95-47-6	o-Xylene	U	1.13	ug/kg	0.338	1.13
100-42-5	Styrene	U	1.13	ug/kg	0.338	1.13
75-25-2	Bromoform	U	1.13	ug/kg	0.338	1.13
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.338	1.13
108-86-1	Bromobenzene	U	1.13	ug/kg	0.338	1.13
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.338	1.13
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.338	1.13
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.338	1.13
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.338	1.13
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.338	1.13
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.338	1.13
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.338	1.13
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.338	1.13
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.338	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.64	ug/kg	1.80	5.64
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	8.6	ug/kg		J
	Unknown Hydrocarbon	20	14.9	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9950	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 15:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:18	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t415.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.380	1.12
74-87-3	Chloromethane	U	1.12	ug/kg	0.335	1.12
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.335	1.12
74-83-9	Bromomethane	U	1.12	ug/kg	0.335	1.12
75-00-3	Chloroethane	U	1.12	ug/kg	0.335	1.12
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.637	1.12
67-64-1	Acetone	J	2.61	ug/kg	1.86	5.59
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
74-88-4	Iodomethane	U	5.59	ug/kg	1.79	5.59
75-09-2	Methylene chloride	U	5.59	ug/kg	2.24	5.59
75-15-0	Carbon disulfide	U	5.59	ug/kg	1.40	5.59
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.335	1.12
78-93-3	2-Butanone	U	5.59	ug/kg	1.68	5.59
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
67-66-3	Chloroform	U	1.12	ug/kg	0.335	1.12
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.369	1.12
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.335	1.12
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.335	1.12
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.335	1.12
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.335	1.12
71-43-2	Benzene	U	1.12	ug/kg	0.335	1.12
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.369	1.12
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.335	1.12
74-95-3	Dibromomethane	U	1.12	ug/kg	0.335	1.12
108-10-1	4-Methyl-2-pentanone	U	5.59	ug/kg	1.40	5.59
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
108-88-3	Toluene	U	1.12	ug/kg	0.335	1.12
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.335	1.12
591-78-6	2-Hexanone	U	5.59	ug/kg	1.68	5.59
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.335	1.12
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.335	1.12
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.335	1.12
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.335	1.12
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.335	1.12

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9950	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 15:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:18	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t415.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.335	1.12
179601-23-1	m,p-Xylenes	U	2.24	ug/kg	0.335	2.24
95-47-6	o-Xylene	U	1.12	ug/kg	0.335	1.12
100-42-5	Styrene	U	1.12	ug/kg	0.335	1.12
75-25-2	Bromoform	U	1.12	ug/kg	0.335	1.12
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.335	1.12
108-86-1	Bromobenzene	U	1.12	ug/kg	0.335	1.12
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.335	1.12
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.335	1.12
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.335	1.12
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.335	1.12
99-87-6	4-Isopropyltoluene	U	1.12	ug/kg	0.335	1.12
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.335	1.12
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.335	1.12
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.59	ug/kg	1.79	5.59
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Hydrocarbon	20	16.7	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741007	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9951	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 17:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:22	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t419.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.378	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.334	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.334	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.334	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.334	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.635	1.11
67-64-1	Acetone	U	5.57	ug/kg	1.85	5.57
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
74-88-4	Iodomethane	U	5.57	ug/kg	1.78	5.57
75-09-2	Methylene chloride	U	5.57	ug/kg	2.23	5.57
75-15-0	Carbon disulfide	U	5.57	ug/kg	1.39	5.57
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.334	1.11
78-93-3	2-Butanone	U	5.57	ug/kg	1.67	5.57
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.334	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.367	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.334	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.334	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.334	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.334	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.334	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.367	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.334	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.334	1.11
108-10-1	4-Methyl-2-pentanone	U	5.57	ug/kg	1.39	5.57
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.334	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.334	1.11
591-78-6	2-Hexanone	U	5.57	ug/kg	1.67	5.57
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.334	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.334	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.334	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.334	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.334	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741007	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9951	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 17:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:22	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t419.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.334	1.11
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.334	2.23
95-47-6	o-Xylene	U	1.11	ug/kg	0.334	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.334	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.334	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.334	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.334	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.334	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.334	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.334	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.334	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.334	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.334	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.334	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.57	ug/kg	1.78	5.57
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	40.6	ug/kg		J
	Unknown Hydrocarbon	20	72.3	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741004	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9952	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 15:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:19	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t416.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.380	1.12
74-87-3	Chloromethane	U	1.12	ug/kg	0.335	1.12
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.335	1.12
74-83-9	Bromomethane	U	1.12	ug/kg	0.335	1.12
75-00-3	Chloroethane	U	1.12	ug/kg	0.335	1.12
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.636	1.12
67-64-1	Acetone	J	2.19	ug/kg	1.85	5.58
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
74-88-4	Iodomethane	U	5.58	ug/kg	1.79	5.58
75-09-2	Methylene chloride	U	5.58	ug/kg	2.23	5.58
75-15-0	Carbon disulfide	U	5.58	ug/kg	1.40	5.58
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.335	1.12
78-93-3	2-Butanone	U	5.58	ug/kg	1.67	5.58
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
67-66-3	Chloroform	U	1.12	ug/kg	0.335	1.12
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.368	1.12
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.335	1.12
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.335	1.12
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.335	1.12
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.335	1.12
71-43-2	Benzene	U	1.12	ug/kg	0.335	1.12
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.368	1.12
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.335	1.12
74-95-3	Dibromomethane	U	1.12	ug/kg	0.335	1.12
108-10-1	4-Methyl-2-pentanone	U	5.58	ug/kg	1.40	5.58
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
108-88-3	Toluene	U	1.12	ug/kg	0.335	1.12
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.335	1.12
591-78-6	2-Hexanone	U	5.58	ug/kg	1.67	5.58
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.335	1.12
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.335	1.12
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.335	1.12
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.335	1.12
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.335	1.12

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741004	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9952	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 15:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:19	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t416.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.335	1.12
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.335	2.23
95-47-6	o-Xylene	U	1.12	ug/kg	0.335	1.12
100-42-5	Styrene	U	1.12	ug/kg	0.335	1.12
75-25-2	Bromoform	U	1.12	ug/kg	0.335	1.12
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.335	1.12
108-86-1	Bromobenzene	U	1.12	ug/kg	0.335	1.12
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.335	1.12
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.335	1.12
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.335	1.12
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.335	1.12
99-87-6	4-Isopropyltoluene	U	1.12	ug/kg	0.335	1.12
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.335	1.12
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.335	1.12
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.58	ug/kg	1.79	5.58
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	88.7	ug/kg		J
	Unknown Hydrocarbon	20	107	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9956	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.1	**Dilution:**	1
Run Date:	07/09/2009 14:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:17	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t414.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.16	ug/kg	0.396	1.16
74-87-3	Chloromethane	U	1.16	ug/kg	0.349	1.16
75-01-4	Vinyl chloride	U	1.16	ug/kg	0.349	1.16
74-83-9	Bromomethane	U	1.16	ug/kg	0.349	1.16
75-00-3	Chloroethane	U	1.16	ug/kg	0.349	1.16
75-69-4	Trichlorofluoromethane	U	1.16	ug/kg	0.663	1.16
67-64-1	Acetone	U	5.82	ug/kg	1.93	5.82
75-35-4	1,1-Dichloroethylene	U	1.16	ug/kg	0.349	1.16
74-88-4	Iodomethane	U	5.82	ug/kg	1.86	5.82
75-09-2	Methylene chloride	U	5.82	ug/kg	2.33	5.82
75-15-0	Carbon disulfide	U	5.82	ug/kg	1.45	5.82
156-60-5	trans-1,2-Dichloroethylene	U	1.16	ug/kg	0.349	1.16
75-34-3	1,1-Dichloroethane	U	1.16	ug/kg	0.349	1.16
78-93-3	2-Butanone	U	5.82	ug/kg	1.75	5.82
156-59-2	cis-1,2-Dichloroethylene	U	1.16	ug/kg	0.349	1.16
594-20-7	2,2-Dichloropropane	U	1.16	ug/kg	0.349	1.16
67-66-3	Chloroform	U	1.16	ug/kg	0.349	1.16
74-97-5	Bromochloromethane	U	1.16	ug/kg	0.384	1.16
71-55-6	1,1,1-Trichloroethane	U	1.16	ug/kg	0.349	1.16
563-58-6	1,1-Dichloropropene	U	1.16	ug/kg	0.349	1.16
56-23-5	Carbon tetrachloride	U	1.16	ug/kg	0.349	1.16
107-06-2	1,2-Dichloroethane	U	1.16	ug/kg	0.349	1.16
71-43-2	Benzene	U	1.16	ug/kg	0.349	1.16
79-01-6	Trichloroethylene	U	1.16	ug/kg	0.384	1.16
78-87-5	1,2-Dichloropropane	U	1.16	ug/kg	0.349	1.16
75-27-4	Bromodichloromethane	U	1.16	ug/kg	0.349	1.16
74-95-3	Dibromomethane	U	1.16	ug/kg	0.349	1.16
108-10-1	4-Methyl-2-pentanone	U	5.82	ug/kg	1.45	5.82
10061-01-5	cis-1,3-Dichloropropylene	U	1.16	ug/kg	0.349	1.16
108-88-3	Toluene	J	0.434	ug/kg	0.349	1.16
10061-02-6	trans-1,3-Dichloropropylene	U	1.16	ug/kg	0.349	1.16
79-00-5	1,1,2-Trichloroethane	U	1.16	ug/kg	0.349	1.16
591-78-6	2-Hexanone	U	5.82	ug/kg	1.75	5.82
142-28-9	1,3-Dichloropropane	U	1.16	ug/kg	0.349	1.16
127-18-4	Tetrachloroethylene	U	1.16	ug/kg	0.349	1.16
124-48-1	Dibromochloromethane	U	1.16	ug/kg	0.349	1.16
106-93-4	1,2-Dibromoethane	U	1.16	ug/kg	0.349	1.16
108-90-7	Chlorobenzene	U	1.16	ug/kg	0.349	1.16

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9956	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 14:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:17	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t414.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.16	ug/kg	0.349	1.16
179601-23-1	m,p-Xylenes	U	2.33	ug/kg	0.349	2.33
95-47-6	o-Xylene	U	1.16	ug/kg	0.349	1.16
100-42-5	Styrene	U	1.16	ug/kg	0.349	1.16
75-25-2	Bromoform	U	1.16	ug/kg	0.349	1.16
79-34-5	1,1,2,2-Tetrachloroethane	U	1.16	ug/kg	0.349	1.16
96-18-4	1,2,3-Trichloropropane	U	1.16	ug/kg	0.349	1.16
108-86-1	Bromobenzene	U	1.16	ug/kg	0.349	1.16
103-65-1	n-Propylbenzene	U	1.16	ug/kg	0.349	1.16
95-49-8	2-Chlorotoluene	U	1.16	ug/kg	0.349	1.16
98-82-8	Isopropylbenzene	U	1.16	ug/kg	0.349	1.16
108-67-8	1,3,5-Trimethylbenzene	U	1.16	ug/kg	0.349	1.16
106-43-4	4-Chlorotoluene	U	1.16	ug/kg	0.349	1.16
98-06-6	tert-Butylbenzene	U	1.16	ug/kg	0.349	1.16
95-63-6	1,2,4-Trimethylbenzene	U	1.16	ug/kg	0.349	1.16
135-98-8	sec-Butylbenzene	U	1.16	ug/kg	0.349	1.16
99-87-6	4-Isopropyltoluene	U	1.16	ug/kg	0.349	1.16
541-73-1	1,3-Dichlorobenzene	U	1.16	ug/kg	0.349	1.16
106-46-7	1,4-Dichlorobenzene	U	1.16	ug/kg	0.349	1.16
104-51-8	n-Butylbenzene	U	1.16	ug/kg	0.349	1.16
96-12-8	1,2-Dibromo-3-chloropropane	U	1.16	ug/kg	0.349	1.16
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.82	ug/kg	1.86	5.82
630-20-6	1,1,1,2-Tetrachloroethane	U	1.16	ug/kg	0.349	1.16
95-50-1	1,2-Dichlorobenzene	U	1.16	ug/kg	0.349	1.16

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741006	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9957	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:54	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t418.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.378	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.334	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.334	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.334	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.334	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.634	1.11
67-64-1	Acetone	U	5.56	ug/kg	1.85	5.56
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
74-88-4	Iodomethane	U	5.56	ug/kg	1.78	5.56
75-09-2	Methylene chloride	U	5.56	ug/kg	2.23	5.56
75-15-0	Carbon disulfide	U	5.56	ug/kg	1.39	5.56
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.334	1.11
78-93-3	2-Butanone	U	5.56	ug/kg	1.67	5.56
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.334	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.367	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.334	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.334	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.334	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.334	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.334	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.367	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.334	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.334	1.11
108-10-1	4-Methyl-2-pentanone	U	5.56	ug/kg	1.39	5.56
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.334	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.334	1.11
591-78-6	2-Hexanone	U	5.56	ug/kg	1.67	5.56
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.334	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.334	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.334	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.334	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.334	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741006	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9957	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:54	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t418.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.334	1.11
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.334	2.23
95-47-6	o-Xylene	U	1.11	ug/kg	0.334	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.334	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.334	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.334	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.334	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.334	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.334	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.334	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.334	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.334	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.334	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.334	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.56	ug/kg	1.78	5.56
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	13.7	ug/kg		J
	Unknown Hydrocarbon	20	16.6	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741005	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9958	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:20	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t417.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.379	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.334	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.334	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.334	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.334	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.635	1.11
67-64-1	Acetone	U	5.57	ug/kg	1.85	5.57
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
74-88-4	Iodomethane	U	5.57	ug/kg	1.78	5.57
75-09-2	Methylene chloride	U	5.57	ug/kg	2.23	5.57
75-15-0	Carbon disulfide	U	5.57	ug/kg	1.39	5.57
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.334	1.11
78-93-3	2-Butanone	U	5.57	ug/kg	1.67	5.57
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.334	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.368	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.334	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.334	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.334	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.334	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.334	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.368	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.334	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.334	1.11
108-10-1	4-Methyl-2-pentanone	U	5.57	ug/kg	1.39	5.57
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.334	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.334	1.11
591-78-6	2-Hexanone	U	5.57	ug/kg	1.67	5.57
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.334	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.334	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.334	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.334	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.334	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741005	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9958	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:20	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t417.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.334	1.11
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.334	2.23
95-47-6	o-Xylene	U	1.11	ug/kg	0.334	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.334	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.334	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.334	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.334	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.334	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.334	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.334	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.334	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.334	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.334	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.334	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.57	ug/kg	1.78	5.57
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	13.1	ug/kg		J
	Unknown Hydrocarbon	20.01	7.73	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232741009**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**19.6**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9990**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/09/2009 18:25**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 12:24**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t421.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.24	ug/kg	0.423	1.24
74-87-3	Chloromethane	U	1.24	ug/kg	0.373	1.24
75-01-4	Vinyl chloride	U	1.24	ug/kg	0.373	1.24
74-83-9	Bromomethane	U	1.24	ug/kg	0.373	1.24
75-00-3	Chloroethane	U	1.24	ug/kg	0.373	1.24
75-69-4	Trichlorofluoromethane	U	1.24	ug/kg	0.709	1.24
67-64-1	Acetone	U	6.22	ug/kg	2.07	6.22
75-35-4	1,1-Dichloroethylene	U	1.24	ug/kg	0.373	1.24
74-88-4	Iodomethane	U	6.22	ug/kg	1.99	6.22
75-09-2	Methylene chloride	U	6.22	ug/kg	2.49	6.22
75-15-0	Carbon disulfide	U	6.22	ug/kg	1.56	6.22
156-60-5	trans-1,2-Dichloroethylene	U	1.24	ug/kg	0.373	1.24
75-34-3	1,1-Dichloroethane	U	1.24	ug/kg	0.373	1.24
78-93-3	2-Butanone	U	6.22	ug/kg	1.87	6.22
156-59-2	cis-1,2-Dichloroethylene	U	1.24	ug/kg	0.373	1.24
594-20-7	2,2-Dichloropropane	U	1.24	ug/kg	0.373	1.24
67-66-3	Chloroform	U	1.24	ug/kg	0.373	1.24
74-97-5	Bromochloromethane	U	1.24	ug/kg	0.411	1.24
71-55-6	1,1,1-Trichloroethane	U	1.24	ug/kg	0.373	1.24
563-58-6	1,1-Dichloropropene	U	1.24	ug/kg	0.373	1.24
56-23-5	Carbon tetrachloride	U	1.24	ug/kg	0.373	1.24
107-06-2	1,2-Dichloroethane	U	1.24	ug/kg	0.373	1.24
71-43-2	Benzene	U	1.24	ug/kg	0.373	1.24
79-01-6	Trichloroethylene	U	1.24	ug/kg	0.411	1.24
78-87-5	1,2-Dichloropropane	U	1.24	ug/kg	0.373	1.24
75-27-4	Bromodichloromethane	U	1.24	ug/kg	0.373	1.24
74-95-3	Dibromomethane	U	1.24	ug/kg	0.373	1.24
108-10-1	4-Methyl-2-pentanone	U	6.22	ug/kg	1.56	6.22
10061-01-5	cis-1,3-Dichloropropylene	U	1.24	ug/kg	0.373	1.24
108-88-3	Toluene	U	1.24	ug/kg	0.373	1.24
10061-02-6	trans-1,3-Dichloropropylene	U	1.24	ug/kg	0.373	1.24
79-00-5	1,1,2-Trichloroethane	U	1.24	ug/kg	0.373	1.24
591-78-6	2-Hexanone	U	6.22	ug/kg	1.87	6.22
142-28-9	1,3-Dichloropropane	U	1.24	ug/kg	0.373	1.24
127-18-4	Tetrachloroethylene	U	1.24	ug/kg	0.373	1.24
124-48-1	Dibromochloromethane	U	1.24	ug/kg	0.373	1.24
106-93-4	1,2-Dibromoethane	U	1.24	ug/kg	0.373	1.24
108-90-7	Chlorobenzene	U	1.24	ug/kg	0.373	1.24

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 18:25	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:24	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t421.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.24	ug/kg	0.373	1.24
179601-23-1	m,p-Xylenes	U	2.49	ug/kg	0.373	2.49
95-47-6	o-Xylene	U	1.24	ug/kg	0.373	1.24
100-42-5	Styrene	U	1.24	ug/kg	0.373	1.24
75-25-2	Bromoform	U	1.24	ug/kg	0.373	1.24
79-34-5	1,1,2,2-Tetrachloroethane	U	1.24	ug/kg	0.373	1.24
96-18-4	1,2,3-Trichloropropane	U	1.24	ug/kg	0.373	1.24
108-86-1	Bromobenzene	U	1.24	ug/kg	0.373	1.24
103-65-1	n-Propylbenzene	U	1.24	ug/kg	0.373	1.24
95-49-8	2-Chlorotoluene	U	1.24	ug/kg	0.373	1.24
98-82-8	Isopropylbenzene	U	1.24	ug/kg	0.373	1.24
108-67-8	1,3,5-Trimethylbenzene	U	1.24	ug/kg	0.373	1.24
106-43-4	4-Chlorotoluene	U	1.24	ug/kg	0.373	1.24
98-06-6	tert-Butylbenzene	U	1.24	ug/kg	0.373	1.24
95-63-6	1,2,4-Trimethylbenzene	U	1.24	ug/kg	0.373	1.24
135-98-8	sec-Butylbenzene	U	1.24	ug/kg	0.373	1.24
99-87-6	4-Isopropyltoluene	U	1.24	ug/kg	0.373	1.24
541-73-1	1,3-Dichlorobenzene	U	1.24	ug/kg	0.373	1.24
106-46-7	1,4-Dichlorobenzene	U	1.24	ug/kg	0.373	1.24
104-51-8	n-Butylbenzene	U	1.24	ug/kg	0.373	1.24
96-12-8	1,2-Dibromo-3-chloropropane	U	1.24	ug/kg	0.373	1.24
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.22	ug/kg	1.99	6.22
630-20-6	1,1,1,2-Tetrachloroethane	U	1.24	ug/kg	0.373	1.24
95-50-1	1,2-Dichlorobenzene	U	1.24	ug/kg	0.373	1.24

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

QC Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2524

Matrix Type: SOLID

CAP Column (1) : RTX-Volatiles

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201877301	LCS for batch 883694	108	99	98
1201877302	LCS for batch 883694	106	98	99
1201877298	MB for batch 883694	108	99	100
232741001	CAMO-09-10014	113	99	99
232741002	CAMO-09-9956	112	101	106
232741003	CAMO-09-9950	113	100	105
232741004	CAMO-09-9952	115	101	105
232741005	CAMO-09-9958	117	102	106
232741006	CAMO-09-9957	113	98	99
232741007	CAMO-09-9951	116	103	106
232741008	CAMO-09-10031	115	102	109
232741009	CAMO-09-9990	114	104	108
1201878423	LCS for batch 883694	98	99	102
1201878424	LCS for batch 883694	94	99	101
1201878422	MB for batch 883694	100	99	102
1201877299	CAMO-09-9956PS	98	100	104
1201877300	CAMO-09-9956PSD	97	99	101

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956PS
Lab Sample ID: 1201877299
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 14.1
Analysis Date: 07/10/2009 20:22
Prep Batch ID: 883694
Batch ID: 883695
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	45.0	90	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	46.0	92	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	42.9	86	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	44.1	88	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	47.2	94	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	53.8	108	51-151
67-64-1	PS	Acetone	250	0.00	U	102	41	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	45.0	90	61-125
74-88-4	PS	Iodomethane	250	0.00	U	208	83	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	47.5	95	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	228	91	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	43.6	87	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	45.4	91	62-125
78-93-3	PS	2-Butanone	250	0.00	U	134	54	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	48.1	96	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	50.3	101	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	45.2	90	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	43.8	88	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	49.5	99	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	48.6	97	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	48.2	96	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	44.1	88	58-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956PS
Lab Sample ID: 1201877299
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 14.1
Analysis Date: 07/10/2009 20:22
Prep Batch ID: 883694
Batch ID: 883695
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	43.3	87	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	45.8	92	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	46.3	93	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	47.1	94	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	44.2	88	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	224	90	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	45.2	90	54-133
108-88-3	PS	Toluene	50.0	0.373	J	43.5	86	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	45.0	90	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	45.3	91	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	144	58	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	44.2	88	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	42.7	85	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	45.4	91	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	44.2	88	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	43.1	86	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	43.6	87	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	87.4	87	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	46.0	92	52-127
100-42-5	PS	Styrene	50.0	0.00	U	43.4	87	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	49.0	98	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	46.9	94	63-127

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956PS
Lab Sample ID: 1201877299
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 14.1
Analysis Date: 07/10/2009 20:22
Prep Batch ID: 883694
Batch ID: 883695
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	50.4	101	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	42.9	86	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	45.1	90	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	45.6	91	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	42.6	85	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	46.1	92	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	44.3	89	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	48.1	96	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	44.8	90	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	46.0	92	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	43.6	87	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	40.7	81	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	39.1	78	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	42.1	84	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	47.8	96	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	45.4	91	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	40.6	81	43-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956PSD
Lab Sample ID: 1201877300
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 14.1
Analysis Date: 07/10/2009 20:52
Prep Batch ID: 883694
Batch ID: 883695
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	43.2	86	25-149	4	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	43.6	87	39-140	6	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	43.0	86	47-129	0	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	42.2	84	31-135	4	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	44.8	90	53-128	5	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	51.8	104	51-151	4	0-25
67-64-1	PSD	Acetone	250	0.00	U	104	41	21-153	1	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	43.1	86	61-125	4	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	202	81	53-142	3	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	45.5	91	59-136	4	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	219	88	46-129	4	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	41.3	83	56-126	6	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	43.8	88	62-125	4	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	139	56	26-152	4	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	45.5	91	60-130	5	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	47.8	96	55-135	5	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	43.1	86	60-127	5	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	42.6	85	61-131	3	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	46.9	94	59-131	5	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	45.2	90	57-128	7	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	45.1	90	58-136	7	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	42.9	86	58-126	3	0-25

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956PSD
Lab Sample ID: 1201877300
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 14.1
Analysis Date: 07/10/2009 20:52 **Dilution:** 1
Prep Batch ID: 883694
Batch ID: 883695

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	40.8	82	56-123	6	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	42.9	86	51-137	6	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	44.5	89	60-126	4	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	45.7	91	55-138	3	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	43.2	86	60-132	2	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	231	92	58-136	3	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	43.4	87	54-133	4	0-25
108-88-3	PSD	Toluene	50.0	0.373	J	40.1	80	52-128	8	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	43.2	86	53-137	4	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	44.6	89	59-130	2	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	150	60	31-148	3	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	43.1	86	57-127	3	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	38.1	76	51-128	11	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	43.4	87	59-139	4	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	43.2	86	57-133	2	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	39.2	78	53-122	9	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	38.4	77	51-125	13	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	77.0	77	50-126	13	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	40.6	81	52-127	12	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	38.9	78	49-135	11	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	47.5	95	57-149	3	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	45.7	91	63-127	3	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956PSD
Lab Sample ID: 1201877300
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 14.1
Analysis Date: 07/10/2009 20:52
Dilution: 1
Prep Batch ID: 883694
Batch ID: 883695

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	49.8	100	57-149	1	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	37.9	76	49-131	12	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	36.8	74	40-136	21	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	37.6	75	44-135	19	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	35.6	71	44-140	18	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	37.6	75	42-140	20	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	37.1	74	44-132	18	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	39.8	80	42-142	19	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	36.9	74	43-137	19	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	37.2	74	39-139	21	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	34.7	69	38-145	23	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	35.1	70	43-129	15	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	33.5	67	44-125	15	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	33.5	67	36-141	23	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	47.8	96	47-151	0	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	42.0	84	59-131	8	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	35.5	71	43-129	14	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 883694 **Matrix:** SOIL

Lab Sample ID: 1201877301

Instrument: VOA1.I **Analysis Date:** 07/09/2009 08:45 **Dilution:** 1

Analyst: RXM4 **Prep Batch ID** 883694

Purge Vol: 5 mL **Batch ID:** 883695

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	57.5	115	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	53.0	106	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	49.1	98	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	50.9	102	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	51.2	102	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	63.4	127	67-151
67-64-1	LCS	Acetone	250	0.0	129	52	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	50.4	101	70-125
74-88-4	LCS	Iodomethane	250	0.0	244	97	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	49.0	98	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	264	106	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	48.0	96	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	49.5	99	75-120
78-93-3	LCS	2-Butanone	250	0.0	164	65	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	52.3	105	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	55.1	110	74-135
67-66-3	LCS	Chloroform	50.0	0.0	48.9	98	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	48.0	96	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	52.4	105	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	53.0	106	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	52.7	105	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	48.5	97	72-120

Volatile
Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524 **Sample Type:** Laboratory Control Sample
Client ID: LCS for batch 883694 **Matrix:** SOIL
Lab Sample ID: 1201877301
Instrument: VOA1.I **Analysis Date:** 07/09/2009 08:45 **Dilution:** 1
Analyst: RXM4 **Prep Batch ID:** 883694
Purge Vol: 5 mL **Batch ID:** 883695

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	46.4	93	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	50.1	100	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	50.1	100	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	51.7	103	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	48.2	96	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	247	99	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	53.7	107	80-125
108-88-3	LCS	Toluene	50.0	0.0	46.2	92	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	53.2	106	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	48.6	97	76-120
591-78-6	LCS	2-Hexanone	250	0.0	190	76	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	48.7	97	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	47.7	95	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	49.0	98	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	49.0	98	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	48.2	96	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	48.5	97	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	98.5	98	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	51.6	103	74-120
100-42-5	LCS	Styrene	50.0	0.0	51.1	102	76-125
75-25-2	LCS	Bromoform	50.0	0.0	50.4	101	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	47.7	95	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 883694 **Matrix:** SOIL

Lab Sample ID: 1201877301

Instrument: VOA1.I **Analysis Date:** 07/09/2009 08:45 **Dilution:** 1

Analyst: RXM4 **Prep Batch ID** 883694

Purge Vol: 5 mL **Batch ID:** 883695

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	50.7	101	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	45.9	92	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	48.4	97	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	48.4	97	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	43.0	86	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	49.7	99	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	49.7	99	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	49.8	100	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	49.7	99	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	50.4	101	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	52.6	105	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	48.4	97	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	46.6	93	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	52.8	106	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	52.7	105	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	49.5	99	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	47.9	96	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 883694
Matrix: SOIL
Lab Sample ID: 1201877302
Instrument: VOA1.I
Analysis Date: 07/09/2009 10:19
Dilution: 1
Analyst: RXM4
Prep Batch ID: 883694
Purge Vol: 5 mL
Batch ID: 883695

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	265	106	52-139

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 883694 **Matrix:** SOIL

Lab Sample ID: 1201878423

Instrument: VOA1.I **Analysis Date:** 07/10/2009 11:46 **Dilution:** 1

Analyst: RXM4 **Prep Batch ID** 883694

Purge Vol: 5 mL **Batch ID:** 883695

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	47.6	95	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	46.0	92	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	43.9	88	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	45.0	90	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	48.6	97	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	58.2	116	67-151
67-64-1	LCS	Acetone	250	0.0	123	49	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	46.1	92	70-125
74-88-4	LCS	Iodomethane	250	0.0	228	91	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	48.0	96	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	256	102	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	47.2	94	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	48.0	96	75-120
78-93-3	LCS	2-Butanone	250	0.0	160	64	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	51.6	103	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	56.6	113	74-135
67-66-3	LCS	Chloroform	50.0	0.0	47.0	94	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	46.2	92	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	53.8	108	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	54.0	108	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	50.5	101	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	45.7	91	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: LCS for batch 883694
Lab Sample ID: 1201878423
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/10/2009 11:46
Dilution: 1
Prep Batch ID: 883694
Batch ID: 883695

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	47.4	95	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	50.7	101	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	50.0	100	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	49.9	100	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	47.5	95	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	256	102	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	52.8	106	80-125
108-88-3	LCS	Toluene	50.0	0.0	46.7	93	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	52.2	104	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	49.6	99	76-120
591-78-6	LCS	2-Hexanone	250	0.0	186	74	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	47.6	95	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	47.1	94	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	47.9	96	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	49.0	98	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	48.5	97	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	48.5	97	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	99.1	99	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	52.1	104	74-120
100-42-5	LCS	Styrene	50.0	0.0	51.2	102	76-125
75-25-2	LCS	Bromoform	50.0	0.0	52.4	105	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	50.9	102	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 883694 **Matrix:** SOIL

Lab Sample ID: 1201878423

Instrument: VOA1.1 **Analysis Date:** 07/10/2009 11:46 **Dilution:** 1

Analyst: RXM4 **Prep Batch ID:** 883694

Purge Vol: 5 mL **Batch ID:** 883695

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	53.2	106	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	47.2	94	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	50.8	102	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	50.2	100	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	45.7	91	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	51.9	104	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	51.5	103	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	52.7	105	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	51.5	103	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	53.2	106	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	54.7	109	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	49.3	99	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	48.4	97	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	55.4	111	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	56.0	112	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	47.7	95	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	48.9	98	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: LCS for batch 883694
Lab Sample ID: 1201878424
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/10/2009 12:47
Dilution: 1
Prep Batch ID: 883694
Batch ID: 883695

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	193	77	52-139

Method Blank Summary

SDG Number:	09-2524	**Client:**	LANL010	**Matrix:**	SOIL
Client ID:	MB for batch 883694	**Instrument ID:**	VOA1.I	**Data File:**	1t407BA.d
Lab Sample ID:	1201877298	**Prep Date:**	07/09/2009 07:00	**Analyzed:**	07/09/09 11:19
Column:	RTX-Volatiles	**Heated Purge:**	Yes		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 883694	1201877301	1t403LA.d	07/09/09	0845
02	LCS for batch 883694	1201877302	1t405sLA.d	07/09/09	1019
03	CAMO-09-10014	232741001	1t413.d	07/09/09	1421
04	CAMO-09-9956	232741002	1t414.d	07/09/09	1451
05	CAMO-09-9950	232741003	1t415.d	07/09/09	1522
06	CAMO-09-9952	232741004	1t416.d	07/09/09	1553
07	CAMO-09-9958	232741005	1t417.d	07/09/09	1624
08	CAMO-09-9957	232741006	1t418.d	07/09/09	1654
09	CAMO-09-9951	232741007	1t419.d	07/09/09	1724
10	CAMO-09-10031	232741008	1t420.d	07/09/09	1755
11	CAMO-09-9990	232741009	1t421.d	07/09/09	1825

Method Blank Summary

SDG Number:	09-2524	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 883694	Instrument ID:	VOA1.I	Data File:	1t509BA.d
Lab Sample ID:	1201878422	Prep Date:	07/10/2009 09:00	Analyzed:	07/10/09 13:48
Column:	RTX-Volatiles	Heated Purge:	Yes		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 883694	1201878423	1t505LA.d	07/10/09	1146
02	LCS for batch 883694	1201878424	1t507sLA.d	07/10/09	1247
03	CAMO-09-9956PS	1201877299	1t522.d	07/10/09	2022
04	CAMO-09-9956PSD	1201877300	1t523.d	07/10/09	2052

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2524

Instrument ID: VOA1.I **Injection Date/Time:** 01-JUL-09 14:32

Column Description: RTX-Volatiles **Lab File ID** /070109v1/1s309.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	20
75	30.0 - 60.0% of mass 95	48.2
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	73
175	5.0 -9.0% of mass 174	7.5
176	95.0 - 101.0% of mass 174	98
177	5.0 - 9.0% of mass 176	6.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD0005	W1VM090701-05	/070109v1/1s310.d	01-JUL-09 15:01
VSTD001	W1VM090701-06	/070109v1/1s311.d	01-JUL-09 15:31
VSTD002	W1VM090701-08	/070109v1/1s313.d	01-JUL-09 16:32
VSTD005	W1VM090701-09	/070109v1/1s314.d	01-JUL-09 17:02
VSTD010	W1VM090701-10	/070109v1/1s315.d	01-JUL-09 17:32
VSTD020	W1VM090701-11	/070109v1/1s316.d	01-JUL-09 18:02
VSTD050	W1VM090701-12	/070109v1/1s317.d	01-JUL-09 18:33
VSTD100	W1VM090701-13	/070109v1/1s318.d	01-JUL-09 19:04
VSTD005S	W1VM090701-14	/070109v1/1s320.d	01-JUL-09 20:05
VSTD010S	W1VM090701-15	/070109v1/1s321.d	01-JUL-09 20:36
VSTD025S	W1VM090701-16	/070109v1/1s322.d	01-JUL-09 21:06
VSTD050S	W1VM090701-17	/070109v1/1s323.d	01-JUL-09 21:36
VSTD100S	W1VM090701-18	/070109v1/1s324.d	01-JUL-09 22:07
VSTD250S	W1VM090701-19	/070109v1/1s325.d	01-JUL-09 22:38
VSTD500S	W1VM090701-20	/070109v1/1s326.d	01-JUL-09 23:08
ICV	W1VM090701-22	/070109v1/1s329.d	02-JUL-09 00:41
SHORT ICV	W1VM090701-23	/070109v1/1s330.d	02-JUL-09 01:12

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2524

Instrument ID: VOA1.I **Injection Date/Time:** 09-JUL-09 07:46

Column Description: RTX-Volatiles **Lab File ID** /070909v1/1t401.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	21.1
75	30.0 - 60.0% of mass 95	49.7
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	74.5
175	5.0 -9.0% of mass 174	7.3
176	95.0 - 101.0% of mass 174	96.9
177	5.0 - 9.0% of mass 176	6.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD050	W1VM090709-01	/070909v1/1t402.d	09-JUL-09 08:14
LCS	1201877301	/070909v1/1t403LA.d	09-JUL-09 08:45
VSTD250S	UVM090701-08A	/070909v1/1t404.d	09-JUL-09 09:48
LCS	1201877302	/070909v1/1t405sLA.d	09-JUL-09 10:19
BLANK	1201877298	/070909v1/1t407BA.d	09-JUL-09 11:19
CAMO-09-10014	232741001	/070909v1/1t413.d	09-JUL-09 14:21
CAMO-09-9956	232741002	/070909v1/1t414.d	09-JUL-09 14:51
CAMO-09-9950	232741003	/070909v1/1t415.d	09-JUL-09 15:22
CAMO-09-9952	232741004	/070909v1/1t416.d	09-JUL-09 15:53
CAMO-09-9958	232741005	/070909v1/1t417.d	09-JUL-09 16:24
CAMO-09-9957	232741006	/070909v1/1t418.d	09-JUL-09 16:54
CAMO-09-9951	232741007	/070909v1/1t419.d	09-JUL-09 17:24
CAMO-09-10031	232741008	/070909v1/1t420.d	09-JUL-09 17:55
CAMO-09-9990	232741009	/070909v1/1t421.d	09-JUL-09 18:25

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2524

Instrument ID: VOA1.I **Injection Date/Time:** 10-JUL-09 10:17

Column Description: RTX-Volatiles **Lab File ID** /071009v1/1t503.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	19.6
75	30.0 - 60.0% of mass 95	48.4
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	74.2
175	5.0 -9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	96.6
177	5.0 - 9.0% of mass 176	6.4

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD050	W1VM090710-02	/071009v1/1t504.d	10-JUL-09 11:16
LCS	1201878423	/071009v1/1t505LA.d	10-JUL-09 11:46
VSTD25S	UVM090701-08A	/071009v1/1t506.d	10-JUL-09 12:17
LCS	1201878424	/071009v1/1t507sLA.d	10-JUL-09 12:47
BLANK	1201878422	/071009v1/1t509BA.d	10-JUL-09 13:48
CAMO-09-9956MS	1201877299	/071009v1/1t522.d	10-JUL-09 20:22
CAMO-09-9956MSD	1201877300	/071009v1/1t523.d	10-JUL-09 20:52

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA1.I

GC Column: RTX-Volatiles

Client SDG: 09-2524

STD Analysis Time: 09-JUL-09 08:14

Data File: 1t402.d

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	1232665		13.7	1041221		17.2	574817		19.6
Upper Limit	2465330		14.2	2082442		17.7	1149634		20.1
Lower Limit	616333		13.2	520611		16.7	287409		19.1
Sample ID									
BLK01LCS	1268621		13.7	1085386		17.2	595183		19.6
BLK01SLCS	989965		13.7	834976		17.2	444048		19.6
BLK01	1131275		13.7	966822		17.2	504579		19.6
CAMO-09-10014	992852		13.7	854054		17.2	457056		19.6
CAMO-09-9956	995581		13.7	827508		17.2	412983		19.6
CAMO-09-9950	986742		13.7	833066		17.2	434506		19.6
CAMO-09-9952	978480		13.7	834051		17.2	452316		19.6
CAMO-09-9958	973388		13.7	829990		17.2	435828		19.6
CAMO-09-9957	881260		13.7	765192		17.2	412422		19.6
CAMO-09-9951	930994		13.7	792002		17.2	428462		19.6
CAMO-09-10031	906500		13.7	767520		17.2	383895		19.6
CAMO-09-9990	888642		13.7	735713		17.2	343344		19.6

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA1.I

GC Column: RTX-Volatiles

Client SDG: 09-2524

STD Analysis Time: 10-JUL-09 11:16

Data File: lt504.d

	Fluorobenzene				Chlorobenzene-d5				1,4-Dichlorobenzene-d4			
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 Hour STD	1309903		13.7		1124117		17.2		598851		19.6	
Upper Limit	2619806		14.2		2248234		17.7		1197702		20.1	
Lower Limit	654952		13.2		562059		16.7		299426		19.1	
Sample ID												
BLK02LCS	1345532		13.7		1140866		17.2		595601		19.6	
BLK02SLCS	1362581		13.7		1137879		17.2		586477		19.6	
BLK02	1252342		13.7		1064883		17.2		543649		19.6	
CAMO-09-9956MS	1124606		13.7		942601		17.2		468460		19.6	
CAMO-09-9956MSD	1152394		13.7		967626		17.2		490225		19.6	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	S
Lab Sample ID:	232741001	**Date Received:**	07/02/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10014	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 14:21	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:16	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t413.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	J	4.34	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	S
Lab Sample ID:	232741001	**Date Received:**	07/02/2009 08:40		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10014	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 14:21	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:16	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t413.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t413.d
Lab Smp Id: 232741001 Client Smp ID: CAMO-09-10014
Inj Date : 09-JUL-2009 14:21
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741001|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.696	13.682	(1.000)	992852	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	854054	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	457056	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.974)	477215	56.5075	56.5
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1479160	49.7498	49.7
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	583623	49.5787	49.6
16 Acetone	43	9.258	9.249	(0.676)	19777	4.34175	4.3(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 1t413.d
Report Date: 07/09/2009 14:50
Lab. ID: 232741001 SampleType: SAMPLE
Injection Date: 09-JUL-2009 14:21
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232741001|883695|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
16 Acetone			CAS#: 67-64-1			
43	19777	9.26	9.25	80-120	100	( )
58	6133	9.27	9.25	3- 63	31	( )
51 1,2-Dichloroethane			CAS#: 107-06-2			
62	15980	13.69	13.44	80-120	100	(T)
64	2920	13.69	13.44	2- 62	18	(T)
64 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	14583	15.53	15.37	80-120	100	(T)
43	7657	15.53	15.37	216-276	53	(QT)
100	983230	15.53	15.37	0- 60	6742	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t413.d
Lab Smp Id: 232741001 Client Smp ID: CAMO-09-10014
Inj Date : 09-JUL-2009 14:21
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741001|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/070909v1/1t413.d
Date : 09-JUL-2009 14:21
Client ID: CAMO-09-10014
Sample Info: |2327410011883695|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

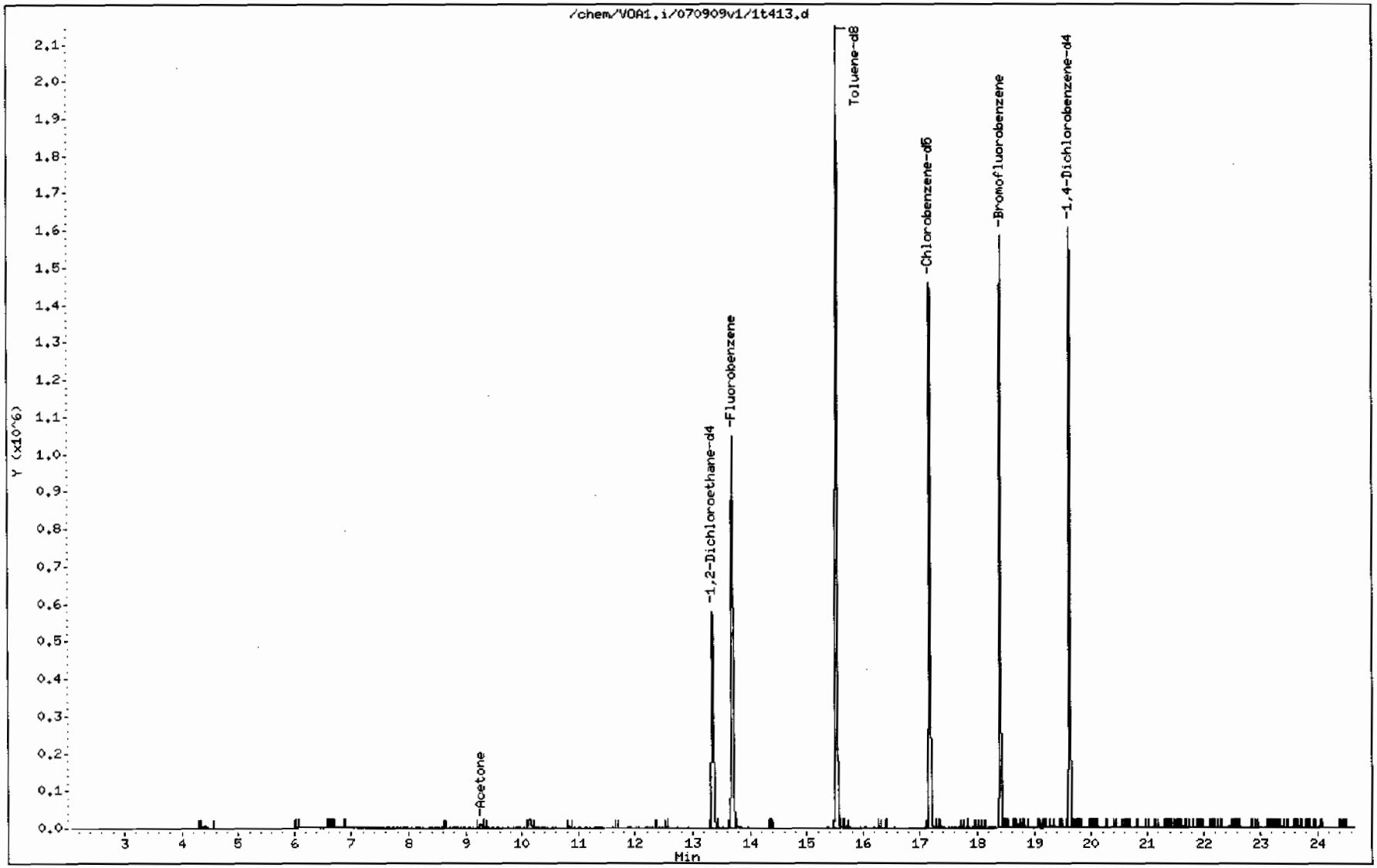

Data File: /chem/VOA1.i/070909v1/1t413.d

Date : 09-JUL-2009 14:21

Client ID: CAMO-09-10014

Instrument: VOA1.i

Sample Info: |2327410001|883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

16 Acetone

Concentration: 4.3 ug/Kg

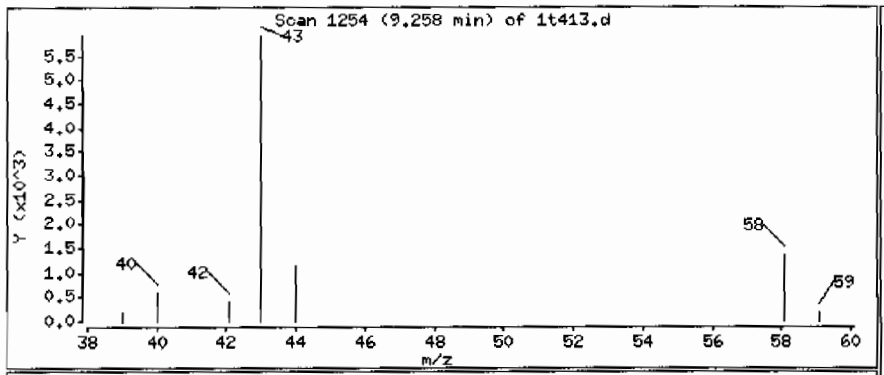

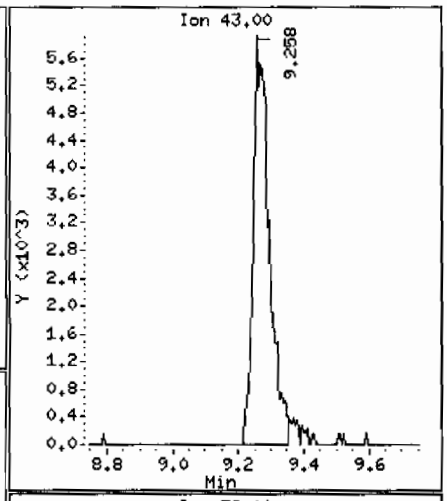

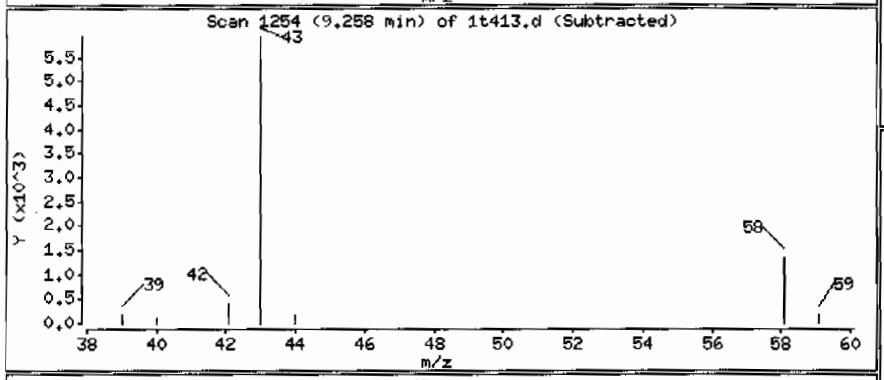

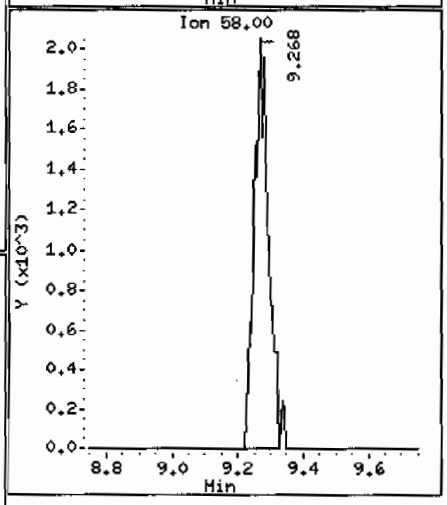

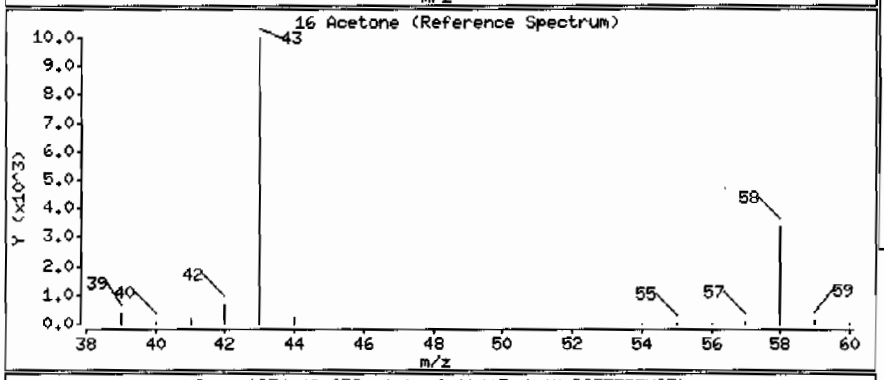

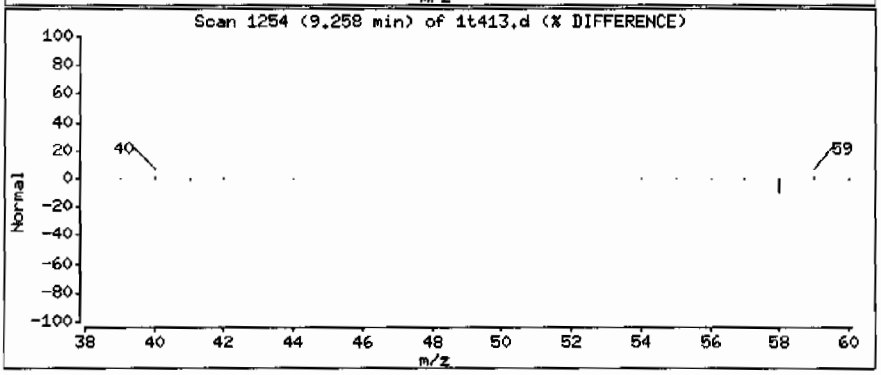

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232741008**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**11.3**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10031**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/09/2009 17:55**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 12:23**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t420.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.383	1.13
74-87-3	Chloromethane	U	1.13	ug/kg	0.338	1.13
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.338	1.13
74-83-9	Bromomethane	U	1.13	ug/kg	0.338	1.13
75-00-3	Chloroethane	U	1.13	ug/kg	0.338	1.13
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.643	1.13
67-64-1	Acetone	J	2.46	ug/kg	1.87	5.64
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
74-88-4	Iodomethane	U	5.64	ug/kg	1.80	5.64
75-09-2	Methylene chloride	U	5.64	ug/kg	2.25	5.64
75-15-0	Carbon disulfide	U	5.64	ug/kg	1.41	5.64
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.338	1.13
78-93-3	2-Butanone	U	5.64	ug/kg	1.69	5.64
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.338	1.13
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13
67-66-3	Chloroform	U	1.13	ug/kg	0.338	1.13
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.372	1.13
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.338	1.13
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.338	1.13
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.338	1.13
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.338	1.13
71-43-2	Benzene	U	1.13	ug/kg	0.338	1.13
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.372	1.13
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.338	1.13
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.338	1.13
74-95-3	Dibromomethane	U	1.13	ug/kg	0.338	1.13
108-10-1	4-Methyl-2-pentanone	U	5.64	ug/kg	1.41	5.64
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13
108-88-3	Toluene	J	0.438	ug/kg	0.338	1.13
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.338	1.13
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.338	1.13
591-78-6	2-Hexanone	U	5.64	ug/kg	1.69	5.64
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.338	1.13
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.338	1.13
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.338	1.13
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.338	1.13
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.338	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 17:55	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:23	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t420.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.338	1.13
179601-23-1	m,p-Xylenes	U	2.25	ug/kg	0.338	2.25
95-47-6	o-Xylene	U	1.13	ug/kg	0.338	1.13
100-42-5	Styrene	U	1.13	ug/kg	0.338	1.13
75-25-2	Bromoform	U	1.13	ug/kg	0.338	1.13
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.338	1.13
108-86-1	Bromobenzene	U	1.13	ug/kg	0.338	1.13
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.338	1.13
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.338	1.13
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.338	1.13
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.338	1.13
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.338	1.13
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.338	1.13
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.338	1.13
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.338	1.13
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.338	1.13
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.338	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.64	ug/kg	1.80	5.64
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.338	1.13
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.338	1.13

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	8.6	ug/kg		J
	Unknown Hydrocarbon	20	14.9	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t420.d
Lab Smp Id: 232741008 Client Smp ID: CAMO-09-10031
Inj Date : 09-JUL-2009 17:55
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741008|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.29610	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	906500	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	767520	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	383895	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	444637	57.6653	65.0
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1360136	50.9042	57.4
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	537170	54.3290	61.2
16 Acetone	43	9.272	9.249	(0.677)	9074	2.18182	2.4(a)
66 Toluene	92	15.606	15.601	(0.909)	6274	0.38846	0.44(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 1t420.d
Report Date: 07/10/2009 07:21
Lab. ID: 232741008 SampleType: SAMPLE
Injection Date: 09-JUL-2009 17:55
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232741008|883695|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
16 Acetone			CAS#: 67-64-1			
43	9074	9.27	9.25	80-120	100	( )
58	1594	9.27	9.25	3- 63	18	( )
51 1,2-Dichloroethane			CAS#: 107-06-2			
62	14654	13.70	13.44	80-120	100	(T)
64	2840	13.70	13.44	2- 62	19	(T)
64 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	13688	15.53	15.37	80-120	100	(T)
43	6832	15.52	15.37	216-276	50	(QT)
100	902719	15.53	15.37	0- 60	6595	(QT)
66 Toluene			CAS#: 108-88-3			
92	6274	15.61	15.60	80-120	100	( )
91	10301	15.61	15.60	137-197	164	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t420.d
Lab Smp Id: 232741008 Client Smp ID: CAMO-09-10031
Inj Date : 09-JUL-2009 17:55
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741008|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.29610	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.166	2432692	50.000
* 102 1,4-Dichlorobenzene-d4	19.620	2414481	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
18.087	371069	7.62671343	8.6	0		0	76

RT	AREA	CONCENTRATIONS ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Hydrocarbon					CAS #:		
20.002	639174	13.2362621	14.9	0		0	102

Data File: /chem/VOA1.i/070909v1/1t420.d
Date : 09-JUL-2009 17:55
Client ID: CAMO-09-10031
Sample Info: |2327410081883695|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

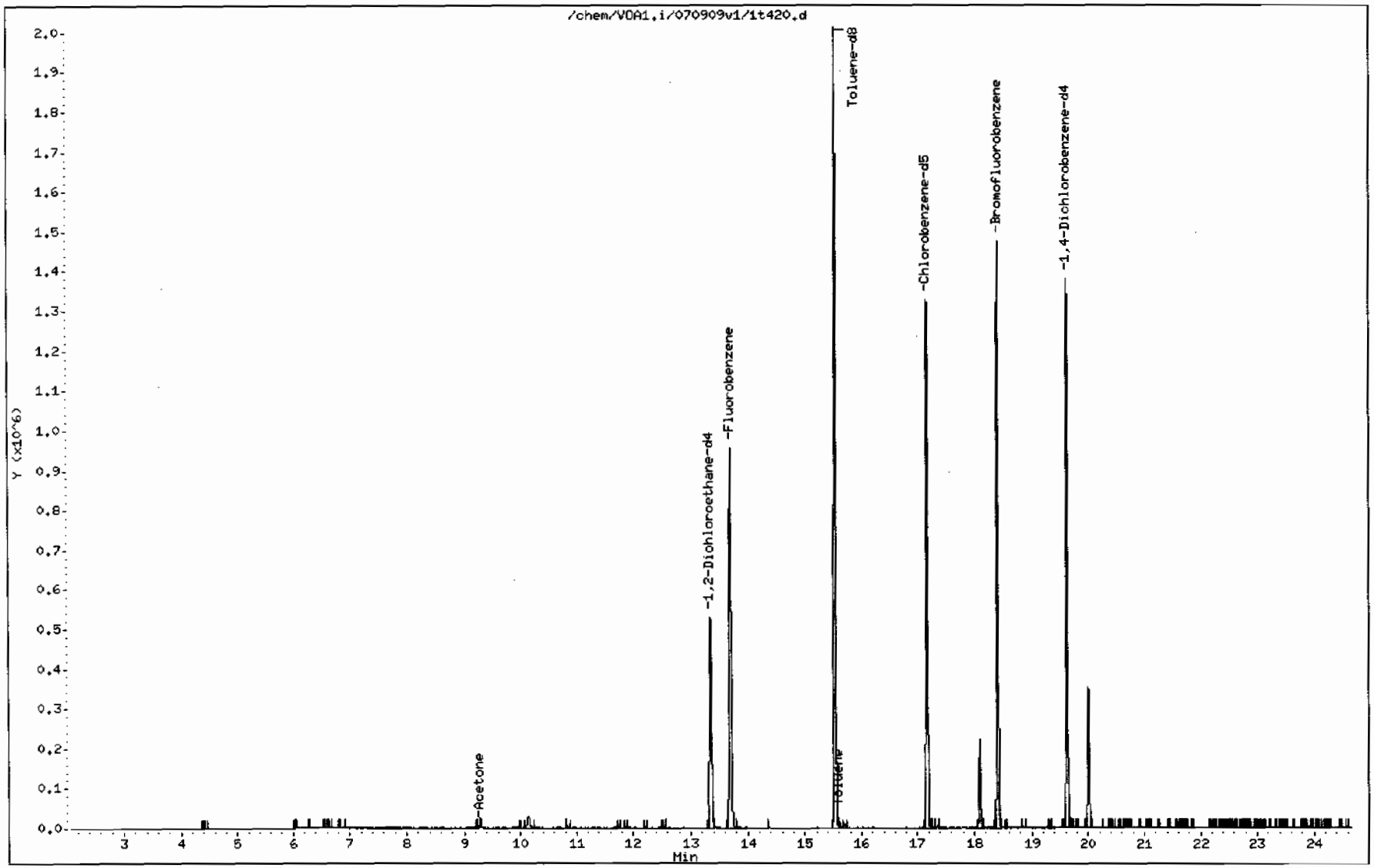

Data File: /chem/VOA1.i/070909v1/1t420.d

Date : 09-JUL-2009 17:55

Client ID: CAMO-09-10031

Instrument: VOA1.i

Sample Info: |2327410081883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

16 Acetone

Concentration: 2.4 ug/Kg

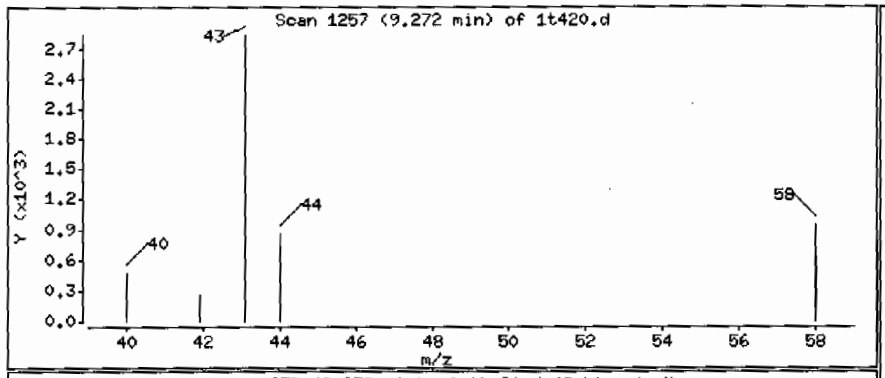

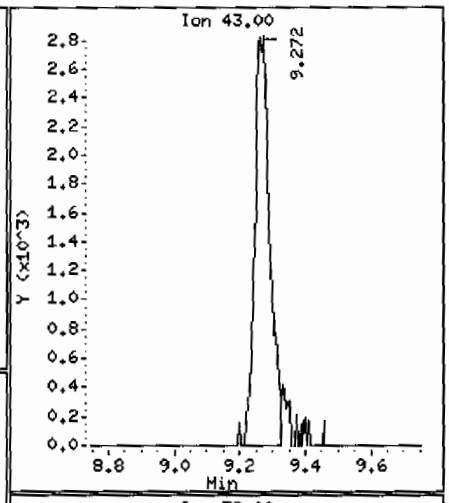

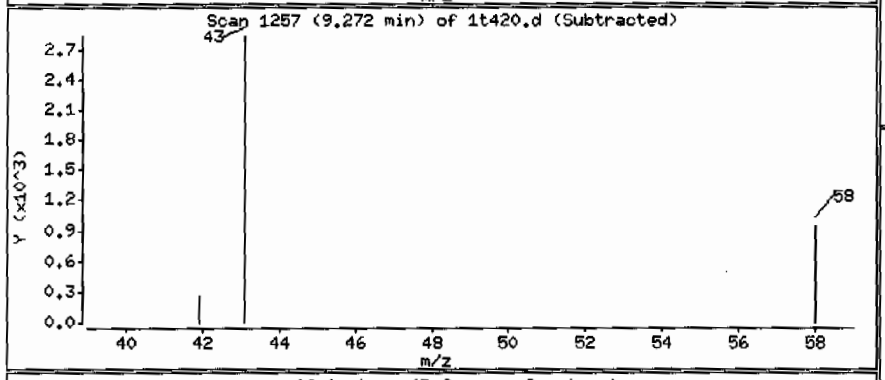

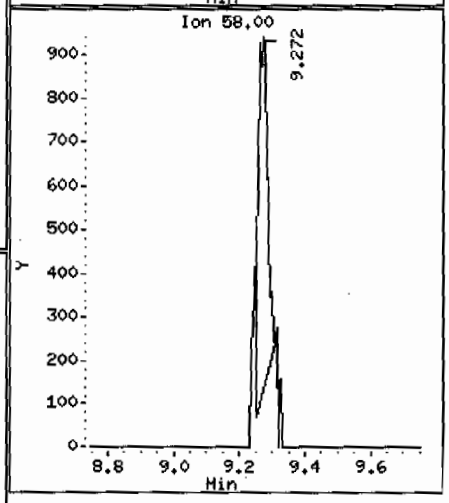

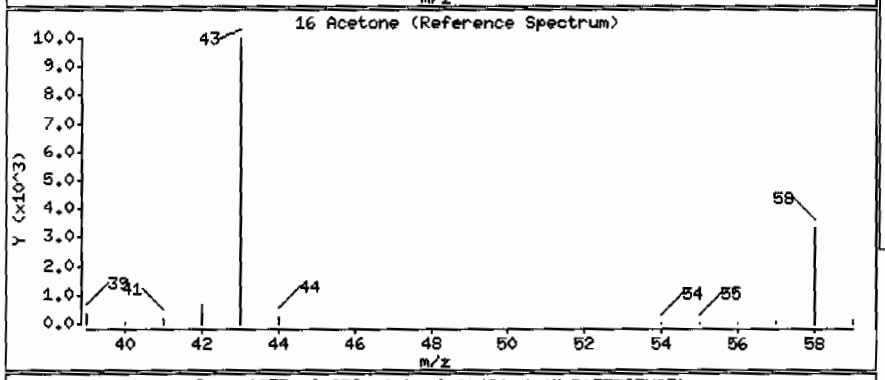

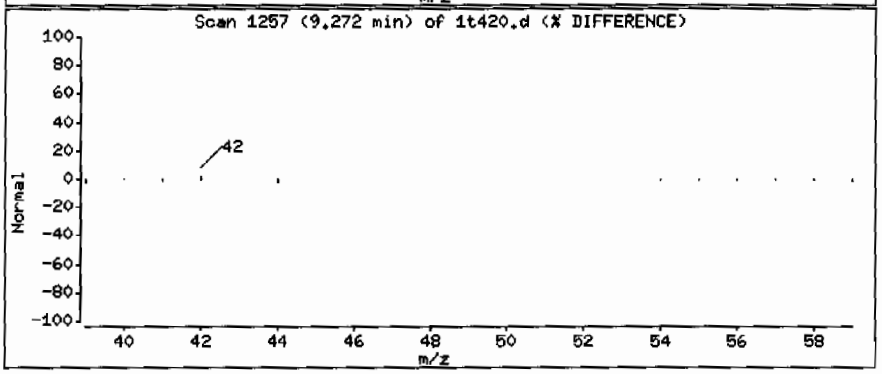

Data File: /chem/VOA1.i/070909v1/1t420.d

Date : 09-JUL-2009 17:55

Client ID: CAMO-09-10031

Instrument: VOA1.i

Sample Info: |2327410081883695111VOAF111

Operator: RXH4

Column phase: RTX-Volatiles

Column diameter: 0.25

66 Toluene

Concentration: 0.44 ug/Kg

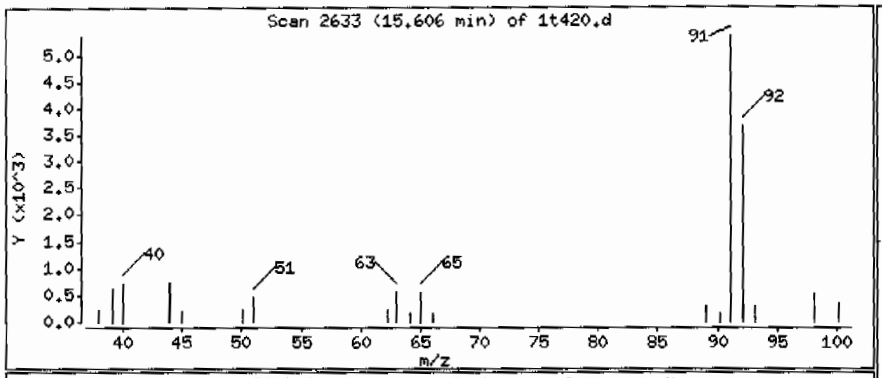

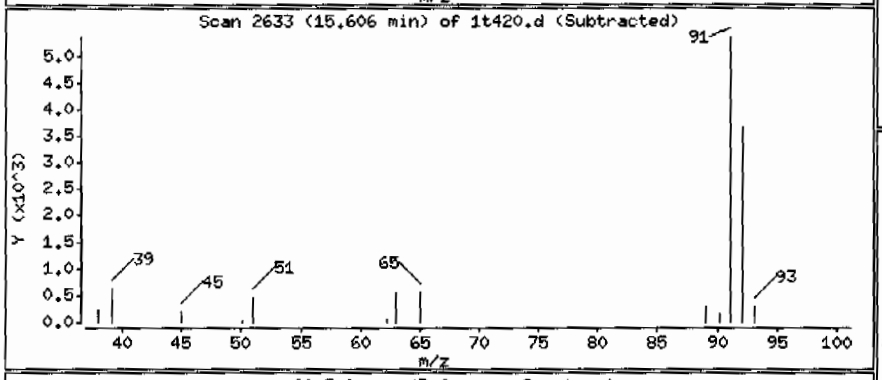

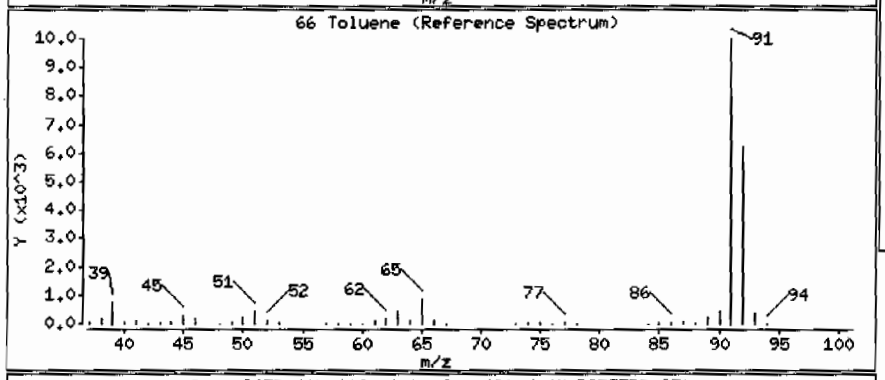

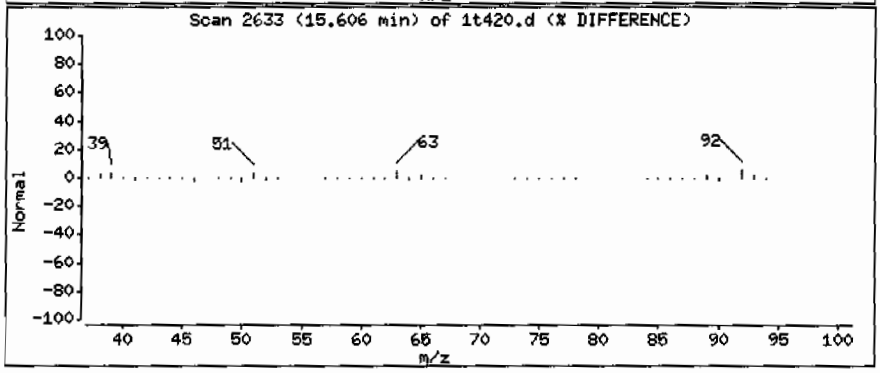

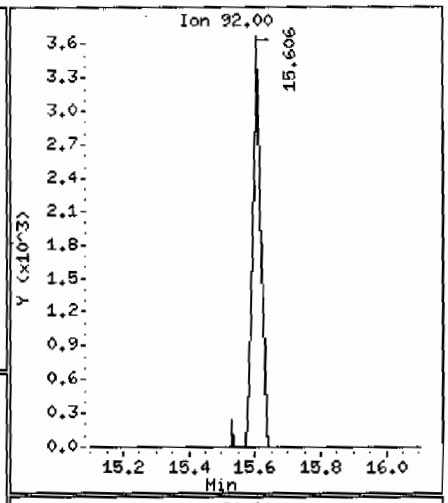

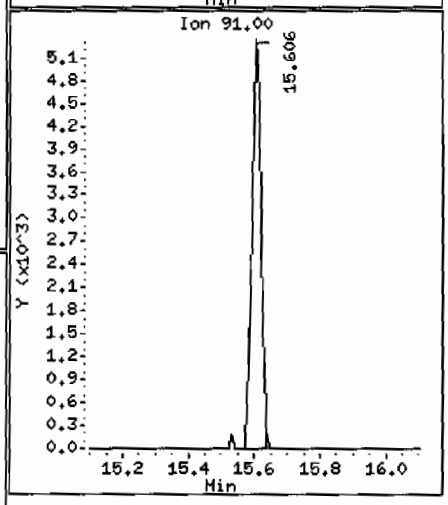

Data File: /chem/VOA1.i/070909v1/1t420.d

Date : 09-JUL-2009 17:55

Client ID: CAMO-09-10031

Instrument: VOA1.i

Sample Info: |2327410008|883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotrisiloxane, hexamethyl-	541-05-9	NIST05.L	73123	22	C6H18O3Si3	222
Trisiloxane, 1,1,3,3,5,5-hexamethyl-	1189-93-1	NIST05.L	63149	22	C6H20O2Si3	208
2-Phenylindolizine	25379-20-8	NIST05.L	52067	14	C14H11N	193

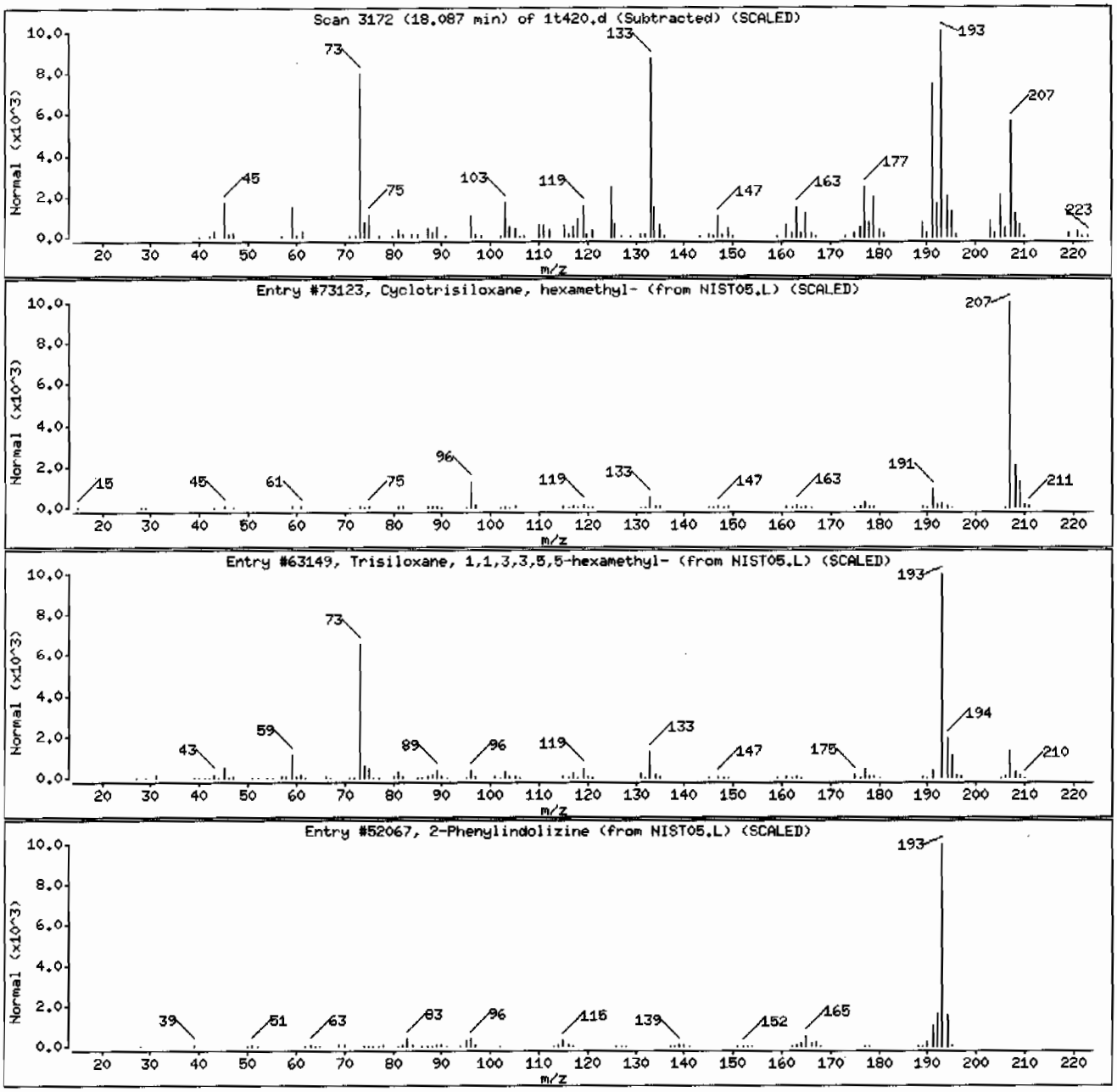

Data File: /chem/VOA1.i/070909v1/1t420.d

Date : 09-JUL-2009 17:55

Client ID: CAMO-09-10031

Instrument: VOA1.i

Sample Info: |2327410081883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Hydrocarbon						
Unknown			0	0		0

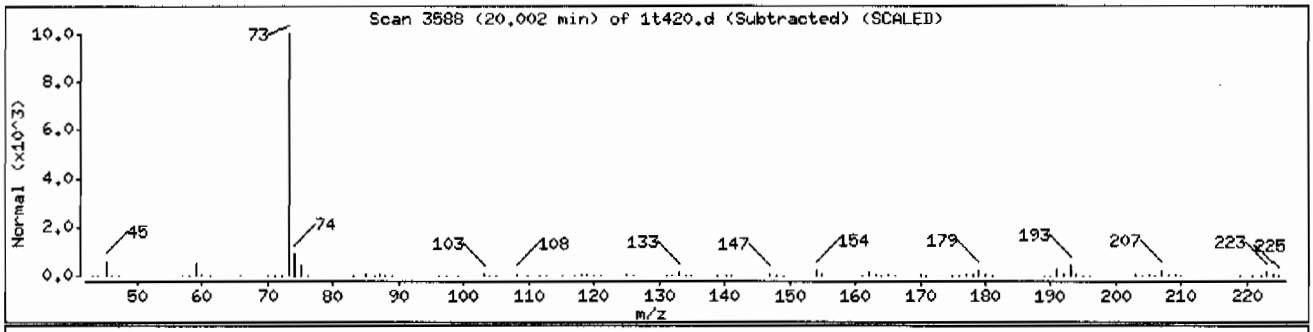

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9950	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 15:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:18	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t415.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.380	1.12
74-87-3	Chloromethane	U	1.12	ug/kg	0.335	1.12
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.335	1.12
74-83-9	Bromomethane	U	1.12	ug/kg	0.335	1.12
75-00-3	Chloroethane	U	1.12	ug/kg	0.335	1.12
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.637	1.12
67-64-1	Acetone	J	2.61	ug/kg	1.86	5.59
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
74-88-4	Iodomethane	U	5.59	ug/kg	1.79	5.59
75-09-2	Methylene chloride	U	5.59	ug/kg	2.24	5.59
75-15-0	Carbon disulfide	U	5.59	ug/kg	1.40	5.59
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.335	1.12
78-93-3	2-Butanone	U	5.59	ug/kg	1.68	5.59
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
67-66-3	Chloroform	U	1.12	ug/kg	0.335	1.12
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.369	1.12
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.335	1.12
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.335	1.12
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.335	1.12
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.335	1.12
71-43-2	Benzene	U	1.12	ug/kg	0.335	1.12
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.369	1.12
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.335	1.12
74-95-3	Dibromomethane	U	1.12	ug/kg	0.335	1.12
108-10-1	4-Methyl-2-pentanone	U	5.59	ug/kg	1.40	5.59
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
108-88-3	Toluene	U	1.12	ug/kg	0.335	1.12
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.335	1.12
591-78-6	2-Hexanone	U	5.59	ug/kg	1.68	5.59
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.335	1.12
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.335	1.12
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.335	1.12
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.335	1.12
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.335	1.12

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9950	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 15:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:18	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t415.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.335	1.12
179601-23-1	m,p-Xylenes	U	2.24	ug/kg	0.335	2.24
95-47-6	o-Xylene	U	1.12	ug/kg	0.335	1.12
100-42-5	Styrene	U	1.12	ug/kg	0.335	1.12
75-25-2	Bromoform	U	1.12	ug/kg	0.335	1.12
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.335	1.12
108-86-1	Bromobenzene	U	1.12	ug/kg	0.335	1.12
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.335	1.12
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.335	1.12
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.335	1.12
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.335	1.12
99-87-6	4-Isopropyltoluene	U	1.12	ug/kg	0.335	1.12
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.335	1.12
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.335	1.12
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.59	ug/kg	1.79	5.59
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Hydrocarbon	20	16.7	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t415.d
Lab Smp Id: 232741003 Client Smp ID: CAMO-09-9950
Inj Date : 09-JUL-2009 15:22
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741003|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.55500	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	986742	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	833066	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	434506	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	476286	56.7467	63.4
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1456631	50.2263	56.2
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	584993	52.2742	58.4
16 Acetone	43	9.267	9.249	(0.677)	10561	2.33287	2.6(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 1t415.d
Report Date: 07/10/2009 07:17
Lab. ID: 232741003 SampleType: SAMPLE
Injection Date: 09-JUL-2009 15:22
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232741003|883695|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
16 Acetone			CAS#: 67-64-1			
43	10561	9.27	9.25	80-120	100	( )
58	2210	9.28	9.25	3- 63	21	( )
51 1,2-Dichloroethane			CAS#: 107-06-2			
62	15699	13.69	13.44	80-120	100	(T)
64	2697	13.70	13.44	2- 62	17	(T)
64 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	13845	15.52	15.37	80-120	100	(T)
43	7439	15.53	15.37	216-276	54	(QT)
100	972087	15.53	15.37	0- 60	7021	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t415.d
Lab Smp Id: 232741003 Client Smp ID: CAMO-09-9950
Inj Date : 09-JUL-2009 15:22
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741003|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.55500	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 102 1,4-Dichlorobenzene-d4	19.620	2712807	50.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Hydrocarbon				CAS #:			
20.002	808344	14.8986580	16.6	0		0	102

Data File: /chem/VOA1.i/070909v1/1t415.d
Date : 09-JUL-2009 15:22
Client ID: CAMO-09-9950
Sample Info: |2327410031883695|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

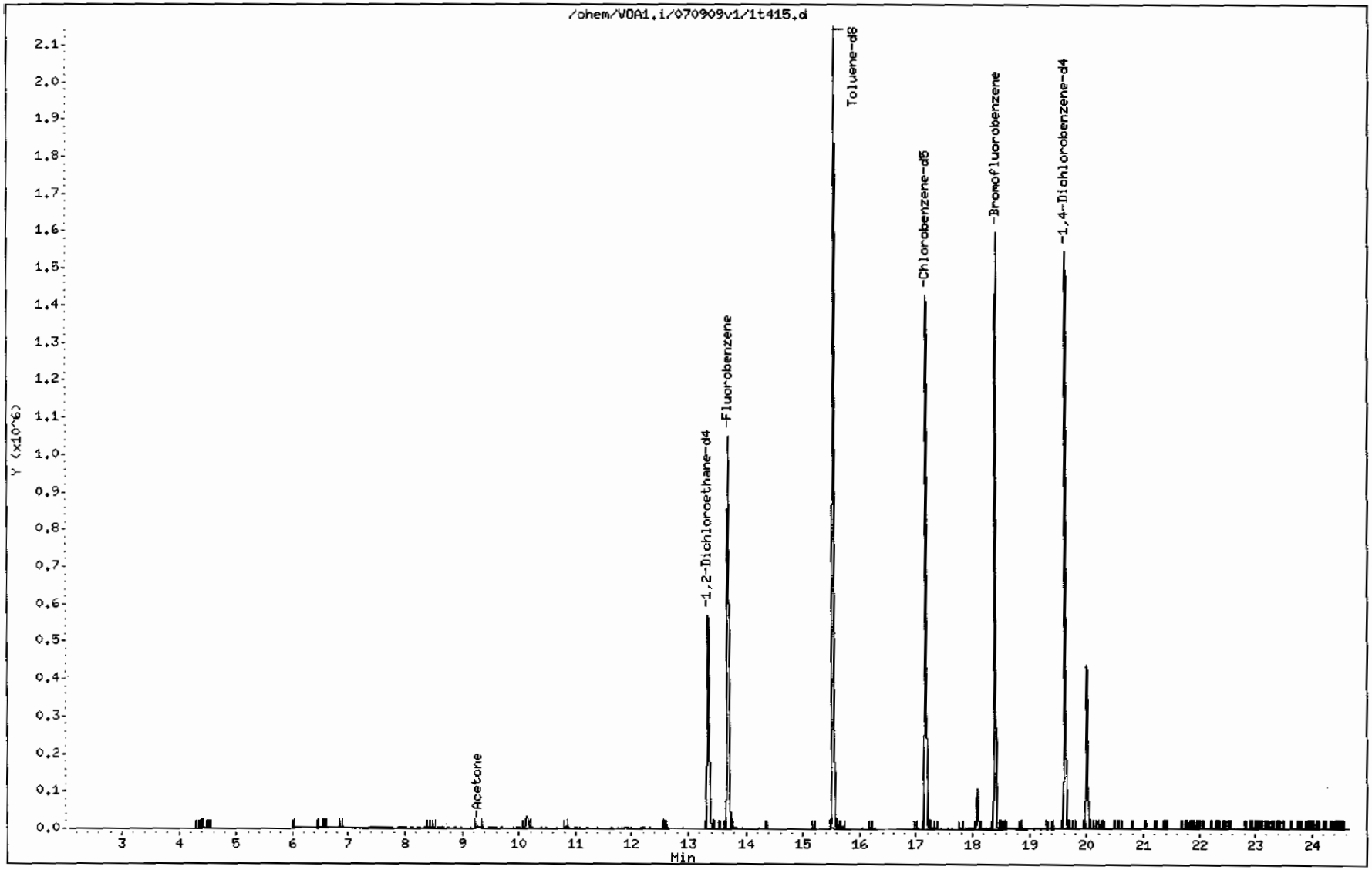

Data File: /chem/VOA1.i/070909v1/1t415.d

Date : 09-JUL-2009 15:22

Client ID: CAMO-09-9950

Instrument: VOA1.i

Sample Info: |2327410031883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

16 Acetone

Concentration: 2.6 ug/Kg

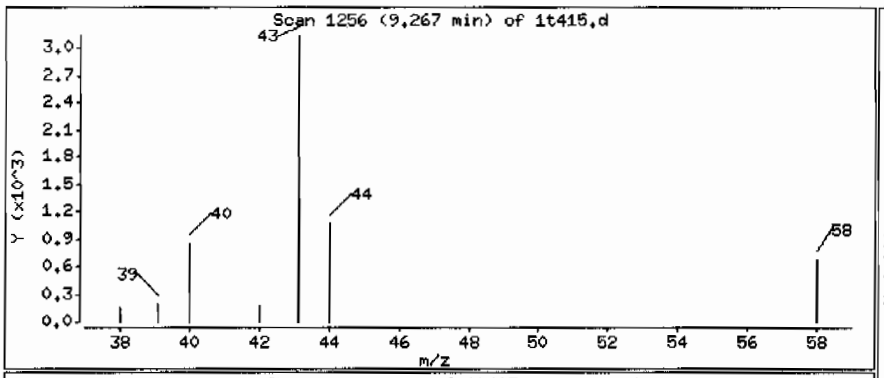

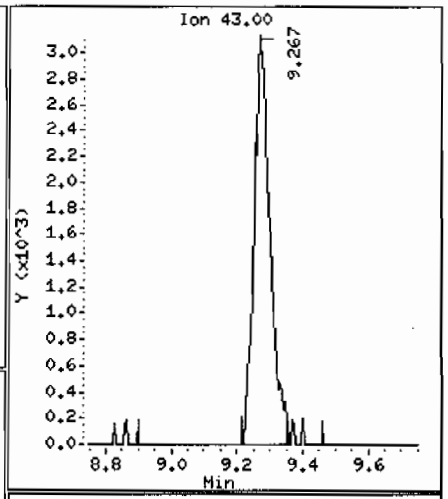

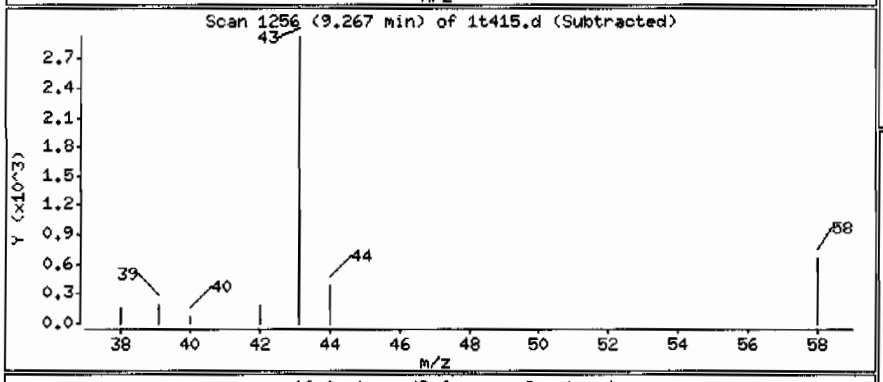

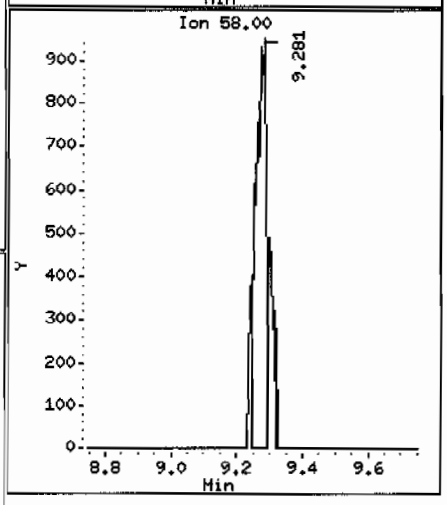

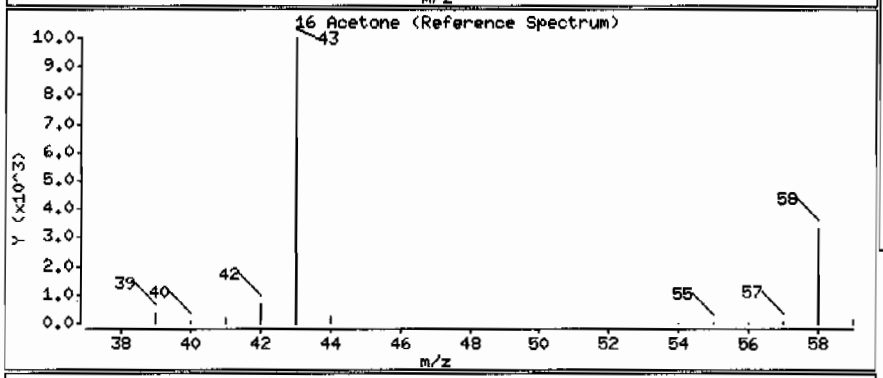

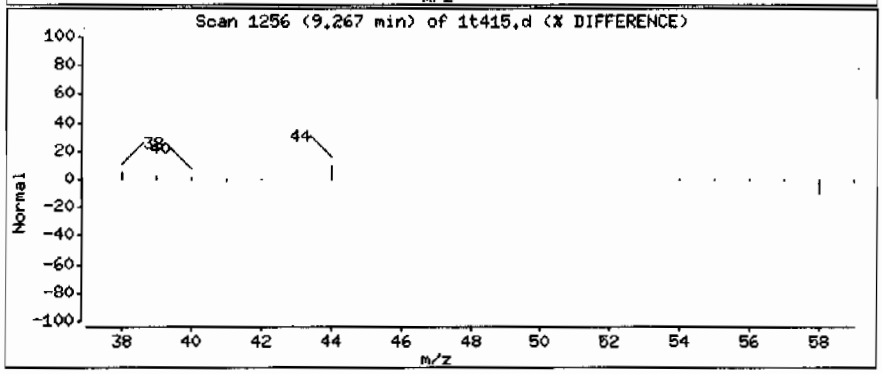

Data File: /chem/VOA1.i/070909v1/1t415.d

Date : 09-JUL-2009 15:22

Client ID: CAMO-09-9950

Instrument: VOA1.i

Sample Info: |2327410031883695111VOAF|1|

Operator: RXH4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Hydrocarbon						
1,3-Cyclopentadiene, 5,5-dimethyl-1-(tri	1000163-65-0	NIST05.L	43043	23	C11H20Si	180

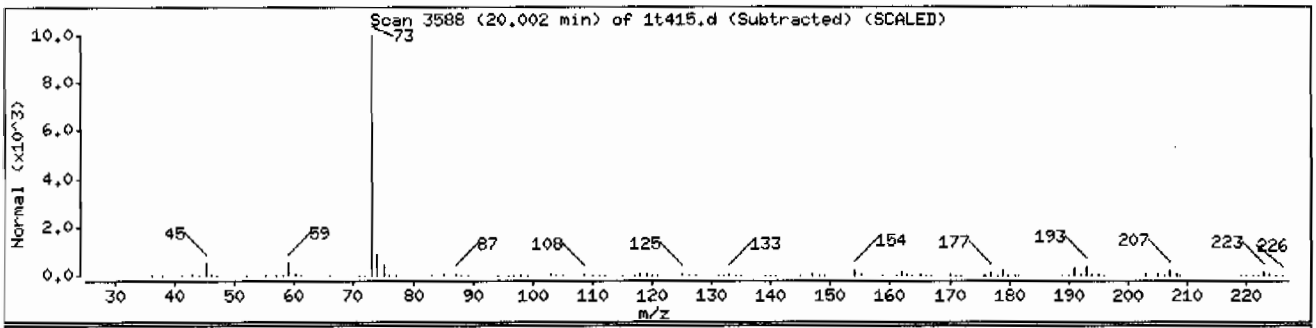

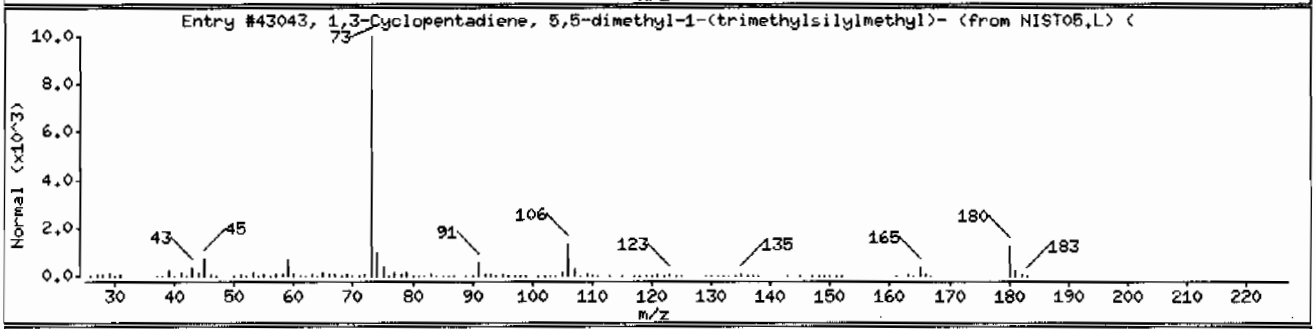

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232741007**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**10.2**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9951**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/09/2009 17:24**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 12:22**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t419.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.378	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.334	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.334	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.334	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.334	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.635	1.11
67-64-1	Acetone	U	5.57	ug/kg	1.85	5.57
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
74-88-4	Iodomethane	U	5.57	ug/kg	1.78	5.57
75-09-2	Methylene chloride	U	5.57	ug/kg	2.23	5.57
75-15-0	Carbon disulfide	U	5.57	ug/kg	1.39	5.57
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.334	1.11
78-93-3	2-Butanone	U	5.57	ug/kg	1.67	5.57
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.334	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.367	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.334	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.334	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.334	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.334	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.334	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.367	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.334	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.334	1.11
108-10-1	4-Methyl-2-pentanone	U	5.57	ug/kg	1.39	5.57
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.334	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.334	1.11
591-78-6	2-Hexanone	U	5.57	ug/kg	1.67	5.57
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.334	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.334	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.334	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.334	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.334	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741007	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9951	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 17:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:22	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t419.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.334	1.11
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.334	2.23
95-47-6	o-Xylene	U	1.11	ug/kg	0.334	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.334	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.334	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.334	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.334	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.334	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.334	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.334	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.334	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.334	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.334	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.334	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.57	ug/kg	1.78	5.57
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	40.6	ug/kg		J
	Unknown Hydrocarbon	20	72.3	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t419.d
Lab Smp Id: 232741007 Client Smp ID: CAMO-09-9951
Inj Date : 09-JUL-2009 17:24
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741007|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.16600	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	930994	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	792002	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	428462	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	458893	57.9484	64.5
$ 65 Toluene-d8	98	15.528	15.523	(0.904)	1417723	51.4193	57.2
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	583542	52.8801	58.9

ION RATIO REPORT

VOA REPORT

Data file: 1t419.d
Report Date: 07/10/2009 07:20
Lab. ID: 232741007 SampleType: SAMPLE
Injection Date: 09-JUL-2009 17:24
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232741007|883695|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
51 1,2-Dichloroethane				CAS#: 107-06-2		
62	15132	13.69	13.44	80-120	100	(T)
64	2780	13.70	13.44	2- 62	18	(T)
64 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	14063	15.53	15.37	80-120	100	(T)
43	7435	15.53	15.37	216-276	53	(QT)
100	932888	15.53	15.37	0- 60	6633	(QT)
84 Isopropylbenzene				CAS#: 98-82-8		
105	8762	18.09	18.14	80-120	100	( )
120	3828	18.08	18.14	0- 55	44	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t419.d
Lab Smp Id: 232741007 Client Smp ID: CAMO-09-9951
Inj Date : 09-JUL-2009 17:24
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741007|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.16600	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.171	2506217	50.000
* 102 1,4-Dichlorobenzene-d4	19.620	2675837	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
18.082	1827295	36.4552491	40.6	0		0	76

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	========	==========	======
Unknown Hydrocarbon					CAS #:		
20.002	3476693	64.9645750	72.3	0		0	102

Data File: /chem/VOA1.i/070909v1/1t419.d
Date : 09-JUL-2009 17:24
Client ID: CAMO-09-9951
Sample Info: |2327410071883695|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

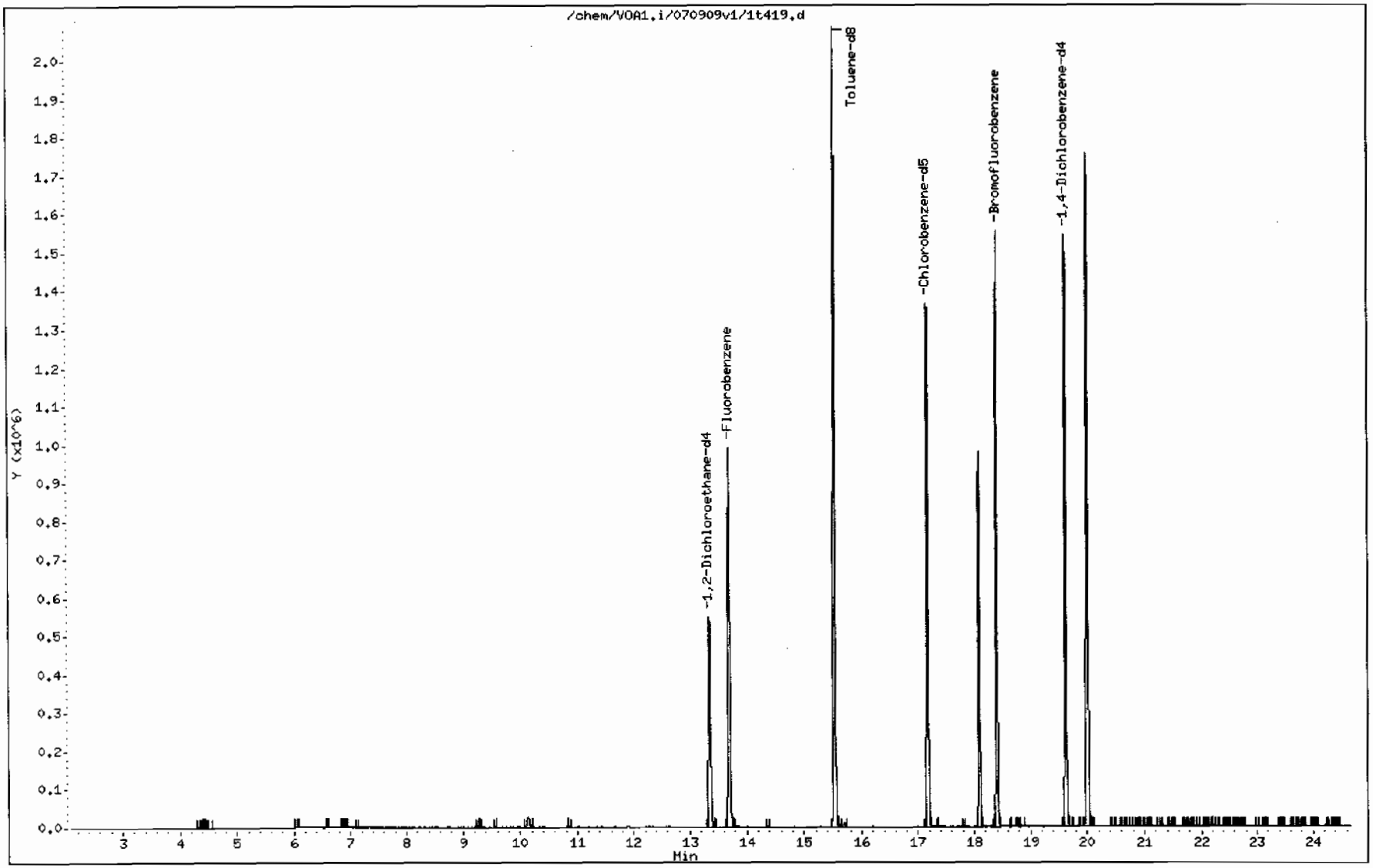

Data File: /chem/VOA1.i/070909v1/1t419.d

Date : 09-JUL-2009 17:24

Client ID: CAMO-09-9951

Instrument: VOA1.i

Sample Info: |2327410071883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Anthracene, 9,10-dihydro-9,10-dimethyl-	22566-43-4	NIST05.L	63100	25	C16H16	208
Trisiloxane, 1,1,3,3,5,5-hexamethyl-	1189-93-1	NIST05.L	63149	22	C6H20O2Si3	208
2-Phenylindolizine	25379-20-8	NIST05.L	52067	22	C14H11N	193

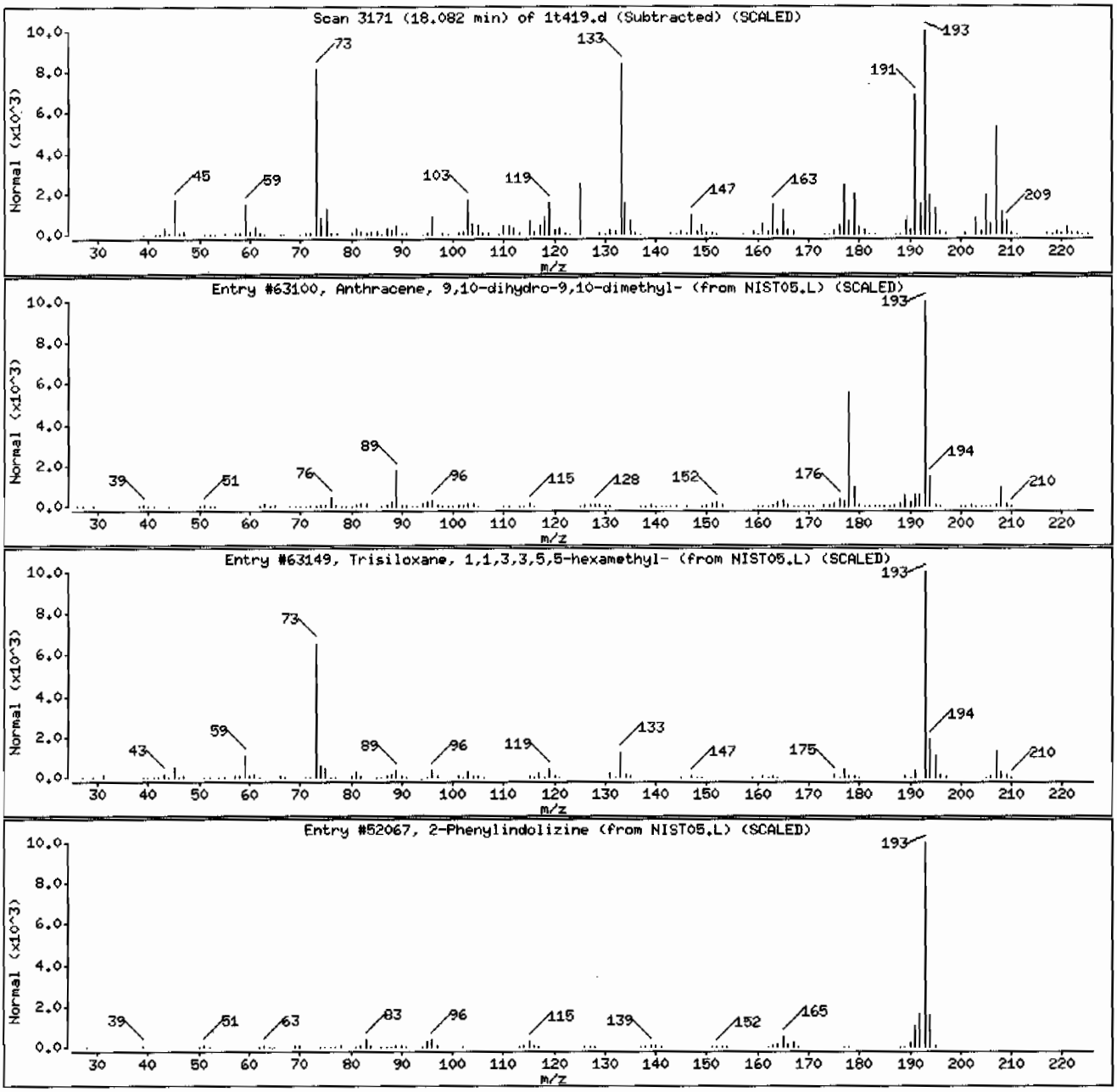

Data File: /chem/VOA1.i/070909v1/1t419.d

Date : 09-JUL-2009 17:24

Client ID: CAMO-09-9951

Instrument: VOA1.i

Sample Info: |2327410071883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Hydrocarbon						
Unknown			0	0		0

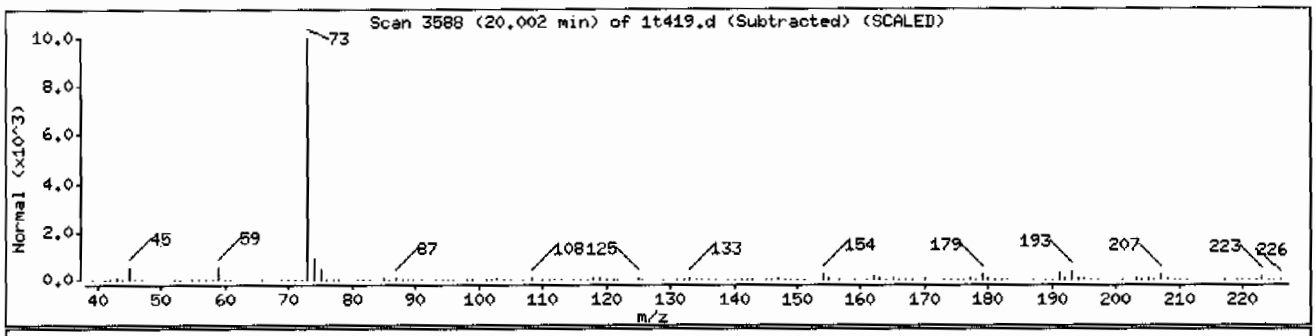

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741004	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9952	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 15:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:19	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t416.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.380	1.12
74-87-3	Chloromethane	U	1.12	ug/kg	0.335	1.12
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.335	1.12
74-83-9	Bromomethane	U	1.12	ug/kg	0.335	1.12
75-00-3	Chloroethane	U	1.12	ug/kg	0.335	1.12
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.636	1.12
67-64-1	Acetone	J	2.19	ug/kg	1.85	5.58
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
74-88-4	Iodomethane	U	5.58	ug/kg	1.79	5.58
75-09-2	Methylene chloride	U	5.58	ug/kg	2.23	5.58
75-15-0	Carbon disulfide	U	5.58	ug/kg	1.40	5.58
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.335	1.12
78-93-3	2-Butanone	U	5.58	ug/kg	1.67	5.58
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.335	1.12
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
67-66-3	Chloroform	U	1.12	ug/kg	0.335	1.12
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.368	1.12
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.335	1.12
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.335	1.12
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.335	1.12
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.335	1.12
71-43-2	Benzene	U	1.12	ug/kg	0.335	1.12
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.368	1.12
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.335	1.12
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.335	1.12
74-95-3	Dibromomethane	U	1.12	ug/kg	0.335	1.12
108-10-1	4-Methyl-2-pentanone	U	5.58	ug/kg	1.40	5.58
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
108-88-3	Toluene	U	1.12	ug/kg	0.335	1.12
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.335	1.12
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.335	1.12
591-78-6	2-Hexanone	U	5.58	ug/kg	1.67	5.58
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.335	1.12
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.335	1.12
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.335	1.12
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.335	1.12
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.335	1.12

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741004	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9952	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 15:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:19	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t416.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.335	1.12
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.335	2.23
95-47-6	o-Xylene	U	1.12	ug/kg	0.335	1.12
100-42-5	Styrene	U	1.12	ug/kg	0.335	1.12
75-25-2	Bromoform	U	1.12	ug/kg	0.335	1.12
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.335	1.12
108-86-1	Bromobenzene	U	1.12	ug/kg	0.335	1.12
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.335	1.12
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.335	1.12
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.335	1.12
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.335	1.12
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.335	1.12
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.335	1.12
99-87-6	4-Isopropyltoluene	U	1.12	ug/kg	0.335	1.12
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.335	1.12
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.335	1.12
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.58	ug/kg	1.79	5.58
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.335	1.12
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.335	1.12

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	88.7	ug/kg		J
	Unknown Hydrocarbon	20	107	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t416.d
Lab Smp Id: 232741004 Client Smp ID: CAMO-09-9952
Inj Date : 09-JUL-2009 15:53
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741004|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.43560	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	978480	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	834051	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	452316	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	477343	57.3529	64.0
$ 65 Toluene-d8	98	15.527	15.523	(0.905)	1462782	50.3788	56.2
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	612708	52.5950	58.7
16 Acetone	43	9.263	9.249	(0.677)	8793	1.95873	2.2(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 1t416.d
Report Date: 07/10/2009 07:18
Lab. ID: 232741004 SampleType: SAMPLE
Injection Date: 09-JUL-2009 15:53
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232741004|883695|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
16 Acetone			CAS#: 67-64-1			
43	8793	9.26	9.25	80-120	100	( )
58	1230	9.25	9.25	3- 63	14	( )
51 1,2-Dichloroethane			CAS#: 107-06-2			
62	15701	13.69	13.44	80-120	100	(T)
64	2694	13.69	13.44	2- 62	17	(T)
64 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	14830	15.52	15.37	80-120	100	(T)
43	7680	15.53	15.37	216-276	52	(QT)
100	972179	15.53	15.37	0- 60	6555	(QT)
82 Styrene			CAS#: 100-42-5			
104	23527	18.08	17.81	80-120	100	(T)
78	229	18.08	17.81	22- 82	1	(QT)
83 Bromoform			CAS#: 75-25-2			
173	1282	18.08	18.11	80-120	100	( )
171	198	18.08	18.11	21- 81	15	(Q)
84 Isopropylbenzene			CAS#: 98-82-8			
105	19762	18.08	18.14	80-120	100	( )
120	8702	18.09	18.14	0- 55	44	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t416.d
Lab Smp Id: 232741004 Client Smp ID: CAMO-09-9952
Inj Date : 09-JUL-2009 15:53
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741004|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.43560	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.166	2626305	50.000
* 102 1,4-Dichlorobenzene-d4	19.620	2832699	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
18.082	4170958	79.4073389	88.6	0		0	76

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown Hydrocarbon					CAS #:		
20.002	5445894	96.1255268	107	0		0	102

Data File: /chem/VOA1.i/070909v1/1t416.d

Date : 09-JUL-2009 15:53

Client ID: CAMO-09-9952

Sample Info: |2327410041883695|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4

Column diameter: 0.25

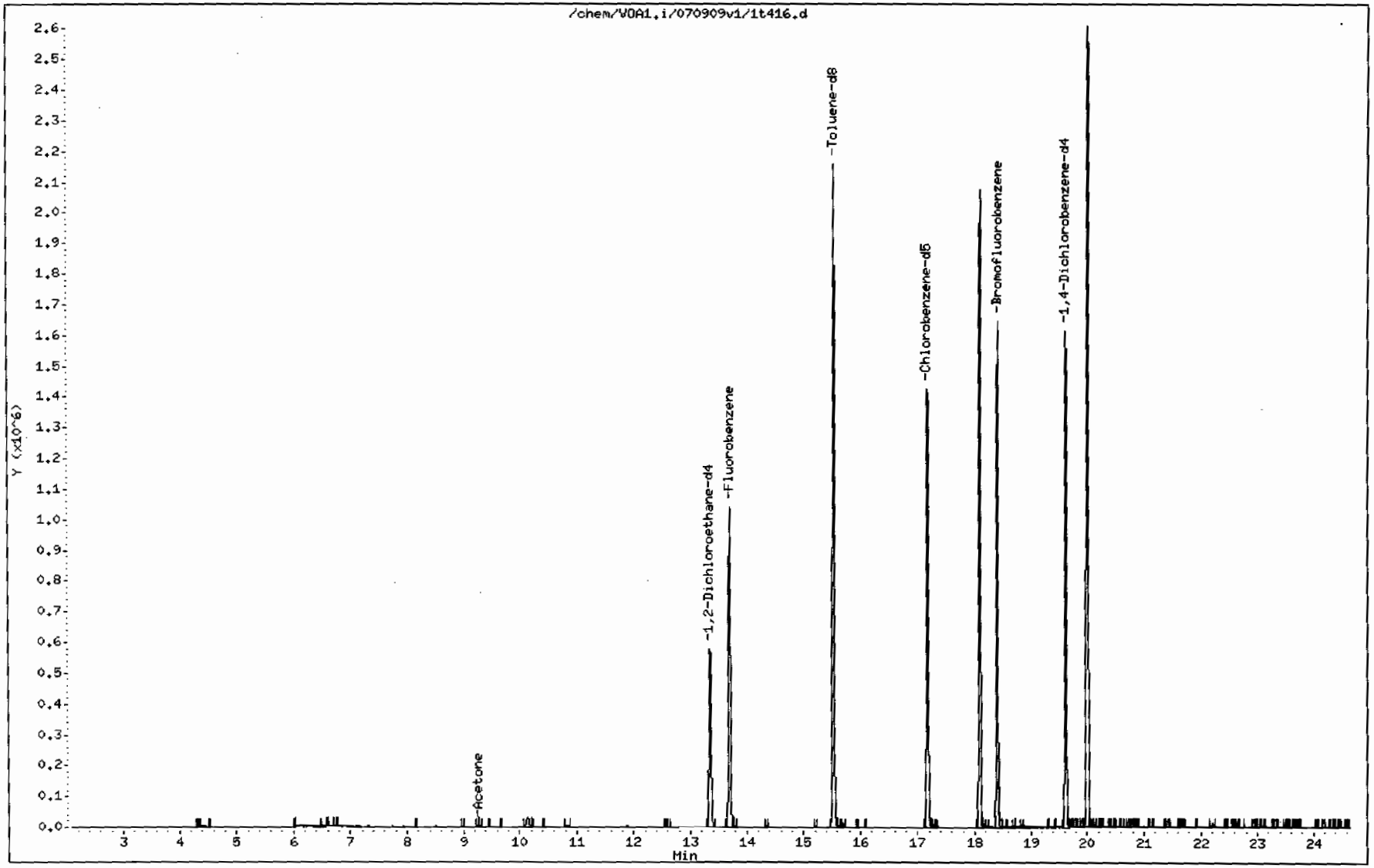

Data File: /chem/VOA1.i/070909v1/1t416.d

Date : 09-JUL-2009 15:53

Client ID: CAMO-09-9952

Instrument: VOA1.i

Sample Info: |2327410041883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

16 Acetone

Concentration: 2.2 ug/Kg

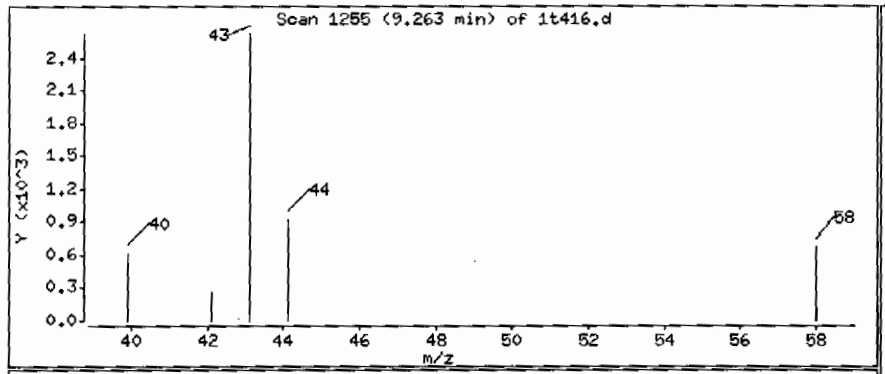

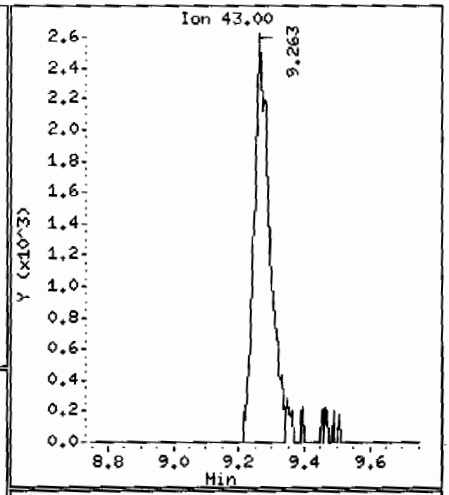

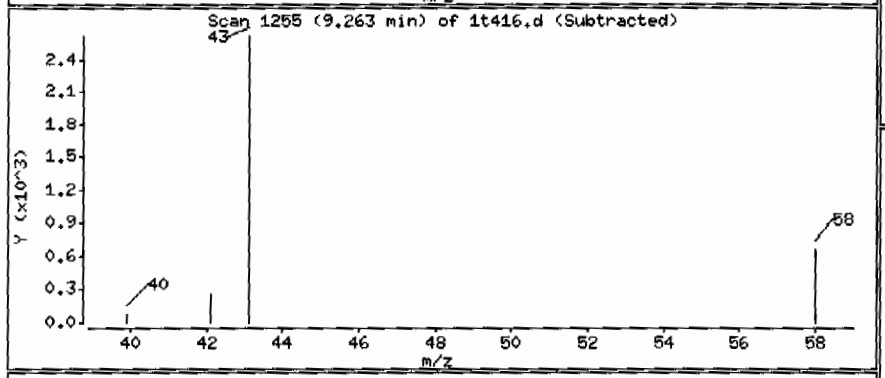

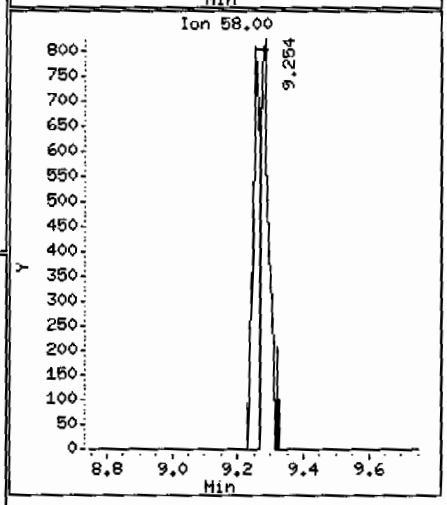

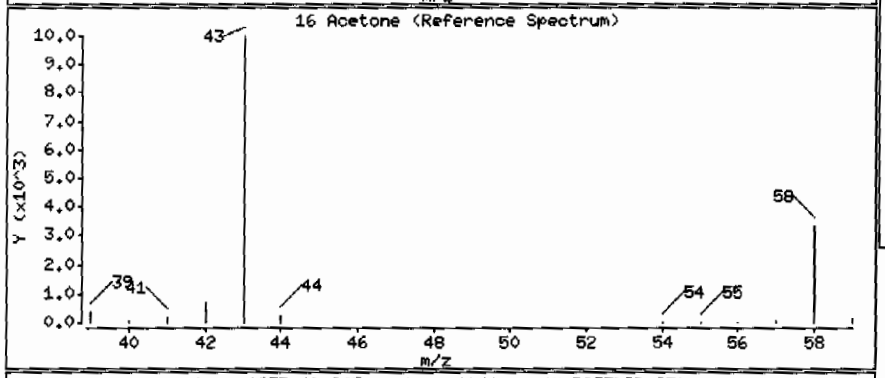

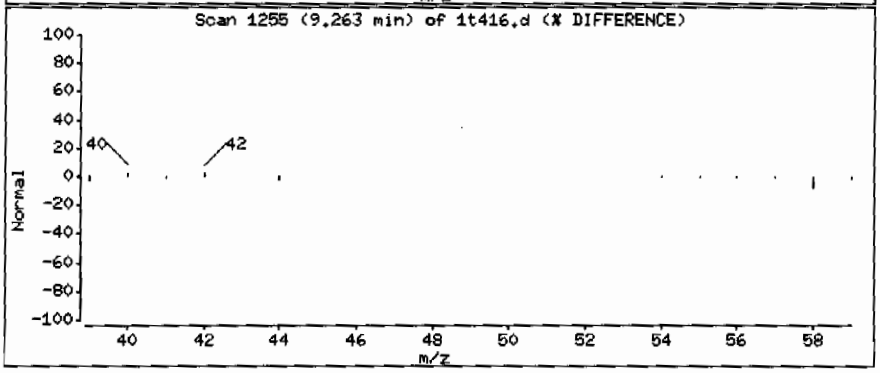

Data File: /chem/VOA1.i/070909v1/1t416.d

Date : 09-JUL-2009 15:53

Client ID: CAMO-09-9952

Instrument: VOA1.i

Sample Info: |2327410041883695|1|VOAF|1|

Operator: RXH4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Trisiloxane, 1,1,3,3,5,5-hexamethyl-	1189-93-1	NIST05.L	63148	27	C6H20O2Si3	208
Cyclotrisiloxane, hexamethyl-	541-05-9	NIST05.L	73123	27	C6H18O3Si3	222
Anthracene, 9,10-dihydro-9,10-dimethyl-	22566-43-4	NIST05.L	63100	25	C16H16	208

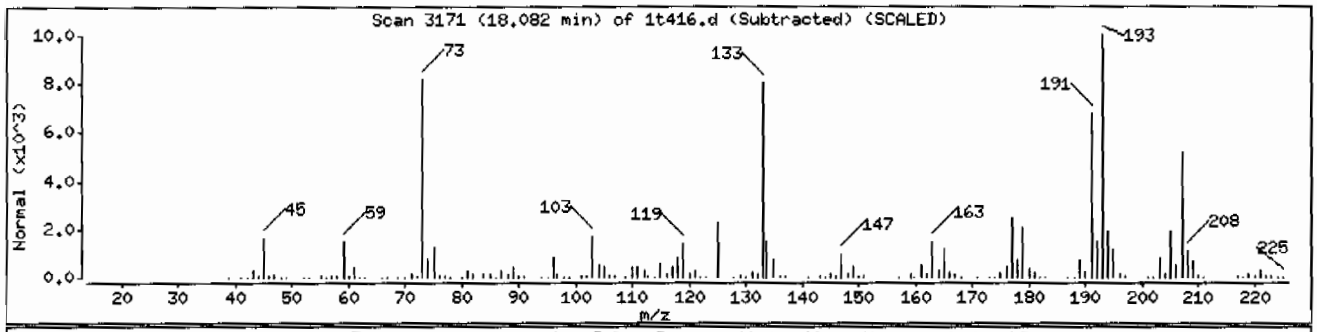

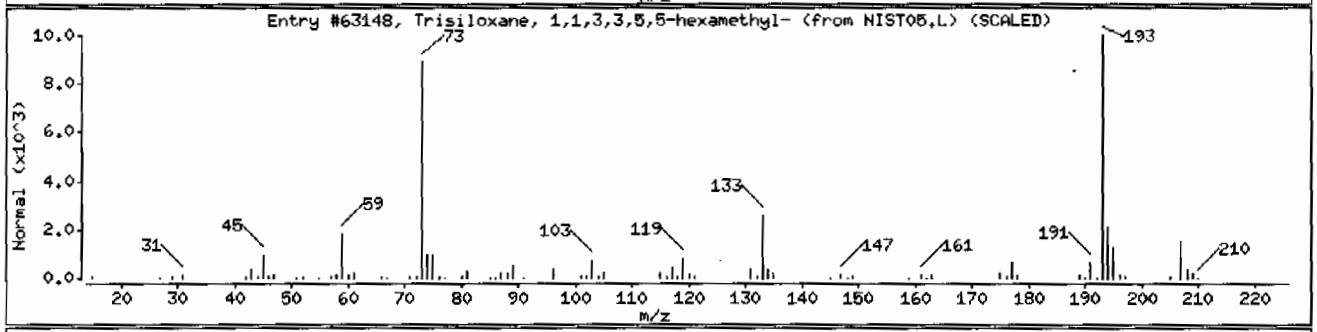

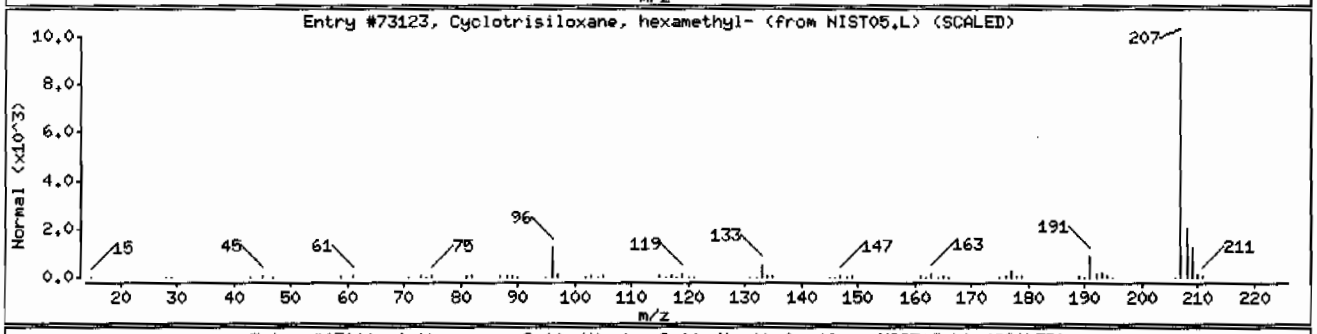

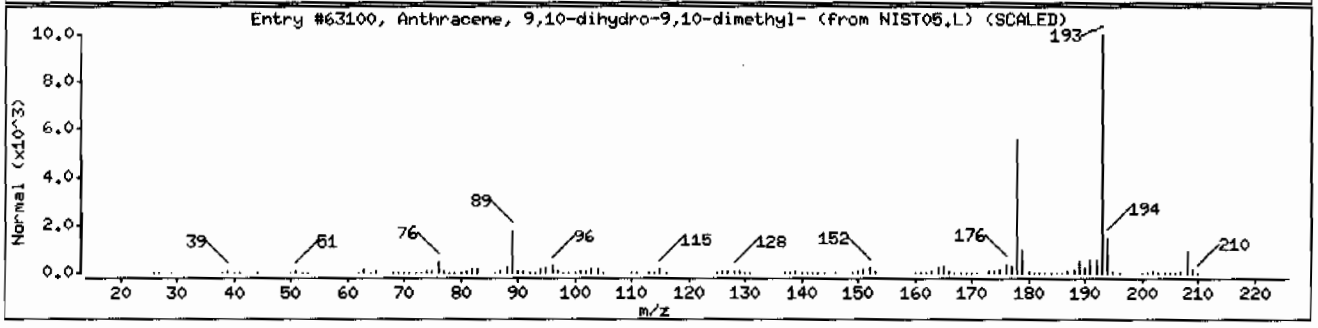

Data File: /chem/VOA1.i/070909v1/1t416.d

Date : 09-JUL-2009 15:53

Client ID: CAMO-09-9952

Instrument: VOA1.i

Sample Info: |2327410041883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Hydrocarbon						
1,3-Cyclopentadiene, 5,5-dimethyl-1-(tri	1000163-65-0	NIST05.L	43043	23	C11H20Si	180

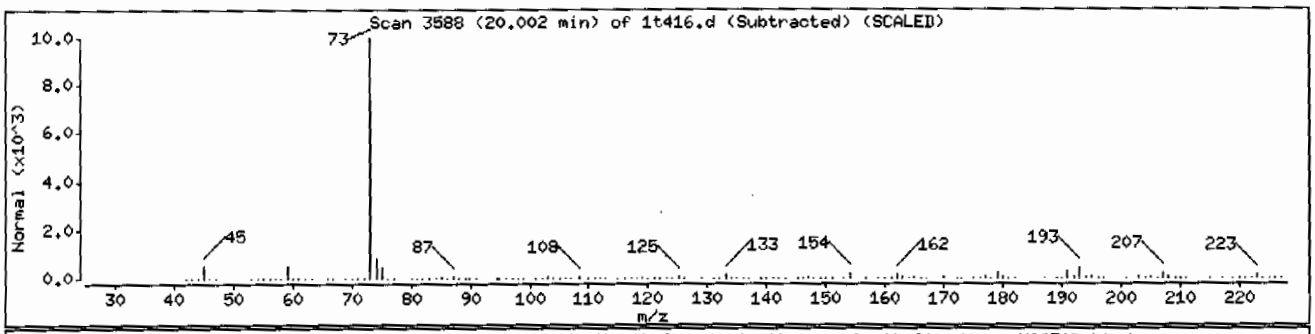

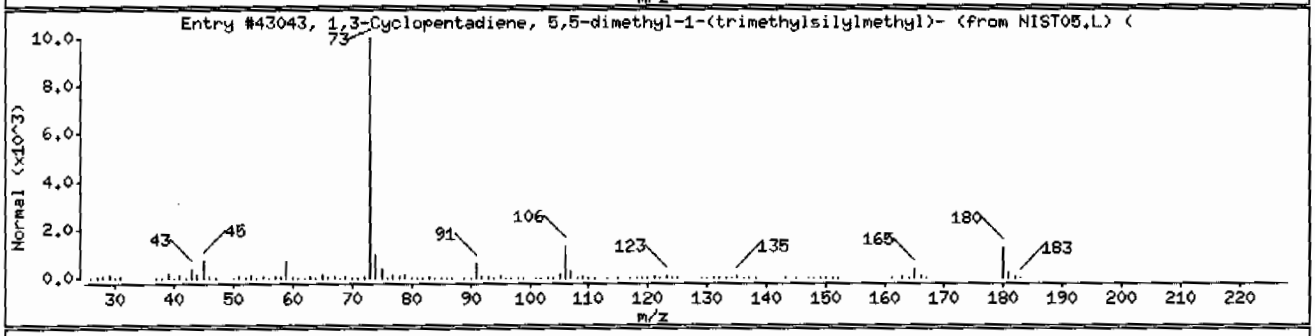

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9956	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 14:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:17	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t414.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.16	ug/kg	0.396	1.16
74-87-3	Chloromethane	U	1.16	ug/kg	0.349	1.16
75-01-4	Vinyl chloride	U	1.16	ug/kg	0.349	1.16
74-83-9	Bromomethane	U	1.16	ug/kg	0.349	1.16
75-00-3	Chloroethane	U	1.16	ug/kg	0.349	1.16
75-69-4	Trichlorofluoromethane	U	1.16	ug/kg	0.663	1.16
67-64-1	Acetone	U	5.82	ug/kg	1.93	5.82
75-35-4	1,1-Dichloroethylene	U	1.16	ug/kg	0.349	1.16
74-88-4	Iodomethane	U	5.82	ug/kg	1.86	5.82
75-09-2	Methylene chloride	U	5.82	ug/kg	2.33	5.82
75-15-0	Carbon disulfide	U	5.82	ug/kg	1.45	5.82
156-60-5	trans-1,2-Dichloroethylene	U	1.16	ug/kg	0.349	1.16
75-34-3	1,1-Dichloroethane	U	1.16	ug/kg	0.349	1.16
78-93-3	2-Butanone	U	5.82	ug/kg	1.75	5.82
156-59-2	cis-1,2-Dichloroethylene	U	1.16	ug/kg	0.349	1.16
594-20-7	2,2-Dichloropropane	U	1.16	ug/kg	0.349	1.16
67-66-3	Chloroform	U	1.16	ug/kg	0.349	1.16
74-97-5	Bromochloromethane	U	1.16	ug/kg	0.384	1.16
71-55-6	1,1,1-Trichloroethane	U	1.16	ug/kg	0.349	1.16
563-58-6	1,1-Dichloropropene	U	1.16	ug/kg	0.349	1.16
56-23-5	Carbon tetrachloride	U	1.16	ug/kg	0.349	1.16
107-06-2	1,2-Dichloroethane	U	1.16	ug/kg	0.349	1.16
71-43-2	Benzene	U	1.16	ug/kg	0.349	1.16
79-01-6	Trichloroethylene	U	1.16	ug/kg	0.384	1.16
78-87-5	1,2-Dichloropropane	U	1.16	ug/kg	0.349	1.16
75-27-4	Bromodichloromethane	U	1.16	ug/kg	0.349	1.16
74-95-3	Dibromomethane	U	1.16	ug/kg	0.349	1.16
108-10-1	4-Methyl-2-pentanone	U	5.82	ug/kg	1.45	5.82
10061-01-5	cis-1,3-Dichloropropylene	U	1.16	ug/kg	0.349	1.16
108-88-3	Toluene	J	0.434	ug/kg	0.349	1.16
10061-02-6	trans-1,3-Dichloropropylene	U	1.16	ug/kg	0.349	1.16
79-00-5	1,1,2-Trichloroethane	U	1.16	ug/kg	0.349	1.16
591-78-6	2-Hexanone	U	5.82	ug/kg	1.75	5.82
142-28-9	1,3-Dichloropropane	U	1.16	ug/kg	0.349	1.16
127-18-4	Tetrachloroethylene	U	1.16	ug/kg	0.349	1.16
124-48-1	Dibromochloromethane	U	1.16	ug/kg	0.349	1.16
106-93-4	1,2-Dibromoethane	U	1.16	ug/kg	0.349	1.16
108-90-7	Chlorobenzene	U	1.16	ug/kg	0.349	1.16

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9956	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 14:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:17	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t414.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.16	ug/kg	0.349	1.16
179601-23-1	m,p-Xylenes	U	2.33	ug/kg	0.349	2.33
95-47-6	o-Xylene	U	1.16	ug/kg	0.349	1.16
100-42-5	Styrene	U	1.16	ug/kg	0.349	1.16
75-25-2	Bromoform	U	1.16	ug/kg	0.349	1.16
79-34-5	1,1,2,2-Tetrachloroethane	U	1.16	ug/kg	0.349	1.16
96-18-4	1,2,3-Trichloropropane	U	1.16	ug/kg	0.349	1.16
108-86-1	Bromobenzene	U	1.16	ug/kg	0.349	1.16
103-65-1	n-Propylbenzene	U	1.16	ug/kg	0.349	1.16
95-49-8	2-Chlorotoluene	U	1.16	ug/kg	0.349	1.16
98-82-8	Isopropylbenzene	U	1.16	ug/kg	0.349	1.16
108-67-8	1,3,5-Trimethylbenzene	U	1.16	ug/kg	0.349	1.16
106-43-4	4-Chlorotoluene	U	1.16	ug/kg	0.349	1.16
98-06-6	tert-Butylbenzene	U	1.16	ug/kg	0.349	1.16
95-63-6	1,2,4-Trimethylbenzene	U	1.16	ug/kg	0.349	1.16
135-98-8	sec-Butylbenzene	U	1.16	ug/kg	0.349	1.16
99-87-6	4-Isopropyltoluene	U	1.16	ug/kg	0.349	1.16
541-73-1	1,3-Dichlorobenzene	U	1.16	ug/kg	0.349	1.16
106-46-7	1,4-Dichlorobenzene	U	1.16	ug/kg	0.349	1.16
104-51-8	n-Butylbenzene	U	1.16	ug/kg	0.349	1.16
96-12-8	1,2-Dibromo-3-chloropropane	U	1.16	ug/kg	0.349	1.16
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.82	ug/kg	1.86	5.82
630-20-6	1,1,1,2-Tetrachloroethane	U	1.16	ug/kg	0.349	1.16
95-50-1	1,2-Dichlorobenzene	U	1.16	ug/kg	0.349	1.16

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t414.d
Lab Smp Id: 232741002 Client Smp ID: CAMO-09-9956
Inj Date : 09-JUL-2009 14:51
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741002|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	14.06760	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	995581	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	827508	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	412983	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.350	13.341	(0.975)	473682	55.9354	65.1
$ 65 Toluene-d8	98	15.528	15.523	(0.904)	1460463	50.6967	59.0
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	563624	52.9895	61.7
66 Toluene	92	15.606	15.601	(0.909)	6498	0.37316	0.43(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 1t414.d
Report Date: 07/10/2009 07:16
Lab. ID: 232741002 SampleType: SAMPLE
Injection Date: 09-JUL-2009 14:51
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232741002|883695|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
51 1,2-Dichloroethane			CAS#: 107-06-2			
62	15585	13.69	13.44	80-120	100	(T)
64	2679	13.70	13.44	2- 62	17	(T)
54 Trichloroethylene			CAS#: 79-01-6			
95	84848	13.69	14.11	80-120	100	(T)
97	65579	13.69	14.11	35- 95	77	(T)
130	196	14.12	14.11	63-123	0	(Q)
64 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	13986	15.53	15.37	80-120	100	(T)
43	7805	15.53	15.37	216-276	56	(QT)
100	968080	15.53	15.37	0- 60	6921	(QT)
66 Toluene			CAS#: 108-88-3			
92	6498	15.61	15.60	80-120	100	( )
91	10369	15.61	15.60	137-197	160	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t414.d
Lab Smp Id: 232741002 Client Smp ID: CAMO-09-9956
Inj Date : 09-JUL-2009 14:51
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741002|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/070909v1/1t414.d
Date : 09-JUL-2009 14:51
Client ID: CAMO-09-9956
Sample Info: |2327410021883695|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

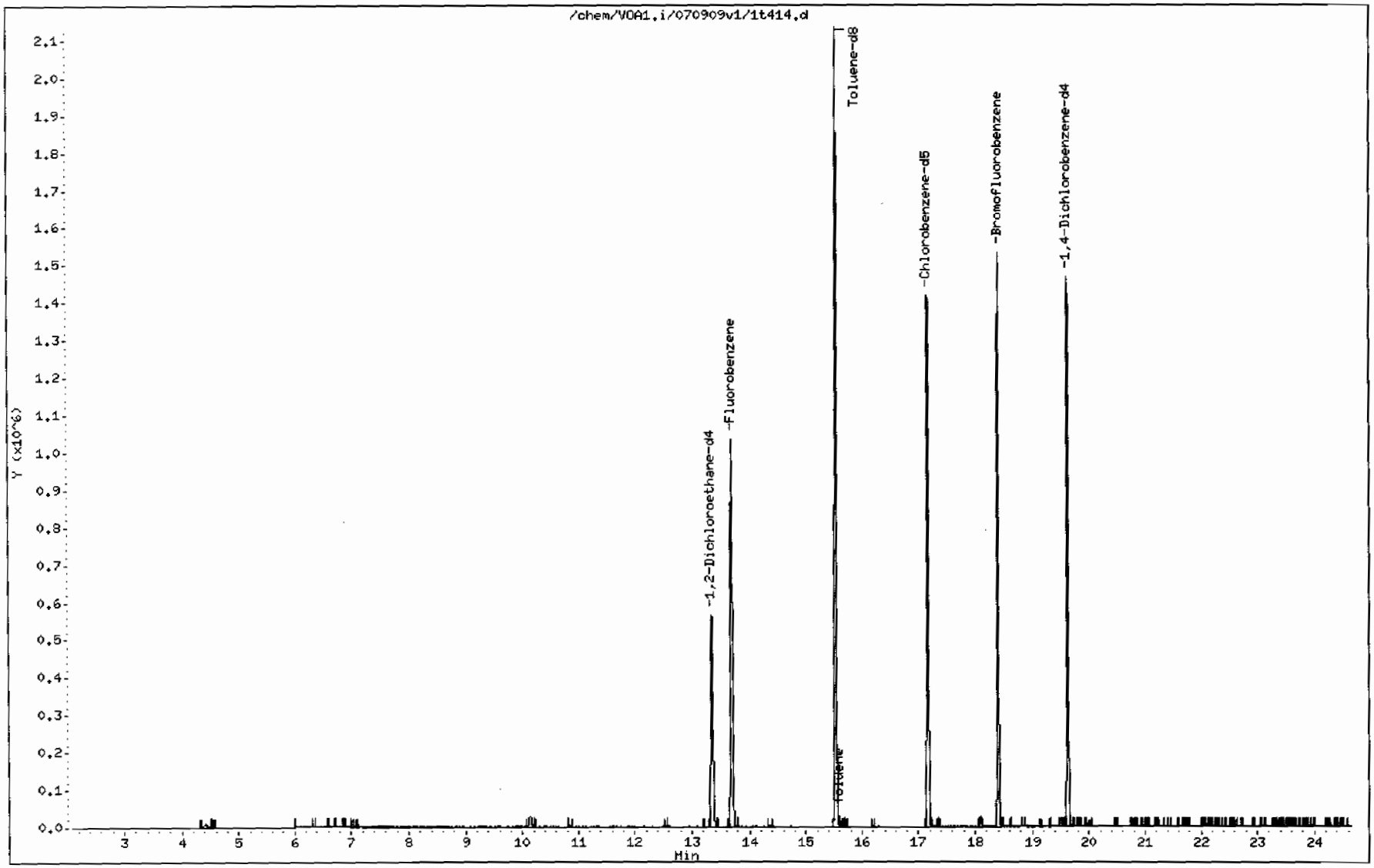

Data File: /chem/VOA1.i/070909v1/1t414.d

Date : 09-JUL-2009 14:51

Client ID: CAMO-09-9956

Instrument: VOA1.i

Sample Info: |2327410021883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

66 Toluene

Concentration: 0.43 ug/Kg

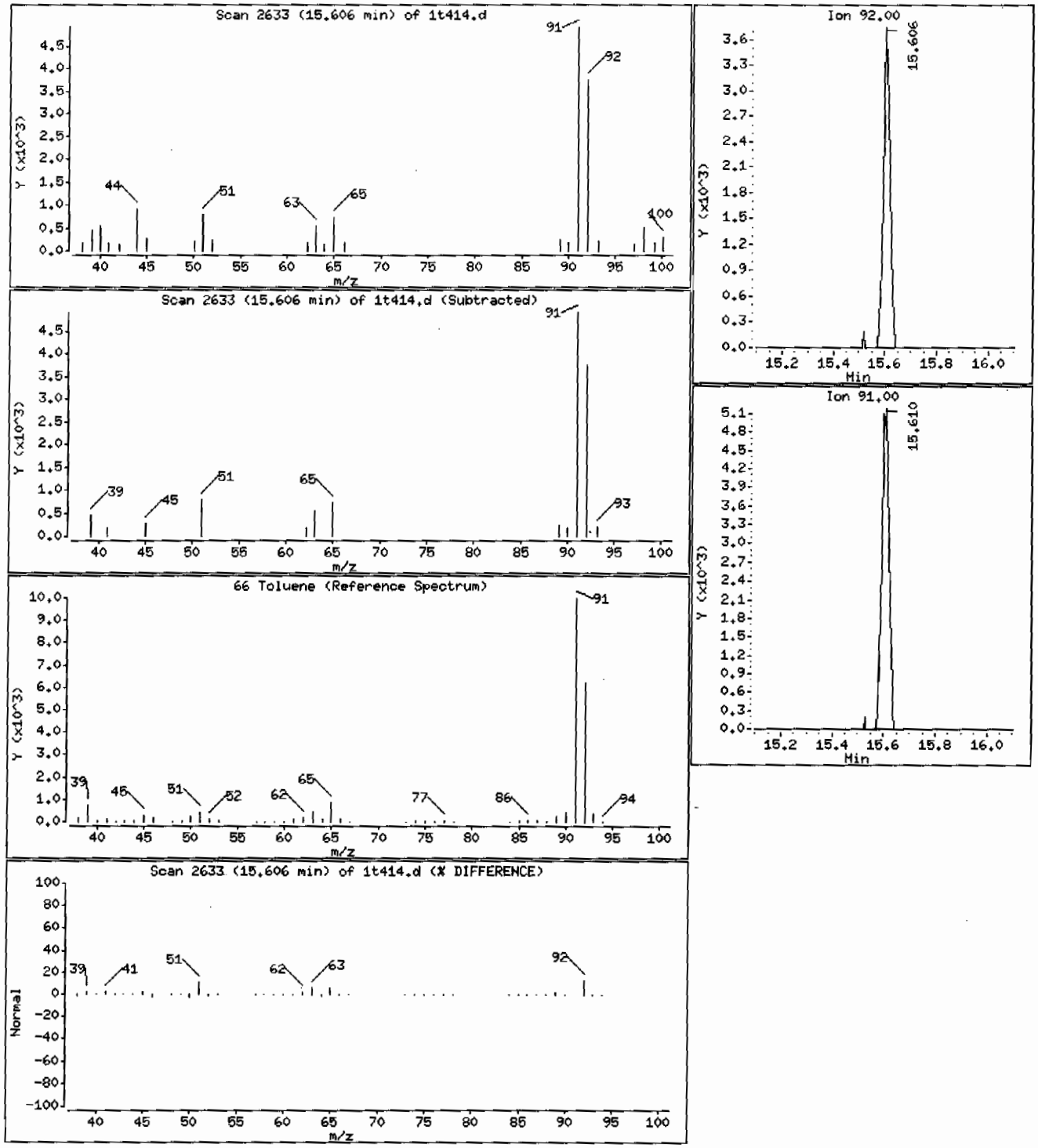

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741006	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9957	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:54	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t418.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.378	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.334	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.334	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.334	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.334	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.634	1.11
67-64-1	Acetone	U	5.56	ug/kg	1.85	5.56
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
74-88-4	Iodomethane	U	5.56	ug/kg	1.78	5.56
75-09-2	Methylene chloride	U	5.56	ug/kg	2.23	5.56
75-15-0	Carbon disulfide	U	5.56	ug/kg	1.39	5.56
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.334	1.11
78-93-3	2-Butanone	U	5.56	ug/kg	1.67	5.56
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.334	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.367	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.334	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.334	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.334	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.334	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.334	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.367	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.334	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.334	1.11
108-10-1	4-Methyl-2-pentanone	U	5.56	ug/kg	1.39	5.56
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.334	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.334	1.11
591-78-6	2-Hexanone	U	5.56	ug/kg	1.67	5.56
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.334	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.334	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.334	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.334	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.334	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741006	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9957	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:54	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:21	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t418.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.334	1.11
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.334	2.23
95-47-6	o-Xylene	U	1.11	ug/kg	0.334	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.334	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.334	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.334	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.334	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.334	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.334	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.334	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.334	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.334	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.334	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.334	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.56	ug/kg	1.78	5.56
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	13.7	ug/kg		J
	Unknown Hydrocarbon	20	16.6	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t418.d
Lab Smp Id: 232741006 Client Smp ID: CAMO-09-9957
Inj Date : 09-JUL-2009 16:54
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741006|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.12230	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	881260	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	765192	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	412422	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	425015	56.6992	63.1
$ 65 Toluene-d8	98	15.528	15.523	(0.904)	1300270	48.8117	54.3
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	528090	49.7163	55.3

ION RATIO REPORT

VOA REPORT

Data file: 1t418.d
Report Date: 07/10/2009 07:19
Lab. ID: 232741006 SampleType: SAMPLE
Injection Date: 09-JUL-2009 16:54
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232741006|883695|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
51 1,2-Dichloroethane				CAS#: 107-06-2		
62	14167	13.69	13.44	80-120	100	(T)
64	2402	13.69	13.44	2- 62	17	(T)
64 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	12765	15.52	15.37	80-120	100	(T)
43	6922	15.52	15.37	216-276	54	(QT)
100	860332	15.53	15.37	0- 60	6739	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t418.d
Lab Smp Id: 232741006 Client Smp ID: CAMO-09-9957
Inj Date : 09-JUL-2009 16:54
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741006|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.12230	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.171	2418582	50.000
* 102 1,4-Dichlorobenzene-d4	19.620	2578328	50.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
18.087	597550	12.3532985	13.7	0		0	76

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	========	==========	======
Unknown Hydrocarbon				CAS #:			
20.002	771180	14.9550441	16.6	0		0	102

Data File: /chem/VOA1.i/070909v1/1t418.d
Date : 09-JUL-2009 16:54
Client ID: CAMO-09-9957
Sample Info: |2327410061883695|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

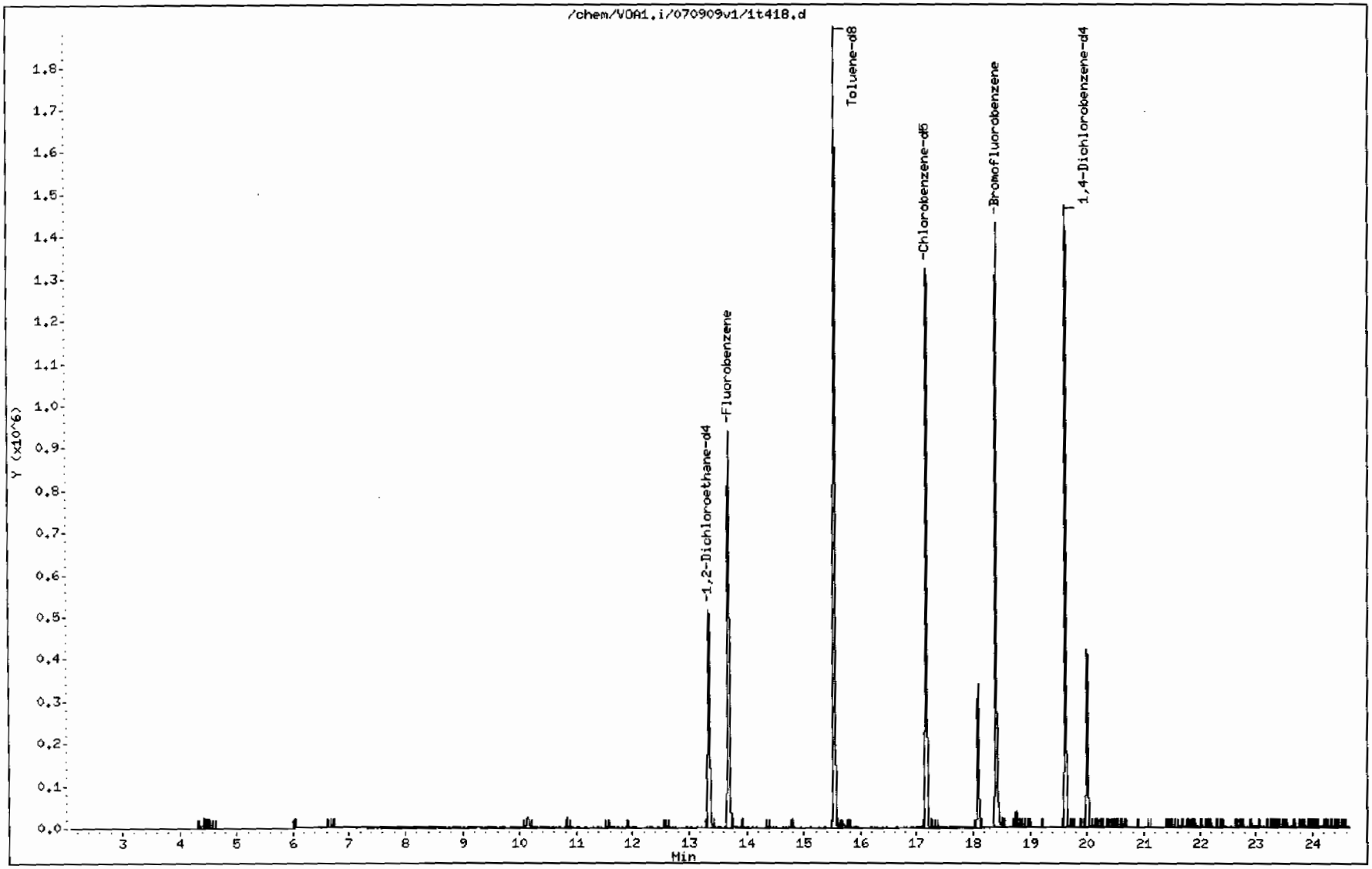

Data File: /chem/VOA1.i/070909v1/1t418.d

Date : 09-JUL-2009 16:54

Client ID: CAMO-09-9957

Instrument: VOA1.i

Sample Info: |2327410061883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Anthracene, 9,10-dihydro-9,10-dimethyl-	22566-43-4	NIST05.L	63100	25	C16H16	208
2-Phenylindolizine	25379-20-8	NIST05.L	52067	18	C14H11N	193
Benzaldehyde, p-nitro-, dimethylhydrazon	10424-92-7	NIST05.L	52176	14	C9H11N3O2	193

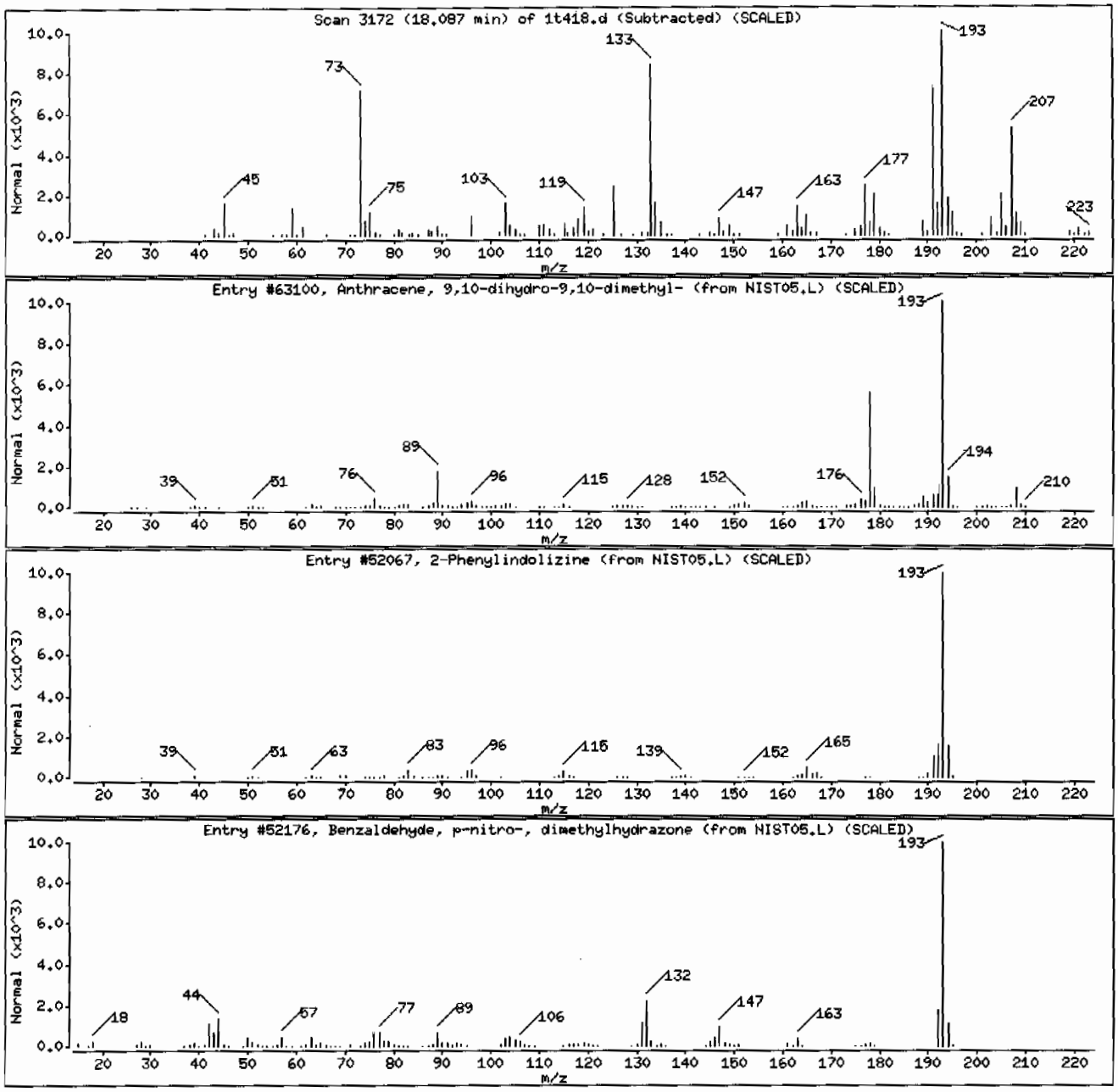

Data File: /chem/VOA1.i/070909v1/1t418.d

Date : 09-JUL-2009 16:54

Client ID: CAHO-09-9957

Instrument: VOA1.i

Sample Info: |2327410061883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Hydrocarbon						
Unknown			0	0		0

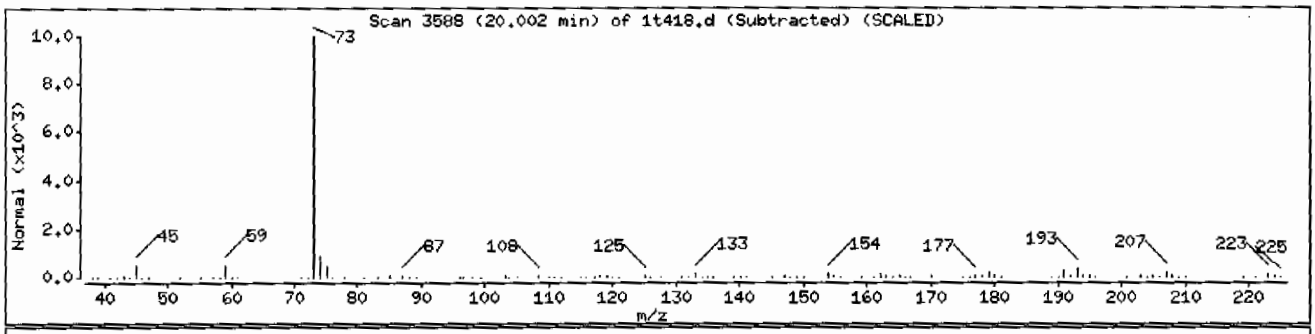

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741005	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9958	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:20	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t417.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.379	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.334	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.334	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.334	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.334	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.635	1.11
67-64-1	Acetone	U	5.57	ug/kg	1.85	5.57
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
74-88-4	Iodomethane	U	5.57	ug/kg	1.78	5.57
75-09-2	Methylene chloride	U	5.57	ug/kg	2.23	5.57
75-15-0	Carbon disulfide	U	5.57	ug/kg	1.39	5.57
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.334	1.11
78-93-3	2-Butanone	U	5.57	ug/kg	1.67	5.57
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.334	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.334	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.368	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.334	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.334	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.334	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.334	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.334	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.368	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.334	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.334	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.334	1.11
108-10-1	4-Methyl-2-pentanone	U	5.57	ug/kg	1.39	5.57
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.334	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.334	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.334	1.11
591-78-6	2-Hexanone	U	5.57	ug/kg	1.67	5.57
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.334	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.334	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.334	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.334	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.334	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741005	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9958	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 16:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:20	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t417.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.334	1.11
179601-23-1	m,p-Xylenes	U	2.23	ug/kg	0.334	2.23
95-47-6	o-Xylene	U	1.11	ug/kg	0.334	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.334	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.334	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.334	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.334	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.334	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.334	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.334	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.334	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.334	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.334	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.334	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.334	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.334	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.57	ug/kg	1.78	5.57
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.334	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.334	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	13.1	ug/kg		J
	Unknown Hydrocarbon	20.01	7.73	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t417.d
Lab Smp Id: 232741005 Client Smp ID: CAMO-09-9958
Inj Date : 09-JUL-2009 16:24
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741005|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.27420	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	973388	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	829990	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	435828	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	482835	58.3162	65.0
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1473552	50.9981	56.8
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	594564	52.9683	59.0

ION RATIO REPORT

VOA REPORT

Data file: 1t417.d
Report Date: 07/10/2009 07:19
Lab. ID: 232741005 SampleType: SAMPLE
Injection Date: 09-JUL-2009 16:24
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232741005|883695|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
51 1,2-Dichloroethane				CAS#: 107-06-2		
62	15679	13.70	13.44	80-120	100	(T)
64	2544	13.70	13.44	2- 62	16	(T)
64 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	13957	15.53	15.37	80-120	100	(T)
43	7350	15.52	15.37	216-276	53	(QT)
100	972394	15.53	15.37	0- 60	6967	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t417.d
Lab Smp Id: 232741005 Client Smp ID: CAMO-09-9958
Inj Date : 09-JUL-2009 16:24
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741005|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.27420	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.166	2607495	50.000
* 102 1,4-Dichlorobenzene-d4	19.620	2725062	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
18.087	615289	11.7984709	13.1	0		0	76

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LTB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown Hydrocarbon					CAS #:		
20.006	378219	6.93964401	7.7	0		0	102

Data File: /chem/VOA1.i/070909v1/1t417.d
Date : 09-JUL-2009 16:24
Client ID: CAMO-09-9958
Sample Info: |2327410051883695|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

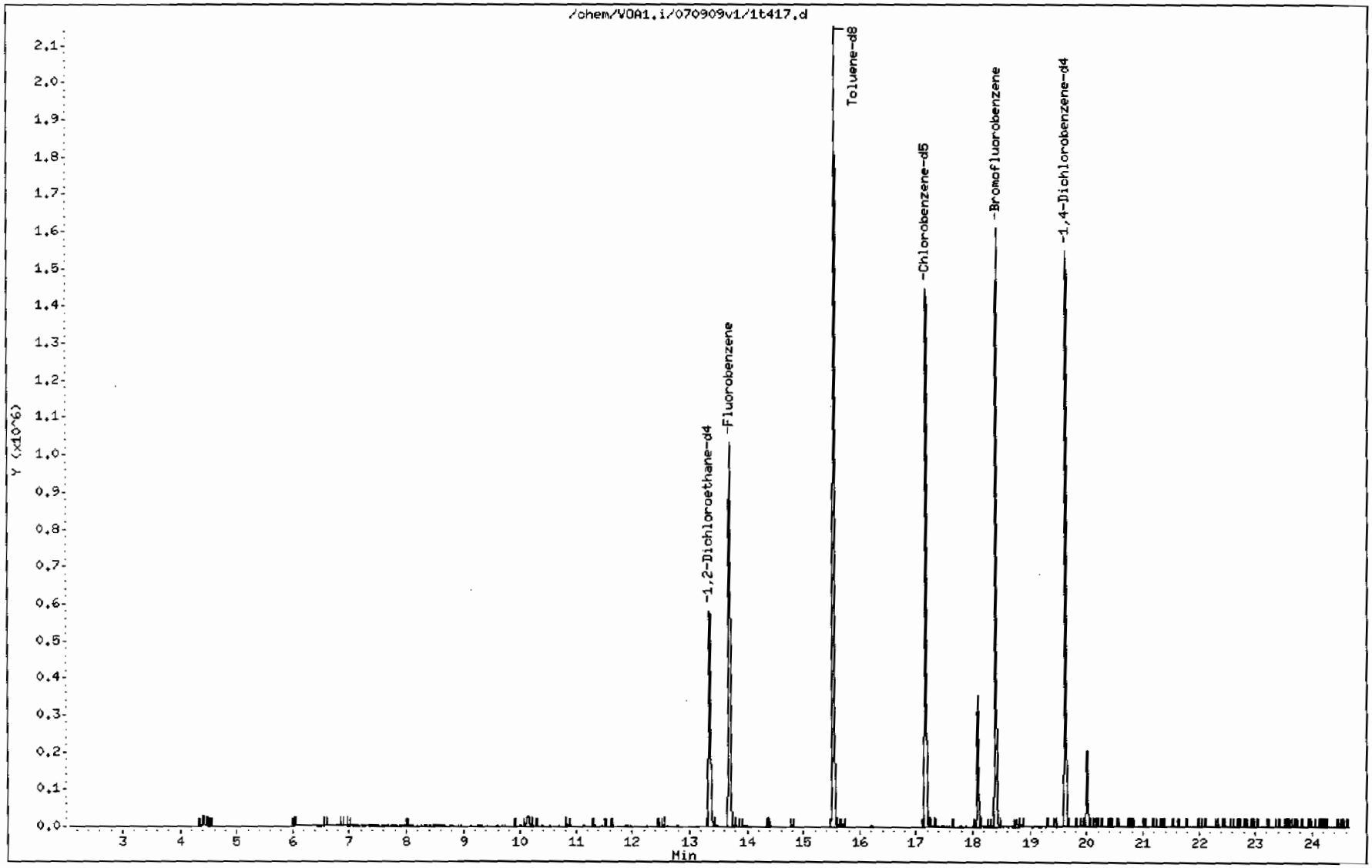

Data File: /chem/VOA1.i/070909v1/1t417.d

Date : 09-JUL-2009 16:24

Client ID: CAMO-09-9958

Instrument: VOA1.i

Sample Info: |2327410051883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
6-Methylphenanthridine	3955-65-5	NIST05.L	52077	25	C14H11N	193
Anthracene, 9,10-dihydro-9,10-dimethyl-	22566-43-4	NIST05.L	63100	25	C16H16	208
Trisiloxane, 1,1,3,3,5,5-hexamethyl-	1189-93-1	NIST05.L	63149	22	C6H20O2Si3	208

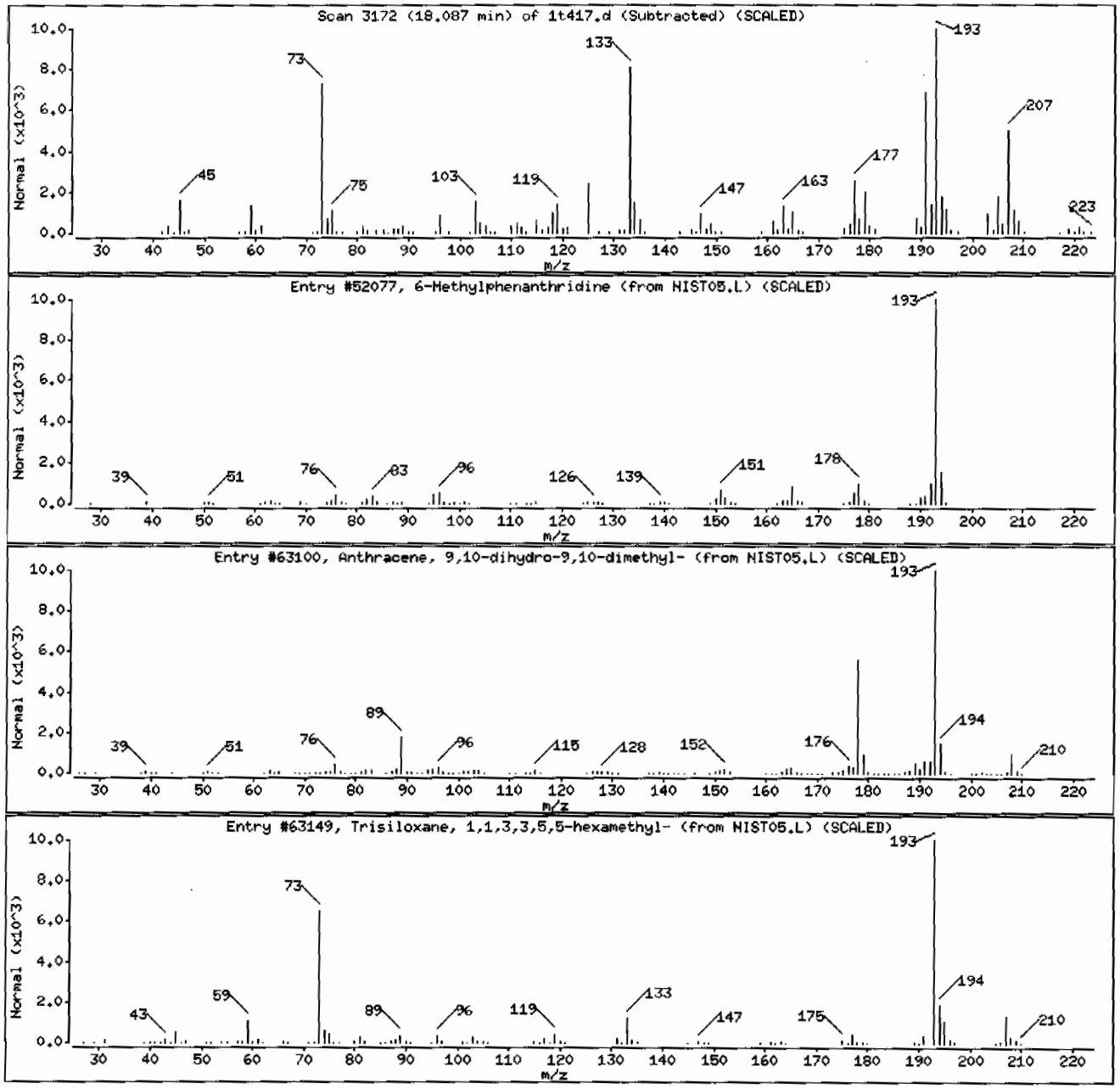

Data File: /chem/VOA1.i/070909v1/1t417.d

Date : 09-JUL-2009 16:24

Client ID: CAMO-09-9958

Instrument: VOA1.i

Sample Info: |2327410051883695|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Hydrocarbon						
Unknown			0	0		0

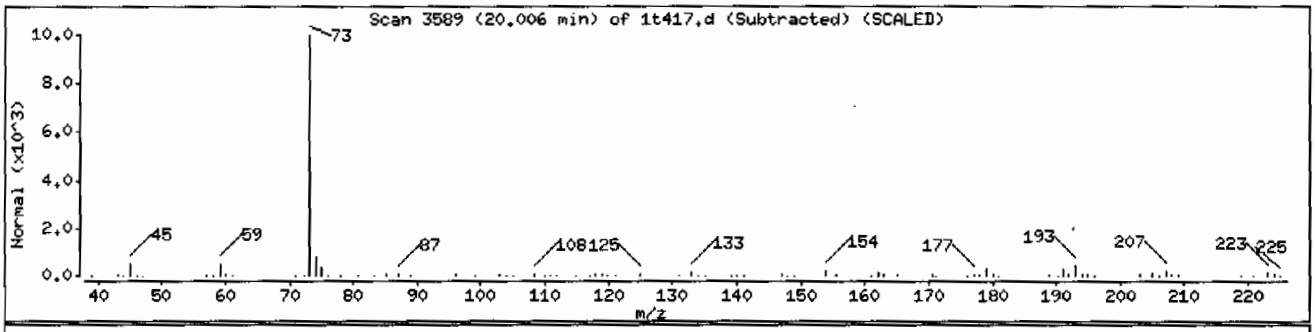

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 18:25	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:24	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t421.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.24	ug/kg	0.423	1.24
74-87-3	Chloromethane	U	1.24	ug/kg	0.373	1.24
75-01-4	Vinyl chloride	U	1.24	ug/kg	0.373	1.24
74-83-9	Bromomethane	U	1.24	ug/kg	0.373	1.24
75-00-3	Chloroethane	U	1.24	ug/kg	0.373	1.24
75-69-4	Trichlorofluoromethane	U	1.24	ug/kg	0.709	1.24
67-64-1	Acetone	U	6.22	ug/kg	2.07	6.22
75-35-4	1,1-Dichloroethylene	U	1.24	ug/kg	0.373	1.24
74-88-4	Iodomethane	U	6.22	ug/kg	1.99	6.22
75-09-2	Methylene chloride	U	6.22	ug/kg	2.49	6.22
75-15-0	Carbon disulfide	U	6.22	ug/kg	1.56	6.22
156-60-5	trans-1,2-Dichloroethylene	U	1.24	ug/kg	0.373	1.24
75-34-3	1,1-Dichloroethane	U	1.24	ug/kg	0.373	1.24
78-93-3	2-Butanone	U	6.22	ug/kg	1.87	6.22
156-59-2	cis-1,2-Dichloroethylene	U	1.24	ug/kg	0.373	1.24
594-20-7	2,2-Dichloropropane	U	1.24	ug/kg	0.373	1.24
67-66-3	Chloroform	U	1.24	ug/kg	0.373	1.24
74-97-5	Bromochloromethane	U	1.24	ug/kg	0.411	1.24
71-55-6	1,1,1-Trichloroethane	U	1.24	ug/kg	0.373	1.24
563-58-6	1,1-Dichloropropene	U	1.24	ug/kg	0.373	1.24
56-23-5	Carbon tetrachloride	U	1.24	ug/kg	0.373	1.24
107-06-2	1,2-Dichloroethane	U	1.24	ug/kg	0.373	1.24
71-43-2	Benzene	U	1.24	ug/kg	0.373	1.24
79-01-6	Trichloroethylene	U	1.24	ug/kg	0.411	1.24
78-87-5	1,2-Dichloropropane	U	1.24	ug/kg	0.373	1.24
75-27-4	Bromodichloromethane	U	1.24	ug/kg	0.373	1.24
74-95-3	Dibromomethane	U	1.24	ug/kg	0.373	1.24
108-10-1	4-Methyl-2-pentanone	U	6.22	ug/kg	1.56	6.22
10061-01-5	cis-1,3-Dichloropropylene	U	1.24	ug/kg	0.373	1.24
108-88-3	Toluene	U	1.24	ug/kg	0.373	1.24
10061-02-6	trans-1,3-Dichloropropylene	U	1.24	ug/kg	0.373	1.24
79-00-5	1,1,2-Trichloroethane	U	1.24	ug/kg	0.373	1.24
591-78-6	2-Hexanone	U	6.22	ug/kg	1.87	6.22
142-28-9	1,3-Dichloropropane	U	1.24	ug/kg	0.373	1.24
127-18-4	Tetrachloroethylene	U	1.24	ug/kg	0.373	1.24
124-48-1	Dibromochloromethane	U	1.24	ug/kg	0.373	1.24
106-93-4	1,2-Dibromoethane	U	1.24	ug/kg	0.373	1.24
108-90-7	Chlorobenzene	U	1.24	ug/kg	0.373	1.24

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 18:25	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 12:24	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t421.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.24	ug/kg	0.373	1.24
179601-23-1	m,p-Xylenes	U	2.49	ug/kg	0.373	2.49
95-47-6	o-Xylene	U	1.24	ug/kg	0.373	1.24
100-42-5	Styrene	U	1.24	ug/kg	0.373	1.24
75-25-2	Bromoform	U	1.24	ug/kg	0.373	1.24
79-34-5	1,1,2,2-Tetrachloroethane	U	1.24	ug/kg	0.373	1.24
96-18-4	1,2,3-Trichloropropane	U	1.24	ug/kg	0.373	1.24
108-86-1	Bromobenzene	U	1.24	ug/kg	0.373	1.24
103-65-1	n-Propylbenzene	U	1.24	ug/kg	0.373	1.24
95-49-8	2-Chlorotoluene	U	1.24	ug/kg	0.373	1.24
98-82-8	Isopropylbenzene	U	1.24	ug/kg	0.373	1.24
108-67-8	1,3,5-Trimethylbenzene	U	1.24	ug/kg	0.373	1.24
106-43-4	4-Chlorotoluene	U	1.24	ug/kg	0.373	1.24
98-06-6	tert-Butylbenzene	U	1.24	ug/kg	0.373	1.24
95-63-6	1,2,4-Trimethylbenzene	U	1.24	ug/kg	0.373	1.24
135-98-8	sec-Butylbenzene	U	1.24	ug/kg	0.373	1.24
99-87-6	4-Isopropyltoluene	U	1.24	ug/kg	0.373	1.24
541-73-1	1,3-Dichlorobenzene	U	1.24	ug/kg	0.373	1.24
106-46-7	1,4-Dichlorobenzene	U	1.24	ug/kg	0.373	1.24
104-51-8	n-Butylbenzene	U	1.24	ug/kg	0.373	1.24
96-12-8	1,2-Dibromo-3-chloropropane	U	1.24	ug/kg	0.373	1.24
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.22	ug/kg	1.99	6.22
630-20-6	1,1,1,2-Tetrachloroethane	U	1.24	ug/kg	0.373	1.24
95-50-1	1,2-Dichlorobenzene	U	1.24	ug/kg	0.373	1.24

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t421.d
Lab Smp Id: 232741009 Client Smp ID: CAMO-09-9990
Inj Date : 09-JUL-2009 18:25
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741009|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	19.63320	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	888642	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	735713	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	343344	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	432542	57.2240	71.2
$ 65 Toluene-d8	98	15.527	15.523	(0.904)	1336477	52.1812	64.9
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	479435	54.2167	67.5

ION RATIO REPORT

VOA REPORT

Data file: 1t421.d
Report Date: 07/10/2009 07:21
Lab. ID: 232741009 SampleType: SAMPLE
Injection Date: 09-JUL-2009 18:25
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232741009|883695|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
51 1,2-Dichloroethane				CAS#: 107-06-2		
62	13632	13.69	13.44	80-120	100	(T)
64	2431	13.69	13.44	2- 62	18	(T)
54 Trichloroethylene				CAS#: 79-01-6		
95	78064	13.69	14.11	80-120	100	(T)
97	57291	13.69	14.11	35- 95	73	(T)
130	854	14.12	14.11	63-123	1	(Q)
64 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	13016	15.52	15.37	80-120	100	(T)
43	7048	15.52	15.37	216-276	54	(QT)
100	886967	15.53	15.37	0- 60	6814	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t421.d
Lab Smp Id: 232741009 Client Smp ID: CAMO-09-9990
Inj Date : 09-JUL-2009 18:25
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232741009|883695|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/070909v1/1t421.d
Date : 09-JUL-2009 18:25
Client ID: CAMD-09-9990
Sample Info: |232741009|88369511|VOAF|1|

Instrument: VOA1.i

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

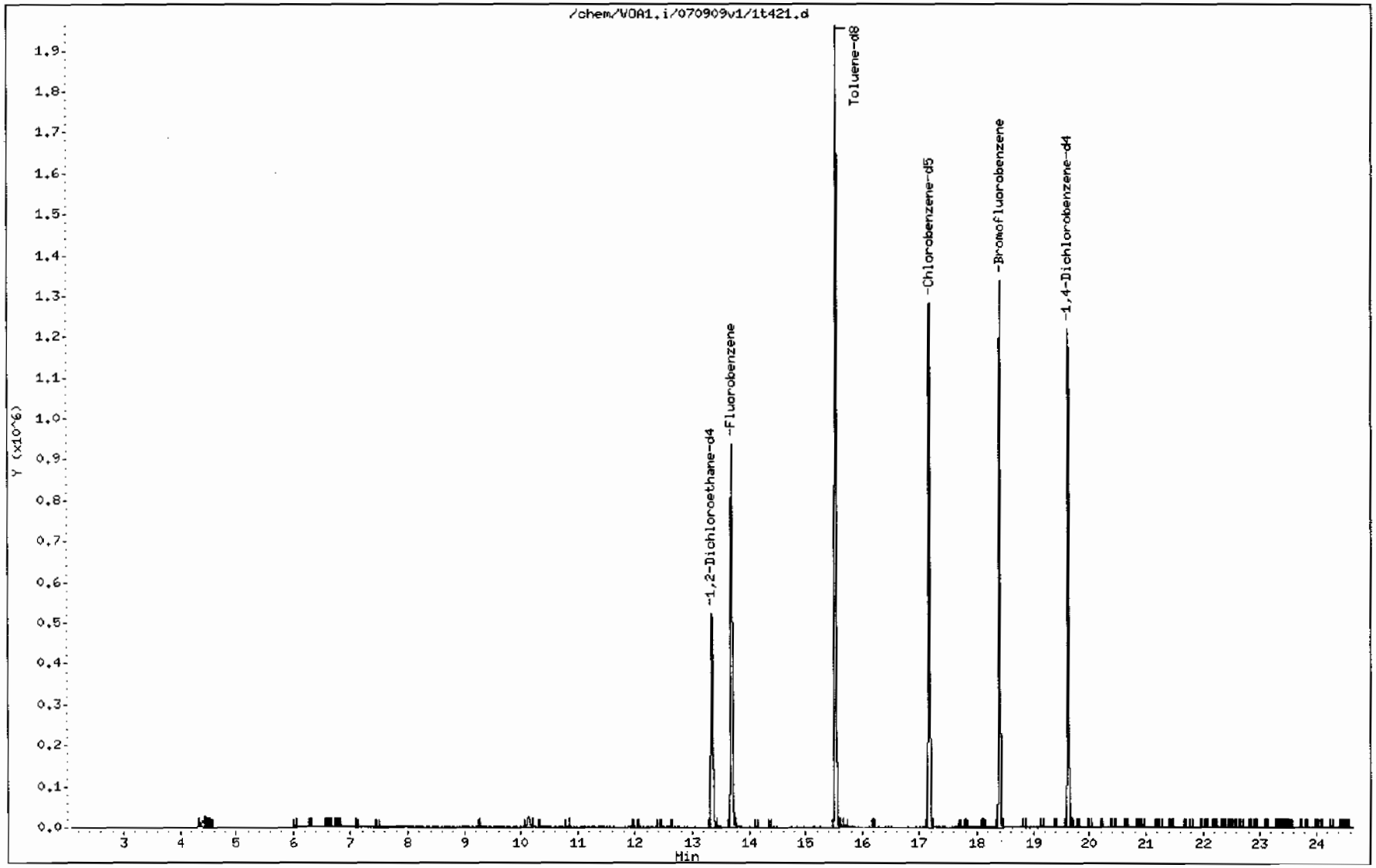

Standard Data

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Report Date: 09-Jul-2009 10:25

Calibration History

Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Start Cal Date: 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
01-JUL-2009 20:05	ICALsubS	/chem/VOA1.i/070109v1/1s320.d
01-JUL-2009 15:31	ICALsubL+	/chem/VOA1.i/070109v1/1s311.d
Cal Level: 2 , Cal Amount: 2.00000		
01-JUL-2009 20:36	ICALsubS	/chem/VOA1.i/070109v1/1s321.d
01-JUL-2009 16:32	ICALsubL+	/chem/VOA1.i/070109v1/1s313.d
Cal Level: 3 , Cal Amount: 5.00000		
01-JUL-2009 21:06	ICALsubS	/chem/VOA1.i/070109v1/1s322.d
01-JUL-2009 17:02	ICALsubL+	/chem/VOA1.i/070109v1/1s314.d
Cal Level: 4 , Cal Amount: 10.00000		
01-JUL-2009 21:36	ICALsubS	/chem/VOA1.i/070109v1/1s323.d
01-JUL-2009 17:32	ICALsubL+	/chem/VOA1.i/070109v1/1s315.d
Cal Level: 5 , Cal Amount: 20.00000		
01-JUL-2009 22:07	ICALsubS	/chem/VOA1.i/070109v1/1s324.d
01-JUL-2009 18:02	ICALsubL+	/chem/VOA1.i/070109v1/1s316.d
Cal Level: 6 , Cal Amount: 50.00000		
01-JUL-2009 22:38	ICALsubS	/chem/VOA1.i/070109v1/1s325.d
01-JUL-2009 18:33	ICALsubL+	/chem/VOA1.i/070109v1/1s317.d
Cal Level: 7 , Cal Amount: 100.00000		
01-JUL-2009 23:08	ICALsubS	/chem/VOA1.i/070109v1/1s326.d
01-JUL-2009 19:04	ICALsubL+	/chem/VOA1.i/070109v1/1s318.d
Cal Level: 8 , Cal Amount: 200.00000		
01-JUL-2009 15:01	BENZENE+	/chem/VOA1.i/070109v1/1s310.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

```
| Ccal Level: 6 , Ccal Amount: 50.0                                                |
+==================================================================================+
|09-JUL-2009 09:48 |CALsubS+SS        |/chem/VOA1.i/070909v1/1t404.d                |
+------------------+------------------+-----------------------------------------+
| Ccal Level: 6 , Ccal Amount: 50.0                                                |
+==================================================================================+
|09-JUL-2009 08:14 |CALsubL+          |/chem/VOA1.i/070909v1/1t402.d                |
+------------------+------------------+-----------------------------------------+
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GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Cal Date : 09-Jul-2009 10:23 ron01469

Calibration File Names:
Level 1: /chem/VOA1.i/070109v1/1s320.d
Level 2: /chem/VOA1.i/070109v1/1s321.d
Level 3: /chem/VOA1.i/070109v1/1s322.d
Level 4: /chem/VOA1.i/070109v1/1s323.d
Level 5: /chem/VOA1.i/070109v1/1s324.d
Level 6: /chem/VOA1.i/070109v1/1s325.d
Level 7: /chem/VOA1.i/070109v1/1s326.d
Level 8: /chem/VOA1.i/070109v1/1s310.d

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
M 1 Xylenes (total)	0.63742	0.69307	0.71573	0.71943	0.73946	0.68749					
	0.64982	+++++					AVRG		0.69178		5.39184
M 2 1,2-Dichloroethylene (total)	0.32788	0.33738	0.34683	0.33689	0.34479	0.32967					
	0.31727	+++++					AVRG		0.33439		3.07833
M 3 1,3-Dichloropropylene	0.55477	0.55186	0.59320	0.59302	0.62220	0.61476					
	0.61636	+++++					AVRG		0.59231		4.88471
4 Chlorotrifluoroethylene	+++++	0.15817	0.18048	0.16606	0.19195	0.22587					
	0.21863	+++++					AVRG		0.19019		14.46938
5 Dichlorodifluoromethane	0.20632	0.20427	0.22782	0.22758	0.24392	0.24683					
	0.24622	+++++					AVRG		0.22899		7.90587

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Cal Date : 09-Jul-2009 10:23 ron01469

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
6 Chloromethane	0.45944	0.44185	0.45669	0.43521	0.44598	0.44230					
	0.41328	+++++					AVRG		0.44211		3.46324
7 Vinyl chloride	0.40464	0.37453	0.36050	0.33937	0.32232	0.30711					
	0.29856	+++++					AVRG		0.34386		11.13694
8 2-Chloro-1,1,1-trifluoroethan	+++++	0.33951	0.33712	0.34484	0.34565	0.34536					
	0.33039	+++++					AVRG		0.34048		1.77924
9 Bromomethane	0.23528	0.23489	0.24562	0.23527	0.23982	0.23784					
	0.22252	+++++					AVRG		0.23589		2.96933
10 Chloroethane	0.25488	0.24919	0.27580	0.25358	0.25901	0.26045					
	0.25180	+++++					AVRG		0.25782		3.42847
11 Trichlorofluoromethane	0.29908	0.30975	0.33790	0.32430	0.33766	0.33952					
	0.33111	+++++					AVRG		0.32562		4.81819
12 Ethyl Ether	0.28323	0.26535	0.29293	0.27952	0.29122	0.30219					
	0.29467	+++++					AVRG		0.28702		4.22281
13 Acrolein	0.04645	0.04741	0.05129	0.05174	0.05387	0.05109					
	0.04441	+++++					AVRG		0.04947		6.87869
14 Trichlorotrifluoroethane	0.30167	0.30505	0.30545	0.28816	0.27868	0.25372					
	0.23745	+++++					AVRG		0.28145		9.51098

GEL Laboratories LLC

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Cal Date : 09-Jul-2009 10:23 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
15 1,1-Dichloroethylene	0.58633	0.59852	0.61194	0.60535	0.62516	0.57999					
	0.55744	+++++					AVRG		0.59496		3.77574
16 Acetone	0.27649	0.24089	0.23620	0.21911	0.20456	0.21940					
	0.20910	+++++					AVRG		0.22939		10.72331
17 Isopropyl Alcohol	+++++	0.01903	0.01848	0.01937	0.01689	0.02192					
	0.02133	+++++					AVRG		0.01950		9.53962
18 Iodomethane	0.47169	0.47936	0.50244	0.48655	0.49232	0.46886					
	0.43739	+++++					AVRG		0.47694		4.40006
19 Carbon disulfide	0.94241	0.98959	1.00350	0.97652	0.98129	0.91611					
	0.88668	+++++					AVRG		0.95658		4.48087
20 Allyl chloride	11825	25078	68054	154967	339827	930196					
	1941178	+++++					LINR	0.10458	0.14018		0.99985
21 Methyl acetate	0.30042	0.26814	0.26181	0.25233	0.25898	0.24408					
	0.22827	+++++					AVRG		0.25915		8.65589
22 Acetonitrile	0.04401	0.04236	0.04219	0.04208	0.03937	0.04098					
	0.03948	+++++					AVRG		0.04150		4.02704
23 Methylene chloride	+++++	45400	86731	102507	229407	486437					
	1000803	+++++					LINR	-0.08086	0.32678		0.99824

GEL Laboratories LLC

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Cal Date : 09-Jul-2009 10:23 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
24 tert-Butyl Alcohol	0.02763	0.03053	0.02951	0.03125	0.02699	0.03504					
	0.03341	+++++					AVRG		0.03062		9.52456
25 tert-Butyl methyl ether	0.80459	0.85216	0.80875	0.86628	0.87306	0.85045					
	0.84198	+++++					AVRG		0.84247		3.15261
26 trans-1,2-Dichloroethylene	0.31895	0.33623	0.33538	0.32788	0.33529	0.32120					
	0.31023	+++++					AVRG		0.32645		3.07043
27 Acrylonitrile	0.10755	0.10844	0.11306	0.11361	0.11675	0.11761					
	0.11246	+++++					AVRG		0.11278		3.35889
28 Isopropyl ether	+++++	1.07710	1.08781	1.16279	1.19797	1.25502					
	1.19456	+++++					AVRG		1.16254		5.92447
29 Vinyl acetate	0.41643	0.46281	0.53553	0.53867	0.48575	0.56484					
	0.52591	+++++					AVRG		0.50428		10.26480
30 1,1-Dichloroethane	0.65284	0.66928	0.68115	0.65627	0.65730	0.63135					
	0.59933	+++++					AVRG		0.64965		4.14793
31 2-Chloro-1,3-butadiene	0.38690	0.39861	0.44120	0.44446	0.47248	0.48524					
	0.47521	+++++					AVRG		0.44344		8.64196
32 Ethyl tert-butyl ether	+++++	0.92556	0.96820	1.02086	1.06883	1.12074					
	1.09267	+++++					AVRG		1.03281		7.30147

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
33 2,2-Dichloropropane	0.33247	0.34211	0.34943	0.33062	0.33228	0.33275					
	0.32222	+++++					AVRG		0.33455		2.61340
34 Ethyl acetate	0.38164	0.33676	0.30866	0.30424	0.30932	0.29939					
	0.28047	+++++					AVRG		0.31721		10.37983
35 2-Butanone	0.26815	0.25900	0.26099	0.25451	0.24319	0.26629					
	0.24429	+++++					AVRG		0.25663		3.85743
36 cis-1,2-Dichloroethylene	0.33682	0.33854	0.35827	0.34590	0.35430	0.33813					
	0.32432	+++++					AVRG		0.34232		3.36605
37 Propionitrile	0.04329	0.04599	0.04588	0.04568	0.04700	0.04674					
	0.04519	+++++					AVRG		0.04568		2.67174
38 Tetrahydrofuran	0.22029	0.22977	0.22377	0.22605	0.23556	0.23596					
	0.22266	+++++					AVRG		0.22772		2.73431
39 Bromochloromethane	0.15645	0.16431	0.16271	0.15768	0.16039	0.15335					
	0.14755	+++++					AVRG		0.15749		3.65976
40 Methacrylonitrile	0.21475	0.23375	0.23677	0.24017	0.24375	0.24120					
	0.22345	+++++					AVRG		0.23340		4.53488
41 Chloroform	0.60646	0.59906	0.60013	0.57961	0.59162	0.56875					
	0.54762	+++++					AVRG		0.58475		3.57452

GEL Laboratories LLC

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
42 Cyclohexane	0.57075	0.58050	0.61393	0.62030	0.65216	0.62351					
	0.60504	+++++					AVRG		0.60946		4.50126
43 1,1,1-Trichloroethane	0.37096	0.37376	0.39116	0.37314	0.38143	0.36685					
	0.35213	+++++					AVRG		0.37278		3.24628
44 Carbon tetrachloride	0.37013	0.40086	0.41182	0.38843	0.40660	0.38432					
	0.37196	+++++					AVRG		0.39059		4.20967
45 1,1-Dichloropropene	0.39691	0.41672	0.42535	0.41776	0.44198	0.42560					
	0.41493	+++++					AVRG		0.41989		3.25058
46 Isobutyl alcohol	0.00854	0.00893	0.00965	0.01013	0.00872	0.01120					
	0.01066	+++++					AVRG		0.00969		10.55116
47 Benzene	1.39449	1.46750	1.41356	1.35299	1.40086	1.31677					
	1.26683	1.51325					AVRG		1.39078		5.68698
49 Methyl tert-amyl ether	+++++	0.77402	0.79681	0.83942	0.87387	0.93349					
	0.91006	+++++					AVRG		0.85461		7.35148
50 Cyclohexene	0.41493	0.47837	0.47993	0.47186	0.50345	0.47582					
	0.46267	+++++					AVRG		0.46958		5.77312
51 1,2-Dichloroethane	0.49042	0.47001	0.49409	0.46993	0.47311	0.45474					
	0.43564	+++++					AVRG		0.46971		4.27552

GEL Laboratories LLC

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Cal Date : 09-Jul-2009 10:23 ron01469

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
53 n-Butyl alcohol	0.00764	0.00811	0.00875	0.00932	0.00776	0.01022					
	0.00990	0.00723					AVRG		0.00862		12.86198
54 Trichloroethylene	0.31564	0.33648	0.34197	0.33142	0.34778	0.32371					
	0.31947	+++++					AVRG		0.33093		3.60488
55 Methylcyclohexane	0.48351	0.51949	0.55612	0.54714	0.57893	0.55558					
	0.53835	+++++					AVRG		0.53987		5.70100
56 Methyl methacrylate	0.15877	0.16659	0.18170	0.19222	0.19896	0.20156					
	0.18963	+++++					AVRG		0.18420		8.79914
57 1,2-Dichloropropane	0.36236	0.37297	0.38103	0.36522	0.38019	0.36451					
	0.35578	+++++					AVRG		0.36887		2.56917
58 1,4-Dioxane	0.00239	0.00259	0.00278	0.00279	0.00295	0.00289					
	0.00289	+++++					AVRG		0.00275		7.25832
59 Dibromomethane	0.21417	0.19938	0.20546	0.19903	0.20141	0.19814					
	0.19045	+++++					AVRG		0.20115		3.62711
60 Bromodichloromethane	0.42624	0.42295	0.44563	0.43221	0.44757	0.43834					
	0.42585	+++++					AVRG		0.43411		2.28390
61 2-Chloroethylvinyl ether	0.14887	0.14797	0.17549	0.17681	0.19232	0.20036					
	0.18662	+++++					AVRG		0.17549		11.61553

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Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
62 2-Nitropropane	0.06048	0.06760	0.07470	0.08031	0.08763	0.09044					
	0.08889	+++++					AVRG		0.07858		14.64738
63 cis-1,3-Dichloropropylene	0.48756	0.48284	0.52873	0.52083	0.54741	0.54533					
	0.53277	+++++					AVRG		0.52078		4.99583
64 4-Methyl-2-pentanone	0.14782	0.15429	0.16272	0.16142	0.16519	0.16937					
	0.16545	+++++					AVRG		0.16089		4.60510
66 Toluene	1.13113	1.09224	1.08809	1.03710	1.06393	0.98601					
	0.96656	+++++					AVRG		1.05215		5.64994
67 Ethyl methacrylate	0.37984	0.39715	0.43645	0.46502	0.48032	0.47739					
	0.43267	+++++					AVRG		0.43841		8.90923
68 trans-1,3-Dichloropropylene	0.52796	0.51933	0.55262	0.55817	0.59005	0.58620					
	0.59001	+++++					AVRG		0.56062		5.26429
69 1,1,2-Trichloroethane	0.28530	0.29644	0.29642	0.29740	0.29230	0.28013					
	0.27689	+++++					AVRG		0.28927		2.92817
70 Tetrachloroethylene	0.32329	0.33887	0.30967	0.30777	0.30966	0.28616					
	0.27627	+++++					AVRG		0.30738		6.86655
71 2-Hexanone	0.36867	0.37735	0.41796	0.39231	0.40164	0.41658					
	0.39543	+++++					AVRG		0.39571		4.66544

GEL Laboratories LLC

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
72 1,3-Dichloropropane	0.62050	0.62012	0.62391	0.61130	0.61237	0.58505					
	0.57129	+++++					AVRG		0.60636		3.32717
73 Dibromochloromethane	0.33323	0.34691	0.35991	0.36270	0.37774	0.37051					
	0.36748	+++++					AVRG		0.35978		4.20841
74 1,2-Dibromoethane	0.32347	0.32547	0.32709	0.32483	0.33127	0.32168					
	0.31965	+++++					AVRG		0.32478		1.16321
75 1-Chlorohexane	+++++	0.30553	0.31129	0.33948	0.35041	0.36061					
	0.34080	+++++					AVRG		0.33469		6.51503
77 Chlorobenzene	1.07007	1.11894	1.10866	1.06375	1.06937	1.01055					
	0.95085	+++++					AVRG		1.05603		5.50719
78 Ethylbenzene	1.86980	1.94783	1.96801	1.94555	2.01579	1.85661					
	1.78345	+++++					AVRG		1.91243		4.14445
79 1,1,1,2-Tetrachloroethane	0.34282	0.36441	0.37391	0.36744	0.37328	0.35568					
	0.35107	+++++					AVRG		0.36123		3.25137
80 m,p-Xylenes	0.65605	0.71176	0.73123	0.72861	0.74849	0.68471					
	0.64142	+++++					AVRG		0.70032		5.79417
81 o-Xylene	0.60017	0.65571	0.68473	0.70109	0.72140	0.69303					
	0.66661	+++++					AVRG		0.67468		5.83391

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Integrator : HP RTE
Method file : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Cal Date : 09-Jul-2009 10:23 ron01469

Compound	1 Level 1 / 100 Level 7	2 Level 2 / 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
82 Styrene	1.03580	1.09802	1.20570	1.21427	1.28019	1.22726					
	1.18675	+++++					AVRG		1.17829		7.07070
83 Bromoform	0.39081	0.40179	0.40914	0.41890	0.43989	0.44680					
	0.44947	+++++					AVRG		0.42240		5.50563
84 Isopropylbenzene	2.94591	3.23534	3.34391	3.41143	3.62700	3.42641					
	3.32247	+++++					AVRG		3.33035		6.26108
85 cis-1,4-Dichloro-2-butene	0.23617	0.25186	0.27708	0.28678	0.29845	0.29689					
	0.27683	+++++					AVRG		0.27487		8.42676
86 Cyclohexanone	0.05523	0.05656	0.05762	0.05962	0.06115	0.06777					
	0.05607	+++++					AVRG		0.05915		7.31819
88 1,1,2,2-Tetrachloroethane	0.90072	0.87226	0.84547	0.83529	0.81511	0.81891					
	0.80723	+++++					AVRG		0.84214		4.02248
89 n-Propylbenzene	4.04987	4.28142	4.24485	4.25599	4.42302	4.19700					
	4.03168	+++++					AVRG		4.21198		3.23486
90 trans-1,4-Dichloro-2-butene	0.24090	0.25718	0.26682	0.26814	0.27962	0.27825					
	0.26249	+++++					AVRG		0.26477		4.99726
91 Bromobenzene	0.89018	0.87881	0.87665	0.85304	0.85181	0.80797					
	0.77454	+++++					AVRG		0.84757		4.95580

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Cal Date : 09-Jul-2009 10:23 ron01469

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
92 1,2,3-Trichloropropane	0.22747	0.22342	0.21233	0.20823	0.20225	0.19958					
	0.19405	+++++					AVRG		0.20962		5.89382
93 1,3,5-Trimethylbenzene	2.51031	2.72431	2.88255	2.92274	3.05427	2.93501					
	2.81037	+++++					AVRG		2.83423		6.21753
94 2-Chlorotoluene	2.78674	3.02174	2.99428	2.95239	3.02505	2.86110					
	2.74147	+++++					AVRG		2.91182		3.98006
95 4-Chlorotoluene	2.48531	2.62664	2.63816	2.62773	2.70483	2.60436					
	2.53638	+++++					AVRG		2.60334		2.76398
96 tert-Butylbenzene	2.06305	2.20843	2.31301	2.34602	2.46194	2.36335					
	2.27287	+++++					AVRG		2.28981		5.55461
97 1,2,4-Trimethylbenzene	2.59369	2.83735	3.06488	3.05432	3.15003	3.05593					
	2.93303	+++++					AVRG		2.95560		6.40510
98 Pentachloroethane	0.19347	0.17011	0.20735	0.19822	0.18406	0.18595					
	0.15090	+++++					AVRG		0.18429		10.21986
99 sec-Butylbenzene	3.47707	3.79894	3.92758	3.95919	4.13231	3.94113					
	3.76469	+++++					AVRG		3.85727		5.33974
100 4-Isopropyltoluene	2.44681	2.73492	2.85033	2.91831	3.06839	2.90522					
	2.83037	+++++					AVRG		2.82205		6.87926

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Cal Date : 09-Jul-2009 10:23 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
101 1,3-Dichlorobenzene	1.70464	1.68434	1.66071	1.64839	1.64732	1.55602					
	1.51174	+++++					AVRG		1.63045		4.30527
103 1,4-Dichlorobenzene	1.85318	1.78158	1.70716	1.64151	1.65701	1.58116					
	1.52422	+++++					AVRG		1.67797		6.75413
104 Benzyl chloride	1.20768	1.25335	1.34065	1.38827	1.44828	1.41999					
	1.26672	+++++					AVRG		1.33213		6.88050
105 n-Butylbenzene	2.68203	2.89691	3.06940	3.12080	3.30027	3.16184					
	3.05387	+++++					AVRG		3.04073		6.56078
106 1,2-Dichlorobenzene	1.57728	1.58898	1.56911	1.53679	1.56346	1.49121					
	1.46860	+++++					AVRG		1.54220		2.97644
107 bis(2-Chloroisopropyl)ether	0.32849	0.34538	0.37251	0.38535	0.42051	0.43022					
	0.40346	+++++					AVRG		0.38370		9.84055
108 1,2-Dibromo-3-chloropropane	0.13303	0.12798	0.13270	0.13246	0.13578	0.14510					
	0.15104	+++++					AVRG		0.13687		5.96947
109 1,2,4-Trichlorobenzene	1.06040	0.99119	1.01214	1.00264	1.01910	0.96691					
	0.96541	+++++					AVRG		1.00254		3.28080
110 Hexachlorobutadiene	0.60216	0.61753	0.61676	0.58430	0.60106	0.54635					
	0.53755	+++++					AVRG		0.58653		5.54598

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Cal Date : 09-Jul-2009 10:23 ron01469

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
111 Naphthalene	2.19216	2.05679	2.11133	2.16086	2.26430	2.22815					
	2.26133	+++++					AVRG		2.18213		3.57027
112 1,2,3-Trichlorobenzene	0.93774	0.87907	0.91495	0.89203	0.90422	0.83521					
	0.83174	+++++					AVRG		0.88500		4.48407
$ 48 1,2-Dichloroethane-d4	0.43165	0.42329	0.43625	0.43027	0.43244	0.41983					
	0.40336	+++++					AVRG		0.42530		2.63096
$ 65 Toluene-d8	1.73503	1.73326	1.78247	1.75638	1.75210	1.73005					
	1.69520	+++++					AVRG		1.74064		1.55429
$ 87 Bromofluorobenzene	1.31083	1.28212	1.29820	1.28398	1.28276	1.28008					
	1.27640	+++++					AVRG		1.28777		0.95123

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Cal Date : 09-Jul-2009 10:23 ron01469

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 02-JUL-2009 00:41
Lab File ID: 1s329.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 19:04
Lab Sample ID: W1VM090701-22 Quant Type: ISTD
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	1 Xylenes (total)	0.69178	0.69099	0.69099	0.050	-0.11307	60.00000	Averaged	
M	2 1,2-Dichloroethylene (total	0.33439	0.33348	0.33348	0.050	-0.27052	60.00000	Averaged	
M	3 1,3-Dichloropropylene	0.59231	0.62667	0.62667	0.050	5.80071	60.00000	Averaged	
	5 Dichlorodifluoromethane	0.22899	0.28395	0.28395	0.050	23.99958	60.00000	Averaged	
	6 Chloromethane	0.44211	0.46191	0.46191	0.100	4.47901	60.00000	Averaged	spcc
	7 Vinyl chloride	0.34386	0.31618	0.31618	0.050	-8.05070	20.00000	Averaged	ccc
	9 Bromomethane	0.23589	0.24192	0.24192	0.050	2.55626	60.00000	Averaged	
	10 Chloroethane	0.25782	0.25807	0.25807	0.050	0.09885	60.00000	Averaged	
	11 Trichlorofluoromethane	0.32562	0.36747	0.36747	0.050	12.85233	60.00000	Averaged	
	12 Ethyl Ether	0.28702	0.31356	0.31356	0.010	9.24758	60.00000	Averaged	
	16 Acetone	0.22939	0.10981	0.10981	0.000	-52.12872	60.00000	Averaged	
	22 Acetonitrile	0.04150	0.04348	0.04348	0.010	4.77078	60.00000	Averaged	
	15 1,1-Dichloroethylene	0.59496	0.58444	0.58444	0.050	-1.76751	20.00000	Averaged	ccc
	21 Methyl acetate	0.25915	0.25688	0.25688	0.010	-0.87437	60.00000	Averaged	
	18 Iodomethane	0.47694	0.46686	0.46686	0.050	-2.11460	60.00000	Averaged	
	23 Methylene chloride	49.37745	50.00000	0.34913	0.000	-1.24510	60.00000	Linear	
	19 Carbon disulfide	0.95658	0.96988	0.96988	0.050	1.39020	60.00000	Averaged	
	25 tert-Butyl methyl ether	0.84247	0.87925	0.87925	0.050	4.36558	60.00000	Averaged	
	26 trans-1,2-Dichloroethylene	0.32645	0.30827	0.30827	0.050	-5.57103	60.00000	Averaged	
	29 Vinyl acetate	0.50428	0.47242	0.47242	0.010	-6.31723	60.00000	Averaged	
	30 1,1-Dichloroethane	0.64965	0.63260	0.63260	0.100	-2.62347	60.00000	Averaged	spcc
	35 2-Butanone	0.25663	0.16288	0.16288	0.030	-36.53172	60.00000	Averaged	
	36 cis-1,2-Dichloroethylene	0.34232	0.35870	0.35870	0.050	4.78423	60.00000	Averaged	
	33 2,2-Dichloropropane	0.33455	0.33990	0.33990	0.050	1.59794	60.00000	Averaged	
	41 Chloroform	0.58475	0.56790	0.56790	0.010	-2.88189	20.00000	Averaged	ccc
	39 Bromochloromethane	0.15749	0.15380	0.15380	0.010	-2.34019	60.00000	Averaged	
	43 1,1,1-Trichloroethane	0.37278	0.36883	0.36883	0.010	-1.05836	60.00000	Averaged	
	42 Cyclohexane	0.60946	0.63025	0.63025	0.010	3.41141	60.00000	Averaged	
	45 1,1-Dichloropropene	0.41989	0.43075	0.43075	0.010	2.58653	60.00000	Averaged	
	53 n-Butyl alcohol	0.00862	0.01124	0.01124	0.001	30.46837	60.00000	Averaged	
	44 Carbon tetrachloride	0.39059	0.38407	0.38407	0.010	-1.66998	60.00000	Averaged	
$	48 1,2-Dichloroethane-d4	0.42530	0.43340	0.43340	0.010	1.90521	60.00000	Averaged	
	51 1,2-Dichloroethane	0.46971	0.45910	0.45910	0.010	-2.25899	60.00000	Averaged	
	47 Benzene	1.39078	1.30256	1.30256	0.010	-6.34341	60.00000	Averaged	
	50 Cyclohexene	0.46958	0.48749	0.48749	0.010	3.81418	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1s329.d
Analysis Type: WATER
Lab Sample ID: W1VM090701-22
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

Injection Date: 02-JUL-2009 00:41
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 19:04
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	54 Trichloroethylene	0.33093	0.33688	0.33688	0.010	1.80000	60.00000	Averaged	
	57 1,2-Dichloropropane	0.36887	0.37359	0.37359	0.010	1.28008	20.00000	Averaged	ccc
	55 Methylcyclohexane	0.53987	0.56735	0.56735	0.010	5.08861	60.00000	Averaged	
	60 Bromodichloromethane	0.43411	0.45428	0.45428	0.010	4.64458	60.00000	Averaged	
	59 Dibromomethane	0.20115	0.19940	0.19940	0.010	-0.87067	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	0.17549	0.18878	0.18878	0.000	7.57059	60.00000	Averaged	
	64 4-Methyl-2-pentanone	0.16089	0.16292	0.16292	0.010	1.25758	60.00000	Averaged	
	63 cis-1,3-Dichloropropylene	0.52078	0.54956	0.54956	0.010	5.52669	60.00000	Averaged	
$	65 Toluene-d8	1.74064	1.75470	1.75470	0.010	0.80797	60.00000	Averaged	
	66 Toluene	1.05215	0.98353	0.98353	0.010	-6.52143	20.00000	Averaged	ccc
	68 trans-1,3-Dichloropropylene	0.56062	0.59964	0.59964	0.010	6.96056	60.00000	Averaged	
	69 1,1,2-Trichloroethane	0.28927	0.29141	0.29141	0.010	0.74219	60.00000	Averaged	
	71 2-Hexanone	0.39571	0.29363	0.29363	0.010	-25.79494	60.00000	Averaged	
	72 1,3-Dichloropropane	0.60636	0.60613	0.60613	0.010	-0.03879	60.00000	Averaged	
	70 Tetrachloroethylene	0.30738	0.28293	0.28293	0.010	-7.95603	60.00000	Averaged	
	73 Dibromochloromethane	0.35978	0.36546	0.36546	0.010	1.57906	60.00000	Averaged	
	74 1,2-Dibromoethane	0.32478	0.32881	0.32881	0.010	1.24189	60.00000	Averaged	
	77 Chlorobenzene	1.05603	1.03831	1.03831	0.300	-1.67816	60.00000	Averaged	spcc
	79 1,1,1,2-Tetrachloroethane	0.36123	0.36199	0.36199	0.010	0.21007	60.00000	Averaged	
	78 Ethylbenzene	1.91243	1.85146	1.85146	0.010	-3.18848	20.00000	Averaged	ccc
	80 m,p-Xylenes	0.70032	0.68536	0.68536	0.010	-2.13634	60.00000	Averaged	
	81 o-Xylene	0.67468	0.70225	0.70225	0.010	4.08728	60.00000	Averaged	
	82 Styrene	1.17829	1.21703	1.21703	0.010	3.28830	60.00000	Averaged	
	83 Bromoform	0.42240	0.45176	0.45176	0.100	6.95130	60.00000	Averaged	spcc
	84 Isopropylbenzene	3.33035	2.92102	2.92102	0.010	-12.29109	60.00000	Averaged	
	88 1,1,2,2-Tetrachloroethane	0.84214	0.81538	0.81538	0.300	-3.17812	60.00000	Averaged	spcc
$	87 Bromofluorobenzene	1.28777	1.29862	1.29862	0.010	0.84289	60.00000	Averaged	
	92 1,2,3-Trichloropropane	0.20962	0.23043	0.23043	0.010	9.92846	60.00000	Averaged	
	91 Bromobenzene	0.84757	0.81481	0.81481	0.010	-3.86540	60.00000	Averaged	
	89 n-Propylbenzene	4.21198	4.05325	4.05325	0.010	-3.76854	60.00000	Averaged	
	94 2-Chlorotoluene	2.91182	2.87996	2.87996	0.010	-1.09418	60.00000	Averaged	
	93 1,3,5-Trimethylbenzene	2.83423	2.85267	2.85267	0.010	0.65086	60.00000	Averaged	
	95 4-Chlorotoluene	2.60334	2.59987	2.59987	0.010	-0.13330	60.00000	Averaged	
	96 tert-Butylbenzene	2.28981	2.36366	2.36366	0.010	3.22505	60.00000	Averaged	
	97 1,2,4-Trimethylbenzene	2.95560	2.95341	2.95341	0.010	-0.07431	60.00000	Averaged	
	99 sec-Butylbenzene	3.85727	3.90621	3.90621	0.010	1.26878	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 02-JUL-2009 00:41
Lab File ID: 1s329.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 19:04
Lab Sample ID: W1VM090701-22 Quant Type: ISTD
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
100 4-Isopropyltoluene	2.82205	2.92025	2.92025	0.010	3.47968	60.00000	Averaged
101 1,3-Dichlorobenzene	1.63045	1.57857	1.57857	0.010	-3.18209	60.00000	Averaged
103 1,4-Dichlorobenzene	1.67797	1.57318	1.57318	0.010	-6.24555	60.00000	Averaged
105 n-Butylbenzene	3.04073	3.04200	3.04200	0.010	0.04164	60.00000	Averaged
106 1,2-Dichlorobenzene	1.54220	1.50957	1.50957	0.010	-2.11580	60.00000	Averaged
108 1,2-Dibromo-3-chloropropane	0.13687	0.15514	0.15514	0.010	13.35051	60.00000	Averaged
109 1,2,4-Trichlorobenzene	1.00254	0.93020	0.93020	0.010	-7.21589	60.00000	Averaged
110 Hexachlorobutadiene	0.58653	0.51957	0.51957	0.010	-11.41679	60.00000	Averaged
111 Naphthalene	2.18213	2.26958	2.26958	0.010	4.00766	60.00000	Averaged
112 1,2,3-Trichlorobenzene	0.88500	0.86180	0.86180	0.010	-2.62146	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.52480
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070109v1/1s329.d
Lab Smp Id: W1VM090701-22 Client Smp ID: ICV
Inj Date : 02-JUL-2009 00:41
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090701-22|ICV|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090605-01D/IVM090630-01
Comment :
Method : /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m
Meth Date : 02-Jul-2009 08:37 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 19:04 Cal File: 1s318.d
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 1 Xylenes (total)	106				2342600	150.000	150
M 2 1,2-Dichloroethylene (total)	96				896533	100.000	99.6
M 3 1,3-Dichloropropylene	75				1416353	100.000	106
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	381684	50.0000	62.0
6 Chloromethane	50	5.535	5.535	(0.404)	620892	50.0000	52.2
7 Vinyl chloride	62	5.908	5.908	(0.432)	425003	50.0000	46.0
9 Bromomethane	96	6.948	6.948	(0.507)	325187	50.0000	51.3
10 Chloroethane	64	7.215	7.215	(0.527)	346895	50.0000	50.0
11 Trichlorofluoromethane	101	7.854	7.854	(0.574)	493945	50.0000	56.4
12 Ethyl Ether	59	8.485	8.485	(0.620)	421484	50.0000	54.6
16 Acetone	43	9.263	9.263	(0.677)	738053	250.000	120
22 Acetonitrile	41	9.986	9.986	(0.729)	1460985	1250.00	1310
15 1,1-Dichloroethylene	61	9.088	9.088	(0.664)	785606	50.0000	49.1
21 Methyl acetate	43	9.843	9.843	(0.719)	1726492	250.000	248
18 Iodomethane	142	9.470	9.470	(0.692)	3137738	250.000	245
23 Methylene chloride	84	10.147	10.147	(0.741)	469296	50.0000	49.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	19 Carbon disulfide	76	9.585	9.585	(0.700)	6518547	250.000	253
	25 tert-Butyl methyl ether	73	10.451	10.451	(0.763)	1181876	50.0000	52.2
	26 trans-1,2-Dichloroethylene	96	10.552	10.552	(0.771)	414368	50.0000	47.2
	29 Vinyl acetate	43	11.307	11.307	(0.826)	3175126	250.000	234
	30 1,1-Dichloroethane	63	11.325	11.325	(0.827)	850340	50.0000	48.7
	35 2-Butanone	43	12.195	12.195	(0.891)	1094712	250.000	159
	36 cis-1,2-Dichloroethylene	96	12.204	12.204	(0.891)	482165	50.0000	52.4
	33 2,2-Dichloropropane	77	12.172	12.172	(0.889)	456891	50.0000	50.8
	41 Chloroform	83	12.619	12.619	(0.922)	763361	50.0000	48.6
	39 Bromochloromethane	128	12.563	12.563	(0.918)	206742	50.0000	48.8
	43 1,1,1-Trichloroethane	97	12.853	12.853	(0.939)	495779	50.0000	49.5
	42 Cyclohexane	56	12.849	12.849	(0.938)	847173	50.0000	51.7
	45 1,1-Dichloropropene	75	13.060	13.060	(0.954)	579014	50.0000	51.3
	53 n-Butyl alcohol	56	13.940	13.940	(1.018)	1511201	5000.00	6520
	44 Carbon tetrachloride	117	13.033	13.033	(0.952)	516259	50.0000	49.2
$	48 1,2-Dichloroethane-d4	65	13.350	13.350	(0.975)	582574	50.0000	51.0
	51 1,2-Dichloroethane	62	13.447	13.447	(0.982)	617112	50.0000	48.9
	47 Benzene	78	13.341	13.341	(0.974)	1750887	50.0000	46.8
	50 Cyclohexene	54	13.406	13.406	(0.979)	655276	50.0000	51.9
*	52 Fluorobenzene	96	13.691	13.691	(1.000)	1344192	50.0000	
	54 Trichloroethylene	95	14.124	14.124	(1.032)	452834	50.0000	50.9
	57 1,2-Dichloropropane	63	14.469	14.469	(1.057)	502173	50.0000	50.6
	55 Methylcyclohexane	83	14.294	14.294	(1.044)	762622	50.0000	52.5
	60 Bromodichloromethane	83	14.759	14.759	(1.078)	610633	50.0000	52.3
	59 Dibromomethane	93	14.630	14.630	(1.069)	268028	50.0000	49.6
	61 2-Chloroethylvinyl ether	63	15.040	15.040	(1.099)	1268768	250.000	269
	64 4-Methyl-2-pentanone	58	15.371	15.371	(0.895)	920527	250.000	253
	63 cis-1,3-Dichloropropylene	75	15.265	15.265	(1.115)	738719	50.0000	52.8
$	65 Toluene-d8	98	15.528	15.528	(0.904)	1982927	50.0000	50.4
	66 Toluene	92	15.606	15.606	(0.909)	1111457	50.0000	46.7
	68 trans-1,3-Dichloropropylene	75	15.887	15.887	(0.925)	677634	50.0000	53.5
	69 1,1,2-Trichloroethane	83	16.112	16.112	(0.938)	329317	50.0000	50.4
	71 2-Hexanone	43	16.278	16.278	(0.948)	1659126	250.000	186
	72 1,3-Dichloropropane	76	16.315	16.315	(0.950)	684963	50.0000	50.0
	70 Tetrachloroethylene	164	16.200	16.200	(0.943)	319727	50.0000	46.0
	73 Dibromochloromethane	129	16.554	16.554	(0.964)	412996	50.0000	50.8
	74 1,2-Dibromoethane	107	16.738	16.738	(0.975)	371579	50.0000	50.6
*	76 Chlorobenzene-d5	117	17.171	17.171	(1.000)	1130064	50.0000	
	77 Chlorobenzene	112	17.203	17.203	(1.002)	1173351	50.0000	49.2
	79 1,1,1,2-Tetrachloroethane	131	17.272	17.272	(1.006)	409068	50.0000	50.1
	78 Ethylbenzene	91	17.231	17.231	(1.003)	2092263	50.0000	48.4
	80 m,p-Xylenes	106	17.346	17.346	(1.010)	1549009	100.000	97.9
	81 o-Xylene	106	17.792	17.792	(1.036)	793591	50.0000	52.0
	82 Styrene	104	17.815	17.815	(1.038)	1375322	50.0000	51.6
	83 Bromoform	173	18.115	18.115	(0.923)	270432	50.0000	53.5
	84 Isopropylbenzene	105	18.142	18.142	(0.925)	1748572	50.0000	43.8
	88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	488097	50.0000	48.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
$ 87 Bromofluorobenzene	95	18.400	18.400	(0.938)	777377	50.0000	50.4
92 1,2,3-Trichloropropane	110	18.616	18.616	(0.949)	137939	50.0000	55.0
91 Bromobenzene	156	18.602	18.602	(0.948)	487758	50.0000	48.1
89 n-Propylbenzene	91	18.570	18.570	(0.946)	2426343	50.0000	48.1
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1723997	50.0000	49.4
93 1,3,5-Trimethylbenzene	105	18.731	18.731	(0.955)	1707659	50.0000	50.3
95 4-Chlorotoluene	91	18.865	18.865	(0.962)	1556330	50.0000	49.9
96 tert-Butylbenzene	119	19.090	19.090	(0.973)	1414927	50.0000	51.6
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1767961	50.0000	50.0
99 sec-Butylbenzene	105	19.316	19.316	(0.984)	2338328	50.0000	50.6
100 4-Isopropyltoluene	119	19.436	19.436	(0.991)	1748111	50.0000	51.7
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	944959	50.0000	48.4
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	598617	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	941730	50.0000	46.9
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1820993	50.0000	50.0
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	903656	50.0000	48.9
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	92871	50.0000	56.7
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	556834	50.0000	46.4
110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	311021	50.0000	44.3
111 Naphthalene	128	22.455	22.455	(1.145)	1358612	50.0000	52.0
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	515885	50.0000	48.7

Data File: /chem/VOA1.i/070109v1/1s329.d
Date : 02-JUL-2009 00:41
Client ID: ICV
Sample Info: IW1VH090701-221ICV11|VOAF11|
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXM4
Column diameter: 0.25

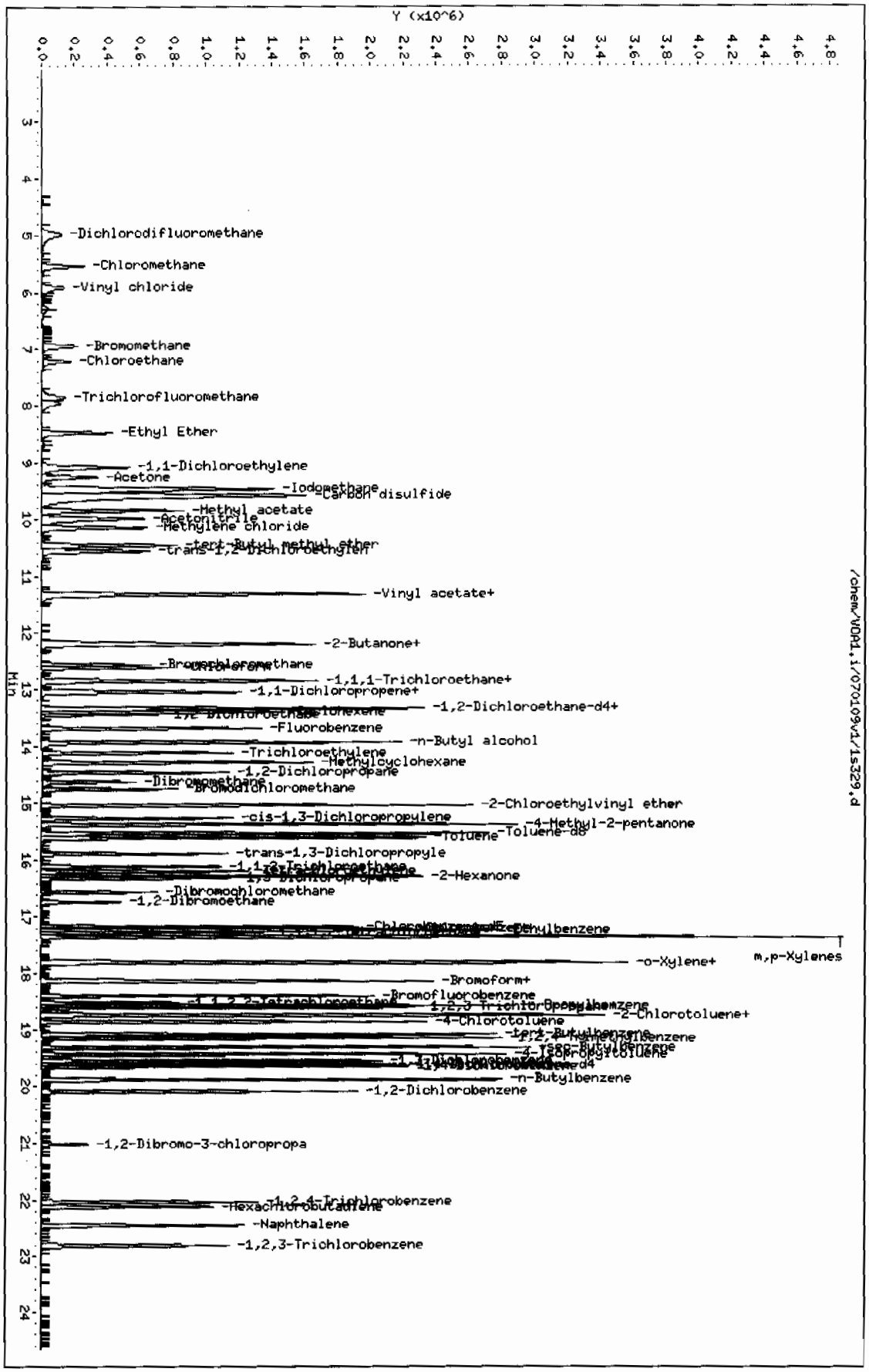

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Data File: /chem/VOA1.i/070109v1/1s330.d
Report Date: 02-Jul-2009 14:30

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1s330.d
Analysis Type: WATER
Lab Sample ID: W1VM090701-23
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

Injection Date: 02-JUL-2009 01:12
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
	4 Chlorotrifluoroethylene	0.19019	0.17560	0.17560	0.010	-7.67423	60.00000	Averaged
	8 2-Chloro-1,1,1-trifluoroeth	0.34048	0.33492	0.33492	0.010	-1.63260	60.00000	Averaged
	13 Acrolein	0.04947	0.05557	0.05557	0.001	12.33149	60.00000	Averaged
	14 Trichlorotrifluoroethane	0.28145	0.26997	0.26997	0.030	-4.08137	60.00000	Averaged
	17 Isopropyl Alcohol	0.01950	0.02260	0.02260	0.000	15.89812	60.00000	Averaged
	20 Allyl chloride	226	250	0.12353	0.010	-9.78593	60.00000	Linear
	24 tert-Butyl Alcohol	0.03062	0.03521	0.03521	0.010	14.98536	60.00000	Averaged
	27 Acrylonitrile	0.11278	0.11450	0.11450	0.010	1.52364	60.00000	Averaged
	28 Isopropyl ether	1.16254	1.22253	1.22253	0.010	5.15998	60.00000	Averaged
	31 2-Chloro-1,3-butadiene	0.44344	0.50184	0.50184	0.010	13.16949	60.00000	Averaged
	32 Ethyl tert-butyl ether	1.03281	1.11176	1.11176	0.010	7.64399	60.00000	Averaged
	37 Propionitrile	0.04568	0.04645	0.04645	0.010	1.67818	60.00000	Averaged
	34 Ethyl acetate	0.31721	0.29400	0.29400	0.010	-7.31606	60.00000	Averaged
	40 Methacrylonitrile	0.23340	0.23672	0.23672	0.010	1.42136	60.00000	Averaged
	38 Tetrahydrofuran	0.22772	0.23864	0.23864	0.010	4.79383	60.00000	Averaged
	46 Isobutyl alcohol	0.00969	0.01087	0.01087	0.001	12.20050	60.00000	Averaged
	49 Methyl tert-amyl ether	0.85461	0.90854	0.90854	0.010	6.31010	60.00000	Averaged
	56 Methyl methacrylate	0.18420	0.20151	0.20151	0.010	9.39565	60.00000	Averaged
	67 Ethyl methacrylate	0.43841	0.45868	0.45868	0.010	4.62443	60.00000	Averaged
	75 1-Chlorohexane	0.33469	0.34952	0.34952	0.000	4.43165	60.00000	Averaged
	58 1,4-Dioxane	0.00275	0.00290	0.00290	0.001	5.12077	60.00000	Averaged
	62 2-Nitropropane	0.07858	0.08874	0.08874	0.000	12.93389	60.00000	Averaged
	85 cis-1,4-Dichloro-2-butene	0.27487	0.28014	0.28014	0.010	1.92061	60.00000	Averaged
	86 Cyclohexanone	0.05915	0.06299	0.06299	0.010	6.49868	60.00000	Averaged
	90 trans-1,4-Dichloro-2-butene	0.26477	0.26300	0.26300	0.010	-0.66843	60.00000	Averaged
	98 Pentachloroethane	0.18429	0.16521	0.16521	0.010	-10.35572	60.00000	Averaged
	104 Benzyl chloride	1.33213	1.23309	1.23309	0.010	-7.43482	60.00000	Averaged
	107 bis(2-Chloroisopropyl)ether	0.38370	0.40845	0.40845	0.010	6.44894	60.00000	Averaged
$	48 1,2-Dichloroethane-d4	0.42530	0.41230	0.41230	0.010	-3.05727	60.00000	Averaged
$	65 Toluene-d8	1.74064	1.72808	1.72808	0.010	-0.72137	60.00000	Averaged
$	87 Bromofluorobenzene	1.28777	1.30124	1.30124	0.010	1.04628	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 02-JUL-2009 01:12
Lab File ID: 1s330.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090701-23 Quant Type: ISTD
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

Average %D / Drift Results.	
Calculated Average %D/Drift =	6.52467
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070109v1/1s330.d
Lab Smp Id: W1VM090701-23 Client Smp ID: SHORT ICV
Inj Date : 02-JUL-2009 01:12
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090701-23|SHORT ICV|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090701-08A/UVM090624-02A
Comment :
Method : /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m
Meth Date : 02-Jul-2009 14:30 slg Quant Type: ISTD
Cal Date : 01-JUL-2009 22:38 Cal File: 1s325.d
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
4 Chlorotrifluoroethylene	116	4.876	4.876	(0.356)	738922	150.000	138
8 2-Chloro-1,1,1-trifluoroethane	118	6.289	6.289	(0.459)	1409368	150.000	148
13 Acrolein	56	8.950	8.950	(0.654)	389715	250.000	281
14 Trichlorotrifluoroethane	101	8.996	8.996	(0.657)	1893394	250.000	240
17 Isopropyl Alcohol	45	9.452	9.452	(0.690)	1585372	2500.00	2900
20 Allyl chloride	76	9.852	9.852	(0.720)	866349	250.000	226
24 tert-Butyl Alcohol	59	10.207	10.207	(0.745)	2469524	2500.00	2870
27 Acrylonitrile	53	10.681	10.681	(0.780)	803051	250.000	254
28 Isopropyl ether	45	11.210	11.210	(0.819)	1714824	50.0000	52.6
31 2-Chloro-1,3-butadiene	53	11.399	11.399	(0.833)	703926	50.0000	56.6
32 Ethyl tert-butyl ether	59	11.767	11.767	(0.859)	1559450	50.0000	53.8
37 Propionitrile	54	12.416	12.416	(0.907)	325746	250.000	254
34 Ethyl acetate	43	12.177	12.177	(0.889)	2061981	250.000	232
40 Methacrylonitrile	41	12.573	12.573	(0.918)	1660231	250.000	254
38 Tetrahydrofuran	42	12.545	12.545	(0.639)	716928	250.000	262

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
46 Isobutyl alcohol	41	13.116	13.116	(0.958)	762605	2500.00	2800
49 Methyl tert-amyl ether	73	13.360	13.360	(0.976)	1274397	50.0000	53.2
56 Methyl methacrylate	69	14.446	14.446	(1.055)	1413280	250.000	273
67 Ethyl methacrylate	69	15.822	15.822	(0.922)	2660724	250.000	262
75 1-Chlorohexane	55	17.042	17.042	(1.245)	490265	50.0000	52.2
58 1,4-Dioxane	88	14.556	14.556	(1.063)	203109	2500.00	2630
62 2-Nitropropane	43	15.090	15.090	(1.102)	622384	250.000	282
85 cis-1,4-Dichloro-2-butene	53	18.285	18.285	(0.932)	841616	250.000	255
86 Cyclohexanone	55	18.395	18.395	(1.072)	1826998	1250.00	1330
90 trans-1,4-Dichloro-2-butene	53	18.579	18.579	(0.947)	790118	250.000	248
98 Pentachloroethane	167	19.206	19.206	(0.979)	496323	250.000	224
104 Benzyl chloride	91	19.785	19.785	(1.008)	3704479	250.000	231
107 bis(2-Chloroisopropyl)ether	45	20.181	20.181	(1.029)	1227064	250.000	266
* 52 Fluorobenzene	96	13.691	13.691	(1.000)	1402688	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	1160167	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	600844	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.346	(0.975)	578322	50.0000	48.5
$ 65 Toluene-d8	98	15.528	15.528	(0.905)	2004865	50.0000	49.6
$ 87 Bromofluorobenzene	95	18.400	18.400	(0.938)	781843	50.0000	50.5

Data File: /chem/VOA1.i/070109v1/1s330.d
Date : 02-JUL-2009 01:12
Client ID: SHORT ICV
Sample Info: IW1VH0970L-23ISHORT ICVI1IVOAF1I1
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXM4
Column diameter: 0.25

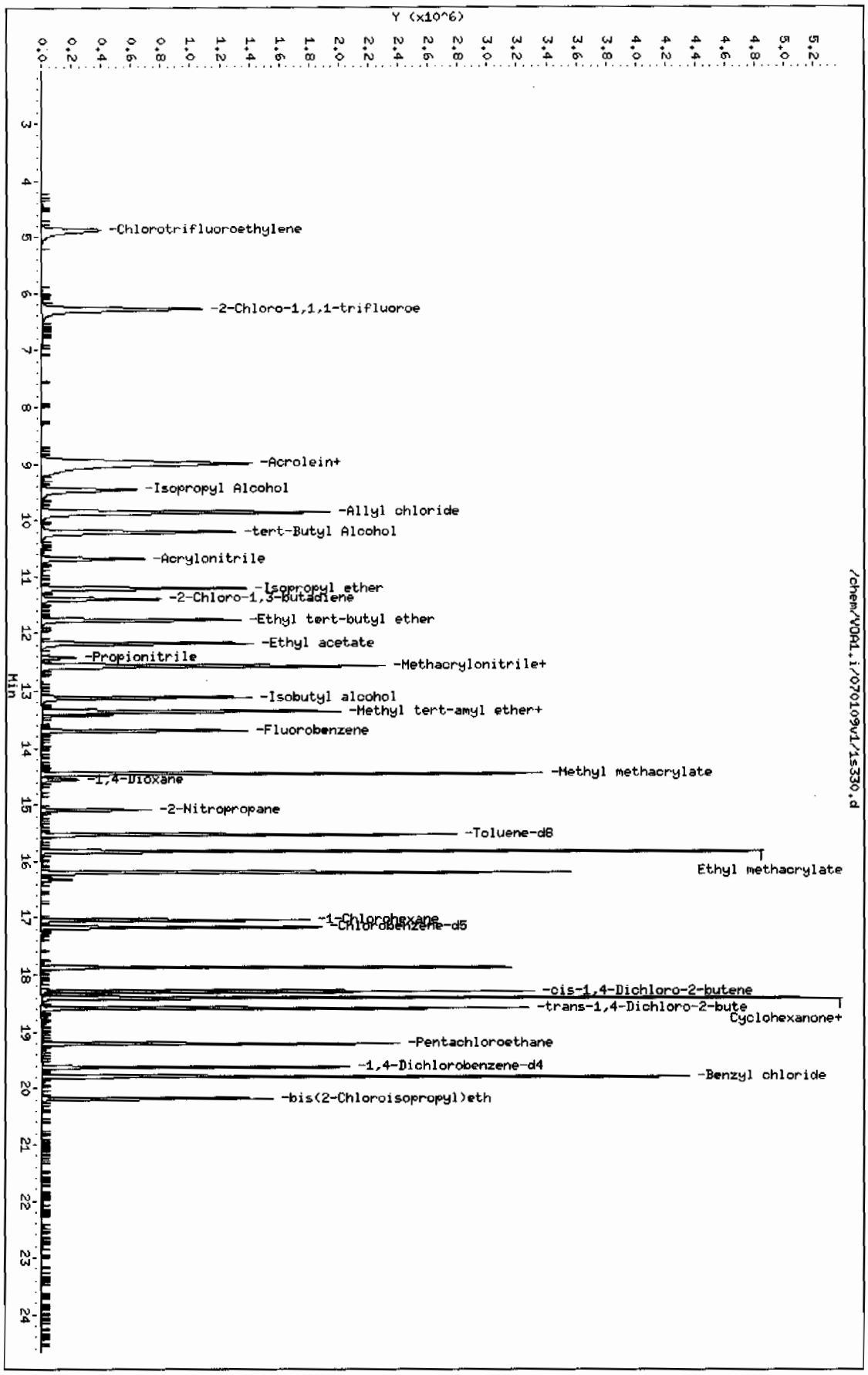

Page 1

Data File: /chem/VOA1.i/070909v1/1t402.d
Report Date: 09-Jul-2009 10:46

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1t402.d
Analysis Type: WATER
Lab Sample ID: W1VM090709-01
Method: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m

Injection Date: 09-JUL-2009 08:14
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	1 Xylenes (total)	0.69178	0.67411	0.67411	0.050	-2.55383	60.00000	Averaged	
M	2 1,2-Dichloroethylene (total	0.33439	0.32455	0.32455	0.050	-2.94098	60.00000	Averaged	
M	3 1,3-Dichloropropylene	0.59231	0.59872	0.59872	0.050	1.08166	60.00000	Averaged	
	5 Dichlorodifluoromethane	0.22899	0.26164	0.26164	0.050	14.25602	60.00000	Averaged	
	6 Chloromethane	0.44211	0.44778	0.44778	0.100	1.28357	60.00000	Averaged	spcc
	7 Vinyl chloride	0.34386	0.32897	0.32897	0.050	-4.32911	20.00000	Averaged	ccc
	9 Bromomethane	0.23589	0.23710	0.23710	0.050	0.51154	60.00000	Averaged	
	10 Chloroethane	0.25782	0.25816	0.25816	0.050	0.13253	60.00000	Averaged	
	11 Trichlorofluoromethane	0.32562	0.42013	0.42013	0.050	29.02654	60.00000	Averaged	
	12 Ethyl Ether	0.28702	0.29143	0.29143	0.010	1.53796	60.00000	Averaged	
	16 Acetone	0.22939	0.10849	0.10849	0.000	-52.70508	60.00000	Averaged	
	22 Acetonitrile	0.04150	0.03976	0.03976	0.010	-4.17880	60.00000	Averaged	
	15 1,1-Dichloroethylene	0.59496	0.58717	0.58717	0.050	-1.31023	20.00000	Averaged	ccc
	21 Methyl acetate	0.25915	0.23660	0.23660	0.010	-8.69933	60.00000	Averaged	
	18 Iodomethane	0.47694	0.45157	0.45157	0.050	-5.32072	60.00000	Averaged	
	23 Methylene chloride	47.52339	50.00000	0.33701	0.000	-4.95322	60.00000	Linear	
	19 Carbon disulfide	0.95658	0.99573	0.99573	0.050	4.09203	60.00000	Averaged	
	25 tert-Butyl methyl ether	0.84247	0.80870	0.80870	0.050	-4.00768	60.00000	Averaged	
	26 trans-1,2-Dichloroethylene	0.32645	0.30499	0.30499	0.050	-6.57486	60.00000	Averaged	
	29 Vinyl acetate	0.50428	0.60198	0.60198	0.010	19.37447	60.00000	Averaged	
	30 1,1-Dichloroethane	0.64965	0.62779	0.62779	0.100	-3.36372	60.00000	Averaged	spcc
	35 2-Butanone	0.25663	0.15069	0.15069	0.030	-41.28247	60.00000	Averaged	
	36 cis-1,2-Dichloroethylene	0.34232	0.34412	0.34412	0.050	0.52440	60.00000	Averaged	
	33 2,2-Dichloropropane	0.33455	0.37702	0.37702	0.050	12.69391	60.00000	Averaged	
	41 Chloroform	0.58475	0.55056	0.55056	0.010	-5.84702	20.00000	Averaged	ccc
	39 Bromochloromethane	0.15749	0.14320	0.14320	0.010	-9.07461	60.00000	Averaged	
	43 1,1,1-Trichloroethane	0.37278	0.38334	0.38334	0.010	2.83503	60.00000	Averaged	
	42 Cyclohexane	0.60946	0.64745	0.64745	0.010	6.23464	60.00000	Averaged	
	45 1,1-Dichloropropene	0.41989	0.43627	0.43627	0.010	3.89986	60.00000	Averaged	
	53 n-Butyl alcohol	0.00862	0.00966	0.00966	0.001	12.12290	60.00000	Averaged	
	44 Carbon tetrachloride	0.39059	0.40783	0.40783	0.010	4.41347	60.00000	Averaged	
$	48 1,2-Dichloroethane-d4	0.42530	0.52207	0.52207	0.010	22.75464	60.00000	Averaged	
	51 1,2-Dichloroethane	0.46971	0.43992	0.43992	0.010	-6.34118	60.00000	Averaged	
	47 Benzene	1.39078	1.25654	1.25654	0.010	-9.65197	60.00000	Averaged	
	50 Cyclohexene	0.46958	0.50507	0.50507	0.010	7.55889	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 09-JUL-2009 08:14
Lab File ID: 1t402.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090709-01 Quant Type: ISTD
Method: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	54 Trichloroethylene	0.33093	0.32094	0.32094	0.010	-3.01618	60.00000	Averaged	
	57 1,2-Dichloropropane	0.36887	0.35562	0.35562	0.010	-3.59066	20.00000	Averaged	ccc
	55 Methylcyclohexane	0.53987	0.58081	0.58081	0.010	7.58239	60.00000	Averaged	
	60 Bromodichloromethane	0.43411	0.43344	0.43344	0.010	-0.15538	60.00000	Averaged	
	59 Dibromomethane	0.20115	0.18344	0.18344	0.010	-8.80456	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	0.17549	0.17200	0.17200	0.000	-1.99177	60.00000	Averaged	
	64 4-Methyl-2-pentanone	0.16089	0.14788	0.14788	0.010	-8.08505	60.00000	Averaged	
	63 cis-1,3-Dichloropropylene	0.52078	0.53060	0.53060	0.010	1.88574	60.00000	Averaged	
$	65 Toluene-d8	1.74064	1.78744	1.78744	0.010	2.68895	60.00000	Averaged	
	66 Toluene	1.05215	0.94835	0.94835	0.010	-9.86588	20.00000	Averaged	ccc
	68 trans-1,3-Dichloropropylene	0.56062	0.56928	0.56928	0.010	1.54382	60.00000	Averaged	
	69 1,1,2-Trichloroethane	0.28927	0.26838	0.26838	0.010	-7.22040	60.00000	Averaged	
	71 2-Hexanone	0.39571	0.27503	0.27503	0.010	-30.49701	60.00000	Averaged	
	72 1,3-Dichloropropane	0.60636	0.55877	0.55877	0.010	-7.84945	60.00000	Averaged	
	70 Tetrachloroethylene	0.30738	0.28482	0.28482	0.010	-7.33956	60.00000	Averaged	
	73 Dibromochloromethane	0.35978	0.34154	0.34154	0.010	-5.06923	60.00000	Averaged	
	74 1,2-Dibromoethane	0.32478	0.30073	0.30073	0.010	-7.40334	60.00000	Averaged	
	77 Chlorobenzene	1.05603	0.99173	0.99173	0.300	-6.08831	60.00000	Averaged	spcc
	79 1,1,1,2-Tetrachloroethane	0.36123	0.34647	0.34647	0.010	-4.08703	60.00000	Averaged	
	78 Ethylbenzene	1.91243	1.79930	1.79930	0.010	-5.91541	20.00000	Averaged	ccc
	80 m,p-Xylenes	0.70032	0.67263	0.67263	0.010	-3.95424	60.00000	Averaged	
	81 o-Xylene	0.67468	0.67706	0.67706	0.010	0.35346	60.00000	Averaged	
	82 Styrene	1.17829	1.17431	1.17431	0.010	-0.33710	60.00000	Averaged	
	83 Bromoform	0.42240	0.41076	0.41076	0.100	-2.75455	60.00000	Averaged	spcc
	84 Isopropylbenzene	3.33035	2.79501	2.79501	0.010	-16.07479	60.00000	Averaged	
	88 1,1,2,2-Tetrachloroethane	0.84214	0.74949	0.74949	0.300	-11.00120	60.00000	Averaged	spcc
$	87 Bromofluorobenzene	1.28777	1.27075	1.27075	0.010	-1.32141	60.00000	Averaged	
	92 1,2,3-Trichloropropane	0.20962	0.20040	0.20040	0.010	-4.39610	60.00000	Averaged	
	91 Bromobenzene	0.84757	0.75577	0.75577	0.010	-10.83073	60.00000	Averaged	
	89 n-Propylbenzene	4.21198	3.89456	3.89456	0.010	-7.53596	60.00000	Averaged	
	94 2-Chlorotoluene	2.91182	2.73522	2.73522	0.010	-6.06501	60.00000	Averaged	
	93 1,3,5-Trimethylbenzene	2.83423	2.71986	2.71986	0.010	-4.03526	60.00000	Averaged	
	95 4-Chlorotoluene	2.60334	2.49056	2.49056	0.010	-4.33235	60.00000	Averaged	
	96 tert-Butylbenzene	2.28981	2.25555	2.25555	0.010	-1.49606	60.00000	Averaged	
	97 1,2,4-Trimethylbenzene	2.95560	2.83230	2.83230	0.010	-4.17180	60.00000	Averaged	
	99 sec-Butylbenzene	3.85727	3.78745	3.78745	0.010	-1.81026	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1t402.d
Analysis Type: WATER
Lab Sample ID: W1VM090709-01
Method: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m

Injection Date: 09-JUL-2009 08:14
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
100 4-Isopropyltoluene	2.82205	2.89416	2.89416	0.010	2.55537	60.00000	Averaged
101 1,3-Dichlorobenzene	1.63045	1.52813	1.52813	0.010	-6.27593	60.00000	Averaged
103 1,4-Dichlorobenzene	1.67797	1.52960	1.52960	0.010	-8.84246	60.00000	Averaged
105 n-Butylbenzene	3.04073	3.11925	3.11925	0.010	2.58219	60.00000	Averaged
106 1,2-Dichlorobenzene	1.54220	1.42442	1.42442	0.010	-7.63732	60.00000	Averaged
108 1,2-Dibromo-3-chloropropane	0.13687	0.13120	0.13120	0.010	-4.14072	60.00000	Averaged
109 1,2,4-Trichlorobenzene	1.00254	0.95461	0.95461	0.010	-4.78112	60.00000	Averaged
110 Hexachlorobutadiene	0.58653	0.53589	0.53589	0.010	-8.63337	60.00000	Averaged
111 Naphthalene	2.18213	2.00441	2.00441	0.010	-8.14443	60.00000	Averaged
112 1,2,3-Trichlorobenzene	0.88500	0.84746	0.84746	0.010	-4.24088	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 7.24016
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t402.d
Lab Smp Id: W1VM090709-01 Client Smp ID: VSTD050
Inj Date : 09-JUL-2009 08:14
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090709-01|CCV/LCS|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090605-01E/IVM090623-01
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 1 Xylenes (total)	106				2105689	150.000	146
M 2 1,2-Dichloroethylene (total)	96				800133	100.000	97.0
M 3 1,3-Dichloropropylene	75				1246795	100.000	102
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	322513	50.0000	57.1
6 Chloromethane	50	5.535	5.535	(0.405)	551963	50.0000	50.6
7 Vinyl chloride	62	5.908	5.908	(0.432)	405515	50.0000	47.8
9 Bromomethane	96	6.934	6.934	(0.507)	292261	50.0000	50.2
10 Chloroethane	64	7.205	7.205	(0.527)	318221	50.0000	50.1
11 Trichlorofluoromethane	101	7.840	7.840	(0.573)	517882	50.0000	64.5
12 Ethyl Ether	59	8.471	8.471	(0.619)	359237	50.0000	50.8
16 Acetone	43	9.249	9.249	(0.676)	668668	250.000	118
22 Acetonitrile	41	9.972	9.972	(0.729)	1225324	1250.00	1200
15 1,1-Dichloroethylene	61	9.083	9.083	(0.664)	723778	50.0000	49.3
21 Methyl acetate	43	9.834	9.834	(0.719)	1458264	250.000	228
18 Iodomethane	142	9.461	9.461	(0.691)	2783154	250.000	237

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
23 Methylene chloride	84	10.133	10.133	(0.741)	415422	50.0000	47.5
19 Carbon disulfide	76	9.571	9.571	(0.700)	6136996	250.000	260
25 tert-Butyl methyl ether	73	10.437	10.437	(0.763)	996861	50.0000	48.0
26 trans-1,2-Dichloroethylene	96	10.542	10.542	(0.771)	375948	50.0000	46.7
29 Vinyl acetate	43	11.293	11.293	(0.825)	3710191	250.000	298
30 1,1-Dichloroethane	63	11.316	11.316	(0.827)	773859	50.0000	48.3
35 2-Butanone	43	12.186	12.186	(0.891)	928741	250.000	147
36 cis-1,2-Dichloroethylene	96	12.195	12.195	(0.891)	424184	50.0000	50.3
33 2,2-Dichloropropane	77	12.158	12.158	(0.889)	464742	50.0000	56.3
41 Chloroform	83	12.605	12.605	(0.921)	678652	50.0000	47.1
39 Bromochloromethane	128	12.554	12.554	(0.918)	176515	50.0000	45.5
43 1,1,1-Trichloroethane	97	12.844	12.844	(0.939)	472535	50.0000	51.4
42 Cyclohexane	56	12.839	12.839	(0.938)	798093	50.0000	53.1
45 1,1-Dichloropropene	75	13.051	13.051	(0.954)	537771	50.0000	51.9
53 n-Butyl alcohol	56	13.930	13.930	(1.018)	1190954	5000.00	5610
44 Carbon tetrachloride	117	13.019	13.019	(0.952)	502715	50.0000	52.2
$ 48 1,2-Dichloroethane-d4	65	13.341	13.341	(0.975)	643541	50.0000	61.4
51 1,2-Dichloroethane	62	13.438	13.438	(0.982)	542275	50.0000	46.8
47 Benzene	78	13.332	13.332	(0.974)	1548895	50.0000	45.2
50 Cyclohexene	54	13.396	13.396	(0.979)	622583	50.0000	53.8
* 52 Fluorobenzene	96	13.682	13.682	(1.000)	1232665	50.0000	
54 Trichloroethylene	95	14.114	14.114	(1.032)	395616	50.0000	48.5
57 1,2-Dichloropropane	63	14.460	14.460	(1.057)	438361	50.0000	48.2
55 Methylcyclohexane	83	14.285	14.285	(1.044)	715943	50.0000	53.8
60 Bromodichloromethane	83	14.754	14.754	(1.078)	534284	50.0000	49.9
59 Dibromomethane	93	14.621	14.621	(1.069)	226118	50.0000	45.6
61 2-Chloroethylvinyl ether	63	15.035	15.035	(1.099)	1060070	250.000	245
64 4-Methyl-2-pentanone	58	15.366	15.366	(0.895)	769901	250.000	230
63 cis-1,3-Dichloropropylene	75	15.256	15.256	(1.115)	654054	50.0000	50.9
$ 65 Toluene-d8	98	15.523	15.523	(0.904)	1861125	50.0000	51.3
66 Toluene	92	15.601	15.601	(0.909)	987437	50.0000	45.1
68 trans-1,3-Dichloropropylene	75	15.882	15.882	(0.925)	592741	50.0000	50.8
69 1,1,2-Trichloroethane	83	16.108	16.108	(0.938)	279444	50.0000	46.4
71 2-Hexanone	43	16.273	16.273	(0.948)	1431823	250.000	174
72 1,3-Dichloropropane	76	16.310	16.310	(0.950)	581799	50.0000	46.1
70 Tetrachloroethylene	164	16.195	16.195	(0.943)	296564	50.0000	46.3
73 Dibromochloromethane	129	16.554	16.554	(0.964)	355622	50.0000	47.5
74 1,2-Dibromoethane	107	16.729	16.729	(0.975)	313131	50.0000	46.3
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	1041221	50.0000	
77 Chlorobenzene	112	17.198	17.198	(1.002)	1032613	50.0000	47.0
79 1,1,1,2-Tetrachloroethane	131	17.267	17.267	(1.006)	360746	50.0000	48.0
78 Ethylbenzene	91	17.226	17.226	(1.003)	1873474	50.0000	47.0
80 m,p-Xylenes	106	17.346	17.346	(1.010)	1400718	100.000	96.0
81 o-Xylene	106	17.792	17.792	(1.036)	704971	50.0000	50.2
82 Styrene	104	17.811	17.811	(1.038)	1222720	50.0000	49.8
83 Bromoform	173	18.110	18.110	(0.923)	236114	50.0000	48.6
84 Isopropylbenzene	105	18.137	18.137	(0.924)	1606618	50.0000	42.0

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	430822	50.0000	44.5
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	730449	50.0000	49.3
92 1,2,3-Trichloropropane	110	18.612	18.612	(0.949)	115195	50.0000	47.8
91 Bromobenzene	156	18.598	18.598	(0.948)	434431	50.0000	44.6
89 n-Propylbenzene	91	18.570	18.570	(0.946)	2238662	50.0000	46.2
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1572253	50.0000	47.0
93 1,3,5-Trimethylbenzene	105	18.727	18.727	(0.954)	1563421	50.0000	48.0
95 4-Chlorotoluene	91	18.865	18.865	(0.962)	1431616	50.0000	47.8
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1296531	50.0000	49.2
97 1,2,4-Trimethylbenzene	105	19.145	19.145	(0.976)	1628056	50.0000	47.9
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	2177090	50.0000	49.1
100 4-Isopropyltoluene	119	19.436	19.436	(0.991)	1663615	50.0000	51.3
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	878394	50.0000	46.9
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	574817	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	879240	50.0000	45.6
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1792999	50.0000	51.3
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	818781	50.0000	46.2
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	75417	50.0000	47.9
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	548726	50.0000	47.6
110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	308040	50.0000	45.7
111 Naphthalene	128	22.450	22.450	(1.144)	1152169	50.0000	45.9
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	487136	50.0000	47.9

Data File: /chem/VOA1.i/070909v1/1t402.d
Date : 09-JUL-2009 08:14
Client ID: VSTD050
Sample Info: IWLVH090709-01ICCV/LCS1|VOAF1|1
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

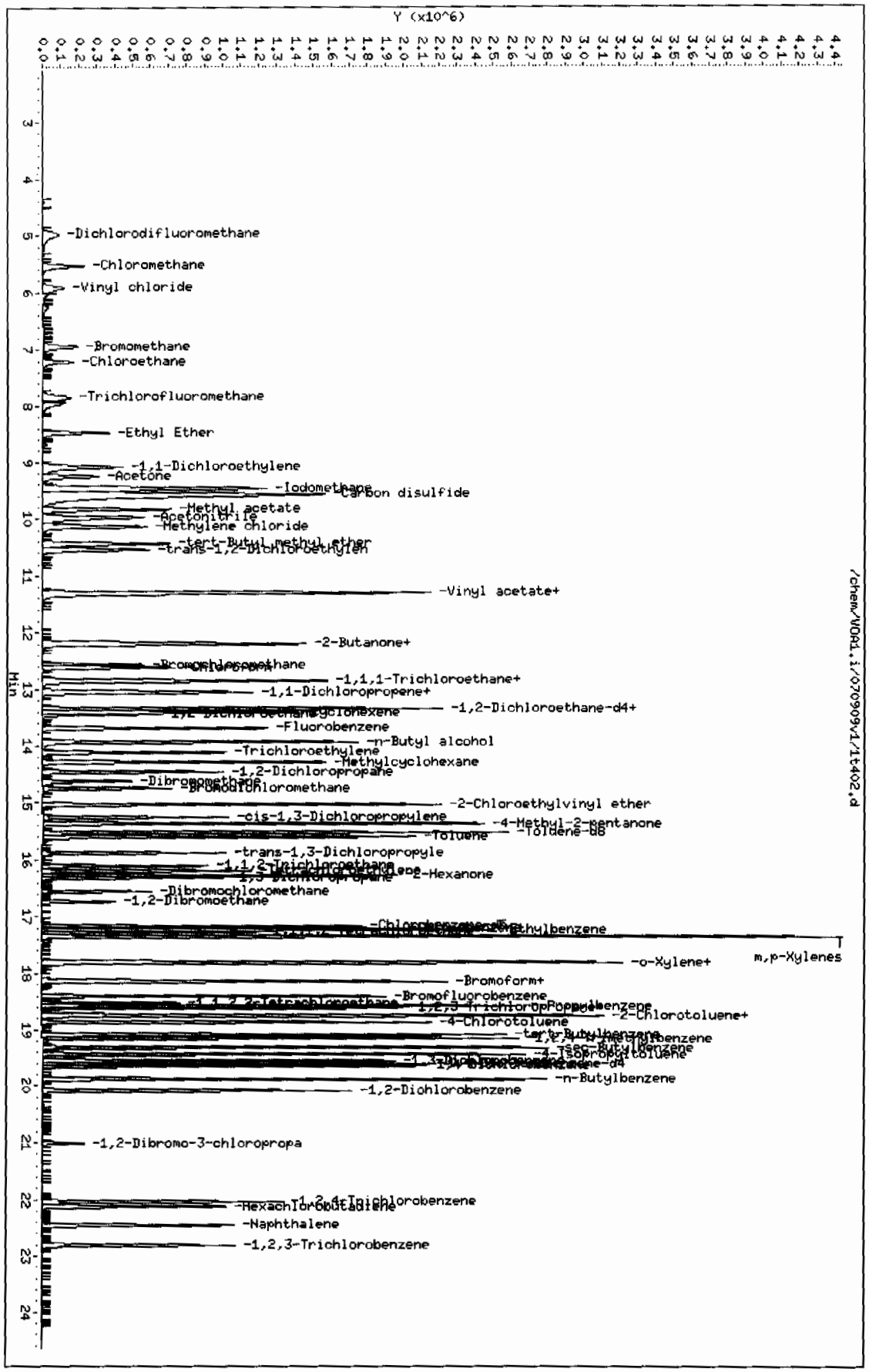

Page 1

Data File: /chem/VOA1.i/070909v1/1t404.d
Report Date: 09-Jul-2009 10:23

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 09-JUL-2009 09:48
Lab File ID: 1t404.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: UVM090701-08A Quant Type: ISTD
Method: /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
13 Acrolein	0.04947	0.06090	0.06090	0.001	23.12144	60.00000	Averaged	
14 Trichlorotrifluoroethane	0.28145	0.28677	0.28677	0.030	1.88768	60.00000	Averaged	
20 Allyl chloride	235	250	0.12911	0.010	-5.80228	60.00000	Linear	
27 Acrylonitrile	0.11278	0.11600	0.11600	0.010	2.84825	60.00000	Averaged	
31 2-Chloro-1,3-butadiene	0.44344	0.50891	0.50891	0.010	14.76311	60.00000	Averaged	
37 Propionitrile	0.04568	0.04764	0.04764	0.010	4.28366	60.00000	Averaged	
34 Ethyl acetate	0.31721	0.29855	0.29855	0.010	-5.88304	60.00000	Averaged	
40 Methacrylonitrile	0.23340	0.24078	0.24078	0.010	3.16213	60.00000	Averaged	
38 Tetrahydrofuran	0.22772	0.23358	0.23358	0.010	2.57032	60.00000	Averaged	
46 Isobutyl alcohol	0.00969	0.01215	0.01215	0.001	25.37063	60.00000	Averaged	
56 Methyl methacrylate	0.18420	0.20372	0.20372	0.010	10.59700	60.00000	Averaged	
67 Ethyl methacrylate	0.43841	0.45078	0.45078	0.010	2.82323	60.00000	Averaged	
58 1,4-Dioxane	0.00275	0.00313	0.00313	0.001	13.49428	60.00000	Averaged	
62 2-Nitropropane	0.07858	0.09455	0.09455	0.000	20.32218	60.00000	Averaged	
85 cis-1,4-Dichloro-2-butene	0.27487	0.30620	0.30620	0.010	11.39903	60.00000	Averaged	
86 Cyclohexanone	0.05915	0.07284	0.07284	0.010	23.15342	60.00000	Averaged	
90 trans-1,4-Dichloro-2-butene	0.26477	0.28909	0.28909	0.010	9.18601	60.00000	Averaged	
98 Pentachloroethane	0.18429	0.32283	0.32283	0.010	75.16977	60.00000	Averaged	<-
104 Benzyl chloride	1.33213	1.65648	1.65648	0.010	24.34774	60.00000	Averaged	
107 bis(2-Chloroisopropyl)ether	0.38370	0.42042	0.42042	0.010	9.56955	60.00000	Averaged	
$ 48 1,2-Dichloroethane-d4	0.42530	0.45768	0.45768	0.010	7.61457	60.00000	Averaged	
$ 65 Toluene-d8	1.74064	1.69831	1.69831	0.010	-2.43199	60.00000	Averaged	
$ 87 Bromofluorobenzene	1.28777	1.26139	1.26139	0.010	-2.04811	60.00000	Averaged	

Average %D / Drift Results.

Calculated Average %D/Drift = 30.93186
Maximun Average %D/Drift = 20.00000
* Failed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t404.d
Lab Smp Id: UVM090701-08A Client Smp ID: VSTD250S
Inj Date : 09-JUL-2009 09:48
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |UVM090701-08A|SHORT|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090701-08A/UVM090624-02A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
13 Acrolein	56	8.927	8.927	(0.653)	392155	250.000	308
14 Trichlorotrifluoroethane	101	8.982	8.982	(0.657)	1846456	250.000	255
20 Allyl chloride	76	9.838	9.838	(0.719)	831331	250.000	235
27 Acrylonitrile	53	10.662	10.662	(0.780)	746882	250.000	257
31 2-Chloro-1,3-butadiene	53	11.385	11.385	(0.832)	655359	50.0000	57.4
37 Propionitrile	54	12.397	12.397	(0.906)	306723	250.000	261
34 Ethyl acetate	43	12.158	12.158	(0.889)	1922327	250.000	235
40 Methacrylonitrile	41	12.559	12.559	(0.918)	1550382	250.000	258
38 Tetrahydrofuran	42	12.535	12.535	(0.639)	672700	250.000	256
46 Isobutyl alcohol	41	13.102	13.102	(0.958)	782311	2500.00	3130
56 Methyl methacrylate	69	14.441	14.441	(1.056)	1311749	250.000	276
67 Ethyl methacrylate	69	15.817	15.817	(0.922)	2459068	250.000	257
58 1,4-Dioxane	88	14.542	14.542	(1.063)	201323	2500.00	2840
62 2-Nitropropane	43	15.081	15.081	(1.103)	608778	250.000	301
85 cis-1,4-Dichloro-2-butene	53	18.280	18.280	(0.932)	881847	250.000	278

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
86 Cyclohexanone	55	18.391	18.391	(1.072)	1986794	1250.00	1540
90 trans-1,4-Dichloro-2-butene	53	18.575	18.575	(0.947)	832591	250.000	273
98 Pentachloroethane	167	19.205	19.205	(0.979)	929739	250.000	438(A)
104 Benzyl chloride	91	19.781	19.781	(1.008)	4770650	250.000	311
107 bis(2-Chloroisopropyl)ether	45	20.177	20.177	(1.028)	1210809	250.000	274
* 52 Fluorobenzene	96	13.677	13.677	(1.000)	1287776	50.0000	
* 76 Chlorobenzene-d5	117	17.162	17.162	(1.000)	1091021	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	575999	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.336	13.336	(0.975)	589392	50.0000	53.8
$ 65 Toluene-d8	98	15.518	15.518	(0.904)	1852889	50.0000	48.8
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	726561	50.0000	49.0

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/VOA1.i/070909v1/1t404.d
Date : 09-JUL-2009 09:48
Client ID: VSTD250S
Sample Info: IUWM090701-08AISHORTI1IVOAFI1I
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXM4
Column diameter: 0.25

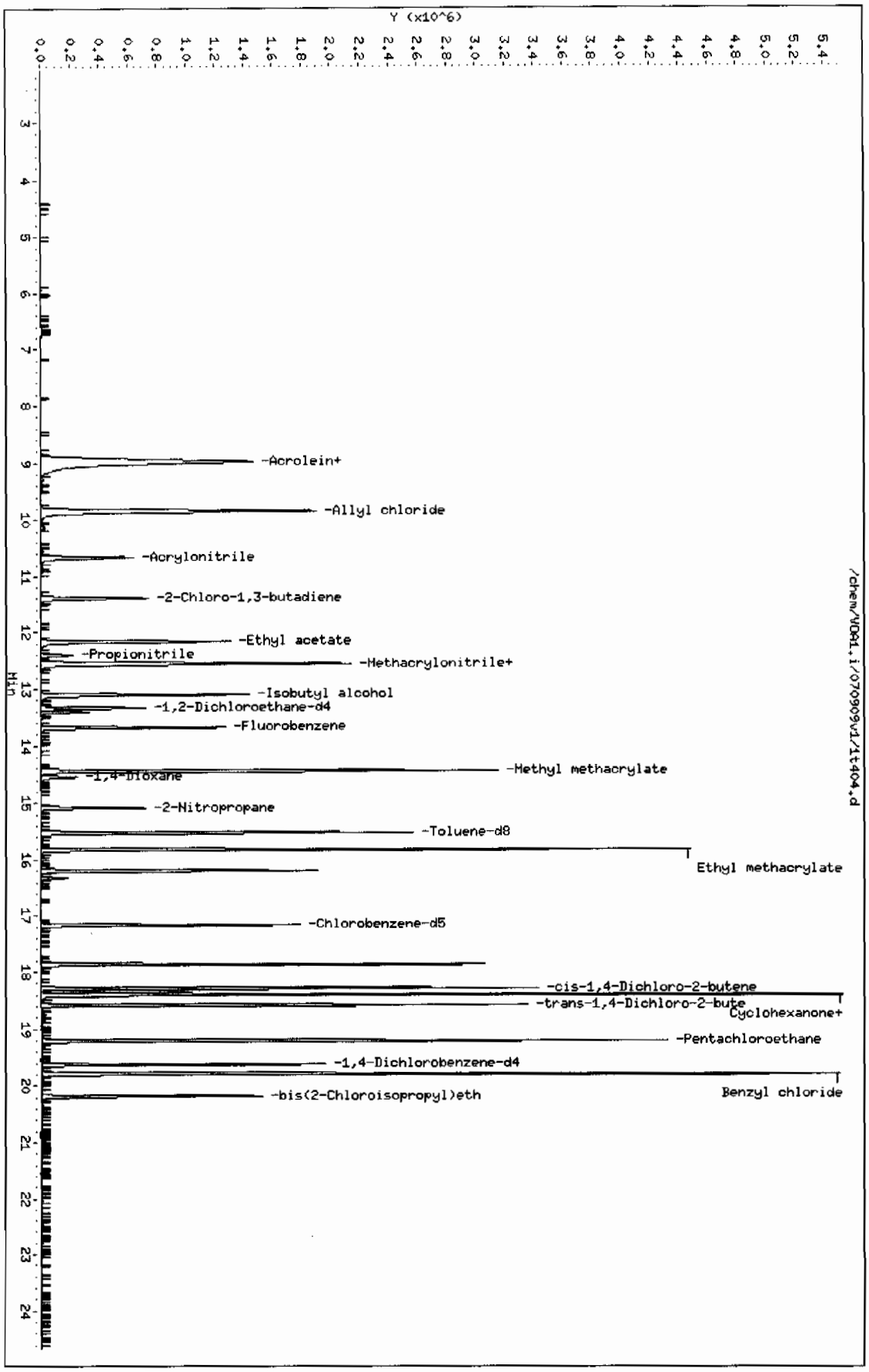

Page 1

Data File: /chem/VOA1.i/071009v1/1t504.d
Report Date: 10-Jul-2009 12:40

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1t504.d
Analysis Type: WATER
Lab Sample ID: W1VM090710-02
Method: /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m

Injection Date: 10-JUL-2009 11:16
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	1 Xylenes (total)	0.69178	0.69250	0.69250	0.050	0.10440	60.00000	Averaged	
M	2 1,2-Dichloroethylene (total	0.33439	0.33702	0.33702	0.050	0.78663	60.00000	Averaged	
M	3 1,3-Dichloropropylene	0.59231	0.61471	0.61471	0.050	3.78187	60.00000	Averaged	
	5 Dichlorodifluoromethane	0.22899	0.22714	0.22714	0.050	-0.80783	60.00000	Averaged	
	6 Chloromethane	0.44211	0.41761	0.41761	0.100	-5.54044	60.00000	Averaged	spcc
	7 Vinyl chloride	0.34386	0.31695	0.31695	0.050	-7.82474	20.00000	Averaged	ccc
	9 Bromomethane	0.23589	0.21937	0.21937	0.050	-7.00395	60.00000	Averaged	
	10 Chloroethane	0.25782	0.26188	0.26188	0.050	1.57715	60.00000	Averaged	
	11 Trichlorofluoromethane	0.32562	0.39461	0.39461	0.050	21.18752	60.00000	Averaged	
	12 Ethyl Ether	0.28702	0.30141	0.30141	0.010	5.01590	60.00000	Averaged	
	16 Acetone	0.22939	0.10604	0.10604	0.000	-53.77169	60.00000	Averaged	
	22 Acetonitrile	0.04150	0.03975	0.03975	0.010	-4.19596	60.00000	Averaged	
	15 1,1-Dichloroethylene	0.59496	0.56253	0.56253	0.050	-5.45096	20.00000	Averaged	ccc
	21 Methyl acetate	0.25915	0.23986	0.23986	0.010	-7.44353	60.00000	Averaged	
	18 Iodomethane	0.47694	0.45252	0.45252	0.050	-5.12053	60.00000	Averaged	
	23 Methylene chloride	49.55543	50.00000	0.35029	0.000	-0.88913	60.00000	Linear	
	19 Carbon disulfide	0.95658	1.01040	1.01040	0.050	5.62563	60.00000	Averaged	
	25 tert-Butyl methyl ether	0.84247	0.83291	0.83291	0.050	-1.13487	60.00000	Averaged	
	26 trans-1,2-Dichloroethylene	0.32645	0.31377	0.31377	0.050	-3.88570	60.00000	Averaged	
	29 Vinyl acetate	0.50428	0.59560	0.59560	0.010	18.10927	60.00000	Averaged	
	30 1,1-Dichloroethane	0.64965	0.63098	0.63098	0.100	-2.87369	60.00000	Averaged	spcc
	35 2-Butanone	0.25663	0.15425	0.15425	0.030	-39.89391	60.00000	Averaged	
	36 cis-1,2-Dichloroethylene	0.34232	0.36027	0.36027	0.050	5.24232	60.00000	Averaged	
	33 2,2-Dichloropropane	0.33455	0.38396	0.38396	0.050	14.76824	60.00000	Averaged	
	41 Chloroform	0.58475	0.56055	0.56055	0.010	-4.13798	20.00000	Averaged	ccc
	39 Bromochloromethane	0.15749	0.14768	0.14768	0.010	-6.22926	60.00000	Averaged	
	43 1,1,1-Trichloroethane	0.37278	0.40373	0.40373	0.010	8.30428	60.00000	Averaged	
	42 Cyclohexane	0.60946	0.67344	0.67344	0.010	10.49890	60.00000	Averaged	
	45 1,1-Dichloropropene	0.41989	0.45839	0.45839	0.010	9.16734	60.00000	Averaged	
	53 n-Butyl alcohol	0.00862	0.01065	0.01065	0.001	23.58605	60.00000	Averaged	
	44 Carbon tetrachloride	0.39059	0.39990	0.39990	0.010	2.38403	60.00000	Averaged	
$	48 1,2-Dichloroethane-d4	0.42530	0.41202	0.41202	0.010	-3.12173	60.00000	Averaged	
	51 1,2-Dichloroethane	0.46971	0.43002	0.43002	0.010	-8.44951	60.00000	Averaged	
	47 Benzene	1.39078	1.33430	1.33430	0.010	-4.06116	60.00000	Averaged	
	50 Cyclohexene	0.46958	0.51434	0.51434	0.010	9.53360	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1t504.d
Analysis Type: WATER
Lab Sample ID: W1VM090710-02
Method: /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m

Injection Date: 10-JUL-2009 11:16
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	54 Trichloroethylene	0.33093	0.33716	0.33716	0.010	1.88246	60.00000	Averaged	
	57 1,2-Dichloropropane	0.36887	0.37247	0.37247	0.010	0.97769	20.00000	Averaged	ccc
	55 Methylcyclohexane	0.53987	0.61641	0.61641	0.010	14.17636	60.00000	Averaged	
	60 Bromodichloromethane	0.43411	0.43755	0.43755	0.010	0.79124	60.00000	Averaged	
	59 Dibromomethane	0.20115	0.18972	0.18972	0.010	-5.68024	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	0.17549	0.17507	0.17507	0.000	-0.23822	60.00000	Averaged	
	64 4-Methyl-2-pentanone	0.16089	0.15392	0.15392	0.010	-4.33137	60.00000	Averaged	
	63 cis-1,3-Dichloropropylene	0.52078	0.55853	0.55853	0.010	7.24834	60.00000	Averaged	
$	65 Toluene-d8	1.74064	1.70485	1.70485	0.010	-2.05619	60.00000	Averaged	
	66 Toluene	1.05215	0.97423	0.97423	0.010	-7.40587	20.00000	Averaged	ccc
	68 trans-1,3-Dichloropropylene	0.56062	0.57858	0.57858	0.010	3.20430	60.00000	Averaged	
	69 1,1,2-Trichloroethane	0.28927	0.28097	0.28097	0.010	-2.86753	60.00000	Averaged	
	71 2-Hexanone	0.39571	0.27575	0.27575	0.010	-30.31487	60.00000	Averaged	
	72 1,3-Dichloropropane	0.60636	0.57087	0.57087	0.010	-5.85352	60.00000	Averaged	
	70 Tetrachloroethylene	0.30738	0.29036	0.29036	0.010	-5.53756	60.00000	Averaged	
	73 Dibromochloromethane	0.35978	0.34017	0.34017	0.010	-5.45222	60.00000	Averaged	
	74 1,2-Dibromoethane	0.32478	0.30821	0.30821	0.010	-5.10122	60.00000	Averaged	
	77 Chlorobenzene	1.05603	1.02074	1.02074	0.300	-3.34176	60.00000	Averaged	spcc
	79 1,1,1,2-Tetrachloroethane	0.36123	0.34507	0.34507	0.010	-4.47268	60.00000	Averaged	
	78 Ethylbenzene	1.91243	1.85325	1.85325	0.010	-3.09446	20.00000	Averaged	ccc
	80 m,p-Xylenes	0.70032	0.68850	0.68850	0.010	-1.68862	60.00000	Averaged	
	81 o-Xylene	0.67468	0.70050	0.70050	0.010	3.82676	60.00000	Averaged	
	82 Styrene	1.17829	1.21223	1.21223	0.010	2.88117	60.00000	Averaged	
	83 Bromoform	0.42240	0.41729	0.41729	0.100	-1.21038	60.00000	Averaged	spcc
	84 Isopropylbenzene	3.33035	2.96896	2.96896	0.010	-10.85150	60.00000	Averaged	
	88 1,1,2,2-Tetrachloroethane	0.84214	0.80583	0.80583	0.300	-4.31109	60.00000	Averaged	spcc
$	87 Bromofluorobenzene	1.28777	1.27512	1.27512	0.010	-0.98239	60.00000	Averaged	
	92 1,2,3-Trichloropropane	0.20962	0.21098	0.21098	0.010	0.64800	60.00000	Averaged	
	91 Bromobenzene	0.84757	0.78184	0.78184	0.010	-7.75573	60.00000	Averaged	
	89 n-Propylbenzene	4.21198	4.19786	4.19786	0.010	-0.33514	60.00000	Averaged	
	94 2-Chlorotoluene	2.91182	2.87945	2.87945	0.010	-1.11200	60.00000	Averaged	
	93 1,3,5-Trimethylbenzene	2.83423	2.90292	2.90292	0.010	2.42360	60.00000	Averaged	
	95 4-Chlorotoluene	2.60334	2.65411	2.65411	0.010	1.94985	60.00000	Averaged	
	96 tert-Butylbenzene	2.28981	2.38230	2.38230	0.010	4.03916	60.00000	Averaged	
	97 1,2,4-Trimethylbenzene	2.95560	2.99410	2.99410	0.010	1.30239	60.00000	Averaged	
	99 sec-Butylbenzene	3.85727	4.03672	4.03672	0.010	4.65219	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 10-JUL-2009 11:16
Lab File ID: 1t504.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090710-02 Quant Type: ISTD
Method: /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
100 4-Isopropyltoluene	2.82205	3.06455	3.06455	0.010	8.59305	60.00000	Averaged
101 1,3-Dichlorobenzene	1.63045	1.59685	1.59685	0.010	-2.06074	60.00000	Averaged
103 1,4-Dichlorobenzene	1.67797	1.60081	1.60081	0.010	-4.59840	60.00000	Averaged
105 n-Butylbenzene	3.04073	3.33706	3.33706	0.010	9.74535	60.00000	Averaged
106 1,2-Dichlorobenzene	1.54220	1.47930	1.47930	0.010	-4.07887	60.00000	Averaged
108 1,2-Dibromo-3-chloropropane	0.13687	0.14352	0.14352	0.010	4.85839	60.00000	Averaged
109 1,2,4-Trichlorobenzene	1.00254	1.03341	1.03341	0.010	3.07887	60.00000	Averaged
110 Hexachlorobutadiene	0.58653	0.57048	0.57048	0.010	-2.73708	60.00000	Averaged
111 Naphthalene	2.18213	2.16819	2.16819	0.010	-0.63867	60.00000	Averaged
112 1,2,3-Trichlorobenzene	0.88500	0.88340	0.88340	0.010	-0.18070	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 6.37133
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071009v1/1t504.d
Lab Smp Id: W1VM090710-02 Client Smp ID: VSTD050
Inj Date : 10-JUL-2009 11:16
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090710-02|CCV/LCS|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090605-01E/IVM090707-01
Comment :
Method : /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m
Meth Date : 10-Jul-2009 12:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 1 Xylenes (total)	106				2335347	150.000	150
M 2 1,2-Dichloroethylene (total)	96				882924	100.000	101
M 3 1,3-Dichloropropylene	75				1382016	100.000	105
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	297536	50.0000	49.6
6 Chloromethane	50	5.535	5.535	(0.405)	547030	50.0000	47.2
7 Vinyl chloride	62	5.908	5.908	(0.432)	415179	50.0000	46.1
9 Bromomethane	96	6.934	6.934	(0.507)	287351	50.0000	46.5
10 Chloroethane	64	7.210	7.210	(0.527)	343039	50.0000	50.8
11 Trichlorofluoromethane	101	7.831	7.831	(0.572)	516897	50.0000	60.6
12 Ethyl Ether	59	8.462	8.462	(0.618)	394823	50.0000	52.5
16 Acetone	43	9.240	9.240	(0.675)	694542	250.000	116
22 Acetonitrile	41	9.967	9.967	(0.728)	1301869	1250.00	1200
15 1,1-Dichloroethylene	61	9.079	9.079	(0.664)	736859	50.0000	47.3
21 Methyl acetate	43	9.824	9.824	(0.718)	1570953	250.000	231
18 Iodomethane	142	9.461	9.461	(0.691)	2963800	250.000	237

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
23 Methylene chloride	84	10.128	10.128	(0.740)	458848	50.0000	49.6
19 Carbon disulfide	76	9.562	9.562	(0.699)	6617623	250.000	264
25 tert-Butyl methyl ether	73	10.432	10.432	(0.762)	1091027	50.0000	49.4
26 trans-1,2-Dichloroethylene	96	10.538	10.538	(0.770)	411004	50.0000	48.0
29 Vinyl acetate	43	11.288	11.288	(0.825)	3900886	250.000	295
30 1,1-Dichloroethane	63	11.307	11.307	(0.826)	826519	50.0000	48.6
35 2-Butanone	43	12.181	12.181	(0.890)	1010275	250.000	150
36 cis-1,2-Dichloroethylene	96	12.190	12.190	(0.891)	471919	50.0000	52.6
33 2,2-Dichloropropane	77	12.154	12.154	(0.888)	502953	50.0000	57.4
41 Chloroform	83	12.600	12.600	(0.921)	734267	50.0000	47.9
39 Bromochloromethane	128	12.549	12.549	(0.917)	193445	50.0000	46.9
43 1,1,1-Trichloroethane	97	12.839	12.839	(0.938)	528850	50.0000	54.2
42 Cyclohexane	56	12.835	12.835	(0.938)	882144	50.0000	55.2
45 1,1-Dichloropropene	75	13.047	13.047	(0.954)	600440	50.0000	54.6
53 n-Butyl alcohol	56	13.926	13.926	(1.018)	1394969	5000.00	6180
44 Carbon tetrachloride	117	13.019	13.019	(0.952)	523832	50.0000	51.2
$ 48 1,2-Dichloroethane-d4	65	13.336	13.336	(0.975)	539708	50.0000	48.4
51 1,2-Dichloroethane	62	13.433	13.433	(0.982)	563282	50.0000	45.8
47 Benzene	78	13.327	13.327	(0.974)	1747802	50.0000	48.0
50 Cyclohexene	54	13.392	13.392	(0.979)	673741	50.0000	54.8
* 52 Fluorobenzene	96	13.682	13.682	(1.000)	1309903	50.0000	
54 Trichloroethylene	95	14.110	14.110	(1.031)	441640	50.0000	50.9
57 1,2-Dichloropropane	63	14.455	14.455	(1.057)	487902	50.0000	50.5
55 Methylcyclohexane	83	14.280	14.280	(1.044)	807436	50.0000	57.1
60 Bromodichloromethane	83	14.750	14.750	(1.078)	573145	50.0000	50.4
59 Dibromomethane	93	14.621	14.621	(1.069)	248518	50.0000	47.2
61 2-Chloroethylvinyl ether	63	15.030	15.030	(1.099)	1146650	250.000	249
64 4-Methyl-2-pentanone	58	15.362	15.362	(0.895)	865142	250.000	239
63 cis-1,3-Dichloropropylene	75	15.256	15.256	(1.115)	731619	50.0000	53.6
$ 65 Toluene-d8	98	15.518	15.518	(0.904)	1916450	50.0000	49.0
66 Toluene	92	15.597	15.597	(0.909)	1095147	50.0000	46.3
68 trans-1,3-Dichloropropylene	75	15.877	15.877	(0.925)	650396	50.0000	51.6
69 1,1,2-Trichloroethane	83	16.103	16.103	(0.938)	315846	50.0000	48.6
71 2-Hexanone	43	16.273	16.273	(0.948)	1549868	250.000	174
72 1,3-Dichloropropane	76	16.310	16.310	(0.950)	641724	50.0000	47.1
70 Tetrachloroethylene	164	16.190	16.190	(0.943)	326401	50.0000	47.2
73 Dibromochloromethane	129	16.549	16.549	(0.964)	382385	50.0000	47.3
74 1,2-Dibromoethane	107	16.729	16.729	(0.975)	346466	50.0000	47.4
* 76 Chlorobenzene-d5	117	17.162	17.162	(1.000)	1124117	50.0000	
77 Chlorobenzene	112	17.198	17.198	(1.002)	1147428	50.0000	48.3
79 1,1,1,2-Tetrachloroethane	131	17.263	17.263	(1.006)	387901	50.0000	47.8
78 Ethylbenzene	91	17.226	17.226	(1.004)	2083274	50.0000	48.4
80 m,p-Xylenes	106	17.341	17.341	(1.010)	1547907	100.000	98.3
81 o-Xylene	106	17.788	17.788	(1.036)	787439	50.0000	51.9
82 Styrene	104	17.811	17.811	(1.038)	1362693	50.0000	51.4
83 Bromoform	173	18.105	18.105	(0.923)	249892	50.0000	49.4
84 Isopropylbenzene	105	18.137	18.137	(0.925)	1777965	50.0000	44.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,1,2,2-Tetrachloroethane	83	18.510	18.510	(0.944)	482574	50.0000	47.8
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	763605	50.0000	49.5
92 1,2,3-Trichloropropane	110	18.607	18.607	(0.949)	126343	50.0000	50.3
91 Bromobenzene	156	18.598	18.598	(0.948)	468203	50.0000	46.1
89 n-Propylbenzene	91	18.566	18.566	(0.946)	2513892	50.0000	49.8
94 2-Chlorotoluene	91	18.745	18.745	(0.956)	1724359	50.0000	49.4
93 1,3,5-Trimethylbenzene	105	18.727	18.727	(0.955)	1738414	50.0000	51.2
95 4-Chlorotoluene	91	18.860	18.860	(0.962)	1589414	50.0000	51.0
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1426643	50.0000	52.0
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1793018	50.0000	50.6
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	2417395	50.0000	52.3
100 4-Isopropyltoluene	119	19.431	19.431	(0.991)	1835208	50.0000	54.3
101 1,3-Dichlorobenzene	146	19.546	19.546	(0.996)	956277	50.0000	49.0
* 102 1,4-Dichlorobenzene-d4	152	19.615	19.615	(1.000)	598851	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.002)	958649	50.0000	47.7
105 n-Butylbenzene	91	19.877	19.877	(1.013)	1998403	50.0000	54.9
106 1,2-Dichlorobenzene	146	20.085	20.085	(1.024)	885879	50.0000	48.0
108 1,2-Dibromo-3-chloropropane	157	21.010	21.010	(1.071)	85947	50.0000	52.4
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	618858	50.0000	51.5
110 Hexachlorobutadiene	225	22.119	22.119	(1.128)	341630	50.0000	48.6
111 Naphthalene	128	22.451	22.451	(1.145)	1298425	50.0000	49.7
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.163)	529022	50.0000	49.9

Data File: /chem/VOA1.i/071009v1/1t504.d
Date : 10-JUL-2009 11:16
Client ID: VSTD050
Sample Info: IWLVH090710-021CCV/LCS11\VOAF11
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

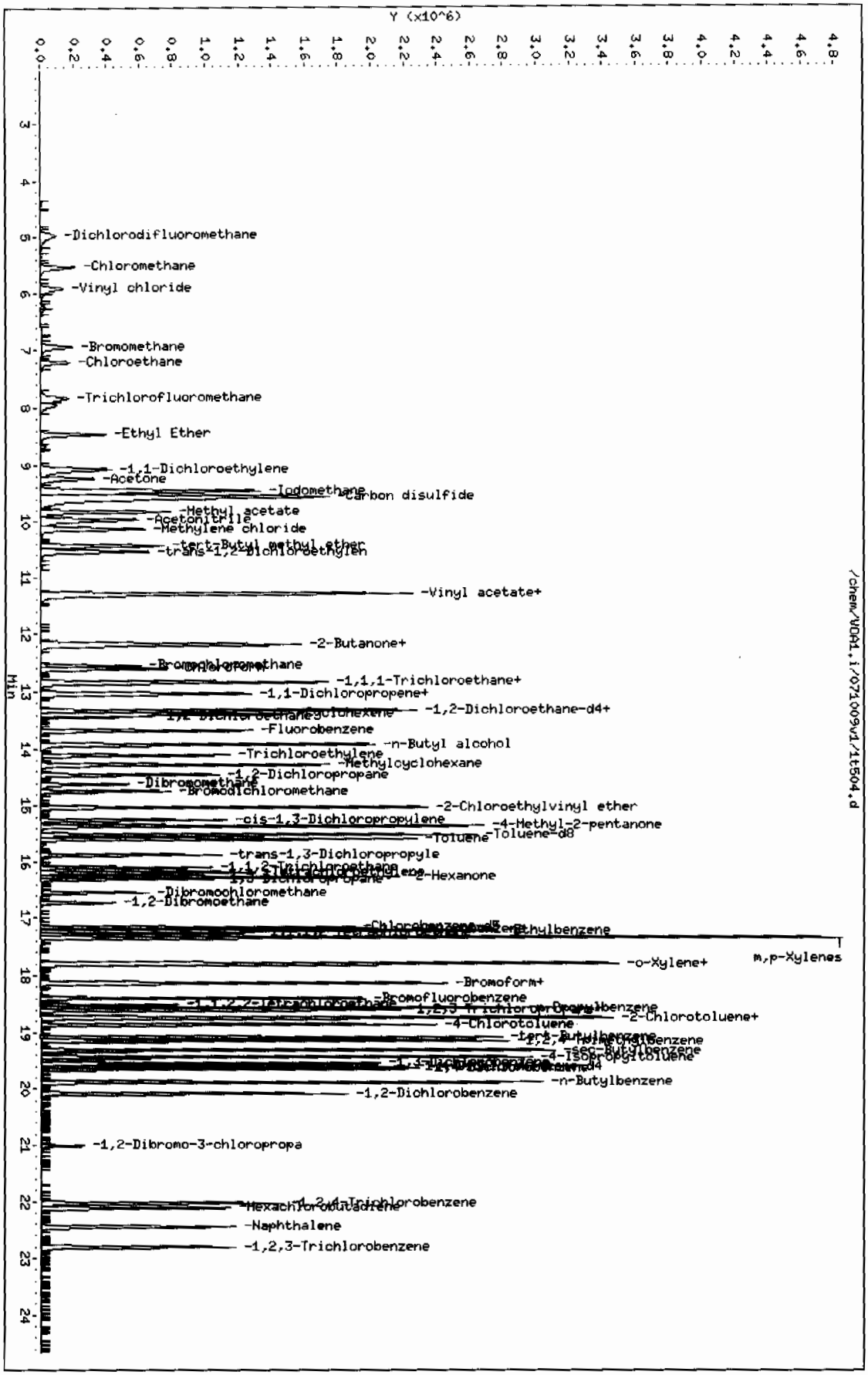

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 10-JUL-2009 12:17
Lab File ID: 1t506.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: UVM090701-08A Quant Type: ISTD
Method: /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
4 Chlorotrifluoroethylene	0.19019	0.20693	0.20693	0.010	8.80232	60.00000	Averaged
8 2-Chloro-1,1,1-trifluoroeth	0.34048	0.35019	0.35019	0.010	2.85143	60.00000	Averaged
13 Acrolein	0.04947	0.05230	0.05230	0.001	5.71798	60.00000	Averaged
14 Trichlorotrifluoroethane	0.28145	0.21994	0.21994	0.030	-21.85610	60.00000	Averaged
17 Isopropyl Alcohol	0.01950	0.02252	0.02252	0.000	15.47936	60.00000	Averaged
20 Allyl chloride	205	250	0.11224	0.010	-17.83728	60.00000	Linear
24 tert-Butyl Alcohol	0.03062	0.03514	0.03514	0.010	14.73805	60.00000	Averaged
27 Acrylonitrile	0.11278	0.10994	0.10994	0.010	-2.51882	60.00000	Averaged
28 Isopropyl ether	1.16254	1.23448	1.23448	0.010	6.18858	60.00000	Averaged
31 2-Chloro-1,3-butadiene	0.44344	0.40549	0.40549	0.010	-8.55790	60.00000	Averaged
32 Ethyl tert-butyl ether	1.03281	1.11287	1.11287	0.010	7.75184	60.00000	Averaged
37 Propionitrile	0.04568	0.04473	0.04473	0.010	-2.08316	60.00000	Averaged
34 Ethyl acetate	0.31721	0.27685	0.27685	0.010	-12.72258	60.00000	Averaged
40 Methacrylonitrile	0.23340	0.22003	0.22003	0.010	-5.73113	60.00000	Averaged
38 Tetrahydrofuran	0.22772	0.22325	0.22325	0.010	-1.96340	60.00000	Averaged
46 Isobutyl alcohol	0.00969	0.01094	0.01094	0.001	12.90401	60.00000	Averaged
49 Methyl tert-amyl ether	0.85461	0.92142	0.92142	0.010	7.81721	60.00000	Averaged
56 Methyl methacrylate	0.18420	0.18752	0.18752	0.010	1.79926	60.00000	Averaged
67 Ethyl methacrylate	0.43841	0.41070	0.41070	0.010	-6.32079	60.00000	Averaged
75 1-Chlorohexane	0.33469	0.38178	0.38178	0.000	14.07120	60.00000	Averaged
58 1,4-Dioxane	0.00275	0.00290	0.00290	0.001	5.10497	60.00000	Averaged
62 2-Nitropropane	0.07858	0.08534	0.08534	0.000	8.60393	60.00000	Averaged
85 cis-1,4-Dichloro-2-butene	0.27487	0.27944	0.27944	0.010	1.66531	60.00000	Averaged
86 Cyclohexanone	0.05915	0.05649	0.05649	0.010	-4.49659	60.00000	Averaged
90 trans-1,4-Dichloro-2-butene	0.26477	0.26395	0.26395	0.010	-0.30992	60.00000	Averaged
98 Pentachloroethane	0.18429	0.29994	0.29994	0.010	62.75007	60.00000	Averaged <-
104 Benzyl chloride	1.33213	1.55426	1.55426	0.010	16.67470	60.00000	Averaged
107 bis(2-Chloroisopropyl)ether	0.38370	0.39542	0.39542	0.010	3.05497	60.00000	Averaged
$ 48 1,2-Dichloroethane-d4	0.42530	0.39459	0.39459	0.010	-7.22039	60.00000	Averaged
$ 65 Toluene-d8	1.74064	1.69464	1.69464	0.010	-2.64263	60.00000	Averaged
$ 87 Bromofluorobenzene	1.28777	1.29432	1.29432	0.010	0.50856	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 10-JUL-2009 12:17
Lab File ID: 1t506.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: UVM090701-08A Quant Type: ISTD
Method: /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m

Average %D / Drift Results.	
Calculated Average %D/Drift =	9.37885
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071009v1/1t506.d
Lab Smp Id: UVM090701-08A Client Smp ID: VSTD25S
Inj Date : 10-JUL-2009 12:17
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |UVM090701-08A|SHORT|1|VOAF|1|
Misc Info : GEL 5ML N/A
Comment :
Method : /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m
Meth Date : 10-Jul-2009 12:39 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
4 Chlorotrifluoroethylene	116	4.883	4.883	(0.357)	842236	150.000	163
8 2-Chloro-1,1,1-trifluoroethane	118	6.298	6.298	(0.460)	1425291	150.000	154
13 Acrolein	56	8.945	8.945	(0.653)	354743	250.000	264
14 Trichlorotrifluoroethane	101	8.996	8.996	(0.657)	1491947	250.000	195
17 Isopropyl Alcohol	45	9.451	9.451	(0.690)	1527845	2500.00	2890
20 Allyl chloride	76	9.852	9.852	(0.720)	761381	250.000	205
24 tert-Butyl Alcohol	59	10.202	10.202	(0.745)	2383408	2500.00	2870
27 Acrylonitrile	53	10.680	10.680	(0.780)	745790	250.000	244
28 Isopropyl ether	45	11.205	11.205	(0.818)	1674816	50.0000	53.1
31 2-Chloro-1,3-butadiene	53	11.399	11.399	(0.833)	550128	50.0000	45.7
32 Ethyl tert-butyl ether	59	11.767	11.767	(0.859)	1509824	50.0000	53.9
37 Propionitrile	54	12.416	12.416	(0.907)	303409	250.000	245
34 Ethyl acetate	43	12.172	12.172	(0.889)	1878029	250.000	218
40 Methacrylonitrile	41	12.568	12.568	(0.918)	1492545	250.000	236
38 Tetrahydrofuran	42	12.545	12.545	(0.639)	659439	250.000	245

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
46 Isobutyl alcohol	41	13.116	13.116	(0.958)	742223	2500.00	2820
49 Methyl tert-amyl ether	73	13.359	13.359	(0.976)	1250082	50.0000	53.9
56 Methyl methacrylate	69	14.446	14.446	(1.055)	1272017	250.000	254
67 Ethyl methacrylate	69	15.822	15.822	(0.922)	2368784	250.000	234
75 1-Chlorohexane	55	17.037	17.037	(1.244)	517958	50.0000	57.0
58 1,4-Dioxane	88	14.556	14.556	(1.063)	196419	2500.00	2630
62 2-Nitropropane	43	15.086	15.086	(1.102)	578895	250.000	272
85 cis-1,4-Dichloro-2-butene	53	18.285	18.285	(0.932)	825413	250.000	254
86 Cyclohexanone	55	18.395	18.395	(1.072)	1629027	1250.00	1190
90 trans-1,4-Dichloro-2-butene	53	18.575	18.575	(0.947)	779656	250.000	249
98 Pentachloroethane	167	19.205	19.205	(0.979)	885951	250.000	407(A)
104 Benzyl chloride	91	19.785	19.785	(1.008)	4590953	250.000	292
107 bis(2-Chloroisopropyl)ether	45	20.177	20.177	(1.028)	1167996	250.000	258
* 52 Fluorobenzene	96	13.691	13.691	(1.000)	1356692	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	1153549	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	590756	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.346	(0.975)	535337	50.0000	46.4
$ 65 Toluene-d8	98	15.527	15.527	(0.905)	1954851	50.0000	48.7
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	764625	50.0000	50.2

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/VOA1.i/071009v1/1t506.d
Date : 10-JUL-2009 12:17
Client ID: VSTD25S
Sample Info: IUWH090701-08A|SHORT|1|VOAF|1|
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXM4
Column diameter: 0.25

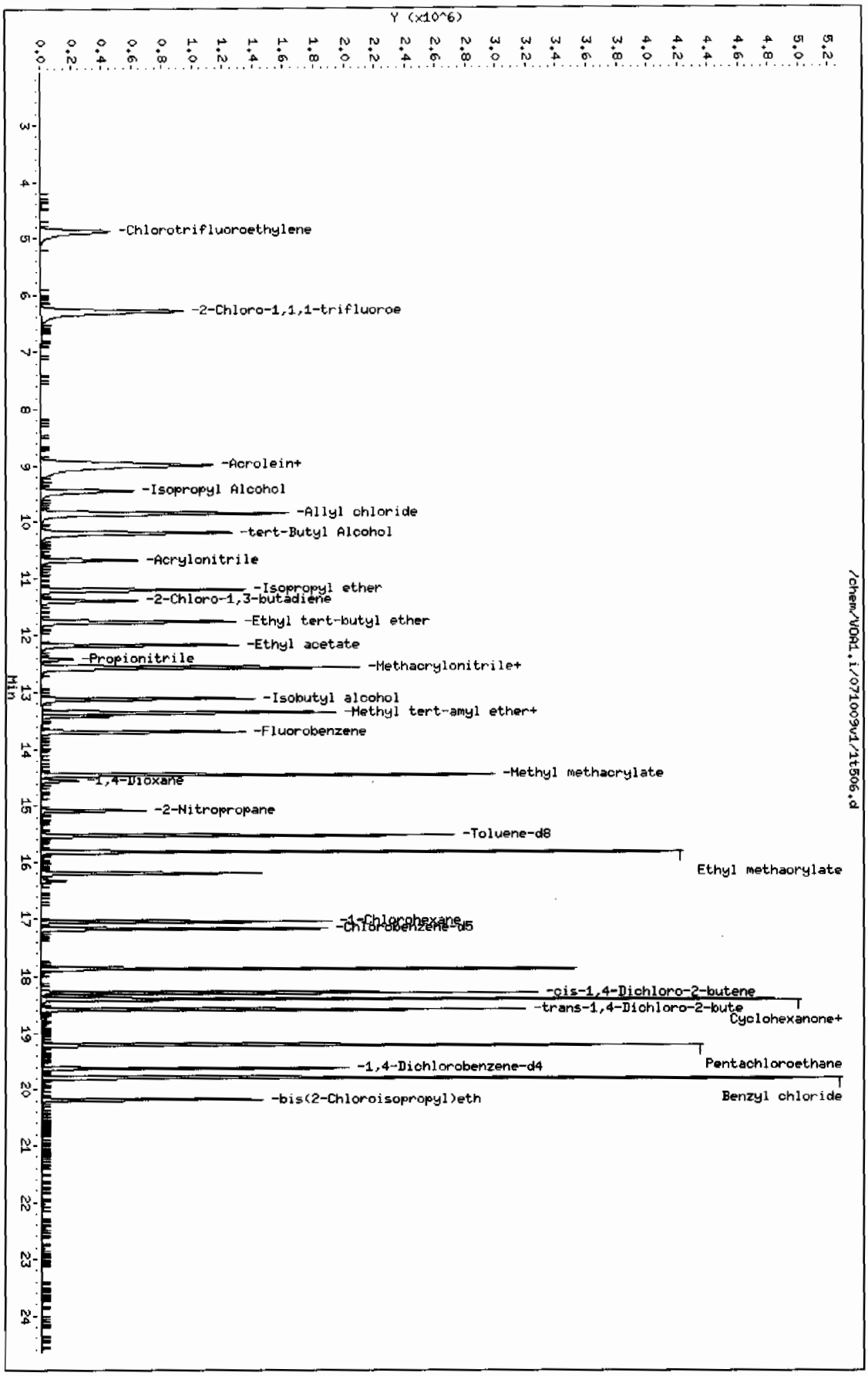

Page 1

QC Data

Data File: /chem/VOA1.i/070109v1/1s309.d

Page 1

Date : 01-JUL-2009 14:32

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXH4

Column phase: RTX-Volatiles

Column diameter: 0.25

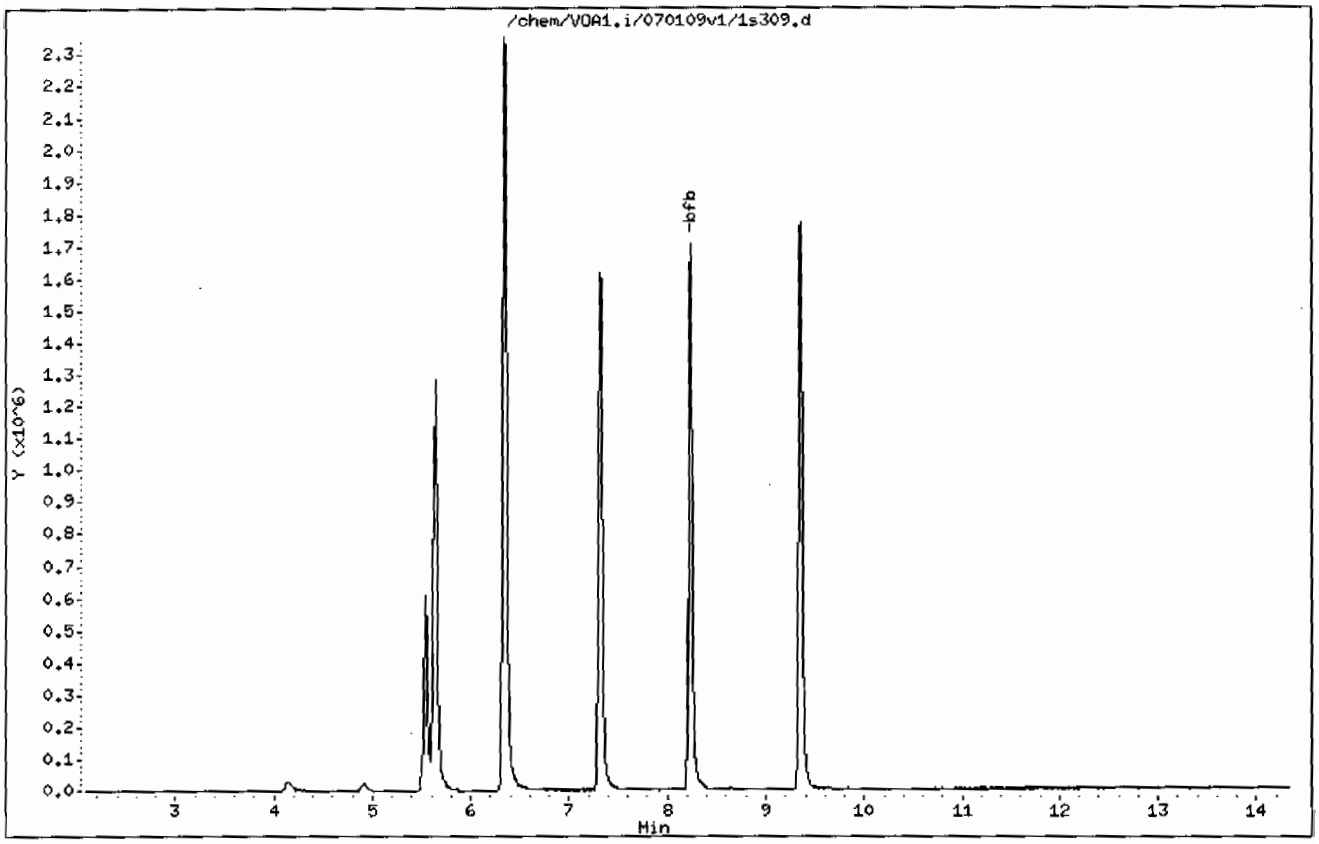

Data File: /chem/VOA1.i/070109v1/1s309.d

Date : 01-JUL-2009 14:32

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

1 bfb

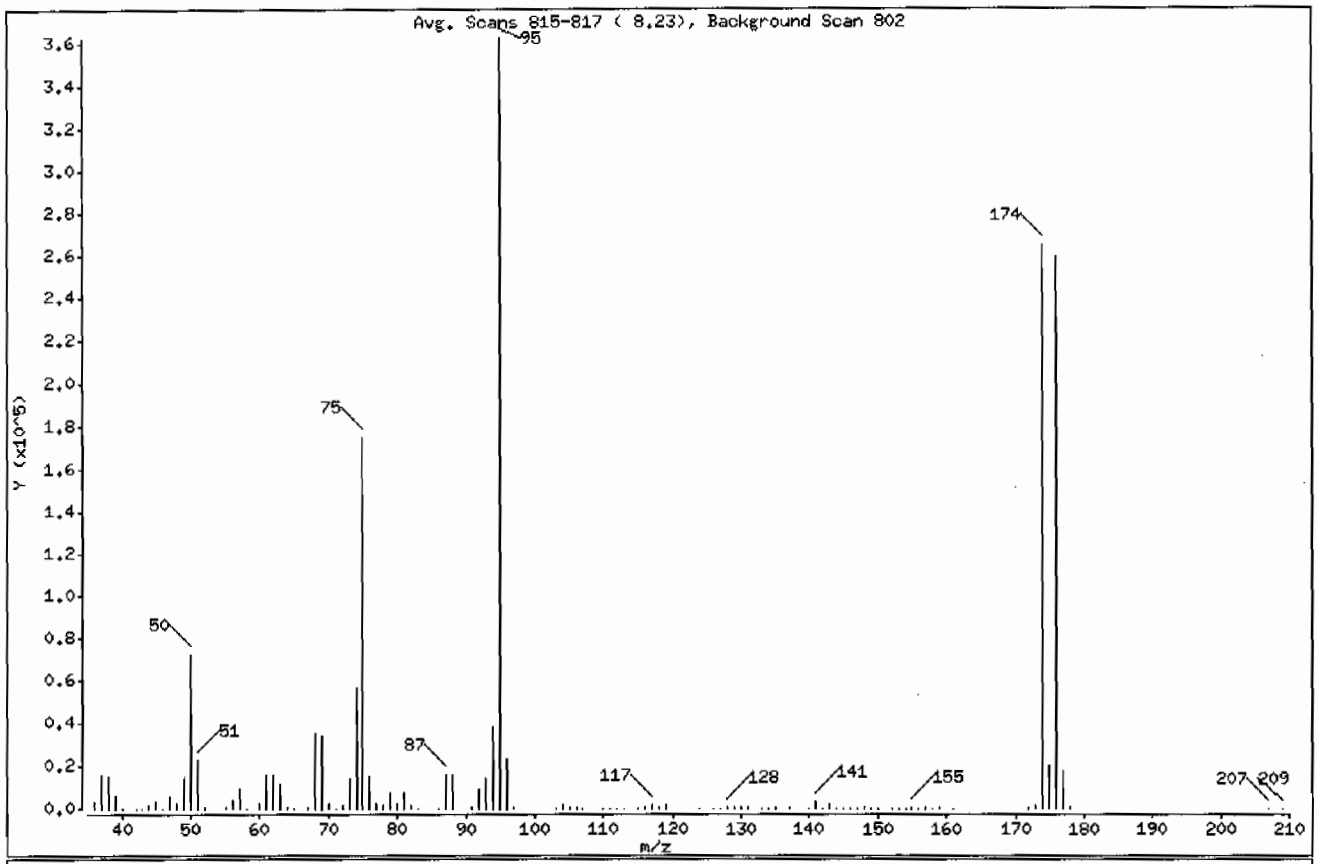

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.99
75	30.00 - 60.00% of mass 95	48.22
96	5.00 - 9.00% of mass 95	6.52
173	Less than 2.00% of mass 174	0.51 (0.70)
174	50.00 - 100.00% of mass 95	72.99
175	5.00 - 9.00% of mass 174	5.47 (7.49)
176	95.00 - 101.00% of mass 174	71.54 (98.02)
177	5.00 - 9.00% of mass 176	4.75 (6.63)

Data File: /chem/VOA1.i/070109v1/1s309.d

Date : 01-JUL-2009 14:32

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVH090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Data File: 1s309.d
Spectrum: Avg. Scans 815-817 (8.23), Background Scan 802
Location of Maximum: 95.00
Number of points: 107

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2987	68.00	35144	104.00	1379	143.00	2894
37.00	15962	69.00	33824	105.00	452	144.00	194
38.00	15049	70.00	2527	106.00	1148	145.00	326
39.00	5607	71.00	65	107.00	197	146.00	410
40.00	46	72.00	1757	110.00	207	147.00	269
42.00	56	73.00	13802	111.00	228	148.00	792
43.00	203	74.00	56696	112.00	122	149.00	198
44.00	1542	75.00	174720	113.00	201	150.00	398
45.00	2973	76.00	15205	115.00	268	152.00	104
46.00	141	77.00	2174	116.00	994	153.00	135
47.00	6030	78.00	1423	117.00	1788	154.00	51
48.00	2091	79.00	7784	118.00	1022	155.00	775
49.00	14352	80.00	2513	119.00	1547	156.00	51
50.00	72416	81.00	7510	124.00	149	157.00	540
51.00	22592	82.00	1769	126.00	56	158.00	50
52.00	1046	83.00	251	127.00	56	159.00	476
55.00	931	86.00	317	128.00	1115	161.00	242
56.00	4576	87.00	16104	129.00	570	172.00	425
57.00	9188	88.00	15611	130.00	1059	173.00	1854
58.00	364	91.00	1103	131.00	456	174.00	264448
60.00	2757	92.00	9230	133.00	110	175.00	19800
61.00	15582	93.00	14536	134.00	68	176.00	259200
62.00	15896	94.00	38184	135.00	542	177.00	17192
63.00	11969	95.00	362304	137.00	472	178.00	441
64.00	1209	96.00	23624	140.00	121	207.00	96
65.00	341	97.00	792	141.00	2972	209.00	120
67.00	883	103.00	248	142.00	308		

Data File: /chem/VOA1.i/070909v1/1t401.d

Page 1

Date : 09-JUL-2009 07:46

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVH090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

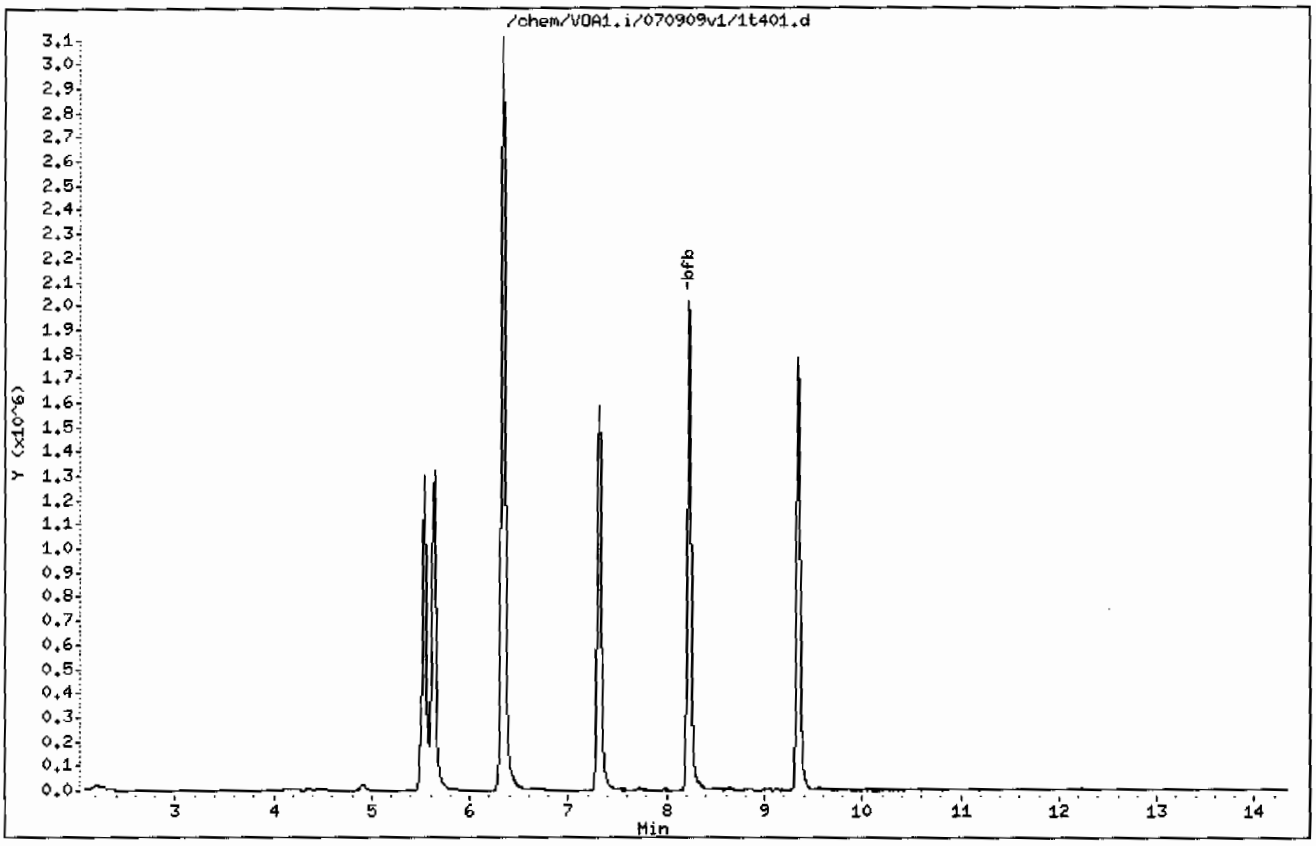

Data File: /chem/VOA1.i/070909v1/1t401.d

Date : 09-JUL-2009 07:46

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

1 bfb

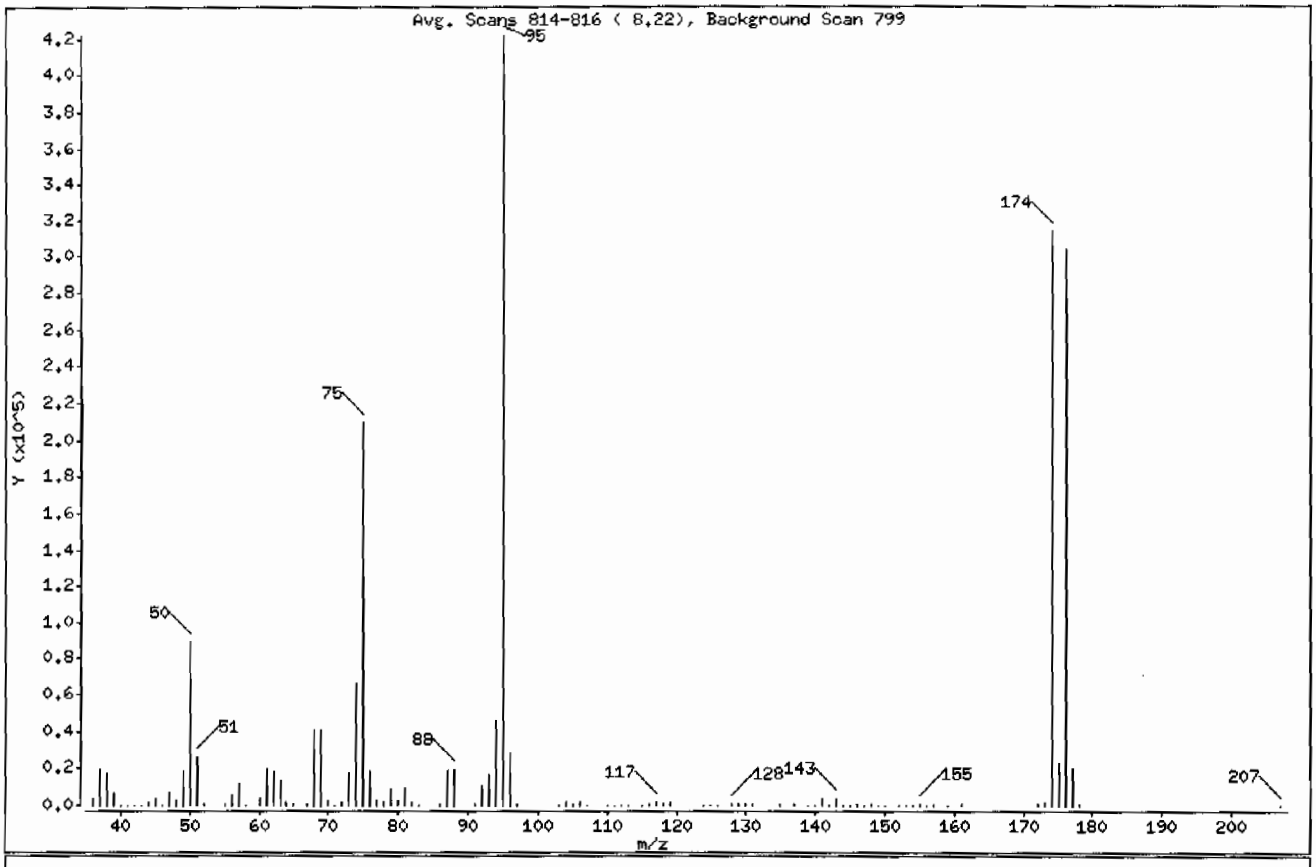

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.10
75	30.00 - 60.00% of mass 95	49.66
96	5.00 - 9.00% of mass 95	6.73
173	Less than 2.00% of mass 174	0.52 (0.70)
174	50.00 - 100.00% of mass 95	74.48
175	5.00 - 9.00% of mass 174	5.46 (7.34)
176	95.00 - 101.00% of mass 174	72.17 (96.90)
177	5.00 - 9.00% of mass 176	4.73 (6.56)

Data File: /chem/VOA1.i/070909v1/1t401.d

Date : 09-JUL-2009 07:46

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Data File: 1t401.d

Spectrum: Avg. Scans 814-816 (8.22), Background Scan 799

Location of Maximum: 95.00

Number of points: 105

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3457	67.00	1023	103.00	171	143.00	3726
37.00	19272	68.00	40856	104.00	1468	144.00	200
38.00	17736	69.00	40912	105.00	583	145.00	428
39.00	6636	70.00	3151	106.00	1617	146.00	529
40.00	356	71.00	136	107.00	299	147.00	188
41.00	77	72.00	1944	110.00	140	148.00	787
42.00	149	73.00	17272	111.00	293	149.00	304
43.00	318	74.00	66248	112.00	213	150.00	410
44.00	1833	75.00	209344	113.00	246	152.00	191
45.00	3755	76.00	18240	115.00	312	153.00	305
46.00	230	77.00	2437	116.00	1310	154.00	241
47.00	6636	78.00	1681	117.00	2209	155.00	913
48.00	2477	79.00	9023	118.00	1360	156.00	59
49.00	18024	80.00	2935	119.00	1739	157.00	595
50.00	88968	81.00	9691	124.00	161	159.00	382
51.00	26184	82.00	1886	125.00	53	161.00	489
52.00	1206	83.00	125	126.00	116	172.00	605
55.00	1180	86.00	542	128.00	1412	173.00	2189
56.00	6170	87.00	18472	129.00	638	174.00	313984
57.00	11734	88.00	18928	130.00	1394	175.00	23032
58.00	450	91.00	1315	131.00	513	176.00	304256
60.00	3668	92.00	10766	135.00	772	177.00	19952
61.00	19256	93.00	16472	137.00	668	178.00	548
62.00	18752	94.00	45480	139.00	52	207.00	238
63.00	13664	95.00	421568	140.00	261		
64.00	1456	96.00	28376	141.00	3574		
65.00	497	97.00	863	142.00	447		

Data File: /chem/VOA1.i/071009v1/1t503.d

Page 1

Date : 10-JUL-2009 10:17

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

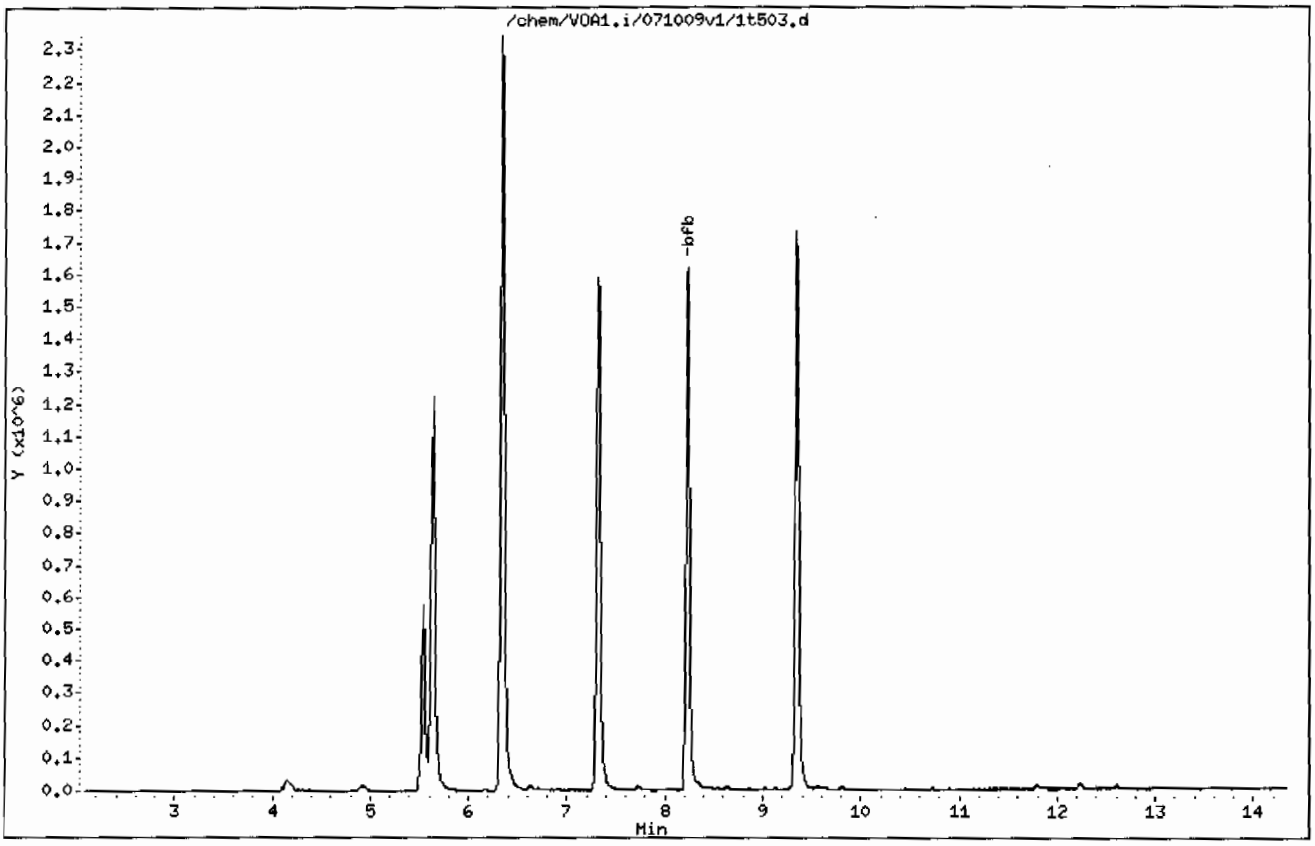

Data File: /chem/VOA1.i/071009v1/1t503.d

Date : 10-JUL-2009 10:17

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

1 bfb

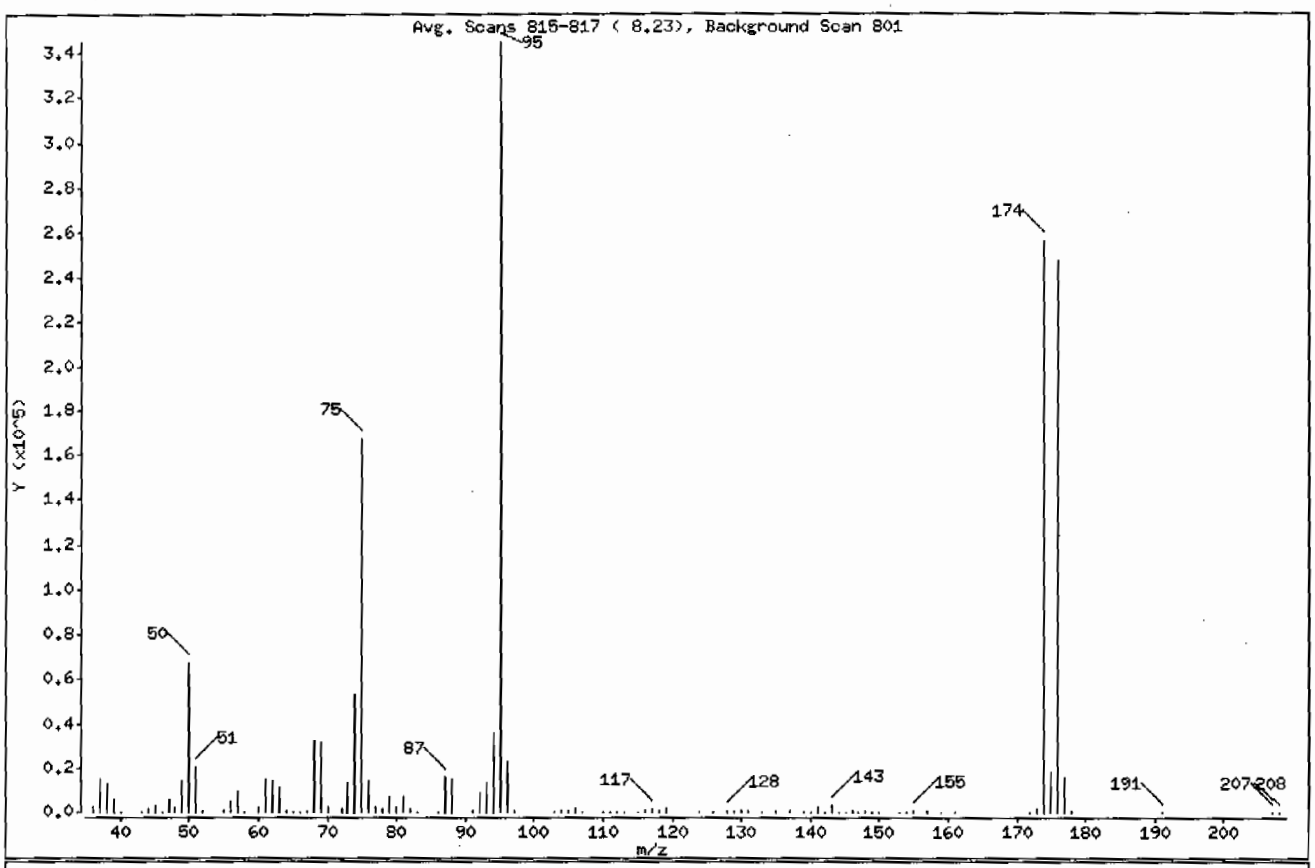

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.61
75	30.00 - 60.00% of mass 95	48.40
96	5.00 - 9.00% of mass 95	6.69
173	Less than 2.00% of mass 174	0.53 (0.71)
174	50.00 - 100.00% of mass 95	74.18
175	5.00 - 9.00% of mass 174	5.31 (7.15)
176	95.00 - 101.00% of mass 174	71.66 (96.60)
177	5.00 - 9.00% of mass 176	4.57 (6.38)

Data File: /chem/VOA1.i/071009v1/1t503.d

Date : 10-JUL-2009 10:17

Client ID: BFB01 Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXH4

Column phase: RTX-Volatiles Column diameter: 0.25

Data File: 1t503.d
Spectrum: Avg. Scans 815-817 (8.23), Background Scan 801
Location of Maximum: 95.00
Number of points: 103

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2702	67.00	783	103.00	162	142.00	357
37.00	15005	68.00	32672	104.00	1140	143.00	3057
38.00	13055	69.00	31904	105.00	482	144.00	243
39.00	5336	70.00	2535	106.00	1203	145.00	274
40.00	340	72.00	1590	107.00	303	146.00	487
43.00	243	73.00	13416	110.00	202	147.00	231
44.00	1378	74.00	52896	111.00	219	148.00	772
45.00	2868	75.00	166912	112.00	174	149.00	195
46.00	183	76.00	14057	113.00	247	150.00	367
47.00	5536	77.00	2265	115.00	342	153.00	159
48.00	1997	78.00	1427	116.00	1035	154.00	124
49.00	14142	79.00	7081	117.00	1921	155.00	613
50.00	67608	80.00	2049	118.00	974	157.00	462
51.00	20648	81.00	7243	119.00	1555	159.00	306
52.00	1076	82.00	1558	124.00	182	161.00	309
55.00	717	83.00	214	126.00	102	172.00	275
56.00	4790	86.00	350	128.00	1105	173.00	1812
57.00	9214	87.00	16060	129.00	497	174.00	255808
58.00	374	88.00	15370	130.00	1003	175.00	18296
60.00	2766	91.00	1018	131.00	560	176.00	247104
61.00	14891	92.00	8864	133.00	58	177.00	15758
62.00	14298	93.00	13099	135.00	565	178.00	456
63.00	11234	94.00	35752	137.00	516	191.00	50
64.00	1138	95.00	344832	139.00	53	207.00	368
65.00	369	96.00	23064	140.00	212	208.00	58
66.00	57	97.00	704	141.00	2723		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201877298**				
Client Sample:	**QC for batch 883694**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 883694**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/09/2009 11:19**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 07:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t407BA.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201877298				
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 883694	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 11:19	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 07:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t407BA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t407BA.d
Lab Smp Id: 1201877298 Client Smp ID: BLANK
Inj Date : 09-JUL-2009 11:19
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201877298|883695|1|VOAF|1|
Misc Info : GEL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	519442	53.9816	54.0
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1131275	50.0000	
$ 65 Toluene-d8	98	15.527	15.523	(0.905)	1661076	49.3519	49.4
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	966822	50.0000	
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	653016	50.2490	50.2
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	504579	50.0000	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t407BA.d
Lab Smp Id: 1201877298 Client Smp ID: BLANK
Inj Date : 09-JUL-2009 11:19
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201877298|883695|1|VOAF|1|
Misc Info : GEL 5G N/A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/070909v1/1t407BA.d
Date : 09-JUL-2009 11:19
Client ID: BLANK
Sample Info: |1201877298188369511|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

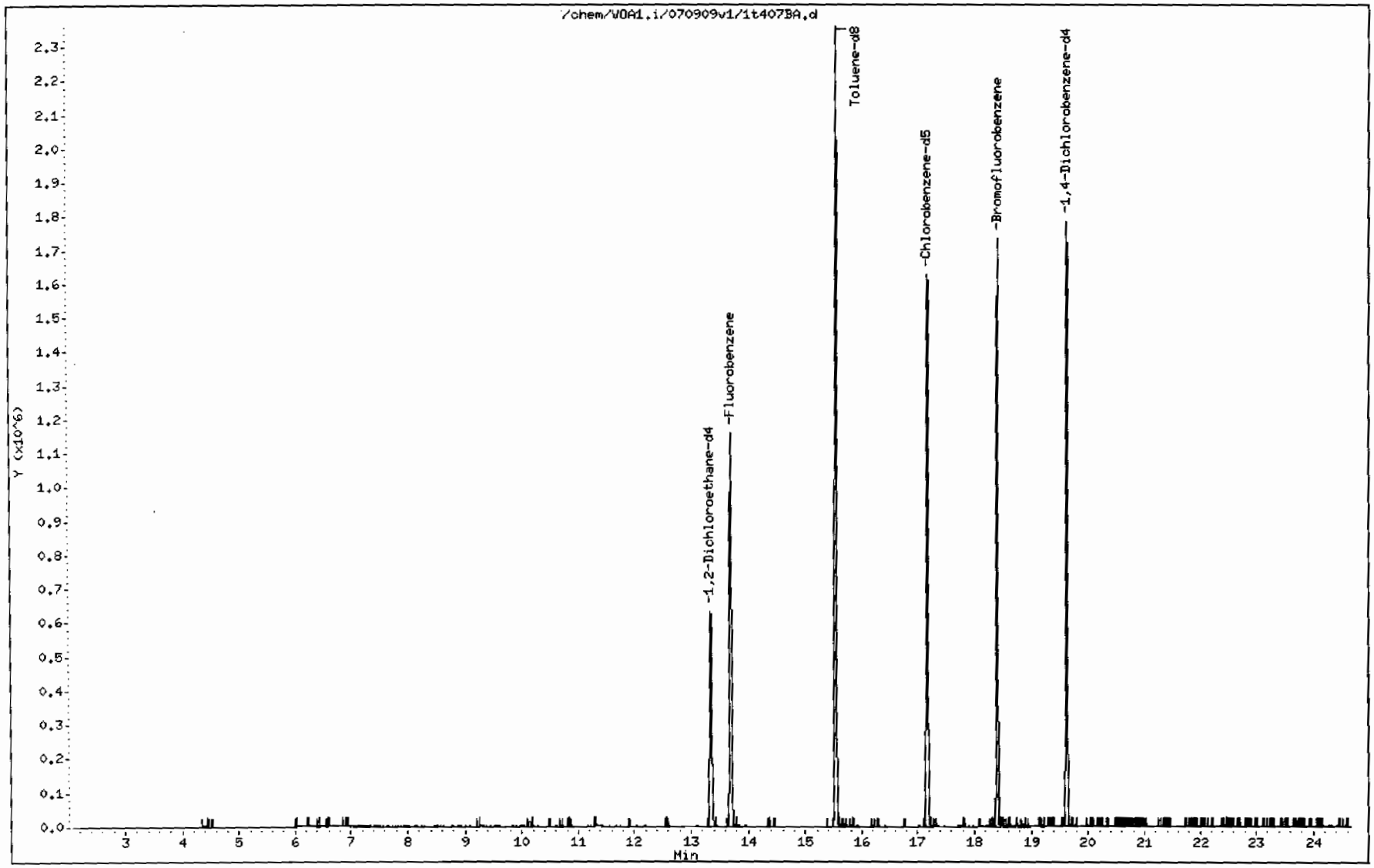

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201878422				
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 883694	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/10/2009 13:48	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/10/2009 09:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t509BA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201878422				
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 883694	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/10/2009 13:48	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/10/2009 09:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t509BA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071009v1/1t509BA.d
Lab Smp Id: 1201878422 Client Smp ID: BLANK
Inj Date : 10-JUL-2009 13:48
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201878422|883695|1|VOAF|1|
Misc Info : GEL 5G N/A
Comment :
Method : /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m
Meth Date : 10-Jul-2009 12:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
$ 48 1,2-Dichloroethane-d4	65	13.346	13.336	(0.975)	530361	49.7881	49.8
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1252342	50.0000	
$ 65 Toluene-d8	98	15.527	15.518	(0.905)	1835620	49.5156	49.5
* 76 Chlorobenzene-d5	117	17.166	17.162	(1.000)	1064883	50.0000	
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	717270	51.2267	51.2
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.615	(1.000)	543649	50.0000	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071009v1/1t509BA.d
Lab Smp Id: 1201878422 Client Smp ID: BLANK
Inj Date : 10-JUL-2009 13:48
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201878422|883695|1|VOAF|1|
Misc Info : GEL 5G N/A
Comment :
Method : /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m
Meth Date : 10-Jul-2009 12:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/071009v1/1t509BA.d
Date : 10-JUL-2009 13:48
Client ID: BLANK
Sample Info: |1201878422|883695|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXH4
Column diameter: 0.25

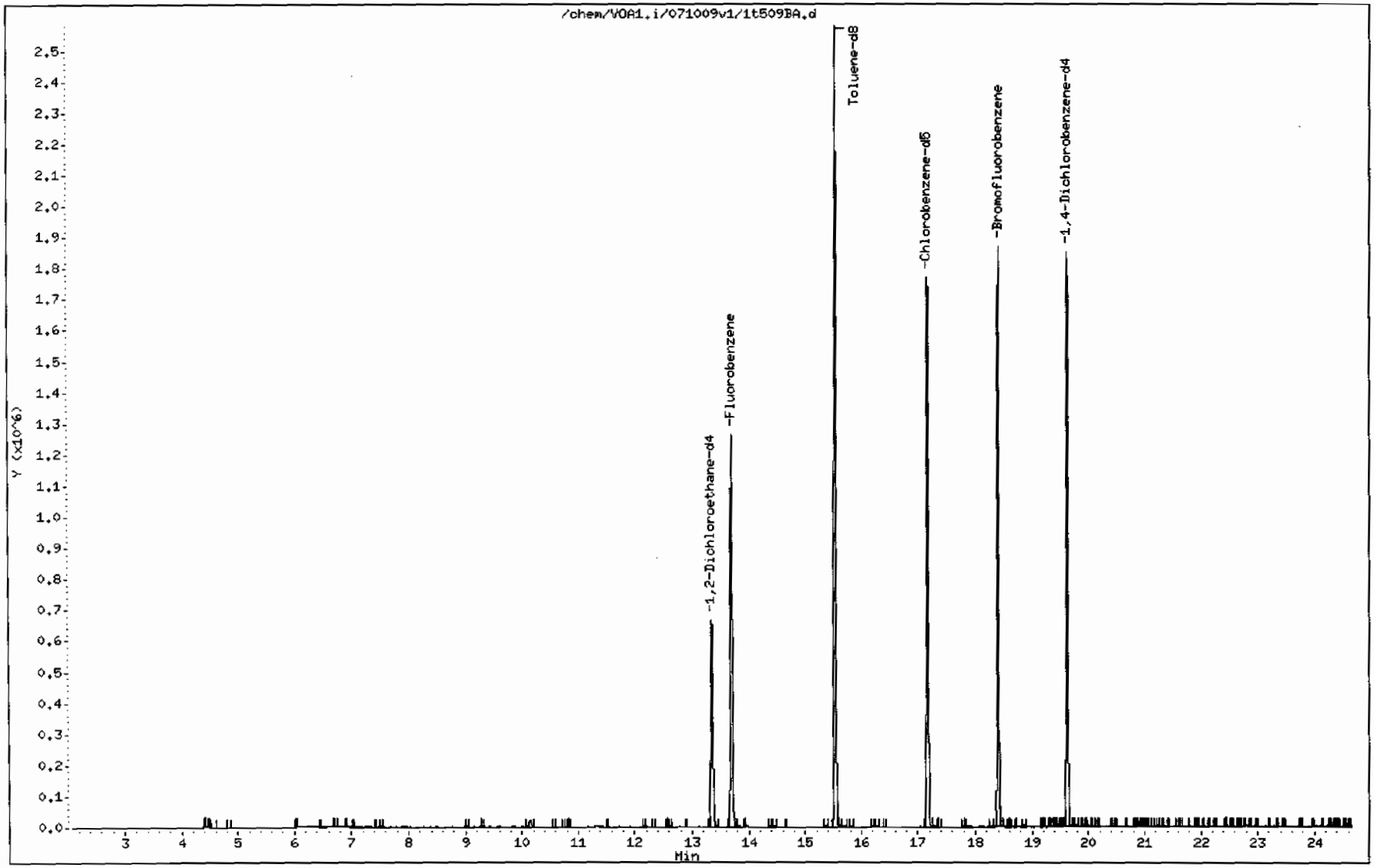

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201877301				
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883694	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 08:45	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 07:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t403LA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		57.5	ug/kg	0.340	1.00
74-87-3	Chloromethane		53.0	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		49.1	ug/kg	0.300	1.00
74-83-9	Bromomethane		50.9	ug/kg	0.300	1.00
75-00-3	Chloroethane		51.2	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		63.4	ug/kg	0.570	1.00
67-64-1	Acetone		129	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		50.4	ug/kg	0.300	1.00
74-88-4	Iodomethane		244	ug/kg	1.60	5.00
75-09-2	Methylene chloride		49.0	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		264	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		48.0	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		49.5	ug/kg	0.300	1.00
78-93-3	2-Butanone		164	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		52.3	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		55.1	ug/kg	0.300	1.00
67-66-3	Chloroform		48.9	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		48.0	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		52.4	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		53.0	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		52.7	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		48.5	ug/kg	0.300	1.00
71-43-2	Benzene		46.4	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		50.1	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		50.1	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		51.7	ug/kg	0.300	1.00
74-95-3	Dibromomethane		48.2	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		247	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		53.7	ug/kg	0.300	1.00
108-88-3	Toluene		46.2	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		53.2	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		48.6	ug/kg	0.300	1.00
591-78-6	2-Hexanone		190	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		48.7	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		47.7	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		49.0	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		49.0	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		48.2	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201877301				
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883694	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 08:45	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 07:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t403LA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		48.5	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		98.5	ug/kg	0.300	2.00
95-47-6	o-Xylene		51.6	ug/kg	0.300	1.00
100-42-5	Styrene		51.1	ug/kg	0.300	1.00
75-25-2	Bromoform		50.4	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		47.7	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		50.7	ug/kg	0.300	1.00
108-86-1	Bromobenzene		45.9	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		48.4	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		48.4	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		43.0	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		49.7	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		49.7	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		49.8	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		49.7	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		50.4	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		52.6	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		48.4	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		46.6	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		52.8	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		52.7	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		49.5	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		47.9	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t403LA.d
Lab Smp Id: 1201877301 Client Smp ID: LCS
Inj Date : 09-JUL-2009 08:45
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201877301|883695|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090605-01E/IVM090623-01
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1 Xylenes (total)	106				2252252	150.039	150
M 2 1,2-Dichloroethylene (total)	96				852586	100.389	100
M 3 1,3-Dichloropropylene	75				1357162	106.911	107
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	333817	57.4544	57.4
6 Chloromethane	50	5.543	5.535	(0.405)	594959	53.0395	53.0
7 Vinyl chloride	62	5.915	5.908	(0.432)	428529	49.1175	49.1
9 Bromomethane	96	6.948	6.934	(0.507)	304768	50.9210	50.9
10 Chloroethane	64	7.215	7.205	(0.527)	335148	51.2349	51.2
11 Trichlorofluoromethane	101	7.850	7.840	(0.573)	523792	63.4001	63.4
12 Ethyl Ether	59	8.485	8.471	(0.620)	387576	53.2214	53.2
15 1,1-Dichloroethylene	61	9.088	9.083	(0.664)	760378	50.3708	50.4
16 Acetone	43	9.263	9.249	(0.677)	752241	129.245	129

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
18 Iodomethane	142	9.470	9.461	(0.692)	2948442	243.648	244
19 Carbon disulfide	76	9.581	9.571	(0.700)	6418123	264.437	264
21 Methyl acetate	43	9.843	9.834	(0.719)	1624350	247.042	247
22 Acetonitrile	41	9.981	9.972	(0.729)	1337638	1270.49	1270
23 Methylene chloride	84	10.142	10.133	(0.741)	439518	48.9681	49.0
25 tert-Butyl methyl ether	73	10.451	10.437	(0.763)	1091668	51.0711	51.1
26 trans-1,2-Dichloroethylene	96	10.552	10.542	(0.771)	397968	48.0470	48.0
29 Vinyl acetate	43	11.307	11.293	(0.826)	3888158	303.887	304
30 1,1-Dichloroethane	63	11.325	11.316	(0.827)	816333	49.5255	49.5
33 2,2-Dichloropropane	77	12.167	12.158	(0.889)	467308	55.0522	55.0
35 2-Butanone	43	12.195	12.186	(0.891)	1065250	163.598	164
36 cis-1,2-Dichloroethylene	96	12.204	12.195	(0.891)	454618	52.3415	52.3
39 Bromochloromethane	128	12.563	12.554	(0.918)	191851	48.0120	48.0
41 Chloroform	83	12.614	12.605	(0.921)	725068	48.8707	48.9
42 Cyclohexane	56	12.849	12.839	(0.938)	851812	55.0858	55.1
43 1,1,1-Trichloroethane	97	12.853	12.844	(0.939)	495852	52.4255	52.4
44 Carbon tetrachloride	117	13.033	13.019	(0.952)	522731	52.7468	52.7
45 1,1-Dichloropropene	75	13.056	13.051	(0.954)	564181	52.9564	53.0
47 Benzene	78	13.341	13.332	(0.974)	1639008	46.4473	46.4
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	585283	54.2389	54.2
50 Cyclohexene	54	13.401	13.396	(0.979)	653192	54.8242	54.8
51 1,2-Dichloroethane	62	13.447	13.438	(0.982)	578313	48.5260	48.5
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1268621	50.0000	
53 n-Butyl alcohol	56	13.935	13.930	(1.018)	1398235	6395.32	6400
54 Trichloroethylene	95	14.124	14.114	(1.032)	420448	50.0749	50.1
55 Methylcyclohexane	83	14.289	14.285	(1.044)	766062	55.9254	55.9
57 1,2-Dichloropropane	63	14.464	14.460	(1.056)	468715	50.0817	50.1
59 Dibromomethane	93	14.630	14.621	(1.069)	245961	48.1934	48.2
60 Bromodichloromethane	83	14.754	14.754	(1.078)	568988	51.6581	51.6
61 2-Chloroethylvinyl ether	63	15.040	15.035	(1.099)	1140664	256.176	256
63 cis-1,3-Dichloropropylene	75	15.265	15.256	(1.115)	709909	53.7261	53.7
64 4-Methyl-2-pentanone	58	15.371	15.366	(0.895)	863667	247.284	247
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1871035	49.5175	49.5
66 Toluene	92	15.606	15.601	(0.909)	1054725	46.1793	46.2
68 trans-1,3-Dichloropropylene	75	15.887	15.882	(0.925)	647253	53.1852	53.2
69 1,1,2-Trichloroethane	83	16.108	16.108	(0.938)	304999	48.5718	48.6
70 Tetrachloroethylene	164	16.200	16.195	(0.944)	318208	47.6887	47.7
71 2-Hexanone	43	16.278	16.273	(0.948)	1631785	189.966	190
72 1,3-Dichloropropane	76	16.315	16.310	(0.950)	640993	48.6975	48.7
73 Dibromochloromethane	129	16.554	16.554	(0.964)	382449	48.9689	49.0
74 1,2-Dibromoethane	107	16.734	16.729	(0.975)	345644	49.0260	49.0
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	1085386	50.0000	
77 Chlorobenzene	112	17.199	17.198	(1.002)	1105237	48.2132	48.2
78 Ethylbenzene	91	17.231	17.226	(1.004)	2011671	48.4570	48.4
79 1,1,1,2-Tetrachloroethane	131	17.268	17.267	(1.006)	387841	49.4604	49.5
80 m,p-Xylenes	106	17.346	17.346	(1.010)	1496950	98.4676	98.5
81 o-Xylene	106	17.792	17.792	(1.036)	755302	51.5716	51.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
82 Styrene	104	17.815	17.811	(1.038)	1307769	51.1289	51.1
83 Bromoform	173	18.115	18.110	(0.923)	253342	50.3852	50.4
84 Isopropylbenzene	105	18.138	18.137	(0.924)	1704485	42.9954	43.0
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	748749	48.8448	48.8
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	478595	47.7423	47.7
89 n-Propylbenzene	91	18.570	18.570	(0.946)	2428029	48.4270	48.4
91 Bromobenzene	156	18.602	18.598	(0.948)	463452	45.9355	45.9
92 1,2,3-Trichloropropane	110	18.612	18.612	(0.949)	126540	50.7128	50.7
93 1,3,5-Trimethylbenzene	105	18.731	18.727	(0.955)	1677251	49.7145	49.7
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1675964	48.3525	48.4
95 4-Chlorotoluene	91	18.865	18.865	(0.962)	1540501	49.7107	49.7
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1357874	49.8172	49.8
97 1,2,4-Trimethylbenzene	105	19.146	19.145	(0.976)	1748655	49.7024	49.7
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	2315605	50.4317	50.4
100 4-Isopropyltoluene	119	19.436	19.436	(0.991)	1767549	52.6170	52.6
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	938732	48.3674	48.4
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	595183	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	931310	46.6260	46.6
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1910546	52.7836	52.8
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	878921	47.8771	47.9
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	85937	52.7461	52.7
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	587070	49.1934	49.2
110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	322629	46.2097	46.2
111 Naphthalene	128	22.455	22.450	(1.145)	1264763	48.6909	48.7
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	514782	48.8655	48.9

Data File: /chem/VOA1.i/070909v1/1t403LA.d
Date : 09-JUL-2009 08:45
Client ID: LCS
Sample Info: 1120187730118836951 1 1VOAFI1 1
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

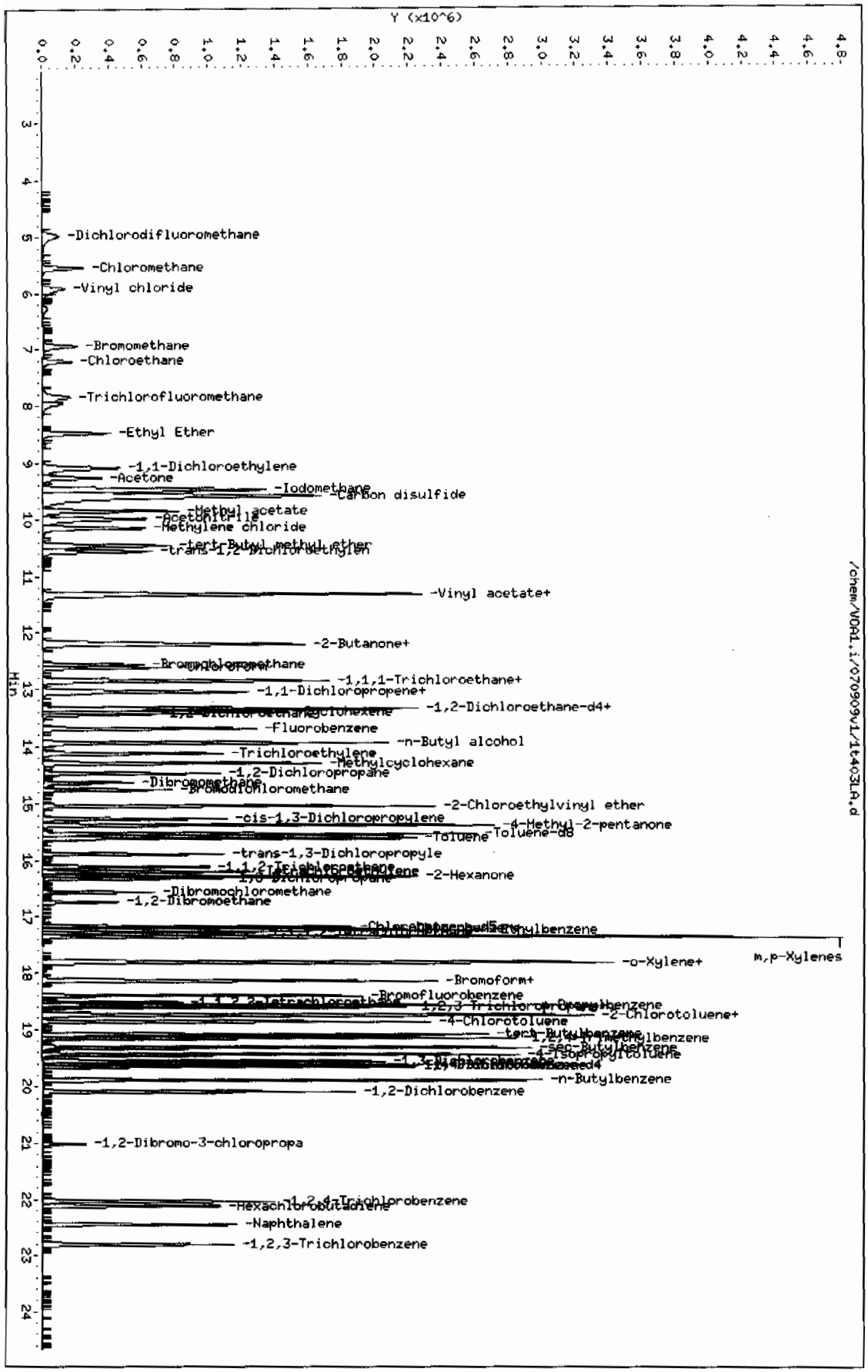

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201877302**				
Client Sample:	**QC for batch 883694**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 883694**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/09/2009 10:19**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 07:02**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t405sLA.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201877302				
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883694	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/09/2009 10:19	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 07:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t405sLA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		265	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070909v1/1t405sLA.d
Lab Smp Id: 1201877302 Client Smp ID: LCS
Inj Date : 09-JUL-2009 10:19
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201877302|883695|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090701-08A
Comment :
Method : /chem/VOA1.i/070909v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acrolein	56	8.945	8.927	(0.653)	325188	332.025	332
14 Trichlorotrifluoroethane	101	8.991	8.982	(0.657)	1475449	264.769	265
20 Allyl chloride	76	9.847	9.838	(0.719)	646003	237.990	238
27 Acrylonitrile	53	10.676	10.662	(0.780)	616351	276.015	276
31 2-Chloro-1,3-butadiene	53	11.394	11.385	(0.832)	517487	58.9404	58.9
34 Ethyl acetate	43	12.172	12.158	(0.889)	1577463	251.166	251
37 Propionitrile	54	12.411	12.397	(0.907)	255293	282.273	282
38 Tetrahydrofuran	42	12.545	12.535	(0.639)	567007	280.363	280
40 Methacrylonitrile	41	12.568	12.559	(0.918)	1294155	280.045	280
46 Isobutyl alcohol	41	13.111	13.102	(0.958)	643096	3351.60	3350
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	446746	53.0539	53.0
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	989965	50.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
56 Methyl methacrylate	69	14.446	14.441	(1.055)	1071596	293.822	294
58 1,4-Dioxane	88	14.552	14.542	(1.063)	163948	3005.71	3000
62 2-Nitropropane	43	15.090	15.081	(1.102)	498768	320.587	320
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1431025	49.2305	49.2
67 Ethyl methacrylate	69	15.822	15.817	(0.922)	2011883	274.804	275
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	834976	50.0000	
85 cis-1,4-Dichloro-2-butene	53	18.285	18.280	(0.932)	707007	289.630	290
86 Cyclohexanone	55	18.395	18.391	(1.072)	1746317	1768.01	1770
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	568787	49.7339	49.7
90 trans-1,4-Dichloro-2-butene	53	18.579	18.575	(0.947)	680479	289.389	289
98 Pentachloroethane	167	19.205	19.205	(0.979)	675986	413.017	413(AR)
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	444048	50.0000	
104 Benzyl chloride	91	19.785	19.781	(1.008)	3800827	321.270	321
107 bis(2-Chloroisopropyl)ether	45	20.181	20.177	(1.029)	1001922	294.022	294

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA1.i/070909v1/1t405sLA.d
Date : 09-JUL-2009 10:19
Client ID: LCS
Sample Info: !120187730218836951|1VOAF1|1
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

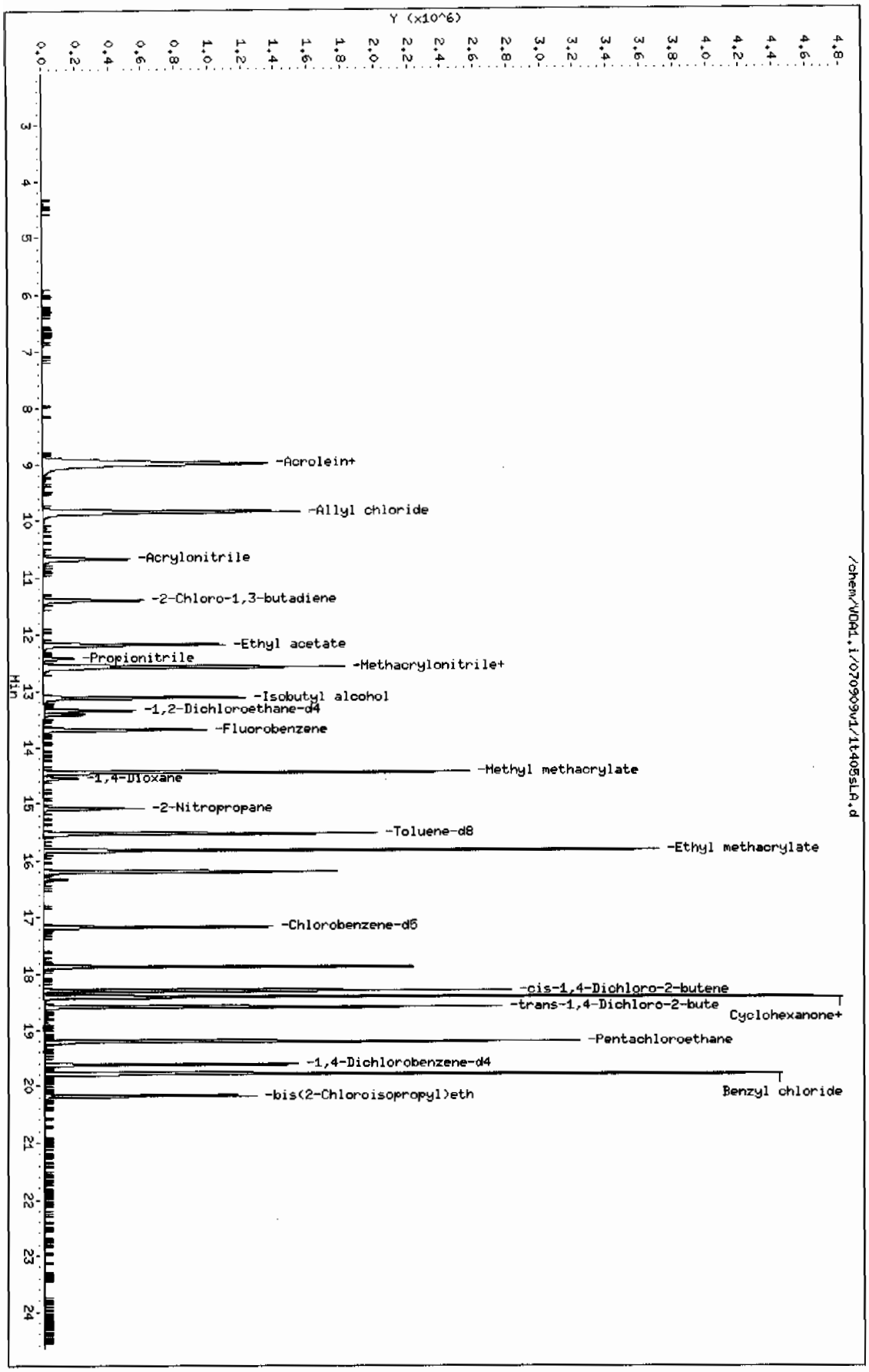

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201878423				
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883694	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/10/2009 11:46	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/10/2009 09:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t505LA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		47.6	ug/kg	0.340	1.00
74-87-3	Chloromethane		46.0	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		43.9	ug/kg	0.300	1.00
74-83-9	Bromomethane		45.0	ug/kg	0.300	1.00
75-00-3	Chloroethane		48.6	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		58.2	ug/kg	0.570	1.00
67-64-1	Acetone		123	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		46.1	ug/kg	0.300	1.00
74-88-4	Iodomethane		228	ug/kg	1.60	5.00
75-09-2	Methylene chloride		48.0	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		256	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		47.2	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		48.0	ug/kg	0.300	1.00
78-93-3	2-Butanone		160	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		51.6	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		56.6	ug/kg	0.300	1.00
67-66-3	Chloroform		47.0	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		46.2	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		53.8	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		54.0	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		50.5	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		45.7	ug/kg	0.300	1.00
71-43-2	Benzene		47.4	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		50.7	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		50.0	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		49.9	ug/kg	0.300	1.00
74-95-3	Dibromomethane		47.5	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		256	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		52.8	ug/kg	0.300	1.00
108-88-3	Toluene		46.7	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		52.2	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		49.6	ug/kg	0.300	1.00
591-78-6	2-Hexanone		186	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		47.6	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		47.1	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		47.9	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		49.0	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		48.5	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201878423**				
Client Sample:	**QC for batch 883694**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 883694**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/10/2009 11:46**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/10/2009 09:01**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t505LA.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		48.5	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		99.1	ug/kg	0.300	2.00
95-47-6	o-Xylene		52.1	ug/kg	0.300	1.00
100-42-5	Styrene		51.2	ug/kg	0.300	1.00
75-25-2	Bromoform		52.4	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		50.9	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		53.2	ug/kg	0.300	1.00
108-86-1	Bromobenzene		47.2	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		50.8	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		50.2	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		45.7	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		51.9	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		51.5	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		52.7	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		51.5	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		53.2	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		54.7	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		49.3	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		48.4	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		55.4	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		56.0	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		47.7	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		48.9	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071009v1/1t505LA.d
Lab Smp Id: 1201878423 Client Smp ID: LCS
Inj Date : 10-JUL-2009 11:46
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201878423|883695|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090701-08A
Comment :
Method : /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m
Meth Date : 10-Jul-2009 12:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1 Xylenes (total)	106				2384416	151.123	151
M 2 1,2-Dichloroethylene (total)	96				889942	98.7945	98.8
M 3 1,3-Dichloropropylene	75				1407400	104.978	105
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	293486	47.6256	47.6
6 Chloromethane	50	5.543	5.535	(0.405)	547036	45.9797	46.0
7 Vinyl chloride	62	5.915	5.908	(0.432)	406602	43.9403	43.9
9 Bromomethane	96	6.943	6.934	(0.507)	285922	45.0415	45.0
10 Chloroethane	64	7.219	7.210	(0.527)	337242	48.6081	48.6
11 Trichlorofluoromethane	101	7.845	7.831	(0.573)	510011	58.2034	58.2
12 Ethyl Ether	59	8.480	8.462	(0.619)	409060	52.9608	53.0
15 1,1-Dichloroethylene	61	9.088	9.079	(0.664)	738436	46.1212	46.1
16 Acetone	43	9.258	9.240	(0.676)	756516	122.550	122

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
	18 Iodomethane	142	9.470	9.461	(0.692)	2928357	228.156	228
	19 Carbon disulfide	76	9.576	9.562	(0.699)	6595783	256.224	256
	21 Methyl acetate	43	9.843	9.824	(0.719)	1676145	240.348	240
	22 Acetonitrile	41	9.981	9.967	(0.729)	1419467	1271.15	1270
	23 Methylene chloride	84	10.137	10.128	(0.740)	458005	48.0403	48.0
	25 tert-Butyl methyl ether	73	10.446	10.432	(0.763)	1129065	49.8014	49.8
	26 trans-1,2-Dichloroethylene	96	10.547	10.538	(0.770)	414856	47.2230	47.2
	29 Vinyl acetate	43	11.302	11.288	(0.826)	3986485	293.762	294
	30 1,1-Dichloroethane	63	11.325	11.307	(0.827)	839998	48.0482	48.0
	33 2,2-Dichloropropane	77	12.167	12.154	(0.889)	509873	56.6332	56.6
	35 2-Butanone	43	12.195	12.181	(0.891)	1102741	159.675	160
	36 cis-1,2-Dichloroethylene	96	12.204	12.190	(0.891)	475086	51.5715	51.6
	39 Bromochloromethane	128	12.563	12.549	(0.918)	195945	46.2336	46.2
	41 Chloroform	83	12.614	12.600	(0.921)	739723	47.0085	47.0
	42 Cyclohexane	56	12.849	12.835	(0.938)	894107	54.5159	54.5
	43 1,1,1-Trichloroethane	97	12.853	12.839	(0.939)	539297	53.7596	53.8
	44 Carbon tetrachloride	117	13.028	13.019	(0.952)	530387	50.4601	50.5
	45 1,1-Dichloropropene	75	13.056	13.047	(0.954)	610335	54.0140	54.0
	47 Benzene	78	13.341	13.327	(0.974)	1773616	47.3890	47.4
$	48 1,2-Dichloroethane-d4	65	13.346	13.336	(0.975)	558821	48.8265	48.8
	50 Cyclohexene	54	13.401	13.392	(0.979)	688222	54.4626	54.5
	51 1,2-Dichloroethane	62	13.442	13.433	(0.982)	577060	45.6531	45.6
*	52 Fluorobenzene	96	13.691	13.682	(1.000)	1345532	50.0000	
	53 n-Butyl alcohol	56	13.935	13.926	(1.018)	1538447	6634.42	6630
	54 Trichloroethylene	95	14.124	14.110	(1.032)	451304	50.6775	50.7
	55 Methylcyclohexane	83	14.289	14.280	(1.044)	810134	55.7622	55.8
	57 1,2-Dichloropropane	63	14.469	14.455	(1.057)	496309	49.9989	50.0
	59 Dibromomethane	93	14.630	14.621	(1.069)	257046	47.4865	47.5
	60 Bromodichloromethane	83	14.759	14.750	(1.078)	583272	49.9280	49.9
	61 2-Chloroethylvinyl ether	63	15.040	15.030	(1.099)	1189152	251.800	252
	63 cis-1,3-Dichloropropylene	75	15.265	15.256	(1.115)	739765	52.7855	52.8
	64 4-Methyl-2-pentanone	58	15.371	15.362	(0.895)	938652	255.684	256
$	65 Toluene-d8	98	15.528	15.518	(0.905)	1968082	49.5530	49.6
	66 Toluene	92	15.606	15.597	(0.909)	1120223	46.6619	46.7
	68 trans-1,3-Dichloropropylene	75	15.887	15.877	(0.925)	667635	52.1922	52.2
	69 1,1,2-Trichloroethane	83	16.108	16.103	(0.938)	327221	49.5765	49.6
	70 Tetrachloroethylene	164	16.195	16.190	(0.943)	330443	47.1140	47.1
	71 2-Hexanone	43	16.278	16.273	(0.948)	1679693	186.034	186
	72 1,3-Dichloropropane	76	16.315	16.310	(0.950)	658235	47.5755	47.6
	73 Dibromochloromethane	129	16.554	16.549	(0.964)	393566	47.9418	47.9
	74 1,2-Dibromoethane	107	16.734	16.729	(0.975)	363022	48.9869	49.0
*	76 Chlorobenzene-d5	117	17.166	17.162	(1.000)	1140866	50.0000	
	77 Chlorobenzene	112	17.199	17.198	(1.002)	1167623	48.4577	48.4
	78 Ethylbenzene	91	17.231	17.226	(1.004)	2115772	48.4862	48.5
	79 1,1,1,2-Tetrachloroethane	131	17.268	17.263	(1.006)	392828	47.6602	47.7
	80 m,p-Xylenes	106	17.346	17.341	(1.010)	1583084	99.0694	99.1
	81 o-Xylene	106	17.792	17.788	(1.036)	801332	52.0537	52.0

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
82 Styrene	104	17.811	17.811	(1.038)	1375328	51.1554	51.2
83 Bromoform	173	18.110	18.105	(0.923)	263411	52.3510	52.4
84 Isopropylbenzene	105	18.138	18.137	(0.924)	1811545	45.6639	45.7
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	780240	50.8634	50.9
88 1,1,2,2-Tetrachloroethane	83	18.515	18.510	(0.944)	510889	50.9281	50.9
89 n-Propylbenzene	91	18.570	18.566	(0.946)	2550161	50.8272	50.8
91 Bromobenzene	156	18.598	18.598	(0.948)	476150	47.1609	47.2
92 1,2,3-Trichloropropane	110	18.612	18.607	(0.949)	132842	53.2011	53.2
93 1,3,5-Trimethylbenzene	105	18.731	18.727	(0.955)	1753734	51.9450	51.9
94 2-Chlorotoluene	91	18.750	18.745	(0.956)	1740542	50.1804	50.2
95 4-Chlorotoluene	91	18.865	18.860	(0.962)	1597428	51.5115	51.5
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1437012	52.6836	52.7
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1811963	51.4657	51.5
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	2442980	53.1685	53.2
100 4-Isopropyltoluene	119	19.436	19.431	(0.991)	1838112	54.6792	54.7
101 1,3-Dichlorobenzene	146	19.551	19.546	(0.996)	957925	49.3217	49.3
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.615	(1.000)	595601	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	966771	48.3674	48.4
105 n-Butylbenzene	91	19.882	19.877	(1.013)	2007781	55.4310	55.4
106 1,2-Dichlorobenzene	146	20.089	20.085	(1.024)	897770	48.8695	48.9
108 1,2-Dibromo-3-chloropropane	157	21.014	21.010	(1.071)	91371	56.0420	56.0
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	601990	50.4082	50.4
110 Hexachlorobutadiene	225	22.124	22.119	(1.128)	326046	46.6663	46.7
111 Naphthalene	128	22.455	22.451	(1.145)	1336154	51.4032	51.4
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	519983	49.3245	49.3

Data File: /chem/VOA1.i/071009v1/1t505LA.d
Date : 10-JUL-2009 11:46
Client ID: LCS
Sample Info: 1120187842318836951 1 1VOAF1 1 1
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

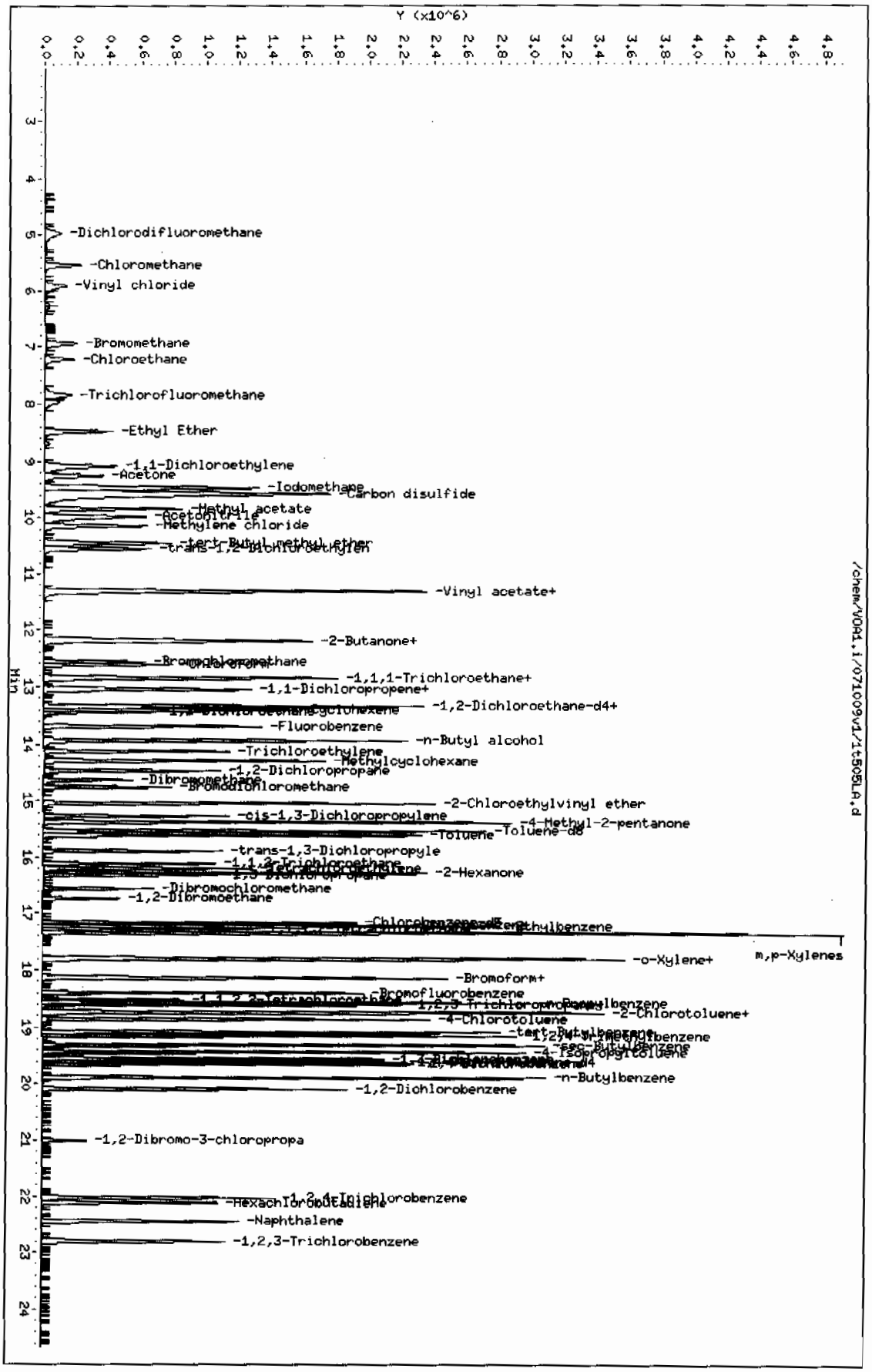

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201878424				
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883694	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/10/2009 12:47	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/10/2009 09:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t507sLA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201878424**				
Client Sample:	**QC for batch 883694**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 883694**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/10/2009 12:47**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/10/2009 09:02**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t507sLA.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		193	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071009v1/1t507sLA.d
Lab Smp Id: 1201878424 Client Smp ID: LCS
Inj Date : 10-JUL-2009 12:47
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201878424|883695|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090701-08A
Comment :
Method : /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m
Meth Date : 10-Jul-2009 12:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 7 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
4 Chlorotrifluoroethylene	116	4.883	4.883	(0.357)	908061	175.198	175
8 2-Chloro-1,1,1-trifluoroethane	118	6.294	6.298	(0.460)	1517900	163.591	164
13 Acrolein	56	8.945	8.945	(0.653)	356418	264.395	264
14 Trichlorotrifluoroethane	101	9.000	8.996	(0.657)	1482224	193.248	193
17 Isopropyl Alcohol	45	9.451	9.451	(0.690)	1591066	2993.45	2990
20 Allyl chloride	76	9.857	9.852	(0.720)	747462	200.898	201
24 tert-Butyl Alcohol	59	10.202	10.202	(0.745)	2514554	3013.21	3010
27 Acrylonitrile	53	10.681	10.680	(0.780)	775688	252.377	252
28 Isopropyl ether	45	11.205	11.205	(0.818)	1699275	53.6369	53.6
31 2-Chloro-1,3-butadiene	53	11.399	11.399	(0.833)	557597	46.1415	46.1
32 Ethyl tert-butyl ether	59	11.767	11.767	(0.859)	1524280	54.1567	54.2
34 Ethyl acetate	43	12.172	12.172	(0.889)	1936488	224.013	224

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
37 Propionitrile	54	12.411	12.416	(0.907)	316242	254.043	254
38 Tetrahydrofuran	42	12.545	12.545	(0.639)	685710	256.715	257
40 Methacrylonitrile	41	12.572	12.568	(0.918)	1542263	242.470	242
46 Isobutyl alcohol	41	13.116	13.116	(0.958)	780544	2955.50	2960
$ 48 1,2-Dichloroethane-d4	65	13.346	13.336	(0.975)	545494	47.0657	47.1
49 Methyl tert-amyl ether	73	13.359	13.359	(0.976)	1275162	54.7525	54.8
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1362581	50.0000	
56 Methyl methacrylate	69	14.450	14.446	(1.055)	1299866	258.946	259
58 1,4-Dioxane	88	14.556	14.556	(1.063)	199656	2659.38	2660
62 2-Nitropropane	43	15.090	15.086	(1.102)	606496	283.226	283
$ 65 Toluene-d8	98	15.527	15.518	(0.905)	1954282	49.3347	49.3
67 Ethyl methacrylate	69	15.822	15.822	(0.922)	2387677	239.317	239
75 1-Chlorohexane	55	17.042	17.037	(1.245)	552406	60.5659	60.6
* 76 Chlorobenzene-d5	117	17.166	17.162	(1.000)	1137879	50.0000	
85 cis-1,4-Dichloro-2-butene	53	18.285	18.285	(0.932)	845200	262.155	262
86 Cyclohexanone	55	18.395	18.395	(1.072)	1730384	1285.53	1280
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	763579	50.5517	50.6
90 trans-1,4-Dichloro-2-butene	53	18.579	18.575	(0.947)	802407	258.369	258
98 Pentachloroethane	167	19.205	19.205	(0.979)	791060	365.947	366(AR)
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.615	(1.000)	586477	50.0000	
104 Benzyl chloride	91	19.785	19.785	(1.008)	4633110	296.513	296
107 bis(2-Chloroisopropyl)ether	45	20.177	20.177	(1.028)	1241015	275.741	276

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA1.i/071009v1/1t507sLA.d
Date : 10-JUL-2009 12:47
Client ID: LCS
Sample Info: 1120187842418836961|1|VOAF|1|
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXM4
Column diameter: 0.25

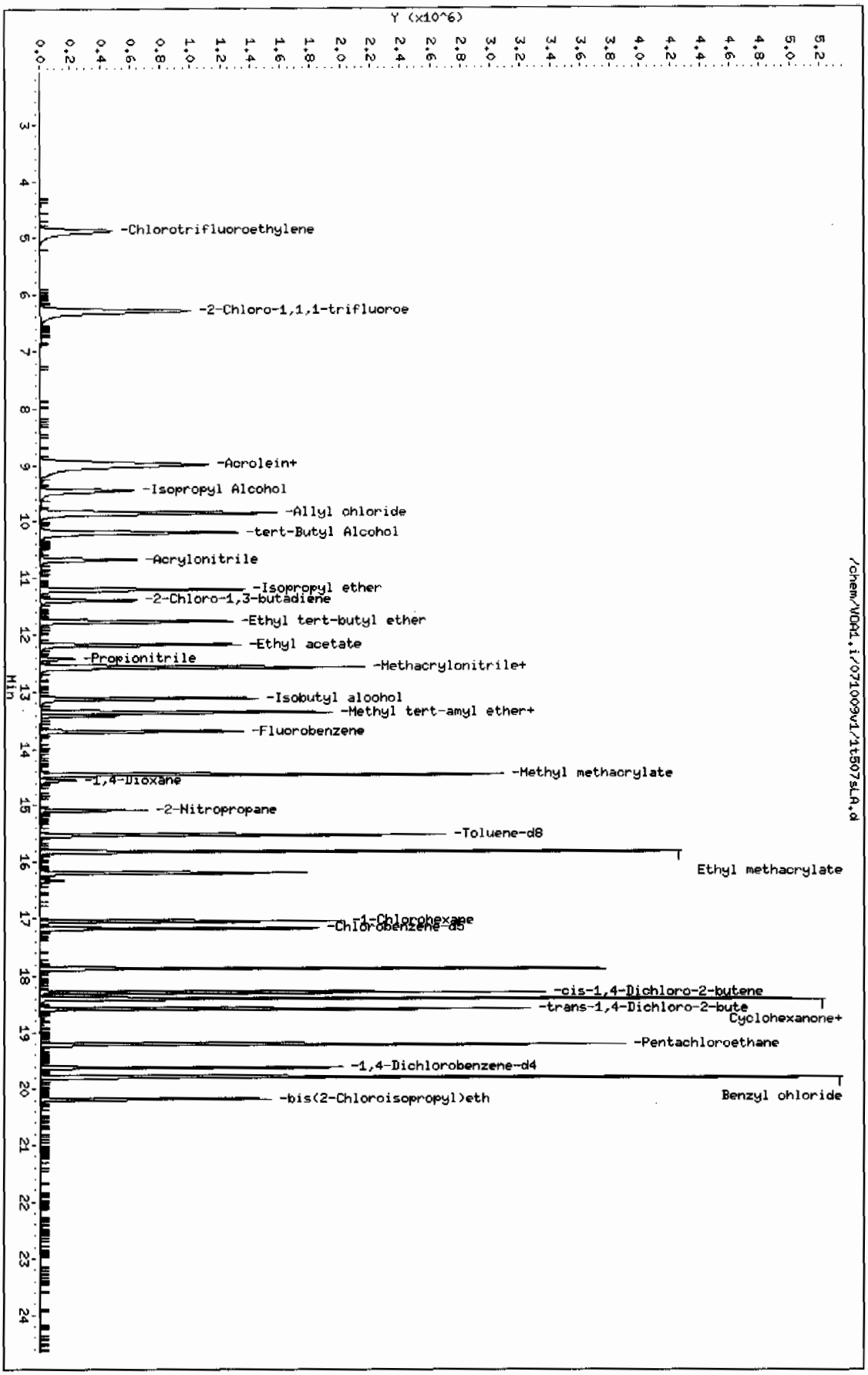

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201877299	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9956PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/10/2009 20:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 13:51	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t522.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		52.4	ug/kg	0.396	1.16
74-87-3	Chloromethane		53.5	ug/kg	0.349	1.16
75-01-4	Vinyl chloride		50.0	ug/kg	0.349	1.16
74-83-9	Bromomethane		51.3	ug/kg	0.349	1.16
75-00-3	Chloroethane		54.9	ug/kg	0.349	1.16
75-69-4	Trichlorofluoromethane		62.6	ug/kg	0.663	1.16
67-64-1	Acetone		119	ug/kg	1.93	5.82
75-35-4	1,1-Dichloroethylene		52.3	ug/kg	0.349	1.16
74-88-4	Iodomethane		242	ug/kg	1.86	5.82
75-09-2	Methylene chloride		55.3	ug/kg	2.33	5.82
75-15-0	Carbon disulfide		265	ug/kg	1.45	5.82
156-60-5	trans-1,2-Dichloroethylene		50.7	ug/kg	0.349	1.16
75-34-3	1,1-Dichloroethane		52.8	ug/kg	0.349	1.16
78-93-3	2-Butanone		156	ug/kg	1.75	5.82
156-59-2	cis-1,2-Dichloroethylene		55.9	ug/kg	0.349	1.16
594-20-7	2,2-Dichloropropane		58.5	ug/kg	0.349	1.16
67-66-3	Chloroform		52.6	ug/kg	0.349	1.16
74-97-5	Bromochloromethane		50.9	ug/kg	0.384	1.16
71-55-6	1,1,1-Trichloroethane		57.6	ug/kg	0.349	1.16
563-58-6	1,1-Dichloropropene		56.6	ug/kg	0.349	1.16
56-23-5	Carbon tetrachloride		56.1	ug/kg	0.349	1.16
107-06-2	1,2-Dichloroethane		51.3	ug/kg	0.349	1.16
71-43-2	Benzene		50.4	ug/kg	0.349	1.16
79-01-6	Trichloroethylene		53.3	ug/kg	0.384	1.16
78-87-5	1,2-Dichloropropane		53.9	ug/kg	0.349	1.16
75-27-4	Bromodichloromethane		54.8	ug/kg	0.349	1.16
74-95-3	Dibromomethane		51.4	ug/kg	0.349	1.16
108-10-1	4-Methyl-2-pentanone		261	ug/kg	1.45	5.82
10061-01-5	cis-1,3-Dichloropropylene		52.6	ug/kg	0.349	1.16
108-88-3	Toluene		50.6	ug/kg	0.349	1.16
10061-02-6	trans-1,3-Dichloropropylene		52.4	ug/kg	0.349	1.16
79-00-5	1,1,2-Trichloroethane		52.7	ug/kg	0.349	1.16
591-78-6	2-Hexanone		168	ug/kg	1.75	5.82
142-28-9	1,3-Dichloropropane		51.4	ug/kg	0.349	1.16
127-18-4	Tetrachloroethylene		49.6	ug/kg	0.349	1.16
124-48-1	Dibromochloromethane		52.8	ug/kg	0.349	1.16
106-93-4	1,2-Dibromoethane		51.5	ug/kg	0.349	1.16
108-90-7	Chlorobenzene		50.1	ug/kg	0.349	1.16

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201877299	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9956PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/10/2009 20:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 13:51	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t522.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		50.7	ug/kg	0.349	1.16
179601-23-1	m,p-Xylenes		102	ug/kg	0.349	2.33
95-47-6	o-Xylene		53.5	ug/kg	0.349	1.16
100-42-5	Styrene		50.5	ug/kg	0.349	1.16
75-25-2	Bromoform		57.1	ug/kg	0.349	1.16
79-34-5	1,1,2,2-Tetrachloroethane		54.6	ug/kg	0.349	1.16
96-18-4	1,2,3-Trichloropropane		58.7	ug/kg	0.349	1.16
108-86-1	Bromobenzene		50.0	ug/kg	0.349	1.16
103-65-1	n-Propylbenzene		52.5	ug/kg	0.349	1.16
95-49-8	2-Chlorotoluene		53.1	ug/kg	0.349	1.16
98-82-8	Isopropylbenzene		49.5	ug/kg	0.349	1.16
108-67-8	1,3,5-Trimethylbenzene		53.7	ug/kg	0.349	1.16
106-43-4	4-Chlorotoluene		51.6	ug/kg	0.349	1.16
98-06-6	tert-Butylbenzene		56.0	ug/kg	0.349	1.16
95-63-6	1,2,4-Trimethylbenzene		52.1	ug/kg	0.349	1.16
135-98-8	sec-Butylbenzene		53.5	ug/kg	0.349	1.16
99-87-6	4-Isopropyltoluene		50.8	ug/kg	0.349	1.16
541-73-1	1,3-Dichlorobenzene		47.4	ug/kg	0.349	1.16
106-46-7	1,4-Dichlorobenzene		45.4	ug/kg	0.349	1.16
104-51-8	n-Butylbenzene		49.0	ug/kg	0.349	1.16
96-12-8	1,2-Dibromo-3-chloropropane		55.6	ug/kg	0.349	1.16
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.82	ug/kg	1.86	5.82
630-20-6	1,1,1,2-Tetrachloroethane		52.8	ug/kg	0.349	1.16
95-50-1	1,2-Dichlorobenzene		47.3	ug/kg	0.349	1.16

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071009v1/1t522.d
Lab Smp Id: 1201877299 Client Smp ID: CAMO-09-9956MS
Inj Date : 10-JUL-2009 20:22
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201877299|883695|1|VOAF|1|
Misc Info : LANL 5G N/A MS 232741002
Comment :
Method : /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m
Meth Date : 10-Jul-2009 12:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 22 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	14.06760	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1124606	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.162	(1.000)	942601	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.615	(1.000)	468460	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.336	(0.975)	466502	48.7674	56.8
$ 65 Toluene-d8	98	15.528	15.518	(0.905)	1642930	50.0671	58.3
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	625074	51.8074	60.3
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	232013	45.0463	52.4
6 Chloromethane	50	5.535	5.535	(0.404)	457572	46.0154	53.5
7 Vinyl chloride	62	5.923	5.908	(0.433)	332016	42.9286	50.0
9 Bromomethane	96	6.943	6.934	(0.507)	233991	44.1020	51.3
10 Chloroethane	64	7.219	7.210	(0.527)	273663	47.1929	54.9
11 Trichlorofluoromethane	101	7.850	7.831	(0.573)	393881	53.7808	62.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
16 Acetone	43	9.258	9.240	(0.676)	527067	102.154	119
15 1,1-Dichloroethylene	61	9.088	9.079	(0.664)	601822	44.9727	52.3
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	613919	39.0502	45.4
18 Todomethane	142	9.470	9.461	(0.692)	2234647	208.311	242
23 Methylene chloride	84	10.142	10.128	(0.741)	379066	47.5317	55.3
19 Carbon disulfide	76	9.576	9.562	(0.699)	4901408	227.807	265
26 trans-1,2-Dichloroethylene	96	10.552	10.538	(0.771)	320207	43.6095	50.7
30 1,1-Dichloroethane	63	11.320	11.307	(0.827)	663452	45.4048	52.8
35 2-Butanone	43	12.195	12.181	(0.891)	774730	134.217	156
36 cis-1,2-Dichloroethylene	96	12.204	12.190	(0.891)	370107	48.0683	55.9
101 1,3-Dichlorobenzene	146	19.551	19.546	(0.996)	621838	40.7068	47.4
33 2,2-Dichloropropane	77	12.167	12.154	(0.889)	378305	50.2742	58.5
41 Chloroform	83	12.614	12.600	(0.921)	594666	45.2141	52.6
106 1,2-Dichlorobenzene	146	20.089	20.085	(1.024)	587252	40.6425	47.3
39 Bromochloromethane	128	12.563	12.549	(0.918)	155050	43.7713	50.9
43 1,1,1-Trichloroethane	97	12.853	12.839	(0.939)	415018	49.4981	57.6
45 1,1-Dichloropropene	75	13.056	13.047	(0.954)	459289	48.6315	56.6
44 Carbon tetrachloride	117	13.033	13.019	(0.952)	423363	48.1906	56.1
51 1,2-Dichloroethane	62	13.447	13.433	(0.982)	465814	44.0916	51.3
47 Benzene	78	13.341	13.327	(0.974)	1354355	43.2956	50.4
54 Trichloroethylene	95	14.124	14.110	(1.032)	340594	45.7590	53.2
57 1,2-Dichloropropane	63	14.464	14.455	(1.056)	384411	46.3337	53.9
60 Bromodichloromethane	83	14.759	14.750	(1.078)	459985	47.1097	54.8
59 Dibromomethane	93	14.630	14.621	(1.069)	199876	44.1787	51.4
64 4-Methyl-2-pentanone	58	15.371	15.362	(0.895)	680411	224.325	261
63 cis-1,3-Dichloropropylene	75	15.265	15.256	(1.115)	529209	45.1795	52.6
66 Toluene	92	15.606	15.597	(0.909)	862897	43.5034	50.6
68 trans-1,3-Dichloropropylene	75	15.887	15.877	(0.925)	475886	45.0273	52.4
69 1,1,2-Trichloroethane	83	16.112	16.103	(0.939)	247109	45.3138	52.7
71 2-Hexanone	43	16.278	16.273	(0.948)	1077808	144.481	168
72 1,3-Dichloropropane	76	16.315	16.310	(0.950)	505353	44.2084	51.4
70 Tetrachloroethylene	164	16.200	16.190	(0.944)	247193	42.6576	49.6
73 Dibromochloromethane	129	16.554	16.549	(0.964)	307817	45.3833	52.8
74 1,2-Dibromoethane	107	16.734	16.729	(0.975)	270867	44.2395	51.5
77 Chlorobenzene	112	17.203	17.198	(1.002)	857366	43.0659	50.1
79 1,1,1,2-Tetrachloroethane	131	17.268	17.263	(1.006)	309065	45.3847	52.8
78 Ethylbenzene	91	17.231	17.226	(1.004)	1570326	43.5558	50.7
80 m,p-Xylenes	106	17.346	17.341	(1.010)	1154354	87.4342	102
81 o-Xylene	106	17.792	17.788	(1.036)	585275	46.0157	53.5
82 Styrene	104	17.811	17.811	(1.038)	963432	43.3723	50.5
83 Bromoform	173	18.115	18.105	(0.923)	194040	49.0303	57.0
88 1,1,2,2-Tetrachloroethane	83	18.515	18.510	(0.944)	370314	46.9336	54.6
92 1,2,3-Trichloropropane	110	18.612	18.607	(0.949)	99046	50.4318	58.7(Q)
91 Bromobenzene	156	18.598	18.598	(0.948)	340915	42.9307	50.0
89 n-Propylbenzene	91	18.570	18.566	(0.946)	1781444	45.1423	52.5
94 2-Chlorotoluene	91	18.750	18.745	(0.956)	1244581	45.6200	53.1
84 Isopropylbenzene	105	18.138	18.137	(0.924)	1327721	42.5514	49.5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
93 1,3,5-Trimethylbenzene	105	18.731	18.727	(0.955)	1225144	46.1371	53.7
95 4-Chlorotoluene	91	18.865	18.860	(0.962)	1081371	44.3344	51.6
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1031657	48.0876	56.0
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1239896	44.7751	52.1
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	1662161	45.9928	53.5
100 4-Isopropyltoluene	119	19.436	19.431	(0.991)	1153576	43.6294	50.8
105 n-Butylbenzene	91	19.882	19.877	(1.013)	1200547	42.1404	49.0
108 1,2-Dibromo-3-chloropropane	157	21.014	21.010	(1.071)	61315	47.8139	55.6

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA1.i/071009v1/1t522.d
Date : 10-JUL-2009 20:22
Client ID: CAMO-09-9956MS
Sample Info: |120187729918836951|VOAF|1|

Instrument: VOA1.i

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

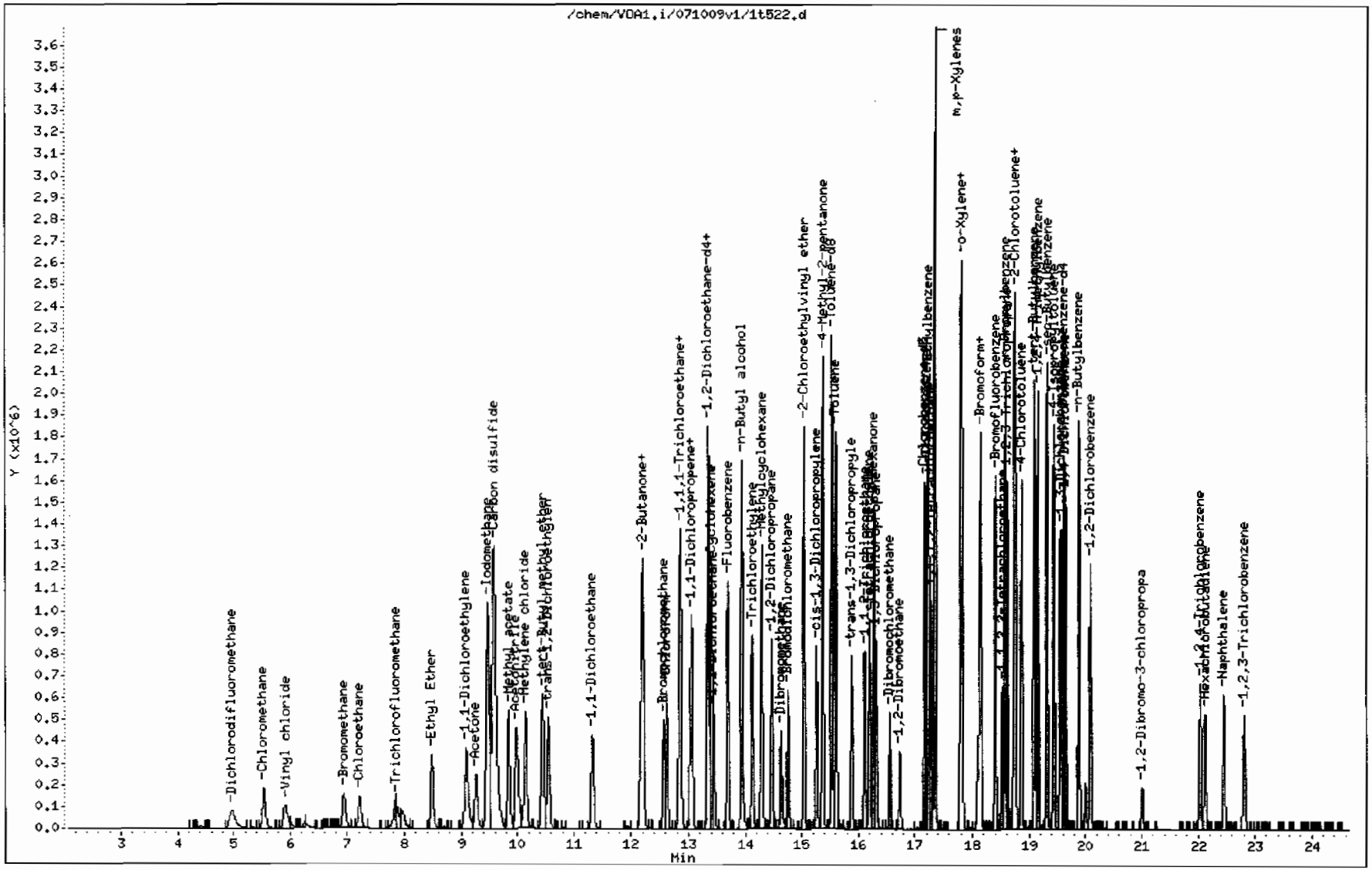

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**1201877300**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**14.1**
Client Sample:	**QC for batch 883694**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**CAMO-09-9956PSD**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883695**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/10/2009 20:52**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/09/2009 13:52**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t523.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		50.3	ug/kg	0.396	1.16
74-87-3	Chloromethane		50.7	ug/kg	0.349	1.16
75-01-4	Vinyl chloride		50.1	ug/kg	0.349	1.16
74-83-9	Bromomethane		49.1	ug/kg	0.349	1.16
75-00-3	Chloroethane		52.2	ug/kg	0.349	1.16
75-69-4	Trichlorofluoromethane		60.3	ug/kg	0.663	1.16
67-64-1	Acetone		121	ug/kg	1.93	5.82
75-35-4	1,1-Dichloroethylene		50.1	ug/kg	0.349	1.16
74-88-4	Iodomethane		235	ug/kg	1.86	5.82
75-09-2	Methylene chloride		53.0	ug/kg	2.33	5.82
75-15-0	Carbon disulfide		255	ug/kg	1.45	5.82
156-60-5	trans-1,2-Dichloroethylene		48.0	ug/kg	0.349	1.16
75-34-3	1,1-Dichloroethane		51.0	ug/kg	0.349	1.16
78-93-3	2-Butanone		162	ug/kg	1.75	5.82
156-59-2	cis-1,2-Dichloroethylene		53.0	ug/kg	0.349	1.16
594-20-7	2,2-Dichloropropane		55.6	ug/kg	0.349	1.16
67-66-3	Chloroform		50.2	ug/kg	0.349	1.16
74-97-5	Bromochloromethane		49.6	ug/kg	0.384	1.16
71-55-6	1,1,1-Trichloroethane		54.6	ug/kg	0.349	1.16
563-58-6	1,1-Dichloropropene		52.6	ug/kg	0.349	1.16
56-23-5	Carbon tetrachloride		52.4	ug/kg	0.349	1.16
107-06-2	1,2-Dichloroethane		50.0	ug/kg	0.349	1.16
71-43-2	Benzene		47.5	ug/kg	0.349	1.16
79-01-6	Trichloroethylene		49.9	ug/kg	0.384	1.16
78-87-5	1,2-Dichloropropane		51.8	ug/kg	0.349	1.16
75-27-4	Bromodichloromethane		53.2	ug/kg	0.349	1.16
74-95-3	Dibromomethane		50.3	ug/kg	0.349	1.16
108-10-1	4-Methyl-2-pentanone		269	ug/kg	1.45	5.82
10061-01-5	cis-1,3-Dichloropropylene		50.5	ug/kg	0.349	1.16
108-88-3	Toluene		46.7	ug/kg	0.349	1.16
10061-02-6	trans-1,3-Dichloropropylene		50.3	ug/kg	0.349	1.16
79-00-5	1,1,2-Trichloroethane		51.9	ug/kg	0.349	1.16
591-78-6	2-Hexanone		174	ug/kg	1.75	5.82
142-28-9	1,3-Dichloropropane		50.2	ug/kg	0.349	1.16
127-18-4	Tetrachloroethylene		44.4	ug/kg	0.349	1.16
124-48-1	Dibromochloromethane		50.6	ug/kg	0.349	1.16
106-93-4	1,2-Dibromoethane		50.3	ug/kg	0.349	1.16
108-90-7	Chlorobenzene		45.7	ug/kg	0.349	1.16

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201877300	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
Client Sample:	QC for batch 883694	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9956PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883695	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/10/2009 20:52	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/09/2009 13:52	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t523.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		44.7	ug/kg	0.349	1.16
179601-23-1	m,p-Xylenes		89.6	ug/kg	0.349	2.33
95-47-6	o-Xylene		47.3	ug/kg	0.349	1.16
100-42-5	Styrene		45.3	ug/kg	0.349	1.16
75-25-2	Bromoform		55.2	ug/kg	0.349	1.16
79-34-5	1,1,2,2-Tetrachloroethane		53.2	ug/kg	0.349	1.16
96-18-4	1,2,3-Trichloropropane		58.0	ug/kg	0.349	1.16
108-86-1	Bromobenzene		44.1	ug/kg	0.349	1.16
103-65-1	n-Propylbenzene		42.8	ug/kg	0.349	1.16
95-49-8	2-Chlorotoluene		43.7	ug/kg	0.349	1.16
98-82-8	Isopropylbenzene		41.5	ug/kg	0.349	1.16
108-67-8	1,3,5-Trimethylbenzene		43.7	ug/kg	0.349	1.16
106-43-4	4-Chlorotoluene		43.2	ug/kg	0.349	1.16
98-06-6	tert-Butylbenzene		46.3	ug/kg	0.349	1.16
95-63-6	1,2,4-Trimethylbenzene		42.9	ug/kg	0.349	1.16
135-98-8	sec-Butylbenzene		43.3	ug/kg	0.349	1.16
99-87-6	4-Isopropyltoluene		40.4	ug/kg	0.349	1.16
541-73-1	1,3-Dichlorobenzene		40.9	ug/kg	0.349	1.16
106-46-7	1,4-Dichlorobenzene		39.0	ug/kg	0.349	1.16
104-51-8	n-Butylbenzene		39.0	ug/kg	0.349	1.16
96-12-8	1,2-Dibromo-3-chloropropane		55.7	ug/kg	0.349	1.16
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.82	ug/kg	1.86	5.82
630-20-6	1,1,1,2-Tetrachloroethane		48.9	ug/kg	0.349	1.16
95-50-1	1,2-Dichlorobenzene		41.3	ug/kg	0.349	1.16

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071009v1/1t523.d
Lab Smp Id: 1201877300 Client Smp ID: CAMO-09-9956MSD
Inj Date : 10-JUL-2009 20:52
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201877300|883695|1|VOAF|1|
Misc Info : LANL 5G N/A MSD 232741002
Comment :
Method : /chem/VOA1.i/071009v1/VOA1-8260ox-070109.m
Meth Date : 10-Jul-2009 12:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 23 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	14.06760	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1152394	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.162	(1.000)	967626	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.615	(1.000)	490225	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.336	(0.975)	477677	48.7315	56.7
$ 65 Toluene-d8	98	15.527	15.518	(0.905)	1666319	49.4666	57.6
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	638866	50.5996	58.9
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	228113	43.2211	50.3
6 Chloromethane	50	5.535	5.535	(0.404)	443783	43.5526	50.7
7 Vinyl chloride	62	5.915	5.908	(0.432)	341146	43.0454	50.1
9 Bromomethane	96	6.943	6.934	(0.507)	229285	42.1730	49.1
10 Chloroethane	64	7.210	7.210	(0.527)	266295	44.8150	52.2
11 Trichlorofluoromethane	101	7.840	7.831	(0.573)	388937	51.8252	60.3

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
16 Acetone	43	9.258	9.240	(0.676)	547712	103.595	120
15 1,1-Dichloroethylene	61	9.092	9.079	(0.664)	590900	43.0918	50.1
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	551395	33.5160	39.0
18 Iodomethane	142	9.470	9.461	(0.692)	2217211	201.701	235
23 Methylene chloride	84	10.137	10.128	(0.740)	373199	45.5090	53.0
19 Carbon disulfide	76	9.576	9.562	(0.699)	4829067	219.033	255
26 trans-1,2-Dichloroethylene	96	10.552	10.538	(0.771)	310373	41.2509	48.0
30 1,1-Dichloroethane	63	11.320	11.307	(0.827)	655884	43.8045	51.0
35 2-Butanone	43	12.195	12.181	(0.891)	823060	139.152	162
36 cis-1,2-Dichloroethylene	96	12.204	12.190	(0.891)	359261	45.5345	53.0
101 1,3-Dichlorobenzene	146	19.550	19.546	(0.996)	561735	35.1397	40.9
33 2,2-Dichloropropane	77	12.172	12.154	(0.889)	368256	47.7587	55.6
41 Chloroform	83	12.614	12.600	(0.921)	580934	43.1050	50.2
106 1,2-Dichlorobenzene	146	20.089	20.085	(1.024)	537060	35.5186	41.3
39 Bromochloromethane	128	12.563	12.549	(0.918)	154678	42.6133	49.6
43 1,1,1-Trichloroethane	97	12.853	12.839	(0.939)	403069	46.9138	54.6
45 1,1-Dichloropropene	75	13.056	13.047	(0.954)	437457	45.2029	52.6
44 Carbon tetrachloride	117	13.028	13.019	(0.952)	405651	45.0610	52.4
51 1,2-Dichloroethane	62	13.447	13.433	(0.982)	464923	42.9461	50.0
47 Benzene	78	13.341	13.327	(0.974)	1309091	40.8395	47.5
54 Trichloroethylene	95	14.123	14.110	(1.032)	327306	42.9134	49.9
57 1,2-Dichloropropane	63	14.469	14.455	(1.057)	378431	44.5131	51.8
60 Bromodichloromethane	83	14.759	14.750	(1.078)	456984	45.6738	53.2
59 Dibromomethane	93	14.630	14.621	(1.069)	200419	43.2306	50.3
64 4-Methyl-2-pentanone	58	15.371	15.362	(0.895)	718937	230.896	269
63 cis-1,3-Dichloropropylene	75	15.265	15.256	(1.115)	521112	43.4155	50.5
66 Toluene	92	15.606	15.597	(0.909)	817234	40.1357	46.7
68 trans-1,3-Dichloropropylene	75	15.886	15.877	(0.925)	468590	43.1904	50.3
69 1,1,2-Trichloroethane	83	16.112	16.103	(0.939)	249839	44.6295	51.9
71 2-Hexanone	43	16.278	16.273	(0.948)	1145485	149.582	174
72 1,3-Dichloropropane	76	16.315	16.310	(0.950)	505738	43.0978	50.2
70 Tetrachloroethylene	164	16.199	16.190	(0.944)	226729	38.1143	44.4
73 Dibromochloromethane	129	16.554	16.549	(0.964)	302465	43.4409	50.6
74 1,2-Dibromoethane	107	16.733	16.729	(0.975)	271732	43.2330	50.3
77 Chlorobenzene	112	17.198	17.198	(1.002)	802030	39.2444	45.7
79 1,1,1,2-Tetrachloroethane	131	17.267	17.263	(1.006)	293514	41.9865	48.8
78 Ethylbenzene	91	17.231	17.226	(1.004)	1421371	38.4046	44.7
80 m,p-Xylenes	106	17.346	17.341	(1.010)	1043859	77.0202	89.6
81 o-Xylene	106	17.792	17.788	(1.036)	530593	40.6376	47.3
82 Styrene	104	17.815	17.811	(1.038)	886742	38.8874	45.2
83 Bromoform	173	18.114	18.105	(0.923)	196591	47.4695	55.2
88 1,1,2,2-Tetrachloroethane	83	18.515	18.510	(0.944)	377738	45.7490	53.2
92 1,2,3-Trichloropropane	110	18.611	18.607	(0.949)	102384	49.8169	58.0(Q)
91 Bromobenzene	156	18.602	18.598	(0.948)	315263	37.9378	44.1
89 n-Propylbenzene	91	18.570	18.566	(0.946)	1517969	36.7580	42.8
94 2-Chlorotoluene	91	18.750	18.745	(0.956)	1073050	37.5863	43.7
84 Isopropylbenzene	105	18.142	18.137	(0.925)	1163291	35.6264	41.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
93 1,3,5-Trimethylbenzene	105	18.727	18.727	(0.954)	1044318	37.5814	43.7
95 4-Chlorotoluene	91	18.865	18.860	(0.962)	946658	37.0882	43.2
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	892411	39.7503	46.2
97 1,2,4-Trimethylbenzene	105	19.145	19.146	(0.976)	1068221	36.8629	42.9
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	1406838	37.1996	43.3
100 4-Isopropyltoluene	119	19.435	19.431	(0.991)	961296	34.7430	40.4
105 n-Butylbenzene	91	19.882	19.877	(1.013)	999026	33.5099	39.0
108 1,2-Dibromo-3-chloropropane	157	21.014	21.010	(1.071)	64200	47.8410	55.7

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA1.i/071009v1/1t523.d
Date : 10-JUL-2009 20:52
Client ID: CAMO-09-9956WSD
Sample Info: 1120187730018836951|1|VOAF|1|
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

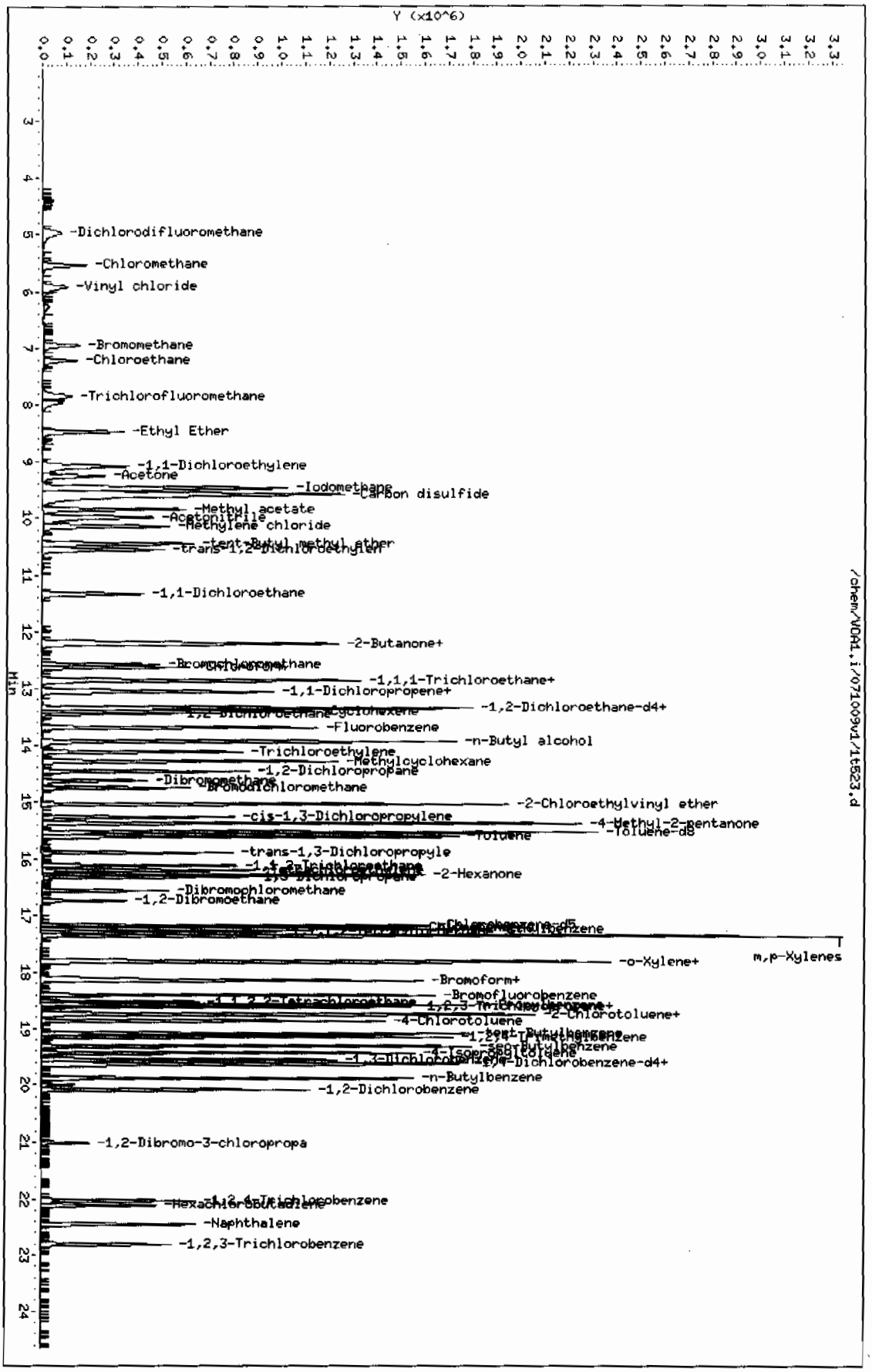

/chem/VOA1.i/071009v1/1t523.d

Miscellaneous Data

Prep LogBook

Analyst: RXM4 Verified by:_____
Batch: 883694
Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201878393		SW846 5030	09-JUL-2009 13:20	5 g	5 mL	1	SOIL
MB	1201878422		SW846 5030	10-JUL-2009 09:00	5 g	5 mL	1	SOIL
LCS	1201878394		SW846 5030	09-JUL-2009 13:21	5 g	5 mL	1	SOIL
LCS	1201878395		SW846 5030	09-JUL-2009 13:22	5 g	5 mL	1	SOIL
LCS	1201878423		SW846 5030	10-JUL-2009 09:01	5 g	5 mL	1	SOIL
LCS	1201878424		SW846 5030	10-JUL-2009 09:02	5 g	5 mL	1	SOIL
SAMPLE	232741001		SW846 5030	09-JUL-2009 12:16	5 g	5 mL	1	SOIL
SAMPLE	232741002		SW846 5030	09-JUL-2009 12:17	5 g	5 mL	1	SOIL
PS	1201877299	232741002	SW846 5030	09-JUL-2009 13:51	5 g	5 mL	1	SOIL
PSD	1201877300	232741002	SW846 5030	09-JUL-2009 13:52	5 g	5 mL	1	SOIL
SAMPLE	232741003		SW846 5030	09-JUL-2009 12:18	5 g	5 mL	1	SOIL
SAMPLE	232741004		SW846 5030	09-JUL-2009 12:19	5 g	5 mL	1	SOIL
SAMPLE	232741005		SW846 5030	09-JUL-2009 12:20	5 g	5 mL	1	SOIL
SAMPLE	232741006		SW846 5030	09-JUL-2009 12:21	5 g	5 mL	1	SOIL
SAMPLE	232741007		SW846 5030	09-JUL-2009 12:22	5 g	5 mL	1	SOIL
SAMPLE	232741008		SW846 5030	09-JUL-2009 12:23	5 g	5 mL	1	SOIL
SAMPLE	232741009		SW846 5030	09-JUL-2009 12:24	5 g	5 mL	1	SOIL

Analyst: RXM4 Verified by:_____
Batch: 883694
Lab SOP: GL-OA-E-039 REV# 7

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201877298		SW846 5035	09-JUL-2009 07:00	5 g	5 mL	1	SOIL
LCS	1201877301		SW846 5035	09-JUL-2009 07:01	5 g	5 mL	1	SOIL
LCS	1201877302		SW846 5035	09-JUL-2009 07:02	5 g	5 mL	1	SOIL
SAMPLE	232670001		SW846 5035	09-JUL-2009 12:11	5 g	5 mL	1	SOIL
SAMPLE	232670002		SW846 5035	09-JUL-2009 12:14	5 g	5 mL	1	SOIL
SAMPLE	232670003		SW846 5035	09-JUL-2009 12:15	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/1/2009 Method 8260B/624 Operator: RJM

REVIEWED BY: SJC
DATE: 7/22/09

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 81710

Sequence Number: 070109v1

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090701-03		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090701-04			5+5	
BFB	UVM090413-02				1
SHORT	W1VM090701-23		5+5	5+5	

Purge Amount	
5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

RJM 7/22/09

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable O/X	Comments
1 Jul 2009 08:55	1S301.D	UVM090413-02	GEL	BFB	5ML	1	N/A	1	W	RXM4	N/A	X	See 1S309
1 Jul 2009 09:23	1S302.D	W1VM090701-01	GEL	CCV/LCS	5ML	1	N/A	2	S	RXM4	N/A	X	UVM090605-01C/IVM090630-01
1 Jul 2009 09:54	1S303.D	W1VM090701-021	GEL	LCS	5G	1	N/A	3	W	RXM4	N/A	X	UVM090605-01C/IVM090630-01
1 Jul 2009 12:01	1S304.D	120187---	GEL	BLANK	5ML	1	N/A	4	W	RXM4	N/A	X	
1 Jul 2009 12:31	1S305.D	W1VM090701-03	GEL	CCV/LCS	5ML	1	N/A	5	W	RXM4	N/A	X	UVM090605-01D/IVM090630-01
1 Jul 2009 13:01	1S306.D	W1VM090701-04	GEL	LCS	5G	1	N/A	6	S	RXM4	N/A	X	UVM090605-01D/IVM090630-01
1 Jul 2009 13:31	1S307.D	12018--	GEL	BLANK	5ML	1	N/A	7	W	RXM4	N/A	X	
1 Jul 2009 14:04	1S308.D	12018--	GEL	BLANK	5ML	1	N/A	8	W	RXM4	N/A	X	
1 Jul 2009 14:32	1S309.D	UVM090413-02	GEL	BFB	5ML	1	N/A	9	W	RXM4	N/A	O	Passed.
1 Jul 2009 15:01	1S310.D	W1VM090701-05	GEL	VSTD0005	5ML	1	N/A	10	W	RXM4	N/A	O	UVM090603-01B/UVM090617-01C
1 Jul 2009 15:31	1S311.D	W1VM090701-06	GEL	VSTD001	5ML	1	N/A	11	W	RXM4	N/A	O	UVM090603-02B/UVM090617-02C
1 Jul 2009 16:01	1S312.D	W1VM090701-07	GEL	VSTD001	5ML	1	N/A	12	W	RXM4	N/A	X	UVM090603-02B/UVM090617-02C; not needed.
1 Jul 2009 16:32	1S313.D	W1VM090701-08	GEL	VSTD002	5ML	1	N/A	13	W	RXM4	N/A	O	UVM090603-03B/UVM090617-03C
1 Jul 2009 17:02	1S314.D	W1VM090701-09	GEL	VSTD005	5ML	1	N/A	14	W	RXM4	N/A	O	UVM090603-04B/UVM090617-04C
1 Jul 2009 17:32	1S315.D	W1VM090701-10	GEL	VSTD010	5ML	1	N/A	15	W	RXM4	N/A	O	UVM090603-05B/UVM090617-05C
1 Jul 2009 18:02	1S316.D	W1VM090701-11	GEL	VSTD020	5ML	1	N/A	16	W	RXM4	N/A	O	UVM090603-06B/UVM090617-06C
1 Jul 2009 18:33	1S317.D	W1VM090701-12	GEL	VSTD050	5ML	1	N/A	17	W	RXM4	N/A	O	UVM090603-07B/UVM090617-07C
1 Jul 2009 19:04	1S318.D	W1VM090701-13	GEL	VSTD100	5ML	1	N/A	18	W	RXM4	N/A	O	UVM090603-08B/UVM090617-08C
1 Jul 2009 19:34	1S319.D	12018--	GEL	BLANK	5ML	1	N/A	19	W	RXM4	N/A	X	
1 Jul 2009 20:05	1S320.D	W1VM090701-14	GEL	VSTD005S	5ML	1	N/A	20	W	RXM4	N/A	O	UVM090701-01/UVM090625-01A
1 Jul 2009 20:36	1S321.D	W1VM090701-15	GEL	VSTD010S	5ML	1	N/A	21	W	RXM4	N/A	O	UVM090701-02/UVM090625-02A
1 Jul 2009 21:06	1S322.D	W1VM090701-16	GEL	VSTD025S	5ML	1	N/A	22	W	RXM4	N/A	O	UVM090701-03/UVM090625-03A
1 Jul 2009 21:36	1S323.D	W1VM090701-17	GEL	VSTD050S	5ML	1	N/A	23	W	RXM4	N/A	O	UVM090701-04/UVM090625-04A
1 Jul 2009 22:07	1S324.D	W1VM090701-18	GEL	VSTD100S	5ML	1	N/A	24	W	RXM4	N/A	O	UVM090701-05/UVM090625-05A
1 Jul 2009 22:38	1S325.D	W1VM090701-19	GEL	VSTD250S	5ML	1	N/A	25	W	RXM4	N/A	O	UVM090701-06/UVM090625-06A
1 Jul 2009 23:06	1S326.D	W1VM090701-20	GEL	VSTD500S	5ML	1	N/A	26	W	RXM4	N/A	O	UVM090701-07/UVM090625-07A
1 Jul 2009 23:39	1S327.D	12018--	GEL	BLANK	5ML	1	N/A	27	W	RXM4	N/A	X	

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/1/2009 Method 8260B/624 Operator: RJM

REVIEWED BY: SK
DATE: 07/22/09

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

Page 255 of 658

Initial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 81710

Sequence Number: 070109v1

Daily Standard — Volume Added for Purge (ul)

Solution ID#		Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090701-03		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090701-04			5+5	
BFB	UVM090413-02				1
SHORT	W1VM090701-23		5+5	5+5	

Purge Amount

5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

RJM 7/22/09

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable O/X	Comments
2 Jul 2009 00:10	1S328.D	W1VM090701-21	GEL	ICV	5ML	1	N/A	28	W	RXM4	N/A	X	UVM090527-01E/IVM090630-01; Vinyl Chloride low
2 Jul 2009 00:41	1S329.D	W1VM090701-22	GEL	ICV	5ML	1	N/A	29	W	RXM4	N/A	O	UVM090605-01D/IVM090630-01
2 Jul 2009 01:12	1S330.D	W1VM090701-23	GEL	SHORT ICV	5ML	1	N/A	30	W	RXM4	N/A	O	UVM090701-01/UVM090527-01E

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/9/2009 Method 8260B/624 Operator: RJM

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 81710

Sequence Number: 070909v1

Daily Standard — Volume Added for Purge (ul)

Solution ID#		Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090709-01		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090709-01/02			5+5	
BFB	UVM090413-02				1
SHORT	UVM090701-08A		5	5	

Purge Amount

5	Water Purge Vol:ML
5	Soil Purge Wt.:G
	Mid level ext. MeOH Vol:
100	ul
CY647	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable O/X	Comments
9 Jul 2009 07:46	1T401.D	UVM090413-02	GEL	BFB	5ML	1	N/A	1	W	RXM4	N/A	O	
9 Jul 2009 08:14	1T402.D	W1VM090709-01	GEL	CCV/LCS	5ML	1	N/A	2	W	RXM4	N/A	O	UVM090605-01E/IVM090707-01
9 Jul 2009 08:45	1T403.D	W1VM090709-02	GEL	LCS	5G	1	N/A	3	S	RXM4	N/A	O	UVM090605-01E/IVM090707-01
9 Jul 2009 09:48	1T404.D	UVM090701-08A	GEL	SHORT	5ML	1	N/A	4	W	RXM4	N/A	O	UVM090701-08A
9 Jul 2009 10:19	1T405.D	UVM090701-08A	GEL	SHORT	5G	1	N/A	5	S	RXM4	N/A	O	UVM090701-08A
9 Jul 2009 10:49	1T406.D	120187--	GEL	BLANK	5ML	1	N/A	6	W	RXM4	N/A	O	
9 Jul 2009 11:19	1T407.D	120187--	GEL	BLANK	5G	1	N/A	7	S	RXM4	N/A	O	
9 Jul 2009 11:50	1T408.D	1201875783	LANL	883693	500uL	10	N/A	8	W	RXM4	N/A	O	TCLP BLANK
9 Jul 2009 12:20	1T409.D	232427001	LANL	883693	500uL	10	N/A	9	W	RXM4	N/A	O	
9 Jul 2009 12:50	1T410.D	232427002	LANL	883693	500uL	10	N/A	10	W	RXM4	N/A	O	
9 Jul 2009 13:20	1T411.D	232848001	LANL	883693	500uL	10	N/A	11	W	RXM4	N/A	O	
9 Jul 2009 13:50	1T412.D	232848002	LANL	883693	500uL	10	N/A	12	W	RXM4	N/A	O	
9 Jul 2009 14:21	1T413.D	232741001	LANL	883695	5G	1	N/A	13	S	RXM4	N/A	O	
9 Jul 2009 14:51	1T414.D	232741002	LANL	883695	5G	1	N/A	14	S	RXM4	N/A	O	
9 Jul 2009 15:22	1T415.D	232741003	LANL	883695	5G	1	N/A	15	S	RXM4	N/A	O	
9 Jul 2009 15:53	1T416.D	232741004	LANL	883695	5G	1	N/A	16	S	RXM4	N/A	O	
9 Jul 2009 16:24	1T417.D	232741005	LANL	883695	5G	1	N/A	17	S	RXM4	N/A	O	
9 Jul 2009 16:54	1T418.D	232741006	LANL	883695	5G	1	N/A	18	S	RXM4	N/A	O	
9 Jul 2009 17:24	1T419.D	232741007	LANL	883695	5G	1	N/A	19	S	RXM4	N/A	O	
9 Jul 2009 17:55	1T420.D	232741008	LANL	883695	5G	1	N/A	20	S	RXM4	N/A	O	
9 Jul 2009 18:25	1T421.D	232741009	LANL	883695	5G	1	N/A	21	S	RXM4	N/A	O	
9 Jul 2009 18:55	1T422.D	1201877294	LANL	883693	500uL	10	N/A	22	W	RXM4	N/A	O	MS 232427001
9 Jul 2009 19:26	1T423.D	1201877295	LANL	883693	500uL	10	N/A	23	W	RXM4	N/A	O	MSD 232427001
9 Jul 2009 19:56	1T424.D	120187--	GEL	BLANK	5ML	1	N/A	24	W	RXM4	N/A	X	

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/10/2009 Method 8260B/624 Operator: RJM

REVIEWED BY: AG
DATE: 7/17/09

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 81710

Sequence Number: 071009v1

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090710-02		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090710-02/03			5+5	
BFB	UVM090413-02				1
SHORT	W1VM090710-04/05		5+5	5+5	

Purge Amount	
5	Water Purge Vol:ML
5	Soil Purge Wt.:G
N/A	Mid level ext. MeOH Vol: ul
N/A	Methanol Lot #
X	Heated Purge

RJM 7/13/09

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable O/X	Comments
7/10/2009 7:25	1T501.D	UVM090413-02	GEL	BFB	5ML	1	N/A	1	W	RXM4	N/A	X	
7/10/2009 9:48	1T502.D	W1VM090710-01	GEL	CCV/LCS	5ML	1	N/A	2	W	RXM4	N/A	X	UVM090605-01E/IVM090708-01
7/10/2009 10:17	1T503.D	UVM090413-02	GEL	BFB	5ML	1	N/A	3	W	RXM4	N/A	O	
7/10/2009 11:16	1T504.D	W1VM090710-02	GEL	CCV/LCS	5ML	1	N/A	4	W	RXM4	N/A	O	UVM090605-01E/IVM090708-01
7/10/2009 11:46	1T505.D	W1VM090710-03	GEL	LCS	5G	1	N/A	5	S	RXM4	N/A	O	UVM090605-01E/IVM090708-01
7/10/2009 12:17	1T506.D	W1VM090710-04	GEL	SHORT	5ML	1	N/A	6	W	RXM4	N/A	O	UVM090701-08A/UVM090624-02B
7/10/2009 12:47	1T507.D	W1VM090710-05	GEL	SHORT	5G	1	N/A	7	S	RXM4	N/A	O	UVM090701-08A/UVM090624-02B
7/10/2009 13:18	1T508.D	120187--	GEL	BLANK	5ML	1	N/A	8	W	RXM4	N/A	O	
7/10/2009 13:48	1T509.D	120187--	GEL	BLANK	5G	1	N/A	9	S	RXM4	N/A	O	
7/10/2009 14:19	1T510.D	233082001	KAPL	884039	5ML	1	PH2	10	W	RXM4	N	O	
7/10/2009 14:50	1T511.D	233082002	KAPL	884039	5ML	1	PH2	11	W	RXM4	N	O	
7/10/2009 15:20	1T512.D	233081001	KAPL	884038	5G	1	N/A	12	S	RXM4	N/A	O	
7/10/2009 15:50	1T513.D	233081002	KAPL	884038	5G	1	N/A	13	S	RXM4	N/A	O	
7/10/2009 16:20	1T514.D	233081003	KAPL	884038	5G	1	N/A	14	S	RXM4	N/A	O	
7/10/2009 16:50	1T515.D	233081004	KAPL	884038	5G	1	N/A	15	S	RXM4	N/A	O	
7/10/2009 17:20	1T516.D	233081005	KAPL	884038	5G	1	N/A	16	S	RXM4	N/A	O	
7/10/2009 17:51	1T517.D	233081006	KAPL	884038	5G	1	N/A	17	S	RXM4	N/A	O	
7/10/2009 18:21	1T518.D	1201878084	KAPL	884039	5ML	1	PH2	18	W	RXM4	N	O	MS 233082001
7/10/2009 18:51	1T519.D	1201878085	KAPL	884039	5ML	1	PH2	19	W	RXM4	N	O	MSD 233082001
7/10/2009 19:21	1T520.D	1201878080	KAPL	884038	5G	1	N/A	20	S	RXM4	N/A	O	MS 233081001
7/10/2009 19:51	1T521.D	1201878081	KAPL	884038	5G	1	N/A	21	S	RXM4	N/A	O	MSD 233081001
7/10/2009 20:22	1T522.D	1201877299	LANL	883695	5G	1	N/A	22	S	RXM4	N/A	O	MS 232741002
7/10/2009 20:52	1T523.D	1201877300	LANL	883695	5G	1	N/A	23	S	RXM5	N/A	O	MSD 232741002

GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2524

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	882565
Prep Batch Number:	882563

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232741002	CAMO-09-9956
232741003	CAMO-09-9950
232741004	CAMO-09-9952
232741005	CAMO-09-9958
232741006	CAMO-09-9957
232741007	CAMO-09-9951
232741008	CAMO-09-10031
232741009	CAMO-09-9990
1201874482	Method Blank (MB)
1201874483	Laboratory Control Sample (LCS)
1201874484	232741002(CAMO-09-9956) Matrix Spike (MS)
1201874485	232741002(CAMO-09-9956) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the

Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232741002 (CAMO-09-9956) was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Sample 232741007 (CAMO-09-9951) was re-analyzed due to internal standard failure. The re-analysis passed and was reported.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Additional Comments
Additional comments were not required for this SDG.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration
The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD5.1	HP Mass Spectrometer	HP6890/HP5973	DB-5MS	25m x 0.2mm, 0.33um (5% Phenylmethylpolysiloxane)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: Dan Berkey **Date:** 7-20-09

Roadmap for LANL 09-2524 SVOA

This roadmap was analyzed by rmb on 07-08-2009, 09:21.
This roadmap was reviewed by jcb on 07-08-2009, 11:00.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD5.i/s070709.b/s5g0711.d	232741002	07-JUL-2009	11:35	09-2524.sub	CAMO 09-9956	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0714.d	232741003	07-JUL-2009	13:00	09-2524.sub	CAMO-09-9950	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0715.d	232741004	07-JUL-2009	13:28	09-2524.sub	CAMO-09-9952	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0716.d	232741005	07-JUL-2009	13:56	09-2524.sub	CAMO-09-9958	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0717.d	232741006	07-JUL-2009	14:24	09-2524.sub	CAMO-09-9957	1	882565	
■	N	/chem/MSD5.i/s070709.b/s5g0718.d	232741007	07-JUL-2009	14:53	09-2524.sub	CAMO-09-9951	1	882565	DUSE - fail istd - s5g0721 pass
☐	N	/chem/MSD5.i/s070709.b/s5g0719.d	232741008	07-JUL-2009	15:21	09-2524.sub	CAMO-09-10031	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0720.d	232741009	07-JUL-2009	15:50	09-2524.sub	CAMO-09-9990	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0721.d	232741007	07-JUL-2009	16:18	09-2524.sub	CAMO-09-9951	1	882565	.rr of s5g0718-pass istd

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD5.i/s070709.b/s5g0704-2.d	1201874482	mb	07-JUL-2009	08:17	09-2524.sub	SBLK01	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0705-2.d	1201874483	lcs	07-JUL-2009	08:45	09-2524.sub	SBLK01LCS	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0712.d	1201874484	ms	07-JUL-2009	12:03	09-2524.sub	CAMO-09-9956MS	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0713.d	1201874485	msd	07-JUL-2009	12:31	09-2524.sub	CAMO-09-9956MSD	1	882565	

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 15:21	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0719.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.1	376
108-95-2	Phenol	U	376	ug/kg	75.1	376
95-57-8	2-Chlorophenol	U	376	ug/kg	75.1	376
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.1	376
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.1	376
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	75.1	376
83-32-9	Acenaphthene	U	37.6	ug/kg	12.4	37.6
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376
100-02-7	4-Nitrophenol	U	376	ug/kg	124	376
87-86-5	Pentachlorophenol	U	376	ug/kg	93.9	376
129-00-0	Pyrene		90.3	ug/kg	11.3	37.6
110-86-1	Pyridine	U	376	ug/kg	75.1	376
62-53-3	Aniline	U	376	ug/kg	113	376
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.1	376
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.1	376
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.1	376
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.1	376
95-48-7	o-Cresol	U	376	ug/kg	75.1	376
65794-96-9	m,p-Cresols	U	376	ug/kg	113	376
67-72-1	Hexachloroethane	U	376	ug/kg	75.1	376
98-95-3	Nitrobenzene	U	376	ug/kg	75.1	376
78-59-1	Isophorone	U	376	ug/kg	75.1	376
88-75-5	2-Nitrophenol	U	376	ug/kg	75.1	376
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	131	376
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.1	376
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.1	376
65-85-0	Benzoic acid	U	751	ug/kg	188	751
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6
106-47-8	4-Chloroaniline	U	376	ug/kg	75.1	376
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.1	376
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.51	37.6
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.1	376
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.1	376
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.1	376
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	12.4	37.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	376	ug/kg	75.1	376
99-09-2	3-Nitroaniline	U	376	ug/kg	75.1	376

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 15:21	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0719.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	376	ug/kg	75.1	376
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751
132-64-9	Dibenzofuran	U	376	ug/kg	75.1	376
84-66-2	Diethylphthalate	U	376	ug/kg	75.1	376
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	75.1	376
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.1	376
100-01-6	4-Nitroaniline	U	376	ug/kg	113	376
	p-Nitroaniline					
122-39-4	Diphenylamine	U	376	ug/kg	75.1	376
122-66-7	Azobenzene	U	376	ug/kg	75.1	376
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	75.1	376
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.1	376
85-01-8	Phenanthrene		72.2	ug/kg	11.3	37.6
120-12-7	Anthracene	J	14.9	ug/kg	7.51	37.6
84-74-2	Di-n-butylphthalate	U	376	ug/kg	75.1	376
206-44-0	Fluoranthene		100	ug/kg	11.3	37.6
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.1	376
56-55-3	Benzo(a)anthracene		44.3	ug/kg	11.3	37.6
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376
218-01-9	Chrysene		38.4	ug/kg	11.3	37.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.1	376
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.1	376
205-99-2	Benzo(b)fluoranthene		49.2	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	J	17.2	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene		40.0	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	J	21.9	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	J	25.8	ug/kg	11.3	37.6
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.1	376

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	327	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9950	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:00	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0714.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	372	ug/kg	74.5	372
108-95-2	Phenol	U	372	ug/kg	74.5	372
95-57-8	2-Chlorophenol	U	372	ug/kg	74.5	372
106-46-7	1,4-Dichlorobenzene	U	372	ug/kg	74.5	372
621-64-7	N-Nitrosodipropylamine	U	372	ug/kg	74.5	372
59-50-7	4-Chloro-3-methylphenol	U	372	ug/kg	74.5	372
83-32-9	Acenaphthene	U	37.2	ug/kg	12.3	37.2
121-14-2	2,4-Dinitrotoluene	U	372	ug/kg	37.2	372
100-02-7	4-Nitrophenol	U	372	ug/kg	123	372
87-86-5	Pentachlorophenol	U	372	ug/kg	93.1	372
129-00-0	Pyrene		41.0	ug/kg	11.2	37.2
110-86-1	Pyridine	U	372	ug/kg	74.5	372
62-53-3	Aniline	U	372	ug/kg	112	372
111-44-4	bis(2-Chloroethyl) ether	U	372	ug/kg	74.5	372
541-73-1	1,3-Dichlorobenzene	U	372	ug/kg	74.5	372
100-51-6	Benzyl alcohol	U	372	ug/kg	112	372
95-50-1	1,2-Dichlorobenzene	U	372	ug/kg	74.5	372
108-60-1	bis(2-Chloroisopropyl)ether	U	372	ug/kg	74.5	372
95-48-7	o-Cresol	U	372	ug/kg	74.5	372
65794-96-9	m,p-Cresols	U	372	ug/kg	112	372
67-72-1	Hexachloroethane	U	372	ug/kg	74.5	372
98-95-3	Nitrobenzene	U	372	ug/kg	74.5	372
78-59-1	Isophorone	U	372	ug/kg	74.5	372
88-75-5	2-Nitrophenol	U	372	ug/kg	74.5	372
105-67-9	2,4-Dimethylphenol	U	372	ug/kg	130	372
111-91-1	bis(2-Chloroethoxy)methane	U	372	ug/kg	74.5	372
120-83-2	2,4-Dichlorophenol	U	372	ug/kg	74.5	372
65-85-0	Benzoic acid	U	745	ug/kg	186	745
91-20-3	Naphthalene	U	37.2	ug/kg	11.2	37.2
106-47-8	4-Chloroaniline	U	372	ug/kg	74.5	372
87-68-3	Hexachlorobutadiene	U	372	ug/kg	74.5	372
91-57-6	2-Methylnaphthalene	U	37.2	ug/kg	7.45	37.2
77-47-4	Hexachlorocyclopentadiene	U	372	ug/kg	74.5	372
88-06-2	2,4,6-Trichlorophenol	U	372	ug/kg	74.5	372
95-95-4	2,4,5-Trichlorophenol	U	372	ug/kg	74.5	372
91-58-7	2-Chloronaphthalene	U	37.2	ug/kg	12.3	37.2
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	372	ug/kg	74.5	372
99-09-2	3-Nitroaniline	U	372	ug/kg	74.5	372

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9950	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:00	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0714.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	372	ug/kg	74.5	372
606-20-2	2,6-Dinitrotoluene	U	372	ug/kg	37.2	372
208-96-8	Acenaphthylene	U	37.2	ug/kg	11.2	37.2
51-28-5	2,4-Dinitrophenol	U	745	ug/kg	142	745
132-64-9	Dibenzofuran	U	372	ug/kg	74.5	372
84-66-2	Diethylphthalate	U	372	ug/kg	74.5	372
86-73-7	Fluorene	U	37.2	ug/kg	11.2	37.2
7005-72-3	4-Chlorophenylphenylether	U	372	ug/kg	74.5	372
534-52-1	2-Methyl-4,6-dinitrophenol	U	372	ug/kg	74.5	372
100-01-6	4-Nitroaniline	U	372	ug/kg	112	372
	p-Nitroaniline					
122-39-4	Diphenylamine	U	372	ug/kg	74.5	372
122-66-7	Azobenzene	U	372	ug/kg	74.5	372
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	372	ug/kg	74.5	372
118-74-1	Hexachlorobenzene	U	372	ug/kg	74.5	372
85-01-8	Phenanthrene	J	29.8	ug/kg	11.2	37.2
120-12-7	Anthracene	U	37.2	ug/kg	7.45	37.2
84-74-2	Di-n-butylphthalate	U	372	ug/kg	74.5	372
206-44-0	Fluoranthene		42.3	ug/kg	11.2	37.2
85-68-7	Butylbenzylphthalate	U	372	ug/kg	74.5	372
56-55-3	Benzo(a)anthracene	J	21.7	ug/kg	11.2	37.2
91-94-1	3,3'-Dichlorobenzidine	U	372	ug/kg	112	372
218-01-9	Chrysene	J	16.1	ug/kg	11.2	37.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	372	ug/kg	74.5	372
117-84-0	Di-n-octylphthalate	U	372	ug/kg	74.5	372
205-99-2	Benzo(b)fluoranthene	J	21.8	ug/kg	11.2	37.2
207-08-9	Benzo(k)fluoranthene	U	37.2	ug/kg	11.2	37.2
50-32-8	Benzo(a)pyrene	J	17.0	ug/kg	11.2	37.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.2	ug/kg	11.2	37.2
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.2	37.2
191-24-2	Benzo(ghi)perylene	J	15.0	ug/kg	11.2	37.2
120-82-1	1,2,4-Trichlorobenzene	U	372	ug/kg	74.5	372

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	352	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741007	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9951	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 16:18	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0721.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	371	ug/kg	74.2	371
108-95-2	Phenol	U	371	ug/kg	74.2	371
95-57-8	2-Chlorophenol	U	371	ug/kg	74.2	371
106-46-7	1,4-Dichlorobenzene	U	371	ug/kg	74.2	371
621-64-7	N-Nitrosodipropylamine	U	371	ug/kg	74.2	371
59-50-7	4-Chloro-3-methylphenol	U	371	ug/kg	74.2	371
83-32-9	Acenaphthene	U	37.1	ug/kg	12.2	37.1
121-14-2	2,4-Dinitrotoluene	U	371	ug/kg	37.1	371
100-02-7	4-Nitrophenol	U	371	ug/kg	122	371
87-86-5	Pentachlorophenol	U	371	ug/kg	92.8	371
129-00-0	Pyrene		40.4	ug/kg	11.1	37.1
110-86-1	Pyridine	U	371	ug/kg	74.2	371
62-53-3	Aniline	U	371	ug/kg	111	371
111-44-4	bis(2-Chloroethyl) ether	U	371	ug/kg	74.2	371
541-73-1	1,3-Dichlorobenzene	U	371	ug/kg	74.2	371
100-51-6	Benzyl alcohol	U	371	ug/kg	111	371
95-50-1	1,2-Dichlorobenzene	U	371	ug/kg	74.2	371
108-60-1	bis(2-Chloroisopropyl)ether	U	371	ug/kg	74.2	371
95-48-7	o-Cresol	U	371	ug/kg	74.2	371
65794-96-9	m,p-Cresols	U	371	ug/kg	111	371
67-72-1	Hexachloroethane	U	371	ug/kg	74.2	371
98-95-3	Nitrobenzene	U	371	ug/kg	74.2	371
78-59-1	Isophorone	U	371	ug/kg	74.2	371
88-75-5	2-Nitrophenol	U	371	ug/kg	74.2	371
105-67-9	2,4-Dimethylphenol	U	371	ug/kg	130	371
111-91-1	bis(2-Chloroethoxy)methane	U	371	ug/kg	74.2	371
120-83-2	2,4-Dichlorophenol	U	371	ug/kg	74.2	371
65-85-0	Benzoic acid	U	742	ug/kg	186	742
91-20-3	Naphthalene	U	37.1	ug/kg	11.1	37.1
106-47-8	4-Chloroaniline	U	371	ug/kg	74.2	371
87-68-3	Hexachlorobutadiene	U	371	ug/kg	74.2	371
91-57-6	2-Methylnaphthalene	U	37.1	ug/kg	7.42	37.1
77-47-4	Hexachlorocyclopentadiene	U	371	ug/kg	74.2	371
88-06-2	2,4,6-Trichlorophenol	U	371	ug/kg	74.2	371
95-95-4	2,4,5-Trichlorophenol	U	371	ug/kg	74.2	371
91-58-7	2-Chloronaphthalene	U	37.1	ug/kg	12.2	37.1
88-74-4	2-Nitroaniline	U	371	ug/kg	74.2	371
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	371	ug/kg	74.2	371

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741007	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9951	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 16:18	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0721.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	371	ug/kg	74.2	371
606-20-2	2,6-Dinitrotoluene	U	371	ug/kg	37.1	371
208-96-8	Acenaphthylene	U	37.1	ug/kg	11.1	37.1
51-28-5	2,4-Dinitrophenol	U	742	ug/kg	141	742
132-64-9	Dibenzofuran	U	371	ug/kg	74.2	371
84-66-2	Diethylphthalate	U	371	ug/kg	74.2	371
86-73-7	Fluorene	U	37.1	ug/kg	11.1	37.1
7005-72-3	4-Chlorophenylphenylether	U	371	ug/kg	74.2	371
534-52-1	2-Methyl-4,6-dinitrophenol	U	371	ug/kg	74.2	371
100-01-6	4-Nitroaniline	U	371	ug/kg	111	371
	p-Nitroaniline					
122-39-4	Diphenylamine	U	371	ug/kg	74.2	371
122-66-7	Azobenzene	U	371	ug/kg	74.2	371
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	371	ug/kg	74.2	371
118-74-1	Hexachlorobenzene	U	371	ug/kg	74.2	371
85-01-8	Phenanthrene	J	12.5	ug/kg	11.1	37.1
120-12-7	Anthracene	U	37.1	ug/kg	7.42	37.1
84-74-2	Di-n-butylphthalate	U	371	ug/kg	74.2	371
206-44-0	Fluoranthene		38.3	ug/kg	11.1	37.1
85-68-7	Butylbenzylphthalate	U	371	ug/kg	74.2	371
56-55-3	Benzo(a)anthracene		39.9	ug/kg	11.1	37.1
91-94-1	3,3'-Dichlorobenzidine	U	371	ug/kg	111	371
218-01-9	Chrysene	J	35.5	ug/kg	11.1	37.1
117-81-7	bis(2-Ethylhexyl)phthalate	U	371	ug/kg	74.2	371
117-84-0	Di-n-octylphthalate	U	371	ug/kg	74.2	371
205-99-2	Benzo(b)fluoranthene		44.3	ug/kg	11.1	37.1
207-08-9	Benzo(k)fluoranthene	J	21.9	ug/kg	11.1	37.1
50-32-8	Benzo(a)pyrene	J	34.4	ug/kg	11.1	37.1
193-39-5	Indeno(1,2,3-cd)pyrene	J	16.7	ug/kg	11.1	37.1
53-70-3	Dibenzo(a,h)anthracene	U	37.1	ug/kg	11.1	37.1
191-24-2	Benzo(ghi)perylene	J	15.8	ug/kg	11.1	37.1
120-82-1	1,2,4-Trichlorobenzene	U	371	ug/kg	74.2	371

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	303	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741004	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9952	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:28	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0715.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	372	ug/kg	74.4	372
108-95-2	Phenol	U	372	ug/kg	74.4	372
95-57-8	2-Chlorophenol	U	372	ug/kg	74.4	372
106-46-7	1,4-Dichlorobenzene	U	372	ug/kg	74.4	372
621-64-7	N-Nitrosodipropylamine	U	372	ug/kg	74.4	372
59-50-7	4-Chloro-3-methylphenol	U	372	ug/kg	74.4	372
83-32-9	Acenaphthene	U	37.2	ug/kg	12.3	37.2
121-14-2	2,4-Dinitrotoluene	U	372	ug/kg	37.2	372
100-02-7	4-Nitrophenol	U	372	ug/kg	123	372
87-86-5	Pentachlorophenol	U	372	ug/kg	92.9	372
129-00-0	Pyrene	U	37.2	ug/kg	11.2	37.2
110-86-1	Pyridine	U	372	ug/kg	74.4	372
62-53-3	Aniline	U	372	ug/kg	112	372
111-44-4	bis(2-Chloroethyl) ether	U	372	ug/kg	74.4	372
541-73-1	1,3-Dichlorobenzene	U	372	ug/kg	74.4	372
100-51-6	Benzyl alcohol	U	372	ug/kg	112	372
95-50-1	1,2-Dichlorobenzene	U	372	ug/kg	74.4	372
108-60-1	bis(2-Chloroisopropyl)ether	U	372	ug/kg	74.4	372
95-48-7	o-Cresol	U	372	ug/kg	74.4	372
65794-96-9	m,p-Cresols	U	372	ug/kg	112	372
67-72-1	Hexachloroethane	U	372	ug/kg	74.4	372
98-95-3	Nitrobenzene	U	372	ug/kg	74.4	372
78-59-1	Isophorone	U	372	ug/kg	74.4	372
88-75-5	2-Nitrophenol	U	372	ug/kg	74.4	372
105-67-9	2,4-Dimethylphenol	U	372	ug/kg	130	372
111-91-1	bis(2-Chloroethoxy)methane	U	372	ug/kg	74.4	372
120-83-2	2,4-Dichlorophenol	U	372	ug/kg	74.4	372
65-85-0	Benzoic acid	U	744	ug/kg	186	744
91-20-3	Naphthalene	U	37.2	ug/kg	11.2	37.2
106-47-8	4-Chloroaniline	U	372	ug/kg	74.4	372
87-68-3	Hexachlorobutadiene	U	372	ug/kg	74.4	372
91-57-6	2-Methylnaphthalene	U	37.2	ug/kg	7.44	37.2
77-47-4	Hexachlorocyclopentadiene	U	372	ug/kg	74.4	372
88-06-2	2,4,6-Trichlorophenol	U	372	ug/kg	74.4	372
95-95-4	2,4,5-Trichlorophenol	U	372	ug/kg	74.4	372
91-58-7	2-Chloronaphthalene	U	37.2	ug/kg	12.3	37.2
88-74-4	2-Nitroaniline	U	372	ug/kg	74.4	372
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	372	ug/kg	74.4	372

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741004	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9952	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:28	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0715.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	372	ug/kg	74.4	372
606-20-2	2,6-Dinitrotoluene	U	372	ug/kg	37.2	372
208-96-8	Acenaphthylene	U	37.2	ug/kg	11.2	37.2
51-28-5	2,4-Dinitrophenol	U	744	ug/kg	141	744
132-64-9	Dibenzofuran	U	372	ug/kg	74.4	372
84-66-2	Diethylphthalate	U	372	ug/kg	74.4	372
86-73-7	Fluorene	U	37.2	ug/kg	11.2	37.2
7005-72-3	4-Chlorophenylphenylether	U	372	ug/kg	74.4	372
534-52-1	2-Methyl-4,6-dinitrophenol	U	372	ug/kg	74.4	372
100-01-6	4-Nitroaniline	U	372	ug/kg	112	372
	p-Nitroaniline					
122-39-4	Diphenylamine	U	372	ug/kg	74.4	372
122-66-7	Azobenzene	U	372	ug/kg	74.4	372
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	372	ug/kg	74.4	372
118-74-1	Hexachlorobenzene	U	372	ug/kg	74.4	372
85-01-8	Phenanthrene	U	37.2	ug/kg	11.2	37.2
120-12-7	Anthracene	U	37.2	ug/kg	7.44	37.2
84-74-2	Di-n-butylphthalate	U	372	ug/kg	74.4	372
206-44-0	Fluoranthene	U	37.2	ug/kg	11.2	37.2
85-68-7	Butylbenzylphthalate	U	372	ug/kg	74.4	372
56-55-3	Benzo(a)anthracene	U	37.2	ug/kg	11.2	37.2
91-94-1	3,3'-Dichlorobenzidine	U	372	ug/kg	112	372
218-01-9	Chrysene	U	37.2	ug/kg	11.2	37.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	372	ug/kg	74.4	372
117-84-0	Di-n-octylphthalate	U	372	ug/kg	74.4	372
205-99-2	Benzo(b)fluoranthene	U	37.2	ug/kg	11.2	37.2
207-08-9	Benzo(k)fluoranthene	U	37.2	ug/kg	11.2	37.2
50-32-8	Benzo(a)pyrene	U	37.2	ug/kg	11.2	37.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.2	ug/kg	11.2	37.2
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.2	37.2
191-24-2	Benzo(ghi)perylene	U	37.2	ug/kg	11.2	37.2
120-82-1	1,2,4-Trichlorobenzene	U	372	ug/kg	74.4	372

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	349	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9956	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 11:35	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0711.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	388	ug/kg	77.6	388
108-95-2	Phenol	U	388	ug/kg	77.6	388
95-57-8	2-Chlorophenol	U	388	ug/kg	77.6	388
106-46-7	1,4-Dichlorobenzene	U	388	ug/kg	77.6	388
621-64-7	N-Nitrosodipropylamine	U	388	ug/kg	77.6	388
59-50-7	4-Chloro-3-methylphenol	U	388	ug/kg	77.6	388
83-32-9	Acenaphthene	U	38.8	ug/kg	12.8	38.8
121-14-2	2,4-Dinitrotoluene	U	388	ug/kg	38.8	388
100-02-7	4-Nitrophenol	U	388	ug/kg	128	388
87-86-5	Pentachlorophenol	U	388	ug/kg	96.9	388
129-00-0	Pyrene	J	24.6	ug/kg	11.6	38.8
110-86-1	Pyridine	U	388	ug/kg	77.6	388
62-53-3	Aniline	U	388	ug/kg	116	388
111-44-4	bis(2-Chloroethyl) ether	U	388	ug/kg	77.6	388
541-73-1	1,3-Dichlorobenzene	U	388	ug/kg	77.6	388
100-51-6	Benzyl alcohol	U	388	ug/kg	116	388
95-50-1	1,2-Dichlorobenzene	U	388	ug/kg	77.6	388
108-60-1	bis(2-Chloroisopropyl)ether	U	388	ug/kg	77.6	388
95-48-7	o-Cresol	U	388	ug/kg	77.6	388
65794-96-9	m,p-Cresols	U	388	ug/kg	116	388
67-72-1	Hexachloroethane	U	388	ug/kg	77.6	388
98-95-3	Nitrobenzene	U	388	ug/kg	77.6	388
78-59-1	Isophorone	U	388	ug/kg	77.6	388
88-75-5	2-Nitrophenol	U	388	ug/kg	77.6	388
105-67-9	2,4-Dimethylphenol	U	388	ug/kg	136	388
111-91-1	bis(2-Chloroethoxy)methane	U	388	ug/kg	77.6	388
120-83-2	2,4-Dichlorophenol	U	388	ug/kg	77.6	388
65-85-0	Benzoic acid	U	776	ug/kg	194	776
91-20-3	Naphthalene	U	38.8	ug/kg	11.6	38.8
106-47-8	4-Chloroaniline	U	388	ug/kg	77.6	388
87-68-3	Hexachlorobutadiene	U	388	ug/kg	77.6	388
91-57-6	2-Methylnaphthalene	U	38.8	ug/kg	7.76	38.8
77-47-4	Hexachlorocyclopentadiene	U	388	ug/kg	77.6	388
88-06-2	2,4,6-Trichlorophenol	U	388	ug/kg	77.6	388
95-95-4	2,4,5-Trichlorophenol	U	388	ug/kg	77.6	388
91-58-7	2-Chloronaphthalene	U	38.8	ug/kg	12.8	38.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	388	ug/kg	77.6	388
99-09-2	3-Nitroaniline	U	388	ug/kg	77.6	388

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741002	Date Received:	07/02/2009 08:40	%Moisture:	14.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9956	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 11:35	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5g0711.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	388	ug/kg	77.6	388
606-20-2	2,6-Dinitrotoluene	U	388	ug/kg	38.8	388
208-96-8	Acenaphthylene	U	38.8	ug/kg	11.6	38.8
51-28-5	2,4-Dinitrophenol	U	776	ug/kg	147	776
132-64-9	Dibenzofuran	U	388	ug/kg	77.6	388
84-66-2	Diethylphthalate	U	388	ug/kg	77.6	388
86-73-7	Fluorene	U	38.8	ug/kg	11.6	38.8
7005-72-3	4-Chlorophenylphenylether	U	388	ug/kg	77.6	388
534-52-1	2-Methyl-4,6-dinitrophenol	U	388	ug/kg	77.6	388
100-01-6	4-Nitroaniline	U	388	ug/kg	116	388
	p-Nitroaniline					
122-39-4	Diphenylamine	U	388	ug/kg	77.6	388
122-66-7	Azobenzene	U	388	ug/kg	77.6	388
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	388	ug/kg	77.6	388
118-74-1	Hexachlorobenzene	U	388	ug/kg	77.6	388
85-01-8	Phenanthrene	J	14.1	ug/kg	11.6	38.8
120-12-7	Anthracene	U	38.8	ug/kg	7.76	38.8
84-74-2	Di-n-butylphthalate	U	388	ug/kg	77.6	388
206-44-0	Fluoranthene	J	25.6	ug/kg	11.6	38.8
85-68-7	Butylbenzylphthalate	U	388	ug/kg	77.6	388
56-55-3	Benzo(a)anthracene	U	38.8	ug/kg	11.6	38.8
91-94-1	3,3'-Dichlorobenzidine	U	388	ug/kg	116	388
218-01-9	Chrysene	U	38.8	ug/kg	11.6	38.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	388	ug/kg	77.6	388
117-84-0	Di-n-octylphthalate	U	388	ug/kg	77.6	388
205-99-2	Benzo(b)fluoranthene	J	13.2	ug/kg	11.6	38.8
207-08-9	Benzo(k)fluoranthene	U	38.8	ug/kg	11.6	38.8
50-32-8	Benzo(a)pyrene	U	38.8	ug/kg	11.6	38.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.8	ug/kg	11.6	38.8
53-70-3	Dibenzo(a,h)anthracene	U	38.8	ug/kg	11.6	38.8
191-24-2	Benzo(ghi)perylene	U	38.8	ug/kg	11.6	38.8
120-82-1	1,2,4-Trichlorobenzene	U	388	ug/kg	77.6	388

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	8.98	ug/kg		JA
	Unknown	13.48	4.56	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741006	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9957	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 14:24	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0717.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	371	ug/kg	74.1	371
108-95-2	Phenol	U	371	ug/kg	74.1	371
95-57-8	2-Chlorophenol	U	371	ug/kg	74.1	371
106-46-7	1,4-Dichlorobenzene	U	371	ug/kg	74.1	371
621-64-7	N-Nitrosodipropylamine	U	371	ug/kg	74.1	371
59-50-7	4-Chloro-3-methylphenol	U	371	ug/kg	74.1	371
83-32-9	Acenaphthene	U	37.1	ug/kg	12.2	37.1
121-14-2	2,4-Dinitrotoluene	U	371	ug/kg	37.1	371
100-02-7	4-Nitrophenol	U	371	ug/kg	122	371
87-86-5	Pentachlorophenol	U	371	ug/kg	92.6	371
129-00-0	Pyrene	U	37.1	ug/kg	11.1	37.1
110-86-1	Pyridine	U	371	ug/kg	74.1	371
62-53-3	Aniline	U	371	ug/kg	111	371
111-44-4	bis(2-Chloroethyl) ether	U	371	ug/kg	74.1	371
541-73-1	1,3-Dichlorobenzene	U	371	ug/kg	74.1	371
100-51-6	Benzyl alcohol	U	371	ug/kg	111	371
95-50-1	1,2-Dichlorobenzene	U	371	ug/kg	74.1	371
108-60-1	bis(2-Chloroisopropyl)ether	U	371	ug/kg	74.1	371
95-48-7	o-Cresol	U	371	ug/kg	74.1	371
65794-96-9	m,p-Cresols	U	371	ug/kg	111	371
67-72-1	Hexachloroethane	U	371	ug/kg	74.1	371
98-95-3	Nitrobenzene	U	371	ug/kg	74.1	371
78-59-1	Isophorone	U	371	ug/kg	74.1	371
88-75-5	2-Nitrophenol	U	371	ug/kg	74.1	371
105-67-9	2,4-Dimethylphenol	U	371	ug/kg	130	371
111-91-1	bis(2-Chloroethoxy)methane	U	371	ug/kg	74.1	371
120-83-2	2,4-Dichlorophenol	U	371	ug/kg	74.1	371
65-85-0	Benzoic acid	U	741	ug/kg	185	741
91-20-3	Naphthalene	U	37.1	ug/kg	11.1	37.1
106-47-8	4-Chloroaniline	U	371	ug/kg	74.1	371
87-68-3	Hexachlorobutadiene	U	371	ug/kg	74.1	371
91-57-6	2-Methylnaphthalene	U	37.1	ug/kg	7.41	37.1
77-47-4	Hexachlorocyclopentadiene	U	371	ug/kg	74.1	371
88-06-2	2,4,6-Trichlorophenol	U	371	ug/kg	74.1	371
95-95-4	2,4,5-Trichlorophenol	U	371	ug/kg	74.1	371
91-58-7	2-Chloronaphthalene	U	37.1	ug/kg	12.2	37.1
88-74-4	2-Nitroaniline	U	371	ug/kg	74.1	371
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	371	ug/kg	74.1	371

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741006	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9957	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 14:24	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0717.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	371	ug/kg	74.1	371
606-20-2	2,6-Dinitrotoluene	U	371	ug/kg	37.1	371
208-96-8	Acenaphthylene	U	37.1	ug/kg	11.1	37.1
51-28-5	2,4-Dinitrophenol	U	741	ug/kg	141	741
132-64-9	Dibenzofuran	U	371	ug/kg	74.1	371
84-66-2	Diethylphthalate	U	371	ug/kg	74.1	371
86-73-7	Fluorene	U	37.1	ug/kg	11.1	37.1
7005-72-3	4-Chlorophenylphenylether	U	371	ug/kg	74.1	371
534-52-1	2-Methyl-4,6-dinitrophenol	U	371	ug/kg	74.1	371
100-01-6	4-Nitroaniline	U	371	ug/kg	111	371
	p-Nitroaniline					
122-39-4	Diphenylamine	U	371	ug/kg	74.1	371
122-66-7	Azobenzene	U	371	ug/kg	74.1	371
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	371	ug/kg	74.1	371
118-74-1	Hexachlorobenzene	U	371	ug/kg	74.1	371
85-01-8	Phenanthrene	U	37.1	ug/kg	11.1	37.1
120-12-7	Anthracene	U	37.1	ug/kg	7.41	37.1
84-74-2	Di-n-butylphthalate	U	371	ug/kg	74.1	371
206-44-0	Fluoranthene	U	37.1	ug/kg	11.1	37.1
85-68-7	Butylbenzylphthalate	U	371	ug/kg	74.1	371
56-55-3	Benzo(a)anthracene	U	37.1	ug/kg	11.1	37.1
91-94-1	3,3'-Dichlorobenzidine	U	371	ug/kg	111	371
218-01-9	Chrysene	U	37.1	ug/kg	11.1	37.1
117-81-7	bis(2-Ethylhexyl)phthalate	U	371	ug/kg	74.1	371
117-84-0	Di-n-octylphthalate	U	371	ug/kg	74.1	371
205-99-2	Benzo(b)fluoranthene	U	37.1	ug/kg	11.1	37.1
207-08-9	Benzo(k)fluoranthene	U	37.1	ug/kg	11.1	37.1
50-32-8	Benzo(a)pyrene	U	37.1	ug/kg	11.1	37.1
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.1	ug/kg	11.1	37.1
53-70-3	Dibenzo(a,h)anthracene	U	37.1	ug/kg	11.1	37.1
191-24-2	Benzo(ghi)perylene	U	37.1	ug/kg	11.1	37.1
120-82-1	1,2,4-Trichlorobenzene	U	371	ug/kg	74.1	371

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	394	ug/kg		JA
5131-66-8	2-Propanol, 1-butoxy-	3.54	1860	ug/kg	90	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741005	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9958	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:56	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0716.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	372	ug/kg	74.3	372
108-95-2	Phenol	U	372	ug/kg	74.3	372
95-57-8	2-Chlorophenol	U	372	ug/kg	74.3	372
106-46-7	1,4-Dichlorobenzene	U	372	ug/kg	74.3	372
621-64-7	N-Nitrosodipropylamine	U	372	ug/kg	74.3	372
59-50-7	4-Chloro-3-methylphenol	U	372	ug/kg	74.3	372
83-32-9	Acenaphthene	U	37.2	ug/kg	12.3	37.2
121-14-2	2,4-Dinitrotoluene	U	372	ug/kg	37.2	372
100-02-7	4-Nitrophenol	U	372	ug/kg	123	372
87-86-5	Pentachlorophenol	U	372	ug/kg	92.9	372
129-00-0	Pyrene		80.1	ug/kg	11.1	37.2
110-86-1	Pyridine	U	372	ug/kg	74.3	372
62-53-3	Aniline	U	372	ug/kg	111	372
111-44-4	bis(2-Chloroethyl) ether	U	372	ug/kg	74.3	372
541-73-1	1,3-Dichlorobenzene	U	372	ug/kg	74.3	372
100-51-6	Benzyl alcohol	U	372	ug/kg	111	372
95-50-1	1,2-Dichlorobenzene	U	372	ug/kg	74.3	372
108-60-1	bis(2-Chloroisopropyl)ether	U	372	ug/kg	74.3	372
95-48-7	o-Cresol	U	372	ug/kg	74.3	372
65794-96-9	m,p-Cresols	U	372	ug/kg	111	372
67-72-1	Hexachloroethane	U	372	ug/kg	74.3	372
98-95-3	Nitrobenzene	U	372	ug/kg	74.3	372
78-59-1	Isophorone	U	372	ug/kg	74.3	372
88-75-5	2-Nitrophenol	U	372	ug/kg	74.3	372
105-67-9	2,4-Dimethylphenol	U	372	ug/kg	130	372
111-91-1	bis(2-Chloroethoxy)methane	U	372	ug/kg	74.3	372
120-83-2	2,4-Dichlorophenol	U	372	ug/kg	74.3	372
65-85-0	Benzoic acid	U	743	ug/kg	186	743
91-20-3	Naphthalene	U	37.2	ug/kg	11.1	37.2
106-47-8	4-Chloroaniline	U	372	ug/kg	74.3	372
87-68-3	Hexachlorobutadiene	U	372	ug/kg	74.3	372
91-57-6	2-Methylnaphthalene	U	37.2	ug/kg	7.43	37.2
77-47-4	Hexachlorocyclopentadiene	U	372	ug/kg	74.3	372
88-06-2	2,4,6-Trichlorophenol	U	372	ug/kg	74.3	372
95-95-4	2,4,5-Trichlorophenol	U	372	ug/kg	74.3	372
91-58-7	2-Chloronaphthalene	U	37.2	ug/kg	12.3	37.2
88-74-4	2-Nitroaniline	U	372	ug/kg	74.3	372
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	372	ug/kg	74.3	372

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741005	Date Received:	07/02/2009 08:40	%Moisture:	10.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9958	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 13:56	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0716.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	372	ug/kg	74.3	372
606-20-2	2,6-Dinitrotoluene	U	372	ug/kg	37.2	372
208-96-8	Acenaphthylene	U	37.2	ug/kg	11.1	37.2
51-28-5	2,4-Dinitrophenol	U	743	ug/kg	141	743
132-64-9	Dibenzofuran	U	372	ug/kg	74.3	372
84-66-2	Diethylphthalate	U	372	ug/kg	74.3	372
86-73-7	Fluorene	U	37.2	ug/kg	11.1	37.2
7005-72-3	4-Chlorophenylphenylether	U	372	ug/kg	74.3	372
534-52-1	2-Methyl-4,6-dinitrophenol	U	372	ug/kg	74.3	372
100-01-6	4-Nitroaniline	U	372	ug/kg	111	372
	p-Nitroaniline					
122-39-4	Diphenylamine	U	372	ug/kg	74.3	372
122-66-7	Azobenzene	U	372	ug/kg	74.3	372
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	372	ug/kg	74.3	372
118-74-1	Hexachlorobenzene	U	372	ug/kg	74.3	372
85-01-8	Phenanthrene		43.3	ug/kg	11.1	37.2
120-12-7	Anthracene	J	12.4	ug/kg	7.43	37.2
84-74-2	Di-n-butylphthalate	J	75.5	ug/kg	74.3	372
206-44-0	Fluoranthene		78.0	ug/kg	11.1	37.2
85-68-7	Butylbenzylphthalate	U	372	ug/kg	74.3	372
56-55-3	Benzo(a)anthracene	J	35.2	ug/kg	11.1	37.2
91-94-1	3,3'-Dichlorobenzidine	U	372	ug/kg	111	372
218-01-9	Chrysene	J	35.3	ug/kg	11.1	37.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	372	ug/kg	74.3	372
117-84-0	Di-n-octylphthalate	U	372	ug/kg	74.3	372
205-99-2	Benzo(b)fluoranthene		46.3	ug/kg	11.1	37.2
207-08-9	Benzo(k)fluoranthene	J	21.1	ug/kg	11.1	37.2
50-32-8	Benzo(a)pyrene		40.2	ug/kg	11.1	37.2
193-39-5	Indeno(1,2,3-cd)pyrene	J	25.9	ug/kg	11.1	37.2
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.1	37.2
191-24-2	Benzo(ghi)perylene	J	30.6	ug/kg	11.1	37.2
120-82-1	1,2,4-Trichlorobenzene	U	372	ug/kg	74.3	372

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	355	ug/kg		JA
5131-66-8	2-Propanol, 1-butoxy-	3.54	1360	ug/kg	83	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741005	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9958	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:56	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0716.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	3.61	353	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 15:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0720.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	414	ug/kg	82.8	414
108-95-2	Phenol	U	414	ug/kg	82.8	414
95-57-8	2-Chlorophenol	U	414	ug/kg	82.8	414
106-46-7	1,4-Dichlorobenzene	U	414	ug/kg	82.8	414
621-64-7	N-Nitrosodipropylamine	U	414	ug/kg	82.8	414
59-50-7	4-Chloro-3-methylphenol	U	414	ug/kg	82.8	414
83-32-9	Acenaphthene	U	41.4	ug/kg	13.7	41.4
121-14-2	2,4-Dinitrotoluene	U	414	ug/kg	41.4	414
100-02-7	4-Nitrophenol	U	414	ug/kg	137	414
87-86-5	Pentachlorophenol	U	414	ug/kg	104	414
129-00-0	Pyrene	U	41.4	ug/kg	12.4	41.4
110-86-1	Pyridine	U	414	ug/kg	82.8	414
62-53-3	Aniline	U	414	ug/kg	124	414
111-44-4	bis(2-Chloroethyl) ether	U	414	ug/kg	82.8	414
541-73-1	1,3-Dichlorobenzene	U	414	ug/kg	82.8	414
100-51-6	Benzyl alcohol	U	414	ug/kg	124	414
95-50-1	1,2-Dichlorobenzene	U	414	ug/kg	82.8	414
108-60-1	bis(2-Chloroisopropyl)ether	U	414	ug/kg	82.8	414
95-48-7	o-Cresol	U	414	ug/kg	82.8	414
65794-96-9	m,p-Cresols	U	414	ug/kg	124	414
67-72-1	Hexachloroethane	U	414	ug/kg	82.8	414
98-95-3	Nitrobenzene	U	414	ug/kg	82.8	414
78-59-1	Isophorone	U	414	ug/kg	82.8	414
88-75-5	2-Nitrophenol	U	414	ug/kg	82.8	414
105-67-9	2,4-Dimethylphenol	U	414	ug/kg	145	414
111-91-1	bis(2-Chloroethoxy)methane	U	414	ug/kg	82.8	414
120-83-2	2,4-Dichlorophenol	U	414	ug/kg	82.8	414
65-85-0	Benzoic acid	U	828	ug/kg	207	828
91-20-3	Naphthalene	U	41.4	ug/kg	12.4	41.4
106-47-8	4-Chloroaniline	U	414	ug/kg	82.8	414
87-68-3	Hexachlorobutadiene	U	414	ug/kg	82.8	414
91-57-6	2-Methylnaphthalene	U	41.4	ug/kg	8.28	41.4
77-47-4	Hexachlorocyclopentadiene	U	414	ug/kg	82.8	414
88-06-2	2,4,6-Trichlorophenol	U	414	ug/kg	82.8	414
95-95-4	2,4,5-Trichlorophenol	U	414	ug/kg	82.8	414
91-58-7	2-Chloronaphthalene	U	41.4	ug/kg	13.7	41.4
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	414	ug/kg	82.8	414
99-09-2	3-Nitroaniline	U	414	ug/kg	82.8	414

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 15:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0720.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	414	ug/kg	82.8	414
606-20-2	2,6-Dinitrotoluene	U	414	ug/kg	41.4	414
208-96-8	Acenaphthylene	U	41.4	ug/kg	12.4	41.4
51-28-5	2,4-Dinitrophenol	U	828	ug/kg	157	828
132-64-9	Dibenzofuran	U	414	ug/kg	82.8	414
84-66-2	Diethylphthalate	U	414	ug/kg	82.8	414
86-73-7	Fluorene	U	41.4	ug/kg	12.4	41.4
7005-72-3	4-Chlorophenylphenylether	U	414	ug/kg	82.8	414
534-52-1	2-Methyl-4,6-dinitrophenol	U	414	ug/kg	82.8	414
100-01-6	4-Nitroaniline	U	414	ug/kg	124	414
	p-Nitroaniline					
122-39-4	Diphenylamine	U	414	ug/kg	82.8	414
122-66-7	Azobenzene	U	414	ug/kg	82.8	414
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	414	ug/kg	82.8	414
118-74-1	Hexachlorobenzene	U	414	ug/kg	82.8	414
85-01-8	Phenanthrene	U	41.4	ug/kg	12.4	41.4
120-12-7	Anthracene	U	41.4	ug/kg	8.28	41.4
84-74-2	Di-n-butylphthalate	U	414	ug/kg	82.8	414
206-44-0	Fluoranthene	U	41.4	ug/kg	12.4	41.4
85-68-7	Butylbenzylphthalate	U	414	ug/kg	82.8	414
56-55-3	Benzo(a)anthracene	U	41.4	ug/kg	12.4	41.4
91-94-1	3,3'-Dichlorobenzidine	U	414	ug/kg	124	414
218-01-9	Chrysene	U	41.4	ug/kg	12.4	41.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	414	ug/kg	82.8	414
117-84-0	Di-n-octylphthalate	U	414	ug/kg	82.8	414
205-99-2	Benzo(b)fluoranthene	U	41.4	ug/kg	12.4	41.4
207-08-9	Benzo(k)fluoranthene	U	41.4	ug/kg	12.4	41.4
50-32-8	Benzo(a)pyrene	U	41.4	ug/kg	12.4	41.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	41.4	ug/kg	12.4	41.4
53-70-3	Dibenzo(a,h)anthracene	U	41.4	ug/kg	12.4	41.4
191-24-2	Benzo(ghi)perylene	U	41.4	ug/kg	12.4	41.4
120-82-1	1,2,4-Trichlorobenzene	U	414	ug/kg	82.8	414

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.07	239	ug/kg		J
	Unknown Aldol Condensate	3.02	449	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 15:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0720.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
506-30-9	Eicosanoic acid	9.06	241	ug/kg	98	NJ
1599-67-3	1-Docosene	10.21	237	ug/kg	94	NJ
	Unknown	13.37	206	ug/kg		J
83-47-6	.gamma.-Sitosterol	14.05	3000	ug/kg	99	NJ
1000143-61-3	N-(4-Methoxyphenyl)-2-hydroxyimino-aceta	14.4	321	ug/kg	92	NJ
1058-61-3	Stigmast-4-en-3-one	15.33	693	ug/kg	91	NJ
	Unknown	16.7	415	ug/kg		J
	Unknown	17.71	168	ug/kg		J
62906-36-9	1,2-Dicarbadodecaborane(12), 1-[(propylt	18.63	4040	ug/kg	90	NJ
	Unknown	19.41	4170	ug/kg		J
	Unknown	19.52	173	ug/kg		J

QC Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 09-2524

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201874482	MB for batch 882563	78	78	77	83	74	102
1201874483	LCS for batch 882563	78	74	71	81	85	95
232741002	CAMO-09-9956	61	62	58	64	73	81
1201874484	CAMO-09-9956MS	60	63	61	69	81	84
1201874485	CAMO-09-9956MSD	67	68	69	74	85	90
232741003	CAMO-09-9950	57	59	56	65	59	76
232741004	CAMO-09-9952	66	65	65	68	73	88
232741005	CAMO-09-9958	64	64	59	66	77	87
232741006	CAMO-09-9957	69	69	66	72	76	92
232741008	CAMO-09-10031	58	59	56	63	64	77
232741009	CAMO-09-9990	67	70	65	66	78	86
232741007	CAMO-09-9951	59	58	56	63	69	85

Surrogate			Acceptance Limits
2FP	=	2-Fluorophenol	(35%-96%)
PHL	=	Phenol-d5	(36%-96%)
NBZ	=	Nitrobenzene-d5	(34%-104%)
FBP	=	2-Fluorobiphenyl	(36%-100%)
TBP	=	2,4,6-Tribromophenol	(37%-106%)
TPH	=	p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: LCS for batch 882563
Lab Sample ID: 1201874483
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/07/2009 08:45
Prep Batch ID: 882563
Batch ID: 882565
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1280	77	31-95
108-95-2	LCS	Phenol	1670	0.0	1300	78	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1370	82	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	1230	74	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1370	82	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1400	84	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1370	82	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1340	81	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1380	83	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	1370	82	38-116
129-00-0	LCS	Pyrene	1670	0.0	1510	90	43-108
110-86-1	LCS	Pyridine	1670	0.0	1280	77	13-129
62-53-3	LCS	Aniline	1670	0.0	1390	83	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1230	74	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	1260	75	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	1320	79	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	1320	79	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1330	80	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1300	78	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1460	87	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	1270	76	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1280	77	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: LCS for batch 882563
Lab Sample ID: 1201874483
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/07/2009 08:45
Dilution: 1
Prep Batch ID: 882563
Batch ID: 882565

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1360	82	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1310	79	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1280	77	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1290	77	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1370	82	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	779	47	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1210	73	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1210	73	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1350	81	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1460	87	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1330	80	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1460	87	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1480	89	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1370	82	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1380	83	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1700	102	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1560	94	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1360	82	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1460	88	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	1350	81	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1430	86	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1590	95	50-108

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2524

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 882563

Matrix: SOIL

Lab Sample ID: 1201874483

Instrument: MSD5.I

Analysis Date: 07/07/2009 08:45

Dilution: 1

Analyst: RMB

Prep Batch ID: 882563

Inj. Vol: .5 uL

Batch ID: 882565

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1360	82	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1390	83	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	1320	79	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	2160	129	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1580	95	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1420	85	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1360	81	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1430	86	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1390	83	45-107
120-12-7	LCS	Anthracene	1670	0.0	1430	86	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1630	98	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1450	87	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1660	99	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1390	83	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1410	85	45-98
218-01-9	LCS	Chrysene	1670	0.0	1450	87	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1700	102	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1700	102	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1430	86	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1490	90	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1480	89	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1530	92	45-128

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: **09-2524**

Client ID: **LCS for batch 882563**

Lab Sample ID: **1201874483**

Instrument: **MSD5.I**

Analyst: **RMB**

Inj. Vol: **.5 uL**

Sample Type: **Laboratory Control Sample**

Matrix: **SOIL**

Analysis Date: **07/07/2009 08:45**

Dilution: 1

Prep Batch ID **882563**

Batch ID: **882565**

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1570	94	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1530	92	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1300	78	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	09-2524	**Sample Type:**	Matrix Spike
Client ID:	CAMO-09-9956MS	**Matrix:**	R
Lab Sample ID:	1201874484	**%Moisture:**	14.1
Instrument:	MSD5.I	**Analysis Date:**	07/07/2009 12:03
Analyst:	RMB	**Prep Batch ID:**	882563
Inj. Vol:	.5 uL	**Batch ID:**	882565

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	1940	0.00	U	1170	60	32-90
108-95-2	MS	Phenol	1940	0.00	U	1310	67	32-105
95-57-8	MS	2-Chlorophenol	1940	0.00	U	1320	68	33-106
106-46-7	MS	1,4-Dichlorobenzene	1940	0.00	U	1070	55	33-95
621-64-7	MS	N-Nitrosodipropylamine	1940	0.00	U	1360	70	31-109
59-50-7	MS	4-Chloro-3-methylphenol	1940	0.00	U	1620	84	38-119
83-32-9	MS	Acenaphthene	1940	0.00	U	1440	74	39-100
121-14-2	MS	2,4-Dinitrotoluene	1940	0.00	U	1550	80	42-107
100-02-7	MS	4-Nitrophenol	1940	0.00	U	1730	89	24-120
87-86-5	MS	Pentachlorophenol	1940	0.00	U	1620	84	26-121
129-00-0	MS	Pyrene	1940	24.6	J	1690	86	34-120
110-86-1	MS	Pyridine	1940	0.00	U	1170	61	30-95
62-53-3	MS	Aniline	1940	0.00	U	1320	68	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	1940	0.00	U	1170	60	34-101
541-73-1	MS	1,3-Dichlorobenzene	1940	0.00	U	1060	55	31-97
100-51-6	MS	Benzyl alcohol	1940	0.00	U	1260	65	17-120
95-50-1	MS	1,2-Dichlorobenzene	1940	0.00	U	1140	59	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	1940	0.00	U	1230	64	32-113
95-48-7	MS	o-Cresol	1940	0.00	U	1320	68	31-119
65794-96-9	MS	m,p-Cresols	1940	0.00	U	1510	78	35-125
67-72-1	MS	Hexachloroethane	1940	0.00	U	1010	52	30-100
98-95-3	MS	Nitrobenzene	1940	0.00	U	1240	64	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956MS
Lab Sample ID: 1201874484
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 14.1
Analysis Date: 07/07/2009 12:03
Prep Batch ID: 882563
Batch ID: 882565
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	1940	0.00	U	1350	69	34-110
88-75-5	MS	2-Nitrophenol	1940	0.00	U	1320	68	32-108
105-67-9	MS	2,4-Dimethylphenol	1940	0.00	U	1310	68	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	1940	0.00	U	1290	66	35-108
120-83-2	MS	2,4-Dichlorophenol	1940	0.00	U	1460	75	38-110
65-85-0	MS	Benzoic acid	1940	0.00	U	834	43	18-134
91-20-3	MS	Naphthalene	1940	0.00	U	1160	60	31-105
106-47-8	MS	4-Chloroaniline	1940	0.00	U	1390	72	29-123
87-68-3	MS	Hexachlorobutadiene	1940	0.00	U	1190	61	31-109
91-57-6	MS	2-Methylnaphthalene	1940	0.00	U	1460	75	32-110
77-47-4	MS	Hexachlorocyclopentadiene	1940	0.00	U	874	45	21-122
88-06-2	MS	2,4,6-Trichlorophenol	1940	0.00	U	1570	81	37-108
95-95-4	MS	2,4,5-Trichlorophenol	1940	0.00	U	1690	87	37-116
91-58-7	MS	2-Chloronaphthalene	1940	0.00	U	1430	74	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	1940	0.00	U	1590	82	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	1940	0.00	U	2090	108	39-117
131-11-3	MS	Dimethylphthalate	1940	0.00	U	1730	89	41-105
606-20-2	MS	2,6-Dinitrotoluene	1940	0.00	U	1520	79	41-103
208-96-8	MS	Acenaphthylene	1940	0.00	U	1570	81	41-103
51-28-5	MS	2,4-Dinitrophenol	1940	0.00	U	1180	61	25-104
132-64-9	MS	Dibenzofuran	1940	0.00	U	1610	83	40-114
84-66-2	MS	Diethylphthalate	1940	0.00	U	1790	93	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956MS
Lab Sample ID: 1201874484
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 14.1
Analysis Date: 07/07/2009 12:03
Prep Batch ID: 882563
Batch ID: 882565
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	1940	0.00	U	1560	80	48-99
7005-72-3	MS	4-Chlorophenylphenylether	1940	0.00	U	1550	80	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	1940	0.00	U	1310	67	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	1940	0.00	U	2690	139	35-139
122-39-4	MS	Diphenylamine	1940	0.00	U	1660	85	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	1940	0.00	U	1540	79	37-118
101-55-3	MS	4-Bromophenylphenylether	1940	0.00	U	1530	79	39-112
118-74-1	MS	Hexachlorobenzene	1940	0.00	U	1490	77	38-113
85-01-8	MS	Phenanthrene	1940	14.1	J	1620	83	38-110
120-12-7	MS	Anthracene	1940	0.00	U	1620	83	38-112
84-74-2	MS	Di-n-butylphthalate	1940	0.00	U	1830	94	42-119
206-44-0	MS	Fluoranthene	1940	25.6	J	1740	88	38-119
85-68-7	MS	Butylbenzylphthalate	1940	0.00	U	1780	92	39-126
56-55-3	MS	Benzo(a)anthracene	1940	0.00	U	1570	81	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	1940	0.00	U	1130	58	35-106
218-01-9	MS	Chrysene	1940	0.00	U	1610	83	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	1940	0.00	U	1790	92	40-125
117-84-0	MS	Di-n-octylphthalate	1940	0.00	U	1910	98	30-147
205-99-2	MS	Benzo(b)fluoranthene	1940	13.2	J	1650	84	38-117
207-08-9	MS	Benzo(k)fluoranthene	1940	0.00	U	1670	86	39-120
50-32-8	MS	Benzo(a)pyrene	1940	0.00	U	1650	85	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	1940	0.00	U	1390	72	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number:	**09-2524**	**Sample Type:**	**Matrix Spike**
Client ID:	**CAMO-09-9956MS**	**Matrix:**	**R**
Lab Sample ID:	**1201874484**	**%Moisture:**	**14.1**
Instrument:	**MSD5.I**	**Analysis Date:**	**07/07/2009 12:03**
Analyst:	**RMB**	**Prep Batch ID:**	**882563**
Inj. Vol:	**.5 uL**	**Batch ID:**	**882565**

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	1940	0.00	U	1430	74	32-124
191-24-2	MS	Benzo(ghi)perylene	1940	0.00	U	1280	66	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	1940	0.00	U	1200	62	31-105

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956MSD
Lab Sample ID: 1201874485
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 14.1
Analysis Date: 07/07/2009 12:31
Dilution: 1
Prep Batch ID: 882563
Batch ID: 882565

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD	N-Methyl-N-nitrosomethylam	1940	0.00	U	1360	70	32-90	15	0-30
108-95-2	MSD	Phenol	1940	0.00	U	1420	73	32-105	9	0-30
95-57-8	MSD	2-Chlorophenol	1940	0.00	U	1420	73	33-106	8	0-30
106-46-7	MSD	1,4-Dichlorobenzene	1940	0.00	U	1190	61	33-95	11	0-30
621-64-7	MSD	N-Nitrosodipropylamine	1940	0.00	U	1510	78	31-109	11	0-30
59-50-7	MSD	4-Chloro-3-methylphenol	1940	0.00	U	1670	86	38-119	3	0-30
83-32-9	MSD	Acenaphthene	1940	0.00	U	1520	78	39-100	6	0-30
121-14-2	MSD	2,4-Dinitrotoluene	1940	0.00	U	1580	81	42-107	2	0-30
100-02-7	MSD	4-Nitrophenol	1940	0.00	U	1550	80	24-120	11	0-30
87-86-5	MSD	Pentachlorophenol	1940	0.00	U	1650	85	26-121	2	0-30
129-00-0	MSD	Pyrene	1940	24.6	J	1680	85	34-120	1	0-30
110-86-1	MSD	Pyridine	1940	0.00	U	1200	62	30-95	2	0-30
62-53-3	MSD	Aniline	1940	0.00	U	1270	65	34-111	4	0-30
111-44-4	MSD	bis(2-Chloroethyl) ether	1940	0.00	U	1290	67	34-101	10	0-30
541-73-1	MSD	1,3-Dichlorobenzene	1940	0.00	U	1200	62	31-97	13	0-30
100-51-6	MSD	Benzyl alcohol	1940	0.00	U	1380	71	17-120	9	0-30
95-50-1	MSD	1,2-Dichlorobenzene	1940	0.00	U	1280	66	32-102	11	0-30
108-60-1	MSD	bis(2-Chloroisopropyl)ether	1940	0.00	U	1350	70	32-113	9	0-30
95-48-7	MSD	o-Cresol	1940	0.00	U	1440	74	31-119	9	0-30
65794-96-9	MSD	m,p-Cresols	1940	0.00	U	1590	82	35-125	5	0-30
67-72-1	MSD	Hexachloroethane	1940	0.00	U	1150	59	30-100	13	0-30
98-95-3	MSD	Nitrobenzene	1940	0.00	U	1400	72	33-108	12	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956MSD
Lab Sample ID: 1201874485
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 14.1
Analysis Date: 07/07/2009 12:31 **Dilution:** 1
Prep Batch ID: 882563
Batch ID: 882565

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD Isophorone	1940	0.00	U	1450	75	34-110	8	0-30
88-75-5	MSD 2-Nitrophenol	1940	0.00	U	1520	78	32-108	14	0-30
105-67-9	MSD 2,4-Dimethylphenol	1940	0.00	U	1360	70	32-115	3	0-30
111-91-1	MSD bis(2-Chloroethoxy)methane	1940	0.00	U	1430	74	35-108	11	0-30
120-83-2	MSD 2,4-Dichlorophenol	1940	0.00	U	1540	79	38-110	6	0-30
65-85-0	MSD Benzoic acid	1940	0.00	U	963	50	18-134	14	0-30
91-20-3	MSD Naphthalene	1940	0.00	U	1280	66	31-105	10	0-30
106-47-8	MSD 4-Chloroaniline	1940	0.00	U	1330	69	29-123	4	0-30
87-68-3	MSD Hexachlorobutadiene	1940	0.00	U	1340	69	31-109	11	0-30
91-57-6	MSD 2-Methylnaphthalene	1940	0.00	U	1550	80	32-110	6	0-30
77-47-4	MSD Hexachlorocyclopentadiene	1940	0.00	U	1140	59	21-122	26	0-30
88-06-2	MSD 2,4,6-Trichlorophenol	1940	0.00	U	1620	84	37-108	3	0-30
95-95-4	MSD 2,4,5-Trichlorophenol	1940	0.00	U	1740	90	37-116	3	0-30
91-58-7	MSD 2-Chloronaphthalene	1940	0.00	U	1520	78	37-103	6	0-30
88-74-4	MSD 2-Nitroaniline *o-Nitroaniline*	1940	0.00	U	1650	85	36-115	3	0-30
99-09-2	MSD 3-Nitroaniline *m-Nitroaniline*	1940	0.00	U	2020	104	39-117	4	0-30
131-11-3	MSD Dimethylphthalate	1940	0.00	U	1760	91	41-105	2	0-30
606-20-2	MSD 2,6-Dinitrotoluene	1940	0.00	U	1570	81	41-103	3	0-30
208-96-8	MSD Acenaphthylene	1940	0.00	U	1620	84	41-103	3	0-30
51-28-5	MSD 2,4-Dinitrophenol	1940	0.00	U	1260	65	25-104	7	0-30
132-64-9	MSD Dibenzofuran	1940	0.00	U	1640	85	40-114	2	0-30
84-66-2	MSD Diethylphthalate	1940	0.00	U	1820	94	43-110	1	0-30

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2524

Client ID: CAMO-09-9956MSD

Lab Sample ID: 1201874485

Instrument: MSD5.I

Analyst: RMB

Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate

Matrix: R

%Moisture: 14.1

Analysis Date: 07/07/2009 12:31

Dilution: 1

Prep Batch ID: 882563

Batch ID: 882565

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	1940	0.00	U	1580	82	48-99	2	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	1940	0.00	U	1590	82	42-111	2	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	1940	0.00	U	1410	73	19-118	8	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	1940	0.00	U	2500	129	35-139	7	0-30
122-39-4	MSD	Diphenylamine	1940	0.00	U	1750	90	41-112	5	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	1940	0.00	U	1630	84	37-118	6	0-30
101-55-3	MSD	4-Bromophenylphenylether	1940	0.00	U	1580	82	39-112	3	0-30
118-74-1	MSD	Hexachlorobenzene	1940	0.00	U	1600	83	38-113	7	0-30
85-01-8	MSD	Phenanthrene	1940	14.1	J	1620	83	38-110	0	0-30
120-12-7	MSD	Anthracene	1940	0.00	U	1690	87	38-112	4	0-30
84-74-2	MSD	Di-n-butylphthalate	1940	0.00	U	1880	97	42-119	3	0-30
206-44-0	MSD	Fluoranthene	1940	25.6	J	1720	87	38-119	1	0-30
85-68-7	MSD	Butylbenzylphthalate	1940	0.00	U	1860	96	39-126	5	0-30
56-55-3	MSD	Benzo(a)anthracene	1940	0.00	U	1610	83	39-110	3	0-30
91-94-1	MSD	3,3'-Dichlorobenzidine	1940	0.00	U	1190	61	35-106	4	0-30
218-01-9	MSD	Chrysene	1940	0.00	U	1660	85	39-109	3	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	1940	0.00	U	1910	99	40-125	7	0-30
117-84-0	MSD	Di-n-octylphthalate	1940	0.00	U	2060	106	30-147	8	0-30
205-99-2	MSD	Benzo(b)fluoranthene	1940	13.2	J	1690	87	38-117	3	0-30
207-08-9	MSD	Benzo(k)fluoranthene	1940	0.00	U	1790	92	39-120	7	0-30
50-32-8	MSD	Benzo(a)pyrene	1940	0.00	U	1710	88	40-115	4	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	1940	0.00	U	1420	73	32-120	2	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: CAMO-09-9956MSD
Lab Sample ID: 1201874485
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 14.1
Analysis Date: 07/07/2009 12:31
Prep Batch ID: 882563
Batch ID: 882565
Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD Dibenzo(a,h)anthracene	1940	0.00	U	1520	78	32-124	6	0-30
191-24-2	MSD Benzo(ghi)perylene	1940	0.00	U	1310	68	28-119	3	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	1940	0.00	U	1340	69	31-105	11	0-30

Method Blank Summary

SDG Number:	09-2524	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882563	Instrument ID:	MSD5.I	Data File:	s5g0704.d
Lab Sample ID:	1201874482	Prep Date:	07/06/2009 20:30	Analyzed:	07/07/09 08:17
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 882563	1201874483	s5g0705-2.d	07/07/09	0845
02 CAMO-09-9956	232741002	s5g0711.d	07/07/09	1135
03 CAMO-09-9956MS	1201874484	s5g0712.d	07/07/09	1203
04 CAMO-09-9956MSD	1201874485	s5g0713.d	07/07/09	1231
05 CAMO-09-9950	232741003	s5g0714.d	07/07/09	1300
06 CAMO-09-9952	232741004	s5g0715.d	07/07/09	1328
07 CAMO-09-9958	232741005	s5g0716.d	07/07/09	1356
08 CAMO-09-9957	232741006	s5g0717.d	07/07/09	1424
09 CAMO-09-10031	232741008	s5g0719.d	07/07/09	1521
10 CAMO-09-9990	232741009	s5g0720.d	07/07/09	1550
11 CAMO-09-9951	232741007	s5g0721.d	07/07/09	1618

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2524

Instrument ID: MSD5.I **Injection Date/Time:** 07-JUL-09 07:12

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s070709.b/s5g0701.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	35.7
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	41.2
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	28.4
365	Greater than 1% of mass 198	3.9
441	Present, but less than mass 443	76.2
442	Greater than 40% of mass 198	94.2
443	17 - 23% of mass 442	19.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090617-02.4	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 07:25
AP12CVS	WBN090619-01.4	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 07:53
SBLK01	1201874482	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 08:17
SBLK01LCS	1201874483	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 08:45
CAMO-09-9956	232741002	/chem/MSD5.i/s070709.b/s5g071	07-JUL-09 11:35
CAMO-09-9956MS	1201874484	/chem/MSD5.i/s070709.b/s5g071	07-JUL-09 12:03
CAMO-09-9956MSD	1201874485	/chem/MSD5.i/s070709.b/s5g071	07-JUL-09 12:31
CAMO-09-9950	232741003	/chem/MSD5.i/s070709.b/s5g071	07-JUL-09 13:00
CAMO-09-9952	232741004	/chem/MSD5.i/s070709.b/s5g071	07-JUL-09 13:28
CAMO-09-9958	232741005	/chem/MSD5.i/s070709.b/s5g071	07-JUL-09 13:56
CAMO-09-9957	232741006	/chem/MSD5.i/s070709.b/s5g071	07-JUL-09 14:24
CAMO-09-10031	232741008	/chem/MSD5.i/s070709.b/s5g071	07-JUL-09 15:21
CAMO-09-9990	232741009	/chem/MSD5.i/s070709.b/s5g072	07-JUL-09 15:50
CAMO-09-9951	232741007	/chem/MSD5.i/s070709.b/s5g072	07-JUL-09 16:18

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2524

Instrument ID: MSD5.I **Injection Date/Time:** 25-JUN-09 14:07

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s062509.b/s5f2510.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40.6
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	37.2
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	42.2
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.7
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	72.4
442	Greater than 40% of mass 198	88.9
443	17 - 23% of mass 442	20

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICAL001	WBN090602-08	/chem/MSD5.i/s062509.b/s5f2512	25-JUN-09 14:42
MEGAICAL010	WBN090602-07	/chem/MSD5.i/s062509.b/s5f2513	25-JUN-09 15:10
MEGAICAL020	WBN090602-06	/chem/MSD5.i/s062509.b/s5f2514	25-JUN-09 15:38
MEGAICAL040	WBN090602-05.1	/chem/MSD5.i/s062509.b/s5f2515	25-JUN-09 16:05
MEGAICAL050	WBN090602-04	/chem/MSD5.i/s062509.b/s5f2516	25-JUN-09 16:33
MEGAICAL080	WBN090602-03	/chem/MSD5.i/s062509.b/s5f2517	25-JUN-09 17:02
MEGAICAL100	WBN090602-02	/chem/MSD5.i/s062509.b/s5f2518	25-JUN-09 17:29
MEGAICAL120	WBN090602-01	/chem/MSD5.i/s062509.b/s5f2519	25-JUN-09 17:57
MEGAICV	WBN090602-09.1	/chem/MSD5.i/s062509.b/s5f2521	25-JUN-09 18:48
AP12ICAL010	WBN090528-07	/chem/MSD5.i/s062509.b/s5f2522	25-JUN-09 19:10
AP12ICAL020	WBN090528-06	/chem/MSD5.i/s062509.b/s5f2523	25-JUN-09 19:32
AP12ICAL040	WBN090528-05.1	/chem/MSD5.i/s062509.b/s5f2524	25-JUN-09 19:55
AP12ICAL050	WBN090528-04	/chem/MSD5.i/s062509.b/s5f2525	25-JUN-09 20:18
AP12ICAL080	WBN090528-03	/chem/MSD5.i/s062509.b/s5f2526	25-JUN-09 20:41
AP12ICAL100	WBN090528-02	/chem/MSD5.i/s062509.b/s5f2527	25-JUN-09 21:03
AP12ICAL120	WBN090528-01	/chem/MSD5.i/s062509.b/s5f2528	25-JUN-09 21:25

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2524

Instrument ID: MSD5.I **Injection Date/Time:** 25-JUN-09 14:07

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s062509.b/s5f2510.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40.6
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	37.2
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	42.2
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.7
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	72.4
442	Greater than 40% of mass 198	88.9
443	17 - 23% of mass 442	20

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
AP12ICV	WBN090528-08.5	/chem/MSD5.i/s062509.b/s5f2530	25-JUN-09 22:11

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 09-2524

Instrument: MSD5.I

STD Analysis Time: 07-JUL-09 07:25

GC Column: J&W DB-5MS

Data File: s5g0702.d

	1,4-Dichlorobenzene-d4				Naphthalene-d8				Acenaphthene-d10				Phenanthrene-d10				Chrysene-d12				Perylene-d12			
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 Hour STD	373014		4		1411459		4.87		827906		6.13		1543223		7.31		1495571		9.72		1337006		11.5	
Upper Limit	746028		4.5		2822918		5.37		1655812		6.63		3086446		7.81		2991142		10.2		2674012		12.0	
Lower Limit	186507		3.5		705730		4.37		413953		5.63		771612		6.81		747786		9.22		668503		11.0	
Sample ID																								
BLK01	326193		4		1170112		4.87		763333		6.13		1443136		7.31		1435830		9.72		1272438		11.5	
BLK01LCS	334582		4		1297644		4.87		769594		6.13		1455353		7.31		1401485		9.72		1233101		11.5	
CAMO-09-9956	333340		4		1203121		4.87		757390		6.13		1477062		7.31		1511259		9.72		1281756		11.5	
CAMO-09-9956MS	342222		4		1335244		4.87		814167		6.13		1626254		7.31		1670460		9.73		1412005		11.5	
CAMO-09-9956MSD	373336		4		1422068		4.87		847627		6.13		1637138		7.31		1670559		9.73		1400844		11.5	
CAMO-09-9950	415066		4		1478333		4.87		905755		6.13		1741759		7.31		1741990		9.72		1300087		11.5	
CAMO-09-9952	361710		4		1272485		4.87		792403		6.13		1523222		7.31		1514173		9.72		1174169		11.5	
CAMO-09-9958	332654		4		1218395		4.87		775887		6.13		1502959		7.31		1483299		9.72		1226409		11.5	
CAMO-09-9957	455089		4		1650764		4.87		1015229		6.13		1931917		7.31		1913144		9.72		1484234		11.5	
CAMO-09-10031	376274		4		1353661		4.87		868593		6.13		1677708		7.31		1683743		9.72		1307160		11.5	
CAMO-09-9990	363904		4		1279787		4.87		834202		6.13		1590944		7.31		1663440		9.72		1426578		11.5	
CAMO-09-9951	324014		4		1194508		4.87		776554		6.13		1486170		7.31		1438619		9.72		1121902		11.5	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741008	Date Received:	07/02/2009 08:40	%Moisture:	11.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10031	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 15:21	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0719.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	376	ug/kg	75.1	376
108-95-2	Phenol	U	376	ug/kg	75.1	376
95-57-8	2-Chlorophenol	U	376	ug/kg	75.1	376
106-46-7	1,4-Dichlorobenzene	U	376	ug/kg	75.1	376
621-64-7	N-Nitrosodipropylamine	U	376	ug/kg	75.1	376
59-50-7	4-Chloro-3-methylphenol	U	376	ug/kg	75.1	376
83-32-9	Acenaphthene	U	37.6	ug/kg	12.4	37.6
121-14-2	2,4-Dinitrotoluene	U	376	ug/kg	37.6	376
100-02-7	4-Nitrophenol	U	376	ug/kg	124	376
87-86-5	Pentachlorophenol	U	376	ug/kg	93.9	376
129-00-0	Pyrene		90.3	ug/kg	11.3	37.6
110-86-1	Pyridine	U	376	ug/kg	75.1	376
62-53-3	Aniline	U	376	ug/kg	113	376
111-44-4	bis(2-Chloroethyl) ether	U	376	ug/kg	75.1	376
541-73-1	1,3-Dichlorobenzene	U	376	ug/kg	75.1	376
100-51-6	Benzyl alcohol	U	376	ug/kg	113	376
95-50-1	1,2-Dichlorobenzene	U	376	ug/kg	75.1	376
108-60-1	bis(2-Chloroisopropyl)ether	U	376	ug/kg	75.1	376
95-48-7	o-Cresol	U	376	ug/kg	75.1	376
65794-96-9	m,p-Cresols	U	376	ug/kg	113	376
67-72-1	Hexachloroethane	U	376	ug/kg	75.1	376
98-95-3	Nitrobenzene	U	376	ug/kg	75.1	376
78-59-1	Isophorone	U	376	ug/kg	75.1	376
88-75-5	2-Nitrophenol	U	376	ug/kg	75.1	376
105-67-9	2,4-Dimethylphenol	U	376	ug/kg	131	376
111-91-1	bis(2-Chloroethoxy)methane	U	376	ug/kg	75.1	376
120-83-2	2,4-Dichlorophenol	U	376	ug/kg	75.1	376
65-85-0	Benzoic acid	U	751	ug/kg	188	751
91-20-3	Naphthalene	U	37.6	ug/kg	11.3	37.6
106-47-8	4-Chloroaniline	U	376	ug/kg	75.1	376
87-68-3	Hexachlorobutadiene	U	376	ug/kg	75.1	376
91-57-6	2-Methylnaphthalene	U	37.6	ug/kg	7.51	37.6
77-47-4	Hexachlorocyclopentadiene	U	376	ug/kg	75.1	376
88-06-2	2,4,6-Trichlorophenol	U	376	ug/kg	75.1	376
95-95-4	2,4,5-Trichlorophenol	U	376	ug/kg	75.1	376
91-58-7	2-Chloronaphthalene	U	37.6	ug/kg	12.4	37.6
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	376	ug/kg	75.1	376
99-09-2	3-Nitroaniline	U	376	ug/kg	75.1	376

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741008	Date Received:	07/02/2009 08:40	%Moisture:	11.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10031	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 15:21	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0719.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	376	ug/kg	75.1	376
606-20-2	2,6-Dinitrotoluene	U	376	ug/kg	37.6	376
208-96-8	Acenaphthylene	U	37.6	ug/kg	11.3	37.6
51-28-5	2,4-Dinitrophenol	U	751	ug/kg	143	751
132-64-9	Dibenzofuran	U	376	ug/kg	75.1	376
84-66-2	Diethylphthalate	U	376	ug/kg	75.1	376
86-73-7	Fluorene	U	37.6	ug/kg	11.3	37.6
7005-72-3	4-Chlorophenylphenylether	U	376	ug/kg	75.1	376
534-52-1	2-Methyl-4,6-dinitrophenol	U	376	ug/kg	75.1	376
100-01-6	4-Nitroaniline	U	376	ug/kg	113	376
	p-Nitroaniline					
122-39-4	Diphenylamine	U	376	ug/kg	75.1	376
122-66-7	Azobenzene	U	376	ug/kg	75.1	376
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	376	ug/kg	75.1	376
118-74-1	Hexachlorobenzene	U	376	ug/kg	75.1	376
85-01-8	Phenanthrene		72.2	ug/kg	11.3	37.6
120-12-7	Anthracene	J	14.9	ug/kg	7.51	37.6
84-74-2	Di-n-butylphthalate	U	376	ug/kg	75.1	376
206-44-0	Fluoranthene		100	ug/kg	11.3	37.6
85-68-7	Butylbenzylphthalate	U	376	ug/kg	75.1	376
56-55-3	Benzo(a)anthracene		44.3	ug/kg	11.3	37.6
91-94-1	3,3'-Dichlorobenzidine	U	376	ug/kg	113	376
218-01-9	Chrysene		38.4	ug/kg	11.3	37.6
117-81-7	bis(2-Ethylhexyl)phthalate	U	376	ug/kg	75.1	376
117-84-0	Di-n-octylphthalate	U	376	ug/kg	75.1	376
205-99-2	Benzo(b)fluoranthene		49.2	ug/kg	11.3	37.6
207-08-9	Benzo(k)fluoranthene	J	17.2	ug/kg	11.3	37.6
50-32-8	Benzo(a)pyrene		40.0	ug/kg	11.3	37.6
193-39-5	Indeno(1,2,3-cd)pyrene	J	21.9	ug/kg	11.3	37.6
53-70-3	Dibenzo(a,h)anthracene	U	37.6	ug/kg	11.3	37.6
191-24-2	Benzo(ghi)perylene	J	25.8	ug/kg	11.3	37.6
120-82-1	1,2,4-Trichlorobenzene	U	376	ug/kg	75.1	376

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	327	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0719.d
Lab Smp Id: 232741008 Client Smp ID: CAMO-09-10031
Inj Date : 07-JUL-2009 15:21
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741008|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	11.29610	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	376274	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1353661	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	868593	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1677708	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1683743	40.0000	
* 98 Perylene-d12	264	11.462	11.462	(1.000)	1307160	40.0000	
$ 3 2-Fluorophenol	112	3.184	3.184	(0.796)	481033	58.2240	2190
$ 5 Phenol-d5	99	3.714	3.714	(0.929)	646308	59.3310	2230
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	281735	28.0873	1050
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	710001	31.6065	1190
$ 60 2,4,6-Tribromophenol	329	6.728	6.733	(1.097)	226199	63.8256	2400
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.894)	996799	38.6837	1450

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.587	8.592	(0.883)	88343	2.40510	90.3
68 Phenanthrene	178	7.325	7.330	(1.003)	60409	1.92208	72.2
69 Anthracene	178	7.369	7.373	(1.009)	12280	0.39586	14.9(a)
76 Fluoranthene	202	8.370	8.375	(1.146)	95573	2.66944	100
89 Benzo(a)anthracene	228	9.709	9.714	(0.998)	42572	1.17837	44.2
92 Chrysene	228	9.747	9.752	(1.002)	33849	1.02279	38.4
95 Benzo(b)fluoranthene	252	10.922	10.922	(0.953)	37801	1.30941	49.2
96 Benzo(k)fluoranthene	252	10.951	10.956	(0.955)	13018	0.45907	17.2(a)
97 Benzo(a)pyrene	252	11.375	11.380	(0.992)	27206	1.06459	40.0
99 Indeno(1,2,3-cd)pyrene	276	13.296	13.306	(1.160)	14984	0.58349	21.9(a)
101 Benzo(ghi)perylene	276	13.855	13.869	(1.209)	15015	0.68584	25.8(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0719.d
Report Date: 07/07/2009 16:56
Lab. ID: 232741008 SampleType: SAMPLE
Injection Date: 07-JUL-2009 15:21
Operator: RMB Instrument: MSD5.i
Sample Info: |232741008|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	40820	3.71	3.79	80-120	100	(T)
93	200	3.75	3.79	154-214	0	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	42381	4.36	4.24	80-120	100	(T)
42	29427	4.36	4.24	56-116	69	(T)
31 4-Chloroaniline			CAS#: 106-47-8			
127	156	4.88	4.90	80-120	100	( )
65	3548	4.87	4.90	8- 68	2272	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	125	6.13	6.08	80-120	100	( )
92	4729	6.13	6.08	79-139	3780	(Q)
108	18737	6.13	6.08	0- 42	14974	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	188192	6.13	5.89	80-120	100	(T)
164	868593	6.13	5.89	0- 40	462	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	113545	6.13	5.94	80-120	100	(T)
63	1544	6.13	5.94	55-115	1	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	113545	6.13	6.25	80-120	100	(T)
89	1843	6.13	6.24	39- 99	2	(QT)
63	1544	6.13	6.24	20- 80	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	9118	6.73	6.55	80-120	100	(T)
165	9826	6.73	6.55	61-121	108	(T)
167	3499	6.73	6.55	0- 44	38	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	780	6.73	6.56	80-120	100	(T)
105	1632	6.73	6.56	4- 64	209	(QT)
51	1476	6.73	6.56	31- 91	189	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	60409	7.33	7.33	80-120	100	( )
179	10940	7.33	7.33	0- 46	18	( )
176	11478	7.33	7.33	0- 49	19	( )
69 Anthracene			CAS#: 120-12-7			
178	12280	7.37	7.37	80-120	100	( )
179	2485	7.37	7.37	0- 46	20	( )
176	2284	7.37	7.37	0- 48	19	( )
76 Fluoranthene			CAS#: 206-44-0			
202	95573	8.37	8.38	80-120	100	( )
203	16815	8.37	8.38	0- 48	18	( )
101	7156	8.37	8.37	0- 39	7	( )
79 Pyrene			CAS#: 129-00-0			
202	88343	8.59	8.59	80-120	100	( )
200	18618	8.59	8.59	0- 51	21	( )
101	9299	8.59	8.59	0- 40	11	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	42572	9.71	9.71	80-120	100	( )
226	9600	9.71	9.71	0- 56	23	( )
229	9974	9.71	9.71	0- 50	23	( )
92 Chrysene			CAS#: 218-01-9			
228	33849	9.75	9.75	80-120	100	( )
229	7978	9.75	9.75	0- 50	24	( )
226	10168	9.75	9.75	0- 59	30	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	37801	10.92	10.92	80-120	100	( )
253	8743	10.92	10.92	0- 51	23	( )
125	3059	10.92	10.92	0- 37	8	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	13018	10.95	10.96	80-120	100	( )
253	4154	10.95	10.96	0- 54	32	( )
125	1607	10.96	10.96	0- 38	12	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	27206	11.37	11.38	80-120	100	( )
253	6335	11.37	11.38	0- 52	23	( )
125	1072	11.37	11.38	0- 30	4	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	14984	13.30	13.31	80-120	100	( )
138	3426	13.30	13.31	0- 51	23	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	15015	13.85	13.87	80-120	100	( )
138	3382	13.84	13.87	0- 30	23	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0719.d
Lab Smp Id: 232741008 Client Smp ID: CAMO-09-10031
Inj Date : 07-JUL-2009 15:21
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741008|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	11.29610	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2431034	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.011	529706	8.71572191	327	0		0	10

Data File: /chem/MSD5.i/s070709.b/s5g0719.d
Date : 07-JUL-2009 15:21
Client ID: CAMO-09-10031
Sample Info: 1232741008188256511ISVHF11ILANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

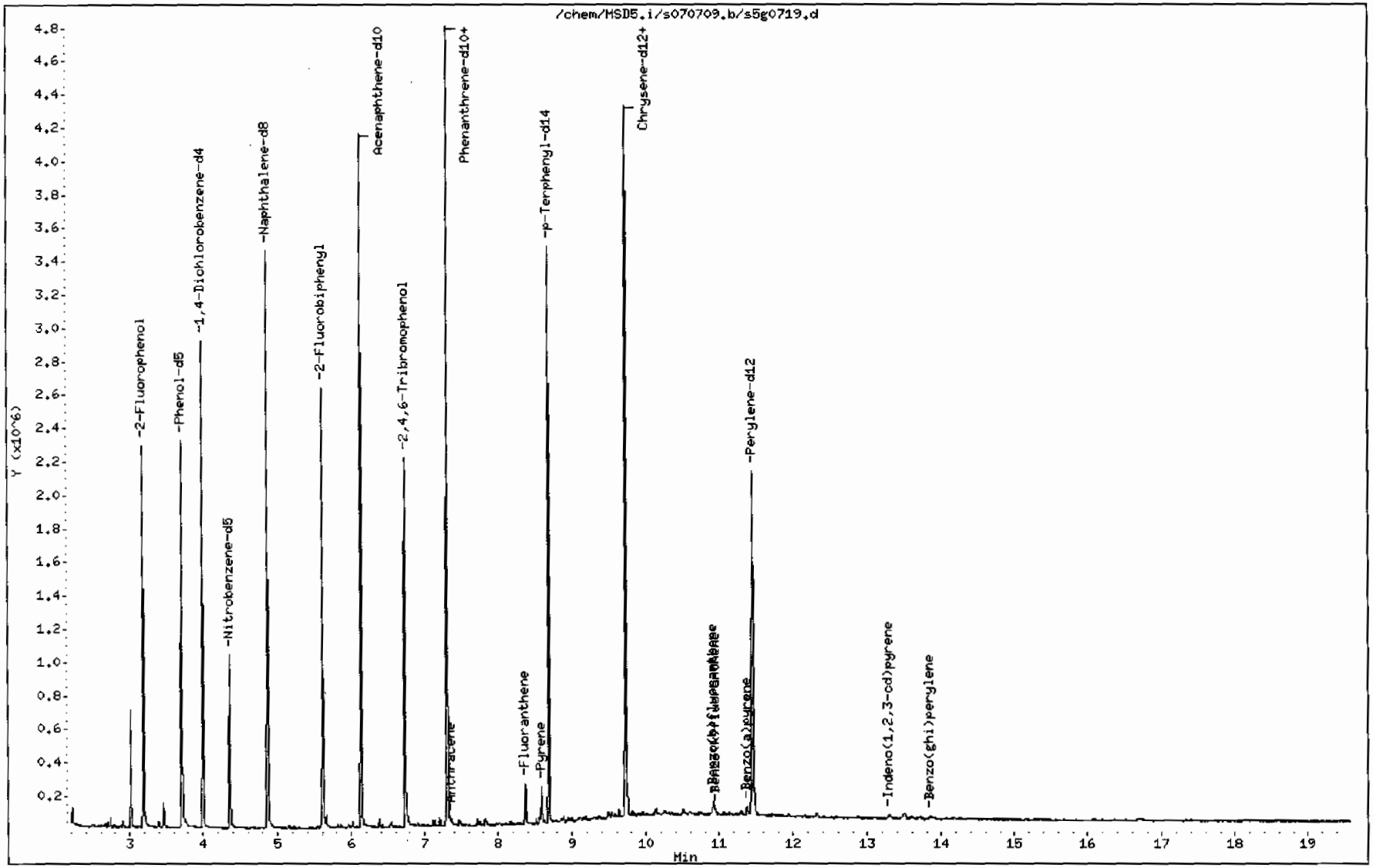

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031

Instrument: MSD5.i

Sample Info: |2327410081882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 90.3 ug/Kg

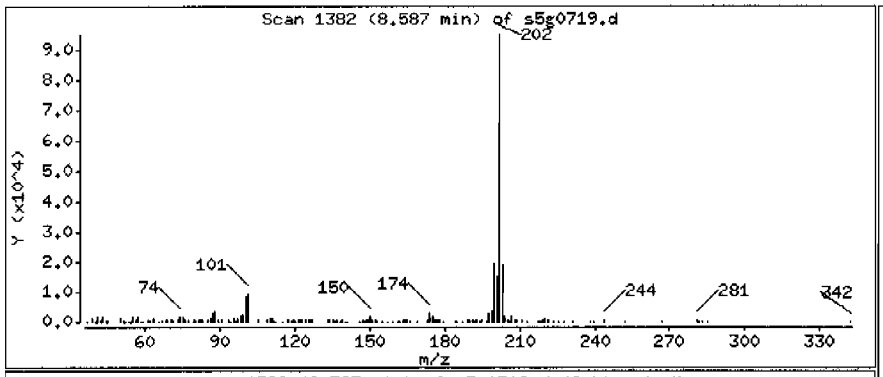

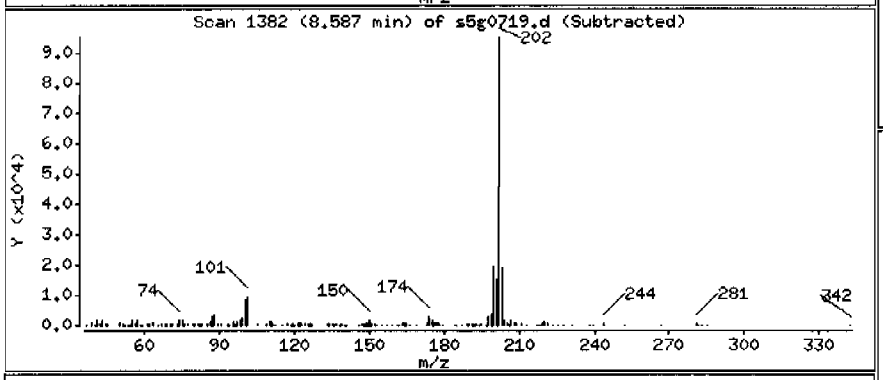

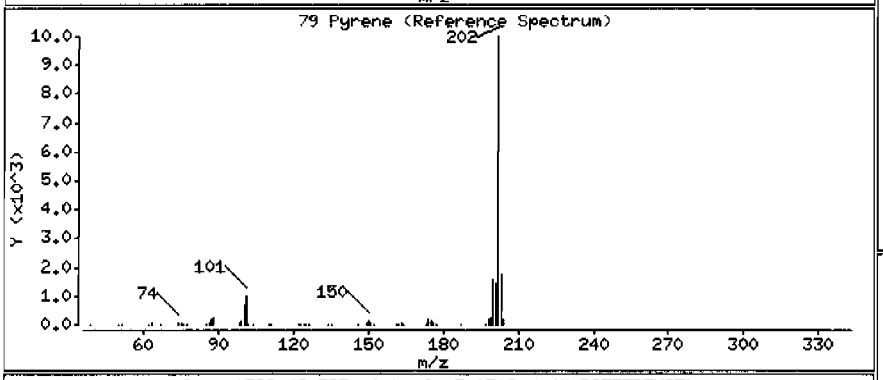

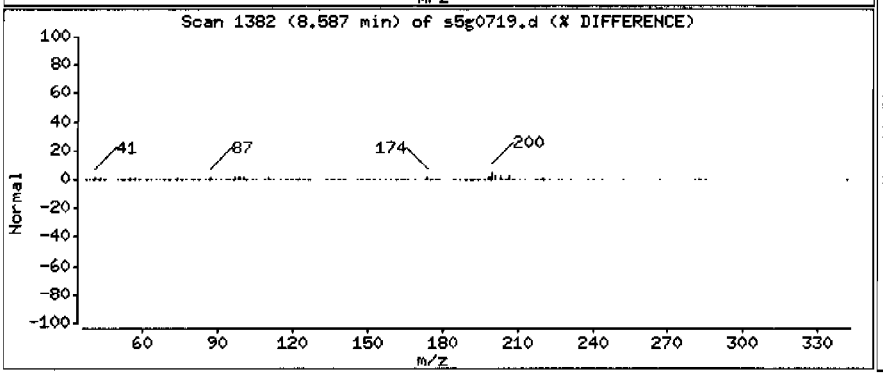

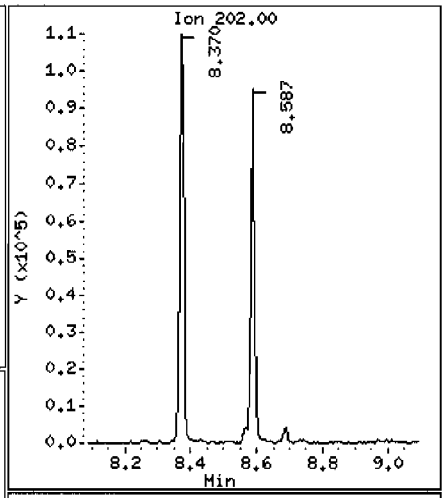

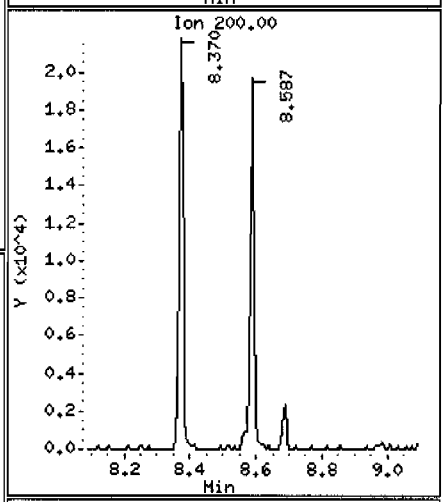

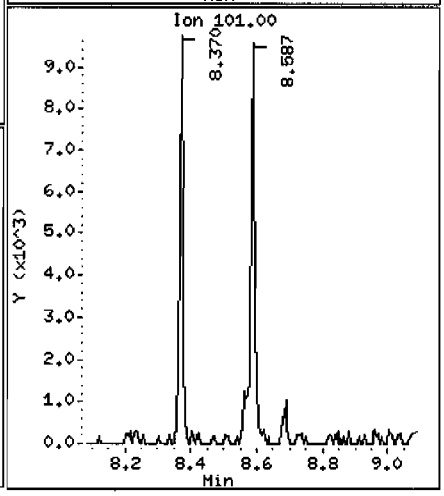

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031

Instrument: MSD5.i

Sample Info: 1232741008188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 72.2 ug/Kg

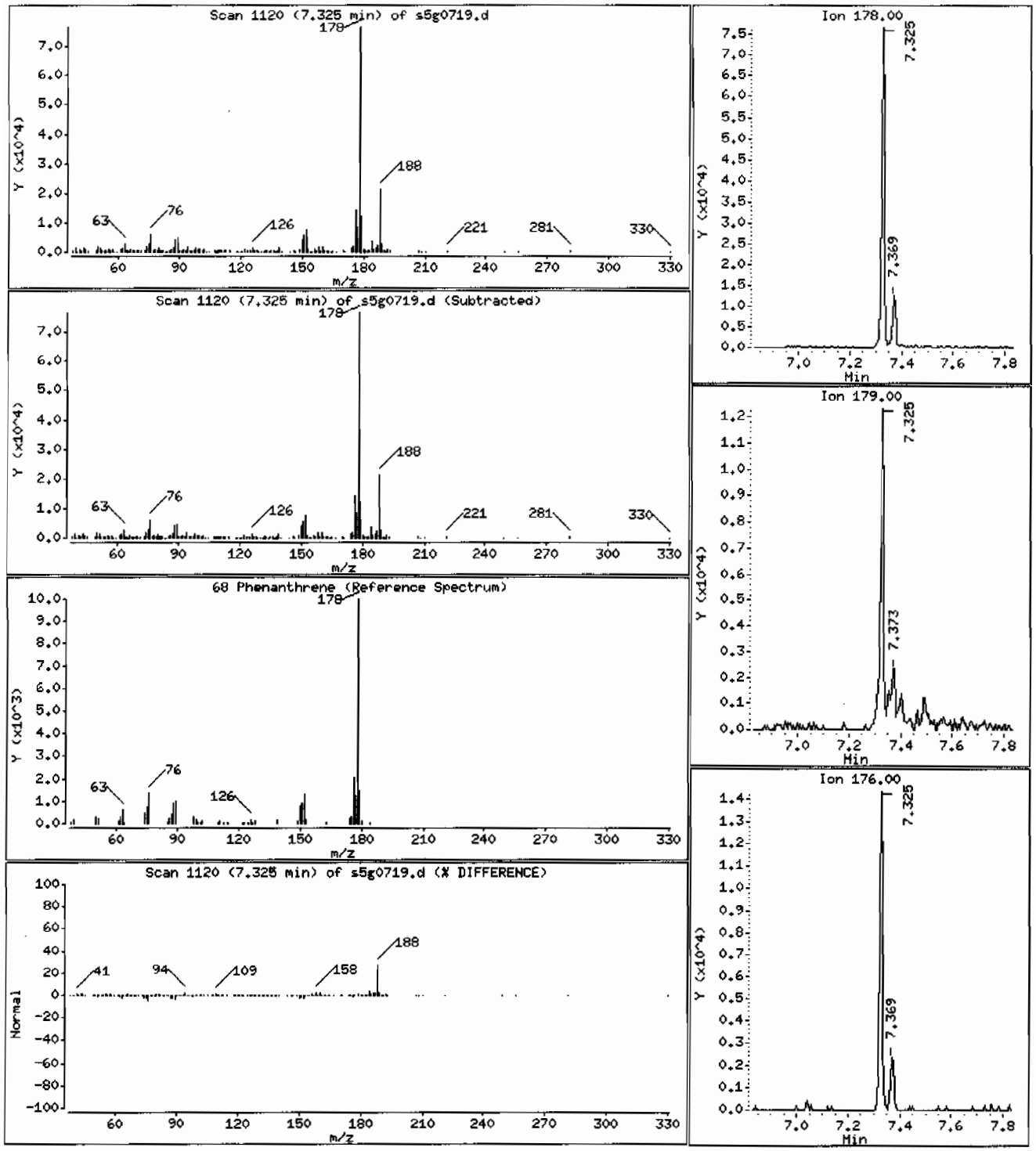

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031

Instrument: MSD5.i

Sample Info: 1232741008188256511SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

69 Anthracene

Concentration: 14.9 ug/Kg

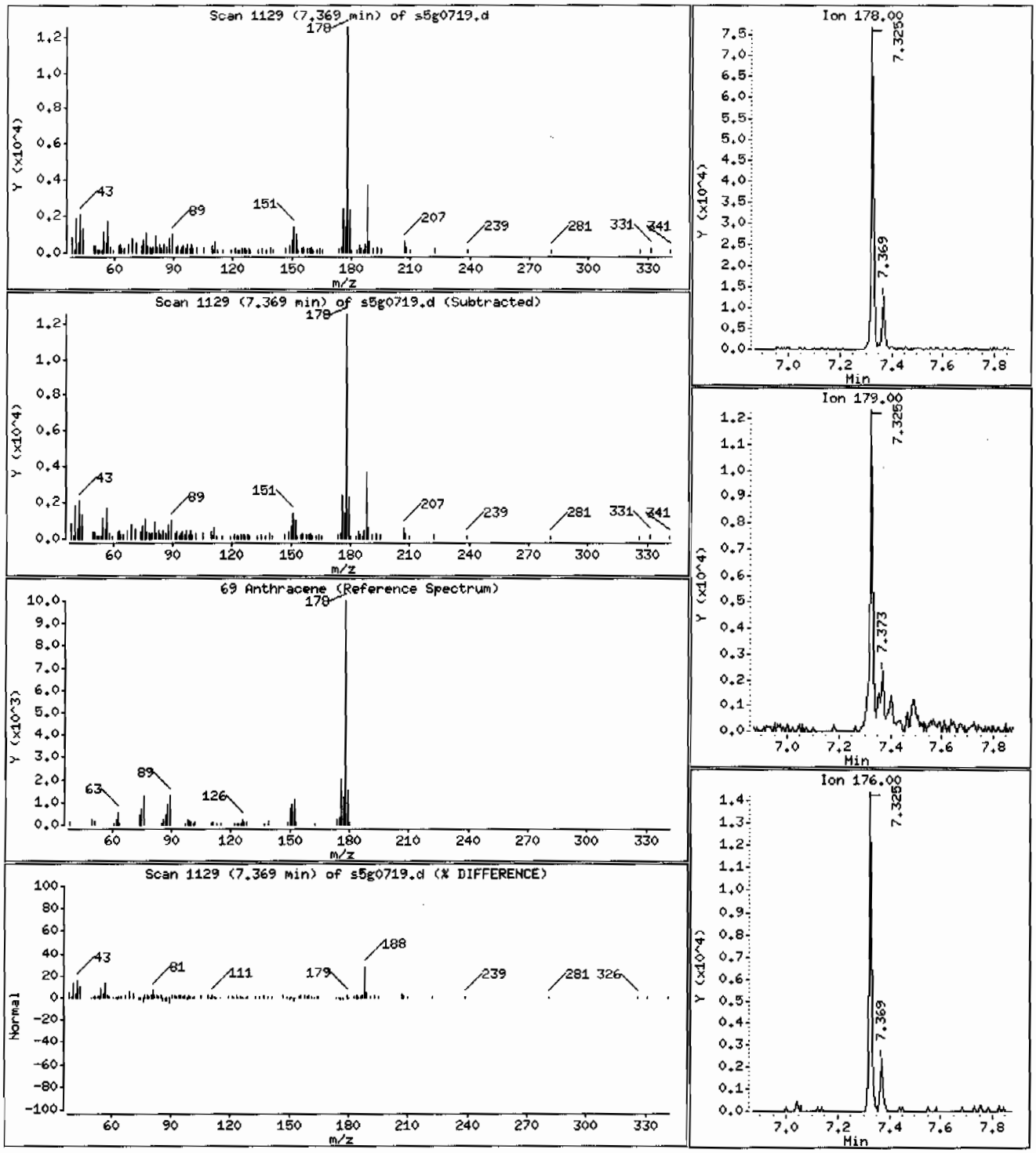

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031

Instrument: MSD5.i

Sample Info: 1232741008188256511|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 100 ug/Kg

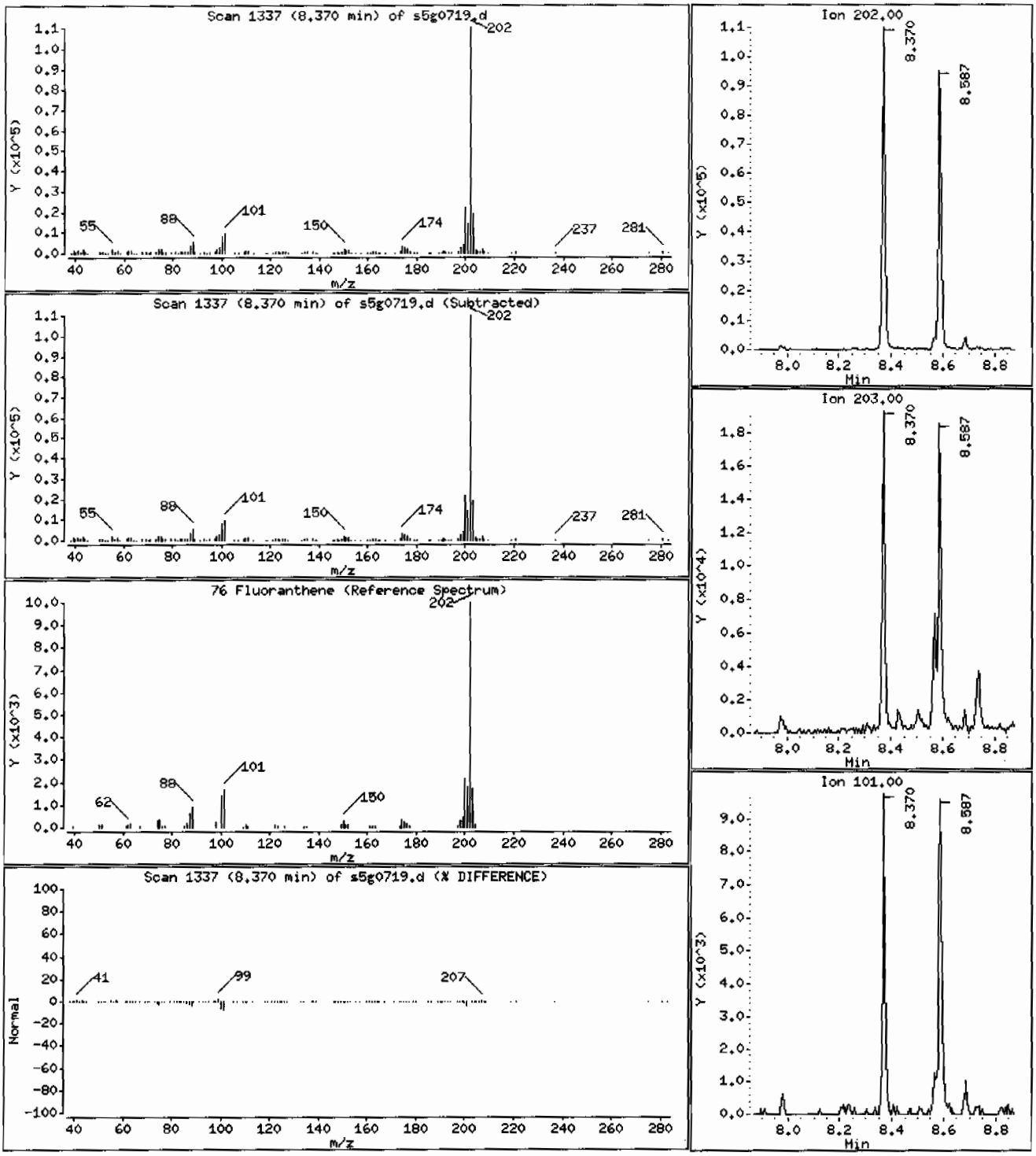

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031

Instrument: MSD5.i

Sample Info: 1232741008188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 44.2 ug/Kg

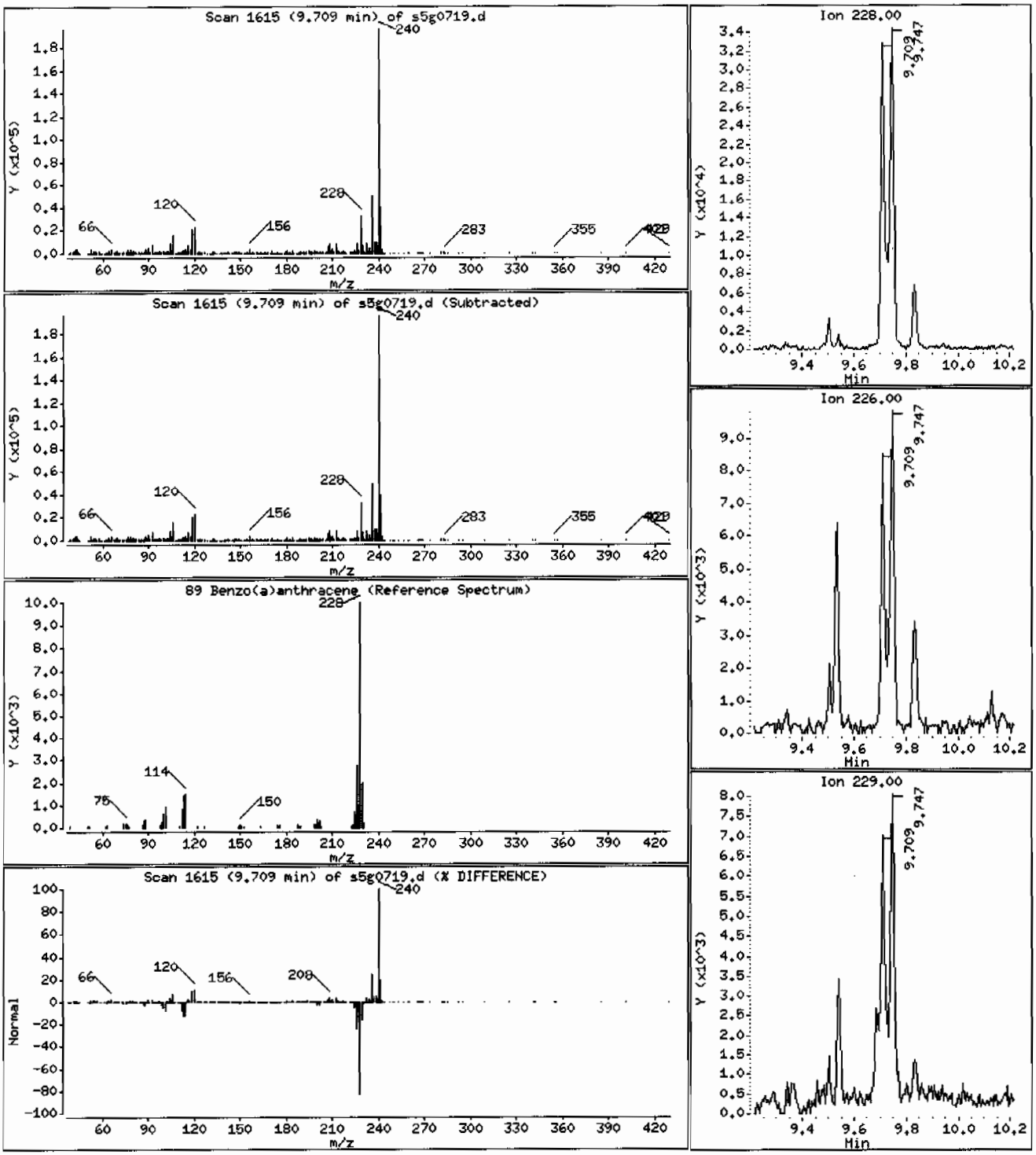

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Page 7

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031

Instrument: MSD5.i

Sample Info: 1232741008188256511ISVMF11ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 38.4 ug/Kg

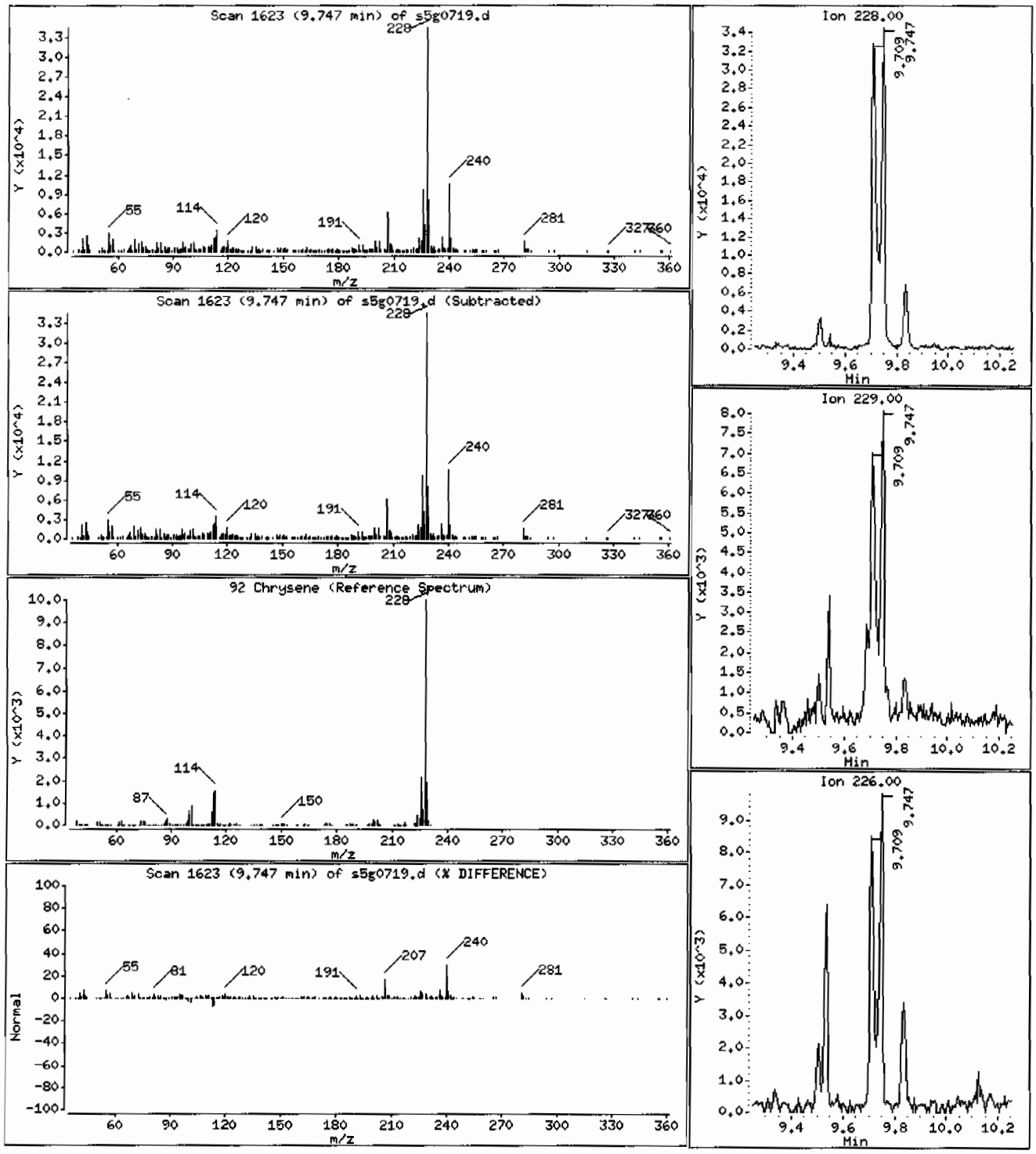

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Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031

Instrument: MSD5.i

Sample Info: 1232741008|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 49.2 ug/Kg

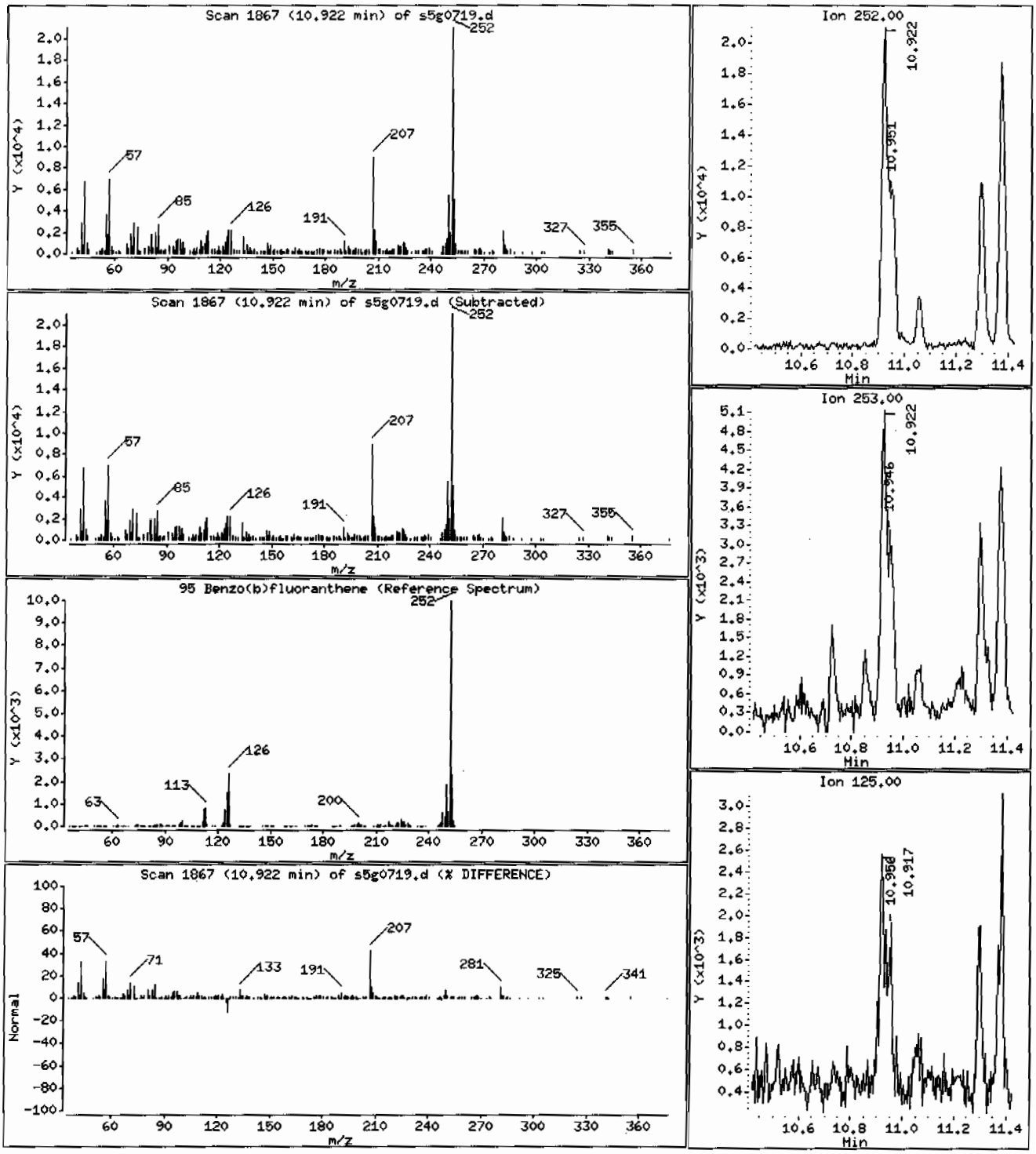

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031 Instrument: MSD5.i

Sample Info: 1232741008|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

96 Benzo(k)fluoranthene Concentration: 17.2 ug/Kg

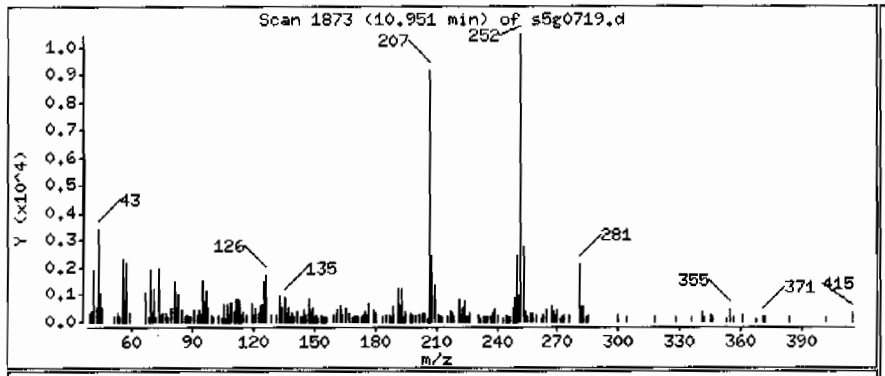

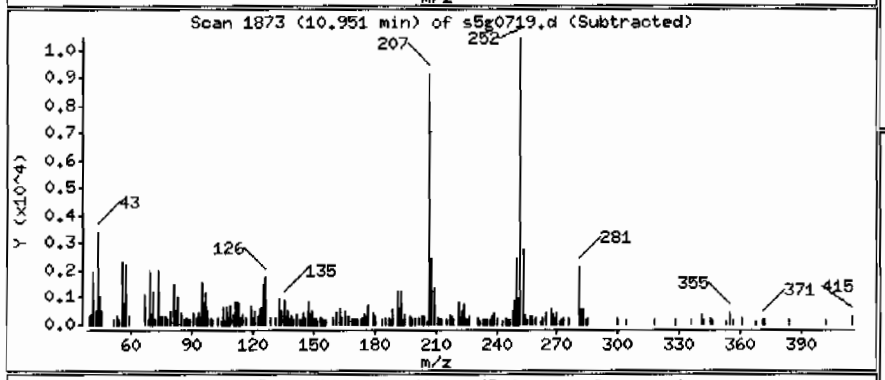

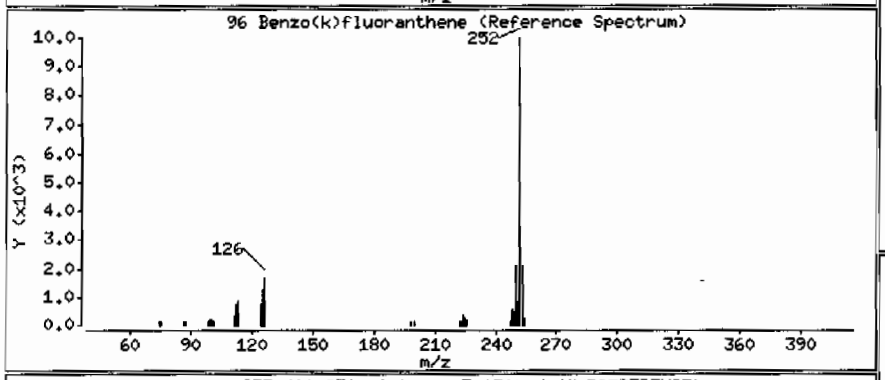

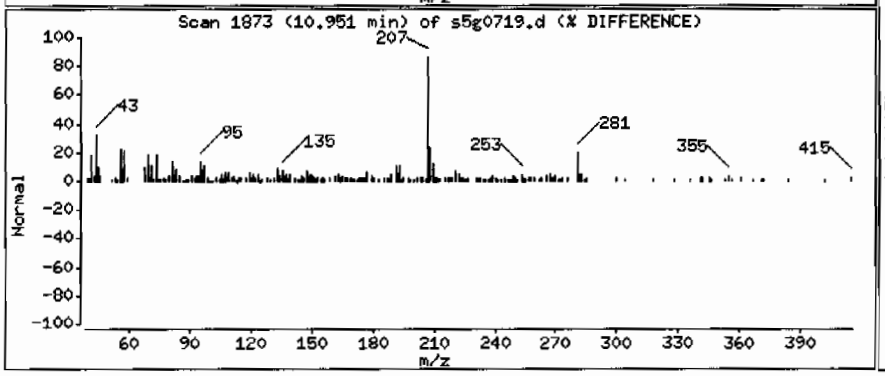

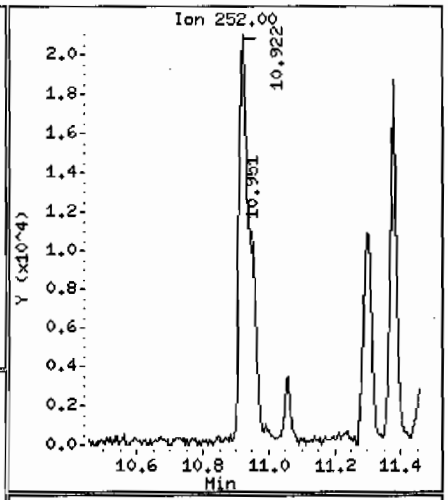

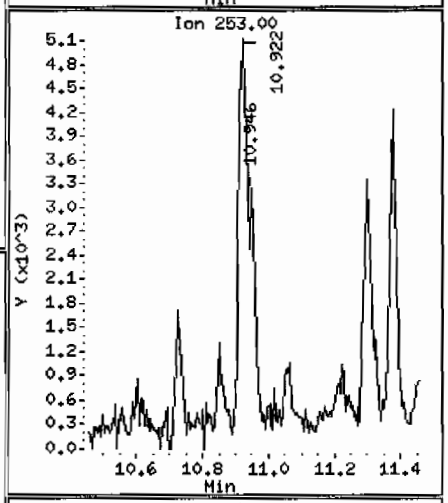

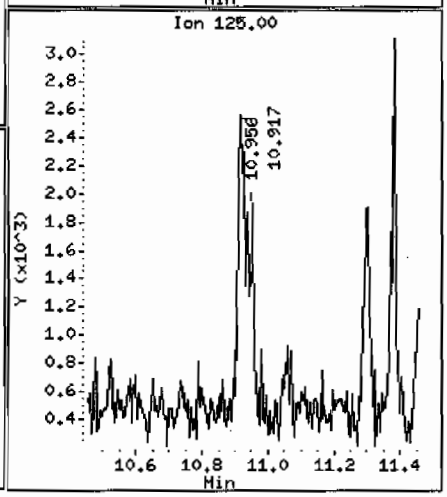

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031

Instrument: MSD5.i

Sample Info: 1232741008188256511ISVMF11ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 40.0 ug/Kg

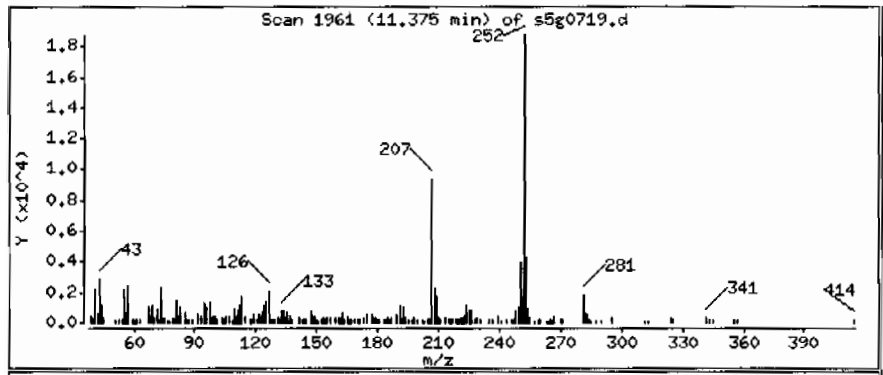

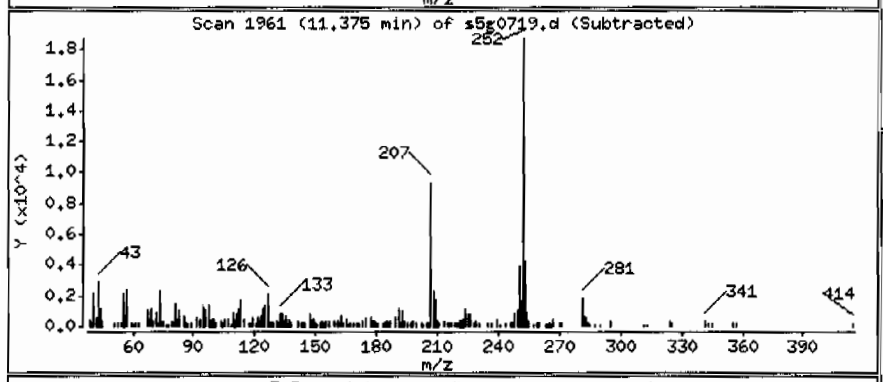

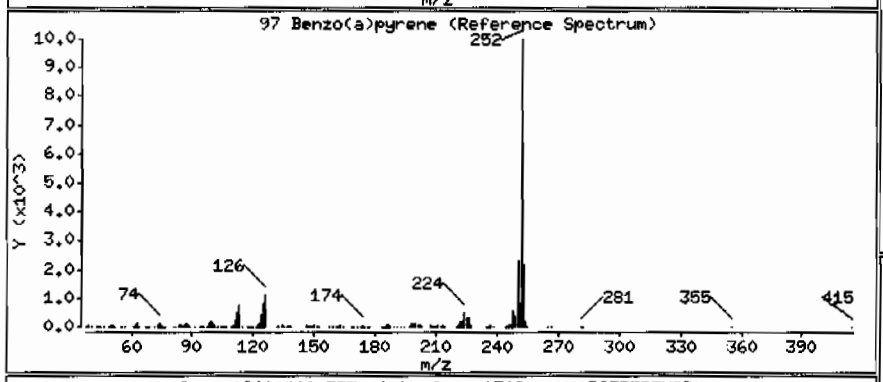

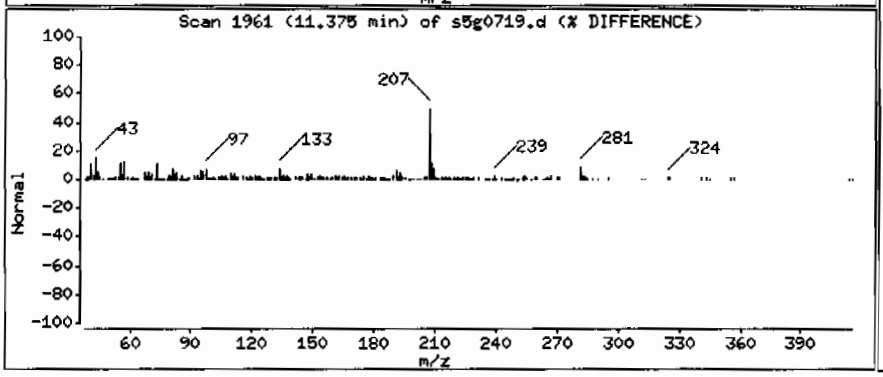

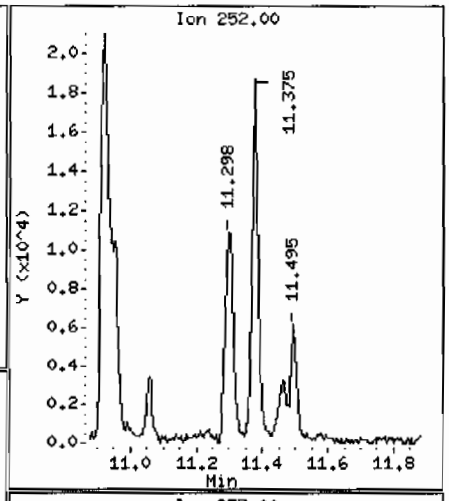

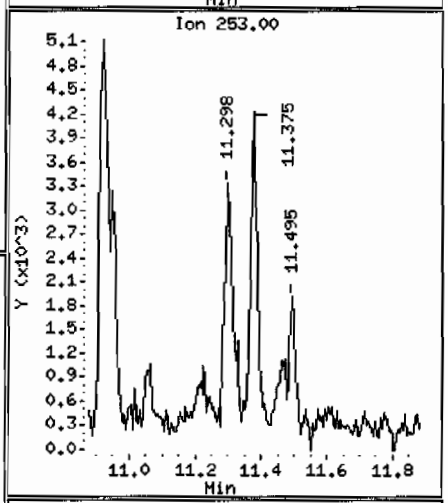

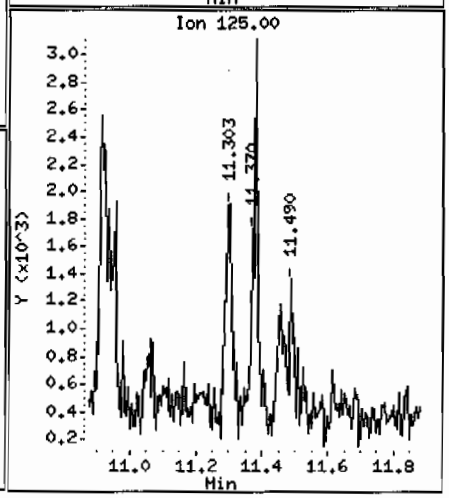

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031 Instrument: MSD5.i

Sample Info: 1232741008188256511|SVMFI1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 21.9 ug/Kg

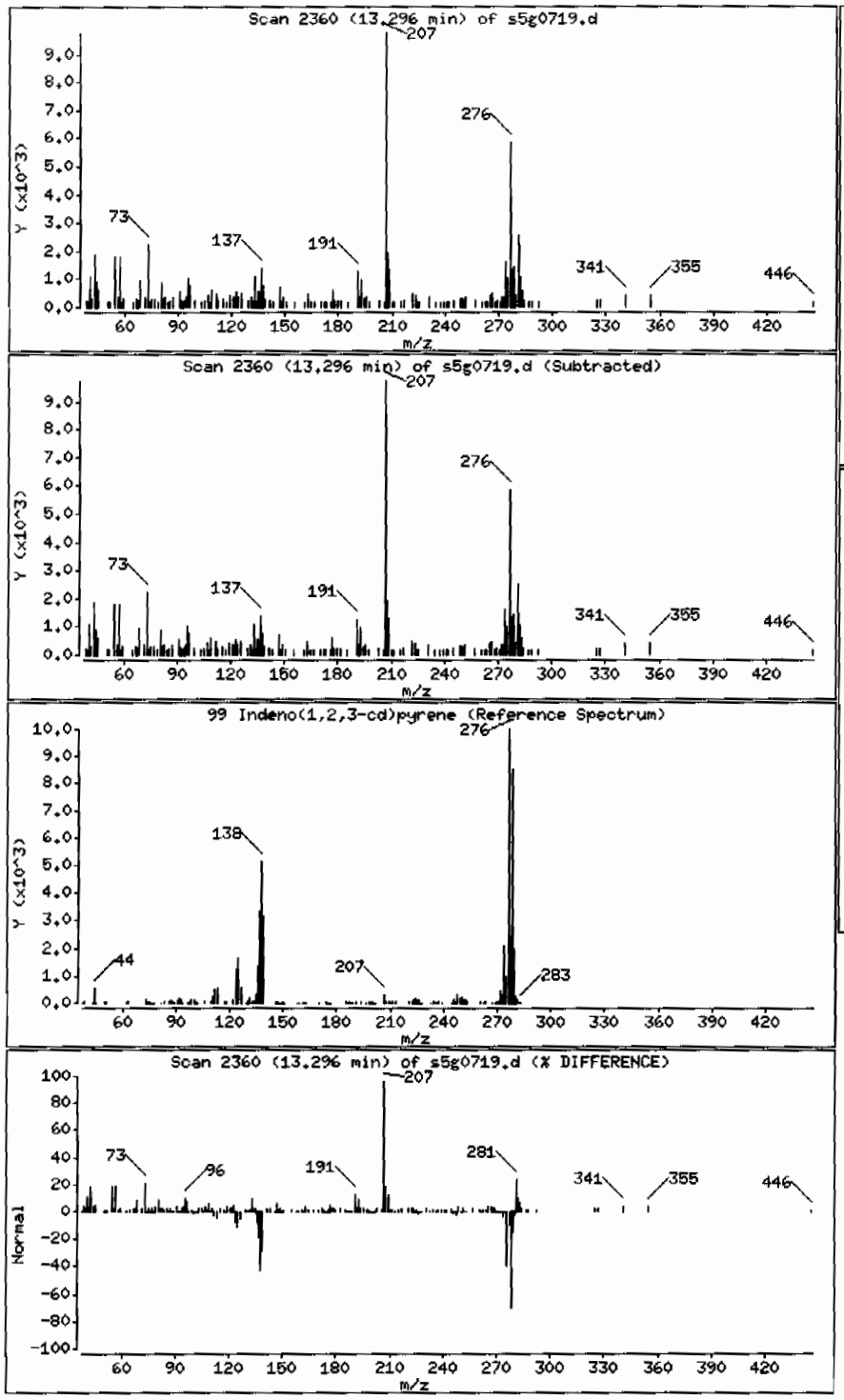

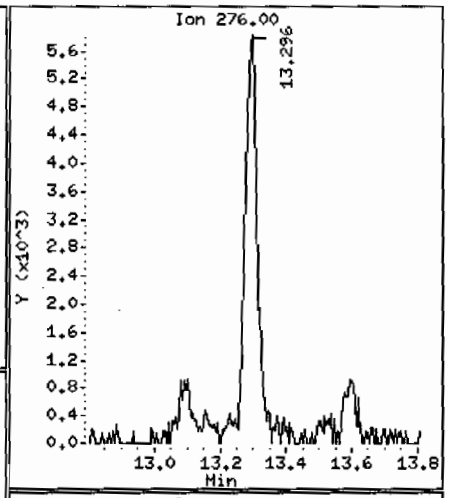

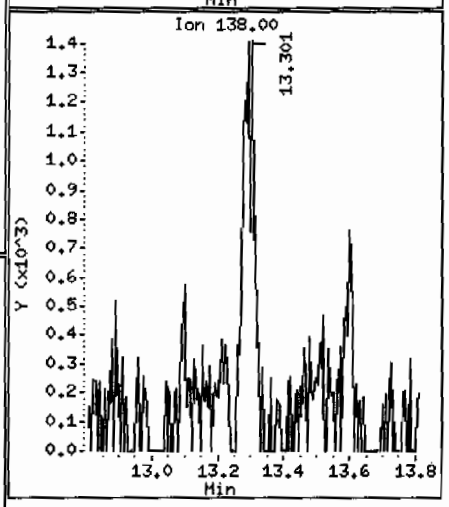

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031

Instrument: MSD5.i

Sample Info: 1232741008|88256511|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 25.8 ug/Kg

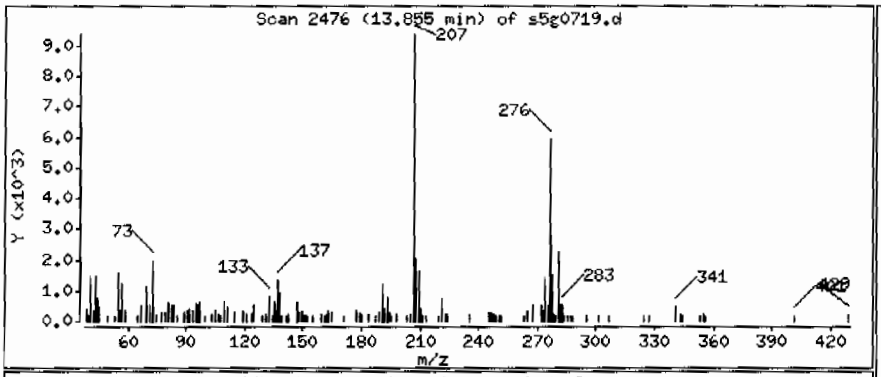

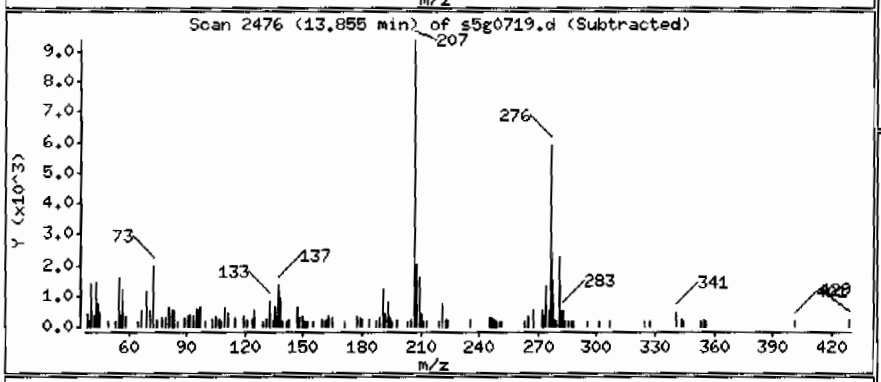

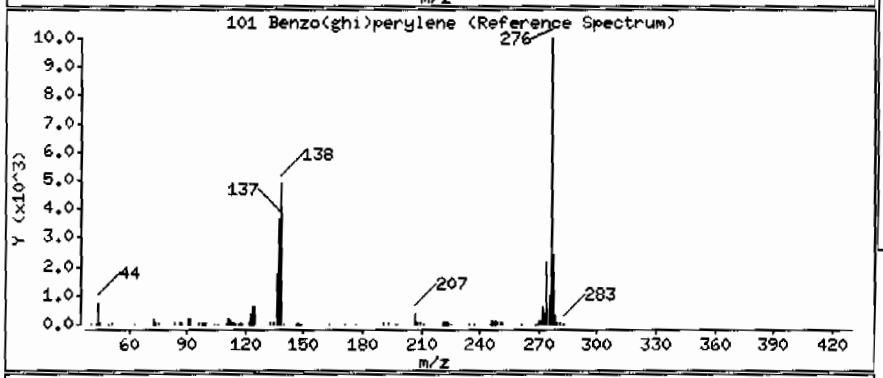

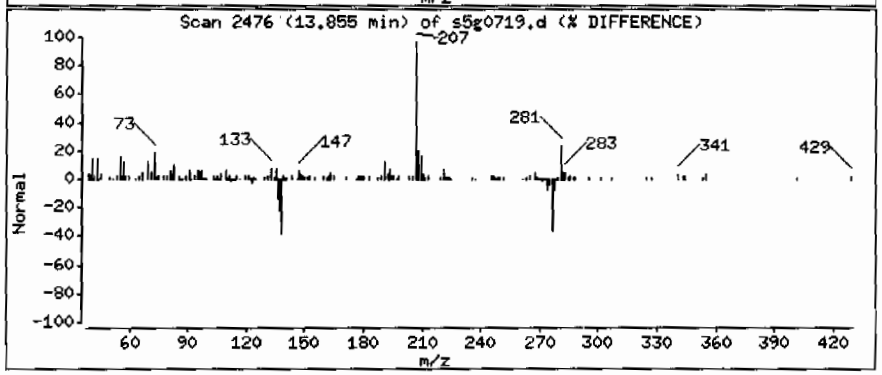

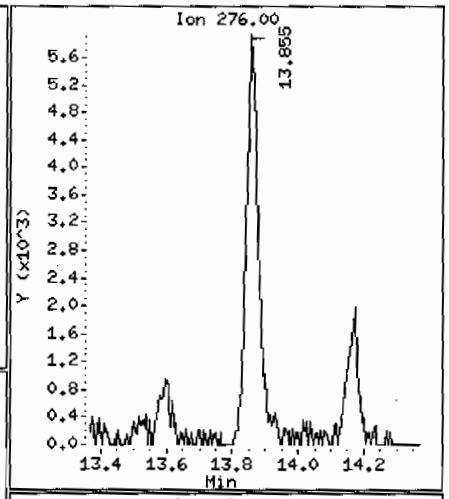

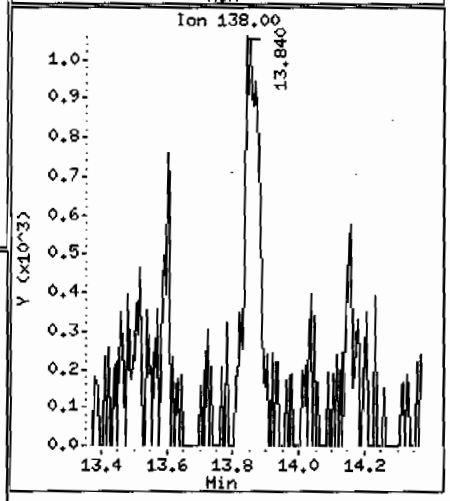

Data File: /chem/MSD5.i/s070709.b/s5g0719.d

Date : 07-JUL-2009 15:21

Client ID: CAMO-09-10031

Instrument: MSD5.i

Sample Info: |2327410081882565|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	59	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116

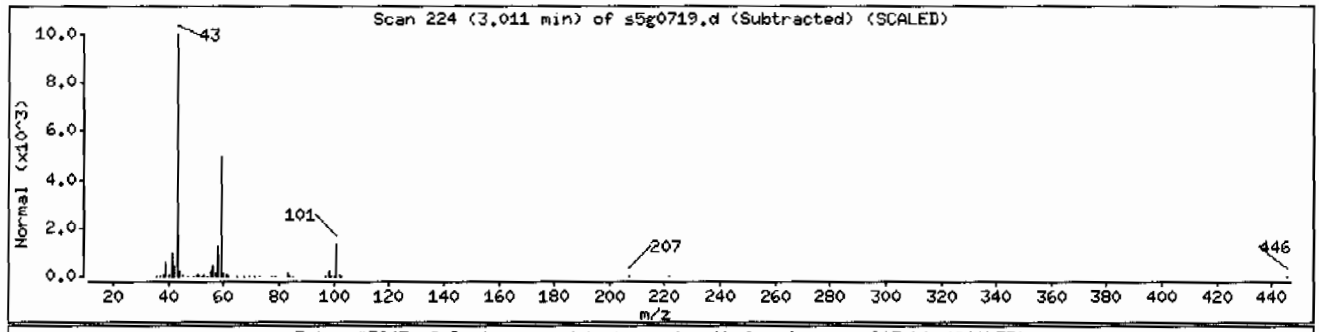

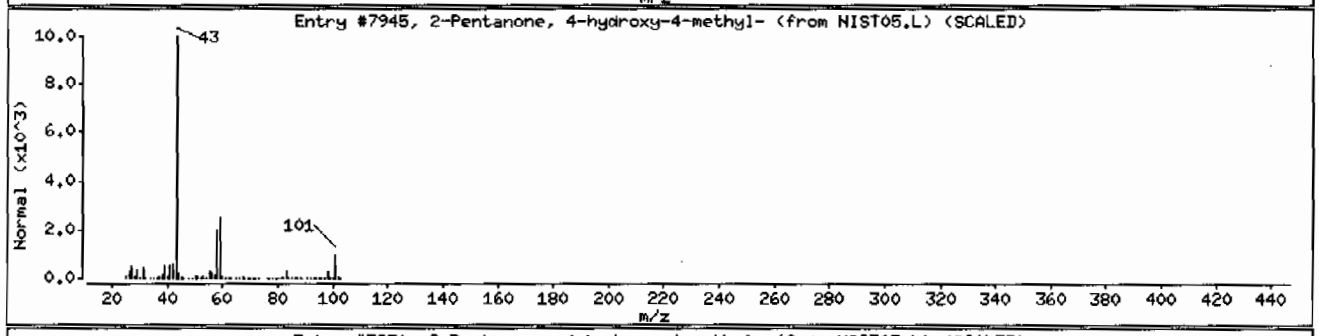

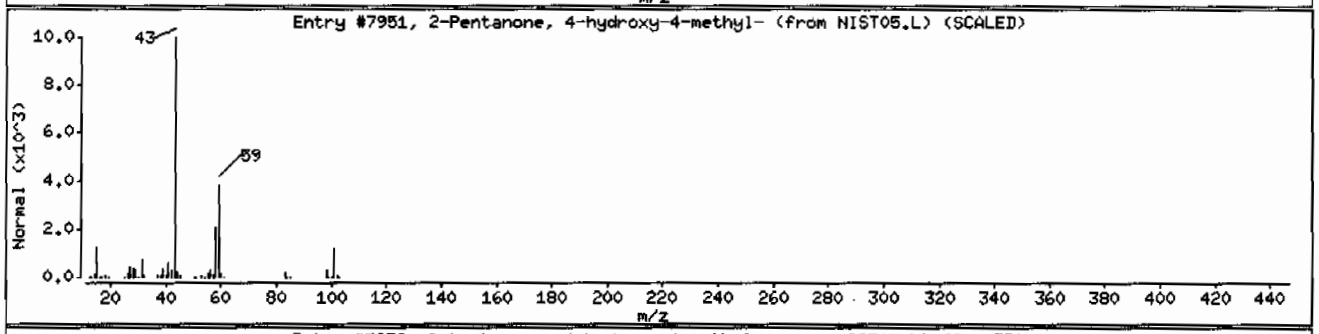

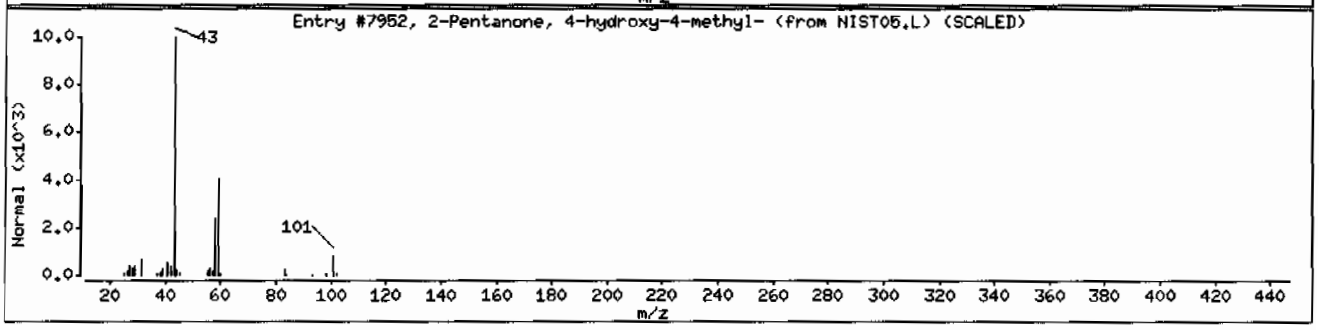

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9950	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:00	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0714.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	372	ug/kg	74.5	372
108-95-2	Phenol	U	372	ug/kg	74.5	372
95-57-8	2-Chlorophenol	U	372	ug/kg	74.5	372
106-46-7	1,4-Dichlorobenzene	U	372	ug/kg	74.5	372
621-64-7	N-Nitrosodipropylamine	U	372	ug/kg	74.5	372
59-50-7	4-Chloro-3-methylphenol	U	372	ug/kg	74.5	372
83-32-9	Acenaphthene	U	37.2	ug/kg	12.3	37.2
121-14-2	2,4-Dinitrotoluene	U	372	ug/kg	37.2	372
100-02-7	4-Nitrophenol	U	372	ug/kg	123	372
87-86-5	Pentachlorophenol	U	372	ug/kg	93.1	372
129-00-0	Pyrene		41.0	ug/kg	11.2	37.2
110-86-1	Pyridine	U	372	ug/kg	74.5	372
62-53-3	Aniline	U	372	ug/kg	112	372
111-44-4	bis(2-Chloroethyl) ether	U	372	ug/kg	74.5	372
541-73-1	1,3-Dichlorobenzene	U	372	ug/kg	74.5	372
100-51-6	Benzyl alcohol	U	372	ug/kg	112	372
95-50-1	1,2-Dichlorobenzene	U	372	ug/kg	74.5	372
108-60-1	bis(2-Chloroisopropyl)ether	U	372	ug/kg	74.5	372
95-48-7	o-Cresol	U	372	ug/kg	74.5	372
65794-96-9	m,p-Cresols	U	372	ug/kg	112	372
67-72-1	Hexachloroethane	U	372	ug/kg	74.5	372
98-95-3	Nitrobenzene	U	372	ug/kg	74.5	372
78-59-1	Isophorone	U	372	ug/kg	74.5	372
88-75-5	2-Nitrophenol	U	372	ug/kg	74.5	372
105-67-9	2,4-Dimethylphenol	U	372	ug/kg	130	372
111-91-1	bis(2-Chloroethoxy)methane	U	372	ug/kg	74.5	372
120-83-2	2,4-Dichlorophenol	U	372	ug/kg	74.5	372
65-85-0	Benzoic acid	U	745	ug/kg	186	745
91-20-3	Naphthalene	U	37.2	ug/kg	11.2	37.2
106-47-8	4-Chloroaniline	U	372	ug/kg	74.5	372
87-68-3	Hexachlorobutadiene	U	372	ug/kg	74.5	372
91-57-6	2-Methylnaphthalene	U	37.2	ug/kg	7.45	37.2
77-47-4	Hexachlorocyclopentadiene	U	372	ug/kg	74.5	372
88-06-2	2,4,6-Trichlorophenol	U	372	ug/kg	74.5	372
95-95-4	2,4,5-Trichlorophenol	U	372	ug/kg	74.5	372
91-58-7	2-Chloronaphthalene	U	37.2	ug/kg	12.3	37.2
88-74-4	2-Nitroaniline	U	372	ug/kg	74.5	372
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	372	ug/kg	74.5	372

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9950	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:00	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0714.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	372	ug/kg	74.5	372
606-20-2	2,6-Dinitrotoluene	U	372	ug/kg	37.2	372
208-96-8	Acenaphthylene	U	37.2	ug/kg	11.2	37.2
51-28-5	2,4-Dinitrophenol	U	745	ug/kg	142	745
132-64-9	Dibenzofuran	U	372	ug/kg	74.5	372
84-66-2	Diethylphthalate	U	372	ug/kg	74.5	372
86-73-7	Fluorene	U	37.2	ug/kg	11.2	37.2
7005-72-3	4-Chlorophenylphenylether	U	372	ug/kg	74.5	372
534-52-1	2-Methyl-4,6-dinitrophenol	U	372	ug/kg	74.5	372
100-01-6	4-Nitroaniline	U	372	ug/kg	112	372
	p-Nitroaniline					
122-39-4	Diphenylamine	U	372	ug/kg	74.5	372
122-66-7	Azobenzene	U	372	ug/kg	74.5	372
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	372	ug/kg	74.5	372
118-74-1	Hexachlorobenzene	U	372	ug/kg	74.5	372
85-01-8	Phenanthrene	J	29.8	ug/kg	11.2	37.2
120-12-7	Anthracene	U	37.2	ug/kg	7.45	37.2
84-74-2	Di-n-butylphthalate	U	372	ug/kg	74.5	372
206-44-0	Fluoranthene		42.3	ug/kg	11.2	37.2
85-68-7	Butylbenzylphthalate	U	372	ug/kg	74.5	372
56-55-3	Benzo(a)anthracene	J	21.7	ug/kg	11.2	37.2
91-94-1	3,3'-Dichlorobenzidine	U	372	ug/kg	112	372
218-01-9	Chrysene	J	16.1	ug/kg	11.2	37.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	372	ug/kg	74.5	372
117-84-0	Di-n-octylphthalate	U	372	ug/kg	74.5	372
205-99-2	Benzo(b)fluoranthene	J	21.8	ug/kg	11.2	37.2
207-08-9	Benzo(k)fluoranthene	U	37.2	ug/kg	11.2	37.2
50-32-8	Benzo(a)pyrene	J	17.0	ug/kg	11.2	37.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.2	ug/kg	11.2	37.2
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.2	37.2
191-24-2	Benzo(ghi)perylene	J	15.0	ug/kg	11.2	37.2
120-82-1	1,2,4-Trichlorobenzene	U	372	ug/kg	74.5	372

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	352	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0714.d
Lab Smp Id: 232741003 Client Smp ID: CAMO-09-9950
Inj Date : 07-JUL-2009 13:00
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741003|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	10.55500	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	415066	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1478333	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	905755	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1741759	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1741990	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1300087	40.0000	
$ 3 2-Fluorophenol	112	3.184	3.184	(0.796)	520591	57.1230	2130
$ 5 Phenol-d5	99	3.714	3.714	(0.929)	714400	59.4525	2210
$ 20 Nitrobenzene-d5	82	4.359	4.369	(0.895)	305152	27.8562	1040
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	761331	32.5010	1210
$ 60 2,4,6-Tribromophenol	329	6.728	6.733	(1.097)	216378	58.5494	2180
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.894)	1008689	37.8363	1410

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.587	8.592	(0.883)	41790	1.09967	41.0
68 Phenanthrene	178	7.325	7.330	(1.003)	26101	0.79993	29.8(a)
76 Fluoranthene	202	8.370	8.375	(1.146)	42201	1.13537	42.3
89 Benzo(a)anthracene	228	9.709	9.714	(0.998)	21802	0.58329	21.7(a)
92 Chrysene	228	9.742	9.752	(1.002)	14842	0.43347	16.1(a)
95 Benzo(b)fluoranthene	252	10.917	10.922	(0.953)	16769	0.58403	21.8(a)
97 Benzo(a)pyrene	252	11.375	11.380	(0.993)	11582	0.45568	17.0(a)
101 Benzo(ghi)perylene	276	13.855	13.869	(1.209)	8777	0.40309	15.0(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0714.d
Report Date: 07/07/2009 13:18
Lab. ID: 232741003 SampleType: SAMPLE
Injection Date: 07-JUL-2009 13:00
Operator: RMB Instrument: MSD5.i
Sample Info: |232741003|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	43484	3.71	3.79	80-120	100	(T)
93	214	3.71	3.79	154-214	0	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	43971	4.36	4.24	80-120	100	(T)
42	31382	4.36	4.24	56-116	71	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	1618	4.87	4.64	80-120	100	(T)
122	451	4.86	4.64	52-112	28	(QT)
77	6232	4.87	4.64	53-113	385	(QT)
31 4-Chloroaniline			CAS#: 106-47-8			
127	351	4.92	4.90	80-120	100	( )
65	116	4.93	4.90	8- 68	33	( )
41 m-Nitroaniline			CAS#: 99-09-2			
138	184	6.13	6.08	80-120	100	( )
92	5325	6.13	6.08	79-139	2893	(Q)
108	19767	6.13	6.08	0- 42	10738	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	195320	6.13	5.89	80-120	100	(T)
164	905755	6.13	5.89	0- 40	464	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	116636	6.13	5.94	80-120	100	(T)
63	1627	6.13	5.94	55-115	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	116636	6.13	6.25	80-120	100	(T)
89	2079	6.13	6.24	39- 99	2	(QT)
63	1627	6.13	6.24	20- 80	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	8782	6.73	6.55	80-120	100	(T)
165	9310	6.73	6.55	61-121	106	(T)
167	3379	6.73	6.55	0- 44	38	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	196	6.72	6.56	80-120	100	(T)
105	1404	6.73	6.56	4- 64	715	(QT)
51	1437	6.73	6.56	31- 91	731	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	26101	7.33	7.33	80-120	100	( )
179	4591	7.33	7.33	0- 46	18	( )
176	4761	7.33	7.33	0- 49	18	( )
69 Anthracene			CAS#: 120-12-7			
178	26101	7.33	7.37	80-120	100	( )
179	4346	7.33	7.37	0- 46	17	( )
176	4761	7.33	7.37	0- 48	18	( )
76 Fluoranthene			CAS#: 206-44-0			
202	42201	8.37	8.38	80-120	100	( )
203	7184	8.37	8.38	0- 48	17	( )
101	4064	8.37	8.37	0- 39	10	( )
79 Pyrene			CAS#: 129-00-0			
202	41790	8.59	8.59	80-120	100	( )
200	7212	8.59	8.59	0- 51	17	( )
101	4570	8.59	8.59	0- 40	11	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	21802	9.71	9.71	80-120	100	( )
226	4573	9.71	9.71	0- 56	21	( )
229	3506	9.71	9.71	0- 50	16	( )
92 Chrysene			CAS#: 218-01-9			
228	14842	9.74	9.75	80-120	100	( )
229	2422	9.75	9.75	0- 50	16	( )
226	5471	9.75	9.75	0- 59	37	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	16769	10.92	10.92	80-120	100	( )
253	2615	10.92	10.92	0- 51	16	( )
125	1471	10.92	10.92	0- 37	9	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	16778	10.92	10.96	80-120	100	( )
253	2615	10.92	10.96	0- 54	16	( )
125	1565	10.92	10.96	0- 38	9	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	11582	11.37	11.38	80-120	100	( )
253	3384	11.37	11.38	0- 52	29	( )
125	1265	11.37	11.38	0- 30	11	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	8777	13.85	13.87	80-120	100	( )
138	2186	13.85	13.87	0- 30	25	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0714.d
Lab Smp Id: 232741003 Client Smp ID: CAMO-09-9950
Inj Date : 07-JUL-2009 13:00
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741003|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	10.55500	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2649838	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.011	626076	9.45077715	352	0		0	10

Data File: /chem/MSD5.i/s070709.b/s5g0714.d
Date : 07-JUL-2009 13:00
Client ID: CAMO-09-9950
Sample Info: |2327410031882565|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

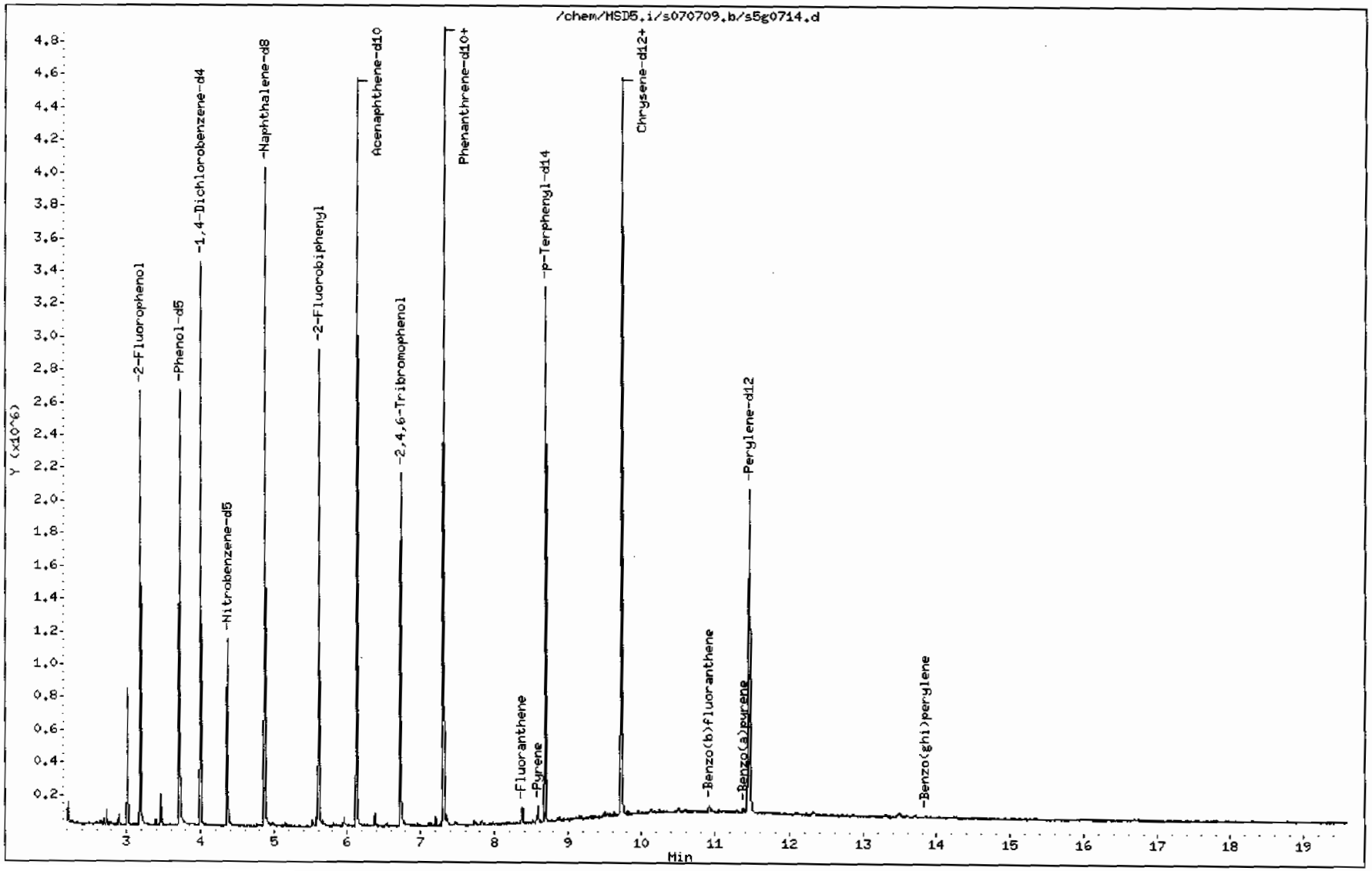

Data File: /chem/MSD5.i/s070709.b/s5g0714.d

Date : 07-JUL-2009 13:00

Client ID: CAMO-09-9950

Instrument: MSD5.i

Sample Info: 1232741003188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 41.0 ug/Kg

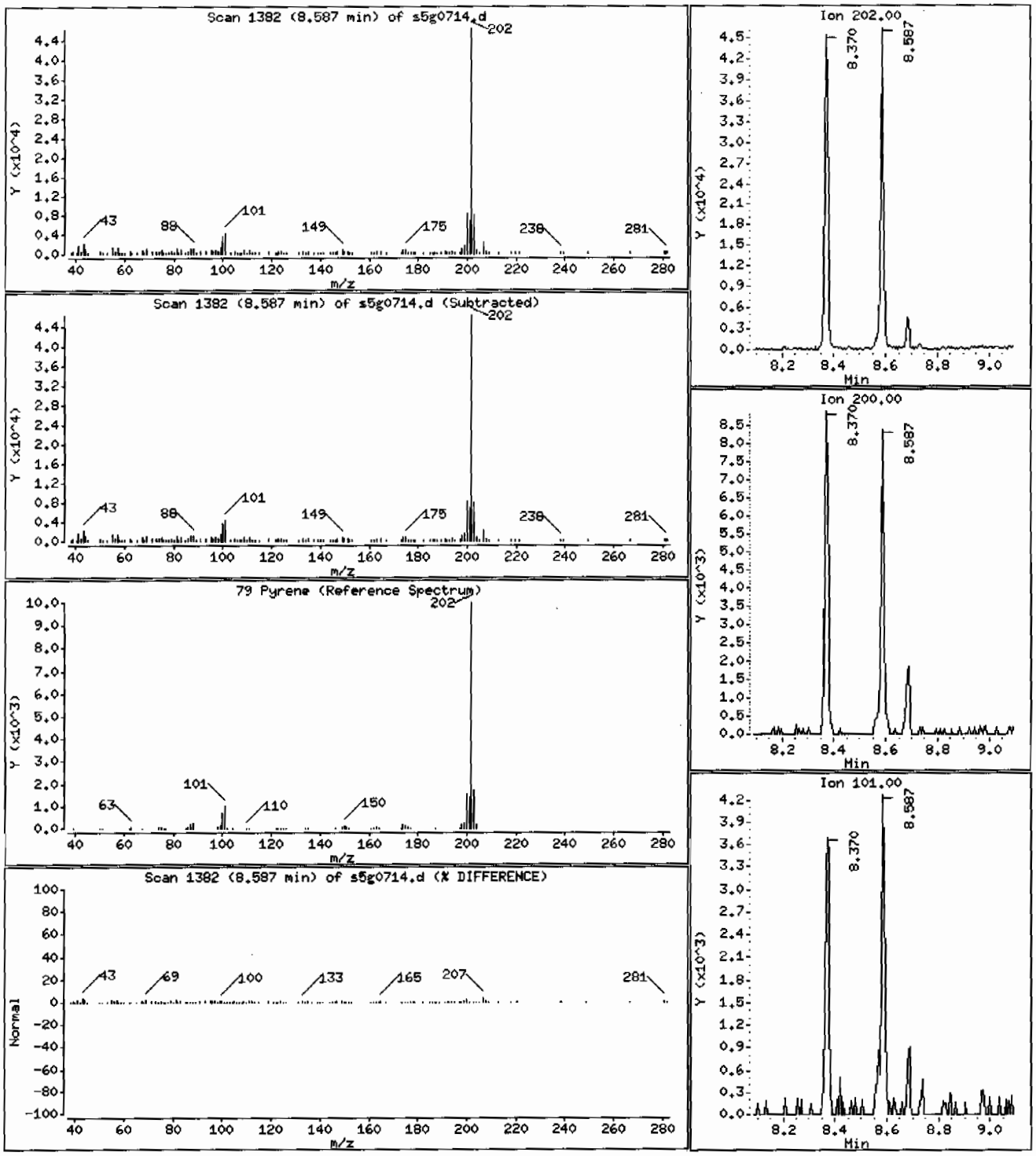

Data File: /chem/MSD5.i/s070709.b/s5g0714.d

Date : 07-JUL-2009 13:00

Client ID: CAMO-09-9950 Instrument: MSD5.i

Sample Info: 1232741003188256511ISVMFI1ILANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

68 Phenanthrene Concentration: 29.8 ug/Kg

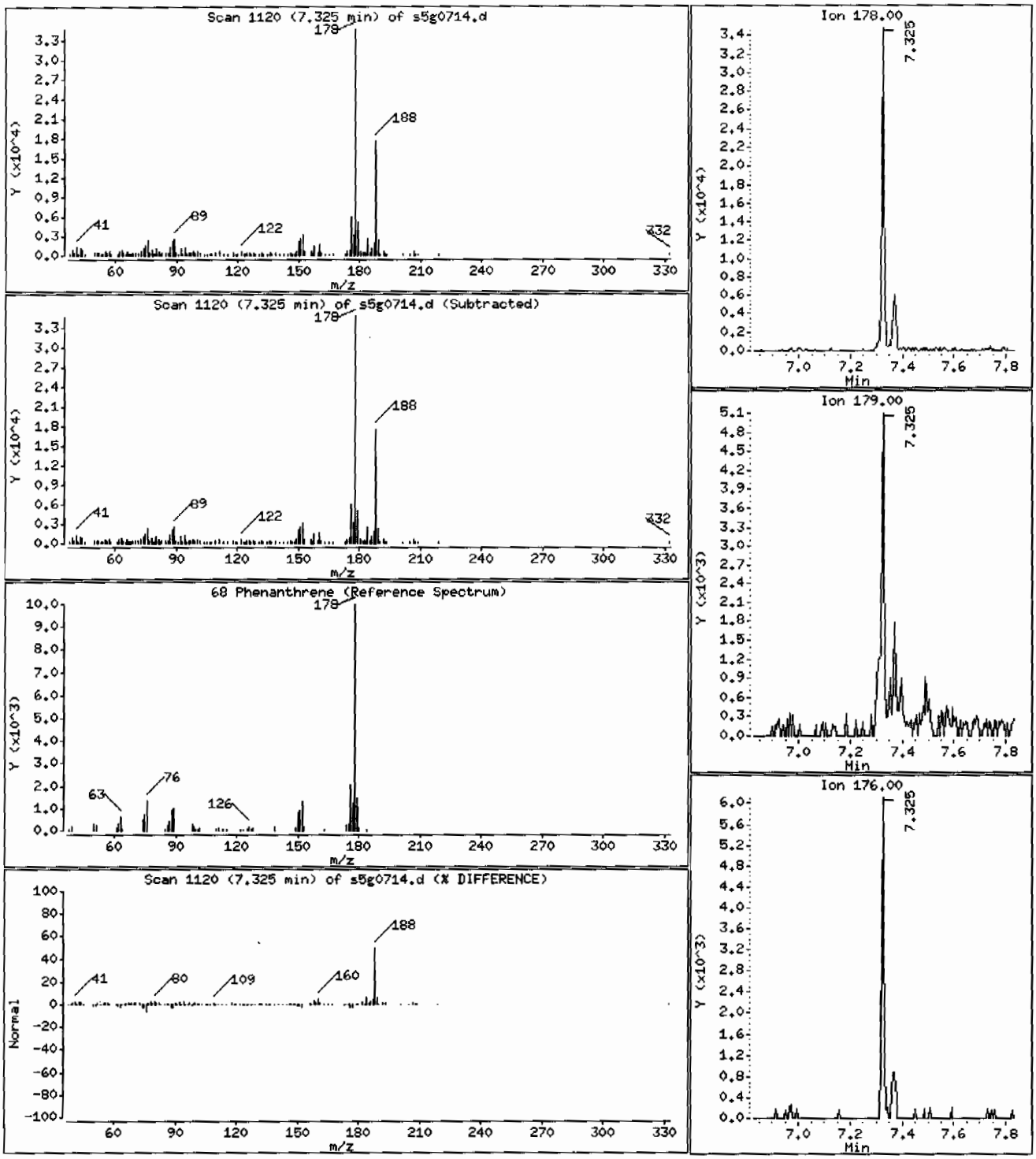

Data File: /chem/MSD5.i/s070709.b/s5g0714.d

Date : 07-JUL-2009 13:00

Client ID: CAMO-09-9950

Instrument: MSD5.i

Sample Info: |2327410031882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 42.3 ug/Kg

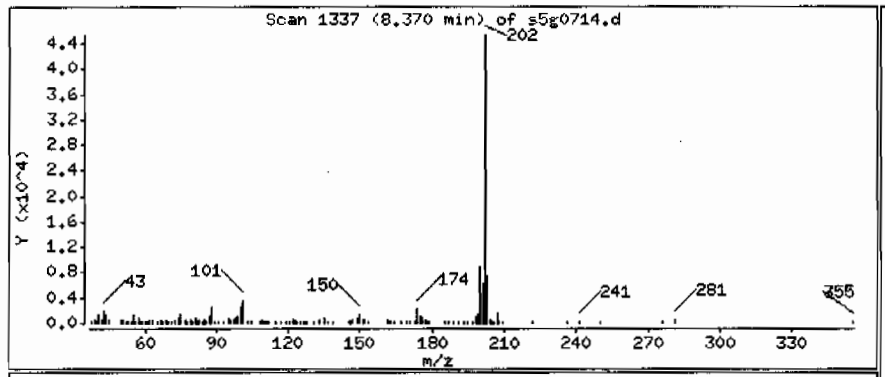

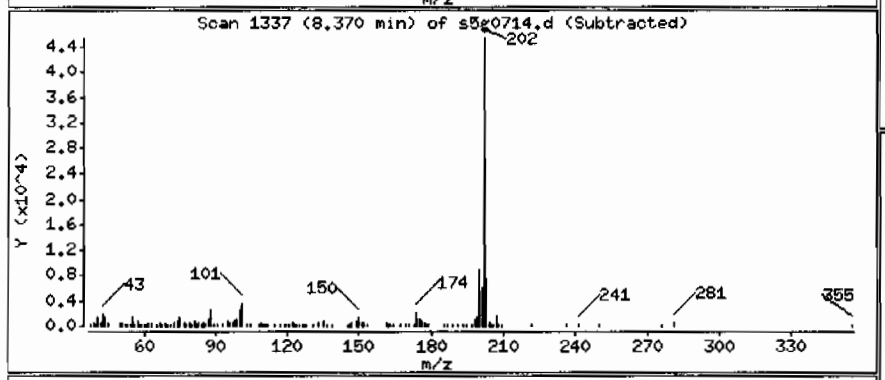

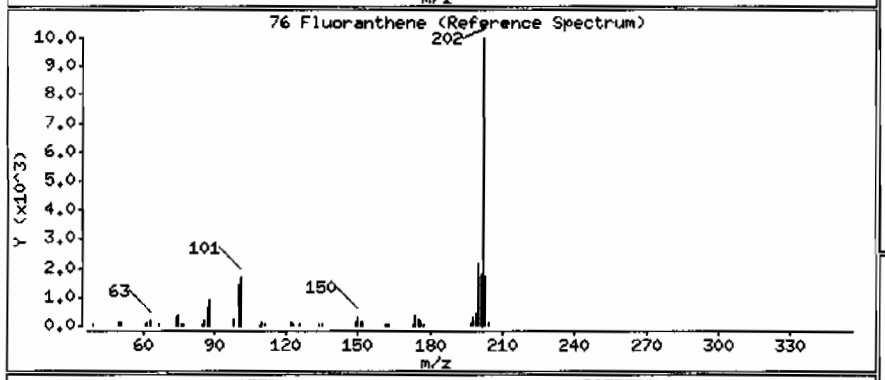

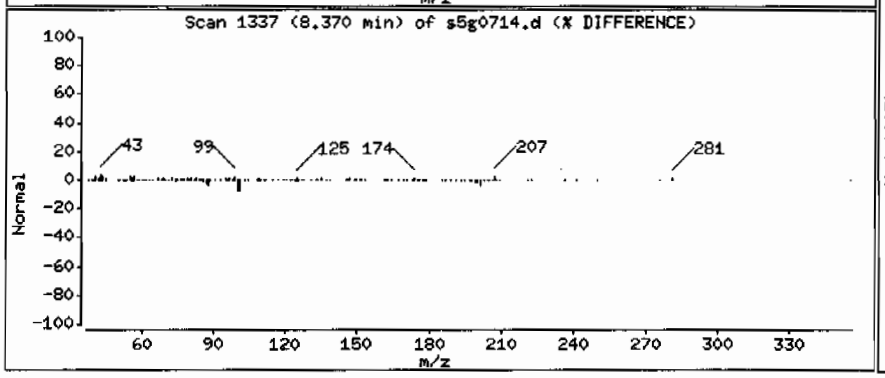

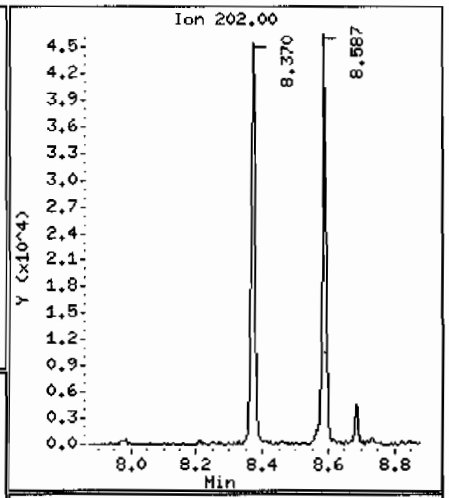

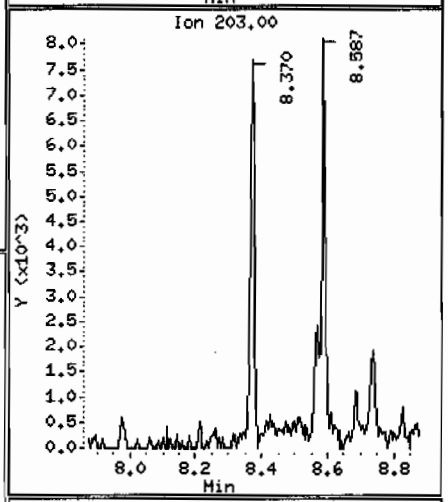

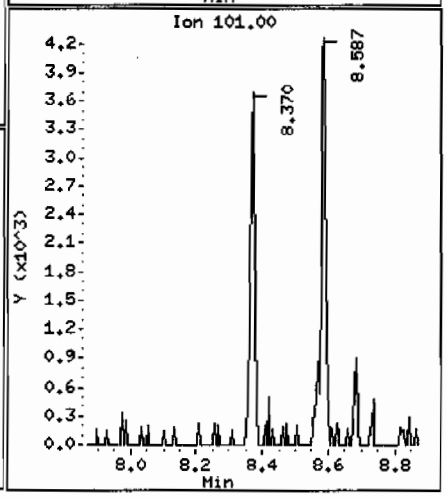

Data File: /chem/MSD5.i/s070709.b/s5g0714.d

Date : 07-JUL-2009 13:00

Client ID: CAMO-09-9950

Instrument: MSD5.i

Sample Info: 1232741003188256511SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 21.7 ug/Kg

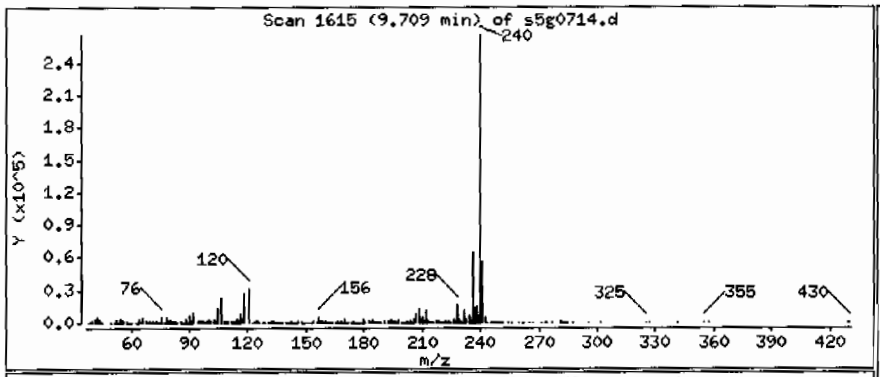

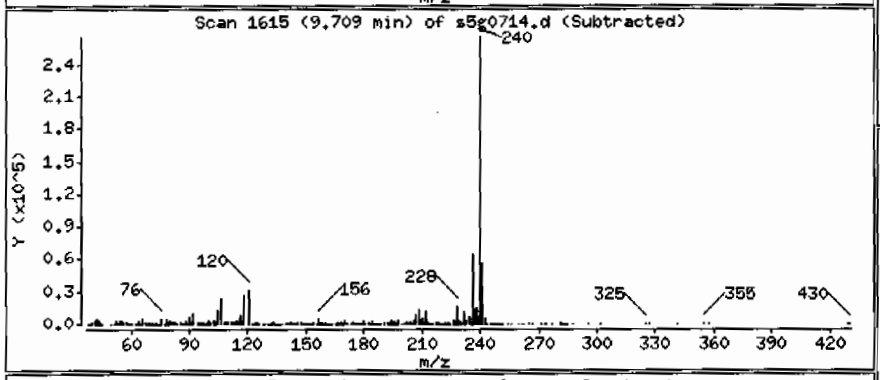

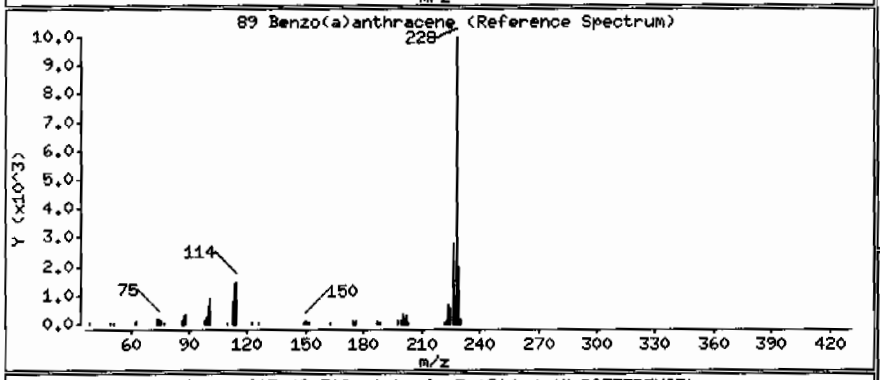

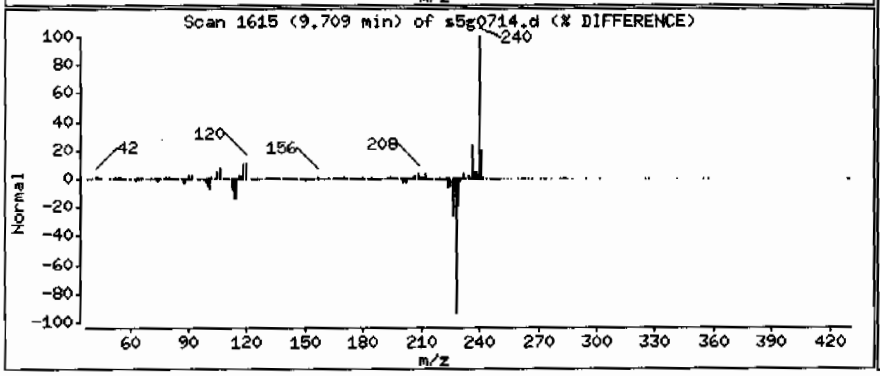

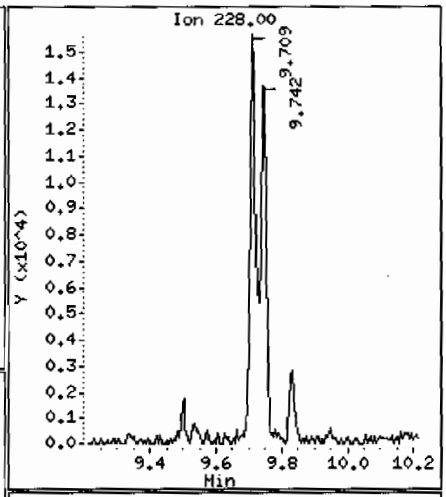

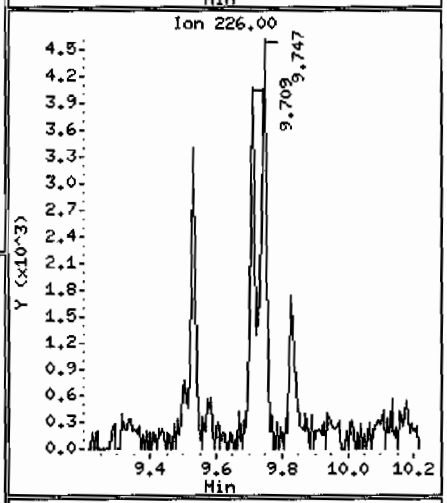

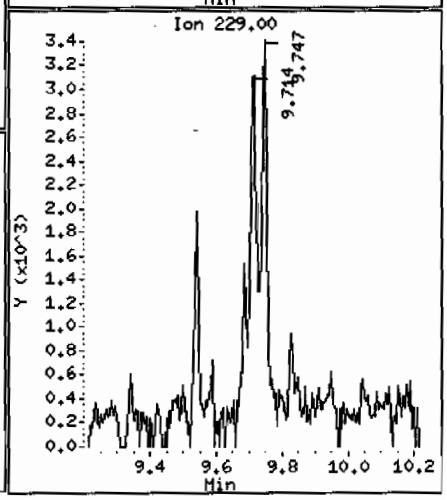

Data File: /chem/MSD5.i/s070709.b/s5g0714.d

Date : 07-JUL-2009 13:00

Client ID: CAMO-09-9950

Instrument: MSD5.i

Sample Info: 1232741003188256511|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 16.1 ug/Kg

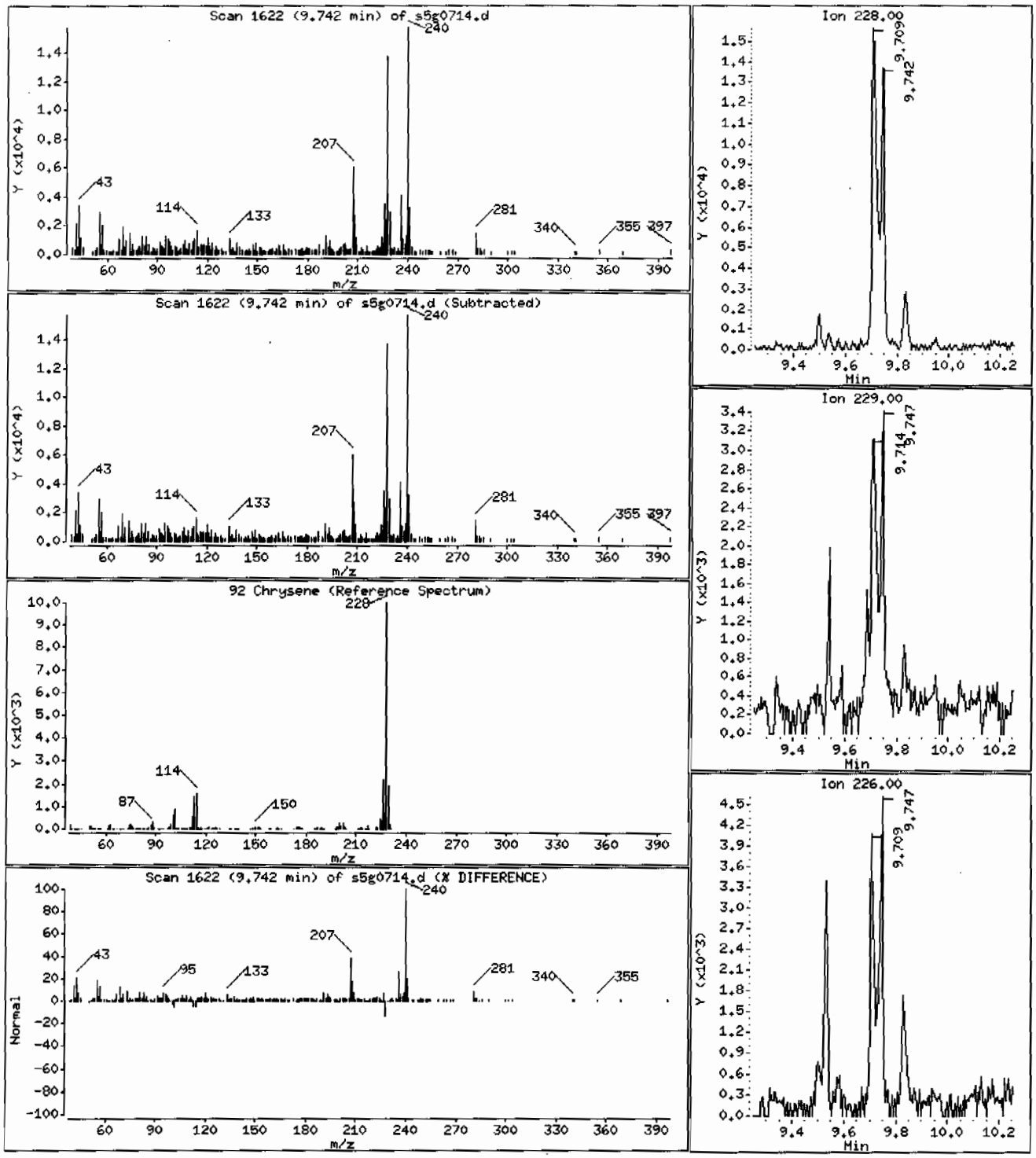

Data File: /chem/MSD5.i/s070709.b/s5g0714.d

Date : 07-JUL-2009 13:00

Client ID: CAMO-09-9950

Instrument: MSD5.i

Sample Info: 1232741003188256511SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 21.8 ug/Kg

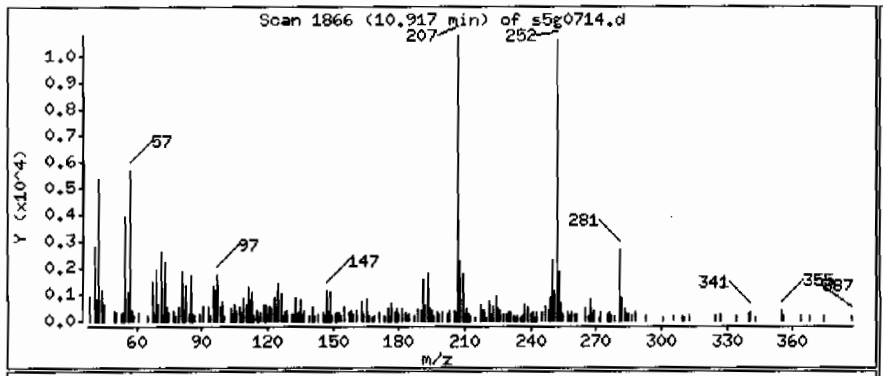

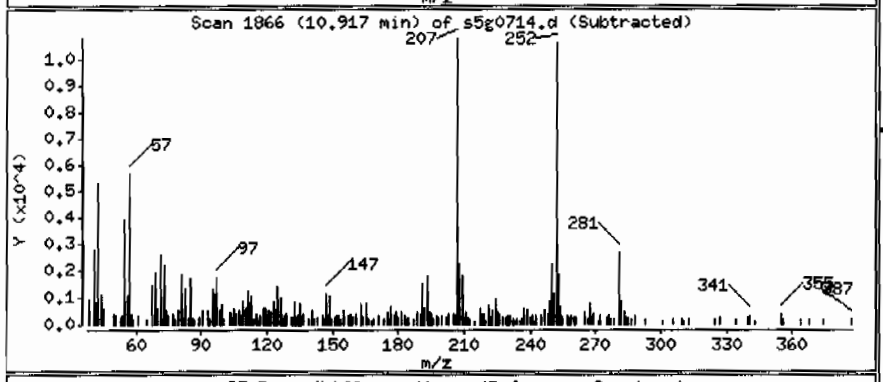

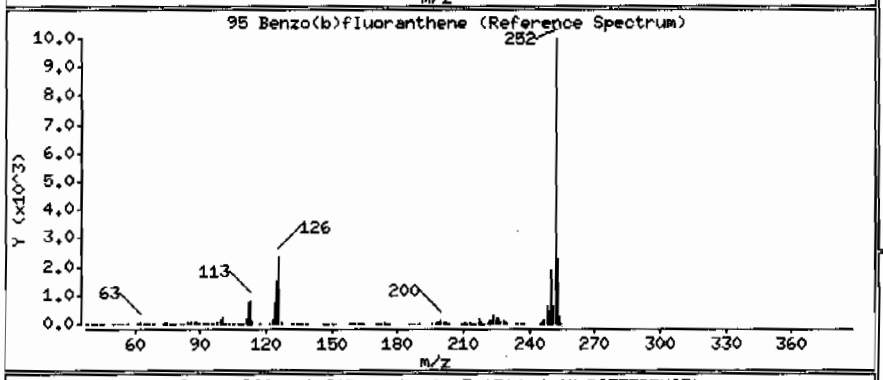

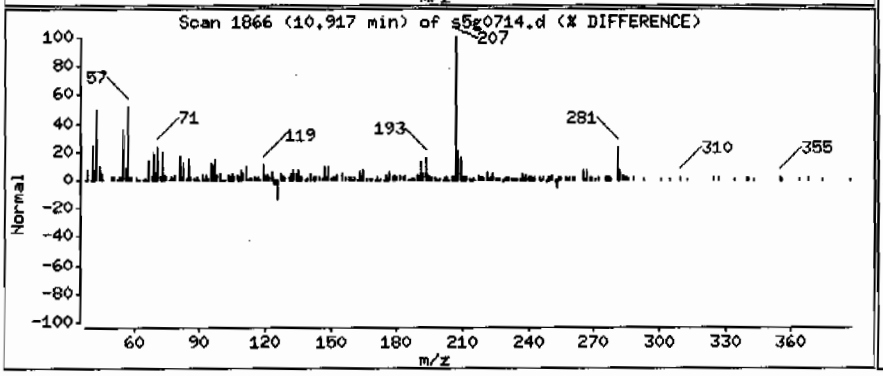

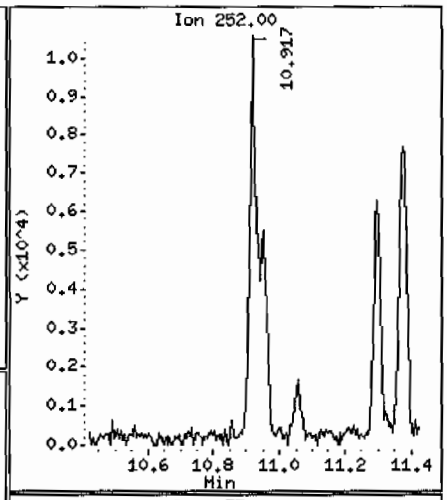

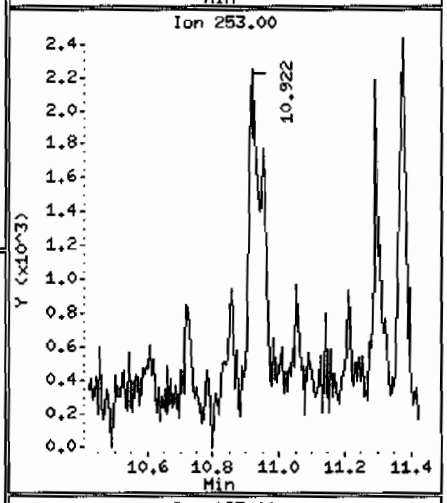

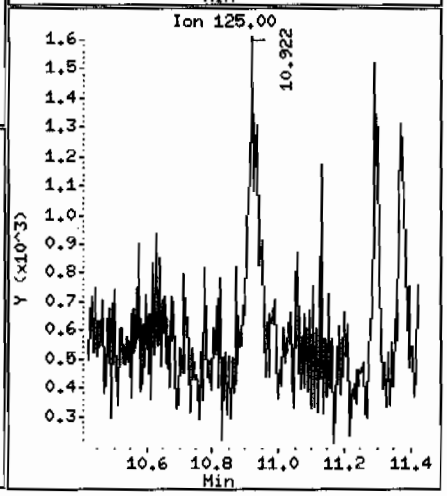

Data File: /chem/MSD5.i/s070709.b/s5g0714.d

Date : 07-JUL-2009 13:00

Client ID: CAMO-09-9950 Instrument: MSD5.i

Sample Info: 1232741003188256511|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

97 Benzo(a)pyrene Concentration: 17.0 ug/Kg

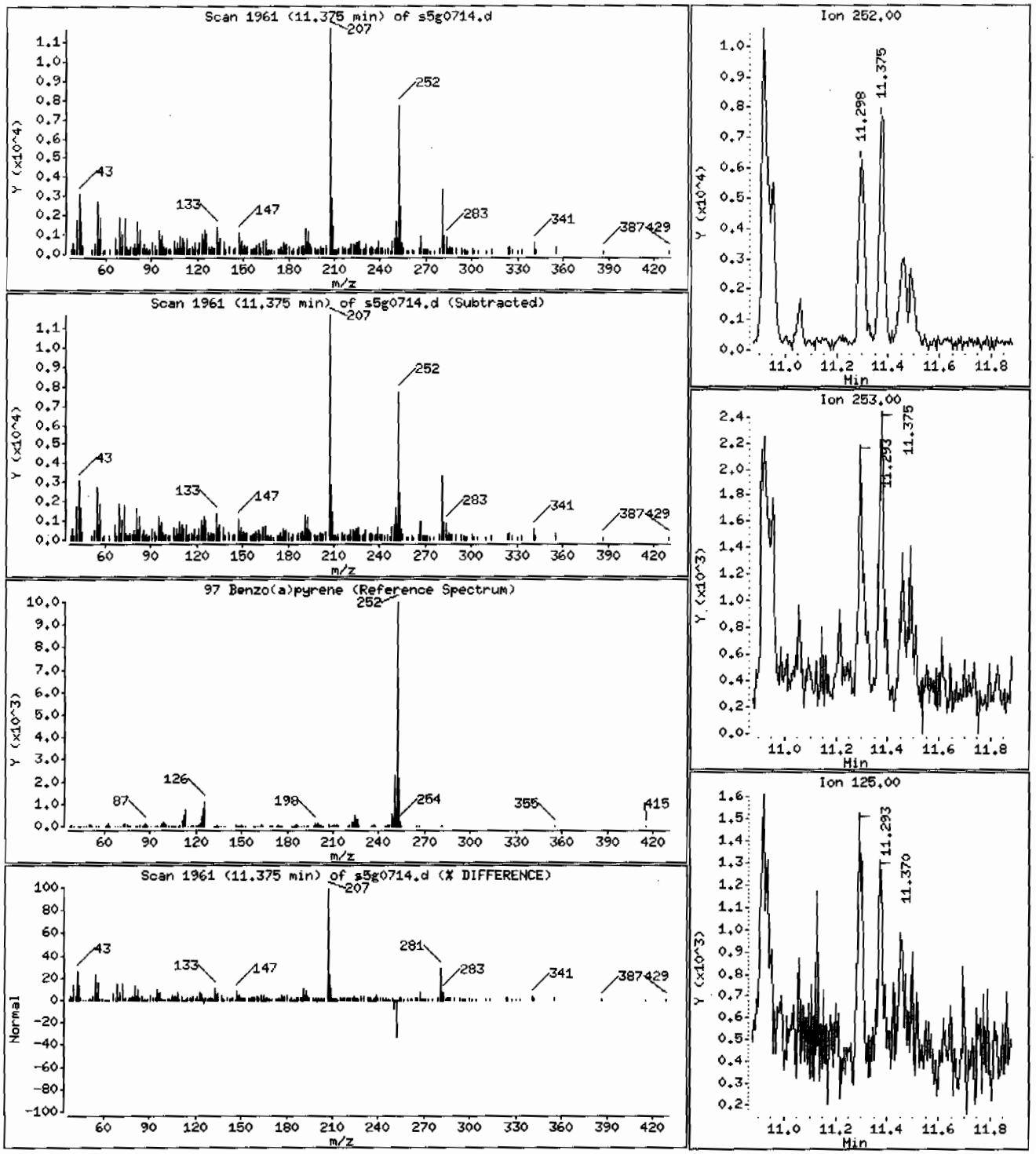

Data File: /chem/MSD5.i/s070709.b/s5g0714.d

Date : 07-JUL-2009 13:00

Client ID: CAMO-09-9950 Instrument: MSD5.i

Sample Info: 1232741003188256511SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

101 Benzo(ghi)perylene Concentration: 15.0 ug/Kg

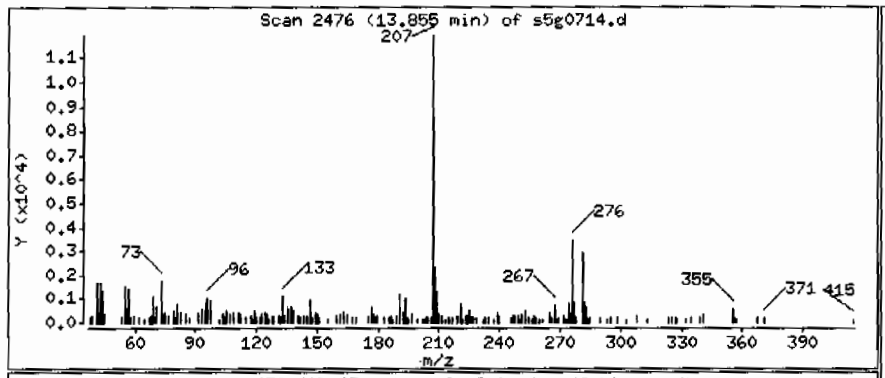

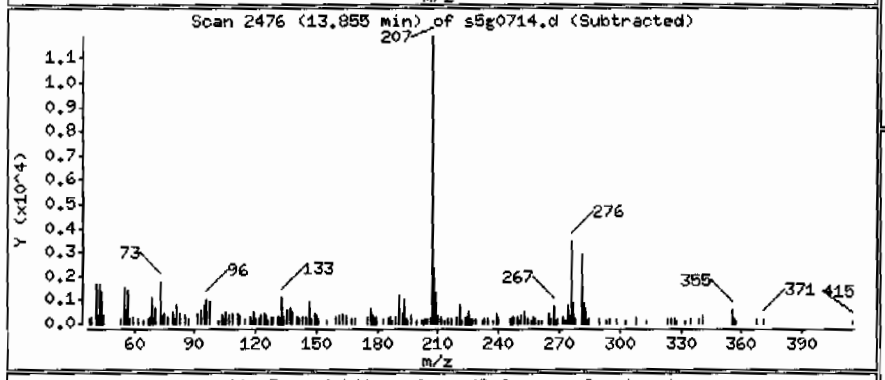

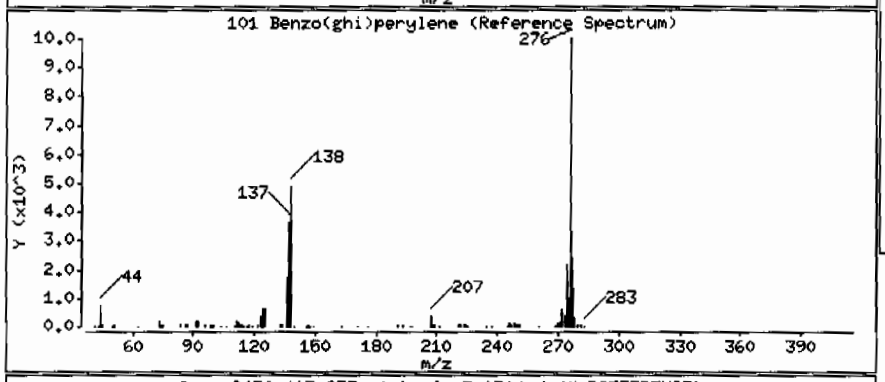

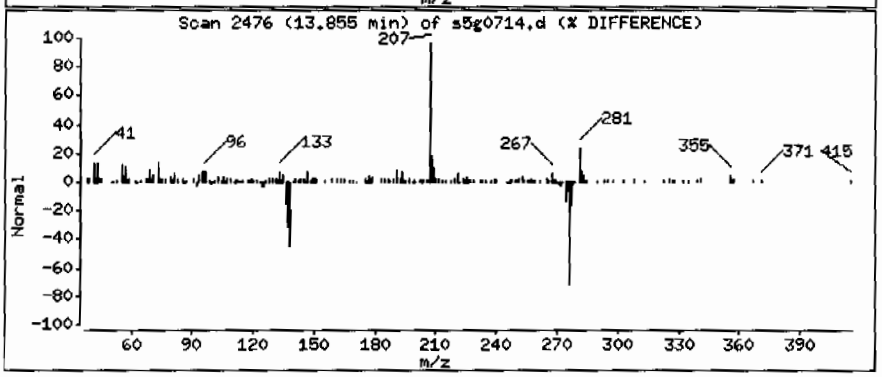

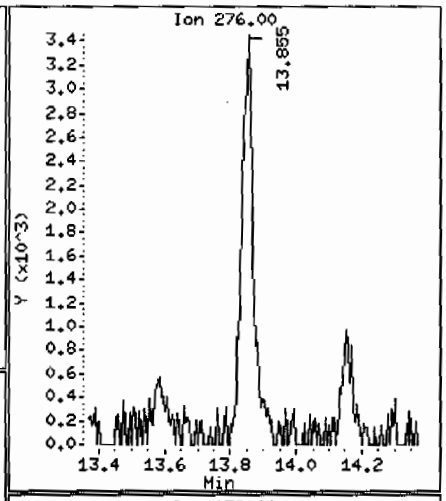

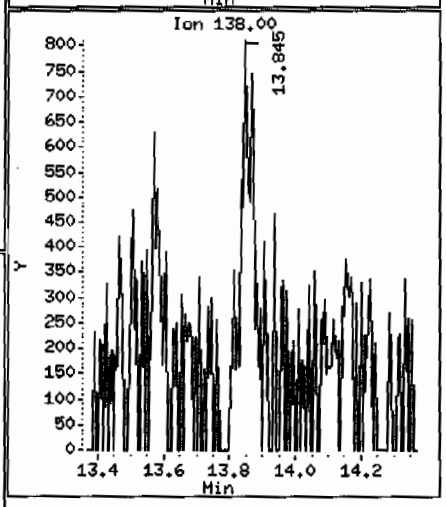

Data File: /chem/MSD5.i/s070709.b/s5g0714.d

Date : 07-JUL-2009 13:00

Client ID: CAMO-09-9950

Instrument: MSD5.i

Sample Info: |2327410031882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

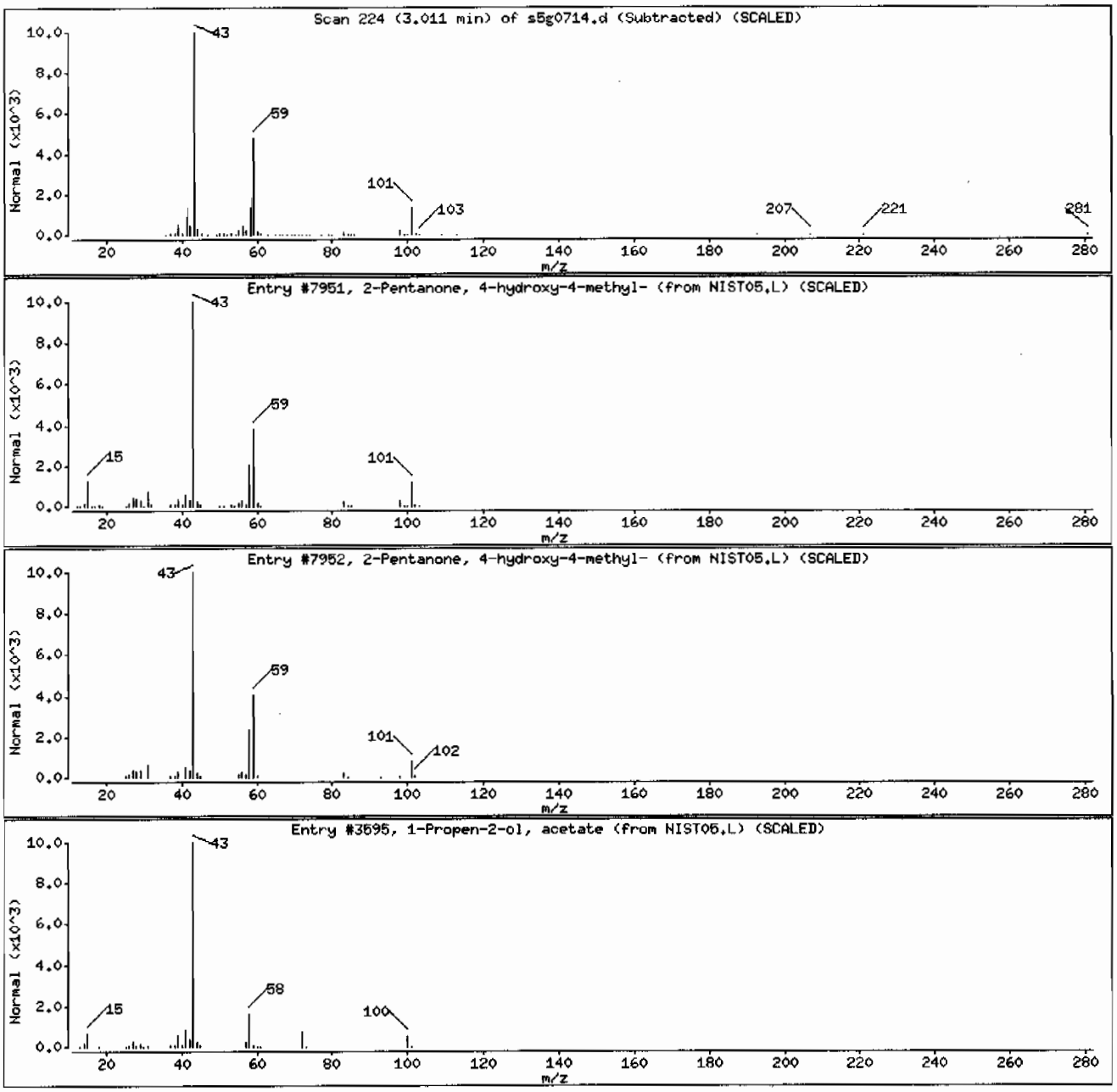

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741007	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9951	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 16:18	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0721.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	371	ug/kg	74.2	371
108-95-2	Phenol	U	371	ug/kg	74.2	371
95-57-8	2-Chlorophenol	U	371	ug/kg	74.2	371
106-46-7	1,4-Dichlorobenzene	U	371	ug/kg	74.2	371
621-64-7	N-Nitrosodipropylamine	U	371	ug/kg	74.2	371
59-50-7	4-Chloro-3-methylphenol	U	371	ug/kg	74.2	371
83-32-9	Acenaphthene	U	37.1	ug/kg	12.2	37.1
121-14-2	2,4-Dinitrotoluene	U	371	ug/kg	37.1	371
100-02-7	4-Nitrophenol	U	371	ug/kg	122	371
87-86-5	Pentachlorophenol	U	371	ug/kg	92.8	371
129-00-0	Pyrene		40.4	ug/kg	11.1	37.1
110-86-1	Pyridine	U	371	ug/kg	74.2	371
62-53-3	Aniline	U	371	ug/kg	111	371
111-44-4	bis(2-Chloroethyl) ether	U	371	ug/kg	74.2	371
541-73-1	1,3-Dichlorobenzene	U	371	ug/kg	74.2	371
100-51-6	Benzyl alcohol	U	371	ug/kg	111	371
95-50-1	1,2-Dichlorobenzene	U	371	ug/kg	74.2	371
108-60-1	bis(2-Chloroisopropyl)ether	U	371	ug/kg	74.2	371
95-48-7	o-Cresol	U	371	ug/kg	74.2	371
65794-96-9	m,p-Cresols	U	371	ug/kg	111	371
67-72-1	Hexachloroethane	U	371	ug/kg	74.2	371
98-95-3	Nitrobenzene	U	371	ug/kg	74.2	371
78-59-1	Isophorone	U	371	ug/kg	74.2	371
88-75-5	2-Nitrophenol	U	371	ug/kg	74.2	371
105-67-9	2,4-Dimethylphenol	U	371	ug/kg	130	371
111-91-1	bis(2-Chloroethoxy)methane	U	371	ug/kg	74.2	371
120-83-2	2,4-Dichlorophenol	U	371	ug/kg	74.2	371
65-85-0	Benzoic acid	U	742	ug/kg	186	742
91-20-3	Naphthalene	U	37.1	ug/kg	11.1	37.1
106-47-8	4-Chloroaniline	U	371	ug/kg	74.2	371
87-68-3	Hexachlorobutadiene	U	371	ug/kg	74.2	371
91-57-6	2-Methylnaphthalene	U	37.1	ug/kg	7.42	37.1
77-47-4	Hexachlorocyclopentadiene	U	371	ug/kg	74.2	371
88-06-2	2,4,6-Trichlorophenol	U	371	ug/kg	74.2	371
95-95-4	2,4,5-Trichlorophenol	U	371	ug/kg	74.2	371
91-58-7	2-Chloronaphthalene	U	37.1	ug/kg	12.2	37.1
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	371	ug/kg	74.2	371
99-09-2	3-Nitroaniline	U	371	ug/kg	74.2	371

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741007	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9951	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 16:18	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0721.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	371	ug/kg	74.2	371
606-20-2	2,6-Dinitrotoluene	U	371	ug/kg	37.1	371
208-96-8	Acenaphthylene	U	37.1	ug/kg	11.1	37.1
51-28-5	2,4-Dinitrophenol	U	742	ug/kg	141	742
132-64-9	Dibenzofuran	U	371	ug/kg	74.2	371
84-66-2	Diethylphthalate	U	371	ug/kg	74.2	371
86-73-7	Fluorene	U	37.1	ug/kg	11.1	37.1
7005-72-3	4-Chlorophenylphenylether	U	371	ug/kg	74.2	371
534-52-1	2-Methyl-4,6-dinitrophenol	U	371	ug/kg	74.2	371
100-01-6	4-Nitroaniline	U	371	ug/kg	111	371
	p-Nitroaniline					
122-39-4	Diphenylamine	U	371	ug/kg	74.2	371
122-66-7	Azobenzene	U	371	ug/kg	74.2	371
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	371	ug/kg	74.2	371
118-74-1	Hexachlorobenzene	U	371	ug/kg	74.2	371
85-01-8	Phenanthrene	J	12.5	ug/kg	11.1	37.1
120-12-7	Anthracene	U	37.1	ug/kg	7.42	37.1
84-74-2	Di-n-butylphthalate	U	371	ug/kg	74.2	371
206-44-0	Fluoranthene		38.3	ug/kg	11.1	37.1
85-68-7	Butylbenzylphthalate	U	371	ug/kg	74.2	371
56-55-3	Benzo(a)anthracene		39.9	ug/kg	11.1	37.1
91-94-1	3,3'-Dichlorobenzidine	U	371	ug/kg	111	371
218-01-9	Chrysene	J	35.5	ug/kg	11.1	37.1
117-81-7	bis(2-Ethylhexyl)phthalate	U	371	ug/kg	74.2	371
117-84-0	Di-n-octylphthalate	U	371	ug/kg	74.2	371
205-99-2	Benzo(b)fluoranthene		44.3	ug/kg	11.1	37.1
207-08-9	Benzo(k)fluoranthene	J	21.9	ug/kg	11.1	37.1
50-32-8	Benzo(a)pyrene	J	34.4	ug/kg	11.1	37.1
193-39-5	Indeno(1,2,3-cd)pyrene	J	16.7	ug/kg	11.1	37.1
53-70-3	Dibenzo(a,h)anthracene	U	37.1	ug/kg	11.1	37.1
191-24-2	Benzo(ghi)perylene	J	15.8	ug/kg	11.1	37.1
120-82-1	1,2,4-Trichlorobenzene	U	371	ug/kg	74.2	371

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	303	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0721.d
Lab Smp Id: 232741007 Client Smp ID: CAMO-09-9951
Inj Date : 07-JUL-2009 16:18
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741007|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	10.16600	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.003	4.003	(1.000)	324014	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1194508	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	776554	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1486170	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1438619	40.0000	
* 98 Perylene-d12	264	11.462	11.462	(1.000)	1121902	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.797)	421453	59.2403	2200
$ 5 Phenol-d5	99	3.714	3.714	(0.928)	548525	58.4761	2170
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	248544	28.0797	1040
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	628418	31.2904	1160
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	219210	69.1845	2570
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.894)	940645	42.7245	1580

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.587	8.592	(0.883)	34154	1.08826	40.4
68 Phenanthrene	178	7.325	7.330	(1.003)	9365	0.33638	12.5(a)
76 Fluoranthene	202	8.370	8.375	(1.146)	32749	1.03260	38.3
89 Benzo(a)anthracene	228	9.709	9.714	(0.998)	33218	1.07612	39.9
92 Chrysene	228	9.747	9.752	(1.002)	27031	0.95595	35.5(a)
95 Benzo(b)fluoranthene	252	10.927	10.922	(0.953)	29598	1.19456	44.3
96 Benzo(k)fluoranthene	252	10.946	10.956	(0.955)	14339	0.58916	21.9(a)
97 Benzo(a)pyrene	252	11.375	11.380	(0.992)	20363	0.92840	34.4(a)
99 Indeno(1,2,3-cd)pyrene	276	13.296	13.306	(1.160)	9945	0.45121	16.7(a)
101 Benzo(ghi)perylene	276	13.855	13.869	(1.209)	8025	0.42708	15.8(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0721.d
Report Date: 07/07/2009 16:57
Lab. ID: 232741007 SampleType: SAMPLE
Injection Date: 07-JUL-2009 16:18
Operator: RMB Instrument: MSD5.i
Sample Info: |232741007|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	33798	3.71	3.79	80-120	100	(T)
93	202	3.57	3.79	154-214	1	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	36268	4.36	4.24	80-120	100	(T)
42	24250	4.36	4.24	56-116	67	(T)
41 m-Nitroaniline			CAS#: 99-09-2			
138	123	6.13	6.08	80-120	100	( )
92	4298	6.13	6.08	79-139	3491	(Q)
108	15841	6.13	6.08	0- 42	12867	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	164125	6.13	5.89	80-120	100	(T)
164	776554	6.13	5.89	0- 40	473	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	99887	6.13	5.94	80-120	100	(T)
63	1341	6.13	5.94	55-115	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	99887	6.13	6.25	80-120	100	(T)
89	1884	6.13	6.24	39- 99	2	(QT)
63	1341	6.13	6.24	20- 80	1	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
53 Fluorene			CAS#: 86-73-7			
166	9153	6.73	6.55	80-120	100	(T)
165	9947	6.73	6.55	61-121	109	(T)
167	3549	6.73	6.55	0- 44	39	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	895	6.73	6.56	80-120	100	(T)
105	1521	6.73	6.56	4- 64	170	(QT)
51	1679	6.73	6.56	31- 91	188	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	15701	6.73	6.91	80-120	100	(T)
141	79441	6.73	6.91	33- 93	506	(QT)
250	31390	6.73	6.91	68-128	200	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	9365	7.33	7.33	80-120	100	( )
179	1750	7.33	7.33	0- 46	19	( )
176	1654	7.33	7.33	0- 49	18	( )
69 Anthracene			CAS#: 120-12-7			
178	9365	7.33	7.37	80-120	100	( )
179	1750	7.33	7.37	0- 46	19	( )
176	1654	7.33	7.37	0- 48	18	( )
76 Fluoranthene			CAS#: 206-44-0			
202	32749	8.37	8.38	80-120	100	( )
203	6105	8.37	8.38	0- 48	19	( )
101	3059	8.37	8.37	0- 39	9	( )
79 Pyrene			CAS#: 129-00-0			
202	34154	8.59	8.59	80-120	100	( )
200	6709	8.59	8.59	0- 51	20	( )
101	3412	8.59	8.59	0- 40	10	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	33218	9.71	9.71	80-120	100	( )
226	8042	9.71	9.71	0- 56	24	( )
229	8095	9.71	9.71	0- 50	24	( )
92 Chrysene			CAS#: 218-01-9			
228	27031	9.75	9.75	80-120	100	( )
229	5562	9.75	9.75	0- 50	21	( )
226	7807	9.75	9.75	0- 59	29	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	29598	10.93	10.92	80-120	100	( )
253	5487	10.92	10.92	0- 51	19	( )
125	3800	10.92	10.92	0- 37	13	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	14339	10.95	10.96	80-120	100	( )
253	2041	10.94	10.96	0- 54	14	( )
125	1001	10.95	10.96	0- 38	7	( )
97 Benzo(a)pyrene				CAS#: 50-32-8		
252	20363	11.37	11.38	80-120	100	( )
253	4552	11.38	11.38	0- 52	22	( )
125	1197	11.37	11.38	0- 30	6	( )
99 Indeno(1,2,3-cd)pyrene				CAS#: 193-39-5		
276	9945	13.30	13.31	80-120	100	( )
138	2309	13.29	13.31	0- 51	23	( )
101 Benzo(ghi)perylene				CAS#: 191-24-2		
276	8025	13.85	13.87	80-120	100	( )
138	1891	13.86	13.87	0- 30	24	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0721.d
Lab Smp Id: 232741007 Client Smp ID: CAMO-09-9951
Inj Date : 07-JUL-2009 16:18
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741007|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	10.16600	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.003	2100417	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.016	428675	8.16362089	303	0		0	10

Data File: /chem/MSD5.i/s070709.b/s5g0721.d
Date : 07-JUL-2009 16:18
Client ID: CAMO-09-9951
Sample Info: 1232741007188256511ISVMF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

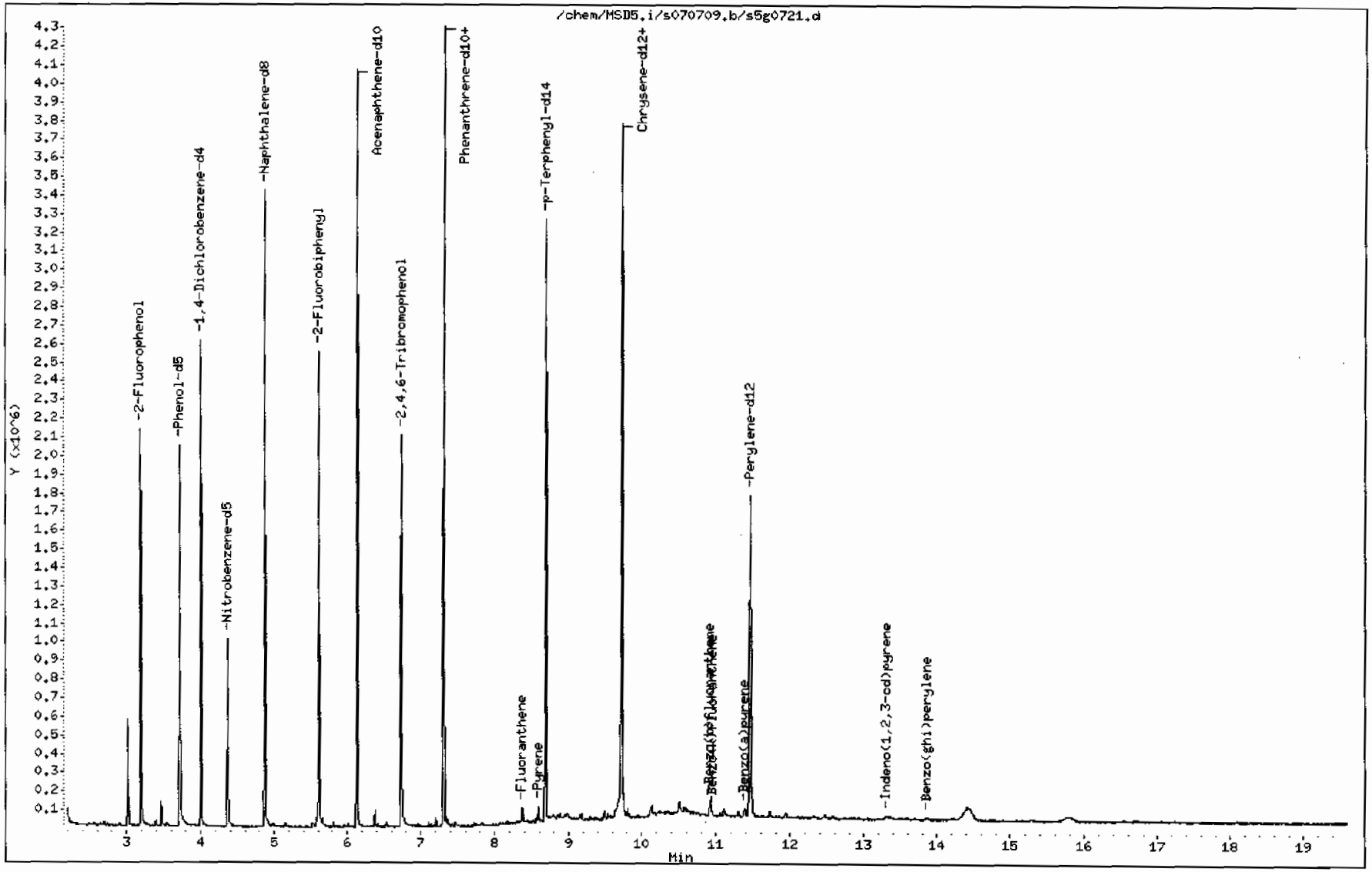

Data File: /chem/MSD5.i/s070709.b/s5g0721.d

Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951

Instrument: MSD5.i

Sample Info: 1232741007188256511SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 40.4 ug/Kg

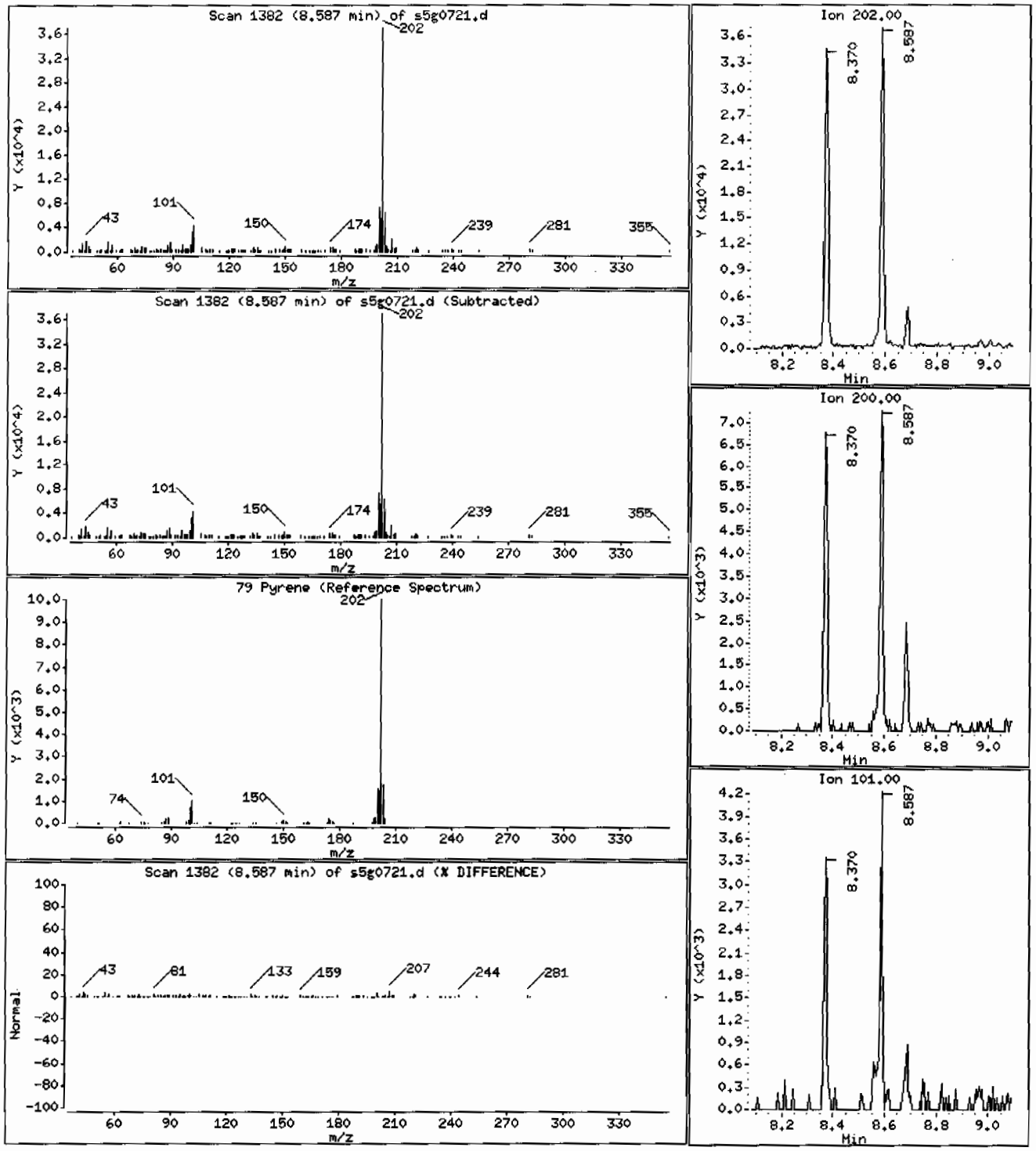

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Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951 Instrument: MSD5.i

Sample Info: |2327410071882565|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

68 Phenanthrene Concentration: 12.5 ug/Kg

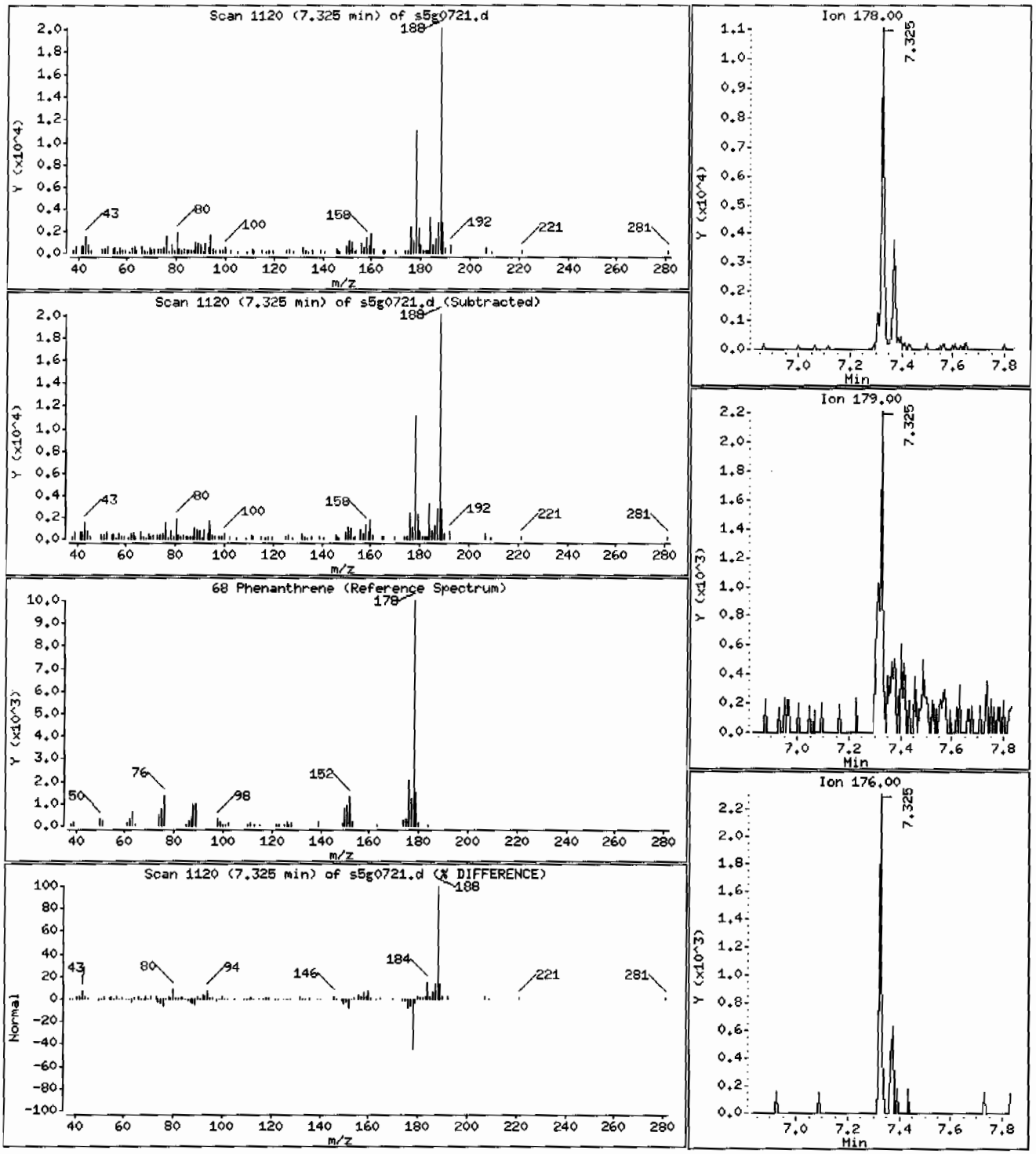

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Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951

Instrument: MSD5.i

Sample Info: 1232741007188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 38.3 ug/Kg

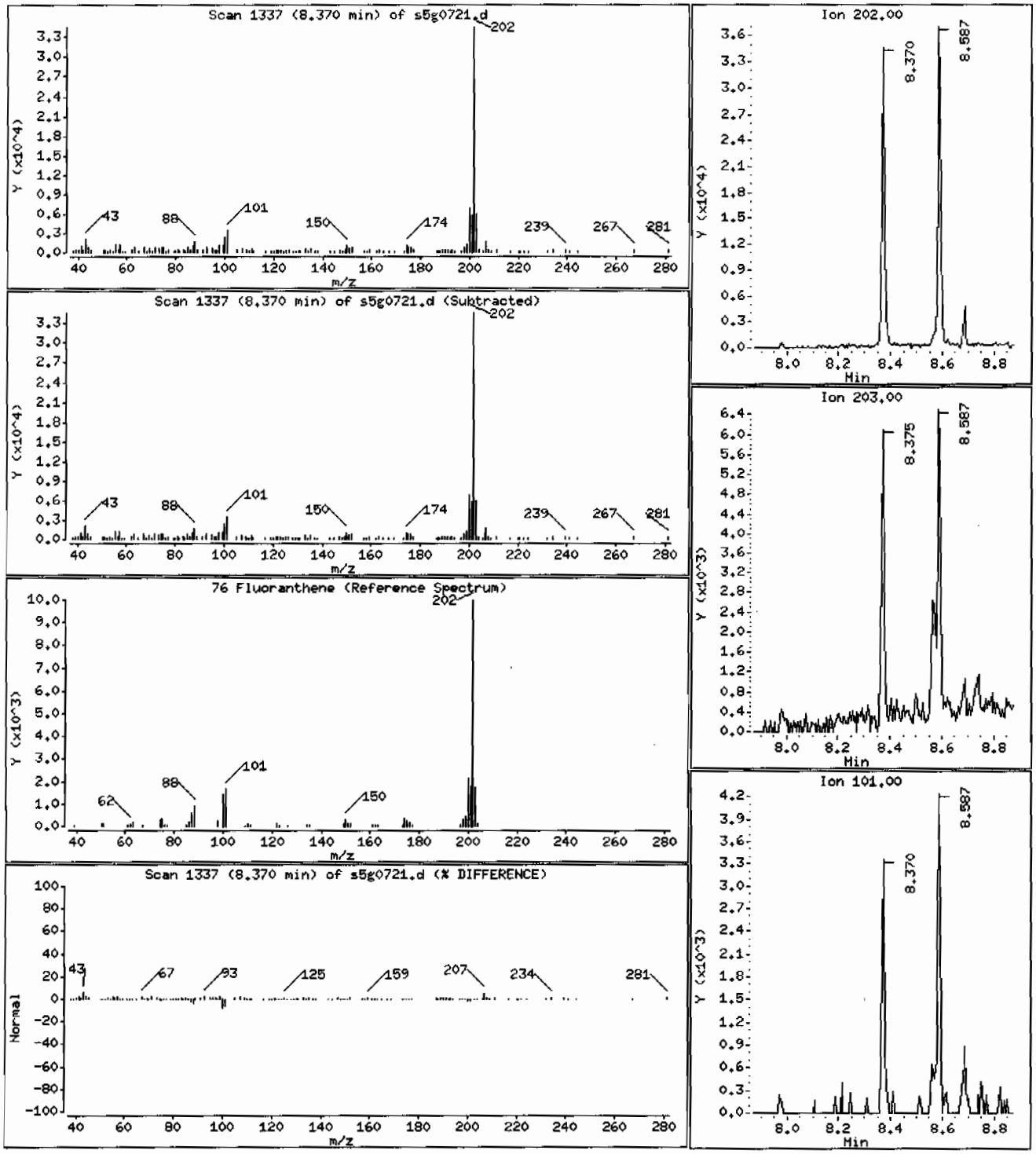

Data File: /chem/MSD5.i/s070709.b/s5g0721.d

Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951

Instrument: MSD5.i

Sample Info: 1232741007|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 39.9 ug/Kg

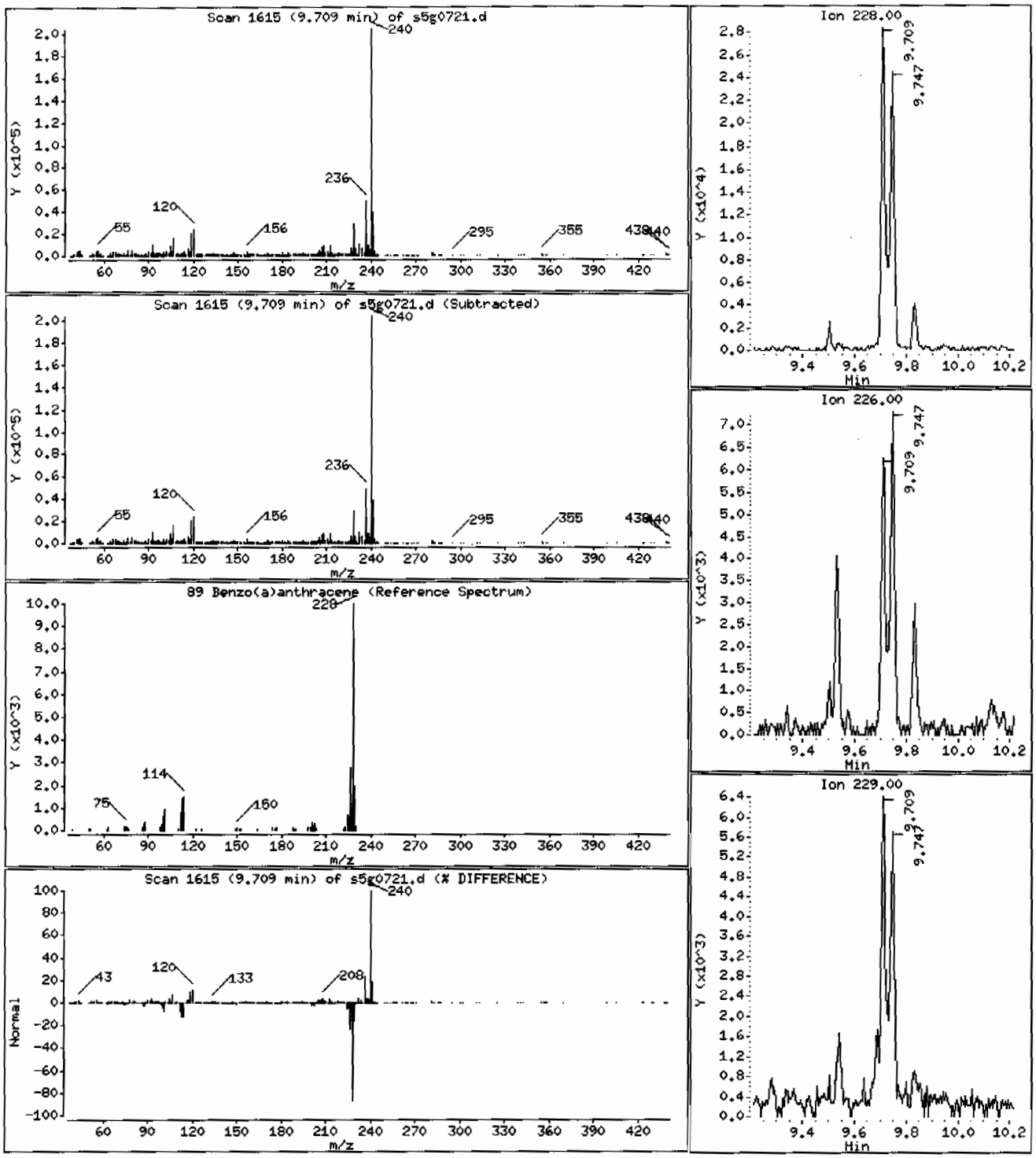

Data File: /chem/MSD5.i/s070709.b/s5g0721.d

Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951 Instrument: MSD5.i

Sample Info: 1232741007188256511SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

92 Chrysene Concentration: 35.5 ug/Kg

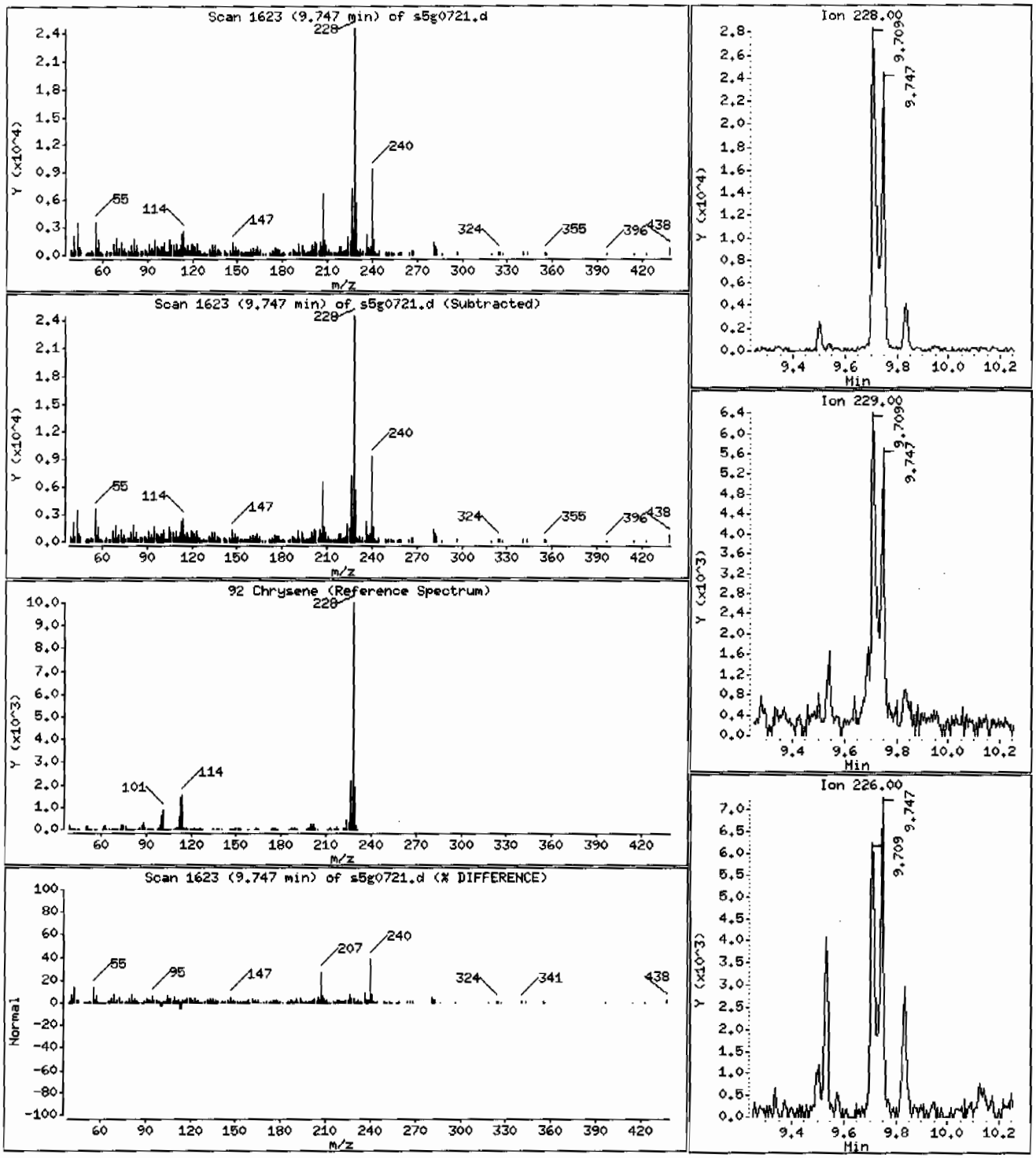

Data File: /chem/MSD5.i/s070709.b/s5g0721.d

Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951

Instrument: MSD5.i

Sample Info: 1232741007188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 44.3 ug/Kg

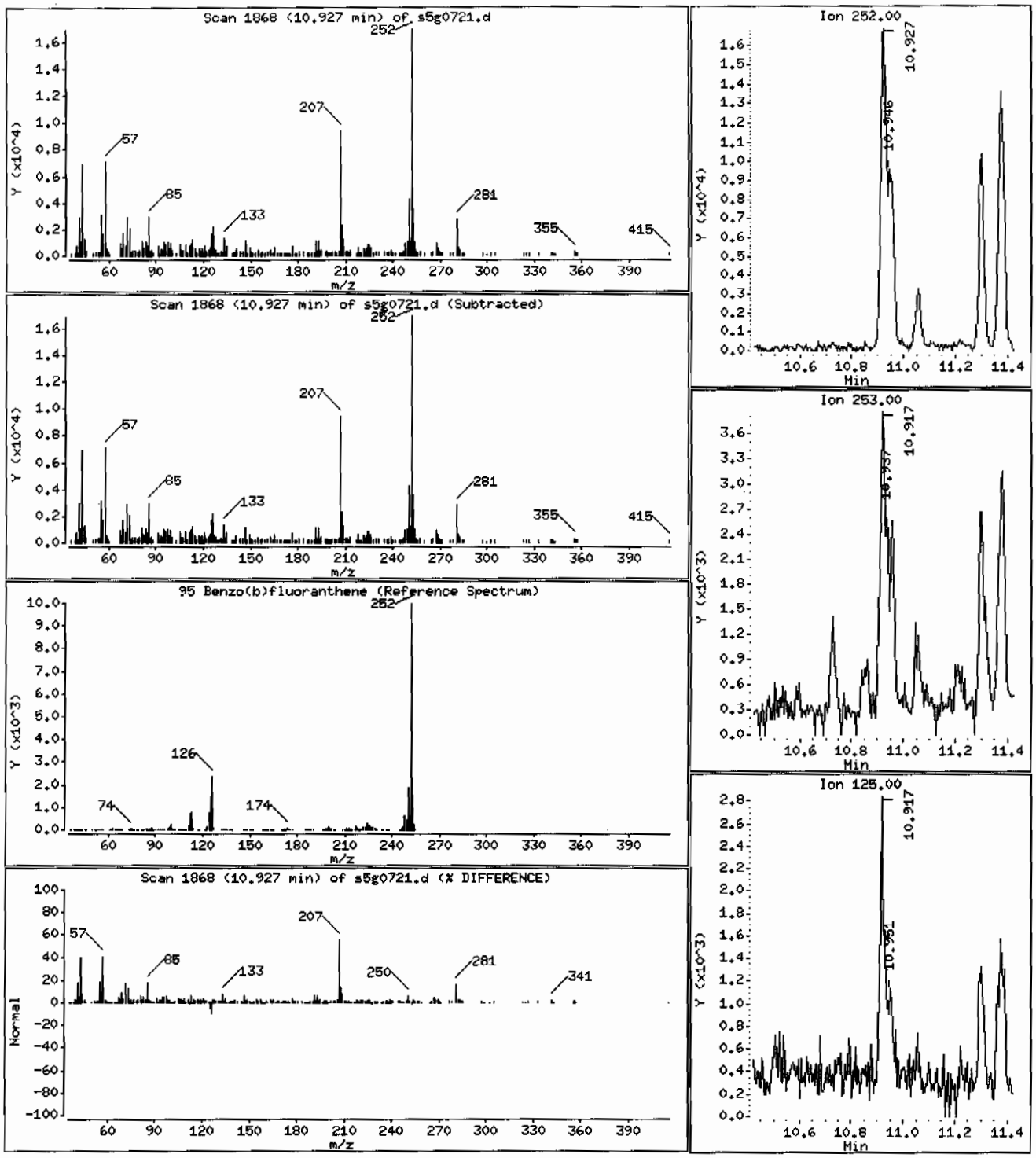

Data File: /chem/MSD5.i/s070709.b/s5g0721.d

Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951

Instrument: MSD5.i

Sample Info: 1232741007188256511ISVMF11ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

96 Benzo(k)fluoranthene

Concentration: 21.9 ug/Kg

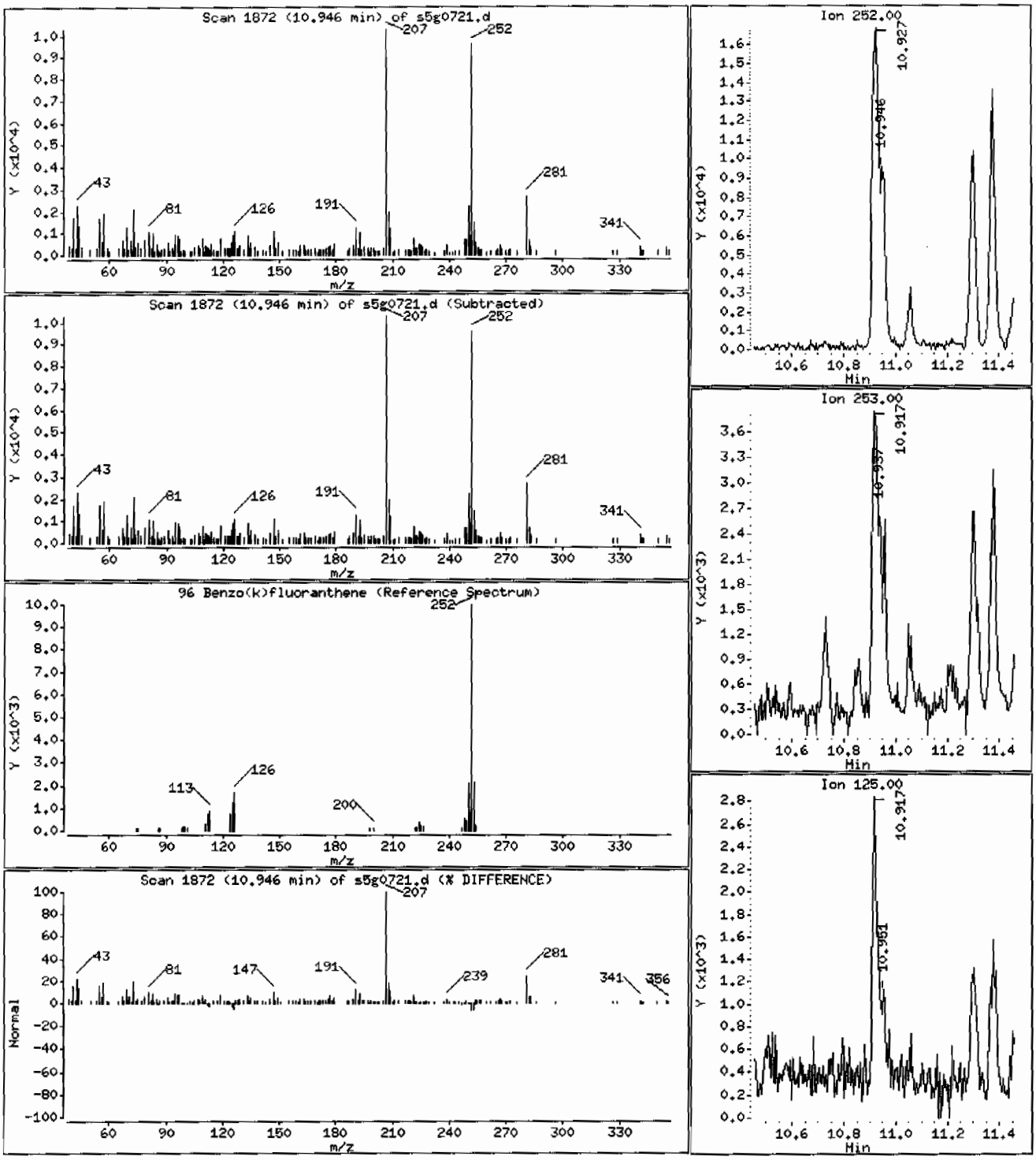

Data File: /chem/MSD5.i/s070709.b/s5g0721.d

Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951 Instrument: MSD5.i

Sample Info: |2327410071882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

97 Benzo(a)pyrene Concentration: 34.4 ug/Kg

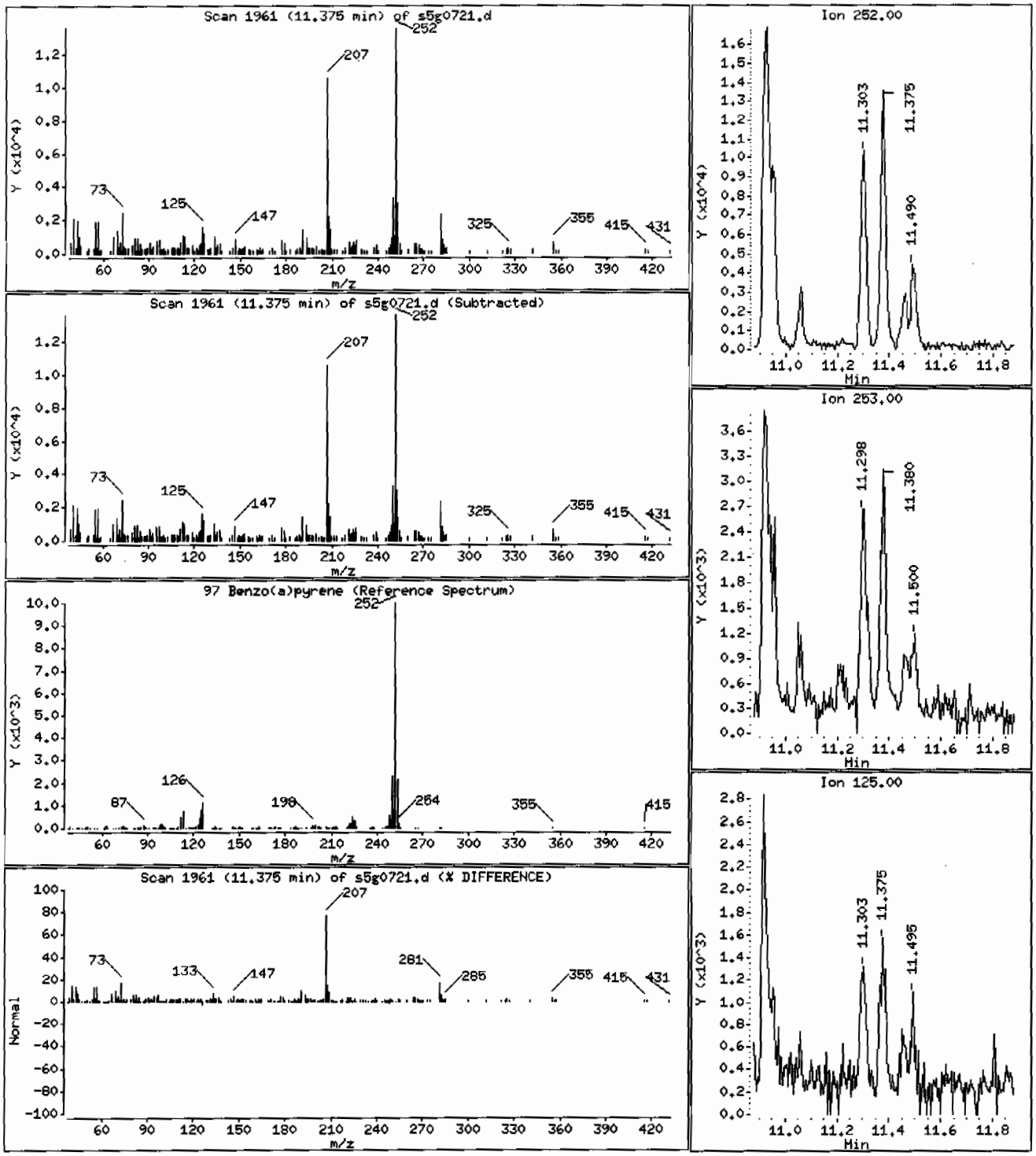

Data File: /chem/MSD5.i/s070709.b/s5g0721.d

Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951 Instrument: MSD5.i

Sample Info: 1232741007188256511|SVMF11|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene Concentration: 16.7 ug/Kg

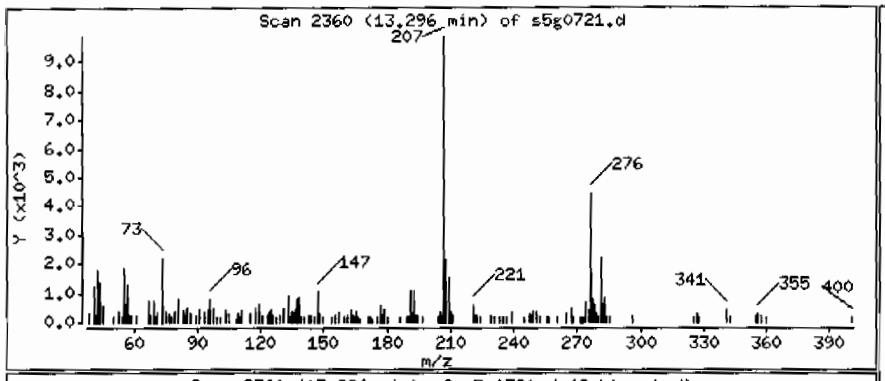

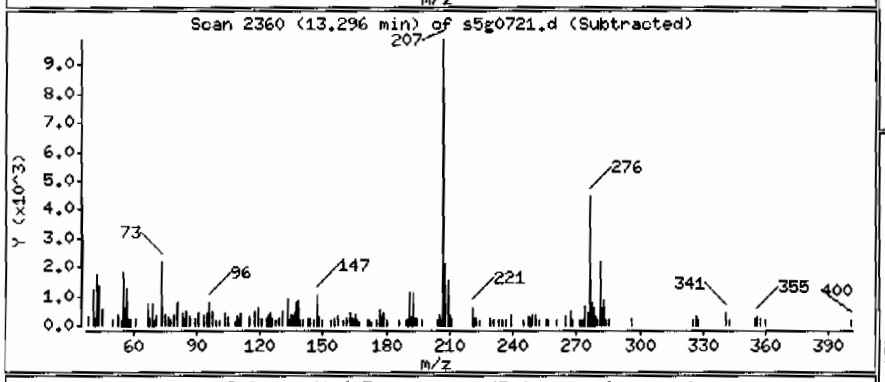

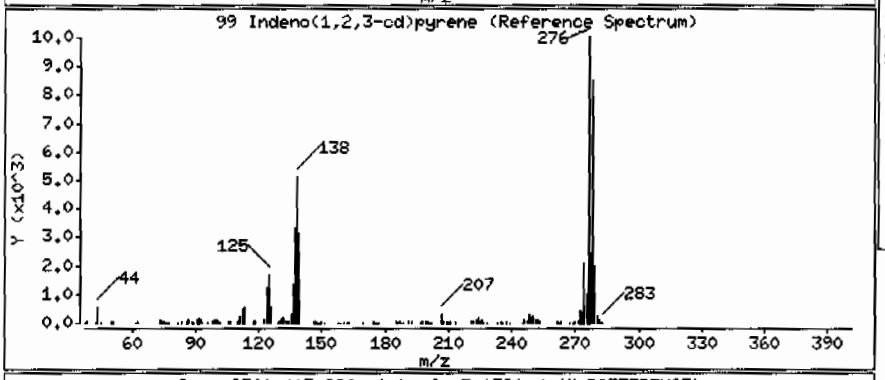

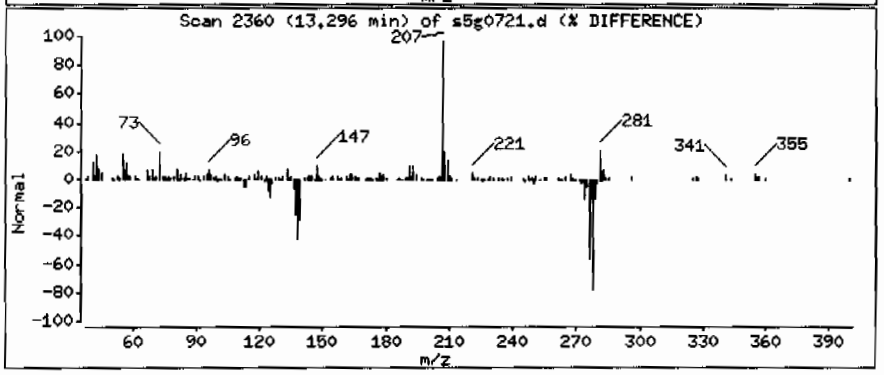

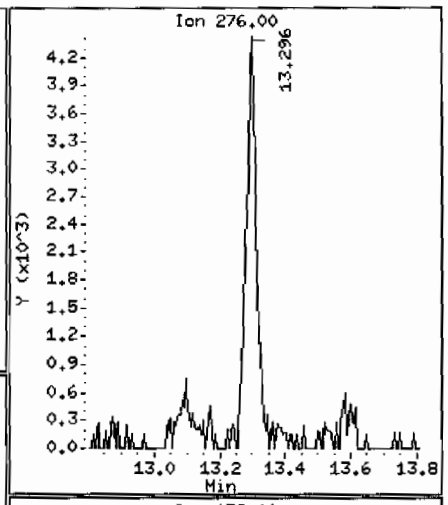

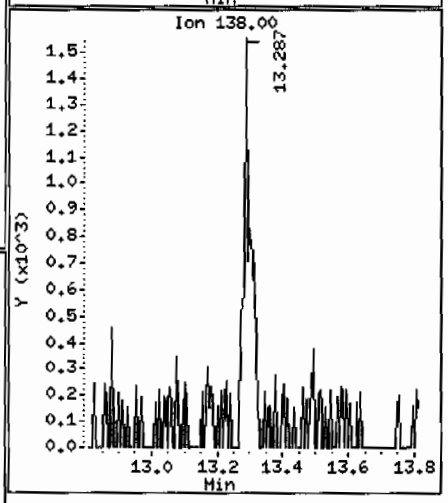

Data File: /chem/MSD5.i/s070709.b/s5g0721.d

Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951 Instrument: MSD5.i

Sample Info: 1232741007188256511SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

101 Benzo(ghi)perylene Concentration: 15.8 ug/Kg

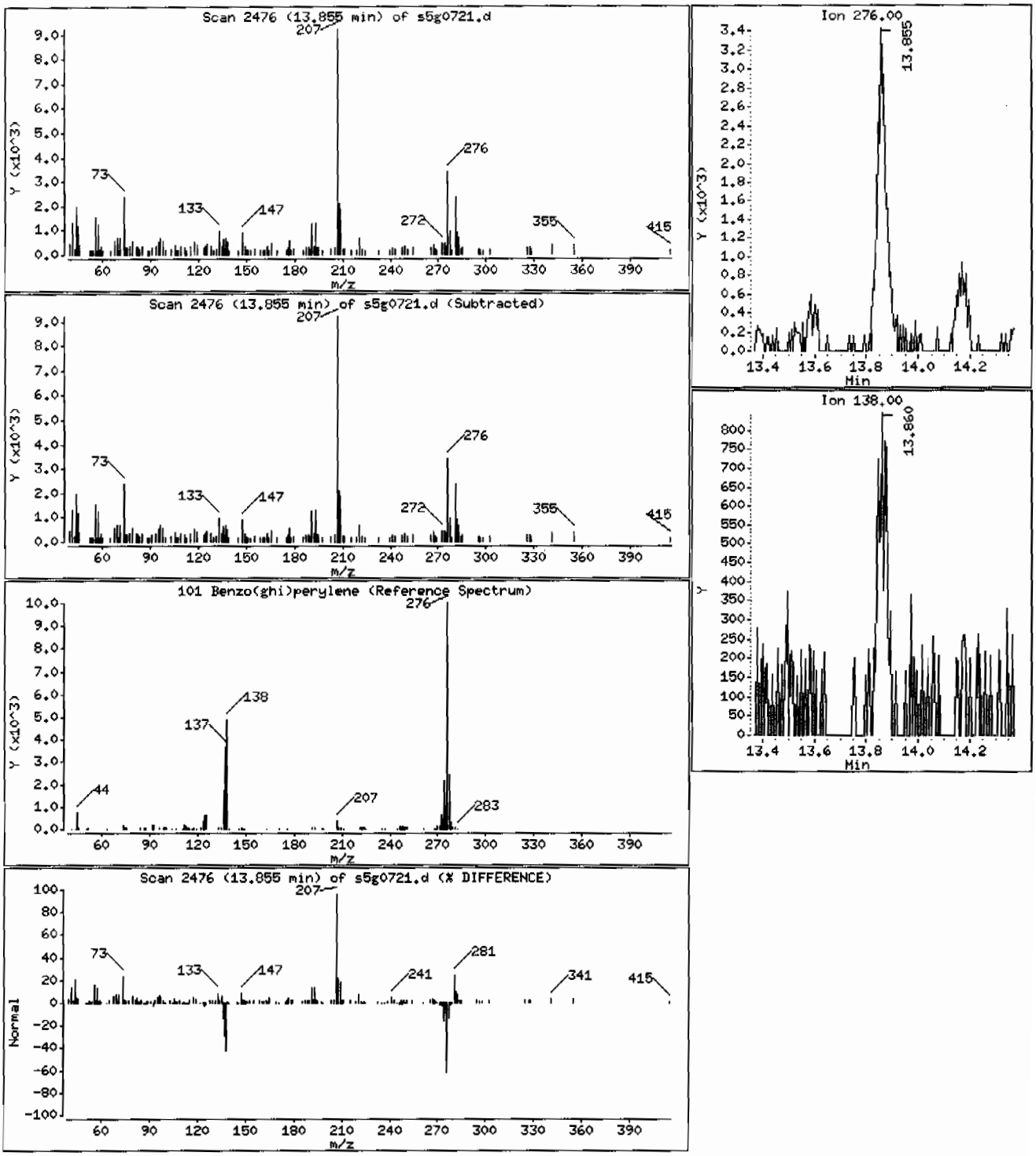

Data File: /chem/MSD5.i/s070709.b/s5g0721.d

Date : 07-JUL-2009 16:18

Client ID: CAMO-09-9951

Instrument: MSD5.i

Sample Info: 1232741007188256511ISVMF11ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7950	17	C6H12O2	116

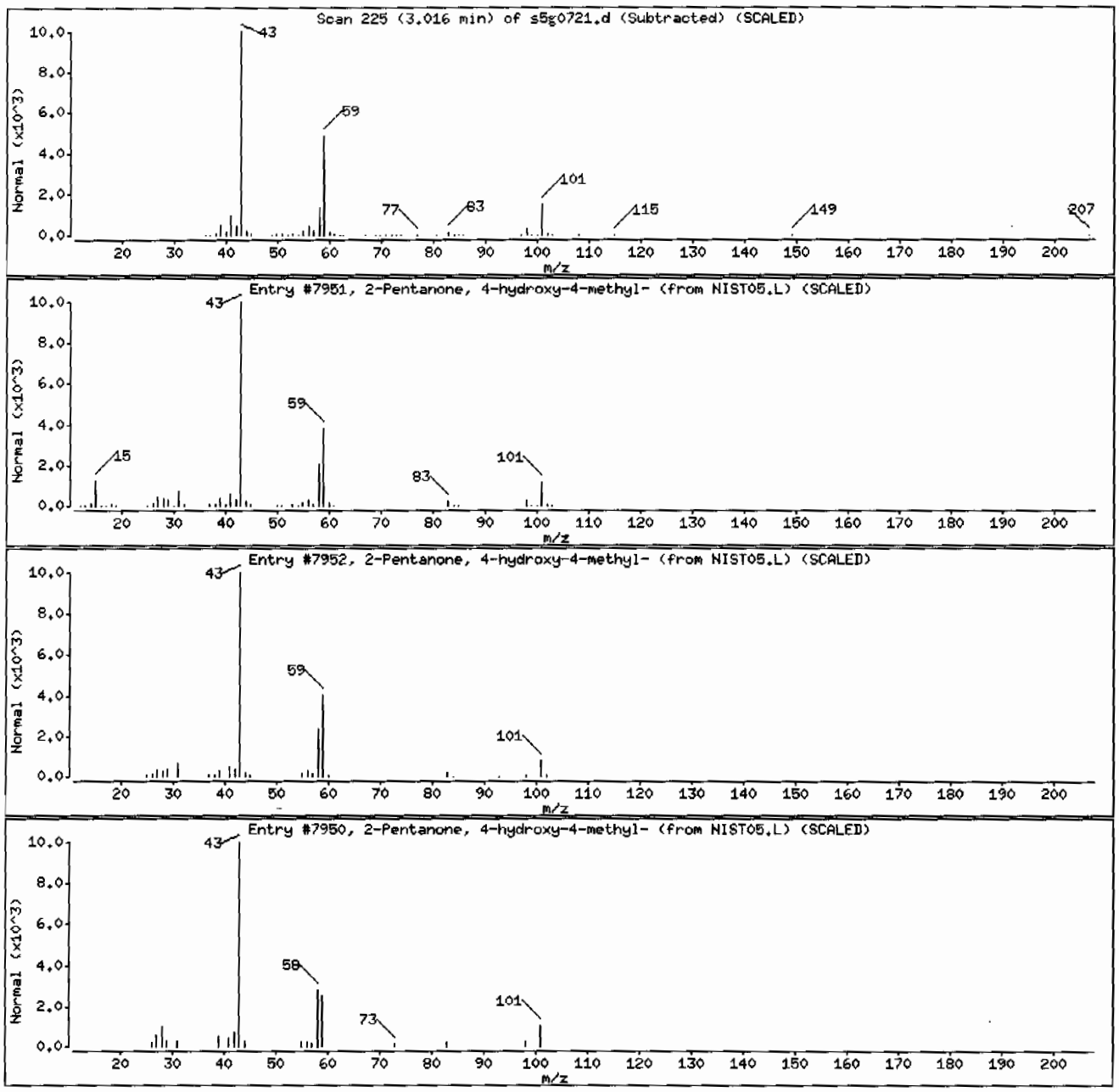

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741004	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9952	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:28	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0715.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	372	ug/kg	74.4	372
108-95-2	Phenol	U	372	ug/kg	74.4	372
95-57-8	2-Chlorophenol	U	372	ug/kg	74.4	372
106-46-7	1,4-Dichlorobenzene	U	372	ug/kg	74.4	372
621-64-7	N-Nitrosodipropylamine	U	372	ug/kg	74.4	372
59-50-7	4-Chloro-3-methylphenol	U	372	ug/kg	74.4	372
83-32-9	Acenaphthene	U	37.2	ug/kg	12.3	37.2
121-14-2	2,4-Dinitrotoluene	U	372	ug/kg	37.2	372
100-02-7	4-Nitrophenol	U	372	ug/kg	123	372
87-86-5	Pentachlorophenol	U	372	ug/kg	92.9	372
129-00-0	Pyrene	U	37.2	ug/kg	11.2	37.2
110-86-1	Pyridine	U	372	ug/kg	74.4	372
62-53-3	Aniline	U	372	ug/kg	112	372
111-44-4	bis(2-Chloroethyl) ether	U	372	ug/kg	74.4	372
541-73-1	1,3-Dichlorobenzene	U	372	ug/kg	74.4	372
100-51-6	Benzyl alcohol	U	372	ug/kg	112	372
95-50-1	1,2-Dichlorobenzene	U	372	ug/kg	74.4	372
108-60-1	bis(2-Chloroisopropyl)ether	U	372	ug/kg	74.4	372
95-48-7	o-Cresol	U	372	ug/kg	74.4	372
65794-96-9	m,p-Cresols	U	372	ug/kg	112	372
67-72-1	Hexachloroethane	U	372	ug/kg	74.4	372
98-95-3	Nitrobenzene	U	372	ug/kg	74.4	372
78-59-1	Isophorone	U	372	ug/kg	74.4	372
88-75-5	2-Nitrophenol	U	372	ug/kg	74.4	372
105-67-9	2,4-Dimethylphenol	U	372	ug/kg	130	372
111-91-1	bis(2-Chloroethoxy)methane	U	372	ug/kg	74.4	372
120-83-2	2,4-Dichlorophenol	U	372	ug/kg	74.4	372
65-85-0	Benzoic acid	U	744	ug/kg	186	744
91-20-3	Naphthalene	U	37.2	ug/kg	11.2	37.2
106-47-8	4-Chloroaniline	U	372	ug/kg	74.4	372
87-68-3	Hexachlorobutadiene	U	372	ug/kg	74.4	372
91-57-6	2-Methylnaphthalene	U	37.2	ug/kg	7.44	37.2
77-47-4	Hexachlorocyclopentadiene	U	372	ug/kg	74.4	372
88-06-2	2,4,6-Trichlorophenol	U	372	ug/kg	74.4	372
95-95-4	2,4,5-Trichlorophenol	U	372	ug/kg	74.4	372
91-58-7	2-Chloronaphthalene	U	37.2	ug/kg	12.3	37.2
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	372	ug/kg	74.4	372
99-09-2	3-Nitroaniline	U	372	ug/kg	74.4	372

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741004	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9952	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:28	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0715.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	372	ug/kg	74.4	372
606-20-2	2,6-Dinitrotoluene	U	372	ug/kg	37.2	372
208-96-8	Acenaphthylene	U	37.2	ug/kg	11.2	37.2
51-28-5	2,4-Dinitrophenol	U	744	ug/kg	141	744
132-64-9	Dibenzofuran	U	372	ug/kg	74.4	372
84-66-2	Diethylphthalate	U	372	ug/kg	74.4	372
86-73-7	Fluorene	U	37.2	ug/kg	11.2	37.2
7005-72-3	4-Chlorophenylphenylether	U	372	ug/kg	74.4	372
534-52-1	2-Methyl-4,6-dinitrophenol	U	372	ug/kg	74.4	372
100-01-6	4-Nitroaniline	U	372	ug/kg	112	372
	p-Nitroaniline					
122-39-4	Diphenylamine	U	372	ug/kg	74.4	372
122-66-7	Azobenzene	U	372	ug/kg	74.4	372
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	372	ug/kg	74.4	372
118-74-1	Hexachlorobenzene	U	372	ug/kg	74.4	372
85-01-8	Phenanthrene	U	37.2	ug/kg	11.2	37.2
120-12-7	Anthracene	U	37.2	ug/kg	7.44	37.2
84-74-2	Di-n-butylphthalate	U	372	ug/kg	74.4	372
206-44-0	Fluoranthene	U	37.2	ug/kg	11.2	37.2
85-68-7	Butylbenzylphthalate	U	372	ug/kg	74.4	372
56-55-3	Benzo(a)anthracene	U	37.2	ug/kg	11.2	37.2
91-94-1	3,3'-Dichlorobenzidine	U	372	ug/kg	112	372
218-01-9	Chrysene	U	37.2	ug/kg	11.2	37.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	372	ug/kg	74.4	372
117-84-0	Di-n-octylphthalate	U	372	ug/kg	74.4	372
205-99-2	Benzo(b)fluoranthene	U	37.2	ug/kg	11.2	37.2
207-08-9	Benzo(k)fluoranthene	U	37.2	ug/kg	11.2	37.2
50-32-8	Benzo(a)pyrene	U	37.2	ug/kg	11.2	37.2
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.2	ug/kg	11.2	37.2
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.2	37.2
191-24-2	Benzo(ghi)perylene	U	37.2	ug/kg	11.2	37.2
120-82-1	1,2,4-Trichlorobenzene	U	372	ug/kg	74.4	372

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	349	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0715.d
Lab Smp Id: 232741004 Client Smp ID: CAMO-09-9952
Inj Date : 07-JUL-2009 13:28
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741004|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	10.43560	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	361710	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1272485	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	792403	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1523222	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1514173	40.0000	
* 98 Perylene-d12	264	11.461	11.462	(1.000)	1174169	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.798)	521245	65.6316	2440
$ 5 Phenol-d5	99	3.714	3.714	(0.929)	677150	64.6652	2400
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	304942	32.3402	1200
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	700009	34.1579	1270
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	237208	73.3675	2730
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.894)	1018231	43.9407	1630

ION RATIO REPORT

SV REPORT

Data file: s5g0715.d
Report Date: 07/07/2009 13:46
Lab. ID: 232741004 SampleType: SAMPLE
Injection Date: 07-JUL-2009 13:28
Operator: RMB Instrument: MSD5.i
Sample Info: |232741004|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	41966	3.71	3.79	80-120	100	(T)
93	100	3.77	3.79	154-214	0	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	43768	4.36	4.24	80-120	100	(T)
42	31197	4.36	4.24	56-116	71	(T)
31 4-Chloroaniline			CAS#: 106-47-8			
127	201	4.91	4.90	80-120	100	( )
65	127	4.90	4.90	8- 68	64	( )
43 Dimethylphthalate			CAS#: 131-11-3			
163	171975	6.13	5.89	80-120	100	(T)
164	792165	6.13	5.89	0- 40	461	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	102677	6.13	5.94	80-120	100	(T)
63	1606	6.13	5.94	55-115	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	102677	6.13	6.25	80-120	100	(T)
89	1618	6.13	6.24	39- 99	2	(QT)
63	1606	6.13	6.24	20- 80	2	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
53 Fluorene			CAS#: 86-73-7			
166	10160	6.73	6.55	80-120	100	(T)
165	9932	6.73	6.55	61-121	98	(T)
167	3322	6.73	6.55	0- 44	33	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	1061	6.73	6.56	80-120	100	(T)
105	1623	6.73	6.56	4- 64	153	(QT)
51	1322	6.73	6.56	31- 91	125	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	15963	6.73	6.91	80-120	100	(T)
141	86449	6.73	6.91	33- 93	542	(QT)
250	32103	6.73	6.91	68-128	201	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0715.d
Lab Smp Id: 232741004 Client Smp ID: CAMO-09-9952
Inj Date : 07-JUL-2009 13:28
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741004|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	10.43560	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2304098	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.011	540873	9.38975797	349	0		0	10

Data File: /chem/MSD5.i/s070709.b/s5g0715.d

Date : 07-JUL-2009 13:28

Client ID: CAMO-09-9952

Sample Info: 1232741004|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RHB

Column diameter: 0.20

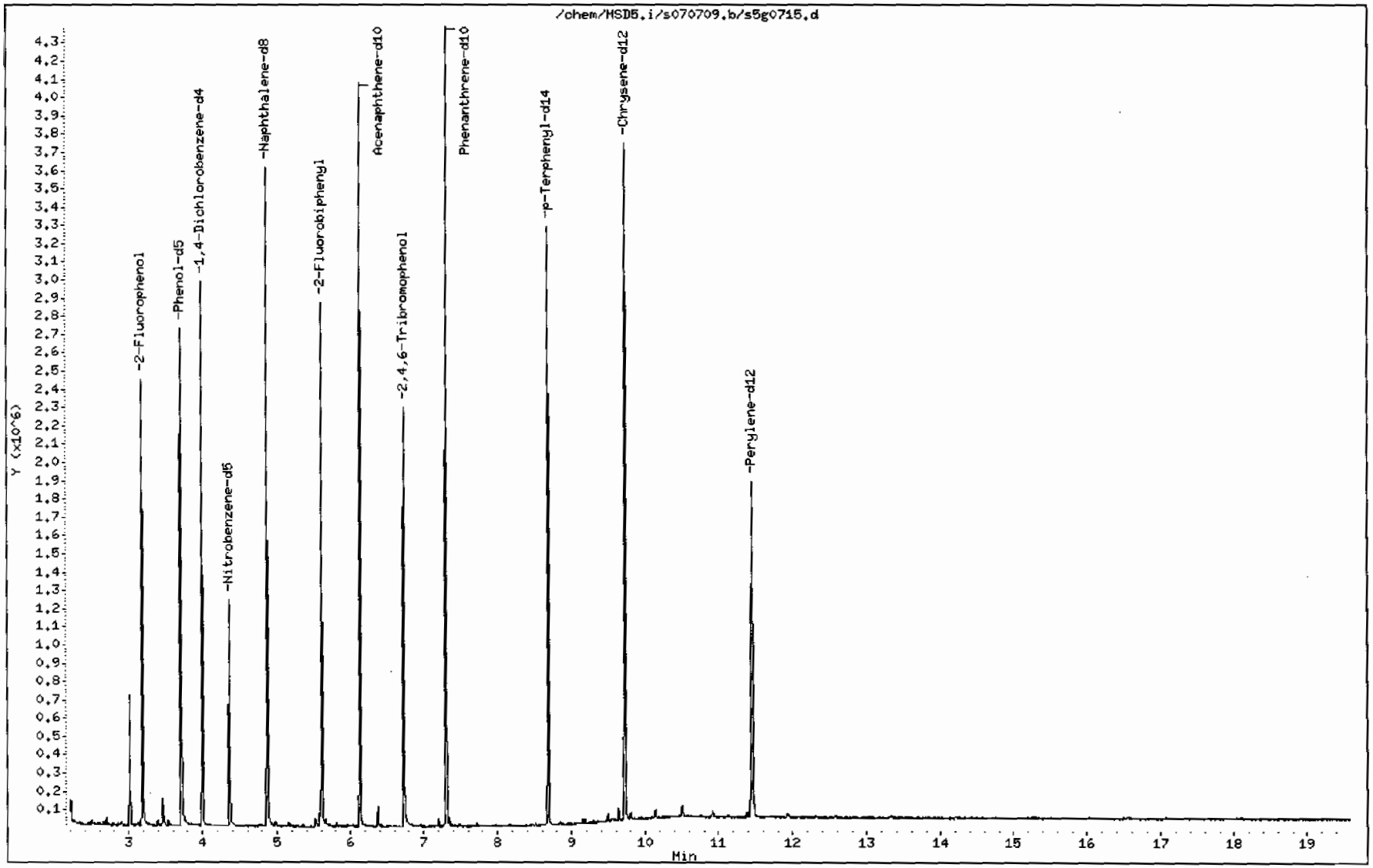

Data File: /chem/MSD5.i/s070709.b/s5g0715.d

Date : 07-JUL-2009 13:28

Client ID: CAMO-09-9952

Instrument: MSD5.i

Sample Info: 1232741004188256511|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	9	C4H7NO2	101

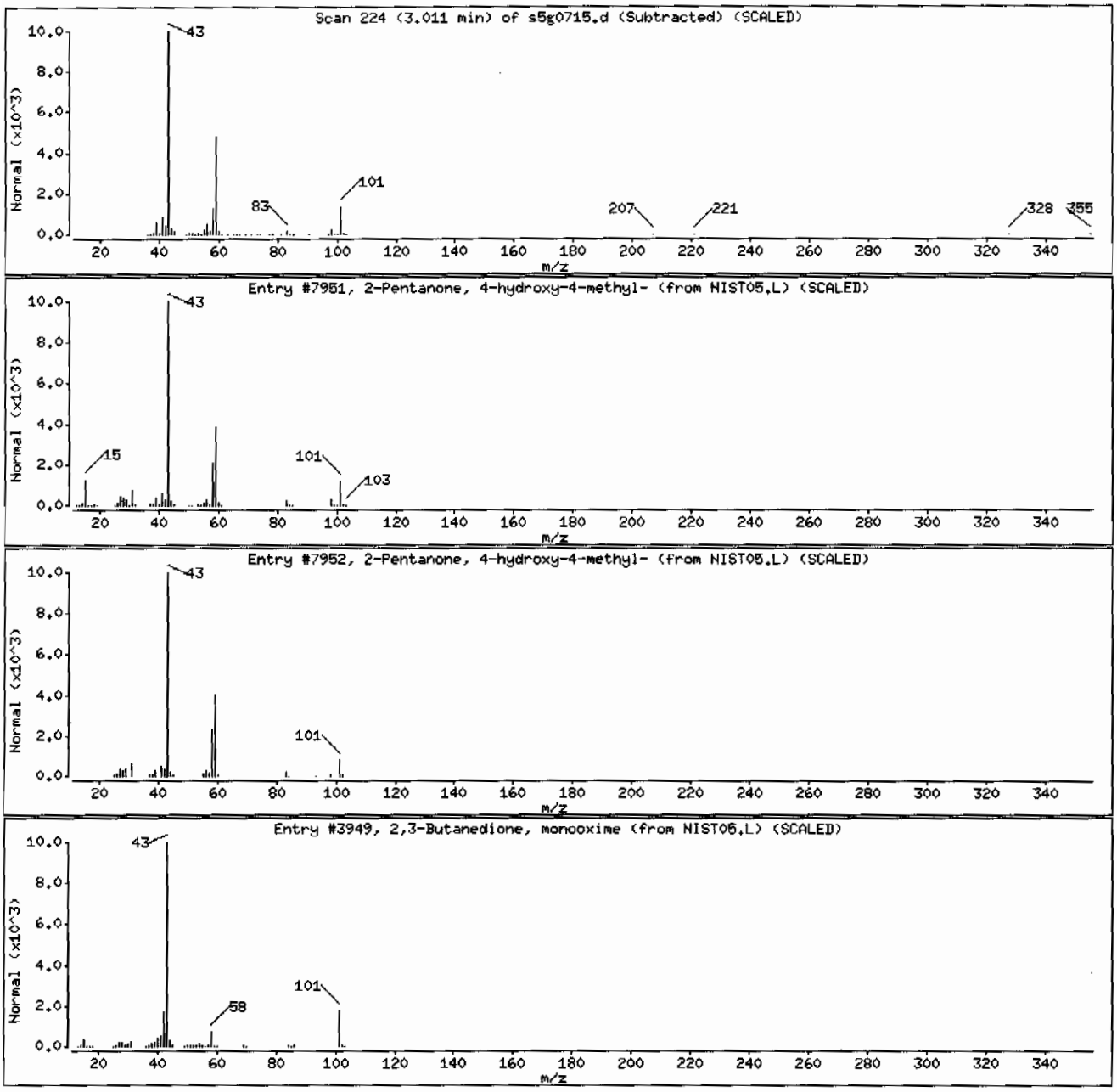

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741002	Date Received:	07/02/2009 08:40	%Moisture:	14.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9956	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 11:35	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5g0711.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	388	ug/kg	77.6	388
108-95-2	Phenol	U	388	ug/kg	77.6	388
95-57-8	2-Chlorophenol	U	388	ug/kg	77.6	388
106-46-7	1,4-Dichlorobenzene	U	388	ug/kg	77.6	388
621-64-7	N-Nitrosodipropylamine	U	388	ug/kg	77.6	388
59-50-7	4-Chloro-3-methylphenol	U	388	ug/kg	77.6	388
83-32-9	Acenaphthene	U	38.8	ug/kg	12.8	38.8
121-14-2	2,4-Dinitrotoluene	U	388	ug/kg	38.8	388
100-02-7	4-Nitrophenol	U	388	ug/kg	128	388
87-86-5	Pentachlorophenol	U	388	ug/kg	96.9	388
129-00-0	Pyrene	J	24.6	ug/kg	11.6	38.8
110-86-1	Pyridine	U	388	ug/kg	77.6	388
62-53-3	Aniline	U	388	ug/kg	116	388
111-44-4	bis(2-Chloroethyl) ether	U	388	ug/kg	77.6	388
541-73-1	1,3-Dichlorobenzene	U	388	ug/kg	77.6	388
100-51-6	Benzyl alcohol	U	388	ug/kg	116	388
95-50-1	1,2-Dichlorobenzene	U	388	ug/kg	77.6	388
108-60-1	bis(2-Chloroisopropyl)ether	U	388	ug/kg	77.6	388
95-48-7	o-Cresol	U	388	ug/kg	77.6	388
65794-96-9	m,p-Cresols	U	388	ug/kg	116	388
67-72-1	Hexachloroethane	U	388	ug/kg	77.6	388
98-95-3	Nitrobenzene	U	388	ug/kg	77.6	388
78-59-1	Isophorone	U	388	ug/kg	77.6	388
88-75-5	2-Nitrophenol	U	388	ug/kg	77.6	388
105-67-9	2,4-Dimethylphenol	U	388	ug/kg	136	388
111-91-1	bis(2-Chloroethoxy)methane	U	388	ug/kg	77.6	388
120-83-2	2,4-Dichlorophenol	U	388	ug/kg	77.6	388
65-85-0	Benzoic acid	U	776	ug/kg	194	776
91-20-3	Naphthalene	U	38.8	ug/kg	11.6	38.8
106-47-8	4-Chloroaniline	U	388	ug/kg	77.6	388
87-68-3	Hexachlorobutadiene	U	388	ug/kg	77.6	388
91-57-6	2-Methylnaphthalene	U	38.8	ug/kg	7.76	38.8
77-47-4	Hexachlorocyclopentadiene	U	388	ug/kg	77.6	388
88-06-2	2,4,6-Trichlorophenol	U	388	ug/kg	77.6	388
95-95-4	2,4,5-Trichlorophenol	U	388	ug/kg	77.6	388
91-58-7	2-Chloronaphthalene	U	38.8	ug/kg	12.8	38.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	388	ug/kg	77.6	388
99-09-2	3-Nitroaniline	U	388	ug/kg	77.6	388

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9956	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 11:35	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0711.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	388	ug/kg	77.6	388
606-20-2	2,6-Dinitrotoluene	U	388	ug/kg	38.8	388
208-96-8	Acenaphthylene	U	38.8	ug/kg	11.6	38.8
51-28-5	2,4-Dinitrophenol	U	776	ug/kg	147	776
132-64-9	Dibenzofuran	U	388	ug/kg	77.6	388
84-66-2	Diethylphthalate	U	388	ug/kg	77.6	388
86-73-7	Fluorene	U	38.8	ug/kg	11.6	38.8
7005-72-3	4-Chlorophenylphenylether	U	388	ug/kg	77.6	388
534-52-1	2-Methyl-4,6-dinitrophenol	U	388	ug/kg	77.6	388
100-01-6	4-Nitroaniline	U	388	ug/kg	116	388
	p-Nitroaniline					
122-39-4	Diphenylamine	U	388	ug/kg	77.6	388
122-66-7	Azobenzene	U	388	ug/kg	77.6	388
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	388	ug/kg	77.6	388
118-74-1	Hexachlorobenzene	U	388	ug/kg	77.6	388
85-01-8	Phenanthrene	J	14.1	ug/kg	11.6	38.8
120-12-7	Anthracene	U	38.8	ug/kg	7.76	38.8
84-74-2	Di-n-butylphthalate	U	388	ug/kg	77.6	388
206-44-0	Fluoranthene	J	25.6	ug/kg	11.6	38.8
85-68-7	Butylbenzylphthalate	U	388	ug/kg	77.6	388
56-55-3	Benzo(a)anthracene	U	38.8	ug/kg	11.6	38.8
91-94-1	3,3'-Dichlorobenzidine	U	388	ug/kg	116	388
218-01-9	Chrysene	U	38.8	ug/kg	11.6	38.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	388	ug/kg	77.6	388
117-84-0	Di-n-octylphthalate	U	388	ug/kg	77.6	388
205-99-2	Benzo(b)fluoranthene	J	13.2	ug/kg	11.6	38.8
207-08-9	Benzo(k)fluoranthene	U	38.8	ug/kg	11.6	38.8
50-32-8	Benzo(a)pyrene	U	38.8	ug/kg	11.6	38.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.8	ug/kg	11.6	38.8
53-70-3	Dibenzo(a,h)anthracene	U	38.8	ug/kg	11.6	38.8
191-24-2	Benzo(ghi)perylene	U	38.8	ug/kg	11.6	38.8
120-82-1	1,2,4-Trichlorobenzene	U	388	ug/kg	77.6	388

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.01	8.98	ug/kg		JA
	Unknown	13.48	4.56	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0711.d
Lab Smp Id: 232741002 Client Smp ID: CAMO-09-9956
Inj Date : 07-JUL-2009 11:35
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741002|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	14.06760	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	333340	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1203121	40.0000	
* 46 Acenaphthene-d10	164	6.126	6.131	(1.000)	757390	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1477062	40.0000	
* 91 Chrysene-d12	240	9.718	9.723	(1.000)	1511259	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1281756	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.798)	448313	61.2527	2380
$ 5 Phenol-d5	99	3.714	3.714	(0.929)	594631	61.6178	2390
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	258096	28.9501	1120
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.916)	629429	32.1337	1250
$ 60 2,4,6-Tribromophenol	329	6.728	6.733	(1.098)	225528	72.9796	2830
$ 81 p-Terphenyl-d14	244	8.683	8.688	(0.893)	935818	40.4622	1570

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.587	8.592	(0.884)	20906	0.63412	24.6(a)
68 Phenanthrene	178	7.325	7.330	(1.003)	10041	0.36288	14.1(a)
76 Fluoranthene	202	8.370	8.375	(1.146)	20786	0.65944	25.6(a)
95 Benzo(b)fluoranthene	252	10.912	10.922	(0.952)	9649	0.34086	13.2(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0711.d
Report Date: 07/07/2009 11:53
Lab. ID: 232741002 SampleType: SAMPLE
Injection Date: 07-JUL-2009 11:35
Operator: RMB Instrument: MSD5.i
Sample Info: |232741002|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	37734	3.71	3.79	80-120	100	(T)
93	116	3.74	3.79	154-214	0	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	38451	4.36	4.24	80-120	100	(T)
42	25449	4.36	4.24	56-116	66	(T)
27 Benzoic acid		CAS#: 65-85-0				
105	199	4.77	4.64	80-120	100	(T)
122	588	4.87	4.64	52-112	295	(QT)
77	541	4.77	4.64	53-113	272	(QT)
31 4-Chloroaniline		CAS#: 106-47-8				
127	150	4.89	4.90	80-120	100	( )
65	113	4.90	4.90	8- 68	76	(Q)
41 m-Nitroaniline		CAS#: 99-09-2				
138	138	6.12	6.08	80-120	100	( )
92	4409	6.13	6.08	79-139	3176	(Q)
108	15345	6.13	6.08	0- 42	11052	(Q)
43 Dimethylphthalate		CAS#: 131-11-3				
163	163713	6.13	5.89	80-120	100	(T)
164	757390	6.13	5.89	0- 40	463	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	100688	6.13	5.94	80-120	100	(T)
63	1487	6.13	5.94	55-115	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	100688	6.13	6.25	80-120	100	(T)
89	1780	6.13	6.24	39- 99	2	(QT)
63	1487	6.13	6.24	20- 80	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	8658	6.73	6.55	80-120	100	(T)
165	9289	6.73	6.55	61-121	107	(T)
167	2864	6.73	6.55	0- 44	33	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	910	6.73	6.56	80-120	100	(T)
105	1595	6.73	6.56	4- 64	175	(QT)
51	1612	6.73	6.56	31- 91	177	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	15732	6.73	6.91	80-120	100	(T)
141	79496	6.73	6.91	33- 93	505	(QT)
250	31952	6.73	6.91	68-128	203	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	10041	7.33	7.33	80-120	100	( )
179	1684	7.33	7.33	0- 46	17	( )
176	1864	7.33	7.33	0- 49	19	( )
69 Anthracene			CAS#: 120-12-7			
178	10041	7.33	7.37	80-120	100	( )
179	1684	7.33	7.37	0- 46	17	( )
176	1864	7.33	7.37	0- 48	19	( )
76 Fluoranthene			CAS#: 206-44-0			
202	20786	8.37	8.38	80-120	100	( )
203	4115	8.37	8.38	0- 48	20	( )
101	1743	8.37	8.37	0- 39	8	( )
79 Pyrene			CAS#: 129-00-0			
202	20906	8.59	8.59	80-120	100	( )
200	3913	8.59	8.59	0- 51	19	( )
101	2238	8.59	8.59	0- 40	11	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	14604	9.71	9.71	80-120	100	( )
226	3618	9.71	9.71	0- 56	25	( )
229	2049	9.71	9.71	0- 50	14	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
92 Chrysene			CAS#: 218-01-9			
228	14604	9.71	9.75	80-120	100	( )
229	2049	9.71	9.75	0- 50	14	( )
226	3618	9.71	9.75	0- 59	25	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	9649	10.91	10.92	80-120	100	( )
253	3182	10.92	10.92	0- 51	33	( )
125	1229	10.91	10.92	0- 37	13	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	9649	10.91	10.96	80-120	100	( )
253	3182	10.92	10.96	0- 54	33	( )
125	1229	10.91	10.96	0- 38	13	( )
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	8394	11.37	11.38	80-120	100	( )
253	971	11.37	11.38	0- 52	12	( )
125	646	11.37	11.38	0- 30	8	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0711.d
Lab Smp Id: 232741002 Client Smp ID: CAMO-09-9956
Inj Date : 07-JUL-2009 11:35
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741002|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	14.06760	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2148596	40.000
* 98 Perylene-d12	11.457	3157841	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.010	482403	8.98080085	348	0		0	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
13.484	360290	4.56374774	177	0		0	98

Data File: /chem/MSD5.i/s070709.b/s5g0711.d

Date : 07-JUL-2009 11:35

Client ID: CAMO-09-9956

Sample Info: |2327410021882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

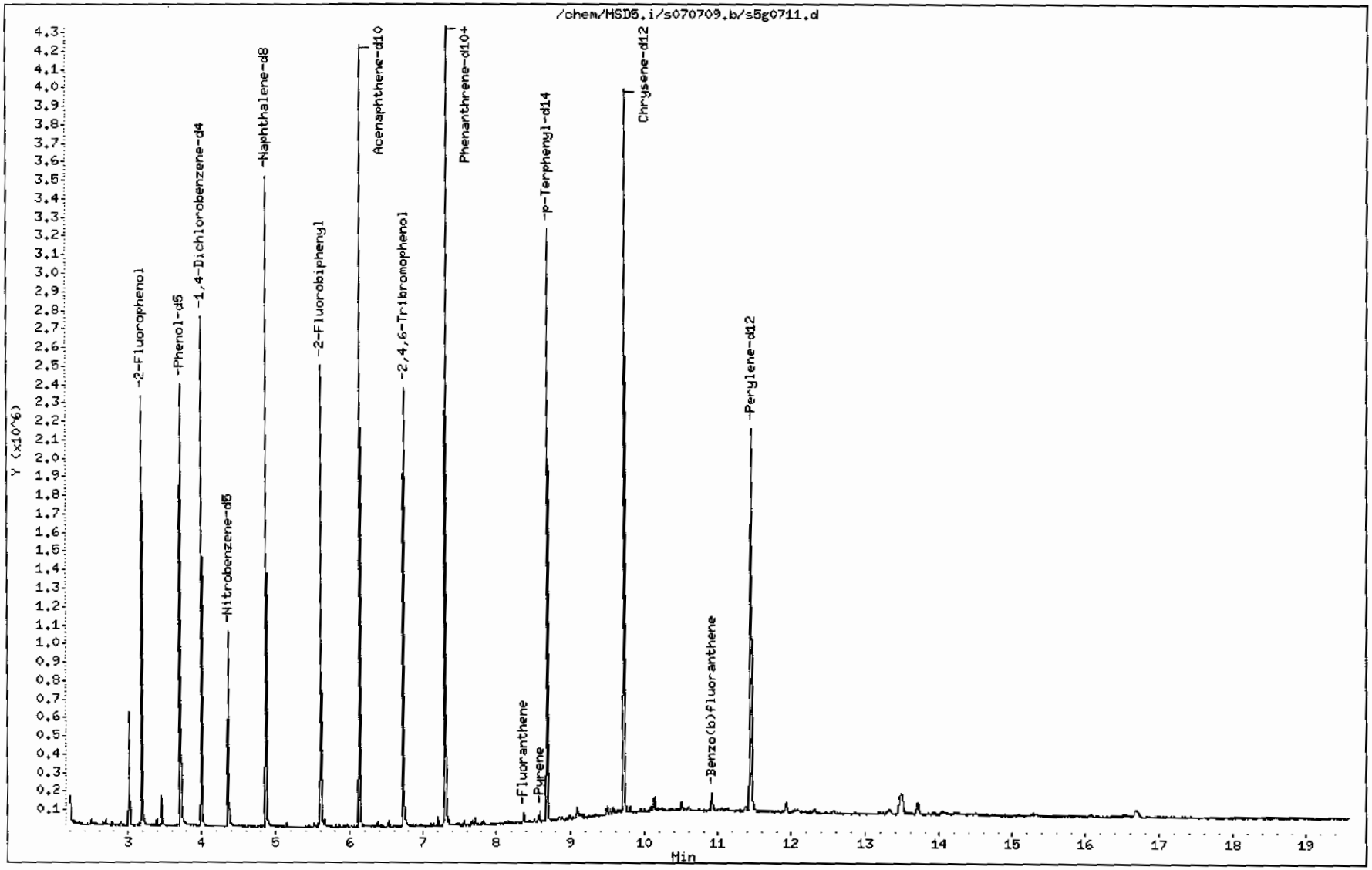

Data File: /chem/MSD5.i/s070709.b/s5g0711.d

Date : 07-JUL-2009 11:35

Client ID: CAMO-09-9956 Instrument: MSD5.i

Sample Info: 1232741002|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

79 Pyrene Concentration: 24.6 ug/Kg

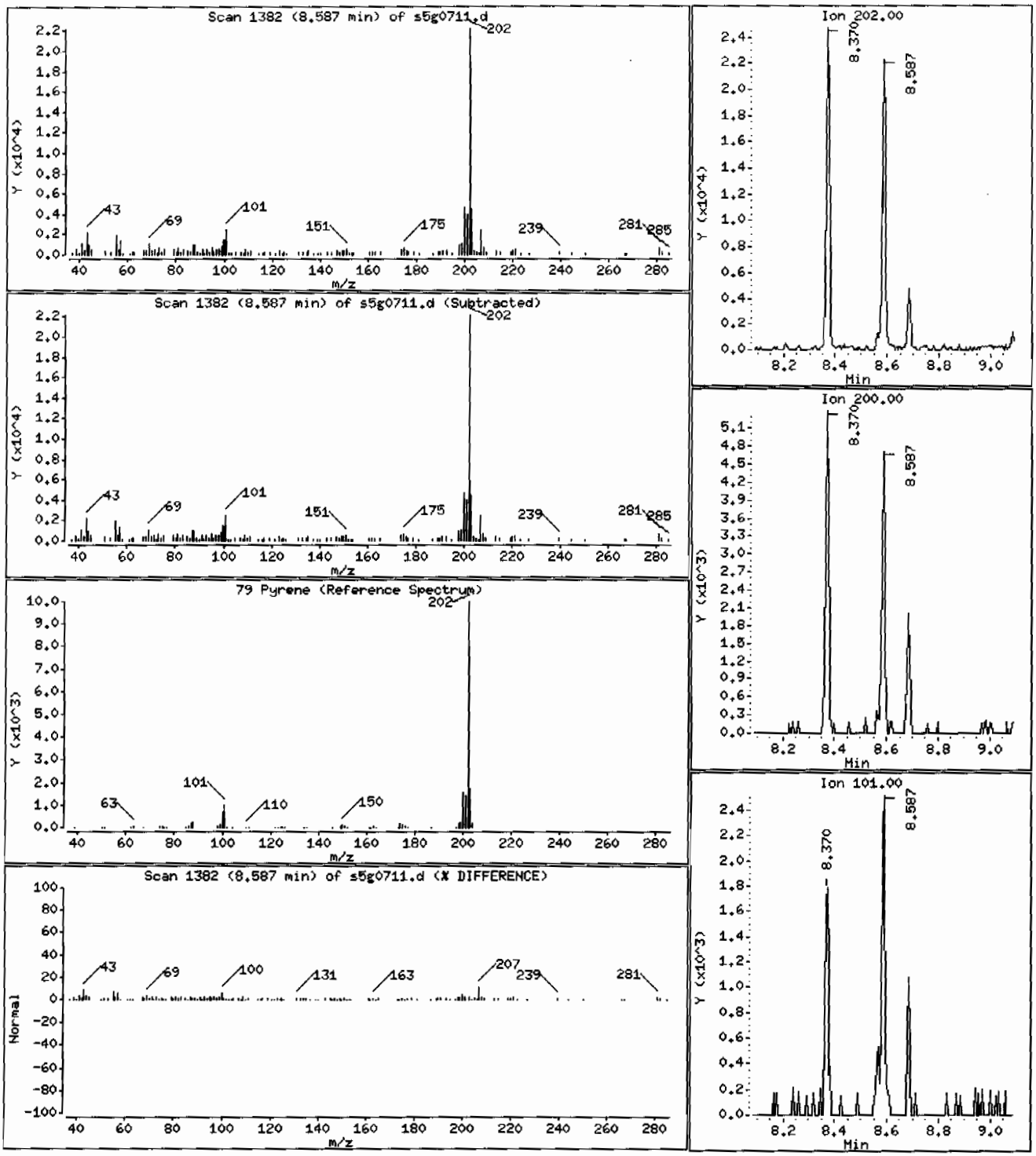

Data File: /chem/MSD5.i/s070709.b/s5g0711.d

Date : 07-JUL-2009 11:35

Client ID: CAMO-09-9956

Instrument: MSD5.i

Sample Info: |2327410021882565111SVMF111LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 14.1 ug/Kg

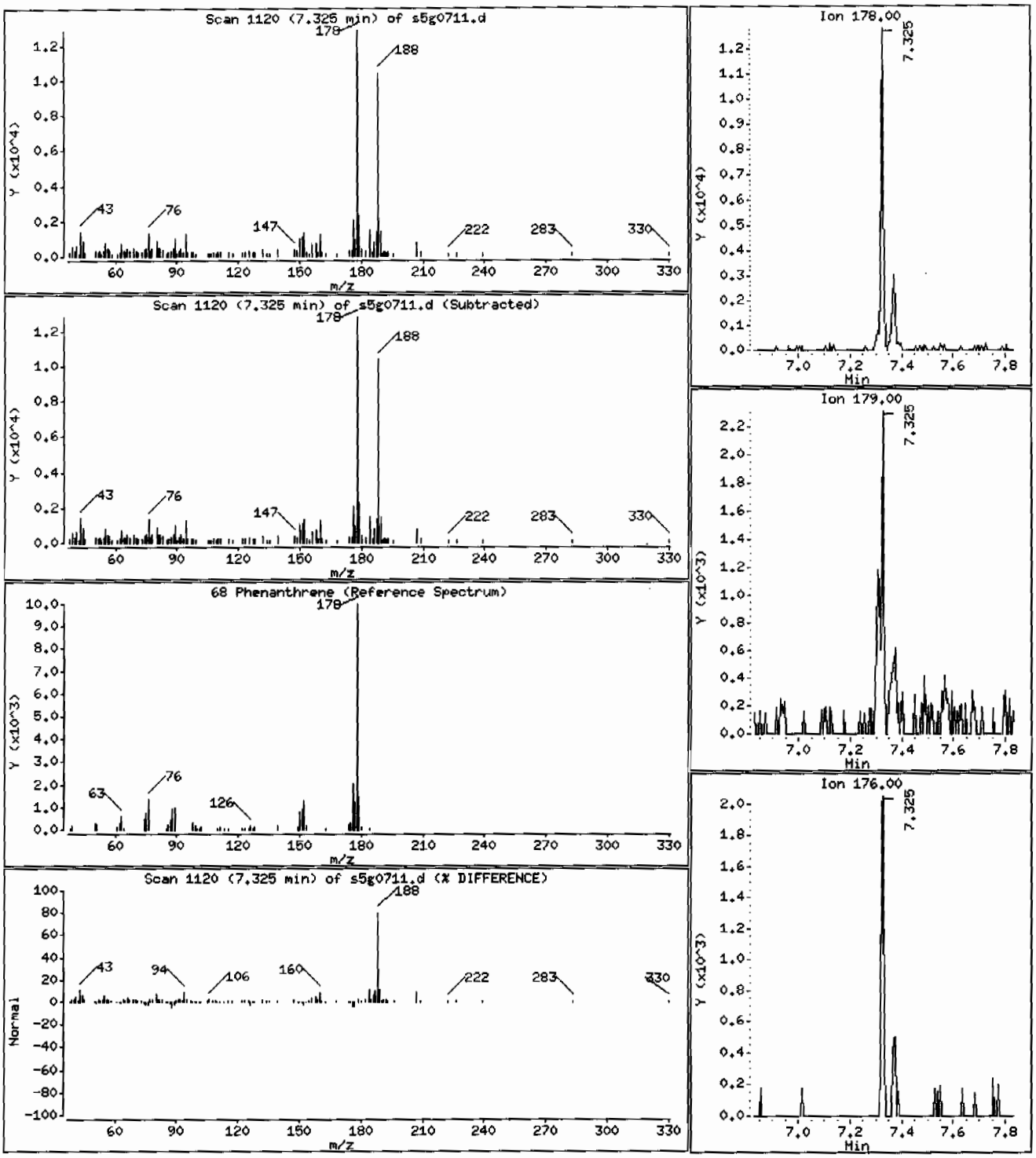

Data File: /chem/MSD5.i/s070709.b/s5g0711.d

Date : 07-JUL-2009 11:35

Client ID: CAMO-09-9956

Instrument: MSD5.i

Sample Info: 1232741002188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 25.6 ug/Kg

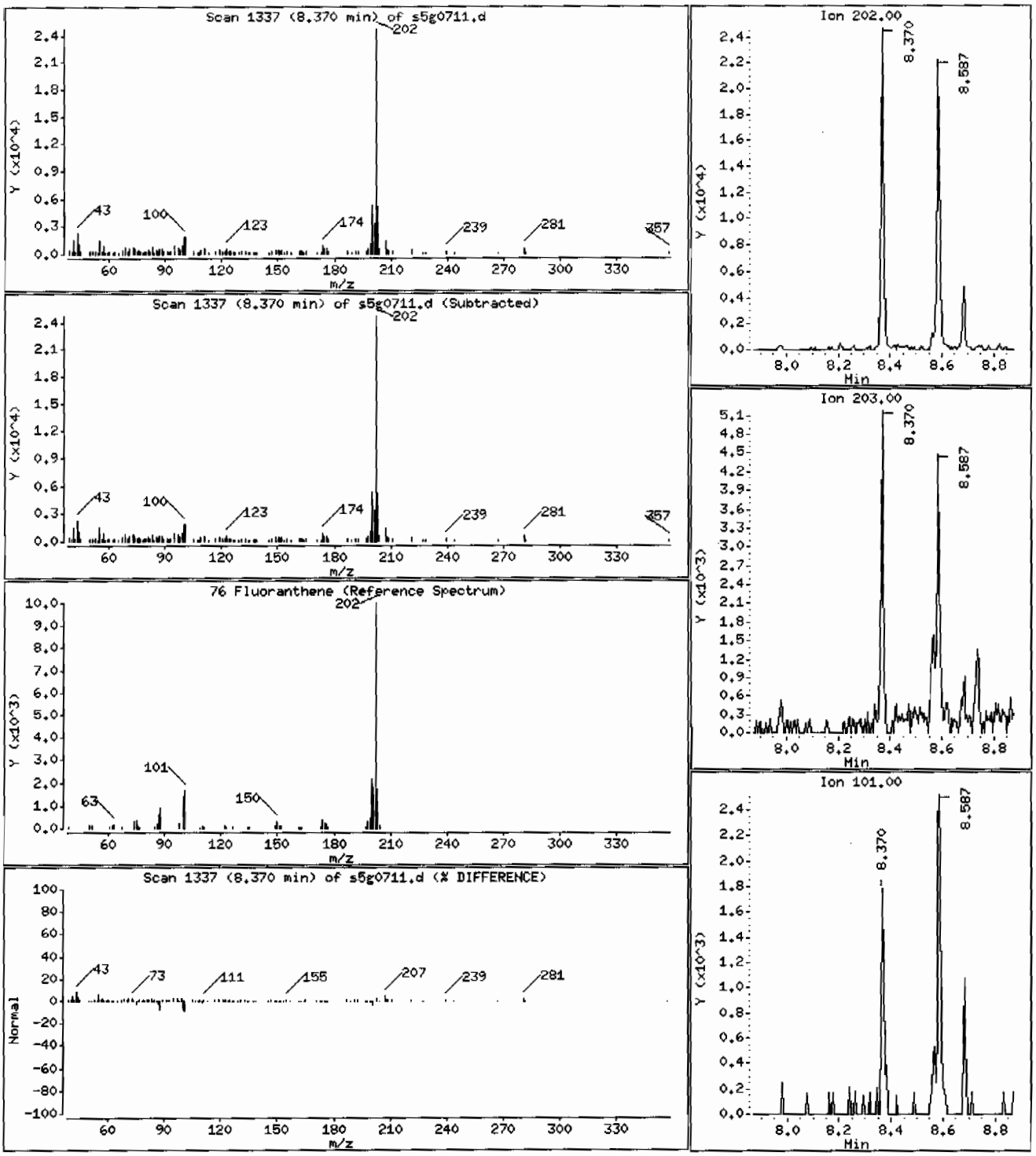

Data File: /chem/MSD5.i/s070709.b/s5g0711.d

Date : 07-JUL-2009 11:35

Client ID: CAMO-09-9956

Instrument: MSD5.i

Sample Info: |2327410021882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 13.2 ug/Kg

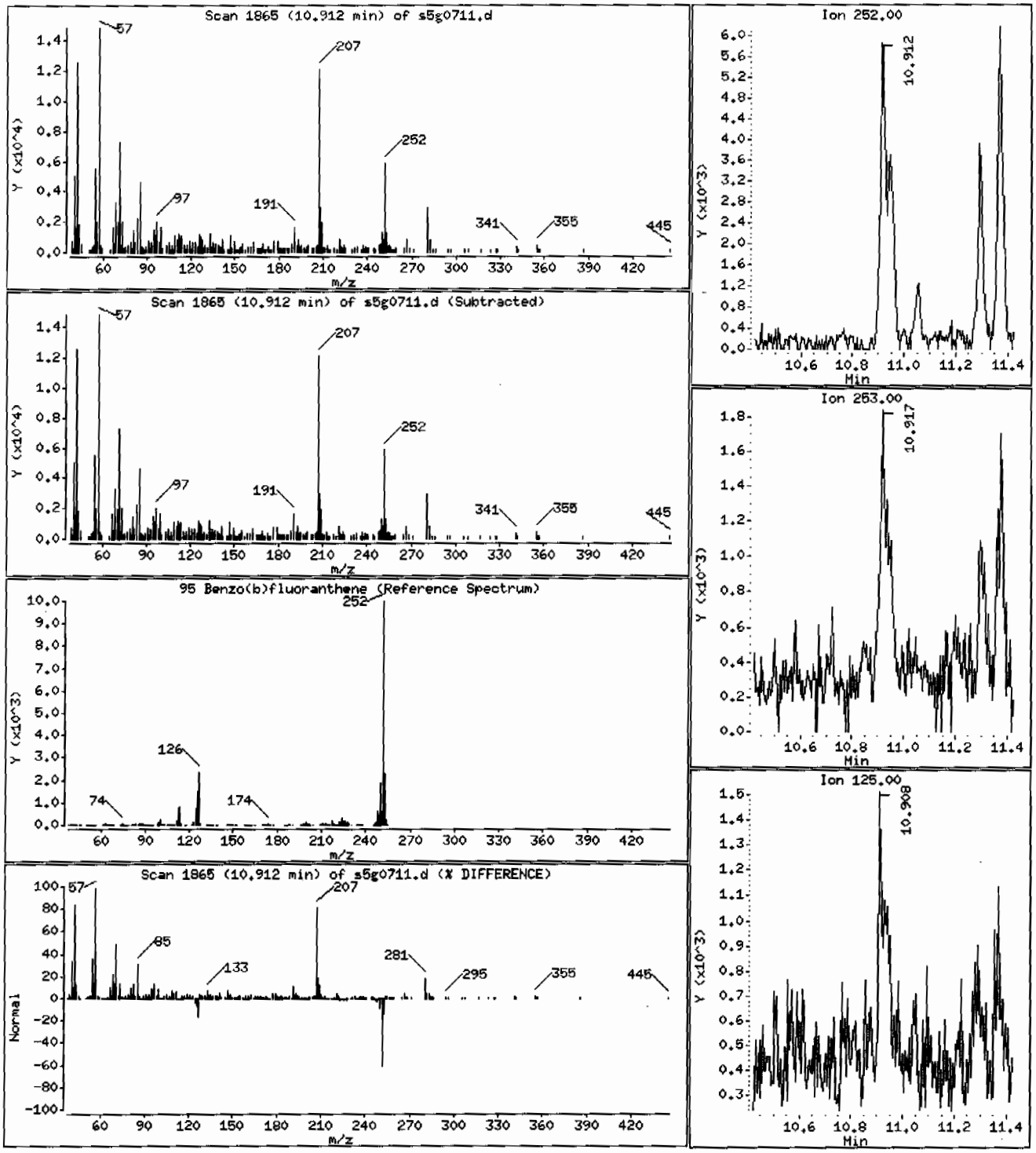

Data File: /chem/MSD5.i/s070709.b/s5g0711.d

Date : 07-JUL-2009 11:35

Client ID: CAMO-09-9956

Instrument: MSD5.i

Sample Info: |2327410021882565111SVMF11LANL

Volume Injected (uL): 0.5

Operator: RHB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116

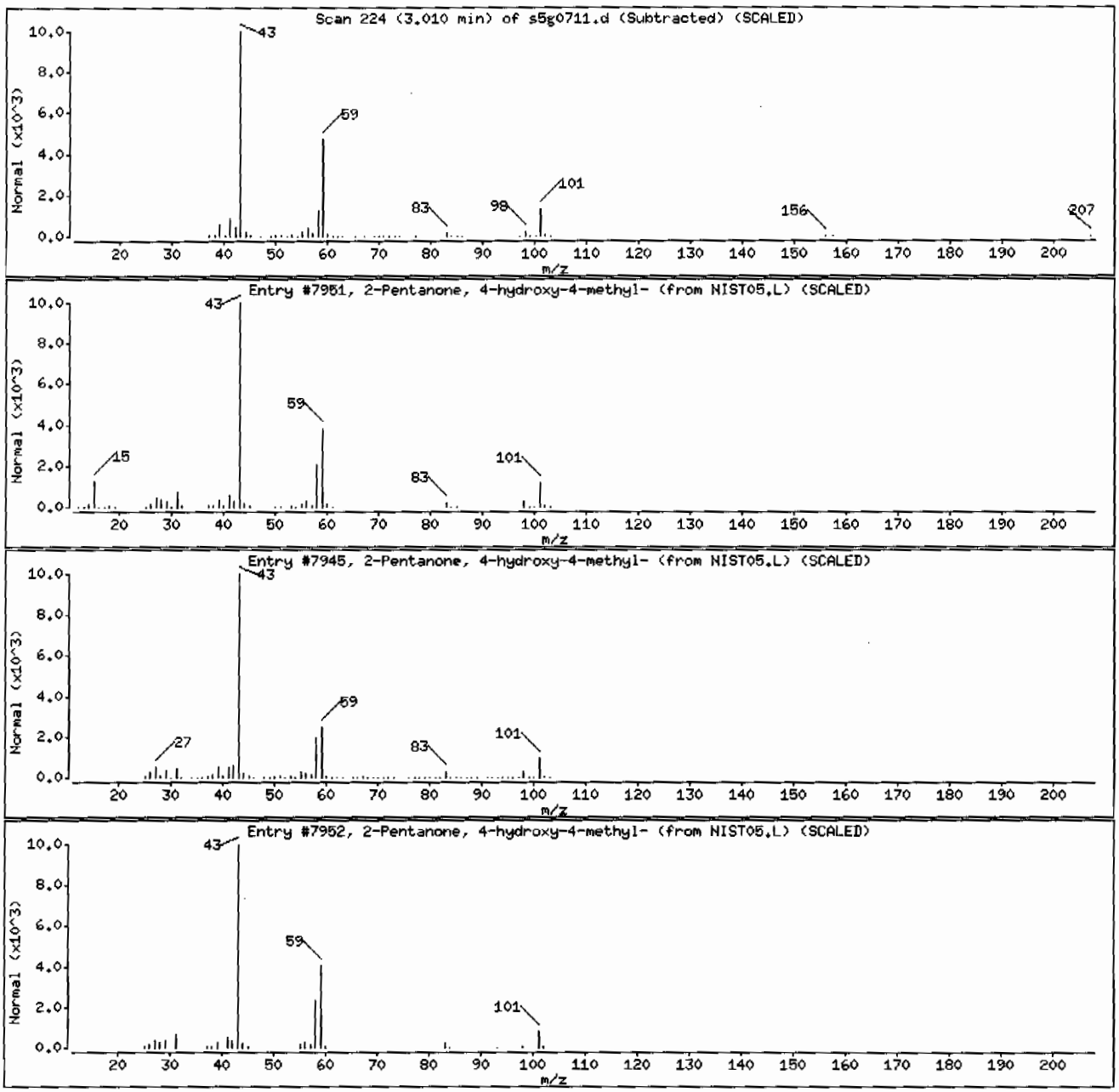

Data File: /chem/MSD5.i/s070709.b/s5g0711.d

Date : 07-JUL-2009 11:35

Client ID: CAMO-09-9956 Instrument: MSD5.i

Sample Info: 1232741002188256511|SVMF1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclotrisiloxane, hexamethyl-	541-05-9	NIST05.L	73123	46	C6H18O3Si3	222
2-Ethylacridine	55751-83-2	NIST05.L	62222	46	C15H13N	207
Cyclotrisiloxane, hexamethyl-	541-05-9	NIST05.L	73121	46	C6H18O3Si3	222

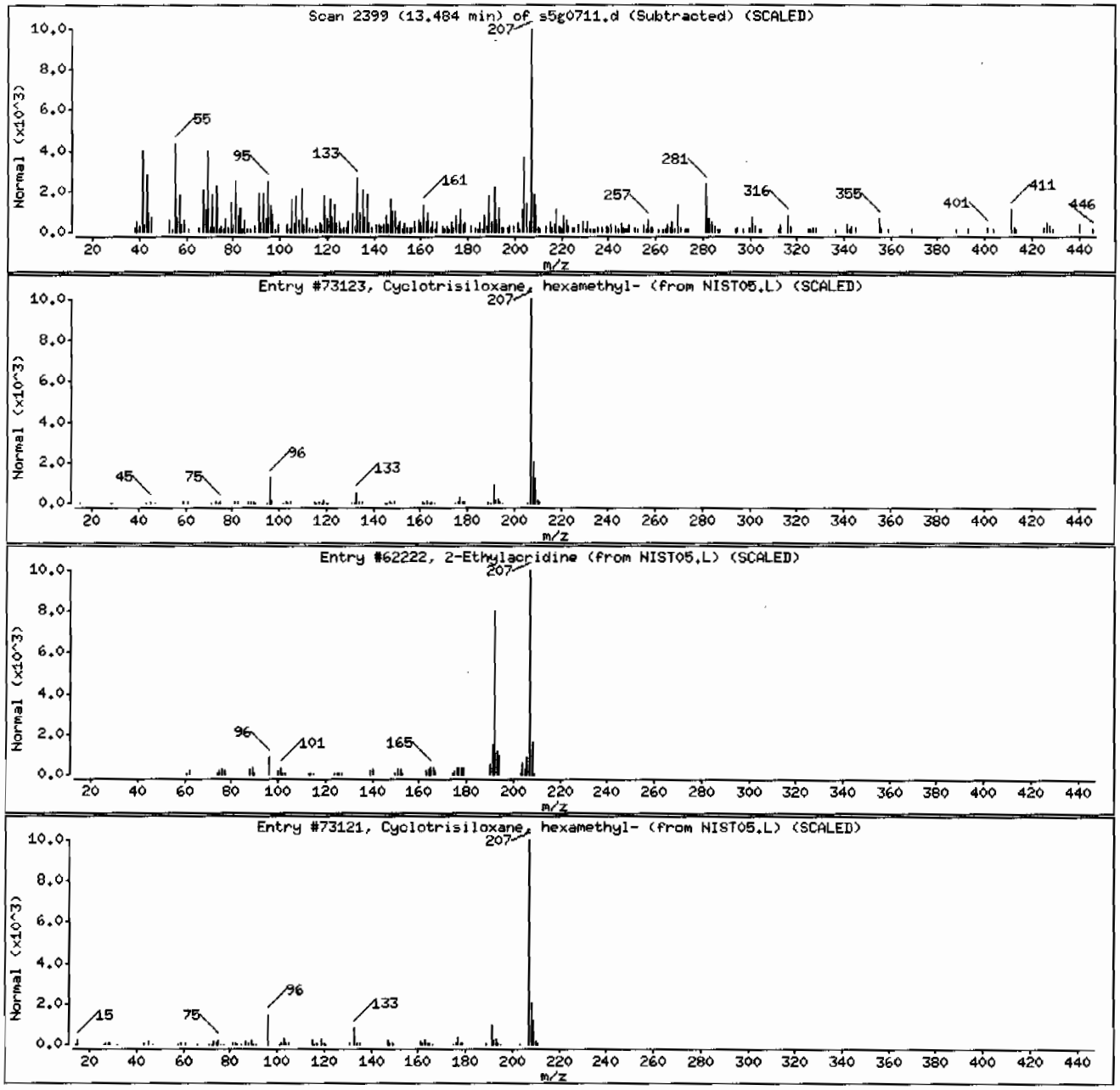

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741006	Date Received:	07/02/2009 08:40	%Moisture:	10.1
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9957	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 14:24	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0717.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	371	ug/kg	74.1	371
108-95-2	Phenol	U	371	ug/kg	74.1	371
95-57-8	2-Chlorophenol	U	371	ug/kg	74.1	371
106-46-7	1,4-Dichlorobenzene	U	371	ug/kg	74.1	371
621-64-7	N-Nitrosodipropylamine	U	371	ug/kg	74.1	371
59-50-7	4-Chloro-3-methylphenol	U	371	ug/kg	74.1	371
83-32-9	Acenaphthene	U	37.1	ug/kg	12.2	37.1
121-14-2	2,4-Dinitrotoluene	U	371	ug/kg	37.1	371
100-02-7	4-Nitrophenol	U	371	ug/kg	122	371
87-86-5	Pentachlorophenol	U	371	ug/kg	92.6	371
129-00-0	Pyrene	U	37.1	ug/kg	11.1	37.1
110-86-1	Pyridine	U	371	ug/kg	74.1	371
62-53-3	Aniline	U	371	ug/kg	111	371
111-44-4	bis(2-Chloroethyl) ether	U	371	ug/kg	74.1	371
541-73-1	1,3-Dichlorobenzene	U	371	ug/kg	74.1	371
100-51-6	Benzyl alcohol	U	371	ug/kg	111	371
95-50-1	1,2-Dichlorobenzene	U	371	ug/kg	74.1	371
108-60-1	bis(2-Chloroisopropyl)ether	U	371	ug/kg	74.1	371
95-48-7	o-Cresol	U	371	ug/kg	74.1	371
65794-96-9	m,p-Cresols	U	371	ug/kg	111	371
67-72-1	Hexachloroethane	U	371	ug/kg	74.1	371
98-95-3	Nitrobenzene	U	371	ug/kg	74.1	371
78-59-1	Isophorone	U	371	ug/kg	74.1	371
88-75-5	2-Nitrophenol	U	371	ug/kg	74.1	371
105-67-9	2,4-Dimethylphenol	U	371	ug/kg	130	371
111-91-1	bis(2-Chloroethoxy)methane	U	371	ug/kg	74.1	371
120-83-2	2,4-Dichlorophenol	U	371	ug/kg	74.1	371
65-85-0	Benzoic acid	U	741	ug/kg	185	741
91-20-3	Naphthalene	U	37.1	ug/kg	11.1	37.1
106-47-8	4-Chloroaniline	U	371	ug/kg	74.1	371
87-68-3	Hexachlorobutadiene	U	371	ug/kg	74.1	371
91-57-6	2-Methylnaphthalene	U	37.1	ug/kg	7.41	37.1
77-47-4	Hexachlorocyclopentadiene	U	371	ug/kg	74.1	371
88-06-2	2,4,6-Trichlorophenol	U	371	ug/kg	74.1	371
95-95-4	2,4,5-Trichlorophenol	U	371	ug/kg	74.1	371
91-58-7	2-Chloronaphthalene	U	37.1	ug/kg	12.2	37.1
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	371	ug/kg	74.1	371
99-09-2	3-Nitroaniline	U	371	ug/kg	74.1	371

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741006	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.1
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9957	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 14:24	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0717.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	371	ug/kg	74.1	371
606-20-2	2,6-Dinitrotoluene	U	371	ug/kg	37.1	371
208-96-8	Acenaphthylene	U	37.1	ug/kg	11.1	37.1
51-28-5	2,4-Dinitrophenol	U	741	ug/kg	141	741
132-64-9	Dibenzofuran	U	371	ug/kg	74.1	371
84-66-2	Diethylphthalate	U	371	ug/kg	74.1	371
86-73-7	Fluorene	U	37.1	ug/kg	11.1	37.1
7005-72-3	4-Chlorophenylphenylether	U	371	ug/kg	74.1	371
534-52-1	2-Methyl-4,6-dinitrophenol	U	371	ug/kg	74.1	371
100-01-6	4-Nitroaniline	U	371	ug/kg	111	371
	p-Nitroaniline					
122-39-4	Diphenylamine	U	371	ug/kg	74.1	371
122-66-7	Azobenzene	U	371	ug/kg	74.1	371
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	371	ug/kg	74.1	371
118-74-1	Hexachlorobenzene	U	371	ug/kg	74.1	371
85-01-8	Phenanthrene	U	37.1	ug/kg	11.1	37.1
120-12-7	Anthracene	U	37.1	ug/kg	7.41	37.1
84-74-2	Di-n-butylphthalate	U	371	ug/kg	74.1	371
206-44-0	Fluoranthene	U	37.1	ug/kg	11.1	37.1
85-68-7	Butylbenzylphthalate	U	371	ug/kg	74.1	371
56-55-3	Benzo(a)anthracene	U	37.1	ug/kg	11.1	37.1
91-94-1	3,3'-Dichlorobenzidine	U	371	ug/kg	111	371
218-01-9	Chrysene	U	37.1	ug/kg	11.1	37.1
117-81-7	bis(2-Ethylhexyl)phthalate	U	371	ug/kg	74.1	371
117-84-0	Di-n-octylphthalate	U	371	ug/kg	74.1	371
205-99-2	Benzo(b)fluoranthene	U	37.1	ug/kg	11.1	37.1
207-08-9	Benzo(k)fluoranthene	U	37.1	ug/kg	11.1	37.1
50-32-8	Benzo(a)pyrene	U	37.1	ug/kg	11.1	37.1
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.1	ug/kg	11.1	37.1
53-70-3	Dibenzo(a,h)anthracene	U	37.1	ug/kg	11.1	37.1
191-24-2	Benzo(ghi)perylene	U	37.1	ug/kg	11.1	37.1
120-82-1	1,2,4-Trichlorobenzene	U	371	ug/kg	74.1	371

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	394	ug/kg		JA
5131-66-8	2-Propanol, 1-butoxy-	3.54	1860	ug/kg	90	NJ

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0717.d
Lab Smp Id: 232741006 Client Smp ID: CAMO-09-9957
Inj Date : 07-JUL-2009 14:24
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741006|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	10.12230	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	455089	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1650764	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	1015229	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1931917	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1913144	40.0000	
* 98 Perylene-d12	264	11.462	11.462	(1.000)	1484234	40.0000	
$ 3 2-Fluorophenol	112	3.184	3.184	(0.796)	688605	68.9137	2550
$ 5 Phenol-d5	99	3.714	3.714	(0.929)	906899	68.8349	2550
$ 20 Nitrobenzene-d5	82	4.359	4.369	(0.895)	405642	33.1617	1230
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	945966	36.0284	1330
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	316110	76.3123	2830
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.894)	1339902	45.7638	1700

ION RATIO REPORT

SV REPORT

Data file: s5g0717.d
Report Date: 07/07/2009 14:57
Lab. ID: 232741006 SampleType: SAMPLE
Injection Date: 07-JUL-2009 14:24
Operator: RMB Instrument: MSD5.i
Sample Info: |232741006|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	56905	3.71	3.79	80-120	100	(T)
93	106	3.77	3.79	154-214	0	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	59086	4.36	4.24	80-120	100	(T)
42	40158	4.36	4.24	56-116	68	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	1627	4.87	4.64	80-120	100	(T)
122	562	4.86	4.64	52-112	35	(QT)
77	6566	4.87	4.64	53-113	404	(QT)
31 4-Chloroaniline			CAS#: 106-47-8			
127	118	4.90	4.90	80-120	100	( )
65	100	4.92	4.90	8- 68	85	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	165	6.13	6.08	80-120	100	( )
92	6123	6.13	6.08	79-139	3698	(Q)
108	21523	6.13	6.08	0- 42	12997	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	221510	6.13	5.89	80-120	100	(T)
164	1015229	6.13	5.89	0- 40	458	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	133442	6.13	5.94	80-120	100	(T)
63	1799	6.13	5.94	55-115	1	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	133442	6.13	6.25	80-120	100	(T)
89	2010	6.13	6.24	39- 99	2	(QT)
63	1799	6.13	6.24	20- 80	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	12816	6.73	6.55	80-120	100	(T)
165	13397	6.73	6.55	61-121	105	(T)
167	4316	6.73	6.55	0- 44	34	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	800	6.73	6.56	80-120	100	(T)
105	1849	6.73	6.56	4- 64	231	(QT)
51	2018	6.73	6.56	31- 91	252	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	22125	6.73	6.91	80-120	100	(T)
141	114965	6.73	6.91	33- 93	520	(QT)
250	44942	6.73	6.91	68-128	203	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0717.d
Lab Smp Id: 232741006 Client Smp ID: CAMO-09-9957
Inj Date : 07-JUL-2009 14:24
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741006|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	10.12230	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2960052	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.016	786095	10.6227121	394	0		0	10
2-Propanol, 1-butoxy-					CAS #: 5131-66-8		
3.536	3719474	50.2622631	1860	90	NIST05.L	13973	10

Data File: /chem/MSD5.i/s070709.b/s5g0717.d
Date : 07-JUL-2009 14:24
Client ID: CAMO-09-9957
Sample Info: |2327410061882565|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

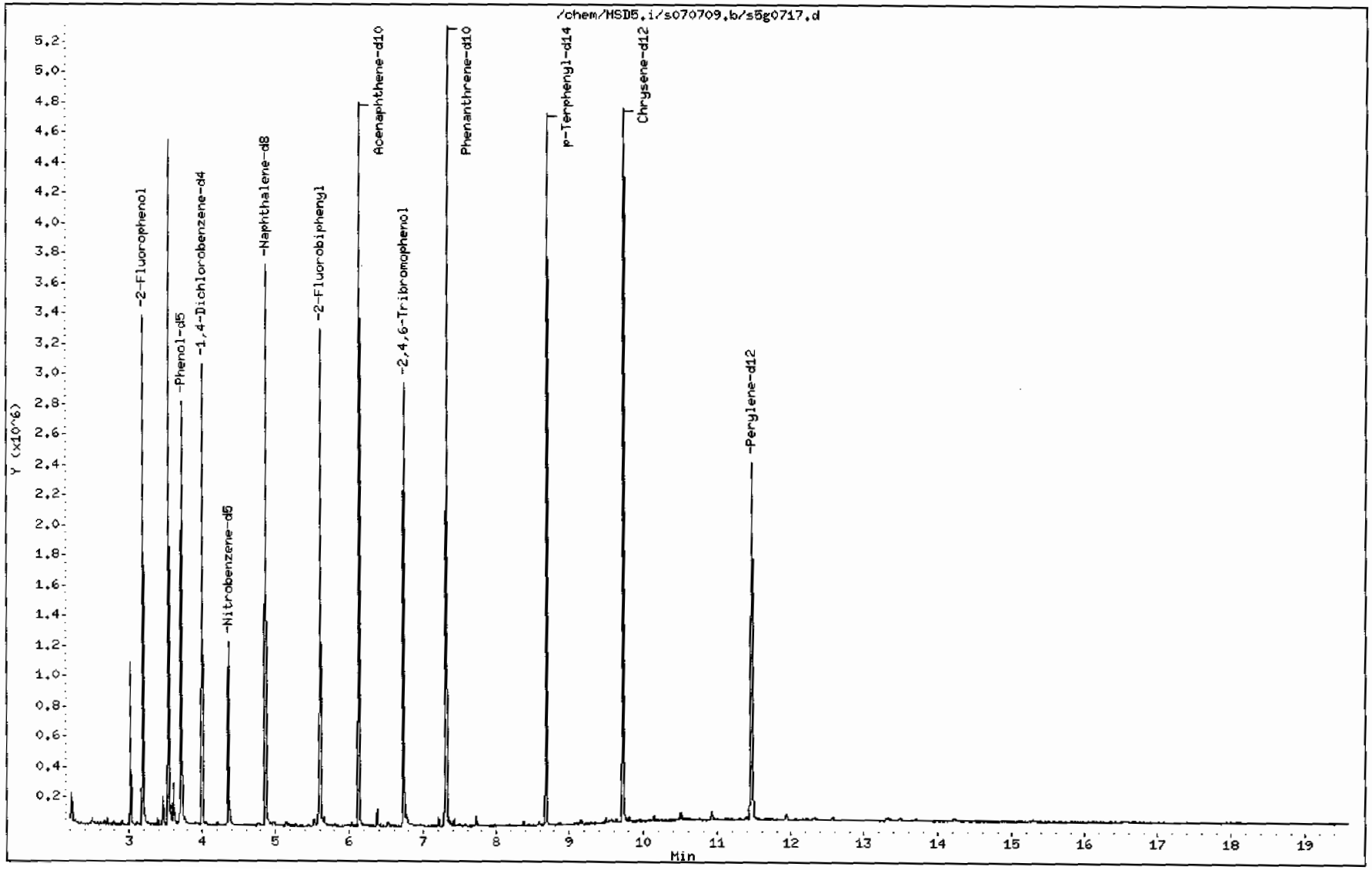

Data File: /chem/MSD5.i/s070709.b/s5g0717.d

Date : 07-JUL-2009 14:24

Client ID: CAMO-09-9957

Instrument: MSD5.i

Sample Info: |2327410061882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	28	C6H12O2	116

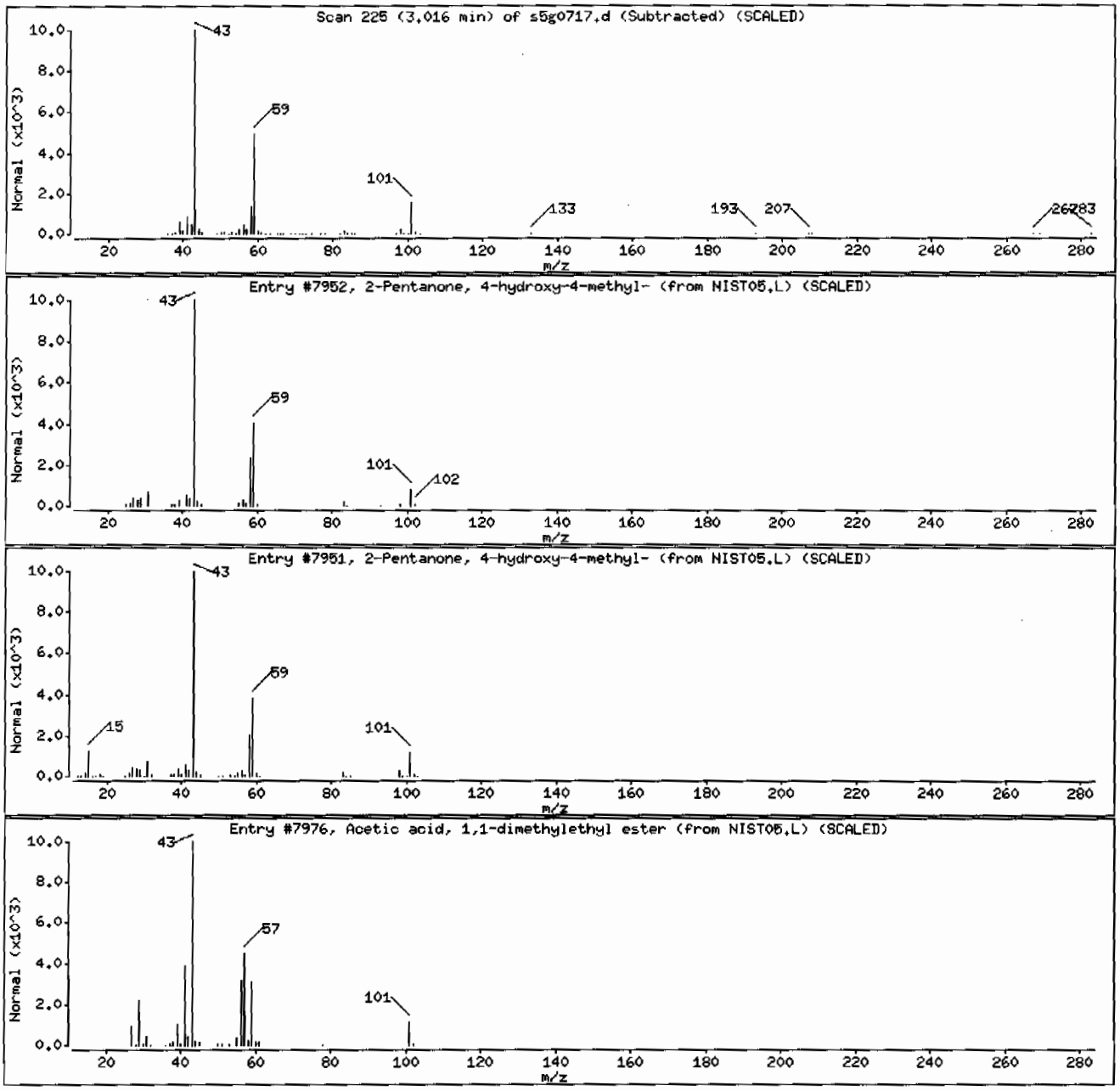

Data File: /chem/MSD5.i/s070709.b/s5g0717.d

Date : 07-JUL-2009 14:24

Client ID: CAMO-09-9957 Instrument: MSD5.i

Sample Info: 1232741006|882565|1|SVHF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2-Propanol, 1-butoxy-	5131-66-8	NIST05.L	13973	90	C7H16O2	132
2-Propanol, 1-butoxy-	5131-66-8	NIST05.L	13971	90	C7H16O2	132
1-Propanol, 2-(1-methylethoxy)-	3944-37-4	NIST05.L	8592	59	C6H14O2	118

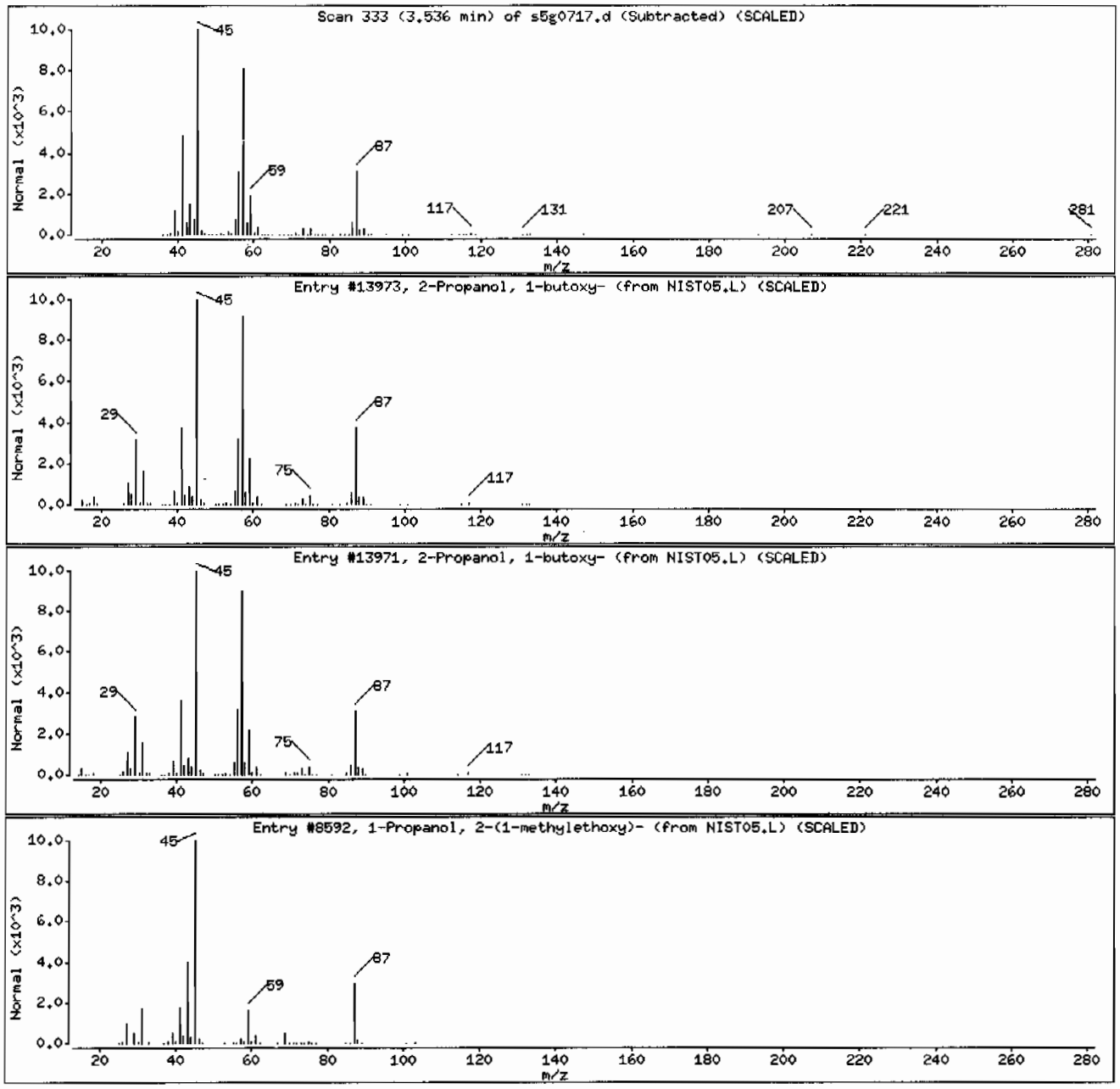

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	Date Collected:	06/29/2009 12:00	Matrix:	R
Lab Sample ID:	232741005	Date Received:	07/02/2009 08:40	%Moisture:	10.3
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9958	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 13:56	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0716.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	372	ug/kg	74.3	372
108-95-2	Phenol	U	372	ug/kg	74.3	372
95-57-8	2-Chlorophenol	U	372	ug/kg	74.3	372
106-46-7	1,4-Dichlorobenzene	U	372	ug/kg	74.3	372
621-64-7	N-Nitrosodipropylamine	U	372	ug/kg	74.3	372
59-50-7	4-Chloro-3-methylphenol	U	372	ug/kg	74.3	372
83-32-9	Acenaphthene	U	37.2	ug/kg	12.3	37.2
121-14-2	2,4-Dinitrotoluene	U	372	ug/kg	37.2	372
100-02-7	4-Nitrophenol	U	372	ug/kg	123	372
87-86-5	Pentachlorophenol	U	372	ug/kg	92.9	372
129-00-0	Pyrene		80.1	ug/kg	11.1	37.2
110-86-1	Pyridine	U	372	ug/kg	74.3	372
62-53-3	Aniline	U	372	ug/kg	111	372
111-44-4	bis(2-Chloroethyl) ether	U	372	ug/kg	74.3	372
541-73-1	1,3-Dichlorobenzene	U	372	ug/kg	74.3	372
100-51-6	Benzyl alcohol	U	372	ug/kg	111	372
95-50-1	1,2-Dichlorobenzene	U	372	ug/kg	74.3	372
108-60-1	bis(2-Chloroisopropyl)ether	U	372	ug/kg	74.3	372
95-48-7	o-Cresol	U	372	ug/kg	74.3	372
65794-96-9	m,p-Cresols	U	372	ug/kg	111	372
67-72-1	Hexachloroethane	U	372	ug/kg	74.3	372
98-95-3	Nitrobenzene	U	372	ug/kg	74.3	372
78-59-1	Isophorone	U	372	ug/kg	74.3	372
88-75-5	2-Nitrophenol	U	372	ug/kg	74.3	372
105-67-9	2,4-Dimethylphenol	U	372	ug/kg	130	372
111-91-1	bis(2-Chloroethoxy)methane	U	372	ug/kg	74.3	372
120-83-2	2,4-Dichlorophenol	U	372	ug/kg	74.3	372
65-85-0	Benzoic acid	U	743	ug/kg	186	743
91-20-3	Naphthalene	U	37.2	ug/kg	11.1	37.2
106-47-8	4-Chloroaniline	U	372	ug/kg	74.3	372
87-68-3	Hexachlorobutadiene	U	372	ug/kg	74.3	372
91-57-6	2-Methylnaphthalene	U	37.2	ug/kg	7.43	37.2
77-47-4	Hexachlorocyclopentadiene	U	372	ug/kg	74.3	372
88-06-2	2,4,6-Trichlorophenol	U	372	ug/kg	74.3	372
95-95-4	2,4,5-Trichlorophenol	U	372	ug/kg	74.3	372
91-58-7	2-Chloronaphthalene	U	37.2	ug/kg	12.3	37.2
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	372	ug/kg	74.3	372
99-09-2	3-Nitroaniline	U	372	ug/kg	74.3	372

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741005	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9958	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:56	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0716.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	372	ug/kg	74.3	372
606-20-2	2,6-Dinitrotoluene	U	372	ug/kg	37.2	372
208-96-8	Acenaphthylene	U	37.2	ug/kg	11.1	37.2
51-28-5	2,4-Dinitrophenol	U	743	ug/kg	141	743
132-64-9	Dibenzofuran	U	372	ug/kg	74.3	372
84-66-2	Diethylphthalate	U	372	ug/kg	74.3	372
86-73-7	Fluorene	U	37.2	ug/kg	11.1	37.2
7005-72-3	4-Chlorophenylphenylether	U	372	ug/kg	74.3	372
534-52-1	2-Methyl-4,6-dinitrophenol	U	372	ug/kg	74.3	372
100-01-6	4-Nitroaniline	U	372	ug/kg	111	372
	p-Nitroaniline					
122-39-4	Diphenylamine	U	372	ug/kg	74.3	372
122-66-7	Azobenzene	U	372	ug/kg	74.3	372
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	372	ug/kg	74.3	372
118-74-1	Hexachlorobenzene	U	372	ug/kg	74.3	372
85-01-8	Phenanthrene		43.3	ug/kg	11.1	37.2
120-12-7	Anthracene	J	12.4	ug/kg	7.43	37.2
84-74-2	Di-n-butylphthalate	J	75.5	ug/kg	74.3	372
206-44-0	Fluoranthene		78.0	ug/kg	11.1	37.2
85-68-7	Butylbenzylphthalate	U	372	ug/kg	74.3	372
56-55-3	Benzo(a)anthracene	J	35.2	ug/kg	11.1	37.2
91-94-1	3,3'-Dichlorobenzidine	U	372	ug/kg	111	372
218-01-9	Chrysene	J	35.3	ug/kg	11.1	37.2
117-81-7	bis(2-Ethylhexyl)phthalate	U	372	ug/kg	74.3	372
117-84-0	Di-n-octylphthalate	U	372	ug/kg	74.3	372
205-99-2	Benzo(b)fluoranthene		46.3	ug/kg	11.1	37.2
207-08-9	Benzo(k)fluoranthene	J	21.1	ug/kg	11.1	37.2
50-32-8	Benzo(a)pyrene		40.2	ug/kg	11.1	37.2
193-39-5	Indeno(1,2,3-cd)pyrene	J	25.9	ug/kg	11.1	37.2
53-70-3	Dibenzo(a,h)anthracene	U	37.2	ug/kg	11.1	37.2
191-24-2	Benzo(ghi)perylene	J	30.6	ug/kg	11.1	37.2
120-82-1	1,2,4-Trichlorobenzene	U	372	ug/kg	74.3	372

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	355	ug/kg		JA
5131-66-8	2-Propanol, 1-butoxy-	3.54	1360	ug/kg	83	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741005	**Date Received:**	07/02/2009 08:40	**%Moisture:**	10.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9958	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 13:56	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0716.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	3.61	353	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0716.d
Lab Smp Id: 232741005 Client Smp ID: CAMO-09-9958
Inj Date : 07-JUL-2009 13:56
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741005|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	10.27420	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.003	4.003	(1.000)	332654	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1218395	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	775887	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1502959	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1483299	40.0000	
* 98 Perylene-d12	264	11.462	11.462	(1.000)	1226409	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.797)	470998	64.4849	2400
$ 5 Phenol-d5	99	3.714	3.714	(0.928)	615950	63.9586	2380
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	268523	29.7421	1100
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	663785	33.0798	1230
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	243192	76.8194	2850
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.894)	992969	43.7425	1620

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.587	8.592	(0.883)	69732	2.15497	80.0
68 Phenanthrene	178	7.325	7.330	(1.003)	32791	1.16464	43.3
69 Anthracene	178	7.369	7.373	(1.009)	9291	0.33433	12.4(a)
72 Di-n-butylphthalate	149	7.720	7.720	(1.057)	65072	2.03284	75.5(a)
76 Fluoranthene	202	8.370	8.375	(1.146)	67300	2.09831	78.0
89 Benzo(a)anthracene	228	9.709	9.714	(0.998)	30116	0.94624	35.2(a)
92 Chrysene	228	9.747	9.752	(1.002)	27690	0.94975	35.3(a)
95 Benzo(b)fluoranthene	252	10.922	10.922	(0.953)	33729	1.24529	46.3
96 Benzo(k)fluoranthene	252	10.951	10.956	(0.955)	15109	0.56790	21.1(a)
97 Benzo(a)pyrene	252	11.375	11.380	(0.992)	25919	1.08101	40.2
99 Indeno(1,2,3-cd)pyrene	276	13.287	13.306	(1.159)	16782	0.69653	25.9(a)
101 Benzo(ghi)perylene	276	13.860	13.869	(1.209)	16911	0.82330	30.6(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0716.d
Report Date: 07/07/2009 14:16
Lab. ID: 232741005 SampleType: SAMPLE
Injection Date: 07-JUL-2009 13:56
Operator: RMB Instrument: MSD5.i
Sample Info: |232741005|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	39466	3.71	3.79	80-120	100	(T)
93	530	3.79	3.79	154-214	1	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	39628	4.36	4.24	80-120	100	(T)
42	27995	4.36	4.24	56-116	71	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	246	4.83	4.64	80-120	100	(T)
122	314	4.87	4.64	52-112	128	(QT)
77	5509	4.87	4.64	53-113	2236	(QT)
31 4-Chloroaniline			CAS#: 106-47-8			
127	254	4.90	4.90	80-120	100	( )
65	136	4.90	4.90	8- 68	54	( )
43 Dimethylphthalate			CAS#: 131-11-3			
163	165463	6.13	5.89	80-120	100	(T)
164	775887	6.13	5.89	0- 40	469	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	99493	6.13	5.94	80-120	100	(T)
63	1419	6.13	5.94	55-115	1	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	99493	6.13	6.25	80-120	100	(T)
89	1479	6.13	6.24	39- 99	1	(QT)
63	1419	6.13	6.24	20- 80	1	(QT)
53 Fluorene				CAS#: 86-73-7		
166	9758	6.73	6.55	80-120	100	(T)
165	9943	6.73	6.55	61-121	102	(T)
167	3297	6.73	6.55	0- 44	34	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	792	6.73	6.56	80-120	100	(T)
105	1458	6.73	6.56	4- 64	184	(QT)
51	1474	6.73	6.56	31- 91	186	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	16915	6.73	6.91	80-120	100	(T)
141	84771	6.73	6.91	33- 93	501	(QT)
250	32907	6.73	6.91	68-128	195	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	32791	7.33	7.33	80-120	100	( )
179	4612	7.33	7.33	0- 46	14	( )
176	6379	7.33	7.33	0- 49	19	( )
69 Anthracene				CAS#: 120-12-7		
178	9291	7.37	7.37	80-120	100	( )
179	1476	7.36	7.37	0- 46	16	( )
176	1526	7.37	7.37	0- 48	16	( )
72 Di-n-butylphthalate				CAS#: 84-74-2		
149	65072	7.72	7.72	80-120	100	( )
150	5995	7.72	7.72	0- 40	9	( )
104	3560	7.72	7.72	0- 36	5	( )
76 Fluoranthene				CAS#: 206-44-0		
202	67300	8.37	8.38	80-120	100	( )
203	11944	8.37	8.38	0- 48	18	( )
101	6191	8.37	8.37	0- 39	9	( )
79 Pyrene				CAS#: 129-00-0		
202	69732	8.59	8.59	80-120	100	( )
200	14376	8.59	8.59	0- 51	21	( )
101	7006	8.59	8.59	0- 40	10	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	30116	9.71	9.71	80-120	100	( )
226	7847	9.71	9.71	0- 56	26	( )
229	6590	9.71	9.71	0- 50	22	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
92 Chrysene			CAS#: 218-01-9			
228	27690	9.75	9.75	80-120	100	( )
229	5763	9.74	9.75	0- 50	21	( )
226	8311	9.75	9.75	0- 59	30	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	33729	10.92	10.92	80-120	100	( )
253	8488	10.93	10.92	0- 51	25	( )
125	3299	10.92	10.92	0- 37	10	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	15109	10.95	10.96	80-120	100	( )
253	2963	10.96	10.96	0- 54	20	( )
125	1763	10.94	10.96	0- 38	12	( )
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	25919	11.37	11.38	80-120	100	( )
253	7013	11.37	11.38	0- 52	27	( )
125	3220	11.37	11.38	0- 30	12	( )
99 Indeno(1,2,3-cd)pyrene			CAS#: 193-39-5			
276	16782	13.29	13.31	80-120	100	( )
138	3700	13.29	13.31	0- 51	22	( )
101 Benzo(ghi)perylene			CAS#: 191-24-2			
276	16911	13.86	13.87	80-120	100	( )
138	3354	13.85	13.87	0- 30	20	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0716.d
Lab Smp Id: 232741005 Client Smp ID: CAMO-09-9958
Inj Date : 07-JUL-2009 13:56
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741005|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	10.27420	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.003	2132079	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.015	509613	9.56085437	355	0		0	10
2-Propanol, 1-butoxy-				CAS #: 5131-66-8			
3.540	1957602	36.7266219	1360	83	NIST05.L	13971	10

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown				CAS #:			
3.608	506310	9.49889448	353	0		0	10

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAHO-09-9958

Sample Info: |2327410051882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

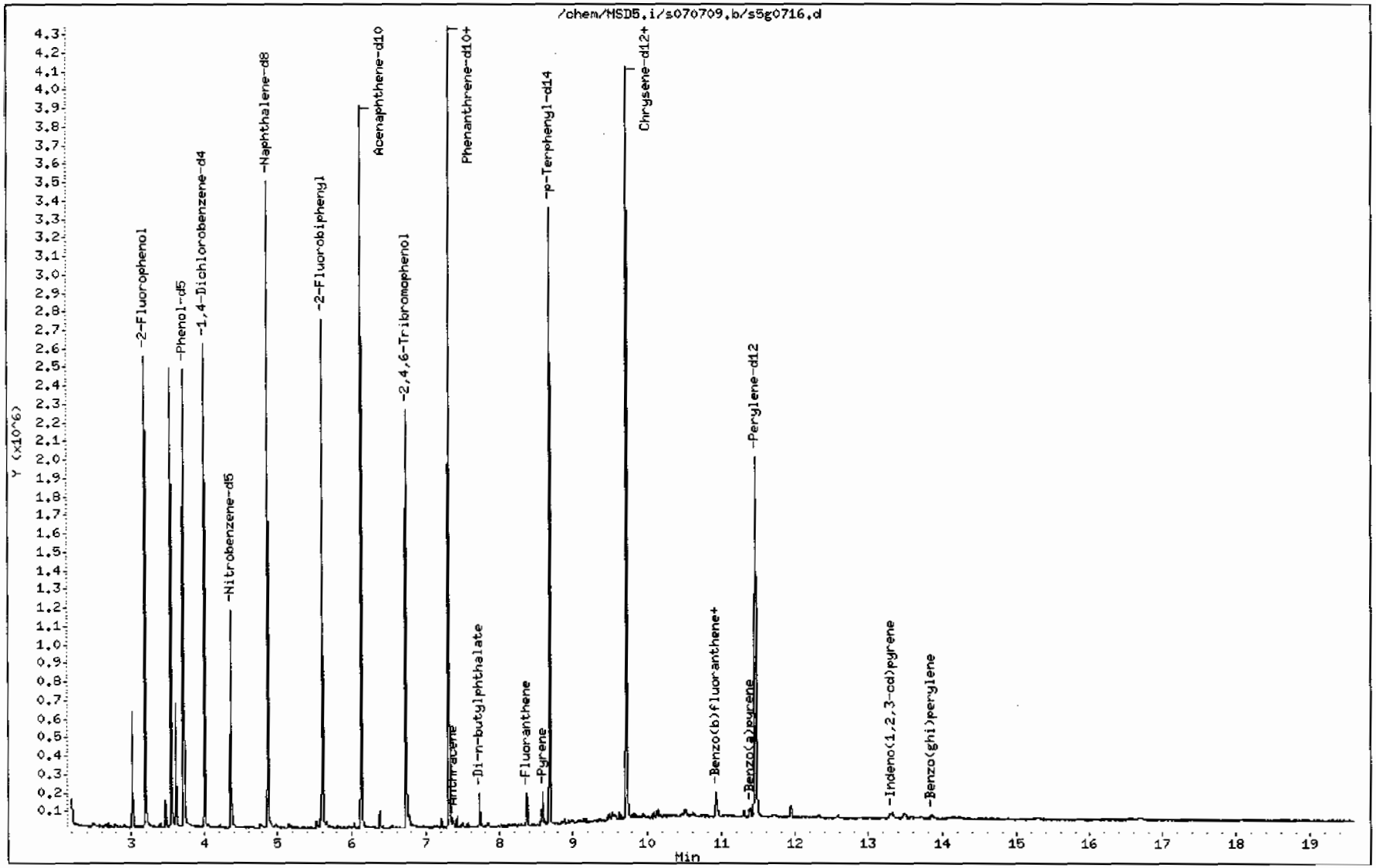

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: 1232741005188256511|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 80.0 ug/Kg

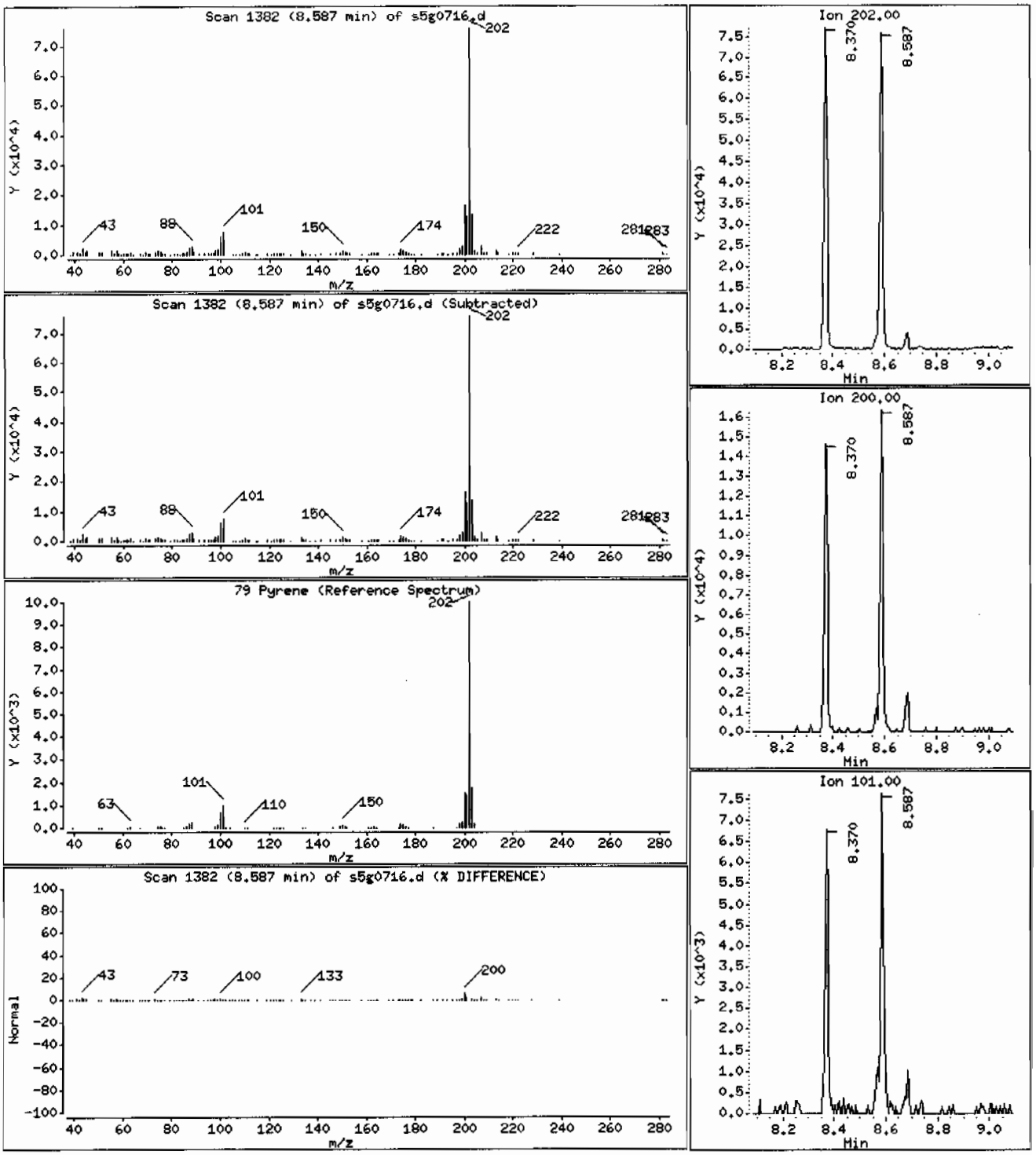

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Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: |2327410051882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 43.3 ug/Kg

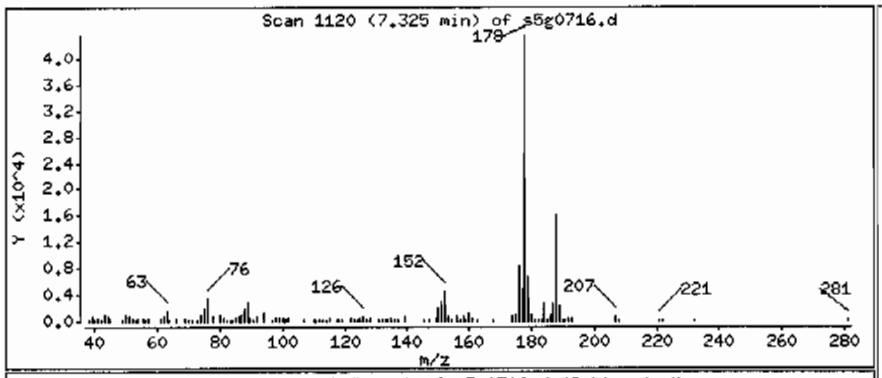

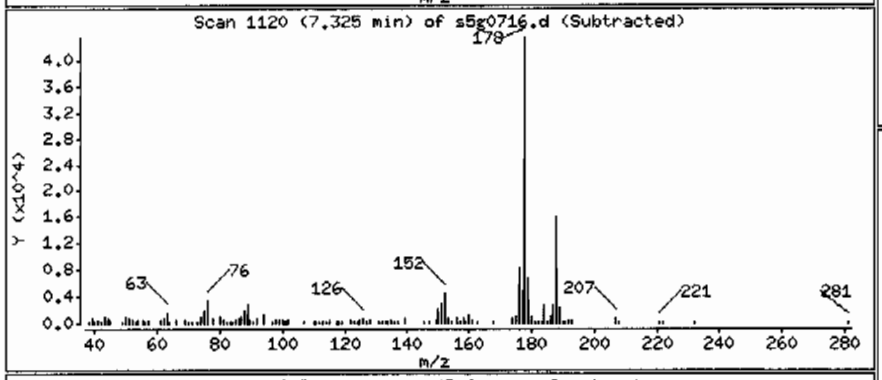

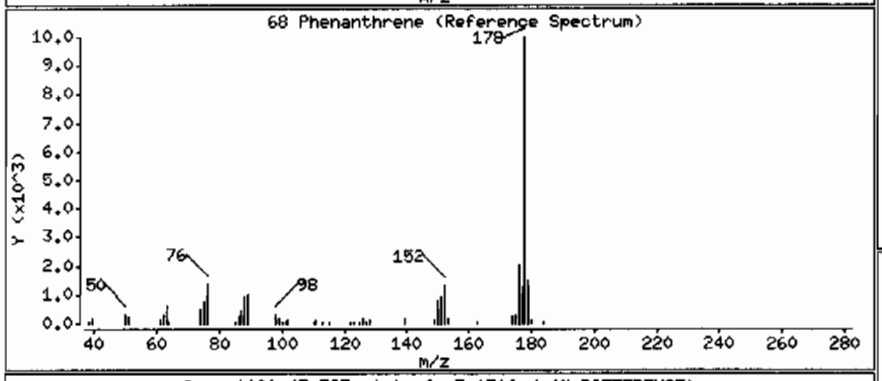

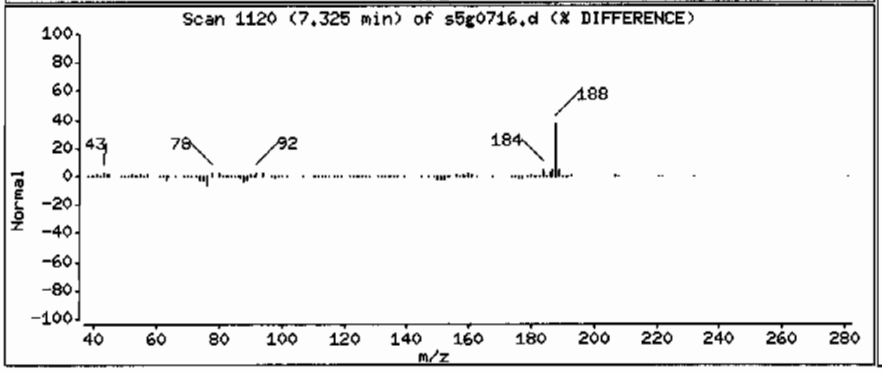

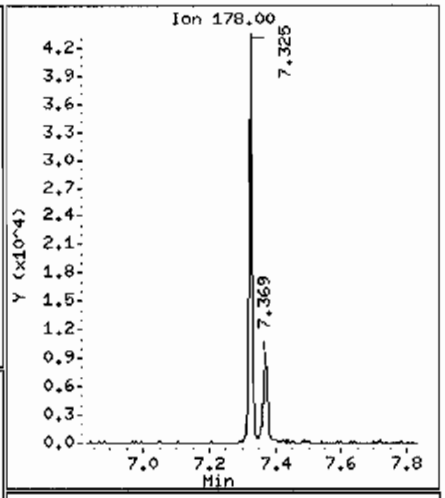

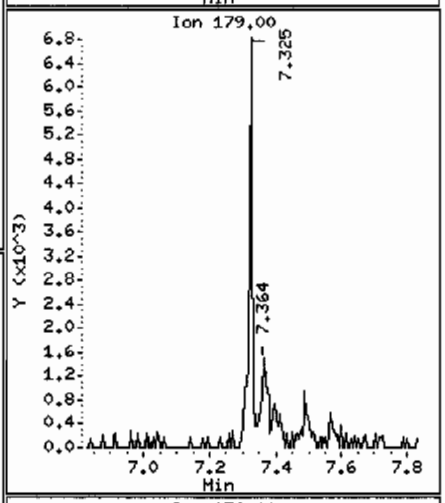

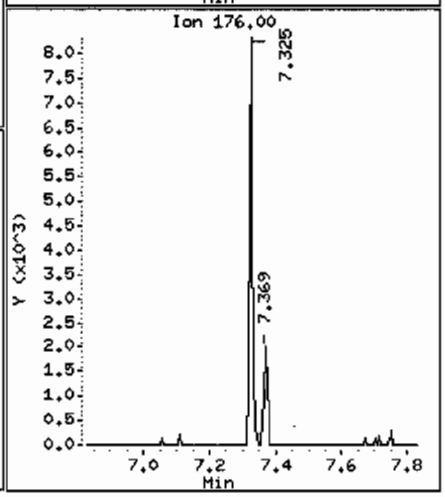

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: |2327410051882565111SVMF111LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

69 Anthracene

Concentration: 12.4 ug/Kg

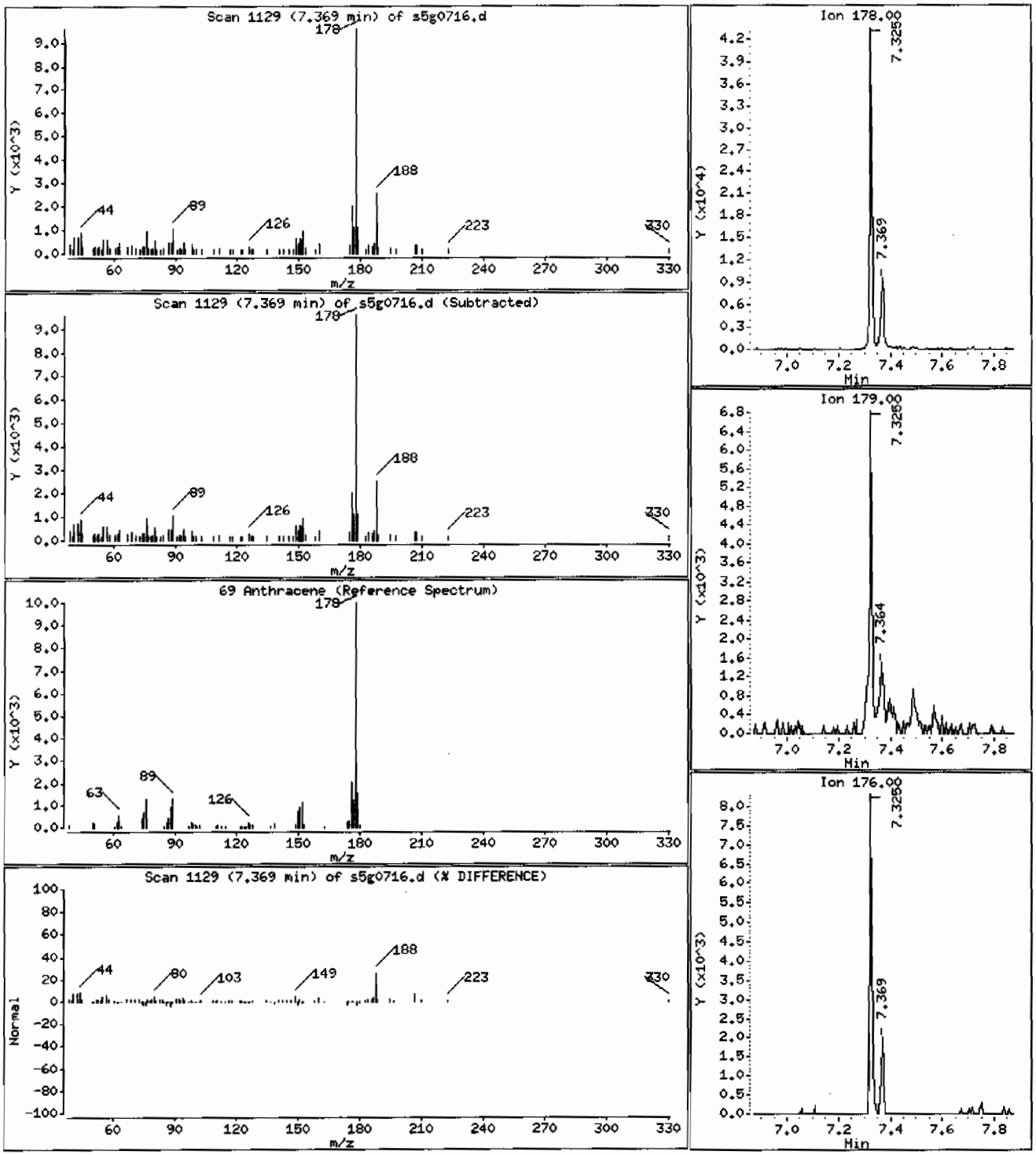

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: 1232741005|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RHB

Column phase: J&W DB-5MS

Column diameter: 0.20

72 Di-n-butylphthalate

Concentration: 75.5 ug/Kg

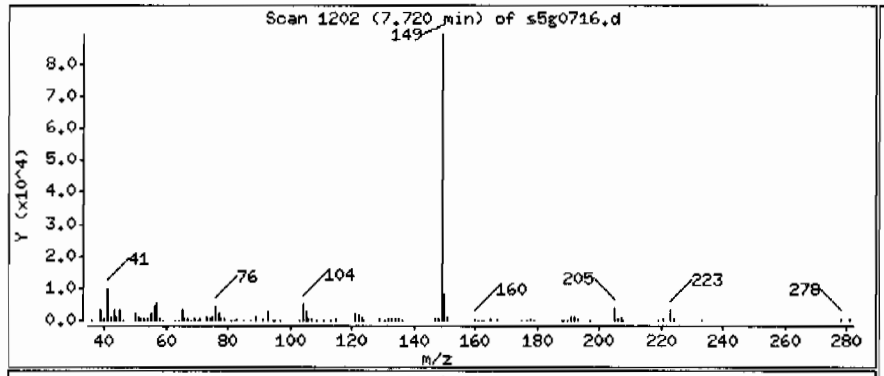

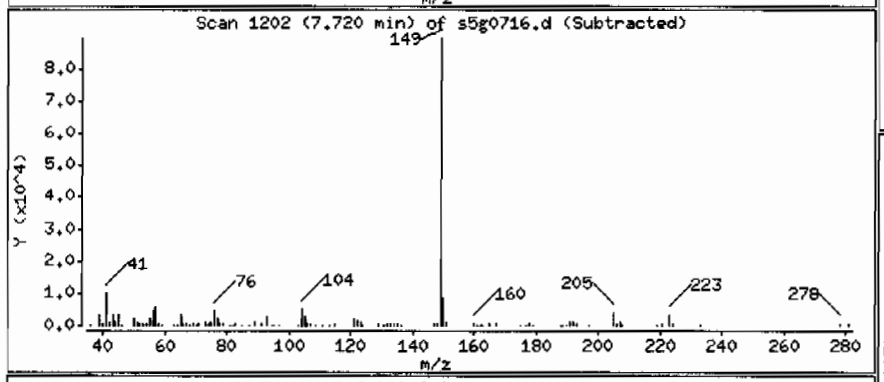

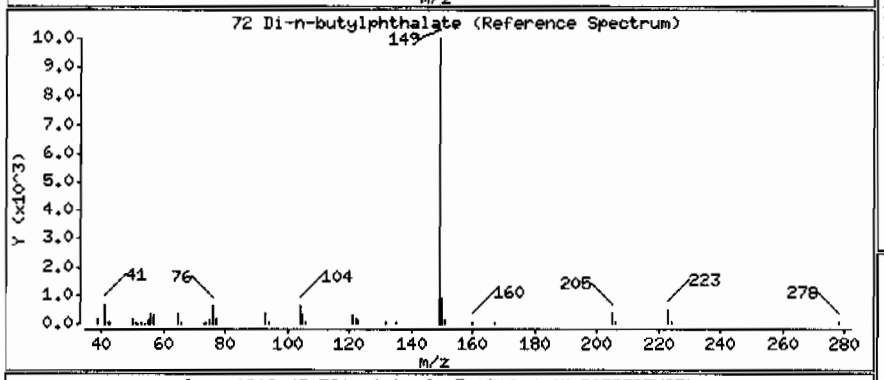

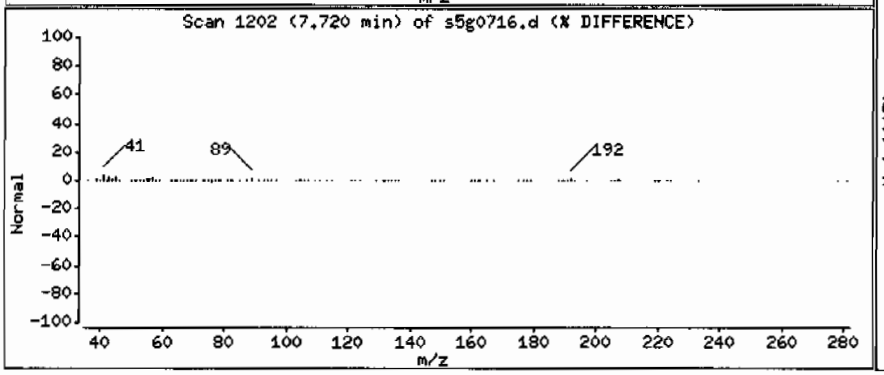

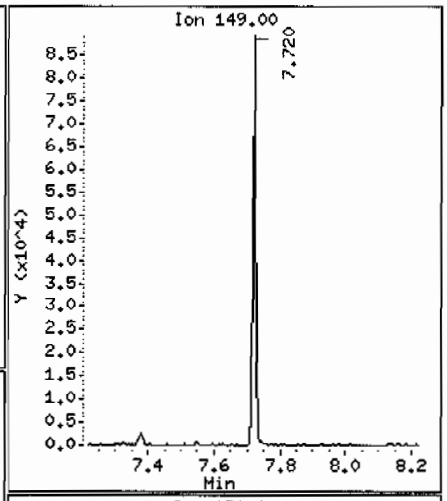

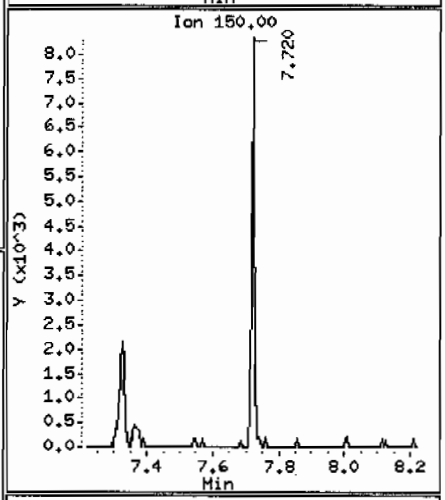

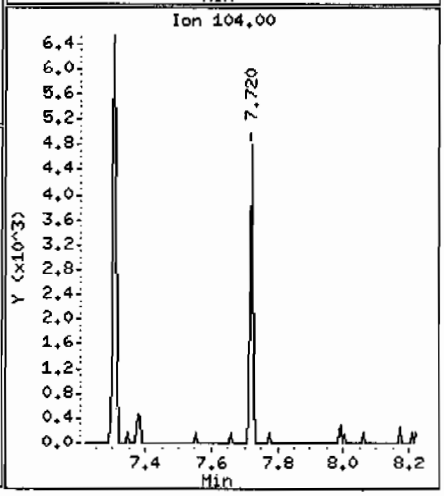

Data File: /chem/HSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958 Instrument: HSD5.i

Sample Info: |2327410051882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

76 Fluoranthene Concentration: 78.0 ug/Kg

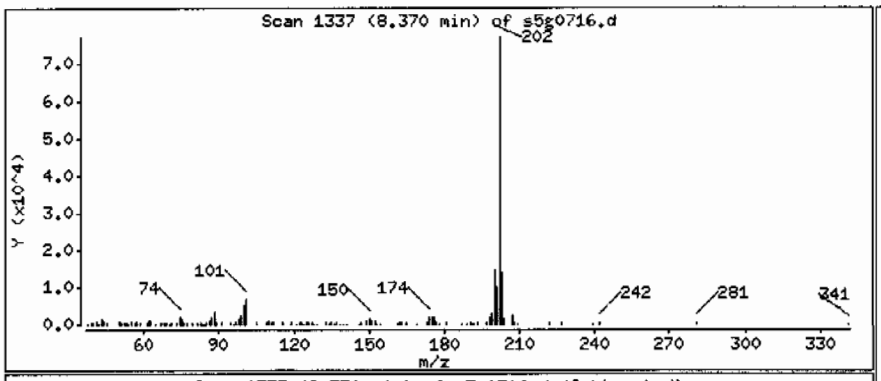

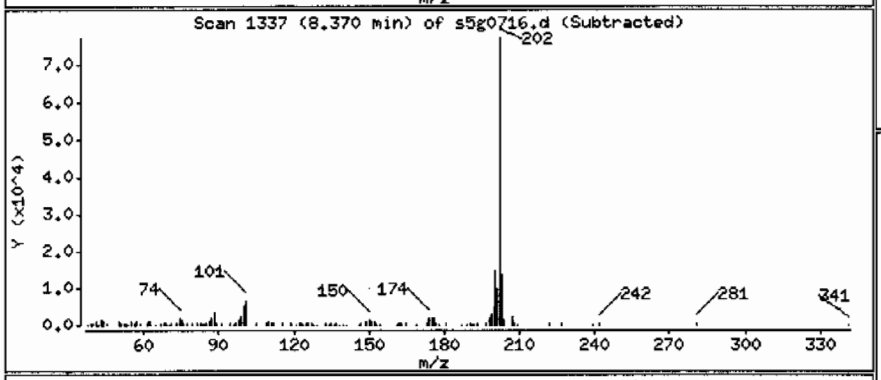

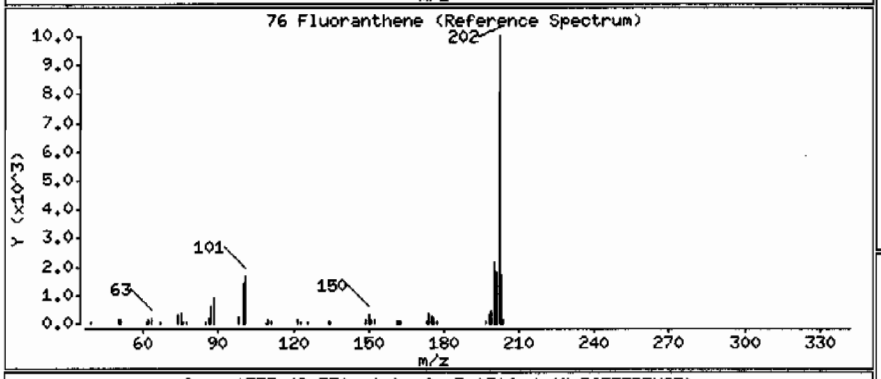

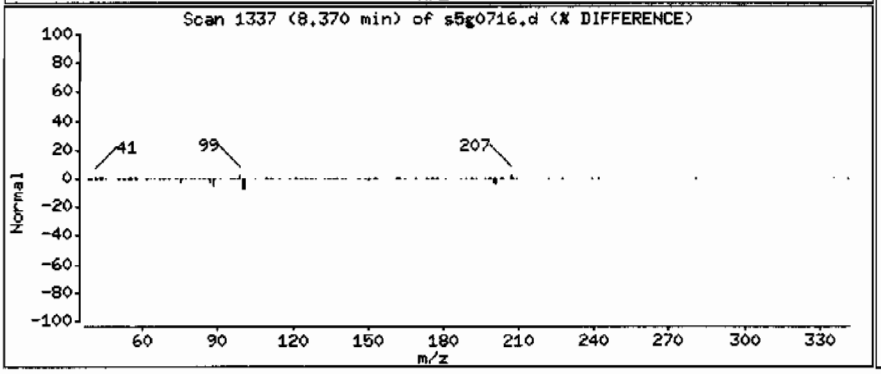

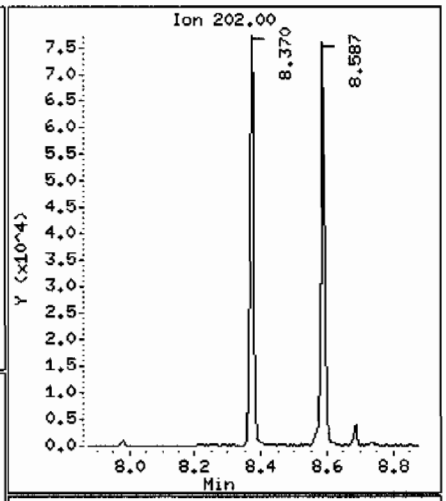

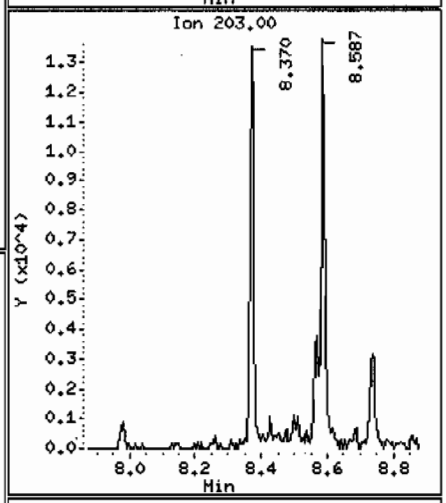

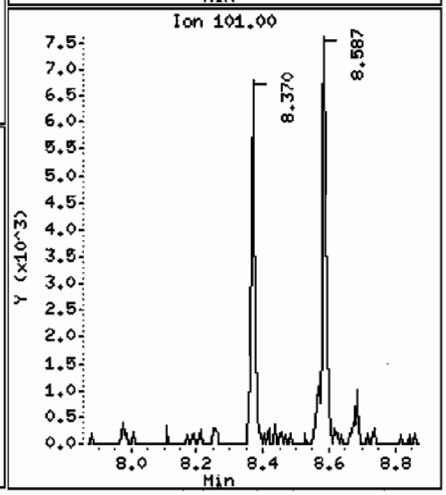

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: |2327410051882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 35.2 ug/Kg

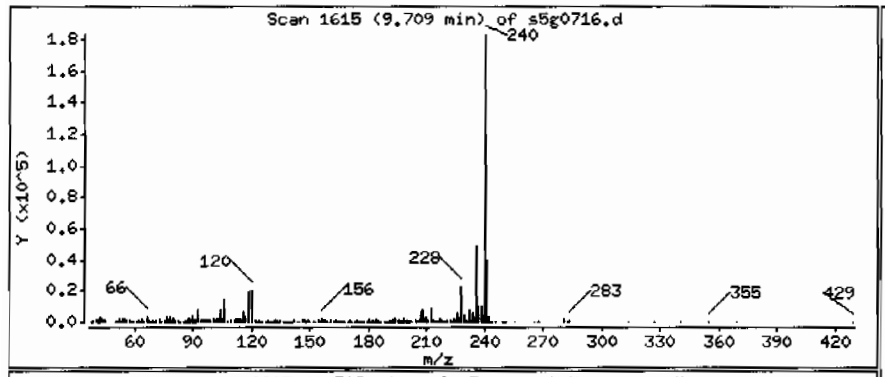

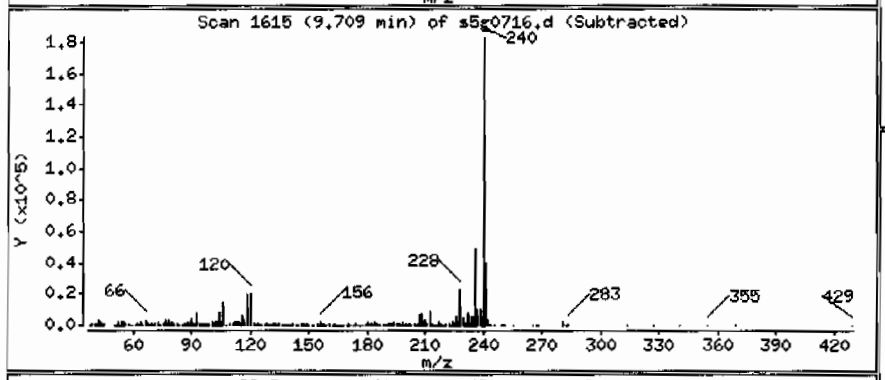

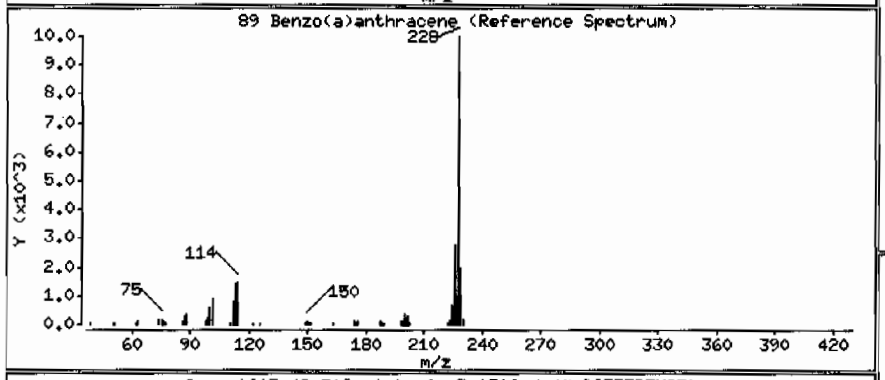

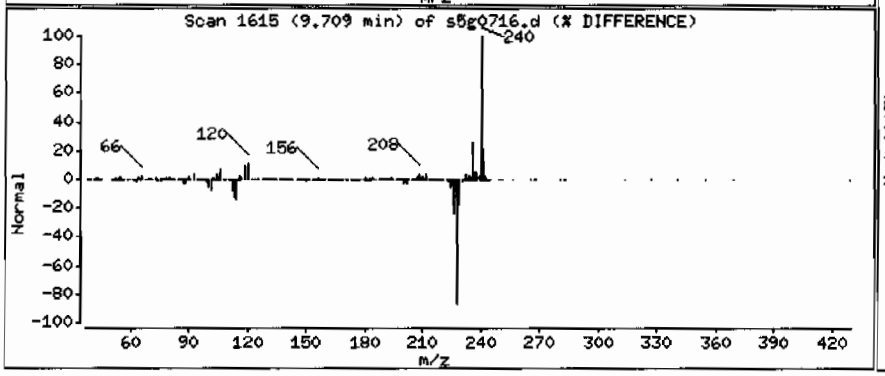

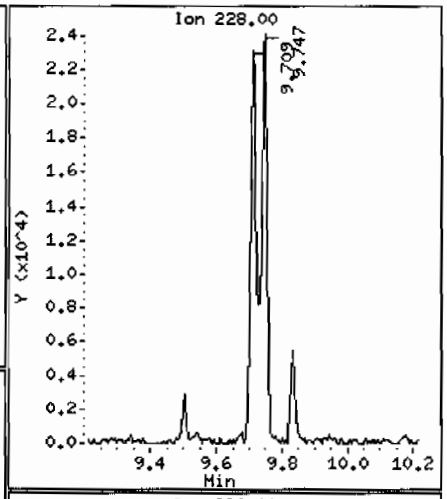

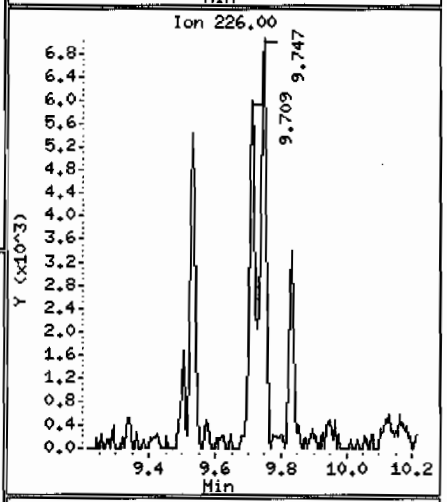

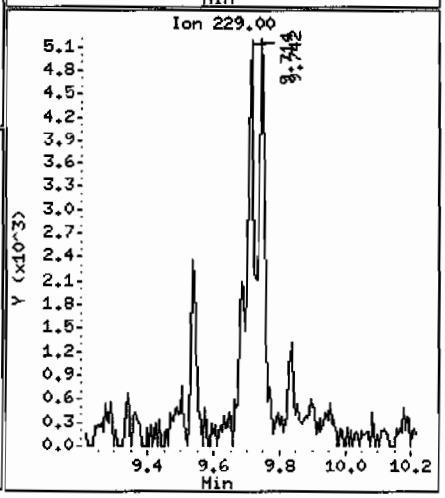

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: |2327410051882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 35.3 ug/Kg

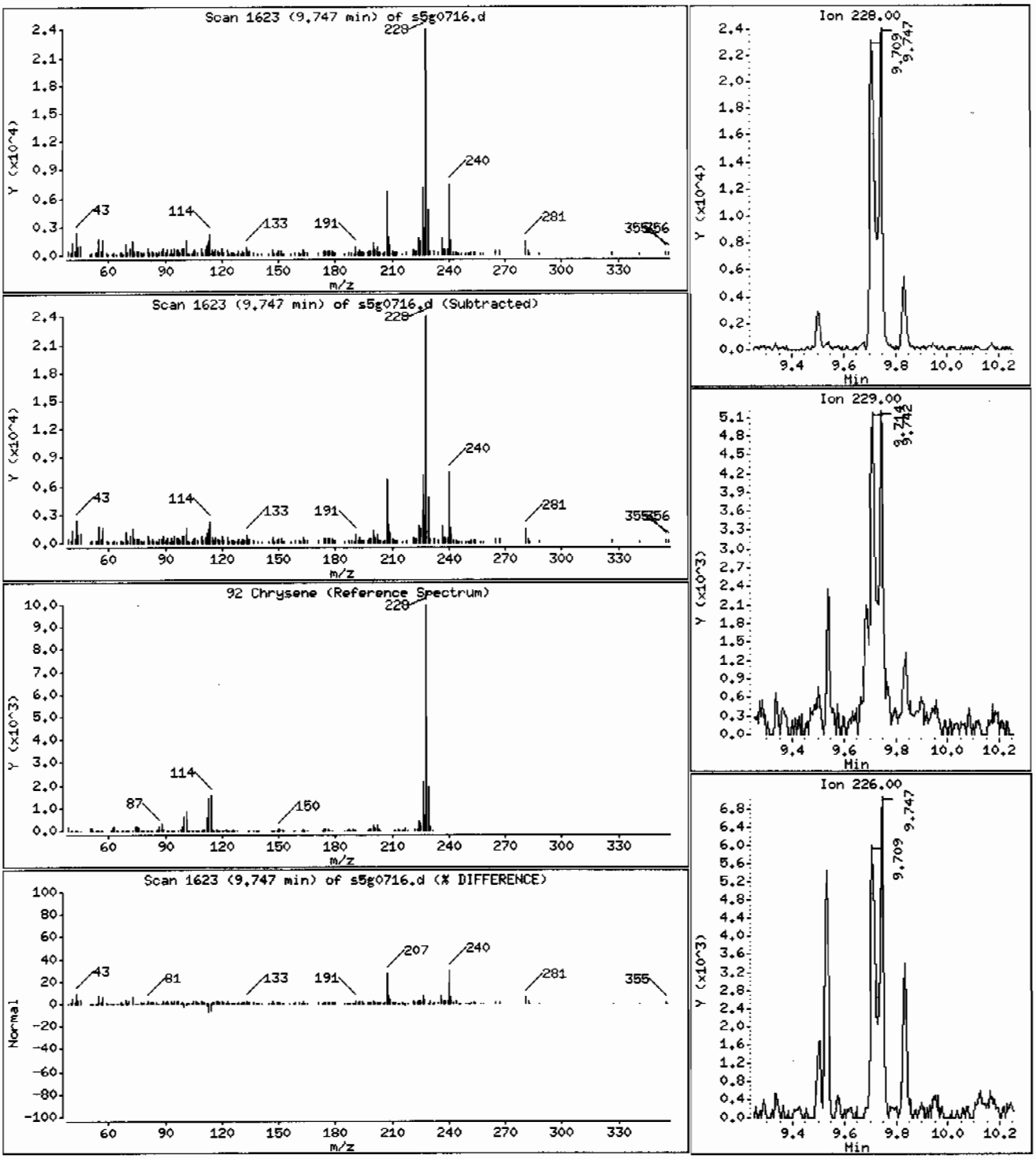

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: |2327410051882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 46.3 ug/Kg

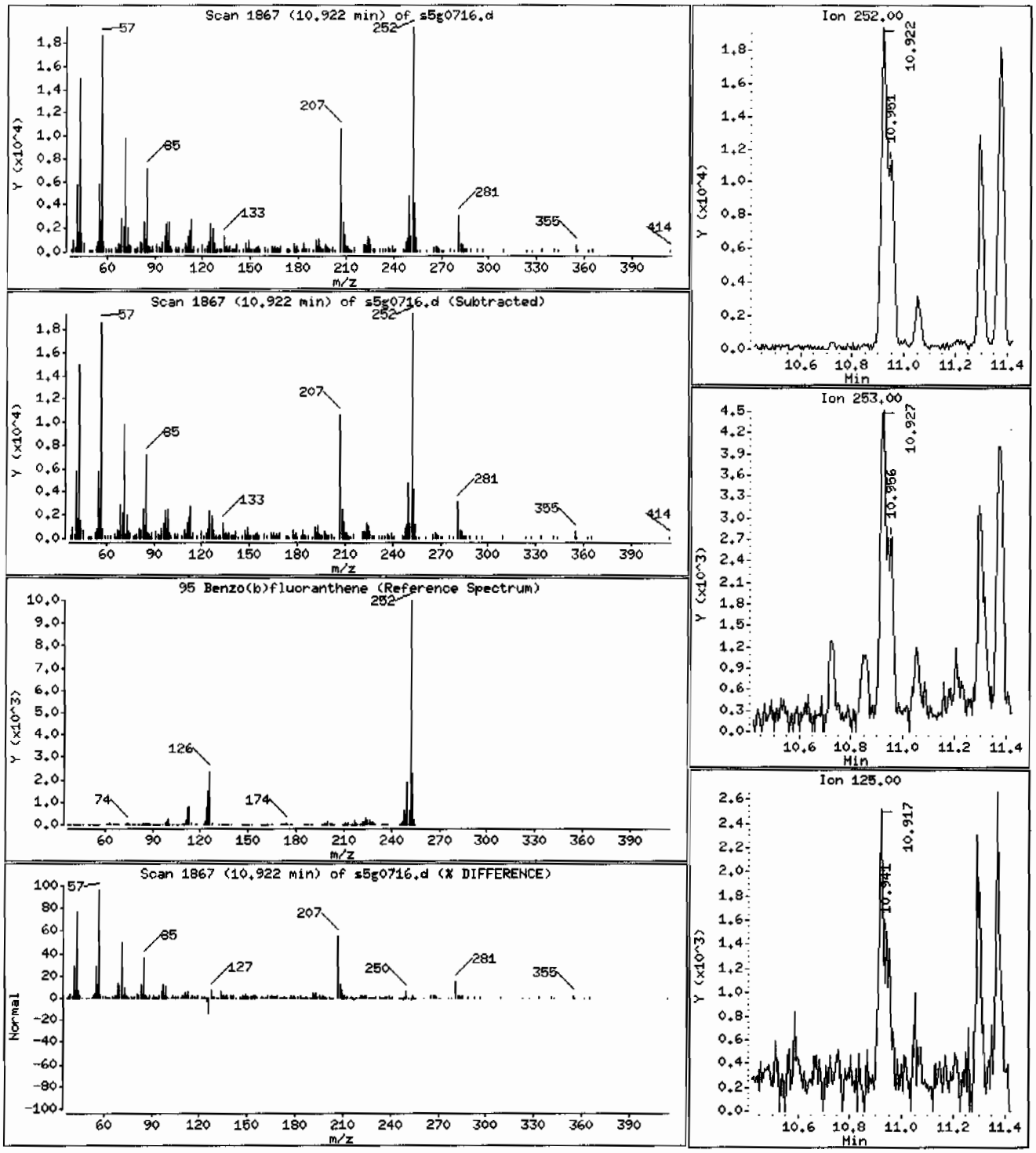

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: 1232741005188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

96 Benzo(k)fluoranthene

Concentration: 21.1 ug/Kg

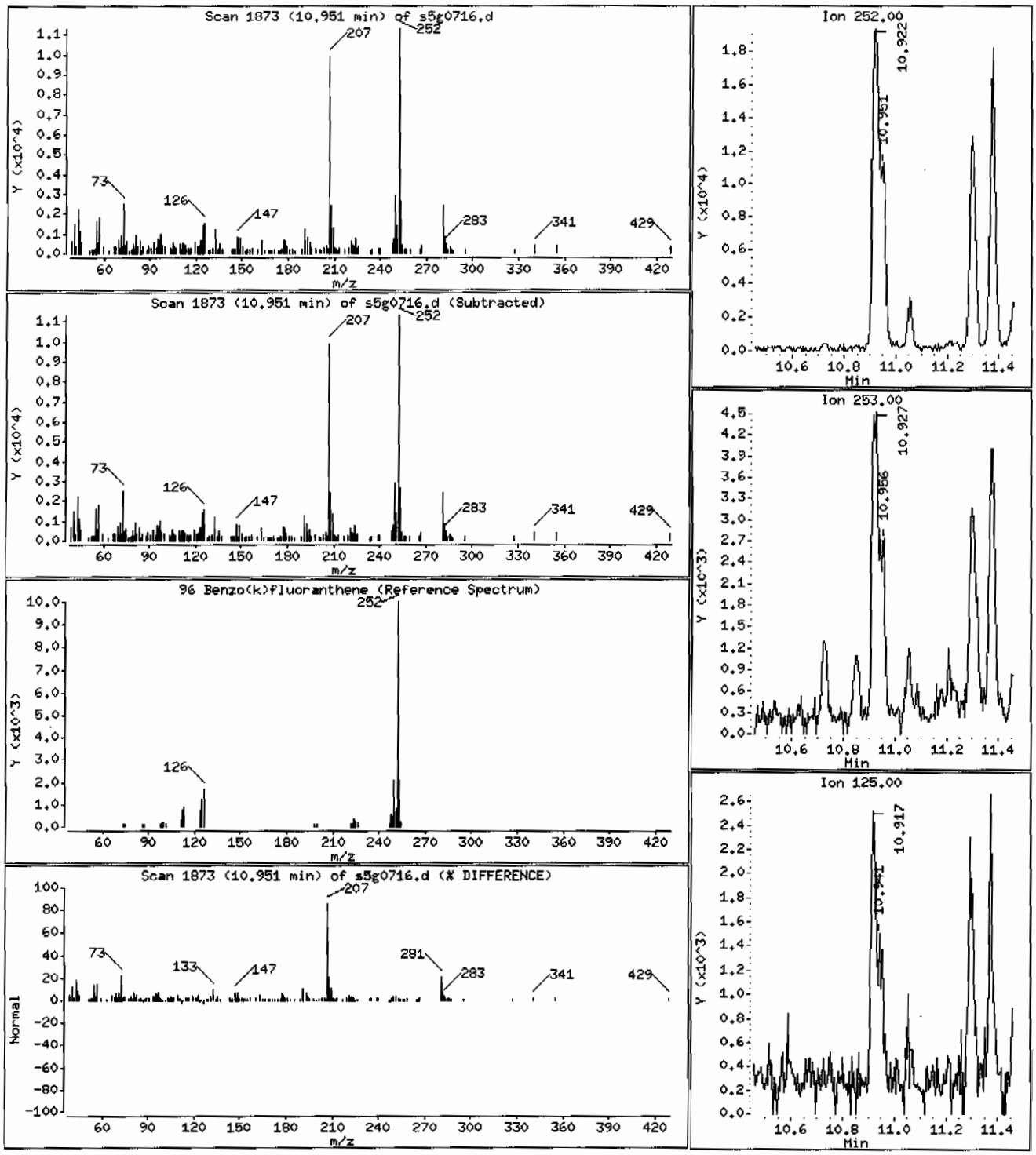

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: 1232741005188256511|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 40.2 ug/Kg

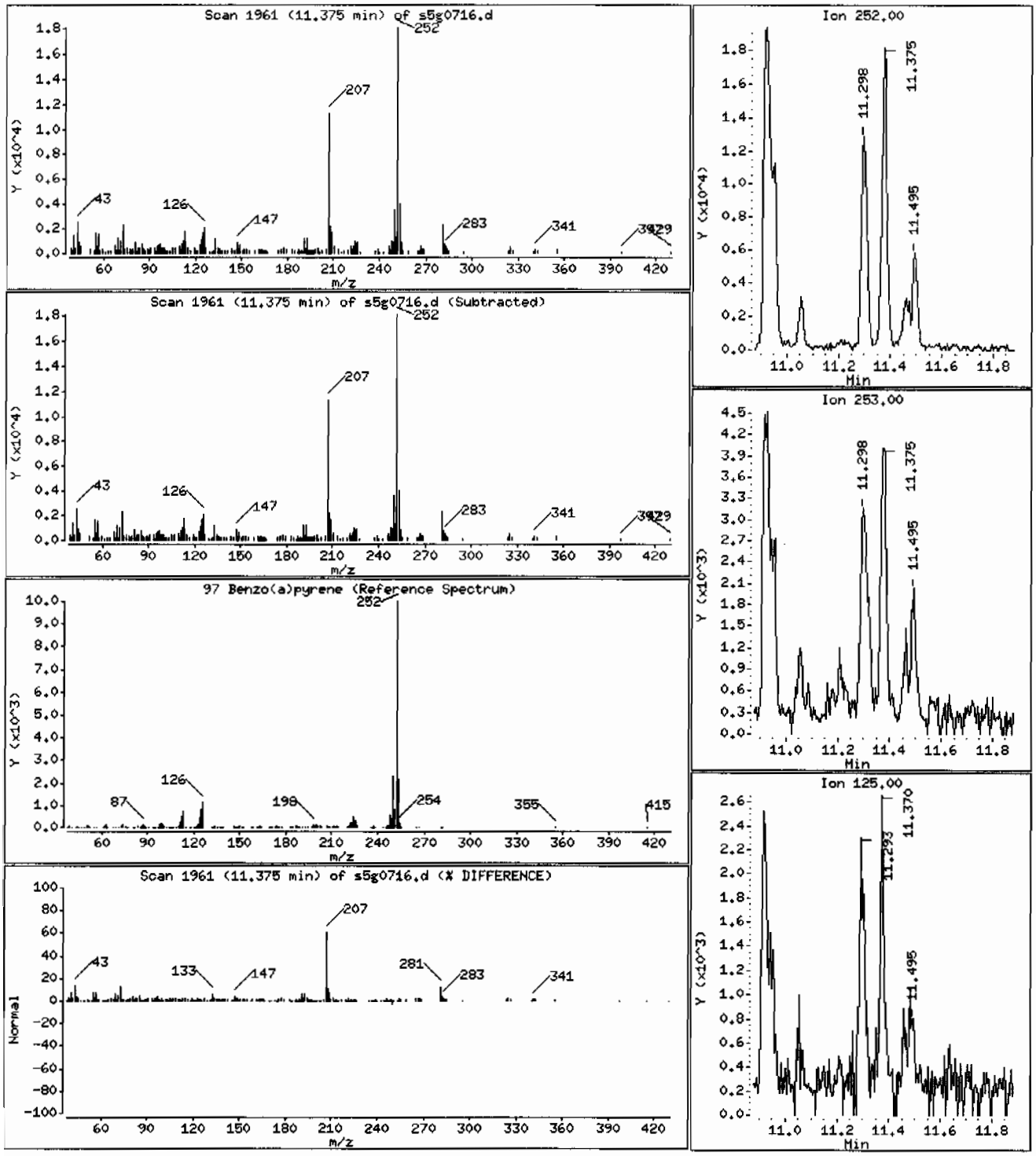

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: 1232741005188256511|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 25.9 ug/Kg

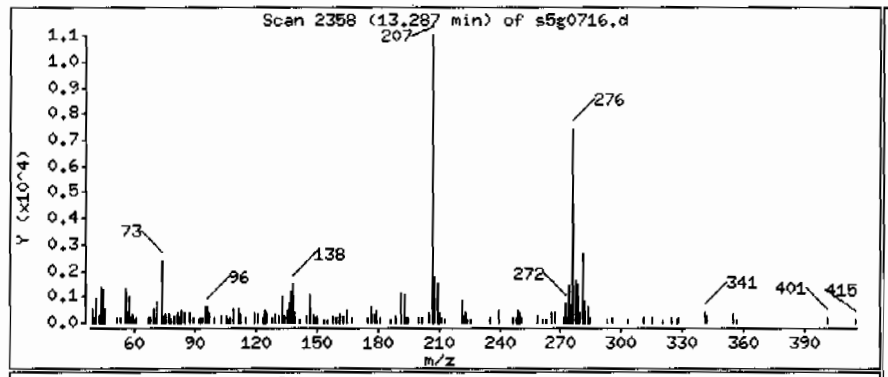

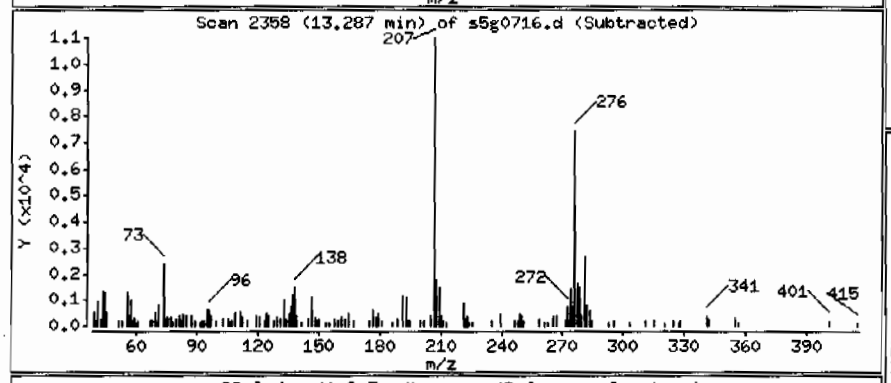

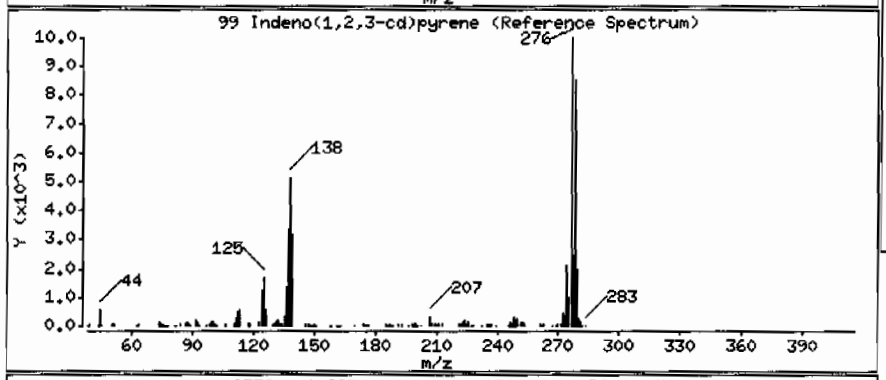

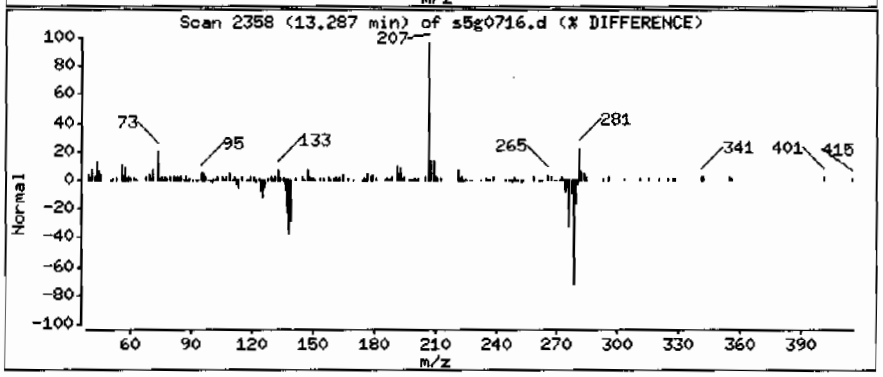

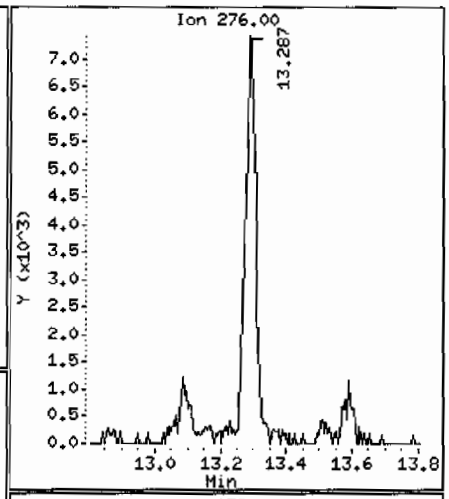

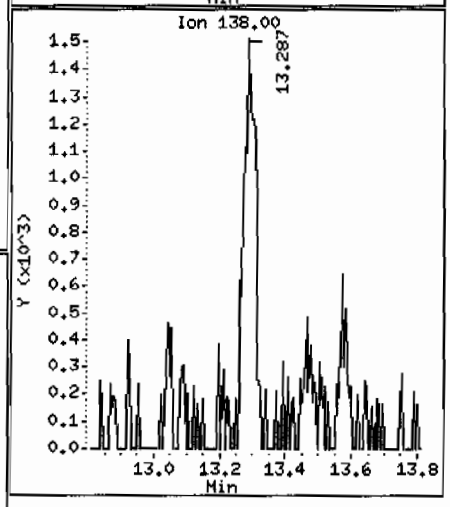

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: 1232741005188256511ISVMF11ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 30.6 ug/Kg

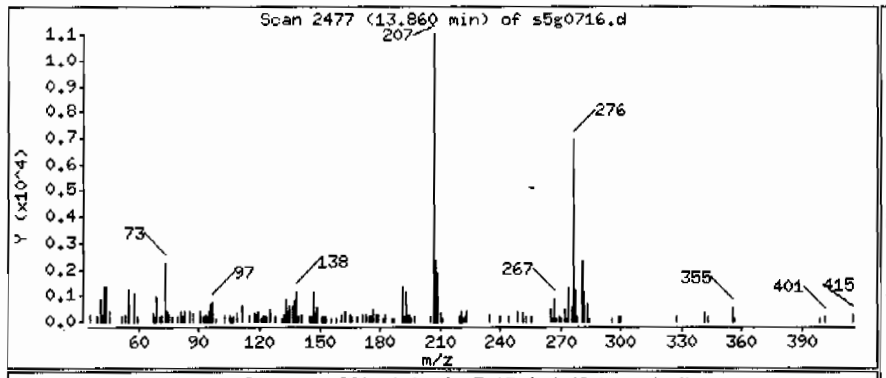

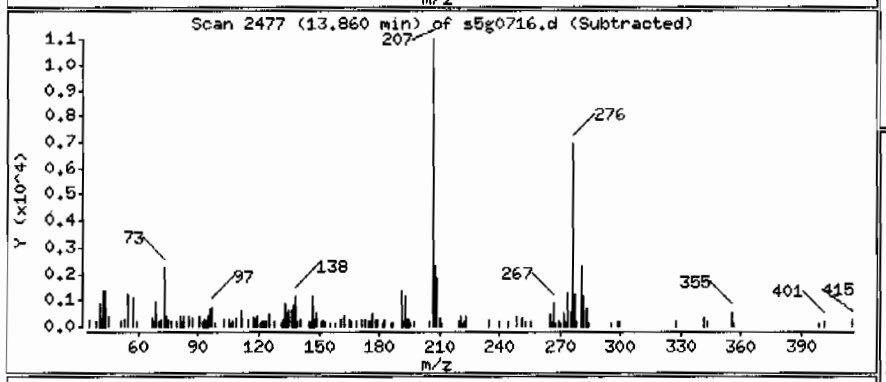

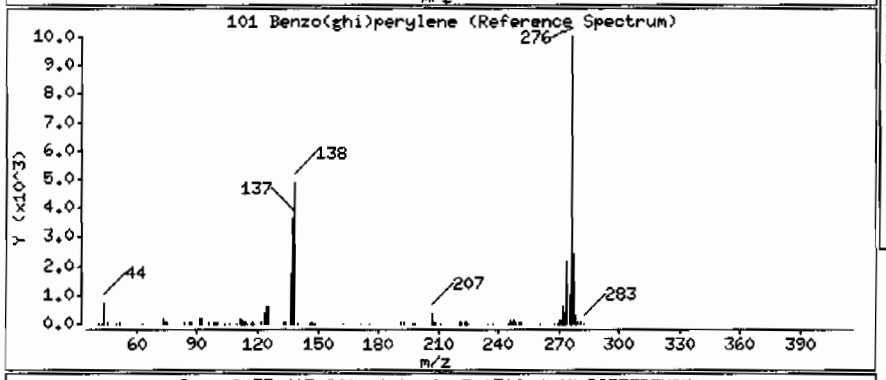

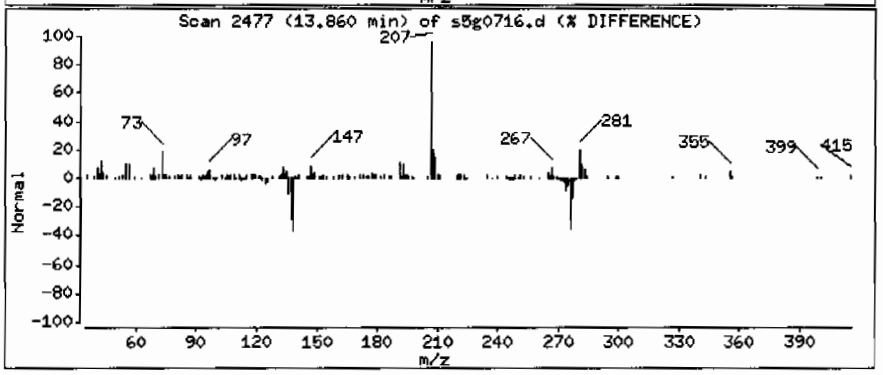

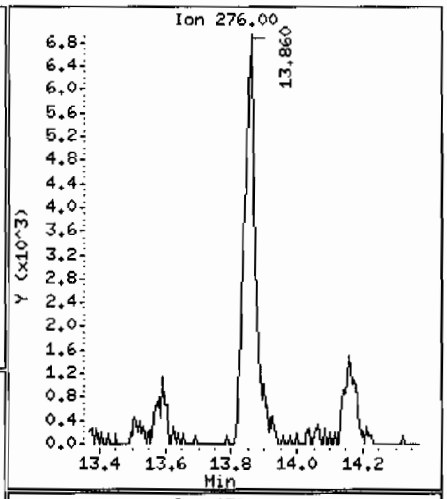

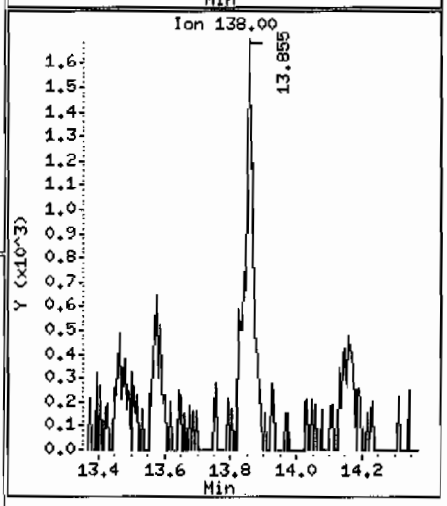

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958

Instrument: MSD5.i

Sample Info: 1232741005188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	28	C6H12O2	116

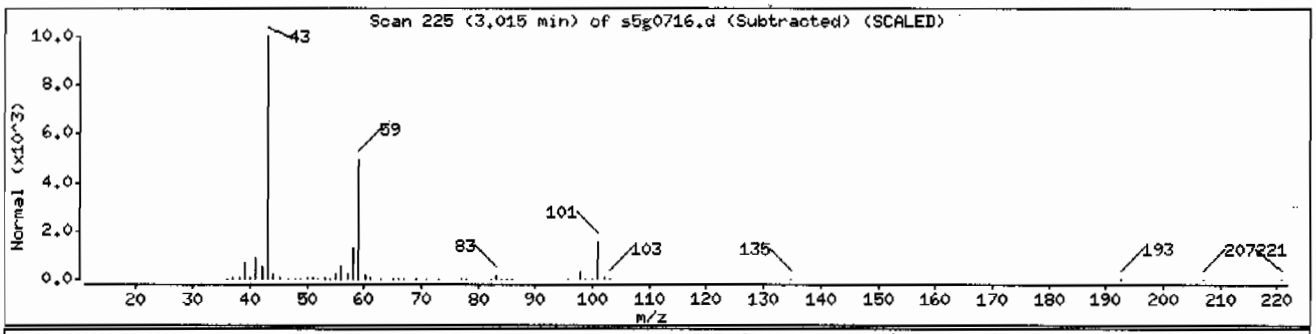

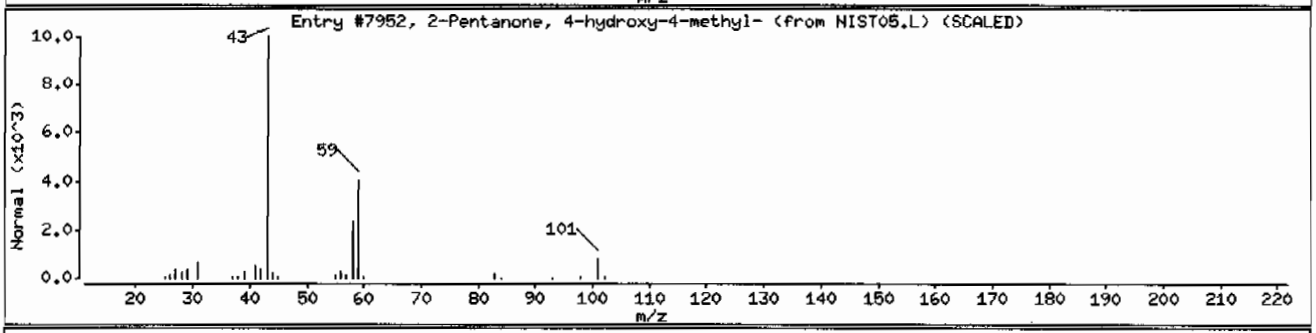

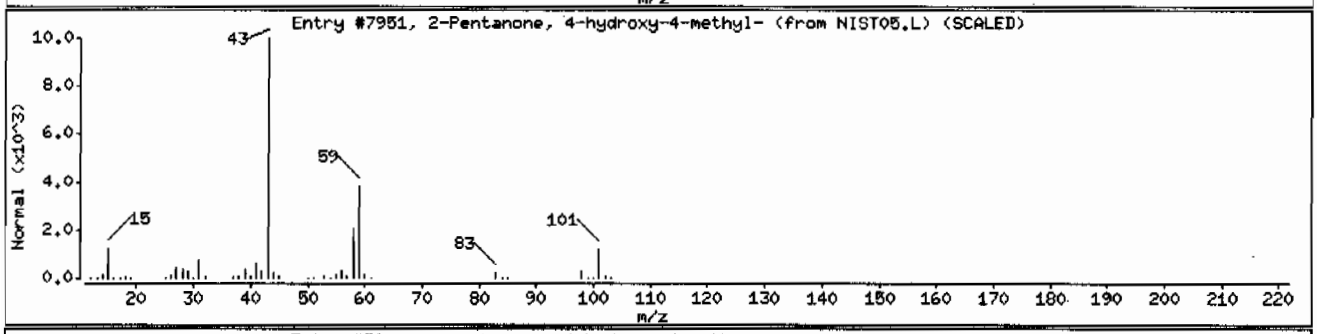

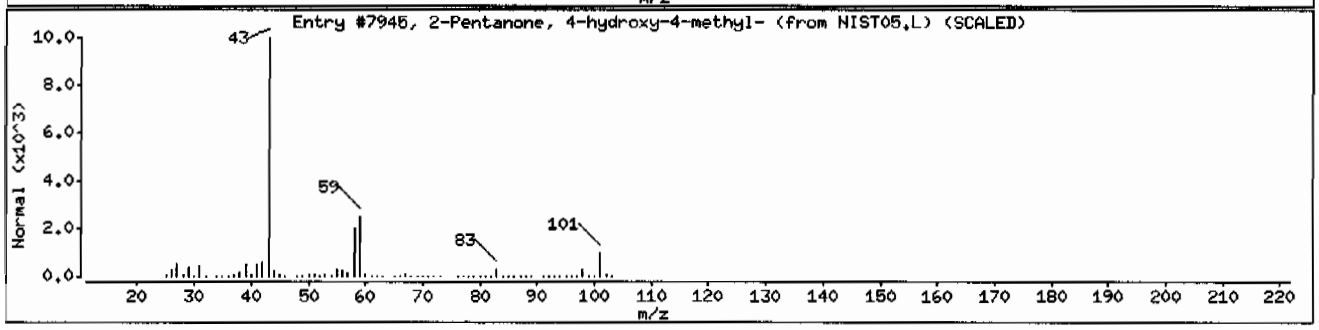

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958 Instrument: MSD5.i

Sample Info: 1232741005|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2-Propanol, 1-butoxy-	5131-66-8	NIST05.L	13971	83	C7H16O2	132
2-Propanol, 1-butoxy-	5131-66-8	NIST05.L	13973	83	C7H16O2	132
1-Propanol, 2-(1-methylethoxy)-	3944-37-4	NIST05.L	8592	53	C6H14O2	118

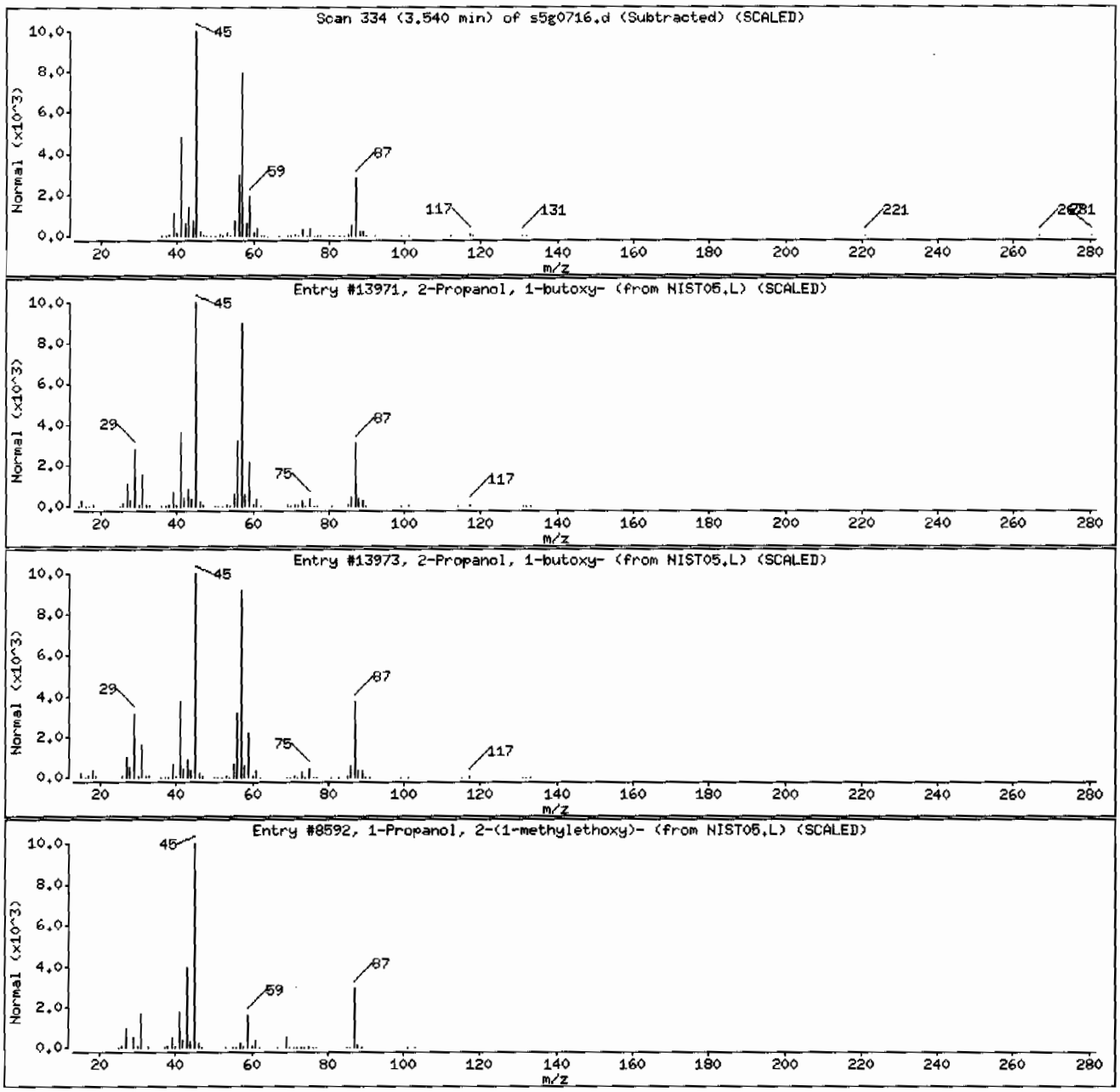

Data File: /chem/MSD5.i/s070709.b/s5g0716.d

Date : 07-JUL-2009 13:56

Client ID: CAMO-09-9958 Instrument: MSD5.i

Sample Info: 1232741005|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Ethanol, 2-(2-propenyloxy)-	111-45-5	NIST05.L	4199	28	C5H10O2	102
Diazene, bis(1,1-dimethylethyl)-	927-83-3	NIST05.L	19172	17	C8H18N2	142
1-Propene, 3-propoxy-	1471-03-0	NIST05.L	3770	9	C6H12O	100

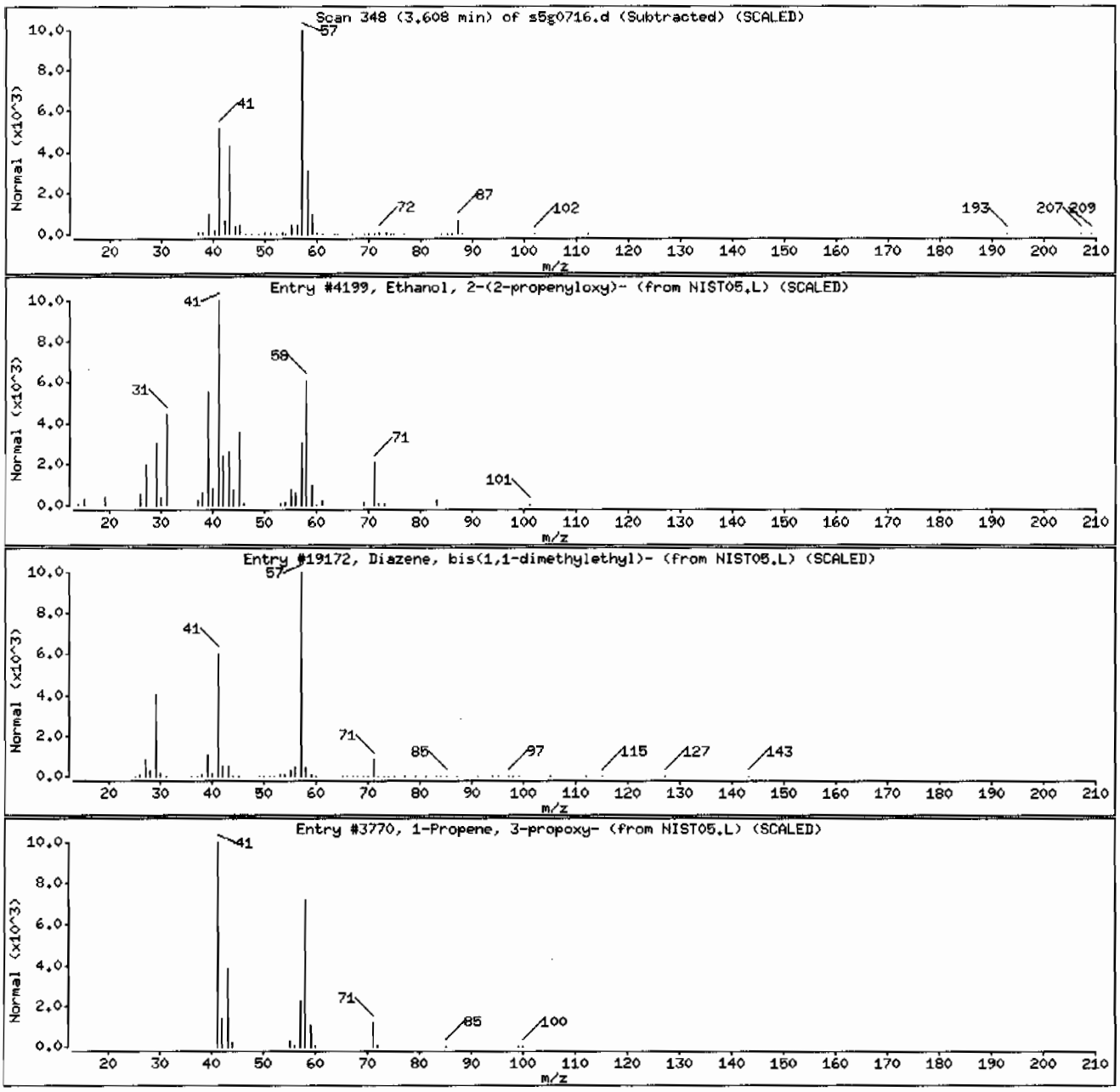

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232741009**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**19.6**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9990**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 15:50**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30.05 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0720.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	414	ug/kg	82.8	414
108-95-2	Phenol	U	414	ug/kg	82.8	414
95-57-8	2-Chlorophenol	U	414	ug/kg	82.8	414
106-46-7	1,4-Dichlorobenzene	U	414	ug/kg	82.8	414
621-64-7	N-Nitrosodipropylamine	U	414	ug/kg	82.8	414
59-50-7	4-Chloro-3-methylphenol	U	414	ug/kg	82.8	414
83-32-9	Acenaphthene	U	41.4	ug/kg	13.7	41.4
121-14-2	2,4-Dinitrotoluene	U	414	ug/kg	41.4	414
100-02-7	4-Nitrophenol	U	414	ug/kg	137	414
87-86-5	Pentachlorophenol	U	414	ug/kg	104	414
129-00-0	Pyrene	U	41.4	ug/kg	12.4	41.4
110-86-1	Pyridine	U	414	ug/kg	82.8	414
62-53-3	Aniline	U	414	ug/kg	124	414
111-44-4	bis(2-Chloroethyl) ether	U	414	ug/kg	82.8	414
541-73-1	1,3-Dichlorobenzene	U	414	ug/kg	82.8	414
100-51-6	Benzyl alcohol	U	414	ug/kg	124	414
95-50-1	1,2-Dichlorobenzene	U	414	ug/kg	82.8	414
108-60-1	bis(2-Chloroisopropyl)ether	U	414	ug/kg	82.8	414
95-48-7	o-Cresol	U	414	ug/kg	82.8	414
65794-96-9	m,p-Cresols	U	414	ug/kg	124	414
67-72-1	Hexachloroethane	U	414	ug/kg	82.8	414
98-95-3	Nitrobenzene	U	414	ug/kg	82.8	414
78-59-1	Isophorone	U	414	ug/kg	82.8	414
88-75-5	2-Nitrophenol	U	414	ug/kg	82.8	414
105-67-9	2,4-Dimethylphenol	U	414	ug/kg	145	414
111-91-1	bis(2-Chloroethoxy)methane	U	414	ug/kg	82.8	414
120-83-2	2,4-Dichlorophenol	U	414	ug/kg	82.8	414
65-85-0	Benzoic acid	U	828	ug/kg	207	828
91-20-3	Naphthalene	U	41.4	ug/kg	12.4	41.4
106-47-8	4-Chloroaniline	U	414	ug/kg	82.8	414
87-68-3	Hexachlorobutadiene	U	414	ug/kg	82.8	414
91-57-6	2-Methylnaphthalene	U	41.4	ug/kg	8.28	41.4
77-47-4	Hexachlorocyclopentadiene	U	414	ug/kg	82.8	414
88-06-2	2,4,6-Trichlorophenol	U	414	ug/kg	82.8	414
95-95-4	2,4,5-Trichlorophenol	U	414	ug/kg	82.8	414
91-58-7	2-Chloronaphthalene	U	41.4	ug/kg	13.7	41.4
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	414	ug/kg	82.8	414
99-09-2	3-Nitroaniline	U	414	ug/kg	82.8	414

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 15:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0720.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	414	ug/kg	82.8	414
606-20-2	2,6-Dinitrotoluene	U	414	ug/kg	41.4	414
208-96-8	Acenaphthylene	U	41.4	ug/kg	12.4	41.4
51-28-5	2,4-Dinitrophenol	U	828	ug/kg	157	828
132-64-9	Dibenzofuran	U	414	ug/kg	82.8	414
84-66-2	Diethylphthalate	U	414	ug/kg	82.8	414
86-73-7	Fluorene	U	41.4	ug/kg	12.4	41.4
7005-72-3	4-Chlorophenylphenylether	U	414	ug/kg	82.8	414
534-52-1	2-Methyl-4,6-dinitrophenol	U	414	ug/kg	82.8	414
100-01-6	4-Nitroaniline	U	414	ug/kg	124	414
	p-Nitroaniline					
122-39-4	Diphenylamine	U	414	ug/kg	82.8	414
122-66-7	Azobenzene	U	414	ug/kg	82.8	414
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	414	ug/kg	82.8	414
118-74-1	Hexachlorobenzene	U	414	ug/kg	82.8	414
85-01-8	Phenanthrene	U	41.4	ug/kg	12.4	41.4
120-12-7	Anthracene	U	41.4	ug/kg	8.28	41.4
84-74-2	Di-n-butylphthalate	U	414	ug/kg	82.8	414
206-44-0	Fluoranthene	U	41.4	ug/kg	12.4	41.4
85-68-7	Butylbenzylphthalate	U	414	ug/kg	82.8	414
56-55-3	Benzo(a)anthracene	U	41.4	ug/kg	12.4	41.4
91-94-1	3,3'-Dichlorobenzidine	U	414	ug/kg	124	414
218-01-9	Chrysene	U	41.4	ug/kg	12.4	41.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	414	ug/kg	82.8	414
117-84-0	Di-n-octylphthalate	U	414	ug/kg	82.8	414
205-99-2	Benzo(b)fluoranthene	U	41.4	ug/kg	12.4	41.4
207-08-9	Benzo(k)fluoranthene	U	41.4	ug/kg	12.4	41.4
50-32-8	Benzo(a)pyrene	U	41.4	ug/kg	12.4	41.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	41.4	ug/kg	12.4	41.4
53-70-3	Dibenzo(a,h)anthracene	U	41.4	ug/kg	12.4	41.4
191-24-2	Benzo(ghi)perylene	U	41.4	ug/kg	12.4	41.4
120-82-1	1,2,4-Trichlorobenzene	U	414	ug/kg	82.8	414

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.07	239	ug/kg		J
	Unknown Aldol Condensate	3.02	449	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 15:50	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	s5g0720.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
506-30-9	Eicosanoic acid	9.06	241	ug/kg	98	NJ
1599-67-3	1-Docosene	10.21	237	ug/kg	94	NJ
	Unknown	13.37	206	ug/kg		J
83-47-6	.gamma.-Sitosterol	14.05	3000	ug/kg	99	NJ
1000143-61-3	N-(4-Methoxyphenyl)-2-hydroxyimino-aceta	14.4	321	ug/kg	92	NJ
1058-61-3	Stigmast-4-en-3-one	15.33	693	ug/kg	91	NJ
	Unknown	16.7	415	ug/kg		J
	Unknown	17.71	168	ug/kg		J
62906-36-9	1,2-Dicarbadodecaborane(12), 1-[(propylt	18.63	4040	ug/kg	90	NJ
	Unknown	19.41	4170	ug/kg		J
	Unknown	19.52	173	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0720.d
Lab Smp Id: 232741009 Client Smp ID: CAMO-09-9990
Inj Date : 07-JUL-2009 15:50
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741009|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.05000	weight of sample
M	19.63320	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.002	4.003	(1.000)	363904	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1279787	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	834202	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1590944	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1663440	40.0000	
* 98 Perylene-d12	264	11.466	11.462	(1.000)	1426578	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.797)	534957	66.9520	2770
$ 5 Phenol-d5	99	3.718	3.714	(0.929)	738574	70.1057	2900
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	306853	32.3572	1340
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	711813	32.9935	1370
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	266974	78.4365	3250
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.894)	1095203	43.0214	1780

ION RATIO REPORT

SV REPORT

Data file: s5g0720.d
Report Date: 07/07/2009 16:56
Lab. ID: 232741009 SampleType: SAMPLE
Injection Date: 07-JUL-2009 15:50
Operator: RMB Instrument: MSD5.i
Sample Info: |232741009|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2524
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	44822	3.71	3.79	80-120	100	(T)
93	5187	3.77	3.79	154-214	12	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	45201	4.36	4.24	80-120	100	(T)
42	30757	4.36	4.24	56-116	68	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	1736	4.87	4.64	80-120	100	(T)
122	510	4.87	4.64	52-112	29	(QT)
77	4816	4.87	4.64	53-113	277	(QT)
31 4-Chloroaniline			CAS#: 106-47-8			
127	119	4.92	4.90	80-120	100	( )
65	162	4.92	4.90	8- 68	137	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	1112	6.03	6.08	80-120	100	( )
92	1783	6.02	6.08	79-139	160	(Q)
108	962	6.03	6.08	0- 42	87	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	177859	6.13	5.89	80-120	100	(T)
164	833183	6.13	5.89	0- 40	468	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	108614	6.13	5.94	80-120	100	(T)
63	1780	6.13	5.94	55-115	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	108614	6.13	6.25	80-120	100	(T)
89	1830	6.13	6.24	39- 99	2	(QT)
63	1780	6.13	6.24	20- 80	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	10719	6.73	6.55	80-120	100	(T)
165	11057	6.73	6.55	61-121	103	(T)
167	3571	6.73	6.55	0- 44	33	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	998	6.73	6.56	80-120	100	(T)
105	1742	6.73	6.56	4- 64	175	(QT)
51	971	6.73	6.56	31- 91	97	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	18747	6.73	6.91	80-120	100	(T)
141	96707	6.73	6.91	33- 93	516	(QT)
250	36387	6.73	6.91	68-128	194	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0720.d
Lab Smp Id: 232741009 Client Smp ID: CAMO-09-9990
Inj Date : 07-JUL-2009 15:50
Operator : RMB Inst ID: MSD5.i
Smp Info : |232741009|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.05000	weight of sample
M	19.63320	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.002	2330205	40.000
* 91 Chrysene-d12	9.723	4664237	40.000
* 98 Perylene-d12	11.466	3500979	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.067	335770	5.76377948	239	0		0	10
Unknown Aldol Condensate				CAS #:			
3.020	631425	10.8389613	449	0		0	10
Eicosanoic acid				CAS #: 506-30-9			
9.063	679317	5.82574988	241	98	NIST05.L	132301	91
1-Docosene				CAS #: 1599-67-3			
10.214	667669	5.72585562	237	94	NIST05.L	129889	91
Unknown				CAS #:			
13.368	436040	4.98191973	206	0		0	98
.gamma.-Sitosterol				CAS #: 83-47-6			
14.047	6338866	72.4239094	3000	99	NIST05.L	174402	98
N-(4-Methoxyphenyl)-2-hydroxyimino-aceta				CAS #: 1000143-61-3			
14.399	677549	7.74124841	320	92	NIST05.L	53297	98
Stigmast-4-en-3-one				CAS #: 1058-61-3			
15.333	1464430	16.7316594	693	91	NIST05.L	173936	98
Unknown				CAS #:			
16.700	877642	10.0273849	415	0		0	98
Unknown				CAS #:			
17.712	354161	4.04642443	168	0		0	98
1,2-Dicarbadodecaborane(12), 1-[(propylt				CAS #: 62906-36-9			
18.627	8538619	97.5569103	4040	90	NIST05.L	81316	98
Unknown				CAS #:			
19.407	8817379	100.741856	4170	0		0	98
Unknown				CAS #:			
19.517	364940	4.16957779	173	0		0	98

Data File: /chem/MSD5.i/s070709.b/s5g0720.d
Date : 07-JUL-2009 15:50
Client ID: CAMO-09-9990
Sample Info: 1232741009188256511SVMF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

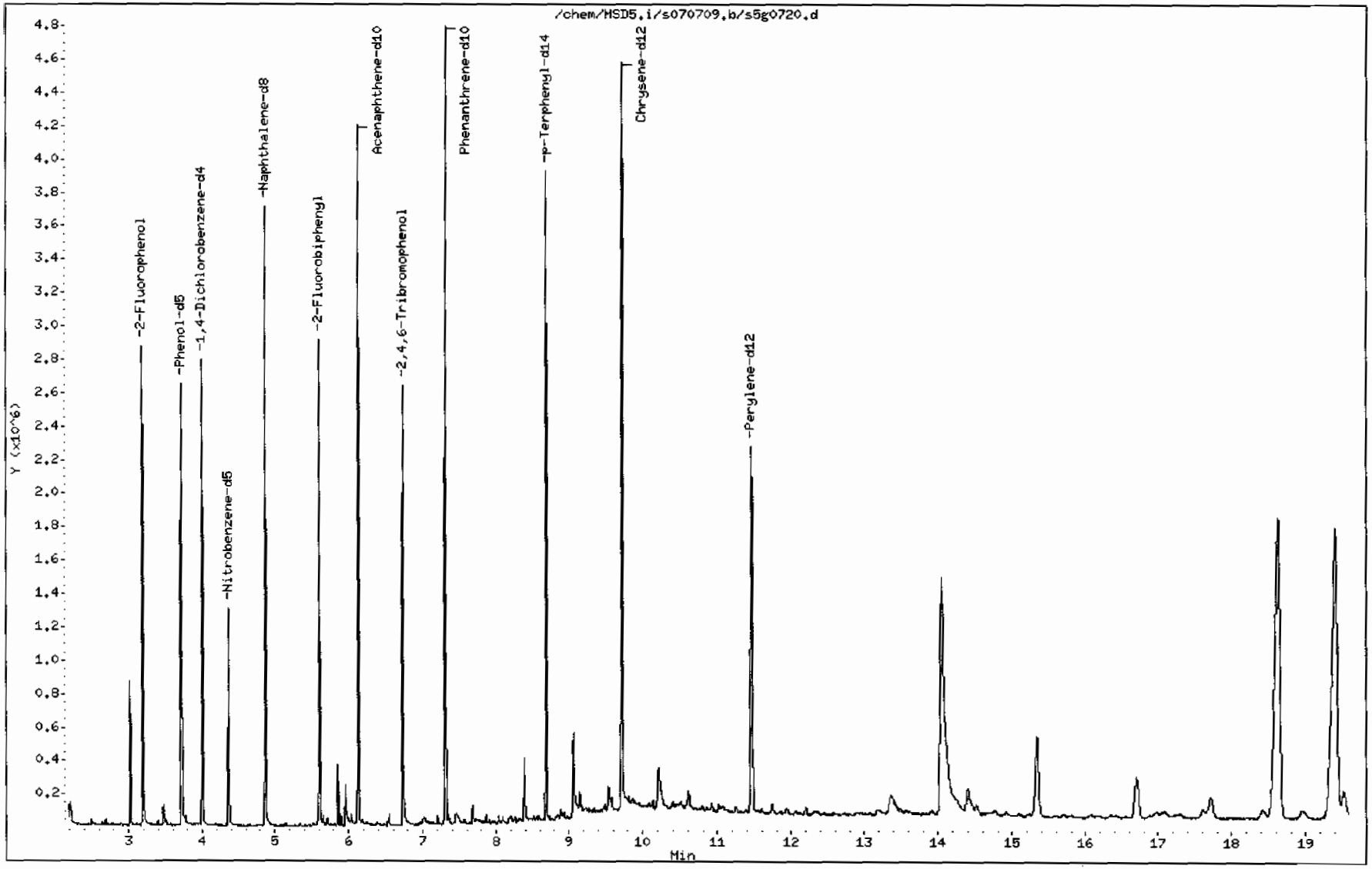

Data File: /chem/MSD5.i/s070709.b/s5g0720.d

Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990

Instrument: MSD5.i

Sample Info: |2327410091882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	45	C5H12O2	104
Ethane, 1,1,1-trimethoxy-	1445-45-0	NIST05.L	8968	28	C5H12O3	120
Methylglyoxal	78-98-8	NIST05.L	613	27	C3H4O2	72

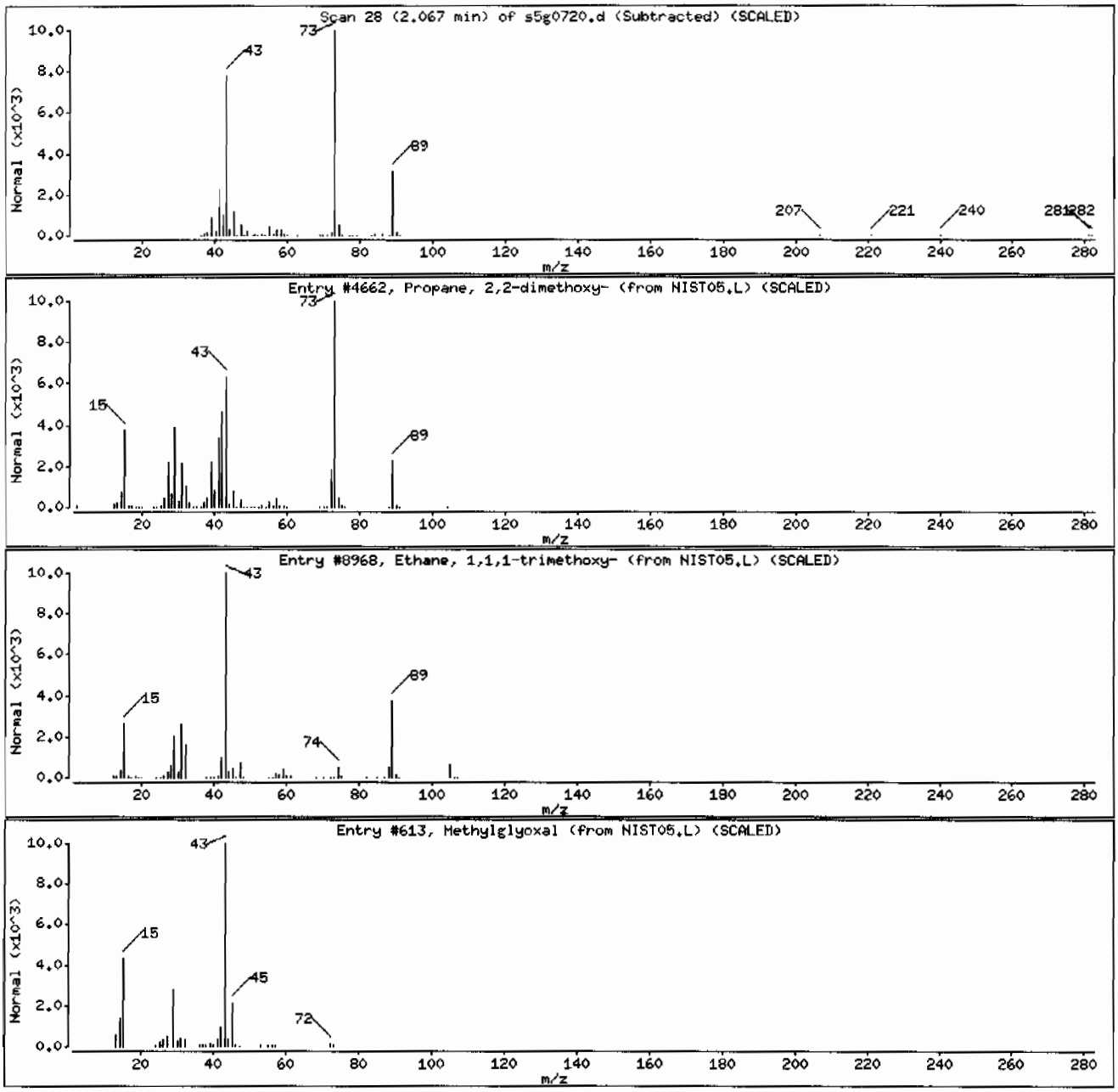

Data File: /chem/MSD5.i/s070709.b/s5g0720.d

Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990

Instrument: MSD5.i

Sample Info: 1232741009188256511SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	64	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	56	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116

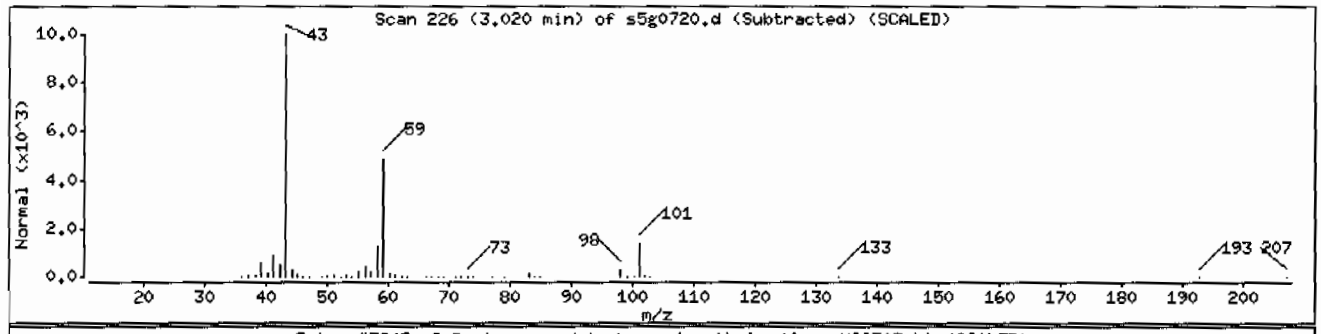

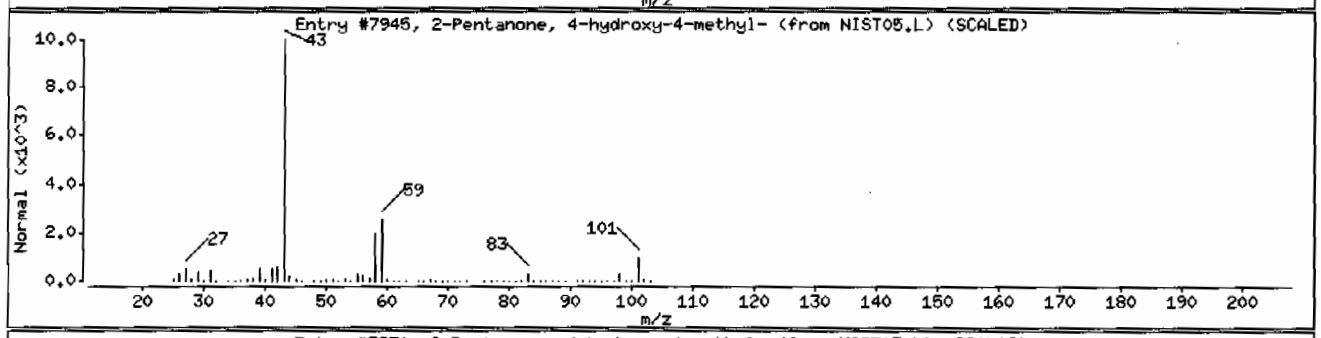

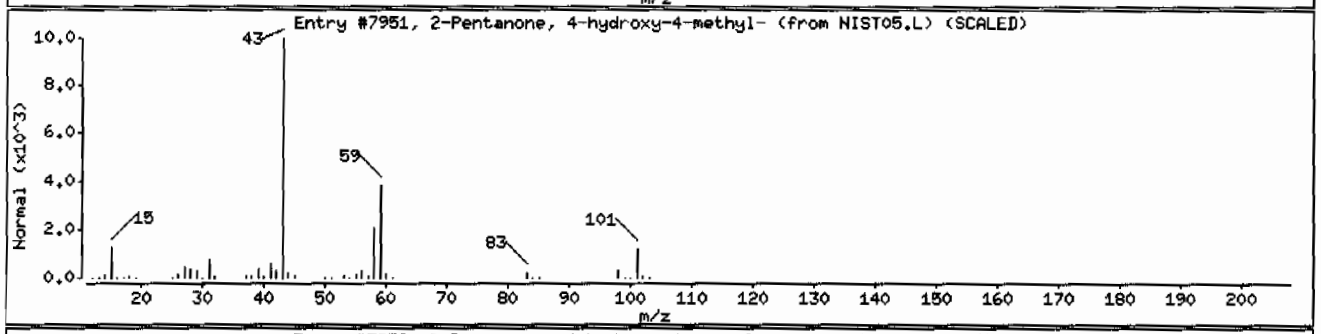

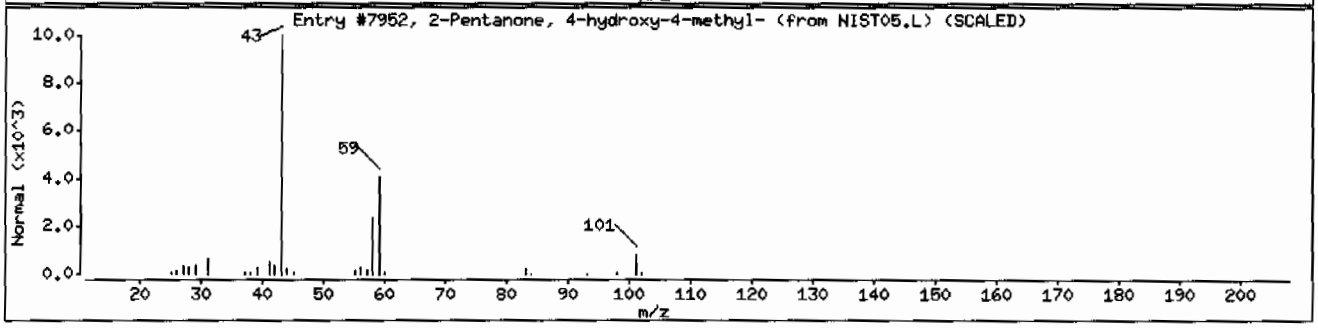

Data File: /chem/MSD5.i/s070709.b/s5g0720.d

Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990

Instrument: MSD5.i

Sample Info: |2327410091882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosanoic acid	506-30-9	NIST05.L	132301	98	C20H40O2	312
Heptadecanoic acid	506-12-7	NIST05.L	105614	97	C17H34O2	270
Eicosanoic acid	506-30-9	NIST05.L	132302	91	C20H40O2	312

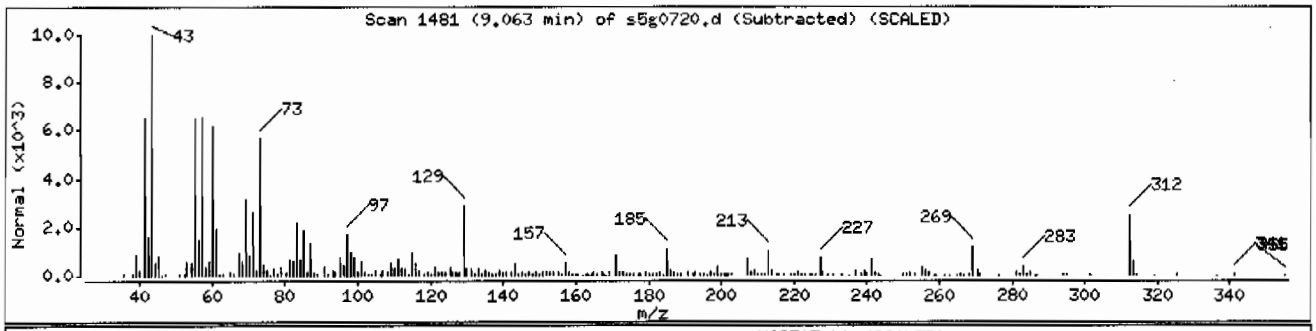

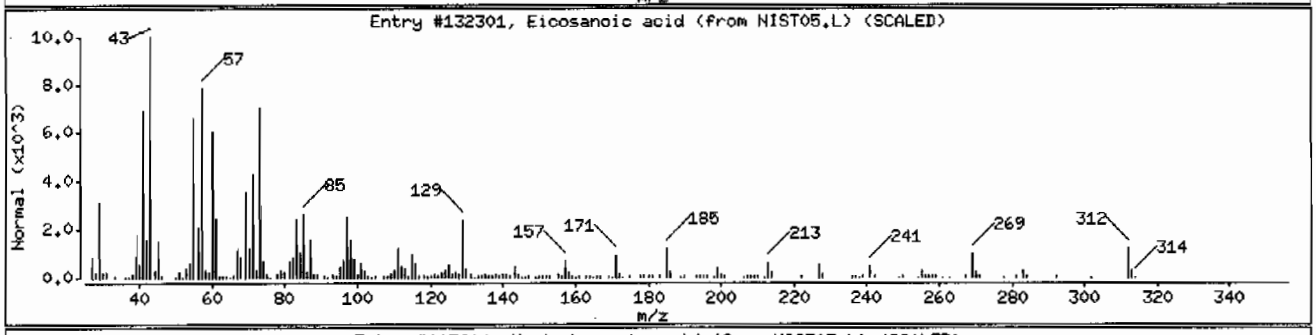

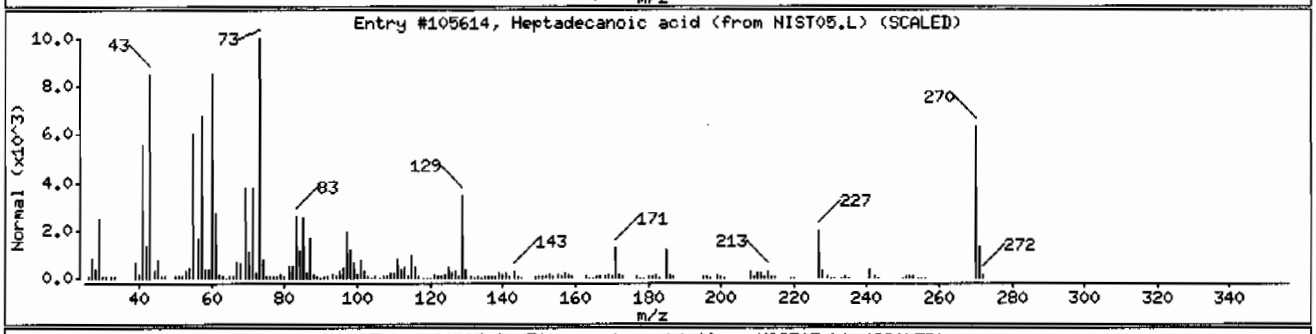

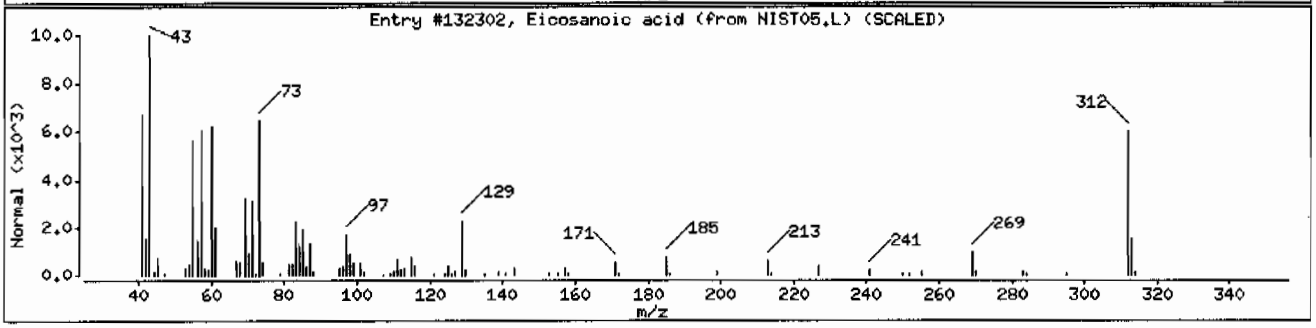

Data File: /chem/MSD5.i/s070709.b/s5g0720.d

Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990

Instrument: MSD5.i

Sample Info: |2327410091882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Docosene	1599-67-3	NIST05.L	129889	94	C22H44	308
1-Triacontanol	593-50-0	NIST05.L	178480	74	C30H62O	438
Cyclohexane, 1,1'-(2-propyl-1,3-propaned	55030-21-2	NIST05.L	92245	70	C18H34	250

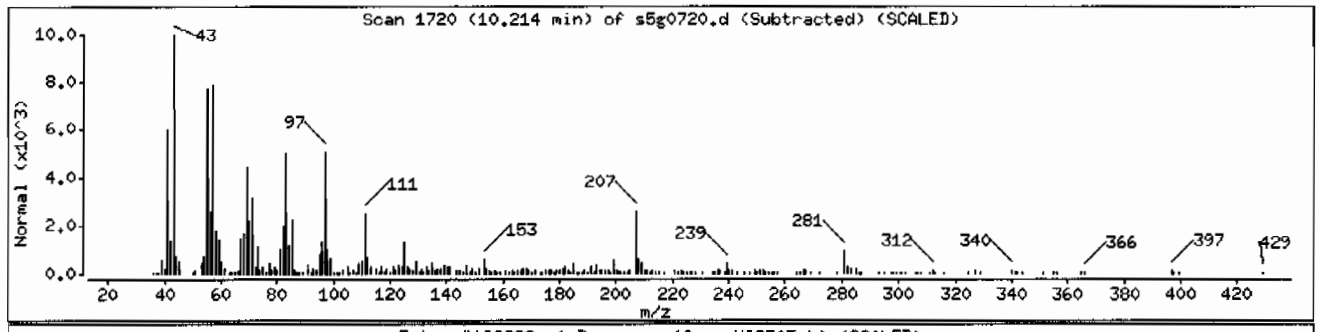

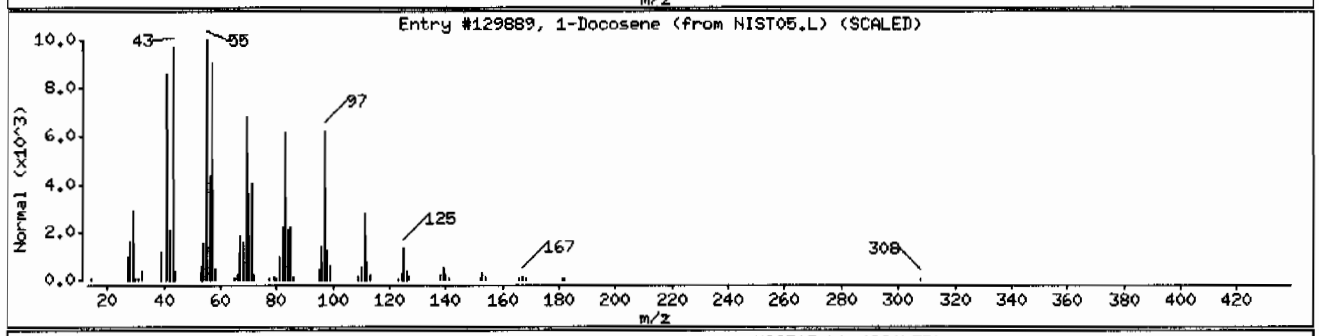

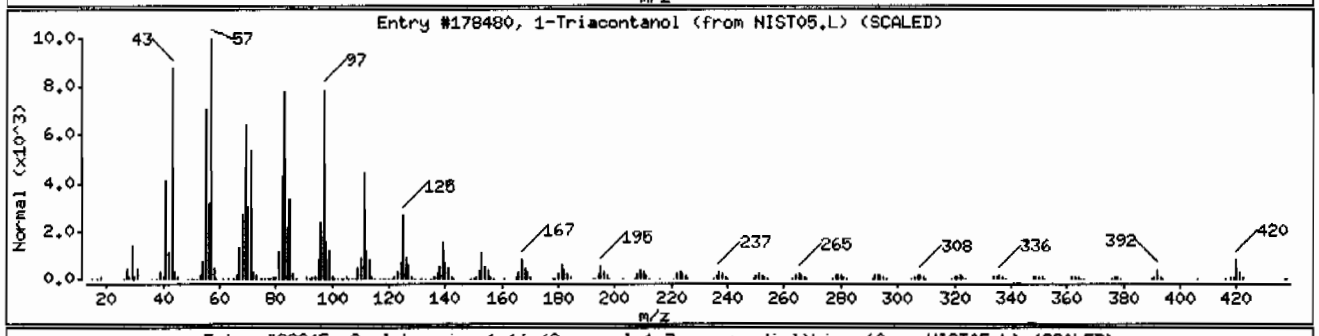

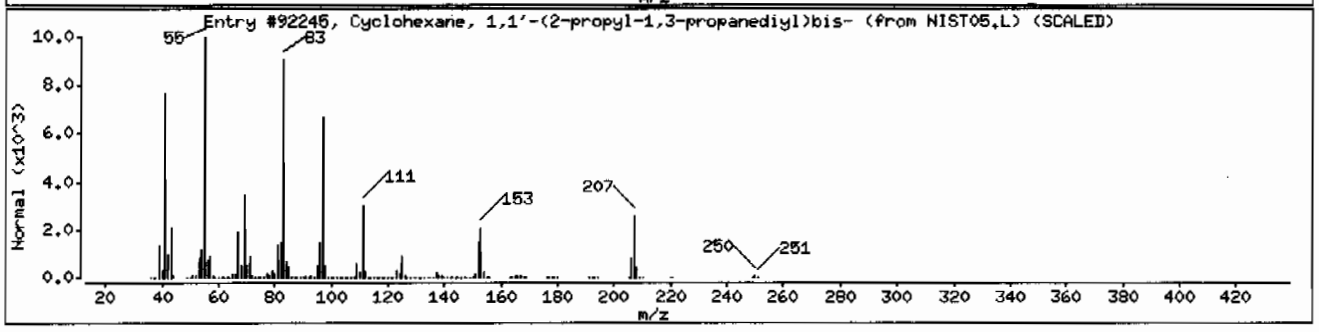

Data File: /chem/MSD5.i/s070709.b/s5g0720.d

Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990

Instrument: MSD5.i

Sample Info: 1232741009188256511|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Campesterol	474-62-4	NIST05.L	171432	56	C28H480	400
Silicic acid, diethyl bis(trimethylsilyl	3555-45-1	NIST05.L	121708	43	C10H2804Si3	296
5-Methyl-2-phenylindolizine	36944-99-7	NIST05.L	62231	30	C15H13N	207

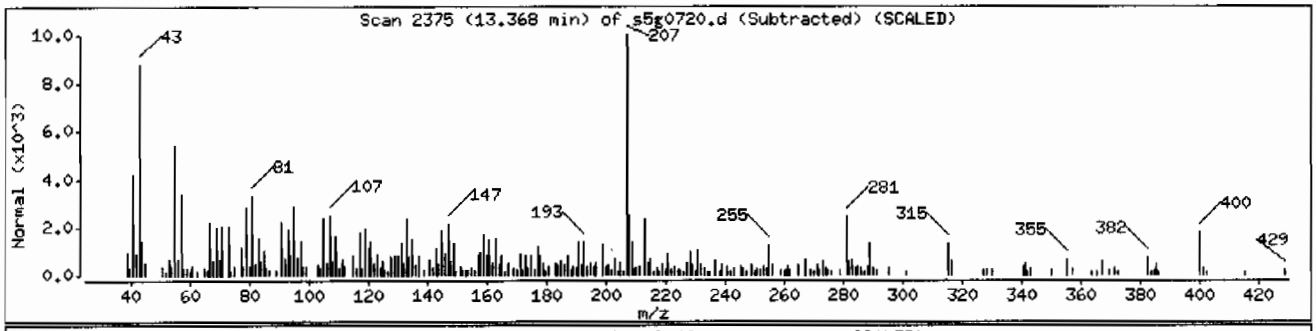

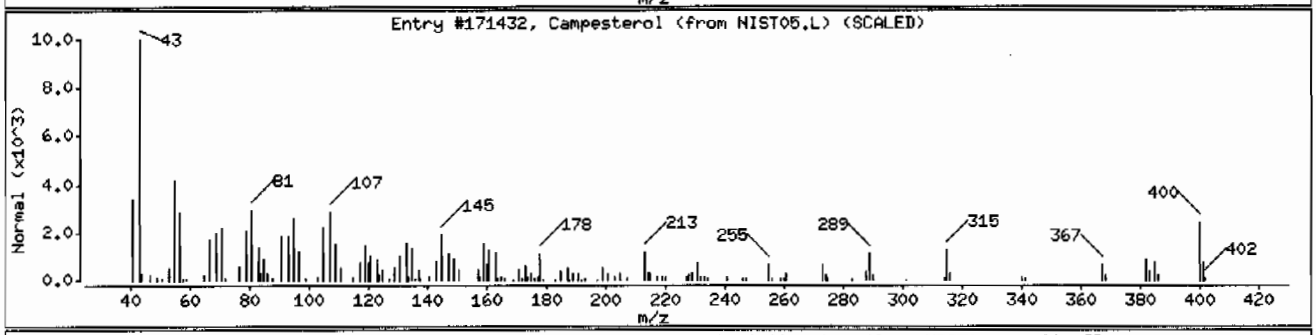

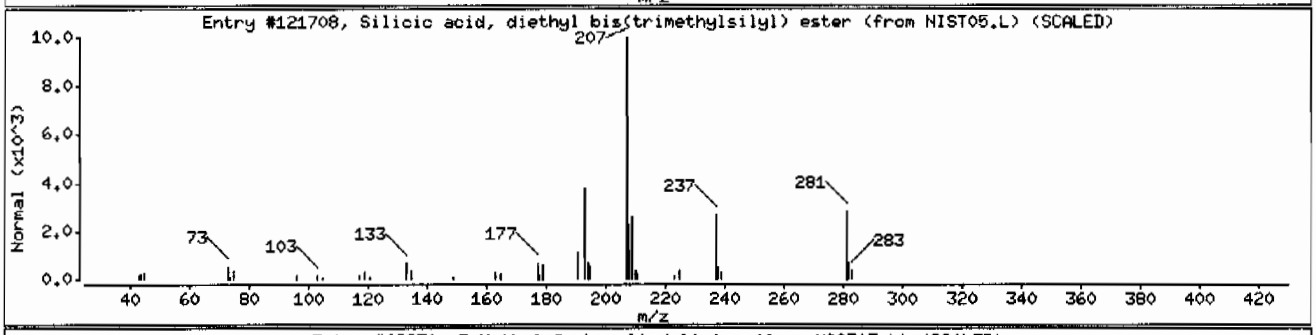

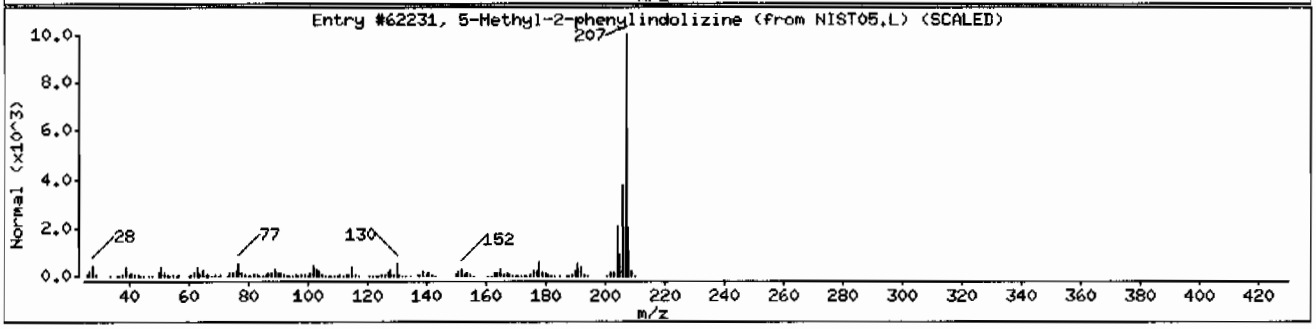

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Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990

Instrument: MSD5.i

Sample Info: 1232741009188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
.gamma.-Sitosterol	83-47-6	NIST05.L	174402	99	C29H50O	414
.beta.-Sitosterol	83-46-5	NIST05.L	174399	95	C29H50O	414
.beta.-Sitosterol	83-46-5	NIST05.L	174401	91	C29H50O	414

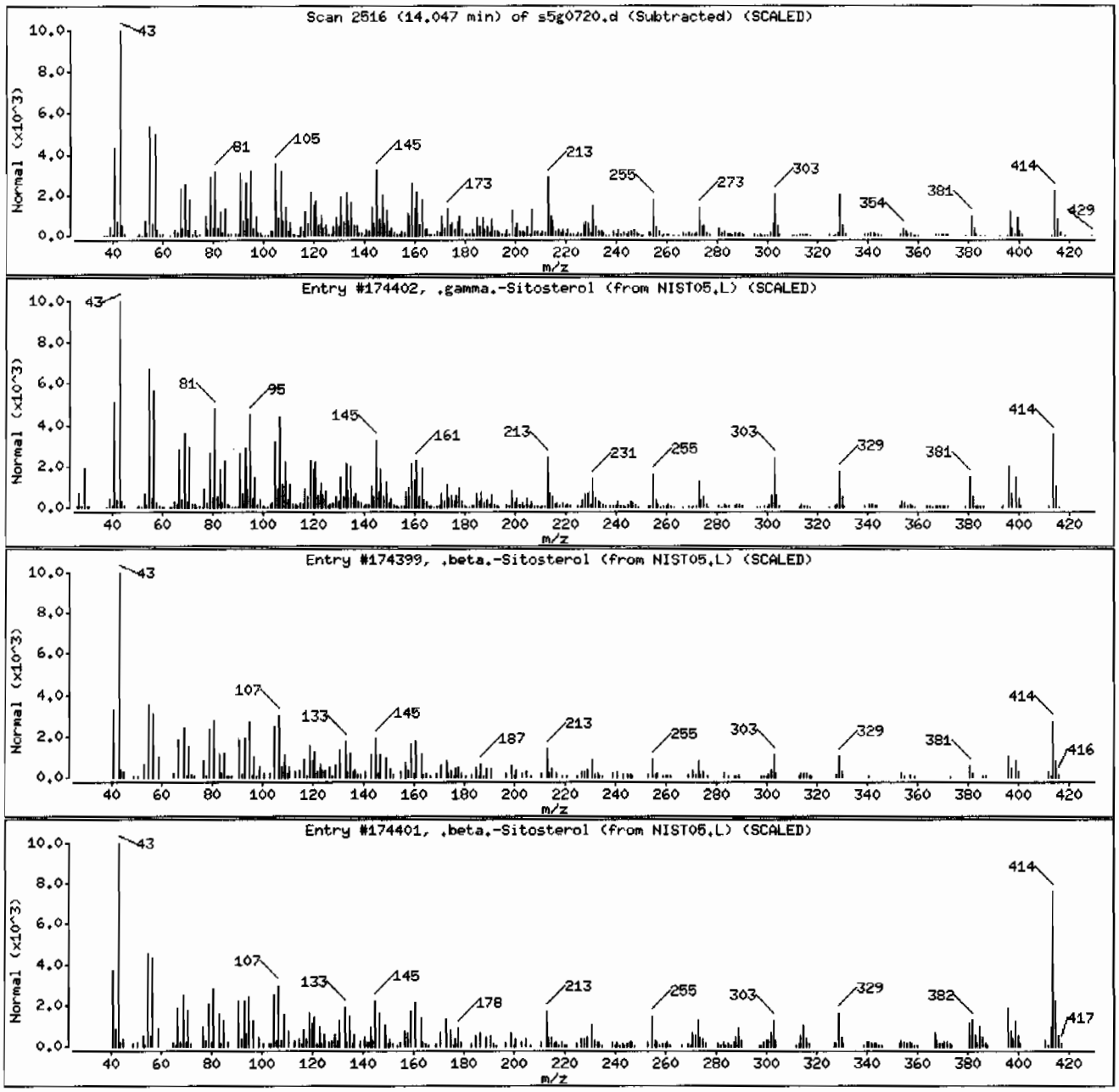

Data File: /chem/MSD5.i/s070709.b/s5g0720.d

Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990 Instrument: MSD5.i

Sample Info: |2327410091882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
N-(4-Methoxyphenyl)-2-hydroxyimino-aceta	1000143-61-3	NIST05.L	53297	92	C9H10N2O3	194
2-Amino-benzothiazole-6-carboxylic acid	1000318-48-6	NIST05.L	53255	46	C8H6N2O2S	194
1H-Benzimidazole, 2-phenyl-	716-79-0	NIST05.L	52780	25	C13H10N2	194

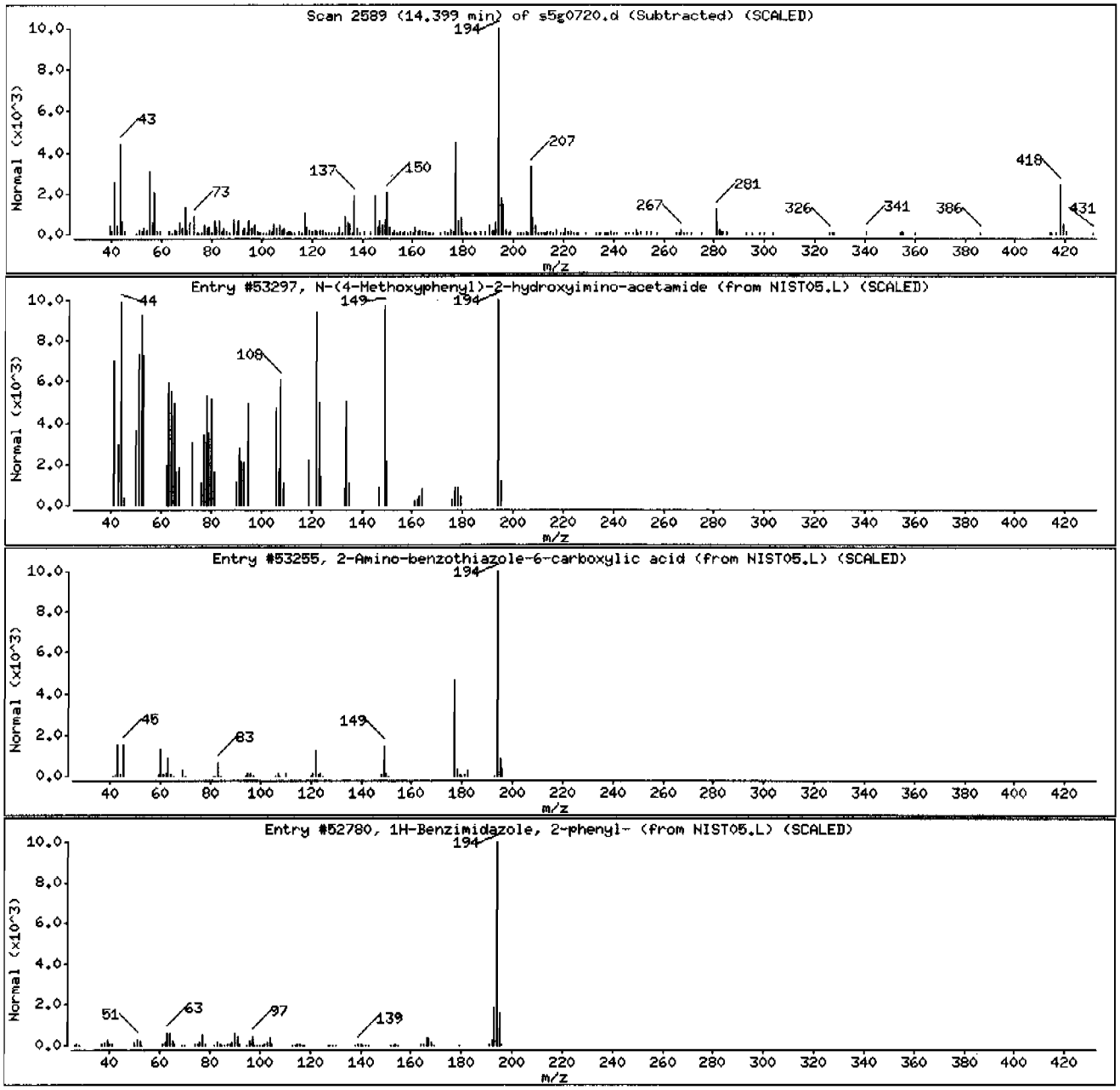

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Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990 Instrument: MSD5.i

Sample Info: 1232741009|88256511|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Stigmast-4-en-3-one	1058-61-3	NIST05.L	173936	91	C29H480	412
1-Naphthalenecarboxylic acid, 8-(dimethy	69674-55-1	NIST05.L	77956	56	C14H15N02	229
Cholest-5-en-3-one, 4,4-dimethyl-	2220-42-0	NIST05.L	173939	46	C29H480	412

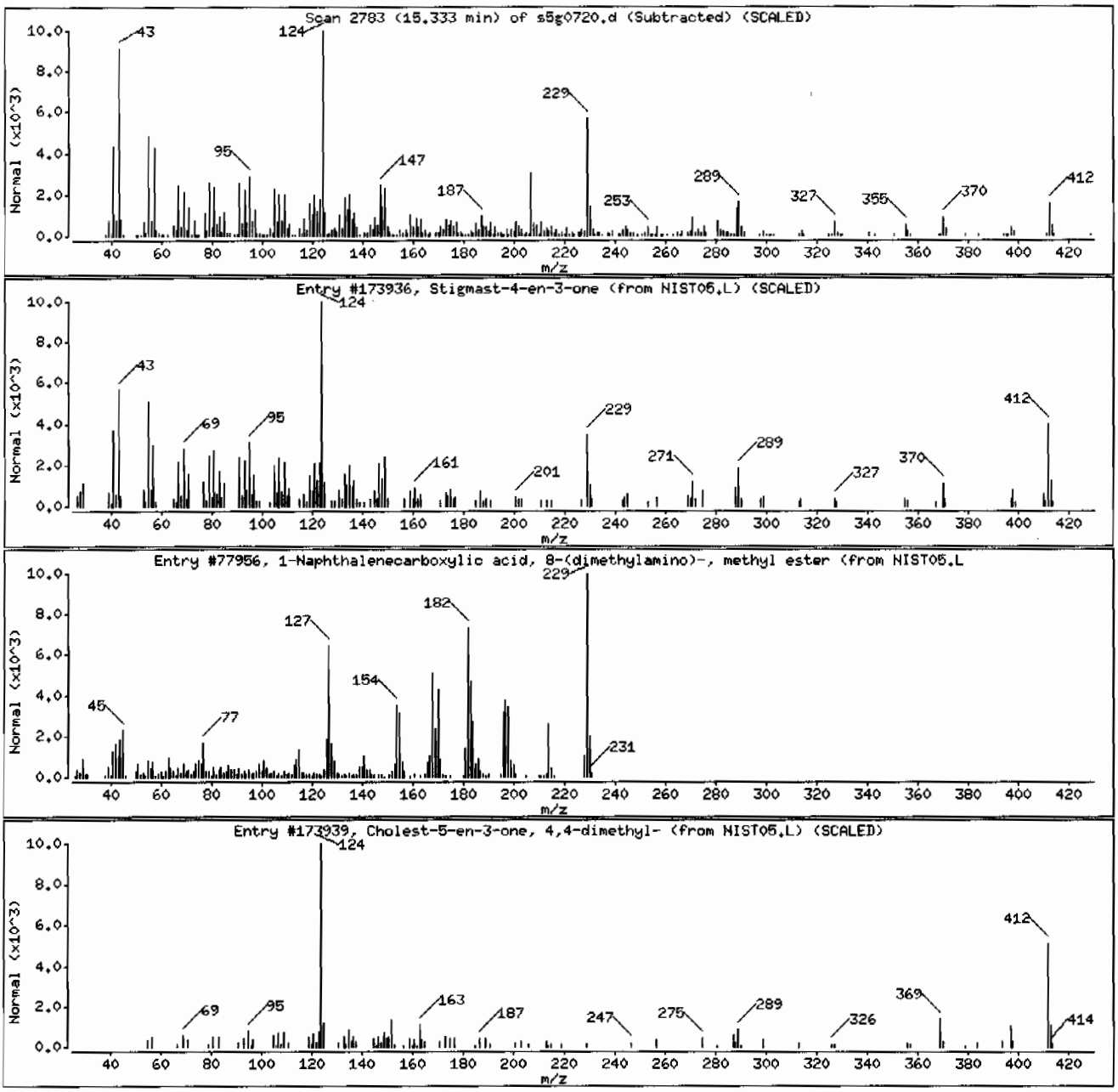

Data File: /chem/MSD5.i/s070709.b/s5g0720.d

Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990

Instrument: MSD5.i

Sample Info: |2327410091882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Friedelan-3-one	559-74-0	NIST05.L	176566	64	C30H500	426
2,2,6-Trimethyl-1-(2-methyl-cyclobut-2-e	1000188-72-8	NIST05.L	69963	56	C15H220	218
D:A-Friedoursan-3-one	89950-00-5	NIST05.L	176576	46	C30H500	426

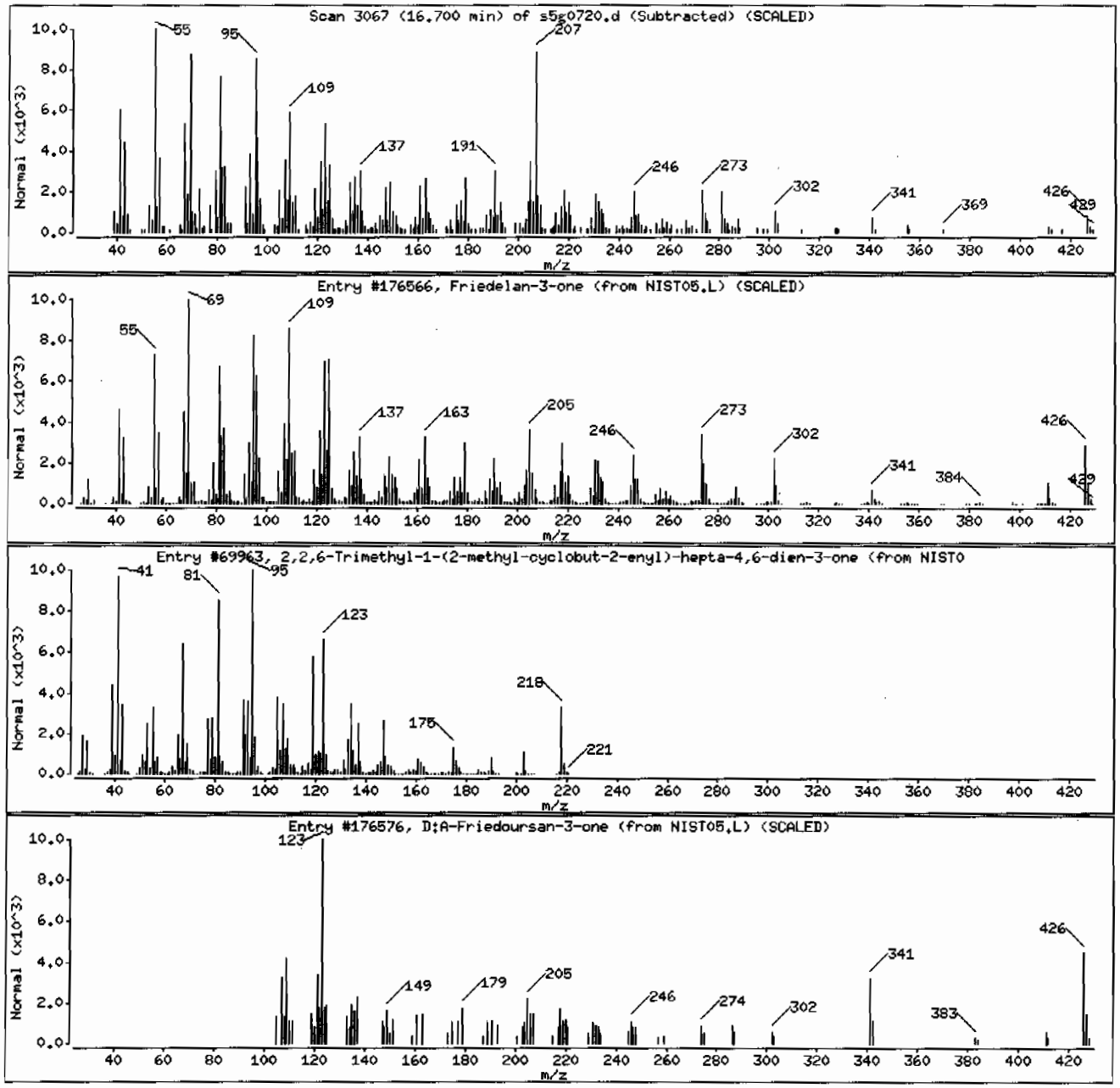

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Date : 07-JUL-2009 15:50

Client ID: CAMD-09-9990 Instrument: MSD5.i

Sample Info: 1232741009188256511SVMF11LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
9,10-Methanoanthracen-11-ol, 9,10-dihydr	126615-74-5	NIST05.L	92233	30	C18H18O	250
2-Amino-4,4,6,6-tetramethyl-4,6-dihydro-	1000275-36-2	NIST05.L	72381	30	C11H14N2OS	222
Silane, trimethyl[5-methyl-2-(1-methylet	55012-80-1	NIST05.L	72682	25	C13H22OSi	222

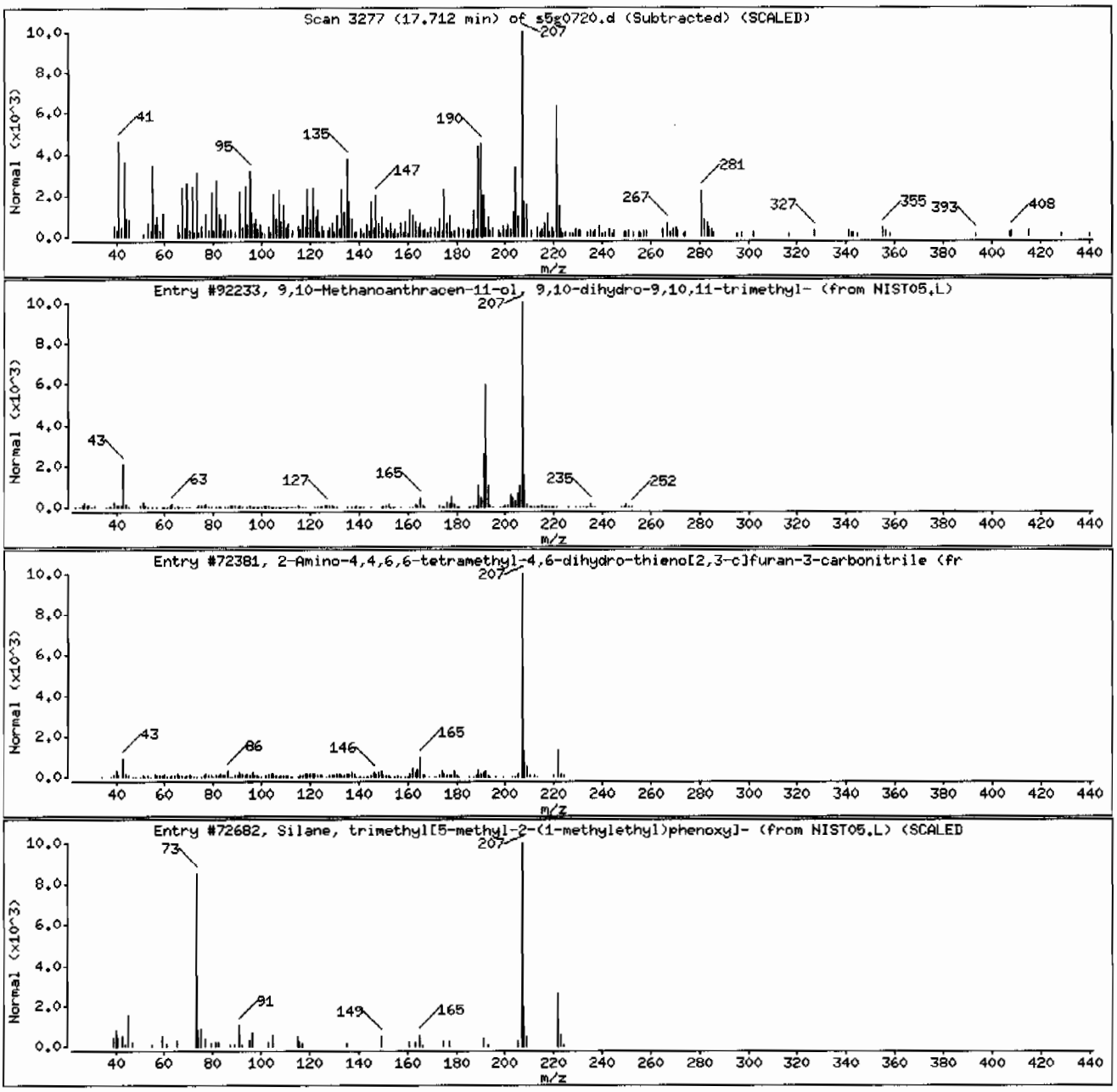

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Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990

Instrument: HSD5.i

Sample Info: |2327410091882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,2-Dicarbadodecaborane(12), 1-[(propylt	62906-36-9	NIST05.L	81316	90	C6H20B10S	234
2,3,5,6-Tetramethylterephthalaldehyde	7072-01-7	NIST05.L	49829	56	C12H14O2	190
Acetic acid, 2-(2-propyl-1-benzimidazoly	331736-92-6	NIST05.L	69668	50	C12H14N2O2	218

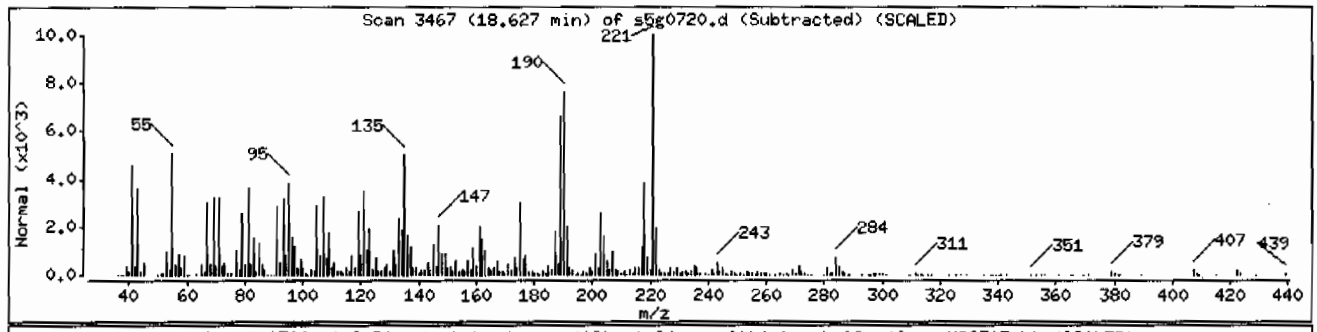

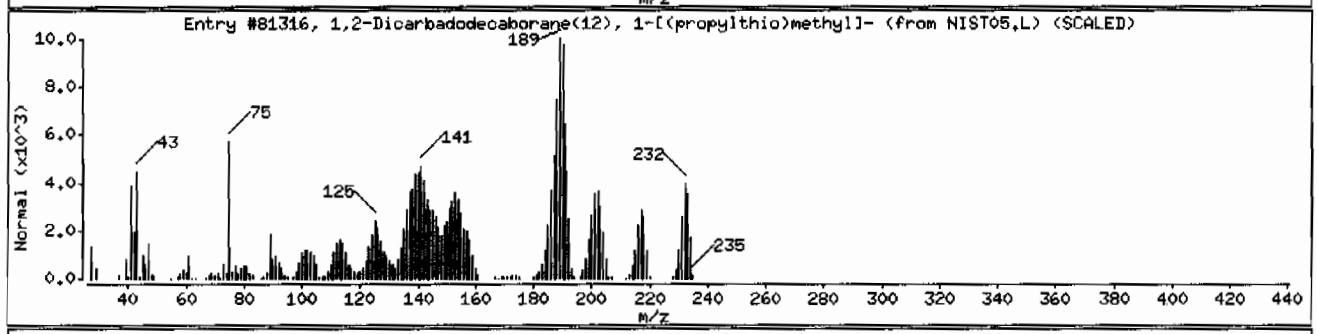

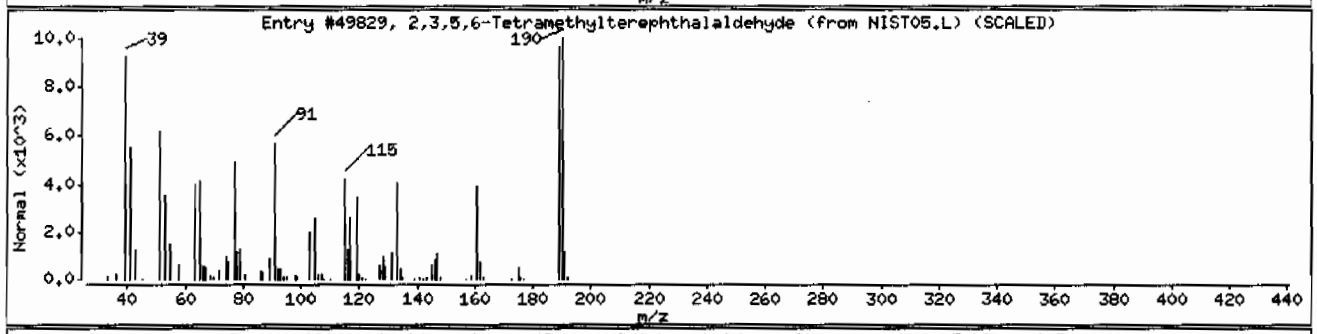

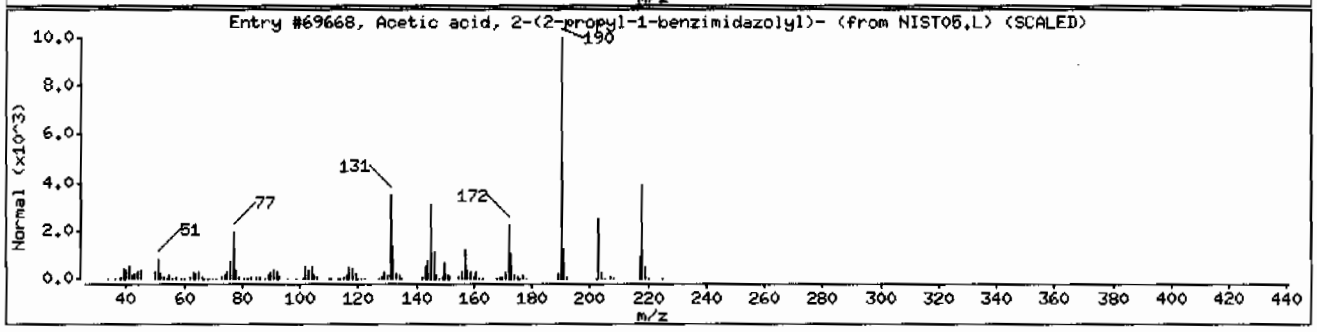

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Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990

Instrument: MSD5.i

Sample Info: 1232741009188256511|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2(1H)Naphthalenone, 3,5,6,7,8,8a-hexahyd	1000188-66-5	NIST05.L	69976	42	C15H22O	218
3-Methoxymethyl-2,5,5,8a-tetramethyl-6,7	64201-73-6	NIST05.L	82517	38	C15H24O2	236
6-Isopropenyl-4,8a-dimethyl-4a,5,6,7,8,8	86917-79-5	NIST05.L	69971	30	C15H22O	218

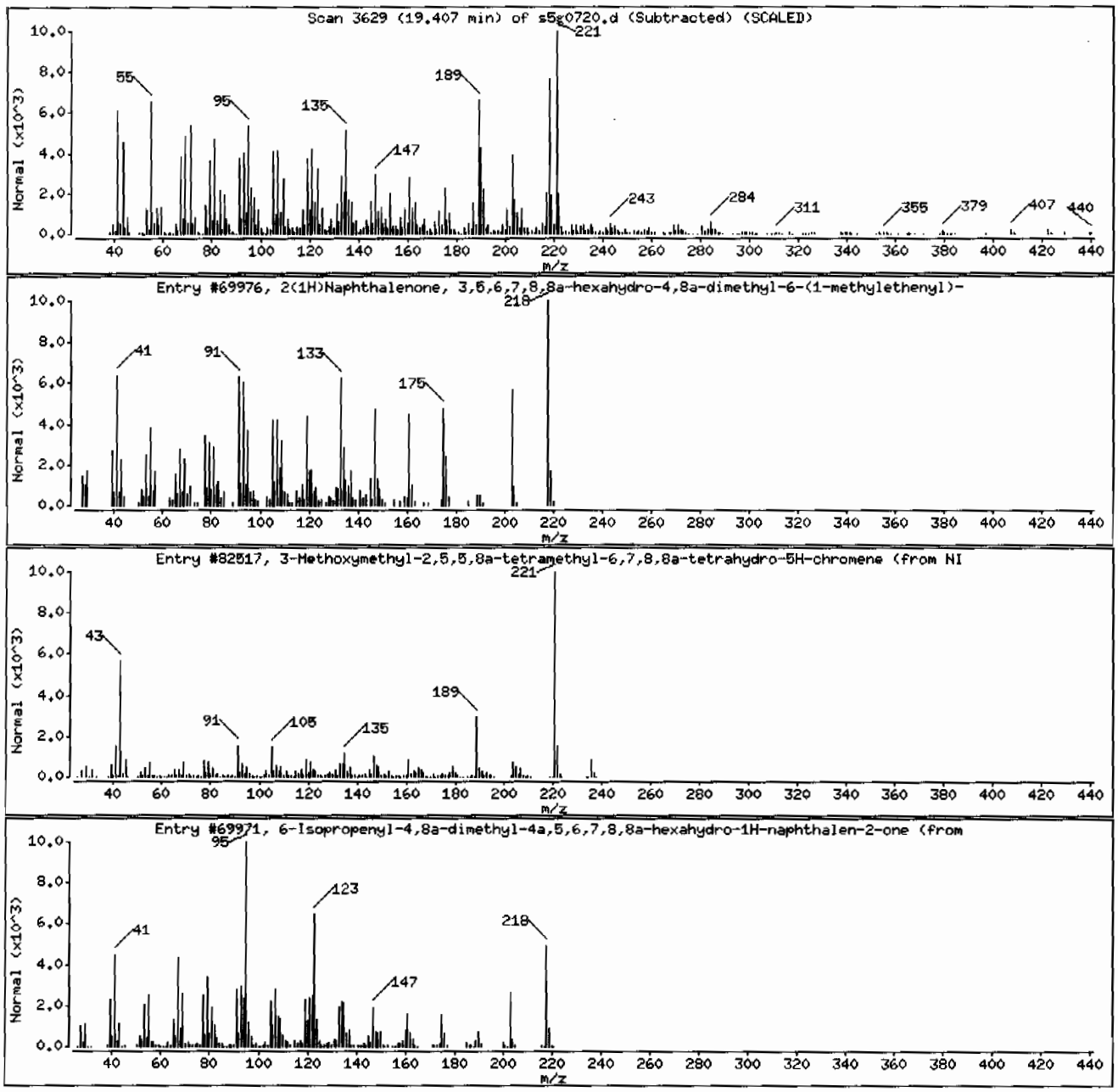

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Date : 07-JUL-2009 15:50

Client ID: CAMO-09-9990 Instrument: MSD5.i

Sample Info: |2327410091882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Nitro-4-(trifluoromethyl)phenol	400-99-7	NIST05.L	62280	38	C7H4F3NO3	207
4-Dehydroxy-N-(4,5-methylenedioxy-2-nitr	1000111-66-9	NIST05.L	123317	38	C16H14N2O4	298
1,1,3,3-Tetraallyl-1,3-disilacyclobutane	1000302-02-9	NIST05.L	90571	35	C14H24Si2	248

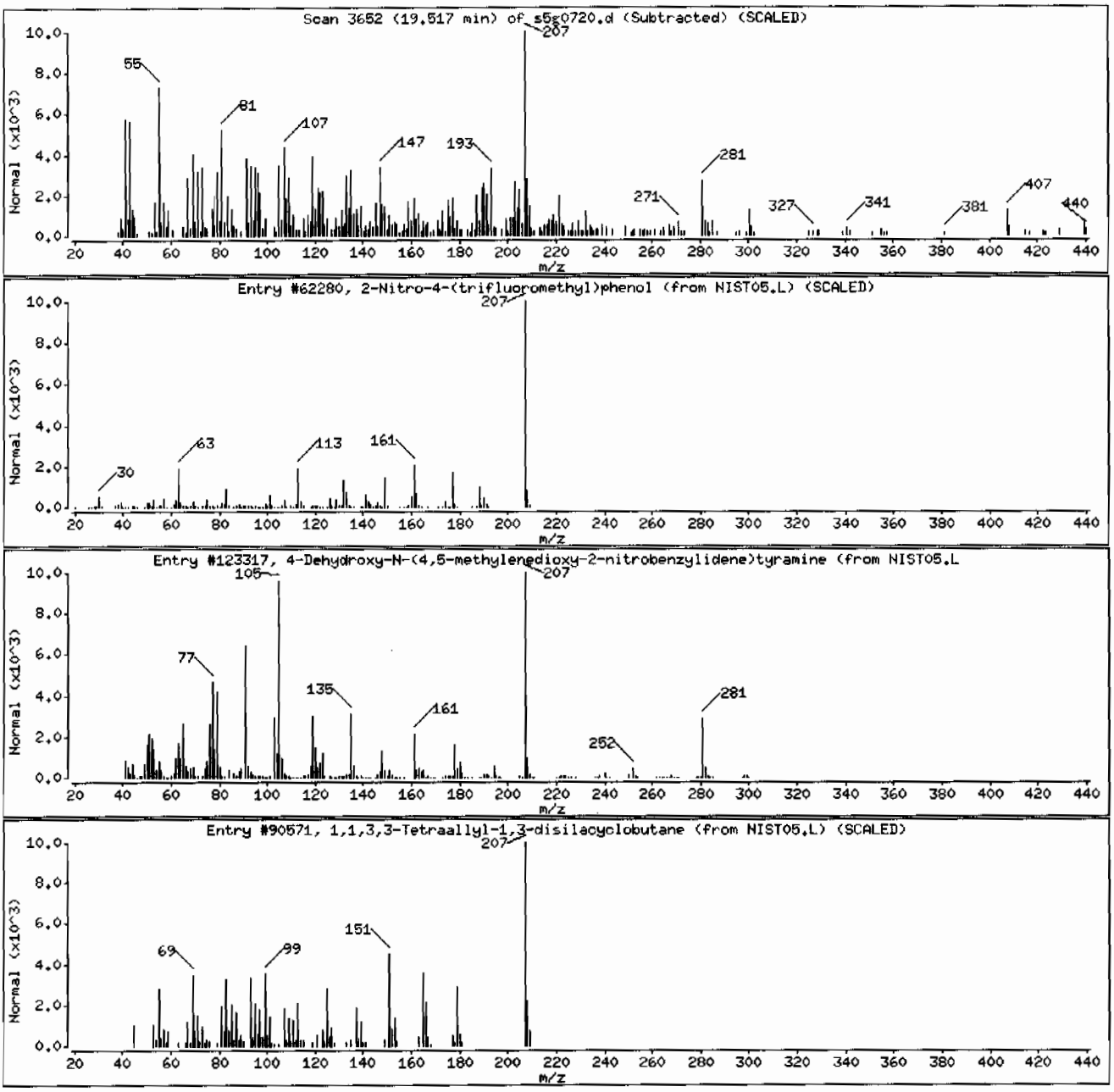

Standard Data

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 07-Jul-2009 07:47

Calibration History

Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Start Cal Date: 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
25-JUN-2009 14:42	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2512.d
Cal Level: 2 , Cal Amount: 10.00000		
26-JUN-2009 15:54	nev	/chem/MSD5.i/s062509.b/s5f2551.d
26-JUN-2009 12:32	hex	/chem/MSD5.i/s062509.b/s5f2542.d
26-JUN-2009 09:31	pest	/chem/MSD5.i/s062509.b/s5f2534.d
25-JUN-2009 19:10	ap12	/chem/MSD5.i/s062509.b/s5f2522.d
25-JUN-2009 15:10	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2513.d
Cal Level: 3 , Cal Amount: 20.00000		
26-JUN-2009 16:17	nev	/chem/MSD5.i/s062509.b/s5f2552.d
26-JUN-2009 12:55	hex	/chem/MSD5.i/s062509.b/s5f2543.d
26-JUN-2009 09:53	pest	/chem/MSD5.i/s062509.b/s5f2535.d
25-JUN-2009 19:32	ap12	/chem/MSD5.i/s062509.b/s5f2523.d
25-JUN-2009 15:38	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2514.d
Cal Level: 4 , Cal Amount: 40.00000		
26-JUN-2009 16:39	nev	/chem/MSD5.i/s062509.b/s5f2553.d
26-JUN-2009 13:17	hex	/chem/MSD5.i/s062509.b/s5f2544.d
26-JUN-2009 10:16	pest	/chem/MSD5.i/s062509.b/s5f2536.d
25-JUN-2009 19:55	ap12	/chem/MSD5.i/s062509.b/s5f2524.d
25-JUN-2009 16:05	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2515.d
Cal Level: 5 , Cal Amount: 50.00000		
26-JUN-2009 17:01	nev	/chem/MSD5.i/s062509.b/s5f2554.d
26-JUN-2009 13:40	hex	/chem/MSD5.i/s062509.b/s5f2545.d
26-JUN-2009 10:39	pest	/chem/MSD5.i/s062509.b/s5f2537.d
25-JUN-2009 20:18	ap12	/chem/MSD5.i/s062509.b/s5f2525.d
25-JUN-2009 16:33	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2516.d
Cal Level: 6 , Cal Amount: 80.00000		
26-JUN-2009 17:24	nev	/chem/MSD5.i/s062509.b/s5f2555.d
26-JUN-2009 14:02	hex	/chem/MSD5.i/s062509.b/s5f2546.d
26-JUN-2009 11:02	pest	/chem/MSD5.i/s062509.b/s5f2538.d
25-JUN-2009 20:41	ap12	/chem/MSD5.i/s062509.b/s5f2526.d
25-JUN-2009 17:02	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2517.d
Cal Level: 7 , Cal Amount: 100.00000		

26-JUN-2009 17:47	nev	/chem/MSD5.i/s062509.b/s5f2556.d
26-JUN-2009 14:25	hex	/chem/MSD5.i/s062509.b/s5f2547.d
26-JUN-2009 11:25	pest	/chem/MSD5.i/s062509.b/s5f2539.d
25-JUN-2009 21:03	ap12	/chem/MSD5.i/s062509.b/s5f2527.d
25-JUN-2009 17:29	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2518.d

Cal Level: 8 , Cal Amount: 120.00000		
26-JUN-2009 18:09	nev	/chem/MSD5.i/s062509.b/s5f2557.d
26-JUN-2009 11:47	pest	/chem/MSD5.i/s062509.b/s5f2540.d
25-JUN-2009 21:25	ap12	/chem/MSD5.i/s062509.b/s5f2528.d
25-JUN-2009 17:57	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2519.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
07-JUL-2009 07:25	MEGAIICARE	/chem/MSD5.i/s070709.b/s5g0702.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Calibration File Names:
Level 1: /chem/MSD5.i/s062509.b/s5f2512.d
Level 2: /chem/MSD5.i/s062509.b/s5f2551.d
Level 3: /chem/MSD5.i/s062509.b/s5f2552.d
Level 4: /chem/MSD5.i/s062509.b/s5f2553.d
Level 5: /chem/MSD5.i/s062509.b/s5f2554.d
Level 6: /chem/MSD5.i/s062509.b/s5f2555.d
Level 7: /chem/MSD5.i/s062509.b/s5f2556.d
Level 8: /chem/MSD5.i/s062509.b/s5f2557.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.44023	0.49064	0.47716	0.46210	0.46052					
	0.47841	0.46192					AVRG		0.46728		3.49500
2 Pyridine	+++++	0.69279	0.75514	0.74169	0.59556	0.56835					
	0.76016	0.72634					AVRG		0.69143		11.33716
4 Aniline	+++++	0.44415	0.52170	0.51663	0.49970	0.50458					
	0.52141	0.50721					AVRG		0.50220		5.37034
209 Benzaldehyde	+++++	0.85159	0.89015	0.81871	0.79990	0.75839					
	0.74985	0.70918					AVRG		0.79683		7.86449
6 Phenol	+++++	1.14962	1.24888	1.18550	1.14101	1.11147					
	1.12731	1.08172					AVRG		1.14936		4.73589

GEL Laboratories LLC

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Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	0.90051	0.90959	0.96460	0.91224	0.88038	0.84926					
	0.85216	0.81790					AVRG		0.88583		5.19026
8 2-Chlorophenol	+++++	0.95967	1.04338	0.98839	0.94752	0.92897					
	0.94964	0.90735					AVRG		0.96070		4.60720
203 n-Decane	+++++	1.76533	1.83008	1.65405	1.57800	1.43467					
	1.36362	1.28290					AVRG		1.55838		13.23692
9 1,3-Dichlorobenzene	+++++	1.19264	1.28772	1.18603	1.14421	1.08989					
	1.09658	1.05091					AVRG		1.14971		6.95854
11 1,4-Dichlorobenzene	+++++	1.20398	1.26798	1.17125	1.13840	1.08879					
	1.09132	1.04491					AVRG		1.14381		6.71389
12 Benzyl alcohol	+++++	0.56979	0.63670	0.62573	0.60396	0.60465					
	0.61546	0.58777					AVRG		0.60629		3.73063
13 1,2-Dichlorobenzene	+++++	1.15580	1.17968	1.08323	1.05201	0.99640					
	1.00595	0.96590					AVRG		1.06271		7.67104
14 bis(2-Chloroisopropyl)ether	+++++	2.22903	2.36787	2.18504	2.06888	1.93644					
	1.87607	1.76841					AVRG		2.06168		10.34954
15 o-Cresol	+++++	0.73909	0.77770	0.73149	0.71184	0.68497					
	0.69315	0.66420					AVRG		0.71463		5.34449

GEL Laboratories LLC

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Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
16 Acetophenone	+++++	1.11152	1.14047	1.10567	1.07838	1.07242					
	1.04402	1.04190					AVRG		1.08491		3.35447
17 N-Nitrosodipropylamine	0.53750	0.60668	0.67952	0.64418	0.62140	0.62312					
	0.64069	0.59864					AVRG		0.61897		6.68884
18 m,p-Cresols	+++++	0.95993	1.03790	0.98085	0.94779	0.92236					
	0.94191	0.89906					AVRG		0.95569		4.67544
19 Hexachloroethane	+++++	0.41401	0.45409	0.43628	0.42388	0.41362					
	0.42132	0.40627					AVRG		0.42421		3.83148
21 Nitrobenzene	+++++	0.30294	0.32276	0.28522	0.28127	0.25509					
	0.25224	0.23551					AVRG		0.27643		11.11561
22 Isophorone	+++++	0.54758	0.58414	0.54133	0.51835	0.48143					
	0.47395	0.43472					AVRG		0.51164		10.00571
23 2-Nitrophenol	+++++	0.14529	0.15968	0.13060	0.12565	0.11851					
	0.11804	0.11062					AVRG		0.12977		13.28936
24 2,4-Dimethylphenol	+++++	0.24006	0.26073	0.23521	0.22763	0.20780					
	0.20628	0.19018					AVRG		0.22398		10.73144
25 bis(2-Chloroethoxy)methane	+++++	0.32945	0.33889	0.30691	0.29506	0.26818					
	0.26319	0.24472					AVRG		0.29234		12.06634

GEL Laboratories LLC

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Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
26 2,4-Dichlorophenol	+++++	0.23679	0.25509	0.23664	0.22756	0.21060					
	0.20430	0.18739					AVRG		0.22262		10.36895
27 Benzoic acid	+++++	+++++	51071	179236	222805	415300					
	636355	696809					LINR	0.30650	0.14372		0.99499
28 1,2,4-Trichlorobenzene	+++++	0.31579	0.32696	0.29301	0.27810	0.25284					
	0.24524	0.22654					AVRG		0.27693		13.50910
30 Naphthalene	0.92630	0.81441	0.84437	0.74175	0.71375	0.63501					
	+++++	+++++					AVRG		0.77927		13.28698
204 alpha-Terpineol	+++++	0.27539	0.29587	0.27412	0.26160	0.23729					
	0.22709	0.21031					AVRG		0.25452		11.98565
31 4-Chloroaniline	+++++	49594	132620	425679	656127	1107368					
	1404474	+++++					LINR	0.18534	0.32589		0.99103
189 Caprolactam	+++++	0.07040	0.08077	0.07795	0.07939	0.08243					
	0.08208	0.08270					AVRG		0.07939		5.44768
32 Hexachlorobutadiene	+++++	0.22957	0.23375	0.21257	0.20237	0.18593					
	0.18127	0.16955					AVRG		0.20215		12.15251
33 4-Chloro-3-methylphenol	+++++	0.22052	0.23942	0.22592	0.22085	0.20102					
	0.19961	0.18500					AVRG		0.21319		8.75387

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
34 2-Methylnaphthalene	0.54547	0.51742	0.53737	0.48509	0.46571	0.42309					
	0.40601	0.37515					AVRG		0.46942		13.47765
35 1-Methylnaphthalene	0.61675	0.54291	0.56151	0.50018	0.48099	0.43377					
	0.41494	+++++					AVRG		0.50729		14.13879
36 Hexachlorocyclopentadiene	+++++	27986	82848	201022	230899	383354					
	546120	529744					LINR	0.06768	0.19504		0.99133
208 1,1'-Biphenyl	+++++	1.15705	1.15621	1.07607	1.06999	0.99440					
	0.93860	0.92132					AVRG		1.04481		9.22094
205 2,3-Dichloroaniline	+++++	0.43038	0.47856	0.47126	0.45828	0.43340					
	0.43590	0.41815					AVRG		0.44656		5.11263
37 2,4,6-Trichlorophenol	+++++	0.28676	0.32859	0.32419	0.31870	0.30788					
	0.30664	0.29394					AVRG		0.30953		4.99573
38 2,4,5-Trichlorophenol	+++++	0.31119	0.35383	0.35359	0.34899	0.32750					
	0.32118	0.30897					AVRG		0.33218		5.93452
40 2-Chloronaphthalene	0.90782	0.88976	0.95381	0.88628	0.86190	0.79283					
	0.77800	0.73919					AVRG		0.85120		8.64193
42 o-Nitroaniline	+++++	0.22990	0.27677	0.28660	0.28311	0.27222					
	0.27973	0.26622					AVRG		0.27065		7.09467

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
41 m-Nitroaniline	+++++	13390	28329	139268	173437	345778					
	493724	513131					LINR	0.29884	0.19829		0.99453
43 Dimethylphthalate	+++++	1.04940	1.13308	1.04947	1.03679	0.97403					
	0.95746	0.91235					AVRG		1.01609		7.22171
44 2,6-Dinitrotoluene	+++++	0.23053	0.26215	0.25119	0.24633	0.23672					
	0.23773	0.22882					AVRG		0.24192		4.95083
45 Acenaphthylene	1.32250	1.32839	1.43067	1.30894	1.28012	1.15975					
	1.12592	1.07678					AVRG		1.25413		9.61726
47 Acenaphthene	0.86434	0.82293	0.89161	0.84103	0.82730	0.77871					
	0.77201	0.74002					AVRG		0.81724		6.19484
48 2,4-Dinitrophenol	+++++	+++++	27401	92512	114873	206533					
	316209	327495					LINR	0.31618	0.12695		0.99276
49 Dibenzofuran	+++++	1.22775	1.32738	1.22440	1.19116	1.08140					
	1.04556	1.00480					AVRG		1.15749		10.04078
50 2,4-Dinitrotoluene	+++++	0.28811	0.33236	0.33277	0.32207	0.31602					
	0.32001	0.30435					AVRG		0.31653		5.01775
51 Diethylphthalate	+++++	1.02375	1.11667	1.04486	1.01847	0.95382					
	0.93049	0.87854					AVRG		0.99523		8.00568

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
52 4-Nitrophenol	+++++	0.10237	0.13339	0.15027	0.14627	0.15044					
	0.15471	0.15539					AVRG		0.14183		13.32361
53 Fluorene	1.08263	1.02003	1.09222	1.03146	1.00049	0.93401					
	0.91950	0.87726					AVRG		0.99470		7.82414
54 4-Chlorophenylphenylether	+++++	0.58767	0.63875	0.60550	0.58889	0.55750					
	0.55283	0.52876					AVRG		0.57998		6.33880
55 2-Methyl-4,6-dinitrophenol	+++++	21239	62983	165240	200894	364502					
	508544	531313					LINR	0.16218	0.10002		0.99855
56 p-Nitroaniline	+++++	0.10363	0.09786	0.10787	0.10361	0.11040					
	+++++	+++++					AVRG		0.10468		4.57223
133 Diphenylamine	+++++	0.42588	0.42331	0.39385	0.39040	0.38179					
	0.39613	0.37595					AVRG		0.39819		4.85853
58 1,2-Diphenylhydrazine	+++++	0.52955	0.56955	0.53115	0.51761	0.47792					
	0.46451	0.44849					AVRG		0.50554		8.53737
59 Tributylphosphate	+++++	1.00806	1.18622	1.23669	1.16465	1.10392					
	1.07665	0.99822					AVRG		1.11063		8.12668
61 4-Bromophenylphenylether	+++++	0.19446	0.21087	0.19593	0.19164	0.18443					
	0.18455	0.17645					AVRG		0.19119		5.76073

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End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
63 Hexachlorobenzene	+++++	0.20663	0.22068	0.20559	0.20389	0.19450					
	0.19301	0.18516					AVRG		0.20135		5.75118
207 Atrazine	+++++	0.03899	0.03935	0.03659	0.03414	0.02579					
	0.02506	0.01147					AVRG		0.03020		33.49708 <-
65 Pentachlorophenol	+++++	29080	74972	189390	229767	418008					
	576136	593432					LINR	0.13477	0.11155		0.99815
206 n-Octadecane	+++++	0.47475	0.50082	0.45712	0.43884	0.39852					
	0.38292	0.36185					AVRG		0.43069		11.86963
68 Phenanthrene	0.88355	0.80072	0.83106	0.77370	0.74248	0.67864					
	0.65899	0.62552					AVRG		0.74933		11.98568
69 Anthracene	0.80079	0.78389	0.83647	0.77814	0.74916	0.68231					
	0.65679	0.62923					AVRG		0.73960		10.09070
72 Di-n-butylphthalate	+++++	0.92678	1.00428	0.92303	0.88168	0.79411					
	0.73607	0.69755					AVRG		0.85193		13.15447
76 Fluoranthene	0.87967	0.89588	0.95145	0.91545	0.88662	0.80387					
	0.76584	0.73008					AVRG		0.85361		9.11643
77 Benzidine	+++++	0.19760	0.17186	0.13560	0.15750	0.17176					
	+++++	+++++					AVRG		0.16686		13.59632

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
79 Pyrene	0.91265	0.94419	1.00845	0.90726	0.87106	0.79690					
	0.79234	0.74808					AVRG		0.87262		10.07157
85 Butylbenzylphthalate	+++++	0.35330	0.41644	0.38432	0.37612	0.36818					
	0.36866	0.35103					AVRG		0.37401		5.90957
89 Benzo(a)anthracene	0.93687	0.86506	0.93282	0.88495	0.85327	0.81322					
	0.79963	0.78038					AVRG		0.85828		6.82989
90 3,3'-Dichlorobenzidine	+++++	0.27335	0.29372	0.28527	0.28392	0.28609					
	0.29172	0.29334					AVRG		0.28677		2.49370
92 Chrysene	0.89108	0.82456	0.87830	0.80396	0.77658	0.72635					
	0.71171	0.67721					AVRG		0.78622		9.89559
93 bis(2-Ethylhexyl)phthalate	0.36763	0.54183	0.61773	0.55490	0.53303	0.51324					
	0.50377	0.47385					AVRG		0.51325		14.10892
94 Di-n-octylphthalate	+++++	0.87264	1.03338	0.94180	0.92021	0.86905					
	0.90617	0.85721					AVRG		0.91435		6.63445
95 Benzo(b)fluoranthene	0.83575	0.83776	0.94486	0.89597	0.89706	0.88345					
	0.87605	0.89631					AVRG		0.88340		3.99003
96 Benzo(k)fluoranthene	0.83667	0.88573	0.95144	0.92402	0.88042	0.80919					
	0.87047	0.78400					AVRG		0.86774		6.47091

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	0.68279	0.75497	0.84574	0.83044	0.81295	0.78346					
	0.78610	0.75963					AVRG		0.78201		6.56659
99 Indeno(1,2,3-cd)pyrene	0.68768	0.76122	0.82731	0.85825	0.80224	0.83562					
	0.77091	0.74337					AVRG		0.78583		7.13057
100 Dibenzo(a,h)anthracene	0.55928	0.62675	0.66243	0.69649	0.65909	0.67837					
	0.63358	0.60851					AVRG		0.64056		6.79267
101 Benzo(ghi)perylene	0.62928	0.66607	0.71083	0.72801	0.67267	0.69867					
	0.63897	0.61503					AVRG		0.66994		6.05494
102 1,4-Dioxane	+++++	0.27310	0.33649	0.31633	0.31586	0.30752					
	0.30760	0.30009					AVRG		0.30814		6.24756
103 Methyl methacrylate	+++++	0.16571	0.14464	0.16919	0.16853	0.13461					
	0.14912	0.14745					AVRG		0.15418		8.81814
104 Ethyl methacrylate	+++++	0.71311	0.75791	0.73095	0.72426	0.71167					
	0.71385	0.70503					AVRG		0.72240		2.47238
105 2-Picoline	+++++	1.11548	1.17142	1.11300	1.10983	1.09598					
	1.08845	1.07485					AVRG		1.10986		2.77913
106 N-Nitrosomethylethylamine	+++++	0.39956	0.41468	0.41346	0.41221	0.41623					
	0.42662	0.42599					AVRG		0.41554		2.20553

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	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.47558	0.50132	0.48450	0.48273	0.46970					
	0.48198	0.46348					AVRG		0.47990		2.52987
108 N-Nitrosodiethylamine	+++++	0.39546	0.40809	0.41357	0.41074	0.41897					
	0.41660	0.42103					AVRG		0.41207		2.08747
109 Ethyl Methanesulfonate	+++++	0.55498	0.59813	0.57386	0.57552	0.57488					
	0.58581	0.57709					AVRG		0.57718		2.26529
110 Pentachloroethane	+++++	0.32980	0.34246	0.32767	0.32795	0.32606					
	0.31926	0.32166					AVRG		0.32784		2.27134
111 N-Nitrosopyrrolidine	+++++	0.36971	0.39411	0.42033	0.41585	0.42732					
	0.42989	0.42616					AVRG		0.41191		5.38141
113 N-Nitrosomorpholine	+++++	0.64474	0.66018	0.67778	0.67210	0.67246					
	0.66541	0.65964					AVRG		0.66462		1.66103
114 o-Toluidine	+++++	1.61381	1.49415	1.47472	1.43016	1.39203					
	1.34155	1.32892					AVRG		1.43933		6.87634
115 N-Nitrosopiperidine	+++++	0.12839	0.13413	0.13516	0.13244	0.13401					
	0.13430	0.13333					AVRG		0.13311		1.68824
116 a,a-Dimethylphenethylamine	+++++	0.63521	0.68983	0.83773	0.84651	0.86822					
	0.88737	0.88928					AVRG		0.80774		12.65773

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
117 Triethylphosphorothioate	+++++	0.19064	0.20260	0.20099	0.19502	0.19185					
	0.18753	0.18646					AVRG		0.19358		3.24858
118 2,6-Dichlorophenol	+++++	0.22516	0.23849	0.23337	0.23367	0.23208					
	0.23139	0.22767					AVRG		0.23169		1.86464
119 Hexachloropropene	+++++	0.11814	0.13192	0.13900	0.13353	0.14270					
	0.15051	0.15068					AVRG		0.13807		8.32008
120 p-Phenylenediamine	+++++	43977	99414	308611	373494	696188					
	963689	995859					LINR	0.12820	0.20874		0.99126
121 N-Nitrosodi-n-butylamine	+++++	0.17823	0.17723	0.18484	0.17833	0.17974					
	0.18115	0.17847					AVRG		0.17971		1.43983
122 Safrole	+++++	0.21837	0.22703	0.21735	0.21549	0.21160					
	0.20575	0.20421					AVRG		0.21426		3.67215
123 1,2,4,5-Tetrachlorobenzene	+++++	0.54138	0.55353	0.51470	0.51225	0.49714					
	0.48155	0.47070					AVRG		0.51018		5.89454
124 Isosafrole	+++++	0.32966	0.34665	0.33144	0.33467	0.32864					
	0.32331	0.32007					AVRG		0.33063		2.60072
125 1,4-Naphthoquinone	+++++	0.31987	0.36331	0.33039	0.32211	0.26630					
	+++++	+++++					AVRG		0.32039		10.89181

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126 m-Dinitrobenzene	+++++	0.14698	0.17243	0.17441	0.16744	0.16475					
	0.17068	0.16207					AVRG		0.16554		5.58667
127 Pentachlorobenzene	+++++	0.50210	0.51268	0.47854	0.47885	0.46376					
	0.45302	0.44508					AVRG		0.47629		5.19583
128 1-Naphthylamine	+++++	0.71576	0.74676	0.71478	0.73564	0.70096					
	0.70170	0.66704					AVRG		0.71181		3.64479
129 2-Naphthylamine	+++++	0.65048	0.67212	0.63289	0.62367	0.60738					
	0.67547	0.62734					AVRG		0.64134		3.98982
130 2,3,4,6-Tetrachlorophenol	+++++	0.26896	0.31335	0.32826	0.31414	0.31017					
	0.32221	0.30193					AVRG		0.30843		6.26838
131 5-Nitro-o-toluidine	+++++	0.22244	0.25484	0.25927	0.26491	0.26382					
	0.26232	0.26458					AVRG		0.25602		5.95016
132 Thionazin	+++++	0.13992	0.16083	0.16656	0.16351	0.16350					
	0.15944	0.15655					AVRG		0.15862		5.58077
134 Sulfotepp	+++++	0.11001	0.12298	0.12668	0.11604	0.11569					
	0.11568	0.11405					AVRG		0.11730		4.80512
135 Phorate	+++++	0.29230	0.33975	0.34982	0.32693	0.31677					
	0.31242	0.30198					AVRG		0.32000		6.36308

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	100 Level 7	120 Level 8									
136 1,3,5-Trinitrobenzene	+++++	0.07807	0.09604	0.10968	0.11316	0.11642					
	0.12063	0.11865					AVRG		0.10752		14.26247
137 Phenacetin	+++++	0.20290	0.22171	0.22556	0.22545	0.22049					
	0.22407	0.22896					AVRG		0.22131		3.87405
138 Diallate	+++++	0.21704	0.21096	0.20865	0.20571	0.20547					
	0.19847	0.19919					AVRG		0.20650		3.15687
139 Dimethoate	+++++	0.14997	0.18004	0.19018	0.19006	0.19876					
	0.19392	0.19159					AVRG		0.18493		8.87531
140 4-Aminobiphenyl	+++++	0.39954	0.37157	0.34033	0.38960	0.38731					
	0.37146	0.32708					AVRG		0.36955		7.22857
141 Pentachloronitrobenzene	+++++	0.09293	0.09496	0.09184	0.09009	0.08786					
	0.08371	0.08367					AVRG		0.08929		4.95202
142 Pronamide	+++++	0.27271	0.27709	0.26759	0.26568	0.25326					
	0.24278	0.24492					AVRG		0.26058		5.22110
143 Dinoseb	+++++	31988	96506	256390	323328	575312					
	818250	840863					LINR	0.17281	0.15992		0.99762
144 Disulfoton	+++++	0.24425	0.29551	0.29849	0.27680	0.27235					
	0.26633	0.25788					AVRG		0.27309		7.12374

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145 Methyl parathion	+++++	0.10770	0.14875	0.15826	0.16106	0.16736						
	0.16426	0.16189					AVRG		0.15275		13.56103	
146 4-Nitroquinoline-1-oxide	+++++	0.01141	0.01322	0.01133	0.01062	0.00818						
	0.00868	0.00809					AVRG		0.01022		19.09653	<-
147 Methapyrilene	+++++	0.42026	0.44488	0.43856	0.43377	0.40715						
	0.40099	0.37457					AVRG		0.41717		5.94225	
148 Isodrin	+++++	0.10571	0.10794	0.10433	0.10601	0.10397						
	0.10008	0.10248					AVRG		0.10436		2.45344	
149 Aramite	+++++	0.04905	0.05045	0.05167	0.05357	0.05214						
	0.04972	0.04968					AVRG		0.05090		3.18460	
150 Kepone	+++++	0.04990	0.06374	0.06858	0.06953	0.07010						
	0.07444	0.07444					AVRG		0.06725		12.61524	
151 p-(Dimethylamino)azobenzene	+++++	0.20254	0.21029	0.20667	0.20747	0.19714						
	0.19688	0.19360					AVRG		0.20208		3.13600	
152 Chlorobenzilate	+++++	0.29145	0.30146	0.29895	0.30236	0.30552						
	0.29673	0.30007					AVRG		0.29951		1.50134	
153 3,3'-Dimethylbenzidine	+++++	0.46677	0.47630	0.42302	0.43278	0.41562						
	0.43046	0.43922					AVRG		0.44059		5.12372	

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154 Famphur	+++++	0.28070	0.34471	0.37738	0.35216	0.35407						
	0.35151	0.34312					AVRG		0.34338		8.69120	
155 2-Acetylaminofluorene	+++++	0.21740	0.26283	0.27987	0.28264	0.28876						
	0.29539	0.30354					AVRG		0.27578		10.43001	
157 7,12Dimethylbenz(a)anthracene	+++++	0.45233	0.47142	0.46173	0.47665	0.44445						
	0.44076	0.43541					AVRG		0.45468		3.46334	
158 3-Methylcholanthrene	+++++	0.38164	0.42107	0.41321	0.41394	0.40883						
	0.41065	0.41489					AVRG		0.40918		3.11363	
26 Phthalic anhydride	+++++	34490	64897	175190	219706	434516						
	592574	638483					LINR	0.15802	0.12664		0.99629	
173 Carbazole	30520	150845	307142	743993	923267	1782076						
	2604833	2666301					LINR	0.13905	0.49388		0.99084	
174 Hexachlorophene	+++++	480806	2278613	3488755	6057217	7167289						
	+++++	+++++					LINR	10.43537	0.08980		0.99073	
179 Dibenzo(a,e)pyrene	+++++	0.38443	0.37707	0.43058	0.39017	0.45492						
	0.38756	0.34953					AVRG		0.39632		8.87511	
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

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184 p-Benzoquinone	+++++	6354	22229	56493	80248	134257					
	176805	204907					LINR	0.21207	0.17005		0.99849
191 Parathion	+++++	0.06241	0.08380	0.09228	0.08665	0.09019					
	0.08792	0.08819					AVRG		0.08449		11.94545
192 Methoxychlor	+++++	0.47987	0.56846	0.54978	0.51458	0.52157					
	0.47918	0.44390					AVRG		0.50819		8.56166
210 m-Toluidine	+++++	82014	176998	423487	569165	1017485					
	1470841	1569700					LINR	0.22355	1.33578		0.99386
211 p-Toluidine	+++++	48655	120805	272230	351988	651296					
	846340	873954					LINR	0.14365	0.74877		0.99481
212 Cis Diallate	+++++	0.19980	0.20241	0.21284	0.20964	0.21416					
	0.21304	0.21632					AVRG		0.20975		2.98917
213 Trans Diallate	+++++	0.25534	0.24819	0.24547	0.24201	0.24173					
	0.23350	0.23435					AVRG		0.24294		3.15687
214 1,4-Dinitrobenzene	+++++	0.17121	0.20381	0.18645	0.17549	0.17568					
	0.18326	0.17442					AVRG		0.18147		6.16594
215 2-Ethoxyethanol	+++++	0.42738	0.64231	0.63531	0.62447	0.60898					
	0.63642	0.61711					AVRG		0.59885		12.77596

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
216 Methylenebis(2-chloroaniline)	+++++	0.08449	0.09509	0.10697	0.10796	0.12155					
	0.12865	0.12373					AVRG		0.10978		14.66692
229 2,2'-Dichlorobenzil	+++++	0.43514	0.47184	0.44898	0.45185	0.43856					
	0.44140	0.43749					AVRG		0.44646		2.85679
230 4-Chlorothioanisole	+++++	0.26856	0.27242	0.26616	0.27394	0.26615					
	0.26741	0.26488					AVRG		0.26850		1.27497
231 4-Chlorothiophenol	+++++	41768	132011	275353	382851	635600					
	848320	930133					LINR	0.16594	0.21026		0.99850
232 bis(p-Chlorophenyl)sulfone	+++++	0.31542	0.31724	0.29112	0.29450	0.28313					
	0.28387	0.28770					AVRG		0.29614		4.84670
233 bis(p-Chlorophenyl)disulfide	+++++	0.08882	0.09796	0.10629	0.09493	0.09841					
	0.10107	0.10018					AVRG		0.09824		5.52014
234 Diphenyl disulfide	+++++	0.17514	0.18495	0.17946	0.18101	0.17947					
	0.17997	0.17866					AVRG		0.17981		1.62468
235 Diphenyl sulfide	+++++	0.85058	0.85814	0.81105	0.81875	0.77524					
	0.75190	0.74816					AVRG		0.80197		5.57629
236 Phenyl sulfone	+++++	0.36602	0.35985	0.34325	0.35342	0.33956					
	0.33842	0.33797					AVRG		0.34836		3.27307

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
237 Hydroxymethyl phthalimide	+++++	0.13574	0.15119	0.15892	0.13998	0.12536						
	0.12935	0.12316					AVRG		0.13767		9.72353	
238 Phthalic acid	+++++	0.06939	0.07287	0.08292	0.11566	0.12455						
	0.14463	0.15090					AVRG		0.10870		31.11787	<-
239 Thiophenol	+++++	0.60742	0.77250	0.81805	0.90219	0.94227						
	0.93729	0.94386					AVRG		0.84623		14.74711	
240 bis(Chloromethyl)ether	+++++	0.85590	0.85616	0.81409	0.81889	0.83526						
	0.80381	0.79901					AVRG		0.82616		2.83945	
241 Octachlorostyrene	+++++	0.10243	0.10326	0.09498	0.09677	0.09556						
	0.09562	0.09577					AVRG		0.09777		3.59684	
M 225 Trichlorophenols	+++++	0.29897	0.34121	0.33889	0.33385	0.31769						
	0.31391	0.30146					AVRG		0.32085		5.43035	
M 226 Tetrachlorophenols	+++++	0.26896	0.31335	0.32826	0.31414	0.31017						
	0.32221	0.30193					AVRG		0.30843		6.26838	
M 227 Benzo(b,k)fluoranthene	0.83621	0.86175	0.94815	0.91000	0.88874	0.84632						
	0.87326	0.84016					AVRG		0.87557		4.41963	
M 228 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	mi	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
$ 3 2-Fluorophenol	+++++	0.84209	0.92035	0.89559	0.87122	0.86709						
	0.89027	0.86129					AVRG		0.87827		2.93514	
$ 5 Phenol-d5	+++++	1.12824	1.23711	1.20172	1.15464	1.13363						
	1.14808	1.10269					AVRG		1.15801		3.99148	
$ 187 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 20 Nitrobenzene-d5	+++++	0.32326	0.35849	0.32302	0.30818	0.26119						
	0.25859	0.24209					AVRG		0.29640		14.47409	
$ 39 2-Fluorobiphenyl	+++++	1.12044	1.19637	1.09339	1.05081	0.95786						
	0.92784	0.89472					AVRG		1.03449		10.74330	
$ 60 2,4,6-Tribromophenol	+++++	0.13461	0.16754	0.16952	0.16904	0.16702						
	0.17089	0.16383					AVRG		0.16321		7.84797	
$ 81 p-Terphenyl-d14	+++++	0.64272	0.69513	0.63531	0.60706	0.57674						
	0.57751	0.55064					AVRG		0.61216		8.06339	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2530.d
Analysis Type: WATER
Lab Sample ID: WBN090528-08.5
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 25-JUN-2009 22:11
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 10:16
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.79683	0.68969	0.68969	0.000	-13.44538	60.00000	Averaged
16 Acetophenone	1.08491	1.09337	1.09337	0.000	0.78008	60.00000	Averaged
189 Caprolactam	0.07939	0.08623	0.08623	0.000	8.62020	60.00000	Averaged
208 1,1'-Biphenyl	1.04481	1.10113	1.10113	0.000	5.39117	60.00000	Averaged
207 Atrazine	0.03020	0.02623	0.02623	0.000	-13.14245	60.00000	Averaged
77 Benzidine	0.16686	0.16548	0.16548	0.000	-0.82680	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28677	0.30900	0.30900	0.000	7.75178	60.00000	Averaged
102 1,4-Dioxane	0.30814	0.37821	0.37821	0.000	22.74029	60.00000	Averaged
103 Methyl methacrylate	0.15418	0.20577	0.20577	0.000	33.46578	60.00000	Averaged
104 Ethyl methacrylate	0.72240	0.86947	0.86947	0.000	20.35908	60.00000	Averaged
105 2-Picoline	1.10986	1.11145	1.11145	0.000	0.14364	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.41554	0.43916	0.43916	0.000	5.68448	60.00000	Averaged
107 Methyl methanesulfonate	0.47990	0.53510	0.53510	0.000	11.50234	60.00000	Averaged
108 N-Nitrosodiethylamine	0.41207	0.42418	0.42418	0.000	2.93858	60.00000	Averaged
109 Ethyl Methanesulfonate	0.57718	0.71921	0.71921	0.000	24.60806	60.00000	Averaged
110 Pentachloroethane	0.32784	0.45184	0.45184	0.000	37.82372	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.41191	0.43254	0.43254	0.000	5.00958	60.00000	Averaged
113 N-Nitrosomorpholine	0.66462	0.70098	0.70098	0.000	5.47224	60.00000	Averaged
114 o-Toluidine	1.43933	1.46147	1.46147	0.000	1.53771	60.00000	Averaged
115 N-Nitrosopiperidine	0.13311	0.13919	0.13919	0.000	4.57041	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.80774	0.88284	0.88284	0.000	9.29822	60.00000	Averaged
118 2,6-Dichlorophenol	0.23169	0.24346	0.24346	0.000	5.07768	60.00000	Averaged
119 Hexachloropropene	0.13807	0.22200	0.22200	0.000	60.78426	60.00000	Averaged <-
120 p-Phenylenediamine	41.67913	40.00000	0.19074	0.000	4.19784	60.00000	Linear
121 N-Nitrosodi-n-butylamine	0.17971	0.18978	0.18978	0.000	5.59950	60.00000	Averaged
122 Safrole	0.21426	0.25431	0.25431	0.000	18.69392	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.51018	0.55414	0.55414	0.000	8.61659	60.00000	Averaged
124 Isosafrole	0.33063	0.45825	0.45825	0.000	38.59723	60.00000	Averaged
125 1,4-Naphthoquinone	0.32039	0.31743	0.31743	0.000	-0.92461	60.00000	Averaged
127 Pentachlorobenzene	0.47629	0.49731	0.49731	0.000	4.41334	60.00000	Averaged
128 1-Naphthylamine	0.71181	0.74533	0.74533	0.000	4.70975	60.00000	Averaged
129 2-Naphthylamine	0.64134	0.57650	0.57650	0.000	-10.10953	60.00000	Averaged
131 5-Nitro-o-toluidine	0.25602	0.27374	0.27374	0.000	6.92121	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.10752	0.13454	0.13454	0.000	25.12508	60.00000	Averaged
137 Phenacetin	0.22131	0.23937	0.23937	0.000	8.16340	60.00000	Averaged
138 Diallate	0.20650	0.20770	0.20770	0.000	0.58296	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 25-JUN-2009 22:11
Lab File ID: s5f2530.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 10:16
Lab Sample ID: WBN090528-08.5 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20975	0.22776	0.22776	0.000	8.58954	60.00000	Averaged
213 Trans Diallate	0.24294	0.24436	0.24436	0.000	0.58296	60.00000	Averaged
140 4-Aminobiphenyl	0.36955	0.40991	0.40991	0.000	10.91902	60.00000	Averaged
141 Pentachloronitrobenzene	0.08929	0.09331	0.09331	0.000	4.50272	60.00000	Averaged
142 Pronamide	0.26058	0.26773	0.26773	0.000	2.74451	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01022	0.01223	0.01223	0.000	19.62918	60.00000	Averaged
147 Methapyrilene	0.41717	0.44149	0.44149	0.000	5.82947	60.00000	Averaged
148 Isodrin	0.10436	0.10072	0.10072	0.000	-3.48541	60.00000	Averaged
149 Aramite	0.05090	0.04734	0.04734	0.000	-6.97764	60.00000	Averaged
150 Kepone	0.06725	0.06505	0.06505	0.000	-3.27279	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.20208	0.21351	0.21351	0.000	5.65511	60.00000	Averaged
152 Chlorobenzilate	0.29951	0.30883	0.30883	0.000	3.11302	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.44059	0.46027	0.46027	0.000	4.46551	60.00000	Averaged
155 2-Acetylaminofluorene	0.27578	0.31027	0.31027	0.000	12.50985	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.45468	0.42550	0.42550	0.000	-6.41815	60.00000	Averaged
158 3-Methylcholanthrene	0.40918	0.41886	0.41886	0.000	2.36719	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD5.i/s062509.b/s5f2530.d
Lab Smp Id: WBN090528-08.5 Client Smp ID: AP12ICV
Inj Date : 25-JUN-2009 22:11
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090528-08.5|40 PPM|1|SVM|1|AP12ICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m
Meth Date : 26-Jun-2009 10:43 hnm Quant Type: ISTD
Cal Date : 25-JUN-2009 21:25 Cal File: s5f2528.d
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.031	4.031	(1.000)	513917	40.0000	
* 29 Naphthalene-d8	136	4.901	4.901	(1.000)	1759940	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.160	(1.000)	1124731	40.0000	
* 67 Phenanthrene-d10	188	7.342	7.342	(1.000)	2155121	40.0000	
* 91 Chrysene-d12	240	9.766	9.766	(1.000)	2326057	40.0000	
* 98 Perylene-d12	264	11.524	11.524	(1.000)	2206835	40.0000	
209 Benzaldehyde	77	3.754	3.754	(0.931)	354443	40.0000	34.6
16 Acetophenone	105	4.278	4.278	(1.061)	561903	40.0000	40.3
189 Caprolactam	113	5.172	5.172	(1.055)	151764	40.0000	43.4
208 1,1'-Biphenyl	154	5.719	5.719	(0.928)	1238478	40.0000	42.2
207 Atrazine	173	7.031	7.031	(0.958)	56529	40.0000	34.7
77 Benzidine	184	8.495	8.495	(0.870)	384927	40.0000	39.7
90 3,3'-Dichlorobenzidine	252	9.689	9.689	(0.992)	718760	40.0000	43.1

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
102 1,4-Dioxane	88	2.337	2.337	(0.580)	194371	40.0000	49.1
103 Methyl methacrylate	100	2.331	2.331	(0.578)	105751	40.0000	53.4
104 Ethyl methacrylate	69	2.713	2.713	(0.673)	446835	40.0000	48.1
105 2-Picoline	93	2.913	2.913	(0.723)	571194	40.0000	40.0
106 N-Nitrosomethylethylamine	88	2.960	2.960	(0.734)	225690	40.0000	42.3
107 Methyl methanesulfonate	80	3.119	3.119	(0.774)	274996	40.0000	44.6
108 N-Nitrosodiethylamine	102	3.354	3.354	(0.832)	217991	40.0000	41.2
109 Ethyl Methanesulfonate	79	3.507	3.507	(0.870)	369616	40.0000	49.8
110 Pentachloroethane	167	3.854	3.854	(0.956)	232206	40.0000	55.1
111 N-Nitrosopyrrolidine	100	4.266	4.266	(1.058)	222292	40.0000	42.0(Q)
113 N-Nitrosomorpholine	56	4.290	4.290	(1.064)	360248	40.0000	42.2
114 o-Toluidine	106	4.307	4.307	(1.069)	751073	40.0000	40.6
115 N-Nitrosopiperidine	114	4.507	4.507	(0.920)	244971	40.0000	41.8
116 a,a-Dimethylphenethylamine	58	4.772	4.772	(0.974)	1553746	40.0000	43.7
118 2,6-Dichlorophenol	162	4.943	4.943	(1.008)	428468	40.0000	42.0
119 Hexachloropropene	213	4.972	4.972	(1.014)	390700	40.0000	64.3
120 p-Phenylenediamine	108	5.178	5.178	(1.056)	335699	40.0000	41.7
121 N-Nitrosodi-n-butylamine	84	5.137	5.137	(1.048)	333995	40.0000	42.2(T)
122 Safrole	162	5.307	5.307	(1.083)	447572	40.0000	47.5
123 1,2,4,5-Tetrachlorobenzene	216	5.513	5.513	(0.895)	623256	40.0000	43.4
124 Isosafrole	162	5.678	5.678	(0.922)	515408	40.0000	55.4
125 1,4-Naphthoquinone	158	5.872	5.872	(0.953)	357026	40.0000	39.6
127 Pentachlorobenzene	250	6.278	6.278	(1.019)	559342	40.0000	41.8
128 1-Naphthylamine	143	6.366	6.366	(1.033)	838296	40.0000	41.9
129 2-Naphthylamine	143	6.425	6.425	(1.043)	648408	40.0000	36.0
131 5-Nitro-o-toluidine	152	6.566	6.566	(1.066)	307889	40.0000	42.8
136 1,3,5-Trinitrobenzene	75	6.819	6.819	(0.929)	289941	40.0000	50.0
137 Phenacetin	108	6.860	6.860	(0.934)	515877	40.0000	43.3(Q)
138 Diallate	86	6.842	6.842	(0.932)	447626	40.0000	40.2
212 Cis Diallate	86	6.925	6.925	(0.943)	73628	6.00000	6.5(a)
213 Trans Diallate	86	6.842	6.842	(0.932)	447626	34.0000	34.2
140 4-Aminobiphenyl	169	7.154	7.154	(0.974)	883396	40.0000	44.4
141 Pentachloronitrobenzene	237	7.178	7.178	(0.978)	201104	40.0000	41.8(Q)
142 Pronamide	173	7.166	7.166	(0.976)	576989	40.0000	41.1
146 4-Nitroquinoline-1-oxide	101	8.013	8.013	(1.091)	26348	40.0000	47.8
147 Methapyrilene	58	8.042	8.042	(1.095)	951461	40.0000	42.3
148 Isodrin	193	8.272	8.272	(1.127)	217072	40.0000	38.6
149 Aramite	185	8.666	8.666	(1.180)	102033	40.0000	37.2
150 Kepone	272	9.260	9.260	(1.261)	140182	40.0000	38.7
151 p-(Dimethylamino)azobenzene	120	8.848	8.848	(0.906)	496641	40.0000	42.3
152 Chlorobenzilate	251	8.878	8.878	(0.909)	718358	40.0000	41.2
153 3,3'-Dimethylbenzidine	212	9.166	9.166	(0.939)	1070613	40.0000	41.8
155 2-Acetylaminofluorene	181	9.413	9.413	(0.964)	721716	40.0000	45.0
157 7,12Dimethylbenz(a)anthracene	256	10.948	10.948	(0.950)	938999	40.0000	37.4
158 3-Methylcholanthrene	268	11.954	11.954	(1.037)	924361	40.0000	40.9(Q)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s062509.b/s5f2530.d
Date : 25-JUN-2009 22:11
Client ID: AP12ICV
Sample Info: IWBN090528-08,5140 PPM11|SVM11|AP12ICV
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

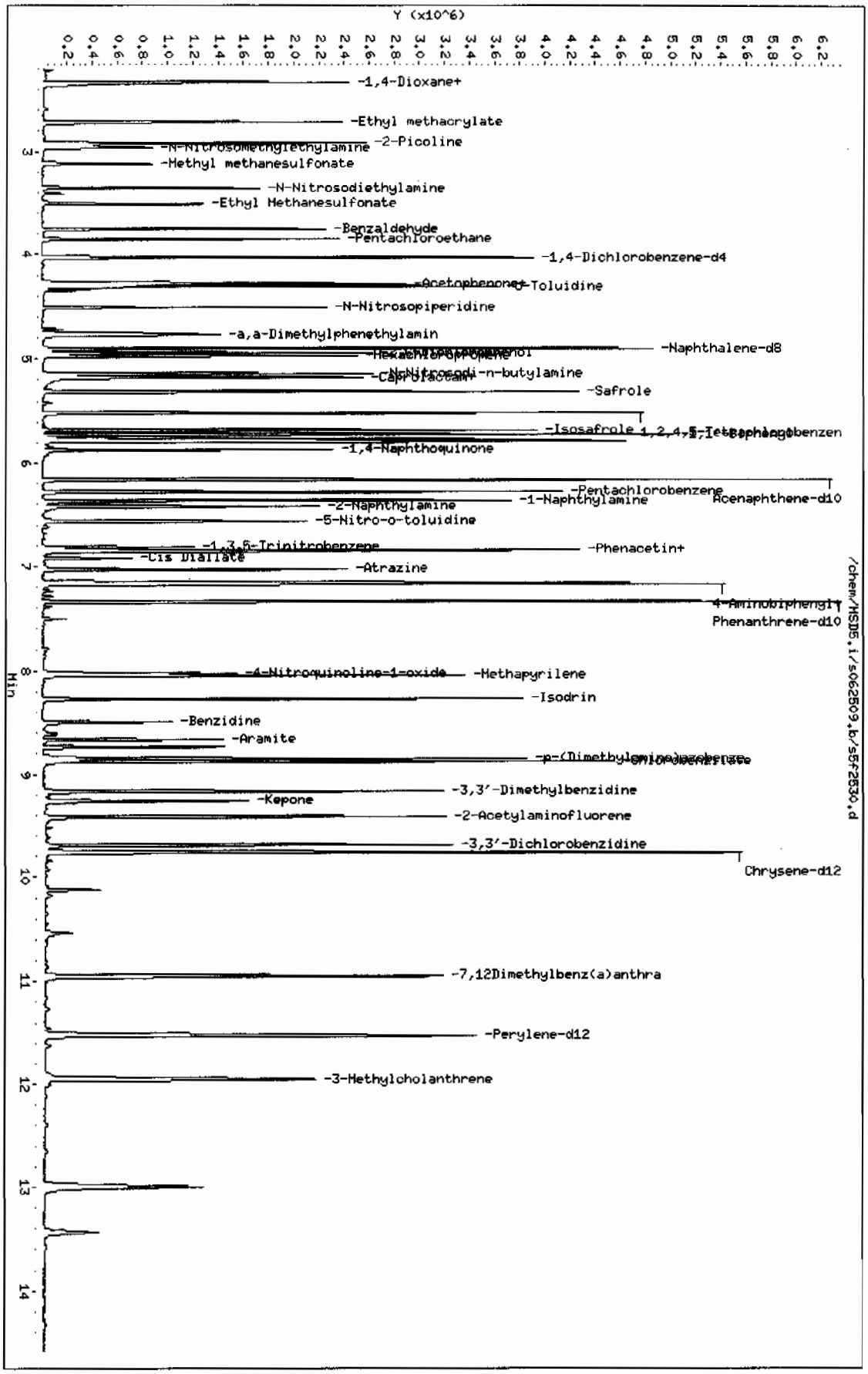

Page 1

Data File: /chem/MSD5.i/s062509.b/s5f2533.d
Report Date: 26-Jun-2009 09:26

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2533.d
Analysis Type: WATER
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 26-JUN-2009 09:03
Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Init. Cal. Times: 14:42 21:25

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$	3 2-Fluorophenol	0.87827	0.92425	0.92425	0.000	5.23547	60.00000	Averaged
$	5 Phenol-d5	1.15801	1.18114	1.18114	0.000	1.99696	60.00000	Averaged
$	20 Nitrobenzene-d5	0.29640	0.32886	0.32886	0.000	10.95026	60.00000	Averaged
$	39 2-Fluorobiphenyl	1.03449	1.12238	1.12238	0.000	8.49584	60.00000	Averaged
$	60 2,4,6-Tribromophenol	0.16321	0.16963	0.16963	0.000	3.93360	60.00000	Averaged
$	81 p-Terphenyl-d14	0.61216	0.71476	0.71476	0.000	16.76084	60.00000	Averaged
	1 N-Methyl-N-nitrosomethylami	0.46728	0.54505	0.54505	0.000	16.64238	60.00000	Averaged
	2 Pyridine	0.69143	0.70995	0.70995	0.000	2.67819	60.00000	Averaged
	4 Aniline	0.50220	0.53118	0.53118	0.000	5.77120	60.00000	Averaged
	6 Phenol	1.14936	1.18675	1.18675	0.001	3.25298	20.00000	Averaged ccc
	7 bis(2-Chloroethyl) ether	0.88583	0.90830	0.90830	0.000	2.53655	60.00000	Averaged
	8 2-Chlorophenol	0.96070	1.02584	1.02584	0.000	6.78060	60.00000	Averaged
	203 n-Decane	1.55838	1.69824	1.69824	0.000	8.97494	60.00000	Averaged
	9 1,3-Dichlorobenzene	1.14971	1.22756	1.22756	0.000	6.77092	60.00000	Averaged
	11 1,4-Dichlorobenzene	1.14381	1.19501	1.19501	0.001	4.47626	20.00000	Averaged ccc
	13 1,2-Dichlorobenzene	1.06271	1.08794	1.08794	0.000	2.37401	60.00000	Averaged
	14 bis(2-Chloroisopropyl)ether	2.06168	2.20216	2.20216	0.000	6.81386	60.00000	Averaged
	12 Benzyl alcohol	0.60629	0.63280	0.63280	0.000	4.37103	60.00000	Averaged
	15 o-Cresol	0.71463	0.71377	0.71377	0.000	-0.12043	60.00000	Averaged
	18 m,p-Cresols	0.95569	0.97996	0.97996	0.000	2.54026	60.00000	Averaged
	17 N-Nitrosodipropylamine	0.61897	0.66847	0.66847	0.050	7.99822	60.00000	Averaged spcc
	19 Hexachloroethane	0.42421	0.45290	0.45290	0.000	6.76415	60.00000	Averaged
	21 Nitrobenzene	0.27643	0.32316	0.32316	0.000	16.90510	60.00000	Averaged
	22 Isophorone	0.51164	0.58577	0.58577	0.000	14.48914	60.00000	Averaged
	23 2-Nitrophenol	0.12977	0.13565	0.13565	0.001	4.53272	20.00000	Averaged ccc
	24 2,4-Dimethylphenol	0.22398	0.23682	0.23682	0.000	5.73150	60.00000	Averaged
	25 bis(2-Chloroethoxy)methane	0.29234	0.30563	0.30563	0.000	4.54679	60.00000	Averaged
	26 2,4-Dichlorophenol	0.22262	0.23707	0.23707	0.001	6.49090	20.00000	Averaged ccc
	27 Benzoic acid	49.71978	40.00000	0.13459	0.000	24.29945	60.00000	Linear
	28 1,2,4-Trichlorobenzene	0.27693	0.28464	0.28464	0.000	2.78700	60.00000	Averaged
	30 Naphthalene	0.77927	0.75380	0.75380	0.000	-3.26722	60.00000	Averaged
	204 alpha-Terpineol	0.25452	0.26630	0.26630	0.000	4.62601	60.00000	Averaged
	31 4-Chloroaniline	47.43792	40.00000	0.32609	0.000	18.59479	60.00000	Linear
	32 Hexachlorobutadiene	0.20215	0.20705	0.20705	0.001	2.42592	20.00000	Averaged ccc
	33 4-Chloro-3-methylphenol	0.21319	0.22983	0.22983	0.001	7.80207	20.00000	Averaged ccc
	34 2-Methylnaphthalene	0.46942	0.52808	0.52808	0.000	12.49823	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2533.d
Analysis Type: WATER
Lab Sample ID: WBN090602-09.1
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 26-JUN-2009 09:03
Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Init. Cal. Times: 14:42 21:25
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	0.50729	0.49555	0.49555	0.000	-2.31520	60.00000	Averaged
36 Hexachlorocyclopentadiene	39.64221	40.00000	0.18009	0.050	-0.89448	60.00000	Linear spcc
205 2,3-Dichloroaniline	0.44656	0.49099	0.49099	0.000	9.94845	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.30953	0.32810	0.32810	0.001	6.00118	20.00000	Averaged ccc
38 2,4,5-Trichlorophenol	0.33218	0.36608	0.36608	0.000	10.20698	60.00000	Averaged
40 2-Chloronaphthalene	0.85120	0.90066	0.90066	0.000	5.81012	60.00000	Averaged
42 o-Nitroaniline	0.27065	0.28553	0.28553	0.000	5.49930	60.00000	Averaged
41 m-Nitroaniline	38.41712	40.00000	0.13119	0.000	-3.95720	60.00000	Linear
43 Dimethylphthalate	1.01609	1.07110	1.07110	0.000	5.41428	60.00000	Averaged
44 2,6-Dinitrotoluene	0.24192	0.27930	0.27930	0.000	15.44876	60.00000	Averaged
50 2,4-Dinitrotoluene	0.31653	0.36215	0.36215	0.000	14.41426	60.00000	Averaged
45 Acenaphthylene	1.25413	1.36304	1.36304	0.000	8.68388	60.00000	Averaged
47 Acenaphthene	0.81724	0.84415	0.84415	0.001	3.29259	20.00000	Averaged ccc
48 2,4-Dinitrophenol	41.95216	40.00000	0.09301	0.050	4.88039	60.00000	Linear spcc
49 Dibenzofuran	1.15749	1.23802	1.23802	0.000	6.95699	60.00000	Averaged
51 Diethylphthalate	0.99523	1.06353	1.06353	0.000	6.86293	60.00000	Averaged
52 4-Nitrophenol	0.14183	0.13849	0.13849	0.050	-2.35609	60.00000	Averaged spcc
53 Fluorene	0.99470	1.03686	1.03686	0.000	4.23858	60.00000	Averaged
54 4-Chlorophenylphenylether	0.57998	0.61529	0.61529	0.000	6.08785	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	55.17976	40.00000	0.12176	0.000	37.94939	60.00000	Linear
56 p-Nitroaniline	0.10468	0.10711	0.10711	0.000	2.32364	60.00000	Averaged
133 Diphenylamine	0.39819	0.42143	0.42143	0.001	5.83632	20.00000	Averaged ccc
58 1,2-Diphenylhydrazine	0.50554	0.55423	0.55423	0.000	9.63098	60.00000	Averaged
61 4-Bromophenylphenylether	0.19119	0.20218	0.20218	0.000	5.74963	60.00000	Averaged
63 Hexachlorobenzene	0.20135	0.21304	0.21304	0.000	5.80172	60.00000	Averaged
65 Pentachlorophenol	42.93985	40.00000	0.10471	0.001	7.34962	20.00000	Linear ccc
206 n-Octadecane	0.43069	0.46656	0.46656	0.000	8.32965	60.00000	Averaged
68 Phenanthrene	0.74933	0.76655	0.76655	0.000	2.29763	60.00000	Averaged
69 Anthracene	0.73960	0.78221	0.78221	0.000	5.76128	60.00000	Averaged
72 Di-n-butylphthalate	0.85193	0.94952	0.94952	0.000	11.45527	60.00000	Averaged
76 Fluoranthene	0.85361	0.92888	0.92888	0.001	8.81843	20.00000	Averaged ccc
79 Pyrene	0.87262	0.93192	0.93192	0.000	6.79628	60.00000	Averaged
85 Butylbenzylphthalate	0.37401	0.41884	0.41884	0.000	11.98745	60.00000	Averaged
89 Benzo(a)anthracene	0.85828	0.89070	0.89070	0.000	3.77758	60.00000	Averaged
92 Chrysene	0.78622	0.81917	0.81917	0.000	4.19176	60.00000	Averaged
93 bis(2-Ethylhexyl)phthalate	0.51325	0.58454	0.58454	0.000	13.89072	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 26-JUN-2009 09:03
Lab File ID: s5f2533.d Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 21:25
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
94 Di-n-octylphthalate	0.91435	1.00400	1.00400	0.001	9.80457	20.00000	Averaged	ccc
95 Benzo(b)fluoranthene	0.88340	0.92115	0.92115	0.000	4.27302	60.00000	Averaged	
96 Benzo(k)fluoranthene	0.86774	0.92327	0.92327	0.000	6.39833	60.00000	Averaged	
97 Benzo(a)pyrene	0.78201	0.83388	0.83388	0.001	6.63286	20.00000	Averaged	ccc
99 Indeno(1,2,3-cd)pyrene	0.78583	0.79439	0.79439	0.000	1.09020	60.00000	Averaged	
100 Dibenzo(a,h)anthracene	0.64056	0.66834	0.66834	0.000	4.33609	60.00000	Averaged	
101 Benzo(ghi)perylene	0.66994	0.67440	0.67440	0.000	0.66555	60.00000	Averaged	
126 m-Dinitrobenzene	0.16554	0.17075	0.17075	0.000	3.14663	60.00000	Averaged	
130 2,3,4,6-Tetrachlorophenol	0.30843	0.31127	0.31127	0.000	0.91990	60.00000	Averaged	
143 Dinoseb	44.22962	40.00000	0.14919	0.000	10.57406	60.00000	Linear	
173 Carbazole	41.25747	40.00000	0.44073	0.000	3.14368	60.00000	Linear	
184 p-Benzoquinone	23.92059	40.00000	0.06563	0.000	-40.19852	60.00000	Linear	
192 Methoxychlor	0.50819	0.59122	0.59122	0.000	16.33706	60.00000	Averaged	
211 p-Toluidine	43.31403	40.00000	0.70324	0.000	8.28508	60.00000	Linear	
210 m-Toluidine	41.09601	40.00000	1.07377	0.000	2.74002	60.00000	Linear	
26 Phthalic anhydride	43.89917	40.00000	0.11898	0.000	9.74792	60.00000	Linear	
179 Dibenzo(a,e)pyrene	0.39632	0.23471	0.23471	0.000	-40.77708	60.00000	Averaged	
214 1,4-Dinitrobenzene	0.18147	0.18811	0.18811	0.000	3.65351	60.00000	Averaged	
215 2-Ethoxyethanol	0.59885	0.70005	0.70005	0.000	16.89800	60.00000	Averaged	
216 Methylenebis(2-chloroaniline	0.10978	0.11539	0.11539	0.000	5.11341	60.00000	Averaged	
M 225 Trichlorophenols	0.32085	0.34709	0.34709	0.000	8.17820	60.00000	Averaged	
M 226 Tetrachlorophenols	0.30843	0.31127	0.31127	0.000	0.91990	60.00000	Averaged	
M 227 Benzo(b,k)fluoranthene	0.87557	0.92221	0.92221	0.000	5.32615	60.00000	Averaged	

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Data file : /chem/MSD5.i/s062509.b/s5f2533.d
Lab Smp Id: WBN090602-09.1 Client Smp ID: MEGAICV
Inj Date : 26-JUN-2009 09:03
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090602-09.1|40 PPM|1|SVM|1|MEGAICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m
Meth Date : 26-Jun-2009 09:26 rmb Quant Type: ISTD
Cal Date : 25-JUN-2009 19:55 Cal File: s5f2524.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.032	4.032	(1.000)	451724	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1704563	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1006448	40.0000	
* 67 Phenanthrene-d10	188	7.345	7.345	(1.000)	1867078	40.0000	
* 91 Chrysene-d12	240	9.767	9.767	(1.000)	1916495	40.0000	
* 98 Perylene-d12	264	11.529	11.529	(1.000)	1772024	40.0000	
$ 3 2-Fluorophenol	112	3.208	3.208	(0.796)	417507	40.0000	42.1
$ 5 Phenol-d5	99	3.743	3.743	(0.928)	533549	40.0000	40.8
$ 20 Nitrobenzene-d5	82	4.398	4.398	(0.897)	560561	40.0000	44.4
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	1129616	40.0000	43.4
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	170721	40.0000	41.6
$ 81 p-Terphenyl-d14	244	8.727	8.727	(0.894)	1369835	40.0000	46.7
1 N-Methyl-N-nitrosomethylamine	74	2.505	2.505	(0.621)	246213	40.0000	46.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
2 Pyridine	79	2.539	2.539	(0.630)	320702	40.0000	41.1
4 Aniline	66	3.815	3.815	(0.946)	239947	40.0000	42.3
6 Phenol	94	3.752	3.752	(0.931)	536083	40.0000	41.3(Q)
7 bis(2-Chloroethyl) ether	63	3.829	3.829	(0.950)	410301	40.0000	41.0
8 2-Chlorophenol	128	3.897	3.897	(0.967)	463398	40.0000	42.7
203 n-Decane	43	3.878	3.878	(0.962)	767136	40.0000	43.6
9 1,3-Dichlorobenzene	146	3.998	3.998	(0.992)	554517	40.0000	42.7
11 1,4-Dichlorobenzene	146	4.046	4.046	(1.004)	539813	40.0000	41.8
13 1,2-Dichlorobenzene	146	4.147	4.147	(1.029)	491448	40.0000	40.9
14 bis(2-Chloroisopropyl)ether	45	4.176	4.176	(1.036)	994767	40.0000	42.7
12 Benzyl alcohol	108	4.099	4.099	(1.017)	285849	40.0000	41.7
15 o-Cresol	107	4.147	4.147	(1.029)	322429	40.0000	40.0
18 m,p-Cresols	107	4.248	4.248	(1.054)	442673	40.0000	41.0
17 N-Nitrosodipropylamine	70	4.268	4.268	(1.059)	301966	40.0000	43.2
19 Hexachloroethane	117	4.378	4.378	(1.086)	204587	40.0000	42.7
21 Nitrobenzene	77	4.412	4.412	(0.900)	550854	40.0000	46.8
22 Isophorone	82	4.561	4.561	(0.930)	998489	40.0000	45.8
23 2-Nitrophenol	139	4.624	4.624	(0.943)	231229	40.0000	41.8
24 2,4-Dimethylphenol	122	4.614	4.614	(0.941)	403677	40.0000	42.3
25 bis(2-Chloroethoxy)methane	93	4.682	4.682	(0.955)	520973	40.0000	41.8
26 2,4-Dichlorophenol	162	4.788	4.788	(0.976)	404106	40.0000	42.6
27 Benzoic acid	105	4.677	4.677	(0.954)	229416	40.0000	49.7
28 1,2,4-Trichlorobenzene	180	4.850	4.850	(0.989)	485193	40.0000	41.1
30 Naphthalene	128	4.918	4.918	(1.003)	1284908	40.0000	38.7(Q)
204 alpha-Terpineol	59	4.889	4.889	(0.997)	453924	40.0000	41.8
31 4-Chloroaniline	127	4.932	4.932	(1.006)	555837	40.0000	47.4
32 Hexachlorobutadiene	225	4.980	4.980	(1.016)	352928	40.0000	41.0
33 4-Chloro-3-methylphenol	107	5.245	5.245	(1.070)	391753	40.0000	43.1
34 2-Methylnaphthalene	142	5.399	5.399	(1.101)	900153	40.0000	45.0
35 1-Methylnaphthalene	142	5.471	5.471	(1.116)	844693	40.0000	39.1
36 Hexachlorocyclopentadiene	237	5.505	5.505	(0.893)	181254	40.0000	39.6
205 2,3-Dichloroaniline	161	5.597	5.597	(0.908)	494154	40.0000	44.0
37 2,4,6-Trichlorophenol	196	5.587	5.587	(0.906)	330218	40.0000	42.4
38 2,4,5-Trichlorophenol	196	5.616	5.616	(0.911)	368445	40.0000	44.1
40 2-Chloronaphthalene	162	5.755	5.755	(0.934)	906463	40.0000	42.3
42 o-Nitroaniline	65	5.808	5.808	(0.942)	287375	40.0000	42.2
41 m-Nitroaniline	138	6.112	6.112	(0.991)	132031	40.0000	38.4
43 Dimethylphthalate	163	5.919	5.919	(0.960)	1078006	40.0000	42.2
44 2,6-Dinitrotoluene	165	5.977	5.977	(0.970)	281098	40.0000	46.2
50 2,4-Dinitrotoluene	165	6.276	6.276	(1.018)	364487	40.0000	45.8
45 Acenaphthylene	152	6.064	6.064	(0.984)	1371830	40.0000	43.5
47 Acenaphthene	154	6.189	6.189	(1.004)	849596	40.0000	41.3
48 2,4-Dinitrophenol	184	6.184	6.184	(1.003)	93607	40.0000	42.0
49 Dibenzofuran	168	6.314	6.314	(1.024)	1246000	40.0000	42.8
51 Diethylphthalate	149	6.430	6.430	(1.043)	1070389	40.0000	42.7
52 4-Nitrophenol	139	6.203	6.203	(1.006)	139386	40.0000	39.0
53 Fluorene	166	6.579	6.579	(1.067)	1043548	40.0000	41.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
54 4-Chlorophenylphenylether	204	6.550	6.550	(1.062)	619261	40.0000	42.4
55 2-Methyl-4,6-dinitrophenol	198	6.593	6.593	(0.898)	227338	40.0000	55.2
56 p-Nitroaniline	138	6.574	6.574	(1.066)	107798	40.0000	40.9
133 Diphenylamine	169	6.641	6.641	(0.904)	786838	40.0000	42.3
58 1,2-Diphenylhydrazine	77	6.675	6.675	(0.909)	1034789	40.0000	43.8
61 4-Bromophenylphenylether	248	6.945	6.945	(0.946)	377491	40.0000	42.3
63 Hexachlorobenzene	284	7.017	7.017	(0.955)	397753	40.0000	42.3
65 Pentachlorophenol	266	7.166	7.166	(0.976)	195510	40.0000	42.9
206 n-Octadecane	57	7.147	7.147	(0.973)	871112	40.0000	43.3
68 Phenanthrene	178	7.364	7.364	(1.003)	1431207	40.0000	40.9
69 Anthracene	178	7.407	7.407	(1.009)	1460442	40.0000	42.3
72 Di-n-butylphthalate	149	7.759	7.759	(1.056)	1772829	40.0000	44.6
76 Fluoranthene	202	8.414	8.414	(1.146)	1734295	40.0000	43.5
79 Pyrene	202	8.630	8.630	(0.884)	1786021	40.0000	42.7
85 Butylbenzylphthalate	149	9.150	9.150	(0.937)	802710	40.0000	44.8
89 Benzo(a)anthracene	228	9.752	9.752	(0.999)	1707017	40.0000	41.5
92 Chrysene	228	9.796	9.796	(1.003)	1569944	40.0000	41.7
93 bis(2-Ethylhexyl)phthalate	149	9.675	9.675	(0.991)	1120270	40.0000	45.6
94 Di-n-octylphthalate	149	10.354	10.354	(0.898)	1779108	40.0000	43.9
95 Benzo(b)fluoranthene	252	10.985	10.985	(0.953)	1632300	40.0000	41.7
96 Benzo(k)fluoranthene	252	11.019	11.019	(0.956)	1636049	40.0000	42.6
97 Benzo(a)pyrene	252	11.447	11.447	(0.993)	1477653	40.0000	42.6
99 Indeno(1,2,3-cd)pyrene	276	13.402	13.402	(1.162)	1407684	40.0000	40.4
100 Dibenzo(a,h)anthracene	278	13.412	13.412	(1.163)	1184313	40.0000	41.7
101 Benzo(ghi)perylene	276	13.975	13.975	(1.212)	1195053	40.0000	40.3
126 m-Dinitrobenzene	168	5.963	5.963	(0.967)	171847	40.0000	41.2
130 2,3,4,6-Tetrachlorophenol	232	6.396	6.396	(1.037)	313275	40.0000	40.4
143 Dinoseb	211	7.287	7.287	(0.992)	278552	40.0000	44.2
173 Carbazole	167	7.523	7.523	(1.024)	822880	40.0000	41.2
184 p-Benzoquinone	54	3.516	3.516	(0.872)	29647	40.0000	23.9
192 Methoxychlor	227	9.627	9.627	(0.986)	1133064	40.0000	46.5
211 p-Toluidine	106	4.306	4.306	(1.068)	317671	40.0000	43.3
210 m-Toluidine	106	4.330	4.330	(1.074)	485048	40.0000	41.1
26 Phthalic anhydride	104	5.433	5.433	(1.108)	202802	40.0000	43.9
179 Dibenzo(a,e)pyrene	302	18.343	18.343	(1.591)	415918	40.0000	23.7
214 1,4-Dinitrobenzene	75	5.900	5.900	(0.957)	189318	40.0000	41.5
215 2-Ethoxyethanol	59	2.341	2.341	(0.581)	316229	40.0000	46.8
216 Methylenebis(2-chloroaniline)	231	9.690	9.690	(0.992)	221148	40.0000	42.0(Q)
M 225 Trichlorophenols	196				698663	80.0000	86.5
M 226 Tetrachlorophenols	232				313275	40.0000	40.4
M 227 Benzo(b,k)fluoranthene	252				3268349	80.0000	84.3

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s062509.b/s5f2533.d
Date : 26-JUN-2009 09:03
Client ID: MEGAICV
Sample Info: IWBN090602-09,1:40 PPM:1:SVM:1:MEGAICV
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

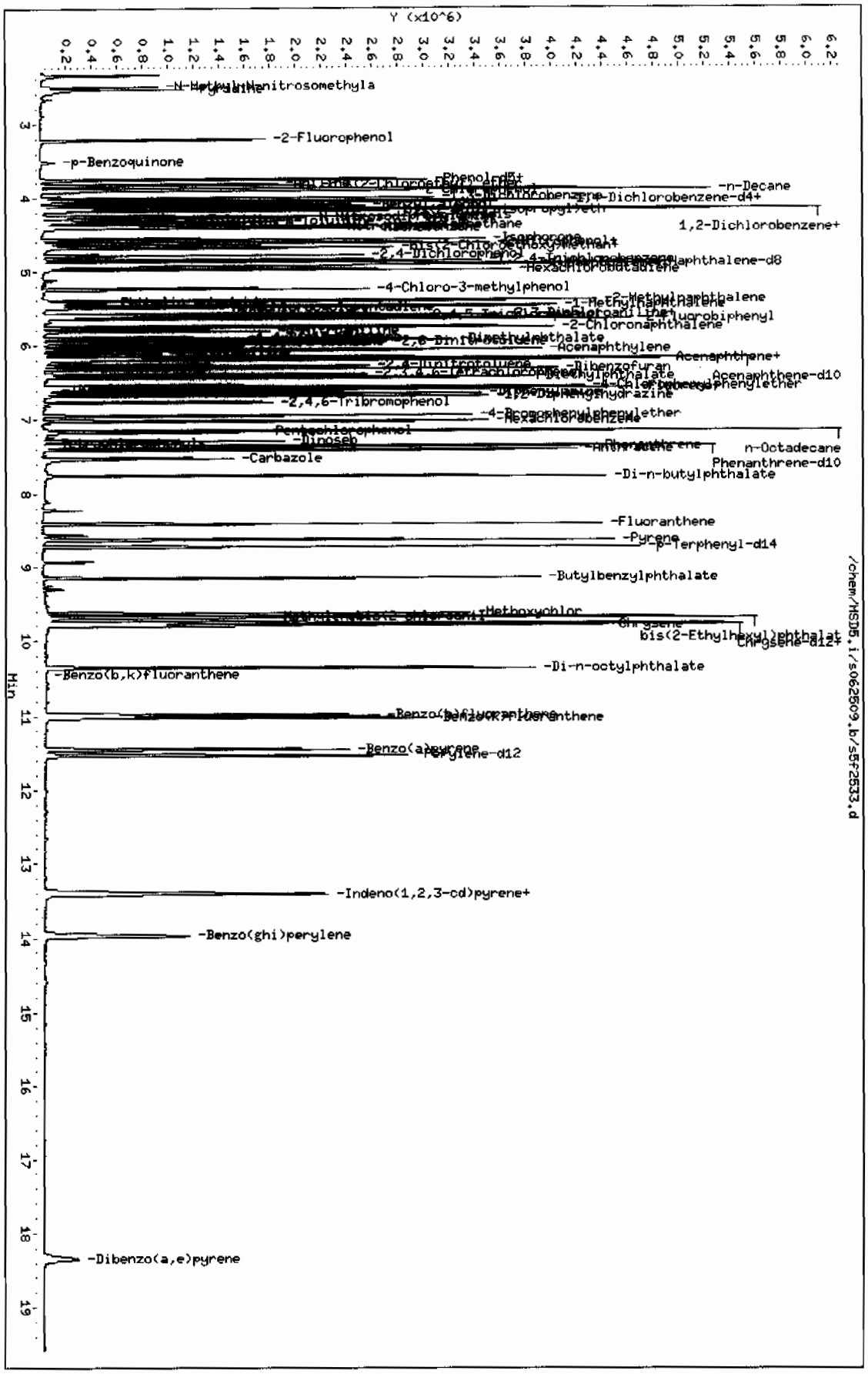

Page 1

Data File: /chem/MSD5.i/s070709.b/s5g0702.d
Report Date: 07-Jul-2009 16:55

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5g0702.d
Analysis Type: WATER
Lab Sample ID: WBN090617-02.4
Method: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m

Injection Date: 07-JUL-2009 07:25
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$	3 2-Fluorophenol	0.87827	0.88158	0.88158	0.000	0.37688	60.00000	Averaged	
$	5 Phenol-d5	1.15801	1.14342	1.14342	0.000	-1.26067	60.00000	Averaged	
$	20 Nitrobenzene-d5	0.29640	0.28570	0.28570	0.000	-3.61068	60.00000	Averaged	
$	39 2-Fluorobiphenyl	1.03449	1.09948	1.09948	0.000	6.28228	60.00000	Averaged	
$	60 2,4,6-Tribromophenol	0.16321	0.17300	0.17300	0.000	5.99738	60.00000	Averaged	
$	81 p-Terphenyl-d14	0.61216	0.66589	0.66589	0.000	8.77798	60.00000	Averaged	
	1 N-Methyl-N-nitrosomethylami	0.46728	0.46480	0.46480	0.000	-0.53108	60.00000	Averaged	
	2 Pyridine	0.69143	0.57887	0.57887	0.000	-16.27956	60.00000	Averaged	
	4 Aniline	0.50220	0.49210	0.49210	0.000	-2.01027	60.00000	Averaged	
	6 Phenol	1.14936	1.13030	1.13030	0.001	-1.65807	20.00000	Averaged	ccc
	7 bis(2-Chloroethyl) ether	0.88583	0.87356	0.87356	0.000	-1.38555	60.00000	Averaged	
	8 2-Chlorophenol	0.96070	0.97423	0.97423	0.000	1.40859	60.00000	Averaged	
	203 n-Decane	1.55838	1.64075	1.64075	0.000	5.28569	60.00000	Averaged	
	9 1,3-Dichlorobenzene	1.14971	1.18576	1.18576	0.000	3.13569	60.00000	Averaged	
	11 1,4-Dichlorobenzene	1.14381	1.16873	1.16873	0.001	2.17931	20.00000	Averaged	ccc
	13 1,2-Dichlorobenzene	1.06271	1.11573	1.11573	0.000	4.98917	60.00000	Averaged	
	14 bis(2-Chloroisopropyl)ether	2.06168	2.09684	2.09684	0.000	1.70535	60.00000	Averaged	
	12 Benzyl alcohol	0.60629	0.59144	0.59144	0.000	-2.44932	60.00000	Averaged	
	15 o-Cresol	0.71463	0.70373	0.70373	0.000	-1.52525	60.00000	Averaged	
	18 m,p-Cresols	0.95569	0.93288	0.93288	0.000	-2.38677	60.00000	Averaged	
	17 N-Nitrosodipropylamine	0.61897	0.65100	0.65100	0.050	5.17456	60.00000	Averaged	spcc
	19 Hexachloroethane	0.42421	0.44006	0.44006	0.000	3.73764	60.00000	Averaged	
	21 Nitrobenzene	0.27643	0.27481	0.27481	0.000	-0.58639	60.00000	Averaged	
	22 Isophorone	0.51164	0.52327	0.52327	0.000	2.27369	60.00000	Averaged	
	23 2-Nitrophenol	0.12977	0.13161	0.13161	0.001	1.41666	20.00000	Averaged	ccc
	24 2,4-Dimethylphenol	0.22398	0.23027	0.23027	0.000	2.80793	60.00000	Averaged	
	25 bis(2-Chloroethoxy)methane	0.29234	0.28952	0.28952	0.000	-0.96575	60.00000	Averaged	
	26 2,4-Dichlorophenol	0.22262	0.23063	0.23063	0.001	3.59552	20.00000	Averaged	ccc
	27 Benzoic acid	46.59661	40.00000	0.12337	0.000	16.49151	60.00000	Linear	
	28 1,2,4-Trichlorobenzene	0.27693	0.28915	0.28915	0.000	4.41317	60.00000	Averaged	
	30 Naphthalene	0.77927	0.73291	0.73291	0.000	-5.94853	60.00000	Averaged	
	204 alpha-Terpineol	0.25452	0.26950	0.26950	0.000	5.88179	60.00000	Averaged	
	31 4-Chloroaniline	25.53918	40.00000	0.14767	0.000	-36.15205	60.00000	Linear	
	32 Hexachlorobutadiene	0.20215	0.21693	0.21693	0.001	7.31478	20.00000	Averaged	ccc
	33 4-Chloro-3-methylphenol	0.21319	0.22504	0.22504	0.001	5.55688	20.00000	Averaged	ccc
	34 2-Methylnaphthalene	0.46942	0.47745	0.47745	0.000	1.71109	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5g0702.d
Analysis Type: WATER
Lab Sample ID: WBN090617-02.4
Method: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m

Injection Date: 07-JUL-2009 07:25
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35 1-Methylnaphthalene	0.50729	0.50010	0.50010	0.000	-1.41856	60.00000	Averaged
36 Hexachlorocyclopentadiene	41.18652	40.00000	0.18762	0.050	2.96630	60.00000	Linear spcc
205 2,3-Dichloroaniline	0.44656	0.46730	0.46730	0.000	4.64296	60.00000	Averaged
37 2,4,6-Trichlorophenol	0.30953	0.34408	0.34408	0.001	11.16199	20.00000	Averaged ccc
38 2,4,5-Trichlorophenol	0.33218	0.35333	0.35333	0.000	6.36696	60.00000	Averaged
40 2-Chloronaphthalene	0.85120	0.88745	0.88745	0.000	4.25854	60.00000	Averaged
42 o-Nitroaniline	0.27065	0.27326	0.27326	0.000	0.96496	60.00000	Averaged
41 m-Nitroaniline	22.12452	40.00000	0.05042	0.000	-44.68869	60.00000	Linear
43 Dimethylphthalate	1.01609	1.06421	1.06421	0.000	4.73590	60.00000	Averaged
44 2,6-Dinitrotoluene	0.24192	0.24648	0.24648	0.000	1.88303	60.00000	Averaged
50 2,4-Dinitrotoluene	0.31653	0.31903	0.31903	0.000	0.79164	60.00000	Averaged
45 Acenaphthylene	1.25413	1.34370	1.34370	0.000	7.14195	60.00000	Averaged
47 Acenaphthene	0.81724	0.85043	0.85043	0.001	4.06080	20.00000	Averaged ccc
48 2,4-Dinitrophenol	43.97556	40.00000	0.09943	0.050	9.93891	60.00000	Linear spcc
49 Dibenzofuran	1.15749	1.20416	1.20416	0.000	4.03222	60.00000	Averaged
51 Diethylphthalate	0.99523	1.04961	1.04961	0.000	5.46419	60.00000	Averaged
52 4-Nitrophenol	0.14183	0.14586	0.14586	0.050	2.83937	60.00000	Averaged spcc
53 Fluorene	0.99470	1.02395	1.02395	0.000	2.94055	60.00000	Averaged
54 4-Chlorophenylphenylether	0.57998	0.58722	0.58722	0.000	1.24725	60.00000	Averaged
55 2-Methyl-4,6-dinitrophenol	41.64473	40.00000	0.08792	0.000	4.11182	60.00000	Linear
56 p-Nitroaniline	0.10468	0.10067	0.10067	0.000	-3.82425	60.00000	Averaged
133 Diphenylamine	0.39819	0.39999	0.39999	0.001	0.45179	20.00000	Averaged ccc
58 1,2-Diphenylhydrazine	0.50554	0.51876	0.51876	0.000	2.61511	60.00000	Averaged
61 4-Bromophenylphenylether	0.19119	0.19637	0.19637	0.000	2.71146	60.00000	Averaged
63 Hexachlorobenzene	0.20135	0.20988	0.20988	0.000	4.23556	60.00000	Averaged
65 Pentachlorophenol	44.51998	40.00000	0.10912	0.001	11.29994	20.00000	Linear ccc
206 n-Octadecane	0.43069	0.44923	0.44923	0.000	4.30395	60.00000	Averaged
68 Phenanthrene	0.74933	0.78293	0.78293	0.000	4.48425	60.00000	Averaged
69 Anthracene	0.73960	0.78135	0.78135	0.000	5.64490	60.00000	Averaged
72 Di-n-butylphthalate	0.85193	0.93100	0.93100	0.000	9.28165	60.00000	Averaged
76 Fluoranthene	0.85361	0.89235	0.89235	0.001	4.53857	20.00000	Averaged ccc
79 Pyrene	0.87262	0.96080	0.96080	0.000	10.10554	60.00000	Averaged
85 Butylbenzylphthalate	0.37401	0.40133	0.40133	0.000	7.30402	60.00000	Averaged
89 Benzo(a)anthracene	0.85828	0.88162	0.88162	0.000	2.71978	60.00000	Averaged
92 Chrysene	0.78622	0.80883	0.80883	0.000	2.87639	60.00000	Averaged
93 bis(2-Ethylhexyl)phthalate	0.51325	0.56889	0.56889	0.000	10.84217	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5g0702.d
Analysis Type: WATER
Lab Sample ID: WBN090617-02.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m

Injection Date: 07-JUL-2009 07:25
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	0.91435	1.01946	1.01946	0.001	11.49547	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.88340	0.94418	0.94418	0.000	6.88046	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.86774	0.89077	0.89077	0.000	2.65401	60.00000	Averaged	
	97 Benzo(a)pyrene	0.78201	0.83730	0.83730	0.001	7.06988	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78583	0.86969	0.86969	0.000	10.67207	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	0.64056	0.71532	0.71532	0.000	11.67025	60.00000	Averaged	
	101 Benzo(ghi)perylene	0.66994	0.72441	0.72441	0.000	8.13032	60.00000	Averaged	
	126 m-Dinitrobenzene	0.16554	0.16154	0.16154	0.000	-2.41463	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30843	0.33536	0.33536	0.000	8.73203	60.00000	Averaged	
	143 Dinoseb	42.81665	40.00000	0.14354	0.000	7.04162	60.00000	Linear	
	173 Carbazole	30.88098	40.00000	0.31261	0.000	-22.79756	60.00000	Linear	
	184 p-Benzoquinone	15.43196	40.00000	0.02954	0.000	-61.42010	60.00000	Linear	<-
	192 Methoxychlor	0.50819	0.59529	0.59529	0.000	17.13785	60.00000	Averaged	
	211 p-Toluidine	34.95845	40.00000	0.54683	0.000	-12.60388	60.00000	Linear	
	210 m-Toluidine	35.58430	40.00000	0.88971	0.000	-11.03926	60.00000	Linear	
	26 Phthalic anhydride	25.51155	40.00000	0.06076	0.000	-36.22114	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	0.39632	0.47583	0.47583	0.000	20.06207	60.00000	Averaged	
	214 1,4-Dinitrobenzene	0.18147	0.18879	0.18879	0.000	4.02934	60.00000	Averaged	
	215 2-Ethoxyethanol	0.59885	0.59356	0.59356	0.000	-0.88467	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.10978	0.10185	0.10185	0.000	-7.22098	60.00000	Averaged	
M	225 Trichlorophenols	0.32085	0.34870	0.34870	0.000	8.67973	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30843	0.33536	0.33536	0.000	8.73203	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.87557	0.91748	0.91748	0.000	4.78611	60.00000	Averaged	

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0702.d
Lab Smp Id: WBN090617-02.4 Client Smp ID: MEGACVS
Inj Date : 07-JUL-2009 07:25
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090617-02.4|40 PPM|1|SVM|1|MEGACVS
Misc Info : |MSD8270|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.003	4.003	(1.000)	373014	40.0000	
* 29 Naphthalene-d8	136	4.874	4.874	(1.000)	1411459	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	827906	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1543223	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1495571	40.0000	
* 98 Perylene-d12	264	11.462	11.462	(1.000)	1337006	40.0000	
$ 3 2-Fluorophenol	112	3.184	3.184	(0.795)	328842	40.0000	40.2
$ 5 Phenol-d5	99	3.714	3.714	(0.928)	426510	40.0000	39.5
$ 20 Nitrobenzene-d5	82	4.369	4.369	(0.896)	403254	40.0000	38.6
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	910266	40.0000	42.5
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	143224	40.0000	42.4
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.894)	995890	40.0000	43.5
1 N-Methyl-N-nitrosomethylamine	74	2.476	2.476	(0.619)	173378	40.0000	39.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
2 Pyridine	79	2.510	2.510	(0.627)	215927	40.0000	33.5
4 Aniline	66	3.786	3.786	(0.946)	183561	40.0000	39.2
6 Phenol	94	3.723	3.723	(0.930)	421619	40.0000	39.3(Q)
7 bis(2-Chloroethyl) ether	63	3.800	3.800	(0.949)	325849	40.0000	39.4
8 2-Chlorophenol	128	3.868	3.868	(0.966)	363403	40.0000	40.6
203 n-Decane	43	3.849	3.849	(0.962)	612022	40.0000	42.1
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.992)	442306	40.0000	41.2
11 1,4-Dichlorobenzene	146	4.012	4.012	(1.002)	435954	40.0000	40.9
13 1,2-Dichlorobenzene	146	4.118	4.118	(1.029)	416183	40.0000	42.0
14 bis(2-Chloroisopropyl)ether	45	4.147	4.147	(1.036)	782149	40.0000	40.7
12 Benzyl alcohol	108	4.070	4.070	(1.017)	220617	40.0000	39.0
15 o-Cresol	107	4.118	4.118	(1.029)	262503	40.0000	39.4
18 m,p-Cresols	107	4.219	4.219	(1.054)	347976	40.0000	39.0
17 N-Nitrosodipropylamine	70	4.239	4.239	(1.059)	242831	40.0000	42.1
19 Hexachloroethane	117	4.349	4.349	(1.087)	164150	40.0000	41.5
21 Nitrobenzene	77	4.378	4.378	(0.898)	387886	40.0000	39.8
22 Isophorone	82	4.532	4.532	(0.930)	738581	40.0000	40.9
23 2-Nitrophenol	139	4.595	4.595	(0.943)	185761	40.0000	40.6
24 2,4-Dimethylphenol	122	4.585	4.585	(0.941)	325021	40.0000	41.1
25 bis(2-Chloroethoxy)methane	93	4.653	4.653	(0.955)	408644	40.0000	39.6
26 2,4-Dichlorophenol	162	4.759	4.759	(0.976)	325521	40.0000	41.4
27 Benzoic acid	105	4.638	4.638	(0.952)	174129	40.0000	46.6
28 1,2,4-Trichlorobenzene	180	4.821	4.821	(0.989)	408119	40.0000	41.8
30 Naphthalene	128	4.889	4.889	(1.003)	1034473	40.0000	37.6
204 alpha-Terpineol	59	4.860	4.860	(0.997)	380382	40.0000	42.4
31 4-Chloroaniline	127	4.903	4.903	(1.006)	208434	40.0000	25.5
32 Hexachlorobutadiene	225	4.951	4.951	(1.016)	306190	40.0000	42.9
33 4-Chloro-3-methylphenol	107	5.216	5.216	(1.070)	317634	40.0000	42.2
34 2-Methylnaphthalene	142	5.370	5.370	(1.102)	673898	40.0000	40.7
35 1-Methylnaphthalene	142	5.442	5.442	(1.117)	705866	40.0000	39.4
36 Hexachlorocyclopentadiene	237	5.471	5.471	(0.892)	155334	40.0000	41.2
205 2,3-Dichloroaniline	161	5.568	5.568	(0.908)	386877	40.0000	41.8
37 2,4,6-Trichlorophenol	196	5.558	5.558	(0.907)	284863	40.0000	44.5
38 2,4,5-Trichlorophenol	196	5.587	5.587	(0.911)	292523	40.0000	42.5
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	734724	40.0000	41.7
42 o-Nitroaniline	65	5.780	5.780	(0.943)	226235	40.0000	40.4
41 m-Nitroaniline	138	6.078	6.078	(0.991)	41743	40.0000	22.1
43 Dimethylphthalate	163	5.885	5.885	(0.960)	881063	40.0000	41.9
44 2,6-Dinitrotoluene	165	5.943	5.943	(0.969)	204061	40.0000	40.8
50 2,4-Dinitrotoluene	165	6.247	6.247	(1.019)	264129	40.0000	40.3
45 Acenaphthylene	152	6.030	6.030	(0.984)	1112460	40.0000	42.8
47 Acenaphthene	154	6.155	6.155	(1.004)	704077	40.0000	41.6
48 2,4-Dinitrophenol	184	6.155	6.155	(1.004)	82318	40.0000	44.0
49 Dibenzofuran	168	6.280	6.280	(1.024)	996934	40.0000	41.6
51 Diethylphthalate	149	6.396	6.396	(1.043)	868979	40.0000	42.2
52 4-Nitrophenol	139	6.174	6.174	(1.007)	120760	40.0000	41.1
53 Fluorene	166	6.545	6.545	(1.068)	847735	40.0000	41.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
54 4-Chlorophenylphenylether	204	6.516	6.516	(1.063)	486162	40.0000	40.5
55 2-Methyl-4,6-dinitrophenol	198	6.560	6.560	(0.898)	135673	40.0000	41.6
56 p-Nitroaniline	138	6.545	6.545	(1.068)	83347	40.0000	38.5
133 Diphenylamine	169	6.603	6.603	(0.904)	617269	40.0000	40.2
58 1,2-Diphenylhydrazine	77	6.641	6.641	(0.909)	800564	40.0000	41.0
61 4-Bromophenylphenylether	248	6.906	6.906	(0.945)	303049	40.0000	41.1
63 Hexachlorobenzene	284	6.983	6.983	(0.956)	323894	40.0000	41.7
65 Pentachlorophenol	266	7.133	7.133	(0.976)	168398	40.0000	44.5
206 n-Octadecane	57	7.109	7.109	(0.973)	693256	40.0000	41.7
68 Phenanthrene	178	7.330	7.330	(1.003)	1208242	40.0000	41.8
69 Anthracene	178	7.373	7.373	(1.009)	1205792	40.0000	42.2
72 Di-n-butylphthalate	149	7.720	7.720	(1.057)	1436745	40.0000	43.7
76 Fluoranthene	202	8.375	8.375	(1.146)	1377093	40.0000	41.8
79 Pyrene	202	8.592	8.592	(0.884)	1436941	40.0000	44.0
85 Butylbenzylphthalate	149	9.112	9.112	(0.937)	600212	40.0000	42.9
89 Benzo(a)anthracene	228	9.714	9.714	(0.999)	1318523	40.0000	41.1
92 Chrysene	228	9.752	9.752	(1.003)	1209667	40.0000	41.2
93 bis(2-Ethylhexyl)phthalate	149	9.632	9.632	(0.991)	850822	40.0000	44.3
94 Di-n-octylphthalate	149	10.301	10.301	(0.899)	1363022	40.0000	44.6
95 Benzo(b)fluoranthene	252	10.922	10.922	(0.953)	1262380	40.0000	42.8
96 Benzo(k)fluoranthene	252	10.956	10.956	(0.956)	1190971	40.0000	41.1
97 Benzo(a)pyrene	252	11.380	11.380	(0.993)	1119470	40.0000	42.8
99 Indeno(1,2,3-cd)pyrene	276	13.306	13.306	(1.161)	1162781	40.0000	44.3
100 Dibenzo(a,h)anthracene	278	13.316	13.316	(1.162)	956386	40.0000	44.7
101 Benzo(ghi)perylene	276	13.869	13.869	(1.210)	968540	40.0000	43.2
126 m-Dinitrobenzene	168	5.929	5.929	(0.967)	133740	40.0000	39.0
130 2,3,4,6-Tetrachlorophenol	232	6.362	6.362	(1.038)	277649	40.0000	43.5
143 Dinoseb	211	7.248	7.248	(0.992)	221518	40.0000	42.8
173 Carbazole	167	7.489	7.489	(1.025)	482432	40.0000	30.9
184 p-Benzoquinone	54	3.487	3.487	(0.871)	11020	40.0000	15.4
192 Methoxychlor	227	9.584	9.584	(0.986)	890293	40.0000	46.8
211 p-Toluidine	106	4.277	4.277	(1.069)	203976	40.0000	35.0
210 m-Toluidine	106	4.301	4.301	(1.075)	331874	40.0000	35.6
26 Phthalic anhydride	104	5.399	5.399	(1.108)	85759	40.0000	25.5
179 Dibenzo(a,e)pyrene	302	18.184	18.184	(1.586)	636191	40.0000	48.0
214 1,4-Dinitrobenzene	75	5.871	5.871	(0.958)	156298	40.0000	41.6
215 2-Ethoxyethanol	59	2.313	2.313	(0.578)	221405	40.0000	39.6
216 Methylenebis(2-chloroaniline)	231	9.646	9.646	(0.992)	152326	40.0000	37.1(Q)
M 225 Trichlorophenols	196				577386	80.0000	86.9
M 226 Tetrachlorophenols	232				277649	40.0000	43.5
M 227 Benzo(b,k)fluoranthene	252				2453351	80.0000	83.8

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070709.b/s5g0702.d
Date : 07-JUL-2009 07:25
Client ID: MEGACVS
Sample Info: IWBN090617-02,4|40 PPM|1|SVM|1|MEGACVS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

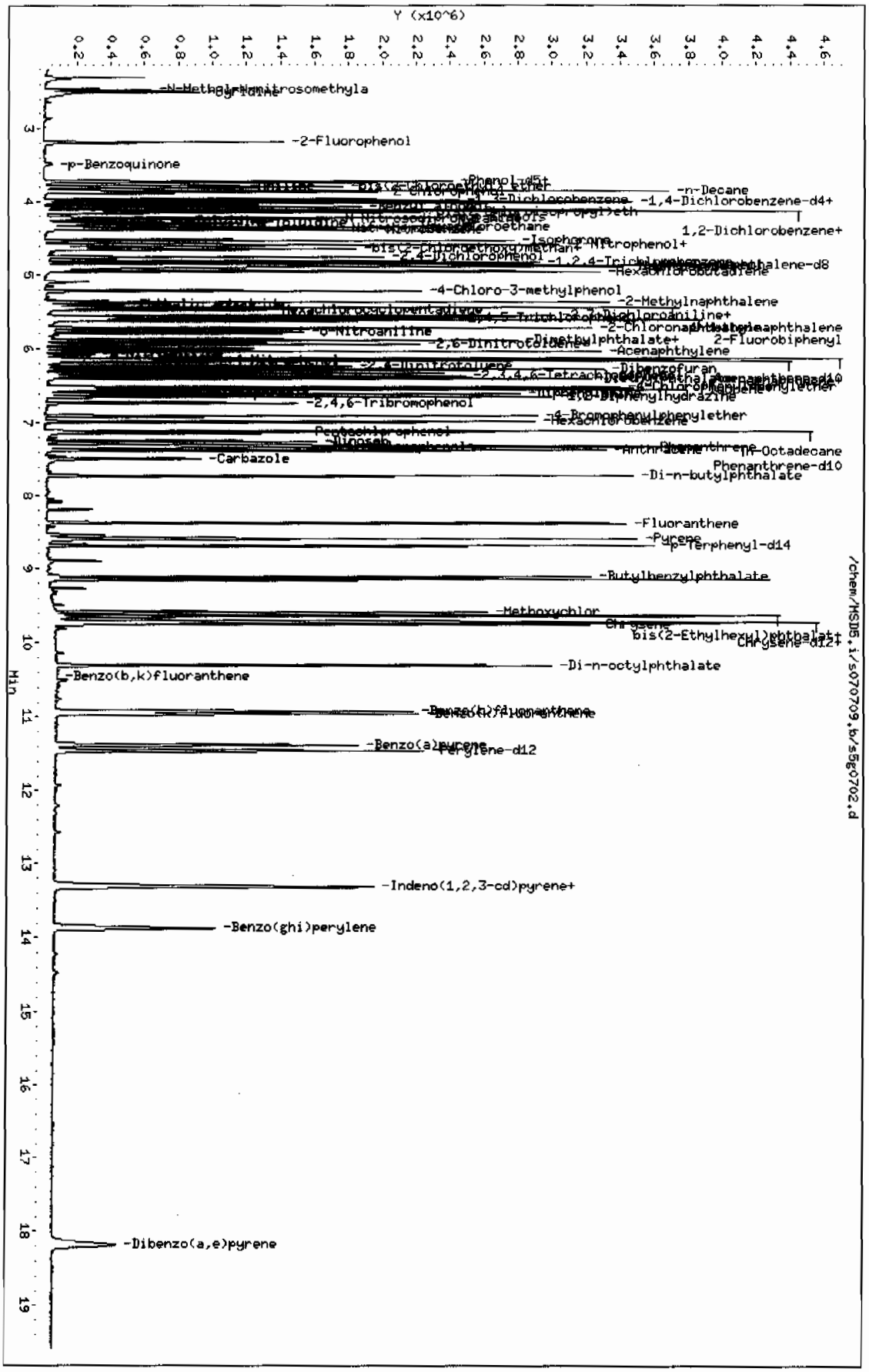

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5g0703.d
Analysis Type: WATER
Lab Sample ID: WBN090619-01.4
Method: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m

Injection Date: 07-JUL-2009 07:53
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.79683	0.83997	0.83997	0.000	5.41456	60.00000	Averaged
16 Acetophenone	1.08491	1.12455	1.12455	0.000	3.65383	60.00000	Averaged
189 Caprolactam	0.07939	0.08209	0.08209	0.000	3.40710	60.00000	Averaged
208 1,1'-Biphenyl	1.04481	1.12908	1.12908	0.000	8.06628	60.00000	Averaged
207 Atrazine	0.03020	0.04003	0.04003	0.000	32.56565	60.00000	Averaged
77 Benzidine	0.16686	0.16060	0.16060	0.000	-3.75422	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28677	0.30107	0.30107	0.000	4.98623	60.00000	Averaged
102 1,4-Dioxane	0.30814	0.27287	0.27287	0.000	-11.44604	60.00000	Averaged
103 Methyl methacrylate	0.15418	0.17110	0.17110	0.000	10.97550	60.00000	Averaged
104 Ethyl methacrylate	0.72240	0.75335	0.75335	0.000	4.28493	60.00000	Averaged
105 2-Picoline	1.10986	1.13094	1.13094	0.000	1.89977	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.41554	0.42113	0.42113	0.000	1.34517	60.00000	Averaged
107 Methyl methanesulfonate	0.47990	0.51536	0.51536	0.000	7.38882	60.00000	Averaged
108 N-Nitrosodiethylamine	0.41207	0.42110	0.42110	0.000	2.19123	60.00000	Averaged
109 Ethyl Methanesulfonate	0.57718	0.59829	0.59829	0.000	3.65654	60.00000	Averaged
110 Pentachloroethane	0.32784	0.35491	0.35491	0.000	8.25853	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.41191	0.41790	0.41790	0.000	1.45486	60.00000	Averaged
113 N-Nitrosomorpholine	0.66462	0.69923	0.69923	0.000	5.20828	60.00000	Averaged
114 o-Toluidine	1.43933	1.50464	1.50464	0.000	4.53745	60.00000	Averaged
115 N-Nitrosopiperidine	0.13311	0.13697	0.13697	0.000	2.89768	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.80774	0.67477	0.67477	0.000	-16.46208	60.00000	Averaged
118 2,6-Dichlorophenol	0.23169	0.24385	0.24385	0.000	5.24611	60.00000	Averaged
119 Hexachloropropene	0.13807	0.15121	0.15121	0.000	9.51702	60.00000	Averaged
120 p-Phenylenediamine	26.71480	40.00000	0.11265	0.000	-33.21300	60.00000	Linear
121 N-Nitrosodi-n-butylamine	0.17971	0.18347	0.18347	0.000	2.09242	60.00000	Averaged
122 Safrole	0.21426	0.22079	0.22079	0.000	3.04929	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.51018	0.54845	0.54845	0.000	7.50086	60.00000	Averaged
124 Isosafrole	0.33063	0.33782	0.33782	0.000	2.17244	60.00000	Averaged
125 1,4-Naphthoquinone	0.32039	0.35636	0.35636	0.000	11.22429	60.00000	Averaged
127 Pentachlorobenzene	0.47629	0.50923	0.50923	0.000	6.91551	60.00000	Averaged
128 1-Naphthylamine	0.71181	0.69651	0.69651	0.000	-2.14956	60.00000	Averaged
129 2-Naphthylamine	0.64134	0.63364	0.63364	0.000	-1.19986	60.00000	Averaged
131 5-Nitro-o-toluidine	0.25602	0.25291	0.25291	0.000	-1.21544	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.10752	0.09823	0.09823	0.000	-8.64303	60.00000	Averaged
137 Phenacetin	0.22131	0.22604	0.22604	0.000	2.13991	60.00000	Averaged
138 Diallate	0.20650	0.21356	0.21356	0.000	3.42118	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5g0703.d
Analysis Type: WATER
Lab Sample ID: WBN090619-01.4
Method: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m

Injection Date: 07-JUL-2009 07:53
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 18:09
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20975	0.22229	0.22229	0.000	5.97921	60.00000	Averaged
213 Trans Diallate	0.24294	0.25125	0.25125	0.000	3.42118	60.00000	Averaged
140 4-Aminobiphenyl	0.36955	0.29147	0.29147	0.000	-21.12985	60.00000	Averaged
141 Pentachloronitrobenzene	0.08929	0.09420	0.09420	0.000	5.49949	60.00000	Averaged
142 Pronamide	0.26058	0.28472	0.28472	0.000	9.26378	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01022	0.00714	0.00714	0.000	-30.15459	60.00000	Averaged
147 Methapyrilene	0.41717	0.44613	0.44613	0.000	6.94283	60.00000	Averaged
148 Isodrin	0.10436	0.10773	0.10773	0.000	3.22384	60.00000	Averaged
149 Aramite	0.05090	0.05245	0.05245	0.000	3.04399	60.00000	Averaged
150 Kepone	0.06725	0.07661	0.07661	0.000	13.91957	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.20208	0.23022	0.23022	0.000	13.92192	60.00000	Averaged
152 Chlorobenzilate	0.29951	0.34714	0.34714	0.000	15.90325	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.44059	0.47981	0.47981	0.000	8.89949	60.00000	Averaged
155 2-Acetylaminofluorene	0.27578	0.31067	0.31067	0.000	12.65245	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.45468	0.49983	0.49983	0.000	9.93040	60.00000	Averaged
158 3-Methylcholanthrene	0.40918	0.43181	0.43181	0.000	5.53060	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0703.d
Lab Smp Id: WBN090619-01.4 Client Smp ID: AP12CVS
Inj Date : 07-JUL-2009 07:53
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090619-01.4|40 PPM|1|SVM|1|AP12CVS
Misc Info : |MSD8270|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:11 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.996	3.996	(1.000)	354149	40.0000	
* 29 Naphthalene-d8	136	4.866	4.866	(1.000)	1242819	40.0000	
* 46 Acenaphthene-d10	164	6.125	6.125	(1.000)	784305	40.0000	
* 67 Phenanthrene-d10	188	7.301	7.301	(1.000)	1455292	40.0000	
* 91 Chrysene-d12	240	9.713	9.713	(1.000)	1323010	40.0000	
* 98 Perylene-d12	264	11.448	11.448	(1.000)	1108993	40.0000	
209 Benzaldehyde	77	3.725	3.725	(0.932)	297474	40.0000	42.2
16 Acetophenone	105	4.248	4.248	(1.063)	398258	40.0000	41.5
189 Caprolactam	113	5.137	5.137	(1.056)	102027	40.0000	41.4
208 1,1'-Biphenyl	154	5.690	5.690	(0.929)	885545	40.0000	43.2
207 Atrazine	173	6.995	6.995	(0.958)	58260	40.0000	53.0
77 Benzidine	184	8.454	8.454	(0.870)	212475	40.0000	38.5
90 3,3'-Dichlorobenzidine	252	9.648	9.648	(0.993)	398322	40.0000	42.0

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
102 1,4-Dioxane	88	2.307	2.307	(0.578)	96637	40.0000	35.4
103 Methyl methacrylate	100	2.302	2.302	(0.576)	60594	40.0000	44.4
104 Ethyl methacrylate	69	2.684	2.684	(0.672)	266798	40.0000	41.7
105 2-Picoline	93	2.884	2.884	(0.722)	400522	40.0000	40.8
106 N-Nitrosomethylethylamine	88	2.931	2.931	(0.734)	149141	40.0000	40.5
107 Methyl methanesulfonate	80	3.084	3.084	(0.772)	182513	40.0000	43.0
108 N-Nitrosodiethylamine	102	3.325	3.325	(0.832)	149130	40.0000	40.9
109 Ethyl Methanesulfonate	79	3.478	3.478	(0.870)	211882	40.0000	41.5
110 Pentachloroethane	167	3.825	3.825	(0.957)	125691	40.0000	43.3
111 N-Nitrosopyrrolidine	100	4.237	4.237	(1.060)	147999	40.0000	40.6(Q)
113 N-Nitrosomorpholine	56	4.254	4.254	(1.065)	247632	40.0000	42.1
114 o-Toluidine	106	4.278	4.278	(1.071)	532868	40.0000	41.8
115 N-Nitrosopiperidine	114	4.478	4.478	(0.920)	170224	40.0000	41.2
116 a,a-Dimethylphenethylamine	58	4.725	4.725	(0.971)	838611	40.0000	33.4
118 2,6-Dichlorophenol	162	4.907	4.907	(1.008)	303056	40.0000	42.1
119 Hexachloropropene	213	4.937	4.937	(1.014)	187928	40.0000	43.8
120 p-Phenylenediamine	108	5.148	5.148	(1.058)	140006	40.0000	26.7
121 N-Nitrosodi-n-butylamine	84	5.107	5.107	(1.050)	228024	40.0000	40.8(T)
122 Safrole	162	5.278	5.278	(1.085)	274403	40.0000	41.2
123 1,2,4,5-Tetrachlorobenzene	216	5.484	5.484	(0.895)	430149	40.0000	43.0
124 Isosafrole	162	5.648	5.648	(0.922)	264951	40.0000	40.9
125 1,4-Naphthoquinone	158	5.837	5.837	(0.953)	279492	40.0000	44.5
127 Pentachlorobenzene	250	6.242	6.242	(1.019)	399391	40.0000	42.8
128 1-Naphthylamine	143	6.331	6.331	(1.034)	546273	40.0000	39.1
129 2-Naphthylamine	143	6.390	6.390	(1.043)	496968	40.0000	39.5
131 5-Nitro-o-toluidine	152	6.525	6.525	(1.065)	198360	40.0000	39.5
136 1,3,5-Trinitrobenzene	75	6.795	6.795	(0.931)	142950	40.0000	36.5
137 Phenacetin	108	6.819	6.819	(0.934)	328957	40.0000	40.8(Q)
138 Diallate	86	6.807	6.807	(0.932)	310798	40.0000	41.4
212 Cis Diallate	86	6.884	6.884	(0.943)	48523	6.00000	6.4(a)
213 Trans Diallate	86	6.807	6.807	(0.932)	310798	34.0000	35.2
140 4-Aminobiphenyl	169	7.113	7.113	(0.974)	424170	40.0000	31.5
141 Pentachloronitrobenzene	237	7.137	7.137	(0.977)	137095	40.0000	42.2(Q)
142 Pronamide	173	7.125	7.125	(0.976)	414346	40.0000	43.7
146 4-Nitroquinoline-1-oxide	101	7.978	7.978	(1.093)	10387	40.0000	27.9
147 Methapyrilene	58	8.001	8.001	(1.096)	649253	40.0000	42.8
148 Isodrin	193	8.231	8.231	(1.127)	156772	40.0000	41.3
149 Aramite	185	8.625	8.625	(1.181)	76322	40.0000	41.2
150 Kepone	272	9.213	9.213	(1.262)	111486	40.0000	45.6
151 p-(Dimethylamino)azobenzene	120	8.807	8.807	(0.907)	304580	40.0000	45.6
152 Chlorobenzilate	251	8.836	8.836	(0.910)	459267	40.0000	46.4
153 3,3'-Dimethylbenzidine	212	9.119	9.119	(0.939)	634787	40.0000	43.6
155 2-Acetylaminofluorene	181	9.372	9.372	(0.965)	411016	40.0000	45.1
157 7,12Dimethylbenz(a)anthracene	256	10.883	10.883	(0.951)	554307	40.0000	44.0
158 3-Methylcholanthrene	268	11.866	11.866	(1.036)	478870	40.0000	42.2(Q)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070709.b/s5g0703.d
Date : 07-JUL-2009 07:53
Client ID: AP12CVS
Sample Info: IWBN096619-01,4!40 PPM!1!SVM!1!AP12CVS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RHB
Column diameter: 0.20

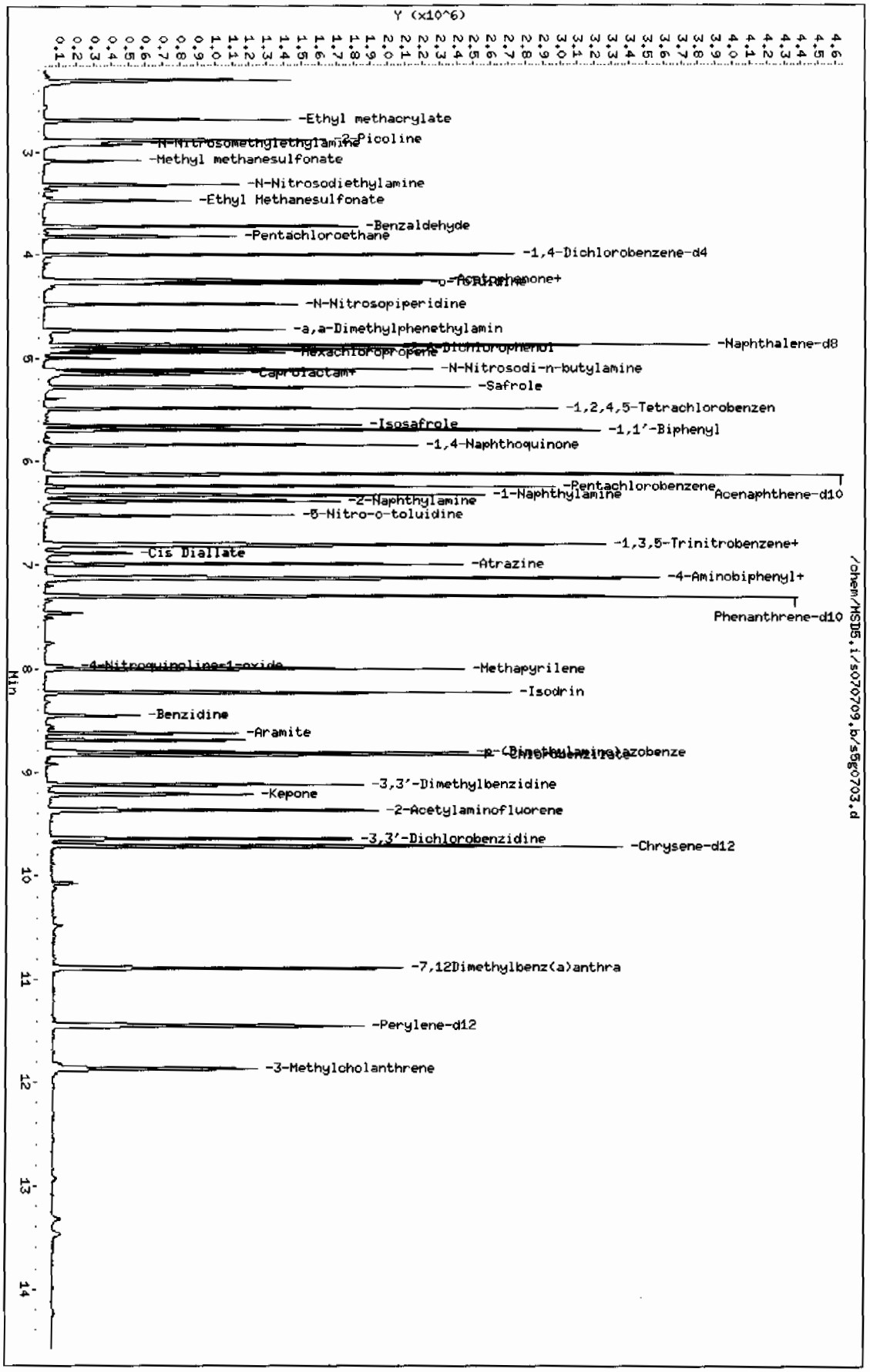

Page 1

QC Data

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

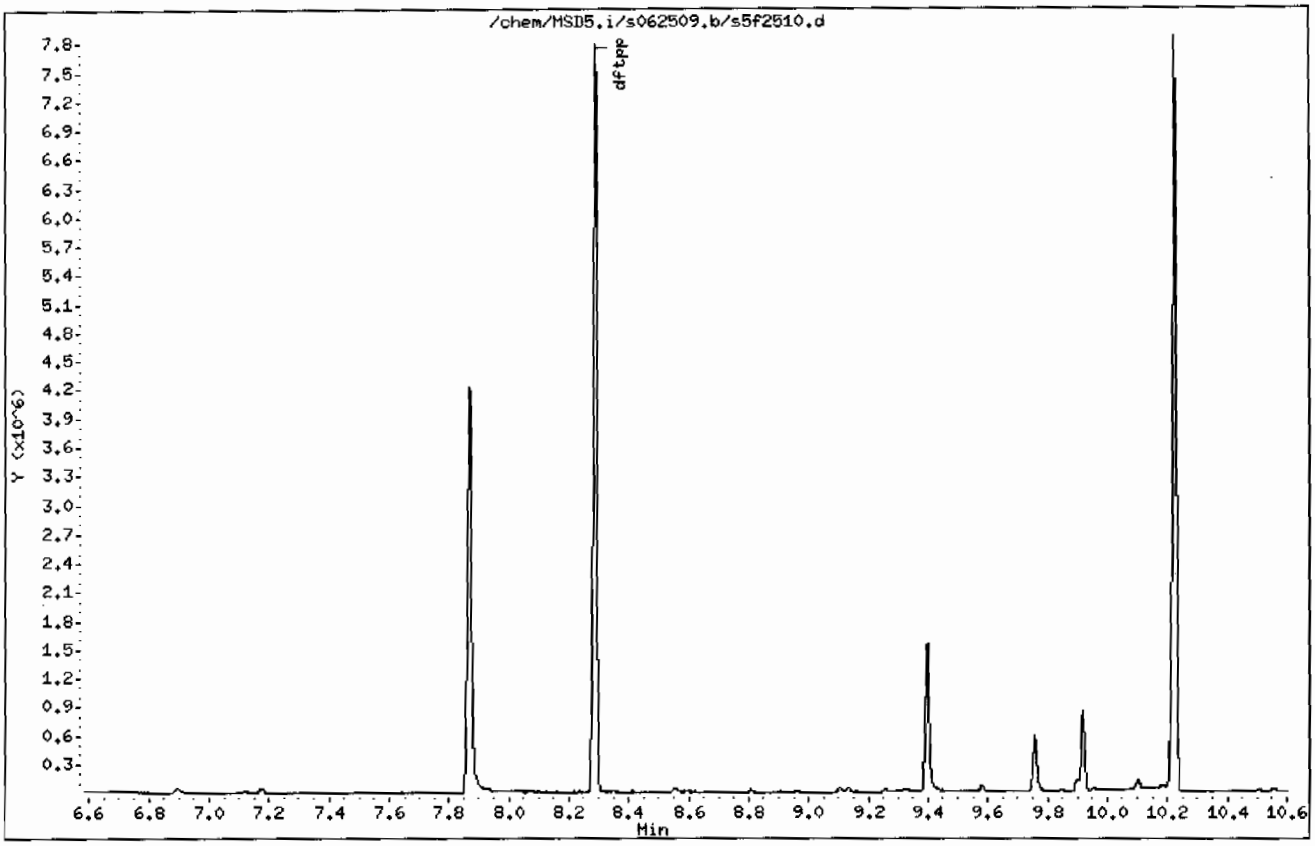

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

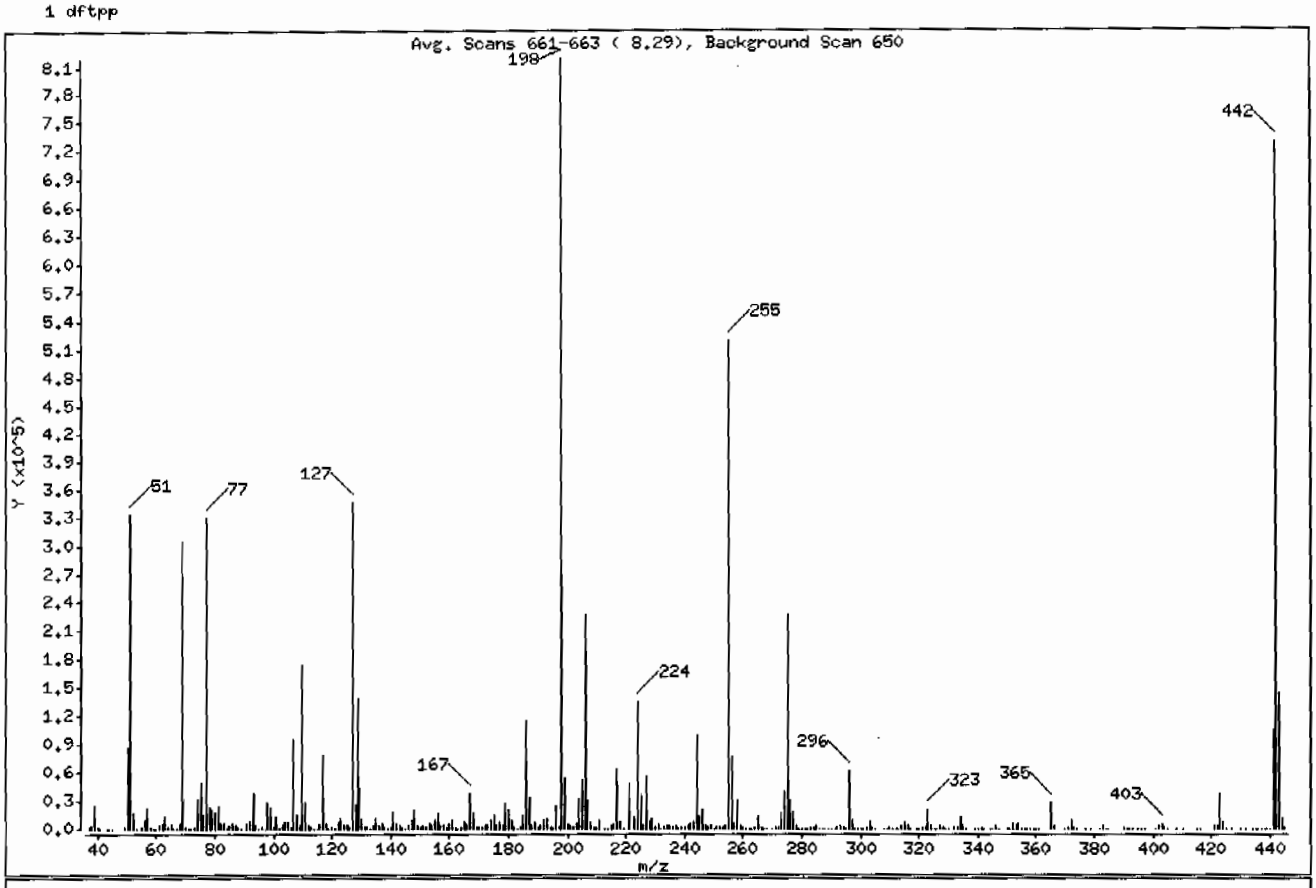

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.61
68	Less than 2.00% of mass 69	0.65 (1.74)
69	Mass 69 relative abundance	37.21
70	Less than 2.00% of mass 69	0.22 (0.59)
127	40.00 - 60.00% of mass 198	42.23
197	Less than 1.00% of mass 198	0.20
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 30.00% of mass 198	27.74
365	Greater than 1.00% of mass 198	3.39
441	Present, but less than mass 443	12.90
442	Greater than 40.00% of mass 198	88.92
443	17.00 - 23.00% of mass 442	17.81 (20.03)

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: 1WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d
Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1138	132.00	1206	224.00	135680	316.00	4346
38.00	4283	133.00	226	225.00	33672	317.00	724
39.00	24376	134.00	3902	226.00	3982	319.00	199
40.00	1095	135.00	10990	227.00	56520	320.00	278
41.00	377	136.00	4516	228.00	8381	321.00	1904
43.00	83	137.00	5167	229.00	11198	322.00	1049
44.00	53	138.00	1139	230.00	1508	323.00	20544
45.00	651	139.00	686	231.00	4747	324.00	3833
49.00	1842	140.00	2033	232.00	906	325.00	443
50.00	85864	141.00	18056	233.00	1144	326.00	441
51.00	332416	142.00	5920	234.00	3535	327.00	3582
52.00	16009	143.00	3898	235.00	4352	328.00	1881
53.00	680	144.00	1153	236.00	2596	329.00	411
55.00	1744	145.00	796	237.00	4493	330.00	67
56.00	10124	146.00	3833	238.00	149	332.00	1501
57.00	22896	147.00	8537	239.00	2028	333.00	2044
58.00	1220	148.00	20240	240.00	1558	334.00	12375
59.00	387	149.00	3724	241.00	3207	335.00	3249
60.00	170	150.00	975	242.00	6476	336.00	306
61.00	4094	151.00	2947	243.00	7666	339.00	390
62.00	4868	152.00	1120	244.00	100592	340.00	156
63.00	13455	153.00	5976	245.00	12760	341.00	2032
64.00	2223	154.00	4578	246.00	19808	342.00	558
65.00	6554	155.00	9784	247.00	4078	344.00	42
66.00	399	156.00	16170	248.00	1014	345.00	49
67.00	136	157.00	3266	249.00	3682	346.00	3814
68.00	5300	158.00	3502	250.00	900	347.00	894
69.00	304576	159.00	2575	251.00	988	350.00	113
70.00	1791	160.00	6522	252.00	1107	351.00	234
71.00	141	161.00	8738	253.00	2216	352.00	6066
72.00	193	162.00	2332	254.00	3272	353.00	3622
73.00	2630	163.00	733	255.00	519616	354.00	5630
74.00	32008	164.00	965	256.00	76312	355.00	936
75.00	49176	165.00	7434	257.00	5701	356.00	159
76.00	15003	166.00	5583	258.00	30480	357.00	134

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d

Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650

Location of Maximum: 198.00

Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	329536	167.00	37360	259.00	4688	358.00	50
78.00	21848	168.00	16760	260.00	1050	359.00	514
79.00	21520	169.00	2806	261.00	818	360.00	90
80.00	17208	170.00	1585	262.00	281	361.00	66
81.00	24696	171.00	1950	263.00	357	365.00	27752
82.00	5995	172.00	3353	264.00	1198	366.00	3838
83.00	5784	173.00	4618	265.00	12254	370.00	420
84.00	731	174.00	9069	266.00	2093	371.00	1264
85.00	4077	175.00	15586	267.00	419	372.00	10324
86.00	6050	176.00	4443	268.00	101	373.00	2774
87.00	2825	177.00	6975	270.00	767	374.00	88
88.00	1193	178.00	2852	271.00	964	377.00	347
89.00	527	179.00	28744	272.00	1488	379.00	53
91.00	5217	180.00	20024	273.00	16303	382.00	46
92.00	6689	181.00	9747	274.00	39684	383.00	2936
93.00	36944	182.00	1277	275.00	227072	384.00	811
94.00	3121	183.00	633	276.00	30592	385.00	279
95.00	410	184.00	2511	277.00	19040	390.00	1527
96.00	1703	185.00	14675	278.00	3536	391.00	836
97.00	405	186.00	114752	279.00	847	392.00	606
98.00	27784	187.00	33024	280.00	137	393.00	78
99.00	23016	188.00	3270	281.00	305	395.00	178
100.00	1807	189.00	7565	282.00	573	396.00	60
101.00	12467	190.00	1456	283.00	2171	397.00	44
102.00	633	191.00	3531	284.00	1562	401.00	502
103.00	3694	192.00	9327	285.00	3393	402.00	3711
104.00	8033	193.00	10576	286.00	586	403.00	5371
105.00	8061	194.00	2381	287.00	70	404.00	2149
106.00	2335	195.00	1583	288.00	178	405.00	328
107.00	96840	196.00	24512	289.00	728	408.00	44
108.00	15060	197.00	1668	290.00	735	410.00	195
109.00	3168	198.00	818496	291.00	471	415.00	117
110.00	175616	199.00	55264	292.00	1011	416.00	64
111.00	27672	200.00	4870	293.00	4463	421.00	4380
112.00	3394	201.00	4357	294.00	950	422.00	4373

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d
Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	1009	202.00	2129	295.00	722	423.00	37104
114.00	389	203.00	6231	296.00	62712	424.00	6752
115.00	427	204.00	31184	297.00	9287	425.00	610
116.00	5229	205.00	52096	298.00	618	427.00	44
117.00	79808	206.00	227136	299.00	244	430.00	41
118.00	5242	207.00	30208	300.00	51	432.00	68
119.00	641	208.00	7259	301.00	781	434.00	57
120.00	1537	209.00	2346	302.00	1183	435.00	42
121.00	459	210.00	2765	303.00	7108	436.00	46
122.00	6606	211.00	9606	304.00	2260	437.00	88
123.00	11016	213.00	938	305.00	253	438.00	260
124.00	4477	214.00	263	308.00	883	439.00	169
125.00	4654	215.00	2833	309.00	636	440.00	115
126.00	1781	216.00	5142	310.00	1042	441.00	105616
127.00	345664	217.00	63232	311.00	221	442.00	727808
128.00	25848	218.00	7687	312.00	209	443.00	145792
129.00	139648	219.00	590	313.00	595	444.00	12170
130.00	11462	221.00	48472	314.00	3436	445.00	968
131.00	2254	223.00	13920	315.00	7722		

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

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Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

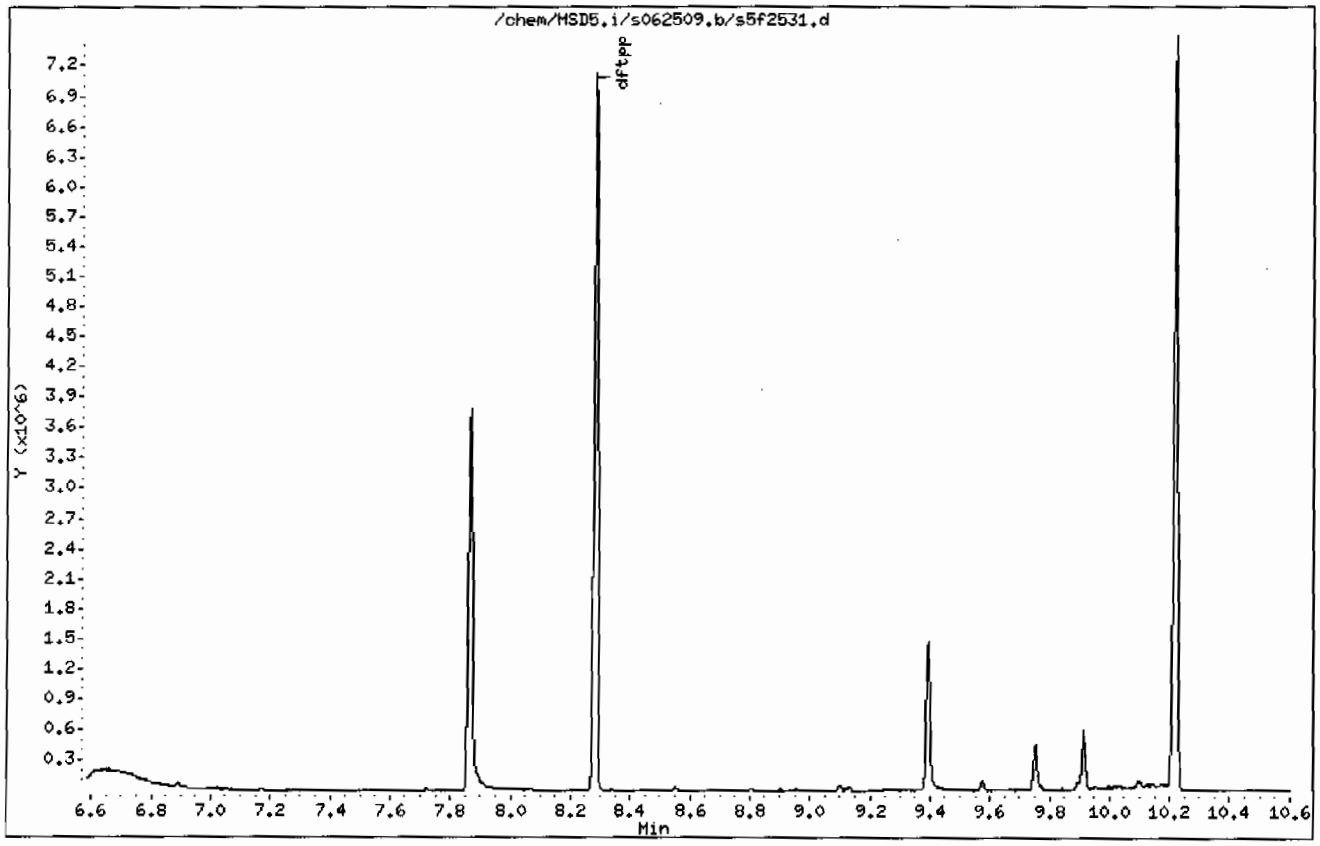

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

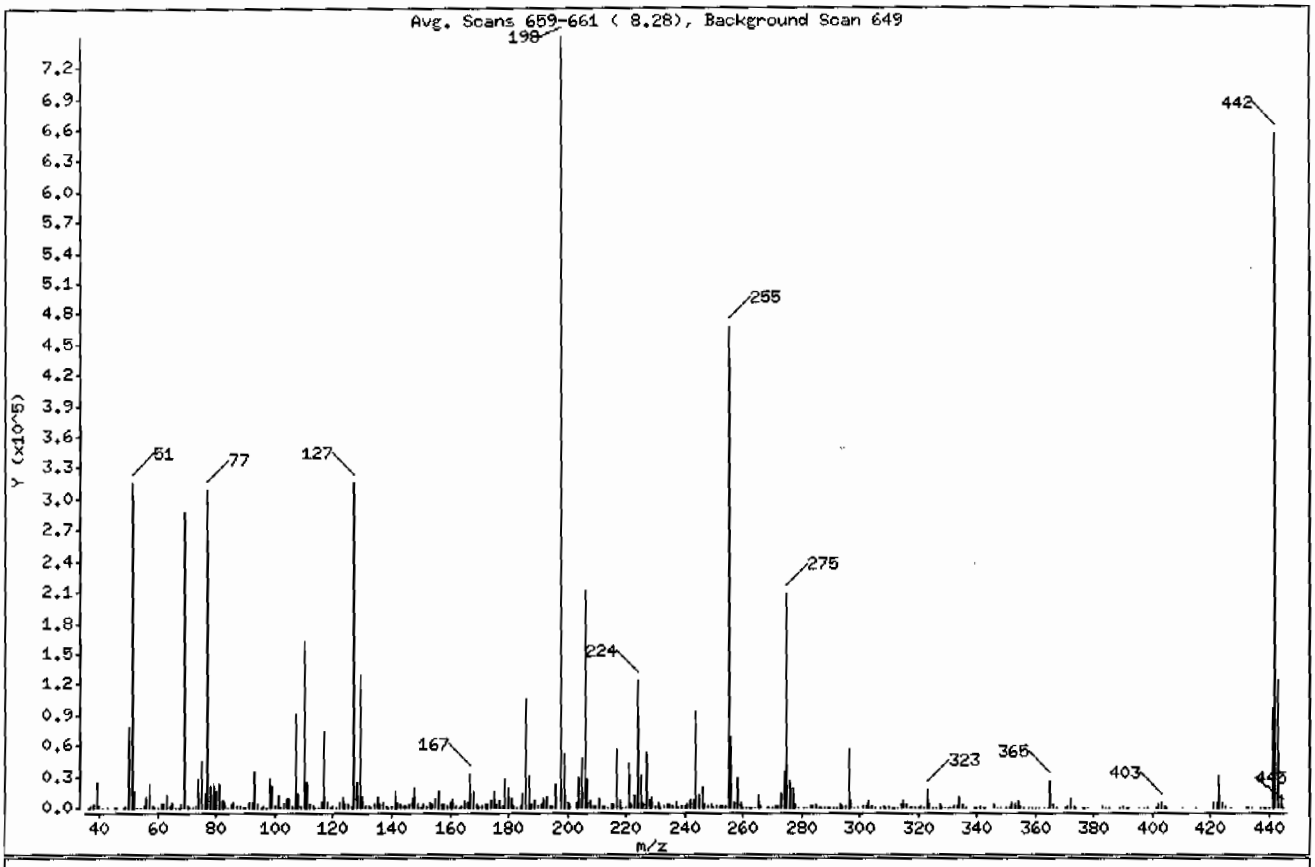

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.16
68	Less than 2.00% of mass 69	0.57 (1.48)
69	Mass 69 relative abundance	38.30
70	Less than 2.00% of mass 69	0.14 (0.37)
127	40.00 - 60.00% of mass 198	42.18
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.81
275	10.00 - 30.00% of mass 198	27.72
365	Greater than 1.00% of mass 198	3.36
441	Present, but less than mass 443	12.82
442	Greater than 40.00% of mass 198	87.41
443	17.00 - 23.00% of mass 442	16.50 (18.88)

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	130	129.00	129144	221.00	43352	315.00	6757
37.00	963	130.00	10379	222.00	3421	316.00	3304
38.00	4111	131.00	2243	223.00	12803	317.00	505
39.00	23600	132.00	1255	224.00	124544	318.00	89
40.00	1272	133.00	555	225.00	30704	319.00	68
41.00	492	134.00	3635	226.00	3391	320.00	212
43.00	105	135.00	10704	227.00	52696	321.00	2199
45.00	749	136.00	4146	228.00	7219	322.00	768
46.00	78	137.00	5330	229.00	10175	323.00	17872
48.00	68	138.00	1404	230.00	1430	324.00	3180
49.00	2390	139.00	748	231.00	4406	325.00	325
50.00	77896	140.00	1839	232.00	746	326.00	448
51.00	316032	141.00	15758	233.00	1331	327.00	3348
52.00	15853	142.00	5118	234.00	3163	328.00	1586
53.00	697	143.00	3702	235.00	3412	329.00	430
54.00	44	144.00	1161	236.00	2372	330.00	62
55.00	1475	145.00	866	237.00	4445	331.00	102
56.00	9953	146.00	3158	238.00	456	332.00	1465
57.00	23072	147.00	8024	239.00	2101	333.00	1384
58.00	898	148.00	18984	240.00	1609	334.00	11134
59.00	336	149.00	3739	241.00	3164	335.00	3143
60.00	225	150.00	774	242.00	6733	336.00	405
61.00	3752	151.00	3382	243.00	6226	339.00	142
62.00	4243	152.00	1243	244.00	92688	340.00	159
63.00	11328	153.00	5283	245.00	12475	341.00	2110
64.00	1836	154.00	3943	246.00	19736	342.00	653
65.00	5514	155.00	9153	247.00	3761	343.00	43
66.00	395	156.00	15309	248.00	881	346.00	4090
67.00	365	157.00	3021	249.00	3370	347.00	606
68.00	4238	158.00	3692	250.00	704	348.00	61
69.00	287104	159.00	2450	251.00	990	350.00	163
70.00	1055	160.00	5815	252.00	1128	351.00	312
71.00	62	161.00	8439	253.00	2364	352.00	5888
72.00	71	162.00	2487	254.00	2478	353.00	3580
73.00	2346	163.00	529	255.00	467136	354.00	6153

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	27560	164.00	872	256.00	68464	355.00	1155
75.00	45608	165.00	7480	257.00	5362	356.00	47
76.00	14580	166.00	4923	258.00	28784	358.00	84
77.00	307648	167.00	33168	259.00	4672	359.00	471
78.00	20952	168.00	15532	260.00	577	360.00	108
79.00	20168	169.00	3430	261.00	840	361.00	199
80.00	15037	170.00	1365	262.00	192	363.00	41
81.00	22200	171.00	1541	263.00	518	364.00	46
82.00	6183	172.00	3329	264.00	441	365.00	25200
83.00	5317	173.00	3966	265.00	11328	366.00	3575
84.00	652	174.00	7529	266.00	1690	367.00	168
85.00	3481	175.00	14827	268.00	443	370.00	679
86.00	5823	176.00	3632	269.00	245	371.00	1446
87.00	2522	177.00	6522	270.00	550	372.00	8793
88.00	1077	178.00	2348	271.00	1149	373.00	1961
89.00	639	179.00	27592	272.00	1211	374.00	221
90.00	270	180.00	18360	273.00	14446	376.00	42
91.00	5249	181.00	8854	274.00	34480	377.00	208
92.00	5425	182.00	1836	275.00	207744	378.00	45
93.00	34864	183.00	697	276.00	26632	383.00	2261
94.00	2727	184.00	2248	277.00	18216	384.00	695
95.00	519	185.00	13594	278.00	2938	385.00	153
96.00	1793	186.00	105608	279.00	721	389.00	48
97.00	255	187.00	30760	281.00	239	390.00	895
98.00	27192	188.00	3410	282.00	488	391.00	683
99.00	20512	189.00	6590	283.00	2542	392.00	588
100.00	1368	190.00	891	284.00	1204	395.00	63
101.00	11329	191.00	3357	285.00	3197	397.00	89
102.00	651	192.00	9407	286.00	509	398.00	57
103.00	4207	193.00	9901	287.00	81	401.00	639
104.00	8219	194.00	2267	288.00	186	402.00	3069
105.00	7766	195.00	1341	289.00	847	403.00	4596
106.00	2422	196.00	23040	290.00	595	404.00	1548
107.00	90816	198.00	749568	291.00	454	405.00	250
108.00	14415	199.00	51080	292.00	743	410.00	207

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
109.00	2528	200.00	4574	293.00	4058	415.00	154
110.00	161600	201.00	3697	294.00	966	421.00	4311
111.00	23872	203.00	5056	295.00	1275	422.00	4609
112.00	3017	204.00	29384	296.00	57624	423.00	31232
113.00	1030	205.00	48440	297.00	7723	424.00	5999
114.00	259	206.00	211840	298.00	524	425.00	887
115.00	204	207.00	27712	299.00	72	427.00	53
116.00	5076	208.00	7647	301.00	883	432.00	79
117.00	74856	209.00	2440	302.00	1121	433.00	51
118.00	5416	210.00	2546	303.00	6834	434.00	102
119.00	663	211.00	8250	304.00	2045	437.00	63
120.00	1188	212.00	1226	305.00	210	438.00	98
121.00	285	213.00	887	307.00	150	439.00	269
122.00	5954	214.00	230	308.00	912	440.00	46
123.00	9965	215.00	2724	309.00	557	441.00	96112
124.00	4154	216.00	3200	310.00	896	442.00	655168
125.00	3951	217.00	57056	311.00	325	443.00	123696
126.00	1734	218.00	6740	312.00	245	444.00	11497
127.00	316160	219.00	408	313.00	389	445.00	757
128.00	23760	220.00	754	314.00	2901		

Data File: /chem/MSD5.i/s070709.b/s5g0701.d

Page 1

Date : 07-JUL-2009 07:12

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

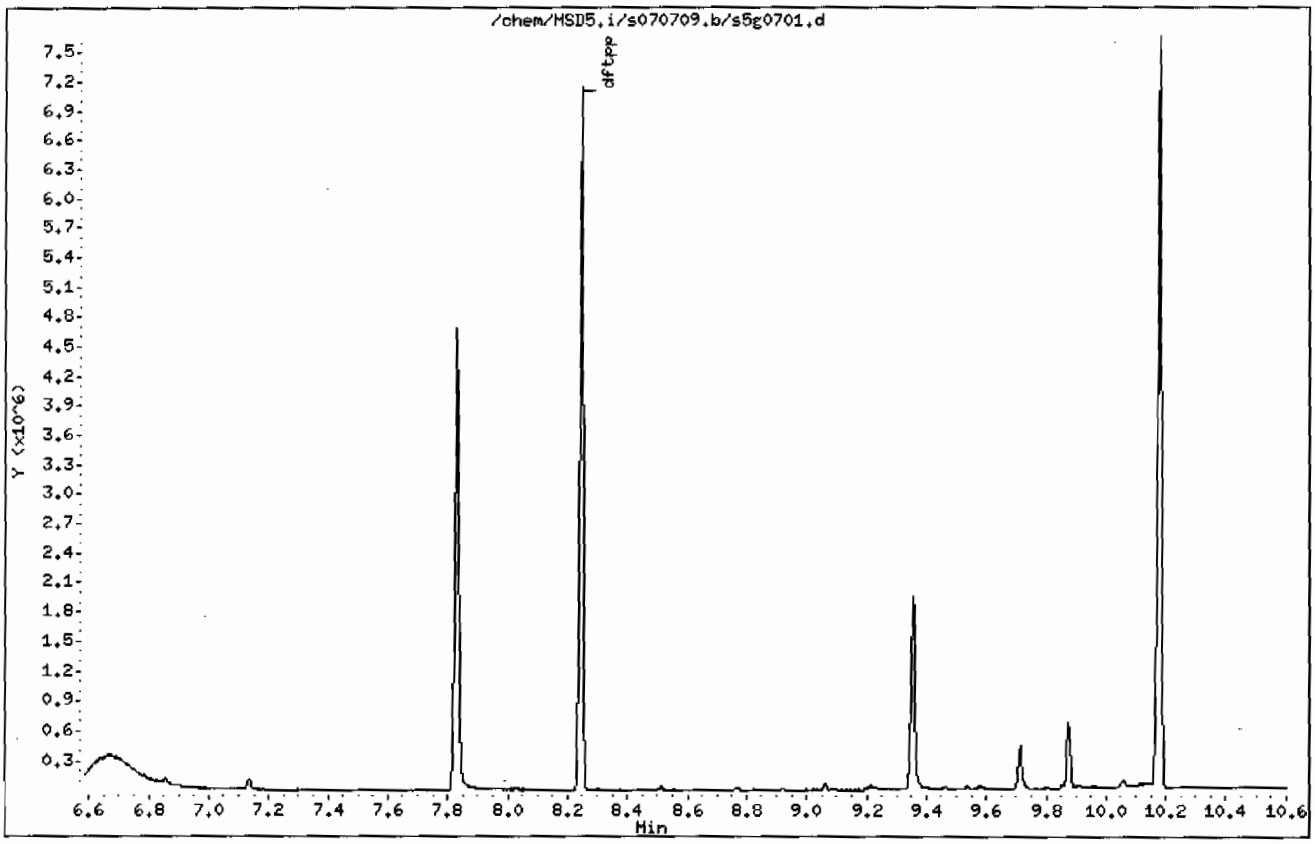

Data File: /chem/MSD5.i/s070709.b/s5g0701.d

Date : 07-JUL-2009 07:12

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: 1WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

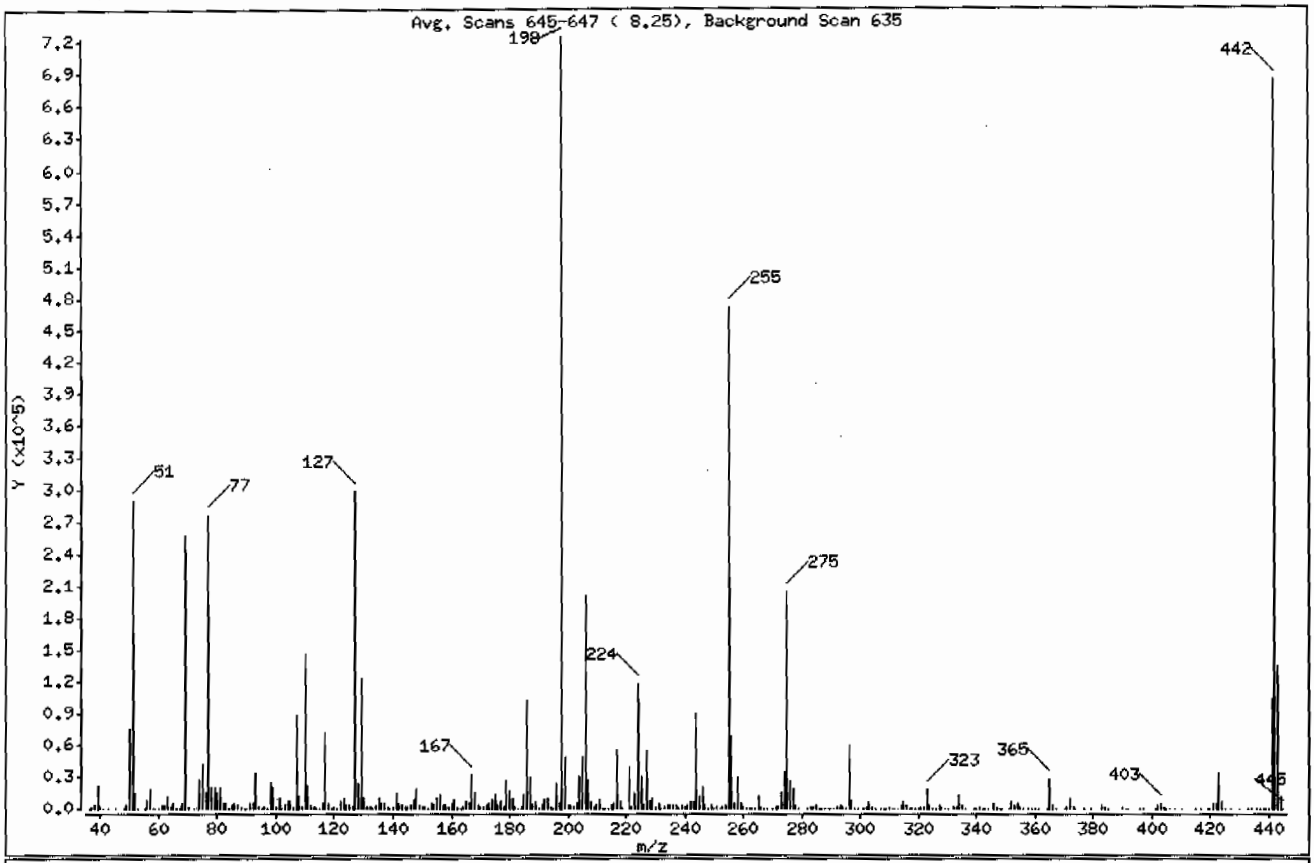

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	39.99
68	Less than 2.00% of mass 69	0.62 (1.75)
69	Mass 69 relative abundance	35.68
70	Less than 2.00% of mass 69	0.17 (0.48)
127	40.00 - 60.00% of mass 198	41.19
197	Less than 1.00% of mass 198	0.59
199	5.00 - 9.00% of mass 198	6.73
275	10.00 - 30.00% of mass 198	28.38
365	Greater than 1.00% of mass 198	3.87
441	Present, but less than mass 443	14.19
442	Greater than 40.00% of mass 198	94.17
443	17.00 - 23.00% of mass 442	18.62 (19.77)

Data File: /chem/MSD5.i/s070709.b/s5g0701.d

Date : 07-JUL-2009 07:12

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0701.d
Spectrum: Avg. Scans 645-647 (8.25), Background Scan 635
Location of Maximum: 198.00
Number of points: 358

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	152	132.00	1039	223.00	13027	318.00	54
37.00	1000	133.00	726	224.00	118424	319.00	91
38.00	3844	134.00	2946	225.00	30144	320.00	358
39.00	22080	135.00	9942	226.00	3013	321.00	1988
40.00	1104	136.00	4498	227.00	54656	322.00	1024
41.00	769	137.00	4980	228.00	6803	323.00	18576
43.00	161	138.00	1172	229.00	10098	324.00	3889
45.00	485	139.00	715	230.00	1450	325.00	401
48.00	144	140.00	1798	231.00	4303	326.00	445
49.00	2724	141.00	15410	232.00	809	327.00	3670
50.00	75488	142.00	4887	233.00	1223	328.00	2196
51.00	289536	143.00	3118	234.00	4029	329.00	284
52.00	14247	144.00	1126	235.00	4067	330.00	162
53.00	515	145.00	977	236.00	2948	332.00	1222
55.00	828	146.00	2766	237.00	4064	333.00	1986
56.00	8219	147.00	7770	238.00	742	334.00	13082
57.00	18448	148.00	18376	239.00	2804	335.00	3067
58.00	831	149.00	3826	240.00	1473	336.00	313
59.00	299	150.00	1006	241.00	3100	339.00	324
60.00	171	151.00	2323	242.00	7124	340.00	234
61.00	3667	152.00	707	243.00	6621	341.00	2001
62.00	3902	153.00	5292	244.00	90560	342.00	783
63.00	11545	154.00	3823	245.00	12180	343.00	62
64.00	1602	155.00	9217	246.00	19416	344.00	76
65.00	5475	156.00	13727	247.00	3310	346.00	4553
66.00	310	157.00	3116	248.00	634	347.00	844
67.00	508	158.00	3761	249.00	3656	348.00	163
68.00	4524	159.00	2231	250.00	358	349.00	49
69.00	258368	160.00	5530	251.00	908	351.00	362
70.00	1246	161.00	7778	252.00	826	352.00	6042
72.00	237	162.00	2238	253.00	2018	353.00	3973
73.00	2132	163.00	638	254.00	2601	354.00	5711
74.00	26072	164.00	921	255.00	470528	355.00	1014
75.00	41336	165.00	7020	256.00	67848	356.00	52
76.00	14155	166.00	5088	257.00	5312	358.00	112

Data File: /chem/MSD5.i/s070709.b/s5g0701.d

Date : 07-JUL-2009 07:12

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0701.d
Spectrum: Avg. Scans 645-647 (8.25), Background Scan 635
Location of Maximum: 198.00
Number of points: 358

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	276032	167.00	31920	258.00	30168	359.00	518
78.00	19424	168.00	14854	259.00	4669	360.00	122
79.00	19472	169.00	2720	260.00	1023	361.00	44
80.00	14185	170.00	1459	261.00	774	364.00	171
81.00	20776	171.00	1666	262.00	111	365.00	28048
82.00	5055	172.00	2993	263.00	340	366.00	3349
83.00	4437	173.00	4561	264.00	624	367.00	358
84.00	450	174.00	7618	265.00	11865	370.00	409
85.00	3339	175.00	13697	266.00	1396	371.00	1459
86.00	5747	176.00	3861	267.00	263	372.00	9795
87.00	3103	177.00	6485	268.00	433	373.00	2380
88.00	947	178.00	2186	270.00	567	374.00	211
89.00	385	179.00	26400	271.00	1092	377.00	300
90.00	61	180.00	17256	272.00	1717	379.00	79
91.00	4620	181.00	9231	273.00	14414	383.00	2836
92.00	4886	182.00	1205	274.00	35704	384.00	902
93.00	32792	183.00	565	275.00	205504	385.00	119
94.00	2325	184.00	2343	276.00	26208	390.00	1249
95.00	474	185.00	13464	277.00	18200	391.00	774
96.00	1545	186.00	101136	278.00	3036	392.00	624
97.00	476	187.00	29840	279.00	665	396.00	74
98.00	25224	188.00	2755	282.00	471	397.00	95
99.00	19744	189.00	6487	283.00	2075	401.00	723
100.00	1672	190.00	814	284.00	1646	402.00	3562
101.00	9781	191.00	2937	285.00	3229	403.00	5283
102.00	480	192.00	7739	286.00	628	404.00	1993
103.00	3630	193.00	9895	287.00	158	405.00	263
104.00	7133	194.00	2091	288.00	216	406.00	46
105.00	7357	195.00	813	289.00	702	408.00	42
106.00	2083	196.00	23176	290.00	700	410.00	182
107.00	88192	197.00	4273	291.00	536	415.00	251
108.00	12294	198.00	724032	292.00	925	417.00	92
109.00	2415	199.00	48744	293.00	3845	419.00	103
110.00	147136	200.00	3799	294.00	978	420.00	82
111.00	22136	201.00	3510	295.00	666	421.00	4482

Data File: /chem/MSD5.i/s070709.b/s5g0701.d

Date : 07-JUL-2009 07:12

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0701.d
Spectrum: Avg. Scans 645-647 (8.25), Background Scan 635
Location of Maximum: 198.00
Number of points: 358

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	2731	202.00	1076	296.00	60088	422.00	4172
113.00	941	203.00	5404	297.00	8012	423.00	33608
114.00	116	204.00	30320	298.00	694	424.00	6993
115.00	253	205.00	47864	299.00	131	425.00	795
116.00	5266	206.00	201920	301.00	679	427.00	49
117.00	71584	207.00	26984	302.00	1180	430.00	51
118.00	4766	208.00	7330	303.00	7085	433.00	47
119.00	648	209.00	2128	304.00	1905	434.00	53
120.00	1260	210.00	2722	305.00	321	436.00	63
121.00	628	211.00	8323	307.00	178	437.00	130
122.00	5894	212.00	796	308.00	830	438.00	51
123.00	9320	213.00	816	309.00	668	439.00	214
124.00	3751	214.00	381	310.00	993	440.00	147
125.00	3538	215.00	2533	311.00	254	441.00	102744
126.00	1470	216.00	4529	312.00	261	442.00	681856
127.00	298240	217.00	55200	313.00	486	443.00	134784
128.00	22872	218.00	7450	314.00	3168	444.00	11949
129.00	122848	219.00	693	315.00	7035	445.00	732
130.00	9991	221.00	39672	316.00	3391		
131.00	1640	222.00	2468	317.00	587		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201874482				
Client Sample:	QC for batch 882563	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882563	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 08:17	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0704.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	66.7	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	110	333
87-86-5	Pentachlorophenol	U	333	ug/kg	83.3	333
129-00-0	Pyrene	U	33.3	ug/kg	10.0	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	100	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline	U	333	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874482**				
Client Sample:	**QC for batch 882563**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 882563**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 08:17**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0704.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	66.7	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	66.7	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.05	1000	ug/kg		J
71-43-2	Benzene	2.12	144	ug/kg	95	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201874482				
Client Sample:	QC for batch 882563	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882563	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 08:17	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0704.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.2	184	ug/kg		J
	Unknown Aldol Condensate	3.01	374	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0704-2.d
Lab Smp Id: 1201874482 Client Smp ID: SBLK01
Inj Date : 07-JUL-2009 08:17
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201874482|882565|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.003	4.003	(1.000)	326193	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1170112	40.0000	
* 46 Acenaphthene-d10	164	6.126	6.131	(1.000)	763333	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1443136	40.0000	
* 91 Chrysene-d12	240	9.718	9.723	(1.000)	1435830	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1272438	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.797)	561042	78.3344	2610
$ 5 Phenol-d5	99	3.714	3.714	(0.928)	736510	77.9920	2600
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	331972	38.2871	1280
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.916)	821599	41.6178	1390
$ 60 2,4,6-Tribromophenol	329	6.728	6.733	(1.098)	231933	74.4679	2480
$ 81 p-Terphenyl-d14	244	8.683	8.688	(0.893)	1122505	51.0836	1700

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0704-2.d
Lab Smp Id: 1201874482 Client Smp ID: SBLK01
Inj Date : 07-JUL-2009 08:17
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201874482|882565|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.003	2109434	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.052	1586096	30.0762381	1000	0		0	10
Benzene				CAS #: 71-43-2			
2.120	227439	4.31279718	144	95	NIST05.L	998	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.202	290995	5.51798092	184	0		0	10
Unknown Aldol Condensate				CAS #:			
3.011	592003	11.2258116	374	0		0	10

Data File: /chem/MSD5.i/s070709.b/s5g0704-2.d
Date : 07-JUL-2009 08:17
Client ID: SBLK01
Sample Info: |120187448218825651|1|SVMF|1|SBLK01
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

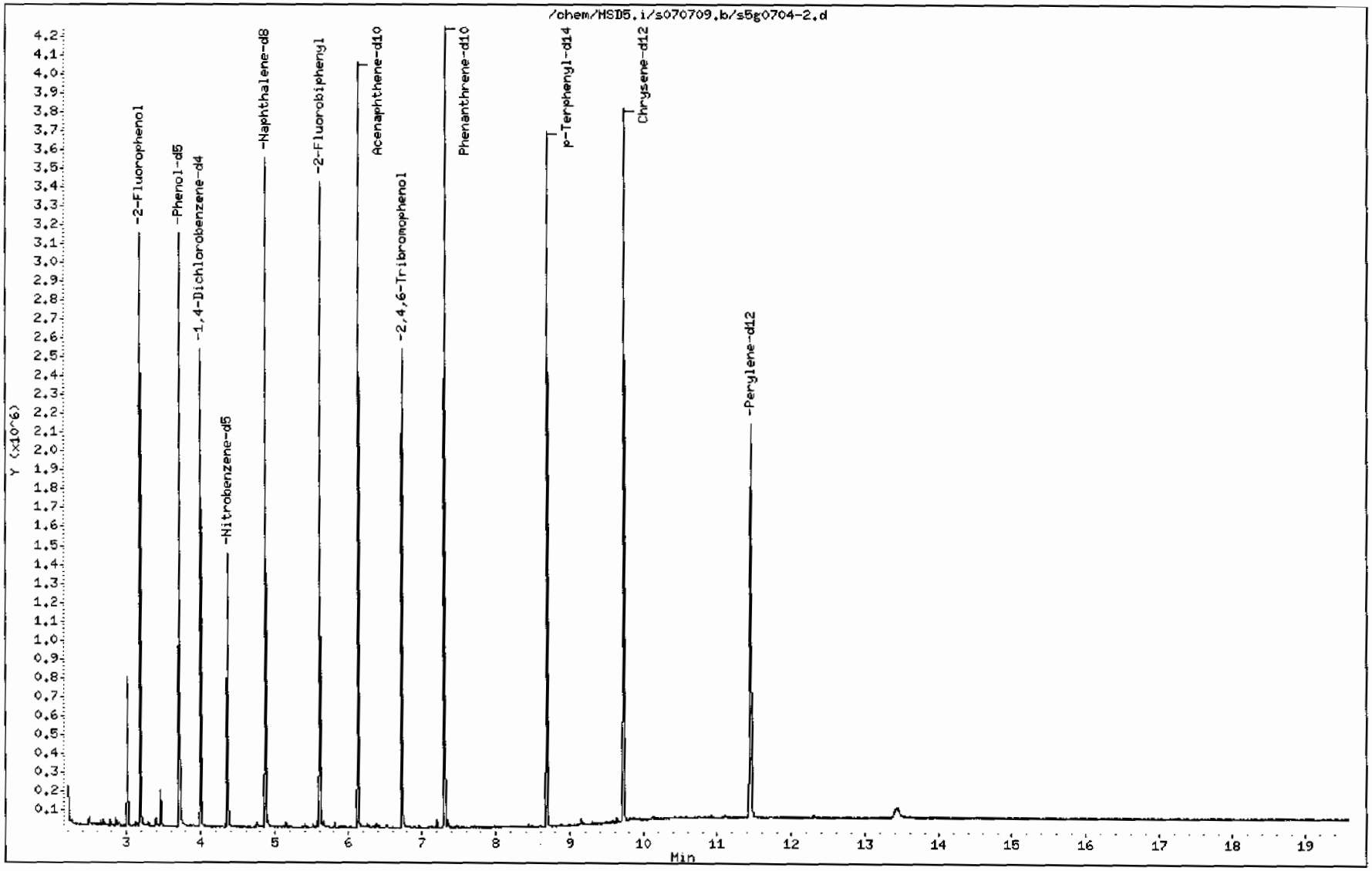

Data File: /chem/MSD5.i/s070709.b/s5g0704-2.d

Date : 07-JUL-2009 08:17

Client ID: SBLK01

Instrument: MSD5.i

Sample Info: |1201874482|882565|1|SVMF|1|SBLK01

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	50	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	33	C5H12O2	104
Propanoic acid, 2-methyl-, propyl ester	644-49-5	NIST05.L	13119	25	C7H14O2	130

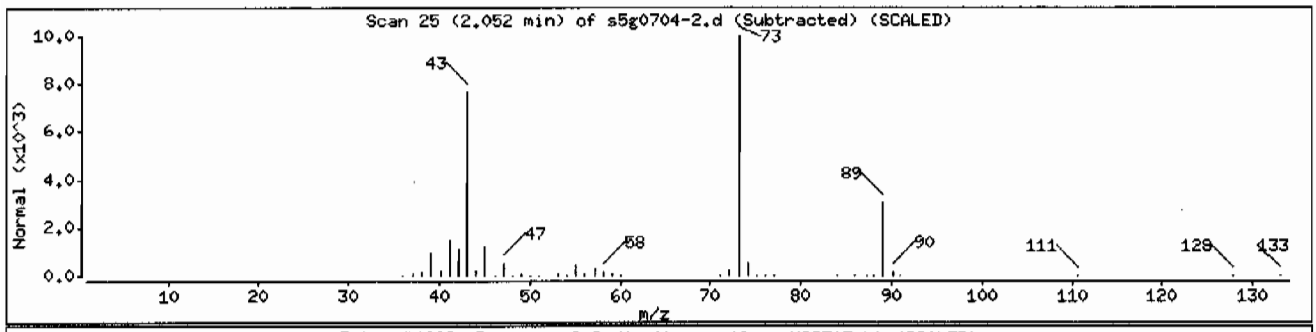

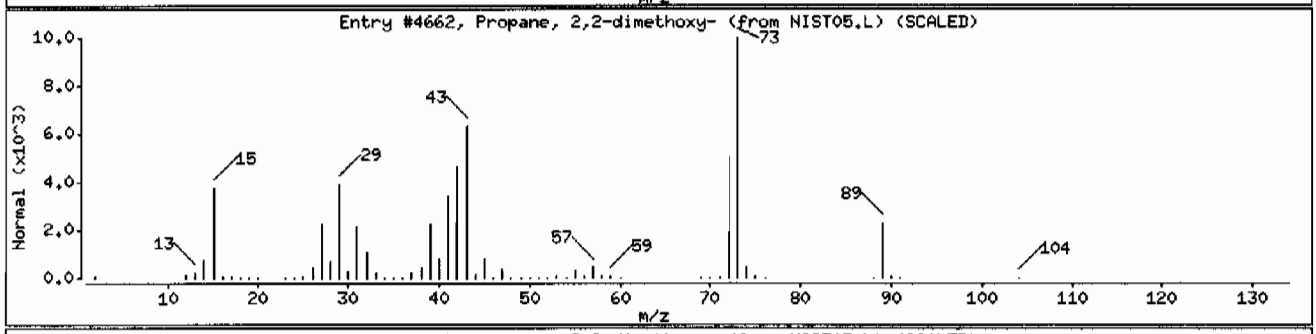

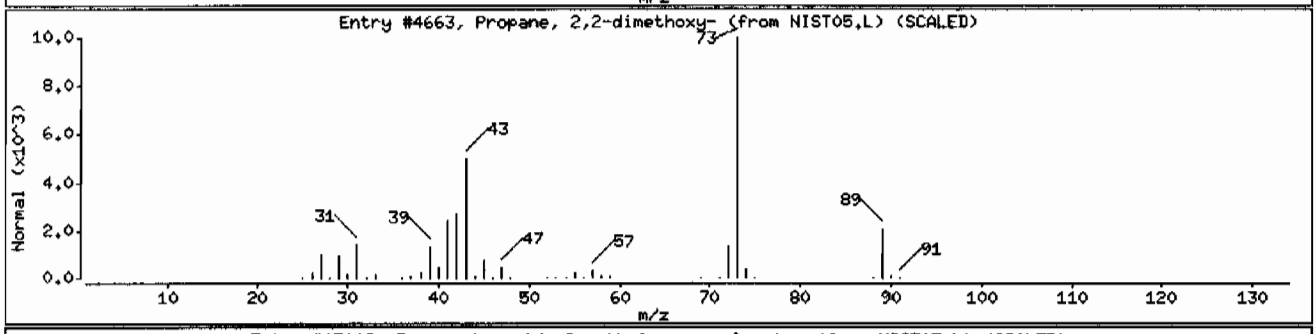

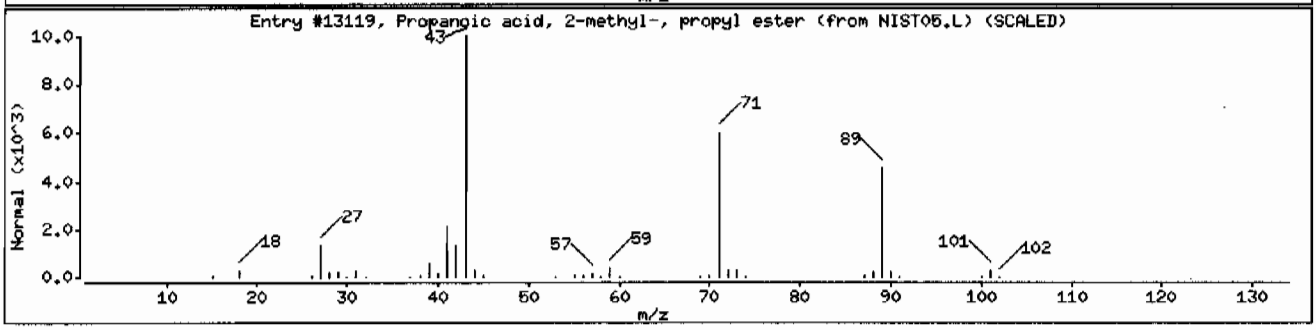

Data File: /chem/MSD5.i/s070709.b/s5g0704-2.d

Date : 07-JUL-2009 08:17

Client ID: SBLK01 Instrument: MSD5.i

Sample Info: |120187448218825651|1|SVHF|1|SBLK01

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene	71-43-2	NIST05.L	998	95	C6H6	78
Benzene	71-43-2	NIST05.L	1001	91	C6H6	78
Benzene	71-43-2	NIST05.L	1000	91	C6H6	78

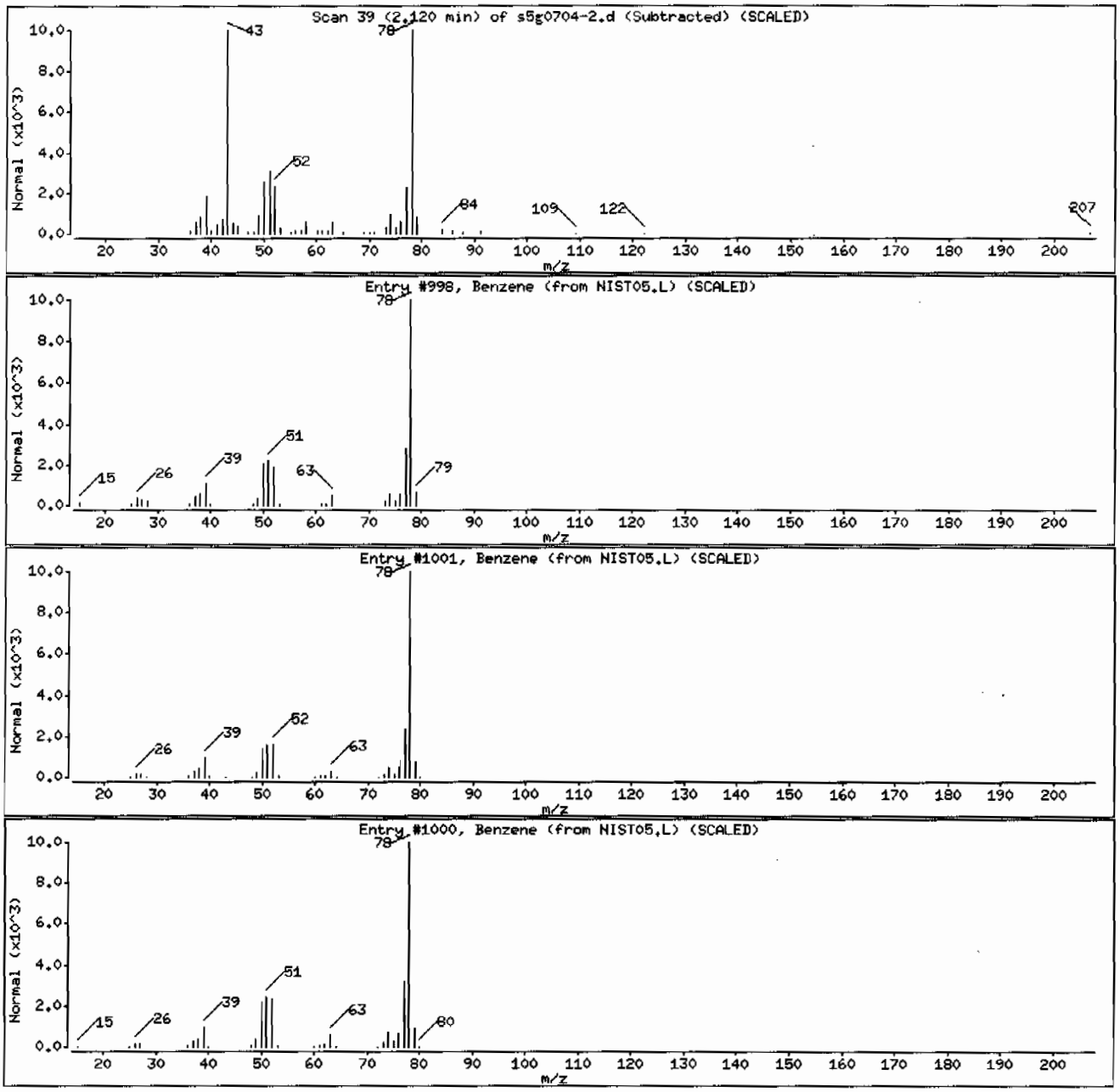

Data File: /chem/MSD5.i/s070709.b/s5g0704-2.d

Date : 07-JUL-2009 08:17

Client ID: SBLK01

Instrument: MSD5.i

Sample Info: |1201874482188256511|SVMF11|SBLK01

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2355	30	C3H5ClO	92
Ethanol, 2-nitro-, propionate (ester)	5390-28-3	NIST05.L	21507	25	C5H9NO4	147
Acetic acid, methyl ester	79-20-9	NIST05.L	806	16	C3H6O2	74

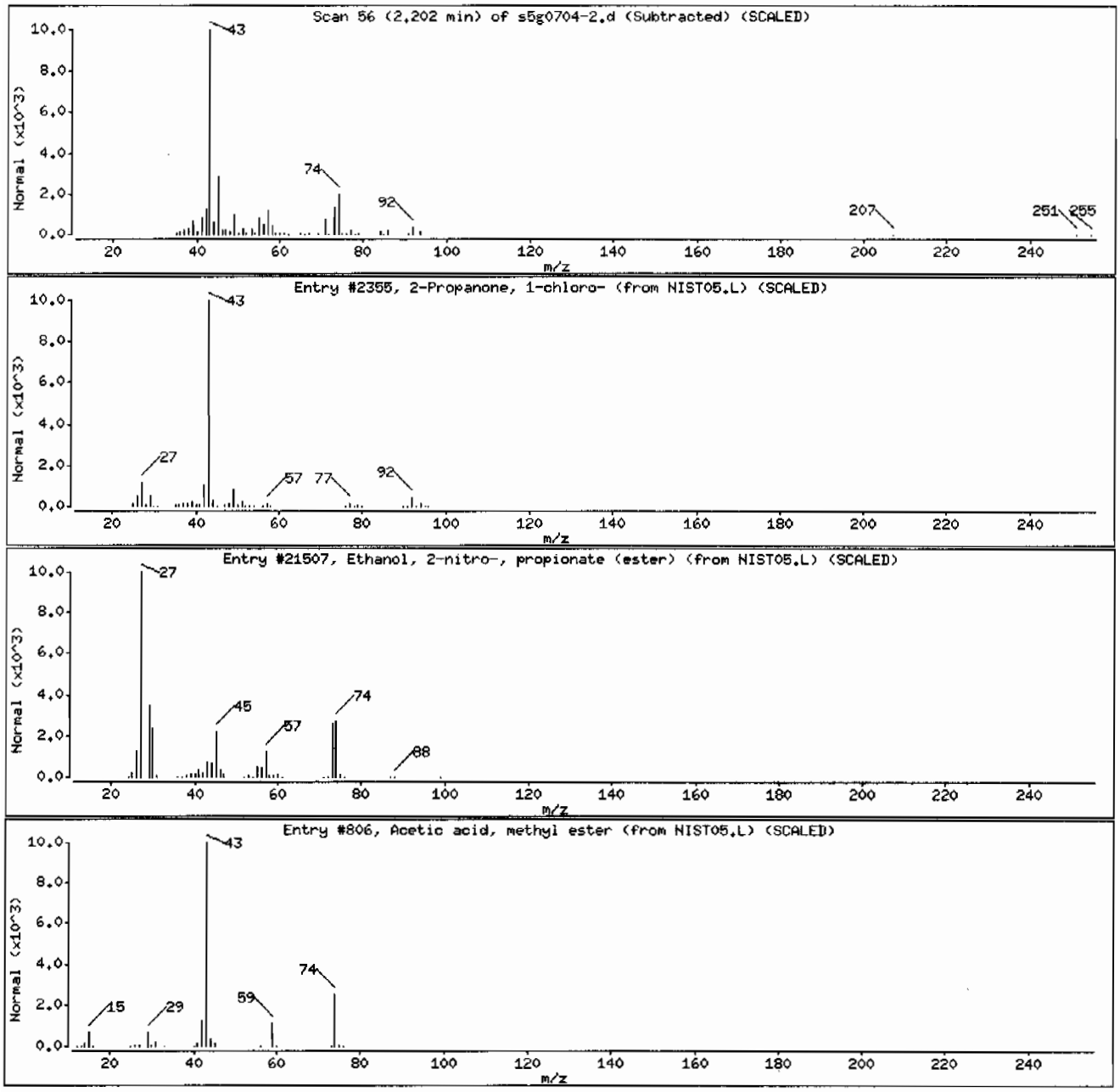

Data File: /chem/MSD5.i/s070709.b/s5g0704-2.d

Date : 07-JUL-2009 08:17

Client ID: SBLK01 Instrument: MSD5.i

Sample Info: |1201874482188256511|SVMF11|SBLK01

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	9	C4H7NO2	101

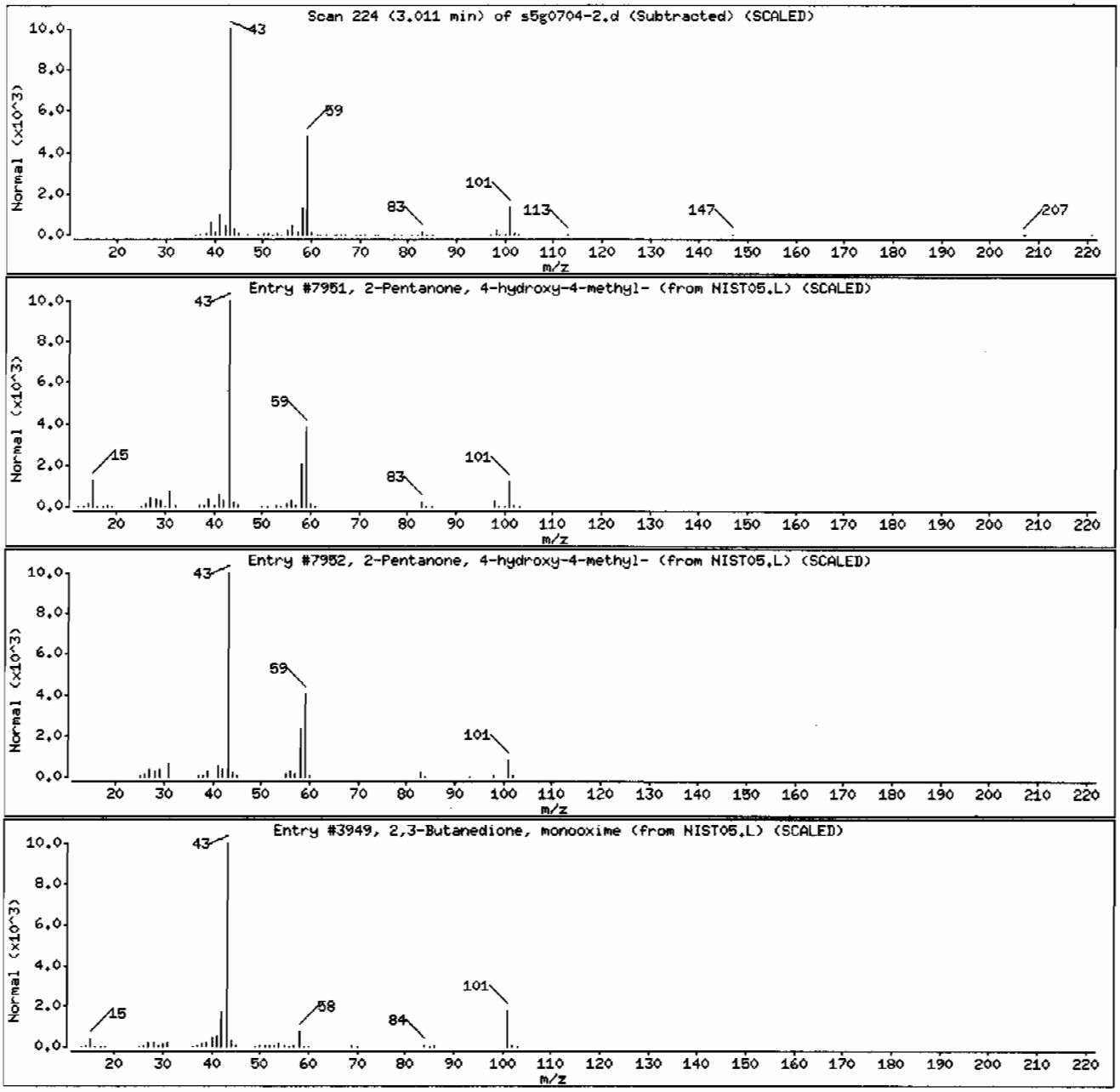

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201874483				
Client Sample:	QC for batch 882563	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882563	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 08:45	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0705-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1280	ug/kg	66.7	333
108-95-2	Phenol		1300	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1370	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1230	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1370	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1400	ug/kg	66.7	333
83-32-9	Acenaphthene		1370	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene		1340	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1380	ug/kg	110	333
87-86-5	Pentachlorophenol		1370	ug/kg	83.3	333
129-00-0	Pyrene		1510	ug/kg	10.0	33.3
110-86-1	Pyridine		1280	ug/kg	66.7	333
62-53-3	Aniline		1390	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether		1230	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1260	ug/kg	66.7	333
100-51-6	Benzyl alcohol		1320	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1320	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1330	ug/kg	66.7	333
95-48-7	o-Cresol		1300	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1460	ug/kg	100	333
67-72-1	Hexachloroethane		1270	ug/kg	66.7	333
98-95-3	Nitrobenzene		1280	ug/kg	66.7	333
78-59-1	Isophorone		1360	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1310	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol		1280	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane		1290	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1370	ug/kg	66.7	333
65-85-0	Benzoic acid		779	ug/kg	167	667
91-20-3	Naphthalene		1210	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1210	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1350	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1460	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1330	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1460	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1480	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1370	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline		1380	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline		1700	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874483**				
Client Sample:	**QC for batch 882563**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882563**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 08:45**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0705-2.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1560	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1360	ug/kg	33.3	333
208-96-8	Acenaphthylene		1460	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		1350	ug/kg	127	667
132-64-9	Dibenzofuran		1430	ug/kg	66.7	333
84-66-2	Diethylphthalate		1590	ug/kg	66.7	333
86-73-7	Fluorene		1360	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1390	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol		1320	ug/kg	66.7	333
100-01-6	4-Nitroaniline		2160	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1580	ug/kg	66.7	333
122-66-7	Azobenzene		1420	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1360	ug/kg	66.7	333
118-74-1	Hexachlorobenzene		1430	ug/kg	66.7	333
85-01-8	Phenanthrene		1390	ug/kg	10.0	33.3
120-12-7	Anthracene		1430	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1630	ug/kg	66.7	333
206-44-0	Fluoranthene		1450	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1660	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1390	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1410	ug/kg	100	333
218-01-9	Chrysene		1450	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1700	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1700	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1430	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1490	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1480	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1530	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1570	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1530	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1300	ug/kg	66.7	333

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0705-2.d
Lab Smp Id: 1201874483 Client Smp ID: SBLK01LCS
Inj Date : 07-JUL-2009 08:45
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201874483|882565|1|SVMF|1|SBLK01LCS
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.003	4.003	(1.000)	334582	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1297644	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	769594	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1455353	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1401485	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1233101	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.797)	573699	78.0932	2600
$ 5 Phenol-d5	99	3.718	3.714	(0.929)	715089	73.8250	2460
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	341469	35.5119	1180
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	808666	40.6295	1350
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	266353	84.8235	2830
$ 81 p-Terphenyl-d14	244	8.683	8.688	(0.893)	1017085	47.4204	1580

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.728	3.723	(0.931)	375163	39.0230	1300(Q)
8 2-Chlorophenol	128	3.868	3.868	(0.966)	329221	40.9691	1360
11 1,4-Dichlorobenzene	146	4.012	4.012	(1.007)	352402	36.8335	1230
17 N-Nitrosodipropylamine	70	4.234	4.239	(1.058)	212602	41.0635	1370(Q)
28 1,2,4-Trichlorobenzene	180	4.821	4.821	(0.990)	351288	39.1025	1300
33 4-Chloro-3-methylphenol	107	5.221	5.216	(1.072)	290719	42.0345	1400
47 Acenaphthene	154	6.155	6.155	(1.004)	647014	41.1491	1370
50 2,4-Dinitrotoluene	165	6.242	6.247	(1.018)	245126	40.2510	1340
52 4-Nitrophenol	139	6.174	6.174	(1.007)	112717	41.3052	1380
65 Pentachlorophenol	266	7.133	7.133	(0.976)	145087	41.1389	1370
79 Pyrene	202	8.587	8.592	(0.883)	1380519	45.1535	1500
2 Pyridine	79	2.519	2.510	(0.629)	221690	38.3313	1280
4 Aniline	66	3.781	3.786	(0.945)	175327	41.7380	1390
7 bis(2-Chloroethyl) ether	63	3.796	3.800	(0.948)	273276	36.8815	1230
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.992)	362155	37.6585	1260
12 Benzyl alcohol	108	4.065	4.070	(1.016)	200092	39.4551	1320
13 1,2-Dichlorobenzene	146	4.118	4.118	(1.029)	352397	39.6438	1320
14 bis(2-Chloroisopropyl)ether	45	4.142	4.147	(1.035)	688958	39.9512	1330
15 o-Cresol	107	4.123	4.118	(1.030)	233768	39.1073	1300
18 m,p-Cresols	107	4.219	4.219	(1.054)	349032	43.6624	1460
19 Hexachloroethane	117	4.344	4.349	(1.085)	134799	37.9896	1270
21 Nitrobenzene	77	4.378	4.378	(0.899)	343657	38.3212	1280
22 Isophorone	82	4.527	4.532	(0.930)	678306	40.8662	1360
23 2-Nitrophenol	139	4.595	4.595	(0.944)	165534	39.3201	1310
24 2,4-Dimethylphenol	122	4.585	4.585	(0.942)	279565	38.4743	1280
25 bis(2-Chloroethoxy)methane	93	4.648	4.653	(0.954)	367248	38.7233	1290
26 2,4-Dichlorophenol	162	4.754	4.759	(0.976)	296328	41.0306	1370
27 Benzoic acid	105	4.629	4.638	(0.951)	51783	23.3667	779
30 Naphthalene	128	4.889	4.889	(1.004)	918457	36.3311	1210
31 4-Chloroaniline	127	4.903	4.903	(1.007)	306442	36.3992	1210
32 Hexachlorobutadiene	225	4.951	4.951	(1.017)	266145	40.5844	1350
34 2-Methylnaphthalene	142	5.370	5.370	(1.103)	665298	43.6881	1460
36 Hexachlorocyclopentadiene	237	5.471	5.471	(0.892)	139386	39.8521	1330
37 2,4,6-Trichlorophenol	196	5.558	5.558	(0.907)	260145	43.6833	1460
38 2,4,5-Trichlorophenol	196	5.592	5.587	(0.912)	283050	44.2883	1480
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	671029	40.9740	1360
42 o-Nitroaniline	65	5.779	5.780	(0.943)	215139	41.3152	1380
41 m-Nitroaniline	138	6.073	6.078	(0.991)	149098	51.0354	1700
43 Dimethylphthalate	163	5.881	5.885	(0.959)	915318	46.8209	1560
44 2,6-Dinitrotoluene	165	5.943	5.943	(0.969)	189923	40.8036	1360
45 Acenaphthylene	152	6.030	6.030	(0.984)	1057647	43.8324	1460
48 2,4-Dinitrophenol	184	6.150	6.155	(1.003)	67755	40.3870	1350(Q)
49 Dibenzofuran	168	6.280	6.280	(1.024)	953001	42.7931	1430
51 Diethylphthalate	149	6.396	6.396	(1.043)	911536	47.6046	1590
53 Fluorene	166	6.540	6.545	(1.067)	782185	40.8710	1360
54 4-Chlorophenylphenylether	204	6.516	6.516	(1.063)	463985	41.5801	1390
55 2-Methyl-4,6-dinitrophenol	198	6.559	6.560	(0.898)	120748	39.6664	1320

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.067)	130253	64.6759	2160
133 Diphenylamine	169	6.603	6.603	(0.904)	686299	47.3715	1580
58 1,2-Diphenylhydrazine	77	6.641	6.641	(0.909)	784520	42.6520	1420
61 4-Bromophenylphenylether	248	6.906	6.906	(0.945)	283308	40.7273	1360
63 Hexachlorobenzene	284	6.983	6.983	(0.956)	314254	42.8957	1430
68 Phenanthrene	178	7.325	7.330	(1.003)	1137250	41.7132	1390
69 Anthracene	178	7.368	7.373	(1.009)	1157362	43.0096	1430
72 Di-n-butylphthalate	149	7.720	7.720	(1.057)	1516265	48.9174	1630
76 Fluoranthene	202	8.370	8.375	(1.146)	1354490	43.6123	1450
85 Butylbenzylphthalate	149	9.112	9.112	(0.937)	651358	49.7061	1660
89 Benzo(a)anthracene	228	9.709	9.714	(0.998)	1254966	41.7327	1390
90 3,3'-Dichlorobenzidine	252	9.651	9.648	(0.993)	424664	42.2647	1410
92 Chrysene	228	9.747	9.752	(1.002)	1195529	43.3999	1450
93 bis(2-Ethylhexyl)phthalate	149	9.632	9.632	(0.991)	915136	50.8898	1700
94 Di-n-octylphthalate	149	10.301	10.301	(0.899)	1435824	50.9390	1700
95 Benzo(b)fluoranthene	252	10.922	10.922	(0.953)	1169410	42.9408	1430
96 Benzo(k)fluoranthene	252	10.956	10.956	(0.956)	1197322	44.7590	1490
97 Benzo(a)pyrene	252	11.375	11.380	(0.993)	1073049	44.5112	1480
99 Indeno(1,2,3-cd)pyrene	276	13.301	13.306	(1.161)	1111706	45.8907	1530
100 Dibenzo(a,h)anthracene	278	13.311	13.316	(1.162)	928137	47.0014	1570
101 Benzo(ghi)perylene	276	13.864	13.869	(1.210)	945122	45.7628	1520
1 N-Methyl-N-nitrosomethylamine	74	2.481	2.476	(0.620)	150389	38.4762	1280

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070709.b/s5g0705-2.d
Date : 07-JUL-2009 08:45
Client ID: SBLK01LCS
Sample Info: 1120187448318825651|1|SVHF|1|SBLK01LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RHB
Column diameter: 0.20

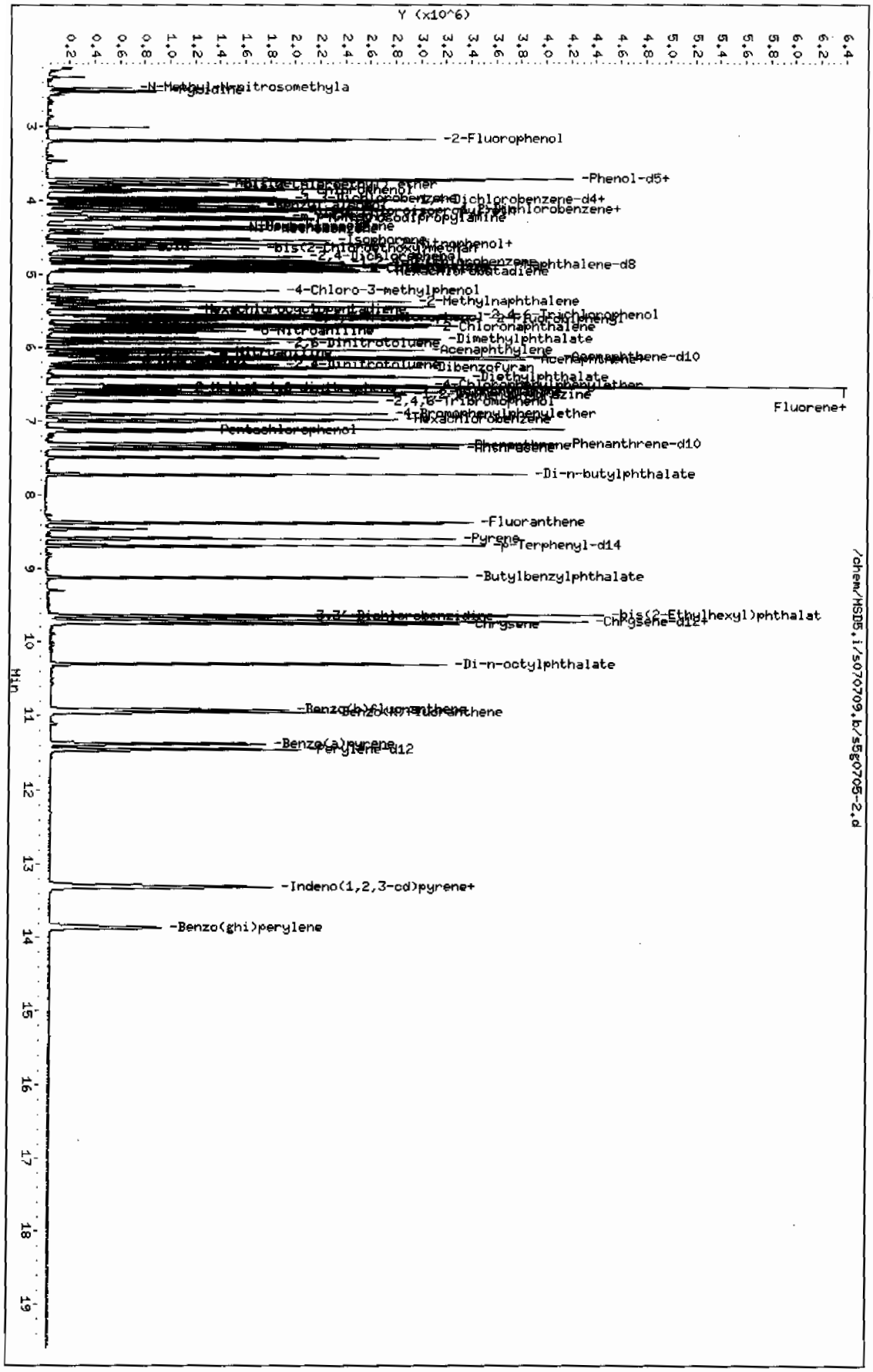

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874484	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
Client Sample:	QC for batch 882563	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9956MS	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 12:03	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0712.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1170	ug/kg	77.6	388
108-95-2	Phenol		1310	ug/kg	77.6	388
95-57-8	2-Chlorophenol		1320	ug/kg	77.6	388
106-46-7	1,4-Dichlorobenzene		1070	ug/kg	77.6	388
621-64-7	N-Nitrosodipropylamine		1360	ug/kg	77.6	388
59-50-7	4-Chloro-3-methylphenol		1620	ug/kg	77.6	388
83-32-9	Acenaphthene		1440	ug/kg	12.8	38.8
121-14-2	2,4-Dinitrotoluene		1550	ug/kg	38.8	388
100-02-7	4-Nitrophenol		1730	ug/kg	128	388
87-86-5	Pentachlorophenol		1620	ug/kg	97.0	388
129-00-0	Pyrene		1690	ug/kg	11.6	38.8
110-86-1	Pyridine		1170	ug/kg	77.6	388
62-53-3	Aniline		1320	ug/kg	116	388
111-44-4	bis(2-Chloroethyl) ether		1170	ug/kg	77.6	388
541-73-1	1,3-Dichlorobenzene		1060	ug/kg	77.6	388
100-51-6	Benzyl alcohol		1260	ug/kg	116	388
95-50-1	1,2-Dichlorobenzene		1140	ug/kg	77.6	388
108-60-1	bis(2-Chloroisopropyl)ether		1230	ug/kg	77.6	388
95-48-7	o-Cresol		1320	ug/kg	77.6	388
65794-96-9	m,p-Cresols		1510	ug/kg	116	388
67-72-1	Hexachloroethane		1010	ug/kg	77.6	388
98-95-3	Nitrobenzene		1240	ug/kg	77.6	388
78-59-1	Isophorone		1350	ug/kg	77.6	388
88-75-5	2-Nitrophenol		1320	ug/kg	77.6	388
105-67-9	2,4-Dimethylphenol		1310	ug/kg	136	388
111-91-1	bis(2-Chloroethoxy)methane		1290	ug/kg	77.6	388
120-83-2	2,4-Dichlorophenol		1460	ug/kg	77.6	388
65-85-0	Benzoic acid		834	ug/kg	194	776
91-20-3	Naphthalene		1160	ug/kg	11.6	38.8
106-47-8	4-Chloroaniline		1390	ug/kg	77.6	388
87-68-3	Hexachlorobutadiene		1190	ug/kg	77.6	388
91-57-6	2-Methylnaphthalene		1460	ug/kg	7.76	38.8
77-47-4	Hexachlorocyclopentadiene		874	ug/kg	77.6	388
88-06-2	2,4,6-Trichlorophenol		1570	ug/kg	77.6	388
95-95-4	2,4,5-Trichlorophenol		1690	ug/kg	77.6	388
91-58-7	2-Chloronaphthalene		1430	ug/kg	12.8	38.8
88-74-4	2-Nitroaniline		1590	ug/kg	77.6	388
99-09-2	*o-Nitroaniline* 3-Nitroaniline		2090	ug/kg	77.6	388

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201874484	**Date Received:**	07/02/2009 08:40	**%Moisture:**	14.1
Client Sample:	QC for batch 882563	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9956MS	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 12:03	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0712.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1730	ug/kg	77.6	388
606-20-2	2,6-Dinitrotoluene		1520	ug/kg	38.8	388
208-96-8	Acenaphthylene		1570	ug/kg	11.6	38.8
51-28-5	2,4-Dinitrophenol		1180	ug/kg	147	776
132-64-9	Dibenzofuran		1610	ug/kg	77.6	388
84-66-2	Diethylphthalate		1790	ug/kg	77.6	388
86-73-7	Fluorene		1560	ug/kg	11.6	38.8
7005-72-3	4-Chlorophenylphenylether		1550	ug/kg	77.6	388
534-52-1	2-Methyl-4,6-dinitrophenol		1310	ug/kg	77.6	388
100-01-6	4-Nitroaniline		2690	ug/kg	116	388
	p-Nitroaniline					
122-39-4	Diphenylamine		1660	ug/kg	77.6	388
122-66-7	Azobenzene		1540	ug/kg	77.6	388
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1530	ug/kg	77.6	388
118-74-1	Hexachlorobenzene		1490	ug/kg	77.6	388
85-01-8	Phenanthrene		1620	ug/kg	11.6	38.8
120-12-7	Anthracene		1620	ug/kg	7.76	38.8
84-74-2	Di-n-butylphthalate		1830	ug/kg	77.6	388
206-44-0	Fluoranthene		1740	ug/kg	11.6	38.8
85-68-7	Butylbenzylphthalate		1780	ug/kg	77.6	388
56-55-3	Benzo(a)anthracene		1570	ug/kg	11.6	38.8
91-94-1	3,3'-Dichlorobenzidine		1130	ug/kg	116	388
218-01-9	Chrysene		1610	ug/kg	11.6	38.8
117-81-7	bis(2-Ethylhexyl)phthalate		1790	ug/kg	77.6	388
117-84-0	Di-n-octylphthalate		1910	ug/kg	77.6	388
205-99-2	Benzo(b)fluoranthene		1650	ug/kg	11.6	38.8
207-08-9	Benzo(k)fluoranthene		1670	ug/kg	11.6	38.8
50-32-8	Benzo(a)pyrene		1650	ug/kg	11.6	38.8
193-39-5	Indeno(1,2,3-cd)pyrene		1390	ug/kg	11.6	38.8
53-70-3	Dibenzo(a,h)anthracene		1430	ug/kg	11.6	38.8
191-24-2	Benzo(ghi)perylene		1280	ug/kg	11.6	38.8
120-82-1	1,2,4-Trichlorobenzene		1200	ug/kg	77.6	388

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0712.d
Lab Smp Id: 1201874484 Client Smp ID: CAMO-09-9956MS
Inj Date : 07-JUL-2009 12:03
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201874484|882565|1|SVMF|1|LANL41002MS
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	14.06760	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.002	4.003	(1.000)	342222	40.0000	
* 29 Naphthalene-d8	136	4.874	4.874	(1.000)	1335244	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	814167	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1626254	40.0000	
* 91 Chrysene-d12	240	9.728	9.723	(1.000)	1670460	40.0000	
* 98 Perylene-d12	264	11.461	11.462	(1.000)	1412005	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.797)	454090	60.4318	2340
$ 5 Phenol-d5	99	3.718	3.714	(0.929)	619786	62.5576	2430
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.895)	302929	30.6167	1190
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	722523	34.3140	1330
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	269772	81.2089	3150
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.893)	1078870	42.2017	1640

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.728	3.723	(0.931)	331019	33.6627	1300(Q)
8 2-Chlorophenol	128	3.868	3.868	(0.966)	278939	33.9369	1320
11 1,4-Dichlorobenzene	146	4.012	4.012	(1.002)	268860	27.4742	1060
17 N-Nitrosodipropylamine	70	4.234	4.239	(1.058)	185011	34.9367	1360(Q)
28 1,2,4-Trichlorobenzene	180	4.821	4.821	(0.989)	286738	31.0185	1200
33 4-Chloro-3-methylphenol	107	5.221	5.216	(1.071)	297748	41.8385	1620
47 Acenaphthene	154	6.155	6.155	(1.004)	615515	37.0027	1440
50 2,4-Dinitrotoluene	165	6.242	6.247	(1.018)	257593	39.9825	1550
52 4-Nitrophenol	139	6.174	6.174	(1.007)	128391	44.4732	1720
65 Pentachlorophenol	266	7.137	7.133	(0.977)	165368	41.8541	1620
79 Pyrene	202	8.591	8.592	(0.883)	1591253	43.6657	1690
2 Pyridine	79	2.519	2.510	(0.629)	179066	30.2702	1170
4 Aniline	66	3.781	3.786	(0.945)	146397	34.0729	1320(Q)
7 bis(2-Chloroethyl) ether	63	3.795	3.800	(0.948)	228625	30.1665	1170
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.992)	268559	27.3025	1060
12 Benzyl alcohol	108	4.070	4.070	(1.017)	168611	32.5053	1260
13 1,2-Dichlorobenzene	146	4.118	4.118	(1.029)	266839	29.3486	1140
14 bis(2-Chloroisopropyl)ether	45	4.142	4.147	(1.035)	561437	31.8297	1230
15 o-Cresol	107	4.123	4.118	(1.030)	207700	33.9707	1320
18 m,p-Cresols	107	4.219	4.219	(1.054)	318279	38.9264	1510
19 Hexachloroethane	117	4.344	4.349	(1.085)	94780	26.1150	1010
21 Nitrobenzene	77	4.378	4.378	(0.898)	294503	31.9153	1240
22 Isophorone	82	4.527	4.532	(0.929)	593153	34.7296	1350
23 2-Nitrophenol	139	4.595	4.595	(0.943)	147806	34.1204	1320
24 2,4-Dimethylphenol	122	4.585	4.585	(0.941)	253179	33.8618	1310
25 bis(2-Chloroethoxy)methane	93	4.648	4.653	(0.954)	323464	33.1462	1280
26 2,4-Dichlorophenol	162	4.758	4.759	(0.976)	279359	37.5917	1460
27 Benzoic acid	105	4.628	4.638	(0.950)	44290	21.4920	834
30 Naphthalene	128	4.888	4.889	(1.003)	780197	29.9929	1160
31 4-Chloroaniline	127	4.903	4.903	(1.006)	310068	35.9163	1390
32 Hexachlorobutadiene	225	4.951	4.951	(1.016)	207336	30.7263	1190
34 2-Methylnaphthalene	142	5.370	5.370	(1.102)	591298	37.7353	1460
36 Hexachlorocyclopentadiene	237	5.471	5.471	(0.892)	78714	22.5353	874
37 2,4,6-Trichlorophenol	196	5.558	5.558	(0.907)	254230	40.3529	1560
38 2,4,5-Trichlorophenol	196	5.592	5.587	(0.912)	295098	43.6456	1690
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	638367	36.8456	1430
42 o-Nitroaniline	65	5.779	5.780	(0.943)	226353	41.0889	1590
41 m-Nitroaniline	138	6.078	6.078	(0.991)	169497	53.9501	2090
43 Dimethylphthalate	163	5.880	5.885	(0.959)	923489	44.6527	1730
44 2,6-Dinitrotoluene	165	5.943	5.943	(0.969)	193379	39.2716	1520
45 Acenaphthylene	152	6.030	6.030	(0.984)	1034941	40.5432	1570
48 2,4-Dinitrophenol	184	6.155	6.155	(1.004)	46151	30.5077	1180(Q)
49 Dibenzofuran	168	6.280	6.280	(1.024)	977471	41.4890	1610
51 Diethylphthalate	149	6.396	6.396	(1.043)	937128	46.2618	1790
53 Fluorene	166	6.545	6.545	(1.068)	813640	40.1871	1560
54 4-Chlorophenylphenylether	204	6.516	6.516	(1.063)	472289	40.0071	1550
55 2-Methyl-4,6-dinitrophenol	198	6.559	6.560	(0.898)	110768	33.7255	1310

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.067)	147989	69.4596	2690
133 Diphenylamine	169	6.608	6.603	(0.904)	691326	42.7038	1660
58 1,2-Diphenylhydrazine	77	6.641	6.641	(0.909)	813602	39.5847	1540
61 4-Bromophenylphenylether	248	6.906	6.906	(0.945)	307050	39.5017	1530
63 Hexachlorobenzene	284	6.983	6.983	(0.956)	315397	38.5275	1490
68 Phenanthrene	178	7.330	7.330	(1.003)	1274579	41.8373	1620
69 Anthracene	178	7.373	7.373	(1.009)	1254101	41.7070	1620
72 Di-n-butylphthalate	149	7.725	7.720	(1.057)	1629823	47.0553	1820
76 Fluoranthene	202	8.375	8.375	(1.146)	1557883	44.8899	1740
85 Butylbenzylphthalate	149	9.112	9.112	(0.937)	715262	45.7939	1780
89 Benzo(a)anthracene	228	9.713	9.714	(0.998)	1448726	40.4188	1570
90 3,3'-Dichlorobenzidine	252	9.656	9.648	(0.993)	350040	29.2282	1130
92 Chrysene	228	9.752	9.752	(1.002)	1359569	41.4078	1610
93 bis(2-Ethylhexyl)phthalate	149	9.636	9.632	(0.991)	987263	46.0607	1790
94 Di-n-octylphthalate	149	10.306	10.301	(0.899)	1585281	49.1154	1900
95 Benzo(b)fluoranthene	252	10.927	10.922	(0.953)	1322867	42.4211	1640
96 Benzo(k)fluoranthene	252	10.961	10.956	(0.956)	1319828	43.0873	1670
97 Benzo(a)pyrene	252	11.380	11.380	(0.993)	1170707	42.4092	1640
99 Indeno(1,2,3-cd)pyrene	276	13.301	13.306	(1.160)	997093	35.9445	1390
100 Dibenzo(a,h)anthracene	278	13.320	13.316	(1.162)	834529	36.9065	1430
101 Benzo(ghi)perylene	276	13.864	13.869	(1.210)	777599	32.8808	1280
1 N-Methyl-N-nitrosomethylamine	74	2.481	2.476	(0.620)	120217	30.0702	1170

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070709.b/s5g0712.d
Date : 07-JUL-2009 12:03
Client ID: CAMC-09-9956MS
Sample Info: 1120187448418825651ISVMF11LANL41002MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

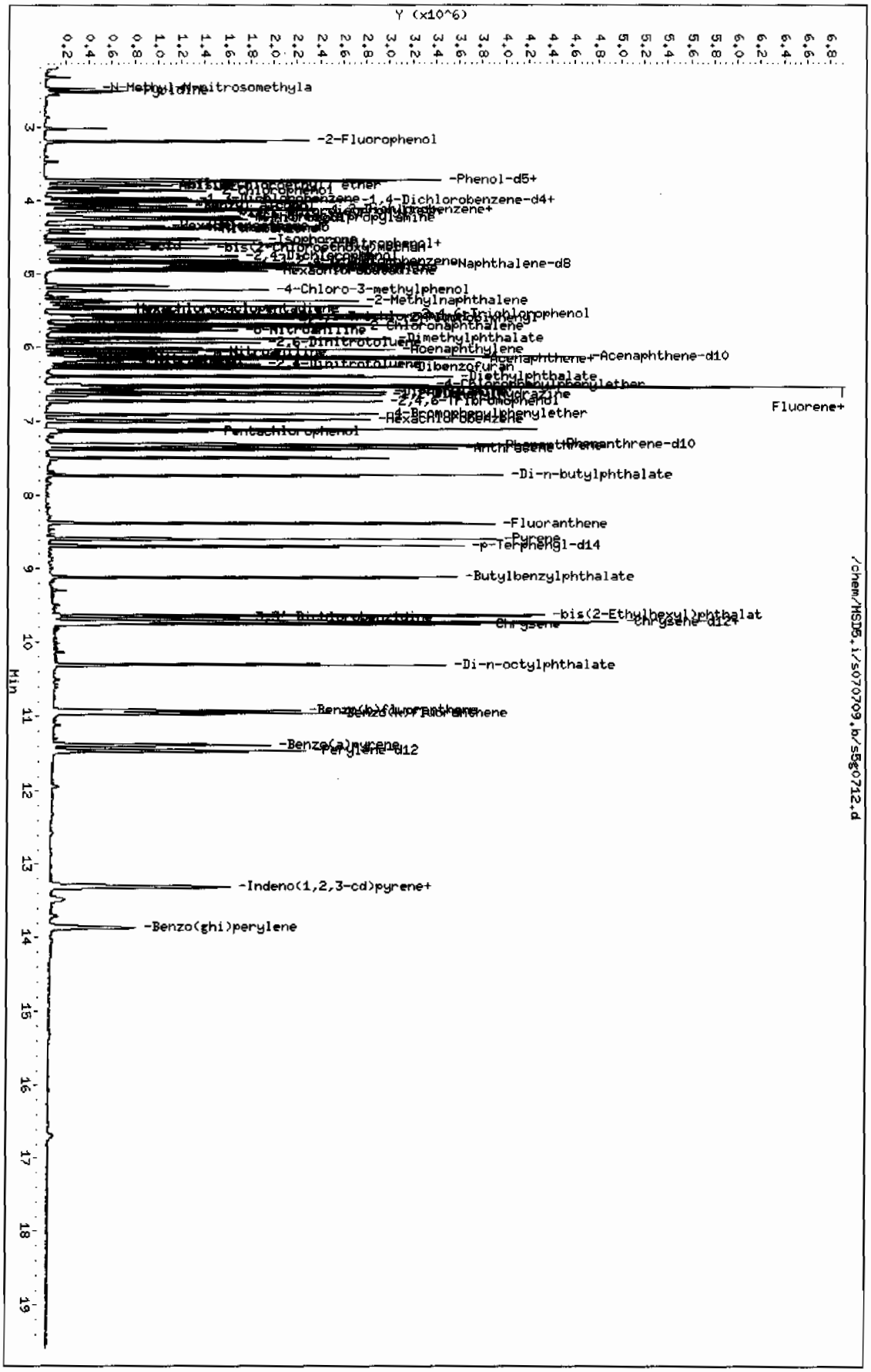

Page 1

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**1201874485**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**14.1**
Client Sample:	**QC for batch 882563**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**CAMO-09-9956MSD**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 12:31**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0713.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1360	ug/kg	77.6	388
108-95-2	Phenol		1420	ug/kg	77.6	388
95-57-8	2-Chlorophenol		1420	ug/kg	77.6	388
106-46-7	1,4-Dichlorobenzene		1190	ug/kg	77.6	388
621-64-7	N-Nitrosodipropylamine		1510	ug/kg	77.6	388
59-50-7	4-Chloro-3-methylphenol		1670	ug/kg	77.6	388
83-32-9	Acenaphthene		1520	ug/kg	12.8	38.8
121-14-2	2,4-Dinitrotoluene		1580	ug/kg	38.8	388
100-02-7	4-Nitrophenol		1550	ug/kg	128	388
87-86-5	Pentachlorophenol		1650	ug/kg	97.0	388
129-00-0	Pyrene		1680	ug/kg	11.6	38.8
110-86-1	Pyridine		1200	ug/kg	77.6	388
62-53-3	Aniline		1270	ug/kg	116	388
111-44-4	bis(2-Chloroethyl) ether		1290	ug/kg	77.6	388
541-73-1	1,3-Dichlorobenzene		1200	ug/kg	77.6	388
100-51-6	Benzyl alcohol		1380	ug/kg	116	388
95-50-1	1,2-Dichlorobenzene		1280	ug/kg	77.6	388
108-60-1	bis(2-Chloroisopropyl)ether		1350	ug/kg	77.6	388
95-48-7	o-Cresol		1440	ug/kg	77.6	388
65794-96-9	m,p-Cresols		1590	ug/kg	116	388
67-72-1	Hexachloroethane		1150	ug/kg	77.6	388
98-95-3	Nitrobenzene		1400	ug/kg	77.6	388
78-59-1	Isophorone		1450	ug/kg	77.6	388
88-75-5	2-Nitrophenol		1520	ug/kg	77.6	388
105-67-9	2,4-Dimethylphenol		1360	ug/kg	136	388
111-91-1	bis(2-Chloroethoxy)methane		1430	ug/kg	77.6	388
120-83-2	2,4-Dichlorophenol		1540	ug/kg	77.6	388
65-85-0	Benzoic acid		963	ug/kg	194	776
91-20-3	Naphthalene		1280	ug/kg	11.6	38.8
106-47-8	4-Chloroaniline		1330	ug/kg	77.6	388
87-68-3	Hexachlorobutadiene		1340	ug/kg	77.6	388
91-57-6	2-Methylnaphthalene		1550	ug/kg	7.76	38.8
77-47-4	Hexachlorocyclopentadiene		1140	ug/kg	77.6	388
88-06-2	2,4,6-Trichlorophenol		1620	ug/kg	77.6	388
95-95-4	2,4,5-Trichlorophenol		1740	ug/kg	77.6	388
91-58-7	2-Chloronaphthalene		1520	ug/kg	12.8	38.8
88-74-4	2-Nitroaniline		1650	ug/kg	77.6	388
99-09-2	*o-Nitroaniline* 3-Nitroaniline		2020	ug/kg	77.6	388

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**1201874485**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**14.1**
Client Sample:	**QC for batch 882563**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**CAMO-09-9956MSD**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 12:31**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0713.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1760	ug/kg	77.6	388
606-20-2	2,6-Dinitrotoluene		1570	ug/kg	38.8	388
208-96-8	Acenaphthylene		1620	ug/kg	11.6	38.8
51-28-5	2,4-Dinitrophenol		1260	ug/kg	147	776
132-64-9	Dibenzofuran		1640	ug/kg	77.6	388
84-66-2	Diethylphthalate		1820	ug/kg	77.6	388
86-73-7	Fluorene		1580	ug/kg	11.6	38.8
7005-72-3	4-Chlorophenylphenylether		1590	ug/kg	77.6	388
534-52-1	2-Methyl-4,6-dinitrophenol		1410	ug/kg	77.6	388
100-01-6	4-Nitroaniline		2500	ug/kg	116	388
	p-Nitroaniline					
122-39-4	Diphenylamine		1750	ug/kg	77.6	388
122-66-7	Azobenzene		1630	ug/kg	77.6	388
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1580	ug/kg	77.6	388
118-74-1	Hexachlorobenzene		1600	ug/kg	77.6	388
85-01-8	Phenanthrene		1620	ug/kg	11.6	38.8
120-12-7	Anthracene		1690	ug/kg	7.76	38.8
84-74-2	Di-n-butylphthalate		1880	ug/kg	77.6	388
206-44-0	Fluoranthene		1720	ug/kg	11.6	38.8
85-68-7	Butylbenzylphthalate		1860	ug/kg	77.6	388
56-55-3	Benzo(a)anthracene		1610	ug/kg	11.6	38.8
91-94-1	3,3'-Dichlorobenzidine		1190	ug/kg	116	388
218-01-9	Chrysene		1660	ug/kg	11.6	38.8
117-81-7	bis(2-Ethylhexyl)phthalate		1910	ug/kg	77.6	388
117-84-0	Di-n-octylphthalate		2060	ug/kg	77.6	388
205-99-2	Benzo(b)fluoranthene		1690	ug/kg	11.6	38.8
207-08-9	Benzo(k)fluoranthene		1790	ug/kg	11.6	38.8
50-32-8	Benzo(a)pyrene		1710	ug/kg	11.6	38.8
193-39-5	Indeno(1,2,3-cd)pyrene		1420	ug/kg	11.6	38.8
53-70-3	Dibenzo(a,h)anthracene		1520	ug/kg	11.6	38.8
191-24-2	Benzo(ghi)perylene		1310	ug/kg	11.6	38.8
120-82-1	1,2,4-Trichlorobenzene		1340	ug/kg	77.6	388

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0713.d
Lab Smp Id: 1201874485 Client Smp ID: CAMO-09-9956MSD
Inj Date : 07-JUL-2009 12:31
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201874485|882565|1|SVMF|1|LANL41002MSD
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	14.06760	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	373336	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1422068	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	847627	40.0000	
* 67 Phenanthrene-d10	188	7.311	7.306	(1.000)	1637138	40.0000	
* 91 Chrysene-d12	240	9.728	9.723	(1.000)	1670559	40.0000	
* 98 Perylene-d12	264	11.466	11.462	(1.000)	1400844	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.798)	546348	66.6501	2580
$ 5 Phenol-d5	99	3.719	3.714	(0.930)	731934	67.7202	2630
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	365877	34.7211	1350
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	808708	36.8910	1430
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	294921	85.2749	3310
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.893)	1146567	44.8471	1740

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.728	3.723	(0.933)	393247	36.6580	1420(Q)
8 2-Chlorophenol	128	3.868	3.868	(0.967)	329273	36.7221	1420
11 1,4-Dichlorobenzene	146	4.012	4.012	(1.004)	326997	30.6303	1190
17 N-Nitrosodipropylamine	70	4.234	4.239	(1.059)	225325	39.0033	1510(Q)
28 1,2,4-Trichlorobenzene	180	4.821	4.821	(0.990)	341089	34.6453	1340
33 4-Chloro-3-methylphenol	107	5.221	5.216	(1.072)	326257	43.0455	1670
47 Acenaphthene	154	6.155	6.155	(1.004)	678952	39.2051	1520
50 2,4-Dinitrotoluene	165	6.242	6.247	(1.018)	272369	40.6071	1580
52 4-Nitrophenol	139	6.179	6.174	(1.008)	120105	39.9608	1550
65 Pentachlorophenol	266	7.137	7.133	(0.976)	170087	42.6453	1650
79 Pyrene	202	8.592	8.592	(0.883)	1576268	43.2519	1680
2 Pyridine	79	2.524	2.510	(0.631)	199622	30.9327	1200
4 Aniline	66	3.786	3.786	(0.947)	153405	32.7284	1270(Q)
7 bis(2-Chloroethyl) ether	63	3.796	3.800	(0.949)	275237	33.2902	1290(Q)
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.993)	332056	30.9444	1200
12 Benzyl alcohol	108	4.070	4.070	(1.018)	201070	35.5323	1380
13 1,2-Dichlorobenzene	146	4.118	4.118	(1.030)	326196	32.8870	1280
14 bis(2-Chloroisopropyl)ether	45	4.142	4.147	(1.036)	669024	34.7681	1350
15 o-Cresol	107	4.123	4.118	(1.031)	248187	37.2096	1440
18 m,p-Cresols	107	4.219	4.219	(1.055)	366178	41.0522	1590
19 Hexachloroethane	117	4.345	4.349	(1.087)	117425	29.6580	1150
21 Nitrobenzene	77	4.378	4.378	(0.899)	355189	36.1417	1400
22 Isophorone	82	4.532	4.532	(0.931)	682106	37.4995	1450
23 2-Nitrophenol	139	4.595	4.595	(0.944)	180414	39.1051	1520
24 2,4-Dimethylphenol	122	4.585	4.585	(0.942)	279135	35.0540	1360
25 bis(2-Chloroethoxy)methane	93	4.648	4.653	(0.954)	384119	36.9585	1430
26 2,4-Dichlorophenol	162	4.759	4.759	(0.977)	314581	39.7468	1540
27 Benzoic acid	105	4.633	4.638	(0.952)	64188	24.8228	963(Q)
30 Naphthalene	128	4.889	4.889	(1.004)	915576	33.0483	1280
31 4-Chloroaniline	127	4.903	4.903	(1.007)	312195	34.3597	1330
32 Hexachlorobutadiene	225	4.951	4.951	(1.017)	247542	34.4449	1340
34 2-Methylnaphthalene	142	5.370	5.370	(1.103)	667960	40.0251	1550
36 Hexachlorocyclopentadiene	237	5.471	5.471	(0.892)	110014	29.3258	1140
37 2,4,6-Trichlorophenol	196	5.558	5.558	(0.907)	273915	41.7611	1620
38 2,4,5-Trichlorophenol	196	5.592	5.587	(0.912)	315898	44.8776	1740
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	707242	39.2095	1520
42 o-Nitroaniline	65	5.779	5.780	(0.943)	243286	42.4194	1640
41 m-Nitroaniline	138	6.078	6.078	(0.991)	168139	51.9691	2020
43 Dimethylphthalate	163	5.881	5.885	(0.959)	977121	45.3809	1760
44 2,6-Dinitrotoluene	165	5.943	5.943	(0.969)	207988	40.5711	1570
45 Acenaphthylene	152	6.030	6.030	(0.984)	1112841	41.8740	1620
48 2,4-Dinitrophenol	184	6.155	6.155	(1.004)	53601	32.5720	1260(Q)
49 Dibenzofuran	168	6.280	6.280	(1.024)	1038053	42.3211	1640
51 Diethylphthalate	149	6.396	6.396	(1.043)	987220	46.8108	1820
53 Fluorene	166	6.545	6.545	(1.068)	860210	40.8100	1580
54 4-Chlorophenylphenylether	204	6.516	6.516	(1.063)	502858	40.9151	1590
55 2-Methyl-4,6-dinitrophenol	198	6.560	6.560	(0.897)	122741	36.4690	1410

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56	p-Nitroaniline	138	6.540	6.545	(1.067)	143012	64.4740	2500
133	Diphenylamine	169	6.608	6.603	(0.904)	734387	45.0621	1750
58	1,2-Diphenylhydrazine	77	6.641	6.641	(0.908)	871905	42.1394	1630
61	4-Bromophenylphenylether	248	6.906	6.906	(0.945)	319709	40.8568	1580
63	Hexachlorobenzene	284	6.983	6.983	(0.955)	340475	41.3144	1600
68	Phenanthrene	178	7.330	7.330	(1.003)	1279269	41.7121	1620
69	Anthracene	178	7.373	7.373	(1.009)	1319712	43.5972	1690
72	Di-n-butylphthalate	149	7.725	7.720	(1.057)	1687700	48.4023	1880
76	Fluoranthene	202	8.375	8.375	(1.146)	1545151	44.2270	1720
85	Butylbenzylphthalate	149	9.112	9.112	(0.937)	750180	48.0266	1860
89	Benzo(a)anthracene	228	9.714	9.714	(0.998)	1488970	41.5391	1610
90	3,3'-Dichlorobenzidine	252	9.656	9.648	(0.993)	366127	30.5697	1180
92	Chrysene	228	9.752	9.752	(1.002)	1402836	42.7230	1660
93	bis(2-Ethylhexyl)phthalate	149	9.637	9.632	(0.991)	1056145	49.2714	1910
94	Di-n-octylphthalate	149	10.306	10.301	(0.899)	1696728	52.9871	2060
95	Benzo(b)fluoranthene	252	10.927	10.922	(0.953)	1349939	43.6341	1690
96	Benzo(k)fluoranthene	252	10.961	10.956	(0.956)	1404393	46.2133	1790
97	Benzo(a)pyrene	252	11.384	11.380	(0.993)	1204771	43.9909	1710
99	Indeno(1,2,3-cd)pyrene	276	13.306	13.306	(1.160)	1008329	36.6392	1420
100	Dibenzo(a,h)anthracene	278	13.320	13.316	(1.162)	876720	39.0813	1520
101	Benzo(ghi)perylene	276	13.869	13.869	(1.210)	793672	33.8279	1310
1	N-Methyl-N-nitrosomethylamine	74	2.486	2.476	(0.622)	153052	35.0928	1360

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070709.b/s5g0713.d

Page 1

Date : 07-JUL-2009 12:31

Client ID: CAMD-09-9956MSD

Instrument: MSD5.i

Sample Info: 1120187448518825651 1 SVMF 1 1 LANL41002MSD

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

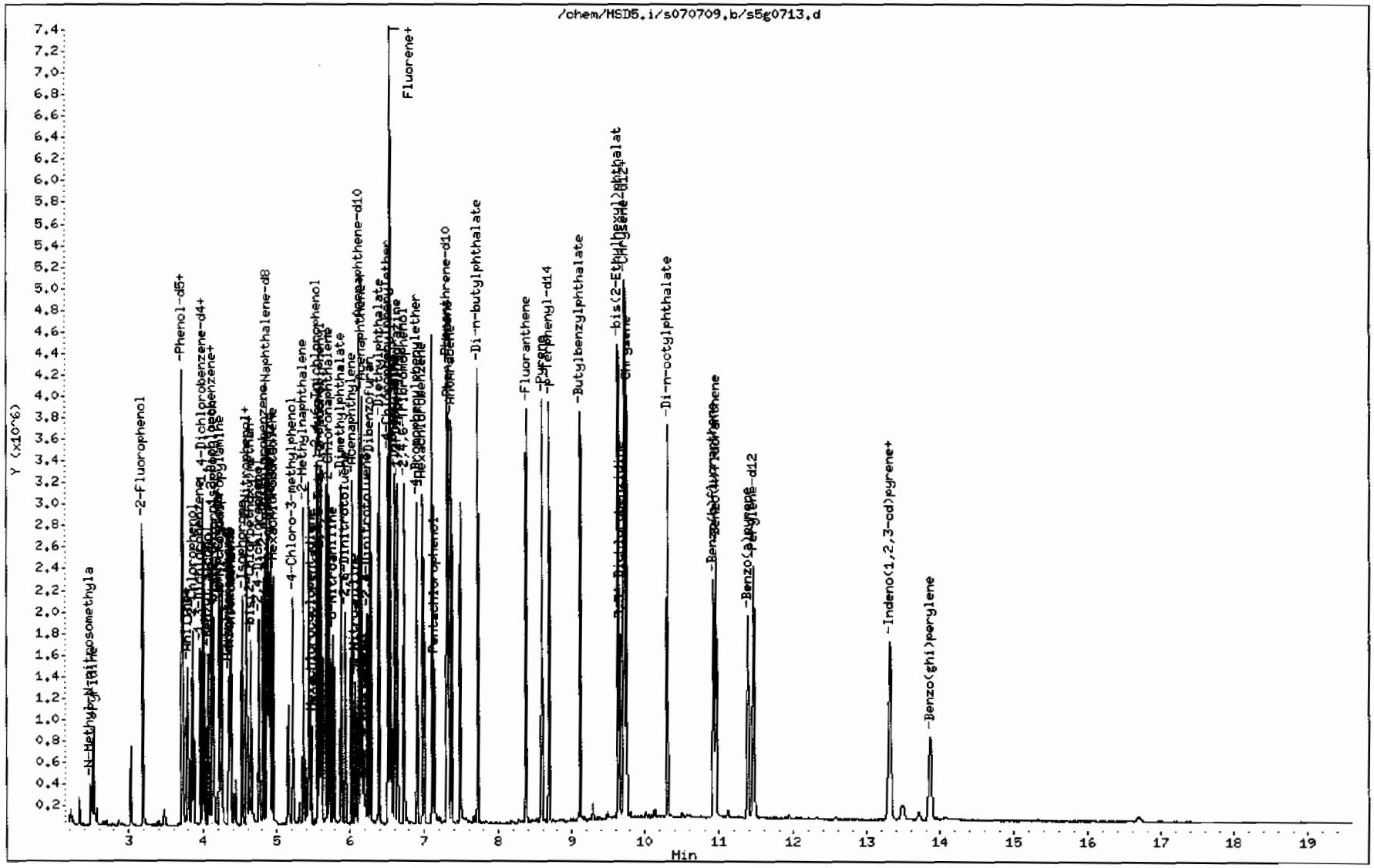

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 882563 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201874482 MB	06-JUL-2009 20:30:06	30	1	0.03333
1201874483 LCS	06-JUL-2009 20:30:06	30	1	0.03333
232661002	06-JUL-2009 20:30:06	30.02	1	0.03331
232661003	06-JUL-2009 20:30:06	30	1	0.03333
232661004	06-JUL-2009 20:30:06	30.03	1	0.0333
232661005	06-JUL-2009 20:30:06	30.01	1	0.03332
232661006	06-JUL-2009 20:30:06	30	1	0.03333
232741002	06-JUL-2009 20:30:06	30.01	1	0.03332
1201874484 MS (232741002)	06-JUL-2009 20:30:06	30	1	0.03333
1201874485 MSD (232741002)	06-JUL-2009 20:30:06	30	1	0.03333
232741003	06-JUL-2009 20:30:06	30.02	1	0.03331
232741004	06-JUL-2009 20:30:06	30.03	1	0.0333
232741005	06-JUL-2009 20:30:06	30	1	0.03333
232741006	06-JUL-2009 20:30:06	30.03	1	0.0333
232741007	06-JUL-2009 20:30:06	30	1	0.03333
232741008	06-JUL-2009 20:30:06	30.02	1	0.03331
232741009	06-JUL-2009 20:30:06	30.05	1	0.03328

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201874483	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
LCS	1201874483	BENZIDINE LCS	UE090702-18	1	mL
MS	1201874484	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MS	1201874484	BENZIDINE LCS	UE090702-18	1	mL
MSD	1201874485	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MSD	1201874485	BENZIDINE LCS	UE090702-18	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1143854-D	150	mL
SOURC	All	SODIUM SULFATE	1149626	30	g

Comments:

Verified By: AAW

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD5

DATE: 07/07/2009 METHOD:8270C MSD5-DFTPPx.m OPERATOR:rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1424 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD5.i/s070709.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s5g0701.d	WBN090624-01	rmb	07-JUL-2009 07:12	50PPM	s070709	1.0	DFTPP	
s5g0702-625.d	WBN090617-02.4	RMB	07-JUL-2009 07:25	40 PPM	s070709	1.0	MEGACVS	
s5g0702.d	WBN090617-02.4	RMB	07-JUL-2009 07:25	40 PPM	s070709	1.0	MEGACVS	pass 373014
s5g0703-625.d	WBN090619-01.4	RMB	07-JUL-2009 07:53	40 PPM	s070709	1.0	AP12CVS	
s5g0703.d	WBN090619-01.4	RMB	07-JUL-2009 07:53	40 PPM	s070709	1.0	AP12CVS	
s5g0704-2.d	1201874482	RMB	07-JUL-2009 08:17	882565	09-2524	1.0	SBLK01	
s5g0704.d	1201874482	RMB	07-JUL-2009 08:17	882565	09-2515	1.0	SBLK01	
s5g0705-2.d	1201874483	RMB	07-JUL-2009 08:45	882565	09-2524	1.0	SBLK01LCS	
s5g0705.d	1201874483	RMB	07-JUL-2009 08:45	882565	09-2515	1.0	SBLK01LCS	
s5g0706.d	232661002	RMB	07-JUL-2009 09:13	882565	09-2515	1.0	LANL	
s5g0707.d	232661003	RMB	07-JUL-2009 09:41	882565	09-2515	1.0	LANL	
s5g0708.d	232661004	RMB	07-JUL-2009 10:10	882565	09-2515	1.0	LANL	
s5g0709.d	232661005	RMB	07-JUL-2009 10:38	882565	09-2515	1.0	LANL	
s5g0710.d	232661006	RMB	07-JUL-2009 11:07	882565	09-2515	1.0	LANL	
s5g0711.d	232741002	RMB	07-JUL-2009 11:35	882565	09-2524	1.0	LANL	
s5g0712.d	1201874484	RMB	07-JUL-2009 12:03	882565	09-2524	1.0	LANL41002MS	
s5g0713.d	1201874485	RMB	07-JUL-2009 12:31	882565	09-2524	1.0	LANL41002MSD	
s5g0714.d	232741003	RMB	07-JUL-2009 13:00	882565	09-2524	1.0	LANL	
s5g0715.d	232741004	RMB	07-JUL-2009 13:28	882565	09-2524	1.0	LANL	

s5g0716.d	232741005	RMB	07-JUL-2009 13:56	882565	09-2524	1.0	LANL	
s5g0717.d	232741006	RMB	07-JUL-2009 14:24	882565	09-2524	1.0	LANL	
s5g0718.d	232741007	RMB	07-JUL-2009 14:53	882565	09-2524	1.0	LANL	DUSE - fail istd - s5g0721 pass
s5g0719.d	232741008	RMB	07-JUL-2009 15:21	882565	09-2524	1.0	LANL	
s5g0720.d	232741009	RMB	07-JUL-2009 15:50	882565	09-2524	1.0	LANL	
s5g0721.d	232741007	RMB	07-JUL-2009 16:18	882565	09-2524	1.0	LANL	rr of s5g0718-pass istd
s5g0722.d	instrument blank	RMB	07-JUL-2009 17:31		s070709	1.0		
s5g0723.d	1201874473	RMB	07-JUL-2009 17:59	882561	09-2544	1.0	SBLK01	
s5g0724.d	1201874474	RMB	07-JUL-2009 18:27	882561	09-2544	1.0	SBLK01LCS	DUSE - overrange hits see s5g0726
s5g0725.d	instrument blank	RMB	07-JUL-2009 18:55		s070709	1.0		
s5g0726.d	1201874474	RMB	07-JUL-2009 19:18	882561	09-2544	2.0	SBLK01LCS	
s5g0727.d	232762001	RMB	07-JUL-2009 19:41	882561	09-2544	1.0	LANL	
s5g0728.d	1201874475	RMB	07-JUL-2009 20:03	882561	09-2544	1.0	LANL62001MS	
s5g0729.d	1201874476	RMB	07-JUL-2009 20:26	882561	09-2544	1.0	LANL62001MSD	

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD5

DATE: 06/25/2009 METHOD:8270C MSD5-DFTPPx.m OPERATOR:rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1424 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD5.i/s062509.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s5f2501.d	WBN090624-01	rmb	25-JUN-2009 07:16	50PPM	s062509	1.0	DFTPP	DUSE
s5f2502.d	WBN090617-02.4	RMB	25-JUN-2009 07:29	40 PPM	s062509	1.0	MEGACVS	DUSE - fail
s5f2503.d	WBN090617-02.4	RMB	25-JUN-2009 08:12	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - cut column
s5f2504.d	WBN090624-01	rmb	25-JUN-2009 09:17	50PPM	s062509	1.0	DFTPP	DUSE
s5f2505.d	WBN090617-02.4	RMB	25-JUN-2009 09:30	40 PPM	s062509	1.0	MEGACVS	DUSE - fail
s5f2506.d	WBN090619-01.4	RMB	25-JUN-2009 09:58	40 PPM	s062509	1.0	AP12CVS	DUSE
s5f2507.d	WBN090617-02.4	RMB	25-JUN-2009 10:36	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - clean IP
s5f2508.d	WBN090624-01	rmb	25-JUN-2009 12:55	50PPM	s062509	1.0	DFTPP	DUSE
s5f2509.d	WBN090617-02.4	RMB	25-JUN-2009 13:09	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - run ICAL
s5f2510-D.d	WBN090624-01	rmb	25-JUN-2009 14:07	50PPM	s062509	1.0	DFTPP	
s5f2510.d	WBN090624-01	rmb	25-JUN-2009 14:07	50PPM	s062509	1.0	DFTPP	
s5f2511.d	instrument blank	RMB	25-JUN-2009 14:20		s062509	1.0		
s5f2512.d	WBN090602-08	RMB	25-JUN-2009 14:42	1 PPM	s062509	1.0	MEGAICAL001	
s5f2513.d	WBN090602-07	RMB	25-JUN-2009 15:10	10 PPM	s062509	1.0	MEGAICAL010	
s5f2514.d	WBN090602-06	RMB	25-JUN-2009 15:38	20 PPM	s062509	1.0	MEGAICAL020	
s5f2515.d	WBN090602-05.1	RMB	25-JUN-2009 16:05	40 PPM	s062509	1.0	MEGAICAL040	
s5f2516.d	WBN090602-04	RMB	25-JUN-2009 16:33	50 PPM	s062509	1.0	MEGAICAL050	
s5f2517.d	WBN090602-03	RMB	25-JUN-2009 17:02	80 PPM	s062509	1.0	MEGAICAL080	
s5f2518.d	WBN090602-02	RMB	25-JUN-2009 17:29	100 PPM	s062509	1.0	MEGAICAL100	

s5f2519.d	WBN090602-01	RMB	25-JUN-2009 17:57	120 PPM	s062509	1.0	MEGAICAL120	
s5f2520.d	instrument blank	RMB	25-JUN-2009 18:25		s062509	1.0		
s5f2521.d	WBN090602-09.1	RMB	25-JUN-2009 18:48	40 PPM	s062509	1.0	MEGAICV	DUSE - fail
s5f2522.d	WBN090528-07	RMB	25-JUN-2009 19:10	10 PPM	s062509	1.0	AP12ICAL010	
s5f2523.d	WBN090528-06	RMB	25-JUN-2009 19:32	20 PPM	s062509	1.0	AP12ICAL020	
s5f2524.d	WBN090528-05.1	RMB	25-JUN-2009 19:55	40 PPM	s062509	1.0	AP12ICAL040	
s5f2525.d	WBN090528-04	RMB	25-JUN-2009 20:18	50 PPM	s062509	1.0	AP12ICAL050	
s5f2526.d	WBN090528-03	RMB	25-JUN-2009 20:41	80 PPM	s062509	1.0	AP12ICAL080	
s5f2527.d	WBN090528-02	RMB	25-JUN-2009 21:03	100 PPM	s062509	1.0	AP12ICAL100	
s5f2528.d	WBN090528-01	RMB	25-JUN-2009 21:25	120 PPM	s062509	1.0	AP12ICAL120	
s5f2529.d	instrument blank	RMB	25-JUN-2009 21:48		s062509	1.0		
s5f2530-625.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 625 - 062509
s5f2530-D.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 8270D - 062509
s5f2530.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 8270C - 062509
s5f2531-D.d	WBN090624-01	rmb	26-JUN-2009 08:28	50PPM	s062509	1.0	DFTPP	
s5f2531.d	WBN090624-01	rmb	26-JUN-2009 08:28	50PPM	s062509	1.0	DFTPP	
s5f2532.d	instrument blank	RMB	26-JUN-2009 08:41		s062509	1.0		
s5f2533-625.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 625 - 062509
s5f2533-BOE.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - BOE - 062509
s5f2533-D.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 8270D - 062509
s5f2533.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 8270C - 062509
s5f2534.d	WBN090609-24	RMB	26-JUN-2009 09:31	10 PPM	s062509	1.0	PESTICAL010	
s5f2535.d	WBN090609-23	RMB	26-JUN-2009 09:53	20 PPM	s062509	1.0	PESTICAL020	
s5f2536.d	WBN090609-22.1	RMB	26-JUN-2009 10:16	40 PPM	s062509	1.0	PESTICAL040	
s5f2537.d	WBN090609-21	RMB	26-JUN-2009 10:39	50 PPM	s062509	1.0	PESTICAL050	
s5f2538.d	WBN090609-20	RMB	26-JUN-2009 11:02	80 PPM	s062509	1.0	PESTICAL080	
s5f2539.d	WBN090609-19	RMB	26-JUN-2009 11:25	100 PPM	s062509	1.0	PESTICAL100	

s5f2540.d	WBN090609-18	RMB	26-JUN-2009 11:47	120 PPM	s062509		1.0	PESTICAL120
s5f2541.d	instrument blank	RMB	26-JUN-2009 12:10		s062509		1.0	
s5f2542.d	WBN090624-16	RMB	26-JUN-2009 12:32	500 PPM	s062509		1.0	HEXICAL500
s5f2543.d	WBN090624-15	RMB	26-JUN-2009 12:55	1000 PPM	s062509		1.0	HEXICAL1000
s5f2544.d	WBN090624-14	RMB	26-JUN-2009 13:17	1250 PPM	s062509		1.0	HEXICAL1250
s5f2545.d	WBN090624-13	RMB	26-JUN-2009 13:40	1500 PPM	s062509		1.0	HEXICAL1500
s5f2546.d	WBN090624-12	RMB	26-JUN-2009 14:02	1750 PPM	s062509		1.0	HEXICAL1750
s5f2547.d	UBN090317-02.6	RMB	26-JUN-2009 14:25	2000 PPM	s062509		1.0	HEXICAL2000
s5f2548.d	instrument blank	RMB	26-JUN-2009 14:47		s062509		1.0	
s5f2549-D.d	WBN090609-25.1	RMB	26-JUN-2009 15:10	40 PPM	s062509		1.0	PESTICV	PESTICV - 8270D - 062509
s5f2549.d	WBN090609-25.1	RMB	26-JUN-2009 15:10	40 PPM	s062509		1.0	PESTICV	PESTICV - 8270C - 062509
s5f2550-D.d	WBN090624-10.1	RMB	26-JUN-2009 15:32	1250 PPM	s062509		1.0	HEXICV	HEXICV - 8270D - 062509
s5f2550.d	WBN090624-10.1	RMB	26-JUN-2009 15:32	1250 PPM	s062509		1.0	HEXICV	HEXICV - 8270C - 062509
s5f2551.d	UBN090428-01	RMB	26-JUN-2009 15:54	10 PPM	s062509		1.0	NEVADAICAL010
s5f2552.d	UBN090428-02	RMB	26-JUN-2009 16:17	20 PPM	s062509		1.0	NEVADAICAL020
s5f2553.d	UBN090428-03	RMB	26-JUN-2009 16:39	40 PPM	s062509		1.0	NEVADAICAL040
s5f2554.d	UBN090428-04	RMB	26-JUN-2009 17:01	50 PPM	s062509		1.0	NEVADAICAL050
s5f2555.d	UBN090428-05	RMB	26-JUN-2009 17:24	80 PPM	s062509		1.0	NEVADAICAL080
s5f2556.d	UBN090428-06	RMB	26-JUN-2009 17:47	100 PPM	s062509		1.0	NEVADAICAL100
s5f2557.d	UBN090428-07	RMB	26-JUN-2009 18:09	120 PPM	s062509		1.0	NEVADAICAL120

GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2524

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3550B
Analytical Batch Number:	882941
Prep Batch Number:	882924

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
232741008	CAMO-09-10031
232741009	CAMO-09-9990
1201875340	Method Blank (MB)
1201875343	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 13.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The

adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria for the Aroclors.

Surrogate recovery did not meet the acceptance criteria in the standard bracketing the samples in this SDG; however this had no adverse effects on the data as the samples in this SDG met surrogate recovery acceptance criteria well.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
The MS and MSD analysis was performed on the sample in another SDG for this batch; however the data were for the MS/MSD and the parent sample were not reported in this batch.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina. Additionally, copper was added to all sample extracts to remove sulfur.

Sample Dilutions
Sample 232741008 (CAMO-09-10031) was diluted at 1:5 prior to analysis due to the oily matrix of the extract.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
Nonconformance report (NCR) is for documentation of any procedural anomalies that may deviate from referenced SOP or contractual document. A NCR was not required for this SDG.

Manual Integration
Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS. The data reported for the MS and MSD are from the same analytical column as the parent sample.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD2A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide)
ECD2A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticide II)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Jimi Cao Date: 7/20/09

Roadmap for LANL 09-2524 PCB

This roadmap was analyzed by yip00818 on 07-09-2009, 14:46.
This roadmap was reviewed by jcb on 07-10-2009, 08:36.
This roadmap was packaged by sha01289 on 07-17-2009, 16:24.
This roadmap was validated by jim01140 on 07-20-2009, 09:19.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd2a.i/070809.b/040i4001.d	232741008	sample	08-JUL-2009	15:53	09-2524.sub	CAMO-09-10031	5.00000	882941	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd2a.i/070809.b/041i4101.d	232741009	sample	08-JUL-2009	16:04	09-2524.sub	CAMO-09-9990	1.00000	882941	UPLOAD BOTH COLUMNS, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd2a.i/070809.b/040b4001.d	232741008	sample	08-JUL-2009	15:53	09-2524.sub	CAMO-09-10031	5.00000	882941	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd2a.i/070809.b/041b4101.d	232741009	sample	08 JUL-2009	16:04	09-2524.sub	CAMO-09-9990	1.00000	882941	UPLOAD BOTH COLUMNS, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd2a.i/070809.b/038f3801.d	1201875340	mb	08-JUL-2009	15:30	09-2524.sub	PBLK01	1.00000	882941	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd2a.i/070809.b/039f3901.d	1201875343	lcs	08-JUL-2009	15:41	09-2524.sub	PBLK01LCS	1.00000	882941	UPLOAD BOTH COLUMNS, USE HIGHER

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd2a.i/070809.b/038b3801.d	1201875340	mb	08-JUL-2009	15:30	09-2524.sub	PBLK01	1.00000	882941	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd2a.i/070809.b/039b3901.d	1201875343	lcs	08-JUL-2009	15:41	09-2524.sub	PBLK01LCS	1.00000	882941	UPLOAD BOTH COLUMNS, USE HIGHER

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	882941	**Inst:**	ECD2A.I	**Dilution:**	5
Run Date:	07/08/2009 15:53	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/07/2009 23:44	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	040f4001.d	**Column:**	1 CLP1	**Level:**	LOW
	040b4001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	18.8	ug/kg	6.26	18.8	1
11104-28-2	Aroclor-1221	U	18.8	ug/kg	6.26	18.8	1
11141-16-5	Aroclor-1232	U	18.8	ug/kg	6.26	18.8	1
53469-21-9	Aroclor-1242	U	18.8	ug/kg	6.26	18.8	1
12672-29-6	Aroclor-1248	U	18.8	ug/kg	6.26	18.8	1
11097-69-1	Aroclor-1254	U	18.8	ug/kg	6.26	18.8	1
11096-82-5	Aroclor-1260		34.2	ug/kg	6.26	18.8	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741009	**Date Received:**	07/02/2009 08:40	**%Moisture:**	19.6
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9990	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	882941	**Inst:**	ECD2A.I	**Dilution:**	1
Run Date:	07/08/2009 16:04	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/07/2009 23:44	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	041f4101.d	**Column:**	1 CLP1	**Level:**	LOW
	041b4101.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.14	ug/kg	1.38	4.14	1
11104-28-2	Aroclor-1221	U	4.14	ug/kg	1.38	4.14	1
11141-16-5	Aroclor-1232	U	4.14	ug/kg	1.38	4.14	1
53469-21-9	Aroclor-1242	U	4.14	ug/kg	1.38	4.14	1
12672-29-6	Aroclor-1248	U	4.14	ug/kg	1.38	4.14	1
11097-69-1	Aroclor-1254	U	4.14	ug/kg	1.38	4.14	1
11096-82-5	Aroclor-1260		5.80	ug/kg	1.38	4.14	1

QUALITY CONTROL SUMMARY

Surrogate Recovery Report

SDG Number: 09–2524

Matrix Type: SOLID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1201875340	MB for batch 882924	61	67	78	80
1201875343	LCS for batch 882924	72	79	81	82
232741008	CAMO–09–10031	54 D	57 D	54 D	54 D
232741009	CAMO–09–9990	47	51	49	48

Surrogate	Acceptance Limits
4CMX = 4cmx	(34%–105%)
DCB = Decachlorobiphenyl	(33%–115%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2524
Client ID: LCS for batch 882924
Lab Sample ID: 1201875343
Instrument: ECD2A.I
Analyst: YS1
Inj. Vol: 1 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/08/2009 15:41
Dilution: 1
Prep Batch ID: 882924
Batch ID: 882941

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	LCS	Aroclor-1016	33.3	0.0	28.9	87	41-110
11096-82-5	LCS	Aroclor-1260	33.3	0.0	32.2	97	48-110

Method Blank Summary

SDG Number:	09-2524	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882924	Instrument ID:	ECD2A.I_2 ECD2A.I_1	Data File:	038b3801.d 038f3801.d
Lab Sample ID:	1201875340				
Column:	CLP2 CLP1	Prep Date:	07/07/2009 23:44	Analyzed:	07/08/09 15:30
		Level:	LOW		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 882924	1201875343	039f3901.d 039b3901.d	07/08/09	1541
02	CAMO-09-10031	232741008	040f4001.d 040b4001.d	07/08/09	1553
03	CAMO-09-9990	232741009	041f4101.d 041b4101.d	07/08/09	1604

SAMPLE DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2524	**Date Collected:**	06/29/2009 12:00	**Matrix:**	R
Lab Sample ID:	232741008	**Date Received:**	07/02/2009 08:40	**%Moisture:**	11.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10031	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	882941	**Inst:**	ECD2A.I	**Dilution:**	5
Run Date:	07/08/2009 15:53	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/07/2009 23:44	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	040f4001.d	**Column:**	1 CLP1	**Level:**	LOW
	040b4001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	18.8	ug/kg	6.26	18.8	1
11104-28-2	Aroclor-1221	U	18.8	ug/kg	6.26	18.8	1
11141-16-5	Aroclor-1232	U	18.8	ug/kg	6.26	18.8	1
53469-21-9	Aroclor-1242	U	18.8	ug/kg	6.26	18.8	1
12672-29-6	Aroclor-1248	U	18.8	ug/kg	6.26	18.8	1
11097-69-1	Aroclor-1254	U	18.8	ug/kg	6.26	18.8	1
11096-82-5	Aroclor-1260		34.2	ug/kg	6.26	18.8	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/040f4001.d
Lab Smp Id: 232741008 Client Smp ID: CAMO-09-10031
Inj Date : 08-JUL-2009 15:53
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |232741008|5|
Misc Info : |ECD82P_1SF|882941|SVAF|LANL|SOIL|CAMO-09-10031|||
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 09-Jul-2009 11:41 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 40
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2524.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	11.29610	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.796	1.796	0.000	1243755	21.5195	4.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.628	5.628	0.000	1191733	21.7392	4.1	80.00- 120.00	100.00
7 Aroclor-1260					CAS #: 11096-82-5		
4.038	4.037	0.001	562401	136.675	25.7	80.00- 120.00	100.00
4.309	4.309	0.000	422300	196.306	36.9	30.40- 70.40	75.09
4.476	4.474	0.002	499693	224.043	42.1	32.95- 72.95	88.85
4.687	4.686	0.001	808629	148.931	28.0	111.13- 151.13	143.78

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260 (continued)							
4.875	4.875	0.000	574711	202.655	38.1	47.93- 87.93	102.19
Average of Peak Concentrations =					34.1		

Data File: /chem/ecd2a.i/070809.b/040f4001.d
Date : 08-JUL-2009 15:53
Client ID: CAMO-09-10031
Sample Info: |23274100815|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

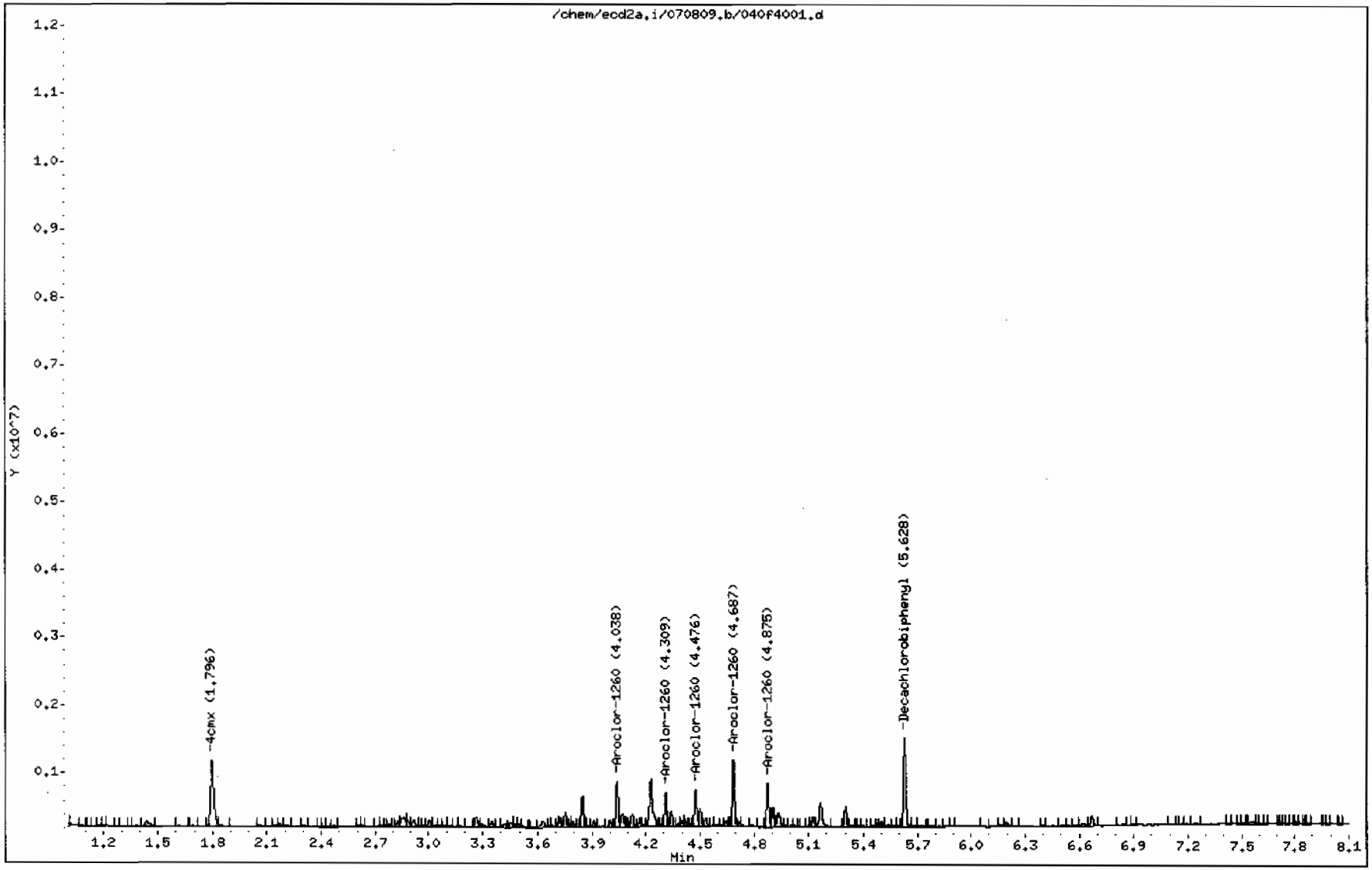

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/040b4001.d
Lab Smp Id: 232741008 Client Smp ID: CAMO-09-10031
Inj Date : 08-JUL-2009 15:53
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |232741008|5|
Misc Info : |ECD82P_1SF|882941|SVAF|LANL|SOIL|CAMO-09-10031|||
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 09-Jul-2009 11:41 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 40
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2524.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	11.29610	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.127	2.126	0.001	3767511	22.6103	4.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.361	6.359	0.002	3342665	21.4100	4.0	80.00- 120.00	100.00
7 Aroclor-1260					CAS #: 11096-82-5		
4.474	4.473	0.001	1042447	141.020	26.5	80.00- 120.00	100.00
4.934	4.934	0.000	1206547	198.595	37.3	57.40- 97.40	115.74
5.134	5.134	0.000	957848	146.526	27.5	61.25- 101.25	91.88
5.311	5.311	0.000	2332182	146.457	27.5	175.45- 215.45	223.72

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260 (continued)							
5.560	5.559	0.001	1890572	169.409	31.8	113.15- 153.15	181.36
Average of Peak Concentrations =					30.1		

Data File: /chem/ecd2a.i/070809.b/040b4001.d
Date : 08-JUL-2009 15:53
Client ID: CAMO-09-10031
Sample Info: |23274100815|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd2a.i
Operator: YS1
Column diameter: 0.25

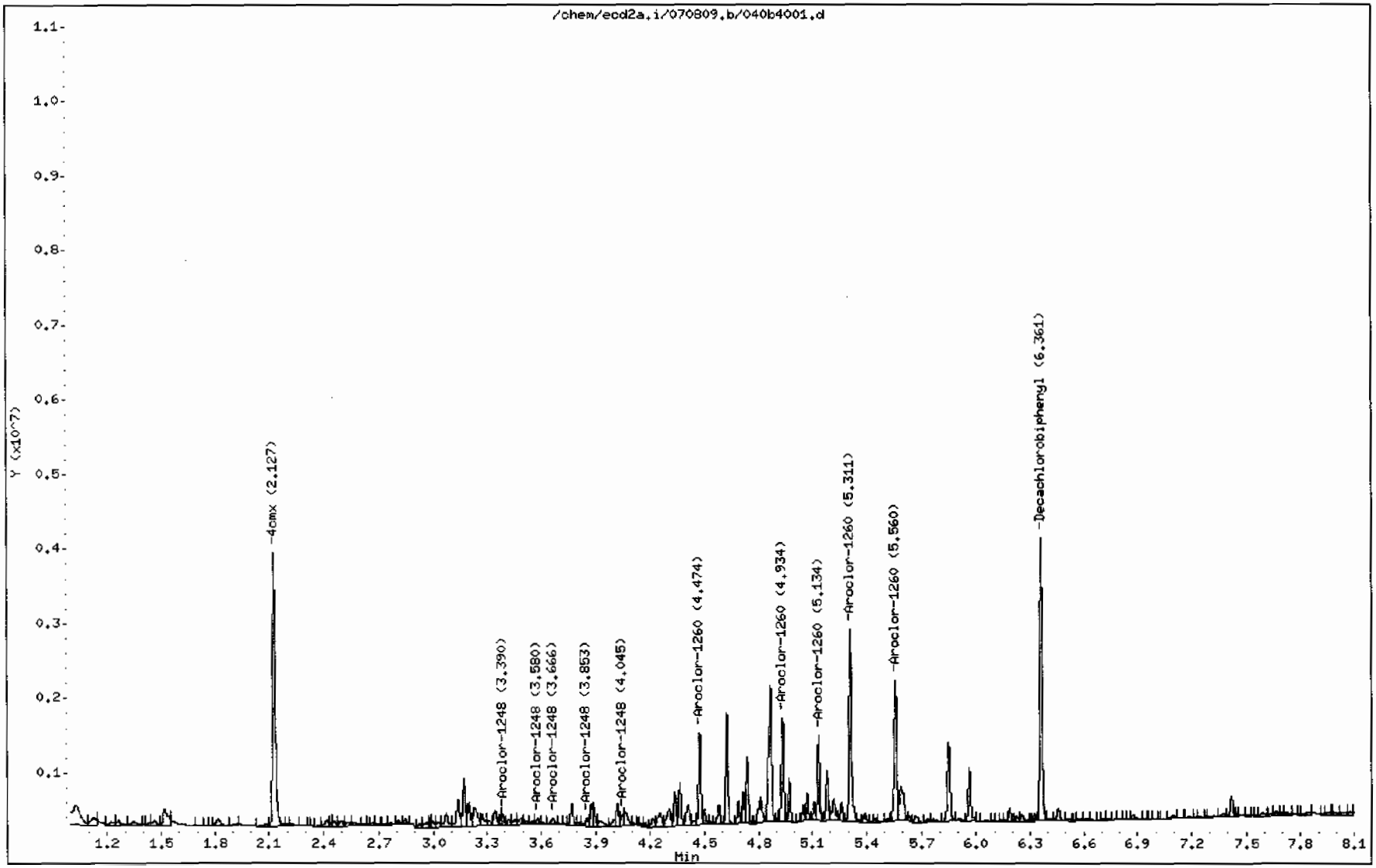

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2524**	**Date Collected:**	**06/29/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232741009**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**19.6**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9990**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**882941**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**07/08/2009 16:04**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/07/2009 23:44**	**Aliquot:**	**30.02 g**	**Final Volume:**	**1 mL**
Data File:	**041f4101.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	041b4101.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	4.14	ug/kg	1.38	4.14	1
11104-28-2	Aroclor-1221	U	4.14	ug/kg	1.38	4.14	1
11141-16-5	Aroclor-1232	U	4.14	ug/kg	1.38	4.14	1
53469-21-9	Aroclor-1242	U	4.14	ug/kg	1.38	4.14	1
12672-29-6	Aroclor-1248	U	4.14	ug/kg	1.38	4.14	1
11097-69-1	Aroclor-1254	U	4.14	ug/kg	1.38	4.14	1
11096-82-5	Aroclor-1260		5.80	ug/kg	1.38	4.14	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/041f4101.d
Lab Smp Id: 232741009 Client Smp ID: CAMO-09-9990
Inj Date : 08-JUL-2009 16:04
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |232741009|1|
Misc Info : |ECD82P_1SF|882941|SVAF|LANL|SOIL|CAMO-09-9990|||
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 09-Jul-2009 11:41 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 41
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2524.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	19.63320	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.795	1.796	-0.001	5403519	93.4917	3.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.629	5.628	0.001	5341136	97.4314	4.0	80.00- 120.00	100.00
7 Aroclor-1260					CAS #: 11096-82-5		
4.039	4.037	0.002	476139	115.712	4.8	80.00- 120.00	100.00
4.309	4.309	0.000	327777	152.367	6.3	30.40- 70.40	68.84
4.475	4.474	0.001	403155	180.759	7.5	32.95- 72.95	84.67
4.687	4.686	0.001	676629	124.620	5.2	111.13- 151.13	142.11

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260 (continued)							
4.876	4.875	0.001	370119	130.512	5.4	47.93- 87.93	77.73
Average of Peak Concentrations =					5.8		

Data File: /chem/ecd2a.i/070809.b/041f4101.d
Date : 08-JUL-2009 16:04
Client ID: CAMO-09-9990
Sample Info: 1232741009|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

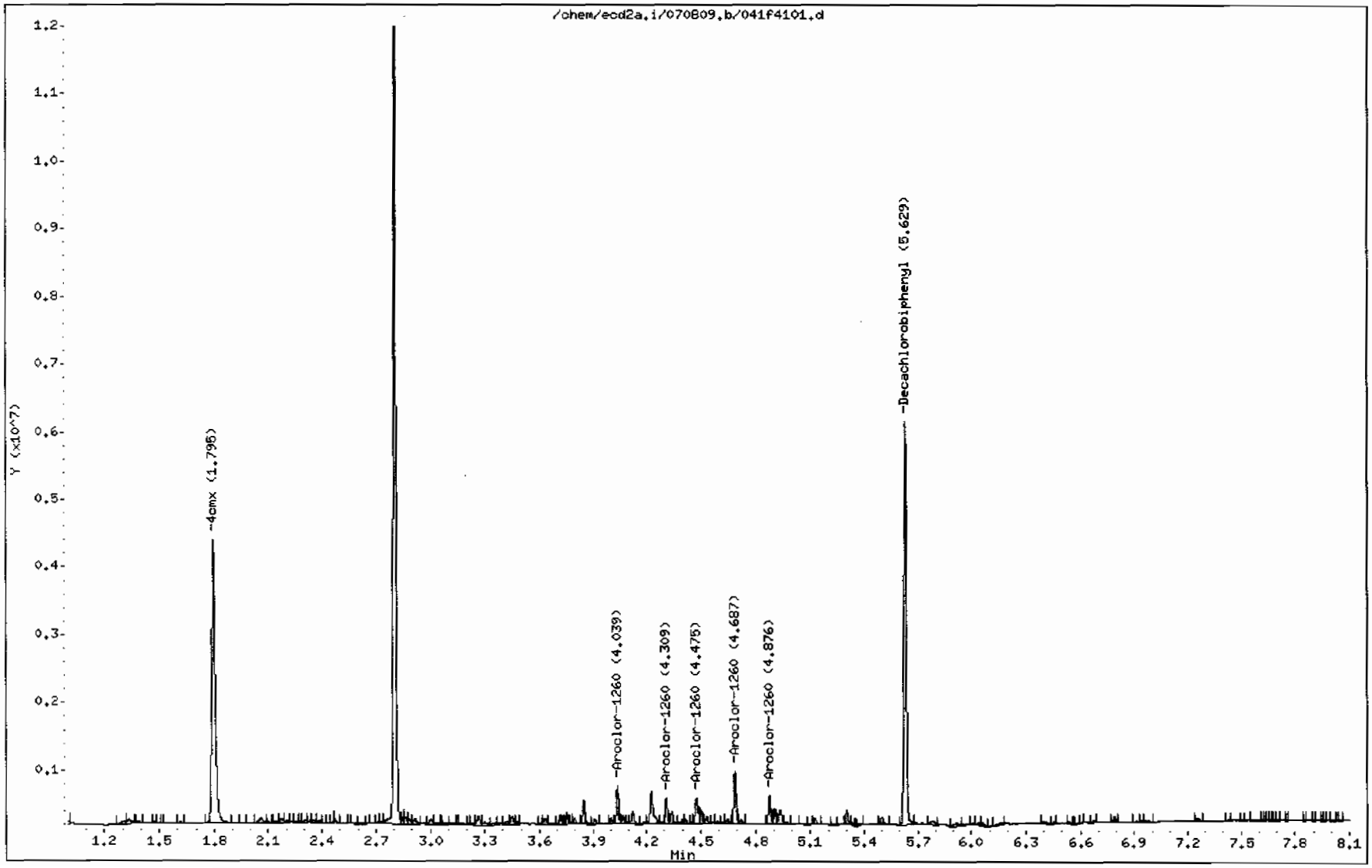

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/041b4101.d
Lab Smp Id: 232741009 Client Smp ID: CAMO-09-9990
Inj Date : 08-JUL-2009 16:04
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |232741009|1|
Misc Info : |ECD82P_1SF|882941|SVAF|LANL|SOIL|CAMO-09-9990|||
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 09-Jul-2009 11:41 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 41
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2524.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.02000	Weight of sample extracted (g)
M	19.63320	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.126	2.126	0.000	16907826	101.470	4.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.362	6.359	0.003	14834057	95.0131	3.9	80.00- 120.00	100.00
7 Aroclor-1260					CAS #: 11096-82-5		
4.474	4.473	0.001	819285	110.831	4.6	80.00- 120.00	100.00
4.934	4.934	0.000	892042	146.828	6.1	57.40- 97.40	108.88
5.134	5.134	0.000	842586	128.894	5.3	61.25- 101.25	102.84
5.312	5.311	0.001	1985409	124.680	5.2	175.45- 215.45	242.33

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260 (continued)							
5.560	5.559	0.001	1293282	115.887	4.8	113.15- 153.15	157.85
Average of Peak Concentrations =					5.2		

Data File: /chem/ecd2a.i/070809.b/041b4101.d

Date : 08-JUL-2009 16:04

Client ID: CAMO-09-9990

Sample Info: |2327410091|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd2a.i

Operator: YS1

Column diameter: 0.25

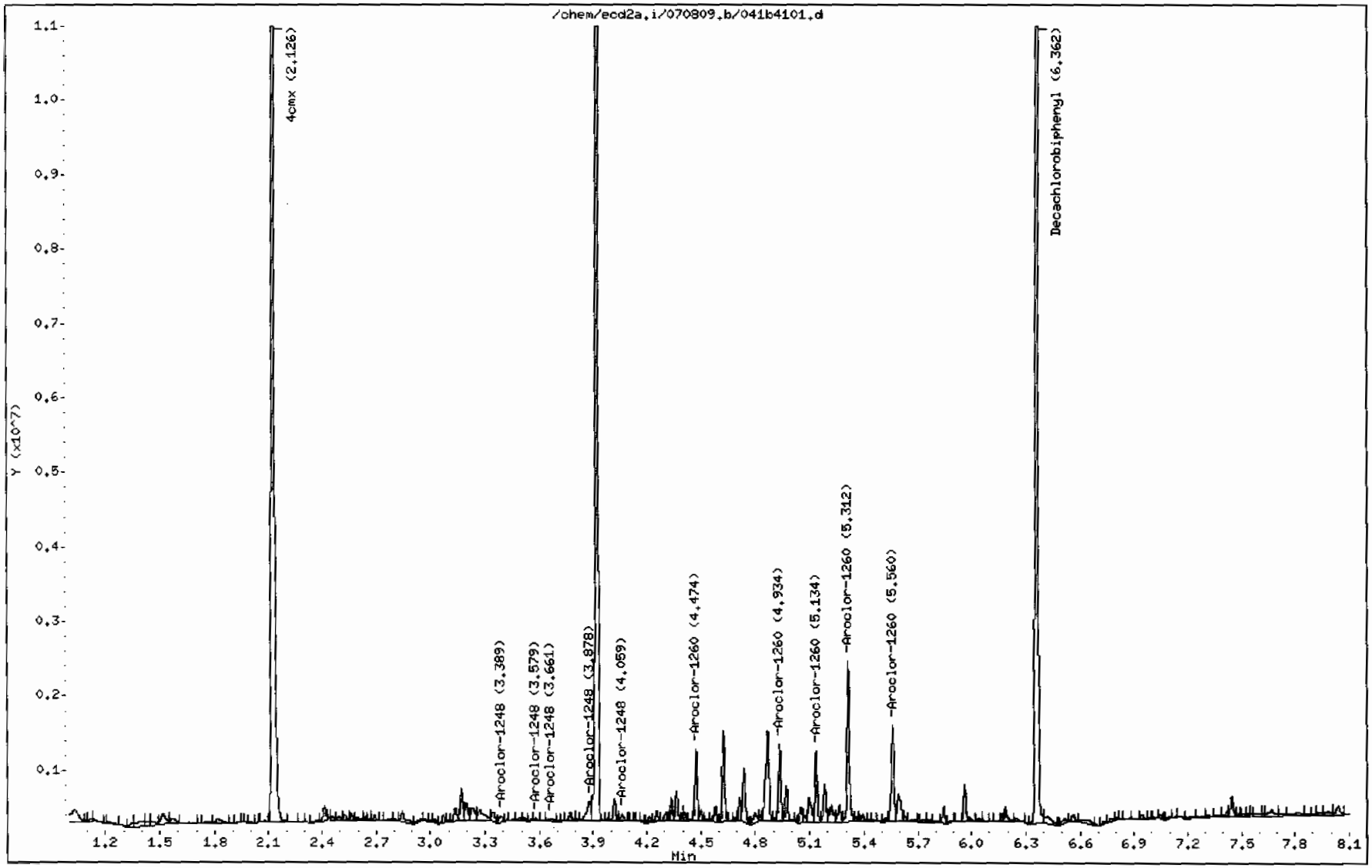

STANDARDS DATA

Report Date: 09-Jul-2009 12:06

Calibration History

Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Start Cal Date: 03-JUN-2009 09:41
End Cal Date : 06-JUL-2009 12:57

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
06-JUL-2009 12:13	AR1221	/chem/ecd2a.i/070609.b/007f0701.d
03-JUN-2009 13:12	AR1248	/chem/ecd2a.i/060309.b/022f2201.d
03-JUN-2009 12:06	AR1242	/chem/ecd2a.i/060309.b/016f1601.d
20-JUN-2009 10:14	AR1660	/chem/ecd2a.i/062009.b/006f0601.d
03-JUN-2009 10:37	AR1254	/chem/ecd2a.i/060309.b/008f0801.d
Cal Level: 2 , Cal Amount: 250.00000		
06-JUL-2009 12:24	AR1221	/chem/ecd2a.i/070609.b/008f0801.d
03-JUN-2009 13:23	AR1248	/chem/ecd2a.i/060309.b/023f2301.d
03-JUN-2009 12:17	AR1242	/chem/ecd2a.i/060309.b/017f1701.d
03-JUN-2009 10:48	AR1254	/chem/ecd2a.i/060309.b/009f0901.d
20-JUN-2009 10:26	AR1660	/chem/ecd2a.i/062009.b/007f0701.d
Cal Level: 3 , Cal Amount: 500.00000		
06-JUL-2009 12:35	AR1221	/chem/ecd2a.i/070609.b/009f0901.d
03-JUN-2009 13:34	AR1248	/chem/ecd2a.i/060309.b/024f2401.d
03-JUN-2009 12:28	AR1242	/chem/ecd2a.i/060309.b/018f1801.d
03-JUN-2009 10:59	AR1254	/chem/ecd2a.i/060309.b/010f1001.d
20-JUN-2009 10:37	AR1660	/chem/ecd2a.i/062009.b/008f0801.d
Cal Level: 4 , Cal Amount: 1000.00000		
03-JUN-2009 15:03	DDTANALOGSTD	/chem/ecd2a.i/060309.b/032f3201.d
03-JUN-2009 14:52	AR1268	/chem/ecd2a.i/060309.b/031f3101.d
03-JUN-2009 14:41	AR1262	/chem/ecd2a.i/060309.b/030f3001.d
06-JUL-2009 12:46	AR1221	/chem/ecd2a.i/070609.b/010f1001.d
03-JUN-2009 14:19	AR1232	/chem/ecd2a.i/060309.b/028f2801.d
03-JUN-2009 13:45	AR1248	/chem/ecd2a.i/060309.b/025f2501.d
03-JUN-2009 12:39	AR1242	/chem/ecd2a.i/060309.b/019f1901.d
03-JUN-2009 11:10	AR1254	/chem/ecd2a.i/060309.b/011f1101.d
20-JUN-2009 10:48	AR1660	/chem/ecd2a.i/062009.b/009f0901.d
Cal Level: 5 , Cal Amount: 4000.00000		
06-JUL-2009 12:57	AR1221	/chem/ecd2a.i/070609.b/011f1101.d
03-JUN-2009 13:56	AR1248	/chem/ecd2a.i/060309.b/026f2601.d
03-JUN-2009 12:50	AR1242	/chem/ecd2a.i/060309.b/020f2001.d
03-JUN-2009 11:21	AR1254	/chem/ecd2a.i/060309.b/012f1201.d
20-JUN-2009 10:59	AR1660	/chem/ecd2a.i/062009.b/010f1001.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 16:59	AR1660	/chem/ecd2a.i/070809.b/046f4601.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 22:56	AR1660	/chem/ecd2a.i/070809.b/074f7401.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 19:56	AR1660	/chem/ecd2a.i/070809.b/062f6201.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 19:23	AR1660	/chem/ecd2a.i/070809.b/059f5901.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 19:12	AR1660	/chem/ecd2a.i/070809.b/058f5801.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 15:08	AR1660	/chem/ecd2a.i/070809.b/036f3601.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 11:41	AR1660	/chem/ecd2a.i/070809.b/019f1901.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 13:08	AR1660	/chem/ecd2a.i/070809.b/026f2601.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 08:23	AR1660	/chem/ecd2a.i/070809.b/002f0201.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 09:52	AR1268	/chem/ecd2a.i/070809.b/010f1001.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 09:41	AR1242	/chem/ecd2a.i/070809.b/009f0901.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 09:29	AR1262	/chem/ecd2a.i/070809.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 09:18	AR1221	/chem/ecd2a.i/070809.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 09:07	AR1232	/chem/ecd2a.i/070809.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 08:56	AR1248	/chem/ecd2a.i/070809.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 08:34	AR1254	/chem/ecd2a.i/070809.b/003f0301.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 08:45	AR1242	/chem/ecd2a.i/070809.b/004f0401.d

Report Date: 09-Jul-2009 12:06

Calibration History

Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Start Cal Date: 03-JUN-2009 09:41
End Cal Date : 06-JUL-2009 12:57

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
06-JUL-2009 12:13	AR1221	/chem/ecd2a.i/070609.b/007b0701.d
03-JUN-2009 13:12	AR1248	/chem/ecd2a.i/060309.b/022b2201.d
03-JUN-2009 13:12	PCB	/chem/ecd2a.i/060309.b/022b2201.d
03-JUN-2009 12:06	AR1242	/chem/ecd2a.i/060309.b/016b1601.d
20-JUN-2009 10:14	AR1660	/chem/ecd2a.i/062009.b/006b0601.d
03-JUN-2009 10:37	AR1254	/chem/ecd2a.i/060309.b/008b0801.d
Cal Level: 2 , Cal Amount: 250.00000		
06-JUL-2009 12:24	AR1221	/chem/ecd2a.i/070609.b/008b0801.d
03-JUN-2009 13:23	AR1248	/chem/ecd2a.i/060309.b/023b2301.d
03-JUN-2009 12:17	AR1242	/chem/ecd2a.i/060309.b/017b1701.d
03-JUN-2009 10:48	AR1254	/chem/ecd2a.i/060309.b/009b0901.d
20-JUN-2009 10:26	AR1660	/chem/ecd2a.i/062009.b/007b0701.d
Cal Level: 3 , Cal Amount: 500.00000		
06-JUL-2009 12:35	AR1221	/chem/ecd2a.i/070609.b/009b0901.d
03-JUN-2009 13:34	AR1248	/chem/ecd2a.i/060309.b/024b2401.d
03-JUN-2009 12:28	AR1242	/chem/ecd2a.i/060309.b/018b1801.d
03-JUN-2009 10:59	AR1254	/chem/ecd2a.i/060309.b/010b1001.d
20-JUN-2009 10:37	AR1660	/chem/ecd2a.i/062009.b/008b0801.d
Cal Level: 4 , Cal Amount: 1000.00000		
03-JUN-2009 15:03	DDTANALOGSTD	/chem/ecd2a.i/060309.b/032b3201.d
03-JUN-2009 14:52	AR1268	/chem/ecd2a.i/060309.b/031b3101.d
03-JUN-2009 14:41	AR1262	/chem/ecd2a.i/060309.b/030b3001.d
06-JUL-2009 12:46	AR1221	/chem/ecd2a.i/070609.b/010b1001.d
03-JUN-2009 14:19	AR1232	/chem/ecd2a.i/060309.b/028b2801.d
03-JUN-2009 13:45	AR1248	/chem/ecd2a.i/060309.b/025b2501.d
03-JUN-2009 12:39	AR1242	/chem/ecd2a.i/060309.b/019b1901.d
03-JUN-2009 11:10	AR1254	/chem/ecd2a.i/060309.b/011b1101.d
20-JUN-2009 10:48	AR1660	/chem/ecd2a.i/062009.b/009b0901.d
Cal Level: 5 , Cal Amount: 4000.00000		
06-JUL-2009 12:57	AR1221	/chem/ecd2a.i/070609.b/011b1101.d
03-JUN-2009 13:56	AR1248	/chem/ecd2a.i/060309.b/026b2601.d
03-JUN-2009 12:50	AR1242	/chem/ecd2a.i/060309.b/020b2001.d
03-JUN-2009 11:21	AR1254	/chem/ecd2a.i/060309.b/012b1201.d
20-JUN-2009 10:59	AR1660	/chem/ecd2a.i/062009.b/010b1001.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 16:59	AR1660	/chem/ecd2a.i/070809.b/046b4601.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 22:56	AR1660	/chem/ecd2a.i/070809.b/074b7401.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 19:56	AR1660	/chem/ecd2a.i/070809.b/062b6201.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 19:23	AR1660	/chem/ecd2a.i/070809.b/059b5901.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 19:12	AR1660	/chem/ecd2a.i/070809.b/058b5801.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 15:08	AR1660	/chem/ecd2a.i/070809.b/036b3601.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 11:41	AR1660	/chem/ecd2a.i/070809.b/019b1901.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 13:08	AR1660	/chem/ecd2a.i/070809.b/026b2601.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 09:52	AR1268	/chem/ecd2a.i/070809.b/010b1001.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 09:41	AR1242	/chem/ecd2a.i/070809.b/009b0901.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 09:29	AR1262	/chem/ecd2a.i/070809.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 09:18	AR1221	/chem/ecd2a.i/070809.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 09:07	AR1232	/chem/ecd2a.i/070809.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 08:56	AR1248	/chem/ecd2a.i/070809.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 08:45	AR1242	/chem/ecd2a.i/070809.b/004b0401.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 08:34	AR1254	/chem/ecd2a.i/070809.b/003b0301.d
Ccal Level: 4 , Ccal Amount: 1000		
08-JUL-2009 08:23	AR1660	/chem/ecd2a.i/070809.b/002b0201.d

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Quant Method : ESTD Target Version : 3.50
Last Update : 08-Jul-2009 17:01 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	500.000000
Initial:End Threshold	250.000000
Initial:Area Threshold	10000.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	1.100000
8.500:Bunch Factor	2.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.300	2.270-2.330	2.054e+03
	2.624	2.594-2.654	2.874e+03
	2.714	2.684-2.744	1.786e+03
	2.849	2.819-2.879	9.361e+02
	3.000	2.970-3.030	1.348e+03
2 Aroclor-1221	1.922	1.892-1.952	5.860e+02
	2.022	1.992-2.052	3.167e+02
	2.050	2.020-2.080	1.425e+03
3 Aroclor-1232	2.053	2.023-2.083	1.244e+03
	2.302	2.272-2.332	9.907e+02
	2.716	2.686-2.746	8.699e+02
	2.758	2.728-2.788	5.457e+02
	3.002	2.972-3.032	6.531e+02
4 Aroclor-1242	2.301	2.271-2.331	1.634e+03
	2.624	2.594-2.654	2.236e+03
	2.715	2.685-2.745	1.391e+03
	2.757	2.727-2.787	8.431e+02
	3.001	2.971-3.031	1.078e+03
5 Aroclor-1248	2.849	2.819-2.879	1.244e+03
	3.001	2.971-3.031	1.690e+03
	3.059	3.029-3.089	1.311e+03
	3.294	3.264-3.324	1.935e+03
	3.446	3.416-3.476	1.587e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	3.266	3.236-3.296	1.614e+03
		3.448	3.418-3.478	2.211e+03
		3.718	3.688-3.748	2.968e+03
		3.910	3.880-3.939	2.327e+03
		4.039	4.009-4.069	2.175e+03
	7 Aroclor-1260	4.037	4.007-4.067	4.115e+03
		4.309	4.279-4.339	2.151e+03
		4.474	4.444-4.504	2.230e+03
		4.686	4.656-4.716	5.430e+03
		4.875	4.845-4.905	2.836e+03
	8 Aroclor-1262	3.847	3.817-3.877	2.459e+03
		4.039	4.009-4.069	3.552e+03
		4.310	4.280-4.340	4.749e+03
		4.475	4.445-4.505	4.081e+03
		4.933	4.903-4.963	3.949e+03
	9 Aroclor-1268	4.905	4.875-4.935	8.805e+03
		4.931	4.901-4.961	8.169e+03
		5.064	5.034-5.094	6.563e+03
		5.303	5.273-5.333	3.148e+03
		5.498	5.468-5.528	2.171e+04
T	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	1.796	1.766-1.826	5.780e+04
$	12 Decachlorobiphenyl	5.628	5.598-5.658	5.482e+04
	13 4,4'-DDT	4.252	4.232-4.272	4.657e+04
	14 4,4'-DDD	4.059	4.039-4.079	4.606e+04
	15 4,4'-DDE	3.653	3.633-3.673	6.623e+04

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Quant Method : ESTD Target Version : 3.50
Last Update : 08-Jul-2009 17:01 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	1000.000000
Initial:End Threshold	500.000000
Initial:Area Threshold	500.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	3.000000
Initial:Negative Peaks	OFF
Initial:Tension	4.000000
4.200:Tension	1.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.805	2.775-2.835	5.770e+03
	3.240	3.210-3.270	4.681e+03
	3.313	3.283-3.343	2.896e+03
	3.390	3.360-3.420	2.754e+03
	3.578	3.548-3.608	3.794e+03
2 Aroclor-1221	2.350	2.320-2.380	1.521e+03
	2.456	2.426-2.486	9.356e+02
	2.500	2.470-2.530	3.535e+03
3 Aroclor-1232	2.502	2.472-2.532	3.208e+03
	2.806	2.776-2.836	3.019e+03
	3.242	3.212-3.272	2.383e+03
	3.313	3.283-3.343	1.495e+03
	3.579	3.549-3.609	1.838e+03
4 Aroclor-1242	2.806	2.776-2.836	4.545e+03
	3.240	3.210-3.270	3.635e+03
	3.313	3.283-3.343	2.254e+03
	3.578	3.548-3.608	2.968e+03
	3.665	3.635-3.695	3.366e+03
5 Aroclor-1248	3.391	3.361-3.421	3.707e+03
	3.579	3.549-3.609	4.743e+03
	3.664	3.634-3.694	5.049e+03
	3.853	3.823-3.883	5.617e+03
	4.039	4.009-4.069	4.809e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	3.879	3.849-3.909	5.262e+03
		4.019	3.989-4.049	6.017e+03
		4.336	4.306-4.366	8.579e+03
		4.499	4.469-4.529	6.241e+03
		4.869	4.839-4.899	9.026e+03
	7 Aroclor-1260	4.473	4.443-4.503	7.392e+03
		4.934	4.904-4.964	6.075e+03
		5.134	5.104-5.164	6.537e+03
		5.311	5.281-5.341	1.592e+04
		5.559	5.529-5.589	1.116e+04
	8 Aroclor-1262	4.474	4.444-4.504	7.352e+03
		4.625	4.595-4.655	9.171e+03
		4.934	4.904-4.964	1.329e+04
		5.134	5.104-5.164	1.207e+04
		5.559	5.529-5.589	1.810e+04
	9 Aroclor-1268	5.558	5.528-5.588	2.459e+04
		5.589	5.559-5.619	2.274e+04
		5.762	5.732-5.792	1.828e+04
		5.961	5.931-5.991	8.705e+03
		6.185	6.155-6.215	6.259e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	2.126	2.096-2.156	1.666e+05
$	12 Decachlorobiphenyl	6.359	6.329-6.389	1.561e+05
	13 4,4'-DDT	4.871	4.851-4.891	1.371e+05
	14 4,4'-DDD	4.655	4.635-4.675	1.490e+05
	15 4,4'-DDE	4.251	4.231-4.271	2.015e+05

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUN-2009 09:41
End Cal Date : 06-JUL-2009 12:57
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Cal Date : 08-Jul-2009 17:01 yip00818
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd2a.i/070609.b/007f0701.d
Level 2: /chem/ecd2a.i/070609.b/008f0801.d
Level 3: /chem/ecd2a.i/070609.b/009f0901.d
Level 4: /chem/ecd2a.i/060309.b/032f3201.d
Level 5: /chem/ecd2a.i/070609.b/011f1101.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	2338	2153	2047	1993	1740	2054	10.693
(2)	3053	2949	2807	2910	2653	2874	5.290
(3)	2014	1866	1752	1735	1561	1786	9.392
(4)	1060	1011	927	882	801	936	11.016
(5)	1507	1400	1318	1311	1203	1348	8.427
2 Aroclor-1221(1)	679	621	581	543	506	586	11.506
(2)	375	341	319	292	257	317	14.266
(3)	1643	1494	1408	1329	1250	1425	10.686
3 Aroclor-1232(1)	+++++	+++++	+++++	1244	+++++	1244	0.000
(2)	+++++	+++++	+++++	991	+++++	991	0.000
(3)	+++++	+++++	+++++	870	+++++	870	0.000
(4)	+++++	+++++	+++++	546	+++++	546	0.000
(5)	+++++	+++++	+++++	653	+++++	653	0.000
4 Aroclor-1242(1)	1952	1670	1576	1553	1419	1634	12.167
(2)	2659	2303	2027	2223	1967	2236	12.236
(3)	1629	1423	1336	1323	1242	1391	10.643
(4)	975	865	810	807	759	843	9.800
(5)	1232	1101	1041	1029	988	1078	8.803
5 Aroclor-1248(1)	1423	1282	1211	1177	1128	1244	9.187
(2)	1902	1735	1665	1623	1527	1690	8.293
(3)	1473	1350	1273	1250	1211	1311	7.895
(4)	2108	1924	1929	1907	1806	1935	5.627
(5)	1768	1599	1559	1531	1478	1587	6.958
6 Aroclor-1254(1)	1810	1647	1580	1548	1485	1614	7.701
(2)	2434	2228	2180	2146	2069	2211	6.211
(3)	3140	2955	2935	2954	2855	2968	3.524
(4)	2495	2307	2287	2295	2250	2327	4.137
(5)	2406	2214	2161	2084	2007	2175	6.961

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUN-2009 09:41
End Cal Date : 06-JUL-2009 12:57
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Cal Date : 08-Jul-2009 17:01 yip00818
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
7 Aroclor-1260(1)	4264	4151	4087	4177	3895	4115	3.368
(2)	2307	2181	2117	2140	2012	2151	4.982
(3)	2364	2253	2193	2237	2105	2230	4.220
(4)	5451	5400	5399	5603	5295	5430	2.070
(5)	2910	2806	2794	2892	2777	2836	2.145
8 Aroclor-1262(1)	+++++	+++++	+++++	2459	+++++	2459	0.000
(2)	+++++	+++++	+++++	3552	+++++	3552	0.000
(3)	+++++	+++++	+++++	4749	+++++	4749	0.000
(4)	+++++	+++++	+++++	4081	+++++	4081	0.000
(5)	+++++	+++++	+++++	3949	+++++	3949	0.000
9 Aroclor-1268(1)	+++++	+++++	+++++	8805	+++++	8805	0.000
(2)	+++++	+++++	+++++	8169	+++++	8169	0.000
(3)	+++++	+++++	+++++	6563	+++++	6563	0.000
(4)	+++++	+++++	+++++	3148	+++++	3148	0.000
(5)	+++++	+++++	+++++	21711	+++++	21711	0.000
T 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 4,4'-DDT	+++++	+++++	+++++	46567	+++++	46567	0.000
14 4,4'-DDD	+++++	+++++	+++++	46057	+++++	46057	0.000
15 4,4'-DDE	+++++	+++++	+++++	66230	+++++	66230	0.000
$ 11 4cmx	59790	58509	58087	58566	54032	57797	3.804
$ 12 Decachlorobiphenyl	57536	54035	53948	55776	52802	54819	3.381

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUN-2009 09:41
End Cal Date : 06-JUL-2009 12:57
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Cal Date : 08-Jul-2009 17:01 yip00818
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd2a.i/070609.b/007b0701.d
Level 2: /chem/ecd2a.i/070609.b/008b0801.d
Level 3: /chem/ecd2a.i/070609.b/009b0901.d
Level 4: /chem/ecd2a.i/060309.b/032b3201.d
Level 5: /chem/ecd2a.i/070609.b/011b1101.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	6173	5943	5836	5855	5046	5770	7.393
(2)	4839	4728	4701	4791	4345	4681	4.168
(3)	2957	2884	2879	2961	2798	2896	2.313
(4)	2904	2777	2721	2782	2584	2754	4.211
(5)	3911	3832	3766	3886	3576	3794	3.530
2 Aroclor-1221(1)	1677	1545	1491	1460	1433	1521	6.359
(2)	1056	968	922	887	845	936	8.673
(3)	3838	3601	3531	3480	3228	3535	6.217
3 Aroclor-1232(1)	+++++	+++++	+++++	3208	+++++	3208	0.000
(2)	+++++	+++++	+++++	3019	+++++	3019	0.000
(3)	+++++	+++++	+++++	2383	+++++	2383	0.000
(4)	+++++	+++++	+++++	1495	+++++	1495	0.000
(5)	+++++	+++++	+++++	1838	+++++	1838	0.000
4 Aroclor-1242(1)	5060	4576	4468	4552	4070	4545	7.762
(2)	3949	3582	3553	3659	3434	3635	5.312
(3)	2420	2192	2175	2268	2213	2254	4.413
(4)	3150	2945	2835	3031	2881	2968	4.216
(5)	3624	3285	3208	3426	3284	3366	4.895
5 Aroclor-1248(1)	3938	3724	3728	3702	3441	3707	4.760
(2)	4944	4756	4788	4788	4439	4743	3.903
(3)	5319	5032	5042	5061	4789	5049	3.720
(4)	5704	5570	5673	5719	5418	5617	2.231
(5)	4873	4722	4822	4887	4741	4809	1.561
6 Aroclor-1254(1)	5456	5279	5300	5304	4969	5262	3.385
(2)	6185	5983	6056	6083	5775	6017	2.546
(3)	8508	8570	8743	8803	8271	8579	2.452
(4)	6196	6355	6270	6327	6060	6241	1.893
(5)	9101	8948	9152	9177	8754	9026	1.953

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUN-2009 09:41
End Cal Date : 06-JUL-2009 12:57
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Cal Date : 08-Jul-2009 17:01 yip00818
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
7 Aroclor-1260(1)	7310	7492	7393	7729	7037	7392	3.422
(2)	6099	6096	6013	6334	5836	6075	2.956
(3)	6540	6510	6484	6841	6311	6537	2.933
(4)	15634	15913	16025	16767	15281	15924	3.465
(5)	10891	10952	11181	11747	11028	11160	3.096
8 Aroclor-1262(1)	+++++	+++++	+++++	7352	+++++	7352	0.000
(2)	+++++	+++++	+++++	9171	+++++	9171	0.000
(3)	+++++	+++++	+++++	13290	+++++	13290	0.000
(4)	+++++	+++++	+++++	12074	+++++	12074	0.000
(5)	+++++	+++++	+++++	18104	+++++	18104	0.000
9 Aroclor-1268(1)	+++++	+++++	+++++	24591	+++++	24591	0.000
(2)	+++++	+++++	+++++	22742	+++++	22742	0.000
(3)	+++++	+++++	+++++	18285	+++++	18285	0.000
(4)	+++++	+++++	+++++	8705	+++++	8705	0.000
(5)	+++++	+++++	+++++	62585	+++++	62585	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 4,4'-DDT	+++++	+++++	+++++	137139	+++++	137139	0.000
14 4,4'-DDD	+++++	+++++	+++++	148992	+++++	148992	0.000
15 4,4'-DDE	+++++	+++++	+++++	201546	+++++	201546	0.000
$ 11 4cmx	160163	166894	169740	174710	161635	166628	3.573
$ 12 Decachlorobiphenyl	155809	151675	153462	165035	154651	156126	3.337

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

Instrument ID: ECD2A Calibration Date: 07/08/09 Time: 0823

Lab File ID: 002F0201 Init. Calib. Date(s): 06/20/09 06/20/09

Heated Purge: (Y/N) N Init. Calib. Times: 1014 1059

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2054.287	2046.380	0.01	-0.4	15.0
(2)	2874.444	3058.226	0.01	6.4	15.0
(3)	1785.649	1771.455	0.01	-0.8	15.0
(4)	936.098	919.594	0.01	-1.8	15.0
(5)	1347.765	1334.279	0.01	-1.0	15.0
Aroclor-1260	4114.879	4131.989	0.01	0.4	15.0
(2)	2151.230	2092.393	0.01	-2.7	15.0
(3)	2230.342	2216.448	0.01	-0.6	15.0
(4)	5429.554	5566.726	0.01	2.5	15.0
(5)	2835.910	2868.771	0.01	1.2	15.0
4cmx	57796.749	52237.820	0.01	-9.6	15.0
Decachlorobiphenyl	54819.436	52619.770	0.01	-4.0	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

Instrument ID: ECD2A Calibration Date: 07/08/09 Time: 0823

Lab File ID: 002B0201 Init. Calib. Date(s): 06/20/09 06/20/09

Heated Purge: (Y/N) N Init. Calib. Times: 1014 1059

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5770.349	6203.832	0.01	7.5	15.0
(2)	4680.977	5083.542	0.01	8.6	15.0
(3)	2895.669	3133.840	0.01	8.2	15.0
(4)	2753.708	2943.197	0.01	6.9	15.0
(5)	3794.218	4117.518	0.01	8.5	15.0
Aroclor-1260	7392.194	7795.235	0.01	5.4	15.0
(2)	6075.417	6356.115	0.01	4.6	15.0
(3)	6537.051	6856.657	0.01	4.9	15.0
(4)	15923.984	16925.777	0.01	6.3	15.0
(5)	11159.813	11920.757	0.01	6.8	15.0
4cmx	166628.39	160443.40	0.01	-3.7	15.0
Decachlorobiphenyl	156126.47	157825.04	0.01	1.1	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

Instrument ID: ECD2A Calibration Date: 07/08/09 Time: 1508

Lab File ID: 036F3601 Init. Calib. Date(s): 06/20/09 06/20/09

Heated Purge: (Y/N) N Init. Calib. Times: 1014 1059

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2054.287	2115.898	0.01	3.0	15.0
(2)	2874.444	3076.657	0.01	7.0	15.0
(3)	1785.649	1843.772	0.01	3.2	15.0
(4)	936.098	944.208	0.01	0.9	15.0
(5)	1347.765	1402.533	0.01	4.1	15.0
Aroclor-1260	4114.879	4266.879	0.01	3.7	15.0
(2)	2151.230	2175.414	0.01	1.1	15.0
(3)	2230.342	2309.471	0.01	3.5	15.0
(4)	5429.554	5728.457	0.01	5.5	15.0
(5)	2835.910	2962.846	0.01	4.5	15.0
4cmx	57796.749	52596.550	0.01	-9.0	15.0
Decachlorobiphenyl	54819.436	50668.060	0.01	-7.6	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

Instrument ID: ECD2A Calibration Date: 07/08/09 Time: 1508

Lab File ID: 036B3601 Init. Calib. Date(s): 06/20/09 06/20/09

Heated Purge: (Y/N) N Init. Calib. Times: 1014 1059

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	5770.349	6423.577	0.01	11.3	15.0
(2)	4680.977	5269.594	0.01	12.6	15.0
(3)	2895.669	3261.926	0.01	12.6	15.0
(4)	2753.708	3056.323	0.01	11.0	15.0
(5)	3794.218	4259.911	0.01	12.3	15.0
Aroclor-1260	7392.194	8018.614	0.01	8.5	15.0
(2)	6075.417	6421.304	0.01	5.7	15.0
(3)	6537.051	6909.849	0.01	5.7	15.0
(4)	15923.984	16879.609	0.01	6.0	15.0
(5)	11159.813	11709.702	0.01	4.9	15.0
4cmx	166628.39	163381.45	0.01	-1.9	15.0
Decachlorobiphenyl	156126.47	141541.28	0.01	-9.3	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

Instrument ID: ECD2A Calibration Date: 07/08/09 Time: 1659

Lab File ID: 046F4601 Init. Calib. Date(s): 06/20/09 06/20/09

Heated Purge: (Y/N) N Init. Calib. Times: 1014 1059

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D	
Aroclor-1016	2054.287	2136.939	0.01	4.0	15.0	
(2)	2874.444	3066.625	0.01	6.7	15.0	
(3)	1785.649	1863.278	0.01	4.3	15.0	
(4)	936.098	969.444	0.01	3.6	15.0	
(5)	1347.765	1399.537	0.01	3.8	15.0	
Aroclor-1260	4114.879	4266.084	0.01	3.7	15.0	
(2)	2151.230	2149.921	0.01	-0.1	15.0	
(3)	2230.342	2258.876	0.01	1.3	15.0	
(4)	5429.554	5593.958	0.01	3.0	15.0	
(5)	2835.910	2897.953	0.01	2.2	15.0	
4cmx	57796.749	53388.170	0.01	-7.6	15.0	
Decachlorobiphenyl	54819.436	46005.710	0.01	-16.1	15.0	<-

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

Instrument ID: ECD2A Calibration Date: 07/08/09 Time: 1659

Lab File ID: 046B4601 Init. Calib. Date(s): 06/20/09 06/20/09

Heated Purge: (Y/N) N Init. Calib. Times: 1014 1059

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D	
Aroclor-1016	5770.349	6465.476	0.01	12.0	15.0	
(2)	4680.977	5253.428	0.01	12.2	15.0	
(3)	2895.669	3263.606	0.01	12.7	15.0	
(4)	2753.708	3053.268	0.01	10.9	15.0	
(5)	3794.218	4248.242	0.01	12.0	15.0	
Aroclor-1260	7392.194	7722.642	0.01	4.5	15.0	
(2)	6075.417	5977.127	0.01	-1.6	15.0	
(3)	6537.051	6274.367	0.01	-4.0	15.0	
(4)	15923.984	15094.278	0.01	-5.2	15.0	
(5)	11159.813	10283.065	0.01	-7.8	15.0	
4cmx	166628.39	165030.28	0.01	-1.0	15.0	
Decachlorobiphenyl	156126.47	116112.90	0.01	-25.6	15.0	<-

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/002f0201.d
Lab Smp Id: WAR090616-60 1 Client Smp ID: AR166001
Inj Date : 08-JUL-2009 08:23
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090616-60 1
Misc Info : |PCB_CVS|1660||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 08-Jul-2009 15:46 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.796	1.796	0.000	5223782	100.000	90.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.628	5.628	0.000	5261977	100.000	96.0	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.300	2.300	0.000	2046380	1000.00	996	80.00- 120.00	100.00
2.624	2.624	0.000	3058226	1000.00	1060	129.45- 169.45	149.45
2.714	2.714	0.000	1771455	1000.00	992	66.57- 106.57	86.57
2.849	2.849	0.000	919594	1000.00	982	24.94- 64.94	44.94
3.000	3.000	0.000	1334279	1000.00	990	45.20- 85.20	65.20
Average of Peak Amounts =					1e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.037	4.037	0.000	4131989	1000.00	1000	80.00- 120.00	100.00
4.309	4.309	0.000	2092393	1000.00	973	30.64- 70.64	50.64
4.474	4.474	0.000	2216448	1000.00	994	33.64- 73.64	53.64
4.686	4.686	0.000	5566726	1000.00	1020	114.72- 154.72	134.72
4.875	4.875	0.000	2868771	1000.00	1010	49.43- 89.43	69.43
Average of Peak Amounts =					1e+03		

Data File: /chem/ecd2a.i/070809.b/002f0201.d

Date : 08-JUL-2009 08:23

Client ID: AR166001

Sample Info: IWAR090616-60 1

Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1

Column diameter: 0.25

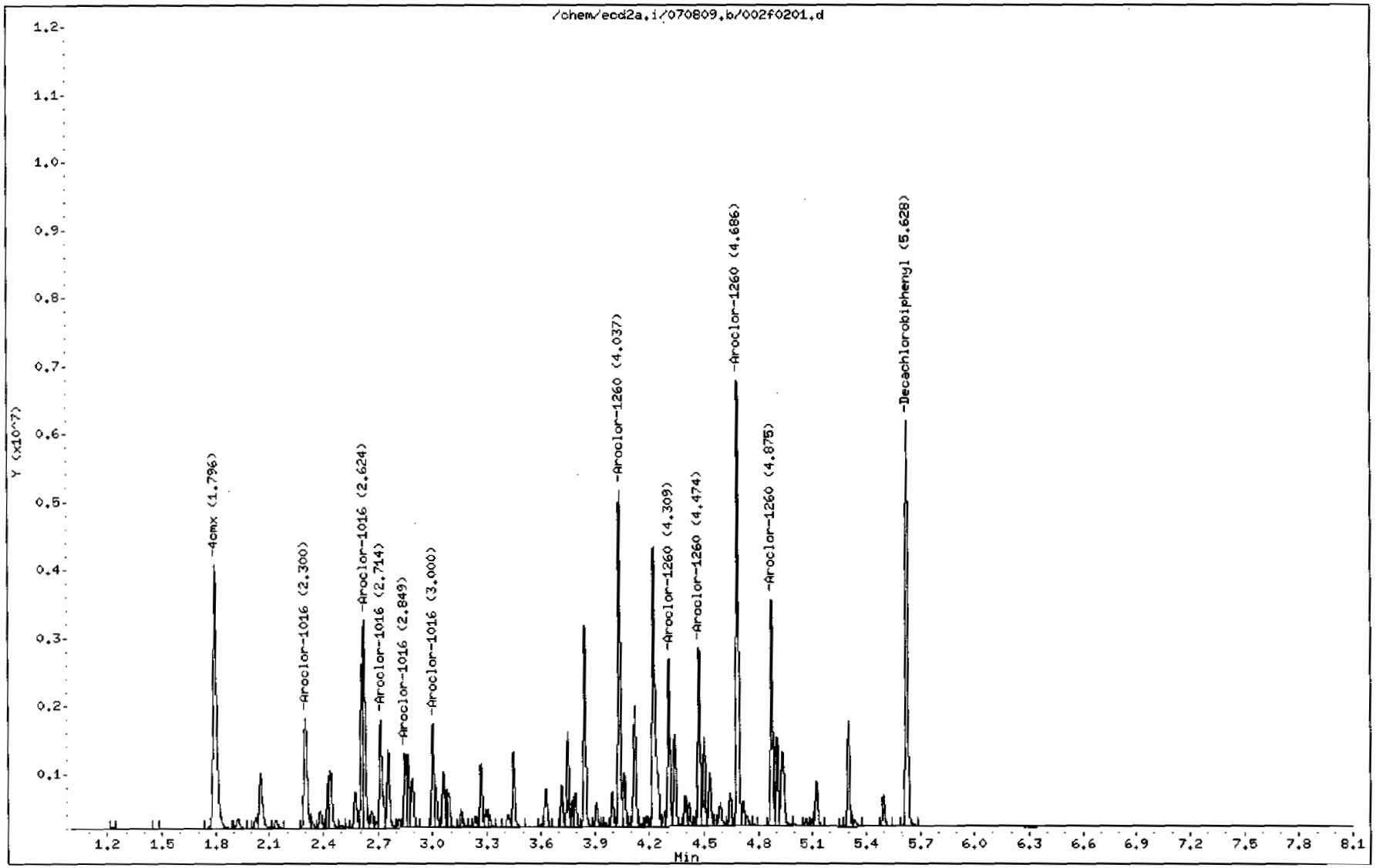

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/002b0201.d
Lab Smp Id: WAR090616-60 1 Client Smp ID: AR166001
Inj Date : 08-JUL-2009 08:23
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090616-60 1
Misc Info : |PCB_CVS|1660||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 08-Jul-2009 12:07 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclpl

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.126	2.126	0.000	16044340	100.000	96.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.359	6.359	0.000	15782504	100.000	101	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.805	2.805	0.000	6203832	1000.00	1080	80.00- 120.00	100.00
3.240	3.240	0.000	5083542	1000.00	1090	61.94- 101.94	81.94
3.313	3.313	0.000	3133840	1000.00	1080	30.51- 70.51	50.51
3.390	3.390	0.000	2943197	1000.00	1070	27.44- 67.44	47.44
3.578	3.578	0.000	4117518	1000.00	1080	46.37- 86.37	66.37
Average of Peak Amounts =					1.08e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.473	4.473	0.000	7795235	1000.00	1050	80.00- 120.00	100.00
4.934	4.934	0.000	6356115	1000.00	1050	61.54- 101.54	81.54
5.134	5.134	0.000	6856657	1000.00	1050	67.96- 107.96	87.96
5.311	5.311	0.000	16925777	1000.00	1060	197.13- 237.13	217.13
5.559	5.559	0.000	11920757	1000.00	1070	132.92- 172.92	152.92
Average of Peak Amounts =					1.06e+03		

Data File: /chem/ecd2a.i/070809.b/002b0201.d
Date : 08-JUL-2009 08:23
Client ID: AR166001
Sample Info: IWAR090616-60 1

Column phase: CLP2

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

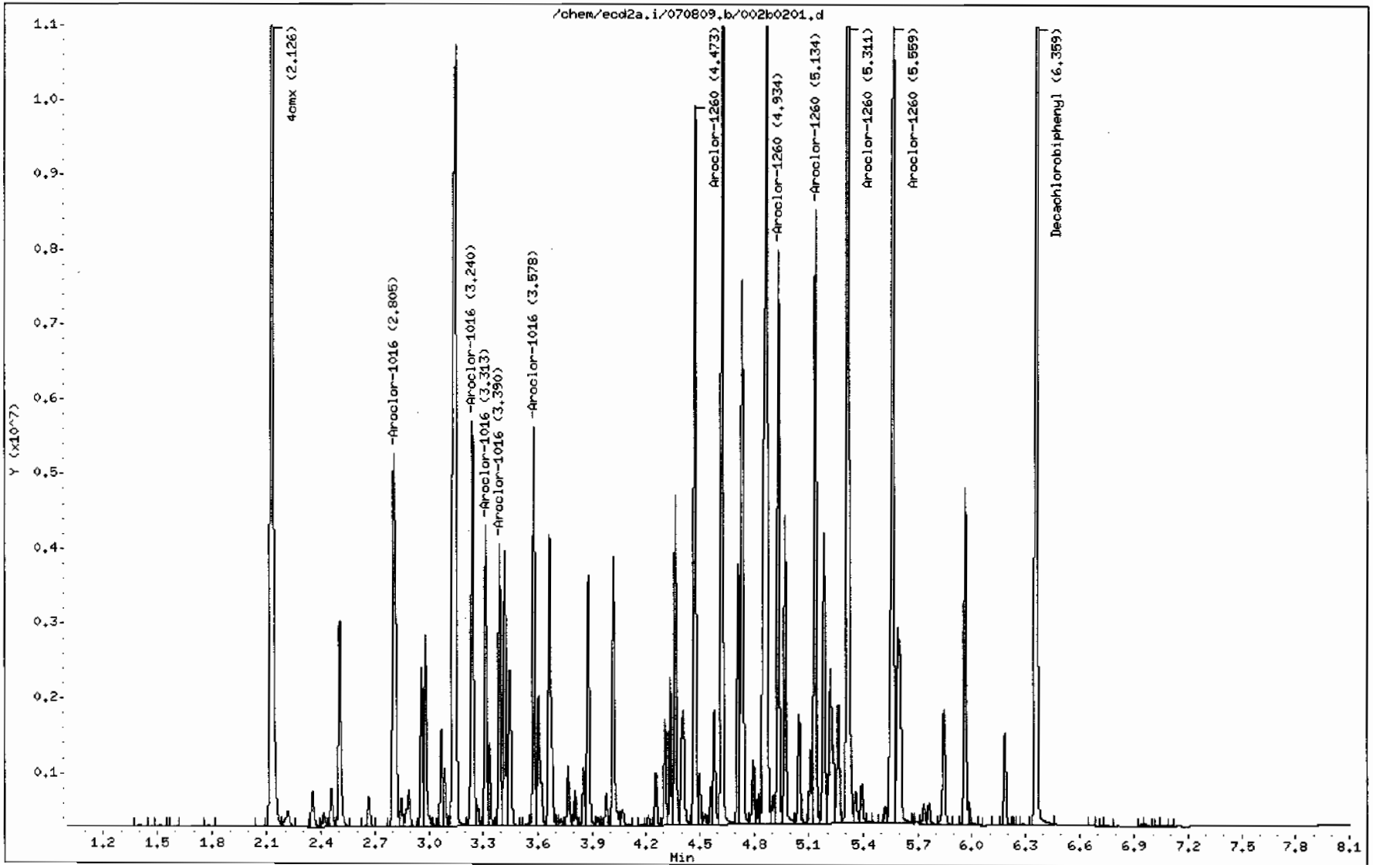

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/003f0301.d
Lab Smp Id: WAR090630-54 Client Smp ID: AR125401
Inj Date : 08-JUL-2009 08:34
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090630-54
Misc Info : |PCB_CVS|1254||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 08-Jul-2009 15:35 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.796	1.796	0.000	5114882	100.000	88.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.628	5.628	0.000	5170900	100.000	94.3	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.266	3.266	0.000	1476394	1000.00	915	80.00- 120.00	100.00
3.448	3.448	0.000	2050363	1000.00	927	118.88- 158.88	138.88
3.718	3.718	0.000	2725770	1000.00	918	164.62- 204.62	184.62
3.910	3.910	0.000	2111267	1000.00	907	123.00- 163.00	143.00
4.039	4.039	0.000	2095257	1000.00	964	121.92- 161.92	141.92
		Average of Peak Amounts =			926		

Data File: /chem/ecd2a.i/070809.b/003f0301.d

Date : 08-JUL-2009 08:34

Client ID: AR125401

Sample Info: !WAR090630-54

Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1

Column diameter: 0.25

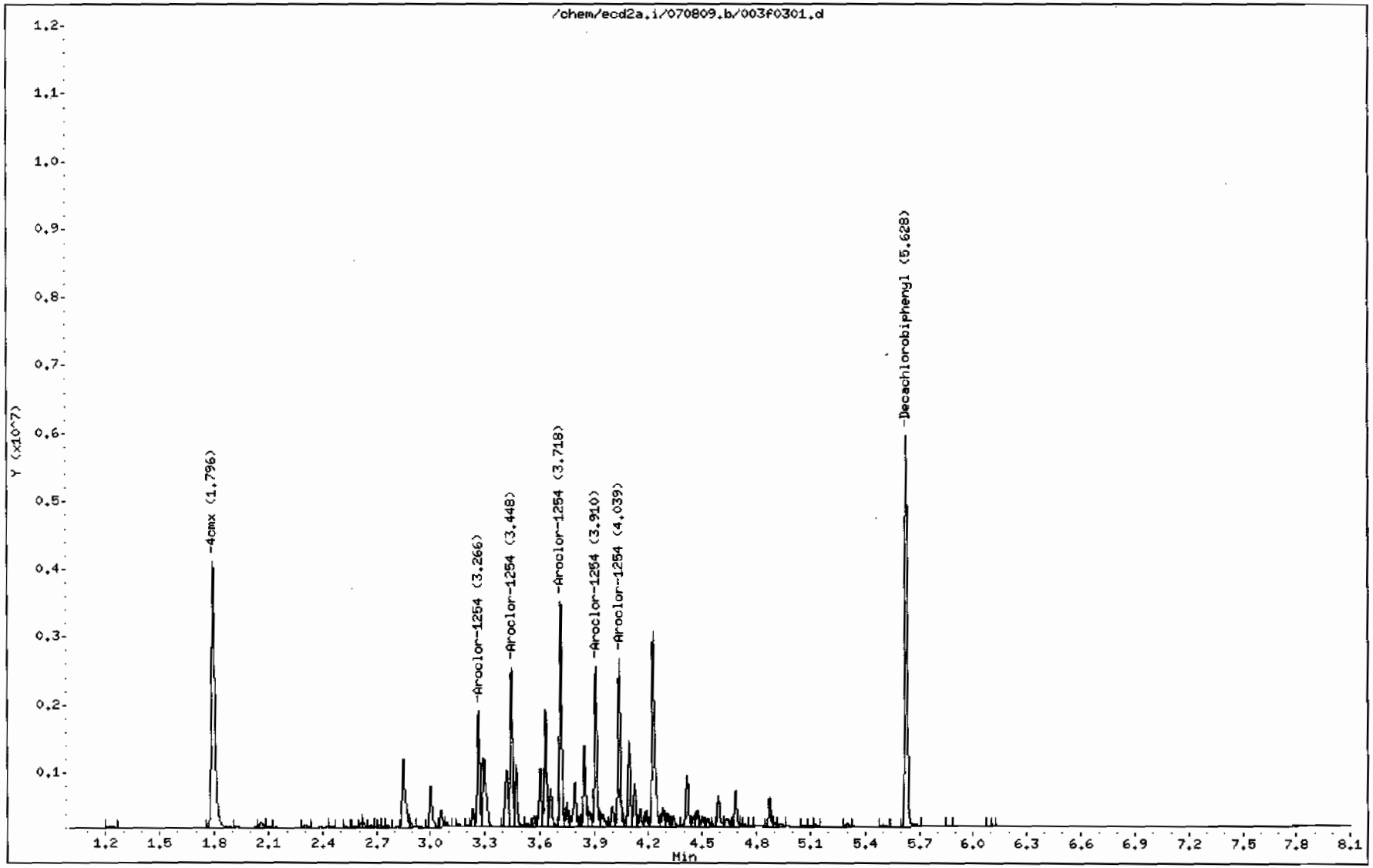

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/003b0301.d
Lab Smp Id: WAR090630-54 Client Smp ID: AR125401
Inj Date : 08-JUL-2009 08:34
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090630-54
Misc Info : |PCB_CVS|1254||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 08-Jul-2009 12:08 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.126	2.126	0.000	15914212	100.000	95.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.359	6.359	0.000	15569326	100.000	99.7	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.879	3.879	0.000	5371996	1000.00	1020	80.00- 120.00	100.00
4.019	4.019	0.000	6043605	1000.00	1000	92.50- 132.50	112.50
4.336	4.336	0.000	8554363	1000.00	997	139.24- 179.24	159.24
4.499	4.499	0.000	6130386	1000.00	982	94.12- 134.12	114.12
4.869	4.869	0.000	9587516	1000.00	1060	158.47- 198.47	178.47

Average of Peak Amounts = 1.01e+03

Data File: /chem/ecd2a.i/070809.b/003b0301.d
Date : 08-JUL-2009 08:34
Client ID: AR125401
Sample Info: IWAR090630-54

Column phase: CLP2

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

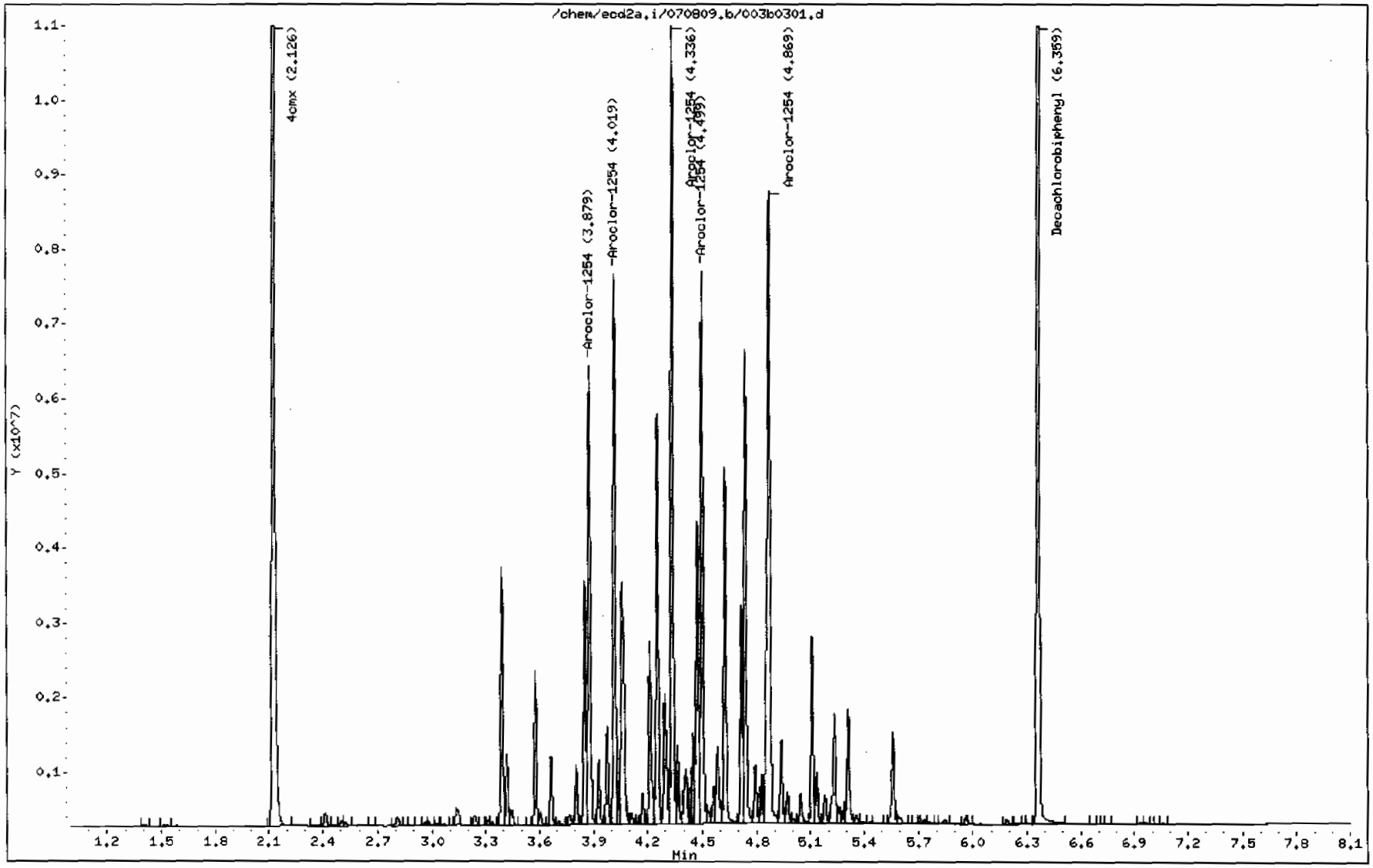

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/005f0501.d
Lab Smp Id: WAR090521-48 Client Smp ID: AR124801
Inj Date : 08-JUL-2009 08:56
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090521-48
Misc Info : |PCB_CVS|1248||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 08-Jul-2009 15:35 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.795	1.796	-0.001	5603306	100.000	96.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.628	5.628	0.000	5368154	100.000	97.9	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
2.849	2.849	0.000	1211603	1000.00	974	80.00- 120.00	100.00
3.001	3.001	0.000	1668203	1000.00	987	117.69- 157.69	137.69
3.059	3.059	0.000	1287391	1000.00	982	86.26- 126.26	106.26
3.294	3.294	0.000	1874442	1000.00	969	134.71- 174.71	154.71
3.446	3.446	0.000	1547375	1000.00	975	107.71- 147.71	127.71
Average of Peak Amounts =					977		

Data File: /chem/ecd2a.i/070809.b/005f0501.d
Date : 08-JUL-2009 08:56
Client ID: AR124801
Sample Info: IWAR090521-48

Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

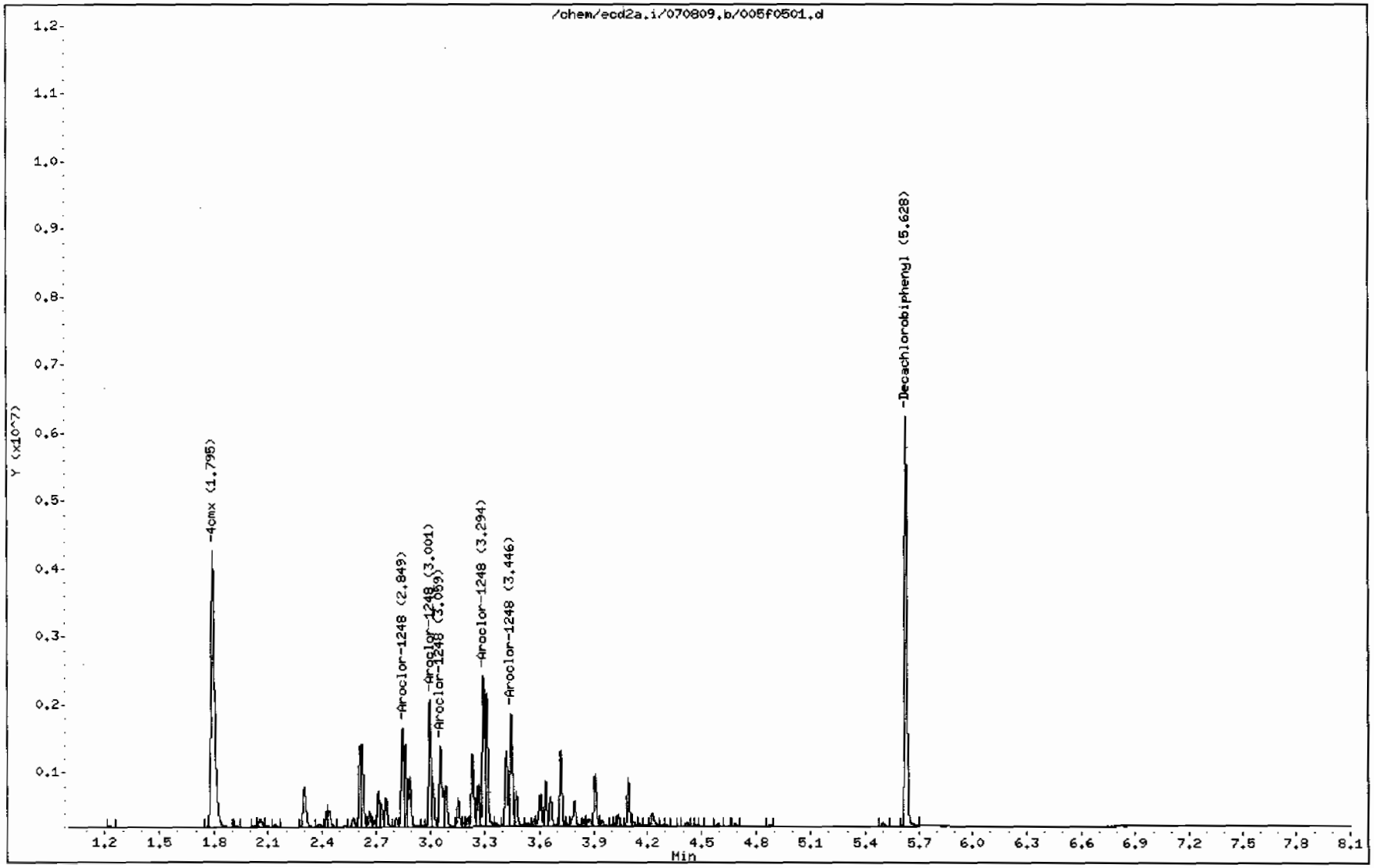

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/005b0501.d
Lab Smp Id: WAR090521-48 Client Smp ID: AR124801
Inj Date : 08-JUL-2009 08:56
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090521-48
Misc Info : |PCB_CVS|1248||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 08-Jul-2009 12:08 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.125	2.126	-0.001	17437106	100.000	105	80.00- 120.00	100.00
$ 12 Decachlorobipheny1					CAS #: 2051-24-3		
6.360	6.359	0.001	16166467	100.000	104	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.391	3.391	0.000	3911922	1000.00	1060	80.00- 120.00	100.00
3.579	3.579	0.000	5068338	1000.00	1070	109.56- 149.56	129.56
3.664	3.664	0.000	5351857	1000.00	1060	116.81- 156.81	136.81
3.853	3.853	0.000	5948221	1000.00	1060	132.05- 172.05	152.05
4.039	4.039	0.000	5169097	1000.00	1070	112.14- 152.14	132.14

Average of Peak Amounts = 1.06e+03

Data File: /chem/ecd2a.i/070809.b/005b0501.d

Date : 08-JUL-2009 08:56

Client ID: AR124801

Sample Info: IWAR090521-48

Column phase: CLP2

Instrument: ecd2a.i

Operator: YS1

Column diameter: 0.25

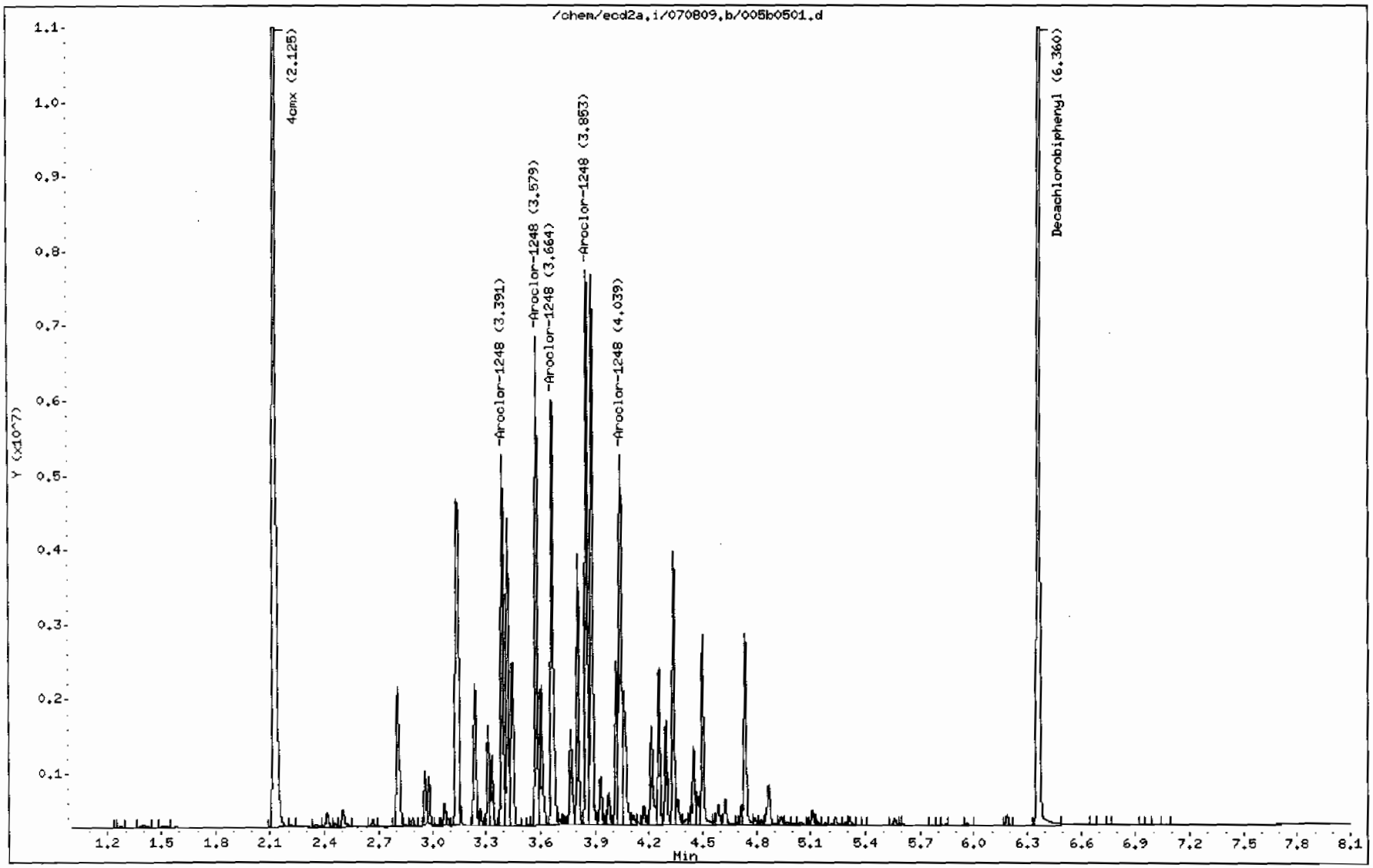

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/006f0601.d
Lab Smp Id: WAR090618-32 Client Smp ID: AR123201
Inj Date : 08-JUL-2009 09:07
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090618-32
Misc Info : |PCB_CVS|1232||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 08-Jul-2009 15:36 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.797	1.796	0.001	5268747	100.000	91.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.628	5.628	0.000	5186344	100.000	94.6	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.053	2.053	0.000	1137663	1000.00	915	80.00- 120.00	100.00
2.302	2.302	0.000	847967	1000.00	856	54.54- 94.54	74.54
2.716	2.716	0.000	725262	1000.00	834	43.75- 83.75	63.75
2.758	2.758	0.000	450801	1000.00	826	19.63- 59.63	39.63
3.002	3.002	0.000	519568	1000.00	796	25.67- 65.67	45.67
Average of Peak Amounts =					845		

Data File: /chem/ecd2a.i/070809.b/006f0601.d
Date : 08-JUL-2009 09:07
Client ID: AR123201
Sample Info: IWAR090618-32

Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

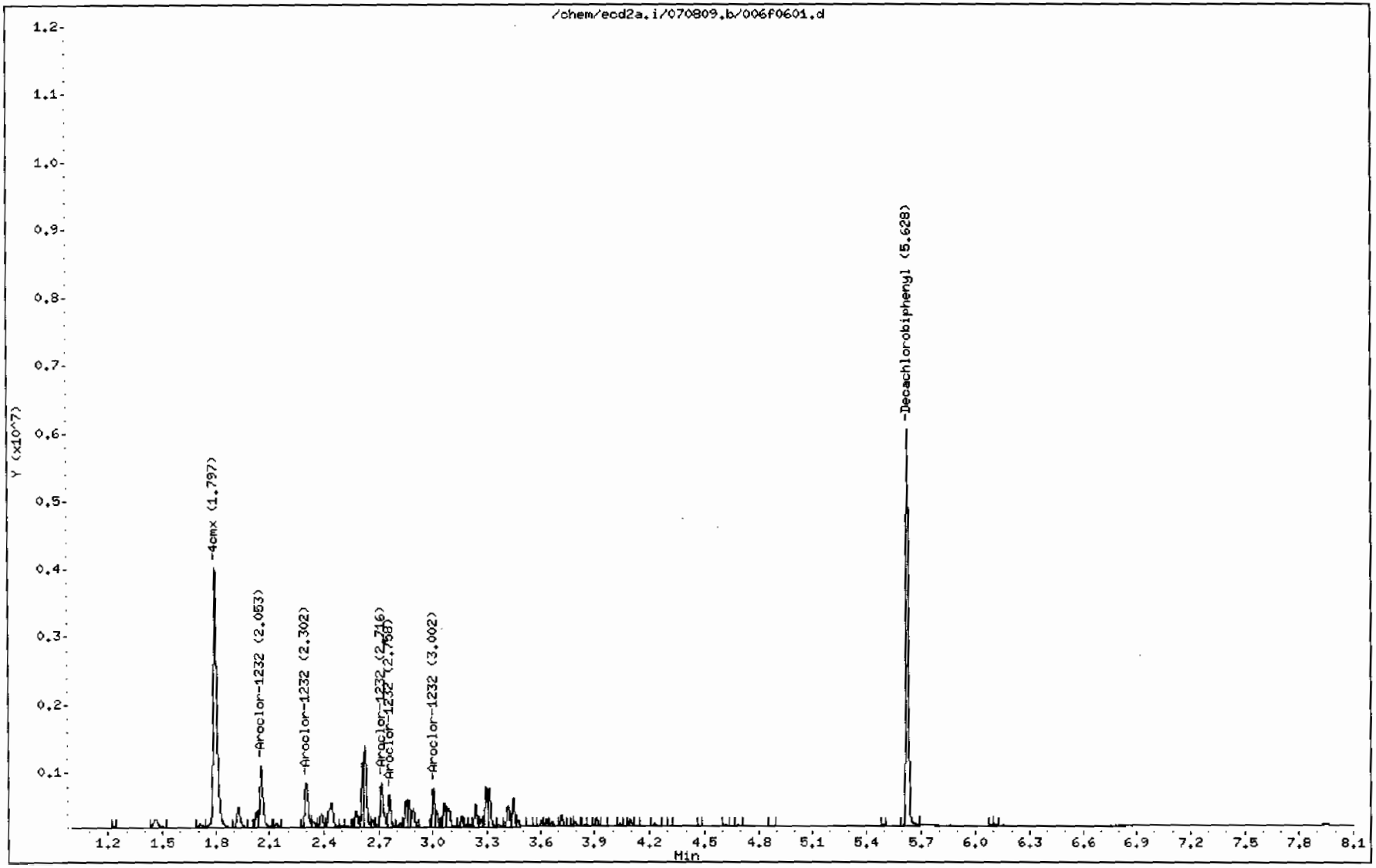

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/006b0601.d
Lab Smp Id: WAR090618-32 Client Smp ID: AR123201
Inj Date : 08-JUL-2009 09:07
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090618-32
Misc Info : |PCB_CVS|1232||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 08-Jul-2009 12:08 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

AMOUNTS

RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.127	2.126	0.001	16131465	100.000	96.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.360	6.359	0.001	15691778	100.000	100	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.502	2.502	0.000	2973073	1000.00	927	80.00- 120.00	100.00
2.806	2.806	0.000	2591490	1000.00	858	67.17- 107.17	87.17
3.242	3.242	0.000	1982334	1000.00	832	46.68- 86.68	66.68
3.313	3.313	0.000	1221731	1000.00	817	21.09- 61.09	41.09
3.579	3.579	0.000	1473490	1000.00	802	29.56- 69.56	49.56
Average of Peak Amounts =					847		

Data File: /chem/ecd2a.i/070809.b/006b0601.d
Date : 08-JUL-2009 09:07
Client ID: AR123201
Sample Info: IWAR090618-32

Column phase: CLP2

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

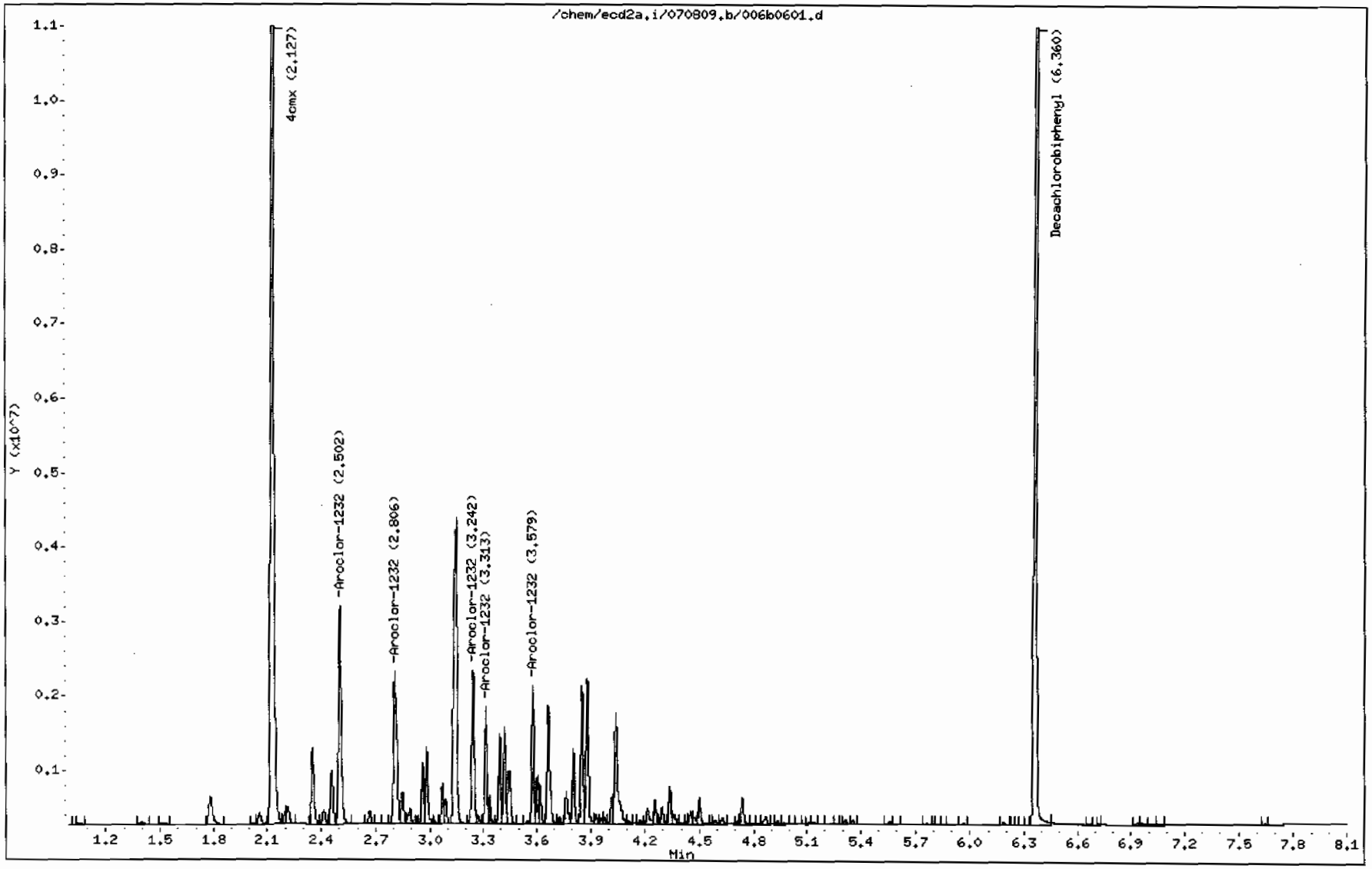

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/007f0701.d
Lab Smp Id: WAR090618-21 Client Smp ID: AR122101
Inj Date : 08-JUL-2009 09:18
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090618-21
Misc Info : |PCB_CVS|1221||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 08-Jul-2009 15:36 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.794	1.796	-0.002	5461862	100.000	94.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.629	5.628	0.001	5390828	100.000	98.3	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
1.922	1.922	0.000	575836	1000.00	983	80.00- 120.00	100.00
2.022	2.022	0.000	307566	1000.00	971	33.41- 73.41	53.41
2.050	2.050	0.000	1407625	1000.00	988	224.45- 264.45	244.45
Average of Peak Amounts =					981		

Data File: /chem/ecd2a.i/070809.b/007f0701.d

Date : 08-JUL-2009 09:18

Client ID: AR122101

Sample Info: IWAR090618-21

Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1

Column diameter: 0.25

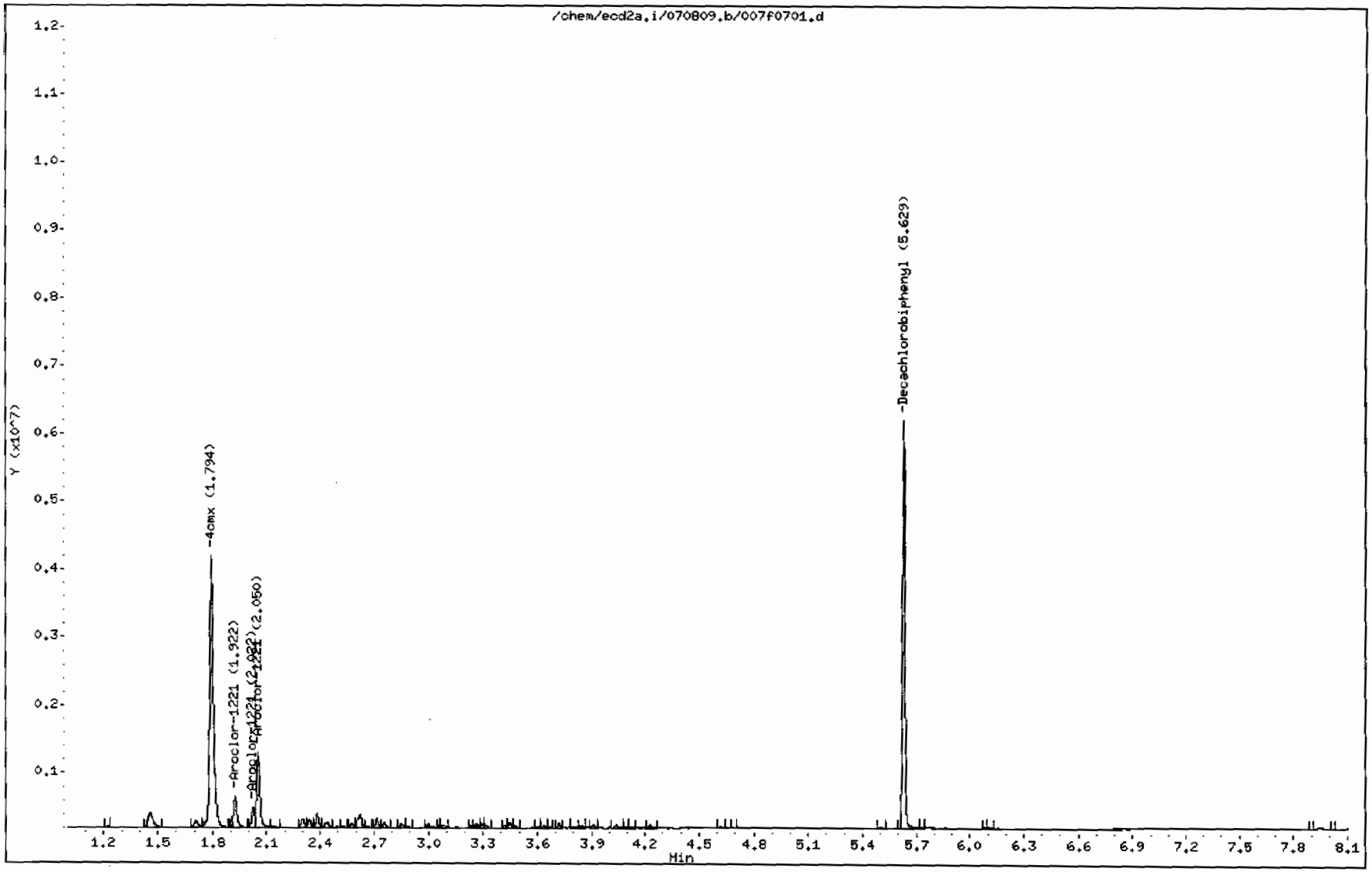

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/007b0701.d
Lab Smp Id: WAR090618-21 Client Smp ID: AR122101
Inj Date : 08-JUL-2009 09:18
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090618-21
Misc Info : |PCB_CVS|1221||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 08-Jul-2009 12:09 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.125	2.126	-0.001	16622594	100.000	99.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.361	6.359	0.002	16179403	100.000	104	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.350	2.350	0.000	1548289	1000.00	1020	80.00- 120.00	100.00
2.456	2.456	0.000	943884	1000.00	1010	40.96- 80.96	60.96
2.500	2.500	0.000	3692863	1000.00	1040	218.51- 258.51	238.51

Average of Peak Amounts = 1.02e+03

Data File: /chem/ecd2a.i/070809.b/007b0701.d
Date : 08-JUL-2009 09:18
Client ID: AR122101
Sample Info: IWAR090618-21

Column phase: CLP2

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

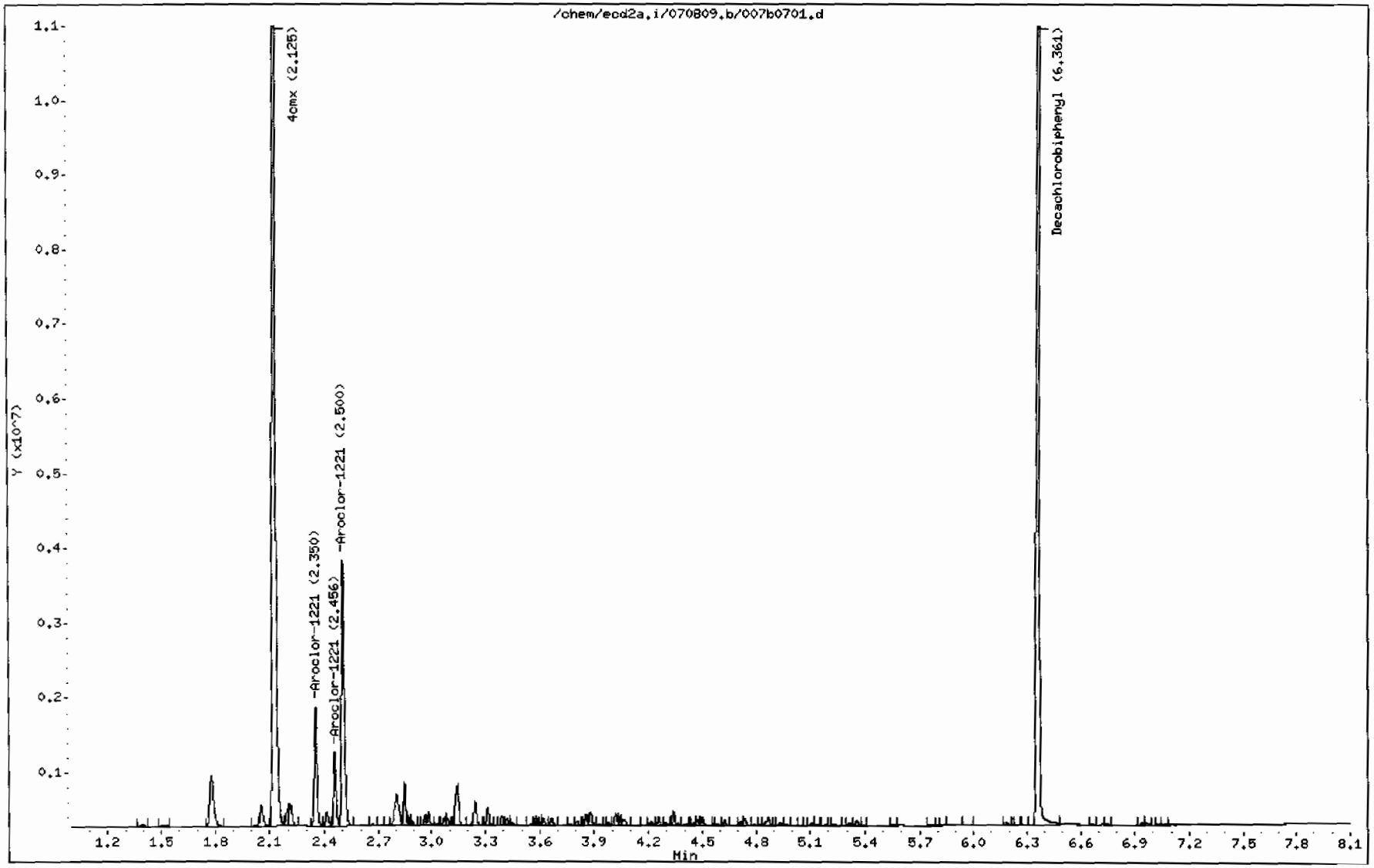

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/009f0901.d
Lab Smp Id: WAR090519-42 Client Smp ID: AR124201
Inj Date : 08-JUL-2009 09:41
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090519-42
Misc Info : |PCB_CVS|1242||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 08-Jul-2009 15:36 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 9 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.796	1.796	0.000	5814246	100.000	100	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.629	5.628	0.001	5510736	100.000	100	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.301	2.301	0.000	1470622	1000.00	900	80.00- 120.00	100.00
2.624	2.624	0.000	2065062	1000.00	924	120.42- 160.42	140.42
2.715	2.715	0.000	1273788	1000.00	916	66.62- 106.62	86.62
2.757	2.757	0.000	792780	1000.00	940	33.91- 73.91	53.91
3.001	3.001	0.000	965153	1000.00	895	45.63- 85.63	65.63
Average of Peak Amounts =					915		

Data File: /chem/ecd2a.i/070809.b/009f0901.d

Date : 08-JUL-2009 09:41

Client ID: AR124201

Sample Info: IWAR090519-42

Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1

Column diameter: 0.25

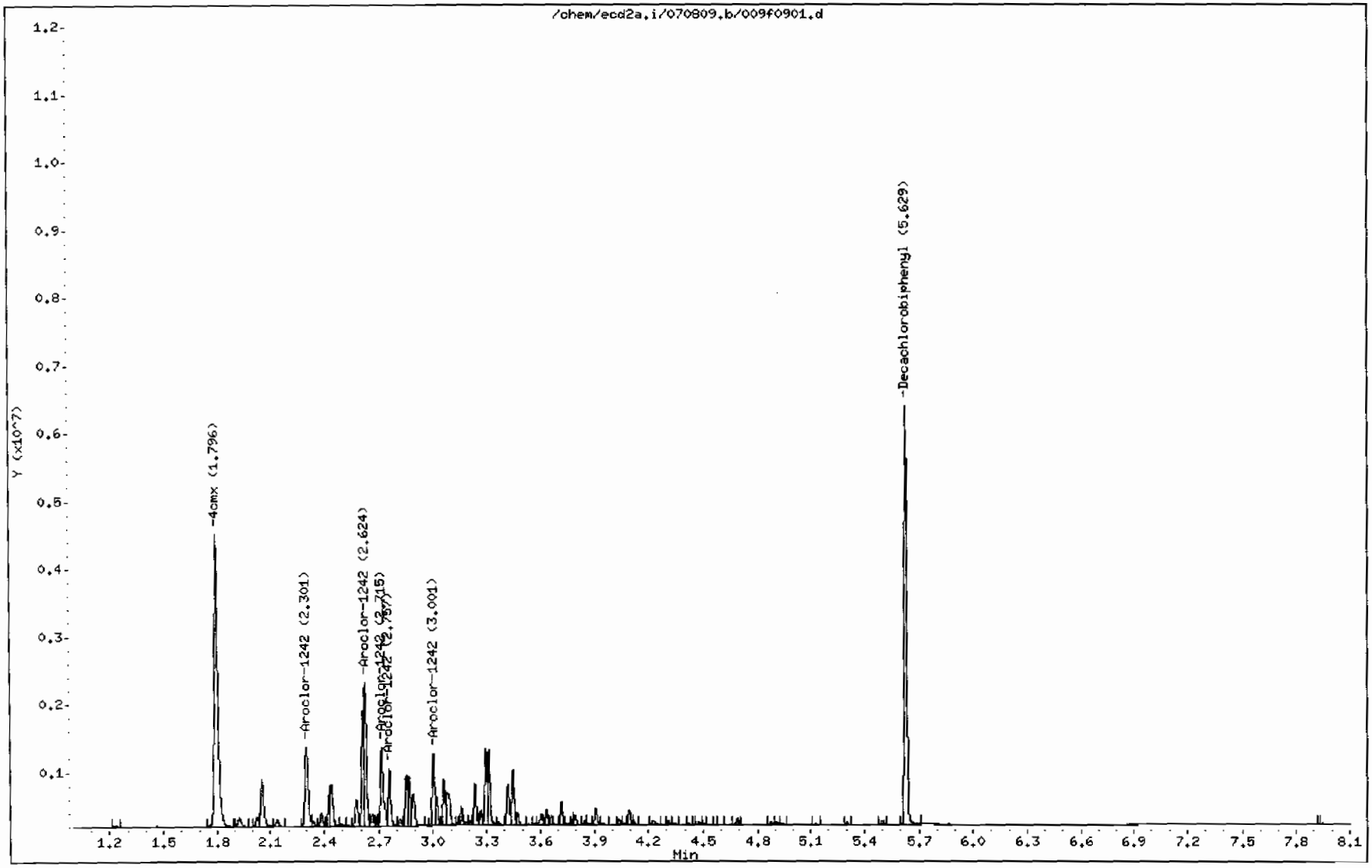

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/009b0901.d
Lab Smp Id: WAR090519-42 Client Smp ID: AR124201
Inj Date : 08-JUL-2009 09:41
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090519-42
Misc Info : |PCB_CVS|1242||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 08-Jul-2009 12:10 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 9 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

AMOUNTS

RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.126	2.126	0.000	17949490	100.000	108	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.361	6.359	0.002	16656591	100.000	107	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.806	2.806	0.000	4398480	1000.00	968	80.00- 120.00	100.00
3.240	3.240	0.000	3568105	1000.00	981	61.12- 101.12	81.12
3.313	3.313	0.000	2223479	1000.00	986	30.55- 70.55	50.55
3.578	3.578	0.000	2799747	1000.00	943	43.65- 83.65	63.65
3.665	3.665	0.000	3083387	1000.00	916	50.10- 90.10	70.10
Average of Peak Amounts =					959		

Data File: /chem/ecd2a.i/070809.b/009b0901.d
Date : 08-JUL-2009 09:41
Client ID: AR124201
Sample Info: IWAR090519-42

Column phase: CLP2

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

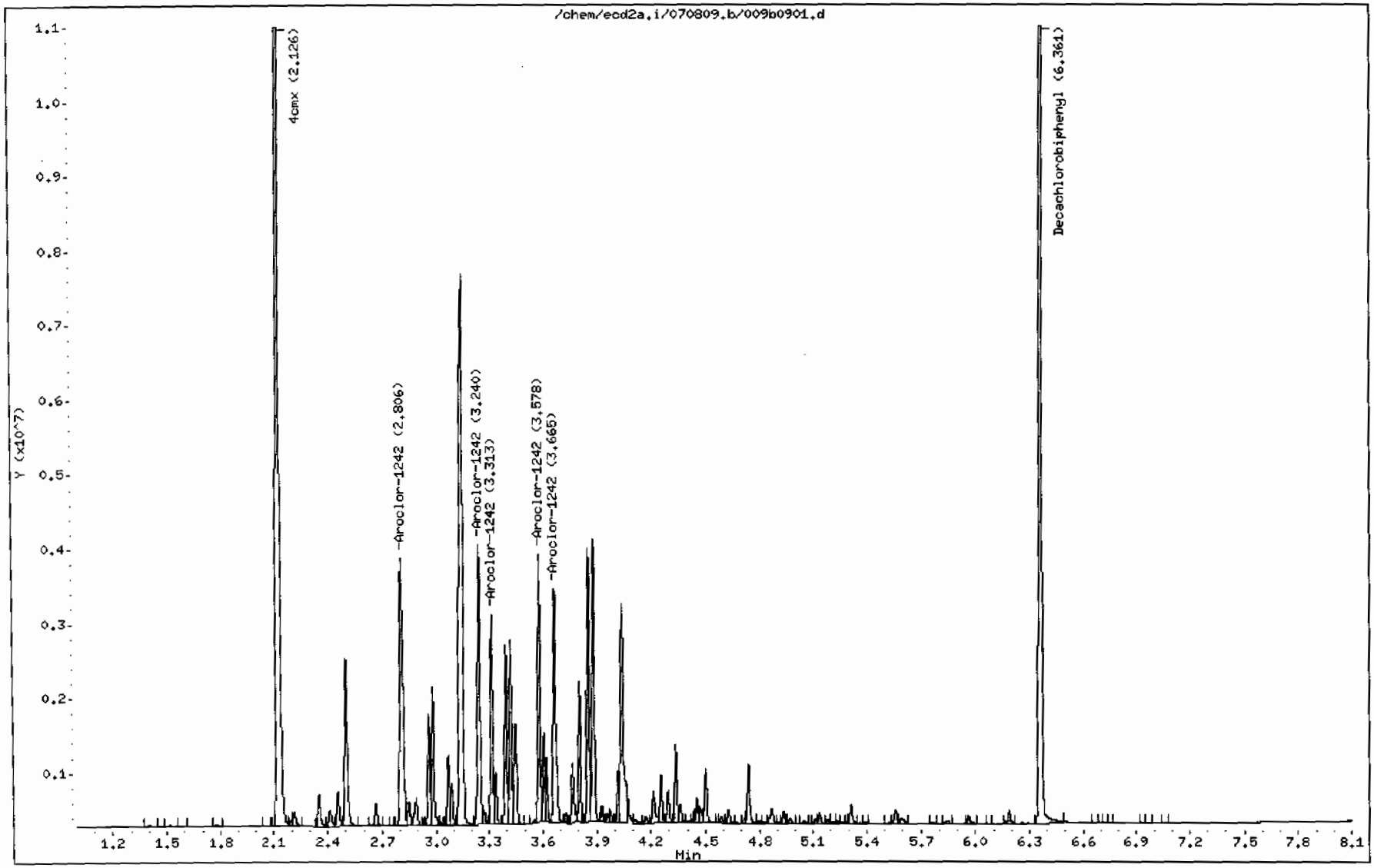

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/036f3601.d
Lab Smp Id: WAR090616-60 04 Client Smp ID: AR166004
Inj Date : 08-JUL-2009 15:08
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090616-60 04
Misc Info : |PCB_CVS|1660||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 09-Jul-2009 09:48 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 36 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.795	1.796	-0.001	5259655	100.000	91.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.626	5.628	-0.002	5066806	100.000	92.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.299	2.300	-0.001	2115898	1000.00	1030	80.00- 120.00	100.00
2.622	2.624	-0.002	3076657	1000.00	1070	125.41- 165.41	145.41
2.713	2.714	-0.001	1843772	1000.00	1030	67.14- 107.14	87.14
2.848	2.849	-0.001	944208	1000.00	1010	24.62- 64.62	44.62
2.999	3.000	-0.001	1402533	1000.00	1040	46.29- 86.29	66.29
Average of Peak Amounts =					1.04e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.036	4.037	-0.001	4266879	1000.00	1040	80.00- 120.00	100.00
4.307	4.309	-0.002	2175414	1000.00	1010	30.98- 70.98	50.98
4.472	4.474	-0.002	2309471	1000.00	1040	34.13- 74.13	54.13
4.684	4.686	-0.002	5728457	1000.00	1060	114.25- 154.25	134.25
4.874	4.875	-0.001	2962846	1000.00	1040	49.44- 89.44	69.44
Average of Peak Amounts =					1.04e+03		

Data File: /chem/ecd2a.i/070809.b/036f3601.d
Date : 08-JUL-2009 15:08
Client ID: AR166004
Sample Info: IWAR090616-60 04

Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

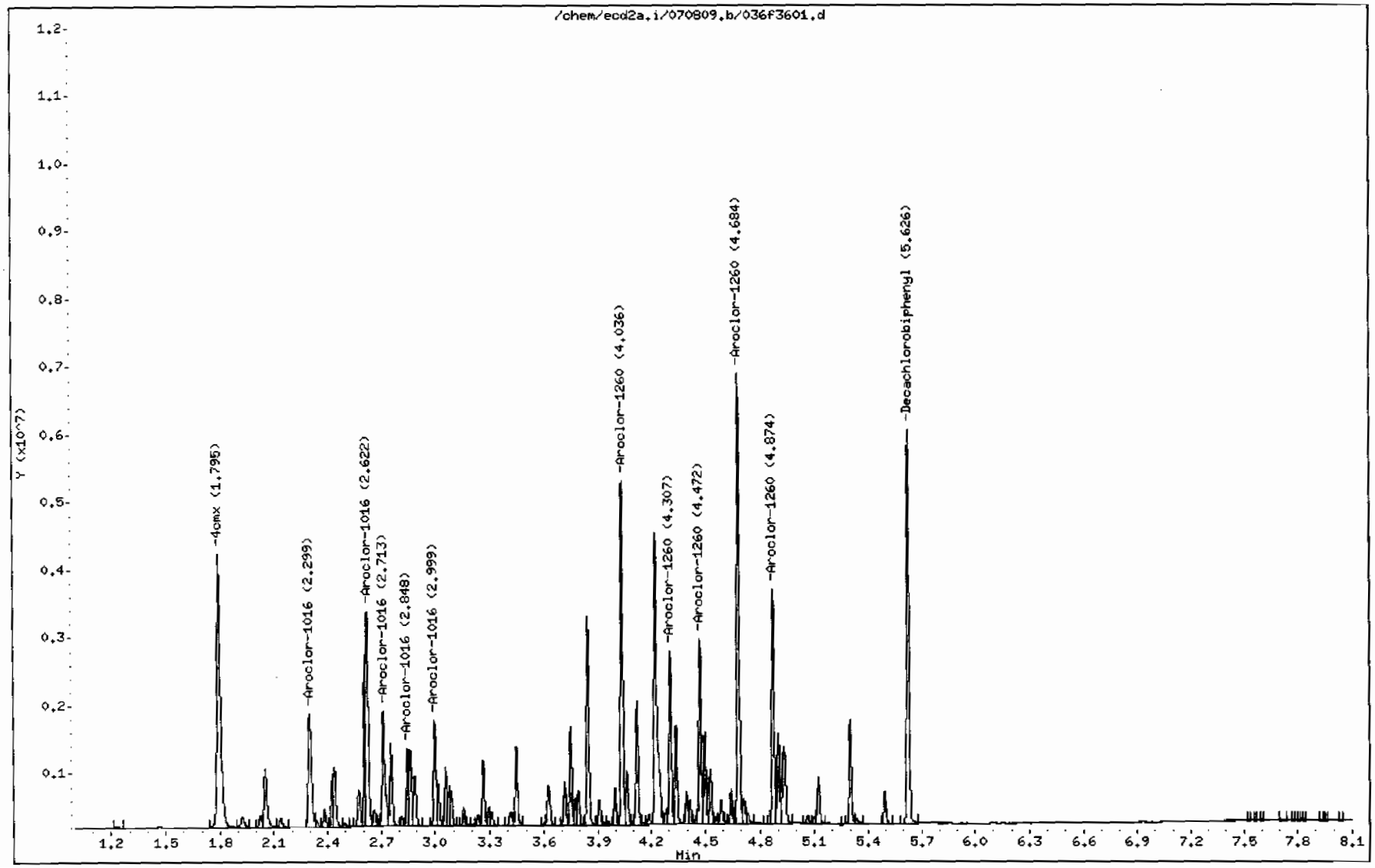

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/036b3601.d
Lab Smp Id: WAR090616-60 04 Client Smp ID: AR166004
Inj Date : 08-JUL-2009 15:08
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090616-60 04
Misc Info : |PCB_CVS|1660||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 09-Jul-2009 09:48 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 36 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.126	2.126	0.000	16338145	100.000	98.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.359	6.359	0.000	14154128	100.000	90.6	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.805	2.805	0.000	6423577	1000.00	1110	80.00- 120.00	100.00
3.240	3.240	0.000	5269594	1000.00	1120	62.04- 102.04	82.04
3.312	3.313	-0.001	3261926	1000.00	1130	30.78- 70.78	50.78
3.390	3.390	0.000	3056323	1000.00	1110	27.58- 67.58	47.58
3.577	3.578	-0.001	4259911	1000.00	1120	46.32- 86.32	66.32
Average of Peak Amounts =					1.12e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.472	4.473	-0.001	8018614	1000.00	1080	80.00- 120.00	100.00
4.932	4.934	-0.002	6421304	1000.00	1060	60.08- 100.08	80.08
5.133	5.134	-0.001	6909849	1000.00	1060	66.17- 106.17	86.17
5.311	5.311	0.000	16879609	1000.00	1060	190.51- 230.51	210.51
5.559	5.559	0.000	11709702	1000.00	1050	126.03- 166.03	146.03
Average of Peak Amounts =					1.06e+03		

Data File: /chem/ecd2a.i/070809.b/036b3601.d

Date : 08-JUL-2009 15:08

Client ID: AR166004

Sample Info: IWAR090616-60 04

Column phase: CLP2

Instrument: ecd2a.i

Operator: YS1

Column diameter: 0.25

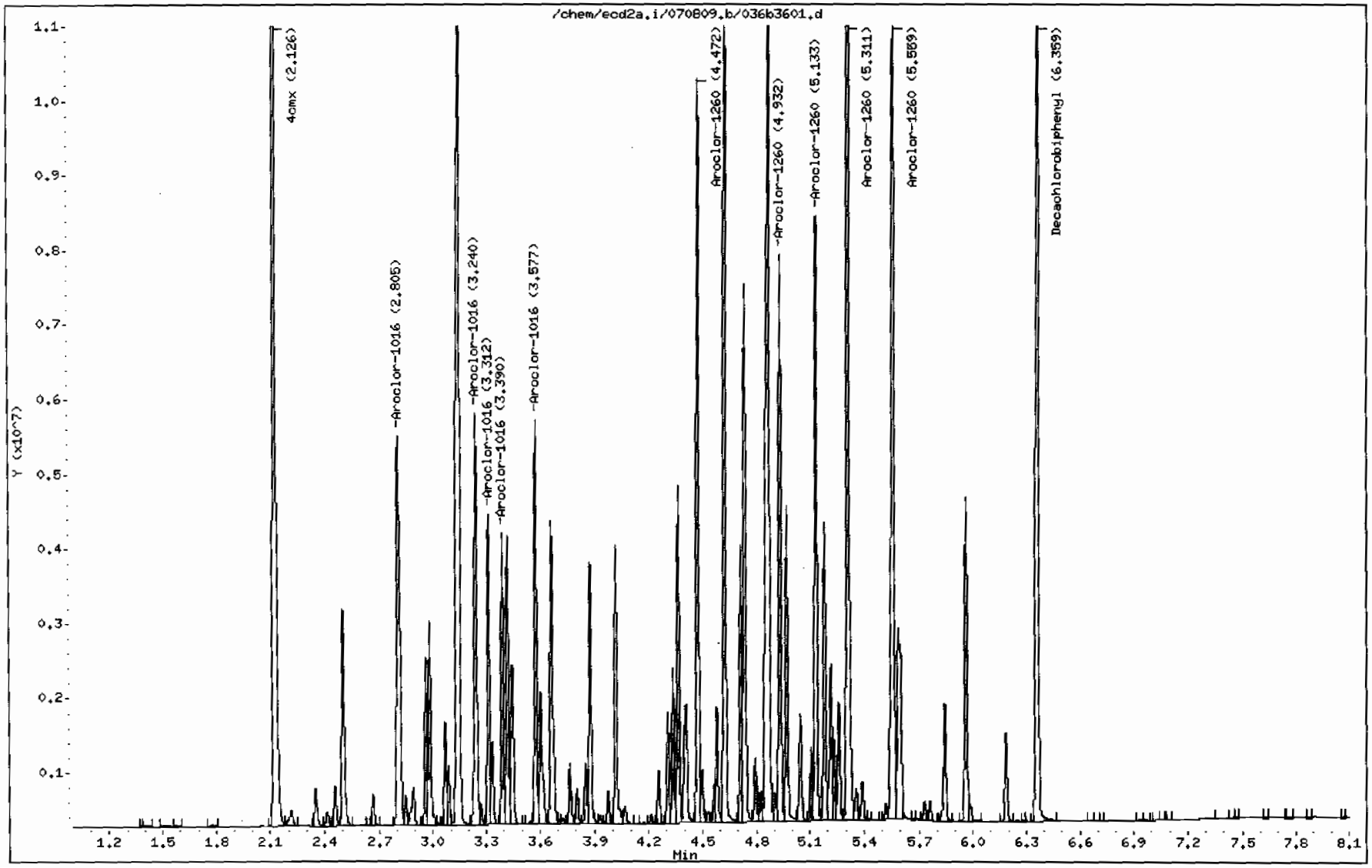

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/046f4601.d
Lab Smp Id: WAR090616-60 05 Client Smp ID: AR166005
Inj Date : 08-JUL-2009 16:59
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090616-60 05
Misc Info : |PCB_CVS|1660||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 09-Jul-2009 11:41 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 46 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.796	1.796	0.000	5338817	100.000	92.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.629	5.628	0.001	4600571	100.000	83.9	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.301	2.300	0.001	2136939	1000.00	1040	80.00- 120.00	100.00
2.625	2.624	0.001	3066625	1000.00	1070	123.51- 163.51	143.51
2.716	2.714	0.002	1863278	1000.00	1040	67.19- 107.19	87.19
2.850	2.849	0.001	969444	1000.00	1040	25.37- 65.37	45.37
3.001	3.000	0.001	1399537	1000.00	1040	45.49- 85.49	65.49
Average of Peak Amounts =					1.04e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.039	4.037	0.002	4266084	1000.00	1040	80.00- 120.00	100.00
4.310	4.309	0.001	2149921	1000.00	999	30.40- 70.40	50.40
4.476	4.474	0.002	2258876	1000.00	1010	32.95- 72.95	52.95
4.687	4.686	0.001	5593958	1000.00	1030	111.13- 151.13	131.13
4.876	4.875	0.001	2897953	1000.00	1020	47.93- 87.93	67.93
Average of Peak Amounts =					1.02e+03		

Data File: /chem/ecd2a.i/070809.b/046f4601.d

Date : 08-JUL-2009 16:59

Client ID: AR166005

Sample Info: IWAR090616-60 05

Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1

Column diameter: 0.25

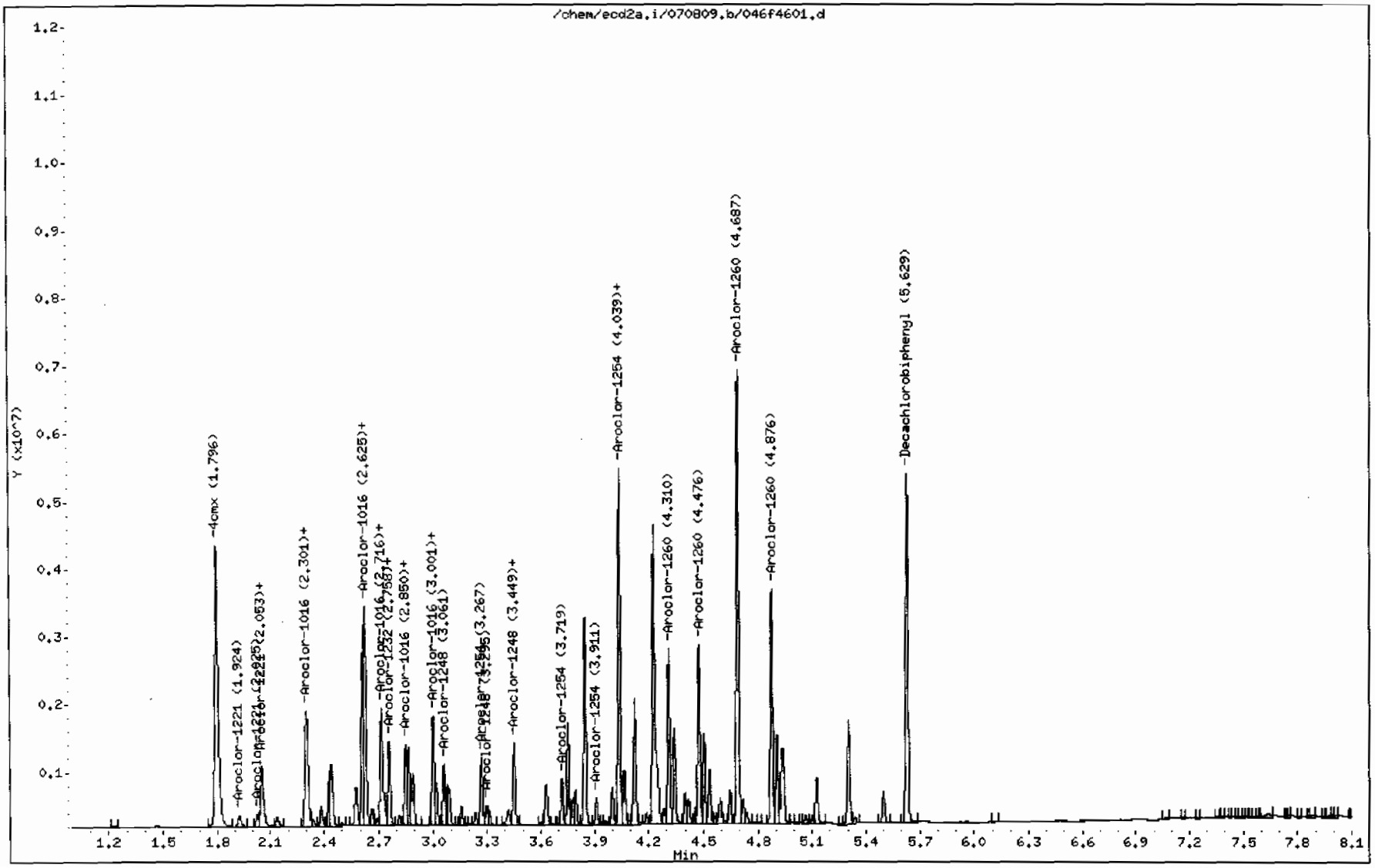

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/046b4601.d
Lab Smp Id: WAR090616-60 05 Client Smp ID: AR166005
Inj Date : 08-JUL-2009 16:59
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |WAR090616-60 05
Misc Info : |PCB_CVS|1660||CVS|
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 09-Jul-2009 11:41 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 46 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.126	2.126	0.000	16503028	100.000	99.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.361	6.359	0.002	11611290	100.000	74.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.806	2.805	0.001	6465476	1000.00	1120	80.00- 120.00	100.00
3.241	3.240	0.001	5253428	1000.00	1120	61.25- 101.25	81.25
3.314	3.313	0.001	3263606	1000.00	1130	30.48- 70.48	50.48
3.391	3.390	0.001	3053268	1000.00	1110	27.22- 67.22	47.22
3.580	3.578	0.002	4248242	1000.00	1120	45.71- 85.71	65.71
Average of Peak Amounts =					1.12e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.475	4.473	0.002	7722642	1000.00	1040	80.00- 120.00	100.00
4.935	4.934	0.001	5977127	1000.00	984	57.40- 97.40	77.40
5.135	5.134	0.001	6274367	1000.00	960	61.25- 101.25	81.25
5.312	5.311	0.001	15094278	1000.00	948	175.45- 215.45	195.45
5.561	5.559	0.002	10283065	1000.00	921	113.15- 153.15	133.15
Average of Peak Amounts =					972		

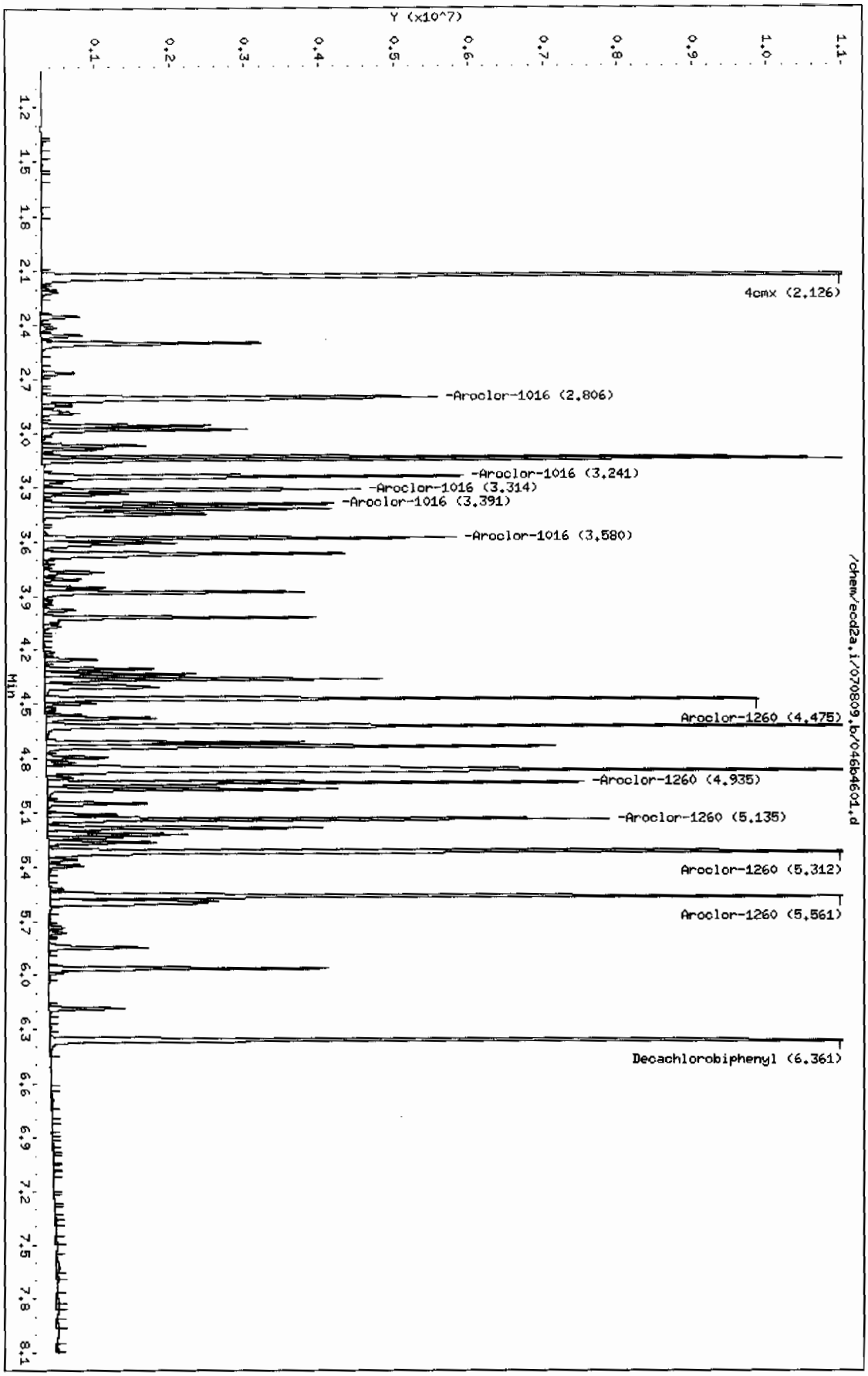
Data File: /chem/ecd2a.i/070809.b/046b4601.d
Date : 08-JUL-2009 16:59
Client ID: AR166005
Sample Info: IWAR090616-60 05
Column phase: CLP2
Instrument: ecd2a.i
Operator: YS1
Column diameter: 0.25
Y (x10^7)
Min
4cmx (2.126)
-Aroclor-1016 (2.806)
-Aroclor-1016 (3.241)
-Aroclor-1016 (3.314)
-Aroclor-1016 (3.391)
-Aroclor-1016 (3.580)
Aroclor-1260 (4.475)
-Aroclor-1260 (4.935)
-Aroclor-1260 (5.135)
Aroclor-1260 (5.312)
Aroclor-1260 (5.561)
Decachlorobiphenyl (6.361)
/chem/ecd2a.i/070809.b/046b4601.d

Page 1

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/20/09 06/20/09

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.80 DCB: 5.63

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/20/09	0918	1.79	5.63
02	AR166001	WAR090616-60	06/20/09	0929	1.80	5.63
03	AR125401	WAR090302-54	06/20/09	0940	1.80	5.63
04	AR124201	WAR090519-42	06/20/09	0951	1.80	5.63
05	AR124801	WAR090521-48	06/20/09	1002	1.80	5.63
06	AR166001	WAR090620-01	06/20/09	1014	1.79	5.63
07	AR166002	WAR090620-02	06/20/09	1026	1.80	5.63
08	AR166003	WAR090620-03	06/20/09	1037	1.80	5.63
09	AR166004	WAR090620-04	06/20/09	1048	1.80	5.63
10	AR166005	IAR090601-01	06/20/09	1059	1.80	5.63
11	AR166001	WAR090616-60	06/20/09	1110	1.80	5.63
12	AR123201	WAR090618-32	06/20/09	1125	1.79	5.63
13	AR122101	WAR090618-21	06/20/09	1136	1.80	5.63
14	AR126201	WAR090608-62	06/20/09	1147	1.80	5.63
15	AR126801	WAR090424-68	06/20/09	1158	1.80	5.63
16	DDTANALOGSTD	WAR090618-DD	06/20/09	1209		
17	PIBLK02	WAR090519-99	06/20/09	1220	1.80	5.63
18	ZZZZZ	ZZZZZ	06/20/09	1231	1.80	5.63
19	ZZZZZ	ZZZZZ	06/20/09	1242	1.80	5.63
20	ZZZZZ	ZZZZZ	06/20/09	1253	1.80	5.63
21	ZZZZZ	ZZZZZ	06/20/09	1304	1.80	5.63
22	ZZZZZ	ZZZZZ	06/20/09	1316	1.80	5.63
23	ZZZZZ	ZZZZZ	06/20/09	1327	1.80	5.63
24	ZZZZZ	ZZZZZ	06/20/09	1338	1.80	5.63
25	ZZZZZ	ZZZZZ	06/20/09	1349	1.80	5.63
26	ZZZZZ	ZZZZZ	06/20/09	1400	1.80	5.63
27	AR166002	WAR090616-60	06/20/09	1411	1.80	5.63
28						
29						
30						
31						
32						

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/20/09 06/20/09

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.13 DCB: 6.36

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090519-99	06/20/09	0918	2.13	6.36
02	AR166001	WAR090616-60	06/20/09	0929	2.13	6.36
03	AR125401	WAR090302-54	06/20/09	0940	2.13	6.36
04	AR124201	WAR090519-42	06/20/09	0951	2.13	6.36
05	AR124801	WAR090521-48	06/20/09	1002	2.13	6.36
06	AR166001	WAR090620-01	06/20/09	1014	2.12	6.36
07	AR166002	WAR090620-02	06/20/09	1026	2.13	6.36
08	AR166003	WAR090620-03	06/20/09	1037	2.13	6.36
09	AR166004	WAR090620-04	06/20/09	1048	2.13	6.36
10	AR166005	IAR090601-01	06/20/09	1059	2.13	6.36
11	AR166001	WAR090616-60	06/20/09	1110	2.13	6.36
12	AR123201	WAR090618-32	06/20/09	1125	2.12	6.36
13	AR122101	WAR090618-21	06/20/09	1136	2.13	6.36
14	AR126201	WAR090608-62	06/20/09	1147	2.13	6.36
15	AR126801	WAR090424-68	06/20/09	1158	2.13	6.36
16	DDTANALOGSTD	WAR090618-DD	06/20/09	1209		
17	PIBLK02	WAR090519-99	06/20/09	1220	2.13	6.36
18	ZZZZZ	ZZZZZ	06/20/09	1231	2.13	6.36
19	ZZZZZ	ZZZZZ	06/20/09	1242	2.13	6.36
20	ZZZZZ	ZZZZZ	06/20/09	1253	2.13	6.36
21	ZZZZZ	ZZZZZ	06/20/09	1304	2.13	6.36
22	ZZZZZ	ZZZZZ	06/20/09	1316	2.13	6.36
23	ZZZZZ	ZZZZZ	06/20/09	1327	2.13	6.36
24	ZZZZZ	ZZZZZ	06/20/09	1338	2.13	6.36
25	ZZZZZ	ZZZZZ	06/20/09	1349	2.13	6.36
26	ZZZZZ	ZZZZZ	06/20/09	1400	2.13	6.36
27	AR166002	WAR090616-60	06/20/09	1411	2.13	6.36
28						
29						
30						
31						
32						

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/20/09 06/20/09

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.80 DCB: 5.63

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090630-99	07/08/09	0812	1.79	5.63
02	AR166001	WAR090616-60	07/08/09	0823	1.80	5.63
03	AR125401	WAR090630-54	07/08/09	0834	1.80	5.63
04	ZZZZZ	ZZZZZ	07/08/09	0845	1.80	5.63
05	AR124801	WAR090521-48	07/08/09	0856	1.80	5.63
06	AR123201	WAR090618-32	07/08/09	0907	1.80	5.63
07	AR122101	WAR090618-21	07/08/09	0918	1.79	5.63
08	AR126201	WAR090608-62	07/08/09	0929	1.80	5.63
09	AR124201	WAR090519-42	07/08/09	0941	1.80	5.63
10	AR126801	WAR090424-68	07/08/09	0952	1.80	5.63
11	DDTANALOGSTD	WAR090618-DD	07/08/09	1003		
12	PBLK02	WAR090630-99	07/08/09	1014	1.80	5.63
13	ZZZZZ	ZZZZZ	07/08/09	1025	1.80	5.63
14	ZZZZZ	ZZZZZ	07/08/09	1036	1.80	5.63
15	ZZZZZ	ZZZZZ	07/08/09	1047	1.80	5.64
16	ZZZZZ	ZZZZZ	07/08/09	1058	1.80	5.64
17	ZZZZZ	ZZZZZ	07/08/09	1109	1.80	5.64
18	ZZZZZ	ZZZZZ	07/08/09	1125	1.80	5.63
19	AR166002	WAR090616-60	07/08/09	1141	1.80	5.63
20	ZZZZZ	ZZZZZ	07/08/09	1156	1.80	5.63
21	ZZZZZ	ZZZZZ	07/08/09	1207	1.80	5.63
22	ZZZZZ	ZZZZZ	07/08/09	1218	1.80	5.63
23	ZZZZZ	ZZZZZ	07/08/09	1230	1.79	5.63
24	ZZZZZ	ZZZZZ	07/08/09	1241		
25	ZZZZZ	ZZZZZ	07/08/09	1253		
26	AR166003	WAR090616-60	07/08/09	1308	1.80	5.63
27	PIBLK04	WAR090630-99	07/08/09	1319	1.80	5.63
28	ZZZZZ	ZZZZZ	07/08/09	1330	1.80	5.63
29	ZZZZZ	ZZZZZ	07/08/09	1341	1.80	5.63
30	ZZZZZ	ZZZZZ	07/08/09	1352	1.80	5.63
31	ZZZZZ	ZZZZZ	07/08/09	1404	1.80	5.63
32	ZZZZZ	ZZZZZ	07/08/09	1415	1.80	5.63

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 06/20/09 06/20/0

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.80 DCB: 5.63

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	ZZZZZ	ZZZZZ	07/08/09	1426	1.80	5.63
02	ZZZZZ	ZZZZZ	07/08/09	1437	1.80	5.63
03	ZZZZZ	ZZZZZ	07/08/09	1452	1.80	5.63
04	AR166004	WAR090616-60	07/08/09	1508	1.79	5.63
05	PIBLK05	WAR090630-99	07/08/09	1519	1.80	5.63
06	PBLK01	1201875340	07/08/09	1530	1.80	5.63
07	PBLK01LCS	1201875343	07/08/09	1541	1.80	5.63
08	CAMO-09-1003	232741008	07/08/09	1553	1.80	5.63
09	CAMO-09-9990	232741009	07/08/09	1604	1.80	5.63
10	ZZZZZ	ZZZZZ	07/08/09	1615	1.80	5.63
11	ZZZZZ	ZZZZZ	07/08/09	1626	1.80	5.63
12	ZZZZZ	ZZZZZ	07/08/09	1637	1.80	5.63
13	ZZZZZ	ZZZZZ	07/08/09	1648	1.79	5.63
14	AR166005	WAR090616-60	07/08/09	1659	1.80	5.63
15	ZZZZZ	ZZZZZ	07/08/09	1710	1.80	5.63
16	ZZZZZ	ZZZZZ	07/08/09	1721	1.81	5.63
17	ZZZZZ	ZZZZZ	07/08/09	1732	1.80	5.63
18	ZZZZZ	ZZZZZ	07/08/09	1743	1.81	5.63
19	ZZZZZ	ZZZZZ	07/08/09	1755	1.80	5.63
20	ZZZZZ	ZZZZZ	07/08/09	1806	1.81	5.63
21	ZZZZZ	ZZZZZ	07/08/09	1817	1.80	5.63
22	ZZZZZ	ZZZZZ	07/08/09	1828	1.80	5.63
23	ZZZZZ	ZZZZZ	07/08/09	1839	1.81	5.63
24	ZZZZZ	ZZZZZ	07/08/09	1850	1.80	5.63
25	ZZZZZ	ZZZZZ	07/08/09	1901	1.80	5.63
26	AR166006	WAR090616-60	07/08/09	1912	1.80	5.63
27	AR166007	WAR090616-60	07/08/09	1923	1.80	5.63
28	ZZZZZ	ZZZZZ	07/08/09	1934	1.81	5.63
29	ZZZZZ	ZZZZZ	07/08/09	1945	1.80	5.63
30	AR166008	WAR090616-60	07/08/09	1956	1.80	5.63
31	PIBLK07	WAR090630-99	07/08/09	2007	1.80	5.63
32	ZZZZZ	ZZZZZ	07/08/09	2019	1.80	5.63

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/20/09 06/20/09

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.13 DCB: 6.36

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090630-99	07/08/09	0812	2.12	6.36
02	AR166001	WAR090616-60	07/08/09	0823	2.13	6.36
03	AR125401	WAR090630-54	07/08/09	0834	2.13	6.36
04	ZZZZZ	ZZZZZ	07/08/09	0845	2.13	6.36
05	AR124801	WAR090521-48	07/08/09	0856	2.13	6.36
06	AR123201	WAR090618-32	07/08/09	0907	2.13	6.36
07	AR122101	WAR090618-21	07/08/09	0918	2.12	6.36
08	AR126201	WAR090608-62	07/08/09	0929	2.13	6.36
09	AR124201	WAR090519-42	07/08/09	0941	2.13	6.36
10	AR126801	WAR090424-68	07/08/09	0952	2.13	6.36
11	DDTANALOGSTD	WAR090618-DD	07/08/09	1003		
12	PIBLK02	WAR090630-99	07/08/09	1014	2.13	6.36
13	ZZZZZ	ZZZZZ	07/08/09	1025	2.13	6.36
14	ZZZZZ	ZZZZZ	07/08/09	1036	2.13	6.36
15	ZZZZZ	ZZZZZ	07/08/09	1047	2.13	6.37
16	ZZZZZ	ZZZZZ	07/08/09	1058	2.13	6.37
17	ZZZZZ	ZZZZZ	07/08/09	1109	2.13	6.37
18	ZZZZZ	ZZZZZ	07/08/09	1125	2.13	6.36
19	AR166002	WAR090616-60	07/08/09	1141	2.13	6.36
20	PIBLK03	WAR090630-99	07/08/09	1156	2.13	6.36
21	ZZZZZ	ZZZZZ	07/08/09	1207	2.13	6.36
22	ZZZZZ	ZZZZZ	07/08/09	1218	2.13	6.36
23	ZZZZZ	ZZZZZ	07/08/09	1230	2.12	6.36
24	ZZZZZ	ZZZZZ	07/08/09	1241		
25	ZZZZZ	ZZZZZ	07/08/09	1253		
26	AR166003	WAR090616-60	07/08/09	1308	2.13	6.36
27	PIBLK04	WAR090630-99	07/08/09	1319	2.13	6.36
28	ZZZZZ	ZZZZZ	07/08/09	1330	2.13	6.36
29	ZZZZZ	ZZZZZ	07/08/09	1341	2.13	6.36
30	ZZZZZ	ZZZZZ	07/08/09	1352	2.13	6.36
31	ZZZZZ	ZZZZZ	07/08/09	1404	2.13	6.36
32	ZZZZZ	ZZZZZ	07/08/09	1415	2.13	6.36

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2524

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 06/20/09 06/20/09

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.13 DCB: 6.36

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	ZZZZZ	ZZZZZ	07/08/09	1426	2.13	6.36
02	ZZZZZ	ZZZZZ	07/08/09	1437	2.13	6.36
03	ZZZZZ	ZZZZZ	07/08/09	1452	2.13	6.36
04	AR166004	WAR090616-60	07/08/09	1508	2.13	6.36
05	PIBLK05	WAR090630-99	07/08/09	1519	2.13	6.36
06	PBLK01	1201875340	07/08/09	1530	2.13	6.36
07	PBLK01LCS	1201875343	07/08/09	1541	2.13	6.36
08	CAMO-09-1003	232741008	07/08/09	1553	2.13	6.36
09	CAMO-09-9990	232741009	07/08/09	1604	2.13	6.36
10	ZZZZZ	ZZZZZ	07/08/09	1615	2.13	6.36
11	ZZZZZ	ZZZZZ	07/08/09	1626	2.13	6.36
12	ZZZZZ	ZZZZZ	07/08/09	1637	2.13	6.36
13	ZZZZZ	ZZZZZ	07/08/09	1648	2.13	6.36
14	AR166005	WAR090616-60	07/08/09	1659	2.13	6.36
15	PIBLK06	WAR090630-99	07/08/09	1710	2.13	6.36
16	ZZZZZ	ZZZZZ	07/08/09	1721	2.13	6.36
17	ZZZZZ	ZZZZZ	07/08/09	1732	2.13	6.36
18	ZZZZZ	ZZZZZ	07/08/09	1743	2.13	6.36
19	ZZZZZ	ZZZZZ	07/08/09	1755	2.13	6.36
20	ZZZZZ	ZZZZZ	07/08/09	1806	2.13	6.36
21	ZZZZZ	ZZZZZ	07/08/09	1817	2.13	6.36
22	ZZZZZ	ZZZZZ	07/08/09	1828	2.13	6.36
23	ZZZZZ	ZZZZZ	07/08/09	1839	2.14	6.36
24	ZZZZZ	ZZZZZ	07/08/09	1850	2.13	6.36
25	ZZZZZ	ZZZZZ	07/08/09	1901	2.13	6.36
26	AR166006	WAR090616-60	07/08/09	1912	2.13	6.36
27	AR166007	WAR090616-60	07/08/09	1923	2.13	6.36
28	ZZZZZ	ZZZZZ	07/08/09	1934	2.13	6.36
29	ZZZZZ	ZZZZZ	07/08/09	1945	2.13	6.36
30	PIBLK08	WAR090616-60	07/08/09	1956	2.13	6.36
31	PIBLK07	WAR090630-99	07/08/09	2007	2.13	6.36
32	ZZZZZ	ZZZZZ	07/08/09	2019	2.13	6.36

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

Identification Summary

SDG Number: 09-2524 **Client ID:** CAMO-09-10031

Lab Sample ID: 232741008

Data File:	040f4001.d	**Data File:**	040b4001.d
Inst:	ECD2A.I_1	**Inst:**	ECD2A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	08-JUL-09 15:53	**Analyzed:**	08-JUL-09 15:53

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1260							12.5
Column 1	1	4.04	4.01 – 4.07	25.7		ug/kg	
	2	4.31	4.28 – 4.34	36.9		ug/kg	
	3	4.48	4.44 – 4.5	42.1		ug/kg	
	4	4.69	4.66 – 4.72	28		ug/kg	
	5	4.88	4.85 – 4.91	38.1		ug/kg	
					34.1		
Column 2	1	4.47	4.44 – 4.5	26.5		ug/kg	
	2	4.93	4.9 – 4.96	37.3		ug/kg	
	3	5.13	5.1 – 5.16	27.5		ug/kg	
	4	5.31	5.28 – 5.34	27.5		ug/kg	
	5	5.56	5.53 – 5.59	31.8		ug/kg	
					30.1		

Identification Summary

SDG Number: 09-2524 **Client ID:** CAMO-09-9990

Lab Sample ID: 232741009

Data File:	041f4101.d	**Data File:**	041b4101.d
Inst:	ECD2A.I_1	**Inst:**	ECD2A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	08-JUL-09 16:04	**Analyzed:**	08-JUL-09 16:04

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1260							11.5
Column 1	1	4.04	4.01 – 4.07	4.8		ug/kg	
	2	4.31	4.28 – 4.34	6.32		ug/kg	
	3	4.48	4.44 – 4.5	7.49		ug/kg	
	4	4.69	4.66 – 4.72	5.17		ug/kg	
	5	4.88	4.85 – 4.91	5.41		ug/kg	
					5.84		
Column 2	1	4.47	4.44 – 4.5	4.59		ug/kg	
	2	4.93	4.9 – 4.96	6.09		ug/kg	
	3	5.13	5.1 – 5.16	5.34		ug/kg	
	4	5.31	5.28 – 5.34	5.17		ug/kg	
	5	5.56	5.53 – 5.59	4.8		ug/kg	
					5.2		

Identification Summary

SDG Number: 09-2524 **Client ID:** LCS for batch 882924

Lab Sample ID: 1201875343

Data File: 039f3901.d **Data File:** 039b3901.d

Inst: ECD2A.I_1 **Inst:** ECD2A.I_2

Column: CLP1 **Column:** CLP2

Analyzed: 08-JUL-09 15:41 **Analyzed:** 08-JUL-09 15:41

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							6.39
Column 1	1	2.3	2.27 – 2.33	26.4		ug/kg	
	2	2.62	2.59 – 2.65	27.5		ug/kg	
	3	2.71	2.68 – 2.74	26.5		ug/kg	
	4	2.85	2.82 – 2.88	27.7		ug/kg	
	5	3	2.97 – 3.03	27.6		ug/kg	
					27.1		
Column 2	1	2.81	2.78 – 2.84	28.3		ug/kg	
	2	3.24	3.21 – 3.27	30.1		ug/kg	
	3	3.31	3.28 – 3.34	28.6		ug/kg	
	4	3.39	3.36 – 3.42	29.2		ug/kg	
	5	3.58	3.55 – 3.61	28.5		ug/kg	
					28.9		
Aroclor-1260							3.07
Column 1	1	4.04	4.01 – 4.07	27.6		ug/kg	
	2	4.31	4.28 – 4.34	33.3		ug/kg	
	3	4.47	4.44 – 4.5	32.2		ug/kg	
	4	4.69	4.66 – 4.72	33		ug/kg	
	5	4.88	4.85 – 4.91	30		ug/kg	
					31.2		
Column 2	1	4.47	4.44 – 4.5	29.3		ug/kg	
	2	4.93	4.9 – 4.96	34.1		ug/kg	
	3	5.13	5.1 – 5.16	32.9		ug/kg	
	4	5.31	5.28 – 5.34	32.4		ug/kg	
	5	5.56	5.53 – 5.59	32.2		ug/kg	
					32.2		

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201875340				
Client Sample:	QC for batch 882924	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882924	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	882941	**Inst:**	ECD2A.I	**Dilution:**	1
Run Date:	07/08/2009 15:30	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/07/2009 23:44	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	038f3801.d	**Column:**	1 CLP1	**Level:**	LOW
	038b3801.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.33	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/038f3801.d
Lab Smp Id: 1201875340 Client Smp ID: PBLK01
Inj Date : 08-JUL-2009 15:30
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |1201875340|1|
Misc Info : |ECD82P_1SF|882941|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 09-Jul-2009 11:41 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 38 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2524.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.796	1.796	0.000	7095153	122.760	4.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.629	5.628	0.001	8537844	155.745	5.2	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/070809.b/038f3801.d
Date : 08-JUL-2009 15:30
Client ID: PBLK01
Sample Info: |120187534011|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd2a.i

Operator: YS1
Column diameter: 0.25

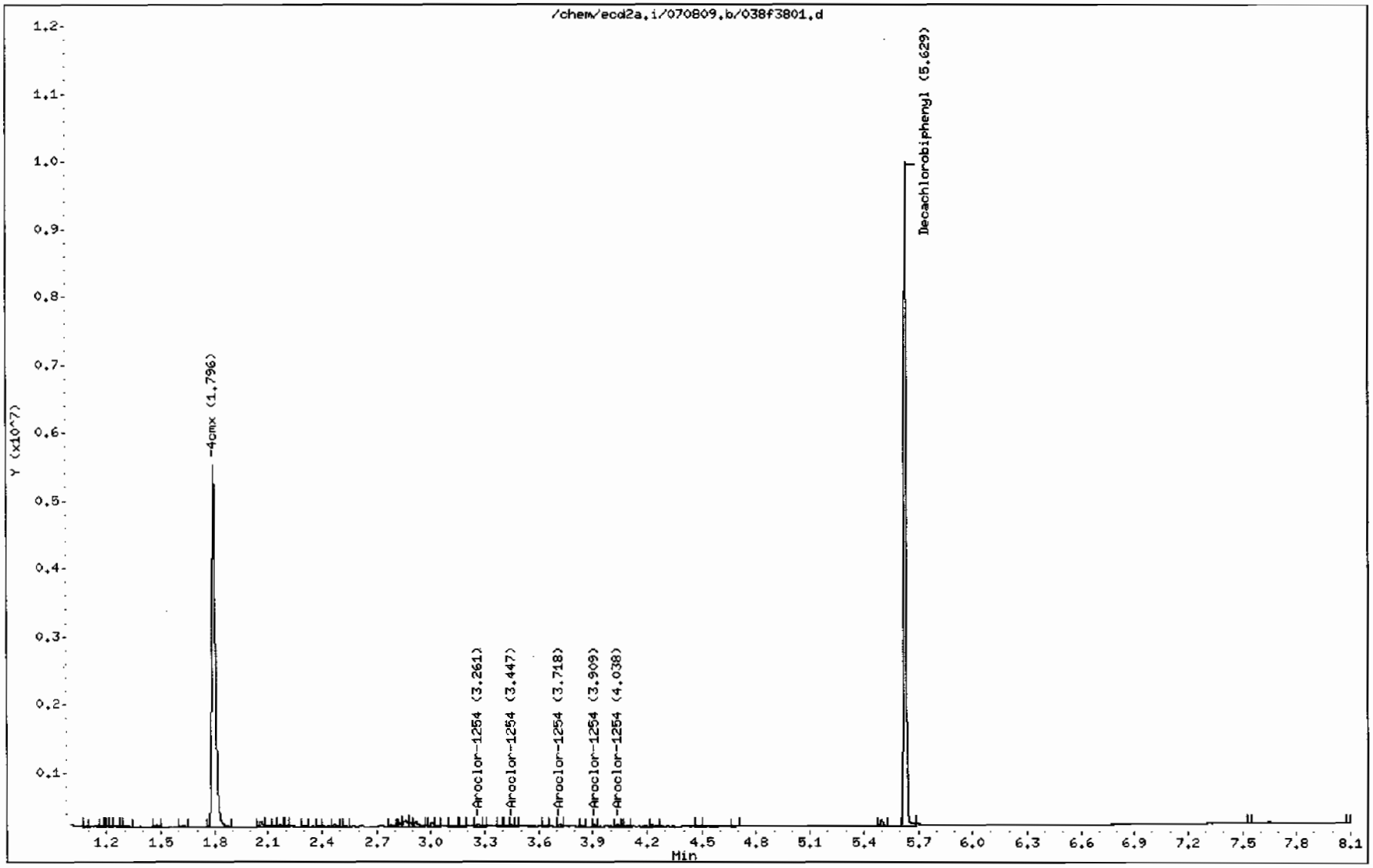

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/038b3801.d
Lab Smp Id: 1201875340 Client Smp ID: PBLK01
Inj Date : 08-JUL-2009 15:30
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |1201875340|1|
Misc Info : |ECD82P_1SF|882941|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 09-Jul-2009 11:41 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 38 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2524.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.126	2.126	0.000	22395346	134.403	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.361	6.359	0.002	24891290	159.430	5.3	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/070809.b/038b3801.d
Date : 08-JUL-2009 15:30
Client ID: PBLK01
Sample Info: 1120187534011
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd2a.i
Operator: YS1
Column diameter: 0.25

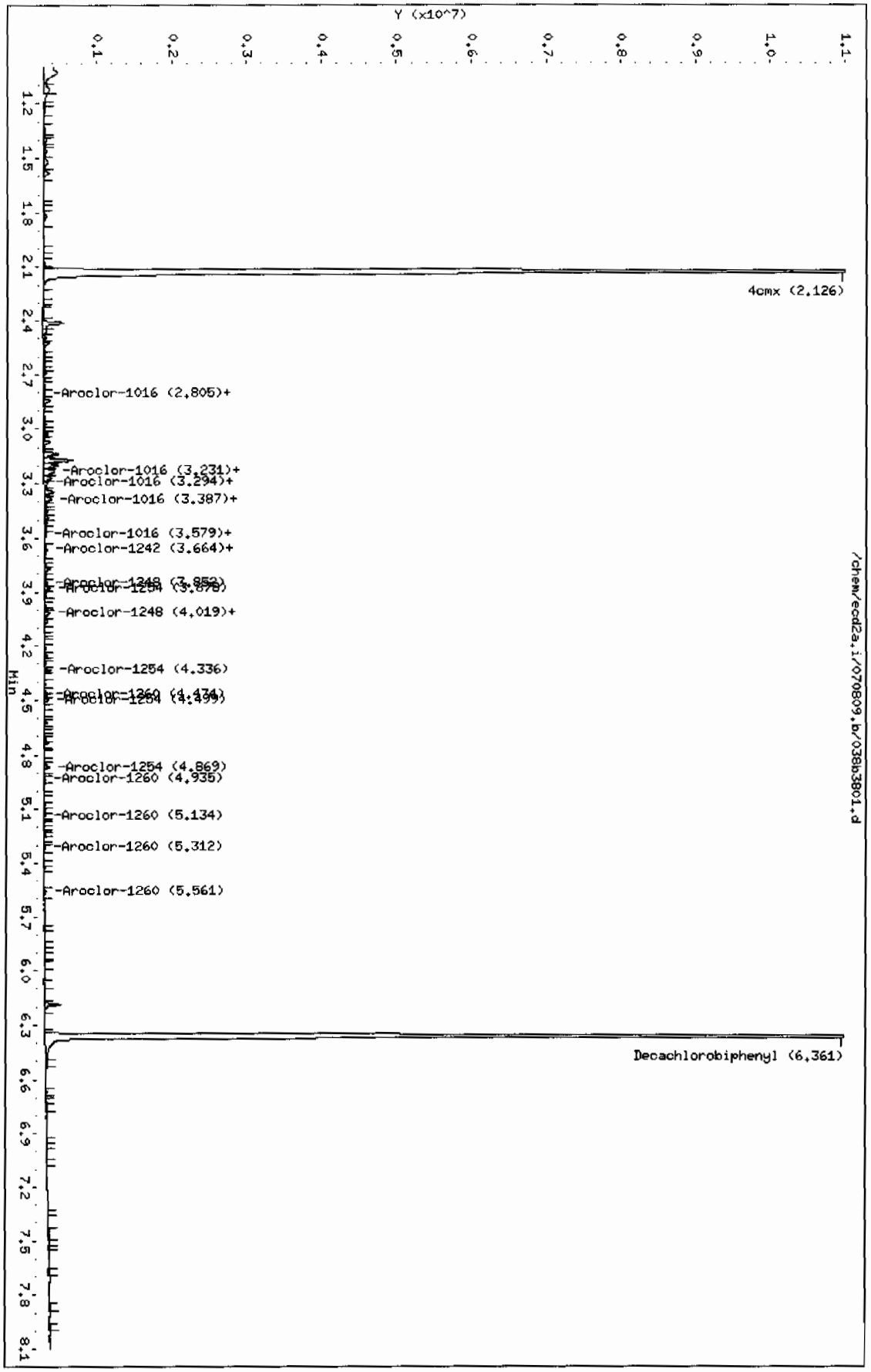

Page 1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2524			**Matrix:**	SOIL
Lab Sample ID:	1201875343				
Client Sample:	QC for batch 882924	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882924	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	882941	**Inst:**	ECD2A.I	**Dilution:**	1
Run Date:	07/08/2009 15:41	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/07/2009 23:44	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	039f3901.d	**Column:**	1 CLP1	**Level:**	LOW
	039b3901.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		28.9	ug/kg	1.11	3.33	2
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260		32.2	ug/kg	1.11	3.33	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/039f3901.d
Lab Smp Id: 1201875343 Client Smp ID: PBLK01LCS
Inj Date : 08-JUL-2009 15:41
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |1201875343|1|
Misc Info : |ECD82P_1SF|882941|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-F-8082-060309.m
Meth Date : 09-Jul-2009 11:41 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008f0801.d
Als bottle: 39 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2524.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.795	1.796	-0.001	8298988	143.589	4.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.630	5.628	0.002	8843289	161.317	5.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.300	2.300	0.000	1624807	790.935	26.4	80.00- 120.00	100.00
2.623	2.624	-0.001	2368018	823.818	27.5	123.51- 163.51	145.74
2.715	2.714	0.001	1419270	794.820	26.5	67.19- 107.19	87.35
2.850	2.849	0.001	779320	832.519	27.8	25.37- 65.37	47.96

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.000	3.000	0.000	1117409	829.083	27.6	45.49- 85.49	68.77
Average of Peak Concentrations =					27.1		
7 Aroclor-1260					CAS #: 11096-82-5		
4.038	4.037	0.001	3405835	827.688	27.6	80.00- 120.00	100.00
4.309	4.309	0.000	2151471	1000.11	33.3	30.40- 70.40	63.17
4.475	4.474	0.001	2152447	965.075	32.2	32.95- 72.95	63.20
4.686	4.686	0.000	5371534	989.314	33.0	111.13- 151.13	157.72
4.876	4.875	0.001	2549751	899.095	30.0	47.93- 87.93	74.86
Average of Peak Concentrations =					31.2		

Data File: /chem/ecd2a.i/070809.b/039f3901.d
Date : 08-JUL-2009 15:41
Client ID: PBLK01LCS
Sample Info: |1201875343|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd2a.i
Operator: YS1
Column diameter: 0.25

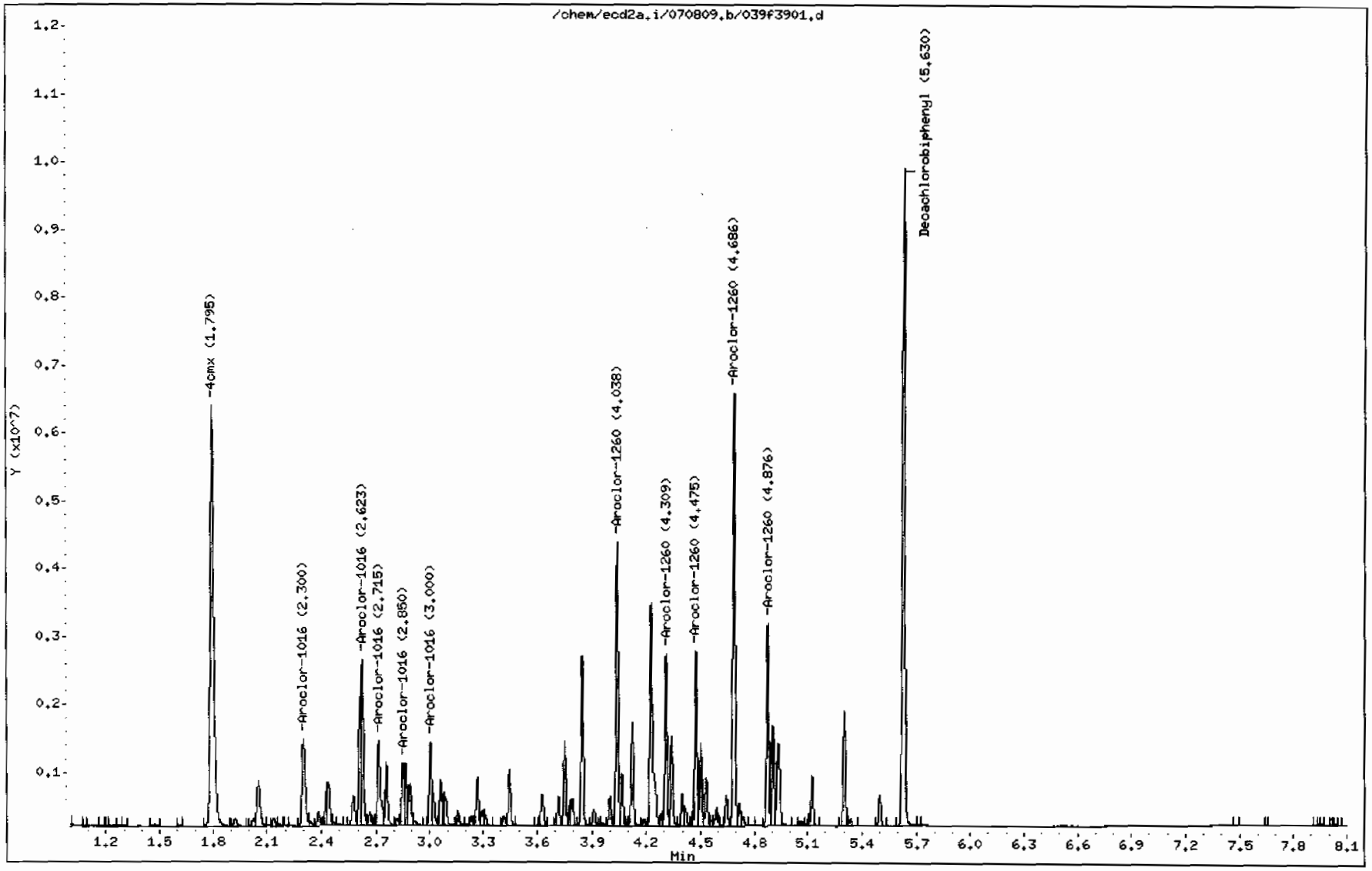

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/070809.b/039b3901.d
Lab Smp Id: 1201875343 Client Smp ID: PBLK01LCS
Inj Date : 08-JUL-2009 15:41
Operator : YS1 Inst ID: ecd2a.i
Smp Info : |1201875343|1|
Misc Info : |ECD82P_1SF|882941|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd2a.i/070809.b/ECD2-B-8082-060309.m
Meth Date : 09-Jul-2009 11:41 yip00818 Quant Type: ESTD
Cal Date : 06-JUL-2009 12:24 Cal File: 008b0801.d
Als bottle: 39 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2524.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.125	2.126	-0.001	26272863	157.673	5.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.360	6.359	0.001	25494133	163.292	5.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.805	2.805	0.000	4904703	849.984	28.3	80.00- 120.00	100.00
3.240	3.240	0.000	4220615	901.653	30.0	61.25- 101.25	86.05
3.312	3.313	-0.001	2488245	859.299	28.6	30.48- 70.48	50.73
3.390	3.390	0.000	2408422	874.610	29.2	27.22- 67.22	49.10

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.578	3.578	0.000	3241165	854.238	28.5	45.71- 85.71	66.08
Average of Peak Concentrations =					28.9		
7 Aroclor-1260					CAS #: 11096-82-5		
4.474	4.473	0.001	6508838	880.502	29.4	80.00- 120.00	100.00
4.934	4.934	0.000	6217339	1023.36	34.1	57.40- 97.40	95.52
5.135	5.134	0.001	6459178	988.087	32.9	61.25- 101.25	99.24
5.312	5.311	0.001	15456381	970.635	32.4	175.45- 215.45	237.47
5.560	5.559	0.001	10766191	964.729	32.2	113.15- 153.15	165.41
Average of Peak Concentrations =					32.2		

Data File: /chem/ecd2a.i/070809.b/039b3901.d
Date : 08-JUL-2009 15:41
Client ID: PBLK01LCS
Sample Info: |1201875343|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd2a.i
Operator: YS1
Column diameter: 0.25

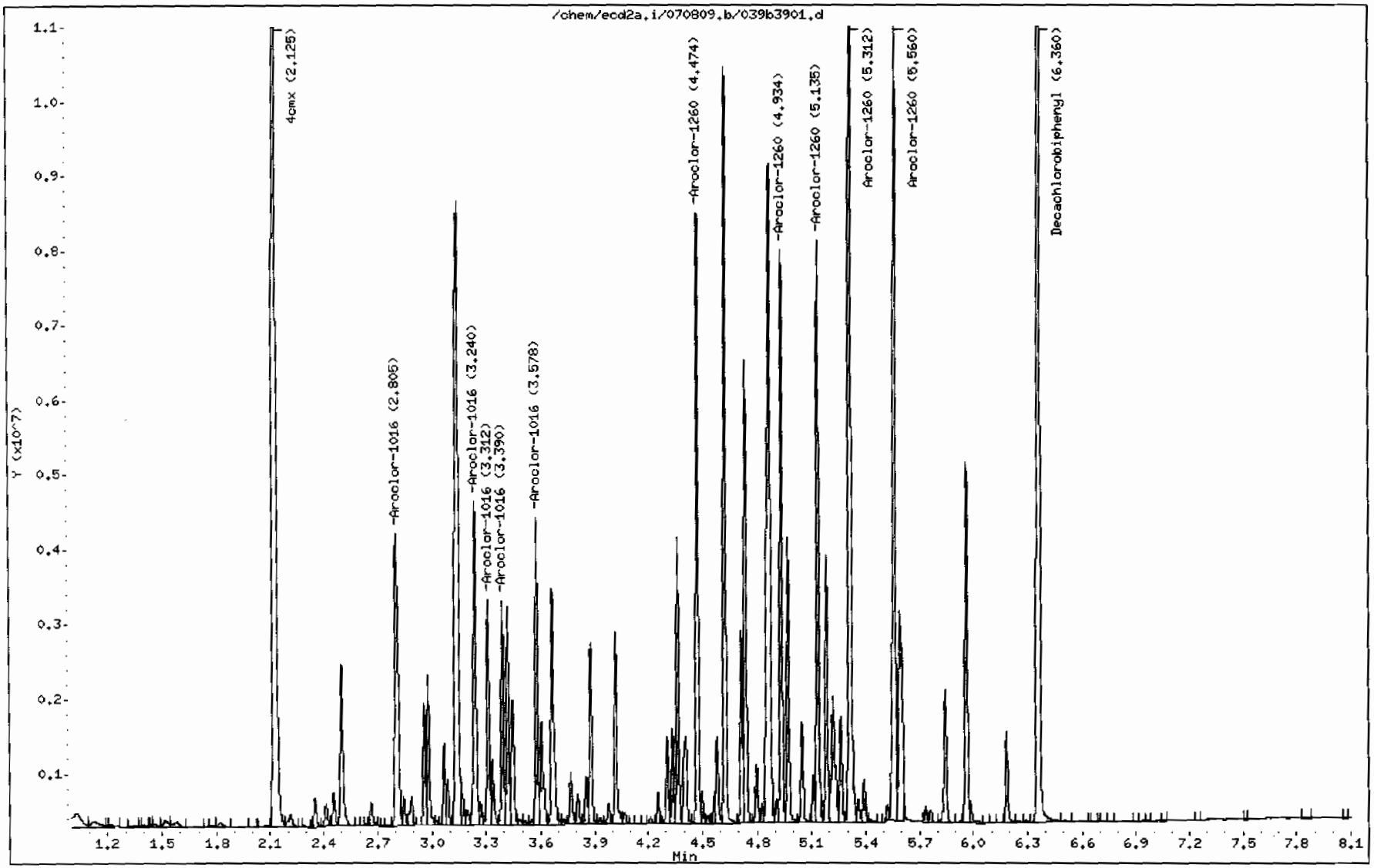

MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD2

DATE: 06/20/2009 METHOD: ECD2-F-8082-060309.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:CY613
ALUMINA LOT:090409-A
COPPER LOT:090324-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: Injection Volume: 1.0 uL

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090519-99IB1	JAOC	20-JUN-2009 09:18		062009	1.0		CLEAN
002f0201.d	WAR090616-60 1	JAOC	20-JUN-2009 09:29		062009	1.0		DUSE
003f0301.d	WAR090302-54	JAOC	20-JUN-2009 09:40		062009	1.0		PASSES BOTH COLUMNS
004f0401.d	WAR090519-42	JAOC	20-JUN-2009 09:51		062009	1.0		PASSES BOTH COLUMNS
005f0501.d	WAR090521-48	JAOC	20-JUN-2009 10:02		062009	1.0		PASSES BOTH COLUMNS
006f0601.d	WAR090620-01 60	JAOC	20-JUN-2009 10:14		062009	1.0		1660 LEVEL 1
007f0701.d	WAR090620-02 60	JAOC	20-JUN-2009 10:26		062009	1.0		1660 LEVEL 2
008f0801.d	WAR090620-03 60	JAOC	20-JUN-2009 10:37		062009	1.0		1660 LEVEL 3
009f0901.d	WAR090620-04 60	JAOC	20-JUN-2009 10:48		062009	1.0		1660 LEVEL 4
010f1001.d	IAR090601-01 60	JAOC	20-JUN-2009 10:59		062009	1.0		1660 LEVEL 5
011f1101.d	WAR090616-60 1	JAOC	20-JUN-2009 11:10		062009	1.0		PASSES BOTH COLUMNS
012f1201.d	WAR090618-32	JAOC	20-JUN-2009 11:25		062009	1.0		PATTERN ONLY
013f1301.d	WAR090618-21	JAOC	20-JUN-2009 11:36		062009	1.0		PATTERN ONLY
014f1401.d	WAR090608-62	JAOC	20-JUN-2009 11:47		062009	1.0		PATTERN ONLY
015f1501.d	WAR090424-68	JAOC	20-JUN-2009 11:58		062009	1.0		PATTERN ONLY

Instrument Batch: /chem/ecd2a.i/062009.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	WAR090618-DDT	JAOC	20-JUN-2009 12:09		062009	1.0		DDT

017f1701.d	WAR090519-99IB2	JAOC	20-JUN-2009 12:20		062009		1.0	CLEAN
018f1801.d	1201864053	JAOC	20-JUN-2009 12:31	878120	231436		1.0	QC A	UPLOAD BOTH, USE HIGHER
019f1901.d	1201864054	JAOC	20-JUN-2009 12:42	878120	231436		1.0	QC A	UPLOAD BOTH, USE HIGHER
020f2001.d	231436001	JAOC	20-JUN-2009 12:53	878120	231436		1.0	LANL	UPLOAD BOTH, USE HIGHER
021f2101.d	231436004	JAOC	20-JUN-2009 13:04	878120	231436		1.0	LANL	UPLOAD BOTH, USE HIGHER
022f2201.d	231436008	JAOC	20-JUN-2009 13:16	878120	231436		5.0	LANL	UPLOAD BOTH, USE HIGHER
023f2301.d	231890003	JAOC	20-JUN-2009 13:27	878120	231890		1.0	LANL	UPLOAD BOTH, USE HIGHER
024f2401.d	1201864055	JAOC	20-JUN-2009 13:38	878120	231890		1.0	QC A	UPLOAD BOTH, USE HIGHER
025f2501.d	1201864056	JAOC	20-JUN-2009 13:49	878120	231890		1.0	QC A	UPLOAD BOTH, USE HIGHER
026f2601.d	231890004	JAOC	20-JUN-2009 14:00	878120	231890		1.0	LANL	UPLOAD BOTH, USE HIGHER
027f2701.d	WAR090616-60 2	JAOC	20-JUN-2009 14:11		062009		1.0	PASSES BOTH COLUMNS

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD2

DATE: 07/09/2009 METHOD: ECD2-F-8082-060309.m OPERATOR:YS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:CY613
ALUMINA LOT:1134110-A
COPPER LOT:090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number: Injection Volume: 1.0 uL

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090630-99IB1	YS1	08-JUL-2009 08:12		070809	1.0		CLEAN
002f0201.d	WAR090616-60 1	YS1	08-JUL-2009 08:23		070809	1.0		PASSED ON BOTH COLUMNS
003f0301.d	WAR090630-54	YS1	08-JUL-2009 08:34		070809	1.0		PASSED ON BOTH COLUMNS
004f0401.d	WAR090519-42	YS1	08-JUL-2009 08:45	1242	070809	1.0	CVS	USE RR FILE9
005f0501.d	WAR090521-48	YS1	08-JUL-2009 08:56	1248	070809	1.0	CVS	PASSED ON BOTH COLUMNS
006f0601.d	WAR090618-32	YS1	08-JUL-2009 09:07	1232	070809	1.0	CVS	PATTERN ONLY
007f0701.d	WAR090618-21	YS1	08-JUL-2009 09:18		070809	1.0		PASSED ON BOTH COLUMNS
008f0801.d	WAR090608-62	YS1	08-JUL-2009 09:29		070809	1.0		PATTERN ONLY
009f0901.d	WAR090519-42	YS1	08-JUL-2009 09:41		070809	1.0		PASSED ON BOTH COLUMNS
010f1001.d	WAR090424-68	YS1	08-JUL-2009 09:52		070809	1.0		PATTERN ONLY
011f1101.d	WAR090618-DDT	YS1	08-JUL-2009 10:03		070809	1.0		DDT ANALOG STANDARD
012f1201.d	WAR090630-99IB2	YS1	08-JUL-2009 10:14		070809	1.0		CLEAN
013f1301.d	1201876860	YS1	08-JUL-2009 10:25	SOLV	SP3430	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
014f1401.d	1201876861	YS1	08-JUL-2009 10:36	883017	SP3430	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
015f1501.d	232701001	YS1	08-JUL-2009 10:47	883017	SP3430	20.0	ORNL	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecd2a.i/070809.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	1201876862	YS1	08-JUL-2009 10:58	883017	SP3430	20.0	QQC A	UPLOAD BOTH COLUMNS, USE HIGHER

017f1701.d	1201876863	YS1	08-JUL-2009 11:09	883017	SP3430		20.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
018f1801.d	232701002	YS1	08-JUL-2009 11:25	883017	SP3430		20.0	ORNL	UPLOAD BOTH COLUMNS, USE HIGHER
019f1901.d	WAR090616-60 02	YS1	08-JUL-2009 11:41	883017	883016		1.0		PASSED ON BOTH COLUMNS
020f2001.d	WAR090630-99 03	YS1	08-JUL-2009 11:56	1660	070809		1.0		CLEAN
021f2101.d	232279001	YS1	08-JUL-2009 12:07	883236	232279		25.0	MECP	UPLOAD BOTH COLUMNS, USE HIGHER
022f2201.d	232279002110	YS1	08-JUL-2009 12:18	883236	232279		10.0	MECP	UPLOAD BOTH COLUMNS, USE HIGHER
023f2301.d	232279003	YS1	08-JUL-2009 12:30	883236	232279		25.0	MECP	UPLOAD BOTH COLUMNS, USE HIGHER
024f2401.d	232279004	YS1	08-JUL-2009 12:41	883236	232279		250.0	MECP	UPLOAD BOTH COLUMNS, USE HIGHER
025f2501.d	232279005	YS1	08-JUL-2009 12:53	883236	232279		250.0	MECP	UPLOAD BOTH COLUMNS, USE HIGHER
026f2601.d	WAR090616-60 03	YS1	08-JUL-2009 13:08	1660	070809		1.0	CVS	PASSED ON BOTH COLUMNS
027f2701.d	WAR090630-99 04	YS1	08-JUL-2009 13:19	SOLV	070809		1.0	IB	CLEAN
028f2801.d	1201875443	YS1	08-JUL-2009 13:30	882970	232668H		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
029f2901.d	1201875446	YS1	08-JUL-2009 13:41	882970	232668H		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
030f3001.d	232668019	YS1	08-JUL-2009 13:52	882970	232668H		5.0	SSFL	UPLOAD BOTH COLUMNS, USE HIGHER
031f3101.d	232668020	YS1	08-JUL-2009 14:04	882970	232668H		1.0	SSFL	UPLOAD BOTH COLUMNS, USE HIGHER
032f3201.d	232668021	YS1	08-JUL-2009 14:15	882970	232668H		1.0	SSFL	UPLOAD BOTH COLUMNS, USE HIGHER
033f3301.d	232668022	YS1	08-JUL-2009 14:26	882970	232668H		5.0	SSFL	UPLOAD BOTH COLUMNS, USE HIGHER
034f3401.d	1201875444	YS1	08-JUL-2009 14:37	882970	232668H		5.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
035f3501.d	1201875445	YS1	08-JUL-2009 14:52	882970	232668H		5.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecd2a.i/070809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	WAR090616-60 04	YS1	08-JUL-2009 15:08	1660	070809	1.0	CVS	PASSED ON BOTH COLUMNS
037f3701.d	WAR090630-99 05	YS1	08-JUL-2009 15:19	SOLV	070809	1.0	IB	CLEAN
038f3801.d	1201875340	YS1	08-JUL-2009 15:30	882941	09-2524	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
039f3901.d	1201875343	YS1	08-JUL-2009 15:41	882941	09-2524	1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
040f4001.d	232741008	YS1	08-JUL-2009 15:53	882941	09-2524	5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
041f4101.d	232741009	YS1	08-JUL-2009 16:04	882941	09-2524	1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER

042f4201.d	232846001	YS1	08-JUL-2009 16:15	882941	09-2546		5.0	LANL	DUSE RE RESULT DOES NOT MATCH WITH MS
043f4401.d	1201875341	YS1	08-JUL-2009 16:26	882941	09-2546		5.0	QC A	DUSE RE
044f4401.d	1201875342	YS1	08-JUL-2009 16:37	882941	09-2546		5.0	QC A	DUSE RE
045f4501.d	232846002	YS1	08-JUL-2009 16:48	882941	09-2546		5.0	LANL	DUSE RE
046f4601.d	WAR090616-60 05	YS1	08-JUL-2009 16:59	1660	070809		1.0	CVS	PASSED ON BOTH COLUMNS
047f4701.d	WAR090630-99 06	YS1	08-JUL-2009 17:10	SOLV	070809		1.0	IB	CLEAN
048f4801.d	1201870968	YS1	08-JUL-2009 17:21	882730	232138		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
049f4901.d	1201874887	YS1	08-JUL-2009 17:32	882730	232138		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
050f5001.d	1201874888	YS1	08-JUL-2009 17:43	882730	232138		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
051f5101.d	232138001	YS1	08-JUL-2009 17:55	882730	232138		1.0	BBES	UPLOAD BOTH COLUMNS, USE HIGHER
052f5201.d	1201874889	YS1	08-JUL-2009 18:06	882730	232138		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
053f5301.d	1201874890	YS1	08-JUL-2009 18:17	882730	232138		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
054f5401.d	232138002	YS1	08-JUL-2009 18:28	882730	232138		1.0	BBES	UPLOAD BOTH COLUMNS, USE HIGHER
055f5501.d	232138003	YS1	08-JUL-2009 18:39	882730	232138		1.0	BBES	UPLOAD BOTH COLUMNS, USE HIGHER
056f5601.d	232138004	YS1	08-JUL-2009 18:50	882730	232138		1.0	BBES	UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecd2a.i/070809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
057f5701.d	232138005	YS1	08-JUL-2009 19:01	882730	232138	1.0	BBES	UPLOAD BOTH COLUMNS, USE HIGHER
058f5801.d	WAR090616-60 06	YS1	08-JUL-2009 19:12	1660	070809	1.0	CVS	PASSED ON BOTH COLUMNS
059f5901.d	WAR090616-60 07	YS1	08-JUL-2009 19:23		070809	1.0		PASSED ON BOTH COLUMNS
060f6001.d	232138006	YS1	08-JUL-2009 19:34	882730	232138	1.0	BBES	UPLOAD BOTH COLUMNS, USE HIGHER
061f6101.d	232138007	YS1	08-JUL-2009 19:45	882730	232138	1.0	BBES	UPLOAD BOTH COLUMNS, USE HIGHER
062f6201.d	WAR090616-60 08	YS1	08-JUL-2009 19:56	1660	070809	1.0	CVS	PASSED ON BOTH COLUMNS
063f6301.d	WAR090630-99 07	YS1	08-JUL-2009 20:07	SOLV	070809	1.0	IB	CLEAN
064f6401.d	1201875927	YS1	08-JUL-2009 20:19	883141	070809	1.0	QC A	DUSE REPORT FROM 090809-608
065f6501.d	1201875930	YS1	08-JUL-2009 20:34	883141		1.0	QC A	DUSE REPORT FROM 090809-608

066f6601.d	232916011	YS1	08-JUL-2009 20:50	883141	232916		1.0	BJCO	DUSE REPORT FROM 090809-608
067f6701.d	1201875928	YS1	08-JUL-2009 21:06	883141			1.0	QC A	DUSE REPORT FROM 090809-608
068f6801.d	1201875929	YS1	08-JUL-2009 21:21	883141			1.0	QC A	DUSE REPORT FROM 090809-608
069f6901.d	1201875936	YS1	08-JUL-2009 21:37	883147	232925		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
070f7001.d	1201875939	YS1	08-JUL-2009 21:53	883147	232925		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
071f7101.d	232925009	YS1	08-JUL-2009 22:09	883147	232925		1.0	ORNL	UPLOAD BOTH COLUMNS, USE HIGHER
072f7201.d	1201875937	YS1	08-JUL-2009 22:24	883147	232925		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
073f7301.d	1201875938	YS1	08-JUL-2009 22:40	883147	232925		1.0	QC A	UPLOAD BOTH COLUMNS, USE HIGHER
074f7401.d	WAR090616-60 09	YS1	08-JUL-2009 22:56	1660	070809		1.0	CVS	PASSED ON BOTH COLUMNS
075f7501.d	WAR090630-99 08	YS1	08-JUL-2009 23:07	SOLV	070809		1.0	IB	CLEAN

Instrument Batch: /chem/ecd2a.i/070809.b

Page: 4

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 882924 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201875340 MB	07-JUL-2009 23:44:17	30	H2SO4/KMn2		2	9	1	0.03333
1201875343 LCS	07-JUL-2009 23:44:17	30	H2SO4/KMn2		2	9	1	0.03333
232741008	07-JUL-2009 23:44:17	30	H2SO4/KMn2		2	9	1	0.03333
232741009	07-JUL-2009 23:44:17	30.02	H2SO4/KMn2		2	9	1	0.03331
232846001	07-JUL-2009 23:44:17	30	H2SO4/KMn2		2	9	1	0.03333
1201875341 MS (232846001)	07-JUL-2009 23:44:17	30	H2SO4/KMn2		2	9	1	0.03333
1201875342 MSD (232846001)	07-JUL-2009 23:44:17	30.05	H2SO4/KMn2		2	9	1	0.03328
232846002	07-JUL-2009 23:44:17	30.05	H2SO4/KMn2		2	9	1	0.03328

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201875343	PCB Laboratory Control	WE090624-07	1	mL
MS	1201875341	PCB Laboratory Control	WE090624-07	1	mL
MSD	1201875342	PCB Laboratory Control	WE090624-07	1	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE090619-14	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	1:1 sulfuric acid	1133264a	5	mL
REGNT	All	Hexane	1149624-B2	150	mL
REGNT	All	5% Potassium Permanganate	B1133159-F	5	mL
SOURC	All	SODIUM SULFATE	1149626	30	g

Comments:

Clean up Date: 07/07/09

Clean up Initials: NBP

Verified By: AAW

Final Solvent: Hexane

Clean Up SOP: GL-OA-E-037

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2523

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2523
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-9950	R	6/29/2009	
		2	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		2	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		2	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		2	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2523

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	2	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		2	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		2	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
		2	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2523

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2523C

REQUEST NUMBER: 09-2523

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9956	1	GLASS	8290	Ice	R
CAMO-09-9956	2	GLASS	8290	Ice	R
CAMO-09-9950	1	GLASS	8290	Ice	R
CAMO-09-9950	2	GLASS	8290	Ice	R
CAMO-09-9952	1	GLASS	8290	Ice	R
CAMO-09-9952	2	GLASS	8290	Ice	R
CAMO-09-9958	1	GLASS	8290	Ice	R
CAMO-09-9958	2	GLASS	8290	Ice	R
CAMO-09-9957	1	GLASS	8290	Ice	R
CAMO-09-9957	2	GLASS	8290	Ice	R
CAMO-09-9951	1	GLASS	8290	Ice	R
CAMO-09-9951	2	GLASS	8290	Ice	R
CAMO-09-10031	1	GLASS	8290	Ice	R
CAMO-09-10031	2	GLASS	8290	Ice	R
CAMO-09-9990	1	GLASS	8290	Ice	R
CAMO-09-9990	2	GLASS	8290	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00			
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9950

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	OBT4	Fill
TIME COLLECTED (HH:MM)		12:18	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	4.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+ N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown fill with cobbles & concrete

(FD: CAMO-09-10031)

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) 14, (5) of 50 building 001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 5 dpm

β/γ 674 dpm

PID Ambient / Reading = 0.0 / 0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.29.09 1617	(Printed Name) Sheri Sherwood	6/29/09 4:30
(Signature) A. Goumas		(Signature) Sheri Sherwood	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9951

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBt3
TIME COLLECTED (HH:MM)		1243	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	4.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	5.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Dry indurated Purple/brown tuff w/ lithics

SAMPLE COMMENTS: interface @ 4.5' bgs

LOCATION DESC: 50-004(a) - 14 (5) of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 10$ dpm

$\beta/\gamma \leq 879$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gonzales **REVIEWED BY (PRINT)** J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales (Signature) A. Gonzales	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	4/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9952

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Qbt3
TIME COLLECTED (HH:MM)		1202	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	9.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	10.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: ND

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+ N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Gray/brown indurated tuff w/ lithics

FTB: CAMO-09-10014

SAMPLE COMMENTS: Advance w/ Power auger sample w/ hand auger @ 9.5' bgs

LOCATION DESC: 50-004(a)-14 (S) of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

<< 33 dpm

β/γ < 742 dpm

PID Ambient / Reading = 0.0 / 0.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.29.09 1617	(Printed Name) Sherri Sherwood	6/29/09 4:30
(Signature) A. Goumas		(Signature) Sherri Sherwood	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9956

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	9.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	AG 6.29.09 ~~10~~ 10.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	~~0~~ S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown crushed tuff fill w/ cobbles

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) 16 (5) of bldg 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 22 dpm

β/γ ≤ 722 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	4/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9957

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Qbt3
TIME COLLECTED (HH:MM)		1510	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	10.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	11.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Purple/gray indurated tuff

FR: CAMO-09-10025

SAMPLE COMMENTS: Interface @ 10.0' bgs

LOCATION DESC: 50-004(a)-16, South of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 28 dpm

β/γ ≤ 1022 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6-29-09	(Printed Name) Sherri Sherwood	6/29/09
(Signature) [signature]	1517	(Signature) Sherri Sherwood	4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9958

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		1541	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	H.A.
LOCATION ID:	MO-605462	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	15.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	16.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Grey / Purple, indurated, slightly moist tuff.

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 50-004(a)-00-16 (5) of bldg. 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 39$ dpm

$\beta/\gamma \leq 606$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch (Signature) [signature]	6/29/09 1617	(Printed Name) Sherri Sherwood (Signature) [signature]	6/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9990

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		J.B ~~1000~~ 0930	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	H.A.
LOCATION ID:	MO-605473	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	✓
TOP DEPTH:	0	3.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	4.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Regular~~ 15-Day J.B 8/29/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	✓	✓

SAMPLE DESC: Brown/Purple, indurated, wet tuff

SAMPLE COMMENTS: S/T interface @ 3.0' bgs. Saturation zone encountered @ ~~4.0'~~ 3.0' bgs. Final depth not collected to avoid contamination from saturation zone. J.B 8/29/09

LOCATION DESC: 50-004(a)-00-11

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 16$ dpm

$\beta/\gamma \leq 1049$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/29/09 1617	(Printed Name) Sheni Sherwood	4/29/09 4:30
(Signature) [signature]		(Signature) Sherwood, Sheni	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10014

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1302	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	M0-605460	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA (AG 6.29.09) BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package

SAMPLE DESC: QC Sample of CAMO-09-9952

SAMPLE COMMENTS: none

LOCATION DESC: 50-004(a)-14

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gaumer

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gaumer (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 1730
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10025

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1518	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	mo605462	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	Full Data Package
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-9958

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) - 16

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) [signature]	6/29/09 4:30
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10031

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	OBT4	Fill
TIME COLLECTED (HH:MM)		12:18	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	UNK	MO-605460	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	4.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	16-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C+~~8082~~ 8270C/PAH	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: QC Sample of CAMO-09-9950

Brown Fill with cobbles & concrete

SAMPLE COMMENTS: None

LOCATION DESC: 50-004-84, (5) of building 01 @ 50

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 5 dpm

β/γ ≤ 674 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gaumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gaumas (Signature) A. Gaumas	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 4:30

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-9990
-9950 → 9952
-9956 → 9958
-10031

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10014
-10025

Reason: QC of Samples.

Print Last Name Branch Signature [signature] Date 6/29/09

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00078	Request or PO Number:	
Client Sample ID:	CAMO-09-9990	ARS Sample ID:	ARS2-09-00078-001
Sample Collection Date:	06/29/09 09:30	Date Received:	06/30/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/30/09 14:55

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	QUAL	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	63.53	79.39	121.29	79.77	U	pCi/g	EPA 900.0M	6/30/2009	ME	N/A
GROSS BETA	51.75	17.38	19.29	18.50		pCi/g	EPA 900.0M	6/30/2009	ME	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
K-40	-0.87	-11.06	2.22	-11.06	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CO-60	0.00	0.15	0.09	0.15	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CS-134	0.16	0.13	0.07	0.13	SI	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CS-137	-0.01	11.97	0.06	11.97	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
EU-152	0.00	9.51	0.11	9.51	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
PB-212	1.11	0.40	0.11	0.40		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
RA 228	1.24	0.51	0.24	0.51		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
U-235	1.10	0.54	0.14	0.54		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
U-238	2.81	3.60	1.50	3.65		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
AM-241	0.36	0.28	0.09	0.28		pCi/g	EPA 901.1M	6/30/2009	ME	N/A

NOTES: % Moisture: 2.31

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5123-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2523 VALIDATION DATE: 07/28/09 LAB CODE: ALTC

CONTRACT LABORATORY NAME: Vista Analytical Laboratory

VALIDATOR: Monica Dymerski ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☒ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The retention time for OCDD was outside the -1 to +3 second window when compared to 13C-OCDD for sample CAMO-09-9951. Inspection of raw data indicated this was due to a chromatographic anomaly; thus, the sample result was not qualified, based on professional judgment.
2. The 2,3,7,8-TCDF results for samples -9956 and -10031 were detects; however, the results were not confirmed on a second column nor was TCDF GC resolution data provided. Thus, the associated sample results were qualified U,DF8c.
3. It should be noted that the samples were not analyzed within thirty days of the ICAL. No sample data were qualified as a result.
4. The ICV %D was >20% with a positive bias for 1,2,3,4,7,8-HxCDD. All associated sample results were NDs and, thus, were not qualified.

DATA VALIDATION COVER SHEET

5123-1

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Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

5. It should be noted that ICV standards are not available for 13C-OCDF and 13C-1,2,3,4-TCDF, which are used in the quantitation of OCDF; 13C-2,3,7,8-TCDF; 13C-1,2,3,7,8-PeCDF and 13C-2,3,4,7,8-PECDF. Thus, ICV %Ds could not be evaluated for these compounds. No sample data were qualified as a result.
6. It should be noted that laboratory ion abundance limits were used for the evaluation of the PeCDD compounds since the laboratory uses an alternate ion for these masses sue to interferences.
7. It should be noted that MS/MSD analyses were not performed with the samples. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/29/09

VALIDATOR'S SIGNATURE: DATE: 07/28/09

Form 5123-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☒	☐	☐	1. The IS retention time and qualitative criteria for target compound identification were not met.	R, DF0	R, DF0
☐	☒	☐	2. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF0b	R, DF0b
☐	☒	☐	3. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF1d	R, DF1d
☐	☒	☐	4. The sample result is ≤5 times the concentration of the related analyte in the method blank.	N/A	U, DF4
☐	☒	☐	5. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, DF4a
☐	☐	☒	6. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	N/A	U, DF4d
☐	☒	☐	7. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF4e	R, DF4e
☐	☒	☐	8. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, DF7	J, DF7
☐	☒	☐	9. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria.	UJ, R, DF7a	J, DF7a
☐	☒	☐	10. The affected analytes were analyzed with an out of range ion abundance in the initial calibration and/or CCV.	R, DF7b	R, DF7b
☒	☐	☐	11. The ICV and/or CCV were recovered outside the method specific limits.	UJ, R, DF7c	J, R, DF7c
☐	☒	☐	12. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, DF7d	J, DF7d

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, DF7f	R, DF7f
☐	☒	☐	14. The affected analyte is considered rejected because the ion abundances did not meet specifications.	N/A	R, DF8
☐	☒	☐	15. The ion abundance documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF8a	R, DF8a
☐	☒	☐	16. If GC column performance was not evaluated at the required frequency or if method criteria were not met, qualify all associated detects as J and all associated non-detects as UJ.	UJ, DF8b	J, DF8b
☒	☐	☐	17. If 2, 3, 7, 8-TCDF was detected in a sample and the result was not confirmed on a second column with successful analysis of the GC column performance mix, qualify all associated detects as U.	N/A	U, DF8c
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, DF9	J-, DF9
☐	☒	☐	19. The holding time was >2 times the applicable holding time requirement.	R, DF9a	J-, DF9a
☐	☒	☐	20. The LCS percent recovery was <10%.	R, DF12	J-, DF12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, DF12a	J-, DF12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, DF12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12c	R, DF12c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST

5123-2

Dioxin/Furan Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	24. The MS/MSD percent recovery was <10%.	R, DF12d	R, DF12d
☐	☐	☒	25. The MS/MSD percent recovery was >10% but <70%.	UJ, DF12e	J, DF12e
☐	☐	☒	26. The MS/MSD percent recovery was >70%	N/A	J+, DF12f
☐	☐	☒	27. The MS/MSD relative percent difference was >30%.	UJ, DF12g	J, DF12g
☐	☒	☐	28. The fortification sample percent recovery was <10%.	R, DF12h	J-, DF12h
☐	☒	☐	29. The fortification sample percent recovery was <40% but >10%	UJ, DF12i	J-, DF12i
☐	☒	☐	30. The fortification sample percent recovery was >135%.	N/A	J+, DF12j
☐	☒	☐	31. The fortification sample documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, DF12k	R, DF12k
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytes identified due to matrix interference.	R, DF15	UJ, DF15
☐	☒	☐	33. Sample clean-up was not performed. If run log notations, spectral data and/or internal standard or labeled compound recoveries indicate interferences and extract cleanup was not performed, qualify all associated detects as J and all non-detects as UJ.	RJ, DF15a	J, DF15a
☐	☒	☐	34. The instrument performance sample did not pass method acceptance criteria.	R, DF16	R, DF16
☐	☒	☐	35. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, DF16c	R, DF16c

DIOXIN/FURAN ANALYTICAL DATA VALIDATION CHECKLIST	
5123-2 **Dioxin/Furan Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	36. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, DF19	J, R, DR19
☐	☒	☐	37. Duplicate, dilution, or reanalysis.	UJ, DF88	J, DF88

Sample ID: CAMO-09-9950 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-001	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.3 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	87.0	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1218						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0595		
1,2,3,7,8-PeCDD	ND	0.140		
1,2,3,4,7,8-HxCDD	ND	0.508		
1,2,3,6,7,8-HxCDD	ND	0.524		
1,2,3,7,8,9-HxCDD	ND	0.496		
1,2,3,4,6,7,8-HpCDD	12.5			
OCDD	136			
2,3,7,8-TCDF	ND	0.0890		
1,2,3,7,8-PeCDF	ND	0.0939		
2,3,4,7,8-PeCDF	ND	0.101		
1,2,3,4,7,8-HxCDF	ND	0.224		
1,2,3,6,7,8-HxCDF	ND	0.235		
2,3,4,6,7,8-HxCDF	ND	0.306		
1,2,3,7,8,9-HxCDF	ND	0.364		
1,2,3,4,6,7,8-HpCDF	1.50			J
1,2,3,4,7,8,9-HpCDF	ND	0.283		
OCDF	6.79			

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	89.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	86.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	76.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	90.8	40 - 135	
	13C-OCDD	91.4	40 - 135	
	13C-2,3,7,8-TCDF	92.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.2	40 - 135	
	13C-2,3,4,7,8-PeCDF	88.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	90.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	77.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	74.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	83.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	72.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	90.6	40 - 135	
	13C-OCDF	83.9	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	90.5	40 - 135	

Totals			
Total TCDD	ND	0.0595	
Total PeCDD	ND	0.140	
Total HxCDD	1.93		
Total HpCDD	21.8		
Total TCDF	0.216		0.378
Total PeCDF	0.583		
Total HxCDF	1.29		1.52
Total HpCDF	5.17		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.283

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

MLD 07/28/09

Sample ID: CAMO-09-9951 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-002	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.1 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	90.1	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1243						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0552		
1,2,3,7,8-PeCDD	ND	0.128		
1,2,3,4,7,8-HxCDD	ND	0.358		
1,2,3,6,7,8-HxCDD	ND	0.356		
1,2,3,7,8,9-HxCDD	ND	0.343		
1,2,3,4,6,7,8-HpCDD	1.51			J
OCDD	15.3			
2,3,7,8-TCDF	ND	0.0557		
1,2,3,7,8-PeCDF	ND	0.0820		
2,3,4,7,8-PeCDF	ND	0.0869		
1,2,3,4,7,8-HxCDF	ND	0.155		
1,2,3,6,7,8-HxCDF	ND	0.161		
2,3,4,6,7,8-HxCDF	ND	0.200		
1,2,3,7,8,9-HxCDF	ND	0.262		
1,2,3,4,6,7,8-HpCDF	ND	0.322		
1,2,3,4,7,8,9-HpCDF	ND	0.328		
OCDF	0.690			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	103	40 - 135	
	13C-1,2,3,7,8-PeCDD	100	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	99.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	86.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	105	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	106	40 - 135	
	13C-1,2,3,7,8-PeCDF	105	40 - 135	
	13C-2,3,4,7,8-PeCDF	99.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	102	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	92.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.0	40 - 135	
	13C-OCDF	93.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	96.1	40 - 135	

Totals		
Total TCDD	ND	0.0552
Total PeCDD	ND	0.128
Total HxCDD	ND	0.352
Total HpCDD	2.85	
Total TCDF	ND	0.0557
Total PeCDF	ND	0.0844
Total HxCDF	ND	0.194
Total HpCDF	ND	0.325

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0311

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

MLD 07/28/09

Sample ID: **CAMO-09-9952** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-003	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.1 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	89.9	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1302						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0568		
1,2,3,7,8-PeCDD	ND	0.134		
1,2,3,4,7,8-HxCDD	ND	0.398		
1,2,3,6,7,8-HxCDD	ND	0.403		
1,2,3,7,8,9-HxCDD	ND	0.386		
1,2,3,4,6,7,8-HpCDD	ND	0.583		
OCDD	3.22			J
2,3,7,8-TCDF	ND	0.0583		
1,2,3,7,8-PeCDF	ND	0.0744		
2,3,4,7,8-PeCDF	ND	0.0789		
1,2,3,4,7,8-HxCDF	ND	0.175		
1,2,3,6,7,8-HxCDF	ND	0.193		
2,3,4,6,7,8-HxCDF	ND	0.218		
1,2,3,7,8,9-HxCDF	ND	0.292		
1,2,3,4,6,7,8-HpCDF	ND	0.284		
1,2,3,4,7,8,9-HpCDF	ND	0.291		
OCDF	ND	0.194		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	101	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	96.8	40 - 135	
	13C-OCDD	92.8	40 - 135	
	13C-2,3,7,8-TCDF	101	40 - 135	
	13C-1,2,3,7,8-PeCDF	102	40 - 135	
	13C-2,3,4,7,8-PeCDF	95.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	97.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	80.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	91.4	40 - 135	
	13C-OCDF	85.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	95.3	40 - 135	

Totals		
Total TCDD	ND	0.0568
Total PeCDD	ND	0.134
Total HxCDD	ND	0.396
Total HpCDD	ND	0.583
Total TCDF	ND	0.0583
Total PeCDF	ND	0.0766
Total HxCDF	ND	0.220
Total HpCDF	ND	0.288

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.00322**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

MLD 07/28/09

Sample ID: CAMO-09-9956 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-004	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.6 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	85.6	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1500						

Analyte	Conc. (pg/g)		DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.0604		
1,2,3,7,8-PeCDD	ND		0.144		
1,2,3,4,7,8-HxCDD	ND		0.367		
1,2,3,6,7,8-HxCDD	ND		0.388		
1,2,3,7,8,9-HxCDD	ND		0.363		
1,2,3,4,6,7,8-HpCDD	3.44				
OCDD	24.3				
2,3,7,8-TCDF	0.146	U,DF8c			J
1,2,3,7,8-PeCDF	ND		0.0836		
2,3,4,7,8-PeCDF	ND		0.0923		
1,2,3,4,7,8-HxCDF	0.281				J
1,2,3,6,7,8-HxCDF	ND		0.169		
2,3,4,6,7,8-HxCDF	ND		0.206		
1,2,3,7,8,9-HxCDF	ND		0.248		
1,2,3,4,6,7,8-HpCDF	0.756				J
1,2,3,4,7,8,9-HpCDF	ND		0.274		
OCDF	2.18				J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	88.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	84.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	76.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	92.9	40 - 135	
	13C-OCDD	94.0	40 - 135	
	13C-2,3,7,8-TCDF	93.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	93.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	87.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	75.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	74.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	84.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	75.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	86.8	40 - 135	
	13C-OCDF	85.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	97.4	40 - 135	

Totals			
Total TCDD	ND	0.0604	
Total PeCDD	ND	0.144	
Total HxCDD	0.520		
Total HpCDD	7.55		
Total TCDF	0.282		
Total PeCDF	0.538		0.711
Total HxCDF	0.738		0.935
Total HpCDF	1.81		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.111

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

MLD 07/28/09

Sample ID: CAMO-09-9957 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-005	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.0 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	90.5	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1510						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0607		
1,2,3,7,8-PeCDD	ND	0.108		
1,2,3,4,7,8-HxCDD	ND	0.409		
1,2,3,6,7,8-HxCDD	ND	0.393		
1,2,3,7,8,9-HxCDD	ND	0.386		
1,2,3,4,6,7,8-HpCDD	0.968			J
OCDD	8.37			
2,3,7,8-TCDF	ND	0.0625		
1,2,3,7,8-PeCDF	ND	0.0658		
2,3,4,7,8-PeCDF	ND	0.0687		
1,2,3,4,7,8-HxCDF	ND	0.146		
1,2,3,6,7,8-HxCDF	ND	0.162		
2,3,4,6,7,8-HxCDF	ND	0.194		
1,2,3,7,8,9-HxCDF	ND	0.256		
1,2,3,4,6,7,8-HpCDF	ND	0.262		
1,2,3,4,7,8,9-HpCDF	ND	0.287		
OCDF	0.383			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	99.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	107	40 - 135	
	13C-OCDD	106	40 - 135	
	13C-2,3,7,8-TCDF	102	40 - 135	
	13C-1,2,3,7,8-PeCDF	98.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	94.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	100	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	92.9	40 - 135	
	13C-OCDF	93.7	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	92.3	40 - 135	

Totals		
Total TCDD	ND	0.0607
Total PeCDD	ND	0.108
Total HxCDD	ND	0.396
Total HpCDD	0.968	
Total TCDF	ND	0.0625
Total PeCDF	ND	0.0672
Total HxCDF	ND	0.190
Total HpCDF	ND	0.274

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0184

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

MLD 07/28/09

Sample ID: CAMO-09-9958 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-006	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.0 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	90.2	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1541						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0586		
1,2,3,7,8-PeCDD	ND	0.150		
1,2,3,4,7,8-HxCDD	ND	0.464		
1,2,3,6,7,8-HxCDD	ND	0.466		
1,2,3,7,8,9-HxCDD	ND	0.447		
1,2,3,4,6,7,8-HpCDD	2.29			J
OCDD	20.1			
2,3,7,8-TCDF	ND	0.0729		
1,2,3,7,8-PeCDF	ND	0.0722		
2,3,4,7,8-PeCDF	ND	0.0849		
1,2,3,4,7,8-HxCDF	ND	0.181		
1,2,3,6,7,8-HxCDF	ND	0.203		
2,3,4,6,7,8-HxCDF	ND	0.253		
1,2,3,7,8,9-HxCDF	ND	0.307		
1,2,3,4,6,7,8-HpCDF	ND	0.290		
1,2,3,4,7,8,9-HpCDF	ND	0.329		
OCDF	0.690			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	100	40 - 135	
	13C-1,2,3,7,8-PeCDD	93.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	97.7	40 - 135	
	13C-OCDD	105	40 - 135	
	13C-2,3,7,8-TCDF	99.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	103	40 - 135	
	13C-2,3,4,7,8-PeCDF	92.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	100	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	85.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	84.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	91.8	40 - 135	
	13C-OCDF	91.6	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.0	40 - 135	

Totals			
Total TCDD	ND	0.0586	
Total PeCDD	ND	0.150	
Total HxCDD	ND	0.459	
Total HpCDD	2.29		3.96
Total TCDF	ND	0.0729	
Total PeCDF	ND	0.0786	
Total HxCDF	ND	0.236	
Total HpCDF	ND		0.330

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0437

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

MLD 07/28/09

Sample ID: CAMO-09-9990 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-007	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	12.1 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	81.9	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	0930						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0520		
1,2,3,7,8-PeCDD	ND	0.113		
1,2,3,4,7,8-HxCDD	ND	0.434		
1,2,3,6,7,8-HxCDD	ND	0.446		
1,2,3,7,8,9-HxCDD	ND	0.424		
1,2,3,4,6,7,8-HpCDD	ND	0.573		
OCDD	1.48			J
2,3,7,8-TCDF	ND	0.0515		
1,2,3,7,8-PeCDF	ND	0.0565		
2,3,4,7,8-PeCDF	ND	0.0633		
1,2,3,4,7,8-HxCDF	ND	0.169		
1,2,3,6,7,8-HxCDF	ND	0.175		
2,3,4,6,7,8-HxCDF	ND	0.213		
1,2,3,7,8,9-HxCDF	ND	0.281		
1,2,3,4,6,7,8-HpCDF	ND	0.332		
1,2,3,4,7,8,9-HpCDF	ND	0.366		
OCDF	ND	0.184		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	98.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	98.7	40 - 135	
	13C-OCDD	97.5	40 - 135	
	13C-2,3,7,8-TCDF	102	40 - 135	
	13C-1,2,3,7,8-PeCDF	101	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	97.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	83.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	91.3	40 - 135	
	13C-OCDF	87.7	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	90.2	40 - 135	

Totals			
Total TCDD	ND	0.0520	
Total PeCDD	ND	0.113	
Total HxCDD	ND	0.435	
Total HpCDD	ND	0.573	
Total TCDF	ND		0.0972
Total PeCDF	ND	0.0599	
Total HxCDF	ND	0.210	
Total HpCDF	ND	0.349	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.00148

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

MLD 07/28/09

Sample ID: CAMO-09-10031 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-008	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.4 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	87.6	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1218						

Analyte	Conc. (pg/g)		DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.0626		
1,2,3,7,8-PeCDD	ND			0.236	
1,2,3,4,7,8-HxCDD	ND			0.540	
1,2,3,6,7,8-HxCDD	0.786				J
1,2,3,7,8,9-HxCDD	0.675				J
1,2,3,4,6,7,8-HpCDD	22.1				
OCDD	206				
2,3,7,8-TCDF	0.152	U,DF8c			J
1,2,3,7,8-PeCDF	ND		0.0865		
2,3,4,7,8-PeCDF	ND		0.101		
1,2,3,4,7,8-HxCDF	ND		0.200		
1,2,3,6,7,8-HxCDF	ND		0.222		
2,3,4,6,7,8-HxCDF	ND		0.280		
1,2,3,7,8,9-HxCDF	ND		0.342		
1,2,3,4,6,7,8-HpCDF	3.33				
1,2,3,4,7,8,9-HpCDF	ND		0.346		
OCDF	8.94				

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	97.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	100	40 - 135	
	13C-1,2,3,7,8-PeCDF	106	40 - 135	
	13C-2,3,4,7,8-PeCDF	93.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	102	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.7	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.3	40 - 135	
	13C-OCDF	94.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.7	40 - 135	

Totals	
Total TCDD	0.111
Total PeCDD	ND 0.236
Total HxCDD	5.91 6.45
Total HpCDD	40.9
Total TCDF	0.592
Total PeCDF	0.816 1.25
Total HxCDF	3.31
Total HpCDF	8.60

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.631

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:20

MLD 07/28/09

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2523C

REQUEST NUMBER: 09-2523

31853

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9956	1	GLASS	8290	Ice	R
CAMO-09-9956	2	GLASS	8290	Ice	R
CAMO-09-9950	1	GLASS	8290	Ice	R
CAMO-09-9950	2	GLASS	8290	Ice	R
CAMO-09-9952	1	GLASS	8290	Ice	R
CAMO-09-9952	2	GLASS	8290	Ice	R
CAMO-09-9958	1	GLASS	8290	Ice	R
CAMO-09-9958	2	GLASS	8290	Ice	R
CAMO-09-9957	1	GLASS	8290	Ice	R
CAMO-09-9957	2	GLASS	8290	Ice	R
CAMO-09-9951	1	GLASS	8290	Ice	R
CAMO-09-9951	2	GLASS	8290	Ice	R
CAMO-09-10031	1	GLASS	8290	Ice	R
CAMO-09-10031	2	GLASS	8290	Ice	R
CAMO-09-9990	1	GLASS	8290	Ice	R
CAMO-09-9990	2	GLASS	8290	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00	B. Benedict Bettina Benedict	7/2/09	0956
Printed Name Signature			Printed Name Signature	BdB 7/2/09	
Printed Name Signature			Printed Name Signature		
Printed Name Signature			Printed Name Signature		

Received for DISPOSAL By:	Date	Time	Remarks:
Printed Name Signature			

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2523

31853

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on: 2.0°C
LANL Request Number:09-2523
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-9950	R	6/29/2009	
		2	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		2	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		2	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		2	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2523

31853

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	2	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		2	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		2	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
		2	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2523

Vista
Analytical Laboratory

July 07, 2009

Vista Project I.D.: 31853

Mr. Keith Greene
Los Alamos National Laboratory
ER Sample Management Office
TA-3, Building 271, DP O1-U
Los Alamos, NM 87545

Dear Mr. Greene,

Enclosed are the results for the eight soil samples received at Vista Analytical Laboratory on July 02, 2009 under your Project Name "09-2523". These samples were extracted and analyzed using EPA Method 8290 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

FVR

Martha M. Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Vista

Section I: Sample Inventory Report

Date Received: **7/2/2009**

Vista Lab. ID	Client Sample ID
31853-001	CAMO-09-9950
31853-002	CAMO-09-9951
31853-003	CAMO-09-9952
31853-004	CAMO-09-9956
31853-005	CAMO-09-9957
31853-006	CAMO-09-9958
31853-007	CAMO-09-9990
31853-008	CAMO-09-10031

SECTION II

Vista

Method Blank **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2218	Lab Sample:	0-MB001
Sample Size:	10.0 g	Date Extracted:	5-Jul-09	Date Analyzed DB-5:	6-Jul-09
				Date Analyzed DB-225:	NA

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0400		
1,2,3,7,8-PeCDD	ND	0.126		
1,2,3,4,7,8-HxCDD	ND	0.152		
1,2,3,6,7,8-HxCDD	ND	0.142		
1,2,3,7,8,9-HxCDD	ND	0.142		
1,2,3,4,6,7,8-HpCDD	ND	0.308		
OCDD	ND	0.177		
2,3,7,8-TCDF	ND	0.0439		
1,2,3,7,8-PeCDF	ND	0.0420		
2,3,4,7,8-PeCDF	ND	0.0498		
1,2,3,4,7,8-HxCDF	ND	0.0722		
1,2,3,6,7,8-HxCDF	ND	0.0755		
2,3,4,6,7,8-HxCDF	ND	0.0984		
1,2,3,7,8,9-HxCDF	ND	0.116		
1,2,3,4,6,7,8-HpCDF	ND	0.196		
1,2,3,4,7,8,9-HpCDF	ND	0.206		
OCDF	ND	0.130		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	98.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	92.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	90.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	81.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	97.1	40 - 135	
	13C-OCDD	98.9	40 - 135	
	13C-2,3,7,8-TCDF	96.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	105	40 - 135	
	13C-2,3,4,7,8-PeCDF	89.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	83.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	93.1	40 - 135	
	13C-OCDF	91.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	93.1	40 - 135	

Totals		
Total TCDD	ND	0.0400
Total PeCDD	ND	0.126
Total HxCDD	ND	0.145
Total HpCDD	ND	0.308
Total TCDF	ND	0.0439
Total PeCDF	ND	0.0459
Total HxCDF	ND	0.0905
Total HpCDF	ND	0.201

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

Vista

OPR Results **EPA Method 8290**

Matrix:	Soil	QC Batch No.:	2218	Lab Sample:	0-OPR001
Sample Size:	10.0 g	Date Extracted:	5-Jul-09	Date Analyzed DB-5:	6-Jul-09
				Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits
2,3,7,8-TCDD	10.0	8.87	7 - 13
1,2,3,7,8-PeCDD	50.0	45.1	35 - 65
1,2,3,4,7,8-HxCDD	50.0	44.9	35 - 65
1,2,3,6,7,8-HxCDD	50.0	45.3	35 - 65
1,2,3,7,8,9-HxCDD	50.0	47.9	35 - 65
1,2,3,4,6,7,8-HpCDD	50.0	43.8	35 - 65
OCDD	100	87.5	70 - 130
2,3,7,8-TCDF	10.0	8.25	7 - 13
1,2,3,7,8-PeCDF	50.0	41.0	35 - 65
2,3,4,7,8-PeCDF	50.0	40.2	35 - 65
1,2,3,4,7,8-HxCDF	50.0	43.1	35 - 65
1,2,3,6,7,8-HxCDF	50.0	43.1	35 - 65
2,3,4,6,7,8-HxCDF	50.0	43.8	35 - 65
1,2,3,7,8,9-HxCDF	50.0	45.2	35 - 65
1,2,3,4,6,7,8-HpCDF	50.0	44.8	35 - 65
1,2,3,4,7,8,9-HpCDF	50.0	45.9	35 - 65
OCDF	100	88.1	70 - 130

	Labeled Standard	%R	LCL-UCL	Qualifier
IS	13C-2,3,7,8-TCDD	102	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	97.5	40 - 135	
	13C-OCDD	95.2	40 - 135	
	13C-2,3,7,8-TCDF	97.6	40 - 135	
	13C-1,2,3,7,8-PeCDF	108	40 - 135	
	13C-2,3,4,7,8-PeCDF	93.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	104	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	88.5	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	81.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	97.5	40 - 135	
	13C-OCDF	89.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	91.6	40 - 135	

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

Vista

Sample ID: CAMO-09-9950 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-001	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.3 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	87.0	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1218						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0595		
1,2,3,7,8-PeCDD	ND	0.140		
1,2,3,4,7,8-HxCDD	ND	0.508		
1,2,3,6,7,8-HxCDD	ND	0.524		
1,2,3,7,8,9-HxCDD	ND	0.496		
1,2,3,4,6,7,8-HpCDD	12.5			
OCDD	136			
2,3,7,8-TCDF	ND	0.0890		
1,2,3,7,8-PeCDF	ND	0.0939		
2,3,4,7,8-PeCDF	ND	0.101		
1,2,3,4,7,8-HxCDF	ND	0.224		
1,2,3,6,7,8-HxCDF	ND	0.235		
2,3,4,6,7,8-HxCDF	ND	0.306		
1,2,3,7,8,9-HxCDF	ND	0.364		
1,2,3,4,6,7,8-HpCDF	1.50			J
1,2,3,4,7,8,9-HpCDF	ND	0.283		
OCDF	6.79			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	89.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	86.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	76.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	90.8	40 - 135	
	13C-OCDD	91.4	40 - 135	
	13C-2,3,7,8-TCDF	92.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	97.2	40 - 135	
	13C-2,3,4,7,8-PeCDF	88.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	90.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	77.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	74.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	83.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	72.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	90.6	40 - 135	
	13C-OCDF	83.9	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	90.5	40 - 135	

Totals			
Total TCDD	ND	0.0595	
Total PeCDD	ND	0.140	
Total HxCDD	1.93		
Total HpCDD	21.8		
Total TCDF	0.216		0.378
Total PeCDF	0.583		
Total HxCDF	1.29		1.52
Total HpCDF	5.17		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.283

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

Vista

Sample ID: **CAMO-09-9951** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-002	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.1 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	90.1	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1243						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0552		
1,2,3,7,8-PeCDD	ND	0.128		
1,2,3,4,7,8-HxCDD	ND	0.358		
1,2,3,6,7,8-HxCDD	ND	0.356		
1,2,3,7,8,9-HxCDD	ND	0.343		
1,2,3,4,6,7,8-HpCDD	1.51			J
OCDD	15.3			
2,3,7,8-TCDF	ND	0.0557		
1,2,3,7,8-PeCDF	ND	0.0820		
2,3,4,7,8-PeCDF	ND	0.0869		
1,2,3,4,7,8-HxCDF	ND	0.155		
1,2,3,6,7,8-HxCDF	ND	0.161		
2,3,4,6,7,8-HxCDF	ND	0.200		
1,2,3,7,8,9-HxCDF	ND	0.262		
1,2,3,4,6,7,8-HpCDF	ND	0.322		
1,2,3,4,7,8,9-HpCDF	ND	0.328		
OCDF	0.690			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	103	40 - 135	
	13C-1,2,3,7,8-PeCDD	100	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	99.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	86.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	105	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	106	40 - 135	
	13C-1,2,3,7,8-PeCDF	105	40 - 135	
	13C-2,3,4,7,8-PeCDF	99.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	102	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	92.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.0	40 - 135	
	13C-OCDF	93.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	96.1	40 - 135	

Totals		
Total TCDD	ND	0.0552
Total PeCDD	ND	0.128
Total HxCDD	ND	0.352
Total HpCDD	2.85	
Total TCDF	ND	0.0557
Total PeCDF	ND	0.0844
Total HxCDF	ND	0.194
Total HpCDF	ND	0.325

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0311

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

Vista

Sample ID: **CAMO-09-9952** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-003	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.1 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	89.9	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1302						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0568		
1,2,3,7,8-PeCDD	ND	0.134		
1,2,3,4,7,8-HxCDD	ND	0.398		
1,2,3,6,7,8-HxCDD	ND	0.403		
1,2,3,7,8,9-HxCDD	ND	0.386		
1,2,3,4,6,7,8-HpCDD	ND	0.583		
OCDD	3.22			J
2,3,7,8-TCDF	ND	0.0583		
1,2,3,7,8-PeCDF	ND	0.0744		
2,3,4,7,8-PeCDF	ND	0.0789		
1,2,3,4,7,8-HxCDF	ND	0.175		
1,2,3,6,7,8-HxCDF	ND	0.193		
2,3,4,6,7,8-HxCDF	ND	0.218		
1,2,3,7,8,9-HxCDF	ND	0.292		
1,2,3,4,6,7,8-HpCDF	ND	0.284		
1,2,3,4,7,8,9-HpCDF	ND	0.291		
OCDF	ND	0.194		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	101	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	96.8	40 - 135	
	13C-OCDD	92.8	40 - 135	
	13C-2,3,7,8-TCDF	101	40 - 135	
	13C-1,2,3,7,8-PeCDF	102	40 - 135	
	13C-2,3,4,7,8-PeCDF	95.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	97.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	80.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	91.4	40 - 135	
	13C-OCDF	85.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	95.3	40 - 135	

Totals		
Total TCDD	ND	0.0568
Total PeCDD	ND	0.134
Total HxCDD	ND	0.396
Total HpCDD	ND	0.583
Total TCDF	ND	0.0583
Total PeCDF	ND	0.0766
Total HxCDF	ND	0.220
Total HpCDF	ND	0.288

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.00322**

a. Sample specific estimated detection limit

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

Vista

Sample ID: **CAMO-09-9956** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-004	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.6 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	85.6	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1500						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0604		
1,2,3,7,8-PeCDD	ND	0.144		
1,2,3,4,7,8-HxCDD	ND	0.367		
1,2,3,6,7,8-HxCDD	ND	0.388		
1,2,3,7,8,9-HxCDD	ND	0.363		
1,2,3,4,6,7,8-HpCDD	3.44			
OCDD	24.3			
2,3,7,8-TCDF	0.146			J
1,2,3,7,8-PeCDF	ND	0.0836		
2,3,4,7,8-PeCDF	ND	0.0923		
1,2,3,4,7,8-HxCDF	0.281			J
1,2,3,6,7,8-HxCDF	ND	0.169		
2,3,4,6,7,8-HxCDF	ND	0.206		
1,2,3,7,8,9-HxCDF	ND	0.248		
1,2,3,4,6,7,8-HpCDF	0.756			J
1,2,3,4,7,8,9-HpCDF	ND	0.274		
OCDF	2.18			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	88.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	84.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	76.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	92.9	40 - 135	
	13C-OCDD	94.0	40 - 135	
	13C-2,3,7,8-TCDF	93.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	93.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	87.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	75.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	74.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	84.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	75.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	86.8	40 - 135	
	13C-OCDF	85.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	97.4	40 - 135	

Totals			
Total TCDD	ND	0.0604	
Total PeCDD	ND	0.144	
Total HxCDD	0.520		
Total HpCDD	7.55		
Total TCDF	0.282		
Total PeCDF	0.538		0.711
Total HxCDF	0.738		0.935
Total HpCDF	1.81		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.111**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

Vista

Sample ID: CAMO-09-9957 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-005	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.0 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	90.5	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1510						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0607		
1,2,3,7,8-PeCDD	ND	0.108		
1,2,3,4,7,8-HxCDD	ND	0.409		
1,2,3,6,7,8-HxCDD	ND	0.393		
1,2,3,7,8,9-HxCDD	ND	0.386		
1,2,3,4,6,7,8-HpCDD	0.968			J
OCDD	8.37			
2,3,7,8-TCDF	ND	0.0625		
1,2,3,7,8-PeCDF	ND	0.0658		
2,3,4,7,8-PeCDF	ND	0.0687		
1,2,3,4,7,8-HxCDF	ND	0.146		
1,2,3,6,7,8-HxCDF	ND	0.162		
2,3,4,6,7,8-HxCDF	ND	0.194		
1,2,3,7,8,9-HxCDF	ND	0.256		
1,2,3,4,6,7,8-HpCDF	ND	0.262		
1,2,3,4,7,8,9-HpCDF	ND	0.287		
OCDF	0.383			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	99.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	107	40 - 135	
	13C-OCDD	106	40 - 135	
	13C-2,3,7,8-TCDF	102	40 - 135	
	13C-1,2,3,7,8-PeCDF	98.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	94.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	100	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	92.9	40 - 135	
	13C-OCDF	93.7	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	92.3	40 - 135	

Totals		
Total TCDD	ND	0.0607
Total PeCDD	ND	0.108
Total HxCDD	ND	0.396
Total HpCDD	0.968	
Total TCDF	ND	0.0625
Total PeCDF	ND	0.0672
Total HxCDF	ND	0.190
Total HpCDF	ND	0.274

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0184

a Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e TEQ based on (1989) International Toxic Equivalent Factors (ITEF)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

Vista

Sample ID: CAMO-09-9958 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-006	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.0 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	90.2	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1541						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0586		
1,2,3,7,8-PeCDD	ND	0.150		
1,2,3,4,7,8-HxCDD	ND	0.464		
1,2,3,6,7,8-HxCDD	ND	0.466		
1,2,3,7,8,9-HxCDD	ND	0.447		
1,2,3,4,6,7,8-HpCDD	2.29			J
OCDD	20.1			
2,3,7,8-TCDF	ND	0.0729		
1,2,3,7,8-PeCDF	ND	0.0722		
2,3,4,7,8-PeCDF	ND	0.0849		
1,2,3,4,7,8-HxCDF	ND	0.181		
1,2,3,6,7,8-HxCDF	ND	0.203		
2,3,4,6,7,8-HxCDF	ND	0.253		
1,2,3,7,8,9-HxCDF	ND	0.307		
1,2,3,4,6,7,8-HpCDF	ND	0.290		
1,2,3,4,7,8,9-HpCDF	ND	0.329		
OCDF	0.690			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	100	40 - 135	
	13C-1,2,3,7,8-PeCDD	93.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	97.7	40 - 135	
	13C-OCDD	105	40 - 135	
	13C-2,3,7,8-TCDF	99.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	103	40 - 135	
	13C-2,3,4,7,8-PeCDF	92.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	100	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	85.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	84.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	91.8	40 - 135	
	13C-OCDF	91.6	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.0	40 - 135	

Totals

Total TCDD	ND	0.0586	
Total PeCDD	ND	0.150	
Total HxCDD	ND	0.459	
Total HpCDD	2.29		3.96
Total TCDF	ND	0.0729	
Total PeCDF	ND	0.0786	
Total HxCDF	ND	0.236	
Total HpCDF	ND		0.330

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.0437

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

Vista

Sample ID: **CAMO-09-9990** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-007	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	12.1 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	81.9	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	0930						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.0520		
1,2,3,7,8-PeCDD	ND	0.113		
1,2,3,4,7,8-HxCDD	ND	0.434		
1,2,3,6,7,8-HxCDD	ND	0.446		
1,2,3,7,8,9-HxCDD	ND	0.424		
1,2,3,4,6,7,8-HpCDD	ND	0.573		
OCDD	1.48			J
2,3,7,8-TCDF	ND	0.0515		
1,2,3,7,8-PeCDF	ND	0.0565		
2,3,4,7,8-PeCDF	ND	0.0633		
1,2,3,4,7,8-HxCDF	ND	0.169		
1,2,3,6,7,8-HxCDF	ND	0.175		
2,3,4,6,7,8-HxCDF	ND	0.213		
1,2,3,7,8,9-HxCDF	ND	0.281		
1,2,3,4,6,7,8-HpCDF	ND	0.332		
1,2,3,4,7,8,9-HpCDF	ND	0.366		
OCDF	ND	0.184		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	98.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	98.7	40 - 135	
	13C-OCDD	97.5	40 - 135	
	13C-2,3,7,8-TCDF	102	40 - 135	
	13C-1,2,3,7,8-PeCDF	101	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	97.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	83.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	91.3	40 - 135	
	13C-OCDF	87.7	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	90.2	40 - 135	

Totals			
Total TCDD	ND	0.0520	
Total PeCDD	ND	0.113	
Total HxCDD	ND	0.435	
Total HpCDD	ND	0.573	
Total TCDF	ND		0.0972
Total PeCDF	ND	0.0599	
Total HxCDF	ND	0.210	
Total HpCDF	ND	0.349	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.00148**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:09

Vista

Sample ID: CAMO-09-10031 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	31853-008	Date Received:	2-Jul-09
Project:	09-2523	Sample Size:	11.4 g	QC Batch No.:	2218	Date Extracted:	5-Jul-09
Date Collected:	29-Jun-09	%Solids:	87.6	Date Analyzed DB-5:	6-Jul-09	Date Analyzed DB-225:	NA
Time Collected:	1218						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.0626		
1,2,3,7,8-PeCDD	ND		0.236	
1,2,3,4,7,8-HxCDD	ND		0.540	
1,2,3,6,7,8-HxCDD	0.786			J
1,2,3,7,8,9-HxCDD	0.675			J
1,2,3,4,6,7,8-HpCDD	22.1			
OCDD	206			
2,3,7,8-TCDF	0.152			J
1,2,3,7,8-PeCDF	ND	0.0865		
2,3,4,7,8-PeCDF	ND	0.101		
1,2,3,4,7,8-HxCDF	ND	0.200		
1,2,3,6,7,8-HxCDF	ND	0.222		
2,3,4,6,7,8-HxCDF	ND	0.280		
1,2,3,7,8,9-HxCDF	ND	0.342		
1,2,3,4,6,7,8-HpCDF	3.33			
1,2,3,4,7,8,9-HpCDF	ND	0.346		
OCDF	8.94			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	97.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	84.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	102	40 - 135	
	13C-OCDD	108	40 - 135	
	13C-2,3,7,8-TCDF	100	40 - 135	
	13C-1,2,3,7,8-PeCDF	106	40 - 135	
	13C-2,3,4,7,8-PeCDF	93.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	102	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.7	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	95.3	40 - 135	
	13C-OCDF	94.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.7	40 - 135	

Totals		
Total TCDD	0.111	
Total PeCDD	ND	0.236
Total HxCDD	5.91	6.45
Total HpCDD	40.9	
Total TCDF	0.592	
Total PeCDF	0.816	1.25
Total HxCDF	3.31	
Total HpCDF	8.60	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.631

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: JMH

Approved By: William J. Luksemburg 07-Jul-2009 14:20

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The amount detected is above the High Calibration Limit.
P	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical Interference
J	The amount detected is below the Low Calibration Limit.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated detection limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that correspond to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-2008
State of Arizona	AZ0639
State of Arkansas, DEQ	08-043-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	N/A
State of Connecticut	PH-0182
State of Florida, DEP	E87777
State of Indiana Department of Health	C-CA-02
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA08000
State of Louisiana, DEQ	01977
State of Maine	2008024
State of Michigan	9932
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	NFESC413
State of Nevada	CA004132007A
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-006
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	TN02996
State of Texas	T104704189-08-TX
U.S. Army Corps of Engineers	N/A
State of Utah	CA16400
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2523

31853

2.0°C

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Martha Maier
Alta Analytical Lab Incorporated
5070 Robert J. Mathews Parkway
El Dorado Hills, CA 95762

These Samples are on:
LANL Request Number:09-2523
Per Agreement Number:176450010
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	1	CAMO-09-9950	R	6/29/2009	
		2	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		2	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		2	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		2	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2523

31853

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8290	2	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		2	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		2	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
		2	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2523

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2523C

LOS ALAMOS

NATIONAL LABORATORY

REQUEST NUMBER: 09-2523

31853

ATTN: Martha Maier

Alta Analytical Lab Incorporated

5070 Robert J. Mathews Parkway

El Dorado Hills, CA 95762

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9956	1	GLASS	8290	Ice	R
CAMO-09-9956	2	GLASS	8290	Ice	R
CAMO-09-9950	1	GLASS	8290	Ice	R
CAMO-09-9950	2	GLASS	8290	Ice	R
CAMO-09-9952	1	GLASS	8290	Ice	R
CAMO-09-9952	2	GLASS	8290	Ice	R
CAMO-09-9958	1	GLASS	8290	Ice	R
CAMO-09-9958	2	GLASS	8290	Ice	R
CAMO-09-9957	1	GLASS	8290	Ice	R
CAMO-09-9957	2	GLASS	8290	Ice	R
CAMO-09-9951	1	GLASS	8290	Ice	R
CAMO-09-9951	2	GLASS	8290	Ice	R
CAMO-09-10031	1	GLASS	8290	Ice	R
CAMO-09-10031	2	GLASS	8290	Ice	R
CAMO-09-9990	1	GLASS	8290	Ice	R
CAMO-09-9990	2	GLASS	8290	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00	B. Benedict Bettina L Benedict	7/2/09	0956
Printed Name Signature			Printed Name Signature	BLB 7/2/09	
Printed Name Signature			Printed Name Signature		
Printed Name Signature			Printed Name Signature		

Received for DISPOSAL By:	Date	Time	Remarks:
Printed Name Signature			

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 31853 TAT 15

Samples Arrival:	Date/Time 7/2/09 0905	Initials: BSB	Location: WR-2 Shelf/Rack: N/A
Logged In:	Date/Time 7/2/09 0948	Initials: BSB	Location: WR-2 Shelf/Rack: A-5

Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice	Dry Ice	None		
Temp °C 2.0°C	Time: 0909	Thermometer ID: IR-1				

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7209 7847 5907	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?	✓		
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?		COC	Sample Container	None	
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

	date	/time	
CAMO-09-9950	6/29/09	1218	A3B jar
-9951		1243	
-9952		1302	
-9956		1500	
-9957		1510	
-9958		1541	
-9990		0930	

	date	/time	
CAMO-09-10031	6/29/09	1218	A3B jar

Sample Login 3/2007 rmh

EXTRACTION INFORMATION

PROCESS SHEET

Project No.-AR: 31853-1 of 1

RUSH

Prep Due: 7/9/2009

Hold Due: 7/29/2009

Project Due: 7/15/2009

TAT: 13

Client: Los Alamos National Laboratory(LOANM01F

Client Manager: Martha M. Maier

Method: EPA Method 8290 | PCDD/F (Tetra - Octa)

2218

Split Type:

Matrix: Soil

LabID	Recon	Client-ID	Description	Date Received	SLoc	Shelf
001	☑	CAMO-09-9950		7/2/2009	WR-2	A-5
002	☑	CAMO-09-9951		7/2/2009	WR-2	A-5
003	☑	CAMO-09-9952		7/2/2009	WR-2	A-5
004	☑	CAMO-09-9956		7/2/2009	WR-2	A-5
005	☑	CAMO-09-9957		7/2/2009	WR-2	A-5
006	☑	CAMO-09-9958		7/2/2009	WR-2	A-5
007	☑	CAMO-09-9990		7/2/2009	WR-2	A-5
008	☑	CAMO-09-10031		7/2/2009	WR-2	A-5

% Solid DB 7/2/09

Instructions:

Report Options

Report Level:

EDD Type:

Report Group: Dioxins NoMDL with %Solid

TEQ Type: EPA(Default) : Min

Samples Reconciled By: DB 7/2/09

Vial Box ID: TBF

Date Requested 7/8/2009

Percent Solids

Vista Analytical Laboratory

Project: 31853

Sample ID	Chemist/Date 03 7/2/09		Chemist/Date 7/3/09	Comments
	Boat Wt.	Sample + Boat Wt.	Residue + Boat Wt.	
001	1.33	6.72	6.02	
002	1.35	6.99	6.43	
003	1.34	7.37	6.76	
004	1.33	7.39	6.52	
005	1.35	6.19	5.73	
006	1.35	7.81	7.18	
007	1.33	10.62	8.94	
008	1.33	7.13	6.41	

Procedure:

- Tare the balance.
- Record Boat Weight.
- Add 2 - 10 g of sample.
- Record Wet Wt. + Boat Wt.
- Dry in oven overnight at 107°C.
- Tare the balance.
- Record Residue + Boat Wt.

Notes:

%Solids 3/2007 rmh

Project: 31853

Extraction Set: 2218

Chemist: T. HORNER 7/5/09

Method(s): EPA Method 8290 | PCDD/F (Tetra - Octa)

C	ALTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/ WIT DATE	CRS CHEM/WIT DATE	AP CHEM/Date	ABSG CHEM/Date	AA CHEM/Date	Florisil CHEM/Date	RS CHEM/WIT DATE
☐	0_2218_MB001	10.00	10.00	TEH NK 7/5/09	TEH 7/6/09	NA	TEH 7/6/09	TEH 7/6/09	TEH 7/6/09	TEH 7/6/09
☐	0_2218_OPR001	↓	↓	↓	↓	↓	↓	↓	↓	↓
☐	31853_2218_001 (Δ)	11.49	11.30	↓	↓	↓	↓	↓	↓	↓
☐	31853_2218_002	11.10	11.09	↓	↓	↓	↓	↓	↓	↓
☐	31853_2218_003	11.13	11.09	↓	↓	↓	↓	↓	↓	↓
☐	31853_2218_004	11.68	11.55	↓	↓	↓	↓	↓	↓	↓
☐	31853_2218_005	11.05	11.02	↓	↓	↓	↓	↓	↓	↓
☐	31853_2218_006	11.08	11.01	↓	↓	↓	↓	↓	↓	↓
☐	31853_2218_007	12.21	12.07	↓	↓	↓	↓	↓	↓	↓
☐	31853_2218_008	11.42	11.41	↓	↓	↓	↓	↓	↓	↓

IS Name	NS Name	CRS Name	RS Name
PCDD/F 13C 080910A (VH)	PCDD/F 13C 080916B (VH)	PCDD/F 13C 080910C (VH)	PCDD/F 13C 080910D (VH)
PCB	PCB	PCB	PCB
PAH	PAH	PAH	PAH

Cycle Time 7/5 Start: 1300 Stop: 0630 7/6

APP.: SEFUN SOX (SDS)

SOLV: TOL

Other: NA

Final Volume(s): 20 µL

Check Out: Chemist: TEH 7/5/09

Check-In: Chemist: ↓ / /

Comments: (Δ) Lost ~5% of sample before N2 blowdown. TEH 7/6/09

SAMPLE DATA

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-4.qld

Last Altered: Tuesday, July 07, 2009 13:07:48 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:08:12 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_4, Date: 06-Jul-2009, Time: 15:55:37, ID: 0_2218_MB001, Description: 0_2218_MB001

1	2,3,7,8-TCDD			NO	1.08	10.000					0.0400
2	1,2,3,7,8-PeCDD			NO	1.03	10.000					0.126
3	1,2,3,4,7,8-HxCDD			NO	1.00	10.000					0.152
4	1,2,3,6,7,8-HxCDD			NO	1.13	10.000					0.142
5	1,2,3,7,8,9-HxCDD			NO	1.10	10.000					0.142
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	10.000					0.308
7	OCDD			NO	1.18	10.000					0.177
8	2,3,7,8-TCDF			NO	1.09	10.000					0.0439
9	1,2,3,7,8-PeCDF			NO	1.16	10.000					0.0420
10	2,3,4,7,8-PeCDF			NO	1.12	10.000					0.0498
11	1,2,3,4,7,8-HxCDF			NO	1.41	10.000					0.0722
12	1,2,3,6,7,8-HxCDF			NO	1.22	10.000					0.0755
13	2,3,4,6,7,8-HxCDF			NO	1.28	10.000					0.0984
14	1,2,3,7,8,9-HxCDF			NO	1.26	10.000					0.116
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	10.000					0.196
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	10.000					0.206
17	OCDF			NO	1.10	10.000					0.130
18	13C-2,3,7,8-TCDD	7.21e5	0.78	NO	1.01	10.000	26.01	1.023	196.36	98.2	0.250
19	13C-1,2,3,7,8-PeCDD	5.53e5	0.62	NO	0.827	10.000	30.67	1.206	184.52	92.3	0.286
20	13C-1,2,3,4,7,8-HxCDD	4.85e5	1.27	NO	0.916	10.000	34.11	0.988	181.48	90.7	0.731
21	13C-1,2,3,6,7,8-HxCDD	4.37e5	1.25	NO	0.921	10.000	34.22	0.991	162.76	81.4	0.728
22	13C-1,2,3,4,6,7,8-HpCDD	4.01e5	1.06	NO	0.708	10.000	38.17	1.106	194.17	97.1	1.18
23	13C-OCDD	5.79e5	0.89	NO	0.503	10.000	41.63	1.206	395.46	98.9	0.884
24	13C-2,3,7,8-TCDF	9.62e5	0.77	NO	0.977	10.000	25.24	0.992	192.72	96.4	0.189
25	13C-1,2,3,7,8-PeCDF	9.61e5	1.55	NO	0.896	10.000	29.43	1.157	209.72	105	0.393
26	13C-2,3,4,7,8-PeCDF	8.19e5	1.57	NO	0.900	10.000	30.38	1.194	178.00	89.0	0.392
27	13C-1,2,3,4,7,8-HxCDF	6.35e5	0.52	NO	1.17	10.000	33.19	0.961	186.39	93.2	0.788
28	13C-1,2,3,6,7,8-HxCDF	7.37e5	0.53	NO	1.52	10.000	33.32	0.965	166.46	83.2	0.606
29	13C-2,3,4,6,7,8-HxCDF	5.76e5	0.53	NO	1.25	10.000	33.94	0.983	158.31	79.2	0.737
30	13C-1,2,3,7,8,9-HxCDF	5.51e5	0.51	NO	1.05	10.000	34.93	1.012	179.68	89.8	0.875

7/7/09
7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-4.qld

Last Altered: Tuesday, July 07, 2009 13:07:48 Pacific Daylight Time
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Name: 090706H1_4, Date: 06-Jul-2009, Time: 15:55:37, ID: 0_2218_MB001, Description: 0_2218_MB001

31	13C-1,2,3,4,6,7,8-HpCDF	4.21e5	0.45	NO	0.868	10.000	36.81	1.066	166.59	83.3	1.29
32	13C-1,2,3,4,7,8,9-HpCDF	3.94e5	0.44	NO	0.727	10.000	38.74	1.122	186.22	93.1	1.54
33	13C-OCDF	8.10e5	0.89	NO	0.760	10.000	41.87	1.213	365.86	91.5	0.433
34	37Cl-2,3,7,8-TCDD	1.80e5			0.668	10.000	26.03	1.023	74.479	93.1	0.0632
35	13C-1,2,3,4-TCDD	7.24e5	0.79	NO	1.00	10.000	25.43	0.000	200.00	100	0.254
36	13C-1,2,3,4-TCDF	1.02e6	0.76	NO	1.00	10.000	24.01	0.000	200.00	100	0.184
37	13C-1,2,3,7,8,9-HxCDD	5.83e5	1.24	NO	1.00	10.000	34.52	0.000	200.00	100	0.670
38	Total Tetra-Dioxins				1.08	10.000					0.0165
39	Total Penta-Dioxins				1.03	10.000					0.0224
40	Total Hexa-Dioxins				1.13	10.000					0.0901
41	Total Hepta-Dioxins				1.06	10.000					0.200
42	Total Tetra-Furans				1.09	10.000					0.0165
43	1st Func. Penta-Furans				1.16	10.000					0.00893
44	Total Penta-Furans				1.16	10.000					0.0228
45	Total Hexa-Furans				1.28	10.000					0.0647
46	Total Hepta-Furans				1.69	10.000					0.128

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-4.qld

Last Altered: Monday, July 06, 2009 16:44:29 Pacific Daylight Time
Printed: Monday, July 06, 2009 16:44:54 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_4, Date: 06-Jul-2009, Time: 15:55:37, ID: 0_2218_MB001, Description: 0_2218_MB001

2,3,7,8-TCDD

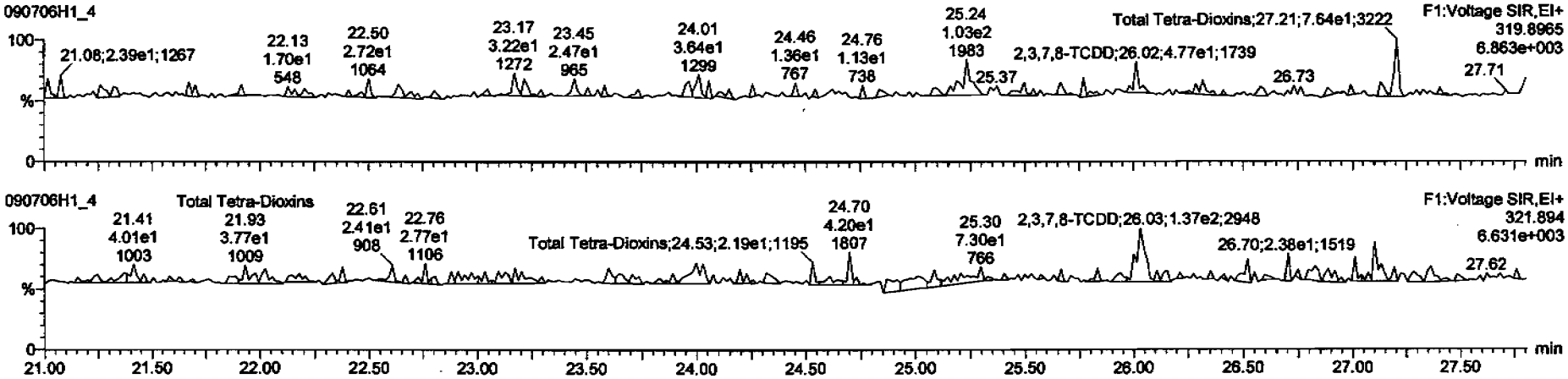

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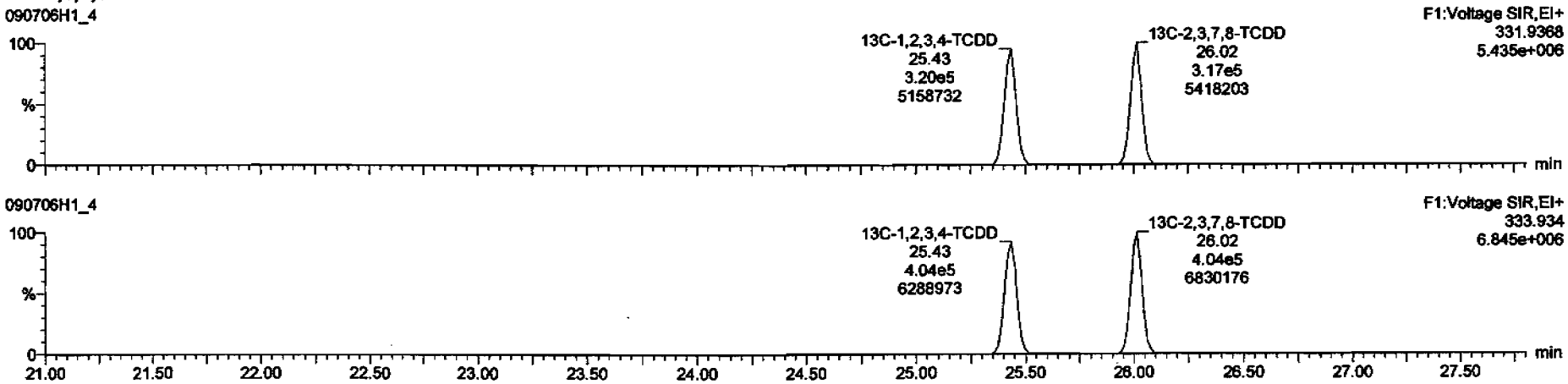

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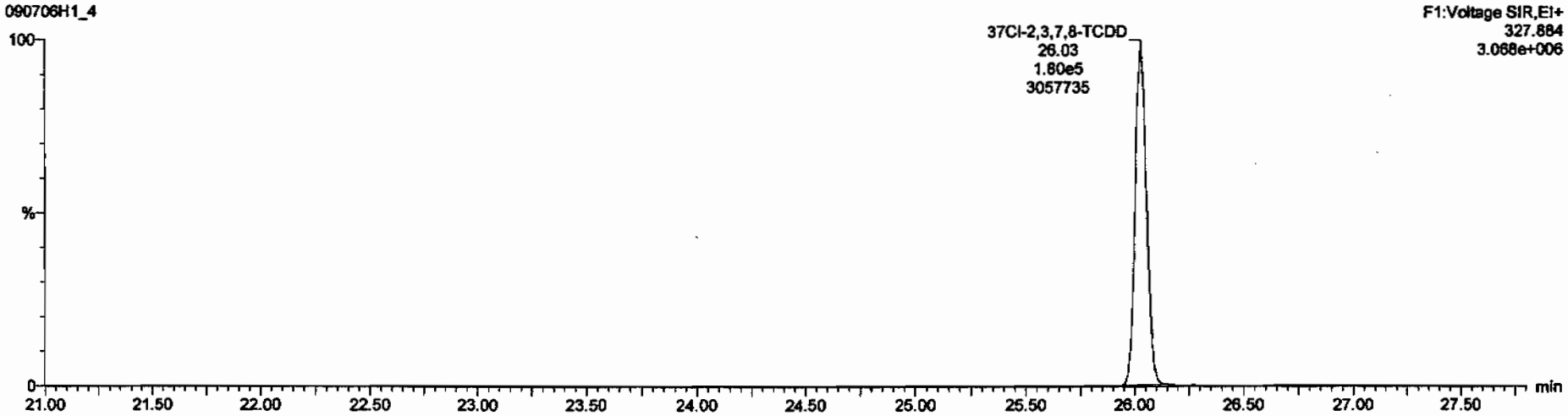

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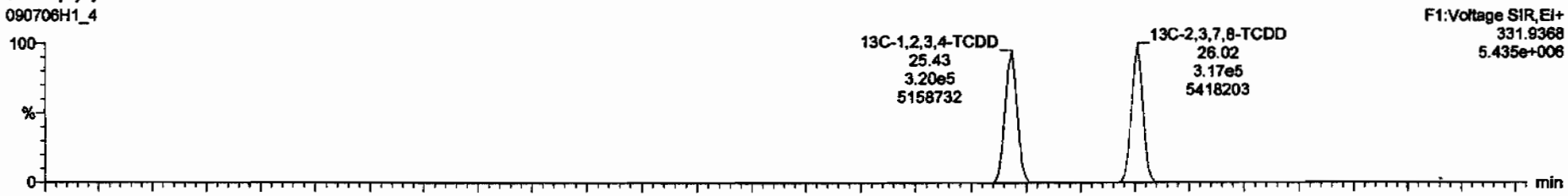

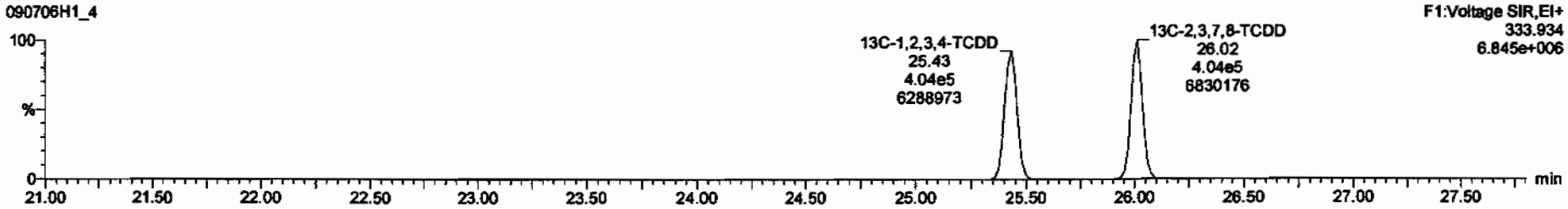

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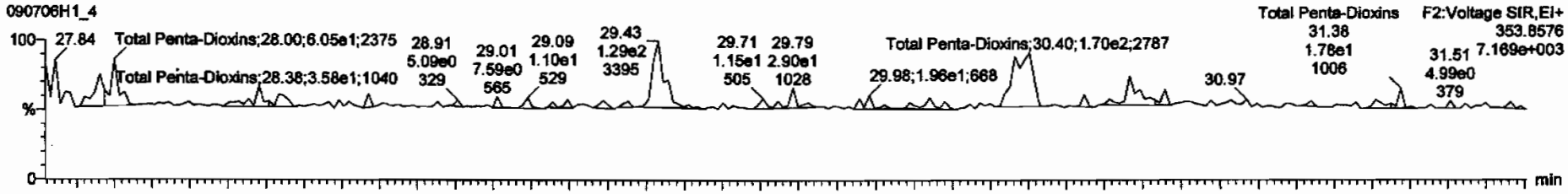

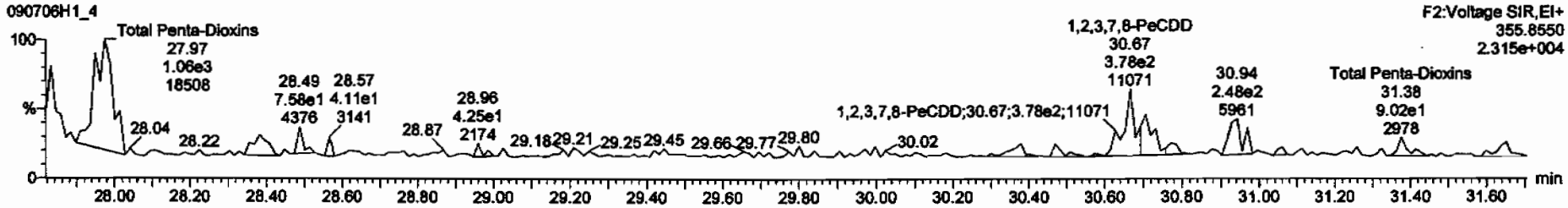

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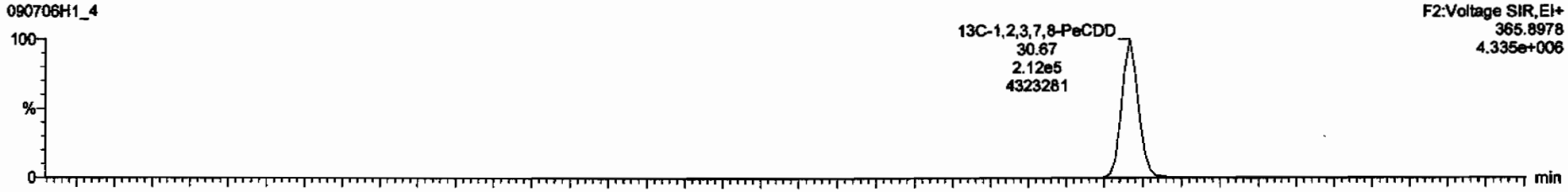

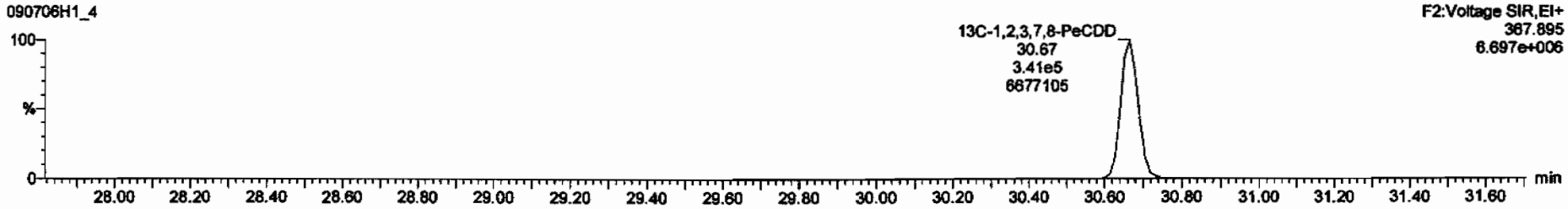

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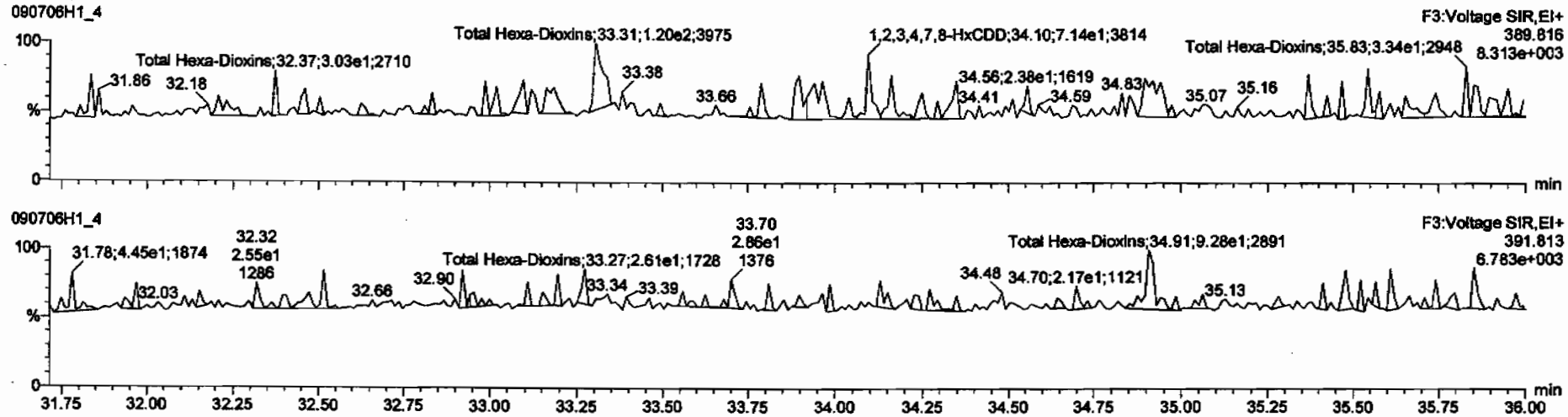

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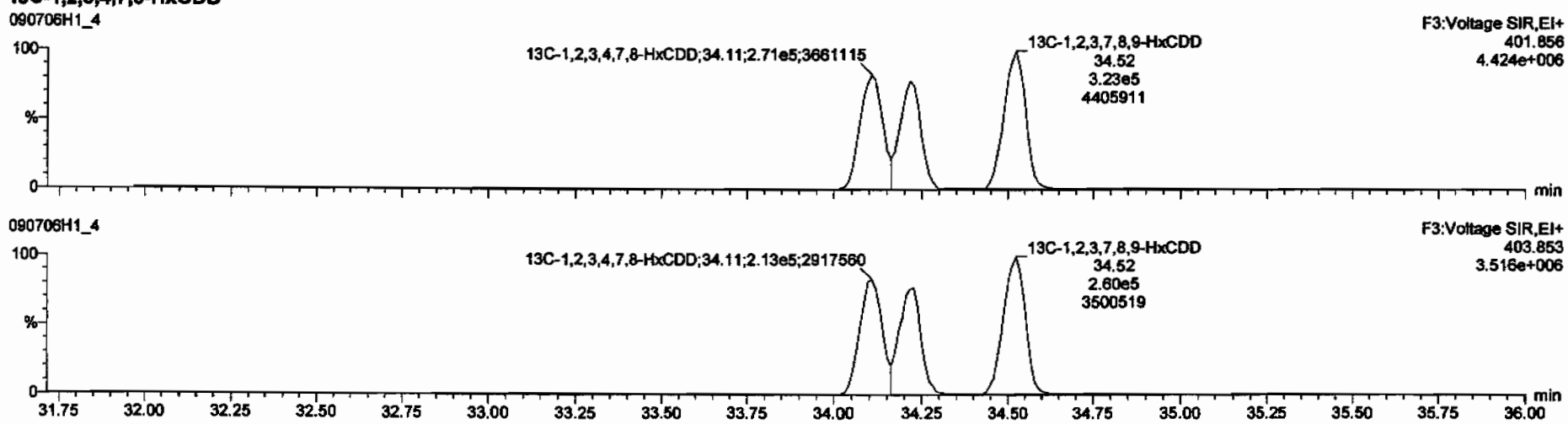

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Printed: Monday, July 06, 2009 16:44:54 Pacific Daylight Time

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1,2,3,4,6,7,8-HpCDD

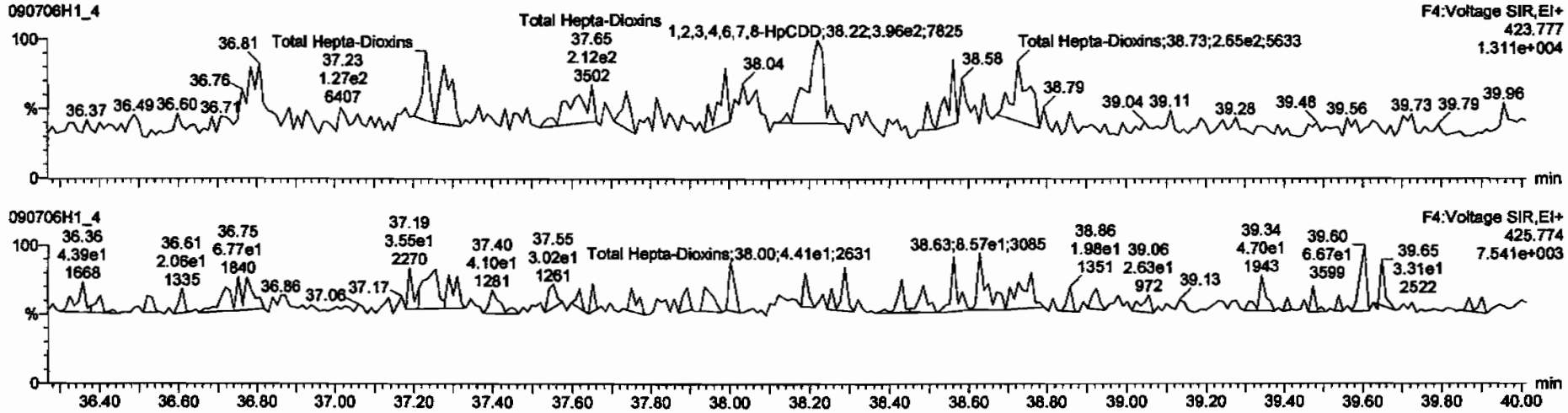

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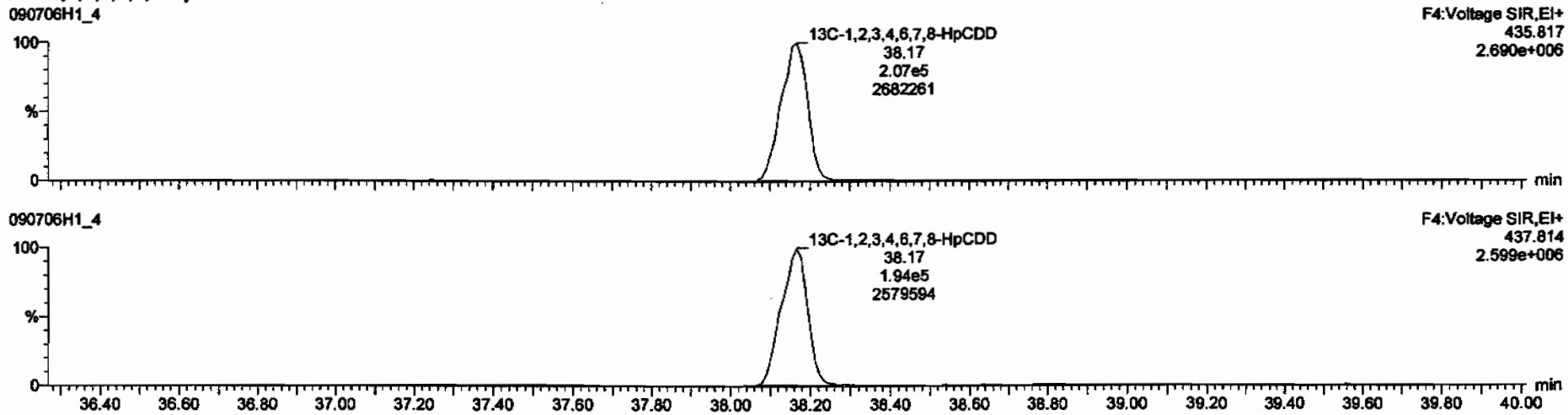

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Printed: Monday, July 06, 2009 16:44:54 Pacific Daylight Time

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OCDD

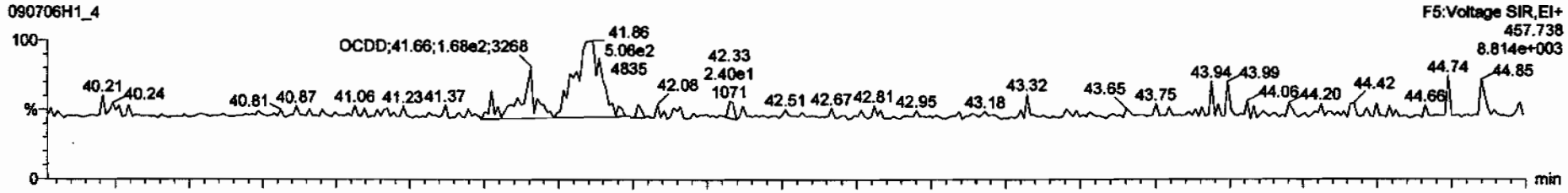

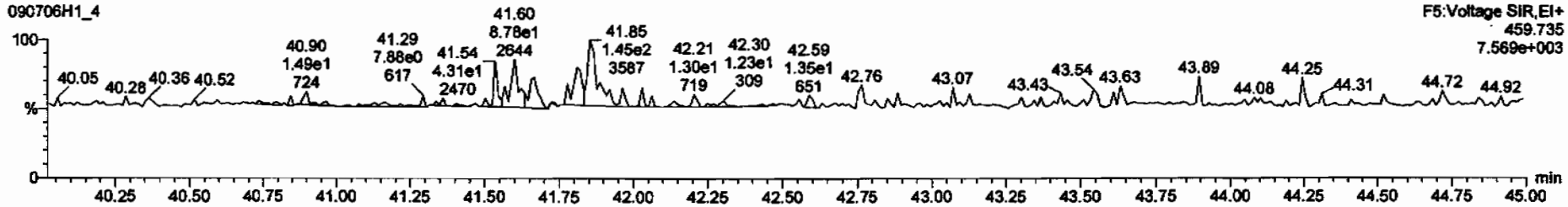

13C-OCDD

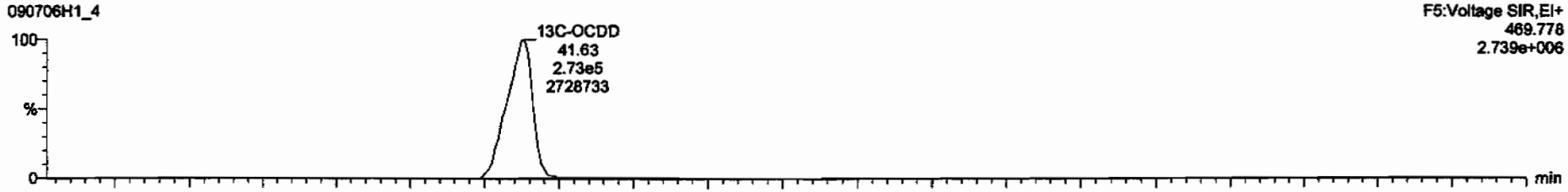

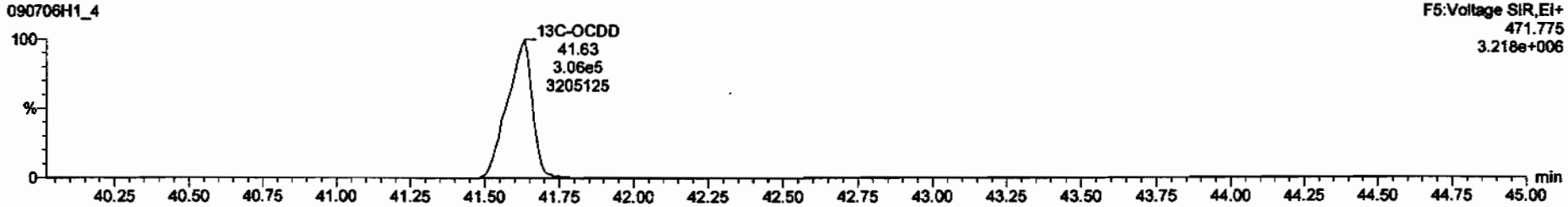

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Last Altered: Monday, July 06, 2009 16:44:29 Pacific Daylight Time
Printed: Monday, July 06, 2009 16:44:54 Pacific Daylight Time

Name: 090706H1_4, Date: 06-Jul-2009, Time: 15:55:37, ID: 0_2218_MB001, Description: 0_2218_MB001

2,3,7,8-TCDF

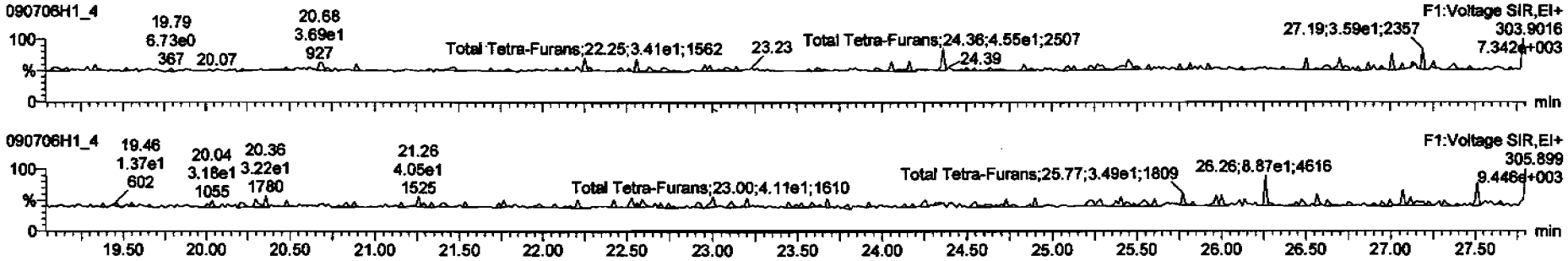

13C-2,3,7,8-TCDF

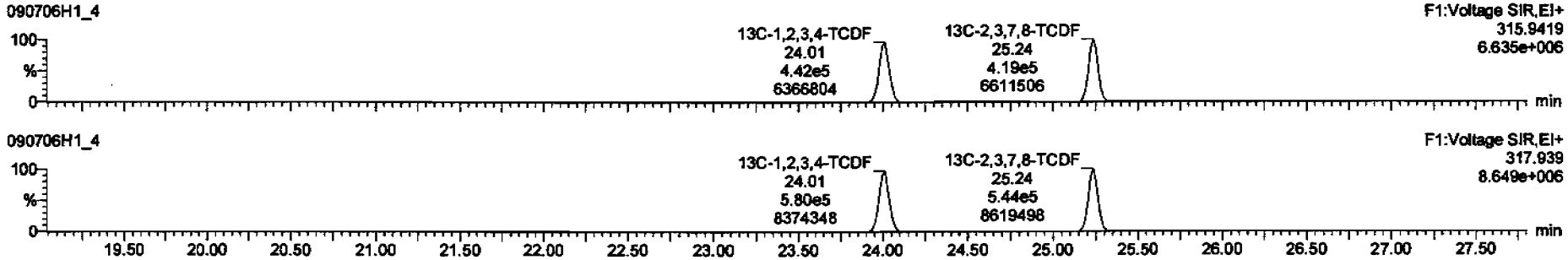

DPE1

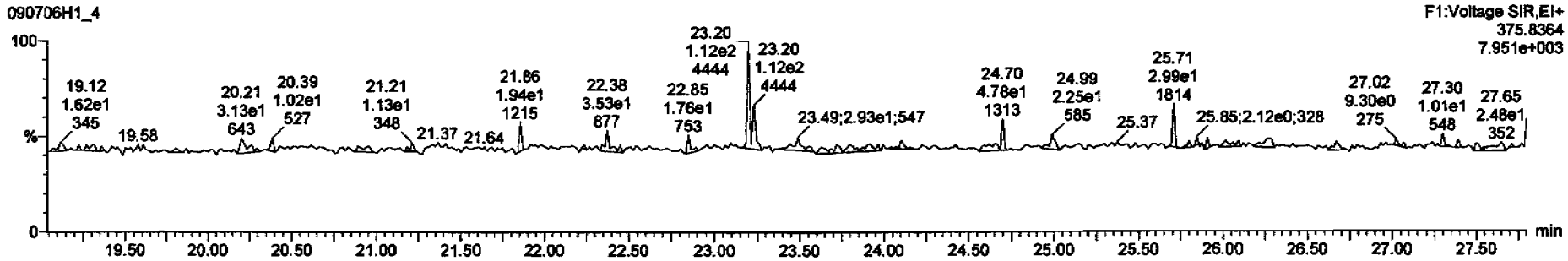

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Name: 090706H1_4, Date: 06-Jul-2009, Time: 15:55:37, ID: 0_2218_MB001, Description: 0_2218_MB001

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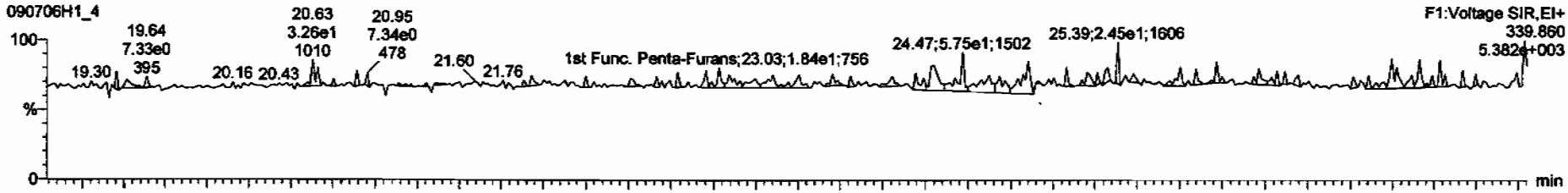

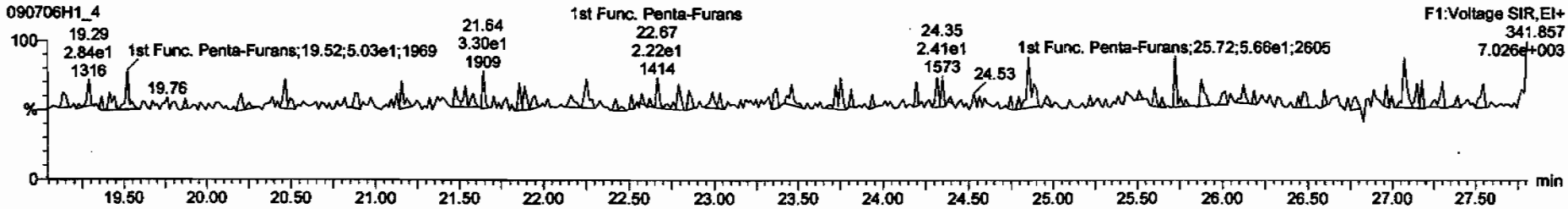

DPE6

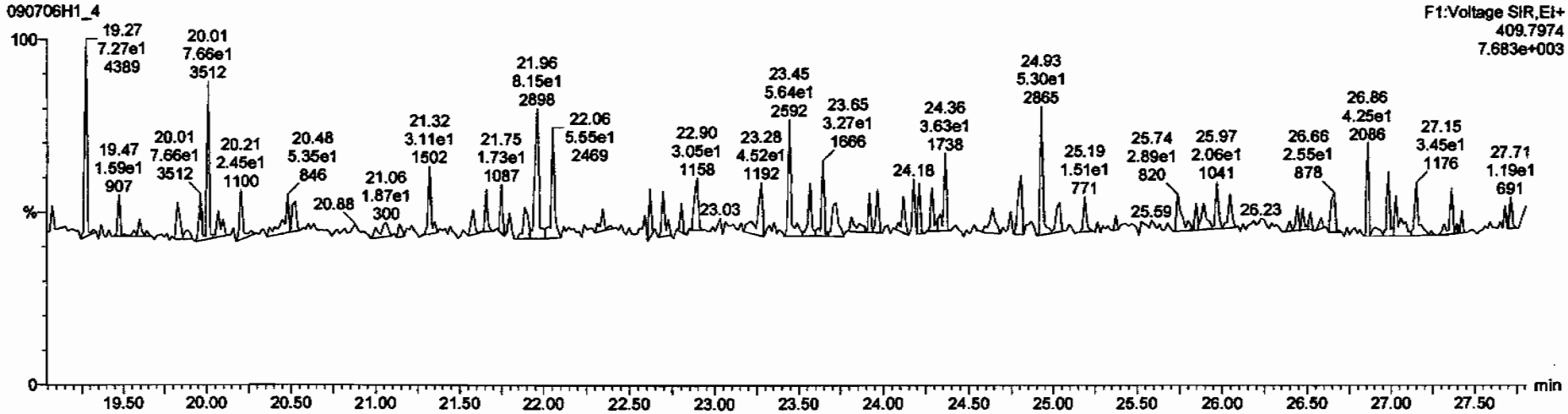

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Printed: Monday, July 06, 2009 16:44:54 Pacific Daylight Time

Name: 090706H1_4, Date: 06-Jul-2009, Time: 15:55:37, ID: 0_2218_MB001, Description: 0_2218_MB001

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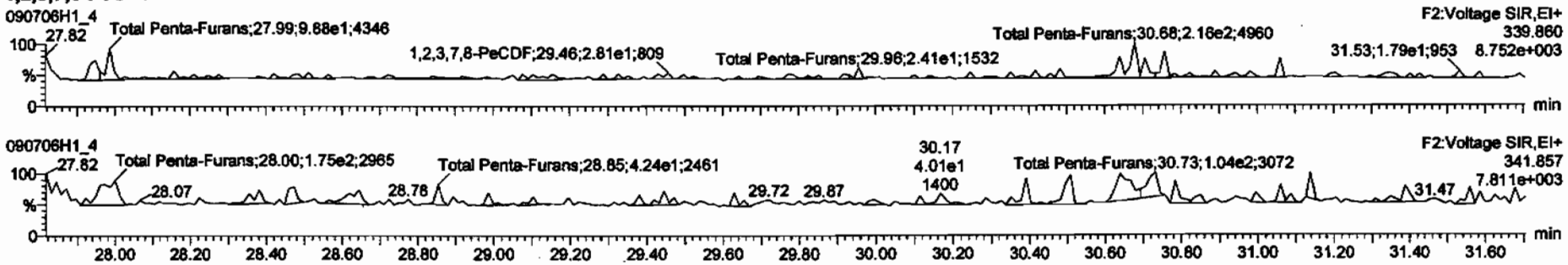

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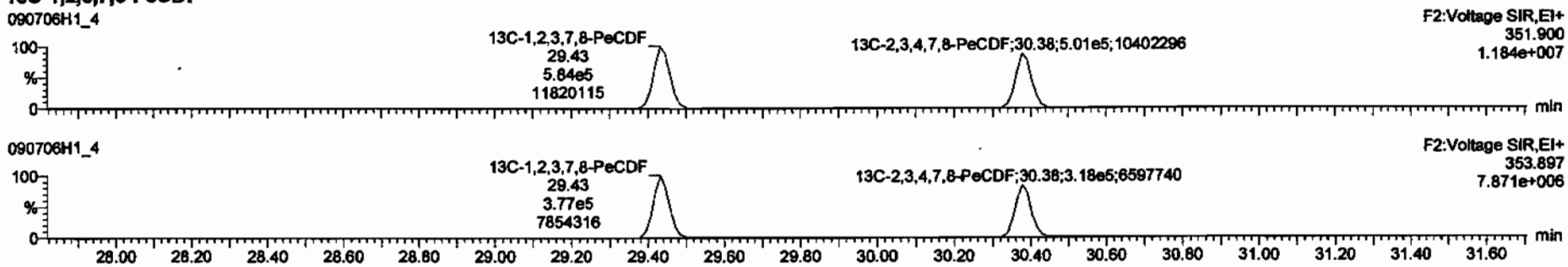

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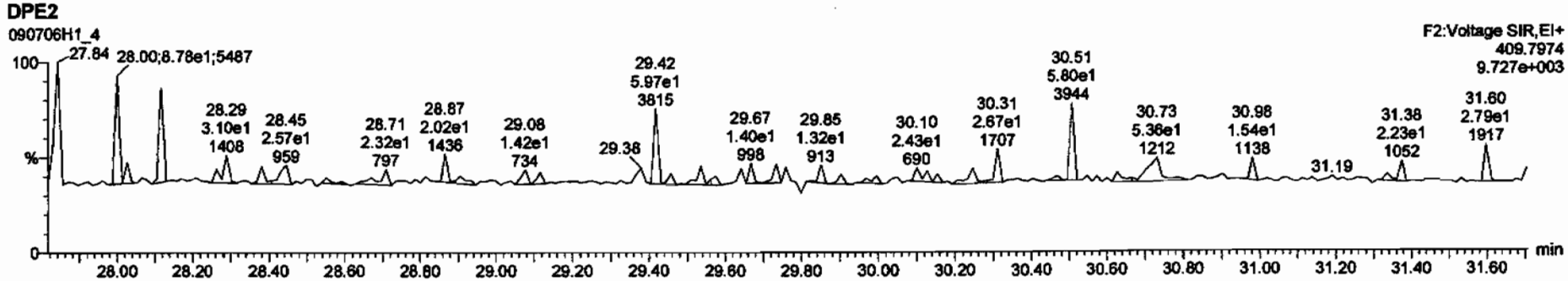

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Printed: Monday, July 06, 2009 16:44:54 Pacific Daylight Time

Name: 090706H1_4, Date: 06-Jul-2009, Time: 15:55:37, ID: 0_2218_MB001, Description: 0_2218_MB001

1,2,3,4,7,8-HxCDF

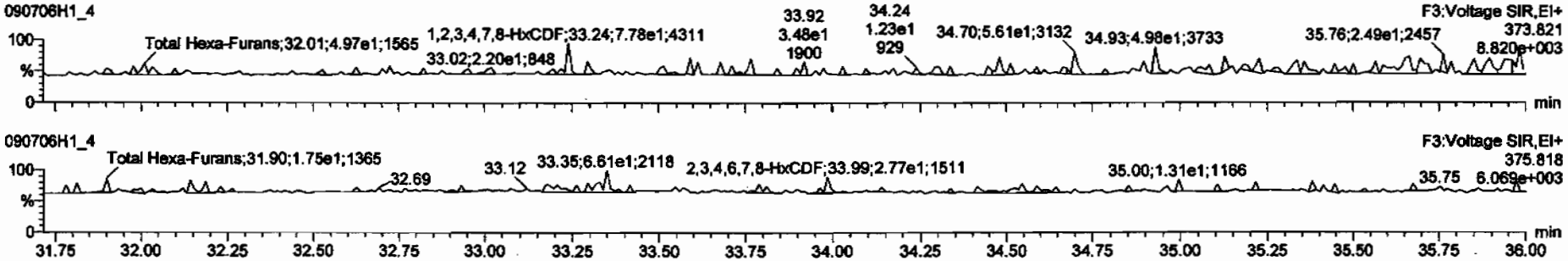

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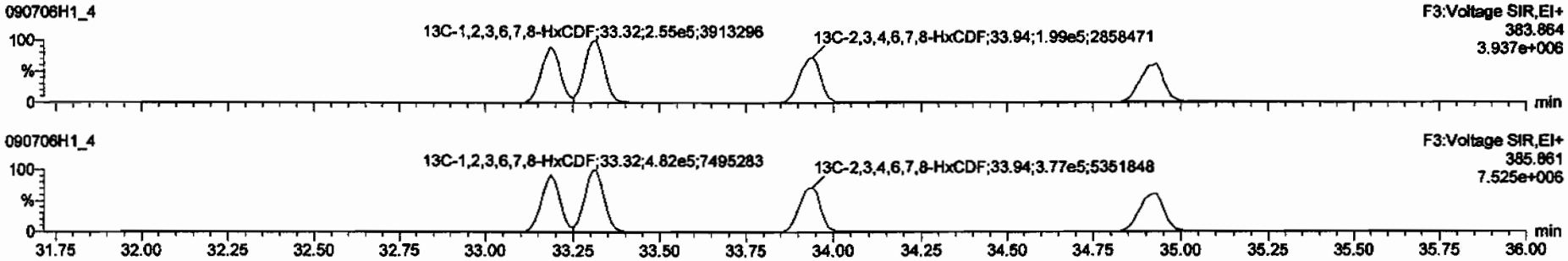

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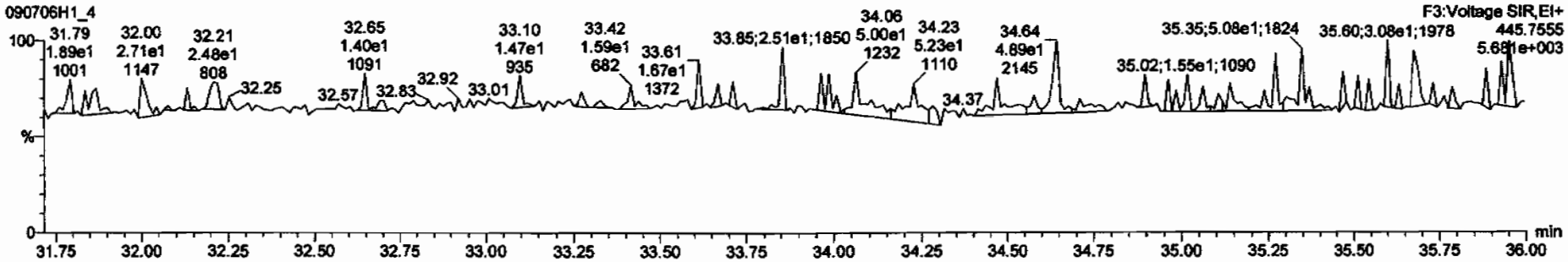

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Printed: Monday, July 06, 2009 16:44:54 Pacific Daylight Time

Name: 090706H1_4, Date: 06-Jul-2009, Time: 15:55:37, ID: 0_2218_MB001, Description: 0_2218_MB001

1,2,3,4,6,7,8-HpCDF

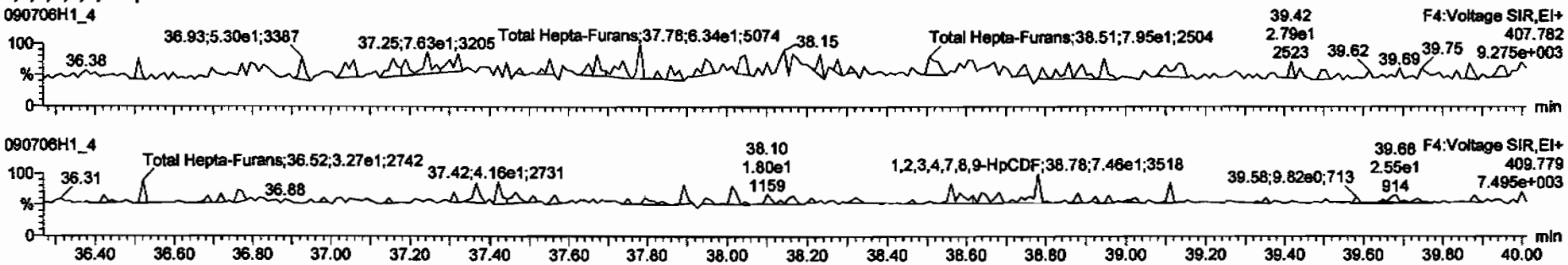

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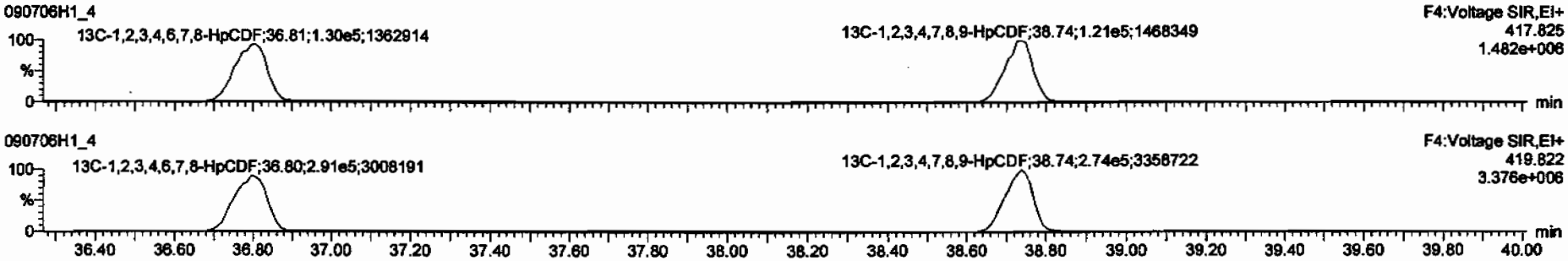

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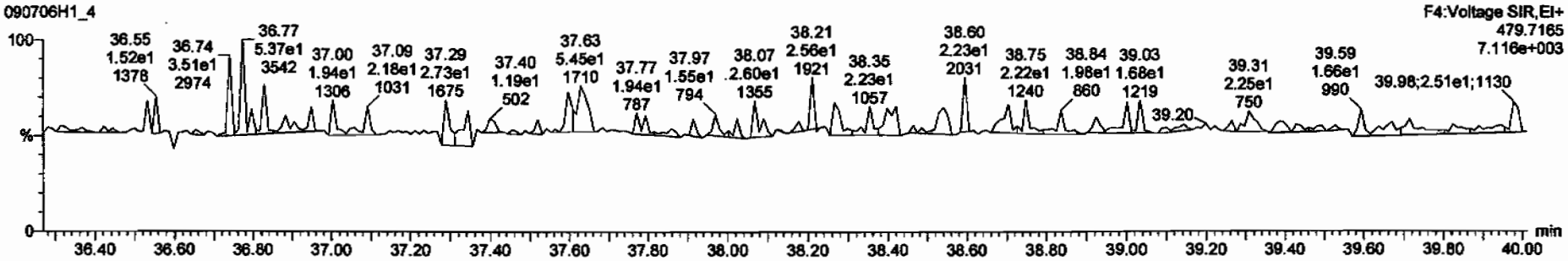

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Last Altered: Monday, July 06, 2009 16:44:29 Pacific Daylight Time
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OCDF

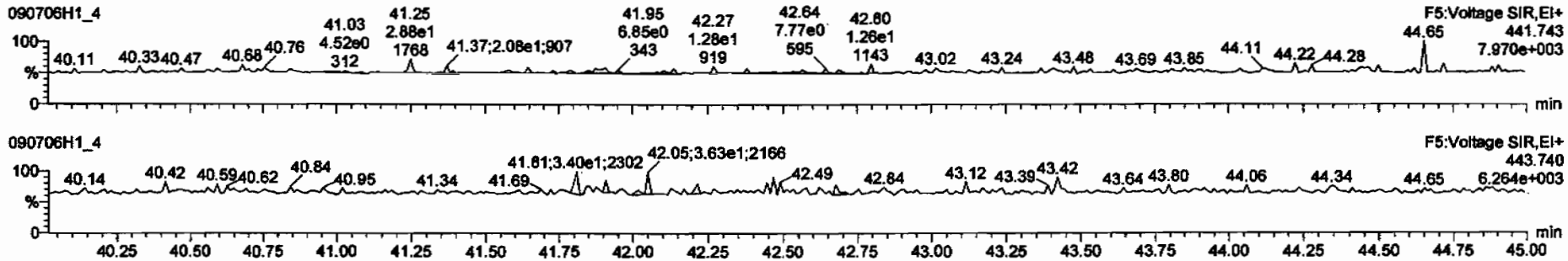

13C-OCDF

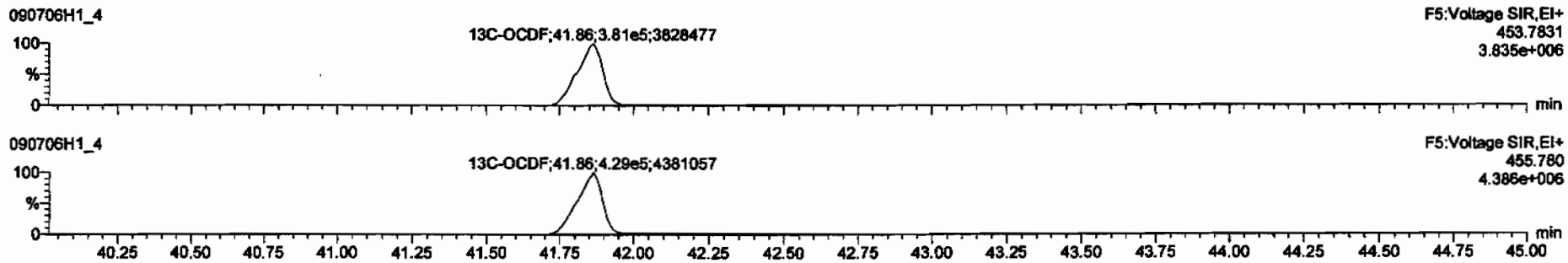

DPE5

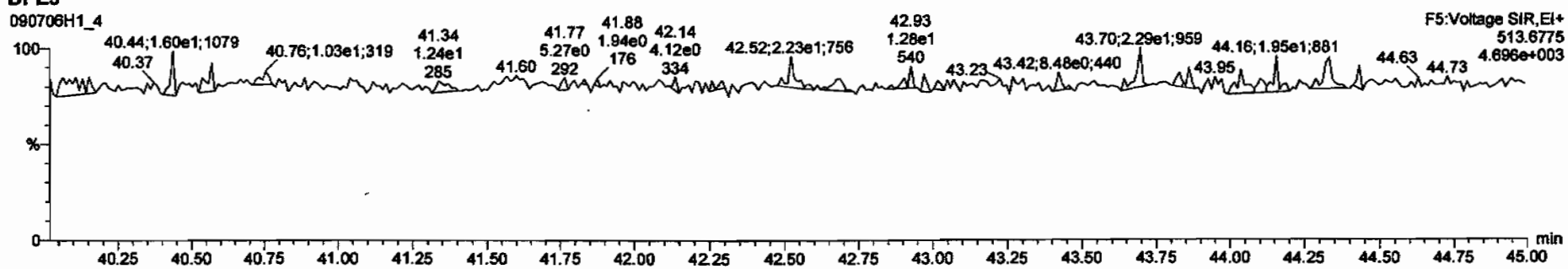

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Last Altered: Monday, July 06, 2009 16:44:29 Pacific Daylight Time
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Name: 090706H1_4, Date: 06-Jul-2009, Time: 15:55:37, ID: 0_2218_MB001, Description: 0_2218_MB001

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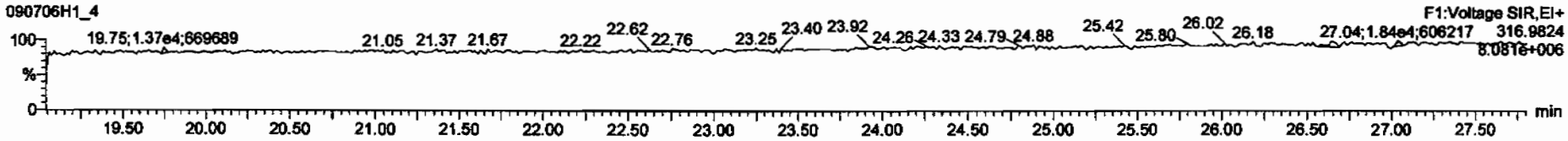

PFK2

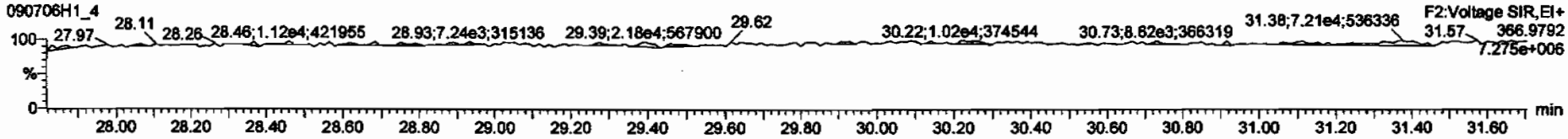

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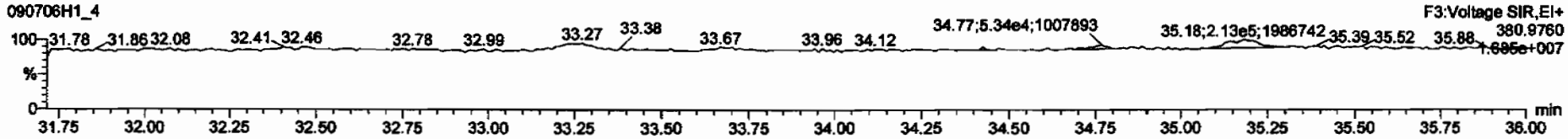

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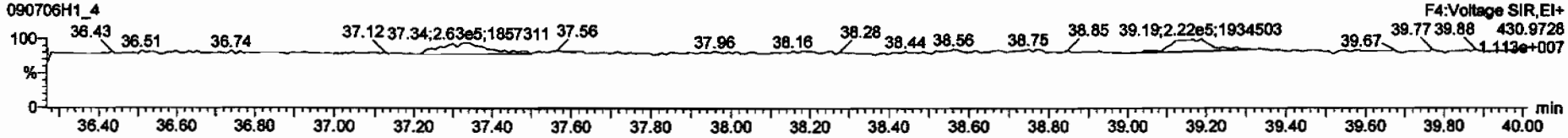

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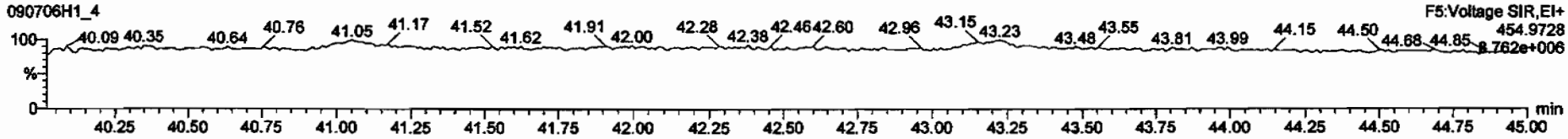

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-2.qld

Last Altered: Monday, July 06, 2009 16:43:09 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:03:01 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

1	2,3,7,8-TCDD	6.08e4	0.77	NO	1.08	1.000	26.03	1.001	8.8694	88.7	0.0266	8.8690
2	1,2,3,7,8-PeCDD	2.30e5	0.60	NO	1.03	1.000	30.69	1.000	45.058	90.1	0.0800	45.058
3	1,2,3,4,7,8-HxCDD	1.75e5	1.23	NO	1.00	1.000	34.13	1.001	44.897	89.8	0.127	44.897
4	1,2,3,6,7,8-HxCDD	1.82e5	1.24	NO	1.13	1.000	34.24	1.001	45.325	90.7	0.129	45.325
5	1,2,3,7,8,9-HxCDD	1.97e5	1.26	NO	1.10	1.000	34.53	1.009	47.885	95.8	0.123	47.885
6	1,2,3,4,6,7,8-HpCDD	1.48e5	1.05	NO	1.06	1.000	38.18	1.000	43.808	87.6	0.270	43.808
7	OCDD	2.27e5	0.89	NO	1.18	1.000	41.63	1.000	87.529	87.5	0.133	87.529
8	2,3,7,8-TCDF	7.55e4	0.76	NO	1.09	1.000	25.25	1.001	8.2481	82.5	0.0281	8.2480
9	1,2,3,7,8-PeCDF	4.06e5	1.61	NO	1.16	1.000	29.46	1.000	41.019	82.0	0.0587	41.019
10	2,3,4,7,8-PeCDF	3.35e5	1.59	NO	1.12	1.000	30.40	1.000	40.155	80.3	0.0704	40.155
11	1,2,3,4,7,8-HxCDF	3.42e5	1.25	NO	1.41	1.000	33.20	1.000	43.130	86.3	0.101	43.130
12	1,2,3,6,7,8-HxCDF	3.26e5	1.25	NO	1.22	1.000	33.33	1.000	43.092	86.2	0.113	43.092
13	2,3,4,6,7,8-HxCDF	2.69e5	1.27	NO	1.28	1.000	33.95	1.000	43.835	87.7	0.143	43.835
14	1,2,3,7,8,9-HxCDF	2.43e5	1.28	NO	1.26	1.000	34.94	1.001	45.241	90.5	0.179	45.241
15	1,2,3,4,6,7,8-HpCDF	2.45e5	1.06	NO	1.69	1.000	36.82	1.000	44.811	89.6	0.211	44.811
16	1,2,3,4,7,8,9-HpCDF	2.21e5	1.06	NO	1.48	1.000	38.75	1.000	45.855	91.7	0.209	45.855
17	OCDF	3.02e5	0.91	NO	1.10	1.000	41.87	1.000	88.089	88.1	0.124	88.089
18	13C-2,3,7,8-TCDD	6.36e5	0.78	NO	1.01	1.000	26.01	1.023	101.86	102	0.125	
19	13C-1,2,3,7,8-PeCDD	4.93e5	0.63	NO	0.827	1.000	30.68	1.207	96.856	96.9	0.136	
20	13C-1,2,3,4,7,8-HxCDD	3.89e5	1.28	NO	0.916	1.000	34.11	0.988	92.333	92.3	0.333	
21	13C-1,2,3,6,7,8-HxCDD	3.56e5	1.26	NO	0.921	1.000	34.22	0.991	84.078	84.1	0.331	
22	13C-1,2,3,4,6,7,8-HpCDD	3.18e5	1.04	NO	0.708	1.000	38.17	1.105	97.532	97.5	0.576	
23	13C-OCDD	4.40e5	0.88	NO	0.503	1.000	41.61	1.205	190.33	95.2	0.348	
24	13C-2,3,7,8-TCDF	8.41e5	0.77	NO	0.977	1.000	25.22	0.992	97.607	97.6	0.0976	
25	13C-1,2,3,7,8-PeCDF	8.55e5	1.55	NO	0.896	1.000	29.44	1.158	108.15	108	0.166	
26	13C-2,3,4,7,8-PeCDF	7.46e5	1.56	NO	0.900	1.000	30.39	1.196	93.928	93.9	0.165	
27	13C-1,2,3,4,7,8-HxCDF	5.62e5	0.51	NO	1.17	1.000	33.19	0.961	104.48	104	0.362	
28	13C-1,2,3,6,7,8-HxCDF	6.19e5	0.51	NO	1.52	1.000	33.32	0.965	88.514	88.5	0.279	
29	13C-2,3,4,6,7,8-HxCDF	4.79e5	0.51	NO	1.25	1.000	33.94	0.983	83.429	83.4	0.339	
30	13C-1,2,3,7,8,9-HxCDF	4.27e5	0.52	NO	1.05	1.000	34.92	1.011	88.045	88.0	0.402	

7/7/09
7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-2.qld

Last Altered: Monday, July 06, 2009 16:43:09 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:03:01 Pacific Daylight Time

Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

31	13C-1,2,3,4,6,7,8-HpCDF	3.23e5	0.44	NO	0.868	1.000	36.81	1.066	80.963	81.0	0.721
32	13C-1,2,3,4,7,8,9-HpCDF	3.26e5	0.45	NO	0.727	1.000	38.74	1.122	97.543	97.5	0.862
33	13C-OCDF	6.26e5	0.89	NO	0.760	1.000	41.85	1.212	179.04	89.5	0.219
34	37Cl-2,3,7,8-TCDD	1.51e5			0.668	1.000	26.03	1.024	36.639	91.6	0.0349
35	13C-1,2,3,4-TCDD	6.15e5	0.78	NO	1.00	1.000	25.42	0.000	100.00	100	0.127
36	13C-1,2,3,4-TCDF	8.82e5	0.79	NO	1.00	1.000	24.00	0.000	100.00	100	0.0953
37	13C-1,2,3,7,8,9-HxCDD	4.60e5	1.24	NO	1.00	1.000	34.52	0.000	100.00	100	0.305

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-2.qld

Last Altered: Monday, July 06, 2009 16:43:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 16:43:30 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

2,3,7,8-TCDD

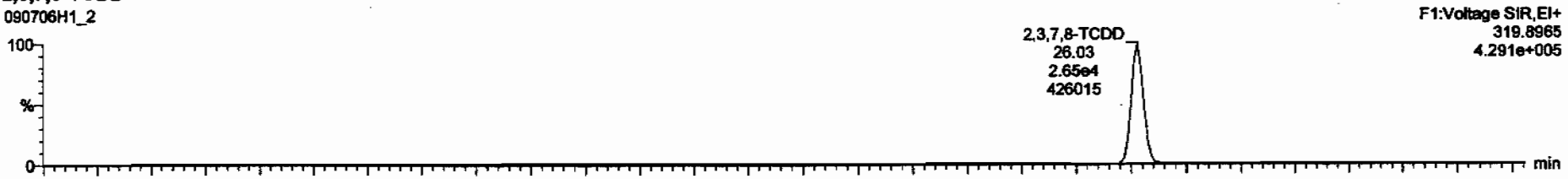

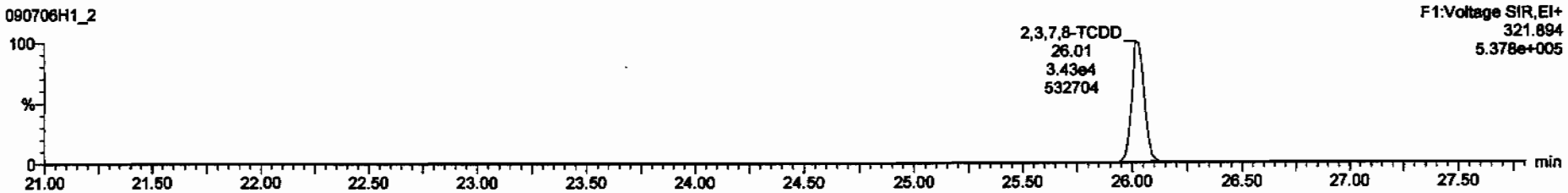

13C-2,3,7,8-TCDD

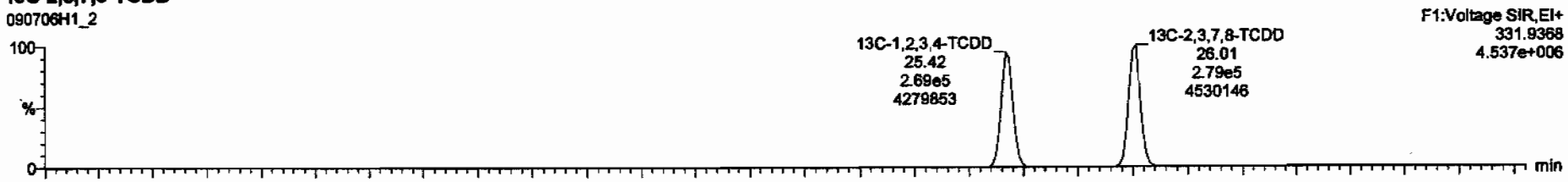

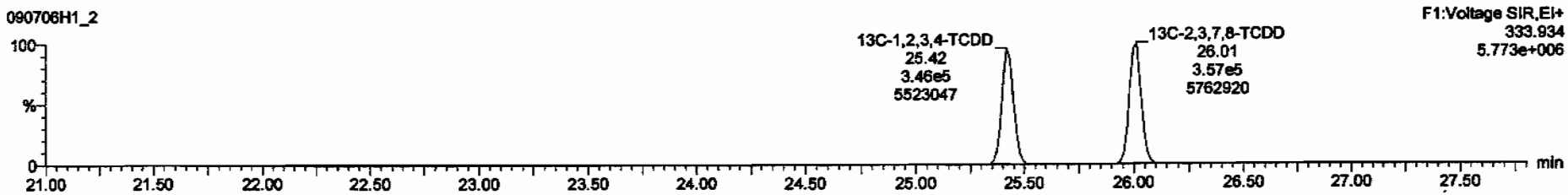

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Last Altered: Monday, July 06, 2009 16:43:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 16:43:30 Pacific Daylight Time

Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

37Cl-2,3,7,8-TCDD

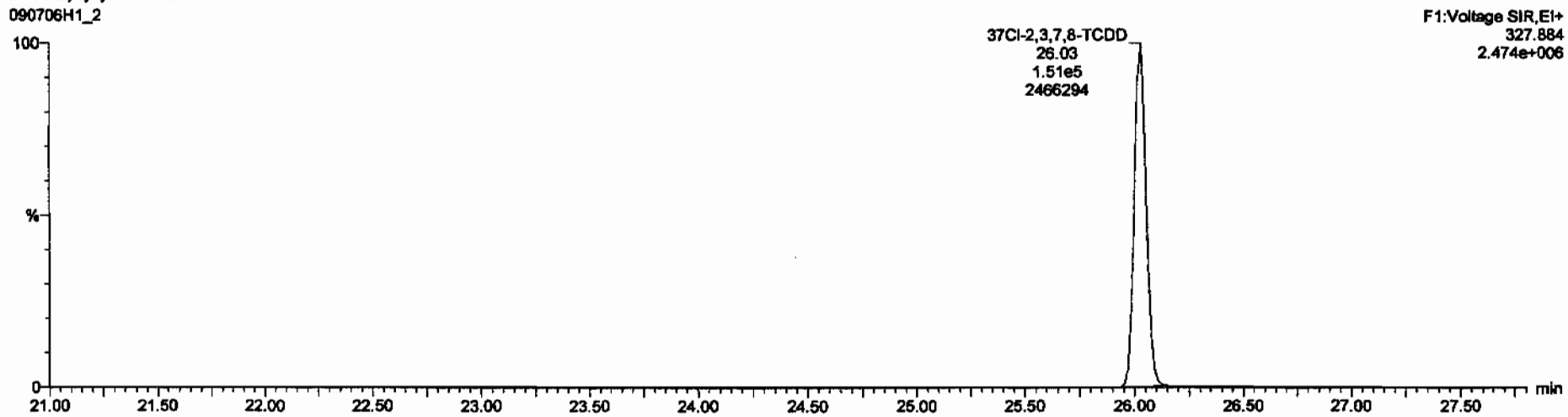

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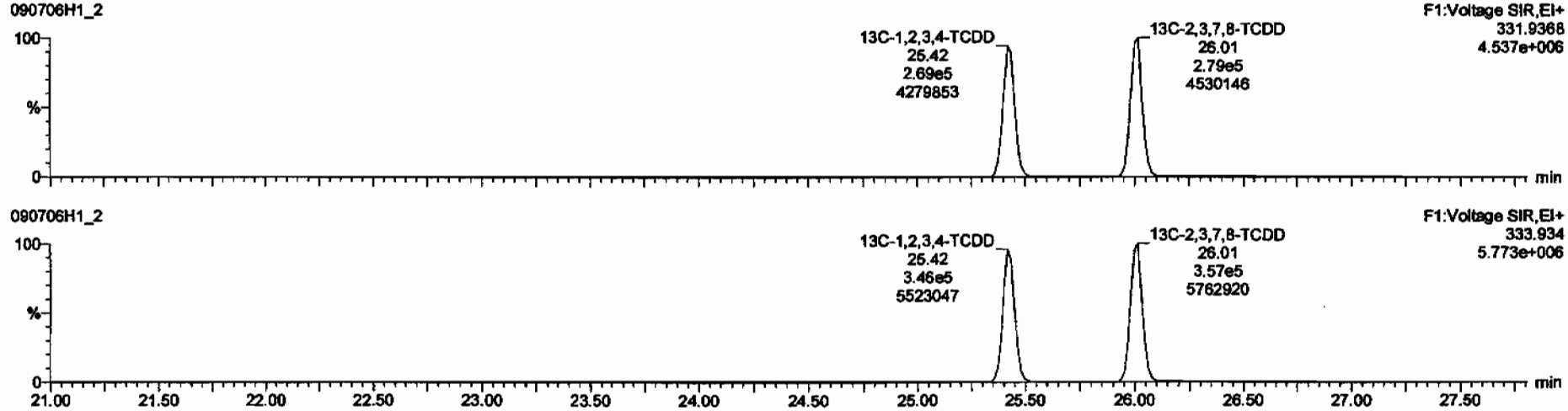

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Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

1,2,3,7,8-PeCDD

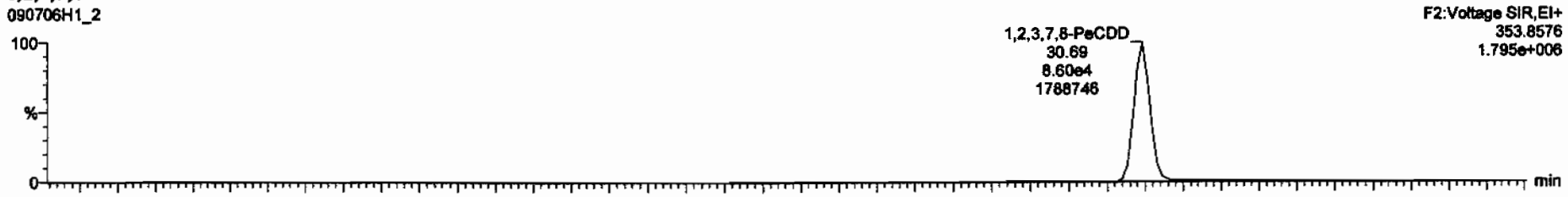

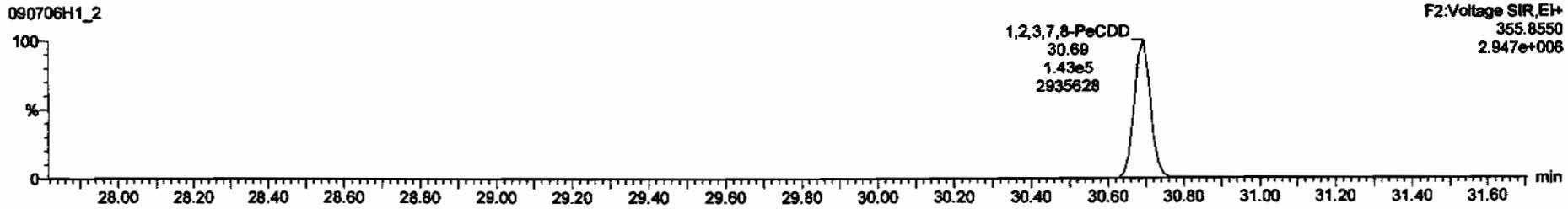

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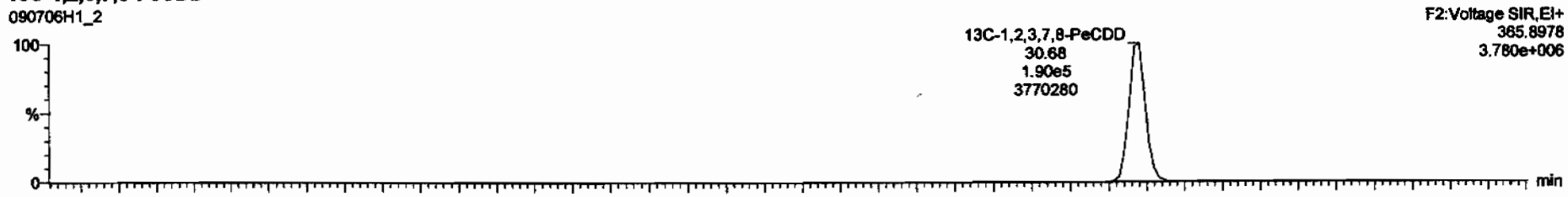

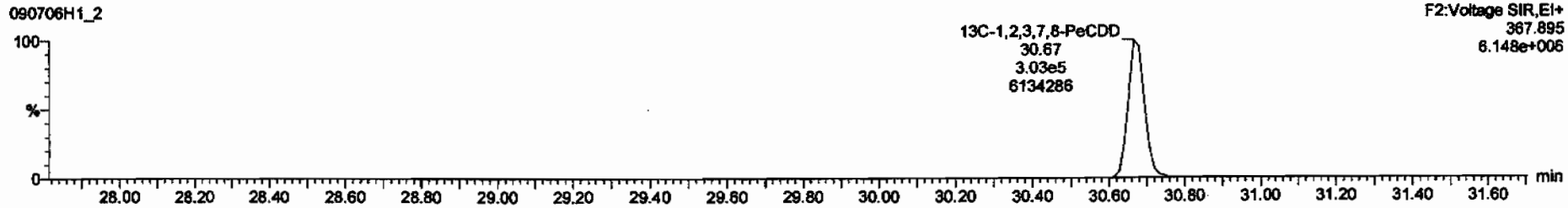

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Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

1,2,3,4,7,8-HxCDD

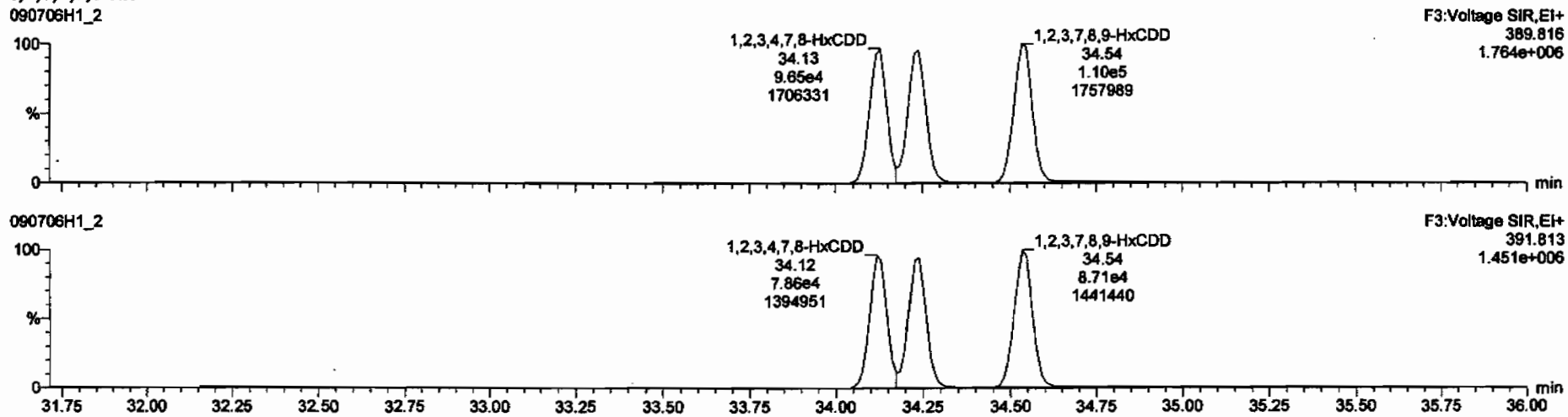

13C-1,2,3,4,7,8-HxCDD

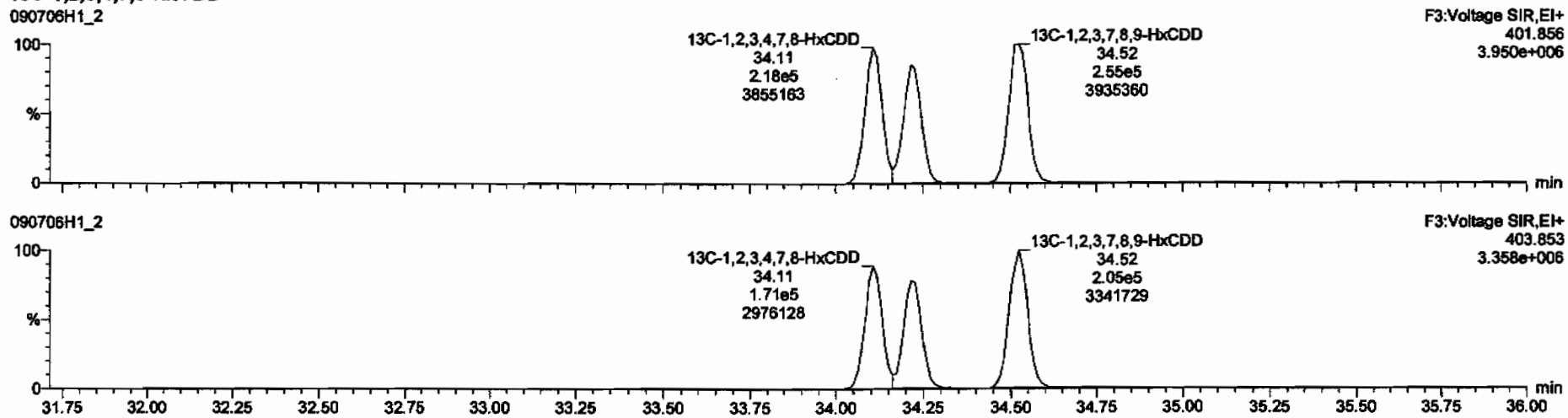

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Last Altered: Monday, July 06, 2009 16:43:09 Pacific Daylight Time
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Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

1,2,3,4,6,7,8-HpCDD

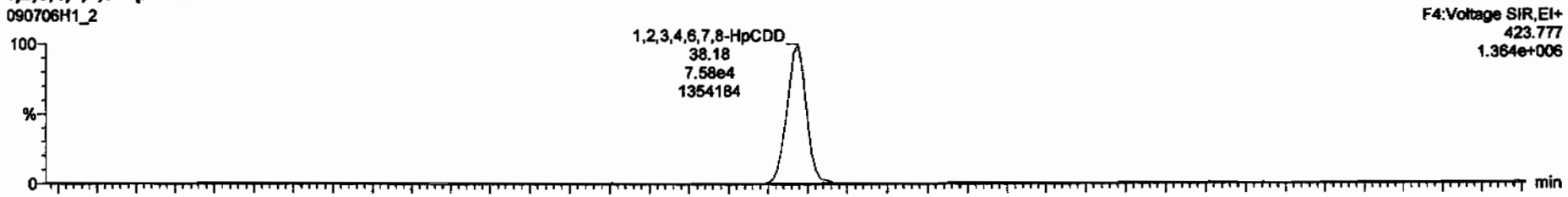

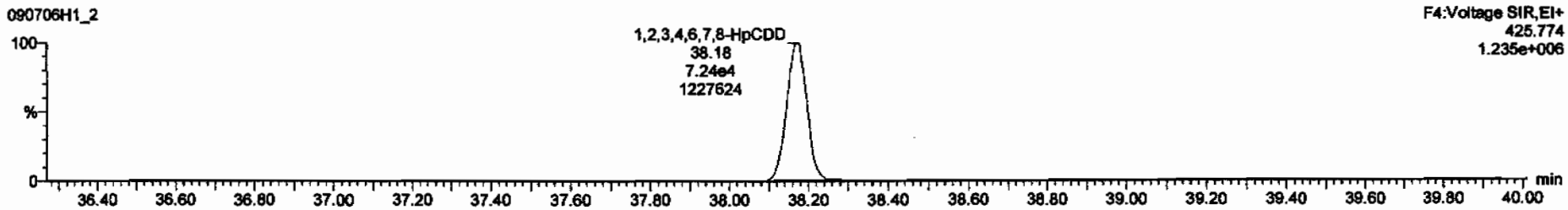

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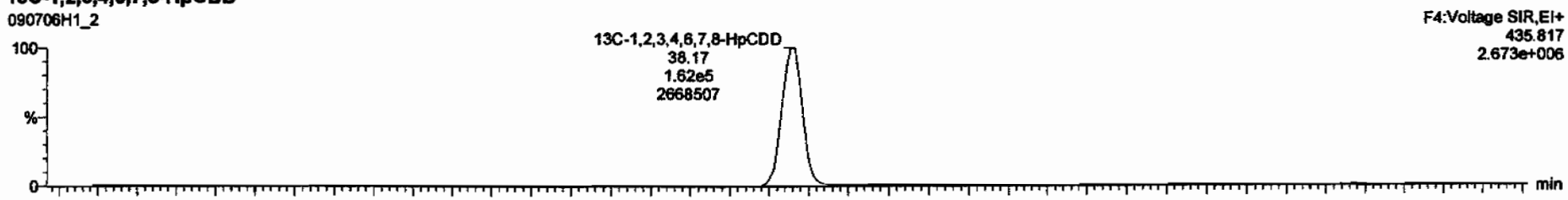

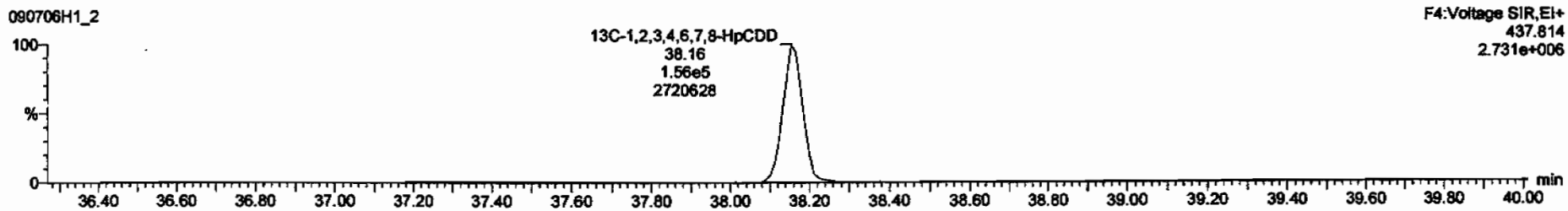

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Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

OCDD

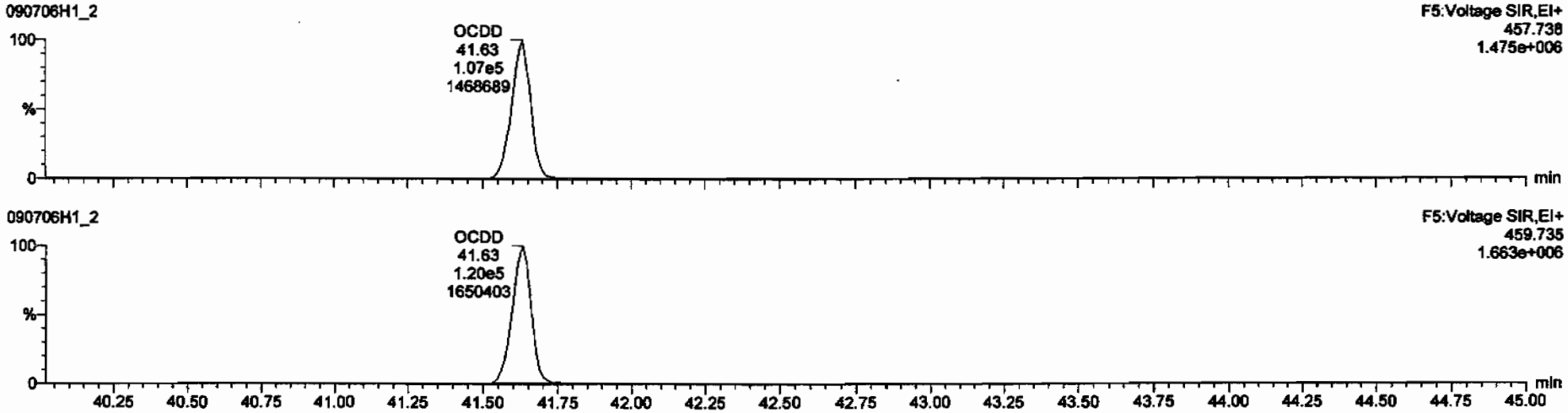

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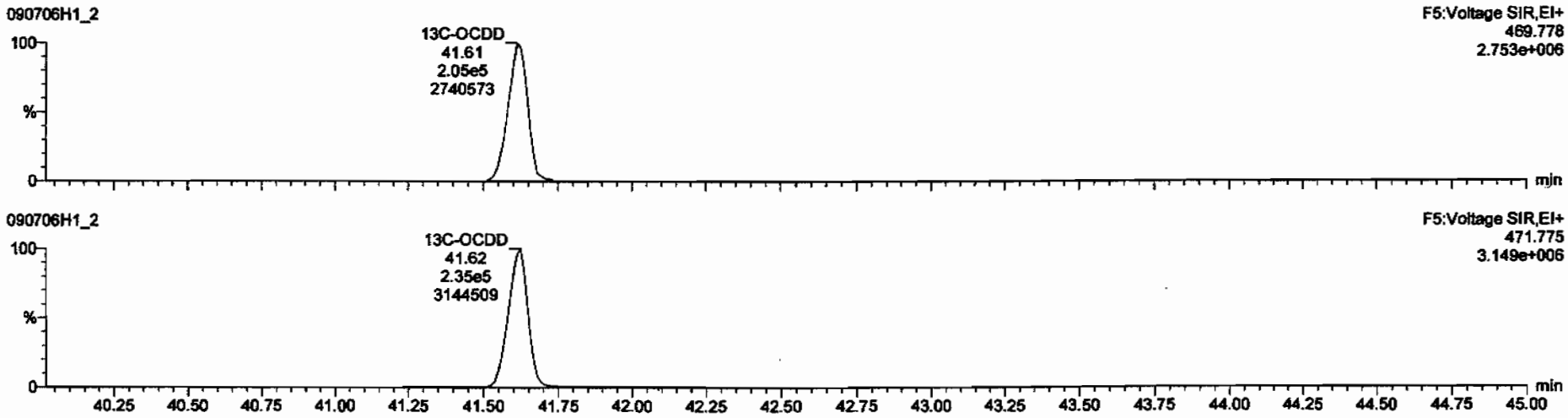

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Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

2,3,7,8-TCDF

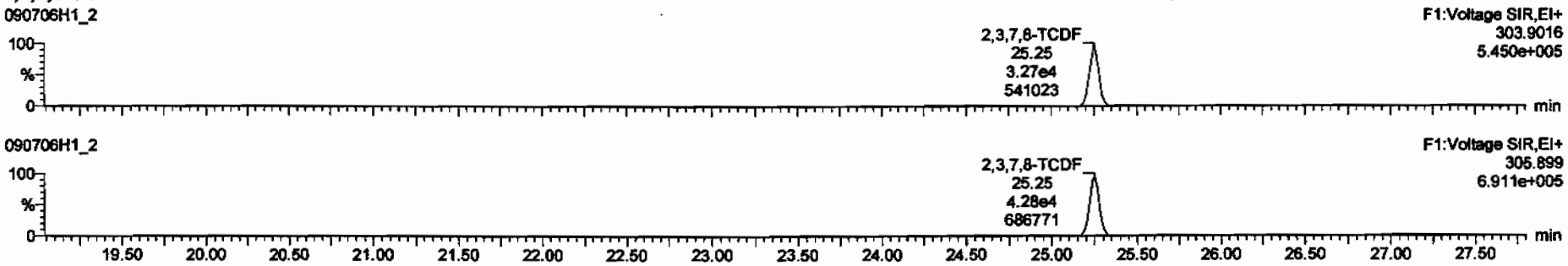

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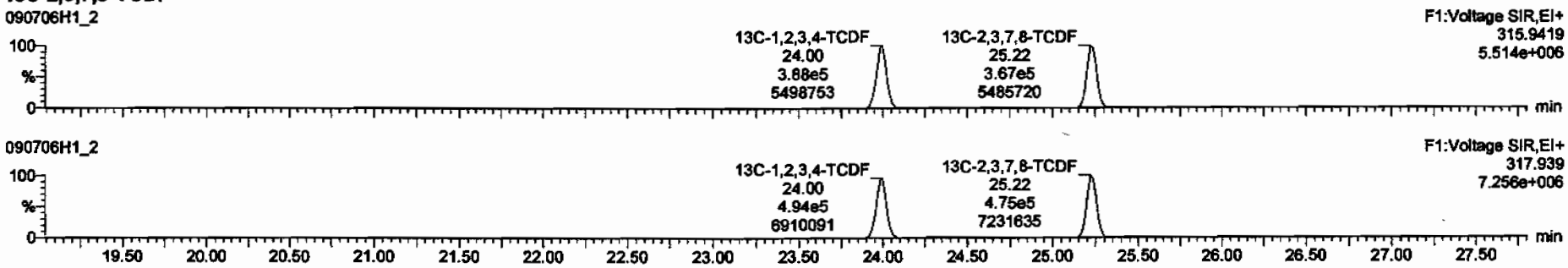

DPE1

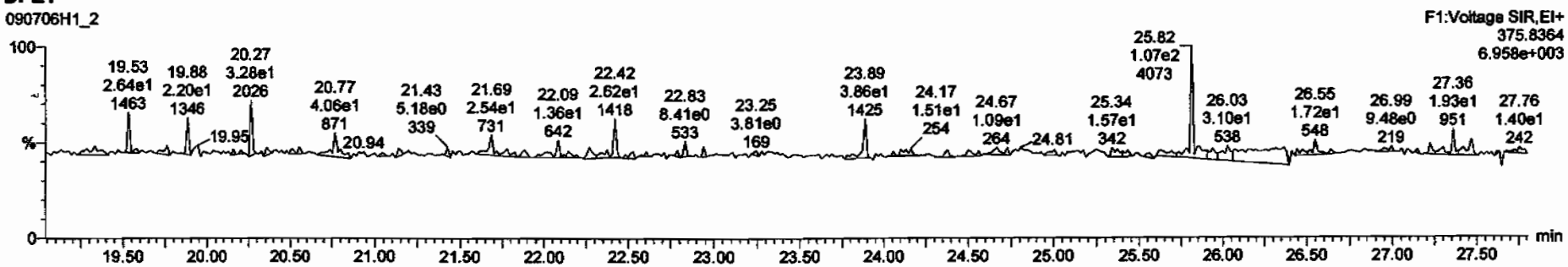

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Printed: Monday, July 06, 2009 16:43:30 Pacific Daylight Time

Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

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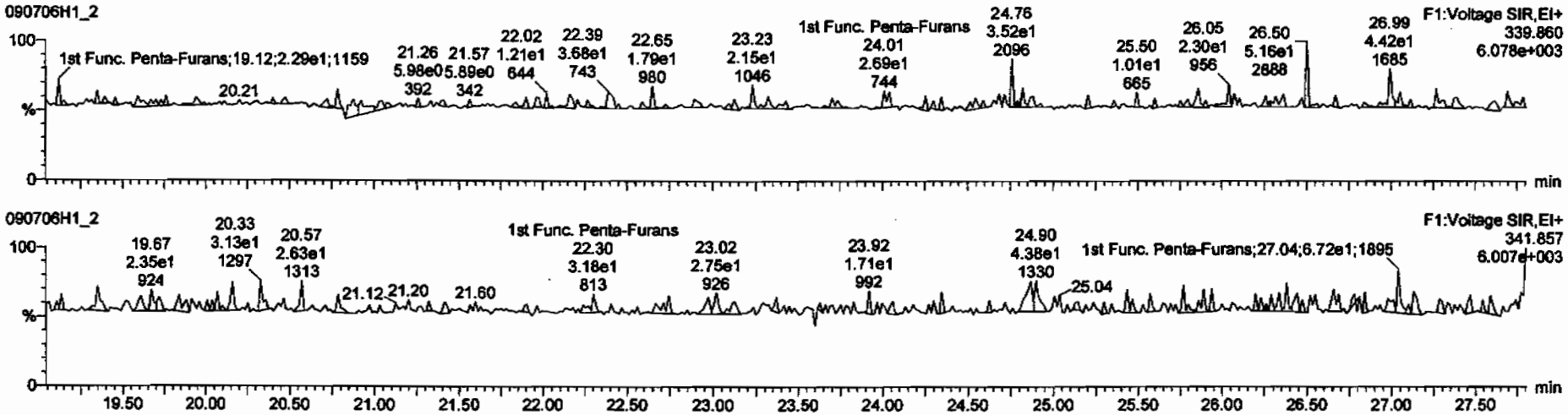

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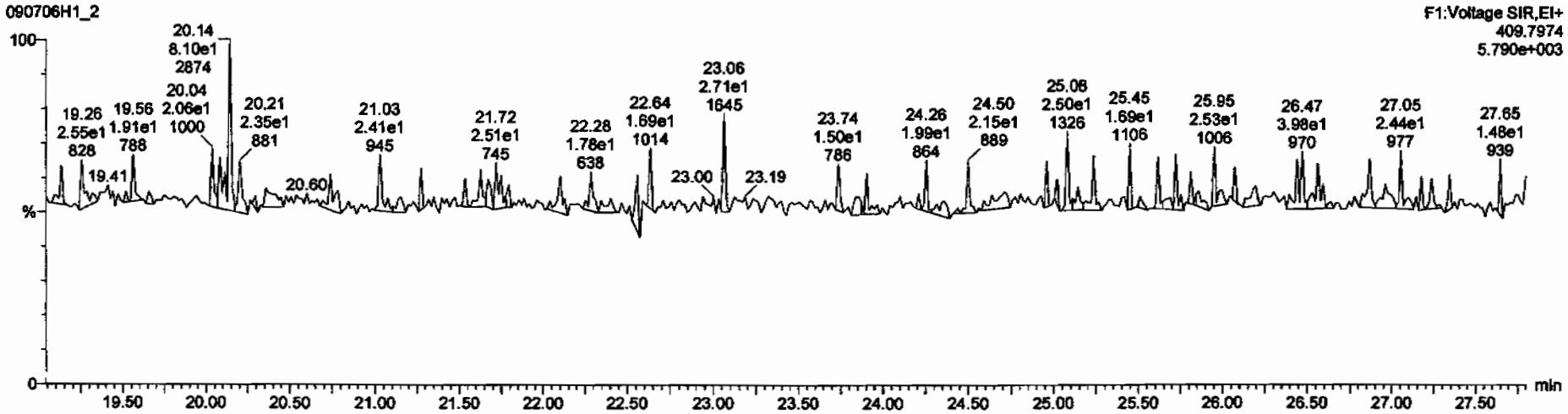

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Last Altered: Monday, July 06, 2009 16:43:09 Pacific Daylight Time
Printed: Monday, July 06, 2009 16:43:30 Pacific Daylight Time

Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

1,2,3,7,8-PeCDF

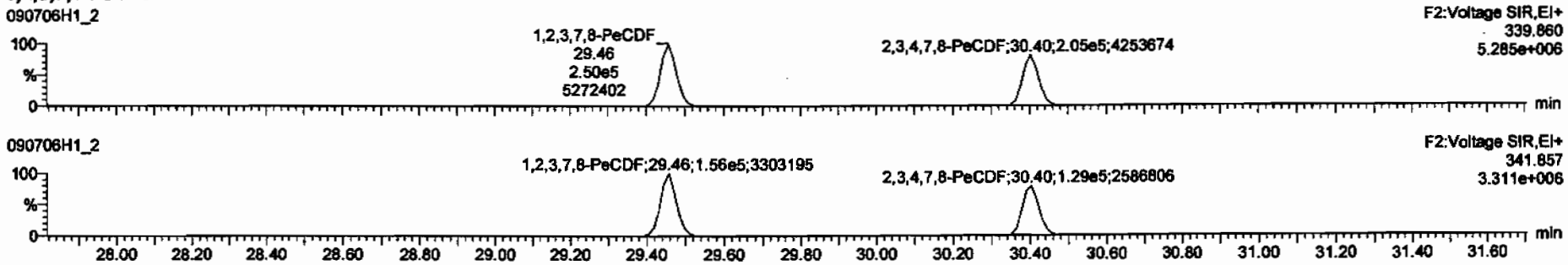

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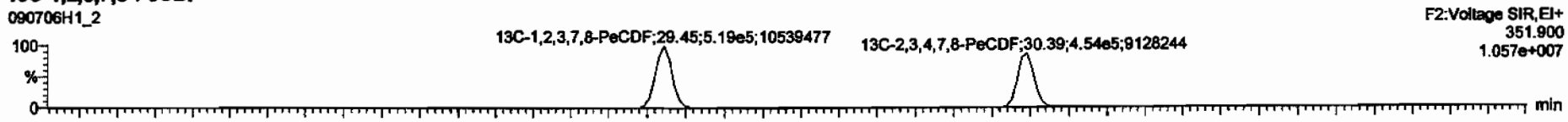

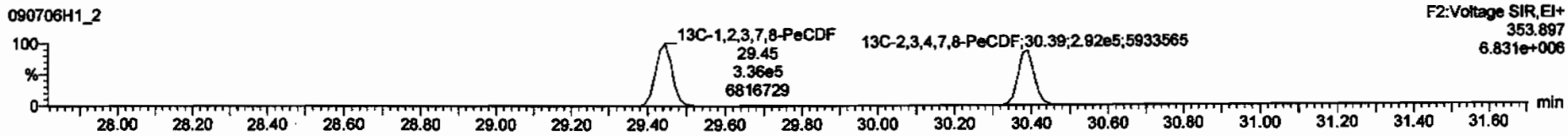

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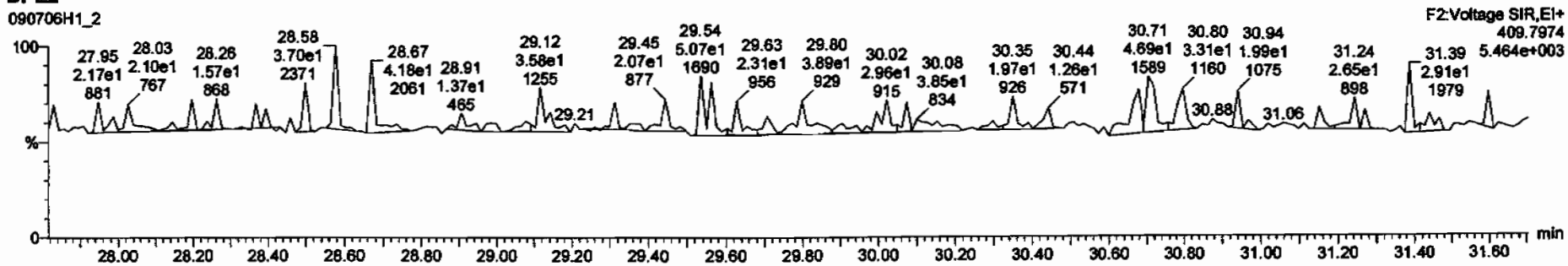

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Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

1,2,3,4,7,8-HxCDF

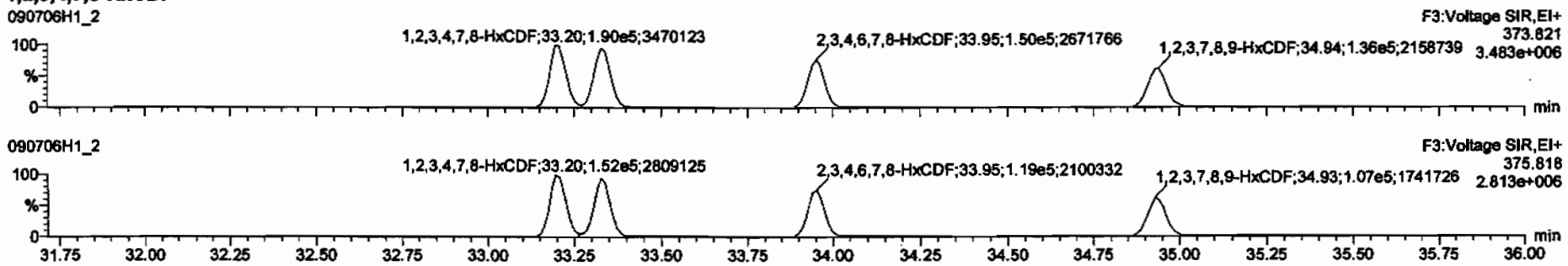

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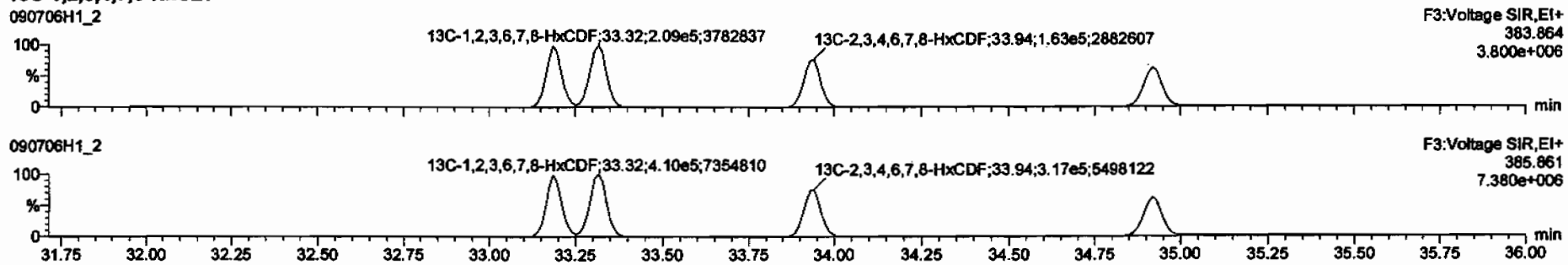

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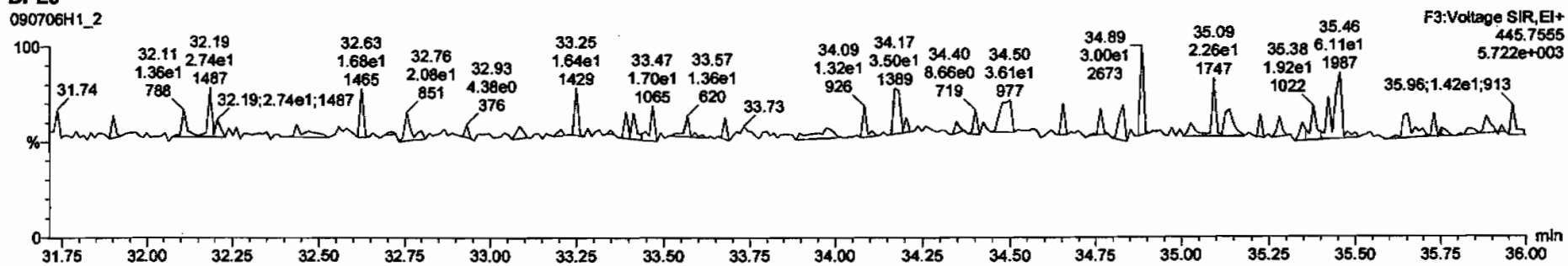

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1,2,3,4,6,7,8-HpCDF

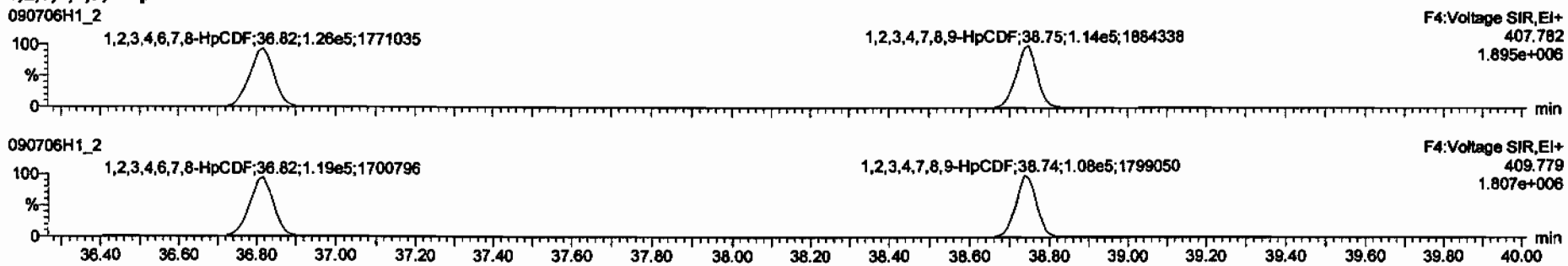

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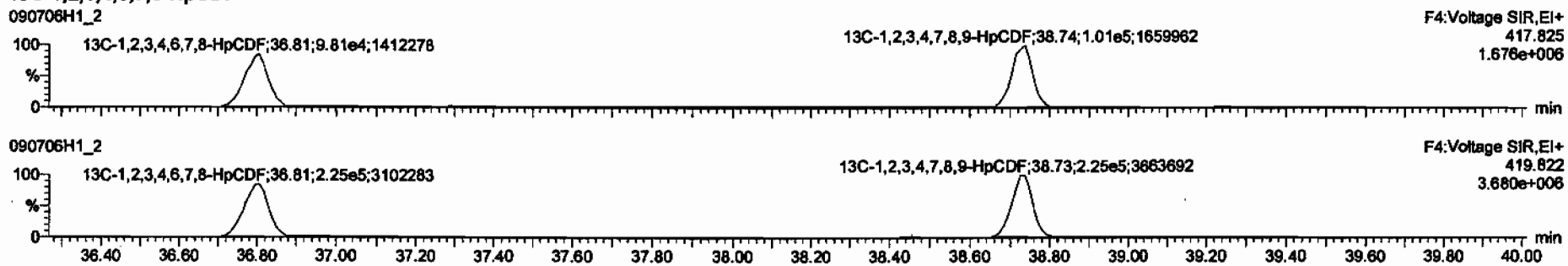

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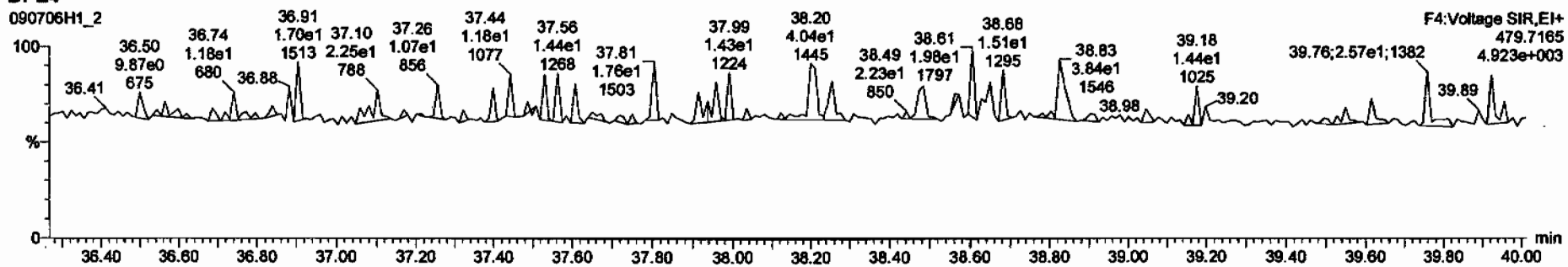

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Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

OCDF

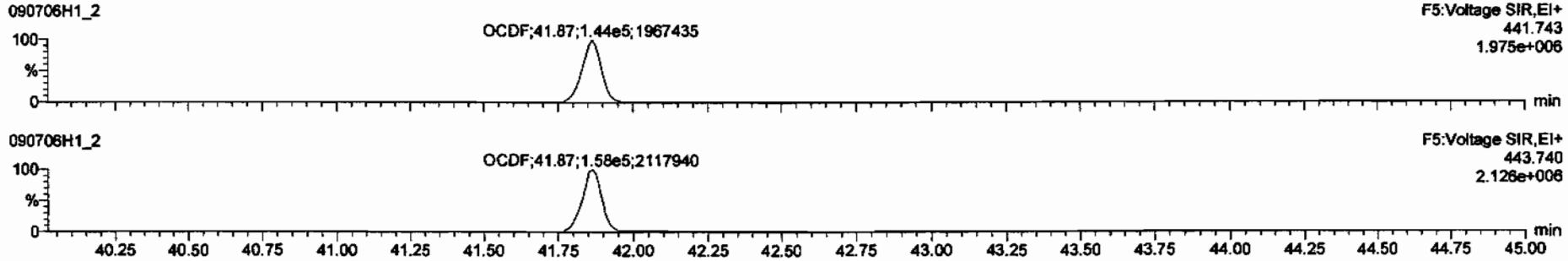

13C-OCDF

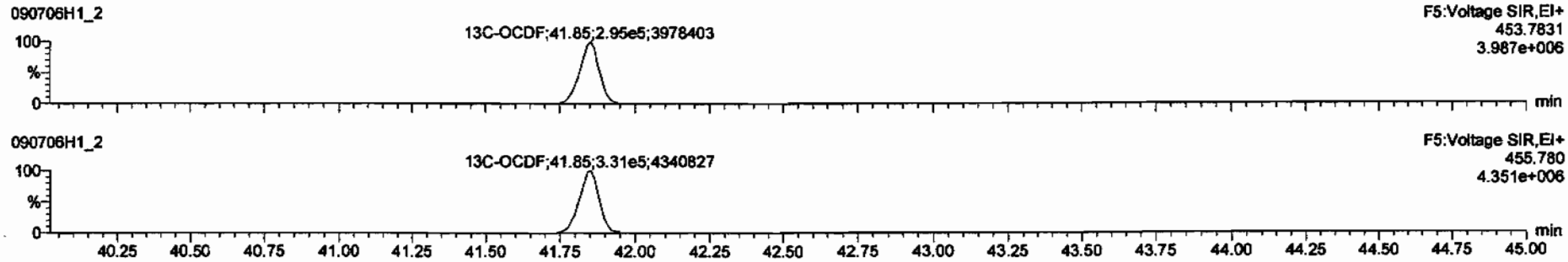

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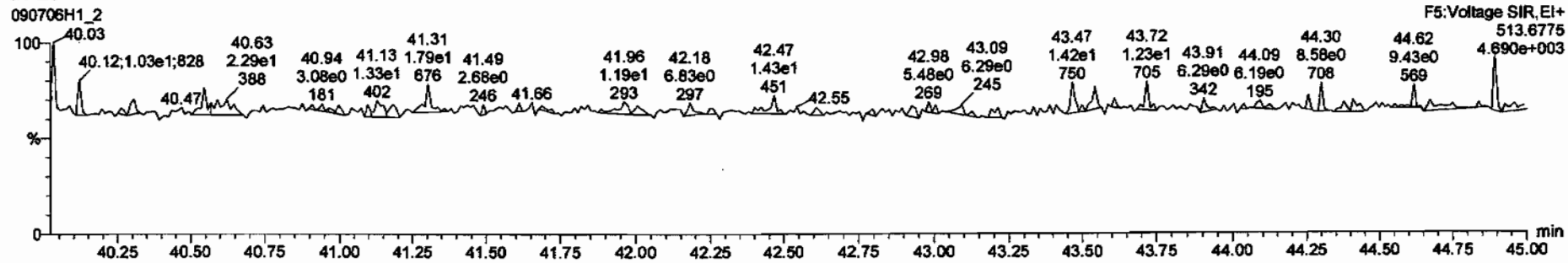

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Last Altered: Monday, July 06, 2009 16:43:09 Pacific Daylight Time
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Name: 090706H1_2, Date: 06-Jul-2009, Time: 14:16:34, ID: 0_2218_OPR001, Description: 0_2218_OPR001

PFK1

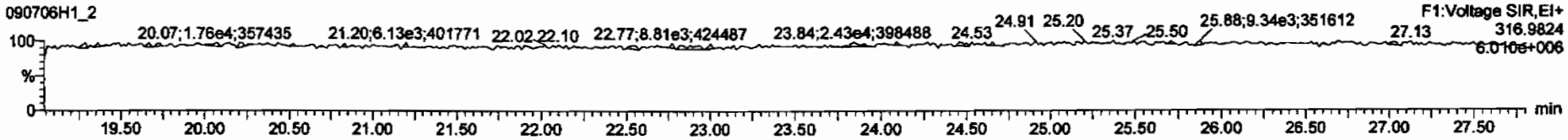

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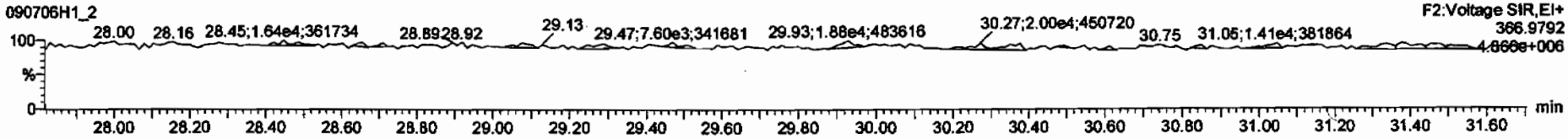

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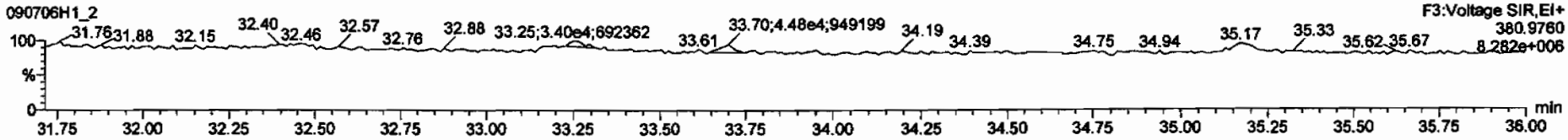

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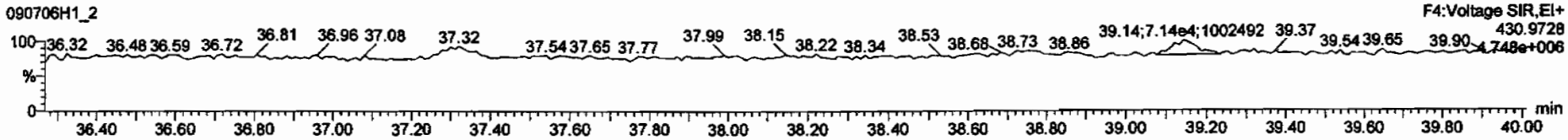

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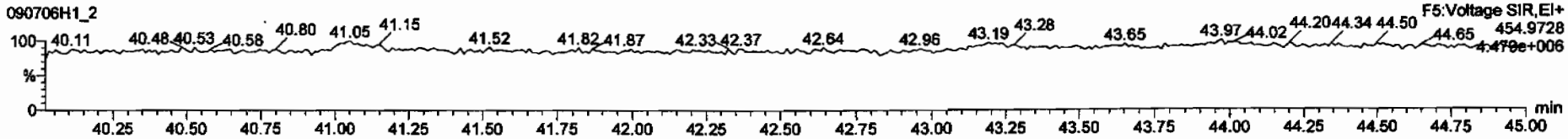

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Last Altered: Tuesday, July 07, 2009 13:15:06 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:15:34 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

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2	1,2,3,7,8-PeCDD			NO	1.03	9.832					0.140	
3	1,2,3,4,7,8-HxCDD			NO	1.00	9.832					0.508	
4	1,2,3,6,7,8-HxCDD			NO	1.13	9.832					0.524	
5	1,2,3,7,8,9-HxCDD			NO	1.10	9.832					0.496	
6	1,2,3,4,6,7,8-HpCDD	2.21e4	1.00	NO	1.06	9.832	38.17	1.000	12.528		0.561	~~42.528~~
7	OCDD	1.90e5	0.91	NO	1.18	9.832	41.62	1.000	136.34		0.330	~~136.34~~
8	2,3,7,8-TCDF			NO	1.09	9.832					0.0890	
9	1,2,3,7,8-PeCDF			NO	1.16	9.832					0.0939	
10	2,3,4,7,8-PeCDF			NO	1.12	9.832					0.101	
11	1,2,3,4,7,8-HxCDF			NO	1.41	9.832					0.224	
12	1,2,3,6,7,8-HxCDF			NO	1.22	9.832					0.235	
13	2,3,4,6,7,8-HxCDF			NO	1.28	9.832					0.306	
14	1,2,3,7,8,9-HxCDF			NO	1.26	9.832					0.364	
15	1,2,3,4,6,7,8-HpCDF	4.13e3	1.08	NO	1.69	9.832	36.81	1.000	1.5022		0.290	~~1.5022~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	9.832					0.283	
17	OCDF	1.22e4	0.89	NO	1.10	9.832	41.85	1.000	6.7874		0.157	~~6.7874~~
18	13C-2,3,7,8-TCDD	6.49e5	0.79	NO	1.01	9.832	26.00	1.023	190.02	93.4	0.325	
19	13C-1,2,3,7,8-PeCDD	5.05e5	0.63	NO	0.827	9.832	30.67	1.206	181.34	89.1	0.303	
20	13C-1,2,3,4,7,8-HxCDD	4.15e5	1.25	NO	0.916	9.832	34.11	0.988	175.50	86.3	0.775	
21	13C-1,2,3,6,7,8-HxCDD	3.68e5	1.25	NO	0.921	9.832	34.22	0.991	154.67	76.0	0.771	
22	13C-1,2,3,4,6,7,8-HpCDD	3.38e5	1.04	NO	0.708	9.832	38.16	1.105	184.62	90.8	1.16	
23	13C-OCDD	4.82e5	0.90	NO	0.503	9.832	41.61	1.205	371.93	91.4	0.893	
24	13C-2,3,7,8-TCDF	8.59e5	0.78	NO	0.977	9.832	25.24	0.993	188.01	92.4	0.262	
25	13C-1,2,3,7,8-PeCDF	8.29e5	1.56	NO	0.896	9.832	29.43	1.158	197.78	97.2	0.430	
26	13C-2,3,4,7,8-PeCDF	7.54e5	1.55	NO	0.900	9.832	30.38	1.195	179.32	88.2	0.429	
27	13C-1,2,3,4,7,8-HxCDF	5.58e5	0.52	NO	1.17	9.832	33.19	0.961	184.99	90.9	0.785	
28	13C-1,2,3,6,7,8-HxCDF	6.20e5	0.52	NO	1.52	9.832	33.31	0.965	158.19	77.8	0.604	
29	13C-2,3,4,6,7,8-HxCDF	4.87e5	0.52	NO	1.25	9.832	33.93	0.983	151.13	74.3	0.735	
30	13C-1,2,3,7,8,9-HxCDF	4.60e5	0.52	NO	1.05	9.832	34.92	1.011	169.22	83.2	0.872	

7/7/09
7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 13:15:06 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:15:34 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

31 13C-1,2,3,4,6,7,8-HpCDF	3.31e5	0.43	NO	0.868	9.832	36.79	1.066	147.69	72.6	1.42	
32 13C-1,2,3,4,7,8,9-HpCDF	3.45e5	0.45	NO	0.727	9.832	38.73	1.122	184.20	90.6	1.70	
33 13C-OCDF	6.69e5	0.89	NO	0.760	9.832	41.84	1.212	341.48	83.9	0.518	
34 37Cl-2,3,7,8-TCDD	1.66e5			0.668	9.832	26.03	1.024	73.606	90.5	0.116	
35 13C-1,2,3,4-TCDD	6.85e5	0.79	NO	1.00	9.832	25.42	0.000	203.42	100	0.330	
36 13C-1,2,3,4-TCDF	9.51e5	0.78	NO	1.00	9.832	24.00	0.000	203.42	100	0.256	
37 13C-1,2,3,7,8,9-HxCDD	5.25e5	1.28	NO	1.00	9.832	34.52	0.000	203.42	100	0.710	
38 Total Tetra-Dioxins				1.08	9.832					0.0238	
39 Total Penta-Dioxins				1.03	9.832					0.0430	
40 Total Hexa-Dioxins				1.13	9.832			1.9266		0.486	~~1.9266~~
41 Total Hepta-Dioxins				1.06	9.832			21.837		0.561	~~21.837~~
42 Total Tetra-Furans				1.09	9.832			0.21567		0.0890	0.37813
43 1st Func. Penta-Furans				1.16	9.832			~~0.32070~~ 0.583		0.0380	~~0.32070~~
44 Total Penta-Furans				1.16	9.832			~~0.25320~~		0.0957	~~0.25820~~
45 Total Hexa-Furans				1.28	9.832			1.2877		0.278	1.5206
46 Total Hepta-Furans				1.69	9.832			5.1722		0.268	~~5.1722~~

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 13:15:06 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:15:34 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Total Hexa-Dioxins	32.52	1.895e4	1.393e4	1.085e3	7.648e2	1.42	NO	1.850e3	0.85438	0.85438	0.486
Total Hexa-Dioxins	33.40	1.984e4	1.375e4	1.343e3	9.785e2	1.37	NO	2.321e3	1.0722	1.0722	0.486

Hepta-Dioxins

Total Hepta-Dioxins	37.23	1.018e5	9.756e4	8.707e3	7.729e3	1.13	NO	1.644e4	9.3088	9.3088	0.561
1,2,3,4,6,7,8-HpCDD	38.17	1.737e5	1.652e5	1.105e4	1.107e4	1.00	NO	2.212e4	12.528	12.528	0.561

Tetra-Furans

Total Tetra-Furans	21.73	4.298e3	5.005e3	4.187e2	4.214e2	0.99	YES	0.000e0	0.00000	0.16245	0.0890
Total Tetra-Furans	25.59	8.053e3	9.390e3	4.476e2	5.425e2	0.83	NO	9.901e2	0.21567	0.21567	0.0890

Penta-Furans function 1

1st Func. Penta-Furans	27.01	1.358e4	1.037e4	8.766e2	6.097e2	1.44	NO	1.486e3	0.32970	0.32970	0.0380

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 13:15:06 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:15:34 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

Penta-Furans

Total Penta-Furans	28.50	1.228e4	9.718e3	6.721e2	4.694e2	1.43	NO	1.141e3	0.25320	0.25320	0.0957

Hexa-Furans

Total Hexa-Furans	31.98	1.030e4	6.402e3	5.627e2	3.477e2	1.62	YES	0.000e0	0.00000	0.23291	0.278
Total Hexa-Furans	32.14	3.129e4	2.311e4	1.464e3	1.257e3	1.16	NO	2.721e3	0.81378	0.81378	0.278
Total Hexa-Furans	32.71	2.101e4	1.386e4	8.999e2	6.848e2	1.31	NO	1.585e3	0.47390	0.47390	0.278

Hepta-Furans

1,2,3,4,6,7,8-HpCDF	36.81	2.922e4	2.466e4	2.140e3	1.987e3	1.08	NO	4.128e3	1.5022	1.5022	0.290
Total Hepta-Furans	37.45	7.853e4	5.946e4	5.368e3	4.935e3	1.09	NO	1.030e4	3.6700	3.6700	0.268

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

2,3,7,8-TCDD

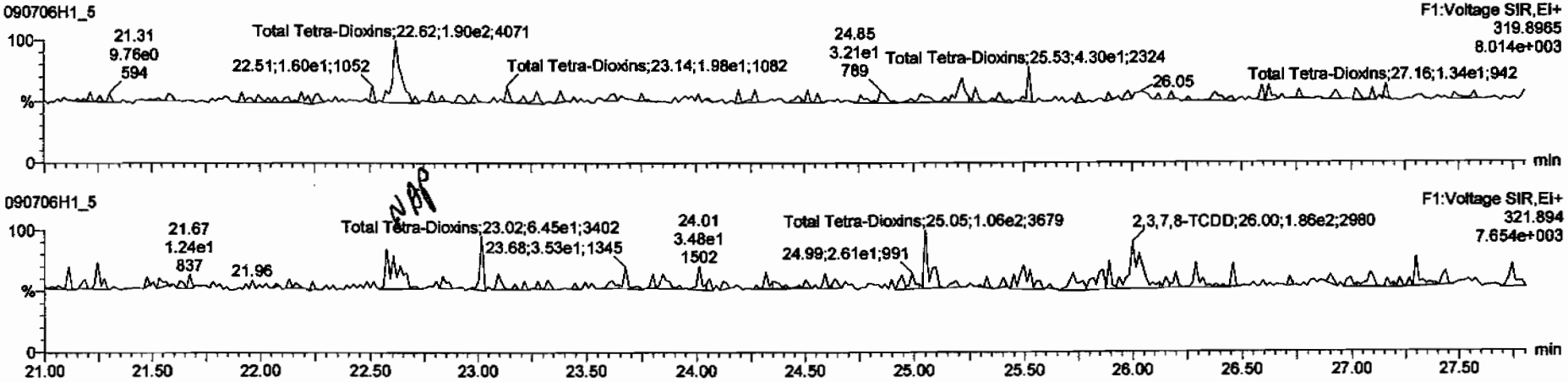

13C-2,3,7,8-TCDD

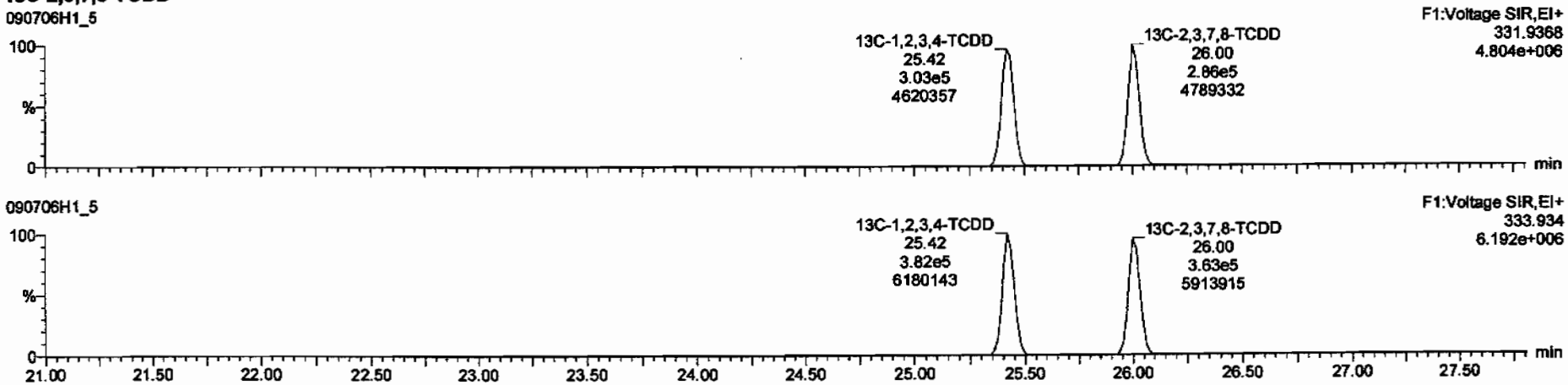

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Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

37Cl-2,3,7,8-TCDD

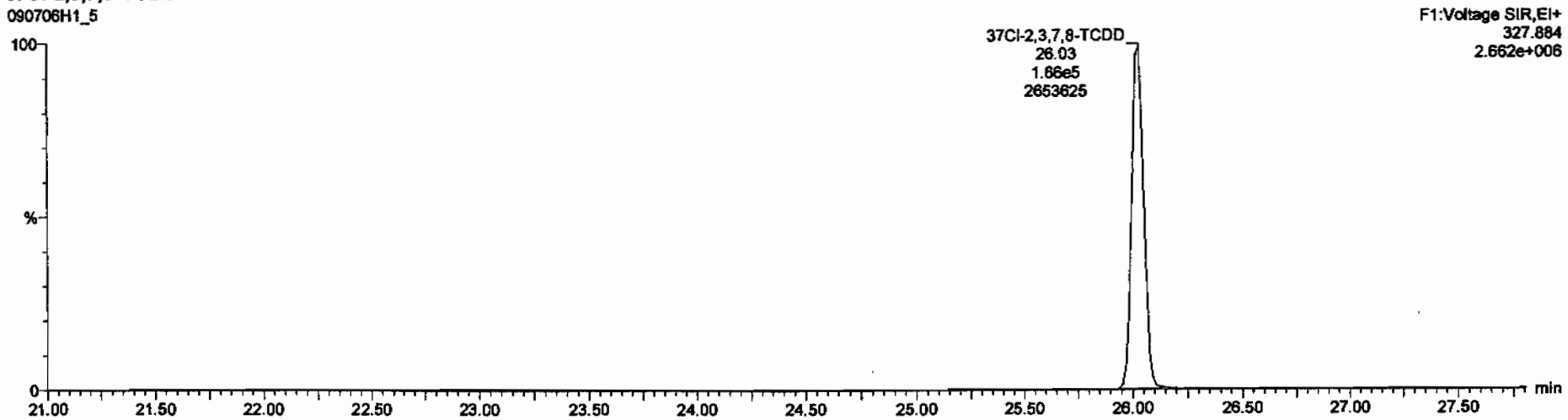

13C-1,2,3,4-TCDD

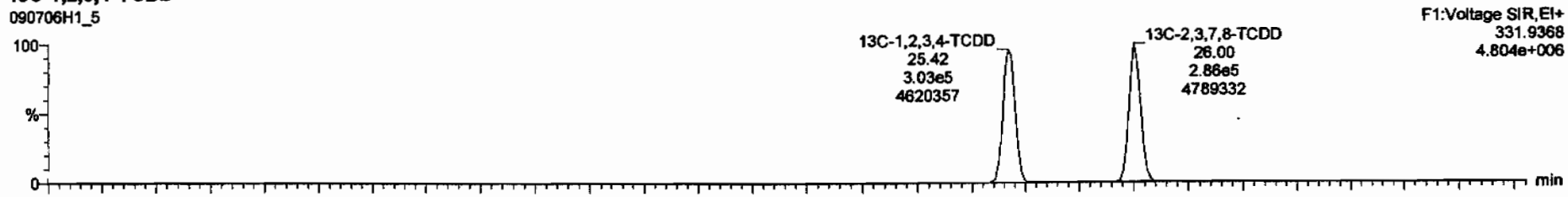

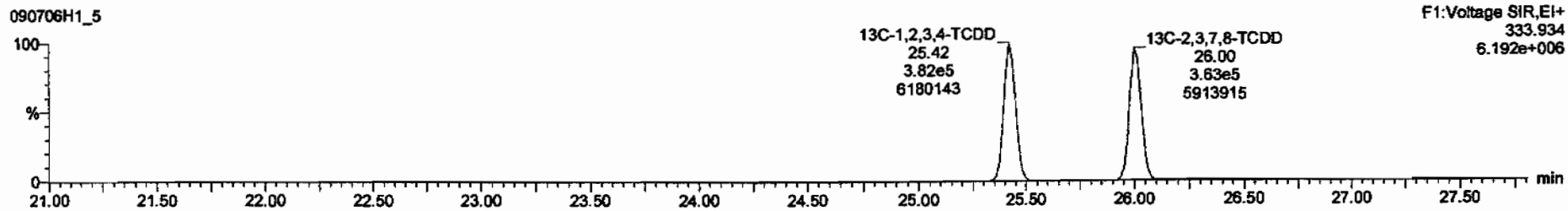

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

1,2,3,7,8-PeCDD

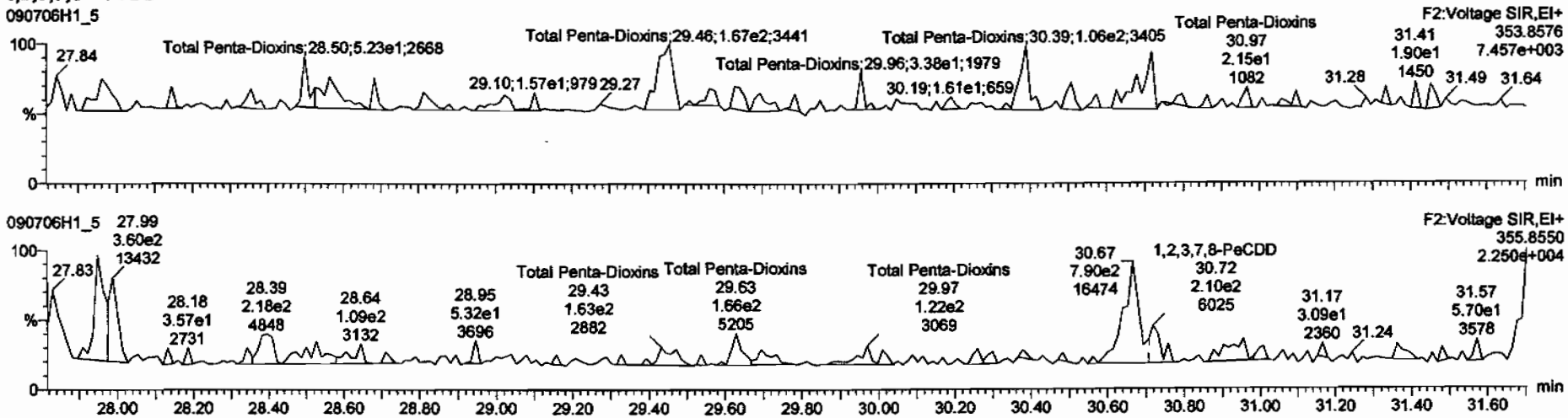

13C-1,2,3,7,8-PeCDD

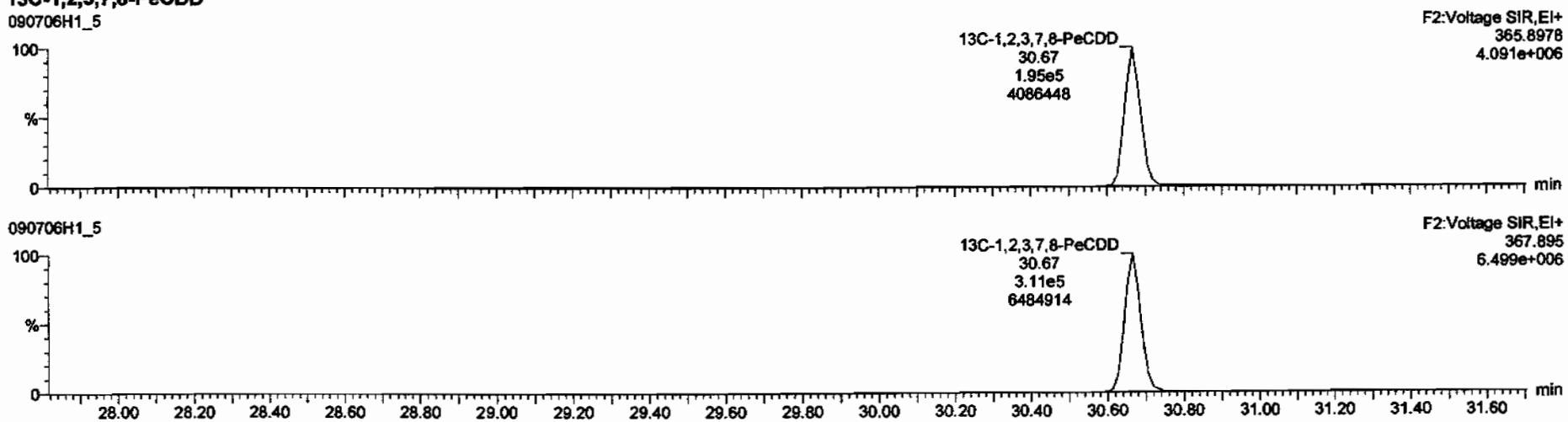

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Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

1,2,3,4,7,8-HxCDD

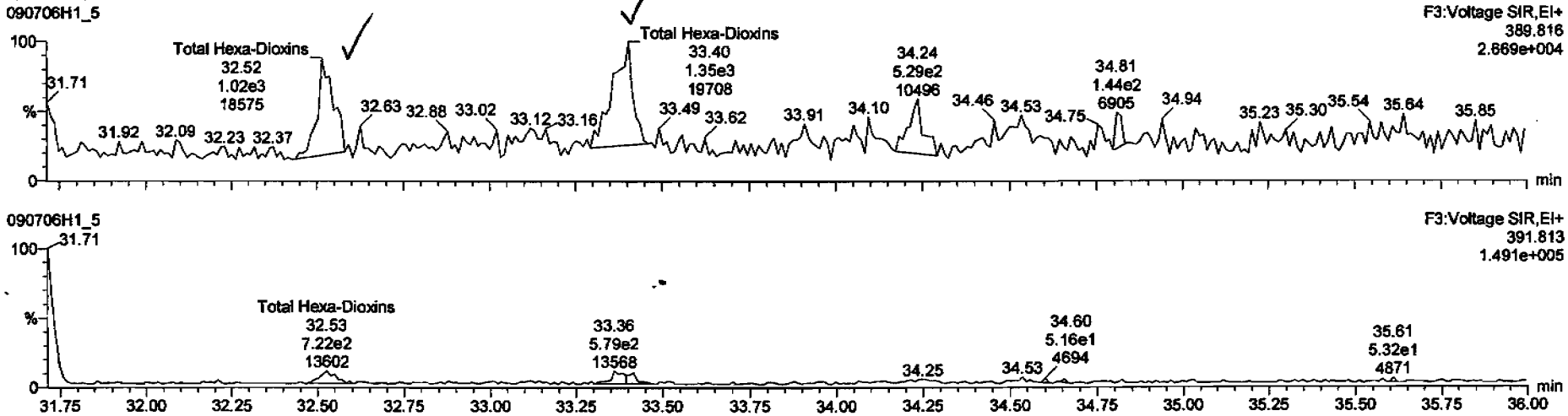

13C-1,2,3,4,7,8-HxCDD

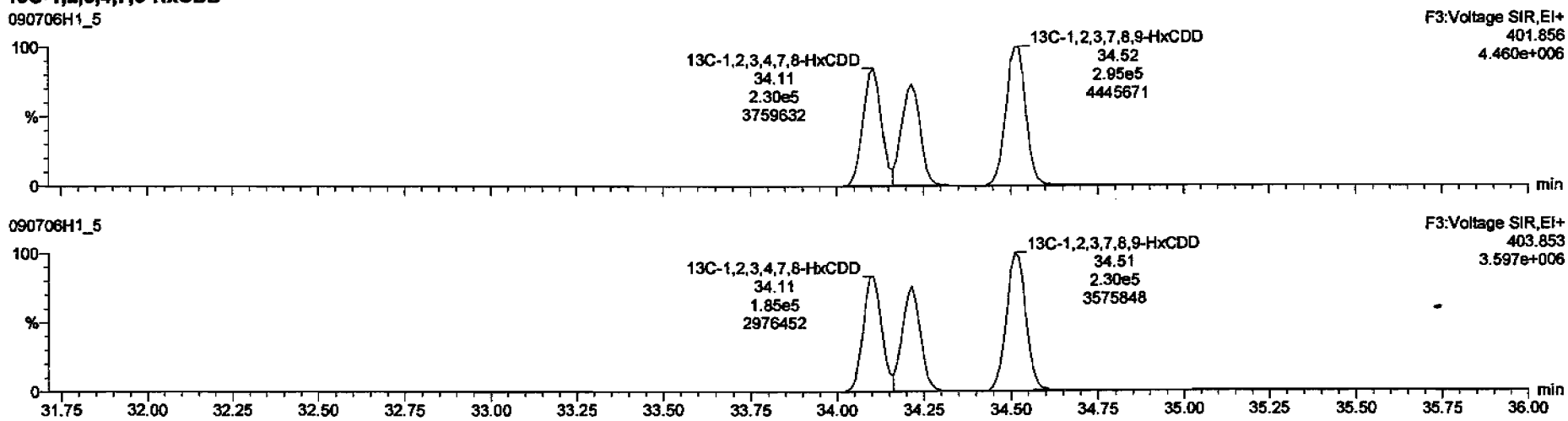

TargetLynx - 090706h1-5.qld * - [Chromatogram]

090706H1_5 - 31853_2218_001 CAMO-09-9950 11.3 - CAMO-09-9950

Name	RT	Area	Height	RA	Flag	Conc.	Conc.
Total Hexa-Dioxins	32.52	1.085e3	7.648e2	1.42	NO	0.85438	0.85438
Total Hexa-Dioxins	33.40	1.343e3	9.785e2	1.37	NO	1.0722	1.0722

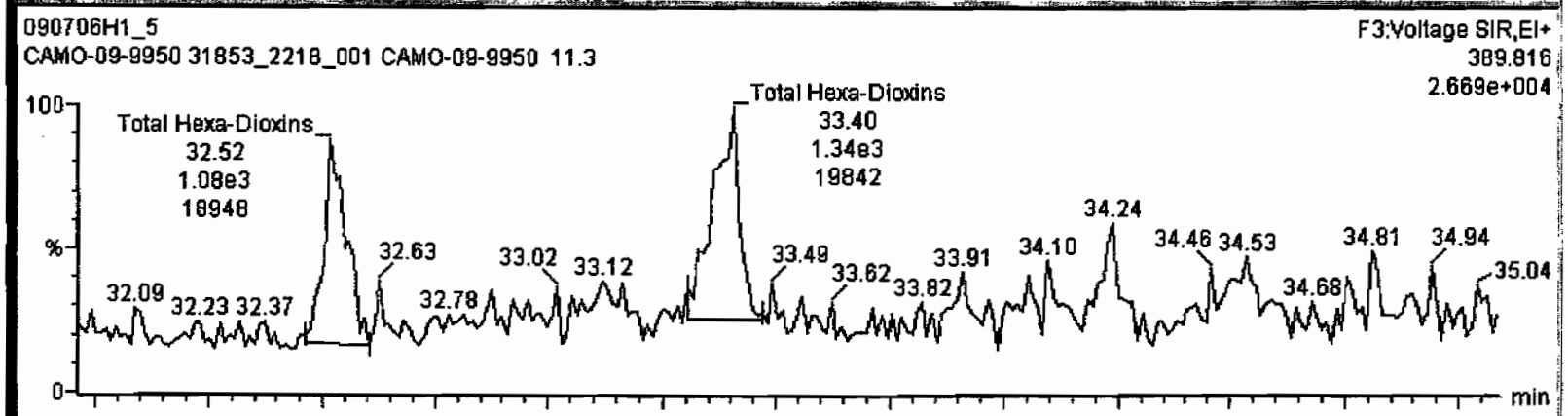

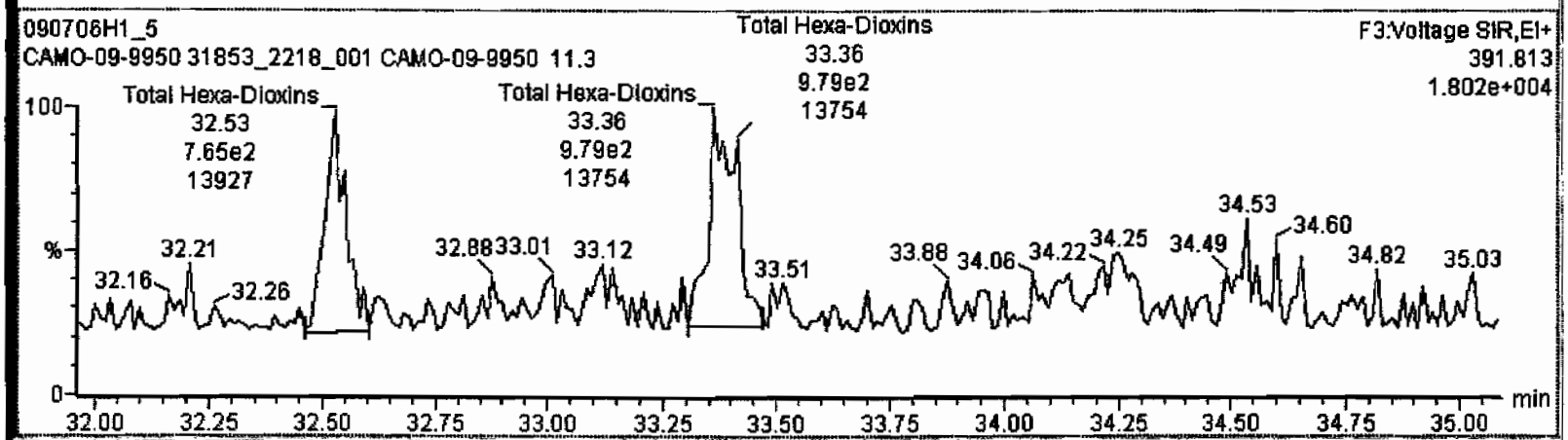

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

1,2,3,4,6,7,8-HpCDD

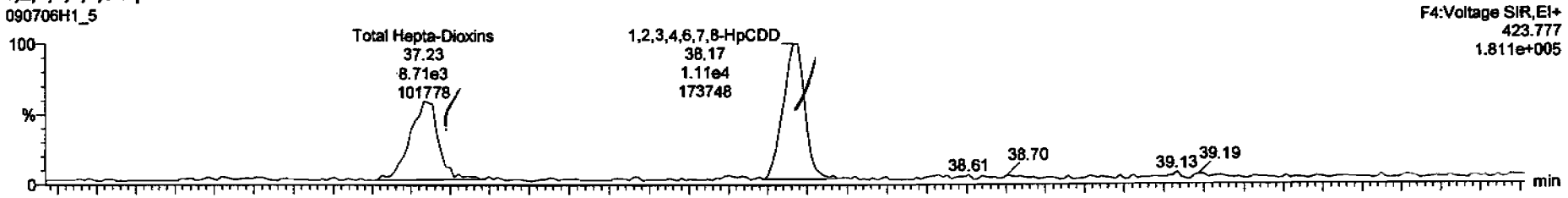

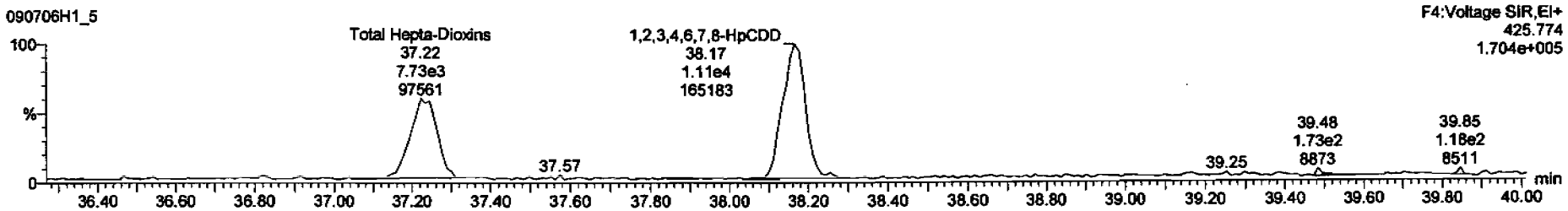

13C-1,2,3,4,6,7,8-HpCDD

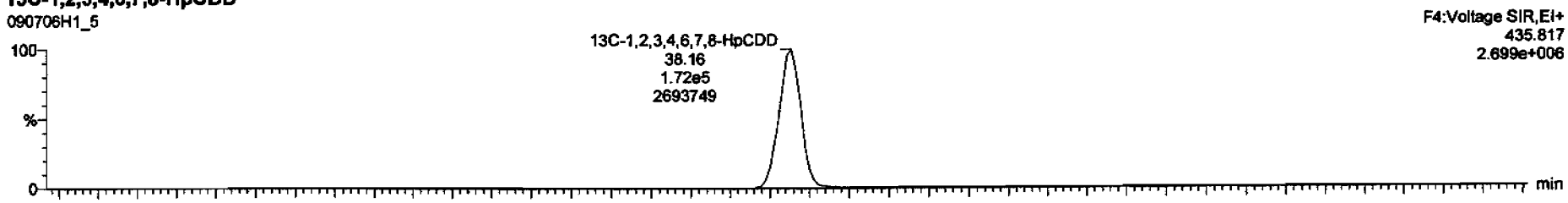

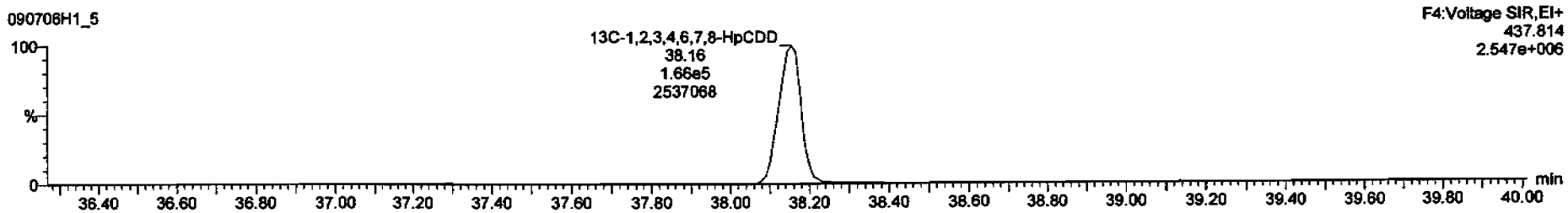

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

OCDD

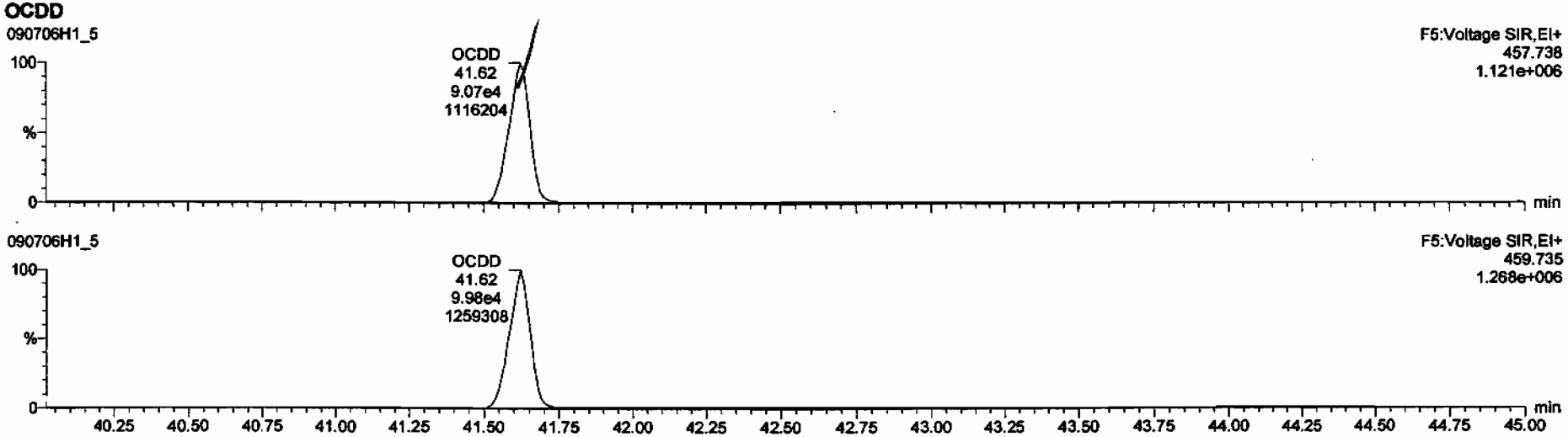

13C-OCDD

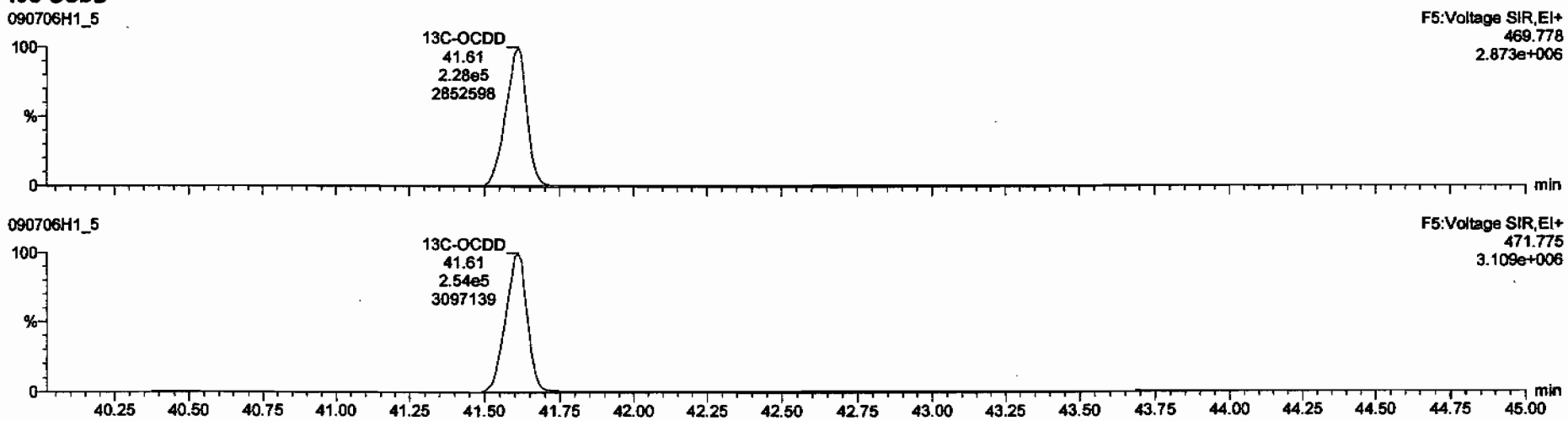

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

2,3,7,8-TCDF

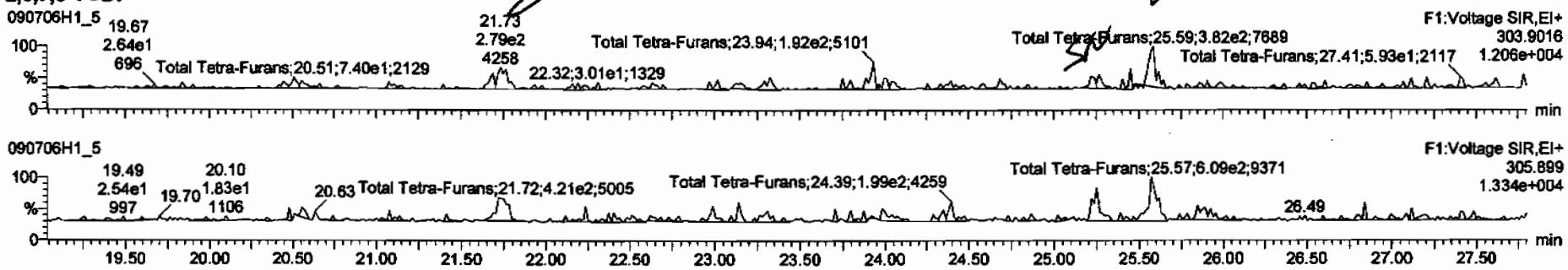

13C-2,3,7,8-TCDF

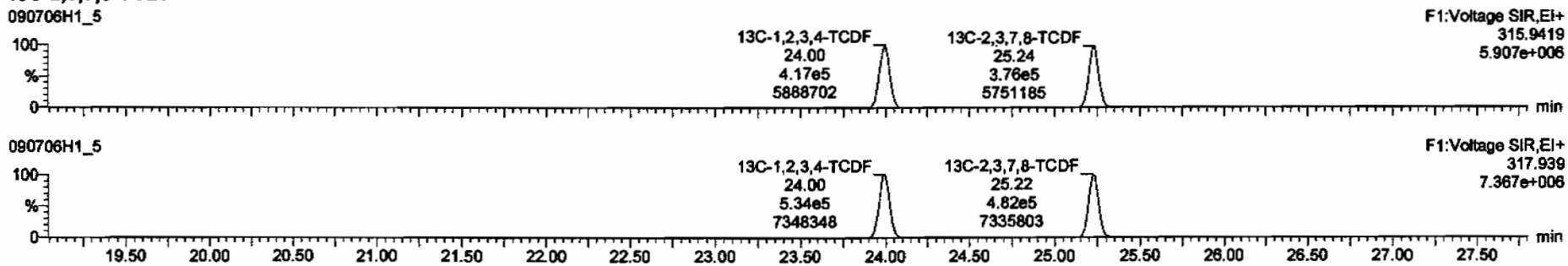

DPE1

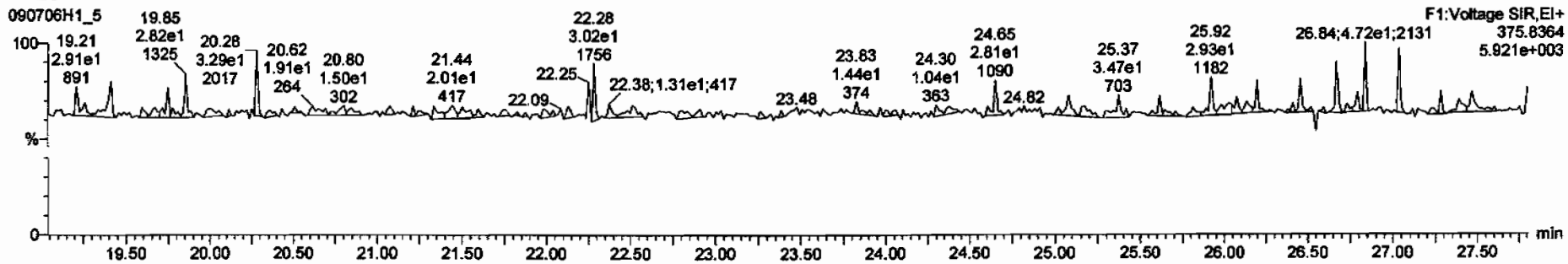

TargetLynx - 090706h1-5.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090706H1_5 - 31853_2218_001 CAMO-09-9950 11.3 - CAMO-09-9950

	Name	RT	Area	m2 Area	RA	QV	Conc.	Spec.
1	Total Tetra-Furans	21.73	4.187e2	4.214e2	0.99	YES	0.16245	0.00000
2	Total Tetra-Furans	25.59	4.476e2	5.425e2	0.83	NO	0.21567	0.21567

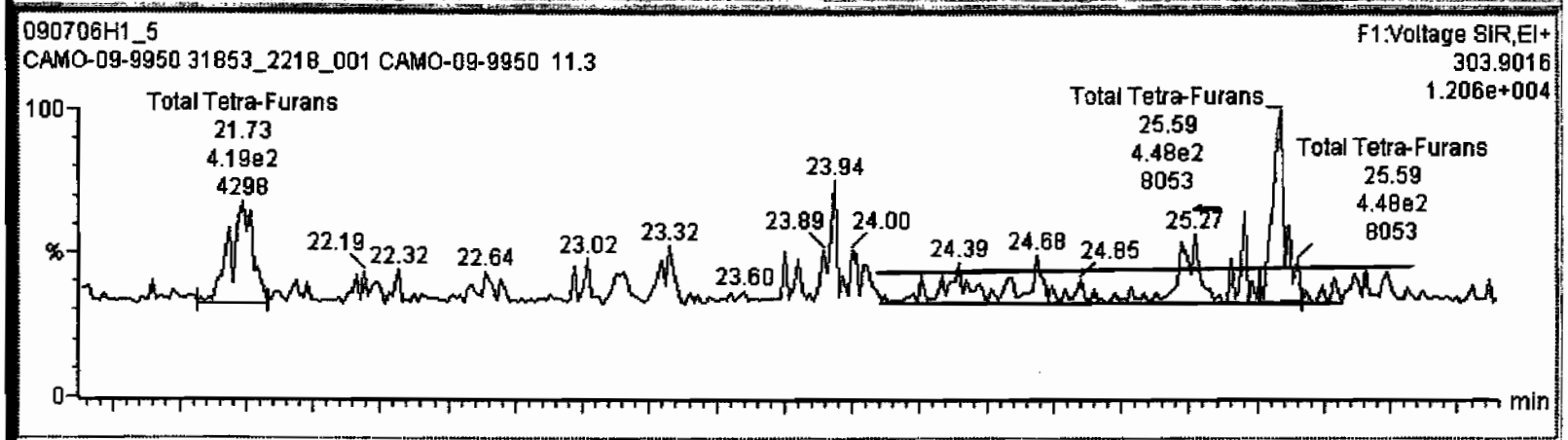

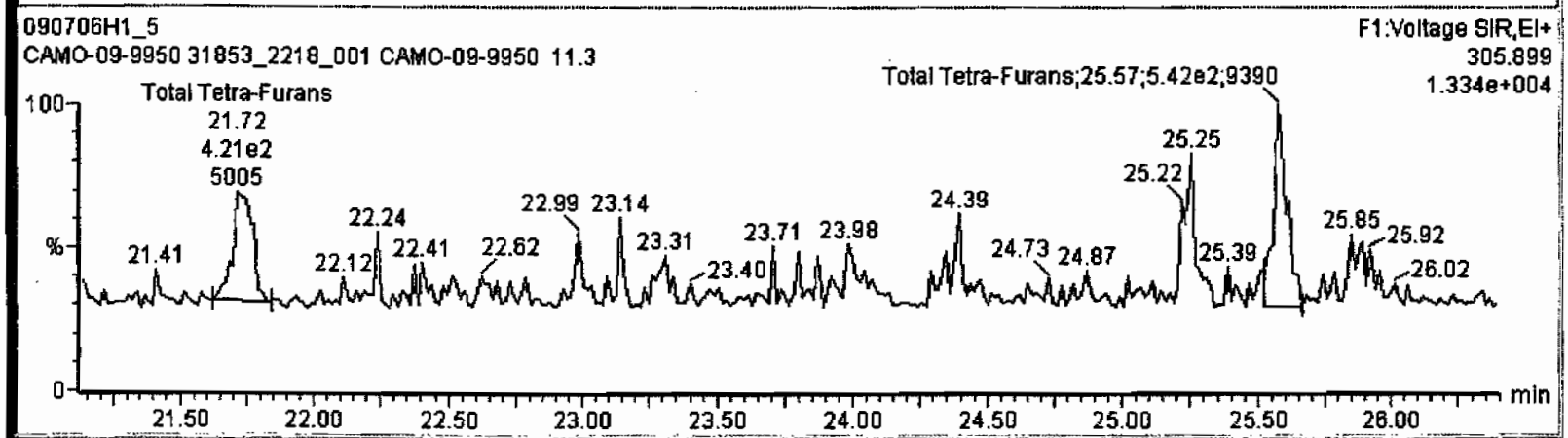

Ready

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

1st Func. Penta-Furans

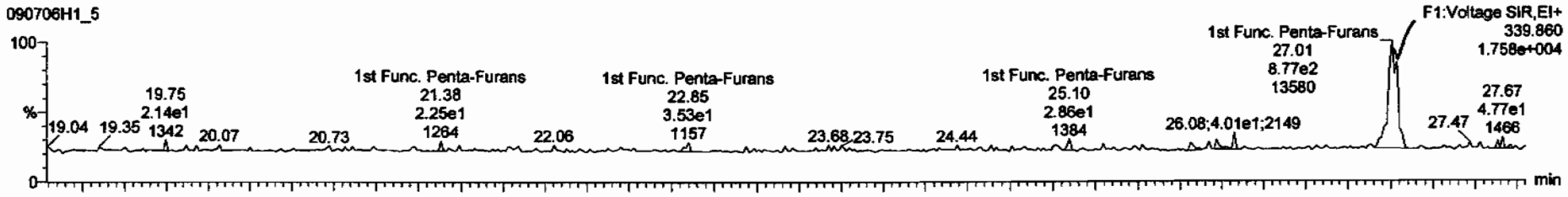

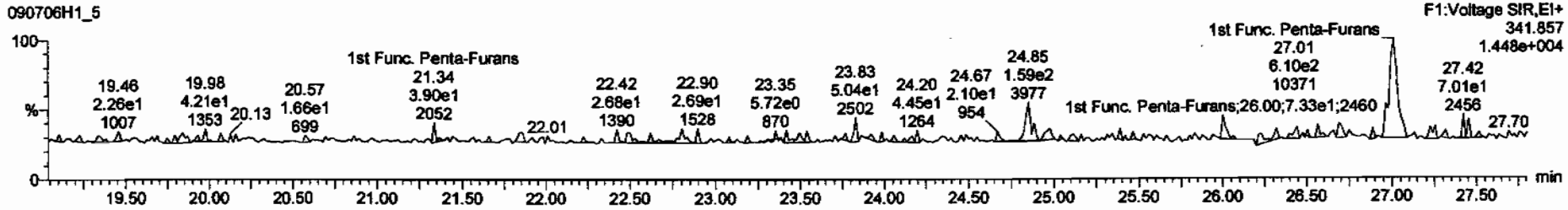

DPE6

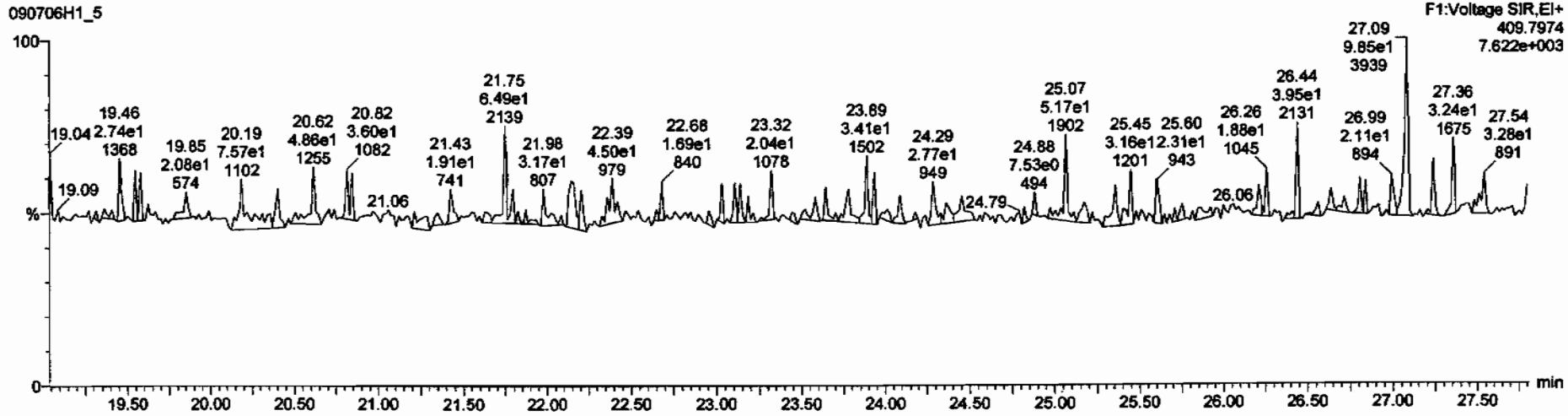

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

1,2,3,7,8-PeCDF

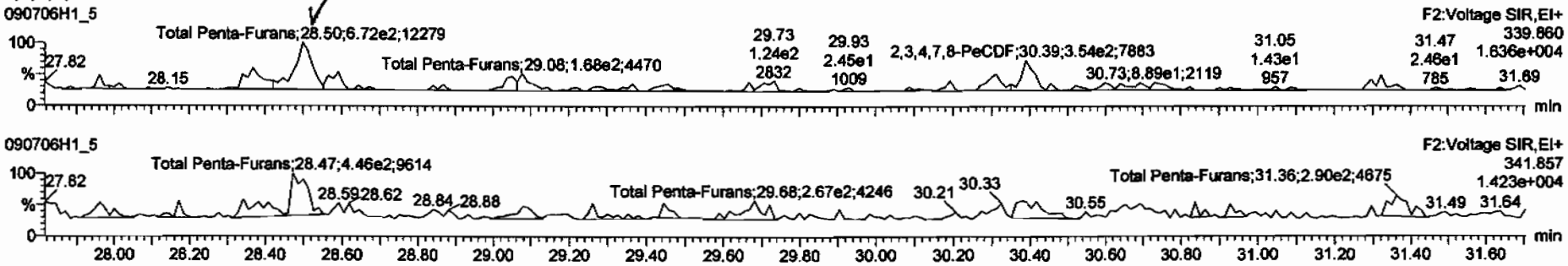

13C-1,2,3,7,8-PeCDF

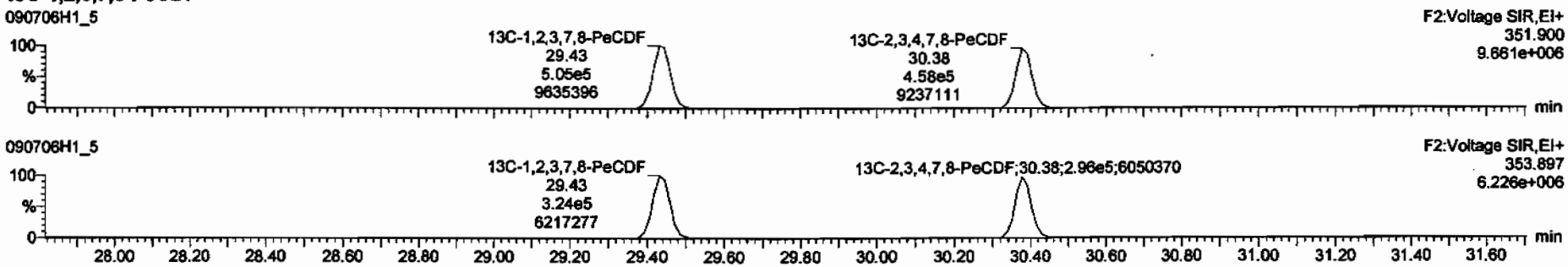

DPE2

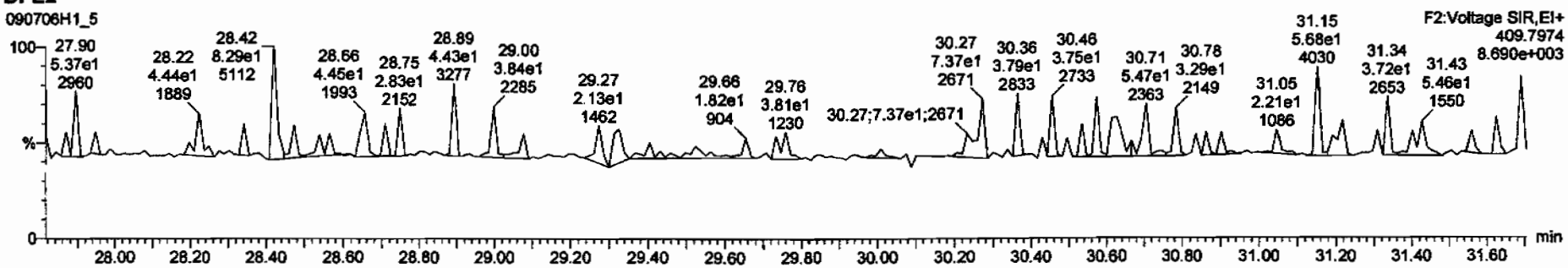

TargetLynx - 090706h1-5.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090706H1_5 - 31853_2218_001 CAMO-09-9950 11.3 - CAMO-09-9950

Name	RT	m/z Response	m/z Resp.	RA	Qty	EMPA	Conc.
Total Penta-Furans	28.50	6.721e2	4.694e2	1.43	NO	0.25320	0.25320

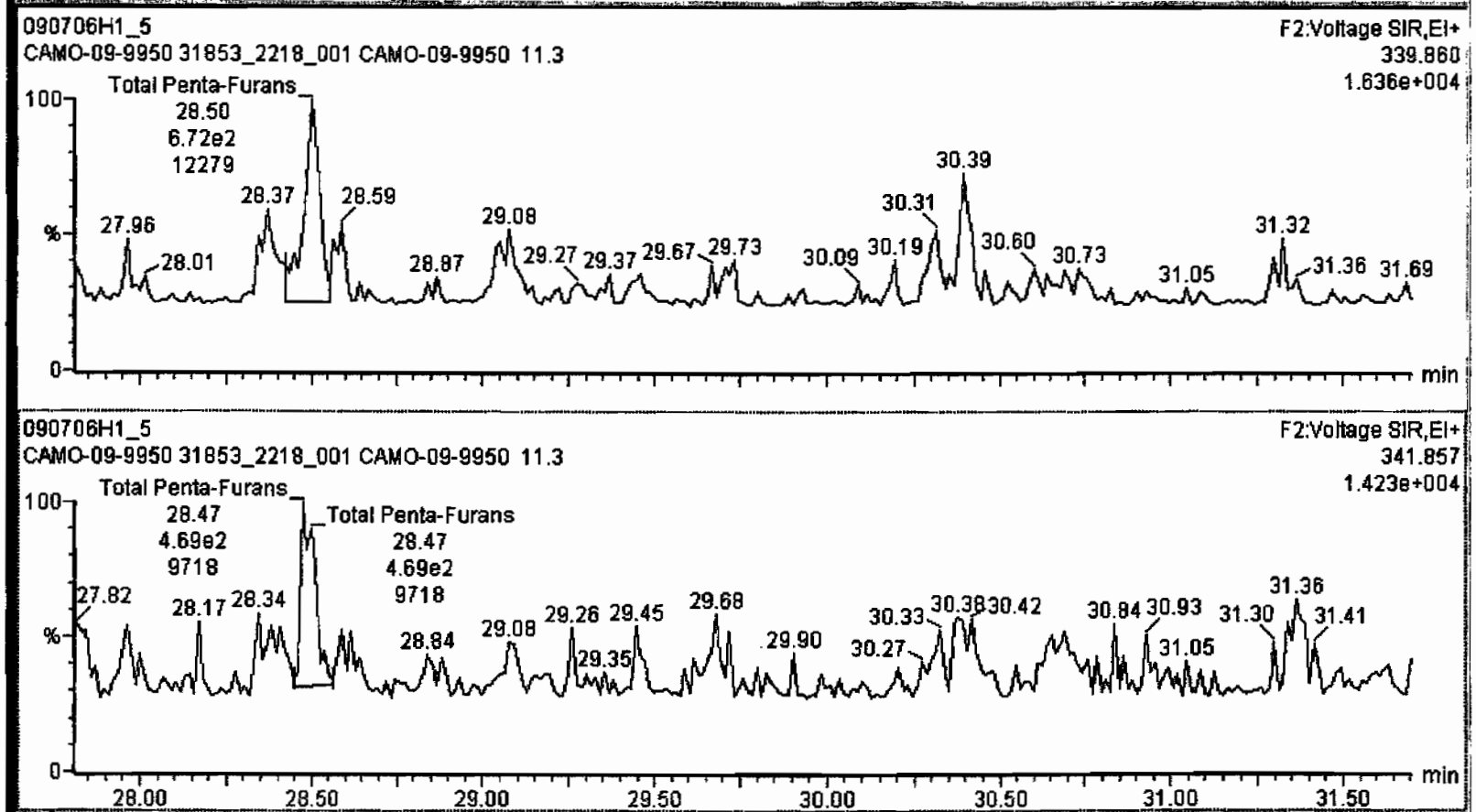

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Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

1,2,3,4,7,8-HxCDF

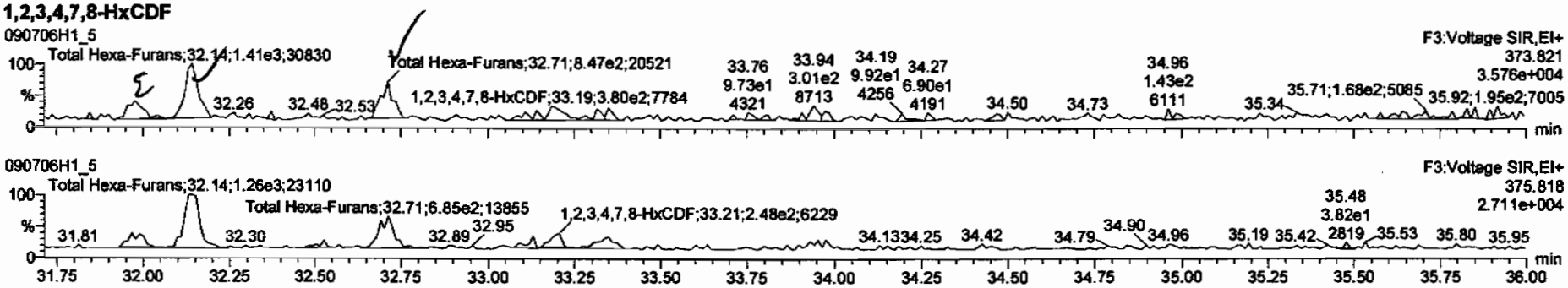

13C-1,2,3,4,7,8-HxCDF

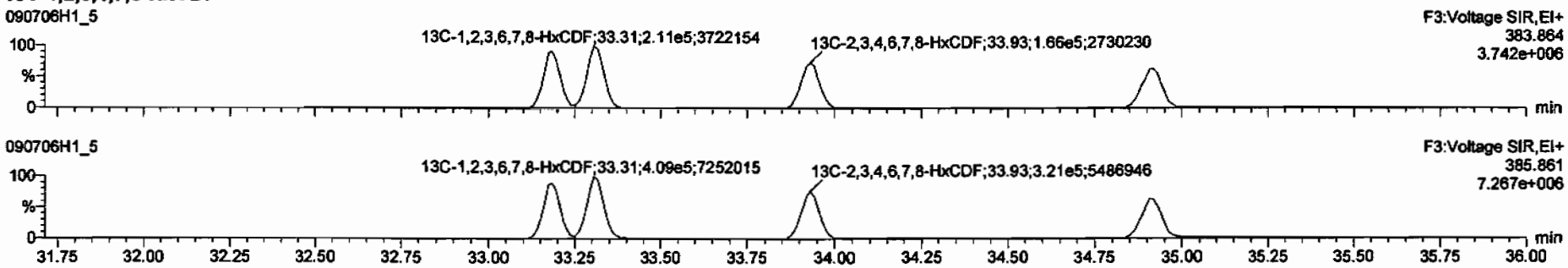

DPE3

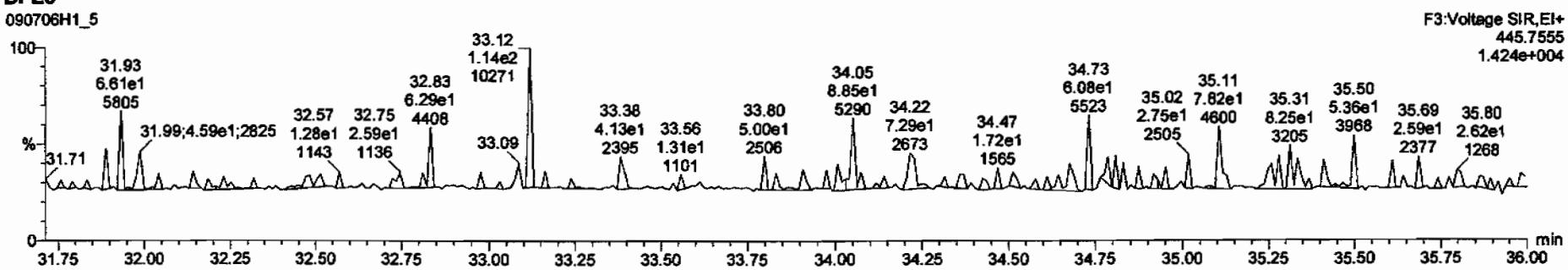

TargetLynx - 090706h1-5.qld * - [Chromatogram]

090706H1_5 - 31853_2218_001 CAMO-09-9950 11.3 - CAMO-09-9950

	Name	RT	m/z Peak	m/z Resp	RA	qM?	Exp	Conc
1	Total Hexa-Furans	31.98	5.627e2	3.477e2	1.62	YES	0.23291	0.00000
2	Total Hexa-Furans	32.14	1.464e3	1.257e3	1.16	NO	0.81378	0.81378
3	Total Hexa-Furans	32.71	8.999e2	6.848e2	1.31	NO	0.47390	0.47390

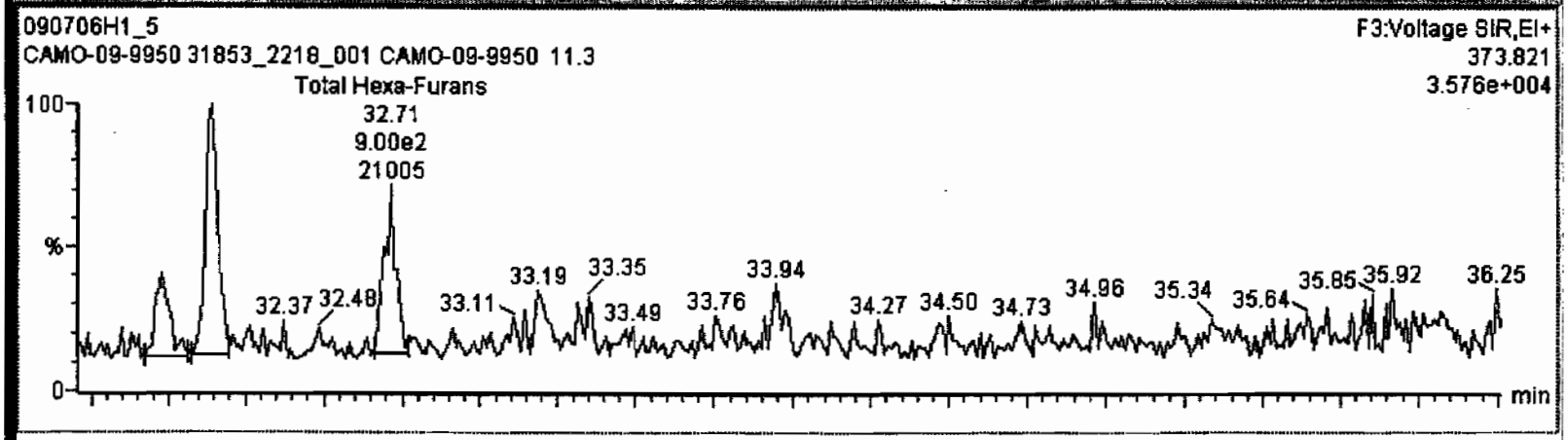

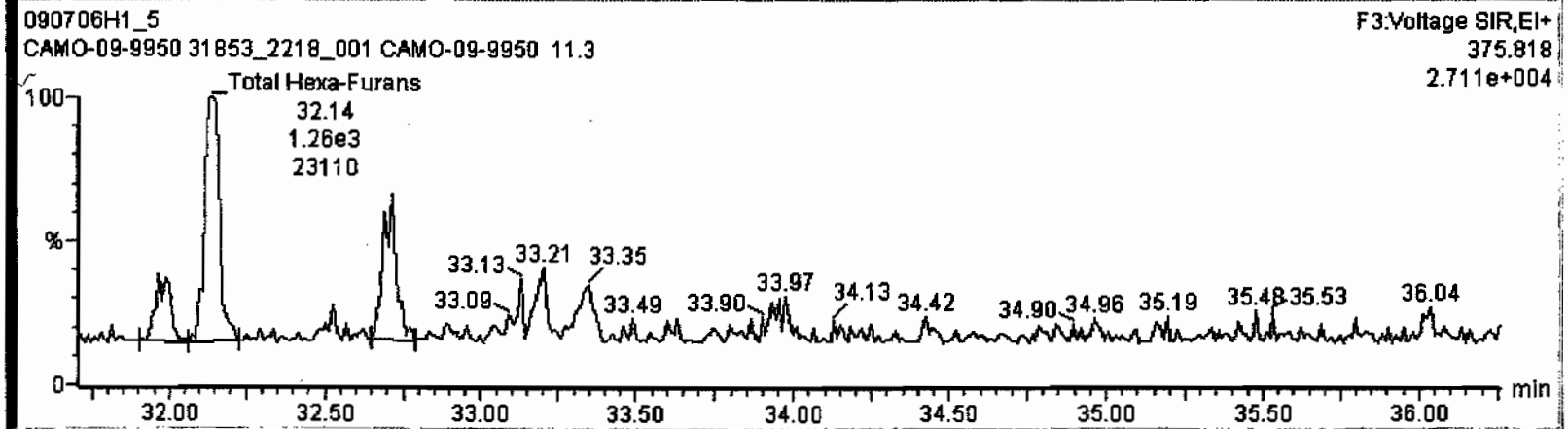

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Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

1,2,3,4,6,7,8-HpCDF

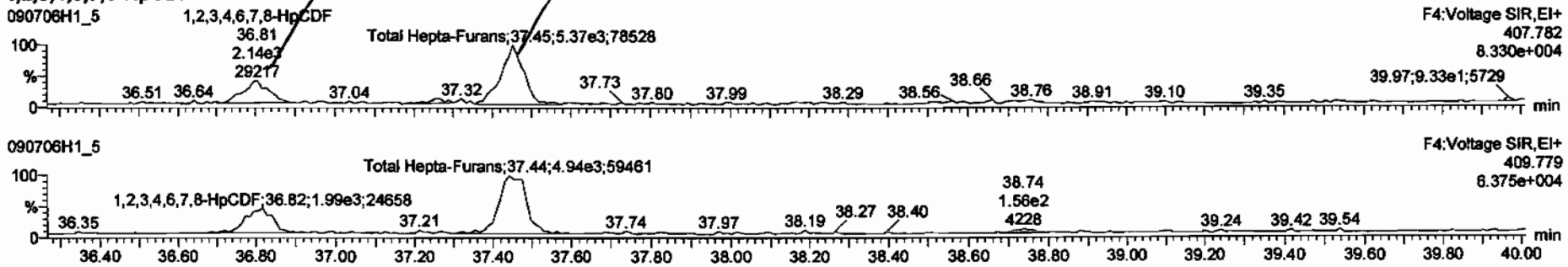

13C-1,2,3,4,6,7,8-HpCDF

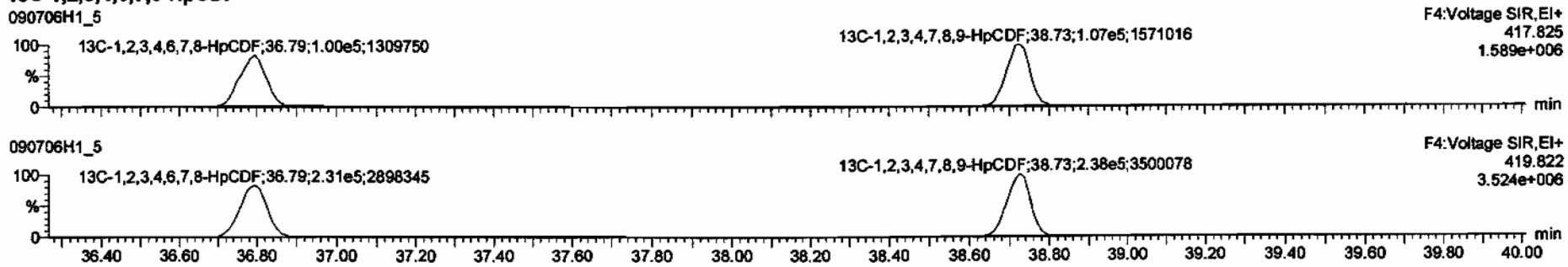

DPE4

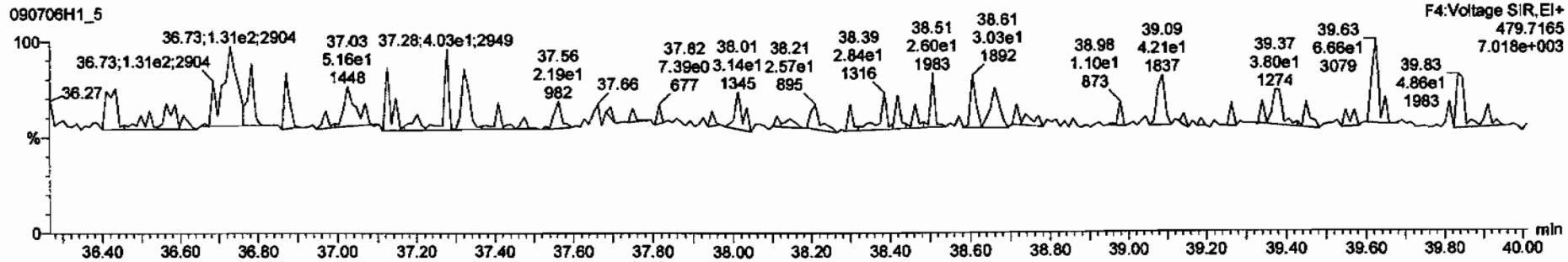

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Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

OCDF

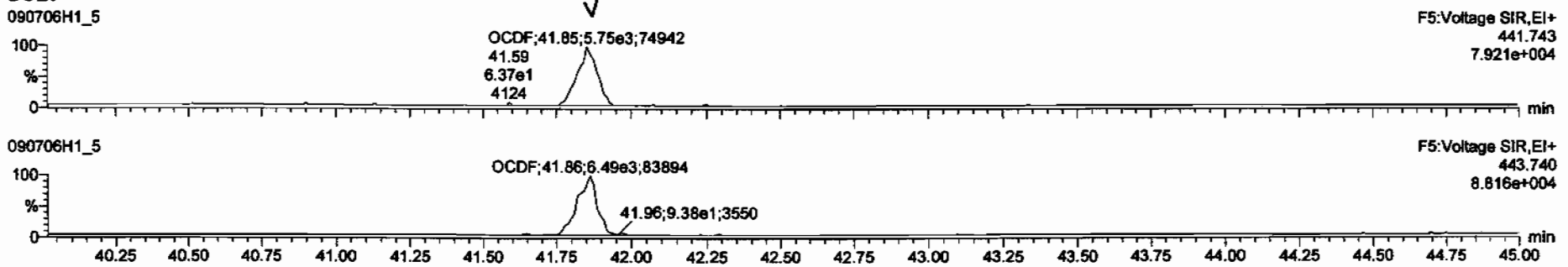

13C-OCDF

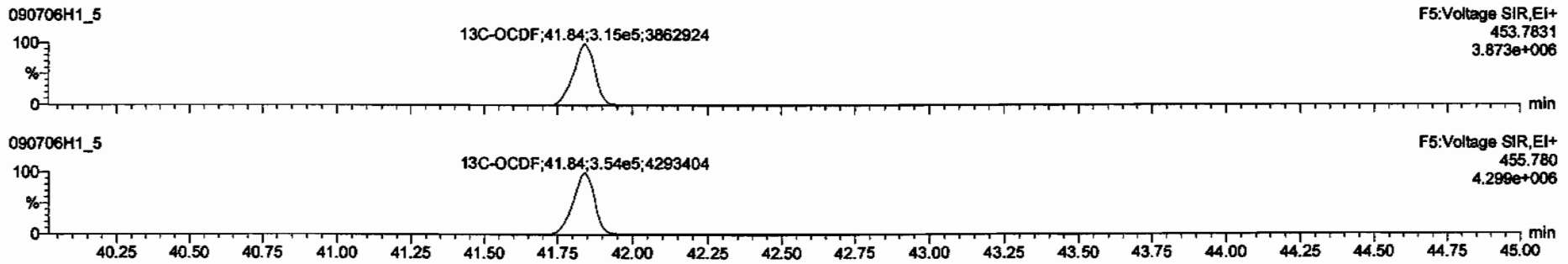

DPE5

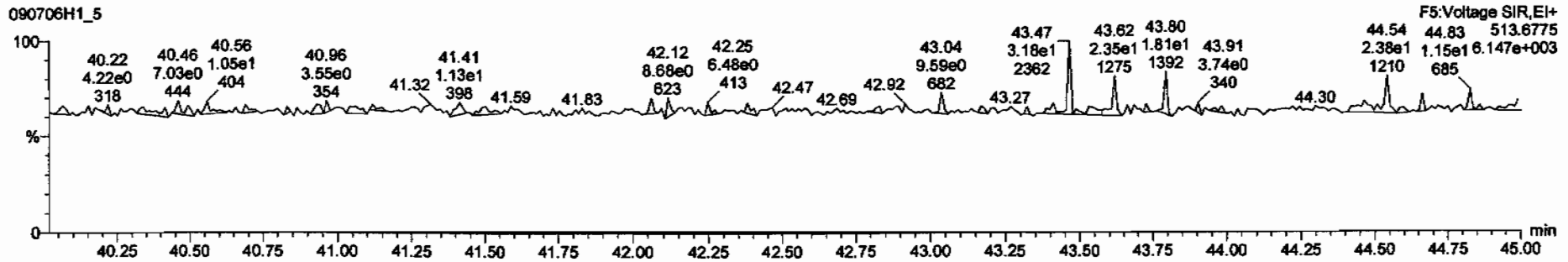

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-5.qld

Last Altered: Tuesday, July 07, 2009 07:43:29 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:43:52 Pacific Daylight Time

Name: 090706H1_5, Date: 06-Jul-2009, Time: 16:45:10, ID: 31853_2218_001 CAMO-09-9950 11.3, Description: CAMO-09-9950

PFK1

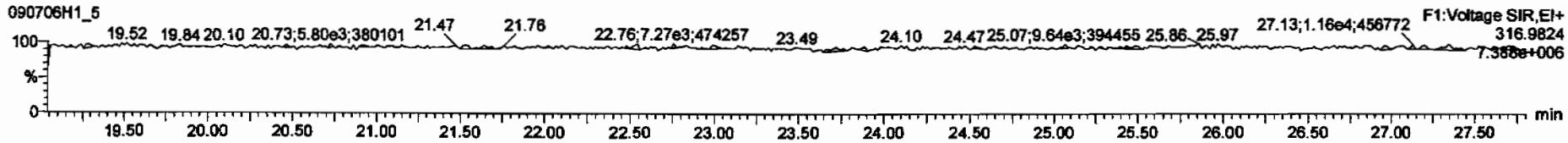

PFK2

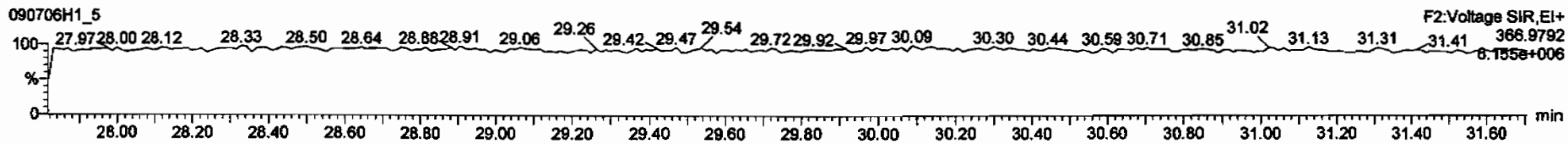

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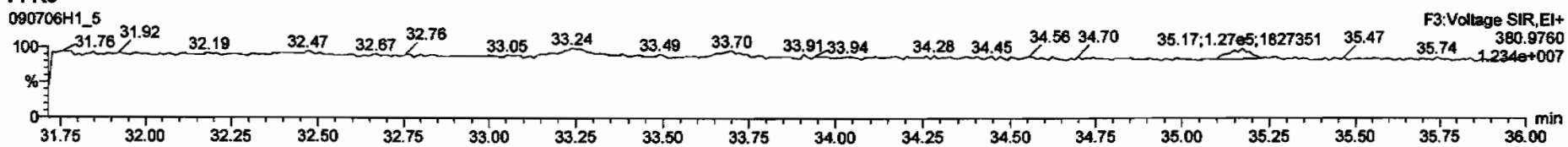

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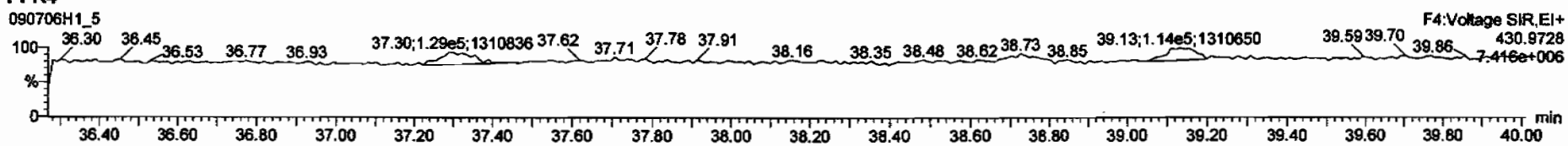

PFK5

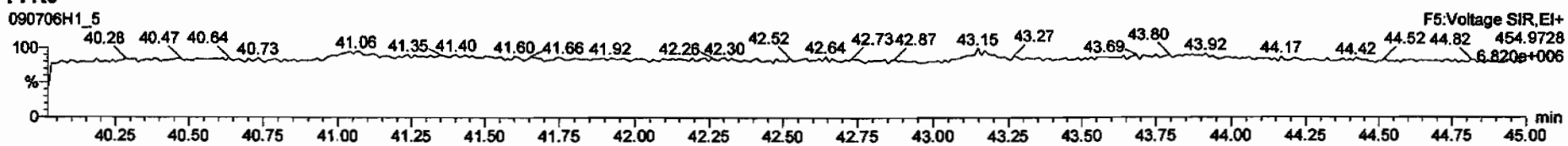

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-6.qld

Last Altered: Tuesday, July 07, 2009 13:20:50 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:21:10 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

1	2,3,7,8-TCDD			NO	1.08	9.989					0.0552	
2	1,2,3,7,8-PeCDD			NO	1.03	9.989					0.128	
3	1,2,3,4,7,8-HxCDD			NO	1.00	9.989					0.358	
4	1,2,3,6,7,8-HxCDD			NO	1.13	9.989					0.356	
5	1,2,3,7,8,9-HxCDD			NO	1.10	9.989					0.343	
6	1,2,3,4,6,7,8-HpCDD	2.86e3	1.01	NO	1.06	9.989	38.18	1.000	1.5073		0.415	~~1.5073~~
7	OCDD	2.34e4	0.90	NO	1.18	9.989	41.66	1.001	15.257		0.683	~~15.257~~
8	2,3,7,8-TCDF			NO	1.09	9.989					0.0557	
9	1,2,3,7,8-PeCDF			NO	1.16	9.989					0.0820	
10	2,3,4,7,8-PeCDF			NO	1.12	9.989					0.0869	
11	1,2,3,4,7,8-HxCDF			NO	1.41	9.989					0.155	
12	1,2,3,6,7,8-HxCDF			NO	1.22	9.989					0.161	
13	2,3,4,6,7,8-HxCDF			NO	1.28	9.989					0.200	
14	1,2,3,7,8,9-HxCDF			NO	1.26	9.989					0.262	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	9.989					0.322	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	9.989					0.328	
17	OCDF	1.28e3	0.78	NO	1.10	9.989	41.88	1.000	0.68959		0.163	~~0.68959~~
18	13C-2,3,7,8-TCDD	6.61e5	0.82	NO	1.01	9.989	26.01	1.023	206.36	103	0.340	
19	13C-1,2,3,7,8-PeCDD	5.24e5	0.63	NO	0.827	9.989	30.68	1.206	200.90	100	0.421	
20	13C-1,2,3,4,7,8-HxCDD	4.34e5	1.28	NO	0.916	9.989	34.11	0.988	198.20	99.0	0.748	
21	13C-1,2,3,6,7,8-HxCDD	3.83e5	1.26	NO	0.921	9.989	34.22	0.991	174.07	86.9	0.744	
22	13C-1,2,3,4,6,7,8-HpCDD	3.57e5	1.05	NO	0.708	9.989	38.17	1.106	210.84	105	1.23	
23	13C-OCDD	5.21e5	0.89	NO	0.503	9.989	41.62	1.206	433.70	108	0.919	
24	13C-2,3,7,8-TCDF	9.07e5	0.77	NO	0.977	9.989	25.24	0.992	211.57	106	0.180	
25	13C-1,2,3,7,8-PeCDF	8.28e5	1.57	NO	0.896	9.989	29.44	1.158	210.59	105	0.498	
26	13C-2,3,4,7,8-PeCDF	7.90e5	1.58	NO	0.900	9.989	30.39	1.195	200.03	99.9	0.496	
27	13C-1,2,3,4,7,8-HxCDF	5.72e5	0.52	NO	1.17	9.989	33.19	0.961	204.72	102	0.697	
28	13C-1,2,3,6,7,8-HxCDF	6.30e5	0.53	NO	1.52	9.989	33.32	0.965	173.38	86.6	0.536	
29	13C-2,3,4,6,7,8-HxCDF	5.18e5	0.52	NO	1.25	9.989	33.94	0.983	173.42	86.6	0.652	
30	13C-1,2,3,7,8,9-HxCDF	4.66e5	0.52	NO	1.05	9.989	34.92	1.011	184.98	92.4	0.773	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-6.qld

Last Altered: Tuesday, July 07, 2009 13:20:50 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:21:10 Pacific Daylight Time

Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

31 13C-1,2,3,4,6,7,8-HpCDF	3.55e5	0.45	NO	0.868	9.989	36.81	1.066	170.84	85.3	1.33	
32 13C-1,2,3,4,7,8,9-HpCDF	3.30e5	0.42	NO	0.727	9.989	38.74	1.122	190.13	95.0	1.59	
33 13C-OCDF	6.78e5	0.89	NO	0.760	9.989	41.87	1.213	373.52	93.3	0.755	
34 37Cl-2,3,7,8-TCDD	1.62e5			0.668	9.989	26.03	1.023	76.969	96.1	0.0996	
35 13C-1,2,3,4-TCDD	6.32e5	0.79	NO	1.00	9.989	25.43	0.000	200.22	100	0.345	
36 13C-1,2,3,4-TCDF	8.79e5	0.78	NO	1.00	9.989	24.00	0.000	200.22	100	0.176	
37 13C-1,2,3,7,8,9-HxCDD	4.79e5	1.22	NO	1.00	9.989	34.52	0.000	200.22	100	0.685	
38 Total Tetra-Dioxins				1.08	9.989					0.0241	
39 Total Penta-Dioxins				1.03	9.989					0.0397	
40 Total Hexa-Dioxins				1.13	9.989					0.215	
41 Total Hepta-Dioxins				1.06	9.989			2.8466		0.415	~~2.8466~~
42 Total Tetra-Furans				1.09	9.989					0.0224	
43 1st Func. Penta-Furans				1.16	9.989					0.0131	
44 Total Penta-Furans				1.16	9.989					0.0420	
45 Total Hexa-Furans				1.28	9.989					0.135	
46 Total Hepta-Furans				1.69	9.989					0.192	

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-6.qld

Last Altered: Tuesday, July 07, 2009 13:20:50 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:21:10 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Hepta-Dioxins

Total Hepta-Dioxins	37.25	2.132e4	1.555e4	1.295e3	1.246e3	1.04	NO	2.541e3	1.3393	1.3393	0.415
1,2,3,4,6,7,8-HpCDD	38.18	2.444e4	2.318e4	1.437e3	1.422e3	1.01	NO	2.860e3	1.5073	1.5073	0.415

Tetra-Furans

Penta-Furans function 1

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-6.qld

Last Altered: Tuesday, July 07, 2009 13:20:50 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:21:10 Pacific Daylight Time

Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

Penta-Furans

Hexa-Furans

Hepta-Furans

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-6.qld

Last Altered: Tuesday, July 07, 2009 07:44:03 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:21 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

2,3,7,8-TCDD

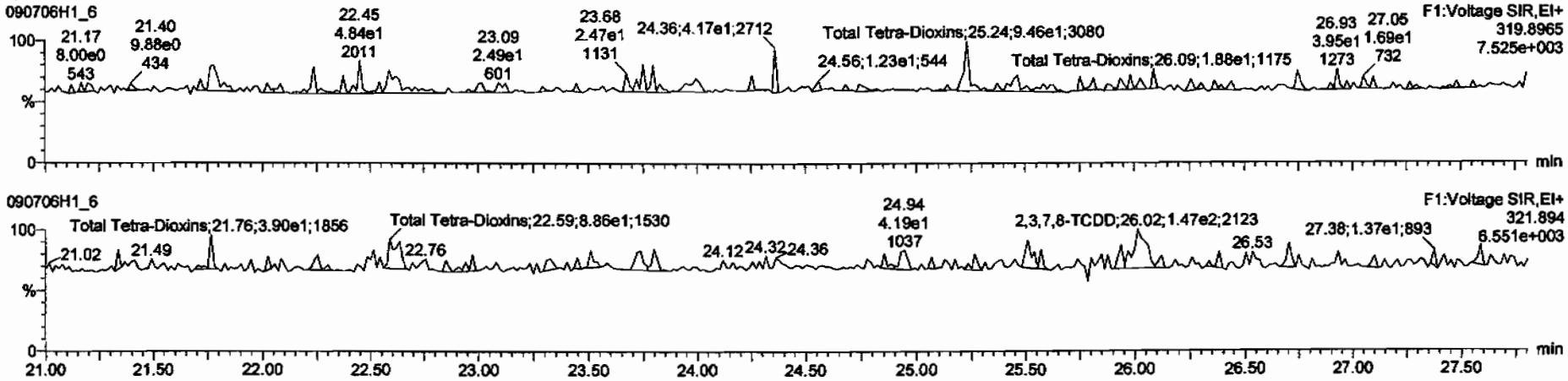

13C-2,3,7,8-TCDD

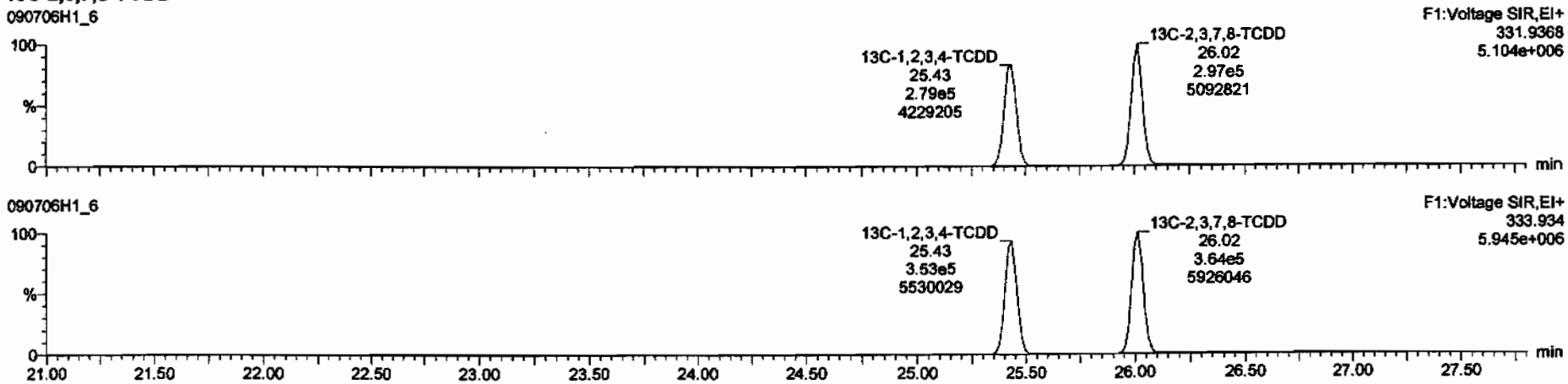

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Last Altered: Tuesday, July 07, 2009 07:44:03 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:21 Pacific Daylight Time

Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

37Cl-2,3,7,8-TCDD

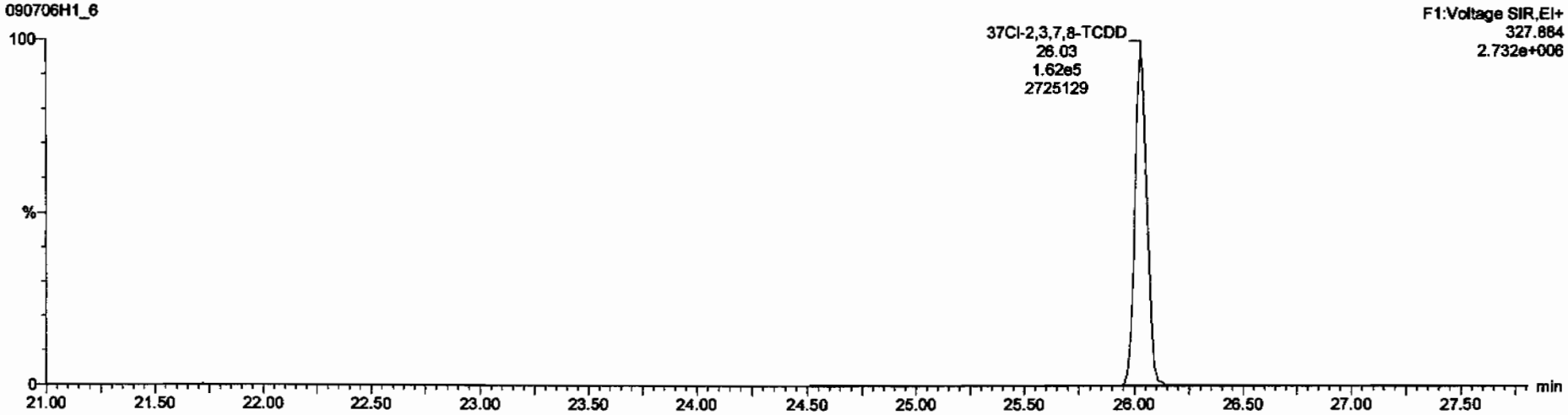

13C-1,2,3,4-TCDD

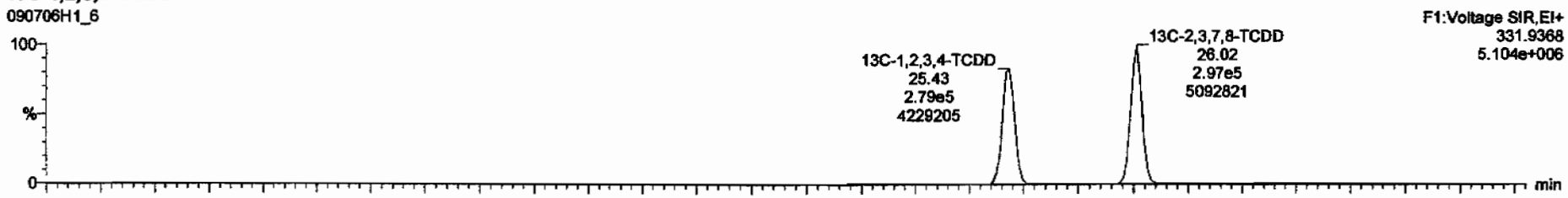

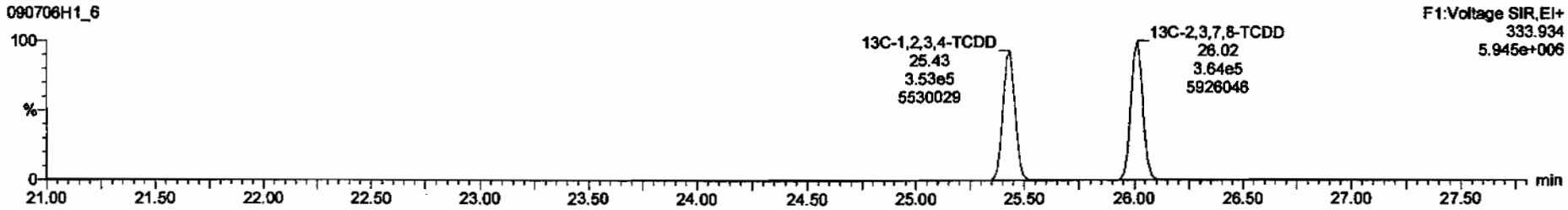

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Last Altered: Tuesday, July 07, 2009 07:44:03 Pacific Daylight Time
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Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

1,2,3,7,8-PeCDD

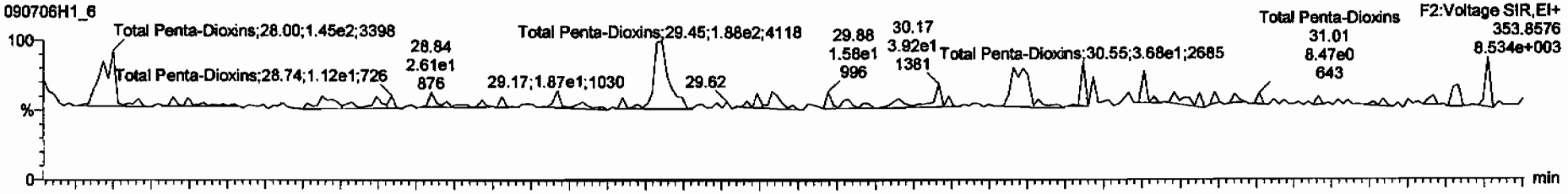

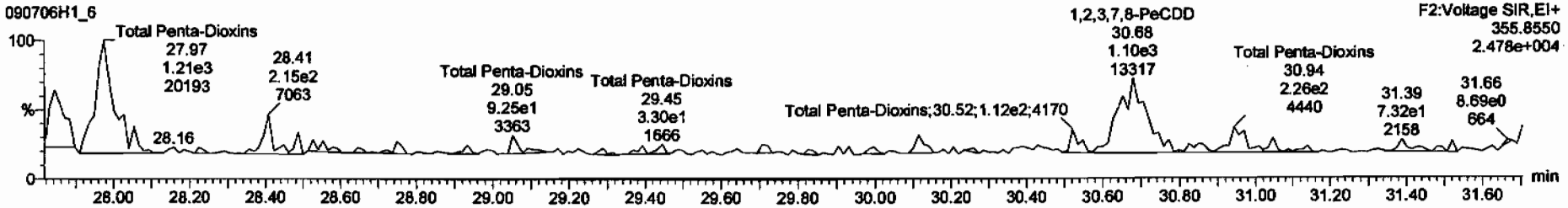

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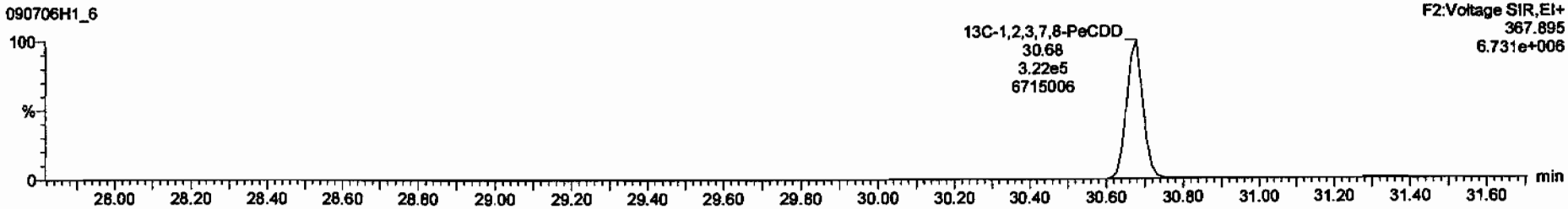

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Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

1,2,3,4,7,8-HxCDD

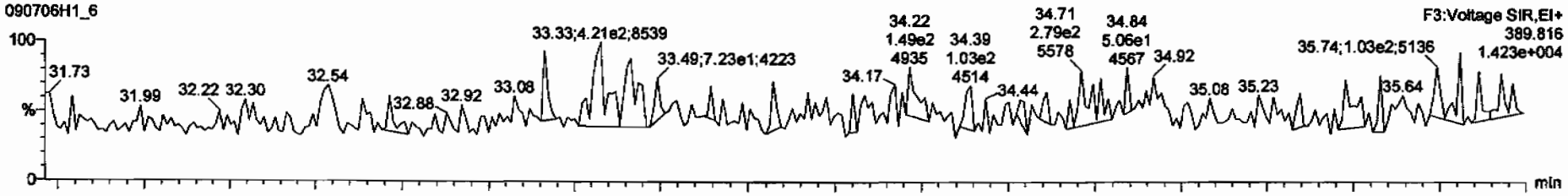

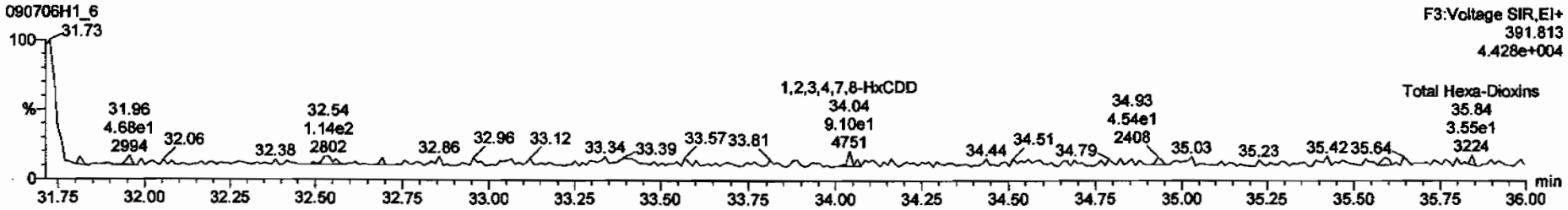

13C-1,2,3,4,7,8-HxCDD

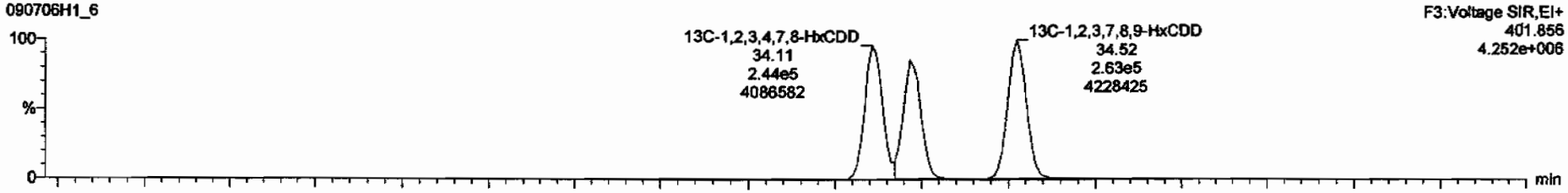

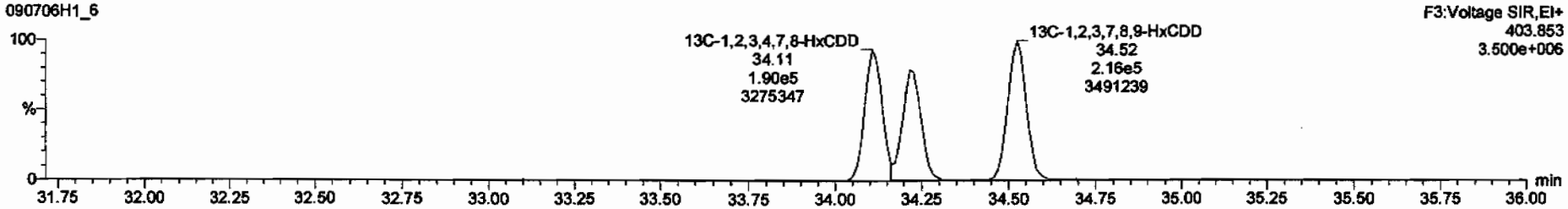

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Last Altered: Tuesday, July 07, 2009 07:44:03 Pacific Daylight Time
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Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

1,2,3,4,6,7,8-HpCDD

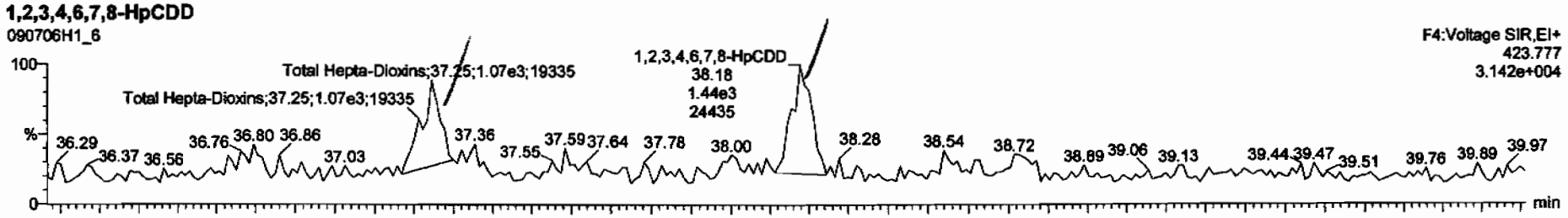

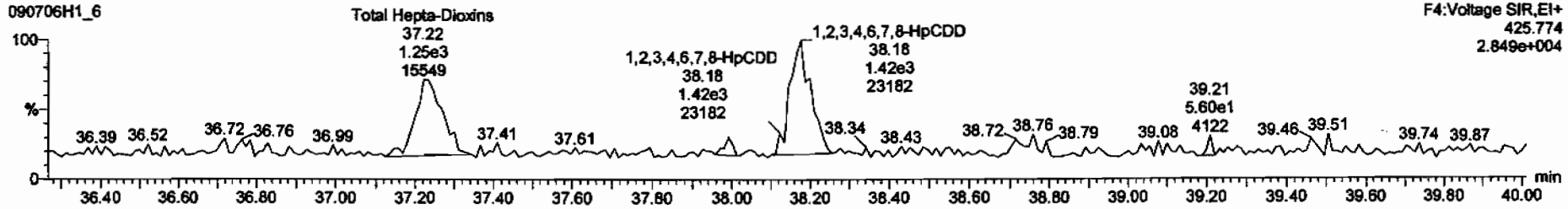

13C-1,2,3,4,6,7,8-HpCDD

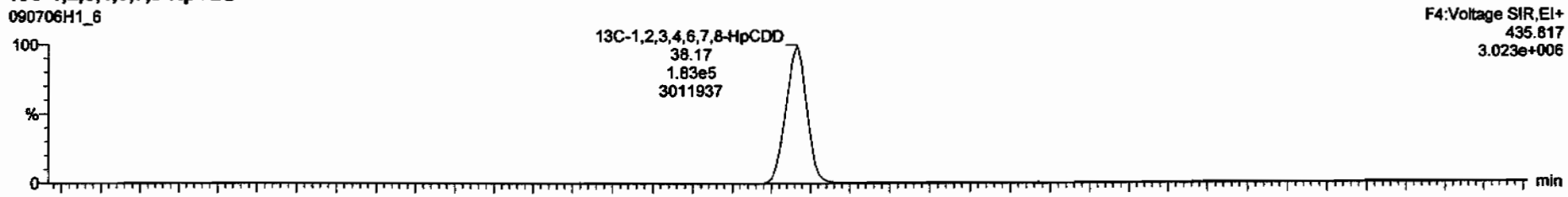

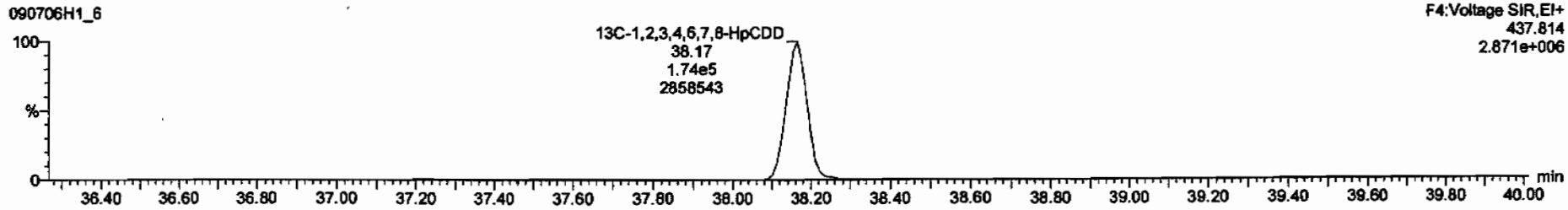

TargetLynx - 090706h1-6.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090706H1_6 - 31853_2218_002 CAMO-09-9951 11.09 - CAMO-09-9951

	Name	RT	m1 Resp	m2 Resp	Ratio			
1	Total Hepta-Dioxins	37.25	1.295e3	1.246e3	1.04	NO	1.3393	1.3393
2	1,2,3,4,6,7,8-HpCDD	38.18	1.437e3	1.422e3	1.01	NO	1.5073	1.5073

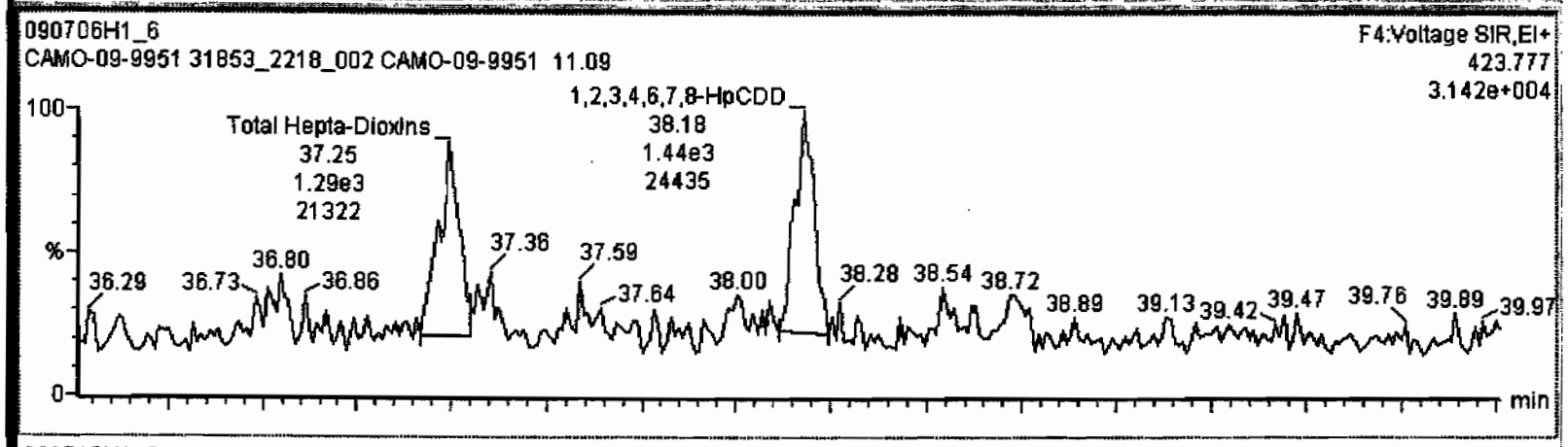

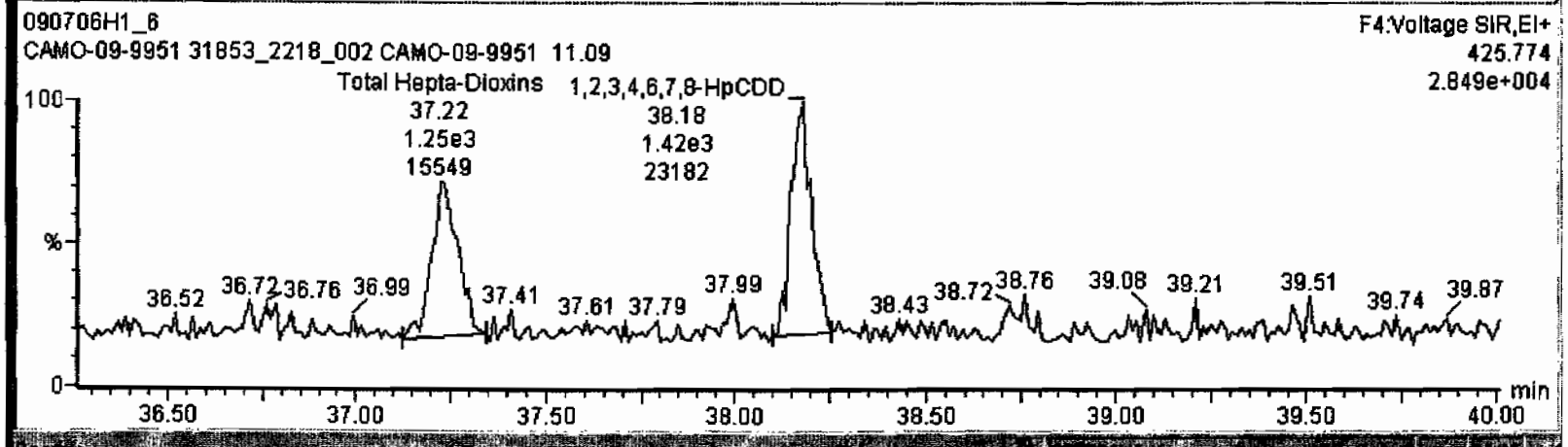

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-6.qld

Last Altered: Tuesday, July 07, 2009 07:44:03 Pacific Daylight Time
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Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

OCDD

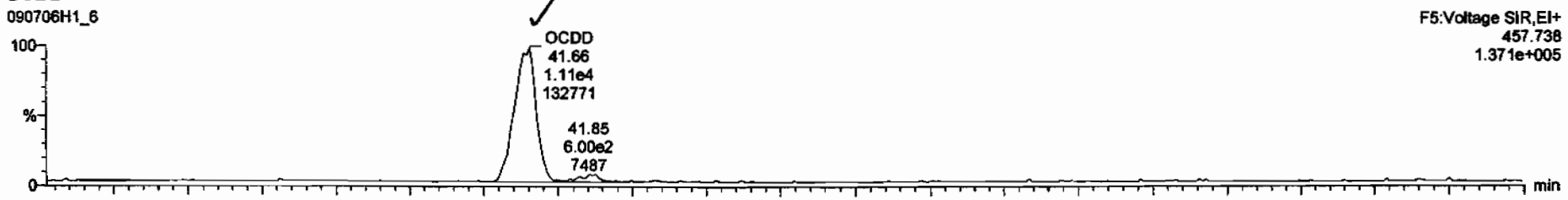

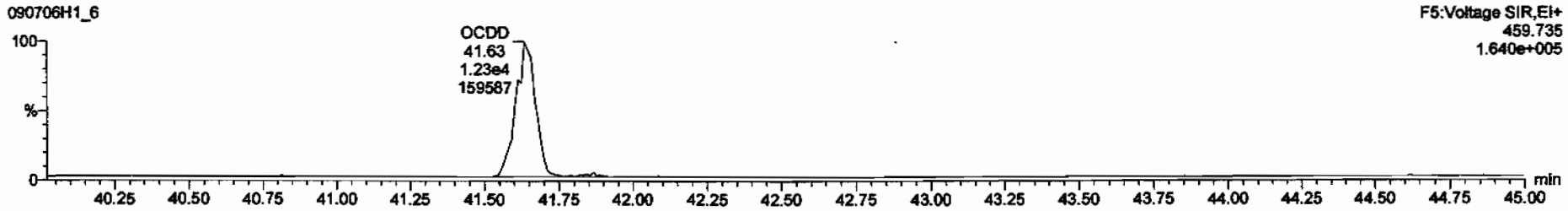

13C-OCDD

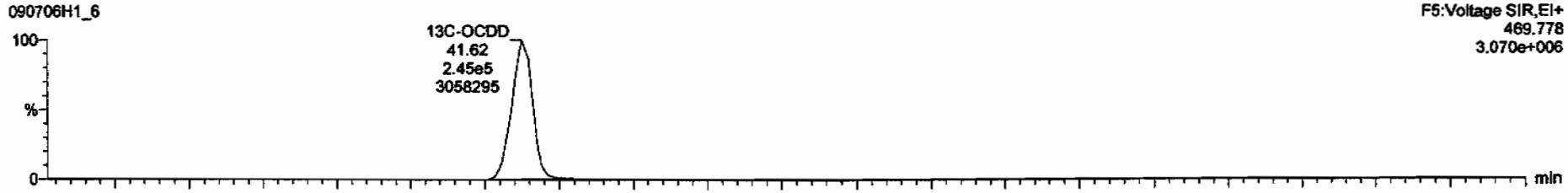

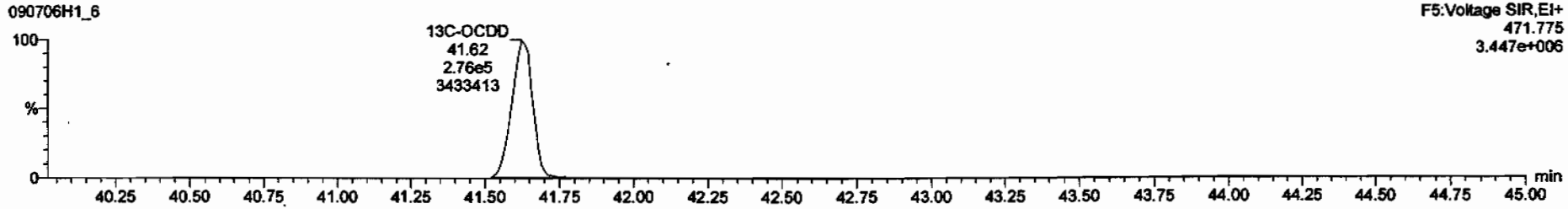

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Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

2,3,7,8-TCDF

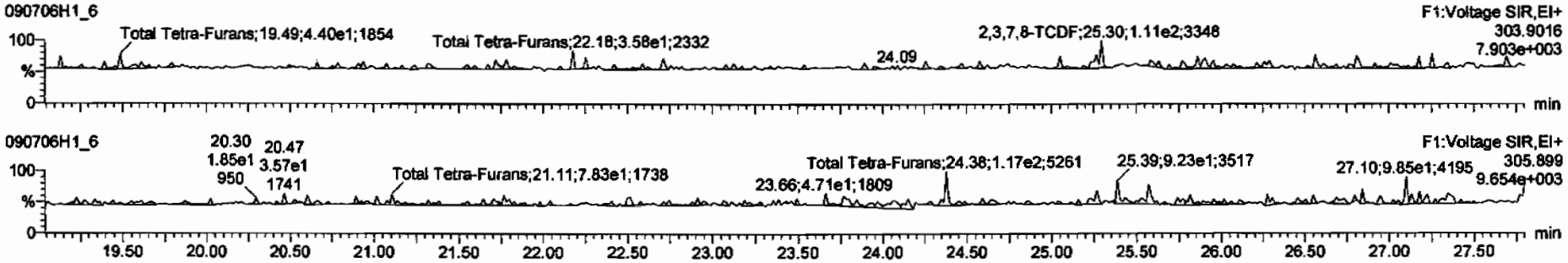

13C-2,3,7,8-TCDF

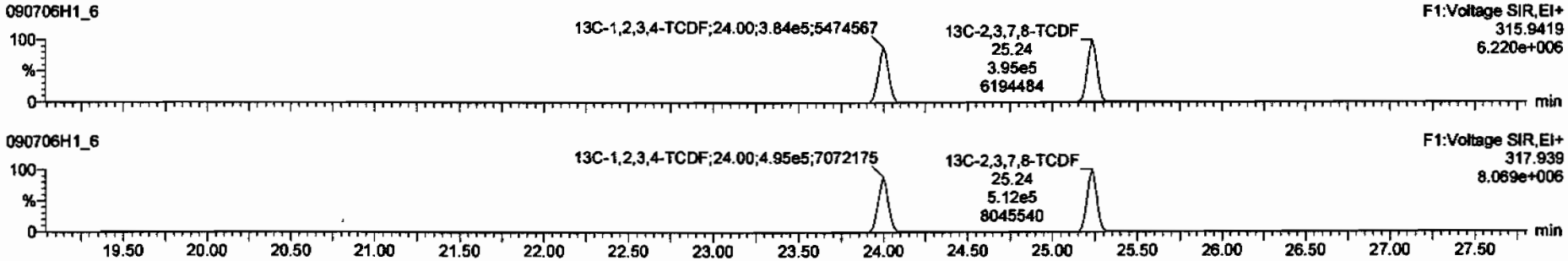

DPE1

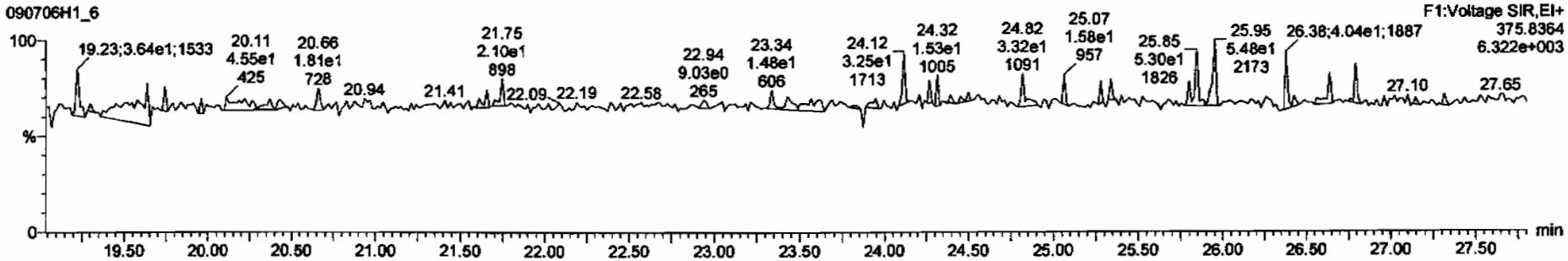

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Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

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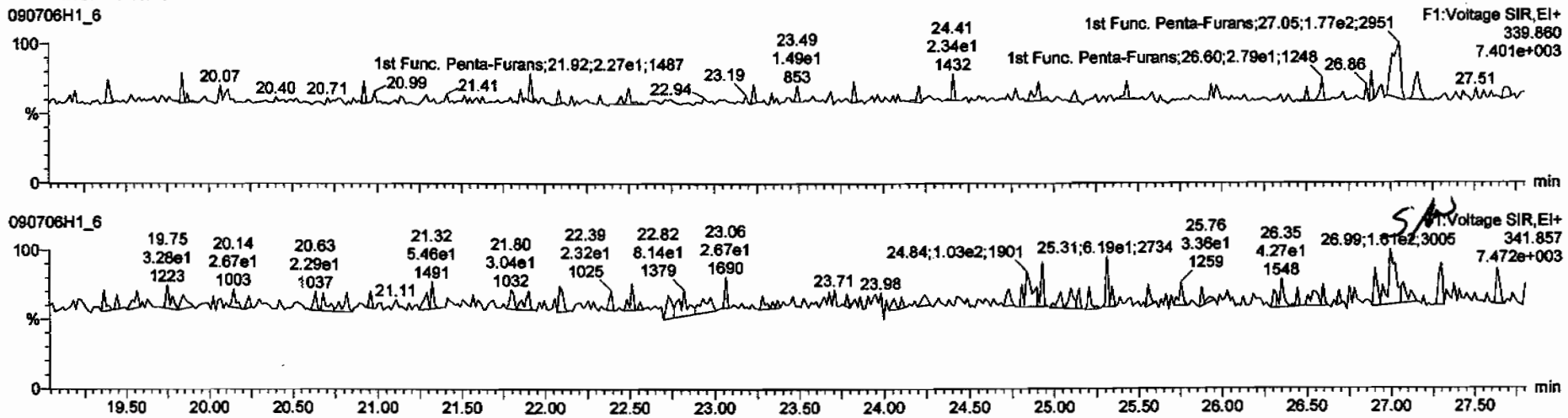

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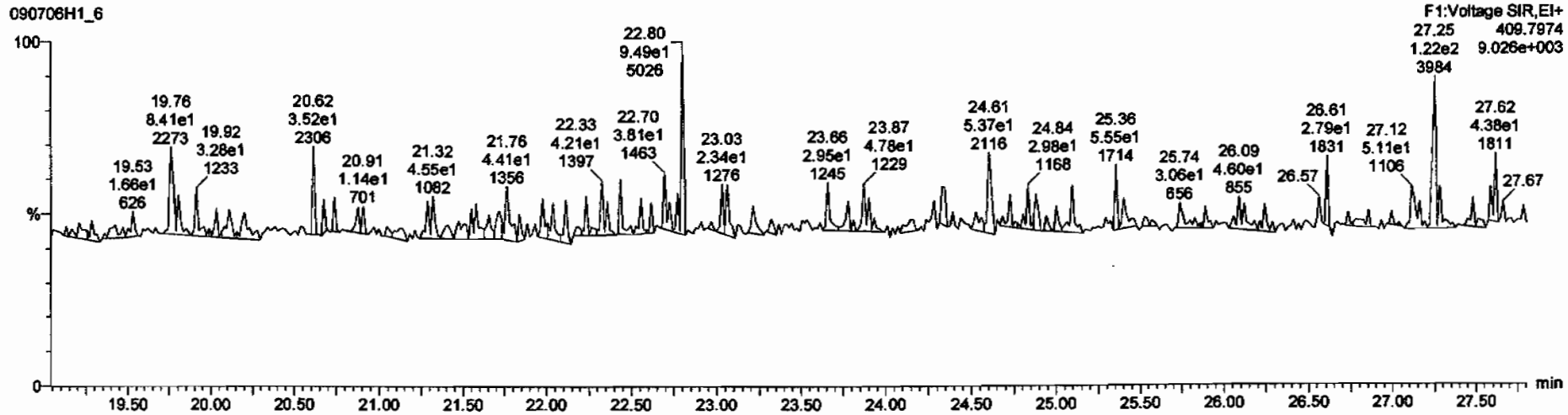

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Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

1,2,3,7,8-PeCDF

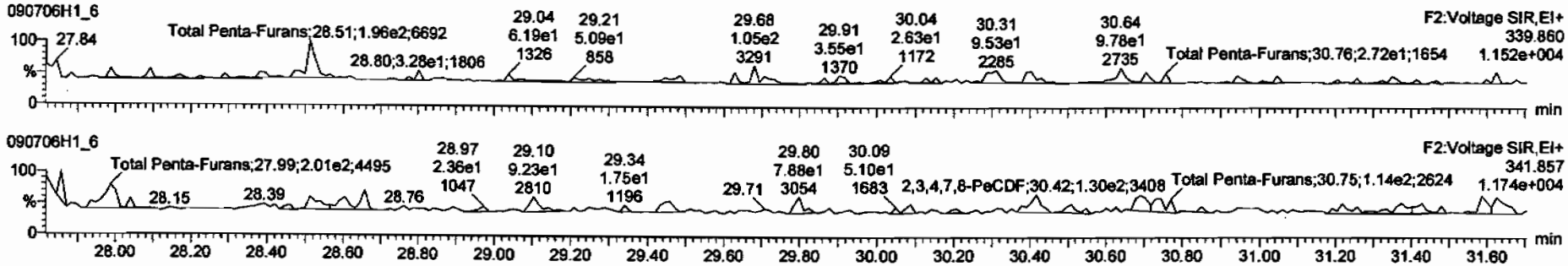

13C-1,2,3,7,8-PeCDF

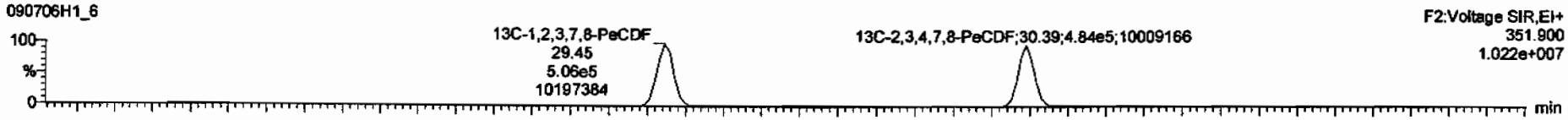

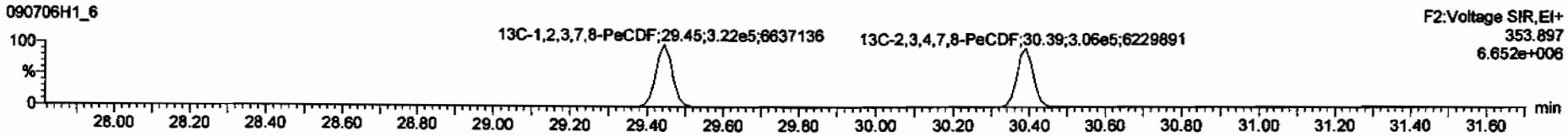

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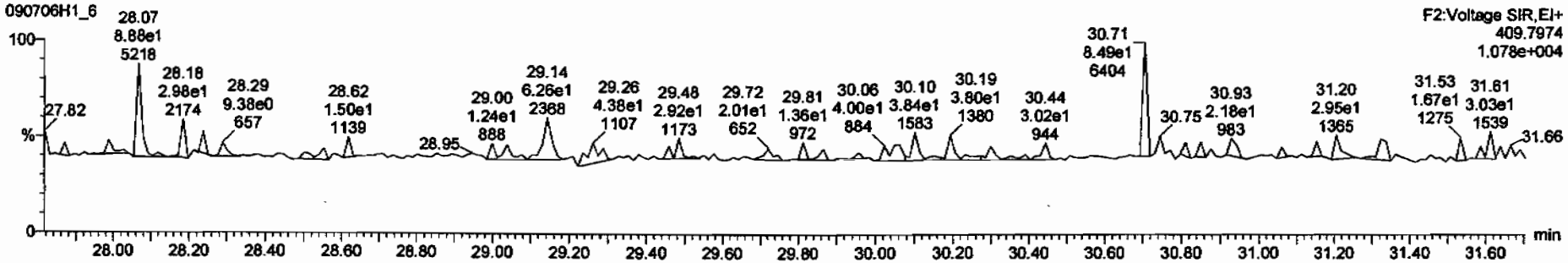

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Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

1,2,3,4,7,8-HxCDF

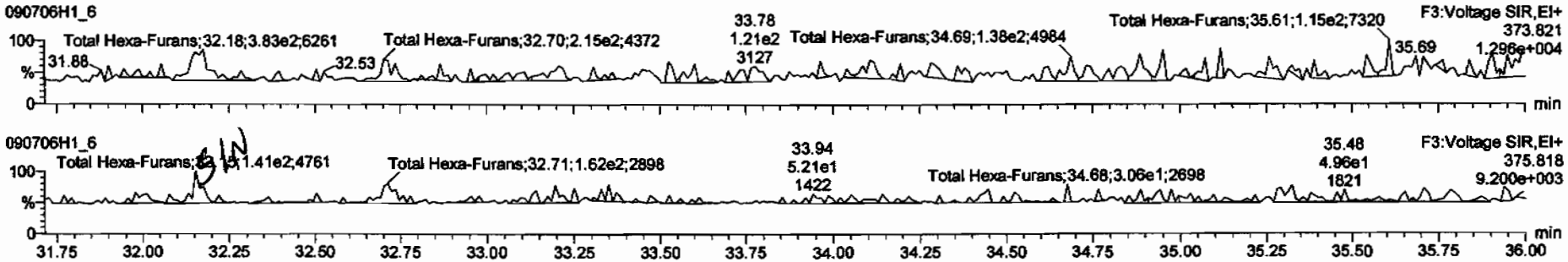

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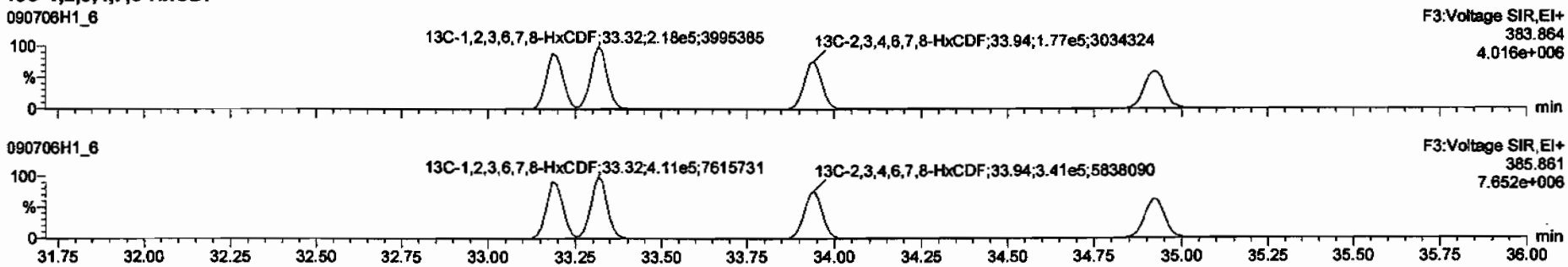

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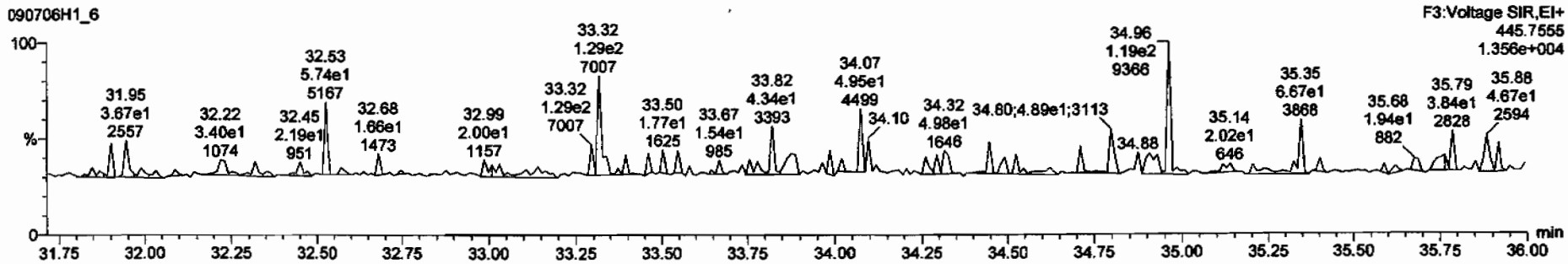

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1,2,3,4,6,7,8-HpCDF

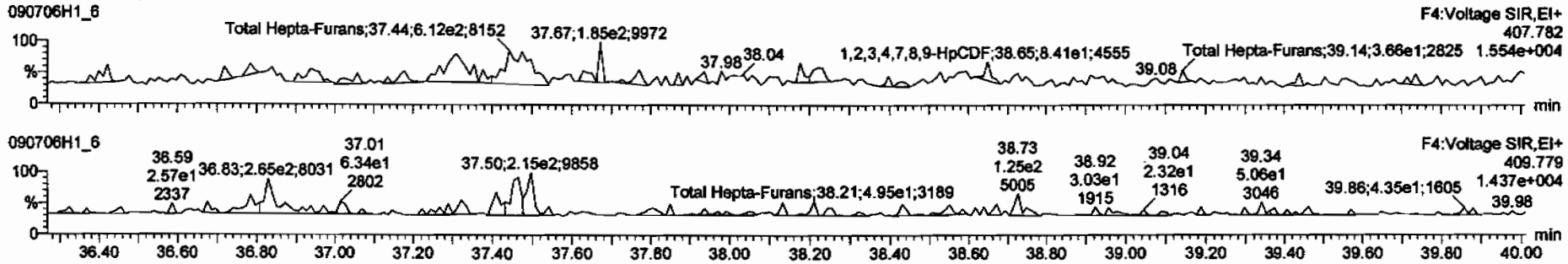

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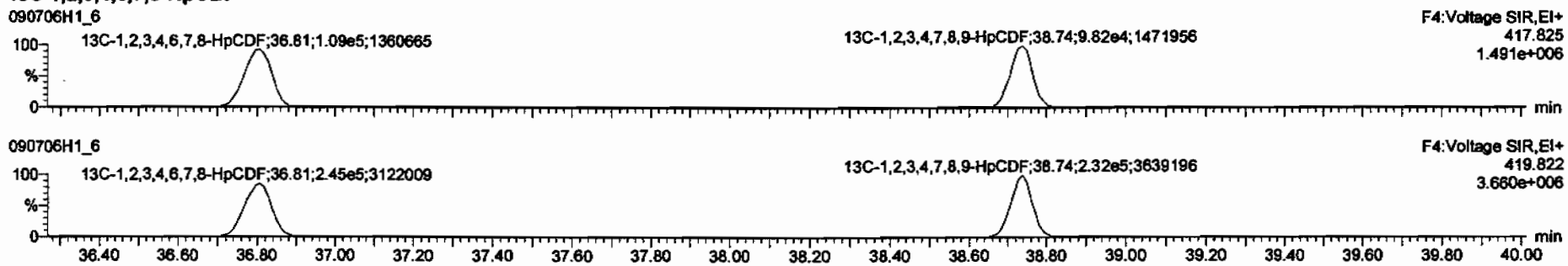

DPE4

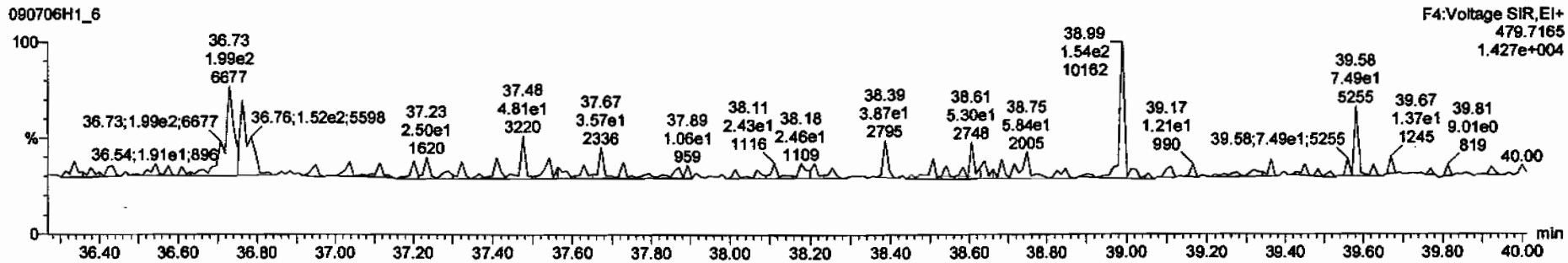

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Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

OCDF

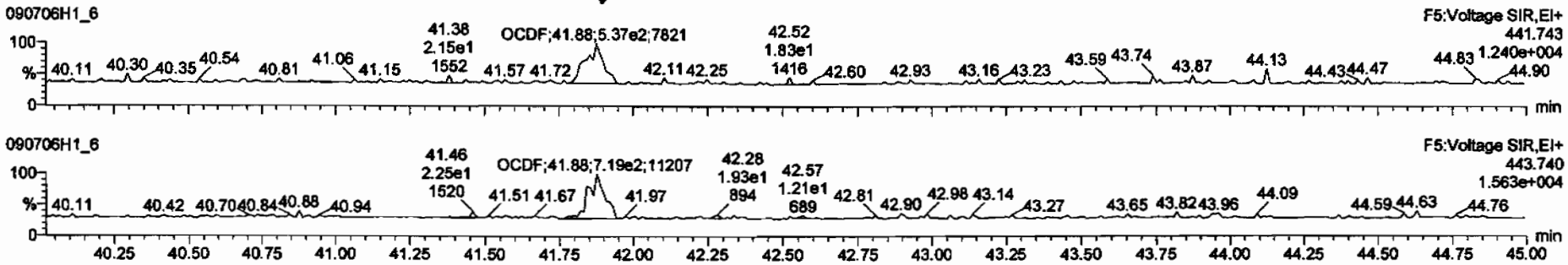

13C-OCDF

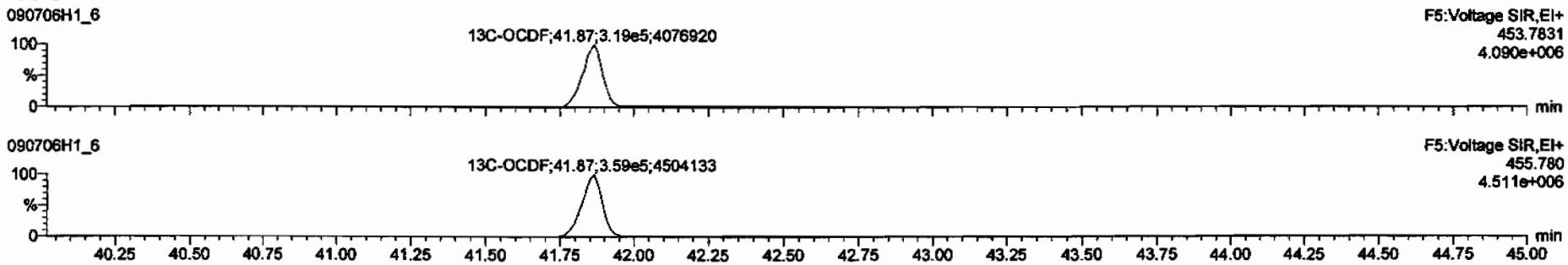

DPE5

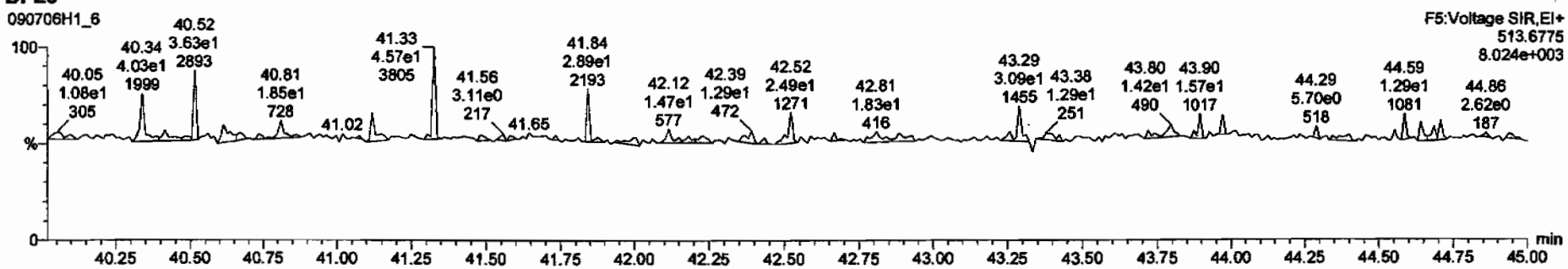

TargetLynx - 090706h1-6.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090706H1_6 - 31853_2218_002 CAMO-09-9951 11.09 - CAMO-09-9951

	Name	Area	RA	IS	RRT	RT(A)	S/N	RRF	Ions	Res	IS	Note
8	13C-2,3,7,8-TCDD	6.61e5	0.82	NO	1.01	9.989	26.01	1.023	206	103	0.340	
19	13C-1,2,3,7,8-PeCDD	5.24e5	0.63	NO	0.83	9.989	30.68	1.206	201	100	0.421	
20	13C-1,2,3,4,7,8-HxCDD	4.34e5	1.28	NO	0.92	9.989	34.11	0.988	198	99.0	0.748	
21	13C-1,2,3,6,7,8-HxCDD	3.83e5	1.26	NO	0.92	9.989	34.22	0.991	174	86.9	0.744	

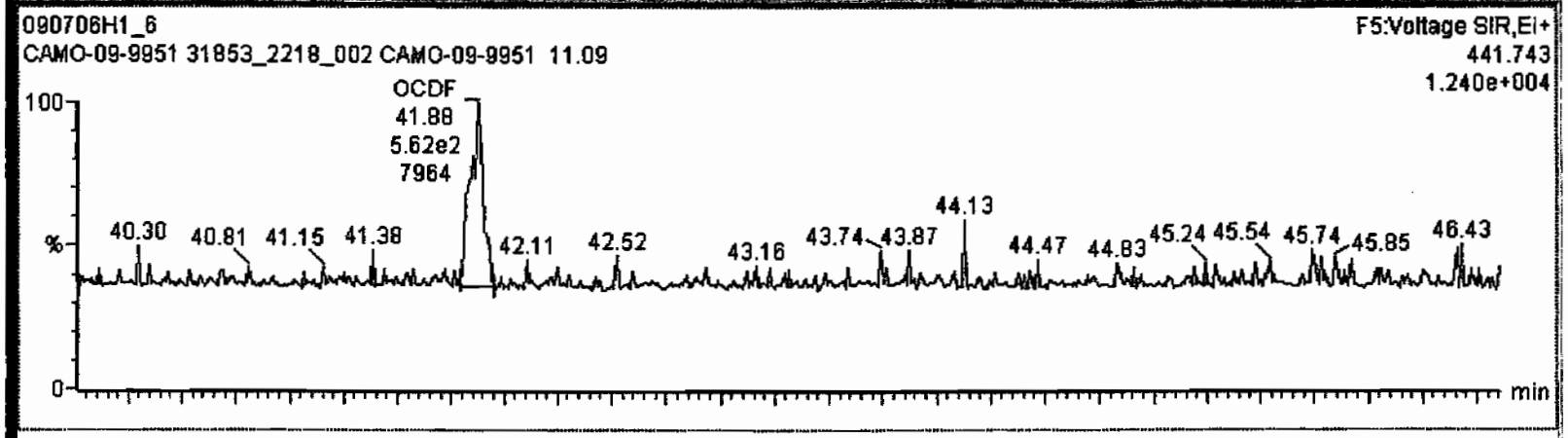

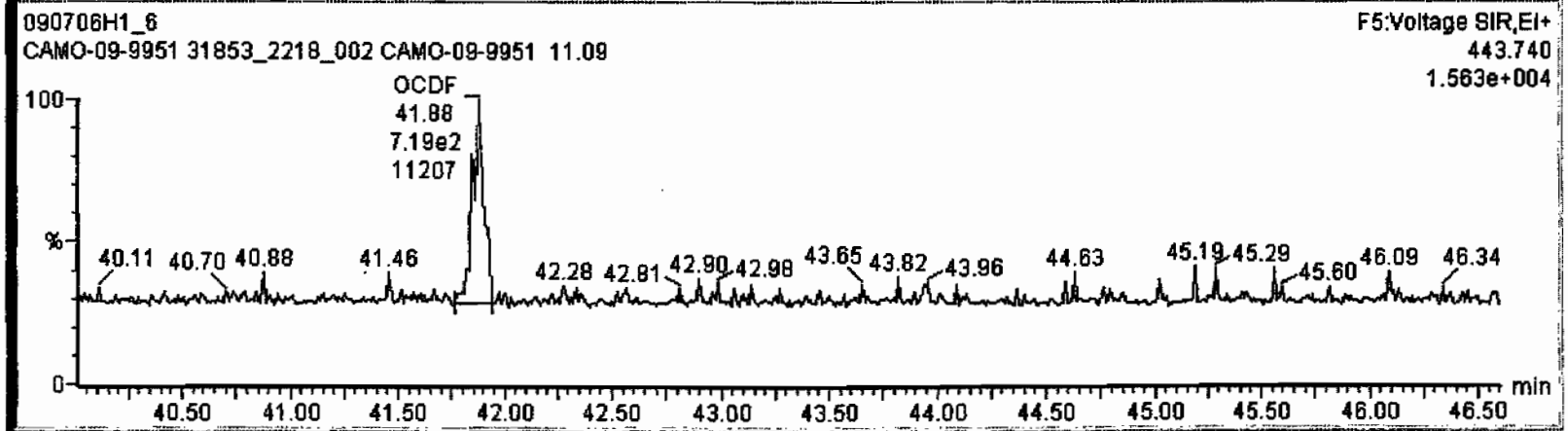

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-6.qld

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Name: 090706H1_6, Date: 06-Jul-2009, Time: 17:34:41, ID: 31853_2218_002 CAMO-09-9951 11.09, Description: CAMO-09-9951

PFK1

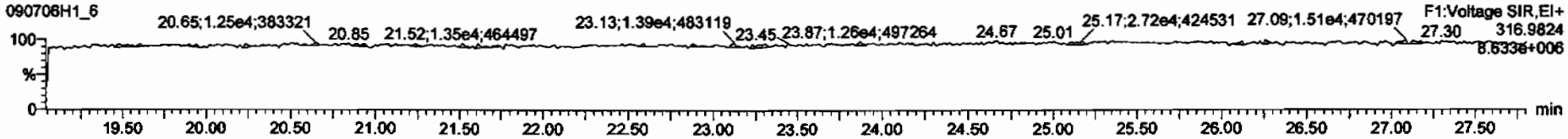

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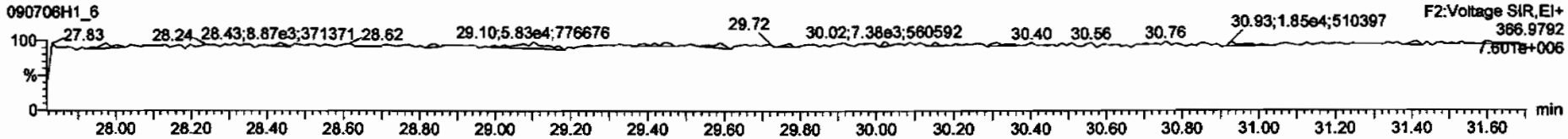

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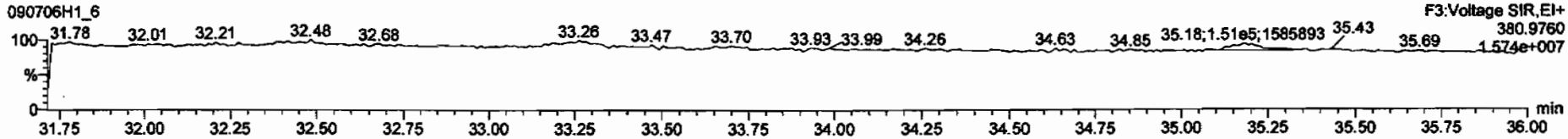

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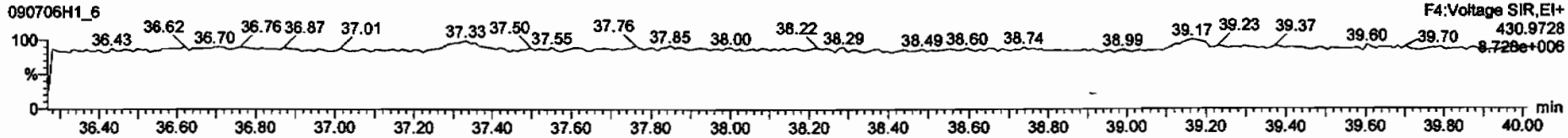

PFK5

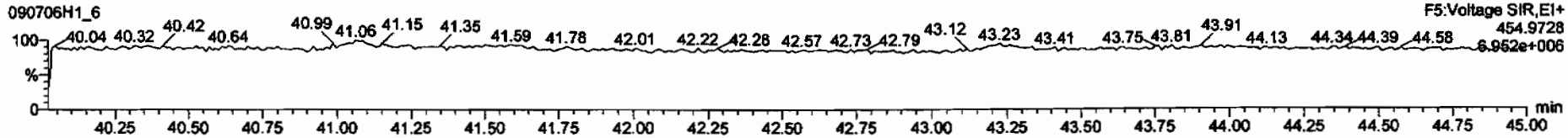

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-7.qld

Last Altered: Tuesday, July 07, 2009 13:24:44 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:24:57 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

1	2,3,7,8-TCDD			NO	1.08	9.968					0.0568	
2	1,2,3,7,8-PeCDD			NO	1.03	9.968					0.134	
3	1,2,3,4,7,8-HxCDD			NO	1.00	9.968					0.398	
4	1,2,3,6,7,8-HxCDD			NO	1.13	9.968					0.403	
5	1,2,3,7,8,9-HxCDD			NO	1.10	9.968					0.386	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	9.968					0.583	
7	OCDD	4.05e3	0.90	NO	1.18	9.968	41.66	1.000	3.2238		0.304	~~3.2238~~
8	2,3,7,8-TCDF			NO	1.09	9.968					0.0583	
9	1,2,3,7,8-PeCDF			NO	1.16	9.968					0.0744	
10	2,3,4,7,8-PeCDF			NO	1.12	9.968					0.0789	
11	1,2,3,4,7,8-HxCDF			NO	1.41	9.968					0.175	
12	1,2,3,6,7,8-HxCDF			NO	1.22	9.968					0.193	
13	2,3,4,6,7,8-HxCDF			NO	1.28	9.968					0.218	
14	1,2,3,7,8,9-HxCDF			NO	1.26	9.968					0.292	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	9.968					0.284	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	9.968					0.291	
17	OCDF			NO	1.10	9.968					0.194	
18	13C-2,3,7,8-TCDD	5.92e5	0.79	NO	1.01	9.968	26.01	1.023	202.21	101	0.351	
19	13C-1,2,3,7,8-PeCDD	4.60e5	0.60	NO	0.827	9.968	30.68	1.206	192.75	96.1	0.352	
20	13C-1,2,3,4,7,8-HxCDD	3.94e5	1.23	NO	0.916	9.968	34.12	0.988	187.96	93.7	0.806	
21	13C-1,2,3,6,7,8-HxCDD	3.55e5	1.25	NO	0.921	9.968	34.23	0.991	168.39	83.9	0.802	
22	13C-1,2,3,4,6,7,8-HpCDD	3.15e5	1.05	NO	0.708	9.968	38.17	1.106	194.22	96.8	1.30	
23	13C-OCDD	4.28e5	0.88	NO	0.503	9.968	41.65	1.206	372.43	92.8	1.19	
24	13C-2,3,7,8-TCDF	8.03e5	0.77	NO	0.977	9.968	25.25	0.993	202.13	101	0.290	
25	13C-1,2,3,7,8-PeCDF	7.50e5	1.55	NO	0.896	9.968	29.44	1.158	205.71	103	0.464	
26	13C-2,3,4,7,8-PeCDF	7.03e5	1.56	NO	0.900	9.968	30.39	1.195	192.32	95.9	0.462	
27	13C-1,2,3,4,7,8-HxCDF	5.23e5	0.52	NO	1.17	9.968	33.20	0.962	195.40	97.4	0.851	
28	13C-1,2,3,6,7,8-HxCDF	5.80e5	0.52	NO	1.52	9.968	33.33	0.965	166.91	83.2	0.655	
29	13C-2,3,4,6,7,8-HxCDF	4.73e5	0.53	NO	1.25	9.968	33.94	0.983	165.54	82.5	0.796	
30	13C-1,2,3,7,8,9-HxCDF	4.31e5	0.52	NO	1.05	9.968	34.93	1.012	178.69	89.1	0.945	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-7.qld

Last Altered: Tuesday, July 07, 2009 13:24:44 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:24:57 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

31	13C-1,2,3,4,6,7,8-HpCDF	3.19e5	0.44	NO	0.868	9.968	36.82	1.066	160.56	80.0	1.48
32	13C-1,2,3,4,7,8,9-HpCDF	3.05e5	0.43	NO	0.727	9.968	38.74	1.122	183.48	91.4	1.77
33	13C-OCDF	5.99e5	0.91	NO	0.760	9.968	41.89	1.213	344.44	85.8	0.758
34	37Cl-2,3,7,8-TCDD	1.47e5			0.668	9.968	26.05	1.024	76.450	95.3	0.122
35	13C-1,2,3,4-TCDD	5.79e5	0.79	NO	1.00	9.968	25.43	0.000	200.64	100	0.357
36	13C-1,2,3,4-TCDF	8.16e5	0.78	NO	1.00	9.968	24.01	0.000	200.64	100	0.284
37	13C-1,2,3,7,8,9-HxCDD	4.59e5	1.27	NO	1.00	9.968	34.52	0.000	200.64	100	0.738
38	Total Tetra-Dioxins				1.08	9.968					0.0274
39	Total Penta-Dioxins				1.03	9.968					0.0355
40	Total Hexa-Dioxins				1.13	9.968					0.248
41	Total Hepta-Dioxins				1.06	9.968					0.372
42	Total Tetra-Furans				1.09	9.968					0.0255
43	1st Func. Penta-Furans				1.16	9.968					0.0142
44	Total Penta-Furans				1.16	9.968					0.0324
45	Total Hexa-Furans				1.28	9.968					0.136
46	Total Hepta-Furans				1.69	9.968					0.172

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-7.qld

Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

2,3,7,8-TCDD

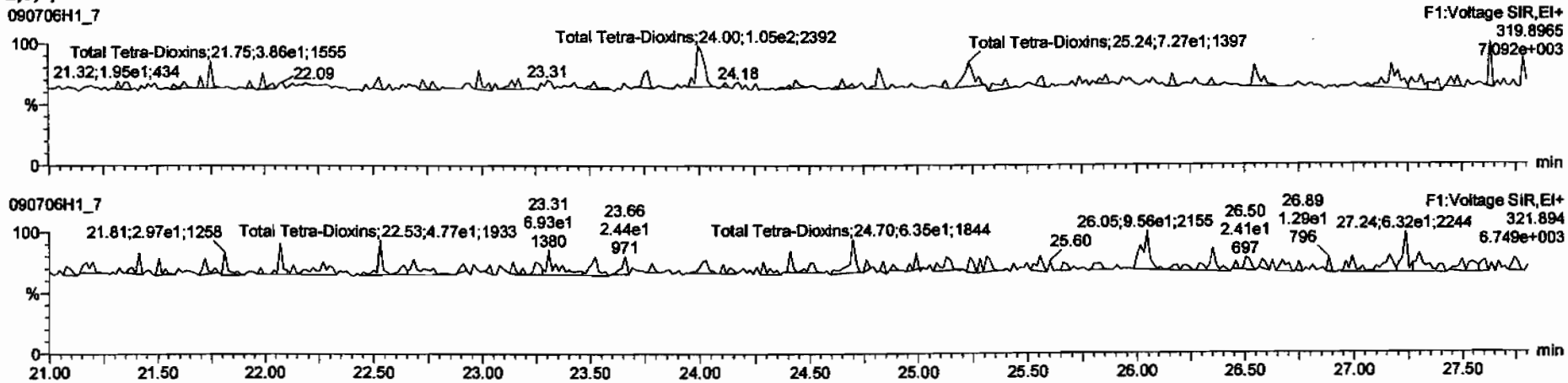

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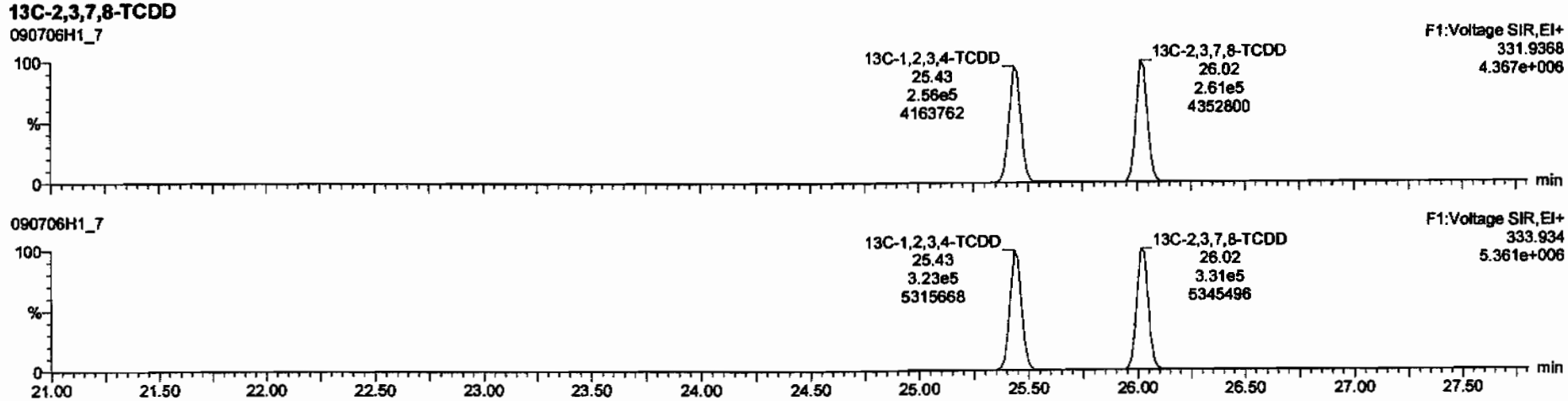

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Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

37Cl-2,3,7,8-TCDD

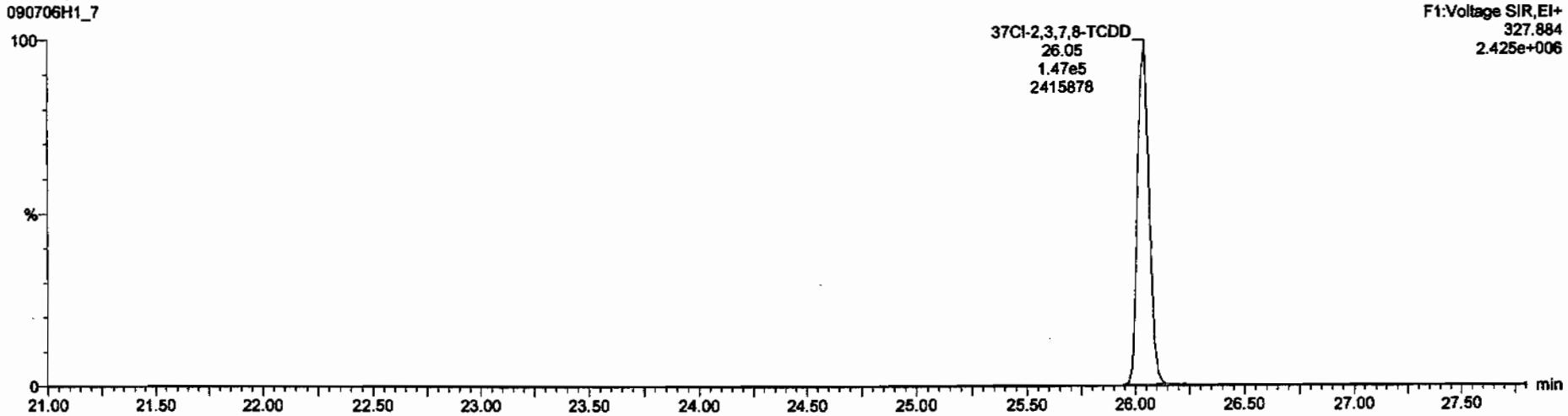

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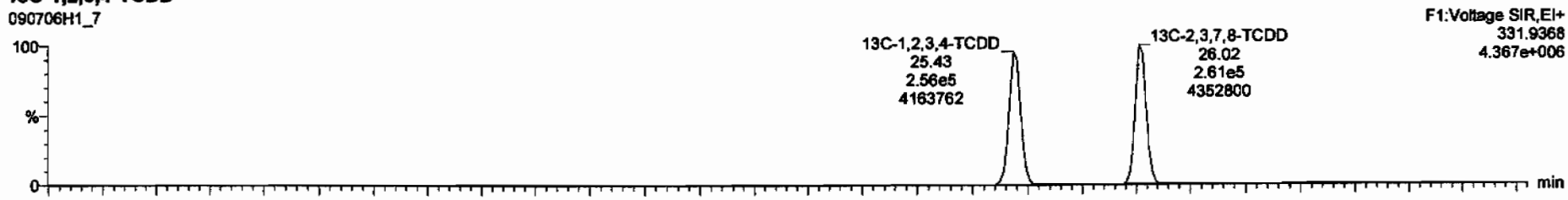

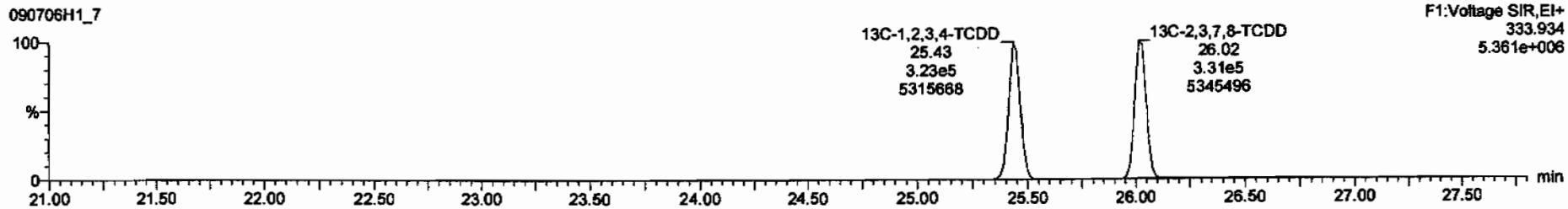

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Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

1,2,3,7,8-PeCDD

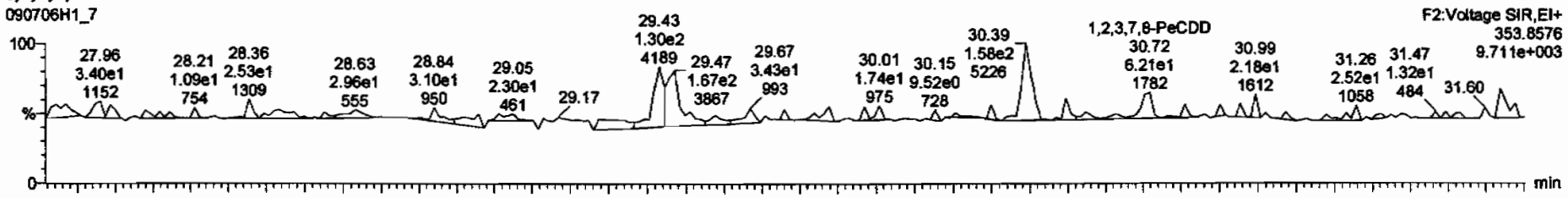

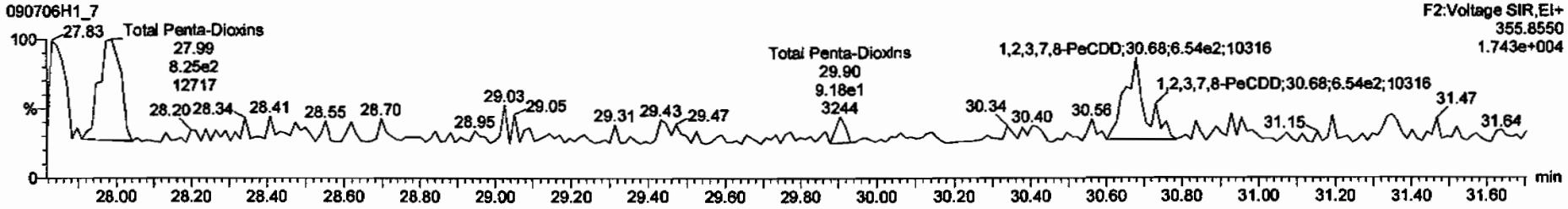

13C-1,2,3,7,8-PeCDD

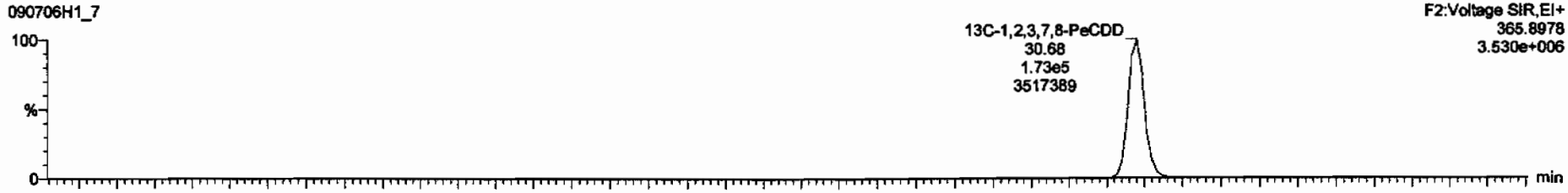

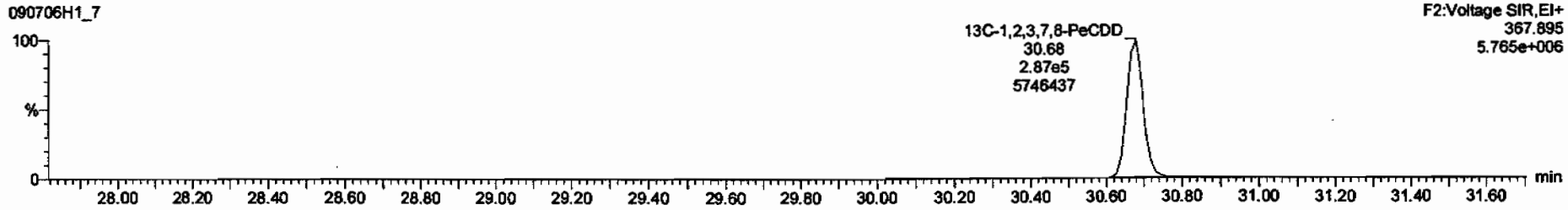

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Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
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Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

1,2,3,4,7,8-HxCDD

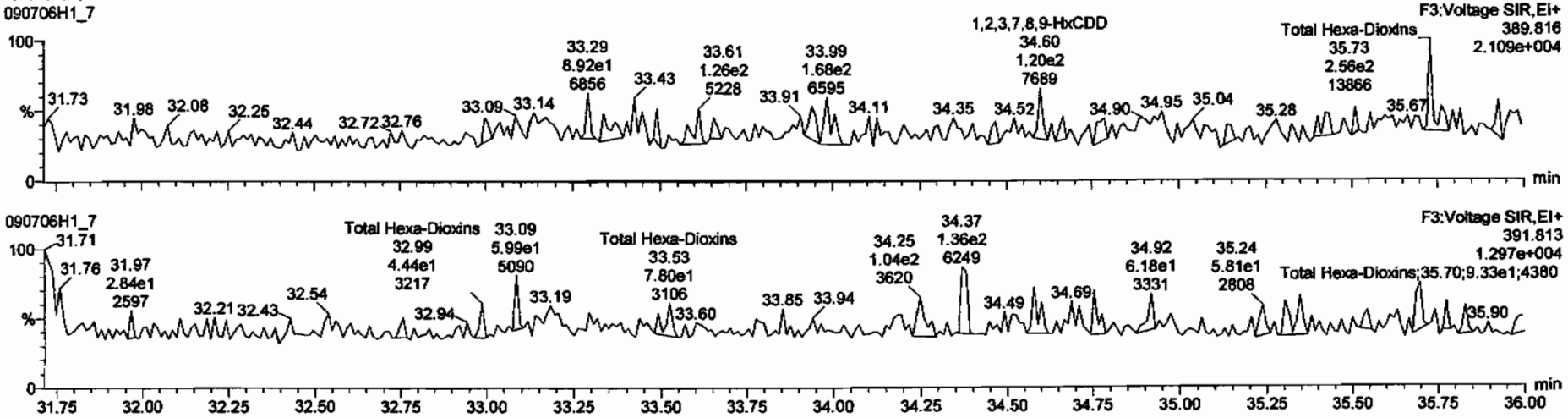

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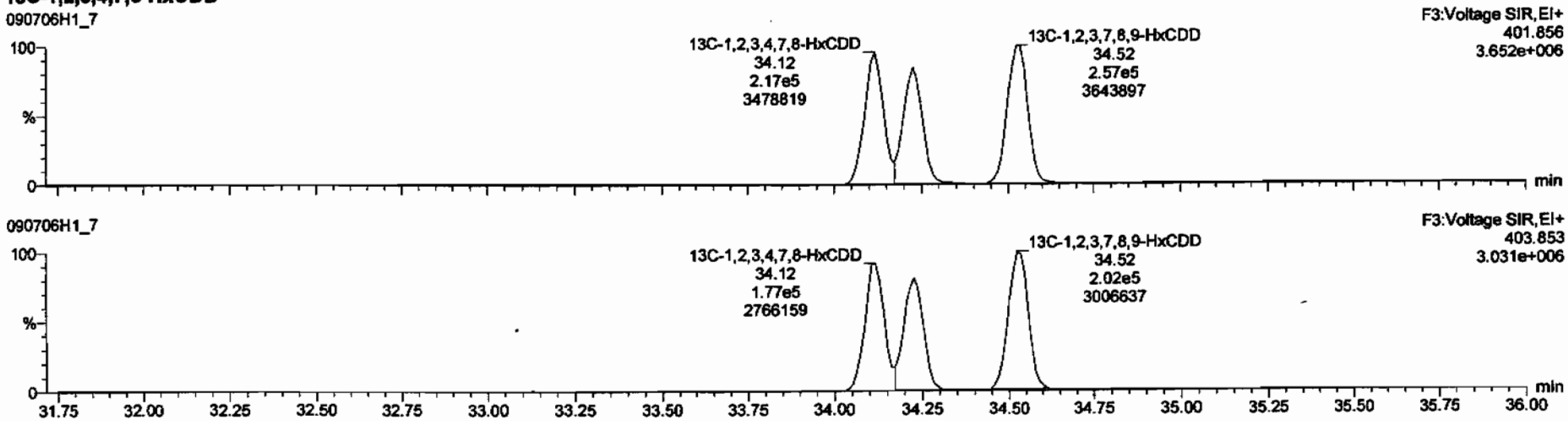

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Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

1,2,3,4,6,7,8-HpCDD

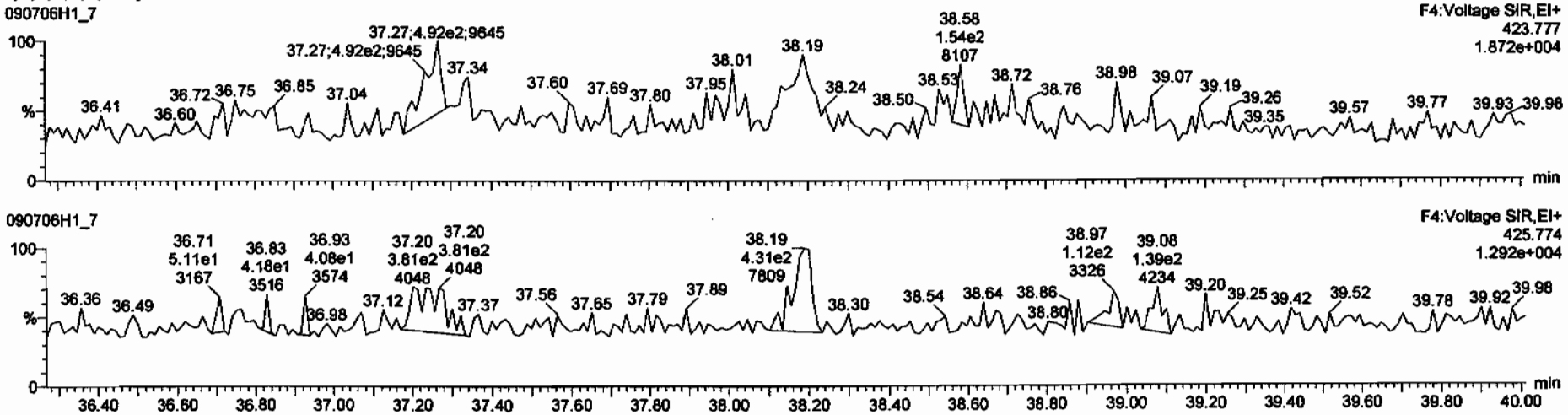

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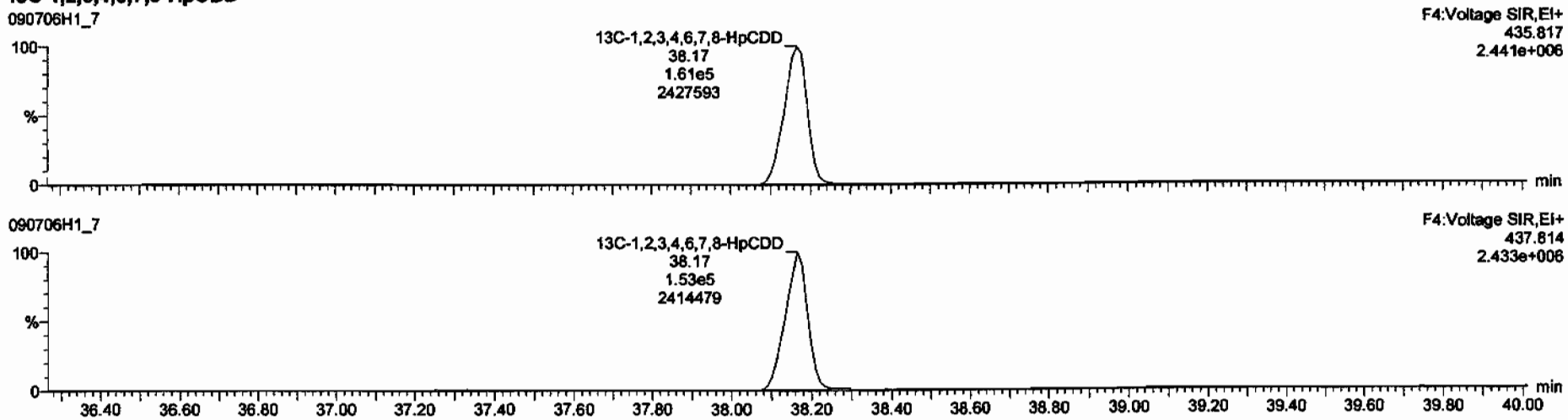

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Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

OCDD

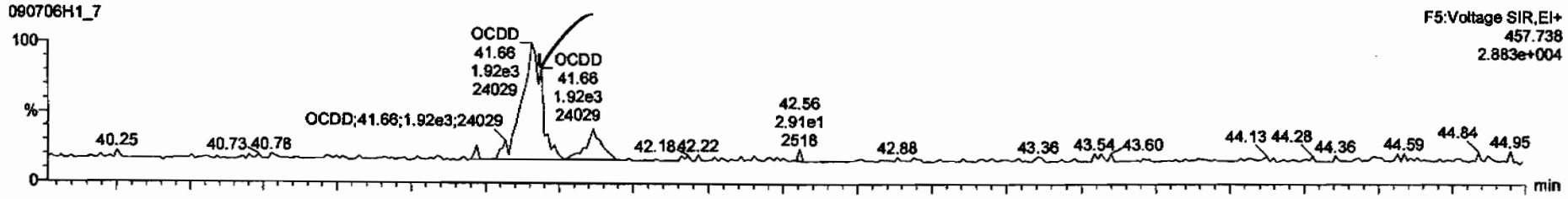

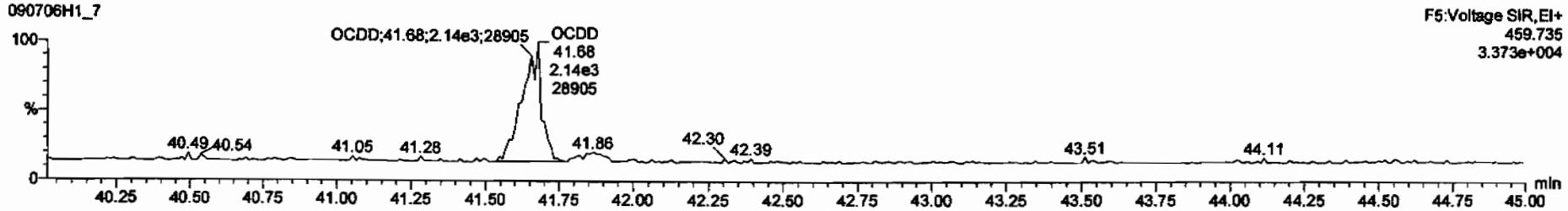

13C-OCDD

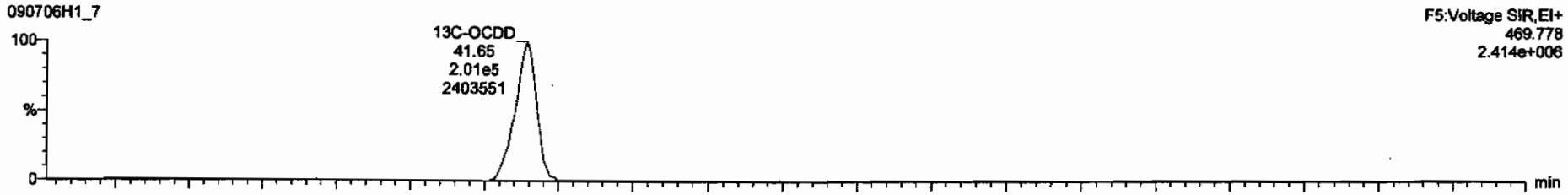

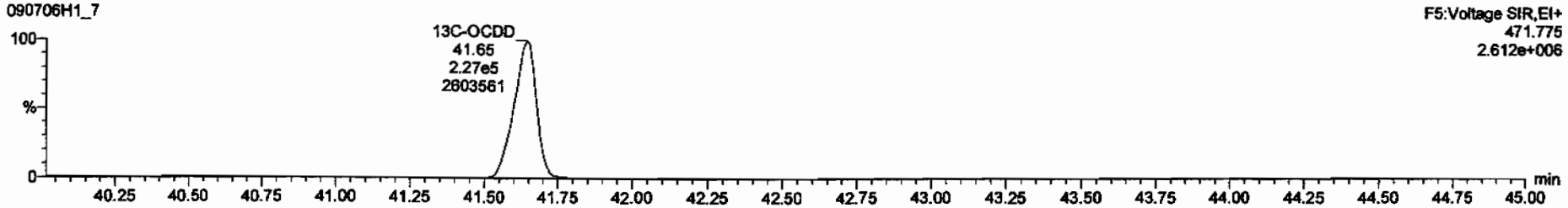

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Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

2,3,7,8-TCDF

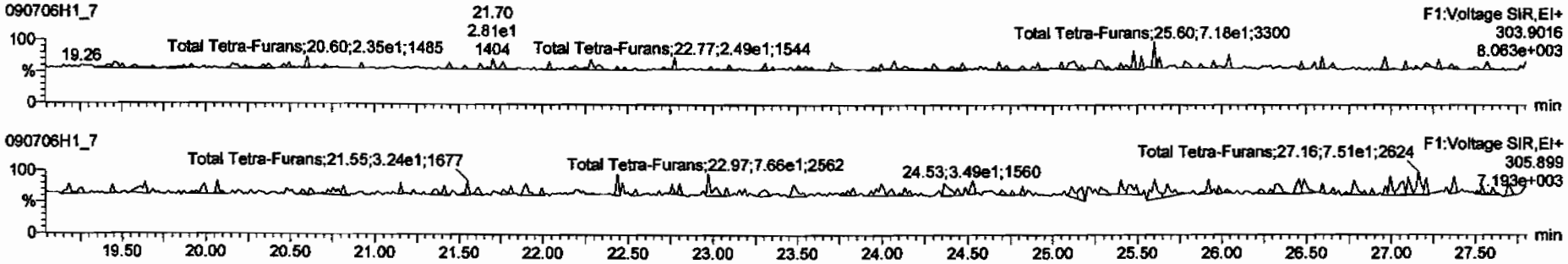

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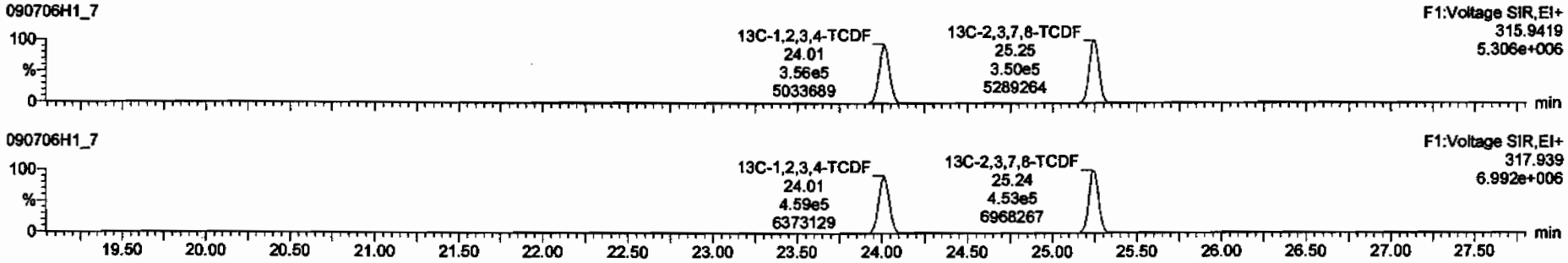

DPE1

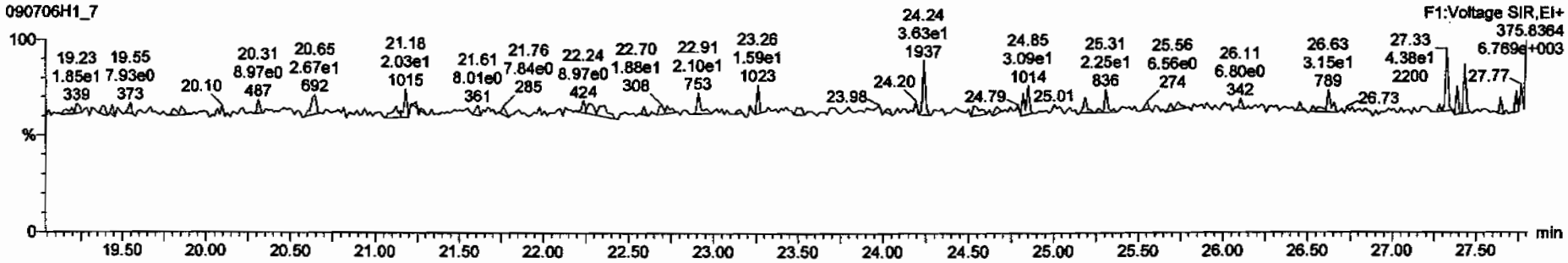

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Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

1st Func. Penta-Furans

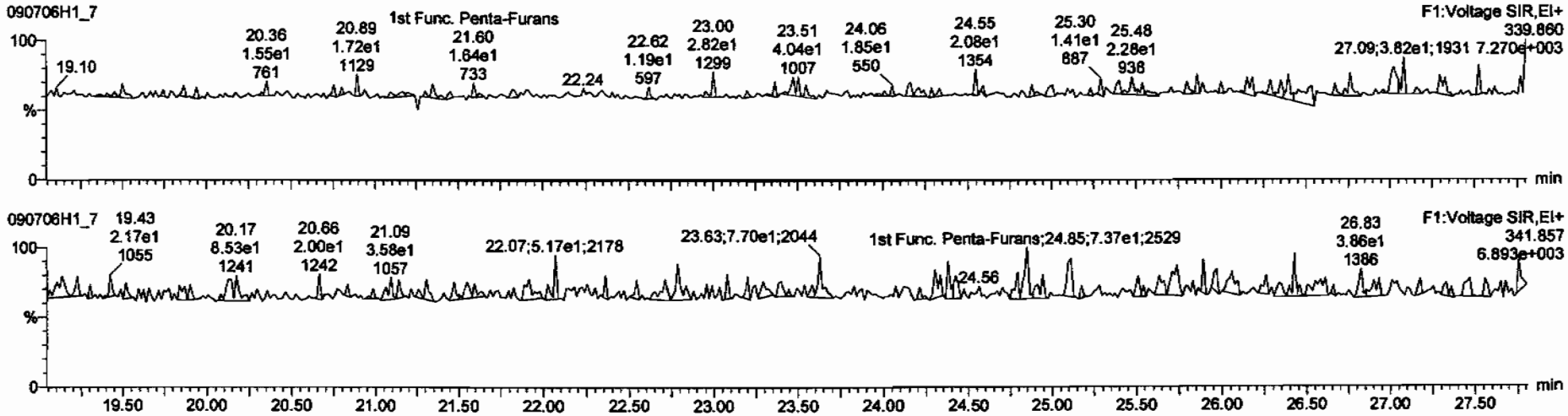

DPE6

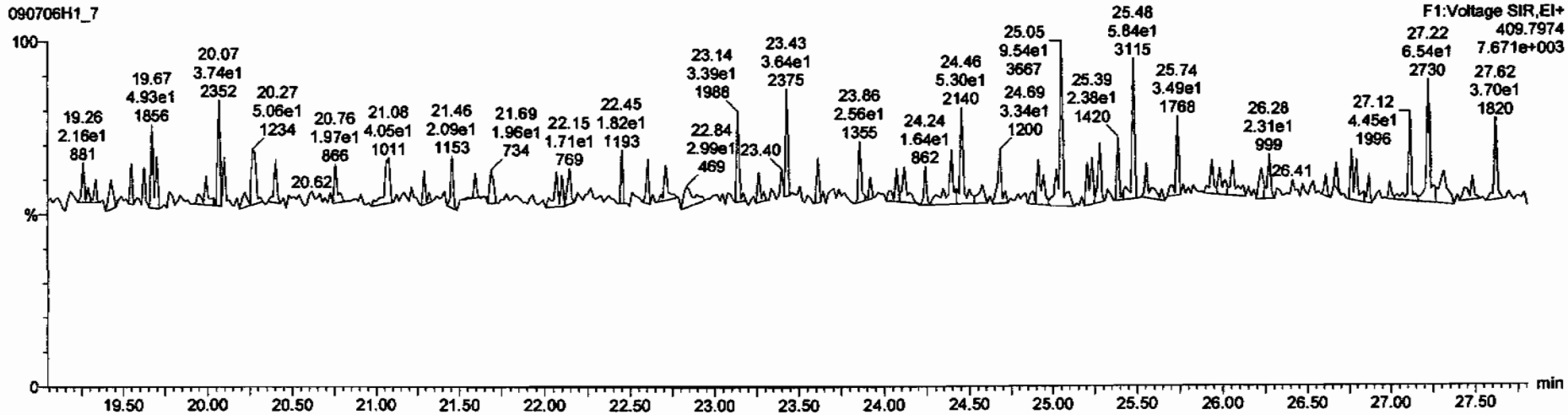

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Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

1,2,3,7,8-PeCDF

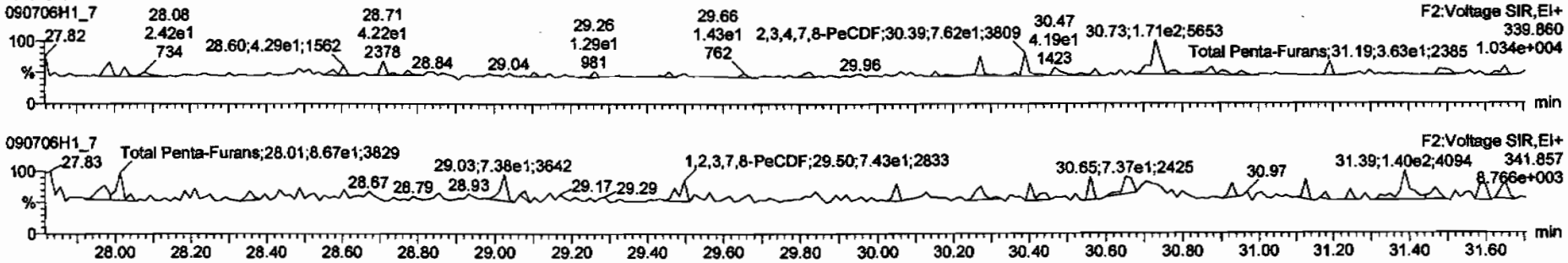

13C-1,2,3,7,8-PeCDF

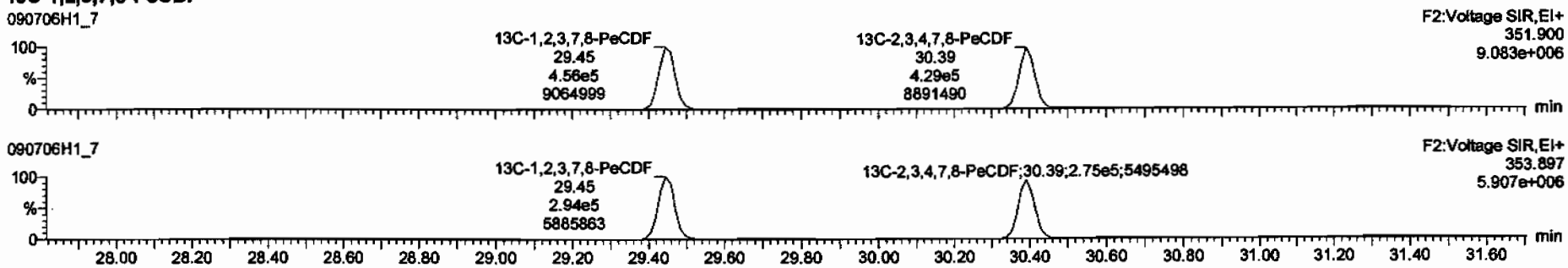

DPE2

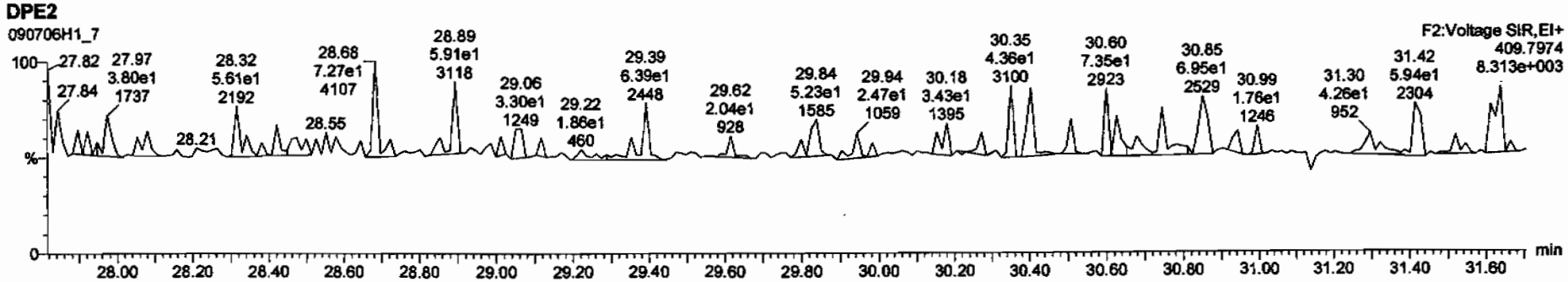

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-7.qld

Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

1,2,3,4,7,8-HxCDF

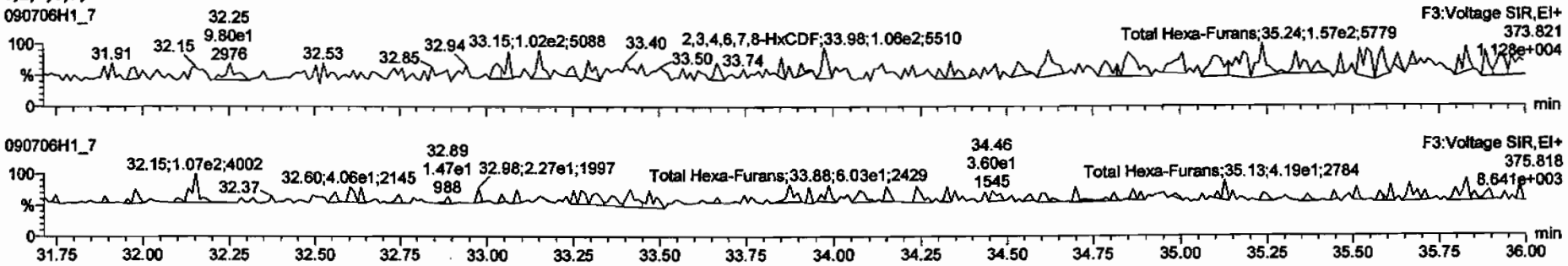

13C-1,2,3,4,7,8-HxCDF

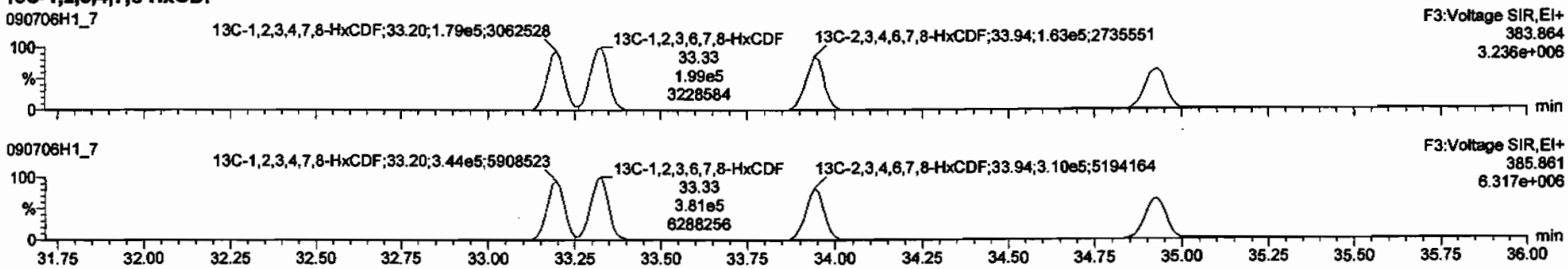

DPE3

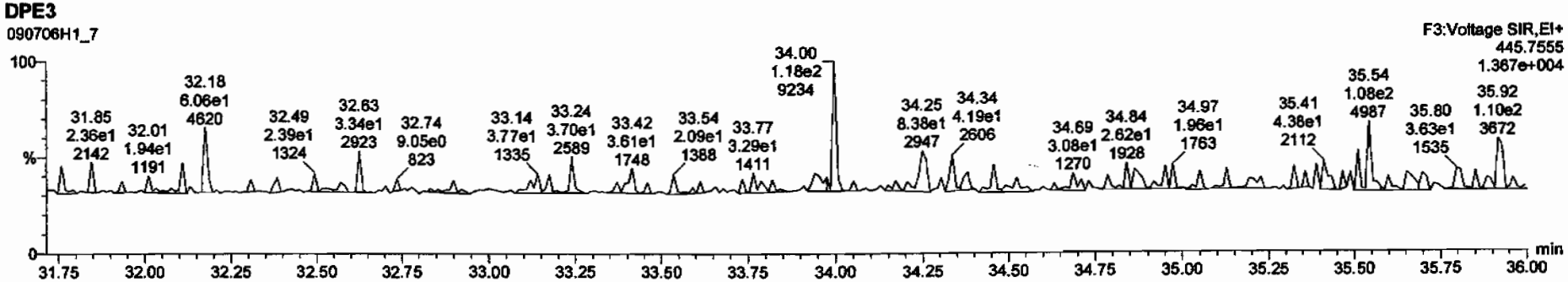

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Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

1,2,3,4,6,7,8-HpCDF

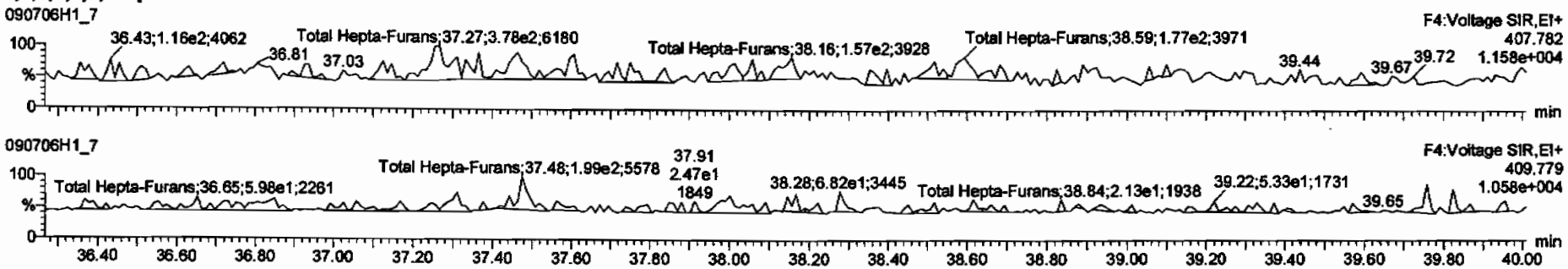

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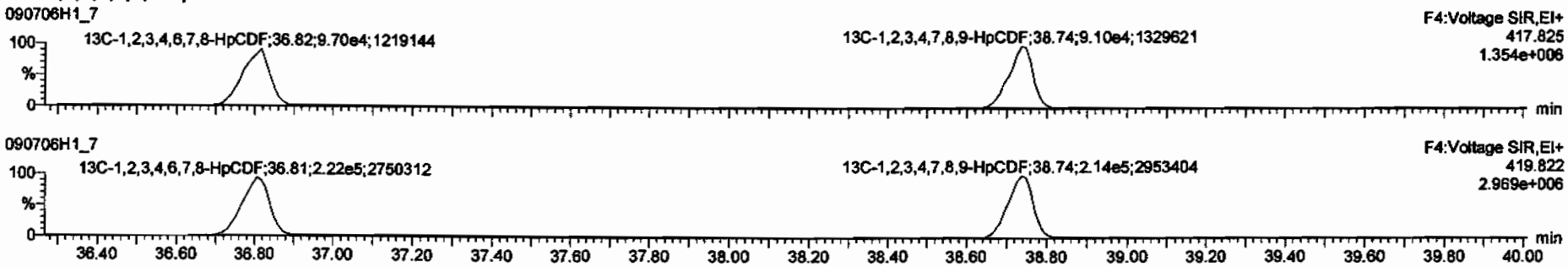

DPE4

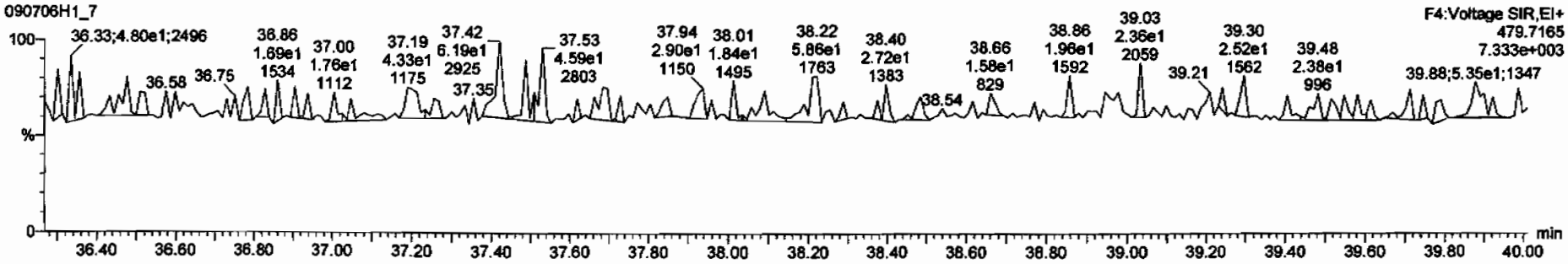

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Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

OCDF

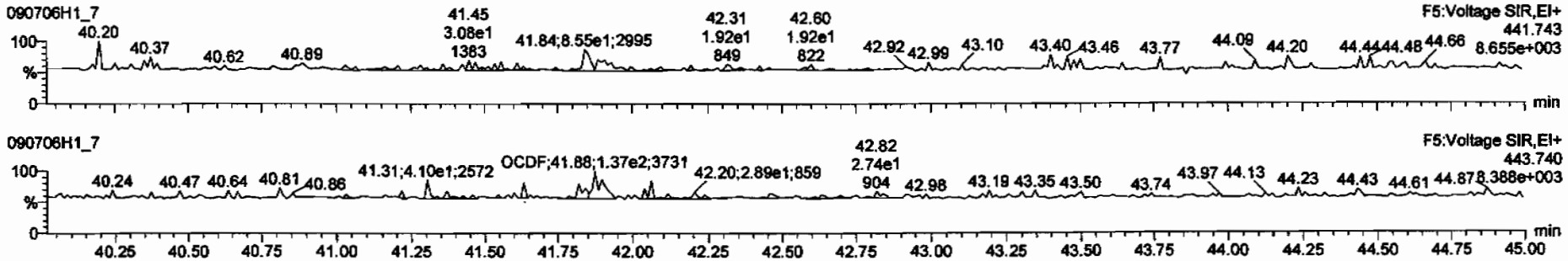

13C-OCDF

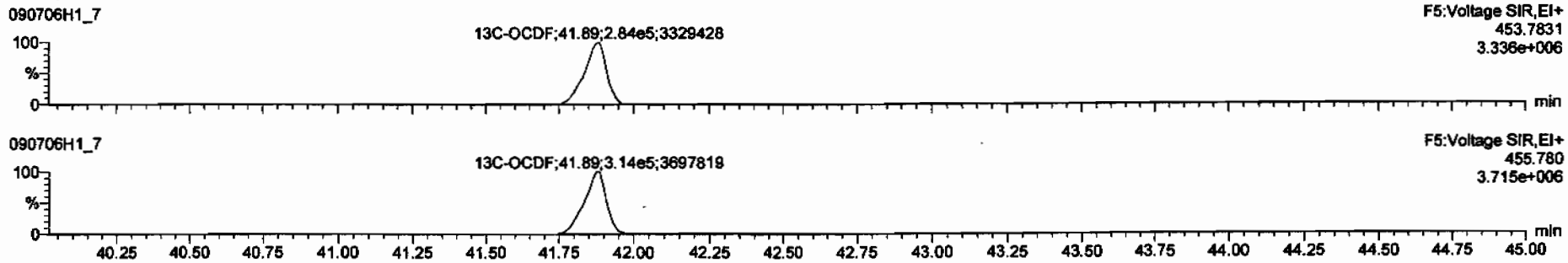

DPE5

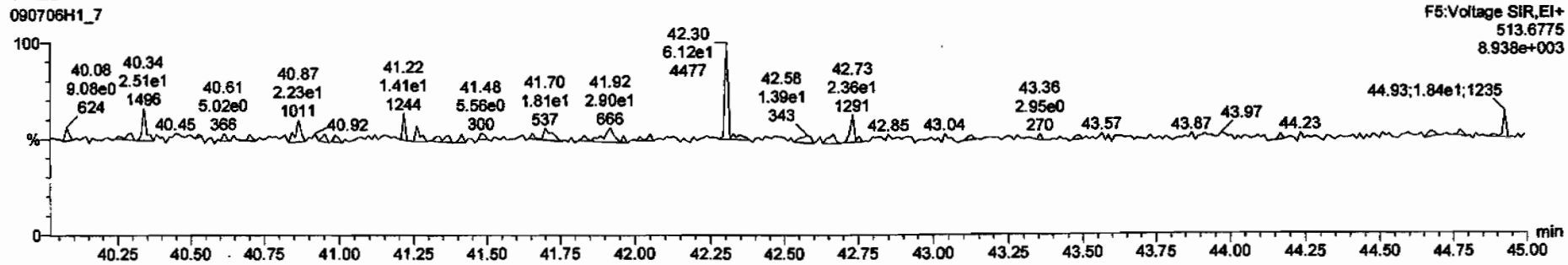

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-7.qld

Last Altered: Tuesday, July 07, 2009 07:44:33 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:44:52 Pacific Daylight Time

Name: 090706H1_7, Date: 06-Jul-2009, Time: 18:24:13, ID: 31853_2218_003 CAMO-09-9952 11.09, Description: CAMO-09-9952

PFK1

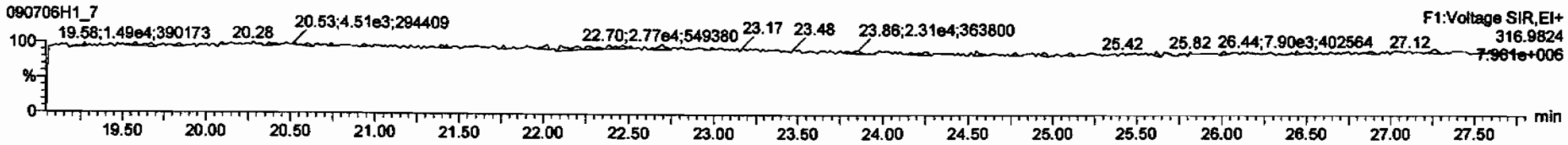

PFK2

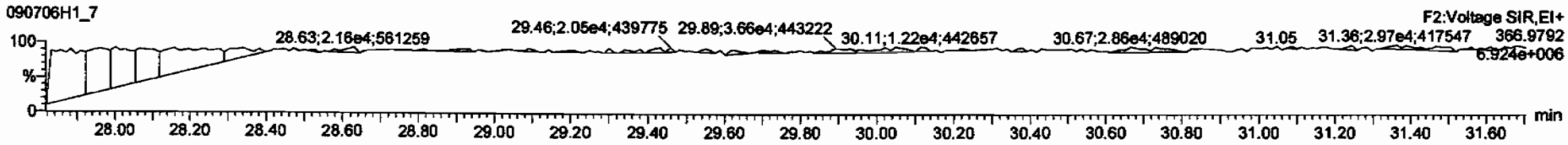

PFK3

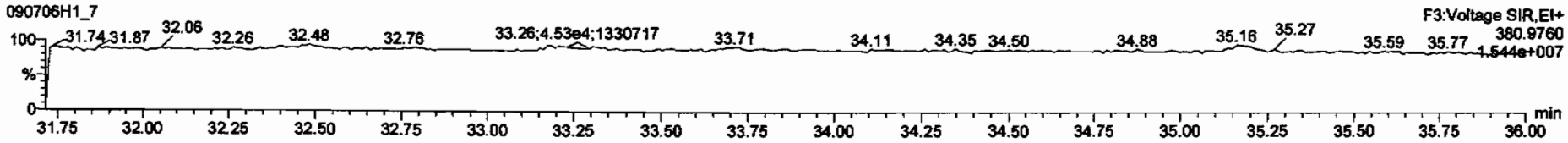

PFK4

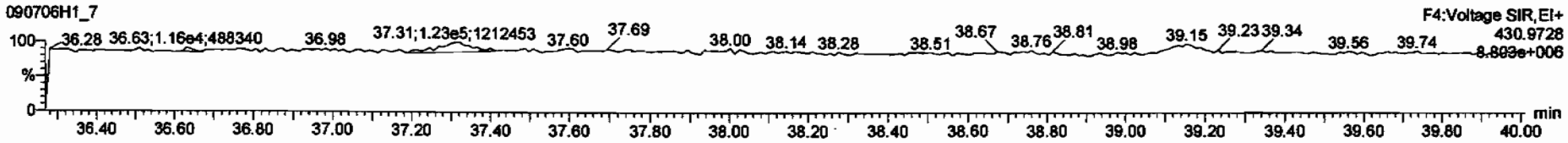

PFK5

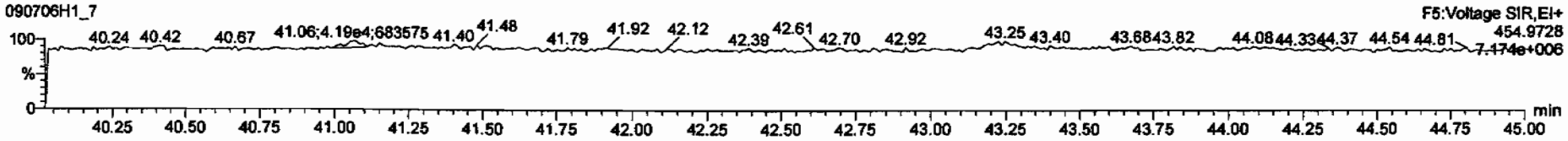

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 13:31:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:32:17 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

1	2,3,7,8-TCDD			NO	1.08	9.892					0.0604	
2	1,2,3,7,8-PeCDD			NO	1.03	9.892					0.144	
3	1,2,3,4,7,8-HxCDD			NO	1.00	9.892					0.367	
4	1,2,3,6,7,8-HxCDD			NO	1.13	9.892					0.388	
5	1,2,3,7,8,9-HxCDD			NO	1.10	9.892					0.363	
6	1,2,3,4,6,7,8-HpCDD	6.48e3	1.03	NO	1.06	9.892	38.18	1.000	3.4384		0.440	~~0.4384~~
7	OCDD	3.64e4	0.90	NO	1.18	9.892	41.63	1.001	24.272		0.234	~~24.272~~
8	2,3,7,8-TCDF	6.99e2	0.87	NO	1.09	9.892	25.27	1.001	0.14599		0.0819	~~0.14599~~
9	1,2,3,7,8-PeCDF			NO	1.16	9.892					0.0836	
10	2,3,4,7,8-PeCDF			NO	1.12	9.892					0.0923	
11	1,2,3,4,7,8-HxCDF	1.10e3	1.23	NO	1.41	9.892	33.21	1.000	0.28131		0.155	~~0.28131~~
12	1,2,3,6,7,8-HxCDF			NO	1.22	9.892					0.169	
13	2,3,4,6,7,8-HxCDF			NO	1.28	9.892					0.206	
14	1,2,3,7,8,9-HxCDF			NO	1.26	9.892					0.248	
15	1,2,3,4,6,7,8-HpCDF	2.26e3	0.91	NO	1.69	9.892	36.81	1.000	0.75581		0.269	~~0.75581~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	9.892					0.274	
17	OCDF	4.18e3	0.83	NO	1.10	9.892	41.86	1.000	2.1797		0.150	~~2.1797~~
18	13C-2,3,7,8-TCDD	6.51e5	0.78	NO	1.01	9.892	26.01	1.023	188.59	93.3	0.290	
19	13C-1,2,3,7,8-PeCDD	5.02e5	0.63	NO	0.827	9.892	30.68	1.206	178.41	88.2	0.238	
20	13C-1,2,3,4,7,8-HxCDD	4.21e5	1.24	NO	0.916	9.892	34.12	0.988	170.79	84.5	0.641	
21	13C-1,2,3,6,7,8-HxCDD	3.85e5	1.25	NO	0.921	9.892	34.23	0.991	155.32	76.8	0.638	
22	13C-1,2,3,4,6,7,8-HpCDD	3.58e5	1.07	NO	0.708	9.892	38.17	1.105	187.88	92.9	1.23	
23	13C-OCDD	5.14e5	0.90	NO	0.503	9.892	41.61	1.205	380.31	94.0	0.972	
24	13C-2,3,7,8-TCDF	8.91e5	0.78	NO	0.977	9.892	25.24	0.992	188.81	93.4	0.279	
25	13C-1,2,3,7,8-PeCDF	8.18e5	1.55	NO	0.896	9.892	29.46	1.158	189.10	93.5	0.715	
26	13C-2,3,4,7,8-PeCDF	7.65e5	1.56	NO	0.900	9.892	30.40	1.195	176.18	87.1	0.712	
27	13C-1,2,3,4,7,8-HxCDF	5.59e5	0.52	NO	1.17	9.892	33.20	0.961	177.70	87.9	0.665	
28	13C-1,2,3,6,7,8-HxCDF	6.23e5	0.53	NO	1.52	9.892	33.33	0.965	152.27	75.3	0.512	
29	13C-2,3,4,6,7,8-HxCDF	5.06e5	0.52	NO	1.25	9.892	33.95	0.983	150.35	74.4	0.623	
30	13C-1,2,3,7,8,9-HxCDF	4.85e5	0.52	NO	1.05	9.892	34.93	1.011	171.20	84.7	0.739	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 13:31:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:32:17 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

31	13C-1,2,3,4,6,7,8-HpCDF	3.59e5	0.45	NO	0.868	9.892	36.81	1.066	153.40	75.9	1.30	
32	13C-1,2,3,4,7,8,9-HpCDF	3.43e5	0.44	NO	0.727	9.892	38.74	1.122	175.59	86.8	1.56	
33	13C-OCDF	7.07e5	0.88	NO	0.760	9.892	41.85	1.212	345.64	85.5	0.479	
34	37Cl-2,3,7,8-TCDD	1.79e5			0.868	9.892	26.05	1.024	78.764	97.4	0.120	
35	13C-1,2,3,4-TCDD	6.87e5	0.78	NO	1.00	9.892	25.43	0.000	202.18	100	0.295	
36	13C-1,2,3,4-TCDF	9.76e5	0.77	NO	1.00	9.892	24.01	0.000	202.18	100	0.273	
37	13C-1,2,3,7,8,9-HxCDD	5.44e5	1.23	NO	1.00	9.892	34.53	0.000	202.18	100	0.588	
38	Total Tetra-Dioxins				1.08	9.892					0.0270	
39	Total Penta-Dioxins				1.03	9.892					0.0456	
40	Total Hexa-Dioxins				1.13	9.892			0.52004		0.356	~~0.52004~~
41	Total Hepta-Dioxins				1.06	9.892			7.5458		0.440	~~7.5458~~
42	Total Tetra-Furans				1.09	9.892			0.28153		0.0819	~~0.28153~~
43	1st Func. Penta-Furans				1.16	9.892			~~0.20343~~ 0.538		0.0450	~~0.20343~~ 0.711
44	Total Penta-Furans				1.16	9.892			0.33408		0.0862	~~0.50720~~
45	Total Hexa-Furans				1.28	9.892			0.73805		0.193	0.93523
46	Total Hepta-Furans				1.69	9.892			1.8055		0.255	~~1.8055~~

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 13:31:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:32:17 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Total Hexa-Dioxins	32.55	1.296e4	1.054e4	6.627e2	5.042e2	1.31	NO	1.167e3	0.52004	0.52004	0.356

Hepta-Dioxins

Total Hepta-Dioxins	37.24	5.554e4	5.701e4	4.087e3	3.657e3	1.12	NO	7.744e3	4.1074	4.1074	0.440
1,2,3,4,6,7,8-HpCDD	38.18	6.111e4	5.415e4	3.297e3	3.186e3	1.03	NO	6.483e3	3.4384	3.4384	0.440

Tetra-Furans

2,3,7,8-TCDF	25.27	4.867e3	6.089e3	3.257e2	3.737e2	0.87	NO	6.995e2	0.14599	0.14599	0.0819
Total Tetra-Furans	25.60	5.382e3	6.170e3	2.887e2	3.607e2	0.80	NO	6.495e2	0.13555	0.13555	0.0819

Penta-Furans function 1

1st Func. Penta-Furans	27.01	1.010e4	6.338e3	5.406e2	3.827e2	1.41	NO	9.233e2	0.20343	0.20343	0.0450

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 13:31:59 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:32:17 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

Penta-Furans

	Total Penta-Furans	28.38	1.192e4	8.788e3	4.776e2	4.208e2	1.13	YES	0.000e0	0.00000	0.17312	0.0862
	Total Penta-Furans	28.51	1.689e4	1.156e4	9.587e2	5.576e2	1.72	NO	1.516e3	0.33408	0.33408	0.0862

Hexa-Furans

	Total Hexa-Furans	32.15	1.379e4	1.676e4	8.122e2	7.586e2	1.07	NO	1.571e3	0.45675	0.45675	0.193
	Total Hexa-Furans	32.74	1.085e4	8.780e3	5.899e2	3.027e2	1.95	YES	0.000e0	0.00000	0.19718	0.193
	1,2,3,4,7,8-HxCDF	33.21	1.119e4	8.342e3	6.055e2	4.924e2	1.23	NO	1.098e3	0.28131	0.28131	0.155

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.81	1.623e4	1.733e4	1.076e3	1.188e3	0.91	NO	2.264e3	0.75581	0.75581	0.269
	Total Hepta-Furans	37.46	2.458e4	2.985e4	1.522e3	1.555e3	0.98	NO	3.077e3	1.0497	1.0497	0.255

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

2,3,7,8-TCDD

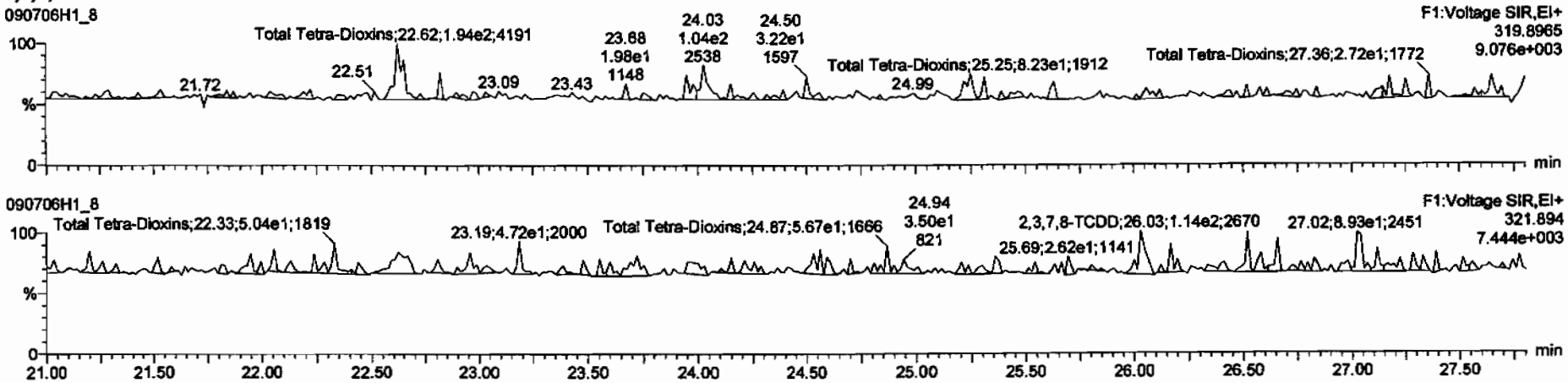

13C-2,3,7,8-TCDD

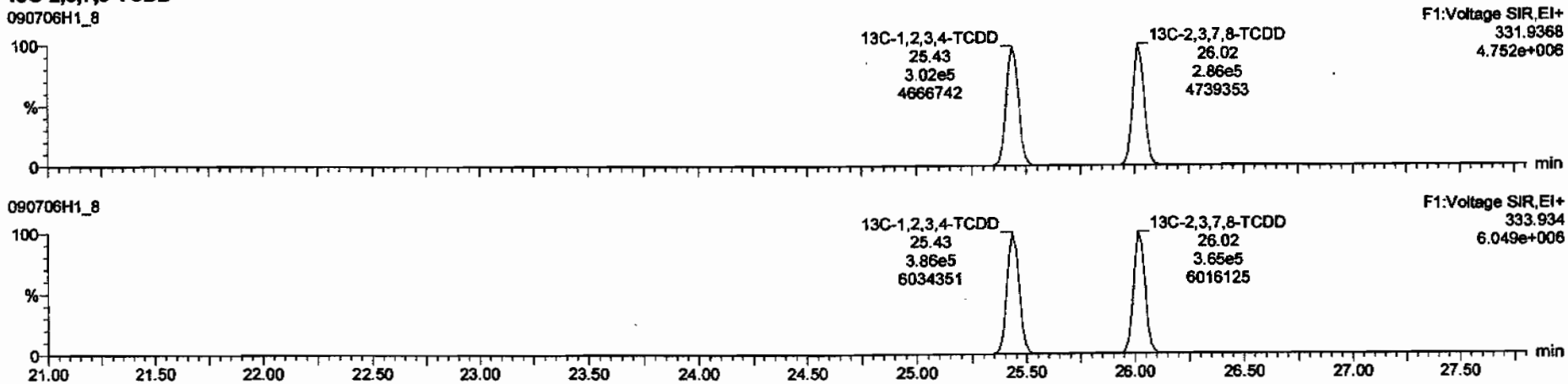

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

37Cl-2,3,7,8-TCDD

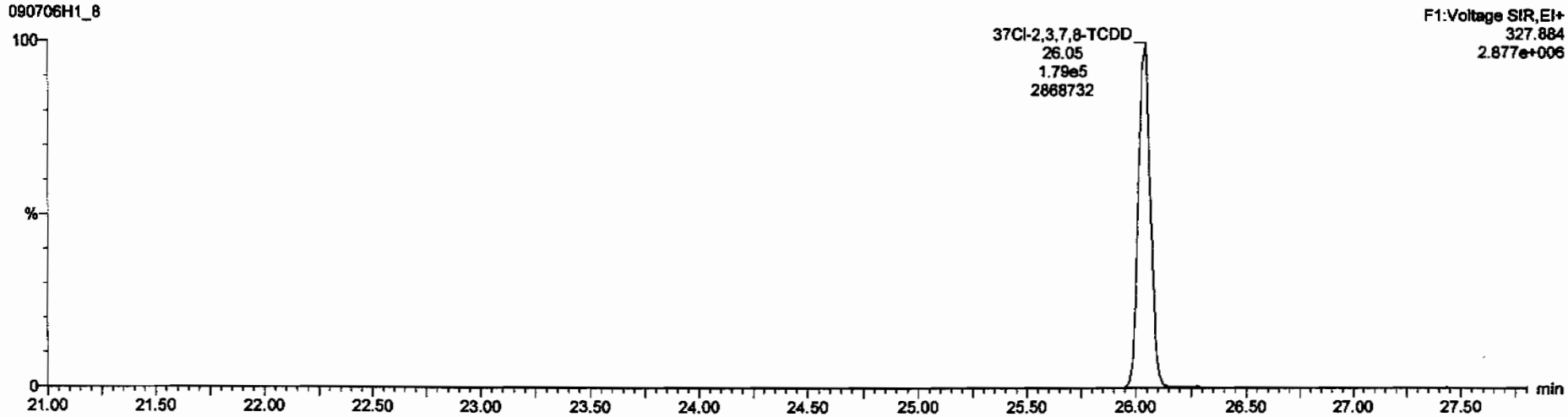

13C-1,2,3,4-TCDD

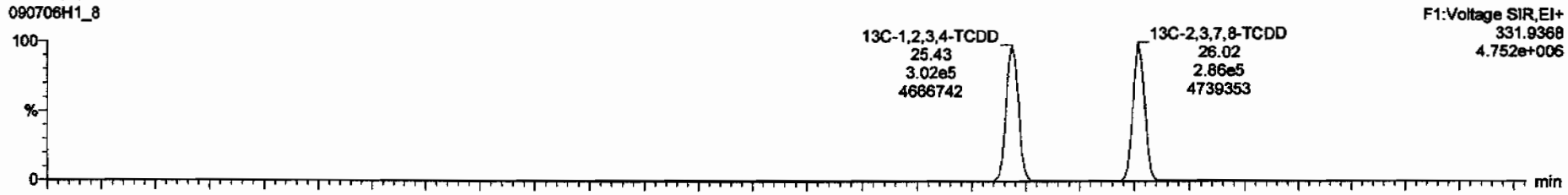

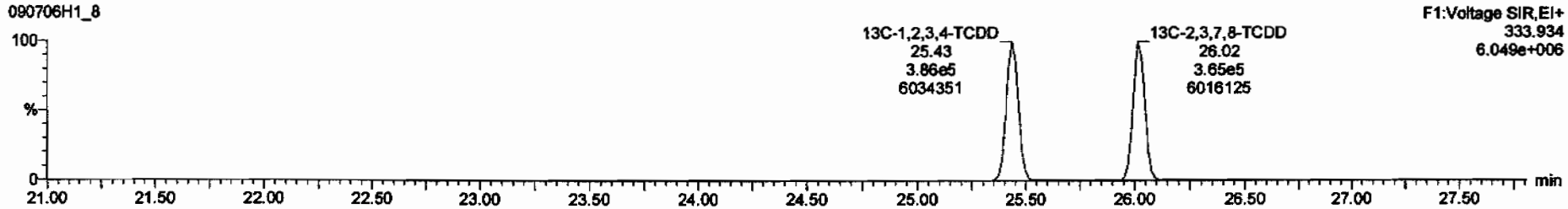

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

1,2,3,7,8-PeCDD

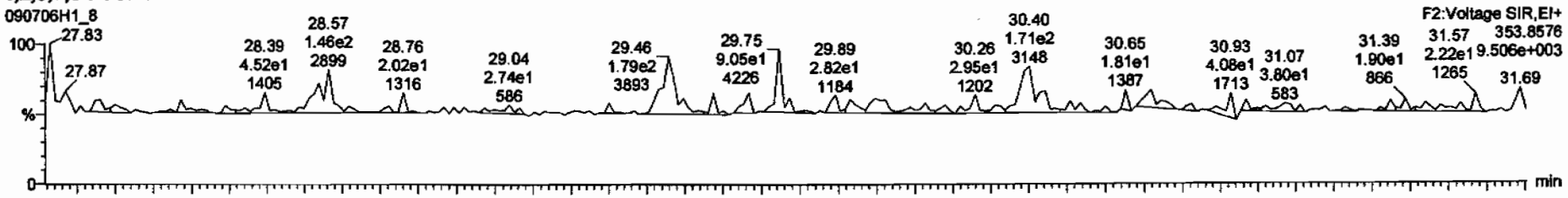

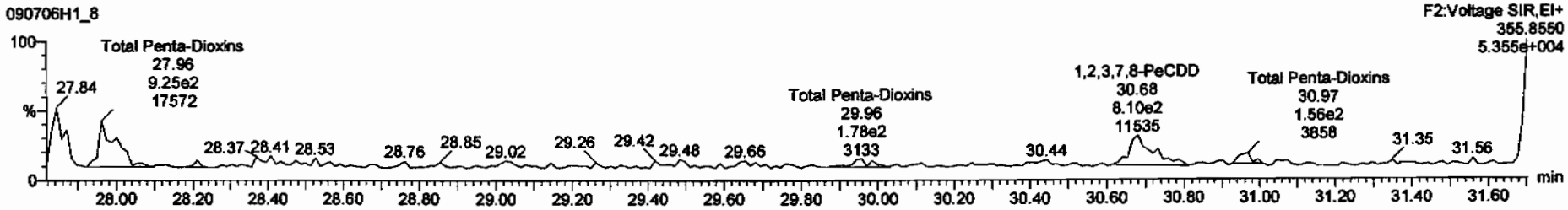

13C-1,2,3,7,8-PeCDD

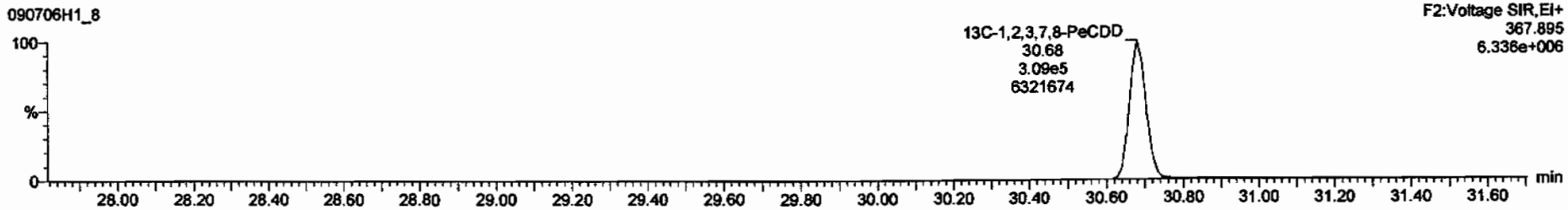

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

1,2,3,4,7,8-HxCDD

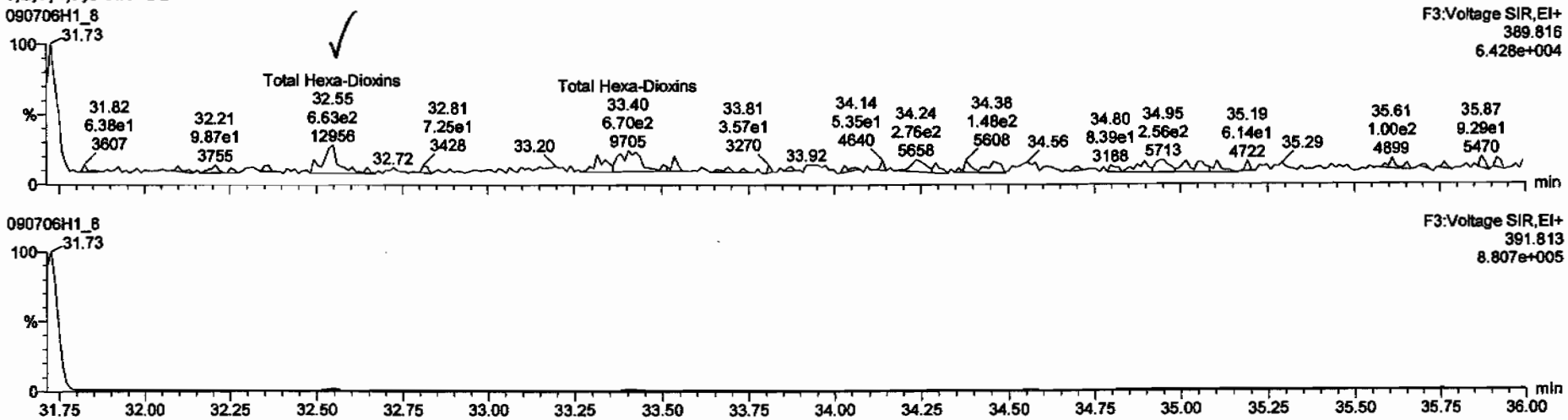

13C-1,2,3,4,7,8-HxCDD

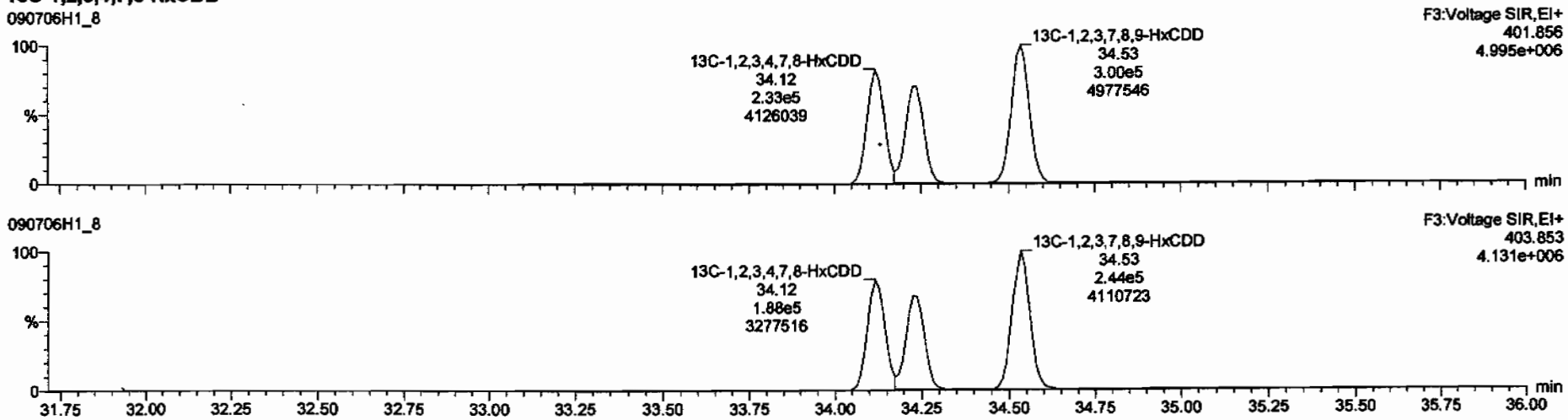

TargetLynx - 090706h1-8.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090706H1_8 - 31853_2218_004 CAMO-09-9956 11.55 - CAMO-09-9956

Name	RT	Int. Resp.	Int. Conc.	Ratio	Flag	EMPC	Conc.
Total Hexa-Dioxins	32.55	6.627e2	5.042e2	1.31	NO	0.52004	0.52004

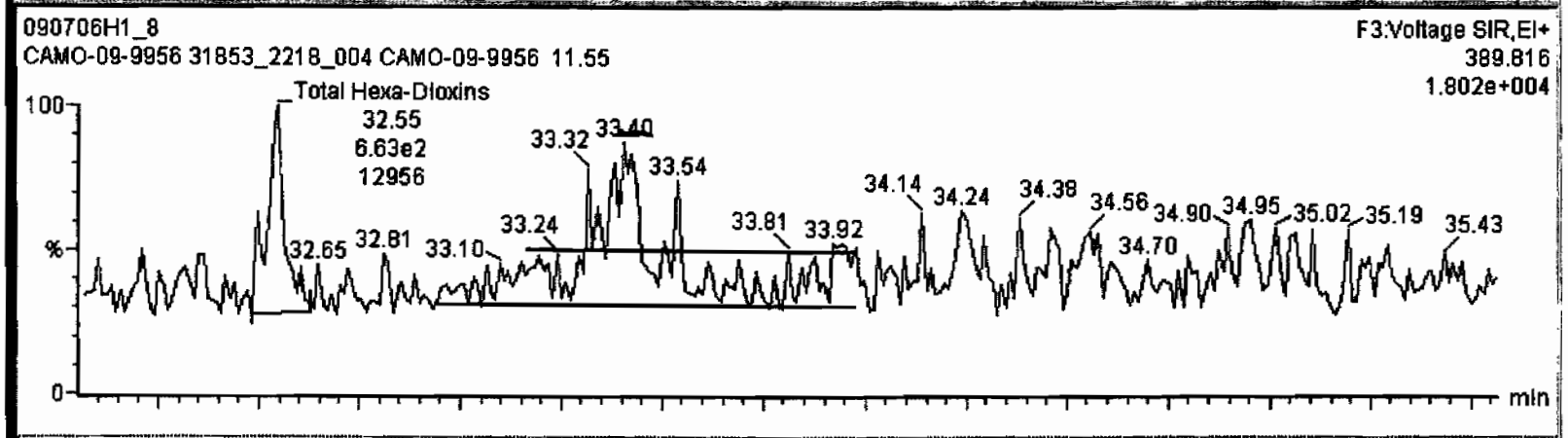

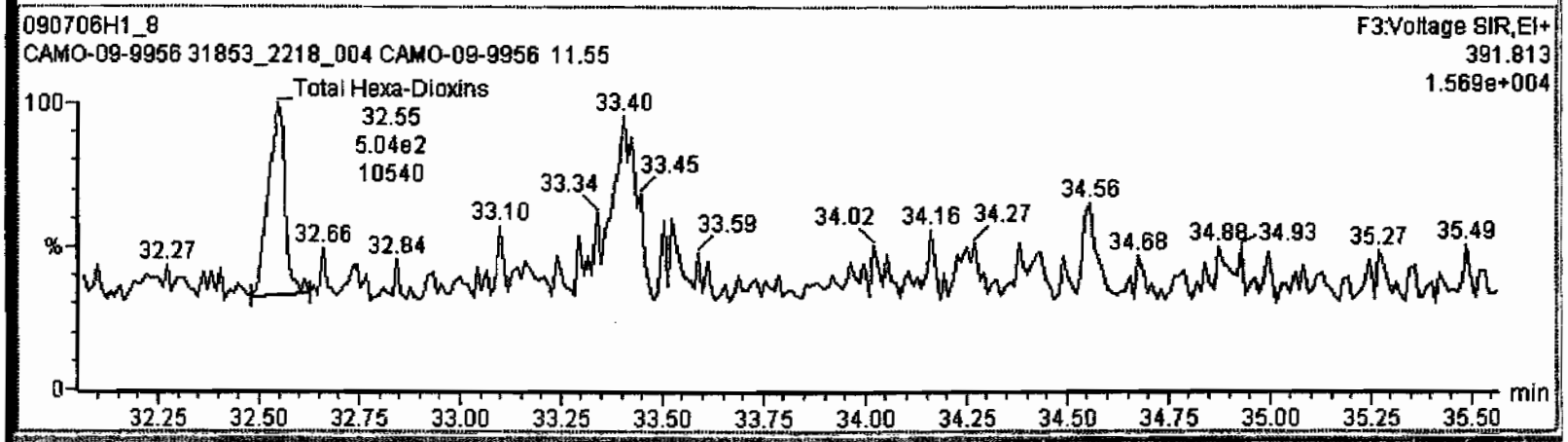

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

1,2,3,4,6,7,8-HpCDD

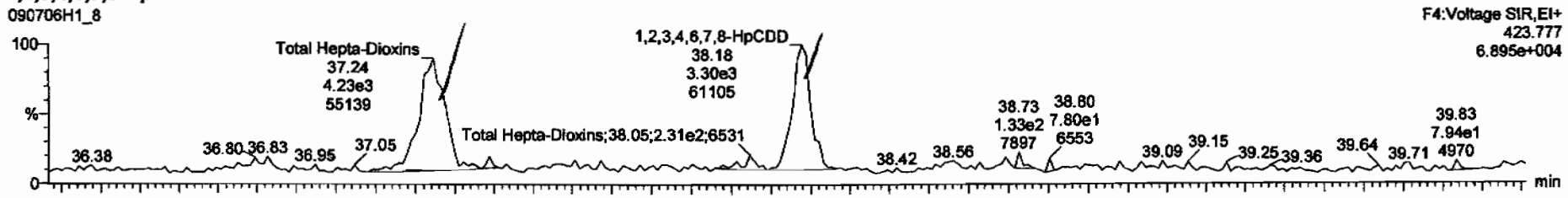

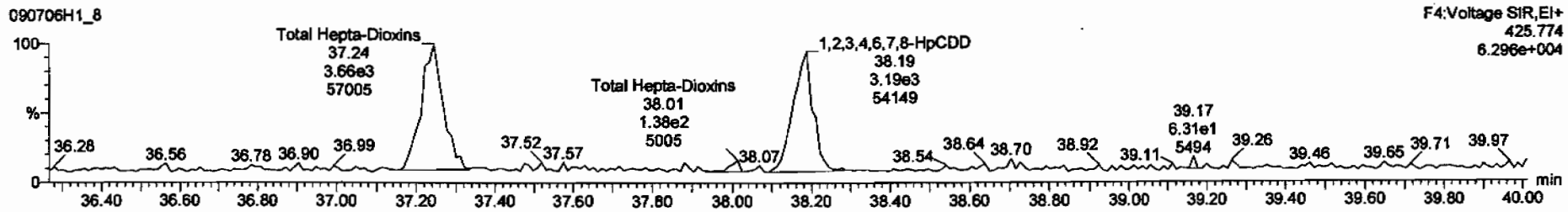

13C-1,2,3,4,6,7,8-HpCDD

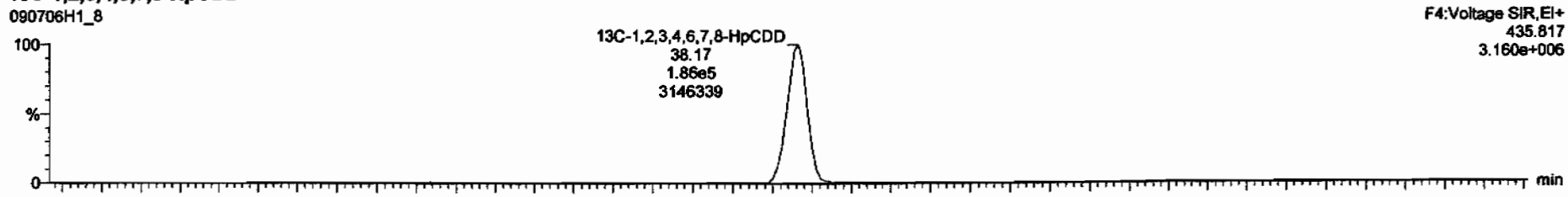

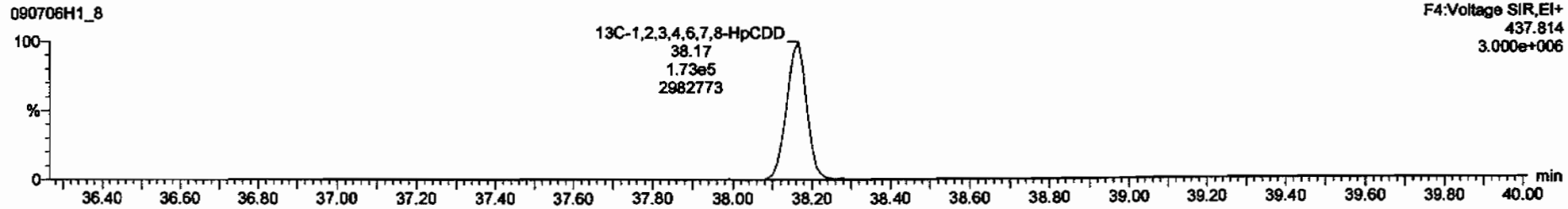

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

OCDD

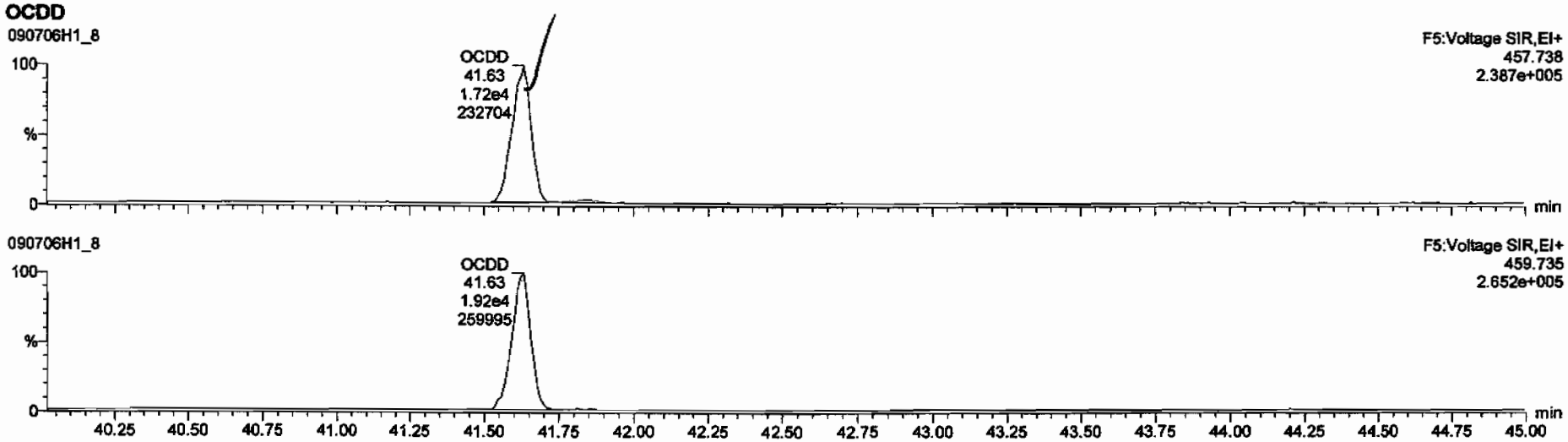

13C-OCDD

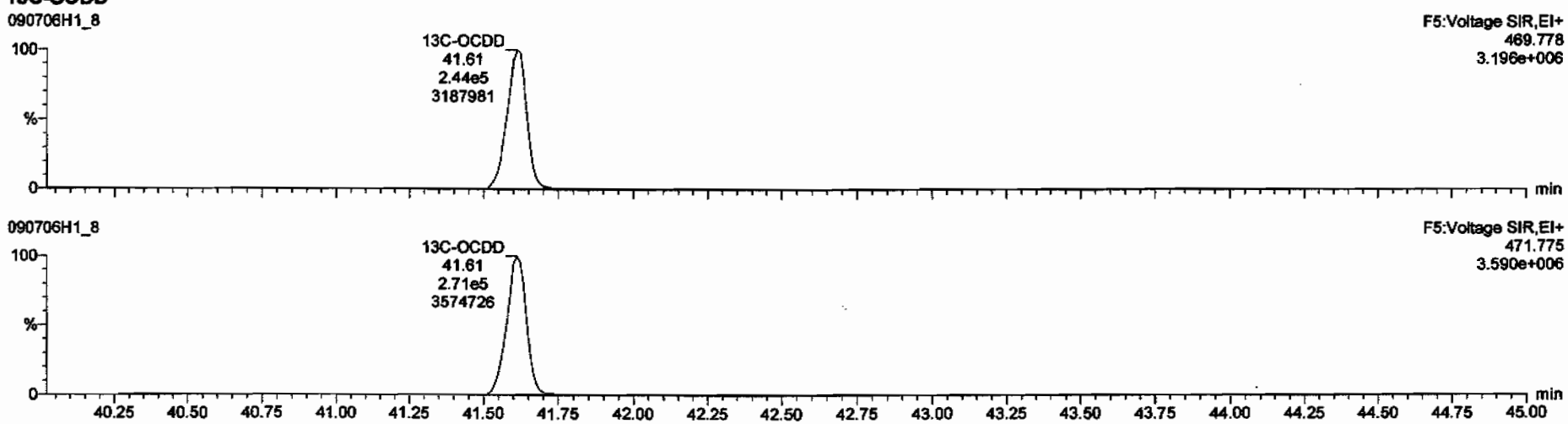

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

2,3,7,8-TCDF

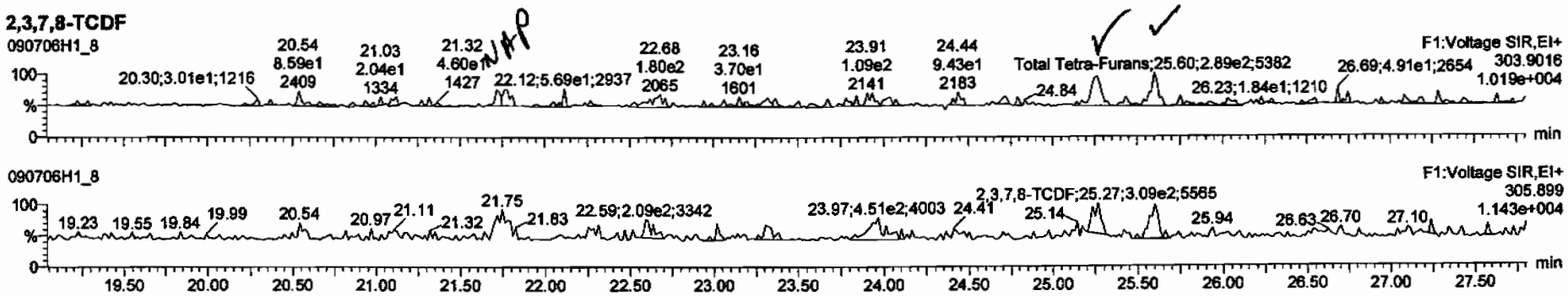

13C-2,3,7,8-TCDF

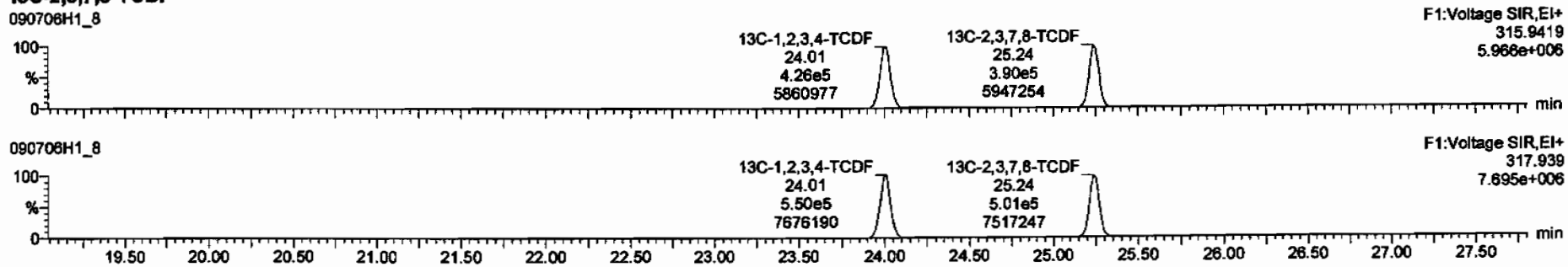

DPE1

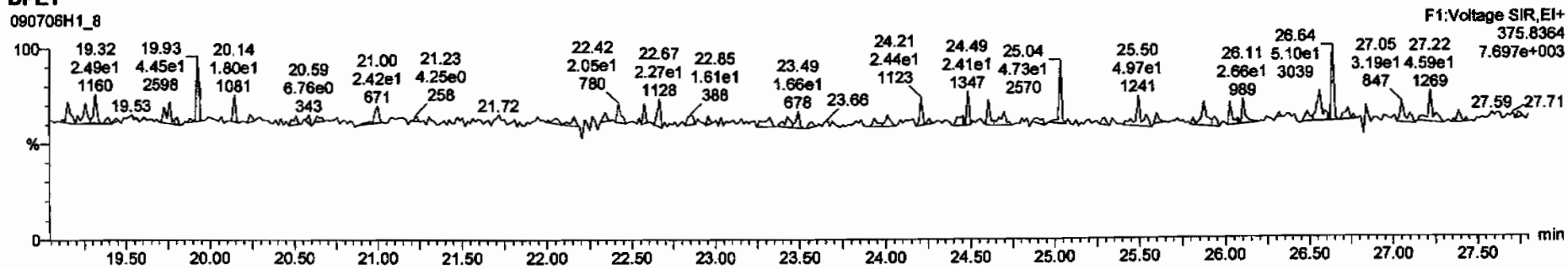

TargetLynx - 090706h1-8.qld * - [Chromatogram]

File Edit View Display Processing Action Help

090706H1_8 - 31853_2218_004 CAMO-09-9956 11.55 - CAMO-09-9956

	Name	RT	m1 Area	m2 Area	RA	Flag	Amount	Conc.
1	2,3,7,8-TCDF	25.27	3.257e2	3.737e2	0.87	NO	0.14599	0.14599
2	Total Tetra-Furans	25.60	2.887e2	3.607e2	0.80	NO	0.13555	0.13555

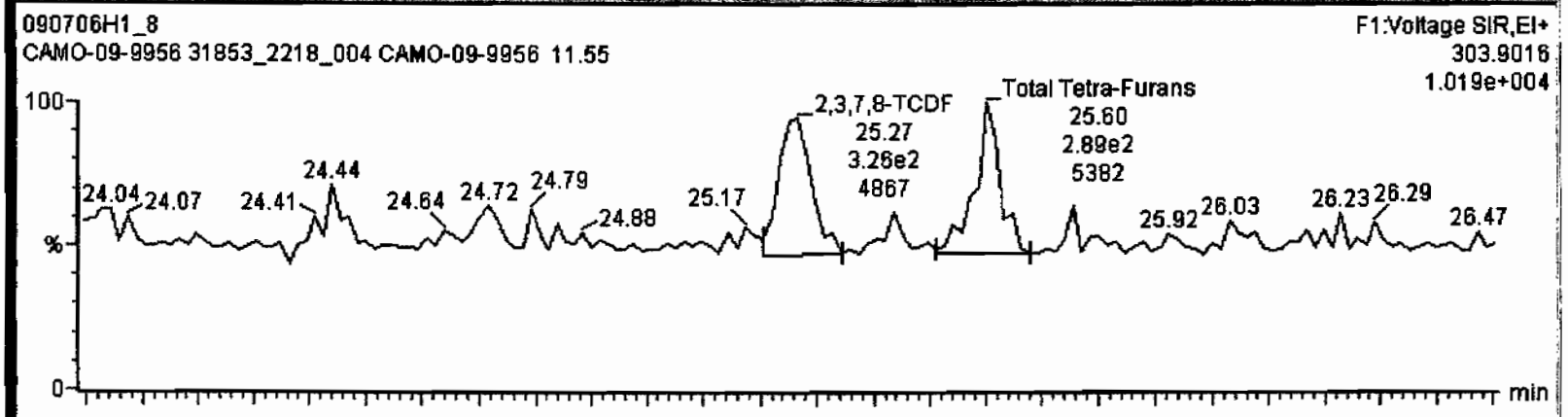

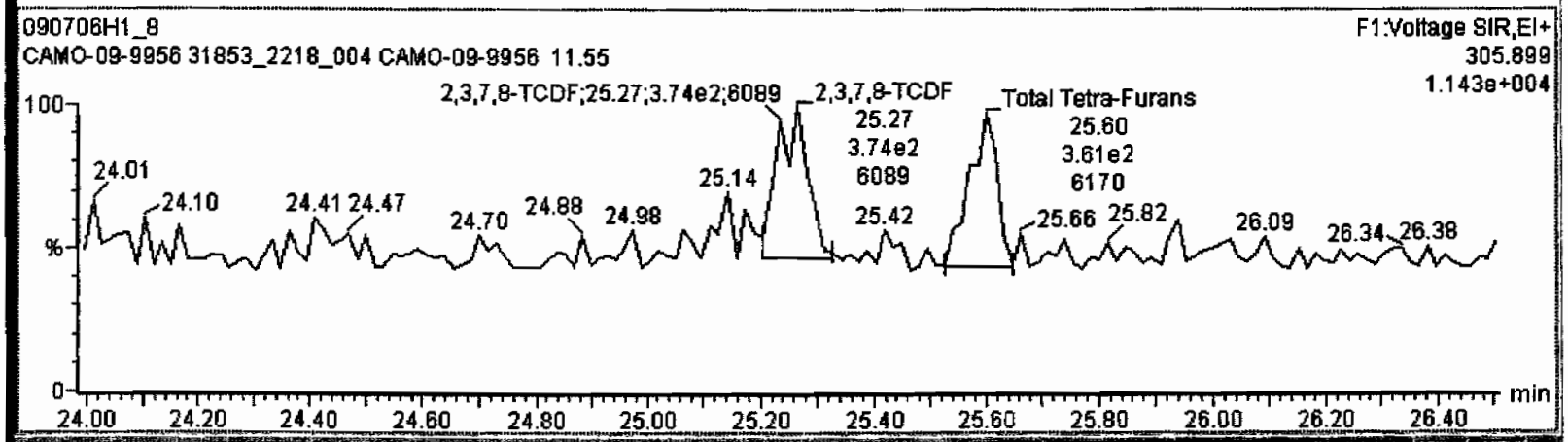

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

1st Func. Penta-Furans

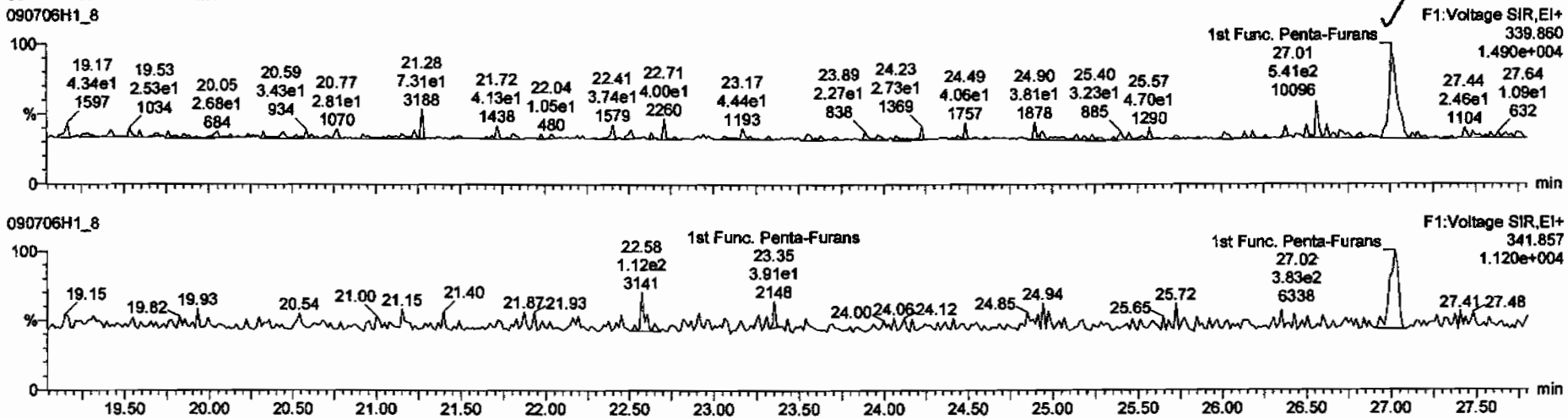

DPE6

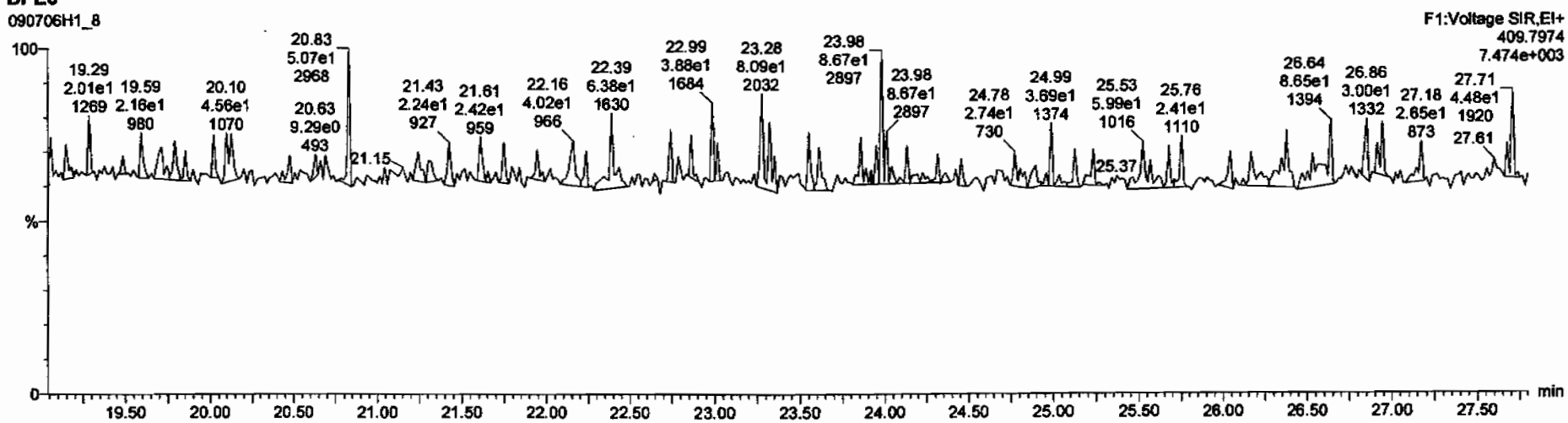

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

1,2,3,7,8-PeCDF

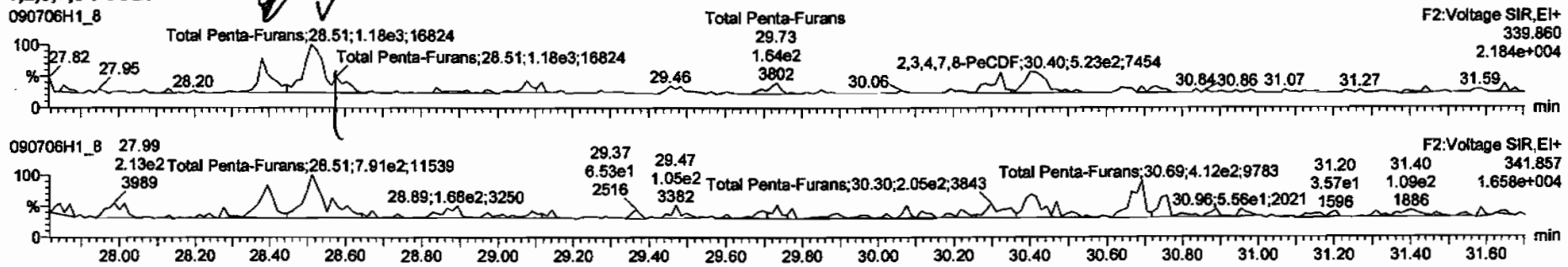

13C-1,2,3,7,8-PeCDF

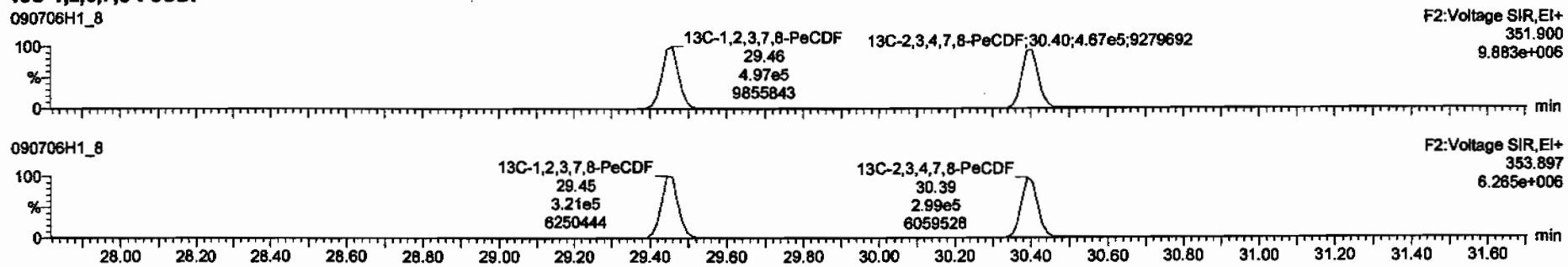

DPE2

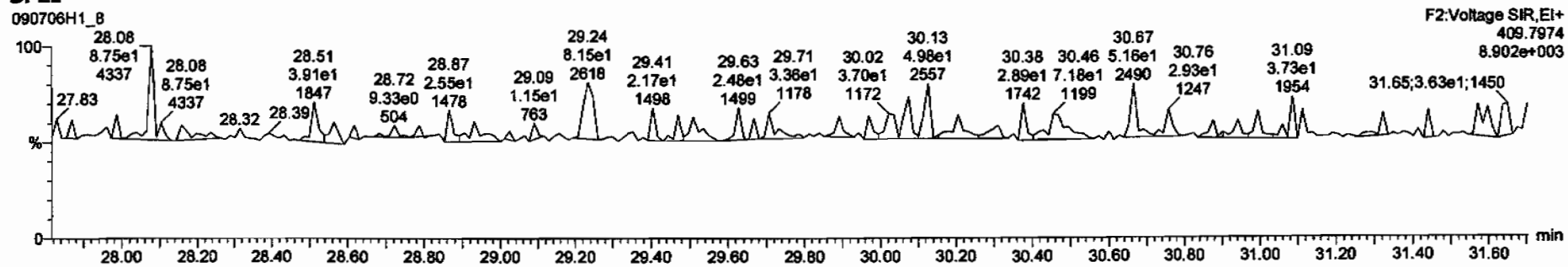

TargetLynx - 090706h1-8.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090706H1_8 - 31853_2218_004 CAMO-09-9956 11.55 - CAMO-09-9956

	Name	RT	m1 Resp	m2 Resp	RR			
1	Total Penta-Furans	28.38	4.776e2	4.208e2	1.13	YES	0.17312	0.00000
2	Total Penta-Furans	28.51	9.587e2	5.576e2	1.72	NO	0.33408	0.33408

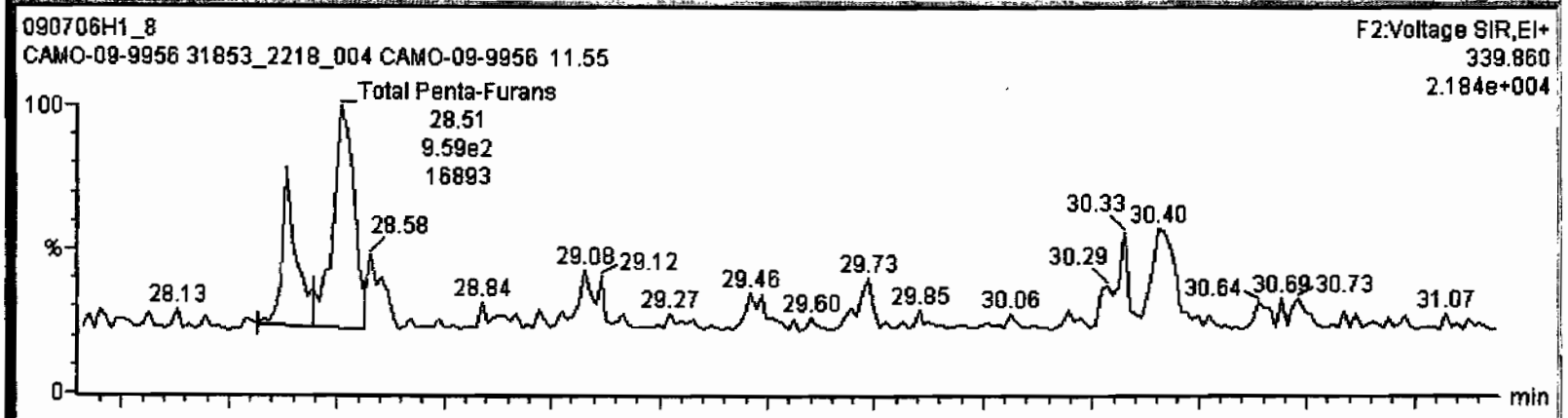

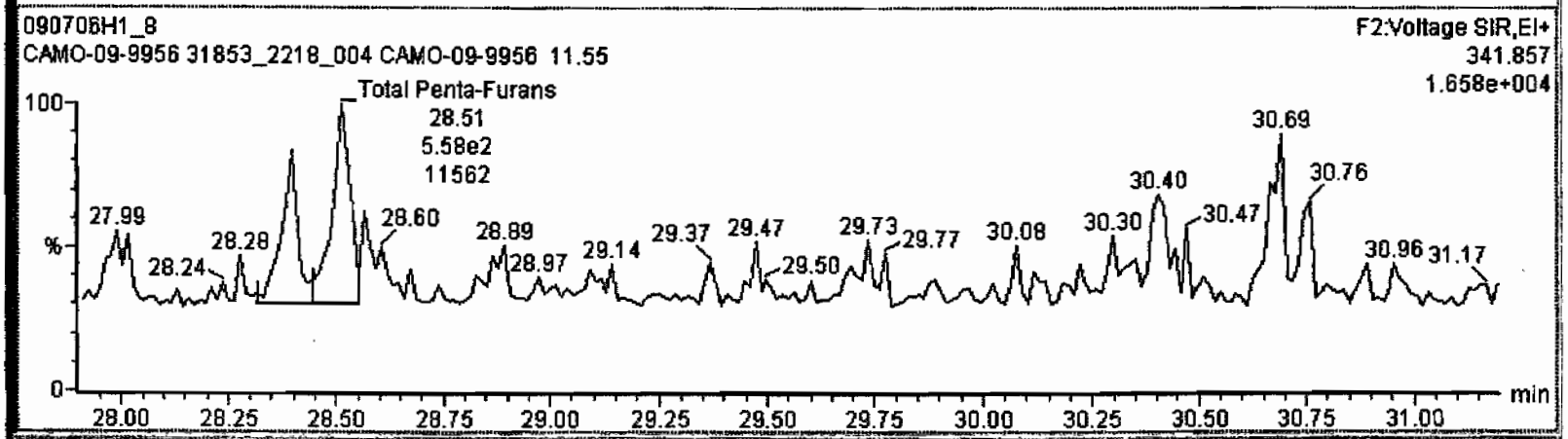

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

1,2,3,4,7,8-HxCDF

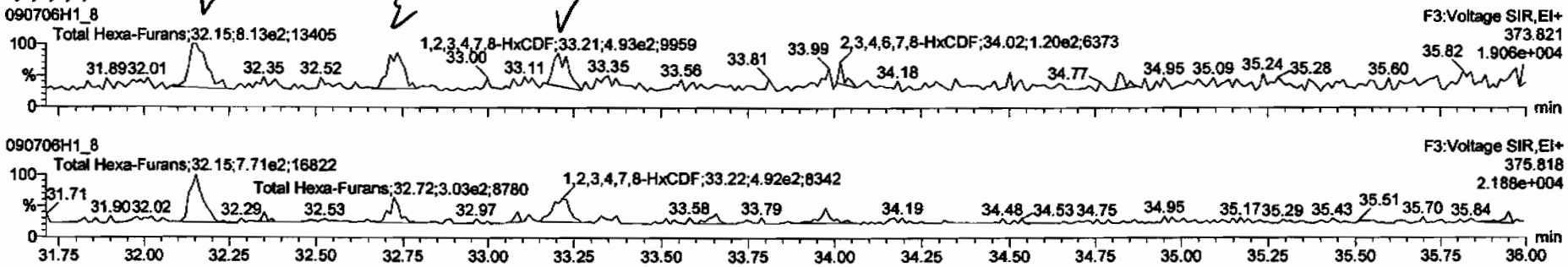

13C-1,2,3,4,7,8-HxCDF

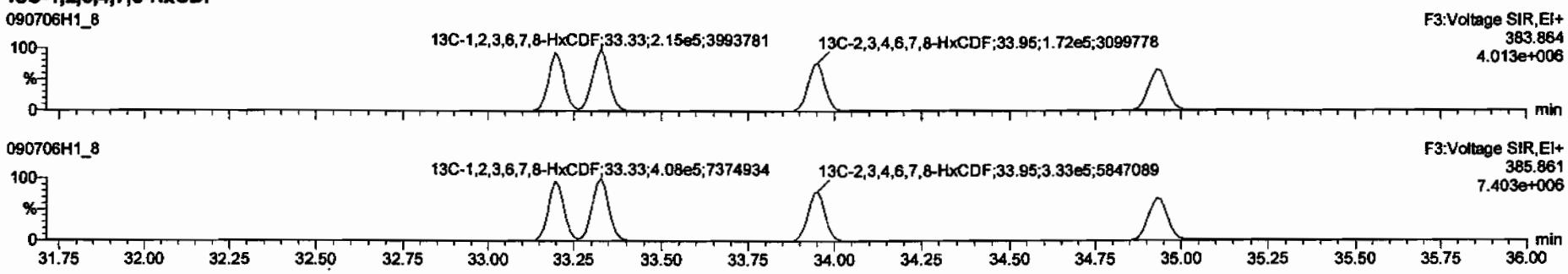

DPE3

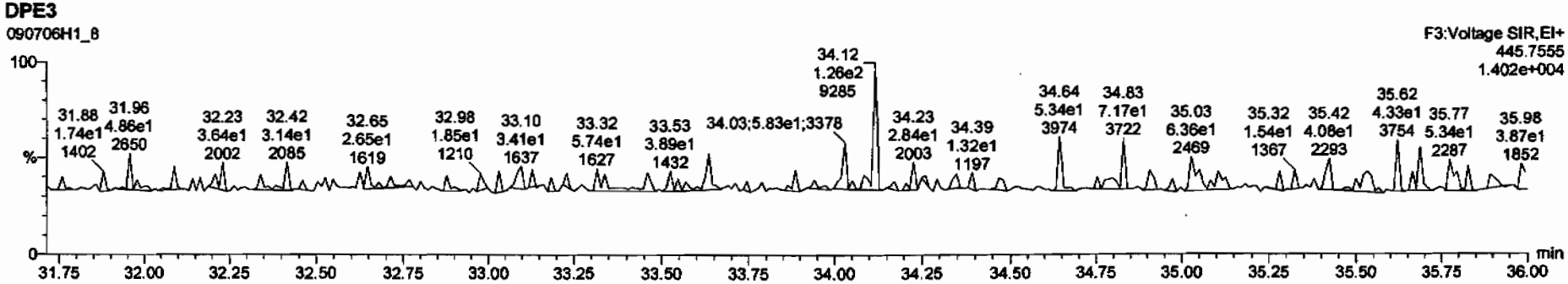

TargetLynx - 090706h1-8.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090706H1_8 - 31853_2218_004 CAMO-09-9956 11.55 - CAMO-09-9956

	Name	RT	m1 Area	m2 Area	RA	DY	Amount	Conc.
	Total Hexa-Furans	32.15	8.122e2	7.586e2	1.07	NO	0.45675	0.45675
	Total Hexa-Furans	32.74	5.899e2	3.027e2	1.95	YES	0.19718	0.00000
	1,2,3,4,7,8-HxCDF	33.21	6.055e2	4.924e2	1.23	NO	0.28131	0.28131

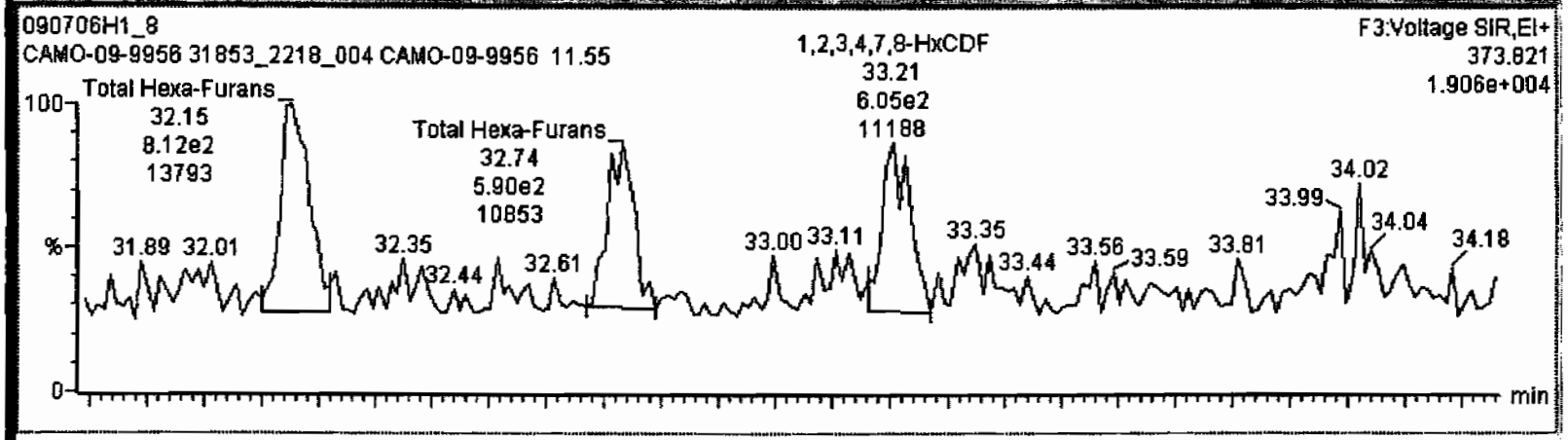

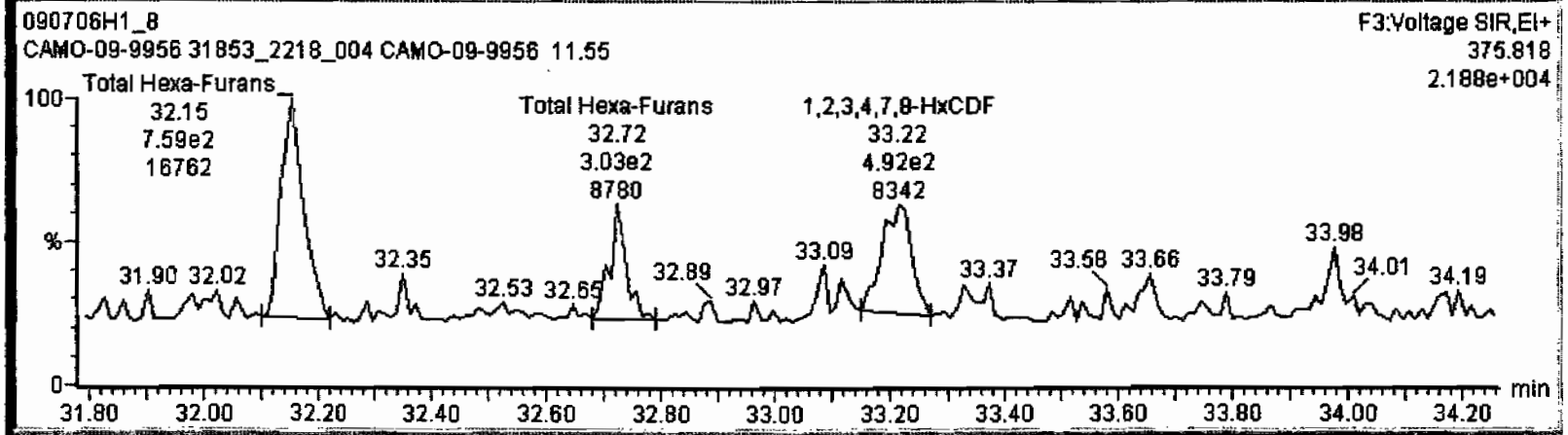

Ready

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

1,2,3,4,6,7,8-HpCDF

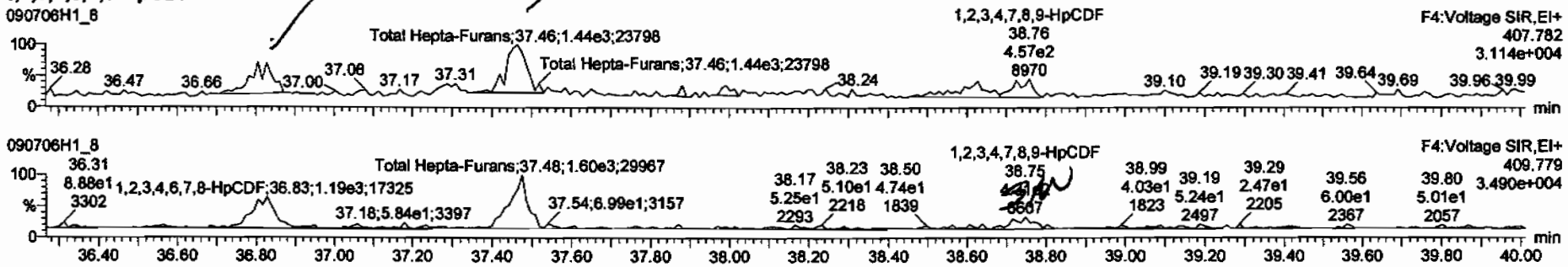

13C-1,2,3,4,6,7,8-HpCDF

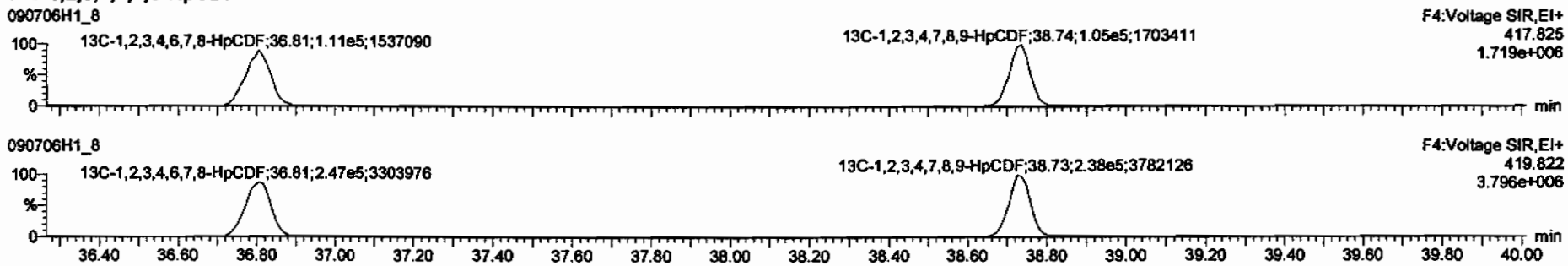

DPE4

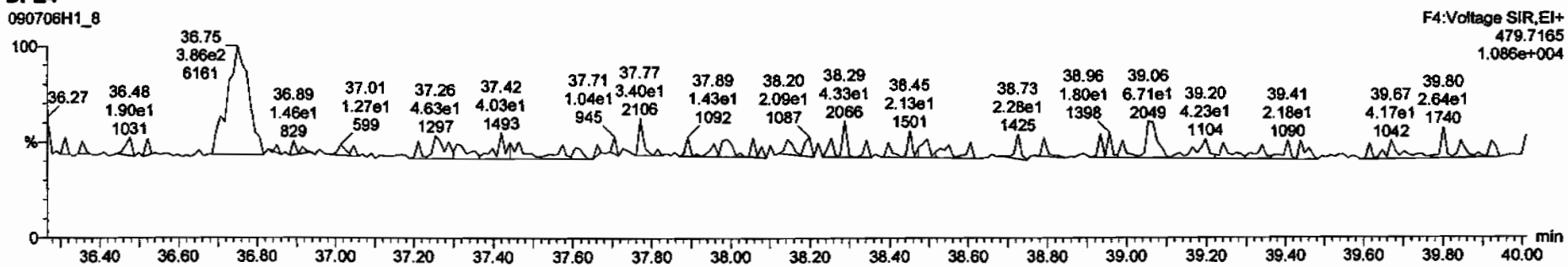

TargetLynx - 090706h1-8.qld * - [Chromatogram]

File Edit View Display Processing Window Help

090706H1_8 - 31853_2218_004 CAMO-09-9956 11.55 - CAMO-09-9956

	Name	RT	m/z Resp	m/z Resp	RA	Flag		
1	1,2,3,4,6,7,8-HpCDF	36.81	1.076e3	1.188e3	0.91	NO	0.75581	0.75581
2	Total Hepta-Furans	37.46	1.522e3	1.555e3	0.98	NO	1.0497	1.0497

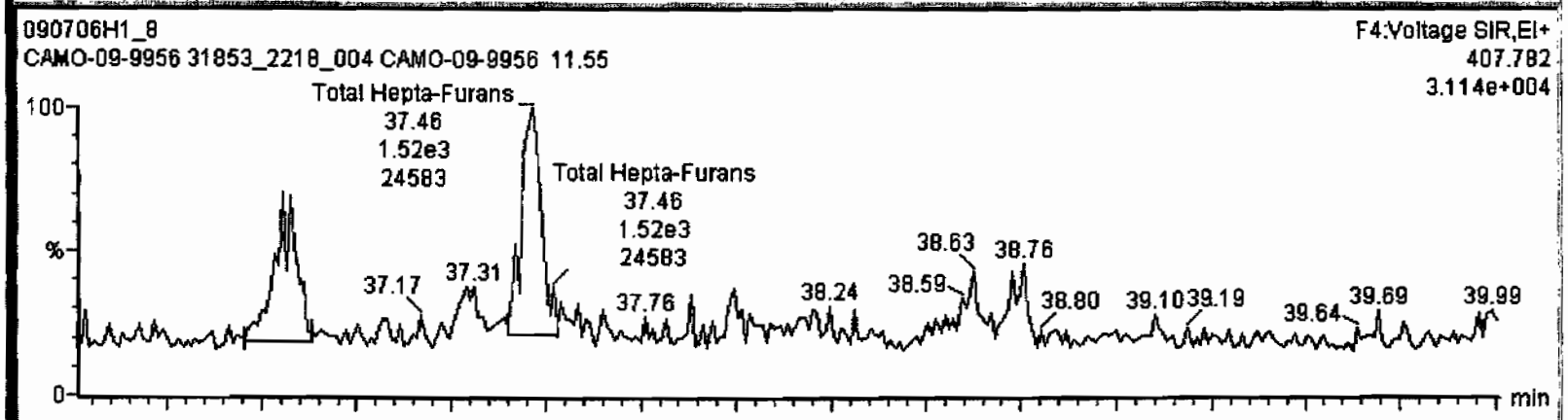

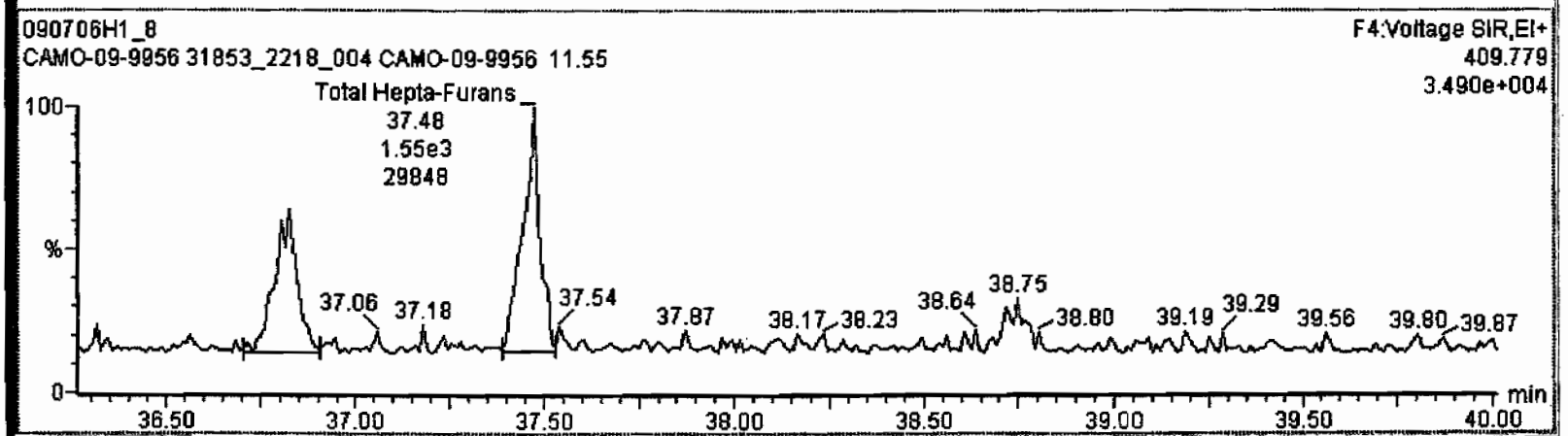

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

OCDF

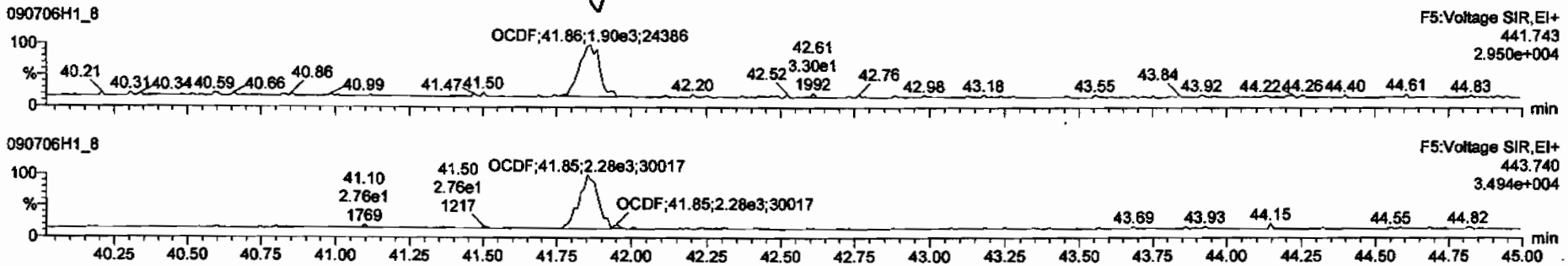

13C-OCDF

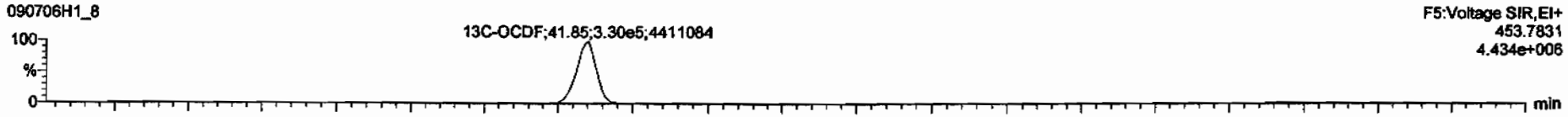

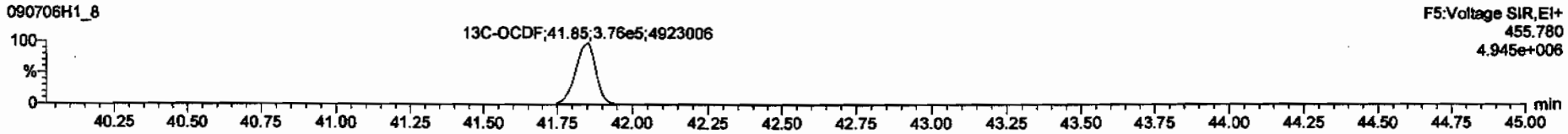

DPE5

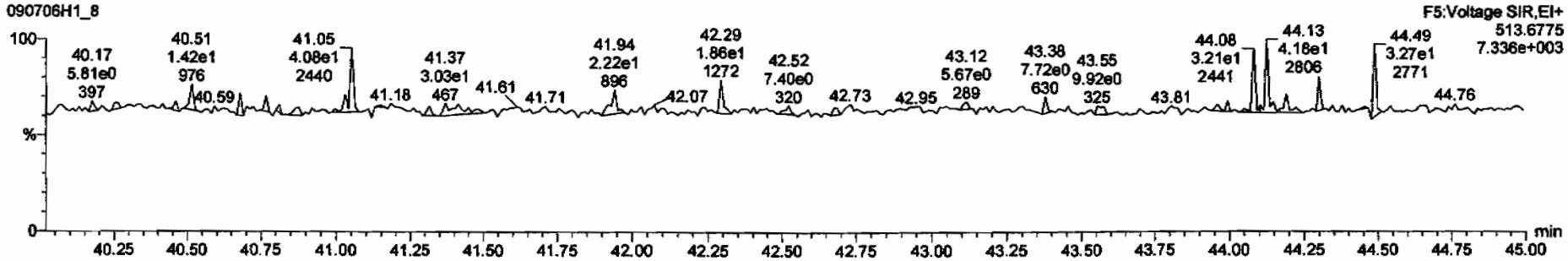

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-8.qld

Last Altered: Tuesday, July 07, 2009 07:45:01 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:20 Pacific Daylight Time

Name: 090706H1_8, Date: 06-Jul-2009, Time: 19:13:44, ID: 31853_2218_004 CAMO-09-9956 11.55, Description: CAMO-09-9956

PFK1

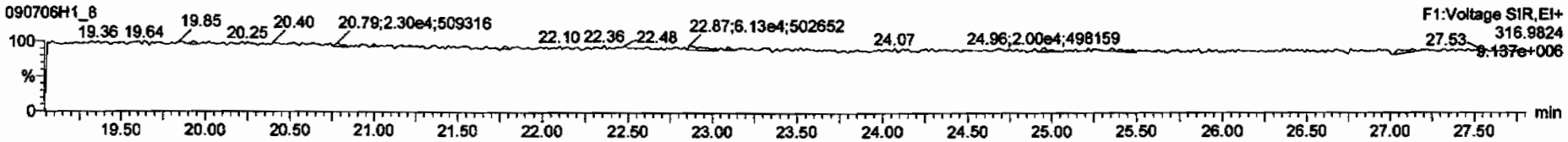

PFK2

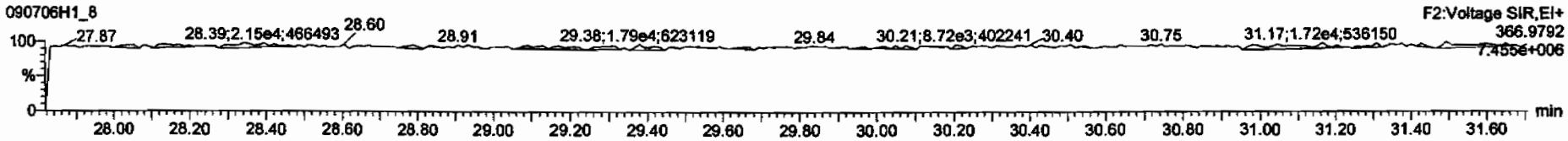

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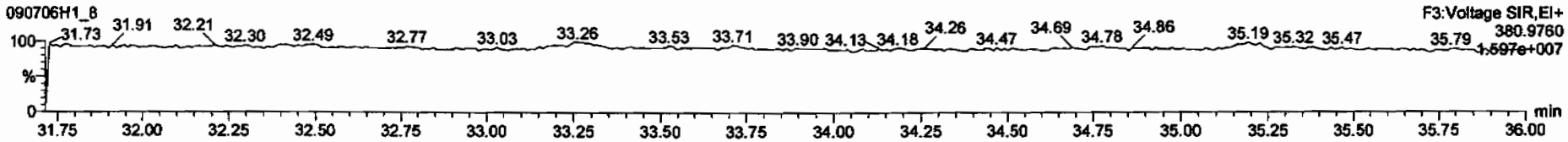

PFK4

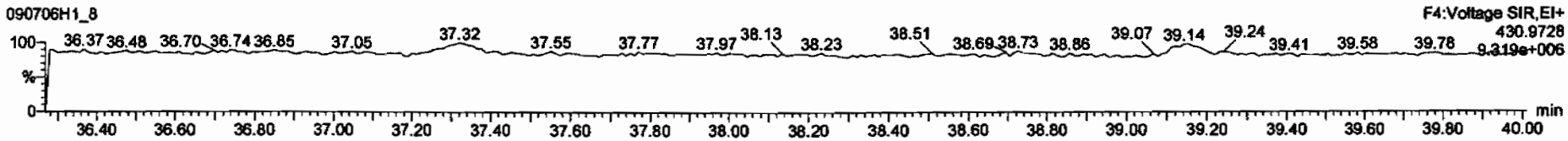

PFK5

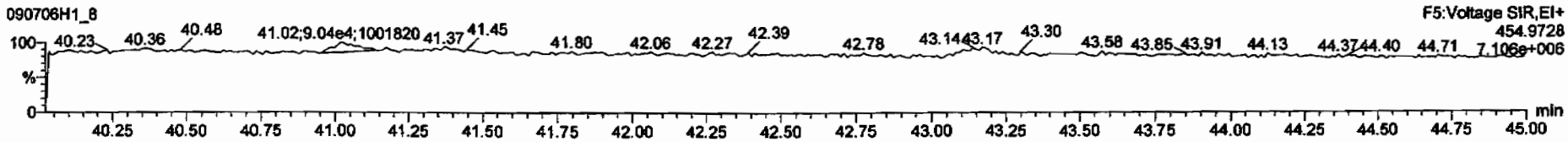

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 13:43:23 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:43:49 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

1 2,3,7,8-TCDD			NO	1.08	9.973					0.0607	
2 1,2,3,7,8-PeCDD			NO	1.03	9.973					0.108	
3 1,2,3,4,7,8-HxCDD			NO	1.00	9.973					0.409	
4 1,2,3,6,7,8-HxCDD			NO	1.13	9.973					0.393	
5 1,2,3,7,8,9-HxCDD			NO	1.10	9.973					0.386	
6 1,2,3,4,6,7,8-HpCDD	1.94e3	1.18	NO	1.06	9.973	38.19	1.000	0.96826		0.425	~~0.96826~~
7 OCDD	1.31e4	0.88	NO	1.18	9.973	41.66	1.001	8.3725		0.225	~~8.3725~~
8 2,3,7,8-TCDF			NO	1.09	9.973					0.0625	
9 1,2,3,7,8-PeCDF			NO	1.16	9.973					0.0658	
10 2,3,4,7,8-PeCDF			NO	1.12	9.973					0.0687	
11 1,2,3,4,7,8-HxCDF			NO	1.41	9.973					0.146	
12 1,2,3,6,7,8-HxCDF			NO	1.22	9.973					0.162	
13 2,3,4,6,7,8-HxCDF			NO	1.28	9.973					0.194	
14 1,2,3,7,8,9-HxCDF			NO	1.26	9.973					0.256	
15 1,2,3,4,6,7,8-HpCDF			NO	1.69	9.973					0.262	
16 1,2,3,4,7,8,9-HpCDF			NO	1.48	9.973					0.287	
17 OCDF	7.43e2	1.01	NO	1.10	9.973	41.89	1.000	0.38324		0.126	~~0.38324~~
18 13C-2,3,7,8-TCDD	6.73e5	0.78	NO	1.01	9.973	26.01	1.023	200.28	99.9	0.295	
19 13C-1,2,3,7,8-PeCDD	5.27e5	0.63	NO	0.827	9.973	30.69	1.207	192.60	96.0	0.324	
20 13C-1,2,3,4,7,8-HxCDD	4.28e5	1.27	NO	0.916	9.973	34.13	0.988	187.94	93.7	0.621	
21 13C-1,2,3,6,7,8-HxCDD	3.93e5	1.26	NO	0.921	9.973	34.24	0.991	171.57	85.6	0.618	
22 13C-1,2,3,4,6,7,8-HpCDD	3.79e5	1.07	NO	0.708	9.973	38.18	1.105	215.08	107	1.21	
23 13C-OCDD	5.31e5	0.88	NO	0.503	9.973	41.63	1.206	425.65	106	0.958	
24 13C-2,3,7,8-TCDF	9.27e5	0.77	NO	0.977	9.973	25.25	0.993	204.54	102	0.265	
25 13C-1,2,3,7,8-PeCDF	8.22e5	1.57	NO	0.896	9.973	29.46	1.158	197.63	98.5	0.405	
26 13C-2,3,4,7,8-PeCDF	7.95e5	1.58	NO	0.900	9.973	30.40	1.195	190.31	94.9	0.403	
27 13C-1,2,3,4,7,8-HxCDF	5.83e5	0.52	NO	1.17	9.973	33.21	0.962	200.69	100	0.747	
28 13C-1,2,3,6,7,8-HxCDF	6.35e5	0.51	NO	1.52	9.973	33.34	0.965	168.17	83.9	0.575	
29 13C-2,3,4,6,7,8-HxCDF	5.29e5	0.52	NO	1.25	9.973	33.95	0.983	170.58	85.1	0.700	
30 13C-1,2,3,7,8,9-HxCDF	4.72e5	0.51	NO	1.05	9.973	34.94	1.012	180.54	90.0	0.830	

JT 7/7/09
7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 13:43:23 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:43:49 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

31	13C-1,2,3,4,6,7,8-HpCDF	3.70e5	0.44	NO	0.868	9.973	36.82	1.066	171.40	85.5	1.43	
32	13C-1,2,3,4,7,8,9-HpCDF	3.36e5	0.44	NO	0.727	9.973	38.75	1.122	186.22	92.9	1.71	
33	13C-OCDF	7.09e5	0.90	NO	0.760	9.973	41.88	1.213	375.76	93.7	0.549	
34	37Cl-2,3,7,8-TCDD	1.64e5			0.668	9.973	26.05	1.024	74.079	92.3	0.0967	
35	13C-1,2,3,4-TCDD	6.64e5	0.79	NO	1.00	9.973	25.43	0.000	200.54	100	0.299	
36	13C-1,2,3,4-TCDF	9.31e5	0.76	NO	1.00	9.973	24.01	0.000	200.54	100	0.258	
37	13C-1,2,3,7,8,9-HxCDD	4.98e5	1.25	NO	1.00	9.973	34.53	0.000	200.54	100	0.569	
38	Total Tetra-Dioxins				1.08	9.973					0.0292	
39	Total Penta-Dioxins				1.03	9.973					0.0345	
40	Total Hexa-Dioxins				1.13	9.973					0.236	
41	Total Hepta-Dioxins				1.06	9.973			0.96826		0.425	~~0.96826~~
42	Total Tetra-Furans				1.09	9.973					0.0281	
43	1st Func. Penta-Furans				1.16	9.973					0.0164	
44	Total Penta-Furans				1.16	9.973					0.0290	
45	Total Hexa-Furans				1.28	9.973					0.128	
46	Total Hepta-Furans				1.69	9.973					0.165	

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 13:43:23 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:43:49 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Hepta-Dioxins

1,2,3,4,6,7,8-HpCDD	38.19	1.706e4	1.759e4	1.051e3	8.940e2	1.18	NO	1.945e3	0.96826	0.96826	0.425

Tetra-Furans

Penta-Furans function 1

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qid

Last Altered: Tuesday, July 07, 2009 13:43:23 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:43:49 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

Penta-Furans

Hexa-Furans

Hepta-Furans

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

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Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

2,3,7,8-TCDD

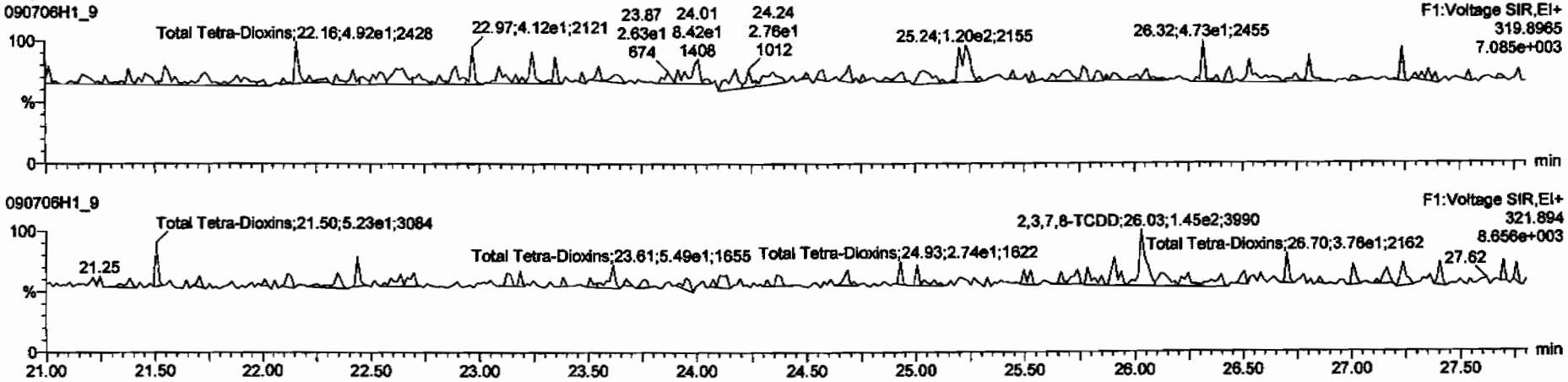

13C-2,3,7,8-TCDD

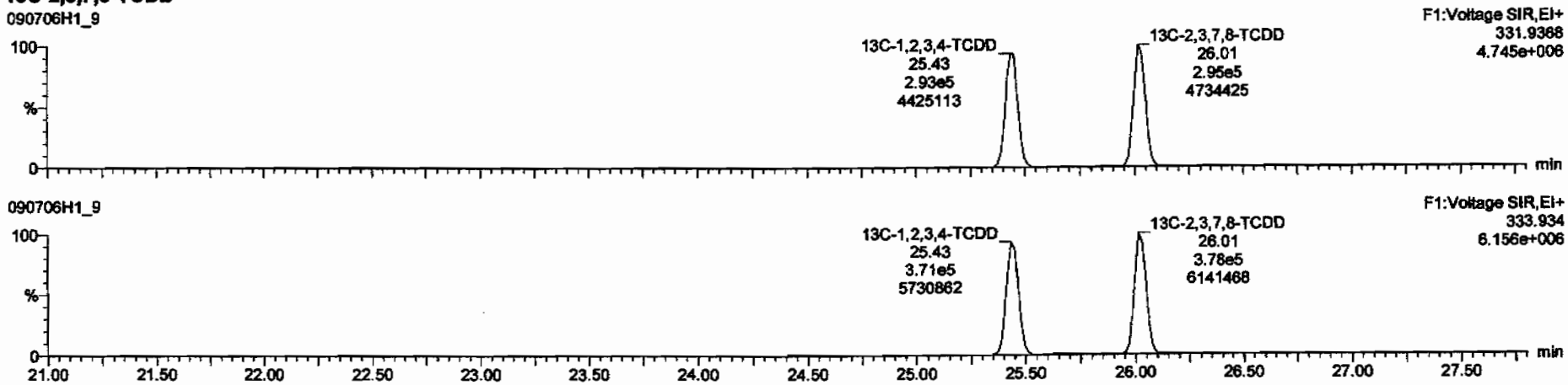

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

37Cl-2,3,7,8-TCDD

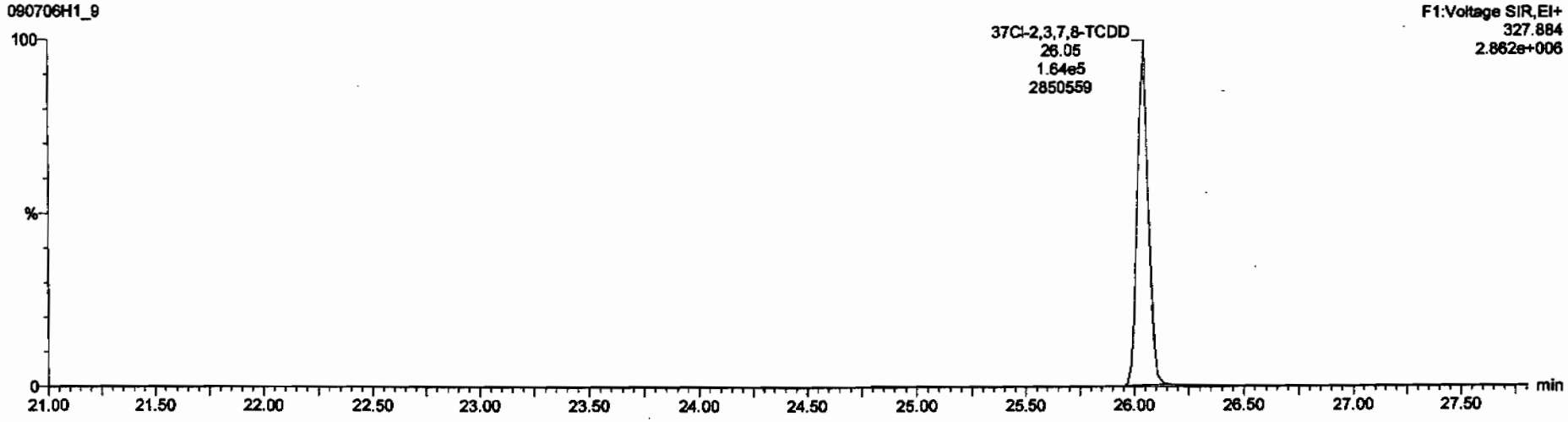

13C-1,2,3,4-TCDD

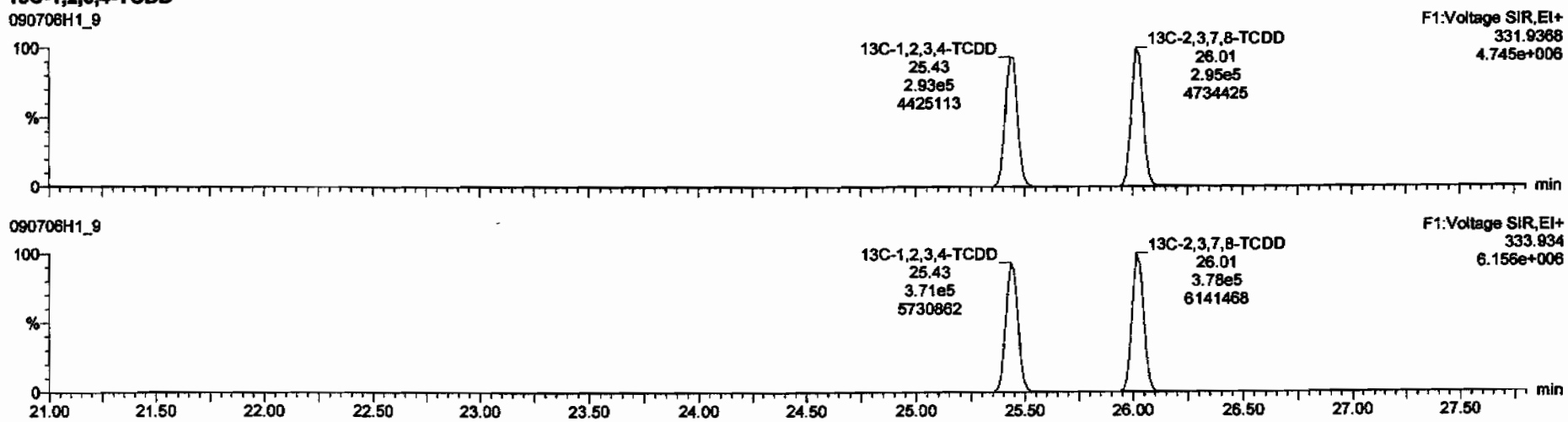

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

1,2,3,7,8-PeCDD

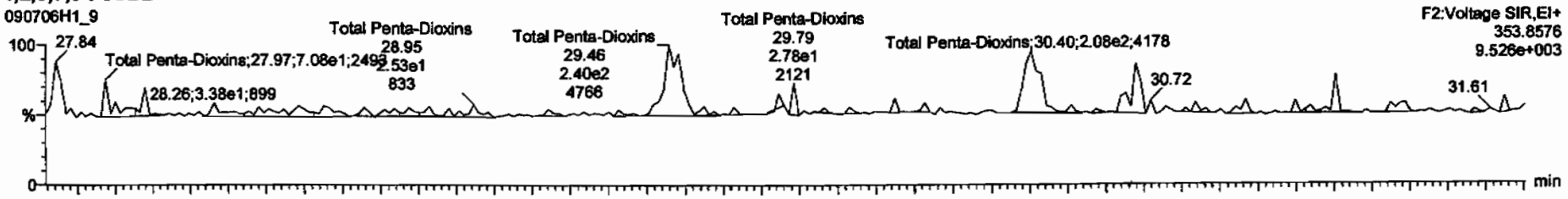

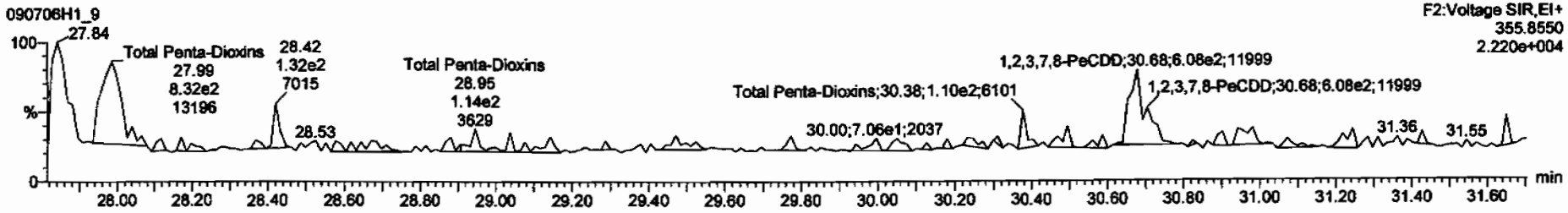

13C-1,2,3,7,8-PeCDD

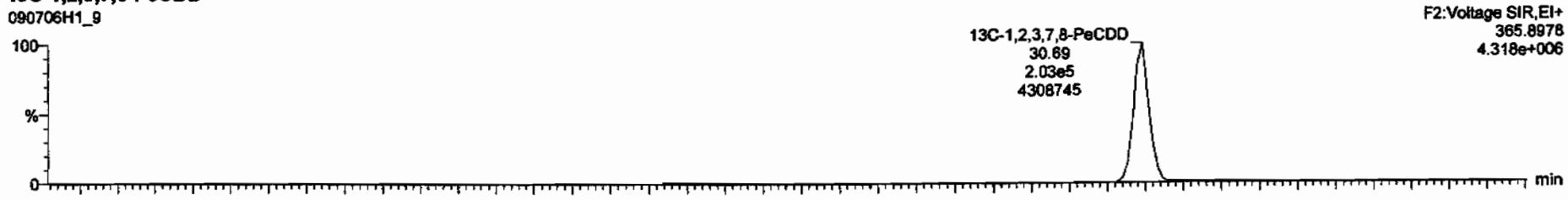

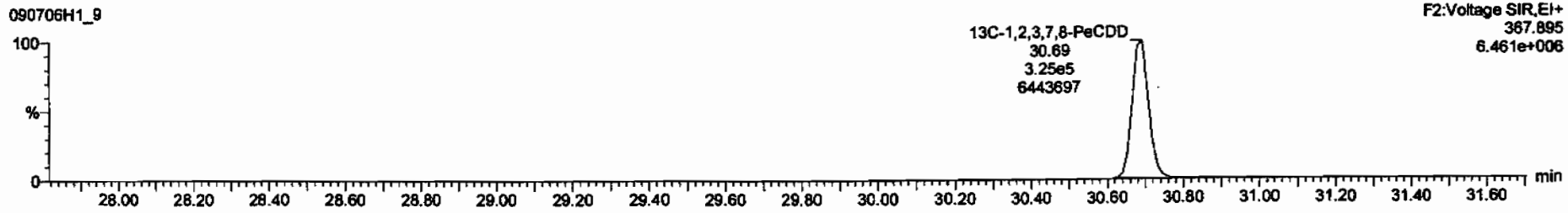

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Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

1,2,3,4,7,8-HxCDD

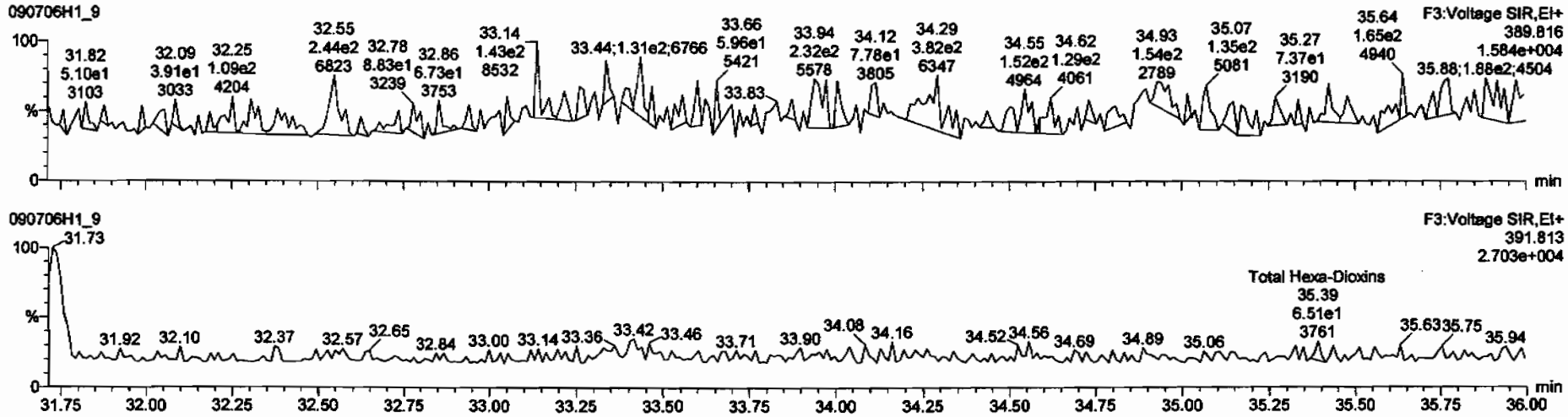

13C-1,2,3,4,7,8-HxCDD

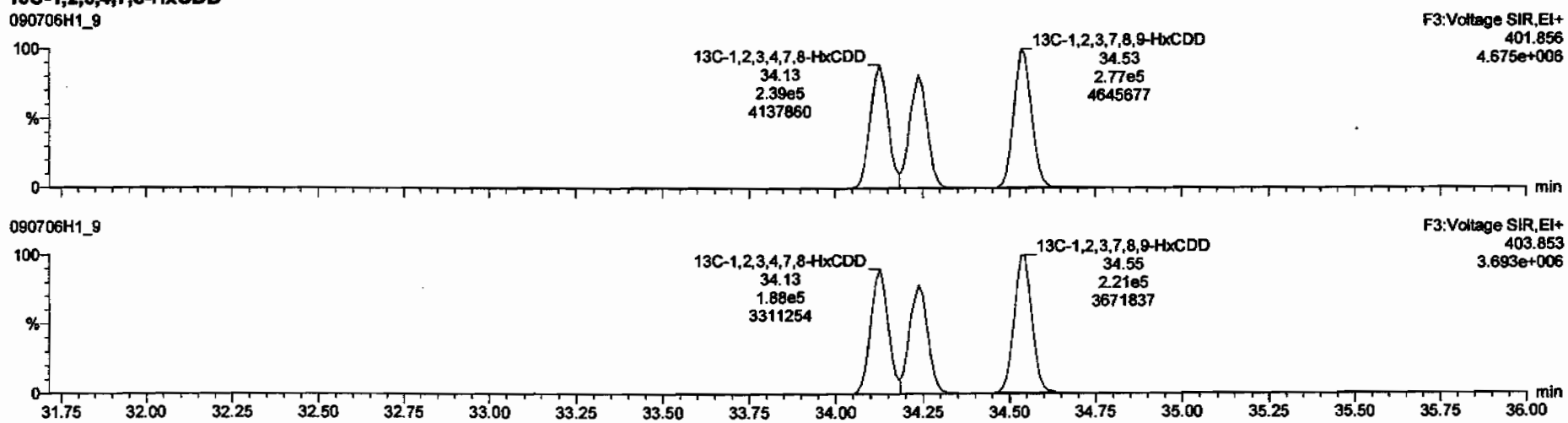

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

1,2,3,4,6,7,8-HpCDD

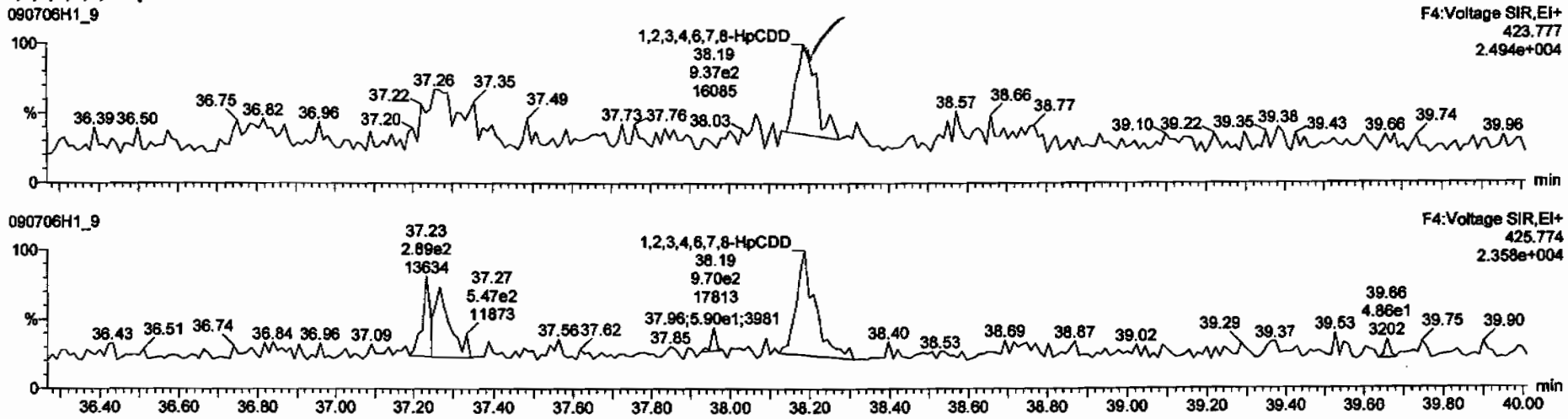

13C-1,2,3,4,6,7,8-HpCDD

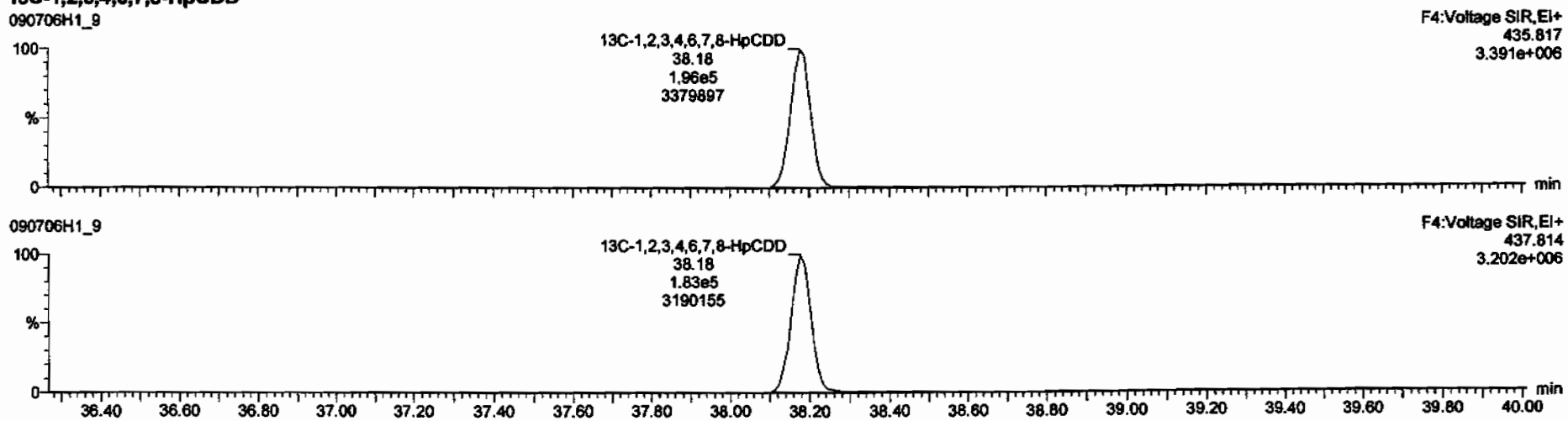

TargetLynx - 090706h1-9.qld * - [Chromatogram]

090706H1_9 - 31853_2218_005 CAMO-09-9957 11.02 - CAMO-09-9957

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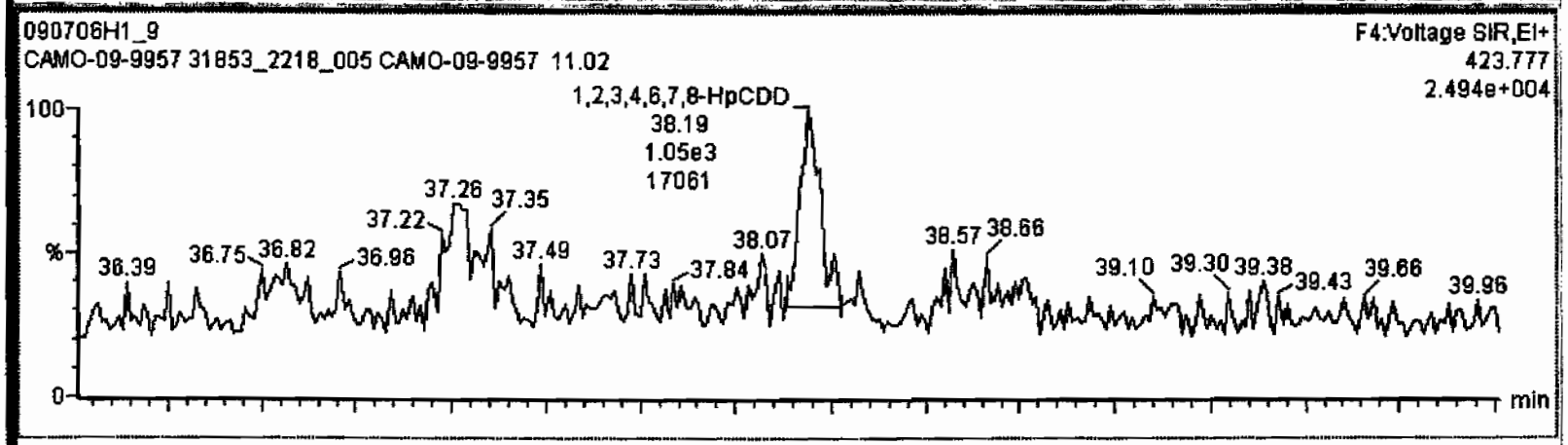

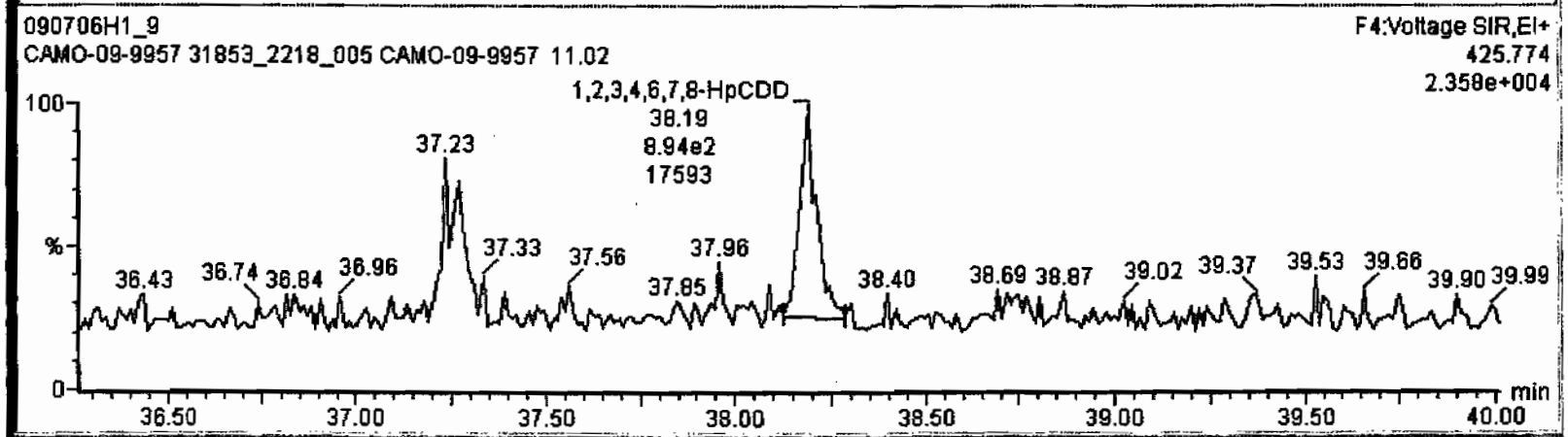

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Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
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OCDD

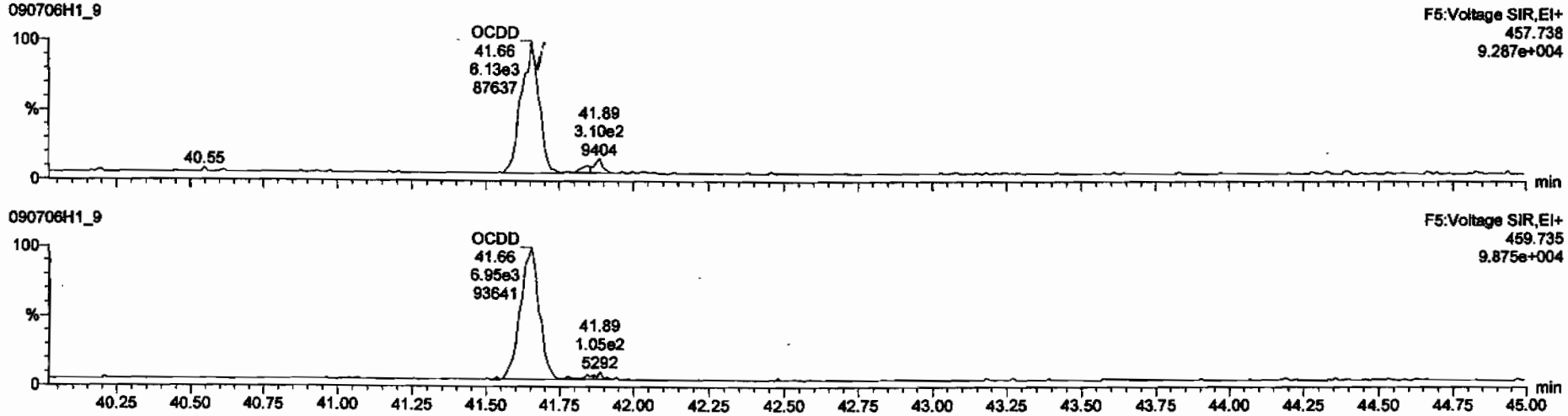

13C-OCDD

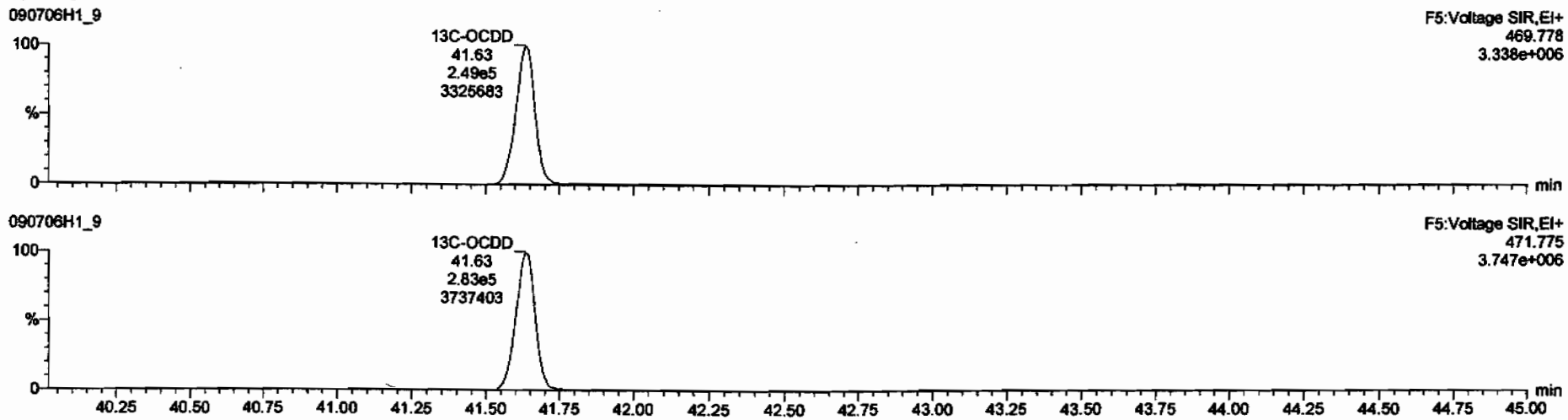

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

2,3,7,8-TCDF

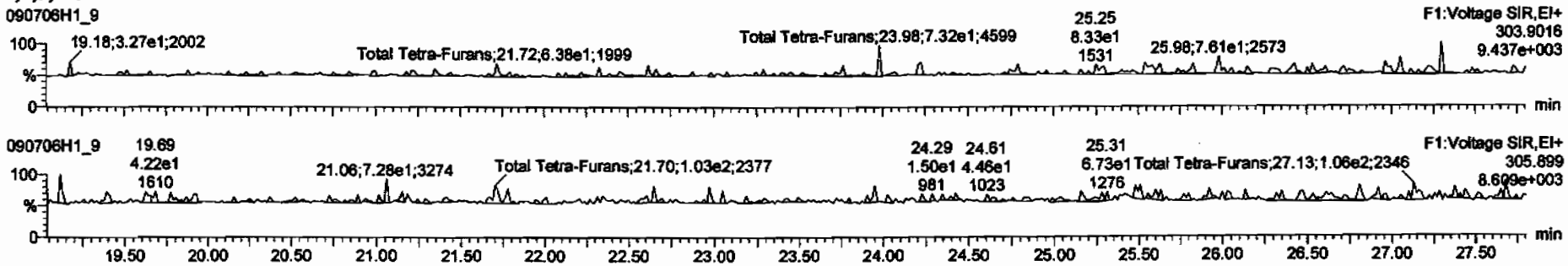

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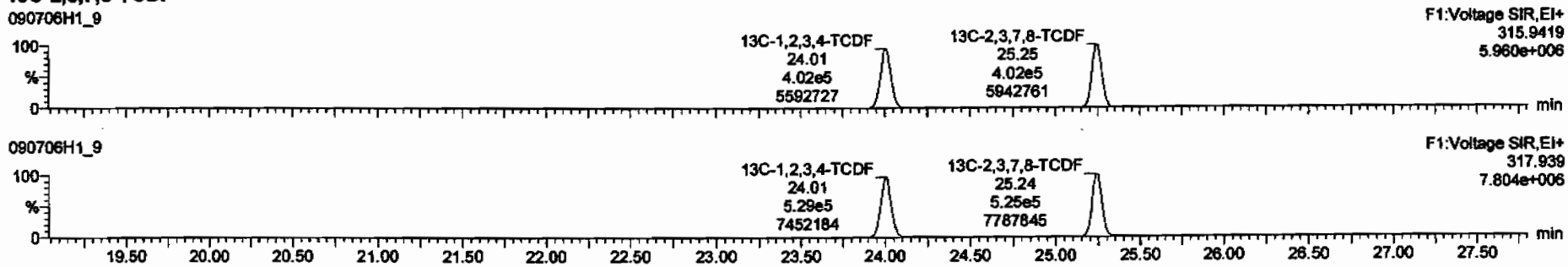

DPE1

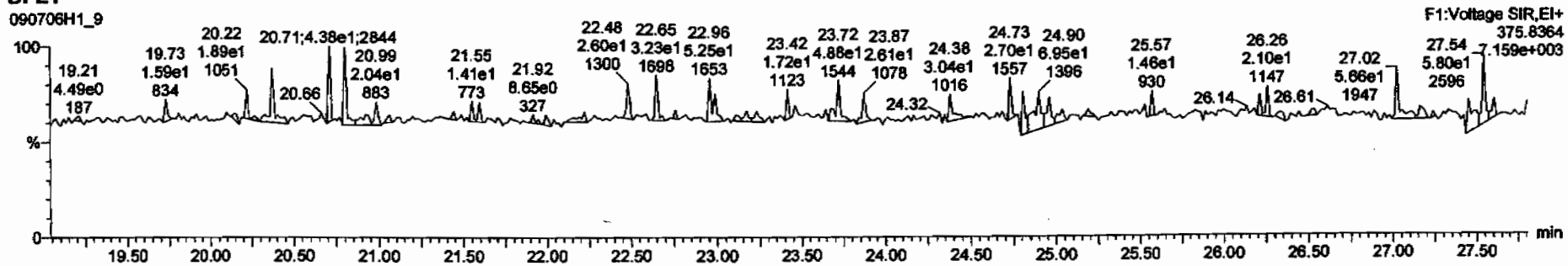

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

1st Func. Penta-Furans

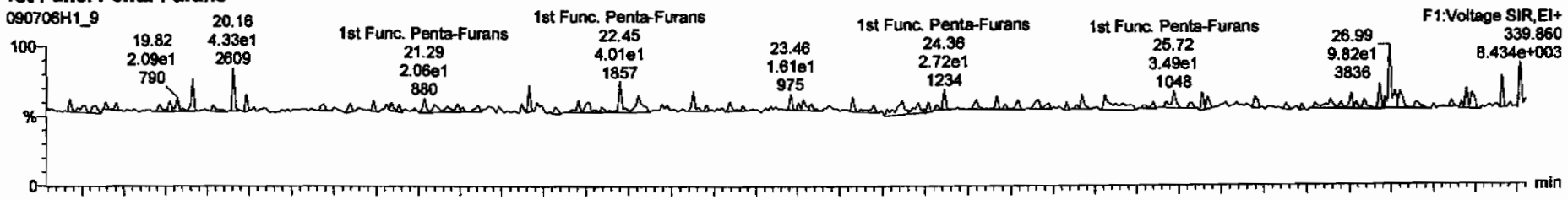

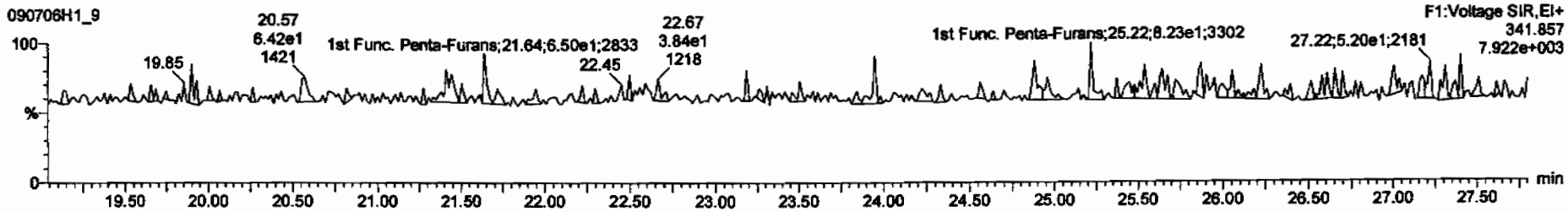

DPE6

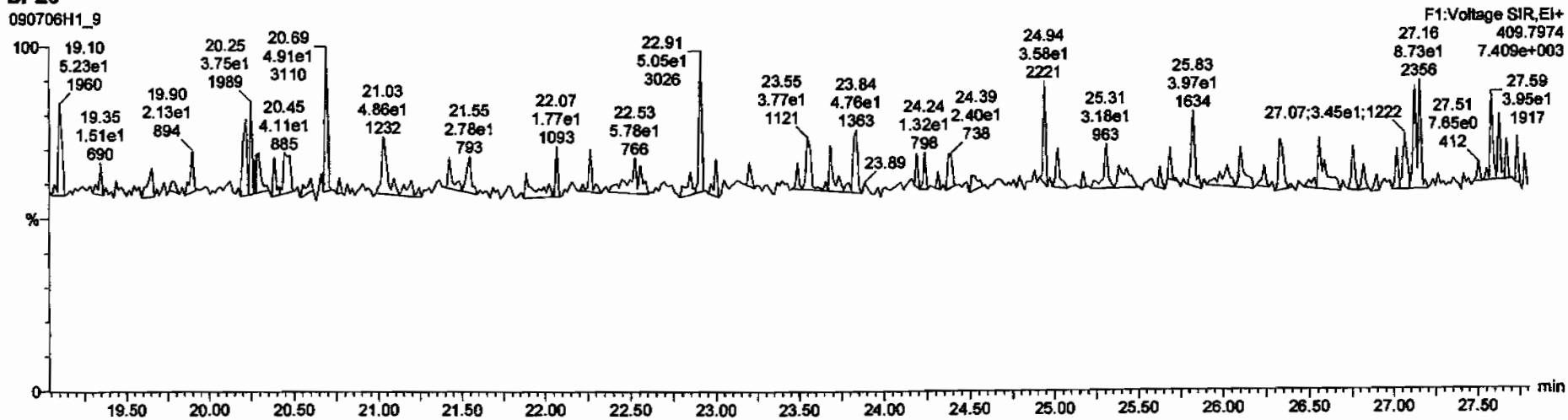

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Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

1,2,3,7,8-PeCDF

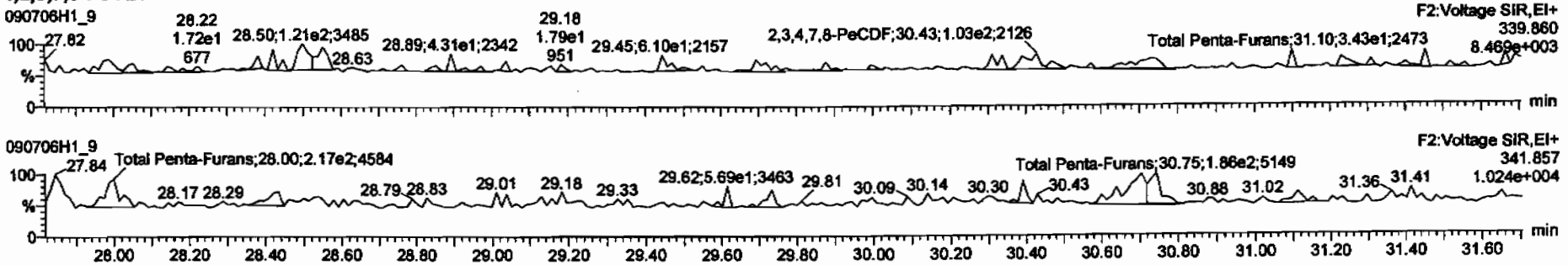

13C-1,2,3,7,8-PeCDF

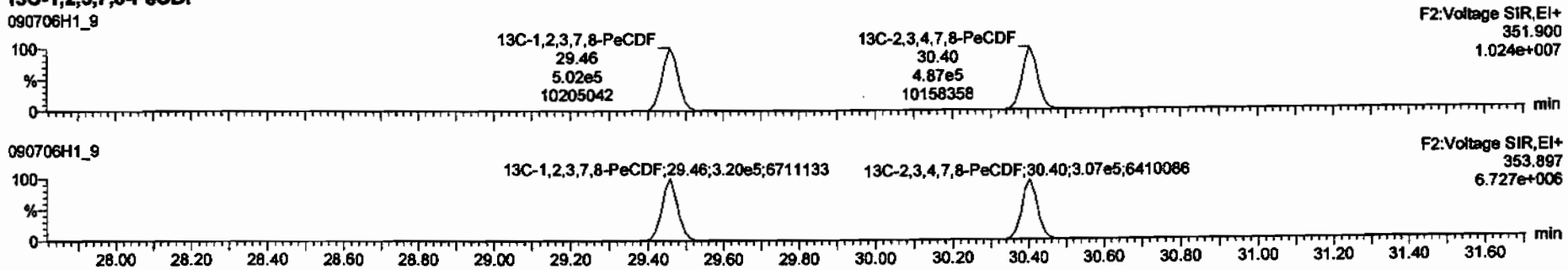

DPE2

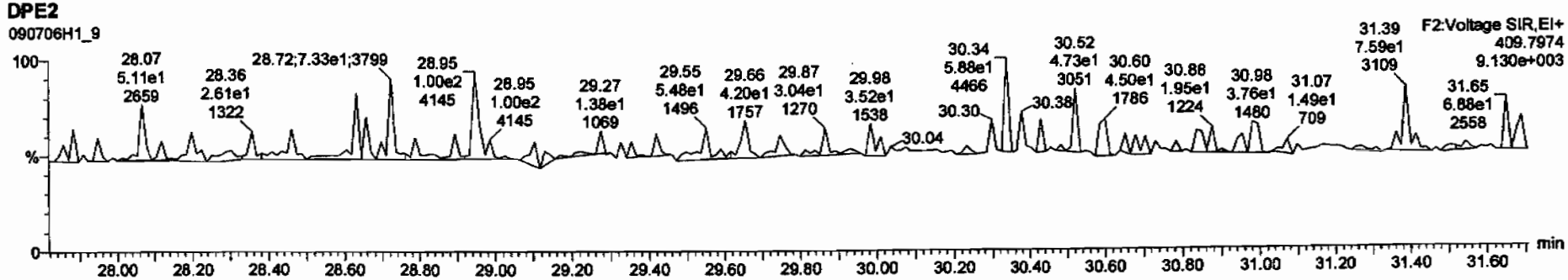

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

1,2,3,4,7,8-HxCDF

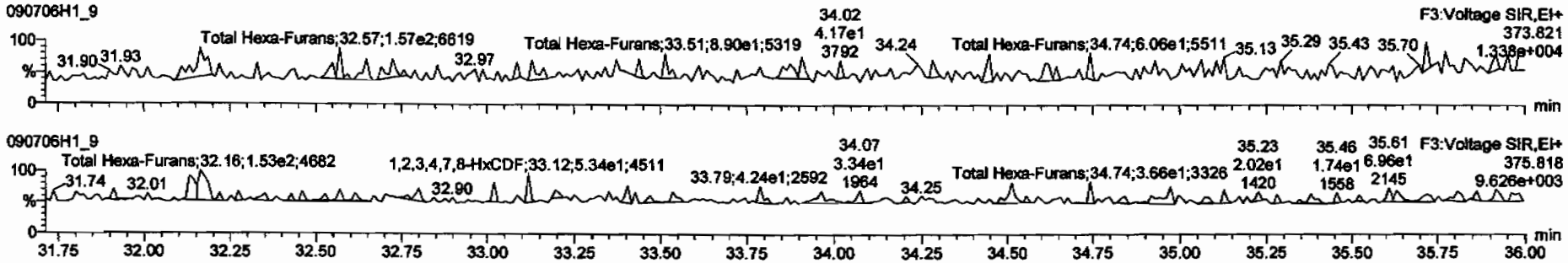

13C-1,2,3,4,7,8-HxCDF

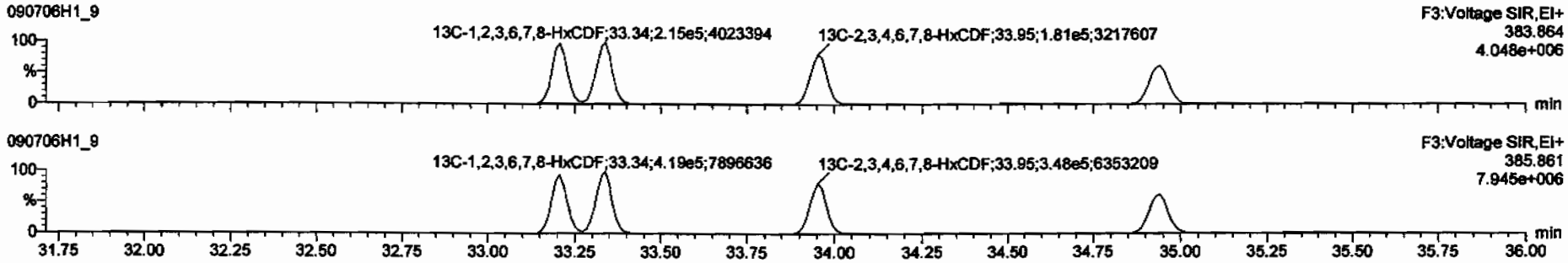

DPE3

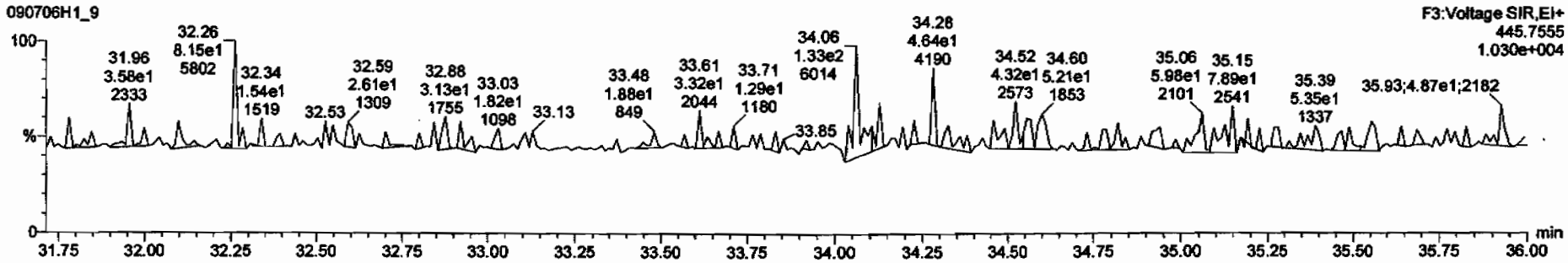

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Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

1,2,3,4,6,7,8-HpCDF

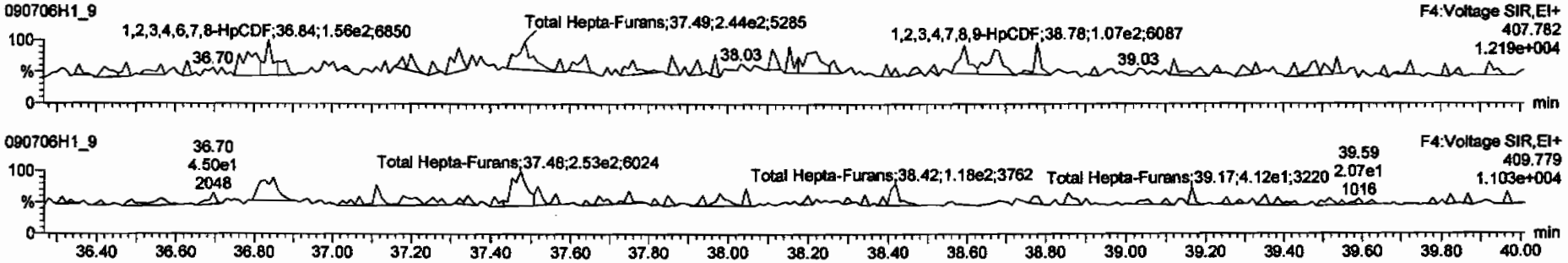

13C-1,2,3,4,6,7,8-HpCDF

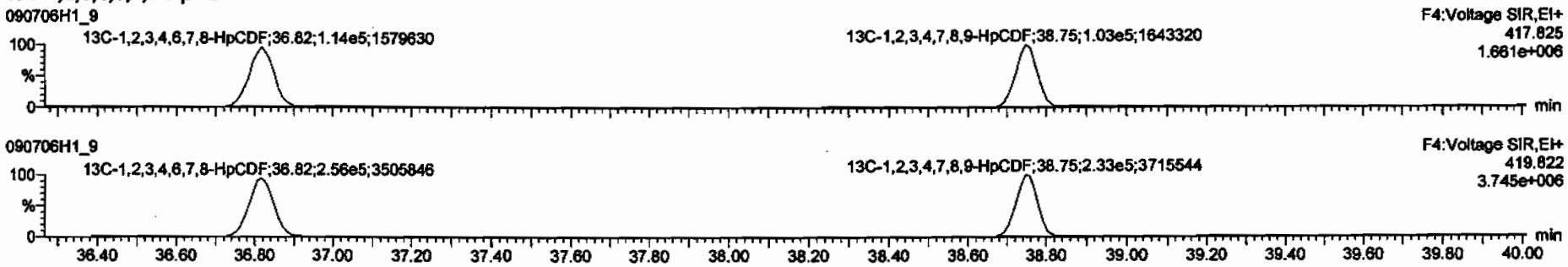

DPE4

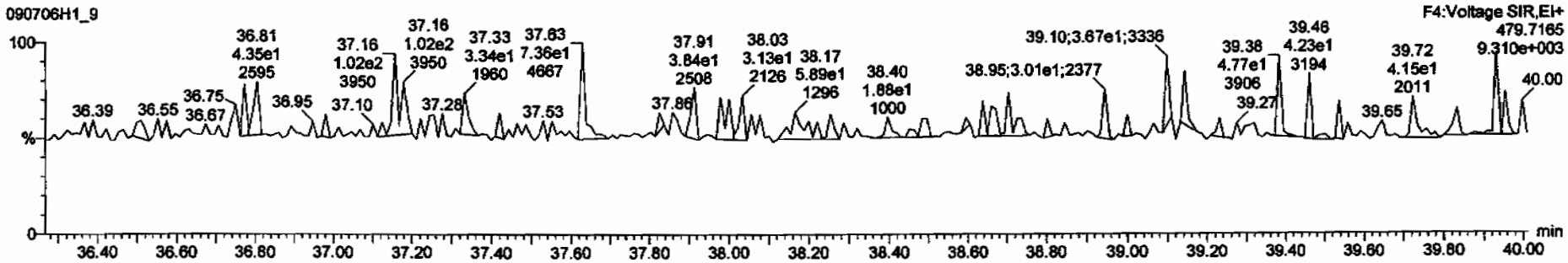

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

OCDF

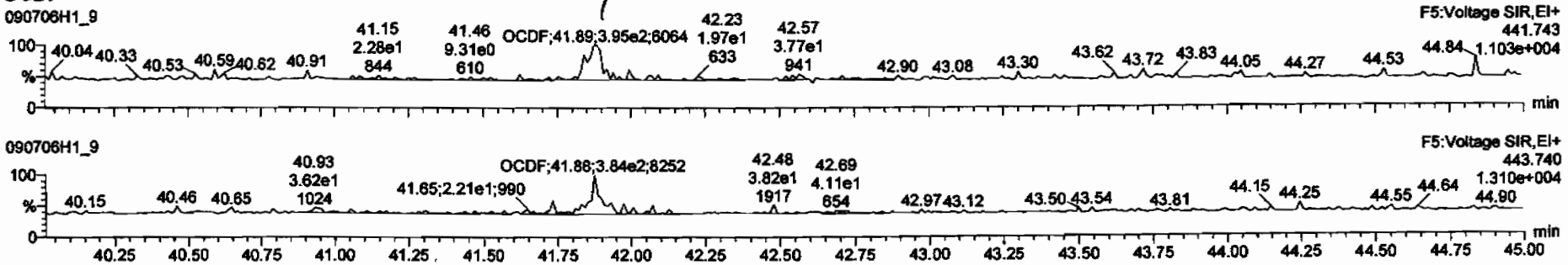

13C-OCDF

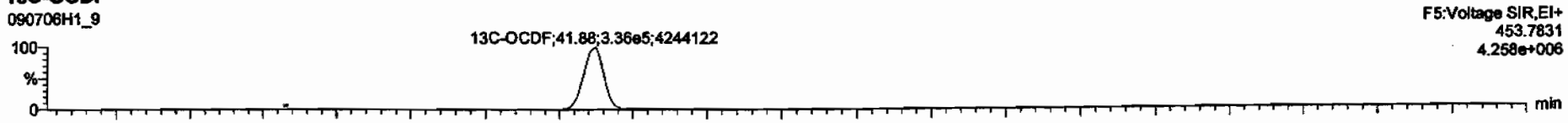

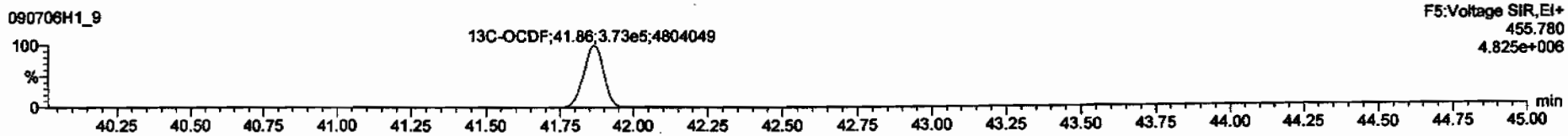

DPE5

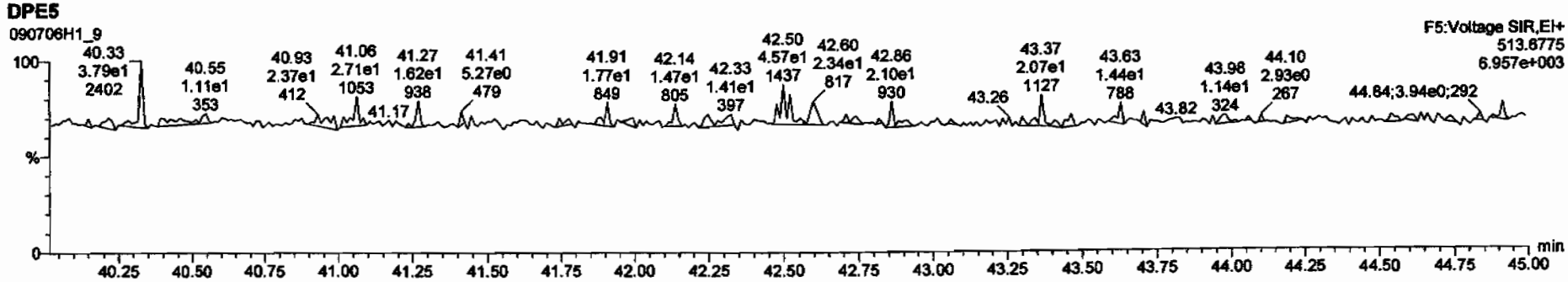

TargetLynx - 090706h1-9.qld * - [Chromatogram]

090706H1_9 - 31853_2218_005 CAMO-09-9957 11.02 - CAMO-09-9957

13C-2,3,7,8-TCDD	6.73e5	0.78	NO	1.01	9.973	26.01	1.023	200	99.9	0.295	
13C-1,2,3,7,8-PeCDD	5.27e5	0.63	NO	0.83	9.973	30.69	1.207	193	96.0	0.324	
13C-1,2,3,4,7,8-HxCDD	4.28e5	1.27	NO	0.92	9.973	34.13	0.988	188	93.7	0.621	
13C-1,2,3,6,7,8-HxCDD	3.93e5	1.26	NO	0.92	9.973	34.24	0.991	172	85.6	0.618	

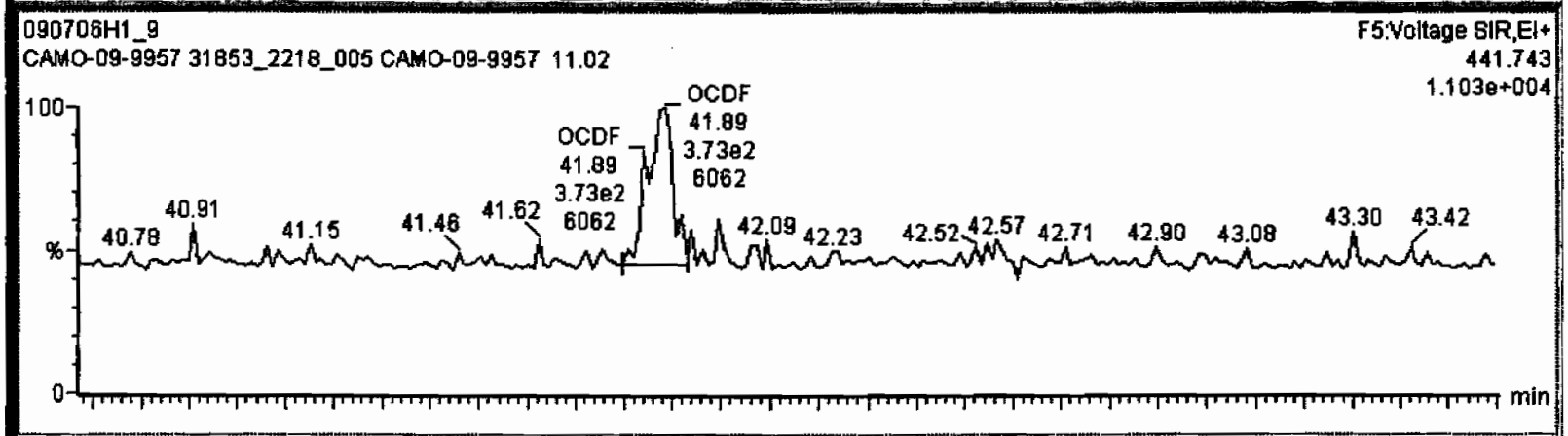

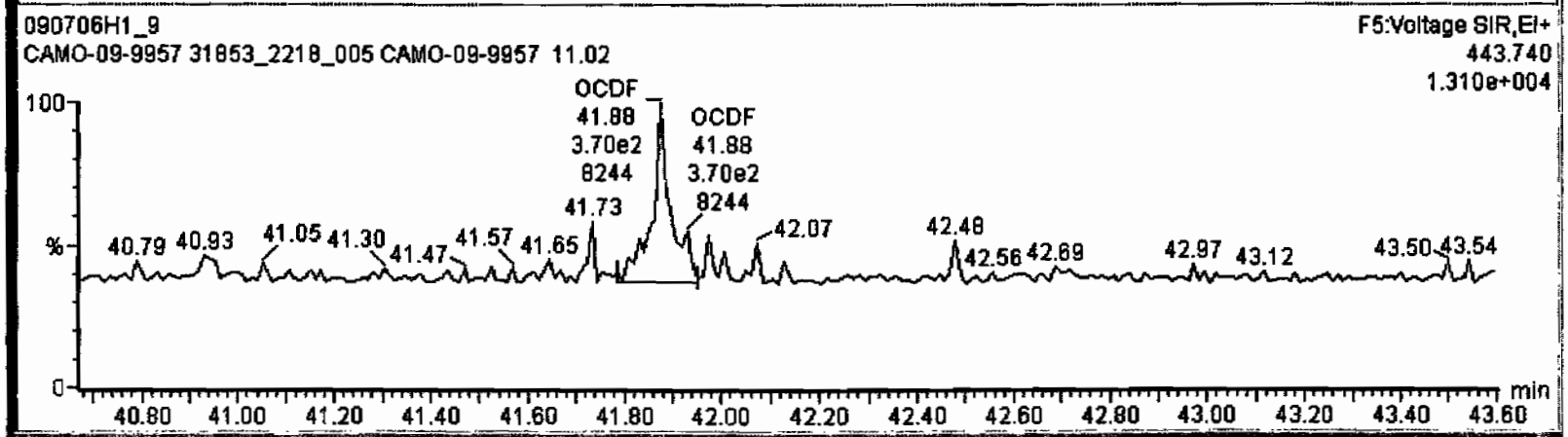

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-9.qld

Last Altered: Tuesday, July 07, 2009 07:45:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:45:45 Pacific Daylight Time

Name: 090706H1_9, Date: 06-Jul-2009, Time: 20:03:16, ID: 31853_2218_005 CAMO-09-9957 11.02, Description: CAMO-09-9957

PFK1

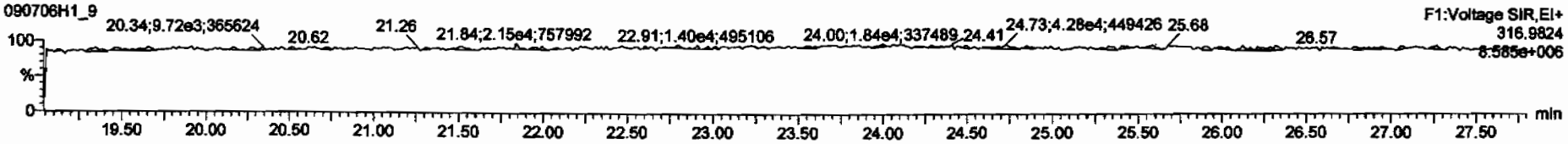

PFK2

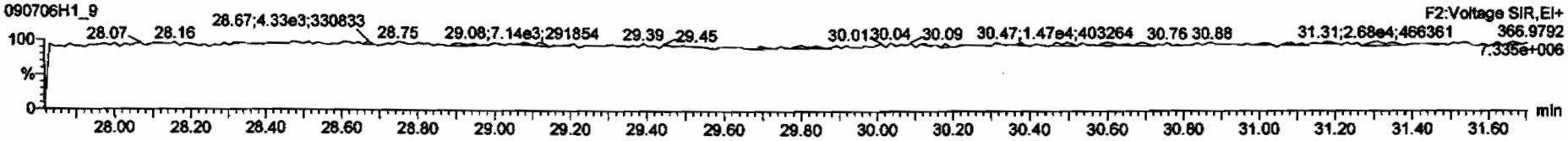

PFK3

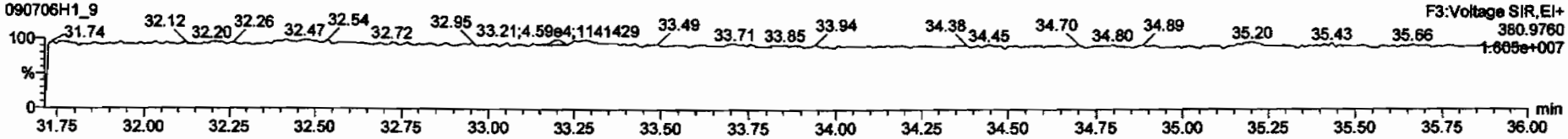

PFK4

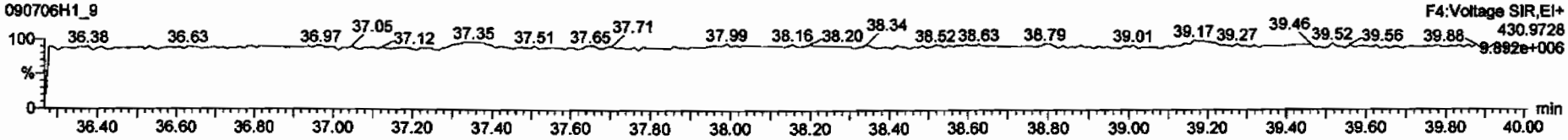

PFK5

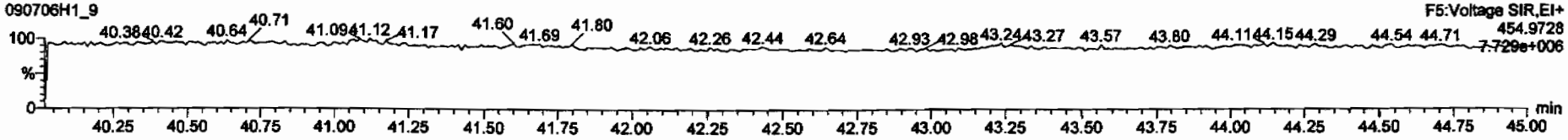

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 13:50:15 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:52:04 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

1	2,3,7,8-TCDD			NO	1.08	9.936					0.0586	
2	1,2,3,7,8-PeCDD			NO	1.03	9.936					0.150	
3	1,2,3,4,7,8-HxCDD			NO	1.00	9.936					0.464	
4	1,2,3,6,7,8-HxCDD			NO	1.13	9.936					0.466	
5	1,2,3,7,8,9-HxCDD			NO	1.10	9.936					0.447	
6	1,2,3,4,6,7,8-HpCDD	3.97e3	1.14	NO	1.06	9.936	38.19	1.000	2.2933		0.574	~~2.2933~~
7	OCDD	2.95e4	0.87	NO	1.18	9.936	41.65	1.000	20.107		0.250	~~20.107~~
8	2,3,7,8-TCDF			NO	1.09	9.936					0.0729	
9	1,2,3,7,8-PeCDF			NO	1.16	9.936					0.0722	
10	2,3,4,7,8-PeCDF			NO	1.12	9.936					0.0649	
11	1,2,3,4,7,8-HxCDF			NO	1.41	9.936					0.181	
12	1,2,3,6,7,8-HxCDF			NO	1.22	9.936					0.203	
13	2,3,4,6,7,8-HxCDF			NO	1.28	9.936					0.253	
14	1,2,3,7,8,9-HxCDF			NO	1.26	9.936					0.307	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	9.936					0.290	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	9.936					0.329	
17	OCDF	1.24e3	0.92	NO	1.10	9.936	41.89	1.000	0.69018		0.169	~~0.69018~~
18	13C-2,3,7,8-TCDD	6.53e5	0.79	NO	1.01	9.936	26.01	1.023	201.37	100	0.306	
19	13C-1,2,3,7,8-PeCDD	4.95e5	0.61	NO	0.827	9.936	30.68	1.206	187.33	93.1	0.288	
20	13C-1,2,3,4,7,8-HxCDD	4.09e5	1.27	NO	0.916	9.936	34.12	0.988	189.70	94.2	0.737	
21	13C-1,2,3,6,7,8-HxCDD	3.71e5	1.25	NO	0.921	9.936	34.24	0.991	171.12	85.0	0.734	
22	13C-1,2,3,4,6,7,8-HpCDD	3.28e5	1.06	NO	0.708	9.936	38.18	1.105	196.74	97.7	1.17	
23	13C-OCDD	5.01e5	0.87	NO	0.503	9.936	41.63	1.206	424.17	105	0.970	
24	13C-2,3,7,8-TCDF	8.76e5	0.77	NO	0.977	9.936	25.25	0.993	200.67	99.7	0.265	
25	13C-1,2,3,7,8-PeCDF	8.27e5	1.55	NO	0.896	9.936	29.46	1.158	206.44	103	0.410	
26	13C-2,3,4,7,8-PeCDF	7.48e5	1.55	NO	0.900	9.936	30.40	1.195	185.94	92.4	0.408	
27	13C-1,2,3,4,7,8-HxCDF	5.55e5	0.52	NO	1.17	9.936	33.20	0.961	201.70	100	0.693	
28	13C-1,2,3,6,7,8-HxCDF	6.13e5	0.52	NO	1.52	9.936	33.33	0.965	171.54	85.2	0.533	
29	13C-2,3,4,6,7,8-HxCDF	5.03e5	0.53	NO	1.25	9.936	33.95	0.983	171.19	85.0	0.648	
30	13C-1,2,3,7,8,9-HxCDF	4.50e5	0.52	NO	1.05	9.936	34.93	1.011	181.80	90.3	0.769	

7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 13:50:15 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:52:04 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

31 13C-1,2,3,4,6,7,8-HpCDF	3.48e5	0.45	NO	0.868	9.936	36.82	1.066	170.60	84.8	1.46	
32 13C-1,2,3,4,7,8,9-HpCDF	3.16e5	0.44	NO	0.727	9.936	38.74	1.122	184.72	91.8	1.75	
33 13C-OCDF	6.59e5	0.91	NO	0.760	9.936	41.88	1.213	368.70	91.6	0.484	
34 37Cl-2,3,7,8-TCDD	1.62e5			0.668	9.936	26.05	1.024	75.672	94.0	0.0974	
35 13C-1,2,3,4-TCDD	6.43e5	0.79	NO	1.00	9.936	25.43	0.000	201.29	100	0.310	
36 13C-1,2,3,4-TCDF	9.00e5	0.77	NO	1.00	9.936	24.01	0.000	201.29	100	0.259	
37 13C-1,2,3,7,8,9-HxCDD	4.73e5	1.23	NO	1.00	9.936	34.53	0.000	201.29	100	0.676	
38 Total Tetra-Dioxins				1.08	9.936					0.0259	
39 Total Penta-Dioxins				1.03	9.936					0.0569	
40 Total Hexa-Dioxins				1.13	9.936					0.264	
41 Total Hepta-Dioxins				1.06	9.936			2.2933		0.574	3.9606
42 Total Tetra-Furans				1.09	9.936					0.0310	
43 1st Func. Penta-Furans				1.16	9.936					0.0157	
44 Total Penta-Furans				1.16	9.936					0.0329	
45 Total Hexa-Furans				1.28	9.936					0.161	
46 Total Hepta-Furans				1.69	9.936			~~0.00000~~ ND		0.187	0.32972

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 13:50:15 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:52:04 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Hepta-Dioxins

	Total Hepta-Dioxins	37.26	2.238e4	1.841e4	1.853e3	1.416e3	1.31	YES	0.000e0	0.00000	1.6673	0.574
	1,2,3,4,6,7,8-HpCDD	38.19	3.197e4	3.162e4	2.120e3	1.853e3	1.14	NO	3.974e3	2.2933	2.2933	0.574

Tetra-Furans

Penta-Furans function 1

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 13:50:15 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 13:52:04 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

Penta-Furans

Hexa-Furans

Hepta-Furans

Total Hepta-Furans	37.48	1.402e4	9.424e3	5.554e2	4.502e2	1.23	YES	0.000e0	0.00000	0.32972	0.289

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:14 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

2,3,7,8-TCDD

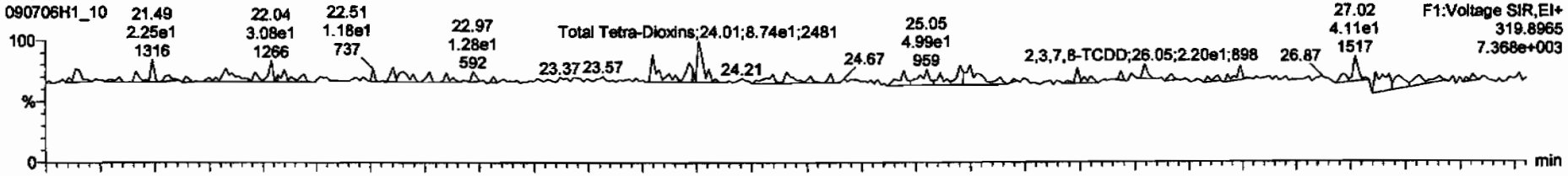

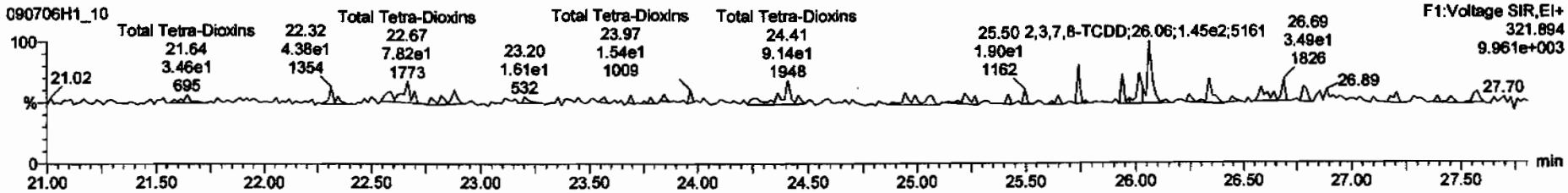

13C-2,3,7,8-TCDD

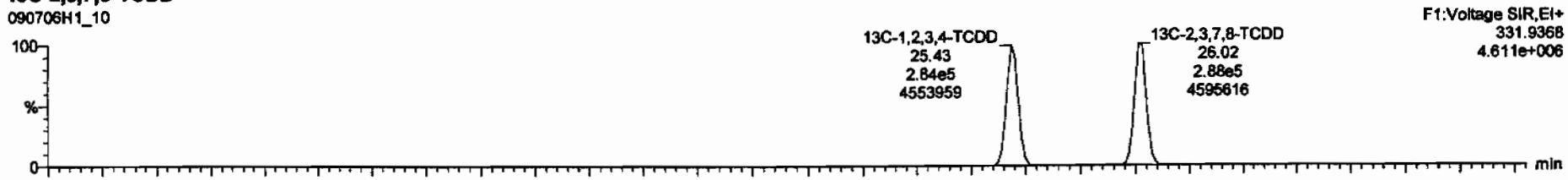

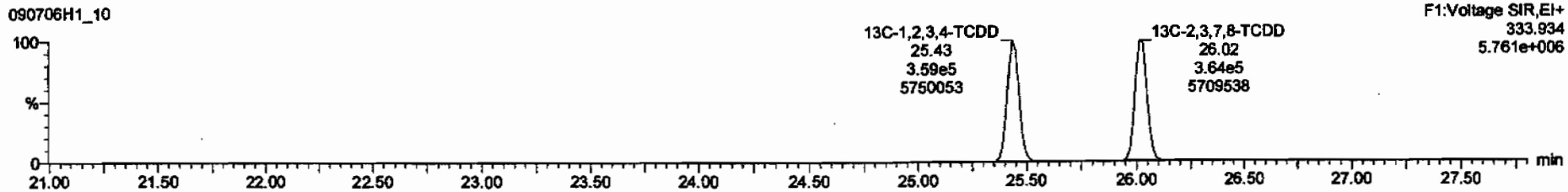

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:14 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

37Cl-2,3,7,8-TCDD

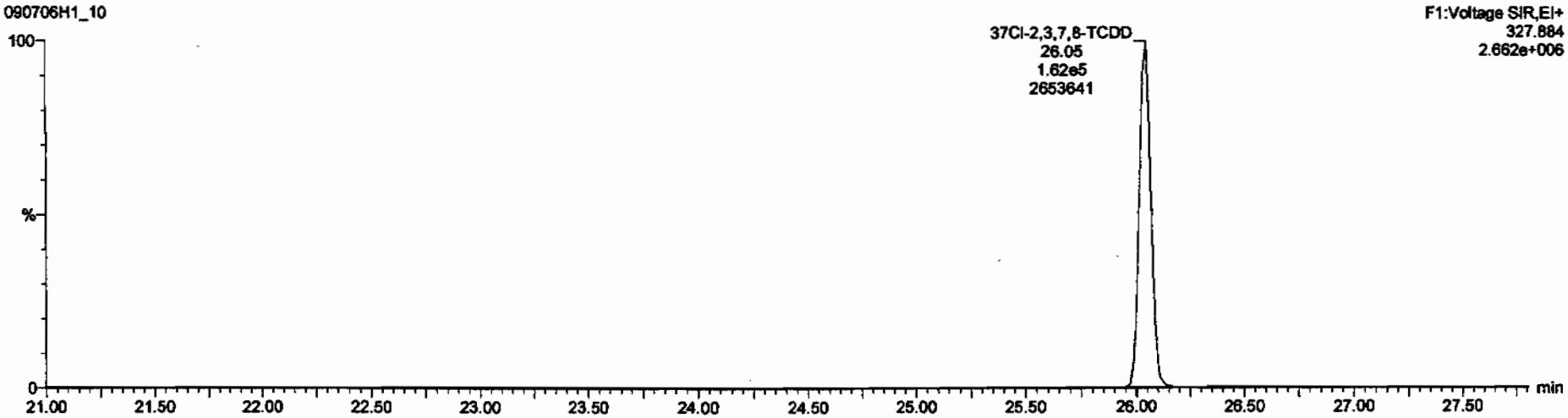

13C-1,2,3,4-TCDD

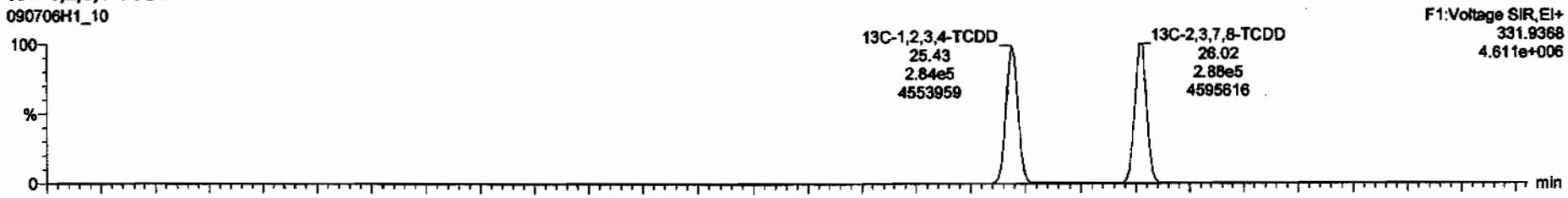

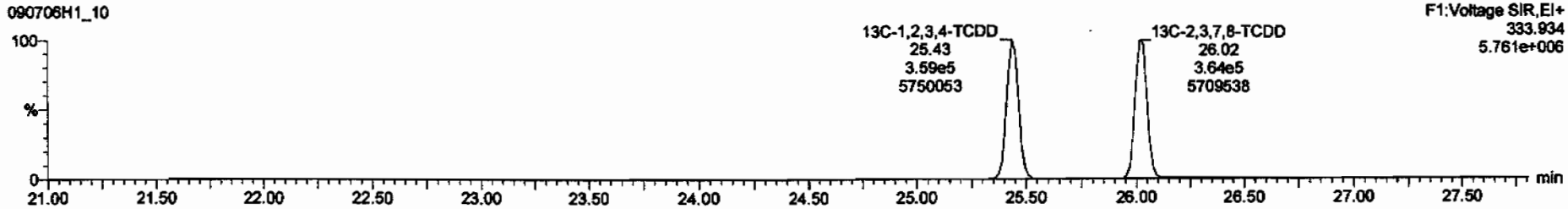

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Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:14 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

1,2,3,7,8-PeCDD

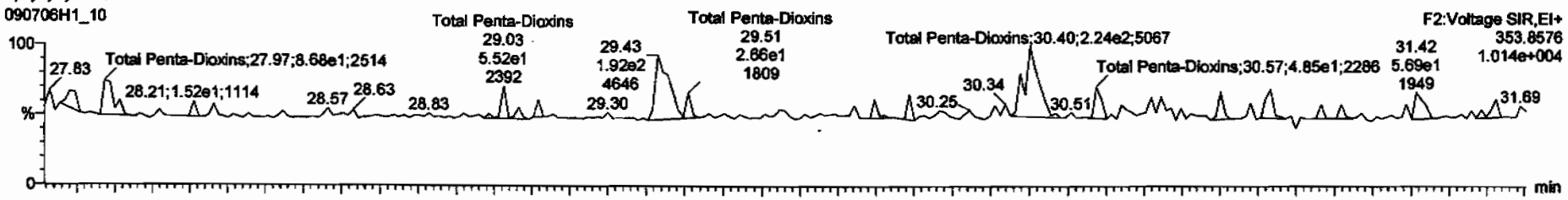

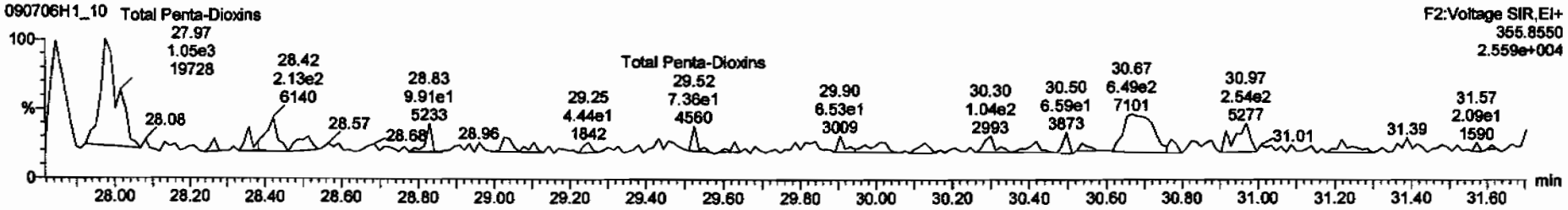

13C-1,2,3,7,8-PeCDD

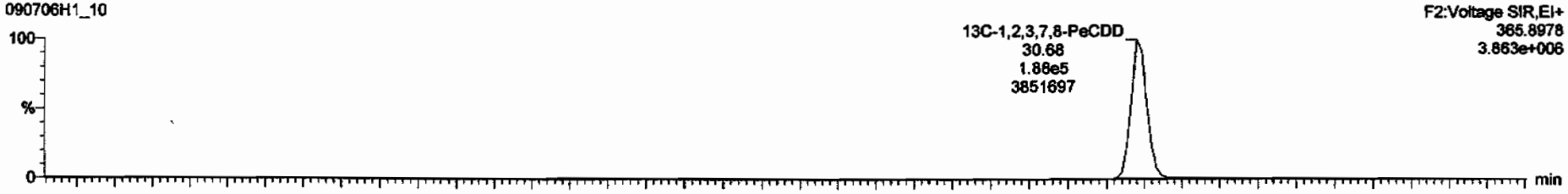

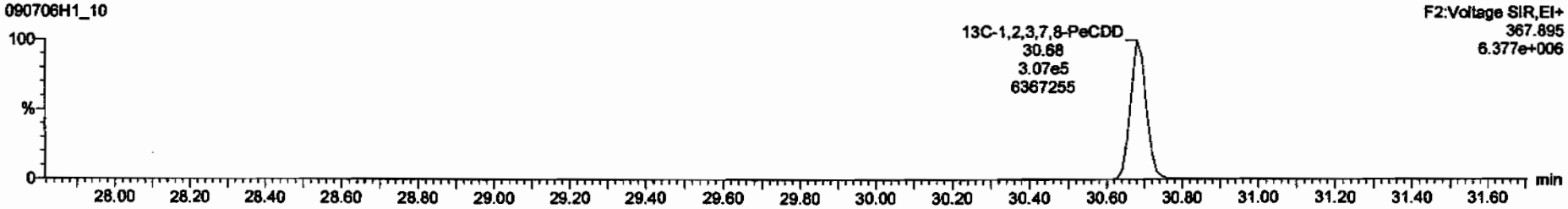

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Printed: Tuesday, July 07, 2009 07:46:14 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

1,2,3,4,7,8-HxCDD

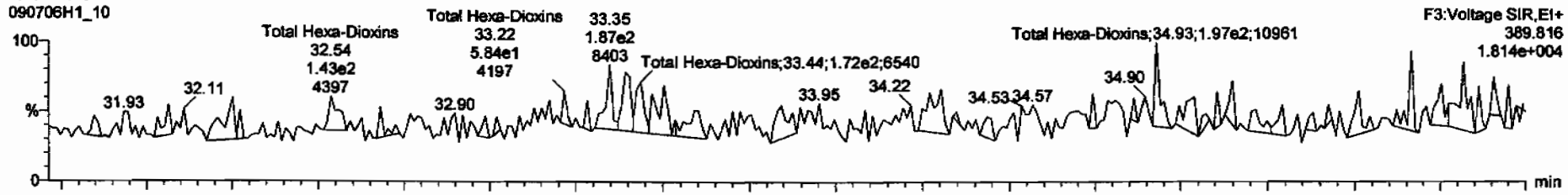

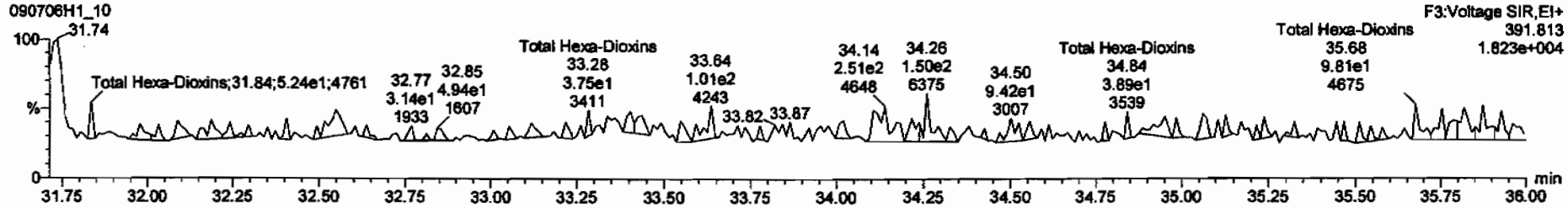

13C-1,2,3,4,7,8-HxCDD

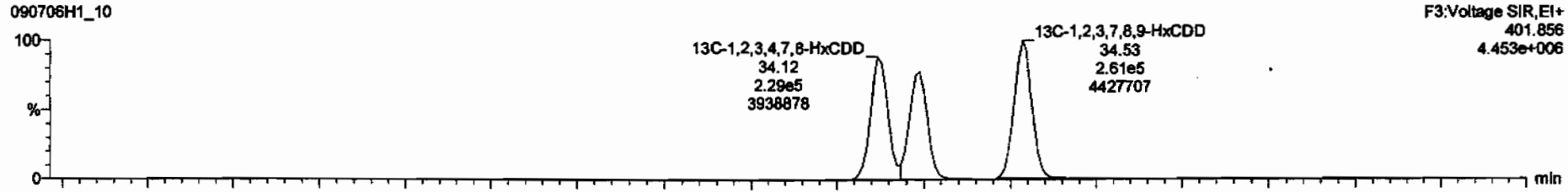

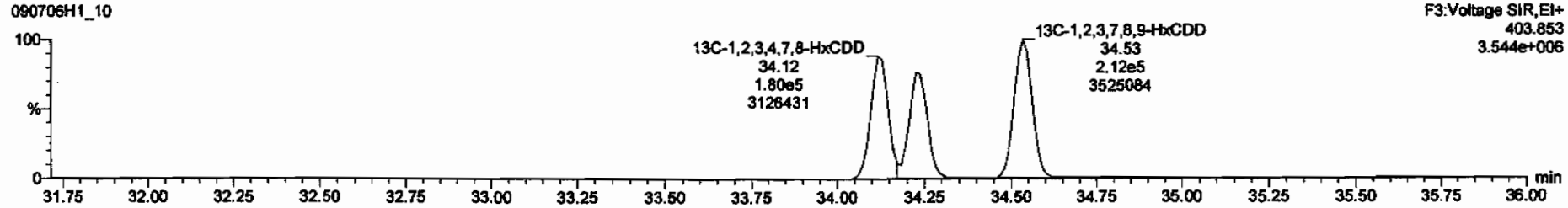

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:14 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

1,2,3,4,6,7,8-HpCDD

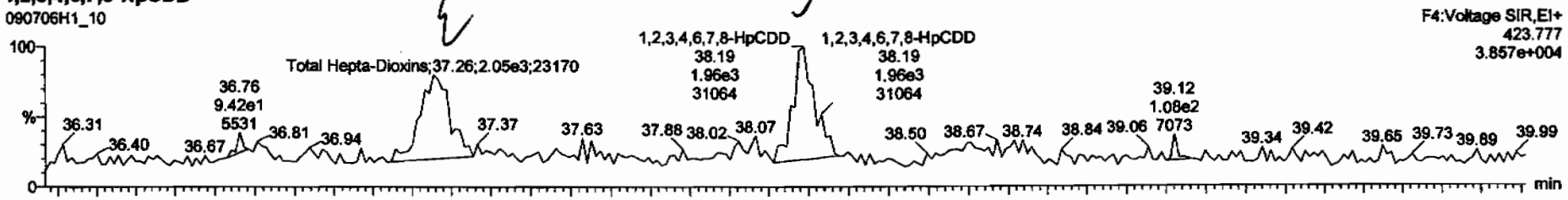

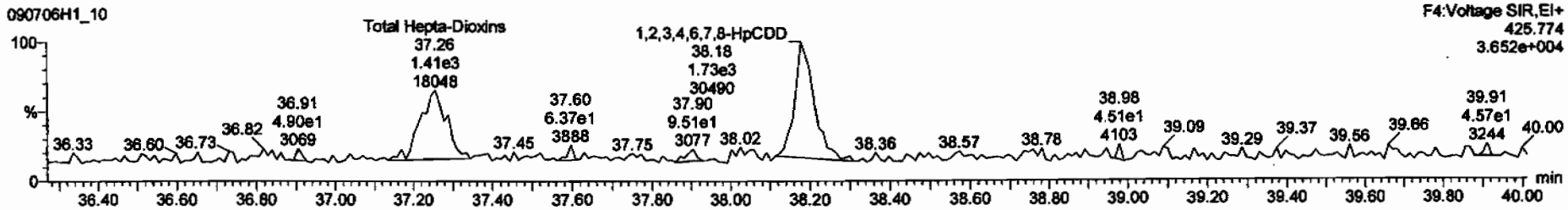

13C-1,2,3,4,6,7,8-HpCDD

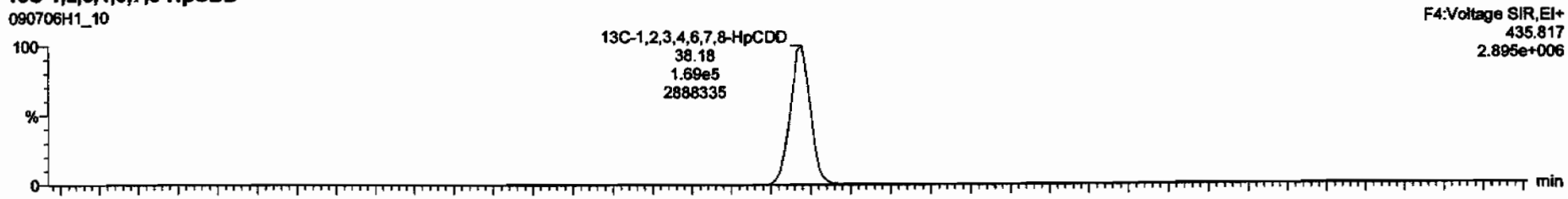

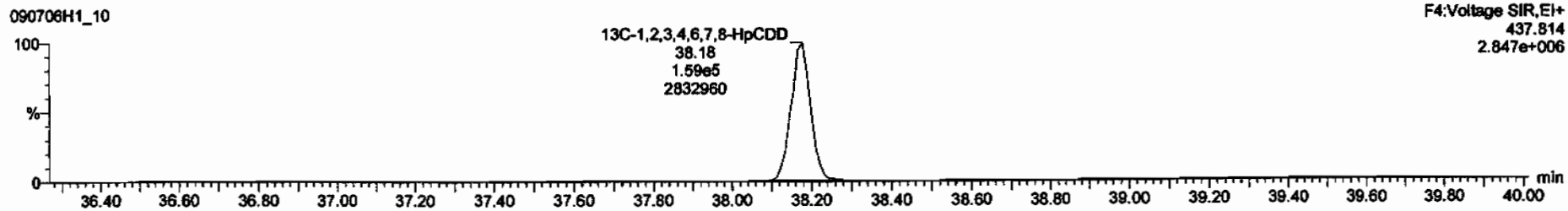

TargetLynx - 090706h1-10.qtd * - [Chromatogram]

090706H1_10 - 31853_2218_006 CAMO-09-9958 11.01 - CAMO-09-9958

Name	RT	Area	Height	Ratio	Pass	Conc	Dev
Total Hepta-Dioxins	37.26	1.853e3	1.416e3	1.31	YES	1.6673	0.00000
1,2,3,4,6,7,8-HpCDD	38.19	2.120e3	1.853e3	1.14	NO	2.2933	2.2933

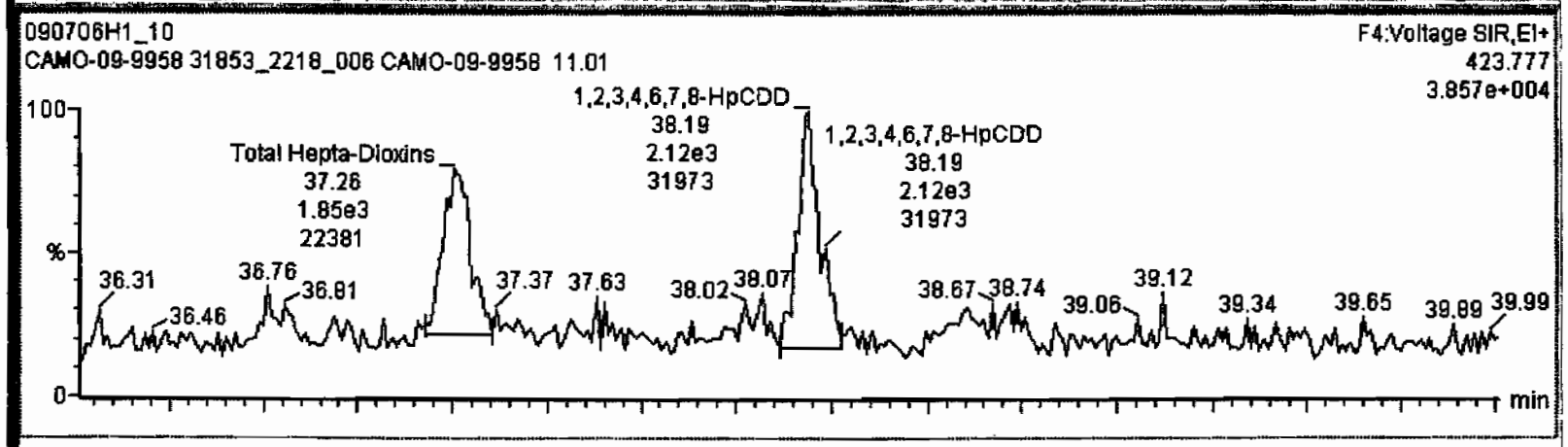

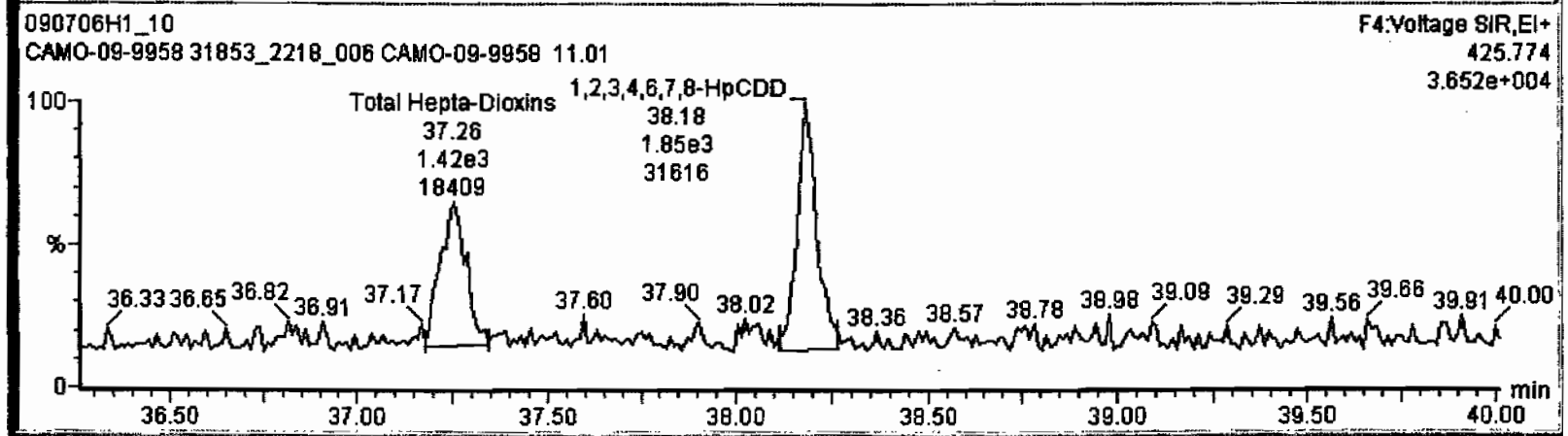

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:14 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

OCDD

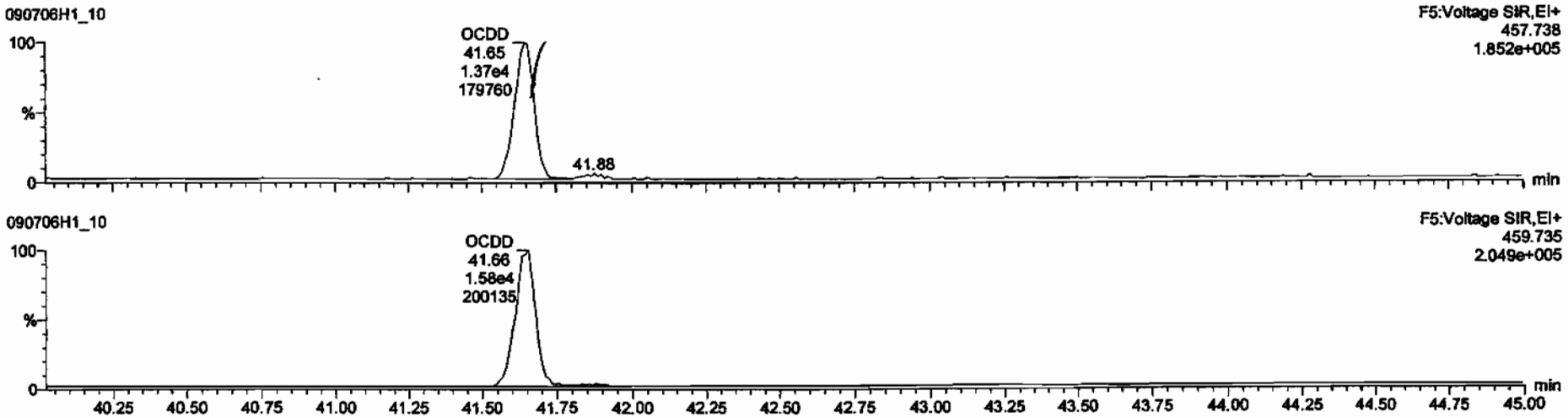

13C-OCDD

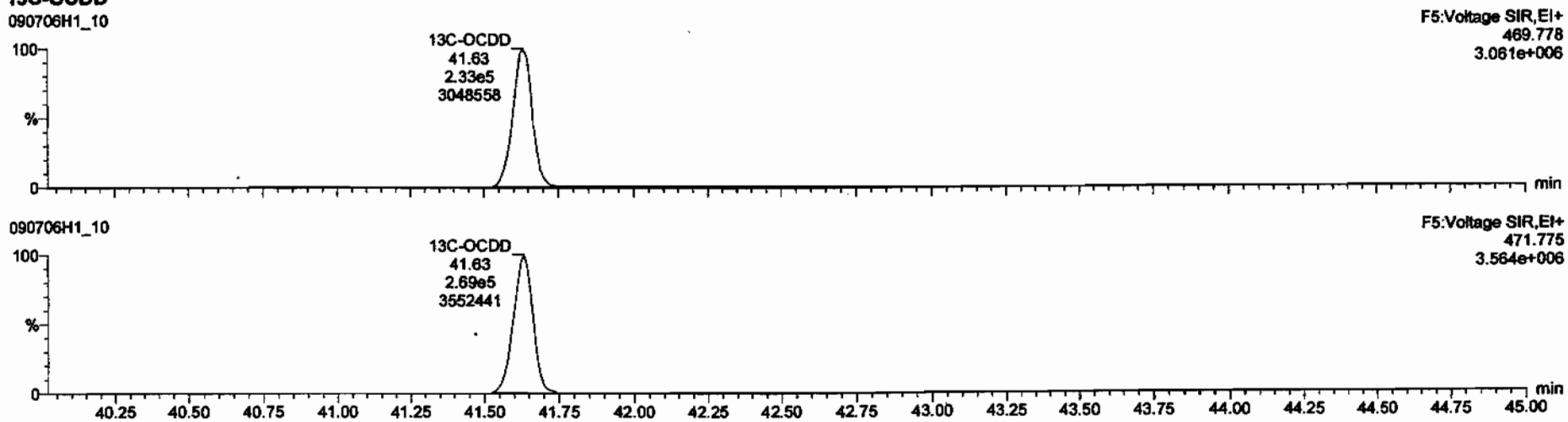

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
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Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

2,3,7,8-TCDF

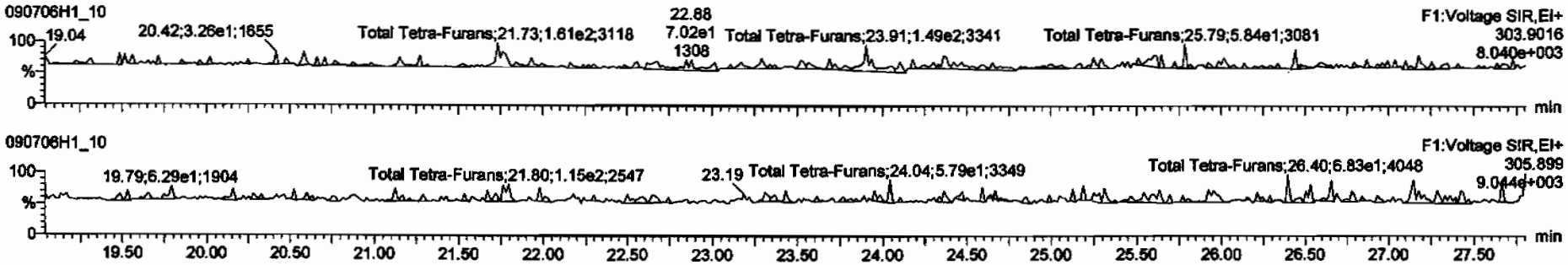

13C-2,3,7,8-TCDF

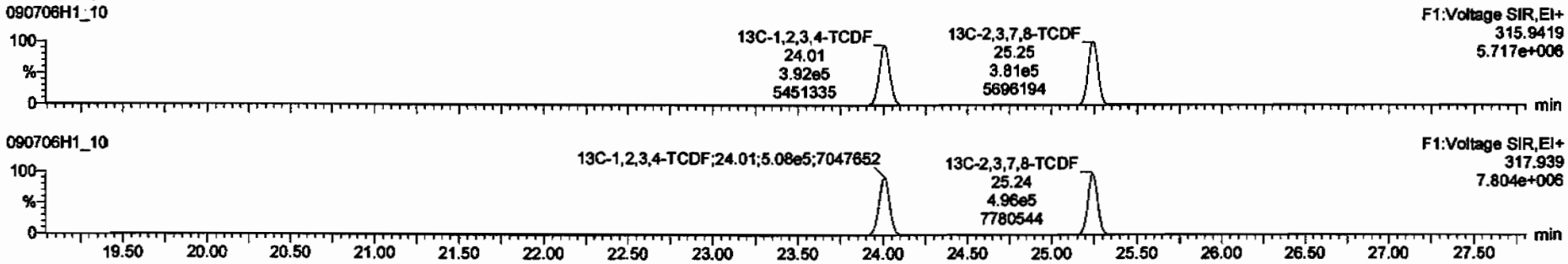

DPE1

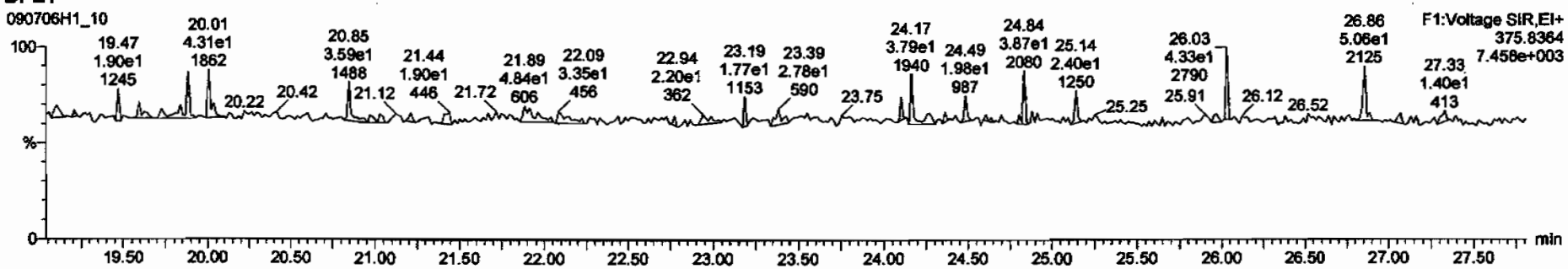

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:14 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

1st Func. Penta-Furans

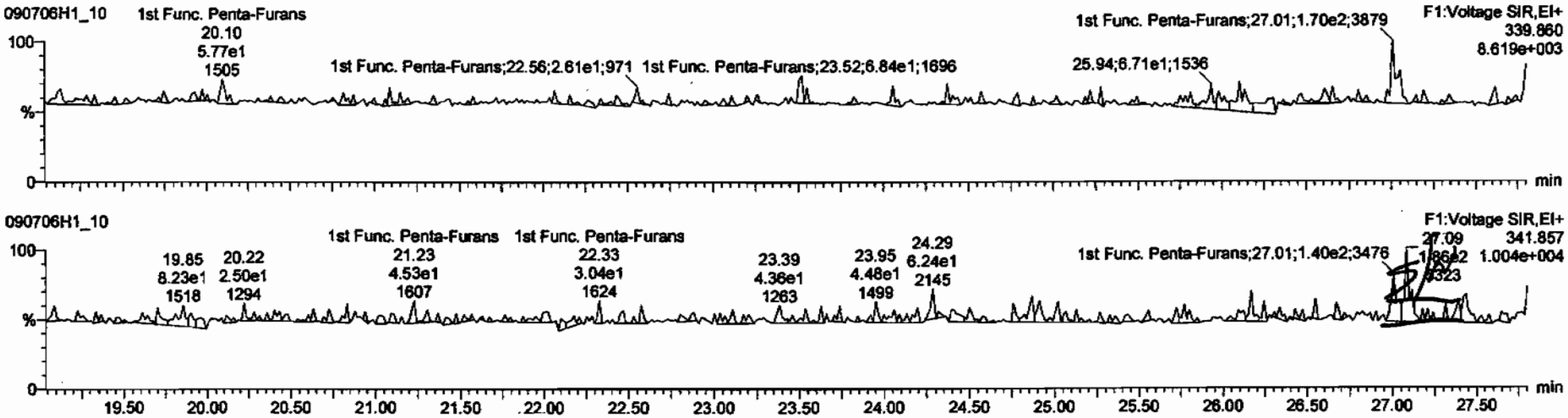

DPE6

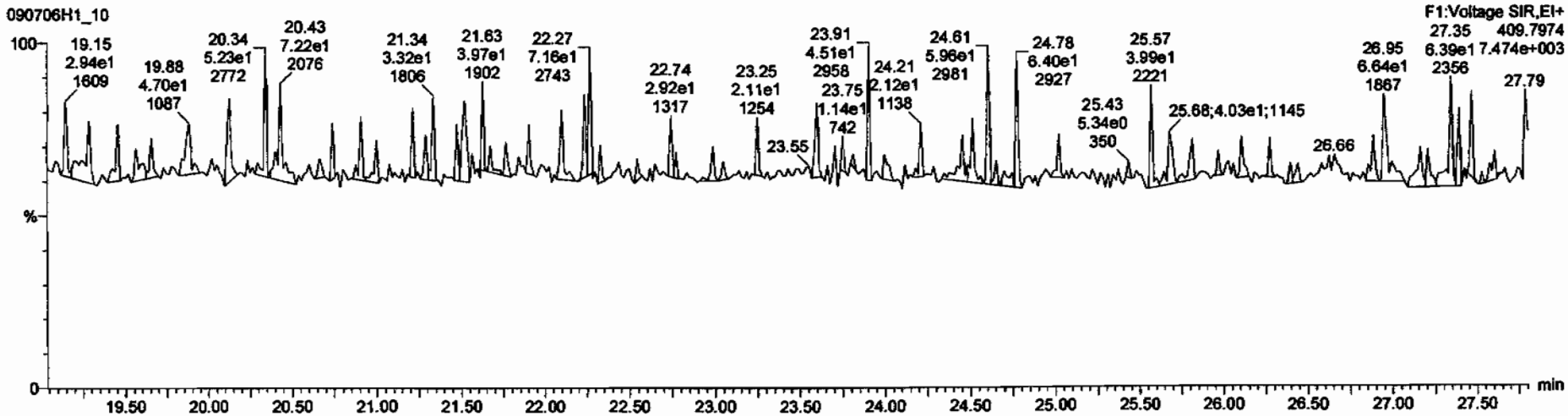

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Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
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Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

1,2,3,7,8-PeCDF

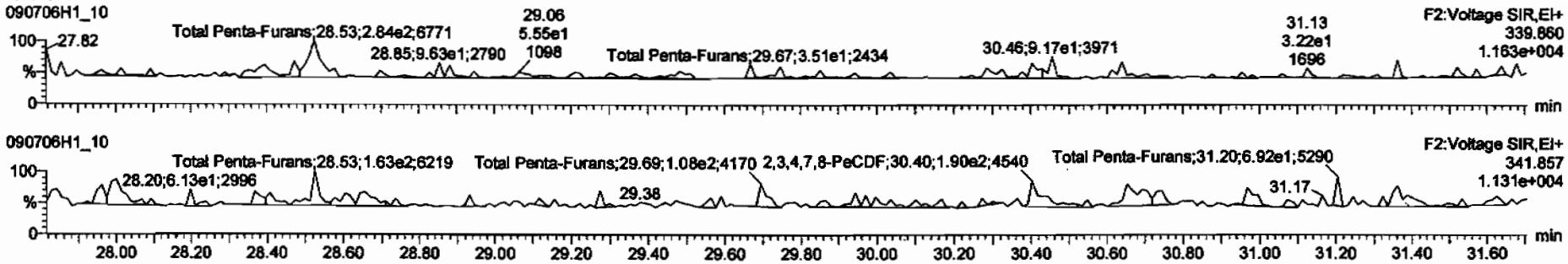

13C-1,2,3,7,8-PeCDF

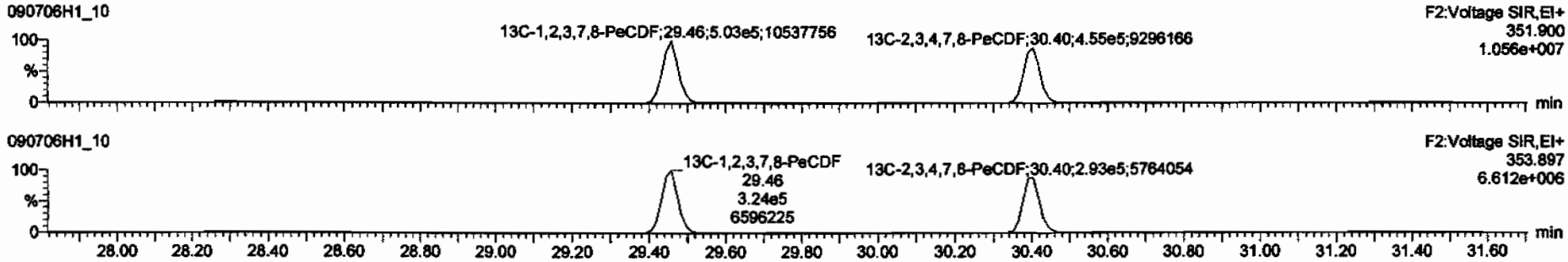

DPE2

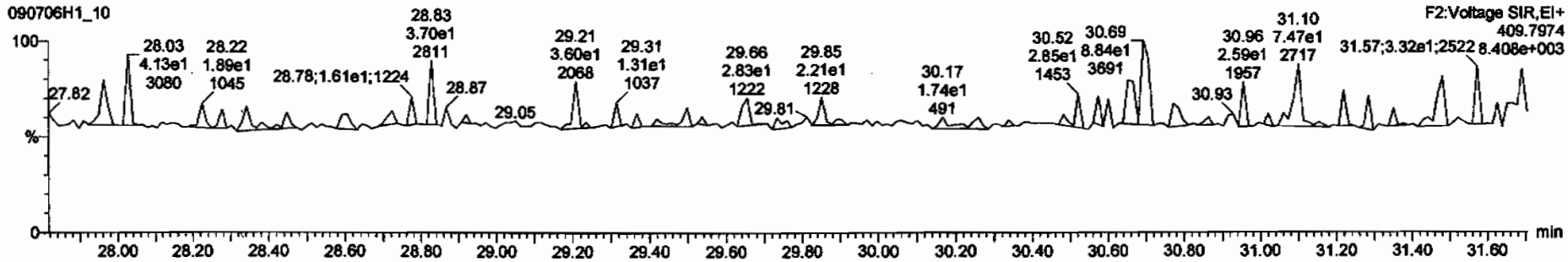

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:14 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

1,2,3,4,7,8-HxCDF

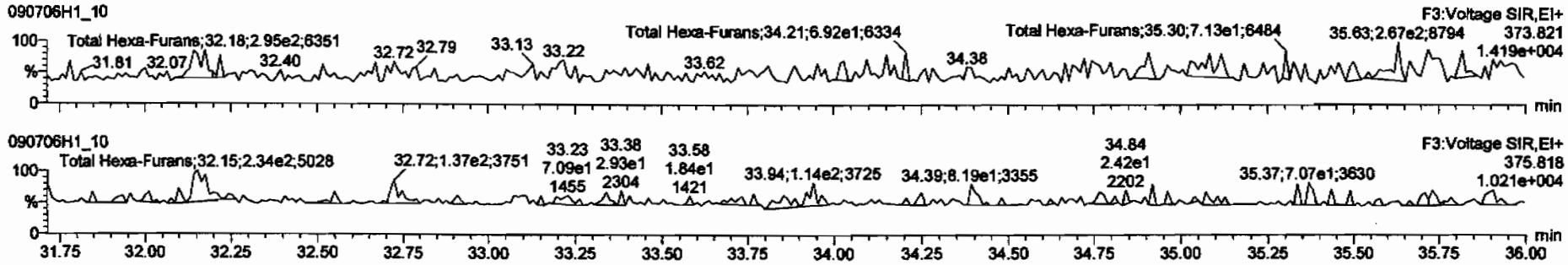

13C-1,2,3,4,7,8-HxCDF

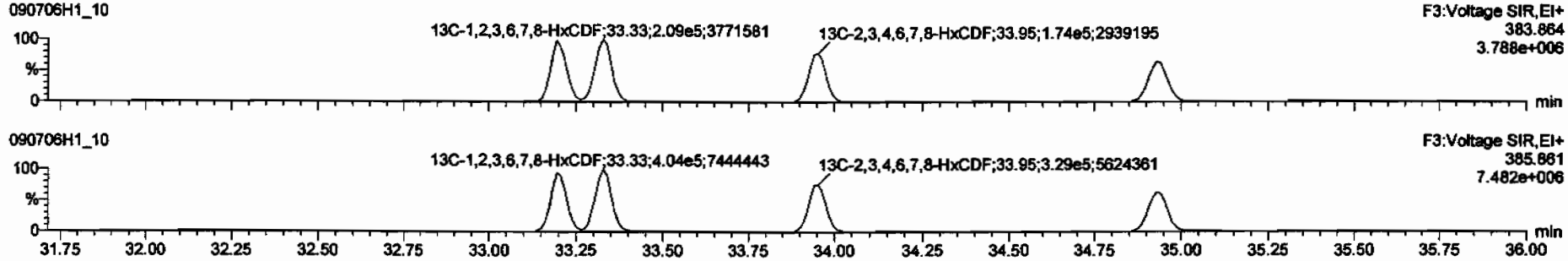

DPE3

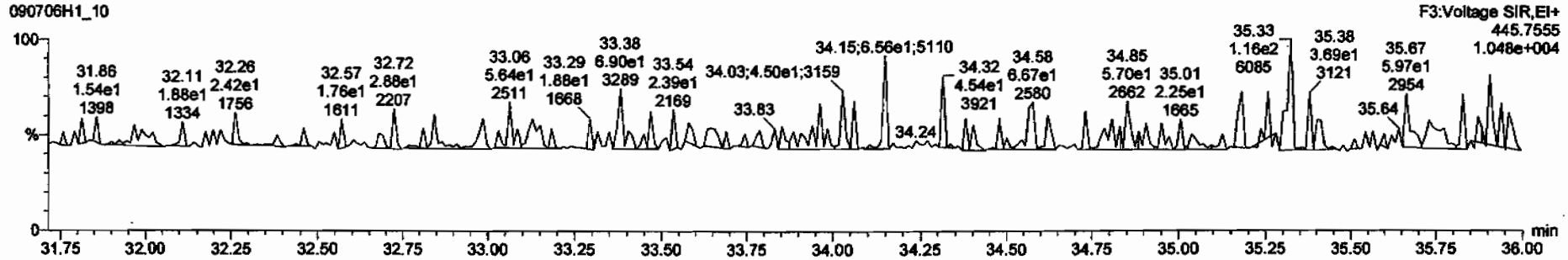

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
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Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

1,2,3,4,6,7,8-HpCDF

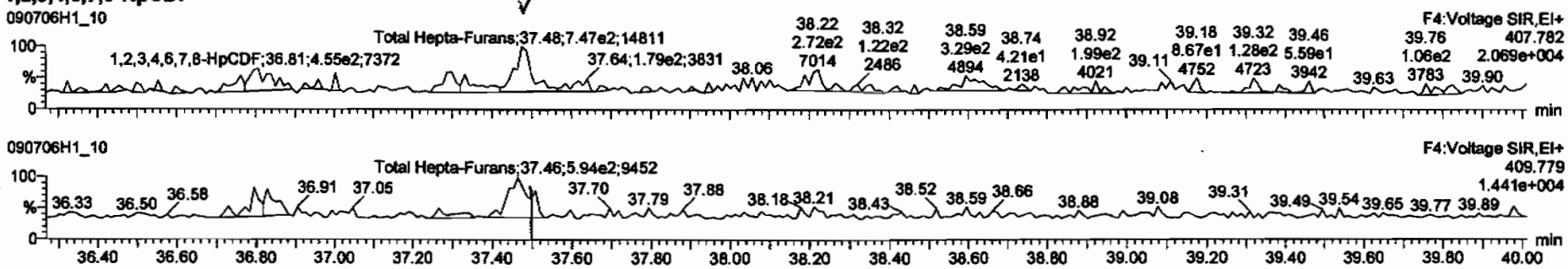

13C-1,2,3,4,6,7,8-HpCDF

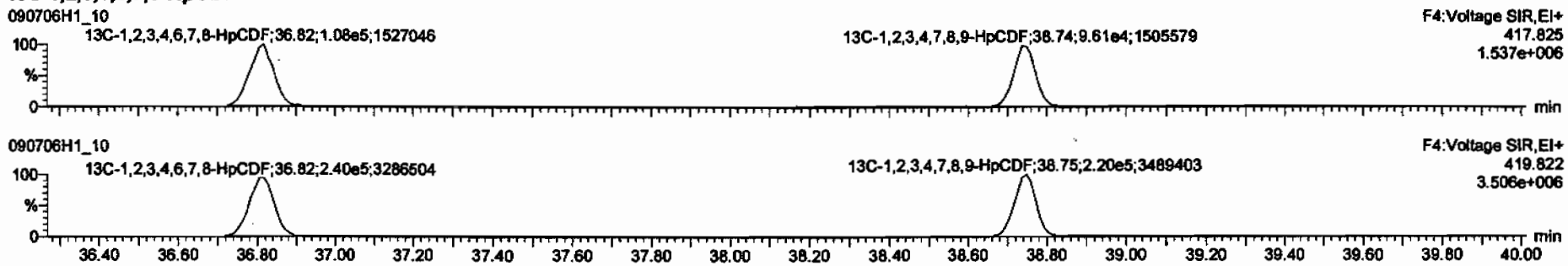

DPE4

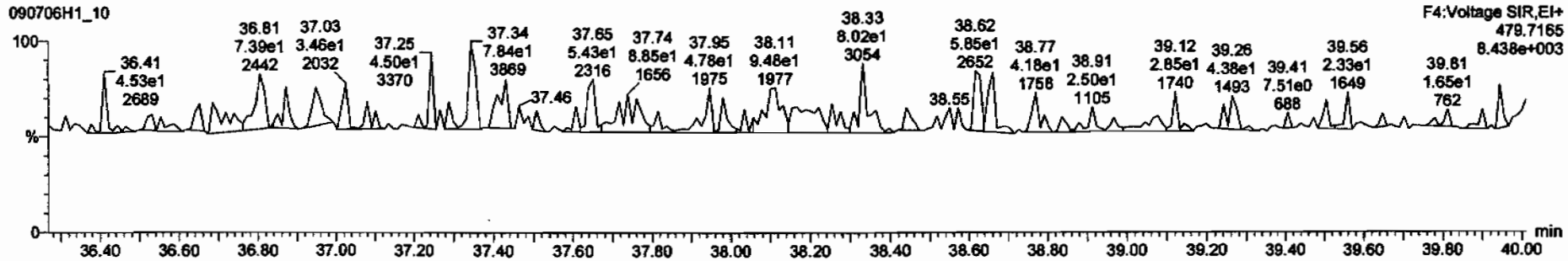

TargetLynx - 090706h1-10.qld * - [Chromatogram]

090706H1_10 - 31853_2218_006 CAMO-09-9958 11.01 - CAMO-09-9958

Total Hepta-Furans	37.48	5.554e2	4.502e2	1.23	YES	0.32972	0.00000

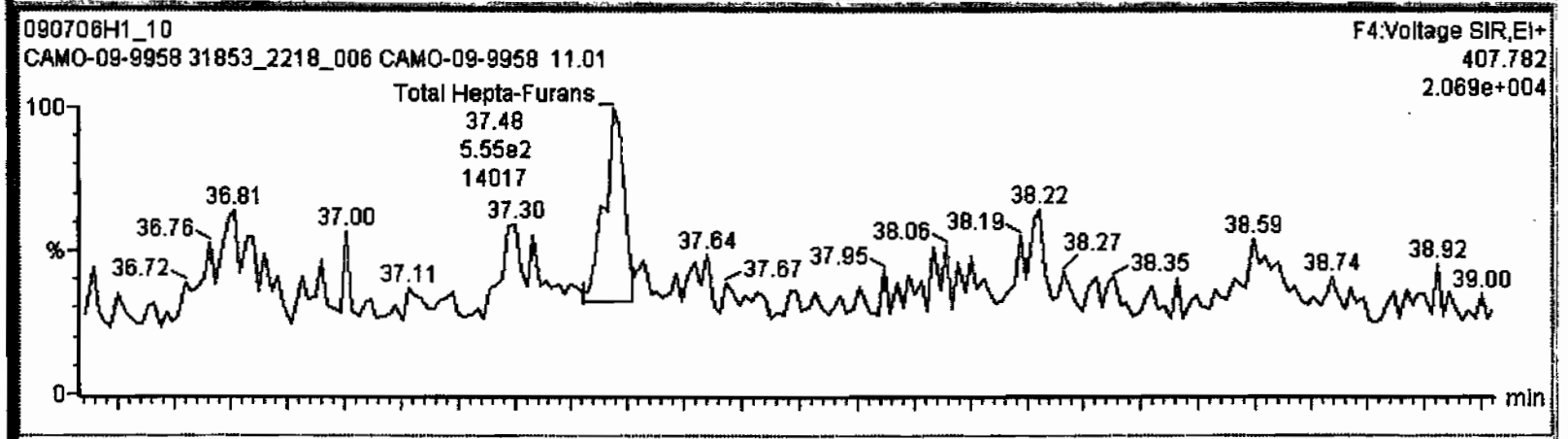

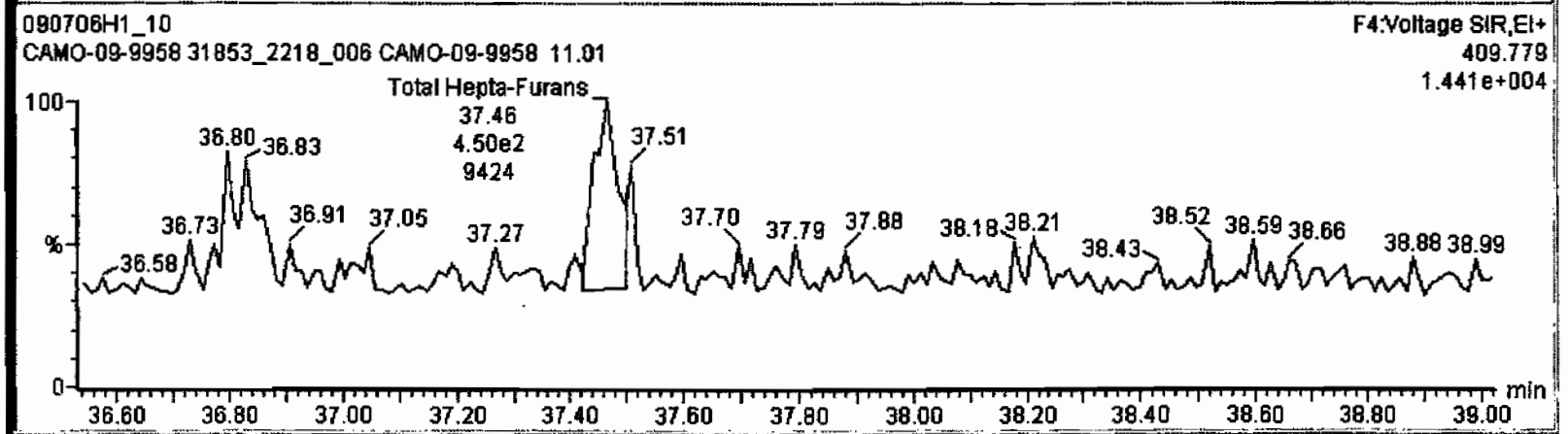

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:14 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

OCDF

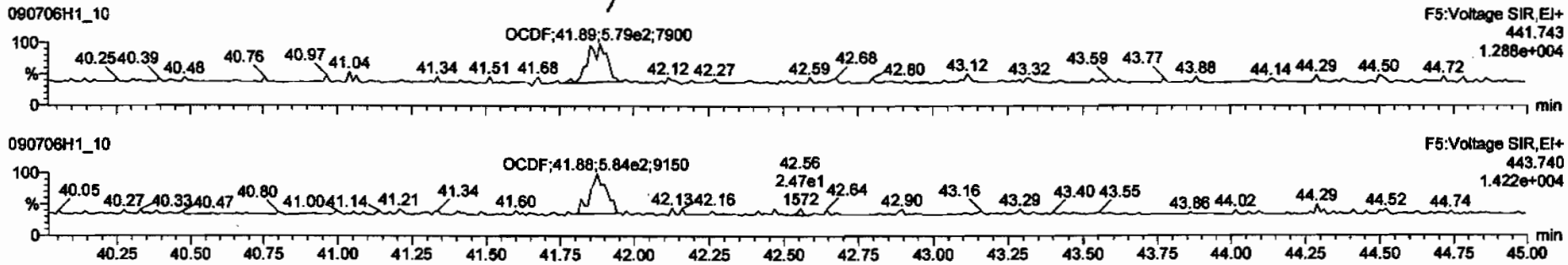

13C-OCDF

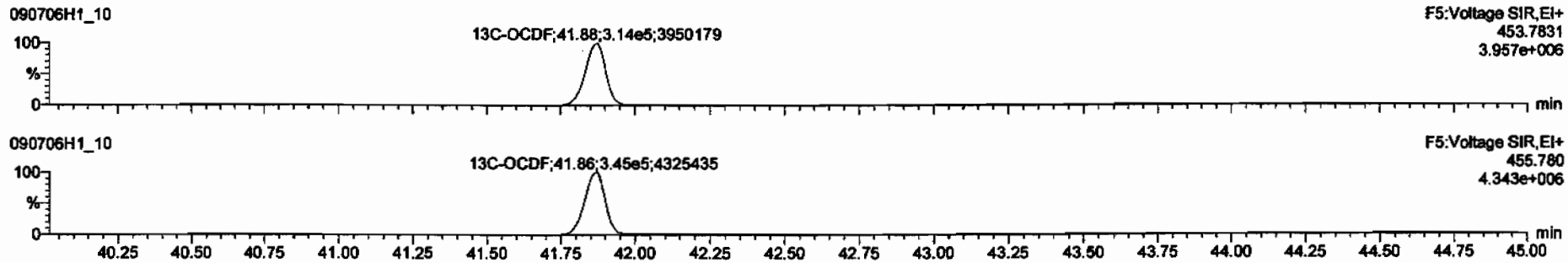

DPE5

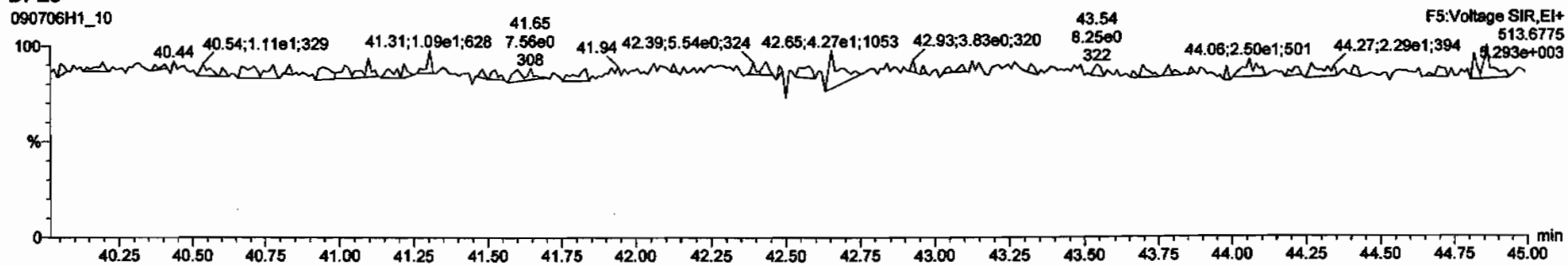

TargetLynx - 090706h1-10.qld * - [Chromatogram]

090706H1_10 - 31853_2218_006 CAMO-09-9958 11.01 - CAMO-09-9958

13C-2,3,7,8-TCDD	6.53e5	0.79	NO	1.01	9.936	26.01	1.023	201	100	0.306	
13C-1,2,3,7,8-PeCDD	4.95e5	0.61	NO	0.83	9.936	30.68	1.206	187	93.1	0.288	
13C-1,2,3,4,7,8-HxCDD	4.09e5	1.27	NO	0.92	9.936	34.12	0.988	190	94.2	0.737	
13C-1,2,3,6,7,8-HxCDD	3.71e5	1.25	NO	0.92	9.936	34.24	0.991	171	85.0	0.734	

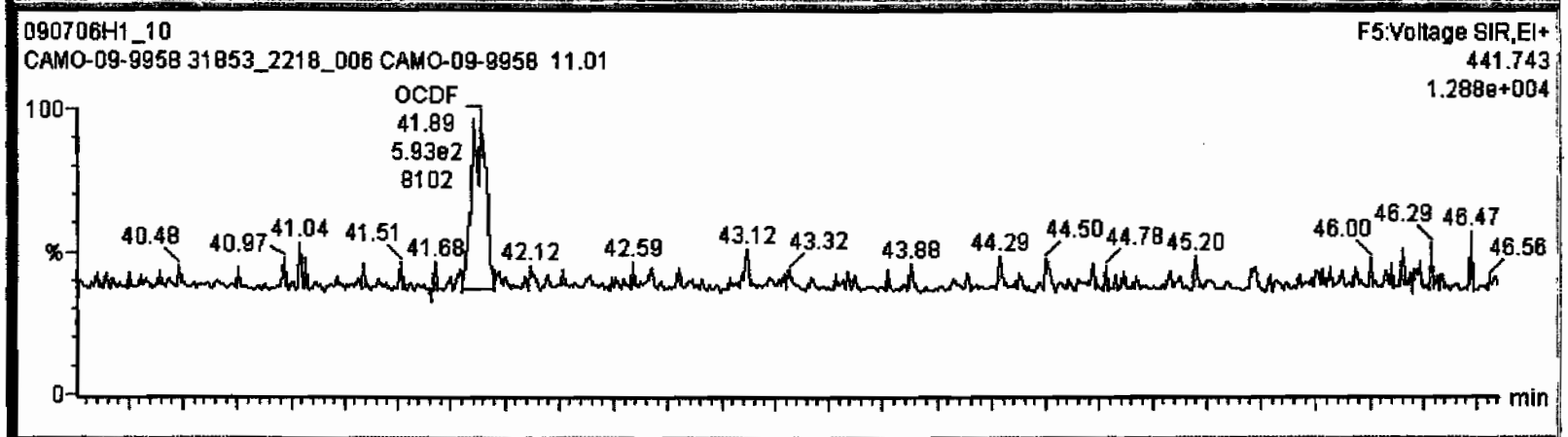

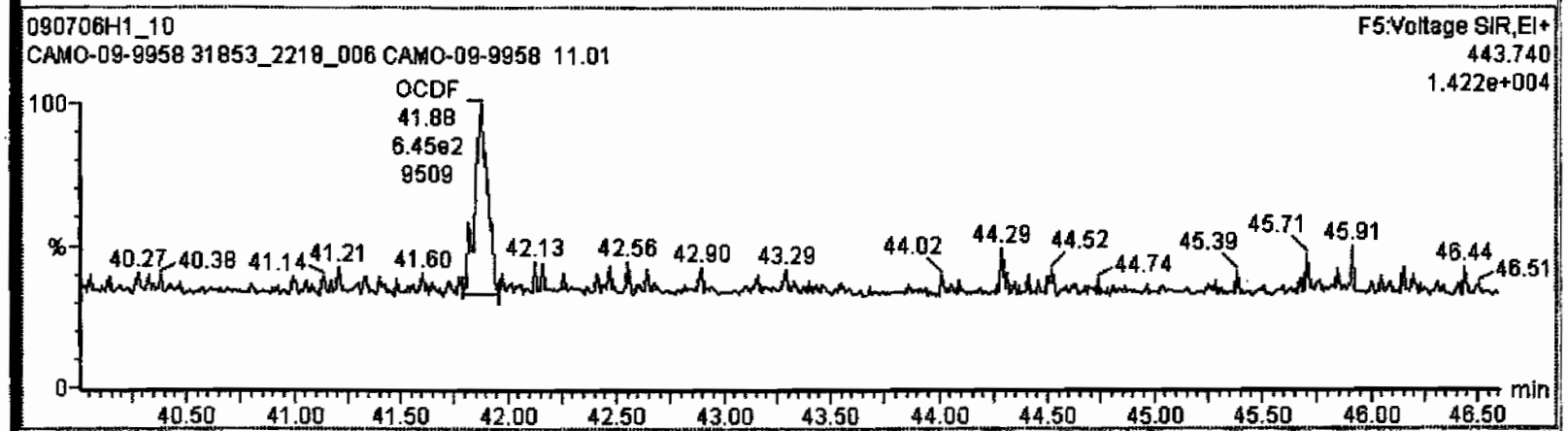

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-10.qld

Last Altered: Tuesday, July 07, 2009 07:45:54 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:14 Pacific Daylight Time

Name: 090706H1_10, Date: 06-Jul-2009, Time: 20:52:48, ID: 31853_2218_006 CAMO-09-9958 11.01, Description: CAMO-09-9958

PFK1

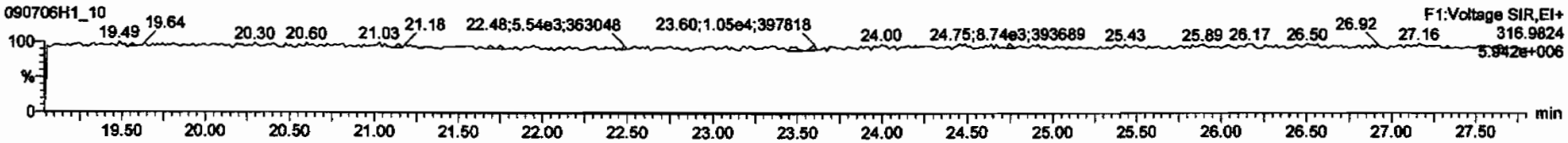

PFK2

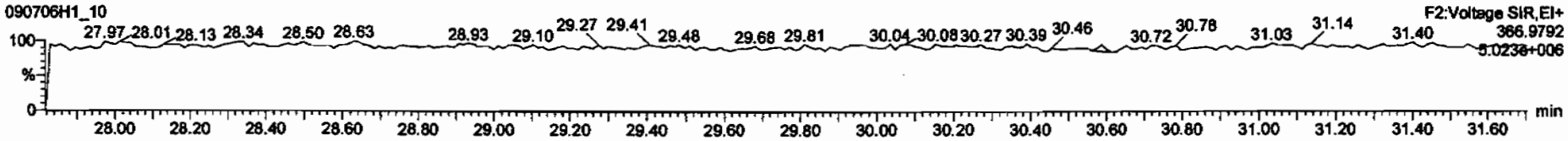

PFK3

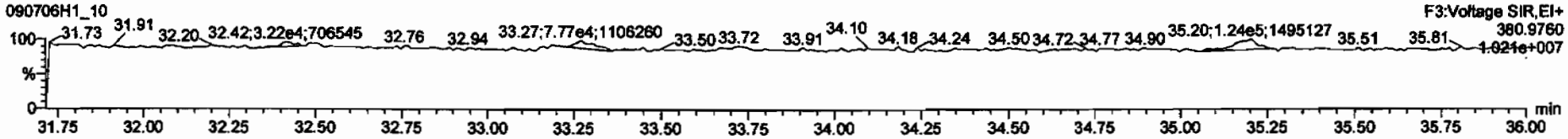

PFK4

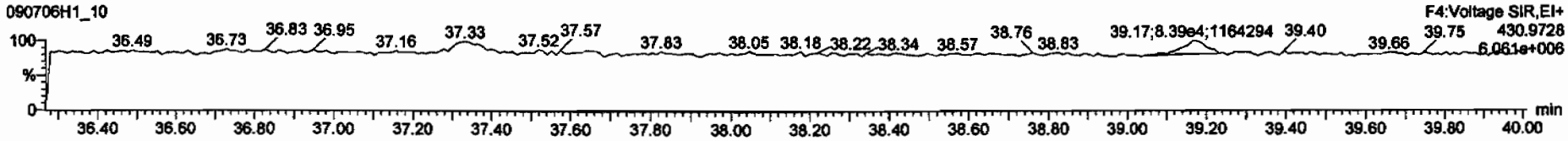

PFK5

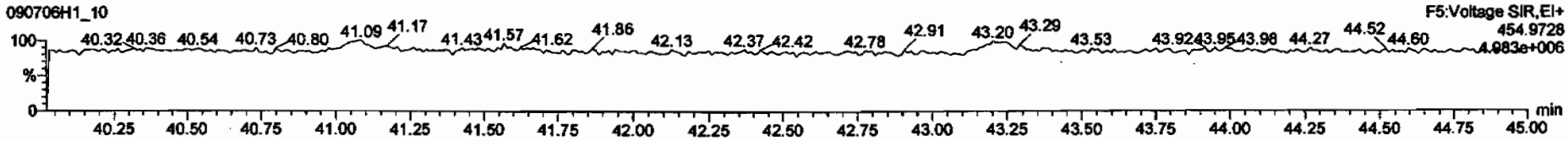

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 14:02:15 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 14:02:26 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

1	2,3,7,8-TCDD			NO	1.08	9.887					0.0520	
2	1,2,3,7,8-PeCDD			NO	1.03	9.887					0.113	
3	1,2,3,4,7,8-HxCDD			NO	1.00	9.887					0.434	
4	1,2,3,6,7,8-HxCDD			NO	1.13	9.887					0.446	
5	1,2,3,7,8,9-HxCDD			NO	1.10	9.887					0.424	
6	1,2,3,4,6,7,8-HpCDD			NO	1.06	9.887					0.573	
7	OCDD	2.31e3	0.82	NO	1.18	9.887	41.63	1.001	1.4812		0.284	~~1.4812~~
8	2,3,7,8-TCDF			NO	1.09	9.887					0.0515	
9	1,2,3,7,8-PeCDF			NO	1.16	9.887					0.0565	
10	2,3,4,7,8-PeCDF			NO	1.12	9.887					0.0633	
11	1,2,3,4,7,8-HxCDF			NO	1.41	9.887					0.169	
12	1,2,3,6,7,8-HxCDF			NO	1.22	9.887					0.175	
13	2,3,4,6,7,8-HxCDF			NO	1.28	9.887					0.213	
14	1,2,3,7,8,9-HxCDF			NO	1.26	9.887					0.281	
15	1,2,3,4,6,7,8-HpCDF			NO	1.69	9.887					0.332	
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	9.887					0.366	
17	OCDF			NO	1.10	9.887					0.184	
18	13C-2,3,7,8-TCDD	7.39e5	0.79	NO	1.01	9.887	26.01	1.023	198.89	98.3	0.279	
19	13C-1,2,3,7,8-PeCDD	5.81e5	0.62	NO	0.827	9.887	30.67	1.206	191.57	94.7	0.248	
20	13C-1,2,3,4,7,8-HxCDD	4.57e5	1.24	NO	0.916	9.887	34.11	0.988	184.86	91.4	0.807	
21	13C-1,2,3,6,7,8-HxCDD	4.22e5	1.23	NO	0.921	9.887	34.23	0.991	169.79	83.9	0.803	
22	13C-1,2,3,4,6,7,8-HpCDD	3.82e5	1.05	NO	0.708	9.887	38.16	1.105	199.74	98.7	1.35	
23	13C-OCDD	5.35e5	0.88	NO	0.503	9.887	41.61	1.205	394.63	97.5	1.12	
24	13C-2,3,7,8-TCDF	1.02e6	0.77	NO	0.977	9.887	25.24	0.992	206.55	102	0.192	
25	13C-1,2,3,7,8-PeCDF	9.27e5	1.56	NO	0.896	9.887	29.44	1.158	203.93	101	0.263	
26	13C-2,3,4,7,8-PeCDF	8.90e5	1.57	NO	0.900	9.887	30.39	1.195	195.02	96.4	0.262	
27	13C-1,2,3,4,7,8-HxCDF	6.20e5	0.52	NO	1.17	9.887	33.20	0.962	196.52	97.1	0.703	
28	13C-1,2,3,6,7,8-HxCDF	6.96e5	0.51	NO	1.52	9.887	33.32	0.965	169.78	83.9	0.541	
29	13C-2,3,4,6,7,8-HxCDF	5.71e5	0.53	NO	1.25	9.887	33.94	0.983	169.44	83.8	0.658	
30	13C-1,2,3,7,8,9-HxCDF	5.17e5	0.52	NO	1.05	9.887	34.93	1.012	181.97	90.0	0.780	

7/7/09
7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 14:02:15 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 14:02:26 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

31	13C-1,2,3,4,6,7,8-HpCDF	3.94e5	0.45	NO	0.868	9.887	36.79	1.066	168.32	83.2	1.62	
32	13C-1,2,3,4,7,8,9-HpCDF	3.62e5	0.44	NO	0.727	9.887	38.73	1.122	184.61	91.3	1.94	
33	13C-OCDF	7.27e5	0.90	NO	0.760	9.887	41.84	1.212	354.83	87.7	0.706	
34	37Cl-2,3,7,8-TCDD	1.79e5			0.668	9.887	26.03	1.023	72.954	90.2	0.118	
35	13C-1,2,3,4-TCDD	7.41e5	0.79	NO	1.00	9.887	25.43	0.000	202.29	100	0.283	
36	13C-1,2,3,4-TCDF	1.03e6	0.77	NO	1.00	9.887	24.00	0.000	202.29	100	0.188	
37	13C-1,2,3,7,8,9-HxCDD	5.46e5	1.24	NO	1.00	9.887	34.52	0.000	202.29	100	0.739	
38	Total Tetra-Dioxins				1.08	9.887					0.0219	
39	Total Penta-Dioxins				1.03	9.887					0.0350	
40	Total Hexa-Dioxins				1.13	9.887					0.272	
41	Total Hepta-Dioxins				1.06	9.887					0.348	
42	Total Tetra-Furans				1.09	9.887			~~0.00000~~ ND		0.0515	0.097195 ✓
43	1st Func. Penta-Furans				1.16	9.887					0.0135	
44	Total Penta-Furans				1.16	9.887					0.0187	
45	Total Hexa-Furans				1.28	9.887					0.144	
46	Total Hepta-Furans				1.69	9.887					0.194	

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 14:02:15 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 14:02:26 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

Tetra-Dioxins

Penta-Dioxins

Hexa-Dioxins

Hepta-Dioxins

Tetra-Furans

Total Tetra-Furans	21.78	3.131e3	3.303e3	2.433e2	2.914e2	0.83	NO	0.000e0	0.00000	0.097195	0.0515

Penta-Furans function 1

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 14:02:15 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 14:02:26 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

Penta-Furans

Hexa-Furans

Hepta-Furans

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

2,3,7,8-TCDD

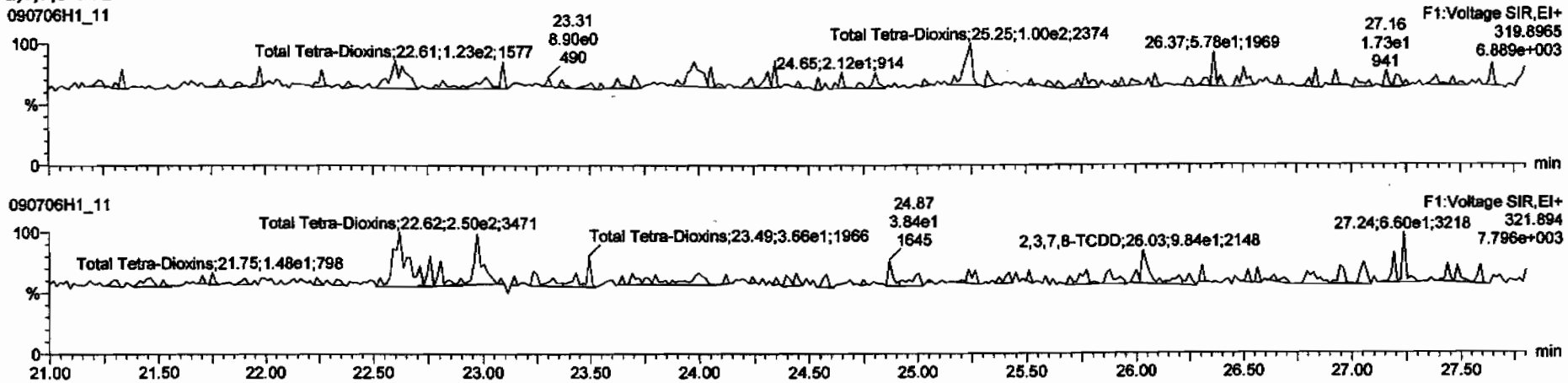

13C-2,3,7,8-TCDD

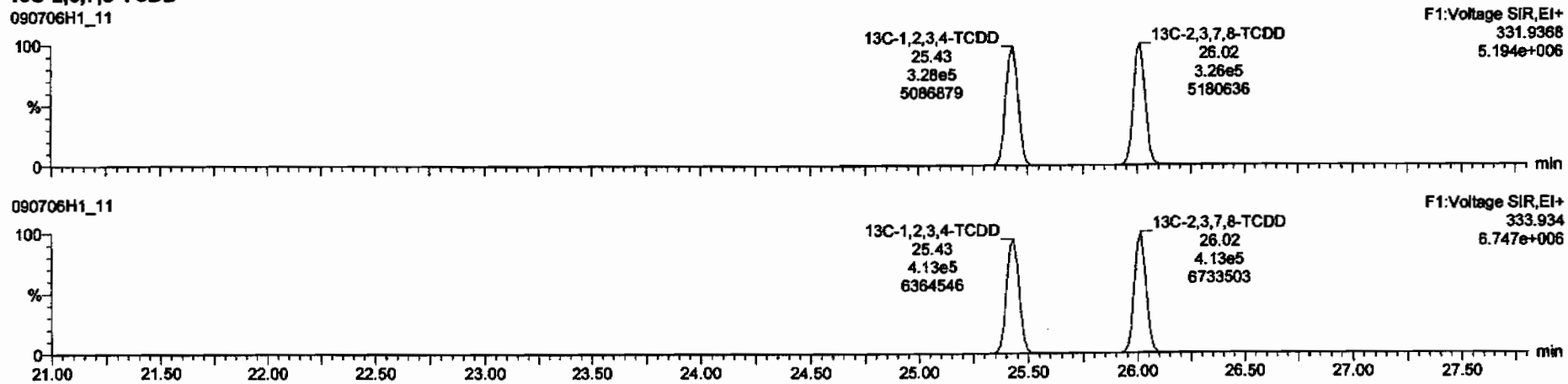

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

37Cl-2,3,7,8-TCDD

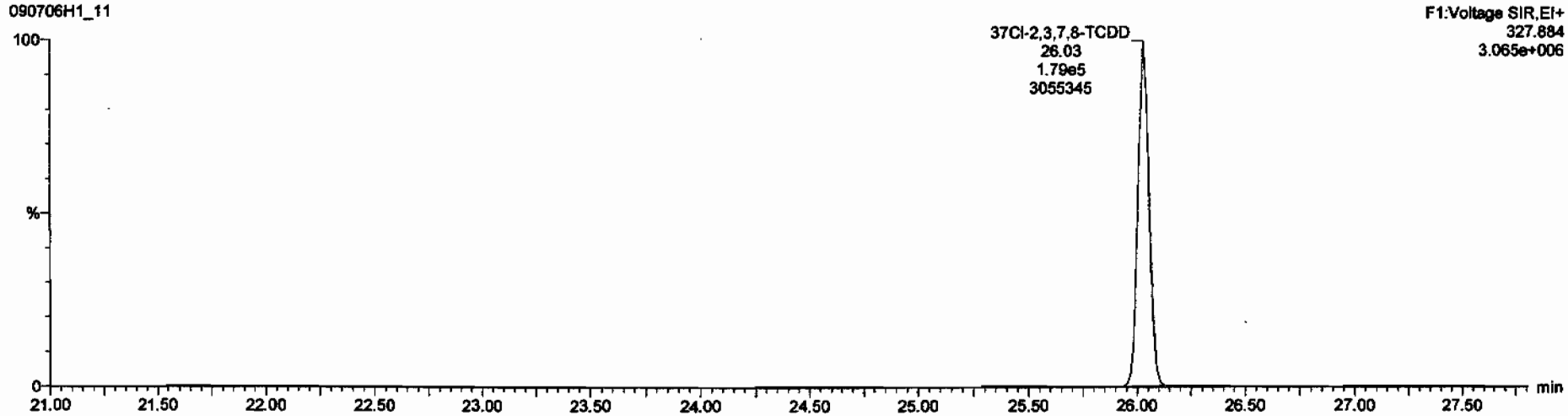

13C-1,2,3,4-TCDD

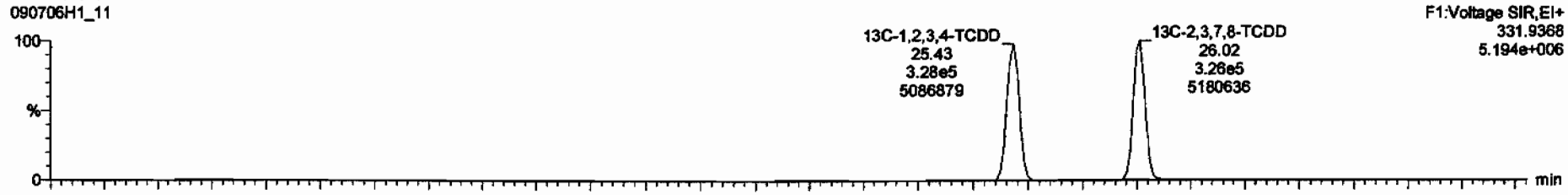

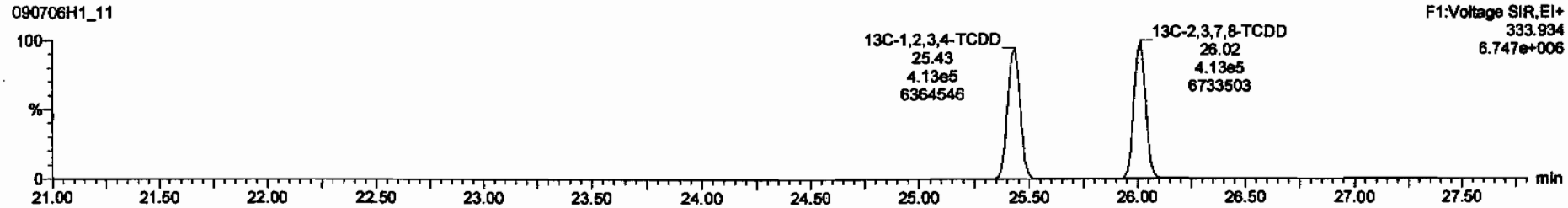

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Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

1,2,3,7,8-PeCDD

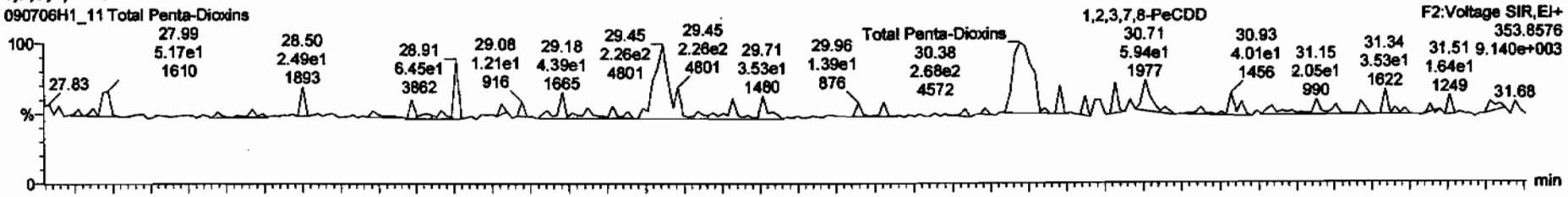

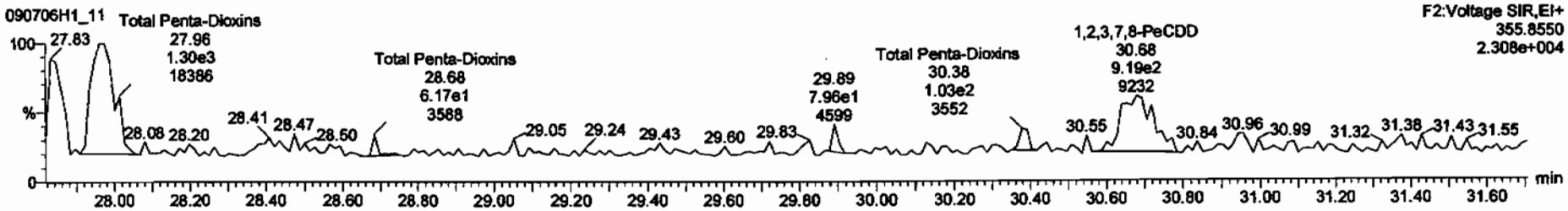

13C-1,2,3,7,8-PeCDD

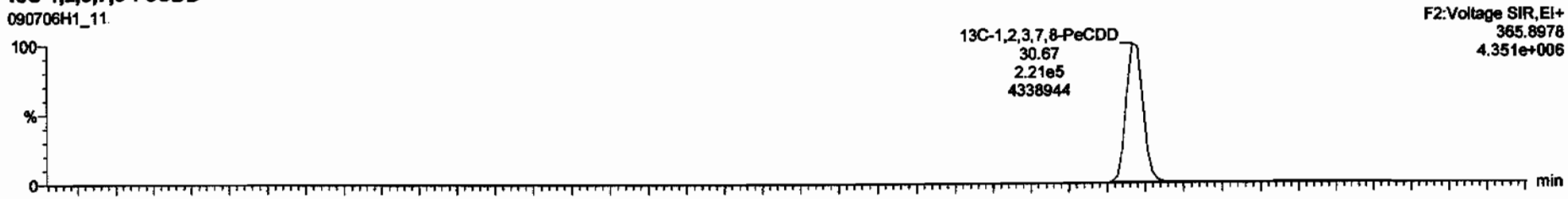

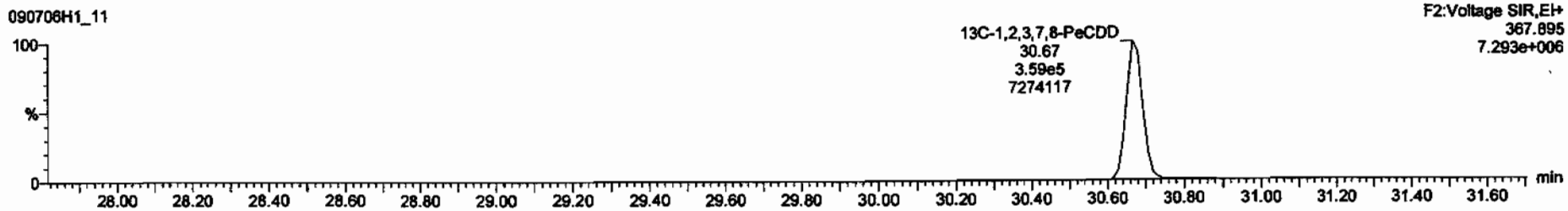

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

1,2,3,4,7,8-HxCDD

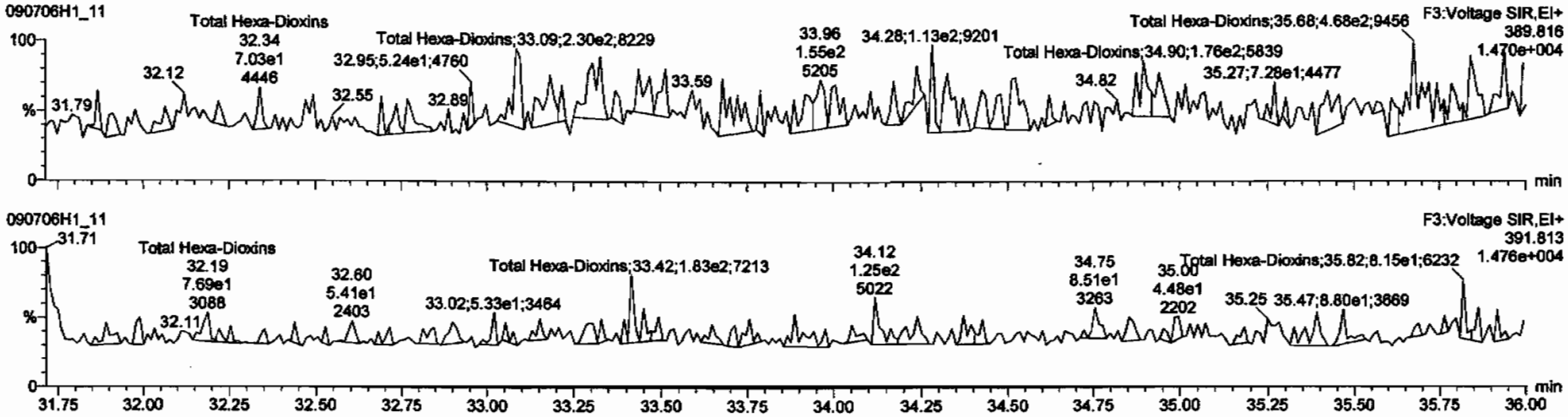

13C-1,2,3,4,7,8-HxCDD

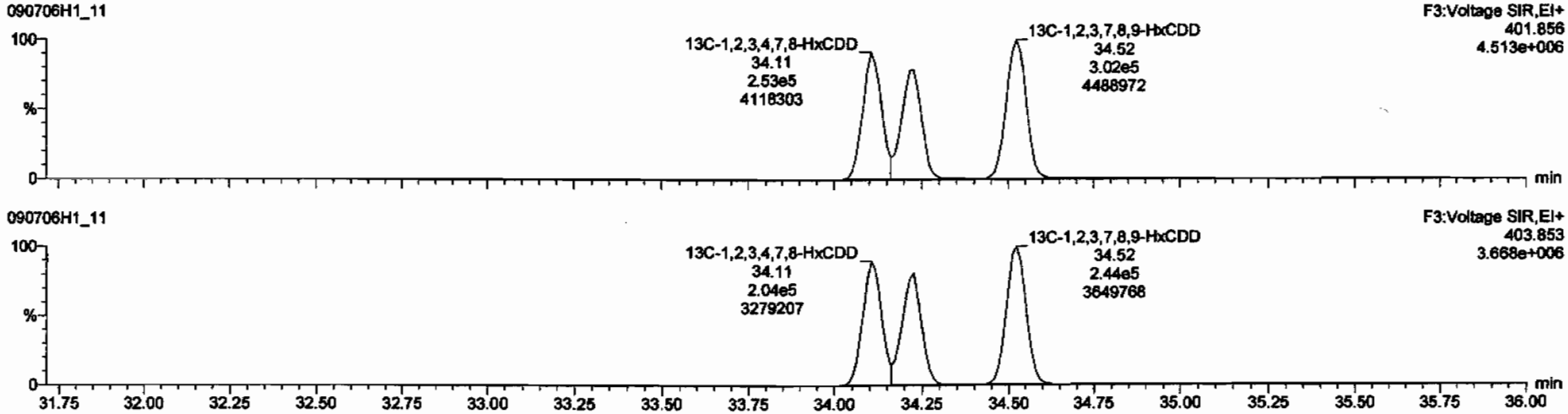

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Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

1,2,3,4,6,7,8-HpCDD

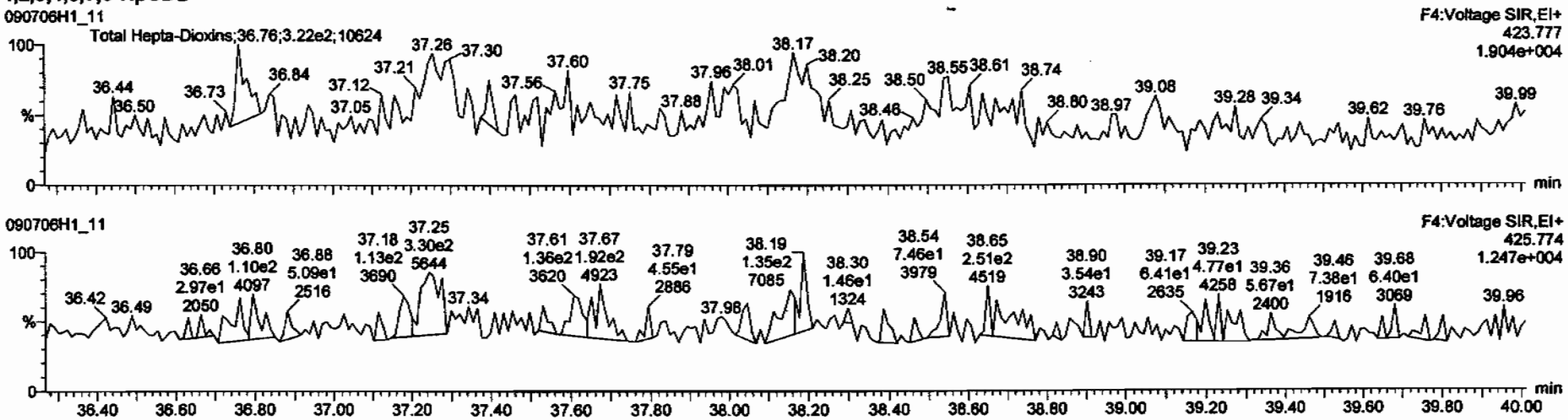

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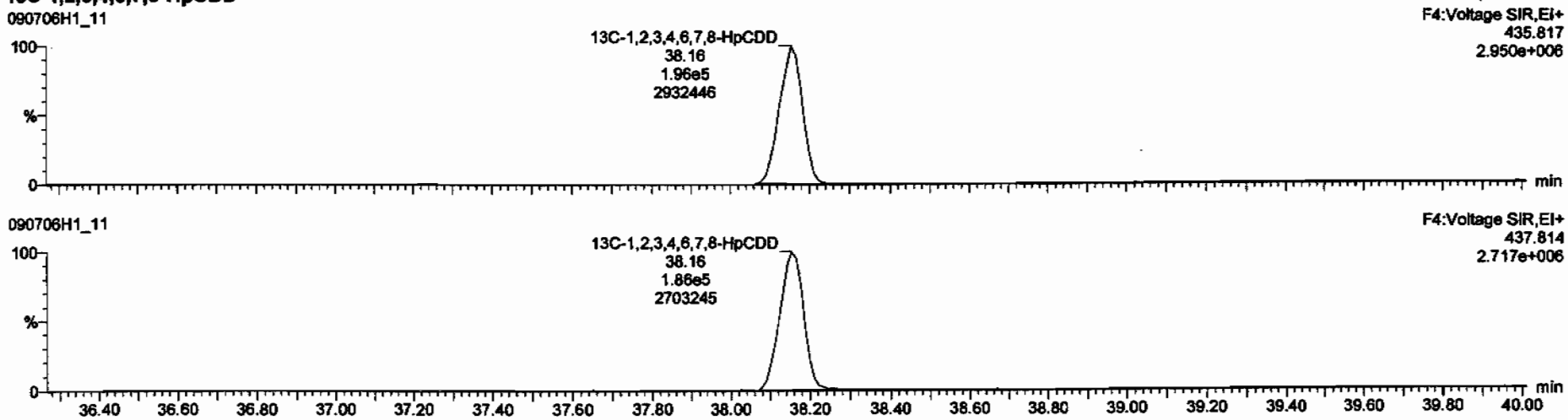

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

OCDD

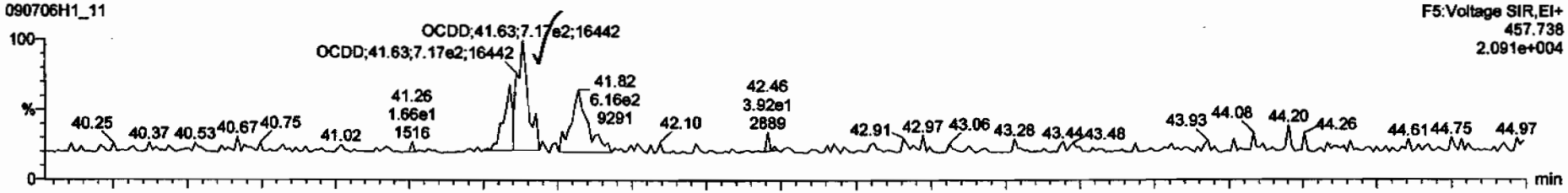

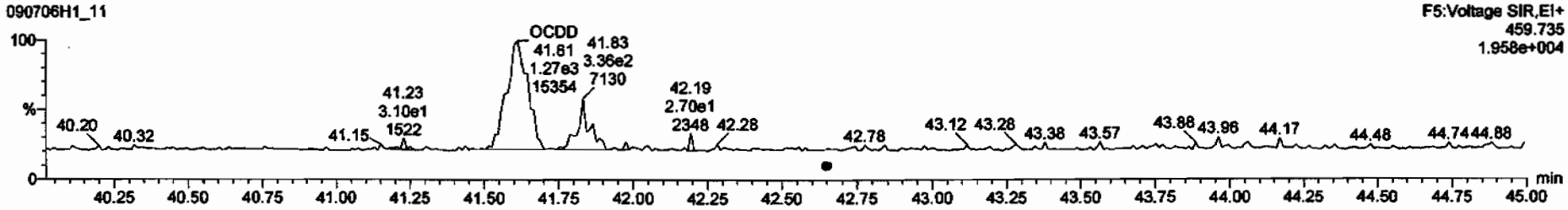

13C-OCDD

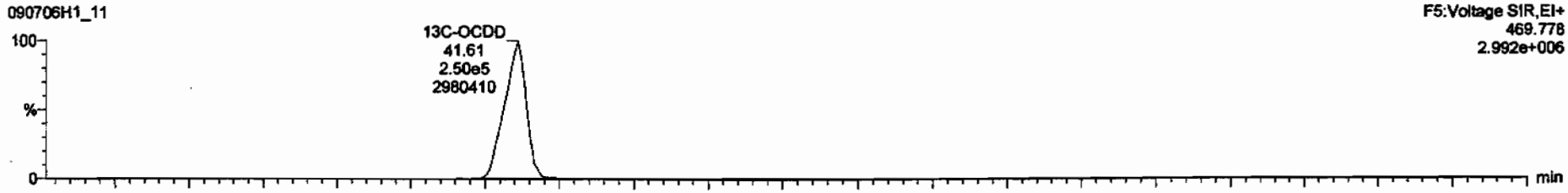

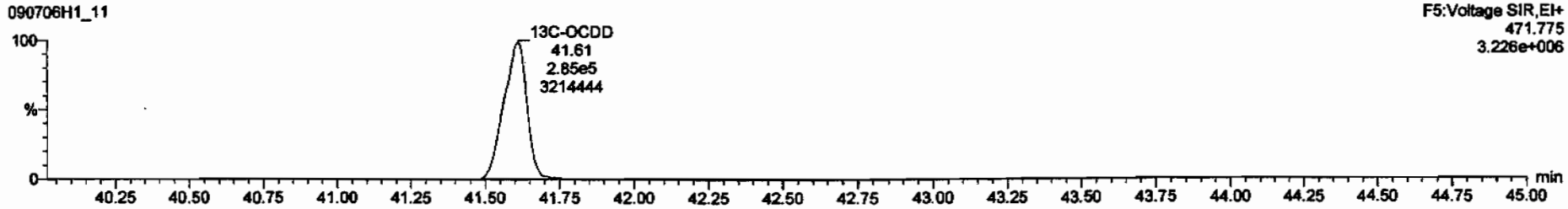

TargetLynx - 090706h1-11.qld * - [Chromatogram]

090706H1_11 - 31853_2218_007 CAMO-09-9990 12.07 - CAMO-09-9990

	2,3,7,8-TCDF	1.18e2	5.40	YES	1.09	9.867	25.27	1.001	0.0215		0.0515	0.00596
	1,2,3,7,8-PeCDF	6.81e1	1.38	NO	1.16	9.867	29.46	1.000	0.0128		0.0565	0.0128
	2,3,4,7,8-PeCDF	1.65e2	4.24	YES	1.12	9.867	30.40	1.000	0.0335		0.0633	0.0163
	1,2,3,4,7,8-HxCDF			NO	1.41	9.867					0.169	

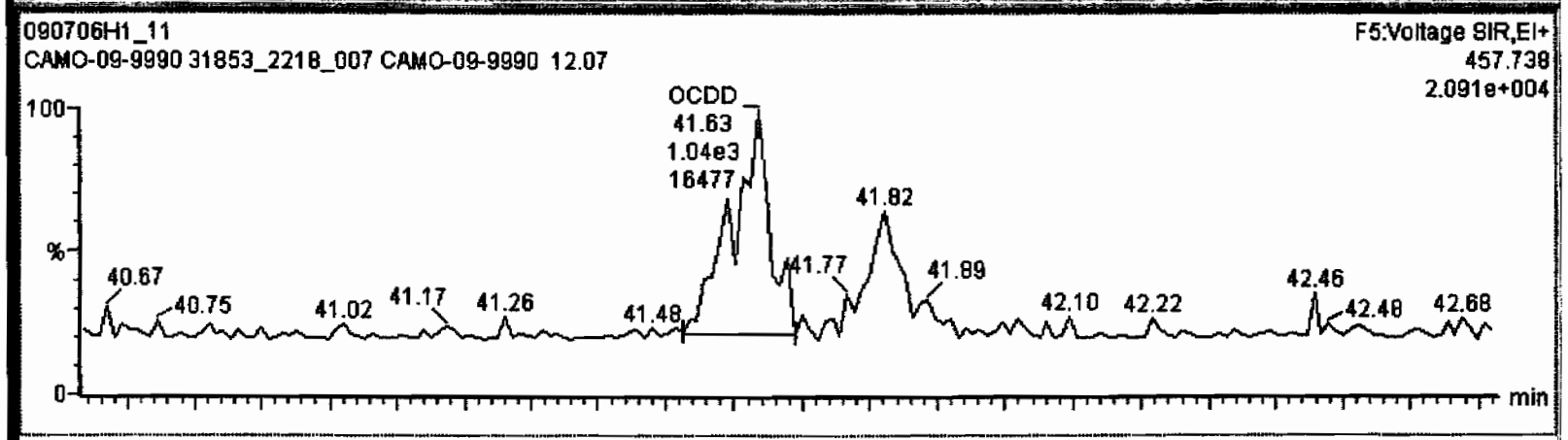

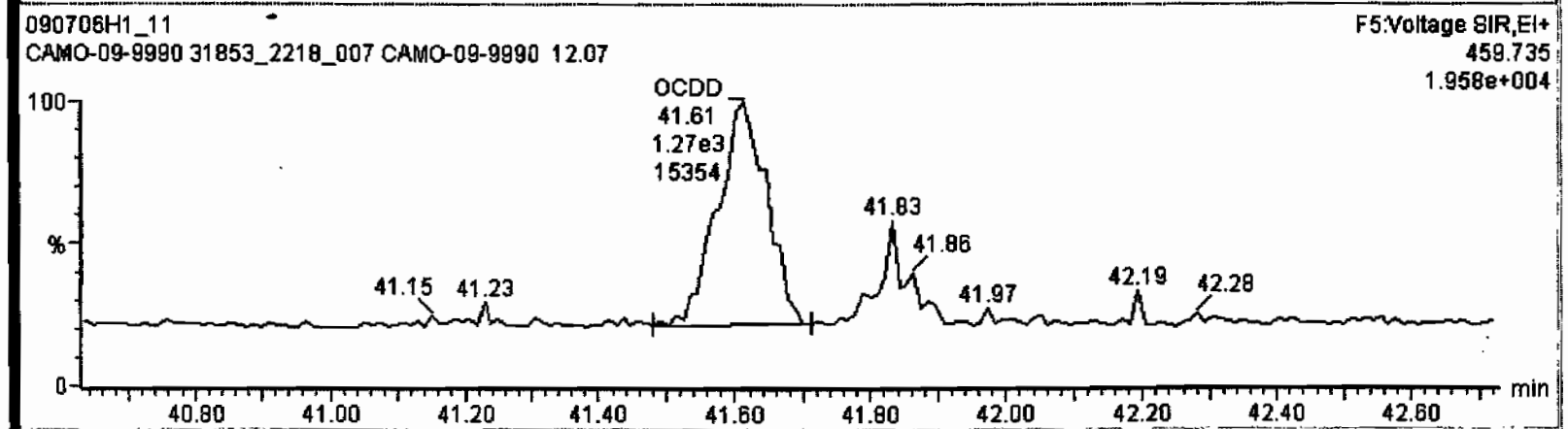

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

2,3,7,8-TCDF

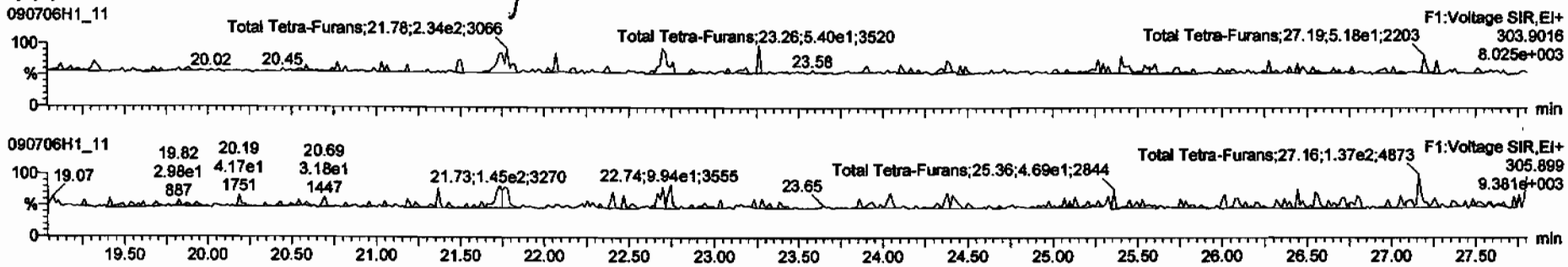

13C-2,3,7,8-TCDF

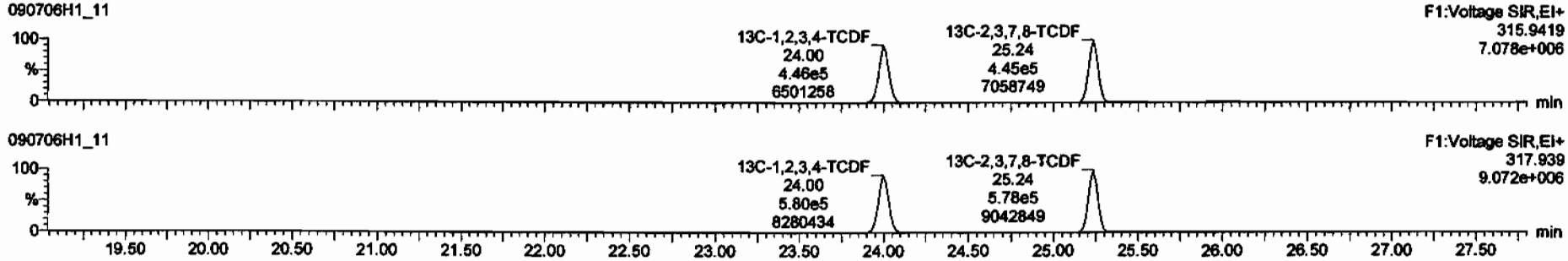

DPE1

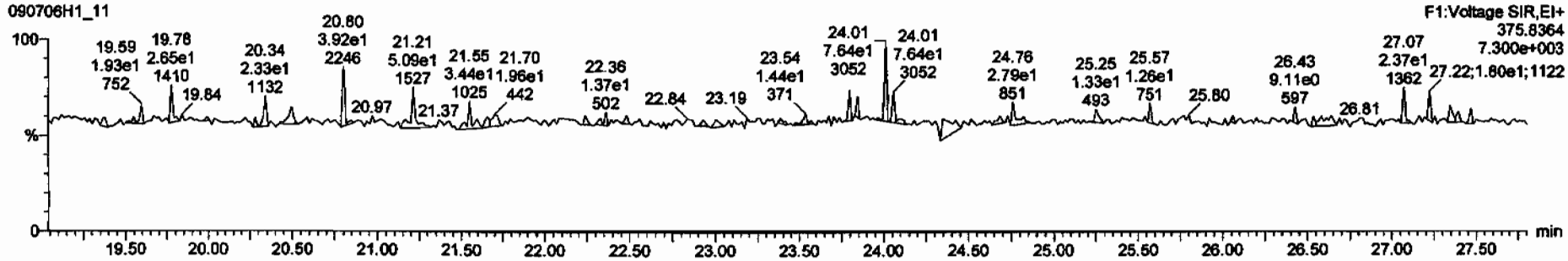

TargetLynx - 090706h1-11.qld * - [Chromatogram]

090706H1_11 - 31853_2218_007 CAMO-09-9990 12.07 - CAMO-09-9990

Name	RT	Area	Height	Ratio	Flag	Conc.	Conf.
Total Tetra-Furans	21.78	2.433e2	2.914e2	0.83	NO	0.097195	0.00000

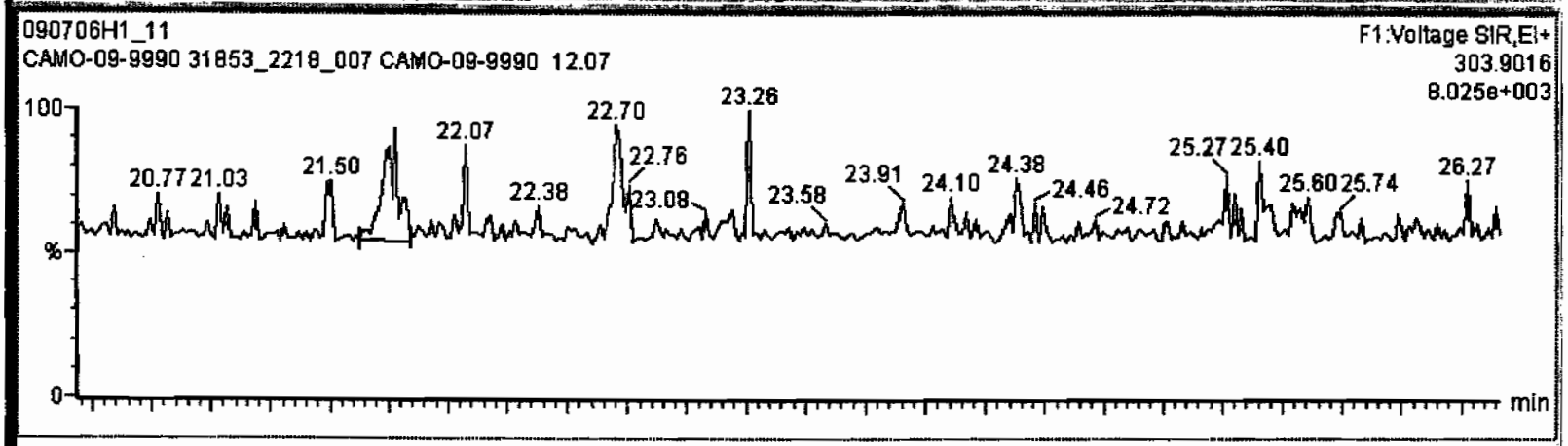

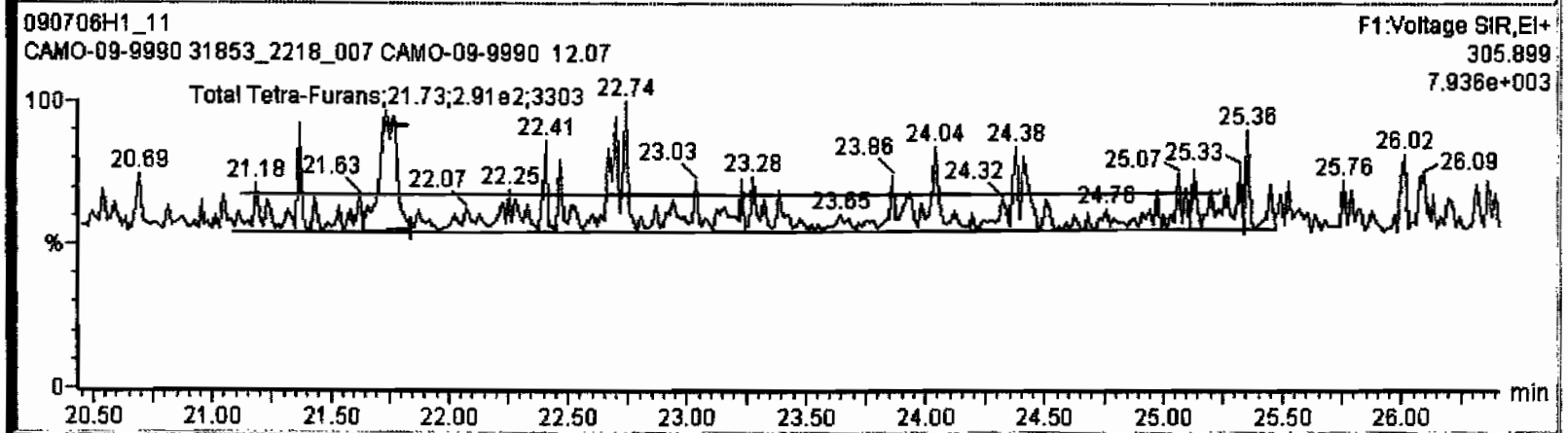

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

1st Func. Penta-Furans

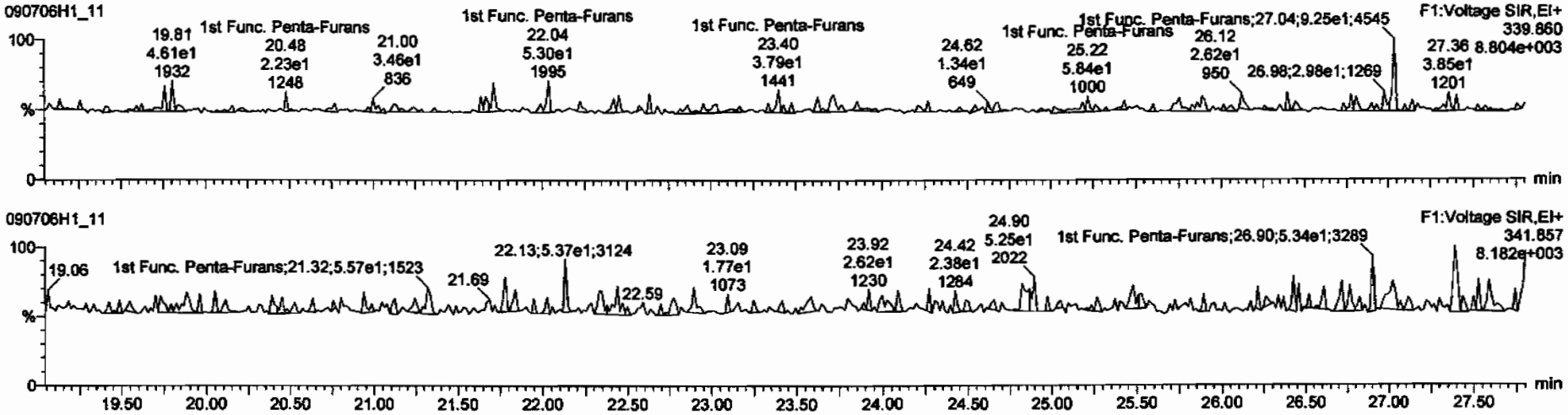

DPE6

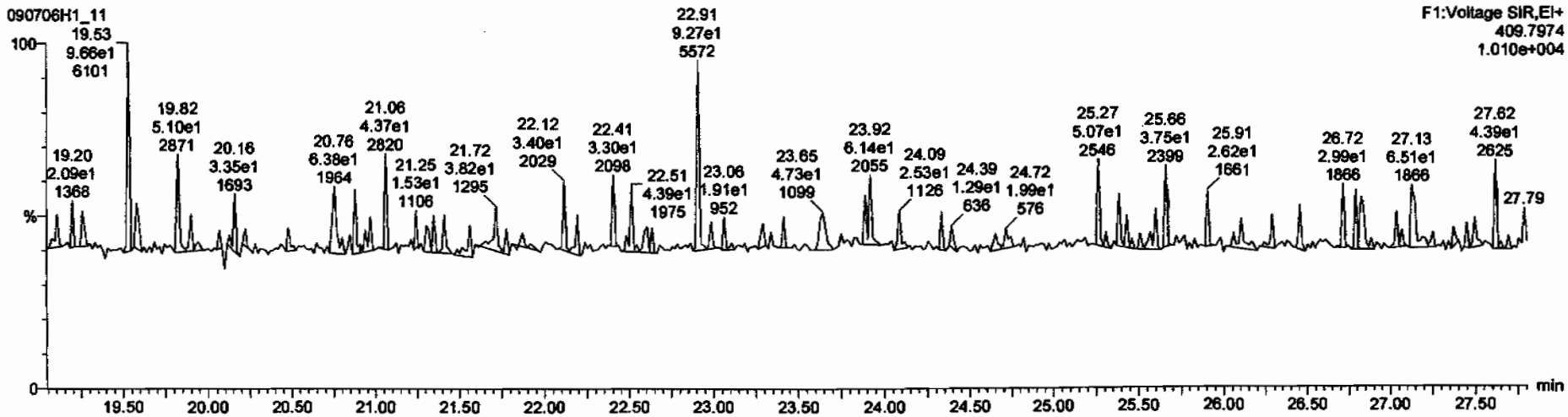

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

1,2,3,7,8-PeCDF

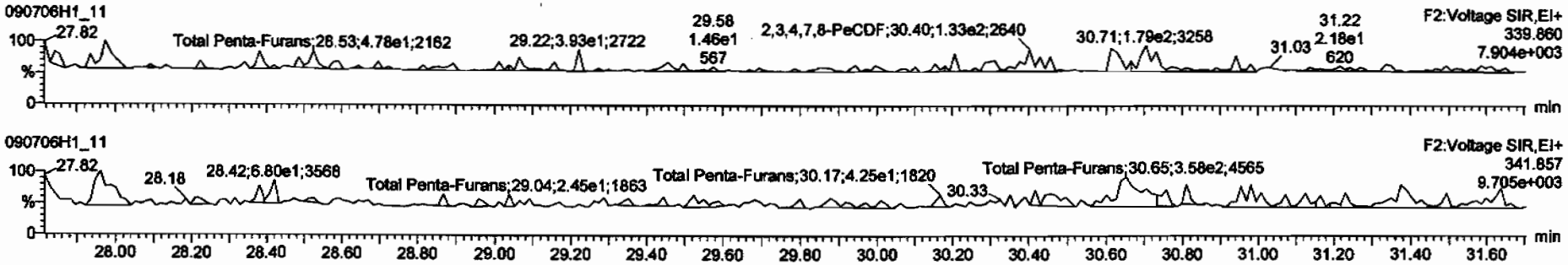

13C-1,2,3,7,8-PeCDF

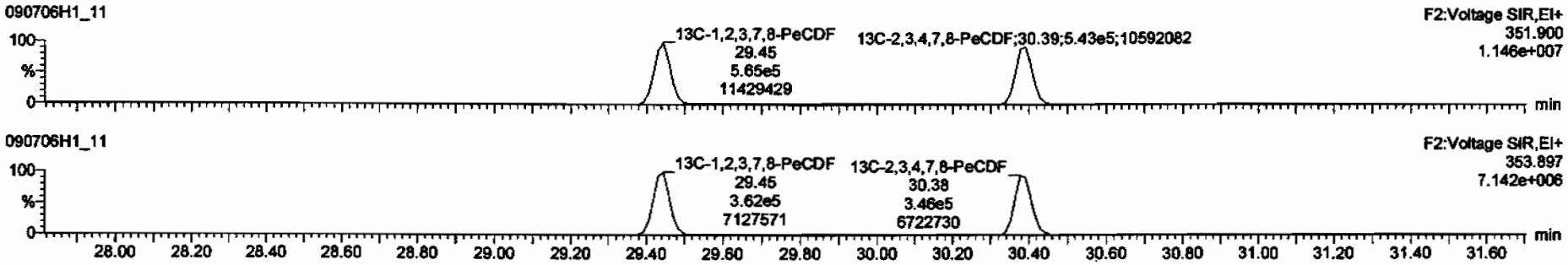

DPE2

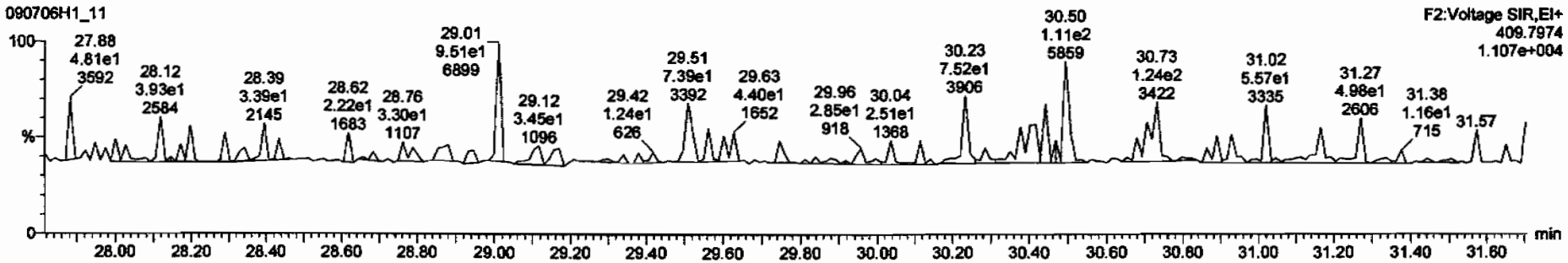

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

1,2,3,4,7,8-HxCDF

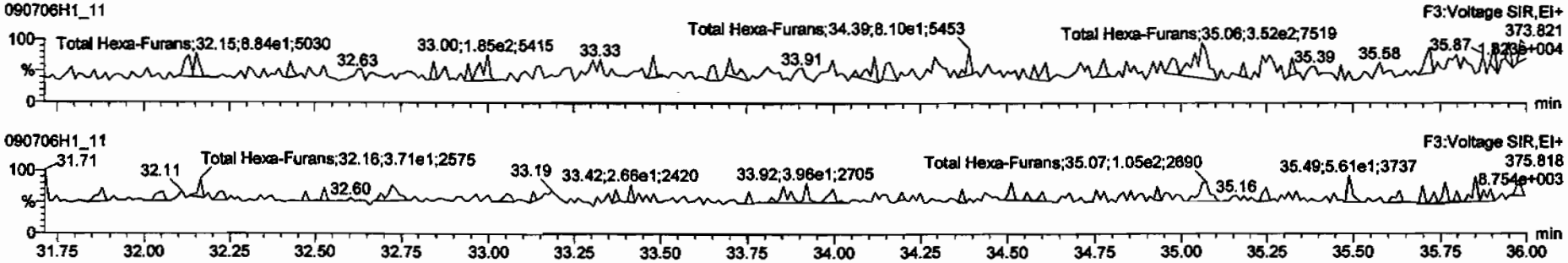

13C-1,2,3,4,7,8-HxCDF

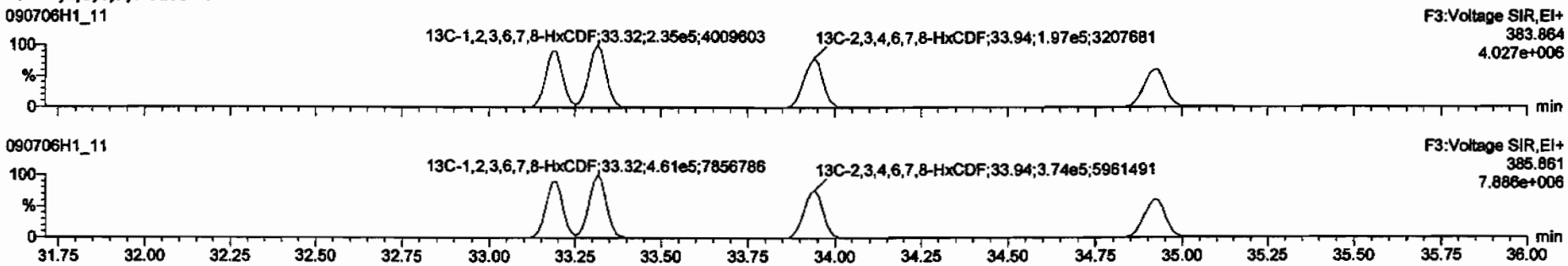

DPE3

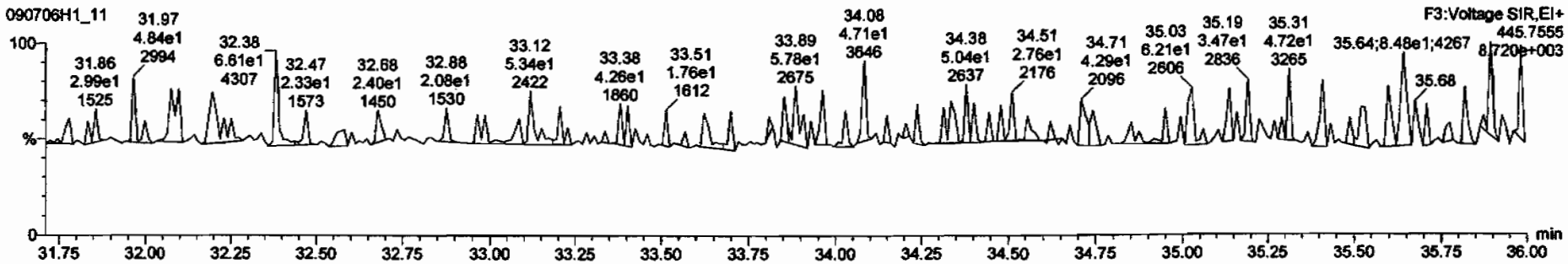

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

1,2,3,4,6,7,8-HpCDF

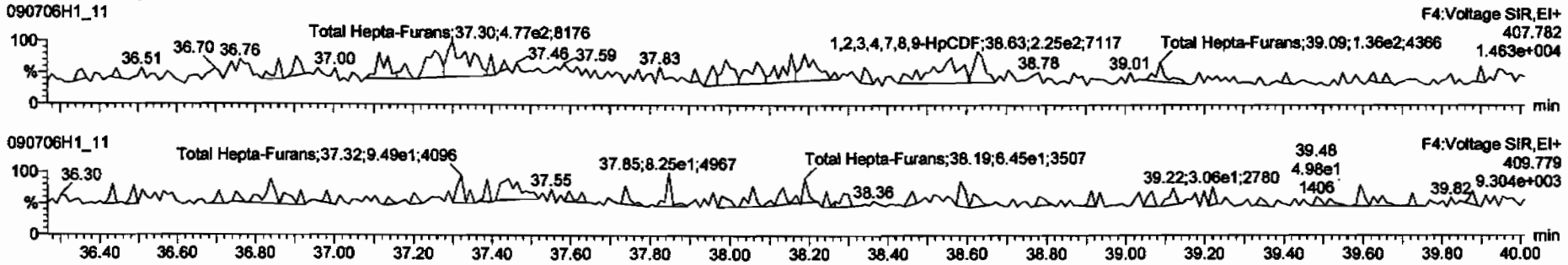

13C-1,2,3,4,6,7,8-HpCDF

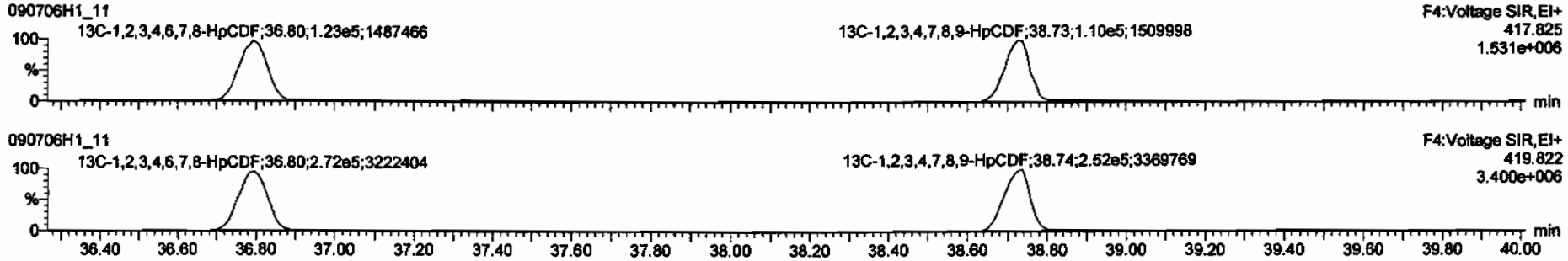

DPE4

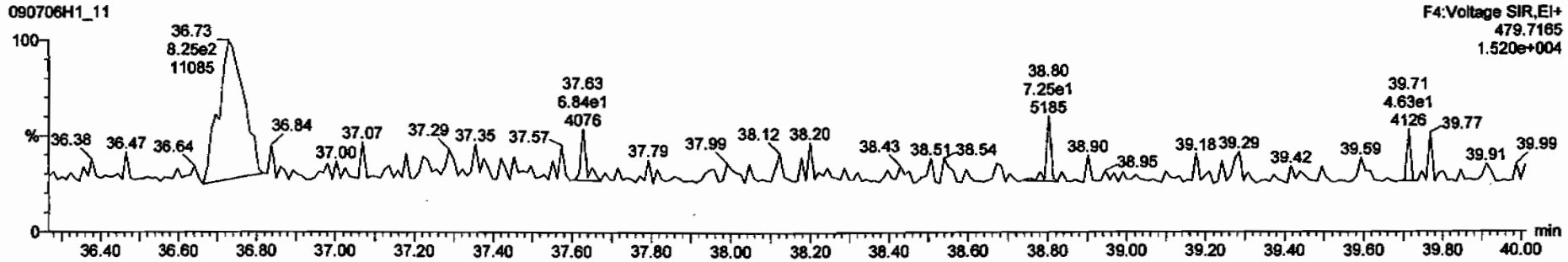

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

OCDF

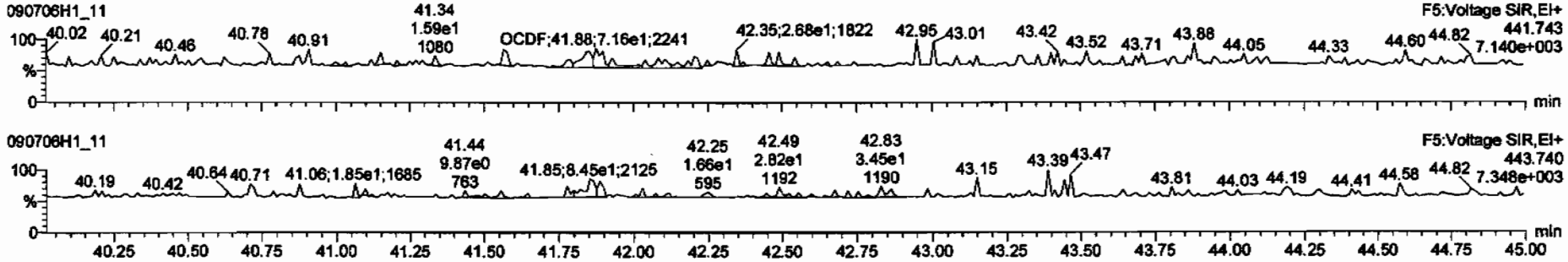

13C-OCDF

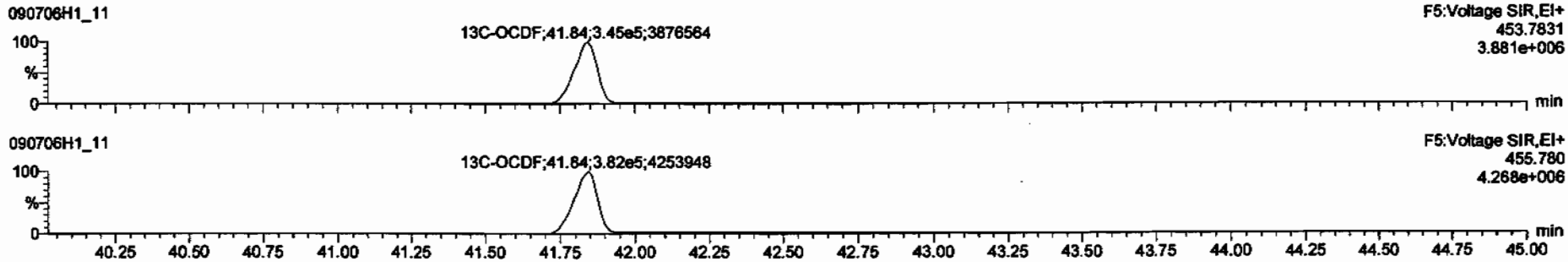

DPE5

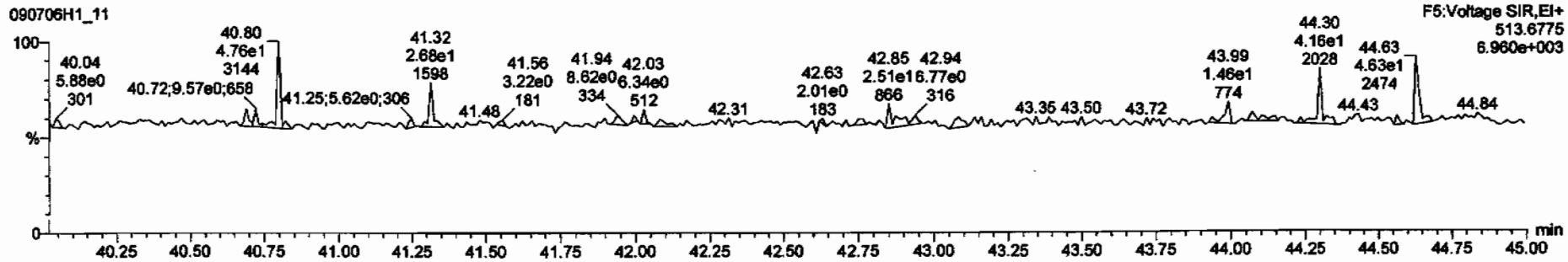

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-11.qld

Last Altered: Tuesday, July 07, 2009 07:46:22 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:46:38 Pacific Daylight Time

Name: 090706H1_11, Date: 06-Jul-2009, Time: 21:42:20, ID: 31853_2218_007 CAMO-09-9990 12.07, Description: CAMO-09-9990

PFK1

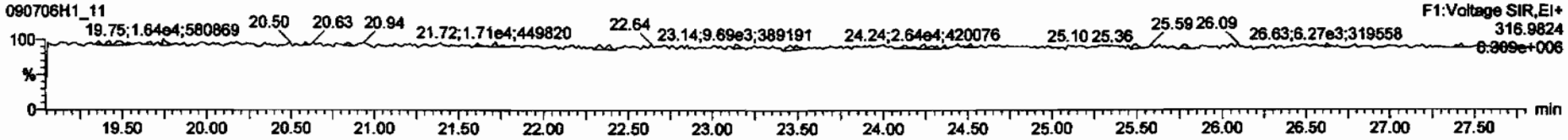

PFK2

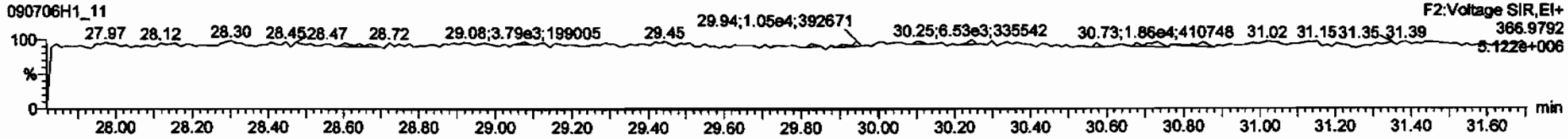

PFK3

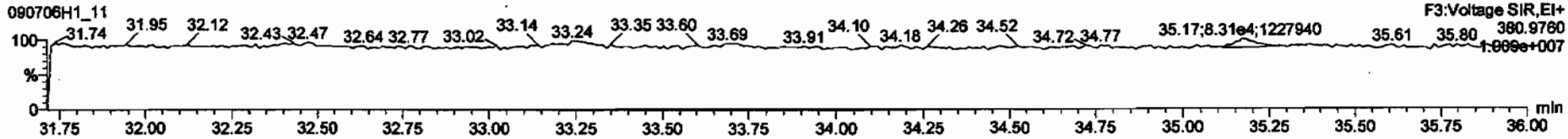

PFK4

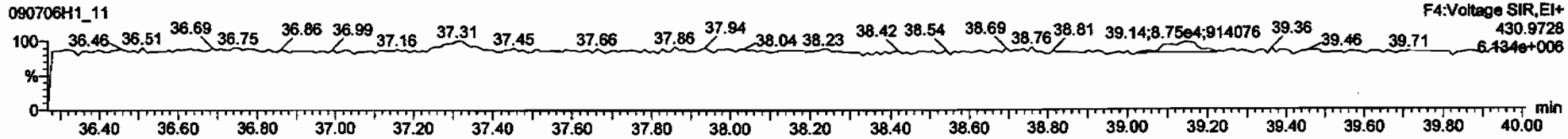

PFK5

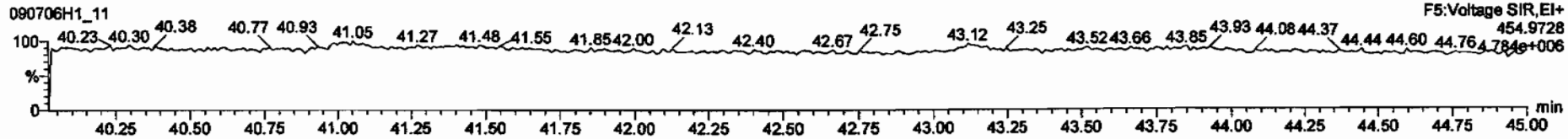

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 14:09:37 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 14:10:07 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

1	2,3,7,8-TCDD			NO	1.08	9.994					0.0626	
2	1,2,3,7,8-PeCDD	1.58e3	0.19	YES	1.03	9.994	30.68	1.000	~~0.57293~~	ND	0.151	0.23565
3	1,2,3,4,7,8-HxCDD	1.36e3	1.63	YES	1.00	9.994	34.14	1.001	~~0.69684~~	ND	0.497	0.54010
4	1,2,3,6,7,8-HxCDD	1.75e3	1.39	NO	1.13	9.994	34.25	1.001	0.78577		0.513	~~0.78577~~
5	1,2,3,7,8,9-HxCDD	1.54e3	1.31	NO	1.10	9.994	34.55	1.010	0.67539		0.486	0.67539
6	1,2,3,4,6,7,8-HpCDD	4.31e4	1.05	NO	1.06	9.994	38.18	1.000	22.125		0.671	22.125
7	OCDD	3.31e5	0.88	NO	1.18	9.994	41.63	1.000	205.64		0.336	205.64
8	2,3,7,8-TCDF	7.88e2	0.66	NO	1.09	9.994	25.24	1.000	0.15193		0.0780	0.15193
9	1,2,3,7,8-PeCDF			NO	1.16	9.994					0.0865	
10	2,3,4,7,8-PeCDF			NO	1.12	9.994					0.101	
11	1,2,3,4,7,8-HxCDF			NO	1.41	9.994					0.200	
12	1,2,3,6,7,8-HxCDF			NO	1.22	9.994					0.222	
13	2,3,4,6,7,8-HxCDF			NO	1.28	9.994					0.280	
14	1,2,3,7,8,9-HxCDF			NO	1.26	9.994					0.342	
15	1,2,3,4,6,7,8-HpCDF	1.06e4	1.16	NO	1.69	9.994	36.82	1.001	3.3342		0.347	~~3.3342~~
16	1,2,3,4,7,8,9-HpCDF			NO	1.48	9.994					0.346	
17	OCDF	1.77e4	0.82	NO	1.10	9.994	41.88	1.001	8.9381		0.183	~~8.9381~~
18	13C-2,3,7,8-TCDD	7.04e5	0.80	NO	1.01	9.994	26.00	1.023	194.75	97.3	0.238	
19	13C-1,2,3,7,8-PeCDD	5.34e5	0.62	NO	0.827	9.994	30.67	1.206	181.24	90.6	0.280	
20	13C-1,2,3,4,7,8-HxCDD	4.31e5	1.25	NO	0.916	9.994	34.11	0.988	185.98	92.9	0.916	
21	13C-1,2,3,6,7,8-HxCDD	3.95e5	1.24	NO	0.921	9.994	34.22	0.991	169.78	84.8	0.912	
22	13C-1,2,3,4,6,7,8-HpCDD	3.67e5	1.02	NO	0.708	9.994	38.17	1.106	204.91	102	1.43	
23	13C-OCDD	5.47e5	0.88	NO	0.503	9.994	41.62	1.206	431.02	108	1.14	
24	13C-2,3,7,8-TCDF	9.54e5	0.77	NO	0.977	9.994	25.24	0.993	200.73	100	0.207	
25	13C-1,2,3,7,8-PeCDF	9.22e5	1.55	NO	0.896	9.994	29.44	1.158	211.30	106	0.388	
26	13C-2,3,4,7,8-PeCDF	8.18e5	1.55	NO	0.900	9.994	30.38	1.195	186.70	93.3	0.387	
27	13C-1,2,3,4,7,8-HxCDF	6.00e5	0.52	NO	1.17	9.994	33.19	0.961	203.28	102	0.664	
28	13C-1,2,3,6,7,8-HxCDF	6.66e5	0.52	NO	1.52	9.994	33.32	0.965	173.57	86.7	0.511	
29	13C-2,3,4,6,7,8-HxCDF	5.29e5	0.53	NO	1.25	9.994	33.94	0.983	167.49	83.7	0.622	
30	13C-1,2,3,7,8,9-HxCDF	4.79e5	0.50	NO	1.05	9.994	34.92	1.011	180.07	90.0	0.738	

J 7/7/09

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 14:09:37 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 14:10:07 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

31	13C-1,2,3,4,6,7,8-HpCDF	3.77e5	0.44	NO	0.868	9.994	36.79	1.066	172.04	86.0	1.56	
32	13C-1,2,3,4,7,8,9-HpCDF	3.50e5	0.44	NO	0.727	9.994	38.74	1.122	190.70	95.3	1.87	
33	13C-OCDF	7.25e5	0.90	NO	0.760	9.994	41.85	1.212	377.69	94.4	0.574	
34	37Cl-2,3,7,8-TCDD	1.71e5			0.668	9.994	26.03	1.024	71.818	89.7	0.123	
35	13C-1,2,3,4-TCDD	7.13e5	0.80	NO	1.00	9.994	25.42	0.000	200.12	100	0.242	
36	13C-1,2,3,4-TCDF	9.74e5	0.78	NO	1.00	9.994	23.98	0.000	200.12	100	0.202	
37	13C-1,2,3,7,8,9-HxCDD	5.06e5	1.23	NO	1.00	9.994	34.52	0.000	200.12	100	0.839	
38	Total Tetra-Dioxins				1.08	9.994			0.11076		0.0626	~~0.11076~~
39	Total Penta-Dioxins				1.03	9.994			~~0.00000~~ nD		0.0529	0.23565
40	Total Hexa-Dioxins				1.13	9.994			5.9145		0.476	6.4546
41	Total Hepta-Dioxins				1.08	9.994			40.908		0.671	~~40.908~~
42	Total Tetra-Furans				1.09	9.994			0.59241		0.0780	~~0.59241~~
43	1st Func. Penta-Furans				1.16	9.994			~~0.64678~~ 0.816		0.0350	~~0.64678~~ 1.25
44	Total Penta-Furans				1.16	9.994			~~6.16920~~		0.0914	~~6.16920~~
45	Total Hexa-Furans				1.28	9.994			3.3053		0.256	~~3.3053~~
46	Total Hepta-Furans				1.69	9.994			8.6022		0.326	~~8.6022~~

Quantify Totals Report MassLynx 4.1
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 14:09:37 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 14:10:07 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

Tetra-Dioxins

	Total Tetra-Dioxins	22.62	3.746e3	4.062e3	1.682e2	2.518e2	0.67	NO	4.200e2	0.11076	0.11076	0.0626

Penta-Dioxins

	1,2,3,7,8-PeCDD	30.68	4.414e3	1.415e4	2.511e2	1.327e3	0.19	YES	1.578e3	0.00000	0.23565	0.151

Hexa-Dioxins

	Total Hexa-Dioxins	32.52	4.322e4	3.710e4	2.511e3	1.831e3	1.37	NO	4.342e3	1.8706	1.8706	0.476
	Total Hexa-Dioxins	33.40	4.423e4	3.554e4	3.414e3	2.581e3	1.32	NO	5.995e3	2.5827	2.5827	0.476
	1,2,3,4,7,8-HxCDD	34.14	1.306e4	8.538e3	8.451e2	5.195e2	1.63	YES	1.365e3	0.00000	0.54010	0.497
	1,2,3,6,7,8-HxCDD	34.25	1.579e4	1.173e4	1.016e3	7.296e2	1.39	NO	1.745e3	0.78577	0.78577	0.513
	1,2,3,7,8,9-HxCDD	34.55	1.593e4	9.737e3	8.712e2	6.640e2	1.31	NO	1.535e3	0.67539	0.67539	0.486

Hepta-Dioxins

	Total Hepta-Dioxins	37.23	2.432e5	2.425e5	1.859e4	1.803e4	1.03	NO	3.662e4	18.782	18.782	0.671
	1,2,3,4,6,7,8-HpCDD	38.18	3.498e5	3.419e5	2.206e4	2.108e4	1.05	NO	4.314e4	22.125	22.125	0.671

Tetra-Furans

	Total Tetra-Furans	21.73	6.253e3	7.801e3	4.793e2	6.459e2	0.74	NO	1.125e3	0.21691	0.21691	0.0780
	2,3,7,8-TCDF	25.24	4.580e3	7.374e3	3.145e2	4.736e2	0.66	NO	7.881e2	0.15193	0.15193	0.0780
	Total Tetra-Furans	25.57	8.990e3	1.021e4	5.327e2	6.270e2	0.85	NO	1.160e3	0.22357	0.22357	0.0780

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 14:09:37 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 14:10:07 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

Penta-Furans function 1

	1st Func. Penta-Furans	27.01	3.255e4	1.989e4	1.946e3	1.310e3	1.49	NO	3.257e3	0.64678	0.64678	0.0350

Penta-Furans

	Total Penta-Furans	28.40	9.046e3	7.939e3	5.056e2	3.468e2	1.46	NO	8.524e2	0.16929	0.16929	0.0914
	Total Penta-Furans	28.49	2.457e4	1.483e4	1.710e3	8.551e2	2.00	YES	0.000e0	0.00000	0.43302	0.0914

Hexa-Furans

	Total Hexa-Furans	31.98	2.031e4	1.499e4	9.957e2	7.671e2	1.30	NO	1.763e3	0.48469	0.48469	0.256
	Total Hexa-Furans	32.14	7.378e4	6.277e4	3.849e3	2.950e3	1.30	NO	6.799e3	1.8693	1.8693	0.256
	Total Hexa-Furans	32.71	3.406e4	2.864e4	1.959e3	1.501e3	1.31	NO	3.460e3	0.95124	0.95124	0.256

Hepta-Furans

	1,2,3,4,6,7,8-HpCDF	36.82	6.870e4	6.714e4	5.713e3	4.906e3	1.16	NO	1.062e4	3.3342	3.3342	0.347
	Total Hepta-Furans	37.47	1.163e5	1.173e5	8.271e3	7.899e3	1.05	NO	1.617e4	5.2680	5.2680	0.326

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

2,3,7,8-TCDD

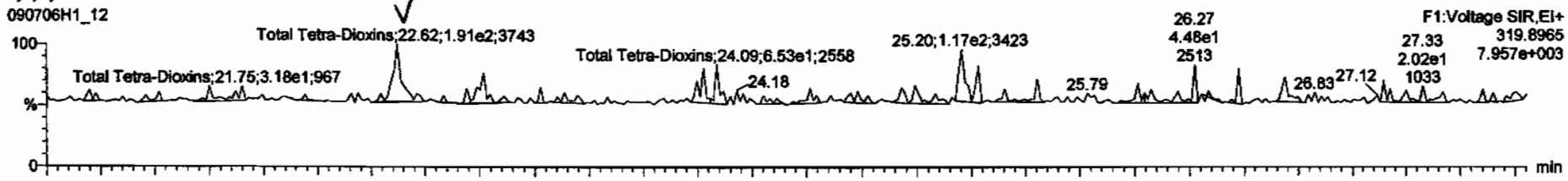

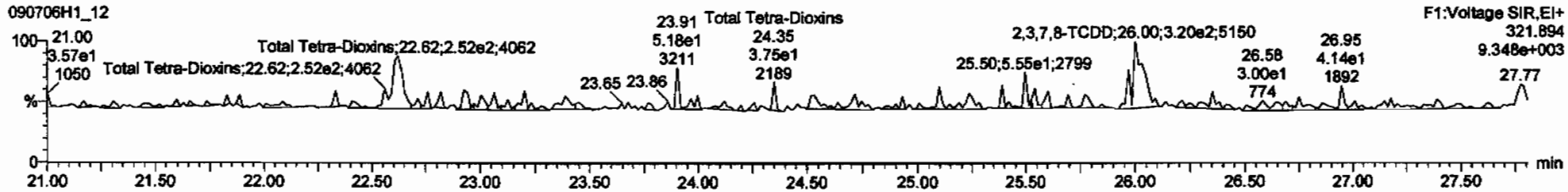

13C-2,3,7,8-TCDD

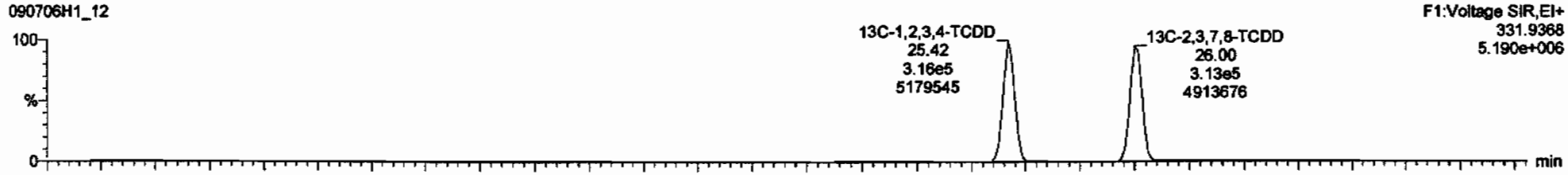

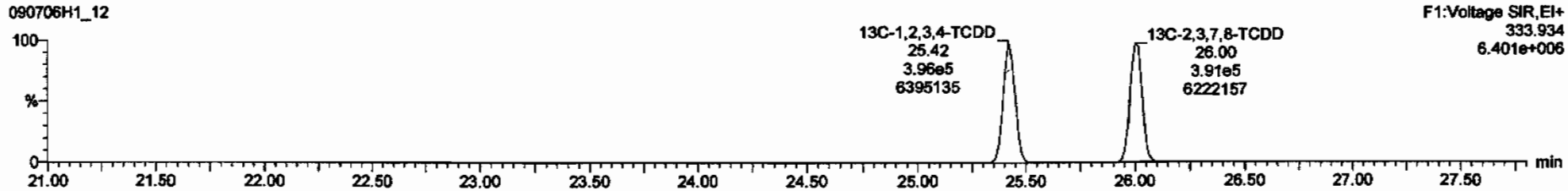

TargetLynx - 090706h1-12.qld * - [Chromatogram]

090706H1_12 - 31853_2218_008 CAMO-09-10031 11.41 - CAMO-09-10031

Total Tetra-Dioxins	22.62	1.682e2	2.518e2	0.67	NO	0.11076	0.11076

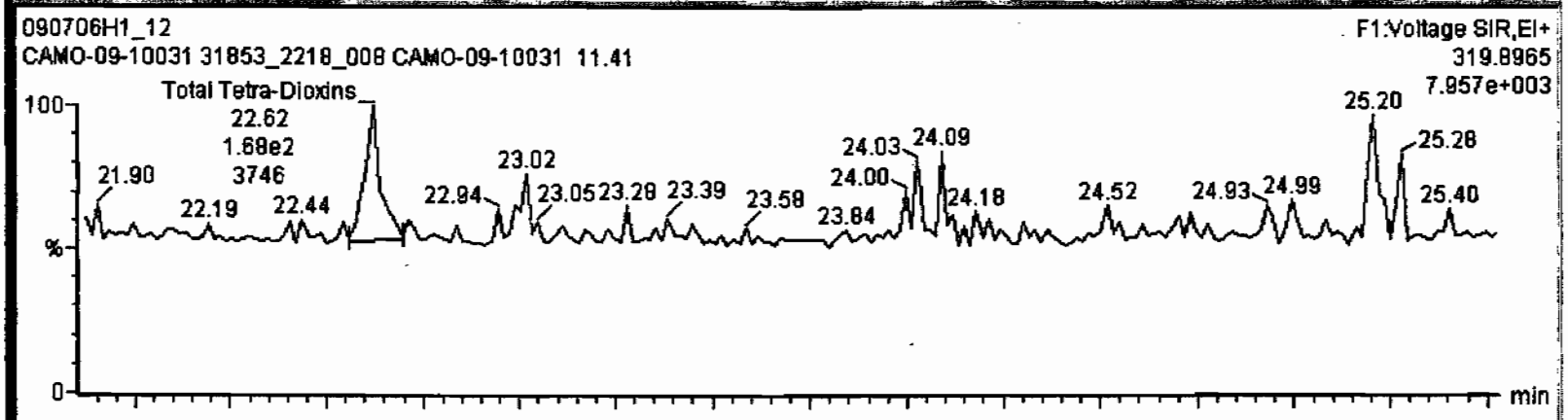

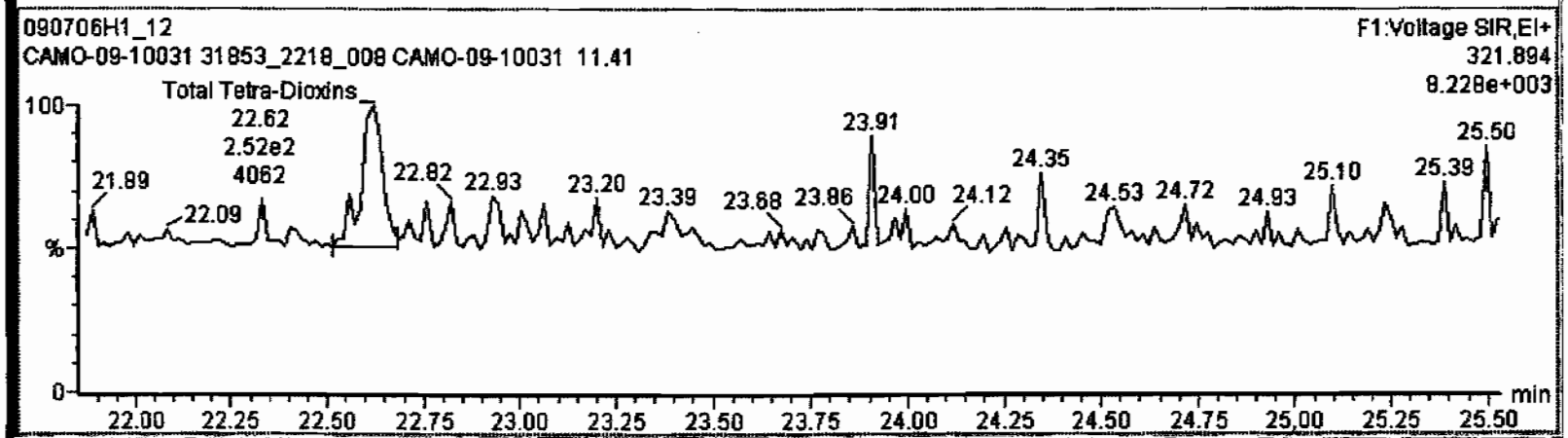

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

37Cl-2,3,7,8-TCDD

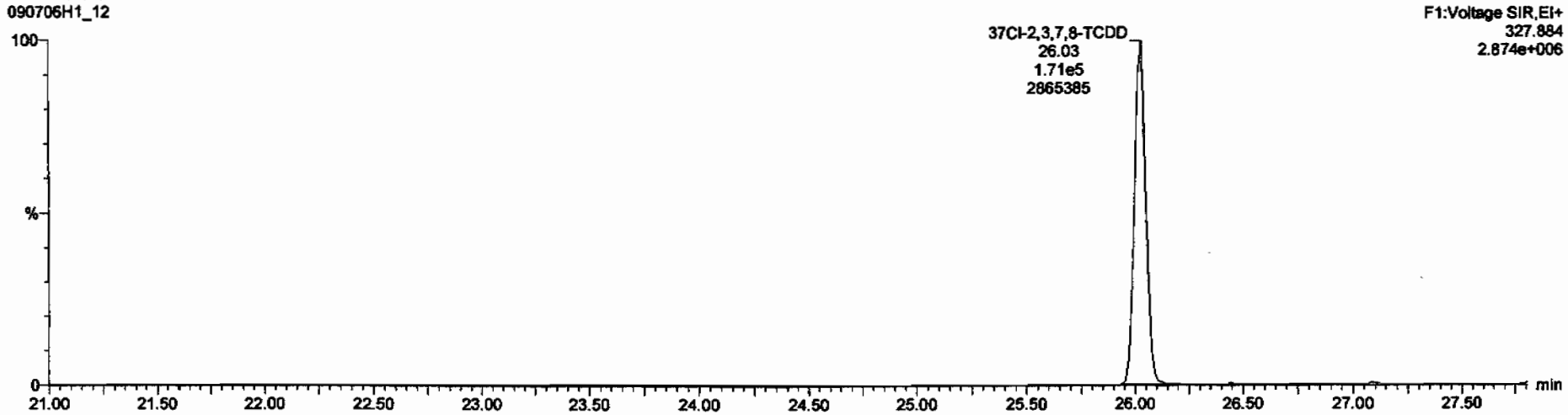

13C-1,2,3,4-TCDD

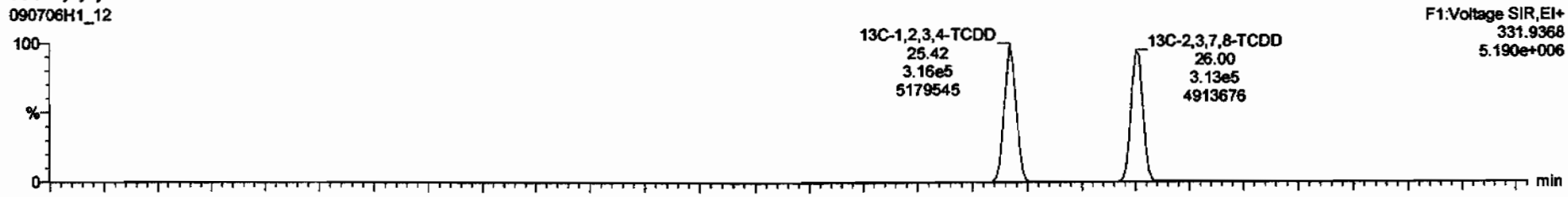

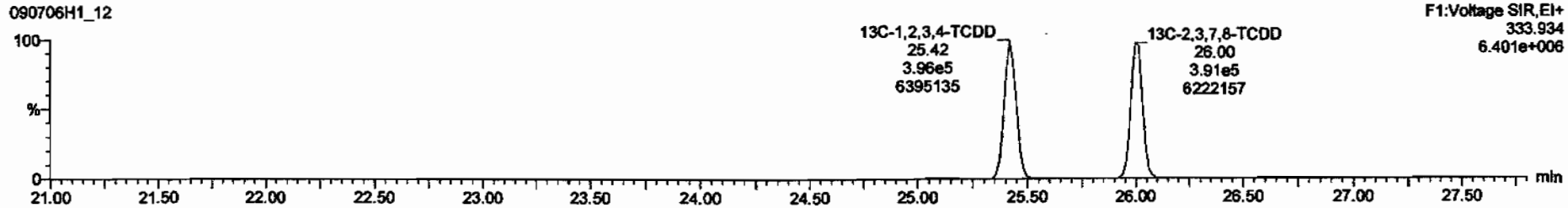

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

1,2,3,7,8-PeCDD

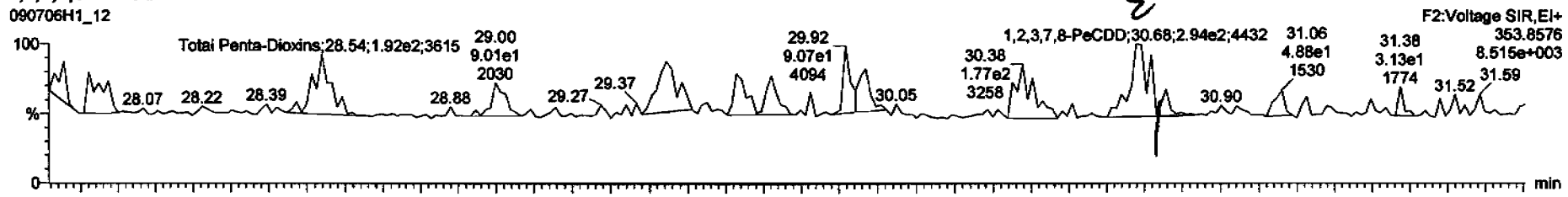

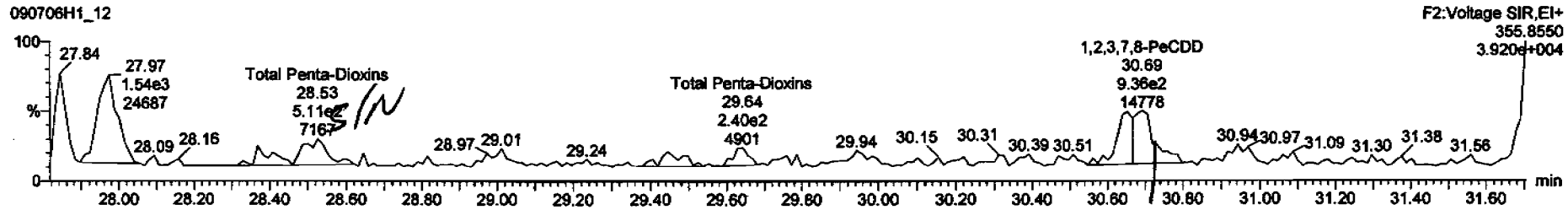

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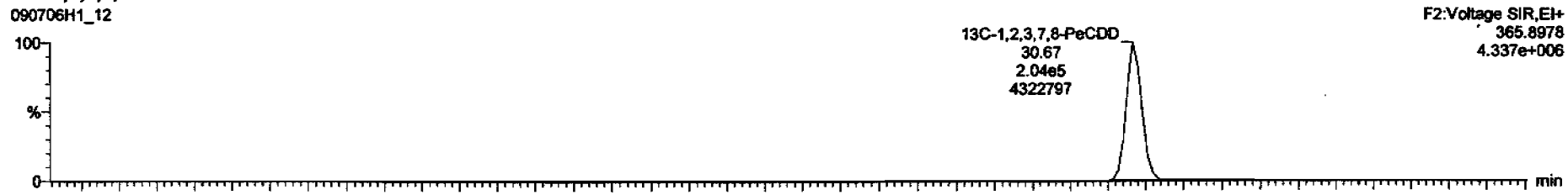

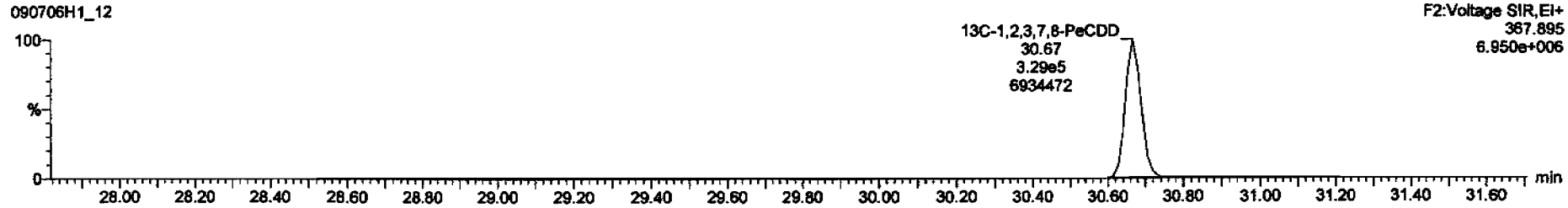

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

1,2,3,4,7,8-HxCDD

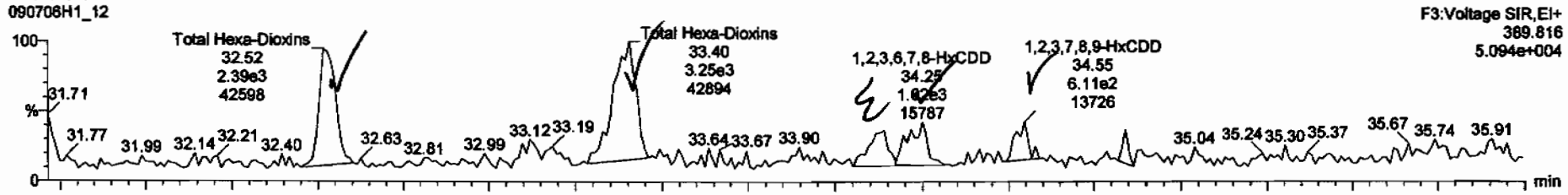

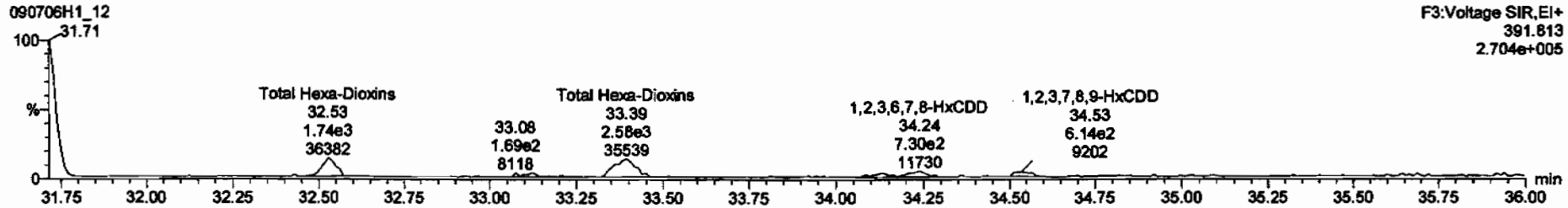

13C-1,2,3,4,7,8-HxCDD

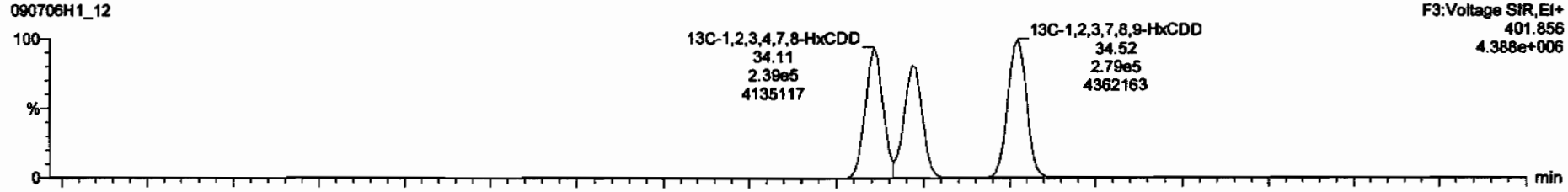

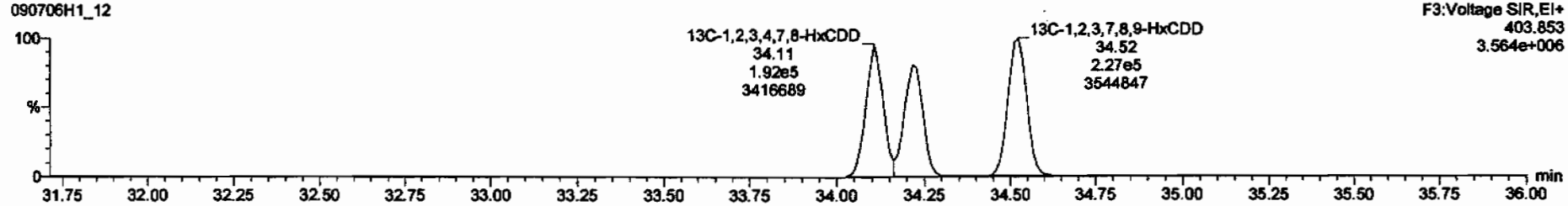

TargetLynx - 090706h1-12.qld * - [Chromatogram]

090706H1_12 - 31853_2218_008 CAMO-09-10031 11.41 - CAMO-09-10031

Name	RT	Area	Height	S/N	Sel	Amount	Conc
Total Hexa-Dioxins	32.52	2.511e3	1.831e3	1.37	NO	1.8706	1.8706
Total Hexa-Dioxins	33.40	3.414e3	2.581e3	1.32	NO	2.5827	2.5827
1,2,3,4,7,8-HxCDD	34.14	8.451e2	5.195e2	1.63	YES	0.54010	0.00000
1,2,3,6,7,8-HxCDD	34.25	1.016e3	7.296e2	1.39	NO	0.78577	0.78577
1,2,3,7,8,9-HxCDD	34.55	8.712e2	6.640e2	1.31	NO	0.67539	0.67539

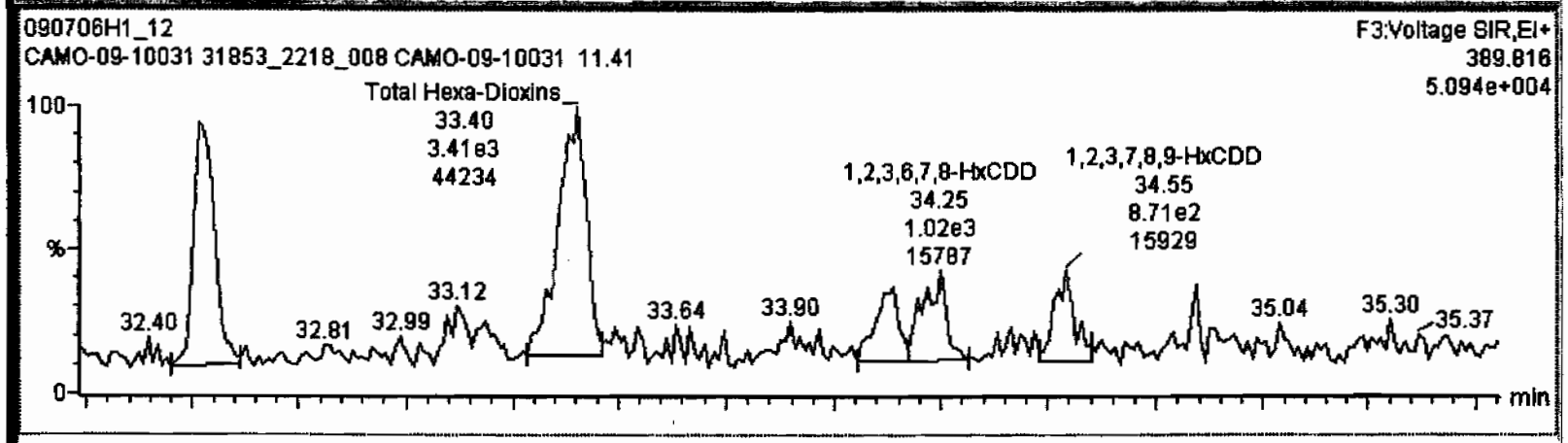

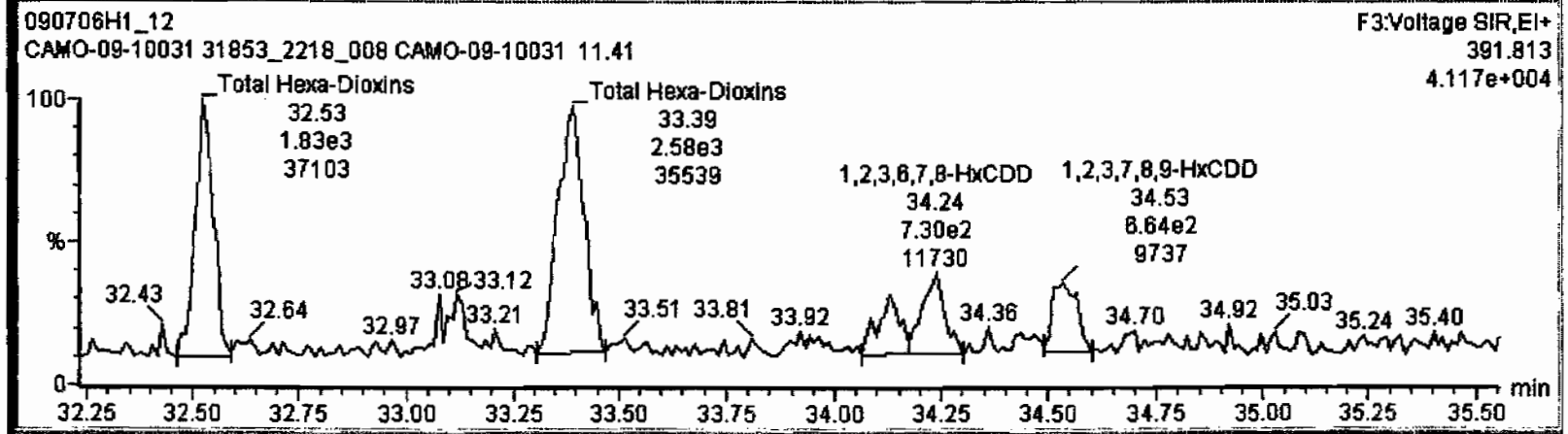

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

1,2,3,4,6,7,8-HpCDD

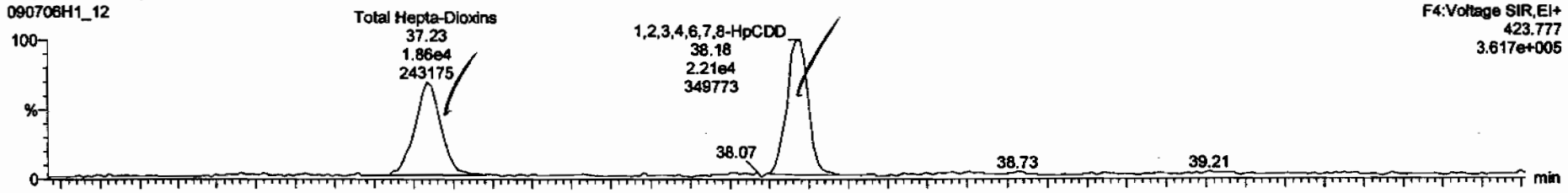

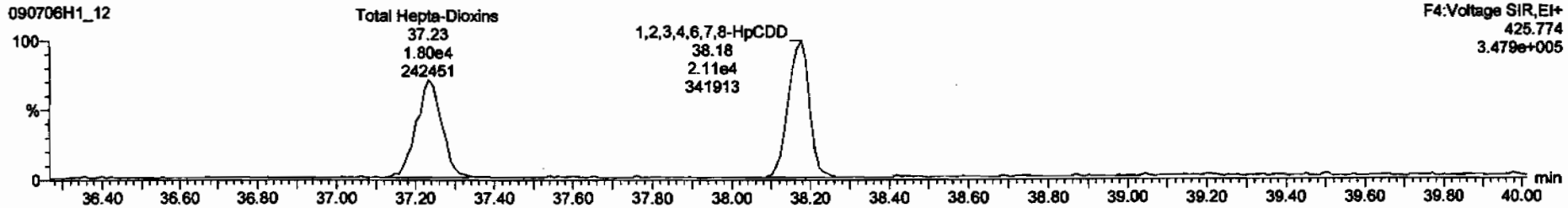

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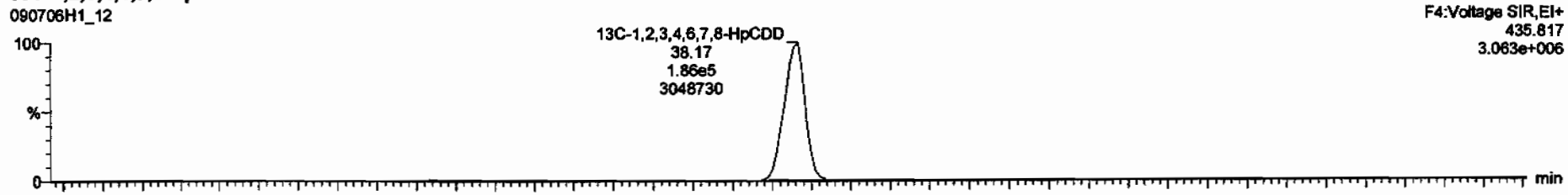

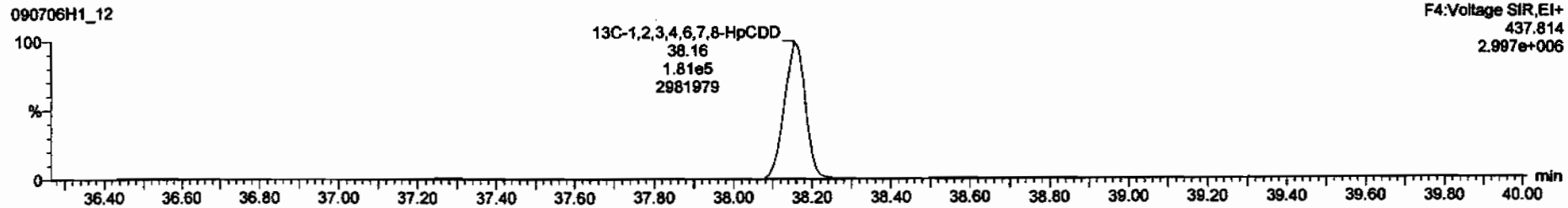

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

OCDD

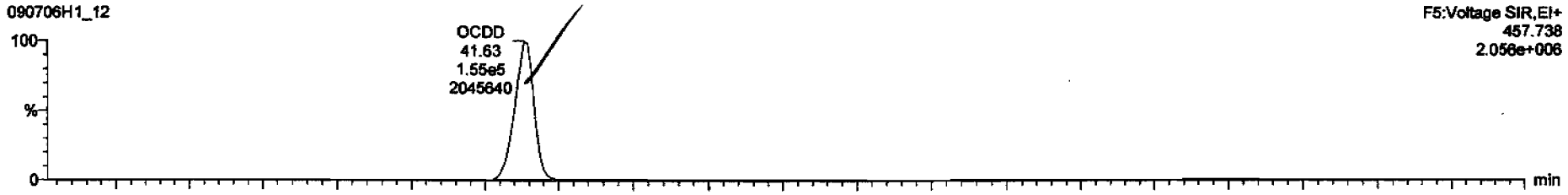

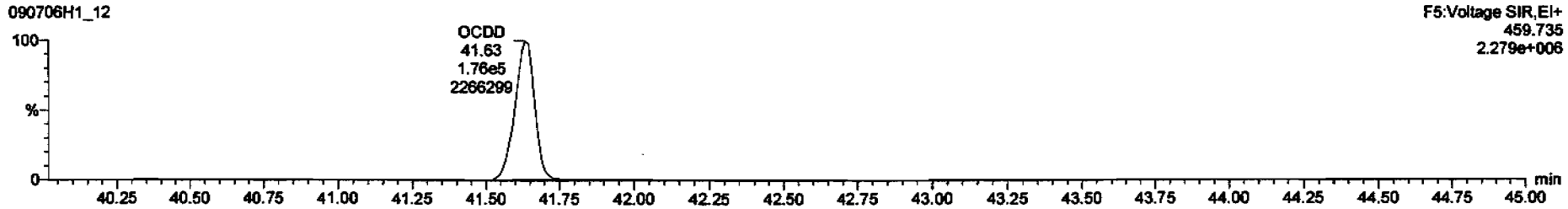

13C-OCDD

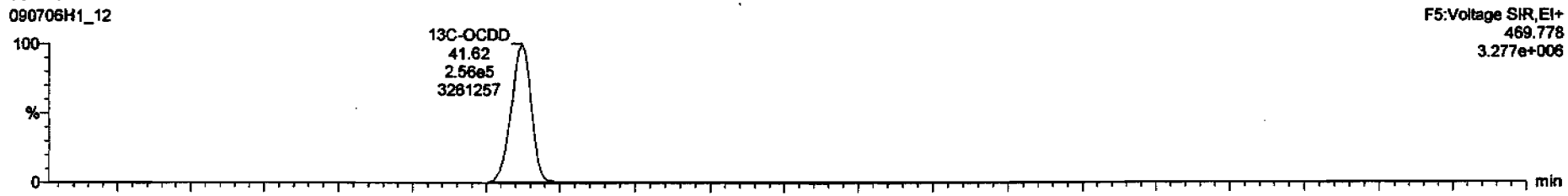

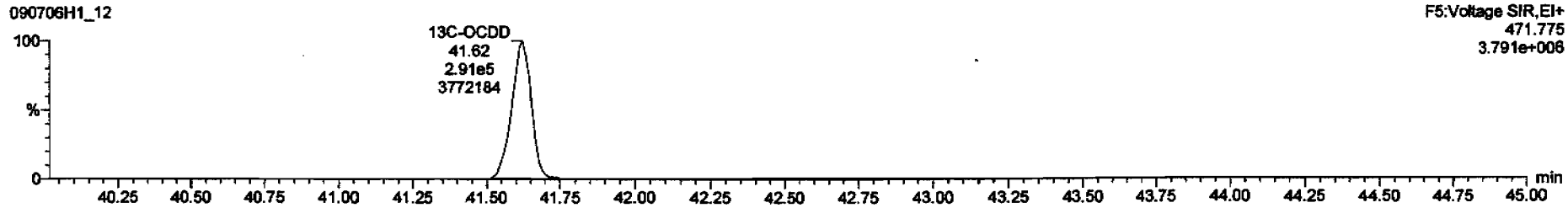

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

2,3,7,8-TCDF

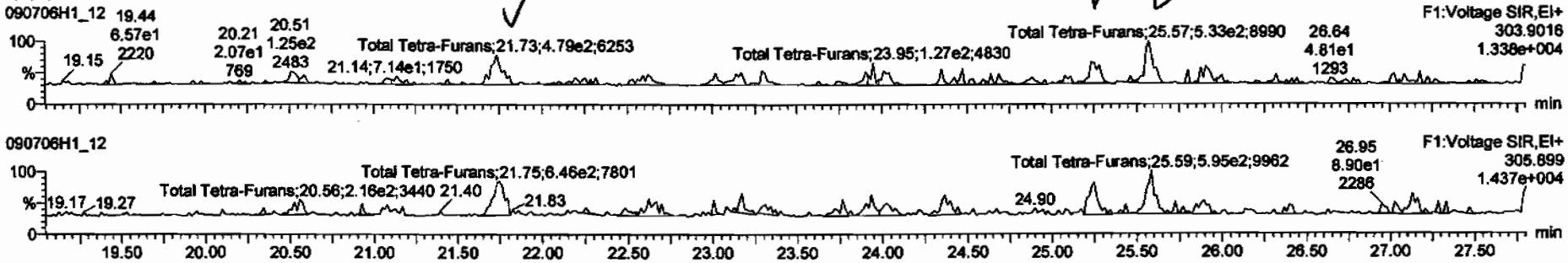

13C-2,3,7,8-TCDF

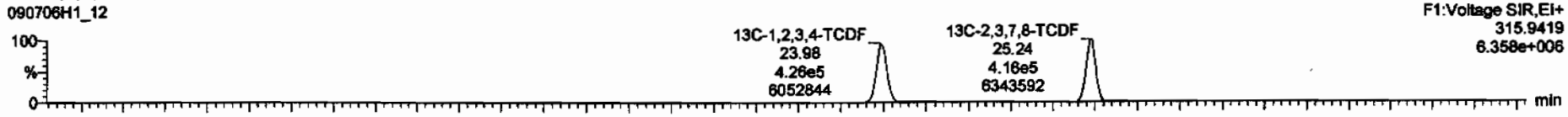

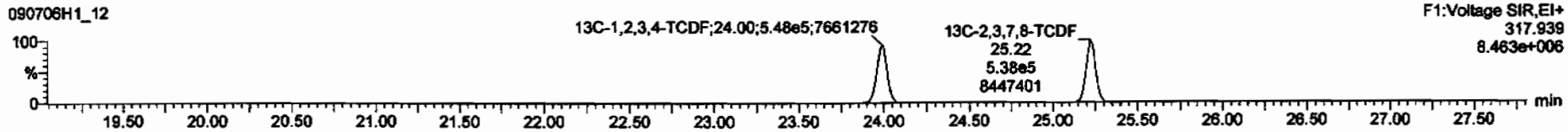

DPE1

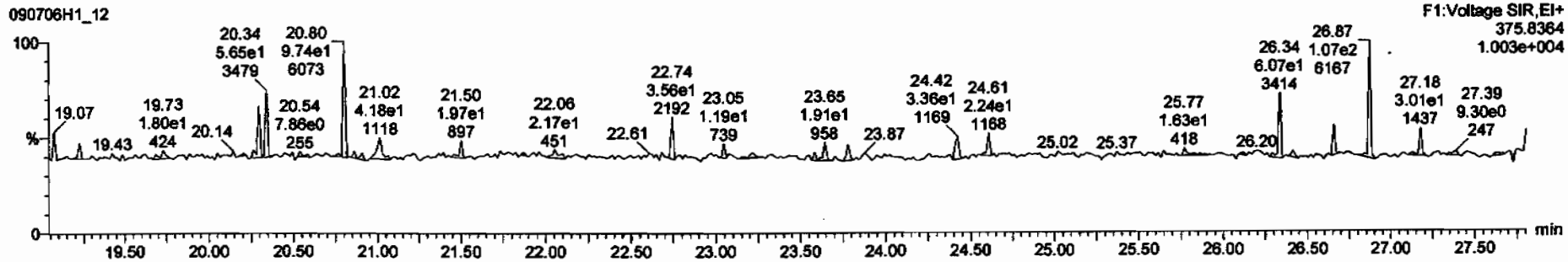

TargetLynx - 090706h1-12.qld * - [Chromatogram]

090706H1_12 - 31853_2218_008 CAMO-09-10031 11.41 - CAMO-09-10031

Name	RT	Int Resp	Total Resp	Ratio	Yes	Conc	Resp
Total Tetra-Furans	21.73	4.793e2	6.459e2	0.74	NO	0.21691	0.21691
2,3,7,8-TCDF	25.24	3.145e2	4.736e2	0.66	NO	0.15193	0.15193
Total Tetra-Furans	25.57	5.327e2	6.270e2	0.85	NO	0.22357	0.22357

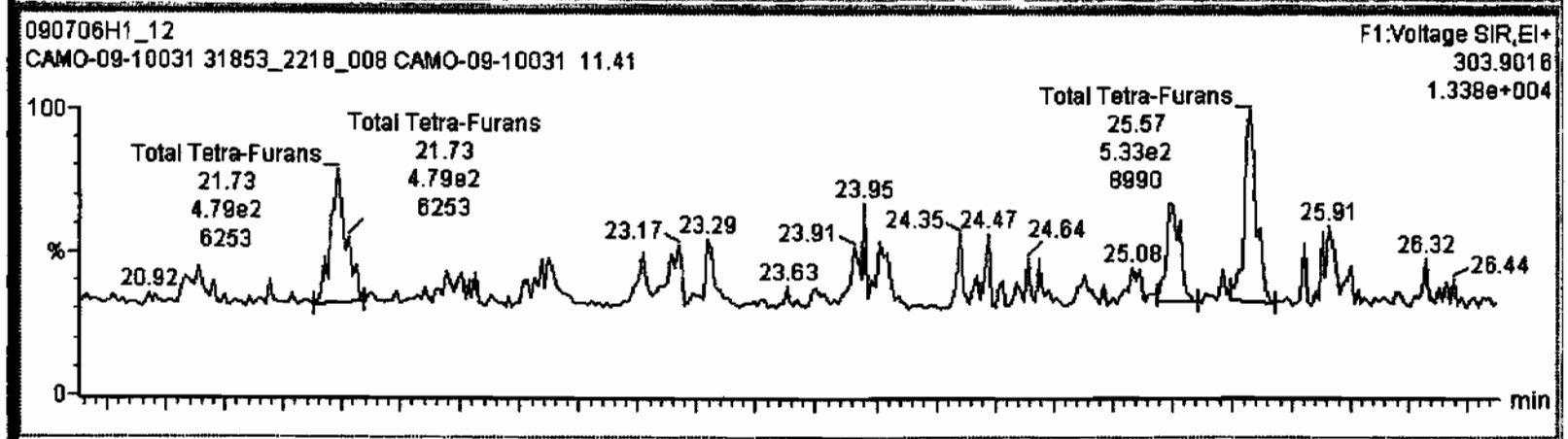

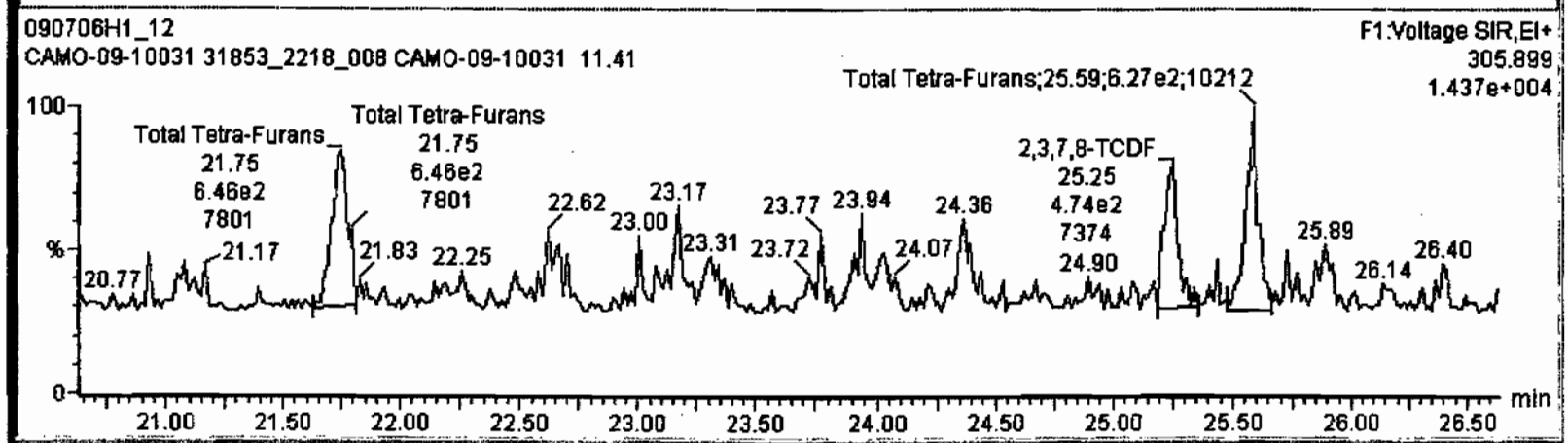

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

1st Func. Penta-Furans

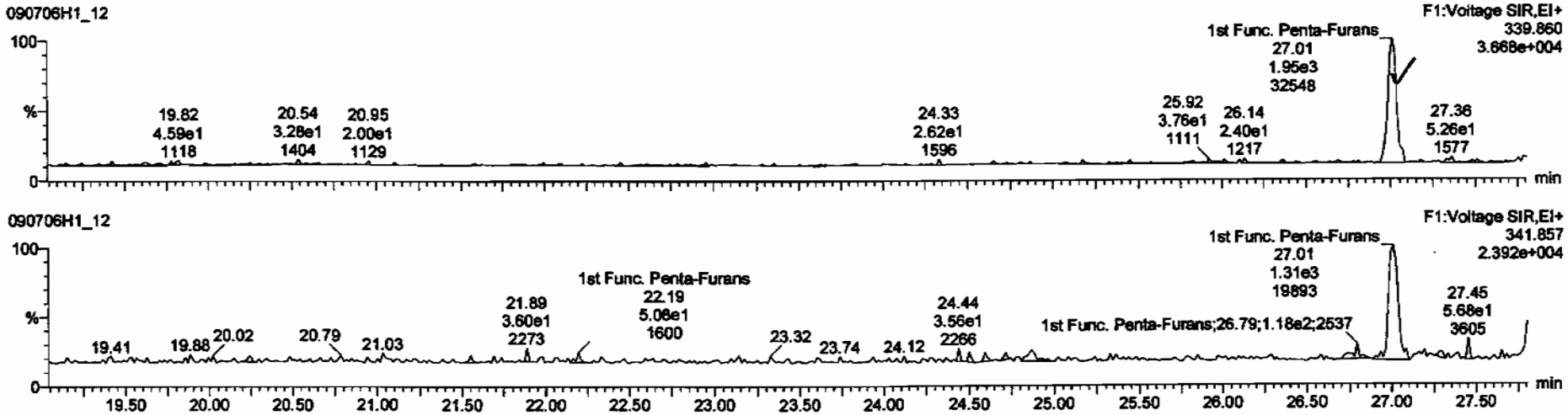

DPE6

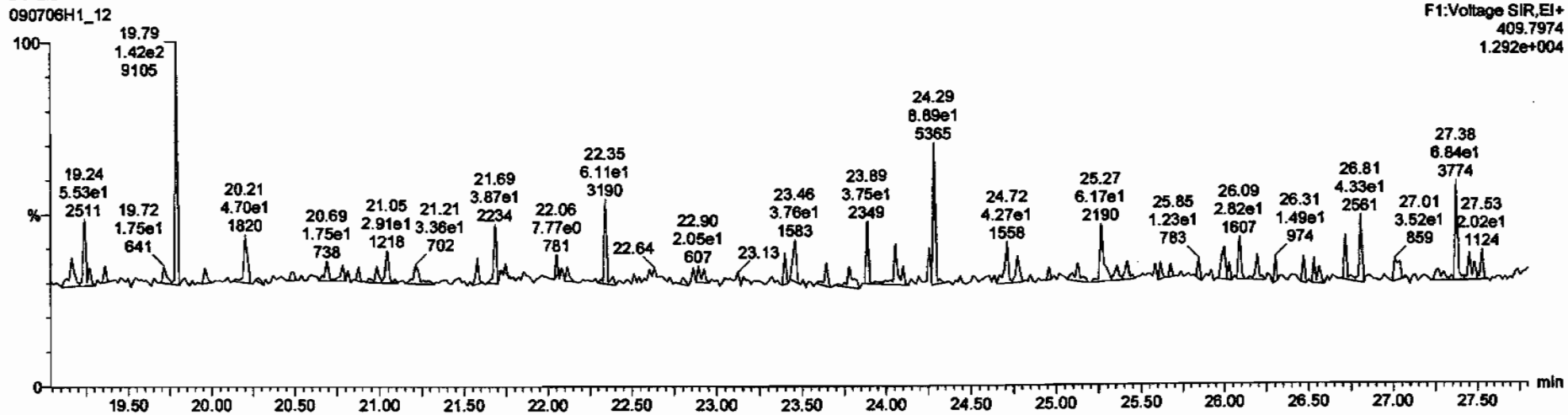

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

1,2,3,7,8-PeCDF

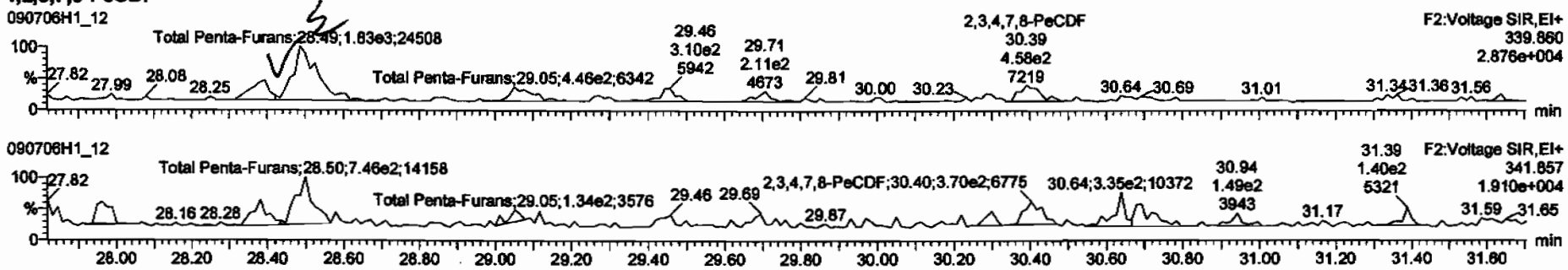

13C-1,2,3,7,8-PeCDF

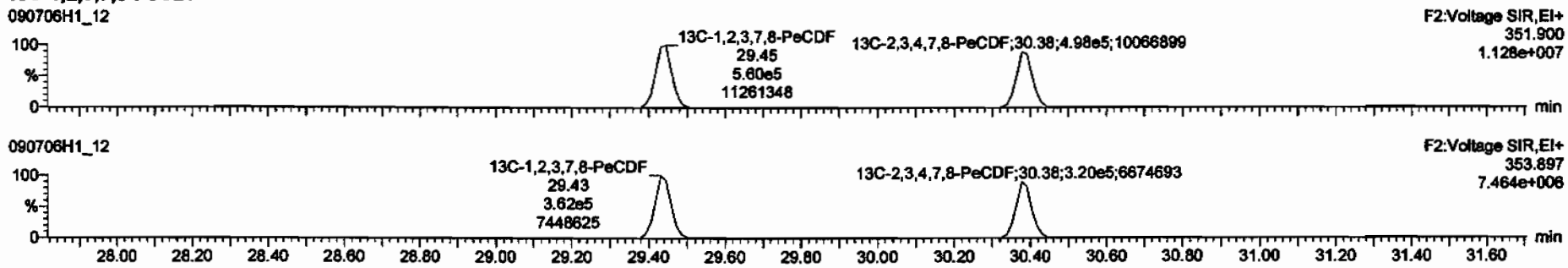

DPE2

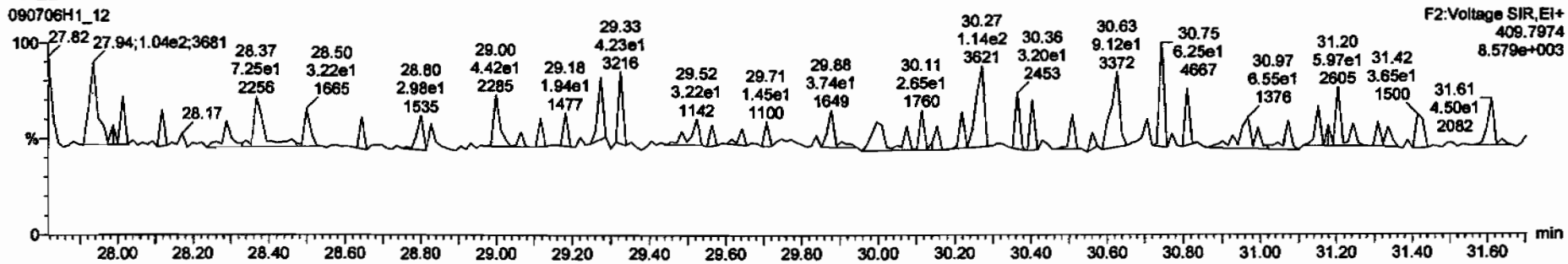

TargetLynx - 090706h1-12.qld * - [Chromatogram]

090706H1_12 - 31853_2218_008 CAMO-09-10031 11.41 - CAMO-09-10031

Name	RT	Area	Height	Ratio	Pass	Conc.	Resp.
Total Penta-Furans	28.40	5.056e2	3.468e2	1.46	NO	0.16929	0.16929
Total Penta-Furans	28.49	1.710e3	8.551e2	2.00	YES	0.43302	0.00000

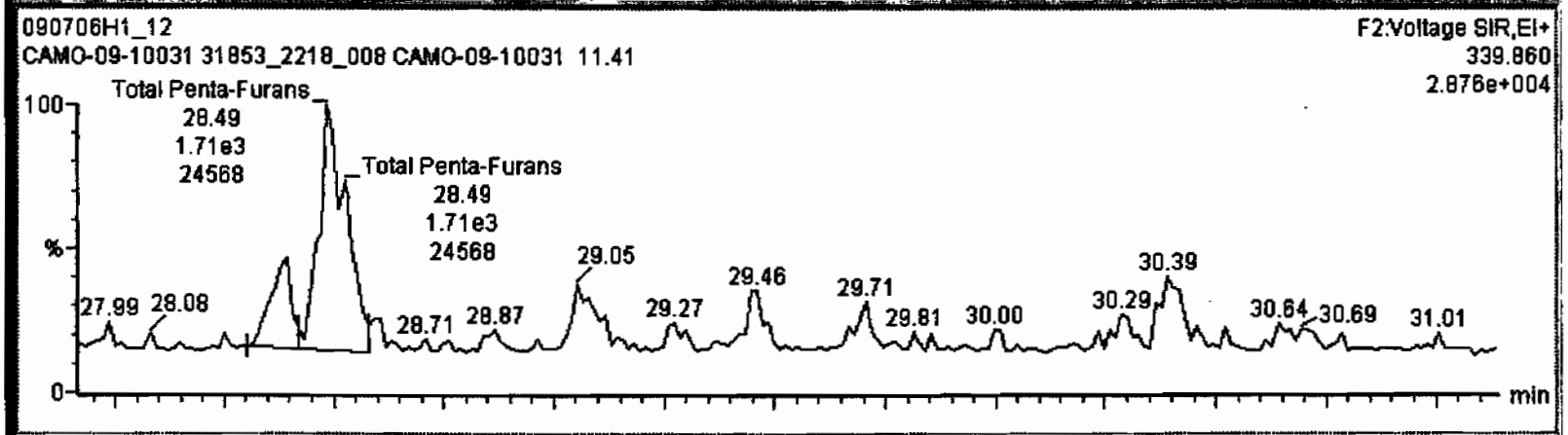

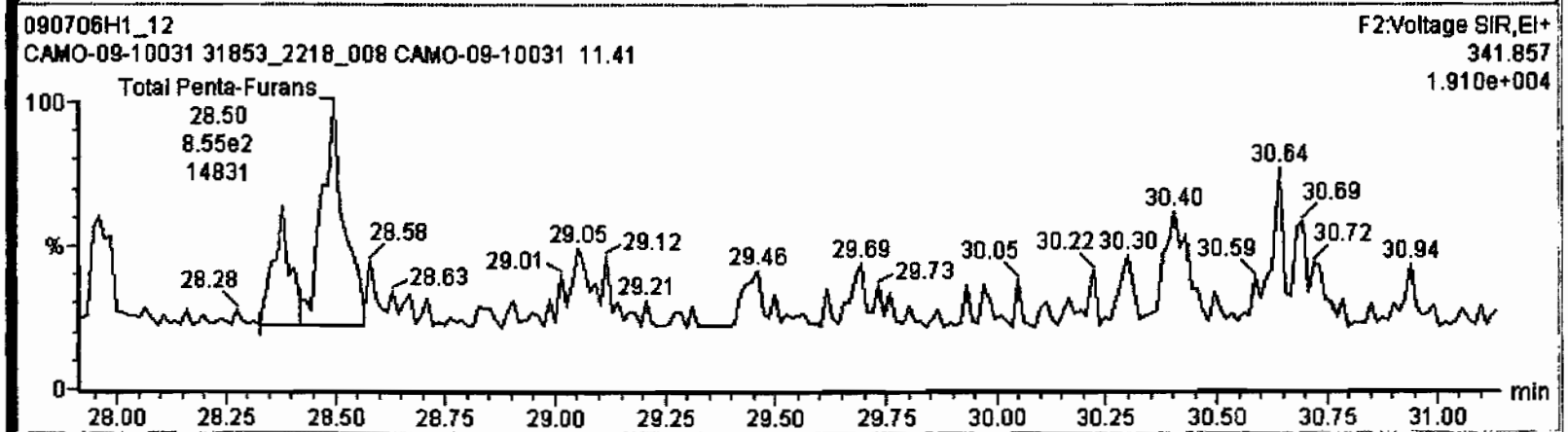

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

1,2,3,4,7,8-HxCDF

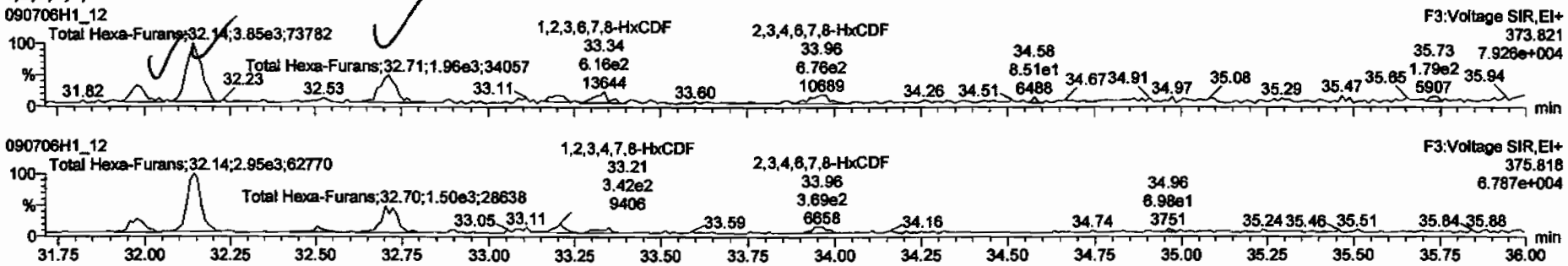

13C-1,2,3,4,7,8-HxCDF

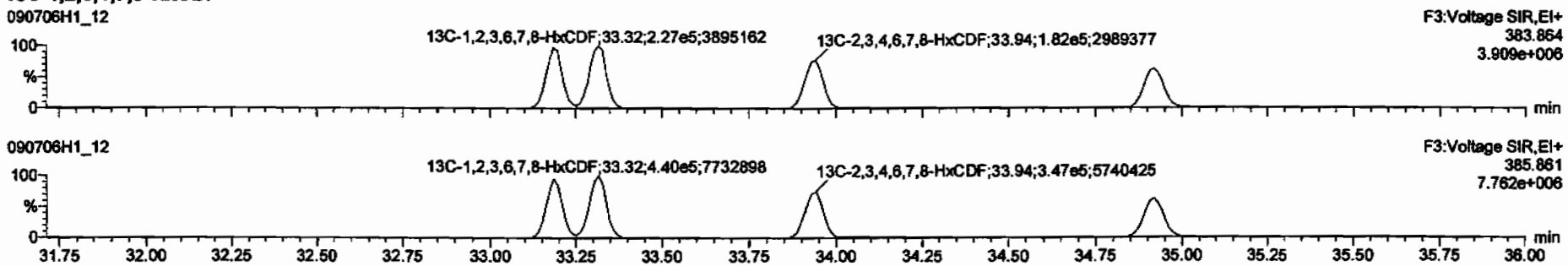

DPE3

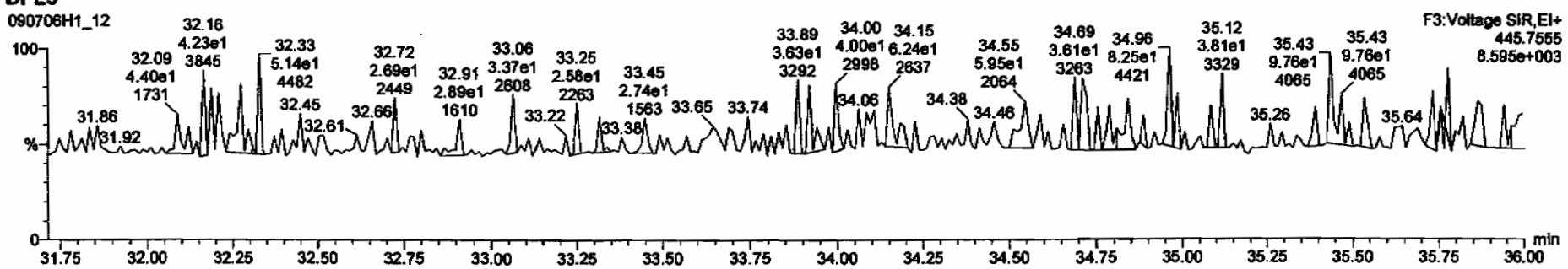

TargetLynx - 090706h1-12.qld * - [Chromatogram]

090706H1_12 - 31853_2218_008 CAMO-09-10031 11.41 - CAMO-09-10031

Total Hexa-Furans	31.98	9.957e2	7.671e2	1.30	NO	0.48469	0.48469
Total Hexa-Furans	32.14	3.849e3	2.950e3	1.30	NO	1.8693	1.8693
Total Hexa-Furans	32.71	1.959e3	1.501e3	1.31	NO	0.95124	0.95124

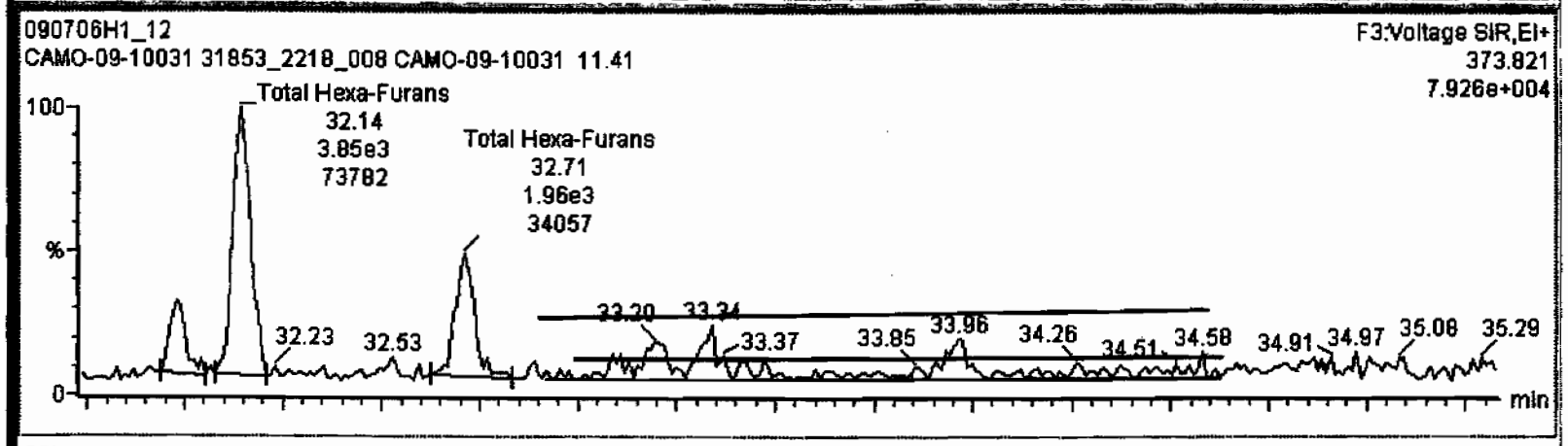

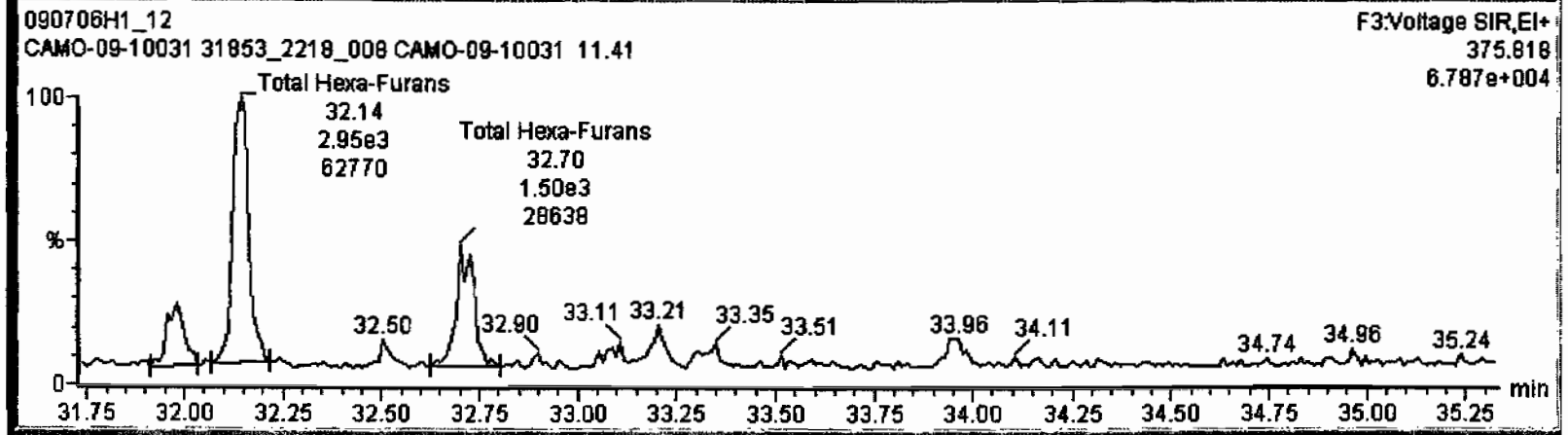

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

1,2,3,4,6,7,8-HpCDF

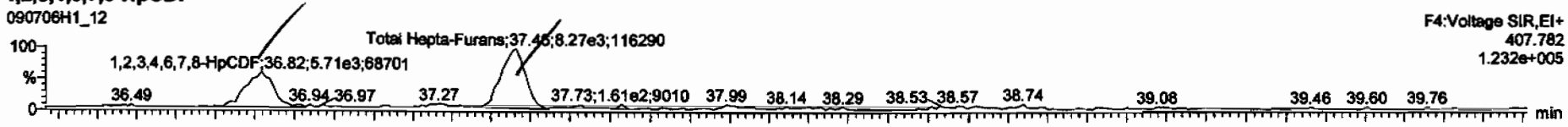

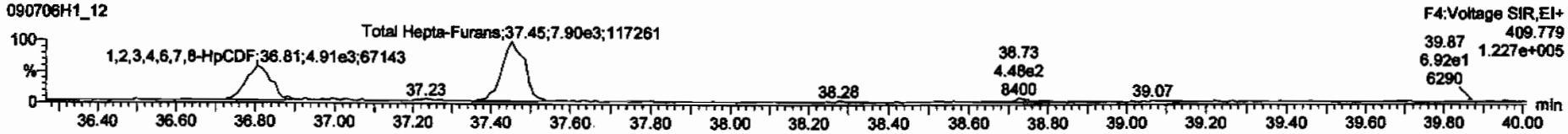

13C-1,2,3,4,6,7,8-HpCDF

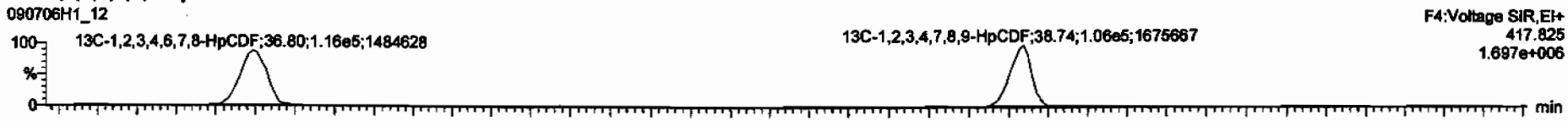

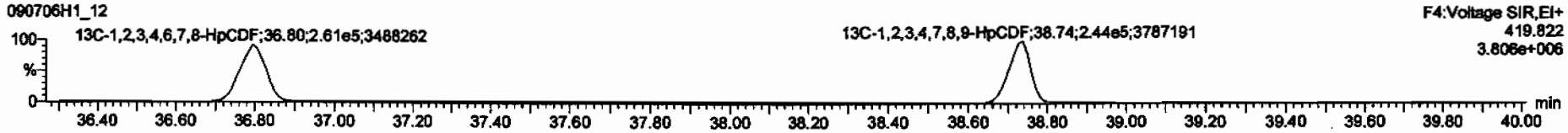

DPE4

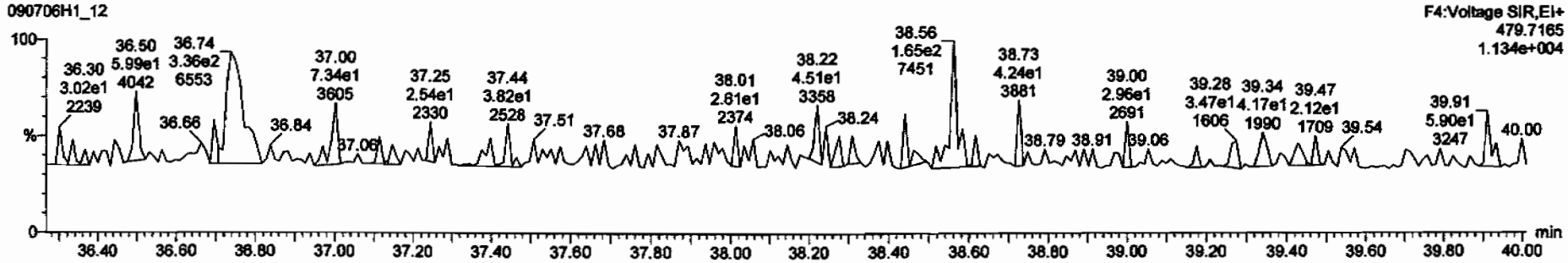

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

OCDF

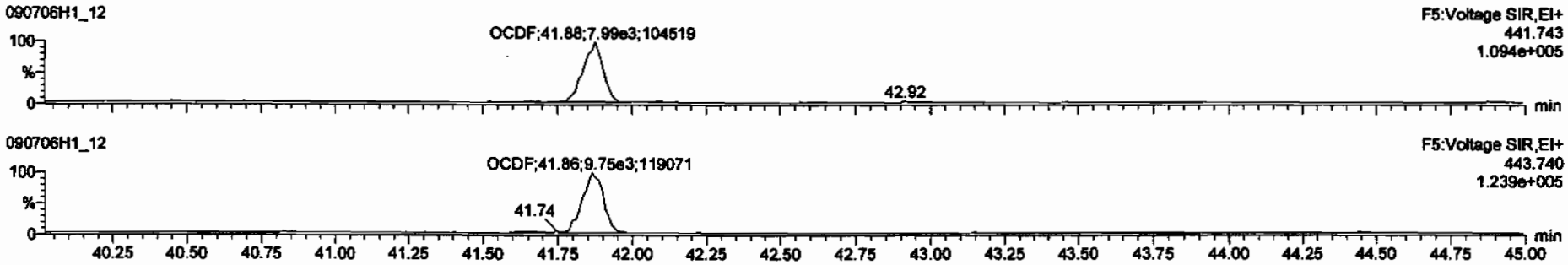

13C-OCDF

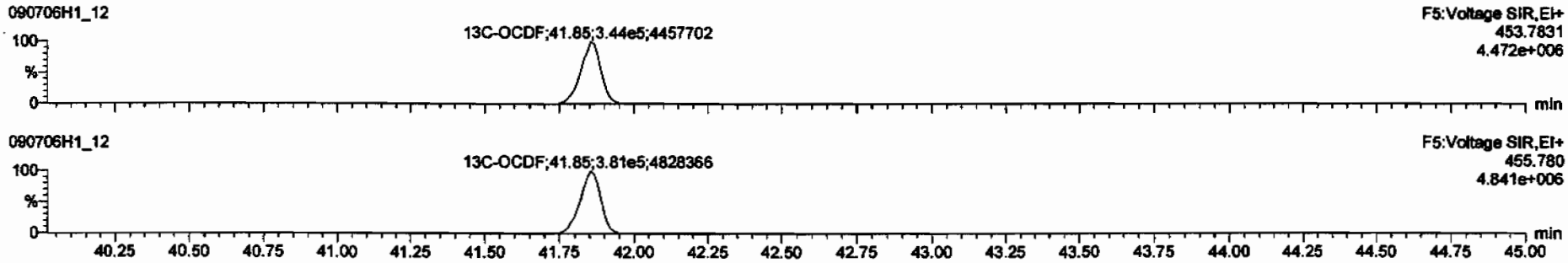

DPE5

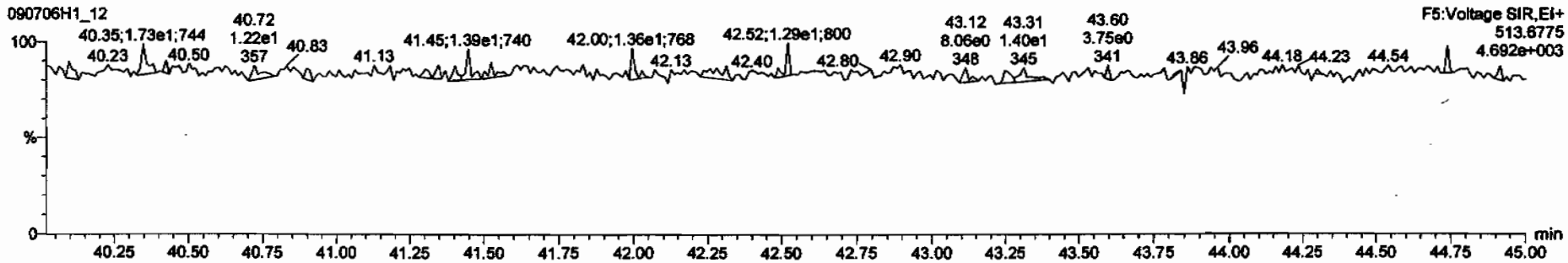

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-12.qld

Last Altered: Tuesday, July 07, 2009 07:46:46 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:47:04 Pacific Daylight Time

Name: 090706H1_12, Date: 06-Jul-2009, Time: 22:31:52, ID: 31853_2218_008 CAMO-09-10031 11.41, Description: CAMO-09-10031

PFK1

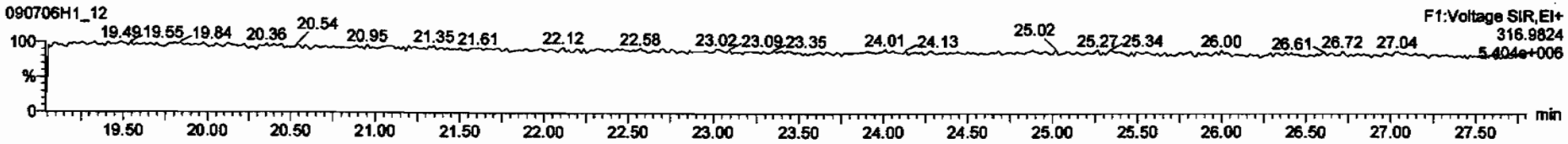

PFK2

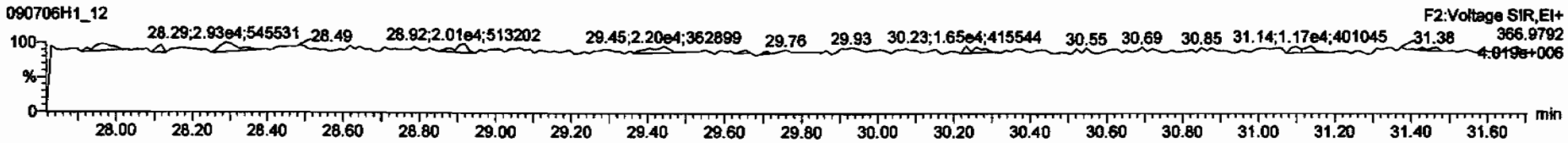

PFK3

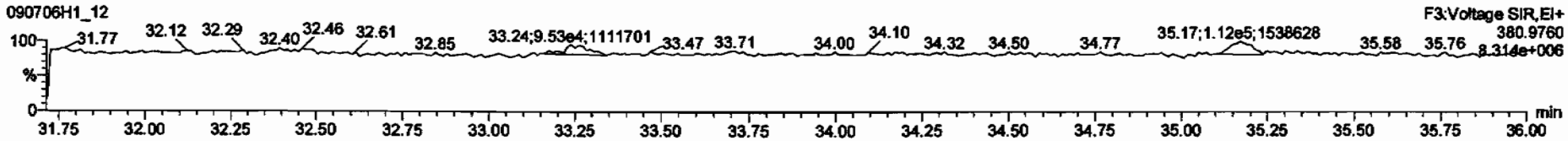

PFK4

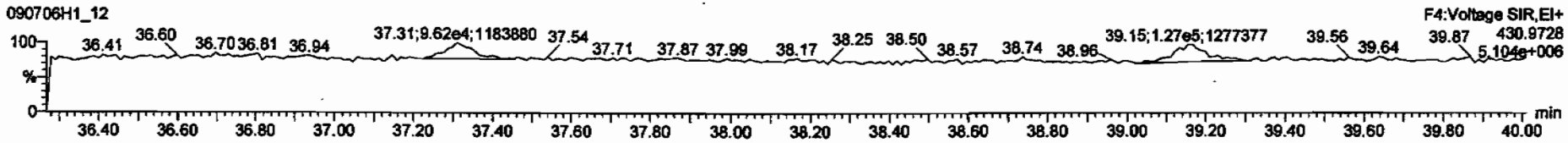

PFK5

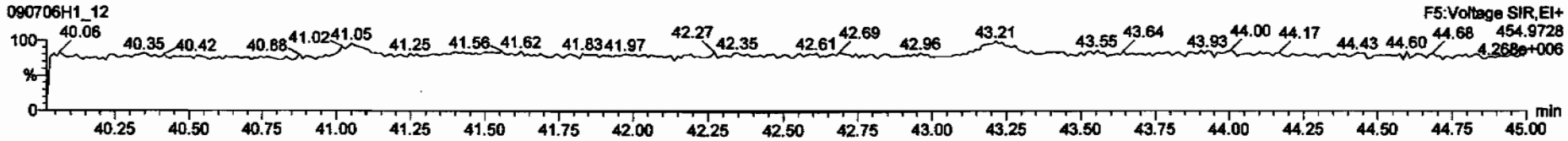

CALIBRATION DATA

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090706H1_1

CCAL ID: ST090706H1-1

GC Column ID: DB-5
Analysis Date: 06-Jul-09 Analysis Time: 13:27:01

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	9.18	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	44.4	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	44.7	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	NO	44.4	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	45.9	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	43.3	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.90	0.76-1.02	NO	87.6	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	8.27	8.4	12.0	No	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	41.0	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	NO	40.9	41.0	60.0	No	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	42.6	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	NO	43.5	44.0	57.0	No	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	43.8	44.0	57.0	No	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	44.1	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	44.8	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	NO	46.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.91	0.76-1.02	NO	89.6	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: 8290 only
Date: 7/6/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090706H1_1

CCAL ID: ST090706H1-1

GC Column ID: DB-5
Analysis Date: 06-Jul-09 Analysis Time: 13:27:01

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	NO	103	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.62	0.54-0.72	NO	96.4	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	103	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	93.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.86	0.76-1.02	NO	226	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	NO	109	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	104	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	97.5	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.50	0.43-0.59	NO	105	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	NO	92.0	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	94.0	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	NO	96.7	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	NO	91.4	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	NO	93.3	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.90	0.76-1.02	NO	195	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.67	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: 8250 ok
Date: 7/6/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, July 06, 2009 14:24:57 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:25:08 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.61
2	1,2,8,9-TCDD (Last)	26.90
3	1,2,4,7,9-PeCDD (First)	28.55
4	1,2,3,8,9-PeCDD (Last)	31.06
5	12,4,6,7,9-HxCDD (First)	32.53
6	1,2,3,7,8,9-HxCDD (Last)	34.53
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.53
10	1,2,8,9-TCDF (Last)	27.07
11	1,3,4,6,8-PeCDF (First)	26.99
12	1,2,3,8,9-PeCDF (Last)	31.32
13	1,2,3,4,6,8-HxCDF (First)	31.98
14	1,2,3,4,8,9-HxCDF (Last)	34.94
15	1,2,3,4,6,7,8-HpCDF (First)	36.82
16	1,2,3,4,7,8,9-HpCDF (Last)	38.75

7/6/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090706H1_1

CCAL ID: ST090706H1-1
GC Column ID: DB-5
Analysis Date: 06-Jul-09
Analysis Time: 13:27:01

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.196	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: [illegible]
Date: 7/6/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090706H1_1

CCAL ID: ST090706H1-1
GC Column ID: DB-5
Analysis Date: 06-Jul-09
Analysis Time: 13:27:01

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.001	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.105	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.205	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.962	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.012	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.212	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____
Date: 7/6/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:23:12 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	3.31e4	0.78	NO	1.08	1.000	26.03	1.001	9.1823	91.8	0.0635	9.1823
2	1,2,3,7,8-PeCDD	1.17e5	0.63	NO	1.03	1.000	30.69	1.000	44.448	88.9	0.160	44.448
3	1,2,3,4,7,8-HxCDD	9.62e4	1.26	NO	1.00	1.000	34.13	1.000	44.695	89.4	0.216	44.695
4	1,2,3,6,7,8-HxCDD	9.78e4	1.25	NO	1.13	1.000	34.24	1.000	44.402	88.8	0.228	44.402
5	1,2,3,7,8,9-HxCDD	1.04e5	1.27	NO	1.10	1.000	34.53	1.009	45.856	91.7	0.214	45.856
6	1,2,3,4,6,7,8-HpCDD	7.44e4	1.07	NO	1.06	1.000	38.17	1.000	43.276	86.6	0.316	43.276
7	OCDD	1.33e5	0.90	NO	1.18	1.000	41.65	1.001	87.564	87.6	0.150	87.564
8	2,3,7,8-TCDF	4.30e4	0.78	NO	1.09	1.000	25.25	1.001	8.2737	82.7	0.0576	8.2737
9	1,2,3,7,8-PeCDF	1.98e5	1.57	NO	1.16	1.000	29.46	1.000	40.969	81.9	0.107	40.969
10	2,3,4,7,8-PeCDF	1.80e5	1.60	NO	1.12	1.000	30.40	1.000	40.871	81.7	0.113	40.871
11	1,2,3,4,7,8-HxCDF	1.67e5	1.25	NO	1.41	1.000	33.21	1.000	42.557	85.1	0.134	42.557
12	1,2,3,6,7,8-HxCDF	1.68e5	1.28	NO	1.22	1.000	33.34	1.001	43.514	87.0	0.141	43.514
13	2,3,4,6,7,8-HxCDF	1.49e5	1.29	NO	1.28	1.000	33.95	1.000	43.809	87.6	0.162	43.809
14	1,2,3,7,8,9-HxCDF	1.28e5	1.29	NO	1.26	1.000	34.94	1.000	44.148	88.3	0.232	44.148
15	1,2,3,4,6,7,8-HpCDF	1.36e5	1.04	NO	1.69	1.000	36.82	1.000	44.756	89.5	0.216	44.756
16	1,2,3,4,7,8,9-HpCDF	1.06e5	1.06	NO	1.48	1.000	38.75	1.000	46.455	92.9	0.248	46.455
17	OCDF	1.64e5	0.91	NO	1.10	1.000	41.86	1.000	89.598	89.6	0.162	89.598
18	13C-2,3,7,8-TCDD	3.34e5	0.80	NO	1.01	1.000	26.00	1.023	103.22	103	0.243	
19	13C-1,2,3,7,8-PeCDD	2.54e5	0.62	NO	0.827	1.000	30.68	1.207	96.428	96.4	0.182	
20	13C-1,2,3,4,7,8-HxCDD	2.15e5	1.24	NO	0.916	1.000	34.12	0.988	103.47	103	0.321	
21	13C-1,2,3,6,7,8-HxCDD	1.96e5	1.26	NO	0.921	1.000	34.23	0.991	93.774	93.8	0.319	
22	13C-1,2,3,4,6,7,8-HpCDD	1.62e5	1.03	NO	0.708	1.000	38.16	1.105	100.70	101	0.570	
23	13C-OCDD	2.57e5	0.86	NO	0.503	1.000	41.61	1.205	225.85	113	0.443	
24	13C-2,3,7,8-TCDF	4.78e5	0.76	NO	0.977	1.000	25.22	0.992	109.02	109	0.179	
25	13C-1,2,3,7,8-PeCDF	4.16e5	1.58	NO	0.896	1.000	29.45	1.158	103.51	104	0.301	
26	13C-2,3,4,7,8-PeCDF	3.93e5	1.61	NO	0.900	1.000	30.39	1.196	97.455	97.5	0.300	
27	13C-1,2,3,4,7,8-HxCDF	2.79e5	0.50	NO	1.17	1.000	33.20	0.962	105.25	105	0.417	
28	13C-1,2,3,6,7,8-HxCDF	3.17e5	0.50	NO	1.52	1.000	33.32	0.965	91.989	92.0	0.321	
29	13C-2,3,4,6,7,8-HxCDF	2.66e5	0.51	NO	1.25	1.000	33.94	0.983	93.952	94.0	0.390	
30	13C-1,2,3,7,8,9-HxCDF	2.31e5	0.52	NO	1.05	1.000	34.93	1.012	96.741	96.7	0.463	

7/6/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:23:12 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	1.80e5	0.43	NO	0.868	1.000	36.81	1.066	91.433	91.4	0.582
32	13C-1,2,3,4,7,8,9-HpCDF	1.54e5	0.45	NO	0.727	1.000	38.74	1.122	93.336	93.3	0.696
33	13C-OCDF	3.35e5	0.90	NO	0.760	1.000	41.85	1.212	194.63	97.3	0.258
34	37Cl-2,3,7,8-TCDD	2.06e4			0.668	1.000	26.02	1.023	9.6709	96.7	0.0696
35	13C-1,2,3,4-TCDD	3.19e5	0.75	NO	1.00	1.000	25.42	0.000	100.00	100	0.247
36	13C-1,2,3,4-TCDF	4.49e5	0.75	NO	1.00	1.000	23.98	0.000	100.00	100	0.175
37	13C-1,2,3,7,8,9-HxCDD	2.27e5	1.24	NO	1.00	1.000	34.52	0.000	100.00	100	0.294

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 7:28:11 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 7:28:33 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

	090706H1_1	ST090706H1-1 1613 CS3 080917I	06-Jul-09	13:27:01
	090706H1_2	0_2218_OPR001	06-Jul-09	14:16:34
	090706H1_3	solvent blank	06-Jul-09	15:06:04
	090706H1_4	0_2218_MB001	06-Jul-09	15:55:37
	090706H1_5	31853_2218_001 CAMO-09-9950 11.3	06-Jul-09	16:45:10
	090706H1_6	31853_2218_002 CAMO-09-9951 11.09	06-Jul-09	17:34:41
	090706H1_7	31853_2218_003 CAMO-09-9952 11.09	06-Jul-09	18:24:13
	090706H1_8	31853_2218_004 CAMO-09-9956 11.55	06-Jul-09	19:13:44
	090706H1_9	31853_2218_005 CAMO-09-9957 11.02	06-Jul-09	20:03:16
	090706H1_10	31853_2218_006 CAMO-09-9958 11.01	06-Jul-09	20:52:48
	090706H1_11	31853_2218_007 CAMO-09-9990 12.07	06-Jul-09	21:42:20
	090706H1_12	31853_2218_008 CAMO-09-10031 11.41	06-Jul-09	22:31:52
	090706H1_13	31854_2218_001 CAMO-09-6613 11.11	06-Jul-09	23:21:25
	090706H1_14	31854_2218_002 CAMO-09-6614 11.04	07-Jul-09	00:10:58
	090706H1_15	31854_2218_003 CAMO-09-6615 10.66	07-Jul-09	01:00:30
	090706H1_16	solvent blank	07-Jul-09	01:50:03
	090706H1_17	ST090706H1-2 1613 CS3 080917I	07-Jul-09	02:39:35

CALIBRATION STANDARDS REVIEW CHECKLIST

Vista Analytical Laboratory

Beg. Calibration ID: ST090706H1-1

End Calibration ID: ST090706H1-2

	Beg.	End
Ion abundance within QC limits?	✓	✓
Concentration within range? (A)	✓	✓
First and last eluters present?	✓	✓
Retention Times within criteria?	✓	✓
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	✓	✓
Forms signed and dated?	✓	✓
Correct ICAL referenced?	✓	✓
Run Log:		
-Data file matches Conc Cal ID?	✓	✓
-Correct instrument listed?	✓	✓
-Samples within 12-hour clock?	y	n

	Beg.	End
Mass resolution > 10,000?	✓	✓
TCDD/TCDF valleys < 25%?	✓	✓
Peaks integrated correctly?	✓	✓
Manual integrations included?	✓	✓
8280 CS1 Ending Standard		
-Ratios within limits	NA	
-S/N > 2.5:1		
-CS1 within 12-hour clock		

Comments: (A) 8290 only 7/7/09

Reviewed by: MJ 7/7/09
Initials & Date

* *Ending standard criteria applicable to 8290 only.*

Vista Analytical Laboratory
El Dorado Hills, CA 95762

Calib.Stds.Review 1/2008 rmh

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 06, 2009 13:24:44 Pacific Daylight Time

M 292.9824 R 14618

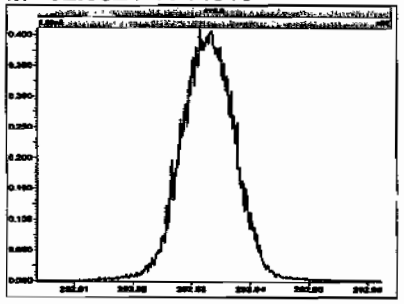

M 304.9824 R 15063

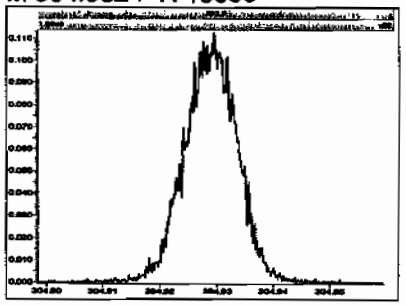

M 318.9792 R 15060

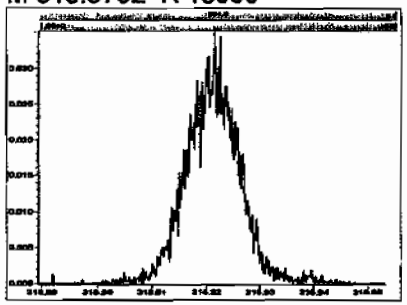

M 330.9792 R 13886

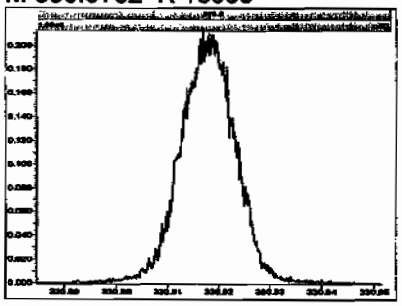

M 342.9792 R 14126

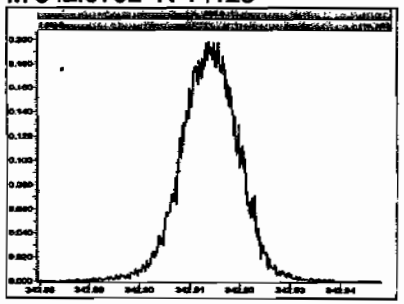

M 354.9792 R 13811

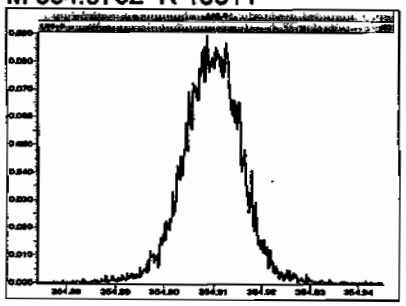

M 366.9792 R 13366

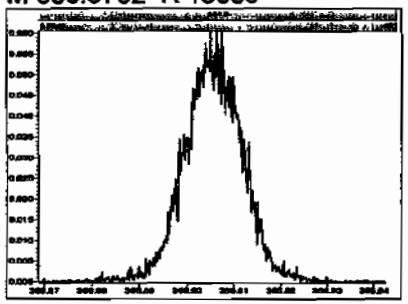

M 380.9760 R 12686

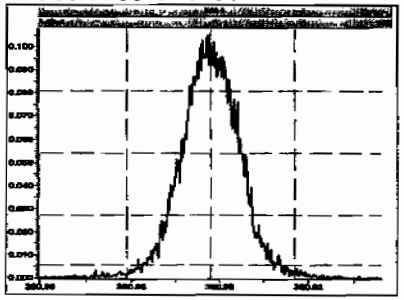

M 392.9760 R 11467

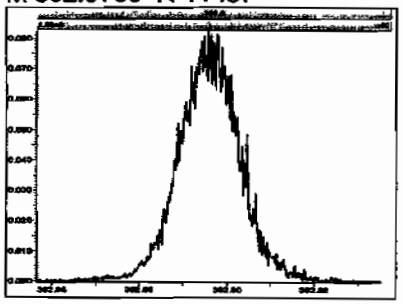

M 404.9760 R 12628

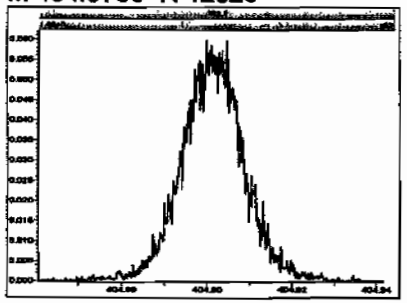

M 416.9760 R 13514

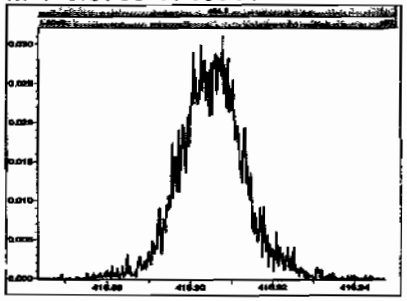

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 06, 2009 13:25:23 Pacific Daylight Time

M 330.9792 R 14704

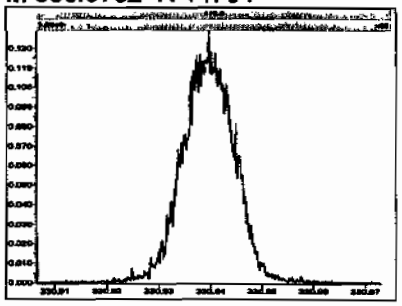

M 342.9792 R 15056

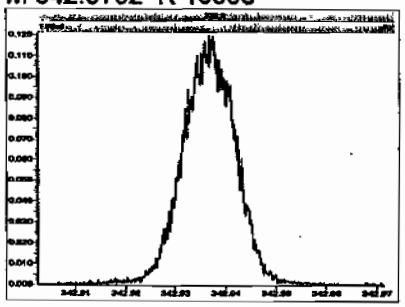

M 354.9792 R 15528

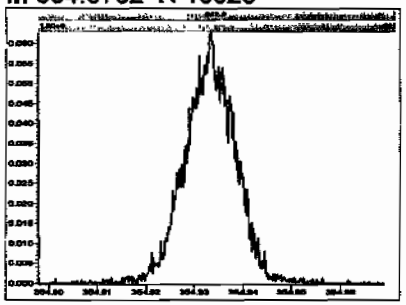

M 366.9792 R 14618

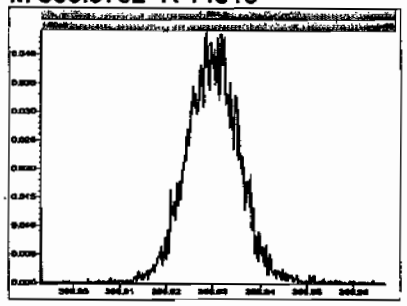

M 380.9760 R 13814

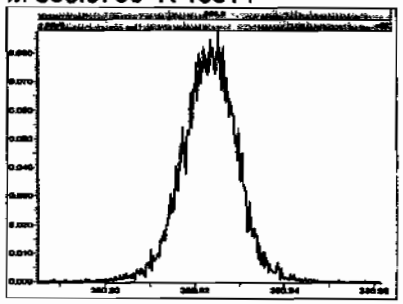

M 392.9760 R 13661

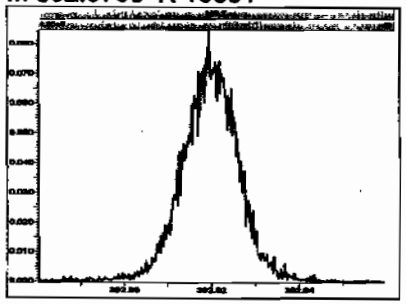

M 404.9760 R 12753

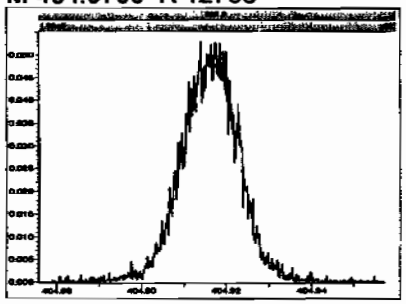

M 416.9760 R 14206

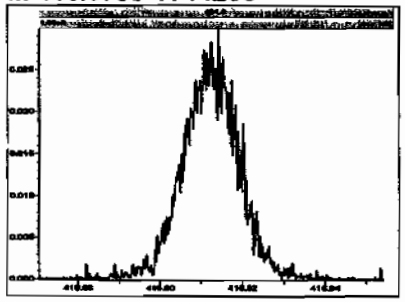

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 06, 2009 13:25:44 Pacific Daylight Time

M 366.9792 R 16555

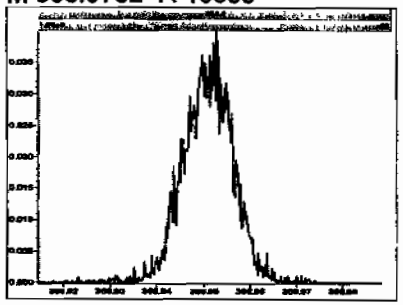

M 380.9760 R 15429

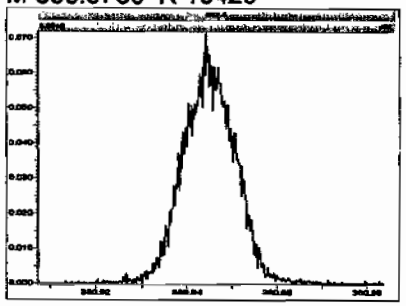

M 392.9760 R 14793

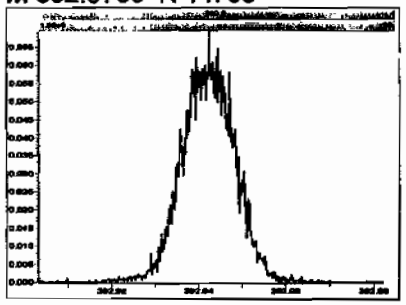

M 404.9760 R 14284

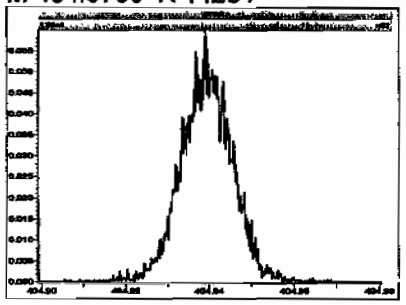

M 416.9760 R 16781

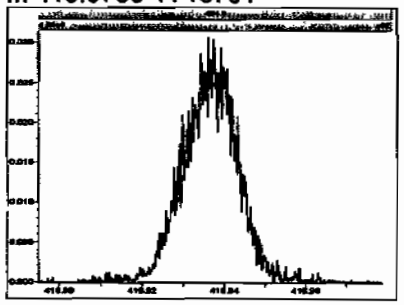

M 430.9728 R 14368

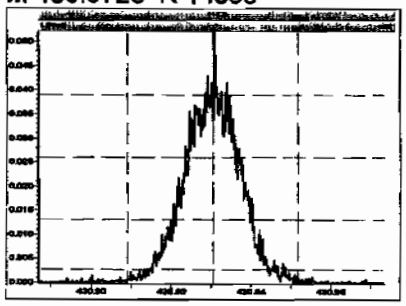

M 442.9728 R 14043

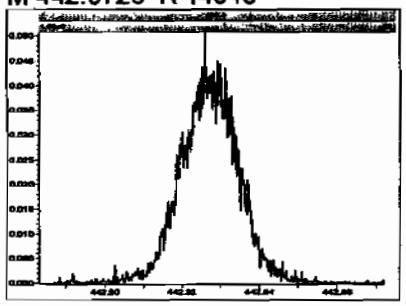

M 454.9728 R 13663

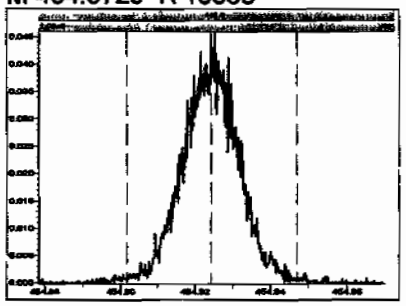

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, July 06, 2009 13:26:11 Pacific Daylight Time

M 404.9760 R 14615

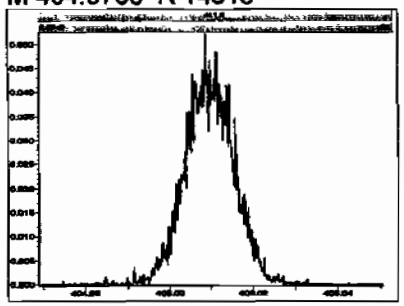

M 416.9760 R 16446

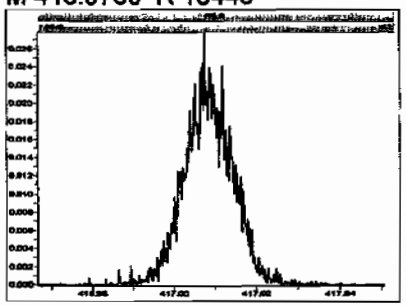

M 430.9728 R 15525

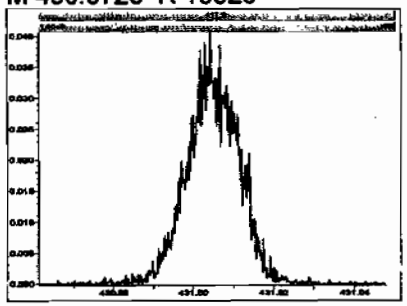

M 442.9728 R 14702

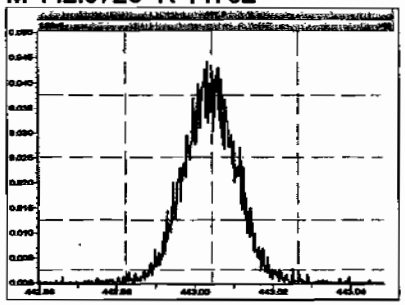

M 454.9728 R 15336

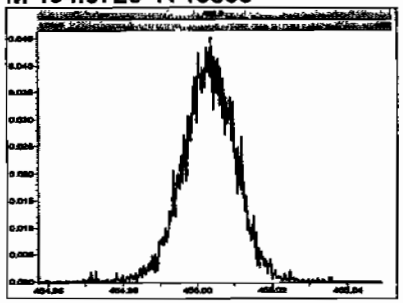

M 466.9728 R 14790

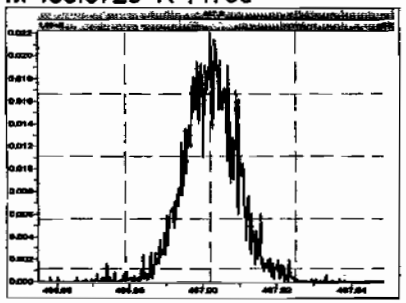

M 480.9696 R 14286

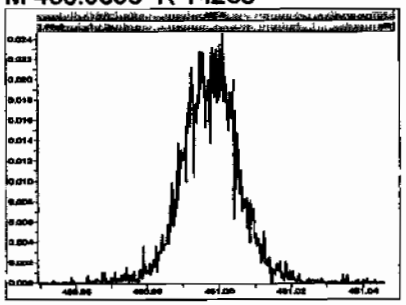

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, July 06, 2009 13:26:35 Pacific Daylight Time

M 430.9728 R 16025

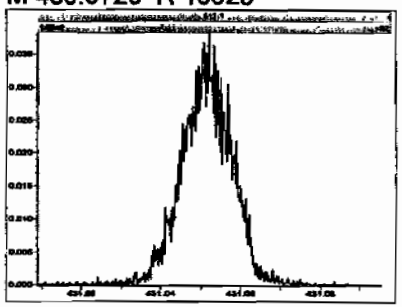

M 442.9728 R 16023

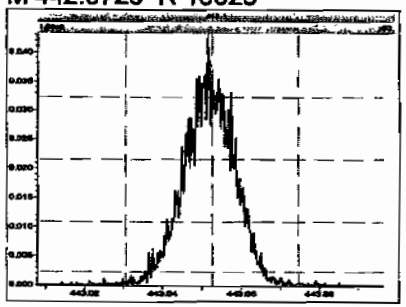

M 454.9728 R 15433

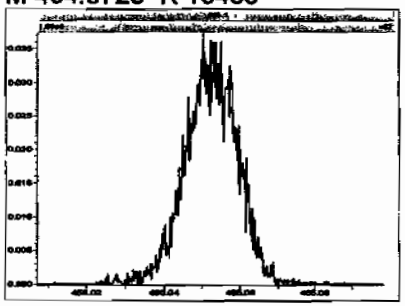

M 466.9728 R 15722

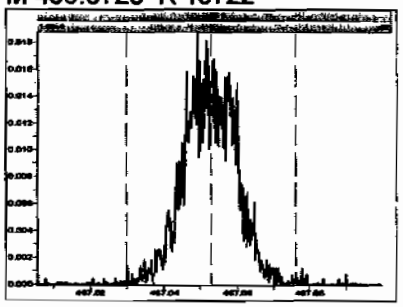

M 480.9696 R 15530

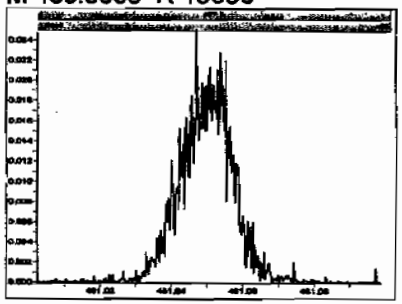

M 492.9696 R 14621

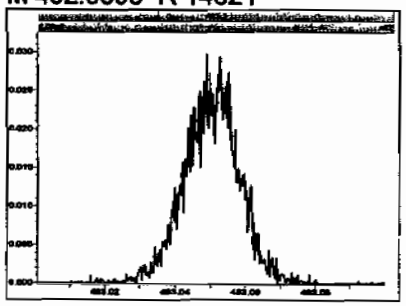

M 504.9696 R 14705

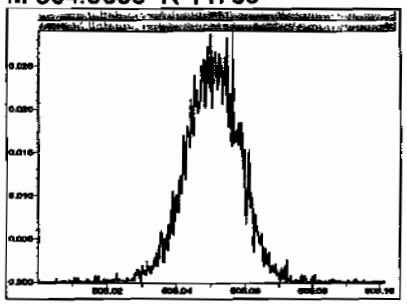

M 516.9697 R 15145

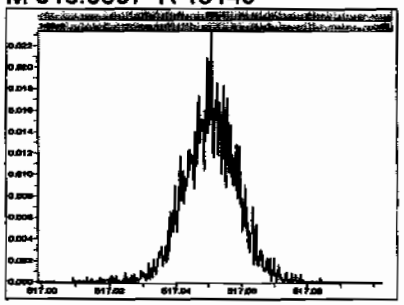

Quantify Sample Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, July 06, 2009 14:24:57 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:25:08 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

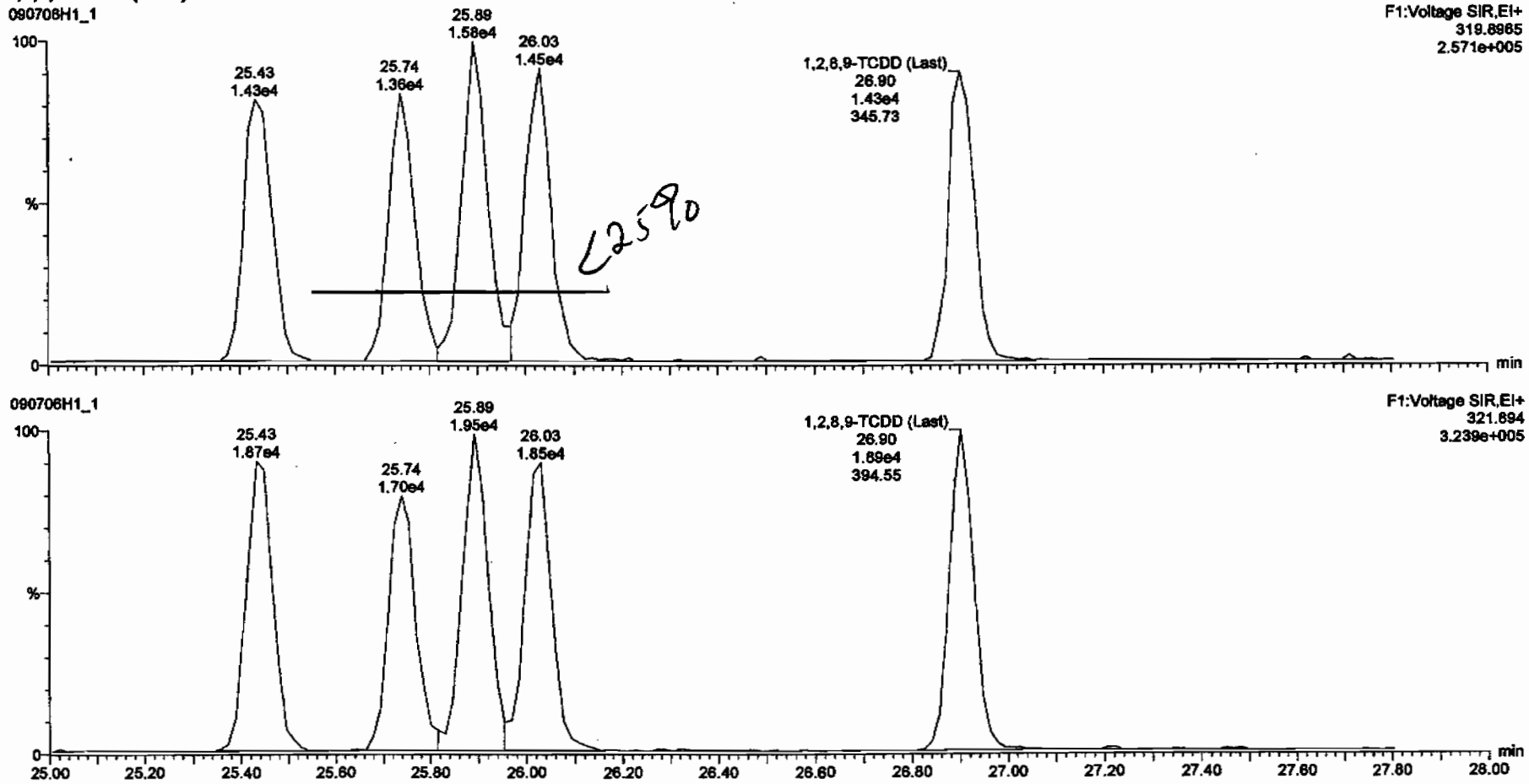

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

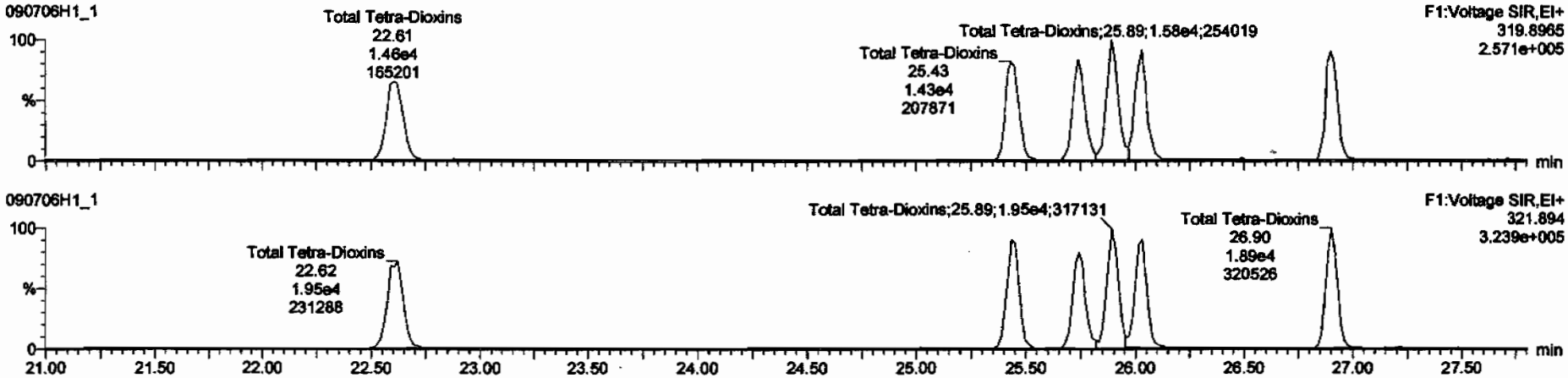

13C-2,3,7,8-TCDD

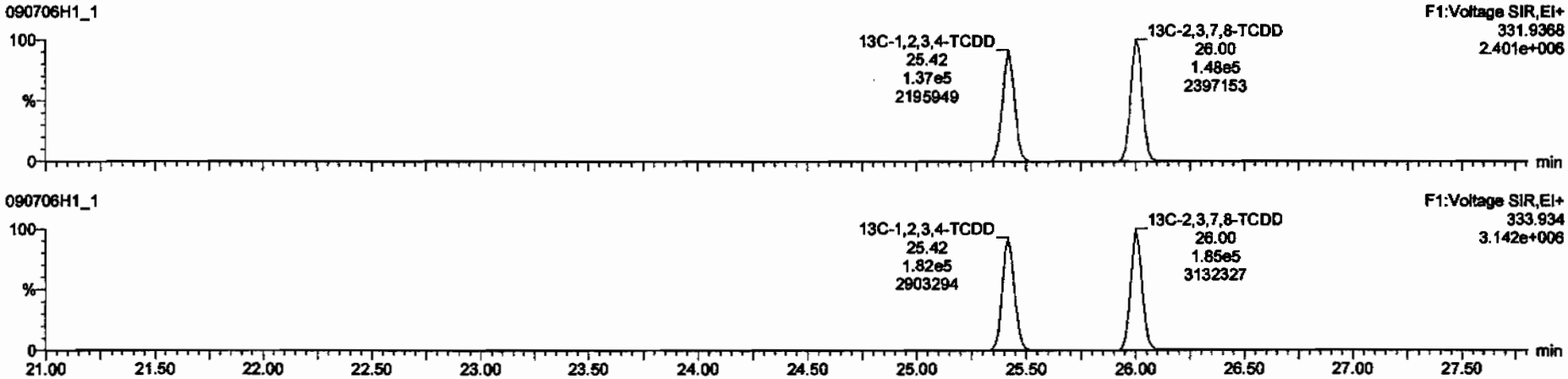

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

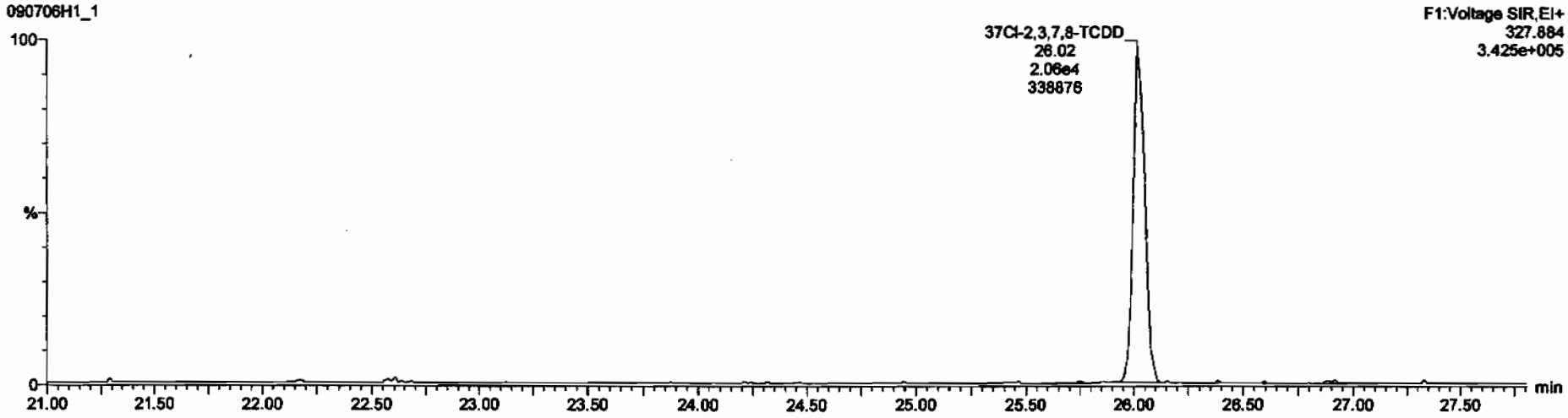

13C-1,2,3,4-TCDD

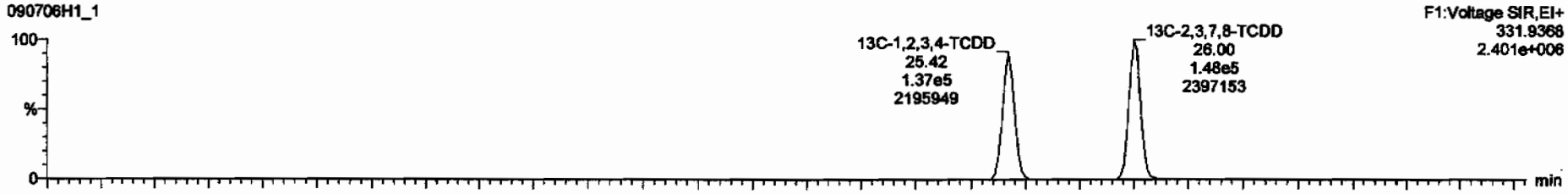

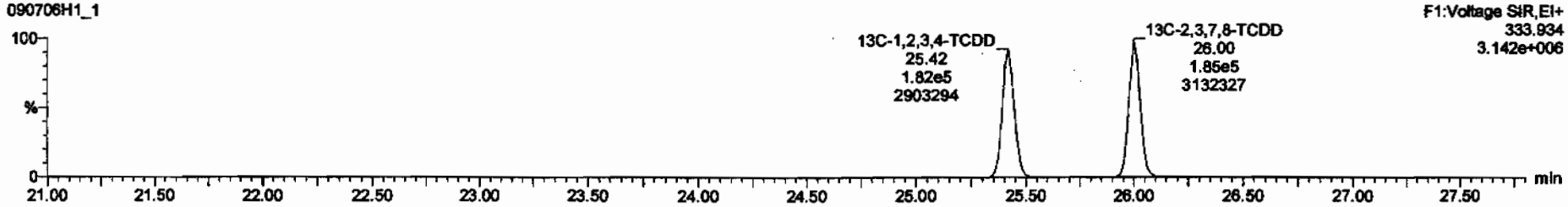

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

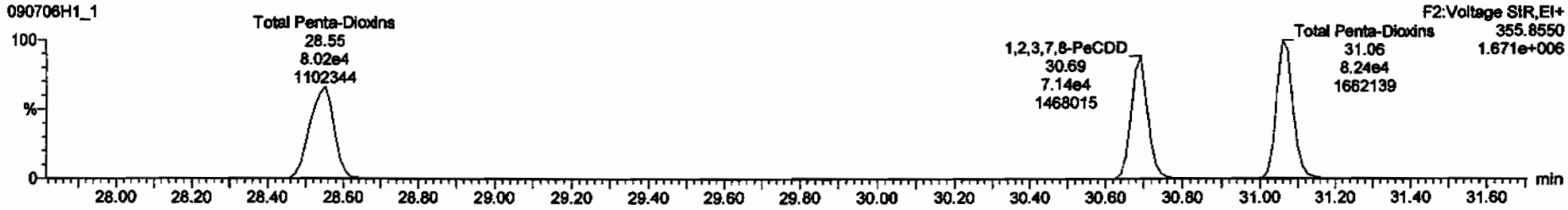

13C-1,2,3,7,8-PeCDD

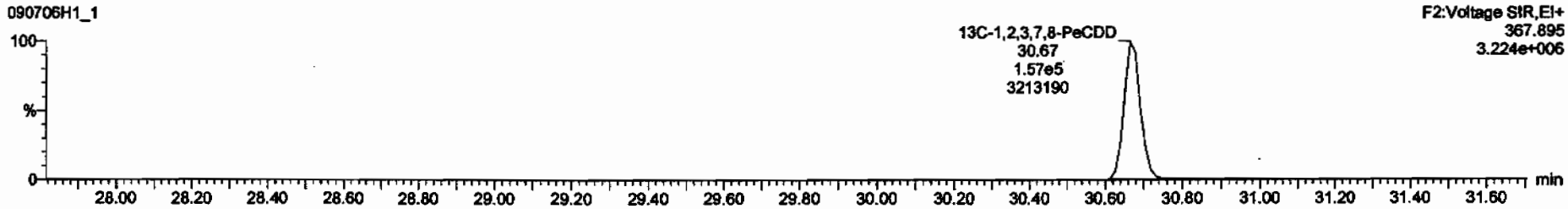

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Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

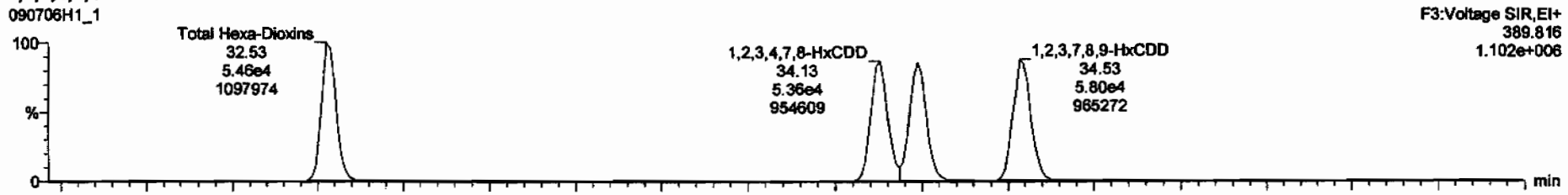

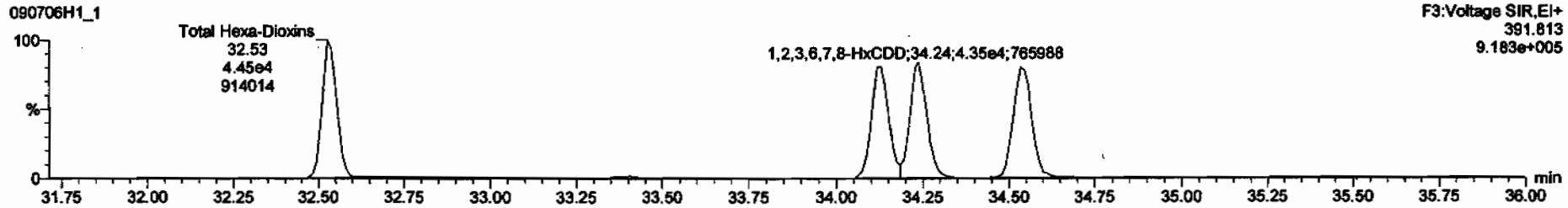

13C-1,2,3,4,7,8-HxCDD

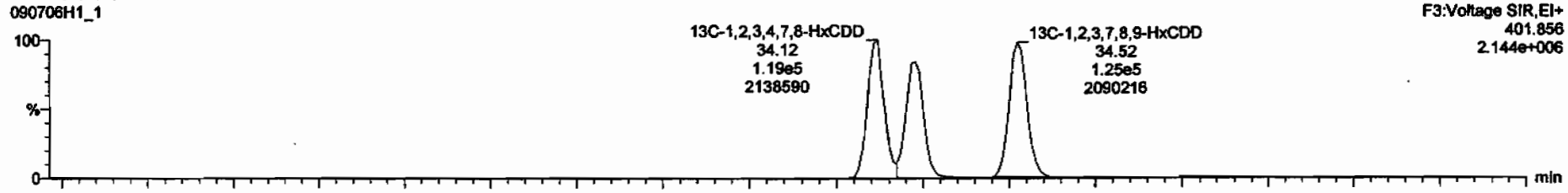

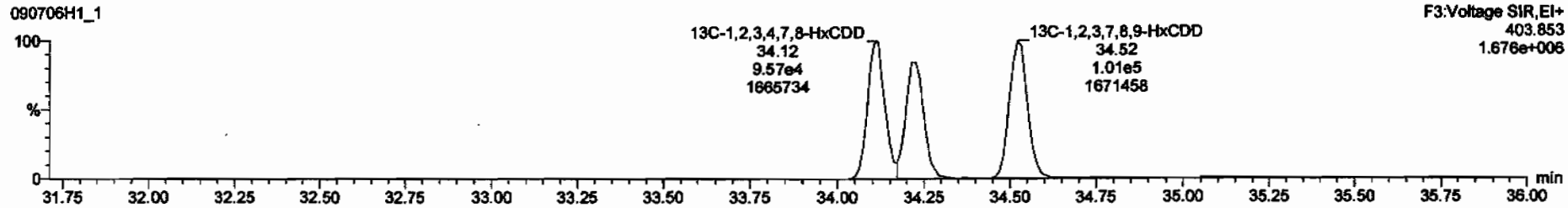

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDD

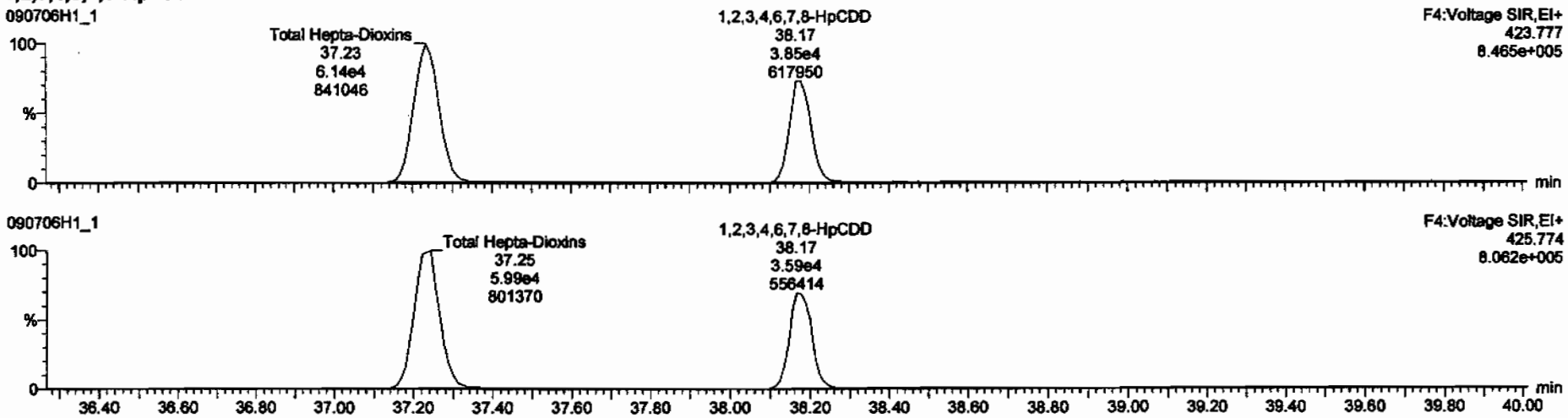

13C-1,2,3,4,6,7,8-HpCDD

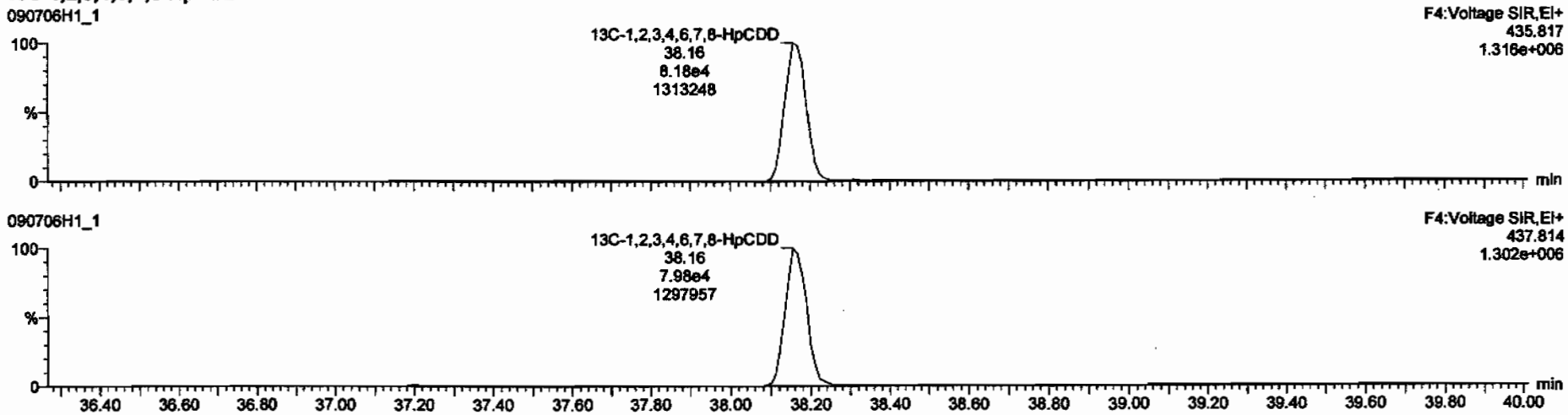

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDD

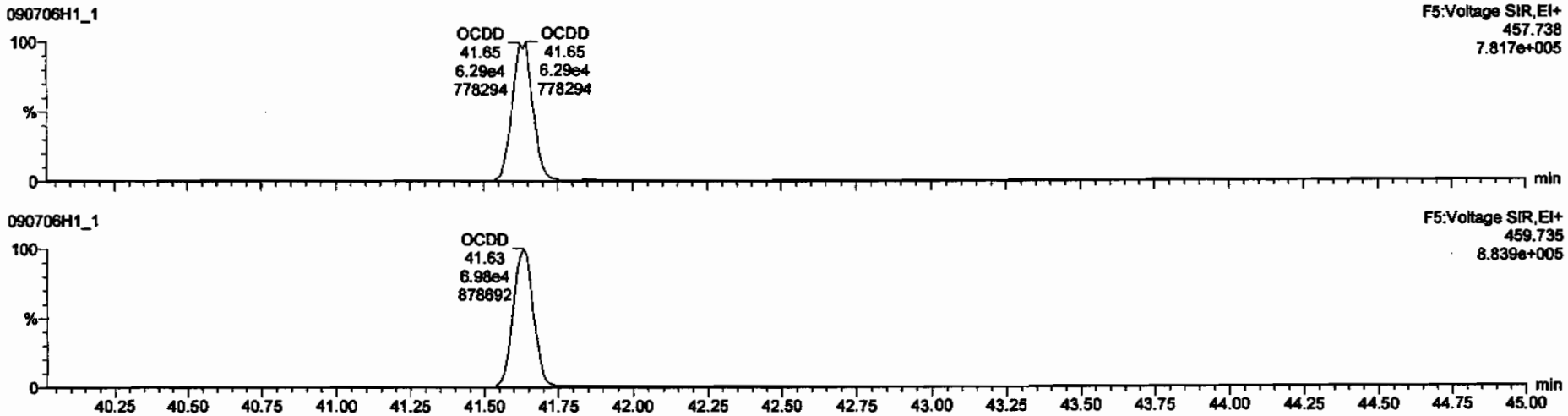

13C-OCDD

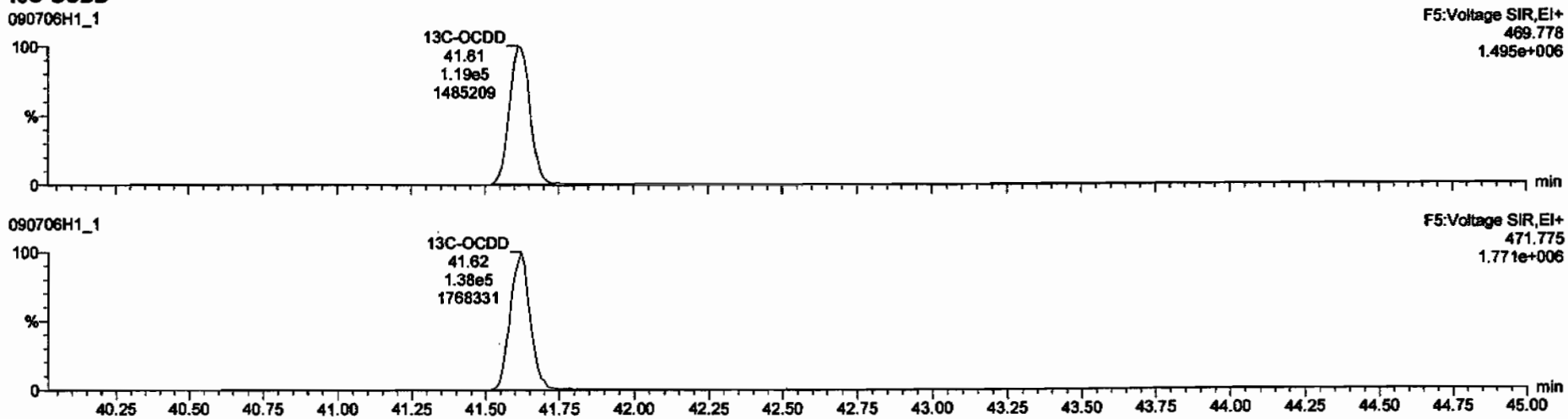

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDF

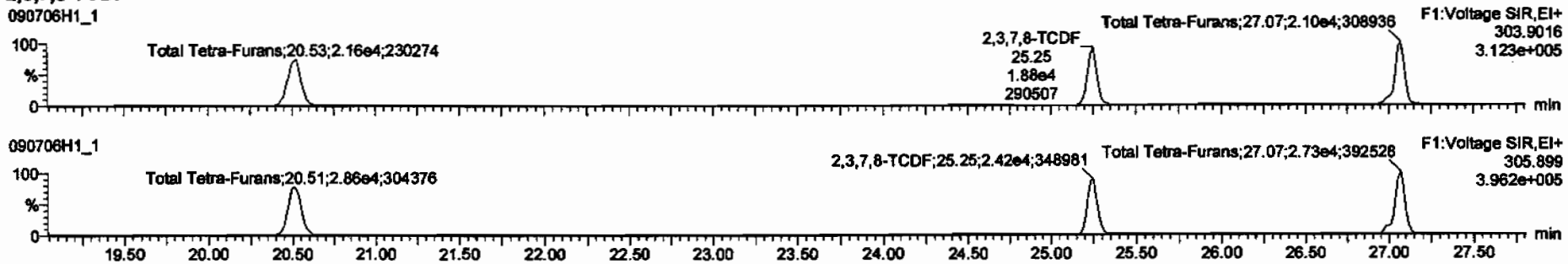

13C-2,3,7,8-TCDF

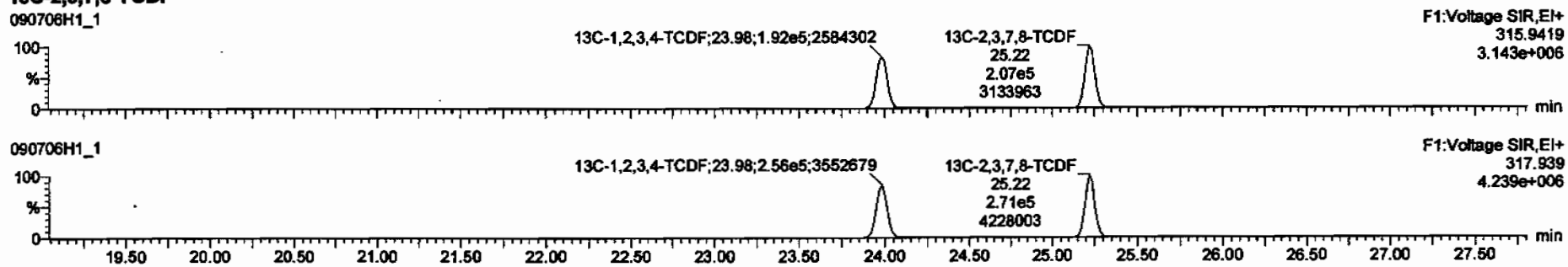

DPE1

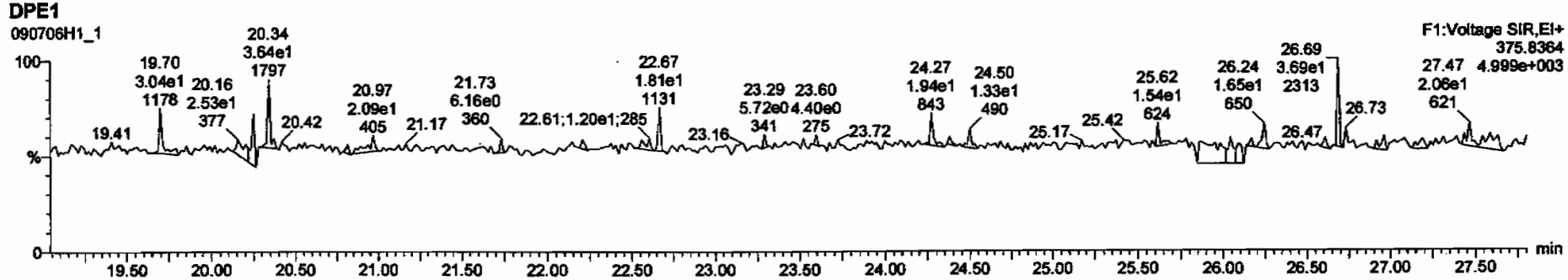

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

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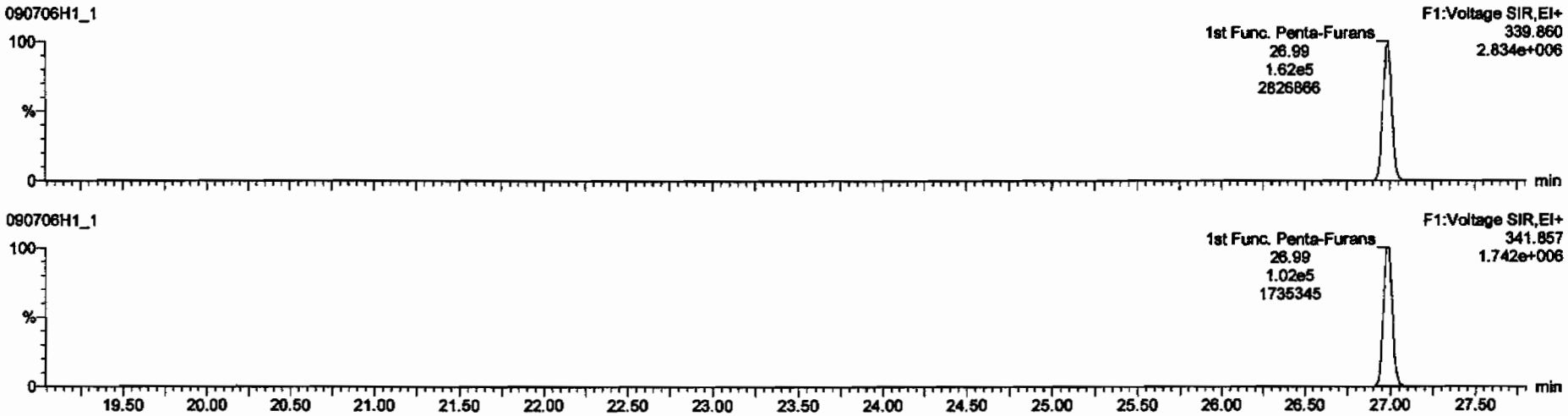

DPE6

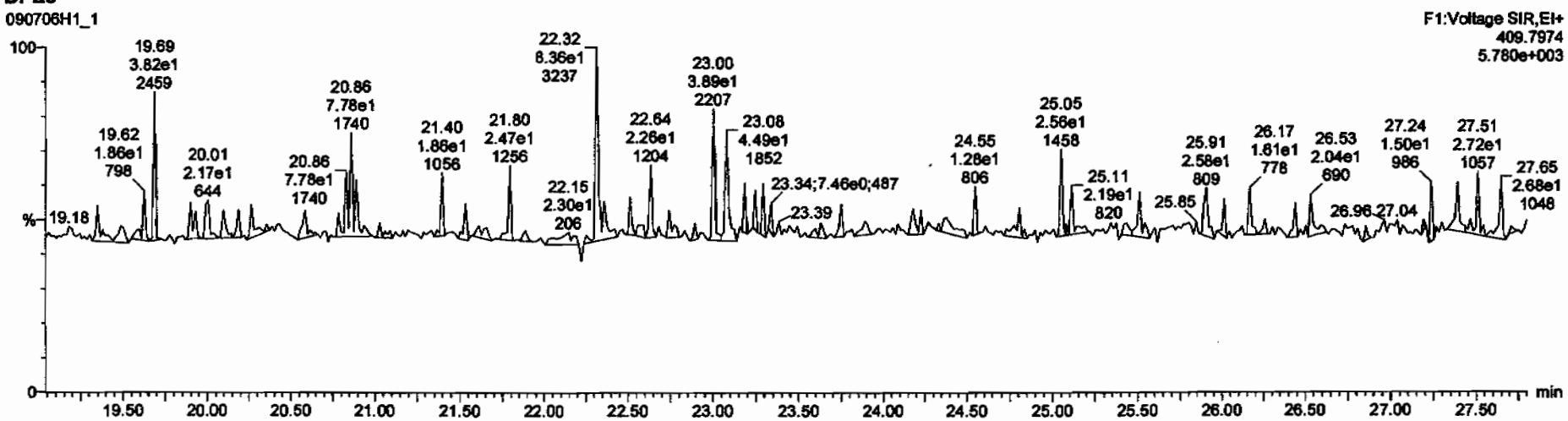

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDF

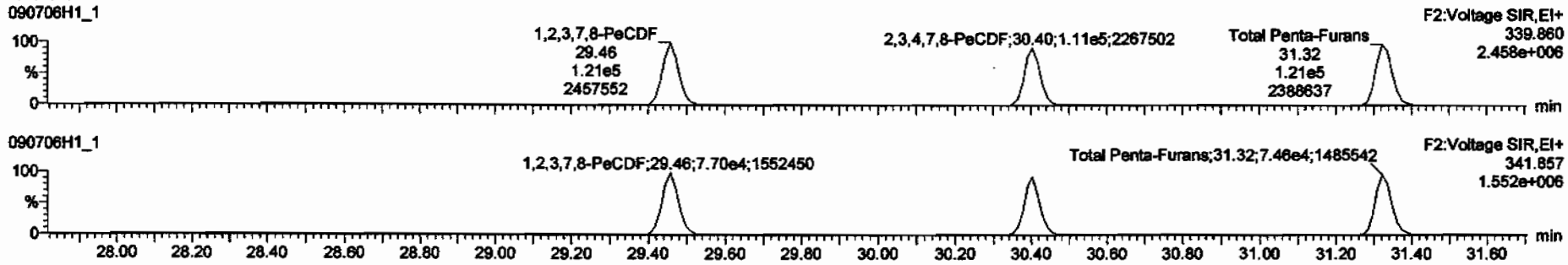

13C-1,2,3,7,8-PeCDF

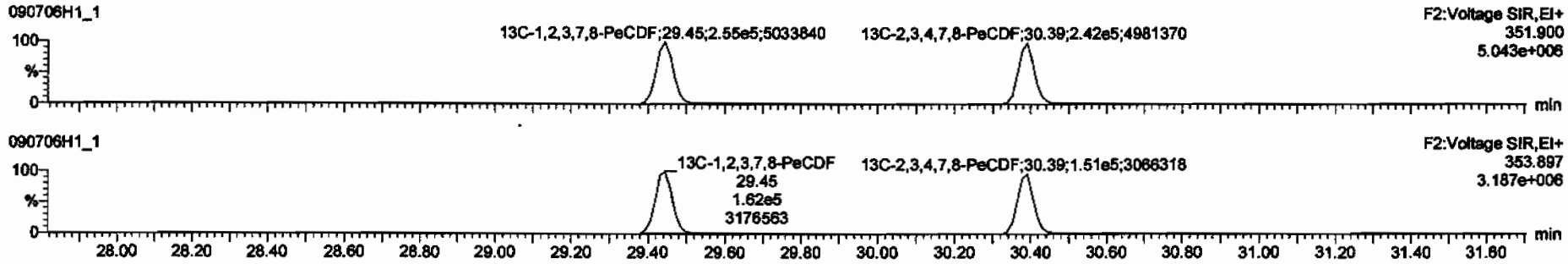

DPE2

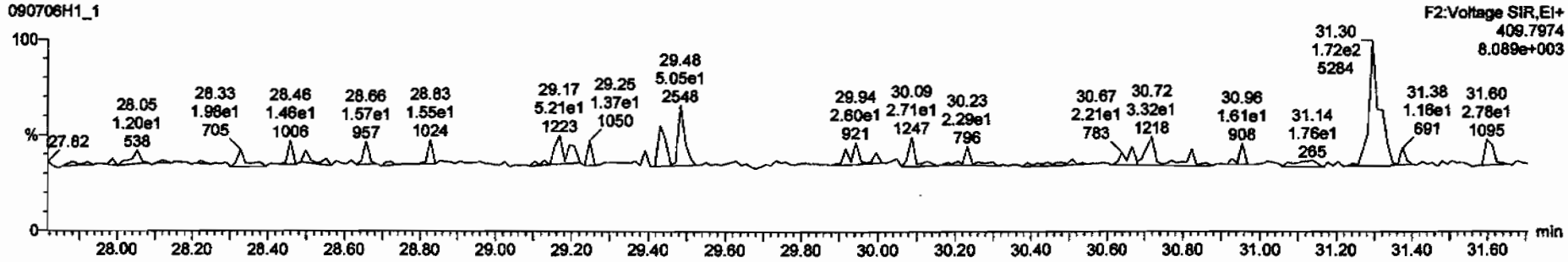

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Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDF

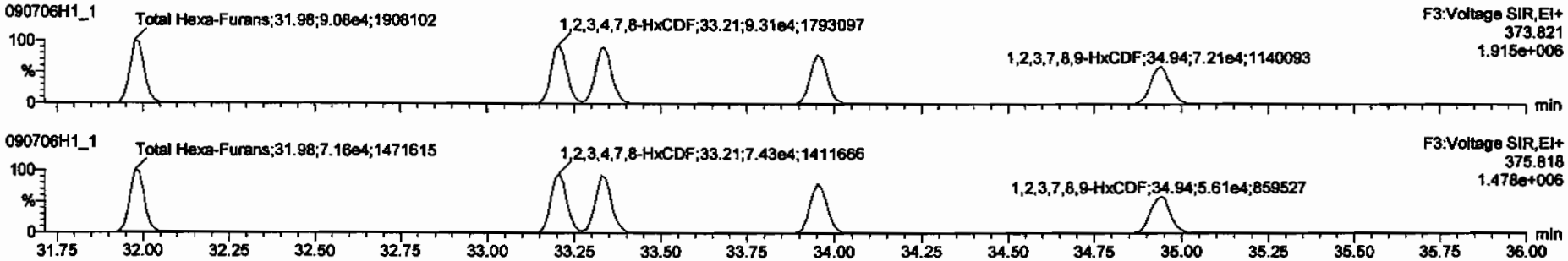

13C-1,2,3,4,7,8-HxCDF

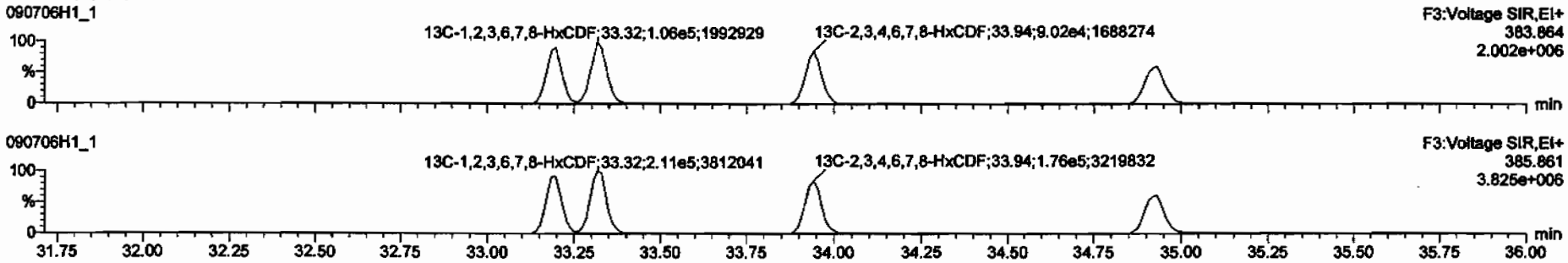

DPE3

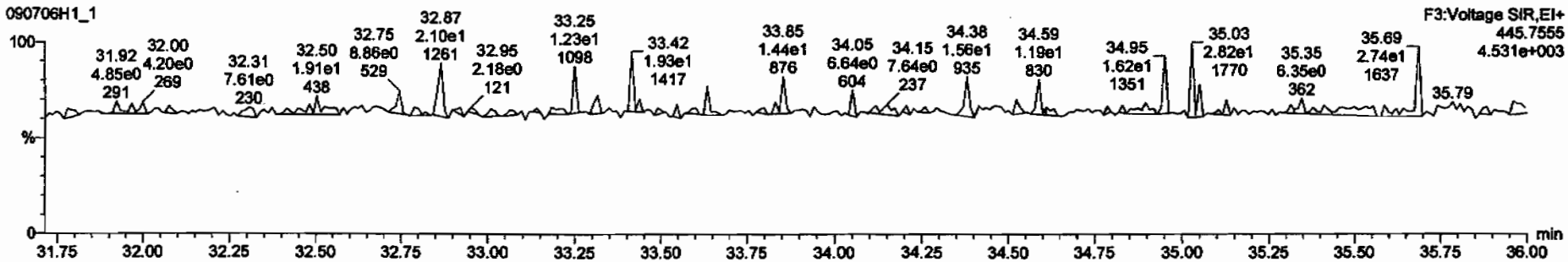

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Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,6,7,8-HpCDF

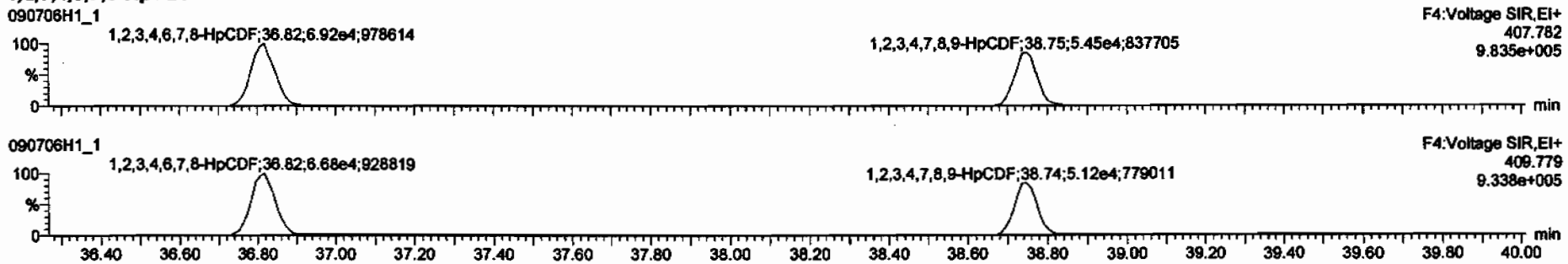

13C-1,2,3,4,6,7,8-HpCDF

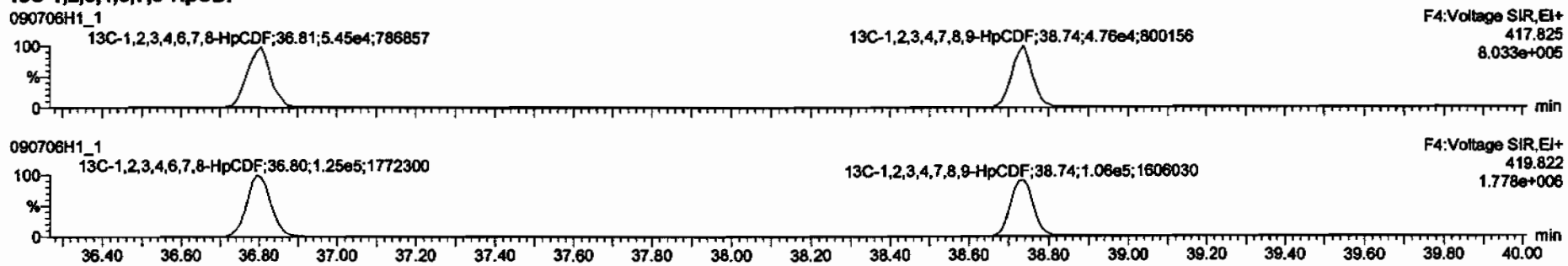

DPE4

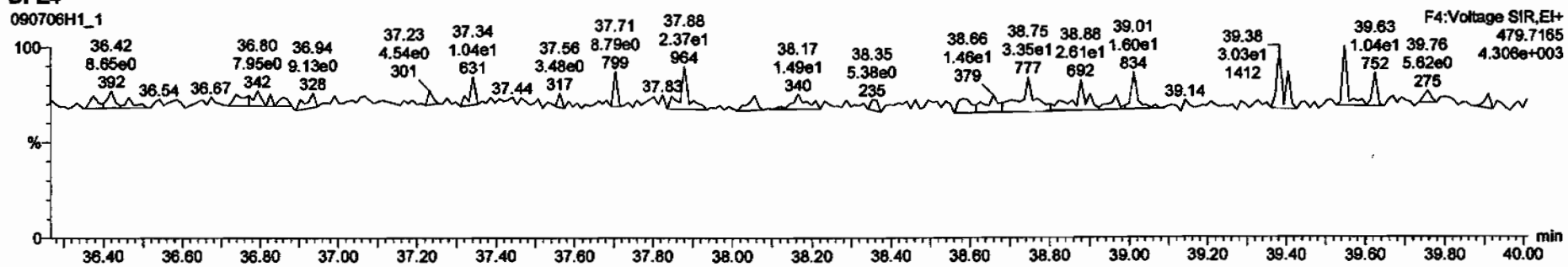

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Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

OCDF

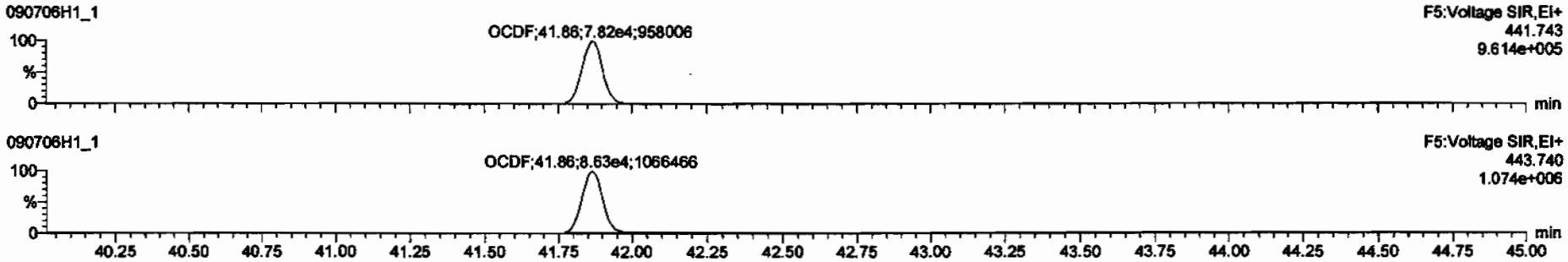

13C-OCDF

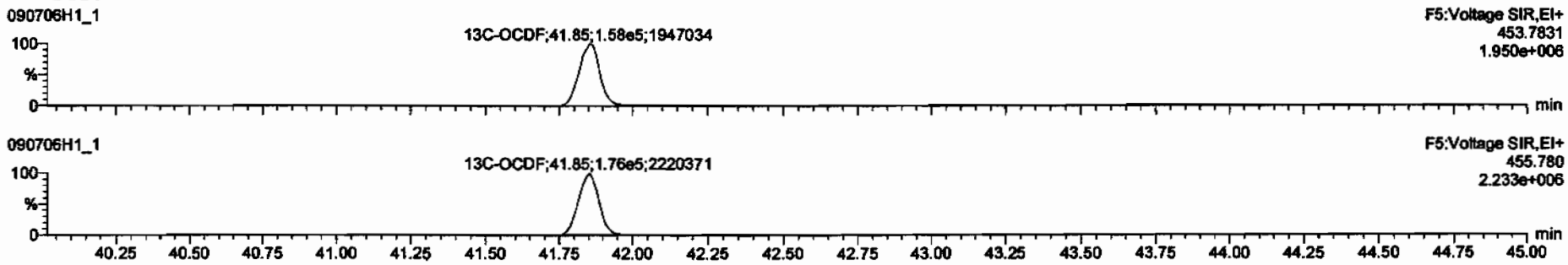

DPE5

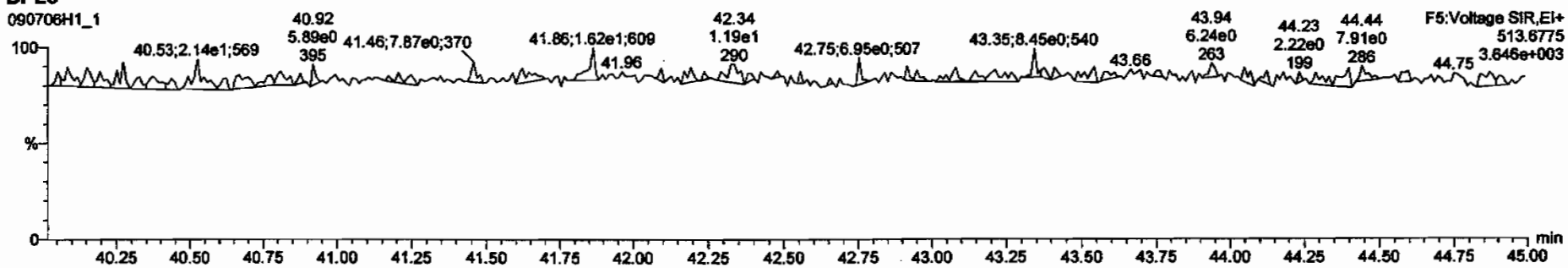

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090706h1-1.qld

Last Altered: Monday, July 06, 2009 14:16:39 Pacific Daylight Time
Printed: Monday, July 06, 2009 14:22:59 Pacific Daylight Time

Name: 090706H1_1, Date: 06-Jul-2009, Time: 13:27:01, ID: ST090706H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

PFK1

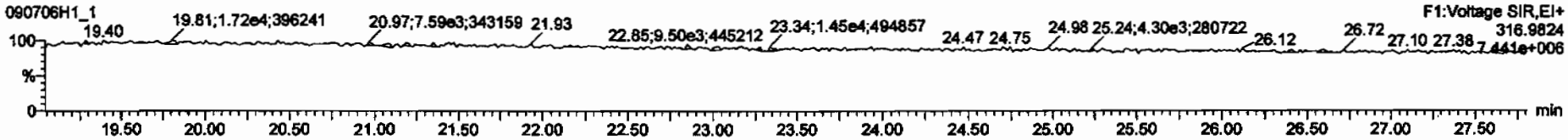

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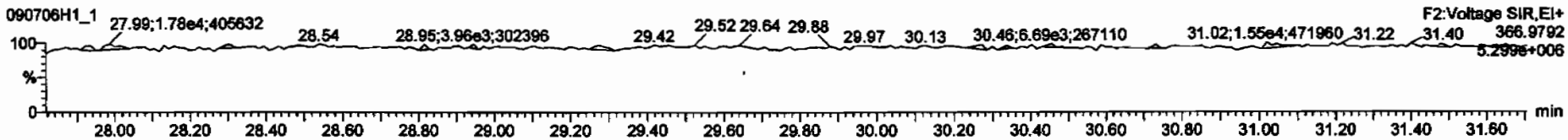

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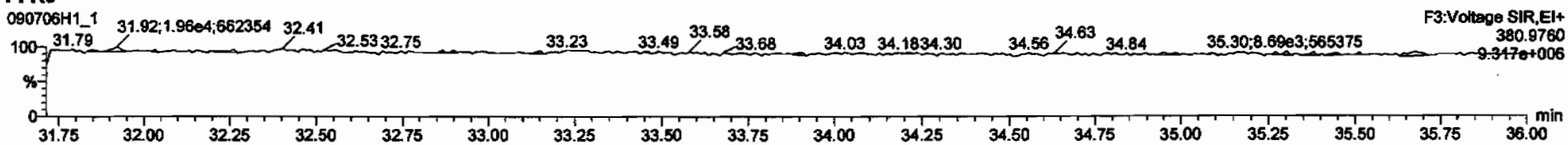

PFK4

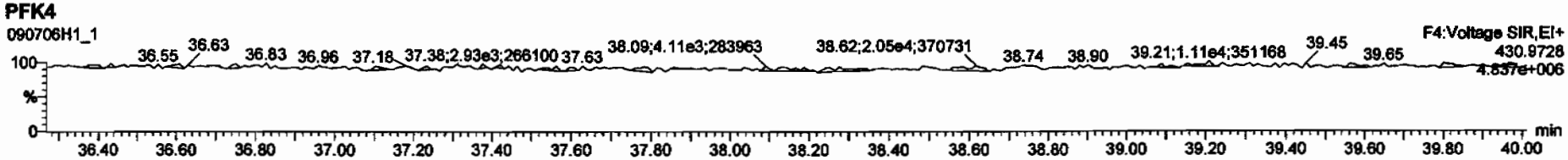

PFK5

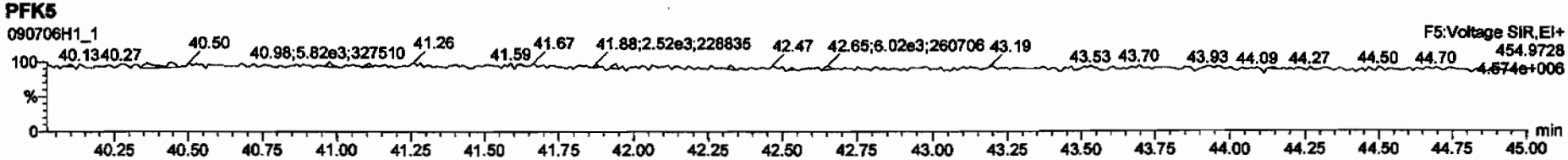

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090706H1_17

CCAL ID: ST090706H1-2

GC Column ID: DB-5
Analysis Date: 07-Jul-09 Analysis Time: 02:39:35

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	NO	9.17	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.60	0.54-0.72	NO	44.9	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	44.8	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	44.8	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	NO	46.2	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	NO	44.5	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.89	0.76-1.02	NO	87.9	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	8.21	8.4	12.0	No	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	41.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	41.3	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	NO	43.3	45.0	56.0	No	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	NO	43.2	44.0	57.0	No	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	NO	43.6	44.0	57.0	No	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	NO	44.9	45.0	56.0	No	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	NO	44.4	45.0	55.0	No	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	45.4	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.92	0.76-1.02	NO	89.1	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: _____ 8290 only
Date: 7/7/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090706H1_17

CCAL ID: ST090706H1-2

GC Column ID: DB-5
Analysis Date: 07-Jul-09
Analysis Time: 02:39:35

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	NO	104	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	96.6	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.32	1.05-1.43	NO	105	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.20	1.05-1.43	NO	91.8	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	NO	100	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.90	0.76-1.02	NO	221	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	107	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.6	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	NO	96.6	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	103	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	NO	88.7	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	NO	93.7	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	NO	95.5	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	NO	91.1	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	NO	95.1	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.89	0.76-1.02	NO	194	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.24	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature] 8290 only
Date: 7/7/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 07:27:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:27:57 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_17, Date: 07-Jul-2009, Time: 02:39:35, ID: ST090706H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.62
2	1,2,8,9-TCDD (Last)	26.90
3	1,2,4,7,9-PeCDD (First)	28.54
4	1,2,3,8,9-PeCDD (Last)	31.06
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.52
7	1,2,3,4,6,7,9-HpCDD (First)	37.22
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.54
10	1,2,8,9-TCDF (Last)	27.05
11	1,3,4,6,8-PeCDF (First)	26.98
12	1,2,3,8,9-PeCDF (Last)	31.31
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.92
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.75

7/7/09

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090706H1_17

CCAL ID: ST090706H1-2

GC Column ID: DB-5
Analysis Date: 07-Jul-09

Analysis Time: 02:39:35

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.206	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.992	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 7/7/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090706H1_17

CCAL ID: ST090706H1-2
GC Column ID: DB-5
Analysis Date: 07-Jul-09
Analysis Time: 02:39:35

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999	1.001	Yes
OCDF	13C-OCDF	1.000	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.962	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.012	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.065	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____
Date: 7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-17.qld

Last Altered: Tuesday, July 07, 2009 07:24:43 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:25:48 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_17, Date: 07-Jul-2009, Time: 02:39:35, ID: ST090706H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1	2,3,7,8-TCDD	4.91e4	0.76	NO	1.08	1.000	26.03	1.001	9.1661	91.7	0.0491	9.1661
2	1,2,3,7,8-PeCDD	1.74e5	0.60	NO	1.03	1.000	30.68	1.000	44.924	89.8	0.113	44.924
3	1,2,3,4,7,8-HxCDD	1.49e5	1.24	NO	1.00	1.000	34.12	1.001	44.843	89.7	0.219	44.843
4	1,2,3,6,7,8-HxCDD	1.48e5	1.26	NO	1.13	1.000	34.23	1.001	44.841	89.7	0.223	44.841
5	1,2,3,7,8,9-HxCDD	1.59e5	1.24	NO	1.10	1.000	34.52	1.009	46.183	92.4	0.212	46.183
6	1,2,3,4,6,7,8-HpCDD	1.17e5	1.02	NO	1.06	1.000	38.17	1.000	44.523	89.0	0.332	44.523
7	OCDD	1.99e5	0.89	NO	1.18	1.000	41.63	1.000	87.918	87.9	0.215	87.918
8	2,3,7,8-TCDF	6.21e4	0.77	NO	1.09	1.000	25.25	1.001	8.2088	82.1	0.0485	8.2088
9	1,2,3,7,8-PeCDF	2.83e5	1.61	NO	1.16	1.000	29.45	1.000	41.631	83.3	0.0844	41.631
10	2,3,4,7,8-PeCDF	2.66e5	1.61	NO	1.12	1.000	30.39	1.000	41.295	82.6	0.0831	41.295
11	1,2,3,4,7,8-HxCDF	2.55e5	1.26	NO	1.41	1.000	33.20	1.000	43.317	86.6	0.141	43.317
12	1,2,3,6,7,8-HxCDF	2.46e5	1.28	NO	1.22	1.000	33.33	1.001	43.223	86.4	0.154	43.223
13	2,3,4,6,7,8-HxCDF	2.26e5	1.23	NO	1.28	1.000	33.94	1.000	43.644	87.3	0.174	43.644
14	1,2,3,7,8,9-HxCDF	1.97e5	1.30	NO	1.26	1.000	34.92	1.000	44.939	89.9	0.237	44.939
15	1,2,3,4,6,7,8-HpCDF	2.05e5	1.04	NO	1.69	1.000	36.81	1.001	44.410	88.8	0.259	44.410
16	1,2,3,4,7,8,9-HpCDF	1.61e5	1.05	NO	1.48	1.000	38.75	1.001	45.404	90.8	0.276	45.404
17	OCDF	2.49e5	0.92	NO	1.10	1.000	41.86	1.000	89.074	89.1	0.138	89.074
18	13C-2,3,7,8-TCDD	4.96e5	0.78	NO	1.01	1.000	26.00	1.023	104.38	104	0.176	
19	13C-1,2,3,7,8-PeCDD	3.75e5	0.64	NO	0.827	1.000	30.67	1.206	96.598	96.6	0.190	
20	13C-1,2,3,4,7,8-HxCDD	3.32e5	1.32	NO	0.916	1.000	34.10	0.988	104.61	105	0.320	
21	13C-1,2,3,6,7,8-HxCDD	2.93e5	1.20	NO	0.921	1.000	34.21	0.991	91.795	91.8	0.318	
22	13C-1,2,3,4,6,7,8-HpCDD	2.46e5	1.04	NO	0.708	1.000	38.16	1.106	100.30	100	0.614	
23	13C-OCDD	3.84e5	0.90	NO	0.503	1.000	41.62	1.206	220.89	110	0.459	
24	13C-2,3,7,8-TCDF	6.96e5	0.78	NO	0.977	1.000	25.22	0.992	107.31	107	0.176	
25	13C-1,2,3,7,8-PeCDF	5.87e5	1.58	NO	0.896	1.000	29.43	1.158	98.613	98.6	0.236	
26	13C-2,3,4,7,8-PeCDF	5.77e5	1.59	NO	0.900	1.000	30.38	1.195	96.619	96.6	0.236	
27	13C-1,2,3,4,7,8-HxCDF	4.18e5	0.52	NO	1.17	1.000	33.19	0.962	103.18	103	0.420	
28	13C-1,2,3,6,7,8-HxCDF	4.66e5	0.52	NO	1.52	1.000	33.31	0.965	88.675	88.7	0.323	
29	13C-2,3,4,6,7,8-HxCDF	4.05e5	0.51	NO	1.25	1.000	33.93	0.983	93.729	93.7	0.393	
30	13C-1,2,3,7,8,9-HxCDF	3.48e5	0.52	NO	1.05	1.000	34.92	1.012	95.501	95.5	0.466	

7/7/09

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-17.qld

Last Altered: Tuesday, July 07, 2009 07:24:43 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:25:48 Pacific Daylight Time

Name: 090706H1_17, Date: 07-Jul-2009, Time: 02:39:35, ID: ST090706H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	2.74e5	0.44	NO	0.868	1.000	36.77	1.065	91.145	91.1	0.614
32	13C-1,2,3,4,7,8,9-HpCDF	2.39e5	0.44	NO	0.727	1.000	38.73	1.122	95.089	95.1	0.734
33	13C-OCDF	5.10e5	0.89	NO	0.760	1.000	41.85	1.213	193.91	97.0	0.285
34	37Cl-2,3,7,8-TCDD	2.89e4			0.668	1.000	26.02	1.023	9.2357	92.4	0.0862
35	13C-1,2,3,4-TCDD	4.69e5	0.78	NO	1.00	1.000	25.42	0.000	100.00	100	0.179
36	13C-1,2,3,4-TCDF	6.64e5	0.79	NO	1.00	1.000	23.98	0.000	100.00	100	0.172
37	13C-1,2,3,7,8,9-HxCDD	3.46e5	1.27	NO	1.00	1.000	34.51	0.000	100.00	100	0.293

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 7:28:11 AM Pacific Daylight Time
Printed: Tuesday, July 07, 2009 7:28:33 AM Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Compound name: 1,3,6,8-TCDD (First)

090706H1_1	ST090706H1-1 1613 CS3 080917I			06-Jul-09	13:27:01
090706H1_2	0_2218_OPR001			06-Jul-09	14:16:34
090706H1_3	solvent blank			06-Jul-09	15:06:04
090706H1_4	0_2218_MB001			06-Jul-09	15:55:37
090706H1_5	31853_2218_001 CAMO-09-9950	11.3		06-Jul-09	16:45:10
090706H1_6	31853_2218_002 CAMO-09-9951	11.09		06-Jul-09	17:34:41
090706H1_7	31853_2218_003 CAMO-09-9952	11.09		06-Jul-09	18:24:13
090706H1_8	31853_2218_004 CAMO-09-9956	11.55		06-Jul-09	19:13:44
090706H1_9	31853_2218_005 CAMO-09-9957	11.02		06-Jul-09	20:03:16
090706H1_10	31853_2218_006 CAMO-09-9958	11.01		06-Jul-09	20:52:48
090706H1_11	31853_2218_007 CAMO-09-9990	12.07		06-Jul-09	21:42:20
090706H1_12	31853_2218_008 CAMO-09-10031	11.41		06-Jul-09	22:31:52
090706H1_13	31854_2218_001 CAMO-09-6613	11.11		06-Jul-09	23:21:25
090706H1_14	31854_2218_002 CAMO-09-6614	11.04		07-Jul-09	00:10:58
090706H1_15	31854_2218_003 CAMO-09-6615	10.66		07-Jul-09	01:00:30
090706H1_16	solvent blank			07-Jul-09	01:50:03
090706H1_17	ST090706H1-2 1613 CS3 080917I			07-Jul-09	02:39:35

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Tuesday, July 07, 2009 07:27:28 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:27:57 Pacific Daylight Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 06 Jul 2009 13:00:28
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_17, Date: 07-Jul-2009, Time: 02:39:35, ID: ST090706H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

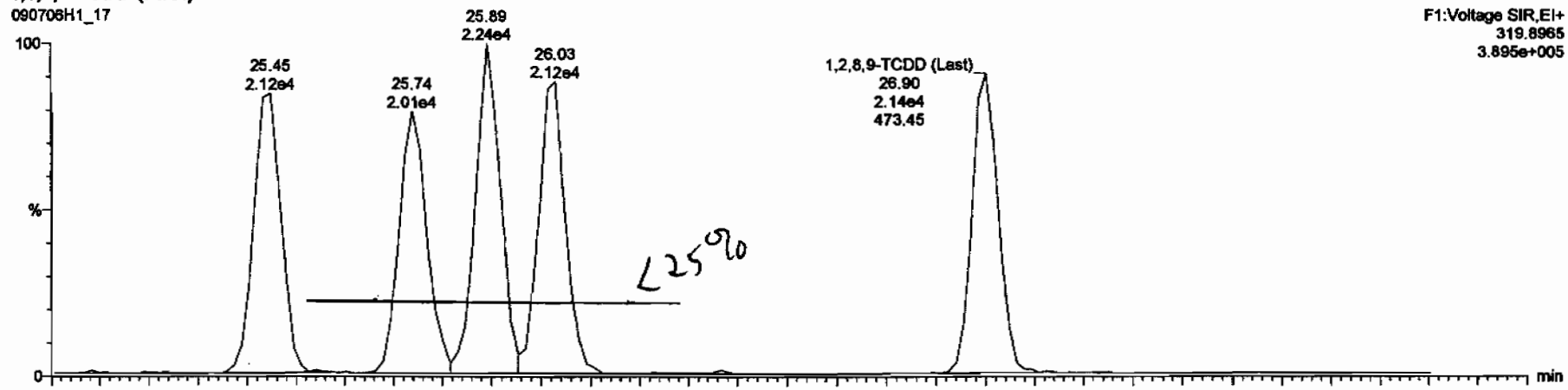

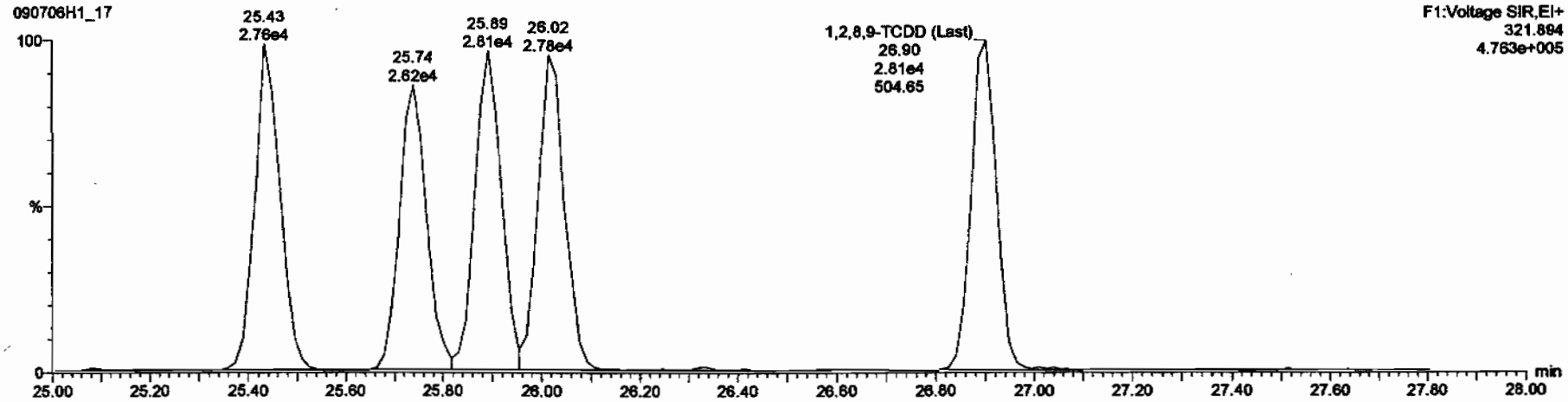

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-17.qld

Last Altered: Tuesday, July 07, 2009 07:24:43 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:25:33 Pacific Daylight Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 03 Jul 2009 06:47:18
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 08:27:00

Name: 090706H1_17, Date: 07-Jul-2009, Time: 02:39:35, ID: ST090706H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

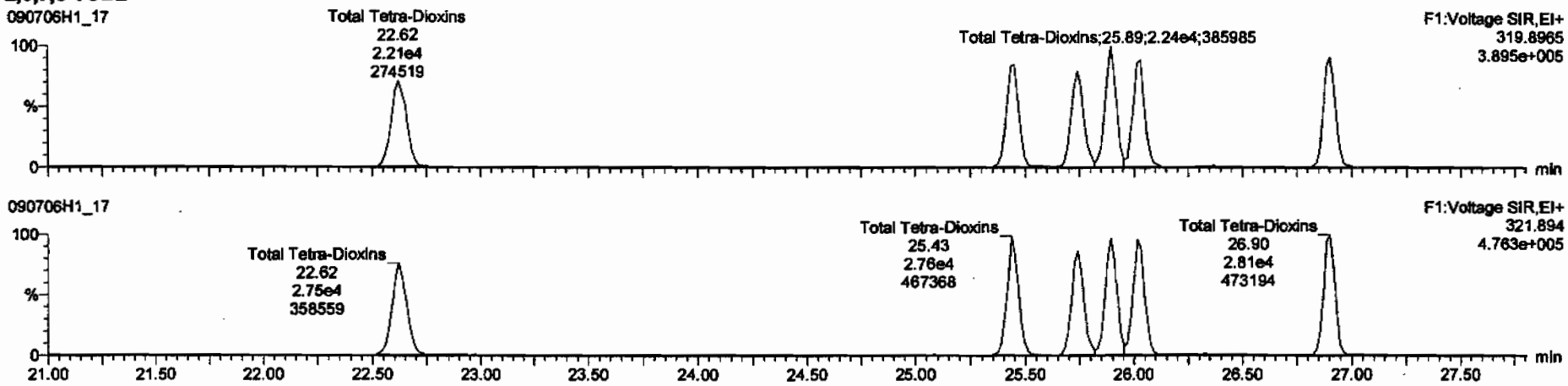

13C-2,3,7,8-TCDD

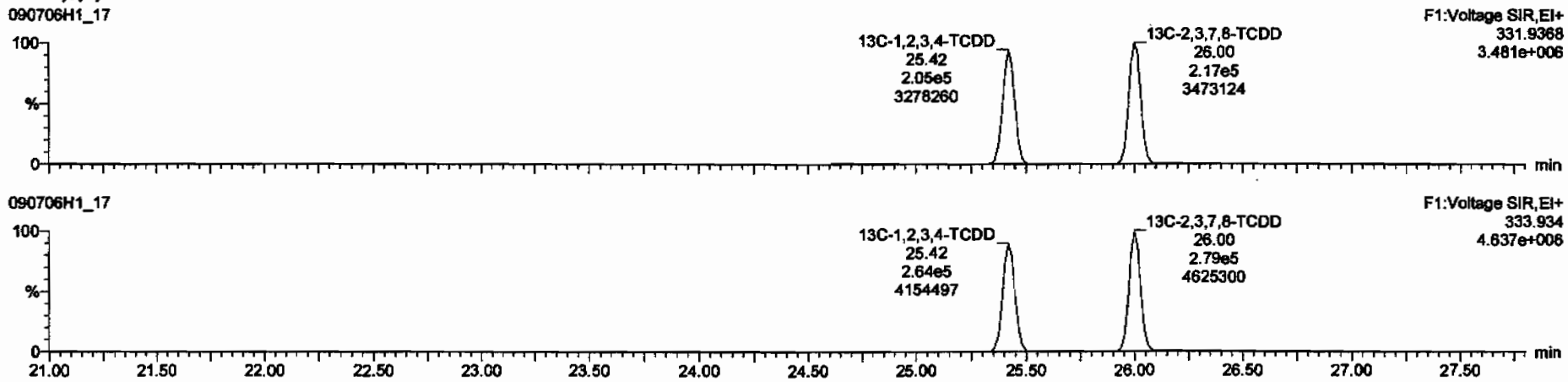

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Last Altered: Tuesday, July 07, 2009 07:24:43 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:25:33 Pacific Daylight Time

Name: 090706H1_17, Date: 07-Jul-2009, Time: 02:39:35, ID: ST090706H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

37Cl-2,3,7,8-TCDD

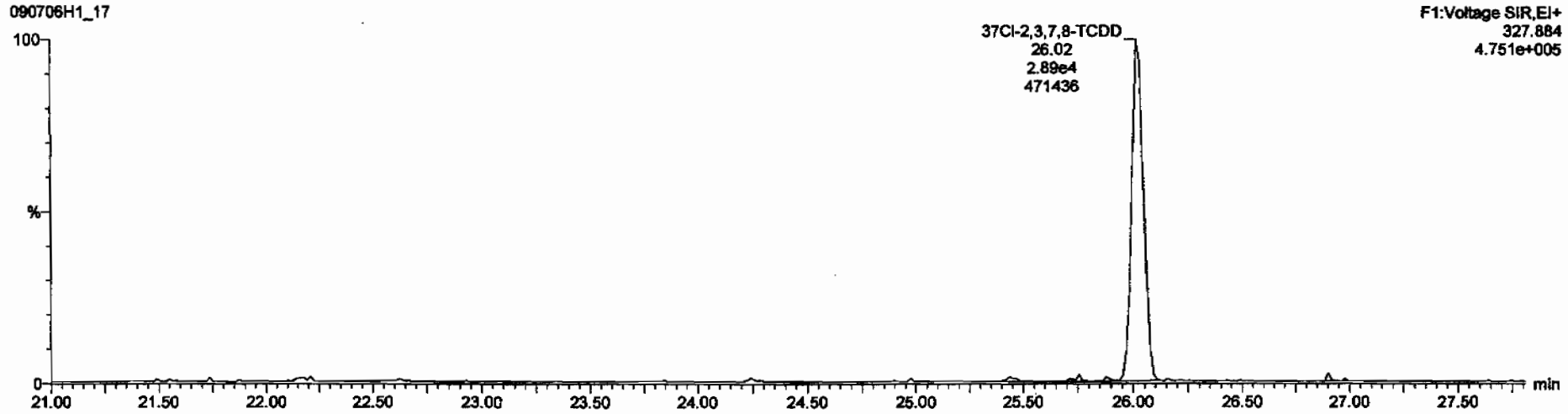

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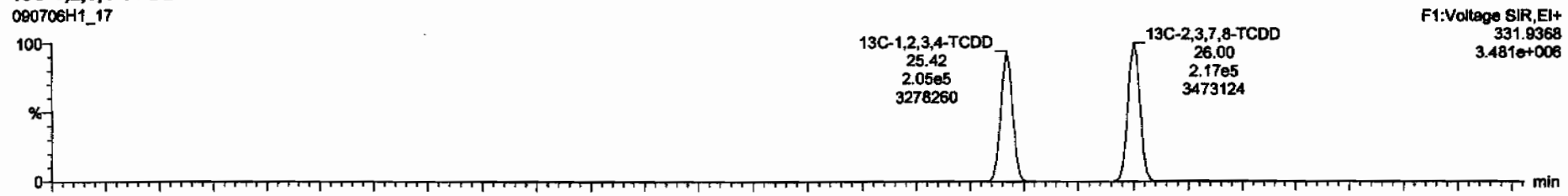

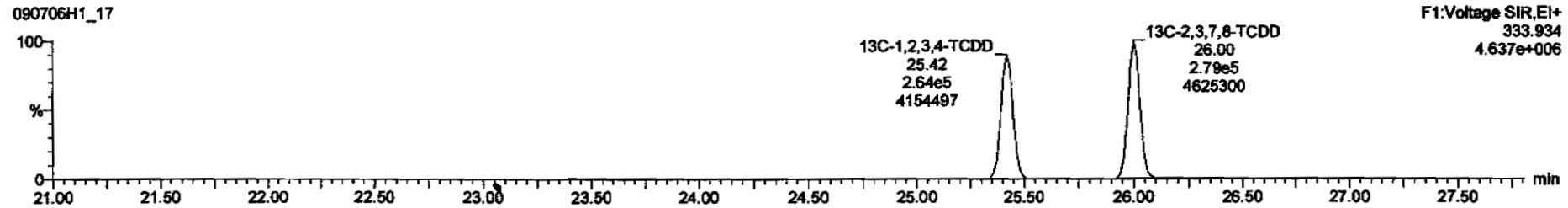

Dataset: C:\MassLynx\Default.pro\Results\090706h1\090706h1-17.qld

Last Altered: Tuesday, July 07, 2009 07:24:43 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:25:33 Pacific Daylight Time

Name: 090706H1_17, Date: 07-Jul-2009, Time: 02:39:35, ID: ST090706H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,7,8-PeCDD

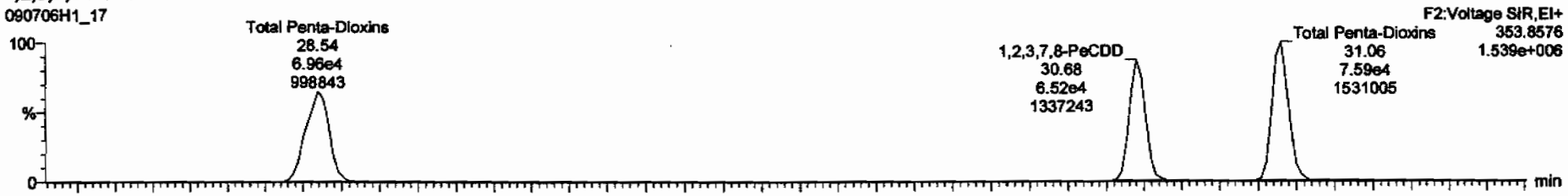

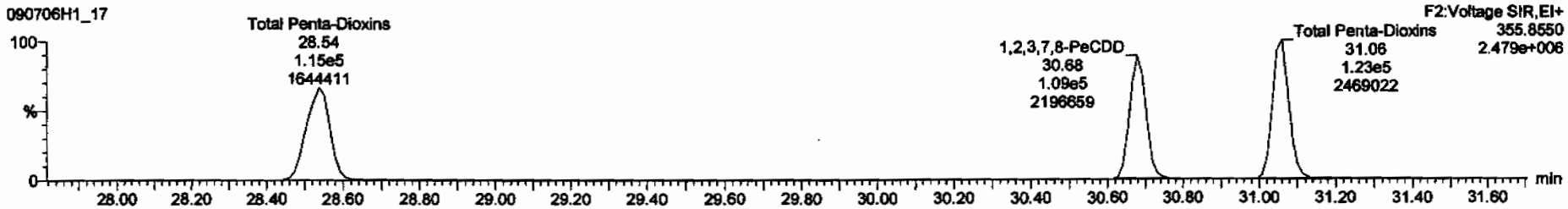

13C-1,2,3,7,8-PeCDD

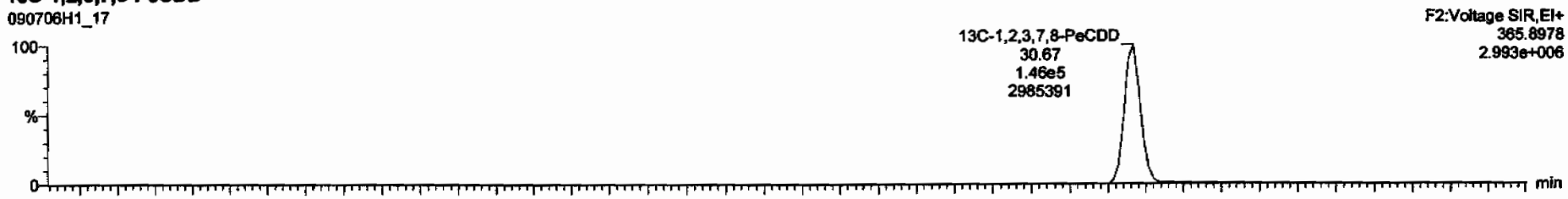

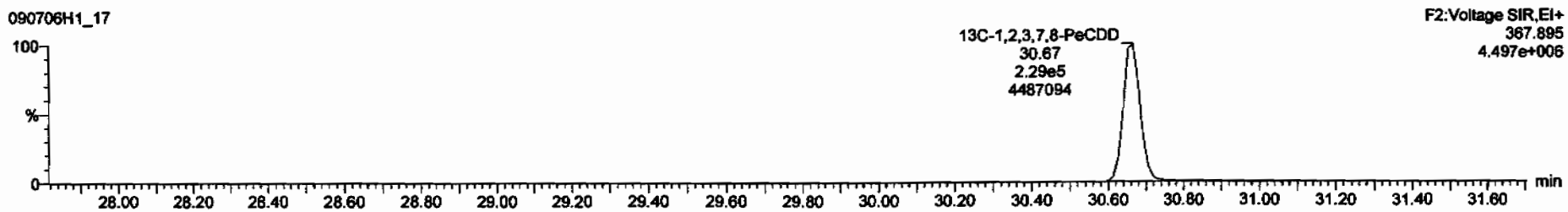

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Last Altered: Tuesday, July 07, 2009 07:24:43 Pacific Daylight Time
Printed: Tuesday, July 07, 2009 07:25:33 Pacific Daylight Time

Name: 090706H1_17, Date: 07-Jul-2009, Time: 02:39:35, ID: ST090706H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

1,2,3,4,7,8-HxCDD

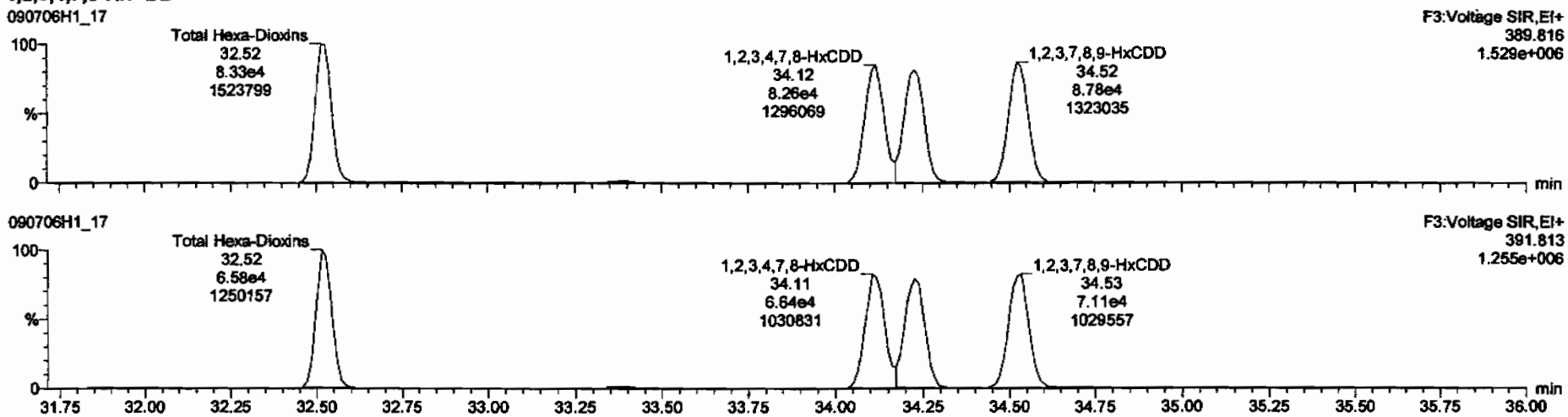

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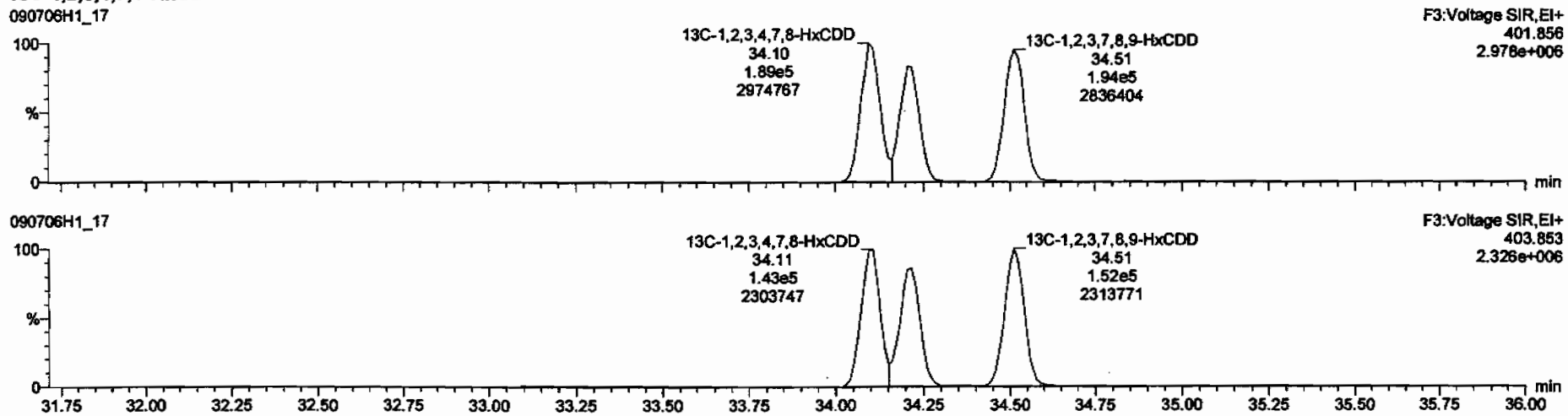

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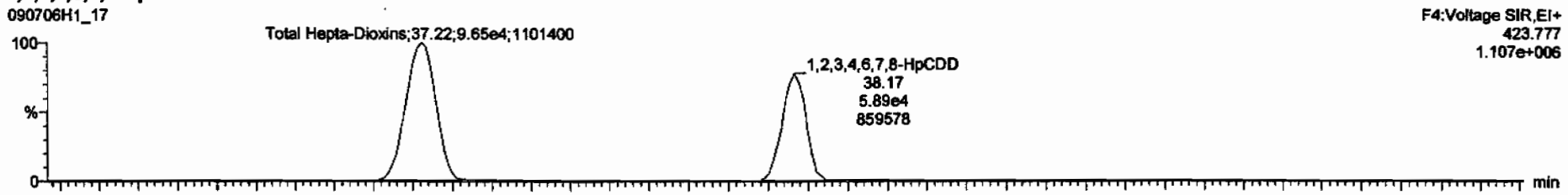

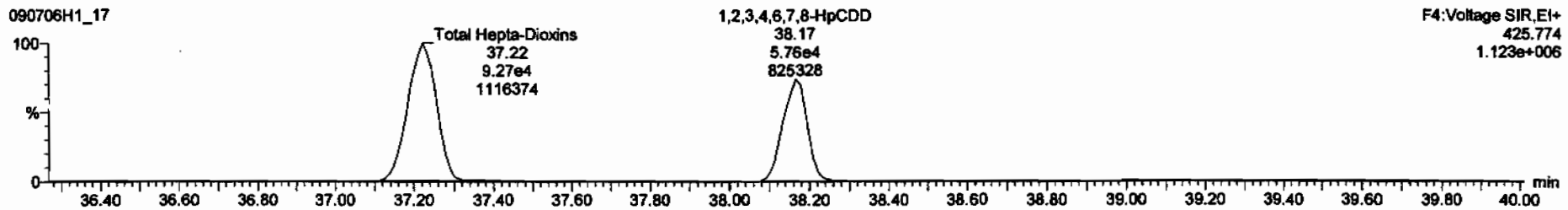

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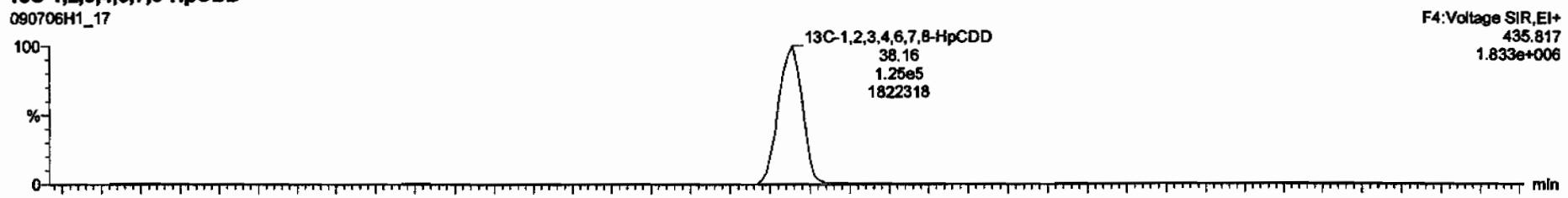

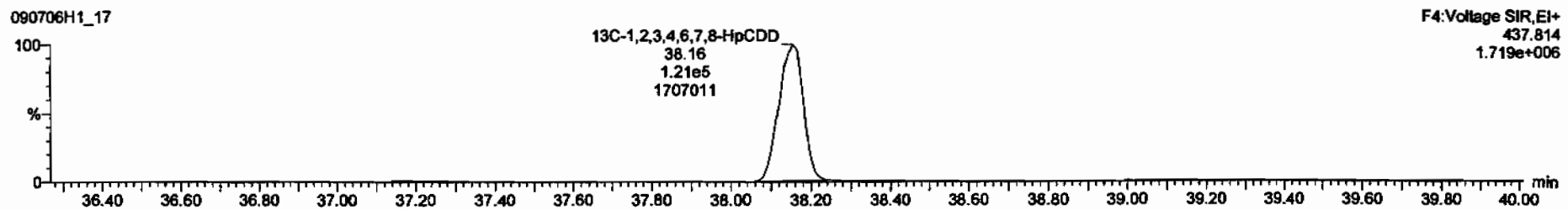

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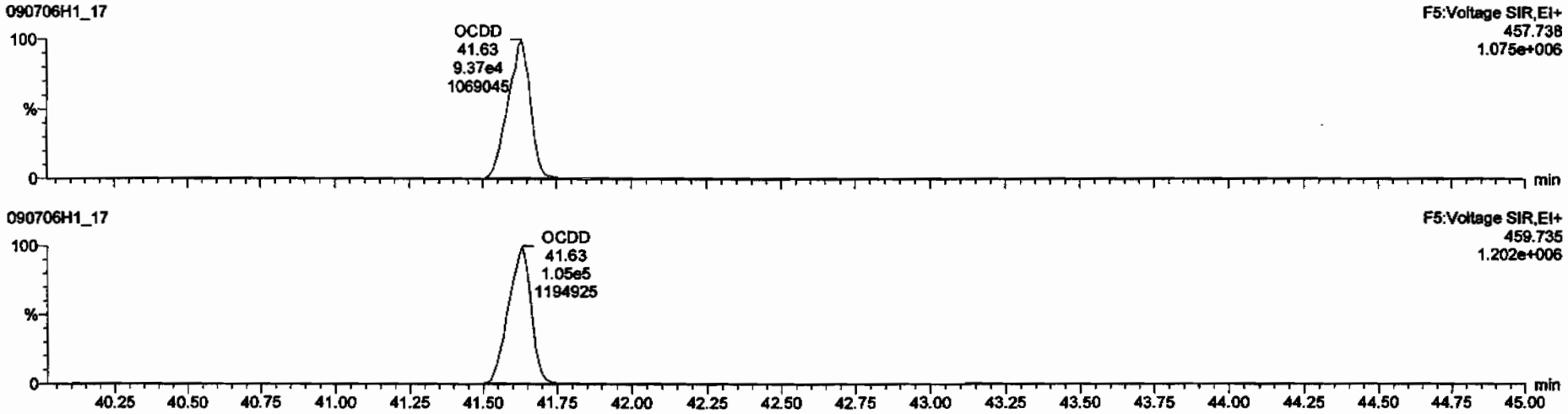

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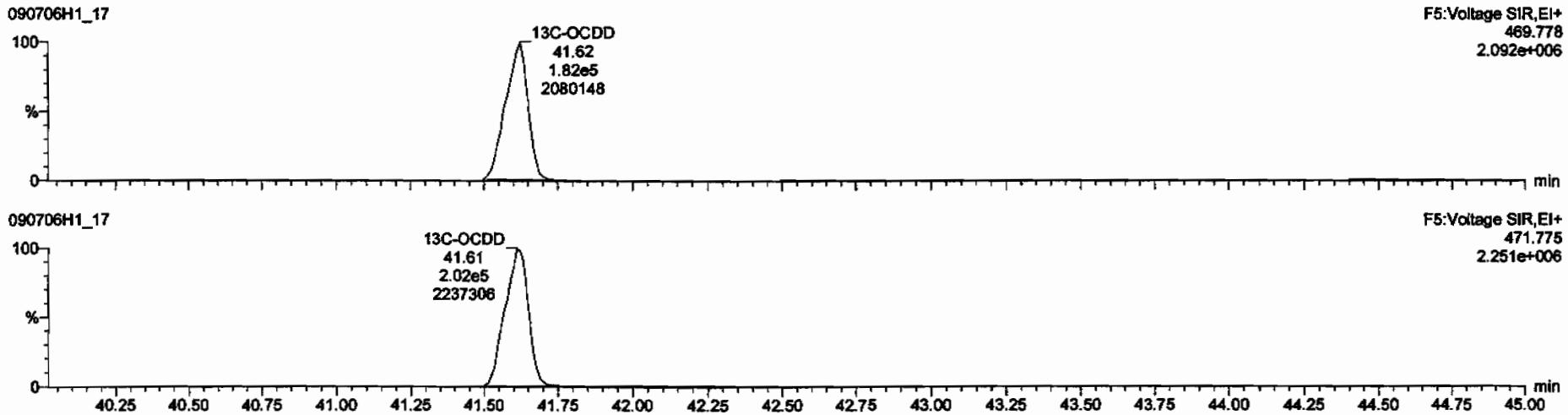

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2,3,7,8-TCDF

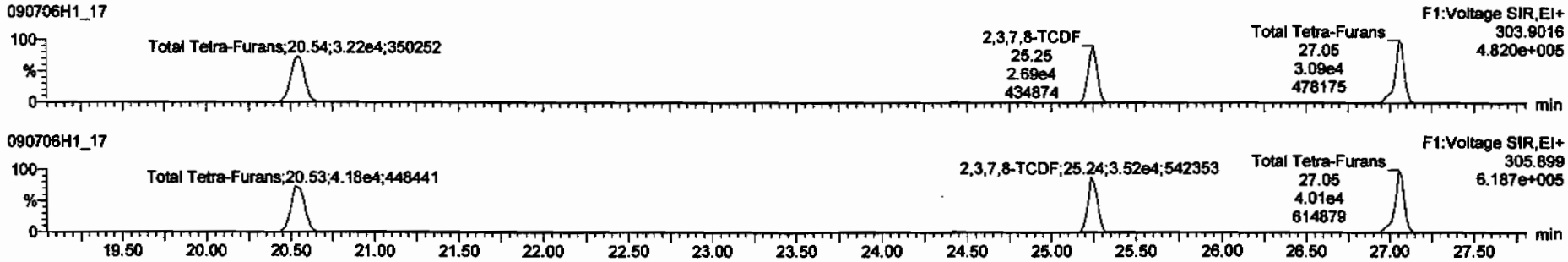

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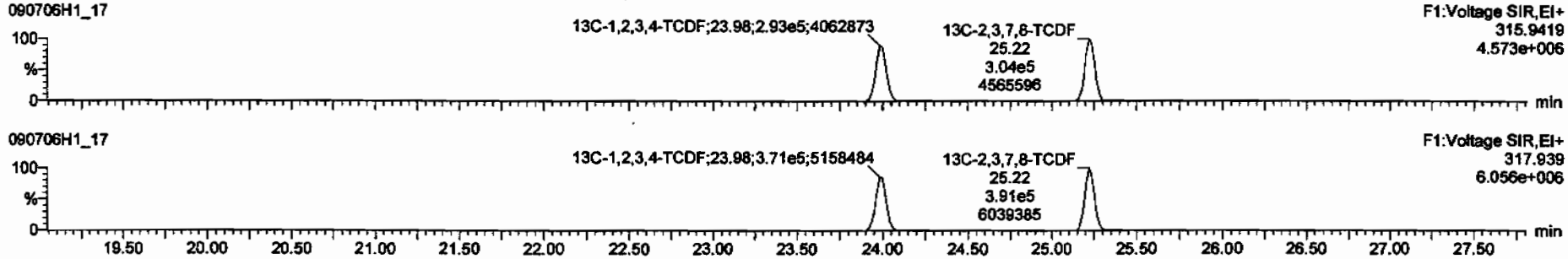

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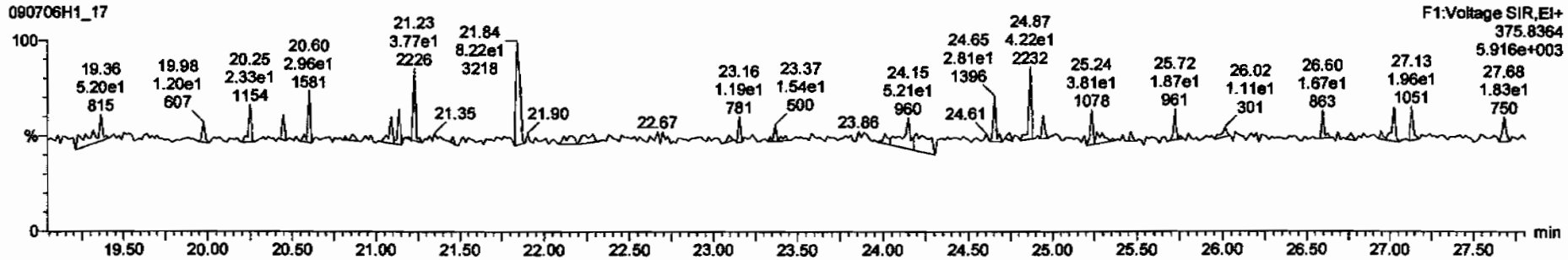

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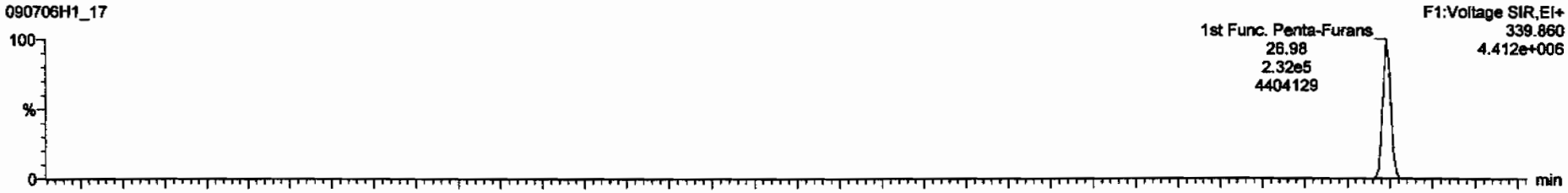

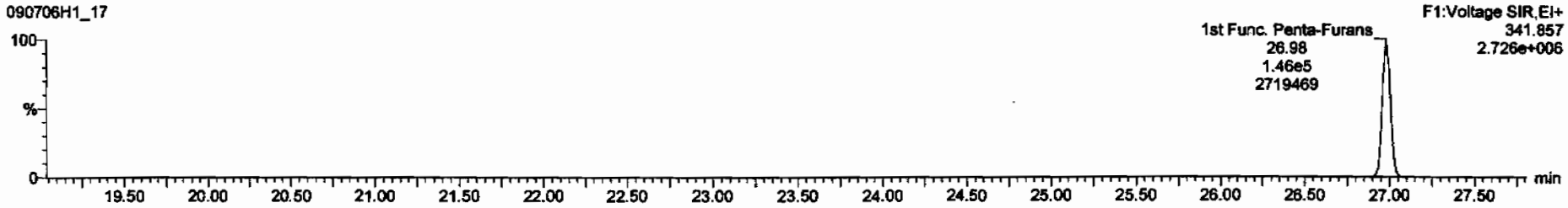

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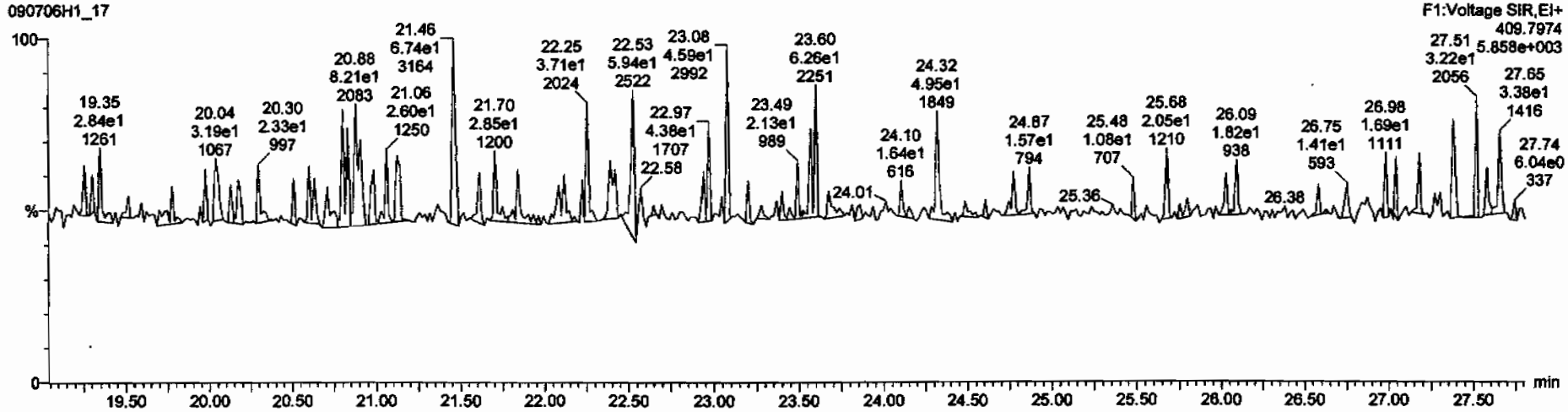

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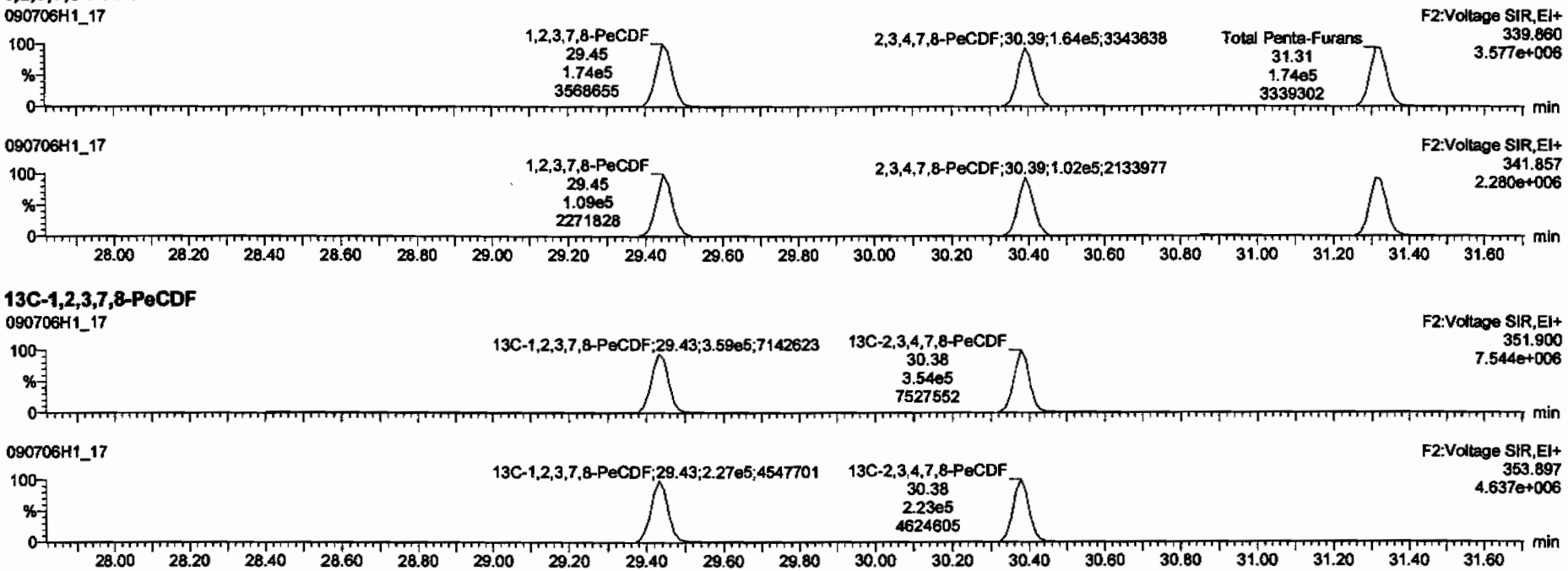

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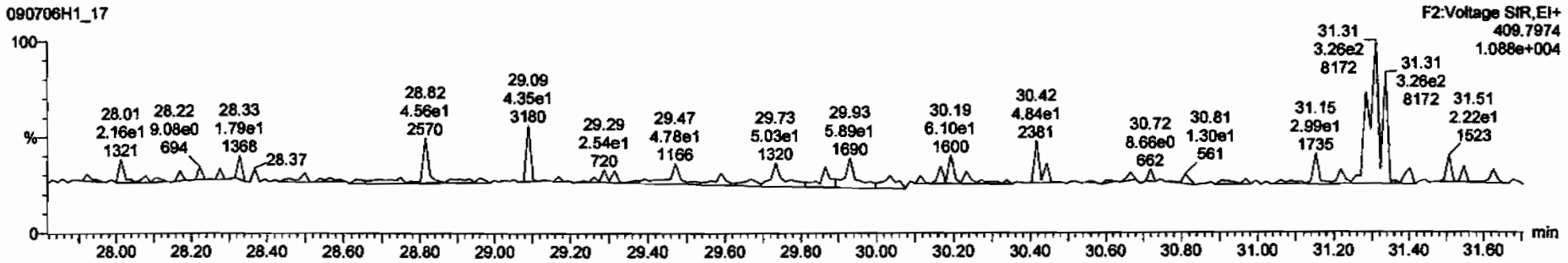

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1,2,3,4,7,8-HxCDF

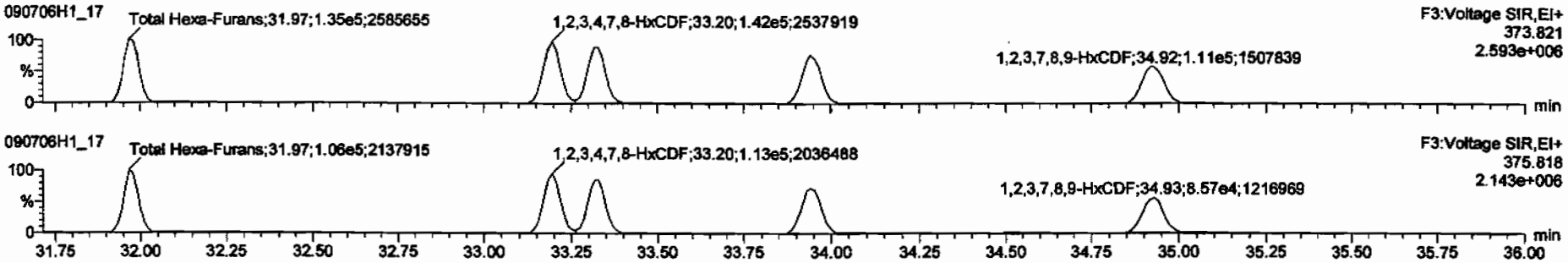

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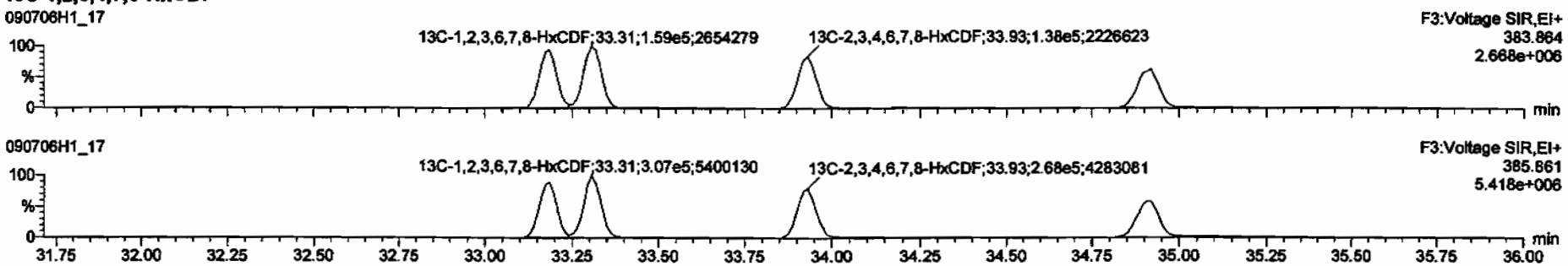

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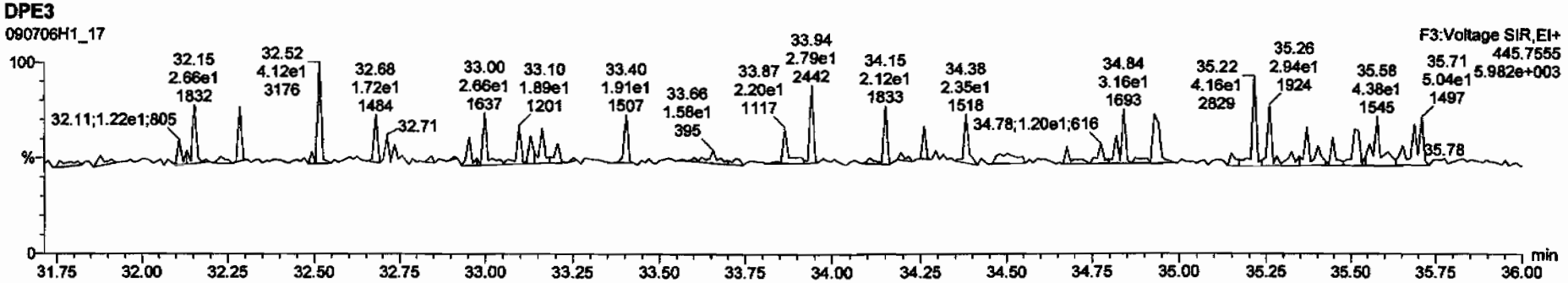

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1,2,3,4,6,7,8-HpCDF

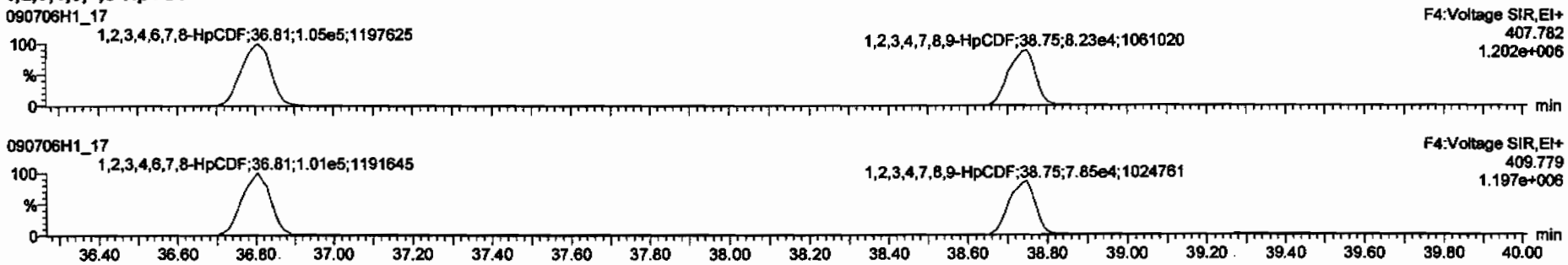

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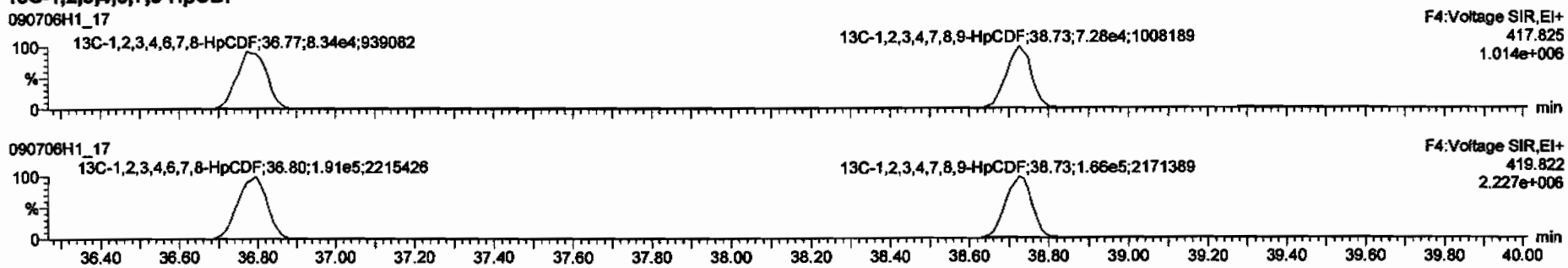

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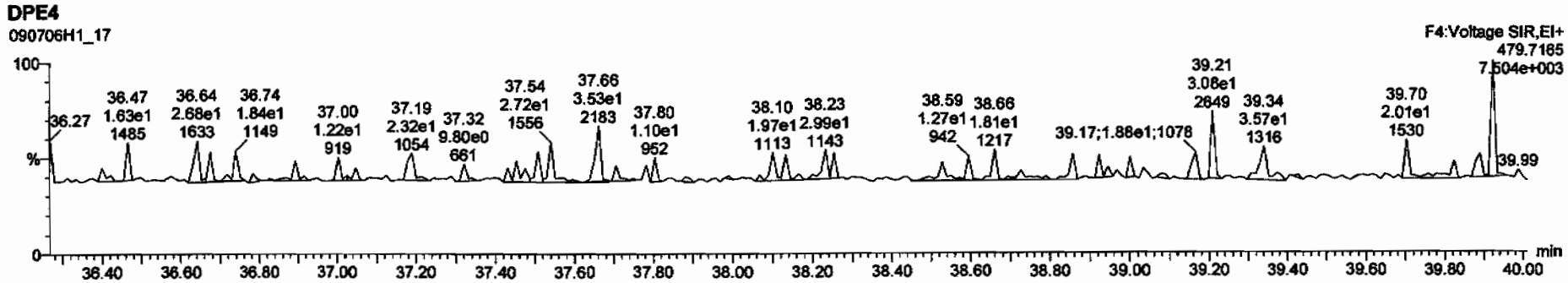

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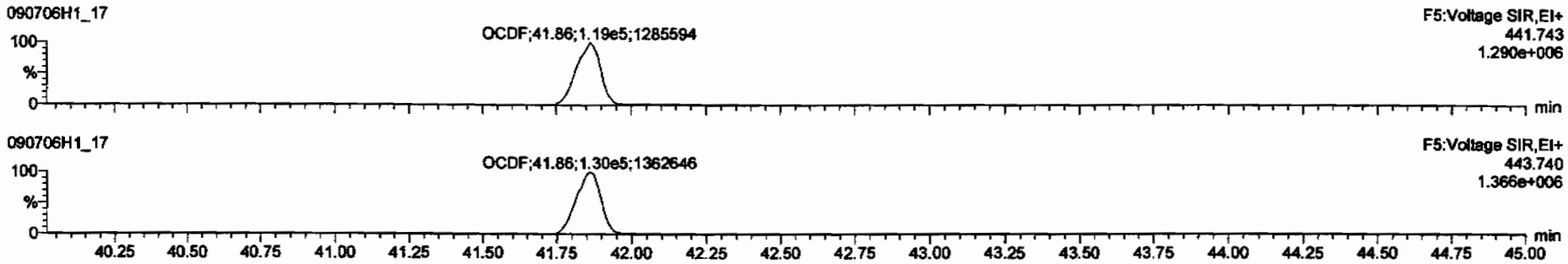

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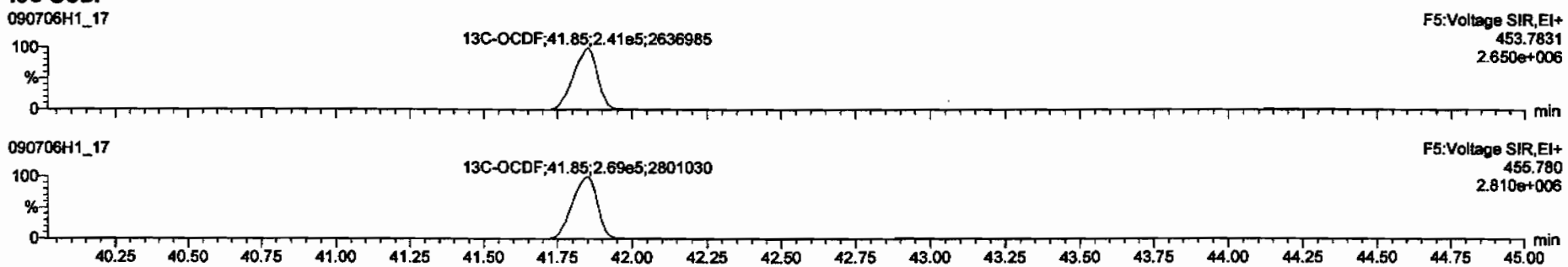

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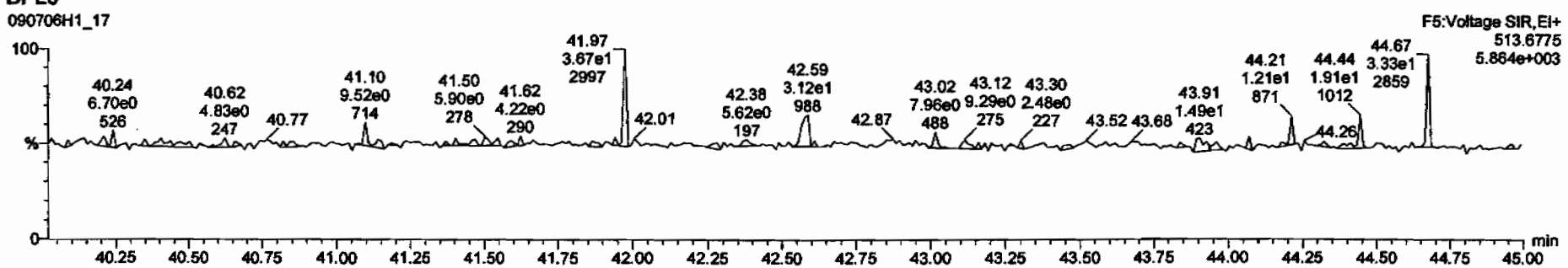

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Name: 090706H1_17, Date: 07-Jul-2009, Time: 02:39:35, ID: ST090706H1-2 1613 CS3 080917I, Description: 1613 CS3 080917I

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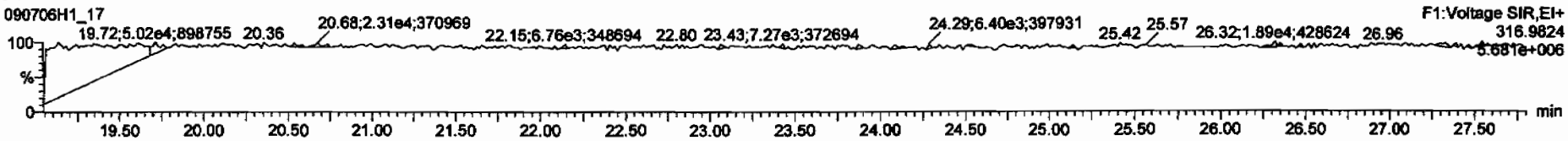

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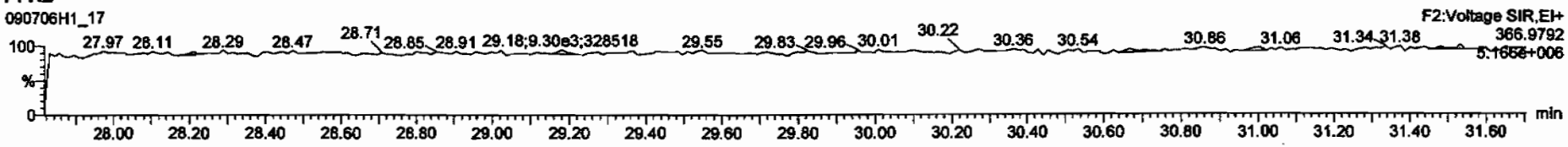

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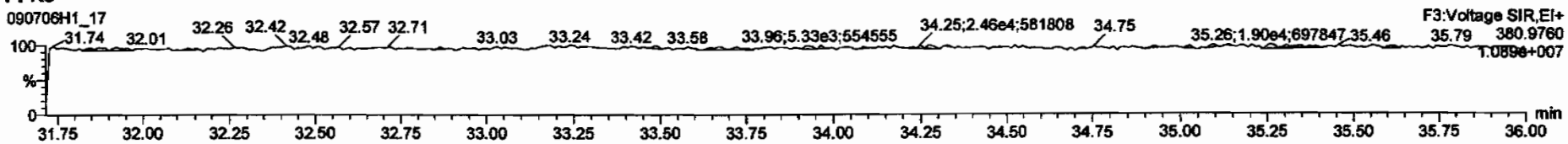

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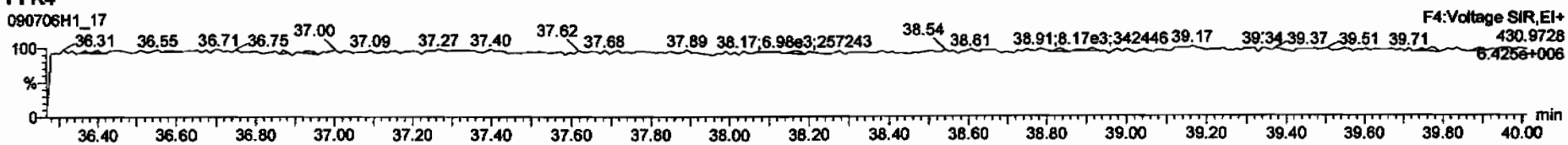

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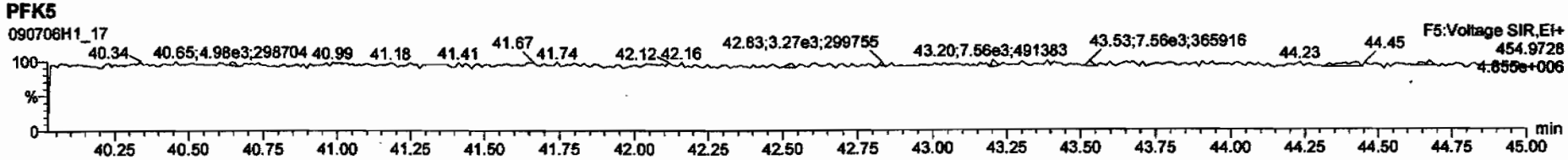

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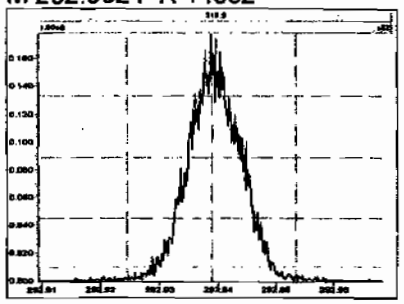

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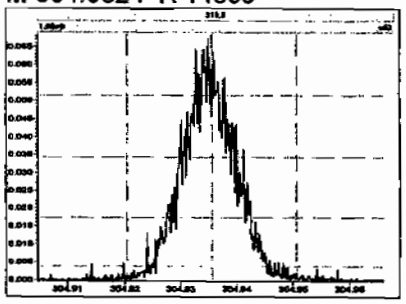

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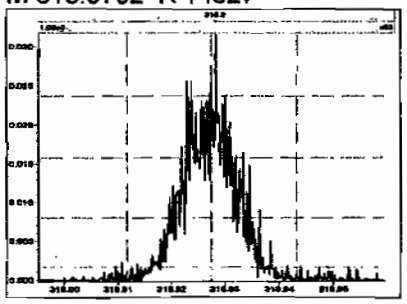

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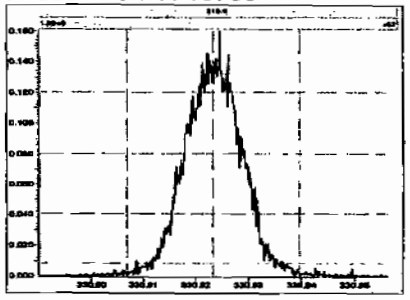

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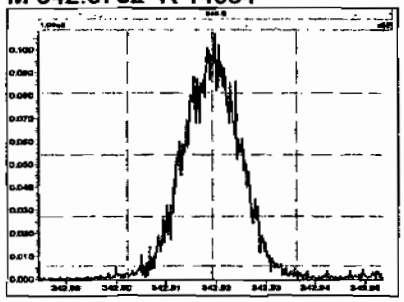

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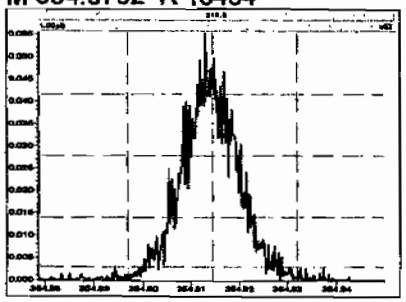

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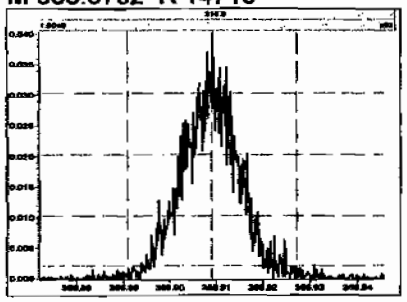

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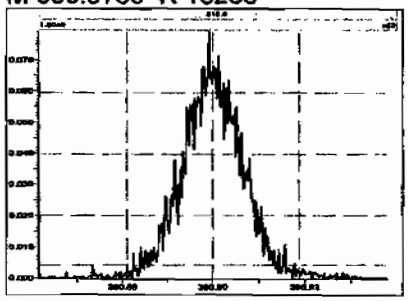

M 392.9760 R 13742

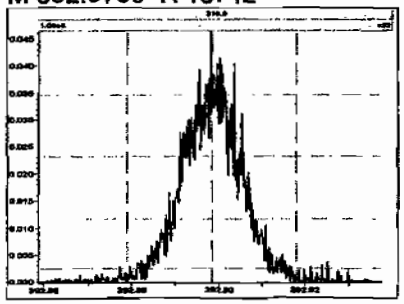

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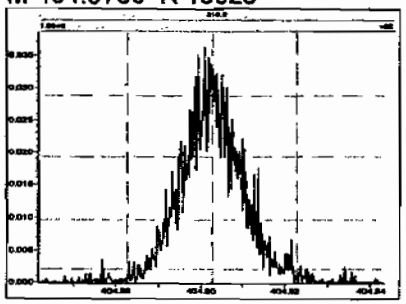

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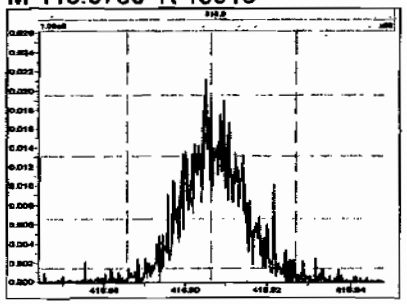

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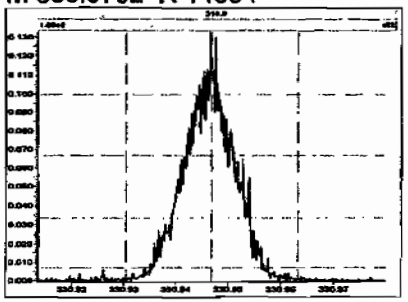

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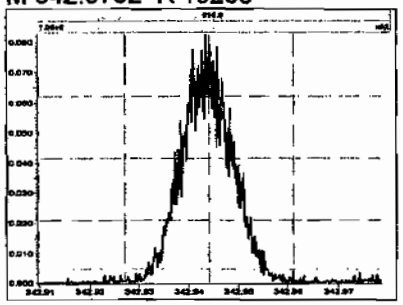

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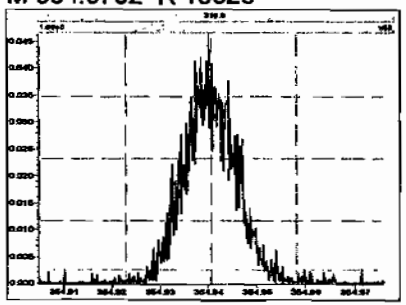

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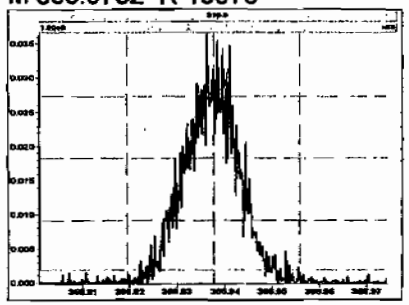

M 380.9760 R 14707

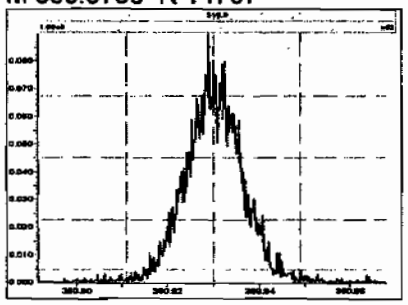

M 392.9760 R 14970

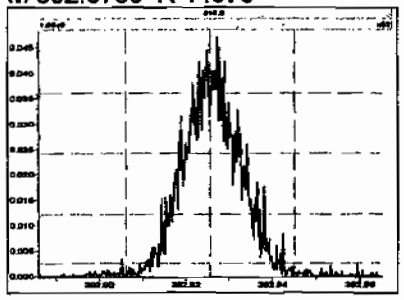

M 404.9760 R 15153

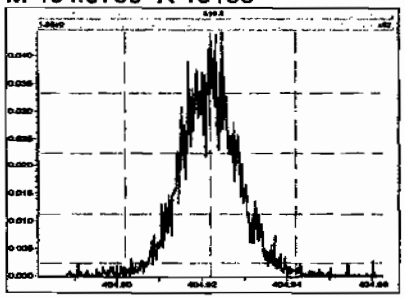

M 416.9760 R 15293

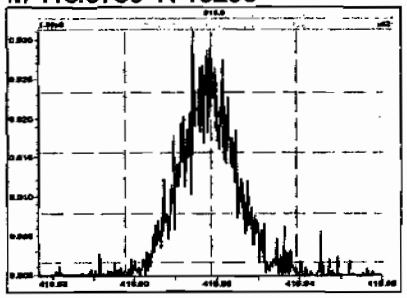

M 366.9792 R 16196

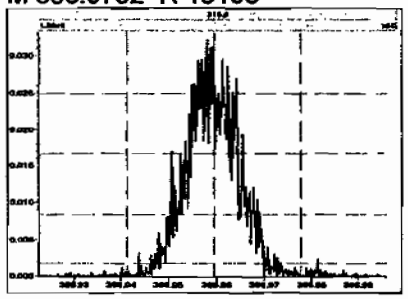

M 380.9760 R 14888

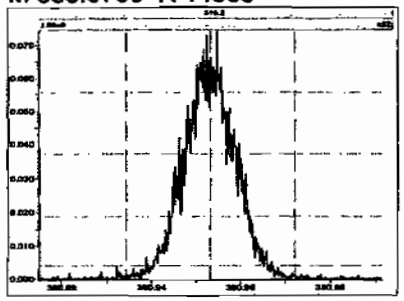

M 392.9760 R 16562

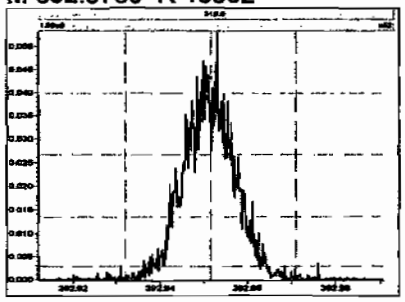

M 404.9760 R 15549

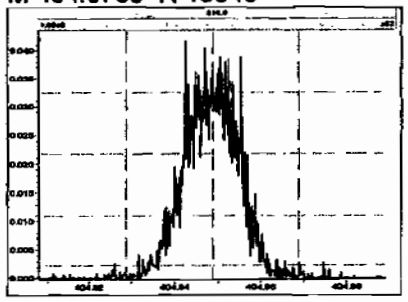

M 416.9760 R 15017

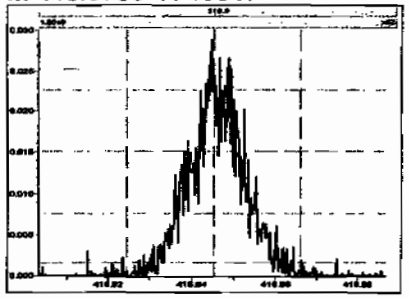

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M 430.9728 R 14536

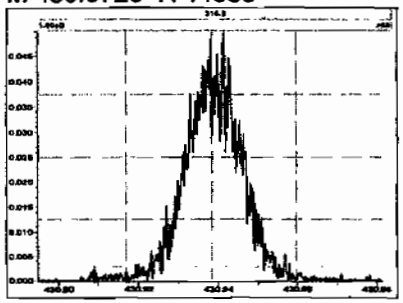

M 442.9728 R 14581

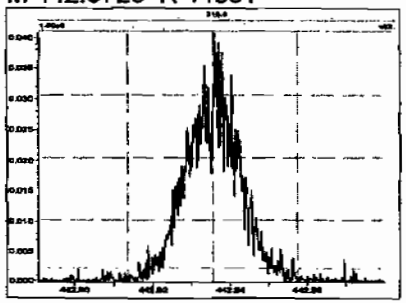

M 454.9728 R 14084

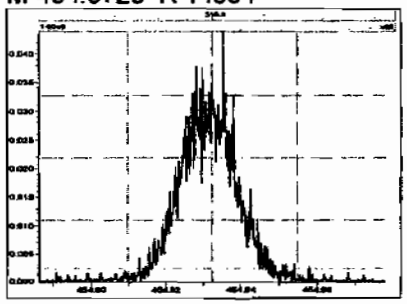

M 404.9760 R 16189

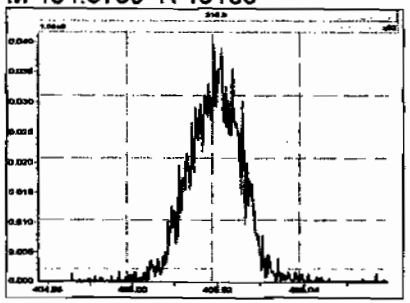

M 416.9760 R 17186

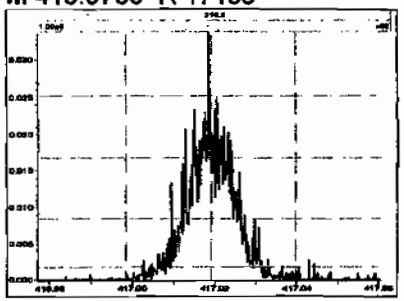

M 430.9728 R 15824

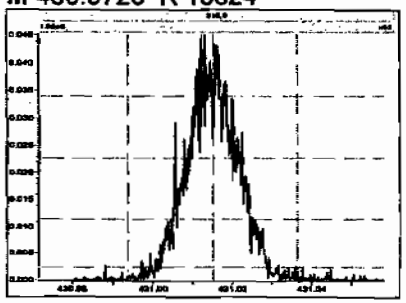

M 442.9728 R 16236

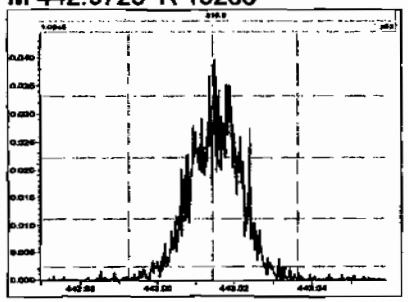

M 454.9728 R 15914

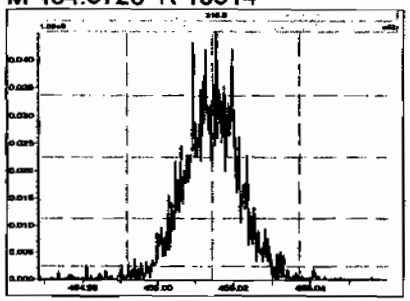

M 466.9728 R 16568

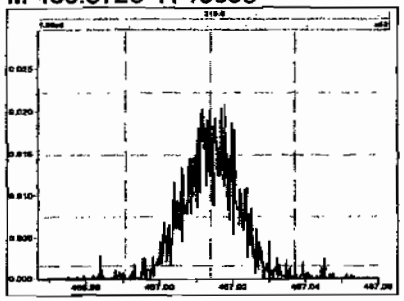

M 480.9696 R 14800

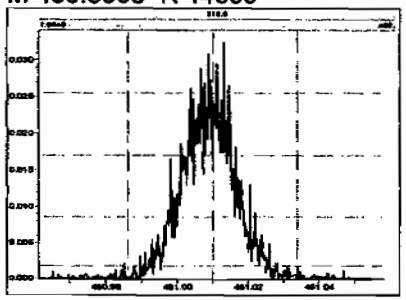

M 430.9728 R 15939

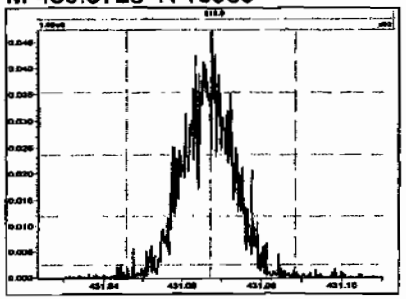

M 442.9728 R 16556

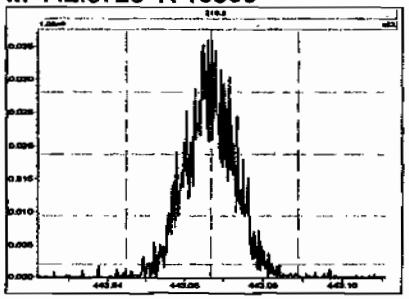

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M 454.9728 R 15469

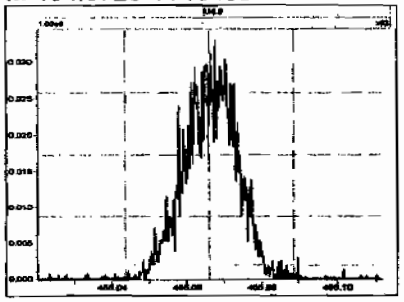

M 466.9728 R 17738

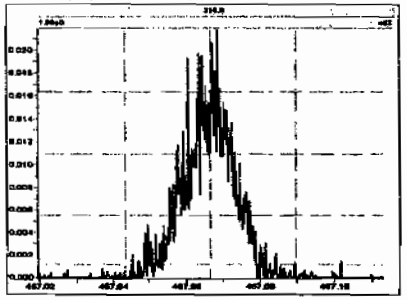

M 480.9696 R 15441

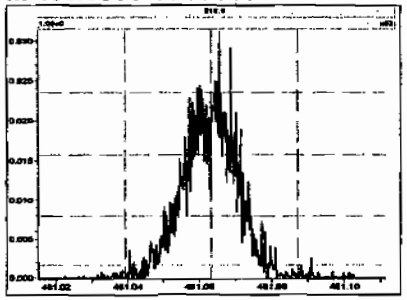

M 492.9696 R 16080

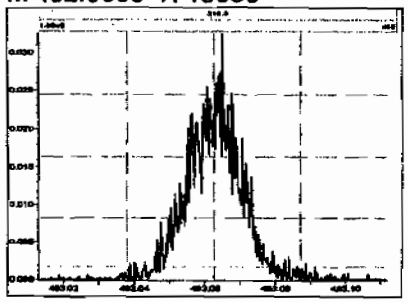

M 504.9696 R 16131

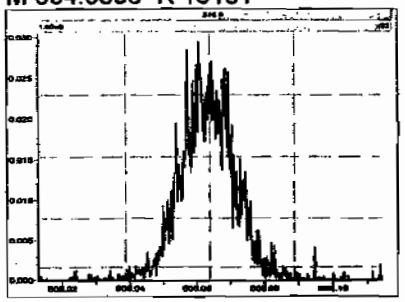

M 516.9697 R 16839

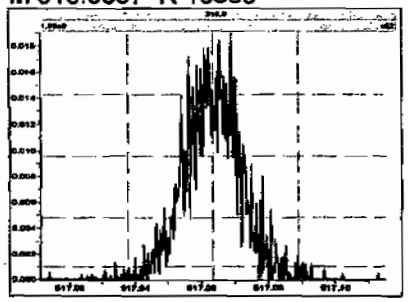

ICAL

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Compound name: 2,3,7,8-TCDD
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IW	RT	RRT	Response	IS Response	Conc	%D	RRF
090212H1_1	10.0	0.82	NO	25.98	1.001	7.90e4	7.49e5	9.78	-2.2	1.05
090212H1_3	0.250	0.85	NO	26.00	1.001	1.54e3	5.94e5	0.240	-4.1	1.03
090212H1_4	0.500	0.71	NO	25.98	1.001	3.65e3	6.33e5	0.536	7.1	1.16
090212H1_5	2.00	0.72	NO	26.00	1.001	1.40e4	6.64e5	1.95	-2.5	1.05
090212H1_6	40.0	0.77	NO	25.98	1.001	3.33e5	7.81e5	39.5	-1.3	1.06
090212H1_7	200	0.78	NO	26.00	1.001	1.92e6	8.66e5	206	3.0	1.11

Compound name: 1,2,3,7,8-PeCDD
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IW	RT	RRT	Response	IS Response	Conc	%D	RRF
090212H1_1	50.0	0.63	NO	30.65	1.000	3.03e5	6.02e5	48.6	-2.7	1.01
090212H1_3	1.25	0.69	NO	30.67	1.000	6.36e3	4.83e5	1.27	1.9	1.05
090212H1_4	2.50	0.60	NO	30.67	1.000	1.30e4	4.97e5	2.53	1.1	1.04
090212H1_5	10.0	0.61	NO	30.67	1.000	5.28e4	5.23e5	9.77	-2.3	1.01
090212H1_6	200	0.63	NO	30.67	1.000	1.31e6	6.35e5	200	-0.1	1.03
090212H1_7	1000	0.63	NO	30.67	1.000	8.09e6	7.66e5	1020	2.2	1.06

2/13/09
MS 2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1,2,3,4,7,8-HxCDD
Response Factor: 1.00153
RRF SD: 0.0317187, Relative SD: 3.16702
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	S Resp	Conc	%D	RRF
090212H1_1	50.0	1.26	NO	34.10	1.000	2.54e5	5.27e5	48.0	-3.9	0.962
090212H1_3	1.25	1.42	NO	34.11	1.000	5.16e3	4.08e5	1.26	1.0	1.01
090212H1_4	2.50	1.28	NO	34.11	1.001	1.10e4	4.22e5	2.61	4.2	1.04
090212H1_5	10.0	1.32	NO	34.12	1.000	4.31e4	4.47e5	9.64	-3.6	0.965
090212H1_6	200	1.27	NO	34.11	1.000	1.12e6	5.53e5	203	1.4	1.02
090212H1_7	1000	1.25	NO	34.12	1.000	7.63e6	7.54e5	1010	1.0	1.01

Compound name: 1,2,3,6,7,8-HxCDD
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	S Resp	Conc	%D	RRF
090212H1_1	50.0	1.27	NO	34.21	1.000	2.90e5	5.42e5	47.6	-4.8	1.07
090212H1_3	1.25	1.20	NO	34.23	1.001	6.02e3	4.14e5	1.29	3.4	1.16
090212H1_4	2.50	1.24	NO	34.23	1.001	1.23e4	4.20e5	2.60	3.9	1.17
090212H1_5	10.0	1.26	NO	34.24	1.001	4.91e4	4.60e5	9.48	-5.2	1.07
090212H1_6	200	1.30	NO	34.22	1.000	1.29e6	5.59e5	205	2.7	1.16
090212H1_7	1000	1.26	NO	34.23	1.000	8.08e6	7.18e5	1000	0.0	1.13

Compound name: 1,2,3,7,8,9-HxCDD
Response Factor: 1.10201
RRF SD: 0.0447729, Relative SD: 4.06282
Response type: Internal Std (Ref Multiple), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	S Resp	Conc	%D	RRF
090212H1_1	50.0	1.28	NO	34.51	1.009	2.83e5	0.00e0	48.1	-3.9	1.06
090212H1_3	1.25	1.27	NO	34.53	1.010	5.79e3	0.00e0	1.28	2.4	1.13

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 1,2,3,7,8,9-HxCDD

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50	1.28	NO	34.52	1.009	1.21e4	0.00e0	2.60	4.0	1.15
090212H1_5	10.0	1.22	NO	34.53	1.009	4.70e4	0.00e0	9.41	-5.9	1.04
090212H1_6	200	1.32	NO	34.52	1.009	1.26e6	0.00e0	207	3.3	1.14
090212H1_7	1000	1.25	NO	34.53	1.009	8.13e6	0.00e0	1000	0.2	1.10

Compound name: 1,2,3,4,6,7,8-HpCDD
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.03	NO	38.17	1.000	2.11e5	4.13e5	48.0	-4.0	1.02
090212H1_3	1.25	1.15	NO	38.18	1.000	4.52e3	3.21e5	1.32	5.7	1.12
090212H1_4	2.50	1.07	NO	38.18	1.000	8.68e3	3.21e5	2.54	1.7	1.08
090212H1_5	10.0	1.07	NO	38.19	1.001	3.41e4	3.36e5	9.55	-4.5	1.02
090212H1_6	200	1.07	NO	38.19	1.000	9.19e5	4.29e5	201	0.7	1.07
090212H1_7	1000	1.05	NO	38.19	1.001	6.29e6	5.88e5	1000	0.5	1.07

Compound name: OCDD
Response Factor: 1.17831
RRF SD: 0.0736447, Relative SD: 6.25001
Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.91	NO	41.63	1.000	3.30e5	5.87e5	95.3	-4.7	1.12
090212H1_3	2.50	0.89	NO	41.67	1.001	7.09e3	4.40e5	2.74	9.5	1.29
090212H1_4	5.00	0.87	NO	41.65	1.000	1.25e4	4.37e5	4.85	-3.0	1.14
090212H1_5	20.0	0.85	NO	41.66	1.000	5.10e4	4.67e5	18.5	-7.3	1.09
090212H1_6	400	0.92	NO	41.68	1.000	1.48e6	6.21e5	404	1.1	1.19
090212H1_7	2000	0.89	NO	41.67	1.001	1.10e7	8.92e5	2090	4.4	1.23

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: 2,3,7,8-TCDF
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0	0.78	NO	25.19	1.001	1.14e5	1.07e6	9.75	-2.5	1.06
090212H1_3	0.250	0.83	NO	25.19	1.001	2.44e3	8.63e5	0.260	4.1	1.13
090212H1_4	0.500	0.84	NO	25.20	1.001	4.98e3	9.06e5	0.506	1.2	1.10
090212H1_5	2.00	0.81	NO	25.20	1.001	1.97e4	9.70e5	1.87	-6.4	1.02
090212H1_6	40.0	0.79	NO	25.20	1.001	4.71e5	1.08e6	40.1	0.3	1.09
090212H1_7	200	0.79	NO	25.20	1.001	2.66e6	1.18e6	207	3.4	1.12

Compound name: 1,2,3,7,8-PeCDF
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.61	NO	29.42	1.000	5.65e5	9.82e5	49.6	-0.7	1.15
090212H1_3	1.25	1.63	NO	29.43	1.000	1.11e4	7.63e5	1.25	0.1	1.16
090212H1_4	2.50	1.74	NO	29.43	1.000	2.29e4	7.80e5	2.53	1.3	1.17
090212H1_5	10.0	1.61	NO	29.43	1.000	9.64e4	8.78e5	9.48	-5.2	1.10
090212H1_6	200	1.62	NO	29.43	1.000	2.36e6	9.96e5	204	2.0	1.18
090212H1_7	1000	1.60	NO	29.45	1.000	1.42e7	1.20e6	1030	2.5	1.19

Compound name: 2,3,4,7,8-PeCDF
Response Factor: 1.11789
RRF SD: 0.0264655, Relative SD: 2.36745
Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.56	NO	30.35	1.000	5.35e5	9.65e5	49.6	-0.8	1.11
090212H1_3	1.25	1.51	NO	30.36	1.000	1.08e4	7.68e5	1.25	0.4	1.12

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Compound name: 2,3,4,7,8-PeCDF

Name	Std Conc	RA	IsY	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	2.50	1.61	NO	30.36	1.000	2.28e4	7.94e5	2.57	2.6	1.15
090212H1_5	10.0	1.64	NO	30.38	1.000	9.28e4	8.67e5	9.58	-4.2	1.07
090212H1_6	200	1.60	NO	30.36	1.000	2.28e6	1.01e6	203	1.5	1.13
090212H1_7	1000	1.59	NO	30.38	1.000	1.37e7	1.22e6	1010	0.5	1.12

Compound name: 1,2,3,4,7,8-HxCDF
Response Factor: 1.41088
RRF SD: 0.0512913, Relative SD: 3.6354
Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsY	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.27	NO	33.19	1.001	4.59e5	6.74e5	48.3	-3.3	1.36
090212H1_3	1.25	1.35	NO	33.19	1.000	9.88e3	5.28e5	1.33	6.0	1.50
090212H1_4	2.50	1.32	NO	33.19	1.000	1.96e4	5.45e5	2.54	1.8	1.44
090212H1_5	10.0	1.31	NO	33.20	1.000	7.94e4	5.86e5	9.61	-3.9	1.36
090212H1_6	200	1.27	NO	33.20	1.001	1.99e6	7.08e5	199	-0.5	1.40
090212H1_7	1000	1.27	NO	33.20	1.000	1.28e7	9.05e5	1000	-0.0	1.41

Compound name: 1,2,3,6,7,8-HxCDF
Response Factor: 1.22218
RRF SD: 0.0229408, Relative SD: 1.87703
Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsY	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0	1.25	NO	33.31	1.000	5.49e5	9.02e5	49.8	-0.4	1.22
090212H1_3	1.25	1.21	NO	33.32	1.000	1.07e4	6.79e5	1.29	3.1	1.26
090212H1_4	2.50	1.37	NO	33.31	1.000	2.16e4	6.99e5	2.52	1.0	1.23
090212H1_5	10.0	1.34	NO	33.33	1.000	8.96e4	7.51e5	9.76	-2.4	1.19
090212H1_6	200	1.27	NO	33.32	1.000	2.27e6	9.34e5	199	-0.5	1.22
090212H1_7	1000	1.27	NO	33.33	1.001	1.41e7	1.17e6	992	-0.8	1.21

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Compound name: 2,3,4,6,7,8-HxCDF
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.29	NO	33.92	1.000	4.53e5	7.19e5	49.2	-1.6	1.26
090212H1_3	1.25	1.38	NO	33.93	1.000	9.11e3	5.78e5	1.23	-1.5	1.26
090212H1_4	2.50	1.28	NO	33.93	1.001	1.91e4	5.74e5	2.60	3.9	1.33
090212H1_5	10.0	1.25	NO	33.94	1.000	7.70e4	6.20e5	9.71	-2.9	1.24
090212H1_6	200	1.26	NO	33.93	1.000	1.95e6	7.64e5	200	-0.2	1.28
090212H1_7	1000	1.30	NO	33.94	1.000	1.26e7	9.59e5	1020	2.3	1.31

Compound name: 1,2,3,7,8,9-HxCDF
Response Factor: 1.25756
RRF SD: 0.0204635, Relative SD: 1.62723
Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.25	NO	34.91	1.000	3.76e5	6.05e5	49.5	-1.0	1.24
090212H1_3	1.25	1.37	NO	34.91	1.000	7.41e3	4.73e5	1.24	-0.4	1.25
090212H1_4	2.50	1.24	NO	34.92	1.001	1.51e4	4.79e5	2.50	0.2	1.26
090212H1_5	10.0	1.28	NO	34.93	1.000	6.29e4	5.10e5	9.81	-1.9	1.23
090212H1_6	200	1.25	NO	34.92	1.001	1.68e6	6.50e5	206	2.9	1.29
090212H1_7	1000	1.28	NO	34.92	1.000	1.08e7	8.57e5	1000	0.3	1.26

Compound name: 1,2,3,4,6,7,8-HpCDF
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IV	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.05	NO	36.81	1.000	4.18e5	5.07e5	48.8	-2.3	1.65
090212H1_3	1.25	1.05	NO	36.84	1.001	8.84e3	3.97e5	1.32	5.5	1.78

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Compound name: 1,2,3,4,6,7,8-HpCDF

Name	Std Conc	RA	IO	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	2.50	1.04	NO	36.82	1.000	1.73e4	3.94e5	2.60	4.0	1.76
090212H1_5	10.0	1.05	NO	36.84	1.001	6.64e4	4.25e5	9.25	-7.5	1.56
090212H1_6	200	1.06	NO	36.83	1.000	1.78e6	5.26e5	200	-0.1	1.69
090212H1_7	1000	1.06	NO	36.83	1.000	1.17e7	6.89e5	1010	0.5	1.70

Compound name: 1,2,3,4,7,8,9-HpCDF
Response Factor: 1.48054
RRF SD: 0.0286004, Relative SD: 1.93175
Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IO	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	50.0	1.05	NO	38.73	1.000	3.09e5	4.20e5	49.7	-0.5	1.47
090212H1_3	1.25	0.89	NO	38.75	1.001	6.11e3	3.26e5	1.27	1.3	1.50
090212H1_4	2.50	0.99	NO	38.73	1.000	1.20e4	3.25e5	2.49	-0.4	1.47
090212H1_5	10.0	1.07	NO	38.74	1.000	4.97e4	3.47e5	9.66	-3.4	1.43
090212H1_6	200	1.04	NO	38.75	1.000	1.34e6	4.47e5	202	0.9	1.49
090212H1_7	1000	1.03	NO	38.75	1.000	9.18e6	6.08e5	1020	2.1	1.51

Compound name: OCDF
Response Factor: 1.09622
RRF SD: 0.0644136, Relative SD: 5.87597
Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IO	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.93	NO	41.88	1.001	4.66e5	8.78e5	96.7	-3.3	1.06
090212H1_3	2.50	0.90	NO	41.89	1.001	1.01e4	6.65e5	2.76	10.6	1.21
090212H1_4	5.00	0.84	NO	41.88	1.001	1.79e4	6.44e5	5.08	1.6	1.11
090212H1_5	20.0	0.95	NO	41.88	1.000	7.14e4	6.95e5	18.8	-6.2	1.03
090212H1_6	400	0.94	NO	41.90	1.000	2.10e6	9.52e5	402	0.4	1.10
090212H1_7	2000	0.92	NO	41.89	1.000	1.48e7	1.39e6	1940	-3.1	1.06

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Compound name: 13C-2,3,7,8-TCDD
Response Factor: 1.01489
RRF SD: 0.0275825, Relative SD: 2.71777
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsOut	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.77	NO	25.95	1.022	7.49e5	7.37e5	100	0.1	1.02
090212H1_3	100	0.80	NO	25.97	1.022	5.94e5	6.03e5	97.2	-2.8	0.986
090212H1_4	100	0.78	NO	25.97	1.022	6.33e5	6.33e5	98.5	-1.5	1.00
090212H1_5	100	0.78	NO	25.97	1.022	6.64e5	6.68e5	97.9	-2.1	0.994
090212H1_6	100	0.79	NO	25.97	1.022	7.81e5	7.54e5	102	2.0	1.04
090212H1_7	100	0.79	NO	25.97	1.022	8.66e5	8.18e5	104	4.3	1.06

Compound name: 13C-1,2,3,7,8-PeCDD
Response Factor: 0.827461
RRF SD: 0.0577323, Relative SD: 6.97704
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsOut	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.64	NO	30.64	1.207	6.02e5	7.37e5	98.7	-1.3	0.817
090212H1_3	100	0.63	NO	30.65	1.207	4.83e5	6.03e5	96.8	-3.2	0.801
090212H1_4	100	0.61	NO	30.65	1.207	4.97e5	6.33e5	94.9	-5.1	0.786
090212H1_5	100	0.64	NO	30.65	1.207	5.23e5	6.68e5	94.6	-5.4	0.783
090212H1_6	100	0.65	NO	30.65	1.207	6.35e5	7.54e5	102	1.7	0.842
090212H1_7	100	0.64	NO	30.65	1.207	7.66e5	8.18e5	113	13.2	0.937

Compound name: 13C-1,2,3,4,7,8-HxCDD
Response Factor: 0.916247
RRF SD: 0.0122736, Relative SD: 1.33955
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IsOut	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.26	NO	34.08	0.988	5.27e5	5.79e5	99.4	-0.6	0.911
090212H1_3	100	1.26	NO	34.10	0.988	4.08e5	4.37e5	102	2.0	0.934

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Compound name: 13C-1,2,3,4,7,8-HxCDD

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_4	100	1.26	NO	34.08	0.988	4.22e5	4.66e5	98.7	-1.3	0.904
090212H1_5	100	1.24	NO	34.11	0.988	4.47e5	4.90e5	99.6	-0.4	0.913
090212H1_6	100	1.25	NO	34.10	0.988	5.53e5	6.10e5	98.9	-1.1	0.907
090212H1_7	100	1.25	NO	34.11	0.988	7.54e5	8.12e5	101	1.4	0.929

Compound name: 13C-1,2,3,6,7,8-HxCDD
Response Factor: 0.920893
RRF SD: 0.0250009, Relative SD: 2.71486
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	100	1.26	NO	34.19	0.991	5.42e5	5.79e5	102	1.7	0.936
090212H1_3	100	1.23	NO	34.21	0.991	4.14e5	4.37e5	103	2.9	0.948
090212H1_4	100	1.29	NO	34.21	0.991	4.20e5	4.66e5	97.7	-2.3	0.900
090212H1_5	100	1.25	NO	34.22	0.991	4.60e5	4.90e5	102	2.1	0.940
090212H1_6	100	1.27	NO	34.21	0.991	5.59e5	6.10e5	99.5	-0.5	0.916
090212H1_7	100	1.23	NO	34.22	0.991	7.18e5	8.12e5	96.0	-4.0	0.884

Compound name: 13C-1,2,3,4,6,7,8-HpCDD
Response Factor: 0.708388
RRF SD: 0.019948, Relative SD: 2.81596
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	QV	RT	RRT	Resp	IS Resp	Conc	%D	RRF
090212H1_1	100	1.07	NO	38.16	1.106	4.13e5	5.79e5	101	0.7	0.713
090212H1_3	100	1.09	NO	38.17	1.106	3.21e5	4.37e5	104	3.9	0.736
090212H1_4	100	1.05	NO	38.17	1.106	3.21e5	4.66e5	97.1	-2.9	0.688
090212H1_5	100	1.06	NO	38.17	1.106	3.36e5	4.90e5	96.8	-3.2	0.686
090212H1_6	100	1.06	NO	38.18	1.106	4.29e5	6.10e5	99.3	-0.7	0.703
090212H1_7	100	1.04	NO	38.17	1.106	5.88e5	8.12e5	102	2.2	0.724

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Compound name: 13C-OCDD
Response Factor: 0.502588
RRF SD: 0.0283515, Relative SD: 5.6411
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IV	RT	RRT	Area	IS Area	Conc.	%Dev.	RRF
090212H1_1	200	0.89	NO	41.62	1.206	5.87e5	5.79e5	202	0.9	0.507
090212H1_3	200	0.92	NO	41.65	1.207	4.40e5	4.37e5	200	0.2	0.504
090212H1_4	200	0.90	NO	41.63	1.206	4.37e5	4.66e5	187	-6.7	0.469
090212H1_5	200	0.89	NO	41.65	1.206	4.67e5	4.90e5	190	-5.0	0.477
090212H1_6	200	0.91	NO	41.67	1.207	6.21e5	6.10e5	203	1.4	0.510
090212H1_7	200	0.93	NO	41.65	1.206	8.92e5	8.12e5	219	9.3	0.549

Compound name: 13C-2,3,7,8-TCDF
Response Factor: 0.976814
RRF SD: 0.0185774, Relative SD: 1.90184
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IV	RT	RRT	Area	IS Area	Conc.	%Dev.	RRF
090212H1_1	100	0.77	NO	25.16	0.991	1.07e6	1.11e6	98.8	-1.2	0.965
090212H1_3	100	0.79	NO	25.17	0.991	8.63e5	9.05e5	97.5	-2.5	0.953
090212H1_4	100	0.78	NO	25.17	0.991	9.06e5	9.34e5	99.3	-0.7	0.970
090212H1_5	100	0.79	NO	25.17	0.991	9.70e5	9.83e5	101	1.1	0.987
090212H1_6	100	0.77	NO	25.17	0.991	1.08e6	1.10e6	100	0.4	0.980
090212H1_7	100	0.76	NO	25.17	0.991	1.18e6	1.18e6	103	2.9	1.01

Compound name: 13C-1,2,3,7,8-PeCDF
Response Factor: 0.896189
RRF SD: 0.0663113, Relative SD: 7.39926
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IV	RT	RRT	Area	IS Area	Conc.	%Dev.	RRF
090212H1_1	100	1.58	NO	29.41	1.158	9.82e5	1.11e6	98.4	-1.6	0.882
090212H1_3	100	1.57	NO	29.42	1.158	7.63e5	9.05e5	94.0	-6.0	0.842

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Compound name: 13C-1,2,3,7,8-PeCDF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_4	100	1.57	NO	29.42	1.158	7.80e5	9.34e5	93.1	-6.9	0.835
090212H1_5	100	1.58	NO	29.42	1.158	8.78e5	9.83e5	99.7	-0.3	0.894
090212H1_6	100	1.56	NO	29.42	1.158	9.96e5	1.10e6	101	1.0	0.905
090212H1_7	100	1.52	NO	29.43	1.159	1.20e6	1.18e6	114	13.7	1.02

Compound name: 13C-2,3,4,7,8-PeCDF
Response Factor: 0.899625
RRF SD: 0.0716088, Relative SD: 7.95986
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	1.57	NO	30.34	1.195	9.65e5	1.11e6	96.3	-3.7	0.866
090212H1_3	100	1.54	NO	30.35	1.195	7.68e5	9.05e5	94.2	-5.8	0.848
090212H1_4	100	1.52	NO	30.35	1.195	7.94e5	9.34e5	94.5	-5.5	0.850
090212H1_5	100	1.59	NO	30.36	1.195	8.67e5	9.83e5	98.1	-1.9	0.882
090212H1_6	100	1.55	NO	30.35	1.195	1.01e6	1.10e6	102	1.6	0.914
090212H1_7	100	1.54	NO	30.36	1.195	1.22e6	1.18e6	115	15.3	1.04

Compound name: 13C-1,2,3,4,7,8-HxCDF
Response Factor: 1.16919
RRF SD: 0.0331609, Relative SD: 2.83622
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IS	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	100	0.54	NO	33.16	0.961	6.74e5	5.79e5	99.5	-0.5	1.16
090212H1_3	100	0.54	NO	33.17	0.961	5.28e5	4.37e5	104	3.5	1.21
090212H1_4	100	0.52	NO	33.17	0.961	5.45e5	4.66e5	99.9	-0.1	1.17
090212H1_5	100	0.54	NO	33.19	0.961	5.86e5	4.90e5	102	2.3	1.20
090212H1_6	100	0.53	NO	33.17	0.961	7.08e5	6.10e5	99.4	-0.6	1.16
090212H1_7	100	0.53	NO	33.19	0.961	9.05e5	8.12e5	95.3	-4.7	1.11

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Compound name: 13C-1,2,3,6,7,8-HxCDF
Response Factor: 1.51914
RRF SD: 0.0457416, Relative SD: 3.01103
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IsTd	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.55	NO	33.29	0.965	9.02e5	5.79e5	103	2.5	1.56
090212H1_3	100	0.52	NO	33.31	0.965	6.79e5	4.37e5	102	2.4	1.56
090212H1_4	100	0.53	NO	33.29	0.965	6.99e5	4.66e5	98.7	-1.3	1.50
090212H1_5	100	0.53	NO	33.32	0.965	7.51e5	4.90e5	101	1.0	1.53
090212H1_6	100	0.52	NO	33.31	0.965	9.34e5	6.10e5	101	0.8	1.53
090212H1_7	100	0.54	NO	33.31	0.965	1.17e6	8.12e5	94.6	-5.4	1.44

Compound name: 13C-2,3,4,6,7,8-HxCDF
Response Factor: 1.24921
RRF SD: 0.0473005, Relative SD: 3.78643
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IsTd	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.54	NO	33.91	0.983	7.19e5	5.79e5	99.3	-0.7	1.24
090212H1_3	100	0.53	NO	33.92	0.983	5.78e5	4.37e5	106	6.0	1.32
090212H1_4	100	0.55	NO	33.91	0.983	5.74e5	4.66e5	98.4	-1.6	1.23
090212H1_5	100	0.55	NO	33.93	0.983	6.20e5	4.90e5	101	1.3	1.27
090212H1_6	100	0.53	NO	33.92	0.983	7.64e5	6.10e5	100	0.4	1.25
090212H1_7	100	0.53	NO	33.93	0.983	9.59e5	8.12e5	94.5	-5.5	1.18

Compound name: 13C-1,2,3,7,8,9-HxCDF
Response Factor: 1.05297
RRF SD: 0.0198461, Relative SD: 1.88477
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RA	IsTd	RT	RRT	Resp.	IS Resp.	Conc.	%Dev.	RRF
090212H1_1	100	0.53	NO	34.90	1.011	6.05e5	5.79e5	99.2	-0.8	1.04
090212H1_3	100	0.52	NO	34.90	1.011	4.73e5	4.37e5	103	2.9	1.08

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Compound name: 13C-1,2,3,7,8,9-HxCDF

Name	Std Conc	RF	Int	RT	RRT	Resp	IS Resp	Conc	Dev (%)	RRF
090212H1_4	100	0.53	NO	34.90	1.011	4.79e5	4.66e5	97.6	-2.4	1.03
090212H1_5	100	0.54	NO	34.92	1.011	5.10e5	4.90e5	98.9	-1.1	1.04
090212H1_6	100	0.52	NO	34.90	1.011	6.50e5	6.10e5	101	1.2	1.07
090212H1_7	100	0.53	NO	34.91	1.011	8.57e5	8.12e5	100	0.2	1.05

Compound name: 13C-1,2,3,4,6,7,8-HpCDF
Response Factor: 0.868264
RRF SD: 0.0231201, Relative SD: 2.6628
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	Int	RT	RRT	Resp	IS Resp	Conc	Dev (%)	RRF
090212H1_1	100	0.46	NO	36.80	1.066	5.07e5	5.79e5	101	0.8	0.875
090212H1_3	100	0.44	NO	36.81	1.066	3.97e5	4.37e5	105	4.7	0.909
090212H1_4	100	0.44	NO	36.81	1.066	3.94e5	4.66e5	97.3	-2.7	0.845
090212H1_5	100	0.44	NO	36.82	1.066	4.25e5	4.90e5	99.9	-0.1	0.868
090212H1_6	100	0.46	NO	36.82	1.066	5.26e5	6.10e5	99.5	-0.5	0.864
090212H1_7	100	0.45	NO	36.82	1.066	6.89e5	8.12e5	97.7	-2.3	0.849

Compound name: 13C-1,2,3,4,7,8,9-HpCDF
Response Factor: 0.726514
RRF SD: 0.0207066, Relative SD: 2.85014
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RF	Int	RT	RRT	Resp	IS Resp	Conc	Dev (%)	RRF
090212H1_1	100	0.46	NO	38.72	1.122	4.20e5	5.79e5	99.8	-0.2	0.725
090212H1_3	100	0.45	NO	38.73	1.122	3.26e5	4.37e5	103	2.8	0.747
090212H1_4	100	0.45	NO	38.72	1.122	3.25e5	4.66e5	95.9	-4.1	0.696
090212H1_5	100	0.44	NO	38.73	1.122	3.47e5	4.90e5	97.6	-2.4	0.709
090212H1_6	100	0.45	NO	38.74	1.122	4.47e5	6.10e5	101	1.0	0.734
090212H1_7	100	0.44	NO	38.74	1.122	6.08e5	8.12e5	103	3.0	0.748

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Compound name: 13C-OCDF
Response Factor: 0.759527
RRF SD: 0.058777, Relative SD: 7.73863
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	200	0.91	NO	41.85	1.213	8.78e5	5.79e5	200	-0.2	0.758
090212H1_3	200	0.88	NO	41.86	1.213	6.65e5	4.37e5	200	0.2	0.761
090212H1_4	200	0.90	NO	41.85	1.213	6.44e5	4.66e5	182	-9.1	0.690
090212H1_5	200	0.90	NO	41.86	1.213	6.95e5	4.90e5	187	-6.6	0.710
090212H1_6	200	0.90	NO	41.89	1.213	9.52e5	6.10e5	206	2.8	0.781
090212H1_7	200	0.90	NO	41.88	1.213	1.39e6	8.12e5	226	12.8	0.857

Compound name: 37Cl-2,3,7,8-TCDD
Response Factor: 0.668396
RRF SD: 0.0327668, Relative SD: 4.90231
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0			25.98	1.023	4.66e4	7.37e5	9.46	-5.4	0.632
090212H1_3	0.250			25.97	1.022	1.08e3	6.03e5	0.269	7.5	0.718
090212H1_4	0.500			25.98	1.023	2.17e3	6.33e5	0.512	2.4	0.685
090212H1_5	2.00			25.98	1.023	8.69e3	6.68e5	1.95	-2.7	0.650
090212H1_6	40.0			25.98	1.023	1.93e5	7.54e5	38.4	-4.1	0.641
090212H1_7	200			25.98	1.023	1.12e6	8.16e5	205	2.3	0.684

Compound name: 13C-1,2,3,4-TCDD
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 35), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.81	NO	25.39	0.000	7.37e5	7.37e5	100	0.0	1.00
090212H1_3	100	0.79	NO	25.40	0.000	6.03e5	6.03e5	100	0.0	1.00

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Compound name: 13C-1,2,3,4-TCDD

Name	Std Conc	RA	IOK	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_4	100	0.79	NO	25.40	0.000	6.33e5	6.33e5	100	0.0	1.00
090212H1_5	100	0.78	NO	25.40	0.000	6.68e5	6.68e5	100	0.0	1.00
090212H1_6	100	0.78	NO	25.40	0.000	7.54e5	7.54e5	100	0.0	1.00
090212H1_7	100	0.79	NO	25.40	0.000	8.18e5	8.18e5	100	0.0	1.00

Compound name: 13C-1,2,3,4-TCDF
Response Factor: 1
RRF SD: 4.96507e-017, Relative SD: 4.96507e-015
Response type: Internal Std (Ref 36), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IOK	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	0.78	NO	23.95	0.000	1.11e6	1.11e6	100	0.0	1.00
090212H1_3	100	0.77	NO	23.95	0.000	9.05e5	9.05e5	100	0.0	1.00
090212H1_4	100	0.77	NO	23.95	0.000	9.34e5	9.34e5	100	0.0	1.00
090212H1_5	100	0.76	NO	23.97	0.000	9.83e5	9.83e5	100	0.0	1.00
090212H1_6	100	0.77	NO	23.97	0.000	1.10e6	1.10e6	100	-0.0	1.00
090212H1_7	100	0.78	NO	23.97	0.000	1.18e6	1.18e6	100	0.0	1.00

Compound name: 13C-1,2,3,7,8,9-HxCDD
Response Factor: 1
RRF SD: 9.93014e-017, Relative SD: 9.93014e-015
Response type: Internal Std (Ref 37), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IOK	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	100	1.22	NO	34.50	0.000	5.79e5	5.79e5	100	0.0	1.00
090212H1_3	100	1.23	NO	34.51	0.000	4.37e5	4.37e5	100	0.0	1.00
090212H1_4	100	1.25	NO	34.51	0.000	4.66e5	4.66e5	100	0.0	1.00
090212H1_5	100	1.18	NO	34.52	0.000	4.90e5	4.90e5	100	0.0	1.00
090212H1_6	100	1.26	NO	34.52	0.000	6.10e5	6.10e5	100	0.0	1.00
090212H1_7	100	1.22	NO	34.52	0.000	8.12e5	8.12e5	100	0.0	1.00

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Compound name: Total Tetra-Dioxins
Response Factor: 1.07838
RRF SD: 0.0455668, Relative SD: 4.22547
Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	10.0						7.49e5	60.1		
090212H1_3	0.250						5.94e5	0.240		
090212H1_4	0.500						6.33e5	0.536		
090212H1_5	2.00						6.64e5	1.95		
090212H1_6	40.0						7.81e5	39.5		
090212H1_7	200						8.66e5	206		

Compound name: Total Penta-Dioxins
Response Factor: 1.03344
RRF SD: 0.0219095, Relative SD: 2.12006
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0						6.02e5	159		
090212H1_3	1.25						4.83e5	1.30		
090212H1_4	2.50						4.97e5	2.53		
090212H1_5	10.0						5.23e5	9.77		
090212H1_6	200						6.35e5	200		
090212H1_7	1000						7.66e5	1020		

Compound name: Total Hexa-Dioxins
Response Factor: 1.12539
RRF SD: 0.0462549, Relative SD: 4.11012
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	RA	IA	RT	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	50.0						0.00e0	191		
090212H1_3	1.25						0.00e0	3.85		

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Compound name: Total Hexa-Dioxins

Name	Std Conc.	RF	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_4	2.50					0.00e0	7.81		
090212H1_5	10.0					0.00e0	28.5		
090212H1_6	200					0.00e0	615		
090212H1_7	1000					0.00e0	3010		

Compound name: Total Hepta-Dioxins
Response Factor: 1.06405
RRF SD: 0.0404877, Relative SD: 3.80507
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RF	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	50.0					4.13e5	127		
090212H1_3	1.25					3.21e5	1.38		
090212H1_4	2.50					3.21e5	2.60		
090212H1_5	10.0					3.36e5	9.55		
090212H1_6	200					4.29e5	203		
090212H1_7	1000					5.88e5	1010		

Compound name: Total Tetra-Furans
Response Factor: 1.08769
RRF SD: 0.0426758, Relative SD: 3.92354
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc.	RF	RT	RRT	Resp.	IS Resp.	Conc.	%D	RRF
090212H1_1	10.0					1.07e6	35.3		
090212H1_3	0.250					8.63e5	0.269		
090212H1_4	0.500					9.06e5	0.506		
090212H1_5	2.00					9.70e5	1.88		
090212H1_6	40.0					1.08e6	40.6		
090212H1_7	200					1.18e6	209		

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Compound name: 1st Func. Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Y	Resp	RRF	Resp	S Resp	Conc	Y	RRF
	090212H1_1	50.0						0.00e0	46.2		
	090212H1_3	1.25						0.00e0	0.00241		
	090212H1_4	2.50						0.00e0	0.0270		
	090212H1_5	10.0						0.00e0	0.0198		
	090212H1_6	200						0.00e0	0.00694		
	090212H1_7	1000						0.00e0	0.00731		

Compound name: Total Penta-Furans
Response Factor: 1.15874
RRF SD: 0.0326218, Relative SD: 2.81528
Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Y	Resp	RRF	Resp	S Resp	Conc	Y	RRF
	090212H1_1	50.0						0.00e0	147		
	090212H1_3	1.25						0.00e0	2.51		
	090212H1_4	2.50						0.00e0	5.10		
	090212H1_5	10.0						0.00e0	19.1		
	090212H1_6	200						0.00e0	412		
	090212H1_7	1000						0.00e0	2040		

Compound name: Total Hexa-Furans
Response Factor: 1.28009
RRF SD: 0.0331621, Relative SD: 2.5906
Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)
Curve type: RF

	Name	Std Conc	RA	Y	Resp	RRF	Resp	S Resp	Conc	Y	RRF
	090212H1_1	50.0						0.00e0	250		
	090212H1_3	1.25						0.00e0	5.09		

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Compound name: Total Hexa-Furans

Name	Std Conc	Response	IS Resp	Conc	Dev	RRF
090212H1_4	2.50		0.00e0	10.2		
090212H1_5	10.0		0.00e0	38.9		
090212H1_6	200		0.00e0	804		
090212H1_7	1000		0.00e0	4020		

Compound name: Total Hepta-Furans
Response Factor: 1.68885
RRF SD: 0.0783779, Relative SD: 4.6409
Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)
Curve type: RF

Name	Std Conc	Response	IS Resp	Conc	Dev	RRF
090212H1_1	50.0		0.00e0	98.6		
090212H1_3	1.25		0.00e0	2.59		
090212H1_4	2.50		0.00e0	5.09		
090212H1_5	10.0		0.00e0	18.9		
090212H1_6	200		0.00e0	403		
090212H1_7	1000		0.00e0	2030		

Compound name: PFK1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	Response	IS Resp	Conc	Dev	RRF
090212H1_1	1.00					
090212H1_3	1.00					
090212H1_4	1.00					
090212H1_5	1.00					
090212H1_6	1.00					
090212H1_7	1.00					

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Compound name: PFK2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sample	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00							
090212H1_3	1.00							
090212H1_4	1.00							
090212H1_5	1.00							
090212H1_6	1.00							
090212H1_7	1.00							

Compound name: PFK3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sample	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00							
090212H1_3	1.00							
090212H1_4	1.00							
090212H1_5	1.00							
090212H1_6	1.00							
090212H1_7	1.00							

Compound name: PFK4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Sample	RT	RRT	Resp	IS Resp	Conc	Dev	RRF
090212H1_1	1.00							
090212H1_3	1.00							
090212H1_4	1.00							
090212H1_5	1.00							

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Compound name: PFK4

Name	Std Conc
090212H1_6	1.00
090212H1_7	1.00

Compound name: PFK5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

Compound name: DPE1
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc
090212H1_1	1.00
090212H1_3	1.00
090212H1_4	1.00
090212H1_5	1.00
090212H1_6	1.00
090212H1_7	1.00

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Compound name: DPE2
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	Area	RF	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE3
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	Area	RF	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									
090212H1_6	1.00									
090212H1_7	1.00									

Compound name: DPE4
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	Area	RF	RRT	Resp	IS Resp	Conc	%Dev	RRF
090212H1_1	1.00									
090212H1_3	1.00									
090212H1_4	1.00									
090212H1_5	1.00									

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Compound name: DPE4

Name	Std Conc	RT	RRT	Area	ISTD Area	Conc	Index	RRF
090212H1_6	1.00							
090212H1_7	1.00							

Compound name: DPE5
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	RRT	Area	ISTD Area	Conc	Index	RRF
090212H1_1	1.00							
090212H1_3	1.00							
090212H1_4	1.00							
090212H1_5	1.00							
090212H1_6	1.00							
090212H1_7	1.00							

Compound name: DPE6
No Calibration
Response type: External Std, Area
Curve type: RF

Name	Std Conc	RT	RRT	Area	ISTD Area	Conc	Index	RRF
090212H1_1	1.00							
090212H1_3	1.00							
090212H1_4	1.00							
090212H1_5	1.00							
090212H1_6	1.00							
090212H1_7	1.00							

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	NO	9.78	7.8	12.9	Yes	8.00	12.0	Yes
						8.2	12.3 (4)				
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	NO	48.6	39.0	65.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	48.0	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	NO	47.6	39.0	64.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	NO	48.1	41.0	61.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	NO	48.0	43.0	58.0	Yes	40.0	60.0	Yes
OCDD	M+2/M+4	0.91	0.76-1.02	NO	95.3	79.0	126.0	Yes	80.0	120.0	Yes
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	NO	9.75	8.4	12.0	Yes	8.00	12.0	Yes
						8.6	11.6 (4)				
1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	NO	49.6	41.0	60.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	NO	48.3	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.8	44.0	57.0	Yes	40.0	60.0	Yes
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	NO	49.2	44.0	57.0	Yes	40.0	60.0	Yes
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	NO	49.5	45.0	56.0	Yes	40.0	60.0	Yes
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	48.8	45.0	55.0	Yes	40.0	60.0	Yes
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	NO	49.7	43.0	58.0	Yes	40.0	60.0	Yes
OCDF	M+2/M+4	0.93	0.76-1.02	NO	96.7	63.0	159.0	Yes	80.0	120.0	Yes

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09 Analysis Time: 11:10:11

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABOUND. RATIO	QC LIMITS (2)	Flag	CONC. FOUND	CONC. RANGE (3) (ng/ml) 1613 Min	CONC. RANGE (3) (ng/ml) 1613 Max		CONC. RANGE (ng/ml) 8290 Min	CONC. RANGE (ng/ml) 8290 Max	
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	NO	100	82.0	121.0	Yes	70.0	130.0	Yes
						85.0	117.0 (5)				
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	NO	98.7	62.0	160.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	99.4	85.0	117.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	NO	102	85.0	118.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	NO	101	72.0	138.0	Yes	70.0	130.0	Yes
13C-OCDD	M+2/M+4	0.89	0.76-1.02	NO	202	96.0	415.0	Yes	140.0	260.0	Yes
13C-2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	NO	98.8	71.0	140.0	Yes	70.0	130.0	Yes
						76.0	131.0 (5)				
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	NO	98.4	76.0	130.0	Yes	70.0	130.0	Yes
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	NO	96.3	77.0	130.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.5	76.0	131.0	Yes	70.0	130.0	Yes
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	NO	103	70.0	143.0	Yes	70.0	130.0	Yes
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	NO	99.3	73.0	137.0	Yes	70.0	130.0	Yes
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	NO	99.2	74.0	135.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	NO	101	78.0	129.0	Yes	70.0	130.0	Yes
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	NO	99.8	77.0	129.0	Yes	70.0	130.0	Yes
13C-OCDF	M+2/M+4	0.91	0.76-1.02	NO	200	96.0	415.0	Yes	140.0	260.0	Yes
CLEANUP STANDARD (4)											
37Cl-2,3,7,8-TCDD					9.46	7.9	12.7	Yes	7.0	13.0	Yes
						8.3	12.1 (5)				

(1) See Table 8. Method 1613, for m/z specifications
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613
(3) Contract required concentration range as specified in Table 6, Method 1613
(4) No ion abundance ratio; report concentration found
(5) Contract required concentration range as specified in Table 6a, Method 1613, for tetras only

Analyst: [signature]
Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1	1,3,6,8-TCDD (First)	22.58
2	1,2,8,9-TCDD (Last)	26.86
3	1,2,4,7,9-PeCDD (First)	28.51
4	1,2,3,8,9-PeCDD (Last)	31.03
5	12,4,6,7,9-HxCDD (First)	32.52
6	1,2,3,7,8,9-HxCDD (Last)	34.51
7	1,2,3,4,6,7,9-HpCDD (First)	37.23
8	1,2,3,4,6,7,8-HpCDD (Last)	38.17
9	1,3,6,8-TCDF (First)	20.50
10	1,2,8,9-TCDF (Last)	27.01
11	1,3,4,6,8-PeCDF (First)	26.96
12	1,2,3,8,9-PeCDF (Last)	31.28
13	1,2,3,4,6,8-HxCDF (First)	31.97
14	1,2,3,4,8,9-HxCDF (Last)	34.91
15	1,2,3,4,6,7,8-HpCDF (First)	36.81
16	1,2,3,4,7,8,9-HpCDF (Last)	38.73

2/13/09

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory

CCAL ID: ST090212H1-1

Initial Calibration Date: 02/12/2009

Instrument ID: VG10

GC Column ID: DB-5

VER Data file name: 090212H1_1

Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999	1.002	Yes
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999	1.002	Yes
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999	1.003	Yes
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999	1.002	Yes
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999	1.002	Yes
LABELED COMPOUNDS					
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976	1.043	Yes
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.207	1.000	1.567	Yes
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.991	0.923	1.103	Yes
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.158	1.000	1.425	Yes
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.195	1.011	1.526	Yes
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989	1.052	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Vista Analytical Laboratory
Initial Calibration Date: 02/12/2009
Instrument ID: VG10
VER Data file name: 090212H1_1

CCAL ID: ST090212H1-1

GC Column ID: DB-5
Analysis Date: 12-Feb-09

Analysis Time: 11:10:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC Limit Min	RRT QC Limit Max	
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999	1.001	Yes
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998	1.004	Yes
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.009	1.000	1.019	Yes
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999	1.001	Yes
OCDD	13C-OCDD	1.000	0.999	1.001	Yes
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999	1.001	Yes
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997	1.005	Yes
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999	1.001	Yes
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999	1.001	Yes
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999	1.001	Yes
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999	1.001	Yes
OCDF	13C-OCDF	1.001	0.999	1.001	Yes
LABELED COMPOUNDS					
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.988	0.977	1.000	Yes
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.991	0.981	1.003	Yes
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,7,8,9-HxCDD	1.106	1.086	1.110	Yes
13C-OCDD	13C-1,2,3,7,8,9-HxCDD	1.206	1.032	1.311	Yes
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.961	0.944	0.970	Yes
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.965	0.949	0.975	Yes
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDD	0.983	0.959	1.021	Yes
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDD	1.011	0.977	1.047	Yes
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.066	1.043	1.085	Yes
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,7,8,9-HxCDD	1.122	1.057	1.151	Yes
13C-OCDF	13C-1,2,3,7,8,9-HxCDD	1.213	1.032	1.311	Yes

(1) Contract required limits for Relative Retention Times (RRT) as specified in Table2, Method 1613. 10/94

Analyst: _____

Date: 2/13/09

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

	Compound	Area	Ratio	Int	BRT	WOH	RT	RRT	Conc	%Rec	Ion	Conc
1	2,3,7,8-TCDD	7.90e4	0.82	NO	1.08	1.000	25.98	1.001	9.7764	97.8	0.0390	9.7764
2	1,2,3,7,8-PeCDD	3.03e5	0.63	NO	1.03	1.000	30.65	1.000	48.635	97.3	0.124	48.635
3	1,2,3,4,7,8-HxCDD	2.54e5	1.26	NO	1.00	1.000	34.10	1.000	48.035	96.1	0.187	48.035
4	1,2,3,6,7,8-HxCDD	2.90e5	1.27	NO	1.13	1.000	34.21	1.000	47.595	95.2	0.184	47.595
5	1,2,3,7,8,9-HxCDD	2.83e5	1.28	NO	1.10	1.000	34.51	1.009	48.051	96.1	0.180	48.051
6	1,2,3,4,6,7,8-HpCDD	2.11e5	1.03	NO	1.06	1.000	38.17	1.000	47.989	96.0	0.341	47.989
7	OCDD	3.30e5	0.91	NO	1.18	1.000	41.63	1.000	95.331	95.3	0.179	95.331
8	2,3,7,8-TCDF	1.14e5	0.78	NO	1.09	1.000	25.19	1.001	9.7515	97.5	0.0409	9.7515
9	1,2,3,7,8-PeCDF	5.65e5	1.61	NO	1.16	1.000	29.42	1.000	49.643	99.3	0.123	49.643
10	2,3,4,7,8-PeCDF	5.35e5	1.56	NO	1.12	1.000	30.35	1.000	49.591	99.2	0.120	49.591
11	1,2,3,4,7,8-HxCDF	4.59e5	1.27	NO	1.41	1.000	33.19	1.001	48.331	96.7	0.150	48.331
12	1,2,3,6,7,8-HxCDF	5.49e5	1.25	NO	1.22	1.000	33.31	1.000	49.809	99.6	0.137	49.809
13	2,3,4,6,7,8-HxCDF	4.53e5	1.29	NO	1.28	1.000	33.92	1.000	49.224	98.4	0.172	49.224
14	1,2,3,7,8,9-HxCDF	3.76e5	1.25	NO	1.26	1.000	34.91	1.000	49.483	99.0	0.252	49.483
15	1,2,3,4,6,7,8-HpCDF	4.18e5	1.05	NO	1.69	1.000	36.81	1.000	48.842	97.7	0.180	48.842
16	1,2,3,4,7,8,9-HpCDF	3.09e5	1.05	NO	1.48	1.000	38.73	1.000	49.738	99.5	0.251	49.738
17	OCDF	4.66e5	0.93	NO	1.10	1.000	41.88	1.001	96.743	96.7	0.177	96.743
18	13C-2,3,7,8-TCDD	7.49e5	0.77	NO	1.01	1.000	25.95	1.022	100.15	100	0.141	
19	13C-1,2,3,7,8-PeCDD	6.02e5	0.64	NO	0.827	1.000	30.64	1.207	98.735	98.7	0.269	
20	13C-1,2,3,4,7,8-HxCDD	5.27e5	1.26	NO	0.916	1.000	34.08	0.988	99.432	99.4	0.335	
21	13C-1,2,3,6,7,8-HxCDD	5.42e5	1.26	NO	0.921	1.000	34.19	0.991	101.67	102	0.334	
22	13C-1,2,3,4,6,7,8-HpCDD	4.13e5	1.07	NO	0.708	1.000	38.16	1.106	100.67	101	0.425	
23	13C-OCDD	5.87e5	0.89	NO	0.503	1.000	41.62	1.206	201.71	101	0.424	
24	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	0.977	1.000	25.16	0.991	98.760	98.8	0.129	
25	13C-1,2,3,7,8-PeCDF	9.82e5	1.58	NO	0.896	1.000	29.41	1.158	98.441	98.4	0.304	
26	13C-2,3,4,7,8-PeCDF	9.65e5	1.57	NO	0.900	1.000	30.34	1.195	96.306	96.3	0.303	
27	13C-1,2,3,4,7,8-HxCDF	6.74e5	0.54	NO	1.17	1.000	33.16	0.961	99.512	99.5	0.469	
28	13C-1,2,3,6,7,8-HxCDF	9.02e5	0.55	NO	1.52	1.000	33.29	0.965	102.54	103	0.361	
29	13C-2,3,4,6,7,8-HxCDF	7.19e5	0.54	NO	1.25	1.000	33.91	0.983	99.345	99.3	0.439	
30	13C-1,2,3,7,8,9-HxCDF	6.05e5	0.53	NO	1.05	1.000	34.90	1.011	99.208	99.2	0.521	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:35:05 AM Pacific Standard Time

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

31	13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.46	NO	0.868	1.000	36.80	1.066	100.83	101	0.602
32	13C-1,2,3,4,7,8,9-HpCDF	4.20e5	0.46	NO	0.727	1.000	38.72	1.122	99.796	99.8	0.719
33	13C-OCDF	8.78e5	0.91	NO	0.760	1.000	41.85	1.213	199.65	99.8	0.296
34	37Cl-2,3,7,8-TCDD	4.66e4			0.668	1.000	25.98	1.023	9.4592	94.6	0.0533
35	13C-1,2,3,4-TCDD	7.37e5	0.81	NO	1.00	1.000	25.39	0.000	100.00	100	0.144
36	13C-1,2,3,4-TCDF	1.11e6	0.78	NO	1.00	1.000	23.95	0.000	100.00	100	0.126
37	13C-1,2,3,7,8,9-HxCDD	5.79e5	1.22	NO	1.00	1.000	34.50	0.000	100.00	100	0.307

Quantify Compound Summary Report **MassLynx 4.1**
Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 7:21:09 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:21:55 AM Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Compound name: 1,3,6,8-TCDD (First)

Name	Description	Date	Time
090212H1_1	ST090212H1-1 1613 CS3 080917I	12-Feb-09	11:10:11
090212H1_2	solvent blank	12-Feb-09	11:59:18
090212H1_3	ST090212H1-2 1613 CS0 080917F	12-Feb-09	12:49:08
090212H1_4	ST090212H1-3 1613 CS1 080917CG	12-Feb-09	13:38:34
090212H1_5	ST090212H1-4 1613 CS2 080917H	12-Feb-09	14:28:11
090212H1_6	ST090212H1-5 1613 CS4 080917J	12-Feb-09	15:17:39
090212H1_7	ST090212H1-6 1613 CS5 080917K	12-Feb-09	16:07:03
090212H1_8	solvent blank	12-Feb-09	16:56:26
090212H1_9	SSS090212H1-1 Sec Src Std L070913A	12-Feb-09	17:45:49

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:13 Pacific Standard Time

M 292.9824 R 13157

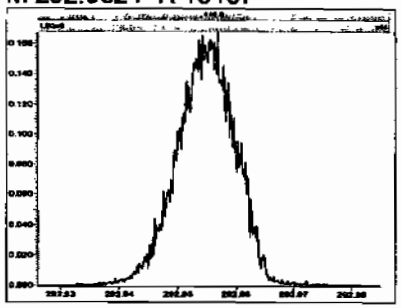

M 304.9824 R 14289

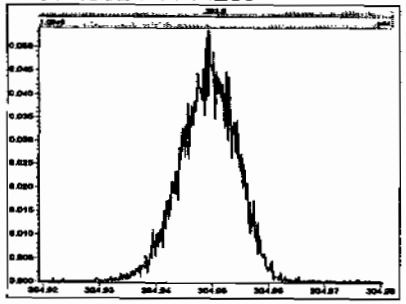

M 318.9792 R 13655

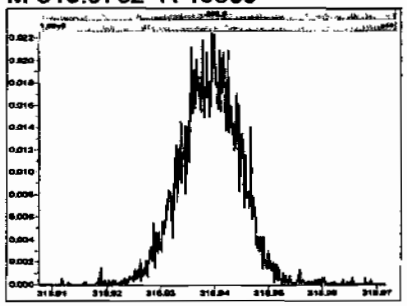

M 330.9792 R 12819

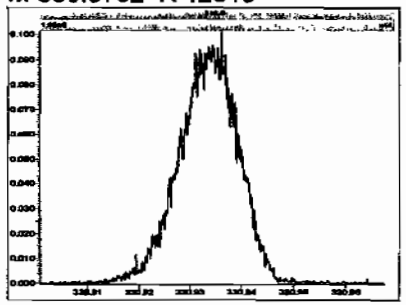

M 342.9792 R 13085

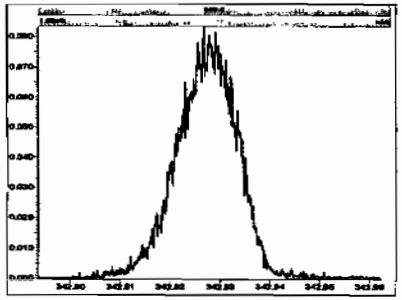

M 354.9792 R 13440

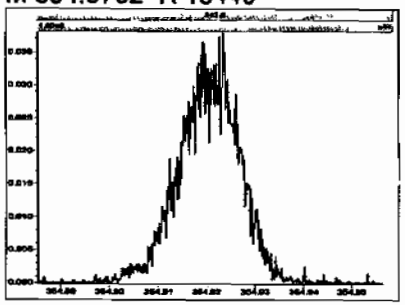

M 366.9792 R 11572

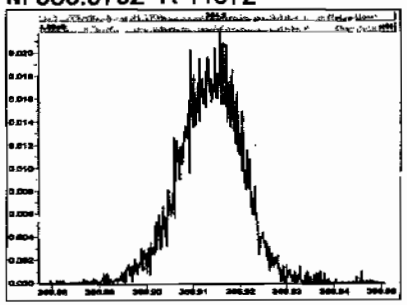

M 380.9760 R 13365

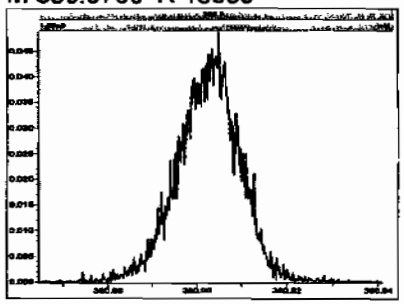

M 392.9760 R 13660

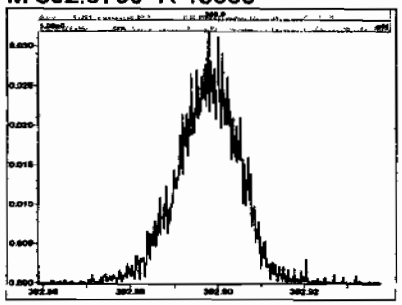

M 404.9760 R 13160

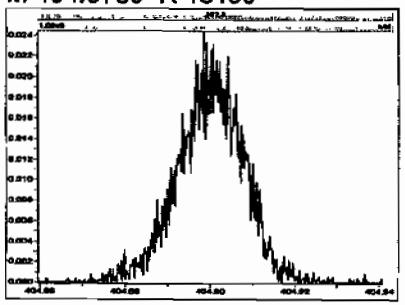

M 416.9760 R 15061

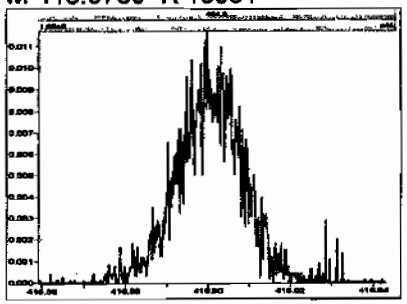

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:36 Pacific Standard Time

M 330.9792 R 13661

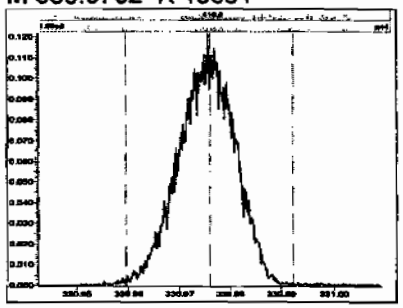

M 342.9792 R 12688

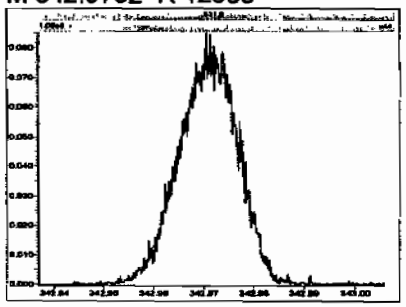

M 354.9792 R 13813

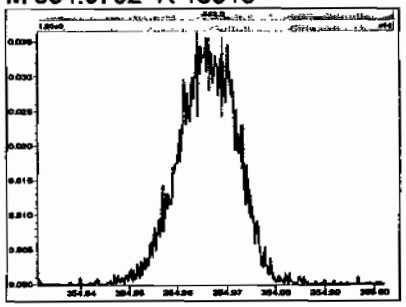

M 366.9792 R 13735

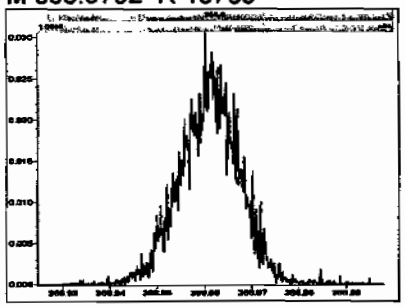

M 380.9760 R 13225

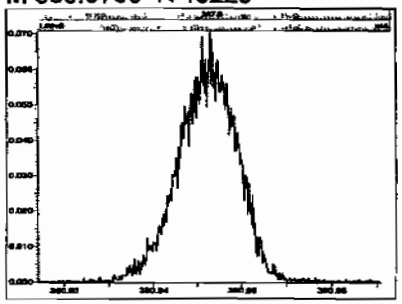

M 392.9760 R 13090

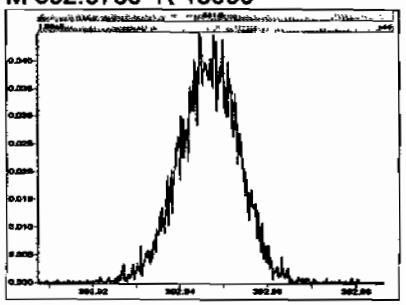

M 404.9760 R 13368

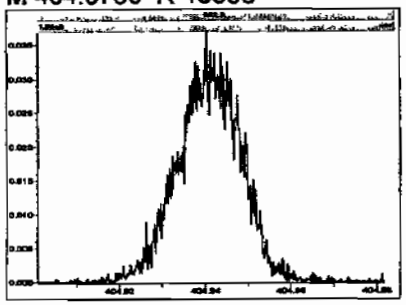

M 416.9760 R 13510

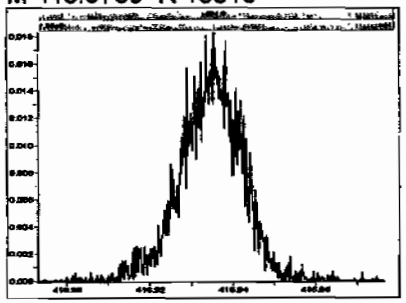

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:08:57 Pacific Standard Time

M 366.9792 R 13441

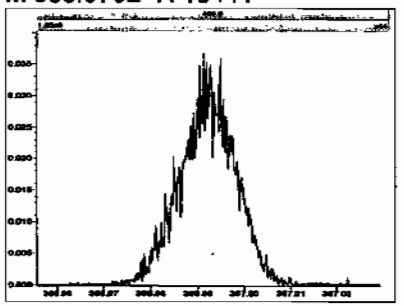

M 380.9760 R 13367

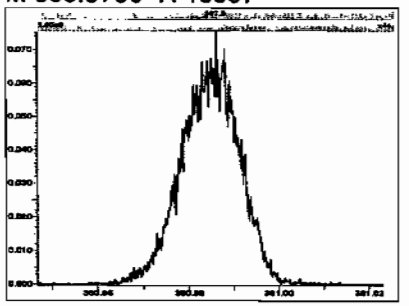

M 392.9760 R 13733

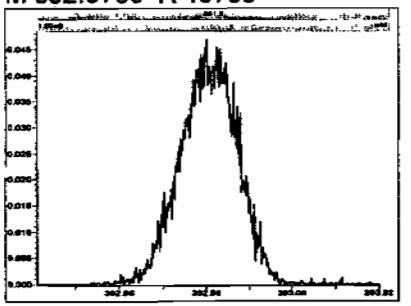

M 404.9760 R 12136

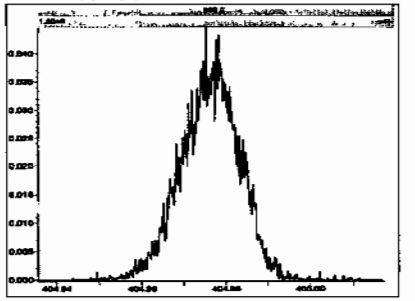

M 416.9760 R 13887

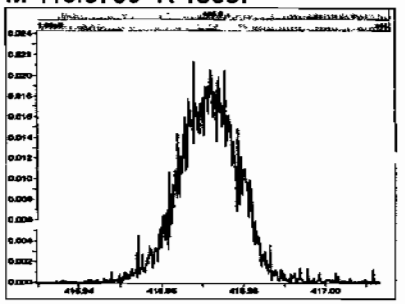

M 430.9728 R 13515

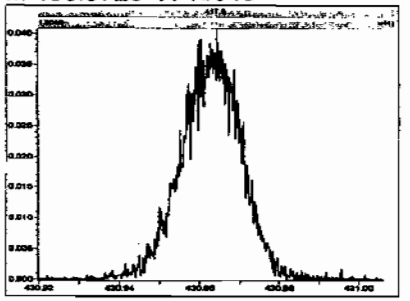

M 442.9728 R 14124

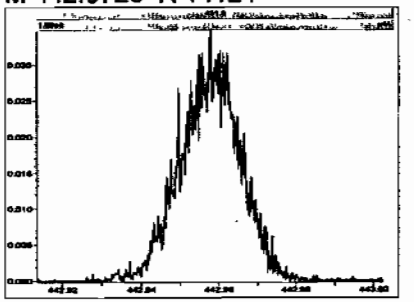

M 454.9728 R 13225

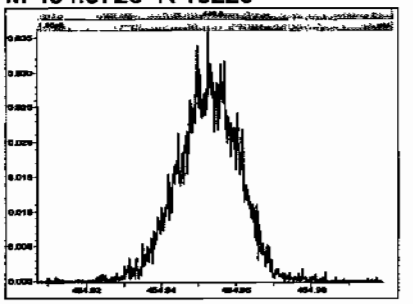

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:16 Pacific Standard Time

M 404.9760 R 13299

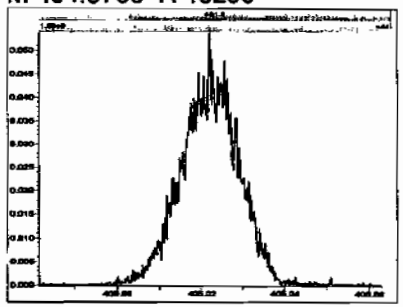

M 416.9760 R 14124

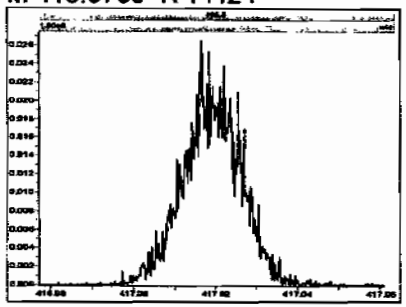

M 430.9728 R 13019

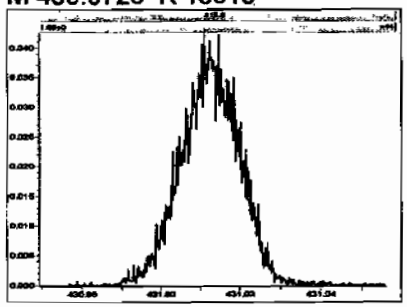

M 442.9728 R 13022

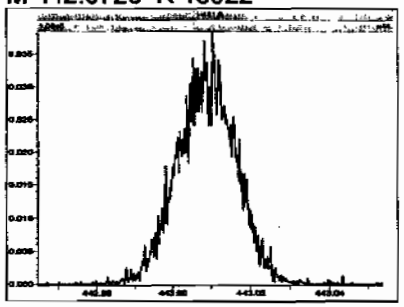

M 454.9728 R 12953

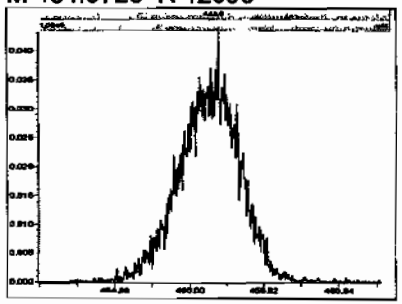

M 466.9728 R 12692

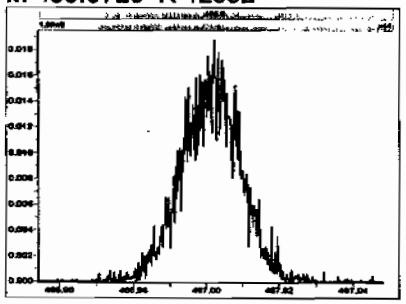

M 480.9696 R 14882

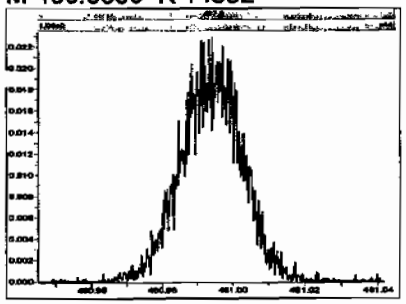

Experiment Calibration Report **MassLynx 4.1**

File: Experiment: ocdd_db5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, February 12, 2009 11:09:41 Pacific Standard Time

M 430.9728 R 12434

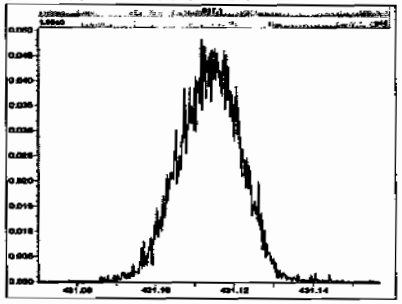

M 442.9728 R 12886

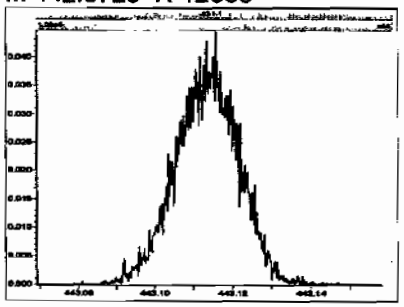

M 454.9728 R 12021

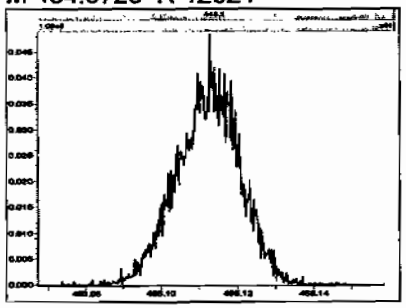

M 466.9728 R 12954

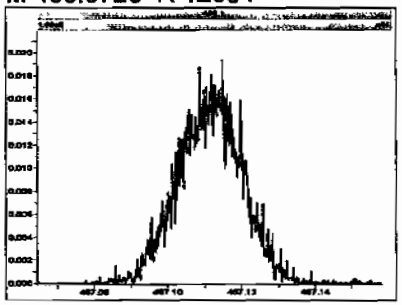

M 480.9696 R 11520

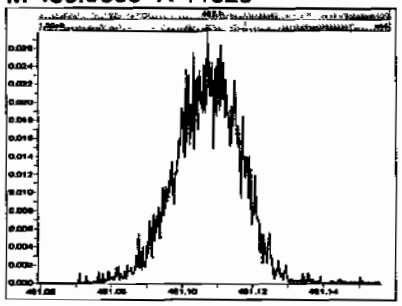

M 492.9696 R 12757

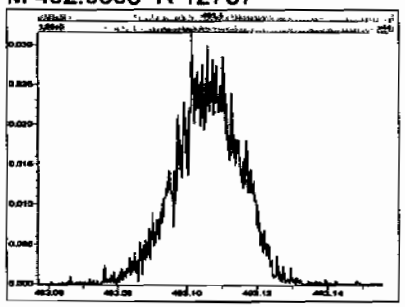

M 504.9696 R 11211

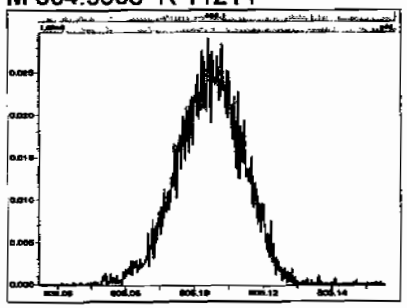

M 516.9697 R 11516

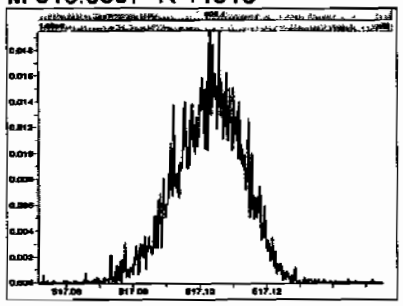

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Friday, February 13, 2009 07:21:09 Pacific Standard Time
Printed: Friday, February 13, 2009 07:21:32 Pacific Standard Time

Method: C:\MassLynx\Default.pro\Methdb\cpsm.mdb 09 Feb 2009 14:14:46
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg10-12-19-08.cdb 22 Dec 2008 13:35:31

Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

1,3,6,8-TCDD (First)

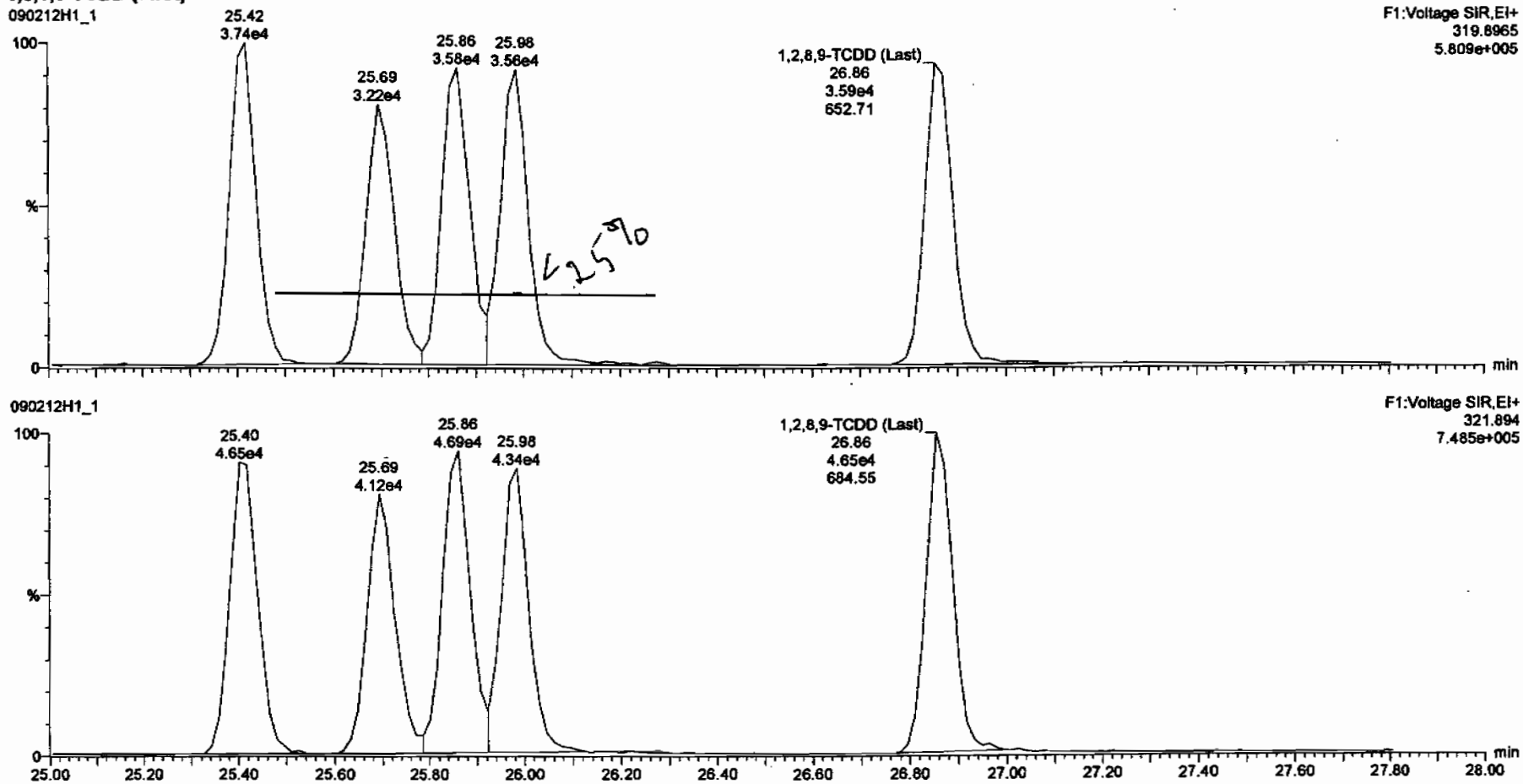

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\New Folder\090212h1-crv.qld

Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

2,3,7,8-TCDD

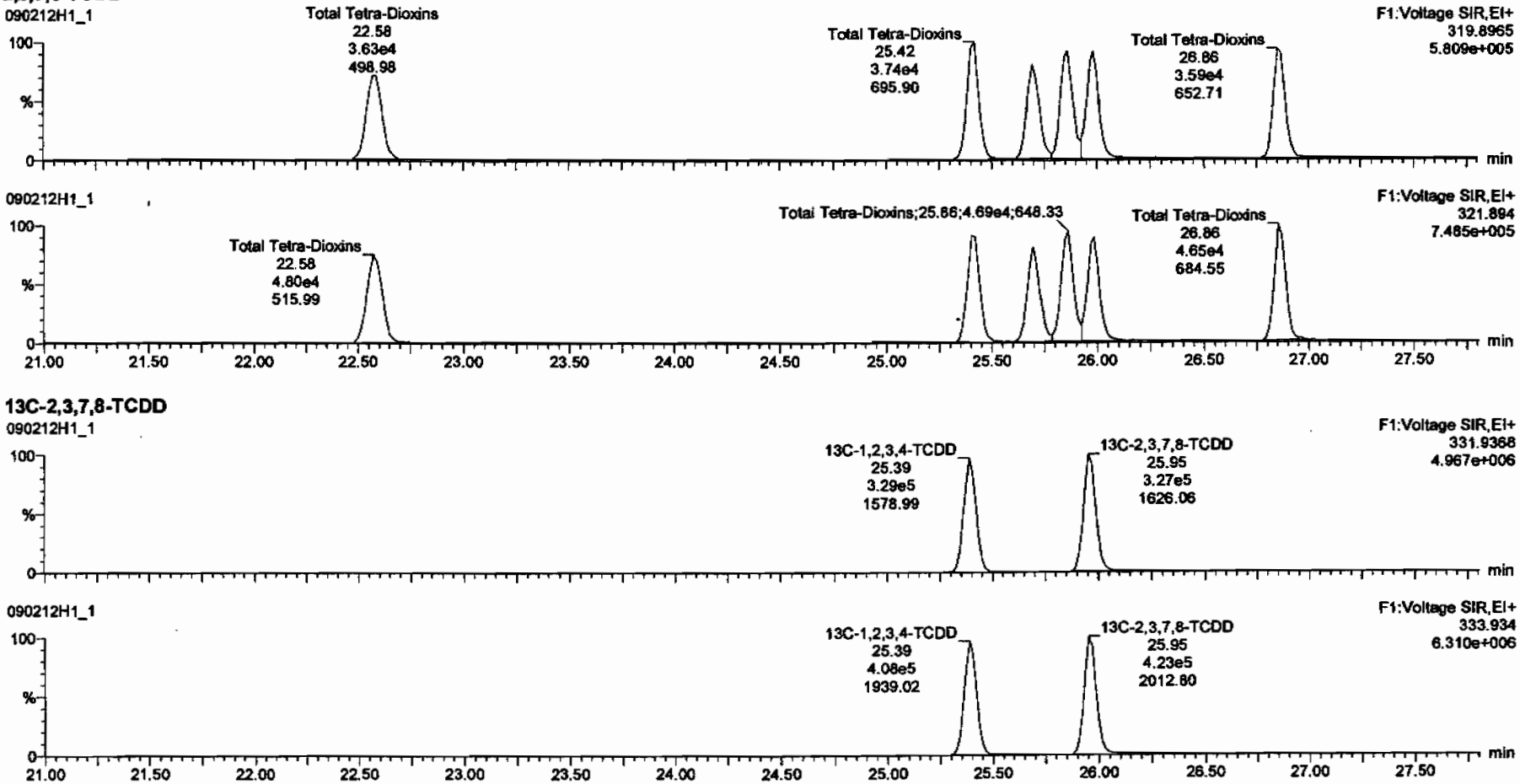

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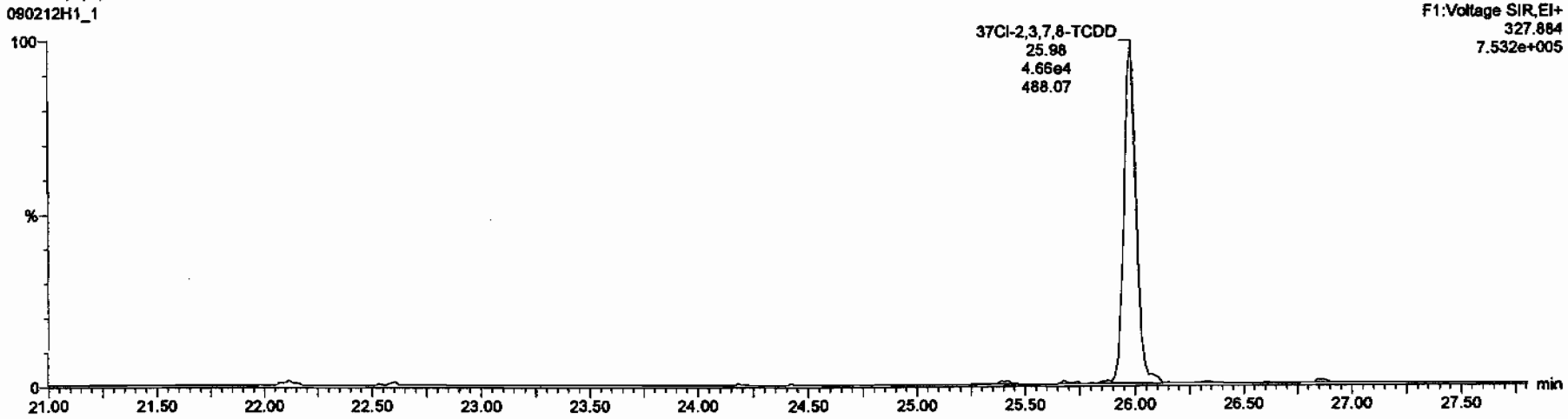

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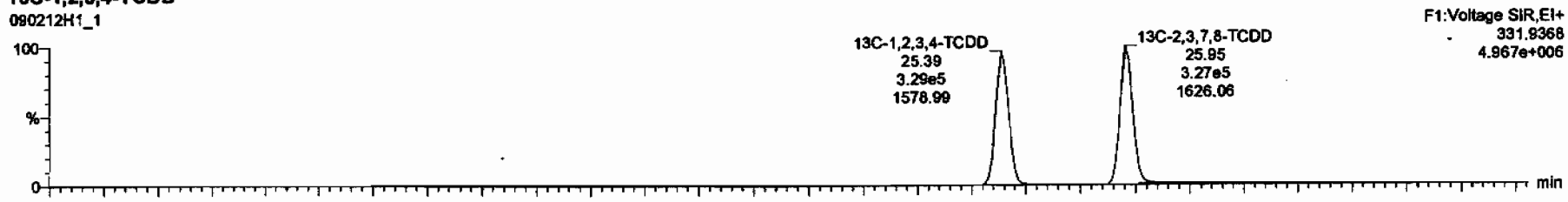

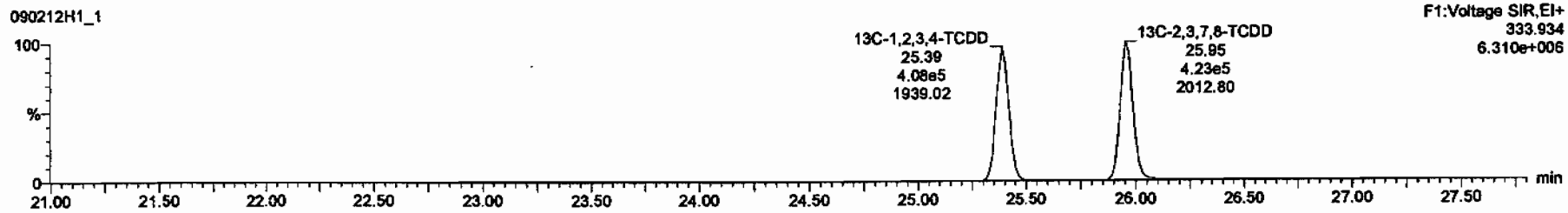

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1,2,3,7,8-PeCDD

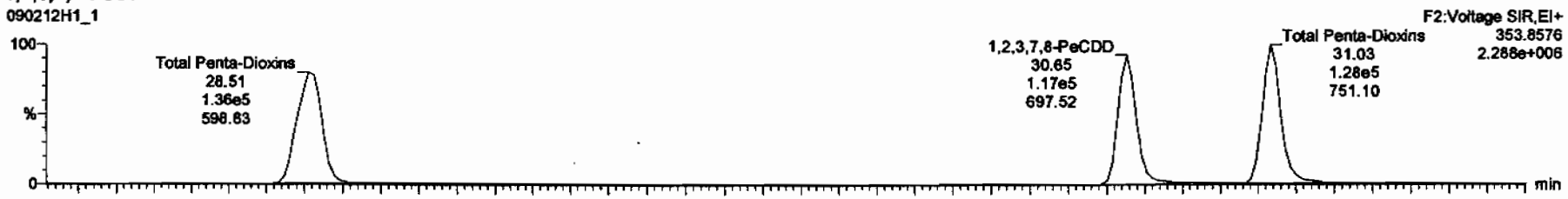

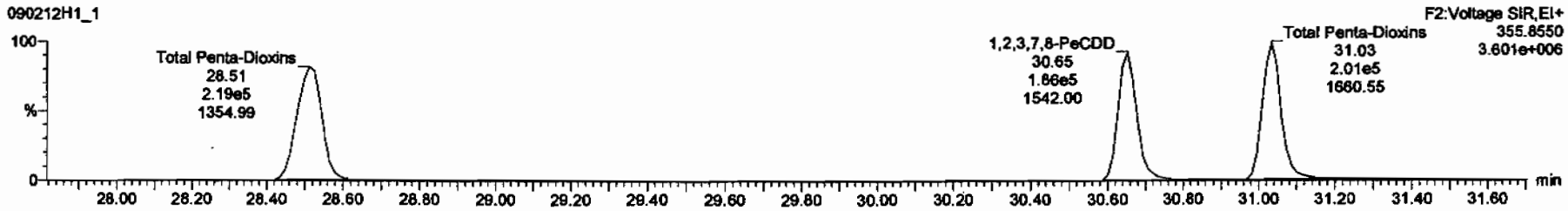

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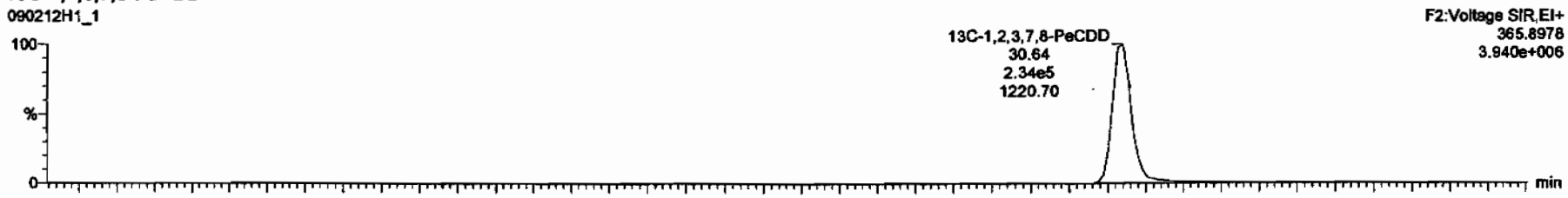

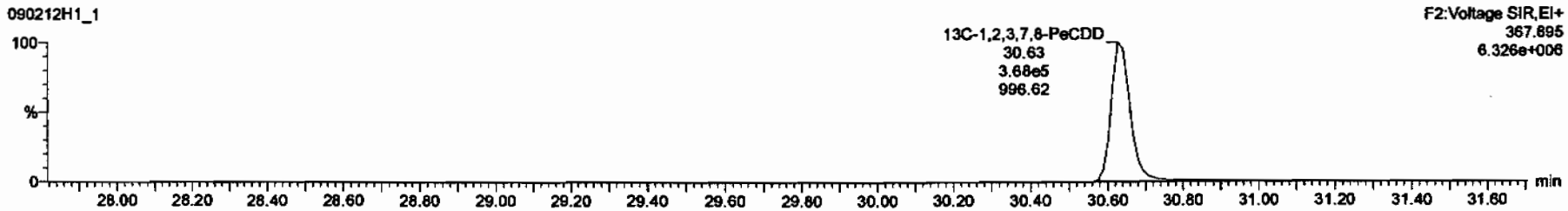

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1,2,3,4,7,8-HxCDD

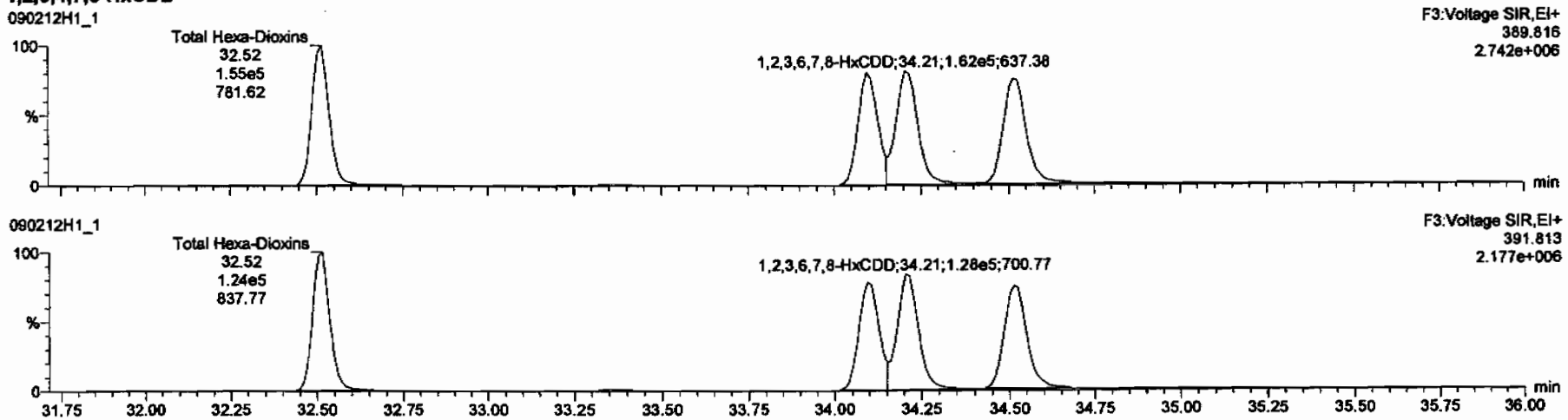

13C-1,2,3,4,7,8-HxCDD

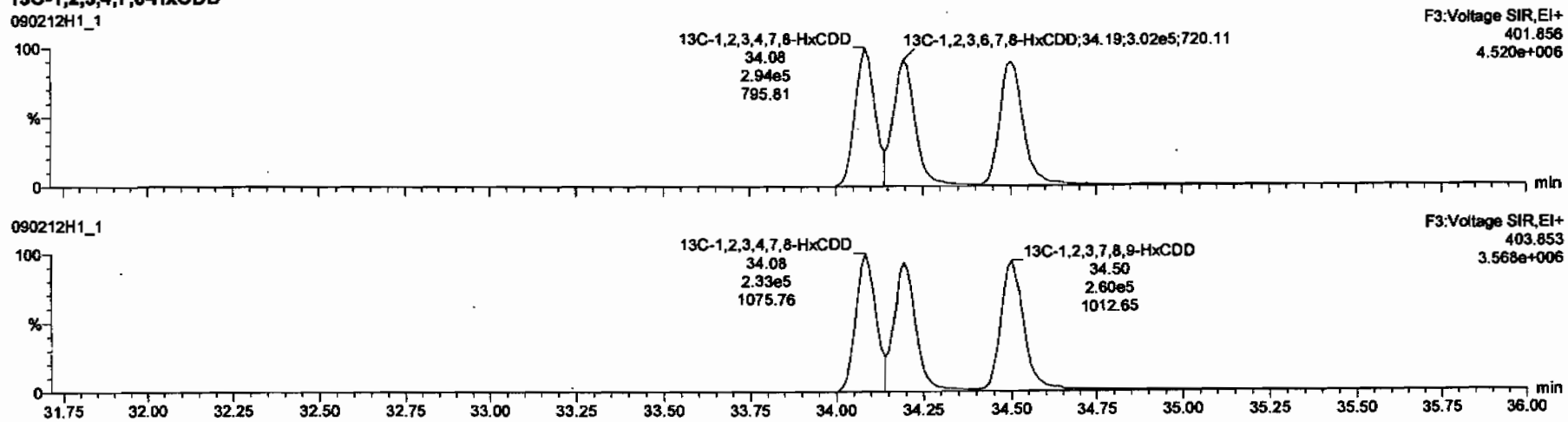

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1,2,3,4,6,7,8-HpCDD

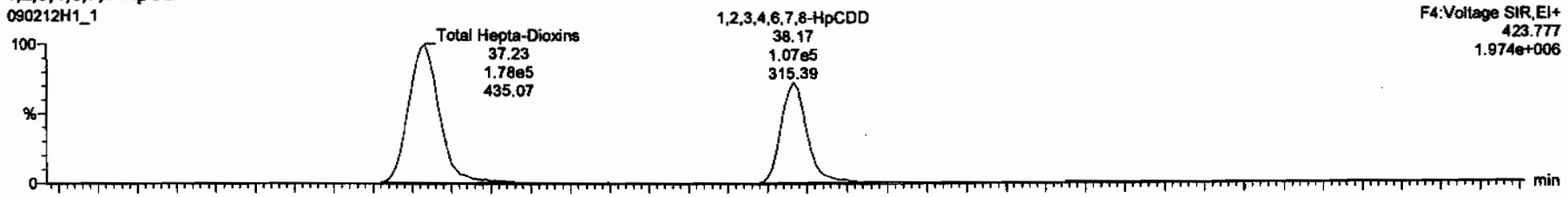

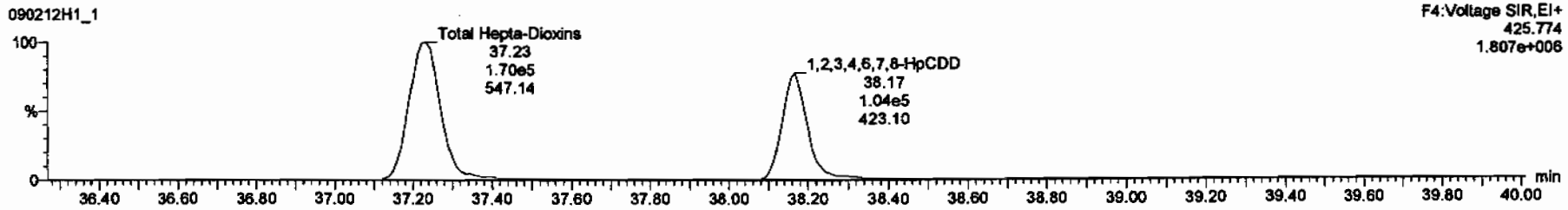

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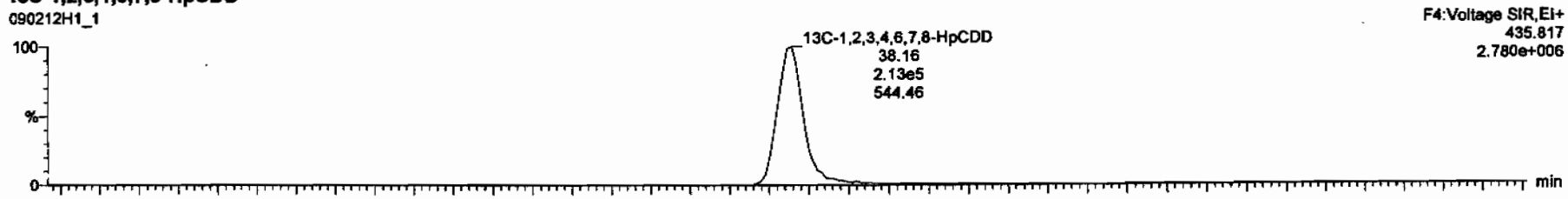

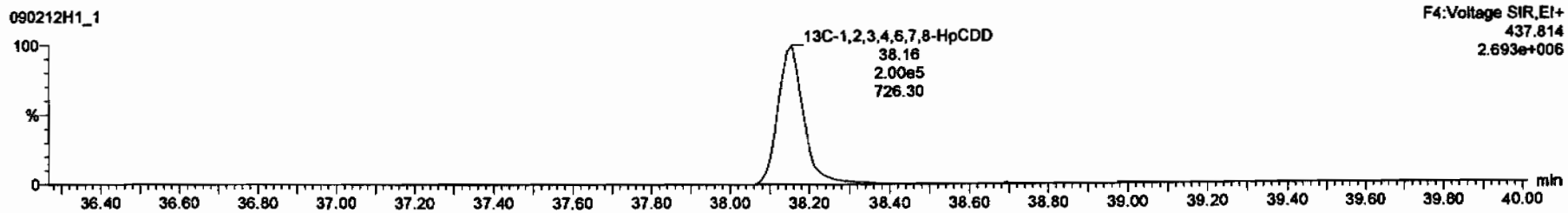

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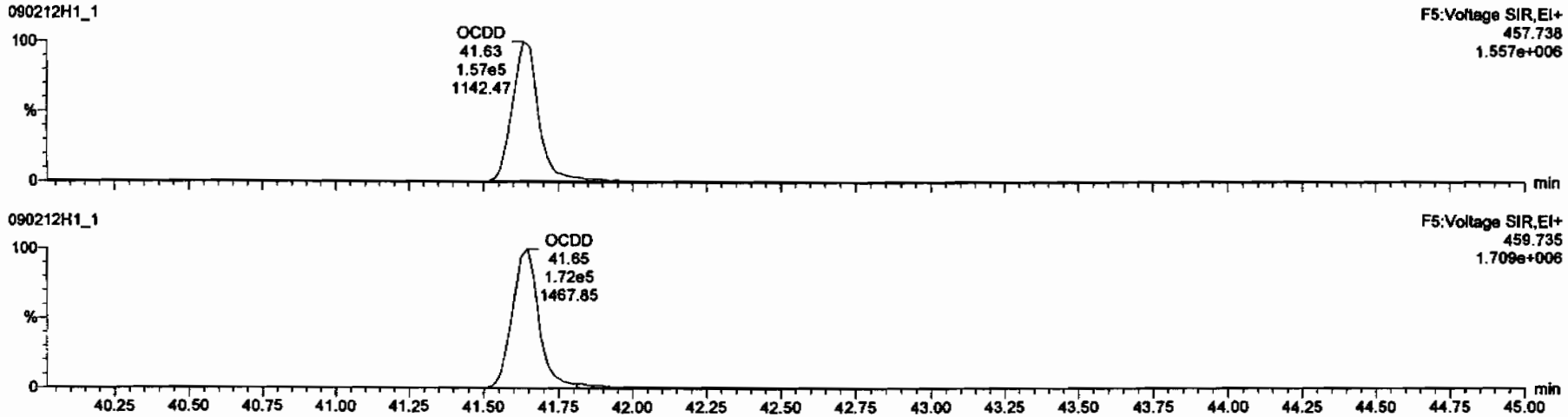

13C-OCDD

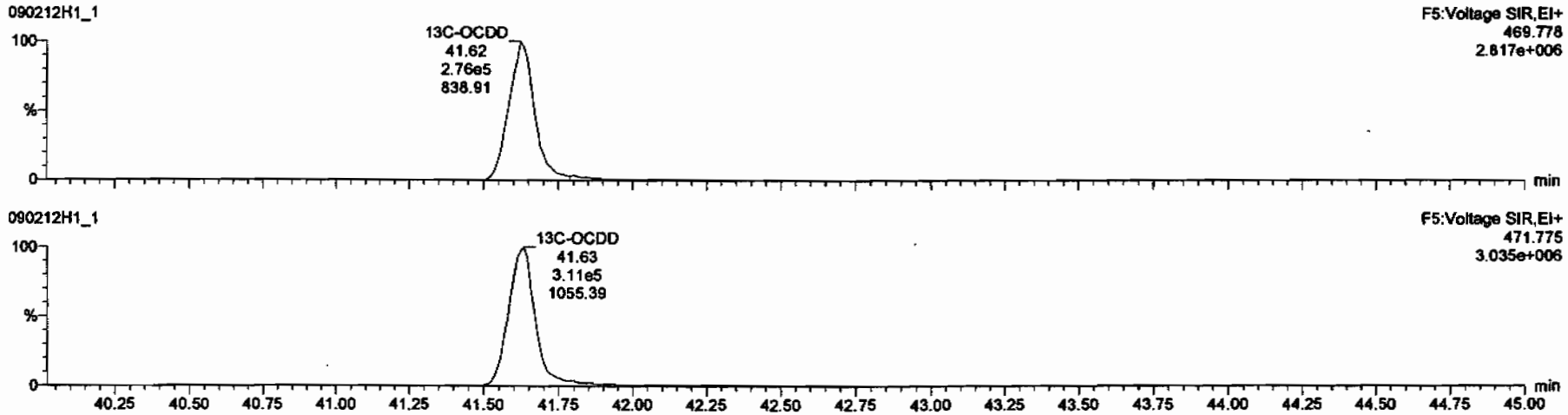

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2,3,7,8-TCDF

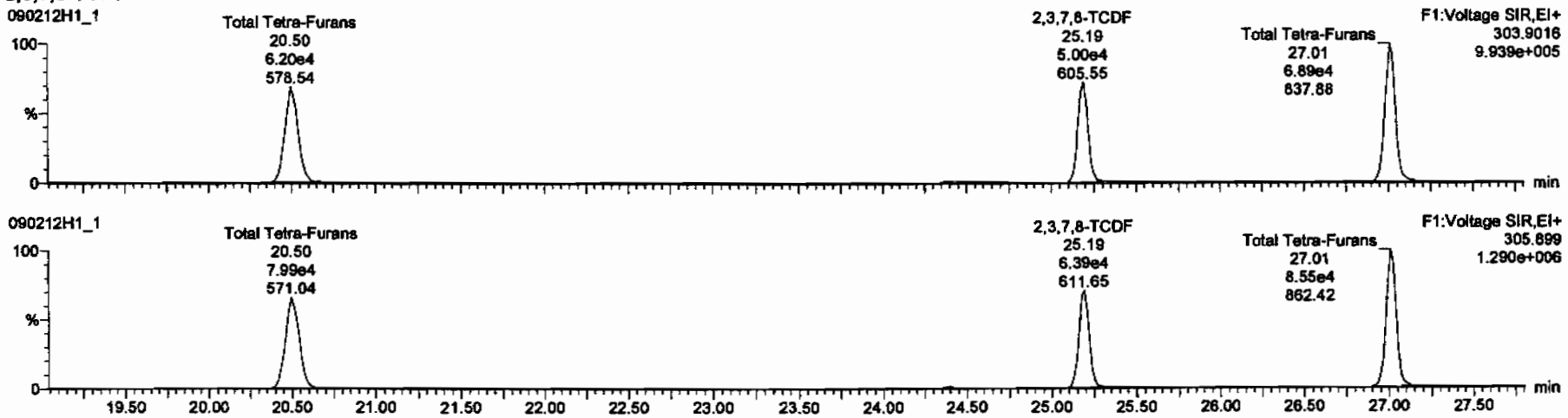

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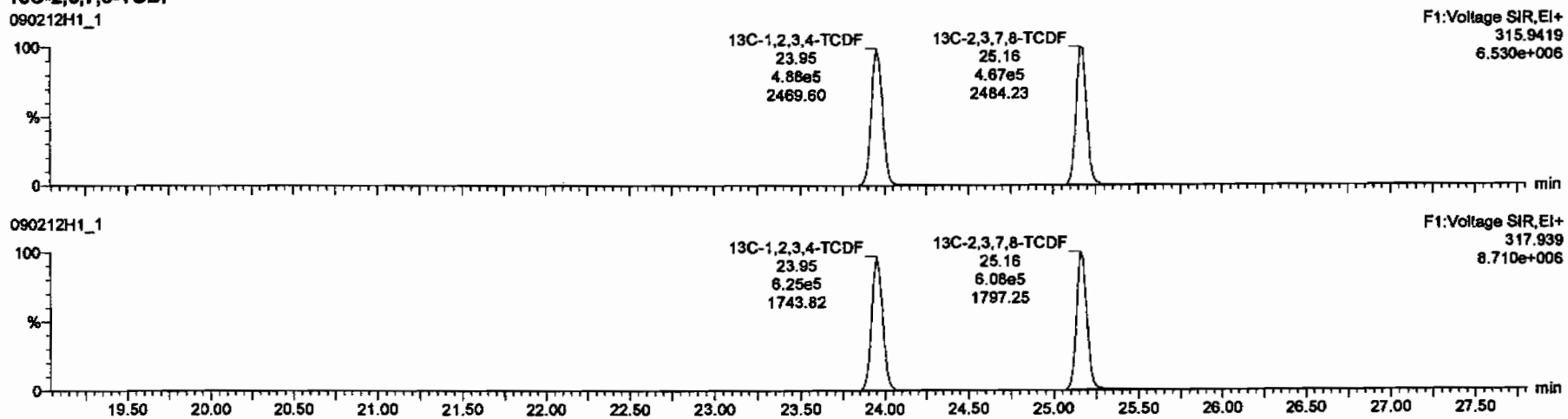

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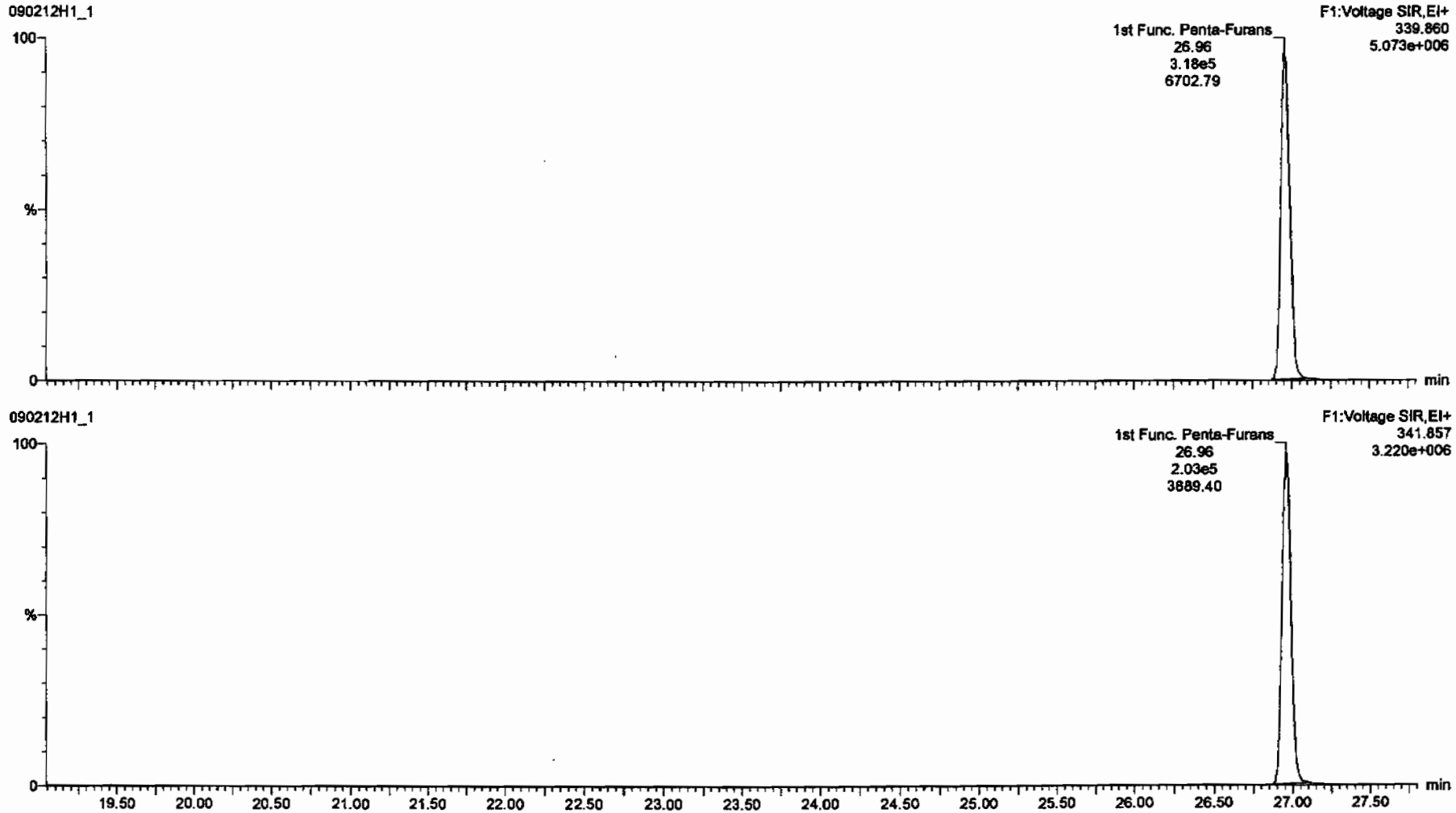

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1,2,3,7,8-PeCDF

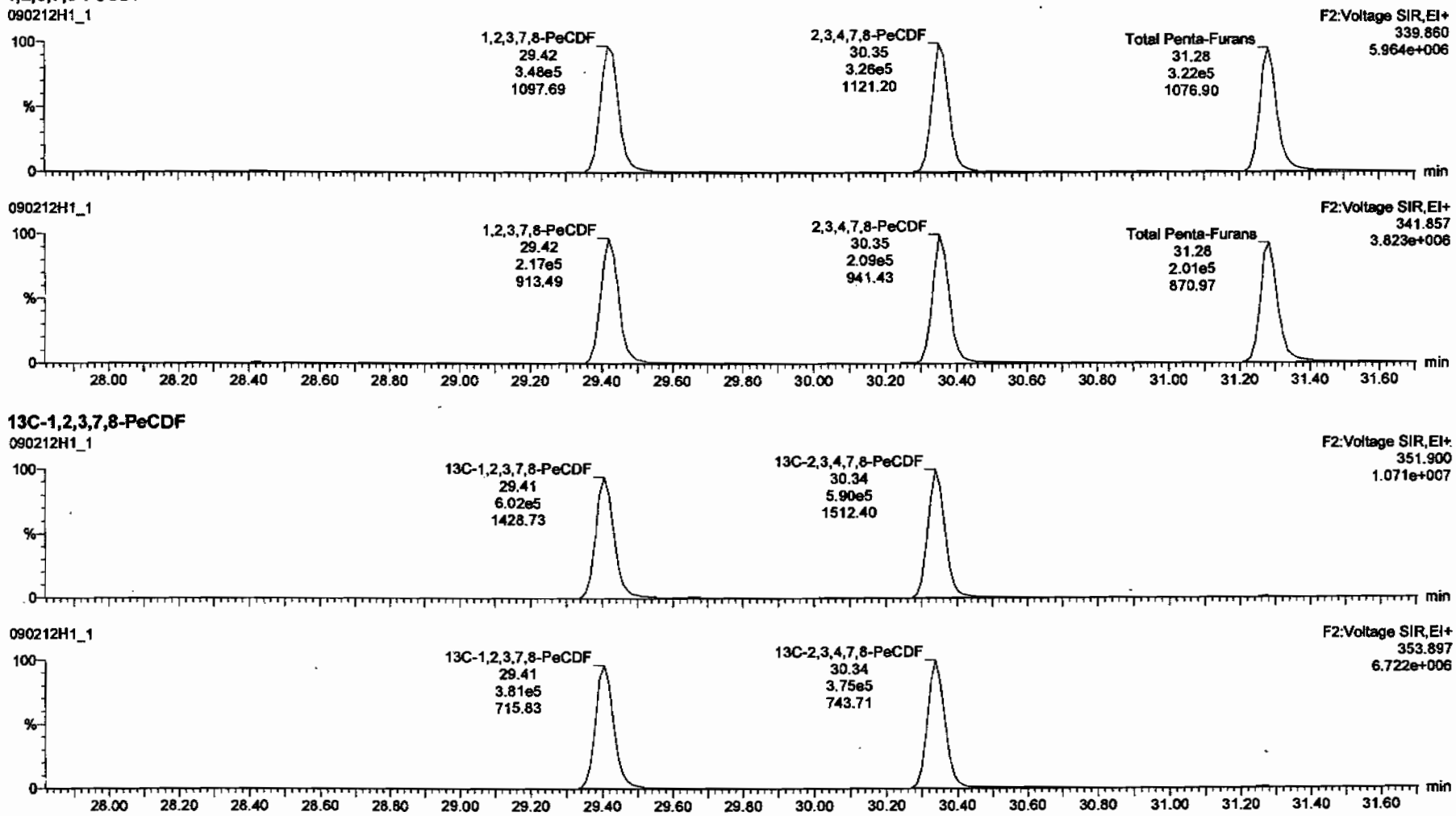

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1,2,3,4,7,8-HxCDF

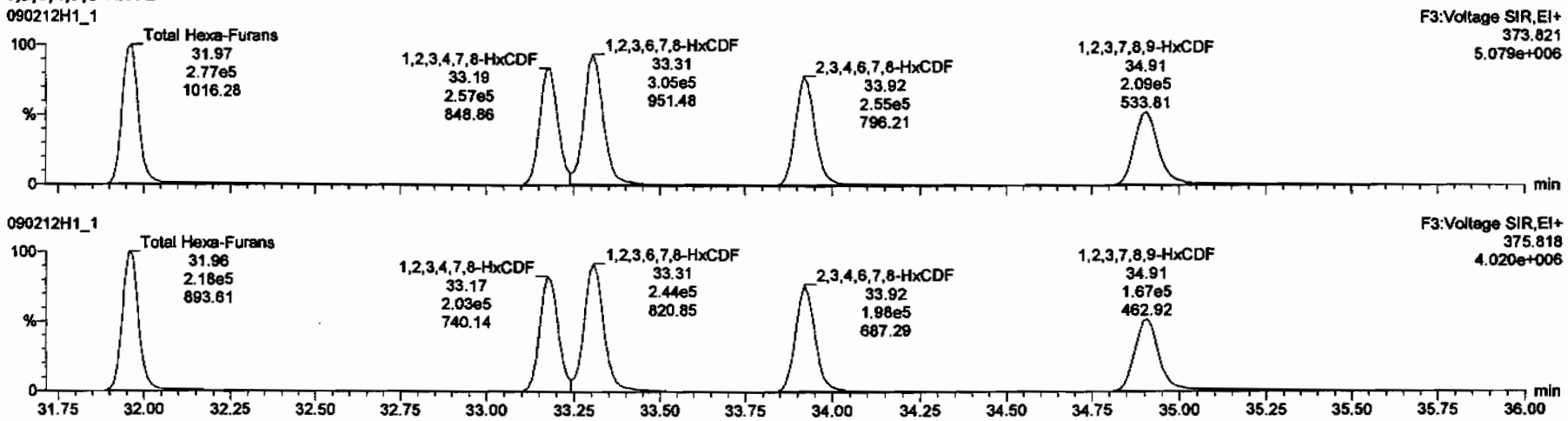

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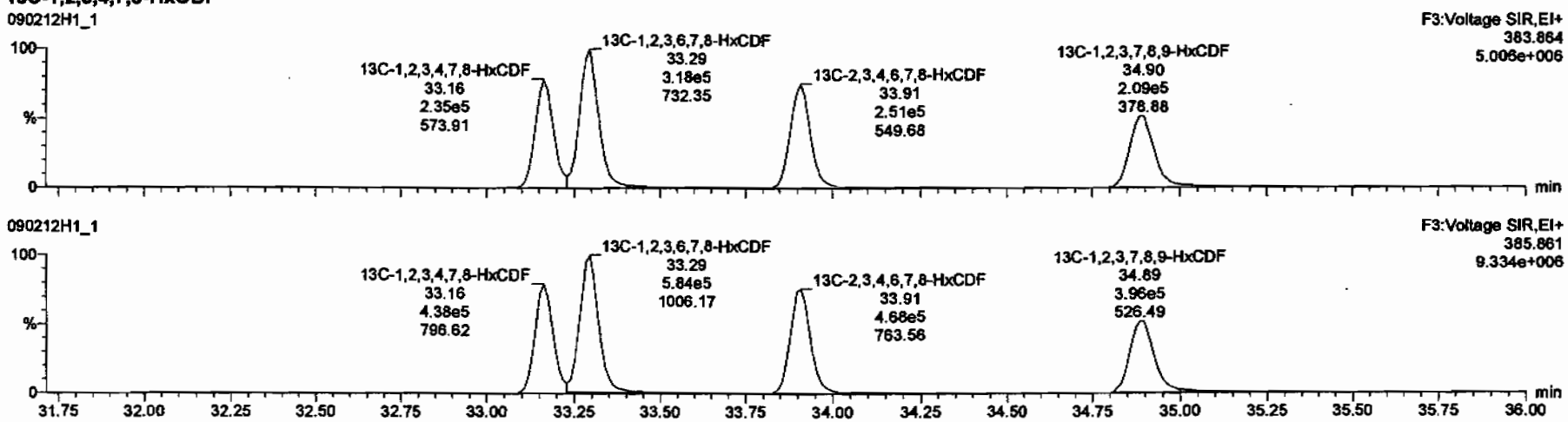

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1,2,3,4,6,7,8-HpCDF

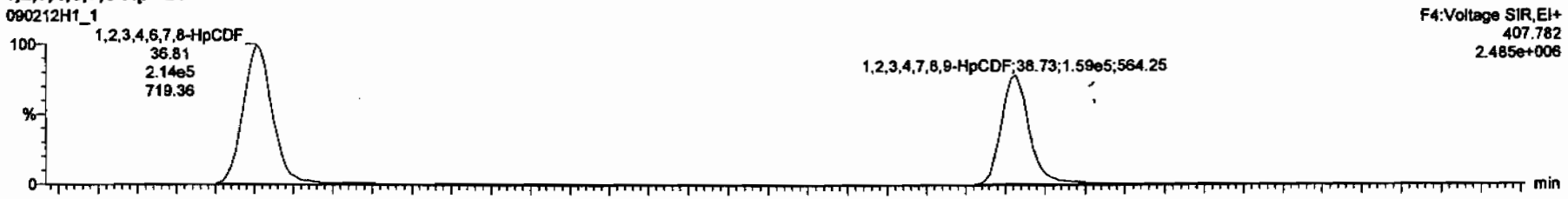

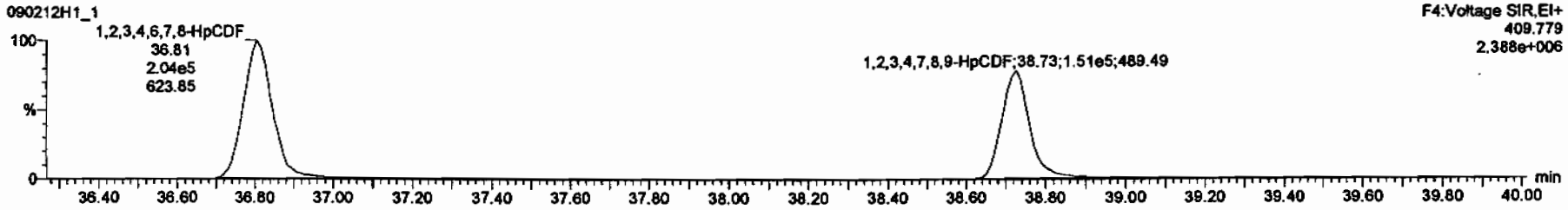

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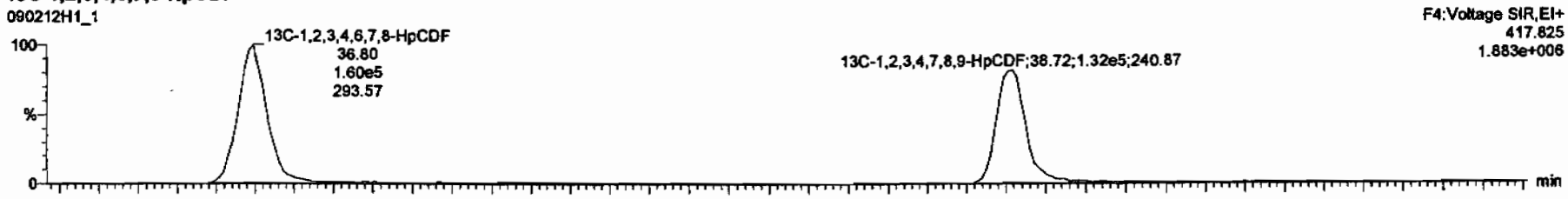

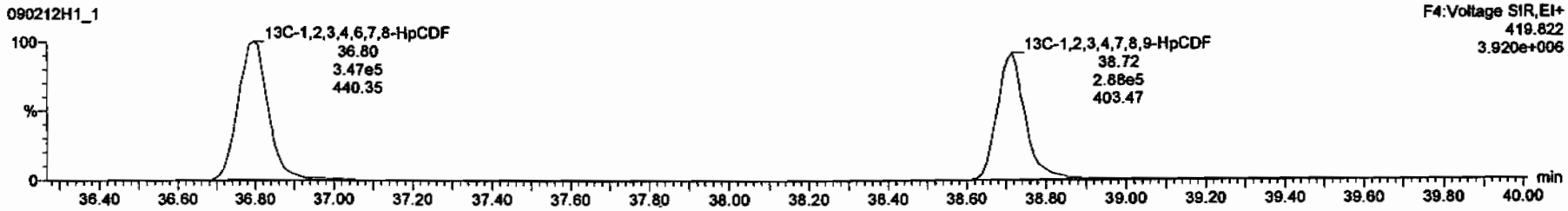

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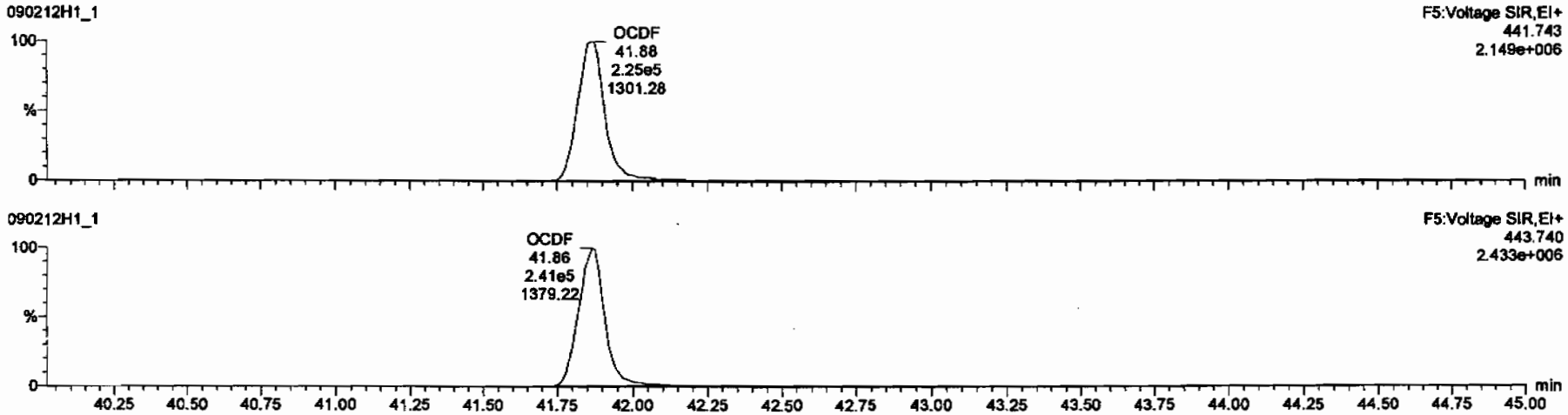

13C-OCDF

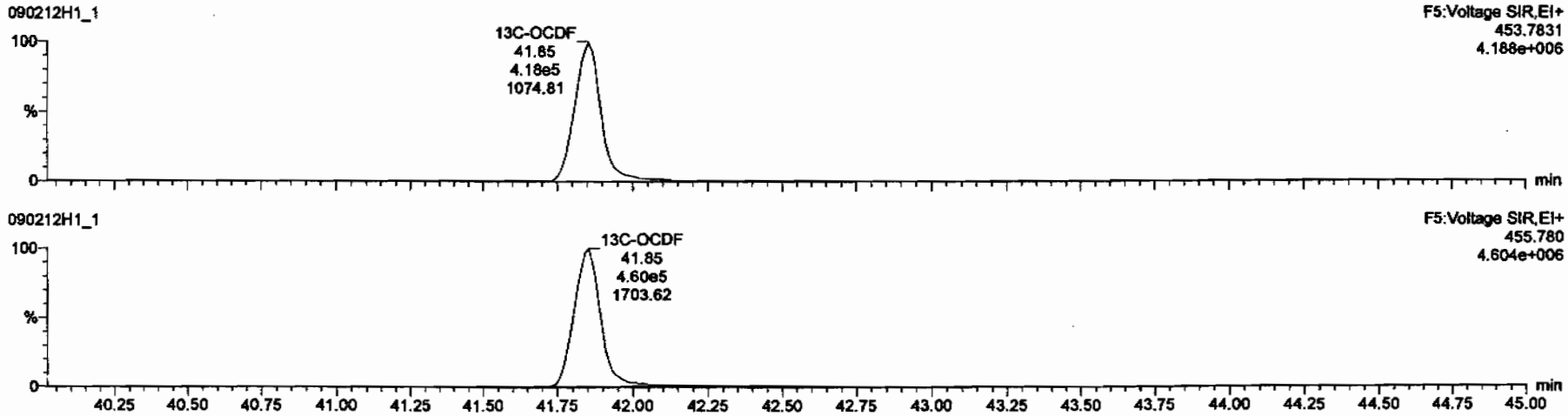

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PFK1

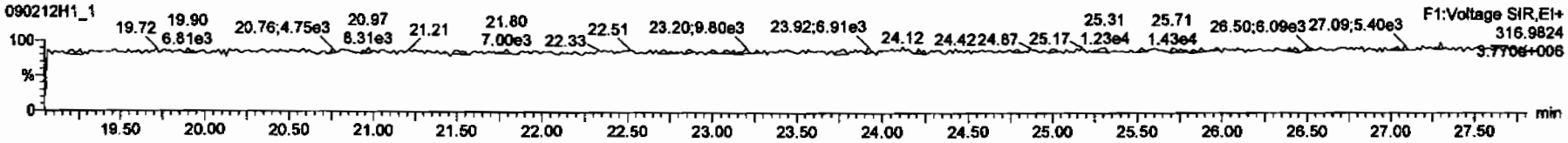

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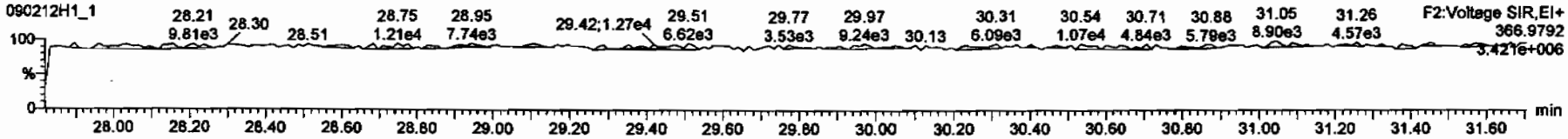

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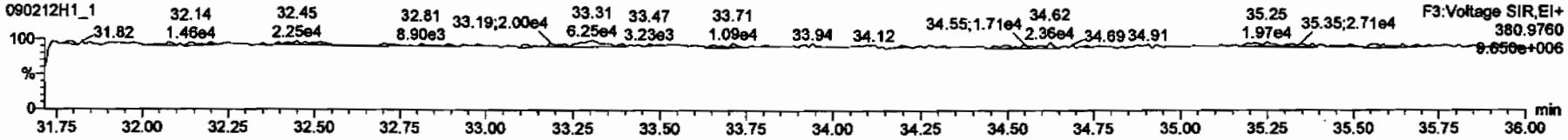

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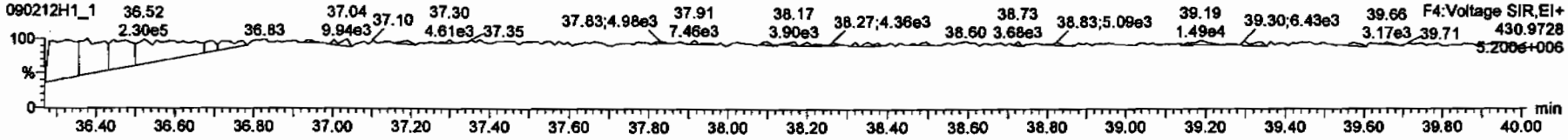

PFK5

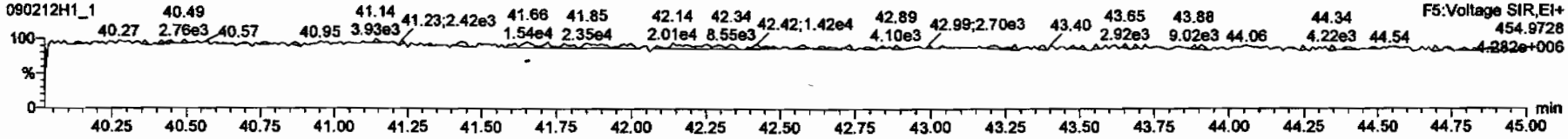

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Name: 090212H1_1, Date: 12-Feb-2009, Time: 11:10:11, ID: ST090212H1-1 1613 CS3 080917I, Description: 1613 CS3 080917I

DPE1
090212H1_1

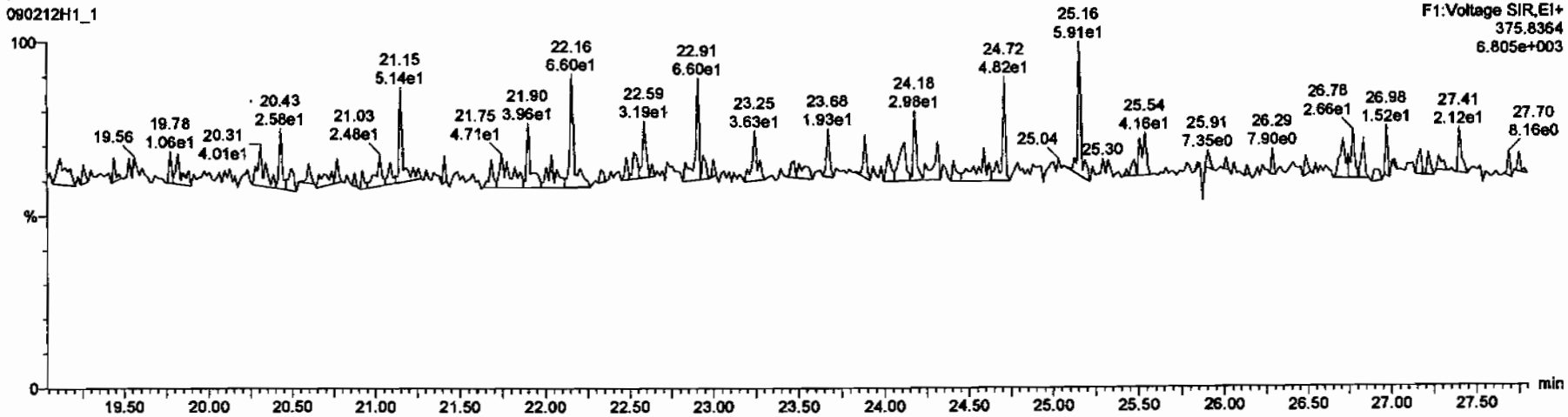

DPE6
090212H1_1

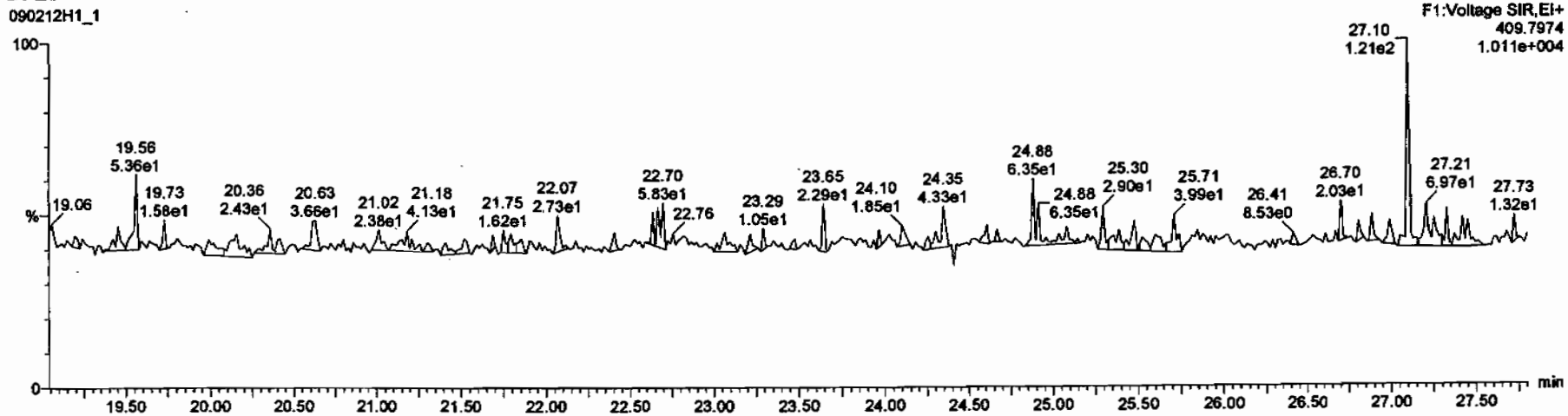

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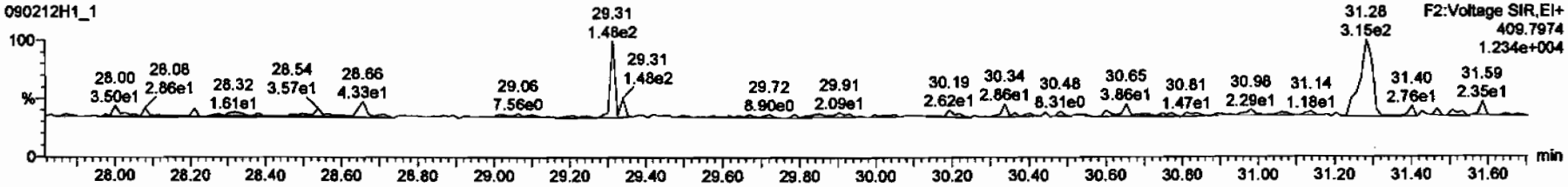

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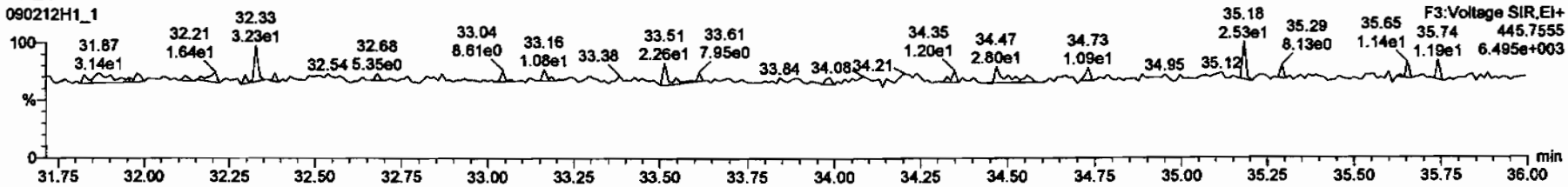

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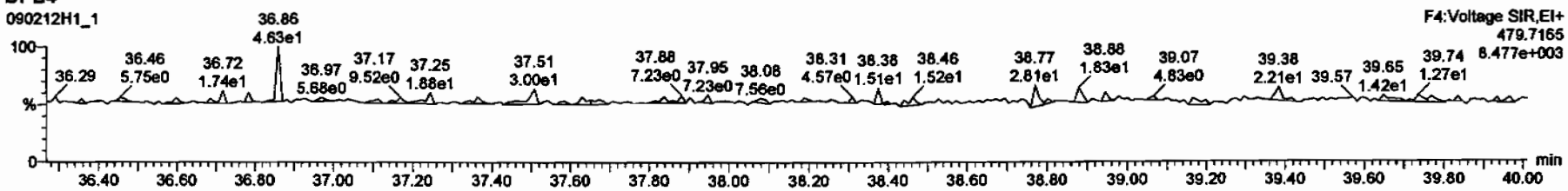

DPE5

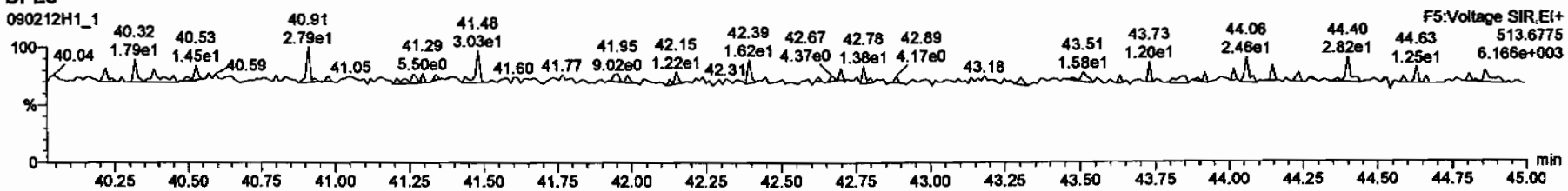

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2,3,7,8-TCDD

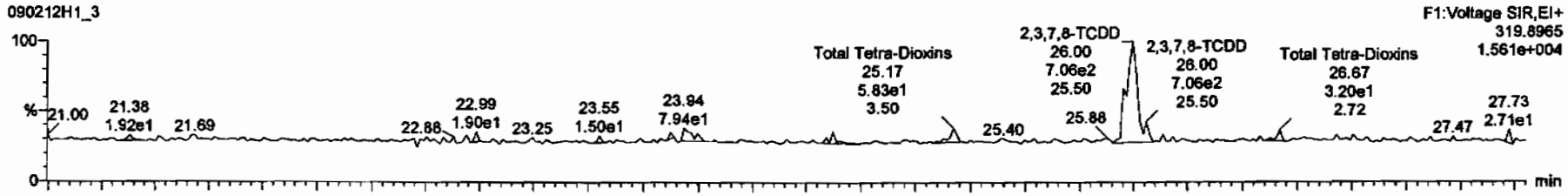

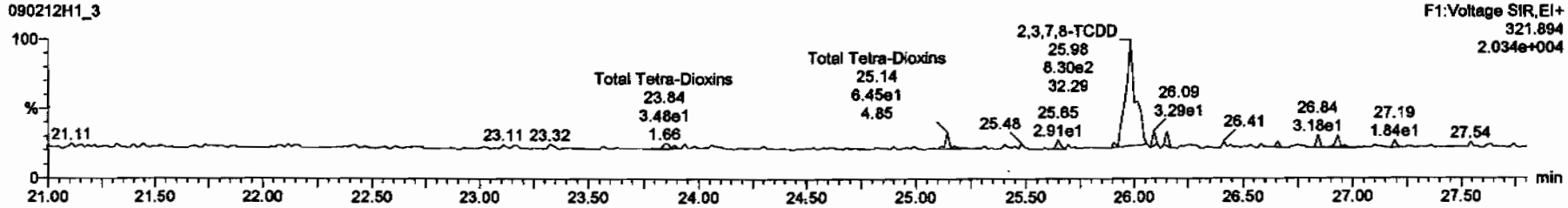

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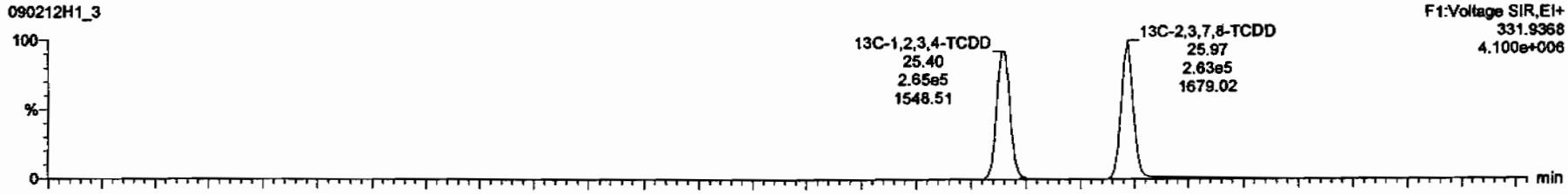

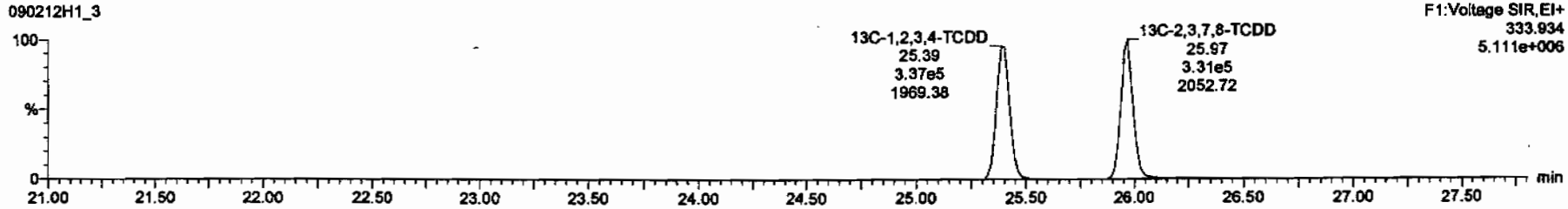

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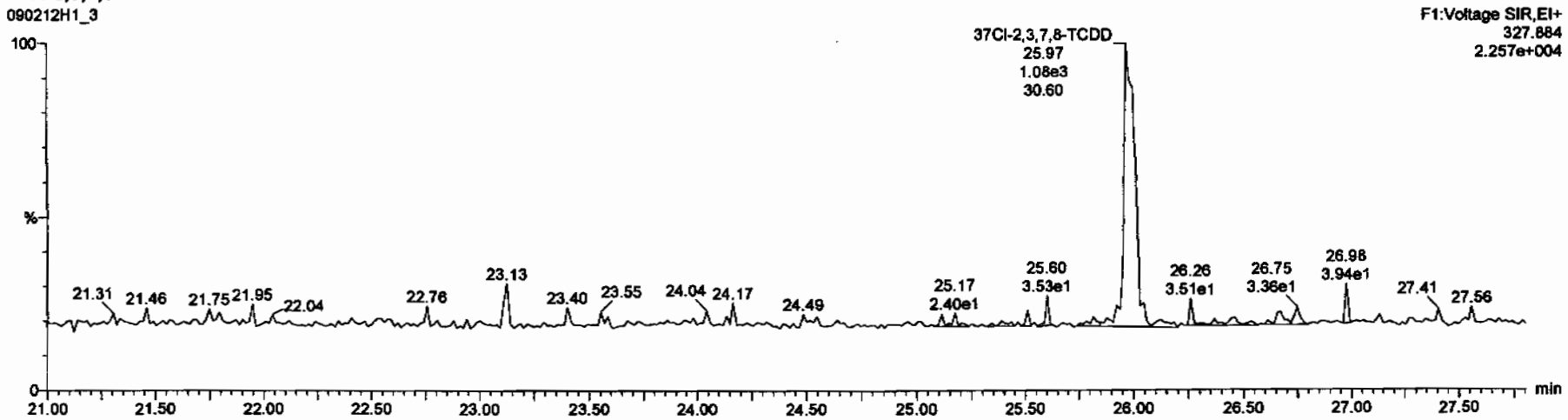

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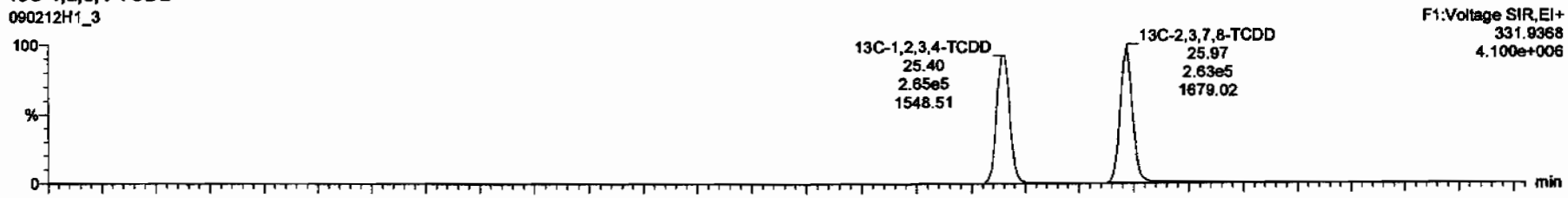

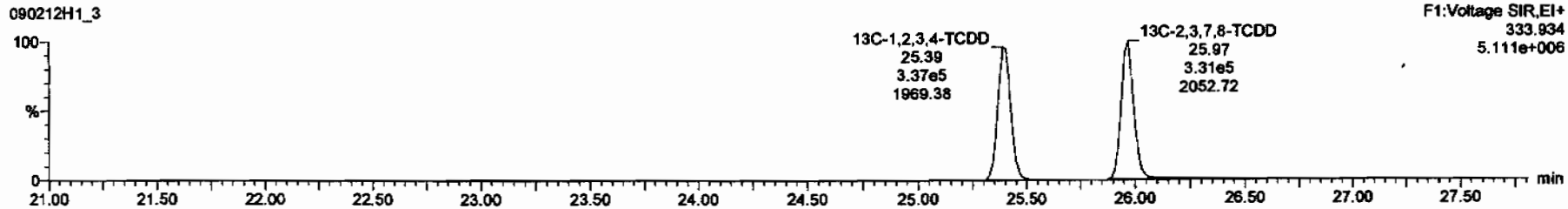

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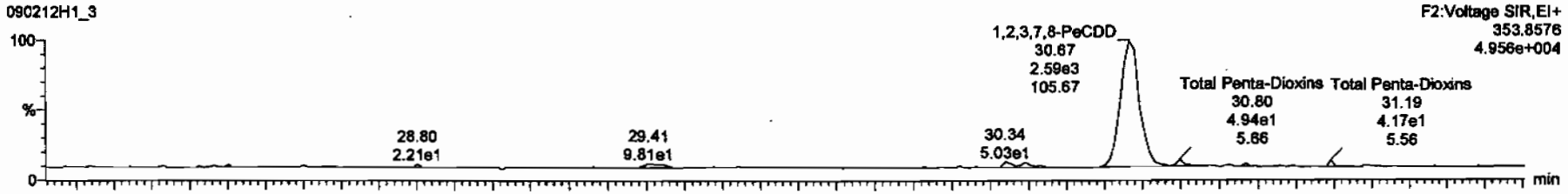

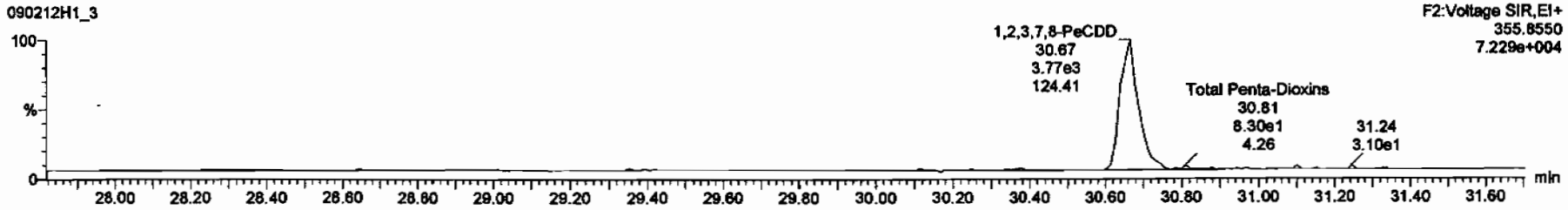

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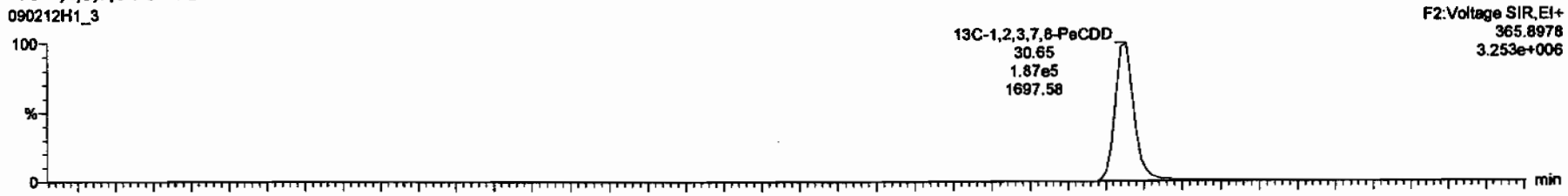

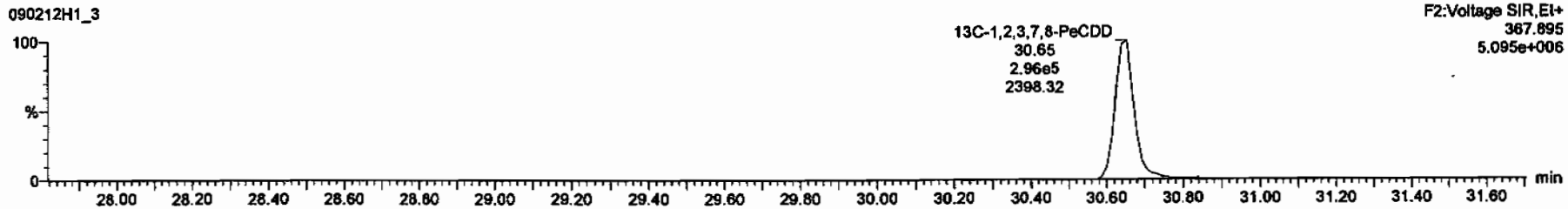

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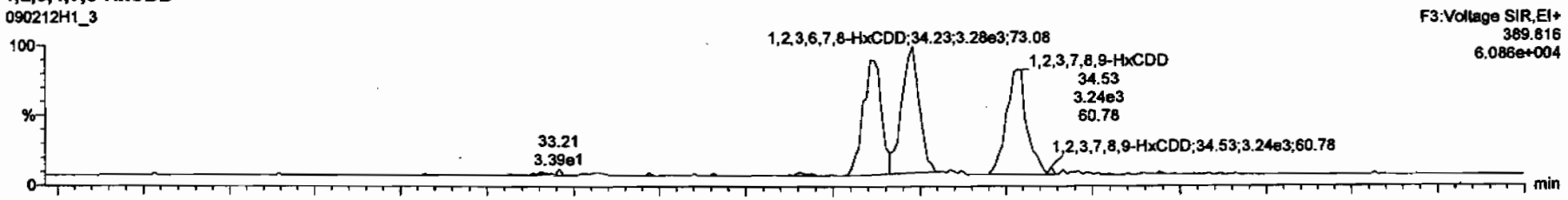

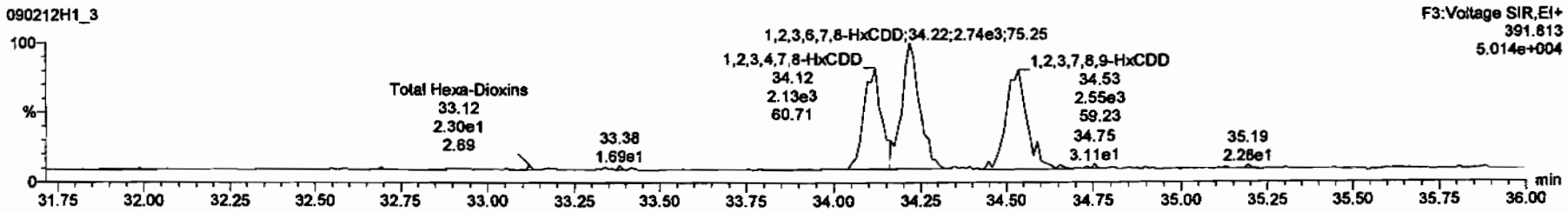

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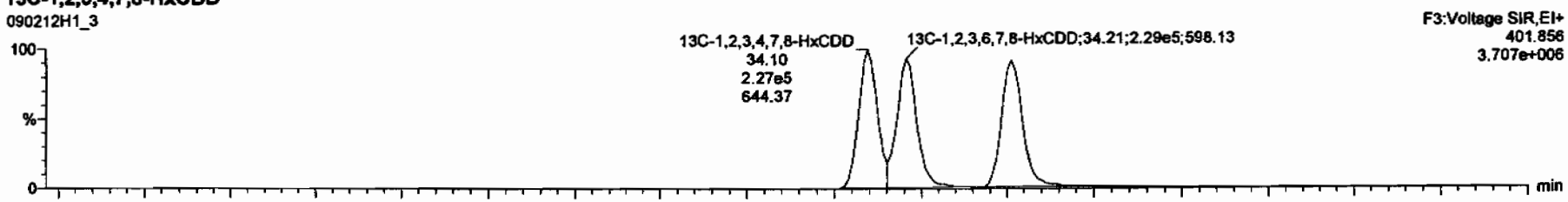

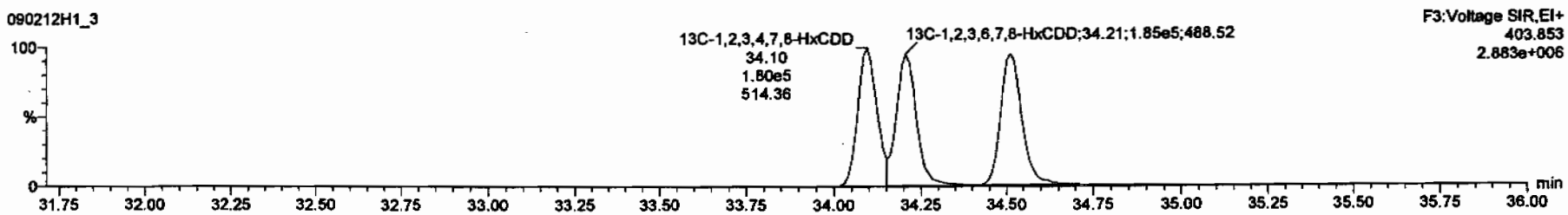

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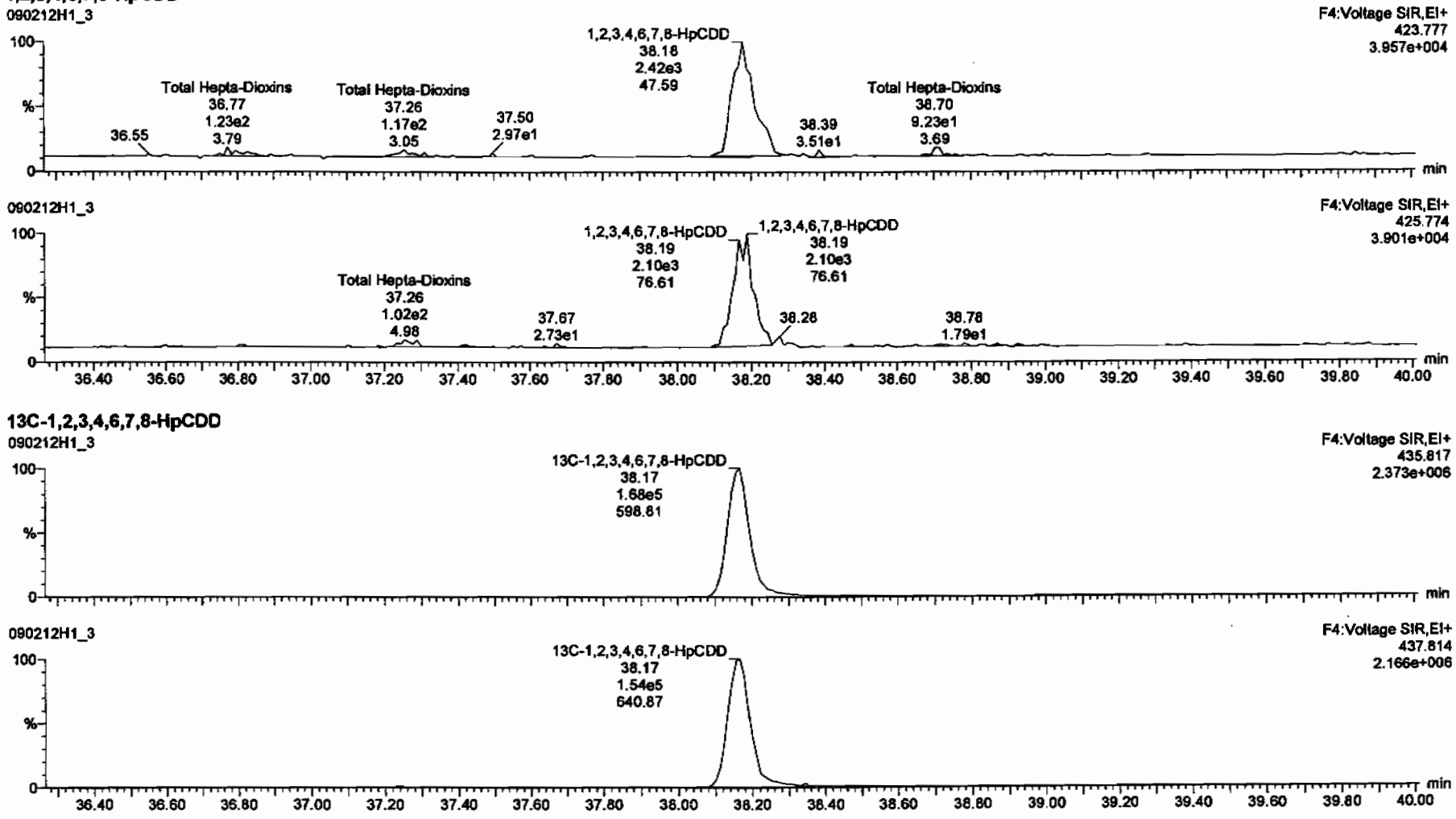

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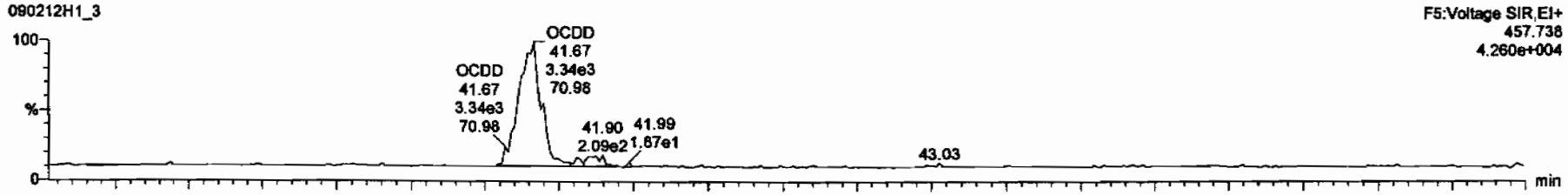

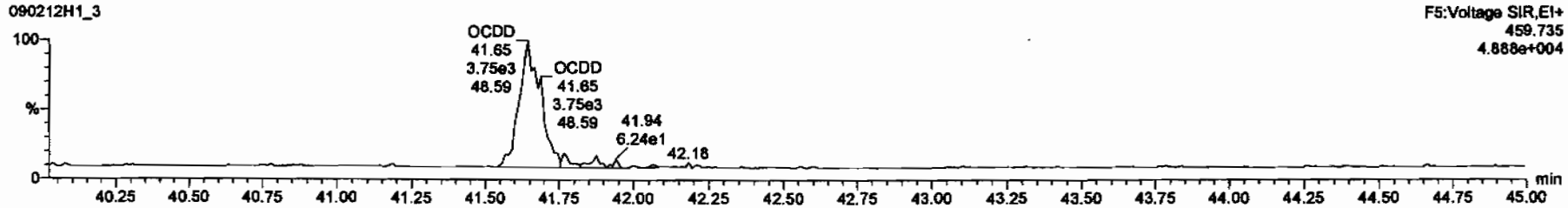

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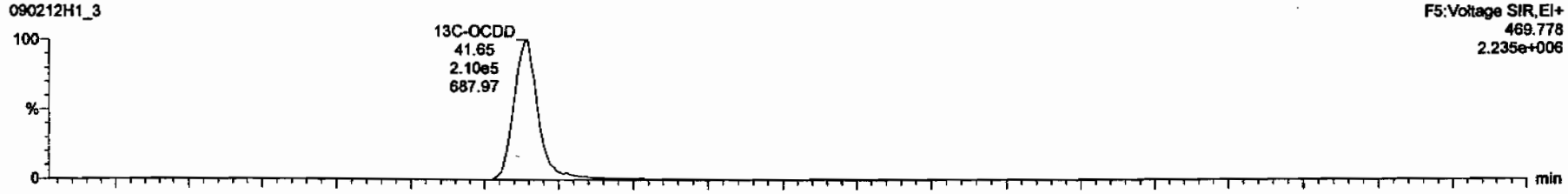

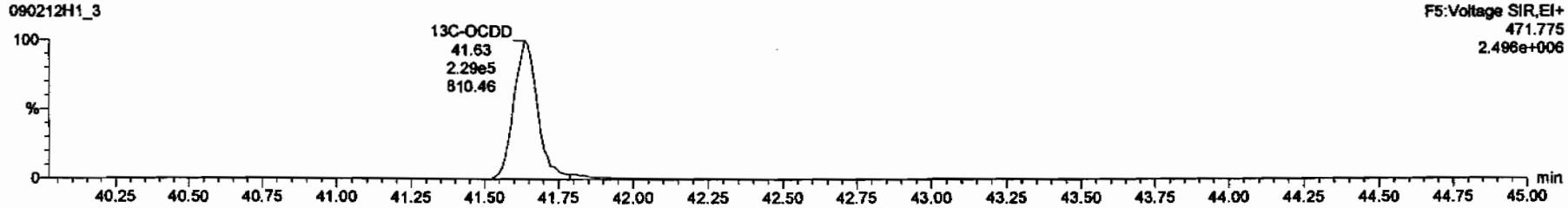

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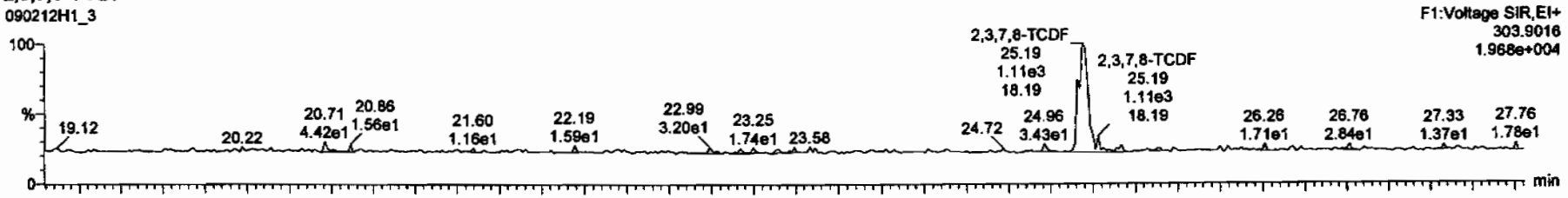

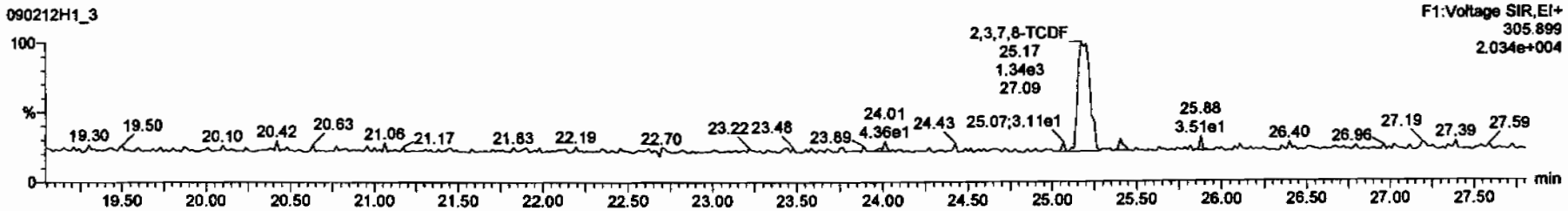

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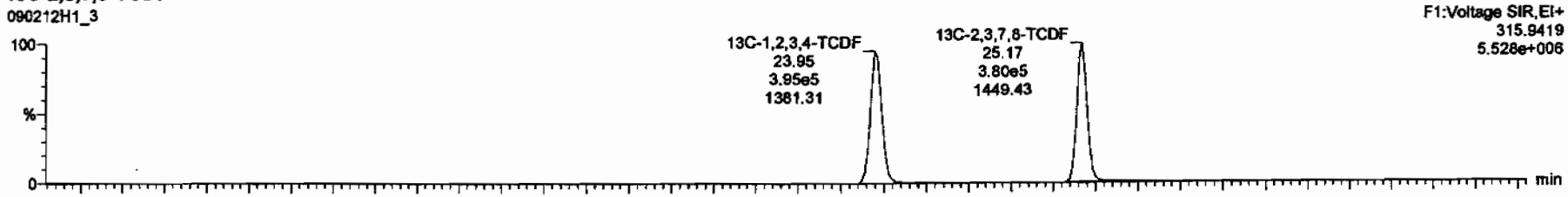

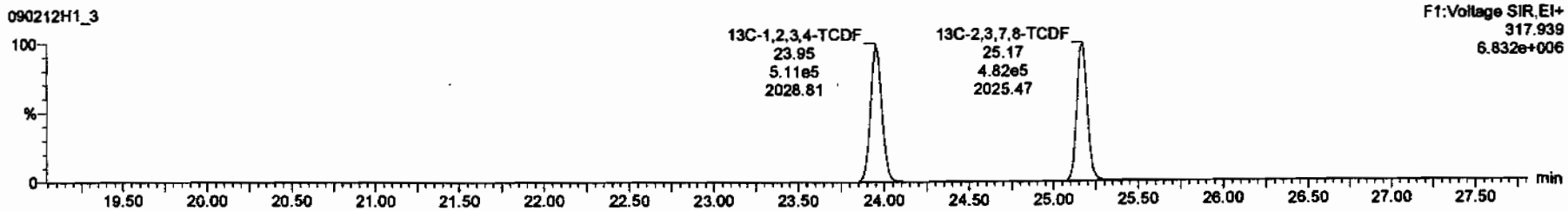

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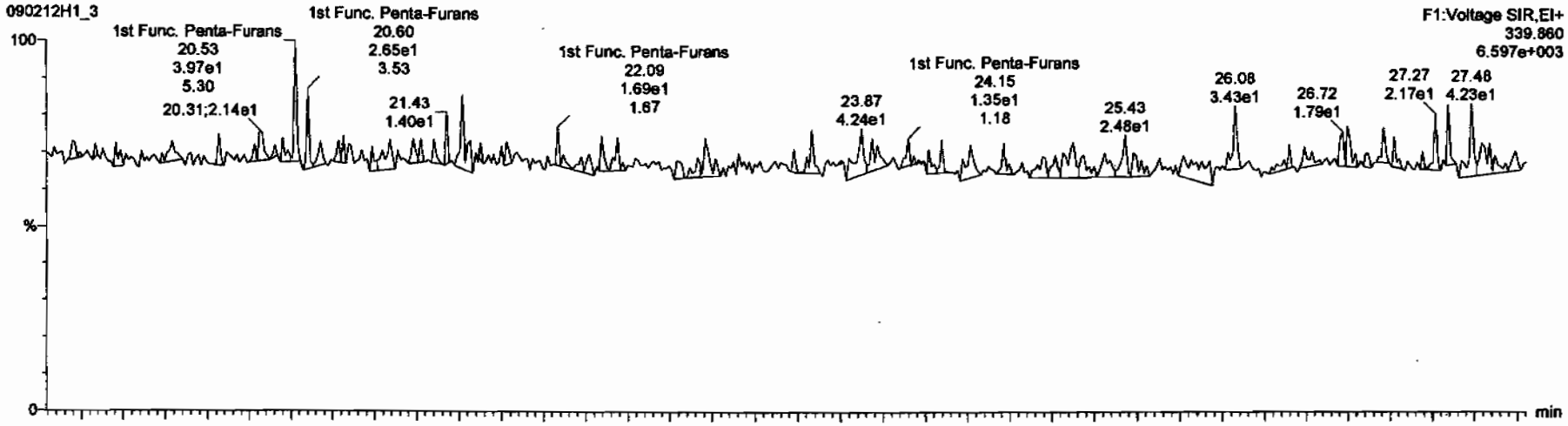

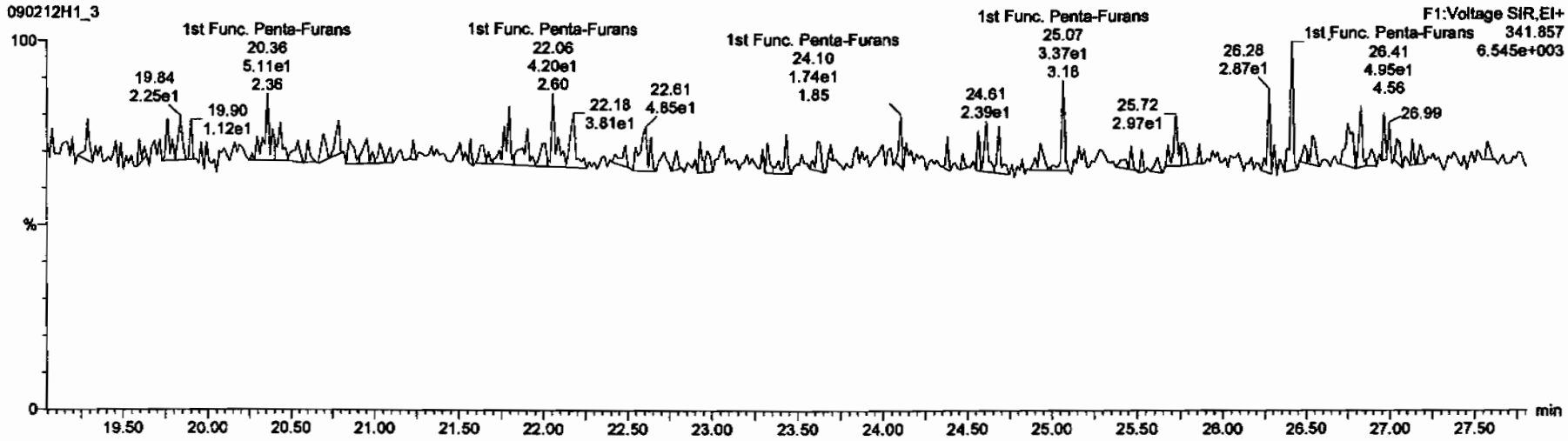

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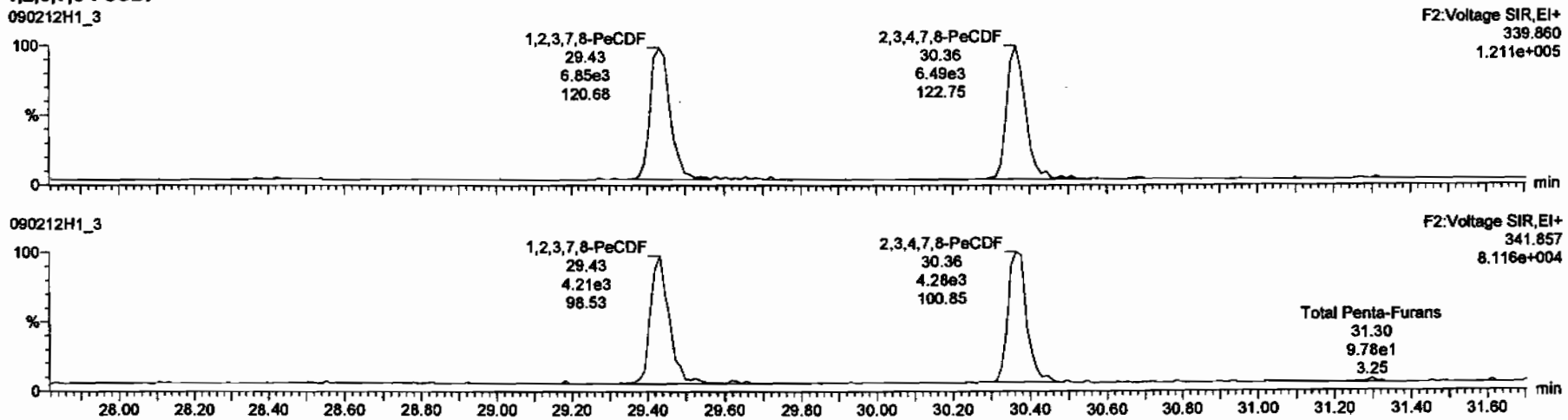

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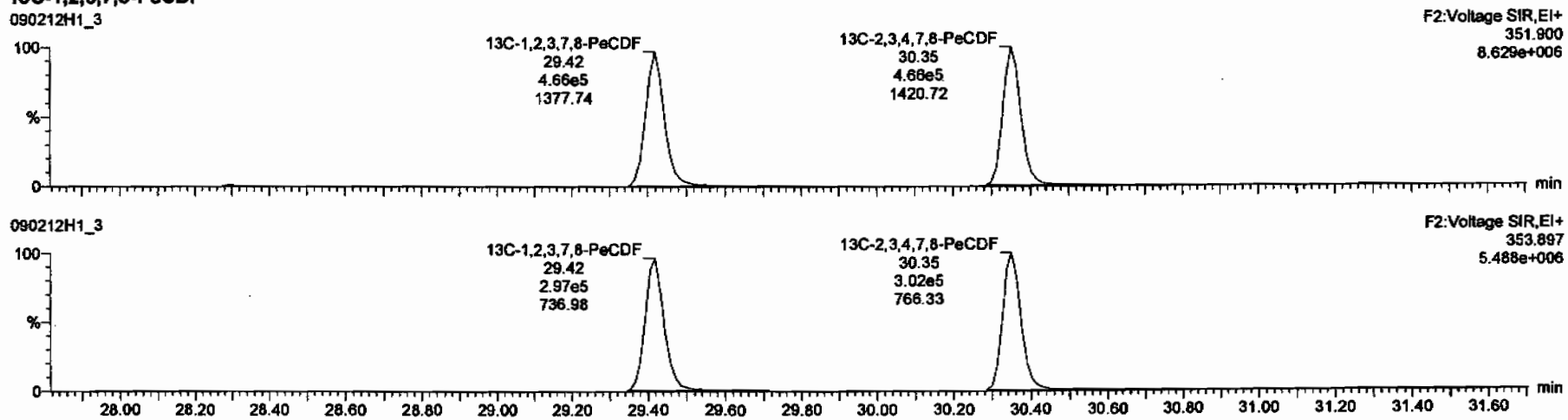

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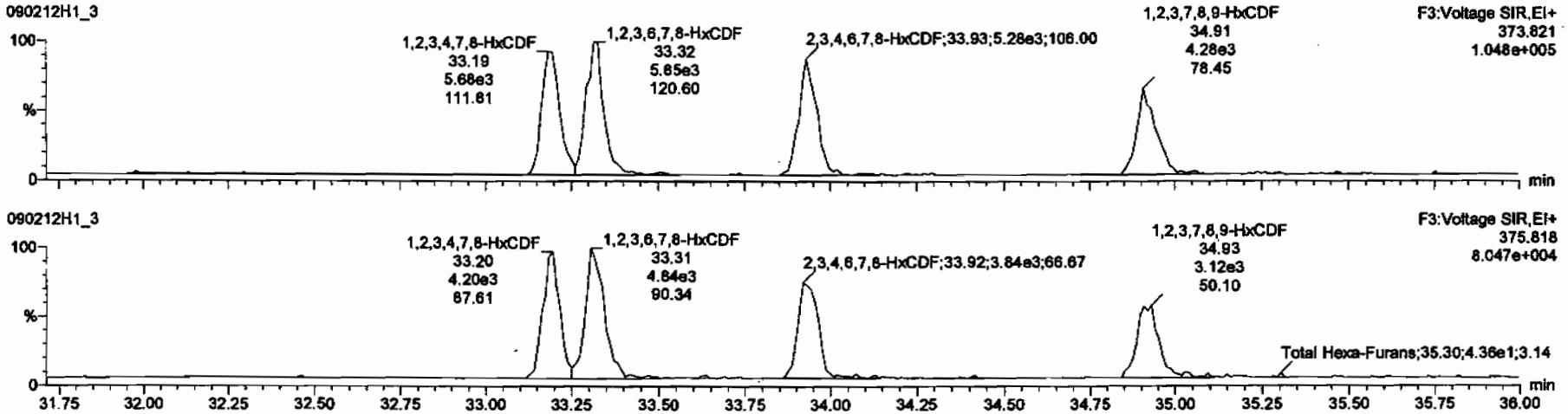

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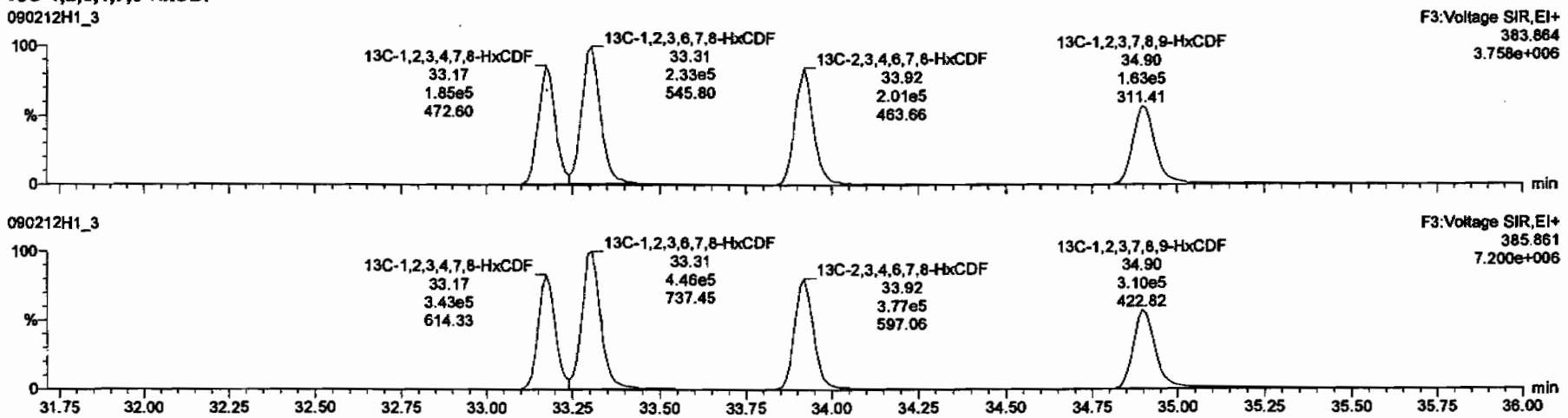

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1,2,3,4,6,7,8-HpCDF

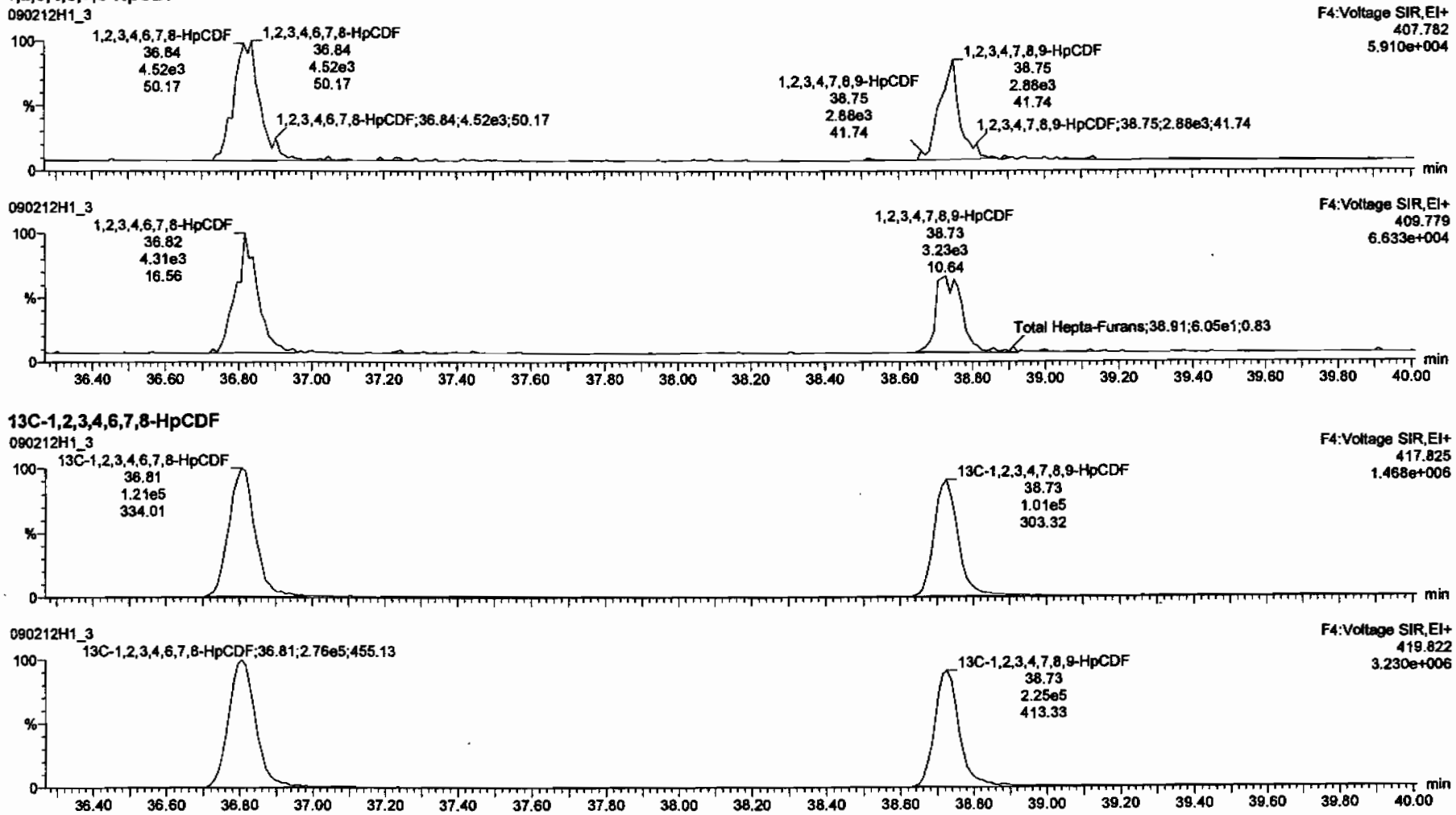

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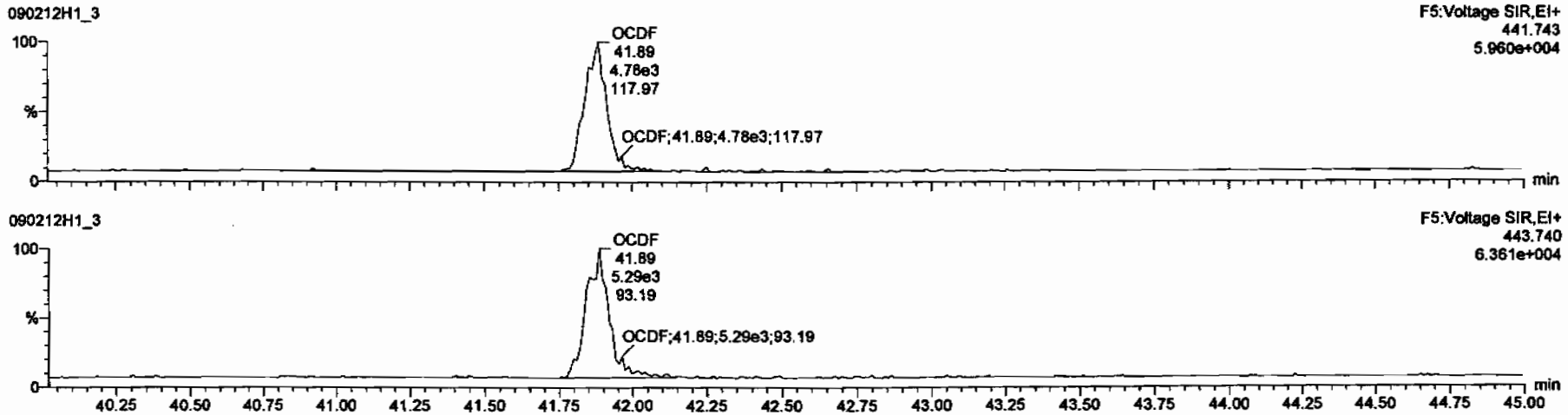

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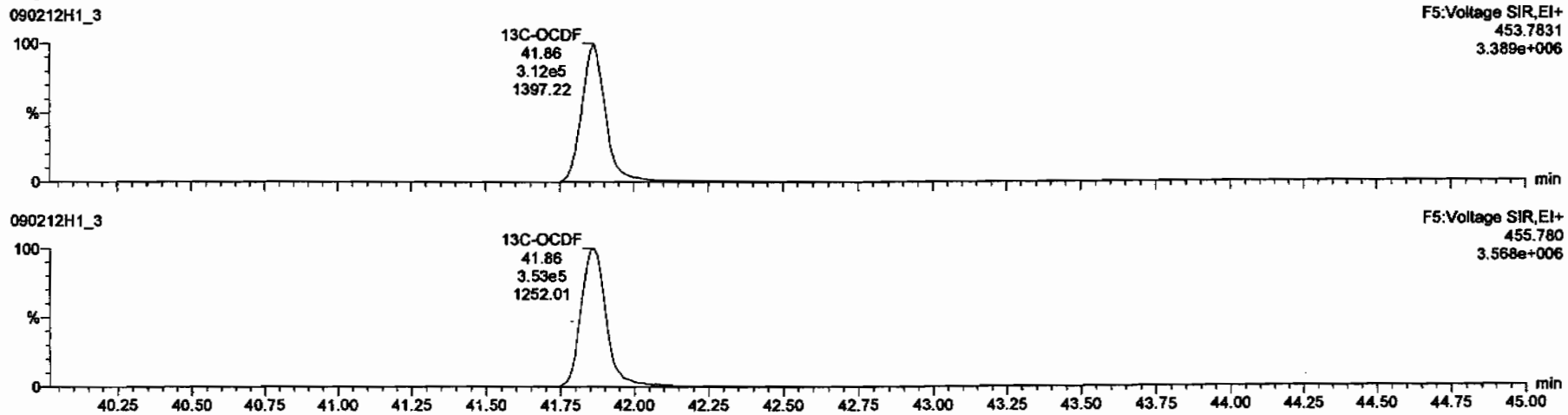

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PFK1

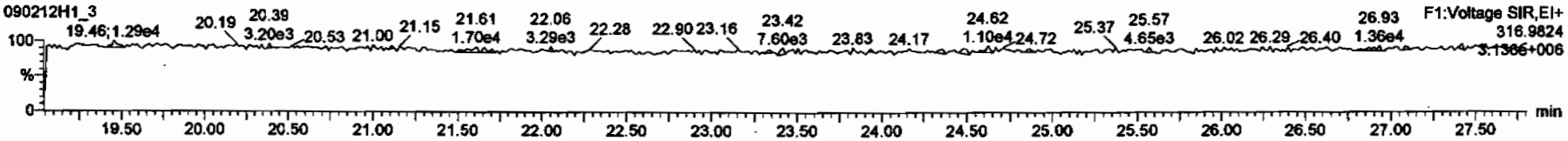

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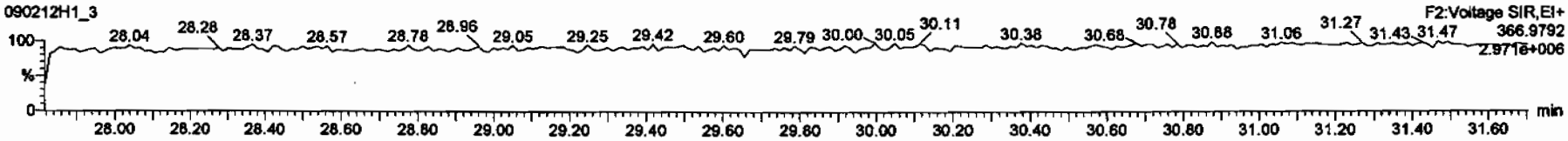

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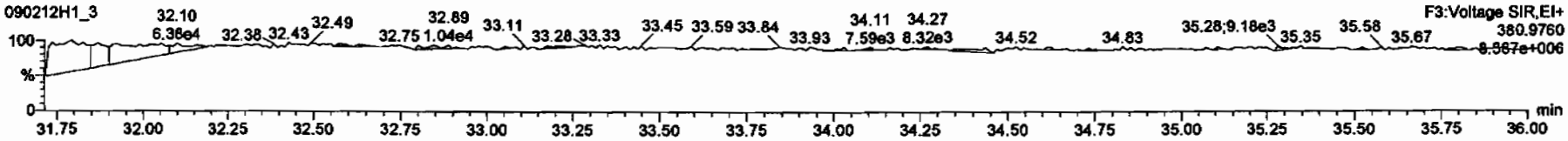

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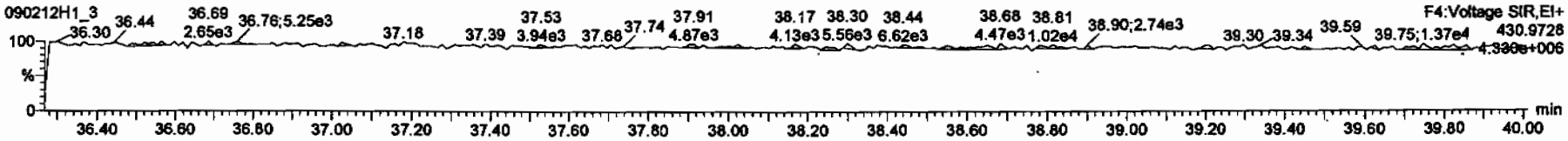

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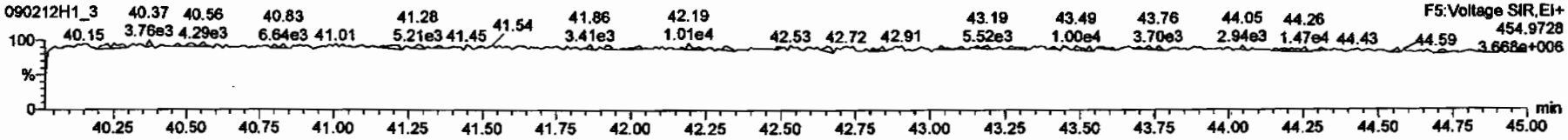

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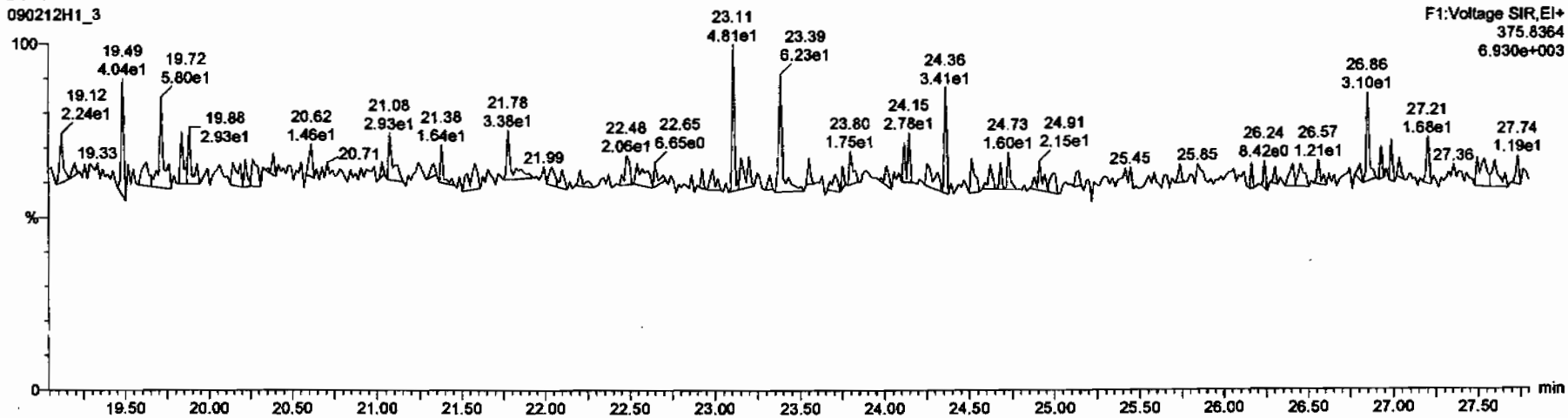

DPE6

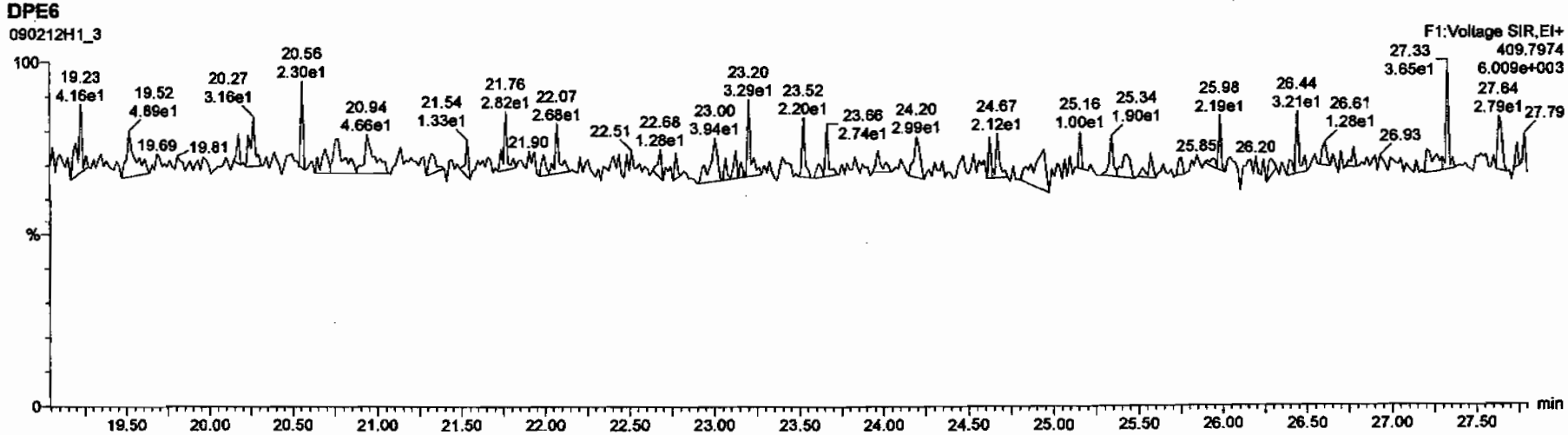

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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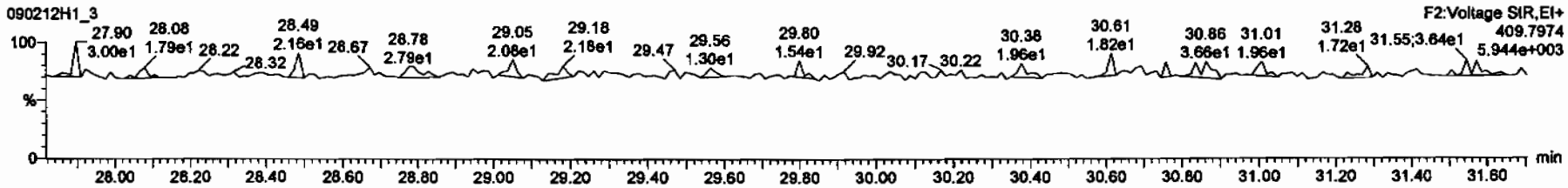

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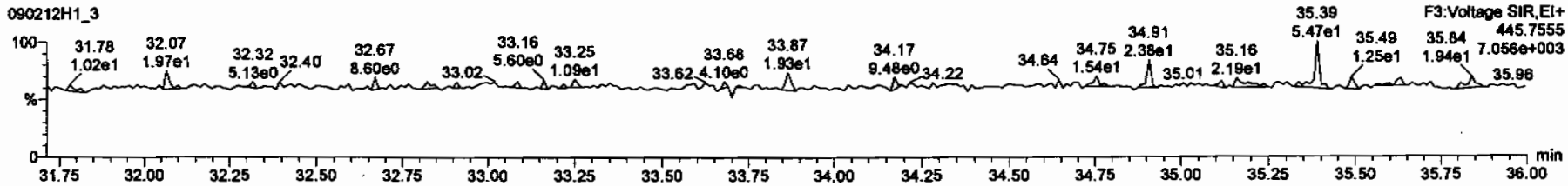

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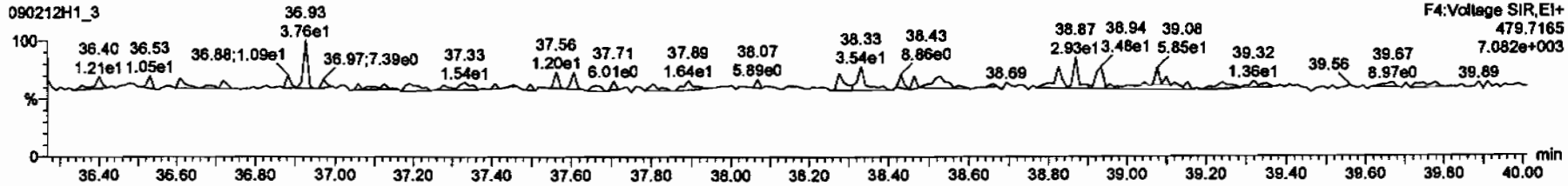

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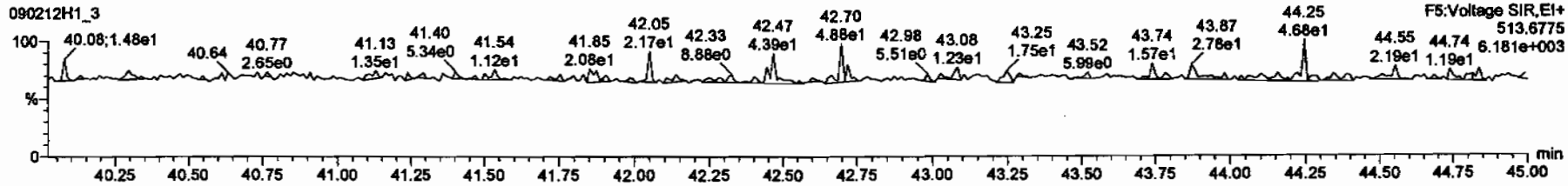

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2,3,7,8-TCDD

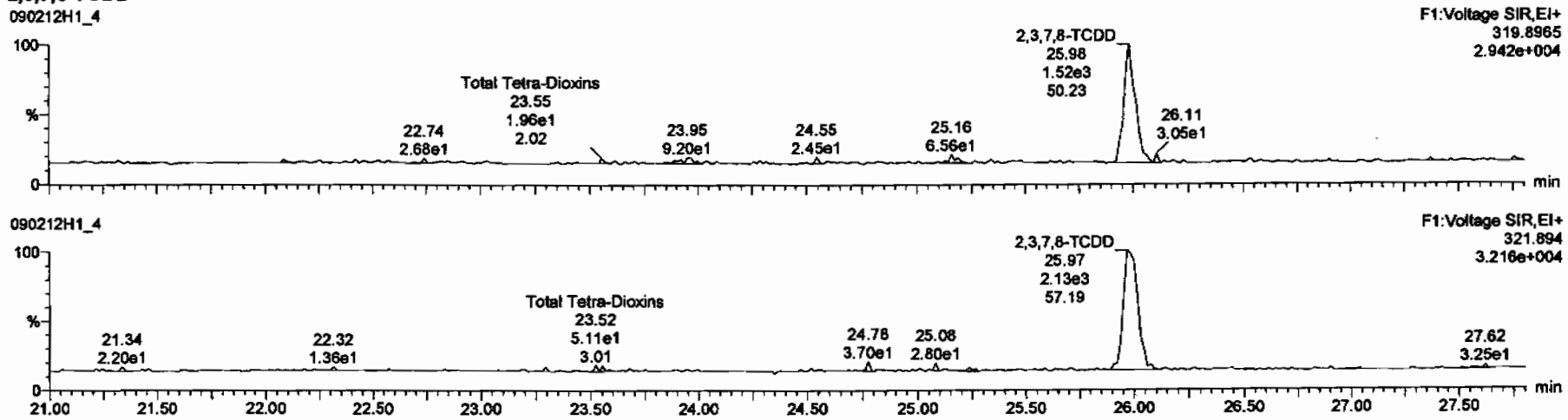

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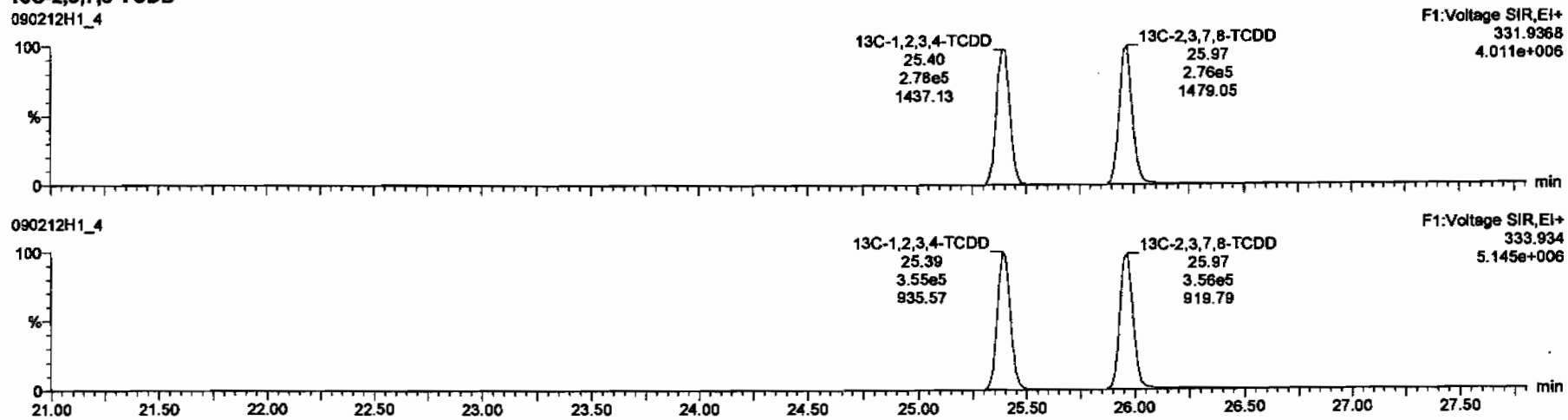

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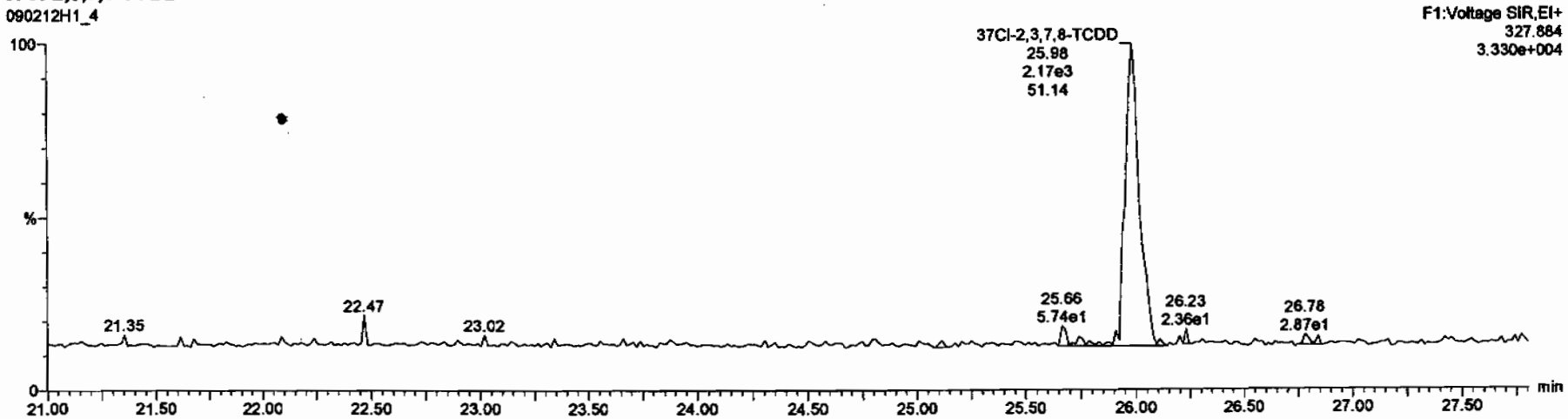

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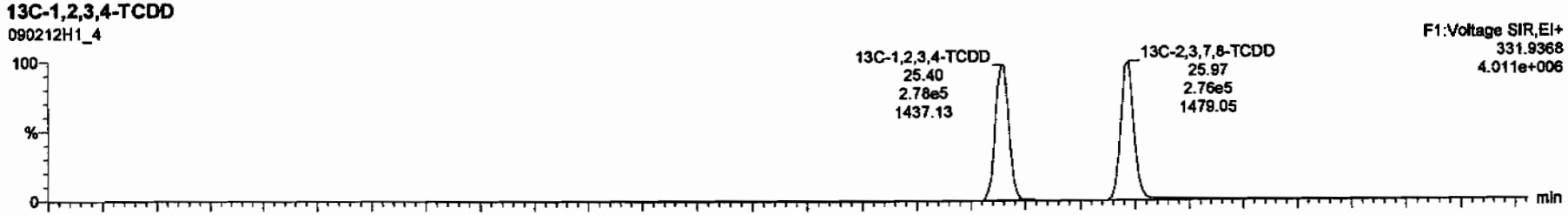

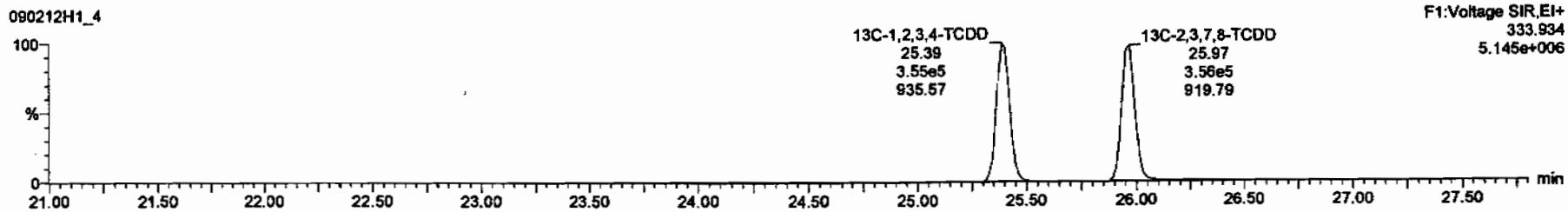

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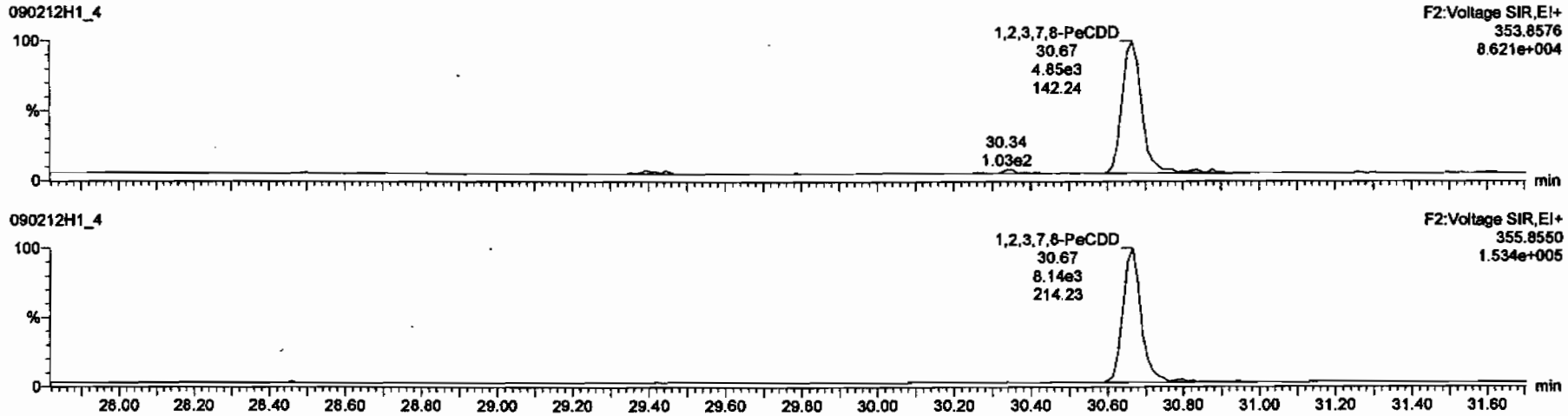

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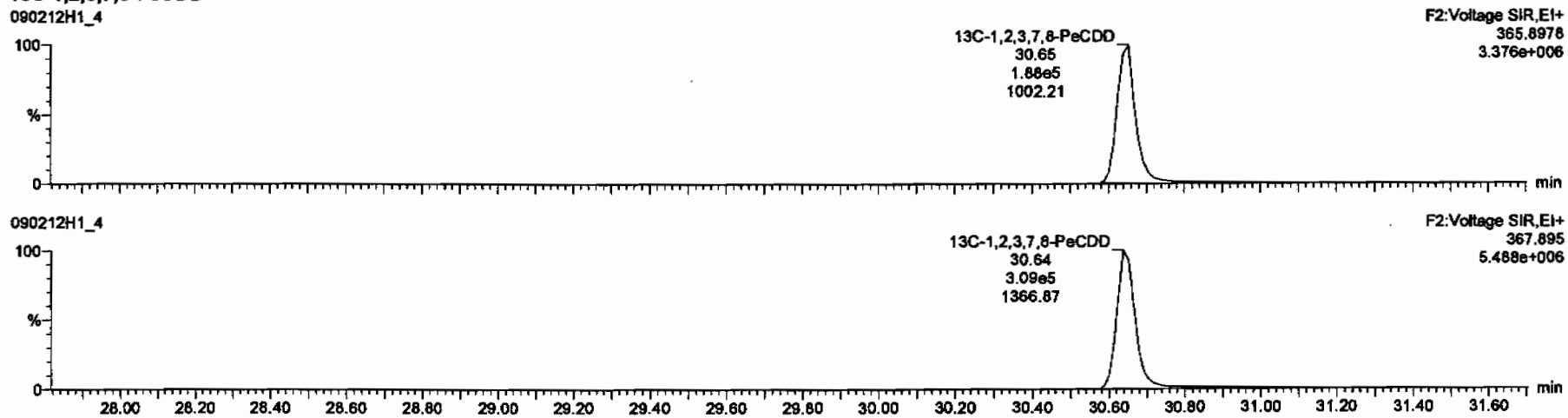

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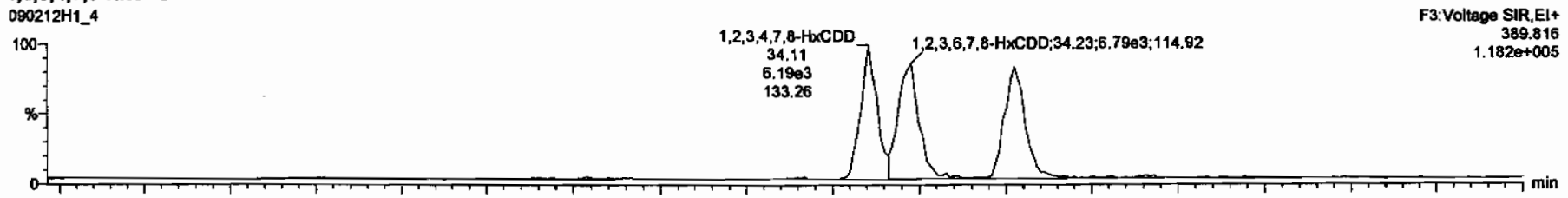

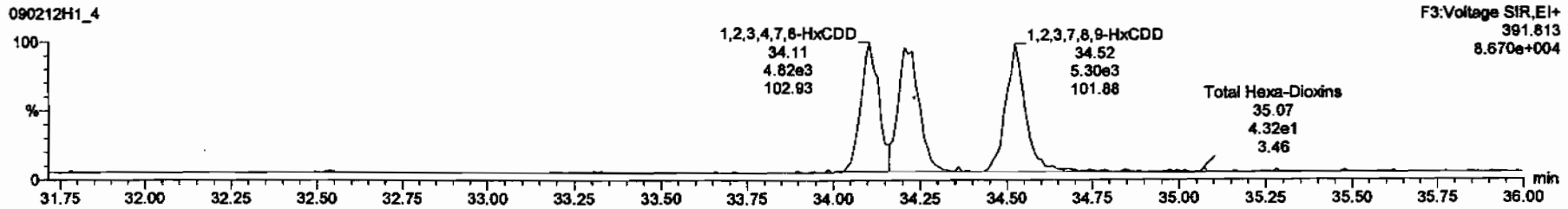

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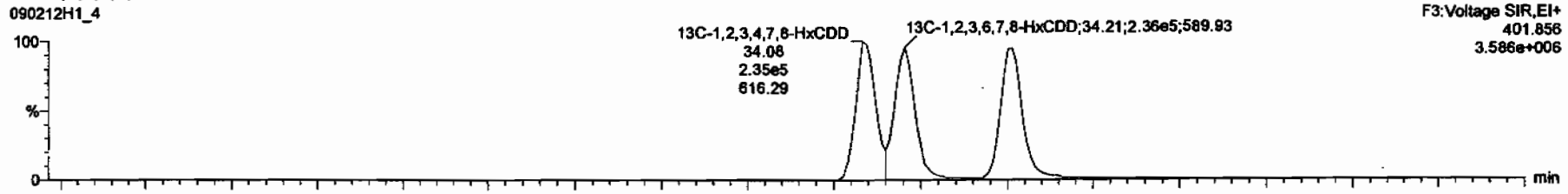

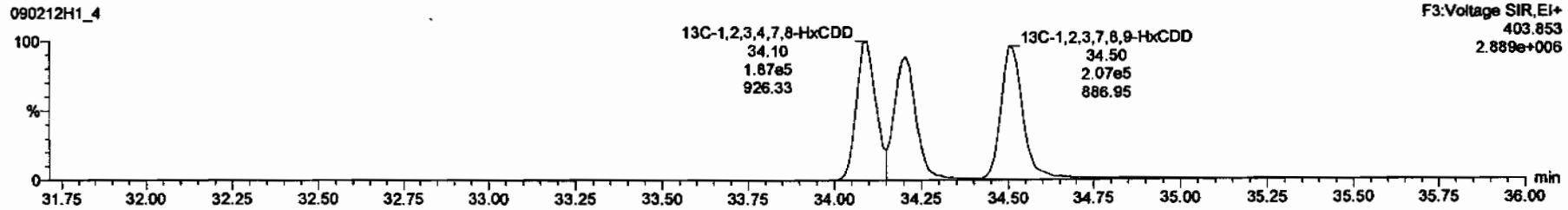

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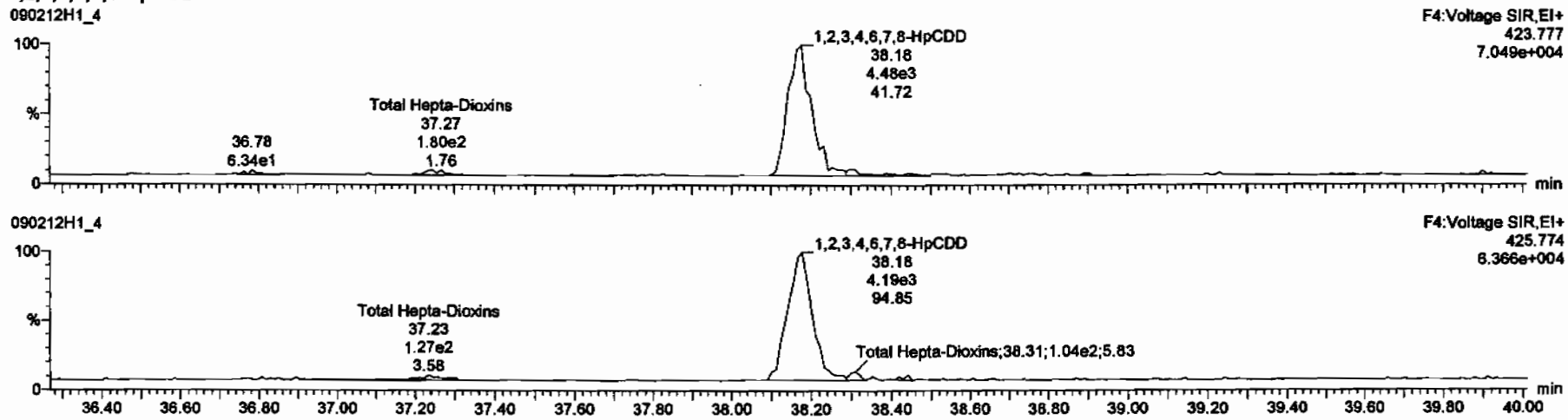

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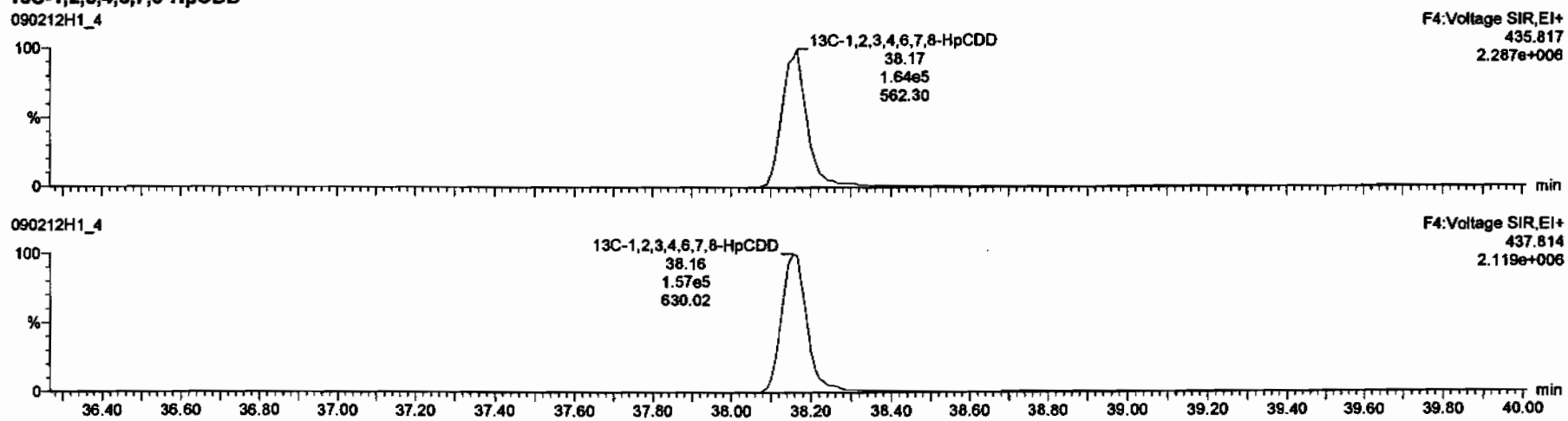

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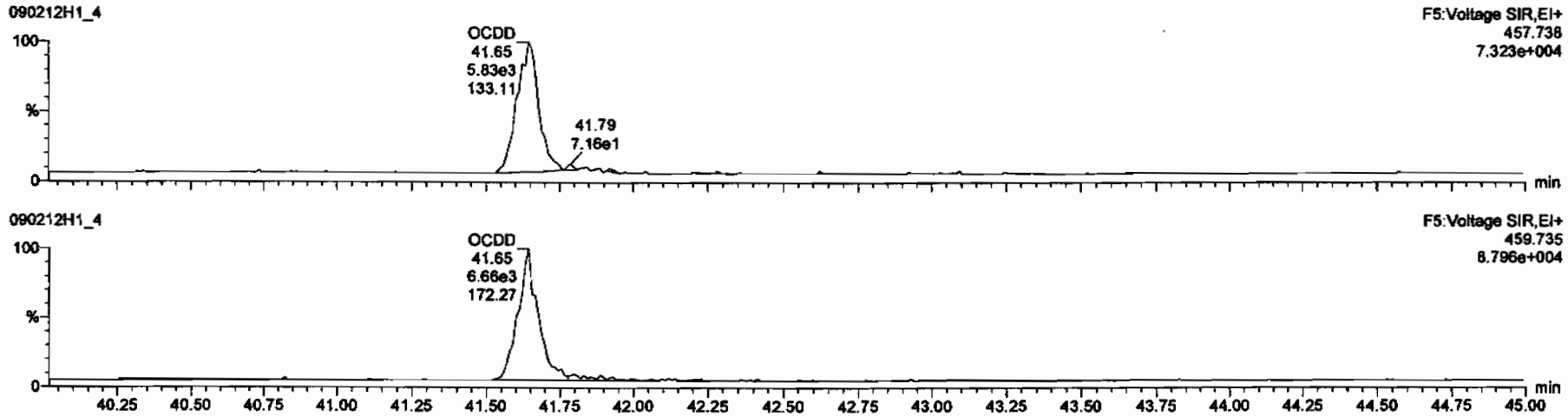

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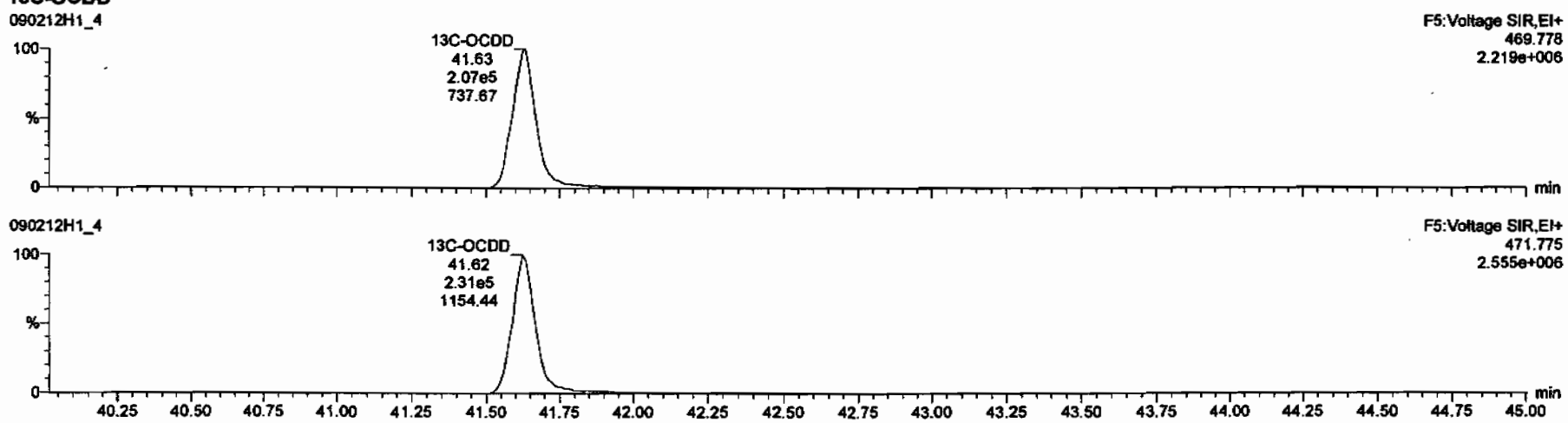

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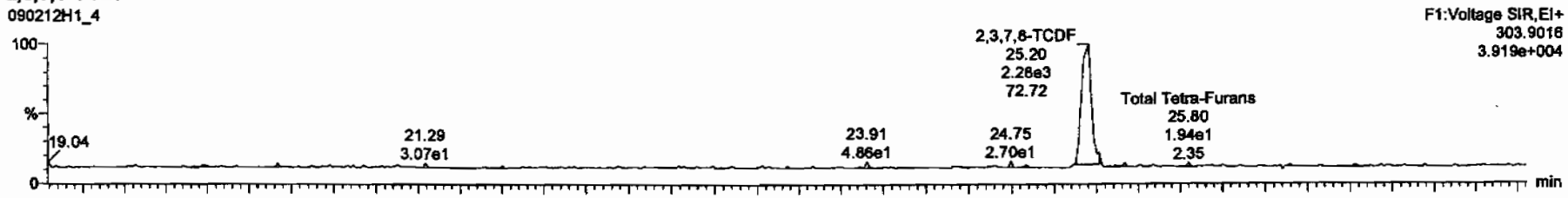

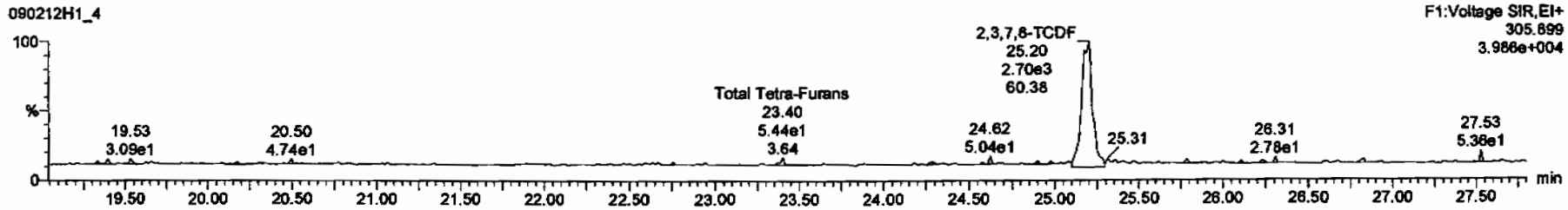

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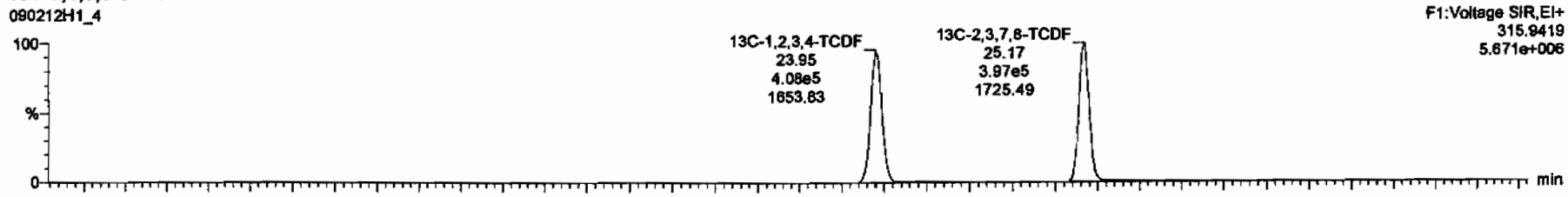

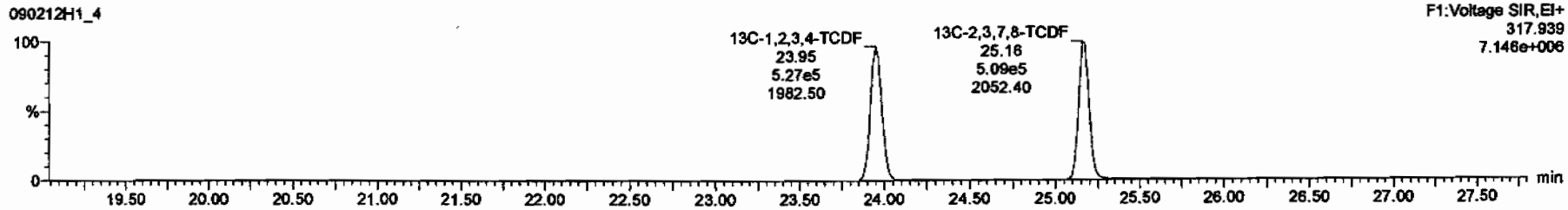

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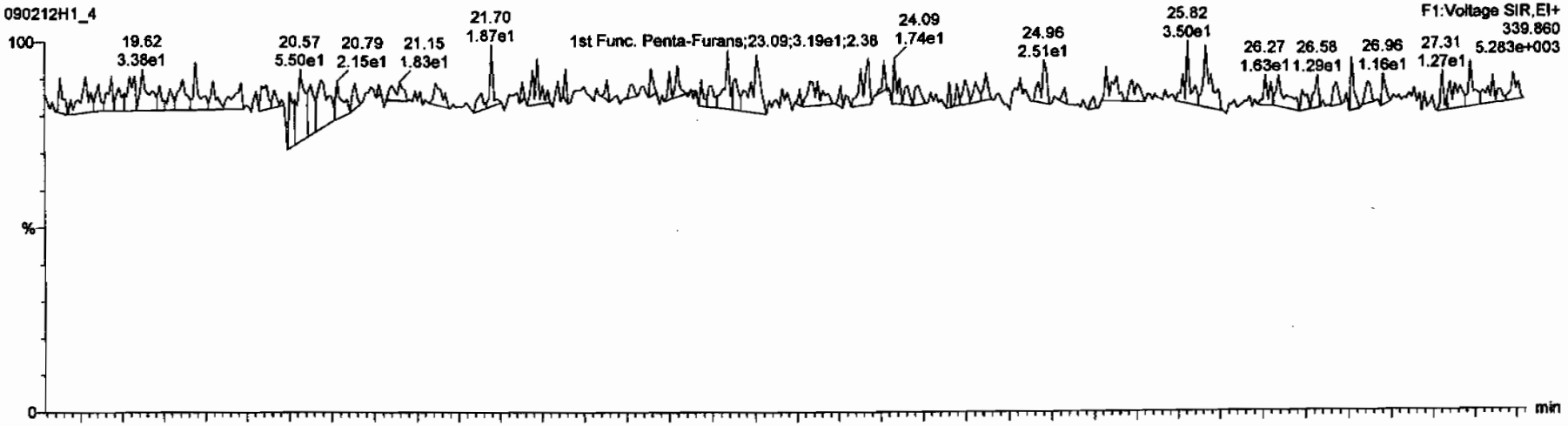

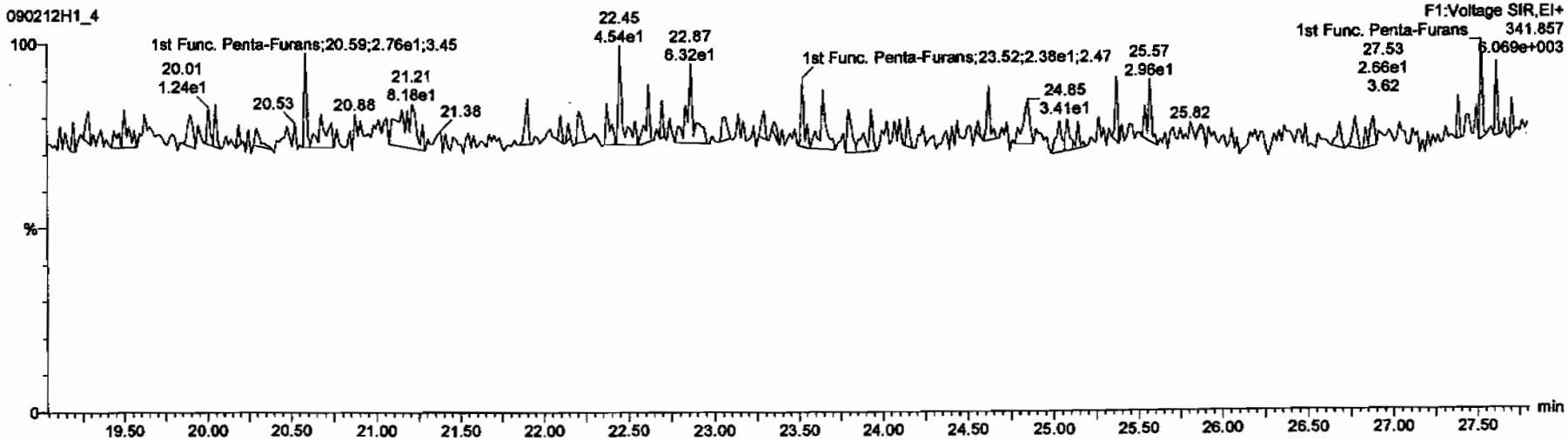

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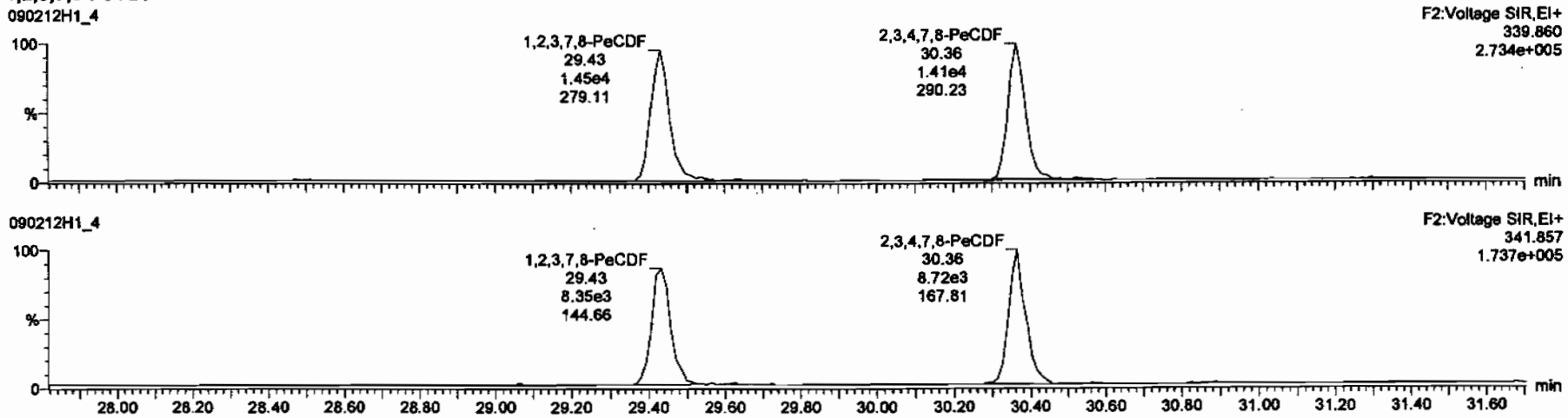

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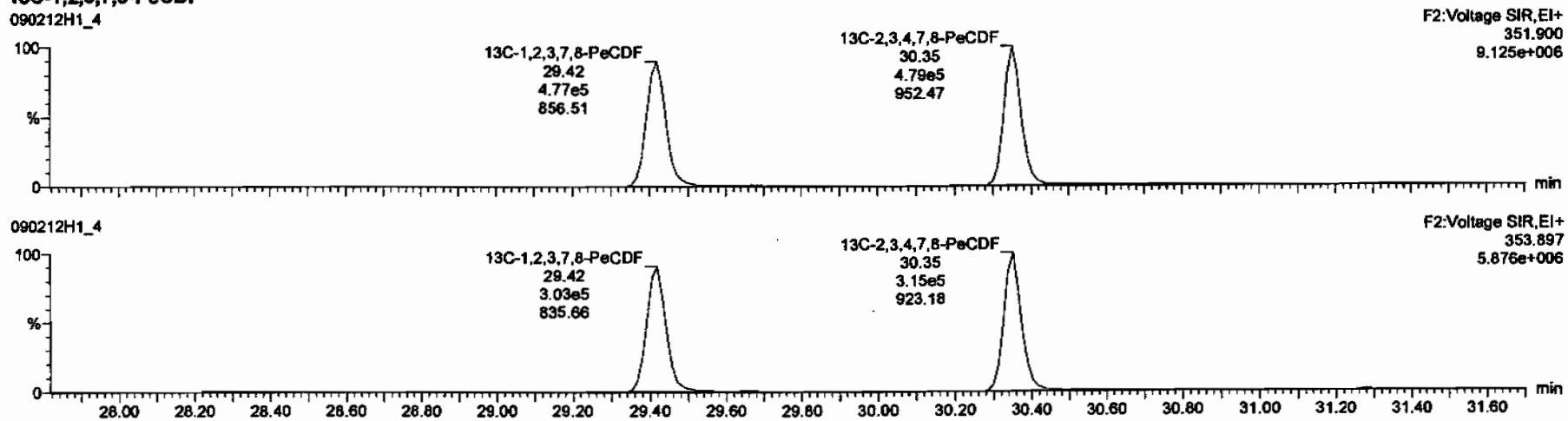

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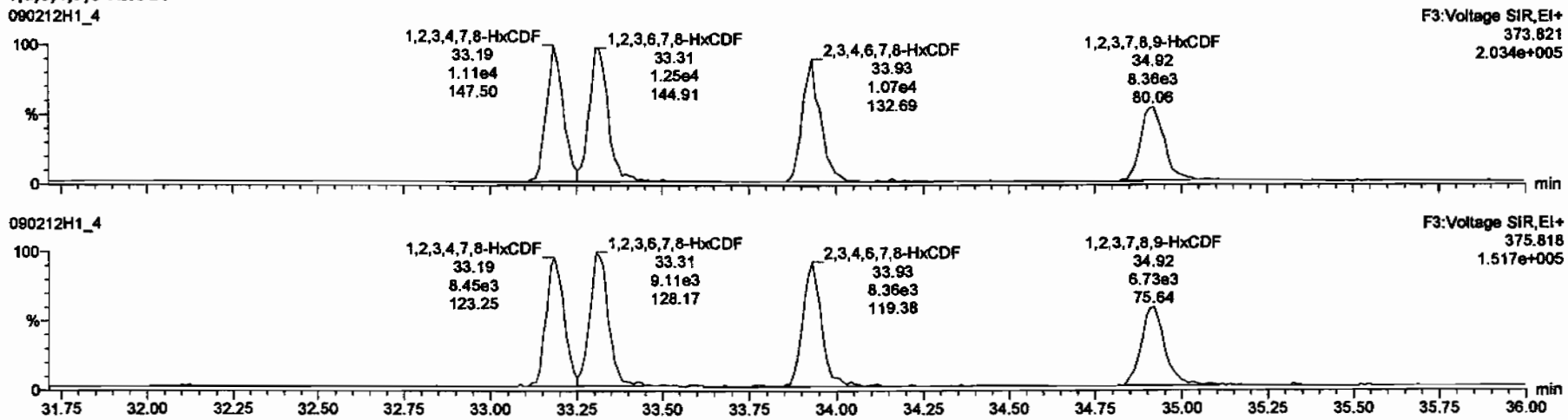

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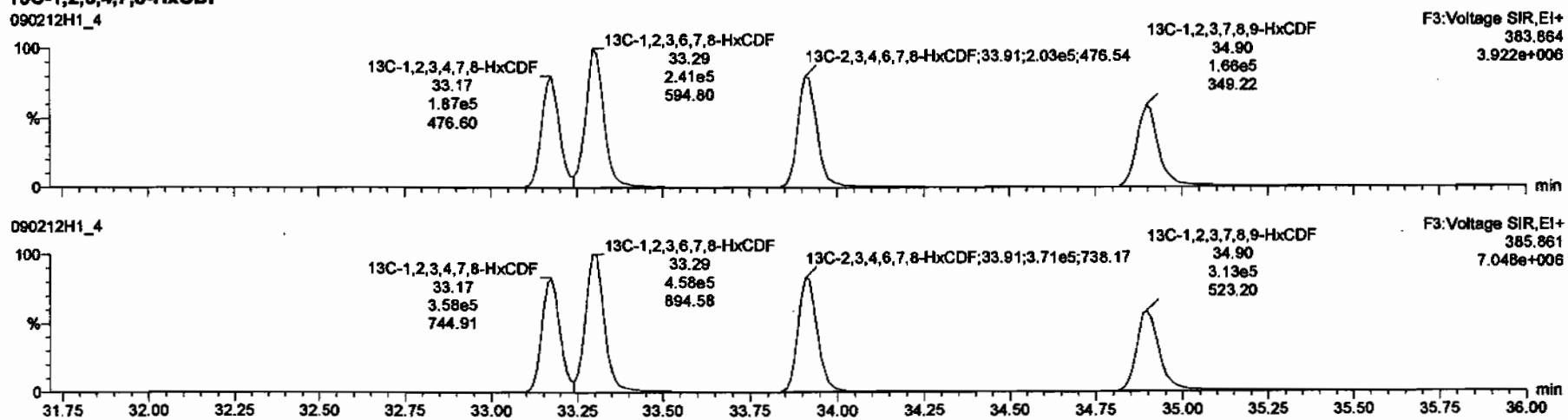

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1,2,3,4,6,7,8-HpCDF

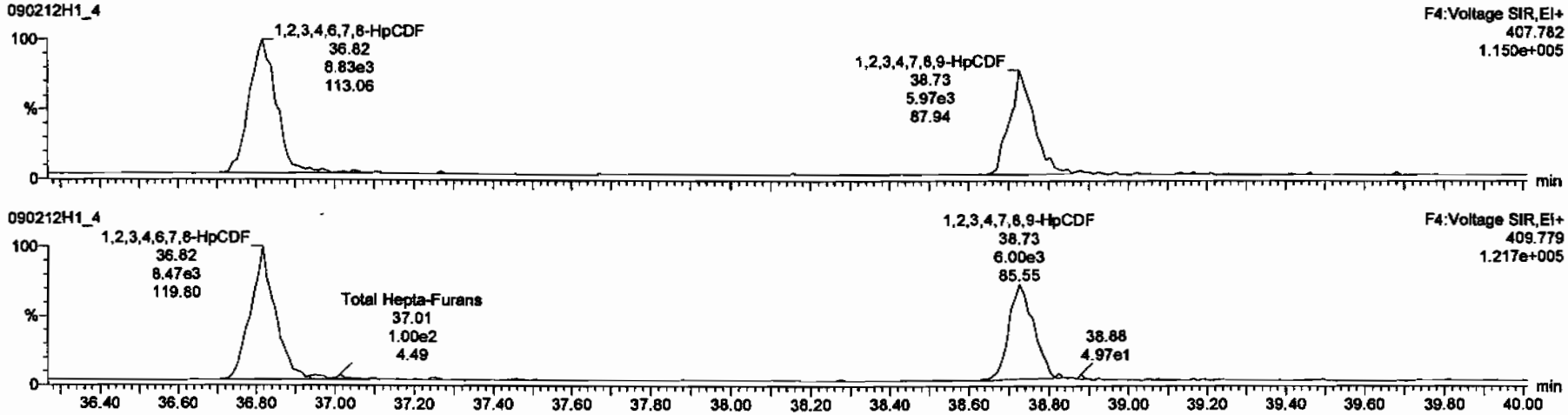

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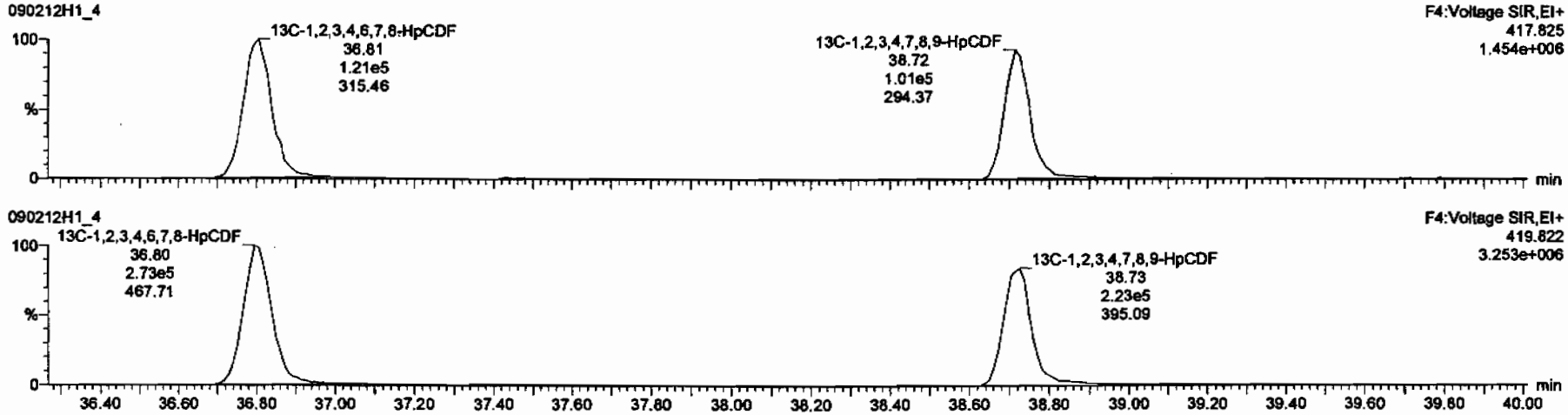

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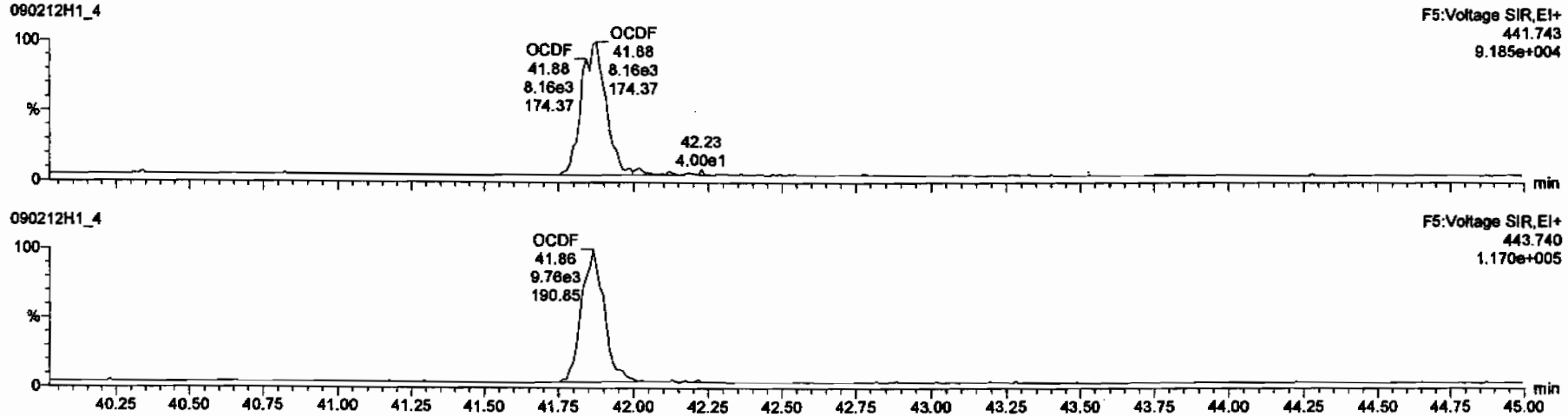

13C-OCDF

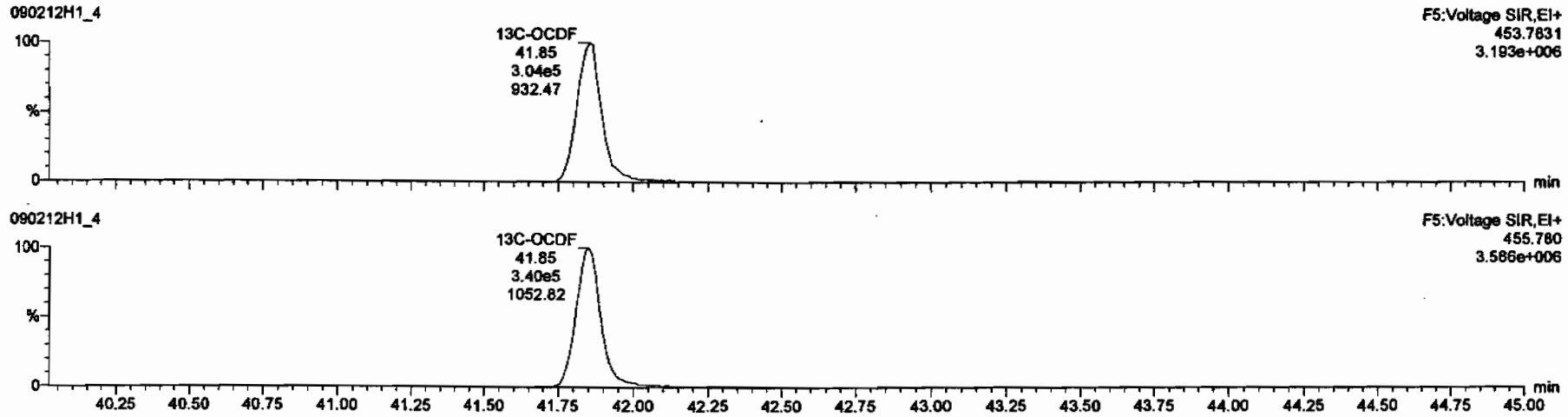

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PFK1

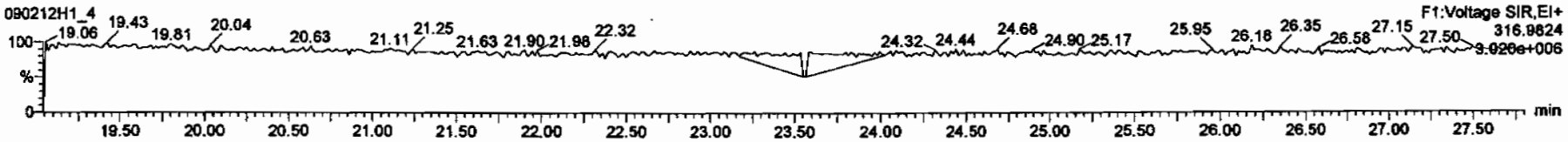

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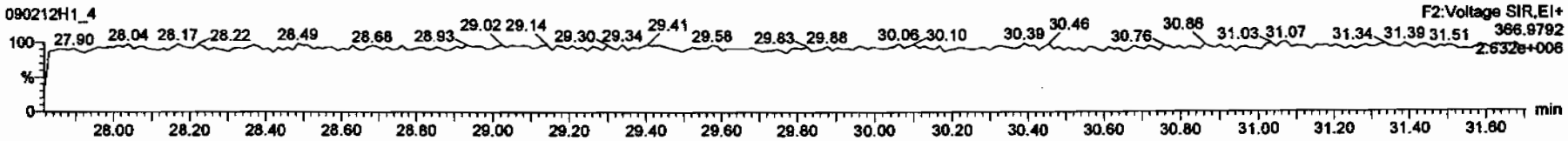

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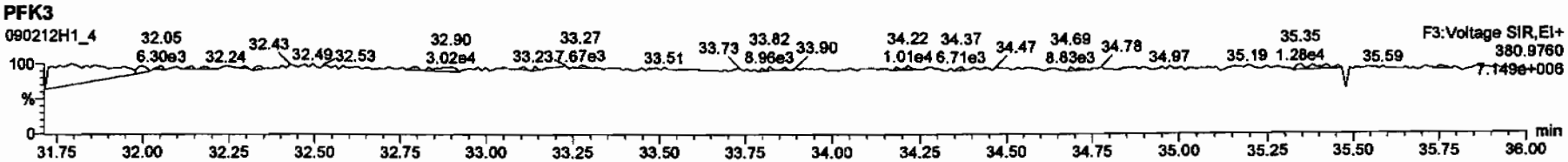

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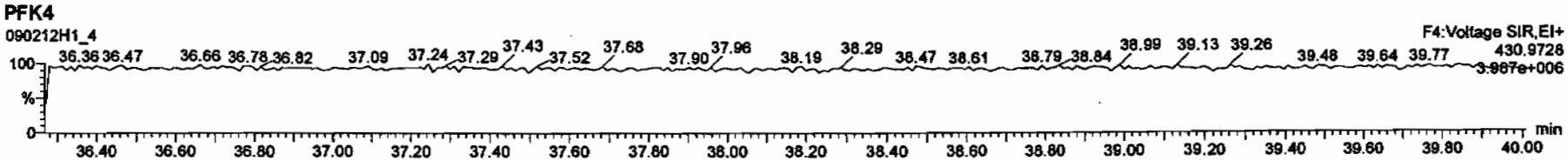

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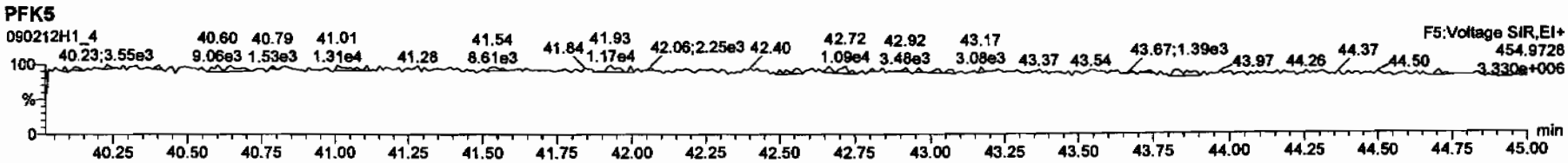

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DPE1

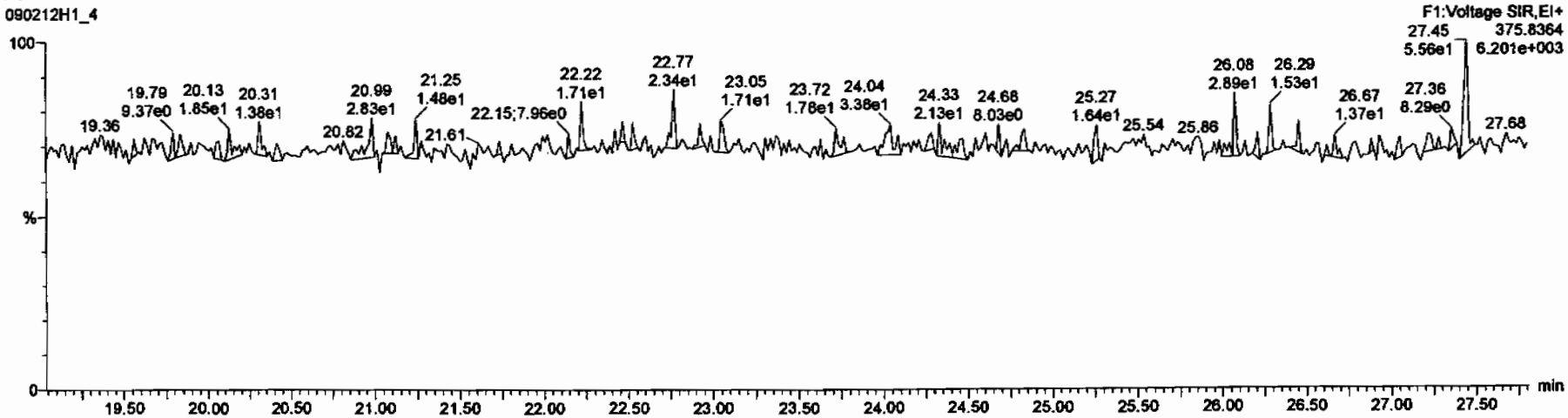

DPE6

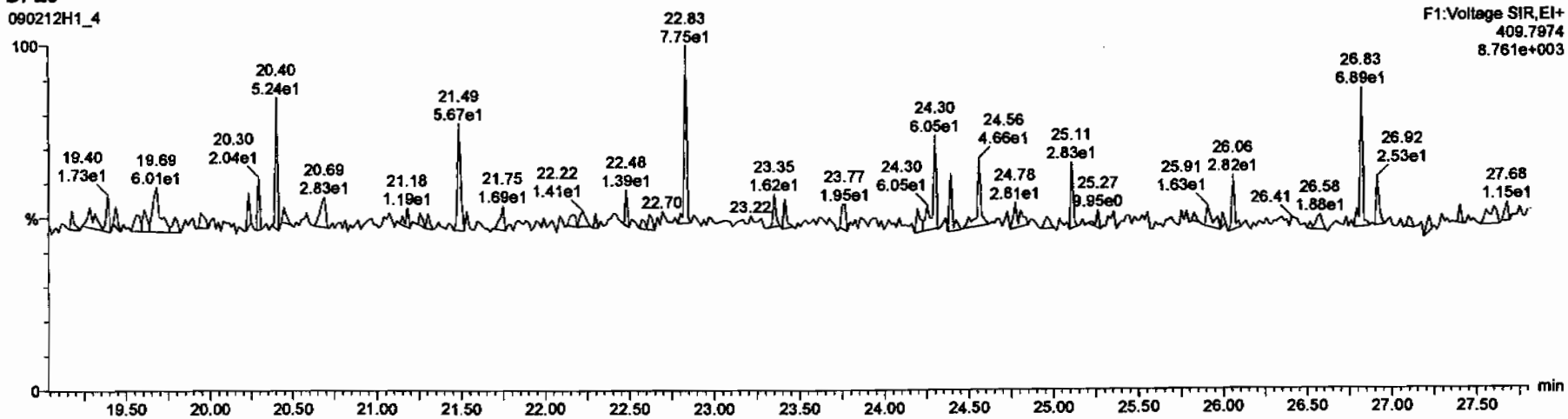

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Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

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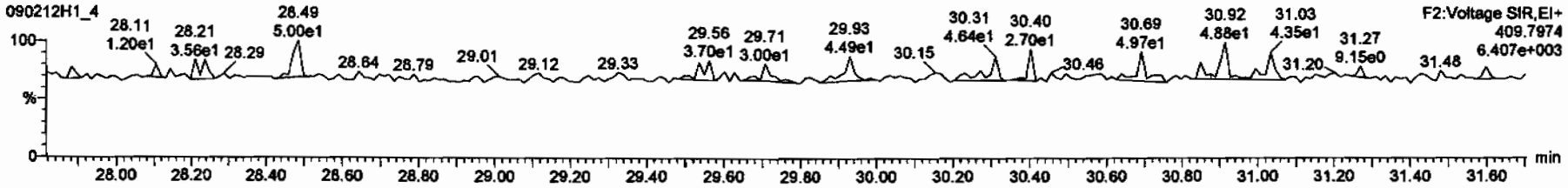

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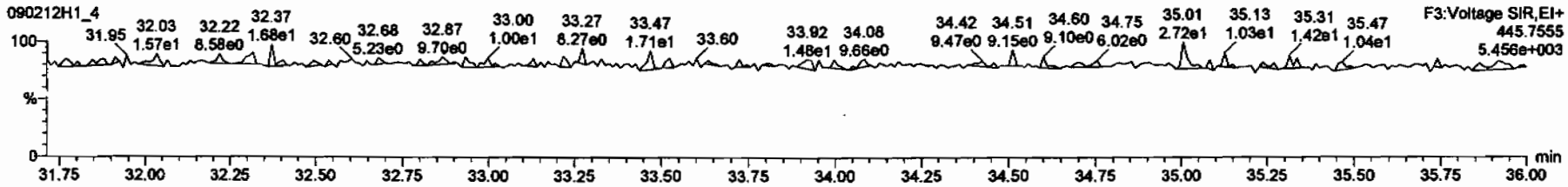

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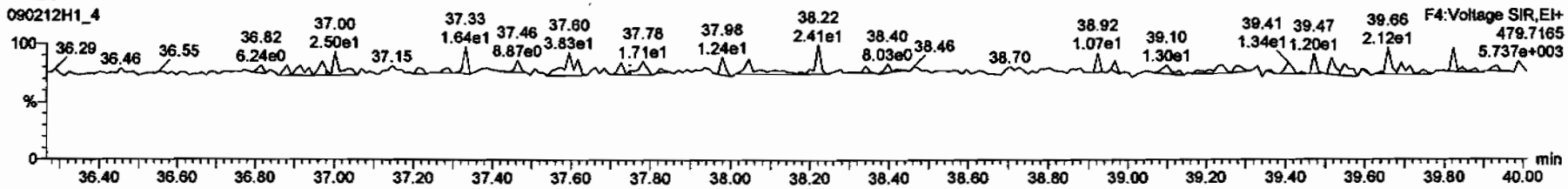

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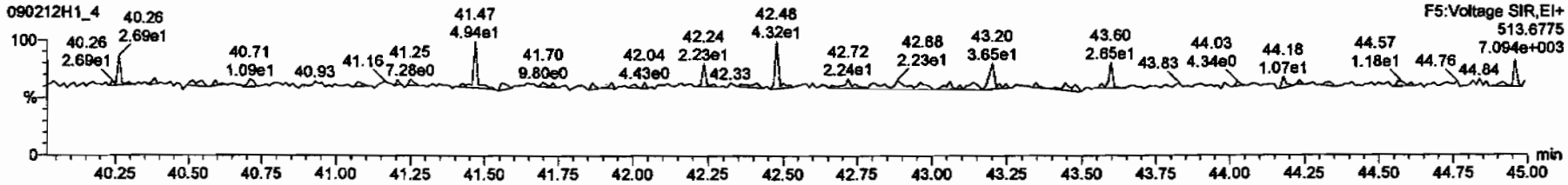

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2,3,7,8-TCDD

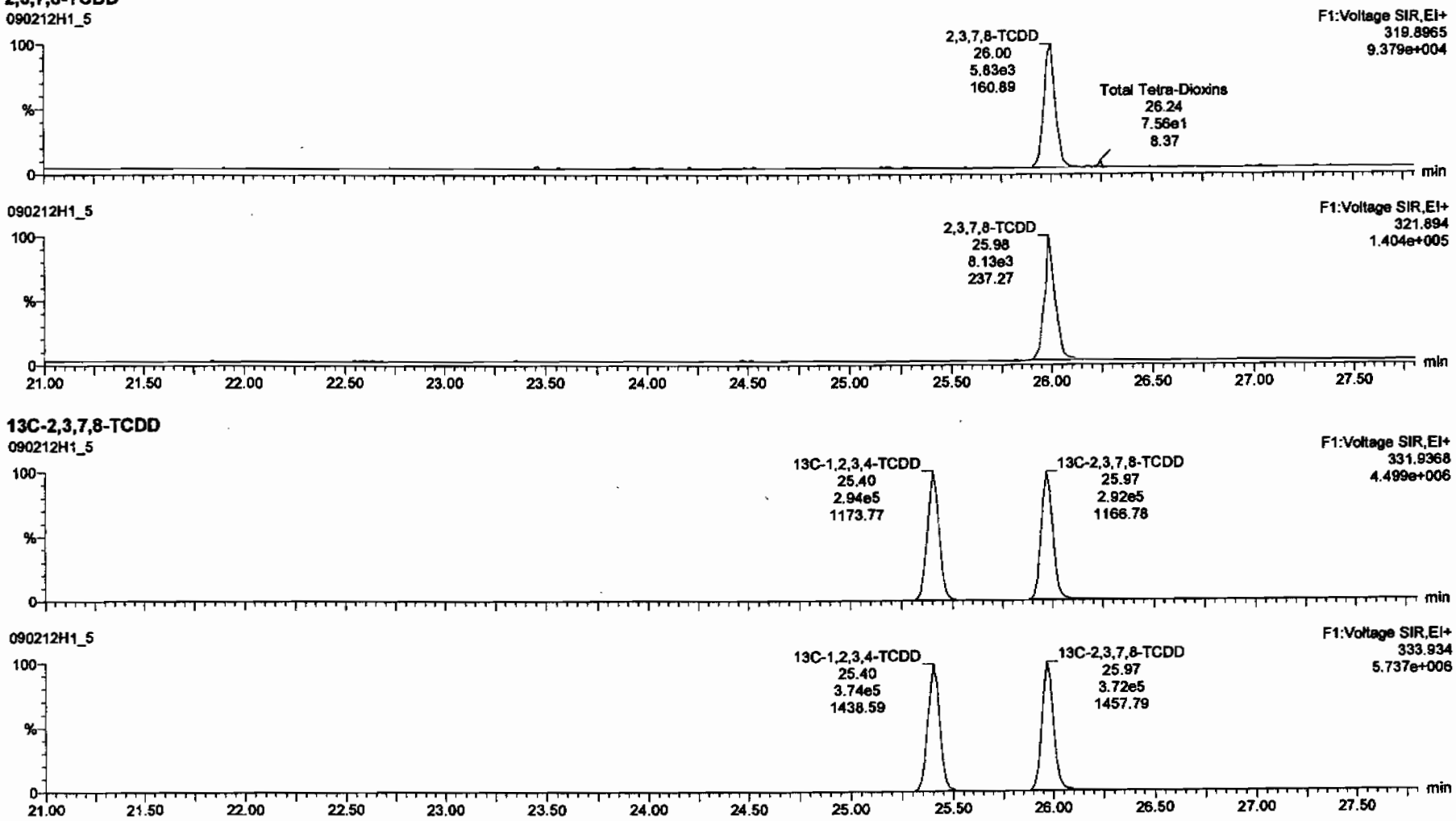

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37Cl-2,3,7,8-TCDD

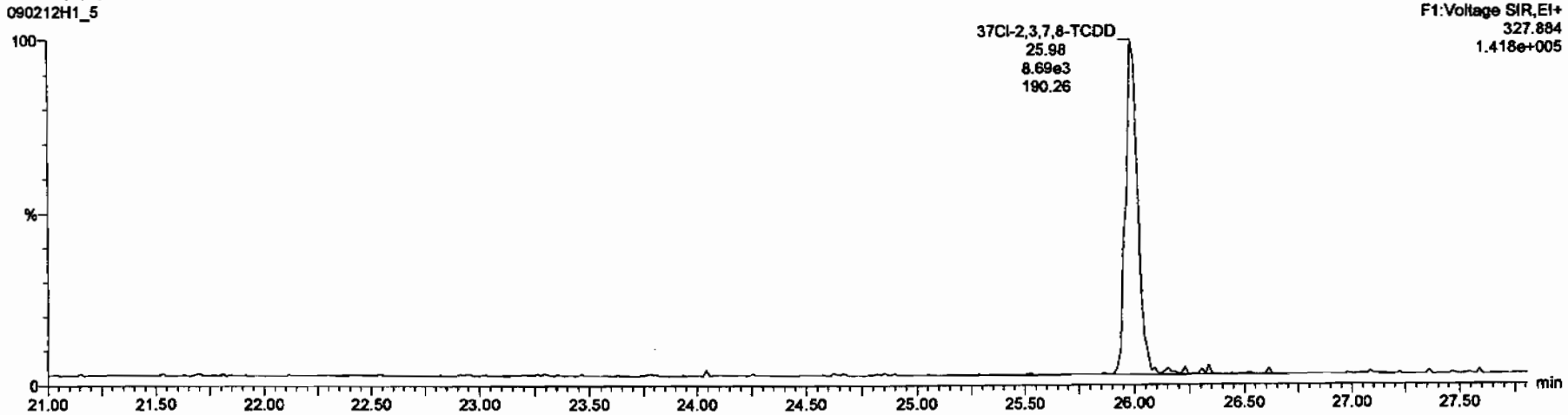

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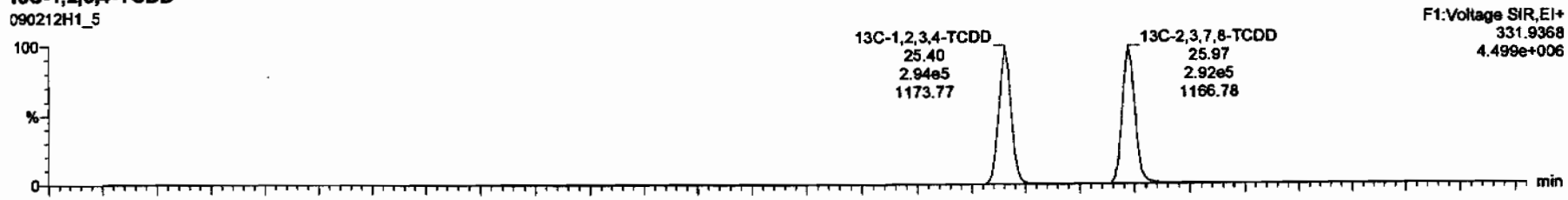

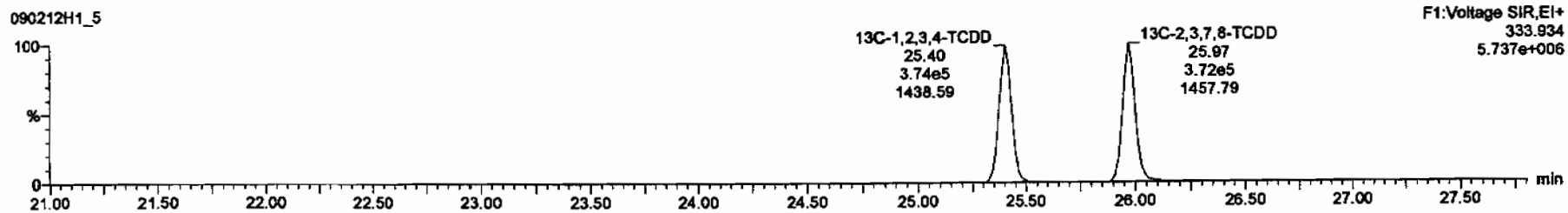

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1,2,3,7,8-PeCDD

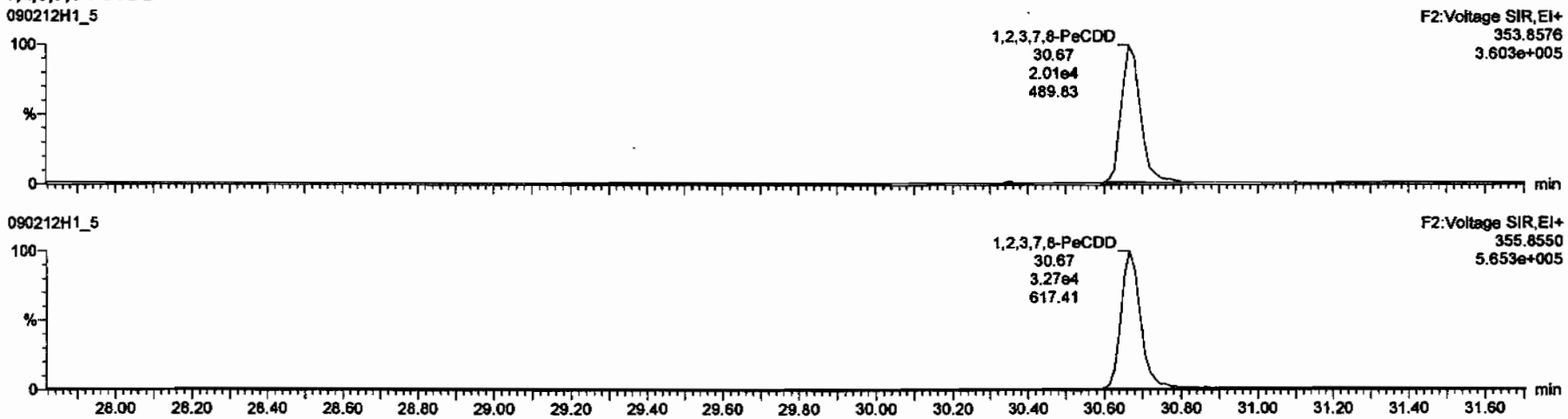

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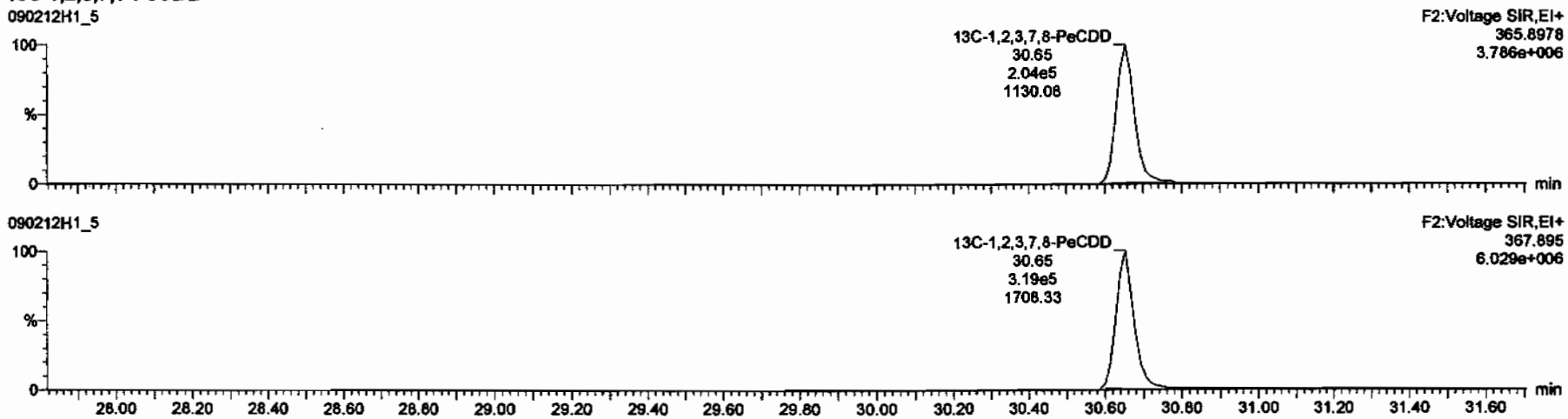

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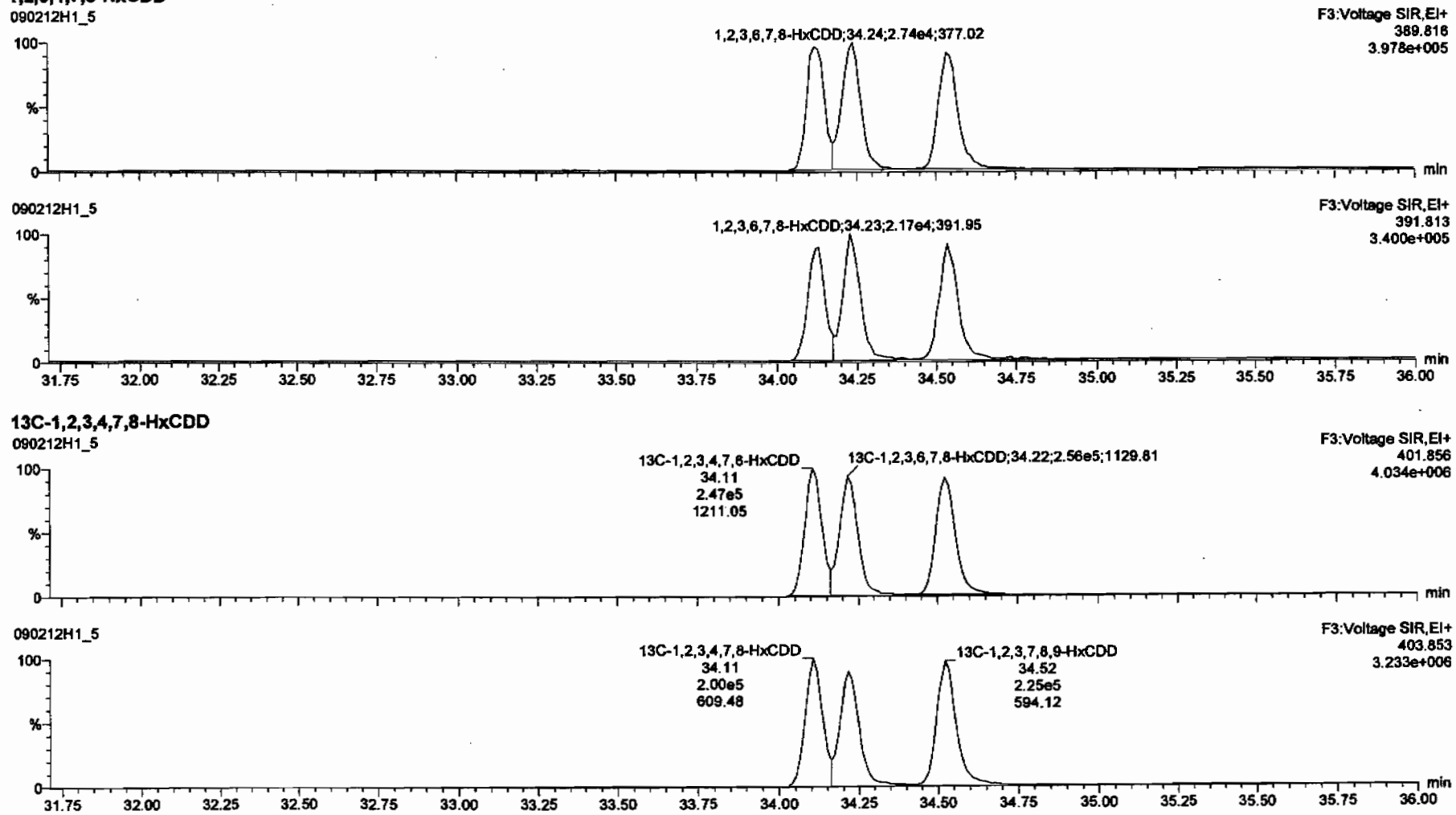

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1,2,3,4,6,7,8-HpCDD

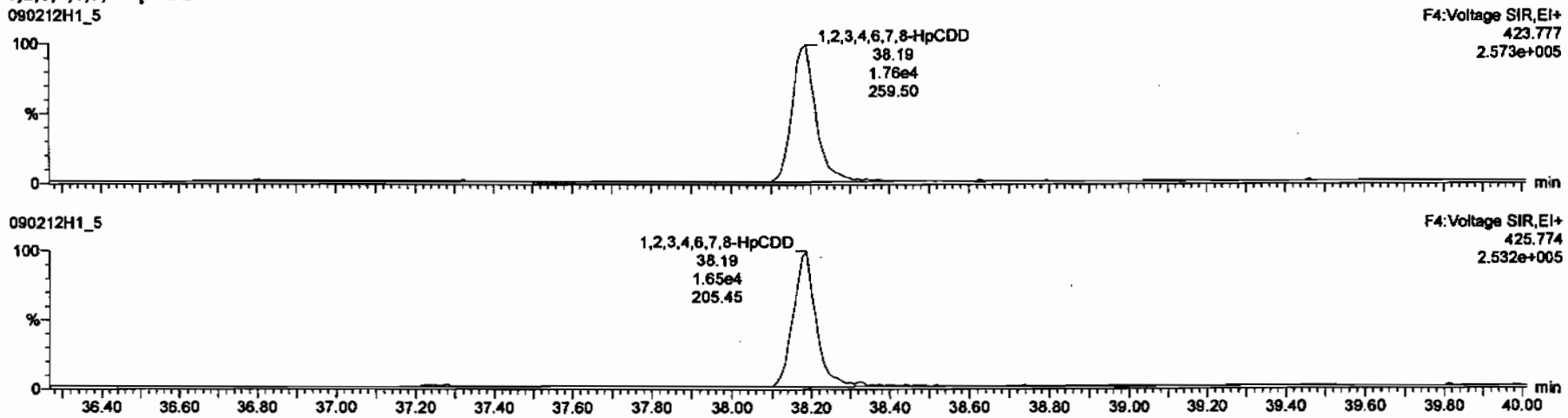

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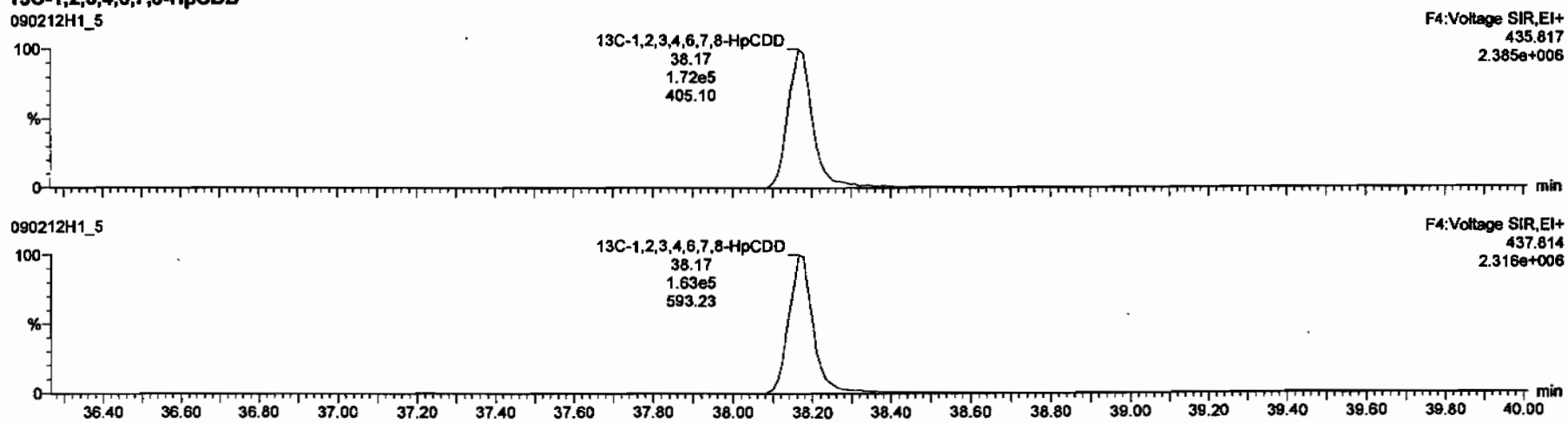

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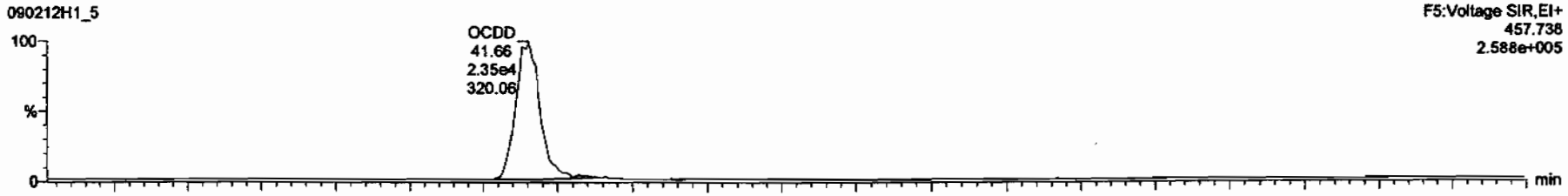

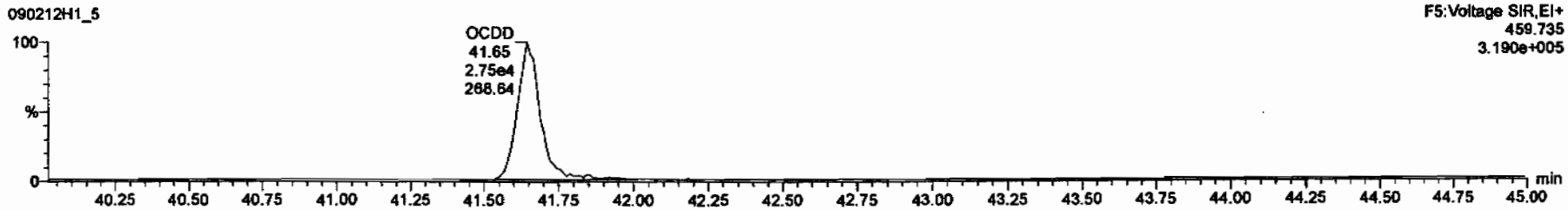

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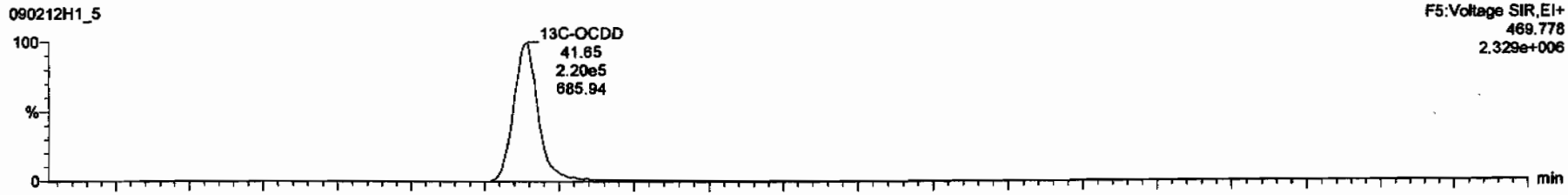

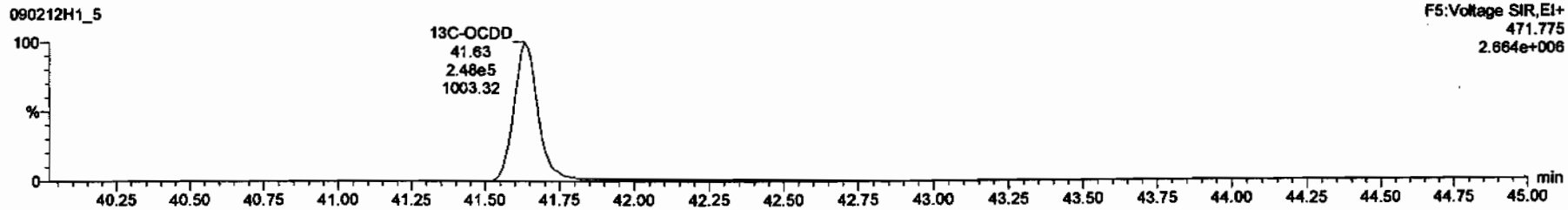

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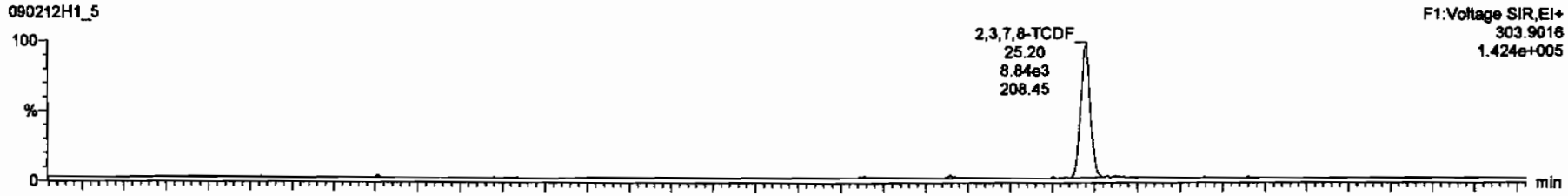

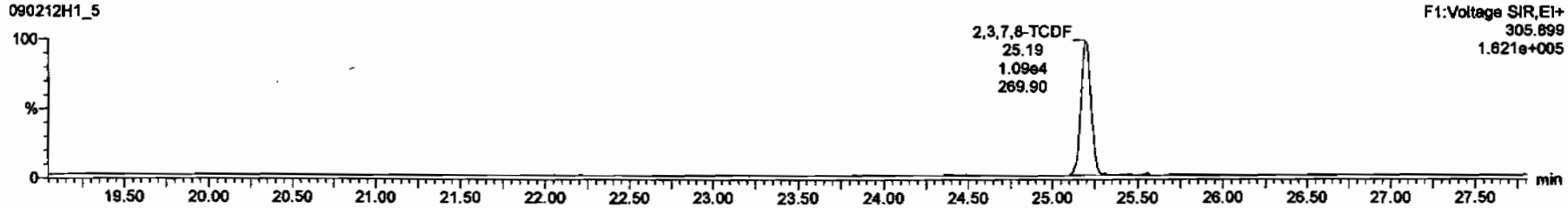

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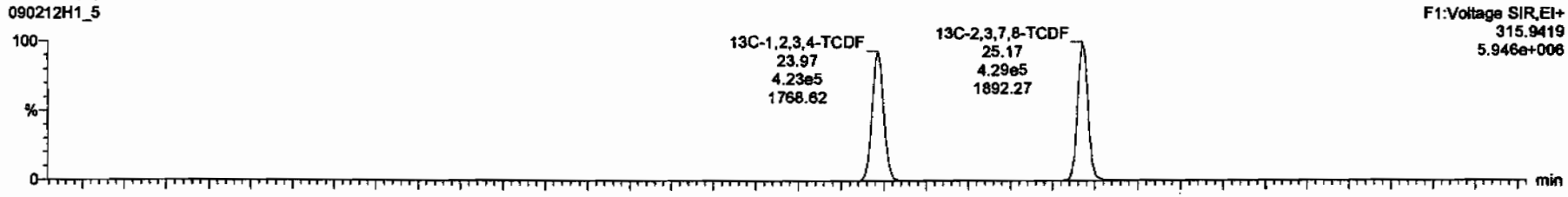

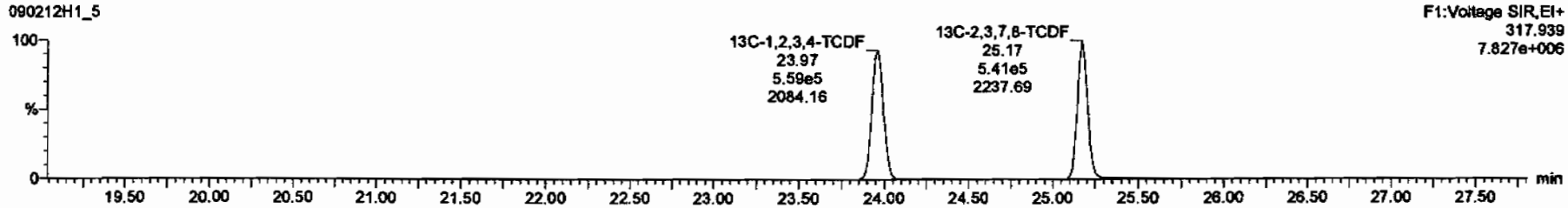

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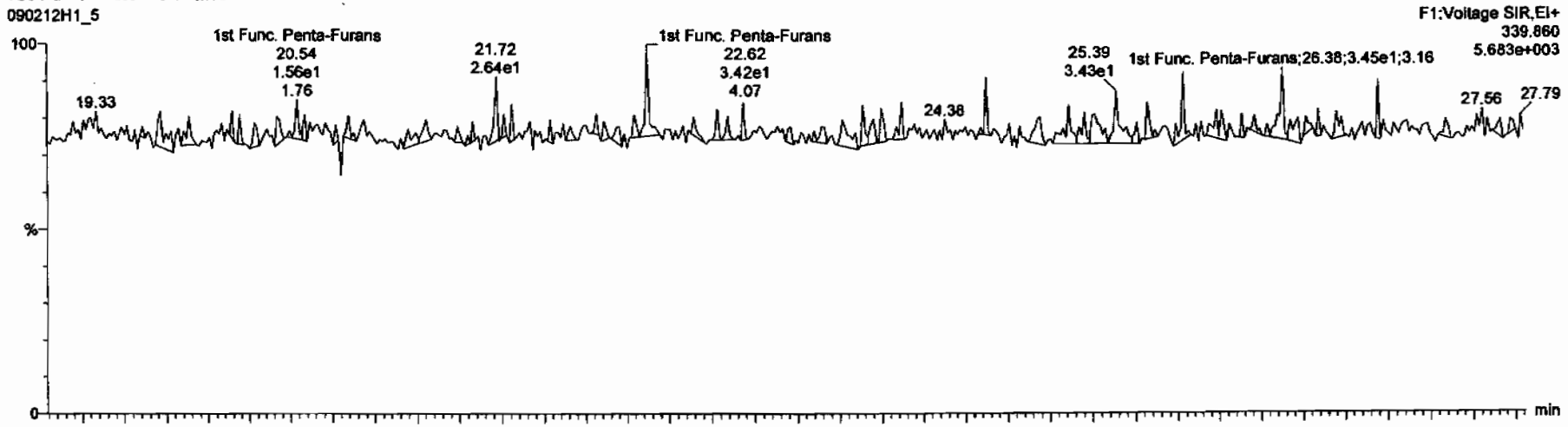

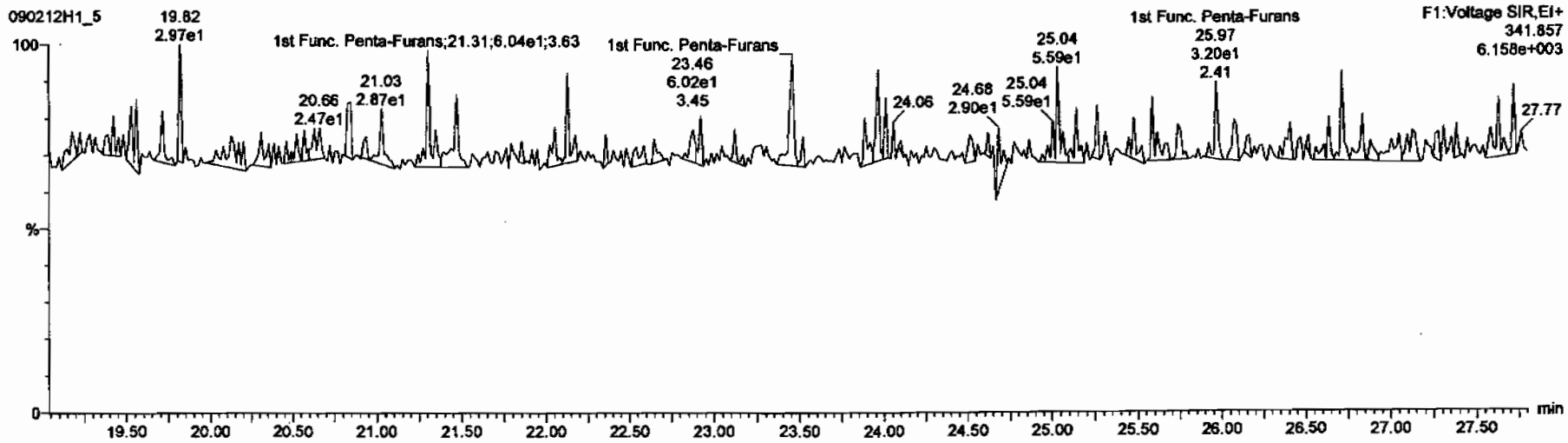

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1,2,3,7,8-PeCDF

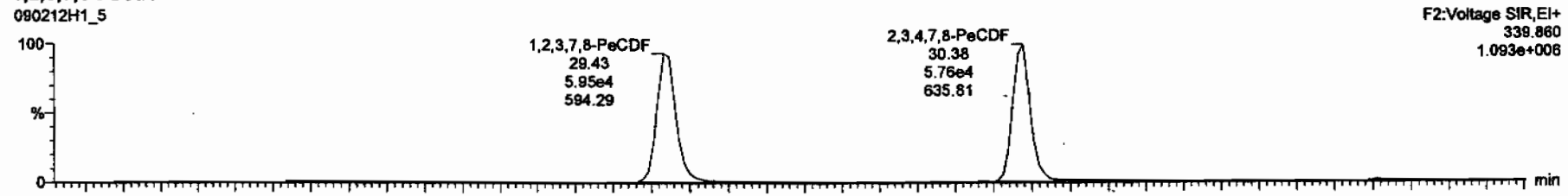

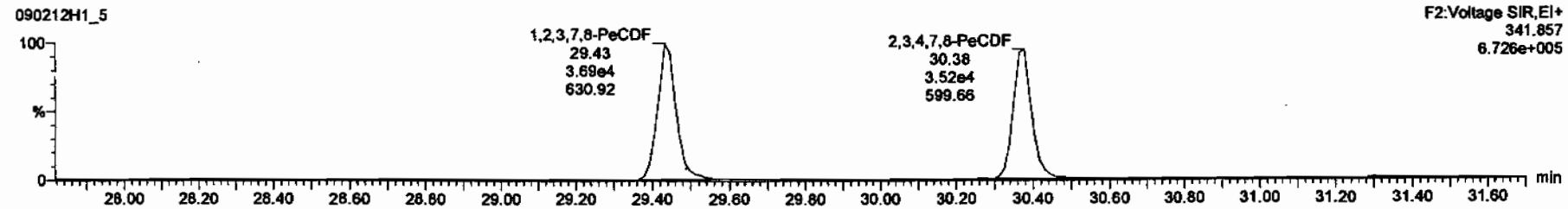

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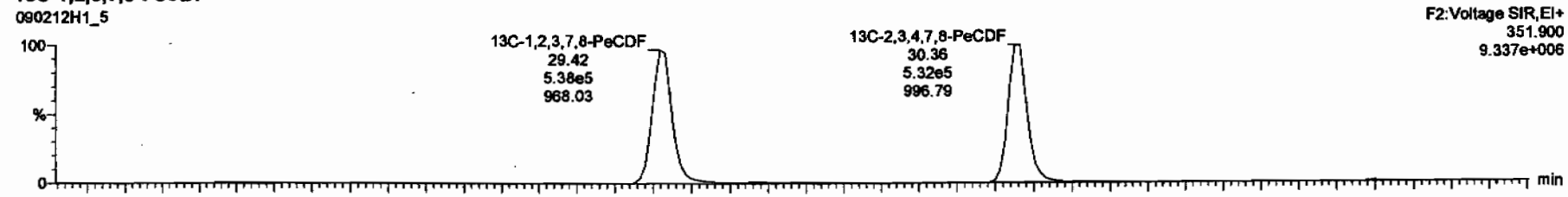

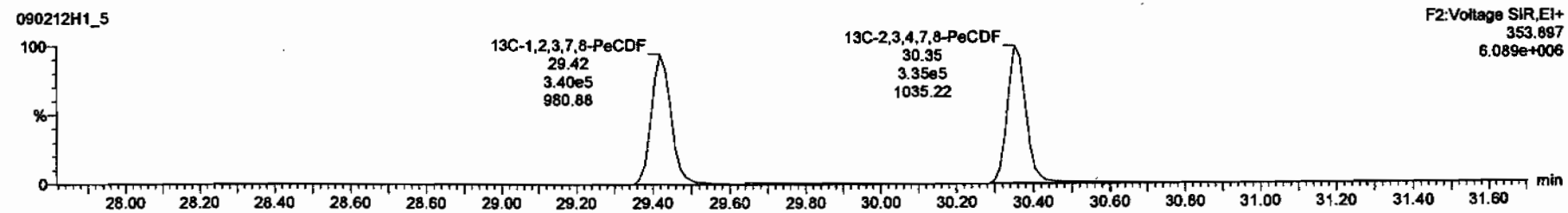

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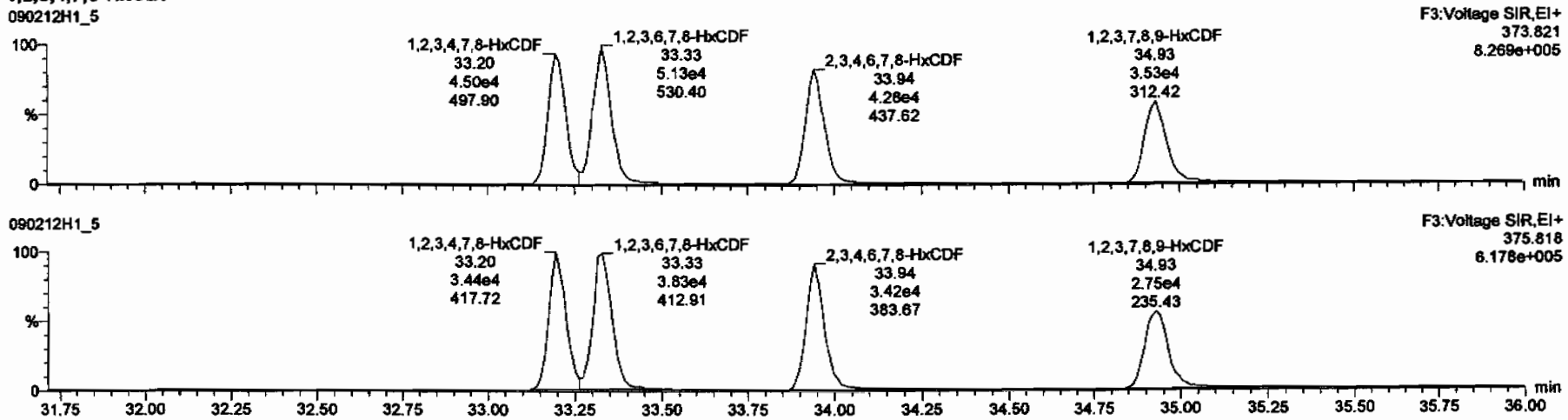

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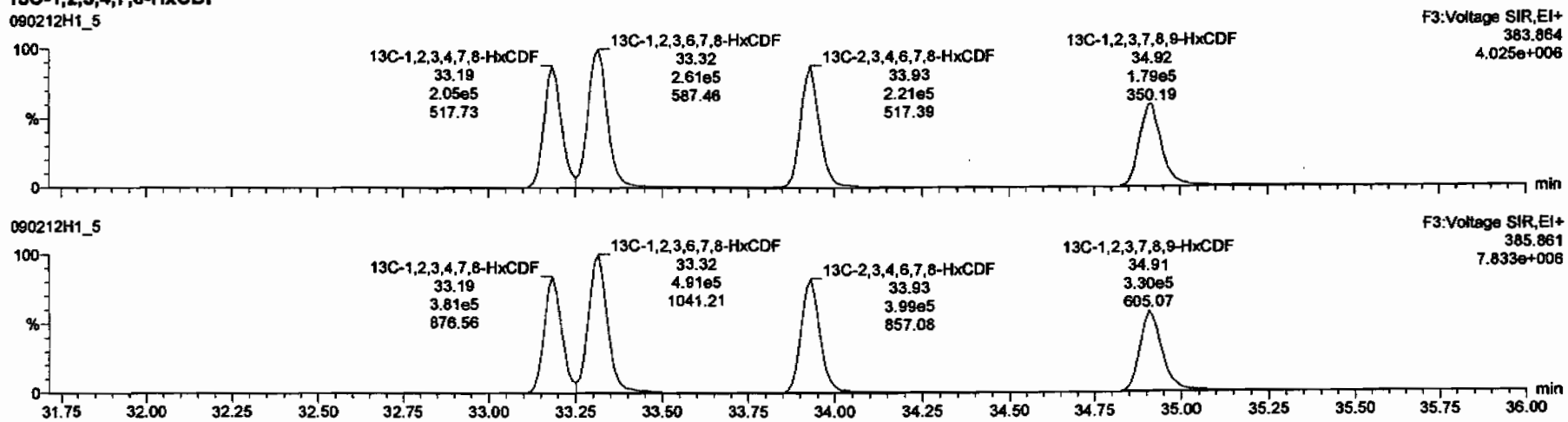

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1,2,3,4,6,7,8-HpCDF

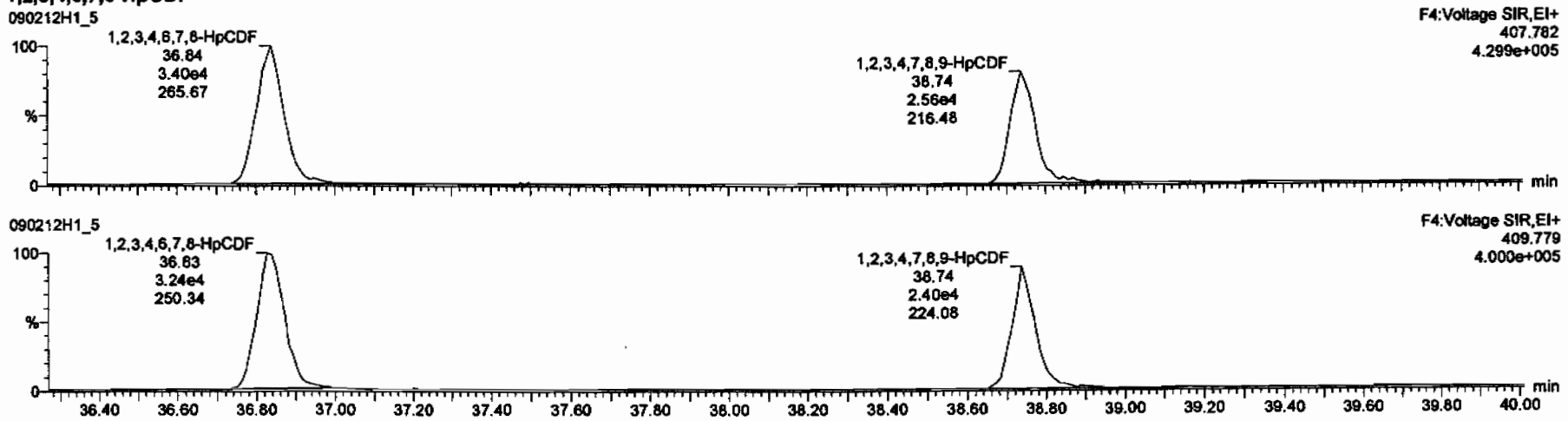

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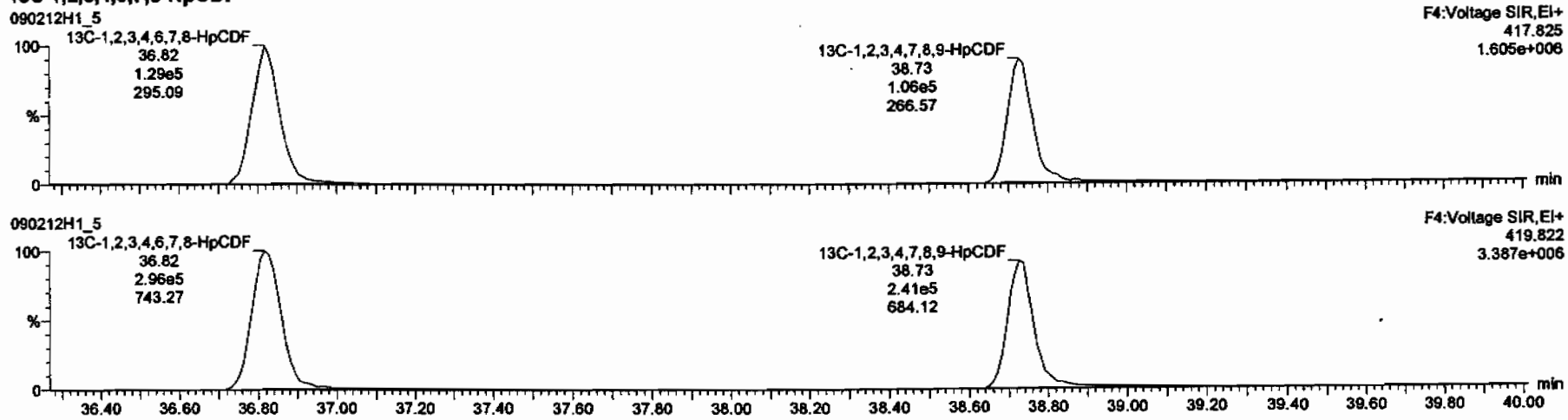

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OCDF

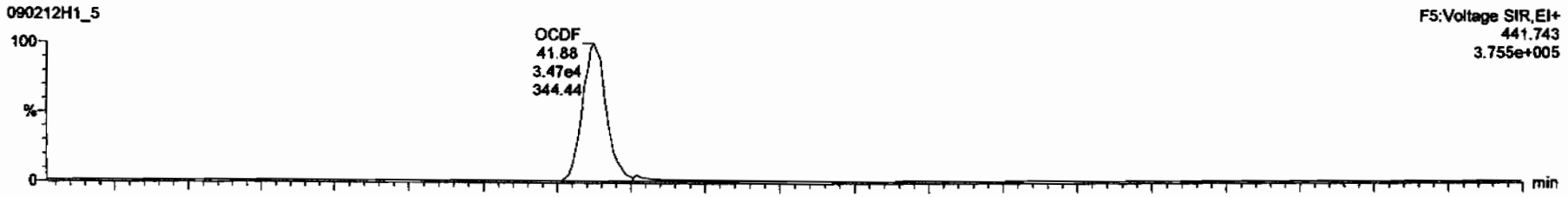

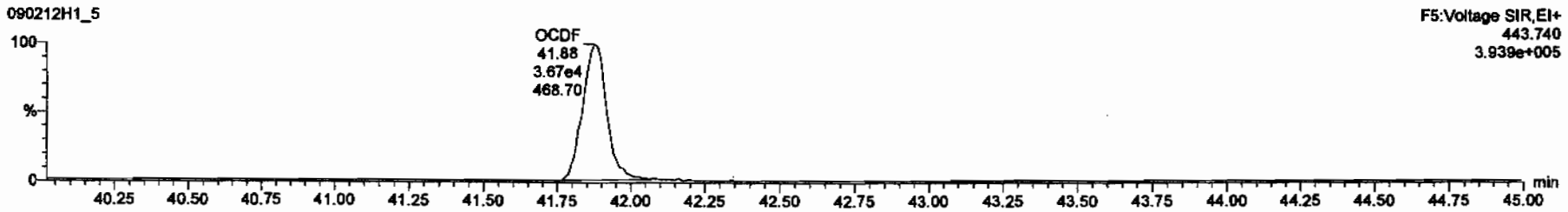

13C-OCDF

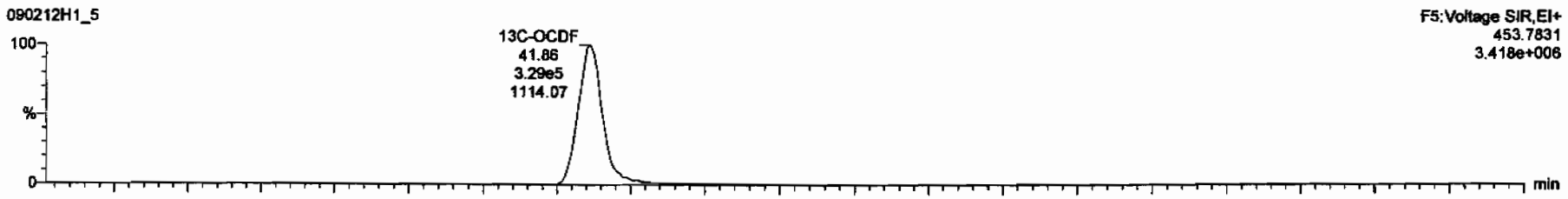

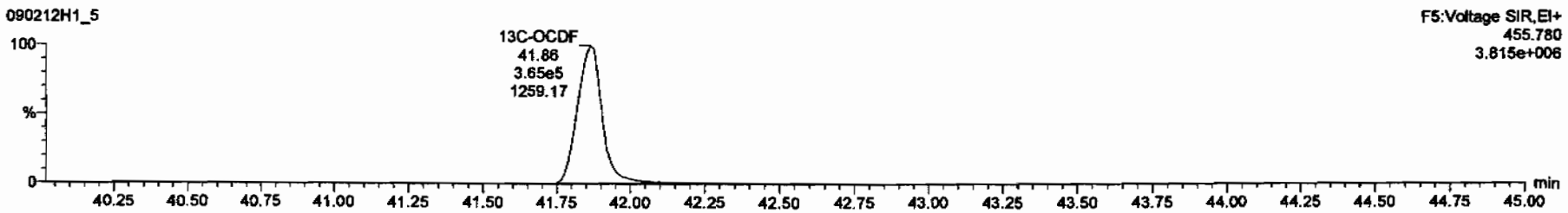

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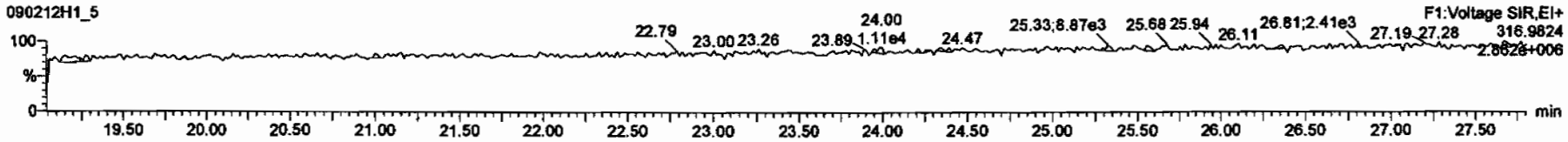

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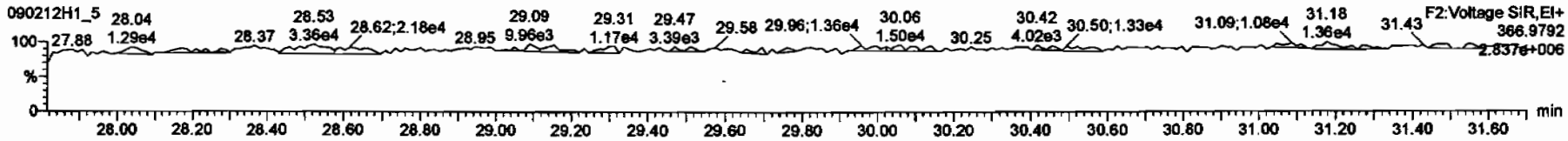

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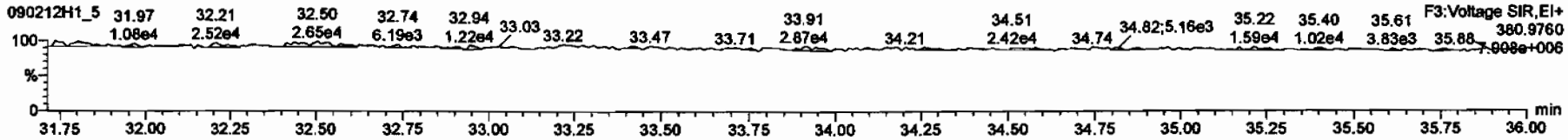

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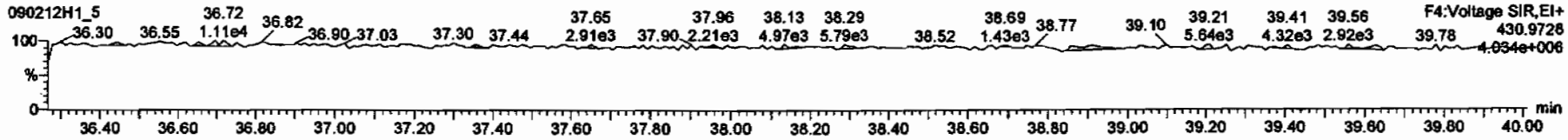

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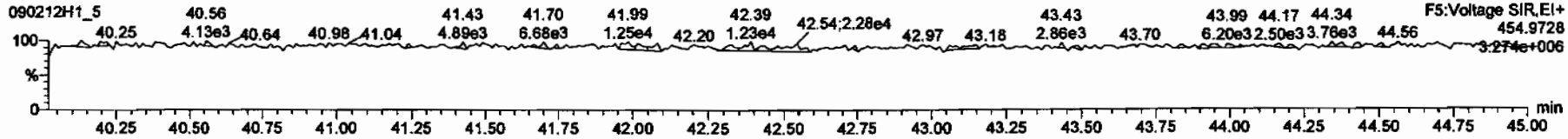

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Last Altered: Friday, February 13, 2009 7:27:01 AM Pacific Standard Time
Printed: Friday, February 13, 2009 7:33:23 AM Pacific Standard Time

Name: 090212H1_5, Date: 12-Feb-2009, Time: 14:28:11, ID: ST090212H1-4 1613 CS2 080917H, Description: 1613 CS2 080917H

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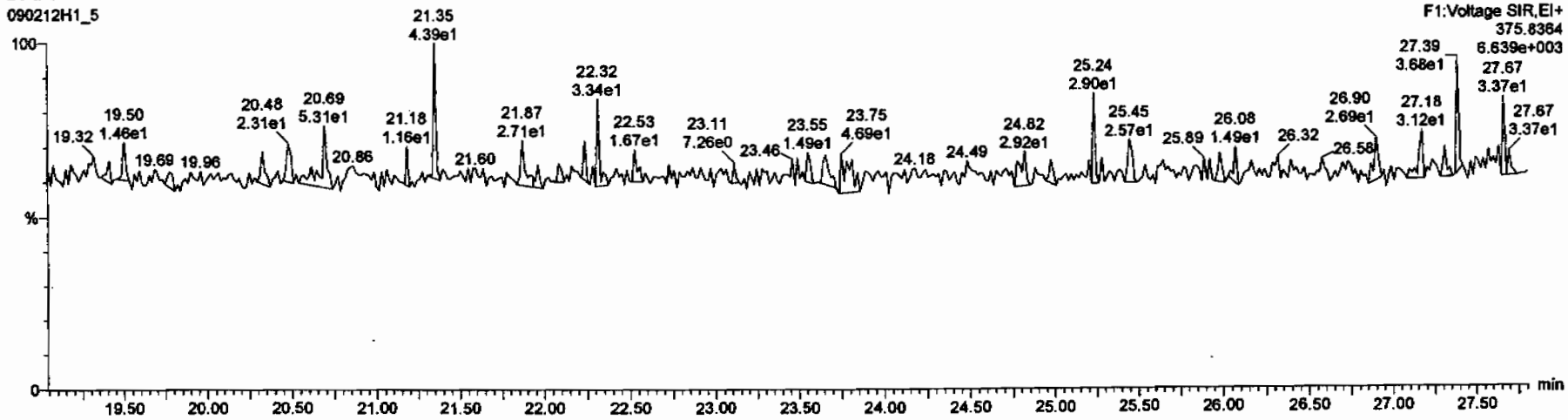

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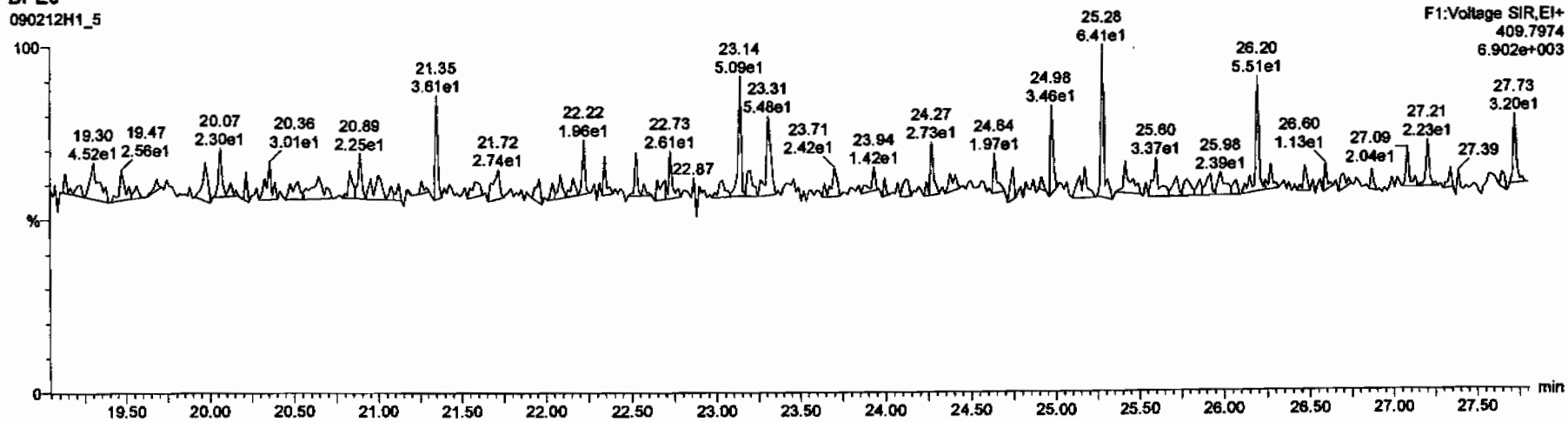

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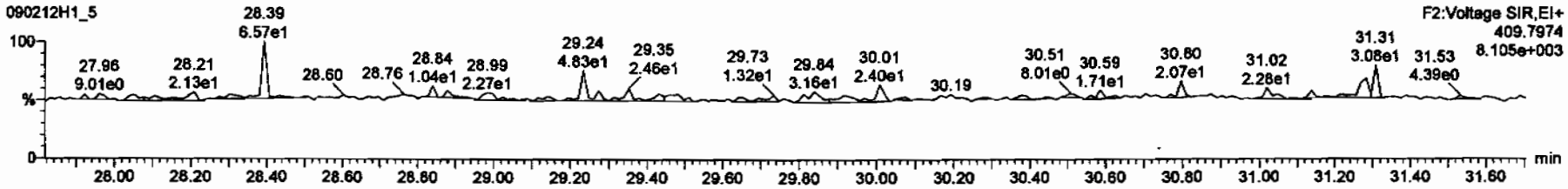

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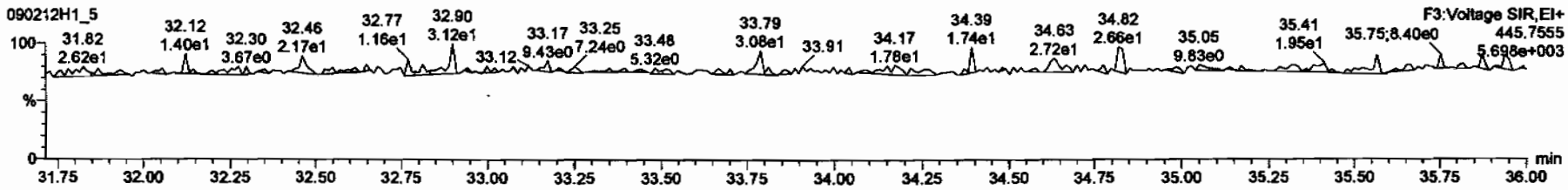

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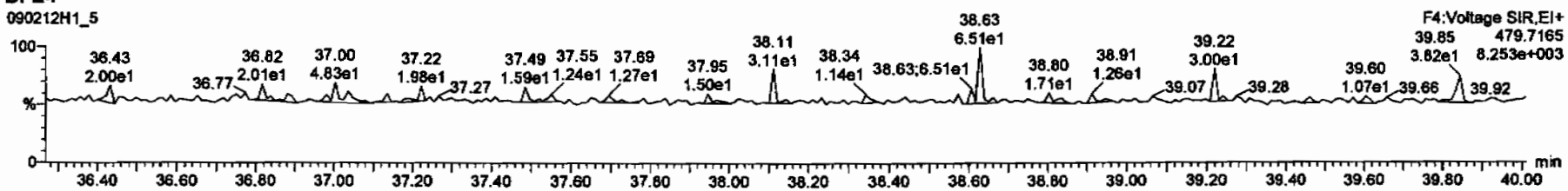

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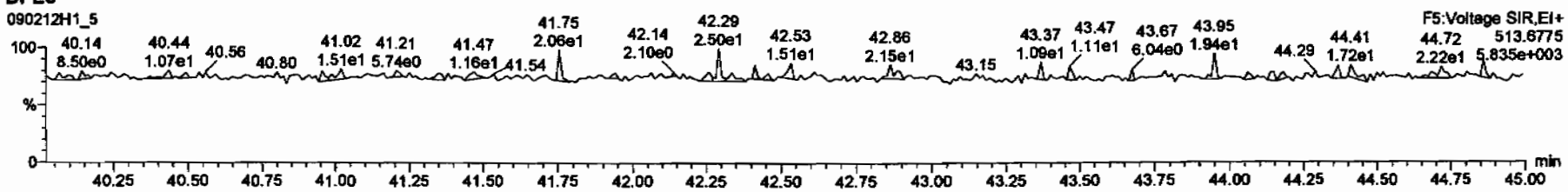

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2,3,7,8-TCDD

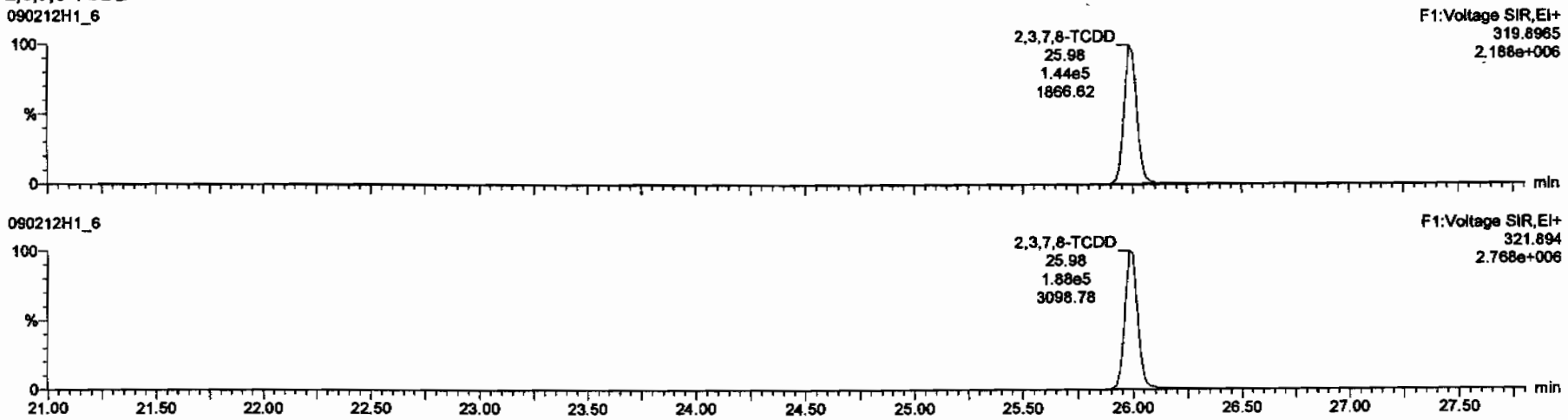

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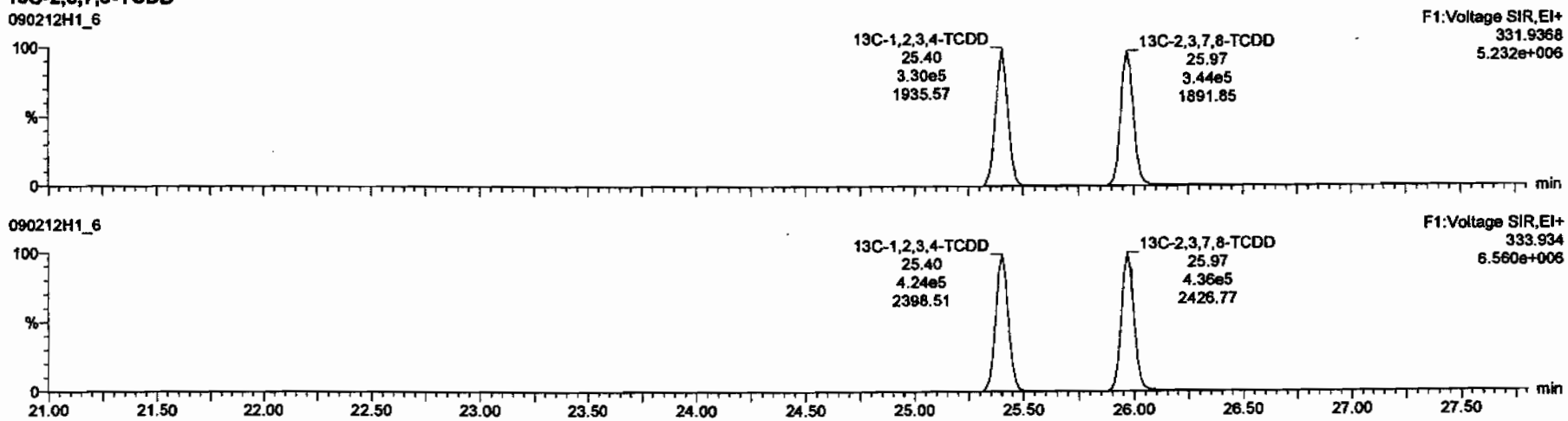

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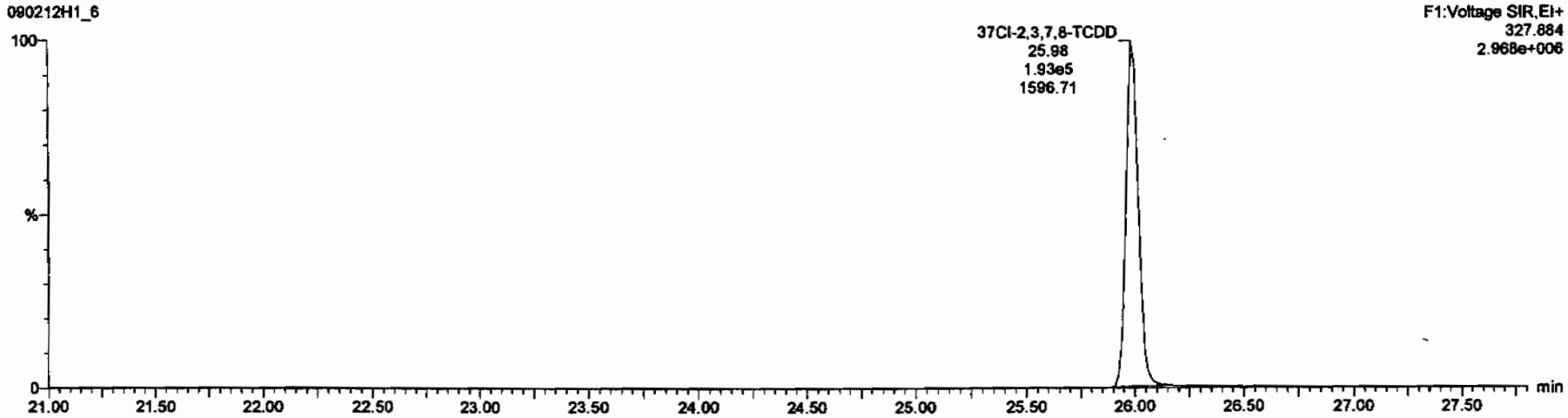

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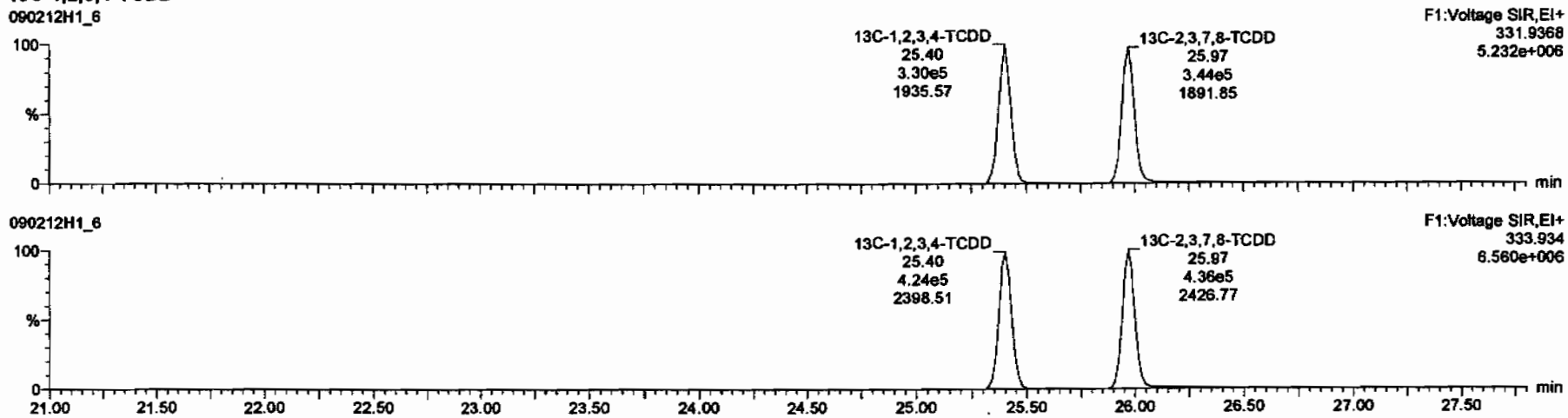

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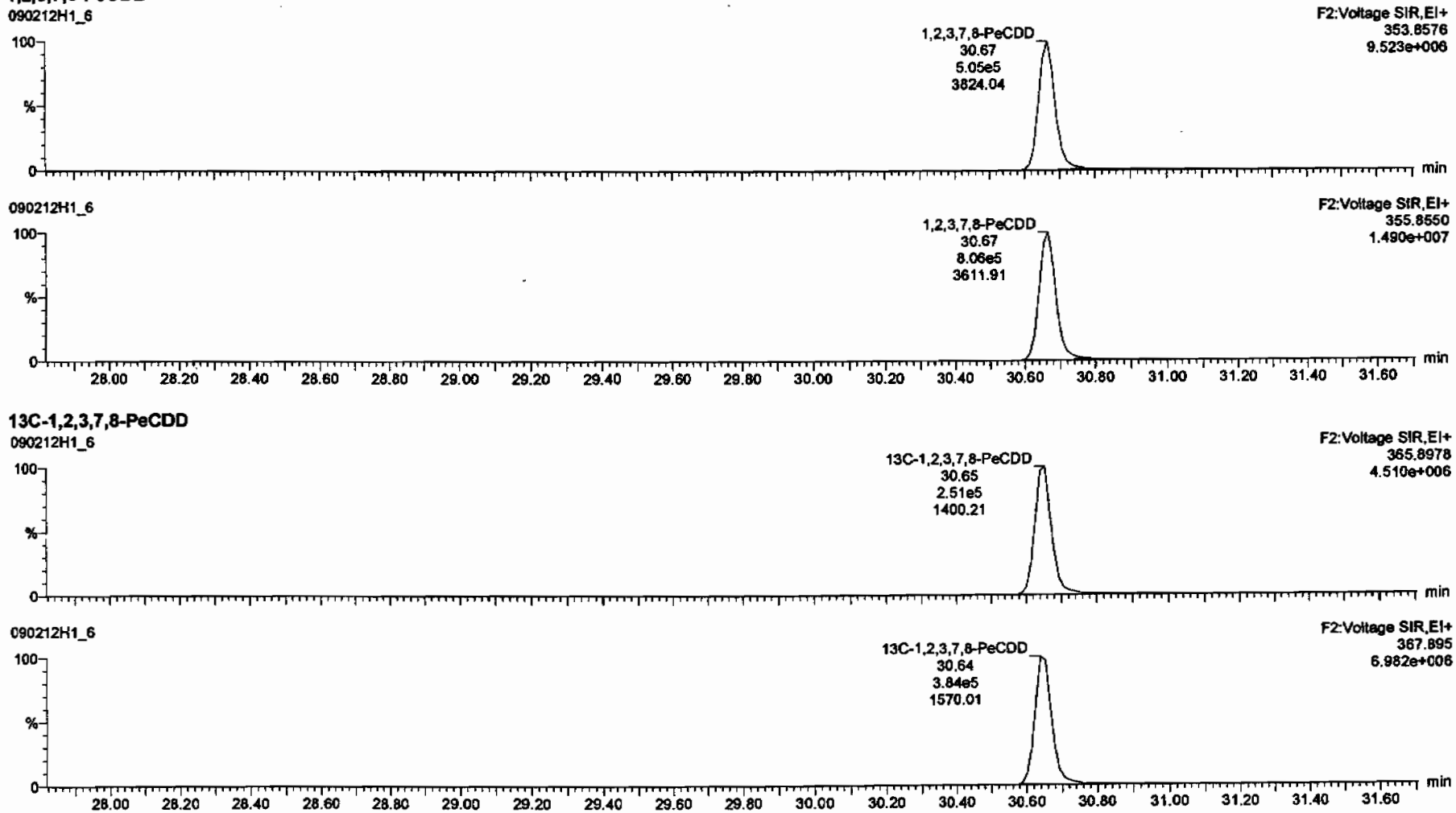

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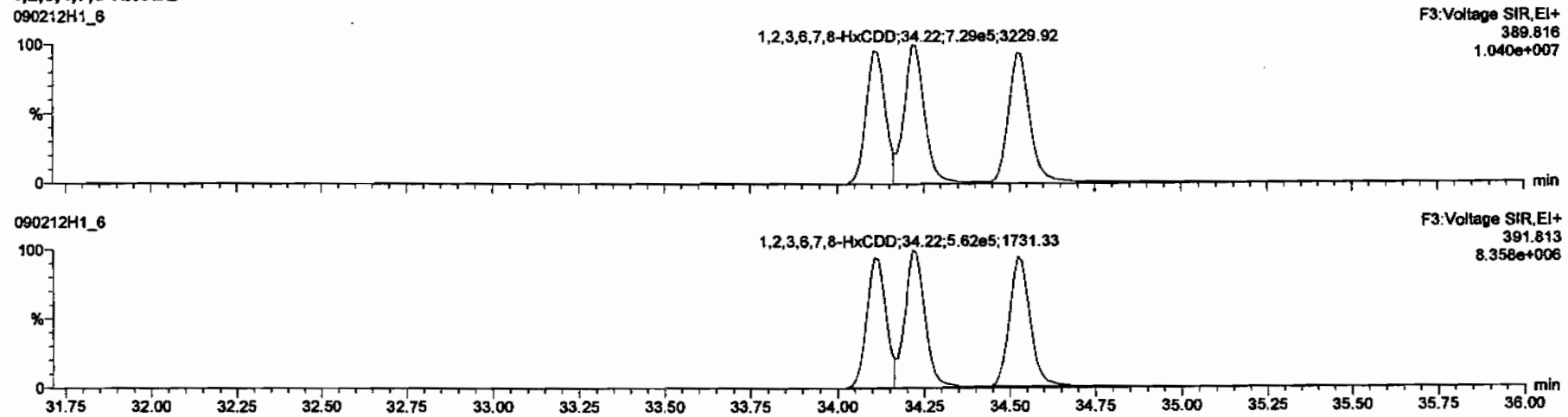

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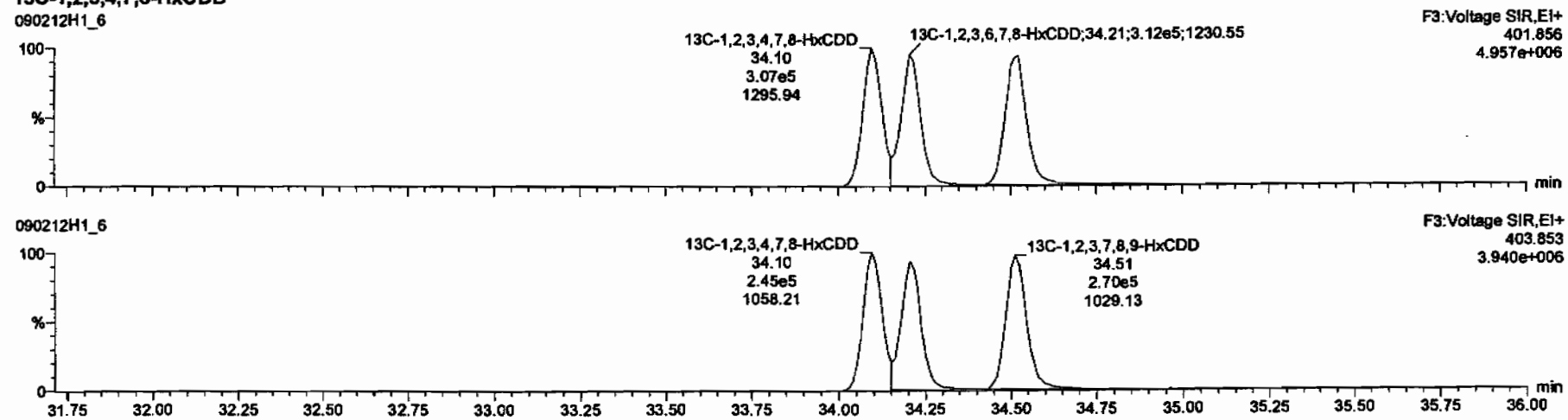

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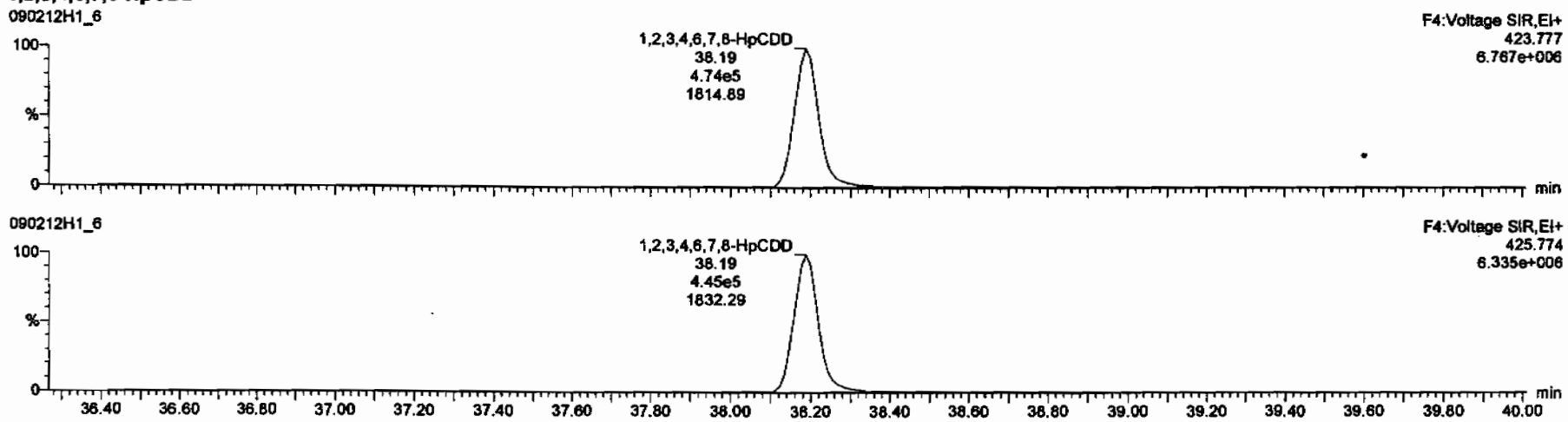

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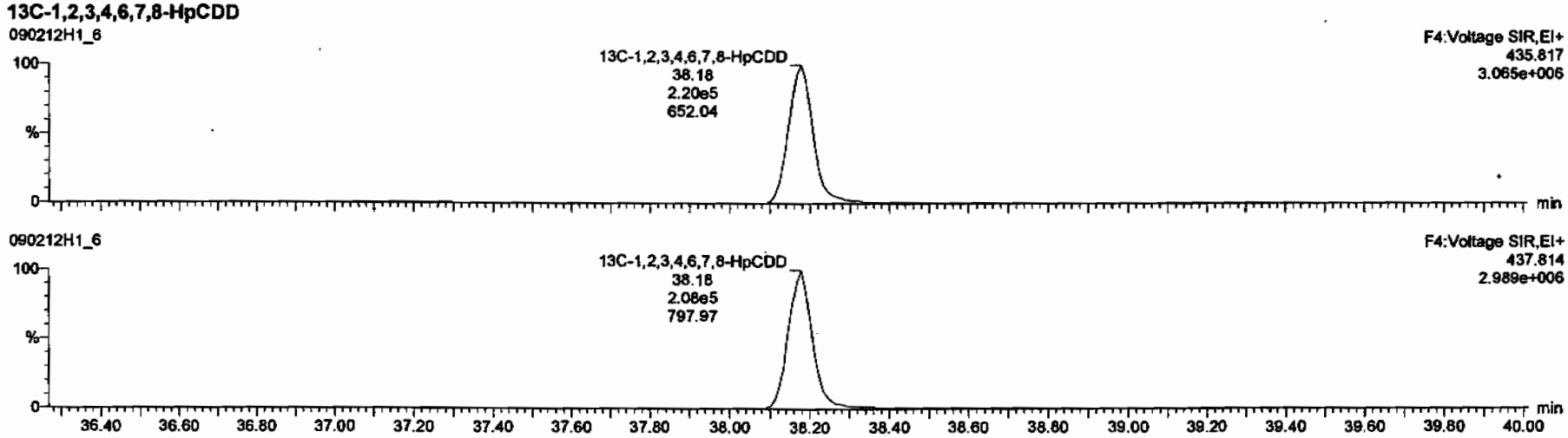

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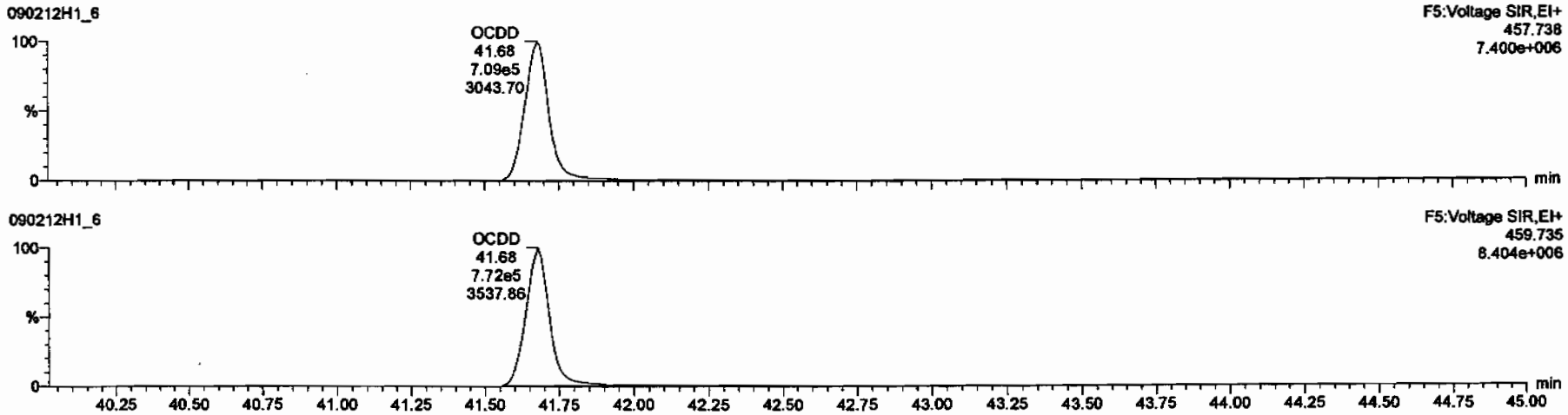

13C-OCDD

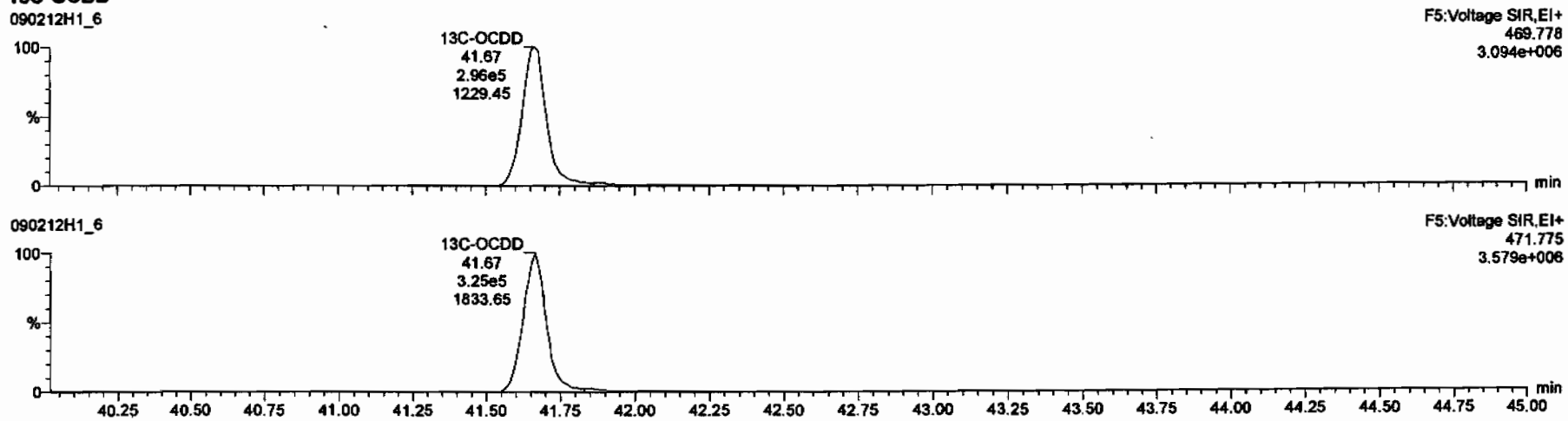

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2,3,7,8-TCDF

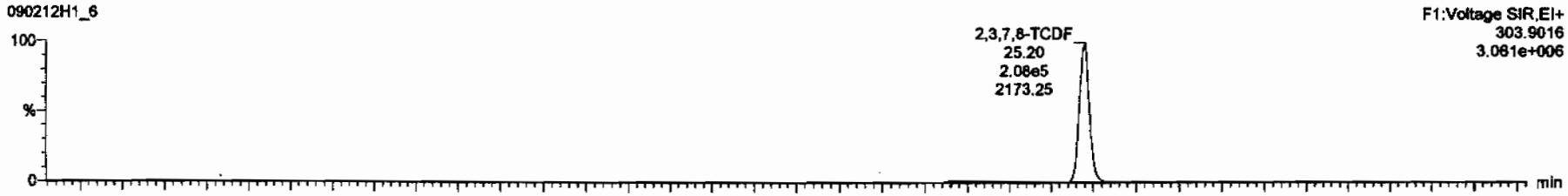

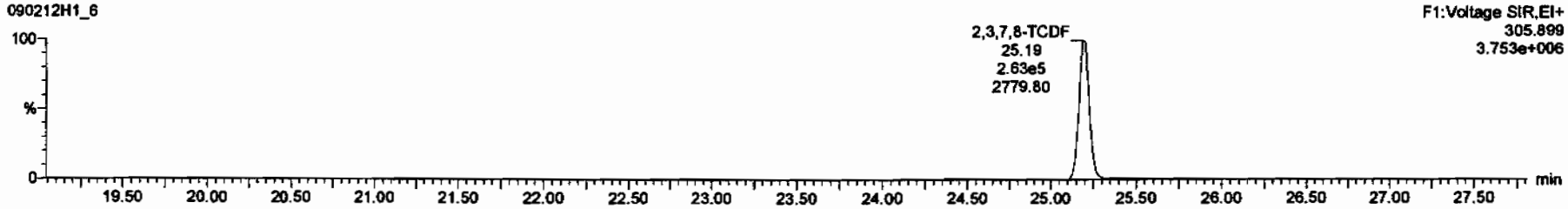

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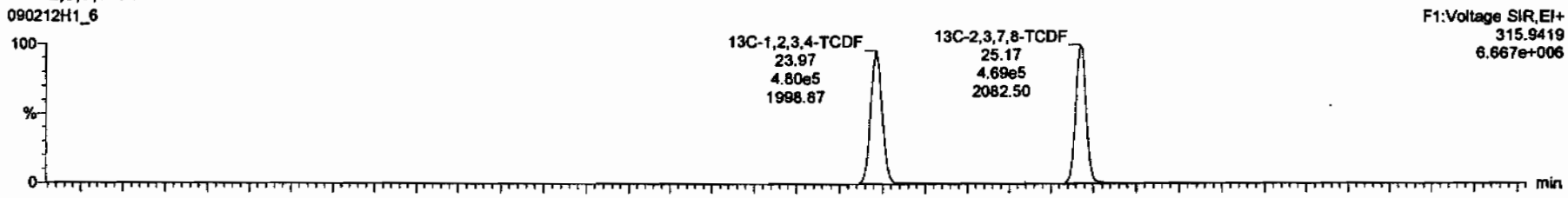

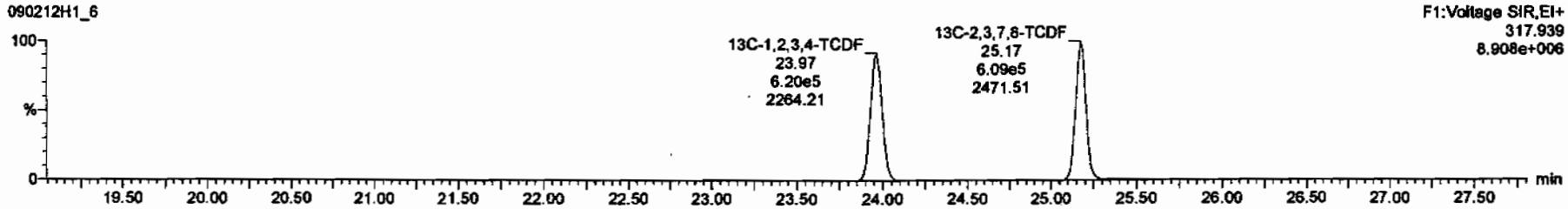

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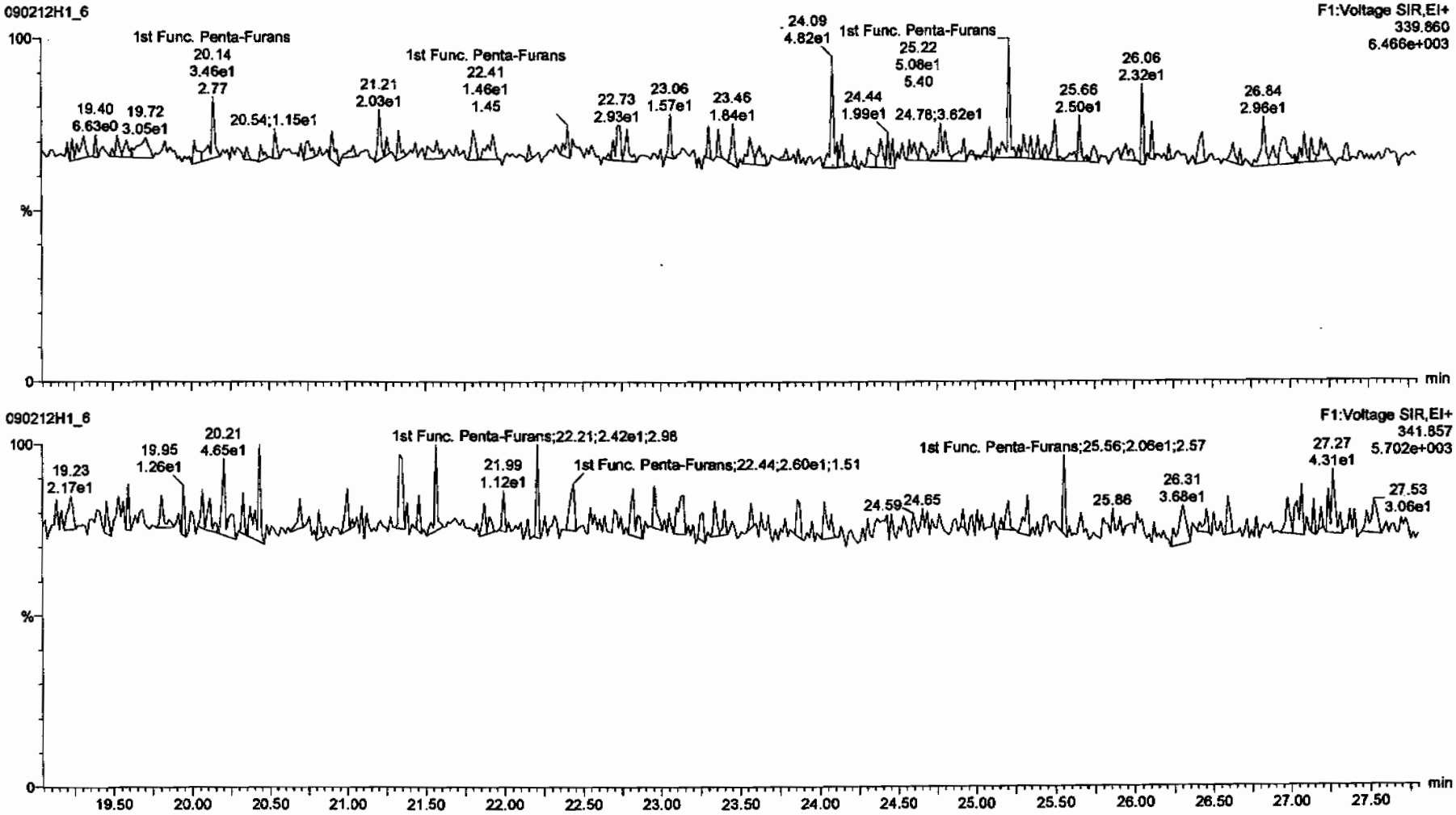

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1,2,3,7,8-PeCDF

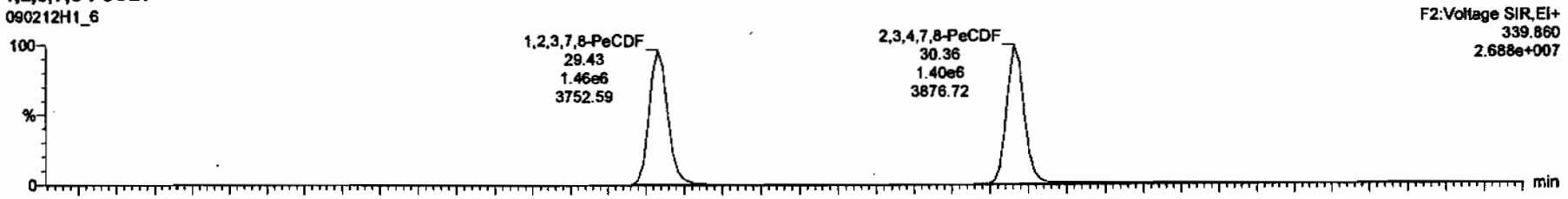

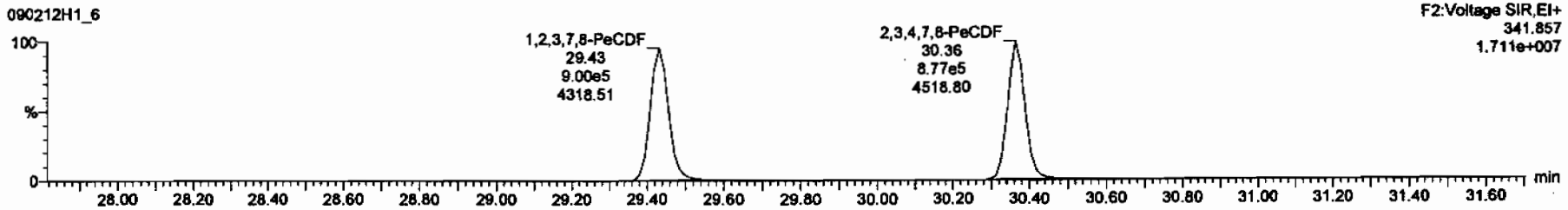

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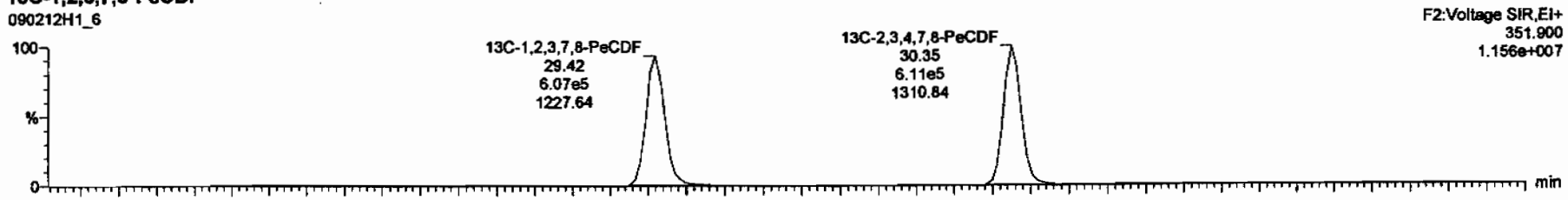

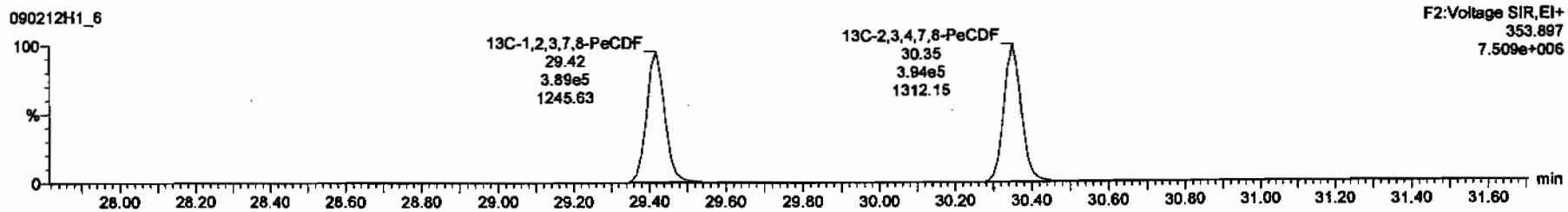

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1,2,3,4,7,8-HxCDF

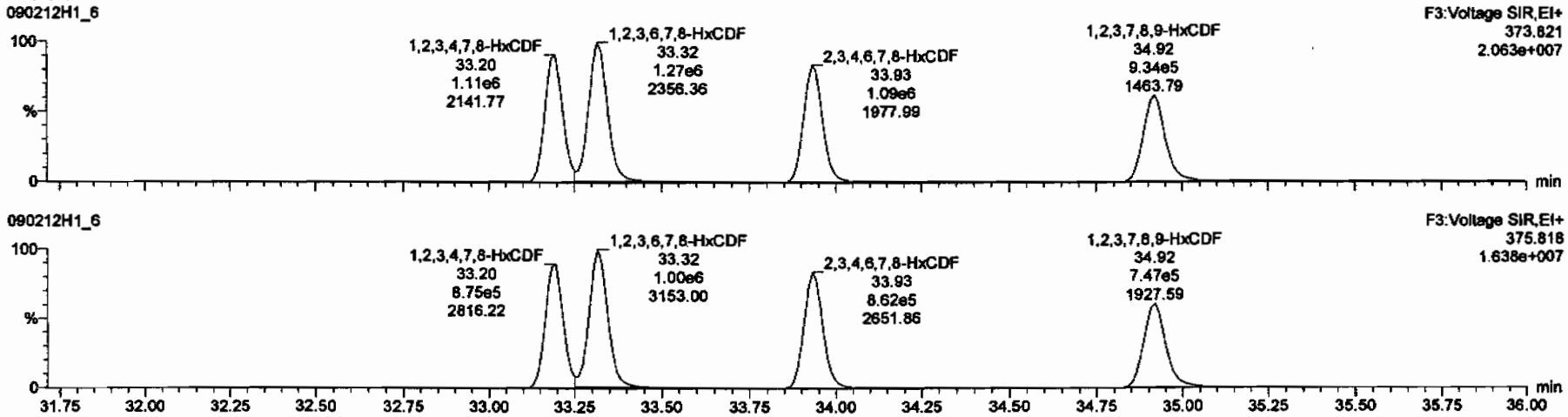

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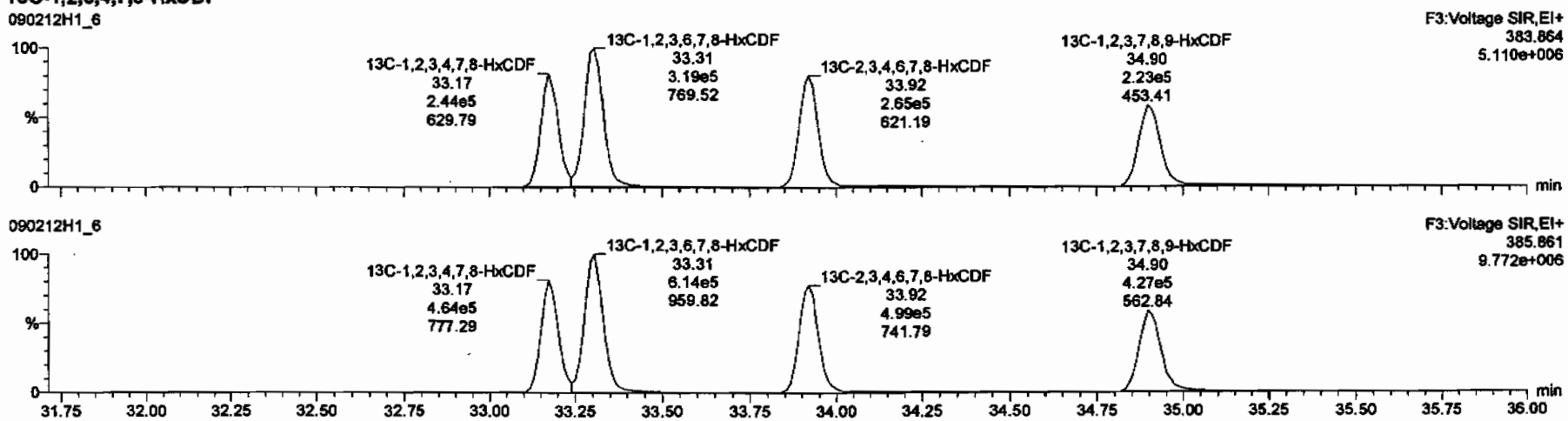

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1,2,3,4,6,7,8-HpCDF

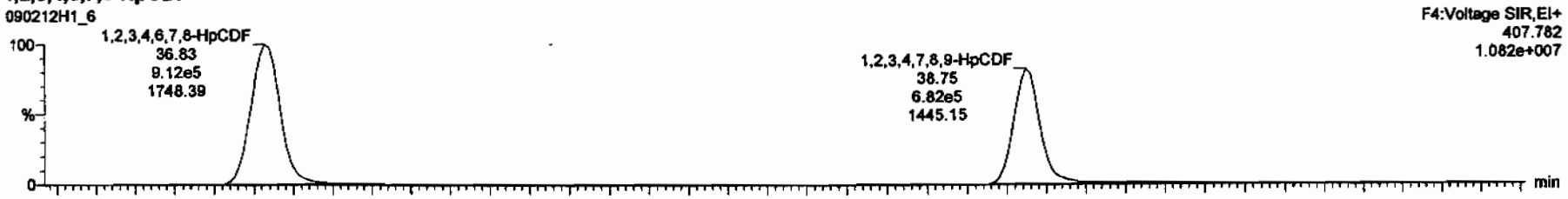

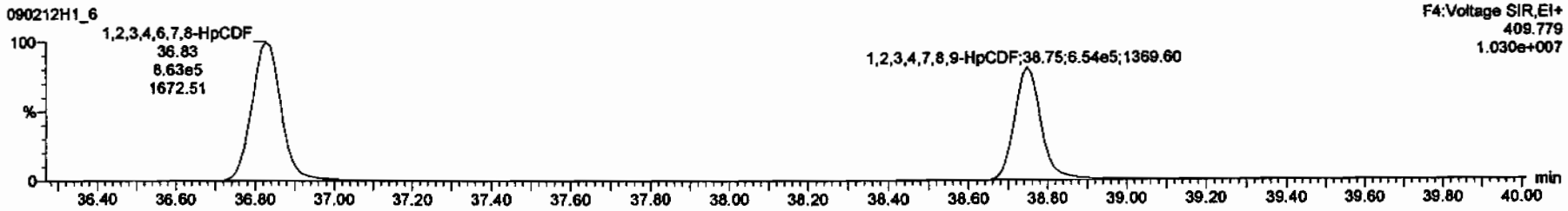

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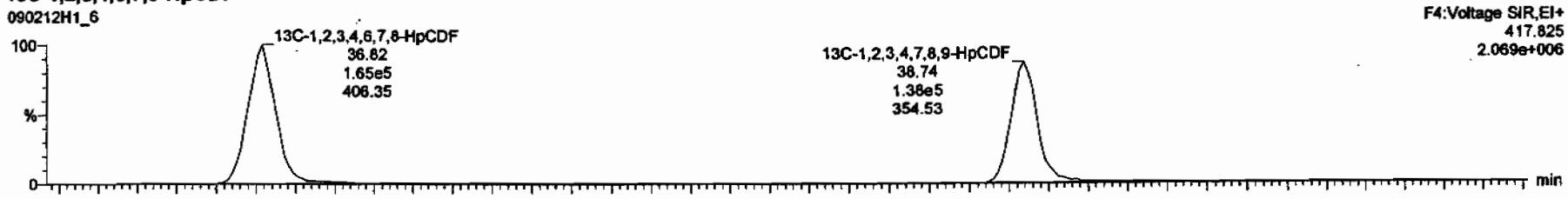

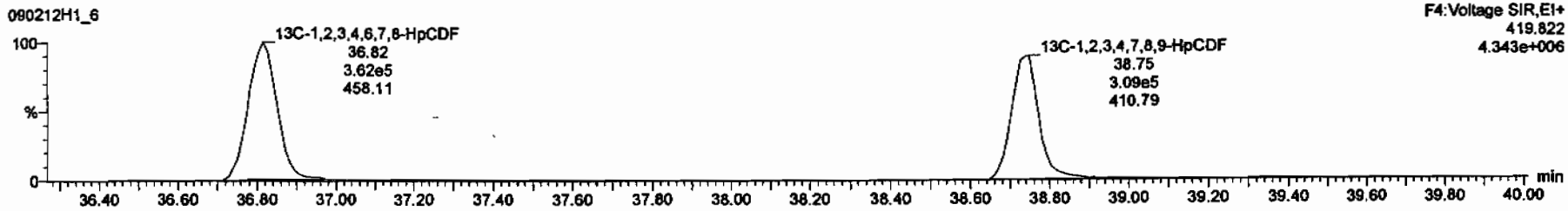

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OCDF

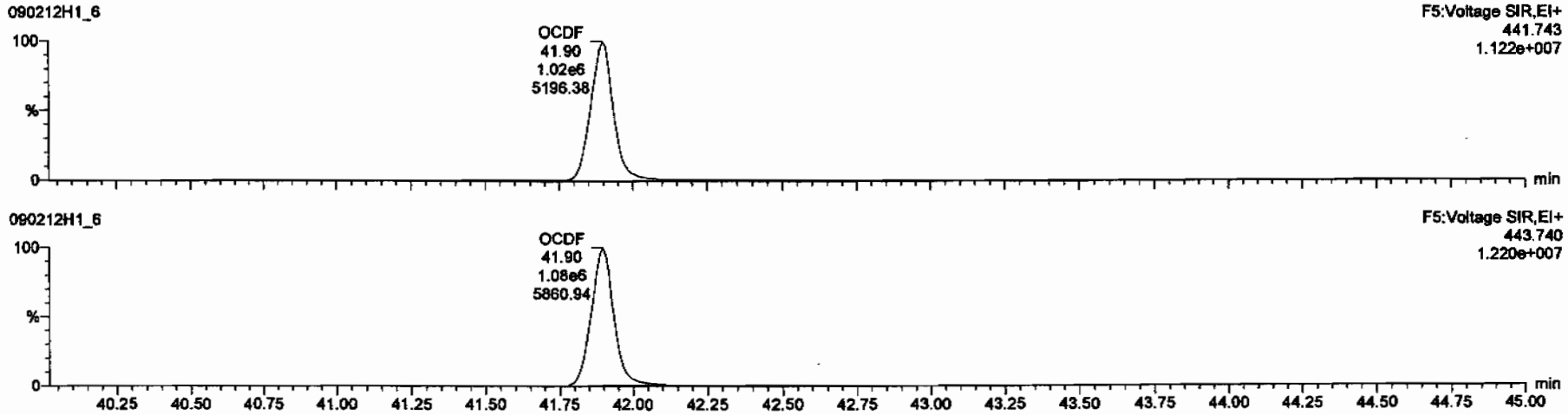

13C-OCDF

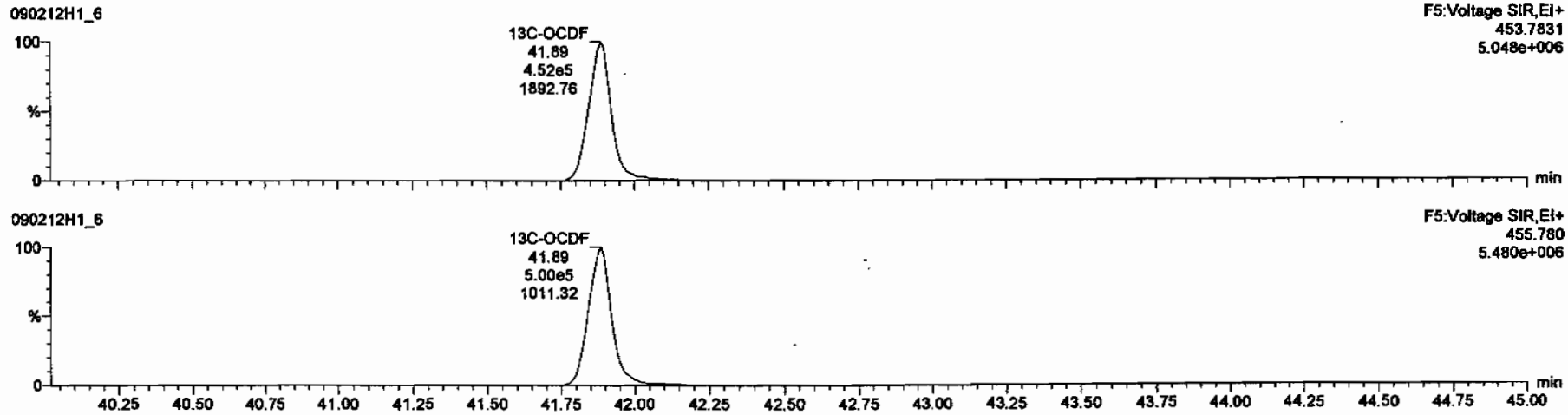

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PFK1

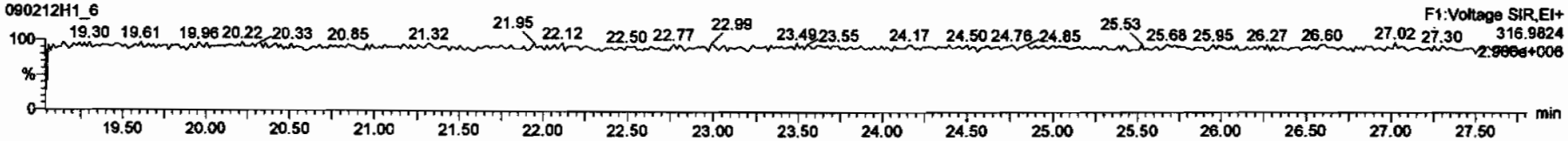

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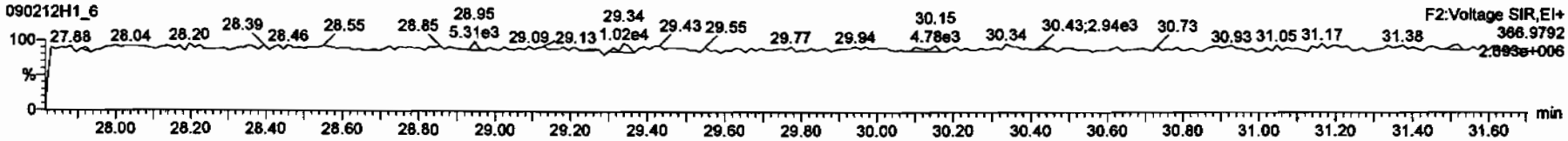

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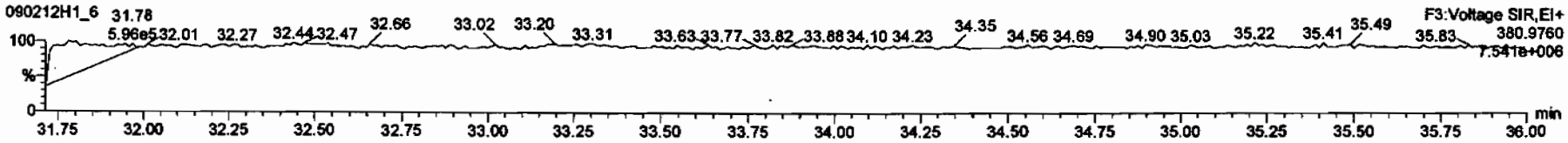

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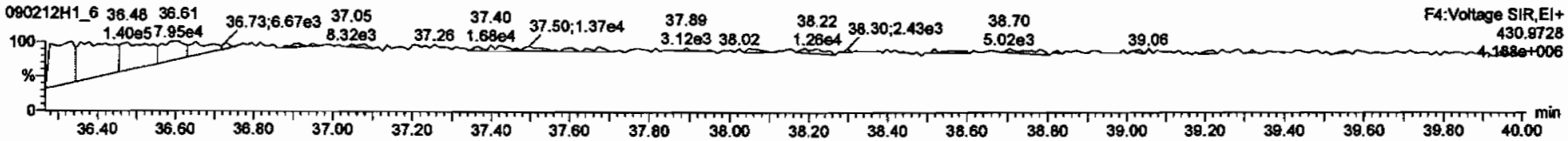

PFK5

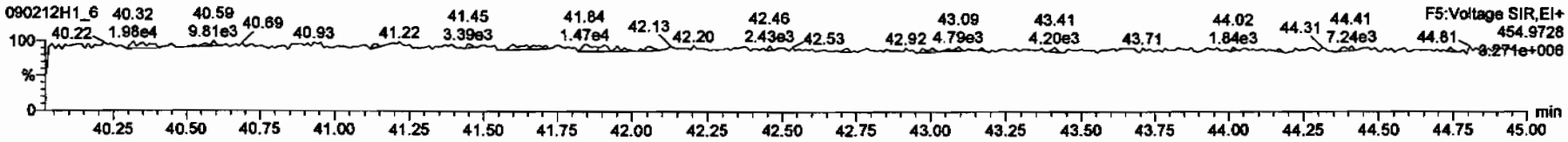

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DPE1

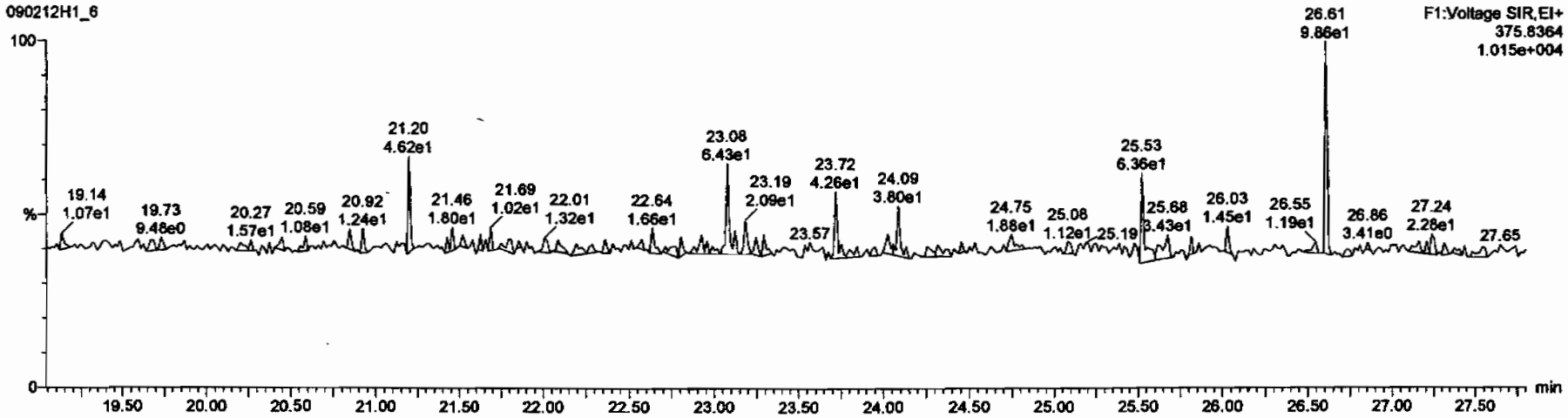

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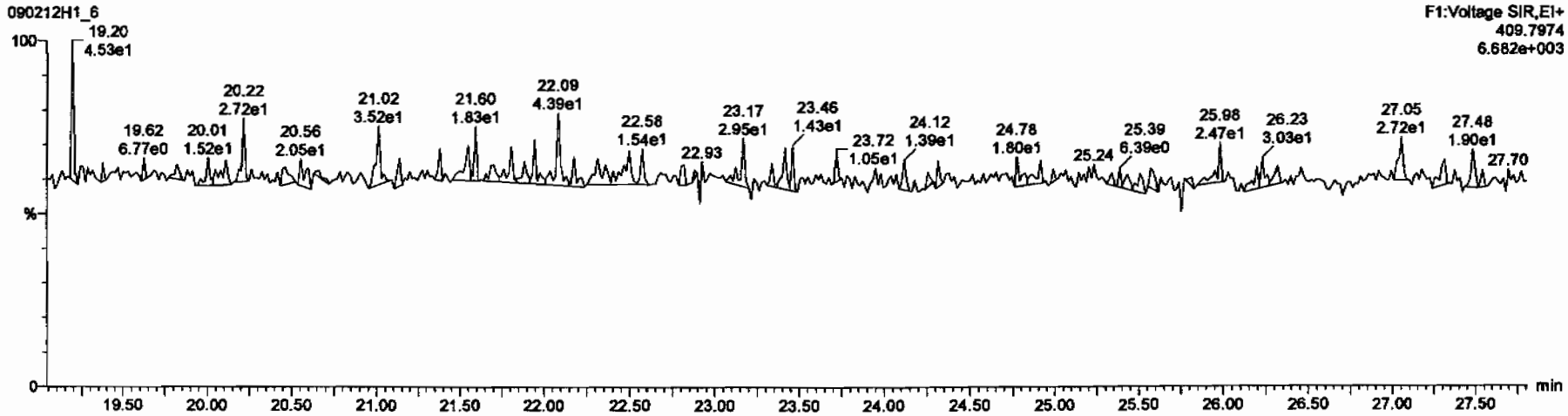

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Name: 090212H1_6, Date: 12-Feb-2009, Time: 15:17:39, ID: ST090212H1-5 1613 CS4 080917J, Description: 1613 CS4 080917J

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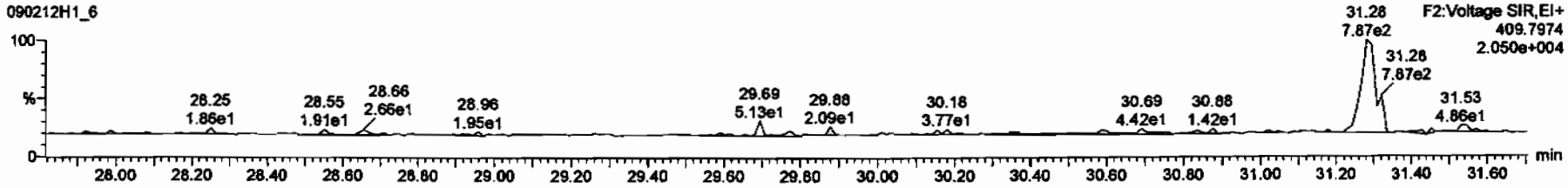

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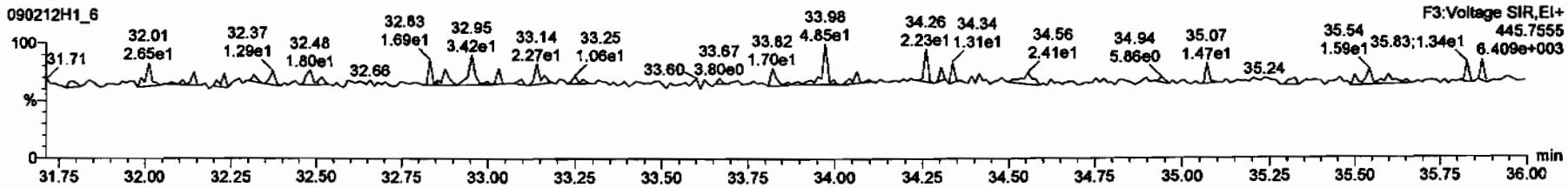

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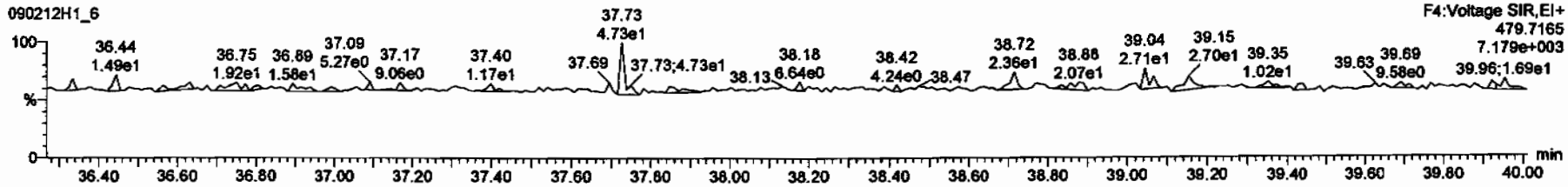

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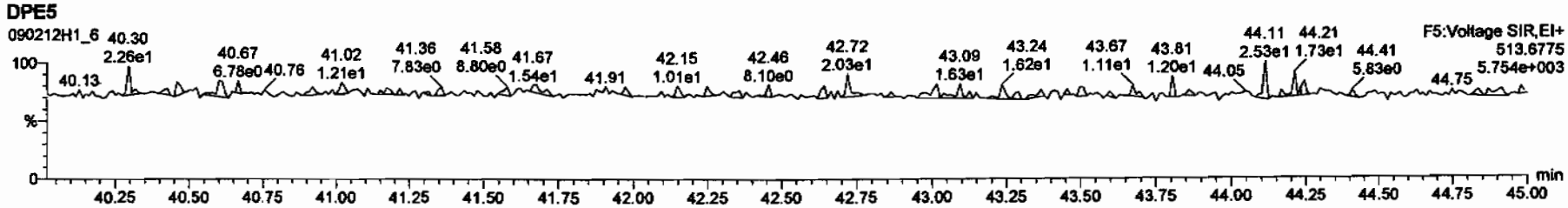

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2,3,7,8-TCDD

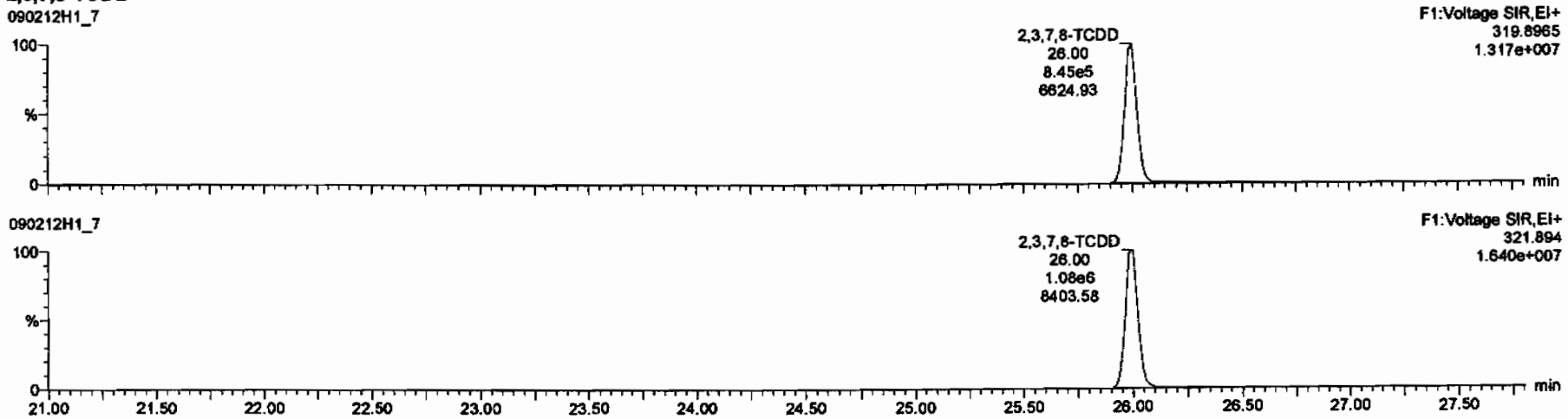

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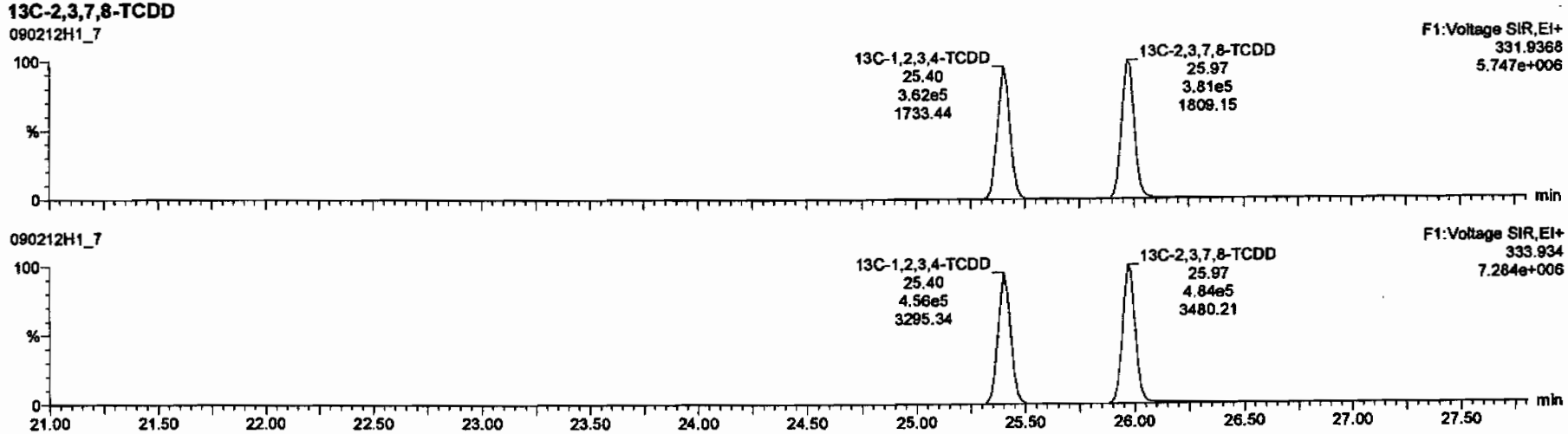

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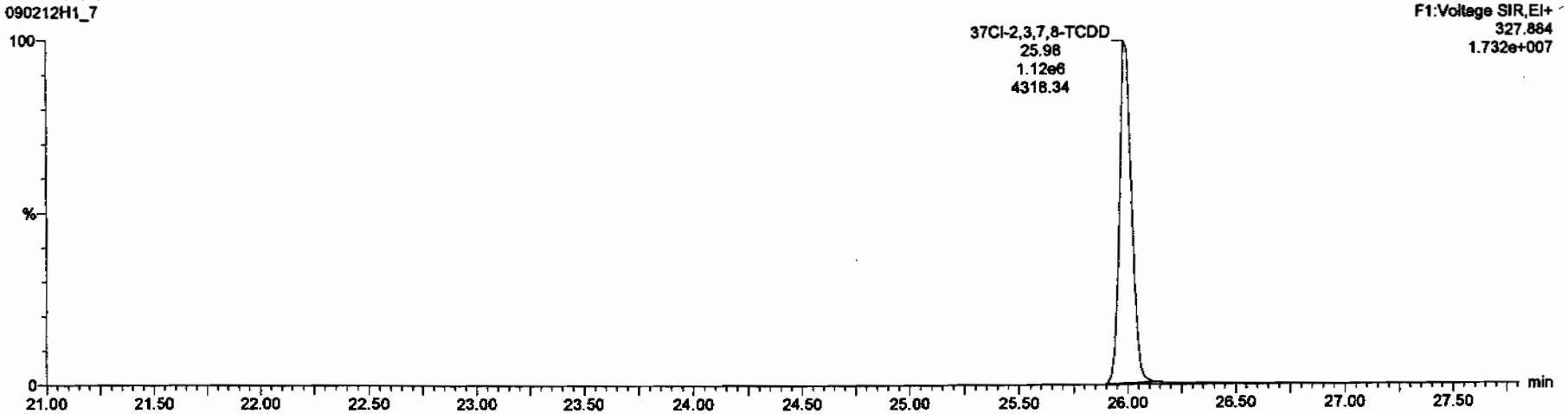

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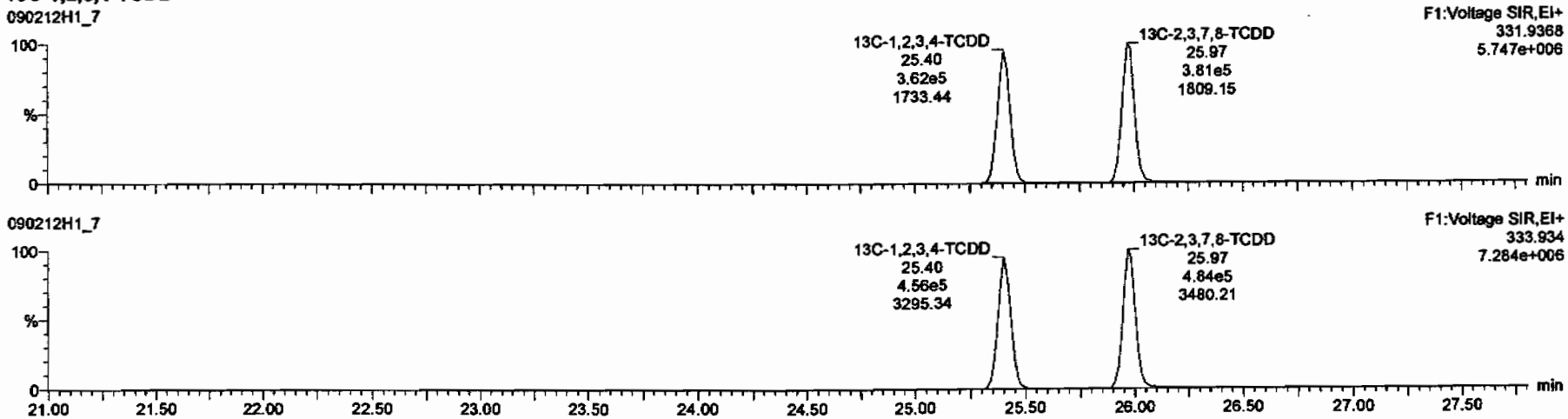

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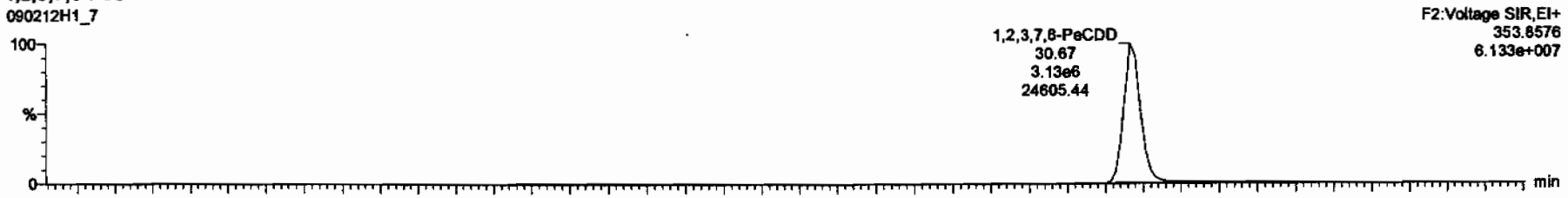

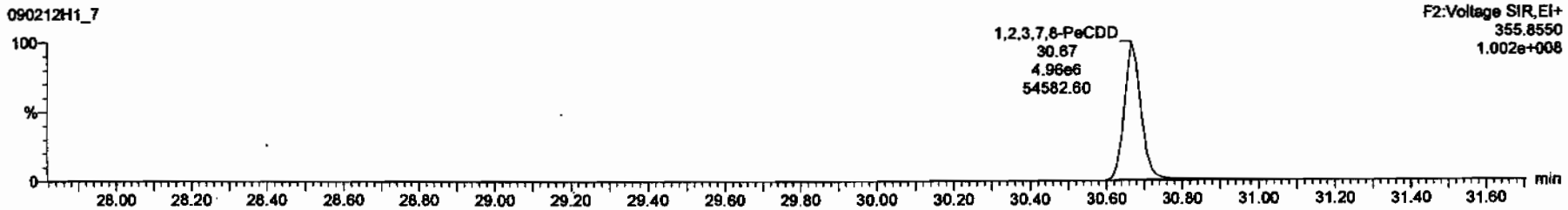

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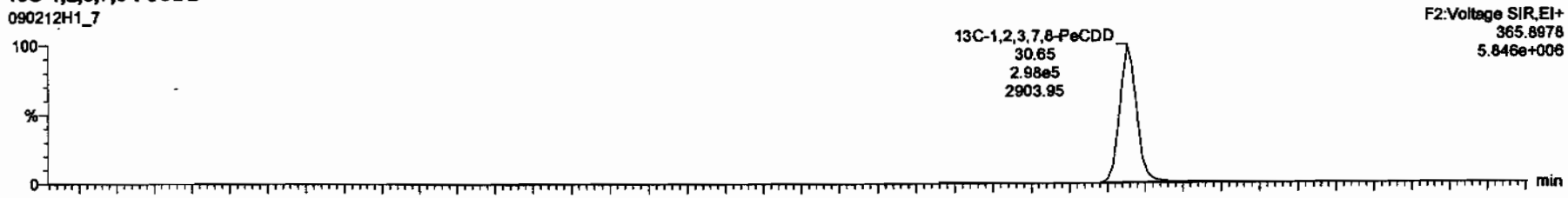

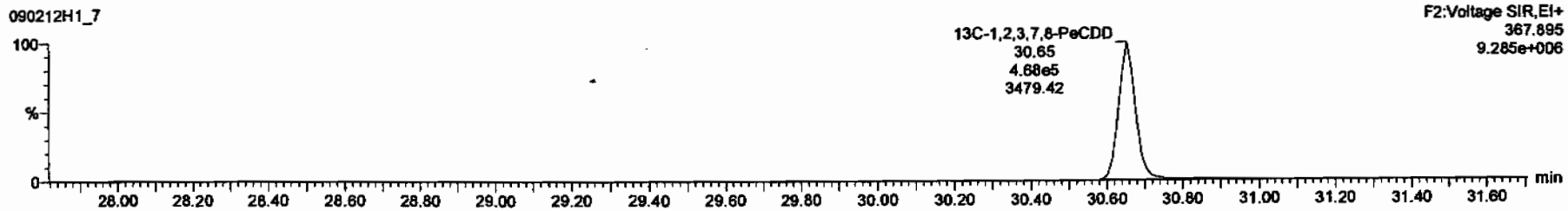

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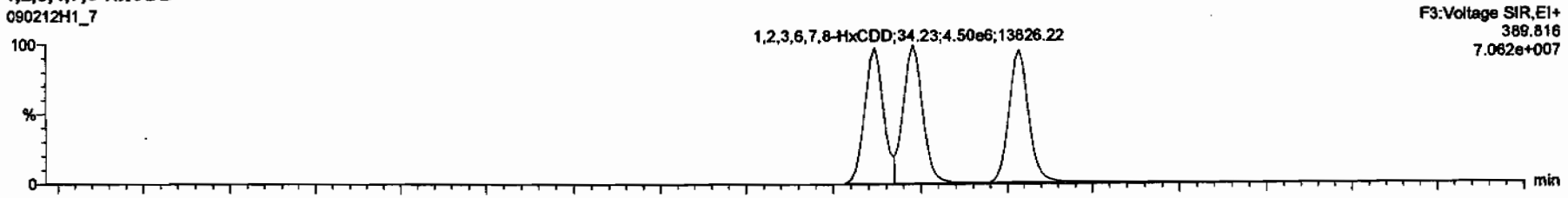

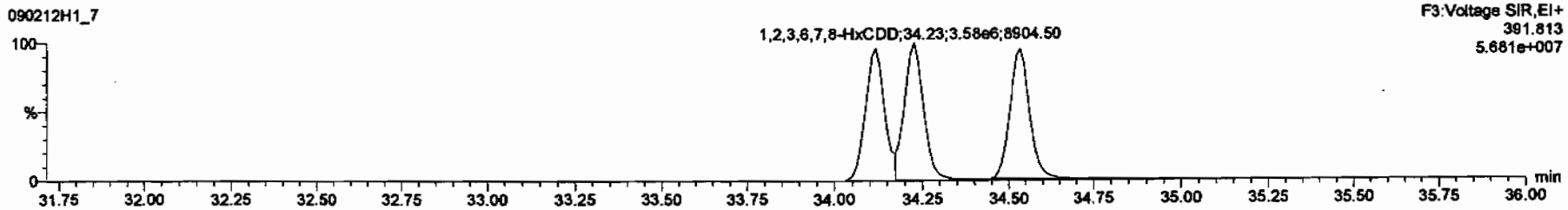

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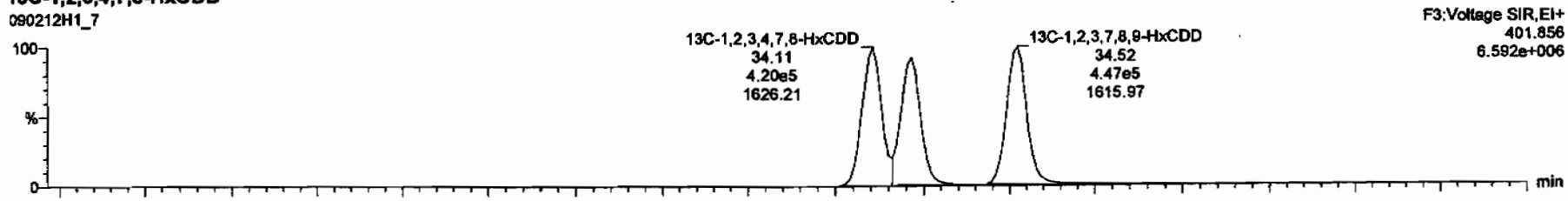

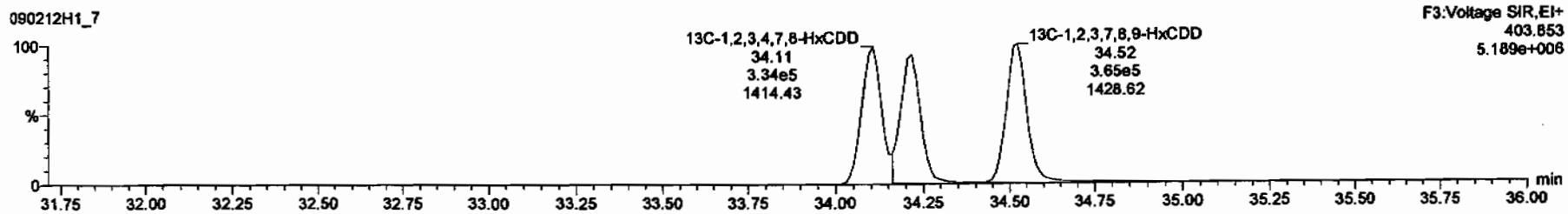

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1,2,3,4,6,7,8-HpCDD

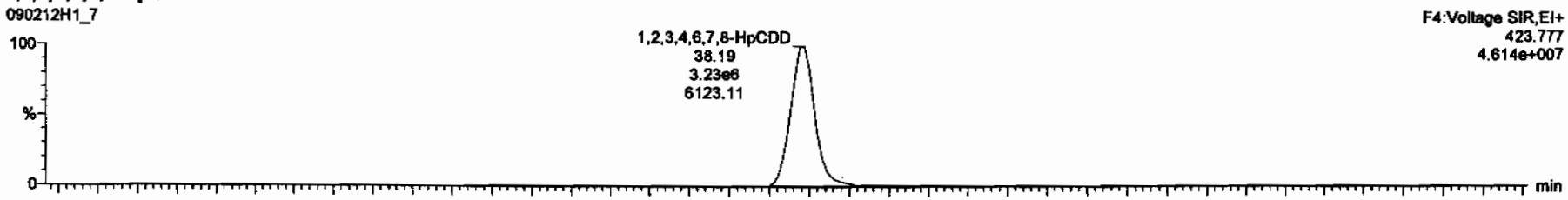

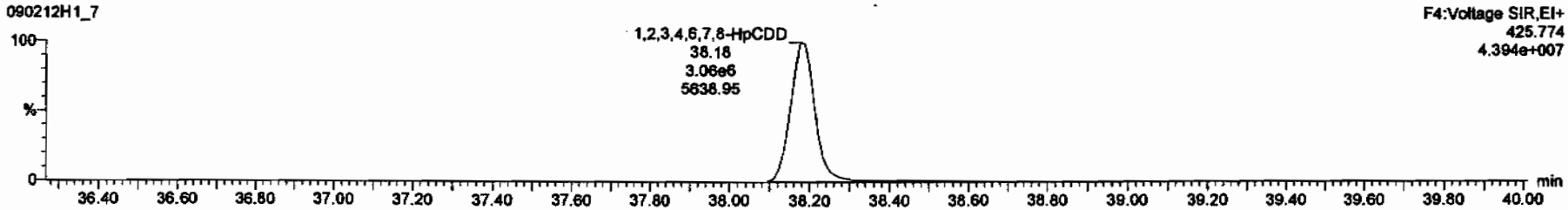

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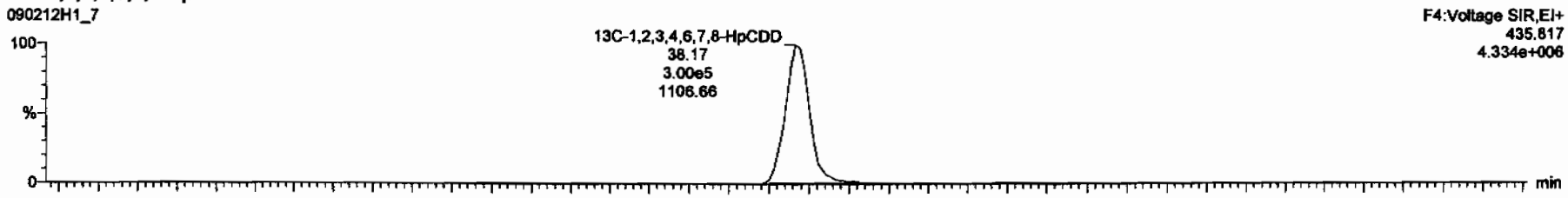

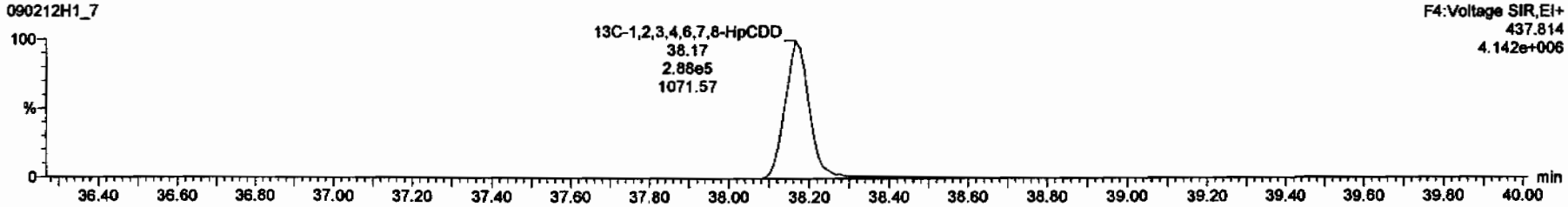

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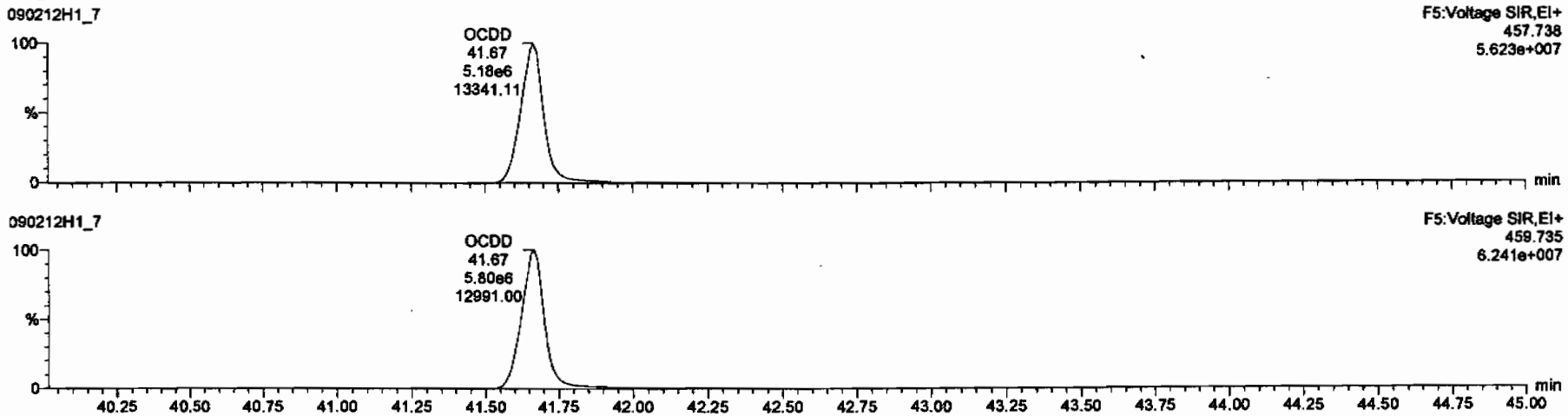

13C-OCDD

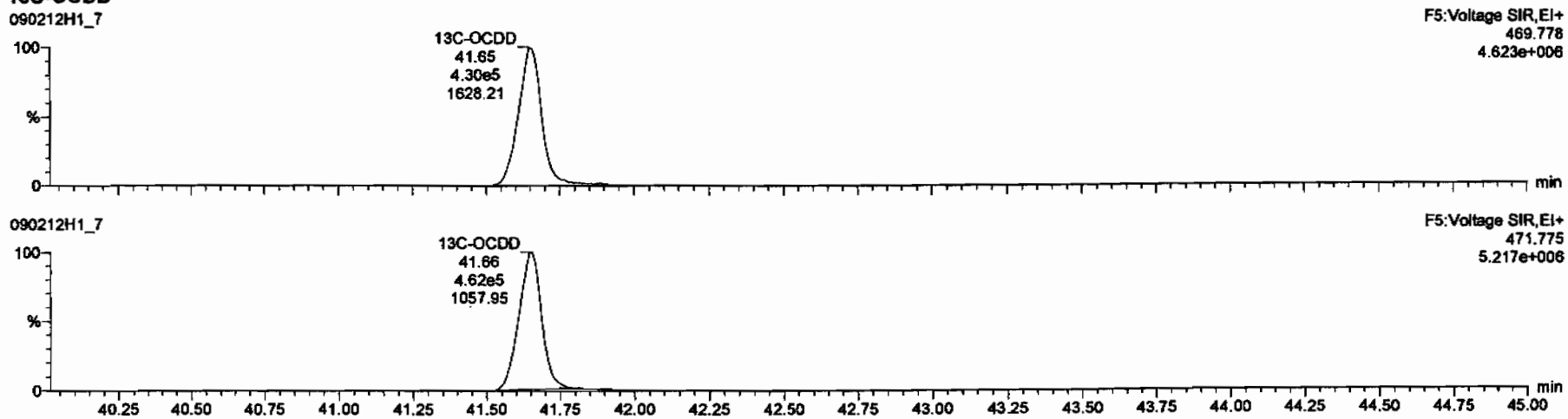

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2,3,7,8-TCDF

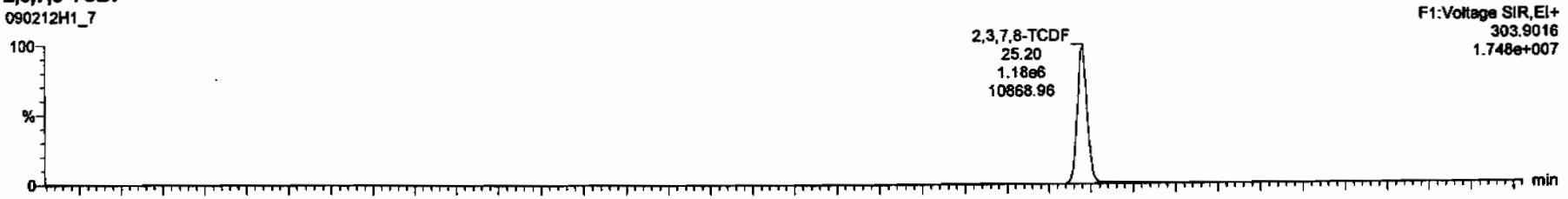

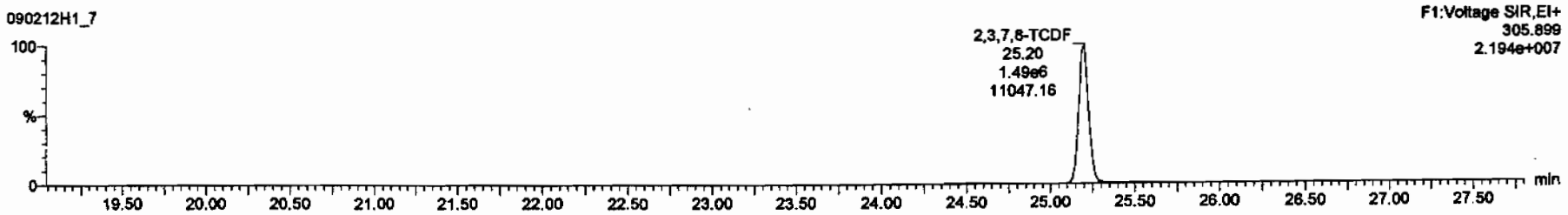

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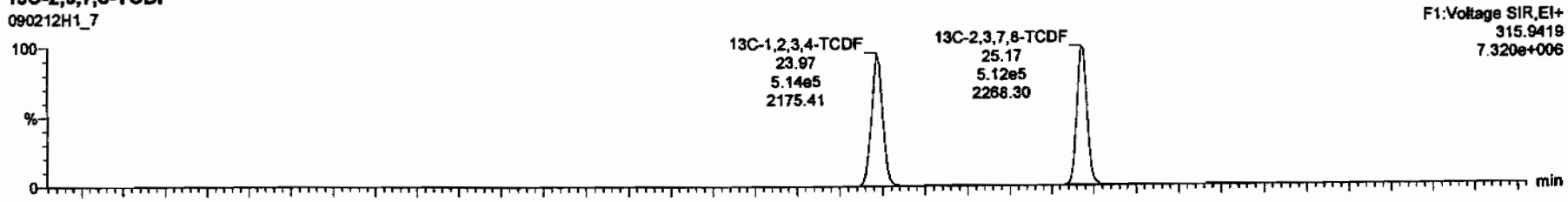

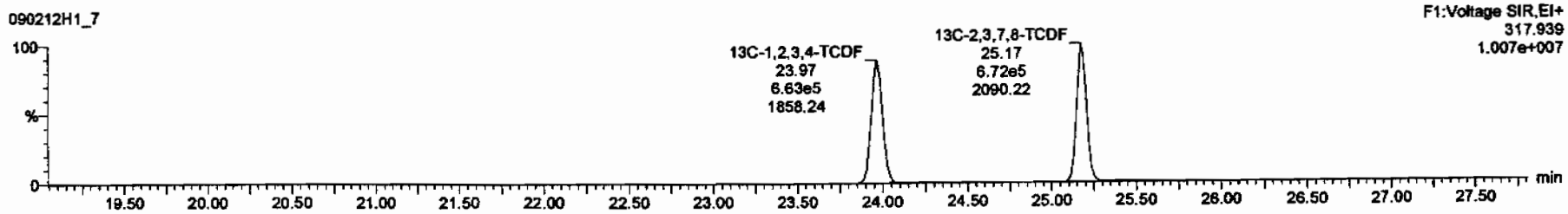

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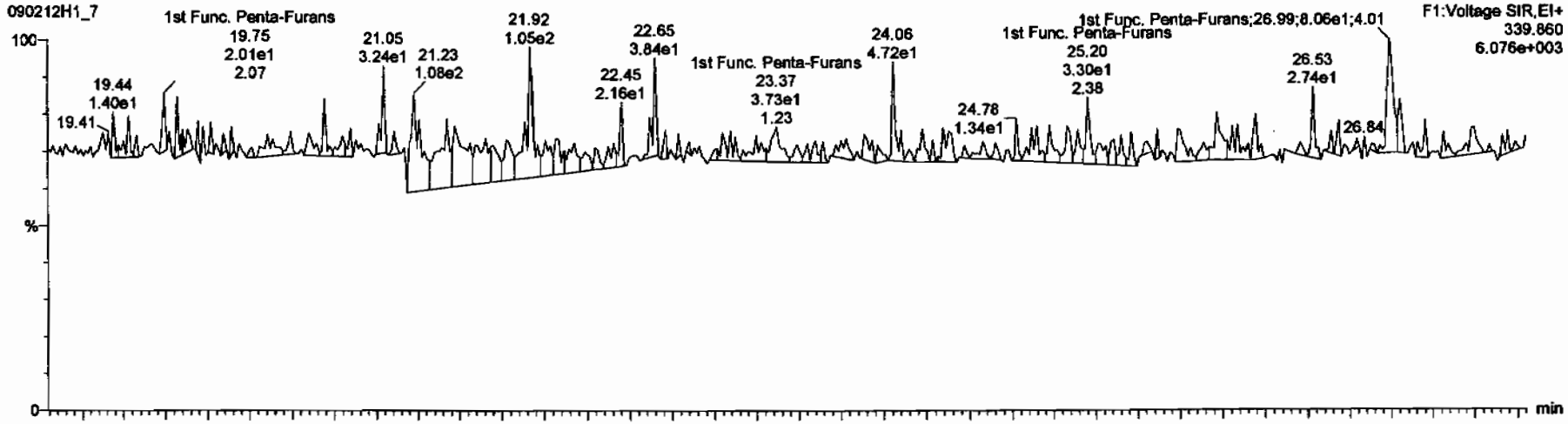

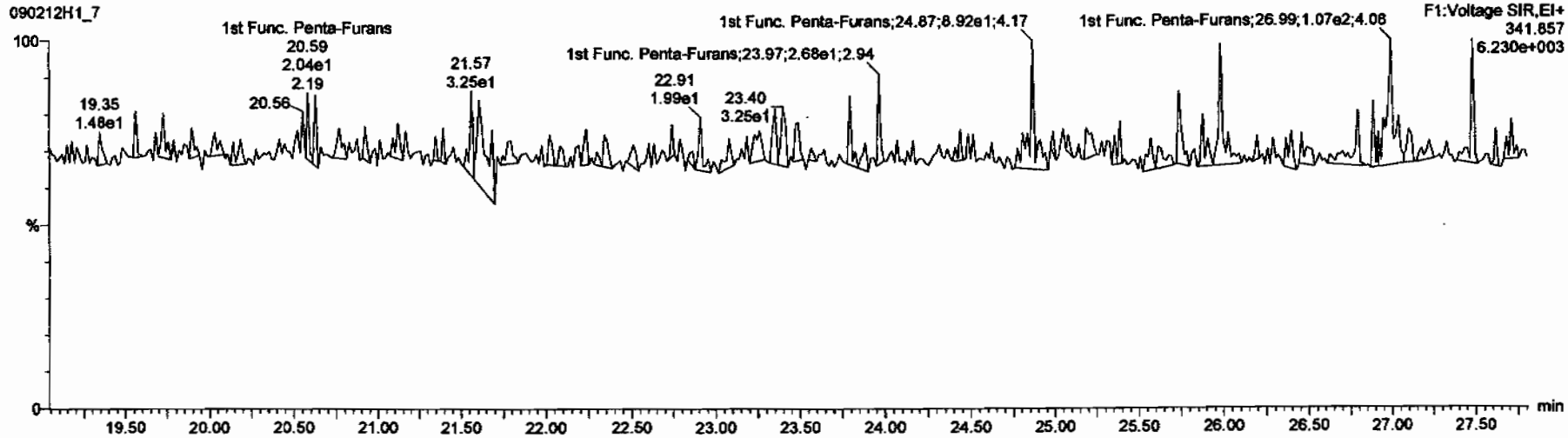

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1,2,3,7,8-PeCDF

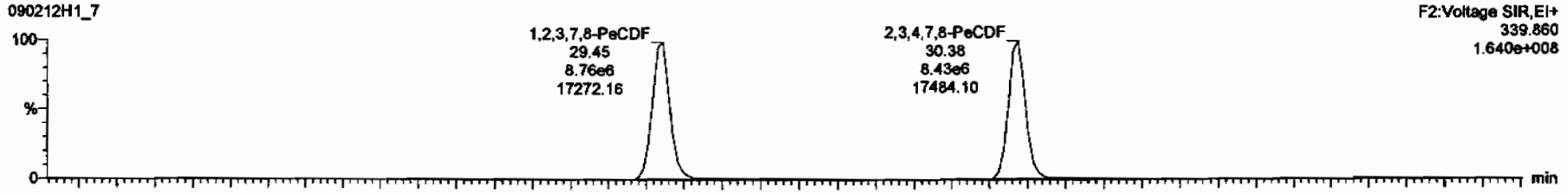

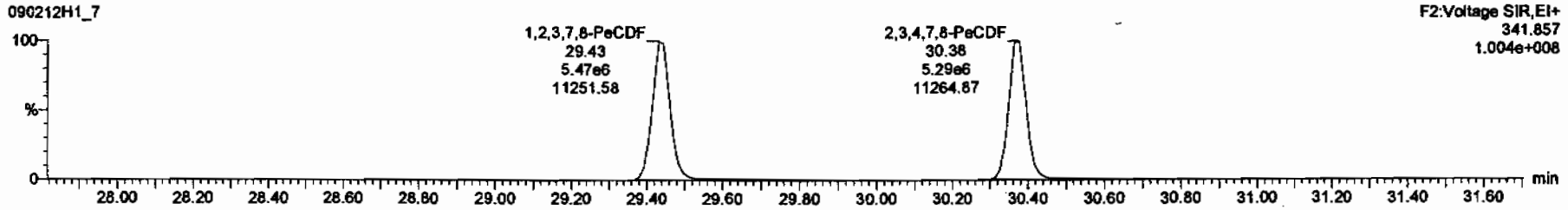

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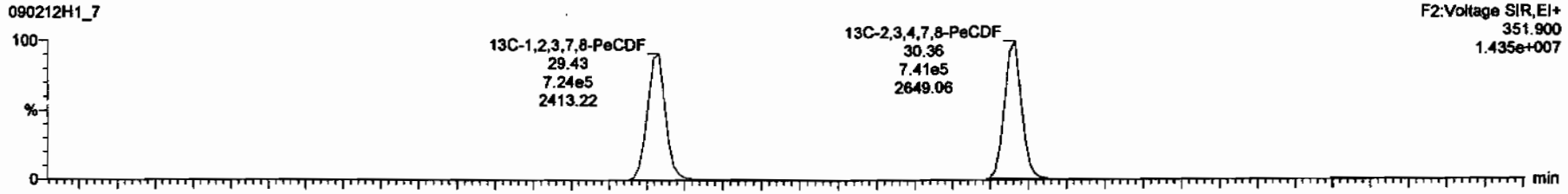

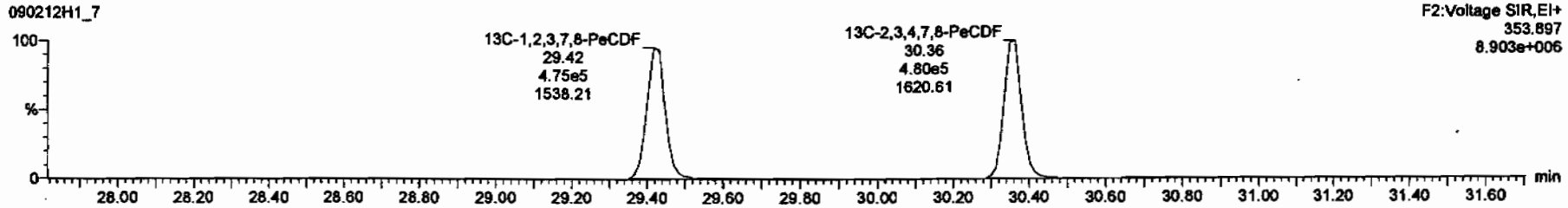

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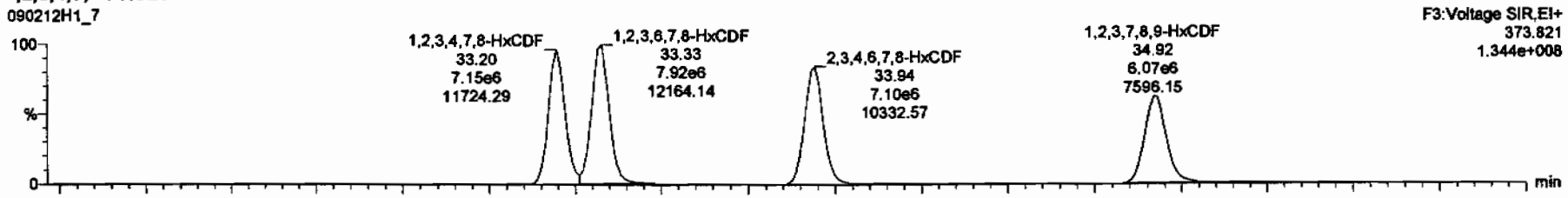

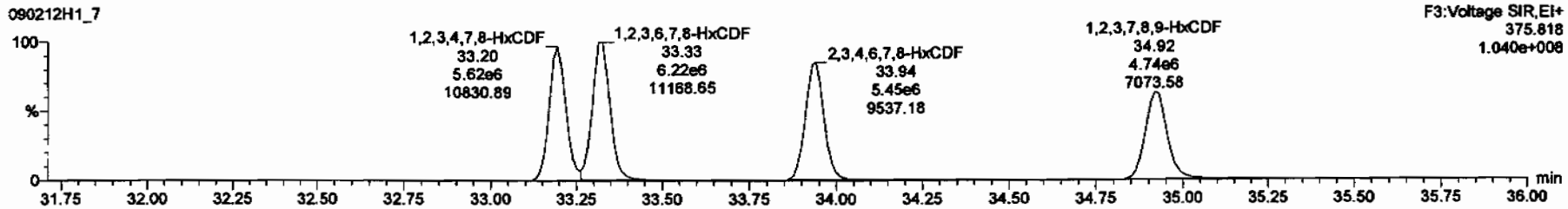

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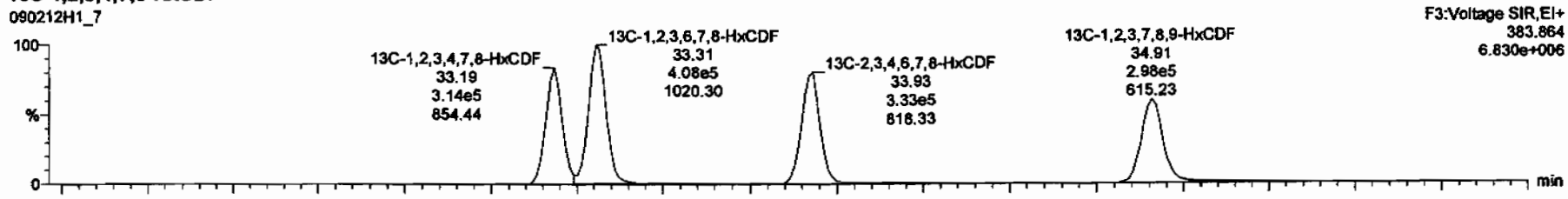

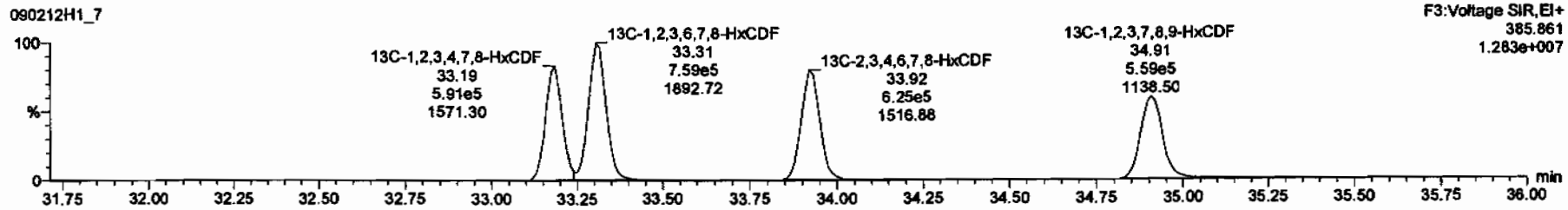

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1,2,3,4,6,7,8-HpCDF

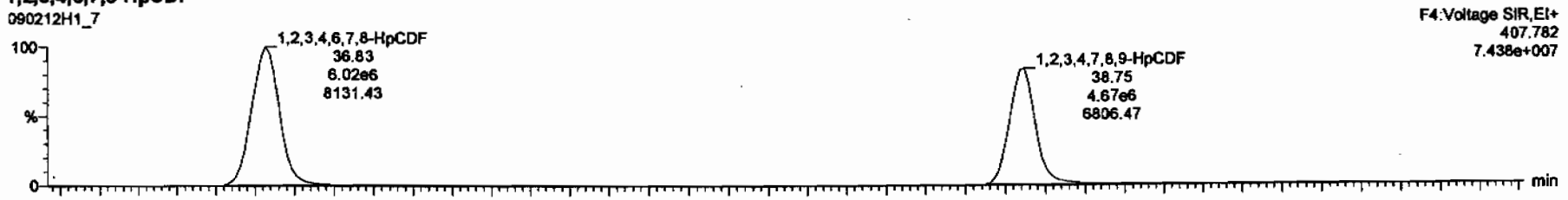

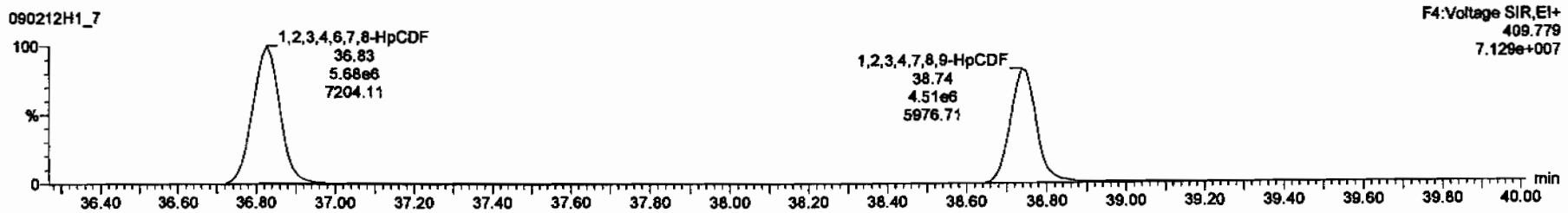

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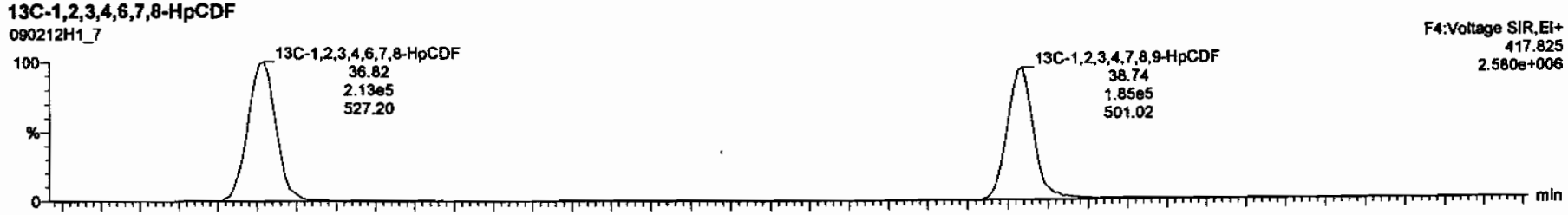

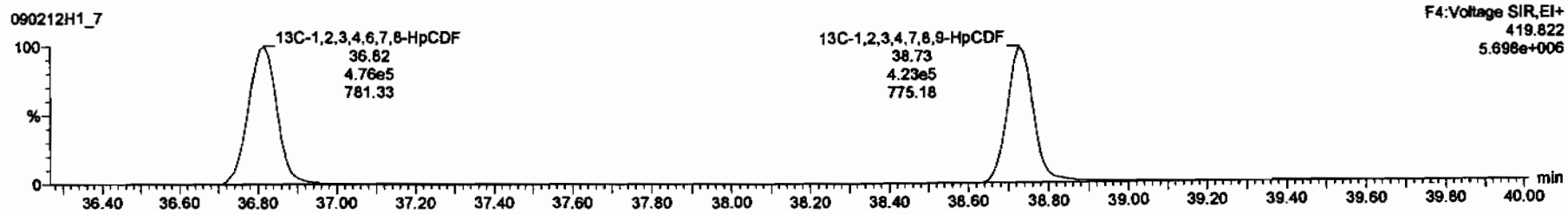

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OCDF

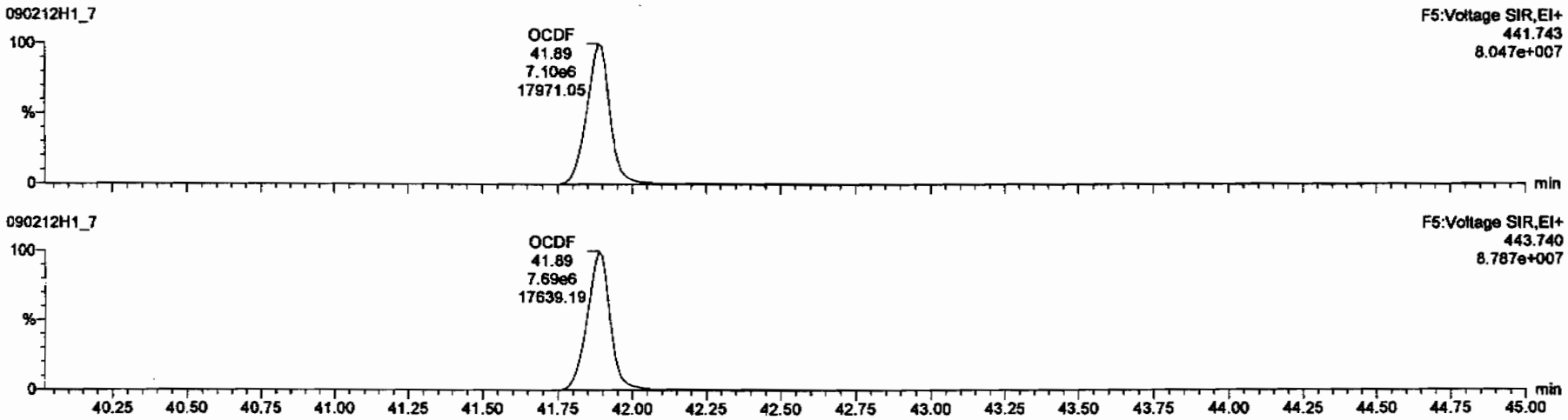

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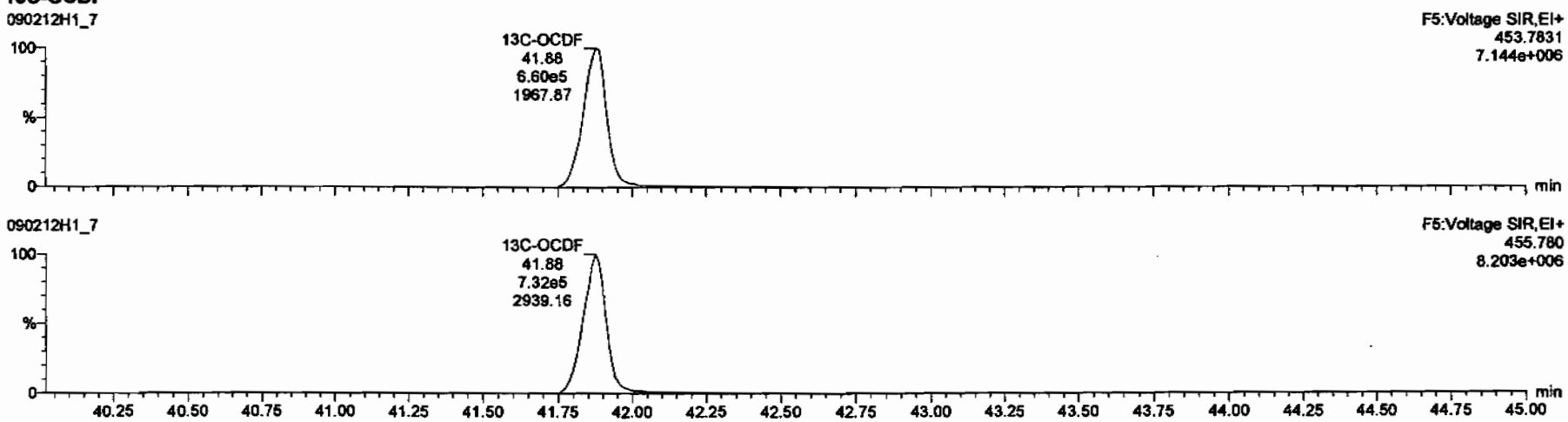

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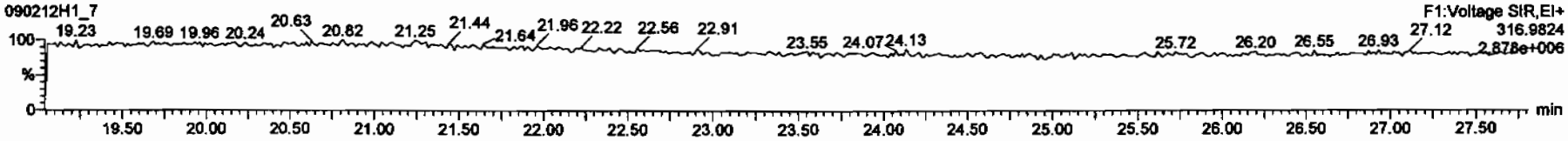

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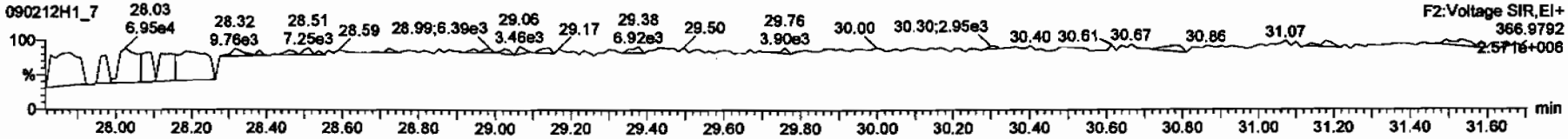

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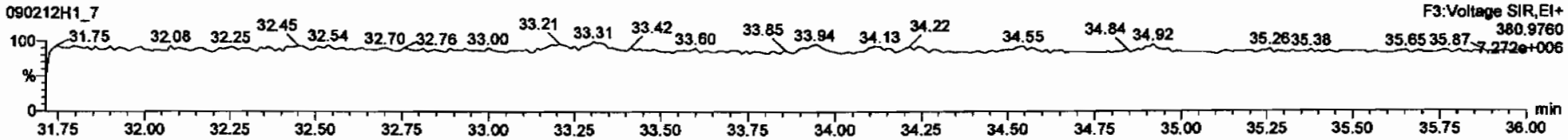

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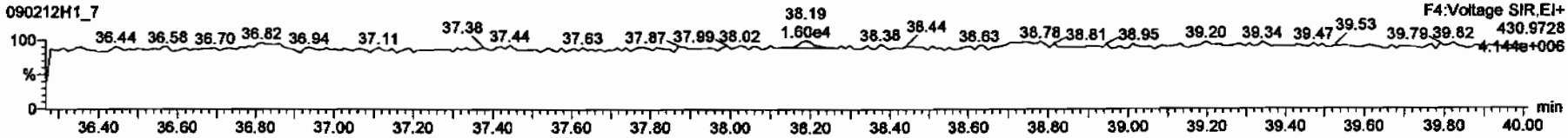

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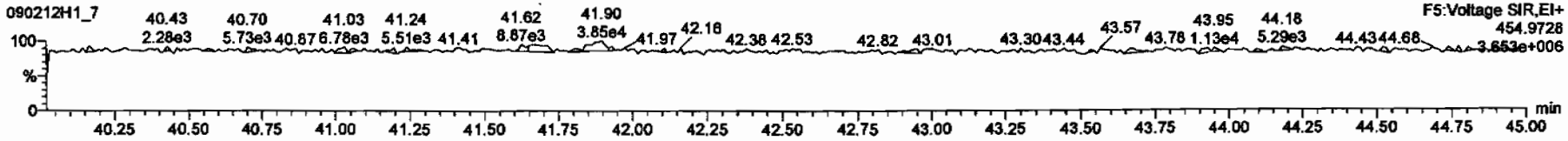

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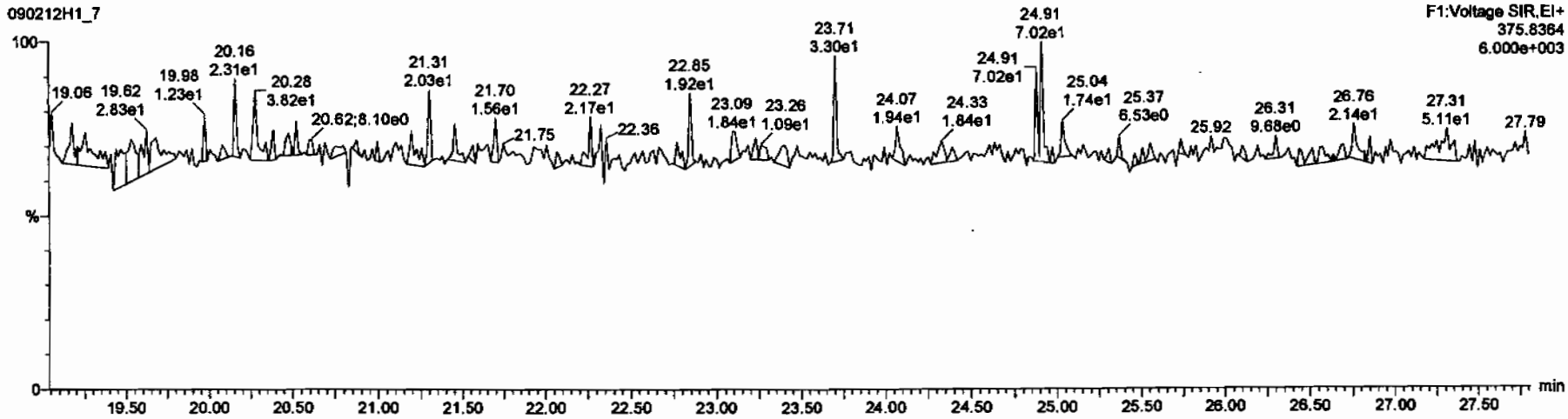

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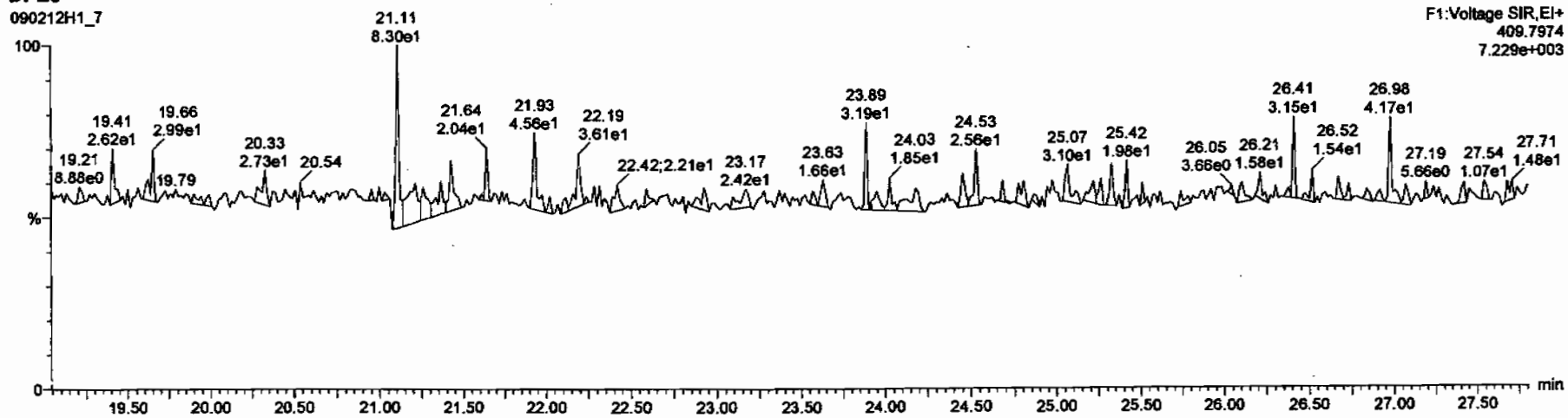

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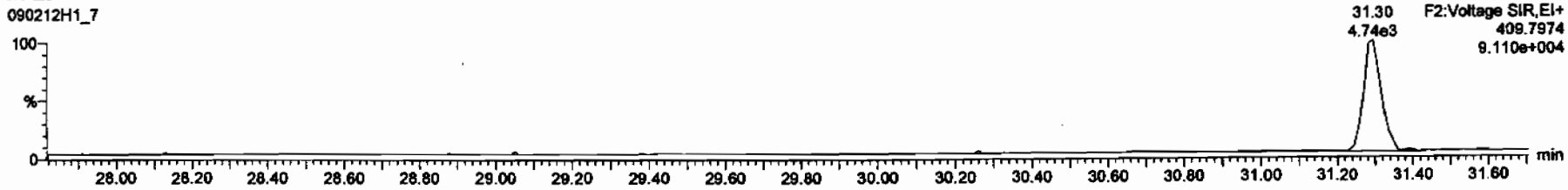

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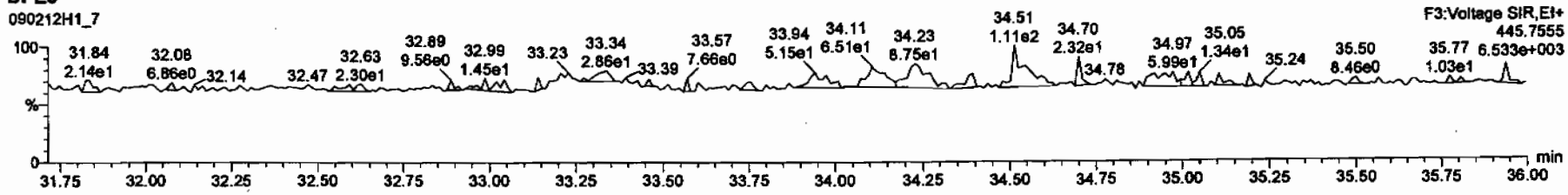

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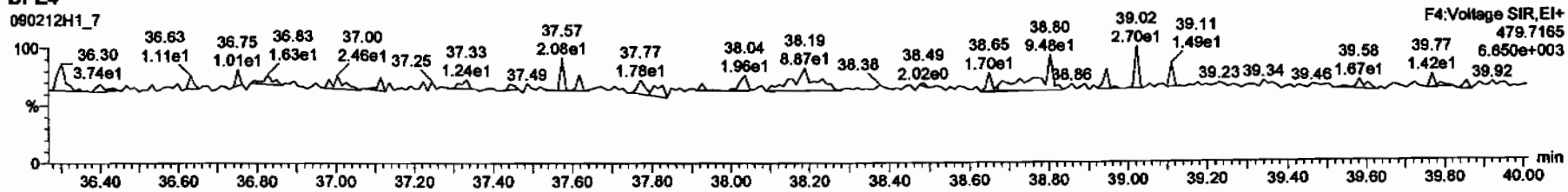

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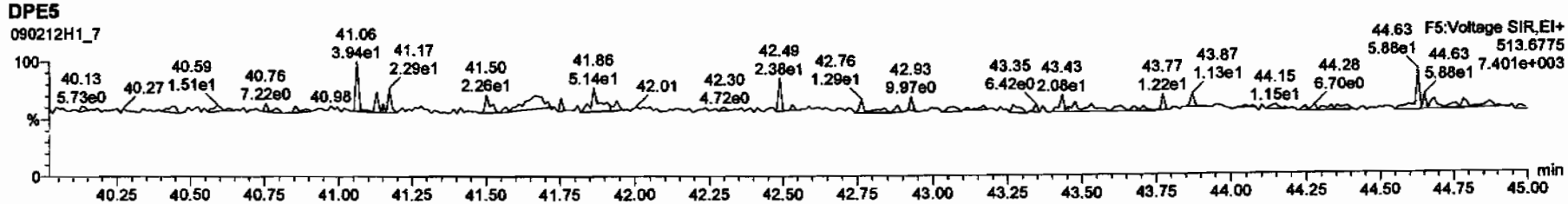

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M 292.9824 R 13769

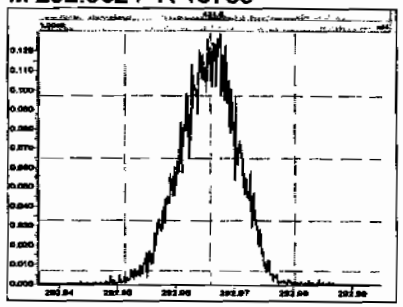

M 304.9824 R 14205

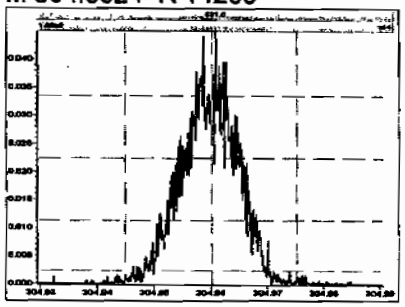

M 318.9792 R 15079

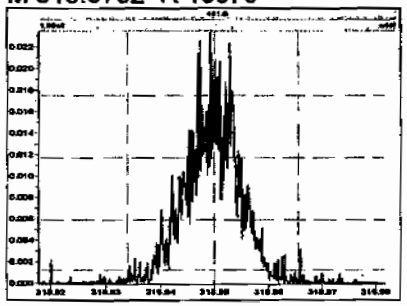

M 330.9792 R 13699

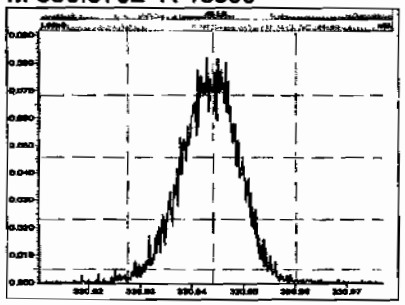

M 342.9792 R 13710

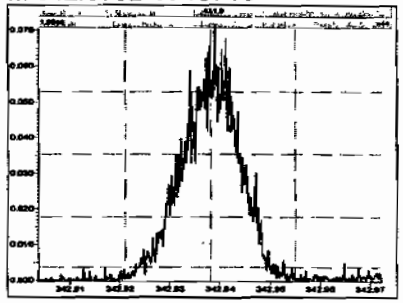

M 354.9792 R 14492

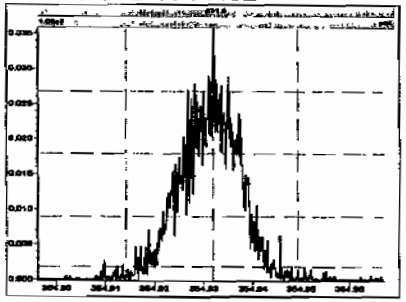

M 366.9792 R 14631

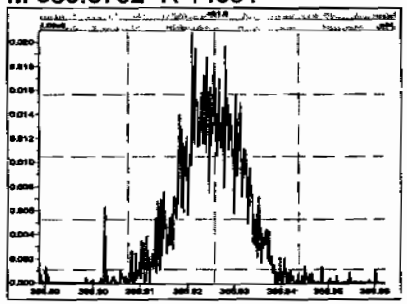

M 380.9760 R 13026

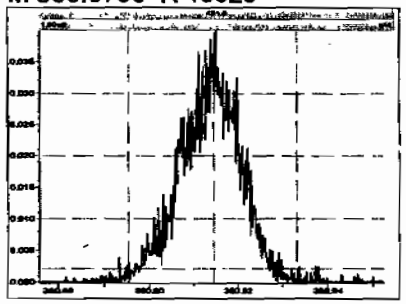

M 392.9760 R 14233

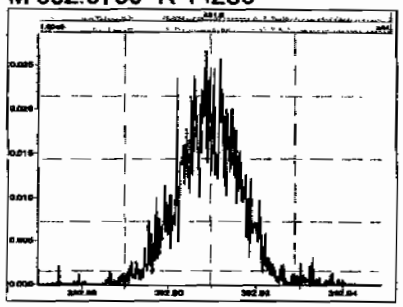

M 404.9760 R 15184

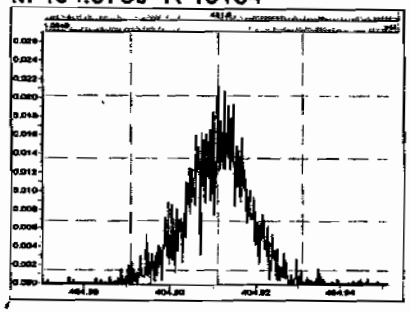

M 416.9760 R 15880

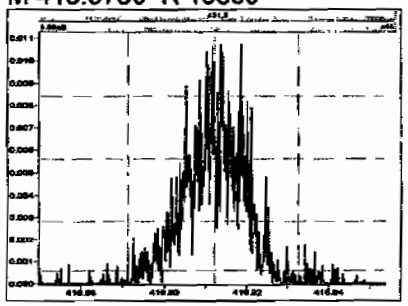

M 330.9792 R 13440

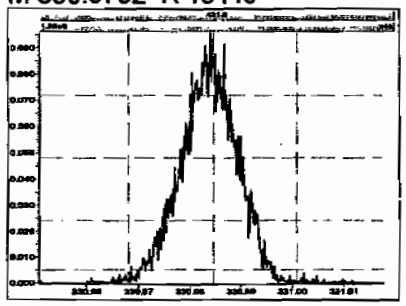

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M 342.9792 R 13880

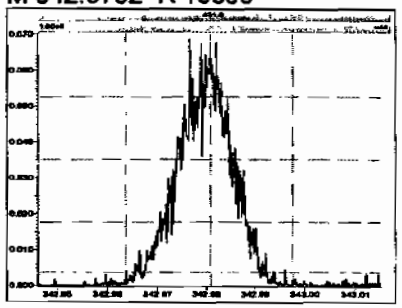

M 354.9792 R 14292

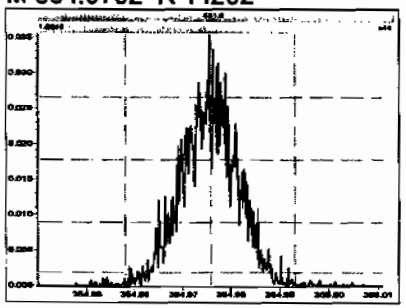

M 366.9792 R 14452

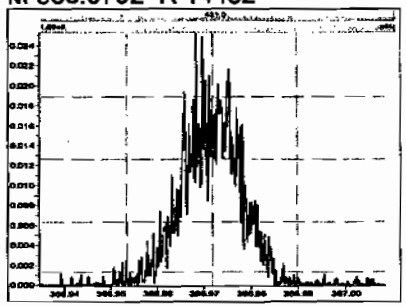

M 380.9760 R 13928

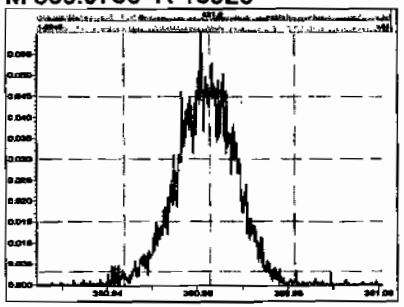

M 392.9760 R 14536

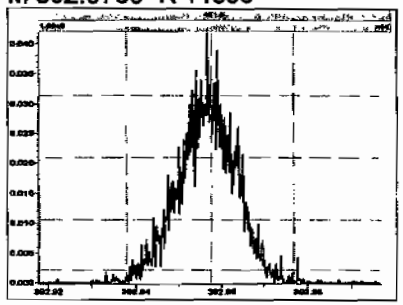

M 404.9760 R 14536

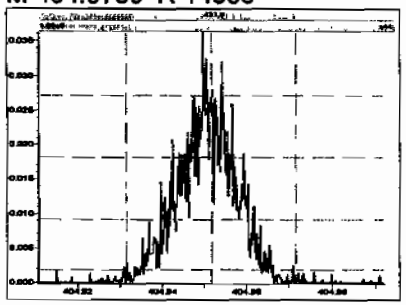

M 416.9760 R 15053

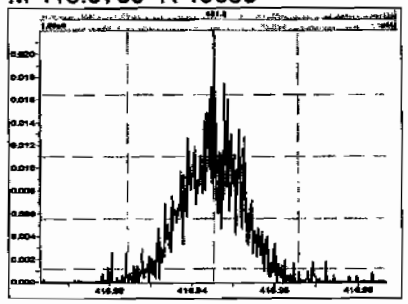

M 366.9792 R 15433

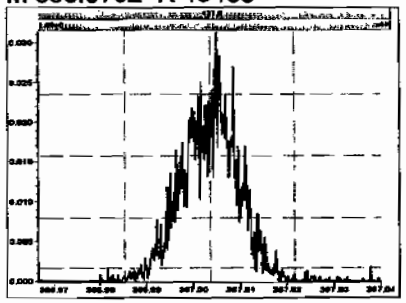

M 380.9760 R 14220

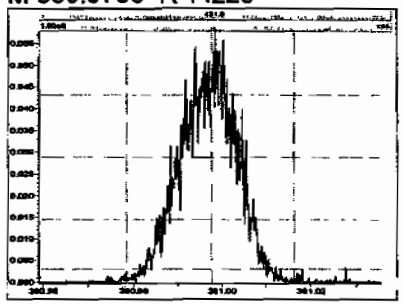

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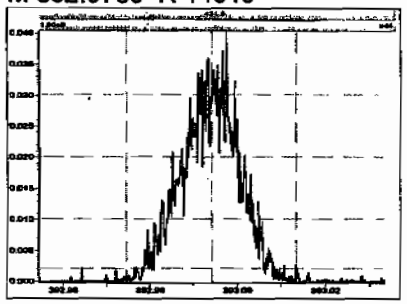

M 404.9760 R 14971

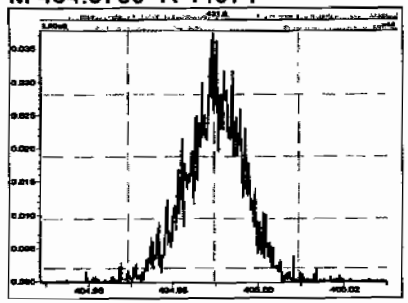

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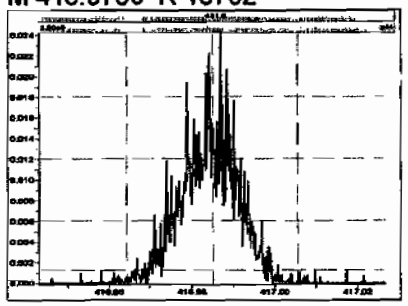

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M 430.9728 R 14874

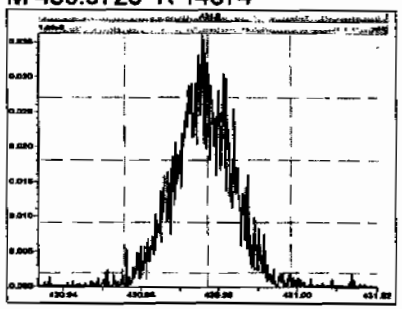

M 442.9728 R 15394

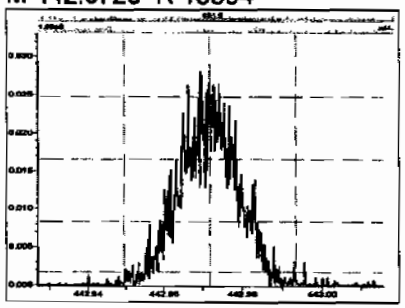

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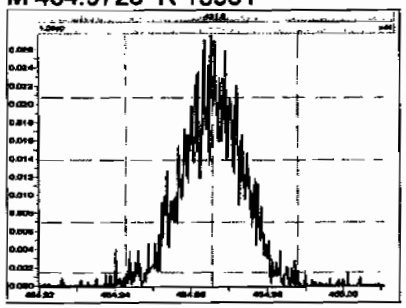

M 404.9760 R 14384

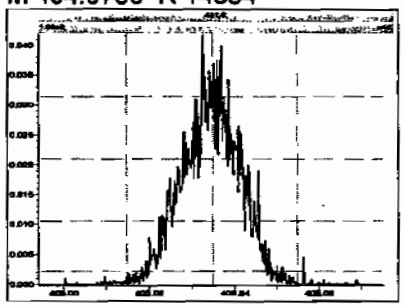

M 416.9760 R 16486

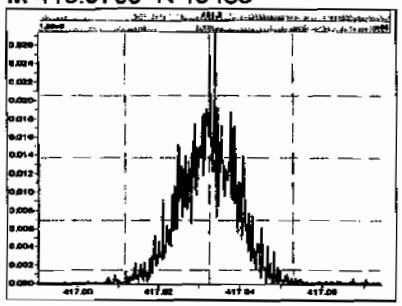

M 430.9728 R 14520

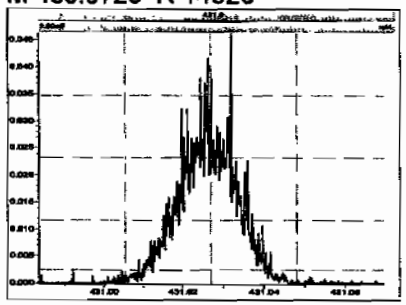

M 442.9728 R 14332

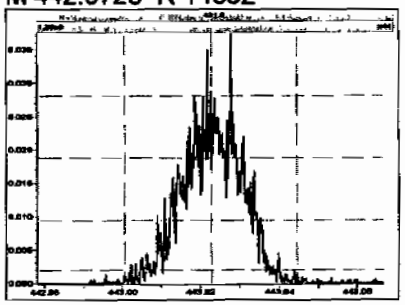

M 454.9728 R 13746

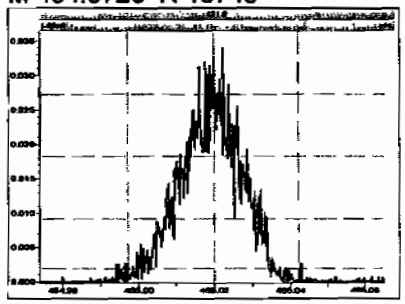

M 466.9728 R 16090

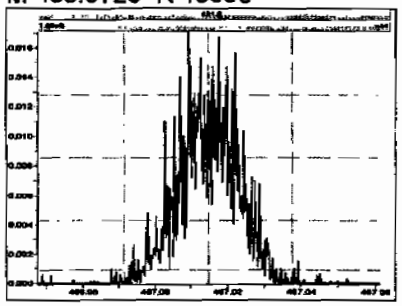

M 480.9696 R 13927

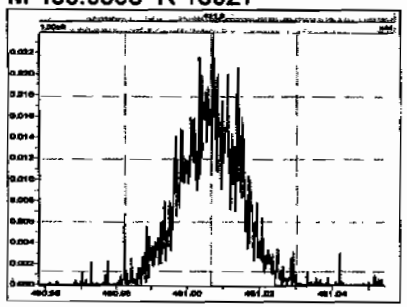

M 430.9728 R 12991

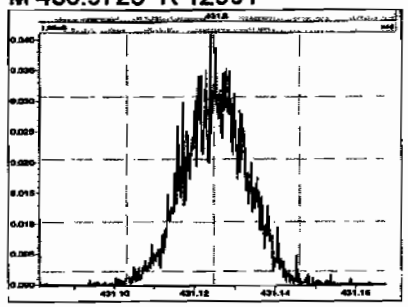

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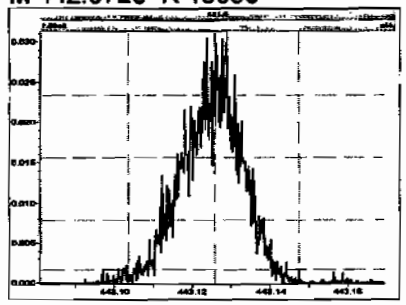

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M 454.9728 R 12791

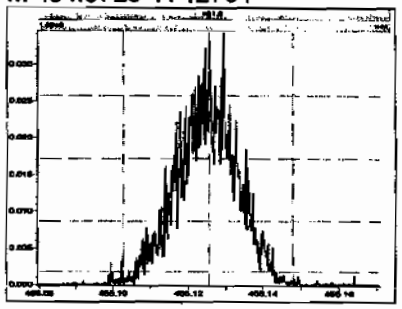

M 466.9728 R 14943

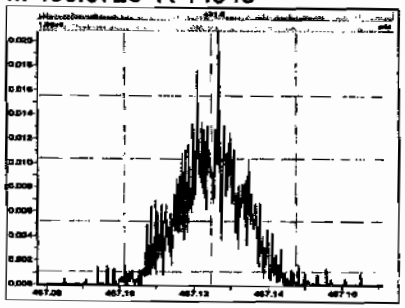

M 480.9696 R 12740

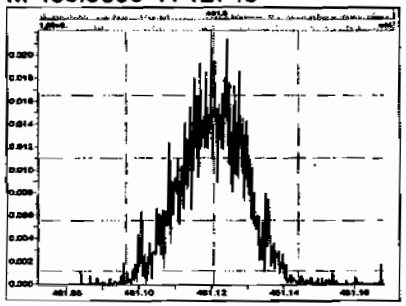

M 492.9696 R 15128

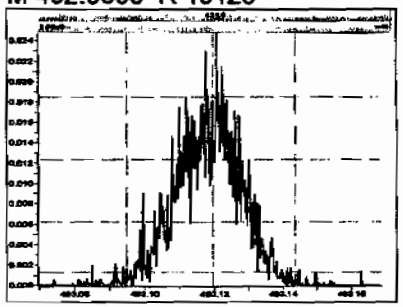

M 504.9696 R 13236

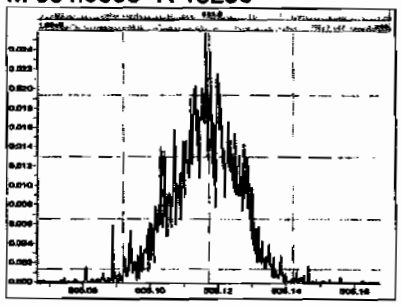

M 516.9697 R 17182

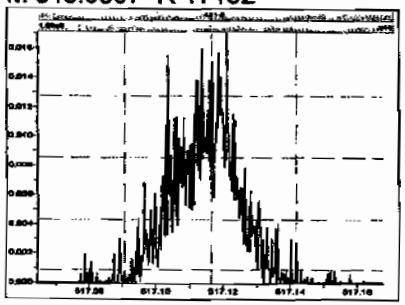

Quantify Sample Summary Report **MassLynx 4.1**
Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	1 2,3,7,8-TCDD	2.66e4	0.81	NO	1.08	1.000	25.98	1.001	9.5090		0.0723	9.5090
	2 1,2,3,7,8-PeCDD	1.01e5	0.61	NO	1.03	1.000	30.65	1.000	47.444		0.172	47.444
	3 1,2,3,4,7,8-HxCDD	9.43e4	1.26	NO	1.00	1.000	34.11	1.001	60.533		0.392	60.533
	4 1,2,3,6,7,8-HxCDD	8.97e4	1.28	NO	1.13	1.000	34.22	1.000	41.292		0.312	41.292
	5 1,2,3,7,8,9-HxCDD	9.40e4	1.29	NO	1.10	1.000	34.52	1.009	48.966		0.335	48.966
	6 1,2,3,4,6,7,8-HpCDD	7.06e4	1.02	NO	1.06	1.000	38.18	1.001	47.757		0.360	47.757
	7 OCDD	1.05e5	0.91	NO	1.18	1.000	41.66	1.000	87.851		0.375	87.851
	8 2,3,7,8-TCDF	3.59e4	0.80	NO	1.09	1.000	25.20	1.001	9.2692		0.0713	9.2692
	9 1,2,3,7,8-PeCDF	1.90e5	1.60	NO	1.16	1.000	29.43	1.001	47.569		0.197	47.569
	10 2,3,4,7,8-PeCDF	1.76e5	1.60	NO	1.12	1.000	30.36	1.001	49.959		0.207	49.959
	11 1,2,3,4,7,8-HxCDF	1.51e5	1.22	NO	1.41	1.000	33.19	1.000	47.242		0.234	47.242
	12 1,2,3,6,7,8-HxCDF	1.99e5	1.24	NO	1.22	1.000	33.31	1.000	52.247		0.205	52.247
	13 2,3,4,6,7,8-HxCDF	1.49e5	1.26	NO	1.28	1.000	33.93	1.001	48.194		0.285	48.194
	14 1,2,3,7,8,9-HxCDF	1.18e5	1.28	NO	1.28	1.000	34.91	1.000	50.089		0.402	50.089
	15 1,2,3,4,6,7,8-HpCDF	1.26e5	1.05	NO	1.69	1.000	36.81	1.000	45.609		0.324	45.609
	16 1,2,3,4,7,8,9-HpCDF	9.92e4	1.09	NO	1.48	1.000	38.74	1.000	53.044		0.451	53.044
	17 OCDF	1.36e5	0.92	NO	1.10	1.000	41.88	1.001	~~77825~~		102	77825
	18 13C-2,3,7,8-TCDD	2.60e5	0.79	NO	1.01	1.000	25.97	1.022	100.68	101	0.251	
	19 13C-1,2,3,7,8-PeCDD	2.07e5	0.62	NO	0.827	1.000	30.64	1.206	98.194	98.2	0.366	
	20 13C-1,2,3,4,7,8-HxCDD	1.56e5	1.23	NO	0.916	1.000	34.08	0.988	96.272	96.3	1.12	
	21 13C-1,2,3,6,7,8-HxCDD	1.93e5	1.30	NO	0.921	1.000	34.21	0.991	118.79	119	1.12	
	22 13C-1,2,3,4,6,7,8-HpCDD	1.39e5	1.04	NO	0.708	1.000	38.16	1.106	111.12	111	0.936	
	23 13C-OCDD	2.03e5	0.90	NO	0.503	1.000	41.65	1.207	229.27	115	1.10	
	24 13C-2,3,7,8-TCDF	3.56e5	0.77	NO	0.977	1.000	25.17	0.991	47241	~~47200~~	47.8	
	25 13C-1,2,3,7,8-PeCDF	3.45e5	1.53	NO	0.896	1.000	29.41	1.158	49875	~~49900~~	135	
	26 13C-2,3,4,7,8-PeCDF	3.15e5	1.57	NO	0.900	1.000	30.34	1.194	45355	~~45400~~	135	
	27 13C-1,2,3,4,7,8-HxCDF	2.27e5	0.52	NO	1.17	1.000	33.17	0.962	110.01	110	1.09	
	28 13C-1,2,3,6,7,8-HxCDF	3.11e5	0.53	NO	1.52	1.000	33.29	0.965	116.12	116	0.841	
	29 13C-2,3,4,6,7,8-HxCDF	2.41e5	0.53	NO	1.25	1.000	33.91	0.983	109.27	109	1.02	
	30 13C-1,2,3,7,8,9-HxCDF	1.87e5	0.53	NO	1.05	1.000	34.90	1.011	100.48	100	1.21	

2/13/09

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:40:23 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

	Name	Area	RA	IS	RRF	Wt/Vol	RT	RRT	Conc	Rec	Dev
31	13C-1,2,3,4,6,7,8-HpCDF	1.64e5	0.42	NO	0.868	1.000	36.80	1.066	107.17	107	0.875
32	13C-1,2,3,4,7,8,9-HpCDF	1.26e5	0.43	NO	0.727	1.000	38.73	1.122	98.571	98.6	1.05
33	13C-OCDF	3.18e2	0.17	YES	0.760	1.000	41.82	1.212	0.23753	~~0.119~~	0.197
34	37Cl-2,3,7,8-TCDD	2.82e4			0.668	1.000	25.98	1.023	16.616	166	0.0976
35	13C-1,2,3,4-TCDD	2.54e5	0.81	NO	1.00	1.000	25.40	0.000	100.00	100	0.254
36	13C-1,2,3,4-TCDF	7.72e2	0.44	YES	1.00	1.000	23.92	0.000	100.00	100	46.7
37	13C-1,2,3,7,8,9-HxCDD	1.76e5	1.30	NO	1.00	1.000	34.50	0.000	100.00	100	1.03

Vista Analytical Laboratory VG-10

Dataset: C:\MassLynx\Default.pro\Results\090212h1\090212h1-sss.qld

Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Method: C:\MassLynx\DEFAULT.PRO\MethDB\16.mdb 11 Feb 2009 10:13:41
Calibration: C:\MassLynx\Default.pro\Curvedb\db-5_1613vg10-2-12-09.cdb 13 Feb 2009 07:27:00

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

2,3,7,8-TCDD

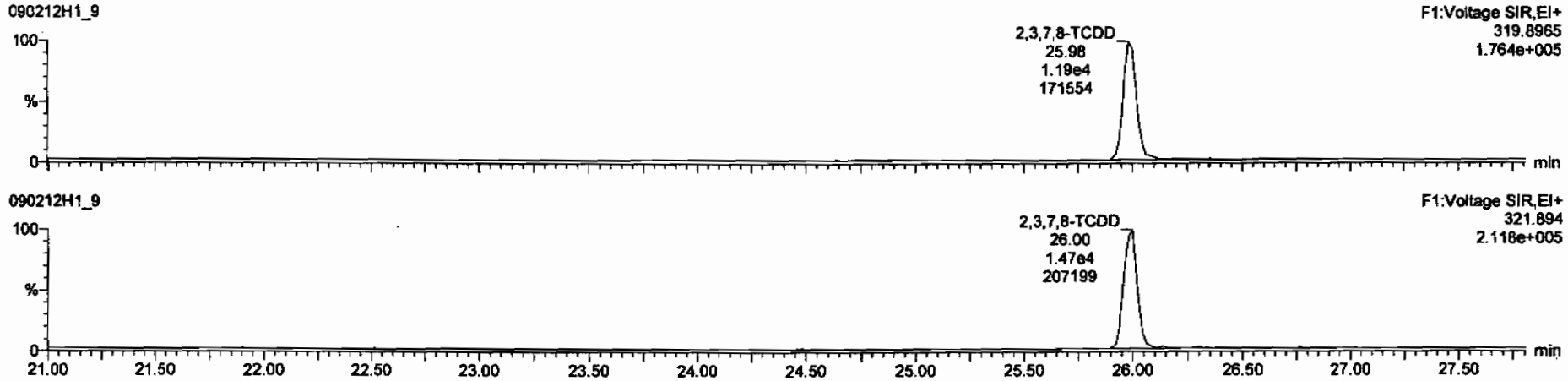

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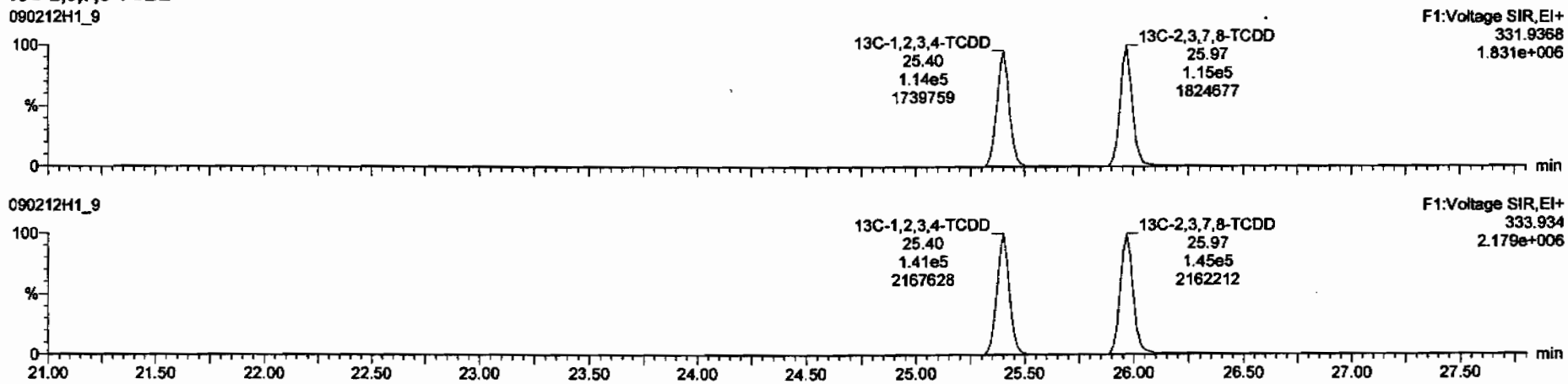

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

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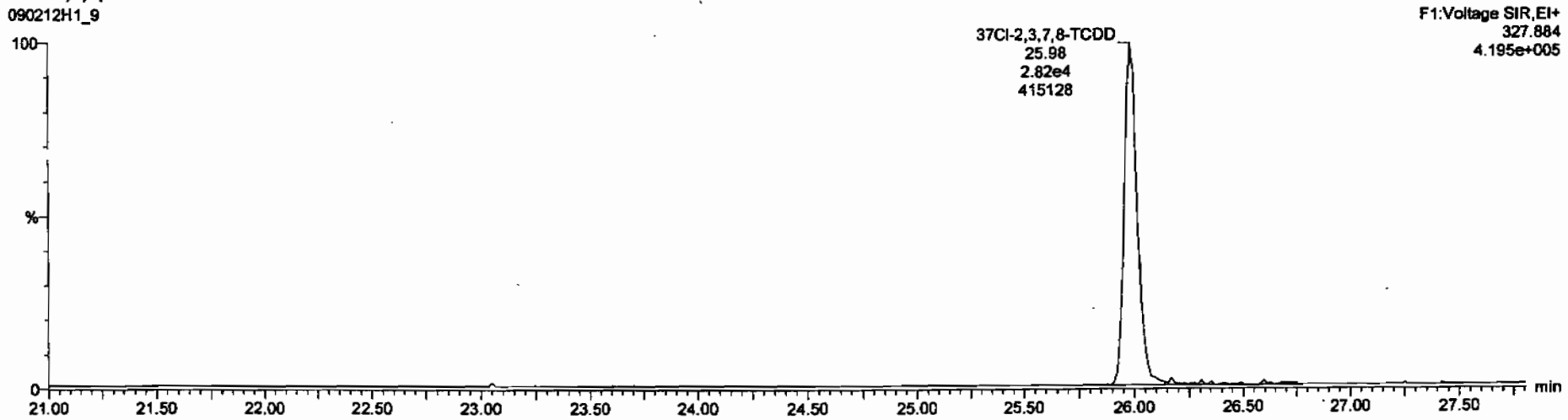

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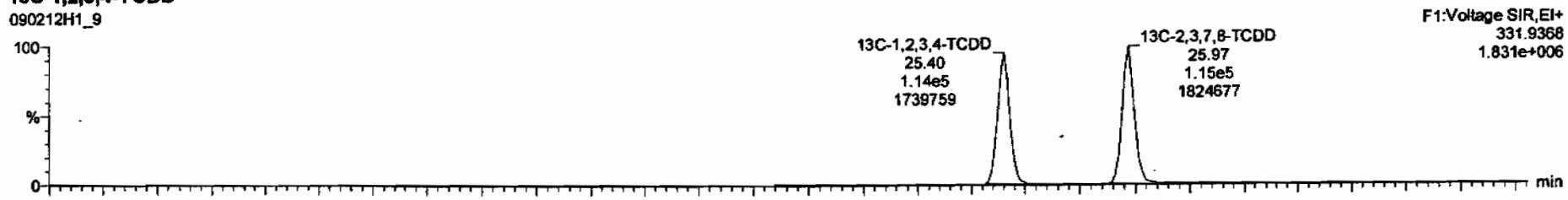

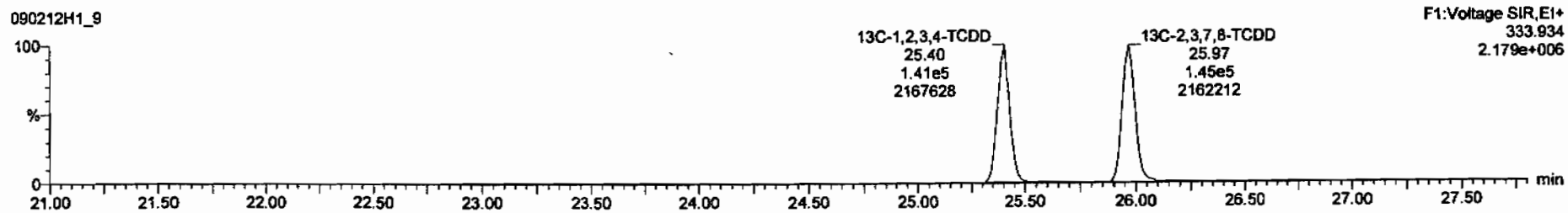

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,7,8-PeCDD

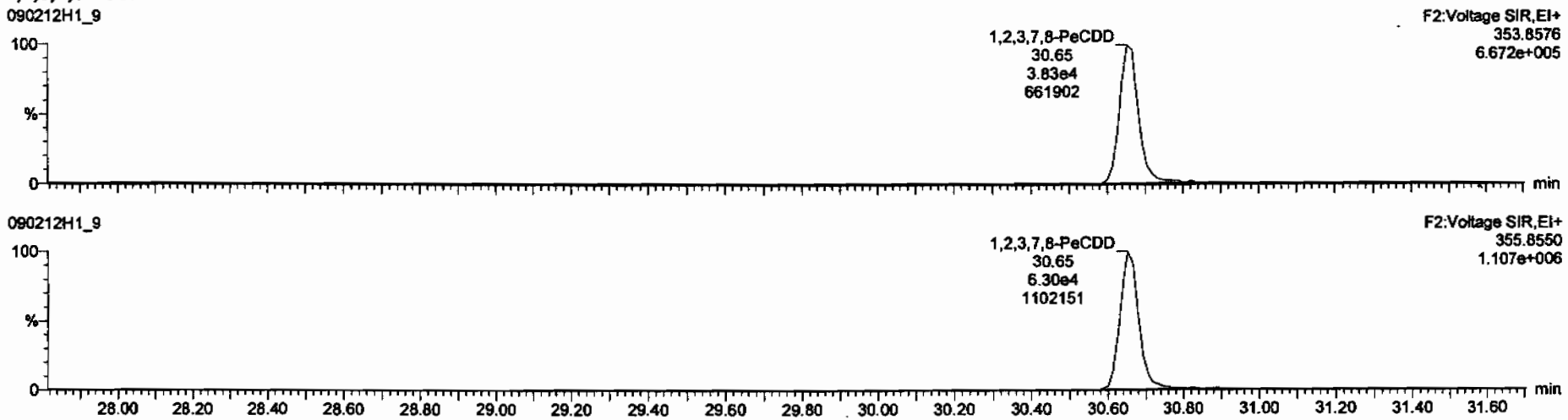

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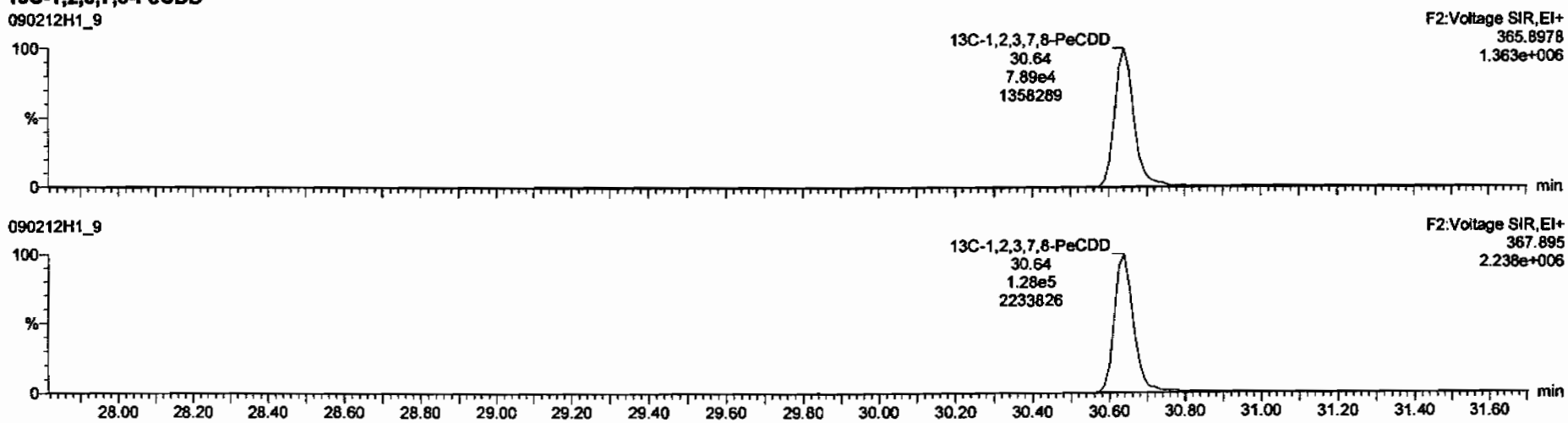

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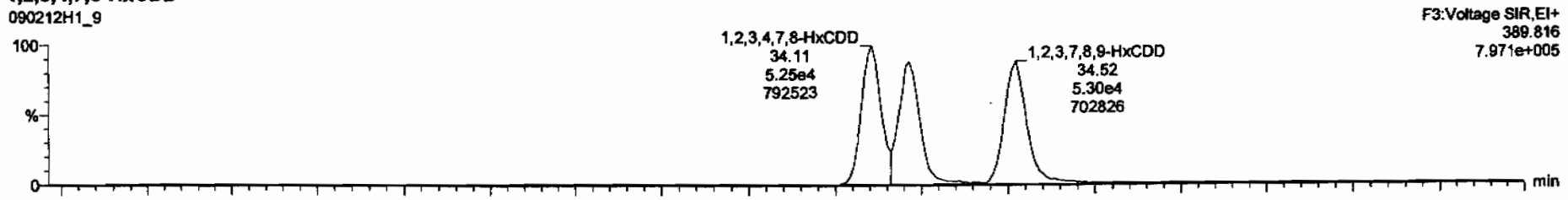

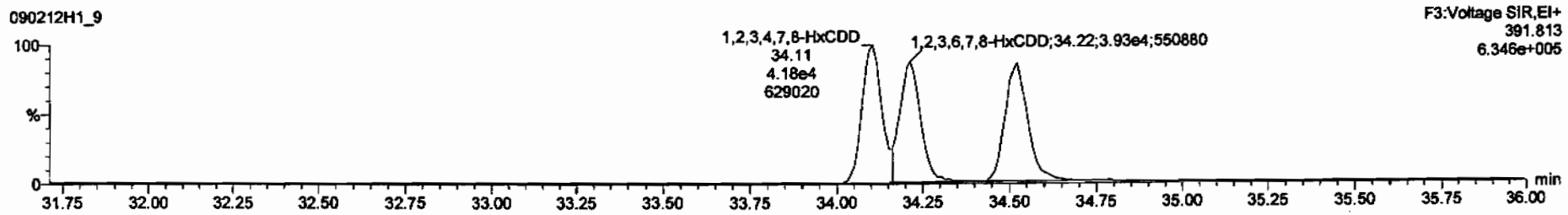

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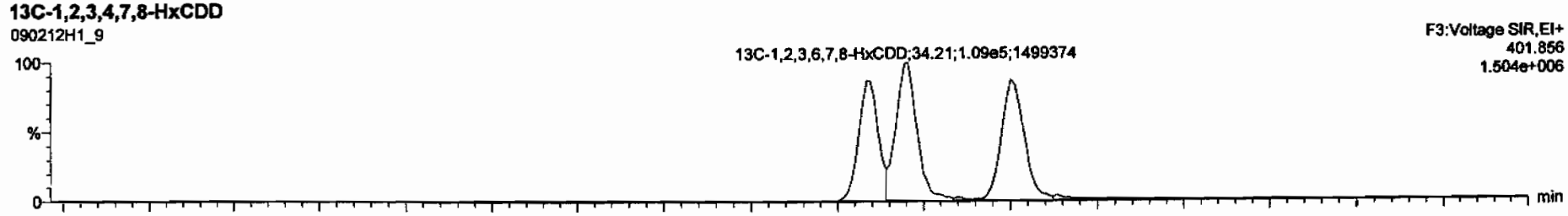

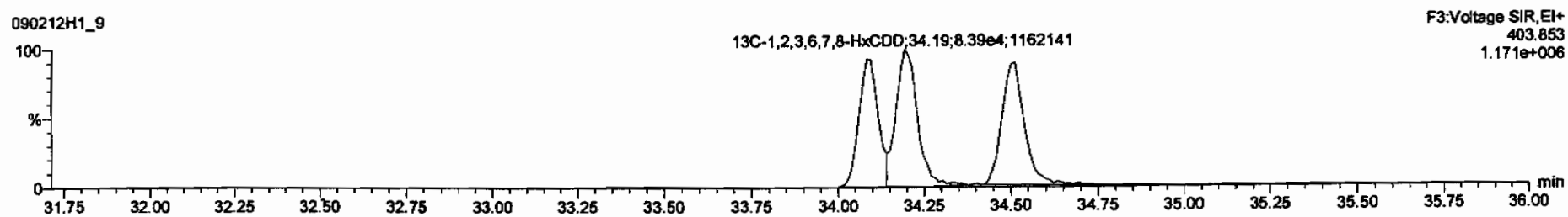

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,6,7,8-HpCDD

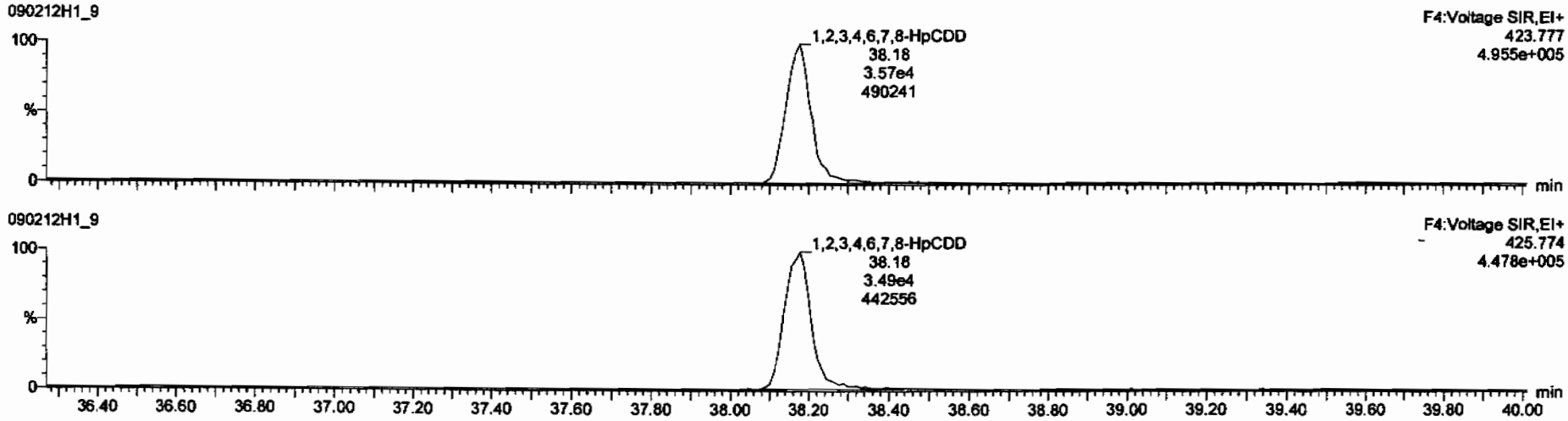

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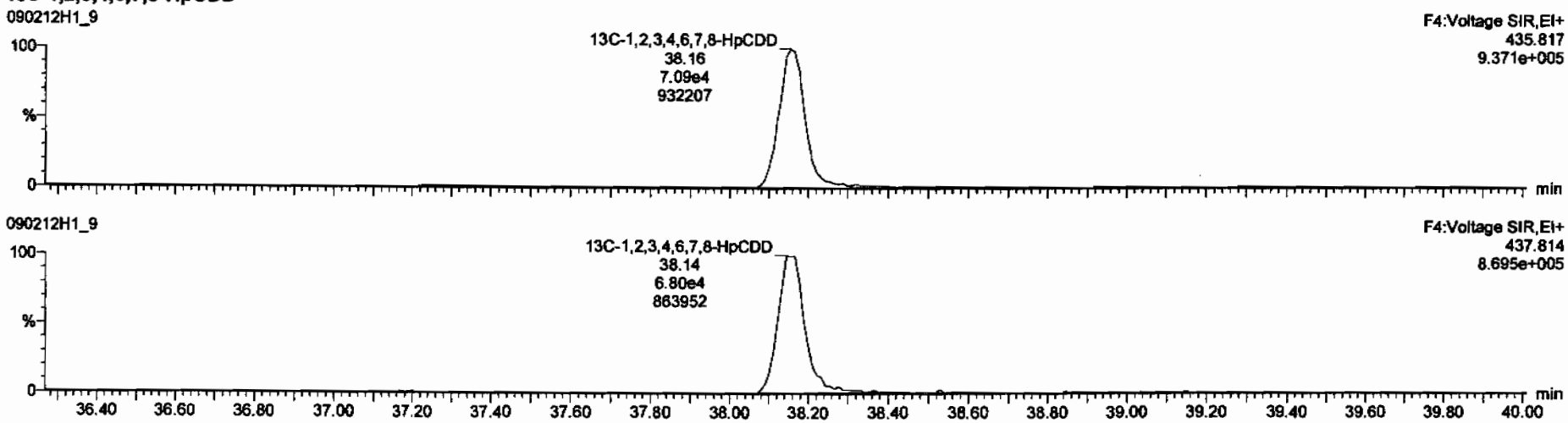

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OCDD

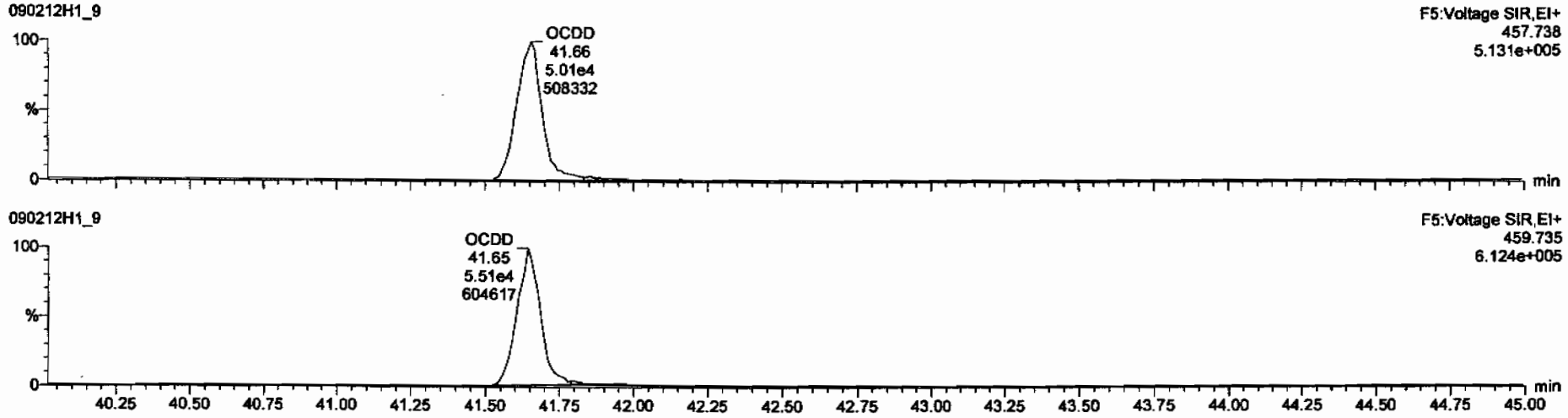

13C-OCDD

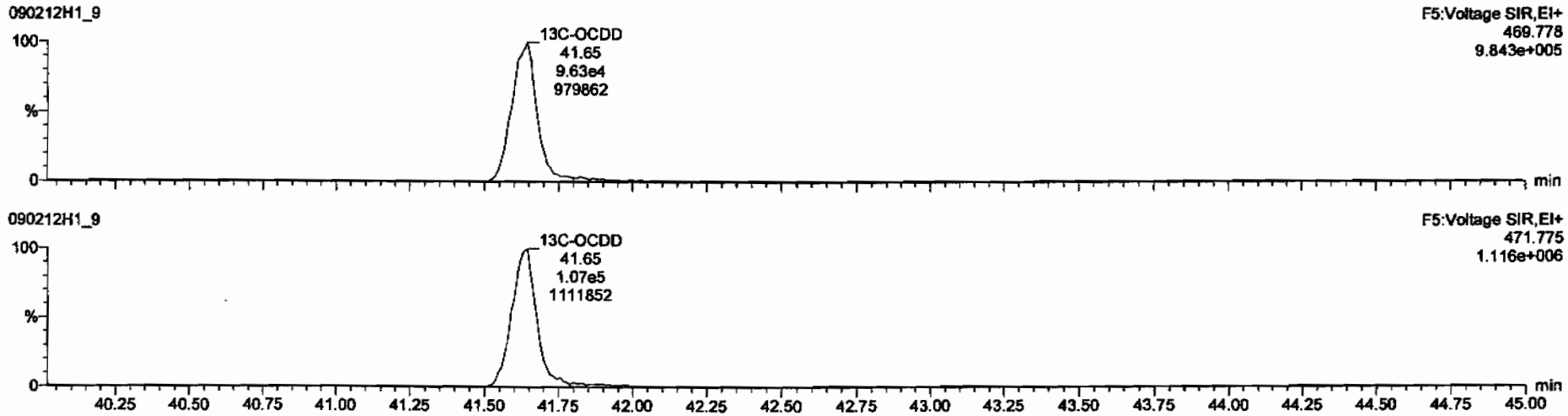

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2,3,7,8-TCDF

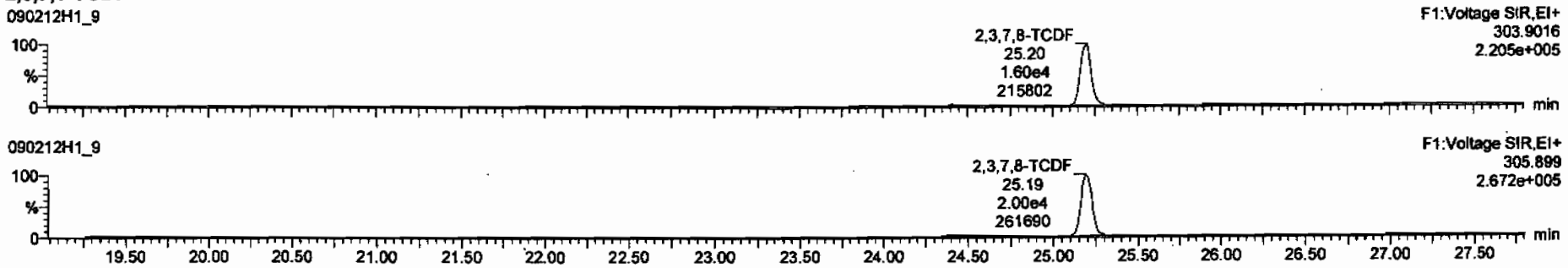

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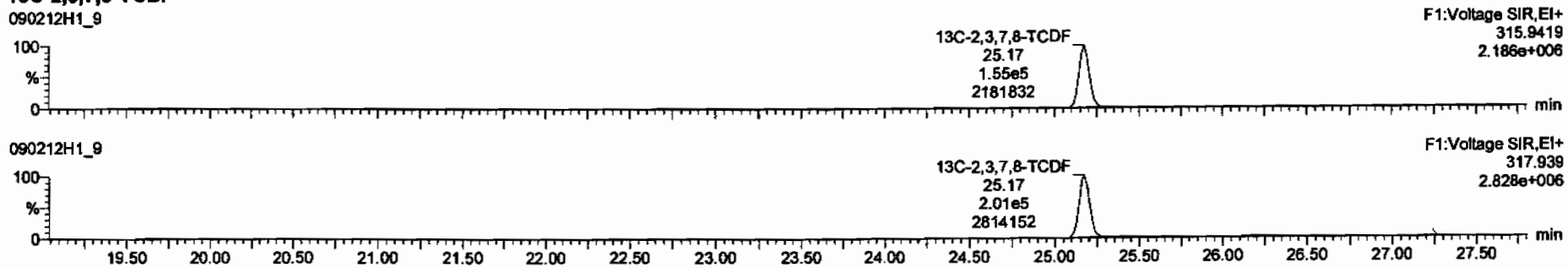

DPE1

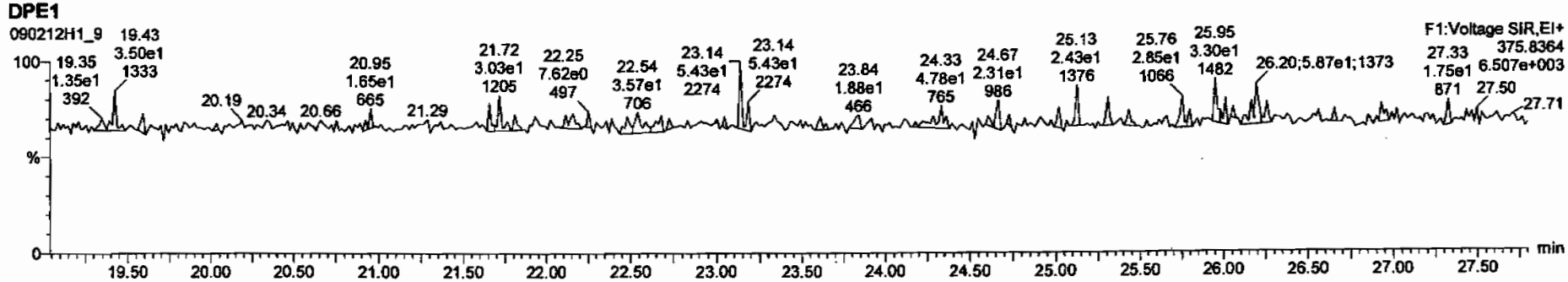

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1st Func. Penta-Furans

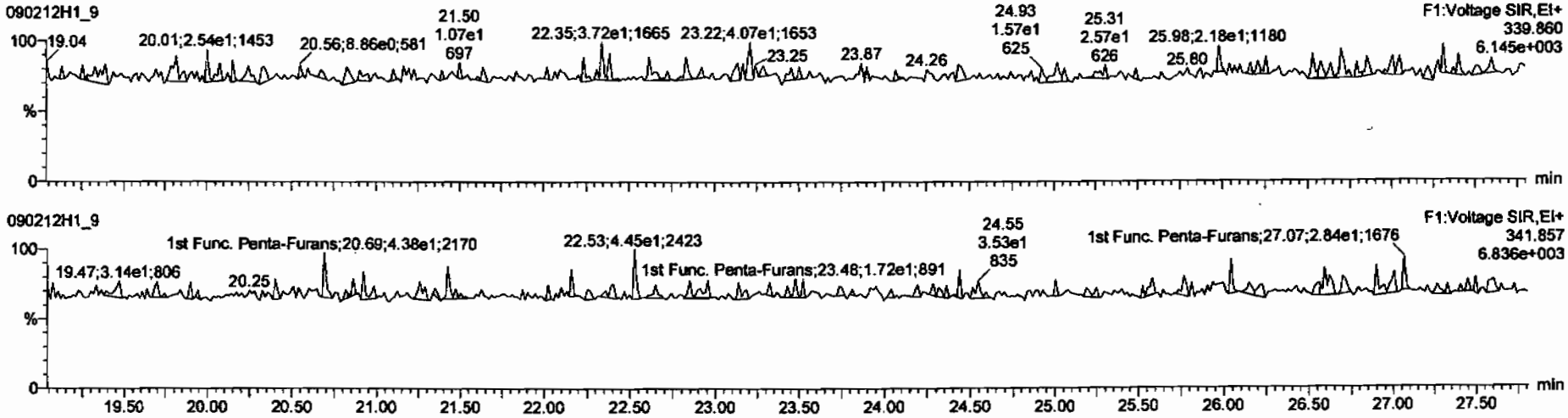

DPE6

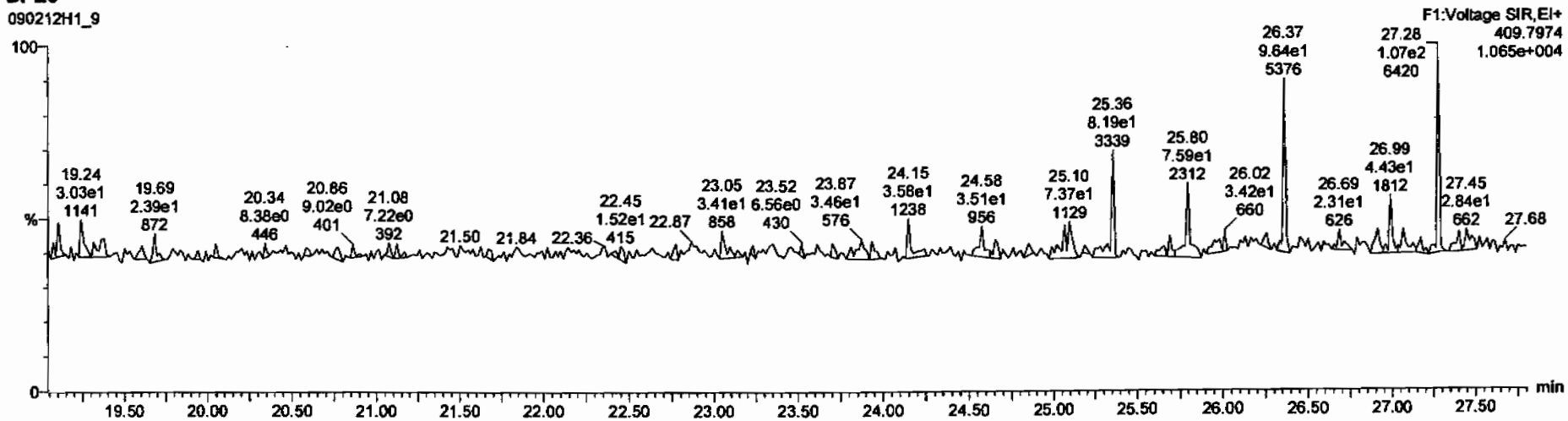

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Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,7,8-PeCDF

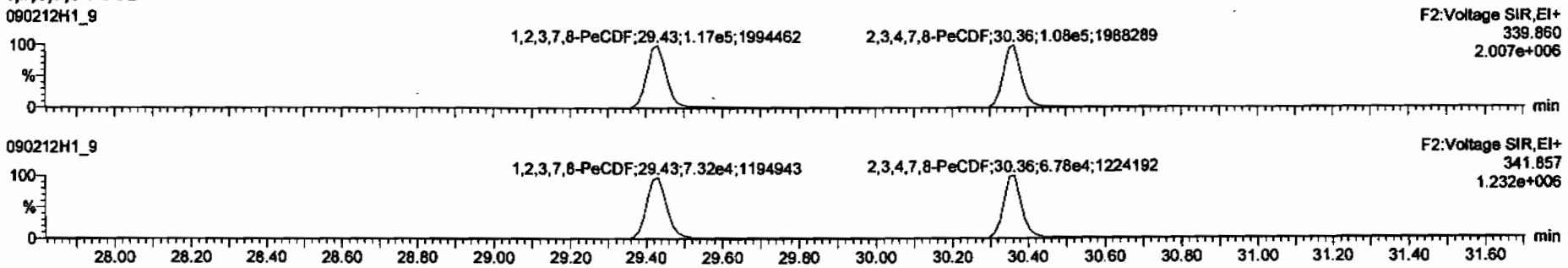

13C-1,2,3,7,8-PeCDF

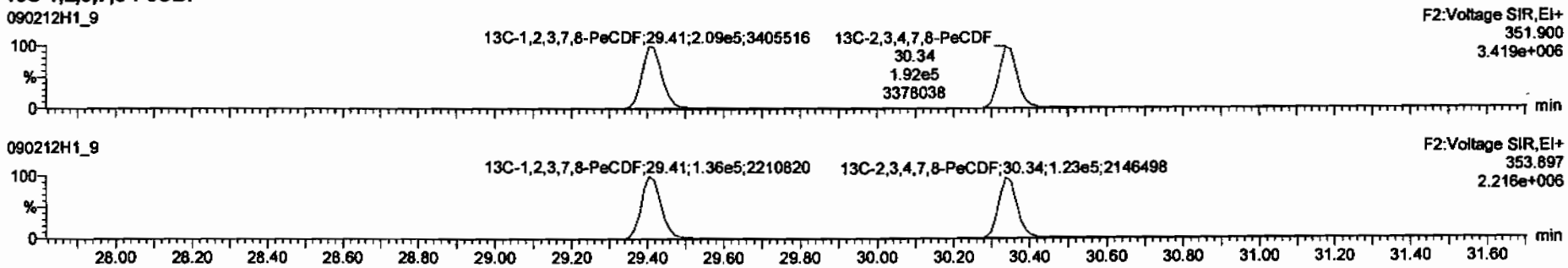

DPE2

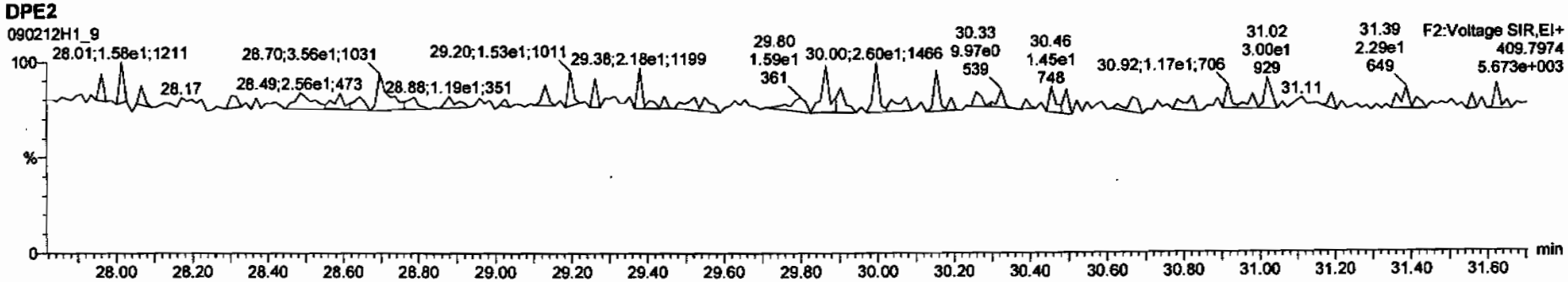

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,7,8-HxCDF

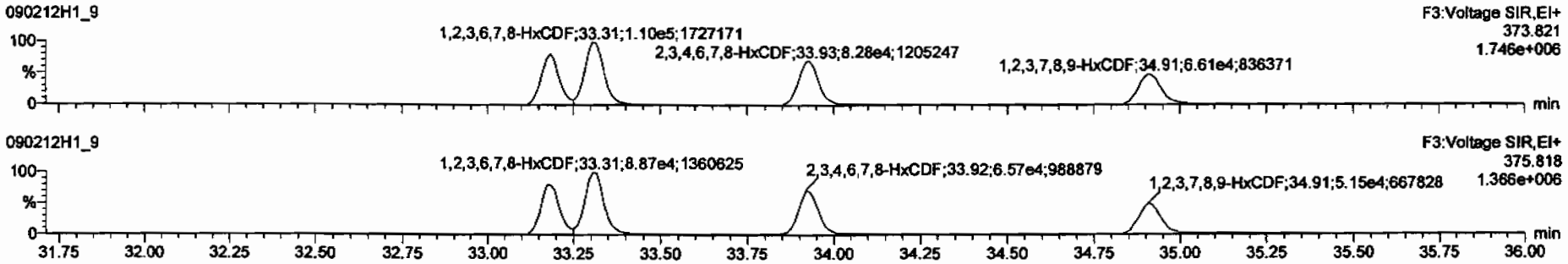

13C-1,2,3,4,7,8-HxCDF

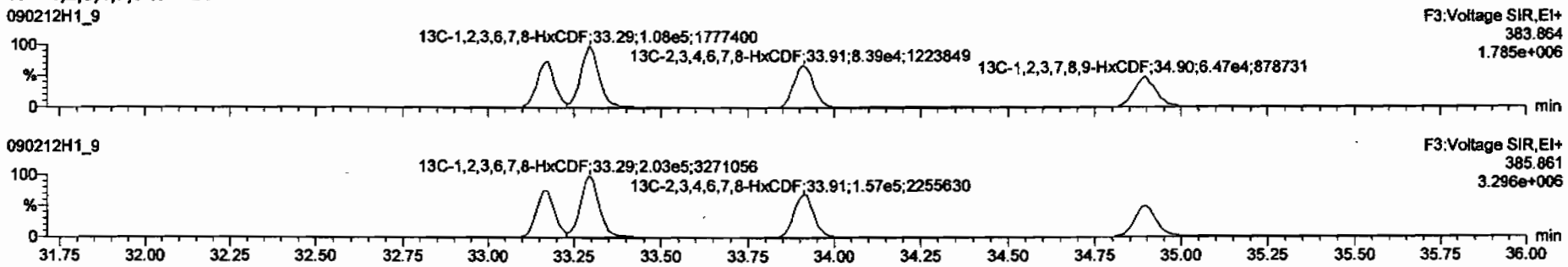

DPE3

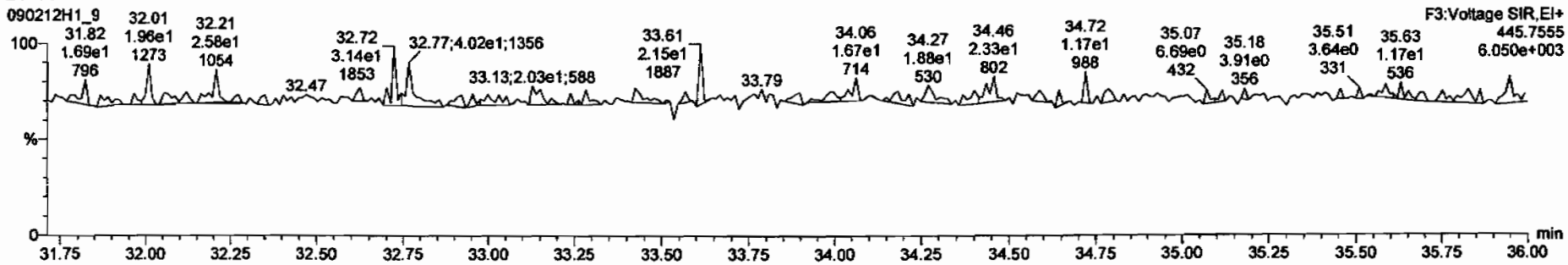

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

1,2,3,4,6,7,8-HpCDF

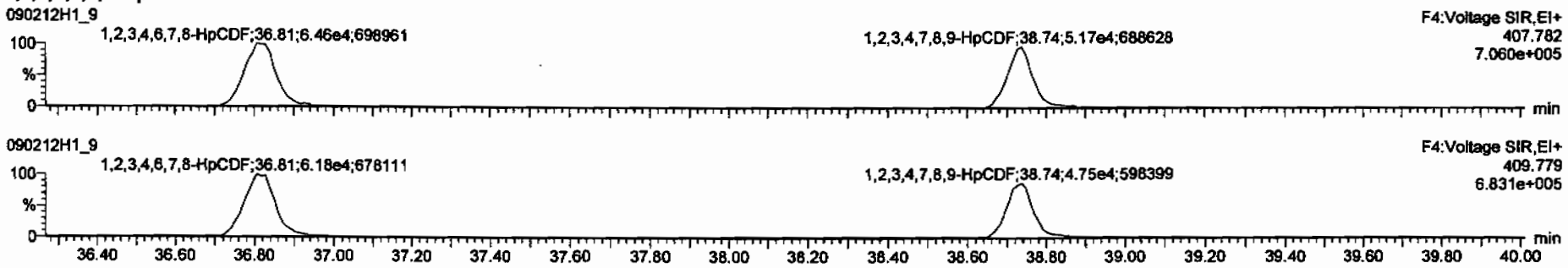

13C-1,2,3,4,6,7,8-HpCDF

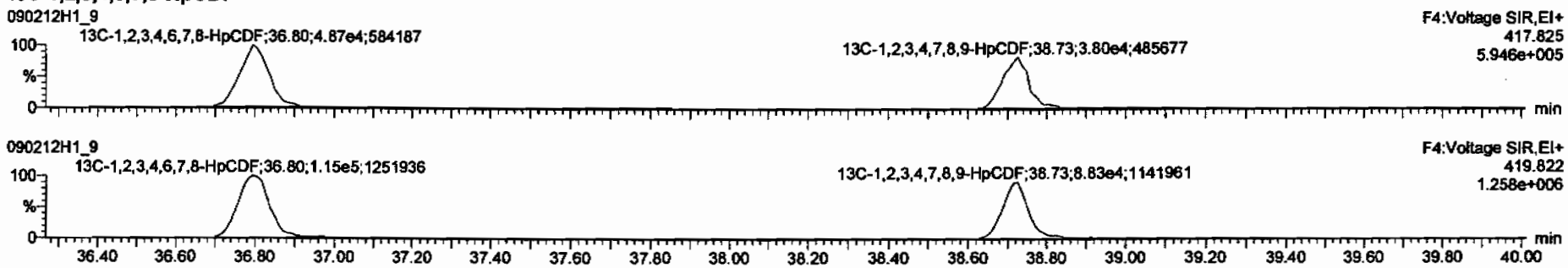

DPE4

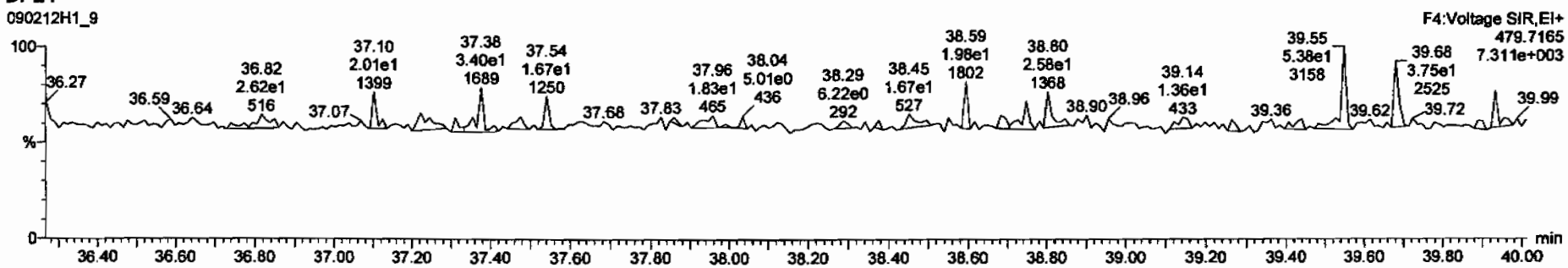

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

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OCDF

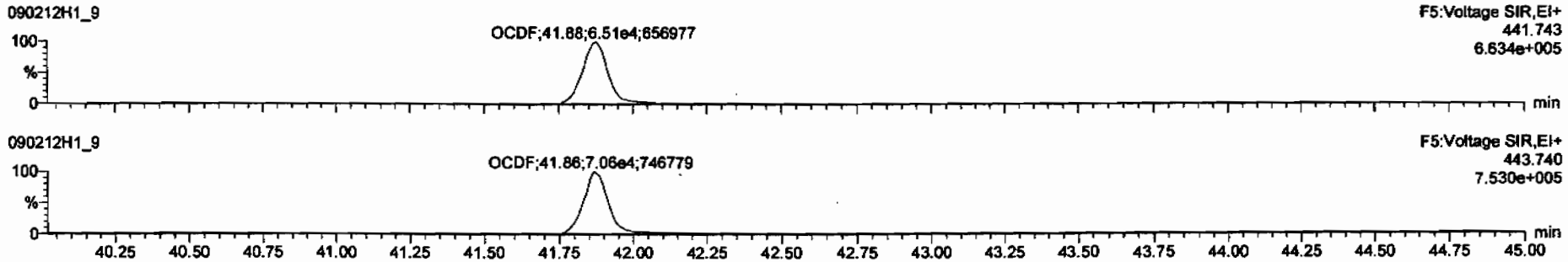

13C-OCDF

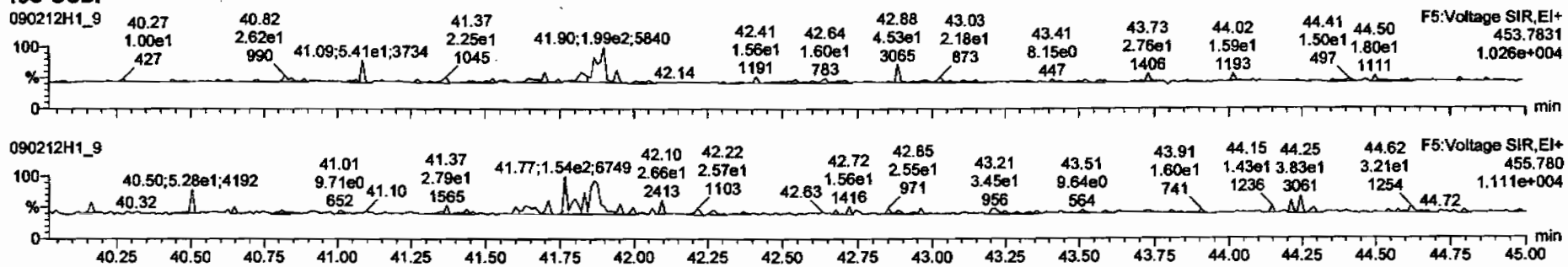

DPE5

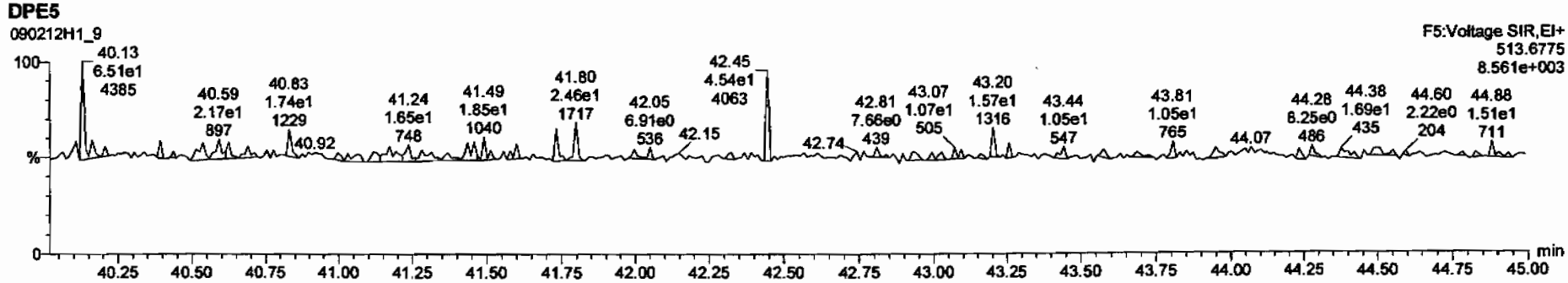

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Last Altered: Friday, February 13, 2009 07:39:35 Pacific Standard Time
Printed: Friday, February 13, 2009 07:43:22 Pacific Standard Time

Name: 090212H1_9, Date: 12-Feb-2009, Time: 17:45:49, ID: SSS090212H1-1 Sec Src Std L070913A, Description: Sec Src Std L070913A

PFK1

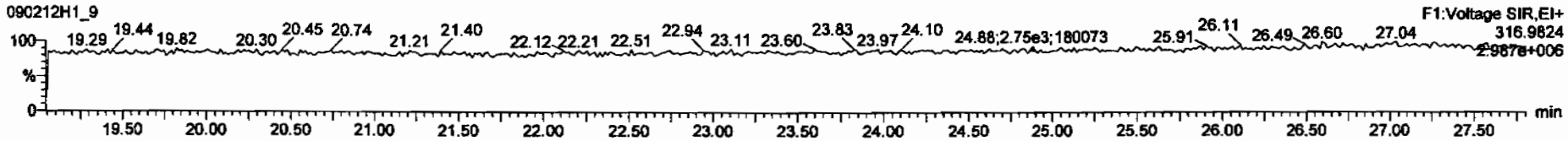

PFK2

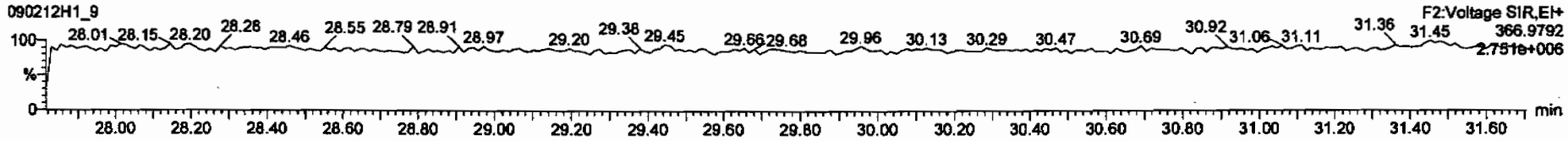

PFK3

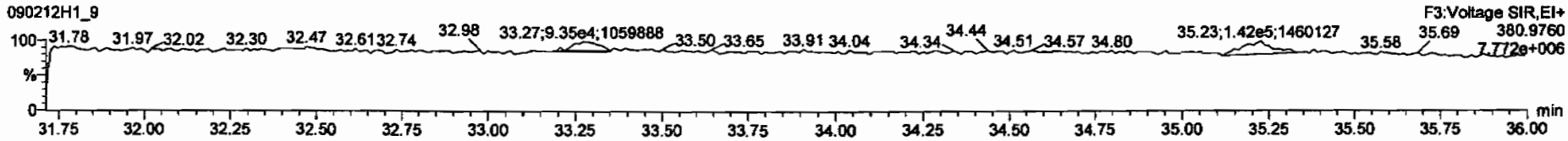

PFK4

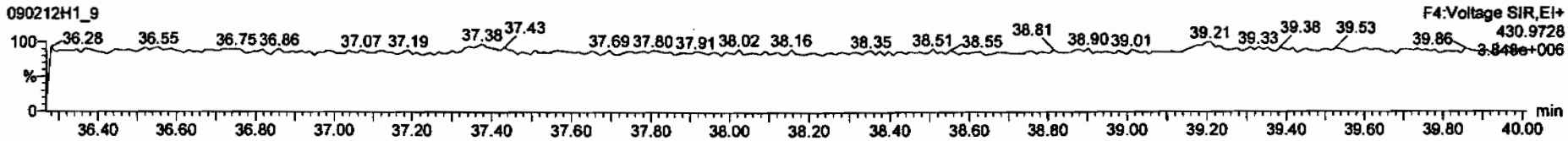

PFK5

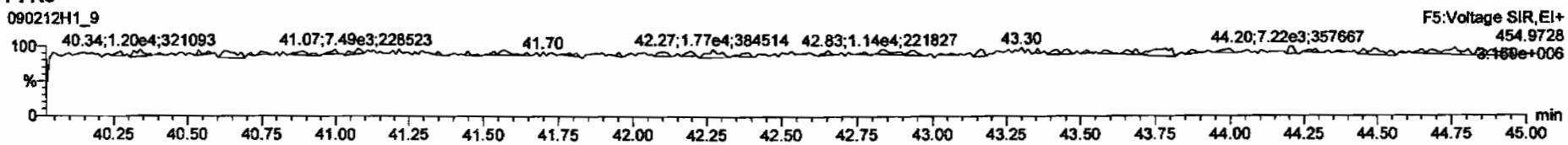

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2517

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2517

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/30/2009

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	EPA:906.0	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2517

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-10030	R	6/26/2009	
	HASL-300:ISOPU	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	HASL-300:ISOU	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2517

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2517

REQUEST NUMBER: 09-2517

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9942	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9942	1	POLY	H3	Ice	R
CAMO-09-9941	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9941	1	POLY	H3	Ice	R
CAMO-09-9943	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9943	1	POLY	H3	Ice	R
CAMO-09-10030	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-10030	1	POLY	H3	Ice	R
CAMO-09-9989	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9989	1	POLY	H3	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/30/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9941

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/~~18~~ 26/2009 AG 6.26.09	MEDIA:	OBT4	Fill
TIME COLLECTED (HH:MM)		AG 6.26.09 1100 0929	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605457	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	~~2.0~~ 3.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	~~3.0~~ 5.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Reg~~ AG 6.26.09 15-DAY	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown crushed tuff fill

FD: CAMO-09-10030

SAMPLE COMMENTS: Depth required for duplicate

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 19 dpm

β/γ ≤ 1059 dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9942

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	QBT4	Qbt 3
TIME COLLECTED (HH:MM)		0938	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	NA
LOCATION ID:	MO-605457	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	5.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	6.0	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Indurated Brown/gray tuff

SAMPLE COMMENTS: Interface @ 5.0' bgs

LOCATION DESC: 50-004(a).09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 19 dpm

β/γ ≤ 373 dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gonnas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonnas	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9943

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	QBT4	qbt3
TIME COLLECTED (HH:MM)		1105	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605457	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	10.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	11.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Purple/gray tuff indurated

FR: CAMO-09-10024

SAMPLE COMMENTS: Advanced to depth w/ power auger, sample taken by hand auger 10.0 – 11.0' bgs

LOCATION DESC: 50-004(a) 09

FIELD SCREENING/MEASUREMENT RESULTS:

6.25.09 ~~β~~ α ≤ 25

β/γ ≤ 1168

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A Goumas	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9989

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	QBT4	~~Fill~~ Sed
TIME COLLECTED (HH:MM)		1110	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605473	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	2.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	3.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED:	YES / NO / NA	

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown wet sediment w/ organic material (bark & roots) FTB: CAMO-09-10013

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a)-11, below drainage culvert (N) of NES MDAC

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 35$ dpm

$\beta/\gamma \leq 937$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Gurney **REVIEWED BY (PRINT)** J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gurney	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1146	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10013

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1110	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-60547 3	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
NA 6.26.09 1 ~~2~~	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package

SAMPLE DESC: QC Sample of CAMO-09-9989

SAMPLE COMMENTS: NONE

LOCATION DESC: 50-004(a)-11

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gourmos

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gourmos (Signature) [signature]	6.26.09 1145	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/26/09 11:50
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) (Signature)		(Printed Name) (Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10024

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1120	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-405457	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:		NA
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	8-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	Full Data Package
1		NO3NO2	~~250~~ ML POLY 500 AG 6.26.09	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09 - 9943

SAMPLE COMMENTS: NONE

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gomas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomas (Signature) [signature]	6.26.09 1145	(Printed Name) Sherri Sherwood (Signature) [signature]	6/26/09 11:50
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10030

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		0929	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	UNK	MO-605457	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	5.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	5	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: QC Sample of CAMO-09-9941
Brown crushed tuff

SAMPLE COMMENTS: Depth required for duplicate

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 19$ dpm

$\beta/\gamma \leq 1059$ dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-9941 —> 9943
-10030
-9989

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10024
-10013

Reason: QC of Samples.

Print Last Name Branch **Signature** [signature] **Date** 6/26/09

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00077

Client Sample ID: CAMO-09-9941

Sample Collection Date: 06/26/09 09:29

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-09-00077-001

Date Received: 06/29/09 00:00

Report Date: 06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 3 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	9.95	51.11	121.29	51.12	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	44.04	16.17	19.29	17.05		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	19.69	7.90	1.78	7.93		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	11.66	0.12	11.66	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	15.25	0.07	15.25	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.00	12.12	0.14	12.12	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.38	0.52	0.16	0.52		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA-226	1.67	0.62	0.31	0.63		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	0.27	0.31	0.30	0.31	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.95	3.08	1.20	3.28		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.52	0.37	0.12	0.37		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.11

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-9942	ARS Sample ID:	ARS2-09-00077-002
Sample Collection Date:	06/26/09 09:38	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	108.05	92.47	105.46	93.41		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	40.58	16.76	19.78	17.48		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	-0.51	-12.91	3.86	-12.91	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	11.98	0.11	11.98	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.05	0.09	0.09	0.09	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	15.68	0.08	15.68	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.00	12.46	0.14	12.46	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.53	0.57	0.18	0.57		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA-226	1.29	0.67	0.32	0.67		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	1.23	0.75	0.29	0.75		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.81	4.27	1.72	4.41		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.23	0.49	0.20	0.49		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.33

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-9943	ARS Sample ID:	ARS2-09-00077-003
Sample Collection Date:	06/26/09 11:05	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.84	86.53	128.32	86.99	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	31.80	16.53	21.48	16.99		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.08	0.15	0.13	0.15	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	-0.95	-18.05	3.58	-18.05	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	12.09	0.13	12.09	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	0.03	0.15	0.10	0.15	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.45	0.41	0.15	0.41	BI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.50	0.63	0.23	0.64		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA-228	1.10	1.03	0.24	1.03		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	-0.08	145.55	0.33	145.55	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	5.99	3.70	1.46	3.95		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.31	0.27	0.10	0.27		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.24

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CANO-09-9989	ARS Sample ID:	ARS2-09-00077-004
Sample Collection Date:	06/26/09 11:10	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	17.51	58.18	125.00	58.22	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	21.49	13.98	20.31	14.22		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	0.65	4.90	2.76	4.90	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.15	0.13	0.09	0.13		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.16	0.10	0.07	0.10	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	0.82	0.34	0.06	0.34		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.33	0.30	0.10	0.30	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	0.76	0.35	0.12	0.35		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA 226	1.43	0.73	0.24	0.73		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	1.45	0.96	0.31	0.96		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	1.89	2.39	1.08	2.39		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	1.13	0.39	0.11	0.39		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 0.89

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate # 30658 NELAP Certificate # E87558

ARS AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00077

Client Sample ID: CAMO-09-10030

Sample Collection Date: 06/26/09 09:20

Sample Matrix: Soil/Solid

Request or PO Number:

ARS Sample ID: ARS2-09-00077-005

Date Received: 06/29/09 00:00

Report Date: 06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	10.00	51.07	121.29	51.09	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	37.43	15.41	19.29	16.08		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	26.64	9.76	2.03	9.80		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	13.30	0.13	13.30	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	41.30	0.09	41.30	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.46	0.53	0.20	0.53	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.49	0.56	0.15	0.56		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA 220	2.59	1.70	0.64	1.71		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	2.44	1.56	0.44	1.56		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.31	3.99	1.69	4.11		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.86	0.46	0.13	0.46		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 0.98

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2517 VALIDATION DATE: 07/27/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: David Schwent ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☒ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. All reported gamma spec sample results that were rejected by the laboratory due to interference or low abundance were qualified R,R5a. In the QC samples, several gamma spec results were also rejected by the laboratory. No sample data were qualified as a result.

2. All reported sample results that were ≤ the MDCs were qualified U,R5.

3. The result for gamma spec analyte Th-234 in sample CAMO-09-9989 was > the MDC but ≤3X the 1-sigma TPU and, thus, was qualified U,R11.

4. No MS was performed for the tritium analysis. However, an LCS was performed and met acceptance criteria. Thus, no sample data were qualified.

DATA VALIDATION COVER SHEET

5119-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

5. It should be noted that the matrix QC analysis for the isotopic-Pu, gamma spec, and tritium batches in this RN were performed on LANL samples from other RNs. No sample data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/28/09

VALIDATOR'S SIGNATURE: David Schmoll DATE: 07/27/09

Form 5119-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☒	☐	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9942	Project:	LANL01004
Sample ID:	232664001	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	11.9%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		0.130		0.0233	+/-0.0153	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.483		0.0284	+/-0.0353	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.773		0.219	+/-0.0846	0.100	pCi/g		KXM4	07/15/09	2112	885095	3
Uranium-235/236	U	0.078	U,R5	0.101	+/-0.0271	0.100	pCi/g						
Uranium-238		0.909		0.086	+/-0.0948	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.298	U,R5	0.335	+/-0.106	0.200	pCi/g		MXR1	07/14/09	0826	882713	5
Bismuth-211	UI	4.50	R,R5a	0.362	+/-0.283		pCi/g						
Bismuth-214		1.43		0.129	+/-0.109	0.200	pCi/g						
Cadmium-109	UI	3.63	R,R5a	1.75	+/-0.623		pCi/g						
Cerium-139	U	0.0245	U,R5	0.0616	+/-0.0184	0.050	pCi/g						
Cesium-134	U	0.112		0.113	+/-0.0362	0.100	pCi/g						
Cesium-137	U	-0.0177		0.0679	+/-0.0227	0.100	pCi/g						
Cobalt-60	U	0.0447		0.0892	+/-0.0253	0.100	pCi/g						
Europium-152	U	-0.00247		0.179	+/-0.0654	0.200	pCi/g						
Lanthanum-140	U	0.0182		0.187	+/-0.0641		pCi/g						
Lead-212		1.94		0.112	+/-0.0926	0.100	pCi/g						
Lead-214		1.57		0.129	+/-0.107	0.100	pCi/g						
Mercury-203	U	0.0529	U,R5	0.0894	+/-0.0259	0.100	pCi/g						
Potassium-40		34.8		0.658	+/-1.79	1.00	pCi/g						
Radium-223	U	0.391	U,R5	1.31	+/-0.436		pCi/g						
Radium-224	UI	5.57	R,R5a	1.27	+/-0.511		pCi/g						
Radium-226		1.43		0.129	+/-0.109		pCi/g						
Radium-228		1.81		0.234	+/-0.200	0.500	pCi/g						
Ruthenium-106	U	-0.0586	U,R5	0.597	+/-0.187	0.800	pCi/g						
Sodium-22	U	-0.00262	U,R5	0.0836	+/-0.026	0.080	pCi/g						
Strontium-85	UI	0.163	R,R5a	0.0952	+/-0.0277		pCi/g						
Thallium-208		0.485		0.0686	+/-0.0484	0.080	pCi/g						
Thorium-227	U	-0.416	U,R5	0.722	+/-0.239		pCi/g						
Thorium-231	U	0.391		1.31	+/-0.436		pCi/g						
Thorium-234	U	2.21		2.71	+/-0.831	2.00	pCi/g						
Tin-113	U	0.0122		0.087	+/-0.0259	0.100	pCi/g						
Uranium-235	U	-0.00456		0.431	+/-0.133	0.500	pCi/g						
Yttrium-88	U	0.00831		0.0537	+/-0.0154	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9942
Sample ID: 232664001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	-6.83	U,R5	237	+/-69.2	250	pCi/L		KXK2	07/15/09	1048	883020	6

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	93.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9941
Sample ID: 232664002
Matrix: R
Collect Date: 26-JUN-09
Receive Date: 01-JUL-09
Collector: Client
Moisture: 10.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		0.0424		0.0211	+/-0.00809	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		3.49		0.0257	+/-0.182	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.35		0.266	+/-0.137	0.100	pCi/g		KXM4	07/16/09	1950	885095	3
Uranium-235/236	U	0.0267	U,R5	0.123	+/-0.0168	0.100	pCi/g						
Uranium-238		1.32		0.104	+/-0.134	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241		0.382		0.342	+/-0.107	0.200	pCi/g		MXR1	07/14/09	0827	882713	6
Bismuth-211	UI	4.56	R,R5a	0.306	+/-0.261		pCi/g						
Bismuth-214		1.43		0.103	+/-0.100	0.200	pCi/g						
Cadmium-109	UI	4.47	R,R5a	1.29	+/-0.583		pCi/g						
Cerium-139	U	-0.0168	U,R5	0.0456	+/-0.0138	0.050	pCi/g						
Cesium-134	UI	0.0851	R,R5a	0.079	+/-0.0216	0.100	pCi/g						
Cesium-137	U	0.0292	U,R5	0.0653	+/-0.0187	0.100	pCi/g						
Cobalt-60	U	-0.00494		0.0551	+/-0.0172	0.100	pCi/g						
Europium-152	U	-0.00204		0.146	+/-0.0565	0.200	pCi/g						
Lanthanum-140	U	-0.137		0.142	+/-0.0509		pCi/g						
Lead-212		1.91		0.084	+/-0.0892	0.100	pCi/g						
Lead-214		1.59		0.107	+/-0.0998	0.100	pCi/g						
Mercury-203	U	0.0409	U,R5	0.0692	+/-0.0203	0.100	pCi/g						
Potassium-40		28.1		0.490	+/-1.31	1.00	pCi/g						
Radium-223	U	0.017	U,R5	1.04	+/-0.369		pCi/g						
Radium-224	UI	5.04	R,R5a	0.954	+/-0.676		pCi/g						
Radium-226		1.43		0.103	+/-0.100		pCi/g						
Radium-228		1.85		0.210	+/-0.174	0.500	pCi/g						
Ruthenium-106	U	-0.273	U,R5	0.478	+/-0.159	0.800	pCi/g						
Sodium-22	U	0.0035	U,R5	0.0723	+/-0.022	0.080	pCi/g						
Strontium-85	UI	0.144	R,R5a	0.0754	+/-0.022		pCi/g						
Thallium-208		0.506		0.0563	+/-0.0424	0.080	pCi/g						
Thorium-227	U	-0.219	U,R5	0.567	+/-0.179		pCi/g						
Thorium-231	U	0.017		1.04	+/-0.369		pCi/g						
Thorium-234	U	1.88		2.75	+/-0.857	2.00	pCi/g						
Tin-113	U	-0.011		0.0672	+/-0.0204	0.100	pCi/g						
Uranium-235	U	-0.00292		0.342	+/-0.110	0.500	pCi/g						
Yttrium-88	U	0.0287		0.0602	+/-0.0165	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9941
Sample ID: 232664002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		245	239	+/-76.8	250	pCi/L		KXK2	07/15/09	1151	883020	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EML HASL 300, 4.5.2.3
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	94.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	87.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9943
Sample ID: 232664003
Matrix: R
Collect Date: 26-JUN-09
Receive Date: 01-JUL-09
Collector: Client
Moisture: 13.9%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238		0.0283		0.0194	+/-0.00702	0.050	pCi/g		CXM2	07/16/09 1010	882703	1
Plutonium-239/240		0.406		0.0238	+/-0.0293	0.050	pCi/g					
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.822		0.291	+/-0.0985	0.100	pCi/g		KXM4	07/15/09 2112	885095	3
Uranium-235/236	U	0.0208	U,R5	0.134	+/-0.0249	0.100	pCi/g					
Uranium-238		0.953		0.114	+/-0.108	0.100	pCi/g					
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0117	U,R5	0.236	+/-0.081	0.200	pCi/g		MXR1	07/14/09 0837	882713	5
Bismuth-211	UI	4.36	R,R5a	0.314	+/-0.250		pCi/g					
Bismuth-214		1.25		0.102	+/-0.0935	0.200	pCi/g					
Cadmium-109		4.62		1.18	+/-0.585		pCi/g					
Cerium-139	U	0.0193	U,R5	0.0487	+/-0.0144	0.050	pCi/g					
Cesium-134	UI	0.156	R,R5a	0.0866	+/-0.0461	0.100	pCi/g					
Cesium-137	U	0.0168	U,R5	0.0592	+/-0.0176	0.100	pCi/g					
Cobalt-60	U	0.0099		0.0616	+/-0.0182	0.100	pCi/g					
Europium-152	U	-0.0788		0.142	+/-0.0603	0.200	pCi/g					
Lanthanum-140	U	-0.125		0.124	+/-0.0461		pCi/g					
Lead-212		1.91		0.0873	+/-0.0867	0.100	pCi/g					
Lead-214		1.52		0.105	+/-0.0954	0.100	pCi/g					
Mercury-203	U	0.024	U,R5	0.070	+/-0.0204	0.100	pCi/g					
Potassium-40		35.8		0.512	+/-1.52	1.00	pCi/g					
Radium-223	U	0.0216	U,R5	1.01	+/-0.348		pCi/g					
Radium-224	UI	5.15	R,R5a	0.992	+/-0.666		pCi/g					
Radium-226		1.25		0.102	+/-0.0935		pCi/g					
Radium-228		1.84		0.188	+/-0.184	0.500	pCi/g					
Ruthenium-106	U	0.0281	U,R5	0.452	+/-0.136	0.800	pCi/g					
Sodium-22	U	-0.0147	U,R5	0.0648	+/-0.0201	0.080	pCi/g					
Strontium-85	UI	0.171	R,R5a	0.0754	+/-0.0215		pCi/g					
Thallium-208		0.598		0.0524	+/-0.0395	0.080	pCi/g					
Thorium-227	U	0.136	U,R5	0.628	+/-0.183		pCi/g					
Thorium-231	U	0.0216		1.01	+/-0.348		pCi/g					
Thorium-234	U	0.802		2.05	+/-0.831	2.00	pCi/g					
Tin-113	U	-0.0194		0.0697	+/-0.0218	0.100	pCi/g					
Uranium-235	U	0.262		0.381	+/-0.113	0.500	pCi/g					
Yttrium-88	U	0.0236		0.0534	+/-0.0147	0.100	pCi/g					

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Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9943
Sample ID: 232664003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	134	U,R5	236	+/-72.3	250	pCi/L		KXK2	07/15/09	1253	883020	6

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10030	Project:	LANL01004
Sample ID:	232664004	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	10%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		0.0343		0.0198	+/-0.00808	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		2.95		0.0242	+/-0.153	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.30		0.291	+/-0.137	0.100	pCi/g		KXM4	07/16/09	1950	885095	3
Uranium-235/236	U	0.0728	U,R5	0.135	+/-0.0272	0.100	pCi/g						
Uranium-238		1.38		0.115	+/-0.143	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241		0.693		0.305	+/-0.134	0.200	pCi/g		MXR1	07/14/09	0838	882713	6
Bismuth-211	UI	4.55	R,R5a	0.356	+/-0.326		pCi/g						
Bismuth-214		1.47		0.155	+/-0.117	0.200	pCi/g						
Cadmium-109	UI	4.35	R,R5a	1.36	+/-0.651		pCi/g						
Cerium-139	U	-0.0404	U,R5	0.0483	+/-0.0157	0.050	pCi/g						
Cesium-134	UI	0.194	R,R5a	0.123	+/-0.050	0.100	pCi/g						
Cesium-137	U	0.0304	U,R5	0.089	+/-0.0259	0.100	pCi/g						
Cobalt-60	U	-0.00397		0.0883	+/-0.0269	0.100	pCi/g						
Europium-152	U	0.0398		0.179	+/-0.0592	0.200	pCi/g						
Lanthanum-140	U	0.158		0.284	+/-0.0769		pCi/g						
Lead-212		1.84		0.117	+/-0.101	0.100	pCi/g						
Lead-214		1.58		0.124	+/-0.121	0.100	pCi/g						
Mercury-203	U	0.071	U,R5	0.0861	+/-0.0261	0.100	pCi/g						
Potassium-40		29.4		0.707	+/-1.52	1.00	pCi/g						
Radium-223	U	-0.114	U,R5	1.21	+/-0.418		pCi/g						
Radium-224	UI	3.91	R,R5a	1.54	+/-0.535		pCi/g						
Radium-226		1.47		0.155	+/-0.117		pCi/g						
Radium-228		1.85		0.278	+/-0.227	0.500	pCi/g						
Ruthenium-106	U	-0.143	U,R5	0.653	+/-0.204	0.800	pCi/g						
Sodium-22	U	-0.0188	U,R5	0.0996	+/-0.0322	0.080	pCi/g						
Strontium-85	UI	0.136	R,R5a	0.0917	+/-0.026		pCi/g						
Thallium-208		0.575		0.0709	+/-0.053	0.080	pCi/g						
Thorium-227	U	0.454	U,R5	0.702	+/-0.209		pCi/g						
Thorium-231	U	-0.114		1.21	+/-0.418		pCi/g						
Thorium-234	U	1.65		2.39	+/-1.15	2.00	pCi/g						
Tin-113	U	-0.000472		0.0921	+/-0.0281	0.100	pCi/g						
Uranium-235	U	0.158		0.389	+/-0.116	0.500	pCi/g						
Yttrium-88	U	0.0123		0.0777	+/-0.0223	0.100	pCi/g						

DJS
07/27/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10030
Sample ID: 232664004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	216	U,R5	236	+/-75.0	250	pCi/L		KXK2	07/15/09	1356	883020	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EML HASL 300, 4.5.2.3
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	93.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	79.0	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

DJS
07/27/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9989	Project:	LANL01004
Sample ID:	232664005	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	16.7%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		7.75		0.0169	+/-0.374	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		3.13		0.0206	+/-0.157	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.25		0.262	+/-0.129	0.100	pCi/g		KXM4	07/16/09	1950	885095	3
Uranium-235/236	U	0.0861	U,R5	0.121	+/-0.0267	0.100	pCi/g						
Uranium-238		1.22		0.103	+/-0.126	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241		1.52		0.203	+/-0.128	0.200	pCi/g		MXR1	07/14/09	0857	882713	6
Bismuth-211	UI	3.44	R,R5a	0.291	+/-0.259		pCi/g						
Bismuth-214		0.926		0.101	+/-0.0867	0.200	pCi/g						
Cadmium-109	UI	3.20	R,R5a	1.18	+/-0.378		pCi/g						
Cerium-139	U	-0.00606	U,R5	0.0439	+/-0.0136	0.050	pCi/g						
Cesium-134	UI	0.111	R,R5a	0.0744	+/-0.0246	0.100	pCi/g						
Cesium-137		1.25		0.055	+/-0.0752	0.100	pCi/g						
Cobalt-60	U	0.0285	U,R5	0.0677	+/-0.0194	0.100	pCi/g						
Europium-152	U	0.0198		0.160	+/-0.0506	0.200	pCi/g						
Lanthanum-140	U	-0.0331		0.130	+/-0.042		pCi/g						
Lead-212		1.37		0.0825	+/-0.0859	0.100	pCi/g						
Lead-214		1.20		0.101	+/-0.0953	0.100	pCi/g						
Mercury-203	U	0.0217	U,R5	0.0658	+/-0.0188	0.100	pCi/g						
Potassium-40		23.7		0.450	+/-1.08	1.00	pCi/g						
Radium-223	U	-0.637	U,R5	0.975	+/-0.312		pCi/g						
Radium-224	UI	4.19	R,R5a	0.938	+/-0.664		pCi/g						
Radium-226		0.926		0.101	+/-0.0867		pCi/g						
Radium-228		1.52		0.168	+/-0.159	0.500	pCi/g						
Ruthenium-106	U	0.013	U,R5	0.472	+/-0.145	0.800	pCi/g						
Sodium-22	U	-0.0112		0.0568	+/-0.0183	0.080	pCi/g						
Strontium-85	U	0.0504		0.0602	+/-0.0186		pCi/g						
Thallium-208		0.420		0.0556	+/-0.0404	0.080	pCi/g						
Thorium-227	U	0.100	U,R5	0.592	+/-0.170		pCi/g						
Thorium-231	U	-0.637	U,R5	0.975	+/-0.312		pCi/g						
Thorium-234		1.75	U,R11	1.66	+/-0.695	2.00	pCi/g						
Tin-113	U	-0.000196	U,R5	0.0699	+/-0.0209	0.100	pCi/g						
Uranium-235	U	0.0222		0.325	+/-0.100	0.500	pCi/g						
Yttrium-88	U	0.000707		0.0484	+/-0.0143	0.100	pCi/g						

DJS
07/27/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9989
Sample ID: 232664005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	109	U,R5	237	+/-72.0	250	pCi/L		KXK2	07/15/09	1458	883020	7

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE EML HASL-300, U-02-RC Modified
6	EML HASL 300, 4.5.2.3
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	105	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	84.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

DJS
07/27/09

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2517

REQUEST NUMBER: 09-2517

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232664%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9942	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9942	1	POLY	H3	Ice	R
CAMO-09-9941	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9941	1	POLY	H3	Ice	R
CAMO-09-9943	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9943	1	POLY	H3	Ice	R
CAMO-09-10030	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-10030	1	POLY	H3	Ice	R
CAMO-09-9989	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9989	1	POLY	H3	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/30/09	1400	Patricia Dent	P. Dent	7/1/2009	09:00
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2517

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2517
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/30/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	EPA:906.0	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2517

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-10030	R	6/26/2009	
	HASL-300:ISOPU	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	HASL-300:ISOU	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2517

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 02, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232664
SDG: 09-2517

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on July 01, 2009, and analyzed for Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2517
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232664
SDG: 09-2517

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- Standards Data.....589
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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232664
SDG # : 09-2517

July 02, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on July 01, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. The containers for radiochemistry were received at 24C temperature. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232664001	CAMO-09-9942
232664002	CAMO-09-9941
232664003	CAMO-09-9943
232664004	CAMO-09-10030
232664005	CAMO-09-9989

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

List of current GEL Certifications as of 02 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2517

REQUEST NUMBER: 09-2517

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232664%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
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CAMO-09-9942	1	POLY	H3	Ice	R
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CAMO-09-9943	1	POLY	H3	Ice	R
CAMO-09-10030	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-10030	1	POLY	H3	Ice	R
CAMO-09-9989	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9989	1	POLY	H3	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/30/09	1400	Patricia Dent	P. Dent	7/1/2009	09:00
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2517

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2517

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/30/2009

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	EPA:906.0	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2517

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-10030	R	6/26/2009	
	HASL-300:ISOPU	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	HASL-300:ISOU	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2517

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2517**
Received By: Patricia Dent	**Date Received: JULY 1, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,4,6,24C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5626 6C
7209 7847 5815 4C
7209 7847 5804 24C
7209 7847 5837 2C

PM (or PMA) review: Initials _____ Date 7/1/09

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 55.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

(843) 556-8171

CHARLESTON, SC 29407

FedEx Express

Ref: 6b010aue611550000

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5828 Form 0201

WED Deliver By: 01JUL09

29407 -SC-US

CHS A1

XX CHSA

ORIGIN ID: SAFA (505) 665-9969
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 55.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

(843) 556-8171

CHARLESTON, SC 29407

FedEx Express

Ref: 6b010amr1a015018bo

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5815 Form 0201

WED Deliver By: 01JUL09

29407 -SC-US

CHS A1

XX CHSA

(1 4 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9868
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 39.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

CLS0906171/22/23

Ref: 6b010amr1a015018bo

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5804 Form 0201

WED
Deliver By:
01JUL09

CHS A1

29407 -SC-US XX CHSA

NRIT V3.04-06

ORIGIN ID: SAFA (505) 665-9868
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 28.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

CLS0906171/22/23

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5837 Form 0201

WED
Deliver By:
01JUL09

CHS A1

29407 -SC-US XX CHSA

1.8 156148-434 NRIT V3.04-06

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

RADIOLOGICAL ANALYSIS

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882703
Prep Batch Number:	881985

Sample ID	Client ID
232664001	CAMO-09-9942
232664002	CAMO-09-9941
232664003	CAMO-09-9943
232664004	CAMO-09-10030
232664005	CAMO-09-9989
1201874791	Method Blank (MB)
1201874792	232754002(CAMO-09-6614) Sample Duplicate (DUP)
1201874793	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874791 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232754002 (CAMO-09-6614). The QC was from LANL work order 232754.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples were recounted due to high relative percent difference/relative error ratio.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	885095
Prep Batch Number:	881985

Sample ID	Client ID
232664001	CAMO-09-9942
232664002	CAMO-09-9941
232664003	CAMO-09-9943
232664004	CAMO-09-10030
232664005	CAMO-09-9989
1201880626	Method Blank (MB)
1201880627	232664002(CAMO-09-9941) Sample Duplicate (DUP)
1201880628	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201880626 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232664002 (CAMO-09-9941). The QC was from LANL work order 232664.

QC Information
Refer to Non-Conformance Report.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples 1201880627 (CAMO-09-9941), 232664002 (CAMO-09-9941), 232664004 (CAMO-09-10030) and 232664005 (CAMO-09-9989) were given additional clean-up steps and recounted in order to remove suspected interferences. Samples were reprepped due to high recovery.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 712489 was generated due to Other. 1. The Laboratory Control Sample 1201880628 does not meet the resolution requirement of having a full width half maximum of 100 keV or less, however the tracer yield and spike recovery requirements were met. 1. Reporting results.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882713
Prep Batch Number:	881985

Sample ID	Client ID
232664001	CAMO-09-9942
232664002	CAMO-09-9941
232664003	CAMO-09-9943
232664004	CAMO-09-10030
232664005	CAMO-09-9989
1201874832	Method Blank (MB)
1201874833	232754001(CAMO-09-6615) Sample Duplicate (DUP)
1201874834	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, September 2008, November 2008, February 2009, April 2009 and June 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232754001 (CAMO-09-6615). The QC was from LANL work order 232754.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result for the following is greater than 1.65 times the CSU, but less than the minimum detectable activity: Ra-224.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result for the following is greater than the decision level in the method blank, but less than the minimum detectable activity: Ra-224.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232664001	CAMO-09-9942
			232664002	CAMO-09-9941
			232664003	CAMO-09-9943
			232664004	CAMO-09-10030
			232664005	CAMO-09-9989
			1201874833	CAMO-09-6615(232754001DUP)
		Cadmium-109	232664001	CAMO-09-9942
			232664002	CAMO-09-9941
			232664004	CAMO-09-10030
			232664005	CAMO-09-9989
			1201874833	CAMO-09-6615(232754001DUP)
		Radium-224	232664001	CAMO-09-9942
			232664002	CAMO-09-9941
			232664003	CAMO-09-9943
			232664004	CAMO-09-10030
			232664005	CAMO-09-9989
			1201874833	CAMO-09-6615(232754001DUP)
UI	Data rejected due to low abundance.	Cesium-134	232664002	CAMO-09-9941
			232664003	CAMO-09-9943
			232664004	CAMO-09-10030
			232664005	CAMO-09-9989
		Strontium-85	232664001	CAMO-09-9942
			232664002	CAMO-09-9941
			232664003	CAMO-09-9943
			232664004	CAMO-09-10030

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883020

Sample ID	Client ID
232664001	CAMO-09-9942
232664002	CAMO-09-9941
232664003	CAMO-09-9943
232664004	CAMO-09-10030
232664005	CAMO-09-9989
1201875586	Method Blank (MB)
1201875587	232347003(CAMO-09-10461) Sample Duplicate (DUP)
1201875588	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232347003 (CAMO-09-10461). The QC was from LANL work order 232347.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 7/20/09

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
17-JUL-09	Radiochemistry	SOP	Process
Instrument Type: ALPHA SPECTROMETER	**Test / Method:** DOE EML HASL-300, U-02-RC Modified	**Matrix Type:** Solid	**Client Code:** LANL
Batch ID: 885095	**Sample Numbers:** See Below		

Potentially affected work order(s)(SDG): 232265(09-2435),232664(09-2517)

Application Issues:

Other

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The Laboratory Control Sample 1201880628 does not meet the resolution requirement of having a full width half maximum of 100 keV or less, however the tracer yield and spike recovery requirements were met.	1. Reporting results.

Originator's Name:

Jessica Downey 17-JUL-09

Data Validator/Group Leader:

Joseph Moulden 17-JUL-09

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2517 GEL Work Order: 232664

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/20/09

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9942	Project:	LANL01004
Sample ID:	232664001	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	11.9%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
d Alpha Spec Analysis											
'SOPU "Dry Weight Corrected"											
Plutonium-238		0.130	0.0233	+/-0.0153	0.050	pCi/g	CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.483	0.0284	+/-0.0353	0.050	pCi/g					
'SOU "Dry Weight Corrected"											
Uranium-233/234		0.773	0.219	+/-0.0846	0.100	pCi/g	KXM4	07/15/09	2112	885095	3
Uranium-235/236	U	0.078	0.101	+/-0.0271	0.100	pCi/g					
Uranium-238		0.909	0.086	+/-0.0948	0.100	pCi/g					
d Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.298	0.335	+/-0.106	0.200	pCi/g	MXR1	07/14/09	0826	882713	5
Bismuth-211	UI	4.50	0.362	+/-0.283		pCi/g					
Bismuth-214		1.43	0.129	+/-0.109	0.200	pCi/g					
Cadmium-109	UI	3.63	1.75	+/-0.623		pCi/g					
Cerium-139	U	0.0245	0.0616	+/-0.0184	0.050	pCi/g					
Cesium-134	U	0.112	0.113	+/-0.0362	0.100	pCi/g					
Cesium-137	U	-0.0177	0.0679	+/-0.0227	0.100	pCi/g					
Cobalt-60	U	0.0447	0.0892	+/-0.0253	0.100	pCi/g					
Europium-152	U	-0.00247	0.179	+/-0.0654	0.200	pCi/g					
Lanthanum-140	U	0.0182	0.187	+/-0.0641		pCi/g					
Lead-212		1.94	0.112	+/-0.0926	0.100	pCi/g					
Lead-214		1.57	0.129	+/-0.107	0.100	pCi/g					
Mercury-203	U	0.0529	0.0894	+/-0.0259	0.100	pCi/g					
Potassium-40		34.8	0.658	+/-1.79	1.00	pCi/g					
Radium-223	U	0.391	1.31	+/-0.436		pCi/g					
Radium-224	UI	5.57	1.27	+/-0.511		pCi/g					
Radium-226		1.43	0.129	+/-0.109		pCi/g					
Radium-228		1.81	0.234	+/-0.200	0.500	pCi/g					
Ruthenium-106	U	-0.0586	0.597	+/-0.187	0.800	pCi/g					
Sodium-22	U	-0.00262	0.0836	+/-0.026	0.080	pCi/g					
Strontium-85	UI	0.163	0.0952	+/-0.0277		pCi/g					
Thallium-208		0.485	0.0686	+/-0.0484	0.080	pCi/g					
Thorium-227	U	-0.416	0.722	+/-0.239		pCi/g					
Thorium-231	U	0.391	1.31	+/-0.436		pCi/g					
Thorium-234	U	2.21	2.71	+/-0.831	2.00	pCi/g					
Tin-113	U	0.0122	0.087	+/-0.0259	0.100	pCi/g					
Uranium-235	U	-0.00456	0.431	+/-0.133	0.500	pCi/g					
Yttrium-88	U	0.00831	0.0537	+/-0.0154	0.100	pCi/g					

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9942
Sample ID: 232664001

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	-6.83	237	+/-69.2	250	pCi/L		KXK2	07/15/09	1048	883020	6

he following Analytical Methods were performed

lethod	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.0	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	93.4	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9942
Sample ID: 232664001

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9941	Project:	LANL01004
Sample ID:	232664002	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	10.8%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
ıd Alpha Spec Analysis												
'SOPU "Dry Weight Corrected"												
Plutonium-238		0.0424	0.0211	+/-0.00809	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		3.49	0.0257	+/-0.182	0.050	pCi/g						
'SOU "Dry Weight Corrected"												
Uranium-233/234		1.35	0.266	+/-0.137	0.100	pCi/g		KXM4	07/16/09	1950	885095	3
Uranium-235/236	U	0.0267	0.123	+/-0.0168	0.100	pCi/g						
Uranium-238		1.32	0.104	+/-0.134	0.100	pCi/g						
ıd Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241		0.382	0.342	+/-0.107	0.200	pCi/g		MXR1	07/14/09	0827	882713	6
Bismuth-211	UI	4.56	0.306	+/-0.261		pCi/g						
Bismuth-214		1.43	0.103	+/-0.100	0.200	pCi/g						
Cadmium-109	UI	4.47	1.29	+/-0.583		pCi/g						
Cerium-139	U	-0.0168	0.0456	+/-0.0138	0.050	pCi/g						
Cesium-134	UI	0.0851	0.079	+/-0.0216	0.100	pCi/g						
Cesium-137	U	0.0292	0.0653	+/-0.0187	0.100	pCi/g						
Cobalt-60	U	-0.00494	0.0551	+/-0.0172	0.100	pCi/g						
Europium-152	U	-0.00204	0.146	+/-0.0565	0.200	pCi/g						
Lanthanum-140	U	-0.137	0.142	+/-0.0509		pCi/g						
Lead-212		1.91	0.084	+/-0.0892	0.100	pCi/g						
Lead-214		1.59	0.107	+/-0.0998	0.100	pCi/g						
Mercury-203	U	0.0409	0.0692	+/-0.0203	0.100	pCi/g						
Potassium-40		28.1	0.490	+/-1.31	1.00	pCi/g						
Radium-223	U	0.017	1.04	+/-0.369		pCi/g						
Radium-224	UI	5.04	0.954	+/-0.676		pCi/g						
Radium-226		1.43	0.103	+/-0.100		pCi/g						
Radium-228		1.85	0.210	+/-0.174	0.500	pCi/g						
Ruthenium-106	U	-0.273	0.478	+/-0.159	0.800	pCi/g						
Sodium-22	U	0.0035	0.0723	+/-0.022	0.080	pCi/g						
Strontium-85	UI	0.144	0.0754	+/-0.022		pCi/g						
Thallium-208		0.506	0.0563	+/-0.0424	0.080	pCi/g						
Thorium-227	U	-0.219	0.567	+/-0.179		pCi/g						
Thorium-231	U	0.017	1.04	+/-0.369		pCi/g						
Thorium-234	U	1.88	2.75	+/-0.857	2.00	pCi/g						
Tin-113	U	-0.011	0.0672	+/-0.0204	0.100	pCi/g						
Uranium-235	U	-0.00292	0.342	+/-0.110	0.500	pCi/g						
Yttrium-88	U	0.0287	0.0602	+/-0.0165	0.100	pCi/g						

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9941
Sample ID: 232664002

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
ıd Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		245	239	+/-76.8	250	pCi/L		KXK2	07/15/09	1151	883020	7

he following Analytical Methods were performed

lethod	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	94.4	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	87.4	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9941
Sample ID: 232664002

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9943	Project:	LANL01004
Sample ID:	232664003	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	13.9%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Alpha Spec Analysis												
SOPU "Dry Weight Corrected"												
Plutonium-238		0.0283	0.0194	+/-0.00702	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.406	0.0238	+/-0.0293	0.050	pCi/g						
SOU "Dry Weight Corrected"												
Uranium-233/234		0.822	0.291	+/-0.0985	0.100	pCi/g		KXM4	07/15/09	2112	885095	3
Uranium-235/236	U	0.0208	0.134	+/-0.0249	0.100	pCi/g						
Uranium-238		0.953	0.114	+/-0.108	0.100	pCi/g						
d Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0117	0.236	+/-0.081	0.200	pCi/g		MXR1	07/14/09	0837	882713	5
Bismuth-211	UI	4.36	0.314	+/-0.250		pCi/g						
Bismuth-214		1.25	0.102	+/-0.0935	0.200	pCi/g						
Cadmium-109		4.62	1.18	+/-0.585		pCi/g						
Cerium-139	U	0.0193	0.0487	+/-0.0144	0.050	pCi/g						
Cesium-134	UI	0.156	0.0866	+/-0.0461	0.100	pCi/g						
Cesium-137	U	0.0168	0.0592	+/-0.0176	0.100	pCi/g						
Cobalt-60	U	0.0099	0.0616	+/-0.0182	0.100	pCi/g						
Europium-152	U	-0.0788	0.142	+/-0.0603	0.200	pCi/g						
Lanthanum-140	U	-0.125	0.124	+/-0.0461		pCi/g						
Lead-212		1.91	0.0873	+/-0.0867	0.100	pCi/g						
Lead-214		1.52	0.105	+/-0.0954	0.100	pCi/g						
Mercury-203	U	0.024	0.070	+/-0.0204	0.100	pCi/g						
Potassium-40		35.8	0.512	+/-1.52	1.00	pCi/g						
Radium-223	U	0.0216	1.01	+/-0.348		pCi/g						
Radium-224	UI	5.15	0.992	+/-0.666		pCi/g						
Radium-226		1.25	0.102	+/-0.0935		pCi/g						
Radium-228		1.84	0.188	+/-0.184	0.500	pCi/g						
Ruthenium-106	U	0.0281	0.452	+/-0.136	0.800	pCi/g						
Sodium-22	U	-0.0147	0.0648	+/-0.0201	0.080	pCi/g						
Strontium-85	UI	0.171	0.0754	+/-0.0215		pCi/g						
Thallium-208		0.598	0.0524	+/-0.0395	0.080	pCi/g						
Thorium-227	U	0.136	0.628	+/-0.183		pCi/g						
Thorium-231	U	0.0216	1.01	+/-0.348		pCi/g						
Thorium-234	U	0.802	2.05	+/-0.831	2.00	pCi/g						
Tin-113	U	-0.0194	0.0697	+/-0.0218	0.100	pCi/g						
Uranium-235	U	0.262	0.381	+/-0.113	0.500	pCi/g						
Yttrium-88	U	0.0236	0.0534	+/-0.0147	0.100	pCi/g						

Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9943
Sample ID: 232664003

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
ıd Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	134	236	+/-72.3	250	pCi/L		KXK2	07/15/09	1253	883020	6

he following Analytical Methods were performed

lethod	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.7	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	71.7	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected

Certificate of Analysis

Company : Los Alamos National Laboratory
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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9943
Sample ID: 232664003

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10030	Project:	LANL01004
Sample ID:	232664004	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	10%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
ıd Alpha Spec Analysis											
'SOPU "Dry Weight Corrected"											
Plutonium-238		0.0343	0.0198	+/-0.00808	0.050	pCi/g	CXM2	07/16/09	1010	882703	1
Plutonium-239/240		2.95	0.0242	+/-0.153	0.050	pCi/g					
'SOU "Dry Weight Corrected"											
Uranium-233/234		1.30	0.291	+/-0.137	0.100	pCi/g	KXM4	07/16/09	1950	885095	3
Uranium-235/236	U	0.0728	0.135	+/-0.0272	0.100	pCi/g					
Uranium-238		1.38	0.115	+/-0.143	0.100	pCi/g					
ıd Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241		0.693	0.305	+/-0.134	0.200	pCi/g	MXR1	07/14/09	0838	882713	6
Bismuth-211	UI	4.55	0.356	+/-0.326		pCi/g					
Bismuth-214		1.47	0.155	+/-0.117	0.200	pCi/g					
Cadmium-109	UI	4.35	1.36	+/-0.651		pCi/g					
Cerium-139	U	-0.0404	0.0483	+/-0.0157	0.050	pCi/g					
Cesium-134	UI	0.194	0.123	+/-0.050	0.100	pCi/g					
Cesium-137	U	0.0304	0.089	+/-0.0259	0.100	pCi/g					
Cobalt-60	U	-0.00397	0.0883	+/-0.0269	0.100	pCi/g					
Europium-152	U	0.0398	0.179	+/-0.0592	0.200	pCi/g					
Lanthanum-140	U	0.158	0.284	+/-0.0769		pCi/g					
Lead-212		1.84	0.117	+/-0.101	0.100	pCi/g					
Lead-214		1.58	0.124	+/-0.121	0.100	pCi/g					
Mercury-203	U	0.071	0.0861	+/-0.0261	0.100	pCi/g					
Potassium-40		29.4	0.707	+/-1.52	1.00	pCi/g					
Radium-223	U	-0.114	1.21	+/-0.418		pCi/g					
Radium-224	UI	3.91	1.54	+/-0.535		pCi/g					
Radium-226		1.47	0.155	+/-0.117		pCi/g					
Radium-228		1.85	0.278	+/-0.227	0.500	pCi/g					
Ruthenium-106	U	-0.143	0.653	+/-0.204	0.800	pCi/g					
Sodium-22	U	-0.0188	0.0996	+/-0.0322	0.080	pCi/g					
Strontium-85	UI	0.136	0.0917	+/-0.026		pCi/g					
Thallium-208		0.575	0.0709	+/-0.053	0.080	pCi/g					
Thorium-227	U	0.454	0.702	+/-0.209		pCi/g					
Thorium-231	U	-0.114	1.21	+/-0.418		pCi/g					
Thorium-234	U	1.65	2.39	+/-1.15	2.00	pCi/g					
Tin-113	U	-0.000472	0.0921	+/-0.0281	0.100	pCi/g					
Uranium-235	U	0.158	0.389	+/-0.116	0.500	pCi/g					
Yttrium-88	U	0.0123	0.0777	+/-0.0223	0.100	pCi/g					

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10030
Sample ID: 232664004

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
id Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	216	236	+/-75.0	250	pCi/L		KXK2	07/15/09	1356	883020	7

he following Analytical Methods were performed

Method	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	93.5	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	79.0	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Certificate of Analysis

Company : Los Alamos National Laboratory
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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10030
Sample ID: 232664004

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9989	Project:	LANL01004
Sample ID:	232664005	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	16.7%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
d Alpha Spec Analysis											
SOPU "Dry Weight Corrected"											
Plutonium-238		7.75	0.0169	+/-0.374	0.050	pCi/g		CXM2	07/16/09 1010	882703	1
Plutonium-239/240		3.13	0.0206	+/-0.157	0.050	pCi/g					
SOU "Dry Weight Corrected"											
Uranium-233/234		1.25	0.262	+/-0.129	0.100	pCi/g		KXM4	07/16/09 1950	885095	3
Uranium-235/236	U	0.0861	0.121	+/-0.0267	0.100	pCi/g					
Uranium-238		1.22	0.103	+/-0.126	0.100	pCi/g					
d Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241		1.52	0.203	+/-0.128	0.200	pCi/g		MXR1	07/14/09 0857	882713	6
Bismuth-211	UI	3.44	0.291	+/-0.259		pCi/g					
Bismuth-214		0.926	0.101	+/-0.0867	0.200	pCi/g					
Cadmium-109	UI	3.20	1.18	+/-0.378		pCi/g					
Cerium-139	U	-0.00606	0.0439	+/-0.0136	0.050	pCi/g					
Cesium-134	UI	0.111	0.0744	+/-0.0246	0.100	pCi/g					
Cesium-137		1.25	0.055	+/-0.0752	0.100	pCi/g					
Cobalt-60	U	0.0285	0.0677	+/-0.0194	0.100	pCi/g					
Europium-152	U	0.0198	0.160	+/-0.0506	0.200	pCi/g					
Lanthanum-140	U	-0.0331	0.130	+/-0.042		pCi/g					
Lead-212		1.37	0.0825	+/-0.0859	0.100	pCi/g					
Lead-214		1.20	0.101	+/-0.0953	0.100	pCi/g					
Mercury-203	U	0.0217	0.0658	+/-0.0188	0.100	pCi/g					
Potassium-40		23.7	0.450	+/-1.08	1.00	pCi/g					
Radium-223	U	-0.637	0.975	+/-0.312		pCi/g					
Radium-224	UI	4.19	0.938	+/-0.664		pCi/g					
Radium-226		0.926	0.101	+/-0.0867		pCi/g					
Radium-228		1.52	0.168	+/-0.159	0.500	pCi/g					
Ruthenium-106	U	0.013	0.472	+/-0.145	0.800	pCi/g					
Sodium-22	U	-0.0112	0.0568	+/-0.0183	0.080	pCi/g					
Strontium-85	U	0.0504	0.0602	+/-0.0186		pCi/g					
Thallium-208		0.420	0.0556	+/-0.0404	0.080	pCi/g					
Thorium-227	U	0.100	0.592	+/-0.170		pCi/g					
Thorium-231	U	-0.637	0.975	+/-0.312		pCi/g					
Thorium-234		1.75	1.66	+/-0.695	2.00	pCi/g					
Tin-113	U	-0.000196	0.0699	+/-0.0209	0.100	pCi/g					
Uranium-235	U	0.0222	0.325	+/-0.100	0.500	pCi/g					
Yttrium-88	U	0.000707	0.0484	+/-0.0143	0.100	pCi/g					

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9989
Sample ID: 232664005

Project: LANL01004
Client ID: LANL010

ırameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
ıd Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	109	237	+/-72.0	250	pCi/L		KXK2	07/15/09	1458	883020	7

he following Analytical Methods were performed

lethod	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

ırrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	105	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	84.8	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9989
Sample ID: 232664005

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 20, 2009

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232664

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882703										
QC1201874792 232754002 DUP										
Plutonium-238	U	0.0153	U	0.00373	pCi/g	0.551		(0-1)	CXM2	07/16/0910:10
	TPU:	+/-0.00719		+/-0.00329						
	Yield:	96.6		95.9						
Plutonium-239/240		0.0376		0.0671	pCi/g	0.776		(0-1)		
	TPU:	+/-0.00882		+/-0.0102						
	Yield:	96.6		95.9						
QC1201874793 LCS										
Plutonium-238				6.26	pCi/g			(75%-125%)		
	TPU:			+/-0.457						
	Yield:			103						
Plutonium-239/240	41.8			38.3	pCi/g		91.6	(75%-125%)		
	TPU:			+/-2.29						
	Yield:			103						
QC1201874791 MB										
Plutonium-238			U	0.00829	pCi/g					
	TPU:			+/-0.00619						
	Yield:			101						
Plutonium-239/240			U	0.00553	pCi/g					
	TPU:			+/-0.00339						
	Yield:			101						
Batch 885095										
QC1201880627 232664002 DUP										
Uranium-233/234		1.35		0.954	pCi/g	0.826		(0-1)	KXM4	07/16/0919:50
	TPU:	+/-0.137		+/-0.105						
	Yield:	87.4		84.3						
Uranium-235/236	U	0.0267	U	0.0584	pCi/g	0.361		(0-1)		
	TPU:	+/-0.0168		+/-0.0271						
	Yield:	87.4		84.3						
Uranium-238		1.32		1.15	pCi/g	0.316		(0-1)		
	TPU:	+/-0.134		+/-0.121						
	Yield:	87.4		84.3						
QC1201880628 LCS										
Uranium-233/234				5.79	pCi/g			(75%-125%)		07/15/0921:12
	TPU:			+/-0.593						
	Yield:			87.1						
Uranium-235/236			U	0.471	pCi/g			(75%-125%)		
	TPU:			+/-0.131						
	Yield:			87.1						
Uranium-238	5.75			5.45	pCi/g		94.8	(75%-125%)		
	TPU:			+/-0.563						
	Yield:			87.1						
QC1201880626 MB										
Uranium-233/234			U	0.00358	pCi/g					07/15/0921:12

QC Summary

Workorder: 232664

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 885095										
	TPU:			+/-0.00843						
	Yield:			81.8						
Uranium-235/236			U	0.00223	pCi/g					
	TPU:			+/-0.00673						
	Yield:			81.8						
Uranium-238			U	-0.00356	pCi/g					
	TPU:			+/-0.00498						
	Yield:			81.8						
Rad Gamma Spec										
Batch 882713										
QC1201874833 232754001 DUP										
Americium-241	U	0.0982	U	0.0474	pCi/g	0.201		(0-1)	MXR1	07/14/0911:23
	TPU:	+/-0.0904		+/-0.0358						
Bismuth-211	UI	4.13	UI	4.10	pCi/g	0.036		(0-1)		
	TPU:	+/-0.249		+/-0.279						
Bismuth-214		1.15		1.28	pCi/g	0.353		(0-1)		
	TPU:	+/-0.084		+/-0.104						
Cadmium-109	UI	3.36	UI	3.73	pCi/g	0.191		(0-1)		
	TPU:	+/-0.523		+/-0.441						
Cerium-139	U	-0.0138	U	-0.0152	pCi/g	0.0233		(0-1)		
	TPU:	+/-0.0154		+/-0.0163						
Cesium-134	UI	0.132	U	0.0783	pCi/g	0.403		(0-1)		
	TPU:	+/-0.0333		+/-0.0331						
Cesium-137	U	-0.0224	U	-0.051	pCi/g	0.315		(0-1)		
	TPU:	+/-0.0203		+/-0.025						
Cobalt-60	U	-0.00278	U	0.0309	pCi/g	0.385		(0-1)		
	TPU:	+/-0.0208		+/-0.023						
Europium-152	U	0.103	U	0.0576	pCi/g	0.193		(0-1)		
	TPU:	+/-0.0539		+/-0.0641						
Lanthanum-140	U	0.0618	U	-0.0273	pCi/g	0.521		(0-1)		
	TPU:	+/-0.0333		+/-0.0523						
Lead-212		1.82		1.86	pCi/g	0.112		(0-1)		
	TPU:	+/-0.0831		+/-0.117						
Lead-214		1.44		1.43	pCi/g	0.0328		(0-1)		
	TPU:	+/-0.0945		+/-0.104						
Mercury-203	U	0.0321	U	0.0433	pCi/g	0.125		(0-1)		
	TPU:	+/-0.0227		+/-0.0225						
Potassium-40		35.5		33.6	pCi/g	0.297		(0-1)		
	TPU:	+/-1.78		+/-1.48						
Radium-223	U	0.338	U	-0.286	pCi/g	0.417		(0-1)		
	TPU:	+/-0.355		+/-0.392						
Radium-224	UI	5.23	UI	4.72	pCi/g	0.228		(0-1)		
	TPU:	+/-0.541		+/-0.567						
Radium-226		1.15		1.28	pCi/g	0.353		(0-1)		
	TPU:	+/-0.084		+/-0.104						
Radium-228		1.70		1.93	pCi/g	0.286		(0-1)		
	TPU:	+/-0.172		+/-0.227						
Ruthenium-106	U	0.020	U	0.128	pCi/g	0.156		(0-1)		
	TPU:	+/-0.156		+/-0.190						
Sodium-22	U	-0.00479	U	-0.0124	pCi/g	0.0731		(0-1)		

QC Summary

Workorder: 232664

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 882713										
	TPU:	+/-0.0227		+/-0.0296						
Strontium-85	UI	0.122	U	0.0871	pCi/g	0.352		(0-1)		
	TPU:	+/-0.0213		+/-0.0276						
Thallium-208		0.574		0.537	pCi/g	0.204		(0-1)		
	TPU:	+/-0.0414		+/-0.0494						
Thorium-227	U	-0.202	U	-0.26	pCi/g	0.0717		(0-1)		
	TPU:	+/-0.199		+/-0.210						
Thorium-231	U	0.338	U	-0.286	pCi/g	0.417		(0-1)		
	TPU:	+/-0.355		+/-0.392						
Thorium-234	U	1.49		1.70	pCi/g	0.0686		(0-1)		
	TPU:	+/-0.960		+/-0.614						
Tin-113	U	-0.00589	U	-0.0244	pCi/g	0.196		(0-1)		
	TPU:	+/-0.0218		+/-0.0254						
Uranium-235	U	-0.161	U	0.0263	pCi/g	0.418		(0-1)		
	TPU:	+/-0.111		+/-0.114						
Yttrium-88	U	-0.00583	U	-0.00724	pCi/g	0.0208		(0-1)		
	TPU:	+/-0.0146		+/-0.0193						
QC1201874834 LCS										
Americium-241	15.9			13.7	pCi/g		86	(75%-125%)		07/14/0912:33
	TPU:			+/-0.723						
Bismuth-211				2.38	pCi/g					
	TPU:			+/-0.348						
Bismuth-214				0.914	pCi/g					
	TPU:			+/-0.172						
Cadmium-109				47.5	pCi/g					
	TPU:			+/-2.30						
Cerium-139			U	0.0156	pCi/g					
	TPU:			+/-0.0246						
Cesium-134			U	0.0305	pCi/g					
	TPU:			+/-0.0546						
Cesium-137	5.64			6.01	pCi/g		107	(75%-125%)		
	TPU:			+/-0.288						
Cobalt-60	6.91			6.85	pCi/g		99	(75%-125%)		
	TPU:			+/-0.264						
Europium-152			U	0.0303	pCi/g					
	TPU:			+/-0.105						
Lanthanum-140			U	0.028	pCi/g					
	TPU:			+/-0.0495						
Lead-212				0.811	pCi/g					
	TPU:			+/-0.121						
Lead-214				0.827	pCi/g					
	TPU:			+/-0.123						
Mercury-203			U	0.0406	pCi/g					
	TPU:			+/-0.0332						
Potassium-40			U	0.849	pCi/g					
	TPU:			+/-0.362						
Radium-223			U	-0.332	pCi/g					
	TPU:			+/-0.638						
Radium-224			U	0.865	pCi/g					
	TPU:			+/-0.654						
Radium-226				0.914	pCi/g					

QC Summary

Workorder: 232664

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 882713										
	TPU:			+/-0.172						
Radium-228				1.12	pCi/g					
	TPU:			+/-0.332						
Ruthenium-106			U	-0.398	pCi/g					
	TPU:			+/-0.334						
Sodium-22			U	-0.0645	pCi/g					
	TPU:			+/-0.0318						
Strontium-85			U	0.125	pCi/g					
	TPU:			+/-0.0407						
Thallium-208				0.233	pCi/g					
	TPU:			+/-0.0613						
Thorium-227			U	-0.532	pCi/g					
	TPU:			+/-0.354						
Thorium-231			U	-0.332	pCi/g					
	TPU:			+/-0.638						
Thorium-234			U	0.239	pCi/g					
	TPU:			+/-0.615						
Tin-113			U	0.0872	pCi/g					
	TPU:			+/-0.0467						
Uranium-235			U	-0.0991	pCi/g					
	TPU:			+/-0.175						
Yttrium-88			U	0.0654	pCi/g					
	TPU:			+/-0.0267						
QC1201874832 MB										
Americium-241			U	0.00208	pCi/g					07/14/0911:22
	TPU:			+/-0.00896						
Bismuth-211			U	-0.011	pCi/g					
	TPU:			+/-0.068						
Bismuth-214			U	0.0233	pCi/g					
	TPU:			+/-0.0213						
Cadmium-109			U	0.0421	pCi/g					
	TPU:			+/-0.0927						
Cerium-139			U	-0.00105	pCi/g					
	TPU:			+/-0.00585						
Cesium-134			U	0.00345	pCi/g					
	TPU:			+/-0.0144						
Cesium-137			U	-0.0101	pCi/g					
	TPU:			+/-0.0108						
Cobalt-60			U	0.0066	pCi/g					
	TPU:			+/-0.0136						
Europium-152			U	-0.014	pCi/g					
	TPU:			+/-0.0279						
Lanthanum-140			U	-0.0442	pCi/g					
	TPU:			+/-0.025						
Lead-212			U	0.015	pCi/g					
	TPU:			+/-0.0151						
Lead-214			U	0.00197	pCi/g					
	TPU:			+/-0.0238						
Mercury-203			U	-0.00599	pCi/g					
	TPU:			+/-0.00826						
Potassium-40			U	0.140	pCi/g					

QC Summary

Workorder: 232664

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 882713										
	TPU:			+/-0.158						
Radium-223			U	-0.0565	pCi/g					
	TPU:			+/-0.173						
Radium-224			U	0.297	pCi/g					
	TPU:			+/-0.153						
Radium-226			U	0.0233	pCi/g					
	TPU:			+/-0.0213						
Radium-228			U	0.0178	pCi/g					
	TPU:			+/-0.0469						
Ruthenium-106			U	-0.196	pCi/g					
	TPU:			+/-0.109						
Sodium-22			U	-0.00124	pCi/g					
	TPU:			+/-0.0129						
Strontium-85			U	-0.00426	pCi/g					
	TPU:			+/-0.0172						
Thallium-208			U	0.00523	pCi/g					
	TPU:			+/-0.0132						
Thorium-227			U	-0.0396	pCi/g					
	TPU:			+/-0.0949						
Thorium-231			U	-0.0565	pCi/g					
	TPU:			+/-0.173						
Thorium-234			U	-0.0849	pCi/g					
	TPU:			+/-0.0979						
Tin-113			U	0.00405	pCi/g					
	TPU:			+/-0.0123						
Uranium-235			U	-0.0494	pCi/g					
	TPU:			+/-0.0428						
Yttrium-88			U	0.0147	pCi/g					
	TPU:			+/-0.018						
Rad Liquid Scintillation										
Batch 883020										
QC1201875587 232347003 DUP										
Tritium		1170		1050	pCi/L	0.266		(0-1)	KXK2	07/15/0917:03
	TPU:	+/-113		+/-116						
QC1201875588 LCS										
Tritium	5730			6320	pCi/L		110	(75%-125%)		07/15/0918:05
	TPU:			+/-529						
QC1201875586 MB										
Tritium			U	-126	pCi/L					07/15/0916:01
	TPU:			+/-66.4						

Notes:
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

QC Summary

Workorder: 232664

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time

B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 882703 Product: Pb Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument blg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed. If applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/17/09

Secondary Review Performed By: [signature] 7/18/09

LANL

7/12 - 7/23

Plutonium Que Sheet

06-JUL-09

Batch #: 882703 Analyst: CXM2 First Client Due Date:23-JUL-09 Internal Due Date:12-JUL-09

Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 1262-A Expiration Date: 5/11/10 Vol: 0.1mL

LCS Isotope(s): Pu-239/Pu-238 LCS Code: 0244-B Expiration Date: 4/30/20 Vol: 0.106g

Spike Isotope(s): Pu-239/Pu-238 Spike Code: — Expiration Date: — Vol: —

Prep Date: 7/9/09 Initials: CMM Pipet ID: 2971058 Balance ID: 50410272 Witness: MOL 7/9/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Pu Det #
232347001-1	CAMO-09-10462	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	1	1	1.250	31 ~~13~~
232347002-1	CAMO-09-10460	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	2	2	1.250	32 14
232347003-1	CAMO-09-10461	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	3	3	1.267	33 15
232347004-1	CAMO-09-10467	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	4	4	1.251	70 16
232664001-1	CAMO-09-9942	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	5	5	1.252	35 17
232664002-1	CAMO-09-9941	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	6	6	1.260	36 19
232664003-1	CAMO-09-9943	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	7	7	1.253	37 20
232664004-1	CAMO-09-10030	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	8	8	1.266	38 20
232664005-1	CAMO-09-9989	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	9	9	1.254	39 22
232746001-1	CAMO-09-9956	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	10	10	1.253	40 23
232746002-1	CAMO-09-9950	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	11	11	1.252	41 24
232746003-1	CAMO-09-9952	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	12	12	1.251	42 ~~27~~
232746004-1	CAMO-09-9958	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	13	13	1.256	43 ~~28~~
232746005-1	CAMO-09-9957	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	14	14	1.252	44 ~~29~~
232746006-1	CAMO-09-9951	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	15	15	1.257	45 ~~30~~
232746007-1	CAMO-09-10031	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	16	16	1.253	46 ~~31~~
232746008-1	CAMO-09-9990	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	17	17	1.253	47 ~~32~~
232754001-1	CAMO-09-6615	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	18	18	1.250	48 ~~35~~
232754002-1	CAMO-09-6614	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	19	19	1.255	65 ~~36~~
232754003-1	CAMO-09-6613	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	20	20	1.266	66 ~~37~~
1201874791-1	MB for batch 882703	MB		.05 pCi/g	SOIL	QC ACCOUNT		21	21	~~1.267~~ 1.0	67 ~~38~~
1201874792-1	CAMO-09-6614(232754002DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	30-JUN-09	22	22	1.254	68 ~~39~~
1201874793-1	LCS for batch 882703	LCS		.05 pCi/g	SOIL	QC ACCOUNT		23	23	0.106	69 ~~70~~

trans

dailies

Choose SOP Used: ~~GL-RAD-A-011~~ GL-RAD-A-045 GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION Circle One

Data Reviewed By: 7/17/09

Blank Correction Report

Batch ID 882703

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874792	DUP	Plutonium-238	1.25 g	0.00373	0.00329	0.0222	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0671	0.0102	0.0271	.004424	pCi/g	NO
1201874793	LCS	Plutonium-238	0.106 g	6.26	0.457	0.233	.078207547	pCi/g	NO
		Plutonium-239/240	0.106 g	38.3	2.29	0.285	.052169811	pCi/g	NO
1201874791	MB	Plutonium-238	1.00 g	0.00829	0.00619	0.0247	.00829	pCi/g	YES
		Plutonium-239/240	1.00 g	0.00553	0.00339	0.0302	.00553	pCi/g	YES
232347001	CAMO-09-10462	Plutonium-238	1.25 g	0.0025	0.00729	0.0223	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00375	0.00545	0.0273	.004424	pCi/g	YES
232347002	CAMO-09-10460	Plutonium-238	1.25 g	0.0101	0.00807	0.0258	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00	0.00457	0.0316	.004424	pCi/g	YES
232347003	CAMO-09-10461	Plutonium-238	1.27 g	-0.00236	0.00237	0.0211	.006527559	pCi/g	YES
		Plutonium-239/240	1.27 g	-0.00118	0.00264	0.0258	.004354331	pCi/g	YES
232347004	CAMO-09-10467	Plutonium-238	1.25 g	0.00984	0.00579	0.022	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00737	0.00325	0.0268	.004424	pCi/g	YES
232664001	CAMO-09-9942	Plutonium-238	1.25 g	0.130	0.0153	0.0233	.006632	pCi/g	NO
		Plutonium-239/240	1.25 g	0.483	0.0353	0.0284	.004424	pCi/g	NO
232664002	CAMO-09-9941	Plutonium-238	1.26 g	0.0424	0.00809	0.0211	.006579365	pCi/g	NO
		Plutonium-239/240	1.26 g	3.49	0.182	0.0257	.004388889	pCi/g	NO
232664003	CAMO-09-9943	Plutonium-238	1.25 g	0.0283	0.00702	0.0194	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.406	0.0293	0.0238	.004424	pCi/g	NO
232664004	CAMO-09-10030	Plutonium-238	1.27 g	0.0343	0.00808	0.0198	.006527559	pCi/g	NO
		Plutonium-239/240	1.27 g	2.95	0.153	0.0242	.004354331	pCi/g	NO
232664005	CAMO-09-9989	Plutonium-238	1.25 g	7.75	0.374	0.0169	.006632	pCi/g	NO
		Plutonium-239/240	1.25 g	3.13	0.157	0.0206	.004424	pCi/g	NO
232746001	CAMO-09-9956	Plutonium-238	1.25 g	0.00649	0.00432	0.0232	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.026	0.00674	0.0284	.004424	pCi/g	NO
232746002	CAMO-09-9950	Plutonium-238	1.25 g	0.0121	0.00543	0.0216	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.134	0.0149	0.0263	.004424	pCi/g	NO
232746003	CAMO-09-9952	Plutonium-238	1.25 g	0.0107	0.00398	0.0212	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00713	0.00376	0.026	.004424	pCi/g	YES
232746004	CAMO-09-9958	Plutonium-238	1.26 g	0.00691	0.00366	0.0206	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0265	0.0059	0.0251	.004388889	pCi/g	NO
232746005	CAMO-09-9957	Plutonium-238	1.25 g	0.00768	0.00427	0.0196	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00768	0.00454	0.024	.004424	pCi/g	YES
232746006	CAMO-09-9951	Plutonium-238	1.26 g	0.0065	0.00345	0.0232	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0182	0.00693	0.0284	.004388889	pCi/g	YES
232746007	CAMO-09-10031	Plutonium-238	1.25 g	0.011	0.00416	0.0197	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.180	0.0168	0.0241	.004424	pCi/g	NO
232746008	CAMO-09-9990	Plutonium-238	1.25 g	1.58	0.0885	0.0212	.006632	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232746008	CAMO-09-9990	Plutonium-239/240	1.25 g	0.380	0.0283	0.026	.004424	pCi/g	NO
232754001	CAMO-09-6615	Plutonium-238	1.25 g	-0.0064	0.00665	0.0229	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.147	0.0159	0.0279	.004424	pCi/g	NO
232754002	CAMO-09-6614	Plutonium-238	1.26 g	0.0153	0.00719	0.021	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0376	0.00882	0.0256	.004388889	pCi/g	NO
232754003	CAMO-09-6613	Plutonium-238	1.27 g	0.0143	0.00817	0.0233	.006527559	pCi/g	YES
		Plutonium-239/240	1.27 g	0.0912	0.0121	0.0285	.004354331	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 26-JUN-2009 00:00:00	SAMPLE ID : S0232664001_PU SAMPLE QTY: 1.252 G
DETECTOR NUMBER :78202 AVERAGE %EFFICIENCY :30.3939 % YIELD : 91.025	COUNT DATE:16-JUL-2009 10:10:38 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.475E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.475E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.82972 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B035.CNF;1039 BKG DATE : 12-JUL-2009 EFF FILE : W035.CNF;304 CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	383.000	371.000	12.000	4.1106	99.90000	4.83E-01	3.53E-02	1.24E-02	2.84E-02	2.59E-02
PU-236	5749.000	4.000	-6.000	10.000	2.7154	100.0000	-7.91E-03	4.93E-03	8.22E-03	2.00E-02	4.93E-03
PU-238	5499.000	107.000	100.000	7.000	3.2589	99.90000	1.30E-01	1.53E-02	9.87E-03	2.33E-02	1.39E-02
PU242	4890.000	1176.000	1164.000	12.000	3.4641	100.0000	1.51E+00	8.75E-02	1.05E-02	2.45E-02	4.48E-02
PU-244	4589.000	3.000	1.000	2.000	4.8319	99.90000	1.30E-03	2.91E-03	1.46E-02	3.28E-02	2.91E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

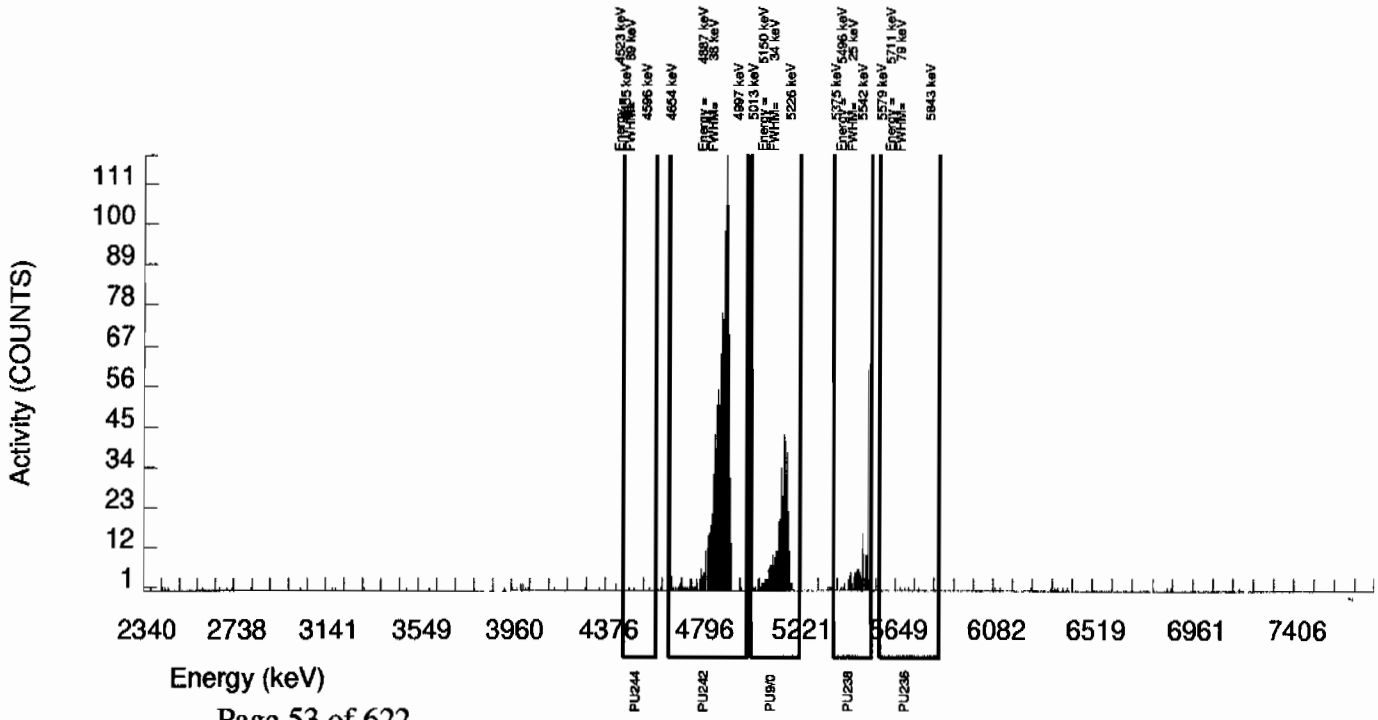

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 26-JUN-2009 00:00:00	SAMPLE ID : S0232664002_PU SAMPLE QTY: 1.260 G
DETECTOR NUMBER :78203 AVERAGE %EFFICIENCY :32.1706 % YIELD : 94.420	COUNT DATE:16-JUL-2009 10:10:38 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.465E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.465E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.97257 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B036.CNF;1036 BKG DATE : 12-JUL-2009 EFF FILE : W036.CNF;316 CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2974.000	2965.000	9.000	4.1106	99.90000	3.49E+00	1.82E-01	1.13E-02	2.57E-02	6.43E-02
PU-236	5749.000	5.000	2.000	3.000	2.7154	100.0000	2.39E-03	3.38E-03	7.43E-03	1.81E-02	3.38E-03
PU-238	5499.000	40.000	36.000	4.000	3.2589	99.90000	4.24E-02	8.09E-03	8.93E-03	2.11E-02	7.82E-03
PU242	4890.000	1284.000	1278.000	6.000	2.4495	100.0000	1.50E+00	8.46E-02	6.71E-03	1.66E-02	4.23E-02
PU-244	4589.000	11.000	10.000	1.000	4.8319	99.90000	1.18E-02	4.12E-03	1.32E-02	2.97E-02	4.08E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

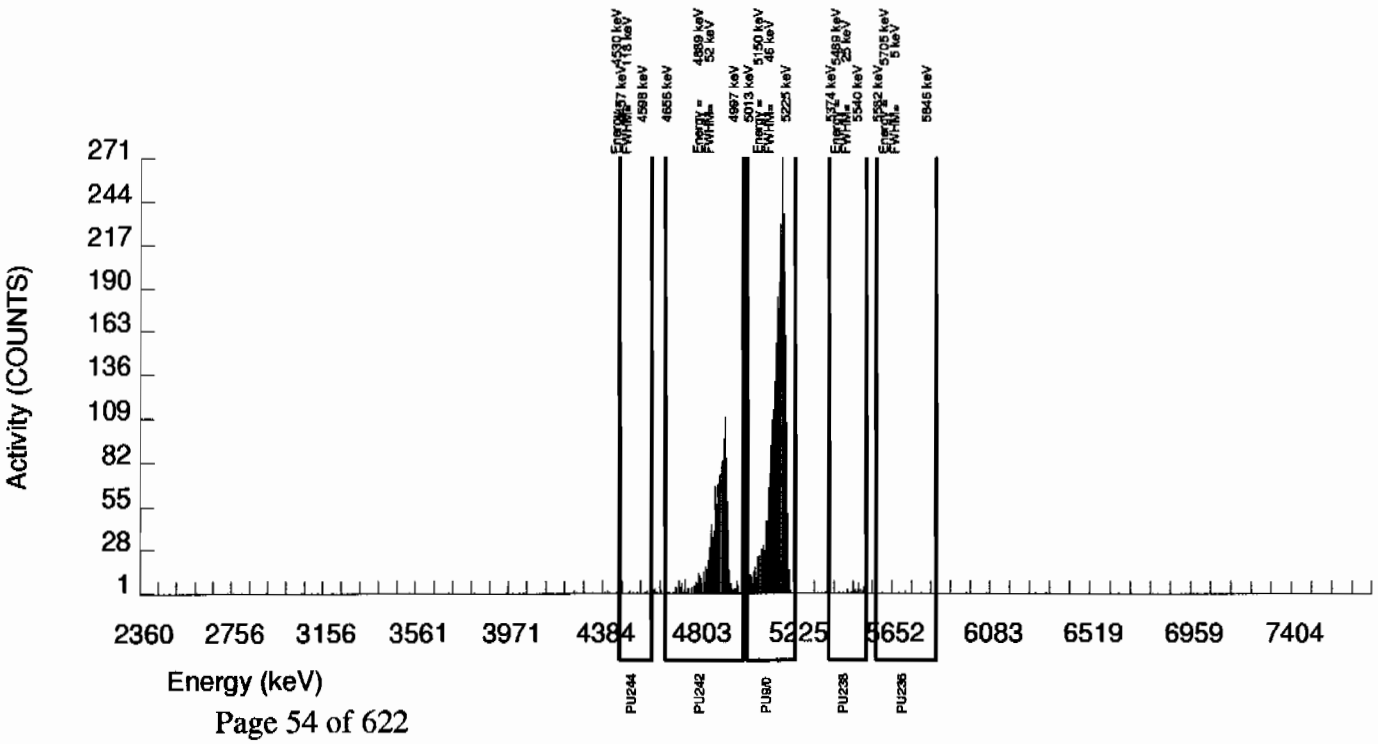

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 26-JUN-2009 00:00:00	SAMPLE ID : S0232664003_PU SAMPLE QTY: 1.253 G
DETECTOR NUMBER :45-149BB5 AVERAGE %EFFICIENCY :36.0936 % YIELD : 91.665	COUNT DATE:16-JUL-2009 10:10:41 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.473E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.473E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.85664 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B037.CNF;1048 BKG DATE : 12-JUL-2009 EFF FILE : W037.CNF;292 CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	388.000	373.000	15.000	4.1106	99.90000	4.06E-01	2.93E-02	1.04E-02	2.38E-02	2.18E-02
PU-236	5749.000	16.000	0.000	16.000	2.7154	100.0000	1.05E-09	6.23E-03	6.86E-03	1.67E-02	6.23E-03
PU-238	5499.000	33.000	26.000	7.000	3.2589	99.90000	2.83E-02	7.02E-03	8.25E-03	1.94E-02	6.88E-03
PU242	4890.000	1407.000	1392.000	15.000	3.8730	100.0000	1.51E+00	8.35E-02	9.79E-03	2.25E-02	4.10E-02
PU-244	4589.000	21.000	15.000	6.000	4.8319	99.90000	1.63E-02	5.71E-03	1.22E-02	2.74E-02	5.65E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

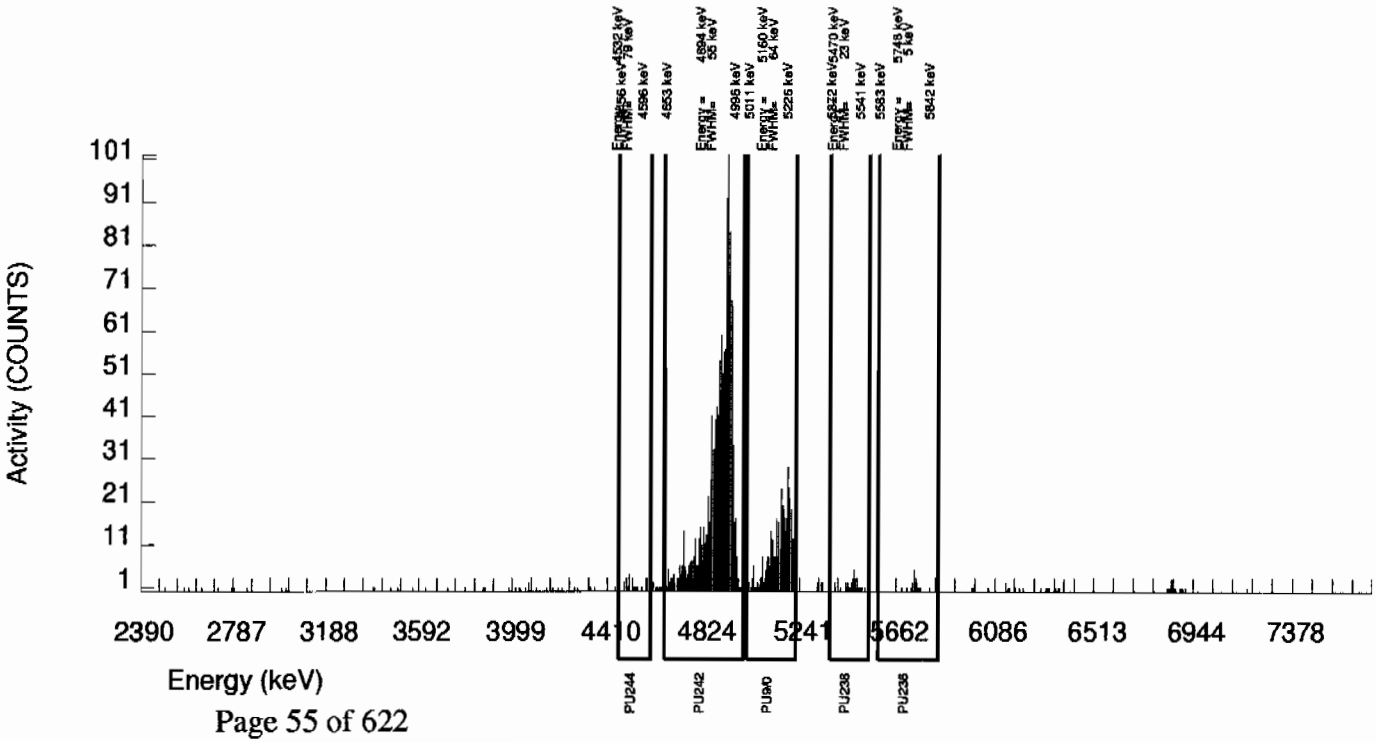

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 26-JUN-2009 00:00:00	SAMPLE ID : S0232664004_PU SAMPLE QTY: 1.266 G
DETECTOR NUMBER :72532 AVERAGE %EFFICIENCY :34.4017 % YIELD : 93.478	COUNT DATE:16-JUL-2009 10:10:41 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.458E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.458E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.93294 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B038.CNF;1045 BKG DATE : 12-JUL-2009 EFF FILE : W038.CNF;306 CAL DATE : 8-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2667.000	2663.000	4.000	4.1106	99.90000	2.95E+00	1.53E-01	1.06E-02	2.42E-02	5.72E-02
PU-236	5749.000	9.000	-1.000	10.000	2.7154	100.0000	-1.12E-03	4.89E-03	6.99E-03	1.70E-02	4.89E-03
PU-238	5499.000	41.000	31.000	10.000	3.2589	99.90000	3.43E-02	8.08E-03	8.40E-03	1.98E-02	7.91E-03
PU242	4890.000	1361.000	1353.000	8.000	2.8284	100.0000	1.50E+00	8.30E-02	7.28E-03	1.76E-02	4.09E-02
PU-244	4589.000	14.000	10.000	4.000	4.8319	99.90000	1.11E-02	4.73E-03	1.24E-02	2.79E-02	4.70E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

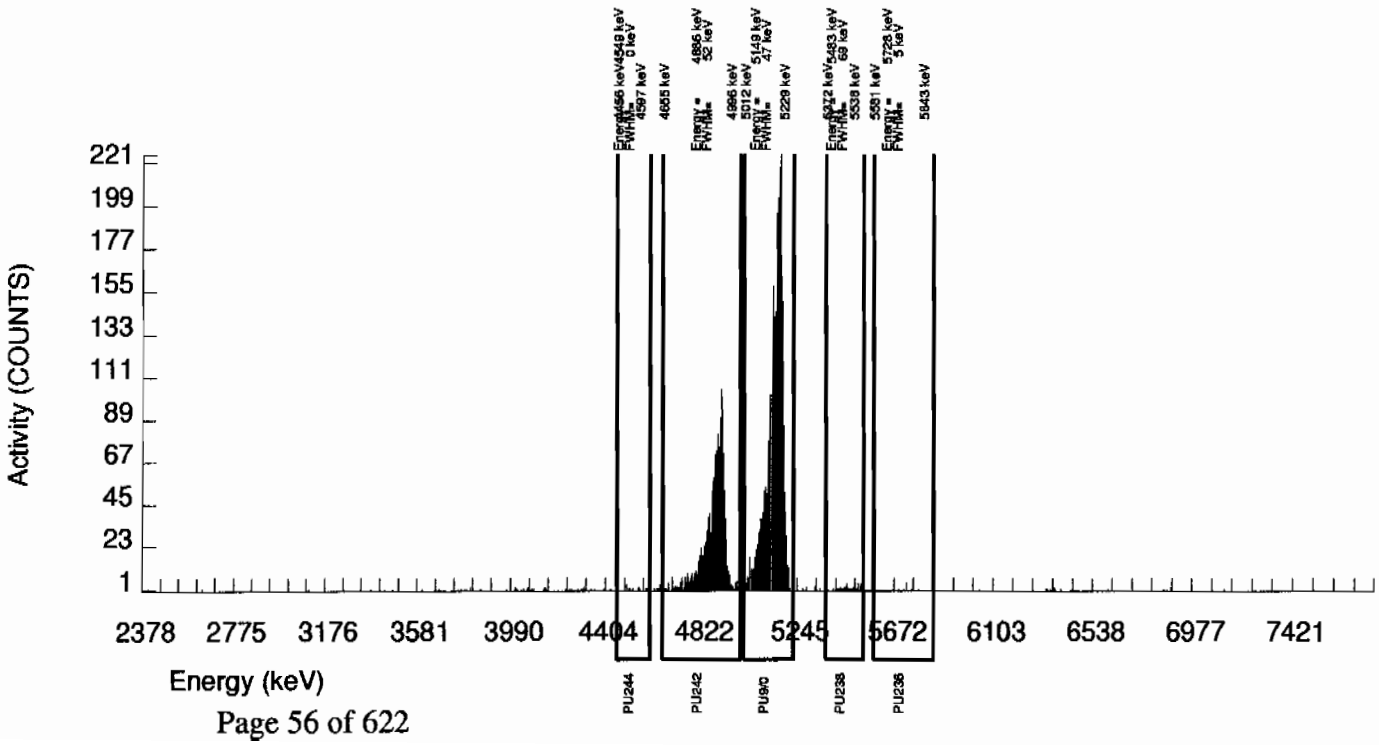

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 26-JUN-2009 00:00:00	SAMPLE ID : S0232664005_PU SAMPLE QTY: 1.254 G
DETECTOR NUMBER :45-149BB2 AVERAGE %EFFICIENCY :36.3356 % YIELD : 104.856	COUNT DATE:16-JUL-2009 10:10:41 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.472E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.472E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.41165 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B039.CNF;1045 BKG DATE : 12-JUL-2009 EFF FILE : W039.CNF;283 CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	3328.000	3321.000	7.000	4.1106	99.90000	3.13E+00	1.57E-01	9.02E-03	2.06E-02	5.45E-02
PU-236	5749.000	18.000	3.000	15.000	2.7154	100.0000	2.87E-03	5.49E-03	5.96E-03	1.45E-02	5.49E-03
PU-238	5499.000	8224.000	8206.000	18.000	3.2589	99.90000	7.75E+00	3.74E-01	7.15E-03	1.69E-02	8.57E-02
PU242	4890.000	1607.000	1603.000	4.000	2.0000	100.0000	1.51E+00	8.04E-02	4.39E-03	1.13E-02	3.78E-02
PU-244	4589.000	43.000	40.000	3.000	4.8319	99.90000	3.77E-02	6.64E-03	1.06E-02	2.38E-02	6.40E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

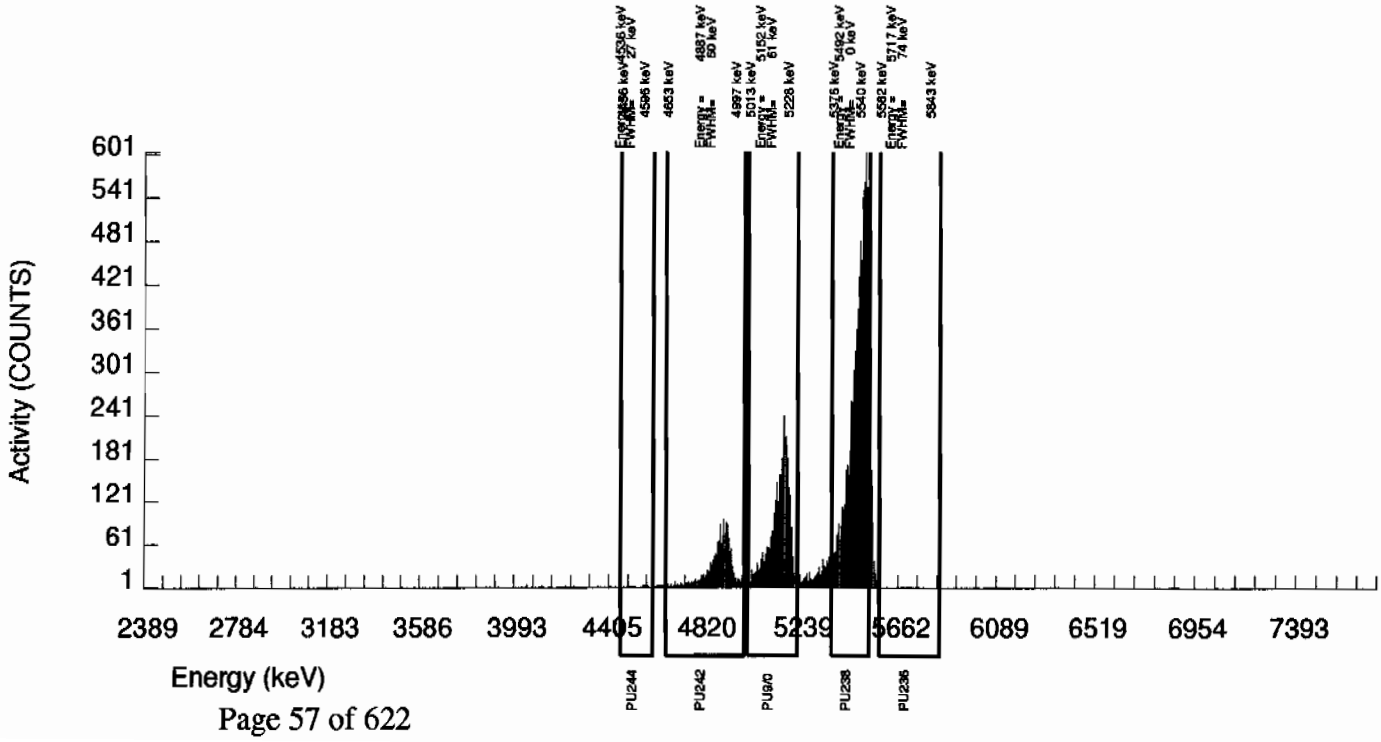

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S0232754002_PU SAMPLE QTY: 1.255 G
DETECTOR NUMBER :68551 AVERAGE %EFFICIENCY :31.6730 % YIELD : 96.579	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.471E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.471E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.06340 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B065.CNF;1879 BKG DATE : 12-JUL-2009 EFF FILE : W065.CNF;293 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	43.000	32.000	11.000	4.1106	99.90000	3.76E-02	8.82E-03	1.12E-02	2.56E-02	8.63E-03
PU-236	5749.000	29.000	17.000	12.000	2.7154	100.0000	2.02E-02	7.66E-03	7.41E-03	1.80E-02	7.60E-03
PU-238	5499.000	25.000	13.000	12.000	3.2589	99.90000	1.53E-02	7.19E-03	8.90E-03	2.10E-02	7.15E-03
PU242	4890.000	1294.000	1287.000	7.000	2.6458	100.0000	1.51E+00	8.48E-02	7.22E-03	1.76E-02	4.23E-02
PU-244	4589.000	9.000	6.000	3.000	4.8319	99.90000	7.05E-03	4.08E-03	1.32E-02	2.96E-02	4.07E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

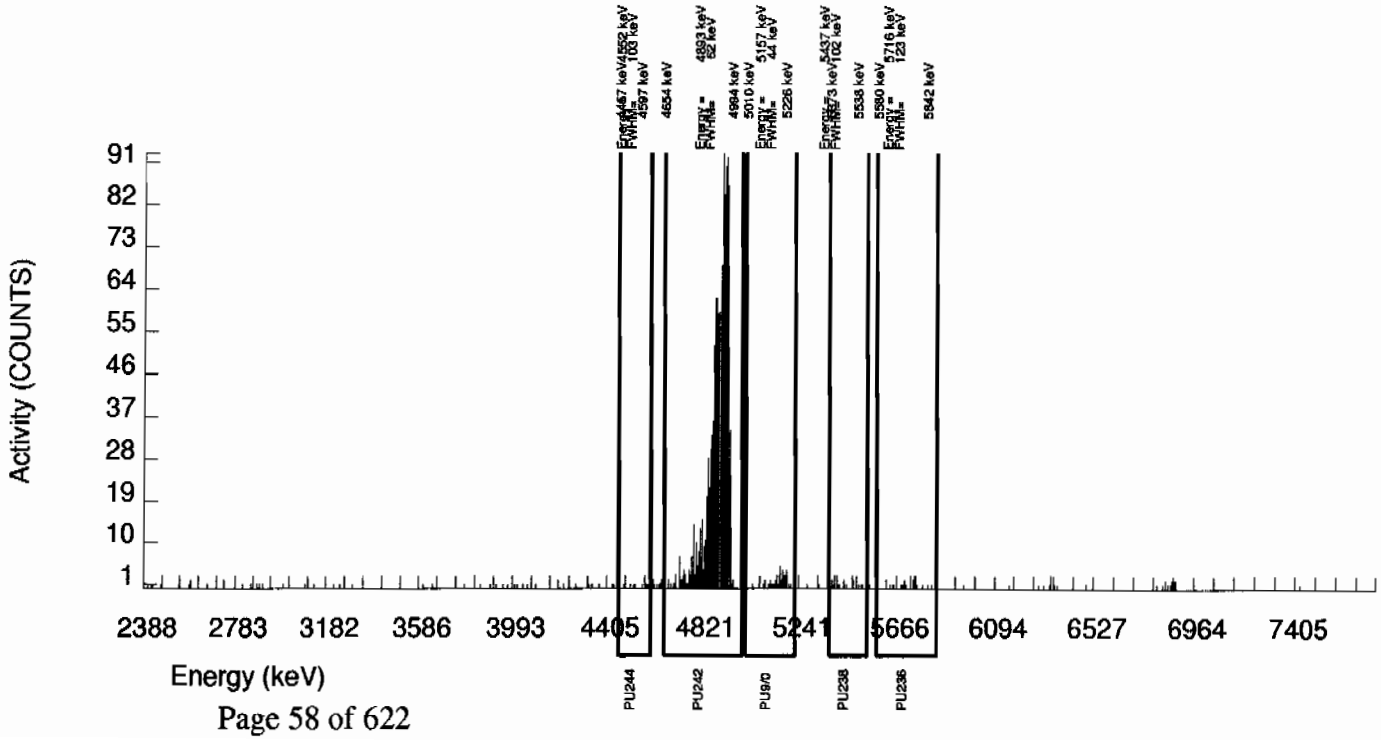

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874791_PU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :46-089B4 AVERAGE %EFFICIENCY :32.2511 % YIELD : 101.186	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.846E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.846E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.25722 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B067.CNF;1038 BKG DATE : 12-JUL-2009 EFF FILE : W067.CNF;275 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	5.000	4.000	1.000	4.1106	99.90000	5.53E-03	3.39E-03	1.32E-02	3.02E-02	3.38E-03
PU-236	5749.000	7.000	3.000	4.000	2.7154	100.0000	4.16E-03	4.61E-03	8.72E-03	2.12E-02	4.60E-03
PU-238	5499.000	13.000	6.000	7.000	3.2589	99.90000	8.29E-03	6.19E-03	1.05E-02	2.47E-02	6.18E-03
PU242	4890.000	1378.000	1373.000	5.000	2.2361	100.0000	1.90E+00	1.05E-01	7.18E-03	1.81E-02	5.13E-02
PU-244	4589.000	9.000	7.000	2.000	4.8319	99.90000	9.67E-03	4.61E-03	1.55E-02	3.48E-02	4.58E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

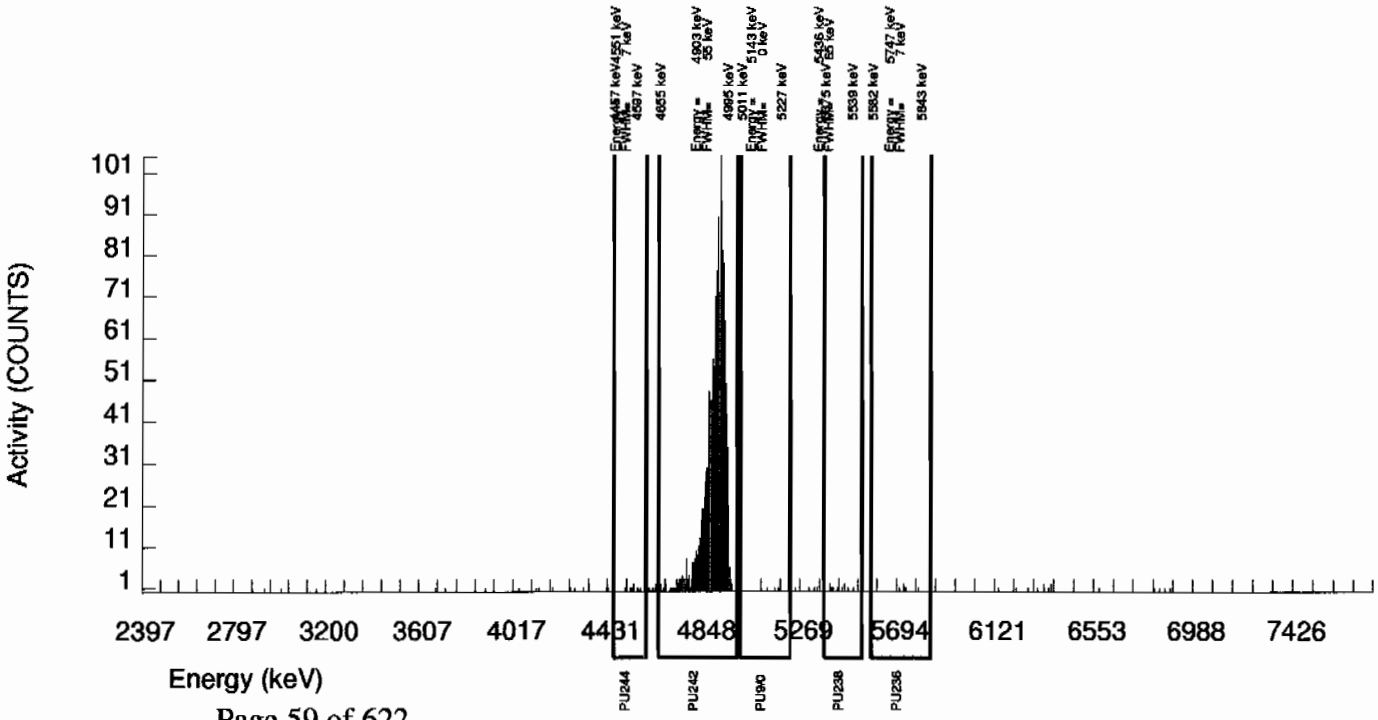

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S1201874792_PU SAMPLE QTY: 1.254 G
DETECTOR NUMBER :78794 AVERAGE %EFFICIENCY :30.1861 % YIELD : 95.904	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.472E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.472E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.03497 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B068.CNF;1031 BKG DATE : 12-JUL-2009 EFF FILE : W068.CNF;266 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	57.000	54.000	3.000	4.1106	99.90000	6.71E-02	1.02E-02	1.19E-02	2.71E-02	9.62E-03
PU-236	5749.000	6.000	0.000	6.000	2.7154	100.0000	0.00E+00	4.35E-03	7.84E-03	1.90E-02	4.35E-03
PU-238	5499.000	5.000	3.000	2.000	3.2589	99.90000	3.73E-03	3.29E-03	9.42E-03	2.22E-02	3.29E-03
PU242	4890.000	1226.000	1218.000	8.000	2.8284	100.0000	1.51E+00	8.61E-02	8.16E-03	1.97E-02	4.36E-02
PU-244	4589.000	6.000	4.000	2.000	4.8319	99.90000	4.97E-03	3.52E-03	1.40E-02	3.13E-02	3.51E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

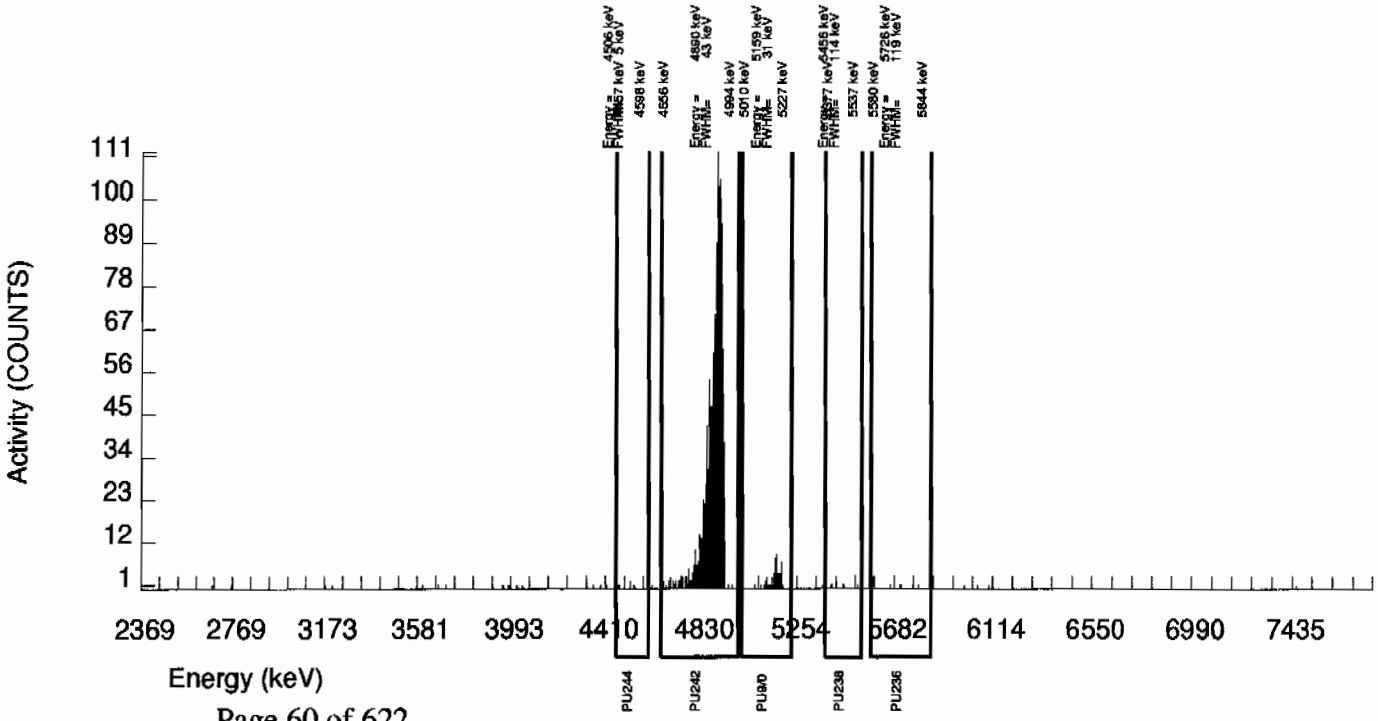

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874793_PU SAMPLE QTY: 0.106 G
DETECTOR NUMBER :78795 AVERAGE %EFFICIENCY :31.5901 % YIELD : 103.077	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.742E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.742E+01	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.33680 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B069.CNF;1033 BKG DATE : 12-JUL-2009 EFF FILE : W069.CNF;273 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2934.000	2933.000	1.000	4.1106	99.90000	3.83E+01	2.29E+00	1.25E-01	2.85E-01	7.08E-01
PU-236	5749.000	1.000	-5.000	6.000	2.7154	100.0000	-6.56E-02	3.47E-02	8.24E-02	2.00E-01	3.47E-02
PU-238	5499.000	480.000	479.000	1.000	3.2589	99.90000	6.26E+00	4.57E-01	9.90E-02	2.33E-01	2.87E-01
PU242	4890.000	1377.000	1370.000	7.000	2.6458	100.0000	1.79E+01	1.13E+00	8.03E-02	1.96E-01	4.86E-01
PU-244	4589.000	5.000	3.000	2.000	4.8319	99.90000	3.92E-02	3.46E-02	1.47E-01	3.29E-01	3.46E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

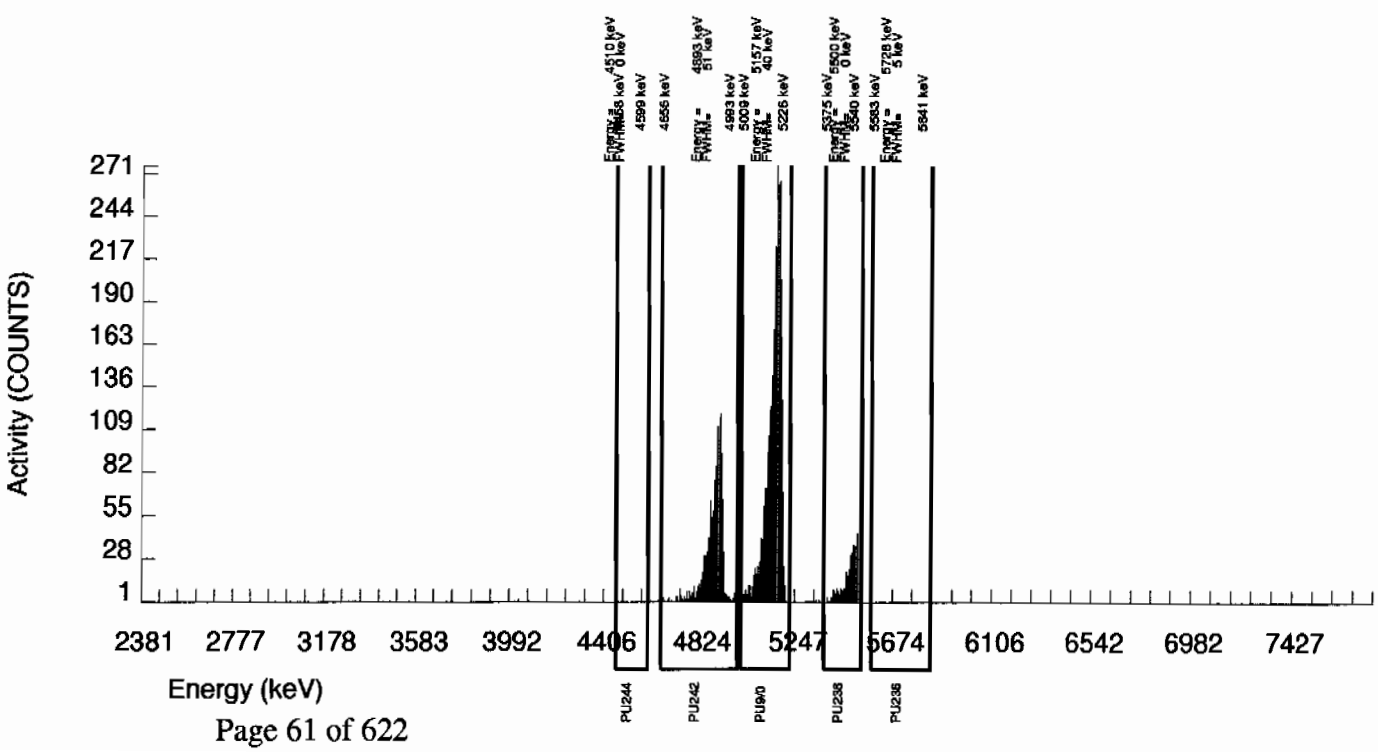

Radiochemistry Batch Checklist, Rev 9

Batch# 88S09S Product: U Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		7/17/09
Batch non-conformances completed, if applicable.	✓		NA NCR 712489
Batch non-conformances second reviewed and disposition verified to be completed.	✓		NA NCR 712489
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/17/09

Secondary Review Performed By: [signature] 7/17/09

7/9-7/15

ANL

Uranium Que Sheet

14-JUL-09

Batch #: 885095 **Analyst:** KXM4 **First Client Due Date:** 15-JUL-09 **Internal Due Date:** 09-JUL-09

Tracer Isotope: U-232/U-236 **Tracer Code:** 1183-B **Expiration Date:** 12-16-09 **Vol:** 0.1 mL

LCS Isotope: U-238 **LCS Code:** SRM 0244-A **Expiration Date:** 10-31-20 **Vol:** 0.1 g

Spike Isotope: U-238 **Spike Code:** NA **Expiration Date:** NA **Vol:** NA

Prep Date: 7-14-09 **Initials:** KM **Pipet ID:** 2471058 **Balance ID:** 50410272 **Witness:** 7/14/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g)	U Det #
232265001-2	CAMO-09-10473	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	1	1	0.505	113
232265002-2	CAMO-09-10474	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	2	2	0.519	114
232265003-2	CAMO-09-10476	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	3	3	0.505	115
232265004-2	CAMO-09-10475	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	4	4	0.512	116
232265005-2	CAMO-09-10471	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	5	5	0.519	117
232265006-2	CAMO-09-10472	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	6	6	0.513	118
232265007-2	CAMO-09-10478	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	7	7	0.518	~~119~~ 121
232265008-2	CAMO-09-10477	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	8	8	0.507	~~120~~ 122
232265009-2	CAMO-09-10481	SAMPLE		.1 pCi/g	SOIL	LANL010	19-JUN-09	9	9	0.508	123
232664001-2	CAMO-09-9942	SAMPLE		.1 pCi/g	SOIL	LANL010	26-JUN-09	10	10	0.505	124
232664002-2	CAMO-09-9941	SAMPLE		.1 pCi/g	SOIL	LANL010	26-JUN-09	11	11	0.510	~~125~~ 121
232664003-2	CAMO-09-9943	SAMPLE		.1 pCi/g	SOIL	LANL010	26-JUN-09	12	12	0.504	126
232664004-2	CAMO-09-10030	SAMPLE		.1 pCi/g	SOIL	LANL010	26-JUN-09	13	13	0.502	127 122
232664005-2	CAMO-09-9989	SAMPLE		.1 pCi/g	SOIL	LANL010	26-JUN-09	14	14	0.507	~~129~~ 123
1201880626-1	MB for batch 885095	MB		UCF pCi/g to pCi/	SOIL	QC ACCOUNT		15	15	~~0.39~~ 1.0	130
1201880627-2	CAMO-09-9941(232664002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	26-JUN-09	16	16	0.511	~~131~~ 124
1201880628-1	LCS for batch 885095	LCS		UCF pCi/g to pCi/	SOIL	QC ACCOUNT		17	17	0.117	132

Choose SOP used: GL-RAD-A-021
GL-RAD-A-038
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: 7/17/09

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 885095

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201880627	DUP	Uranium-233/234	0.511 g	0.954	0.105	0.263	.007005871	pCi/g	NO
		Uranium-235/236	0.511 g	0.0584	0.0271	0.122	.004363992	pCi/g	NO
		Uranium-238	0.511 g	1.15	0.121	0.103	-.00696673	pCi/g	NO
1201880628	LCS	Uranium-233/234	0.117 g	5.79	0.593	1.05	.030598291	pCi/g	NO
		Uranium-235/236	0.117 g	0.471	0.131	0.487	.019059829	pCi/g	NO
		Uranium-238	0.117 g	5.45	0.563	0.414	-.03042735	pCi/g	NO
1201880626	MB	Uranium-233/234	1.00 g	0.00358	0.00843	0.132	.00358	pCi/g	YES
		Uranium-235/236	1.00 g	0.00223	0.00673	0.0612	.00223	pCi/g	YES
		Uranium-238	1.00 g	-0.00356	0.00498	0.0519	-.00356	pCi/g	NO
232265001	CAMO-09-10473	Uranium-233/234	0.505 g	0.734	0.0804	0.206	.007089109	pCi/g	NO
		Uranium-235/236	0.505 g	0.044	0.0179	0.0954	.004415842	pCi/g	NO
		Uranium-238	0.505 g	0.889	0.0916	0.081	-.00704950	pCi/g	NO
232265002	CAMO-09-10474	Uranium-233/234	0.519 g	0.385	0.0524	0.212	.006897881	pCi/g	NO
		Uranium-235/236	0.519 g	0.0124	0.0088	0.0978	.004296724	pCi/g	YES
		Uranium-238	0.519 g	0.406	0.0537	0.083	-.00685934	pCi/g	NO
232265003	CAMO-09-10476	Uranium-233/234	0.505 g	0.424	0.0558	0.215	.007089109	pCi/g	NO
		Uranium-235/236	0.505 g	0.00993	0.0126	0.0992	.004415842	pCi/g	YES
		Uranium-238	0.505 g	0.332	0.0478	0.0842	-.00704950	pCi/g	NO
232265004	CAMO-09-10475	Uranium-233/234	0.512 g	0.513	0.0642	0.216	.006992188	pCi/g	NO
		Uranium-235/236	0.512 g	0.0253	0.0128	0.0998	.004355469	pCi/g	NO
		Uranium-238	0.512 g	0.601	0.0708	0.0847	-.00695313	pCi/g	NO
232265005	CAMO-09-10471	Uranium-233/234	0.519 g	0.368	0.0506	0.204	.006897881	pCi/g	NO
		Uranium-235/236	0.519 g	0.0897	0.024	0.0944	.004296724	pCi/g	NO
		Uranium-238	0.519 g	0.579	0.0676	0.0802	-.00685934	pCi/g	NO
232265006	CAMO-09-10472	Uranium-233/234	0.513 g	0.325	0.0482	0.222	.006978558	pCi/g	NO
		Uranium-235/236	0.513 g	0.0389	0.0161	0.102	.004346979	pCi/g	NO
		Uranium-238	0.513 g	0.427	0.0567	0.0869	-.00693957	pCi/g	NO
232265007	CAMO-09-10478	Uranium-233/234	0.518 g	0.411	0.0532	0.202	.006911197	pCi/g	NO
		Uranium-235/236	0.518 g	0.0194	0.0126	0.0933	.004305019	pCi/g	YES
		Uranium-238	0.518 g	0.251	0.0397	0.0792	-.00687259	pCi/g	NO
232265008	CAMO-09-10477	Uranium-233/234	0.507 g	0.393	0.0541	0.218	.007061144	pCi/g	NO
		Uranium-235/236	0.507 g	0.0338	0.0165	0.101	.004398422	pCi/g	NO
		Uranium-238	0.507 g	0.393	0.0545	0.0856	-.00702170	pCi/g	NO
232265009	CAMO-09-10481	Uranium-233/234	0.508 g	0.415	0.0559	0.223	.007047244	pCi/g	NO
		Uranium-235/236	0.508 g	0.0196	0.0114	0.103	.004389764	pCi/g	YES
		Uranium-238	0.508 g	0.278	0.044	0.0876	-.00700787	pCi/g	NO
232664001	CAMO-09-9942	Uranium-233/234	0.505 g	0.773	0.0846	0.219	.007089109	pCi/g	NO
		Uranium-235/236	0.505 g	0.078	0.0271	0.101	.004415842	pCi/g	NO
		Uranium-238	0.505 g	0.909	0.0948	0.086	-.00704950	pCi/g	NO
232664002	CAMO-09-9941	Uranium-233/234	0.510 g	1.35	0.137	0.266	.007019608	pCi/g	NO
		Uranium-235/236	0.510 g	0.0267	0.0168	0.123	.004372549	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232664002	CAMO-09-9941	Uranium-238	0.510 g	1.32	0.134	0.104	-.00698039	pCi/g	NO
232664003	CAMO-09-9943	Uranium-233/234	0.504 g	0.822	0.0985	0.291	.007103175	pCi/g	NO
		Uranium-235/236	0.504 g	0.0208	0.0249	0.134	.004424603	pCi/g	YES
		Uranium-238	0.504 g	0.953	0.108	0.114	-.00706349	pCi/g	NO
232664004	CAMO-09-10030	Uranium-233/234	0.502 g	1.30	0.137	0.291	.007131474	pCi/g	NO
		Uranium-235/236	0.502 g	0.0728	0.0272	0.135	.004442231	pCi/g	NO
		Uranium-238	0.502 g	1.38	0.143	0.115	-.00709163	pCi/g	NO
232664005	CAMO-09-9989	Uranium-233/234	0.507 g	1.25	0.129	0.262	.007061144	pCi/g	NO
		Uranium-235/236	0.507 g	0.0861	0.0267	0.121	.004398422	pCi/g	NO
		Uranium-238	0.507 g	1.22	0.126	0.103	-.00702170	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885095
SAMPLE DATE : 26-JUN-2009 00:00:00

SAMPLE ID : S0232664001_UU
SAMPLE QTY: 0.505 G

DETECTOR NUMBER :45-142V2
AVERAGE %EFFICIENCY :25.8792
% YIELD : 93.435

COUNT DATE:15-JUL-2009 21:12:08
ELAPSED LIVE TIME(SEC): 42628.53
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
SOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B124.CNF;371
PCI/G : 2.329E+01	PCI/G : 2.329E+01	NOMINAL : 5.29588 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.94818 dpm	EFF FILE : W124.CNF;99
			CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	153.000	148.835	1.421	9.1924	100.0000	7.73E-01	8.46E-02	1.03E-01	2.19E-01	6.39E-02
U232	5302.100	915.000	909.316	5.684	2.3841	100.0000	4.72E+00	3.74E-01	2.66E-02	6.73E-02	1.57E-01
U-235	4391.000	15.000	12.158	2.842	3.0409	80.90000	7.80E-02	2.71E-02	4.20E-02	1.01E-01	2.65E-02
U-238	4184.730	175.000	175.000	0.000	3.2215	100.0000	9.09E-01	9.48E-02	3.60E-02	8.60E-02	6.87E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

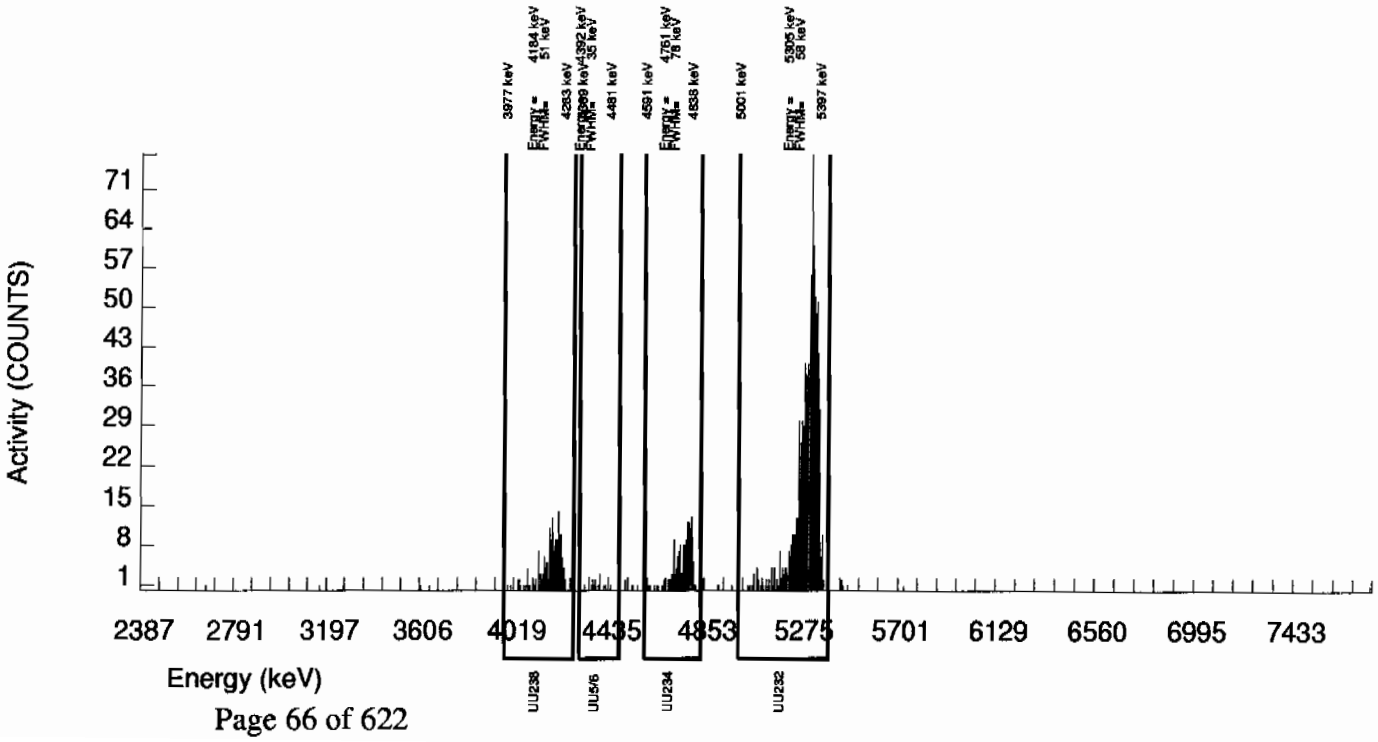

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885095 SAMPLE DATE : 26-JUN-2009 00:00:00	SAMPLE ID : S0232664002_UU SAMPLE QTY: 0.510 G
DETECTOR NUMBER :75545 AVERAGE %EFFICIENCY :24.8150 % YIELD : 87.356	COUNT DATE:16-JUL-2009 19:50:49 ELAPSED LIVE TIME(SEC): 38060.69 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.306E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.306E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29588 dpm RESULTS : 4.62626 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B121.CNF;375 BKG DATE : 12-JUL-2009 EFF FILE : W121.CNF;104 CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	213.000	210.804	0.000	9.1924	100.0000	1.35E+00	1.37E-01	1.24E-01	2.66E-01	9.33E-02
U232	5302.100	731.000	727.828	3.172	1.7809	100.0000	4.68E+00	3.86E-01	2.41E-02	6.55E-02	1.74E-01
U-235	4391.000	4.000	3.366	0.634	3.0409	80.90000	2.67E-02	1.68E-02	5.08E-02	1.23E-01	1.67E-02
U-238	4184.730	206.000	204.731	1.269	3.2215	100.0000	1.32E+00	1.34E-01	4.35E-02	1.04E-01	9.24E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

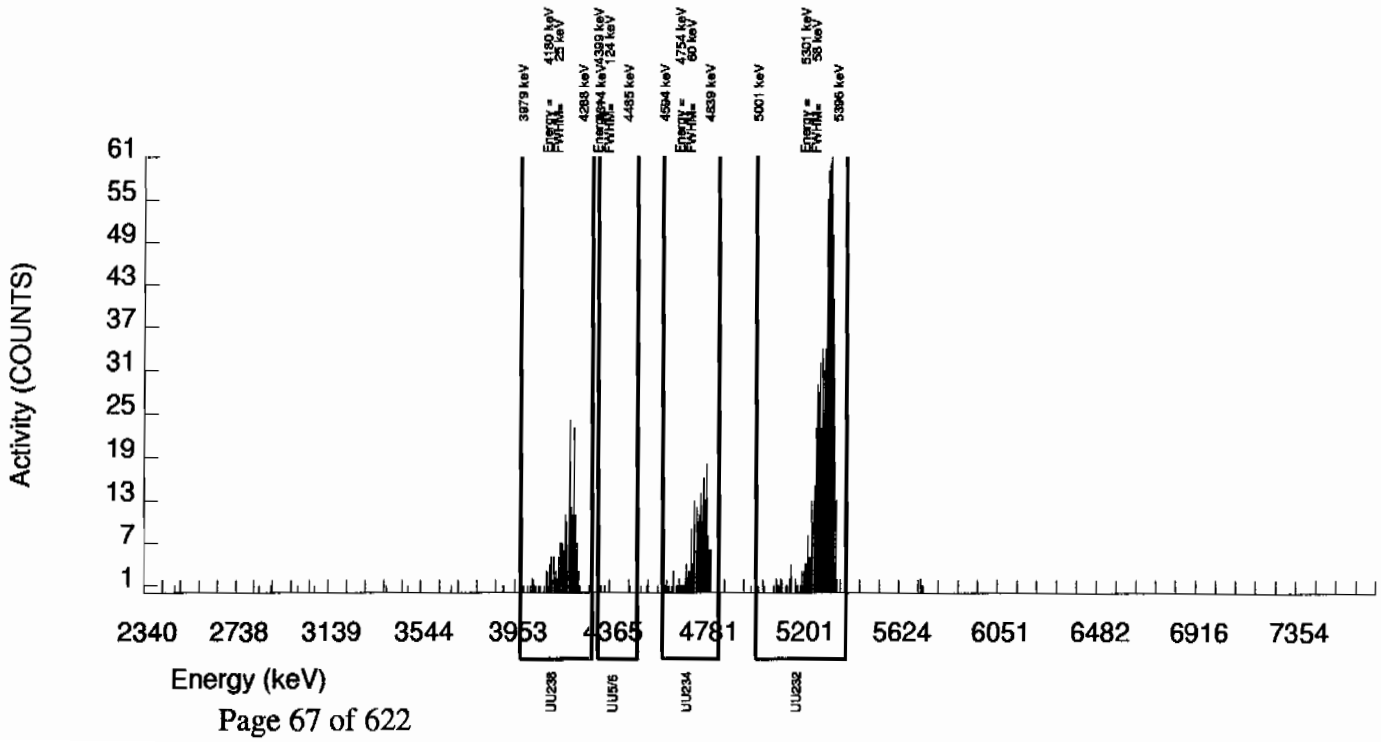

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885095 SAMPLE DATE : 26-JUN-2009 00:00:00	SAMPLE ID : S0232664003_UU SAMPLE QTY: 0.504 G
DETECTOR NUMBER :75548 AVERAGE %EFFICIENCY :25.4638 % YIELD : 71.709	COUNT DATE:15-JUL-2009 21:12:14 ELAPSED LIVE TIME(SEC): 42633.53 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.333E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.333E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29588 dpm RESULTS : 3.79764 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B126.CNF;380 BKG DATE : 12-JUL-2009 EFF FILE : W126.CNF;117 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	125.000	119.375	3.553	9.1924	100.0000	8.22E-01	9.85E-02	1.36E-01	2.91E-01	7.72E-02
U232	5302.100	696.000	686.763	9.237	3.0393	100.0000	4.73E+00	3.97E-01	4.50E-02	1.09E-01	1.83E-01
U-235	4391.000	6.000	2.447	3.553	3.0409	80.90000	2.08E-02	2.49E-02	5.57E-02	1.34E-01	2.49E-02
U-238	4184.730	139.000	138.289	0.711	3.2215	100.0000	9.53E-01	1.08E-01	4.77E-02	1.14E-01	8.14E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

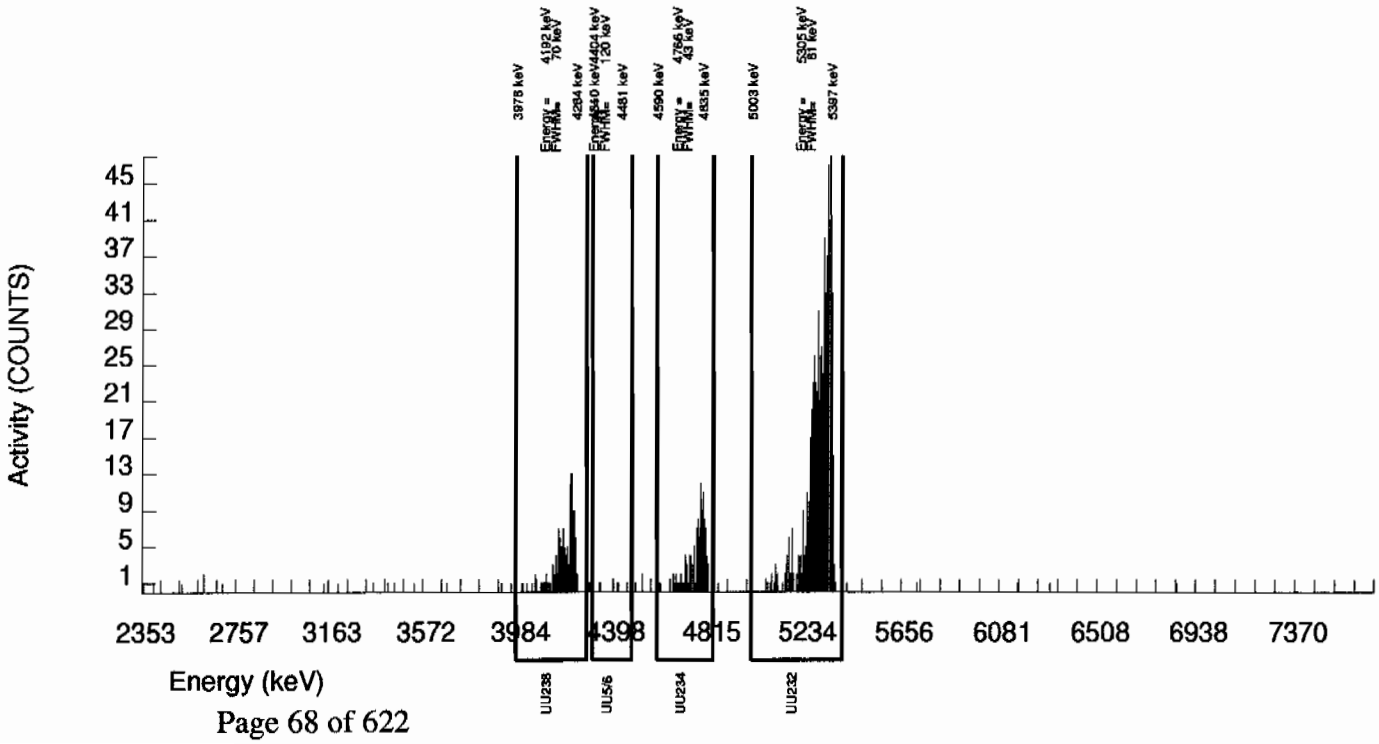

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885095 SAMPLE DATE : 26-JUN-2009 00:00:00	SAMPLE ID : S0232664004_UU SAMPLE QTY: 0.502 G
DETECTOR NUMBER :75546 AVERAGE %EFFICIENCY :25.3549 % YIELD : 79.011	COUNT DATE:16-JUL-2009 19:50:50 ELAPSED LIVE TIME(SEC): 38169.55 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.343E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.343E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29588 dpm RESULTS : 4.18434 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B122.CNF;377 BKG DATE : 12-JUL-2009 EFF FILE : W122.CNF;107 CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	188.000	184.056	1.908	9.1924	100.0000	1.30E+00	1.37E-01	1.36E-01	2.91E-01	9.63E-02
U232	5302.100	686.000	674.549	11.451	3.3839	100.0000	4.75E+00	4.01E-01	5.01E-02	1.19E-01	1.85E-01
U-235	4391.000	9.000	8.364	0.636	3.0409	80.90000	7.28E-02	2.72E-02	5.57E-02	1.35E-01	2.67E-02
U-238	4184.730	198.000	195.455	2.545	3.2215	100.0000	1.38E+00	1.43E-01	4.77E-02	1.15E-01	9.95E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

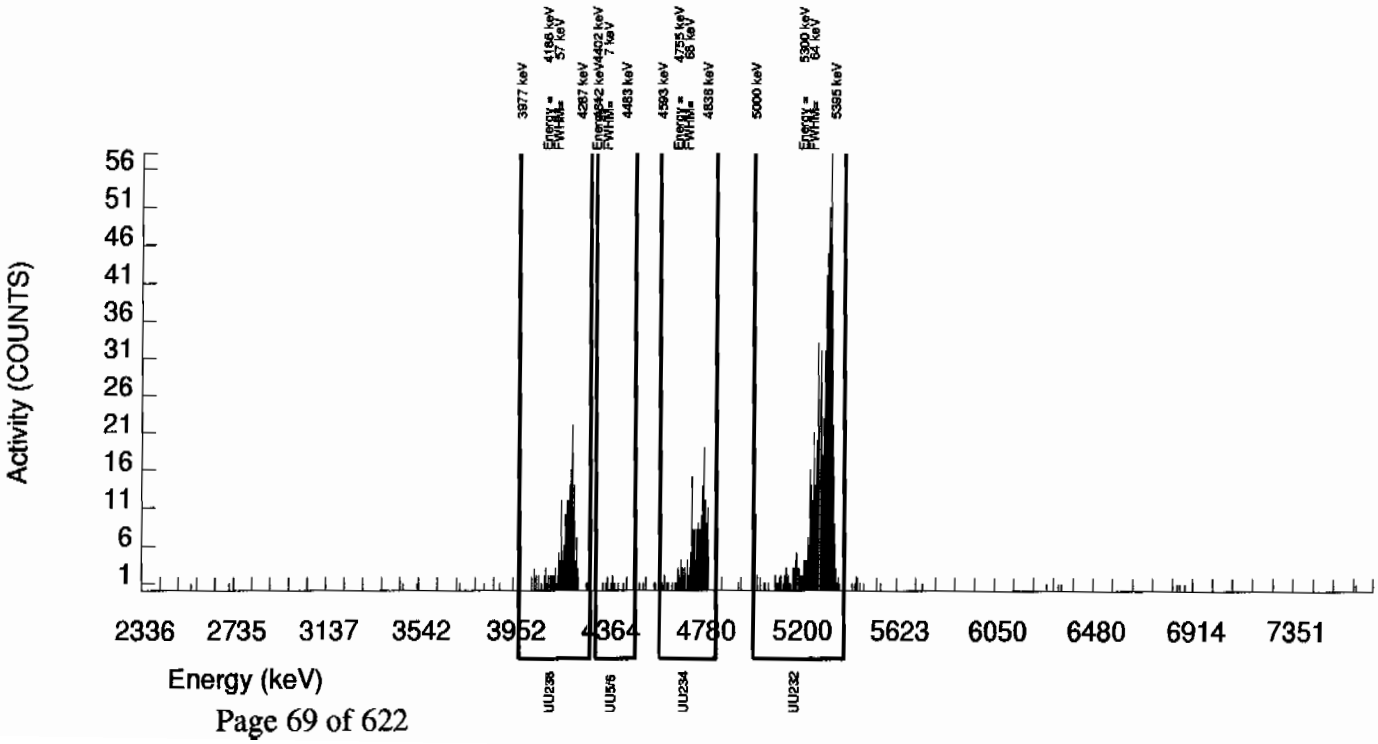

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885095 SAMPLE DATE : 26-JUN-2009 00:00:00	SAMPLE ID : S0232664005_UU SAMPLE QTY: 0.507 G
DETECTOR NUMBER :45-142V3 AVERAGE %EFFICIENCY :25.9996 % YIELD : 84.819	COUNT DATE:16-JUL-2009 19:50:54 ELAPSED LIVE TIME(SEC): 38169.85 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.319E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.319E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29588 dpm RESULTS : 4.49189 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B123.CNF;375 BKG DATE : 12-JUL-2009 EFF FILE : W123.CNF;103 CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	201.000	198.123	0.636	9.1924	100.0000	1.25E+00	1.29E-01	1.22E-01	2.62E-01	8.94E-02
U232	5302.100	747.000	742.547	4.453	2.1102	100.0000	4.71E+00	3.87E-01	2.81E-02	7.34E-02	1.74E-01
U-235	4391.000	11.000	11.000	0.000	3.0409	80.90000	8.61E-02	2.67E-02	5.01E-02	1.21E-01	2.60E-02
U-238	4184.730	194.000	192.728	1.272	3.2215	100.0000	1.22E+00	1.26E-01	4.29E-02	1.03E-01	8.84E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

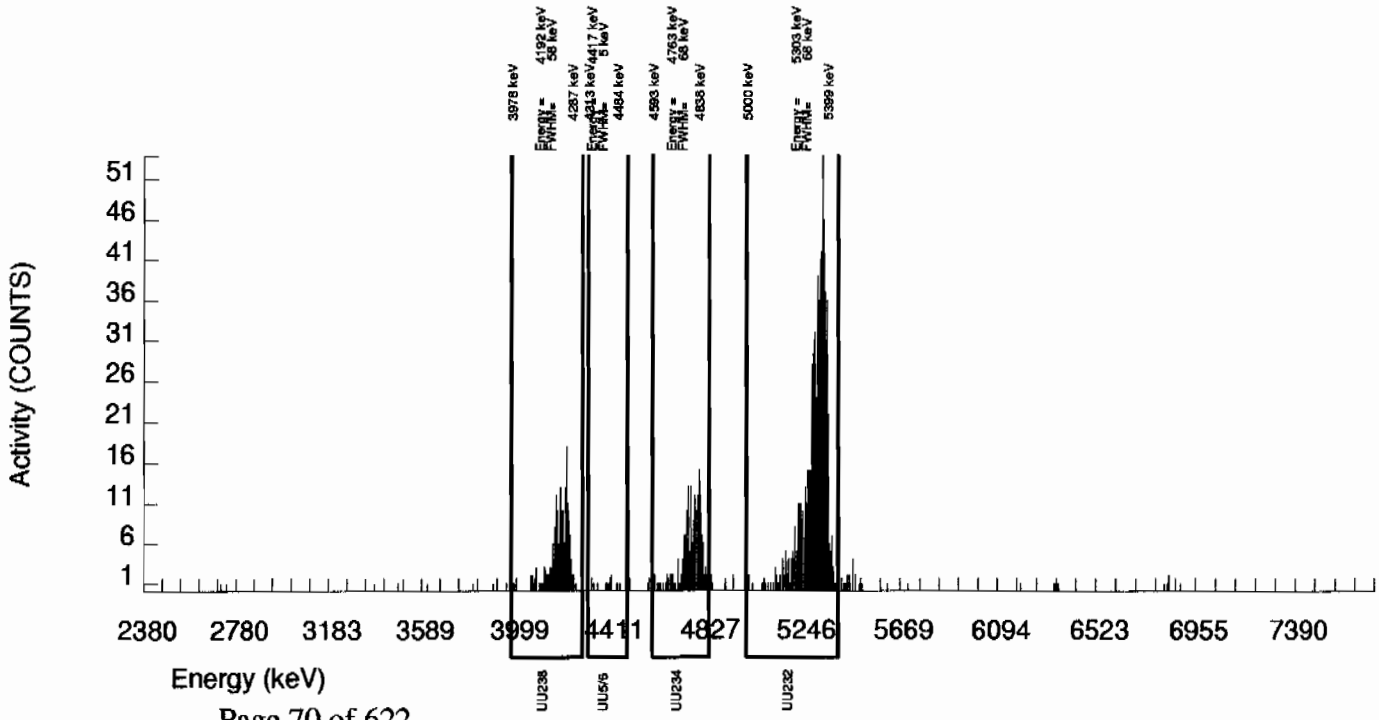

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885095 SAMPLE DATE : 14-JUL-2009 00:00:00	SAMPLE ID : S1201880626_UU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :76228 AVERAGE %EFFICIENCY :24.6764 % YIELD : 81.812	COUNT DATE:15-JUL-2009 21:12:21 ELAPSED LIVE TIME(SEC): 42730.52 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 1.176E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29336 dpm RESULTS : 4.33061 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B130.CNF;379 BKG DATE : 12-JUL-2009 EFF FILE : W130.CNF;115 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	7.000	1.143	3.561	9.1924	100.0000	3.58E-03	8.43E-03	6.20E-02	1.32E-01	8.43E-03
U232	5302.100	766.000	761.015	4.985	2.2328	100.0000	2.38E+00	1.95E-01	1.51E-02	3.86E-02	8.69E-02
U-235	4391.000	2.000	0.576	1.424	3.0409	80.90000	2.23E-03	6.73E-03	2.53E-02	6.12E-02	6.72E-03
U-238	4184.730	1.000	-1.137	2.137	3.2215	100.0000	-3.56E-03	4.98E-03	2.17E-02	5.19E-02	4.98E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

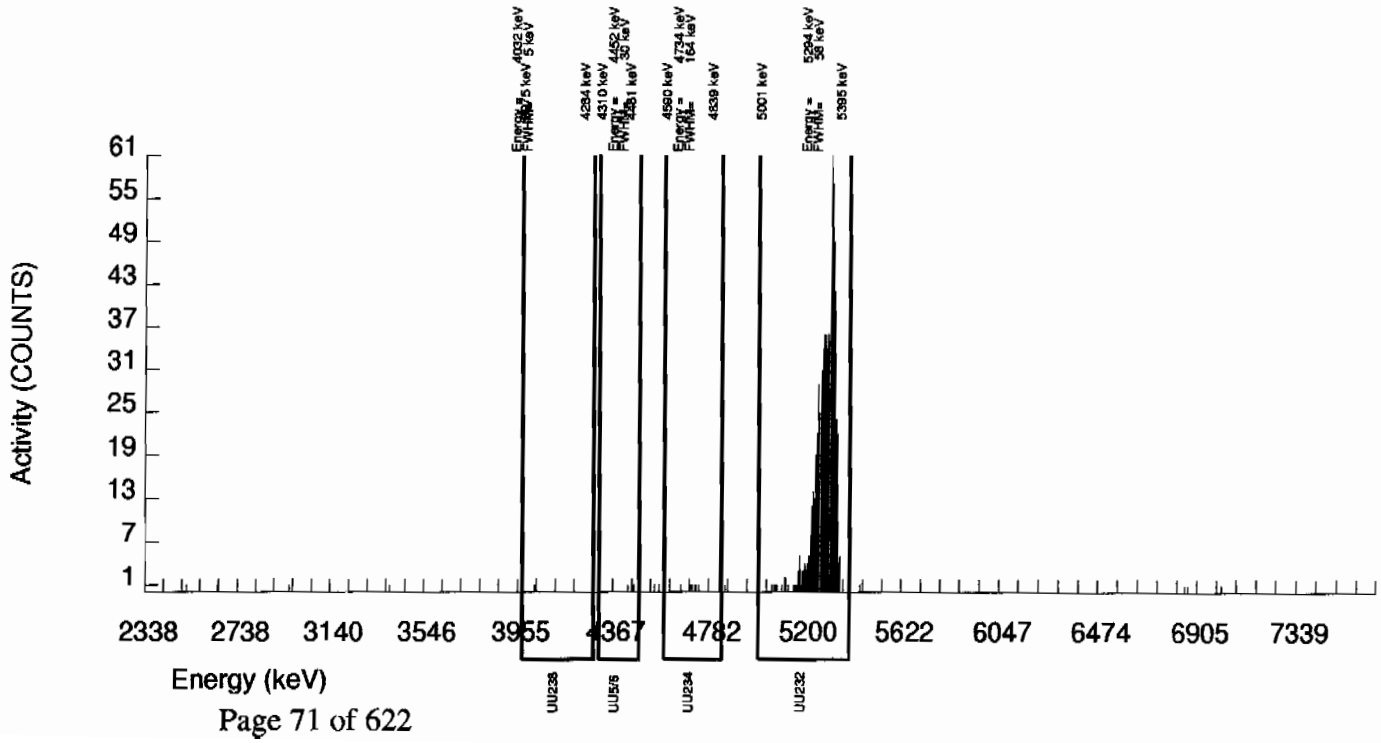

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885095 SAMPLE DATE : 26-JUN-2009 00:00:00	SAMPLE ID : S1201880627_UU SAMPLE QTY: 0.511 G
DETECTOR NUMBER :45-142V2 AVERAGE %EFFICIENCY :25.8792 % YIELD : 84.291	COUNT DATE:16-JUL-2009 19:50:57 ELAPSED LIVE TIME(SEC): 38242.11 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.301E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.301E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29588 dpm RESULTS : 4.46394 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B124.CNF;371 BKG DATE : 12-JUL-2009 EFF FILE : W124.CNF;99 CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	154.000	150.505	1.275	9.1924	100.0000	9.54E-01	1.05E-01	1.23E-01	2.63E-01	7.83E-02
U232	5302.100	741.000	735.901	5.099	2.2581	100.0000	4.67E+00	3.85E-01	3.01E-02	7.75E-02	1.73E-01
U-235	4391.000	10.000	7.451	2.549	3.0409	80.90000	5.84E-02	2.71E-02	5.02E-02	1.22E-01	2.67E-02
U-238	4184.730	182.000	182.000	0.000	3.2215	100.0000	1.15E+00	1.21E-01	4.30E-02	1.03E-01	8.55E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

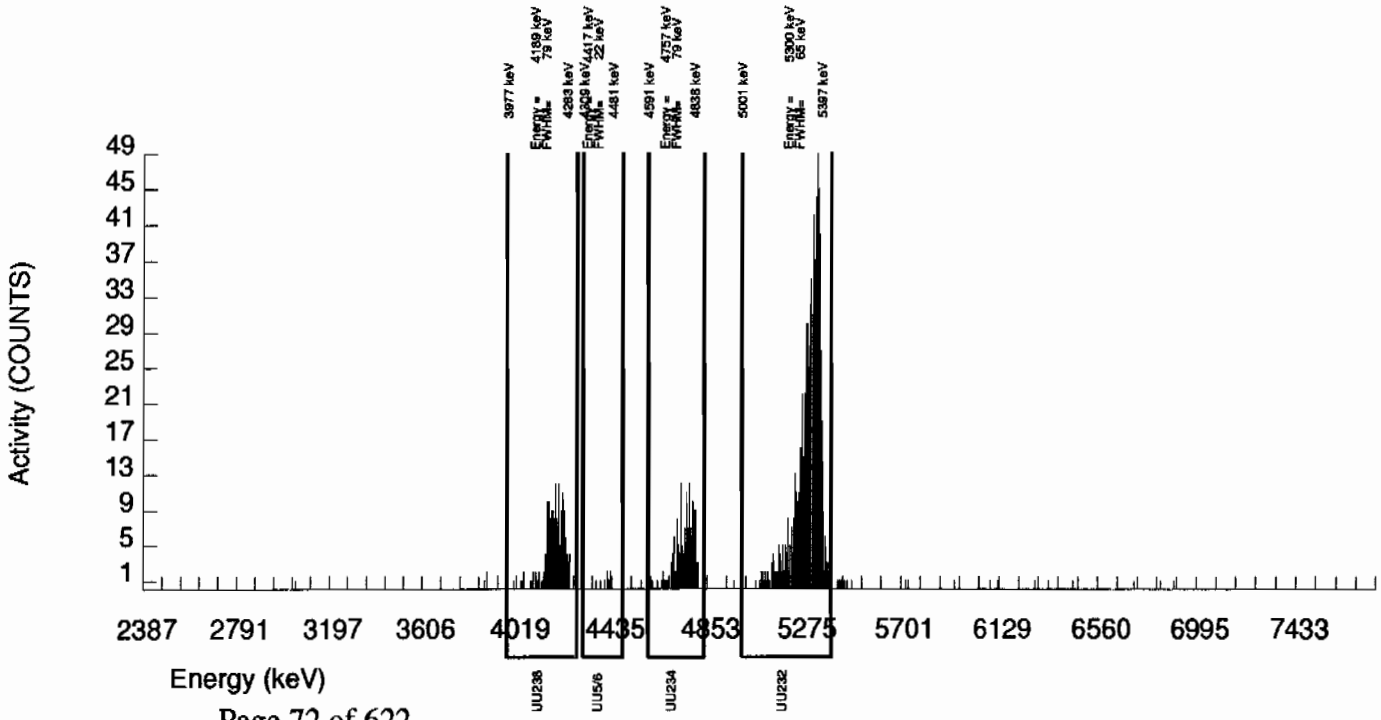

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 885095 SAMPLE DATE : 14-JUL-2009 00:00:00	SAMPLE ID : S1201880628_UU SAMPLE QTY: 0.117 G
DETECTOR NUMBER :67579 AVERAGE %EFFICIENCY :24.8622 % YIELD : 87.121	COUNT DATE:15-JUL-2009 21:12:26 ELAPSED LIVE TIME(SEC): 42750.35 ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 1.005E+02	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.005E+02	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29336 dpm RESULTS : 4.61162 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B132.CNF;369 BKG DATE : 12-JUL-2009 EFF FILE : W132.CNF;104 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	239.000	232.260	4.275	9.1924	100.0000	5.79E+00	5.93E-01	4.94E-01	1.05E+00	3.86E-01
U232	5302.100	824.000	816.875	7.125	2.6693	100.0000	2.04E+01	1.74E+00	1.43E-01	3.54E-01	7.18E-01
U-235	4391.000	16.000	15.287	0.713	3.0409	80.90000	4.71E-01	1.31E-01	2.02E-01	4.87E-01	1.25E-01
U-238	4184.730	220.000	218.575	1.425	3.2215	100.0000	5.45E+00	5.63E-01	1.73E-01	4.14E-01	3.71E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

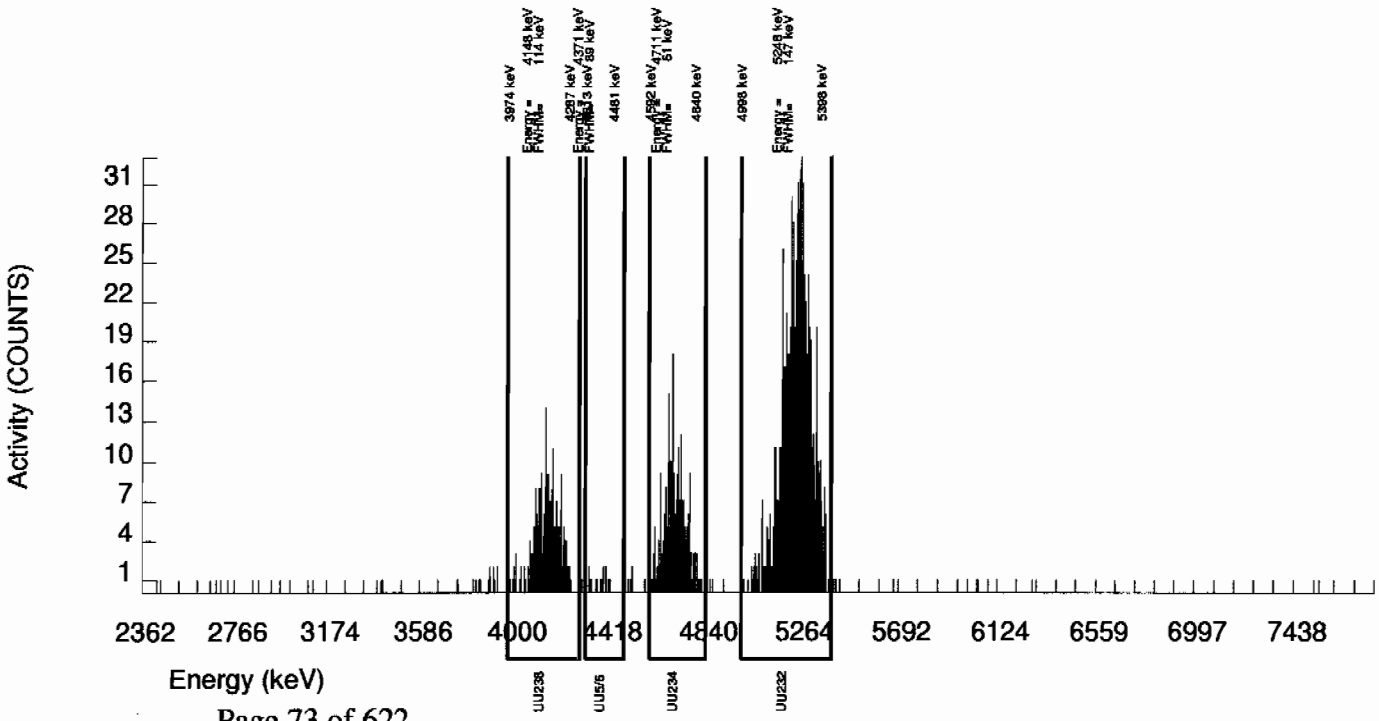

Radiochemistry Batch Checklist, Rev 9

Batch# 882713 Product: Y/LANL Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			n/a
Samples have been blank corrected (if required)			n/a
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			n/a
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			n/a
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			n/a
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			n/a
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			n/a
Batch non-conformances second reviewed and disposition verified to be completed.			n/a
Aliquot Correction completed if required.			n/a
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Maggie Stamps 7/17/09

Secondary Review Performed By: [illegible] 7/17/09

Gamma Spec Que Sheet

L.G. - 7/14/09

07/07/2009

Batch #:882713 Analyst: MXR1 First Client DueDate 07/23/2009 Internal Due Date: 07/12/2009

Gamma Spike Isotope: Mixed Gamma Spike Code: n/a Expiration Date: n/a Vol: n/a Nominal Concentration: n/a

Gamma LCS Isotope: Mixed Gamma LCS Code: 1032-A Expiration Date: 12/4/09 Vol: 1.0mL Nominal Concentration: Cs137-5.636 Co60-6.914 Am241-15.92

Initials: MS Prep Date: 7/7/09 Witness: n/a

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
232664001-1	CAMO-09-9942	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	104.07	16	7/2/09
232664002-1	CAMO-09-9941	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	105.14	18	
232664003-1	CAMO-09-9943	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	111.20	22	
232664004-1	CAMO-09-10030	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	101.93	23	
232664005-1	CAMO-09-9989	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	125.24	20	
232746001-1	CAMO-09-9956	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	130.35	2	7/7/09
232746002-1	CAMO-09-9950	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	127.35	9	
232746003-1	CAMO-09-9952	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	137.08	12	
232746004-1	CAMO-09-9958	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	137.82	5	
232746005-1	CAMO-09-9957	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	131.80	21	
232746006-1	CAMO-09-9951	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	131.37	14	
232746007-1	CAMO-09-10031	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	130.70	17	
232746008-1	CAMO-09-9990	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	144.47	13	
232754001-1	CAMO-09-6615	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	135.03	16	
232754002-1	CAMO-09-6614	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	133.25	18	
232754003-1	CAMO-09-6613	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	137.02	22	
232758002-1	CAMO-09-9962	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	121.73	2	
232758003-1	CAMO-09-9964	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	116.04	12	
232758004-1	CAMO-09-9963	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	116.48	9	
232758005-1	CAMO-09-10032	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	125.33	20	
1201874832-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	7/7/09	144.47	21 ~~10~~	
1201874833-1	DUP CAMO-09-6615(232754001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	30-JUN-09 12:00:00	133.07	5	
1201874834-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	7/7/09	155.44	13	

7/17/09

Data Reviewed By: Maggie Stamps 7/17/09

GEL Laboratories LLC, Radiochemistry Division

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
882713	232664001	SAMPLE	14-JUL-09	Americium-241	0.298	0.3346	0.200
				Cerium-139	0.02451	0.06158	0.050
				Cesium-134	0.1115	0.1127	0.100
				Sodium-22	-0.00262	0.08357	0.080
				Thorium-234	2.212	2.712	2.00
882713	232664002	SAMPLE	14-JUL-09	Thorium-234	1.878	2.754	2.00
882713	232664003	SAMPLE	14-JUL-09	Americium-241	0.01167	0.2363	0.200
				Thorium-234	0.8017	2.045	2.00
882713	232664004	SAMPLE	14-JUL-09	Sodium-22	-0.01878	0.09959	0.080
				Thorium-234	1.654	2.394	2.00
882713	232664005	SAMPLE	14-JUL-09				
882713	232746001	SAMPLE	14-JUL-09	Americium-241	0.07321	0.3081	0.200
				Thorium-234	0.8008	2.375	2.00
882713	232746002	SAMPLE	14-JUL-09	Americium-241	-0.04631	0.2681	0.200
				Thorium-234	0.7057	2.449	2.00
882713	232746003	SAMPLE	14-JUL-09	Americium-241	0.02808	0.2475	0.200
				Thorium-234	0.692	2.007	2.00
882713	232746004	SAMPLE	14-JUL-09	Cerium-139	-0.00508	0.05139	0.050
				Sodium-22	-0.03144	0.08283	0.080
882713	232746005	SAMPLE	14-JUL-09	Cerium-139	0.00744	0.05605	0.050
				Cobalt-60	0.04706	0.107	0.100
				Europium-152	0.01525	0.2005	0.200
				Sodium-22	-0.02711	0.1192	0.080
882713	232746006	SAMPLE	14-JUL-09	Americium-241	0.1301	0.2201	0.200
				Cerium-139	0.01688	0.0524	0.050
882713	232746007	SAMPLE	14-JUL-09	Cerium-139	0.01118	0.05925	0.050
				Cesium-134	0.02656	0.112	0.100
				Sodium-22	-0.00346	0.09341	0.080
882713	232746008	SAMPLE	14-JUL-09	Cerium-139	-0.02121	0.05246	0.050
				Sodium-22	0.01578	0.0925	0.080
882713	232754001	SAMPLE	14-JUL-09	Americium-241	0.09817	0.2899	0.200
				Cerium-139	-0.01375	0.05154	0.050
				Thorium-234	1.486	2.378	2.00
882713	232754002	SAMPLE	14-JUL-09	Americium-241	-0.0349	0.2985	0.200
				Thorium-234	1.363	2.58	2.00
882713	232754003	SAMPLE	14-JUL-09	Americium-241	0.1579	0.2213	0.200
882713	232758002	SAMPLE	14-JUL-09	Americium-241	-0.1085	0.329	0.200
				Cerium-139	-0.02087	0.0523	0.050
				Cesium-134	0.06978	0.1015	0.100
				Sodium-22	0.03599	0.08858	0.080
				Thorium-234	0.5268	2.612	2.00
882713	232758003	SAMPLE	14-JUL-09	Americium-241	-0.00355	0.2809	0.200
				Cerium-139	-0.00348	0.05194	0.050

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
882713	232758003	SAMPLE	14-JUL-09	Sodium-22	-0.01567	0.09152	0.080
882713	232758004	SAMPLE	14-JUL-09	Americium-241	-0.06326	0.3138	0.200
				Cerium-139	-0.01329	0.05188	0.050
				Sodium-22	0.03741	0.08039	0.080
				Thorium-234	1.156	2.801	2.00
882713	232758005	SAMPLE	14-JUL-09				
882713	1201874832	MB	14-JUL-09				
882713	1201874833	DUP	14-JUL-09	Cerium-139	-0.01523	0.05411	0.050
				Cesium-134	0.07826	0.1097	0.100
				Sodium-22	-0.01244	0.09425	0.080
882713	1201874834	LCS	14-JUL-09	Cerium-139	0.01555	0.08511	0.050
				Cesium-134	0.03051	0.1905	0.100
				Europium-152	0.03026	0.3345	0.200
				Mercury-203	0.04059	0.1189	0.100
				Potassium-40	0.8487	1.261	1.00
				Ruthenium-106	-0.3975	1.078	0.800
				Sodium-22	-0.06454	0.09224	0.080
				Tin-113	0.08723	0.1647	0.100
				Uranium-235	-0.09912	0.5983	0.500
				Yttrium-88	0.06542	0.1092	0.100

Gamma Review Report based on Result > MDA for Batch:882713

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664001	26-JUN-09 12:00	14-JUL-09 08:26	17.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.809	0.2002	pCi/g	0.2344	N	911.6	3	1.648	IDENTIFIED	9.345	☐	
Americium-243 INT	0.4869	0.04549	pCi/g	0.1144	N	75.07	1	0.9184	IDENTIFIED	8.514	☐	
Annihilation Rad.	0.1513	0.04074	pCi/g	0.05033	N	511.1	2	1.653	IDENTIFIED	26.77	☐	
Pb214 Bismuth-211 INT	4.501	0.2829	pCi/g	0.3616	Y	352.1	4	1.054	IDENTIFIED	5.466	☑ UI	
Bismuth-212 ✓	1.494	0.2557	pCi/g	0.5626	N	727.7	1	1.336	IDENTIFIED	16.56	☐	
Bismuth-214 ✓	1.425	0.1093	pCi/g	0.1294	0.200	609.6	4	1.378	IDENTIFIED	6.55	☐	
Pb-214 Cadmium-109 INT	3.631	0.6229	pCi/g	1.749	Y	87.31	5	1.048	IDENTIFIED	16.61	☑ UI	
Cadmium-115	38.19	14.21	pCi/g	0	N	87.31	5	1.048	NOT_IDENTI	16.61	☐	
Cerium-143	3189	525.9	pCi/g	0	N	328.2	1	1.222	NOT_IDENTI	40.42	☐	
Gross Gamma	11.05	1.894	pCi/g	5.542	N		0				☐	
Iodine-123 HE	4.22E+07	1.12E+08	pCi/g	0	N	87.31	5	1.048	NOT_IDENTI	16.61	☐	
Iodine-133 HE	16030	30210	pCi/g	0	N	511.1	2	1.653	FAIL_DECAY	26.77	☐	
Krypton-85 LA	30.91	5.244	pCi/g	18.04	N	238.8	7	1.001	NOT_IDENTI	3.218	☐	
Lead-212 ✓	1.94	0.09261	pCi/g	0.1119	0.100	238.8	7	1.001	IDENTIFIED	3.218	☐	
Lead-214 ✓	1.566	0.1066	pCi/g	0.129	0.100	352.1	4	1.054	IDENTIFIED	5.466	☐	
Lutetium-177 HE	4.13	1.185	pCi/g	3.142	N	209.2	1	0.9456	FAIL_ABUND	28.57	☐	
Neptunium-237 INT	1.044	0.2089	pCi/g	0.4652	N	87.31	5	1.048	IDENTIFIED	16.61	☐	
Polonium-212 NV	1.94	0.09261	pCi/g	0.1119	N	238.8	7	1.001	IDENTIFIED	3.218	☐	
Polonium-214 NV	1.566	0.1066	pCi/g	0.129	N	352.1	4	1.054	IDENTIFIED	5.466	☐	
Polonium-216 NV	1.94	0.09261	pCi/g	0.1119	N	238.8	7	1.001	IDENTIFIED	3.218	☐	
Polonium-218 NV	1.566	0.1066	pCi/g	0.129	N	352.1	4	1.054	IDENTIFIED	5.466	☐	
Potassium-40 ✓	34.8	1.792	pCi/g	0.6581	1.00	1461	1	1.821	IDENTIFIED	2.964	☐	
Pb214 Radium-224 INT	5.566	0.5106	pCi/g	1.272	Y	241.8	1	1.705	IDENTIFIED	8.76	☑ UI	
Radium-226 ✓	1.425	0.1093	pCi/g	0.1294	Y	609.6	4	1.378	IDENTIFIED	6.55	☐	
Radium-228 ✓	1.809	0.2002	pCi/g	0.2344	0.500	911.6	3	1.648	IDENTIFIED	9.345	☐	
Strontium-85 LA	0.1631	0.02767	pCi/g	0.09522	Y	238.8	7	1.001	NOT_IDENTI	3.218	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.4851	0.04839	pCi/g	0.06862	0.080	583.6	1	1.17	IDENTIFIED	9.362	☐	
Thorium-228 ✓	1.94	0.09261	pCi/g	0.1118	N	238.8	7	1.001	IDENTIFIED	3.218	☐	
Thorium-230 ✓	1.425	0.1093	pCi/g	0.1294	N	609.6	4	1.378	IDENTIFIED	6.55	☐	
Thorium-232 ✓	1.809	0.2002	pCi/g	0.2344	N	911.6	3	1.648	IDENTIFIED	9.345	☐	
Tin-126 INT	0.3555	0.06098	pCi/g	0.1751	N	87.31	5	1.048	IDENTIFIED	16.61	☐	
Titanium-44 LA	0.457	0.03334	pCi/g	0.1065	N	77.37	1	0.9237	FAIL_ABUND	6.157	☐	
Total Uranium	6.5797	2.47E-06	ug/g	4.0372	N		0				☐	
Uranium-234 ✓	1.425	0.1093	pCi/g	0.1294	N	609.6	4	1.378	IDENTIFIED	6.55	☐	
Zirconium-97 HE	8.31E+06	1.70E+07	pCi/g	0	N	238.8	7	1.001	NOT_IDENTI	3.218	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664002	26-JUN-09 12:00	14-JUL-09 08:27	17.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.852	0.1735	pCi/g	0.2099	N	911.4	3	1.617	IDENTIFIED	6.622	☐	
Americium-241 ✓	0.382	0.1069	pCi/g	0.3424	0.200	59.45	1	0.8876	IDENTIFIED	27.67	☐	
Americium-243 INT	0.3481	0.0468	pCi/g	0.1001	N	74.87	2	1.139	IDENTIFIED	12.78	☐	
Annihilation Rad.	0.1157	0.03126	pCi/g	0.04269	N	511.2	2	1.873	IDENTIFIED	26.82	☐	
Pb214 Bismuth-211 INT	4.564	0.2609	pCi/g	0.3061	Y	352	4	1.194	IDENTIFIED	4.73	☑ UI	
Bismuth-212 LA	1.492	0.2098	pCi/g	0.6223	N	727.2	1	1.622	FAIL_ABUND	13.15	☐	
Bismuth-214 ✓	1.432	0.1004	pCi/g	0.1028	0.200	609.5	4	1.701	IDENTIFIED	5.405	☐	
Pb214 Cadmium-109 INT	4.467	0.5829	pCi/g	1.288	Y	87.29	4	1.23	IDENTIFIED	12.21	☑ UI	
Cadmium-115 HE	0.5475	11.3	pCi/g	0	N	87.29	4	1.23	NOT_IDENTI	12.21	☐	
Cerium-143	3281	484.4	pCi/g	0	N	328.4	1	0.7934	FAIL_DECAY	87.08	☐	
Cesium-134 LA	0.08514	0.02159	pCi/g	0.07897	0.100	511.2	2	1.873	NOT_IDENTI	26.82	☑ UI	Data rejected due to low abundance.

	Cesium-135 mp	0.5888	0.131	pCi/g	0.223	N	269.6	2	1.525	IDENTIFIED	21.93	☐	
	Gross Gamma	10.11	1.52	pCi/g	2.771	N		0				☐	
	Iodine-135	1.58E+18	0	pCi/g	0	N	269.6	2	1.525	NOT_IDENTI	21.93	☐	
	Krypton-85 LA	27.28	4.178	pCi/g	14.29	N	238.7	8	1.277	NOT_IDENTI	3.025	☐	
	Lead-212 ✓	1.905	0.08916	pCi/g	0.08398	0.100	238.7	8	1.277	IDENTIFIED	3.025	☐	
	Lead-214 ✓	1.588	0.09977	pCi/g	0.1067	0.100	352	4	1.194	IDENTIFIED	4.73	☐	
	Lutetium-177 HE	3.18	1.155	pCi/g	2.671	N	208.9	1	1.057	FAIL_ABUND	36.21	☐	
	Neptunium-237 INT	1.284	0.2136	pCi/g	0.3785	N	87.29	4	1.23	IDENTIFIED	12.21	☐	
	Niobium-95m HE	0.2172	0.06484	pCi/g	0.2053	N	238.7	8	1.277	NOT_IDENTI	3.025	☐	
	Polonium-212 nr	1.905	0.08916	pCi/g	0.08398	N	238.7	8	1.277	IDENTIFIED	3.025	☐	
	Polonium-214 nr	1.588	0.09977	pCi/g	0.1067	N	352	4	1.194	IDENTIFIED	4.73	☐	
	Polonium-216 nr	1.905	0.08916	pCi/g	0.08398	N	238.7	8	1.277	IDENTIFIED	3.025	☐	
	Polonium-218 nr	1.588	0.09977	pCi/g	0.1067	N	352	4	1.194	IDENTIFIED	4.73	☐	
	Potassium-40 ✓	28.13	1.306	pCi/g	0.4898	1.00	1461	1	2.4	IDENTIFIED	2.678	☐	
	Promethium-149 HE	129.9	100.6	pCi/g	0	N	90.08	1	1.05	NOT_IDENTI	17.18	☐	
Pb214	Radium-224 INT	5.041	0.6758	pCi/g	0.9544	Y	241.7	1	1.944	IDENTIFIED	13.11	☑ UI	
	Radium-226 ✓	1.432	0.1004	pCi/g	0.1028	Y	609.5	4	1.701	IDENTIFIED	5.405	☐	
	Radium-228 ✓	1.852	0.1735	pCi/g	0.2099	0.500	911.4	3	1.617	IDENTIFIED	6.622	☐	
	Strontium-85 LA	0.144	0.02204	pCi/g	0.07543	Y	238.7	8	1.277	NOT_IDENTI	3.025	☑ UI	Data rejected due to low abundance.
	Thallium-200 HE	302.5	1163	pCi/g	0	N	74.87	2	1.139	NOT_IDENTI	12.78	☐	
	Thallium-208 ✓	0.5055	0.04241	pCi/g	0.0563	0.080	583.4	1	1.356	IDENTIFIED	7.416	☐	
	Thorium-228 ✓	1.905	0.08916	pCi/g	0.08397	N	238.7	8	1.277	IDENTIFIED	3.025	☐	
	Thorium-230 ✓	1.432	0.1004	pCi/g	0.1028	N	609.5	4	1.701	IDENTIFIED	5.405	☐	
	Thorium-232 ✓	1.852	0.1735	pCi/g	0.2099	N	911.4	3	1.617	IDENTIFIED	6.622	☐	
	Tin-126 INT	0.4373	0.05706	pCi/g	0.1269	N	87.29	4	1.23	IDENTIFIED	12.21	☐	
	Titanium-44 LA	0.4527	0.0364	pCi/g	0.09055	N	77.13	1	1.12	FAIL_ABUND	6.832	☐	
	Total Uranium	5.5855	2.55E-06	ug/g	4.1004	N		0				☐	
	Uranium-234 ✓	1.432	0.1004	pCi/g	0.1028	N	609.5	4	1.701	IDENTIFIED	5.405	☐	
	Zirconium-97	5.65E+07	1.36E+07	pCi/g	0	N	238.7	8	1.277	NOT_IDENTI	3.025	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664003	26-JUN-09 12:00	14-JUL-09 08:37	17.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.835	0.1844	pCi/g	0.1879	N	911.4	3	2.341	IDENTIFIED	7.864	☐	
	Americium-243 INT	0.5195	0.04425	pCi/g	0.08951	N	74.85	2	1.354	IDENTIFIED	7.576	☐	
	Annihilation Rad.	0.145	0.03015	pCi/g	0.04015	N	511.2	2	2.037	IDENTIFIED	20.55	☐	
Pb214	Bismuth-211 INT	4.361	0.2495	pCi/g	0.3143	Y	352	4	1.507	IDENTIFIED	4.762	☑ UI	
	Bismuth-212 LA	1.253	0.2427	pCi/g	0.6079	N	727.3	1	1.664	FAIL_ABUND	18.76	☐	
	Bismuth-214 ✓	1.254	0.09352	pCi/g	0.102	0.200	609.5	4	1.743	IDENTIFIED	6.027	☐	
Pb214	Cadmium-109 INT	4.616	0.5852	pCi/g	1.179	Y	87.29	5	1.526	IDENTIFIED	11.88	☐	
	Cadmium-115 HE	10.67	10.92	pCi/g	0	N	87.29	5	1.526	NOT_IDENTI	11.88	☐	
	Cerium-143	3414	507.3	pCi/g	0	N	328	1	0.938	FAIL_DECAY	26.6	☐	
	Cesium-134 LA	0.1559	0.04611	pCi/g	0.08663	0.100	796.4	1	4.365	FAIL_ABUND	29.22	☑ UI	Data rejected due to low abundance.
	Gross Gamma	10.84	1.462	pCi/g	2.636	N		0				☐	
	Iodine-123 HE	4.64E+07	9.10E+07	pCi/g	0	N	87.29	5	1.526	NOT_IDENTI	11.88	☐	
	Iodine-133 HE	5161	23940	pCi/g	0	N	511.2	2	2.037	FAIL_DECAY	20.55	☐	
	Krypton-85 LA	32.44	4.072	pCi/g	14.3	N	238.7	8	1.299	NOT_IDENTI	2.857	☐	
	Lead-212 ✓	1.908	0.08671	pCi/g	0.08726	0.100	238.7	8	1.299	IDENTIFIED	2.857	☐	
	Lead-214 ✓	1.517	0.09538	pCi/g	0.1053	0.100	352	4	1.507	IDENTIFIED	4.762	☐	
	Lutetium-177 HE	3.1	0.7568	pCi/g	2.617	N	209.2	1	0.9849	FAIL_ABUND	24.26	☐	
	Neptunium-237 INT	1.327	0.2169	pCi/g	0.3436	N	87.29	5	1.526	IDENTIFIED	11.88	☐	
	Niobium-95m LA	0.4326	0.07395	pCi/g	0.2345	N	238.7	8	1.299	NOT_IDENTI	2.857	☐	
	Polonium-212 nr	1.908	0.08671	pCi/g	0.08726	N	238.7	8	1.299	IDENTIFIED	2.857	☐	
	Polonium-214 nr	1.517	0.09538	pCi/g	0.1053	N	352	4	1.507	IDENTIFIED	4.762	☐	
	Polonium-216 nr	1.908	0.08671	pCi/g	0.08726	N	238.7	8	1.299	IDENTIFIED	2.857	☐	
	Polonium-218 nr	1.517	0.09538	pCi/g	0.1053	N	352	4	1.507	IDENTIFIED	4.762	☐	
	Potassium-40 ✓	35.76	1.522	pCi/g	0.5119	1.00	1461	1	2.989	IDENTIFIED	2.449	☐	
Pb214	Radium-224 INT	5.145	0.6659	pCi/g	0.9915	Y	241.6	1	2.006	IDENTIFIED	12.65	☑ UI	

Radium-226 ✓		1.254	0.09352	pCi/g	0.102	Y	609.5	4	1.743	IDENTIFIED	6.027	☐	
Radium-228 ✓		1.835	0.1844	pCi/g	0.1879	0.500	911.4	3	2.341	IDENTIFIED	7.864	☐	
Strontium-85 LA		0.1712	0.02149	pCi/g	0.07544	Y	238.7	8	1.299	NOT_IDENTI	2.857	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	73.2	1247	pCi/g	0	N	74.85	2	1.354	NOT_IDENTI	7.576	☐	
Thallium-208 ✓		0.5983	0.03952	pCi/g	0.05238	0.080	583.3	1	1.902	IDENTIFIED	5.367	☐	
Thorium-228 ✓		1.908	0.08671	pCi/g	0.08725	N	238.7	8	1.299	IDENTIFIED	2.857	☐	
Thorium-230 ✓		1.253	0.09352	pCi/g	0.102	N	609.5	4	1.743	IDENTIFIED	6.027	☐	
Thorium-232 ✓		1.835	0.1844	pCi/g	0.1879	N	911.4	3	2.341	IDENTIFIED	7.864	☐	
Tin-126 INT		0.4519	0.05728	pCi/g	0.1159	N	87.29	5	1.526	IDENTIFIED	11.88	☐	
Titanium-44 LA		0.4151	0.03008	pCi/g	0.08223	N	77.18	1	1.135	FAIL_ABUND	6.055	☐	
Uranium-234 ✓		1.253	0.09352	pCi/g	0.102	N	609.5	4	1.743	IDENTIFIED	6.027	☐	
Zirconium-97		8.55E+07	1.44E+07	pCi/g	0	N	238.7	8	1.299	NOT_IDENTI	2.857	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664004	26-JUN-09 12:00	14-JUL-09 08:38	17.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.849	0.227	pCi/g	0.2781	N	911.5	3	2.117	IDENTIFIED	10.83	☐	
Americium-241 ✓		0.6932	0.1339	pCi/g	0.3054	0.200	59.4	1	0.9642	IDENTIFIED	18.75	☐	
Americium-243 INT		0.3872	0.04478	pCi/g	0.09869	N	74.94	2	0.8271	IDENTIFIED	10.67	☐	
Annihilation Rad.		0.1627	0.04393	pCi/g	0.05327	N	511.3	1	1.464	IDENTIFIED	26.85	☐	
Pb214 Bismuth-211 INT		4.545	0.3259	pCi/g	0.3555	Y	351.9	4	1.221	IDENTIFIED	6.389	☑ UI	
Bismuth-212 LA		1.897	0.3528	pCi/g	0.9735	N	727.4	1	1.248	FAIL_ABUND	18.17	☐	
Bismuth-214 ✓		1.47	0.1169	pCi/g	0.1545	0.200	609.6	4	1.354	IDENTIFIED	7.008	☐	
Pb214 Cadmium-109 INT		4.354	0.6509	pCi/g	1.36	Y	87.13	4	1.173	IDENTIFIED	14.14	☑ UI	
Cerium-143		1144	380.4	pCi/g	0	N	328.4	1	1.321	FAIL_DECAY	35.01	☐	
Cesium-134 LA		0.1942	0.04997	pCi/g	0.123	0.100	794.7	1	1.341	FAIL_ABUND	25.48	☑ UI	Data rejected due to low abundance.
Gross Gamma		10.64	1.76	pCi/g	3.904	N		0				☐	
Iodine-123	HE	1.31E+08	9.77E+07	pCi/g	0	N	87.13	4	1.173	NOT_IDENTI	14.14	☐	
Krypton-85	HE	25.71	4.927	pCi/g	17.37	N	238.8	7	1.048	NOT_IDENTI	4.154	☐	
Lead-212 ✓		1.84	0.1011	pCi/g	0.1172	0.100	238.8	7	1.048	IDENTIFIED	4.154	☐	
Lead-214 ✓		1.581	0.1206	pCi/g	0.124	0.100	351.9	4	1.221	IDENTIFIED	6.389	☐	
Lutetium-177	HE	4.056	1.037	pCi/g	2.895	N	209.4	1	0.7712	FAIL_ABUND	25.43	☐	
Neptunium-237 INT		1.252	0.2273	pCi/g	0.3186	N	87.13	4	1.173	IDENTIFIED	14.14	☐	
Polonium-212 nr		1.84	0.1011	pCi/g	0.1172	N	238.8	7	1.048	IDENTIFIED	4.154	☐	
Polonium-214 nr		1.581	0.1206	pCi/g	0.124	N	351.9	4	1.221	IDENTIFIED	6.389	☐	
Polonium-216 nr		1.84	0.1011	pCi/g	0.1172	N	238.8	7	1.048	IDENTIFIED	4.154	☐	
Polonium-218 nr		1.581	0.1206	pCi/g	0.124	N	351.9	4	1.221	IDENTIFIED	6.389	☐	
Potassium-40 ✓		29.39	1.522	pCi/g	0.7072	1.00	1461	1	2.226	IDENTIFIED	3.581	☐	
Pb-214 Radium-224 INT		3.913	0.5347	pCi/g	1.535	Y	242	1	1.367	IDENTIFIED	13.37	☑ UI	
Radium-226 ✓		1.47	0.1169	pCi/g	0.1545	Y	609.6	4	1.354	IDENTIFIED	7.008	☐	
Radium-228 ✓		1.849	0.227	pCi/g	0.2781	0.500	911.5	3	2.117	IDENTIFIED	10.83	☐	
Strontium-85 LA		0.1357	0.026	pCi/g	0.09165	Y	238.8	7	1.048	NOT_IDENTI	4.154	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	296	1521	pCi/g	0	N	74.94	2	0.8271	NOT_IDENTI	10.67	☐	
Thallium-208 ✓		0.5745	0.05297	pCi/g	0.07089	0.080	583.5	1	1.243	IDENTIFIED	8.631	☐	
Thorium-228 ✓		1.84	0.1011	pCi/g	0.1172	N	238.8	7	1.048	IDENTIFIED	4.154	☐	
Thorium-230 ✓		1.47	0.1169	pCi/g	0.1545	N	609.6	4	1.354	IDENTIFIED	7.008	☐	
Thorium-232 ✓		1.849	0.227	pCi/g	0.2781	N	911.5	3	2.117	IDENTIFIED	10.83	☐	
Tin-126 INT		0.4262	0.06371	pCi/g	0.1216	N	87.13	4	1.173	IDENTIFIED	14.14	☐	
Titanium-44 LA		0.42	0.03442	pCi/g	0.07962	N	77.13	1	0.8674	FAIL_ABUND	6.849	☐	
Total Uranium		4.9944	3.43E-06	ug/g	3.5636	N		0				☐	
Uranium-234 ✓		1.47	0.1169	pCi/g	0.1545	N	609.6	4	1.354	IDENTIFIED	7.008	☐	
Zirconium-97	HE	1.38E+07	1.82E+07	pCi/g	0	N	238.8	7	1.048	NOT_IDENTI	4.154	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664005	26-JUN-09 12:00	14-JUL-09 08:57	17.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.517	0.1587	pCi/g	0.1684	N	911.3	3	1.628	IDENTIFIED	8.475	☐	
Americium-241 ✓	1.519	0.1275	pCi/g	0.203	0.200	59.64	1	1.005	IDENTIFIED	7.504	☐	
Americium-243 INT	0.285	0.03149	pCi/g	0.07834	N	74.87	2	1.016	IDENTIFIED	10.44	☐	
Annihilation Rad.	0.1142	0.03247	pCi/g	0.04101	N	511	1	1.674	IDENTIFIED	28.15	☐	
Barium-137m NR	1.186	0.07105	pCi/g	0.05201	N	661.5	3	1.44	IDENTIFIED	4.296	☐	
Beryllium-7 ✓	2.889	0.3296	pCi/g	0.5915	N	477.5	1	1.174	IDENTIFIED	10.62	☐	
Pb-214 Bismuth-211 INT	3.444	0.2589	pCi/g	0.2906	Y	351.8	4	1.357	IDENTIFIED	5.775	☑ UI	
Bismuth-212 ✓	0.9065	0.1841	pCi/g	0.4302	N	727.3	1	1.047	IDENTIFIED	19.65	☐	
Bismuth-214 ✓	0.9258	0.08665	pCi/g	0.1012	0.200	609.3	4	1.38	IDENTIFIED	8.003	☐	
Pb-214 Cadmium-109 INT	3.201	0.3781	pCi/g	1.184	Y	87.37	4	1.247	IDENTIFIED	11.09	☑ UI	
Cerium-143	2239	403.9	pCi/g	0	N	661.5	3	1.44	FAIL_DECAY	4.296	☐	
Cesium-134 LA	0.1109	0.0246	pCi/g	0.0744	0.100	794.4	1	3.221	FAIL_ABUND	21.68	☑ UI	Data rejected due to low abundance.
Cesium-135 NVP	0.4721	0.1174	pCi/g	0.2219	N	269.7	2	1.347	IDENTIFIED	24.08	☐	
Cesium-137 ✓	1.253	0.07518	pCi/g	0.05498	0.100	661.5	3	1.44	IDENTIFIED	4.296	☐	
Gross Gamma	9.599	1.342	pCi/g	3.654	N		0				☐	
Iodine-123 HE	2.67E+07	8.52E+07	pCi/g	0	N	87.37	4	1.247	NOT_IDENTI	11.09	☐	
Iodine-135	1.45E+18	0	pCi/g	0	N	269.7	2	1.347	NOT_IDENTI	24.08	☐	
Lead-212 ✓	1.368	0.08586	pCi/g	0.0825	0.100	238.6	8	1.065	IDENTIFIED	3.523	☐	
Lead-214 ✓	1.198	0.09533	pCi/g	0.1013	0.100	351.8	4	1.357	IDENTIFIED	5.775	☐	
Neptunium-237 INT	0.9202	0.1443	pCi/g	0.3795	N	87.37	4	1.247	IDENTIFIED	11.09	☐	
Niobium-97 HE	4.47E+05	7.47E+05	pCi/g	0	N	238.6	8	1.065	NOT_IDENTI	3.523	☐	
Polonium-212 NR	1.368	0.08586	pCi/g	0.0825	N	238.6	8	1.065	IDENTIFIED	3.523	☐	
Polonium-214 NR	1.198	0.09533	pCi/g	0.1013	N	351.8	4	1.357	IDENTIFIED	5.775	☐	
Polonium-216 NR	1.368	0.08586	pCi/g	0.0825	N	238.6	8	1.065	IDENTIFIED	3.523	☐	
Polonium-218 NR	1.198	0.09533	pCi/g	0.1013	N	351.8	4	1.357	IDENTIFIED	5.775	☐	
Potassium-40 ✓	23.7	1.078	pCi/g	0.4504	1.00	1461	1	1.67	IDENTIFIED	3.225	☐	
Promethium-149 HE	13.75	93.31	pCi/g	0	N	89.9	1	1.037	NOT_IDENTI	18.39	☐	
Pb214 Radium-224 INT	4.194	0.6635	pCi/g	0.9384	Y	241.5	1	1.972	IDENTIFIED	15.08	☑ UI	
Radium-226 ✓	0.9258	0.08665	pCi/g	0.1012	Y	609.3	4	1.38	IDENTIFIED	8.003	☐	
Radium-228 ✓	1.517	0.1587	pCi/g	0.1684	0.500	911.3	3	1.628	IDENTIFIED	8.475	☐	
Rhodium-102 HE	0.08465	0.017	pCi/g	0.05878	N	238.6	8	1.065	NOT_IDENTI	3.523	☐	
Technetium-99m	5.16E+18	0	pCi/g	0	N	238.6	8	1.065	NOT_IDENTI	3.523	☐	
Thallium-200 HE	107.1	1170	pCi/g	0	N	74.87	2	1.016	NOT_IDENTI	10.44	☐	
Thallium-208 ✓	0.4197	0.04044	pCi/g	0.05558	0.080	583.2	1	1.151	IDENTIFIED	8.581	☐	
Thorium-228 ✓	1.368	0.08586	pCi/g	0.08249	N	238.6	8	1.065	IDENTIFIED	3.523	☐	
Thorium-230 ✓	0.9258	0.08665	pCi/g	0.1012	N	609.3	4	1.38	IDENTIFIED	8.003	☐	
Thorium-232 ✓	1.517	0.1587	pCi/g	0.1684	N	911.3	3	1.628	IDENTIFIED	8.475	☐	
Thorium-234 ✓	1.745	0.6948	pCi/g	1.66	2.00	63.31	2	1.333	IDENTIFIED	38.88	☐	
Tin-126 INT	0.3134	0.03701	pCi/g	0.1162	N	87.37	4	1.247	IDENTIFIED	11.09	☐	
Titanium-44 LA	0.3171	0.02404	pCi/g	0.06974	N	77.19	1	1.012	FAIL_ABUND	6.628	☐	
Total Uranium	5.2024	2.07E-06	ug/g	2.4712	N		0				☐	
Uranium-234 ✓	0.9258	0.08665	pCi/g	0.1012	N	609.3	4	1.38	IDENTIFIED	8.003	☐	
Uranium-238 HE	1.745	0.6948	pCi/g	1.66	N	63.31	2	1.333	IDENTIFIED	38.88	☐	
Zirconium-97	3.64E+07	1.33E+07	pCi/g	0	N	238.6	8	1.065	NOT_IDENTI	3.523	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746001	29-JUN-09 12:00	14-JUL-09 08:58	14.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.343	0.1676	pCi/g	0.2356	N	911.4	3	1.911	IDENTIFIED	11.03	☐	
Americium-243 INT	0.3126	0.04099	pCi/g	0.09878	N	74.87	1	0.9929	IDENTIFIED	12.06	☐	
Annihilation Rad. HE	0.09362	0.03543	pCi/g	0.05451	N	510.7	1	1.524	IDENTIFIED	37.7	☐	
Pb-214 Bismuth-211 INT	4.281	0.2933	pCi/g	0.333	Y	352	4	1.22	IDENTIFIED	5.536	☑ UI	
Bismuth-212 HE	0.9188	0.2927	pCi/g	0.7075	N	727.8	1	1.505	FAIL_ABUND	31.55	☐	
Bismuth-214 ✓	1.03	0.0985	pCi/g	0.1103	0.200	609.5	4	1.231	IDENTIFIED	8.61	☐	
Cadmium-109 INT	3.643	0.5667	pCi/g	1.23	Y	87.29	4	1.119	IDENTIFIED	14.41	☑ UI	
Cerium-143	444.9	90.81	pCi/g	0	N	328.5	1	0.86	FAIL_DECAY	27.36	☐	

Cesium-134 LA		0.1055	0.03728	pCi/g	0.103	0.100	795.7	2	1.74	FAIL_ABUND	35.1	☑ UI	Data rejected due to low abundance.
Gross Gamma		8.584	1.542	pCi/g	3.112	N		0				☐	
Iodine-123	HE	3.87E+06	2.15E+06	pCi/g	0	N	87.29	4	1.119	NOT_IDENTI	14.41	☐	
Iodine-135	HE	5.21E+14	1.65E+15	pCi/g	0	N	795.7	2	1.74	NOT_IDENTI	35.1	☐	
Lead-212 ✓		1.646	0.0961	pCi/g	0.09114	0.100	238.7	4	1.058	IDENTIFIED	3.414	☐	
Lead-214 ✓		1.489	0.1092	pCi/g	0.1161	0.100	352	4	1.22	IDENTIFIED	5.536	☐	
Lutetium-177	HE	2.368	0.6521	pCi/g	2.033	N	209.4	1	1.735	FAIL_ABUND	27.26	☐	
Neptunium-237 INT		1.052	0.1963	pCi/g	0.3623	N	87.29	4	1.119	IDENTIFIED	14.41	☐	
Polonium-212 nr		1.646	0.0961	pCi/g	0.09114	N	238.7	4	1.058	IDENTIFIED	3.414	☐	
Polonium-214 nr		1.489	0.1092	pCi/g	0.1161	N	352	4	1.22	IDENTIFIED	5.536	☐	
Polonium-216 nr		1.646	0.0961	pCi/g	0.09114	N	238.7	4	1.058	IDENTIFIED	3.414	☐	
Polonium-218 nr		1.489	0.1092	pCi/g	0.1161	N	352	4	1.22	IDENTIFIED	5.536	☐	
Potassium-40 ✓		23.57	1.226	pCi/g	0.536	1.00	1461	1	2.052	IDENTIFIED	3.652	☐	
Pb214 Radium-224 INT		4.137	0.7012	pCi/g	1.038	Y	241.5	1	1.723	IDENTIFIED	16.42	☑ UI	
Radium-226 ✓		1.03	0.0985	pCi/g	0.1103	Y	609.5	4	1.231	IDENTIFIED	8.61	☐	
Radium-228 ✓		1.343	0.1676	pCi/g	0.2356	0.500	911.4	3	1.911	IDENTIFIED	11.03	☐	
Sodium-24	HE	93220	2.88E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-208 ✓		0.4934	0.04293	pCi/g	0.06875	0.080	583.3	1	1.435	IDENTIFIED	7.888	☐	
Thorium-228 ✓		1.646	0.0961	pCi/g	0.09113	N	238.7	4	1.058	IDENTIFIED	3.414	☐	
Thorium-230 ✓		1.03	0.0985	pCi/g	0.1103	N	609.5	4	1.231	IDENTIFIED	8.61	☐	
Thorium-232 ✓		1.343	0.1676	pCi/g	0.2356	N	911.4	3	1.911	IDENTIFIED	11.03	☐	
Tin-126 INT		0.3582	0.05572	pCi/g	0.1216	N	87.29	4	1.119	IDENTIFIED	14.41	☐	
Titanium-44 LA		0.3819	0.0314	pCi/g	0.08093	N	77.07	1	0.8837	FAIL_ABUND	6.319	☐	
Uranium-234 ✓		1.03	0.0985	pCi/g	0.1103	N	609.5	4	1.231	IDENTIFIED	8.61	☐	
Zirconium-97	HE	1.08E+06	8.08E+05	pCi/g	0	N	303	1	1.667	NOT_IDENTI	53.39	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746002	29-JUN-09 12:00	14-JUL-09 08:58	14.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.67	0.1778	pCi/g	0.2073	N	911.4	3	1.627	IDENTIFIED	8.897	☐	
Americium-243 INT		0.3275	0.04602	pCi/g	0.09018	N	74.97	2	1.33	IDENTIFIED	13.55	☐	
Annihilation Rad.	HE	0.1076	0.03585	pCi/g	0.04149	N	511.3	3	1.655	IDENTIFIED	33.17	☐	
Pb214 Bismuth-211 INT		3.401	0.2301	pCi/g	0.302	Y	352	4	1.301	IDENTIFIED	5.973	☑ UI	
Bismuth-212 ✓		0.8768	0.2039	pCi/g	0.4619	N	727.5	1	1.378	IDENTIFIED	22.84	☐	
Bismuth-214 ✓		1.285	0.09998	pCi/g	0.1129	0.200	609.4	4	1.565	IDENTIFIED	6.629	☐	
Pb214 Cadmium-109 INT		3.1	0.4257	pCi/g	1.322	Y	87.38	4	1.127	IDENTIFIED	13.1	☑ UI	
Cerium-143		285.6	68.9	pCi/g	0	N	87.38	4	1.127	FAIL_DECAY	13.1	☐	
Gross Gamma		8.799	1.253	pCi/g	2.694	N		0				☐	
Iodine-133	HE	206	2235	pCi/g	0	N	511.3	3	1.655	FAIL_DECAY	33.17	☐	
Iodine-135	HE	2.85E+15	1.50E+15	pCi/g	0	N	511.3	3	1.655	NOT_IDENTI	33.17	☐	
Krypton-85	HE	13.22	3.626	pCi/g	12.49	N	238.8	8	1.232	NOT_IDENTI	3.529	☐	
Lead-212 ✓		1.576	0.07947	pCi/g	0.08331	0.100	238.8	8	1.232	IDENTIFIED	3.529	☐	
Lead-214 ✓		1.183	0.08578	pCi/g	0.1053	0.100	352	4	1.301	IDENTIFIED	5.973	☐	
Lutetium-177	HE	3.039	0.7763	pCi/g	1.822	N	209.7	1	1.148	FAIL_ABUND	25.4	☐	
Neptunium-237 INT		0.8951	0.1537	pCi/g	0.4029	N	87.38	4	1.127	IDENTIFIED	13.1	☐	
Polonium-212 nr		1.576	0.07947	pCi/g	0.08331	N	238.8	8	1.232	IDENTIFIED	3.529	☐	
Polonium-214 nr		1.183	0.08578	pCi/g	0.1053	N	352	4	1.301	IDENTIFIED	5.973	☐	
Polonium-216 nr		1.576	0.07947	pCi/g	0.08331	N	238.8	8	1.232	IDENTIFIED	3.529	☐	
Polonium-218 nr		1.183	0.08578	pCi/g	0.1053	N	352	4	1.301	IDENTIFIED	5.973	☐	
Potassium-40 ✓		29.13	1.401	pCi/g	0.4321	1.00	1461	1	2.068	IDENTIFIED	3.007	☐	
Pb214 Radium-224 INT		3.973	0.5657	pCi/g	0.948	Y	241.8	1	1.648	IDENTIFIED	13.95	☑ UI	
Radium-226 ✓		1.285	0.09998	pCi/g	0.1129	Y	609.4	4	1.565	IDENTIFIED	6.629	☐	
Radium-228 ✓		1.67	0.1778	pCi/g	0.2073	0.500	911.4	3	1.627	IDENTIFIED	8.897	☐	
Strontium-85 LA		0.06761	0.01855	pCi/g	0.06386	Y	238.8	8	1.232	NOT_IDENTI	3.529	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	1.32E+16	8.94E+15	pCi/g	0	N	238.8	8	1.232	NOT_IDENTI	3.529	☐	
Thallium-200	HE	73.18	172	pCi/g	0	N	74.97	2	1.33	NOT_IDENTI	13.55	☐	
Thallium-208 ✓		0.5284	0.04461	pCi/g	0.05499	0.080	583.3	1	1.365	IDENTIFIED	7.665	☐	
Thorium-228 ✓		1.576	0.07947	pCi/g	0.0833	N	238.8	8	1.232	IDENTIFIED	3.529	☐	

Thorium-230 ✓		1.285	0.09998	pCi/g	0.1129	N	609.4	4	1.565	IDENTIFIED	6.629	☐
Thorium-232 ✓		1.67	0.1778	pCi/g	0.2073	N	911.4	3	1.627	IDENTIFIED	8.897	☐
Tin-126 INT		0.3048	0.04185	pCi/g	0.1308	N	87.38	4	1.127	IDENTIFIED	13.1	☐
Titanium-44 LA		0.3605	0.03065	pCi/g	0.07734	N	77.27	1	1.178	FAIL_ABUND	7.612	☐
Uranium-234 ✓		1.285	0.09998	pCi/g	0.1129	N	609.4	4	1.565	IDENTIFIED	6.629	☐
Zirconium-97	HE	7.62E+05	7.09E+05	pCi/g	0	N	238.8	8	1.232	NOT_IDENTI	3.529	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746003	29-JUN-09 12:00	14-JUL-09 08:59	14.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.816	0.1702	pCi/g	0.2494	N	911.7	3	1.582	IDENTIFIED	7.593	☐	
Americium-243 INT		0.3749	0.03873	pCi/g	0.0918	N	74.84	1	1.011	IDENTIFIED	9.753	☐	
Annihilation Rad.	HE	0.1129	0.03753	pCi/g	0.04449	N	510.9	2	1.86	IDENTIFIED	33.11	☐	
Pb214 Bismuth-211 INT		3.782	0.2567	pCi/g	0.3241	Y	352	4	1.143	IDENTIFIED	6.017	☑ UI	
Bismuth-212	HE	0.885	0.229	pCi/g	0.6702	N	727.9	1	1.959	FAIL_ABUND	25.51	☐	
Bismuth-214 ✓		1.104	0.09375	pCi/g	0.1125	0.200	609.4	4	1.189	IDENTIFIED	7.43	☐	
Pb214 Cadmium-109 INT		2.353	0.6031	pCi/g	1.496	Y	87.34	5	1.017	IDENTIFIED	25.34	☑ UI	
Cerium-143		486.5	83.47	pCi/g	0	N	87.34	5	1.017	FAIL_DECAY	25.34	☐	
Gross Gamma		9.881	1.669	pCi/g	2.692	N		0				☐	
Iodine-123	HE	1.80E+06	1.99E+06	pCi/g	0	N	87.34	5	1.017	NOT_IDENTI	25.34	☐	
Iodine-133	HE	1567	2446	pCi/g	0	N	510.9	2	1.86	FAIL_DECAY	33.11	☐	
Iodine-135	HE	4.07E+14	1.67E+15	pCi/g	0	N	795.5	1	1.883	NOT_IDENTI	45.82	☐	
Krypton-85	HE	20.19	4.332	pCi/g	14.72	N	238.7	7	1.052	NOT_IDENTI	3.212	☐	
Lead-212 ✓		1.651	0.07907	pCi/g	0.08945	0.100	238.7	7	1.052	IDENTIFIED	3.212	☐	
Lead-214 ✓		1.316	0.09566	pCi/g	0.113	0.100	352	4	1.143	IDENTIFIED	6.017	☐	
Neptunium-237	HE	0.6795	0.1877	pCi/g	0.4489	N	87.34	5	1.017	IDENTIFIED	25.34	☐	
Polonium-212 nr		1.651	0.07907	pCi/g	0.08945	N	238.7	7	1.052	IDENTIFIED	3.212	☐	
Polonium-214 nr		1.316	0.09566	pCi/g	0.113	N	352	4	1.143	IDENTIFIED	6.017	☐	
Polonium-216 nr		1.651	0.07907	pCi/g	0.08945	N	238.7	7	1.052	IDENTIFIED	3.212	☐	
Polonium-218 nr		1.316	0.09566	pCi/g	0.113	N	352	4	1.143	IDENTIFIED	6.017	☐	
Potassium-40 ✓		35.66	1.574	pCi/g	0.4578	1.00	1461	1	2.239	IDENTIFIED	2.602	☐	
Pb214 Radium-224 INT		4.501	0.5787	pCi/g	1.018	Y	241.8	1	1.572	IDENTIFIED	12.56	☑ UI	
Radium-226 ✓		1.104	0.09375	pCi/g	0.1125	Y	609.4	4	1.189	IDENTIFIED	7.43	☐	
Radium-228 ✓		1.816	0.1702	pCi/g	0.2494	0.500	911.7	3	1.582	IDENTIFIED	7.593	☐	
Sodium-24	HE	4.70E+05	2.84E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1033	0.02216	pCi/g	0.07528	Y	238.7	7	1.052	NOT_IDENTI	3.212	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5957	0.04328	pCi/g	0.0613	0.080	583.5	1	1.257	IDENTIFIED	6.324	☐	
Thorium-228 ✓		1.651	0.07907	pCi/g	0.08944	N	238.7	7	1.052	IDENTIFIED	3.212	☐	
Thorium-230 ✓		1.104	0.09375	pCi/g	0.1125	N	609.4	4	1.189	IDENTIFIED	7.43	☐	
Thorium-232 ✓		1.816	0.1702	pCi/g	0.2494	N	911.7	3	1.582	IDENTIFIED	7.593	☐	
Tin-126	HE	0.2314	0.0593	pCi/g	0.1511	N	87.34	5	1.017	IDENTIFIED	25.34	☐	
Titanium-44 LA		0.4116	0.02879	pCi/g	0.08224	N	77.16	1	0.9704	FAIL_ABUND	6.078	☐	
Uranium-234 ✓		1.104	0.09375	pCi/g	0.1125	N	609.4	4	1.189	IDENTIFIED	7.43	☐	
Zirconium-97		2.72E+06	6.95E+05	pCi/g	0	N	238.7	7	1.052	NOT_IDENTI	3.212	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746004	29-JUN-09 12:00	14-JUL-09 09:13	14.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.651	0.1936	pCi/g	0.2641	N	911.2	3	1.557	IDENTIFIED	9.966	☐	
Americium-243 INT		0.3986	0.03208	pCi/g	0.06458	N	74.74	2	1.339	IDENTIFIED	7.031	☐	
Annihilation Rad.	HE	0.1169	0.03434	pCi/g	0.05759	N	511	2	2.324	IDENTIFIED	29.2	☐	
Pb214 Bismuth-211 INT		4.115	0.2833	pCi/g	0.3903	Y	352	4	1.4	IDENTIFIED	5.641	☑ UI	
Bismuth-212	HE	1.277	0.2884	pCi/g	0.7481	N	727.4	1	1.755	FAIL_ABUND	22.13	☐	
Bismuth-214 LA		1.323	0.09841	pCi/g	0.3012	0.200	609.1	4	1.484	FAIL_ABUND	6.147	☑ UI	Data rejected due to low abundance.
Pb214 Cadmium-109 INT		3.766	0.4367	pCi/g	0.963	Y	87.2	4	1.4	IDENTIFIED	10.95	☑ UI	
Cerium-143		635.4	109.2	pCi/g	0	N	327.9	1	1.095	FAIL_DECAY	38.81	☐	
Cesium-134 LA		0.16	0.03872	pCi/g	0.1061	0.100	794.8	1	1.927	FAIL_ABUND	23.82	☑ UI	Data rejected due to low abundance.

	Gross Gamma		10.26	1.626	pCi/g	4.011	N		0				
	Iodine-123	HE	8.51E+05	2.26E+06	pCi/g	0	N	87.2	4	1.4	NOT_IDENTI	10.95	
	Iodine-133	HE	1807	2781	pCi/g	0	N	511	2	2.324	FAIL_DECAY	29.2	
	Krypton-85	HE	24.63	4.672	pCi/g	16.29	N	238.7	8	1.298	NOT_IDENTI	3.262	
	Lead-212 ✓		1.794	0.1131	pCi/g	0.09337	0.100	238.7	8	1.298	IDENTIFIED	3.262	
	Lead-214 ✓		1.431	0.1054	pCi/g	0.1258	0.100	352	4	1.4	IDENTIFIED	5.641	
	Lutetium-177	HE	2.541	0.8582	pCi/g	2.134	N	209.1	1	1.384	FAIL_ABUND	33.41	
	Neptunium-237 INT		1.087	0.1688	pCi/g	0.2768	N	87.2	4	1.4	IDENTIFIED	10.95	
	Niobium-95m LA		0.4146	0.07792	pCi/g	0.2523	N	238.7	8	1.298	NOT_IDENTI	3.262	
	Polonium-212 nr		1.794	0.1131	pCi/g	0.09337	N	238.7	8	1.298	IDENTIFIED	3.262	
	Polonium-214 nr		1.431	0.1054	pCi/g	0.1258	N	352	4	1.4	IDENTIFIED	5.641	
	Polonium-216 nr		1.794	0.1131	pCi/g	0.09337	N	238.7	8	1.298	IDENTIFIED	3.262	
	Polonium-218 nr		1.431	0.1054	pCi/g	0.1258	N	352	4	1.4	IDENTIFIED	5.641	
	Potassium-40 ✓		33.21	1.443	pCi/g	0.5177	1.00	1461	1	2.18	IDENTIFIED	3.037	
Pb214	Radium-224 INT		4.703	0.6989	pCi/g	1.063	Y	241.7	1	1.773	IDENTIFIED	14.03	☑ UI
	Radium-226 LA		1.323	0.09841	pCi/g	0.3012	Y	609.1	4	1.484	FAIL_ABUND	6.147	☑ UI Data rejected due to low abundance.
	Radium-228 ✓		1.651	0.1936	pCi/g	0.2641	0.500	911.2	3	1.557	IDENTIFIED	9.966	
	Strontium-85 LA		0.126	0.02389	pCi/g	0.08334	Y	238.7	8	1.298	NOT_IDENTI	3.262	☑ UI Data rejected due to low abundance.
	Thallium-200	HE	192.2	220.6	pCi/g	0	N	74.74	2	1.339	NOT_IDENTI	7.031	
	Thallium-208 ✓		0.5708	0.04552	pCi/g	0.06491	0.080	583	1	1.556	IDENTIFIED	7.076	
	Thorium-228 ✓		1.794	0.1131	pCi/g	0.09336	N	238.7	8	1.298	IDENTIFIED	3.262	
	Thorium-230 ✓		1.323	0.09841	pCi/g	0.3012	N	609.1	4	1.484	FAIL_ABUND	6.147	
	Thorium-232 ✓		1.651	0.1936	pCi/g	0.2641	N	911.2	3	1.557	IDENTIFIED	9.966	
	Thorium-234 ✓		1.32	0.4617	pCi/g	1.085	2.00	63.32	2	1.124	IDENTIFIED	33.84	
	Tin-126 INT		0.3703	0.04294	pCi/g	0.09456	N	87.2	4	1.4	IDENTIFIED	10.95	
	Titanium-44 LA		0.4207	0.02486	pCi/g	0.06807	N	77.02	1	1.222	FAIL_ABUND	4.447	
	Total Uranium		3.9352	1.37E-06	ug/g	1.6174	N		0				
	Uranium-234 LA		1.323	0.09841	pCi/g	0.3012	N	609.1	4	1.484	FAIL_ABUND	6.147	
	Uranium-238	HE	1.32	0.4617	pCi/g	1.085	N	63.32	2	1.124	IDENTIFIED	33.84	
	Zirconium-97		5.03E+06	9.47E+05	pCi/g	0	N	238.7	8	1.298	NOT_IDENTI	3.262	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746005	29-JUN-09 12:00	14-JUL-09 09:16	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓		2.08	0.2099	pCi/g	0.3103	N	911.6	3	1.615	IDENTIFIED	8.723		
	Americium-243 INT		0.5131	0.04177	pCi/g	0.06751	N	75.01	1	1.861	IDENTIFIED	7.207		
	Annihilation Rad.		0.1511	0.0426	pCi/g	0.06298	N	510.9	1	2.272	IDENTIFIED	28.01		
	Bismuth-210	HE	1.324	0.3864	pCi/g	1	N	46.38	3	1.195	IDENTIFIED	28.94		
Pb214	Bismuth-211 INT		4.555	0.2995	pCi/g	0.4215	Y	352	4	1.574	IDENTIFIED	5.757	☑ UI	
	Bismuth-212	HE	1.277	0.3236	pCi/g	0.9456	N	727.4	1	2.301	FAIL_ABUND	24.96		
	Bismuth-214 ✓		1.475	0.131	pCi/g	0.1461	0.200	609.6	4	1.575	IDENTIFIED	7.748		
Pb214	Cadmium-109 INT		3.703	0.3928	pCi/g	1.298	Y	87.27	5	1.385	IDENTIFIED	9.773	☑ UI	
	Cerium-143		830.2	133.2	pCi/g	0	N	327.7	1	1.397	FAIL_DECAY	30.69		
	Cesium-134 LA		0.1432	0.04461	pCi/g	0.131	0.100	795.3	2	1.682	FAIL_ABUND	30.94	☑ UI Data rejected due to low abundance.	
	Gross Gamma		10.73	1.615	pCi/g	4.841	N		0					
	Iodine-123	HE	1.70E+06	2.55E+06	pCi/g	0	N	87.27	5	1.385	NOT_IDENTI	9.773		
	Iodine-135	HE	2.87E+15	2.59E+15	pCi/g	0	N	795.3	2	1.682	NOT_IDENTI	30.94		
	Krypton-85	HE	26.28	5.654	pCi/g	19.34	N	238.6	8	1.464	NOT_IDENTI	3.426		
	Lead-210	HE	1.324	0.3864	pCi/g	1	N	46.38	3	1.195	IDENTIFIED	28.94		
	Lead-212 ✓		1.918	0.09825	pCi/g	0.1059	0.100	238.6	8	1.464	IDENTIFIED	3.426		
	Lead-214 ✓		1.584	0.1121	pCi/g	0.1478	0.100	352	4	1.574	IDENTIFIED	5.757		
	Lutetium-177	HE	2.997	0.6479	pCi/g	2.394	N	87.27	5	1.385	NOT_IDENTI	9.773		
	Neptunium-237 INT		1.069	0.1582	pCi/g	0.354	N	87.27	5	1.385	IDENTIFIED	9.773		
	Niobium-95m LA		0.7299	0.09405	pCi/g	0.3197	N	238.6	8	1.464	NOT_IDENTI	3.426		
	Polonium-210	HE	1.324	0.3855	pCi/g	1	N	46.38	3	1.195	IDENTIFIED	28.94		
	Polonium-212 nr		1.918	0.09825	pCi/g	0.1059	N	238.6	8	1.464	IDENTIFIED	3.426		
	Polonium-214 nr		1.584	0.1121	pCi/g	0.1478	N	352	4	1.574	IDENTIFIED	5.757		
	Polonium-216 nr		1.918	0.09825	pCi/g	0.1059	N	238.6	8	1.464	IDENTIFIED	3.426		

	Polonium-218	1.584	0.1121	pCi/g	0.1478	N	352	4	1.574	IDENTIFIED	5.757	☐	
	Potassium-40	35.75	1.658	pCi/g	0.7099	1.00	1461	1	2.315	IDENTIFIED	3.372	☐	
Pb214	Radium-224 INT	5.289	0.8808	pCi/g	1.207	Y	241.6	1	2.112	IDENTIFIED	16.37	☑ UI	
	Radium-226	1.475	0.131	pCi/g	0.1461	Y	609.6	4	1.575	IDENTIFIED	7.748	☐	
	Radium-228	2.08	0.2099	pCi/g	0.3103	0.500	911.6	3	1.615	IDENTIFIED	8.723	☐	
	Strontium-85 LA	0.1344	0.02892	pCi/g	0.0989	Y	238.6	8	1.464	NOT_IDENTI	3.426	☑ UI	Data rejected due to low abundance.
	Thallium-208	0.5943	0.06808	pCi/g	0.08477	0.080	583.5	1	1.677	IDENTIFIED	10.81	☐	
	Thorium-228	1.918	0.09825	pCi/g	0.1059	N	238.6	8	1.464	IDENTIFIED	3.426	☐	
	Thorium-230	1.475	0.131	pCi/g	0.1461	N	609.6	4	1.575	IDENTIFIED	7.748	☐	
	Thorium-232	2.08	0.2099	pCi/g	0.3103	N	911.6	3	1.615	IDENTIFIED	8.723	☐	
	Tin-126 INT	0.3641	0.03862	pCi/g	0.1274	N	87.27	5	1.385	IDENTIFIED	9.773	☐	
	Titanium-44 LA	0.4238	0.02592	pCi/g	0.07234	N	77.24	1	1.256	FAIL_ABUND	4.762	☐	
	Total Uranium	2.5576	1.25E-06	ug/g	1.7688	N		0				☐	
	Uranium-234	1.475	0.131	pCi/g	0.1461	N	609.6	4	1.575	IDENTIFIED	7.748	☐	
	Zirconium-97	4.99E+06	1.04E+06	pCi/g	0	N	238.6	8	1.464	NOT_IDENTI	3.426	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746006	29-JUN-09 12:00	14-JUL-09 10:20	14.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228	1.876	0.1825	pCi/g	0.2314	N	911.3	3	1.497	IDENTIFIED	7.753	☐	
	Americium-243 INT	0.4552	0.0501	pCi/g	0.08713	N	74.88	1	1.916	IDENTIFIED	10.34	☐	
	Annihilation Rad.	0.1415	0.03727	pCi/g	0.04525	N	510.7	2	2.283	IDENTIFIED	26.18	☐	
Pb214	Bismuth-211 INT	3.832	0.2785	pCi/g	0.3168	Y	351.6	4	1.456	IDENTIFIED	6.541	☑ UI	
	Bismuth-212	1.425	0.2417	pCi/g	0.4896	N	727.7	1	1.364	IDENTIFIED	16.41	☐	
	Bismuth-214	1.276	0.09083	pCi/g	0.1061	0.200	609.1	4	1.45	IDENTIFIED	5.918	☐	
Pb214	Cadmium-109 INT	2.285	0.6088	pCi/g	1.52	Y	87.44	3	1.173	IDENTIFIED	26.29	☑ UI	
	Cerium-143	941.8	130.3	pCi/g	0	N	328.1	1	1.751	FAIL_DECAY	32.06	☐	
	Cesium-134 LA	0.1187	0.03124	pCi/g	0.09086	0.100	794.7	2	1.144	FAIL_ABUND	26.04	☑ UI	Data rejected due to low abundance.
	Cesium-135 HE	0.3181	0.08959	pCi/g	0.2955	N	794.7	2	1.144	NOT_IDENTI	26.04	☐	
	Gross Gamma	10.85	1.654	pCi/g	4.584	N		0				☐	
	Iodine-133 HE	1299	2511	pCi/g	0	N	510.7	2	2.283	FAIL_DECAY	26.18	☐	
	Lead-212	1.757	0.08498	pCi/g	0.09051	0.100	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Lead-214	1.333	0.1029	pCi/g	0.1104	0.100	351.6	4	1.456	IDENTIFIED	6.541	☐	
	Lutetium-177 HE	2.993	0.7705	pCi/g	2.107	N	209.2	1	1.649	FAIL_ABUND	25.59	☐	
	Neptunium-237 HE	0.6596	0.1885	pCi/g	0.4364	N	87.44	3	1.173	IDENTIFIED	26.29	☐	
	Niobium-95 HE	0.09913	0.02619	pCi/g	0.08646	N	238.4	7	1.375	NOT_IDENTI	3.183	☐	
	Niobium-95m LA	0.8223	0.08681	pCi/g	0.2893	N	238.4	7	1.375	NOT_IDENTI	3.183	☐	
	Polonium-212	1.757	0.08498	pCi/g	0.09051	N	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Polonium-214	1.333	0.1029	pCi/g	0.1104	N	351.6	4	1.456	IDENTIFIED	6.541	☐	
	Polonium-216	1.757	0.08498	pCi/g	0.09051	N	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Polonium-218	1.333	0.1029	pCi/g	0.1104	N	351.6	4	1.456	IDENTIFIED	6.541	☐	
	Potassium-40	34.87	1.565	pCi/g	0.5357	1.00	1461	1	1.873	IDENTIFIED	2.636	☐	
Pb214	Radium-224 INT	4.691	0.7796	pCi/g	1.029	Y	241.3	1	2.182	IDENTIFIED	16.37	☑ UI	
	Radium-226	1.276	0.09083	pCi/g	0.1061	Y	609.1	4	1.45	IDENTIFIED	5.918	☐	
	Radium-228	1.876	0.1825	pCi/g	0.2314	0.500	911.3	3	1.497	IDENTIFIED	7.753	☐	
	Thallium-208	0.4948	0.04496	pCi/g	0.06075	0.080	583	1	1.322	IDENTIFIED	8.418	☐	
	Thorium-228	1.757	0.08498	pCi/g	0.0905	N	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Thorium-230	1.276	0.09083	pCi/g	0.1061	N	609.1	4	1.45	IDENTIFIED	5.918	☐	
	Thorium-232	1.876	0.1825	pCi/g	0.2314	N	911.3	3	1.497	IDENTIFIED	7.753	☐	
	Tin-126 HE	0.2246	0.05985	pCi/g	0.1511	N	87.44	3	1.173	IDENTIFIED	26.29	☐	
	Titanium-44 LA	0.4319	0.03051	pCi/g	0.08398	N	77.2	1	1.26	FAIL_ABUND	5.919	☐	
	Total Uranium	4.1924	2.06E-06	ug/g	2.8044	N		0				☐	
	Uranium-234	1.276	0.09083	pCi/g	0.1061	N	609.1	4	1.45	IDENTIFIED	5.918	☐	
	Zirconium-97	5.81E+06	8.77E+05	pCi/g	0	N	238.4	7	1.375	NOT_IDENTI	3.183	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746007	29-JUN-09 12:00	14-JUL-09 10:27	14.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.723	0.184	pCi/g	0.2732	N	911	3	1.639	IDENTIFIED	9.374	☐	
Americium-243 INT		0.3667	0.03208	pCi/g	0.07127	N	75.03	1	1.178	IDENTIFIED	7.656	☐	
Pb214 Bismuth-211 INT		3.567	0.2541	pCi/g	0.3894	Y	352	4	1.07	IDENTIFIED	6.158	☑ UI	
Bismuth-212	HE	1.073	0.3407	pCi/g	0.8203	N	727.9	1	1.335	FAIL_ABUND	31.43	☐	
Bismuth-214 ✓		1.188	0.1067	pCi/g	0.1421	0.200	609.3	4	1.213	IDENTIFIED	7.782	☐	
Pb214 Cadmium-109 INT		3.563	0.4201	pCi/g	1.178	Y	87.52	3	1.037	IDENTIFIED	11.08	☑ UI	
Cerium-143		740.1	122.1	pCi/g	0	N	328	1	1.054	FAIL_DECAY	39.43	☐	
Gross Gamma		8.516	1.415	pCi/g	3.876	N		0				☐	
Iodine-133	HE	5818	3404	pCi/g	0	N	510.9	2	2.025	FAIL_DECAY	76.72	☐	
Iodine-135	HE	3.55E+15	2.28E+15	pCi/g	0	N	510.9	2	2.025	NOT_IDENTI	76.72	☐	
Krypton-85	HE	20.95	5.572	pCi/g	18.73	N	238.8	7	1.003	NOT_IDENTI	3.494	☐	
Lead-212 ✓		1.656	0.09286	pCi/g	0.0996	0.100	238.8	7	1.003	IDENTIFIED	3.494	☐	
Lead-214 ✓		1.241	0.09414	pCi/g	0.14	0.100	352	4	1.07	IDENTIFIED	6.158	☐	
Lutetium-177	HE	3.553	0.8847	pCi/g	2.24	N	208.8	1	1.314	FAIL_ABUND	24.62	☐	
Neptunium-237 INT		1.029	0.1612	pCi/g	0.3391	N	87.52	3	1.037	IDENTIFIED	11.08	☐	
Polonium-212 nr		1.656	0.09286	pCi/g	0.0996	N	238.8	7	1.003	IDENTIFIED	3.494	☐	
Polonium-214 nr		1.241	0.09414	pCi/g	0.14	N	352	4	1.07	IDENTIFIED	6.158	☐	
Polonium-216 nr		1.656	0.09286	pCi/g	0.0996	N	238.8	7	1.003	IDENTIFIED	3.494	☐	
Polonium-218 nr		1.241	0.09414	pCi/g	0.14	N	352	4	1.07	IDENTIFIED	6.158	☐	
Potassium-40 ✓		26.15	1.294	pCi/g	0.6702	1.00	1460	1	1.997	IDENTIFIED	3.878	☐	
Pb214 Radium-224 INT		5.245	0.7396	pCi/g	1.134	Y	241.8	1	1.965	IDENTIFIED	13.59	☑ UI	
Radium-226 ✓		1.188	0.1067	pCi/g	0.1421	Y	609.3	4	1.213	IDENTIFIED	7.782	☐	
Radium-228 ✓		1.723	0.184	pCi/g	0.2732	0.500	911	3	1.639	IDENTIFIED	9.374	☐	
Strontium-85 LA		0.1072	0.02851	pCi/g	0.09583	Y	238.8	7	1.003	NOT_IDENTI	3.494	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.4748	0.05056	pCi/g	0.07678	0.080	583.3	1	1.532	IDENTIFIED	9.882	☐	
Thorium-228 ✓		1.656	0.09286	pCi/g	0.09959	N	238.8	7	1.003	IDENTIFIED	3.494	☐	
Thorium-230 ✓		1.188	0.1067	pCi/g	0.1421	N	609.3	4	1.213	IDENTIFIED	7.782	☐	
Thorium-232 ✓		1.723	0.184	pCi/g	0.2732	N	911	3	1.639	IDENTIFIED	9.374	☐	
Tin-126 INT		0.3503	0.0413	pCi/g	0.1157	N	87.52	3	1.037	IDENTIFIED	11.08	☐	
Titanium-44 LA		0.3534	0.02309	pCi/g	0.07791	N	77.37	1	0.8566	FAIL_ABUND	5.011	☐	
Total Uranium		2.9726	1.47E-06	ug/g	1.8694	N		0				☐	
Uranium-234 ✓		1.188	0.1067	pCi/g	0.1421	N	609.3	4	1.213	IDENTIFIED	7.782	☐	
Zirconium-97	HE	1.05E+06	1.08E+06	pCi/g	0	N	238.8	7	1.003	NOT_IDENTI	3.494	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746008	29-JUN-09 12:00	14-JUL-09 10:28	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.857	0.1877	pCi/g	0.271	N	912	3	1.624	IDENTIFIED	8.673	☐	
Americium-243 INT		0.4006	0.03239	pCi/g	0.06333	N	75.1	1	1.22	IDENTIFIED	6.845	☐	
Annihilation Rad.	HE	0.09404	0.03683	pCi/g	0.05855	N	511.3	2	1.865	IDENTIFIED	39.01	☐	
Bismuth-210	HE	1.642	0.4583	pCi/g	0.8324	N	46.58	3	1.199	IDENTIFIED	27.61	☐	
Pb214 Bismuth-211 INT		3.754	0.2722	pCi/g	0.3484	Y	352.3	4	1.364	IDENTIFIED	6.274	☑ UI	
Bismuth-212	HE	1.206	0.296	pCi/g	0.7929	N	728	1	1.644	FAIL_ABUND	24.07	☐	
Bismuth-214 ✓		1.15	0.1031	pCi/g	0.1396	0.200	609.7	4	1.582	IDENTIFIED	7.649	☐	
Pb214 Cadmium-109 INT		3.487	0.4584	pCi/g	1.288	Y	87.4	4	1.321	IDENTIFIED	12.53	☑ UI	
Cerium-143		314.9	79.69	pCi/g	0	N	328.6	1	1.301	FAIL_DECAY	24.9	☐	
Cesium-134 LA		0.1049	0.03538	pCi/g	0.1043	0.100	795.4	1	1.457	FAIL_ABUND	33.49	☑ UI	Data rejected due to low abundance.
Europium-155	HE	0.2353	0.07419	pCi/g	0.1645	N	105.8	1	1.801	IDENTIFIED	31.1	☐	
Gross Gamma		9.646	1.685	pCi/g	3.776	N		0				☐	
Iodine-123	HE	8.68E+05	2.50E+06	pCi/g	0	N	87.4	4	1.321	NOT_IDENTI	12.53	☐	
Iodine-133	HE	1630	3058	pCi/g	0	N	511.3	2	1.865	FAIL_DECAY	39.01	☐	
Krypton-85 LA		28.81	5.186	pCi/g	18.02	N	239	7	1.183	NOT_IDENTI	3.352	☐	
Lead-210	HE	1.642	0.4583	pCi/g	0.8324	N	46.58	3	1.199	IDENTIFIED	27.61	☐	
Lead-212 ✓		1.703	0.09611	pCi/g	0.09646	0.100	239	7	1.183	IDENTIFIED	3.352	☐	
Lead-214 ✓		1.306	0.1006	pCi/g	0.1318	0.100	352.3	4	1.364	IDENTIFIED	6.274	☐	
Lutetium-177	HE	3.643	0.9098	pCi/g	2.065	N	209.8	1	1.3	FAIL_ABUND	24.65	☐	
Neptunium-237 INT		1.007	0.1683	pCi/g	0.2919	N	87.4	4	1.321	IDENTIFIED	12.53	☐	

Polonium-210	HE	1.642	0.4571	pCi/g	0.8324	N	46.58	3	1.199	IDENTIFIED	27.61	☐	
Polonium-212 nr		1.703	0.09611	pCi/g	0.09646	N	239	7	1.183	IDENTIFIED	3.352	☐	
Polonium-214 nr		1.306	0.1006	pCi/g	0.1318	N	352.3	4	1.364	IDENTIFIED	6.274	☐	
Polonium-216 nr		1.703	0.09611	pCi/g	0.09646	N	239	7	1.183	IDENTIFIED	3.352	☐	
Polonium-218 nr		1.306	0.1006	pCi/g	0.1318	N	352.3	4	1.364	IDENTIFIED	6.274	☐	
Potassium-40 ✓		29.66	1.288	pCi/g	0.7954	1.00	1461	1	1.944	IDENTIFIED	3.083	☐	
Pb214 Radium-224 INT		4.187	0.6591	pCi/g	1.098	Y	242.1	1	1.832	IDENTIFIED	15.24	☑ UI	
Radium-226 ✓		1.15	0.1031	pCi/g	0.1396	Y	609.7	4	1.582	IDENTIFIED	7.649	☐	
Radium-228 ✓		1.857	0.1877	pCi/g	0.271	0.500	912	3	1.624	IDENTIFIED	8.673	☐	
Sodium-24	HE	6.35E+05	3.82E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1475	0.02654	pCi/g	0.09224	Y	239	7	1.183	NOT_IDENTI	3.352	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5137	0.04933	pCi/g	0.07254	0.080	583.6	1	1.385	IDENTIFIED	8.666	☐	
Thorium-228 ✓		1.703	0.09611	pCi/g	0.09645	N	239	7	1.183	IDENTIFIED	3.352	☐	
Thorium-230 ✓		1.15	0.1031	pCi/g	0.1396	N	609.7	4	1.582	IDENTIFIED	7.649	☐	
Thorium-232 ✓		1.857	0.1877	pCi/g	0.271	N	912	3	1.624	IDENTIFIED	8.673	☐	
Tin-126 INT		0.3429	0.04507	pCi/g	0.1251	N	87.4	4	1.321	IDENTIFIED	12.53	☐	
Titanium-44 LA		0.3786	0.02439	pCi/g	0.06775	N	77.43	1	1.008	FAIL_ABUND	4.851	☐	
Total Uranium		1.7923	1.61E-06	ug/g	1.5784	N		0				☐	
Uranium-234 ✓		1.15	0.1031	pCi/g	0.1396	N	609.7	4	1.582	IDENTIFIED	7.649	☐	
Zirconium-97	HE	1.39E+06	9.16E+05	pCi/g	0	N	239	7	1.183	NOT_IDENTI	3.352	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals		Zero?	queue
232754001	30-JUN-09 12:00	14-JUL-09 10:44	13.9	SAMPLE	LOAD	1	LANL	LANL01004	GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.698	0.1715	pCi/g	0.2371	N	911.8	3	1.678	IDENTIFIED	8.176	☐	
Americium-243 INT		0.5143	0.04818	pCi/g	0.09721	N	74.93	1	1.524	IDENTIFIED	8.542	☐	
Annihilation Rad.	HE	0.08906	0.03096	pCi/g	0.04642	N	511.2	2	1.375	IDENTIFIED	34.64	☐	
Pb214 Bismuth-211 INT		4.134	0.2492	pCi/g	0.3081	Y	352.1	4	1.151	IDENTIFIED	5.167	☑ UI	
Bismuth-212	HE	0.8962	0.2433	pCi/g	0.6497	N	728.1	1	1.57	FAIL_ABUND	26.8	☐	
Bismuth-214 ✓		1.15	0.08395	pCi/g	0.116	0.200	609.8	4	1.285	IDENTIFIED	6.112	☐	
Pb214 Cadmium-109 INT		3.362	0.5232	pCi/g	1.554	Y	87.42	3	1.114	IDENTIFIED	14.96	☑ UI	
Cerium-143		401.1	62.61	pCi/g	0	N	328.3	1	1.273	NOT_IDENTI	34.06	☐	
Cesium-134 LA		0.1317	0.03326	pCi/g	0.09357	0.100	795.1	1	1.232	FAIL_ABUND	24.92	☑ UI	Data rejected due to low abundance.
Gross Gamma		10.62	1.6	pCi/g	4.298	N		0				☐	
Iodine-133	HE	942.1	1145	pCi/g	0	N	511.2	2	1.375	FAIL_DECAY	34.64	☐	
Krypton-85 LA		23.98	4.207	pCi/g	14.66	N	238.9	7	0.9798	NOT_IDENTI	2.907	☐	
Lead-212 ✓		1.819	0.08313	pCi/g	0.09341	0.100	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Lead-214 ✓		1.438	0.09445	pCi/g	0.1074	0.100	352.1	4	1.151	IDENTIFIED	5.167	☐	
Neptunium-237 INT		0.9719	0.1815	pCi/g	0.4362	N	87.42	3	1.114	IDENTIFIED	14.96	☐	
Polonium-212 nr		1.819	0.08313	pCi/g	0.09341	N	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Polonium-214 nr		1.438	0.09445	pCi/g	0.1074	N	352.1	4	1.151	IDENTIFIED	5.167	☐	
Polonium-216 nr		1.819	0.08313	pCi/g	0.09341	N	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Polonium-218 nr		1.438	0.09445	pCi/g	0.1074	N	352.1	4	1.151	IDENTIFIED	5.167	☐	
Potassium-40 ✓		35.49	1.784	pCi/g	0.5223	1.00	1461	1	2.005	IDENTIFIED	2.751	☐	
Pb214 Radium-224 INT		5.23	0.5408	pCi/g	1.062	Y	241.9	1	1.709	IDENTIFIED	9.975	☑ UI	
Radium-226 ✓		1.15	0.08395	pCi/g	0.116	Y	609.8	4	1.285	IDENTIFIED	6.112	☐	
Radium-228 ✓		1.698	0.1715	pCi/g	0.2371	0.500	911.8	3	1.678	IDENTIFIED	8.176	☐	
Sodium-24	HE	1.14E+05	1.00E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1215	0.02131	pCi/g	0.07425	Y	238.9	7	0.9798	NOT_IDENTI	2.907	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5743	0.04144	pCi/g	0.05993	0.080	583.6	1	1.23	IDENTIFIED	6.341	☐	
Thorium-228 ✓		1.819	0.08313	pCi/g	0.0934	N	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Thorium-230 ✓		1.15	0.08395	pCi/g	0.116	N	609.8	4	1.285	IDENTIFIED	6.112	☐	
Thorium-232 ✓		1.698	0.1715	pCi/g	0.2371	N	911.8	3	1.678	IDENTIFIED	8.176	☐	
Tin-126 INT		0.331	0.05152	pCi/g	0.1555	N	87.42	3	1.114	IDENTIFIED	14.96	☐	
Titanium-44 LA		0.4569	0.02942	pCi/g	0.09348	N	77.37	1	1.024	FAIL_ABUND	5.113	☐	
Total Uranium		4.3464	2.86E-06	ug/g	3.5402	N		0				☐	
Uranium-234 ✓		1.15	0.08395	pCi/g	0.116	N	609.8	4	1.285	IDENTIFIED	6.112	☐	
Zirconium-97	HE	4.73E+05	3.01E+05	pCi/g	0	N	238.9	7	0.9798	NOT_IDENTI	2.907	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232754002	30-JUN-09 12:00	14-JUL-09 10:45	13.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.753	0.1635	pCi/g	0.1676	N	911.5	3	1.964	IDENTIFIED	6.562	☐	
Americium-243 INT	0.4169	0.04288	pCi/g	0.09238	N	74.91	1	1.147	IDENTIFIED	9.397	☐	
Annihilation Rad. HE	0.0501	0.02514	pCi/g	0.0392	N	511.1	1	1.715	IDENTIFIED	50.08	☐	
Pb214 Bismuth-211 INT	4.048	0.2328	pCi/g	0.2473	Y	352	4	1.415	IDENTIFIED	4.774	☑ UI	
Bismuth-212 LA	1.187	0.1895	pCi/g	0.5431	N	727.8	1	0.899	FAIL_ABUND	15.17	☐	
Bismuth-214 ✓	1.197	0.08347	pCi/g	0.09223	0.200	609.5	4	1.55	IDENTIFIED	5.359	☐	
Pb214 Cadmium-109 INT	2.323	0.5103	pCi/g	1.328	Y	87.22	4	1.079	IDENTIFIED	21.48	☑ UI	
Cerium-143	399.5	56.18	pCi/g	0	N	327.9	1	1.072	FAIL_DECAY	43.43	☐	
Cesium-134 LA	0.08569	0.02459	pCi/g	0.07298	0.100	795.4	1	2.414	FAIL_ABUND	28.28	☑ UI	Data rejected due to low abundance.
Gross Gamma	10.23	1.415	pCi/g	2.553	N		0				☐	
Iodine-123	1.26E+06	5.49E+05	pCi/g	0	N	87.22	4	1.079	NOT_IDENTI	21.48	☐	
Krypton-85 LA	24.85	3.531	pCi/g	12.33	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	
Lead-212 ✓	1.713	0.07789	pCi/g	0.07976	0.100	238.7	9	1.228	IDENTIFIED	2.813	☐	
Lead-214 ✓	1.408	0.08894	pCi/g	0.08618	0.100	352	4	1.415	IDENTIFIED	4.774	☐	
Lutetium-177 LA	3.431	0.5821	pCi/g	1.585	N	209.4	1	1.209	FAIL_ABUND	16.75	☐	
Neptunium-237 INT	0.6717	0.163	pCi/g	0.3195	N	87.22	4	1.079	IDENTIFIED	21.48	☐	
Niobium-95 HE	0.06956	0.01982	pCi/g	0.06466	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	
Niobium-97 HE	10270	11750	pCi/g	0	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	
Polonium-212 NV	1.713	0.07789	pCi/g	0.07976	N	238.7	9	1.228	IDENTIFIED	2.813	☐	
Polonium-214 NV	1.408	0.08894	pCi/g	0.08618	N	352	4	1.415	IDENTIFIED	4.774	☐	
Polonium-216 NV	1.713	0.07789	pCi/g	0.07976	N	238.7	9	1.228	IDENTIFIED	2.813	☐	
Polonium-218 NV	1.408	0.08894	pCi/g	0.08618	N	352	4	1.415	IDENTIFIED	4.774	☐	
Potassium-40 ✓	36.73	1.594	pCi/g	0.4334	1.00	1461	1	2.166	IDENTIFIED	2.108	☐	
Pb214 Radium-224 INT	4.971	0.5853	pCi/g	0.9064	Y	241.7	1	1.767	IDENTIFIED	11.44	☑ UI	
Radium-226 ✓	1.197	0.08347	pCi/g	0.09223	Y	609.5	4	1.55	IDENTIFIED	5.359	☐	
Radium-228 ✓	1.753	0.1635	pCi/g	0.1676	0.500	911.5	3	1.964	IDENTIFIED	6.562	☐	
Sodium-24 HE	43990	78100	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA	0.1259	0.01788	pCi/g	0.06246	Y	238.7	9	1.228	NOT_IDENTI	2.813	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.5118	0.04171	pCi/g	0.04738	0.080	583.5	1	1.425	IDENTIFIED	7.145	☐	
Thorium-228 ✓	1.713	0.07789	pCi/g	0.07975	N	238.7	9	1.228	IDENTIFIED	2.813	☐	
Thorium-230 ✓	1.196	0.08347	pCi/g	0.09223	N	609.5	4	1.55	IDENTIFIED	5.359	☐	
Thorium-232 ✓	1.753	0.1635	pCi/g	0.1676	N	911.5	3	1.964	IDENTIFIED	6.562	☐	
Tin-126 HE	0.2287	0.05025	pCi/g	0.132	N	87.22	4	1.079	IDENTIFIED	21.48	☐	
Titanium-44 LA	0.3748	0.03096	pCi/g	0.0794	N	77.15	1	1.192	FAIL_ABUND	7.09	☐	
Total Uranium	4.0891	2.19E-06	ug/g	3.8403	N		0				☐	
Uranium-234 ✓	1.196	0.08347	pCi/g	0.09223	N	609.5	4	1.55	IDENTIFIED	5.359	☐	
Zirconium-97	5.27E+05	2.61E+05	pCi/g	0	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232754003	30-JUN-09 12:00	14-JUL-09 10:48	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.853	0.167	pCi/g	0.1797	N	911.5	3	2.493	IDENTIFIED	6.491	☐	
Americium-243 INT	0.428	0.03882	pCi/g	0.08113	N	74.73	2	1.259	IDENTIFIED	8.195	☐	
Annihilation Rad.	0.1014	0.02572	pCi/g	0.03647	N	510.9	1	2.083	IDENTIFIED	25.17	☐	
Pb214 Bismuth-211 INT	4.258	0.2255	pCi/g	0.2786	Y	352	4	1.472	IDENTIFIED	4.241	☑ UI	
Bismuth-212 HE	1.031	0.2502	pCi/g	0.5604	N	727.1	1	1.956	FAIL_ABUND	23.79	☐	
Bismuth-214 ✓	1.407	0.09537	pCi/g	0.09179	0.200	609.3	4	1.841	IDENTIFIED	5.155	☐	
Pb214 Cadmium-109 INT	3.959	0.4801	pCi/g	1.071	Y	87.32	3	1.299	IDENTIFIED	11.29	☑ UI	
Cerium-143	610.7	77.36	pCi/g	0	N	328.6	1	1.96	FAIL_DECAY	25.69	☐	
Cesium-134 LA	0.09124	0.02929	pCi/g	0.07301	0.100	795.4	2	1.9	FAIL_ABUND	31.78	☑ UI	Data rejected due to low abundance.
Cesium-135 HE	0.3031	0.07474	pCi/g	0.2461	N	795.4	2	1.9	NOT_IDENTI	31.78	☐	
Gross Gamma	11	1.217	pCi/g	2.22	N		0				☐	
Krypton-85 LA	29.87	3.408	pCi/g	12.3	N	238.7	8	1.36	NOT_IDENTI	2.609	☐	
Lead-212 ✓	1.862	0.08182	pCi/g	0.08056	0.100	238.7	8	1.36	IDENTIFIED	2.609	☐	

Lead-214 ✓		1.481	0.08743	pCi/g	0.0946	0.100	352	4	1.472	IDENTIFIED	4.241	☐	
Lutetium-177	HE	2.659	0.5889	pCi/g	1.599	N	209.3	1	1.443	FAIL_ABUND	21.98	☐	
Neptunium-237 INT		1.145	0.1822	pCi/g	0.314	N	87.32	3	1.299	IDENTIFIED	11.29	☐	
Niobium-95m LA		0.5005	0.06922	pCi/g	0.2246	N	238.7	8	1.36	NOT_IDENTI	2.609	☐	
Polonium-212 nr		1.862	0.08182	pCi/g	0.08056	N	238.7	8	1.36	IDENTIFIED	2.609	☐	
Polonium-214 nr		1.481	0.08743	pCi/g	0.0946	N	352	4	1.472	IDENTIFIED	4.241	☐	
Polonium-216 nr		1.862	0.08182	pCi/g	0.08056	N	238.7	8	1.36	IDENTIFIED	2.609	☐	
Polonium-218 nr		1.481	0.08743	pCi/g	0.0946	N	352	4	1.472	IDENTIFIED	4.241	☐	
Potassium-40 ✓		39.45	1.564	pCi/g	0.4274	1.00	1461	1	3.306	IDENTIFIED	1.898	☑ UI ~~Data rejected due to high peak width.~~	OK MS 7/17/
Pb214 Radium-224 INT		4.665	0.5732	pCi/g	0.9153	Y	241.7	1	1.823	IDENTIFIED	11.98	☑ UI	
Radium-226 ✓		1.407	0.09537	pCi/g	0.09179	Y	609.3	4	1.841	IDENTIFIED	5.155	☐	
Radium-228 ✓		1.853	0.167	pCi/g	0.1797	0.500	911.5	3	2.493	IDENTIFIED	6.491	☐	
Sodium-24	HE	7404	91140	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1513	0.01726	pCi/g	0.06229	Y	238.7	8	1.36	NOT_IDENTI	2.609	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	137.5	90.34	pCi/g	0	N	74.73	2	1.259	NOT_IDENTI	8.195	☐	
Thallium-208 ✓		0.5768	0.03862	pCi/g	0.0471	0.080	583.1	1	1.858	IDENTIFIED	5.479	☐	
Thorium-228 ✓		1.862	0.08182	pCi/g	0.08055	N	238.7	8	1.36	IDENTIFIED	2.609	☐	
Thorium-230 ✓		1.407	0.09536	pCi/g	0.09179	N	609.3	4	1.841	IDENTIFIED	5.155	☐	
Thorium-232 ✓		1.853	0.167	pCi/g	0.1797	N	911.5	3	2.493	IDENTIFIED	6.491	☐	
Thorium-234 ✓		2.228	0.8423	pCi/g	1.833	2.00	62.92	2	1.265	IDENTIFIED	36.79	☐	
Tin-126 INT		0.3898	0.04727	pCi/g	0.1059	N	87.32	3	1.299	IDENTIFIED	11.29	☐	
Titanium-44 LA		0.4175	0.0278	pCi/g	0.0752	N	77.06	1	1.133	FAIL_ABUND	5.342	☐	
Total Uranium		6.6453	2.51E-06	ug/g	2.7298	N		0				☐	
Uranium-234 ✓		1.407	0.09536	pCi/g	0.09179	N	609.3	4	1.841	IDENTIFIED	5.155	☐	
Uranium-238	HE	2.228	0.8423	pCi/g	1.833	N	62.92	2	1.265	IDENTIFIED	36.79	☐	
Zirconium-97		1.80E+06	2.71E+05	pCi/g	0	N	238.7	8	1.36	NOT_IDENTI	2.609	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758002	30-JUN-09 12:00	14-JUL-09 11:02	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.884	0.2003	pCi/g	0.2489	N	911.1	3	1.556	IDENTIFIED	8.874	☐	
Americium-243 INT		0.3821	0.04885	pCi/g	0.09958	N	74.72	2	1.085	IDENTIFIED	11.7	☐	
Annihilation Rad.		0.1574	0.04343	pCi/g	0.05113	N	511.1	1	2.157	IDENTIFIED	27.41	☐	
Pb214 Bismuth-211 INT		4.232	0.2917	pCi/g	0.4026	Y	352	4	1.171	IDENTIFIED	5.587	☑ UI	
Bismuth-212	HE	0.8514	0.2519	pCi/g	0.7138	N	727.2	1	1.55	FAIL_ABUND	29.26	☐	
Bismuth-214 ✓		1.307	0.1014	pCi/g	0.1196	0.200	609.3	4	1.377	IDENTIFIED	6.548	☐	
Pb214 Cadmium-109 INT		4.2	0.6624	pCi/g	1.262	Y	87.14	3	1.256	IDENTIFIED	14.64	☑ UI	
Cerium-143		294.4	60.39	pCi/g	0	N	327.8	1	0.9544	FAIL_DECAY	34.87	☐	
Cesium-135 mp		0.6762	0.1378	pCi/g	0.268	N	269.7	2	1.239	IDENTIFIED	19.7	☐	
Gross Gamma		9.479	1.897	pCi/g	3.638	N		0				☐	
Iodine-135	HE	1.28E+14	1.78E+14	pCi/g	0	N	269.7	2	1.239	NOT_IDENTI	19.7	☐	
Lead-212 ✓		1.665	0.1003	pCi/g	0.09985	0.100	238.7	7	1.086	IDENTIFIED	3.727	☐	
Lead-214 ✓		1.472	0.1085	pCi/g	0.1345	0.100	352	4	1.171	IDENTIFIED	5.587	☐	
Lutetium-177	HE	2.467	0.7176	pCi/g	2.039	N	209.1	1	1.078	FAIL_ABUND	28.84	☐	
Neptunium-237 INT		1.214	0.2289	pCi/g	0.3723	N	87.14	3	1.256	IDENTIFIED	14.64	☐	
Niobium-97	HE	28530	16890	pCi/g	0	N	238.7	7	1.086	NOT_IDENTI	3.727	☐	
Polonium-212 nr		1.665	0.1003	pCi/g	0.09985	N	238.7	7	1.086	IDENTIFIED	3.727	☐	
Polonium-214 nr		1.472	0.1085	pCi/g	0.1345	N	352	4	1.171	IDENTIFIED	5.587	☐	
Polonium-216 nr		1.665	0.1003	pCi/g	0.09985	N	238.7	7	1.086	IDENTIFIED	3.727	☐	
Polonium-218 nr		1.472	0.1085	pCi/g	0.1345	N	352	4	1.171	IDENTIFIED	5.587	☐	
Potassium-40 ✓		26.33	1.334	pCi/g	0.5086	1.00	1461	1	2.501	IDENTIFIED	3.457	☐	
Pb214 Radium-224 INT		5.532	0.5747	pCi/g	1.137	Y	241.7	1	1.705	IDENTIFIED	9.5	☑ UI	
Radium-226 ✓		1.307	0.1014	pCi/g	0.1196	Y	609.3	4	1.377	IDENTIFIED	6.548	☐	
Radium-228 ✓		1.884	0.2003	pCi/g	0.2489	0.500	911.1	3	1.556	IDENTIFIED	8.874	☐	
Rhenium-188	HE	0.3443	0.09311	pCi/g	0.3328	N	1121	1	1.542	NOT_IDENTI	18.15	☐	
Technetium-99m	HE	1.37E+15	8.21E+14	pCi/g	0	N	238.7	7	1.086	NOT_IDENTI	3.727	☐	
Thallium-200	HE	81.03	124.3	pCi/g	0	N	74.72	2	1.085	NOT_IDENTI	11.7	☐	
Thallium-208 ✓		0.5591	0.04784	pCi/g	0.06229	0.080	583.3	1	1.485	IDENTIFIED	7.729	☐	

Thorium-228 ✓		1.665	0.1003	pCi/g	0.09984	N	238.7	7	1.086	IDENTIFIED	3.727	☐
Thorium-230 ✓		1.307	0.1014	pCi/g	0.1196	N	609.3	4	1.377	IDENTIFIED	6.548	☐
Thorium-232 ✓		1.884	0.2003	pCi/g	0.2489	N	911.1	3	1.556	IDENTIFIED	8.874	☐
Tin-126 INT		0.4136	0.06522	pCi/g	0.125	N	87.14	3	1.256	IDENTIFIED	14.64	☐
Titanium-44 LA		0.4063	0.03334	pCi/g	0.08283	N	77.03	1	0.8932	FAIL_ABUND	6.296	☐
Uranium-234 ✓		1.307	0.1014	pCi/g	0.1196	N	609.3	4	1.377	IDENTIFIED	6.548	☐
Zirconium-97	HE	3.56E+05	3.64E+05	pCi/g	0	N	238.7	7	1.086	NOT_IDENTI	3.727	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758003	30-JUN-09 12:00	14-JUL-09 11:03	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.783	0.1863	pCi/g	0.2367	N	911.8	3	1.531	IDENTIFIED	8.887	☐	
Americium-243 INT		0.4427	0.04487	pCi/g	0.09457	N	74.83	2	1.085	IDENTIFIED	9.548	☐	
Annihilation Rad.	HE	0.109	0.04225	pCi/g	0.05264	N	511	1	2.431	IDENTIFIED	38.64	☐	
Pb214 Bismuth-211 INT		3.975	0.2748	pCi/g	0.3582	Y	352.1	4	1.08	IDENTIFIED	6.157	☑ UI	
Bismuth-212	HE	1.167	0.2714	pCi/g	0.7605	N	727.9	1	1.449	FAIL_ABUND	22.84	☐	
Bismuth-214 ✓		1.211	0.1005	pCi/g	0.1289	0.200	609.7	4	1.313	IDENTIFIED	7.203	☐	
Pb214 Cadmium-109 INT		3.988	0.6074	pCi/g	1.377	Y	87.15	4	1.092	IDENTIFIED	14.75	☑ UI	
Cerium-143		239.8	53.35	pCi/g	0	N	327.9	1	1.181	NOT_IDENTI	24.04	☐	
Cesium-134 LA		0.1727	0.0322	pCi/g	0.1079	0.100	795.7	1	2.639	FAIL_ABUND	18.25	☑ UI	Data rejected due to low abundance.
Gross Gamma		11.18	1.675	pCi/g	3.647	N		0				☐	
Iodine-123	HE	6.03E+05	6.93E+05	pCi/g	0	N	87.15	4	1.092	NOT_IDENTI	14.75	☐	
Krypton-85	HE	23.19	4.772	pCi/g	16.23	N	238.8	7	1.085	NOT_IDENTI	3.341	☐	
Lead-212 ✓		1.87	0.09118	pCi/g	0.09439	0.100	238.8	7	1.085	IDENTIFIED	3.341	☐	
Lead-214 ✓		1.383	0.1022	pCi/g	0.1249	0.100	352.1	4	1.08	IDENTIFIED	6.157	☐	
Lutetium-177	HE	2.982	0.8026	pCi/g	1.967	N	209.4	1	1.267	FAIL_ABUND	26.79	☐	
Neptunium-237 INT		1.153	0.2121	pCi/g	0.4631	N	87.15	4	1.092	IDENTIFIED	14.75	☐	
Polonium-212 nr		1.87	0.09118	pCi/g	0.09439	N	238.8	7	1.085	IDENTIFIED	3.341	☐	
Polonium-214 nr		1.383	0.1022	pCi/g	0.1249	N	352.1	4	1.08	IDENTIFIED	6.157	☐	
Polonium-216 nr		1.87	0.09118	pCi/g	0.09439	N	238.8	7	1.085	IDENTIFIED	3.341	☐	
Polonium-218 nr		1.383	0.1022	pCi/g	0.1249	N	352.1	4	1.08	IDENTIFIED	6.157	☐	
Potassium-40 ✓		37.45	1.693	pCi/g	0.5243	1.00	1462	1	2.195	IDENTIFIED	2.781	☐	
Pb214 Radium-224 INT		5.068	0.6865	pCi/g	1.074	Y	241.7	1	1.676	IDENTIFIED	13.26	☑ UI	
Radium-226 ✓		1.211	0.1005	pCi/g	0.1289	Y	609.7	4	1.313	IDENTIFIED	7.203	☐	
Radium-228 ✓		1.783	0.1863	pCi/g	0.2367	0.500	911.8	3	1.531	IDENTIFIED	8.887	☐	
Strontium-85 LA		0.1175	0.02417	pCi/g	0.08219	Y	238.8	7	1.085	NOT_IDENTI	3.341	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	178.9	120.1	pCi/g	0	N	74.83	2	1.085	NOT_IDENTI	9.548	☐	
Thallium-208 ✓		0.5342	0.05168	pCi/g	0.06755	0.080	583.5	1	1.387	IDENTIFIED	8.988	☐	
Thorium-228 ✓		1.87	0.09118	pCi/g	0.09438	N	238.8	7	1.085	IDENTIFIED	3.341	☐	
Thorium-230 ✓		1.211	0.1005	pCi/g	0.1289	N	609.7	4	1.313	IDENTIFIED	7.203	☐	
Thorium-232 ✓		1.783	0.1863	pCi/g	0.2367	N	911.8	3	1.531	IDENTIFIED	8.887	☐	
Thorium-234 ✓		3.508	1.161	pCi/g	2.21	2.00	63.27	2	1.481	IDENTIFIED	31.99	☐	
Tin-126 INT		0.3926	0.0598	pCi/g	0.1529	N	87.15	4	1.092	IDENTIFIED	14.75	☐	
Titanium-44 LA		0.5098	0.03273	pCi/g	0.08984	N	77.15	1	1.014	FAIL_ABUND	5.406	☐	
Total Uranium		10.461	3.45E-06	ug/g	3.2909	N		0				☐	
Uranium-234 ✓		1.211	0.1005	pCi/g	0.1289	N	609.7	4	1.313	IDENTIFIED	7.203	☐	
Uranium-238	HE	3.508	1.161	pCi/g	2.21	N	63.27	2	1.481	IDENTIFIED	31.99	☐	
Zirconium-97	HE	3.48E+05	3.62E+05	pCi/g	0	N	238.8	7	1.085	NOT_IDENTI	3.341	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758004	30-JUN-09 12:00	14-JUL-09 11:04	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		2.014	0.2049	pCi/g	0.2212	N	911.5	3	1.776	IDENTIFIED	8.323	☐	
Americium-243 INT		0.4223	0.04971	pCi/g	0.1037	N	74.84	2	1.121	IDENTIFIED	11.16	☐	
Annihilation Rad.	HE	0.1079	0.03689	pCi/g	0.04887	N	511	1	1.626	IDENTIFIED	34.06	☐	
Pb214 Bismuth-211 INT		3.957	0.306	pCi/g	0.3567	Y	352.1	4	1.409	IDENTIFIED	7.051	☑ UI	
Bismuth-212	HE	0.9668	0.2764	pCi/g	0.702	N	727.5	1	1.051	FAIL_ABUND	28.25	☐	

	Bismuth-214 ✓	1.277	0.1094	pCi/g	0.109	0.200	609.4	4	1.478	IDENTIFIED	7.534	☐	
Pb214	Cadmium-109 INT	3.596	0.6302	pCi/g	1.361	Y	87.11	3	1.082	IDENTIFIED	17.04	☑ UI	
	Cerium-143	195.5	49.15	pCi/g	0	N	327.7	1	1.748	FAIL_DECAY	36.49	☐	
	Cesium-134 LA	0.2453	0.04267	pCi/g	0.1125	0.100	796	1	3.84	FAIL_ABUND	16.92	☑ UI	Data rejected due to low abundance.
	Gross Gamma	10.9	1.648	pCi/g	3.207	N		0				☐	
	Lead-212 ✓	2.058	0.0995	pCi/g	0.09847	0.100	238.7	5	1.181	IDENTIFIED	3.223	☐	
	Lead-214 ✓	1.376	0.1123	pCi/g	0.1244	0.100	352.1	4	1.409	IDENTIFIED	7.051	☐	
	Lutetium-177 HE	3.195	0.8855	pCi/g	1.896	N	209	1	1.425	FAIL_ABUND	27.58	☐	
	Mercury-203 nvp	0.1223	0.03928	pCi/g	0.06338	0.100	277.9	1	1.347	IDENTIFIED	31.97	☑ UI	
	Neptunium-237 INT	1.04	0.2114	pCi/g	0.4309	N	87.11	3	1.082	IDENTIFIED	17.04	☐	
	Polonium-212 nr	2.058	0.0995	pCi/g	0.09847	N	238.7	5	1.181	IDENTIFIED	3.223	☐	
	Polonium-214 nr	1.376	0.1123	pCi/g	0.1244	N	352.1	4	1.409	IDENTIFIED	7.051	☐	
	Polonium-216 nr	2.058	0.0995	pCi/g	0.09847	N	238.7	5	1.181	IDENTIFIED	3.223	☐	
	Polonium-218 nr	1.376	0.1123	pCi/g	0.1244	N	352.1	4	1.409	IDENTIFIED	7.051	☐	
	Potassium-40 ✓	33.26	1.614	pCi/g	0.6447	1.00	1461	1	2.122	IDENTIFIED	3.076	☐	
Pb214	Radium-224 INT	4.827	0.7403	pCi/g	1.121	Y	241.8	1	1.734	IDENTIFIED	15.08	☑ UI	
	Radium-226 ✓	1.277	0.1094	pCi/g	0.109	Y	609.4	4	1.478	IDENTIFIED	7.534	☐	
	Radium-228 ✓	2.014	0.2049	pCi/g	0.2212	0.500	911.5	3	1.776	IDENTIFIED	8.323	☐	
	Thallium-200 HE	5.886	109.7	pCi/g	0	N	74.84	2	1.121	NOT_IDENTI	11.16	☐	
	Thallium-208 ✓	0.6306	0.05175	pCi/g	0.06456	0.080	583.4	1	1.188	IDENTIFIED	7.404	☐	
	Thorium-228 ✓	2.058	0.0995	pCi/g	0.09846	N	238.7	5	1.181	IDENTIFIED	3.223	☐	
	Thorium-230 ✓	1.277	0.1094	pCi/g	0.109	N	609.4	4	1.478	IDENTIFIED	7.534	☐	
	Thorium-232 ✓	2.014	0.2049	pCi/g	0.2212	N	911.5	3	1.776	IDENTIFIED	8.323	☐	
	Tin-126 INT	0.354	0.06205	pCi/g	0.1348	N	87.11	3	1.082	IDENTIFIED	17.04	☐	
	Titanium-44 LA	0.5158	0.03614	pCi/g	0.08868	N	77.11	1	1.064	FAIL_ABUND	5.896	☐	
	Uranium-234 ✓	1.277	0.1094	pCi/g	0.109	N	609.4	4	1.478	IDENTIFIED	7.534	☐	
	Zirconium-97 HE	3.89E+05	3.20E+05	pCi/g	0	N	238.7	5	1.181	NOT_IDENTI	3.223	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758005	30-JUN-09 12:00	14-JUL-09 11:05	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.682	0.1688	pCi/g	0.1977	N	911.3	3	1.834	IDENTIFIED	7.935	☐	
	Americium-243 INT	0.342	0.03296	pCi/g	0.07883	N	74.91	1	0.928	IDENTIFIED	8.935	☐	
	Annihilation Rad.	0.1348	0.03086	pCi/g	0.04177	N	510.8	1	1.978	IDENTIFIED	22.56	☐	
Pb214	Bismuth-211 INT	4.37	0.3076	pCi/g	0.276	Y	351.9	4	1.171	IDENTIFIED	5.14	☑ UI	
	Bismuth-212 ✓	1.047	0.2052	pCi/g	0.4355	N	727.3	1	1.745	IDENTIFIED	18.93	☐	
	Bismuth-214 ✓	1.288	0.09591	pCi/g	0.1078	0.200	609.4	4	1.523	IDENTIFIED	5.65	☐	
Pb214	Cadmium-109 INT	2.624	0.4885	pCi/g	1.159	Y	87.19	3	1.131	IDENTIFIED	18.17	☑ UI	
	Cerium-143	421.5	65.89	pCi/g	0	N	327.8	1	1.488	FAIL_DECAY	51.49	☐	
	Cesium-135 nvp	0.4749	0.1281	pCi/g	0.2171	N	269.7	2	1.568	IDENTIFIED	26.24	☐	
	Gross Gamma	9.19	1.433	pCi/g	3.542	N		0				☐	
	Iodine-135 HE	2.22E+14	1.38E+14	pCi/g	0	N	269.7	2	1.568	NOT_IDENTI	26.24	☐	
	Lead-212 ✓	1.723	0.1047	pCi/g	0.08207	0.100	238.6	5	1.151	IDENTIFIED	3.148	☐	
	Lead-214 ✓	1.52	0.1141	pCi/g	0.09622	0.100	351.9	4	1.171	IDENTIFIED	5.14	☐	
	Lutetium-177 HE	2.372	0.6309	pCi/g	1.74	N	209.2	1	1.041	FAIL_ABUND	26.32	☐	
	Neptunium-237 INT	0.7588	0.1615	pCi/g	0.3388	N	87.19	3	1.131	IDENTIFIED	18.17	☐	
	Polonium-212 nr	1.723	0.1047	pCi/g	0.08207	N	238.6	5	1.151	IDENTIFIED	3.148	☐	
	Polonium-214 nr	1.52	0.1141	pCi/g	0.09622	N	351.9	4	1.171	IDENTIFIED	5.14	☐	
	Polonium-216 nr	1.723	0.1047	pCi/g	0.08207	N	238.6	5	1.151	IDENTIFIED	3.148	☐	
	Polonium-218 nr	1.52	0.1141	pCi/g	0.09622	N	351.9	4	1.171	IDENTIFIED	5.14	☐	
	Potassium-40 ✓	25.21	1.122	pCi/g	0.471	1.00	1461	1	2.006	IDENTIFIED	3.084	☐	
Pb214	Radium-224 INT	4.989	0.6877	pCi/g	0.9335	Y	241.5	1	1.836	IDENTIFIED	12.93	☑ UI	
	Radium-226 ✓	1.288	0.09591	pCi/g	0.1078	Y	609.4	4	1.523	IDENTIFIED	5.65	☐	
	Radium-228 ✓	1.682	0.1688	pCi/g	0.1977	0.500	911.3	3	1.834	IDENTIFIED	7.935	☐	
	Thallium-208 ✓	0.5121	0.04695	pCi/g	0.05229	0.080	583.2	1	1.235	IDENTIFIED	8.053	☐	
	Thorium-228 ✓	1.723	0.1047	pCi/g	0.08206	N	238.6	5	1.151	IDENTIFIED	3.148	☐	
	Thorium-230 ✓	1.288	0.09591	pCi/g	0.1078	N	609.4	4	1.523	IDENTIFIED	5.65	☐	
	Thorium-232 ✓	1.682	0.1688	pCi/g	0.1977	N	911.3	3	1.834	IDENTIFIED	7.935	☐	

Thorium-234 ✓		2.375	0.7794	pCi/g	1.682	2.00	63.21	2	1.171	IDENTIFIED	31.67	☐
Tin-126 INT		0.2584	0.0481	pCi/g	0.1145	N	87.19	3	1.131	IDENTIFIED	18.17	☐
Titanium-44 LA		0.377	0.02598	pCi/g	0.07497	N	77.14	1	1.019	FAIL_ABUND	5.829	☐
Total Uranium		7.0923	2.32E-06	ug/g	2.5043	N		0				☐
Uranium-234 ✓		1.288	0.09591	pCi/g	0.1078	N	609.4	4	1.523	IDENTIFIED	5.65	☐
Uranium-238	HE	2.375	0.7794	pCi/g	1.682	N	63.21	2	1.171	IDENTIFIED	31.67	☐
Zirconium-97	HE	5.39E+05	2.93E+05	pCi/g	0	N	238.6	5	1.151	NOT_IDENTI	3.148	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201874832		14-JUL-09 11:22	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Iodine-123	HE	108.5	78.03	pCi/g	0	N	1076	2	0.576	NOT_IDENTI	71.2	☐	
Niobium-97	HE	8.596	14.24	pCi/g	0	N	1076	2	0.576	NOT_IDENTI	71.2	☐	
Sodium-24	HE	23.35	53.92	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201874833	30-JUN-09 12:00	14-JUL-09 11:23	14	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.926	0.2272	pCi/g	0.2851	N	911.5	3	1.893	IDENTIFIED	10.04	☐	
Americium-243 INT		0.3905	0.03003	pCi/g	0.06405	N	74.71	2	1.204	IDENTIFIED	6.618	☐	
Annihilation Rad.	HE	0.09893	0.0381	pCi/g	0.05919	N	510.7	2	1.823	IDENTIFIED	38.38	☐	
Bismuth-210	HE	1.139	0.5032	pCi/g	0.9172	N	46.69	3	1.169	IDENTIFIED	44.02	☐	
pb214 Bismuth-211 INT		4.096	0.2787	pCi/g	0.3667	Y	352	4	1.554	IDENTIFIED	5.543	☑ UI	
Bismuth-212	HE	1.405	0.3011	pCi/g	0.8102	N	727.4	1	1.525	FAIL_ABUND	20.95	☐	
Bismuth-214 ✓		1.283	0.1044	pCi/g	0.1374	0.200	609.4	4	1.547	IDENTIFIED	6.972	☐	
pb214 Cadmium-109 INT		3.731	0.441	pCi/g	1.055	Y	87.23	3	1.33	IDENTIFIED	11.19	☑ UI	
Cerium-143		445.4	72.21	pCi/g	0	N	328.4	1	1.865	FAIL_DECAY	45.63	☐	
Gross Gamma		10.19	1.464	pCi/g	4.075	N		0				☐	
Iodine-133	HE	345.5	1288	pCi/g	0	N	510.7	2	1.823	FAIL_DECAY	38.38	☐	
Lead-210	HE	1.139	0.5032	pCi/g	0.9172	N	46.69	3	1.169	IDENTIFIED	44.02	☐	
Lead-212 ✓		1.864	0.1171	pCi/g	0.1012	0.100	238.6	7	1.35	IDENTIFIED	3.226	☐	
Lead-214 ✓		1.425	0.1038	pCi/g	0.1233	0.100	352	4	1.554	IDENTIFIED	5.543	☐	
Lutetium-177 LA		3.447	0.6811	pCi/g	2.006	N	209	1	1.025	FAIL_ABUND	19.12	☐	
Neptunium-237 INT		1.079	0.1693	pCi/g	0.3037	N	87.23	3	1.33	IDENTIFIED	11.19	☐	
Niobium-95m	HE	0.3735	0.08482	pCi/g	0.2683	N	238.6	7	1.35	NOT_IDENTI	3.226	☐	
Niobium-97	HE	25570	19640	pCi/g	0	N	238.6	7	1.35	NOT_IDENTI	3.226	☐	
Polonium-210	HE	1.139	0.5027	pCi/g	0.9172	N	46.69	3	1.169	IDENTIFIED	44.02	☐	
Polonium-212 nr		1.864	0.1171	pCi/g	0.1012	N	238.6	7	1.35	IDENTIFIED	3.226	☐	
Polonium-214 nr		1.425	0.1038	pCi/g	0.1233	N	352	4	1.554	IDENTIFIED	5.543	☐	
Polonium-216 nr		1.864	0.1171	pCi/g	0.1012	N	238.6	7	1.35	IDENTIFIED	3.226	☐	
Polonium-218 nr		1.425	0.1038	pCi/g	0.1233	N	352	4	1.554	IDENTIFIED	5.543	☐	
Potassium-40 ✓		33.55	1.479	pCi/g	0.785	1.00	1461	1	2.046	IDENTIFIED	3.124	☐	
pb214 Radium-224 INT		4.724	0.5671	pCi/g	1.151	Y	241.7	1	1.773	IDENTIFIED	10.97	☑ UI	
Radium-226 ✓		1.283	0.1044	pCi/g	0.1374	Y	609.4	4	1.547	IDENTIFIED	6.972	☐	
Radium-228 ✓		1.926	0.2272	pCi/g	0.2851	0.500	911.5	3	1.893	IDENTIFIED	10.04	☐	
Sodium-24		2.54E+05	1.24E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-200	HE	45.6	112.6	pCi/g	0	N	74.71	2	1.204	NOT_IDENTI	6.618	☐	
Thallium-208 ✓		0.5373	0.0494	pCi/g	0.06903	0.080	583.3	1	1.542	IDENTIFIED	8.426	☐	
Thorium-228 ✓		1.864	0.1171	pCi/g	0.1012	N	238.6	7	1.35	IDENTIFIED	3.226	☐	
Thorium-230 ✓		1.283	0.1044	pCi/g	0.1374	N	609.4	4	1.547	IDENTIFIED	6.972	☐	
Thorium-232 ✓		1.926	0.2272	pCi/g	0.2851	N	911.5	3	1.893	IDENTIFIED	10.04	☐	
Thorium-234 ✓		1.702	0.6136	pCi/g	1.102	2.00	62.92	2	1.407	IDENTIFIED	34.95	☐	
Tin-126 INT		0.3674	0.04342	pCi/g	0.1037	N	87.23	3	1.33	IDENTIFIED	11.19	☐	
Titanium-44 LA		0.3745	0.02373	pCi/g	0.0661	N	76.95	1	1.103	FAIL_ABUND	5	☐	
Total Uranium		5.0744	1.83E-06	ug/g	1.6427	N		0				☐	
Uranium-234 ✓		1.283	0.1044	pCi/g	0.1374	N	609.4	4	1.547	IDENTIFIED	6.972	☐	
Uranium-238	HE	1.702	0.6136	pCi/g	1.102	N	62.92	2	1.407	IDENTIFIED	34.95	☐	

Zirconium-97		1.29E+06	3.73E+05	pCi/g	0	N	238.6	7	1.35	NOT_IDENTI	3.226	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201874834		14-JUL-09 12:33	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	HE	1.119	0.332	pCi/g	0.8422	N	910.9	3	0.8815	FAIL_ABUND	29.21	☐	
Americium-241		13.66	0.7233	pCi/g	0.2687	0.200	59.87	1	1.118	IDENTIFIED	1.511	☐ 86%	
Americium-243		0.2676	0.0413	pCi/g	0.1027	N	75.15	1	1.22	IDENTIFIED	14.82	☐	
Annihilation Rad.	HE	0.1742	0.0613	pCi/g	0.1075	N	511.1	1	1.71	IDENTIFIED	35.02	☐	
Barium-137m		5.687	0.2724	pCi/g	0.1388	N	662.1	2	1.623	IDENTIFIED	2.511	☐	
Bismuth-211		2.377	0.3478	pCi/g	0.6746	Y	352.4	4	1.1	IDENTIFIED	14.17	☐	
Bismuth-214		0.9137	0.1717	pCi/g	0.3939	0.200	610.1	4	1.769	FAIL_ABUND	18.2	☐	
Cadmium-109		47.45	2.3	pCi/g	1.93	Y	88.4	2	1.137	IDENTIFIED	2.782	☐	
Cesium-137		6.012	0.2884	pCi/g	0.1467	0.100	662.1	2	1.623	IDENTIFIED	2.511	☐ 107%	
Cobalt-57		0.4118	0.05003	pCi/g	0.06721	N	122.4	1	1.207	IDENTIFIED	10.38	☐	
Cobalt-60		6.848	0.2639	pCi/g	0.09409	0.100	1333	1	1.999	IDENTIFIED	2.6	☐ 99%	
Gross Gamma		29.1	3.529	pCi/g	5.954	N		0				☐	
Lead-212		0.8114	0.1211	pCi/g	0.1851	0.100	238.8	4	1.05	IDENTIFIED	14.21	☐	
Lead-214		0.8268	0.1229	pCi/g	0.2563	0.100	352.4	4	1.1	IDENTIFIED	14.17	☐	
Neptunium-237		1.973	0.3021	pCi/g	0.785	N	93.07	1	1.113	NOT_IDENTI	98.72	☐	
Niobium-97	HE	117.9	75.78	pCi/g	0	N	295.8	3	1.674	NOT_IDENTI	19.01	☐	
Polonium-212		0.8114	0.1211	pCi/g	0.1851	N	238.8	4	1.05	IDENTIFIED	14.21	☐	
Polonium-214		0.8268	0.1229	pCi/g	0.2563	N	352.4	4	1.1	IDENTIFIED	14.17	☐	
Polonium-216		0.8114	0.1211	pCi/g	0.1851	N	238.8	4	1.05	IDENTIFIED	14.21	☐	
Polonium-218		0.8268	0.1229	pCi/g	0.2563	N	352.4	4	1.1	IDENTIFIED	14.17	☐	
Radium-226		0.9137	0.1717	pCi/g	0.3939	Y	610.1	4	1.769	FAIL_ABUND	18.2	☐	
Radium-228		1.119	0.332	pCi/g	0.8422	0.500	910.9	3	0.8815	FAIL_ABUND	29.21	☐	
Technetium-99m	HE	5.78E+06	2.16E+07	pCi/g	0	N	295.8	3	1.674	NOT_IDENTI	19.01	☐	
Thallium-208		0.2333	0.06125	pCi/g	0.1443	0.080	583.5	1	1.363	IDENTIFIED	25.92	☐	
Thorium-228		0.8114	0.1211	pCi/g	0.1851	N	238.8	4	1.05	IDENTIFIED	14.21	☐	
Thorium-230		0.9137	0.1717	pCi/g	0.3939	N	610.1	4	1.769	FAIL_ABUND	18.2	☐	
Thorium-232	HE	1.119	0.332	pCi/g	0.8422	N	910.9	3	0.8815	FAIL_ABUND	29.21	☐	
Tin-126		4.718	0.2286	pCi/g	0.1917	N	88.4	2	1.137	IDENTIFIED	2.782	☐	
Titanium-44		0.3032	0.03135	pCi/g	0.08929	N	77.34	1	1.228	FAIL_ABUND	9.428	☐	
Uranium-234		0.9137	0.1717	pCi/g	0.3939	N	610.1	4	1.769	FAIL_ABUND	18.2	☐	
Zirconium-97	HE	1020	1163	pCi/g	0	N	295.8	3	1.674	NOT_IDENTI	19.01	☐	

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232664001-1 14-JUL-2009 08:26	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.501			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.631			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.566			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1631			
232664002-1 14-JUL-2009 08:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.564			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.467			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08514		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.041			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.144			
232664003-1 14-JUL-2009 08:37	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.361			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1559		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.145			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1712			
232664004-1 14-JUL-2009 08:38	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.545			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.354			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1942		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.913			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1357			
232664005-1 14-JUL-2009 08:57	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.444			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.201			

GEL QUALS

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Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232664005-1 14-JUL-2009 08:57	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1109		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.194			
232746001-1 14-JUL-2009 08:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.281			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.643			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1055		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.137			
232746002-1 14-JUL-2009 08:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.401			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.1			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.973			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.06761			
232746003-1 14-JUL-2009 08:59	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.782			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.353			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.501			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1033			
232746004-1 14-JUL-2009 09:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.115			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.323		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.766			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.16		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.703			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.323			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232746004-1 14-JUL-2009 09:13	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.126			
232746005-1 14-JUL-2009 09:16	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.555			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.703			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1432		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.289			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1344			
232746006-1 14-JUL-2009 10:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.832			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.285			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1187		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.691			
232746007-1 14-JUL-2009 10:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.567			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.563			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.245			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1072			
232746008-1 14-JUL-2009 10:28	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.754			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.487			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1049		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.187			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1475			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232754001-1 14-JUL-2009 10:44	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.134			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.362			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1317		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.23			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1215			
232754002-1 14-JUL-2009 10:45	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.048			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.323			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08569		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.971			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1259			
232754003-1 14-JUL-2009 10:48	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.258			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.959			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09124		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.665			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1513			
232758002-1 14-JUL-2009 11:02	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.232			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.2			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.532			
232758003-1 14-JUL-2009 11:03	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.975			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.988			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232758003-1 14-JUL-2009 11:03	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1727		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.068			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1175			
232758004-1 14-JUL-2009 11:04	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.957			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.596			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.2453		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to no valid peak.		.1223		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.827			
232758005-1 14-JUL-2009 11:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.37			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.624			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.989			
1201874833-1 DUP 14-JUL-2009 11:23	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.096			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.731			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.724			

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertanty	Units	DL	RDL
882713	232758004	SAMPLE	14-JUL-09	Thallium-200	5.886	109.7	pCi/g	0	N
				Thallium-208	0.6306	0.05175	pCi/g	0.0323	0.080
				Zirconium-97	3.89E+05	3.20E+05	pCi/g	0	N
882713	232758005	SAMPLE	14-JUL-09	Bismuth-211	4.37	0.3076	pCi/g	0.1381	Y
				Bismuth-214	1.288	0.09591	pCi/g	0.05393	0.200
				Cadmium-109	2.624	0.4885	pCi/g	0.5799	Y
				Cerium-143	421.5	65.89	pCi/g	0	N
				Cesium-134	0.08474	0.02718	pCi/g	0.04534	0.100
				Cesium-137	0.05751	0.0187	pCi/g	0.03473	0.100
				Gross Gamma	9.19	1.433	pCi/g	1.718	N
				Iodine-135	2.22E+14	1.38E+14	pCi/g	0	N
				Lead-212	1.723	0.1047	pCi/g	0.04106	0.100
				Lead-214	1.52	0.1141	pCi/g	0.04814	0.100
				Potassium-40	25.21	1.122	pCi/g	0.2356	1.00
				Radium-224	4.989	0.6877	pCi/g	0.467	Y
				Radium-226	1.288	0.09591	pCi/g	0.05393	Y
				Radium-228	1.682	0.1688	pCi/g	0.09892	0.500
				Thallium-208	0.5121	0.04695	pCi/g	0.02616	0.080
				Thorium-234	2.375	0.7794	pCi/g	0.8413	2.00
				Zirconium-97	5.39E+05	2.93E+05	pCi/g	0	N
882713	1201874832	MB	14-JUL-09	Iodine-123	108.5	78.03	pCi/g	0	N
				Niobium-97	8.596	14.24	pCi/g	0	N
				Radium-224	0.2972	0.1533	pCi/g	0.2897	Y
				Sodium-24	23.35	53.92	pCi/g	0	N
882713	1201874833	DUP	14-JUL-09	Bismuth-211	4.096	0.2787	pCi/g	0.1835	Y
				Bismuth-214	1.283	0.1044	pCi/g	0.06876	0.200
				Cadmium-109	3.731	0.441	pCi/g	0.5278	Y
				Cerium-143	445.4	72.21	pCi/g	0	N
				Cesium-134	0.07826	0.03305	pCi/g	0.05489	0.100
				Gross Gamma	10.19	1.464	pCi/g	1.988	N
				Iodine-133	345.5	1288	pCi/g	0	N
				Krypton-85	17.19	5.453	pCi/g	8.781	N
				Lead-212	1.864	0.1171	pCi/g	0.05061	0.100
				Lead-214	1.425	0.1038	pCi/g	0.06171	0.100
				Mercury-203	0.04331	0.02248	pCi/g	0.04052	0.100
				Niobium-97	25570	19640	pCi/g	0	N
				Potassium-40	33.55	1.479	pCi/g	0.3928	1.00

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:27:06.00

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664001.CNF;1
Sample date       : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:26:41
Sample ID         : G232664001           Sample quantity  : 1.04070E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.90  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.33*	80	283	0.89	126.67	124	6	1.12E-02	36.6	
2	3	75.07*	452	405	0.92	150.13	145	13	6.28E-02	8.5	1.05E+00
3	3	77.37*	660	373	0.92	154.74	145	13	9.16E-02	6.2	
4	0	87.31*	228	431	1.05	174.62	172	7	3.17E-02	16.6	
5	0	90.04	126	363	0.90	180.07	178	6	1.76E-02	25.5	
6	0	93.15*	280	394	1.54	186.31	183	9	3.89E-02	15.2	
7	0	129.07	71	414	0.96	258.14	254	10	9.89E-03	54.7	
8	0	182.08	15	183	0.63	364.16	364	6	2.08E-03	145.7	
9	0	186.19*	193	263	1.10	372.38	369	9	2.67E-02	17.7	
10	0	209.21	118	294	0.95	418.43	414	10	1.64E-02	28.6	
11	5	238.82*	1314	144	1.00	477.65	472	16	1.83E-01	3.2	2.98E+00
12	5	241.83	331	143	1.70	483.67	472	16	4.60E-02	8.8	
13	0	270.75	56	213	1.40	541.50	537	9	7.80E-03	49.1	
14	0	295.59	372	201	1.05	591.19	585	11	5.16E-02	9.0	
15	0	300.21	92	184	1.13	600.41	596	11	1.28E-02	30.2	
16	0	328.18*	71	192	1.22	656.37	652	11	9.83E-03	40.4	
17	0	338.50	226	210	0.93	676.99	671	13	3.13E-02	14.9	
18	0	352.09*	673	161	1.05	704.19	698	12	9.34E-02	5.5	
19	0	409.99	80	117	1.11	819.97	815	11	1.11E-02	29.0	
20	0	462.88	77	137	1.18	925.77	919	13	1.07E-02	33.2	
21	0	511.14*	131	166	1.65	1022.27	1014	17	1.82E-02	26.8	
22	0	583.57*	318	129	1.17	1167.15	1161	12	4.41E-02	9.4	
23	0	609.55*	495	124	1.38	1219.10	1212	13	6.87E-02	6.5	
24	0	727.72	113	59	1.34	1455.44	1451	12	1.57E-02	16.6	
25	1	768.38	51	83	2.01	1536.76	1531	37	7.07E-03	35.7	2.72E+00
26	1	772.68	49	65	2.02	1545.37	1531	37	6.81E-03	35.1	
27	0	795.26	50	60	1.17	1590.52	1585	10	6.94E-03	32.2	
28	0	861.90	75	68	2.28	1723.80	1717	17	1.04E-02	27.7	
29	0	911.56*	262	73	1.65	1823.13	1814	14	3.64E-02	9.3	
30	0	936.30	28	68	1.20	1872.59	1863	14	3.88E-03	67.3	
31	3	965.15	34	51	2.06	1930.31	1926	22	4.76E-03	39.6	1.98E+00
32	3	969.31*	143	62	1.66	1938.61	1926	22	1.98E-02	13.6	
33	0	1120.94*	79	85	1.22	2241.89	2235	13	1.10E-02	27.0	
34	0	1378.20*	25	14	1.87	2756.40	2749	14	3.52E-03	40.7	
35	0	1461.08*	1264	24	1.82	2922.16	2912	17	1.76E-01	3.0	
36	0	1588.89	27	9	1.74	3177.78	3172	12	3.72E-03	29.6	
37	0	1593.62	9	12	1.35	3187.23	3183	9	1.21E-03	82.3	
38	0	1620.79*	26	4	0.81	3241.58	3234	13	3.61E-03	25.7	

Sample ID : G232664001 Acquisition date : 14-JUL-2009 08:26:41

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1729.93	28	4	1.96	3459.85	3455	10	3.83E-03	24.2	
40	0	1764.59*	61	17	2.06	3529.18	3522	14	8.43E-03	20.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 10:27:08

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664001.CNF;1		
Analyses by	: PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8		
Sample title	: MXR1		
Sample date	: 26-JUN-2009 12:00:00	Acquisition date	: 14-JUL-2009 08:26:41
Sample ID	: G232664001	Sample quantity	: 104.07 GRAM
Sample type	: SOLID	Sample geometry	:
Detector name	: GAMMA16	Detector geometry	: CAN
Elapsed live time	: 0 02:00:00.00	Elapsed real time	: 0 02:00:01.90 0.0%
Peak Width (FWHM)	: 3.00	Confidence level	: 5.00 %
Energy tolerance	: 1.50 keV	Half life ratio	: 8.00
Errors propagated	: Yes	Systematic Error	: 0.00 %
Efficiency type	: Empirical	Efficiencies at	: Peak Energy
Abundance limit	: 75.00	WTM error limit	: 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.480E+01	3.583E+00	6.631E-01	5.582E-02	52.490
CD-109	+	88.03	*	3.631E+00	1.246E+00	1.740E+00	1.500E-01	2.088
SN-126	+	64.28		8.757E-01	6.527E-01	1.039E+00	1.504E-01	0.843
	+	86.94		1.478E+00	7.838E-01	7.097E-01	2.934E-01	2.082
	+	87.57	*	3.555E-01	1.220E-01	1.742E-01	1.496E-02	2.041
TL-208		277.35		6.962E-01	4.786E-01	7.977E-01	8.324E-02	0.873
	+	510.84		7.004E-01	3.817E-01	2.336E-01	2.381E-02	2.999
	+	583.14	*	4.851E-01	9.678E-02	6.885E-02	4.742E-03	7.046
		860.37		6.925E-01	4.243E-01	7.057E-01	6.740E-02	0.981
BI-211		72.87		7.830E+00	4.368E+00	6.811E+00	5.168E-01	1.150
	+	351.07	*	4.501E+00	5.658E-01	3.619E-01	2.247E-02	12.435
BI-212	+	727.18	*	1.494E+00	5.113E-01	5.650E-01	4.873E-02	2.644
		785.46		1.017E+00	2.542E+00	3.876E+00	3.022E-01	0.262
	+	1620.62		3.007E+00	1.564E+00	1.956E+00	1.434E-01	1.537
PB-212	+	74.81		3.003E+00	6.275E-01	6.989E-01	8.456E-02	4.297
	+	77.11		2.476E+00	3.613E-01	3.811E-01	2.977E-02	6.496
	+	87.30		1.644E+00	5.875E-01	8.164E-01	1.075E-01	2.014
	+	238.63	*	1.940E+00	1.852E-01	1.118E-01	7.885E-03	17.353
	+	300.09		2.082E+00	1.270E+00	1.371E+00	1.112E-01	1.518
PO-212	+	74.81		3.003E+00	6.275E-01	6.989E-01	8.456E-02	4.297
	+	77.11		2.476E+00	3.613E-01	3.811E-01	2.977E-02	6.496
	+	87.30		1.644E+00	5.875E-01	8.164E-01	1.075E-01	2.014
		115.19		1.521E+00	4.238E+00	7.076E+00	4.527E-01	0.215
	+	238.63	*	1.940E+00	1.852E-01	1.118E-01	7.885E-03	17.353
	+	300.09		2.082E+00	1.270E+00	1.371E+00	1.112E-01	1.518
BI-214	+	609.31	*	1.425E+00	2.185E-01	1.298E-01	1.036E-02	10.976
	+	768.36		1.651E+00	1.188E+00	1.431E+00	1.376E-01	1.154
		934.06		1.530E+00	1.690E+00	2.652E+00	2.944E-01	0.577
	+	1120.29		1.218E+00	6.670E-01	6.362E-01	5.923E-02	1.914
		1238.11		1.874E+00	1.192E+00	2.144E+00	1.893E-01	0.874
	+	1377.67		1.727E+00	1.417E+00	1.691E+00	1.786E-01	1.021
	+	1764.49		1.290E+00	5.329E-01	3.368E-01	2.131E-02	3.830
PB-214	+	74.81		5.175E+00	1.040E+00	1.204E+00	1.285E-01	4.297
	+	77.11		4.245E+00	6.987E-01	6.534E-01	7.130E-02	6.496

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.816E+00	9.903E-01	1.399E+00	1.612E-01	2.014
	+	241.98		2.935E+00	5.632E-01	6.330E-01	4.954E-02	4.637
	+	295.21		1.476E+00	2.938E-01	2.350E-01	1.971E-02	6.282
	+	351.92	*	1.566E+00	2.131E-01	1.292E-01	1.047E-02	12.121
PO-214	+	74.81		5.175E+00	1.040E+00	1.204E+00	1.285E-01	4.297
	+	77.11		4.245E+00	6.987E-01	6.534E-01	7.130E-02	6.496
	+	87.30		2.816E+00	9.903E-01	1.399E+00	1.612E-01	2.014
	+	241.98		2.935E+00	5.632E-01	6.330E-01	4.954E-02	4.637
	+	295.21		1.476E+00	2.938E-01	2.350E-01	1.971E-02	6.282
	+	351.92	*	1.566E+00	2.131E-01	1.292E-01	1.047E-02	12.121
PO-216	+	74.81		3.003E+00	6.275E-01	6.989E-01	8.456E-02	4.297
	+	77.11		2.476E+00	3.613E-01	3.811E-01	2.977E-02	6.496
	+	87.30		1.644E+00	5.875E-01	8.164E-01	1.075E-01	2.014
	+	238.63	*	1.940E+00	1.852E-01	1.118E-01	7.885E-03	17.353
	+	300.09		2.082E+00	1.270E+00	1.371E+00	1.112E-01	1.518
PO-218	+	74.81		5.175E+00	1.040E+00	1.204E+00	1.285E-01	4.297
	+	77.11		4.245E+00	6.987E-01	6.534E-01	7.130E-02	6.496
	+	87.30		2.816E+00	9.903E-01	1.399E+00	1.612E-01	2.014
	+	241.98		2.935E+00	5.632E-01	6.330E-01	4.954E-02	4.637
	+	295.21		1.476E+00	2.938E-01	2.350E-01	1.971E-02	6.282
	+	351.92	*	1.566E+00	2.131E-01	1.292E-01	1.047E-02	12.121
RA-224	+	240.98	*	5.566E+00	1.021E+00	1.271E+00	6.936E-02	4.378
RA-226	+	609.31	*	1.425E+00	2.185E-01	1.298E-01	1.036E-02	10.976
	+	768.36		1.651E+00	1.188E+00	1.431E+00	1.376E-01	1.154
		934.06		1.530E+00	1.690E+00	2.652E+00	2.944E-01	0.577
	+	1120.29		1.218E+00	6.670E-01	6.362E-01	5.923E-02	1.914
		1238.11		1.874E+00	1.192E+00	2.144E+00	1.893E-01	0.874
	+	1377.67		1.727E+00	1.417E+00	1.691E+00	1.786E-01	1.021
	+	1764.49		1.290E+00	5.329E-01	3.368E-01	2.131E-02	3.830
AC-228	+	338.32		1.664E+00	8.391E-01	4.276E-01	1.742E-01	3.892
	+	911.07	*	1.809E+00	4.004E-01	2.356E-01	2.796E-02	7.676
	+	969.11		1.740E+00	6.242E-01	4.323E-01	1.012E-01	4.025
RA-228	+	338.32		1.664E+00	8.391E-01	4.276E-01	1.742E-01	3.892
	+	911.07	*	1.809E+00	4.004E-01	2.356E-01	2.796E-02	7.676
	+	969.11		1.740E+00	6.242E-01	4.323E-01	1.012E-01	4.025
TH-228		84.40		1.680E+00	3.448E+00	5.095E+00	6.595E-01	0.330
	+	238.60	*	1.940E+00	1.852E-01	1.118E-01	7.884E-03	17.355
	+	300.10		2.082E+00	1.758E+00	1.371E+00	8.080E-01	1.518
TH-230	+	609.31	*	1.425E+00	2.185E-01	1.298E-01	1.036E-02	10.976
	+	768.36		1.651E+00	1.188E+00	1.431E+00	1.376E-01	1.154
		934.06		1.530E+00	1.690E+00	2.652E+00	2.944E-01	0.577
	+	1120.29		1.217E+00	6.670E-01	6.361E-01	5.923E-02	1.914
		1238.11		1.874E+00	1.192E+00	2.143E+00	1.893E-01	0.874
	+	1377.67		1.727E+00	1.417E+00	1.691E+00	1.786E-01	1.021
	+	1764.49		1.290E+00	5.329E-01	3.368E-01	2.131E-02	3.830
TH-232	+	338.32		1.664E+00	5.030E-01	4.276E-01	2.386E-02	3.892
	+	911.07	*	1.809E+00	4.004E-01	2.356E-01	2.796E-02	7.676
	+	969.11		1.740E+00	6.242E-01	4.323E-01	1.012E-01	4.025
TH-234	+	63.29	*	2.212E+00	1.663E+00	2.694E+00	4.684E-01	0.821

Sample ID : G232664001 Acquisition date : 14-JUL-2009 08:26:41

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.812E+00	9.909E-01	8.872E-01	1.581E-01	3.169
U-234	+	609.31	*	1.425E+00	2.185E-01	1.298E-01	1.036E-02	10.976
	+	768.36		1.651E+00	1.188E+00	1.431E+00	1.376E-01	1.154
		934.06		1.530E+00	1.690E+00	2.652E+00	2.944E-01	0.577
	+	1120.29		1.217E+00	6.670E-01	6.361E-01	5.923E-02	1.914
		1238.11		1.874E+00	1.192E+00	2.143E+00	1.893E-01	0.874
	+	1377.67		1.727E+00	1.417E+00	1.691E+00	1.786E-01	1.021
	+	1764.49		1.290E+00	5.329E-01	3.368E-01	2.131E-02	3.830
NP-237	+	86.50	*	1.044E+00	4.179E-01	4.628E-01	1.033E-01	2.256
		95.87		-8.102E-01	1.294E+00	1.802E+00	4.383E-01	-0.450
U-238	+	63.29	*	2.212E+00	1.663E+00	2.694E+00	4.684E-01	0.821
	+	92.38		2.812E+00	8.843E-01	8.872E-01	7.155E-02	3.169
AM-243	+	74.67	*	4.869E-01	9.098E-02	1.137E-01	8.726E-03	4.283
	+	86.72		3.914E+01	1.343E+01	1.812E+01	1.543E+00	2.160
		117.66		9.534E-01	4.656E+00	7.613E+00	4.785E-01	0.125
		142.18		1.849E+01	2.110E+01	3.565E+01	1.983E+00	0.519
ANH-511	+	511.00	*	1.513E-01	8.148E-02	5.047E-02	2.964E-03	2.998

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.599E-01	3.739E-01	5.967E-01	4.012E-02	-0.268
NA-22		1274.54	*	-2.618E-03	5.191E-02	8.414E-02	6.253E-03	-0.031
NA-24		1368.53	*	-1.294E+00	5.191E-02	Half-Life too short		
AL-26		1129.67		-9.611E-01	2.189E+00	3.367E+00	2.146E-01	-0.285
		1808.65	*	3.747E-02	2.959E-02	6.121E-02	3.655E-03	0.612
TI-44		67.85		-3.985E-02	6.288E-02	9.436E-02	6.980E-03	-0.422
	+	78.38	*	4.570E-01	6.668E-02	1.059E-01	8.356E-03	4.315
SC-46		889.25	*	-4.403E-02	4.836E-02	7.377E-02	6.933E-03	-0.597
	+	1120.51		2.132E-01	1.159E-01	1.633E-01	1.068E-02	1.306
V-48		944.10		1.814E-01	1.263E+00	2.078E+00	1.887E-01	0.087
		983.50	*	1.486E-02	9.548E-02	1.603E-01	1.382E-02	0.093
		1312.09		-4.043E-02	1.116E-01	1.740E-01	1.421E-02	-0.232
CR-51		320.08	*	-2.202E-01	4.508E-01	7.359E-01	4.625E-02	-0.299
MN-52		744.21		-1.968E-01	3.911E-01	5.991E-01	4.316E-02	-0.329
		848.13		-7.381E-01	1.187E+01	1.974E+01	1.726E+00	-0.037
	+	935.52		5.331E-01	7.189E-01	7.732E-01	7.092E-02	0.689
		1246.25		6.914E-01	1.299E+01	2.130E+01	1.465E+00	0.032
		1333.61		6.931E+00	9.332E+00	1.633E+01	1.401E+00	0.424
		1434.06	*	-3.044E-01	3.701E-01	5.157E-01	4.264E-02	-0.590
MN-54		834.83	*	-2.351E-03	4.417E-02	7.354E-02	6.280E-03	-0.032
CO-56		846.75	*	7.701E-03	5.071E-02	8.570E-02	7.476E-03	0.090
		977.42		-2.463E+00	4.115E+00	5.357E+00	4.659E-01	-0.460
		1037.82		-1.357E-01	3.603E-01	5.720E-01	4.797E-02	-0.237
		1175.09		8.820E-01	3.156E+00	5.283E+00	2.944E-01	0.167
		1238.25		1.945E-01	1.233E-01	2.225E-01	1.567E-02	0.874
		1360.21		4.470E-01	1.149E+00	1.961E+00	1.669E-01	0.228
		1771.40		-1.246E+00	4.301E-01	3.927E-01	2.463E-02	-3.172

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-1.170E-02	3.090E-02	4.960E-02	3.033E-03	-0.236
		136.48		4.980E-02	2.604E-01	4.298E-01	2.850E-02	0.116
CO-58		810.76	*	-1.715E-02	4.646E-02	7.538E-02	6.177E-03	-0.227
FE-59		142.65		2.553E+00	3.383E+00	5.692E+00	3.161E-01	0.449
		192.34		-1.307E+00	1.278E+00	1.789E+00	2.062E-01	-0.731
		1099.22	*	-2.239E-02	1.165E-01	1.882E-01	1.462E-02	-0.119
		1291.56		4.209E-02	1.587E-01	2.655E-01	2.398E-02	0.159
CO-60		1173.22		-2.236E-02	6.371E-02	1.015E-01	5.621E-03	-0.220
		1332.49	*	4.472E-02	5.059E-02	8.983E-02	7.708E-03	0.498
ZN-65		1115.52	*	-4.440E-02	1.373E-01	1.861E-01	1.236E-02	-0.239
GE-68		1077.35	*	2.008E+00	1.633E+00	2.952E+00	2.148E-01	0.680
AS-73		53.44	*	-3.916E-02	1.096E+00	1.838E+00	1.358E-01	-0.021
AS-74		595.88	*	-2.872E-02	1.239E-01	1.982E-01	1.199E-02	-0.145
		634.78		2.766E-01	4.775E-01	8.092E-01	4.925E-02	0.342
SE-75		66.05		-2.693E+00	6.813E+00	9.800E+00	9.224E-01	-0.275
		96.73		-1.035E+00	1.067E+00	1.461E+00	1.902E-01	-0.709
		121.11		-9.628E-02	1.685E-01	2.681E-01	2.534E-02	-0.359
		136.00		7.314E-03	4.962E-02	8.177E-02	4.741E-03	0.089
		198.60		-2.893E-01	2.327E+00	3.661E+00	2.444E-01	-0.079
		264.65	*	1.930E-02	5.852E-02	8.812E-02	4.936E-03	0.219
		279.53		9.770E-02	1.344E-01	2.291E-01	1.389E-02	0.427
		303.91		-3.858E-01	2.754E+00	3.989E+00	3.759E-01	-0.097
		400.65		1.584E-02	3.075E-01	5.122E-01	4.549E-02	0.031
BR-77	+	87.88		1.735E+03	5.952E+02	9.592E+02	8.265E+01	1.809
		200.40		1.224E+02	4.395E+02	7.189E+02	3.773E+01	0.170
	+	239.00		6.915E+02	5.831E+01	9.916E+01	5.402E+00	6.974
		249.79		-1.287E+02	1.801E+02	2.775E+02	1.523E+01	-0.464
		281.68		-2.356E+02	2.354E+02	3.777E+02	2.107E+01	-0.624
		297.23		1.198E+03	2.312E+02	3.462E+02	1.938E+01	3.460
		303.76		-4.990E+01	5.137E+02	7.466E+02	4.183E+01	-0.067
		439.47		5.376E+01	3.741E+02	6.242E+02	3.508E+01	0.086
		484.57		-2.034E+02	6.065E+02	9.751E+02	5.648E+01	-0.209
		520.65	*	1.146E+01	2.594E+01	4.391E+01	2.591E+00	0.261
		574.64		-1.237E+02	5.645E+02	9.062E+02	5.453E+01	-0.137
		578.91		1.058E+02	2.647E+02	3.880E+02	2.338E+01	0.273
		585.48		4.631E+03	7.499E+02	1.386E+03	8.366E+01	3.341
		755.35		8.502E+01	4.446E+02	7.261E+02	5.345E+01	0.117
		817.79		6.933E+01	3.378E+02	5.752E+02	4.762E+01	0.121
SR-82		698.33		1.132E+01	4.554E+01	7.489E+01	4.924E+00	0.151
		776.49	*	-6.537E-01	4.863E-01	7.236E-01	5.547E-02	-0.903
		1395.20		-4.736E+00	1.223E+01	1.855E+01	1.559E+00	-0.255
RB-83		520.41	*	4.052E-02	7.938E-02	1.350E-01	7.964E-03	0.300
		529.64		5.630E-02	1.207E-01	2.046E-01	1.212E-02	0.275
		552.65		-2.686E-01	2.301E-01	3.397E-01	2.030E-02	-0.791
RB-84		881.50	*	-1.510E-02	8.523E-02	1.398E-01	1.297E-02	-0.108
KR-85		513.99	*	3.091E+01	1.049E+01	1.809E+01	1.064E+00	1.708
SR-85		513.99	*	1.631E-01	5.535E-02	9.548E-02	5.616E-03	1.708
RB-86		1076.63	*	1.227E+00	1.122E+00	2.013E+00	1.467E-01	0.610
Y-88		898.02		-1.993E-03	5.257E-02	8.727E-02	8.360E-03	-0.023

---- Non-Identified Nuclides ----

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		1836.01	*	8.314E-03	3.075E-02	5.410E-02	3.115E-03	0.154
ZR-88		392.90	*	4.327E-03	3.497E-02	5.856E-02	3.164E-03	0.074
Y-91		1204.90	*	5.170E+00	2.432E+01	4.050E+01	2.473E+00	0.128
NB-94		702.63	*	1.075E-02	4.189E-02	6.890E-02	4.570E-03	0.156
		871.10		1.865E-02	4.396E-02	7.095E-02	6.461E-03	0.263
NB-95		765.79	*	6.860E-02	5.913E-02	9.235E-02	6.937E-03	0.743
NB-95M		235.69	*	6.255E-02	1.739E-01	2.492E-01	1.806E-02	0.251
ZR-95		724.18		4.916E-02	1.305E-01	1.889E-01	1.480E-02	0.260
		756.15	*	4.786E-02	8.568E-02	1.443E-01	1.209E-02	0.332
NB-97		657.90	*	-2.408E-01	8.568E-02	Half-Life too short		
		1024.50		5.836E+01	8.568E-02	Half-Life too short		
ZR-97		254.15		1.116E+02	8.568E-02	Half-Life too short		
		355.39		6.606E+01	8.568E-02	Half-Life too short		
		507.63	*	8.310E+00	8.568E-02	Half-Life too short		
		602.52		6.690E+01	8.568E-02	Half-Life too short		
		1021.30		2.966E+00	8.568E-02	Half-Life too short		
		1147.95		-1.057E+02	8.568E-02	Half-Life too short		
		1362.66		1.525E+01	8.568E-02	Half-Life too short		
		1750.46		-2.757E+01	8.568E-02	Half-Life too short		
MO-99		140.51		-5.852E+01	6.715E+01	1.015E+02	2.730E+01	-0.577
	+	181.06		1.223E+01	3.569E+01	6.723E+01	1.138E+01	0.182
		366.43		-2.010E+02	1.982E+02	3.104E+02	1.709E+01	-0.648
		739.58	*	5.845E+00	2.753E+01	4.508E+01	6.490E+00	0.130
		778.00		-8.221E+01	8.281E+01	1.280E+02	9.839E+00	-0.642
TC-99M		140.51	*	-8.179E+13	8.281E+01	Half-Life too short		
RH-101		127.23		2.991E-02	4.366E-02	6.511E-02	3.869E-03	0.459
		198.01	*	2.075E-02	4.166E-02	6.726E-02	3.521E-03	0.308
		325.23		2.376E-01	2.889E-01	4.460E-01	2.497E-02	0.533
RH-102		418.52		1.243E-01	3.212E-01	5.452E-01	3.014E-02	0.228
		475.06	*	4.194E-03	3.206E-02	5.330E-02	3.070E-03	0.079
		631.29		-6.159E-02	6.558E-02	9.795E-02	5.959E-03	-0.629
		697.49		-3.062E-02	9.606E-02	1.511E-01	9.919E-03	-0.203
		766.84		2.287E-01	1.573E-01	2.495E-01	1.878E-02	0.917
		1046.59		2.199E-01	1.509E-01	2.765E-01	2.145E-02	0.795
		1112.84		3.621E-01	3.089E-01	5.126E-01	3.422E-02	0.706
RU-103		497.08	*	-3.992E-02	4.654E-02	7.092E-02	8.979E-03	-0.563
	+	610.33		1.614E+01	3.279E+00	3.745E+00	5.812E-01	4.311
RH-106	+	511.85		7.596E-01	4.091E-01	5.296E-01	3.112E-02	1.434
		621.84	*	-5.862E-02	3.733E-01	5.986E-01	7.109E-02	-0.098
		1050.47		-1.583E+00	3.124E+00	4.929E+00	3.794E-01	-0.321
RU-106	+	511.85		7.596E-01	4.091E-01	5.296E-01	3.112E-02	1.434
		621.84	*	-5.862E-02	3.733E-01	5.986E-01	3.637E-02	-0.098
		1050.47		-1.583E+00	3.124E+00	4.929E+00	3.794E-01	-0.321
AG-108M		433.93	*	-1.723E-02	3.887E-02	6.249E-02	3.819E-03	-0.276
		614.37		1.420E-03	5.075E-02	7.147E-02	4.675E-03	0.020
		722.95		5.514E-02	5.164E-02	8.094E-02	5.929E-03	0.681
AG-110M		657.75	*	-3.994E-03	3.776E-02	6.056E-02	3.907E-03	-0.066
		677.61		3.203E-01	3.455E-01	6.018E-01	3.989E-02	0.532
		706.67		-3.032E-02	2.567E-01	4.101E-01	2.867E-02	-0.074

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		763.93		1.353E-01	2.078E-01	3.111E-01	2.416E-02	0.435
		884.67		5.573E-02	5.971E-02	1.068E-01	1.023E-02	0.522
	+	937.48		1.684E-01	2.271E-01	2.128E-01	2.010E-02	0.791
		1384.27		1.045E-01	2.109E-01	3.209E-01	2.788E-02	0.326
IN-111		171.28		-1.822E+00	2.347E+00	3.685E+00	1.872E-01	-0.494
		245.39	*	9.306E-01	2.684E+00	3.849E+00	2.107E-01	0.242
IN-113M		391.69	*	1.218E-02	5.171E-02	8.715E-02	5.065E-03	0.140
SN-113		391.69	*	1.218E-02	5.171E-02	8.715E-02	5.065E-03	0.140
IN-114M		190.27	*	-1.036E-01	2.454E-01	3.378E-01	1.753E-02	-0.307
CD-115		260.90		7.990E-05	2.454E-01	Half-Life too short		
		492.35		9.789E-05	2.454E-01	Half-Life too short		
		527.90	*	3.819E-05	2.454E-01	Half-Life too short		
SN-117M		156.02		1.648E+00	3.204E+00	5.329E+00	2.804E-01	0.309
		158.56	*	4.649E-02	7.603E-02	1.270E-01	6.613E-03	0.366
SB-122		563.90	*	2.273E+00	4.609E+00	7.807E+00	4.684E-01	0.291
		692.80		3.241E+01	1.020E+02	1.689E+02	1.098E+01	0.192
I-123		159.00	*	4.219E+01	1.020E+02	Half-Life too short		
		528.96		9.461E+03	1.020E+02	Half-Life too short		
TE-123M		159.00	*	6.621E-03	3.511E-02	5.768E-02	3.049E-03	0.115
I-124		602.71	*	1.961E-01	1.457E+00	2.076E+00	1.257E-01	0.094
		722.78		9.381E+00	8.510E+00	1.338E+01	9.244E-01	0.701
		1325.50		-1.107E+01	7.006E+01	1.118E+02	9.437E+00	-0.099
		1376.25		5.828E+01	6.686E+01	1.062E+02	8.986E+00	0.549
		1509.49		2.719E+01	3.464E+01	6.139E+01	4.878E+00	0.443
		1691.02		-2.413E+00	6.438E+00	9.916E+00	6.813E-01	-0.243
SB-124		602.71		7.472E-03	5.552E-02	7.911E-02	4.794E-03	0.094
		645.85		5.218E-02	6.297E-01	1.027E+00	6.990E-02	0.051
		709.31		2.215E+00	3.314E+00	5.637E+00	3.789E-01	0.393
		713.82		-1.027E+00	1.931E+00	2.956E+00	3.193E-01	-0.347
		722.78		5.183E-01	4.702E-01	7.394E-01	5.278E-02	0.701
	+	968.20		1.848E+01	5.283E+00	9.203E+00	8.105E-01	2.008
		1045.16		4.034E+00	3.289E+00	5.951E+00	4.628E-01	0.678
		1325.50		-6.532E-01	4.134E+00	6.599E+00	5.568E-01	-0.099
		1368.21		-3.390E-02	2.005E+00	3.170E+00	4.245E-01	-0.011
		1436.60		2.581E+00	3.805E+00	6.836E+00	5.645E-01	0.378
		1691.02	*	-3.145E-02	8.390E-02	1.292E-01	9.425E-03	-0.243
SB-125		427.89	*	4.910E-02	1.070E-01	1.820E-01	1.061E-02	0.270
	+	463.38		8.061E-01	5.374E-01	6.427E-01	4.301E-02	1.254
		600.56		-1.842E-02	2.070E-01	3.346E-01	2.319E-02	-0.055
		635.90		1.841E-01	3.295E-01	5.572E-01	3.922E-02	0.330
TE-125M		109.28	*	-3.853E+00	1.162E+01	1.893E+01	1.666E+00	-0.203
I-126		388.63		-6.094E-02	2.694E-01	4.418E-01	2.391E-02	-0.138
		666.33	*	1.384E-01	2.537E-01	4.275E-01	2.631E-02	0.324
		753.82		8.651E-01	2.076E+00	3.453E+00	2.534E-01	0.251
SB-126		223.80		1.810E+00	5.666E+00	9.255E+00	4.976E-01	0.196
		278.60		3.967E+00	3.503E+00	6.066E+00	3.380E-01	0.654
	+	296.50		1.712E+01	3.236E+00	5.002E+00	2.800E-01	3.423
		414.70		1.695E-02	1.099E-01	1.604E-01	8.836E-03	0.106
		415.30		5.801E+00	9.032E+00	1.376E+01	7.585E-01	0.422

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		1.592E+00	5.203E+00	8.702E+00	5.205E-01	0.183
		573.80		-9.235E-01	1.478E+00	2.299E+00	1.383E-01	-0.402
		593.00		6.160E-01	1.313E+00	2.211E+00	1.337E-01	0.279
		656.30		4.538E-01	4.114E+00	6.729E+00	4.100E-01	0.067
		666.33		5.820E-02	1.067E-01	1.798E-01	1.106E-02	0.324
		675.00		-1.748E+00	2.616E+00	3.972E+00	2.489E-01	-0.440
		695.00		-6.034E-02	1.106E-01	1.705E-01	1.113E-02	-0.354
		697.00		-1.193E-01	3.895E-01	6.134E-01	4.022E-02	-0.194
		720.50	*	1.876E-02	1.997E-01	3.156E-01	2.169E-02	0.059
		856.80		-5.066E-01	7.306E-01	9.555E-01	8.486E-02	-0.530
		989.30		3.215E-01	1.844E+00	3.099E+00	2.649E-01	0.104
		1034.80		4.336E+00	1.178E+01	2.013E+01	1.596E+00	0.215
		1213.00		-1.169E+00	7.081E+00	1.142E+01	7.143E-01	-0.102
SB-127		61.10		1.377E+02	1.269E+02	1.955E+02	2.164E+01	0.704
		252.40		4.387E+00	8.837E+00	1.421E+01	5.931E+00	0.309
		290.80		-3.034E+01	4.503E+01	6.272E+01	6.312E+00	-0.484
		411.60		2.201E+01	2.744E+01	4.179E+01	6.240E+00	0.527
		444.90		5.163E+00	1.825E+01	3.071E+01	3.559E+00	0.168
		473.00		1.397E+00	2.895E+00	4.930E+00	5.918E-01	0.283
		543.00		8.698E+00	3.378E+01	5.622E+01	7.711E+00	0.155
		603.60		2.163E+01	2.439E+01	3.732E+01	4.394E+00	0.579
		685.20	*	-5.262E-02	2.650E+00	4.274E+00	4.604E-01	-0.012
		698.50		5.480E+00	3.080E+01	5.036E+01	7.784E+00	0.109
		722.20		4.747E+01	6.343E+01	9.571E+01	1.038E+01	0.496
		783.80		6.752E+00	8.121E+00	1.273E+01	1.611E+00	0.530
XE-127		57.60		-3.457E+00	8.036E+00	1.327E+01	9.658E-01	-0.260
		145.22		4.071E-01	9.116E-01	1.497E+00	8.224E-02	0.272
		172.10		-6.419E-02	1.501E-01	2.394E-01	1.217E-02	-0.268
		202.84	*	-5.406E-02	6.250E-02	9.322E-02	4.906E-03	-0.580
		374.96		-1.538E-01	2.496E-01	4.010E-01	2.194E-02	-0.384
I-131		80.18		-9.221E-01	7.924E+00	1.154E+01	9.336E-01	-0.080
		284.30		-1.583E+00	2.140E+00	3.470E+00	2.181E-01	-0.456
		364.48	*	9.447E-02	1.670E-01	2.873E-01	1.795E-02	0.329
		636.97		2.510E-01	2.439E+00	3.988E+00	2.703E-01	0.063
		722.89		1.190E+01	1.102E+01	1.729E+01	1.211E+00	0.688
TE-132		49.72		-2.163E+01	4.796E+01	7.935E+01	8.492E+00	-0.273
		111.76		2.815E+01	6.312E+01	1.057E+02	1.077E+01	0.266
		116.30		3.206E+01	5.929E+01	9.951E+01	9.998E+00	0.322
		228.16	*	-3.894E-01	1.446E+00	2.292E+00	3.391E-01	-0.170
BA-133		53.15		-1.317E-01	4.657E+00	7.819E+00	5.778E-01	-0.017
		79.62		3.536E+00	1.875E+00	2.850E+00	4.237E-01	1.241
		81.00		-1.580E-01	1.401E-01	1.917E-01	2.988E-02	-0.824
		276.40		5.815E-01	4.979E-01	7.772E-01	9.996E-02	0.748
		302.84		1.153E-01	1.881E-01	2.864E-01	3.311E-02	0.402
		356.01	*	3.657E-02	5.419E-02	8.278E-02	9.463E-03	0.442
		383.85		1.249E-01	3.516E-01	5.964E-01	6.370E-02	0.209
I-133	+	510.53		1.372E+01	3.516E-01	Half-Life too short		
		529.87	*	1.603E-02	3.516E-01	Half-Life too short		
		706.58		-4.998E-01	3.516E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		856.28		-4.091E+00	3.516E-01	Half-Life too short		
		875.33		-4.340E-01	3.516E-01	Half-Life too short		
		1236.41		9.565E+00	3.516E-01	Half-Life too short		
		1298.22		-1.861E+00	3.516E-01	Half-Life too short		
CS-134		475.35		-3.334E-01	2.140E+00	3.485E+00	2.008E-01	-0.096
		563.23		2.030E-01	4.018E-01	6.810E-01	4.164E-02	0.298
		569.32		-3.281E-02	2.499E-01	3.699E-01	2.285E-02	-0.089
		604.70		6.381E-04	4.468E-02	6.287E-02	3.830E-03	0.010
	+	795.84	*	1.115E-01	7.246E-02	1.132E-01	9.079E-03	0.985
		801.93		-2.232E-01	5.126E-01	7.633E-01	6.177E-02	-0.292
		1038.57		-2.044E+00	4.525E+00	7.136E+00	5.620E-01	-0.286
		1167.94		-1.230E+00	3.200E+00	5.066E+00	2.859E-01	-0.243
		1365.15		-8.540E-01	1.388E+00	2.044E+00	1.818E-01	-0.418
CS-135		268.24	*	5.318E-02	2.289E-01	3.237E-01	2.418E-02	0.164
I-135		288.45		6.263E+12	2.289E-01	Half-Life too short		
		417.63		1.325E+13	2.289E-01	Half-Life too short		
		546.56		6.957E+12	2.289E-01	Half-Life too short		
		836.80		4.077E+12	2.289E-01	Half-Life too short		
		1038.76		-1.272E+13	2.289E-01	Half-Life too short		
		1124.00		8.772E+13	2.289E-01	Half-Life too short		
		1131.51		-8.307E+12	2.289E-01	Half-Life too short		
		1260.41	*	-1.647E+12	2.289E-01	Half-Life too short		
		1457.56		5.621E+14	2.289E-01	Half-Life too short		
		1678.03		4.054E+12	2.289E-01	Half-Life too short		
		1706.46		1.653E+13	2.289E-01	Half-Life too short		
		1791.20		6.671E+12	2.289E-01	Half-Life too short		
CS-136		66.91		2.951E-02	1.259E+00	1.847E+00	2.729E-01	0.016
	+	86.29		5.358E+00	1.908E+00	2.967E+00	3.785E-01	1.806
		153.22		8.562E-01	9.223E-01	1.557E+00	1.066E-01	0.550
		163.89		-1.717E-01	1.490E+00	2.416E+00	1.620E-01	-0.071
		176.55		-2.602E-01	5.115E-01	8.123E-01	4.805E-02	-0.320
		273.65		-1.344E+00	7.774E-01	9.386E-01	6.018E-02	-1.432
		340.57		7.046E-01	2.183E-01	3.723E-01	2.219E-02	1.893
		818.51		5.788E-02	9.939E-02	1.741E-01	1.445E-02	0.333
		1048.07	*	3.096E-02	1.661E-01	2.782E-01	2.266E-02	0.111
		1235.34		1.163E-01	9.345E-01	1.540E+00	1.620E-01	0.076
BA-137M		661.65	*	-1.672E-02	4.286E-02	6.445E-02	3.928E-03	-0.259
CS-137		661.65	*	-1.767E-02	4.530E-02	6.813E-02	4.168E-03	-0.259
CE-139		165.85	*	2.451E-02	3.676E-02	6.143E-02	3.107E-03	0.399
BA-140		162.64		-7.129E-01	1.055E+00	1.669E+00	9.894E-02	-0.427
		304.84		1.900E-01	1.855E+00	2.735E+00	7.451E-01	0.069
		423.70		-2.080E+00	2.628E+00	3.992E+00	1.267E+00	-0.521
		537.32	*	-4.717E-02	3.636E-01	5.891E-01	1.917E-01	-0.080
LA-140	+	328.77		7.490E-01	6.073E-01	7.581E-01	4.786E-02	0.988
		432.53		-9.834E-01	2.851E+00	4.615E+00	2.870E-01	-0.213
		487.03		-3.872E-02	1.895E-01	3.074E-01	2.018E-02	-0.126
		751.79		4.803E-01	2.486E+00	4.059E+00	3.400E-01	0.118
		815.85		-1.212E-01	4.353E-01	7.116E-01	6.606E-02	-0.170
		867.82		-3.121E-01	2.310E+00	3.267E+00	3.101E-01	-0.096

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		919.63		1.958E+00	3.954E+00	6.838E+00	7.682E-01	0.286
		925.24		-5.974E-01	1.572E+00	2.483E+00	2.429E-01	-0.241
		1596.49	*	1.820E-02	1.282E-01	1.889E-01	1.413E-02	0.096
CE-141		145.44	*	3.173E-02	8.316E-02	1.362E-01	7.810E-03	0.233
CE-143		57.37		-3.018E-03	8.316E-02	Half-Life too short		
		231.56		-3.199E-03	8.316E-02	Half-Life too short		
		293.26	*	3.189E-03	8.316E-02	Half-Life too short		
		350.59		1.249E-01	8.316E-02	Half-Life too short		
		490.36		-5.762E-04	8.316E-02	Half-Life too short		
		664.57		1.836E-03	8.316E-02	Half-Life too short		
		721.93		4.939E-03	8.316E-02	Half-Life too short		
CE-144		80.11		-1.689E-02	2.910E+00	4.260E+00	3.409E-01	-0.004
		133.54	*	5.345E-03	2.955E-01	4.252E-01	6.033E-02	0.013
PM-144		476.78		-8.348E-02	7.708E-02	1.167E-01	8.067E-03	-0.716
		618.01		1.277E-02	3.761E-02	6.272E-02	4.019E-03	0.204
		696.49	*	-2.550E-02	4.306E-02	6.617E-02	4.338E-03	-0.385
		778.57		-2.378E+00	2.845E+00	4.464E+00	3.438E-01	-0.533
PR-144		696.49	*	-1.731E+00	2.922E+00	4.491E+00	2.941E-01	-0.385
		1489.15		-1.429E+01	1.391E+01	1.826E+01	1.468E+00	-0.783
PM-146		453.90	*	4.880E-02	4.949E-02	8.666E-02	7.402E-03	0.563
		633.02		1.323E-01	1.636E+00	2.671E+00	9.848E-01	0.050
		735.90		1.929E-01	1.941E-01	3.112E-01	8.769E-02	0.620
		747.13		-8.525E-03	1.116E-01	1.782E-01	2.360E-02	-0.048
ND-147	+	91.11		7.821E-01	4.053E-01	7.852E-01	7.035E-02	0.996
		319.41		-1.437E+00	4.465E+00	7.360E+00	4.125E-01	-0.195
		439.89		1.733E+00	8.127E+00	1.362E+01	7.662E-01	0.127
		531.02	*	-3.539E-01	7.714E-01	1.217E+00	1.653E-01	-0.291
PM-149		285.90	*	-1.805E-05	7.714E-01	Half-Life too short		
EU-152		121.78		-3.862E-02	8.891E-02	1.423E-01	1.118E-02	-0.271
		244.69		4.410E-01	4.515E-01	6.723E-01	3.678E-02	0.656
		344.27	*	-2.467E-03	1.307E-01	1.792E-01	1.135E-02	-0.014
		443.98		3.486E-01	1.084E+00	1.830E+00	1.032E-01	0.191
		778.89		-2.398E-01	3.294E-01	5.219E-01	4.019E-02	-0.460
		867.32		-6.748E-01	1.233E+00	1.655E+00	1.497E-01	-0.408
	+	964.01		4.816E-01	3.835E-01	6.690E-01	5.925E-02	0.720
		1085.78		-1.310E-01	5.214E-01	8.396E-01	5.994E-02	-0.156
		1112.02		2.312E-01	4.269E-01	7.032E-01	4.705E-02	0.329
		1407.95		8.236E-02	2.207E-01	3.826E-01	3.199E-02	0.215
GD-153		69.67		5.244E-01	2.329E+00	3.438E+00	2.564E-01	0.153
		83.37		1.256E+01	2.047E+01	3.043E+01	2.508E+00	0.413
		97.43	*	-5.167E-02	1.081E-01	1.520E-01	1.147E-02	-0.340
		103.18		-1.233E-01	1.307E-01	2.080E-01	1.475E-02	-0.593
EU-154		123.07		-3.546E-02	6.515E-02	1.002E-01	9.593E-03	-0.354
		247.94		7.442E-02	4.409E-01	6.882E-01	6.437E-02	0.108
		591.81		4.729E-01	7.277E-01	1.241E+00	1.231E-01	0.381
		723.30		2.087E-01	2.202E-01	3.402E-01	2.728E-02	0.613
		756.87		3.202E-01	9.045E-01	1.498E+00	1.665E-01	0.214
		873.19		1.723E-01	3.505E-01	6.078E-01	7.668E-02	0.284
		996.32		-2.588E-01	4.425E-01	6.889E-01	1.218E-01	-0.376

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		1004.76		3.013E-02	2.577E-01	4.306E-01	4.926E-02	0.070
		1274.45	*	-8.630E-03	1.447E-01	2.342E-01	2.442E-02	-0.037
EU-155		48.70		-6.724E-01	3.412E+00	5.705E+00	4.138E-01	-0.118
		60.01		8.670E+00	6.680E+00	1.044E+01	7.554E-01	0.831
	+	86.54		4.286E-01	1.471E-01	2.364E-01	2.030E-02	1.813
		105.31	*	6.029E-02	1.303E-01	2.187E-01	1.548E-02	0.276
TB-160	+	86.79		1.174E+00	4.028E-01	6.447E-01	5.494E-02	1.821
		197.04		2.196E-01	7.199E-01	1.153E+00	6.029E-02	0.190
		215.65		-8.247E-02	9.134E-01	1.414E+00	7.540E-02	-0.058
		298.57		3.504E-01	1.928E-01	2.381E-01	1.334E-02	1.471
		879.36	*	-1.126E-01	1.608E-01	2.500E-01	2.310E-02	-0.450
		962.29		3.238E-01	7.312E-01	1.106E+00	9.819E-02	0.293
	+	966.15		3.394E-01	2.703E-01	5.773E-01	5.098E-02	0.588
		1177.93		-4.808E-02	5.124E-01	8.330E-01	4.683E-02	-0.058
		1271.85		3.712E-01	8.711E-01	1.481E+00	1.092E-01	0.251
HO-166M		80.57		-2.653E-01	3.795E-01	5.378E-01	4.321E-02	-0.493
		184.41		2.307E-01	5.487E-02	7.822E-02	4.032E-03	2.950
		280.46		-5.570E-02	9.878E-02	1.621E-01	9.041E-03	-0.344
	+	410.95		6.924E-01	4.035E-01	5.203E-01	2.858E-02	1.331
		711.68	*	-2.582E-02	7.071E-02	1.103E-01	7.450E-03	-0.234
		752.31		1.058E-01	3.438E-01	5.665E-01	4.146E-02	0.187
		810.29		-3.645E-02	6.854E-02	1.096E-01	8.948E-03	-0.333
TM-171		51.35		1.374E+01	4.085E+01	6.950E+01	5.139E+00	0.198
		52.39		-5.145E+00	2.086E+01	3.476E+01	2.571E+00	-0.148
		59.40		4.952E+01	3.668E+01	5.742E+01	4.152E+00	0.862
		66.72	*	6.158E+00	3.942E+01	5.817E+01	4.284E+00	0.106
LU-176	+	88.36		8.431E-01	2.892E-01	4.865E-01	4.173E-02	1.733
		201.83		-1.988E-02	3.464E-02	5.452E-02	2.866E-03	-0.365
		306.84	*	-1.884E-03	3.129E-02	4.770E-02	2.673E-03	-0.040
		401.10		1.317E+00	7.912E+00	1.326E+01	7.221E-01	0.099
LU-177		112.95		-2.844E+00	2.624E+00	4.136E+00	2.691E-01	-0.688
	+	208.36	*	4.130E+00	2.370E+00	3.138E+00	1.661E-01	1.316
LU-177M		52.97		-2.098E-01	2.149E+00	3.599E+00	2.661E-01	-0.058
		54.07		-3.837E-01	1.110E+00	1.840E+00	1.357E-01	-0.209
		61.30		1.730E+00	2.056E+00	3.147E+00	2.284E-01	0.550
		121.62		-2.863E-01	4.643E-01	7.378E-01	4.515E-02	-0.388
		147.16		-5.966E-01	8.030E-01	1.273E+00	6.940E-02	-0.469
		171.86		-2.428E-01	5.812E-01	9.276E-01	4.716E-02	-0.262
		218.09		-9.747E-02	1.027E+00	1.647E+00	8.804E-02	-0.059
		268.79		6.338E-01	1.202E+00	1.731E+00	9.607E-02	0.366
		319.02		-1.092E-01	2.965E-01	4.874E-01	2.731E-02	-0.224
		367.43		-9.840E-01	1.068E+00	1.682E+00	9.254E-02	-0.585
		413.65	*	1.964E-02	2.220E-01	3.221E-01	1.773E-02	0.061
HF-181		56.28		-9.554E-01	1.251E+00	2.038E+00	1.491E-01	-0.469
		57.53		-2.763E-01	6.704E-01	1.108E+00	8.065E-02	-0.249
		65.20		3.205E-01	1.401E+00	2.076E+00	1.521E-01	0.154
		133.02		-1.334E-02	9.801E-02	1.399E-01	8.091E-03	-0.095
		136.25		4.699E-03	5.994E-01	9.827E-01	5.604E-02	0.005
		345.85		1.221E-01	2.841E-01	3.781E-01	2.104E-02	0.323

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	6.166E-02	5.190E-02	9.191E-02	5.315E-03	0.671
W-181		56.28		-3.628E-01	4.756E-01	7.751E-01	5.670E-02	-0.468
		57.53		-1.053E-01	2.551E-01	4.216E-01	3.069E-02	-0.250
		65.20	*	1.210E-01	5.291E-01	7.836E-01	5.742E-02	0.154
TA-182		67.75		-1.033E-01	1.525E-01	2.284E-01	1.689E-02	-0.452
		100.10		2.465E-01	2.206E-01	3.729E-01	2.730E-02	0.661
		152.43		3.453E-01	4.143E-01	6.978E-01	3.725E-02	0.495
		222.10		1.528E-01	4.311E-01	7.052E-01	3.785E-02	0.217
		1001.68		3.275E+00	2.486E+00	4.540E+00	3.808E-01	0.721
	+	1121.28		5.852E-01	3.183E-01	4.579E-01	2.988E-02	1.278
		1189.05		-2.819E-01	3.842E-01	5.859E-01	3.410E-02	-0.481
		1221.42	*	1.272E-01	2.596E-01	4.406E-01	2.825E-02	0.289
		1230.97		2.168E-02	6.386E-01	1.046E+00	6.890E-02	0.021
RE-183		57.98		2.477E-02	2.638E-01	4.296E-01	3.122E-02	0.058
		59.32		2.047E-01	1.545E-01	2.417E-01	1.748E-02	0.847
		67.20		-5.070E-02	2.885E-01	4.194E-01	3.095E-02	-0.121
		162.32	*	-1.157E-01	1.383E-01	2.174E-01	1.115E-02	-0.532
	+	208.81		2.876E+00	1.651E+00	2.175E+00	1.152E-01	1.322
		291.72		-1.556E+00	1.246E+00	1.658E+00	9.274E-02	-0.939
RE-184		57.98		8.985E-02	9.567E-01	1.558E+00	1.132E-01	0.058
		59.32		7.419E-01	5.600E-01	8.758E-01	6.335E-02	0.847
		67.20		-1.838E-01	1.046E+00	1.521E+00	1.122E-01	-0.121
		161.27		-2.060E-01	4.318E-01	6.894E-01	3.551E-02	-0.299
		216.55		-9.437E-03	3.153E-01	5.074E-01	2.709E-02	-0.019
		252.85	*	9.660E-02	2.876E-01	4.684E-01	2.577E-02	0.206
		318.01		-7.721E-02	5.070E-01	8.436E-01	4.726E-02	-0.092
		792.07		1.029E-01	1.504E+00	2.204E+00	1.740E-01	0.047
		903.28		1.077E-03	1.451E+00	2.080E+00	1.975E-01	0.001
		920.93		7.079E-01	5.563E-01	1.015E+00	9.465E-02	0.697
OS-185		59.72		5.903E-01	4.075E-01	6.403E-01	4.631E-02	0.922
		61.14		1.689E-01	2.277E-01	3.473E-01	2.519E-02	0.486
		69.30		-1.869E-01	4.089E-01	6.181E-01	4.601E-02	-0.302
		592.07		1.969E+00	3.026E+00	5.166E+00	3.122E-01	0.381
		646.12	*	4.466E-03	5.233E-02	8.541E-02	5.202E-03	0.052
		717.42		-8.057E-01	1.063E+00	1.593E+00	1.088E-01	-0.506
		874.81		1.939E-01	6.927E-01	1.183E+00	1.084E-01	0.164
		880.27		-6.856E-01	9.159E-01	1.419E+00	1.313E-01	-0.483
RE-188		155.03	*	1.158E-01	2.183E-01	3.634E-01	1.920E-02	0.319
		477.96		-6.893E-01	3.577E+00	5.810E+00	3.352E-01	-0.119
		633.10		2.746E-01	3.394E+00	5.543E+00	3.373E-01	0.050
W-188	+	63.58		9.138E+01	6.714E+01	1.149E+02	8.380E+00	0.795
		227.08		-5.131E+00	1.550E+01	2.453E+01	1.323E+00	-0.209
		290.67	*	-5.653E+00	9.820E+00	1.381E+01	7.723E-01	-0.409
IR-192	+	295.96		1.155E+00	2.186E-01	3.360E-01	1.913E-02	3.437
		308.46		-9.565E-03	1.099E-01	1.837E-01	1.042E-02	-0.052
		316.51	*	-1.373E-02	4.049E-02	6.433E-02	3.624E-03	-0.213
		468.07		3.351E-02	8.264E-02	1.230E-01	8.151E-03	0.273
		604.41		-8.376E-03	6.171E-01	8.659E-01	9.945E-02	-0.010
		612.46		3.984E+00	1.229E+00	2.100E+00	1.634E-01	1.897

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		8.091E-02	2.447E-01	3.640E-01	2.666E-02	0.222
		66.83		2.444E-02	1.314E-01	1.941E-01	1.430E-02	0.126
	+	75.70		1.592E+00	2.975E-01	6.019E-01	4.654E-02	2.645
		98.88	*	1.659E-01	2.971E-01	4.617E-01	3.427E-02	0.359
	+	129.76		4.657E+00	5.099E+00	6.104E+00	3.584E-01	0.763
TL-200		367.94	*	-1.846E-03	5.099E+00	Half-Life too short		
		579.30		1.088E-02	5.099E+00	Half-Life too short		
		828.27		3.196E-02	5.099E+00	Half-Life too short		
		1205.75		7.343E-03	5.099E+00	Half-Life too short		
TL-201		68.90		-3.622E+00	1.198E+01	1.823E+01	1.354E+00	-0.199
		70.82		1.096E+00	7.090E+00	1.049E+01	7.866E-01	0.105
		80.30		-1.172E+00	1.272E+01	1.854E+01	1.486E+00	-0.063
		135.34		3.014E+01	6.041E+01	9.761E+01	5.589E+00	0.309
		167.43	*	7.995E+00	1.596E+01	2.649E+01	1.340E+00	0.302
TL-202		68.90		-2.041E-01	6.749E-01	1.027E+00	7.630E-02	-0.199
		70.82		6.160E-02	3.984E-01	5.892E-01	4.419E-02	0.105
		80.30		-6.590E-02	7.147E-01	1.042E+00	8.352E-02	-0.063
		439.56	*	1.702E-02	9.546E-02	1.596E-01	8.972E-03	0.107
HG-203		70.83		2.442E-01	1.540E+00	2.278E+00	2.945E-01	0.107
		72.87		1.622E+00	9.192E-01	1.411E+00	1.771E-01	1.150
		82.60		-7.179E-01	1.609E+00	2.303E+00	3.102E-01	-0.312
		279.20	*	5.290E-02	5.187E-02	8.944E-02	5.318E-03	0.591
BI-207		72.80		4.115E-01	2.535E-01	3.936E-01	2.985E-02	1.046
	+	74.97		8.741E-01	1.633E-01	2.870E-01	2.208E-02	3.045
		84.90		2.395E-01	2.589E-01	3.891E-01	3.254E-02	0.615
		569.67		2.649E-04	3.887E-02	5.820E-02	3.498E-03	0.005
		1063.62	*	-2.824E-02	6.327E-02	9.984E-02	7.484E-03	-0.283
		1770.23		-3.550E-01	6.802E-01	8.299E-01	5.212E-02	-0.428
TL-207		81.07		-3.615E-01	3.051E-01	4.214E-01	3.400E-02	-0.858
		83.78		5.435E-02	1.722E-01	2.530E-01	2.093E-02	0.215
		94.90		9.144E-01	3.250E-01	5.203E-01	4.054E-02	1.757
		122.32		-7.926E-01	2.125E+00	3.412E+00	2.374E-01	-0.232
		144.24		-6.270E-02	8.465E-01	1.363E+00	9.552E-02	-0.046
		154.21		1.584E-01	4.871E-01	8.048E-01	5.317E-02	0.197
	+	269.46		2.959E-01	2.912E-01	4.108E-01	2.393E-02	0.720
		323.87	*	3.908E-01	8.722E-01	1.311E+00	2.155E-01	0.298
	+	338.28		6.950E+00	2.188E+00	2.792E+00	2.908E-01	2.489
		445.03		7.120E-01	2.597E+00	4.367E+00	4.446E-01	0.163
PO-209		260.50		2.484E+00	1.142E+01	1.848E+01	1.022E+00	0.134
		262.80		-6.054E+00	3.231E+01	5.113E+01	2.829E+00	-0.118
		896.60	*	4.409E+00	9.130E+00	1.579E+01	1.503E+00	0.279
BI-210		46.50	*	1.278E+00	4.964E+00	8.402E+00	6.636E-01	0.152
PB-210		46.50	*	1.278E+00	4.964E+00	8.402E+00	6.636E-01	0.152
PO-210		46.50	*	1.278E+00	4.964E+00	8.402E+00	5.745E-01	0.152
PB-211		404.84	*	-2.385E-01	1.337E+00	1.887E+00	1.176E+00	-0.126
		427.08		7.270E-02	2.370E+00	3.932E+00	2.429E+00	0.018
		831.96		4.736E-03	1.400E+00	2.342E+00	1.467E+00	0.002
PO-215		81.07		-3.615E-01	3.051E-01	4.214E-01	3.400E-02	-0.858
		83.78		5.435E-02	1.722E-01	2.530E-01	2.093E-02	0.215

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		9.144E-01	3.250E-01	5.203E-01	4.054E-02	1.757
		122.32		-7.926E-01	2.125E+00	3.412E+00	2.374E-01	-0.232
		144.24		-6.270E-02	8.465E-01	1.363E+00	9.552E-02	-0.046
		154.21		1.584E-01	4.871E-01	8.048E-01	5.317E-02	0.197
	+	269.46		2.959E-01	2.912E-01	4.108E-01	2.393E-02	0.720
		323.87	*	3.908E-01	8.722E-01	1.311E+00	2.155E-01	0.298
	+	338.28		6.950E+00	2.188E+00	2.792E+00	2.908E-01	2.489
		445.03		7.120E-01	2.597E+00	4.367E+00	4.446E-01	0.163
RN-219	+	271.23		3.797E-01	3.741E-01	5.162E-01	4.095E-02	0.735
		401.81	*	3.165E-01	4.870E-01	8.355E-01	1.125E-01	0.379
RN-220		549.76	*	-3.058E+00	2.925E+01	4.744E+01	2.832E+00	-0.064
RA-223		81.07		-3.615E-01	3.051E-01	4.214E-01	3.400E-02	-0.858
		83.78		5.435E-02	1.722E-01	2.530E-01	2.093E-02	0.215
		94.90		9.144E-01	3.250E-01	5.203E-01	4.054E-02	1.757
		122.32		-7.926E-01	2.125E+00	3.412E+00	2.374E-01	-0.232
		144.24		-6.270E-02	8.465E-01	1.363E+00	9.552E-02	-0.046
		154.21		1.584E-01	4.871E-01	8.048E-01	5.317E-02	0.197
	+	269.46		2.959E-01	2.912E-01	4.108E-01	2.393E-02	0.720
		323.87	*	3.908E-01	8.722E-01	1.311E+00	2.155E-01	0.298
	+	338.28		6.950E+00	2.188E+00	2.792E+00	2.908E-01	2.489
		445.03		7.120E-01	2.597E+00	4.367E+00	4.446E-01	0.163
AC-227		79.80		3.047E+00	2.332E+00	3.469E+00	7.374E-01	0.878
		236.00		5.577E-01	3.278E-01	4.981E-01	5.108E-02	1.120
		256.20	*	-4.155E-01	4.762E-01	7.216E-01	9.990E-02	-0.576
		286.10		4.524E-02	1.683E+00	2.839E+00	3.252E-01	0.016
	+	299.80		3.858E+00	2.416E+00	3.017E+00	4.891E-01	1.279
		304.40		-7.482E-01	2.415E+00	3.448E+00	5.943E-01	-0.217
		334.20		6.225E-01	4.286E+00	4.287E+00	7.831E-01	0.145
TH-227		79.80		3.047E+00	2.334E+00	3.469E+00	7.471E-01	0.878
	+	94.00		1.087E+01	4.050E+00	4.822E+00	1.037E+00	2.254
		236.00		5.577E-01	3.265E-01	4.981E-01	4.397E-02	1.120
		256.20	*	-4.155E-01	4.779E-01	7.216E-01	1.213E-01	-0.576
		286.10		4.524E-02	1.684E+00	2.839E+00	2.844E+00	0.016
	+	299.80		3.858E+00	2.416E+00	3.017E+00	4.891E-01	1.279
		304.40		-7.482E-01	2.415E+00	3.448E+00	5.943E-01	-0.217
		334.20		6.225E-01	4.286E+00	4.287E+00	7.831E-01	0.145
TH-229		85.43		6.009E-01	2.651E-01	4.128E-01	3.470E-02	1.456
	+	88.47		4.853E-01	1.665E-01	2.809E-01	2.405E-02	1.728
		100.00		2.639E-01	2.257E-01	3.822E-01	2.802E-02	0.690
		193.63	*	-6.883E-02	5.956E-01	9.591E-01	4.996E-02	-0.072
		210.97		2.461E+00	1.020E+00	1.630E+00	8.653E-02	1.510
PA-231		283.67	*	-1.707E+00	1.752E+00	2.784E+00	3.811E-01	-0.613
	+	301.29		1.543E+00	9.469E-01	1.228E+00	1.271E-01	1.256
TH-231		81.07		-3.615E-01	3.051E-01	4.214E-01	3.400E-02	-0.858
		83.78		5.435E-02	1.722E-01	2.530E-01	2.093E-02	0.215
		94.90		9.144E-01	3.250E-01	5.203E-01	4.054E-02	1.757
		122.32		-7.926E-01	2.125E+00	3.412E+00	2.374E-01	-0.232
		144.24		-6.270E-02	8.465E-01	1.363E+00	9.552E-02	-0.046
		154.21		1.584E-01	4.871E-01	8.048E-01	5.317E-02	0.197

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		2.959E-01	2.912E-01	4.108E-01	2.393E-02	0.720
		323.87	*	3.908E-01	8.722E-01	1.311E+00	2.155E-01	0.298
	+	338.28		6.950E+00	2.188E+00	2.792E+00	2.908E-01	2.489
		445.03		7.120E-01	2.597E+00	4.367E+00	4.446E-01	0.163
U-231		84.21		5.206E+00	1.142E+01	1.688E+01	1.402E+00	0.308
	+	92.29		1.685E+01	5.300E+00	7.934E+00	6.406E-01	2.124
		95.87	*	-1.442E+00	2.279E+00	3.206E+00	2.467E-01	-0.450
		108.00		-1.989E+00	3.880E+00	6.277E+00	4.254E-01	-0.317
PA-233	+	75.28		2.550E+01	5.762E+00	8.800E+00	1.307E+00	2.898
	+	86.59		6.959E+00	2.970E+00	3.834E+00	1.027E+00	1.815
	+	300.12		1.075E+00	6.662E-01	8.491E-01	1.134E-01	1.267
		311.98	*	-3.438E-03	7.127E-02	1.193E-01	7.131E-03	-0.029
		340.50		3.106E+00	1.152E+00	1.582E+00	3.625E-01	1.963
		398.62		-1.576E+00	2.398E+00	3.764E+00	9.701E-01	-0.419
		415.76		2.651E-01	2.139E+00	3.110E+00	6.379E-01	0.085
PA-234	+	63.00		2.579E+00	1.924E+00	3.291E+00	4.870E-01	0.784
		94.67		9.282E-01	2.542E-01	3.912E-01	4.639E-02	2.373
		98.44		7.170E-02	1.302E-01	1.841E-01	1.024E-01	0.390
		99.86		7.099E-01	5.734E-01	9.728E-01	7.142E-02	0.730
		111.00		2.588E-01	2.183E-01	3.732E-01	4.011E-02	0.693
		131.20		-4.386E-03	1.538E-01	2.209E-01	1.288E-02	-0.020
		152.70		4.166E-01	3.929E-01	6.594E-01	1.031E-01	0.632
	+	186.00		5.438E+00	2.538E+00	2.967E+00	9.033E-01	1.832
		226.40		-5.464E-01	4.918E-01	7.421E-01	8.431E-02	-0.736
		227.20		-1.847E-01	5.089E-01	8.038E-01	4.335E-02	-0.230
		248.90		-9.982E-01	1.045E+00	1.557E+00	3.332E-01	-0.641
		293.70		6.345E+00	1.451E+00	1.969E+00	3.152E-01	3.222
		369.80		4.489E-01	9.729E-01	1.657E+00	3.437E-01	0.271
		568.70		-2.778E-01	1.267E+00	1.863E+00	1.120E-01	-0.149
		569.50		-9.330E-03	3.441E-01	5.136E-01	3.086E-02	-0.018
		574.00		-7.172E-01	1.795E+00	2.841E+00	1.709E-01	-0.252
		699.00		3.809E-01	8.899E-01	1.478E+00	2.698E-01	0.258
		706.10		2.281E-01	1.241E+00	2.025E+00	8.961E-01	0.113
		733.00		-1.990E-01	5.274E-01	6.941E-01	1.502E-01	-0.287
		742.81		-1.190E+00	1.829E+00	2.473E+00	1.658E+00	-0.481
	+	796.30		2.161E+00	1.510E+00	2.195E+00	5.893E-01	0.985
		805.60		7.400E-01	1.236E+00	2.129E+00	6.494E-01	0.348
		819.60		9.518E-01	1.466E+00	2.508E+00	9.518E-01	0.380
		826.30		-4.065E-01	9.972E-01	1.584E+00	7.082E-01	-0.257
		831.60		-1.428E-01	7.519E-01	1.237E+00	3.686E-01	-0.115
		876.40		-7.844E-01	1.251E+00	1.473E+00	1.515E+00	-0.533
		880.51		-2.228E-01	3.237E-01	5.045E-01	4.671E-02	-0.442
		883.24		1.319E-01	3.465E-01	5.772E-01	3.885E-01	0.228
		899.00		-2.856E-01	1.057E+00	1.708E+00	7.500E-01	-0.167
		925.00		-9.571E-01	1.407E+00	2.190E+00	2.033E-01	-0.437
		926.50		-2.100E-01	2.353E-01	3.126E-01	7.972E-02	-0.672
		946.00	*	-4.824E-02	3.859E-01	6.339E-01	1.202E-01	-0.076
		949.00		6.045E-01	5.669E-01	1.016E+00	9.176E-02	0.595
		980.50		-3.184E-01	8.243E-01	1.313E+00	1.137E-01	-0.243

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-2.461E-01	1.178E+00	1.823E+00	1.186E+00	-0.135
PA-234M		766.41		3.467E+01	3.622E+01	3.919E+01	3.000E+01	0.885
		1001.03	*	5.549E+00	7.988E+00	1.395E+01	1.536E+00	0.398
U-235	+	89.95		2.621E+00	1.562E+00	2.417E+00	7.441E-01	1.085
	+	93.35		3.381E+00	1.394E+00	1.535E+00	4.273E-01	2.202
		105.00		1.149E+00	1.306E+00	2.154E+00	6.333E-01	0.534
		143.76	*	-4.562E-03	2.661E-01	4.298E-01	6.966E-02	-0.011
		163.35		-2.879E-01	5.772E-01	9.171E-01	1.630E-01	-0.314
	+	185.71		2.014E-01	7.203E-02	1.096E-01	5.656E-03	1.838
		205.31		-8.487E-02	6.981E-01	9.771E-01	1.741E-01	-0.087
NP-236		94.67		7.070E-01	1.825E-01	2.970E-01	2.321E-02	2.380
		98.44		5.419E-02	9.377E-02	1.391E-01	1.038E-02	0.389
		111.00		1.957E-01	1.643E-01	2.823E-01	1.866E-02	0.693
		160.31	*	-3.989E-02	9.650E-02	1.546E-01	7.993E-03	-0.258
NP-239		99.55		2.179E-01	1.965E-01	3.229E-01	2.379E-02	0.675
		117.00	*	1.128E-01	2.286E-01	3.833E-01	2.421E-02	0.294
	+	209.75		2.208E+00	1.267E+00	1.678E+00	8.896E-02	1.316
		228.18		-6.832E-02	2.642E-01	4.194E-01	2.264E-02	-0.163
		277.60		3.492E-01	2.286E-01	3.852E-01	2.146E-02	0.906
		334.30		3.281E-01	2.427E+00	2.425E+00	1.354E-01	0.135
AM-241		59.54	*	2.980E-01	2.120E-01	3.323E-01	2.647E-02	0.897
CM-243		99.55		2.242E-01	2.022E-01	3.323E-01	2.448E-02	0.675
		103.76	*	3.303E-04	1.163E-01	1.922E-01	1.355E-02	0.002
		117.00		1.161E-01	2.352E-01	3.944E-01	2.491E-02	0.294
	+	209.75		2.177E+00	1.250E+00	1.655E+00	8.772E-02	1.316
		228.18		-6.904E-02	2.670E-01	4.239E-01	2.288E-02	-0.163
		277.60		3.521E-01	2.305E-01	3.884E-01	2.164E-02	0.906
CM-247		278.00		1.374E+00	9.064E-01	1.592E+00	8.869E-02	0.863
		287.40		5.728E-01	1.381E+00	2.373E+00	1.326E-01	0.241
		402.60	*	1.931E-02	4.497E-02	7.462E-02	4.068E-03	0.259
CF-249		252.85		3.584E-01	1.067E+00	1.738E+00	9.562E-02	0.206
		333.44		4.781E-02	3.173E-01	3.178E-01	1.776E-02	0.150
		387.95	*	-7.039E-03	4.613E-02	7.602E-02	4.117E-03	-0.093
CF-251		176.60	*	-8.171E-02	1.526E-01	2.420E-01	1.236E-02	-0.338
		227.00		-1.310E-01	4.514E-01	7.158E-01	3.860E-02	-0.183
		285.00		-5.666E-01	1.959E+00	3.253E+00	1.817E-01	-0.174

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664001 *
* Acquisition date : 14-JUL-2009 08:26:41 Detector SN#     :            *
* Detector ID        : GAM16               Sensitivity      : 5.000    *
* Geometry           : CAN                 Energy tolerance: 1.500     *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000    *
* Elapsed real time:     0 02:00:01.90     Half life ratio :  8.000    *
*************************************************************************
*                                                                       *
*                               SAMPLE DATA                             *
*                                                                       *
* Sample date        : 26-JUN-2009 12:00:00 Nuclide Library : SOLID    *
* Sample ID          : G232664001           Analyst initials: MXR1     *
* Batch Number       : 882713               Sample Quantity : 1.0407E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                                 QC DATA                               *
* Standard Weight  :   0.00000                                          *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope      :            *
* LCS DPM          :    0.000             LCS Isotope      :            *
* LCSD DPM         :    0.000             LCSD Isotope     :            *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.480E+01	3.511E+00	6.581E-01	0.000E+00
CD-109	3.631E+00	1.221E+00	1.749E+00	0.000E+00
SN-126	3.555E-01	1.195E-01	1.751E-01	0.000E+00
TL-208	4.851E-01	9.484E-02	6.862E-02	0.000E+00
BI-211	4.501E+00	5.545E-01	3.616E-01	0.000E+00
BI-212	1.494E+00	5.011E-01	5.626E-01	0.000E+00
PB-212	1.940E+00	1.815E-01	1.119E-01	0.000E+00
PO-212	1.940E+00	1.815E-01	1.119E-01	0.000E+00
BI-214	1.425E+00	2.142E-01	1.294E-01	0.000E+00
PB-214	1.566E+00	2.088E-01	1.290E-01	0.000E+00
PO-214	1.566E+00	2.088E-01	1.290E-01	0.000E+00
PO-216	1.940E+00	1.815E-01	1.119E-01	0.000E+00
PO-218	1.566E+00	2.088E-01	1.290E-01	0.000E+00
RA-224	5.566E+00	1.001E+00	1.272E+00	0.000E+00
RA-226	1.425E+00	2.142E-01	1.294E-01	0.000E+00
AC-228	1.809E+00	3.924E-01	2.344E-01	0.000E+00
RA-228	1.809E+00	3.924E-01	2.344E-01	0.000E+00
TH-228	1.940E+00	1.815E-01	1.118E-01	0.000E+00
TH-230	1.425E+00	2.141E-01	1.294E-01	0.000E+00
TH-232	1.809E+00	3.924E-01	2.344E-01	0.000E+00
TH-234	2.212E+00	1.629E+00	2.712E+00	0.000E+00
U-234	1.425E+00	2.141E-01	1.294E-01	0.000E+00
NP-237	1.044E+00	4.095E-01	4.652E-01	0.000E+00
U-238	2.212E+00	1.629E+00	2.712E+00	0.000E+00
AM-243	4.869E-01	8.916E-02	1.144E-01	0.000E+00
ANH-511	1.513E-01	7.985E-02	5.033E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-1.599E-01	3.665E-01	5.953E-01	0.000E+00	NOT IDENT.

NA-22	-2.618E-03	5.087E-02	8.357E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.653E+07	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.747E-02	2.899E-02	6.070E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.535E-02	1.065E-01	0.000E+00	FAIL ABUN
SC-46	-4.403E-02	4.740E-02	7.339E-02	0.000E+00	FAIL ABUN
V-48	1.486E-02	9.357E-02	1.594E-01	0.000E+00	NOT IDENT.
CR-51	-2.202E-01	4.418E-01	7.355E-01	0.000E+00	NOT IDENT.
MN-52	-3.044E-01	3.627E-01	5.120E-01	0.000E+00	FAIL ABUN
MN-54	-2.351E-03	4.328E-02	7.318E-02	0.000E+00	NOT IDENT.
CO-56	7.701E-03	4.969E-02	8.528E-02	0.000E+00	NOT IDENT.
CO-57	-1.170E-02	3.028E-02	4.978E-02	0.000E+00	NOT IDENT.
CO-58	-1.715E-02	4.553E-02	7.502E-02	0.000E+00	NOT IDENT.
FE-59	-2.239E-02	1.141E-01	1.870E-01	0.000E+00	NOT IDENT.
CO-60	4.472E-02	4.957E-02	8.921E-02	0.000E+00	NOT IDENT.
ZN-65	-4.440E-02	1.346E-01	1.849E-01	0.000E+00	NOT IDENT.
GE-68	2.008E+00	1.600E+00	2.934E+00	0.000E+00	NOT IDENT.
AS-73	-3.916E-02	1.074E+00	1.852E+00	0.000E+00	NOT IDENT.
AS-74	-2.872E-02	1.214E-01	1.975E-01	0.000E+00	NOT IDENT.
SE-75	1.930E-02	5.735E-02	8.815E-02	0.000E+00	NOT IDENT.
BR-77	1.146E+01	2.542E+01	4.379E+01	0.000E+00	FAIL ABUN
SR-82	-6.537E-01	4.766E-01	7.203E-01	0.000E+00	NOT IDENT.
RB-83	4.052E-02	7.779E-02	1.346E-01	0.000E+00	NOT IDENT.
RB-84	-1.510E-02	8.353E-02	1.391E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.028E+01	1.804E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.424E-02	9.522E-02	0.000E+00	NOT IDENT.
RB-86	1.227E+00	1.100E+00	2.000E+00	0.000E+00	NOT IDENT.
Y-88	8.314E-03	3.014E-02	5.365E-02	0.000E+00	NOT IDENT.
ZR-88	4.327E-03	3.427E-02	5.847E-02	0.000E+00	NOT IDENT.
Y-91	5.170E+00	2.383E+01	4.023E+01	0.000E+00	NOT IDENT.
NB-94	1.075E-02	4.105E-02	6.862E-02	0.000E+00	NOT IDENT.
NB-95	6.860E-02	5.795E-02	9.193E-02	0.000E+00	NOT IDENT.
NB-95M	6.255E-02	1.704E-01	2.494E-01	0.000E+00	NOT IDENT.
ZR-95	4.786E-02	8.397E-02	1.436E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.505E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	3.326E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	5.845E+00	2.698E+01	4.489E+01	0.000E+00	FAIL ABUN
TC-99M	0.000E+00	9.331E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.075E-02	4.083E-02	6.737E-02	0.000E+00	NOT IDENT.
RH-102	4.194E-03	3.142E-02	5.318E-02	0.000E+00	NOT IDENT.
RU-103	-3.992E-02	4.560E-02	7.074E-02	0.000E+00	FAIL ABUN
RH-106	-5.862E-02	3.659E-01	5.965E-01	0.000E+00	FAIL ABUN
RU-106	-5.862E-02	3.658E-01	5.965E-01	0.000E+00	FAIL ABUN
AG-108M	-1.723E-02	3.810E-02	6.237E-02	0.000E+00	NOT IDENT.
AG-110M	-3.994E-03	3.700E-02	6.033E-02	0.000E+00	FAIL ABUN
IN-111	9.306E-01	2.630E+00	3.851E+00	0.000E+00	NOT IDENT.
IN-113M	1.218E-02	5.068E-02	8.702E-02	0.000E+00	NOT IDENT.
SN-113	1.218E-02	5.068E-02	8.702E-02	0.000E+00	NOT IDENT.
IN-114M	-1.036E-01	2.405E-01	3.384E-01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	2.784E+01	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	4.649E-02	7.450E-02	1.273E-01	0.000E+00	NOT IDENT.
SB-122	2.273E+00	4.517E+00	7.783E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.193E+08	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	6.621E-03	3.441E-02	5.783E-02	0.000E+00	NOT IDENT.
I-124	1.961E-01	1.428E+00	2.069E+00	0.000E+00	NOT IDENT.
SB-124	-3.145E-02	8.222E-02	1.282E-01	0.000E+00	FAIL ABUN
SB-125	4.910E-02	1.048E-01	1.817E-01	0.000E+00	FAIL ABUN
TE-125M	-3.853E+00	1.139E+01	1.901E+01	0.000E+00	NOT IDENT.
I-126	1.384E-01	2.487E-01	4.259E-01	0.000E+00	NOT IDENT.
SB-126	1.876E-02	1.957E-01	3.142E-01	0.000E+00	FAIL ABUN
SB-127	-5.262E-02	2.597E+00	4.257E+00	0.000E+00	NOT IDENT.
XE-127	-5.406E-02	6.125E-02	9.336E-02	0.000E+00	NOT IDENT.
I-131	9.447E-02	1.637E-01	2.870E-01	0.000E+00	NOT IDENT.
TE-132	-3.894E-01	1.417E+00	2.294E+00	0.000E+00	NOT IDENT.
BA-133	3.657E-02	5.310E-02	8.270E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.920E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.115E-01	7.101E-02	1.127E-01	0.000E+00	FAIL ABUN
CS-135	5.318E-02	2.243E-01	3.238E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	6.590E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.096E-02	1.628E-01	2.766E-01	0.000E+00	FAIL ABUN
BA-137M	-1.672E-02	4.200E-02	6.421E-02	0.000E+00	NOT IDENT.
CS-137	-1.767E-02	4.440E-02	6.787E-02	0.000E+00	NOT IDENT.
CE-139	2.451E-02	3.603E-02	6.158E-02	0.000E+00	NOT IDENT.
BA-140	-4.717E-02	3.563E-01	5.874E-01	0.000E+00	NOT IDENT.
LA-140	1.820E-02	1.257E-01	1.874E-01	0.000E+00	FAIL ABUN
CE-141	3.173E-02	8.150E-02	1.366E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.031E+03	0.000E+00	0.000E+00	SHORT HLIF
CE-144	5.345E-03	2.896E-01	4.266E-01	0.000E+00	NOT IDENT.
PM-144	-2.550E-02	4.220E-02	6.591E-02	0.000E+00	NOT IDENT.

PR-144	-1.731E+00	2.864E+00	4.472E+00	0.000E+00	NOT IDENT.
PM-146	4.880E-02	4.850E-02	8.647E-02	0.000E+00	NOT IDENT.
ND-147	-3.539E-01	7.560E-01	1.214E+00	0.000E+00	FAIL ABUN
PM-149	0.000E+00	2.318E+02	0.000E+00	0.000E+00	SHORT HLIF
EU-152	-2.467E-03	1.281E-01	1.790E-01	0.000E+00	FAIL ABUN
GD-153	-5.167E-02	1.060E-01	1.527E-01	0.000E+00	NOT IDENT.
EU-154	-8.630E-03	1.418E-01	2.326E-01	0.000E+00	NOT IDENT.
EU-155	6.029E-02	1.276E-01	2.197E-01	0.000E+00	FAIL ABUN
TB-160	-1.126E-01	1.576E-01	2.487E-01	0.000E+00	FAIL ABUN
HO-166M	-2.582E-02	6.929E-02	1.098E-01	0.000E+00	FAIL ABUN
TM-171	6.158E+00	3.863E+01	5.855E+01	0.000E+00	NOT IDENT.
LU-176	-1.884E-03	3.066E-02	4.768E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.323E+00	3.142E+00	0.000E+00	FAIL ABUN
LU-177M	1.964E-02	2.176E-01	3.215E-01	0.000E+00	NOT IDENT.
HF-181	6.166E-02	5.086E-02	9.169E-02	0.000E+00	NOT IDENT.
W-181	1.210E-01	5.185E-01	7.887E-01	0.000E+00	NOT IDENT.
TA-182	1.272E-01	2.544E-01	4.377E-01	0.000E+00	FAIL ABUN
RE-183	-1.157E-01	1.356E-01	2.180E-01	0.000E+00	FAIL ABUN
RE-184	9.660E-02	2.818E-01	4.686E-01	0.000E+00	NOT IDENT.
OS-185	4.466E-03	5.129E-02	8.509E-02	0.000E+00	NOT IDENT.
RE-188	1.158E-01	2.139E-01	3.643E-01	0.000E+00	NOT IDENT.
W-188	-5.653E+00	9.623E+00	1.381E+01	0.000E+00	FAIL ABUN
IR-192	-1.373E-02	3.968E-02	6.430E-02	0.000E+00	FAIL ABUN
AU-195	1.659E-01	2.911E-01	4.639E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.936E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	7.995E+00	1.564E+01	2.655E+01	0.000E+00	NOT IDENT.
TL-202	1.702E-02	9.355E-02	1.593E-01	0.000E+00	NOT IDENT.
HG-203	5.290E-02	5.084E-02	8.944E-02	0.000E+00	NOT IDENT.
BI-207	-2.824E-02	6.200E-02	9.924E-02	0.000E+00	FAIL ABUN
TL-207	3.908E-01	8.547E-01	1.310E+00	0.000E+00	FAIL ABUN
PO-209	4.409E+00	8.947E+00	1.571E+01	0.000E+00	NOT IDENT.
BI-210	1.278E+00	4.865E+00	8.470E+00	0.000E+00	NOT IDENT.
PB-210	1.278E+00	4.865E+00	8.470E+00	0.000E+00	NOT IDENT.
PO-210	1.278E+00	4.865E+00	8.470E+00	0.000E+00	NOT IDENT.
PB-211	-2.385E-01	1.311E+00	1.884E+00	0.000E+00	NOT IDENT.
PO-215	3.908E-01	8.547E-01	1.310E+00	0.000E+00	FAIL ABUN
RN-219	3.165E-01	4.772E-01	8.342E-01	0.000E+00	FAIL ABUN
RN-220	-3.058E+00	2.867E+01	4.730E+01	0.000E+00	NOT IDENT.
RA-223	3.908E-01	8.547E-01	1.310E+00	0.000E+00	FAIL ABUN
AC-227	-4.155E-01	4.667E-01	7.220E-01	0.000E+00	FAIL ABUN
TH-227	-4.155E-01	4.683E-01	7.220E-01	0.000E+00	FAIL ABUN
TH-229	-6.883E-02	5.837E-01	9.608E-01	0.000E+00	FAIL ABUN
PA-231	-1.707E+00	1.717E+00	2.784E+00	0.000E+00	FAIL ABUN
TH-231	3.908E-01	8.547E-01	1.310E+00	0.000E+00	FAIL ABUN
U-231	-1.442E+00	2.233E+00	3.222E+00	0.000E+00	FAIL ABUN
PA-233	-3.438E-03	6.985E-02	1.193E-01	0.000E+00	FAIL ABUN
PA-234	-4.824E-02	3.782E-01	6.304E-01	0.000E+00	FAIL ABUN
PA-234M	5.549E+00	7.829E+00	1.387E+01	0.000E+00	NOT IDENT.
U-235	-4.562E-03	2.608E-01	4.311E-01	0.000E+00	FAIL ABUN
NP-236	-3.989E-02	9.457E-02	1.550E-01	0.000E+00	NOT IDENT.
NP-239	1.128E-01	2.240E-01	3.848E-01	0.000E+00	FAIL ABUN
AM-241	2.980E-01	2.078E-01	3.346E-01	0.000E+00	NOT IDENT.
CM-243	3.303E-04	1.140E-01	1.931E-01	0.000E+00	FAIL ABUN
CM-247	1.931E-02	4.407E-02	7.450E-02	0.000E+00	NOT IDENT.
CF-249	-7.039E-03	4.520E-02	7.591E-02	0.000E+00	NOT IDENT.
CF-251	-8.171E-02	1.495E-01	2.425E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:27:06.95

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664001.CNF;1
Sample date       : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:26:41
Sample ID         : G232664001           Sample quantity  : 1.04070E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.90  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1264	10.67*	1.228E+00	3.480E+01	3.480E+01	10.29
CD-109	88.03	228	3.72*	6.254E+00	3.536E+00	3.631E+00	34.31
SN-126	64.28	80	9.60	3.445E+00	8.757E-01	8.757E-01	74.53
	86.94	228	8.90	6.254E+00	1.478E+00	1.478E+00	53.04
	87.57	228	37.00*	6.254E+00	3.555E-01	3.555E-01	34.31
TL-208	277.35	------	6.80	4.948E+00	------	Line Not Found	------
	510.84	131	21.60	3.128E+00	7.004E-01	7.004E-01	54.49
	583.14	318	84.20*	2.806E+00	4.851E-01	4.851E-01	19.95
	860.37	------	12.46	1.990E+00	------	Line Not Found	------
BI-211	72.87	------	1.27	4.802E+00	------	Line Not Found	------
	351.07	673	12.94*	4.166E+00	4.501E+00	4.501E+00	12.57
BI-212	727.18	113	11.80*	2.318E+00	1.494E+00	1.494E+00	34.23
	785.46	------	1.97	2.164E+00	------	Line Not Found	------
	1620.62	26	2.75	1.135E+00	3.007E+00	3.007E+00	52.02
PB-212	74.81	452	10.70	5.073E+00	3.003E+00	3.003E+00	20.89
	77.11	660	18.00	5.338E+00	2.476E+00	2.476E+00	14.59
	87.30	228	8.00	6.254E+00	1.644E+00	1.644E+00	35.74
	238.63	1314	44.60*	5.481E+00	1.940E+00	1.940E+00	9.55
	300.09	92	3.41	4.678E+00	2.082E+00	2.082E+00	61.03
PO-212	74.81	452	10.70	5.073E+00	3.003E+00	3.003E+00	20.89
	77.11	660	18.00	5.338E+00	2.476E+00	2.476E+00	14.59
	87.30	228	8.00	6.254E+00	1.644E+00	1.644E+00	35.74
	115.19	------	0.60	7.278E+00	------	Line Not Found	------
	238.63	1314	44.60*	5.481E+00	1.940E+00	1.940E+00	9.55
	300.09	92	3.41	4.678E+00	2.082E+00	2.082E+00	61.03
BI-214	609.31	495	46.30*	2.705E+00	1.425E+00	1.425E+00	15.34
	768.36	51	5.04	2.208E+00	1.651E+00	1.651E+00	71.99
	934.06	------	3.21	1.843E+00	------	Line Not Found	------
	1120.29	79	15.10	1.553E+00	1.217E+00	1.218E+00	54.79
	1238.11	------	5.94	1.417E+00	------	Line Not Found	------
	1377.67	25	4.11	1.289E+00	1.727E+00	1.727E+00	82.07
	1764.49	61	15.80	1.074E+00	1.290E+00	1.290E+00	41.31

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	452	6.21	5.073E+00	5.175E+00	5.175E+00	20.10
	77.11	660	10.50	5.338E+00	4.245E+00	4.245E+00	16.46
	87.30	228	4.67	6.254E+00	2.816E+00	2.816E+00	35.16
	241.98	331	7.49	5.435E+00	2.935E+00	2.935E+00	19.19
	295.21	372	19.20	4.730E+00	1.476E+00	1.476E+00	19.91
	351.92	673	37.20*	4.166E+00	1.566E+00	1.566E+00	13.61
PO-214	74.81	452	6.21	5.073E+00	5.175E+00	5.175E+00	20.10
	77.11	660	10.50	5.338E+00	4.245E+00	4.245E+00	16.46
	87.30	228	4.67	6.254E+00	2.816E+00	2.816E+00	35.16
	241.98	331	7.49	5.435E+00	2.935E+00	2.935E+00	19.19
	295.21	372	19.20	4.730E+00	1.476E+00	1.476E+00	19.91
	351.92	673	37.20*	4.166E+00	1.566E+00	1.566E+00	13.61
PO-216	74.81	452	10.70	5.073E+00	3.003E+00	3.003E+00	20.89
	77.11	660	18.00	5.338E+00	2.476E+00	2.476E+00	14.59
	87.30	228	8.00	6.254E+00	1.644E+00	1.644E+00	35.74
	238.63	1314	44.60*	5.481E+00	1.940E+00	1.940E+00	9.55
	300.09	92	3.41	4.678E+00	2.082E+00	2.082E+00	61.03
PO-218	74.81	452	6.21	5.073E+00	5.175E+00	5.175E+00	20.10
	77.11	660	10.50	5.338E+00	4.245E+00	4.245E+00	16.46
	87.30	228	4.67	6.254E+00	2.816E+00	2.816E+00	35.16
	241.98	331	7.49	5.435E+00	2.935E+00	2.935E+00	19.19
	295.21	372	19.20	4.730E+00	1.476E+00	1.476E+00	19.91
	351.92	673	37.20*	4.166E+00	1.566E+00	1.566E+00	13.61
RA-224	240.98	331	3.95*	5.435E+00	5.566E+00	5.566E+00	18.35
RA-226	609.31	495	46.30*	2.705E+00	1.425E+00	1.425E+00	15.34
	768.36	51	5.04	2.208E+00	1.651E+00	1.651E+00	71.99
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	79	15.10	1.553E+00	1.217E+00	1.218E+00	54.79
	1238.11	------	5.94	1.417E+00	------ Line Not Found		------
	1377.67	25	4.11	1.289E+00	1.727E+00	1.727E+00	82.07
	1764.49	61	15.80	1.074E+00	1.290E+00	1.290E+00	41.31
AC-228	338.32	226	11.40	4.288E+00	1.664E+00	1.664E+00	50.41
	911.07	262	27.70*	1.886E+00	1.809E+00	1.809E+00	22.14
	969.11	143	16.60	1.780E+00	1.740E+00	1.740E+00	35.88
RA-228	338.32	226	11.40	4.288E+00	1.664E+00	1.664E+00	50.41
	911.07	262	27.70*	1.886E+00	1.809E+00	1.809E+00	22.14
	969.11	143	16.60	1.780E+00	1.740E+00	1.740E+00	35.88
TH-228	84.40	------	1.21	6.023E+00	------ Line Not Found		------
	238.60	1314	44.60*	5.481E+00	1.940E+00	1.940E+00	9.55
	300.10	92	3.41	4.678E+00	2.082E+00	2.082E+00	84.44
TH-230	609.31	495	46.30*	2.705E+00	1.425E+00	1.425E+00	15.34
	768.36	51	5.04	2.208E+00	1.651E+00	1.651E+00	71.99
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	79	15.10	1.553E+00	1.217E+00	1.217E+00	54.79
	1238.11	------	5.94	1.417E+00	------ Line Not Found		------
	1377.67	25	4.11	1.289E+00	1.727E+00	1.727E+00	82.07
	1764.49	61	15.80	1.074E+00	1.290E+00	1.290E+00	41.31
TH-232	338.32	226	11.40	4.288E+00	1.664E+00	1.664E+00	30.22
	911.07	262	27.70*	1.886E+00	1.809E+00	1.809E+00	22.14

Sample ID : G232664001 Acquisition date : 14-JUL-2009 08:26:41

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	143	16.60	1.780E+00	1.740E+00	1.740E+00	35.88
TH-234	63.29	80	3.80*	3.445E+00	2.212E+00	2.212E+00	75.15
	92.38	280	5.41	6.633E+00	2.812E+00	2.812E+00	35.24
U-234	609.31	495	46.30*	2.705E+00	1.425E+00	1.425E+00	15.34
	768.36	51	5.04	2.208E+00	1.651E+00	1.651E+00	71.99
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	79	15.10	1.553E+00	1.217E+00	1.217E+00	54.79
	1238.11	------	5.94	1.417E+00	------ Line Not Found		------
	1377.67	25	4.11	1.289E+00	1.727E+00	1.727E+00	82.07
	1764.49	61	15.80	1.074E+00	1.290E+00	1.290E+00	41.31
NP-237	86.50	228	12.60*	6.254E+00	1.044E+00	1.044E+00	40.04
	95.87	------	2.60	6.774E+00	------ Line Not Found		------
U-238	63.29	80	3.80*	3.445E+00	2.212E+00	2.212E+00	75.15
	92.38	280	5.41	6.633E+00	2.812E+00	2.812E+00	31.45
AM-243	74.67	452	66.00*	5.073E+00	4.869E-01	4.869E-01	18.69
	86.72	228	0.34	6.254E+00	3.914E+01	3.914E+01	34.31
	117.66	------	0.55	7.296E+00	------ Line Not Found		------
	142.18	------	0.13	7.157E+00	------ Line Not Found		------
ANH-511	511.00	131	100.00*	3.128E+00	1.513E-01	1.513E-01	53.85

Flag: "*" = Keyline

Sample ID : G232664001 Acquisition date : 14-JUL-2009 08:26:41

Total number of lines in spectrum 40
Number of unidentified lines 5
Number of lines tentatively identified by NID 35 87.50%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.480E+01	3.480E+01	0.358E+01	10.29	
CD-109	464.00D	1.03	3.536E+00	3.631E+00	1.246E+00	34.31	
SN-126	1.00E+05Y	1.00	3.555E-01	3.555E-01	1.220E-01	34.31	
TL-208	1.41E+10Y	1.00	4.851E-01	4.851E-01	0.968E-01	19.95	
BI-211	7.04E+08Y	1.00	4.501E+00	4.501E+00	0.566E+00	12.57	
BI-212	1.41E+10Y	1.00	1.494E+00	1.494E+00	0.511E+00	34.23	
PB-212	1.41E+10Y	1.00	1.940E+00	1.940E+00	0.185E+00	9.55	
PO-212	1.41E+10Y	1.00	1.940E+00	1.940E+00	0.185E+00	9.55	
BI-214	1600.00Y	1.00	1.425E+00	1.425E+00	0.219E+00	15.34	
PB-214	1600.00Y	1.00	1.566E+00	1.566E+00	0.213E+00	13.61	
PO-214	1600.00Y	1.00	1.566E+00	1.566E+00	0.213E+00	13.61	
PO-216	1.41E+10Y	1.00	1.940E+00	1.940E+00	0.185E+00	9.55	
PO-218	1600.00Y	1.00	1.566E+00	1.566E+00	0.213E+00	13.61	
RA-224	1.41E+10Y	1.00	5.566E+00	5.566E+00	1.021E+00	18.35	
RA-226	1600.00Y	1.00	1.425E+00	1.425E+00	0.219E+00	15.34	
AC-228	1.41E+10Y	1.00	1.809E+00	1.809E+00	0.400E+00	22.14	
RA-228	1.41E+10Y	1.00	1.809E+00	1.809E+00	0.400E+00	22.14	
TH-228	1.41E+10Y	1.00	1.940E+00	1.940E+00	0.185E+00	9.55	
TH-230	4.47E+09Y	1.00	1.425E+00	1.425E+00	0.219E+00	15.34	
TH-232	1.41E+10Y	1.00	1.809E+00	1.809E+00	0.400E+00	22.14	
TH-234	4.47E+09Y	1.00	2.212E+00	2.212E+00	1.663E+00	75.15	
U-234	4.47E+09Y	1.00	1.425E+00	1.425E+00	0.219E+00	15.34	
NP-237	2.14E+06Y	1.00	1.044E+00	1.044E+00	0.418E+00	40.04	
U-238	4.47E+09Y	1.00	2.212E+00	2.212E+00	1.663E+00	75.15	
AM-243	7380.00Y	1.00	4.869E-01	4.869E-01	0.910E-01	18.69	
ANH-511	1.00E+09Y	1.00	1.513E-01	1.513E-01	0.815E-01	53.85	
	Total Activity :		8.043E+01	8.052E+01			

Grand Total Activity : 8.043E+01 8.052E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232664001 Acquisition date : 14-JUL-2009 08:26:41

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	90.04	126	363	0.90	180.07	178	6	1.76E-02	51.0	6.44E+00	T
0	129.07	71	414	0.96	258.14	254	10	9.89E-03	****	7.29E+00	T
0	182.08	15	183	0.63	364.16	364	6	2.08E-03	****	6.46E+00	T
0	186.19	193	263	1.10	372.38	369	9	2.67E-02	35.4	6.38E+00	T
0	209.21	118	294	0.95	418.43	414	10	1.64E-02	57.1	5.97E+00	T
0	270.75	56	213	1.40	541.50	537	9	7.80E-03	98.2	5.03E+00	T
0	328.18	71	192	1.22	656.37	652	11	9.83E-03	80.8	4.39E+00	T
0	409.99	80	117	1.11	819.97	815	11	1.11E-02	58.0	3.72E+00	T
0	462.88	77	137	1.18	925.77	919	13	1.07E-02	66.3	3.38E+00	T
1	772.68	49	65	2.02	1545.37	1531	37	6.81E-03	70.2	2.20E+00	
0	795.26	50	60	1.17	1590.52	1585	10	6.94E-03	64.5	2.14E+00	T
0	861.90	75	68	2.28	1723.80	1717	17	1.04E-02	55.4	1.99E+00	
0	936.30	28	68	1.20	1872.59	1863	14	3.88E-03	****	1.84E+00	T
3	965.15	34	51	2.06	1930.31	1926	22	4.76E-03	79.1	1.79E+00	T
0	1588.89	27	9	1.74	3177.78	3172	12	3.72E-03	59.2	1.15E+00	
0	1593.62	9	12	1.35	3187.23	3183	9	1.21E-03	****	1.15E+00	
0	1729.93	28	4	1.96	3459.85	3455	10	3.83E-03	48.4	1.09E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:27:11.42

```
*****************************************************************************
*                            GEL Laboratories LLC                            *
*                              2040 Savage Road                              *
*                            Charleston, SC 29414                            *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664001.CNF;1 *
* Acquisition date  : 14-JUL-2009 08:26:41  Detector SN#     :             *
* Detector ID       : GAM16                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.90          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 26-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232664001            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.04070E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1023-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.480E+01	3.583E+00	6.631E-01	5.582E-02	52.490
CD-109	3.631E+00	1.246E+00	1.740E+00	1.500E-01	2.088
SN-126	3.555E-01	1.220E-01	1.742E-01	1.496E-02	2.041
TL-208	4.851E-01	9.678E-02	6.885E-02	4.742E-03	7.046
BI-211	4.501E+00	5.658E-01	3.619E-01	2.247E-02	12.435
BI-212	1.494E+00	5.113E-01	5.650E-01	4.873E-02	2.644
PB-212	1.940E+00	1.852E-01	1.118E-01	7.885E-03	17.353
PO-212	1.940E+00	1.852E-01	1.118E-01	7.885E-03	17.353
BI-214	1.425E+00	2.185E-01	1.298E-01	1.036E-02	10.976
PB-214	1.566E+00	2.131E-01	1.292E-01	1.047E-02	12.121
PO-214	1.566E+00	2.131E-01	1.292E-01	1.047E-02	12.121
PO-216	1.940E+00	1.852E-01	1.118E-01	7.885E-03	17.353
PO-218	1.566E+00	2.131E-01	1.292E-01	1.047E-02	12.121
RA-224	5.566E+00	1.021E+00	1.271E+00	6.936E-02	4.378
RA-226	1.425E+00	2.185E-01	1.298E-01	1.036E-02	10.976
AC-228	1.809E+00	4.004E-01	2.356E-01	2.796E-02	7.676
RA-228	1.809E+00	4.004E-01	2.356E-01	2.796E-02	7.676
TH-228	1.940E+00	1.852E-01	1.118E-01	7.884E-03	17.355

Sample ID : G232664001 Acquisition date : 14-JUL-2009 08:26:41

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.425E+00	2.185E-01	1.298E-01	1.036E-02	10.976
TH-232	1.809E+00	4.004E-01	2.356E-01	2.796E-02	7.676
TH-234	2.212E+00	1.663E+00	2.694E+00	4.684E-01	0.821
U-234	1.425E+00	2.185E-01	1.298E-01	1.036E-02	10.976
NP-237	1.044E+00	4.179E-01	4.628E-01	1.033E-01	2.256
U-238	2.212E+00	1.663E+00	2.694E+00	4.684E-01	0.821
AM-243	4.869E-01	9.098E-02	1.137E-01	8.726E-03	4.283
ANH-511	1.513E-01	8.148E-02	5.047E-02	2.964E-03	2.998

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.599E-01		3.739E-01	5.967E-01	4.012E-02	-0.268
NA-22	-2.618E-03		5.191E-02	8.414E-02	6.253E-03	-0.031
NA-24	-1.294E+00		8.435E+00	Half-Life too short		
AL-26	3.747E-02		2.959E-02	6.121E-02	3.655E-03	0.612
TI-44	4.570E-01	+	6.668E-02	1.059E-01	8.356E-03	4.315
SC-46	-4.403E-02		4.836E-02	7.377E-02	6.933E-03	-0.597
V-48	1.486E-02		9.548E-02	1.603E-01	1.382E-02	0.093
CR-51	-2.202E-01		4.508E-01	7.359E-01	4.625E-02	-0.299
MN-52	-3.044E-01		3.701E-01	5.157E-01	4.264E-02	-0.590
MN-54	-2.351E-03		4.417E-02	7.354E-02	6.280E-03	-0.032
CO-56	7.701E-03		5.071E-02	8.570E-02	7.476E-03	0.090
CO-57	-1.170E-02		3.090E-02	4.960E-02	3.033E-03	-0.236
CO-58	-1.715E-02		4.646E-02	7.538E-02	6.177E-03	-0.227
FE-59	-2.239E-02		1.165E-01	1.882E-01	1.462E-02	-0.119
CO-60	4.472E-02		5.059E-02	8.983E-02	7.708E-03	0.498
ZN-65	-4.440E-02		1.373E-01	1.861E-01	1.236E-02	-0.239
GE-68	2.008E+00		1.633E+00	2.952E+00	2.148E-01	0.680
AS-73	-3.916E-02		1.096E+00	1.838E+00	1.358E-01	-0.021
AS-74	-2.872E-02		1.239E-01	1.982E-01	1.199E-02	-0.145
SE-75	1.930E-02		5.852E-02	8.812E-02	4.936E-03	0.219
BR-77	1.146E+01		2.594E+01	4.391E+01	2.591E+00	0.261
SR-82	-6.537E-01		4.863E-01	7.236E-01	5.547E-02	-0.903
RB-83	4.052E-02		7.938E-02	1.350E-01	7.964E-03	0.300
RB-84	-1.510E-02		8.523E-02	1.398E-01	1.297E-02	-0.108
KR-85	3.091E+01		1.049E+01	1.809E+01	1.064E+00	1.708
SR-85	1.631E-01		5.535E-02	9.548E-02	5.616E-03	1.708
RB-86	1.227E+00		1.122E+00	2.013E+00	1.467E-01	0.610
Y-88	8.314E-03		3.075E-02	5.410E-02	3.115E-03	0.154
ZR-88	4.327E-03		3.497E-02	5.856E-02	3.164E-03	0.074
Y-91	5.170E+00		2.432E+01	4.050E+01	2.473E+00	0.128
NB-94	1.075E-02		4.189E-02	6.890E-02	4.570E-03	0.156
NB-95	6.860E-02		5.913E-02	9.235E-02	6.937E-03	0.743
NB-95M	6.255E-02		1.739E-01	2.492E-01	1.806E-02	0.251
ZR-95	4.786E-02		8.568E-02	1.443E-01	1.209E-02	0.332
NB-97	-2.408E-01		7.681E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	8.310E+00		1.697E+01	Half-Life too short		
MO-99	5.845E+00		2.753E+01	4.508E+01	6.490E+00	0.130
TC-99M	-8.179E+13		4.761E+13	Half-Life too short		
RH-101	2.075E-02		4.166E-02	6.726E-02	3.521E-03	0.308
RH-102	4.194E-03		3.206E-02	5.330E-02	3.070E-03	0.079
RU-103	-3.992E-02		4.654E-02	7.092E-02	8.979E-03	-0.563
RH-106	-5.862E-02		3.733E-01	5.986E-01	7.109E-02	-0.098
RU-106	-5.862E-02		3.733E-01	5.986E-01	3.637E-02	-0.098
AG-108M	-1.723E-02		3.887E-02	6.249E-02	3.819E-03	-0.276
AG-110M	-3.994E-03		3.776E-02	6.056E-02	3.907E-03	-0.066
IN-111	9.306E-01		2.684E+00	3.849E+00	2.107E-01	0.242
IN-113M	1.218E-02		5.171E-02	8.715E-02	5.065E-03	0.140
SN-113	1.218E-02		5.171E-02	8.715E-02	5.065E-03	0.140
IN-114M	-1.036E-01		2.454E-01	3.378E-01	1.753E-02	-0.307
CD-115	3.819E-05		1.421E-05	Half-Life too short		
SN-117M	4.649E-02		7.603E-02	1.270E-01	6.613E-03	0.366
SB-122	2.273E+00		4.609E+00	7.807E+00	4.684E-01	0.291
I-123	4.219E+01		1.119E+02	Half-Life too short		
TE-123M	6.621E-03		3.511E-02	5.768E-02	3.049E-03	0.115
I-124	1.961E-01		1.457E+00	2.076E+00	1.257E-01	0.094
SB-124	-3.145E-02		8.390E-02	1.292E-01	9.425E-03	-0.243
SB-125	4.910E-02		1.070E-01	1.820E-01	1.061E-02	0.270
TE-125M	-3.853E+00		1.162E+01	1.893E+01	1.666E+00	-0.203
I-126	1.384E-01		2.537E-01	4.275E-01	2.631E-02	0.324
SB-126	1.876E-02		1.997E-01	3.156E-01	2.169E-02	0.059
SB-127	-5.262E-02		2.650E+00	4.274E+00	4.604E-01	-0.012
XE-127	-5.406E-02		6.250E-02	9.322E-02	4.906E-03	-0.580
I-131	9.447E-02		1.670E-01	2.873E-01	1.795E-02	0.329
TE-132	-3.894E-01		1.446E+00	2.292E+00	3.391E-01	-0.170
BA-133	3.657E-02		5.419E-02	8.278E-02	9.463E-03	0.442
I-133	1.603E-02		3.021E-02	Half-Life too short		
CS-134	1.115E-01	+	7.246E-02	1.132E-01	9.079E-03	0.985
CS-135	5.318E-02		2.289E-01	3.237E-01	2.418E-02	0.164
I-135	-1.647E+12		3.362E+12	Half-Life too short		
CS-136	3.096E-02		1.661E-01	2.782E-01	2.266E-02	0.111
BA-137M	-1.672E-02		4.286E-02	6.445E-02	3.928E-03	-0.259
CS-137	-1.767E-02		4.530E-02	6.813E-02	4.168E-03	-0.259
CE-139	2.451E-02		3.676E-02	6.143E-02	3.107E-03	0.399
BA-140	-4.717E-02		3.636E-01	5.891E-01	1.917E-01	-0.080
LA-140	1.820E-02		1.282E-01	1.889E-01	1.413E-02	0.096
CE-141	3.173E-02		8.316E-02	1.362E-01	7.810E-03	0.233
CE-143	3.189E-03		5.259E-04	Half-Life too short		
CE-144	5.345E-03		2.955E-01	4.252E-01	6.033E-02	0.013
PM-144	-2.550E-02		4.306E-02	6.617E-02	4.338E-03	-0.385
PR-144	-1.731E+00		2.922E+00	4.491E+00	2.941E-01	-0.385
PM-146	4.880E-02		4.949E-02	8.666E-02	7.402E-03	0.563
ND-147	-3.539E-01		7.714E-01	1.217E+00	1.653E-01	-0.291
PM-149	-1.805E-05		1.183E-04	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-2.467E-03		1.307E-01	1.792E-01	1.135E-02	-0.014
GD-153	-5.167E-02		1.081E-01	1.520E-01	1.147E-02	-0.340
EU-154	-8.630E-03		1.447E-01	2.342E-01	2.442E-02	-0.037
EU-155	6.029E-02		1.303E-01	2.187E-01	1.548E-02	0.276
TB-160	-1.126E-01		1.608E-01	2.500E-01	2.310E-02	-0.450
HO-166M	-2.582E-02		7.071E-02	1.103E-01	7.450E-03	-0.234
TM-171	6.158E+00		3.942E+01	5.817E+01	4.284E+00	0.106
LU-176	-1.884E-03		3.129E-02	4.770E-02	2.673E-03	-0.040
LU-177	4.130E+00	+	2.370E+00	3.138E+00	1.661E-01	1.316
LU-177M	1.964E-02		2.220E-01	3.221E-01	1.773E-02	0.061
HF-181	6.166E-02		5.190E-02	9.191E-02	5.315E-03	0.671
W-181	1.210E-01		5.291E-01	7.836E-01	5.742E-02	0.154
TA-182	1.272E-01		2.596E-01	4.406E-01	2.825E-02	0.289
RE-183	-1.157E-01		1.383E-01	2.174E-01	1.115E-02	-0.532
RE-184	9.660E-02		2.876E-01	4.684E-01	2.577E-02	0.206
OS-185	4.466E-03		5.233E-02	8.541E-02	5.202E-03	0.052
RE-188	1.158E-01		2.183E-01	3.634E-01	1.920E-02	0.319
W-188	-5.653E+00		9.820E+00	1.381E+01	7.723E-01	-0.409
IR-192	-1.373E-02		4.049E-02	6.433E-02	3.624E-03	-0.213
AU-195	1.659E-01		2.971E-01	4.617E-01	3.427E-02	0.359
TL-200	-1.846E-03		1.498E-03	Half-Life too short		
TL-201	7.995E+00		1.596E+01	2.649E+01	1.340E+00	0.302
TL-202	1.702E-02		9.546E-02	1.596E-01	8.972E-03	0.107
HG-203	5.290E-02		5.187E-02	8.944E-02	5.318E-03	0.591
BI-207	-2.824E-02		6.327E-02	9.984E-02	7.484E-03	-0.283
TL-207	3.908E-01		8.722E-01	1.311E+00	2.155E-01	0.298
PO-209	4.409E+00		9.130E+00	1.579E+01	1.503E+00	0.279
BI-210	1.278E+00		4.964E+00	8.402E+00	6.636E-01	0.152
PB-210	1.278E+00		4.964E+00	8.402E+00	6.636E-01	0.152
PO-210	1.278E+00		4.964E+00	8.402E+00	5.745E-01	0.152
PB-211	-2.385E-01		1.337E+00	1.887E+00	1.176E+00	-0.126
PO-215	3.908E-01		8.722E-01	1.311E+00	2.155E-01	0.298
RN-219	3.165E-01		4.870E-01	8.355E-01	1.125E-01	0.379
RN-220	-3.058E+00		2.925E+01	4.744E+01	2.832E+00	-0.064
RA-223	3.908E-01		8.722E-01	1.311E+00	2.155E-01	0.298
AC-227	-4.155E-01		4.762E-01	7.216E-01	9.990E-02	-0.576
TH-227	-4.155E-01		4.779E-01	7.216E-01	1.213E-01	-0.576
TH-229	-6.883E-02		5.956E-01	9.591E-01	4.996E-02	-0.072
PA-231	-1.707E+00		1.752E+00	2.784E+00	3.811E-01	-0.613
TH-231	3.908E-01		8.722E-01	1.311E+00	2.155E-01	0.298
U-231	-1.442E+00		2.279E+00	3.206E+00	2.467E-01	-0.450
PA-233	-3.438E-03		7.127E-02	1.193E-01	7.131E-03	-0.029
PA-234	-4.824E-02		3.859E-01	6.339E-01	1.202E-01	-0.076
PA-234M	5.549E+00		7.988E+00	1.395E+01	1.536E+00	0.398
U-235	-4.562E-03		2.661E-01	4.298E-01	6.966E-02	-0.011
NP-236	-3.989E-02		9.650E-02	1.546E-01	7.993E-03	-0.258
NP-239	1.128E-01		2.286E-01	3.833E-01	2.421E-02	0.294
AM-241	2.980E-01		2.120E-01	3.323E-01	2.647E-02	0.897

Sample ID : G232664001 Acquisition date : 14-JUL-2009 08:26:41

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	3.303E-04		1.163E-01	1.922E-01	1.355E-02	0.002
CM-247	1.931E-02		4.497E-02	7.462E-02	4.068E-03	0.259
CF-249	-7.039E-03		4.613E-02	7.602E-02	4.117E-03	-0.093
CF-251	-8.171E-02		1.526E-01	2.420E-01	1.236E-02	-0.338

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232664001       *
* Acquisition date  : 14-JUL-2009 08:26:41 Detector SN#    :            *
* Detector ID       : GAM16                Sensitivity     : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500     *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000    *
* Elapsed real time:    0 02:00:01.90      Half life ratio : 8.000     *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       : 26-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232664001           Analyst initials: MXR1       *
* Batch Number      : 882713               Sample Quantity : 1.0407E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
*                                                                       *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.480E+01	3.511E+00	3.293E-01	1.792E+00
CD-109	3.631E+00	1.221E+00	8.748E-01	6.229E-01
SN-126	3.555E-01	1.195E-01	8.759E-02	6.098E-02
TL-208	4.851E-01	9.484E-02	3.433E-02	4.839E-02
BI-211	4.501E+00	5.545E-01	1.809E-01	2.829E-01
BI-212	1.494E+00	5.011E-01	2.815E-01	2.557E-01
PB-212	1.940E+00	1.815E-01	5.596E-02	9.261E-02
PO-212	1.940E+00	1.815E-01	5.596E-02	9.261E-02
BI-214	1.425E+00	2.142E-01	6.472E-02	1.093E-01
PB-214	1.566E+00	2.088E-01	6.456E-02	1.066E-01
PO-214	1.566E+00	2.088E-01	6.456E-02	1.066E-01
PO-216	1.940E+00	1.815E-01	5.596E-02	9.261E-02
PO-218	1.566E+00	2.088E-01	6.456E-02	1.066E-01
RA-224	5.566E+00	1.001E+00	6.365E-01	5.106E-01
RA-226	1.425E+00	2.142E-01	6.472E-02	1.093E-01
AC-228	1.809E+00	3.924E-01	1.173E-01	2.002E-01
RA-228	1.809E+00	3.924E-01	1.173E-01	2.002E-01
TH-228	1.940E+00	1.815E-01	5.596E-02	9.261E-02
TH-230	1.425E+00	2.141E-01	6.472E-02	1.093E-01
TH-232	1.809E+00	3.924E-01	1.173E-01	2.002E-01
TH-234	2.212E+00	1.629E+00	1.357E+00	8.313E-01
U-234	1.425E+00	2.141E-01	6.472E-02	1.093E-01
NP-237	1.044E+00	4.095E-01	2.328E-01	2.089E-01
U-238	2.212E+00	1.629E+00	1.357E+00	8.313E-01
AM-243	4.869E-01	8.916E-02	5.721E-02	4.549E-02
ANH-511	1.513E-01	7.985E-02	2.518E-02	4.074E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.599E-01	3.665E-01	2.978E-01	1.870E-01 NOT IDENT.

NA-22	-2.618E-03	5.087E-02	4.181E-02	2.595E-02	NOT IDENT.
NA-24	-1.294E+06	1.653E+07	0.000E+00	8.435E+06	SHORT HLIF
AL-26	3.747E-02	2.899E-02	3.037E-02	1.479E-02	NOT IDENT.
TI-44	4.570E-01	6.535E-02	5.329E-02	3.334E-02	FAIL ABUN
SC-46	-4.403E-02	4.740E-02	3.672E-02	2.418E-02	FAIL ABUN
V-48	1.486E-02	9.357E-02	7.977E-02	4.774E-02	NOT IDENT.
CR-51	-2.202E-01	4.418E-01	3.680E-01	2.254E-01	NOT IDENT.
MN-52	-3.044E-01	3.627E-01	2.561E-01	1.851E-01	FAIL ABUN
MN-54	-2.351E-03	4.328E-02	3.661E-02	2.208E-02	NOT IDENT.
CO-56	7.701E-03	4.969E-02	4.266E-02	2.535E-02	NOT IDENT.
CO-57	-1.170E-02	3.028E-02	2.491E-02	1.545E-02	NOT IDENT.
CO-58	-1.715E-02	4.553E-02	3.753E-02	2.323E-02	NOT IDENT.
FE-59	-2.239E-02	1.141E-01	9.356E-02	5.823E-02	NOT IDENT.
CO-60	4.472E-02	4.957E-02	4.463E-02	2.529E-02	NOT IDENT.
ZN-65	-4.440E-02	1.346E-01	9.251E-02	6.867E-02	NOT IDENT.
GE-68	2.008E+00	1.600E+00	1.468E+00	8.165E-01	NOT IDENT.
AS-73	-3.916E-02	1.074E+00	9.266E-01	5.478E-01	NOT IDENT.
AS-74	-2.872E-02	1.214E-01	9.882E-02	6.194E-02	NOT IDENT.
SE-75	1.930E-02	5.735E-02	4.410E-02	2.926E-02	NOT IDENT.
BR-77	1.146E+01	2.542E+01	2.191E+01	1.297E+01	FAIL ABUN
SR-82	-6.537E-01	4.766E-01	3.604E-01	2.431E-01	NOT IDENT.
RB-83	4.052E-02	7.779E-02	6.735E-02	3.969E-02	NOT IDENT.
RB-84	-1.510E-02	8.353E-02	6.959E-02	4.261E-02	NOT IDENT.
KR-85	3.091E+01	1.028E+01	9.028E+00	5.244E+00	NOT IDENT.
SR-85	1.631E-01	5.424E-02	4.764E-02	2.767E-02	NOT IDENT.
RB-86	1.227E+00	1.100E+00	1.001E+00	5.611E-01	NOT IDENT.
Y-88	8.314E-03	3.014E-02	2.684E-02	1.538E-02	NOT IDENT.
ZR-88	4.327E-03	3.427E-02	2.925E-02	1.748E-02	NOT IDENT.
Y-91	5.170E+00	2.383E+01	2.013E+01	1.216E+01	NOT IDENT.
NB-94	1.075E-02	4.105E-02	3.433E-02	2.095E-02	NOT IDENT.
NB-95	6.860E-02	5.795E-02	4.599E-02	2.957E-02	NOT IDENT.
NB-95M	6.255E-02	1.704E-01	1.248E-01	8.695E-02	NOT IDENT.
ZR-95	4.786E-02	8.397E-02	7.186E-02	4.284E-02	NOT IDENT.
NB-97	-2.408E+05	1.505E+06	0.000E+00	7.681E+05	SHORT HLIF
ZR-97	8.310E+06	3.326E+07	0.000E+00	1.697E+07	SHORT HLIF
MO-99	5.845E+00	2.698E+01	2.246E+01	1.376E+01	FAIL ABUN
TC-99M	-8.179E+19	9.331E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.075E-02	4.083E-02	3.370E-02	2.083E-02	NOT IDENT.
RH-102	4.194E-03	3.142E-02	2.661E-02	1.603E-02	NOT IDENT.
RU-103	-3.992E-02	4.560E-02	3.539E-02	2.327E-02	FAIL ABUN
RH-106	-5.862E-02	3.659E-01	2.984E-01	1.867E-01	FAIL ABUN
RU-106	-5.862E-02	3.658E-01	2.984E-01	1.866E-01	FAIL ABUN
AG-108M	-1.723E-02	3.810E-02	3.120E-02	1.944E-02	NOT IDENT.
AG-110M	-3.994E-03	3.700E-02	3.018E-02	1.888E-02	FAIL ABUN
IN-111	9.306E-01	2.630E+00	1.927E+00	1.342E+00	NOT IDENT.
IN-113M	1.218E-02	5.068E-02	4.354E-02	2.586E-02	NOT IDENT.
SN-113	1.218E-02	5.068E-02	4.354E-02	2.586E-02	NOT IDENT.
IN-114M	-1.036E-01	2.405E-01	1.693E-01	1.227E-01	NOT IDENT.
CD-115	3.819E+01	2.784E+01	0.000E+00	1.421E+01	SHORT HLIF
SN-117M	4.649E-02	7.450E-02	6.368E-02	3.801E-02	NOT IDENT.
SB-122	2.273E+00	4.517E+00	3.894E+00	2.305E+00	NOT IDENT.
I-123	4.219E+07	2.193E+08	0.000E+00	1.119E+08	SHORT HLIF
TE-123M	6.621E-03	3.441E-02	2.893E-02	1.756E-02	NOT IDENT.
I-124	1.961E-01	1.428E+00	1.035E+00	7.284E-01	NOT IDENT.
SB-124	-3.145E-02	8.222E-02	6.413E-02	4.195E-02	FAIL ABUN
SB-125	4.910E-02	1.048E-01	9.091E-02	5.348E-02	FAIL ABUN
TE-125M	-3.853E+00	1.139E+01	9.512E+00	5.811E+00	NOT IDENT.
I-126	1.384E-01	2.487E-01	2.131E-01	1.269E-01	NOT IDENT.
SB-126	1.876E-02	1.957E-01	1.572E-01	9.986E-02	FAIL ABUN
SB-127	-5.262E-02	2.597E+00	2.130E+00	1.325E+00	NOT IDENT.
XE-127	-5.406E-02	6.125E-02	4.671E-02	3.125E-02	NOT IDENT.
I-131	9.447E-02	1.637E-01	1.436E-01	8.351E-02	NOT IDENT.
TE-132	-3.894E-01	1.417E+00	1.148E+00	7.228E-01	NOT IDENT.
BA-133	3.657E-02	5.310E-02	4.137E-02	2.709E-02	NOT IDENT.
I-133	1.603E+04	5.920E+04	0.000E+00	3.021E+04	SHORT HLIF
CS-134	1.115E-01	7.101E-02	5.639E-02	3.623E-02	FAIL ABUN
CS-135	5.318E-02	2.243E-01	1.620E-01	1.145E-01	NOT IDENT.
I-135	-1.647E+18	6.590E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.096E-02	1.628E-01	1.384E-01	8.304E-02	FAIL ABUN
BA-137M	-1.672E-02	4.200E-02	3.212E-02	2.143E-02	NOT IDENT.
CS-137	-1.767E-02	4.440E-02	3.396E-02	2.265E-02	NOT IDENT.
CE-139	2.451E-02	3.603E-02	3.081E-02	1.838E-02	NOT IDENT.
BA-140	-4.717E-02	3.563E-01	2.939E-01	1.818E-01	NOT IDENT.
LA-140	1.820E-02	1.257E-01	9.376E-02	6.411E-02	FAIL ABUN
CE-141	3.173E-02	8.150E-02	6.834E-02	4.158E-02	NOT IDENT.
CE-143	3.189E+03	1.031E+03	0.000E+00	5.259E+02	SHORT HLIF
CE-144	5.345E-03	2.896E-01	2.134E-01	1.477E-01	NOT IDENT.
PM-144	-2.550E-02	4.220E-02	3.297E-02	2.153E-02	NOT IDENT.

PR-144	-1.731E+00	2.864E+00	2.238E+00	1.461E+00	NOT IDENT.
PM-146	4.880E-02	4.850E-02	4.326E-02	2.475E-02	NOT IDENT.
ND-147	-3.539E-01	7.560E-01	6.074E-01	3.857E-01	FAIL ABUN
PM-149	-1.805E+01	2.318E+02	0.000E+00	1.183E+02	SHORT HLIF
EU-152	-2.467E-03	1.281E-01	8.957E-02	6.537E-02	FAIL ABUN
GD-153	-5.167E-02	1.060E-01	7.639E-02	5.406E-02	NOT IDENT.
EU-154	-8.630E-03	1.418E-01	1.164E-01	7.233E-02	NOT IDENT.
EU-155	6.029E-02	1.276E-01	1.099E-01	6.513E-02	FAIL ABUN
TB-160	-1.126E-01	1.576E-01	1.244E-01	8.042E-02	FAIL ABUN
HO-166M	-2.582E-02	6.929E-02	5.496E-02	3.535E-02	FAIL ABUN
TM-171	6.158E+00	3.863E+01	2.929E+01	1.971E+01	NOT IDENT.
LU-176	-1.884E-03	3.066E-02	2.385E-02	1.564E-02	FAIL ABUN
LU-177	4.130E+00	2.323E+00	1.572E+00	1.185E+00	FAIL ABUN
LU-177M	1.964E-02	2.176E-01	1.609E-01	1.110E-01	NOT IDENT.
HF-181	6.166E-02	5.086E-02	4.587E-02	2.595E-02	NOT IDENT.
W-181	1.210E-01	5.185E-01	3.946E-01	2.645E-01	NOT IDENT.
TA-182	1.272E-01	2.544E-01	2.190E-01	1.298E-01	FAIL ABUN
RE-183	-1.157E-01	1.356E-01	1.091E-01	6.917E-02	FAIL ABUN
RE-184	9.660E-02	2.818E-01	2.345E-01	1.438E-01	NOT IDENT.
OS-185	4.466E-03	5.129E-02	4.257E-02	2.617E-02	NOT IDENT.
RE-188	1.158E-01	2.139E-01	1.823E-01	1.091E-01	NOT IDENT.
W-188	-5.653E+00	9.623E+00	6.908E+00	4.910E+00	FAIL ABUN
IR-192	-1.373E-02	3.968E-02	3.217E-02	2.025E-02	FAIL ABUN
AU-195	1.659E-01	2.911E-01	2.321E-01	1.485E-01	FAIL ABUN
TL-200	-1.846E+03	2.936E+03	0.000E+00	1.498E+03	SHORT HLIF
TL-201	7.995E+00	1.564E+01	1.328E+01	7.978E+00	NOT IDENT.
TL-202	1.702E-02	9.355E-02	7.968E-02	4.773E-02	NOT IDENT.
HG-203	5.290E-02	5.084E-02	4.475E-02	2.594E-02	NOT IDENT.
BI-207	-2.824E-02	6.200E-02	4.965E-02	3.163E-02	FAIL ABUN
TL-207	3.908E-01	8.547E-01	6.553E-01	4.361E-01	FAIL ABUN
PO-209	4.409E+00	8.947E+00	7.858E+00	4.565E+00	NOT IDENT.
BI-210	1.278E+00	4.865E+00	4.237E+00	2.482E+00	NOT IDENT.
PB-210	1.278E+00	4.865E+00	4.237E+00	2.482E+00	NOT IDENT.
PO-210	1.278E+00	4.865E+00	4.237E+00	2.482E+00	NOT IDENT.
PB-211	-2.385E-01	1.311E+00	9.427E-01	6.687E-01	NOT IDENT.
PO-215	3.908E-01	8.547E-01	6.553E-01	4.361E-01	FAIL ABUN
RN-219	3.165E-01	4.772E-01	4.173E-01	2.435E-01	FAIL ABUN
RN-220	-3.058E+00	2.867E+01	2.366E+01	1.463E+01	NOT IDENT.
RA-223	3.908E-01	8.547E-01	6.553E-01	4.361E-01	FAIL ABUN
AC-227	-4.155E-01	4.667E-01	3.612E-01	2.381E-01	FAIL ABUN
TH-227	-4.155E-01	4.683E-01	3.612E-01	2.389E-01	FAIL ABUN
TH-229	-6.883E-02	5.837E-01	4.807E-01	2.978E-01	FAIL ABUN
PA-231	-1.707E+00	1.717E+00	1.393E+00	8.758E-01	FAIL ABUN
TH-231	3.908E-01	8.547E-01	6.553E-01	4.361E-01	FAIL ABUN
U-231	-1.442E+00	2.233E+00	1.612E+00	1.139E+00	FAIL ABUN
PA-233	-3.438E-03	6.985E-02	5.968E-02	3.564E-02	FAIL ABUN
PA-234	-4.824E-02	3.782E-01	3.154E-01	1.930E-01	FAIL ABUN
PA-234M	5.549E+00	7.829E+00	6.941E+00	3.994E+00	NOT IDENT.
U-235	-4.562E-03	2.608E-01	2.157E-01	1.331E-01	FAIL ABUN
NP-236	-3.989E-02	9.457E-02	7.752E-02	4.825E-02	NOT IDENT.
NP-239	1.128E-01	2.240E-01	1.925E-01	1.143E-01	FAIL ABUN
AM-241	2.980E-01	2.078E-01	1.674E-01	1.060E-01	NOT IDENT.
CM-243	3.303E-04	1.140E-01	9.660E-02	5.815E-02	FAIL ABUN
CM-247	1.931E-02	4.407E-02	3.727E-02	2.249E-02	NOT IDENT.
CF-249	-7.039E-03	4.520E-02	3.798E-02	2.306E-02	NOT IDENT.
CF-251	-8.171E-02	1.495E-01	1.213E-01	7.628E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	348.7236
46.50	348.7236
46.50	348.7236
48.70	377.3190
49.72	378.9084
51.35	337.1559
52.39	354.1885
52.97	349.0546
53.15	342.7627
53.44	340.1866
54.07	350.6163
56.28	372.1103
56.28	372.1118
57.37	0.0000
57.53	372.8673
57.53	372.8681
57.60	374.7505
57.98	360.1067
57.98	360.1067
59.32	329.4313
59.32	329.4313
59.40	329.4728
59.54	326.5901
59.72	322.2485
60.01	325.3533
61.10	351.0917
61.14	373.3358
61.30	373.4288
63.00	440.1511
63.29	440.3451
63.29	440.3451
63.58	433.1046
64.28	455.5205
65.12	444.1717
65.20	444.2244
65.20	444.2244
66.05	444.7883
66.72	431.7802
66.83	431.8525
66.91	443.8595
67.20	456.0089
67.20	456.0089
67.75	490.0427
67.85	490.1146
68.90	482.1211
68.90	482.1211
69.30	493.6476
69.67	459.1513
70.82	491.4660
70.82	491.4660
70.83	491.4740
72.80	480.7858
72.87	480.8325
72.87	480.8325
74.67	505.2687
74.81	505.3667
74.81	505.3667
74.81	505.3667
74.81	505.3667
74.81	505.3667
74.81	505.3667
74.97	505.4769
75.28	505.6932
75.70	505.9830
77.11	471.5150
77.11	471.5150
77.11	471.5150

77.11	471.5150
77.11	471.5150
77.11	471.5150
78.38	460.1720
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79.80	441.2606
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80.18	479.5425
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80.30	479.6175
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81.07	544.1178
81.07	544.1178
81.07	544.1178
81.07	544.1178
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83.37	447.9087
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83.78	457.3236
83.78	457.3236
83.78	457.3236
84.21	440.7433
84.40	440.8506
84.90	444.1953
85.43	432.2325
86.29	463.3923
86.50	463.5158
86.54	463.5379
86.59	463.5674
86.72	508.1670
86.79	508.2094
86.94	549.7695
87.30	593.0367
87.30	593.0367
87.30	593.0367
87.30	593.0367
87.30	593.0367
87.30	593.0367
87.57	580.9420
87.88	561.1808
88.03	561.2855
88.36	438.4432
88.47	438.5041
89.95	909.4441
91.11	505.5381
92.29	355.5440
92.38	355.5833
92.38	355.5833
93.35	332.7828
94.00	319.1013
94.67	333.3071
94.67	333.3091
94.90	355.1107
94.90	355.1107
94.90	355.1107
94.90	355.1107
95.87	397.4375
95.87	397.4375
96.73	393.1800
97.43	357.7297
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98.44	322.3371
98.88	331.0702
99.55	311.8384
99.55	311.8384
99.86	310.9746
100.00	311.0245
100.10	311.0622
103.18	391.4200
103.76	346.6335
105.00	319.6614
105.31	339.3900
108.00	364.0155
109.28	362.5560
111.00	299.0770
111.00	299.0770

111.76	328.9579
112.95	382.7911
115.19	323.2243
116.30	319.6318
117.00	316.8863
117.00	316.8863
117.66	319.0934
121.11	326.2191
121.62	327.3882
121.78	318.4561
122.06	318.5473
122.32	319.6301
122.32	319.6301
122.32	319.6301
122.32	319.6301
123.07	326.7287
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129.76	363.8788
131.20	383.7401
133.02	363.4195
133.54	360.3715
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136.00	346.2374
136.25	354.4220
136.48	341.3323
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140.51	0.0000
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142.65	318.8625
143.76	353.8621
144.24	340.7553
144.24	340.7553
144.24	340.7553
144.24	340.7553
145.22	326.7651
145.44	327.8524
147.16	360.0781
152.43	308.3382
152.70	295.0469
153.22	307.5248
154.21	331.4680
154.21	331.4680
154.21	331.4680
154.21	331.4680
155.03	329.6484
156.02	322.7168
158.56	297.5977
159.00	0.0000
159.00	313.2154
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161.27	322.1139
162.32	344.1709
162.64	331.8213
163.35	332.0215
163.89	315.5654
165.85	297.3726
167.43	301.9299
171.28	310.2058
171.86	298.8607
172.10	298.9197
176.55	307.3469
176.60	307.3581
181.06	267.8214
184.41	168.8867
185.71	169.0588
186.00	169.0979
190.27	269.7565
192.34	301.6200
193.63	274.2766
197.04	272.8535
198.01	274.1194
198.60	295.5805
200.40	282.0892
201.83	300.5713
202.84	311.9597
205.31	279.6807
208.36	290.6214
208.81	290.7163

209.75	239.2711
209.75	239.2711
210.97	222.2526
215.65	242.0127
216.55	249.7342
218.09	255.4170
222.10	255.0501
223.80	245.5719
226.40	278.6680
227.00	245.0243
227.08	247.2162
227.20	247.2369
228.16	239.7690
228.18	239.7723
228.18	239.7723
231.56	0.0000
235.69	266.4063
236.00	257.6968
236.00	257.6968
238.60	265.6070
238.63	265.6125
238.63	265.6125
238.63	265.6125
239.00	265.6771
240.98	266.0261
241.98	235.8413
241.98	235.8413
241.98	235.8413
244.69	211.5762
245.39	194.0334
247.94	200.6646
248.90	248.6189
249.79	232.1773
252.40	202.6652
252.85	208.2627
252.85	208.2627
254.15	0.0000
256.20	238.6797
256.20	238.6797
260.50	193.6870
260.90	0.0000
262.80	206.2280
264.65	194.9329
268.24	232.6479
268.79	241.6783
269.46	241.7772
269.46	241.7772
269.46	241.7772
269.46	241.7772
271.23	195.4256
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276.40	194.8387
277.35	185.5772
277.60	183.3551
277.60	183.3551
278.00	184.5250
278.60	194.4949
279.20	193.6653
279.53	197.3058
280.46	216.3457
281.68	226.4270
283.67	204.1145
284.30	196.9637
285.00	184.3894
285.90	0.0000
286.10	170.9421
286.10	170.9421
287.40	171.0736
288.45	0.0000
290.67	198.0032
290.80	198.0165
291.72	211.7346
293.26	0.0000
293.70	163.5271
295.21	162.1523
295.21	162.1523
295.21	162.1523
295.96	127.3535

296.50	127.3928
297.23	127.4458
298.57	127.5432
299.80	127.6338
299.80	127.6338
300.09	170.2057
300.09	170.2057
300.09	170.2057
300.10	170.2057
300.12	170.2080
301.29	170.3219
302.84	171.9944
303.76	178.1755
303.91	178.1898
304.40	178.2398
304.40	178.2398
304.84	161.5210
306.84	173.9084
308.46	162.1564
311.98	157.8843
316.51	153.6779
318.01	158.4113
319.02	166.7909
319.41	165.9045
320.08	168.7322
323.87	161.6891
323.87	161.6891
323.87	161.6891
323.87	161.6891
325.23	154.1016
328.77	177.8649
333.44	153.2333
334.20	153.2957
334.20	153.2957
334.30	153.3038
338.28	155.4882
338.28	155.4882
338.28	155.4882
338.28	155.4882
338.32	155.4902
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338.32	155.4902
340.50	163.1268
340.57	163.1311
344.27	143.8336
345.85	130.8638
350.59	0.0000
351.07	135.9039
351.92	142.5260
351.92	142.5260
351.92	142.5260
355.39	0.0000
356.01	123.7172
364.48	127.3914
366.43	161.5211
367.43	156.8753
367.94	0.0000
369.80	126.7831
374.96	159.3560
383.85	133.3726
387.95	139.3630
388.63	136.5430
391.69	128.1359
391.69	128.1359
392.90	122.4688
398.62	138.1500
400.65	139.2421
401.10	137.3512
401.81	127.7885
402.60	133.4958
404.84	157.1545
410.95	122.2197
411.60	128.6914
413.65	112.7104
414.70	111.1536
415.30	101.5162
415.76	117.6552
417.63	0.0000

418.52	110.3791
423.70	134.9006
427.08	119.5541
427.89	113.7636
432.53	130.5633
433.93	130.6434
439.47	118.2586
439.56	118.2630
439.89	116.3257
443.98	104.7822
444.90	106.7833
445.03	106.7899
445.03	106.7899
445.03	106.7899
445.03	106.7899
453.90	93.4310
463.38	105.3307
468.07	87.3995
473.00	82.2928
475.06	94.2706
475.35	102.2217
476.78	118.1705
477.59	106.2908
477.96	104.3194
482.03	88.5719
484.57	115.5625
487.03	111.6910
490.36	0.0000
492.35	0.0000
497.08	100.1318
507.63	0.0000
510.53	0.0000
510.84	88.6010
511.00	88.6064
511.85	88.6370
511.85	88.6370
513.99	95.7677
513.99	95.7677
520.41	83.8815
520.65	83.8896
527.90	0.0000
528.96	0.0000
529.64	82.1549
529.87	0.0000
531.02	99.4499
537.32	103.7581
543.00	102.9628
546.56	0.0000
549.76	86.8739
552.65	102.3145
555.20	80.9056
563.23	80.1195
563.90	79.1130
568.70	91.6031
569.32	89.5658
569.50	87.5131
569.67	87.5172
573.80	110.3359
574.00	104.1563
574.64	104.1809
578.91	96.4209
579.30	0.0000
583.14	94.1548
585.48	81.1178
591.81	79.9176
592.07	79.9251
593.00	88.2581
595.88	100.8198
600.56	94.7413
602.52	0.0000
602.71	100.7165
602.71	100.7165
603.60	78.1677
604.41	95.5652
604.70	95.5741
609.31	93.9880
609.31	93.9880
609.31	93.9880

609.31	93.9880
610.33	85.3154
612.46	97.5762
614.37	87.1806
618.01	81.7039
621.84	84.9571
621.84	84.9571
631.29	96.8089
633.02	81.0718
633.10	81.0737
634.78	77.9602
635.90	79.0430
636.97	89.6152
645.85	84.5957
646.12	82.4884
656.30	64.7291
657.75	70.0686
657.90	0.0000
661.65	83.9780
661.65	83.9780
664.57	0.0000
666.33	81.9779
666.33	81.9779
675.00	80.0739
677.61	58.7705
685.20	79.2664
692.80	75.1646
695.00	95.6337
696.49	99.9795
696.49	99.9795
697.00	96.7698
697.49	97.8605
698.33	89.2797
698.50	90.3615
699.00	87.1482
702.63	89.4013
706.10	79.7939
706.58	0.0000
706.67	88.4363
709.31	68.0019
711.68	79.9348
713.82	77.8254
717.42	82.2418
720.50	73.4138
721.93	0.0000
722.20	65.0237
722.78	56.0021
722.78	56.0021
722.89	56.0046
722.95	56.0059
723.30	59.6259
724.18	77.7153
727.18	85.0230
733.00	81.5497
735.90	59.8568
739.58	69.7281
742.81	82.8838
744.21	75.2818
747.13	76.4412
751.79	77.6406
752.31	76.5591
753.82	71.1239
755.35	72.2503
756.15	63.5083
756.87	65.7129
763.93	58.5339
765.79	65.8872
766.41	73.2210
766.84	75.0616
768.36	90.1139
768.36	90.1139
768.36	90.1139
768.36	90.1139
776.49	92.7169
778.00	92.7580
778.57	92.7724
778.89	92.7806
783.80	69.3899

785.46	78.8906
792.07	90.1082
795.84	64.8847
796.30	63.3105
801.93	80.1480
805.60	68.5048
810.29	73.2316
810.76	70.4599
815.85	68.7050
817.79	60.3821
818.51	57.6066
819.60	55.7654
826.30	73.5626
828.27	0.0000
831.60	76.4696
831.96	69.0167
834.83	75.6063
836.80	0.0000
846.75	73.9821
848.13	74.9479
856.28	0.0000
856.80	72.4423
860.37	61.2331
867.32	80.7216
867.82	71.0442
871.10	59.0764
873.19	55.6510
874.81	56.6199
875.33	0.0000
876.40	67.0276
879.36	63.3019
880.27	67.0984
880.51	66.1576
881.50	60.5026
883.24	55.8010
884.67	52.0381
889.25	73.8899
896.60	60.7461
898.02	69.3138
899.00	73.1306
903.28	70.0895
911.07	53.8989
911.07	53.8989
911.07	53.8989
919.63	58.2474
920.93	47.7600
925.00	67.8900
925.24	61.2005
926.50	68.8740
934.06	62.4352
934.06	62.4352
934.06	62.4352
934.06	62.4352
935.52	41.0915
937.48	59.2006
944.10	61.8468
946.00	71.1410
949.00	55.8016
962.29	64.5380
964.01	64.5652
966.15	57.9749
968.20	58.0042
969.11	58.0176
969.11	58.0176
969.11	58.0176
977.42	61.4593
980.50	55.2721
983.50	56.2843
989.30	61.2235
996.32	66.1960
1001.03	51.6532
1001.68	42.8882
1004.76	59.5033
1021.30	0.0000
1024.50	0.0000
1034.80	47.1621
1037.82	54.0780
1038.57	58.0205

1038.76	0.0000
1045.16	51.2171
1046.59	50.2488
1048.07	68.0061
1050.47	77.9071
1050.47	77.9071
1063.62	62.3207
1076.63	51.5938
1077.35	51.6022
1085.78	69.5984
1099.22	61.8335
1112.02	62.4127
1112.84	51.0208
1115.52	78.9342
1120.29	79.1639
1120.29	79.1639
1120.29	79.1639
1120.29	79.1639
1120.51	79.1672
1121.28	87.6278
1124.00	0.0000
1129.67	70.1080
1131.51	0.0000
1147.95	0.0000
1167.94	72.9082
1173.22	89.2139
1175.09	76.0651
1177.93	82.1997
1189.05	73.2422
1204.90	67.3643
1205.75	0.0000
1213.00	78.7264
1221.42	71.6976
1230.97	83.1292
1235.34	96.5588
1236.41	0.0000
1238.11	71.9454
1238.11	71.9454
1238.11	71.9454
1238.11	71.9454
1238.25	71.9482
1246.25	65.8906
1260.41	0.0000
1271.85	43.4680
1274.45	47.6322
1274.54	47.6340
1291.56	44.6797
1298.22	0.0000
1312.09	45.9067
1325.50	43.9363
1325.50	43.9363
1332.49	33.5221
1333.61	36.6720
1360.21	25.2773
1362.66	0.0000
1365.15	31.6260
1368.21	25.3164
1368.53	0.0000
1376.25	28.9777
1377.67	28.5326
1377.67	28.5326
1377.67	28.5326
1377.67	28.5326
1384.27	23.5806
1394.10	21.2012
1395.20	24.3870
1407.95	24.4450
1434.06	28.8369
1436.60	13.8908
1457.56	0.0000
1460.81	26.8331
1489.15	28.0503
1509.49	24.9036
1596.49	19.7878
1620.62	13.2461
1678.03	0.0000
1691.02	15.3164
1691.02	15.3164

1706.46	0.0000
1750.46	0.0000
1764.49	11.6237
1764.49	11.6237
1764.49	11.6237
1764.49	11.6237
1770.23	20.3599
1771.40	60.1209
1791.20	0.0000
1808.65	3.9015
1836.01	6.8564

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232664001

Total Uranium Activity	6.5797E+00	ug/g
Total Uranium Counting Unc.	4.8489E+00	ug/g
Total Uranium Tpu	2.4739E-06	ug/g
Total Uranium Mda	4.0372E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232664001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM16            *
*   SAMPLE DATE   : 26-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 08:26:41.63    SAMPLE ALQT:  104.070 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.105E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.894E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 5.542E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.693E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:28:03.51

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664002.CNF;1
Sample date       : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:27:15
Sample ID         : G232664002           Sample quantity  : 1.05140E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.63  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	2	59.45	94	258	0.89	118.04	115	14	1.31E-02	27.7	1.16E+00
2	2	63.31*	62	283	0.86	125.75	115	14	8.56E-03	44.8	
3	2	74.87*	316	445	1.14	148.86	143	15	4.40E-02	12.8	7.13E-01
4	2	77.13	648	447	1.12	153.38	143	15	9.00E-02	6.8	
5	4	84.17*	109	497	1.47	167.44	161	29	1.51E-02	38.2	1.18E+00
6	4	87.29	292	370	1.23	173.70	161	29	4.06E-02	12.2	
7	4	90.08	180	302	1.05	179.26	161	29	2.50E-02	17.2	
8	4	92.80*	304	429	1.50	184.71	161	29	4.22E-02	14.8	
9	0	153.93	57	366	0.75	306.93	302	9	7.90E-03	62.3	
10	0	185.89*	211	420	1.36	370.81	366	11	2.93E-02	20.8	
11	0	208.94	112	408	1.06	416.89	411	11	1.56E-02	36.2	
12	4	238.73*	1616	213	1.28	476.47	470	20	2.24E-01	3.0	1.03E+00
13	4	241.67*	376	273	1.94	482.34	470	20	5.23E-02	13.1	
14	0	269.61	168	267	1.53	538.21	533	14	2.33E-02	21.9	
15	0	295.26*	465	243	1.34	589.49	585	10	6.46E-02	8.0	
16	0	300.29	62	174	1.11	599.54	596	7	8.67E-03	37.1	
17	0	328.42*	41	275	0.79	655.77	650	13	5.69E-03	87.1	
18	0	338.49*	310	283	1.46	675.92	668	16	4.31E-02	13.5	
19	0	352.01*	902	208	1.19	702.96	696	12	1.25E-01	4.7	
20	0	463.68	98	148	2.90	926.23	920	12	1.37E-02	26.8	
21	0	511.18*	140	171	1.87	1021.19	1014	16	1.94E-02	26.8	
22	0	583.35*	469	145	1.36	1165.50	1158	15	6.51E-02	7.4	
23	0	609.47*	708	141	1.70	1217.72	1211	15	9.83E-02	5.4	
24	0	727.22	165	71	1.62	1453.16	1446	13	2.29E-02	13.2	
25	0	861.72	68	85	2.40	1722.10	1712	14	9.38E-03	31.3	
26	0	911.38*	399	61	1.62	1821.40	1814	13	5.55E-02	6.6	
27	0	935.44	81	104	3.30	1869.50	1860	25	1.13E-02	35.1	
28	3	964.76	103	68	2.81	1928.14	1919	30	1.44E-02	23.0	2.06E+00
29	3	969.20*	289	45	2.40	1937.03	1919	30	4.01E-02	8.1	
30	0	1120.22*	165	89	1.42	2239.01	2231	15	2.30E-02	15.0	
31	0	1461.08*	1591	33	2.40	2920.65	2909	21	2.21E-01	2.7	
32	0	1511.71	15	34	0.89	3021.90	3008	17	2.09E-03	92.4	
33	0	1729.71	39	6	1.74	3457.88	3452	11	5.35E-03	20.0	
34	0	1765.02*	120	18	2.71	3528.49	3522	13	1.67E-02	12.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 10:28:06

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:27:15
Sample ID : G232664002 Sample quantity : 105.14 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.63 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.813E+01	2.613E+00	4.933E-01	3.743E-02	57.030
CD-109	+	88.03	*	4.467E+00	1.166E+00	1.279E+00	1.183E-01	3.492
SN-126	+	64.28		7.434E-01	6.744E-01	1.016E+00	1.502E-01	0.732
	+	86.94		1.818E+00	8.750E-01	5.286E-01	2.192E-01	3.439
	+	87.57	*	4.373E-01	1.141E-01	1.260E-01	1.161E-02	3.470
CS-135	+	268.24	*	5.888E-01	2.621E-01	2.227E-01	1.683E-02	2.644
RE-188	+	155.03	*	1.991E-01	2.482E-01	2.727E-01	1.459E-02	0.730
		477.96		4.981E-01	2.909E+00	4.848E+00	3.089E-01	0.103
		633.10		2.087E-01	2.768E+00	4.478E+00	3.329E-01	0.047
TL-208		277.35		4.015E-01	3.691E-01	6.101E-01	6.407E-02	0.658
	+	510.84		5.357E-01	2.929E-01	1.979E-01	2.105E-02	2.706
	+	583.14	*	5.055E-01	8.481E-02	5.644E-02	4.425E-03	8.956
	+	860.37		6.649E-01	4.228E-01	4.034E-01	4.512E-02	1.648
BI-211		72.87		2.861E+00	3.850E+00	5.890E+00	4.863E-01	0.486
	+	351.07	*	4.564E+00	5.218E-01	3.061E-01	1.965E-02	14.912
PB-212	+	74.81		2.147E+00	6.113E-01	6.103E-01	7.649E-02	3.518
	+	77.11		2.453E+00	3.945E-01	3.414E-01	2.894E-02	7.185
	+	87.30		2.022E+00	5.652E-01	5.851E-01	7.947E-02	3.456
	+	238.63	*	1.905E+00	1.783E-01	8.381E-02	5.987E-03	22.728
	+	300.09		1.093E+00	8.154E-01	1.112E+00	9.134E-02	0.982
PO-212	+	74.81		2.147E+00	6.113E-01	6.103E-01	7.649E-02	3.518
	+	77.11		2.453E+00	3.945E-01	3.414E-01	2.894E-02	7.185
	+	87.30		2.022E+00	5.652E-01	5.851E-01	7.947E-02	3.456
		115.19		4.250E+00	3.614E+00	6.101E+00	3.843E-01	0.697
	+	238.63	*	1.905E+00	1.783E-01	8.381E-02	5.987E-03	22.728
	+	300.09		1.093E+00	8.154E-01	1.112E+00	9.134E-02	0.982
BI-214	+	609.31	*	1.432E+00	2.008E-01	1.031E-01	9.212E-03	13.883
		768.36		1.010E+00	7.386E-01	1.304E+00	1.428E-01	0.774
	+	934.06		3.316E+00	2.365E+00	1.635E+00	2.031E-01	2.028
	+	1120.29		1.674E+00	5.269E-01	4.043E-01	3.871E-02	4.141
		1238.11		1.673E+00	8.892E-01	1.610E+00	1.374E-01	1.039
		1377.67		1.724E+00	9.837E-01	1.824E+00	1.788E-01	0.945
	+	1764.49		1.604E+00	4.070E-01	2.400E-01	1.459E-02	6.682
PB-214	+	74.81		3.699E+00	1.032E+00	1.052E+00	1.174E-01	3.518

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		4.205E+00	7.483E-01	5.853E-01	6.670E-02	7.185
	+	87.30		3.464E+00	9.427E-01	1.002E+00	1.202E-01	3.456
	+	241.98		2.658E+00	7.282E-01	5.038E-01	3.983E-02	5.277
	+	295.21		1.432E+00	2.593E-01	2.114E-01	1.794E-02	6.772
	+	351.92	*	1.588E+00	1.995E-01	1.067E-01	8.824E-03	14.885
PO-214	+	74.81		3.699E+00	1.032E+00	1.052E+00	1.174E-01	3.518
	+	77.11		4.205E+00	7.483E-01	5.853E-01	6.670E-02	7.185
	+	87.30		3.464E+00	9.427E-01	1.002E+00	1.202E-01	3.456
	+	241.98		2.658E+00	7.282E-01	5.038E-01	3.983E-02	5.277
	+	295.21		1.432E+00	2.593E-01	2.114E-01	1.794E-02	6.772
	+	351.92	*	1.588E+00	1.995E-01	1.067E-01	8.824E-03	14.885
PO-216	+	74.81		2.147E+00	6.113E-01	6.103E-01	7.649E-02	3.518
	+	77.11		2.453E+00	3.945E-01	3.414E-01	2.894E-02	7.185
	+	87.30		2.022E+00	5.652E-01	5.851E-01	7.947E-02	3.456
	+	238.63	*	1.905E+00	1.783E-01	8.381E-02	5.987E-03	22.728
	+	300.09		1.093E+00	8.154E-01	1.112E+00	9.134E-02	0.982
PO-218	+	74.81		3.699E+00	1.032E+00	1.052E+00	1.174E-01	3.518
	+	77.11		4.205E+00	7.483E-01	5.853E-01	6.670E-02	7.185
	+	87.30		3.464E+00	9.427E-01	1.002E+00	1.202E-01	3.456
	+	241.98		2.658E+00	7.282E-01	5.038E-01	3.983E-02	5.277
	+	295.21		1.432E+00	2.593E-01	2.114E-01	1.794E-02	6.772
	+	351.92	*	1.588E+00	1.995E-01	1.067E-01	8.824E-03	14.885
RA-224	+	240.98	*	5.041E+00	1.352E+00	9.526E-01	5.306E-02	5.292
RA-226	+	609.31	*	1.432E+00	2.008E-01	1.031E-01	9.212E-03	13.883
		768.36		1.010E+00	7.386E-01	1.304E+00	1.428E-01	0.774
	+	934.06		3.316E+00	2.365E+00	1.635E+00	2.031E-01	2.028
	+	1120.29		1.674E+00	5.269E-01	4.043E-01	3.871E-02	4.141
		1238.11		1.673E+00	8.892E-01	1.610E+00	1.374E-01	1.039
		1377.67		1.724E+00	9.837E-01	1.824E+00	1.788E-01	0.945
	+	1764.49		1.604E+00	4.070E-01	2.400E-01	1.459E-02	6.682
AC-228	+	338.32		1.741E+00	8.521E-01	3.243E-01	1.322E-01	5.370
	+	911.07	*	1.852E+00	3.470E-01	2.109E-01	2.794E-02	8.784
	+	969.11		2.356E+00	6.809E-01	3.306E-01	7.917E-02	7.125
RA-228	+	338.32		1.741E+00	8.521E-01	3.243E-01	1.322E-01	5.370
	+	911.07	*	1.852E+00	3.470E-01	2.109E-01	2.794E-02	8.784
	+	969.11		2.356E+00	6.809E-01	3.306E-01	7.917E-02	7.125
TH-228	+	84.40		5.236E+00	4.060E+00	4.046E+00	5.407E-01	1.294
	+	238.60	*	1.905E+00	1.783E-01	8.380E-02	5.986E-03	22.730
	+	300.10		1.093E+00	1.035E+00	1.112E+00	6.556E-01	0.982
TH-230	+	609.31	*	1.432E+00	2.008E-01	1.031E-01	9.211E-03	13.883
		768.36		1.010E+00	7.386E-01	1.304E+00	1.428E-01	0.774
	+	934.06		3.316E+00	2.365E+00	1.635E+00	2.031E-01	2.028
	+	1120.29		1.674E+00	5.269E-01	4.043E-01	3.871E-02	4.141
		1238.11		1.673E+00	8.892E-01	1.610E+00	1.374E-01	1.039
		1377.67		1.724E+00	9.837E-01	1.824E+00	1.788E-01	0.945
	+	1764.49		1.604E+00	4.070E-01	2.400E-01	1.459E-02	6.682
TH-232	+	338.32		1.741E+00	4.821E-01	3.243E-01	1.876E-02	5.370
	+	911.07	*	1.852E+00	3.470E-01	2.109E-01	2.794E-02	8.784
	+	969.11		2.356E+00	6.809E-01	3.306E-01	7.917E-02	7.125

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-234	+	63.29	*	1.878E+00	1.713E+00	2.731E+00	4.814E-01	0.688
	+	92.38		2.889E+00	9.989E-01	8.124E-01	1.464E-01	3.557
U-234	+	609.31	*	1.432E+00	2.008E-01	1.031E-01	9.211E-03	13.883
		768.36		1.010E+00	7.386E-01	1.304E+00	1.428E-01	0.774
	+	934.06		3.316E+00	2.365E+00	1.635E+00	2.031E-01	2.028
	+	1120.29		1.674E+00	5.269E-01	4.043E-01	3.871E-02	4.141
		1238.11		1.673E+00	8.892E-01	1.610E+00	1.374E-01	1.039
		1377.67		1.724E+00	9.837E-01	1.824E+00	1.788E-01	0.945
	+	1764.49		1.604E+00	4.070E-01	2.400E-01	1.459E-02	6.682
NP-237	+	86.50	*	1.284E+00	4.272E-01	3.758E-01	8.480E-02	3.416
		95.87		1.314E-02	1.051E+00	1.530E+00	3.737E-01	0.009
U-238	+	63.29	*	1.878E+00	1.713E+00	2.731E+00	4.814E-01	0.688
	+	92.38		2.889E+00	8.870E-01	8.124E-01	6.905E-02	3.557
AM-241	+	59.54	*	3.820E-01	2.138E-01	3.393E-01	2.814E-02	1.126
AM-243	+	74.67	*	3.481E-01	9.361E-02	9.933E-02	8.289E-03	3.504
	+	86.72		4.815E+01	1.257E+01	1.405E+01	1.284E+00	3.428
		117.66		-4.334E+00	3.837E+00	5.834E+00	3.588E-01	-0.743
		142.18		6.041E+00	1.773E+01	2.857E+01	1.574E+00	0.211
ANH-511	+	511.00	*	1.157E-01	6.253E-02	4.277E-02	2.824E-03	2.706

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-8.916E-02	3.113E-01	5.043E-01	3.655E-02	-0.177
NA-22		1274.54	*	3.502E-03	4.406E-02	7.280E-02	4.954E-03	0.048
NA-24		1368.53	*	-4.721E+00	4.406E-02	Half-Life too short		
AL-26		1129.67		-8.228E-01	1.605E+00	2.446E+00	1.633E-01	-0.336
		1808.65	*	-5.234E-03	2.706E-02	4.086E-02	2.385E-03	-0.128
TI-44		67.85		-4.335E-02	5.547E-02	8.884E-02	7.144E-03	-0.488
	+	78.38	*	4.527E-01	7.280E-02	8.987E-02	7.684E-03	5.038
SC-46		889.25	*	-1.149E-02	3.742E-02	5.961E-02	6.648E-03	-0.193
	+	1120.51		2.931E-01	9.020E-02	1.310E-01	9.050E-03	2.238
V-48		944.10		-9.588E-01	1.153E+00	1.435E+00	1.519E-01	-0.668
		983.50	*	-1.746E-02	7.021E-02	1.110E-01	1.098E-02	-0.157
		1312.09		-4.017E-02	9.096E-02	1.383E-01	1.007E-02	-0.291
CR-51		320.08	*	-6.251E-02	3.715E-01	5.925E-01	3.815E-02	-0.106
MN-52		744.21		1.894E-01	2.964E-01	5.138E-01	4.531E-02	0.369
		848.13		9.348E+00	8.927E+00	1.569E+01	1.641E+00	0.596
	+	935.52		1.035E+00	7.357E-01	6.490E-01	6.961E-02	1.595
		1246.25		-1.836E+00	1.021E+01	1.659E+01	1.066E+00	-0.111
		1333.61		6.344E-01	6.301E+00	1.041E+01	7.862E-01	0.061
		1434.06	*	1.361E-01	3.107E-01	5.264E-01	3.879E-02	0.259
MN-54		834.83	*	-1.742E-02	3.644E-02	5.783E-02	5.924E-03	-0.301
CO-56		846.75	*	1.410E-02	3.941E-02	6.630E-02	6.922E-03	0.213
		977.42		4.398E-01	3.041E+00	4.293E+00	4.294E-01	0.102
		1037.82		1.185E-01	2.635E-01	4.571E-01	4.235E-02	0.259
		1175.09		-1.238E+00	2.080E+00	3.280E+00	1.820E-01	-0.378
		1238.25		1.703E-01	9.159E-02	1.665E-01	1.110E-02	1.023

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1360.21		4.662E-01	1.044E+00	1.775E+00	1.334E-01	0.263
		1771.40		-2.036E-02	2.210E-01	3.009E-01	1.818E-02	-0.068
CO-57		122.06	*	7.071E-03	2.544E-02	4.134E-02	2.449E-03	0.171
		136.48		-6.711E-02	2.113E-01	3.314E-01	2.170E-02	-0.202
CO-58		810.76	*	-4.988E-04	3.593E-02	5.916E-02	5.841E-03	-0.008
FE-59		142.65		1.146E+00	2.883E+00	4.655E+00	2.561E-01	0.246
		192.34		-7.154E-01	9.605E-01	1.496E+00	1.735E-01	-0.478
		1099.22	*	-1.039E-01	9.373E-02	1.425E-01	1.173E-02	-0.729
		1291.56		-2.154E-02	1.198E-01	1.933E-01	1.624E-02	-0.111
CO-60		1173.22		-2.695E-02	4.025E-02	6.302E-02	3.483E-03	-0.428
		1332.49	*	-4.938E-03	3.445E-02	5.547E-02	4.191E-03	-0.089
ZN-65		1115.52	*	4.513E-02	1.028E-01	1.526E-01	1.075E-02	0.296
GE-68		1077.35	*	3.073E-01	1.112E+00	1.896E+00	1.506E-01	0.162
AS-73		53.44	*	-1.107E+00	1.275E+00	1.997E+00	1.583E-01	-0.554
AS-74		595.88	*	-3.916E-04	1.008E-01	1.631E-01	1.172E-02	-0.002
		634.78		4.441E-02	3.789E-01	6.147E-01	4.577E-02	0.072
SE-75		66.05		-2.148E+00	6.620E+00	9.728E+00	9.635E-01	-0.221
		96.73		-9.245E-01	9.214E-01	1.252E+00	1.651E-01	-0.738
		121.11		6.369E-03	1.370E-01	2.203E-01	2.057E-02	0.029
		136.00		2.159E-03	3.985E-02	6.363E-02	3.624E-03	0.034
		198.60		-5.656E-01	1.794E+00	2.895E+00	1.965E-01	-0.195
		264.65	*	-2.658E-02	4.789E-02	6.581E-02	3.763E-03	-0.404
		279.53		7.819E-02	1.059E-01	1.785E-01	1.103E-02	0.438
		303.91		1.990E+00	2.206E+00	3.319E+00	3.157E-01	0.600
		400.65		1.609E-02	2.392E-01	4.016E-01	3.659E-02	0.040
BR-77	+	87.88		2.134E+03	5.570E+02	8.193E+02	7.571E+01	2.605
		200.40		2.553E+02	3.428E+02	5.885E+02	3.170E+01	0.434
	+	239.00		6.792E+02	5.582E+01	8.613E+01	4.791E+00	7.886
		249.79		7.077E+01	1.401E+02	2.355E+02	1.320E+01	0.301
		281.68		-2.205E+02	1.983E+02	3.040E+02	1.735E+01	-0.726
		297.23		5.984E+02	2.296E+02	2.864E+02	1.644E+01	2.089
		303.76		2.309E+02	4.169E+02	6.135E+02	3.529E+01	0.376
		439.47		2.121E+02	2.802E+02	4.858E+02	2.961E+01	0.436
		484.57		-2.852E+02	4.974E+02	7.906E+02	5.075E+01	-0.361
		520.65	*	-5.170E+00	2.109E+01	3.396E+01	2.266E+00	-0.152
		574.64		2.061E+01	4.560E+02	7.223E+02	5.086E+01	0.029
		578.91		5.291E+01	1.952E+02	2.807E+02	1.985E+01	0.189
		585.48		4.129E+03	6.303E+02	1.104E+03	7.853E+01	3.741
		755.35		4.915E+02	3.423E+02	6.170E+02	5.545E+01	0.797
		817.79		4.192E+01	2.626E+02	4.378E+02	4.364E+01	0.096
SR-82		698.33		-2.747E+01	3.398E+01	5.367E+01	4.370E+00	-0.512
		776.49	*	-3.628E-01	3.687E-01	5.622E-01	5.236E-02	-0.645
		1395.20		5.100E+00	1.098E+01	1.877E+01	1.399E+00	0.272
RB-83		520.41	*	-1.876E-02	6.399E-02	1.027E-01	6.849E-03	-0.183
		529.64		-2.959E-02	9.561E-02	1.529E-01	1.030E-02	-0.194
		552.65		1.905E-02	1.785E-01	2.929E-01	2.019E-02	0.065
RB-84		881.50	*	9.688E-03	6.902E-02	1.141E-01	1.258E-02	0.085
KR-85		513.99	*	2.728E+01	8.355E+00	1.432E+01	9.488E-01	1.905
SR-85		513.99	*	1.440E-01	4.409E-02	7.557E-02	5.007E-03	1.905

---- Non-Identified Nuclides ----

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RB-86		1076.63	*	2.385E-02	7.694E-01	1.287E+00	1.024E-01	0.019
Y-88		898.02		1.346E-04	4.064E-02	6.637E-02	7.523E-03	0.002
		1836.01	*	2.865E-02	3.308E-02	6.070E-02	3.457E-03	0.472
ZR-88		392.90	*	-1.055E-02	2.810E-02	4.609E-02	2.651E-03	-0.229
Y-91		1204.90	*	-1.538E+01	1.856E+01	2.875E+01	1.700E+00	-0.535
NB-94		702.63	*	4.093E-03	3.097E-02	5.213E-02	4.277E-03	0.079
		871.10		-3.701E-03	3.119E-02	5.058E-02	5.486E-03	-0.073
NB-95		765.79	*	5.270E-02	4.320E-02	7.627E-02	6.977E-03	0.691
NB-95M		235.69	*	2.172E-01	1.297E-01	2.049E-01	1.503E-02	1.060
ZR-95		724.18		1.477E-01	1.003E-01	1.617E-01	1.499E-02	0.914
		756.15	*	3.651E-02	6.842E-02	1.174E-01	1.155E-02	0.311
NB-97		657.90	*	-1.572E+00	6.842E-02	Half-Life too short		
		1024.50		-3.367E+01	6.842E-02	Half-Life too short		
ZR-97		254.15		2.380E+01	6.842E-02	Half-Life too short		
		355.39		6.533E+01	6.842E-02	Half-Life too short		
		507.63	*	5.645E+01	6.842E-02	Half-Life too short		
		602.52		-5.335E+01	6.842E-02	Half-Life too short		
		1021.30		-1.589E+01	6.842E-02	Half-Life too short		
		1147.95		7.030E+01	6.842E-02	Half-Life too short		
		1362.66		4.267E+01	6.842E-02	Half-Life too short		
		1750.46		1.463E+01	6.842E-02	Half-Life too short		
MO-99		140.51		-1.664E+01	5.517E+01	8.500E+01	2.286E+01	-0.196
		181.06		-2.121E+01	3.622E+01	5.161E+01	8.762E+00	-0.411
		366.43		8.523E+00	1.506E+02	2.544E+02	1.470E+01	0.034
		739.58	*	-1.798E+01	2.129E+01	3.294E+01	5.026E+00	-0.546
		778.00		-8.723E+01	6.250E+01	9.160E+01	8.552E+00	-0.952
TC-99M		140.51	*	-2.328E+13	6.250E+01	Half-Life too short		
RH-101		127.23		-3.842E-03	3.287E-02	5.232E-02	3.023E-03	-0.073
		198.01	*	-6.137E-03	3.206E-02	5.200E-02	2.795E-03	-0.118
		325.23		3.052E-02	2.457E-01	3.481E-01	2.012E-02	0.088
RH-102		418.52		-7.622E-02	2.609E-01	4.276E-01	2.541E-02	-0.178
		475.06	*	-3.307E-03	2.743E-02	4.493E-02	2.854E-03	-0.074
		631.29		-3.925E-02	5.417E-02	8.254E-02	6.126E-03	-0.476
		697.49		-2.790E-02	7.025E-02	1.143E-01	9.290E-03	-0.244
		766.84		1.717E-01	1.109E-01	1.978E-01	1.813E-02	0.868
		1046.59		-1.982E-02	9.615E-02	1.580E-01	1.363E-02	-0.125
		1112.84		1.698E-01	2.462E-01	3.756E-01	2.666E-02	0.452
RU-103		497.08	*	3.129E-02	3.797E-02	6.539E-02	8.491E-03	0.479
	+	610.33		1.622E+01	3.137E+00	3.065E+00	4.915E-01	5.292
RH-106	+	511.85		5.810E-01	3.139E-01	4.374E-01	2.891E-02	1.328
		621.84	*	-2.733E-01	3.186E-01	4.795E-01	6.033E-02	-0.570
		1050.47		-2.342E+00	2.039E+00	3.065E+00	2.619E-01	-0.764
RU-106	+	511.85		5.810E-01	3.139E-01	4.374E-01	2.891E-02	1.328
		621.84	*	-2.733E-01	3.174E-01	4.795E-01	3.529E-02	-0.570
		1050.47		-2.342E+00	2.039E+00	3.065E+00	2.619E-01	-0.764
AG-108M		433.93	*	1.598E-02	2.931E-02	5.025E-02	3.283E-03	0.318
		614.37		-1.242E-02	4.302E-02	5.814E-02	4.480E-03	-0.214
		722.95		1.789E-02	4.204E-02	6.278E-02	5.552E-03	0.285
AG-110M		657.75	*	-4.112E-02	3.352E-02	5.165E-02	4.074E-03	-0.796

---- Non-Identified Nuclides ----

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		677.61		-2.117E-02	2.833E-01	4.721E-01	3.830E-02	-0.045
		706.67		5.298E-02	1.949E-01	3.307E-01	2.814E-02	0.160
		763.93		-7.665E-02	1.687E-01	2.715E-01	2.539E-02	-0.282
		884.67		-6.899E-03	4.582E-02	7.399E-02	8.356E-03	-0.093
		937.48		8.412E-02	1.065E-01	1.832E-01	2.005E-02	0.459
		1384.27		-2.103E-01	1.767E-01	2.530E-01	1.961E-02	-0.831
IN-111		171.28		1.008E-01	1.824E+00	3.082E+00	1.622E-01	0.033
		245.39	*	-1.562E+00	2.168E+00	2.968E+00	1.659E-01	-0.526
IN-113M		391.69	*	-1.101E-02	4.071E-02	6.721E-02	4.123E-03	-0.164
SN-113		391.69	*	-1.101E-02	4.071E-02	6.721E-02	4.123E-03	-0.164
IN-114M		190.27	*	4.529E-02	1.981E-01	2.959E-01	1.580E-02	0.153
CD-115		260.90		2.288E-04	1.981E-01	Half-Life too short		
		492.35		-8.845E-05	1.981E-01	Half-Life too short		
		527.90	*	5.475E-07	1.981E-01	Half-Life too short		
SN-117M		156.02		-1.543E-01	2.727E+00	4.074E+00	2.176E-01	-0.038
		158.56	*	-1.936E-02	6.379E-02	9.904E-02	5.264E-03	-0.195
SB-122		563.90	*	3.687E+00	4.063E+00	6.966E+00	4.854E-01	0.529
		692.80		5.461E+01	7.991E+01	1.391E+02	1.122E+01	0.393
I-123		159.00	*	-2.974E+01	7.991E+01	Half-Life too short		
		528.96		1.568E+03	7.991E+01	Half-Life too short		
TE-123M		159.00	*	-4.665E-03	2.785E-02	4.534E-02	2.446E-03	-0.103
I-124		602.71	*	-1.317E-01	1.166E+00	1.608E+00	1.163E-01	-0.082
		722.78		2.796E+00	6.902E+00	1.029E+01	8.744E-01	0.272
		1325.50		1.109E+01	4.756E+01	7.966E+01	5.944E+00	0.139
		1376.25		8.477E+01	4.773E+01	8.925E+01	6.683E+00	0.950
		1509.49		1.911E+01	2.516E+01	4.014E+01	2.876E+00	0.476
		1691.02		-4.537E+00	5.674E+00	8.263E+00	5.329E-01	-0.549
SB-124		602.71		-5.019E-03	4.442E-02	6.127E-02	4.431E-03	-0.082
		645.85		-3.498E-02	4.783E-01	7.640E-01	6.193E-02	-0.046
		709.31		6.440E-01	2.590E+00	4.389E+00	3.643E-01	0.147
		713.82		3.625E-01	1.504E+00	2.547E+00	3.020E-01	0.142
		722.78		1.545E-01	3.813E-01	5.684E-01	4.938E-02	0.272
	+	968.20		2.503E+01	4.783E+00	7.729E+00	7.859E-01	3.238
		1045.16		-7.206E-01	2.227E+00	3.627E+00	3.140E-01	-0.199
		1325.50		6.545E-01	2.806E+00	4.700E+00	3.507E-01	0.139
		1368.21		-8.994E-02	1.603E+00	2.598E+00	3.323E-01	-0.035
		1436.60		5.675E-01	3.459E+00	5.725E+00	4.216E-01	0.099
		1691.02	*	-5.911E-02	7.395E-02	1.077E-01	7.428E-03	-0.549
SB-125		427.89	*	-5.446E-02	8.033E-02	1.280E-01	7.996E-03	-0.426
	+	463.38		7.483E-01	4.047E-01	5.235E-01	3.752E-02	1.430
		600.56		1.085E-01	1.776E-01	2.978E-01	2.372E-02	0.364
		635.90		8.507E-02	2.560E-01	4.215E-01	3.477E-02	0.202
TE-125M		109.28	*	2.786E+00	1.009E+01	1.649E+01	1.451E+00	0.169
I-126		388.63		5.574E-02	2.166E-01	3.681E-01	2.116E-02	0.151
		666.33	*	-9.022E-02	2.064E-01	3.370E-01	2.591E-02	-0.268
		753.82		1.674E+00	1.547E+00	2.743E+00	2.459E-01	0.610
SB-126		223.80		1.503E-01	4.543E+00	7.530E+00	4.139E-01	0.020
		278.60		3.458E+00	2.747E+00	4.730E+00	2.696E-01	0.731
	+	296.50		1.661E+01	2.823E+00	4.373E+00	2.510E-01	3.798

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		414.70		-2.930E-02	8.143E-02	1.331E-01	7.874E-03	-0.220
		415.30		1.879E-01	6.691E+00	1.118E+01	6.617E-01	0.017
		555.20		5.091E-01	4.059E+00	6.669E+00	4.608E-01	0.076
		573.80		-5.495E-02	1.153E+00	1.866E+00	1.313E-01	-0.029
		593.00		-9.171E-01	1.071E+00	1.629E+00	1.167E-01	-0.563
		656.30		-5.967E+00	3.762E+00	5.634E+00	4.275E-01	-1.059
		666.33		-3.794E-02	8.680E-02	1.417E-01	1.089E-02	-0.268
		675.00		-3.434E-01	2.132E+00	3.533E+00	2.759E-01	-0.097
		695.00		4.275E-02	8.340E-02	1.437E-01	1.163E-02	0.298
		697.00		-5.690E-02	2.828E-01	4.661E-01	3.786E-02	-0.122
		720.50	*	-1.211E-02	1.725E-01	2.458E-01	2.080E-02	-0.049
		856.80		1.446E-01	5.661E-01	8.193E-01	8.689E-02	0.177
		989.30		5.769E-01	1.325E+00	2.224E+00	2.175E-01	0.259
		1034.80		-1.019E+01	9.124E+00	1.301E+01	1.155E+00	-0.783
		1213.00		-3.084E-01	5.102E+00	8.381E+00	5.039E-01	-0.037
SB-127		61.10		1.539E+01	1.175E+02	1.973E+02	2.245E+01	0.078
		252.40		1.768E-01	6.664E+00	1.095E+01	4.572E+00	0.016
		290.80		-1.218E+01	3.659E+01	5.061E+01	5.132E+00	-0.241
		411.60		2.051E+01	1.855E+01	3.233E+01	4.876E+00	0.635
		444.90		-7.423E+00	1.456E+01	2.336E+01	2.766E+00	-0.318
		473.00		2.275E-01	2.587E+00	4.292E+00	5.276E-01	0.053
		543.00		2.744E+00	2.563E+01	4.210E+01	5.942E+00	0.065
		603.60		-2.947E+01	2.272E+01	2.744E+01	3.408E+00	-1.074
		685.20	*	-1.529E+00	2.109E+00	3.349E+00	3.939E-01	-0.457
		698.50		-2.090E+01	2.300E+01	3.572E+01	5.781E+00	-0.585
		722.20		2.132E+00	4.937E+01	7.112E+01	8.478E+00	0.030
		783.80		9.093E+00	5.638E+00	1.007E+01	1.383E+00	0.903
XE-127		57.60		-3.246E+00	9.490E+00	1.402E+01	1.080E+00	-0.232
		145.22		1.460E-01	7.656E-01	1.191E+00	6.512E-02	0.123
		172.10		-8.594E-02	1.192E-01	1.949E-01	1.026E-02	-0.441
		202.84	*	-4.069E-02	5.356E-02	7.973E-02	4.304E-03	-0.510
		374.96		1.266E-01	1.873E-01	3.259E-01	1.880E-02	0.389
I-131		80.18		-3.006E+00	8.668E+00	9.819E+00	8.581E-01	-0.306
		284.30		-2.847E-01	1.821E+00	2.937E+00	1.880E-01	-0.097
		364.48	*	1.796E-02	1.313E-01	2.228E-01	1.445E-02	0.081
		636.97		5.799E-01	1.845E+00	3.034E+00	2.438E-01	0.191
		722.89		3.748E+00	8.958E+00	1.337E+01	1.147E+00	0.280
TE-132		49.72		1.711E+00	5.416E+01	9.153E+01	1.008E+01	0.019
		111.76		1.070E+01	5.417E+01	8.815E+01	8.956E+00	0.121
		116.30		5.198E+01	4.994E+01	8.362E+01	8.341E+00	0.622
		228.16	*	-8.593E-01	1.174E+00	1.865E+00	2.767E-01	-0.461
BA-133		53.15		-5.250E+00	5.473E+00	8.540E+00	6.777E-01	-0.615
		79.62		-1.323E-01	1.945E+00	2.256E+00	3.436E-01	-0.059
		81.00		2.239E-02	1.388E-01	1.636E-01	2.607E-02	0.137
		276.40		9.627E-02	4.019E-01	5.822E-01	7.520E-02	0.165
		302.84		5.276E-02	1.512E-01	2.193E-01	2.551E-02	0.241
		356.01	*	1.989E-02	4.465E-02	6.444E-02	7.444E-03	0.309
		383.85		1.112E-01	2.725E-01	4.669E-01	5.065E-02	0.238
I-133	+	510.53		1.049E+01	2.725E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		529.87	*	-2.748E-02	2.725E-01	Half-Life too short		
		706.58		9.885E-01	2.725E-01	Half-Life too short		
		856.28		-4.589E-01	2.725E-01	Half-Life too short		
		875.33		3.613E-01	2.725E-01	Half-Life too short		
		1236.41		1.194E+01	2.725E-01	Half-Life too short		
		1298.22		-7.488E-01	2.725E-01	Half-Life too short		
CS-134		475.35		-2.208E-01	1.801E+00	2.949E+00	1.874E-01	-0.075
		563.23		3.129E-01	3.512E-01	6.017E-01	4.251E-02	0.520
		569.32		2.951E-04	1.919E-01	3.057E-01	2.185E-02	0.001
		604.70		-4.181E-02	3.958E-02	4.963E-02	3.608E-03	-0.842
		795.84	*	8.514E-02	4.318E-02	7.928E-02	7.668E-03	1.074
		801.93		-4.566E-01	3.762E-01	5.501E-01	5.366E-02	-0.830
		1038.57		6.341E-01	3.279E+00	5.575E+00	4.906E-01	0.114
		1167.94		1.021E-02	2.131E+00	3.530E+00	2.002E-01	0.003
		1365.15		-7.084E-02	1.172E+00	1.899E+00	1.511E-01	-0.037
I-135		288.45		-1.188E+13	1.172E+00	Half-Life too short		
		417.63		1.082E+13	1.172E+00	Half-Life too short		
		546.56		1.235E+13	1.172E+00	Half-Life too short		
		836.80		-7.156E+12	1.172E+00	Half-Life too short		
		1038.76		6.669E+12	1.172E+00	Half-Life too short		
		1124.00		1.210E+14	1.172E+00	Half-Life too short		
		1131.51		1.664E+11	1.172E+00	Half-Life too short		
		1260.41	*	1.578E+12	1.172E+00	Half-Life too short		
		1457.56		6.623E+14	1.172E+00	Half-Life too short		
		1678.03		-2.823E+12	1.172E+00	Half-Life too short		
		1706.46		3.209E+13	1.172E+00	Half-Life too short		
		1791.20		1.491E+13	1.172E+00	Half-Life too short		
CS-136		66.91		-3.435E-01	1.202E+00	1.767E+00	2.669E-01	-0.194
	+	86.29		6.590E+00	1.831E+00	2.545E+00	3.355E-01	2.590
	+	153.22		8.594E-01	1.072E+00	1.306E+00	8.995E-02	0.658
		163.89		3.006E-01	1.122E+00	1.916E+00	1.310E-01	0.157
		176.55		4.777E-01	4.098E-01	7.147E-01	4.334E-02	0.668
		273.65		-8.881E-01	5.621E-01	7.069E-01	4.608E-02	-1.256
		340.57		6.190E-01	1.719E-01	2.897E-01	1.783E-02	2.137
		818.51		6.115E-02	7.508E-02	1.311E-01	1.309E-02	0.467
		1048.07	*	-2.756E-02	1.053E-01	1.722E-01	1.544E-02	-0.160
		1235.34		6.510E-01	6.700E-01	1.165E+00	1.198E-01	0.559
BA-137M		661.65	*	2.765E-02	3.541E-02	6.192E-02	4.720E-03	0.447
CS-137		661.65	*	2.923E-02	3.743E-02	6.546E-02	5.002E-03	0.447
CE-139		165.85	*	-1.678E-02	2.760E-02	4.547E-02	2.387E-03	-0.369
BA-140		162.64		7.318E-02	7.958E-01	1.351E+00	8.190E-02	0.054
		304.84		7.703E-01	1.589E+00	2.307E+00	6.294E-01	0.334
		423.70		1.876E+00	2.000E+00	3.362E+00	1.070E+00	0.558
		537.32	*	-1.330E-01	2.784E-01	4.340E-01	1.420E-01	-0.306
LA-140	+	328.77		3.312E-01	5.772E-01	5.896E-01	3.821E-02	0.562
		432.53		2.640E+00	2.106E+00	3.678E+00	2.438E-01	0.718
		487.03		1.814E-01	1.542E-01	2.704E-01	1.929E-02	0.671
		751.79		-2.190E+00	1.913E+00	2.858E+00	2.808E-01	-0.766
		815.85		2.659E-02	3.310E-01	5.486E-01	5.930E-02	0.048

---- Non-Identified Nuclides ----

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		867.82		3.538E-01	1.579E+00	2.368E+00	2.642E-01	0.149
		919.63		3.555E-01	3.235E+00	5.199E+00	6.568E-01	0.068
		925.24		-7.302E-01	1.305E+00	1.912E+00	2.165E-01	-0.382
		1596.49	*	-1.372E-01	1.018E-01	1.425E-01	9.778E-03	-0.962
CE-141		145.44	*	9.292E-03	6.975E-02	1.082E-01	6.179E-03	0.086
CE-143		57.37		1.400E-04	6.975E-02	Half-Life too short		
		231.56		-3.700E-03	6.975E-02	Half-Life too short		
		293.26	*	3.281E-03	6.975E-02	Half-Life too short		
	+	350.59		1.437E-01	6.975E-02	Half-Life too short		
		490.36		3.956E-03	6.975E-02	Half-Life too short		
		664.57		2.880E-03	6.975E-02	Half-Life too short		
		721.93		-2.044E-04	6.975E-02	Half-Life too short		
CE-144		80.11		-1.026E+00	3.176E+00	3.606E+00	3.122E-01	-0.284
		133.54	*	7.405E-02	2.098E-01	3.394E-01	4.799E-02	0.218
PM-144		476.78		-2.314E-02	6.320E-02	1.019E-01	7.560E-03	-0.227
		618.01		1.813E-02	3.237E-02	5.130E-02	3.905E-03	0.354
		696.49	*	-7.183E-03	3.142E-02	5.170E-02	4.198E-03	-0.139
		778.57		-1.855E+00	2.085E+00	3.206E+00	2.998E-01	-0.578
PR-144		696.49	*	-4.875E-01	2.132E+00	3.508E+00	2.847E-01	-0.139
		1489.15		-1.211E+01	1.135E+01	1.565E+01	1.131E+00	-0.774
PM-146		453.90	*	2.005E-02	4.136E-02	7.034E-02	6.257E-03	0.285
		633.02		-9.227E-02	1.348E+00	2.158E+00	8.009E-01	-0.043
		735.90		-4.755E-02	1.343E-01	2.164E-01	6.195E-02	-0.220
		747.13		1.750E-02	8.451E-02	1.423E-01	2.018E-02	0.123
ND-147	+	91.11		1.059E+00	3.778E-01	6.607E-01	6.215E-02	1.603
		319.41		-1.828E-01	3.595E+00	5.774E+00	3.336E-01	-0.032
		439.89		6.783E+00	6.114E+00	1.079E+01	6.587E-01	0.628
		531.02	*	8.881E-02	5.984E-01	9.879E-01	1.378E-01	0.090
PM-149		285.90	*	1.299E-04	5.984E-01	Half-Life too short		
EU-152		121.78		1.043E-02	7.279E-02	1.176E-01	9.061E-03	0.089
		244.69		-1.066E-01	3.442E-01	4.862E-01	2.716E-02	-0.219
		344.27	*	-2.043E-03	1.131E-01	1.463E-01	9.547E-03	-0.014
		443.98		-3.285E-01	8.733E-01	1.416E+00	8.677E-02	-0.232
		778.89		-1.599E-01	2.354E-01	3.687E-01	3.447E-02	-0.434
		867.32		-1.084E-02	8.595E-01	1.206E+00	1.300E-01	-0.009
	+	964.01		9.697E-01	4.562E-01	5.928E-01	6.072E-02	1.636
		1085.78		3.932E-01	3.904E-01	6.947E-01	5.383E-02	0.566
		1112.02		1.060E-01	3.591E-01	5.267E-01	3.750E-02	0.201
		1407.95		1.103E-01	1.818E-01	3.131E-01	2.326E-02	0.352
GD-153		69.67		5.344E-02	2.112E+00	3.145E+00	2.553E-01	0.017
	+	83.37		3.032E+01	2.331E+01	2.767E+01	2.458E+00	1.096
		97.43	*	-5.681E-02	9.169E-02	1.284E-01	1.004E-02	-0.443
		103.18		-2.133E-02	1.111E-01	1.787E-01	1.289E-02	-0.119
EU-154		123.07		1.262E-02	5.239E-02	8.490E-02	8.030E-03	0.149
		247.94		5.040E-02	3.925E-01	5.702E-01	5.371E-02	0.088
		591.81		-4.950E-01	6.226E-01	9.186E-01	9.770E-02	-0.539
		723.30		8.006E-02	1.805E-01	2.696E-01	2.542E-02	0.297
		756.87		2.409E-01	7.400E-01	1.253E+00	1.536E-01	0.192
		873.19		-1.276E-01	2.851E-01	4.494E-01	6.260E-02	-0.284

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		996.32		-1.601E-01	3.361E-01	5.185E-01	9.482E-02	-0.309
		1004.76		4.129E-03	1.995E-01	3.228E-01	3.969E-02	0.013
		1274.45	*	4.251E-02	1.202E-01	2.028E-01	2.026E-02	0.210
EU-155		48.70		-1.817E+00	3.866E+00	6.404E+00	4.858E-01	-0.284
	+	60.01		1.244E+01	6.948E+00	1.163E+01	8.876E-01	1.070
	+	86.54		5.272E-01	1.377E-01	2.047E-01	1.886E-02	2.575
		105.31	*	1.346E-01	1.156E-01	1.954E-01	1.397E-02	0.689
TB-160	+	86.79		1.444E+00	3.769E-01	5.611E-01	5.133E-02	2.574
		197.04		-3.898E-02	5.250E-01	8.741E-01	4.695E-02	-0.045
		215.65		8.672E-02	7.185E-01	1.199E+00	6.543E-02	0.072
		298.57		-2.561E-02	2.050E-01	2.053E-01	1.179E-02	-0.125
		879.36	*	-2.573E-02	1.355E-01	2.184E-01	2.399E-02	-0.118
		962.29		1.230E+00	6.301E-01	1.019E+00	1.046E-01	1.208
	+	966.15		6.833E-01	3.215E-01	5.585E-01	5.700E-02	1.223
		1177.93		1.624E-01	3.472E-01	5.937E-01	3.315E-02	0.274
		1271.85		7.025E-01	7.051E-01	1.247E+00	8.425E-02	0.563
HO-166M		80.57		-1.329E-01	4.027E-01	4.567E-01	3.968E-02	-0.291
	+	184.41		1.366E-01	5.719E-02	6.668E-02	3.542E-03	2.049
		280.46		-1.588E-02	8.143E-02	1.312E-01	7.484E-03	-0.121
		410.95		3.763E-01	2.307E-01	4.151E-01	2.443E-02	0.907
		711.68	*	-6.236E-02	5.566E-02	8.522E-02	7.104E-03	-0.732
		752.31		-1.393E-01	2.584E-01	4.064E-01	3.634E-02	-0.343
		810.29		3.682E-03	5.205E-02	8.627E-02	8.494E-03	0.043
TM-171		51.35		2.861E+01	4.640E+01	7.998E+01	6.339E+00	0.358
		52.39		-7.719E+00	2.318E+01	3.849E+01	3.058E+00	-0.201
	+	59.40		6.553E+01	3.660E+01	6.313E+01	4.793E+00	1.038
		66.72	*	-1.117E+01	3.791E+01	5.577E+01	4.459E+00	-0.200
LU-176	+	88.36		1.037E+00	2.707E-01	4.011E-01	3.683E-02	2.586
		201.83		-2.552E-02	2.840E-02	4.563E-02	2.461E-03	-0.559
		306.84	*	3.600E-03	2.315E-02	3.773E-02	2.172E-03	0.095
		401.10		-6.069E-01	6.131E+00	1.020E+01	5.930E-01	-0.060
LU-177		112.95		-3.300E+00	2.290E+00	3.447E+00	2.221E-01	-0.957
	+	208.36	*	3.180E+00	2.309E+00	2.664E+00	1.445E-01	1.193
LU-177M		52.97		-2.556E+00	2.529E+00	3.939E+00	3.127E-01	-0.649
		54.07		-1.163E+00	1.279E+00	1.998E+00	1.580E-01	-0.582
		61.30		-1.374E-01	1.856E+00	3.091E+00	2.389E-01	-0.044
		121.62		3.616E-02	3.769E-01	6.075E-01	3.604E-02	0.060
		147.16		-3.159E-01	6.807E-01	1.055E+00	5.744E-02	-0.299
		171.86		-2.842E-01	4.604E-01	7.565E-01	3.982E-02	-0.376
		218.09		-3.852E-01	8.199E-01	1.332E+00	7.284E-02	-0.289
	+	268.79		2.994E+00	1.324E+00	1.427E+00	8.091E-02	2.098
		319.02		2.513E-02	2.399E-01	3.888E-01	2.245E-02	0.065
		367.43		1.955E-01	8.164E-01	1.392E+00	8.042E-02	0.140
		413.65	*	-2.109E-01	1.721E-01	2.674E-01	1.580E-02	-0.788
HF-181		56.28		8.702E-01	1.476E+00	2.291E+00	1.784E-01	0.380
		57.53		3.573E-03	7.776E-01	1.170E+00	9.026E-02	0.003
		65.20		-5.929E-01	1.335E+00	1.952E+00	1.548E-01	-0.304
		133.02		3.033E-03	6.988E-02	1.117E-01	6.319E-03	0.027
		136.25		2.048E-03	4.765E-01	7.590E-01	4.250E-02	0.003

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		345.85		2.563E-02	2.644E-01	3.123E-01	1.807E-02	0.082
		482.03	*	-2.717E-02	4.185E-02	6.612E-02	4.232E-03	-0.411
W-181		56.28		3.316E-01	5.611E-01	8.710E-01	6.785E-02	0.381
		57.53		1.426E-03	2.959E-01	4.454E-01	3.435E-02	0.003
		65.20	*	-2.238E-01	5.041E-01	7.368E-01	5.844E-02	-0.304
TA-182		67.75		-7.494E-02	1.339E-01	2.164E-01	1.739E-02	-0.346
		100.10		1.137E-01	1.833E-01	3.054E-01	2.296E-02	0.372
		152.43		1.951E-01	4.029E-01	5.809E-01	3.125E-02	0.336
		222.10		2.701E-01	3.378E-01	5.777E-01	3.171E-02	0.468
		1001.68		1.840E-01	1.965E+00	3.188E+00	3.043E-01	0.058
	+	1121.28		8.047E-01	2.476E-01	3.561E-01	2.453E-02	2.260
		1189.05		-3.745E-02	2.921E-01	4.782E-01	2.735E-02	-0.078
		1221.42	*	1.764E-01	1.823E-01	3.207E-01	1.962E-02	0.550
		1230.97		-1.951E-01	4.434E-01	7.068E-01	4.408E-02	-0.276
RE-183	+	57.98		4.787E-01	2.674E-01	4.683E-01	3.598E-02	1.022
	+	59.32		2.752E-01	1.537E-01	2.657E-01	2.018E-02	1.036
		67.20		-4.556E-02	2.558E-01	4.017E-01	3.220E-02	-0.113
		162.32	*	5.689E-04	1.030E-01	1.743E-01	9.199E-03	0.003
	+	208.81		2.214E+00	1.608E+00	1.829E+00	9.923E-02	1.211
		291.72		6.593E-02	9.938E-01	1.417E+00	8.120E-02	0.047
RE-184	+	57.98		1.736E+00	9.697E-01	1.699E+00	1.305E-01	1.022
	+	59.32		9.972E-01	5.569E-01	9.627E-01	7.314E-02	1.036
		67.20		-1.652E-01	9.275E-01	1.456E+00	1.167E-01	-0.113
		161.27		4.722E-02	3.333E-01	5.672E-01	3.000E-02	0.083
		216.55		3.296E-02	2.535E-01	4.229E-01	2.310E-02	0.078
		252.85	*	-1.625E-02	2.226E-01	3.639E-01	2.044E-02	-0.045
		318.01		-1.458E-01	4.140E-01	6.531E-01	3.770E-02	-0.223
		792.07		-4.723E-01	9.420E-01	1.500E+00	1.433E-01	-0.315
		903.28		9.070E-01	1.056E+00	1.666E+00	1.870E-01	0.545
		920.93		1.034E-01	4.450E-01	7.377E-01	8.084E-02	0.140
OS-185	+	59.72		7.456E-01	4.164E-01	7.092E-01	5.394E-02	1.051
		61.14		1.743E-02	2.079E-01	3.484E-01	2.688E-02	0.050
		69.30		-8.489E-02	3.865E-01	5.687E-01	4.607E-02	-0.149
		592.07		-2.554E+00	2.518E+00	3.778E+00	2.705E-01	-0.676
		646.12	*	9.037E-03	3.953E-02	6.459E-02	4.857E-03	0.140
		717.42		2.920E-01	8.183E-01	1.396E+00	1.175E-01	0.209
		874.81		-5.213E-02	5.620E-01	9.131E-01	9.961E-02	-0.057
		880.27		-6.824E-02	7.523E-01	1.222E+00	1.344E-01	-0.056
W-188	+	63.58		7.757E+01	6.971E+01	1.150E+02	9.032E+00	0.675
		227.08		-1.069E+01	1.266E+01	2.014E+01	1.110E+00	-0.531
		290.67	*	-2.695E+00	7.954E+00	1.100E+01	6.300E-01	-0.245
IR-192	+	295.96		1.120E+00	1.907E-01	2.972E-01	1.733E-02	3.768
		308.46		-4.528E-02	9.205E-02	1.445E-01	8.418E-03	-0.313
		316.51	*	-1.541E-02	3.259E-02	5.105E-02	2.961E-03	-0.302
		468.07		2.321E-02	7.083E-02	1.043E-01	7.436E-03	0.222
		604.41		-5.533E-01	5.449E-01	6.819E-01	8.286E-02	-0.811
		612.46		5.004E+00	1.087E+00	1.833E+00	1.608E-01	2.730
AU-195		65.12		-1.083E-01	2.324E-01	3.393E-01	2.690E-02	-0.319
		66.83		-3.782E-02	1.263E-01	1.858E-01	1.486E-02	-0.204

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	75.70		1.138E+00	3.061E-01	5.254E-01	4.412E-02	2.166
		98.88	*	1.136E-01	2.320E-01	3.848E-01	2.944E-02	0.295
		129.76		2.108E+00	3.012E+00	4.864E+00	2.783E-01	0.433
TL-200		367.94	*	3.025E-04	3.012E+00	Half-Life too short		
		579.30		6.263E-04	3.012E+00	Half-Life too short		
		828.27		-5.908E-03	3.012E+00	Half-Life too short		
		1205.75		-1.050E-02	3.012E+00	Half-Life too short		
TL-201		68.90		-5.977E+00	1.084E+01	1.678E+01	1.356E+00	-0.356
		70.82		5.401E-01	6.305E+00	9.403E+00	7.678E-01	0.057
		80.30		-4.782E+00	1.390E+01	1.575E+01	1.365E+00	-0.304
		135.34		-5.561E+00	4.776E+01	7.570E+01	4.251E+00	-0.073
		167.43	*	-2.338E+00	1.195E+01	2.002E+01	1.051E+00	-0.117
TL-202		68.90		-3.367E-01	6.109E-01	9.450E-01	7.640E-02	-0.356
		70.82		3.034E-02	3.542E-01	5.283E-01	4.313E-02	0.057
		80.30		-2.688E-01	7.811E-01	8.849E-01	7.672E-02	-0.304
		439.56	*	5.642E-02	7.149E-02	1.241E-01	7.569E-03	0.454
HG-203		70.83		1.195E-01	1.369E+00	2.042E+00	2.720E-01	0.059
		72.87		5.927E-01	7.998E-01	1.220E+00	1.582E-01	0.486
		82.60		1.448E+00	1.202E+00	2.035E+00	2.824E-01	0.712
		279.20	*	4.085E-02	4.056E-02	6.913E-02	4.193E-03	0.591
BI-207		72.80		1.242E-01	2.234E-01	3.394E-01	2.801E-02	0.366
	+	74.97		6.249E-01	1.681E-01	2.538E-01	2.122E-02	2.462
	+	84.90		3.891E-01	2.992E-01	3.490E-01	3.140E-02	1.115
		569.67		-4.429E-03	2.982E-02	4.701E-02	3.294E-03	-0.094
		1063.62	*	1.924E-02	4.734E-02	8.147E-02	6.726E-03	0.236
		1770.23		-1.332E-02	5.118E-01	7.101E-01	4.296E-02	-0.019
TL-207		81.07		4.475E-02	3.058E-01	3.602E-01	3.141E-02	0.124
	+	83.78		2.565E-01	1.973E-01	2.354E-01	2.098E-02	1.090
		94.90		5.256E-01	2.574E-01	4.093E-01	3.332E-02	1.284
		122.32		7.316E-01	1.757E+00	2.871E+00	1.950E-01	0.255
		144.24		-2.062E-01	7.207E-01	1.098E+00	7.665E-02	-0.188
	+	154.21		4.477E-01	5.583E-01	6.769E-01	4.504E-02	0.661
	+	269.46		6.927E-01	3.066E-01	3.387E-01	2.012E-02	2.045
		323.87	*	1.699E-02	7.370E-01	1.037E+00	1.712E-01	0.016
	+	338.28		7.271E+00	2.112E+00	2.342E+00	2.465E-01	3.105
		445.03		-1.186E+00	2.072E+00	3.311E+00	3.465E-01	-0.358
PO-209		260.50		1.121E+01	9.018E+00	1.561E+01	8.812E-01	0.718
		262.80		-4.419E+00	2.611E+01	4.085E+01	2.309E+00	-0.108
		896.60	*	-6.749E-01	7.252E+00	1.176E+01	1.326E+00	-0.057
BI-210		46.50	*	3.310E+00	5.748E+00	9.945E+00	7.694E-01	0.333
PB-210		46.50	*	3.310E+00	5.748E+00	9.945E+00	7.694E-01	0.333
PO-210		46.50	*	3.310E+00	5.747E+00	9.945E+00	6.615E-01	0.333
PB-211		404.84	*	-8.828E-01	1.036E+00	1.388E+00	8.653E-01	-0.636
		427.08		-2.127E+00	2.219E+00	2.754E+00	1.703E+00	-0.772
		831.96		5.824E-01	1.201E+00	1.949E+00	1.226E+00	0.299
BI-212	+	727.18	*	1.492E+00	4.196E-01	6.245E-01	6.220E-02	2.389
		785.46		2.294E+00	1.657E+00	2.964E+00	2.802E-01	0.774
		1620.62		1.311E+00	1.171E+00	2.185E+00	1.478E-01	0.600
PO-215		81.07		4.475E-02	3.058E-01	3.602E-01	3.141E-02	0.124

---- Non-Identified Nuclides ----

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	+	83.78		2.565E-01	1.973E-01	2.354E-01	2.098E-02	1.090
		94.90		5.256E-01	2.574E-01	4.093E-01	3.332E-02	1.284
		122.32		7.316E-01	1.757E+00	2.871E+00	1.950E-01	0.255
		144.24		-2.062E-01	7.207E-01	1.098E+00	7.665E-02	-0.188
	+	154.21		4.477E-01	5.583E-01	6.769E-01	4.504E-02	0.661
	+	269.46		6.927E-01	3.066E-01	3.387E-01	2.012E-02	2.045
		323.87	*	1.699E-02	7.370E-01	1.037E+00	1.712E-01	0.016
	+	338.28		7.271E+00	2.112E+00	2.342E+00	2.465E-01	3.105
		445.03		-1.186E+00	2.072E+00	3.311E+00	3.465E-01	-0.358
RN-219		271.23		6.194E-01	2.382E-01	4.250E-01	3.408E-02	1.457
		401.81	*	4.835E-02	3.749E-01	6.313E-01	8.595E-02	0.077
RN-220		549.76	*	-1.550E+01	2.388E+01	3.710E+01	2.550E+00	-0.418
RA-223		81.07		4.475E-02	3.058E-01	3.602E-01	3.141E-02	0.124
	+	83.78		2.565E-01	1.973E-01	2.354E-01	2.098E-02	1.090
		94.90		5.256E-01	2.574E-01	4.093E-01	3.332E-02	1.284
		122.32		7.316E-01	1.757E+00	2.871E+00	1.950E-01	0.255
		144.24		-2.062E-01	7.207E-01	1.098E+00	7.665E-02	-0.188
	+	154.21		4.477E-01	5.583E-01	6.769E-01	4.504E-02	0.661
	+	269.46		6.927E-01	3.066E-01	3.387E-01	2.012E-02	2.045
		323.87	*	1.699E-02	7.370E-01	1.037E+00	1.712E-01	0.016
	+	338.28		7.271E+00	2.112E+00	2.342E+00	2.465E-01	3.105
		445.03		-1.186E+00	2.072E+00	3.311E+00	3.465E-01	-0.358
AC-227		79.80		-5.336E-01	2.456E+00	2.811E+00	6.048E-01	-0.190
		236.00		9.050E-01	2.683E-01	4.324E-01	4.461E-02	2.093
		256.20	*	-2.188E-01	3.578E-01	5.663E-01	7.866E-02	-0.386
		286.10		1.069E+00	1.437E+00	2.418E+00	2.785E-01	0.442
	+	299.80		2.025E+00	1.538E+00	2.527E+00	4.110E-01	0.801
		304.40		1.770E+00	1.964E+00	2.932E+00	5.066E-01	0.604
		334.20		9.994E-01	3.176E+00	3.324E+00	6.092E-01	0.301
TH-227		79.80		-5.336E-01	2.456E+00	2.811E+00	6.125E-01	-0.190
	+	94.00		1.117E+01	4.091E+00	4.049E+00	8.761E-01	2.758
		236.00		9.050E-01	2.641E-01	4.324E-01	3.848E-02	2.093
		256.20	*	-2.188E-01	3.584E-01	5.663E-01	9.537E-02	-0.386
		286.10		1.069E+00	1.788E+00	2.418E+00	2.422E+00	0.442
	+	299.80		2.025E+00	1.538E+00	2.527E+00	4.110E-01	0.801
		304.40		1.770E+00	1.964E+00	2.932E+00	5.066E-01	0.604
		334.20		9.994E-01	3.176E+00	3.324E+00	6.092E-01	0.301
TH-229	+	85.43		3.840E-01	2.953E-01	3.483E-01	3.149E-02	1.102
	+	88.47		5.970E-01	1.558E-01	2.298E-01	2.105E-02	2.598
		100.00		1.178E-01	1.872E-01	3.121E-01	2.350E-02	0.377
		193.63	*	1.373E-02	4.631E-01	7.754E-01	4.152E-02	0.018
		210.97		1.125E+00	8.126E-01	1.275E+00	6.931E-02	0.882
PA-231		283.67	*	2.843E-03	1.443E+00	2.347E+00	3.225E-01	0.001
	+	301.29		8.099E-01	6.067E-01	9.830E-01	1.025E-01	0.824
TH-231		81.07		4.475E-02	3.058E-01	3.602E-01	3.141E-02	0.124
	+	83.78		2.565E-01	1.973E-01	2.354E-01	2.098E-02	1.090
		94.90		5.256E-01	2.574E-01	4.093E-01	3.332E-02	1.284
		122.32		7.316E-01	1.757E+00	2.871E+00	1.950E-01	0.255
		144.24		-2.062E-01	7.207E-01	1.098E+00	7.665E-02	-0.188

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	154.21		4.477E-01	5.583E-01	6.769E-01	4.504E-02	0.661
	+	269.46		6.927E-01	3.066E-01	3.387E-01	2.012E-02	2.045
		323.87	*	1.699E-02	7.370E-01	1.037E+00	1.712E-01	0.016
	+	338.28		7.271E+00	2.112E+00	2.342E+00	2.465E-01	3.105
		445.03		-1.186E+00	2.072E+00	3.311E+00	3.465E-01	-0.358
U-231	+	84.21		1.735E+01	1.334E+01	1.575E+01	1.409E+00	1.101
	+	92.29		1.732E+01	5.316E+00	6.876E+00	5.854E-01	2.519
		95.87	*	2.338E-02	1.870E+00	2.723E+00	2.181E-01	0.009
		108.00		-5.095E+00	3.487E+00	5.263E+00	3.579E-01	-0.968
PA-233	+	75.28		1.823E+01	5.422E+00	7.674E+00	1.167E+00	2.376
	+	86.59		8.560E+00	3.117E+00	3.328E+00	8.983E-01	2.572
	+	300.12		5.645E-01	4.255E-01	6.973E-01	9.353E-02	0.810
		311.98	*	-7.562E-03	5.857E-02	9.382E-02	5.748E-03	-0.081
		340.50		2.799E+00	9.590E-01	1.241E+00	2.851E-01	2.254
		398.62		3.344E-01	1.883E+00	3.179E+00	8.220E-01	0.105
		415.76		3.188E-01	1.504E+00	2.537E+00	5.231E-01	0.126
PA-234	+	63.00		2.189E+00	1.987E+00	3.340E+00	5.035E-01	0.655
		94.67		5.066E-01	1.958E-01	3.077E-01	3.722E-02	1.646
		98.44		4.594E-02	9.636E-02	1.543E-01	8.588E-02	0.298
		99.86		3.039E-01	4.745E-01	7.914E-01	5.970E-02	0.384
		111.00		1.355E-01	1.898E-01	3.148E-01	3.378E-02	0.430
		131.20		-2.171E-02	1.101E-01	1.742E-01	9.918E-03	-0.125
	+	152.70		3.674E-01	4.611E-01	5.550E-01	8.690E-02	0.662
	+	186.00		4.918E+00	2.533E+00	2.630E+00	8.014E-01	1.870
		226.40		-2.327E-01	3.789E-01	6.079E-01	6.940E-02	-0.383
		227.20		-2.695E-01	4.141E-01	6.647E-01	3.664E-02	-0.406
		248.90		3.858E-01	8.112E-01	1.312E+00	2.813E-01	0.294
		293.70		6.205E+00	1.328E+00	1.671E+00	2.684E-01	3.713
		369.80		-3.454E-01	7.754E-01	1.269E+00	2.641E-01	-0.272
		568.70		2.044E-01	9.822E-01	1.587E+00	1.111E-01	0.129
		569.50		-2.827E-02	2.652E-01	4.194E-01	2.939E-02	-0.067
		574.00		-1.247E-01	1.424E+00	2.298E+00	1.617E-01	-0.054
		699.00		-5.131E-01	6.547E-01	1.025E+00	1.934E-01	-0.501
		706.10		3.279E-01	9.850E-01	1.660E+00	7.389E-01	0.198
		733.00		3.070E-01	3.686E-01	5.652E-01	1.255E-01	0.543
		742.81		5.259E-01	1.311E+00	2.156E+00	1.450E+00	0.244
		796.30		1.554E+00	9.234E-01	1.524E+00	4.173E-01	1.020
		805.60		4.419E-01	8.903E-01	1.506E+00	4.666E-01	0.294
		819.60		5.166E-01	1.095E+00	1.840E+00	7.059E-01	0.281
		826.30		-9.377E-01	9.168E-01	1.195E+00	5.383E-01	-0.785
		831.60		2.473E-01	6.022E-01	1.011E+00	3.067E-01	0.245
		876.40		2.977E-01	8.397E-01	1.317E+00	1.357E+00	0.226
		880.51		-1.626E-02	2.672E-01	4.349E-01	4.786E-02	-0.037
		883.24		6.737E-02	2.654E-01	4.366E-01	2.950E-01	0.154
		899.00		-9.605E-02	8.272E-01	1.337E+00	5.925E-01	-0.072
		925.00		-4.877E-01	1.162E+00	1.729E+00	1.884E-01	-0.282
		926.50		-4.420E-02	1.900E-01	2.568E-01	6.711E-02	-0.172
		946.00	*	-2.463E-01	3.622E-01	4.597E-01	9.068E-02	-0.536
		949.00		4.601E-01	4.312E-01	7.412E-01	7.784E-02	0.621

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		980.50		4.547E-02	6.809E-01	1.057E+00	1.051E-01	0.043
		1394.10		-6.685E-01	1.213E+00	1.721E+00	1.118E+00	-0.388
PA-234M		766.41		2.693E+01	2.702E+01	3.136E+01	2.406E+01	0.859
		1001.03	*	3.249E+00	6.020E+00	1.010E+01	1.204E+00	0.322
U-235	+	89.95		3.549E+00	1.641E+00	2.056E+00	6.359E-01	1.726
	+	93.35		3.474E+00	1.413E+00	1.359E+00	3.797E-01	2.556
		105.00		1.488E+00	1.207E+00	1.919E+00	5.648E-01	0.776
		143.76	*	-2.922E-03	2.206E-01	3.404E-01	5.513E-02	-0.009
		163.35		1.874E-01	4.311E-01	7.392E-01	1.317E-01	0.253
	+	185.71		1.821E-01	7.625E-02	9.724E-02	5.172E-03	1.873
		205.31		-2.010E-02	5.949E-01	8.579E-01	1.532E-01	-0.023
NP-236		94.67		3.872E-01	1.447E-01	2.338E-01	1.910E-02	1.656
		98.44		3.471E-02	7.029E-02	1.167E-01	8.983E-03	0.298
		111.00		1.025E-01	1.433E-01	2.382E-01	1.566E-02	0.430
		160.31	*	-5.092E-03	7.388E-02	1.248E-01	6.609E-03	-0.041
NP-239		99.55		1.125E-01	1.587E-01	2.654E-01	2.011E-02	0.424
		117.00	*	2.442E-02	1.911E-01	3.092E-01	1.914E-02	0.079
	+	209.75		1.700E+00	1.235E+00	1.363E+00	7.401E-02	1.248
		228.18		-1.565E-01	2.134E-01	3.410E-01	1.881E-02	-0.459
		277.60		1.998E-01	1.776E-01	2.953E-01	1.682E-02	0.677
		334.30		5.225E-01	1.796E+00	1.876E+00	1.085E-01	0.279
CM-243		99.55		1.157E-01	1.633E-01	2.731E-01	2.069E-02	0.424
		103.76	*	7.952E-02	1.014E-01	1.695E-01	1.214E-02	0.469
		117.00		2.513E-02	1.966E-01	3.181E-01	1.969E-02	0.079
	+	209.75		1.676E+00	1.217E+00	1.344E+00	7.297E-02	1.248
		228.18		-1.582E-01	2.157E-01	3.446E-01	1.901E-02	-0.459
		277.60		2.015E-01	1.791E-01	2.978E-01	1.696E-02	0.677
CM-247		278.00		1.006E+00	7.059E-01	1.224E+00	6.975E-02	0.822
		287.40		1.940E-01	1.173E+00	1.922E+00	1.099E-01	0.101
		402.60	*	1.495E-02	3.373E-02	5.773E-02	3.362E-03	0.259
CF-249		252.85		-6.029E-02	8.259E-01	1.350E+00	7.583E-02	-0.045
		333.44		-3.090E-02	2.477E-01	2.435E-01	1.408E-02	-0.127
		387.95	*	6.415E-03	3.722E-02	6.299E-02	3.621E-03	0.102
CF-251		176.60	*	1.429E-01	1.223E-01	2.134E-01	1.127E-02	0.670
		227.00		-3.240E-01	3.691E-01	5.862E-01	3.230E-02	-0.553
		285.00		4.716E-02	1.666E+00	2.713E+00	1.550E-01	0.017

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664002 *
* Acquisition date : 14-JUL-2009 08:27:15 Detector SN#     :           *
* Detector ID        : GAM18               Sensitivity      : 5.000    *
* Geometry           : CAN                 Energy tolerance: 1.500     *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000    *
* Elapsed real time:    0 02:00:01.63      Half life ratio :  8.000    *
*************************************************************************
*                                                                       *
*                               SAMPLE DATA                             *
*                                                                       *
* Sample date        : 26-JUN-2009 12:00:00 Nuclide Library : SOLID     *
* Sample ID          : G232664002           Analyst initials: MXR1      *
* Batch Number       : 882713               Sample Quantity : 1.0514E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                                 QC DATA                               *
* Standard Weight  :   0.00000                                          *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope      :           *
* LCS DPM          :    0.000             LCS Isotope      :           *
* LCSD DPM         :    0.000             LCSD Isotope     :           *
*************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.813E+01	2.561E+00	4.898E-01	0.000E+00
CD-109	4.467E+00	1.142E+00	1.288E+00	0.000E+00
SN-126	4.373E-01	1.118E-01	1.269E-01	0.000E+00
CS-135	5.888E-01	2.568E-01	2.230E-01	0.000E+00
RE-188	1.991E-01	2.432E-01	2.738E-01	0.000E+00
TL-208	5.055E-01	8.312E-02	5.630E-02	0.000E+00
BI-211	4.564E+00	5.114E-01	3.061E-01	0.000E+00
PB-212	1.905E+00	1.748E-01	8.398E-02	0.000E+00
PO-212	1.905E+00	1.748E-01	8.398E-02	0.000E+00
BI-214	1.432E+00	1.967E-01	1.028E-01	0.000E+00
PB-214	1.588E+00	1.955E-01	1.067E-01	0.000E+00
PO-214	1.588E+00	1.955E-01	1.067E-01	0.000E+00
PO-216	1.905E+00	1.748E-01	8.398E-02	0.000E+00
PO-218	1.588E+00	1.955E-01	1.067E-01	0.000E+00
RA-224	5.041E+00	1.325E+00	9.544E-01	0.000E+00
RA-226	1.432E+00	1.967E-01	1.028E-01	0.000E+00
AC-228	1.852E+00	3.400E-01	2.099E-01	0.000E+00
RA-228	1.852E+00	3.400E-01	2.099E-01	0.000E+00
TH-228	1.905E+00	1.748E-01	8.397E-02	0.000E+00
TH-230	1.432E+00	1.967E-01	1.028E-01	0.000E+00
TH-232	1.852E+00	3.400E-01	2.099E-01	0.000E+00
TH-234	1.878E+00	1.679E+00	2.754E+00	0.000E+00
U-234	1.432E+00	1.967E-01	1.028E-01	0.000E+00
NP-237	1.284E+00	4.186E-01	3.785E-01	0.000E+00
U-238	1.878E+00	1.679E+00	2.754E+00	0.000E+00
AM-241	3.820E-01	2.095E-01	3.424E-01	0.000E+00
AM-243	3.481E-01	9.174E-02	1.001E-01	0.000E+00
ANH-511	1.157E-01	6.128E-02	4.269E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)

BE-7	-8.916E-02	3.051E-01	5.036E-01	0.000E+00	NOT IDENT.
NA-22	3.502E-03	4.318E-02	7.234E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.359E+07	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-5.234E-03	2.652E-02	4.053E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.135E-02	9.055E-02	0.000E+00	FAIL ABUN
SC-46	-1.149E-02	3.667E-02	5.933E-02	0.000E+00	FAIL ABUN
V-48	-1.746E-02	6.881E-02	1.105E-01	0.000E+00	NOT IDENT.
CR-51	-6.251E-02	3.641E-01	5.928E-01	0.000E+00	NOT IDENT.
MN-52	1.361E-01	3.044E-01	5.227E-01	0.000E+00	FAIL ABUN
MN-54	-1.742E-02	3.571E-02	5.759E-02	0.000E+00	NOT IDENT.
CO-56	1.410E-02	3.862E-02	6.602E-02	0.000E+00	NOT IDENT.
CO-57	7.071E-03	2.493E-02	4.156E-02	0.000E+00	NOT IDENT.
CO-58	-4.988E-04	3.522E-02	5.892E-02	0.000E+00	NOT IDENT.
FE-59	-1.039E-01	9.186E-02	1.417E-01	0.000E+00	NOT IDENT.
CO-60	-4.938E-03	3.377E-02	5.511E-02	0.000E+00	NOT IDENT.
ZN-65	4.513E-02	1.007E-01	1.517E-01	0.000E+00	NOT IDENT.
GE-68	3.073E-01	1.090E+00	1.885E+00	0.000E+00	NOT IDENT.
AS-73	-1.107E+00	1.250E+00	2.015E+00	0.000E+00	NOT IDENT.
AS-74	-3.916E-04	9.883E-02	1.627E-01	0.000E+00	NOT IDENT.
SE-75	-2.658E-02	4.693E-02	6.590E-02	0.000E+00	NOT IDENT.
BR-77	-5.170E+00	2.067E+01	3.390E+01	0.000E+00	FAIL ABUN
SR-82	-3.628E-01	3.614E-01	5.600E-01	0.000E+00	NOT IDENT.
RB-83	-1.876E-02	6.271E-02	1.025E-01	0.000E+00	NOT IDENT.
RB-84	9.688E-03	6.764E-02	1.136E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.188E+00	1.429E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.321E-02	7.543E-02	0.000E+00	NOT IDENT.
RB-86	2.385E-02	7.540E-01	1.280E+00	0.000E+00	NOT IDENT.
Y-88	2.865E-02	3.242E-02	6.020E-02	0.000E+00	NOT IDENT.
ZR-88	-1.055E-02	2.754E-02	4.607E-02	0.000E+00	NOT IDENT.
Y-91	-1.538E+01	1.819E+01	2.857E+01	0.000E+00	NOT IDENT.
NB-94	4.093E-03	3.035E-02	5.195E-02	0.000E+00	NOT IDENT.
NB-95	5.270E-02	4.233E-02	7.598E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.271E-01	2.053E-01	0.000E+00	NOT IDENT.
ZR-95	3.651E-02	6.705E-02	1.169E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.349E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.672E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.798E+01	2.087E+01	3.282E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.577E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.137E-03	3.142E-02	5.215E-02	0.000E+00	NOT IDENT.
RH-102	-3.307E-03	2.688E-02	4.487E-02	0.000E+00	NOT IDENT.
RU-103	3.129E-02	3.722E-02	6.528E-02	0.000E+00	FAIL ABUN
RH-106	-2.733E-01	3.123E-01	4.782E-01	0.000E+00	FAIL ABUN
RU-106	-2.733E-01	3.111E-01	4.782E-01	0.000E+00	FAIL ABUN
AG-108M	1.598E-02	2.872E-02	5.020E-02	0.000E+00	NOT IDENT.
AG-110M	-4.112E-02	3.285E-02	5.149E-02	0.000E+00	NOT IDENT.
IN-111	-1.562E+00	2.124E+00	2.974E+00	0.000E+00	NOT IDENT.
IN-113M	-1.101E-02	3.990E-02	6.718E-02	0.000E+00	NOT IDENT.
SN-113	-1.101E-02	3.990E-02	6.718E-02	0.000E+00	NOT IDENT.
IN-114M	4.529E-02	1.942E-01	2.969E-01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	2.214E+01	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	-1.936E-02	6.251E-02	9.944E-02	0.000E+00	NOT IDENT.
SB-122	3.687E+00	3.981E+00	6.950E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.740E+08	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-4.665E-03	2.729E-02	4.553E-02	0.000E+00	NOT IDENT.
I-124	-1.317E-01	1.142E+00	1.604E+00	0.000E+00	NOT IDENT.
SB-124	-5.911E-02	7.247E-02	1.068E-01	0.000E+00	FAIL ABUN
SB-125	-5.446E-02	7.872E-02	1.279E-01	0.000E+00	FAIL ABUN
TE-125M	2.786E+00	9.885E+00	1.658E+01	0.000E+00	NOT IDENT.
I-126	-9.022E-02	2.023E-01	3.360E-01	0.000E+00	NOT IDENT.
SB-126	-1.211E-02	1.691E-01	2.449E-01	0.000E+00	FAIL ABUN
SB-127	-1.529E+00	2.067E+00	3.338E+00	0.000E+00	NOT IDENT.
XE-127	-4.069E-02	5.249E-02	7.995E-02	0.000E+00	NOT IDENT.
I-131	1.796E-02	1.286E-01	2.228E-01	0.000E+00	NOT IDENT.
TE-132	-8.593E-01	1.150E+00	1.869E+00	0.000E+00	NOT IDENT.
BA-133	1.989E-02	4.376E-02	6.444E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.744E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.232E-02	7.897E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.787E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-2.756E-02	1.032E-01	1.713E-01	0.000E+00	FAIL ABUN
BA-137M	2.765E-02	3.470E-02	6.173E-02	0.000E+00	NOT IDENT.
CS-137	2.923E-02	3.668E-02	6.525E-02	0.000E+00	NOT IDENT.
CE-139	-1.678E-02	2.705E-02	4.564E-02	0.000E+00	NOT IDENT.
BA-140	-1.330E-01	2.728E-01	4.331E-01	0.000E+00	NOT IDENT.
LA-140	-1.372E-01	9.975E-02	1.415E-01	0.000E+00	FAIL ABUN
CE-141	9.292E-03	6.835E-02	1.087E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.494E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	7.405E-02	2.056E-01	3.411E-01	0.000E+00	NOT IDENT.

PM-144	-7.183E-03	3.079E-02	5.153E-02	0.000E+00	NOT IDENT.
PR-144	-4.875E-01	2.089E+00	3.497E+00	0.000E+00	NOT IDENT.
PM-146	2.005E-02	4.053E-02	7.025E-02	0.000E+00	NOT IDENT.
ND-147	8.881E-02	5.865E-01	9.860E-01	0.000E+00	FAIL ABUN
PM-149	0.000E+00	1.972E+02	0.000E+00	0.000E+00	SHORT HLIF
EU-152	-2.043E-03	1.108E-01	1.463E-01	0.000E+00	FAIL ABUN
GD-153	-5.681E-02	8.986E-02	1.292E-01	0.000E+00	FAIL ABUN
EU-154	4.251E-02	1.178E-01	2.015E-01	0.000E+00	NOT IDENT.
EU-155	1.346E-01	1.133E-01	1.966E-01	0.000E+00	FAIL ABUN
TB-160	-2.573E-02	1.328E-01	2.174E-01	0.000E+00	FAIL ABUN
HO-166M	-6.236E-02	5.454E-02	8.493E-02	0.000E+00	FAIL ABUN
TM-171	-1.117E+01	3.715E+01	5.624E+01	0.000E+00	FAIL ABUN
LU-176	3.600E-03	2.268E-02	3.776E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.263E+00	2.671E+00	0.000E+00	FAIL ABUN
LU-177M	-2.109E-01	1.687E-01	2.672E-01	0.000E+00	FAIL ABUN
HF-181	-2.717E-02	4.101E-02	6.602E-02	0.000E+00	NOT IDENT.
W-181	-2.238E-01	4.940E-01	7.431E-01	0.000E+00	NOT IDENT.
TA-182	1.764E-01	1.787E-01	3.188E-01	0.000E+00	FAIL ABUN
RE-183	5.689E-04	1.009E-01	1.750E-01	0.000E+00	FAIL ABUN
RE-184	-1.625E-02	2.181E-01	3.645E-01	0.000E+00	FAIL ABUN
OS-185	9.037E-03	3.874E-02	6.440E-02	0.000E+00	FAIL ABUN
W-188	-2.695E+00	7.795E+00	1.101E+01	0.000E+00	FAIL ABUN
IR-192	-1.541E-02	3.194E-02	5.108E-02	0.000E+00	FAIL ABUN
AU-195	1.136E-01	2.273E-01	3.873E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.279E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.338E+00	1.171E+01	2.010E+01	0.000E+00	NOT IDENT.
TL-202	5.642E-02	7.006E-02	1.240E-01	0.000E+00	NOT IDENT.
HG-203	4.085E-02	3.975E-02	6.922E-02	0.000E+00	NOT IDENT.
BI-207	1.924E-02	4.639E-02	8.103E-02	0.000E+00	FAIL ABUN
TL-207	1.699E-02	7.223E-01	1.037E+00	0.000E+00	FAIL ABUN
PO-209	-6.749E-01	7.107E+00	1.170E+01	0.000E+00	NOT IDENT.
BI-210	3.310E+00	5.634E+00	1.005E+01	0.000E+00	NOT IDENT.
PB-210	3.310E+00	5.634E+00	1.005E+01	0.000E+00	NOT IDENT.
PO-210	3.310E+00	5.632E+00	1.005E+01	0.000E+00	NOT IDENT.
PB-211	-8.828E-01	1.015E+00	1.387E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.112E-01	6.223E-01	0.000E+00	FAIL ABUN
PO-215	1.699E-02	7.223E-01	1.037E+00	0.000E+00	FAIL ABUN
RN-219	4.835E-02	3.674E-01	6.309E-01	0.000E+00	NOT IDENT.
RN-220	-1.550E+01	2.340E+01	3.702E+01	0.000E+00	NOT IDENT.
RA-223	1.699E-02	7.223E-01	1.037E+00	0.000E+00	FAIL ABUN
AC-227	-2.188E-01	3.506E-01	5.672E-01	0.000E+00	FAIL ABUN
TH-227	-2.188E-01	3.512E-01	5.672E-01	0.000E+00	FAIL ABUN
TH-229	1.373E-02	4.539E-01	7.778E-01	0.000E+00	FAIL ABUN
PA-231	2.843E-03	1.414E+00	2.349E+00	0.000E+00	FAIL ABUN
TH-231	1.699E-02	7.223E-01	1.037E+00	0.000E+00	FAIL ABUN
U-231	2.338E-02	1.833E+00	2.741E+00	0.000E+00	FAIL ABUN
PA-233	-7.562E-03	5.740E-02	9.389E-02	0.000E+00	FAIL ABUN
PA-234	-2.463E-01	3.549E-01	4.574E-01	0.000E+00	FAIL ABUN
PA-234M	3.249E+00	5.899E+00	1.005E+01	0.000E+00	NOT IDENT.
U-235	-2.922E-03	2.162E-01	3.419E-01	0.000E+00	FAIL ABUN
NP-236	-5.092E-03	7.241E-02	1.253E-01	0.000E+00	NOT IDENT.
NP-239	2.442E-02	1.872E-01	3.109E-01	0.000E+00	FAIL ABUN
CM-243	7.952E-02	9.938E-02	1.706E-01	0.000E+00	FAIL ABUN
CM-247	1.495E-02	3.306E-02	5.770E-02	0.000E+00	NOT IDENT.
CF-249	6.415E-03	3.648E-02	6.296E-02	0.000E+00	NOT IDENT.
CF-251	1.429E-01	1.198E-01	2.142E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:28:04.48

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664002.CNF;1
Sample date       : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:27:15
Sample ID         : G232664002           Sample quantity  : 1.05140E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.63  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1591	10.67*	1.893E+00	2.813E+01	2.813E+01	9.29
CD-109	88.03	292	3.72*	6.447E+00	4.349E+00	4.467E+00	26.10
SN-126	64.28	62	9.60	3.084E+00	7.434E-01	7.434E-01	90.73
	86.94	292	8.90	6.447E+00	1.818E+00	1.818E+00	48.14
	87.57	292	37.00*	6.447E+00	4.373E-01	4.373E-01	26.10
CS-135	268.24	168	16.00*	6.358E+00	5.888E-01	5.888E-01	44.51
RE-188	155.03	57	15.00*	8.126E+00	1.665E-01	1.991E-01	124.64
	477.96	------	1.04	4.504E+00	------	Line Not Found	------
	633.10	------	1.26	3.707E+00	------	Line Not Found	------
TL-208	277.35	------	6.80	6.258E+00	------	Line Not Found	------
	510.84	140	21.60	4.308E+00	5.357E-01	5.357E-01	54.68
	583.14	469	84.20*	3.932E+00	5.055E-01	5.055E-01	16.78
	860.37	68	12.46	2.911E+00	6.649E-01	6.649E-01	63.59
BI-211	72.87	------	1.27	4.622E+00	------	Line Not Found	------
	351.07	902	12.94*	5.450E+00	4.564E+00	4.564E+00	11.43
PB-212	74.81	316	10.70	4.918E+00	2.147E+00	2.147E+00	28.47
	77.11	648	18.00	5.237E+00	2.453E+00	2.453E+00	16.08
	87.30	292	8.00	6.447E+00	2.022E+00	2.022E+00	27.95
	238.63	1616	44.60*	6.792E+00	1.905E+00	1.905E+00	9.36
	300.09	62	3.41	5.982E+00	1.093E+00	1.093E+00	74.64
PO-212	74.81	316	10.70	4.918E+00	2.147E+00	2.147E+00	28.47
	77.11	648	18.00	5.237E+00	2.453E+00	2.453E+00	16.08
	87.30	292	8.00	6.447E+00	2.022E+00	2.022E+00	27.95
	115.19	------	0.60	8.058E+00	------	Line Not Found	------
	238.63	1616	44.60*	6.792E+00	1.905E+00	1.905E+00	9.36
	300.09	62	3.41	5.982E+00	1.093E+00	1.093E+00	74.64
BI-214	609.31	708	46.30*	3.811E+00	1.432E+00	1.432E+00	14.02
	768.36	------	5.04	3.195E+00	------	Line Not Found	------
	934.06	81	3.21	2.718E+00	3.316E+00	3.316E+00	71.33
	1120.29	165	15.10	2.334E+00	1.674E+00	1.674E+00	31.47
	1238.11	------	5.94	2.148E+00	------	Line Not Found	------
	1377.67	------	4.11	1.975E+00	------	Line Not Found	------

Sample ID : G232664002 Acquisition date : 14-JUL-2009 08:27:15

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	120	15.80	1.694E+00	1.604E+00	1.604E+00	25.38
PB-214	74.81	316	6.21	4.918E+00	3.699E+00	3.699E+00	27.89
	77.11	648	10.50	5.237E+00	4.205E+00	4.205E+00	17.79
	87.30	292	4.67	6.447E+00	3.464E+00	3.464E+00	27.21
	241.98	376	7.49	6.748E+00	2.658E+00	2.658E+00	27.39
	295.21	465	19.20	6.040E+00	1.432E+00	1.432E+00	18.11
	351.92	902	37.20*	5.450E+00	1.588E+00	1.588E+00	12.57
PO-214	74.81	316	6.21	4.918E+00	3.699E+00	3.699E+00	27.89
	77.11	648	10.50	5.237E+00	4.205E+00	4.205E+00	17.79
	87.30	292	4.67	6.447E+00	3.464E+00	3.464E+00	27.21
	241.98	376	7.49	6.748E+00	2.658E+00	2.658E+00	27.39
	295.21	465	19.20	6.040E+00	1.432E+00	1.432E+00	18.11
	351.92	902	37.20*	5.450E+00	1.588E+00	1.588E+00	12.57
PO-216	74.81	316	10.70	4.918E+00	2.147E+00	2.147E+00	28.47
	77.11	648	18.00	5.237E+00	2.453E+00	2.453E+00	16.08
	87.30	292	8.00	6.447E+00	2.022E+00	2.022E+00	27.95
	238.63	1616	44.60*	6.792E+00	1.905E+00	1.905E+00	9.36
	300.09	62	3.41	5.982E+00	1.093E+00	1.093E+00	74.64
PO-218	74.81	316	6.21	4.918E+00	3.699E+00	3.699E+00	27.89
	77.11	648	10.50	5.237E+00	4.205E+00	4.205E+00	17.79
	87.30	292	4.67	6.447E+00	3.464E+00	3.464E+00	27.21
	241.98	376	7.49	6.748E+00	2.658E+00	2.658E+00	27.39
	295.21	465	19.20	6.040E+00	1.432E+00	1.432E+00	18.11
	351.92	902	37.20*	5.450E+00	1.588E+00	1.588E+00	12.57
RA-224	240.98	376	3.95*	6.748E+00	5.041E+00	5.041E+00	26.81
RA-226	609.31	708	46.30*	3.811E+00	1.432E+00	1.432E+00	14.02
	768.36	------	5.04	3.195E+00	------ Line Not Found		------
	934.06	81	3.21	2.718E+00	3.316E+00	3.316E+00	71.33
	1120.29	165	15.10	2.334E+00	1.674E+00	1.674E+00	31.47
	1238.11	------	5.94	2.148E+00	------ Line Not Found		------
	1377.67	------	4.11	1.975E+00	------ Line Not Found		------
	1764.49	120	15.80	1.694E+00	1.604E+00	1.604E+00	25.38
AC-228	338.32	310	11.40	5.579E+00	1.741E+00	1.741E+00	48.93
	911.07	399	27.70*	2.779E+00	1.852E+00	1.852E+00	18.73
	969.11	289	16.60	2.638E+00	2.356E+00	2.356E+00	28.91
RA-228	338.32	310	11.40	5.579E+00	1.741E+00	1.741E+00	48.93
	911.07	399	27.70*	2.779E+00	1.852E+00	1.852E+00	18.73
	969.11	289	16.60	2.638E+00	2.356E+00	2.356E+00	28.91
TH-228	84.40	109	1.21	6.114E+00	5.236E+00	5.236E+00	77.54
	238.60	1616	44.60*	6.792E+00	1.905E+00	1.905E+00	9.36
	300.10	62	3.41	5.982E+00	1.093E+00	1.093E+00	94.74
TH-230	609.31	708	46.30*	3.811E+00	1.432E+00	1.432E+00	14.02
	768.36	------	5.04	3.195E+00	------ Line Not Found		------
	934.06	81	3.21	2.718E+00	3.316E+00	3.316E+00	71.33
	1120.29	165	15.10	2.334E+00	1.674E+00	1.674E+00	31.47
	1238.11	------	5.94	2.148E+00	------ Line Not Found		------
	1377.67	------	4.11	1.975E+00	------ Line Not Found		------
	1764.49	120	15.80	1.694E+00	1.604E+00	1.604E+00	25.38
TH-232	338.32	310	11.40	5.579E+00	1.741E+00	1.741E+00	27.68

Sample ID : G232664002 Acquisition date : 14-JUL-2009 08:27:15

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	911.07	399	27.70*	2.779E+00	1.852E+00	1.852E+00	18.73
	969.11	289	16.60	2.638E+00	2.356E+00	2.356E+00	28.91
TH-234	63.29	62	3.80*	3.084E+00	1.878E+00	1.878E+00	91.24
	92.38	304	5.41	6.946E+00	2.889E+00	2.889E+00	34.57
U-234	609.31	708	46.30*	3.811E+00	1.432E+00	1.432E+00	14.02
	768.36	------	5.04	3.195E+00	------ Line Not Found		------
	934.06	81	3.21	2.718E+00	3.316E+00	3.316E+00	71.33
	1120.29	165	15.10	2.334E+00	1.674E+00	1.674E+00	31.47
	1238.11	------	5.94	2.148E+00	------ Line Not Found		------
	1377.67	------	4.11	1.975E+00	------ Line Not Found		------
	1764.49	120	15.80	1.694E+00	1.604E+00	1.604E+00	25.38
NP-237	86.50	292	12.60*	6.447E+00	1.284E+00	1.284E+00	33.27
	95.87	------	2.60	7.180E+00	------ Line Not Found		------
U-238	63.29	62	3.80*	3.084E+00	1.878E+00	1.878E+00	91.24
	92.38	304	5.41	6.946E+00	2.889E+00	2.889E+00	30.70
AM-241	59.54	94	35.90*	2.447E+00	3.820E-01	3.820E-01	55.95
AM-243	74.67	316	66.00*	4.918E+00	3.481E-01	3.481E-01	26.89
	86.72	292	0.34	6.447E+00	4.815E+01	4.815E+01	26.10
	117.66	------	0.55	8.112E+00	------ Line Not Found		------
	142.18	------	0.13	8.232E+00	------ Line Not Found		------
ANH-511	511.00	140	100.00*	4.308E+00	1.157E-01	1.157E-01	54.04

Flag: "*" = Keyline

Sample ID : G232664002 Acquisition date : 14-JUL-2009 08:27:15

Total number of lines in spectrum 34
Number of unidentified lines 2
Number of lines tentatively identified by NID 32 94.12%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.813E+01	2.813E+01	0.261E+01	9.29	
CD-109	464.00D	1.03	4.349E+00	4.467E+00	1.166E+00	26.10	
SN-126	1.00E+05Y	1.00	4.373E-01	4.373E-01	1.141E-01	26.10	
CS-135	2.30E+06Y	1.00	5.888E-01	5.888E-01	2.621E-01	44.51	
RE-188	69.40D	1.20	1.665E-01	1.991E-01	2.482E-01	124.64	
TL-208	1.41E+10Y	1.00	5.055E-01	5.055E-01	0.848E-01	16.78	
BI-211	7.04E+08Y	1.00	4.564E+00	4.564E+00	0.522E+00	11.43	
PB-212	1.41E+10Y	1.00	1.905E+00	1.905E+00	0.178E+00	9.36	
PO-212	1.41E+10Y	1.00	1.905E+00	1.905E+00	0.178E+00	9.36	
BI-214	1600.00Y	1.00	1.432E+00	1.432E+00	0.201E+00	14.02	
PB-214	1600.00Y	1.00	1.588E+00	1.588E+00	0.200E+00	12.57	
PO-214	1600.00Y	1.00	1.588E+00	1.588E+00	0.200E+00	12.57	
PO-216	1.41E+10Y	1.00	1.905E+00	1.905E+00	0.178E+00	9.36	
PO-218	1600.00Y	1.00	1.588E+00	1.588E+00	0.200E+00	12.57	
RA-224	1.41E+10Y	1.00	5.041E+00	5.041E+00	1.352E+00	26.81	
RA-226	1600.00Y	1.00	1.432E+00	1.432E+00	0.201E+00	14.02	
AC-228	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.347E+00	18.73	
RA-228	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.347E+00	18.73	
TH-228	1.41E+10Y	1.00	1.905E+00	1.905E+00	0.178E+00	9.36	
TH-230	4.47E+09Y	1.00	1.432E+00	1.432E+00	0.201E+00	14.02	
TH-232	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.347E+00	18.73	
TH-234	4.47E+09Y	1.00	1.878E+00	1.878E+00	1.713E+00	91.24	
U-234	4.47E+09Y	1.00	1.432E+00	1.432E+00	0.201E+00	14.02	
NP-237	2.14E+06Y	1.00	1.284E+00	1.284E+00	0.427E+00	33.27	
U-238	4.47E+09Y	1.00	1.878E+00	1.878E+00	1.713E+00	91.24	
AM-241	432.20Y	1.00	3.820E-01	3.820E-01	2.138E-01	55.95	
AM-243	7380.00Y	1.00	3.481E-01	3.481E-01	0.936E-01	26.89	
ANH-511	1.00E+09Y	1.00	1.157E-01	1.157E-01	0.625E-01	54.04	
	Total Activity :		7.334E+01	7.349E+01			

Grand Total Activity : 7.334E+01 7.349E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232664002 Acquisition date : 14-JUL-2009 08:27:15

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	90.08	180	302	1.05	179.26	161	29	2.50E-02	34.4	6.71E+00	T
0	185.89	211	420	1.36	370.81	366	11	2.93E-02	41.5	7.65E+00	T
0	208.94	112	408	1.06	416.89	411	11	1.56E-02	72.4	7.26E+00	T
0	328.42	41	275	0.79	655.77	650	13	5.69E-03	****	5.68E+00	T
0	463.68	98	148	2.90	926.23	920	12	1.37E-02	53.6	4.59E+00	T
0	727.22	165	71	1.62	1453.16	1446	13	2.29E-02	26.3	3.34E+00	T
3	964.76	103	68	2.81	1928.14	1919	30	1.44E-02	45.9	2.65E+00	T
0	1511.71	15	34	0.89	3021.90	3008	17	2.09E-03	****	1.85E+00	
0	1729.71	39	6	1.74	3457.88	3452	11	5.35E-03	39.9	1.71E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:28:09.49

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                            *
*                                DETECTOR DATA                               *
*                                                                            *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664002.CNF;1   *
* Acquisition date : 14-JUL-2009 08:27:15  Detector SN#     :                *
* Detector ID      : GAM18                 Sensitivity      : 5.00000        *
* Geometry         : CAN                   Energy tolerance: 1.50000         *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000        *
* Elapsed real time: 0 02:00:01.63         Half life ratio : 8.00000         *
*****************************************************************************
*                                                                            *
*                                SAMPLE DATA                                 *
*                                                                            *
* Sample date      : 26-JUN-2009 12:00:00  Nuclide Library : SOLID           *
* Sample ID        : G232664002            Analyst initials: MXR1            *
* Batch Number     : 882713                Sample Quantity : 1.05140E+02 GRAM *
*****************************************************************************
*                                                                            *
*                                  QC DATA                                   *
*                                                                            *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS Isotope      :                 *
* MSD ID           :                       MSD Isotope     :                 *
* LCS ID           : 1023-A                LCS Isotope     :                 *
*****************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.813E+01	2.613E+00	4.933E-01	3.743E-02	57.030
CD-109	4.467E+00	1.166E+00	1.279E+00	1.183E-01	3.492
SN-126	4.373E-01	1.141E-01	1.260E-01	1.161E-02	3.470
CS-135	5.888E-01	2.621E-01	2.227E-01	1.683E-02	2.644
RE-188	1.991E-01	2.482E-01	2.727E-01	1.459E-02	0.730
TL-208	5.055E-01	8.481E-02	5.644E-02	4.425E-03	8.956
BI-211	4.564E+00	5.218E-01	3.061E-01	1.965E-02	14.912
PB-212	1.905E+00	1.783E-01	8.381E-02	5.987E-03	22.728
PO-212	1.905E+00	1.783E-01	8.381E-02	5.987E-03	22.728
BI-214	1.432E+00	2.008E-01	1.031E-01	9.212E-03	13.883
PB-214	1.588E+00	1.995E-01	1.067E-01	8.824E-03	14.885
PO-214	1.588E+00	1.995E-01	1.067E-01	8.824E-03	14.885
PO-216	1.905E+00	1.783E-01	8.381E-02	5.987E-03	22.728
PO-218	1.588E+00	1.995E-01	1.067E-01	8.824E-03	14.885
RA-224	5.041E+00	1.352E+00	9.526E-01	5.306E-02	5.292
RA-226	1.432E+00	2.008E-01	1.031E-01	9.212E-03	13.883
AC-228	1.852E+00	3.470E-01	2.109E-01	2.794E-02	8.784
RA-228	1.852E+00	3.470E-01	2.109E-01	2.794E-02	8.784

Sample ID : G232664002 Acquisition date : 14-JUL-2009 08:27:15

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.905E+00	1.783E-01	8.380E-02	5.986E-03	22.730
TH-230	1.432E+00	2.008E-01	1.031E-01	9.211E-03	13.883
TH-232	1.852E+00	3.470E-01	2.109E-01	2.794E-02	8.784
TH-234	1.878E+00	1.713E+00	2.731E+00	4.814E-01	0.688
U-234	1.432E+00	2.008E-01	1.031E-01	9.211E-03	13.883
NP-237	1.284E+00	4.272E-01	3.758E-01	8.480E-02	3.416
U-238	1.878E+00	1.713E+00	2.731E+00	4.814E-01	0.688
AM-241	3.820E-01	2.138E-01	3.393E-01	2.814E-02	1.126
AM-243	3.481E-01	9.361E-02	9.933E-02	8.289E-03	3.504
ANH-511	1.157E-01	6.253E-02	4.277E-02	2.824E-03	2.706

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-8.916E-02		3.113E-01	5.043E-01	3.655E-02	-0.177
NA-22	3.502E-03		4.406E-02	7.280E-02	4.954E-03	0.048
NA-24	-4.721E+00		6.936E+00	Half-Life too short		
AL-26	-5.234E-03		2.706E-02	4.086E-02	2.385E-03	-0.128
TI-44	4.527E-01	+	7.280E-02	8.987E-02	7.684E-03	5.038
SC-46	-1.149E-02		3.742E-02	5.961E-02	6.648E-03	-0.193
V-48	-1.746E-02		7.021E-02	1.110E-01	1.098E-02	-0.157
CR-51	-6.251E-02		3.715E-01	5.925E-01	3.815E-02	-0.106
MN-52	1.361E-01		3.107E-01	5.264E-01	3.879E-02	0.259
MN-54	-1.742E-02		3.644E-02	5.783E-02	5.924E-03	-0.301
CO-56	1.410E-02		3.941E-02	6.630E-02	6.922E-03	0.213
CO-57	7.071E-03		2.544E-02	4.134E-02	2.449E-03	0.171
CO-58	-4.988E-04		3.593E-02	5.916E-02	5.841E-03	-0.008
FE-59	-1.039E-01		9.373E-02	1.425E-01	1.173E-02	-0.729
CO-60	-4.938E-03		3.445E-02	5.547E-02	4.191E-03	-0.089
ZN-65	4.513E-02		1.028E-01	1.526E-01	1.075E-02	0.296
GE-68	3.073E-01		1.112E+00	1.896E+00	1.506E-01	0.162
AS-73	-1.107E+00		1.275E+00	1.997E+00	1.583E-01	-0.554
AS-74	-3.916E-04		1.008E-01	1.631E-01	1.172E-02	-0.002
SE-75	-2.658E-02		4.789E-02	6.581E-02	3.763E-03	-0.404
BR-77	-5.170E+00		2.109E+01	3.396E+01	2.266E+00	-0.152
SR-82	-3.628E-01		3.687E-01	5.622E-01	5.236E-02	-0.645
RB-83	-1.876E-02		6.399E-02	1.027E-01	6.849E-03	-0.183
RB-84	9.688E-03		6.902E-02	1.141E-01	1.258E-02	0.085
KR-85	2.728E+01		8.355E+00	1.432E+01	9.488E-01	1.905
SR-85	1.440E-01		4.409E-02	7.557E-02	5.007E-03	1.905
RB-86	2.385E-02		7.694E-01	1.287E+00	1.024E-01	0.019
Y-88	2.865E-02		3.308E-02	6.070E-02	3.457E-03	0.472
ZR-88	-1.055E-02		2.810E-02	4.609E-02	2.651E-03	-0.229
Y-91	-1.538E+01		1.856E+01	2.875E+01	1.700E+00	-0.535
NB-94	4.093E-03		3.097E-02	5.213E-02	4.277E-03	0.079
NB-95	5.270E-02		4.320E-02	7.627E-02	6.977E-03	0.691
NB-95M	2.172E-01		1.297E-01	2.049E-01	1.503E-02	1.060

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	3.651E-02		6.842E-02	1.174E-01	1.155E-02	0.311
NB-97	-1.572E+00		6.880E-01	Half-Life too short		
ZR-97	5.645E+01		1.363E+01	Half-Life too short		
MO-99	-1.798E+01		2.129E+01	3.294E+01	5.026E+00	-0.546
TC-99M	-2.328E+13		3.866E+13	Half-Life too short		
RH-101	-6.137E-03		3.206E-02	5.200E-02	2.795E-03	-0.118
RH-102	-3.307E-03		2.743E-02	4.493E-02	2.854E-03	-0.074
RU-103	3.129E-02		3.797E-02	6.539E-02	8.491E-03	0.479
RH-106	-2.733E-01		3.186E-01	4.795E-01	6.033E-02	-0.570
RU-106	-2.733E-01		3.174E-01	4.795E-01	3.529E-02	-0.570
AG-108M	1.598E-02		2.931E-02	5.025E-02	3.283E-03	0.318
AG-110M	-4.112E-02		3.352E-02	5.165E-02	4.074E-03	-0.796
IN-111	-1.562E+00		2.168E+00	2.968E+00	1.659E-01	-0.526
IN-113M	-1.101E-02		4.071E-02	6.721E-02	4.123E-03	-0.164
SN-113	-1.101E-02		4.071E-02	6.721E-02	4.123E-03	-0.164
IN-114M	4.529E-02		1.981E-01	2.959E-01	1.580E-02	0.153
CD-115	5.475E-07		1.130E-05	Half-Life too short		
SN-117M	-1.936E-02		6.379E-02	9.904E-02	5.264E-03	-0.195
SB-122	3.687E+00		4.063E+00	6.966E+00	4.854E-01	0.529
I-123	-2.974E+01		8.877E+01	Half-Life too short		
TE-123M	-4.665E-03		2.785E-02	4.534E-02	2.446E-03	-0.103
I-124	-1.317E-01		1.166E+00	1.608E+00	1.163E-01	-0.082
SB-124	-5.911E-02		7.395E-02	1.077E-01	7.428E-03	-0.549
SB-125	-5.446E-02		8.033E-02	1.280E-01	7.996E-03	-0.426
TE-125M	2.786E+00		1.009E+01	1.649E+01	1.451E+00	0.169
I-126	-9.022E-02		2.064E-01	3.370E-01	2.591E-02	-0.268
SB-126	-1.211E-02		1.725E-01	2.458E-01	2.080E-02	-0.049
SB-127	-1.529E+00		2.109E+00	3.349E+00	3.939E-01	-0.457
XE-127	-4.069E-02		5.356E-02	7.973E-02	4.304E-03	-0.510
I-131	1.796E-02		1.313E-01	2.228E-01	1.445E-02	0.081
TE-132	-8.593E-01		1.174E+00	1.865E+00	2.767E-01	-0.461
BA-133	1.989E-02		4.465E-02	6.444E-02	7.444E-03	0.309
I-133	-2.748E-02		2.420E-02	Half-Life too short		
CS-134	8.514E-02		4.318E-02	7.928E-02	7.668E-03	1.074
I-135	1.578E+12		2.442E+12	Half-Life too short		
CS-136	-2.756E-02		1.053E-01	1.722E-01	1.544E-02	-0.160
BA-137M	2.765E-02		3.541E-02	6.192E-02	4.720E-03	0.447
CS-137	2.923E-02		3.743E-02	6.546E-02	5.002E-03	0.447
CE-139	-1.678E-02		2.760E-02	4.547E-02	2.387E-03	-0.369
BA-140	-1.330E-01		2.784E-01	4.340E-01	1.420E-01	-0.306
LA-140	-1.372E-01		1.018E-01	1.425E-01	9.778E-03	-0.962
CE-141	9.292E-03		6.975E-02	1.082E-01	6.179E-03	0.086
CE-143	3.281E-03		4.844E-04	Half-Life too short		
CE-144	7.405E-02		2.098E-01	3.394E-01	4.799E-02	0.218
PM-144	-7.183E-03		3.142E-02	5.170E-02	4.198E-03	-0.139
PR-144	-4.875E-01		2.132E+00	3.508E+00	2.847E-01	-0.139
PM-146	2.005E-02		4.136E-02	7.034E-02	6.257E-03	0.285
ND-147	8.881E-02		5.984E-01	9.879E-01	1.378E-01	0.090

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	1.299E-04		1.006E-04	Half-Life too short		
EU-152	-2.043E-03		1.131E-01	1.463E-01	9.547E-03	-0.014
GD-153	-5.681E-02		9.169E-02	1.284E-01	1.004E-02	-0.443
EU-154	4.251E-02		1.202E-01	2.028E-01	2.026E-02	0.210
EU-155	1.346E-01		1.156E-01	1.954E-01	1.397E-02	0.689
TB-160	-2.573E-02		1.355E-01	2.184E-01	2.399E-02	-0.118
HO-166M	-6.236E-02		5.566E-02	8.522E-02	7.104E-03	-0.732
TM-171	-1.117E+01		3.791E+01	5.577E+01	4.459E+00	-0.200
LU-176	3.600E-03		2.315E-02	3.773E-02	2.172E-03	0.095
LU-177	3.180E+00	+	2.309E+00	2.664E+00	1.445E-01	1.193
LU-177M	-2.109E-01		1.721E-01	2.674E-01	1.580E-02	-0.788
HF-181	-2.717E-02		4.185E-02	6.612E-02	4.232E-03	-0.411
W-181	-2.238E-01		5.041E-01	7.368E-01	5.844E-02	-0.304
TA-182	1.764E-01		1.823E-01	3.207E-01	1.962E-02	0.550
RE-183	5.689E-04		1.030E-01	1.743E-01	9.199E-03	0.003
RE-184	-1.625E-02		2.226E-01	3.639E-01	2.044E-02	-0.045
OS-185	9.037E-03		3.953E-02	6.459E-02	4.857E-03	0.140
W-188	-2.695E+00		7.954E+00	1.100E+01	6.300E-01	-0.245
IR-192	-1.541E-02		3.259E-02	5.105E-02	2.961E-03	-0.302
AU-195	1.136E-01		2.320E-01	3.848E-01	2.944E-02	0.295
TL-200	3.025E-04		1.163E-03	Half-Life too short		
TL-201	-2.338E+00		1.195E+01	2.002E+01	1.051E+00	-0.117
TL-202	5.642E-02		7.149E-02	1.241E-01	7.569E-03	0.454
HG-203	4.085E-02		4.056E-02	6.913E-02	4.193E-03	0.591
BI-207	1.924E-02		4.734E-02	8.147E-02	6.726E-03	0.236
TL-207	1.699E-02		7.370E-01	1.037E+00	1.712E-01	0.016
PO-209	-6.749E-01		7.252E+00	1.176E+01	1.326E+00	-0.057
BI-210	3.310E+00		5.748E+00	9.945E+00	7.694E-01	0.333
PB-210	3.310E+00		5.748E+00	9.945E+00	7.694E-01	0.333
PO-210	3.310E+00		5.747E+00	9.945E+00	6.615E-01	0.333
PB-211	-8.828E-01		1.036E+00	1.388E+00	8.653E-01	-0.636
BI-212	1.492E+00	+	4.196E-01	6.245E-01	6.220E-02	2.389
PO-215	1.699E-02		7.370E-01	1.037E+00	1.712E-01	0.016
RN-219	4.835E-02		3.749E-01	6.313E-01	8.595E-02	0.077
RN-220	-1.550E+01		2.388E+01	3.710E+01	2.550E+00	-0.418
RA-223	1.699E-02		7.370E-01	1.037E+00	1.712E-01	0.016
AC-227	-2.188E-01		3.578E-01	5.663E-01	7.866E-02	-0.386
TH-227	-2.188E-01		3.584E-01	5.663E-01	9.537E-02	-0.386
TH-229	1.373E-02		4.631E-01	7.754E-01	4.152E-02	0.018
PA-231	2.843E-03		1.443E+00	2.347E+00	3.225E-01	0.001
TH-231	1.699E-02		7.370E-01	1.037E+00	1.712E-01	0.016
U-231	2.338E-02		1.870E+00	2.723E+00	2.181E-01	0.009
PA-233	-7.562E-03		5.857E-02	9.382E-02	5.748E-03	-0.081
PA-234	-2.463E-01		3.622E-01	4.597E-01	9.068E-02	-0.536
PA-234M	3.249E+00		6.020E+00	1.010E+01	1.204E+00	0.322
U-235	-2.922E-03		2.206E-01	3.404E-01	5.513E-02	-0.009
NP-236	-5.092E-03		7.388E-02	1.248E-01	6.609E-03	-0.041
NP-239	2.442E-02		1.911E-01	3.092E-01	1.914E-02	0.079

Sample ID : G232664002 Acquisition date : 14-JUL-2009 08:27:15

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	7.952E-02		1.014E-01	1.695E-01	1.214E-02	0.469
CM-247	1.495E-02		3.373E-02	5.773E-02	3.362E-03	0.259
CF-249	6.415E-03		3.722E-02	6.299E-02	3.621E-03	0.102
CF-251	1.429E-01		1.223E-01	2.134E-01	1.127E-02	0.670

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232664002           *
* Acquisition date  : 14-JUL-2009 08:27:15 Detector SN#     :               *
* Detector ID       : GAM18                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.63      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 26-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232664002           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.0514E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.813E+01	2.561E+00	2.451E-01	1.306E+00
CD-109	4.467E+00	1.142E+00	6.444E-01	5.829E-01
SN-126	4.373E-01	1.118E-01	6.349E-02	5.706E-02
CS-135	5.888E-01	2.568E-01	1.116E-01	1.310E-01
RE-188	1.991E-01	2.432E-01	1.370E-01	1.241E-01
TL-208	5.055E-01	8.312E-02	2.817E-02	4.241E-02
BI-211	4.564E+00	5.114E-01	1.531E-01	2.609E-01
PB-212	1.905E+00	1.748E-01	4.201E-02	8.916E-02
PO-212	1.905E+00	1.748E-01	4.201E-02	8.916E-02
BI-214	1.432E+00	1.967E-01	5.145E-02	1.004E-01
PB-214	1.588E+00	1.955E-01	5.337E-02	9.977E-02
PO-214	1.588E+00	1.955E-01	5.337E-02	9.977E-02
PO-216	1.905E+00	1.748E-01	4.201E-02	8.916E-02
PO-218	1.588E+00	1.955E-01	5.337E-02	9.977E-02
RA-224	5.041E+00	1.325E+00	4.775E-01	6.758E-01
RA-226	1.432E+00	1.967E-01	5.145E-02	1.004E-01
AC-228	1.852E+00	3.400E-01	1.050E-01	1.735E-01
RA-228	1.852E+00	3.400E-01	1.050E-01	1.735E-01
TH-228	1.905E+00	1.748E-01	4.201E-02	8.916E-02
TH-230	1.432E+00	1.967E-01	5.145E-02	1.004E-01
TH-232	1.852E+00	3.400E-01	1.050E-01	1.735E-01
TH-234	1.878E+00	1.679E+00	1.378E+00	8.567E-01
U-234	1.432E+00	1.967E-01	5.145E-02	1.004E-01
NP-237	1.284E+00	4.186E-01	1.894E-01	2.136E-01
U-238	1.878E+00	1.679E+00	1.378E+00	8.567E-01
AM-241	3.820E-01	2.095E-01	1.713E-01	1.069E-01
AM-243	3.481E-01	9.174E-02	5.008E-02	4.680E-02
ANH-511	1.157E-01	6.128E-02	2.136E-02	3.126E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-8.916E-02	3.051E-01	2.519E-01	1.557E-01	NOT IDENT.
NA-22	3.502E-03	4.318E-02	3.619E-02	2.203E-02	NOT IDENT.
NA-24	-4.721E+06	1.359E+07	0.000E+00	6.936E+06	SHORT HLIF
AL-26	-5.234E-03	2.652E-02	2.027E-02	1.353E-02	NOT IDENT.
TI-44	4.527E-01	7.135E-02	4.530E-02	3.640E-02	FAIL ABUN
SC-46	-1.149E-02	3.667E-02	2.968E-02	1.871E-02	FAIL ABUN
V-48	-1.746E-02	6.881E-02	5.527E-02	3.510E-02	NOT IDENT.
CR-51	-6.251E-02	3.641E-01	2.966E-01	1.858E-01	NOT IDENT.
MN-52	1.361E-01	3.044E-01	2.615E-01	1.553E-01	FAIL ABUN
MN-54	-1.742E-02	3.571E-02	2.881E-02	1.822E-02	NOT IDENT.
CO-56	1.410E-02	3.862E-02	3.303E-02	1.970E-02	NOT IDENT.
CO-57	7.071E-03	2.493E-02	2.079E-02	1.272E-02	NOT IDENT.
CO-58	-4.988E-04	3.522E-02	2.948E-02	1.797E-02	NOT IDENT.
FE-59	-1.039E-01	9.186E-02	7.090E-02	4.687E-02	NOT IDENT.
CO-60	-4.938E-03	3.377E-02	2.757E-02	1.723E-02	NOT IDENT.
ZN-65	4.513E-02	1.007E-01	7.591E-02	5.139E-02	NOT IDENT.
GE-68	3.073E-01	1.090E+00	9.432E-01	5.562E-01	NOT IDENT.
AS-73	-1.107E+00	1.250E+00	1.008E+00	6.376E-01	NOT IDENT.
AS-74	-3.916E-04	9.883E-02	8.140E-02	5.042E-02	NOT IDENT.
SE-75	-2.658E-02	4.693E-02	3.297E-02	2.394E-02	NOT IDENT.
BR-77	-5.170E+00	2.067E+01	1.696E+01	1.055E+01	FAIL ABUN
SR-82	-3.628E-01	3.614E-01	2.802E-01	1.844E-01	NOT IDENT.
RB-83	-1.876E-02	6.271E-02	5.128E-02	3.200E-02	NOT IDENT.
RB-84	9.688E-03	6.764E-02	5.685E-02	3.451E-02	NOT IDENT.
KR-85	2.728E+01	8.188E+00	7.152E+00	4.178E+00	NOT IDENT.
SR-85	1.440E-01	4.321E-02	3.774E-02	2.204E-02	NOT IDENT.
RB-86	2.385E-02	7.540E-01	6.402E-01	3.847E-01	NOT IDENT.
Y-88	2.865E-02	3.242E-02	3.012E-02	1.654E-02	NOT IDENT.
ZR-88	-1.055E-02	2.754E-02	2.305E-02	1.405E-02	NOT IDENT.
Y-91	-1.538E+01	1.819E+01	1.429E+01	9.281E+00	NOT IDENT.
NB-94	4.093E-03	3.035E-02	2.599E-02	1.549E-02	NOT IDENT.
NB-95	5.270E-02	4.233E-02	3.801E-02	2.160E-02	NOT IDENT.
NB-95M	2.172E-01	1.271E-01	1.027E-01	6.484E-02	NOT IDENT.
ZR-95	3.651E-02	6.705E-02	5.851E-02	3.421E-02	NOT IDENT.
NB-97	-1.572E+06	1.349E+06	0.000E+00	6.880E+05	SHORT HLIF
ZR-97	5.645E+07	2.672E+07	0.000E+00	1.363E+07	SHORT HLIF
MO-99	-1.798E+01	2.087E+01	1.642E+01	1.065E+01	NOT IDENT.
TC-99M	-2.328E+19	7.577E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.137E-03	3.142E-02	2.609E-02	1.603E-02	NOT IDENT.
RH-102	-3.307E-03	2.688E-02	2.245E-02	1.372E-02	NOT IDENT.
RU-103	3.129E-02	3.722E-02	3.266E-02	1.899E-02	FAIL ABUN
RH-106	-2.733E-01	3.123E-01	2.392E-01	1.593E-01	FAIL ABUN
RU-106	-2.733E-01	3.111E-01	2.392E-01	1.587E-01	FAIL ABUN
AG-108M	1.598E-02	2.872E-02	2.512E-02	1.466E-02	NOT IDENT.
AG-110M	-4.112E-02	3.285E-02	2.576E-02	1.676E-02	NOT IDENT.
IN-111	-1.562E+00	2.124E+00	1.488E+00	1.084E+00	NOT IDENT.
IN-113M	-1.101E-02	3.990E-02	3.361E-02	2.036E-02	NOT IDENT.
SN-113	-1.101E-02	3.990E-02	3.361E-02	2.036E-02	NOT IDENT.
IN-114M	4.529E-02	1.942E-01	1.485E-01	9.907E-02	NOT IDENT.
CD-115	5.475E-01	2.214E+01	0.000E+00	1.130E+01	SHORT HLIF
SN-117M	-1.936E-02	6.251E-02	4.975E-02	3.189E-02	NOT IDENT.
SB-122	3.687E+00	3.981E+00	3.477E+00	2.031E+00	NOT IDENT.
I-123	-2.974E+07	1.740E+08	0.000E+00	8.877E+07	SHORT HLIF
TE-123M	-4.665E-03	2.729E-02	2.278E-02	1.393E-02	NOT IDENT.
I-124	-1.317E-01	1.142E+00	8.022E-01	5.828E-01	NOT IDENT.
SB-124	-5.911E-02	7.247E-02	5.344E-02	3.697E-02	FAIL ABUN
SB-125	-5.446E-02	7.872E-02	6.397E-02	4.017E-02	FAIL ABUN
TE-125M	2.786E+00	9.885E+00	8.296E+00	5.043E+00	NOT IDENT.
I-126	-9.022E-02	2.023E-01	1.681E-01	1.032E-01	NOT IDENT.
SB-126	-1.211E-02	1.691E-01	1.225E-01	8.626E-02	FAIL ABUN
SB-127	-1.529E+00	2.067E+00	1.670E+00	1.055E+00	NOT IDENT.
XE-127	-4.069E-02	5.249E-02	4.000E-02	2.678E-02	NOT IDENT.
I-131	1.796E-02	1.286E-01	1.114E-01	6.563E-02	NOT IDENT.
TE-132	-8.593E-01	1.150E+00	9.351E-01	5.868E-01	NOT IDENT.
BA-133	1.989E-02	4.376E-02	3.224E-02	2.232E-02	NOT IDENT.
I-133	-2.748E+04	4.744E+04	0.000E+00	2.420E+04	SHORT HLIF
CS-134	8.514E-02	4.232E-02	3.951E-02	2.159E-02	NOT IDENT.
I-135	1.578E+18	4.787E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-2.756E-02	1.032E-01	8.569E-02	5.265E-02	FAIL ABUN
BA-137M	2.765E-02	3.470E-02	3.088E-02	1.770E-02	NOT IDENT.
CS-137	2.923E-02	3.668E-02	3.265E-02	1.872E-02	NOT IDENT.
CE-139	-1.678E-02	2.705E-02	2.284E-02	1.380E-02	NOT IDENT.
BA-140	-1.330E-01	2.728E-01	2.167E-01	1.392E-01	NOT IDENT.
LA-140	-1.372E-01	9.975E-02	7.077E-02	5.089E-02	FAIL ABUN
CE-141	9.292E-03	6.835E-02	5.439E-02	3.487E-02	NOT IDENT.
CE-143	3.281E+03	9.494E+02	0.000E+00	4.844E+02	SHORT HLIF
CE-144	7.405E-02	2.056E-01	1.706E-01	1.049E-01	NOT IDENT.

PM-144	-7.183E-03	3.079E-02	2.578E-02	1.571E-02	NOT IDENT.
PR-144	-4.875E-01	2.089E+00	1.749E+00	1.066E+00	NOT IDENT.
PM-146	2.005E-02	4.053E-02	3.515E-02	2.068E-02	NOT IDENT.
ND-147	8.881E-02	5.865E-01	4.933E-01	2.992E-01	FAIL ABUN
PM-149	1.299E+02	1.972E+02	0.000E+00	1.006E+02	SHORT HLIF
EU-152	-2.043E-03	1.108E-01	7.321E-02	5.654E-02	FAIL ABUN
GD-153	-5.681E-02	8.986E-02	6.463E-02	4.584E-02	FAIL ABUN
EU-154	4.251E-02	1.178E-01	1.008E-01	6.010E-02	NOT IDENT.
EU-155	1.346E-01	1.133E-01	9.835E-02	5.779E-02	FAIL ABUN
TB-160	-2.573E-02	1.328E-01	1.088E-01	6.776E-02	FAIL ABUN
HO-166M	-6.236E-02	5.454E-02	4.249E-02	2.783E-02	FAIL ABUN
TM-171	-1.117E+01	3.715E+01	2.814E+01	1.896E+01	FAIL ABUN
LU-176	3.600E-03	2.268E-02	1.889E-02	1.157E-02	FAIL ABUN
LU-177	3.180E+00	2.263E+00	1.336E+00	1.155E+00	FAIL ABUN
LU-177M	-2.109E-01	1.687E-01	1.337E-01	8.606E-02	FAIL ABUN
HF-181	-2.717E-02	4.101E-02	3.303E-02	2.093E-02	NOT IDENT.
W-181	-2.238E-01	4.940E-01	3.717E-01	2.520E-01	NOT IDENT.
TA-182	1.764E-01	1.787E-01	1.595E-01	9.117E-02	FAIL ABUN
RE-183	5.689E-04	1.009E-01	8.753E-02	5.150E-02	FAIL ABUN
RE-184	-1.625E-02	2.181E-01	1.824E-01	1.113E-01	FAIL ABUN
OS-185	9.037E-03	3.874E-02	3.222E-02	1.976E-02	FAIL ABUN
W-188	-2.695E+00	7.795E+00	5.509E+00	3.977E+00	FAIL ABUN
IR-192	-1.541E-02	3.194E-02	2.556E-02	1.630E-02	FAIL ABUN
AU-195	1.136E-01	2.273E-01	1.938E-01	1.160E-01	FAIL ABUN
TL-200	3.025E+02	2.279E+03	0.000E+00	1.163E+03	SHORT HLIF
TL-201	-2.338E+00	1.171E+01	1.005E+01	5.976E+00	NOT IDENT.
TL-202	5.642E-02	7.006E-02	6.205E-02	3.574E-02	NOT IDENT.
HG-203	4.085E-02	3.975E-02	3.463E-02	2.028E-02	NOT IDENT.
BI-207	1.924E-02	4.639E-02	4.054E-02	2.367E-02	FAIL ABUN
TL-207	1.699E-02	7.223E-01	5.190E-01	3.685E-01	FAIL ABUN
PO-209	-6.749E-01	7.107E+00	5.855E+00	3.626E+00	NOT IDENT.
BI-210	3.310E+00	5.634E+00	5.026E+00	2.874E+00	NOT IDENT.
PB-210	3.310E+00	5.634E+00	5.026E+00	2.874E+00	NOT IDENT.
PO-210	3.310E+00	5.632E+00	5.026E+00	2.873E+00	NOT IDENT.
PB-211	-8.828E-01	1.015E+00	6.939E-01	5.180E-01	NOT IDENT.
BI-212	1.492E+00	4.112E-01	3.113E-01	2.098E-01	FAIL ABUN
PO-215	1.699E-02	7.223E-01	5.190E-01	3.685E-01	FAIL ABUN
RN-219	4.835E-02	3.674E-01	3.157E-01	1.874E-01	NOT IDENT.
RN-220	-1.550E+01	2.340E+01	1.852E+01	1.194E+01	NOT IDENT.
RA-223	1.699E-02	7.223E-01	5.190E-01	3.685E-01	FAIL ABUN
AC-227	-2.188E-01	3.506E-01	2.838E-01	1.789E-01	FAIL ABUN
TH-227	-2.188E-01	3.512E-01	2.838E-01	1.792E-01	FAIL ABUN
TH-229	1.373E-02	4.539E-01	3.891E-01	2.316E-01	FAIL ABUN
PA-231	2.843E-03	1.414E+00	1.175E+00	7.215E-01	FAIL ABUN
TH-231	1.699E-02	7.223E-01	5.190E-01	3.685E-01	FAIL ABUN
U-231	2.338E-02	1.833E+00	1.371E+00	9.351E-01	FAIL ABUN
PA-233	-7.562E-03	5.740E-02	4.697E-02	2.929E-02	FAIL ABUN
PA-234	-2.463E-01	3.549E-01	2.288E-01	1.811E-01	FAIL ABUN
PA-234M	3.249E+00	5.899E+00	5.028E+00	3.010E+00	NOT IDENT.
U-235	-2.922E-03	2.162E-01	1.711E-01	1.103E-01	FAIL ABUN
NP-236	-5.092E-03	7.241E-02	6.266E-02	3.694E-02	NOT IDENT.
NP-239	2.442E-02	1.872E-01	1.555E-01	9.553E-02	FAIL ABUN
CM-243	7.952E-02	9.938E-02	8.534E-02	5.070E-02	FAIL ABUN
CM-247	1.495E-02	3.306E-02	2.886E-02	1.687E-02	NOT IDENT.
CF-249	6.415E-03	3.648E-02	3.150E-02	1.861E-02	NOT IDENT.
CF-251	1.429E-01	1.198E-01	1.071E-01	6.115E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	244.5477
46.50	244.5477
46.50	244.5477
48.70	278.0632
49.72	271.1254
51.35	258.4165
52.39	279.4179
52.97	298.2234
53.15	293.8786
53.44	286.0055
54.07	288.5127
56.28	265.1089
56.28	265.1118
57.37	0.0000
57.53	284.3485
57.53	284.3501
57.60	303.8434
57.98	304.2587
57.98	304.2587
59.32	325.7182
59.32	325.7182
59.40	325.8098
59.54	325.9701
59.72	326.1757
60.01	326.5068
61.10	327.7449
61.14	327.7903
61.30	327.9710
63.00	329.8767
63.29	370.7662
63.29	370.7662
63.58	371.1270
64.28	363.4775
65.12	355.9470
65.20	356.0410
65.20	356.0410
66.05	359.8910
66.72	356.3797
66.83	357.9407
66.91	358.0322
67.20	352.0606
67.20	352.0606
67.75	363.7878
67.85	374.4398
68.90	386.2621
68.90	386.2621
69.30	370.8767
69.67	362.6432
70.82	366.8434
70.82	366.8434
70.83	366.8550
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72.87	386.6713
72.87	386.6713
74.67	372.6362
74.81	372.7922
74.81	372.7922
74.81	372.7922
74.81	372.7922
74.81	372.7922
74.81	372.7922
74.97	372.9695
75.28	373.3144
75.70	373.7795
77.11	375.3298
77.11	375.3298
77.11	375.3298

77.11	375.3298
77.11	375.3298
77.11	375.3298
78.38	373.7491
79.62	375.0815
79.80	375.2737
79.80	375.2737
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80.18	375.6794
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80.30	375.8063
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81.07	334.7781
81.07	334.7781
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83.78	327.2718
83.78	327.2718
83.78	327.2718
84.21	327.6581
84.40	327.8272
84.90	328.2749
85.43	328.7475
86.29	329.5119
86.50	329.6976
86.54	329.7324
86.59	329.7772
86.72	329.8916
86.79	329.9513
86.94	330.0856
87.30	330.4040
87.30	330.4040
87.30	330.4040
87.30	330.4040
87.30	330.4040
87.30	330.4040
87.57	330.6411
87.88	330.9130
88.03	331.0457
88.36	331.3342
88.47	331.4303
89.95	332.7204
91.11	333.7235
92.29	334.7383
92.38	334.8162
92.38	334.8162
93.35	335.6436
94.00	297.0088
94.67	268.0647
94.67	268.0687
94.90	268.2231
94.90	268.2231
94.90	268.2231
94.90	268.2231
95.87	295.2950
95.87	295.2950
96.73	339.5389
97.43	315.1596
98.44	277.3593
98.44	277.3593
98.88	279.7446
99.55	269.7447
99.55	269.7447
99.86	270.9931
100.00	271.0853
100.10	271.1525
103.18	309.0056
103.76	283.0257
105.00	282.7871
105.31	289.3516
108.00	364.7318
109.28	305.8970
111.00	280.2383
111.00	280.2383

111.76	292.5430
112.95	354.7801
115.19	260.0769
116.30	257.4437
117.00	274.1497
117.00	274.1497
117.66	303.9529
121.11	264.4751
121.62	262.5599
121.78	262.6474
122.06	263.9001
122.32	264.0417
122.32	264.0417
122.32	264.0417
122.32	264.0417
123.07	274.3701
127.23	311.1569
129.76	291.5136
131.20	322.5879
133.02	296.7610
133.54	286.9321
135.34	293.5791
136.00	282.6436
136.25	281.6473
136.48	294.2191
140.51	316.9919
140.51	0.0000
142.18	296.2466
142.65	303.3736
143.76	303.9936
144.24	315.7420
144.24	315.7420
144.24	315.7420
144.24	315.7420
145.22	295.6033
145.44	295.7236
147.16	325.5002
152.43	307.5945
152.70	312.9851
153.22	294.0205
154.21	293.1255
154.21	293.1255
154.21	293.1255
154.21	293.1255
155.03	279.4988
156.02	287.0120
158.56	294.3878
159.00	0.0000
159.00	286.8626
160.31	281.6782
161.27	276.8110
162.32	271.9663
162.64	270.3325
163.35	260.8593
163.89	262.8762
165.85	284.2911
167.43	274.2729
171.28	269.6730
171.86	293.3956
172.10	297.1196
176.55	248.2894
176.60	248.3081
181.06	300.4056
184.41	256.2847
185.71	285.9350
186.00	286.0603
190.27	267.4578
192.34	291.6936
193.63	258.5146
197.04	266.3583
198.01	273.3032
198.60	282.9338
200.40	261.0443
201.83	329.5626
202.84	334.1290
205.31	311.2462
208.36	291.6002
208.81	291.7800

209.75	261.2217
209.75	261.2217
210.97	254.0072
215.65	255.0407
216.55	257.2751
218.09	272.2882
222.10	243.6407
223.80	263.6374
226.40	262.5742
227.00	280.3610
227.08	280.3895
227.20	273.5934
228.16	266.1044
228.18	266.1106
228.18	266.1106
231.56	0.0000
235.69	216.5008
236.00	219.7462
236.00	219.7462
238.60	233.9384
238.63	233.9474
238.63	233.9474
238.63	233.9474
239.00	234.0536
240.98	234.6244
241.98	234.9125
241.98	234.9125
241.98	234.9125
244.69	230.0959
245.39	231.8903
247.94	219.7703
248.90	211.0751
249.79	209.0029
252.40	210.6599
252.85	216.8224
252.85	216.8224
254.15	0.0000
256.20	222.7401
256.20	222.7401
260.50	181.1180
260.90	0.0000
262.80	211.0394
264.65	214.2886
268.24	187.2400
268.79	187.3569
269.46	178.8614
269.46	178.8614
269.46	178.8614
269.46	178.8614
271.23	179.2171
273.65	252.8198
276.40	217.1255
277.35	196.7313
277.60	196.7834
277.60	196.7834
278.00	185.7518
278.60	193.1436
279.20	194.3075
279.53	200.6127
280.46	216.4265
281.68	245.8849
283.67	195.2520
284.30	205.8316
285.00	197.6229
285.90	0.0000
286.10	175.8699
286.10	175.8699
287.40	194.9855
288.45	0.0000
290.67	196.9233
290.80	196.9519
291.72	187.0334
293.26	0.0000
293.70	173.9131
295.21	218.1599
295.21	218.1599
295.21	218.1599
295.96	266.5657

296.50	296.3507
297.23	296.5729
298.57	296.9873
299.80	212.4023
299.80	212.4023
300.09	186.9705
300.09	186.9705
300.09	186.9705
300.10	186.9705
300.12	186.9758
301.29	197.4096
302.84	178.9742
303.76	172.3189
303.91	160.3990
304.40	160.4793
304.40	160.4793
304.84	175.9248
306.84	174.3540
308.46	184.2827
311.98	167.7305
316.51	173.8852
318.01	168.7350
319.02	162.4054
319.41	163.5503
320.08	173.4106
323.87	191.4580
323.87	191.4580
323.87	191.4580
323.87	191.4580
325.23	189.9650
328.77	193.4533
333.44	171.2606
334.20	149.4099
334.20	149.4099
334.30	149.4244
338.28	154.3939
338.28	154.3939
338.28	154.3939
338.28	154.3939
338.32	154.4003
338.32	154.4003
338.32	154.4003
340.50	153.8303
340.57	153.8409
344.27	166.3445
345.85	171.7674
350.59	0.0000
351.07	169.6107
351.92	169.7429
351.92	169.7429
351.92	169.7429
355.39	0.0000
356.01	139.8801
364.48	149.9694
366.43	149.3218
367.43	144.9238
367.94	0.0000
369.80	162.4678
374.96	139.4892
383.85	145.1394
387.95	159.4654
388.63	152.1779
391.69	154.4138
391.69	154.4138
392.90	153.6432
398.62	145.0674
400.65	154.6199
401.10	156.5423
401.81	150.1052
402.60	145.5359
404.84	183.1853
410.95	134.3051
411.60	135.3147
413.65	190.1246
414.70	159.1967
415.30	147.9637
415.76	141.4178
417.63	0.0000

418.52	147.3926
423.70	111.9416
427.08	146.4748
427.89	138.0013
432.53	96.4666
433.93	122.3859
439.47	114.2586
439.56	114.2659
439.89	108.5321
443.98	139.6935
444.90	140.7531
445.03	141.7315
445.03	141.7315
445.03	141.7315
445.03	141.7315
453.90	134.8989
463.38	134.8532
468.07	124.1958
473.00	133.8152
475.06	135.9802
475.35	136.9944
476.78	138.1184
477.59	137.2099
477.96	125.3970
482.03	142.5885
484.57	151.7673
487.03	117.2495
490.36	0.0000
492.35	0.0000
497.08	101.0506
507.63	0.0000
510.53	0.0000
510.84	123.1944
511.00	123.2070
511.85	123.2770
511.85	123.2770
513.99	114.6808
513.99	114.6808
520.41	118.8910
520.65	118.9110
527.90	0.0000
528.96	0.0000
529.64	112.4492
529.87	0.0000
531.02	107.4327
537.32	121.2237
543.00	118.5657
546.56	0.0000
549.76	121.1418
552.65	101.6511
555.20	99.7336
563.23	115.8888
563.90	115.9348
568.70	116.2763
569.32	116.3197
569.50	118.4265
569.67	118.4403
573.80	122.9385
574.00	124.0037
574.64	122.6510
578.91	105.3979
579.30	0.0000
583.14	126.7969
585.48	105.8105
591.81	133.3476
592.07	137.0278
593.00	138.1631
595.88	128.8166
600.56	127.0302
602.52	0.0000
602.71	131.8215
602.71	131.8215
603.60	169.3154
604.41	160.4810
604.70	164.0734
609.31	120.1621
609.31	120.1621
609.31	120.1621

609.31	120.1621
610.33	120.2332
612.46	118.2285
614.37	129.1172
618.01	105.1243
621.84	132.9037
621.84	132.9037
631.29	127.0918
633.02	113.0771
633.10	108.7329
634.78	106.6587
635.90	100.1893
636.97	100.2499
645.85	100.7373
646.12	93.0870
656.30	145.9053
657.75	138.6716
657.90	0.0000
661.65	119.6375
661.65	119.6375
664.57	0.0000
666.33	138.3850
666.33	138.3850
675.00	109.3622
677.61	105.7988
685.20	122.0583
692.80	98.2153
695.00	104.8815
696.49	113.3956
696.49	113.3956
697.00	112.4878
697.49	118.1429
698.33	127.5719
698.50	127.5830
699.00	122.9244
702.63	111.8700
706.10	109.2409
706.58	0.0000
706.67	108.3319
709.31	100.9286
711.68	120.8802
713.82	94.5394
717.42	92.8161
720.50	99.1910
721.93	0.0000
722.20	99.2739
722.78	94.4199
722.78	94.4199
722.89	94.4240
722.95	94.4260
723.30	99.3292
724.18	87.9685
727.18	96.2557
733.00	73.6257
735.90	98.4422
739.58	108.1928
742.81	93.0195
744.21	81.5656
747.13	95.1348
751.79	116.5344
752.31	104.0405
753.82	80.0145
755.35	78.1441
756.15	93.6155
756.87	101.3705
763.93	138.5196
765.79	107.6171
766.41	110.5581
766.84	112.5190
768.36	114.5406
768.36	114.5406
768.36	114.5406
768.36	114.5406
776.49	104.2593
778.00	113.1066
778.57	103.3841
778.89	97.5464
783.80	78.2145

785.46	82.1885
792.07	111.8801
795.84	69.7996
796.30	70.7974
801.93	93.6528
805.60	77.0209
810.29	80.1513
810.76	83.1387
815.85	78.3667
817.79	77.4430
818.51	66.5420
819.60	70.5493
826.30	103.6467
828.27	0.0000
831.60	92.8997
831.96	89.9176
834.83	114.0371
836.80	0.0000
846.75	91.5017
848.13	73.4470
856.28	0.0000
856.80	79.6353
860.37	77.8788
867.32	76.5135
867.82	71.5298
871.10	80.2649
873.19	91.5216
874.81	84.4607
875.33	0.0000
876.40	77.3885
879.36	86.6602
880.27	85.6731
880.51	85.6816
881.50	79.5948
883.24	74.5461
884.67	80.7214
889.25	84.9706
896.60	90.3615
898.02	87.3329
899.00	93.5346
903.28	74.1343
911.07	95.6187
911.07	95.6187
911.07	95.6187
919.63	85.9335
920.93	82.9622
925.00	84.7593
925.24	87.2607
926.50	80.1782
934.06	74.0147
934.06	74.0147
934.06	74.0147
934.06	74.0147
935.52	74.0580
937.48	74.1158
944.10	95.0920
946.00	102.3443
949.00	67.4933
962.29	83.1183
964.01	75.9419
966.15	76.0049
968.20	76.0635
969.11	76.0913
969.11	76.0913
969.11	76.0913
977.42	63.6108
980.50	67.5064
983.50	70.1331
989.30	64.9627
996.32	80.0827
1001.03	57.7617
1001.68	69.5439
1004.76	78.1937
1021.30	0.0000
1024.50	0.0000
1034.80	77.9766
1037.82	57.6168
1038.57	63.2093

1038.76	0.0000
1045.16	74.5424
1046.59	67.1233
1048.07	69.0240
1050.47	84.9539
1050.47	84.9539
1063.62	70.3439
1076.63	70.6683
1077.35	68.7990
1085.78	73.7289
1099.22	105.4097
1112.02	88.4638
1112.84	78.4720
1115.52	93.5840
1120.29	73.6484
1120.29	73.6484
1120.29	73.6484
1120.29	73.6484
1120.51	73.6538
1121.28	80.3701
1124.00	0.0000
1129.67	86.1958
1131.51	0.0000
1147.95	0.0000
1167.94	71.9069
1173.22	88.5784
1175.09	89.6063
1177.93	81.8906
1189.05	90.9890
1204.90	108.1662
1205.75	0.0000
1213.00	95.6298
1221.42	78.0880
1230.97	102.1163
1235.34	104.2419
1236.41	0.0000
1238.11	93.4000
1238.11	93.4000
1238.11	93.4000
1238.11	93.4000
1238.25	93.4033
1246.25	100.6090
1260.41	0.0000
1271.85	62.2443
1274.45	73.3437
1274.54	80.3795
1291.56	66.6514
1298.22	0.0000
1312.09	66.0428
1325.50	44.8809
1325.50	44.8809
1332.49	48.0393
1333.61	47.0316
1360.21	51.5137
1362.66	0.0000
1365.15	47.4600
1368.21	41.3044
1368.53	0.0000
1376.25	39.3293
1377.67	40.3806
1377.67	40.3806
1377.67	40.3806
1377.67	40.3806
1384.27	74.6869
1394.10	50.9688
1395.20	38.4982
1407.95	44.8986
1434.06	32.6012
1436.60	34.7287
1457.56	0.0000
1460.81	36.0147
1489.15	43.7570
1509.49	30.0420
1596.49	55.6636
1620.62	23.1702
1678.03	0.0000
1691.02	31.4180
1691.02	31.4180

1706.46	0.0000
1750.46	0.0000
1764.49	14.9780
1764.49	14.9780
1764.49	14.9780
1764.49	14.9780
1770.23	24.8843
1771.40	17.7794
1791.20	0.0000
1808.65	18.1516
1836.01	17.2464

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232664002

Total Uranium Activity	5.5855E+00	ug/g
Total Uranium Counting Unc.	4.9966E+00	ug/g
Total Uranium Tpu	2.5493E-06	ug/g
Total Uranium Mda	4.1004E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232664002       *
*   ANALYST       : MXR1                      DETECTOR   : GAM18            *
*   SAMPLE DATE   : 26-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 08:27:15.49    SAMPLE ALQT:  105.140 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.011E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.520E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.771E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.342E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:37:51.33

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664003.CNF;1
Sample date       : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:37:20
Sample ID         : G232664003           Sample quantity  : 1.11200E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.73  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.63*	44	634	1.24	126.64	122	8	6.12E-03	103.3	
2	3	74.85	676	632	1.35	149.08	142	19	9.38E-02	7.6	2.54E+00
3	3	77.18*	833	508	1.14	153.72	142	19	1.16E-01	6.1	
4	5	84.45*	115	630	1.49	168.26	163	31	1.60E-02	38.9	2.55E+00
5	5	87.29	393	575	1.53	173.93	163	31	5.46E-02	11.9	
6	5	89.95*	222	394	1.21	179.25	163	31	3.09E-02	16.8	
7	5	92.94*	395	531	1.80	185.24	163	31	5.48E-02	14.0	
8	0	128.63	226	684	2.25	256.60	249	15	3.14E-02	26.1	
9	0	185.89*	375	522	1.60	371.11	365	14	5.21E-02	14.4	
10	0	209.16	122	277	0.98	417.63	415	7	1.70E-02	24.3	
11	3	238.70*	1813	241	1.30	476.70	470	19	2.52E-01	2.9	1.18E+00
12	3	241.60*	430	347	2.01	482.52	470	19	5.98E-02	12.7	
13	0	270.45	136	281	1.74	540.22	535	11	1.88E-02	25.5	
14	2	295.24	477	198	1.40	589.78	583	21	6.63E-02	6.8	1.75E+00
15	2	300.17	81	224	1.54	599.64	583	21	1.13E-02	34.6	
16	0	327.96	98	180	0.94	655.22	652	9	1.36E-02	26.6	
17	0	338.45*	418	259	1.48	676.20	670	13	5.80E-02	9.5	
18	0	352.05*	965	238	1.51	703.39	697	14	1.34E-01	4.8	
19	0	463.07	106	161	2.06	925.46	920	12	1.48E-02	25.8	
20	0	511.15*	195	178	2.04	1021.62	1013	18	2.70E-02	20.5	
21	0	583.28*	615	105	1.90	1165.91	1160	12	8.54E-02	5.4	
22	0	609.45	685	204	1.74	1218.26	1210	16	9.52E-02	6.0	
23	0	727.27	152	132	1.66	1453.95	1446	16	2.11E-02	18.8	
24	0	796.45	112	139	4.37	1592.35	1580	23	1.56E-02	29.2	
25	0	911.41*	432	116	2.34	1822.38	1815	20	6.00E-02	7.9	
26	1	965.13*	135	74	2.53	1929.87	1921	26	1.87E-02	17.3	1.94E+00
27	1	969.25*	235	57	2.54	1938.12	1921	26	3.27E-02	10.8	
28	0	1120.75*	150	97	2.74	2241.28	2234	17	2.09E-02	17.6	
29	0	1240.12	56	183	1.91	2480.20	2471	21	7.78E-03	61.9	
30	0	1460.90	2240	105	2.99	2922.12	2910	25	3.11E-01	2.4	
31	0	1730.37	45	13	1.88	3461.61	3454	15	6.21E-03	23.9	
32	0	1764.55*	160	11	3.56	3530.05	3517	21	2.22E-02	9.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 10:37:53

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:37:20
Sample ID : G232664003 Sample quantity : 111.20 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.73 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.576E+01	3.044E+00	5.146E-01	3.581E-02	69.504
CD-109	+	88.03	*	4.616E+00	1.170E+00	1.160E+00	1.036E-01	3.980
SN-126	+	64.28		3.173E-01	6.573E-01	7.747E-01	1.117E-01	0.410
	+	86.94		1.879E+00	8.968E-01	4.764E-01	1.972E-01	3.943
	+	87.57	*	4.519E-01	1.146E-01	1.140E-01	1.014E-02	3.965
TL-208		277.35		2.917E-01	3.791E-01	6.171E-01	6.449E-02	0.473
	+	510.84		6.711E-01	2.847E-01	1.853E-01	1.956E-02	3.623
	+	583.14	*	5.983E-01	7.903E-02	5.227E-02	4.024E-03	11.447
		860.37		6.580E-01	2.937E-01	5.371E-01	5.603E-02	1.225
BI-211		72.87		8.297E+00	3.412E+00	5.467E+00	4.184E-01	1.518
	+	351.07	*	4.361E+00	4.990E-01	3.125E-01	1.982E-02	13.956
PB-212	+	74.81		3.204E+00	6.226E-01	5.409E-01	6.579E-02	5.924
	+	77.11		2.249E+00	3.260E-01	3.089E-01	2.458E-02	7.280
	+	87.30		2.090E+00	5.696E-01	5.283E-01	7.061E-02	3.956
	+	238.63	*	1.908E+00	1.734E-01	8.647E-02	6.114E-03	22.059
	+	300.09		1.269E+00	8.850E-01	1.174E+00	9.564E-02	1.081
PO-212	+	74.81		3.204E+00	6.226E-01	5.409E-01	6.579E-02	5.924
	+	77.11		2.249E+00	3.260E-01	3.089E-01	2.458E-02	7.280
	+	87.30		2.090E+00	5.696E-01	5.283E-01	7.061E-02	3.956
		115.19		1.250E+00	3.506E+00	5.913E+00	3.838E-01	0.211
	+	238.63	*	1.908E+00	1.734E-01	8.647E-02	6.114E-03	22.059
	+	300.09		1.269E+00	8.850E-01	1.174E+00	9.564E-02	1.081
BI-214	+	609.31	*	1.254E+00	1.870E-01	1.018E-01	8.952E-03	12.315
		768.36		1.567E+00	7.589E-01	1.306E+00	1.376E-01	1.200
		934.06		8.924E-01	1.106E+00	1.917E+00	2.246E-01	0.466
	+	1120.29		1.394E+00	5.075E-01	4.465E-01	4.234E-02	3.121
		1238.11		1.457E+00	1.025E+00	1.612E+00	1.347E-01	0.904
		1377.67		1.599E+00	9.650E-01	1.779E+00	1.644E-01	0.899
	+	1764.49		1.884E+00	3.820E-01	1.902E-01	1.114E-02	9.905
PB-214	+	74.81		5.521E+00	1.026E+00	9.320E-01	1.002E-01	5.924
	+	77.11		3.856E+00	6.313E-01	5.296E-01	5.834E-02	7.280
	+	87.30		3.580E+00	9.488E-01	9.051E-01	1.063E-01	3.956
	+	241.98		2.713E+00	7.187E-01	5.197E-01	4.075E-02	5.221
	+	295.21		1.310E+00	2.095E-01	2.064E-01	1.738E-02	6.346

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.517E+00	1.908E-01	1.047E-01	8.601E-03	14.486
PO-214	+	74.81		5.521E+00	1.026E+00	9.320E-01	1.002E-01	5.924
	+	77.11		3.856E+00	6.313E-01	5.296E-01	5.834E-02	7.280
	+	87.30		3.580E+00	9.488E-01	9.051E-01	1.063E-01	3.956
	+	241.98		2.713E+00	7.187E-01	5.197E-01	4.075E-02	5.221
	+	295.21		1.310E+00	2.095E-01	2.064E-01	1.738E-02	6.346
	+	351.92	*	1.517E+00	1.908E-01	1.047E-01	8.601E-03	14.486
PO-216	+	74.81		3.204E+00	6.226E-01	5.409E-01	6.579E-02	5.924
	+	77.11		2.249E+00	3.260E-01	3.089E-01	2.458E-02	7.280
	+	87.30		2.090E+00	5.696E-01	5.283E-01	7.061E-02	3.956
	+	238.63	*	1.908E+00	1.734E-01	8.647E-02	6.114E-03	22.059
	+	300.09		1.269E+00	8.850E-01	1.174E+00	9.564E-02	1.081
PO-218	+	74.81		5.521E+00	1.026E+00	9.320E-01	1.002E-01	5.924
	+	77.11		3.856E+00	6.313E-01	5.296E-01	5.834E-02	7.280
	+	87.30		3.580E+00	9.488E-01	9.051E-01	1.063E-01	3.956
	+	241.98		2.713E+00	7.187E-01	5.197E-01	4.075E-02	5.221
	+	295.21		1.310E+00	2.095E-01	2.064E-01	1.738E-02	6.346
	+	351.92	*	1.517E+00	1.908E-01	1.047E-01	8.601E-03	14.486
RA-224	+	240.98	*	5.145E+00	1.332E+00	9.827E-01	5.381E-02	5.235
RA-226	+	609.31	*	1.254E+00	1.870E-01	1.018E-01	8.952E-03	12.315
		768.36		1.567E+00	7.589E-01	1.306E+00	1.376E-01	1.200
		934.06		8.924E-01	1.106E+00	1.917E+00	2.246E-01	0.466
	+	1120.29		1.394E+00	5.075E-01	4.465E-01	4.234E-02	3.121
		1238.11		1.457E+00	1.025E+00	1.612E+00	1.347E-01	0.904
		1377.67		1.599E+00	9.650E-01	1.779E+00	1.644E-01	0.899
	+	1764.49		1.884E+00	3.820E-01	1.902E-01	1.114E-02	9.905
AC-228	+	338.32		2.091E+00	9.403E-01	3.334E-01	1.359E-01	6.272
	+	911.07	*	1.835E+00	3.687E-01	1.882E-01	2.354E-02	9.752
	+	969.11		1.758E+00	5.622E-01	3.380E-01	7.996E-02	5.201
RA-228	+	338.32		2.091E+00	9.403E-01	3.334E-01	1.359E-01	6.272
	+	911.07	*	1.835E+00	3.687E-01	1.882E-01	2.354E-02	9.752
	+	969.11		1.758E+00	5.622E-01	3.380E-01	7.996E-02	5.201
TH-228	+	84.40		4.160E+00	3.281E+00	3.591E+00	4.709E-01	1.159
	+	238.60	*	1.908E+00	1.734E-01	8.647E-02	6.114E-03	22.060
	+	300.10		1.269E+00	1.154E+00	1.174E+00	6.919E-01	1.081
TH-230	+	609.31	*	1.253E+00	1.870E-01	1.018E-01	8.952E-03	12.315
		768.36		1.567E+00	7.589E-01	1.306E+00	1.376E-01	1.200
		934.06		8.924E-01	1.106E+00	1.917E+00	2.246E-01	0.466
	+	1120.29		1.394E+00	5.075E-01	4.465E-01	4.234E-02	3.121
		1238.11		1.457E+00	1.025E+00	1.612E+00	1.347E-01	0.904
		1377.67		1.599E+00	9.649E-01	1.779E+00	1.644E-01	0.899
	+	1764.49		1.884E+00	3.820E-01	1.902E-01	1.114E-02	9.905
TH-232	+	338.32		2.091E+00	4.146E-01	3.334E-01	1.900E-02	6.272
	+	911.07	*	1.835E+00	3.687E-01	1.882E-01	2.354E-02	9.752
	+	969.11		1.758E+00	5.622E-01	3.380E-01	7.996E-02	5.201
TH-234	+	63.29	*	8.017E-01	1.662E+00	2.006E+00	3.478E-01	0.400
	+	92.38		2.960E+00	9.852E-01	7.527E-01	1.352E-01	3.932
U-234	+	609.31	*	1.253E+00	1.870E-01	1.018E-01	8.952E-03	12.315
		768.36		1.567E+00	7.589E-01	1.306E+00	1.376E-01	1.200

Sample ID : G232664003 Acquisition date : 14-JUL-2009 08:37:20

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		8.924E-01	1.106E+00	1.917E+00	2.246E-01	0.466
	+	1120.29		1.394E+00	5.075E-01	4.465E-01	4.234E-02	3.121
		1238.11		1.457E+00	1.025E+00	1.612E+00	1.347E-01	0.904
		1377.67		1.599E+00	9.649E-01	1.779E+00	1.644E-01	0.899
	+	1764.49		1.884E+00	3.820E-01	1.902E-01	1.114E-02	9.905
NP-237	+	86.50	*	1.327E+00	4.338E-01	3.378E-01	7.577E-02	3.928
		95.87		-5.071E-01	1.009E+00	1.452E+00	3.545E-01	-0.349
U-238	+	63.29	*	8.017E-01	1.662E+00	2.006E+00	3.478E-01	0.400
	+	92.38		2.960E+00	8.656E-01	7.527E-01	6.298E-02	3.932
AM-243	+	74.67	*	5.195E-01	8.850E-02	8.792E-02	6.836E-03	5.909
	+	86.72		4.976E+01	1.262E+01	1.264E+01	1.114E+00	3.936
		117.66		-1.236E+00	3.695E+00	6.080E+00	3.858E-01	-0.203
		142.18		7.755E+00	1.892E+01	3.117E+01	1.747E+00	0.249
ANH-511	+	511.00	*	1.450E-01	6.031E-02	4.003E-02	2.595E-03	3.622

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	8.272E-02	3.179E-01	5.180E-01	3.706E-02	0.160
NA-22		1274.54	*	-1.474E-02	4.020E-02	6.502E-02	4.138E-03	-0.227
NA-24		1368.53	*	-2.356E+00	4.020E-02	Half-Life too short		
AL-26		1129.67		9.635E-01	2.069E+00	2.991E+00	1.971E-01	0.322
		1808.65	*	-2.077E-03	2.708E-02	4.448E-02	2.531E-03	-0.047
TI-44		67.85		-1.699E-02	4.848E-02	7.243E-02	5.331E-03	-0.235
	+	78.38	*	4.151E-01	6.016E-02	8.080E-02	6.508E-03	5.137
SC-46		889.25	*	1.194E-02	3.768E-02	6.388E-02	6.549E-03	0.187
	+	1120.51		2.440E-01	8.738E-02	1.185E-01	8.039E-03	2.059
V-48		944.10		-1.731E-01	9.707E-01	1.584E+00	1.552E-01	-0.109
		983.50	*	5.885E-02	7.616E-02	1.318E-01	1.217E-02	0.446
		1312.09		5.227E-02	8.698E-02	1.487E-01	9.843E-03	0.351
CR-51		320.08	*	-1.775E-02	3.695E-01	6.098E-01	3.876E-02	-0.029
MN-52		744.21		-2.361E-01	3.210E-01	4.935E-01	4.146E-02	-0.478
		848.13		5.596E-01	8.945E+00	1.498E+01	1.454E+00	0.037
		935.52		2.249E-02	3.472E-01	5.766E-01	5.713E-02	0.039
		1246.25		5.940E+00	1.174E+01	1.745E+01	1.073E+00	0.340
		1333.61		6.311E-01	6.819E+00	1.139E+01	7.701E-01	0.055
		1434.06	*	3.142E-01	2.598E-01	4.839E-01	3.234E-02	0.649
MN-54		834.83	*	1.874E-02	3.607E-02	6.197E-02	5.912E-03	0.302
CO-56		846.75	*	-6.970E-03	3.807E-02	6.274E-02	6.082E-03	-0.111
		977.42		-1.080E+00	3.288E+00	4.453E+00	4.152E-01	-0.243
		1037.82		-6.952E-02	3.094E-01	4.988E-01	4.404E-02	-0.139
		1175.09		6.698E-01	2.405E+00	3.969E+00	2.242E-01	0.169
		1238.25		1.550E-01	1.063E-01	1.679E-01	1.082E-02	0.923
		1360.21		-3.417E-01	9.513E-01	1.466E+00	9.893E-02	-0.233
		1771.40		-1.157E-02	1.810E-01	2.507E-01	1.462E-02	-0.046
CO-57		122.06	*	5.472E-03	2.794E-02	4.124E-02	2.522E-03	0.133
		136.48		-9.586E-02	2.142E-01	3.481E-01	2.319E-02	-0.275
CO-58		810.76	*	-3.487E-03	3.643E-02	6.060E-02	5.605E-03	-0.058

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		1.675E+00	3.041E+00	5.030E+00	2.814E-01	0.333
		192.34		2.499E-02	1.073E+00	1.519E+00	1.755E-01	0.016
		1099.22	*	2.572E-02	9.229E-02	1.535E-01	1.233E-02	0.168
		1291.56		6.011E-02	1.213E-01	2.089E-01	1.663E-02	0.288
CO-60		1173.22		1.310E-02	4.587E-02	7.577E-02	4.270E-03	0.173
		1332.49	*	9.899E-03	3.648E-02	6.185E-02	4.183E-03	0.160
ZN-65		1115.52	*	2.726E-02	1.045E-01	1.485E-01	1.024E-02	0.184
GE-68		1077.35	*	-7.901E-02	1.215E+00	1.975E+00	1.509E-01	-0.040
AS-73		53.44	*	4.653E-01	7.939E-01	1.281E+00	8.898E-02	0.363
AS-74		595.88	*	3.951E-02	8.861E-02	1.503E-01	1.055E-02	0.263
		634.78		4.718E-02	3.752E-01	6.214E-01	4.511E-02	0.076
SE-75		66.05		2.669E-01	5.398E+00	7.657E+00	7.161E-01	0.035
		96.73		-5.665E-01	8.441E-01	1.209E+00	1.594E-01	-0.469
		121.11		-1.263E-02	1.384E-01	2.218E-01	2.098E-02	-0.057
		136.00		-1.304E-02	4.166E-02	6.571E-02	3.831E-03	-0.198
		198.60		9.695E-01	1.929E+00	3.101E+00	2.080E-01	0.313
		264.65	*	-1.678E-02	4.687E-02	6.682E-02	3.758E-03	-0.251
		279.53		8.825E-02	1.054E-01	1.816E-01	1.106E-02	0.486
		303.91		1.393E+00	2.207E+00	3.304E+00	3.124E-01	0.422
		400.65		-2.028E-01	2.493E-01	3.871E-01	3.509E-02	-0.524
BR-77	+	87.88		2.210E+03	5.604E+02	7.620E+02	6.803E+01	2.901
		200.40		-2.426E+02	3.794E+02	5.971E+02	3.158E+01	-0.406
	+	239.00		6.816E+02	5.390E+01	8.368E+01	4.576E+00	8.145
		249.79		-5.137E+01	1.379E+02	2.284E+02	1.259E+01	-0.225
		281.68		-1.560E+02	1.911E+02	3.076E+02	1.726E+01	-0.507
		297.23		7.635E+02	1.428E+02	2.650E+02	1.496E+01	2.881
		303.76		2.751E+02	4.120E+02	6.187E+02	3.501E+01	0.445
		439.47		1.665E+02	2.980E+02	4.965E+02	2.982E+01	0.335
		484.57		-4.740E+02	4.538E+02	7.159E+02	4.517E+01	-0.662
		520.65	*	-8.265E+00	2.076E+01	3.218E+01	2.106E+00	-0.257
		574.64		-2.799E+02	4.369E+02	6.792E+02	4.680E+01	-0.412
		578.91		1.696E+02	1.989E+02	3.027E+02	2.094E+01	0.560
		585.48		4.941E+03	6.586E+02	1.134E+03	7.890E+01	4.357
		755.35		4.707E+02	3.717E+02	6.456E+02	5.511E+01	0.729
		817.79		-2.273E+01	2.659E+02	4.422E+02	4.121E+01	-0.051
SR-82		698.33		-9.395E+00	3.620E+01	5.812E+01	4.561E+00	-0.162
		776.49	*	-4.107E-01	4.041E-01	6.048E-01	5.322E-02	-0.679
		1395.20		3.655E+00	1.109E+01	1.887E+01	1.269E+00	0.194
RB-83		520.41	*	-2.691E-02	6.295E-02	9.735E-02	6.371E-03	-0.276
		529.64		9.702E-05	9.569E-02	1.595E-01	1.054E-02	0.001
		552.65		4.277E-02	1.842E-01	3.101E-01	2.094E-02	0.138
RB-84		881.50	*	-1.702E-02	6.259E-02	1.018E-01	1.034E-02	-0.167
KR-85		513.99	*	3.244E+01	8.144E+00	1.425E+01	9.268E-01	2.276
SR-85		513.99	*	1.712E-01	4.298E-02	7.521E-02	4.891E-03	2.276
RB-86		1076.63	*	-4.989E-02	8.563E-01	1.393E+00	1.066E-01	-0.036
Y-88		898.02		-3.179E-02	3.947E-02	6.156E-02	6.404E-03	-0.516
		1836.01	*	2.363E-02	2.931E-02	5.376E-02	3.008E-03	0.440
ZR-88		392.90	*	-1.596E-02	2.992E-02	4.738E-02	2.692E-03	-0.337
Y-91		1204.90	*	5.709E+00	2.000E+01	3.294E+01	1.930E+00	0.173

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	2.465E-02	3.306E-02	5.613E-02	4.434E-03	0.439
		871.10		8.645E-03	3.074E-02	5.212E-02	5.219E-03	0.166
NB-95		765.79	*	6.319E-03	4.672E-02	7.407E-02	6.419E-03	0.085
NB-95M		235.69	*	4.326E-01	1.479E-01	2.323E-01	1.688E-02	1.862
ZR-95		724.18		1.305E-01	1.068E-01	1.635E-01	1.462E-02	0.798
		756.15	*	5.381E-02	7.540E-02	1.272E-01	1.199E-02	0.423
NB-97		657.90	*	-1.398E-01	7.540E-02	Half-Life too short		
		1024.50		3.148E+01	7.540E-02	Half-Life too short		
ZR-97		254.15		-4.267E+01	7.540E-02	Half-Life too short		
		355.39		9.758E+01	7.540E-02	Half-Life too short		
		507.63	*	8.552E+01	7.540E-02	Half-Life too short		
		602.52		-1.606E+01	7.540E-02	Half-Life too short		
		1021.30		1.010E+02	7.540E-02	Half-Life too short		
		1147.95		-5.169E+00	7.540E-02	Half-Life too short		
		1362.66		6.131E+00	7.540E-02	Half-Life too short		
		1750.46		-5.082E+01	7.540E-02	Half-Life too short		
MO-99		140.51		-1.731E+01	5.630E+01	8.964E+01	2.413E+01	-0.193
		181.06		-2.213E+01	3.798E+01	5.198E+01	8.807E+00	-0.426
		366.43		1.840E+01	1.585E+02	2.611E+02	1.488E+01	0.070
		739.58	*	8.917E+00	2.251E+01	3.742E+01	5.624E+00	0.238
		778.00		-5.452E+01	6.747E+01	1.028E+02	9.063E+00	-0.531
TC-99M		140.51	*	-2.465E+13	6.747E+01	Half-Life too short		
RH-101	+	127.23		1.258E-01	6.618E-02	5.761E-02	3.431E-03	2.183
		198.01	*	2.103E-02	3.469E-02	5.598E-02	2.954E-03	0.376
		325.23		8.507E-02	2.336E-01	3.427E-01	1.949E-02	0.248
RH-102		418.52		4.806E-02	2.676E-01	4.383E-01	2.569E-02	0.110
		475.06	*	-1.888E-02	2.831E-02	4.362E-02	2.725E-03	-0.433
		631.29		3.529E-02	5.445E-02	8.931E-02	6.465E-03	0.395
		697.49		-4.382E-02	7.590E-02	1.194E-01	9.357E-03	-0.367
		766.84		1.318E-01	1.149E-01	1.917E-01	1.664E-02	0.688
		1046.59		9.513E-03	1.115E-01	1.838E-01	1.507E-02	0.052
		1112.84		2.215E-02	2.586E-01	3.616E-01	2.509E-02	0.061
RU-103		497.08	*	-3.115E-02	3.547E-02	5.586E-02	7.221E-03	-0.558
	+	610.33		1.421E+01	2.841E+00	2.781E+00	4.437E-01	5.109
RH-106	+	511.85		7.278E-01	3.028E-01	4.171E-01	2.706E-02	1.745
		621.84	*	2.812E-02	2.724E-01	4.516E-01	5.635E-02	0.062
		1050.47		-3.666E-01	2.335E+00	3.781E+00	3.075E-01	-0.097
RU-106	+	511.85		7.278E-01	3.028E-01	4.171E-01	2.706E-02	1.745
		621.84	*	2.812E-02	2.724E-01	4.516E-01	3.243E-02	0.062
		1050.47		-3.666E-01	2.335E+00	3.781E+00	3.075E-01	-0.097
AG-108M		433.93	*	-6.286E-03	3.047E-02	4.869E-02	3.142E-03	-0.129
		614.37		-7.796E-04	3.824E-02	5.403E-02	4.074E-03	-0.014
		722.95		3.108E-02	4.238E-02	6.306E-02	5.359E-03	0.493
AG-110M		657.75	*	-3.098E-03	3.198E-02	5.209E-02	4.008E-03	-0.059
		677.61		-2.305E-02	2.860E-01	4.651E-01	3.664E-02	-0.050
		706.67		-1.265E-01	2.099E-01	3.291E-01	2.700E-02	-0.384
		763.93		-2.322E-01	1.734E-01	2.556E-01	2.271E-02	-0.908
		884.67		-5.454E-02	4.430E-02	6.613E-02	6.895E-03	-0.825
		937.48		-1.583E-02	1.092E-01	1.789E-01	1.817E-02	-0.088

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1384.27		-2.969E-01	1.671E-01	2.287E-01	1.610E-02	-1.299
IN-111		171.28		2.128E-02	1.944E+00	3.170E+00	1.630E-01	0.007
		245.39	*	4.812E-02	2.184E+00	3.208E+00	1.762E-01	0.015
IN-113M		391.69	*	-1.935E-02	4.357E-02	6.938E-02	4.211E-03	-0.279
SN-113		391.69	*	-1.935E-02	4.357E-02	6.938E-02	4.211E-03	-0.279
IN-114M		190.27	*	1.229E-02	2.036E-01	2.891E-01	1.514E-02	0.043
CD-115		260.90		-8.613E-05	2.036E-01	Half-Life too short		
		492.35		2.791E-05	2.036E-01	Half-Life too short		
		527.90	*	1.067E-05	2.036E-01	Half-Life too short		
SN-117M		156.02		2.371E+00	2.633E+00	4.447E+00	2.365E-01	0.533
		158.56	*	8.373E-03	6.281E-02	1.033E-01	5.443E-03	0.081
SB-122		563.90	*	4.629E+00	4.079E+00	7.144E+00	4.874E-01	0.648
		692.80		4.433E+00	8.567E+01	1.403E+02	1.091E+01	0.032
I-123		159.00	*	4.635E+01	8.567E+01	Half-Life too short		
		528.96		-5.471E+03	8.567E+01	Half-Life too short		
TE-123M		159.00	*	7.207E-03	2.829E-02	4.675E-02	2.498E-03	0.154
I-124		602.71	*	2.935E-01	1.090E+00	1.581E+00	1.117E-01	0.186
		722.78		4.417E+00	6.933E+00	1.024E+01	8.333E-01	0.431
		1325.50		-1.623E+01	5.084E+01	8.199E+01	5.504E+00	-0.198
		1376.25		1.017E+02	4.784E+01	9.090E+01	6.126E+00	1.118
		1509.49		1.996E+01	2.140E+01	3.843E+01	2.524E+00	0.519
		1691.02		-1.169E+00	4.835E+00	7.539E+00	4.606E-01	-0.155
SB-124		602.71		1.117E-02	4.150E-02	6.019E-02	4.253E-03	0.186
		645.85		3.888E-01	4.694E-01	8.089E-01	6.412E-02	0.481
		709.31		-7.514E-01	2.756E+00	4.411E+00	3.519E-01	-0.170
		713.82		1.812E-01	1.565E+00	2.567E+00	2.984E-01	0.071
		722.78		2.437E-01	3.826E-01	5.649E-01	4.709E-02	0.431
	+	968.20		1.868E+01	4.391E+00	7.475E+00	7.071E-01	2.499
		1045.16		2.002E-01	2.459E+00	4.051E+00	3.333E-01	0.049
		1325.50		-9.565E-01	2.997E+00	4.832E+00	3.244E-01	-0.198
		1368.21		-3.422E-01	1.644E+00	2.664E+00	3.293E-01	-0.128
		1436.60		1.999E+00	3.262E+00	5.719E+00	3.820E-01	0.350
		1691.02	*	-1.522E-02	6.293E-02	9.813E-02	6.459E-03	-0.155
SB-125		427.89	*	-5.002E-02	8.592E-02	1.344E-01	8.287E-03	-0.372
	+	463.38		7.232E-01	3.771E-01	5.033E-01	3.564E-02	1.437
		600.56		-9.192E-02	1.738E-01	2.552E-01	1.995E-02	-0.360
		635.90		3.212E-02	2.478E-01	4.105E-01	3.317E-02	0.078
TE-125M		109.28	*	1.450E+00	9.543E+00	1.603E+01	1.431E+00	0.090
I-126		388.63		1.609E-01	2.237E-01	3.778E-01	2.145E-02	0.426
		666.33	*	6.935E-02	1.945E-01	3.253E-01	2.431E-02	0.213
		753.82		1.782E+00	1.680E+00	2.893E+00	2.464E-01	0.616
SB-126		223.80		4.495E-01	4.825E+00	7.757E+00	4.191E-01	0.058
		278.60		3.059E+00	2.717E+00	4.728E+00	2.649E-01	0.647
	+	296.50		1.520E+01	2.238E+00	3.860E+00	2.179E-01	3.938
		414.70		-5.942E-02	8.454E-02	1.319E-01	7.698E-03	-0.450
		415.30		-2.724E+00	6.871E+00	1.091E+01	6.368E-01	-0.250
		555.20		1.647E+00	4.270E+00	7.245E+00	4.903E-01	0.227
		573.80		-1.540E-01	1.121E+00	1.844E+00	1.269E-01	-0.084
		593.00		-4.033E-01	9.411E-01	1.512E+00	1.059E-01	-0.267

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		656.30		1.889E+00	3.532E+00	5.980E+00	4.418E-01	0.316
		666.33		2.916E-02	8.180E-02	1.368E-01	1.022E-02	0.213
		675.00		-4.966E-01	2.081E+00	3.348E+00	2.536E-01	-0.148
		695.00		-4.803E-02	8.752E-02	1.379E-01	1.076E-02	-0.348
		697.00		-1.834E-01	3.101E-01	4.875E-01	3.818E-02	-0.376
		720.50	*	8.684E-03	1.722E-01	2.411E-01	1.955E-02	0.036
		856.80		-2.947E-01	5.484E-01	8.828E-01	8.673E-02	-0.334
		989.30		-5.499E-01	1.412E+00	2.257E+00	2.064E-01	-0.244
		1034.80		-2.458E+00	1.014E+01	1.634E+01	1.373E+00	-0.150
		1213.00		-1.423E+00	5.608E+00	8.913E+00	5.272E-01	-0.160
SB-127		61.10		1.045E+02	9.722E+01	1.443E+02	1.581E+01	0.724
		252.40		-2.531E+00	6.753E+00	1.104E+01	4.608E+00	-0.229
		290.80		8.079E+00	3.628E+01	5.319E+01	5.367E+00	0.152
		411.60		-1.035E+00	1.946E+01	3.151E+01	4.743E+00	-0.033
		444.90		-3.137E+00	1.490E+01	2.375E+01	2.801E+00	-0.132
		473.00		2.272E-01	2.597E+00	4.194E+00	5.135E-01	0.054
		543.00		-2.431E+01	2.344E+01	3.605E+01	5.065E+00	-0.674
		603.60		1.589E+01	1.926E+01	2.908E+01	3.585E+00	0.547
		685.20	*	1.015E+00	2.168E+00	3.638E+00	4.215E-01	0.279
		698.50		-2.959E+00	2.442E+01	3.954E+01	6.343E+00	-0.075
		722.20		1.694E+01	4.945E+01	7.112E+01	8.300E+00	0.238
		783.80		5.797E+00	5.844E+00	9.949E+00	1.330E+00	0.583
XE-127		57.60		-4.957E+00	5.997E+00	9.322E+00	6.517E-01	-0.532
		145.22		4.262E-01	7.616E-01	1.276E+00	7.068E-02	0.334
		172.10		5.289E-02	1.221E-01	2.022E-01	1.041E-02	0.262
		202.84	*	-1.480E-02	5.070E-02	8.083E-02	4.285E-03	-0.183
		374.96		4.894E-03	1.905E-01	3.120E-01	1.776E-02	0.016
I-131		80.18		-1.044E+00	8.297E+00	9.009E+00	7.462E-01	-0.116
		284.30		-5.011E-01	1.741E+00	2.867E+00	1.810E-01	-0.175
		364.48	*	-3.878E-02	1.360E-01	2.195E-01	1.408E-02	-0.177
		636.97		-8.282E-01	1.823E+00	2.908E+00	2.286E-01	-0.285
		722.89		6.224E+00	9.016E+00	1.337E+01	1.099E+00	0.466
TE-132		49.72		-4.507E+01	3.063E+01	4.612E+01	4.777E+00	-0.977
		111.76		-2.449E+00	5.379E+01	8.891E+01	9.138E+00	-0.028
		116.30		1.651E+01	4.875E+01	8.211E+01	8.292E+00	0.201
		228.16	*	8.773E-02	1.231E+00	1.975E+00	2.925E-01	0.044
BA-133		53.15		2.349E+00	3.341E+00	5.412E+00	3.757E-01	0.434
		79.62		1.289E+00	1.852E+00	2.115E+00	3.166E-01	0.609
		81.00		-4.163E-02	1.395E-01	1.493E-01	2.342E-02	-0.279
		276.40		5.280E-01	4.020E-01	6.185E-01	7.963E-02	0.854
		302.84		1.918E-01	1.515E-01	2.331E-01	2.701E-02	0.823
		356.01	*	2.511E-02	4.213E-02	6.247E-02	7.191E-03	0.402
		383.85		-1.238E-01	2.878E-01	4.525E-01	4.892E-02	-0.274
I-133	+	510.53		1.322E+01	2.878E-01	Half-Life too short		
		529.87	*	5.161E-03	2.878E-01	Half-Life too short		
		706.58		-1.630E+00	2.878E-01	Half-Life too short		
		856.28		-5.241E+00	2.878E-01	Half-Life too short		
		875.33		8.547E-01	2.878E-01	Half-Life too short		
		1236.41		1.353E+01	2.878E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1298.22		-1.065E+00	2.878E-01	Half-Life too short		
CS-134		475.35		-4.687E-02	1.817E+00	2.913E+00	1.820E-01	-0.016
		563.23		3.520E-01	3.525E-01	6.138E-01	4.249E-02	0.574
		569.32		-8.898E-03	1.833E-01	3.031E-01	2.122E-02	-0.029
		604.70		5.726E-02	3.355E-02	5.396E-02	3.833E-03	1.061
	+	795.84	*	1.559E-01	9.222E-02	8.667E-02	7.888E-03	1.799
		801.93		3.448E-02	4.468E-01	6.199E-01	5.681E-02	0.056
		1038.57		-1.054E-01	3.747E+00	6.129E+00	5.113E-01	-0.017
		1167.94		-2.295E+00	2.564E+00	3.894E+00	2.241E-01	-0.590
		1365.15		-4.570E-01	1.109E+00	1.760E+00	1.274E-01	-0.260
CS-135		268.24	*	2.313E-01	1.677E-01	2.617E-01	1.960E-02	0.884
I-135		288.45		-4.155E+12	1.677E-01	Half-Life too short		
		417.63		8.782E+12	1.677E-01	Half-Life too short		
		546.56		6.649E+12	1.677E-01	Half-Life too short		
		836.80		1.673E+13	1.677E-01	Half-Life too short		
		1038.76		-1.409E+12	1.677E-01	Half-Life too short		
		1124.00		4.992E+13	1.677E-01	Half-Life too short		
		1131.51		-2.447E+11	1.677E-01	Half-Life too short		
		1260.41	*	-1.621E+12	1.677E-01	Half-Life too short		
		1457.56		1.113E+15	1.677E-01	Half-Life too short		
		1678.03		-1.423E+12	1.677E-01	Half-Life too short		
		1706.46		9.225E+12	1.677E-01	Half-Life too short		
		1791.20		-1.931E+12	1.677E-01	Half-Life too short		
CS-136		66.91		-3.956E-01	1.015E+00	1.410E+00	2.079E-01	-0.281
	+	86.29		6.814E+00	1.846E+00	2.388E+00	3.093E-01	2.853
		153.22		-4.134E-01	7.856E-01	1.265E+00	8.713E-02	-0.327
		163.89		-6.696E-01	1.219E+00	1.908E+00	1.289E-01	-0.351
		176.55		2.483E-02	4.147E-01	6.762E-01	4.035E-02	0.037
		273.65		-9.994E-01	5.910E-01	7.712E-01	4.962E-02	-1.296
		340.57		9.532E-01	1.825E-01	3.140E-01	1.907E-02	3.036
		818.51		-2.340E-02	7.728E-02	1.266E-01	1.182E-02	-0.185
		1048.07	*	3.258E-02	1.202E-01	2.006E-01	1.718E-02	0.162
		1235.34		1.141E+00	7.689E-01	1.213E+00	1.232E-01	0.941
BA-137M		661.65	*	1.589E-02	3.322E-02	5.596E-02	4.152E-03	0.284
CS-137		661.65	*	1.680E-02	3.512E-02	5.916E-02	4.401E-03	0.284
CE-139		165.85	*	1.929E-02	2.876E-02	4.815E-02	2.467E-03	0.401
BA-140		162.64		-4.405E-01	8.545E-01	1.340E+00	8.018E-02	-0.329
		304.84		-2.851E-02	1.580E+00	2.274E+00	6.198E-01	-0.013
		423.70		6.767E-01	2.024E+00	3.324E+00	1.057E+00	0.204
		537.32	*	1.973E-01	2.654E-01	4.481E-01	1.465E-01	0.440
LA-140	+	328.77		7.056E-01	3.781E-01	5.849E-01	3.743E-02	1.206
		432.53		8.289E-01	2.193E+00	3.624E+00	2.374E-01	0.229
		487.03		-8.005E-02	1.380E-01	2.237E-01	1.574E-02	-0.358
		751.79		-6.584E-01	1.915E+00	3.030E+00	2.857E-01	-0.217
		815.85		-3.178E-02	3.344E-01	5.558E-01	5.683E-02	-0.057
		867.82		-2.455E+00	1.585E+00	2.326E+00	2.412E-01	-1.055
		919.63		-1.442E+00	3.390E+00	4.565E+00	5.426E-01	-0.316
		925.24		-3.669E-01	1.220E+00	1.975E+00	2.076E-01	-0.186
		1596.49	*	-1.250E-01	9.221E-02	1.250E-01	7.977E-03	-1.000

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	2.871E-02	6.920E-02	1.154E-01	6.668E-03	0.249
CE-143		57.37		-2.729E-03	6.920E-02	Half-Life too short		
		231.56		-5.487E-03	6.920E-02	Half-Life too short		
		293.26	*	3.414E-03	6.920E-02	Half-Life too short		
	+	350.59		1.377E-01	6.920E-02	Half-Life too short		
		490.36		3.022E-03	6.920E-02	Half-Life too short		
		664.57		3.547E-03	6.920E-02	Half-Life too short		
		721.93		2.623E-03	6.920E-02	Half-Life too short		
CE-144		80.11		-2.846E-01	3.037E+00	3.305E+00	2.710E-01	-0.086
		133.54	*	5.609E-02	2.276E-01	3.344E-01	4.749E-02	0.168
PM-144		476.78		1.495E-02	6.472E-02	1.053E-01	7.719E-03	0.142
		618.01		-5.101E-03	2.941E-02	4.422E-02	3.292E-03	-0.115
		696.49	*	-1.922E-02	3.419E-02	5.384E-02	4.216E-03	-0.357
		778.57		-1.790E-01	2.231E+00	3.586E+00	3.166E-01	-0.050
PR-144		696.49	*	-1.304E+00	2.320E+00	3.654E+00	2.859E-01	-0.357
		1489.15		-3.316E+00	1.070E+01	1.693E+01	1.118E+00	-0.196
PM-146		453.90	*	1.855E-02	3.935E-02	6.515E-02	5.753E-03	0.285
		633.02		-4.949E-03	1.379E+00	2.177E+00	8.071E-01	-0.002
		735.90		-7.000E-03	1.551E-01	2.319E-01	6.611E-02	-0.030
		747.13		-5.767E-02	8.268E-02	1.266E-01	1.763E-02	-0.455
ND-147	+	91.11		1.019E+00	3.555E-01	6.201E-01	5.730E-02	1.644
		319.41		-2.641E+00	3.689E+00	5.893E+00	3.350E-01	-0.448
		439.89		2.103E+00	6.527E+00	1.073E+01	6.454E-01	0.196
		531.02	*	4.772E-02	5.896E-01	9.873E-01	1.371E-01	0.048
PM-149		285.90	*	-5.405E-05	5.896E-01	Half-Life too short		
EU-152		121.78		3.084E-03	8.095E-02	1.186E-01	9.313E-03	0.026
		244.69		4.663E-01	3.535E-01	5.534E-01	3.039E-02	0.843
		344.27	*	-7.882E-02	1.207E-01	1.409E-01	9.089E-03	-0.559
		443.98		-2.590E-01	8.977E-01	1.425E+00	8.601E-02	-0.182
		778.89		4.561E-02	2.560E-01	4.186E-01	3.695E-02	0.109
		867.32		-1.105E+00	8.050E-01	1.202E+00	1.198E-01	-0.919
	+	964.01		1.156E+00	4.157E-01	5.914E-01	5.630E-02	1.955
		1085.78		9.238E-02	3.709E-01	6.168E-01	4.612E-02	0.150
		1112.02		-1.656E-01	3.661E-01	5.038E-01	3.505E-02	-0.329
		1407.95		1.225E-02	1.789E-01	2.968E-01	1.992E-02	0.041
GD-153		69.67		-1.822E-01	1.878E+00	2.643E+00	1.971E-01	-0.069
	+	83.37		2.409E+01	1.885E+01	2.439E+01	2.070E+00	0.987
		97.43	*	-4.234E-02	8.490E-02	1.220E-01	9.543E-03	-0.347
		103.18		-9.617E-02	1.044E-01	1.694E-01	1.240E-02	-0.568
EU-154		123.07		4.091E-02	5.659E-02	8.541E-02	8.180E-03	0.479
		247.94		-1.433E-01	3.741E-01	5.619E-01	5.261E-02	-0.255
		591.81		-3.871E-01	5.568E-01	8.555E-01	9.007E-02	-0.453
		723.30		1.869E-01	1.796E-01	2.734E-01	2.488E-02	0.684
		756.87		1.074E+00	7.844E-01	1.360E+00	1.623E-01	0.790
		873.19		9.429E-02	2.665E-01	4.538E-01	6.028E-02	0.208
		996.32		4.903E-03	3.511E-01	5.782E-01	1.039E-01	0.008
		1004.76		-8.609E-02	2.080E-01	3.316E-01	3.930E-02	-0.260
		1274.45	*	-4.112E-02	1.122E-01	1.814E-01	1.758E-02	-0.227
EU-155		48.70		-2.495E+00	2.078E+00	3.194E+00	2.155E-01	-0.781

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		2.004E-01	5.241E+00	7.485E+00	5.262E-01	0.027
	+	86.54		5.448E-01	1.383E-01	1.888E-01	1.676E-02	2.886
		105.31	*	6.025E-02	1.040E-01	1.774E-01	1.291E-02	0.340
TB-160	+	86.79		1.493E+00	3.784E-01	5.110E-01	4.505E-02	2.921
		197.04		1.914E-02	6.027E-01	9.523E-01	5.020E-02	0.020
		215.65		-1.803E-01	7.670E-01	1.220E+00	6.542E-02	-0.148
		298.57		1.347E-01	1.113E-01	1.934E-01	1.092E-02	0.696
		879.36	*	-5.438E-02	1.246E-01	2.003E-01	2.027E-02	-0.271
		962.29		1.359E+00	6.347E-01	1.033E+00	9.863E-02	1.315
	+	966.15		8.148E-01	2.929E-01	5.381E-01	5.106E-02	1.514
		1177.93		1.941E-01	3.813E-01	6.383E-01	3.618E-02	0.304
		1271.85		-7.933E-03	6.551E-01	1.089E+00	6.897E-02	-0.007
HO-166M		80.57		-6.586E-02	3.859E-01	4.174E-01	3.438E-02	-0.158
	+	184.41		2.167E-01	6.348E-02	6.991E-02	3.641E-03	3.099
		280.46		-1.072E-01	8.298E-02	1.308E-01	7.337E-03	-0.819
		410.95		1.177E-02	2.383E-01	3.879E-01	2.254E-02	0.030
		711.68	*	2.157E-02	5.634E-02	9.397E-02	7.524E-03	0.230
		752.31		-2.727E-02	2.679E-01	4.314E-01	3.666E-02	-0.063
		810.29		5.336E-03	5.294E-02	8.919E-02	8.227E-03	0.060
TM-171		51.35		-1.102E+01	2.718E+01	4.316E+01	2.978E+00	-0.255
		52.39		8.654E+00	1.454E+01	2.347E+01	1.626E+00	0.369
		59.40		9.674E+00	2.753E+01	3.992E+01	2.799E+00	0.242
		66.72	*	-6.772E+00	3.161E+01	4.430E+01	3.235E+00	-0.153
LU-176	+	88.36		1.072E+00	2.717E-01	3.775E-01	3.355E-02	2.839
		201.83		-6.417E-03	2.938E-02	4.698E-02	2.488E-03	-0.137
		306.84	*	-1.058E-02	2.367E-02	3.738E-02	2.117E-03	-0.283
		401.10		-3.481E+00	6.416E+00	1.014E+01	5.820E-01	-0.343
LU-177		112.95		-9.272E-01	2.172E+00	3.541E+00	2.347E-01	-0.262
	+	208.36	*	3.100E+00	1.514E+00	2.591E+00	1.380E-01	1.197
LU-177M		52.97		1.030E+00	1.527E+00	2.471E+00	1.715E-01	0.417
		54.07		4.354E-01	8.176E-01	1.316E+00	9.157E-02	0.331
		61.30		1.523E+00	1.570E+00	2.327E+00	1.647E-01	0.655
		121.62		1.127E-03	3.982E-01	6.139E-01	3.760E-02	0.002
		147.16		-1.247E+00	6.799E-01	1.041E+00	5.721E-02	-1.199
		171.86		6.410E-02	4.791E-01	7.846E-01	4.038E-02	0.082
		218.09		-4.039E-01	8.656E-01	1.362E+00	7.319E-02	-0.297
		268.79		1.596E+00	8.720E-01	1.389E+00	7.742E-02	1.149
		319.02		-1.817E-01	2.440E-01	3.891E-01	2.210E-02	-0.467
		367.43		3.095E-01	8.567E-01	1.428E+00	8.137E-02	0.217
		413.65	*	-8.384E-02	1.719E-01	2.718E-01	1.584E-02	-0.308
HF-181		56.28		-1.382E-01	9.226E-01	1.474E+00	1.029E-01	-0.094
		57.53		-4.196E-01	5.007E-01	7.780E-01	5.438E-02	-0.539
		65.20		7.538E-01	1.098E+00	1.599E+00	1.157E-01	0.471
		133.02		1.198E-02	7.543E-02	1.105E-01	6.418E-03	0.108
		136.25		-2.417E-01	4.864E-01	7.895E-01	4.528E-02	-0.306
		345.85		-6.053E-02	2.430E-01	2.952E-01	1.682E-02	-0.205
		482.03	*	1.546E-02	3.940E-02	6.752E-02	4.249E-03	0.229
W-181		56.28		-5.236E-02	3.508E-01	5.606E-01	3.912E-02	-0.093
		57.53		-1.597E-01	1.905E-01	2.960E-01	2.069E-02	-0.540

---- Non-Identified Nuclides ----

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		65.20	*	2.846E-01	4.146E-01	6.036E-01	4.366E-02	0.471
TA-182		67.75		-5.863E-02	1.272E-01	1.761E-01	1.295E-02	-0.333
		100.10		5.895E-02	1.877E-01	2.964E-01	2.245E-02	0.199
		152.43		-1.395E-01	3.491E-01	5.648E-01	3.045E-02	-0.247
		222.10		3.736E-01	3.556E-01	5.931E-01	3.199E-02	0.630
		1001.68		-4.562E-01	2.042E+00	3.305E+00	2.959E-01	-0.138
	+	1121.28		6.699E-01	2.399E-01	3.228E-01	2.184E-02	2.075
		1189.05		-3.685E-03	3.183E-01	5.151E-01	2.960E-02	-0.007
		1221.42	*	6.526E-02	1.988E-01	3.382E-01	2.021E-02	0.193
		1230.97		-3.862E-01	5.538E-01	7.367E-01	4.452E-02	-0.524
RE-183		57.98		-1.242E-01	2.028E-01	3.016E-01	2.109E-02	-0.412
		59.32		3.544E-02	1.159E-01	1.677E-01	1.175E-02	0.211
		67.20		-7.849E-02	2.313E-01	3.223E-01	2.362E-02	-0.244
		162.32	*	-6.756E-02	1.108E-01	1.732E-01	8.991E-03	-0.390
	+	208.81		2.158E+00	1.053E+00	1.772E+00	9.448E-02	1.217
		291.72		-5.691E-02	1.026E+00	1.479E+00	8.334E-02	-0.038
RE-184		57.98		-4.503E-01	7.354E-01	1.094E+00	7.649E-02	-0.412
		59.32		1.284E-01	4.199E-01	6.076E-01	4.259E-02	0.211
		67.20		-2.846E-01	8.387E-01	1.169E+00	8.562E-02	-0.244
		161.27		-3.946E-01	3.467E-01	5.412E-01	2.821E-02	-0.729
		216.55		-2.106E-01	2.706E-01	4.201E-01	2.255E-02	-0.501
		252.85	*	-1.233E-01	2.235E-01	3.672E-01	2.027E-02	-0.336
		318.01		-3.306E-01	4.187E-01	6.661E-01	3.783E-02	-0.496
		792.07		4.825E-02	1.186E+00	1.640E+00	1.475E-01	0.029
		903.28		5.475E-01	1.037E+00	1.549E+00	1.597E-01	0.353
		920.93		-5.585E-02	4.714E-01	6.583E-01	6.645E-02	-0.085
OS-185		59.72		3.369E-02	3.138E-01	4.498E-01	3.158E-02	0.075
		61.14		1.907E-01	1.717E-01	2.562E-01	1.811E-02	0.744
		69.30		3.524E-02	3.366E-01	4.780E-01	3.555E-02	0.074
		592.07		-1.687E+00	2.250E+00	3.535E+00	2.474E-01	-0.477
		646.12	*	3.127E-02	3.938E-02	6.777E-02	4.965E-03	0.461
		717.42		-3.100E-01	8.616E-01	1.335E+00	1.078E-01	-0.232
		874.81		3.031E-01	5.400E-01	9.315E-01	9.372E-02	0.325
		880.27		-1.800E-01	6.771E-01	1.103E+00	1.117E-01	-0.163
RE-188		155.03	*	1.588E-01	1.793E-01	3.026E-01	1.615E-02	0.525
		477.96		2.979E-01	3.046E+00	4.917E+00	3.080E-01	0.061
		633.10		9.417E-02	2.859E+00	4.522E+00	3.278E-01	0.021
W-188	+	63.58		3.312E+01	6.847E+01	8.983E+01	6.435E+00	0.369
		227.08		-2.417E+00	1.325E+01	2.104E+01	1.140E+00	-0.115
		290.67	*	2.301E+00	7.901E+00	1.163E+01	6.553E-01	0.198
IR-192	+	295.96		1.025E+00	1.512E-01	2.637E-01	1.513E-02	3.886
		308.46		-5.610E-02	9.281E-02	1.496E-01	8.577E-03	-0.375
		316.51	*	-1.381E-02	3.319E-02	5.386E-02	3.074E-03	-0.256
		468.07		3.282E-05	7.195E-02	9.964E-02	7.011E-03	0.000
		604.41		4.927E-01	4.776E-01	7.299E-01	8.797E-02	0.675
		612.46		6.528E+00	1.130E+00	1.896E+00	1.636E-01	3.444
AU-195	+	65.12		1.124E-01	2.324E-01	2.798E-01	2.023E-02	0.402
		66.83		-4.170E-02	1.064E-01	1.479E-01	1.081E-02	-0.282
	+	75.70		1.699E+00	2.894E-01	4.802E-01	3.769E-02	3.537

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		98.88	*	2.575E-01	2.453E-01	3.768E-01	2.897E-02	0.683
	+	129.76		1.118E+01	5.884E+00	5.252E+00	3.094E-01	2.129
TL-200		367.94	*	7.320E-05	5.884E+00	Half-Life too short		
		579.30		2.085E-02	5.884E+00	Half-Life too short		
		828.27		-2.764E-03	5.884E+00	Half-Life too short		
		1205.75		3.317E-04	5.884E+00	Half-Life too short		
TL-201		68.90		-6.816E-01	9.937E+00	1.401E+01	1.039E+00	-0.049
		70.82		4.179E-01	5.580E+00	7.904E+00	5.948E-01	0.053
		80.30		-2.409E+00	1.331E+01	1.440E+01	1.182E+00	-0.167
		135.34		-2.732E+01	5.207E+01	7.792E+01	4.485E+00	-0.351
		167.43	*	-1.069E+00	1.273E+01	2.071E+01	1.062E+00	-0.052
TL-202		68.90		-3.835E-02	5.591E-01	7.885E-01	5.847E-02	-0.049
		70.82		2.345E-02	3.131E-01	4.435E-01	3.337E-02	0.053
		80.30		-1.352E-01	7.473E-01	8.081E-01	6.637E-02	-0.167
		439.56	*	4.048E-02	7.564E-02	1.259E-01	7.560E-03	0.322
HG-203		70.83		9.244E-02	1.210E+00	1.714E+00	2.218E-01	0.054
		72.87		1.719E+00	7.274E-01	1.133E+00	1.426E-01	1.518
		82.60		1.844E+00	1.555E+00	1.823E+00	2.483E-01	1.011
		279.20	*	2.396E-02	4.070E-02	6.948E-02	4.151E-03	0.345
BI-207		72.80		4.239E-01	1.969E-01	3.142E-01	2.404E-02	1.349
	+	74.97		9.326E-01	1.589E-01	2.354E-01	1.835E-02	3.962
	+	84.90		3.091E-01	2.419E-01	3.221E-01	2.780E-02	0.960
		569.67		1.613E-03	2.814E-02	4.681E-02	3.210E-03	0.034
		1063.62	*	5.449E-03	5.001E-02	8.245E-02	6.509E-03	0.066
		1770.23		8.335E-01	4.527E-01	8.448E-01	4.931E-02	0.987
TL-207		81.07		-1.094E-01	3.071E-01	3.275E-01	2.711E-02	-0.334
	+	83.78		2.038E-01	1.595E-01	2.049E-01	1.746E-02	0.995
		94.90		5.878E-01	2.514E-01	4.171E-01	3.371E-02	1.409
		122.32		7.655E-01	1.908E+00	2.843E+00	1.978E-01	0.269
		144.24		8.709E-01	7.239E-01	1.218E+00	8.574E-02	0.715
		154.21		2.099E-01	4.007E-01	6.687E-01	4.447E-02	0.314
	+	269.46		5.003E-01	2.569E-01	3.343E-01	1.955E-02	1.497
		323.87	*	2.161E-02	6.962E-01	9.998E-01	1.647E-01	0.022
	+	338.28		8.733E+00	1.894E+00	2.421E+00	2.536E-01	3.607
		445.03		1.744E-02	2.094E+00	3.383E+00	3.521E-01	0.005
PO-209		260.50		-1.418E+00	9.146E+00	1.524E+01	8.457E-01	-0.093
		262.80		-1.472E+01	2.591E+01	4.122E+01	2.290E+00	-0.357
		896.60	*	-3.298E+00	7.020E+00	1.126E+01	1.166E+00	-0.293
BI-210		46.50	*	1.292E+00	2.938E+00	4.836E+00	3.657E-01	0.267
PB-210		46.50	*	1.292E+00	2.938E+00	4.836E+00	3.657E-01	0.267
PO-210		46.50	*	1.292E+00	2.938E+00	4.836E+00	3.117E-01	0.267
PB-211		404.84	*	7.177E-02	9.287E-01	1.514E+00	9.438E-01	0.047
		427.08		-8.170E-02	1.883E+00	3.041E+00	1.880E+00	-0.027
		831.96		-1.008E+00	1.305E+00	1.799E+00	1.130E+00	-0.560
BI-212	+	727.18	*	1.253E+00	4.855E-01	6.077E-01	5.860E-02	2.062
		785.46		2.869E-02	1.968E+00	2.836E+00	2.527E-01	0.010
		1620.62		1.086E+00	1.145E+00	2.061E+00	1.302E-01	0.527
PO-215		81.07		-1.094E-01	3.071E-01	3.275E-01	2.711E-02	-0.334
	+	83.78		2.038E-01	1.595E-01	2.049E-01	1.746E-02	0.995

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		94.90		5.878E-01	2.514E-01	4.171E-01	3.371E-02	1.409
		122.32		7.655E-01	1.908E+00	2.843E+00	1.978E-01	0.269
		144.24		8.709E-01	7.239E-01	1.218E+00	8.574E-02	0.715
		154.21		2.099E-01	4.007E-01	6.687E-01	4.447E-02	0.314
	+	269.46		5.003E-01	2.569E-01	3.343E-01	1.955E-02	1.497
		323.87	*	2.161E-02	6.962E-01	9.998E-01	1.647E-01	0.022
	+	338.28		8.733E+00	1.894E+00	2.421E+00	2.536E-01	3.607
		445.03		1.744E-02	2.094E+00	3.383E+00	3.521E-01	0.005
RN-219	+	271.23		6.419E-01	3.314E-01	4.261E-01	3.387E-02	1.507
		401.81	*	6.237E-02	3.915E-01	6.421E-01	8.722E-02	0.097
RN-220		549.76	*	-7.288E+00	2.329E+01	3.800E+01	2.558E+00	-0.192
RA-223		81.07		-1.094E-01	3.071E-01	3.275E-01	2.711E-02	-0.334
	+	83.78		2.038E-01	1.595E-01	2.049E-01	1.746E-02	0.995
		94.90		5.878E-01	2.514E-01	4.171E-01	3.371E-02	1.409
		122.32		7.655E-01	1.908E+00	2.843E+00	1.978E-01	0.269
		144.24		8.709E-01	7.239E-01	1.218E+00	8.574E-02	0.715
		154.21		2.099E-01	4.007E-01	6.687E-01	4.447E-02	0.314
	+	269.46		5.003E-01	2.569E-01	3.343E-01	1.955E-02	1.497
		323.87	*	2.161E-02	6.962E-01	9.998E-01	1.647E-01	0.022
	+	338.28		8.733E+00	1.894E+00	2.421E+00	2.536E-01	3.607
		445.03		1.744E-02	2.094E+00	3.383E+00	3.521E-01	0.005
AC-227		79.80		6.069E-01	2.319E+00	2.583E+00	5.509E-01	0.235
		236.00		1.638E+00	3.352E-01	5.048E-01	5.182E-02	3.244
		256.20	*	1.360E-01	3.659E-01	6.222E-01	8.619E-02	0.219
		286.10		-1.208E-01	1.503E+00	2.404E+00	2.757E-01	-0.050
	+	299.80		2.353E+00	1.673E+00	2.345E+00	3.807E-01	1.003
		304.40		3.389E-01	1.997E+00	2.907E+00	5.014E-01	0.117
		334.20		1.126E+00	2.939E+00	3.426E+00	6.270E-01	0.329
TH-227		79.80		6.069E-01	2.319E+00	2.583E+00	5.581E-01	0.235
	+	94.00		1.144E+01	4.052E+00	3.940E+00	8.514E-01	2.902
		236.00		1.638E+00	3.241E-01	5.048E-01	4.463E-02	3.244
		256.20	*	1.360E-01	3.661E-01	6.222E-01	1.046E-01	0.219
		286.10		-1.208E-01	1.508E+00	2.404E+00	2.407E+00	-0.050
	+	299.80		2.353E+00	1.673E+00	2.345E+00	3.807E-01	1.003
		304.40		3.389E-01	1.997E+00	2.907E+00	5.014E-01	0.117
		334.20		1.126E+00	2.939E+00	3.426E+00	6.270E-01	0.329
TH-229	+	85.43		3.051E-01	2.387E-01	3.358E-01	2.915E-02	0.909
	+	88.47		6.170E-01	1.564E-01	2.161E-01	1.918E-02	2.854
		100.00		7.132E-02	1.920E-01	3.038E-01	2.305E-02	0.235
		193.63	*	-7.101E-01	5.277E-01	7.726E-01	4.060E-02	-0.919
		210.97		1.496E+00	8.945E-01	1.357E+00	7.247E-02	1.103
PA-231		283.67	*	2.076E-01	1.424E+00	2.390E+00	3.275E-01	0.087
	+	301.29		9.410E-01	6.588E-01	9.614E-01	9.972E-02	0.979
TH-231		81.07		-1.094E-01	3.071E-01	3.275E-01	2.711E-02	-0.334
	+	83.78		2.038E-01	1.595E-01	2.049E-01	1.746E-02	0.995
		94.90		5.878E-01	2.514E-01	4.171E-01	3.371E-02	1.409
		122.32		7.655E-01	1.908E+00	2.843E+00	1.978E-01	0.269
		144.24		8.709E-01	7.239E-01	1.218E+00	8.574E-02	0.715
		154.21		2.099E-01	4.007E-01	6.687E-01	4.447E-02	0.314

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.003E-01	2.569E-01	3.343E-01	1.955E-02	1.497
		323.87	*	2.161E-02	6.962E-01	9.998E-01	1.647E-01	0.022
	+	338.28		8.733E+00	1.894E+00	2.421E+00	2.536E-01	3.607
		445.03		1.744E-02	2.094E+00	3.383E+00	3.521E-01	0.005
U-231	+	84.21		1.380E+01	1.080E+01	1.387E+01	1.188E+00	0.995
	+	92.29		1.776E+01	5.194E+00	6.454E+00	5.406E-01	2.752
		95.87	*	-9.035E-01	1.785E+00	2.587E+00	2.064E-01	-0.349
		108.00		-2.270E+00	3.181E+00	5.190E+00	3.610E-01	-0.437
PA-233	+	75.28		2.721E+01	5.782E+00	7.194E+00	1.073E+00	3.783
	+	86.59		8.847E+00	3.175E+00	3.058E+00	8.219E-01	2.893
	+	300.12		6.559E-01	4.625E-01	6.587E-01	8.810E-02	0.996
		311.98	*	9.835E-04	5.986E-02	9.926E-02	5.994E-03	0.010
		340.50		4.167E+00	1.204E+00	1.335E+00	3.063E-01	3.121
		398.62		-1.199E+00	1.975E+00	3.070E+00	7.933E-01	-0.390
		415.76		3.200E-01	1.552E+00	2.545E+00	5.241E-01	0.126
PA-234	+	63.00		9.345E-01	1.936E+00	2.573E+00	3.789E-01	0.363
		94.67		6.124E-01	1.962E-01	3.152E-01	3.799E-02	1.943
		98.44		6.035E-02	1.030E-01	1.473E-01	8.199E-02	0.410
		99.86		2.300E-01	5.121E-01	7.732E-01	5.875E-02	0.298
		111.00		1.687E-01	1.844E-01	3.156E-01	3.420E-02	0.535
		131.20		2.645E-02	1.208E-01	1.775E-01	1.039E-02	0.149
		152.70		-1.194E-01	3.331E-01	5.390E-01	8.441E-02	-0.222
	+	186.00		7.801E+00	3.271E+00	2.678E+00	8.156E-01	2.913
		226.40		-2.416E-02	4.074E-01	6.503E-01	7.395E-02	-0.037
		227.20		-7.563E-02	4.357E-01	6.920E-01	3.749E-02	-0.109
		248.90		-1.297E-01	7.907E-01	1.286E+00	2.754E-01	-0.101
		293.70		5.480E+00	1.227E+00	1.577E+00	2.527E-01	3.475
		369.80		4.585E-02	8.054E-01	1.322E+00	2.749E-01	0.035
		568.70		1.714E-01	9.242E-01	1.548E+00	1.061E-01	0.111
		569.50		2.428E-02	2.503E-01	4.172E-01	2.861E-02	0.058
		574.00		-2.829E-01	1.367E+00	2.238E+00	1.541E-01	-0.126
		699.00		-6.812E-02	7.105E-01	1.152E+00	2.160E-01	-0.059
		706.10		7.586E-02	1.019E+00	1.666E+00	7.409E-01	0.046
		733.00		-9.446E-02	4.223E-01	5.736E-01	1.265E-01	-0.165
		742.81		5.518E-01	1.349E+00	2.164E+00	1.454E+00	0.255
	+	796.30		3.023E+00	1.948E+00	1.690E+00	4.594E-01	1.789
		805.60		1.037E+00	1.132E+00	1.639E+00	5.048E-01	0.633
		819.60		-6.100E-01	1.163E+00	1.837E+00	7.017E-01	-0.332
		826.30		-1.809E-01	7.668E-01	1.255E+00	5.633E-01	-0.144
		831.60		-5.004E-01	6.110E-01	9.362E-01	2.819E-01	-0.534
		876.40		1.761E-01	7.582E-01	1.245E+00	1.282E+00	0.141
		880.51		-2.357E-02	2.416E-01	3.987E-01	4.041E-02	-0.059
		883.24		-1.562E-01	2.733E-01	3.999E-01	2.697E-01	-0.391
		899.00		-6.142E-01	8.192E-01	1.211E+00	5.338E-01	-0.507
		925.00		-2.460E-01	1.087E+00	1.770E+00	1.778E-01	-0.139
		926.50		-7.078E-02	1.660E-01	2.648E-01	6.830E-02	-0.267
		946.00	*	-1.509E-01	2.947E-01	4.674E-01	9.029E-02	-0.323
		949.00		4.458E-02	4.252E-01	7.074E-01	6.881E-02	0.063
		980.50		-2.196E-01	6.882E-01	1.107E+00	1.027E-01	-0.198

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		6.017E-01	1.131E+00	1.848E+00	1.199E+00	0.326
PA-234M		766.41		1.662E+01	2.227E+01	3.025E+01	2.320E+01	0.549
		1001.03	*	1.494E+00	6.396E+00	1.067E+01	1.222E+00	0.140
U-235	+	89.95		3.415E+00	1.558E+00	1.878E+00	5.798E-01	1.818
	+	93.35		3.558E+00	1.408E+00	1.262E+00	3.522E-01	2.820
		105.00		9.223E-01	1.053E+00	1.754E+00	5.167E-01	0.526
		143.76	*	2.620E-01	2.268E-01	3.758E-01	6.097E-02	0.697
		163.35		-2.420E-01	4.631E-01	7.229E-01	1.286E-01	-0.335
	+	185.71		2.889E-01	8.463E-02	9.966E-02	5.197E-03	2.899
		205.31		1.087E-01	5.981E-01	8.458E-01	1.508E-01	0.128
NP-236		94.67		4.675E-01	1.431E-01	2.394E-01	1.941E-02	1.953
		98.44		4.556E-02	7.368E-02	1.114E-01	8.605E-03	0.409
		111.00		1.276E-01	1.391E-01	2.387E-01	1.612E-02	0.535
		160.31	*	-6.147E-02	7.770E-02	1.232E-01	6.446E-03	-0.499
NP-239		99.55		1.061E-01	1.727E-01	2.607E-01	1.988E-02	0.407
		117.00	*	5.629E-02	1.838E-01	3.094E-01	1.975E-02	0.182
	+	209.75		1.656E+00	8.087E-01	1.381E+00	7.367E-02	1.200
		228.18		1.618E-02	2.247E-01	3.606E-01	1.955E-02	0.045
		277.60		1.714E-01	1.770E-01	2.991E-01	1.675E-02	0.573
		334.30		6.832E-01	1.663E+00	1.948E+00	1.110E-01	0.351
AM-241		59.54	*	1.167E-02	1.619E-01	2.317E-01	1.800E-02	0.050
CM-243		99.55		1.092E-01	1.777E-01	2.683E-01	2.046E-02	0.407
		103.76	*	3.648E-02	9.455E-02	1.604E-01	1.166E-02	0.227
		117.00		5.792E-02	1.891E-01	3.184E-01	2.033E-02	0.182
	+	209.75		1.633E+00	7.973E-01	1.361E+00	7.263E-02	1.200
		228.18		1.635E-02	2.271E-01	3.644E-01	1.976E-02	0.045
		277.60		1.728E-01	1.785E-01	3.016E-01	1.689E-02	0.573
CM-247		278.00		9.981E-01	7.124E-01	1.250E+00	7.003E-02	0.798
		287.40		-1.918E-01	1.266E+00	1.913E+00	1.076E-01	-0.100
		402.60	*	3.105E-03	3.572E-02	5.836E-02	3.356E-03	0.053
CF-249		252.85		-4.573E-01	8.293E-01	1.362E+00	7.522E-02	-0.336
		333.44		2.882E-01	2.266E-01	2.558E-01	1.456E-02	1.127
		387.95	*	2.168E-02	3.744E-02	6.285E-02	3.569E-03	0.345
CF-251		176.60	*	2.352E-03	1.236E-01	2.012E-01	1.040E-02	0.012
		227.00		-7.291E-02	3.869E-01	6.141E-01	3.326E-02	-0.119
		285.00		-1.170E+00	1.716E+00	2.670E+00	1.500E-01	-0.438

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664003       *
* Acquisition date : 14-JUL-2009 08:37:20 Detector SN#    :                 *
* Detector ID       : GAM22               Sensitivity     : 5.000           *
* Geometry          : CAN                 Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:01.73     Half life ratio :  8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 26-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232664003           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.1120E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.576E+01	2.983E+00	5.119E-01	0.000E+00
CD-109	4.616E+00	1.147E+00	1.179E+00	0.000E+00
SN-126	4.519E-01	1.123E-01	1.159E-01	0.000E+00
TL-208	5.983E-01	7.745E-02	5.238E-02	0.000E+00
BI-211	4.361E+00	4.890E-01	3.143E-01	0.000E+00
PB-212	1.908E+00	1.700E-01	8.726E-02	0.000E+00
PO-212	1.908E+00	1.700E-01	8.726E-02	0.000E+00
BI-214	1.254E+00	1.833E-01	1.020E-01	0.000E+00
PB-214	1.517E+00	1.870E-01	1.053E-01	0.000E+00
PO-214	1.517E+00	1.870E-01	1.053E-01	0.000E+00
PO-216	1.908E+00	1.700E-01	8.726E-02	0.000E+00
PO-218	1.517E+00	1.870E-01	1.053E-01	0.000E+00
RA-224	5.145E+00	1.305E+00	9.915E-01	0.000E+00
RA-226	1.254E+00	1.833E-01	1.020E-01	0.000E+00
AC-228	1.835E+00	3.613E-01	1.879E-01	0.000E+00
RA-228	1.835E+00	3.613E-01	1.879E-01	0.000E+00
TH-228	1.908E+00	1.700E-01	8.725E-02	0.000E+00
TH-230	1.253E+00	1.833E-01	1.020E-01	0.000E+00
TH-232	1.835E+00	3.613E-01	1.879E-01	0.000E+00
TH-234	8.017E-01	1.629E+00	2.045E+00	0.000E+00
U-234	1.253E+00	1.833E-01	1.020E-01	0.000E+00
NP-237	1.327E+00	4.251E-01	3.436E-01	0.000E+00
U-238	8.017E-01	1.629E+00	2.045E+00	0.000E+00
AM-243	5.195E-01	8.673E-02	8.951E-02	0.000E+00
ANH-511	1.450E-01	5.910E-02	4.015E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	8.272E-02	3.115E-01	5.199E-01	0.000E+00	NOT IDENT.
NA-22	-1.474E-02	3.940E-02	6.476E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	1.396E+07	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.077E-03	2.654E-02	4.417E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.896E-02	8.223E-02	0.000E+00	FAIL ABUN
SC-46	1.194E-02	3.692E-02	6.380E-02	0.000E+00	FAIL ABUN
V-48	5.885E-02	7.464E-02	1.316E-01	0.000E+00	NOT IDENT.
CR-51	-1.775E-02	3.621E-01	6.139E-01	0.000E+00	NOT IDENT.
MN-52	3.142E-01	2.546E-01	4.815E-01	0.000E+00	NOT IDENT.
MN-54	1.874E-02	3.534E-02	6.192E-02	0.000E+00	NOT IDENT.
CO-56	-6.970E-03	3.731E-02	6.268E-02	0.000E+00	NOT IDENT.
CO-57	5.472E-03	2.738E-02	4.182E-02	0.000E+00	NOT IDENT.
CO-58	-3.487E-03	3.570E-02	6.056E-02	0.000E+00	NOT IDENT.
FE-59	2.572E-02	9.044E-02	1.530E-01	0.000E+00	NOT IDENT.
CO-60	9.899E-03	3.575E-02	6.157E-02	0.000E+00	NOT IDENT.
ZN-65	2.726E-02	1.024E-01	1.481E-01	0.000E+00	NOT IDENT.
GE-68	-7.901E-02	1.191E+00	1.970E+00	0.000E+00	NOT IDENT.
AS-73	4.653E-01	7.780E-01	1.307E+00	0.000E+00	NOT IDENT.
AS-74	3.951E-02	8.684E-02	1.506E-01	0.000E+00	NOT IDENT.
SE-75	-1.678E-02	4.593E-02	6.737E-02	0.000E+00	NOT IDENT.
BR-77	-8.265E+00	2.035E+01	3.227E+01	0.000E+00	FAIL ABUN
SR-82	-4.107E-01	3.960E-01	6.047E-01	0.000E+00	NOT IDENT.
RB-83	-2.691E-02	6.169E-02	9.764E-02	0.000E+00	NOT IDENT.
RB-84	-1.702E-02	6.134E-02	1.017E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.981E+00	1.430E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.212E-02	7.544E-02	0.000E+00	NOT IDENT.
RB-86	-4.989E-02	8.392E-01	1.389E+00	0.000E+00	NOT IDENT.
Y-88	2.363E-02	2.873E-02	5.338E-02	0.000E+00	NOT IDENT.
ZR-88	-1.596E-02	2.932E-02	4.762E-02	0.000E+00	NOT IDENT.
Y-91	5.709E+00	1.960E+01	3.282E+01	0.000E+00	NOT IDENT.
NB-94	2.465E-02	3.240E-02	5.617E-02	0.000E+00	NOT IDENT.
NB-95	6.319E-03	4.578E-02	7.407E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.449E-01	2.345E-01	0.000E+00	NOT IDENT.
ZR-95	5.381E-02	7.389E-02	1.272E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.289E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.822E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	8.917E+00	2.206E+01	3.742E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.870E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.103E-02	3.400E-02	5.656E-02	0.000E+00	FAIL ABUN
RH-102	-1.888E-02	2.775E-02	4.378E-02	0.000E+00	NOT IDENT.
RU-103	-3.115E-02	3.476E-02	5.605E-02	0.000E+00	FAIL ABUN
RH-106	2.812E-02	2.670E-01	4.523E-01	0.000E+00	FAIL ABUN
RU-106	2.812E-02	2.670E-01	4.523E-01	0.000E+00	FAIL ABUN
AG-108M	-6.286E-03	2.986E-02	4.890E-02	0.000E+00	NOT IDENT.
AG-110M	-3.098E-03	3.134E-02	5.215E-02	0.000E+00	NOT IDENT.
IN-111	4.812E-02	2.141E+00	3.236E+00	0.000E+00	NOT IDENT.
IN-113M	-1.935E-02	4.270E-02	6.974E-02	0.000E+00	NOT IDENT.
SN-113	-1.935E-02	4.270E-02	6.974E-02	0.000E+00	NOT IDENT.
IN-114M	1.229E-02	1.995E-01	2.922E-01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	2.141E+01	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	8.373E-03	6.155E-02	1.046E-01	0.000E+00	NOT IDENT.
SB-122	4.629E+00	3.997E+00	7.161E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.783E+08	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	7.207E-03	2.773E-02	4.732E-02	0.000E+00	NOT IDENT.
I-124	2.935E-01	1.068E+00	1.584E+00	0.000E+00	NOT IDENT.
SB-124	-1.522E-02	6.168E-02	9.751E-02	0.000E+00	FAIL ABUN
SB-125	-5.002E-02	8.420E-02	1.350E-01	0.000E+00	FAIL ABUN
TE-125M	1.450E+00	9.352E+00	1.627E+01	0.000E+00	NOT IDENT.
I-126	6.935E-02	1.906E-01	3.256E-01	0.000E+00	NOT IDENT.
SB-126	8.684E-03	1.688E-01	2.411E-01	0.000E+00	FAIL ABUN
SB-127	1.015E+00	2.125E+00	3.641E+00	0.000E+00	NOT IDENT.
XE-127	-1.480E-02	4.969E-02	8.166E-02	0.000E+00	NOT IDENT.
I-131	-3.878E-02	1.332E-01	2.208E-01	0.000E+00	NOT IDENT.
TE-132	8.773E-02	1.207E+00	1.994E+00	0.000E+00	NOT IDENT.
BA-133	2.511E-02	4.129E-02	6.284E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.691E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	9.037E-02	8.663E-02	0.000E+00	FAIL ABUN
CS-135	2.313E-01	1.644E-01	2.639E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	5.092E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.258E-02	1.178E-01	2.001E-01	0.000E+00	FAIL ABUN
BA-137M	1.589E-02	3.256E-02	5.602E-02	0.000E+00	NOT IDENT.
CS-137	1.680E-02	3.441E-02	5.922E-02	0.000E+00	NOT IDENT.
CE-139	1.929E-02	2.819E-02	4.872E-02	0.000E+00	NOT IDENT.
BA-140	1.973E-01	2.601E-01	4.493E-01	0.000E+00	NOT IDENT.
LA-140	-1.250E-01	9.037E-02	1.243E-01	0.000E+00	FAIL ABUN
CE-141	2.871E-02	6.782E-02	1.169E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.943E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	5.609E-02	2.230E-01	3.390E-01	0.000E+00	NOT IDENT.
PM-144	-1.922E-02	3.351E-02	5.387E-02	0.000E+00	NOT IDENT.
PR-144	-1.304E+00	2.274E+00	3.656E+00	0.000E+00	NOT IDENT.

PM-146	1.855E-02	3.856E-02	6.542E-02	0.000E+00	NOT IDENT.
ND-147	4.772E-02	5.778E-01	9.901E-01	0.000E+00	FAIL ABUN
PM-149	0.000E+00	2.086E+02	0.000E+00	0.000E+00	SHORT HLIF
EU-152	-7.882E-02	1.183E-01	1.418E-01	0.000E+00	FAIL ABUN
GD-153	-4.234E-02	8.321E-02	1.239E-01	0.000E+00	FAIL ABUN
EU-154	-4.112E-02	1.099E-01	1.806E-01	0.000E+00	NOT IDENT.
EU-155	6.025E-02	1.019E-01	1.801E-01	0.000E+00	FAIL ABUN
TB-160	-5.438E-02	1.221E-01	2.001E-01	0.000E+00	FAIL ABUN
HO-166M	2.157E-02	5.522E-02	9.401E-02	0.000E+00	FAIL ABUN
TM-171	-6.772E+00	3.098E+01	4.514E+01	0.000E+00	NOT IDENT.
LU-176	-1.058E-02	2.320E-02	3.764E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.483E+00	2.617E+00	0.000E+00	FAIL ABUN
LU-177M	-8.384E-02	1.685E-01	2.731E-01	0.000E+00	NOT IDENT.
HF-181	1.546E-02	3.862E-02	6.776E-02	0.000E+00	NOT IDENT.
W-181	2.846E-01	4.063E-01	6.152E-01	0.000E+00	NOT IDENT.
TA-182	6.526E-02	1.948E-01	3.370E-01	0.000E+00	FAIL ABUN
RE-183	-6.756E-02	1.086E-01	1.753E-01	0.000E+00	FAIL ABUN
RE-184	-1.233E-01	2.190E-01	3.703E-01	0.000E+00	NOT IDENT.
OS-185	3.127E-02	3.859E-02	6.785E-02	0.000E+00	NOT IDENT.
RE-188	1.588E-01	1.757E-01	3.064E-01	0.000E+00	NOT IDENT.
W-188	2.301E+00	7.743E+00	1.172E+01	0.000E+00	FAIL ABUN
IR-192	-1.381E-02	3.252E-02	5.423E-02	0.000E+00	FAIL ABUN
AU-195	2.575E-01	2.404E-01	3.828E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.445E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.069E+00	1.248E+01	2.095E+01	0.000E+00	NOT IDENT.
TL-202	4.048E-02	7.413E-02	1.264E-01	0.000E+00	NOT IDENT.
HG-203	2.396E-02	3.989E-02	7.003E-02	0.000E+00	NOT IDENT.
BI-207	5.449E-03	4.901E-02	8.223E-02	0.000E+00	FAIL ABUN
TL-207	2.161E-02	6.823E-01	1.007E+00	0.000E+00	FAIL ABUN
PO-209	-3.298E+00	6.880E+00	1.125E+01	0.000E+00	NOT IDENT.
BI-210	1.292E+00	2.880E+00	4.941E+00	0.000E+00	NOT IDENT.
PB-210	1.292E+00	2.880E+00	4.941E+00	0.000E+00	NOT IDENT.
PO-210	1.292E+00	2.879E+00	4.941E+00	0.000E+00	NOT IDENT.
PB-211	7.177E-02	9.101E-01	1.521E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.758E-01	6.079E-01	0.000E+00	FAIL ABUN
PO-215	2.161E-02	6.823E-01	1.007E+00	0.000E+00	FAIL ABUN
RN-219	6.237E-02	3.837E-01	6.453E-01	0.000E+00	FAIL ABUN
RN-220	-7.288E+00	2.283E+01	3.809E+01	0.000E+00	NOT IDENT.
RA-223	2.161E-02	6.823E-01	1.007E+00	0.000E+00	FAIL ABUN
AC-227	1.360E-01	3.585E-01	6.275E-01	0.000E+00	FAIL ABUN
TH-227	1.360E-01	3.588E-01	6.275E-01	0.000E+00	FAIL ABUN
TH-229	-7.101E-01	5.171E-01	7.809E-01	0.000E+00	FAIL ABUN
PA-231	2.076E-01	1.396E+00	2.408E+00	0.000E+00	FAIL ABUN
TH-231	2.161E-02	6.823E-01	1.007E+00	0.000E+00	FAIL ABUN
U-231	-9.035E-01	1.749E+00	2.628E+00	0.000E+00	FAIL ABUN
PA-233	9.835E-04	5.866E-02	9.995E-02	0.000E+00	FAIL ABUN
PA-234	-1.509E-01	2.888E-01	4.666E-01	0.000E+00	FAIL ABUN
PA-234M	1.494E+00	6.268E+00	1.065E+01	0.000E+00	NOT IDENT.
U-235	2.620E-01	2.223E-01	3.807E-01	0.000E+00	FAIL ABUN
NP-236	-6.147E-02	7.614E-02	1.247E-01	0.000E+00	NOT IDENT.
NP-239	5.629E-02	1.801E-01	3.139E-01	0.000E+00	FAIL ABUN
AM-241	1.167E-02	1.587E-01	2.363E-01	0.000E+00	NOT IDENT.
CM-243	3.648E-02	9.265E-02	1.629E-01	0.000E+00	FAIL ABUN
CM-247	3.105E-03	3.501E-02	5.865E-02	0.000E+00	NOT IDENT.
CF-249	2.168E-02	3.669E-02	6.317E-02	0.000E+00	NOT IDENT.
CF-251	2.352E-03	1.211E-01	2.035E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:37:52.20

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664003.CNF;1
Sample date       : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:37:20
Sample ID         : G232664003           Sample quantity  : 1.11200E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.73  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	2240	10.67*	1.982E+00	3.576E+01	3.576E+01	8.51
CD-109	88.03	393	3.72*	7.942E+00	4.495E+00	4.616E+00	25.35
SN-126	64.28	44	9.60	4.884E+00	3.173E-01	3.173E-01	207.14
	86.94	393	8.90	7.942E+00	1.879E+00	1.879E+00	47.74
	87.57	393	37.00*	7.942E+00	4.519E-01	4.519E-01	25.35
TL-208	277.35	------	6.80	6.634E+00	------ Line Not Found		------
	510.84	195	21.60	4.532E+00	6.711E-01	6.711E-01	42.43
	583.14	615	84.20*	4.119E+00	5.983E-01	5.983E-01	13.21
	860.37	------	12.46	3.015E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	6.380E+00	------ Line Not Found		------
	351.07	965	12.94*	5.776E+00	4.361E+00	4.361E+00	11.44
PB-212	74.81	676	10.70	6.651E+00	3.204E+00	3.204E+00	19.43
	77.11	833	18.00	6.945E+00	2.249E+00	2.249E+00	14.49
	87.30	393	8.00	7.942E+00	2.090E+00	2.090E+00	27.25
	238.63	1813	44.60*	7.194E+00	1.908E+00	1.908E+00	9.09
	300.09	81	3.41	6.344E+00	1.269E+00	1.269E+00	69.72
PO-212	74.81	676	10.70	6.651E+00	3.204E+00	3.204E+00	19.43
	77.11	833	18.00	6.945E+00	2.249E+00	2.249E+00	14.49
	87.30	393	8.00	7.942E+00	2.090E+00	2.090E+00	27.25
	115.19	------	0.60	8.992E+00	------ Line Not Found		------
	238.63	1813	44.60*	7.194E+00	1.908E+00	1.908E+00	9.09
	300.09	81	3.41	6.344E+00	1.269E+00	1.269E+00	69.72
BI-214	609.31	685	46.30*	3.985E+00	1.253E+00	1.254E+00	14.92
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	150	15.10	2.411E+00	1.394E+00	1.394E+00	36.41
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	160	15.80	1.812E+00	1.884E+00	1.884E+00	20.28
PB-214	74.81	676	6.21	6.651E+00	5.521E+00	5.521E+00	18.58
	77.11	833	10.50	6.945E+00	3.856E+00	3.856E+00	16.37
	87.30	393	4.67	7.942E+00	3.580E+00	3.580E+00	26.50

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	430	7.49	7.149E+00	2.713E+00	2.713E+00	26.49
	295.21	477	19.20	6.404E+00	1.310E+00	1.310E+00	15.99
	351.92	965	37.20*	5.776E+00	1.517E+00	1.517E+00	12.58
PO-214	74.81	676	6.21	6.651E+00	5.521E+00	5.521E+00	18.58
	77.11	833	10.50	6.945E+00	3.856E+00	3.856E+00	16.37
	87.30	393	4.67	7.942E+00	3.580E+00	3.580E+00	26.50
	241.98	430	7.49	7.149E+00	2.713E+00	2.713E+00	26.49
	295.21	477	19.20	6.404E+00	1.310E+00	1.310E+00	15.99
	351.92	965	37.20*	5.776E+00	1.517E+00	1.517E+00	12.58
PO-216	74.81	676	10.70	6.651E+00	3.204E+00	3.204E+00	19.43
	77.11	833	18.00	6.945E+00	2.249E+00	2.249E+00	14.49
	87.30	393	8.00	7.942E+00	2.090E+00	2.090E+00	27.25
	238.63	1813	44.60*	7.194E+00	1.908E+00	1.908E+00	9.09
	300.09	81	3.41	6.344E+00	1.269E+00	1.269E+00	69.72
PO-218	74.81	676	6.21	6.651E+00	5.521E+00	5.521E+00	18.58
	77.11	833	10.50	6.945E+00	3.856E+00	3.856E+00	16.37
	87.30	393	4.67	7.942E+00	3.580E+00	3.580E+00	26.50
	241.98	430	7.49	7.149E+00	2.713E+00	2.713E+00	26.49
	295.21	477	19.20	6.404E+00	1.310E+00	1.310E+00	15.99
	351.92	965	37.20*	5.776E+00	1.517E+00	1.517E+00	12.58
RA-224	240.98	430	3.95*	7.149E+00	5.145E+00	5.145E+00	25.89
RA-226	609.31	685	46.30*	3.985E+00	1.253E+00	1.254E+00	14.92
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	150	15.10	2.411E+00	1.394E+00	1.394E+00	36.41
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	160	15.80	1.812E+00	1.884E+00	1.884E+00	20.28
AC-228	338.32	418	11.40	5.914E+00	2.091E+00	2.091E+00	44.96
	911.07	432	27.70*	2.871E+00	1.835E+00	1.835E+00	20.09
	969.11	235	16.60	2.724E+00	1.758E+00	1.758E+00	31.98
RA-228	338.32	418	11.40	5.914E+00	2.091E+00	2.091E+00	44.96
	911.07	432	27.70*	2.871E+00	1.835E+00	1.835E+00	20.09
	969.11	235	16.60	2.724E+00	1.758E+00	1.758E+00	31.98
TH-228	84.40	115	1.21	7.705E+00	4.160E+00	4.160E+00	78.88
	238.60	1813	44.60*	7.194E+00	1.908E+00	1.908E+00	9.09
	300.10	81	3.41	6.344E+00	1.269E+00	1.269E+00	90.92
TH-230	609.31	685	46.30*	3.985E+00	1.253E+00	1.253E+00	14.92
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	150	15.10	2.411E+00	1.394E+00	1.394E+00	36.41
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	------	4.11	2.059E+00	------ Line Not Found		------
	1764.49	160	15.80	1.812E+00	1.884E+00	1.884E+00	20.28
TH-232	338.32	418	11.40	5.914E+00	2.091E+00	2.091E+00	19.83
	911.07	432	27.70*	2.871E+00	1.835E+00	1.835E+00	20.09
	969.11	235	16.60	2.724E+00	1.758E+00	1.758E+00	31.98
TH-234	63.29	44	3.80*	4.884E+00	8.017E-01	8.017E-01	207.36
	92.38	395	5.41	8.325E+00	2.960E+00	2.960E+00	33.29

Sample ID : G232664003 Acquisition date : 14-JUL-2009 08:37:20

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	685	46.30*	3.985E+00	1.253E+00	1.253E+00	14.92
	768.36	------	5.04	3.314E+00	------	Line Not Found	------
	934.06	------	3.21	2.811E+00	------	Line Not Found	------
	1120.29	150	15.10	2.411E+00	1.394E+00	1.394E+00	36.41
	1238.11	------	5.94	2.227E+00	------	Line Not Found	------
	1377.67	------	4.11	2.059E+00	------	Line Not Found	------
	1764.49	160	15.80	1.812E+00	1.884E+00	1.884E+00	20.28
NP-237	86.50	393	12.60*	7.942E+00	1.327E+00	1.327E+00	32.69
	95.87	------	2.60	8.481E+00	------	Line Not Found	------
U-238	63.29	44	3.80*	4.884E+00	8.017E-01	8.017E-01	207.36
	92.38	395	5.41	8.325E+00	2.960E+00	2.960E+00	29.25
AM-243	74.67	676	66.00*	6.651E+00	5.195E-01	5.195E-01	17.04
	86.72	393	0.34	7.942E+00	4.976E+01	4.976E+01	25.35
	117.66	------	0.55	9.009E+00	------	Line Not Found	------
	142.18	------	0.13	8.872E+00	------	Line Not Found	------
ANH-511	511.00	195	100.00*	4.532E+00	1.450E-01	1.450E-01	41.60

Flag: "*" = Keyline

Sample ID : G232664003 Acquisition date : 14-JUL-2009 08:37:20

Total number of lines in spectrum 32
Number of unidentified lines 2
Number of lines tentatively identified by NID 30 93.75%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.576E+01	3.576E+01	0.304E+01	8.51	
CD-109	464.00D	1.03	4.495E+00	4.616E+00	1.170E+00	25.35	
SN-126	1.00E+05Y	1.00	4.519E-01	4.519E-01	1.146E-01	25.35	
TL-208	1.41E+10Y	1.00	5.983E-01	5.983E-01	0.790E-01	13.21	
BI-211	7.04E+08Y	1.00	4.361E+00	4.361E+00	0.499E+00	11.44	
PB-212	1.41E+10Y	1.00	1.908E+00	1.908E+00	0.173E+00	9.09	
PO-212	1.41E+10Y	1.00	1.908E+00	1.908E+00	0.173E+00	9.09	
BI-214	1600.00Y	1.00	1.253E+00	1.254E+00	0.187E+00	14.92	
PB-214	1600.00Y	1.00	1.517E+00	1.517E+00	0.191E+00	12.58	
PO-214	1600.00Y	1.00	1.517E+00	1.517E+00	0.191E+00	12.58	
PO-216	1.41E+10Y	1.00	1.908E+00	1.908E+00	0.173E+00	9.09	
PO-218	1600.00Y	1.00	1.517E+00	1.517E+00	0.191E+00	12.58	
RA-224	1.41E+10Y	1.00	5.145E+00	5.145E+00	1.332E+00	25.89	
RA-226	1600.00Y	1.00	1.253E+00	1.254E+00	0.187E+00	14.92	
AC-228	1.41E+10Y	1.00	1.835E+00	1.835E+00	0.369E+00	20.09	
RA-228	1.41E+10Y	1.00	1.835E+00	1.835E+00	0.369E+00	20.09	
TH-228	1.41E+10Y	1.00	1.908E+00	1.908E+00	0.173E+00	9.09	
TH-230	4.47E+09Y	1.00	1.253E+00	1.253E+00	0.187E+00	14.92	
TH-232	1.41E+10Y	1.00	1.835E+00	1.835E+00	0.369E+00	20.09	
TH-234	4.47E+09Y	1.00	8.017E-01	8.017E-01	16.62E-01	207.36	
U-234	4.47E+09Y	1.00	1.253E+00	1.253E+00	0.187E+00	14.92	
NP-237	2.14E+06Y	1.00	1.327E+00	1.327E+00	0.434E+00	32.69	
U-238	4.47E+09Y	1.00	8.017E-01	8.017E-01	16.62E-01	207.36	
AM-243	7380.00Y	1.00	5.195E-01	5.195E-01	0.885E-01	17.04	
ANH-511	1.00E+09Y	1.00	1.450E-01	1.450E-01	0.603E-01	41.60	
	Total Activity :		7.711E+01	7.723E+01			

Grand Total Activity : 7.711E+01 7.723E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232664003 Acquisition date : 14-JUL-2009 08:37:20

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	89.95	222	394	1.21	179.25	163	31	3.09E-02	33.6	8.14E+00	T
0	128.63	226	684	2.25	256.60	249	15	3.14E-02	52.3	9.00E+00	T
0	185.89	375	522	1.60	371.11	365	14	5.21E-02	28.8	8.11E+00	T
0	209.16	122	277	0.98	417.63	415	7	1.70E-02	48.5	7.69E+00	T
0	270.45	136	281	1.74	540.22	535	11	1.88E-02	51.0	6.73E+00	T
0	327.96	98	180	0.94	655.22	652	9	1.36E-02	53.2	6.03E+00	T
0	463.07	106	161	2.06	925.46	920	12	1.48E-02	51.7	4.85E+00	T
0	727.27	152	132	1.66	1453.95	1446	16	2.11E-02	37.5	3.47E+00	T
0	796.45	112	139	4.37	1592.35	1580	23	1.56E-02	58.4	3.22E+00	T
1	965.13	135	74	2.53	1929.87	1921	26	1.87E-02	34.7	2.73E+00	T
0	1240.12	56	183	1.91	2480.20	2471	21	7.78E-03	****	2.22E+00	
0	1730.37	45	13	1.88	3461.61	3454	15	6.21E-03	47.8	1.82E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:37:56.78

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*****************************************************************************
*                            GEL Laboratories LLC                            *
*                              2040 Savage Road                              *
*                            Charleston, SC 29414                            *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664003.CNF;1  *
* Acquisition date : 14-JUL-2009 08:37:20  Detector SN#     :               *
* Detector ID      : GAM22                 Sensitivity      : 5.00000       *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:01.73         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 26-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232664003            Analyst initials: MXR1           *
* Batch Number     : 882713                Sample Quantity : 1.11200E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45.3MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1023-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.576E+01	3.044E+00	5.146E-01	3.581E-02	69.504
CD-109	4.616E+00	1.170E+00	1.160E+00	1.036E-01	3.980
SN-126	4.519E-01	1.146E-01	1.140E-01	1.014E-02	3.965
TL-208	5.983E-01	7.903E-02	5.227E-02	4.024E-03	11.447
BI-211	4.361E+00	4.990E-01	3.125E-01	1.982E-02	13.956
PB-212	1.908E+00	1.734E-01	8.647E-02	6.114E-03	22.059
PO-212	1.908E+00	1.734E-01	8.647E-02	6.114E-03	22.059
BI-214	1.254E+00	1.870E-01	1.018E-01	8.952E-03	12.315
PB-214	1.517E+00	1.908E-01	1.047E-01	8.601E-03	14.486
PO-214	1.517E+00	1.908E-01	1.047E-01	8.601E-03	14.486
PO-216	1.908E+00	1.734E-01	8.647E-02	6.114E-03	22.059
PO-218	1.517E+00	1.908E-01	1.047E-01	8.601E-03	14.486
RA-224	5.145E+00	1.332E+00	9.827E-01	5.381E-02	5.235
RA-226	1.254E+00	1.870E-01	1.018E-01	8.952E-03	12.315
AC-228	1.835E+00	3.687E-01	1.882E-01	2.354E-02	9.752
RA-228	1.835E+00	3.687E-01	1.882E-01	2.354E-02	9.752
TH-228	1.908E+00	1.734E-01	8.647E-02	6.114E-03	22.060
TH-230	1.253E+00	1.870E-01	1.018E-01	8.952E-03	12.315

Sample ID : G232664003 Acquisition date : 14-JUL-2009 08:37:20

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.835E+00	3.687E-01	1.882E-01	2.354E-02	9.752
TH-234	8.017E-01	1.662E+00	2.006E+00	3.478E-01	0.400
U-234	1.253E+00	1.870E-01	1.018E-01	8.952E-03	12.315
NP-237	1.327E+00	4.338E-01	3.378E-01	7.577E-02	3.928
U-238	8.017E-01	1.662E+00	2.006E+00	3.478E-01	0.400
AM-243	5.195E-01	8.850E-02	8.792E-02	6.836E-03	5.909
ANH-511	1.450E-01	6.031E-02	4.003E-02	2.595E-03	3.622

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	8.272E-02		3.179E-01	5.180E-01	3.706E-02	0.160
NA-22	-1.474E-02		4.020E-02	6.502E-02	4.138E-03	-0.227
NA-24	-2.356E+00		7.122E+00	Half-Life too short		
AL-26	-2.077E-03		2.708E-02	4.448E-02	2.531E-03	-0.047
TI-44	4.151E-01	+	6.016E-02	8.080E-02	6.508E-03	5.137
SC-46	1.194E-02		3.768E-02	6.388E-02	6.549E-03	0.187
V-48	5.885E-02		7.616E-02	1.318E-01	1.217E-02	0.446
CR-51	-1.775E-02		3.695E-01	6.098E-01	3.876E-02	-0.029
MN-52	3.142E-01		2.598E-01	4.839E-01	3.234E-02	0.649
MN-54	1.874E-02		3.607E-02	6.197E-02	5.912E-03	0.302
CO-56	-6.970E-03		3.807E-02	6.274E-02	6.082E-03	-0.111
CO-57	5.472E-03		2.794E-02	4.124E-02	2.522E-03	0.133
CO-58	-3.487E-03		3.643E-02	6.060E-02	5.605E-03	-0.058
FE-59	2.572E-02		9.229E-02	1.535E-01	1.233E-02	0.168
CO-60	9.899E-03		3.648E-02	6.185E-02	4.183E-03	0.160
ZN-65	2.726E-02		1.045E-01	1.485E-01	1.024E-02	0.184
GE-68	-7.901E-02		1.215E+00	1.975E+00	1.509E-01	-0.040
AS-73	4.653E-01		7.939E-01	1.281E+00	8.898E-02	0.363
AS-74	3.951E-02		8.861E-02	1.503E-01	1.055E-02	0.263
SE-75	-1.678E-02		4.687E-02	6.682E-02	3.758E-03	-0.251
BR-77	-8.265E+00		2.076E+01	3.218E+01	2.106E+00	-0.257
SR-82	-4.107E-01		4.041E-01	6.048E-01	5.322E-02	-0.679
RB-83	-2.691E-02		6.295E-02	9.735E-02	6.371E-03	-0.276
RB-84	-1.702E-02		6.259E-02	1.018E-01	1.034E-02	-0.167
KR-85	3.244E+01		8.144E+00	1.425E+01	9.268E-01	2.276
SR-85	1.712E-01		4.298E-02	7.521E-02	4.891E-03	2.276
RB-86	-4.989E-02		8.563E-01	1.393E+00	1.066E-01	-0.036
Y-88	2.363E-02		2.931E-02	5.376E-02	3.008E-03	0.440
ZR-88	-1.596E-02		2.992E-02	4.738E-02	2.692E-03	-0.337
Y-91	5.709E+00		2.000E+01	3.294E+01	1.930E+00	0.173
NB-94	2.465E-02		3.306E-02	5.613E-02	4.434E-03	0.439
NB-95	6.319E-03		4.672E-02	7.407E-02	6.419E-03	0.085
NB-95M	4.326E-01		1.479E-01	2.323E-01	1.688E-02	1.862
ZR-95	5.381E-02		7.540E-02	1.272E-01	1.199E-02	0.423
NB-97	-1.398E-01		6.576E-01	Half-Life too short		
ZR-97	8.552E+01		1.440E+01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	8.917E+00		2.251E+01	3.742E+01	5.624E+00	0.238
TC-99M	-2.465E+13		4.015E+13	Half-Life too short		
RH-101	2.103E-02		3.469E-02	5.598E-02	2.954E-03	0.376
RH-102	-1.888E-02		2.831E-02	4.362E-02	2.725E-03	-0.433
RU-103	-3.115E-02		3.547E-02	5.586E-02	7.221E-03	-0.558
RH-106	2.812E-02		2.724E-01	4.516E-01	5.635E-02	0.062
RU-106	2.812E-02		2.724E-01	4.516E-01	3.243E-02	0.062
AG-108M	-6.286E-03		3.047E-02	4.869E-02	3.142E-03	-0.129
AG-110M	-3.098E-03		3.198E-02	5.209E-02	4.008E-03	-0.059
IN-111	4.812E-02		2.184E+00	3.208E+00	1.762E-01	0.015
IN-113M	-1.935E-02		4.357E-02	6.938E-02	4.211E-03	-0.279
SN-113	-1.935E-02		4.357E-02	6.938E-02	4.211E-03	-0.279
IN-114M	1.229E-02		2.036E-01	2.891E-01	1.514E-02	0.043
CD-115	1.067E-05		1.092E-05	Half-Life too short		
SN-117M	8.373E-03		6.281E-02	1.033E-01	5.443E-03	0.081
SB-122	4.629E+00		4.079E+00	7.144E+00	4.874E-01	0.648
I-123	4.635E+01		9.098E+01	Half-Life too short		
TE-123M	7.207E-03		2.829E-02	4.675E-02	2.498E-03	0.154
I-124	2.935E-01		1.090E+00	1.581E+00	1.117E-01	0.186
SB-124	-1.522E-02		6.293E-02	9.813E-02	6.459E-03	-0.155
SB-125	-5.002E-02		8.592E-02	1.344E-01	8.287E-03	-0.372
TE-125M	1.450E+00		9.543E+00	1.603E+01	1.431E+00	0.090
I-126	6.935E-02		1.945E-01	3.253E-01	2.431E-02	0.213
SB-126	8.684E-03		1.722E-01	2.411E-01	1.955E-02	0.036
SB-127	1.015E+00		2.168E+00	3.638E+00	4.215E-01	0.279
XE-127	-1.480E-02		5.070E-02	8.083E-02	4.285E-03	-0.183
I-131	-3.878E-02		1.360E-01	2.195E-01	1.408E-02	-0.177
TE-132	8.773E-02		1.231E+00	1.975E+00	2.925E-01	0.044
BA-133	2.511E-02		4.213E-02	6.247E-02	7.191E-03	0.402
I-133	5.161E-03		2.394E-02	Half-Life too short		
CS-134	1.559E-01	+	9.222E-02	8.667E-02	7.888E-03	1.799
CS-135	2.313E-01		1.677E-01	2.617E-01	1.960E-02	0.884
I-135	-1.621E+12		2.598E+12	Half-Life too short		
CS-136	3.258E-02		1.202E-01	2.006E-01	1.718E-02	0.162
BA-137M	1.589E-02		3.322E-02	5.596E-02	4.152E-03	0.284
CS-137	1.680E-02		3.512E-02	5.916E-02	4.401E-03	0.284
CE-139	1.929E-02		2.876E-02	4.815E-02	2.467E-03	0.401
BA-140	1.973E-01		2.654E-01	4.481E-01	1.465E-01	0.440
LA-140	-1.250E-01		9.221E-02	1.250E-01	7.977E-03	-1.000
CE-141	2.871E-02		6.920E-02	1.154E-01	6.668E-03	0.249
CE-143	3.414E-03		5.073E-04	Half-Life too short		
CE-144	5.609E-02		2.276E-01	3.344E-01	4.749E-02	0.168
PM-144	-1.922E-02		3.419E-02	5.384E-02	4.216E-03	-0.357
PR-144	-1.304E+00		2.320E+00	3.654E+00	2.859E-01	-0.357
PM-146	1.855E-02		3.935E-02	6.515E-02	5.753E-03	0.285
ND-147	4.772E-02		5.896E-01	9.873E-01	1.371E-01	0.048
PM-149	-5.405E-05		1.064E-04	Half-Life too short		
EU-152	-7.882E-02		1.207E-01	1.409E-01	9.089E-03	-0.559

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-4.234E-02		8.490E-02	1.220E-01	9.543E-03	-0.347
EU-154	-4.112E-02		1.122E-01	1.814E-01	1.758E-02	-0.227
EU-155	6.025E-02		1.040E-01	1.774E-01	1.291E-02	0.340
TB-160	-5.438E-02		1.246E-01	2.003E-01	2.027E-02	-0.271
HO-166M	2.157E-02		5.634E-02	9.397E-02	7.524E-03	0.230
TM-171	-6.772E+00		3.161E+01	4.430E+01	3.235E+00	-0.153
LU-176	-1.058E-02		2.367E-02	3.738E-02	2.117E-03	-0.283
LU-177	3.100E+00	+	1.514E+00	2.591E+00	1.380E-01	1.197
LU-177M	-8.384E-02		1.719E-01	2.718E-01	1.584E-02	-0.308
HF-181	1.546E-02		3.940E-02	6.752E-02	4.249E-03	0.229
W-181	2.846E-01		4.146E-01	6.036E-01	4.366E-02	0.471
TA-182	6.526E-02		1.988E-01	3.382E-01	2.021E-02	0.193
RE-183	-6.756E-02		1.108E-01	1.732E-01	8.991E-03	-0.390
RE-184	-1.233E-01		2.235E-01	3.672E-01	2.027E-02	-0.336
OS-185	3.127E-02		3.938E-02	6.777E-02	4.965E-03	0.461
RE-188	1.588E-01		1.793E-01	3.026E-01	1.615E-02	0.525
W-188	2.301E+00		7.901E+00	1.163E+01	6.553E-01	0.198
IR-192	-1.381E-02		3.319E-02	5.386E-02	3.074E-03	-0.256
AU-195	2.575E-01		2.453E-01	3.768E-01	2.897E-02	0.683
TL-200	7.320E-05		1.247E-03	Half-Life too short		
TL-201	-1.069E+00		1.273E+01	2.071E+01	1.062E+00	-0.052
TL-202	4.048E-02		7.564E-02	1.259E-01	7.560E-03	0.322
HG-203	2.396E-02		4.070E-02	6.948E-02	4.151E-03	0.345
BI-207	5.449E-03		5.001E-02	8.245E-02	6.509E-03	0.066
TL-207	2.161E-02		6.962E-01	9.998E-01	1.647E-01	0.022
PO-209	-3.298E+00		7.020E+00	1.126E+01	1.166E+00	-0.293
BI-210	1.292E+00		2.938E+00	4.836E+00	3.657E-01	0.267
PB-210	1.292E+00		2.938E+00	4.836E+00	3.657E-01	0.267
PO-210	1.292E+00		2.938E+00	4.836E+00	3.117E-01	0.267
PB-211	7.177E-02		9.287E-01	1.514E+00	9.438E-01	0.047
BI-212	1.253E+00	+	4.855E-01	6.077E-01	5.860E-02	2.062
PO-215	2.161E-02		6.962E-01	9.998E-01	1.647E-01	0.022
RN-219	6.237E-02		3.915E-01	6.421E-01	8.722E-02	0.097
RN-220	-7.288E+00		2.329E+01	3.800E+01	2.558E+00	-0.192
RA-223	2.161E-02		6.962E-01	9.998E-01	1.647E-01	0.022
AC-227	1.360E-01		3.659E-01	6.222E-01	8.619E-02	0.219
TH-227	1.360E-01		3.661E-01	6.222E-01	1.046E-01	0.219
TH-229	-7.101E-01		5.277E-01	7.726E-01	4.060E-02	-0.919
PA-231	2.076E-01		1.424E+00	2.390E+00	3.275E-01	0.087
TH-231	2.161E-02		6.962E-01	9.998E-01	1.647E-01	0.022
U-231	-9.035E-01		1.785E+00	2.587E+00	2.064E-01	-0.349
PA-233	9.835E-04		5.986E-02	9.926E-02	5.994E-03	0.010
PA-234	-1.509E-01		2.947E-01	4.674E-01	9.029E-02	-0.323
PA-234M	1.494E+00		6.396E+00	1.067E+01	1.222E+00	0.140
U-235	2.620E-01		2.268E-01	3.758E-01	6.097E-02	0.697
NP-236	-6.147E-02		7.770E-02	1.232E-01	6.446E-03	-0.499
NP-239	5.629E-02		1.838E-01	3.094E-01	1.975E-02	0.182
AM-241	1.167E-02		1.619E-01	2.317E-01	1.800E-02	0.050

Sample ID : G232664003 Acquisition date : 14-JUL-2009 08:37:20

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	3.648E-02		9.455E-02	1.604E-01	1.166E-02	0.227
CM-247	3.105E-03		3.572E-02	5.836E-02	3.356E-03	0.053
CF-249	2.168E-02		3.744E-02	6.285E-02	3.569E-03	0.345
CF-251	2.352E-03		1.236E-01	2.012E-01	1.040E-02	0.012

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232664003            *
* Acquisition date : 14-JUL-2009 08:37:20 Detector SN#    :                 *
* Detector ID      : GAM22                Sensitivity     : 5.000           *
* Geometry         : CAN                  Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:01.73     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 26-JUN-2009 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G232664003           Analyst initials: MXR1            *
* Batch Number     : 882713               Sample Quantity : 1.1120E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.576E+01	2.983E+00	2.561E-01	1.522E+00
CD-109	4.616E+00	1.147E+00	5.900E-01	5.852E-01
SN-126	4.519E-01	1.123E-01	5.798E-02	5.728E-02
TL-208	5.983E-01	7.745E-02	2.620E-02	3.952E-02
BI-211	4.361E+00	4.890E-01	1.573E-01	2.495E-01
PB-212	1.908E+00	1.700E-01	4.365E-02	8.671E-02
PO-212	1.908E+00	1.700E-01	4.365E-02	8.671E-02
BI-214	1.254E+00	1.833E-01	5.101E-02	9.352E-02
PB-214	1.517E+00	1.870E-01	5.270E-02	9.538E-02
PO-214	1.517E+00	1.870E-01	5.270E-02	9.538E-02
PO-216	1.908E+00	1.700E-01	4.365E-02	8.671E-02
PO-218	1.517E+00	1.870E-01	5.270E-02	9.538E-02
RA-224	5.145E+00	1.305E+00	4.960E-01	6.659E-01
RA-226	1.254E+00	1.833E-01	5.101E-02	9.352E-02
AC-228	1.835E+00	3.613E-01	9.400E-02	1.844E-01
RA-228	1.835E+00	3.613E-01	9.400E-02	1.844E-01
TH-228	1.908E+00	1.700E-01	4.365E-02	8.671E-02
TH-230	1.253E+00	1.833E-01	5.101E-02	9.352E-02
TH-232	1.835E+00	3.613E-01	9.400E-02	1.844E-01
TH-234	8.017E-01	1.629E+00	1.023E+00	8.312E-01
U-234	1.253E+00	1.833E-01	5.101E-02	9.352E-02
NP-237	1.327E+00	4.251E-01	1.719E-01	2.169E-01
U-238	8.017E-01	1.629E+00	1.023E+00	8.312E-01
AM-243	5.195E-01	8.673E-02	4.478E-02	4.425E-02
ANH-511	1.450E-01	5.910E-02	2.009E-02	3.015E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	8.272E-02	3.115E-01	2.601E-01	1.590E-01 NOT IDENT.
NA-22	-1.474E-02	3.940E-02	3.240E-02	2.010E-02 NOT IDENT.

NA-24	-2.356E+06	1.396E+07	0.000E+00	7.122E+06	SHORT HLIF
AL-26	-2.077E-03	2.654E-02	2.210E-02	1.354E-02	NOT IDENT.
TI-44	4.151E-01	5.896E-02	4.114E-02	3.008E-02	FAIL ABUN
SC-46	1.194E-02	3.692E-02	3.192E-02	1.884E-02	FAIL ABUN
V-48	5.885E-02	7.464E-02	6.582E-02	3.808E-02	NOT IDENT.
CR-51	-1.775E-02	3.621E-01	3.071E-01	1.848E-01	NOT IDENT.
MN-52	3.142E-01	2.546E-01	2.409E-01	1.299E-01	NOT IDENT.
MN-54	1.874E-02	3.534E-02	3.098E-02	1.803E-02	NOT IDENT.
CO-56	-6.970E-03	3.731E-02	3.136E-02	1.904E-02	NOT IDENT.
CO-57	5.472E-03	2.738E-02	2.092E-02	1.397E-02	NOT IDENT.
CO-58	-3.487E-03	3.570E-02	3.030E-02	1.822E-02	NOT IDENT.
FE-59	2.572E-02	9.044E-02	7.655E-02	4.614E-02	NOT IDENT.
CO-60	9.899E-03	3.575E-02	3.080E-02	1.824E-02	NOT IDENT.
ZN-65	2.726E-02	1.024E-01	7.408E-02	5.226E-02	NOT IDENT.
GE-68	-7.901E-02	1.191E+00	9.855E-01	6.074E-01	NOT IDENT.
AS-73	4.653E-01	7.780E-01	6.541E-01	3.969E-01	NOT IDENT.
AS-74	3.951E-02	8.684E-02	7.534E-02	4.430E-02	NOT IDENT.
SE-75	-1.678E-02	4.593E-02	3.370E-02	2.344E-02	NOT IDENT.
BR-77	-8.265E+00	2.035E+01	1.614E+01	1.038E+01	FAIL ABUN
SR-82	-4.107E-01	3.960E-01	3.025E-01	2.020E-01	NOT IDENT.
RB-83	-2.691E-02	6.169E-02	4.885E-02	3.148E-02	NOT IDENT.
RB-84	-1.702E-02	6.134E-02	5.089E-02	3.129E-02	NOT IDENT.
KR-85	3.244E+01	7.981E+00	7.152E+00	4.072E+00	NOT IDENT.
SR-85	1.712E-01	4.212E-02	3.774E-02	2.149E-02	NOT IDENT.
RB-86	-4.989E-02	8.392E-01	6.951E-01	4.282E-01	NOT IDENT.
Y-88	2.363E-02	2.873E-02	2.671E-02	1.466E-02	NOT IDENT.
ZR-88	-1.596E-02	2.932E-02	2.382E-02	1.496E-02	NOT IDENT.
Y-91	5.709E+00	1.960E+01	1.642E+01	1.000E+01	NOT IDENT.
NB-94	2.465E-02	3.240E-02	2.810E-02	1.653E-02	NOT IDENT.
NB-95	6.319E-03	4.578E-02	3.706E-02	2.336E-02	NOT IDENT.
NB-95M	4.326E-01	1.449E-01	1.173E-01	7.395E-02	NOT IDENT.
ZR-95	5.381E-02	7.389E-02	6.362E-02	3.770E-02	NOT IDENT.
NB-97	-1.398E+05	1.289E+06	0.000E+00	6.576E+05	SHORT HLIF
ZR-97	8.552E+07	2.822E+07	0.000E+00	1.440E+07	SHORT HLIF
MO-99	8.917E+00	2.206E+01	1.872E+01	1.126E+01	NOT IDENT.
TC-99M	-2.465E+19	7.870E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.103E-02	3.400E-02	2.830E-02	1.735E-02	FAIL ABUN
RH-102	-1.888E-02	2.775E-02	2.190E-02	1.416E-02	NOT IDENT.
RU-103	-3.115E-02	3.476E-02	2.804E-02	1.773E-02	FAIL ABUN
RH-106	2.812E-02	2.670E-01	2.263E-01	1.362E-01	FAIL ABUN
RU-106	2.812E-02	2.670E-01	2.263E-01	1.362E-01	FAIL ABUN
AG-108M	-6.286E-03	2.986E-02	2.447E-02	1.523E-02	NOT IDENT.
AG-110M	-3.098E-03	3.134E-02	2.609E-02	1.599E-02	NOT IDENT.
IN-111	4.812E-02	2.141E+00	1.619E+00	1.092E+00	NOT IDENT.
IN-113M	-1.935E-02	4.270E-02	3.489E-02	2.179E-02	NOT IDENT.
SN-113	-1.935E-02	4.270E-02	3.489E-02	2.179E-02	NOT IDENT.
IN-114M	1.229E-02	1.995E-01	1.462E-01	1.018E-01	NOT IDENT.
CD-115	1.067E+01	2.141E+01	0.000E+00	1.092E+01	SHORT HLIF
SN-117M	8.373E-03	6.155E-02	5.233E-02	3.140E-02	NOT IDENT.
SB-122	4.629E+00	3.997E+00	3.583E+00	2.040E+00	NOT IDENT.
I-123	4.635E+07	1.783E+08	0.000E+00	9.098E+07	SHORT HLIF
TE-123M	7.207E-03	2.773E-02	2.367E-02	1.415E-02	NOT IDENT.
I-124	2.935E-01	1.068E+00	7.925E-01	5.450E-01	NOT IDENT.
SB-124	-1.522E-02	6.168E-02	4.878E-02	3.147E-02	FAIL ABUN
SB-125	-5.002E-02	8.420E-02	6.753E-02	4.296E-02	FAIL ABUN
TE-125M	1.450E+00	9.352E+00	8.142E+00	4.771E+00	NOT IDENT.
I-126	6.935E-02	1.906E-01	1.629E-01	9.727E-02	NOT IDENT.
SB-126	8.684E-03	1.688E-01	1.206E-01	8.611E-02	FAIL ABUN
SB-127	1.015E+00	2.125E+00	1.821E+00	1.084E+00	NOT IDENT.
XE-127	-1.480E-02	4.969E-02	4.085E-02	2.535E-02	NOT IDENT.
I-131	-3.878E-02	1.332E-01	1.104E-01	6.798E-02	NOT IDENT.
TE-132	8.773E-02	1.207E+00	9.976E-01	6.157E-01	NOT IDENT.
BA-133	2.511E-02	4.129E-02	3.144E-02	2.107E-02	NOT IDENT.
I-133	5.161E+03	4.691E+04	0.000E+00	2.394E+04	SHORT HLIF
CS-134	1.559E-01	9.037E-02	4.334E-02	4.611E-02	FAIL ABUN
CS-135	2.313E-01	1.644E-01	1.320E-01	8.386E-02	NOT IDENT.
I-135	-1.621E+18	5.092E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.258E-02	1.178E-01	1.001E-01	6.010E-02	FAIL ABUN
BA-137M	1.589E-02	3.256E-02	2.803E-02	1.661E-02	NOT IDENT.
CS-137	1.680E-02	3.441E-02	2.963E-02	1.756E-02	NOT IDENT.
CE-139	1.929E-02	2.819E-02	2.437E-02	1.438E-02	NOT IDENT.
BA-140	1.973E-01	2.601E-01	2.248E-01	1.327E-01	NOT IDENT.
LA-140	-1.250E-01	9.037E-02	6.218E-02	4.610E-02	FAIL ABUN
CE-141	2.871E-02	6.782E-02	5.849E-02	3.460E-02	NOT IDENT.
CE-143	3.414E+03	9.943E+02	0.000E+00	5.073E+02	SHORT HLIF
CE-144	5.609E-02	2.230E-01	1.696E-01	1.138E-01	NOT IDENT.
PM-144	-1.922E-02	3.351E-02	2.695E-02	1.709E-02	NOT IDENT.
PR-144	-1.304E+00	2.274E+00	1.829E+00	1.160E+00	NOT IDENT.

PM-146	1.855E-02	3.856E-02	3.273E-02	1.968E-02	NOT IDENT.
ND-147	4.772E-02	5.778E-01	4.953E-01	2.948E-01	FAIL ABUN
PM-149	-5.405E+01	2.086E+02	0.000E+00	1.064E+02	SHORT HLIF
EU-152	-7.882E-02	1.183E-01	7.094E-02	6.034E-02	FAIL ABUN
GD-153	-4.234E-02	8.321E-02	6.200E-02	4.245E-02	FAIL ABUN
EU-154	-4.112E-02	1.099E-01	9.036E-02	5.609E-02	NOT IDENT.
EU-155	6.025E-02	1.019E-01	9.011E-02	5.200E-02	FAIL ABUN
TB-160	-5.438E-02	1.221E-01	1.001E-01	6.232E-02	FAIL ABUN
HO-166M	2.157E-02	5.522E-02	4.703E-02	2.817E-02	FAIL ABUN
TM-171	-6.772E+00	3.098E+01	2.258E+01	1.580E+01	NOT IDENT.
LU-176	-1.058E-02	2.320E-02	1.883E-02	1.183E-02	FAIL ABUN
LU-177	3.100E+00	1.483E+00	1.309E+00	7.568E-01	FAIL ABUN
LU-177M	-8.384E-02	1.685E-01	1.366E-01	8.596E-02	NOT IDENT.
HF-181	1.546E-02	3.862E-02	3.390E-02	1.970E-02	NOT IDENT.
W-181	2.846E-01	4.063E-01	3.078E-01	2.073E-01	NOT IDENT.
TA-182	6.526E-02	1.948E-01	1.686E-01	9.940E-02	FAIL ABUN
RE-183	-6.756E-02	1.086E-01	8.768E-02	5.542E-02	FAIL ABUN
RE-184	-1.233E-01	2.190E-01	1.853E-01	1.117E-01	NOT IDENT.
OS-185	3.127E-02	3.859E-02	3.395E-02	1.969E-02	NOT IDENT.
RE-188	1.588E-01	1.757E-01	1.533E-01	8.964E-02	NOT IDENT.
W-188	2.301E+00	7.743E+00	5.864E+00	3.951E+00	FAIL ABUN
IR-192	-1.381E-02	3.252E-02	2.713E-02	1.659E-02	FAIL ABUN
AU-195	2.575E-01	2.404E-01	1.915E-01	1.227E-01	FAIL ABUN
TL-200	7.320E+01	2.445E+03	0.000E+00	1.247E+03	SHORT HLIF
TL-201	-1.069E+00	1.248E+01	1.048E+01	6.365E+00	NOT IDENT.
TL-202	4.048E-02	7.413E-02	6.323E-02	3.782E-02	NOT IDENT.
HG-203	2.396E-02	3.989E-02	3.503E-02	2.035E-02	NOT IDENT.
BI-207	5.449E-03	4.901E-02	4.114E-02	2.501E-02	FAIL ABUN
TL-207	2.161E-02	6.823E-01	5.036E-01	3.481E-01	FAIL ABUN
PO-209	-3.298E+00	6.880E+00	5.627E+00	3.510E+00	NOT IDENT.
BI-210	1.292E+00	2.880E+00	2.472E+00	1.469E+00	NOT IDENT.
PB-210	1.292E+00	2.880E+00	2.472E+00	1.469E+00	NOT IDENT.
PO-210	1.292E+00	2.879E+00	2.472E+00	1.469E+00	NOT IDENT.
PB-211	7.177E-02	9.101E-01	7.612E-01	4.643E-01	NOT IDENT.
BI-212	1.253E+00	4.758E-01	3.041E-01	2.427E-01	FAIL ABUN
PO-215	2.161E-02	6.823E-01	5.036E-01	3.481E-01	FAIL ABUN
RN-219	6.237E-02	3.837E-01	3.228E-01	1.958E-01	FAIL ABUN
RN-220	-7.288E+00	2.283E+01	1.906E+01	1.165E+01	NOT IDENT.
RA-223	2.161E-02	6.823E-01	5.036E-01	3.481E-01	FAIL ABUN
AC-227	1.360E-01	3.585E-01	3.139E-01	1.829E-01	FAIL ABUN
TH-227	1.360E-01	3.588E-01	3.139E-01	1.830E-01	FAIL ABUN
TH-229	-7.101E-01	5.171E-01	3.907E-01	2.638E-01	FAIL ABUN
PA-231	2.076E-01	1.396E+00	1.205E+00	7.122E-01	FAIL ABUN
TH-231	2.161E-02	6.823E-01	5.036E-01	3.481E-01	FAIL ABUN
U-231	-9.035E-01	1.749E+00	1.315E+00	8.924E-01	FAIL ABUN
PA-233	9.835E-04	5.866E-02	5.001E-02	2.993E-02	FAIL ABUN
PA-234	-1.509E-01	2.888E-01	2.334E-01	1.473E-01	FAIL ABUN
PA-234M	1.494E+00	6.268E+00	5.328E+00	3.198E+00	NOT IDENT.
U-235	2.620E-01	2.223E-01	1.904E-01	1.134E-01	FAIL ABUN
NP-236	-6.147E-02	7.614E-02	6.239E-02	3.885E-02	NOT IDENT.
NP-239	5.629E-02	1.801E-01	1.571E-01	9.191E-02	FAIL ABUN
AM-241	1.167E-02	1.587E-01	1.182E-01	8.096E-02	NOT IDENT.
CM-243	3.648E-02	9.265E-02	8.150E-02	4.727E-02	FAIL ABUN
CM-247	3.105E-03	3.501E-02	2.934E-02	1.786E-02	NOT IDENT.
CF-249	2.168E-02	3.669E-02	3.161E-02	1.872E-02	NOT IDENT.
CF-251	2.352E-03	1.211E-01	1.018E-01	6.180E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	353.6208
46.50	353.6208
46.50	353.6208
48.70	418.2336
49.72	438.9668
51.35	410.1581
52.39	385.6433
52.97	391.7860
53.15	392.0157
53.44	397.8036
54.07	410.5603
56.28	448.4401
56.28	448.4448
57.37	0.0000
57.53	478.7344
57.53	478.7378
57.60	478.8376
57.98	480.2761
57.98	480.2761
59.32	448.7838
59.32	448.7838
59.40	448.8923
59.54	470.6242
59.72	470.8788
60.01	486.2235
61.10	449.5101
61.14	449.5636
61.30	468.1000
63.00	547.9984
63.29	548.4579
63.29	548.4579
63.58	566.8041
64.28	561.2208
65.12	544.0349
65.20	544.1581
65.20	544.1581
66.05	550.5280
66.72	568.4740
66.83	585.5750
66.91	587.3998
67.20	587.8710
67.20	587.8710
67.75	592.1567
67.85	591.9823
68.90	582.1113
68.90	582.1113
69.30	575.9296
69.67	596.9776
70.82	578.2891
70.82	578.2891
70.83	578.3046
72.80	597.1500
72.87	597.2613
72.87	597.2613
74.67	600.0585
74.81	600.2758
74.81	600.2758
74.81	600.2758
74.81	600.2758
74.81	600.2758
74.81	600.2758
74.97	600.5221
75.28	600.9989
75.70	601.6453
77.11	603.7988
77.11	603.7988
77.11	603.7988

77.11	603.7988
77.11	603.7988
77.11	603.7988
78.38	605.7219
79.62	542.4882
79.80	542.7271
79.80	542.7271
80.11	560.6616
80.18	560.7581
80.30	560.9229
80.30	560.9229
80.57	561.2939
81.00	561.8823
81.07	561.9775
81.07	561.9775
81.07	561.9775
81.07	561.9775
82.60	454.7734
83.37	453.2534
83.78	453.6999
83.78	453.6999
83.78	453.6999
83.78	453.6999
84.21	454.1640
84.40	454.3676
84.90	454.9042
85.43	455.4701
86.29	456.3866
86.50	456.6098
86.54	456.6529
86.59	456.7057
86.72	456.8428
86.79	456.9153
86.94	457.0759
87.30	457.4577
87.30	457.4577
87.30	457.4577
87.30	457.4577
87.30	457.4577
87.30	457.4577
87.57	457.7417
87.88	458.0687
88.03	458.2273
88.36	458.5739
88.47	458.6894
89.95	460.2364
91.11	461.4407
92.29	462.6568
92.38	462.7488
92.38	462.7488
93.35	463.7416
94.00	464.4055
94.67	465.0810
94.67	465.0869
94.90	465.3199
94.90	465.3199
94.90	465.3199
94.90	465.3199
95.87	449.1024
95.87	449.1024
96.73	451.3940
97.43	408.3191
98.44	366.8179
98.44	366.8179
98.88	362.7711
99.55	391.1165
99.55	391.1165
99.86	407.4963
100.00	409.3274
100.10	409.4160
103.18	451.0879
103.76	403.5995
105.00	377.7678
105.31	388.1964
108.00	443.3901
109.28	423.9693
111.00	397.2897
111.00	397.2897

111.76	428.8437
112.95	432.6521
115.19	395.7806
116.30	391.8790
117.00	371.5435
117.00	371.5435
117.66	391.9312
121.11	373.2917
121.62	370.9078
121.78	370.2509
122.06	362.7862
122.32	353.7681
122.32	353.7681
122.32	353.7681
122.32	353.7681
123.07	348.1161
127.23	382.3863
129.76	384.0850
131.20	415.3819
133.02	376.1065
133.54	374.8799
135.34	432.1681
136.00	417.8980
136.25	428.5815
136.48	428.7482
140.51	462.2443
140.51	0.0000
142.18	438.7482
142.65	436.1093
143.76	402.1418
144.24	399.4728
144.24	399.4728
144.24	399.4728
144.24	399.4728
145.22	434.9362
145.44	435.0896
147.16	486.2049
152.43	430.8441
152.70	435.0520
153.22	446.4880
154.21	396.6970
154.21	396.6970
154.21	396.6970
154.21	396.6970
155.03	389.1122
156.02	380.5898
158.56	380.0235
159.00	0.0000
159.00	364.0034
160.31	389.1695
161.27	389.7232
162.32	358.6535
162.64	354.7357
163.35	353.0596
163.89	359.4836
165.85	329.7014
167.43	363.4011
171.28	362.3020
171.86	353.2771
172.10	335.7787
176.55	352.4796
176.60	352.5028
181.06	379.4356
184.41	381.1571
185.71	363.2377
186.00	363.3794
190.27	331.4453
192.34	330.6383
193.63	401.1868
197.04	346.1520
198.01	333.7048
198.60	340.3968
200.40	417.5902
201.83	392.4653
202.84	395.1215
205.31	362.1195
208.36	377.3951
208.81	396.9631

209.75	388.7093
209.75	388.7093
210.97	355.9192
215.65	350.9106
216.55	367.7557
218.09	354.1307
222.10	313.8166
223.80	347.6514
226.40	340.9248
227.00	341.1613
227.08	341.1918
227.20	341.2386
228.16	323.8094
228.18	323.8183
228.18	323.8183
231.56	0.0000
235.69	296.2769
236.00	312.5458
236.00	312.5458
238.60	312.5478
238.63	312.5584
238.63	312.5584
238.63	312.5584
239.00	312.6855
240.98	313.3696
241.98	313.7126
241.98	313.7126
241.98	313.7126
244.69	276.5570
245.39	287.3522
247.94	295.0774
248.90	287.4283
249.79	288.1070
252.40	287.0789
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252.85	299.1080
254.15	0.0000
256.20	281.8061
256.20	281.8061
260.50	284.9122
260.90	0.0000
262.80	287.5385
264.65	262.3635
268.24	250.9299
268.79	252.6215
269.46	232.6294
269.46	232.6294
269.46	232.6294
269.46	232.6294
271.23	261.0098
273.65	359.7532
276.40	252.9833
277.35	275.4946
277.60	269.9603
277.60	269.9603
278.00	255.2623
278.60	256.3507
279.20	272.4733
279.53	262.2232
280.46	321.7271
281.68	291.9722
283.67	248.1838
284.30	251.1674
285.00	263.6196
285.90	0.0000
286.10	248.7649
286.10	248.7649
287.40	248.6028
288.45	0.0000
290.67	240.6729
290.80	240.7007
291.72	263.1001
293.26	0.0000
293.70	249.3020
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295.21	261.4238
295.21	261.4238
295.96	261.6078

296.50	261.7382
297.23	261.9189
298.57	262.2466
299.80	261.9055
299.80	261.9055
300.09	261.9756
300.09	261.9756
300.09	261.9756
300.10	261.9789
300.12	261.9856
301.29	239.8804
302.84	212.9970
303.76	217.9868
303.91	218.0145
304.40	238.9632
304.40	238.9632
304.84	242.2691
306.84	242.1757
308.46	249.1848
311.98	228.6625
316.51	236.4000
318.01	236.7144
319.02	240.8280
319.41	241.8848
320.08	224.4606
323.87	223.5782
323.87	223.5782
323.87	223.5782
323.87	223.5782
325.23	220.5753
328.77	241.9010
333.44	148.0939
334.20	200.8785
334.20	200.8785
334.30	200.8959
338.28	205.2110
338.28	205.2110
338.28	205.2110
338.28	205.2110
338.32	205.2160
338.32	205.2160
338.32	205.2160
340.50	168.8462
340.57	168.8545
344.27	229.1577
345.85	212.0020
350.59	0.0000
351.07	222.0996
351.92	205.5430
351.92	205.5430
351.92	205.5430
355.39	0.0000
356.01	160.9590
364.48	199.5347
366.43	194.7703
367.43	187.8184
367.94	0.0000
369.80	198.3397
374.96	185.8657
383.85	198.4564
387.95	183.6038
388.63	183.6972
391.69	212.0506
391.69	212.0506
392.90	208.1008
398.62	200.6733
400.65	215.5534
401.10	211.4575
401.81	193.8514
402.60	202.3063
404.84	216.2180
410.95	208.7872
411.60	208.8868
413.65	208.1441
414.70	208.3012
415.30	192.6035
415.76	178.9794
417.63	0.0000

418.52	174.0597
423.70	161.9947
427.08	167.6860
427.89	182.6492
432.53	156.6074
433.93	171.6875
439.47	158.4297
439.56	158.4388
439.89	164.8996
443.98	171.8027
444.90	167.6124
445.03	160.1059
445.03	160.1059
445.03	160.1059
445.03	160.1059
453.90	144.8499
463.38	135.9726
468.07	154.5761
473.00	158.7194
475.06	179.7574
475.35	162.2490
476.78	159.1071
477.59	158.0924
477.96	163.6199
482.03	144.0444
484.57	170.0087
487.03	151.8660
490.36	0.0000
492.35	0.0000
497.08	141.7099
507.63	0.0000
510.53	0.0000
510.84	133.5708
511.00	133.5832
511.85	133.6530
511.85	133.6530
513.99	126.7404
513.99	126.7404
520.41	136.4115
520.65	136.4293
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528.96	0.0000
529.64	138.8593
529.87	0.0000
531.02	135.1913
537.32	115.7650
543.00	142.8040
546.56	0.0000
549.76	141.4479
552.65	136.8962
555.20	137.0940
563.23	149.2733
563.90	146.4398
568.70	147.7985
569.32	152.6800
569.50	146.8975
569.67	146.9129
573.80	150.1531
574.00	148.2343
574.64	156.4814
578.91	129.9003
579.30	0.0000
583.14	133.3988
585.48	123.6800
591.81	136.6080
592.07	136.0023
593.00	130.1967
595.88	119.6147
600.56	152.0203
602.52	0.0000
602.71	140.0133
602.71	140.0133
603.60	126.5756
604.41	126.6305
604.70	109.7646
609.31	143.1828
609.31	143.1828
609.31	143.1828

609.31	143.1828
610.33	130.4155
612.46	122.0826
614.37	125.5977
618.01	117.7130
621.84	111.3210
621.84	111.3210
631.29	120.8523
633.02	131.9543
633.10	130.9600
634.78	133.0731
635.90	123.1376
636.97	137.2286
645.85	108.6658
646.12	108.6812
656.30	116.3126
657.75	128.5425
657.90	0.0000
661.65	127.7739
661.65	127.7739
664.57	0.0000
666.33	129.0851
666.33	129.0851
675.00	121.4646
677.61	124.6832
685.20	128.2145
692.80	143.0921
695.00	152.5136
696.49	159.8406
696.49	159.8406
697.00	161.9414
697.49	160.9480
698.33	155.8508
698.50	152.7665
699.00	155.9000
702.63	136.5144
706.10	142.9526
706.58	0.0000
706.67	160.6037
709.31	141.0911
711.68	118.3975
713.82	120.5926
717.42	124.9585
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721.93	0.0000
722.20	109.1307
722.78	105.5814
722.78	105.5814
722.89	105.5856
722.95	105.5897
723.30	103.8162
724.18	121.7654
727.18	122.3796
733.00	131.2406
735.90	124.6130
739.58	118.8578
742.81	113.7634
744.21	132.8060
747.13	117.1494
751.79	129.0243
752.31	129.0541
753.82	112.2045
755.35	113.3392
756.15	129.2726
756.87	111.2955
763.93	180.7495
765.79	154.2926
766.41	139.4327
766.84	135.2010
768.36	108.6593
768.36	108.6593
768.36	108.6593
768.36	108.6593
776.49	141.1121
778.00	139.0639
778.57	121.9785
778.89	117.7142
783.80	113.6731

785.46	133.6060
792.07	138.3650
795.84	126.1121
796.30	126.1359
801.93	114.8574
805.60	94.6236
810.29	102.2445
810.76	106.9141
815.85	101.5488
817.79	101.6306
818.51	105.3916
819.60	113.8367
826.30	111.3425
828.27	0.0000
831.60	133.1498
831.96	133.1696
834.83	121.1197
836.80	0.0000
846.75	114.1549
848.13	108.5525
856.28	0.0000
856.80	138.2932
860.37	92.0082
867.32	131.2569
867.82	136.0400
871.10	90.4922
873.19	87.7068
874.81	86.8074
875.33	0.0000
876.40	86.8613
879.36	93.6506
880.27	87.9474
880.51	87.0010
881.50	86.0779
883.24	97.6207
884.67	106.2924
889.25	96.8874
896.60	109.6662
898.02	112.6133
899.00	110.7284
903.28	86.0750
911.07	90.9232
911.07	90.9232
911.07	90.9232
919.63	95.0964
920.93	88.3467
925.00	98.2048
925.24	100.1584
926.50	105.0695
934.06	97.5586
934.06	97.5586
934.06	97.5586
934.06	97.5586
935.52	110.3003
937.48	112.3328
944.10	105.7513
946.00	113.6636
949.00	101.0368
962.29	103.4949
964.01	94.6825
966.15	94.7545
968.20	94.8248
969.11	94.8549
969.11	94.8549
969.11	94.8549
977.42	97.1182
980.50	99.2083
983.50	86.4022
989.30	103.4976
996.32	100.7587
1001.03	91.9310
1001.68	101.9466
1004.76	111.0600
1021.30	0.0000
1024.50	0.0000
1034.80	104.1208
1037.82	102.2047
1038.57	98.1807

1038.76	0.0000
1045.16	97.3828
1046.59	98.4446
1048.07	94.4337
1050.47	109.7515
1050.47	109.7515
1063.62	94.9202
1076.63	101.4791
1077.35	99.4527
1085.78	87.3865
1099.22	97.0588
1112.02	122.5723
1112.84	107.0743
1115.52	112.6172
1120.29	107.3300
1120.29	107.3300
1120.29	107.3300
1120.29	107.3300
1120.51	115.3940
1121.28	115.4211
1124.00	0.0000
1129.67	113.1205
1131.51	0.0000
1147.95	0.0000
1167.94	132.9302
1173.22	115.1776
1175.09	121.5859
1177.93	114.2867
1189.05	122.0993
1204.90	124.8144
1205.75	0.0000
1213.00	135.8057
1221.42	128.5044
1230.97	143.8092
1235.34	117.2021
1236.41	0.0000
1238.11	127.3511
1238.11	127.3511
1238.11	127.3511
1238.11	127.3511
1238.25	127.3553
1246.25	109.1762
1260.41	0.0000
1271.85	79.9446
1274.45	88.5753
1274.54	88.5782
1291.56	75.6055
1298.22	0.0000
1312.09	64.4871
1325.50	70.5205
1325.50	70.5205
1332.49	61.9453
1333.61	68.7401
1360.21	49.7331
1362.66	0.0000
1365.15	56.6335
1368.21	55.7023
1368.53	0.0000
1376.25	47.0068
1377.67	51.9228
1377.67	51.9228
1377.67	51.9228
1377.67	51.9228
1384.27	89.3060
1394.10	44.2776
1395.20	51.1796
1407.95	61.2242
1434.06	24.8535
1436.60	34.8174
1457.56	0.0000
1460.81	48.0439
1489.15	42.3358
1509.49	33.4310
1596.49	54.8180
1620.62	29.1219
1678.03	0.0000
1691.02	24.3041
1691.02	24.3041

1706.46	0.0000
1750.46	0.0000
1764.49	12.0254
1764.49	12.0254
1764.49	12.0254
1764.49	12.0254
1770.23	13.7602
1771.40	15.4841
1791.20	0.0000
1808.65	26.9731
1836.01	18.4073

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232664003

Total Uranium Activity	2.5062E+00	ug/g
Total Uranium Counting Unc.	4.8477E+00	ug/g
Total Uranium Tpu	2.4733E-06	ug/g
Total Uranium Mda	3.0454E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232664003       *
*   ANALYST       : MXR1                      DETECTOR   : GAM22            *
*   SAMPLE DATE   : 26-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 08:37:20.18    SAMPLE ALQT:  111.200 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.084E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.462E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.636E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.284E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:39:27.67

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664004.CNF;1
Sample date       : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:38:56
Sample ID         : G232664004           Sample quantity  : 1.01930E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.60  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.40	139	217	0.96	118.98	116	6	1.94E-02	18.7	
2	0	63.41*	44	304	0.90	126.98	123	7	6.18E-03	69.0	
3	3	74.94	282	295	0.83	150.05	146	21	3.92E-02	10.7	1.51E+00
4	3	77.13*	480	258	0.87	154.43	146	21	6.66E-02	6.8	
5	0	84.41*	69	228	1.25	169.01	166	6	9.61E-03	37.7	
6	0	87.13	223	289	1.17	174.44	172	7	3.10E-02	14.1	
7	0	89.83	110	225	0.65	179.84	179	5	1.52E-02	22.8	
8	0	92.99*	247	298	1.37	186.17	183	8	3.43E-02	14.2	
9	0	128.75	49	253	0.91	257.70	256	8	6.86E-03	57.2	
10	0	186.26*	167	285	1.07	372.74	368	11	2.32E-02	21.8	
11	0	209.44	97	170	0.77	419.11	415	8	1.35E-02	25.4	
12	0	238.76*	1032	257	1.05	477.77	474	8	1.43E-01	4.2	
13	0	241.98	193	148	1.37	484.21	482	7	2.67E-02	13.4	
14	5	270.51	111	130	1.86	541.29	536	26	1.54E-02	22.8	3.48E+00
15	5	273.11	41	97	1.41	546.49	536	26	5.64E-03	49.0	
16	1	295.35*	288	103	1.16	590.99	585	26	4.00E-02	8.4	1.14E+00
17	1	300.34	70	98	1.32	600.97	585	26	9.79E-03	28.3	
18	0	328.39	73	151	1.32	657.10	652	11	1.01E-02	35.0	
19	0	338.51	220	143	1.17	677.34	672	11	3.05E-02	12.5	
20	0	351.90*	549	150	1.22	704.13	697	13	7.63E-02	6.4	
21	0	464.09	59	120	1.15	928.58	922	14	8.17E-03	41.5	
22	0	511.30*	112	130	1.46	1023.04	1016	15	1.56E-02	26.9	
23	0	583.50*	299	77	1.24	1167.51	1162	13	4.15E-02	8.6	
24	0	609.61*	405	84	1.35	1219.75	1214	13	5.62E-02	7.0	
25	0	727.37	114	70	1.25	1455.38	1448	14	1.58E-02	18.2	
26	0	794.72	69	48	1.34	1590.14	1582	16	9.58E-03	25.5	
27	0	861.18	41	43	1.45	1723.14	1717	13	5.76E-03	35.9	
28	0	911.52	212	60	2.12	1823.88	1817	16	2.95E-02	10.8	
29	0	969.56*	115	48	1.81	1940.03	1935	12	1.59E-02	15.9	
30	0	1121.19*	81	37	1.17	2243.50	2239	10	1.12E-02	18.9	
31	0	1239.24	38	46	1.89	2479.76	2474	13	5.21E-03	40.5	
32	0	1407.63	32	13	0.96	2816.80	2807	17	4.47E-03	31.0	
33	0	1412.41	11	4	0.73	2826.38	2823	7	1.46E-03	42.7	
34	0	1461.12*	849	9	2.23	2923.88	2912	21	1.18E-01	3.6	
35	0	1730.20	25	6	2.42	3462.52	3456	12	3.47E-03	28.0	
36	0	1765.83	58	23	1.69	3533.84	3523	18	8.07E-03	23.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 10:39:30

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664004.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:38:56
Sample ID : G232664004 Sample quantity : 101.93 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA23 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:03.60 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.939E+01	3.044E+00	7.130E-01	5.333E-02	41.224
CD-109	+	88.03	*	4.354E+00	1.302E+00	1.358E+00	1.326E-01	3.207
SN-126	+	64.28		6.548E-01	9.092E-01	9.600E-01	1.461E-01	0.682
	+	86.94		1.772E+00	8.913E-01	5.086E-01	2.115E-01	3.484
	+	87.57	*	4.262E-01	1.274E-01	1.214E-01	1.181E-02	3.512
TL-208		277.35		1.076E+00	4.446E-01	8.212E-01	8.677E-02	1.311
	+	510.84		7.530E-01	4.116E-01	2.476E-01	2.516E-02	3.041
	+	583.14	*	5.745E-01	1.059E-01	7.123E-02	4.624E-03	8.065
	+	860.37		7.625E-01	5.513E-01	4.897E-01	4.427E-02	1.557
BI-211		72.87		1.289E+00	3.755E+00	5.637E+00	4.973E-01	0.229
	+	351.07	*	4.545E+00	6.519E-01	3.566E-01	2.324E-02	12.743
PB-212	+	74.81		2.389E+00	5.958E-01	6.051E-01	7.806E-02	3.947
	+	77.11		2.276E+00	3.730E-01	3.400E-01	3.060E-02	6.692
	+	87.30		1.971E+00	6.214E-01	5.632E-01	7.849E-02	3.500
	+	238.63	*	1.840E+00	2.022E-01	1.174E-01	8.441E-03	15.673
	+	300.09		1.955E+00	1.120E+00	1.386E+00	1.151E-01	1.411
PO-212	+	74.81		2.389E+00	5.958E-01	6.051E-01	7.806E-02	3.947
	+	77.11		2.276E+00	3.730E-01	3.400E-01	3.060E-02	6.692
	+	87.30		1.971E+00	6.214E-01	5.632E-01	7.849E-02	3.500
		115.19		-1.597E+00	3.534E+00	5.888E+00	3.756E-01	-0.271
	+	238.63	*	1.840E+00	2.022E-01	1.174E-01	8.441E-03	15.673
	+	300.09		1.955E+00	1.120E+00	1.386E+00	1.151E-01	1.411
BI-214	+	609.31	*	1.470E+00	2.338E-01	1.553E-01	1.167E-02	9.467
		768.36		1.634E+00	1.031E+00	1.869E+00	1.684E-01	0.875
		934.06		1.394E+00	1.700E+00	3.016E+00	3.254E-01	0.462
	+	1120.29		1.566E+00	6.098E-01	6.042E-01	5.614E-02	2.593
	+	1238.11		2.027E+00	1.652E+00	1.920E+00	1.636E-01	1.056
		1377.67		1.566E+00	1.390E+00	2.587E+00	2.501E-01	0.605
	+	1764.49		1.550E+00	7.268E-01	4.613E-01	2.868E-02	3.361
PB-214	+	74.81		4.116E+00	9.994E-01	1.043E+00	1.207E-01	3.947
	+	77.11		3.901E+00	7.051E-01	5.829E-01	6.873E-02	6.692
	+	87.30		3.377E+00	1.043E+00	9.649E-01	1.196E-01	3.500
	+	241.98		2.064E+00	5.758E-01	5.900E-01	4.692E-02	3.498
	+	295.21		1.401E+00	2.650E-01	2.423E-01	2.077E-02	5.782

Sample ID : G232664004 Acquisition date : 14-JUL-2009 08:38:56

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.581E+00	2.413E-01	1.244E-01	1.038E-02	12.713
PO-214	+	74.81		4.116E+00	9.994E-01	1.043E+00	1.207E-01	3.947
	+	77.11		3.901E+00	7.051E-01	5.829E-01	6.873E-02	6.692
	+	87.30		3.377E+00	1.043E+00	9.649E-01	1.196E-01	3.500
	+	241.98		2.064E+00	5.758E-01	5.900E-01	4.692E-02	3.498
	+	295.21		1.401E+00	2.650E-01	2.423E-01	2.077E-02	5.782
	+	351.92	*	1.581E+00	2.413E-01	1.244E-01	1.038E-02	12.713
PO-216	+	74.81		2.389E+00	5.958E-01	6.051E-01	7.806E-02	3.947
	+	77.11		2.276E+00	3.730E-01	3.400E-01	3.060E-02	6.692
	+	87.30		1.971E+00	6.214E-01	5.632E-01	7.849E-02	3.500
	+	238.63	*	1.840E+00	2.022E-01	1.174E-01	8.441E-03	15.673
	+	300.09		1.955E+00	1.120E+00	1.386E+00	1.151E-01	1.411
PO-218	+	74.81		4.116E+00	9.994E-01	1.043E+00	1.207E-01	3.947
	+	77.11		3.901E+00	7.051E-01	5.829E-01	6.873E-02	6.692
	+	87.30		3.377E+00	1.043E+00	9.649E-01	1.196E-01	3.500
	+	241.98		2.064E+00	5.758E-01	5.900E-01	4.692E-02	3.498
	+	295.21		1.401E+00	2.650E-01	2.423E-01	2.077E-02	5.782
	+	351.92	*	1.581E+00	2.413E-01	1.244E-01	1.038E-02	12.713
RA-224	+	240.98	*	3.913E+00	1.069E+00	1.538E+00	8.666E-02	2.544
RA-226	+	609.31	*	1.470E+00	2.338E-01	1.553E-01	1.167E-02	9.467
		768.36		1.634E+00	1.031E+00	1.869E+00	1.684E-01	0.875
		934.06		1.394E+00	1.700E+00	3.016E+00	3.254E-01	0.462
	+	1120.29		1.566E+00	6.098E-01	6.042E-01	5.614E-02	2.593
	+	1238.11		2.027E+00	1.652E+00	1.920E+00	1.636E-01	1.056
		1377.67		1.566E+00	1.390E+00	2.587E+00	2.501E-01	0.605
	+	1764.49		1.550E+00	7.268E-01	4.613E-01	2.868E-02	3.361
AC-228	+	338.32		2.002E+00	9.581E-01	4.355E-01	1.776E-01	4.597
	+	911.07	*	1.849E+00	4.539E-01	2.799E-01	3.229E-02	6.608
	+	969.11		1.765E+00	6.967E-01	7.293E-01	1.698E-01	2.420
RA-228	+	338.32		2.002E+00	9.581E-01	4.355E-01	1.776E-01	4.597
	+	911.07	*	1.849E+00	4.539E-01	2.799E-01	3.229E-02	6.608
	+	969.11		1.765E+00	6.967E-01	7.293E-01	1.698E-01	2.420
TH-228	+	84.40		4.207E+00	3.222E+00	4.199E+00	5.757E-01	1.002
	+	238.60	*	1.840E+00	2.022E-01	1.174E-01	8.440E-03	15.674
	+	300.10		1.955E+00	1.599E+00	1.386E+00	8.168E-01	1.411
TH-230	+	609.31	*	1.470E+00	2.338E-01	1.553E-01	1.167E-02	9.467
		768.36		1.634E+00	1.031E+00	1.869E+00	1.683E-01	0.875
		934.06		1.394E+00	1.700E+00	3.016E+00	3.253E-01	0.462
	+	1120.29		1.566E+00	6.097E-01	6.042E-01	5.614E-02	2.593
	+	1238.11		2.027E+00	1.652E+00	1.920E+00	1.636E-01	1.056
		1377.67		1.566E+00	1.390E+00	2.587E+00	2.501E-01	0.605
	+	1764.49		1.550E+00	7.268E-01	4.613E-01	2.868E-02	3.361
TH-232	+	338.32		2.002E+00	5.149E-01	4.355E-01	2.572E-02	4.597
	+	911.07	*	1.849E+00	4.539E-01	2.799E-01	3.229E-02	6.608
	+	969.11		1.765E+00	6.967E-01	7.293E-01	1.698E-01	2.420
TH-234	+	63.29	*	1.654E+00	2.302E+00	2.387E+00	4.301E-01	0.693
	+	92.38		3.002E+00	1.013E+00	8.120E-01	1.481E-01	3.698
U-234	+	609.31	*	1.470E+00	2.338E-01	1.553E-01	1.167E-02	9.467
		768.36		1.634E+00	1.031E+00	1.869E+00	1.683E-01	0.875

Sample ID : G232664004 Acquisition date : 14-JUL-2009 08:38:56

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		1.394E+00	1.700E+00	3.016E+00	3.253E-01	0.462
	+	1120.29		1.566E+00	6.097E-01	6.042E-01	5.614E-02	2.593
	+	1238.11		2.027E+00	1.652E+00	1.920E+00	1.636E-01	1.056
		1377.67		1.566E+00	1.390E+00	2.587E+00	2.501E-01	0.605
	+	1764.49		1.550E+00	7.268E-01	4.613E-01	2.868E-02	3.361
NP-237	+	86.50	*	1.252E+00	4.547E-01	3.180E-01	7.243E-02	3.935
		95.87		-8.582E-02	1.082E+00	1.543E+00	3.788E-01	-0.056
U-238	+	63.29	*	1.654E+00	2.302E+00	2.387E+00	4.301E-01	0.693
	+	92.38		3.002E+00	8.936E-01	8.120E-01	7.256E-02	3.698
AM-241	+	59.54	*	6.932E-01	2.678E-01	3.045E-01	2.833E-02	2.277
AM-243	+	74.67	*	3.872E-01	8.955E-02	9.846E-02	8.750E-03	3.933
	+	86.72		4.693E+01	1.403E+01	1.189E+01	1.148E+00	3.947
		117.66		-1.618E+00	3.691E+00	6.139E+00	3.802E-01	-0.263
		142.18		-2.367E+01	1.953E+01	2.993E+01	1.630E+00	-0.791
ANH-511	+	511.00	*	1.627E-01	8.786E-02	5.351E-02	3.108E-03	3.040

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	7.055E-02	4.091E-01	6.695E-01	4.550E-02	0.105
NA-22		1274.54	*	-1.878E-02	6.437E-02	1.004E-01	6.740E-03	-0.187
NA-24		1368.53	*	-2.434E+00	6.437E-02	Half-Life too short		
AL-26		1129.67		4.647E-01	2.228E+00	3.647E+00	2.323E-01	0.127
		1808.65	*	1.291E-02	4.118E-02	7.280E-02	4.375E-03	0.177
TI-44		67.85		-8.068E-02	5.376E-02	7.759E-02	6.756E-03	-1.040
	+	78.38	*	4.200E-01	6.884E-02	7.945E-02	7.202E-03	5.286
SC-46		889.25	*	-4.194E-02	5.598E-02	8.697E-02	7.771E-03	-0.482
	+	1120.51		2.743E-01	1.052E-01	1.886E-01	1.229E-02	1.454
V-48		944.10		-3.761E-01	1.264E+00	2.037E+00	1.775E-01	-0.185
		983.50	*	-2.843E-02	1.092E-01	1.763E-01	1.466E-02	-0.161
		1312.09		-5.737E-02	1.343E-01	2.140E-01	1.522E-02	-0.268
CR-51		320.08	*	1.348E-01	4.446E-01	7.597E-01	4.981E-02	0.177
MN-52		744.21		-5.411E-02	4.351E-01	7.010E-01	4.463E-02	-0.077
		848.13		1.951E+01	1.186E+01	2.224E+01	1.815E+00	0.877
		935.52		3.070E-01	5.354E-01	9.338E-01	8.210E-02	0.329
		1246.25		-7.000E+00	1.577E+01	2.013E+01	1.288E+00	-0.348
		1333.61		-6.511E-01	9.871E+00	1.634E+01	1.199E+00	-0.040
		1434.06	*	3.079E-01	4.718E-01	8.477E-01	6.133E-02	0.363
MN-54		834.83	*	1.263E-02	5.539E-02	9.106E-02	7.210E-03	0.139
CO-56		846.75	*	1.885E-02	5.048E-02	8.456E-02	6.879E-03	0.223
		977.42		1.084E+00	4.102E+00	6.527E+00	5.473E-01	0.166
		1037.82		-3.951E-02	3.988E-01	6.502E-01	5.330E-02	-0.061
		1175.09		2.795E-02	3.338E+00	5.436E+00	3.077E-01	0.005
	+	1238.25		2.104E-01	1.711E-01	2.309E-01	1.536E-02	0.911
		1360.21		-3.520E-01	1.465E+00	2.364E+00	1.731E-01	-0.149
		1771.40		2.528E-02	3.941E-01	5.517E-01	3.413E-02	0.046
CO-57		122.06	*	-2.530E-02	2.553E-02	3.995E-02	2.356E-03	-0.633
		136.48		9.574E-02	2.119E-01	3.641E-01	2.368E-02	0.263

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-58		810.76	*	-6.980E-02	5.534E-02	7.684E-02	5.773E-03	-0.908
FE-59		142.65		-1.441E+00	3.158E+00	5.046E+00	2.744E-01	-0.286
		192.34		-5.908E-01	1.053E+00	1.662E+00	1.922E-01	-0.356
		1099.22	*	-1.910E-02	1.238E-01	1.994E-01	1.536E-02	-0.096
		1291.56		1.186E-01	1.801E-01	3.213E-01	2.667E-02	0.369
CO-60		1173.22		-1.265E-02	6.405E-02	1.022E-01	5.763E-03	-0.124
		1332.49	*	-3.969E-03	5.384E-02	8.901E-02	6.535E-03	-0.045
ZN-65		1115.52	*	9.375E-02	1.433E-01	2.194E-01	1.449E-02	0.427
GE-68		1077.35	*	-7.865E-01	1.497E+00	2.296E+00	1.643E-01	-0.343
AS-73		53.44	*	3.438E-01	1.115E+00	1.818E+00	1.605E-01	0.189
AS-74		595.88	*	-3.492E-02	1.371E-01	2.138E-01	1.179E-02	-0.163
		634.78		-2.161E-01	4.857E-01	7.718E-01	4.086E-02	-0.280
SE-75		66.05		1.942E+00	5.959E+00	9.029E+00	9.475E-01	0.215
		96.73		-2.678E-01	9.220E-01	1.292E+00	1.733E-01	-0.207
		121.11		-6.477E-02	1.358E-01	2.187E-01	2.040E-02	-0.296
		136.00		-7.350E-04	4.075E-02	6.850E-02	3.868E-03	-0.011
		198.60		4.385E-01	2.008E+00	3.247E+00	2.193E-01	0.135
		264.65	*	9.160E-03	5.182E-02	7.928E-02	4.615E-03	0.116
		279.53		1.134E-01	1.342E-01	2.145E-01	1.349E-02	0.529
		303.91		-9.507E-01	2.509E+00	3.590E+00	3.444E-01	-0.265
		400.65		-8.287E-02	3.091E-01	4.968E-01	4.521E-02	-0.167
BR-77	+	87.88		2.085E+03	6.235E+02	8.582E+02	8.374E+01	2.430
		200.40		-1.867E+02	3.975E+02	6.217E+02	3.326E+01	-0.300
	+	239.00		6.577E+02	6.597E+01	1.061E+02	5.964E+00	6.200
		249.79		1.913E+02	1.603E+02	2.762E+02	1.570E+01	0.692
		281.68		2.283E+01	2.292E+02	3.463E+02	2.018E+01	0.066
		297.23		4.798E+02	1.551E+02	2.945E+02	1.729E+01	1.629
		303.76		-2.358E+01	4.572E+02	6.756E+02	3.977E+01	-0.035
		439.47		4.769E+00	4.021E+02	6.545E+02	3.829E+01	0.007
		484.57		3.608E+02	6.330E+02	1.069E+03	6.248E+01	0.338
		520.65	*	-4.105E+00	2.735E+01	4.305E+01	2.492E+00	-0.095
		574.64		4.013E+02	5.613E+02	9.926E+02	5.572E+01	0.404
		578.91		-2.438E+02	2.716E+02	3.516E+02	1.967E+01	-0.693
		585.48		3.944E+03	7.575E+02	1.440E+03	8.014E+01	2.739
		755.35		-4.218E+01	4.668E+02	7.481E+02	4.898E+01	-0.056
		817.79		-7.145E+01	3.496E+02	5.505E+02	4.191E+01	-0.130
SR-82		698.33		2.515E+01	4.998E+01	8.541E+01	4.824E+00	0.294
		776.49	*	-2.122E-01	5.319E-01	8.282E-01	5.713E-02	-0.256
		1395.20		2.191E+00	1.372E+01	2.336E+01	1.703E+00	0.094
RB-83		520.41	*	-1.601E-02	8.271E-02	1.296E-01	7.503E-03	-0.124
		529.64		-7.338E-02	1.445E-01	2.198E-01	1.268E-02	-0.334
		552.65		7.140E-02	2.474E-01	4.253E-01	2.423E-02	0.168
RB-84		881.50	*	1.034E-01	1.066E-01	1.927E-01	1.693E-02	0.537
KR-85		513.99	*	2.571E+01	9.854E+00	1.744E+01	1.012E+00	1.474
SR-85		513.99	*	1.357E-01	5.200E-02	9.206E-02	5.342E-03	1.474
RB-86		1076.63	*	-8.245E-01	1.086E+00	1.617E+00	1.159E-01	-0.510
Y-88		898.02		-2.172E-02	5.682E-02	9.158E-02	8.374E-03	-0.237
		1836.01	*	1.228E-02	4.458E-02	7.838E-02	4.615E-03	0.157
ZR-88		392.90	*	-3.746E-03	3.916E-02	6.394E-02	3.692E-03	-0.059

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91		1204.90	*	1.651E+01	2.600E+01	4.487E+01	2.677E+00	0.368
NB-94		702.63	*	1.257E-02	4.475E-02	7.517E-02	4.295E-03	0.167
		871.10		-2.011E-03	4.279E-02	7.150E-02	6.140E-03	-0.028
NB-95		765.79	*	-2.965E-02	6.267E-02	9.776E-02	6.569E-03	-0.303
NB-95M		235.69	*	-8.735E-02	1.552E-01	2.109E-01	1.556E-02	-0.414
ZR-95		724.18		4.250E-02	1.463E-01	2.144E-01	1.516E-02	0.198
		756.15	*	-5.975E-02	9.672E-02	1.467E-01	1.125E-02	-0.407
NB-97		657.90	*	-3.642E+00	9.672E-02	Half-Life too short		
		1024.50		-8.720E+01	9.672E-02	Half-Life too short		
ZR-97		254.15		-6.800E+01	9.672E-02	Half-Life too short		
		355.39		-1.420E+01	9.672E-02	Half-Life too short		
		507.63	*	1.380E+01	9.672E-02	Half-Life too short		
		602.52		4.300E+01	9.672E-02	Half-Life too short		
		1021.30		-8.155E+01	9.672E-02	Half-Life too short		
		1147.95		-7.110E+01	9.672E-02	Half-Life too short		
		1362.66		1.287E+02	9.672E-02	Half-Life too short		
		1750.46		-4.208E+01	9.672E-02	Half-Life too short		
MO-99		140.51		-1.975E+01	5.476E+01	8.899E+01	2.392E+01	-0.222
		181.06		-1.584E+01	3.623E+01	5.497E+01	9.316E+00	-0.288
		366.43		1.305E+01	1.909E+02	3.176E+02	1.862E+01	0.041
		739.58	*	1.402E+00	2.967E+01	4.865E+01	6.808E+00	0.029
		778.00		-1.176E+02	9.147E+01	1.280E+02	8.864E+00	-0.919
TC-99M		140.51	*	-2.820E+13	9.147E+01	Half-Life too short		
RH-101		127.23		-1.327E-02	3.482E-02	5.161E-02	2.964E-03	-0.257
		198.01	*	-1.210E-02	3.754E-02	5.897E-02	3.143E-03	-0.205
		325.23		-6.990E-03	2.830E-01	4.162E-01	2.459E-02	-0.017
RH-102		418.52		1.516E-01	3.281E-01	5.483E-01	3.194E-02	0.276
		475.06	*	1.150E-02	3.569E-02	5.918E-02	3.464E-03	0.194
		631.29		1.875E-02	6.631E-02	1.128E-01	5.994E-03	0.166
		697.49		4.918E-02	1.038E-01	1.770E-01	9.976E-03	0.278
		766.84		1.721E-01	1.515E-01	2.683E-01	1.808E-02	0.641
		1046.59		-2.329E-01	1.475E-01	1.941E-01	1.470E-02	-1.200
		1112.84		-3.275E-01	3.360E-01	4.799E-01	3.184E-02	-0.682
RU-103		497.08	*	7.912E-03	4.837E-02	7.891E-02	9.990E-03	0.100
	+	610.33		1.666E+01	3.455E+00	4.159E+00	6.358E-01	4.005
RH-106	+	511.85		8.167E-01	4.411E-01	5.860E-01	3.403E-02	1.394
		621.84	*	-1.428E-01	4.076E-01	6.561E-01	7.567E-02	-0.218
		1050.47		9.927E-01	3.009E+00	5.128E+00	3.858E-01	0.194
RU-106	+	511.85		8.167E-01	4.411E-01	5.860E-01	3.403E-02	1.394
		621.84	*	-1.428E-01	4.074E-01	6.561E-01	3.526E-02	-0.218
		1050.47		9.927E-01	3.009E+00	5.128E+00	3.858E-01	0.194
AG-108M		433.93	*	2.896E-02	4.044E-02	6.944E-02	4.403E-03	0.417
		614.37		0.000E+00	5.431E-02	7.846E-02	4.661E-03	0.000
		722.95		-3.607E-02	6.075E-02	7.881E-02	5.125E-03	-0.458
AG-110M		657.75	*	-8.841E-02	4.631E-02	6.239E-02	3.467E-03	-1.417
		677.61		-9.577E-02	4.188E-01	6.760E-01	3.869E-02	-0.142
		706.67		-1.239E-01	2.915E-01	4.606E-01	2.821E-02	-0.269
		763.93		-2.130E-01	2.330E-01	3.468E-01	2.428E-02	-0.614
		884.67		3.915E-02	7.058E-02	1.239E-01	1.129E-02	0.316

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		937.48		-5.137E-02	1.607E-01	2.599E-01	2.360E-02	-0.198
		1384.27		-1.025E-01	2.498E-01	3.943E-01	2.991E-02	-0.260
IN-111		171.28		-1.294E+00	1.966E+00	3.120E+00	1.600E-01	-0.415
		245.39	*	-2.402E+00	2.409E+00	3.071E+00	1.738E-01	-0.782
IN-113M		391.69	*	-4.719E-04	5.624E-02	9.243E-02	5.694E-03	-0.005
SN-113		391.69	*	-4.719E-04	5.624E-02	9.243E-02	5.694E-03	-0.005
IN-114M		190.27	*	1.103E-02	2.094E-01	3.074E-01	1.620E-02	0.036
CD-115		260.90		3.033E-04	2.094E-01	Half-Life too short		
		492.35		-3.193E-05	2.094E-01	Half-Life too short		
		527.90	*	-4.383E-06	2.094E-01	Half-Life too short		
SN-117M		156.02		-1.686E+00	2.718E+00	4.375E+00	2.289E-01	-0.385
		158.56	*	2.339E-02	6.718E-02	1.116E-01	5.798E-03	0.210
SB-122		563.90	*	-1.587E+00	4.949E+00	8.077E+00	4.569E-01	-0.196
		692.80		1.876E+01	1.175E+02	1.956E+02	1.089E+01	0.096
I-123		159.00	*	1.307E+02	1.175E+02	Half-Life too short		
		528.96		-4.774E+03	1.175E+02	Half-Life too short		
TE-123M		159.00	*	2.029E-02	3.034E-02	5.117E-02	2.700E-03	0.396
I-124		602.71	*	5.630E-02	1.534E+00	2.334E+00	1.279E-01	0.024
		722.78		-6.074E+00	9.988E+00	1.293E+01	7.791E-01	-0.470
		1325.50		1.795E+01	7.247E+01	1.246E+02	9.049E+00	0.144
		1376.25		7.648E+01	6.925E+01	1.288E+02	9.412E+00	0.594
		1509.49		2.123E+01	3.797E+01	6.694E+01	4.748E+00	0.317
		1691.02		-6.267E+00	8.123E+00	1.092E+01	7.126E-01	-0.574
SB-124		602.71		2.143E-03	5.840E-02	8.883E-02	4.870E-03	0.024
		645.85		-7.791E-02	7.021E-01	1.151E+00	6.949E-02	-0.068
		709.31		1.393E+00	3.913E+00	6.607E+00	3.843E-01	0.211
		713.82		-1.530E+00	2.294E+00	3.521E+00	3.612E-01	-0.435
		722.78		-3.351E-01	5.511E-01	7.134E-01	4.487E-02	-0.470
	+	968.20		1.875E+01	6.185E+00	1.013E+01	8.586E-01	1.852
		1045.16		-1.361E+00	3.108E+00	4.853E+00	3.684E-01	-0.280
		1325.50		1.058E+00	4.270E+00	7.341E+00	5.332E-01	0.144
		1368.21		-7.508E-02	2.419E+00	4.008E+00	5.083E-01	-0.019
		1436.60		-6.490E-01	5.569E+00	9.068E+00	6.558E-01	-0.072
		1691.02	*	-8.156E-02	1.057E-01	1.421E-01	9.905E-03	-0.574
SB-125		427.89	*	1.047E-01	1.098E-01	1.921E-01	1.169E-02	0.545
	+	463.38		7.694E-01	6.406E-01	6.576E-01	4.480E-02	1.170
		600.56		8.482E-02	2.373E-01	4.060E-01	2.616E-02	0.209
		635.90		-3.470E-01	3.349E-01	4.992E-01	3.175E-02	-0.695
TE-125M		109.28	*	-3.560E+00	9.225E+00	1.548E+01	1.382E+00	-0.230
I-126		388.63		1.271E-01	2.845E-01	4.831E-01	2.794E-02	0.263
		666.33	*	-1.305E-01	2.961E-01	4.711E-01	2.438E-02	-0.277
		753.82		7.910E-01	2.148E+00	3.624E+00	2.364E-01	0.218
SB-126		223.80		-2.604E+00	5.143E+00	8.019E+00	4.428E-01	-0.325
		278.60		7.225E+00	3.286E+00	6.162E+00	3.585E-01	1.173
	+	296.50		1.626E+01	2.903E+00	5.080E+00	2.982E-01	3.200
		414.70		-1.454E-02	1.020E-01	1.648E-01	9.593E-03	-0.088
		415.30		1.476E-01	8.451E+00	1.384E+01	8.056E-01	0.011
		555.20		-2.515E+00	5.858E+00	9.501E+00	5.404E-01	-0.265
		573.80		1.486E+00	1.482E+00	2.672E+00	1.501E-01	0.556

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		593.00		-5.577E-01	1.276E+00	2.046E+00	1.131E-01	-0.273
		656.30		-2.544E+00	4.689E+00	7.343E+00	3.780E-01	-0.346
		666.33		-5.488E-02	1.245E-01	1.981E-01	1.025E-02	-0.277
		675.00		3.021E+00	2.977E+00	5.327E+00	2.824E-01	0.567
		695.00		-4.337E-04	1.264E-01	2.076E-01	1.162E-02	-0.002
		697.00		8.943E-02	4.285E-01	7.156E-01	4.028E-02	0.125
		720.50	*	-2.433E-02	2.543E-01	3.555E-01	2.129E-02	-0.068
		856.80		9.318E-02	7.242E-01	1.025E+00	8.526E-02	0.091
		989.30		-5.506E-02	2.091E+00	3.456E+00	2.854E-01	-0.016
		1034.80		-1.151E+01	1.439E+01	2.167E+01	1.674E+00	-0.531
		1213.00		8.087E-01	6.928E+00	1.138E+01	6.883E-01	0.071
SB-127		61.10		-4.666E+01	1.375E+02	1.750E+02	2.111E+01	-0.267
		252.40		-4.038E+00	7.989E+00	1.197E+01	5.001E+00	-0.337
		290.80		-1.575E+01	4.607E+01	6.682E+01	6.827E+00	-0.236
		411.60		1.700E+01	2.352E+01	4.036E+01	6.076E+00	0.421
		444.90		-1.698E+01	1.938E+01	2.890E+01	3.381E+00	-0.587
		473.00		-9.321E-01	3.335E+00	5.246E+00	6.324E-01	-0.178
		543.00		-7.867E+00	3.189E+01	5.255E+01	7.158E+00	-0.150
		603.60		-2.597E+01	3.054E+01	3.998E+01	4.592E+00	-0.650
		685.20	*	8.878E-01	3.132E+00	5.214E+00	5.338E-01	0.170
		698.50		1.126E+01	3.430E+01	5.774E+01	8.712E+00	0.195
		722.20		-3.647E+01	7.193E+01	9.459E+01	9.751E+00	-0.386
		783.80		6.403E+00	8.096E+00	1.401E+01	1.711E+00	0.457
XE-127		57.60		3.305E+00	8.760E+00	1.349E+01	1.181E+00	0.245
		145.22		8.992E-01	7.652E-01	1.349E+00	7.276E-02	0.667
		172.10		-7.915E-02	1.274E-01	2.026E-01	1.040E-02	-0.391
		202.84	*	-5.578E-02	5.470E-02	8.249E-02	4.428E-03	-0.676
		374.96		-1.078E-01	2.501E-01	4.000E-01	2.334E-02	-0.270
I-131		80.18		-4.835E+00	6.843E+00	9.500E+00	8.781E-01	-0.509
		284.30		-4.340E-01	2.117E+00	3.422E+00	2.228E-01	-0.127
		364.48	*	-5.679E-02	1.652E-01	2.663E-01	1.747E-02	-0.213
		636.97		-2.591E+00	2.470E+00	3.686E+00	2.236E-01	-0.703
		722.89		-7.940E+00	1.294E+01	1.673E+01	1.027E+00	-0.474
TE-132		49.72		3.080E+01	4.804E+01	8.163E+01	9.350E+00	0.377
		111.76		1.883E+01	5.228E+01	9.073E+01	9.297E+00	0.208
		116.30		1.046E+01	4.736E+01	8.151E+01	8.164E+00	0.128
		228.16	*	4.317E-01	1.401E+00	2.295E+00	3.409E-01	0.188
BA-133		53.15		9.970E-02	4.751E+00	7.619E+00	6.720E-01	0.013
		79.62		-1.270E+00	1.524E+00	2.083E+00	3.234E-01	-0.609
		81.00		-8.491E-02	1.152E-01	1.586E-01	2.571E-02	-0.535
		276.40		8.562E-01	4.256E-01	7.733E-01	1.003E-01	1.107
		302.84		-7.737E-02	1.545E-01	2.514E-01	2.941E-02	-0.308
		356.01	*	-2.889E-02	5.682E-02	7.849E-02	9.107E-03	-0.368
		383.85		-6.649E-02	3.745E-01	6.093E-01	6.625E-02	-0.109
I-133	+	510.53		1.485E+01	3.745E-01	Half-Life too short		
		529.87	*	-1.475E-02	3.745E-01	Half-Life too short		
		706.58		-2.180E+00	3.745E-01	Half-Life too short		
		856.28		1.952E+00	3.745E-01	Half-Life too short		
		875.33		-1.109E+00	3.745E-01	Half-Life too short		

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		1236.41		8.815E+00	3.745E-01	Half-Life too short		
		1298.22		-2.556E+00	3.745E-01	Half-Life too short		
CS-134		475.35		1.015E+00	2.305E+00	3.860E+00	2.259E-01	0.263
		563.23		-8.521E-02	4.288E-01	7.074E-01	4.091E-02	-0.120
		569.32		-1.392E-02	2.419E-01	4.035E-01	2.345E-02	-0.034
		604.70		-5.448E-02	5.507E-02	7.127E-02	3.923E-03	-0.764
	+	795.84	*	1.942E-01	9.993E-02	1.238E-01	9.039E-03	1.569
		801.93		-2.739E-01	6.345E-01	8.328E-01	6.155E-02	-0.329
		1038.57		-7.365E-01	4.897E+00	7.937E+00	6.092E-01	-0.093
		1167.94		2.191E+00	3.504E+00	6.055E+00	3.471E-01	0.362
		1365.15		-2.225E-01	1.715E+00	2.805E+00	2.182E-01	-0.079
CS-135		268.24	*	1.370E-02	1.908E-01	2.702E-01	2.064E-02	0.051
I-135		288.45		2.235E+13	1.908E-01	Half-Life too short		
		417.63		-1.566E+12	1.908E-01	Half-Life too short		
		546.56		-1.292E+12	1.908E-01	Half-Life too short		
		836.80		2.209E+13	1.908E-01	Half-Life too short		
		1038.76		-9.882E+11	1.908E-01	Half-Life too short		
		1124.00		1.323E+14	1.908E-01	Half-Life too short		
		1131.51		-4.783E+12	1.908E-01	Half-Life too short		
		1260.41	*	-4.709E+12	1.908E-01	Half-Life too short		
		1457.56		5.246E+14	1.908E-01	Half-Life too short		
		1678.03		-1.590E+13	1.908E-01	Half-Life too short		
		1706.46		-1.688E+13	1.908E-01	Half-Life too short		
		1791.20		-1.240E+12	1.908E-01	Half-Life too short		
CS-136		66.91		8.980E-01	9.888E-01	1.650E+00	2.555E-01	0.544
	+	86.29		6.427E+00	2.017E+00	2.436E+00	3.299E-01	2.638
		153.22		8.994E-01	8.269E-01	1.444E+00	9.837E-02	0.623
		163.89		8.540E-01	1.292E+00	2.182E+00	1.467E-01	0.391
		176.55		5.774E-01	4.576E-01	8.008E-01	4.777E-02	0.721
	+	273.65		7.238E-01	7.113E-01	9.872E-01	6.533E-02	0.733
		340.57		5.378E-01	2.068E-01	3.581E-01	2.245E-02	1.502
		818.51		-3.899E-02	1.006E-01	1.547E-01	1.181E-02	-0.252
		1048.07	*	-4.907E-02	1.602E-01	2.548E-01	2.032E-02	-0.193
		1235.34		2.786E-01	1.109E+00	1.587E+00	1.631E-01	0.176
BA-137M		661.65	*	2.875E-02	4.903E-02	8.465E-02	4.325E-03	0.340
CS-137		661.65	*	3.039E-02	5.183E-02	8.949E-02	4.596E-03	0.340
CE-139		165.85	*	-4.036E-02	3.149E-02	4.833E-02	2.464E-03	-0.835
BA-140		162.64		-3.434E-01	9.254E-01	1.482E+00	8.809E-02	-0.232
		304.84		-1.035E+00	1.767E+00	2.442E+00	6.669E-01	-0.424
		423.70		-1.239E+00	2.581E+00	3.992E+00	1.269E+00	-0.310
		537.32	*	9.935E-02	3.651E-01	6.259E-01	2.035E-01	0.159
LA-140	+	328.77		9.488E-01	6.673E-01	8.060E-01	5.315E-02	1.177
		432.53		4.195E-01	2.963E+00	4.879E+00	3.146E-01	0.086
		487.03		-8.898E-02	2.108E-01	3.270E-01	2.160E-02	-0.272
		751.79		-1.862E-01	2.548E+00	4.121E+00	3.161E-01	-0.045
		815.85		4.900E-02	4.548E-01	7.437E-01	6.464E-02	0.066
		867.82		2.052E-01	2.530E+00	3.539E+00	3.181E-01	0.058
		919.63		3.573E-01	5.122E+00	7.444E+00	8.114E-01	0.048
		925.24		-1.485E+00	1.800E+00	2.748E+00	2.586E-01	-0.540

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1596.49	*	1.575E-01	1.538E-01	2.860E-01	1.962E-02	0.551
CE-141		145.44	*	4.860E-02	6.874E-02	1.188E-01	6.703E-03	0.409
CE-143		57.37		2.061E-03	6.874E-02	Half-Life too short		
		231.56		-1.357E-04	6.874E-02	Half-Life too short		
		293.26	*	1.144E-03	6.874E-02	Half-Life too short		
	+	350.59		1.436E-01	6.874E-02	Half-Life too short		
		490.36		9.736E-03	6.874E-02	Half-Life too short		
		664.57		3.937E-04	6.874E-02	Half-Life too short		
		721.93		-4.226E-03	6.874E-02	Half-Life too short		
CE-144		80.11		-1.849E+00	2.501E+00	3.464E+00	3.175E-01	-0.534
		133.54	*	-2.372E-02	2.348E-01	3.532E-01	4.989E-02	-0.067
PM-144		476.78		2.424E-02	8.146E-02	1.348E-01	9.420E-03	0.180
		618.01		-1.218E-02	4.097E-02	6.638E-02	3.831E-03	-0.184
		696.49	*	-8.533E-03	4.692E-02	7.586E-02	4.269E-03	-0.112
		778.57		-3.556E+00	3.140E+00	4.492E+00	3.117E-01	-0.792
PR-144		696.49	*	-5.791E-01	3.184E+00	5.148E+00	2.894E-01	-0.112
		1489.15		-1.090E+01	1.409E+01	1.962E+01	1.400E+00	-0.555
PM-146		453.90	*	-1.124E-02	5.406E-02	8.609E-02	7.456E-03	-0.131
		633.02		1.039E+00	1.637E+00	2.801E+00	1.029E+00	0.371
		735.90		3.833E-02	1.799E-01	2.997E-01	8.384E-02	0.128
		747.13		1.195E-02	1.195E-01	1.967E-01	2.518E-02	0.061
ND-147	+	91.11		8.246E-01	3.847E-01	5.981E-01	5.880E-02	1.379
		319.41		1.059E+00	4.361E+00	7.426E+00	4.388E-01	0.143
		439.89		3.833E-01	8.720E+00	1.423E+01	8.330E-01	0.027
		531.02	*	1.943E-01	8.434E-01	1.446E+00	1.954E-01	0.134
PM-149		285.90	*	-7.010E-05	8.434E-01	Half-Life too short		
EU-152		121.78		-5.270E-02	7.280E-02	1.156E-01	8.887E-03	-0.456
		244.69		-6.258E-02	3.573E-01	4.989E-01	2.822E-02	-0.125
		344.27	*	3.975E-02	1.184E-01	1.792E-01	1.188E-02	0.222
		443.98		-7.326E-02	1.205E+00	1.884E+00	1.103E-01	-0.039
		778.89		-2.551E-01	3.579E-01	5.386E-01	3.738E-02	-0.474
		867.32		4.034E-01	1.251E+00	1.816E+00	1.547E-01	0.222
		964.01		7.826E-01	4.488E-01	7.677E-01	6.542E-02	1.019
		1085.78		-1.779E-01	5.312E-01	8.394E-01	5.907E-02	-0.212
		1112.02		-4.036E-01	4.494E-01	6.654E-01	4.423E-02	-0.607
	+	1407.95		5.585E-01	3.482E-01	4.946E-01	3.597E-02	1.129
GD-153		69.67		3.247E-01	1.850E+00	2.959E+00	2.585E-01	0.110
	+	83.37		2.436E+01	1.850E+01	2.699E+01	2.534E+00	0.902
		97.43	*	-8.645E-02	9.295E-02	1.341E-01	1.096E-02	-0.645
		103.18		-1.260E-01	1.201E-01	1.736E-01	1.297E-02	-0.726
EU-154		123.07		-2.241E-02	4.974E-02	8.229E-02	7.767E-03	-0.272
		247.94		1.150E-01	3.912E-01	6.371E-01	6.030E-02	0.181
		591.81		-6.660E-01	7.466E-01	1.101E+00	1.059E-01	-0.605
		723.30		-1.907E-01	2.653E-01	3.387E-01	2.464E-02	-0.563
		756.87		-6.602E-01	1.031E+00	1.557E+00	1.651E-01	-0.424
		873.19		-2.436E-01	3.934E-01	6.183E-01	7.574E-02	-0.394
		996.32		-1.814E-01	4.878E-01	7.748E-01	1.360E-01	-0.234
		1004.76		2.913E-02	2.792E-01	4.669E-01	5.252E-02	0.062
		1274.45	*	-5.237E-02	1.796E-01	2.799E-01	2.779E-02	-0.187

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		48.70		-9.675E-01	3.591E+00	5.809E+00	4.686E-01	-0.167
	+	60.01		2.257E+01	8.687E+00	1.198E+01	1.040E+00	1.884
	+	86.54		5.139E-01	1.538E-01	2.074E-01	2.015E-02	2.478
		105.31	*	1.465E-01	1.102E-01	1.990E-01	1.468E-02	0.736
TB-160	+	86.79		1.408E+00	4.209E-01	5.870E-01	5.672E-02	2.398
		197.04		-2.063E-01	6.636E-01	1.044E+00	5.559E-02	-0.198
		215.65		-1.387E-01	8.264E-01	1.323E+00	7.227E-02	-0.105
		298.57		1.197E-01	1.302E-01	2.304E-01	1.354E-02	0.519
		879.36	*	7.173E-02	2.026E-01	3.501E-01	3.062E-02	0.205
		962.29		4.846E-01	7.922E-01	1.297E+00	1.108E-01	0.374
		966.15		9.364E-01	3.744E-01	6.567E-01	5.582E-02	1.426
		1177.93		1.713E-01	5.279E-01	8.861E-01	5.041E-02	0.193
		1271.85		-9.368E-02	1.084E+00	1.732E+00	1.156E-01	-0.054
HO-166M		80.57		-1.991E-01	3.187E-01	4.451E-01	4.093E-02	-0.447
		184.41		8.729E-02	4.116E-02	6.822E-02	3.565E-03	1.280
		280.46		8.766E-04	1.014E-01	1.520E-01	8.851E-03	0.006
		410.95		2.486E-01	3.013E-01	5.215E-01	3.032E-02	0.477
		711.68	*	4.267E-02	8.192E-02	1.402E-01	8.206E-03	0.304
		752.31		-1.903E-02	3.521E-01	5.705E-01	3.707E-02	-0.033
		810.29		-6.399E-02	7.970E-02	1.175E-01	8.792E-03	-0.544
TM-171		51.35		-6.368E+00	4.173E+01	6.771E+01	5.886E+00	-0.094
		52.39		-2.466E+01	2.204E+01	3.277E+01	2.879E+00	-0.752
	+	59.40		1.189E+02	4.576E+01	6.768E+01	5.880E+00	1.757
		66.72	*	3.401E+01	3.346E+01	5.276E+01	4.588E+00	0.645
LU-176	+	88.36		1.011E+00	3.022E-01	3.829E-01	3.711E-02	2.640
		201.83		-1.317E-02	3.089E-02	4.837E-02	2.593E-03	-0.272
		306.84	*	7.197E-03	2.890E-02	4.389E-02	2.586E-03	0.164
		401.10		-1.584E+00	8.126E+00	1.314E+01	7.612E-01	-0.121
LU-177		112.95		7.216E-01	2.127E+00	3.686E+00	2.417E-01	0.196
	+	208.36	*	4.056E+00	2.075E+00	2.898E+00	1.568E-01	1.399
LU-177M		52.97		2.181E-01	2.170E+00	3.497E+00	3.082E-01	0.062
		54.07		-1.290E-01	1.149E+00	1.827E+00	1.614E-01	-0.071
		61.30		-1.304E+00	2.165E+00	2.682E+00	2.330E-01	-0.486
		121.62		-2.734E-01	3.774E-01	5.996E-01	3.544E-02	-0.456
		147.16		-6.749E-01	6.682E-01	1.057E+00	5.670E-02	-0.639
		171.86		-2.995E-01	4.934E-01	7.853E-01	4.032E-02	-0.381
		218.09		-7.691E-01	9.335E-01	1.428E+00	7.828E-02	-0.539
		268.79		9.283E-01	9.999E-01	1.524E+00	8.805E-02	0.609
		319.02		-8.203E-04	2.934E-01	4.918E-01	2.904E-02	-0.002
		367.43		-5.241E-02	1.064E+00	1.754E+00	1.027E-01	-0.030
		413.65	*	-1.685E-01	2.174E-01	3.339E-01	1.943E-02	-0.505
HF-181		56.28		1.066E+00	1.357E+00	2.148E+00	1.891E-01	0.496
		57.53		2.711E-01	7.322E-01	1.127E+00	9.874E-02	0.241
		65.20		-6.468E-02	1.223E+00	1.811E+00	1.573E-01	-0.036
		133.02		4.200E-02	7.743E-02	1.214E-01	6.814E-03	0.346
		136.25		1.662E-01	4.841E-01	8.279E-01	4.595E-02	0.201
		345.85		-3.286E-02	2.500E-01	3.610E-01	2.129E-02	-0.091
		482.03	*	-1.010E-02	5.531E-02	8.766E-02	5.127E-03	-0.115
W-181		56.28		4.054E-01	5.159E-01	8.166E-01	7.191E-02	0.496

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		57.53		1.031E-01	2.786E-01	4.288E-01	3.757E-02	0.240
		65.20	*	-2.441E-02	4.615E-01	6.834E-01	5.937E-02	-0.036
TA-182		67.75		-1.481E-01	1.280E-01	1.892E-01	1.648E-02	-0.783
		100.10		8.701E-02	2.011E-01	3.206E-01	2.509E-02	0.271
		152.43		-1.426E-02	3.657E-01	6.084E-01	3.215E-02	-0.023
		222.10		-9.771E-02	3.878E-01	6.156E-01	3.392E-02	-0.159
		1001.68		-3.128E-01	2.723E+00	4.455E+00	3.617E-01	-0.070
	+	1121.28		7.529E-01	2.888E-01	5.027E-01	3.269E-02	1.498
		1189.05		-1.635E-01	4.770E-01	7.500E-01	4.352E-02	-0.218
		1221.42	*	9.892E-02	2.788E-01	4.672E-01	2.868E-02	0.212
		1230.97		3.095E-01	7.322E-01	1.149E+00	7.166E-02	0.269
RE-183	+	57.98		8.687E-01	3.343E-01	4.354E-01	3.808E-02	1.995
	+	59.32		4.993E-01	1.922E-01	2.879E-01	2.502E-02	1.735
		67.20		-2.458E-02	2.294E-01	3.664E-01	3.188E-02	-0.067
		162.32	*	-1.114E-01	1.214E-01	1.886E-01	9.700E-03	-0.591
	+	208.81		2.822E+00	1.444E+00	2.059E+00	1.115E-01	1.371
		291.72		-1.305E-01	1.238E+00	1.831E+00	1.073E-01	-0.071
RE-184	+	57.98		3.151E+00	1.212E+00	1.579E+00	1.381E-01	1.995
	+	59.32		1.809E+00	6.964E-01	1.043E+00	9.066E-02	1.735
		67.20		-8.910E-02	8.318E-01	1.328E+00	1.156E-01	-0.067
		161.27		-5.216E-01	3.792E-01	5.811E-01	2.998E-02	-0.898
		216.55		-1.918E-01	2.847E-01	4.402E-01	2.408E-02	-0.436
		252.85	*	-1.204E-01	2.615E-01	4.027E-01	2.296E-02	-0.299
		318.01		-3.727E-02	5.149E-01	8.594E-01	5.074E-02	-0.043
		792.07		2.667E-01	1.557E+00	2.228E+00	1.596E-01	0.120
		903.28		4.125E-01	1.463E+00	2.344E+00	2.124E-01	0.176
		920.93		4.702E-01	6.066E-01	1.049E+00	9.358E-02	0.448
OS-185	+	59.72		1.353E+00	5.207E-01	7.371E-01	6.401E-02	1.836
		61.14		-1.050E-01	2.424E-01	3.058E-01	2.656E-02	-0.343
		69.30		-3.344E-02	3.343E-01	5.270E-01	4.601E-02	-0.063
		592.07		-2.532E+00	2.975E+00	4.566E+00	2.527E-01	-0.554
		646.12	*	2.252E-02	5.742E-02	9.813E-02	5.121E-03	0.229
		717.42		7.619E-01	1.183E+00	2.048E+00	1.217E-01	0.372
		874.81		-2.357E-01	7.756E-01	1.262E+00	1.093E-01	-0.187
		880.27		5.926E-01	1.124E+00	1.969E+00	1.726E-01	0.301
RE-188		155.03	*	1.849E-01	1.882E-01	3.276E-01	1.719E-02	0.564
		477.96		1.306E+00	3.855E+00	6.398E+00	3.744E-01	0.204
		633.10		1.772E+00	3.329E+00	5.792E+00	3.072E-01	0.306
W-188	+	63.58		6.833E+01	9.449E+01	1.154E+02	1.003E+01	0.592
		227.08		4.699E+00	1.480E+01	2.427E+01	1.346E+00	0.194
		290.67	*	-3.347E+00	1.000E+01	1.453E+01	8.507E-01	-0.230
IR-192	+	295.96		1.096E+00	1.960E-01	3.539E-01	2.109E-02	3.096
		308.46		1.040E-01	1.071E-01	1.862E-01	1.110E-02	0.558
		316.51	*	1.011E-03	3.966E-02	6.665E-02	3.954E-03	0.015
		468.07		5.078E-02	9.506E-02	1.424E-01	9.593E-03	0.357
		604.41		-7.419E-01	7.661E-01	9.893E-01	1.107E-01	-0.750
		612.46		2.429E+00	1.205E+00	2.042E+00	1.489E-01	1.190
AU-195		65.12		-1.284E-02	2.128E-01	3.150E-01	2.736E-02	-0.041
		66.83		1.002E-01	1.036E-01	1.745E-01	1.518E-02	0.574

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	75.70		1.266E+00	2.928E-01	4.949E-01	4.420E-02	2.558
		98.88	*	2.390E-01	2.607E-01	4.190E-01	3.343E-02	0.570
	+	129.76		3.797E+00	4.352E+00	5.401E+00	3.070E-01	0.703
TL-200		367.94	*	2.960E-04	4.352E+00	Half-Life too short		
		579.30		-2.168E-02	4.352E+00	Half-Life too short		
		828.27		1.201E-02	4.352E+00	Half-Life too short		
		1205.75		6.582E-03	4.352E+00	Half-Life too short		
TL-201		68.90		-4.514E+00	9.896E+00	1.529E+01	1.333E+00	-0.295
		70.82		-5.522E+00	6.259E+00	8.687E+00	7.612E-01	-0.636
		80.30		-7.159E+00	1.101E+01	1.535E+01	1.409E+00	-0.466
		135.34		-2.584E+01	4.815E+01	7.883E+01	4.389E+00	-0.328
		167.43	*	-1.850E+00	1.301E+01	2.134E+01	1.089E+00	-0.087
TL-202		68.90		-2.539E-01	5.567E-01	8.599E-01	7.501E-02	-0.295
		70.82		-3.098E-01	3.511E-01	4.874E-01	4.270E-02	-0.636
		80.30		-4.018E-01	6.177E-01	8.613E-01	7.905E-02	-0.466
		439.56	*	-1.699E-04	1.021E-01	1.660E-01	9.710E-03	-0.001
HG-203		70.83		-1.200E+00	1.362E+00	1.883E+00	2.578E-01	-0.637
		72.87		2.671E-01	7.785E-01	1.168E+00	1.557E-01	0.229
		82.60		1.150E+00	1.412E+00	1.918E+00	2.724E-01	0.599
		279.20	*	7.102E-02	5.225E-02	8.629E-02	5.330E-03	0.823
BI-207		72.80		6.793E-02	2.191E-01	3.284E-01	2.896E-02	0.207
	+	74.97		6.952E-01	1.608E-01	2.678E-01	2.383E-02	2.596
	+	84.90		3.126E-01	2.374E-01	3.260E-01	3.099E-02	0.959
		569.67		-1.266E-02	3.984E-02	6.213E-02	3.500E-03	-0.204
		1063.62	*	-2.528E-02	7.345E-02	1.165E-01	8.557E-03	-0.217
		1770.23		1.366E-01	8.910E-01	1.247E+00	7.718E-02	0.110
TL-207		81.07		-1.768E-01	2.532E-01	3.514E-01	3.242E-02	-0.503
	+	83.78		2.061E-01	1.565E-01	2.275E-01	2.143E-02	0.906
		94.90		1.375E-01	2.708E-01	3.978E-01	3.394E-02	0.346
		122.32		-1.813E+00	1.750E+00	2.728E+00	1.846E-01	-0.665
		144.24		6.741E-01	7.597E-01	1.288E+00	8.920E-02	0.523
		154.21		4.267E-01	4.278E-01	7.446E-01	4.894E-02	0.573
	+	269.46		7.137E-01	3.277E-01	3.946E-01	2.385E-02	1.809
		323.87	*	-1.142E-01	8.367E-01	1.218E+00	2.016E-01	-0.094
	+	338.28		8.361E+00	2.272E+00	3.147E+00	3.332E-01	2.657
		445.03		-3.091E+00	2.798E+00	4.079E+00	4.201E-01	-0.758
PO-209		260.50		8.507E+00	1.111E+01	1.855E+01	1.065E+00	0.459
		262.80		-8.635E+00	3.126E+01	4.865E+01	2.798E+00	-0.177
		896.60	*	-1.285E+00	9.827E+00	1.624E+01	1.474E+00	-0.079
BI-210		46.50	*	3.099E-01	5.462E+00	8.927E+00	6.951E-01	0.035
PB-210		46.50	*	3.099E-01	5.462E+00	8.927E+00	6.951E-01	0.035
PO-210		46.50	*	3.099E-01	5.462E+00	8.927E+00	5.989E-01	0.035
PB-211		404.84	*	1.737E-01	1.123E+00	1.854E+00	1.156E+00	0.094
		427.08		1.860E+00	2.705E+00	4.232E+00	2.616E+00	0.440
		831.96		-1.084E+00	1.926E+00	2.680E+00	1.676E+00	-0.405
BI-212	+	727.18	*	1.897E+00	7.055E-01	9.790E-01	7.770E-02	1.938
		785.46		-2.121E-01	2.624E+00	4.108E+00	2.896E-01	-0.052
		1620.62		5.562E-01	1.768E+00	3.038E+00	2.060E-01	0.183
PO-215		81.07		-1.768E-01	2.532E-01	3.514E-01	3.242E-02	-0.503

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	83.78		2.061E-01	1.565E-01	2.275E-01	2.143E-02	0.906
		94.90		1.375E-01	2.708E-01	3.978E-01	3.394E-02	0.346
		122.32		-1.813E+00	1.750E+00	2.728E+00	1.846E-01	-0.665
		144.24		6.741E-01	7.597E-01	1.288E+00	8.920E-02	0.523
		154.21		4.267E-01	4.278E-01	7.446E-01	4.894E-02	0.573
	+	269.46		7.137E-01	3.277E-01	3.946E-01	2.385E-02	1.809
		323.87	*	-1.142E-01	8.367E-01	1.218E+00	2.016E-01	-0.094
	+	338.28		8.361E+00	2.272E+00	3.147E+00	3.332E-01	2.657
		445.03		-3.091E+00	2.798E+00	4.079E+00	4.201E-01	-0.758
RN-219	+	271.23		9.157E-01	4.233E-01	5.514E-01	4.465E-02	1.661
		401.81	*	3.626E-02	4.945E-01	8.156E-01	1.110E-01	0.044
RN-220		549.76	*	-4.894E+00	3.159E+01	5.244E+01	2.993E+00	-0.093
RA-223		81.07		-1.768E-01	2.532E-01	3.514E-01	3.242E-02	-0.503
	+	83.78		2.061E-01	1.565E-01	2.275E-01	2.143E-02	0.906
		94.90		1.375E-01	2.708E-01	3.978E-01	3.394E-02	0.346
		122.32		-1.813E+00	1.750E+00	2.728E+00	1.846E-01	-0.665
		144.24		6.741E-01	7.597E-01	1.288E+00	8.920E-02	0.523
		154.21		4.267E-01	4.278E-01	7.446E-01	4.894E-02	0.573
	+	269.46		7.137E-01	3.277E-01	3.946E-01	2.385E-02	1.809
		323.87	*	-1.142E-01	8.367E-01	1.218E+00	2.016E-01	-0.094
	+	338.28		8.361E+00	2.272E+00	3.147E+00	3.332E-01	2.657
		445.03		-3.091E+00	2.798E+00	4.079E+00	4.201E-01	-0.758
AC-227		79.80		-1.594E+00	1.946E+00	2.641E+00	5.736E-01	-0.603
		236.00		-1.138E-01	2.789E-01	3.843E-01	3.976E-02	-0.296
		256.20	*	4.535E-01	4.148E-01	7.035E-01	9.798E-02	0.645
		286.10		-5.657E-01	1.713E+00	2.841E+00	3.290E-01	-0.199
	+	299.80		3.623E+00	2.137E+00	3.057E+00	4.987E-01	1.185
		304.40		-1.460E+00	2.237E+00	3.094E+00	5.360E-01	-0.472
		334.20		2.283E+00	3.248E+00	4.376E+00	8.037E-01	0.522
TH-227		79.80		-1.594E+00	1.947E+00	2.641E+00	5.808E-01	-0.603
	+	94.00		1.160E+01	4.160E+00	4.229E+00	9.218E-01	2.744
		236.00		-1.138E-01	2.788E-01	3.843E-01	3.433E-02	-0.296
		256.20	*	4.535E-01	4.171E-01	7.035E-01	1.187E-01	0.645
		286.10		-5.657E-01	1.803E+00	2.841E+00	2.846E+00	-0.199
	+	299.80		3.623E+00	2.137E+00	3.057E+00	4.987E-01	1.185
		304.40		-1.460E+00	2.237E+00	3.094E+00	5.360E-01	-0.472
		334.20		2.283E+00	3.248E+00	4.376E+00	8.037E-01	0.522
TH-229	+	85.43		3.085E-01	2.343E-01	3.093E-01	2.953E-02	0.998
	+	88.47		5.819E-01	1.740E-01	2.143E-01	2.072E-02	2.716
		100.00		4.836E-02	2.121E-01	3.284E-01	2.574E-02	0.147
		193.63	*	2.131E-01	5.488E-01	9.154E-01	4.849E-02	0.233
		210.97		1.087E+00	9.368E-01	1.466E+00	7.957E-02	0.741
PA-231		283.67	*	-4.865E-01	1.793E+00	2.764E+00	3.813E-01	-0.176
	+	301.29		1.449E+00	8.355E-01	1.215E+00	1.276E-01	1.192
TH-231		81.07		-1.768E-01	2.532E-01	3.514E-01	3.242E-02	-0.503
	+	83.78		2.061E-01	1.565E-01	2.275E-01	2.143E-02	0.906
		94.90		1.375E-01	2.708E-01	3.978E-01	3.394E-02	0.346
		122.32		-1.813E+00	1.750E+00	2.728E+00	1.846E-01	-0.665
		144.24		6.741E-01	7.597E-01	1.288E+00	8.920E-02	0.523

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		154.21		4.267E-01	4.278E-01	7.446E-01	4.894E-02	0.573
	+	269.46		7.137E-01	3.277E-01	3.946E-01	2.385E-02	1.809
		323.87	*	-1.142E-01	8.367E-01	1.218E+00	2.016E-01	-0.094
	+	338.28		8.361E+00	2.272E+00	3.147E+00	3.332E-01	2.657
		445.03		-3.091E+00	2.798E+00	4.079E+00	4.201E-01	-0.758
U-231	+	84.21		1.396E+01	1.060E+01	1.529E+01	1.445E+00	0.913
	+	92.29		1.802E+01	5.363E+00	7.106E+00	6.361E-01	2.536
		95.87	*	-1.529E-01	1.927E+00	2.749E+00	2.306E-01	-0.056
		108.00		-1.216E+00	3.113E+00	5.229E+00	3.654E-01	-0.233
PA-233	+	75.28		2.028E+01	5.351E+00	7.801E+00	1.210E+00	2.600
	+	86.59		8.344E+00	3.273E+00	3.390E+00	9.209E-01	2.461
	+	300.12		1.010E+00	5.885E-01	8.547E-01	1.151E-01	1.182
		311.98	*	-3.483E-02	6.860E-02	1.112E-01	6.950E-03	-0.313
		340.50		2.539E+00	1.049E+00	1.549E+00	3.562E-01	1.639
		398.62		-1.766E+00	2.599E+00	3.983E+00	1.030E+00	-0.443
		415.76		2.679E-01	1.902E+00	3.145E+00	6.476E-01	0.085
PA-234	+	63.00		1.928E+00	2.678E+00	3.317E+00	5.154E-01	0.581
		94.67		2.390E-01	2.014E-01	3.055E-01	3.778E-02	0.782
		98.44		8.084E-02	1.131E-01	1.660E-01	9.247E-02	0.487
		99.86		1.371E-01	5.394E-01	8.366E-01	6.572E-02	0.164
		111.00		-1.174E-02	1.784E-01	3.039E-01	3.286E-02	-0.039
		131.20		-3.990E-03	1.203E-01	1.821E-01	1.029E-02	-0.022
		152.70		3.974E-02	3.509E-01	5.879E-01	9.187E-02	0.068
	+	186.00		5.614E+00	2.989E+00	2.897E+00	8.822E-01	1.938
		226.40		-1.263E-01	4.520E-01	7.148E-01	8.171E-02	-0.177
		227.20		1.835E-01	4.881E-01	8.032E-01	4.454E-02	0.228
		248.90		6.107E-01	9.045E-01	1.496E+00	3.209E-01	0.408
		293.70		3.822E+00	1.198E+00	1.865E+00	3.003E-01	2.050
		369.80		-1.472E-01	1.017E+00	1.663E+00	3.465E-01	-0.089
		568.70		-9.890E-02	1.204E+00	2.003E+00	1.129E-01	-0.049
		569.50		-1.025E-01	3.542E-01	5.540E-01	3.121E-02	-0.185
		574.00		1.693E+00	1.838E+00	3.295E+00	1.850E-01	0.514
		699.00		4.473E-01	9.784E-01	1.661E+00	2.979E-01	0.269
		706.10		-5.368E-03	1.424E+00	2.334E+00	1.030E+00	-0.002
		733.00		-6.181E-02	5.063E-01	7.016E-01	1.499E-01	-0.088
		742.81		4.740E-01	1.747E+00	2.880E+00	1.928E+00	0.165
		796.30		2.396E+00	1.509E+00	2.336E+00	6.224E-01	1.026
		805.60		9.745E-01	1.362E+00	2.305E+00	6.991E-01	0.423
		819.60		-1.016E+00	1.547E+00	2.221E+00	8.398E-01	-0.458
		826.30		3.886E-01	1.084E+00	1.793E+00	7.993E-01	0.217
		831.60		-7.551E-01	9.580E-01	1.353E+00	4.010E-01	-0.558
		876.40		-2.292E-02	1.138E+00	1.905E+00	1.958E+00	-0.012
		880.51		2.192E-01	3.993E-01	7.005E-01	6.141E-02	0.313
		883.24		7.641E-02	4.204E-01	7.106E-01	4.779E-01	0.108
		899.00		-1.477E+00	1.296E+00	1.630E+00	7.143E-01	-0.906
		925.00		-1.501E+00	1.611E+00	2.427E+00	2.156E-01	-0.619
		926.50		-1.228E-01	2.398E-01	3.766E-01	9.551E-02	-0.326
		946.00	*	-5.027E-02	3.751E-01	6.153E-01	1.157E-01	-0.082
		949.00		-7.260E-02	5.410E-01	8.872E-01	7.689E-02	-0.082

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		980.50		1.115E-02	9.455E-01	1.570E+00	1.311E-01	0.007
		1394.10		5.327E-01	1.499E+00	2.553E+00	1.657E+00	0.209
PA-234M		766.41		1.892E+01	2.771E+01	4.100E+01	3.136E+01	0.461
		1001.03	*	-1.419E+00	8.871E+00	1.445E+01	1.561E+00	-0.098
U-235	+	89.95		2.762E+00	1.523E+00	2.142E+00	6.657E-01	1.289
	+	93.35		3.610E+00	1.442E+00	1.492E+00	4.188E-01	2.420
		105.00		1.471E+00	1.160E+00	1.956E+00	5.767E-01	0.752
		143.76	*	1.580E-01	2.326E-01	3.892E-01	6.294E-02	0.406
		163.35		5.568E-02	5.022E-01	8.252E-01	1.467E-01	0.067
	+	185.71		2.079E-01	9.144E-02	1.075E-01	5.631E-03	1.933
		205.31		3.565E-01	6.084E-01	9.171E-01	1.637E-01	0.389
NP-236		94.67		1.837E-01	1.520E-01	2.321E-01	1.988E-02	0.792
		98.44		6.109E-02	7.861E-02	1.255E-01	1.008E-02	0.487
		111.00		-8.883E-03	1.349E-01	2.298E-01	1.545E-02	-0.039
		160.31	*	-4.513E-02	8.584E-02	1.360E-01	7.036E-03	-0.332
NP-239		99.55		6.426E-02	1.810E-01	2.823E-01	2.229E-02	0.228
		117.00	*	-4.771E-02	1.855E-01	3.116E-01	1.945E-02	-0.153
	+	209.75		2.167E+00	1.108E+00	1.603E+00	8.688E-02	1.352
		228.18		7.849E-02	2.555E-01	4.186E-01	2.324E-02	0.187
		277.60		5.321E-01	2.105E-01	3.985E-01	2.317E-02	1.335
		334.30		1.303E+00	1.827E+00	2.482E+00	1.466E-01	0.525
CM-243		99.55		6.614E-02	1.862E-01	2.906E-01	2.294E-02	0.228
		103.76	*	-1.486E-02	9.650E-02	1.645E-01	1.219E-02	-0.090
		117.00		-4.909E-02	1.908E-01	3.206E-01	2.001E-02	-0.153
	+	209.75		2.136E+00	1.093E+00	1.580E+00	8.566E-02	1.352
		228.18		7.933E-02	2.582E-01	4.231E-01	2.349E-02	0.187
		277.60		5.365E-01	2.123E-01	4.018E-01	2.336E-02	1.335
CM-247		278.00		2.175E+00	8.718E-01	1.649E+00	9.589E-02	1.319
		287.40		6.237E-01	1.417E+00	2.457E+00	1.436E-01	0.254
		402.60	*	2.715E-02	4.444E-02	7.609E-02	4.411E-03	0.357
CF-249		252.85		-4.466E-01	9.704E-01	1.494E+00	8.520E-02	-0.299
		333.44		1.130E-01	2.798E-01	3.189E-01	1.884E-02	0.354
		387.95	*	1.490E-02	4.924E-02	8.277E-02	4.789E-03	0.180
CF-251		176.60	*	1.723E-01	1.365E-01	2.390E-01	1.235E-02	0.721
		227.00		1.192E-01	4.310E-01	7.053E-01	3.910E-02	0.169
		285.00		-7.169E-01	1.937E+00	3.206E+00	1.872E-01	-0.224

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664004 *
* Acquisition date : 14-JUL-2009 08:38:56 Detector SN#    :            *
* Detector ID        : GAM23               Sensitivity     : 5.000     *
* Geometry           : CAN                 Energy tolerance: 1.500     *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000    *
* Elapsed real time:     0 02:00:03.60     Half life ratio :  8.000    *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date        : 26-JUN-2009 12:00:00 Nuclide Library : SOLID    *
* Sample ID          : G232664004           Analyst initials: MXR1     *
* Batch Number       : 882713               Sample Quantity : 1.0193E+02 GRAM *
* Recovery           :     1.00000          Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
* Standard Weight  :    0.00000                                         *
* CALIB. DATE/TIME :   2-JUN-2009 11:17:00 MS Isotope      :            *
* MSD DPM          :     0.000             MSD Isotope      :           *
* LCS DPM          :     0.000             LCS Isotope      :           *
* LCSD DPM         :     0.000             LCSD Isotope     :           *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.939E+01	2.983E+00	7.072E-01	0.000E+00
CD-109	4.354E+00	1.276E+00	1.360E+00	0.000E+00
SN-126	4.262E-01	1.249E-01	1.216E-01	0.000E+00
TL-208	5.745E-01	1.038E-01	7.089E-02	0.000E+00
BI-211	4.545E+00	6.388E-01	3.555E-01	0.000E+00
PB-212	1.840E+00	1.981E-01	1.172E-01	0.000E+00
PO-212	1.840E+00	1.981E-01	1.172E-01	0.000E+00
BI-214	1.470E+00	2.291E-01	1.545E-01	0.000E+00
PB-214	1.581E+00	2.365E-01	1.240E-01	0.000E+00
PO-214	1.581E+00	2.365E-01	1.240E-01	0.000E+00
PO-216	1.840E+00	1.981E-01	1.172E-01	0.000E+00
PO-218	1.581E+00	2.365E-01	1.240E-01	0.000E+00
RA-224	3.913E+00	1.048E+00	1.535E+00	0.000E+00
RA-226	1.470E+00	2.291E-01	1.545E-01	0.000E+00
AC-228	1.849E+00	4.448E-01	2.781E-01	0.000E+00
RA-228	1.849E+00	4.448E-01	2.781E-01	0.000E+00
TH-228	1.840E+00	1.981E-01	1.172E-01	0.000E+00
TH-230	1.470E+00	2.291E-01	1.545E-01	0.000E+00
TH-232	1.849E+00	4.448E-01	2.781E-01	0.000E+00
TH-234	1.654E+00	2.256E+00	2.394E+00	0.000E+00
U-234	1.470E+00	2.291E-01	1.545E-01	0.000E+00
NP-237	1.252E+00	4.456E-01	3.186E-01	0.000E+00
U-238	1.654E+00	2.256E+00	2.394E+00	0.000E+00
AM-241	6.932E-01	2.624E-01	3.054E-01	0.000E+00
AM-243	3.872E-01	8.776E-02	9.869E-02	0.000E+00
ANH-511	1.627E-01	8.610E-02	5.327E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	7.055E-02	4.009E-01	6.668E-01	0.000E+00	NOT IDENT.

NA-22	-1.878E-02	6.309E-02	9.959E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.043E+07	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.291E-02	4.036E-02	7.216E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.746E-02	7.962E-02	0.000E+00	FAIL ABUN
SC-46	-4.194E-02	5.486E-02	8.642E-02	0.000E+00	FAIL ABUN
V-48	-2.843E-02	1.070E-01	1.751E-01	0.000E+00	NOT IDENT.
CR-51	1.348E-01	4.357E-01	7.576E-01	0.000E+00	NOT IDENT.
MN-52	3.079E-01	4.623E-01	8.409E-01	0.000E+00	NOT IDENT.
MN-54	1.263E-02	5.429E-02	9.051E-02	0.000E+00	NOT IDENT.
CO-56	1.885E-02	4.947E-02	8.404E-02	0.000E+00	FAIL ABUN
CO-57	-2.530E-02	2.502E-02	3.998E-02	0.000E+00	NOT IDENT.
CO-58	-6.980E-02	5.424E-02	7.638E-02	0.000E+00	NOT IDENT.
FE-59	-1.910E-02	1.213E-01	1.980E-01	0.000E+00	NOT IDENT.
CO-60	-3.969E-03	5.276E-02	8.832E-02	0.000E+00	NOT IDENT.
ZN-65	9.375E-02	1.404E-01	2.178E-01	0.000E+00	NOT IDENT.
GE-68	-7.865E-01	1.467E+00	2.280E+00	0.000E+00	NOT IDENT.
AS-73	3.438E-01	1.093E+00	1.824E+00	0.000E+00	NOT IDENT.
AS-74	-3.492E-02	1.344E-01	2.128E-01	0.000E+00	NOT IDENT.
SE-75	9.160E-03	5.078E-02	7.911E-02	0.000E+00	NOT IDENT.
BR-77	-4.105E+00	2.680E+01	4.286E+01	0.000E+00	FAIL ABUN
SR-82	-2.122E-01	5.213E-01	8.233E-01	0.000E+00	NOT IDENT.
RB-83	-1.601E-02	8.106E-02	1.290E-01	0.000E+00	NOT IDENT.
RB-84	1.034E-01	1.045E-01	1.915E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.656E+00	1.737E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.096E-02	9.165E-02	0.000E+00	NOT IDENT.
RB-86	-8.245E-01	1.064E+00	1.605E+00	0.000E+00	NOT IDENT.
Y-88	1.228E-02	4.369E-02	7.769E-02	0.000E+00	NOT IDENT.
ZR-88	-3.746E-03	3.838E-02	6.372E-02	0.000E+00	NOT IDENT.
Y-91	1.651E+01	2.548E+01	4.454E+01	0.000E+00	NOT IDENT.
NB-94	1.257E-02	4.386E-02	7.475E-02	0.000E+00	NOT IDENT.
NB-95	-2.965E-02	6.142E-02	9.719E-02	0.000E+00	NOT IDENT.
NB-95M	-8.735E-02	1.521E-01	2.106E-01	0.000E+00	NOT IDENT.
ZR-95	-5.975E-02	9.479E-02	1.458E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.868E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	3.568E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.402E+00	2.908E+01	4.837E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.681E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.210E-02	3.679E-02	5.890E-02	0.000E+00	NOT IDENT.
RH-102	1.150E-02	3.498E-02	5.893E-02	0.000E+00	NOT IDENT.
RU-103	7.912E-03	4.740E-02	7.857E-02	0.000E+00	FAIL ABUN
RH-106	-1.428E-01	3.995E-01	6.528E-01	0.000E+00	FAIL ABUN
RU-106	-1.428E-01	3.992E-01	6.528E-01	0.000E+00	FAIL ABUN
AG-108M	2.896E-02	3.963E-02	6.918E-02	0.000E+00	NOT IDENT.
AG-110M	-8.841E-02	4.538E-02	6.207E-02	0.000E+00	NOT IDENT.
IN-111	-2.402E+00	2.361E+00	3.065E+00	0.000E+00	NOT IDENT.
IN-113M	-4.719E-04	5.511E-02	9.211E-02	0.000E+00	NOT IDENT.
SN-113	-4.719E-04	5.511E-02	9.211E-02	0.000E+00	NOT IDENT.
IN-114M	1.103E-02	2.052E-01	3.071E-01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	3.265E+01	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	2.339E-02	6.583E-02	1.115E-01	0.000E+00	NOT IDENT.
SB-122	-1.587E+00	4.850E+00	8.039E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.915E+08	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.029E-02	2.973E-02	5.115E-02	0.000E+00	NOT IDENT.
I-124	5.630E-02	1.504E+00	2.322E+00	0.000E+00	NOT IDENT.
SB-124	-8.156E-02	1.036E-01	1.408E-01	0.000E+00	FAIL ABUN
SB-125	1.047E-01	1.076E-01	1.914E-01	0.000E+00	FAIL ABUN
TE-125M	-3.560E+00	9.040E+00	1.549E+01	0.000E+00	NOT IDENT.
I-126	-1.305E-01	2.901E-01	4.686E-01	0.000E+00	NOT IDENT.
SB-126	-2.433E-02	2.492E-01	3.535E-01	0.000E+00	FAIL ABUN
SB-127	8.878E-01	3.070E+00	5.186E+00	0.000E+00	NOT IDENT.
XE-127	-5.578E-02	5.361E-02	8.240E-02	0.000E+00	NOT IDENT.
I-131	-5.679E-02	1.619E-01	2.654E-01	0.000E+00	NOT IDENT.
TE-132	4.317E-01	1.373E+00	2.291E+00	0.000E+00	NOT IDENT.
BA-133	-2.889E-02	5.568E-02	7.824E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	6.971E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	9.794E-02	1.230E-01	0.000E+00	FAIL ABUN
CS-135	1.370E-02	1.870E-01	2.696E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	7.392E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.907E-02	1.570E-01	2.531E-01	0.000E+00	FAIL ABUN
BA-137M	2.875E-02	4.805E-02	8.420E-02	0.000E+00	NOT IDENT.
CS-137	3.039E-02	5.080E-02	8.901E-02	0.000E+00	NOT IDENT.
CE-139	-4.036E-02	3.086E-02	4.831E-02	0.000E+00	NOT IDENT.
BA-140	9.935E-02	3.578E-01	6.230E-01	0.000E+00	NOT IDENT.
LA-140	1.575E-01	1.508E-01	2.836E-01	0.000E+00	FAIL ABUN
CE-141	4.860E-02	6.736E-02	1.188E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.456E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.372E-02	2.301E-01	3.533E-01	0.000E+00	NOT IDENT.
PM-144	-8.533E-03	4.598E-02	7.544E-02	0.000E+00	NOT IDENT.

PR-144	-5.791E-01	3.120E+00	5.120E+00	0.000E+00	NOT IDENT.
PM-146	-1.124E-02	5.298E-02	8.575E-02	0.000E+00	NOT IDENT.
ND-147	1.943E-01	8.266E-01	1.440E+00	0.000E+00	FAIL ABUN
PM-149	0.000E+00	2.373E+02	0.000E+00	0.000E+00	SHORT HLIF
EU-152	3.975E-02	1.160E-01	1.786E-01	0.000E+00	FAIL ABUN
GD-153	-8.645E-02	9.109E-02	1.343E-01	0.000E+00	FAIL ABUN
EU-154	-5.237E-02	1.760E-01	2.778E-01	0.000E+00	NOT IDENT.
EU-155	1.465E-01	1.080E-01	1.992E-01	0.000E+00	FAIL ABUN
TB-160	7.173E-02	1.985E-01	3.479E-01	0.000E+00	FAIL ABUN
HO-166M	4.267E-02	8.028E-02	1.394E-01	0.000E+00	NOT IDENT.
TM-171	3.401E+01	3.279E+01	5.290E+01	0.000E+00	FAIL ABUN
LU-176	7.197E-03	2.832E-02	4.378E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.033E+00	2.895E+00	0.000E+00	FAIL ABUN
LU-177M	-1.685E-01	2.131E-01	3.326E-01	0.000E+00	NOT IDENT.
HF-181	-1.010E-02	5.420E-02	8.729E-02	0.000E+00	NOT IDENT.
W-181	-2.441E-02	4.523E-01	6.853E-01	0.000E+00	NOT IDENT.
TA-182	9.892E-02	2.732E-01	4.638E-01	0.000E+00	FAIL ABUN
RE-183	-1.114E-01	1.190E-01	1.885E-01	0.000E+00	FAIL ABUN
RE-184	-1.204E-01	2.563E-01	4.019E-01	0.000E+00	FAIL ABUN
OS-185	2.252E-02	5.627E-02	9.762E-02	0.000E+00	FAIL ABUN
RE-188	1.849E-01	1.844E-01	3.276E-01	0.000E+00	NOT IDENT.
W-188	-3.347E+00	9.804E+00	1.449E+01	0.000E+00	FAIL ABUN
IR-192	1.011E-03	3.887E-02	6.647E-02	0.000E+00	FAIL ABUN
AU-195	2.390E-01	2.555E-01	4.196E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.981E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.850E+00	1.274E+01	2.133E+01	0.000E+00	NOT IDENT.
TL-202	-1.699E-04	1.000E-01	1.653E-01	0.000E+00	NOT IDENT.
HG-203	7.102E-02	5.121E-02	8.609E-02	0.000E+00	NOT IDENT.
BI-207	-2.528E-02	7.198E-02	1.157E-01	0.000E+00	FAIL ABUN
TL-207	-1.142E-01	8.199E-01	1.214E+00	0.000E+00	FAIL ABUN
PO-209	-1.285E+00	9.631E+00	1.614E+01	0.000E+00	NOT IDENT.
BI-210	3.099E-01	5.353E+00	8.962E+00	0.000E+00	NOT IDENT.
PB-210	3.099E-01	5.353E+00	8.962E+00	0.000E+00	NOT IDENT.
PO-210	3.099E-01	5.353E+00	8.962E+00	0.000E+00	NOT IDENT.
PB-211	1.737E-01	1.101E+00	1.847E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.914E-01	9.735E-01	0.000E+00	FAIL ABUN
PO-215	-1.142E-01	8.199E-01	1.214E+00	0.000E+00	FAIL ABUN
RN-219	3.626E-02	4.846E-01	8.127E-01	0.000E+00	FAIL ABUN
RN-220	-4.894E+00	3.096E+01	5.219E+01	0.000E+00	NOT IDENT.
RA-223	-1.142E-01	8.199E-01	1.214E+00	0.000E+00	FAIL ABUN
AC-227	4.535E-01	4.066E-01	7.021E-01	0.000E+00	FAIL ABUN
TH-227	4.535E-01	4.087E-01	7.021E-01	0.000E+00	FAIL ABUN
TH-229	2.131E-01	5.378E-01	9.144E-01	0.000E+00	FAIL ABUN
PA-231	-4.865E-01	1.757E+00	2.758E+00	0.000E+00	FAIL ABUN
TH-231	-1.142E-01	8.199E-01	1.214E+00	0.000E+00	FAIL ABUN
U-231	-1.529E-01	1.889E+00	2.753E+00	0.000E+00	FAIL ABUN
PA-233	-3.483E-02	6.723E-02	1.109E-01	0.000E+00	FAIL ABUN
PA-234	-5.027E-02	3.676E-01	6.113E-01	0.000E+00	FAIL ABUN
PA-234M	-1.419E+00	8.694E+00	1.435E+01	0.000E+00	NOT IDENT.
U-235	1.580E-01	2.279E-01	3.892E-01	0.000E+00	FAIL ABUN
NP-236	-4.513E-02	8.413E-02	1.360E-01	0.000E+00	NOT IDENT.
NP-239	-4.771E-02	1.818E-01	3.118E-01	0.000E+00	FAIL ABUN
CM-243	-1.486E-02	9.457E-02	1.647E-01	0.000E+00	FAIL ABUN
CM-247	2.715E-02	4.355E-02	7.582E-02	0.000E+00	NOT IDENT.
CF-249	1.490E-02	4.826E-02	8.249E-02	0.000E+00	NOT IDENT.
CF-251	1.723E-01	1.338E-01	2.388E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:39:28.53

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664004.CNF;1
Sample date       : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:38:56
Sample ID         : G232664004           Sample quantity  : 1.01930E+02 GRAM
Detector name     : GAM23                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:03.60  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	849	10.67*	9.965E-01	2.939E+01	2.939E+01	10.36
CD-109	88.03	223	3.72*	5.219E+00	4.239E+00	4.354E+00	29.90
SN-126	64.28	44	9.60	2.605E+00	6.548E-01	6.548E-01	138.85
	86.94	223	8.90	5.219E+00	1.772E+00	1.772E+00	50.30
	87.57	223	37.00*	5.219E+00	4.262E-01	4.262E-01	29.90
TL-208	277.35	------	6.80	4.140E+00	------ Line Not Found		------
	510.84	112	21.60	2.542E+00	7.530E-01	7.530E-01	54.65
	583.14	299	84.20*	2.275E+00	5.745E-01	5.745E-01	18.44
	860.37	41	12.46	1.608E+00	7.625E-01	7.625E-01	72.30
BI-211	72.87	------	1.27	3.829E+00	------ Line Not Found		------
	351.07	549	12.94*	3.438E+00	4.545E+00	4.545E+00	14.34
PB-212	74.81	282	10.70	4.070E+00	2.389E+00	2.389E+00	24.94
	77.11	480	18.00	4.311E+00	2.276E+00	2.276E+00	16.39
	87.30	223	8.00	5.219E+00	1.971E+00	1.971E+00	31.53
	238.63	1032	44.60*	4.632E+00	1.840E+00	1.840E+00	10.99
	300.09	70	3.41	3.893E+00	1.955E+00	1.955E+00	57.30
PO-212	74.81	282	10.70	4.070E+00	2.389E+00	2.389E+00	24.94
	77.11	480	18.00	4.311E+00	2.276E+00	2.276E+00	16.39
	87.30	223	8.00	5.219E+00	1.971E+00	1.971E+00	31.53
	115.19	------	0.60	6.293E+00	------ Line Not Found		------
	238.63	1032	44.60*	4.632E+00	1.840E+00	1.840E+00	10.99
	300.09	70	3.41	3.893E+00	1.955E+00	1.955E+00	57.30
BI-214	609.31	405	46.30*	2.191E+00	1.470E+00	1.470E+00	15.91
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	------	3.21	1.491E+00	------ Line Not Found		------
	1120.29	81	15.10	1.257E+00	1.566E+00	1.566E+00	38.93
	1238.11	38	5.94	1.147E+00	2.027E+00	2.027E+00	81.49
	1377.67	------	4.11	1.046E+00	------ Line Not Found		------
	1764.49	58	15.80	8.736E-01	1.550E+00	1.550E+00	46.88
PB-214	74.81	282	6.21	4.070E+00	4.116E+00	4.116E+00	24.28
	77.11	480	10.50	4.311E+00	3.901E+00	3.901E+00	18.07
	87.30	223	4.67	5.219E+00	3.377E+00	3.377E+00	30.88

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	193	7.49	4.587E+00	2.064E+00	2.064E+00	27.90
	295.21	288	19.20	3.944E+00	1.401E+00	1.401E+00	18.92
	351.92	549	37.20*	3.438E+00	1.581E+00	1.581E+00	15.26
PO-214	74.81	282	6.21	4.070E+00	4.116E+00	4.116E+00	24.28
	77.11	480	10.50	4.311E+00	3.901E+00	3.901E+00	18.07
	87.30	223	4.67	5.219E+00	3.377E+00	3.377E+00	30.88
	241.98	193	7.49	4.587E+00	2.064E+00	2.064E+00	27.90
	295.21	288	19.20	3.944E+00	1.401E+00	1.401E+00	18.92
	351.92	549	37.20*	3.438E+00	1.581E+00	1.581E+00	15.26
PO-216	74.81	282	10.70	4.070E+00	2.389E+00	2.389E+00	24.94
	77.11	480	18.00	4.311E+00	2.276E+00	2.276E+00	16.39
	87.30	223	8.00	5.219E+00	1.971E+00	1.971E+00	31.53
	238.63	1032	44.60*	4.632E+00	1.840E+00	1.840E+00	10.99
	300.09	70	3.41	3.893E+00	1.955E+00	1.955E+00	57.30
PO-218	74.81	282	6.21	4.070E+00	4.116E+00	4.116E+00	24.28
	77.11	480	10.50	4.311E+00	3.901E+00	3.901E+00	18.07
	87.30	223	4.67	5.219E+00	3.377E+00	3.377E+00	30.88
	241.98	193	7.49	4.587E+00	2.064E+00	2.064E+00	27.90
	295.21	288	19.20	3.944E+00	1.401E+00	1.401E+00	18.92
	351.92	549	37.20*	3.438E+00	1.581E+00	1.581E+00	15.26
RA-224	240.98	193	3.95*	4.587E+00	3.913E+00	3.913E+00	27.33
RA-226	609.31	405	46.30*	2.191E+00	1.470E+00	1.470E+00	15.91
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	------	3.21	1.491E+00	------ Line Not Found		------
	1120.29	81	15.10	1.257E+00	1.566E+00	1.566E+00	38.93
	1238.11	38	5.94	1.147E+00	2.027E+00	2.027E+00	81.49
	1377.67	------	4.11	1.046E+00	------ Line Not Found		------
	1764.49	58	15.80	8.736E-01	1.550E+00	1.550E+00	46.88
AC-228	338.32	220	11.40	3.545E+00	2.002E+00	2.002E+00	47.85
	911.07	212	27.70*	1.525E+00	1.849E+00	1.849E+00	24.55
	969.11	115	16.60	1.439E+00	1.765E+00	1.765E+00	39.47
RA-228	338.32	220	11.40	3.545E+00	2.002E+00	2.002E+00	47.85
	911.07	212	27.70*	1.525E+00	1.849E+00	1.849E+00	24.55
	969.11	115	16.60	1.439E+00	1.765E+00	1.765E+00	39.47
TH-228	84.40	69	1.21	5.005E+00	4.207E+00	4.207E+00	76.59
	238.60	1032	44.60*	4.632E+00	1.840E+00	1.840E+00	10.99
	300.10	70	3.41	3.893E+00	1.955E+00	1.955E+00	81.79
TH-230	609.31	405	46.30*	2.191E+00	1.470E+00	1.470E+00	15.91
	768.36	------	5.04	1.785E+00	------ Line Not Found		------
	934.06	------	3.21	1.491E+00	------ Line Not Found		------
	1120.29	81	15.10	1.257E+00	1.566E+00	1.566E+00	38.93
	1238.11	38	5.94	1.147E+00	2.027E+00	2.027E+00	81.49
	1377.67	------	4.11	1.046E+00	------ Line Not Found		------
	1764.49	58	15.80	8.736E-01	1.550E+00	1.550E+00	46.88
TH-232	338.32	220	11.40	3.545E+00	2.002E+00	2.002E+00	25.72
	911.07	212	27.70*	1.525E+00	1.849E+00	1.849E+00	24.55
	969.11	115	16.60	1.439E+00	1.765E+00	1.765E+00	39.47
TH-234	63.29	44	3.80*	2.605E+00	1.654E+00	1.654E+00	139.18
	92.38	247	5.41	5.605E+00	3.002E+00	3.002E+00	33.74

Sample ID : G232664004 Acquisition date : 14-JUL-2009 08:38:56

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	405	46.30*	2.191E+00	1.470E+00	1.470E+00	15.91
	768.36	------	5.04	1.785E+00	------	Line Not Found	------
	934.06	------	3.21	1.491E+00	------	Line Not Found	------
	1120.29	81	15.10	1.257E+00	1.566E+00	1.566E+00	38.93
	1238.11	38	5.94	1.147E+00	2.027E+00	2.027E+00	81.49
	1377.67	------	4.11	1.046E+00	------	Line Not Found	------
	1764.49	58	15.80	8.736E-01	1.550E+00	1.550E+00	46.88
NP-237	86.50	223	12.60*	5.219E+00	1.252E+00	1.252E+00	36.33
	95.87	------	2.60	5.757E+00	------	Line Not Found	------
U-238	63.29	44	3.80*	2.605E+00	1.654E+00	1.654E+00	139.18
	92.38	247	5.41	5.605E+00	3.002E+00	3.002E+00	29.76
AM-241	59.54	139	35.90*	2.062E+00	6.932E-01	6.932E-01	38.63
AM-243	74.67	282	66.00*	4.070E+00	3.872E-01	3.872E-01	23.13
	86.72	223	0.34	5.219E+00	4.693E+01	4.693E+01	29.90
	117.66	------	0.55	6.314E+00	------	Line Not Found	------
	142.18	------	0.13	6.209E+00	------	Line Not Found	------
ANH-511	511.00	112	100.00*	2.542E+00	1.627E-01	1.627E-01	54.01

Flag: "*" = Keyline

Sample ID : G232664004 Acquisition date : 14-JUL-2009 08:38:56

Total number of lines in spectrum 36
Number of unidentified lines 2
Number of lines tentatively identified by NID 34 94.44%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.939E+01	2.939E+01	0.304E+01	10.36	
CD-109	464.00D	1.03	4.239E+00	4.354E+00	1.302E+00	29.90	
SN-126	1.00E+05Y	1.00	4.262E-01	4.262E-01	1.274E-01	29.90	
TL-208	1.41E+10Y	1.00	5.745E-01	5.745E-01	1.059E-01	18.44	
BI-211	7.04E+08Y	1.00	4.545E+00	4.545E+00	0.652E+00	14.34	
PB-212	1.41E+10Y	1.00	1.840E+00	1.840E+00	0.202E+00	10.99	
PO-212	1.41E+10Y	1.00	1.840E+00	1.840E+00	0.202E+00	10.99	
BI-214	1600.00Y	1.00	1.470E+00	1.470E+00	0.234E+00	15.91	
PB-214	1600.00Y	1.00	1.581E+00	1.581E+00	0.241E+00	15.26	
PO-214	1600.00Y	1.00	1.581E+00	1.581E+00	0.241E+00	15.26	
PO-216	1.41E+10Y	1.00	1.840E+00	1.840E+00	0.202E+00	10.99	
PO-218	1600.00Y	1.00	1.581E+00	1.581E+00	0.241E+00	15.26	
RA-224	1.41E+10Y	1.00	3.913E+00	3.913E+00	1.069E+00	27.33	
RA-226	1600.00Y	1.00	1.470E+00	1.470E+00	0.234E+00	15.91	
AC-228	1.41E+10Y	1.00	1.849E+00	1.849E+00	0.454E+00	24.55	
RA-228	1.41E+10Y	1.00	1.849E+00	1.849E+00	0.454E+00	24.55	
TH-228	1.41E+10Y	1.00	1.840E+00	1.840E+00	0.202E+00	10.99	
TH-230	4.47E+09Y	1.00	1.470E+00	1.470E+00	0.234E+00	15.91	
TH-232	1.41E+10Y	1.00	1.849E+00	1.849E+00	0.454E+00	24.55	
TH-234	4.47E+09Y	1.00	1.654E+00	1.654E+00	2.302E+00	139.18	
U-234	4.47E+09Y	1.00	1.470E+00	1.470E+00	0.234E+00	15.91	
NP-237	2.14E+06Y	1.00	1.252E+00	1.252E+00	0.455E+00	36.33	
U-238	4.47E+09Y	1.00	1.654E+00	1.654E+00	2.302E+00	139.18	
AM-241	432.20Y	1.00	6.932E-01	6.932E-01	2.678E-01	38.63	
AM-243	7380.00Y	1.00	3.872E-01	3.872E-01	0.896E-01	23.13	
ANH-511	1.00E+09Y	1.00	1.627E-01	1.627E-01	0.879E-01	54.01	
			---	---			
	Total Activity :		7.242E+01	7.254E+01			

Grand Total Activity : 7.242E+01 7.254E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232664004 Acquisition date : 14-JUL-2009 08:38:56

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	89.83	110	225	0.65	179.84	179	5	1.52E-02	45.6	5.41E+00	T
0	128.75	49	253	0.91	257.70	256	8	6.86E-03	****	6.32E+00	T
0	186.26	167	285	1.07	372.74	368	11	2.32E-02	43.7	5.48E+00	T
0	209.44	97	170	0.77	419.11	415	8	1.35E-02	50.9	5.08E+00	T
5	270.51	111	130	1.86	541.29	536	26	1.54E-02	45.5	4.22E+00	T
5	273.11	41	97	1.41	546.49	536	26	5.64E-03	98.0	4.19E+00	T
0	328.39	73	151	1.32	657.10	652	11	1.01E-02	70.0	3.63E+00	T
0	464.09	59	120	1.15	928.58	922	14	8.17E-03	83.0	2.75E+00	T
0	727.37	114	70	1.25	1455.38	1448	14	1.58E-02	36.3	1.88E+00	T
0	794.72	69	48	1.34	1590.14	1582	16	9.58E-03	51.0	1.73E+00	T
0	1407.63	32	13	0.96	2816.80	2807	17	4.47E-03	61.9	1.03E+00	T
0	1412.41	11	4	0.73	2826.38	2823	7	1.46E-03	85.4	1.02E+00	
0	1730.20	25	6	2.42	3462.52	3456	12	3.47E-03	56.0	8.84E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:39:33.65

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                            *
*                                DETECTOR DATA                               *
*                                                                            *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664004.CNF;1   *
* Acquisition date : 14-JUL-2009 08:38:56  Detector SN#    :                 *
* Detector ID      : GAM23                 Sensitivity     : 5.00000         *
* Geometry         : CAN                   Energy tolerance: 1.50000         *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000        *
* Elapsed real time: 0 02:00:03.60         Half life ratio : 8.00000         *
*****************************************************************************
*                                                                            *
*                                SAMPLE DATA                                 *
*                                                                            *
* Sample date      : 26-JUN-2009 12:00:00  Nuclide Library : SOLID           *
* Sample ID        : G232664004            Analyst initials: MXR1            *
* Batch Number     : 882713                Sample Quantity : 1.01930E+02 GRAM *
*****************************************************************************
*                                                                            *
*                                  QC DATA                                   *
*                                                                            *
* CALIB. DATE/TIME : 2-JUN-2009 11:17:00.62MS Isotope      :                 *
* MSD ID           :                       MSD Isotope     :                 *
* LCS ID           : 1023-A                LCS Isotope     :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.939E+01	3.044E+00	7.130E-01	5.333E-02	41.224
CD-109	4.354E+00	1.302E+00	1.358E+00	1.326E-01	3.207
SN-126	4.262E-01	1.274E-01	1.214E-01	1.181E-02	3.512
TL-208	5.745E-01	1.059E-01	7.123E-02	4.624E-03	8.065
BI-211	4.545E+00	6.519E-01	3.566E-01	2.324E-02	12.743
PB-212	1.840E+00	2.022E-01	1.174E-01	8.441E-03	15.673
PO-212	1.840E+00	2.022E-01	1.174E-01	8.441E-03	15.673
BI-214	1.470E+00	2.338E-01	1.553E-01	1.167E-02	9.467
PB-214	1.581E+00	2.413E-01	1.244E-01	1.038E-02	12.713
PO-214	1.581E+00	2.413E-01	1.244E-01	1.038E-02	12.713
PO-216	1.840E+00	2.022E-01	1.174E-01	8.441E-03	15.673
PO-218	1.581E+00	2.413E-01	1.244E-01	1.038E-02	12.713
RA-224	3.913E+00	1.069E+00	1.538E+00	8.666E-02	2.544
RA-226	1.470E+00	2.338E-01	1.553E-01	1.167E-02	9.467
AC-228	1.849E+00	4.539E-01	2.799E-01	3.229E-02	6.608
RA-228	1.849E+00	4.539E-01	2.799E-01	3.229E-02	6.608
TH-228	1.840E+00	2.022E-01	1.174E-01	8.440E-03	15.674
TH-230	1.470E+00	2.338E-01	1.553E-01	1.167E-02	9.467

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.849E+00	4.539E-01	2.799E-01	3.229E-02	6.608
TH-234	1.654E+00	2.302E+00	2.387E+00	4.301E-01	0.693
U-234	1.470E+00	2.338E-01	1.553E-01	1.167E-02	9.467
NP-237	1.252E+00	4.547E-01	3.180E-01	7.243E-02	3.935
U-238	1.654E+00	2.302E+00	2.387E+00	4.301E-01	0.693
AM-241	6.932E-01	2.678E-01	3.045E-01	2.833E-02	2.277
AM-243	3.872E-01	8.955E-02	9.846E-02	8.750E-03	3.933
ANH-511	1.627E-01	8.786E-02	5.351E-02	3.108E-03	3.040

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	7.055E-02		4.091E-01	6.695E-01	4.550E-02	0.105
NA-22	-1.878E-02		6.437E-02	1.004E-01	6.740E-03	-0.187
NA-24	-2.434E+00		1.043E+01	Half-Life too short		
AL-26	1.291E-02		4.118E-02	7.280E-02	4.375E-03	0.177
TI-44	4.200E-01	+	6.884E-02	7.945E-02	7.202E-03	5.286
SC-46	-4.194E-02		5.598E-02	8.697E-02	7.771E-03	-0.482
V-48	-2.843E-02		1.092E-01	1.763E-01	1.466E-02	-0.161
CR-51	1.348E-01		4.446E-01	7.597E-01	4.981E-02	0.177
MN-52	3.079E-01		4.718E-01	8.477E-01	6.133E-02	0.363
MN-54	1.263E-02		5.539E-02	9.106E-02	7.210E-03	0.139
CO-56	1.885E-02		5.048E-02	8.456E-02	6.879E-03	0.223
CO-57	-2.530E-02		2.553E-02	3.995E-02	2.356E-03	-0.633
CO-58	-6.980E-02		5.534E-02	7.684E-02	5.773E-03	-0.908
FE-59	-1.910E-02		1.238E-01	1.994E-01	1.536E-02	-0.096
CO-60	-3.969E-03		5.384E-02	8.901E-02	6.535E-03	-0.045
ZN-65	9.375E-02		1.433E-01	2.194E-01	1.449E-02	0.427
GE-68	-7.865E-01		1.497E+00	2.296E+00	1.643E-01	-0.343
AS-73	3.438E-01		1.115E+00	1.818E+00	1.605E-01	0.189
AS-74	-3.492E-02		1.371E-01	2.138E-01	1.179E-02	-0.163
SE-75	9.160E-03		5.182E-02	7.928E-02	4.615E-03	0.116
BR-77	-4.105E+00		2.735E+01	4.305E+01	2.492E+00	-0.095
SR-82	-2.122E-01		5.319E-01	8.282E-01	5.713E-02	-0.256
RB-83	-1.601E-02		8.271E-02	1.296E-01	7.503E-03	-0.124
RB-84	1.034E-01		1.066E-01	1.927E-01	1.693E-02	0.537
KR-85	2.571E+01		9.854E+00	1.744E+01	1.012E+00	1.474
SR-85	1.357E-01		5.200E-02	9.206E-02	5.342E-03	1.474
RB-86	-8.245E-01		1.086E+00	1.617E+00	1.159E-01	-0.510
Y-88	1.228E-02		4.458E-02	7.838E-02	4.615E-03	0.157
ZR-88	-3.746E-03		3.916E-02	6.394E-02	3.692E-03	-0.059
Y-91	1.651E+01		2.600E+01	4.487E+01	2.677E+00	0.368
NB-94	1.257E-02		4.475E-02	7.517E-02	4.295E-03	0.167
NB-95	-2.965E-02		6.267E-02	9.776E-02	6.569E-03	-0.303
NB-95M	-8.735E-02		1.552E-01	2.109E-01	1.556E-02	-0.414
ZR-95	-5.975E-02		9.672E-02	1.467E-01	1.125E-02	-0.407
NB-97	-3.642E+00		9.531E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1.380E+01		1.820E+01	Half-Life too short		
MO-99	1.402E+00		2.967E+01	4.865E+01	6.808E+00	0.029
TC-99M	-2.820E+13		3.919E+13	Half-Life too short		
RH-101	-1.210E-02		3.754E-02	5.897E-02	3.143E-03	-0.205
RH-102	1.150E-02		3.569E-02	5.918E-02	3.464E-03	0.194
RU-103	7.912E-03		4.837E-02	7.891E-02	9.990E-03	0.100
RH-106	-1.428E-01		4.076E-01	6.561E-01	7.567E-02	-0.218
RU-106	-1.428E-01		4.074E-01	6.561E-01	3.526E-02	-0.218
AG-108M	2.896E-02		4.044E-02	6.944E-02	4.403E-03	0.417
AG-110M	-8.841E-02		4.631E-02	6.239E-02	3.467E-03	-1.417
IN-111	-2.402E+00		2.409E+00	3.071E+00	1.738E-01	-0.782
IN-113M	-4.719E-04		5.624E-02	9.243E-02	5.694E-03	-0.005
SN-113	-4.719E-04		5.624E-02	9.243E-02	5.694E-03	-0.005
IN-114M	1.103E-02		2.094E-01	3.074E-01	1.620E-02	0.036
CD-115	-4.383E-06		1.666E-05	Half-Life too short		
SN-117M	2.339E-02		6.718E-02	1.116E-01	5.798E-03	0.210
SB-122	-1.587E+00		4.949E+00	8.077E+00	4.569E-01	-0.196
I-123	1.307E+02		9.771E+01	Half-Life too short		
TE-123M	2.029E-02		3.034E-02	5.117E-02	2.700E-03	0.396
I-124	5.630E-02		1.534E+00	2.334E+00	1.279E-01	0.024
SB-124	-8.156E-02		1.057E-01	1.421E-01	9.905E-03	-0.574
SB-125	1.047E-01		1.098E-01	1.921E-01	1.169E-02	0.545
TE-125M	-3.560E+00		9.225E+00	1.548E+01	1.382E+00	-0.230
I-126	-1.305E-01		2.961E-01	4.711E-01	2.438E-02	-0.277
SB-126	-2.433E-02		2.543E-01	3.555E-01	2.129E-02	-0.068
SB-127	8.878E-01		3.132E+00	5.214E+00	5.338E-01	0.170
XE-127	-5.578E-02		5.470E-02	8.249E-02	4.428E-03	-0.676
I-131	-5.679E-02		1.652E-01	2.663E-01	1.747E-02	-0.213
TE-132	4.317E-01		1.401E+00	2.295E+00	3.409E-01	0.188
BA-133	-2.889E-02		5.682E-02	7.849E-02	9.107E-03	-0.368
I-133	-1.475E-02		3.557E-02	Half-Life too short		
CS-134	1.942E-01	+	9.993E-02	1.238E-01	9.039E-03	1.569
CS-135	1.370E-02		1.908E-01	2.702E-01	2.064E-02	0.051
I-135	-4.709E+12		3.771E+12	Half-Life too short		
CS-136	-4.907E-02		1.602E-01	2.548E-01	2.032E-02	-0.193
BA-137M	2.875E-02		4.903E-02	8.465E-02	4.325E-03	0.340
CS-137	3.039E-02		5.183E-02	8.949E-02	4.596E-03	0.340
CE-139	-4.036E-02		3.149E-02	4.833E-02	2.464E-03	-0.835
BA-140	9.935E-02		3.651E-01	6.259E-01	2.035E-01	0.159
LA-140	1.575E-01		1.538E-01	2.860E-01	1.962E-02	0.551
CE-141	4.860E-02		6.874E-02	1.188E-01	6.703E-03	0.409
CE-143	1.144E-03		3.804E-04	Half-Life too short		
CE-144	-2.372E-02		2.348E-01	3.532E-01	4.989E-02	-0.067
PM-144	-8.533E-03		4.692E-02	7.586E-02	4.269E-03	-0.112
PR-144	-5.791E-01		3.184E+00	5.148E+00	2.894E-01	-0.112
PM-146	-1.124E-02		5.406E-02	8.609E-02	7.456E-03	-0.131
ND-147	1.943E-01		8.434E-01	1.446E+00	1.954E-01	0.134
PM-149	-7.010E-05		1.211E-04	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	3.975E-02		1.184E-01	1.792E-01	1.188E-02	0.222
GD-153	-8.645E-02		9.295E-02	1.341E-01	1.096E-02	-0.645
EU-154	-5.237E-02		1.796E-01	2.799E-01	2.779E-02	-0.187
EU-155	1.465E-01		1.102E-01	1.990E-01	1.468E-02	0.736
TB-160	7.173E-02		2.026E-01	3.501E-01	3.062E-02	0.205
HO-166M	4.267E-02		8.192E-02	1.402E-01	8.206E-03	0.304
TM-171	3.401E+01		3.346E+01	5.276E+01	4.588E+00	0.645
LU-176	7.197E-03		2.890E-02	4.389E-02	2.586E-03	0.164
LU-177	4.056E+00	+	2.075E+00	2.898E+00	1.568E-01	1.399
LU-177M	-1.685E-01		2.174E-01	3.339E-01	1.943E-02	-0.505
HF-181	-1.010E-02		5.531E-02	8.766E-02	5.127E-03	-0.115
W-181	-2.441E-02		4.615E-01	6.834E-01	5.937E-02	-0.036
TA-182	9.892E-02		2.788E-01	4.672E-01	2.868E-02	0.212
RE-183	-1.114E-01		1.214E-01	1.886E-01	9.700E-03	-0.591
RE-184	-1.204E-01		2.615E-01	4.027E-01	2.296E-02	-0.299
OS-185	2.252E-02		5.742E-02	9.813E-02	5.121E-03	0.229
RE-188	1.849E-01		1.882E-01	3.276E-01	1.719E-02	0.564
W-188	-3.347E+00		1.000E+01	1.453E+01	8.507E-01	-0.230
IR-192	1.011E-03		3.966E-02	6.665E-02	3.954E-03	0.015
AU-195	2.390E-01		2.607E-01	4.190E-01	3.343E-02	0.570
TL-200	2.960E-04		1.521E-03	Half-Life too short		
TL-201	-1.850E+00		1.301E+01	2.134E+01	1.089E+00	-0.087
TL-202	-1.699E-04		1.021E-01	1.660E-01	9.710E-03	-0.001
HG-203	7.102E-02		5.225E-02	8.629E-02	5.330E-03	0.823
BI-207	-2.528E-02		7.345E-02	1.165E-01	8.557E-03	-0.217
TL-207	-1.142E-01		8.367E-01	1.218E+00	2.016E-01	-0.094
PO-209	-1.285E+00		9.827E+00	1.624E+01	1.474E+00	-0.079
BI-210	3.099E-01		5.462E+00	8.927E+00	6.951E-01	0.035
PB-210	3.099E-01		5.462E+00	8.927E+00	6.951E-01	0.035
PO-210	3.099E-01		5.462E+00	8.927E+00	5.989E-01	0.035
PB-211	1.737E-01		1.123E+00	1.854E+00	1.156E+00	0.094
BI-212	1.897E+00	+	7.055E-01	9.790E-01	7.770E-02	1.938
PO-215	-1.142E-01		8.367E-01	1.218E+00	2.016E-01	-0.094
RN-219	3.626E-02		4.945E-01	8.156E-01	1.110E-01	0.044
RN-220	-4.894E+00		3.159E+01	5.244E+01	2.993E+00	-0.093
RA-223	-1.142E-01		8.367E-01	1.218E+00	2.016E-01	-0.094
AC-227	4.535E-01		4.148E-01	7.035E-01	9.798E-02	0.645
TH-227	4.535E-01		4.171E-01	7.035E-01	1.187E-01	0.645
TH-229	2.131E-01		5.488E-01	9.154E-01	4.849E-02	0.233
PA-231	-4.865E-01		1.793E+00	2.764E+00	3.813E-01	-0.176
TH-231	-1.142E-01		8.367E-01	1.218E+00	2.016E-01	-0.094
U-231	-1.529E-01		1.927E+00	2.749E+00	2.306E-01	-0.056
PA-233	-3.483E-02		6.860E-02	1.112E-01	6.950E-03	-0.313
PA-234	-5.027E-02		3.751E-01	6.153E-01	1.157E-01	-0.082
PA-234M	-1.419E+00		8.871E+00	1.445E+01	1.561E+00	-0.098
U-235	1.580E-01		2.326E-01	3.892E-01	6.294E-02	0.406
NP-236	-4.513E-02		8.584E-02	1.360E-01	7.036E-03	-0.332
NP-239	-4.771E-02		1.855E-01	3.116E-01	1.945E-02	-0.153

Sample ID : G232664004 Acquisition date : 14-JUL-2009 08:38:56

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.486E-02		9.650E-02	1.645E-01	1.219E-02	-0.090
CM-247	2.715E-02		4.444E-02	7.609E-02	4.411E-03	0.357
CF-249	1.490E-02		4.924E-02	8.277E-02	4.789E-03	0.180
CF-251	1.723E-01		1.365E-01	2.390E-01	1.235E-02	0.721

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232664004           *
* Acquisition date  : 14-JUL-2009 08:38:56 Detector SN#     :               *
* Detector ID       : GAM23                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:03.60      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 26-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232664004           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.0193E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  2-JUN-2009 11:17:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.939E+01	2.983E+00	3.538E-01	1.522E+00
CD-109	4.354E+00	1.276E+00	6.805E-01	6.509E-01
SN-126	4.262E-01	1.249E-01	6.083E-02	6.371E-02
TL-208	5.745E-01	1.038E-01	3.546E-02	5.297E-02
BI-211	4.545E+00	6.388E-01	1.779E-01	3.259E-01
PB-212	1.840E+00	1.981E-01	5.864E-02	1.011E-01
PO-212	1.840E+00	1.981E-01	5.864E-02	1.011E-01
BI-214	1.470E+00	2.291E-01	7.728E-02	1.169E-01
PB-214	1.581E+00	2.365E-01	6.202E-02	1.206E-01
PO-214	1.581E+00	2.365E-01	6.202E-02	1.206E-01
PO-216	1.840E+00	1.981E-01	5.864E-02	1.011E-01
PO-218	1.581E+00	2.365E-01	6.202E-02	1.206E-01
RA-224	3.913E+00	1.048E+00	7.682E-01	5.347E-01
RA-226	1.470E+00	2.291E-01	7.728E-02	1.169E-01
AC-228	1.849E+00	4.448E-01	1.391E-01	2.270E-01
RA-228	1.849E+00	4.448E-01	1.391E-01	2.270E-01
TH-228	1.840E+00	1.981E-01	5.863E-02	1.011E-01
TH-230	1.470E+00	2.291E-01	7.728E-02	1.169E-01
TH-232	1.849E+00	4.448E-01	1.391E-01	2.270E-01
TH-234	1.654E+00	2.256E+00	1.197E+00	1.151E+00
U-234	1.470E+00	2.291E-01	7.728E-02	1.169E-01
NP-237	1.252E+00	4.456E-01	1.594E-01	2.273E-01
U-238	1.654E+00	2.256E+00	1.197E+00	1.151E+00
AM-241	6.932E-01	2.624E-01	1.528E-01	1.339E-01
AM-243	3.872E-01	8.776E-02	4.937E-02	4.478E-02
ANH-511	1.627E-01	8.610E-02	2.665E-02	4.393E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	7.055E-02	4.009E-01	3.336E-01	2.046E-01 NOT IDENT.

NA-22	-1.878E-02	6.309E-02	4.983E-02	3.219E-02	NOT IDENT.
NA-24	-2.434E+06	2.043E+07	0.000E+00	1.043E+07	SHORT HLIF
AL-26	1.291E-02	4.036E-02	3.610E-02	2.059E-02	NOT IDENT.
TI-44	4.200E-01	6.746E-02	3.983E-02	3.442E-02	FAIL ABUN
SC-46	-4.194E-02	5.486E-02	4.324E-02	2.799E-02	FAIL ABUN
V-48	-2.843E-02	1.070E-01	8.759E-02	5.459E-02	NOT IDENT.
CR-51	1.348E-01	4.357E-01	3.790E-01	2.223E-01	NOT IDENT.
MN-52	3.079E-01	4.623E-01	4.207E-01	2.359E-01	NOT IDENT.
MN-54	1.263E-02	5.429E-02	4.528E-02	2.770E-02	NOT IDENT.
CO-56	1.885E-02	4.947E-02	4.204E-02	2.524E-02	FAIL ABUN
CO-57	-2.530E-02	2.502E-02	2.000E-02	1.276E-02	NOT IDENT.
CO-58	-6.980E-02	5.424E-02	3.821E-02	2.767E-02	NOT IDENT.
FE-59	-1.910E-02	1.213E-01	9.907E-02	6.190E-02	NOT IDENT.
CO-60	-3.969E-03	5.276E-02	4.419E-02	2.692E-02	NOT IDENT.
ZN-65	9.375E-02	1.404E-01	1.090E-01	7.165E-02	NOT IDENT.
GE-68	-7.865E-01	1.467E+00	1.141E+00	7.483E-01	NOT IDENT.
AS-73	3.438E-01	1.093E+00	9.125E-01	5.574E-01	NOT IDENT.
AS-74	-3.492E-02	1.344E-01	1.065E-01	6.855E-02	NOT IDENT.
SE-75	9.160E-03	5.078E-02	3.958E-02	2.591E-02	NOT IDENT.
BR-77	-4.105E+00	2.680E+01	2.144E+01	1.367E+01	FAIL ABUN
SR-82	-2.122E-01	5.213E-01	4.119E-01	2.660E-01	NOT IDENT.
RB-83	-1.601E-02	8.106E-02	6.456E-02	4.136E-02	NOT IDENT.
RB-84	1.034E-01	1.045E-01	9.579E-02	5.330E-02	NOT IDENT.
KR-85	2.571E+01	9.656E+00	8.689E+00	4.927E+00	NOT IDENT.
SR-85	1.357E-01	5.096E-02	4.585E-02	2.600E-02	NOT IDENT.
RB-86	-8.245E-01	1.064E+00	8.032E-01	5.429E-01	NOT IDENT.
Y-88	1.228E-02	4.369E-02	3.887E-02	2.229E-02	NOT IDENT.
ZR-88	-3.746E-03	3.838E-02	3.188E-02	1.958E-02	NOT IDENT.
Y-91	1.651E+01	2.548E+01	2.228E+01	1.300E+01	NOT IDENT.
NB-94	1.257E-02	4.386E-02	3.740E-02	2.238E-02	NOT IDENT.
NB-95	-2.965E-02	6.142E-02	4.862E-02	3.133E-02	NOT IDENT.
NB-95M	-8.735E-02	1.521E-01	1.053E-01	7.758E-02	NOT IDENT.
ZR-95	-5.975E-02	9.479E-02	7.295E-02	4.836E-02	NOT IDENT.
NB-97	-3.642E+06	1.868E+06	0.000E+00	9.531E+05	SHORT HLIF
ZR-97	1.380E+07	3.568E+07	0.000E+00	1.820E+07	SHORT HLIF
MO-99	1.402E+00	2.908E+01	2.420E+01	1.483E+01	NOT IDENT.
TC-99M	-2.820E+19	7.681E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.210E-02	3.679E-02	2.947E-02	1.877E-02	NOT IDENT.
RH-102	1.150E-02	3.498E-02	2.948E-02	1.785E-02	NOT IDENT.
RU-103	7.912E-03	4.740E-02	3.931E-02	2.419E-02	FAIL ABUN
RH-106	-1.428E-01	3.995E-01	3.266E-01	2.038E-01	FAIL ABUN
RU-106	-1.428E-01	3.992E-01	3.266E-01	2.037E-01	FAIL ABUN
AG-108M	2.896E-02	3.963E-02	3.461E-02	2.022E-02	NOT IDENT.
AG-110M	-8.841E-02	4.538E-02	3.105E-02	2.315E-02	NOT IDENT.
IN-111	-2.402E+00	2.361E+00	1.534E+00	1.204E+00	NOT IDENT.
IN-113M	-4.719E-04	5.511E-02	4.608E-02	2.812E-02	NOT IDENT.
SN-113	-4.719E-04	5.511E-02	4.608E-02	2.812E-02	NOT IDENT.
IN-114M	1.103E-02	2.052E-01	1.536E-01	1.047E-01	NOT IDENT.
CD-115	-4.383E+00	3.265E+01	0.000E+00	1.666E+01	SHORT HLIF
SN-117M	2.339E-02	6.583E-02	5.580E-02	3.359E-02	NOT IDENT.
SB-122	-1.587E+00	4.850E+00	4.022E+00	2.475E+00	NOT IDENT.
I-123	1.307E+08	1.915E+08	0.000E+00	9.771E+07	SHORT HLIF
TE-123M	2.029E-02	2.973E-02	2.559E-02	1.517E-02	NOT IDENT.
I-124	5.630E-02	1.504E+00	1.162E+00	7.672E-01	NOT IDENT.
SB-124	-8.156E-02	1.036E-01	7.047E-02	5.286E-02	FAIL ABUN
SB-125	1.047E-01	1.076E-01	9.575E-02	5.490E-02	FAIL ABUN
TE-125M	-3.560E+00	9.040E+00	7.751E+00	4.612E+00	NOT IDENT.
I-126	-1.305E-01	2.901E-01	2.344E-01	1.480E-01	NOT IDENT.
SB-126	-2.433E-02	2.492E-01	1.769E-01	1.272E-01	FAIL ABUN
SB-127	8.878E-01	3.070E+00	2.594E+00	1.566E+00	NOT IDENT.
XE-127	-5.578E-02	5.361E-02	4.122E-02	2.735E-02	NOT IDENT.
I-131	-5.679E-02	1.619E-01	1.328E-01	8.258E-02	NOT IDENT.
TE-132	4.317E-01	1.373E+00	1.146E+00	7.007E-01	NOT IDENT.
BA-133	-2.889E-02	5.568E-02	3.914E-02	2.841E-02	NOT IDENT.
I-133	-1.475E+04	6.971E+04	0.000E+00	3.557E+04	SHORT HLIF
CS-134	1.942E-01	9.794E-02	6.155E-02	4.997E-02	FAIL ABUN
CS-135	1.370E-02	1.870E-01	1.349E-01	9.540E-02	NOT IDENT.
I-135	-4.709E+18	7.392E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.907E-02	1.570E-01	1.266E-01	8.011E-02	FAIL ABUN
BA-137M	2.875E-02	4.805E-02	4.213E-02	2.452E-02	NOT IDENT.
CS-137	3.039E-02	5.080E-02	4.453E-02	2.592E-02	NOT IDENT.
CE-139	-4.036E-02	3.086E-02	2.417E-02	1.574E-02	NOT IDENT.
BA-140	9.935E-02	3.578E-01	3.117E-01	1.826E-01	NOT IDENT.
LA-140	1.575E-01	1.508E-01	1.419E-01	7.692E-02	FAIL ABUN
CE-141	4.860E-02	6.736E-02	5.946E-02	3.437E-02	NOT IDENT.
CE-143	1.144E+03	7.456E+02	0.000E+00	3.804E+02	SHORT HLIF
CE-144	-2.372E-02	2.301E-01	1.768E-01	1.174E-01	NOT IDENT.
PM-144	-8.533E-03	4.598E-02	3.774E-02	2.346E-02	NOT IDENT.

PR-144	-5.791E-01	3.120E+00	2.561E+00	1.592E+00	NOT IDENT.
PM-146	-1.124E-02	5.298E-02	4.290E-02	2.703E-02	NOT IDENT.
ND-147	1.943E-01	8.266E-01	7.204E-01	4.217E-01	FAIL ABUN
PM-149	-7.010E+01	2.373E+02	0.000E+00	1.211E+02	SHORT HLIF
EU-152	3.975E-02	1.160E-01	8.937E-02	5.919E-02	FAIL ABUN
GD-153	-8.645E-02	9.109E-02	6.718E-02	4.647E-02	FAIL ABUN
EU-154	-5.237E-02	1.760E-01	1.390E-01	8.980E-02	NOT IDENT.
EU-155	1.465E-01	1.080E-01	9.967E-02	5.509E-02	FAIL ABUN
TB-160	7.173E-02	1.985E-01	1.741E-01	1.013E-01	FAIL ABUN
HO-166M	4.267E-02	8.028E-02	6.975E-02	4.096E-02	NOT IDENT.
TM-171	3.401E+01	3.279E+01	2.646E+01	1.673E+01	FAIL ABUN
LU-176	7.197E-03	2.832E-02	2.190E-02	1.445E-02	FAIL ABUN
LU-177	4.056E+00	2.033E+00	1.448E+00	1.037E+00	FAIL ABUN
LU-177M	-1.685E-01	2.131E-01	1.664E-01	1.087E-01	NOT IDENT.
HF-181	-1.010E-02	5.420E-02	4.367E-02	2.765E-02	NOT IDENT.
W-181	-2.441E-02	4.523E-01	3.429E-01	2.307E-01	NOT IDENT.
TA-182	9.892E-02	2.732E-01	2.320E-01	1.394E-01	FAIL ABUN
RE-183	-1.114E-01	1.190E-01	9.431E-02	6.071E-02	FAIL ABUN
RE-184	-1.204E-01	2.563E-01	2.011E-01	1.308E-01	FAIL ABUN
OS-185	2.252E-02	5.627E-02	4.884E-02	2.871E-02	FAIL ABUN
RE-188	1.849E-01	1.844E-01	1.639E-01	9.409E-02	NOT IDENT.
W-188	-3.347E+00	9.804E+00	7.250E+00	5.002E+00	FAIL ABUN
IR-192	1.011E-03	3.887E-02	3.325E-02	1.983E-02	FAIL ABUN
AU-195	2.390E-01	2.555E-01	2.099E-01	1.304E-01	FAIL ABUN
TL-200	2.960E+02	2.981E+03	0.000E+00	1.521E+03	SHORT HLIF
TL-201	-1.850E+00	1.274E+01	1.067E+01	6.503E+00	NOT IDENT.
TL-202	-1.699E-04	1.000E-01	8.270E-02	5.103E-02	NOT IDENT.
HG-203	7.102E-02	5.121E-02	4.307E-02	2.613E-02	NOT IDENT.
BI-207	-2.528E-02	7.198E-02	5.787E-02	3.672E-02	FAIL ABUN
TL-207	-1.142E-01	8.199E-01	6.076E-01	4.183E-01	FAIL ABUN
PO-209	-1.285E+00	9.631E+00	8.074E+00	4.914E+00	NOT IDENT.
BI-210	3.099E-01	5.353E+00	4.484E+00	2.731E+00	NOT IDENT.
PB-210	3.099E-01	5.353E+00	4.484E+00	2.731E+00	NOT IDENT.
PO-210	3.099E-01	5.353E+00	4.484E+00	2.731E+00	NOT IDENT.
PB-211	1.737E-01	1.101E+00	9.242E-01	5.616E-01	NOT IDENT.
BI-212	1.897E+00	6.914E-01	4.870E-01	3.528E-01	FAIL ABUN
PO-215	-1.142E-01	8.199E-01	6.076E-01	4.183E-01	FAIL ABUN
RN-219	3.626E-02	4.846E-01	4.066E-01	2.472E-01	FAIL ABUN
RN-220	-4.894E+00	3.096E+01	2.611E+01	1.580E+01	NOT IDENT.
RA-223	-1.142E-01	8.199E-01	6.076E-01	4.183E-01	FAIL ABUN
AC-227	4.535E-01	4.066E-01	3.513E-01	2.074E-01	FAIL ABUN
TH-227	4.535E-01	4.087E-01	3.513E-01	2.085E-01	FAIL ABUN
TH-229	2.131E-01	5.378E-01	4.575E-01	2.744E-01	FAIL ABUN
PA-231	-4.865E-01	1.757E+00	1.380E+00	8.964E-01	FAIL ABUN
TH-231	-1.142E-01	8.199E-01	6.076E-01	4.183E-01	FAIL ABUN
U-231	-1.529E-01	1.889E+00	1.377E+00	9.637E-01	FAIL ABUN
PA-233	-3.483E-02	6.723E-02	5.547E-02	3.430E-02	FAIL ABUN
PA-234	-5.027E-02	3.676E-01	3.058E-01	1.875E-01	FAIL ABUN
PA-234M	-1.419E+00	8.694E+00	7.181E+00	4.436E+00	NOT IDENT.
U-235	1.580E-01	2.279E-01	1.947E-01	1.163E-01	FAIL ABUN
NP-236	-4.513E-02	8.413E-02	6.803E-02	4.292E-02	NOT IDENT.
NP-239	-4.771E-02	1.818E-01	1.560E-01	9.273E-02	FAIL ABUN
CM-243	-1.486E-02	9.457E-02	8.241E-02	4.825E-02	FAIL ABUN
CM-247	2.715E-02	4.355E-02	3.793E-02	2.222E-02	NOT IDENT.
CF-249	1.490E-02	4.826E-02	4.127E-02	2.462E-02	NOT IDENT.
CF-251	1.723E-01	1.338E-01	1.195E-01	6.824E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
*****************************************************************************
```

ENERGY	MDA COUNTS
46.50	140.3056
46.50	140.3056
46.50	140.3056
48.70	157.0737
49.72	128.7842
51.35	147.1815
52.39	167.3883
52.97	135.1376
53.15	138.3386
53.44	132.3896
54.07	148.2649
56.28	145.7646
56.28	145.7668
57.37	0.0000
57.53	163.4315
57.53	163.4333
57.60	163.4875
57.98	180.5900
57.98	180.5900
59.32	176.1246
59.32	176.1246
59.40	176.1920
59.54	176.3096
59.72	173.6375
60.01	173.8765
61.10	191.8206
61.14	191.8563
61.30	191.9998
63.00	187.7755
63.29	188.0240
63.29	188.0240
63.58	168.1503
64.28	214.8169
65.12	202.6001
65.20	202.6713
65.20	202.6713
66.05	191.8085
66.72	169.0522
66.83	171.6864
66.91	171.7463
67.20	203.7256
67.20	203.7256
67.75	220.6780
67.85	235.0535
68.90	204.1137
68.90	204.1137
69.30	197.8284
69.67	195.9259
70.82	247.6613
70.82	247.6613
70.83	247.6715
72.80	239.2204
72.87	239.2871
72.87	239.2871
74.67	235.0013
74.81	235.1315
74.81	235.1315
74.81	235.1315
74.81	235.1315
74.81	235.1315
74.81	235.1315
74.97	235.2822
75.28	235.5710
75.70	235.9630
77.11	237.2675
77.11	237.2675
77.11	237.2675

77.11	237.2675
77.11	237.2675
77.11	237.2675
78.38	238.4323
79.62	239.5621
79.80	239.7240
79.80	239.7240
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80.18	240.0684
80.30	240.1763
80.30	240.1763
80.57	240.4207
81.00	240.8079
81.07	240.8698
81.07	240.8698
81.07	240.8698
81.07	240.8698
82.60	177.0210
83.37	177.5185
83.78	177.7852
83.78	177.7852
83.78	177.7852
83.78	177.7852
84.21	189.7770
84.40	220.3871
84.90	145.6237
85.43	145.9009
86.29	146.3484
86.50	146.4572
86.54	146.4780
86.59	146.5036
86.72	146.5717
86.79	146.6067
86.94	189.2712
87.30	189.5117
87.30	189.5117
87.30	189.5117
87.30	189.5117
87.30	189.5117
87.30	189.5117
87.57	189.6912
87.88	189.8975
88.03	230.3706
88.36	230.6355
88.47	230.7243
89.95	205.6082
91.11	163.2183
92.29	163.8709
92.38	204.0961
92.38	204.0961
93.35	178.9636
94.00	163.1921
94.67	189.4597
94.67	189.4633
94.90	189.6061
94.90	189.6061
94.90	189.6061
94.90	189.6061
95.87	185.3312
95.87	185.3312
96.73	194.0033
97.43	215.6803
98.44	167.2016
98.44	167.2026
98.88	167.4371
99.55	181.3645
99.55	181.3645
99.86	181.5417
100.00	180.3858
100.10	180.4449
103.18	210.8761
103.76	185.0011
105.00	163.1149
105.31	163.2677
108.00	179.7773
109.28	177.9138
111.00	172.8465
111.00	172.8465

111.76	171.5188
112.95	172.1046
115.19	186.1227
116.30	159.0412
117.00	171.4745
117.00	171.4745
117.66	172.6553
121.11	157.6447
121.62	164.8768
121.78	164.9475
122.06	173.8512
122.32	173.9711
122.32	173.9711
122.32	173.9711
122.32	173.9711
123.07	166.3959
127.23	180.2341
129.76	191.7083
131.20	188.8107
133.02	170.7064
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135.34	188.9486
136.00	180.1545
136.25	169.3401
136.48	165.7910
140.51	184.8839
140.51	0.0000
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142.65	203.3854
143.76	171.4747
144.24	171.6666
144.24	171.6666
144.24	171.6666
144.24	171.6666
145.22	169.2661
145.44	173.0751
147.16	197.1149
152.43	193.7995
152.70	195.8081
153.22	177.0930
154.21	175.5810
154.21	175.5810
154.21	175.5810
154.21	175.5810
155.03	171.1450
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159.00	151.5244
160.31	183.6848
161.27	203.3331
162.32	180.6065
162.64	165.2649
163.35	156.8007
163.89	139.5352
165.85	193.6173
167.43	156.1800
171.28	161.3441
171.86	163.5008
172.10	163.5802
176.55	148.1300
176.60	148.1451
181.06	164.8783
184.41	155.9428
185.71	161.8896
186.00	161.9792
190.27	142.3509
192.34	171.0619
193.63	158.1154
197.04	182.8499
198.01	177.9926
198.60	155.3879
200.40	167.3169
201.83	161.4867
202.84	180.5585
205.31	144.6484
208.36	170.6946
208.81	162.3905

209.75	172.6826
209.75	172.6826
210.97	150.8148
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216.55	152.7594
218.09	159.5721
222.10	151.9941
223.80	152.4086
226.40	155.2134
227.00	145.5838
227.08	145.6029
227.20	145.6301
228.16	145.8510
228.18	145.8550
228.18	145.8550
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235.69	163.5367
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236.00	161.9626
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238.63	200.7774
238.63	200.7774
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241.98	140.0889
241.98	140.0889
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247.94	112.1684
248.90	107.8340
249.79	97.8511
252.40	124.1898
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252.85	126.5298
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256.20	95.3549
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260.90	0.0000
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264.65	108.9027
268.24	105.6331
268.79	100.5141
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269.46	99.4497
269.46	99.4497
269.46	99.4497
271.23	99.6895
273.65	100.0166
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277.35	99.9292
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277.60	99.9622
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278.60	100.0962
279.20	104.0408
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284.30	116.2674
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285.90	0.0000
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286.10	125.0273
287.40	119.9068
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290.80	139.8797
291.72	131.4706
293.26	0.0000
293.70	133.2357
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295.21	114.8301
295.21	114.8301
295.96	114.9375

296.50	115.0156
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299.80	115.4922
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300.09	115.5332
300.09	115.5332
300.10	115.5352
300.12	115.5371
301.29	115.7051
302.84	115.9277
303.76	95.7483
303.91	104.4721
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304.40	108.8910
304.84	106.0443
306.84	88.8298
308.46	81.2931
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319.02	103.4363
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320.08	98.0164
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323.87	106.9980
323.87	106.9980
323.87	106.9980
325.23	108.6552
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334.20	85.2144
334.30	85.2241
338.28	105.7502
338.28	105.7502
338.28	105.7502
338.28	105.7502
338.32	105.7554
338.32	105.7554
338.32	105.7554
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340.57	96.9328
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345.85	92.9312
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351.92	86.2633
351.92	86.2633
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374.96	101.1439
383.85	103.0494
387.95	94.5173
388.63	87.6119
391.69	98.8625
391.69	98.8625
392.90	99.9802
398.62	103.5548
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439.56	85.6323
439.89	84.6127
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445.03	92.3425
445.03	92.3425
445.03	92.3425
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511.85	63.2013
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513.99	47.9794
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529.87	0.0000
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568.70	68.4572
569.32	70.3390
569.50	70.3482
569.67	70.3557
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602.71	82.5219
603.60	102.6495
604.41	109.0254
604.70	109.0479
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609.31	84.6521
609.31	84.6521

609.31	84.6521
610.33	84.7086
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614.37	66.8025
618.01	70.7896
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621.84	69.0486
631.29	54.0326
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661.65	67.8579
664.57	0.0000
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666.33	84.8200
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696.49	73.3101
697.00	70.3196
697.49	65.3158
698.33	66.3529
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699.00	67.3844
702.63	65.5110
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722.78	62.8756
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722.95	62.8816
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727.18	39.8646
733.00	47.8573
735.90	46.2228
739.58	53.5222
742.81	49.4941
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747.13	54.7805
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752.31	54.9357
753.82	48.7568
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756.15	60.2444
756.87	61.3076
763.93	81.3611
765.79	82.4871
766.41	61.6245
766.84	60.5941
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768.36	56.4614
768.36	56.4614
768.36	56.4614
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778.00	70.4154
778.57	70.4367
778.89	65.1923
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792.07	58.2334
795.84	42.4355
796.30	40.6768
801.93	58.5328
805.60	45.8481
810.29	60.9229
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826.30	44.1781
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834.83	66.0099
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867.82	47.6540
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873.19	55.1270
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880.27	50.7042
880.51	50.7098
881.50	47.0436
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884.67	49.8856
889.25	62.0287
896.60	50.1658
898.02	54.8468
899.00	64.1723
903.28	49.7005
911.07	47.6973
911.07	47.6973
911.07	47.6973
919.63	49.8960
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925.24	58.3609
926.50	54.6263
934.06	52.9227
934.06	52.9227
934.06	52.9227
934.06	52.9227
935.52	56.7395
937.48	60.5755
944.10	44.6171
946.00	42.7542
949.00	40.9083
962.29	54.8640
964.01	42.6844
966.15	52.5837
968.20	93.7482
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969.11	103.6560
969.11	103.6560
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980.50	42.4388
983.50	50.2195
989.30	51.3114
996.32	49.5225
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1001.68	43.7952
1004.76	43.8519
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1037.82	39.5166
1038.57	40.5162

1038.76	0.0000
1045.16	40.6246
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1050.47	38.7271
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1076.63	44.1486
1077.35	39.1428
1085.78	46.3219
1099.22	43.5266
1112.02	61.0352
1112.84	65.4950
1115.52	45.4021
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1120.29	44.9006
1120.29	44.9006
1120.29	44.9006
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1129.67	40.2188
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1147.95	0.0000
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1175.09	55.1954
1177.93	50.0410
1189.05	65.9429
1204.90	43.1588
1205.75	0.0000
1213.00	44.3379
1221.42	51.8811
1230.97	53.8251
1235.34	60.1877
1236.41	0.0000
1238.11	58.4219
1238.11	58.4219
1238.11	58.4219
1238.11	58.4219
1238.25	58.4241
1246.25	47.6002
1260.41	0.0000
1271.85	46.3244
1274.45	47.4429
1274.54	47.4447
1291.56	34.3926
1298.22	0.0000
1312.09	44.9213
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1325.50	28.1982
1332.49	32.0315
1333.61	32.9846
1360.21	32.3161
1362.66	0.0000
1365.15	28.5592
1368.21	25.7278
1368.53	0.0000
1376.25	24.8375
1377.67	23.8935
1377.67	23.8935
1377.67	23.8935
1377.67	23.8935
1384.27	37.3501
1394.10	18.2518
1395.20	17.2975
1407.95	0.0000
1434.06	20.4214
1436.60	26.2758
1457.56	0.0000
1460.81	19.6052
1489.15	18.7807
1509.49	23.8627
1596.49	17.3202
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1678.03	0.0000
1691.02	16.7160
1691.02	16.7160

1706.46	0.0000
1750.46	0.0000
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1764.49	13.8370
1764.49	13.8370
1764.49	13.8370
1770.23	13.0575
1771.40	13.0613
1791.20	0.0000
1808.65	10.3565
1836.01	9.4772

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232664004

Total Uranium Activity	4.9944E+00	ug/g
Total Uranium Counting Unc.	6.7134E+00	ug/g
Total Uranium Tpu	3.4252E-06	ug/g
Total Uranium Mda	3.5636E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232664004       *
*   ANALYST       : MXR1                      DETECTOR   : GAM23            *
*   SAMPLE DATE   : 26-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 08:38:56.24    SAMPLE ALQT:  101.930 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.064E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.760E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.904E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.870E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:59:34.76

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664005.CNF;1
Sample date       : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:57:53
Sample ID         : G232664005           Sample quantity  : 1.25240E+02 GRAM
Detector name     : GAM20                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:31.76  0.4%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.75*	37	410	1.20	93.53	90	8	5.18E-03	97.1	
2	0	59.64	736	667	1.01	119.28	113	10	1.02E-01	7.5	
3	0	63.31*	101	457	1.33	126.60	124	8	1.41E-02	38.9	
4	2	74.87*	374	474	1.02	149.68	146	13	5.20E-02	10.4	2.13E+00
5	2	77.19*	637	396	1.01	154.31	146	13	8.85E-02	6.6	
6	4	87.37*	266	266	1.25	174.64	172	11	3.70E-02	11.1	2.01E+00
7	4	89.90*	173	310	1.04	179.70	172	11	2.40E-02	18.4	
8	0	93.24*	326	416	1.63	186.38	183	10	4.53E-02	13.7	
9	0	186.19*	188	430	1.40	372.00	367	12	2.61E-02	24.5	
10	0	209.07	74	219	0.91	417.70	414	7	1.03E-02	34.9	
11	5	238.57*	1122	154	1.07	476.63	472	17	1.56E-01	3.5	2.14E+00
12	5	241.50	302	231	1.97	482.49	472	17	4.20E-02	15.1	
13	0	269.74	128	219	1.35	538.89	534	11	1.77E-02	24.1	
14	2	295.11	333	153	1.35	589.59	584	23	4.63E-02	8.4	1.12E+00
15	2	300.06	78	175	1.45	599.47	584	23	1.08E-02	32.2	
16	0	338.21	171	187	1.17	675.69	671	9	2.38E-02	16.3	
17	0	351.84*	620	152	1.36	702.92	695	13	8.62E-02	5.8	
18	0	463.25	77	142	1.45	925.53	919	13	1.07E-02	33.8	
19	0	477.46	263	138	1.17	953.93	947	11	3.65E-02	10.6	
20	0	511.04*	119	146	1.67	1021.04	1013	17	1.66E-02	28.2	
21	0	583.19*	332	107	1.15	1165.24	1159	12	4.61E-02	8.6	
22	0	609.26*	388	134	1.38	1217.35	1212	13	5.39E-02	8.0	
23	0	661.50	903	120	1.44	1321.78	1314	16	1.25E-01	4.3	
24	0	727.32*	84	50	1.05	1453.36	1449	10	1.16E-02	19.7	
25	0	768.39	65	27	2.13	1535.48	1530	10	9.00E-03	19.6	
26	0	794.41	61	30	3.22	1587.51	1582	11	8.46E-03	21.7	
27	0	860.69	57	43	1.60	1720.05	1715	11	7.87E-03	26.2	
28	0	911.33*	271	56	1.63	1821.34	1816	14	3.77E-02	8.5	
29	0	969.70*	108	103	1.68	1938.07	1930	12	1.50E-02	21.3	
30	0	1120.61	118	46	1.32	2239.98	2235	13	1.64E-02	14.7	
31	0	1461.03*	1085	27	1.67	2921.33	2913	15	1.51E-01	3.2	
32	0	1587.83	22	6	1.27	3175.22	3169	12	3.09E-03	30.5	
33	0	1621.25	12	5	1.39	3242.15	3238	9	1.69E-03	42.8	
34	0	1631.77	16	11	0.63	3263.22	3253	14	2.25E-03	49.4	
35	0	1764.84	75	4	2.42	3529.76	3524	14	1.04E-02	12.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 10:59:37

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664005.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:57:53
Sample ID : G232664005 Sample quantity : 125.24 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA20 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:31.76 0.4%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	+	477.59	*	2.889E+00	6.593E-01	5.826E-01	4.850E-02	4.959
K-40	+	1460.81	*	2.370E+01	2.156E+00	4.507E-01	2.892E-02	52.579
CD-109	+	88.03	*	3.201E+00	7.562E-01	1.139E+00	9.322E-02	2.810
SN-126	+	64.28		6.908E-01	5.460E-01	6.322E-01	8.994E-02	1.093
	+	86.94		1.303E+00	6.102E-01	4.975E-01	2.052E-01	2.618
	+	87.57	*	3.134E-01	7.402E-02	1.118E-01	9.113E-03	2.802
CS-135	+	268.24	*	4.721E-01	2.348E-01	2.168E-01	2.682E-02	2.177
BA-137M	+	661.65	*	1.186E+00	1.421E-01	5.146E-02	4.300E-03	23.042
CS-137	+	661.65	*	1.253E+00	1.504E-01	5.440E-02	4.554E-03	23.042
TL-208		277.35		3.573E-01	3.351E-01	5.814E-01	8.635E-02	0.615
	+	510.84		5.289E-01	3.038E-01	1.871E-01	2.132E-02	2.826
	+	583.14	*	4.197E-01	8.087E-02	5.490E-02	4.811E-03	7.645
	+	860.37		6.705E-01	3.587E-01	3.985E-01	4.139E-02	1.682
BI-210	+	46.50	*	1.414E+00	2.750E+00	3.219E+00	2.483E-01	0.439
PB-210	+	46.50	*	1.414E+00	2.750E+00	3.219E+00	2.483E-01	0.439
PO-210	+	46.50	*	1.414E+00	2.749E+00	3.219E+00	2.132E-01	0.439
BI-211		72.87		4.428E+00	2.922E+00	4.515E+00	3.210E-01	0.981
	+	351.07	*	3.444E+00	5.178E-01	2.850E-01	2.753E-02	12.084
BI-212	+	727.18	*	9.065E-01	3.682E-01	4.263E-01	4.357E-02	2.127
		785.46		1.717E-01	1.401E+00	2.360E+00	2.194E-01	0.073
	+	1620.62		1.123E+00	9.633E-01	1.970E+00	1.165E-01	0.570
PB-212	+	74.81		1.758E+00	4.218E-01	4.630E-01	5.466E-02	3.797
	+	77.11		1.718E+00	2.605E-01	2.663E-01	1.958E-02	6.453
	+	87.30		1.449E+00	3.718E-01	5.521E-01	7.113E-02	2.625
	+	238.63	*	1.368E+00	1.717E-01	8.047E-02	8.366E-03	16.993
	+	300.09		1.459E+00	9.594E-01	1.101E+00	1.413E-01	1.326
PO-212	+	74.81		1.758E+00	4.218E-01	4.630E-01	5.466E-02	3.797
	+	77.11		1.718E+00	2.605E-01	2.663E-01	1.958E-02	6.453
	+	87.30		1.449E+00	3.718E-01	5.521E-01	7.113E-02	2.625
		115.19		-1.708E-01	3.273E+00	5.201E+00	3.987E-01	-0.033
	+	238.63	*	1.368E+00	1.717E-01	8.047E-02	8.366E-03	16.993
	+	300.09		1.459E+00	9.594E-01	1.101E+00	1.413E-01	1.326
BI-214	+	609.31	*	9.258E-01	1.733E-01	9.998E-02	9.703E-03	9.260
	+	768.36		1.722E+00	6.993E-01	8.624E-01	9.431E-02	1.996

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		4.580E-01	1.064E+00	1.819E+00	2.092E-01	0.252
	+	1120.29		1.451E+00	4.482E-01	4.056E-01	3.842E-02	3.577
		1238.11		1.070E+00	8.852E-01	1.559E+00	1.279E-01	0.686
		1377.67		9.318E-01	8.137E-01	1.538E+00	1.352E-01	0.606
	+	1764.49		1.285E+00	3.353E-01	2.749E-01	1.550E-02	4.674
PB-214	+	74.81		3.029E+00	7.059E-01	7.977E-01	8.248E-02	3.797
	+	77.11		2.945E+00	4.997E-01	4.565E-01	4.833E-02	6.453
	+	87.30		2.483E+00	6.169E-01	9.458E-01	1.059E-01	2.625
	+	241.98		2.212E+00	7.107E-01	4.843E-01	5.380E-02	4.567
	+	295.21		1.096E+00	2.346E-01	1.928E-01	2.538E-02	5.682
	+	351.92	*	1.198E+00	1.907E-01	9.936E-02	1.087E-02	12.059
PO-214	+	74.81		3.029E+00	7.059E-01	7.977E-01	8.248E-02	3.797
	+	77.11		2.945E+00	4.997E-01	4.565E-01	4.833E-02	6.453
	+	87.30		2.483E+00	6.169E-01	9.458E-01	1.059E-01	2.625
	+	241.98		2.212E+00	7.107E-01	4.843E-01	5.380E-02	4.567
	+	295.21		1.096E+00	2.346E-01	1.928E-01	2.538E-02	5.682
	+	351.92	*	1.198E+00	1.907E-01	9.936E-02	1.087E-02	12.059
PO-216	+	74.81		1.758E+00	4.218E-01	4.630E-01	5.466E-02	3.797
	+	77.11		1.718E+00	2.605E-01	2.663E-01	1.958E-02	6.453
	+	87.30		1.449E+00	3.718E-01	5.521E-01	7.113E-02	2.625
	+	238.63	*	1.368E+00	1.717E-01	8.047E-02	8.366E-03	16.993
	+	300.09		1.459E+00	9.594E-01	1.101E+00	1.413E-01	1.326
PO-218	+	74.81		3.029E+00	7.059E-01	7.977E-01	8.248E-02	3.797
	+	77.11		2.945E+00	4.997E-01	4.565E-01	4.833E-02	6.453
	+	87.30		2.483E+00	6.169E-01	9.458E-01	1.059E-01	2.625
	+	241.98		2.212E+00	7.107E-01	4.843E-01	5.380E-02	4.567
	+	295.21		1.096E+00	2.346E-01	1.928E-01	2.538E-02	5.682
	+	351.92	*	1.198E+00	1.907E-01	9.936E-02	1.087E-02	12.059
RA-224	+	240.98	*	4.194E+00	1.327E+00	9.155E-01	8.721E-02	4.581
RA-226	+	609.31	*	9.258E-01	1.733E-01	9.998E-02	9.703E-03	9.260
	+	768.36		1.722E+00	6.993E-01	8.624E-01	9.431E-02	1.996
		934.06		4.580E-01	1.064E+00	1.819E+00	2.092E-01	0.252
	+	1120.29		1.451E+00	4.482E-01	4.056E-01	3.842E-02	3.577
		1238.11		1.070E+00	8.852E-01	1.559E+00	1.279E-01	0.686
		1377.67		9.318E-01	8.137E-01	1.538E+00	1.352E-01	0.606
	+	1764.49		1.285E+00	3.353E-01	2.749E-01	1.550E-02	4.674
AC-228	+	338.32		1.047E+00	5.530E-01	3.562E-01	1.479E-01	2.941
	+	911.07	*	1.517E+00	3.174E-01	1.674E-01	2.055E-02	9.061
	+	969.11		1.062E+00	5.163E-01	2.838E-01	6.690E-02	3.741
RA-228	+	338.32		1.047E+00	5.530E-01	3.562E-01	1.479E-01	2.941
	+	911.07	*	1.517E+00	3.174E-01	1.674E-01	2.055E-02	9.061
	+	969.11		1.062E+00	5.163E-01	2.838E-01	6.690E-02	3.741
TH-228		84.40		1.548E+00	2.455E+00	3.645E+00	4.617E-01	0.425
	+	238.60	*	1.368E+00	1.717E-01	8.047E-02	8.364E-03	16.995
	+	300.10		1.459E+00	1.283E+00	1.101E+00	6.576E-01	1.326
TH-230	+	609.31	*	9.258E-01	1.733E-01	9.998E-02	9.703E-03	9.260
	+	768.36		1.722E+00	6.993E-01	8.623E-01	9.431E-02	1.996
		934.06		4.580E-01	1.064E+00	1.819E+00	2.092E-01	0.252
	+	1120.29		1.451E+00	4.482E-01	4.056E-01	3.842E-02	3.577

Sample ID : G232664005 Acquisition date : 14-JUL-2009 08:57:53

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.070E+00	8.852E-01	1.559E+00	1.279E-01	0.686
		1377.67		9.317E-01	8.137E-01	1.538E+00	1.352E-01	0.606
	+	1764.49		1.285E+00	3.353E-01	2.749E-01	1.550E-02	4.674
TH-232	+	338.32		1.047E+00	3.567E-01	3.562E-01	3.514E-02	2.941
	+	911.07	*	1.517E+00	3.174E-01	1.674E-01	2.055E-02	9.061
	+	969.11		1.062E+00	5.163E-01	2.838E-01	6.690E-02	3.741
TH-234	+	63.29	*	1.745E+00	1.390E+00	1.590E+00	2.732E-01	1.098
	+	92.38		2.531E+00	8.253E-01	6.502E-01	1.156E-01	3.892
U-234	+	609.31	*	9.258E-01	1.733E-01	9.998E-02	9.703E-03	9.260
	+	768.36		1.722E+00	6.993E-01	8.623E-01	9.431E-02	1.996
		934.06		4.580E-01	1.064E+00	1.819E+00	2.092E-01	0.252
	+	1120.29		1.451E+00	4.482E-01	4.056E-01	3.842E-02	3.577
		1238.11		1.070E+00	8.852E-01	1.559E+00	1.279E-01	0.686
		1377.67		9.317E-01	8.137E-01	1.538E+00	1.352E-01	0.606
	+	1764.49		1.285E+00	3.353E-01	2.749E-01	1.550E-02	4.674
NP-237	+	86.50	*	9.202E-01	2.886E-01	3.651E-01	8.088E-02	2.520
		95.87		-7.349E-01	9.345E-01	1.266E+00	3.086E-01	-0.581
U-238	+	63.29	*	1.745E+00	1.390E+00	1.590E+00	2.732E-01	1.098
	+	92.38		2.531E+00	7.206E-01	6.502E-01	5.187E-02	3.892
AM-241	+	59.54	*	1.519E+00	2.550E-01	1.943E-01	1.462E-02	7.815
AM-243	+	74.67	*	2.850E-01	6.297E-02	7.522E-02	5.420E-03	3.789
	+	86.72		3.451E+01	8.151E+00	1.367E+01	1.104E+00	2.524
		117.66		-3.799E+00	3.421E+00	5.196E+00	3.990E-01	-0.731
		142.18		-5.703E+00	1.633E+01	2.566E+01	1.713E+00	-0.222
ANH-511	+	511.00	*	1.142E-01	6.493E-02	4.043E-02	3.141E-03	2.825

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22		1274.54	*	-1.124E-02	3.662E-02	5.671E-02	3.389E-03	-0.198
NA-24		1368.53	*	-9.751E+00	3.662E-02	Half-Life too short		
AL-26		1129.67		5.367E-01	1.552E+00	2.608E+00	1.719E-01	0.206
		1808.65	*	1.417E-05	2.067E-02	3.400E-02	1.881E-03	0.000
TI-44		67.85		-8.477E-03	4.111E-02	5.934E-02	4.089E-03	-0.143
	+	78.38	*	3.171E-01	4.807E-02	6.701E-02	4.982E-03	4.732
SC-46		889.25	*	6.762E-03	3.466E-02	5.836E-02	5.846E-03	0.116
	+	1120.51		2.541E-01	7.667E-02	1.194E-01	8.081E-03	2.128
V-48		944.10		1.393E-01	8.620E-01	1.442E+00	1.377E-01	0.097
		983.50	*	-5.991E-02	7.024E-02	1.043E-01	9.420E-03	-0.575
		1312.09		-2.358E-02	7.290E-02	1.117E-01	6.760E-03	-0.211
CR-51		320.08	*	-2.285E-02	3.407E-01	5.623E-01	6.206E-02	-0.041
MN-52		744.21		-1.896E-01	2.861E-01	4.485E-01	4.035E-02	-0.423
		848.13		-1.048E+00	8.399E+00	1.376E+01	1.340E+00	-0.076
		935.52		2.625E-01	3.423E-01	5.998E-01	5.791E-02	0.438
		1246.25		2.987E+00	9.127E+00	1.523E+01	8.973E-01	0.196
		1333.61		1.770E+00	7.200E+00	1.195E+01	7.287E-01	0.148
		1434.06	*	2.127E-03	2.346E-01	3.929E-01	2.393E-02	0.005
MN-54		834.83	*	-8.396E-04	3.435E-02	5.688E-02	5.488E-03	-0.015

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-56		846.75	*	1.505E-02	3.509E-02	6.041E-02	5.879E-03	0.249
		977.42		-1.484E+00	2.459E+00	3.750E+00	3.420E-01	-0.396
		1037.82		-4.633E-02	2.896E-01	4.658E-01	4.054E-02	-0.099
		1175.09		7.131E-01	1.950E+00	3.283E+00	1.873E-01	0.217
		1238.25		9.338E-02	9.207E-02	1.604E-01	9.996E-03	0.582
		1360.21		8.442E-02	8.679E-01	1.475E+00	9.001E-02	0.057
		1771.40		1.055E-01	1.554E-01	2.787E-01	1.567E-02	0.378
CO-57		122.06	*	-9.621E-03	2.336E-02	3.679E-02	2.844E-03	-0.262
		136.48		9.779E-02	1.919E-01	3.141E-01	2.432E-02	0.311
CO-58		810.76	*	-2.818E-02	3.197E-02	4.800E-02	4.560E-03	-0.587
FE-59		142.65		8.674E-01	2.581E+00	4.183E+00	2.783E-01	0.207
		192.34		1.303E+00	9.424E-01	1.565E+00	1.926E-01	0.832
		1099.22	*	-3.647E-02	9.116E-02	1.425E-01	1.139E-02	-0.256
		1291.56		5.353E-03	1.132E-01	1.834E-01	1.391E-02	0.029
CO-60		1173.22		-2.293E-02	3.979E-02	6.057E-02	3.452E-03	-0.379
		1332.49	*	2.849E-02	3.879E-02	6.763E-02	4.125E-03	0.421
ZN-65		1115.52	*	-3.357E-02	8.866E-02	1.173E-01	8.061E-03	-0.286
GE-68		1077.35	*	3.013E-01	1.136E+00	1.903E+00	1.439E-01	0.158
AS-73		53.44	*	-6.640E-01	6.383E-01	9.576E-01	6.396E-02	-0.693
AS-74		595.88	*	-4.290E-02	9.225E-02	1.413E-01	1.153E-02	-0.304
		634.78		-2.893E-01	3.400E-01	5.321E-01	4.408E-02	-0.544
SE-75		66.05		-1.844E-01	4.159E+00	6.053E+00	5.459E-01	-0.030
		96.73		-1.013E+00	7.848E-01	1.034E+00	1.359E-01	-0.980
		121.11		1.370E-01	1.234E-01	2.072E-01	2.183E-02	0.661
		136.00		2.889E-02	3.683E-02	6.093E-02	4.301E-03	0.474
		198.60		1.694E-01	1.596E+00	2.662E+00	2.181E-01	0.064
		264.65	*	1.039E-02	4.356E-02	6.525E-02	7.245E-03	0.159
		279.53		8.571E-03	9.856E-02	1.651E-01	2.031E-02	0.052
		303.91		-5.397E-01	2.109E+00	3.016E+00	4.099E-01	-0.179
		400.65		7.498E-02	2.463E-01	4.111E-01	4.083E-02	0.182
BR-77	+	87.88		1.539E+03	3.636E+02	6.766E+02	5.531E+01	2.275
		200.40		-6.194E+01	3.192E+02	5.357E+02	3.839E+01	-0.116
	+	239.00		4.907E+02	5.755E+01	7.690E+01	7.231E+00	6.381
		249.79		-1.791E+01	1.251E+02	2.082E+02	2.100E+01	-0.086
		281.68		-1.159E+02	1.782E+02	2.859E+02	3.433E+01	-0.405
		297.23		2.922E+02	1.202E+02	2.135E+02	2.459E+01	1.369
		303.76		-8.895E+01	3.956E+02	5.674E+02	6.406E+01	-0.157
		439.47		2.187E+02	3.008E+02	5.140E+02	3.762E+01	0.426
		484.57		-6.842E+01	5.014E+02	8.048E+02	6.129E+01	-0.085
		520.65	*	5.919E-02	2.100E+01	3.391E+01	2.652E+00	0.002
		574.64		-1.164E+02	4.294E+02	6.731E+02	5.435E+01	-0.173
		578.91		1.476E+02	1.825E+02	2.801E+02	2.266E+01	0.527
		585.48		1.557E+03	4.979E+02	8.515E+02	6.913E+01	1.828
		755.35		4.272E+02	3.500E+02	6.347E+02	5.762E+01	0.673
		817.79		7.878E+00	2.276E+02	3.794E+02	3.616E+01	0.021
SR-82		698.33		1.547E+01	3.089E+01	5.382E+01	4.653E+00	0.287
		776.49	*	-4.460E-02	3.203E-01	5.265E-01	4.862E-02	-0.085
		1395.20		-8.143E-01	8.704E+00	1.437E+01	8.769E-01	-0.057
RB-83		520.41	*	-5.240E-03	6.311E-02	1.012E-01	7.912E-03	-0.052

---- Non-Identified Nuclides ----

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		529.64		-7.777E-02	9.075E-02	1.343E-01	1.057E-02	-0.579
		552.65		8.048E-03	1.727E-01	2.789E-01	2.225E-02	0.029
RB-84		881.50	*	1.493E-02	5.943E-02	1.008E-01	1.005E-02	0.148
KR-85		513.99	*	9.547E+00	7.040E+00	1.125E+01	8.761E-01	0.848
SR-85		513.99	*	5.039E-02	3.716E-02	5.939E-02	4.624E-03	0.848
RB-86		1076.63	*	2.639E-02	8.073E-01	1.321E+00	1.001E-01	0.020
Y-88		898.02		4.403E-02	3.523E-02	6.479E-02	6.552E-03	0.680
		1836.01	*	7.070E-04	2.866E-02	4.859E-02	2.661E-03	0.015
ZR-88		392.90	*	-4.308E-03	2.951E-02	4.795E-02	3.340E-03	-0.090
Y-91		1204.90	*	-1.282E+01	1.839E+01	2.770E+01	1.602E+00	-0.463
NB-94		702.63	*	2.048E-03	2.920E-02	4.923E-02	4.272E-03	0.042
		871.10		7.442E-03	2.699E-02	4.595E-02	4.548E-03	0.162
NB-95		765.79	*	1.752E-02	3.847E-02	5.900E-02	5.402E-03	0.297
NB-95M		235.69	*	1.047E-02	1.284E-01	1.913E-01	1.984E-02	0.055
ZR-95		724.18		3.227E-02	8.934E-02	1.357E-01	1.298E-02	0.238
		756.15	*	8.937E-02	6.789E-02	1.238E-01	1.228E-02	0.722
NB-97		657.90	*	4.473E-01	6.789E-02	Half-Life too short		
		1024.50		-5.335E+01	6.789E-02	Half-Life too short		
ZR-97		254.15		1.260E+01	6.789E-02	Half-Life too short		
		355.39		-4.786E+01	6.789E-02	Half-Life too short		
		507.63	*	3.635E+01	6.789E-02	Half-Life too short		
		602.52		1.880E+01	6.789E-02	Half-Life too short		
		1021.30		-6.851E+01	6.789E-02	Half-Life too short		
		1147.95		-8.876E+00	6.789E-02	Half-Life too short		
		1362.66		4.288E+01	6.789E-02	Half-Life too short		
		1750.46		-3.363E+01	6.789E-02	Half-Life too short		
MO-99		140.51		3.497E+00	4.821E+01	7.699E+01	2.092E+01	0.045
		181.06		-4.118E+01	3.722E+01	4.740E+01	8.186E+00	-0.869
		366.43		-4.126E+01	1.458E+02	2.353E+02	1.987E+01	-0.175
		739.58	*	2.149E+01	2.060E+01	3.691E+01	5.677E+00	0.582
		778.00		-1.150E+01	5.361E+01	8.744E+01	8.085E+00	-0.131
TC-99M		140.51	*	5.163E+12	5.361E+01	Half-Life too short		
RH-101		127.23		2.901E-03	2.917E-02	4.700E-02	3.496E-03	0.062
		198.01	*	-1.246E-04	2.892E-02	4.804E-02	3.382E-03	-0.003
		325.23		-8.834E-02	2.077E-01	3.356E-01	3.506E-02	-0.263
RH-102		418.52		1.364E-01	2.812E-01	4.734E-01	3.393E-02	0.288
		475.06	*	8.465E-02	3.399E-02	5.789E-02	4.375E-03	1.462
		631.29		5.867E-03	4.839E-02	7.809E-02	6.462E-03	0.075
		697.49		1.988E-02	6.495E-02	1.116E-01	9.636E-03	0.178
		766.84		1.480E-01	1.010E-01	1.698E-01	1.556E-02	0.871
		1046.59		4.207E-02	1.069E-01	1.813E-01	1.465E-02	0.232
		1112.84		1.159E-01	1.982E-01	3.339E-01	2.308E-02	0.347
RU-103		497.08	*	2.512E-02	3.910E-02	6.617E-02	9.010E-03	0.380
	+	610.33		1.049E+01	2.411E+00	2.767E+00	4.559E-01	3.792
RH-106	+	511.85		5.736E-01	3.260E-01	3.993E-01	3.104E-02	1.436
		621.84	*	1.295E-02	2.907E-01	4.662E-01	6.116E-02	0.028
		1050.47		-8.436E-01	2.007E+00	3.127E+00	2.507E-01	-0.270
RU-106	+	511.85		5.736E-01	3.260E-01	3.993E-01	3.104E-02	1.436
		621.84	*	1.295E-02	2.907E-01	4.662E-01	3.844E-02	0.028

---- Non-Identified Nuclides ----

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		1050.47		-8.436E-01	2.007E+00	3.127E+00	2.507E-01	-0.270
AG-108M		433.93	*	-5.379E-03	3.031E-02	4.882E-02	3.751E-03	-0.110
		614.37		-6.133E-03	4.063E-02	5.555E-02	4.764E-03	-0.110
		722.95		2.859E-02	3.738E-02	5.942E-02	5.446E-03	0.481
AG-110M		657.75	*	6.398E-03	3.547E-02	5.305E-02	4.568E-03	0.121
		677.61		-8.736E-03	2.673E-01	4.479E-01	3.910E-02	-0.020
		706.67		-4.862E-02	1.870E-01	3.069E-01	2.745E-02	-0.158
		763.93		-7.116E-03	1.377E-01	1.981E-01	1.857E-02	-0.036
		884.67		2.305E-02	4.241E-02	7.374E-02	7.543E-03	0.313
		937.48		-5.853E-02	1.047E-01	1.630E-01	1.615E-02	-0.359
		1384.27		-6.750E-02	1.262E-01	1.948E-01	1.255E-02	-0.346
IN-111		171.28		1.879E+00	1.777E+00	2.962E+00	1.693E-01	0.634
		245.39	*	6.464E-01	1.872E+00	2.837E+00	2.781E-01	0.228
IN-113M		391.69	*	-1.955E-04	4.187E-02	6.867E-02	5.002E-03	-0.003
SN-113		391.69	*	-1.955E-04	4.187E-02	6.867E-02	5.002E-03	-0.003
IN-114M		190.27	*	-7.880E-02	1.874E-01	2.739E-01	1.818E-02	-0.288
CD-115		260.90		-9.003E-05	1.874E-01	Half-Life too short		
		492.35		1.120E-05	1.874E-01	Half-Life too short		
		527.90	*	-2.406E-05	1.874E-01	Half-Life too short		
SN-117M		156.02		-2.709E+00	2.432E+00	3.651E+00	2.185E-01	-0.742
		158.56	*	4.221E-03	5.702E-02	9.098E-02	5.327E-03	0.046
SB-122		563.90	*	2.608E+00	3.480E+00	5.954E+00	4.780E-01	0.438
		692.80		-1.599E+01	7.448E+01	1.228E+02	1.056E+01	-0.130
I-123		159.00	*	2.671E+01	7.448E+01	Half-Life too short		
		528.96		-9.820E+03	7.448E+01	Half-Life too short		
TE-123M		159.00	*	4.079E-03	2.603E-02	4.170E-02	2.464E-03	0.098
I-124		602.71	*	-3.123E-01	1.026E+00	1.465E+00	1.198E-01	-0.213
		722.78		4.978E+00	6.190E+00	9.878E+00	8.725E-01	0.504
		1325.50		9.115E+00	4.986E+01	8.202E+01	4.990E+00	0.111
		1376.25		4.148E+01	4.136E+01	7.710E+01	4.705E+00	0.538
		1509.49		1.432E+01	2.039E+01	3.734E+01	2.256E+00	0.383
		1691.02		7.380E-01	4.403E+00	7.546E+00	4.372E-01	0.098
SB-124		602.71		-1.186E-02	3.897E-02	5.563E-02	4.553E-03	-0.213
		645.85		-3.716E-02	4.451E-01	7.449E-01	6.593E-02	-0.050
		709.31		-4.355E-01	2.326E+00	3.834E+00	3.347E-01	-0.114
		713.82		5.062E-01	1.328E+00	2.297E+00	2.789E-01	0.220
		722.78		2.741E-01	3.409E-01	5.439E-01	4.903E-02	0.504
	+	968.20		1.128E+01	4.911E+00	6.901E+00	6.377E-01	1.635
		1045.16		1.619E+00	2.346E+00	4.087E+00	3.312E-01	0.396
		1325.50		5.360E-01	2.932E+00	4.823E+00	2.934E-01	0.111
		1368.21		-1.155E+00	1.352E+00	1.949E+00	2.343E-01	-0.593
		1436.60		-9.934E-01	2.885E+00	4.549E+00	2.770E-01	-0.218
		1691.02	*	9.585E-03	5.718E-02	9.800E-02	6.164E-03	0.098
SB-125		427.89	*	2.347E-02	9.028E-02	1.499E-01	1.114E-02	0.157
	+	463.38		6.702E-01	4.570E-01	5.229E-01	4.315E-02	1.282
		600.56		6.662E-02	1.619E-01	2.679E-01	2.369E-02	0.249
		635.90		-5.156E-03	2.281E-01	3.839E-01	3.459E-02	-0.013
TE-125M		109.28	*	6.603E+00	8.560E+00	1.423E+01	1.360E+00	0.464
I-126		388.63		-2.171E-02	2.335E-01	3.811E-01	2.724E-02	-0.057

---- Non-Identified Nuclides ----

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		666.33	*	-3.701E-02	2.130E-01	3.060E-01	2.568E-02	-0.121
		753.82		1.987E+00	1.568E+00	2.858E+00	2.591E-01	0.695
SB-126		223.80		6.691E-01	4.056E+00	6.883E+00	5.837E-01	0.097
		278.60		1.784E+00	2.578E+00	4.434E+00	5.337E-01	0.402
	+	296.50		1.273E+01	2.606E+00	3.649E+00	4.211E-01	3.488
		414.70		-3.470E-02	8.470E-02	1.348E-01	9.620E-03	-0.258
		415.30		-1.810E+00	7.045E+00	1.133E+01	8.090E-01	-0.160
		555.20		1.373E+00	3.942E+00	6.535E+00	5.222E-01	0.210
		573.80		1.068E-01	1.094E+00	1.770E+00	1.428E-01	0.060
		593.00		-8.534E-01	9.872E-01	1.452E+00	1.183E-01	-0.588
		656.30		2.659E+00	3.594E+00	5.721E+00	4.772E-01	0.465
		666.33		-1.556E-02	8.956E-02	1.287E-01	1.080E-02	-0.121
		675.00		1.269E+00	1.933E+00	3.417E+00	2.891E-01	0.371
		695.00		-1.513E-02	7.506E-02	1.238E-01	1.067E-02	-0.122
		697.00		-9.816E-03	2.604E-01	4.355E-01	3.760E-02	-0.023
		720.50	*	3.035E-02	1.381E-01	2.299E-01	2.027E-02	0.132
		856.80		1.319E-01	5.239E-01	7.788E-01	7.633E-02	0.169
		989.30		2.877E-01	1.274E+00	2.139E+00	1.915E-01	0.135
		1034.80		3.918E+00	8.882E+00	1.520E+01	1.257E+00	0.258
		1213.00		8.448E-01	5.239E+00	8.598E+00	4.992E-01	0.098
SB-127	+	61.10		9.662E+02	1.784E+02	1.569E+02	1.687E+01	6.158
		252.40		2.328E+00	6.291E+00	1.061E+01	4.522E+00	0.219
		290.80		-1.790E+01	3.466E+01	4.859E+01	7.003E+00	-0.368
		411.60		-8.551E-01	1.900E+01	3.099E+01	4.837E+00	-0.028
		444.90		1.003E+01	1.530E+01	2.595E+01	3.250E+00	0.386
		473.00		-1.731E+00	3.062E+00	4.082E+00	5.293E-01	-0.424
		543.00		-9.047E+00	2.252E+01	3.483E+01	5.116E+00	-0.260
		603.60		-1.873E+01	2.016E+01	2.472E+01	3.214E+00	-0.758
		685.20	*	-1.183E+00	1.976E+00	3.146E+00	3.829E-01	-0.376
		698.50		9.551E+00	2.090E+01	3.622E+01	5.959E+00	0.264
		722.20		3.247E+01	4.521E+01	7.129E+01	8.676E+00	0.455
		783.80		2.343E+00	4.643E+00	8.079E+00	1.102E+00	0.290
XE-127		57.60		9.402E+00	5.896E+00	9.222E+00	6.186E-01	1.020
		145.22		-3.508E-01	7.006E-01	1.071E+00	6.987E-02	-0.328
		172.10		2.939E-02	1.152E-01	1.848E-01	1.064E-02	0.159
		202.84	*	-2.176E-02	4.428E-02	7.333E-02	5.351E-03	-0.297
		374.96		-1.068E-01	1.899E-01	3.004E-01	2.392E-02	-0.356
I-131		80.18		-3.960E-01	5.167E+00	7.492E+00	5.728E-01	-0.053
		284.30		-4.796E-01	1.657E+00	2.716E+00	3.334E-01	-0.177
		364.48	*	-1.640E-02	1.246E-01	2.033E-01	1.838E-02	-0.081
		636.97		-6.457E-01	1.708E+00	2.792E+00	2.460E-01	-0.231
		722.89		6.226E+00	7.995E+00	1.273E+01	1.134E+00	0.489
TE-132		49.72		-4.198E+00	2.484E+01	3.644E+01	3.740E+00	-0.115
		111.76		-3.293E+01	4.932E+01	7.698E+01	8.414E+00	-0.428
		116.30		-1.057E+01	4.476E+01	7.126E+01	7.795E+00	-0.148
		228.16	*	2.924E-01	1.089E+00	1.853E+00	3.024E-01	0.158
BA-133		53.15		-2.567E+00	2.539E+00	4.023E+00	2.687E-01	-0.638
		79.62		-8.373E-01	1.182E+00	1.651E+00	2.416E-01	-0.507
		81.00		-2.269E-02	9.053E-02	1.300E-01	1.997E-02	-0.174

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		276.40		2.905E-01	3.423E-01	5.724E-01	9.502E-02	0.508
		302.84		-5.868E-03	1.417E-01	2.064E-01	3.134E-02	-0.028
		356.01	*	-3.511E-02	4.239E-02	5.613E-02	7.551E-03	-0.626
		383.85		8.942E-02	2.963E-01	4.950E-01	5.854E-02	0.181
I-133	+	510.53		1.054E+01	2.963E-01	Half-Life too short		
		529.87	*	-3.599E-02	2.963E-01	Half-Life too short		
		706.58		-8.394E-01	2.963E-01	Half-Life too short		
		856.28		1.325E+00	2.963E-01	Half-Life too short		
		875.33		-4.071E-01	2.963E-01	Half-Life too short		
		1236.41		7.364E+00	2.963E-01	Half-Life too short		
		1298.22		-9.953E-01	2.963E-01	Half-Life too short		
CS-134		475.35		8.828E+00	2.458E+00	4.339E+00	3.280E-01	2.035
		563.23		1.052E-01	3.011E-01	4.988E-01	4.048E-02	0.211
		569.32		-1.157E-01	1.829E-01	2.701E-01	2.209E-02	-0.428
		604.70		-3.446E-02	3.529E-02	4.314E-02	3.543E-03	-0.799
	+	795.84	*	1.109E-01	4.920E-02	7.381E-02	6.961E-03	1.502
		801.93		-1.921E-01	3.304E-01	5.290E-01	5.006E-02	-0.363
		1038.57		-9.168E-01	3.460E+00	5.498E+00	4.514E-01	-0.167
		1167.94		4.435E-01	2.260E+00	3.738E+00	2.172E-01	0.119
		1365.15		-5.056E-01	9.202E-01	1.413E+00	9.390E-02	-0.358
I-135		288.45		-1.294E+13	9.202E-01	Half-Life too short		
		417.63		2.430E+13	9.202E-01	Half-Life too short		
		546.56		6.933E+12	9.202E-01	Half-Life too short		
		836.80		8.684E+12	9.202E-01	Half-Life too short		
		1038.76		-4.348E+12	9.202E-01	Half-Life too short		
		1124.00		2.197E+13	9.202E-01	Half-Life too short		
		1131.51		-2.967E+12	9.202E-01	Half-Life too short		
		1260.41	*	1.448E+12	9.202E-01	Half-Life too short		
		1457.56		2.308E+14	9.202E-01	Half-Life too short		
		1678.03		-3.134E+12	9.202E-01	Half-Life too short		
		1706.46		1.259E+13	9.202E-01	Half-Life too short		
		1791.20		-4.011E+12	9.202E-01	Half-Life too short		
CS-136		66.91		-4.442E-01	7.999E-01	1.132E+00	1.645E-01	-0.392
	+	86.29		4.728E+00	1.204E+00	2.015E+00	2.513E-01	2.346
		153.22		8.580E-01	6.985E-01	1.171E+00	8.770E-02	0.733
		163.89		1.410E-01	1.130E+00	1.805E+00	1.278E-01	0.078
		176.55		2.997E-01	3.855E-01	6.333E-01	4.222E-02	0.473
		273.65		-5.978E-01	5.370E-01	7.194E-01	8.716E-02	-0.831
		340.57		1.084E-01	1.569E-01	2.385E-01	2.382E-02	0.454
		818.51		-1.582E-02	6.598E-02	1.067E-01	1.019E-02	-0.148
		1048.07	*	4.333E-02	1.124E-01	1.907E-01	1.612E-02	0.227
		1235.34		3.360E-01	6.520E-01	1.098E+00	1.101E-01	0.306
CE-139		165.85	*	-6.058E-03	2.714E-02	4.258E-02	2.334E-03	-0.142
BA-140		162.64		7.023E-01	7.921E-01	1.310E+00	8.367E-02	0.536
		304.84		-4.008E-01	1.464E+00	2.084E+00	6.032E-01	-0.192
		423.70		-1.139E-01	2.168E+00	3.529E+00	1.132E+00	-0.032
		537.32	*	-2.846E-03	2.680E-01	4.315E-01	1.422E-01	-0.007
LA-140		328.77		5.730E-01	3.282E-01	5.819E-01	6.229E-02	0.985
		432.53		-1.466E+00	2.207E+00	3.422E+00	2.657E-01	-0.428

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		487.03		-2.730E-02	1.479E-01	2.363E-01	1.944E-02	-0.116
		751.79		-1.594E+00	1.773E+00	2.716E+00	2.698E-01	-0.587
		815.85		2.674E-01	2.954E-01	5.325E-01	5.551E-02	0.502
		867.82		2.990E-01	1.385E+00	2.218E+00	2.279E-01	0.135
		919.63		-1.546E+00	2.865E+00	4.138E+00	4.824E-01	-0.374
		925.24		5.577E-01	1.038E+00	1.807E+00	1.854E-01	0.309
		1596.49	*	-3.313E-02	8.406E-02	1.305E-01	7.761E-03	-0.254
CE-141		145.44	*	-3.813E-02	6.377E-02	9.694E-02	6.516E-03	-0.393
CE-143		57.37		4.594E-03	6.377E-02	Half-Life too short		
		231.56		-3.990E-03	6.377E-02	Half-Life too short		
		293.26	*	2.239E-03	6.377E-02	Half-Life too short		
	+	350.59		1.096E-01	6.377E-02	Half-Life too short		
		490.36		-6.356E-03	6.377E-02	Half-Life too short		
		664.57		2.158E-02	6.377E-02	Half-Life too short		
		721.93		3.530E-03	6.377E-02	Half-Life too short		
CE-144		80.11		-2.641E-01	1.884E+00	2.723E+00	2.057E-01	-0.097
		133.54	*	-3.801E-02	1.882E-01	2.984E-01	4.411E-02	-0.127
PM-144	+	476.78		5.879E-01	1.345E-01	1.980E-01	1.678E-02	2.970
		618.01		-4.389E-04	2.882E-02	4.597E-02	3.901E-03	-0.010
		696.49	*	-1.094E-02	2.898E-02	4.708E-02	4.065E-03	-0.232
		778.57		1.892E-01	1.818E+00	3.060E+00	2.831E-01	0.062
PR-144		696.49	*	-7.422E-01	1.967E+00	3.195E+00	2.757E-01	-0.232
		1489.15		-4.863E+00	9.932E+00	1.524E+01	9.231E-01	-0.319
PM-146		453.90	*	2.630E-02	4.347E-02	7.343E-02	7.186E-03	0.358
		633.02		3.609E-01	1.190E+00	1.942E+00	7.241E-01	0.186
		735.90		-1.547E-01	1.430E-01	2.053E-01	5.892E-02	-0.753
		747.13		1.917E-02	7.146E-02	1.223E-01	1.747E-02	0.157
ND-147	+	91.11		8.169E-01	3.090E-01	5.265E-01	4.629E-02	1.551
		319.41		2.221E+00	3.348E+00	5.756E+00	6.154E-01	0.386
		439.89		3.020E-01	6.683E+00	1.093E+01	8.006E-01	0.028
		531.02	*	-3.345E-01	5.647E-01	8.576E-01	1.246E-01	-0.390
PM-149		285.90	*	1.375E-05	5.647E-01	Half-Life too short		
EU-152		121.78		2.163E-03	6.663E-02	1.072E-01	9.817E-03	0.020
		244.69		2.441E-01	2.890E-01	4.525E-01	4.417E-02	0.540
		344.27	*	1.979E-02	1.013E-01	1.570E-01	1.577E-02	0.126
		443.98		-7.623E-01	9.397E-01	1.442E+00	1.060E-01	-0.529
		778.89		4.746E-02	2.035E-01	3.467E-01	3.207E-02	0.137
		867.32		2.335E-01	7.146E-01	1.122E+00	1.107E-01	0.208
		964.01		2.045E-01	3.319E-01	5.037E-01	4.683E-02	0.406
		1085.78		-1.653E-01	3.308E-01	5.074E-01	3.760E-02	-0.326
		1112.02		2.455E-02	2.830E-01	4.647E-01	3.219E-02	0.053
		1407.95		-2.680E-03	1.753E-01	2.930E-01	1.787E-02	-0.009
GD-153		69.67		-1.025E+00	1.365E+00	2.175E+00	1.514E-01	-0.471
		83.37		9.619E+00	1.443E+01	2.151E+01	1.677E+00	0.447
		97.43	*	-3.062E-02	7.784E-02	1.099E-01	8.588E-03	-0.279
		103.18		-1.177E-01	9.810E-02	1.497E-01	1.154E-02	-0.786
EU-154		123.07		-2.077E-02	4.744E-02	7.457E-02	7.948E-03	-0.278
		247.94		7.978E-02	3.074E-01	5.060E-01	6.335E-02	0.158
		591.81		3.553E-01	5.261E-01	8.925E-01	1.011E-01	0.398

---- Non-Identified Nuclides ----

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		723.30		1.129E-01	1.558E-01	2.467E-01	2.399E-02	0.458
		756.87		7.192E-01	7.216E-01	1.288E+00	1.587E-01	0.558
		873.19		6.175E-02	2.303E-01	3.919E-01	5.167E-02	0.158
		996.32		1.225E-01	3.319E-01	5.627E-01	1.006E-01	0.218
		1004.76		3.529E-02	2.089E-01	3.476E-01	4.075E-02	0.102
		1274.45	*	-4.006E-02	1.027E-01	1.572E-01	1.485E-02	-0.255
EU-155		48.70		-8.631E-01	1.681E+00	2.422E+00	1.615E-01	-0.356
	+	60.01		4.946E+01	8.137E+00	1.007E+01	6.785E-01	4.913
	+	86.54		3.778E-01	8.937E-02	1.617E-01	1.318E-02	2.337
		105.31	*	5.029E-02	9.787E-02	1.614E-01	1.260E-02	0.312
TB-160	+	86.79		1.035E+00	2.445E-01	4.456E-01	3.600E-02	2.323
		197.04		-3.937E-01	5.107E-01	8.196E-01	5.727E-02	-0.480
		215.65		-1.124E-01	6.892E-01	1.155E+00	9.247E-02	-0.097
	+	298.57		2.180E-01	1.428E-01	1.846E-01	2.118E-02	1.181
		879.36	*	-3.484E-02	1.182E-01	1.893E-01	1.884E-02	-0.184
		962.29		1.235E-01	5.669E-01	8.287E-01	7.723E-02	0.149
		966.15		3.388E-01	2.624E-01	4.172E-01	3.867E-02	0.812
		1177.93		1.472E-01	3.102E-01	5.279E-01	3.016E-02	0.279
		1271.85		2.856E-02	5.712E-01	9.267E-01	5.520E-02	0.031
HO-166M		80.57		-1.380E-01	2.504E-01	3.544E-01	2.688E-02	-0.390
		184.41		8.674E-02	3.853E-02	6.485E-02	4.114E-03	1.337
		280.46		-6.176E-02	7.643E-02	1.215E-01	1.463E-02	-0.508
		410.95		1.143E-01	2.360E-01	3.974E-01	2.825E-02	0.288
		711.68	*	-1.694E-02	4.837E-02	7.843E-02	6.861E-03	-0.216
		752.31		-1.148E-01	2.441E-01	3.909E-01	3.540E-02	-0.294
		810.29		-4.476E-02	4.699E-02	6.989E-02	6.624E-03	-0.640
TM-171		51.35		1.024E+01	2.138E+01	3.434E+01	2.293E+00	0.298
		52.39		-2.635E+00	1.083E+01	1.771E+01	1.182E+00	-0.149
	+	59.40		2.605E+02	4.287E+01	5.521E+01	3.720E+00	4.719
		66.72	*	-1.310E+01	2.497E+01	3.549E+01	2.432E+00	-0.369
LU-176	+	88.36		7.432E-01	1.756E-01	3.317E-01	2.709E-02	2.241
		201.83		-1.590E-02	2.545E-02	4.190E-02	3.035E-03	-0.379
		306.84	*	-1.684E-02	2.438E-02	3.561E-02	3.981E-03	-0.473
		401.10		1.337E+00	6.347E+00	1.053E+01	7.408E-01	0.127
LU-177		112.95		-1.161E-01	1.977E+00	3.177E+00	2.434E-01	-0.037
	+	208.36	*	2.150E+00	1.511E+00	2.342E+00	1.780E-01	0.918
LU-177M		52.97		-1.141E+00	1.160E+00	1.840E+00	1.229E-01	-0.620
		54.07		-8.376E-01	7.151E-01	9.919E-01	6.627E-02	-0.844
		61.30		5.960E+00	1.614E+00	2.284E+00	1.541E-01	2.610
		121.62		1.096E-01	3.442E-01	5.611E-01	4.328E-02	0.195
		147.16		-1.251E-01	6.026E-01	9.516E-01	6.117E-02	-0.131
		171.86		1.468E-01	4.472E-01	7.201E-01	4.136E-02	0.204
		218.09		8.027E-01	7.691E-01	1.350E+00	1.100E-01	0.595
	+	268.79		2.401E+00	1.188E+00	1.365E+00	1.549E-01	1.759
		319.02		1.724E-01	2.195E-01	3.799E-01	4.067E-02	0.454
		367.43		3.623E-01	7.868E-01	1.334E+00	1.119E-01	0.272
		413.65	*	-1.902E-01	1.750E-01	2.652E-01	1.891E-02	-0.717
HF-181		56.28		9.217E-01	8.555E-01	1.319E+00	8.830E-02	0.699
		57.53		7.229E-01	4.898E-01	7.634E-01	5.120E-02	0.947

---- Non-Identified Nuclides ----

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		65.20		-1.711E-01	8.501E-01	1.235E+00	8.413E-02	-0.139
		133.02		-4.204E-02	6.356E-02	9.855E-02	7.033E-03	-0.427
		136.25		2.900E-01	4.397E-01	7.240E-01	5.048E-02	0.401
		345.85		1.695E-02	2.142E-01	3.125E-01	2.971E-02	0.054
		482.03	*	2.732E-02	5.057E-02	7.538E-02	5.729E-03	0.362
W-181		56.28		3.509E-01	3.252E-01	5.015E-01	3.357E-02	0.700
		57.53		2.743E-01	1.863E-01	2.903E-01	1.947E-02	0.945
		65.20	*	-6.456E-02	3.209E-01	4.661E-01	3.175E-02	-0.139
TA-182		67.75		9.741E-03	9.774E-02	1.431E-01	9.859E-03	0.068
		100.10		2.445E-01	1.651E-01	2.814E-01	2.183E-02	0.869
		152.43		4.179E-01	3.168E-01	5.333E-01	3.288E-02	0.784
		222.10		-7.172E-02	3.076E-01	5.127E-01	4.298E-02	-0.140
		1001.68		-5.464E-01	1.981E+00	3.172E+00	2.784E-01	-0.172
	+	1121.28		6.975E-01	2.105E-01	3.377E-01	2.280E-02	2.065
		1189.05		2.982E-02	2.679E-01	4.391E-01	2.521E-02	0.068
		1221.42	*	-6.637E-02	1.853E-01	2.891E-01	1.685E-02	-0.230
		1230.97		-2.838E-01	4.484E-01	6.799E-01	3.980E-02	-0.417
RE-183		57.98		7.987E-01	2.064E-01	3.386E-01	2.273E-02	2.359
	+	59.32		1.094E+00	1.800E-01	2.332E-01	1.571E-02	4.692
		67.20		-8.054E-02	1.826E-01	2.606E-01	1.790E-02	-0.309
		162.32	*	8.208E-02	1.027E-01	1.693E-01	9.585E-03	0.485
	+	208.81		1.494E+00	1.050E+00	1.615E+00	1.231E-01	0.925
		291.72		-4.073E-01	9.539E-01	1.349E+00	1.579E-01	-0.302
RE-184		57.98		2.897E+00	7.483E-01	1.228E+00	8.244E-02	2.359
	+	59.32		3.965E+00	6.523E-01	8.450E-01	5.691E-02	4.692
		67.20		-2.920E-01	6.618E-01	9.447E-01	6.490E-02	-0.309
		161.27		-1.724E-01	3.342E-01	5.173E-01	2.957E-02	-0.333
		216.55		1.078E-01	2.419E-01	4.154E-01	3.349E-02	0.260
		252.85	*	6.524E-02	2.065E-01	3.512E-01	3.613E-02	0.186
		318.01		2.774E-01	3.805E-01	6.567E-01	7.058E-02	0.422
		792.07		5.284E-01	9.034E-01	1.406E+00	1.314E-01	0.376
		903.28		-1.159E+00	8.050E-01	1.091E+00	1.093E-01	-1.062
		920.93		-5.639E-02	3.712E-01	6.017E-01	5.912E-02	-0.094
OS-185	+	59.72		2.965E+00	4.877E-01	6.140E-01	4.138E-02	4.828
	+	61.14		1.710E+00	2.814E-01	2.723E-01	1.836E-02	6.282
		69.30		-2.040E-01	2.469E-01	3.921E-01	2.724E-02	-0.520
		592.07		6.121E-01	2.222E+00	3.648E+00	2.971E-01	0.168
		646.12	*	2.089E-03	3.690E-02	6.246E-02	5.195E-03	0.033
		717.42		-4.528E-01	7.326E-01	1.155E+00	1.015E-01	-0.392
		874.81		-8.888E-02	4.713E-01	7.634E-01	7.575E-02	-0.116
		880.27		2.648E-02	6.498E-01	1.079E+00	1.074E-01	0.025
RE-188		155.03	*	-2.279E-02	1.623E-01	2.566E-01	1.549E-02	-0.089
	+	477.96		2.744E+01	6.189E+00	9.285E+00	7.034E-01	2.956
		633.10		-1.230E+00	2.638E+00	4.020E+00	3.329E-01	-0.306
W-188	+	63.58		7.210E+01	5.627E+01	7.370E+01	4.994E+00	0.978
		227.08		3.561E+00	1.132E+01	1.933E+01	1.677E+00	0.184
		290.67	*	-4.075E+00	7.494E+00	1.049E+01	1.231E+00	-0.388
IR-192	+	295.96		8.574E-01	1.758E-01	2.596E-01	3.013E-02	3.303
		308.46		1.561E-02	8.681E-02	1.456E-01	1.624E-02	0.107

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		316.51	*	-1.461E-02	3.038E-02	4.883E-02	5.285E-03	-0.299
		468.07		4.828E-02	7.163E-02	1.085E-01	8.912E-03	0.445
		604.41		-4.670E-01	4.911E-01	5.999E-01	7.642E-02	-0.778
		612.46		1.148E+00	8.075E-01	1.278E+00	1.220E-01	0.899
AU-195		65.12		-1.224E-02	1.483E-01	2.167E-01	1.476E-02	-0.056
		66.83		-4.927E-02	8.368E-02	1.185E-01	8.130E-03	-0.416
	+	75.70		9.320E-01	2.059E-01	3.930E-01	2.856E-02	2.371
		98.88	*	2.733E-01	2.307E-01	3.530E-01	2.747E-02	0.774
		129.76		3.880E+00	2.640E+00	4.478E+00	3.271E-01	0.867
TL-200		367.94	*	1.071E-04	2.640E+00	Half-Life too short		
		579.30		1.255E-02	2.640E+00	Half-Life too short		
		828.27		-1.899E-02	2.640E+00	Half-Life too short		
		1205.75		-4.798E-03	2.640E+00	Half-Life too short		
TL-201		68.90		-3.196E+00	7.183E+00	1.158E+01	8.024E-01	-0.276
		70.82		2.801E+00	4.587E+00	6.888E+00	4.828E-01	0.407
		80.30		-5.840E+00	8.637E+00	1.214E+01	9.185E-01	-0.481
		135.34		3.118E+01	4.335E+01	7.157E+01	5.023E+00	0.436
		167.43	*	-1.100E+00	1.169E+01	1.845E+01	1.022E+00	-0.060
TL-202		68.90		-1.794E-01	4.032E-01	6.499E-01	4.504E-02	-0.276
		70.82		1.568E-01	2.568E-01	3.855E-01	2.703E-02	0.407
		80.30		-3.270E-01	4.836E-01	6.796E-01	5.143E-02	-0.481
		439.56	*	5.262E-02	7.599E-02	1.296E-01	9.487E-03	0.406
HG-203		70.83		6.057E-01	9.937E-01	1.489E+00	1.883E-01	0.407
		72.87		9.175E-01	6.125E-01	9.357E-01	1.148E-01	0.981
		82.60		1.280E-01	9.830E-01	1.608E+00	2.124E-01	0.080
		279.20	*	2.168E-02	3.754E-02	6.431E-02	7.881E-03	0.337
BI-207		72.80		1.495E-01	1.716E-01	2.594E-01	1.843E-02	0.576
	+	74.97		5.117E-01	1.131E-01	1.913E-01	1.382E-02	2.675
		84.90		2.546E-01	1.785E-01	2.738E-01	2.169E-02	0.930
		569.67		-2.045E-02	2.846E-02	4.167E-02	3.356E-03	-0.491
		1063.62	*	3.068E-02	4.658E-02	8.102E-02	6.317E-03	0.379
		1770.23		2.299E-01	3.517E-01	6.096E-01	3.430E-02	0.377
TL-207		81.07		-5.004E-02	1.996E-01	2.868E-01	2.187E-02	-0.174
		83.78		9.997E-02	1.214E-01	1.821E-01	1.426E-02	0.549
		94.90		5.723E-01	2.193E-01	3.528E-01	2.783E-02	1.622
		122.32		-1.008E+00	1.617E+00	2.519E+00	2.118E-01	-0.400
		144.24		1.390E-02	6.425E-01	1.007E+00	7.920E-02	0.014
		154.21		7.381E-02	3.706E-01	5.954E-01	4.312E-02	0.124
	+	269.46		5.554E-01	2.751E-01	3.330E-01	3.841E-02	1.668
		323.87	*	-6.368E-01	6.240E-01	9.546E-01	1.785E-01	-0.667
	+	338.28		4.374E+00	1.538E+00	2.189E+00	2.893E-01	1.998
		445.03		1.422E+00	2.168E+00	3.680E+00	4.131E-01	0.386
PO-209		260.50		6.287E-01	8.436E+00	1.417E+01	1.529E+00	0.044
		262.80		-1.368E+00	2.285E+01	3.810E+01	4.171E+00	-0.036
		896.60	*	4.839E-01	6.465E+00	1.075E+01	1.083E+00	0.045
PB-211		404.84	*	-5.763E-01	9.648E-01	1.405E+00	8.780E-01	-0.410
		427.08		1.769E-01	2.040E+00	3.344E+00	2.072E+00	0.053
		831.96		1.102E-01	1.011E+00	1.691E+00	1.062E+00	0.065
PO-215		81.07		-5.004E-02	1.996E-01	2.868E-01	2.187E-02	-0.174

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		83.78		9.997E-02	1.214E-01	1.821E-01	1.426E-02	0.549
		94.90		5.723E-01	2.193E-01	3.528E-01	2.783E-02	1.622
		122.32		-1.008E+00	1.617E+00	2.519E+00	2.118E-01	-0.400
		144.24		1.390E-02	6.425E-01	1.007E+00	7.920E-02	0.014
		154.21		7.381E-02	3.706E-01	5.954E-01	4.312E-02	0.124
	+	269.46		5.554E-01	2.751E-01	3.330E-01	3.841E-02	1.668
		323.87	*	-6.368E-01	6.240E-01	9.546E-01	1.785E-01	-0.667
	+	338.28		4.374E+00	1.538E+00	2.189E+00	2.893E-01	1.998
		445.03		1.422E+00	2.168E+00	3.680E+00	4.131E-01	0.386
RN-219	+	271.23		7.126E-01	3.550E-01	4.214E-01	5.409E-02	1.691
		401.81	*	2.229E-01	3.856E-01	6.526E-01	9.253E-02	0.342
RN-220		549.76	*	2.542E+00	2.141E+01	3.484E+01	2.775E+00	0.073
RA-223		81.07		-5.004E-02	1.996E-01	2.868E-01	2.187E-02	-0.174
		83.78		9.997E-02	1.214E-01	1.821E-01	1.426E-02	0.549
		94.90		5.723E-01	2.193E-01	3.528E-01	2.783E-02	1.622
		122.32		-1.008E+00	1.617E+00	2.519E+00	2.118E-01	-0.400
		144.24		1.390E-02	6.425E-01	1.007E+00	7.920E-02	0.014
		154.21		7.381E-02	3.706E-01	5.954E-01	4.312E-02	0.124
	+	269.46		5.554E-01	2.751E-01	3.330E-01	3.841E-02	1.668
		323.87	*	-6.368E-01	6.240E-01	9.546E-01	1.785E-01	-0.667
	+	338.28		4.374E+00	1.538E+00	2.189E+00	2.893E-01	1.998
		445.03		1.422E+00	2.168E+00	3.680E+00	4.131E-01	0.386
AC-227		79.80		-5.143E-01	1.441E+00	2.054E+00	4.333E-01	-0.250
		236.00		2.855E-01	2.449E-01	3.821E-01	4.842E-02	0.747
		256.20	*	1.001E-01	3.407E-01	5.781E-01	9.527E-02	0.173
		286.10		1.716E-01	1.323E+00	2.219E+00	3.446E-01	0.077
	+	299.80		2.704E+00	1.818E+00	2.351E+00	4.474E-01	1.150
		304.40		-8.771E-01	1.886E+00	2.641E+00	5.233E-01	-0.332
		334.20		-8.967E-03	2.332E+00	3.386E+00	6.802E-01	-0.003
TH-227		79.80		-5.143E-01	1.441E+00	2.054E+00	4.390E-01	-0.250
	+	94.00		9.779E+00	3.403E+00	3.484E+00	7.494E-01	2.807
		236.00		2.855E-01	2.444E-01	3.821E-01	4.412E-02	0.747
		256.20	*	1.001E-01	3.408E-01	5.781E-01	1.100E-01	0.173
		286.10		1.716E-01	1.334E+00	2.219E+00	2.235E+00	0.077
	+	299.80		2.704E+00	1.818E+00	2.351E+00	4.474E-01	1.150
		304.40		-8.771E-01	1.886E+00	2.641E+00	5.233E-01	-0.332
		334.20		-8.967E-03	2.332E+00	3.386E+00	6.802E-01	-0.003
TH-229		85.43		2.070E-01	1.828E-01	2.769E-01	2.206E-02	0.747
	+	88.47		4.278E-01	1.011E-01	1.900E-01	1.550E-02	2.252
		100.00		2.660E-01	1.693E-01	2.893E-01	2.245E-02	0.919
		193.63	*	3.927E-01	4.487E-01	7.858E-01	5.351E-02	0.500
		210.97		7.023E-01	7.489E-01	1.174E+00	9.089E-02	0.598
PA-231		283.67	*	-4.960E-02	1.333E+00	2.217E+00	3.834E-01	-0.022
	+	301.29		1.082E+00	7.146E-01	9.347E-01	1.338E-01	1.157
TH-231		81.07		-5.004E-02	1.996E-01	2.868E-01	2.187E-02	-0.174
		83.78		9.997E-02	1.214E-01	1.821E-01	1.426E-02	0.549
		94.90		5.723E-01	2.193E-01	3.528E-01	2.783E-02	1.622
		122.32		-1.008E+00	1.617E+00	2.519E+00	2.118E-01	-0.400
		144.24		1.390E-02	6.425E-01	1.007E+00	7.920E-02	0.014

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		154.21		7.381E-02	3.706E-01	5.954E-01	4.312E-02	0.124
	+	269.46		5.554E-01	2.751E-01	3.330E-01	3.841E-02	1.668
		323.87	*	-6.368E-01	6.240E-01	9.546E-01	1.785E-01	-0.667
	+	338.28		4.374E+00	1.538E+00	2.189E+00	2.893E-01	1.998
		445.03		1.422E+00	2.168E+00	3.680E+00	4.131E-01	0.386
U-231		84.21		7.772E+00	8.086E+00	1.219E+01	9.590E-01	0.637
	+	92.29		1.522E+01	4.334E+00	5.625E+00	4.490E-01	2.706
		95.87	*	-1.313E+00	1.641E+00	2.261E+00	1.777E-01	-0.581
		108.00		-1.470E+00	2.941E+00	4.639E+00	3.557E-01	-0.317
PA-233	+	75.28		1.493E+01	3.805E+00	5.779E+00	8.447E-01	2.583
	+	86.59		6.134E+00	2.128E+00	2.629E+00	7.006E-01	2.333
	+	300.12		7.539E-01	5.021E-01	6.618E-01	1.102E-01	1.139
		311.98	*	3.965E-02	5.484E-02	9.457E-02	1.057E-02	0.419
		340.50		6.354E-01	6.827E-01	1.030E+00	2.501E-01	0.617
		398.62		-7.026E-01	1.957E+00	3.118E+00	8.155E-01	-0.225
		415.76		-7.671E-02	1.607E+00	2.619E+00	5.502E-01	-0.029
PA-234	+	63.00		2.034E+00	1.609E+00	2.101E+00	3.057E-01	0.968
	+	94.67		8.720E-01	2.602E-01	2.688E-01	3.202E-02	3.244
		98.44		1.014E-01	1.069E-01	1.391E-01	7.742E-02	0.729
		99.86		7.930E-01	4.280E-01	7.372E-01	5.723E-02	1.076
		111.00		-1.040E-01	1.702E-01	2.664E-01	3.043E-02	-0.390
		131.20		-7.230E-02	9.917E-02	1.535E-01	1.109E-02	-0.471
		152.70		5.031E-01	3.048E-01	5.052E-01	8.054E-02	0.996
	+	186.00		4.387E+00	2.532E+00	2.486E+00	7.627E-01	1.764
		226.40		1.705E-02	3.470E-01	5.855E-01	7.736E-02	0.029
		227.20		1.146E-01	3.737E-01	6.376E-01	5.536E-02	0.180
		248.90		-3.229E-01	6.831E-01	1.110E+00	2.552E-01	-0.291
	+	293.70		5.260E+00	1.335E+00	1.490E+00	2.829E-01	3.530
		369.80		-1.769E-01	7.644E-01	1.237E+00	2.677E-01	-0.143
		568.70		-2.242E-01	8.768E-01	1.338E+00	1.077E-01	-0.168
		569.50		-1.631E-01	2.521E-01	3.719E-01	2.995E-02	-0.439
		574.00		2.155E-01	1.353E+00	2.200E+00	1.776E-01	0.098
		699.00		-1.651E-01	6.129E-01	1.004E+00	1.918E-01	-0.164
		706.10		1.994E-01	8.605E-01	1.462E+00	6.524E-01	0.136
		733.00		9.603E-02	3.721E-01	5.572E-01	1.243E-01	0.172
		742.81		-4.438E-01	1.230E+00	1.928E+00	1.297E+00	-0.230
		796.30		1.435E+00	9.220E-01	1.459E+00	3.983E-01	0.984
		805.60		3.297E-01	8.010E-01	1.374E+00	4.245E-01	0.240
		819.60		-4.491E-01	9.404E-01	1.452E+00	5.554E-01	-0.309
		826.30		7.049E-01	7.314E-01	1.207E+00	5.425E-01	0.584
		831.60		-1.033E-01	5.311E-01	8.638E-01	2.604E-01	-0.120
		876.40		-3.763E-01	7.678E-01	1.027E+00	1.057E+00	-0.366
		880.51		1.160E-01	2.266E-01	3.940E-01	3.925E-02	0.294
		883.24		-1.108E-03	2.471E-01	4.083E-01	2.752E-01	-0.003
		899.00		6.644E-01	7.726E-01	1.286E+00	5.661E-01	0.517
		925.00		6.246E-01	9.432E-01	1.661E+00	1.624E-01	0.376
		926.50		6.535E-03	1.424E-01	2.357E-01	6.056E-02	0.028
		946.00	*	-2.800E-01	2.751E-01	3.960E-01	7.601E-02	-0.707
		949.00		3.092E-02	3.917E-01	6.494E-01	6.162E-02	0.048

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		980.50		4.720E-01	5.955E-01	1.058E+00	9.603E-02	0.446
		1394.10		-1.664E-01	8.413E-01	1.353E+00	8.767E-01	-0.123
PA-234M		766.41		1.480E+01	1.956E+01	2.564E+01	1.967E+01	0.577
		1001.03	*	-3.409E+00	6.413E+00	1.001E+01	1.132E+00	-0.341
U-235	+	89.95		2.734E+00	1.310E+00	1.673E+00	5.139E-01	1.634
	+	93.35		3.042E+00	1.187E+00	1.136E+00	3.161E-01	2.678
		105.00		1.002E+00	9.860E-01	1.588E+00	4.700E-01	0.631
		143.76	*	2.219E-02	2.002E-01	3.151E-01	5.232E-02	0.070
		163.35		1.582E-01	4.341E-01	7.001E-01	1.255E-01	0.226
	+	185.71		1.625E-01	8.013E-02	9.184E-02	5.885E-03	1.769
		205.31		4.909E-01	5.309E-01	8.212E-01	1.525E-01	0.598
NP-236	+	94.67		6.614E-01	1.883E-01	2.042E-01	1.612E-02	3.239
		98.44		7.664E-02	6.885E-02	1.051E-01	8.193E-03	0.729
		111.00		-7.864E-02	1.286E-01	2.015E-01	1.543E-02	-0.390
		160.31	*	-3.673E-02	7.406E-02	1.148E-01	6.619E-03	-0.320
NP-239		99.55		2.679E-01	1.422E-01	2.453E-01	1.906E-02	1.092
		117.00	*	-1.297E-01	1.721E-01	2.669E-01	2.048E-02	-0.486
	+	209.75		1.147E+00	8.061E-01	1.270E+00	9.747E-02	0.903
		228.18		7.171E-02	1.973E-01	3.373E-01	2.949E-02	0.213
		277.60		1.483E-01	1.619E-01	2.806E-01	3.357E-02	0.528
		334.30		4.254E-02	1.324E+00	1.928E+00	1.938E-01	0.022
CM-243		99.55		2.757E-01	1.464E-01	2.524E-01	1.961E-02	1.092
		103.76	*	4.629E-02	8.540E-02	1.412E-01	1.087E-02	0.328
		117.00		-1.334E-01	1.771E-01	2.746E-01	2.108E-02	-0.486
	+	209.75		1.131E+00	7.948E-01	1.252E+00	9.610E-02	0.903
		228.18		7.248E-02	1.994E-01	3.409E-01	2.980E-02	0.213
		277.60		1.495E-01	1.632E-01	2.829E-01	3.386E-02	0.528
CM-247		278.00		6.373E-01	6.684E-01	1.160E+00	1.392E-01	0.549
		287.40		-2.150E-01	1.069E+00	1.760E+00	2.083E-01	-0.122
		402.60	*	1.318E-02	3.490E-02	5.850E-02	4.121E-03	0.225
CF-249		252.85		2.420E-01	7.660E-01	1.303E+00	1.340E-01	0.186
		333.44		-1.416E-02	1.729E-01	2.495E-01	2.517E-02	-0.057
		387.95	*	5.804E-03	3.907E-02	6.469E-02	4.650E-03	0.090
CF-251		176.60	*	9.144E-02	1.150E-01	1.892E-01	1.128E-02	0.483
		227.00		9.438E-02	3.301E-01	5.628E-01	4.880E-02	0.168
		285.00		-4.929E-01	1.533E+00	2.509E+00	2.987E-01	-0.196

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664005      *
* Acquisition date : 14-JUL-2009 08:57:53 Detector SN#    :                 *
* Detector ID        : GAM20                Sensitivity     : 5.000        *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:    0 02:00:00.00       Abundance limit : 75.000       *
* Elapsed real time:    0 02:00:31.76       Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 26-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232664005           Analyst initials: MXR1          *
* Batch Number       : 882713               Sample Quantity : 1.2524E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 30-SEP-2008 10:47:39 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
BE-7	2.889E+00	6.461E-01	5.915E-01	0.000E+00
K-40	2.370E+01	2.113E+00	4.504E-01	0.000E+00
CD-109	3.201E+00	7.411E-01	1.184E+00	0.000E+00
SN-126	3.134E-01	7.254E-02	1.162E-01	0.000E+00
CS-135	4.721E-01	2.301E-01	2.219E-01	0.000E+00
BA-137M	1.186E+00	1.393E-01	5.201E-02	0.000E+00
CS-137	1.253E+00	1.473E-01	5.498E-02	0.000E+00
TL-208	4.197E-01	7.926E-02	5.558E-02	0.000E+00
BI-210	1.414E+00	2.695E+00	3.373E+00	0.000E+00
PB-210	1.414E+00	2.695E+00	3.373E+00	0.000E+00
PO-210	1.414E+00	2.694E+00	3.373E+00	0.000E+00
BI-211	3.444E+00	5.074E-01	2.906E-01	0.000E+00
BI-212	9.065E-01	3.608E-01	4.302E-01	0.000E+00
PB-212	1.368E+00	1.683E-01	8.250E-02	0.000E+00
PO-212	1.368E+00	1.683E-01	8.250E-02	0.000E+00
BI-214	9.258E-01	1.698E-01	1.012E-01	0.000E+00
PB-214	1.198E+00	1.868E-01	1.013E-01	0.000E+00
PO-214	1.198E+00	1.868E-01	1.013E-01	0.000E+00
PO-216	1.368E+00	1.683E-01	8.250E-02	0.000E+00
PO-218	1.198E+00	1.868E-01	1.013E-01	0.000E+00
RA-224	4.194E+00	1.300E+00	9.384E-01	0.000E+00
RA-226	9.258E-01	1.698E-01	1.012E-01	0.000E+00
AC-228	1.517E+00	3.111E-01	1.684E-01	0.000E+00
RA-228	1.517E+00	3.111E-01	1.684E-01	0.000E+00
TH-228	1.368E+00	1.683E-01	8.249E-02	0.000E+00
TH-230	9.258E-01	1.698E-01	1.012E-01	0.000E+00
TH-232	1.517E+00	3.111E-01	1.684E-01	0.000E+00
TH-234	1.745E+00	1.362E+00	1.660E+00	0.000E+00
U-234	9.258E-01	1.698E-01	1.012E-01	0.000E+00
NP-237	9.202E-01	2.828E-01	3.795E-01	0.000E+00
U-238	1.745E+00	1.362E+00	1.660E+00	0.000E+00
AM-241	1.519E+00	2.499E-01	2.030E-01	0.000E+00
AM-243	2.850E-01	6.171E-02	7.834E-02	0.000E+00
ANH-511	1.142E-01	6.363E-02	4.101E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error)	Ided	MDA (pCi/GRAM	)	
NA-22	-1.124E-02	3.589E-02		5.678E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.129E+07		0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.417E-05	2.026E-02		3.387E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.711E-02		6.974E-02	0.000E+00	FAIL ABUN
SC-46	6.762E-03	3.397E-02		5.873E-02	0.000E+00	FAIL ABUN
V-48	-5.991E-02	6.884E-02		1.048E-01	0.000E+00	NOT IDENT.
CR-51	-2.285E-02	3.339E-01		5.741E-01	0.000E+00	NOT IDENT.
MN-52	2.127E-03	2.299E-01		3.927E-01	0.000E+00	NOT IDENT.
MN-54	-8.396E-04	3.367E-02		5.729E-02	0.000E+00	NOT IDENT.
CO-56	1.505E-02	3.439E-02		6.084E-02	0.000E+00	NOT IDENT.
CO-57	-9.621E-03	2.289E-02		3.807E-02	0.000E+00	NOT IDENT.
CO-58	-2.818E-02	3.133E-02		4.837E-02	0.000E+00	NOT IDENT.
FE-59	-3.647E-02	8.933E-02		1.430E-01	0.000E+00	NOT IDENT.
CO-60	2.849E-02	3.801E-02		6.766E-02	0.000E+00	NOT IDENT.
ZN-65	-3.357E-02	8.689E-02		1.176E-01	0.000E+00	NOT IDENT.
GE-68	3.013E-01	1.113E+00		1.910E+00	0.000E+00	NOT IDENT.
AS-73	-6.640E-01	6.255E-01		1.002E+00	0.000E+00	NOT IDENT.
AS-74	-4.290E-02	9.041E-02		1.430E-01	0.000E+00	NOT IDENT.
SE-75	1.039E-02	4.269E-02		6.680E-02	0.000E+00	NOT IDENT.
BR-77	5.919E-02	2.058E+01		3.439E+01	0.000E+00	FAIL ABUN
SR-82	-4.460E-02	3.139E-01		5.309E-01	0.000E+00	NOT IDENT.
RB-83	-5.240E-03	6.185E-02		1.026E-01	0.000E+00	NOT IDENT.
RB-84	1.493E-02	5.824E-02		1.015E-01	0.000E+00	NOT IDENT.
KR-85	9.547E+00	6.899E+00		1.141E+01	0.000E+00	NOT IDENT.
SR-85	5.039E-02	3.641E-02		6.024E-02	0.000E+00	NOT IDENT.
RB-86	2.639E-02	7.911E-01		1.326E+00	0.000E+00	NOT IDENT.
Y-88	7.070E-04	2.809E-02		4.839E-02	0.000E+00	NOT IDENT.
ZR-88	-4.308E-03	2.892E-02		4.882E-02	0.000E+00	NOT IDENT.
Y-91	-1.282E+01	1.802E+01		2.775E+01	0.000E+00	NOT IDENT.
NB-94	2.048E-03	2.862E-02		4.971E-02	0.000E+00	NOT IDENT.
NB-95	1.752E-02	3.770E-02		5.950E-02	0.000E+00	NOT IDENT.
NB-95M	1.047E-02	1.259E-01		1.961E-01	0.000E+00	NOT IDENT.
ZR-95	8.937E-02	6.653E-02		1.249E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.464E+06		0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.614E+07		0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.149E+01	2.019E+01		3.725E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	6.975E+19		0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.246E-04	2.835E-02		4.937E-02	0.000E+00	NOT IDENT.
RH-102	0.000E+00	3.331E-02		5.878E-02	0.000E+00	NOT IDENT.
RU-103	2.512E-02	3.831E-02		6.715E-02	0.000E+00	FAIL ABUN
RH-106	1.295E-02	2.849E-01		4.715E-01	0.000E+00	FAIL ABUN
RU-106	1.295E-02	2.849E-01		4.715E-01	0.000E+00	FAIL ABUN
AG-108M	-5.379E-03	2.970E-02		4.963E-02	0.000E+00	NOT IDENT.
AG-110M	6.398E-03	3.476E-02		5.362E-02	0.000E+00	NOT IDENT.
IN-111	6.464E-01	1.834E+00		2.907E+00	0.000E+00	NOT IDENT.
IN-113M	-1.955E-04	4.104E-02		6.991E-02	0.000E+00	NOT IDENT.
SN-113	-1.955E-04	4.104E-02		6.991E-02	0.000E+00	NOT IDENT.
IN-114M	-7.880E-02	1.837E-01		2.817E-01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	2.177E+01		0.000E+00	0.000E+00	SHORT HLIF
SN-117M	4.221E-03	5.588E-02		9.380E-02	0.000E+00	NOT IDENT.
SB-122	2.608E+00	3.410E+00		6.030E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.671E+08		0.000E+00	0.000E+00	SHORT HLIF
TE-123M	4.079E-03	2.551E-02		4.298E-02	0.000E+00	NOT IDENT.
I-124	-3.123E-01	1.005E+00		1.482E+00	0.000E+00	NOT IDENT.
SB-124	9.585E-03	5.603E-02		9.771E-02	0.000E+00	FAIL ABUN
SB-125	2.347E-02	8.847E-02		1.524E-01	0.000E+00	FAIL ABUN
TE-125M	6.603E+00	8.388E+00		1.475E+01	0.000E+00	NOT IDENT.
I-126	-3.701E-02	2.087E-01		3.092E-01	0.000E+00	NOT IDENT.
SB-126	3.035E-02	1.354E-01		2.321E-01	0.000E+00	FAIL ABUN
SB-127	-1.183E+00	1.936E+00		3.178E+00	0.000E+00	FAIL ABUN
XE-127	-2.176E-02	4.339E-02		7.534E-02	0.000E+00	NOT IDENT.
I-131	-1.640E-02	1.221E-01		2.072E-01	0.000E+00	NOT IDENT.
TE-132	2.924E-01	1.067E+00		1.901E+00	0.000E+00	NOT IDENT.
BA-133	-3.511E-02	4.154E-02		5.723E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.569E+04		0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.821E-02		7.440E-02	0.000E+00	FAIL ABUN
I-135	0.000E+00	4.712E+18		0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.333E-02	1.102E-01		1.915E-01	0.000E+00	FAIL ABUN
CE-139	-6.058E-03	2.660E-02		4.387E-02	0.000E+00	NOT IDENT.
BA-140	-2.846E-03	2.627E-01		4.374E-01	0.000E+00	NOT IDENT.
LA-140	-3.313E-02	8.238E-02		1.302E-01	0.000E+00	NOT IDENT.

CE-141	-3.813E-02	6.249E-02	1.001E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.917E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.801E-02	1.844E-01	3.083E-01	0.000E+00	NOT IDENT.
PM-144	-1.094E-02	2.840E-02	4.754E-02	0.000E+00	FAIL ABUN
PR-144	-7.422E-01	1.928E+00	3.226E+00	0.000E+00	NOT IDENT.
PM-146	2.630E-02	4.260E-02	7.461E-02	0.000E+00	NOT IDENT.
ND-147	-3.345E-01	5.535E-01	8.694E-01	0.000E+00	FAIL ABUN
PM-149	0.000E+00	1.829E+02	0.000E+00	0.000E+00	SHORT HLIF
EU-152	1.979E-02	9.923E-02	1.601E-01	0.000E+00	NOT IDENT.
GD-153	-3.062E-02	7.628E-02	1.140E-01	0.000E+00	NOT IDENT.
EU-154	-4.006E-02	1.007E-01	1.574E-01	0.000E+00	NOT IDENT.
EU-155	5.029E-02	9.591E-02	1.673E-01	0.000E+00	FAIL ABUN
TB-160	-3.484E-02	1.158E-01	1.906E-01	0.000E+00	FAIL ABUN
HO-166M	-1.694E-02	4.740E-02	7.918E-02	0.000E+00	NOT IDENT.
TM-171	-1.310E+01	2.447E+01	3.701E+01	0.000E+00	FAIL ABUN
LU-176	-1.684E-02	2.389E-02	3.638E-02	0.000E+00	FAIL ABUN
LU-177	2.150E+00	1.481E+00	2.405E+00	0.000E+00	FAIL ABUN
LU-177M	-1.902E-01	1.715E-01	2.698E-01	0.000E+00	FAIL ABUN
HF-181	2.732E-02	4.956E-02	7.652E-02	0.000E+00	NOT IDENT.
W-181	-6.456E-02	3.144E-01	4.863E-01	0.000E+00	NOT IDENT.
TA-182	-6.637E-02	1.816E-01	2.896E-01	0.000E+00	FAIL ABUN
RE-183	8.208E-02	1.007E-01	1.745E-01	0.000E+00	FAIL ABUN
RE-184	6.524E-02	2.023E-01	3.598E-01	0.000E+00	FAIL ABUN
OS-185	2.089E-03	3.616E-02	6.315E-02	0.000E+00	FAIL ABUN
RE-188	-2.279E-02	1.591E-01	2.646E-01	0.000E+00	FAIL ABUN
W-188	-4.075E+00	7.344E+00	1.073E+01	0.000E+00	FAIL ABUN
IR-192	-1.461E-02	2.978E-02	4.987E-02	0.000E+00	FAIL ABUN
AU-195	2.733E-01	2.261E-01	3.662E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.292E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.100E+00	1.145E+01	1.900E+01	0.000E+00	NOT IDENT.
TL-202	5.262E-02	7.447E-02	1.317E-01	0.000E+00	NOT IDENT.
HG-203	2.168E-02	3.679E-02	6.578E-02	0.000E+00	NOT IDENT.
BI-207	3.068E-02	4.565E-02	8.132E-02	0.000E+00	FAIL ABUN
TL-207	-6.368E-01	6.115E-01	9.745E-01	0.000E+00	FAIL ABUN
PO-209	4.839E-01	6.336E+00	1.082E+01	0.000E+00	NOT IDENT.
PB-211	-5.763E-01	9.455E-01	1.430E+00	0.000E+00	NOT IDENT.
PO-215	-6.368E-01	6.115E-01	9.745E-01	0.000E+00	FAIL ABUN
RN-219	2.229E-01	3.779E-01	6.642E-01	0.000E+00	FAIL ABUN
RN-220	2.542E+00	2.099E+01	3.530E+01	0.000E+00	NOT IDENT.
RA-223	-6.368E-01	6.115E-01	9.745E-01	0.000E+00	FAIL ABUN
AC-227	1.001E-01	3.338E-01	5.920E-01	0.000E+00	FAIL ABUN
TH-227	1.001E-01	3.340E-01	5.920E-01	0.000E+00	FAIL ABUN
TH-229	3.927E-01	4.397E-01	8.079E-01	0.000E+00	FAIL ABUN
PA-231	-4.960E-02	1.306E+00	2.268E+00	0.000E+00	FAIL ABUN
TH-231	-6.368E-01	6.115E-01	9.745E-01	0.000E+00	FAIL ABUN
U-231	-1.313E+00	1.608E+00	2.347E+00	0.000E+00	FAIL ABUN
PA-233	3.965E-02	5.374E-02	9.659E-02	0.000E+00	FAIL ABUN
PA-234	-2.800E-01	2.696E-01	3.981E-01	0.000E+00	FAIL ABUN
PA-234M	-3.409E+00	6.285E+00	1.005E+01	0.000E+00	NOT IDENT.
U-235	2.219E-02	1.962E-01	3.253E-01	0.000E+00	FAIL ABUN
NP-236	-3.673E-02	7.258E-02	1.183E-01	0.000E+00	FAIL ABUN
NP-239	-1.297E-01	1.687E-01	2.763E-01	0.000E+00	FAIL ABUN
CM-243	4.629E-02	8.369E-02	1.464E-01	0.000E+00	FAIL ABUN
CM-247	1.318E-02	3.420E-02	5.954E-02	0.000E+00	NOT IDENT.
CF-249	5.804E-03	3.829E-02	6.587E-02	0.000E+00	NOT IDENT.
CF-251	9.144E-02	1.127E-01	1.947E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:59:35.82

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664005.CNF;1
Sample date       : 26-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:57:53
Sample ID         : G232664005           Sample quantity  : 1.25240E+02 GRAM
Detector name     : GAM20                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:31.76  0.4%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
BE-7	477.59	263	10.42*	3.300E+00	2.290E+00	2.889E+00	22.82
K-40	1460.81	1085	10.67*	1.286E+00	2.370E+01	2.370E+01	9.10
CD-109	88.03	266	3.72*	6.881E+00	3.117E+00	3.201E+00	23.62
SN-126	64.28	101	9.60	4.587E+00	6.908E-01	6.908E-01	79.04
	86.94	266	8.90	6.881E+00	1.303E+00	1.303E+00	46.84
	87.57	266	37.00*	6.881E+00	3.134E-01	3.134E-01	23.62
CS-135	268.24	128	16.00*	5.064E+00	4.721E-01	4.721E-01	49.75
BA-137M	661.65	903	89.98*	2.538E+00	1.184E+00	1.186E+00	11.98
CS-137	661.65	903	85.12*	2.538E+00	1.252E+00	1.253E+00	12.00
TL-208	277.35	------	6.80	4.965E+00	------ Line Not Found		------
	510.84	119	21.60	3.128E+00	5.289E-01	5.289E-01	57.45
	583.14	332	84.20*	2.814E+00	4.197E-01	4.197E-01	19.27
	860.37	57	12.46	2.032E+00	6.705E-01	6.705E-01	53.50
BI-210	46.50	37	4.05*	1.955E+00	1.412E+00	1.414E+00	194.43
PB-210	46.50	37	4.05*	1.955E+00	1.412E+00	1.414E+00	194.43
PO-210	46.50	37	4.05*	1.955E+00	1.412E+00	1.414E+00	194.39
BI-211	72.87	------	1.27	5.761E+00	------ Line Not Found		------
	351.07	620	12.94*	4.172E+00	3.444E+00	3.444E+00	15.03
BI-212	727.18	84	11.80*	2.345E+00	9.065E-01	9.065E-01	40.62
	785.46	------	1.97	2.198E+00	------ Line Not Found		------
	1620.62	12	2.75	1.181E+00	1.123E+00	1.123E+00	85.75
PB-212	74.81	374	10.70	5.960E+00	1.758E+00	1.758E+00	23.99
	77.11	637	18.00	6.173E+00	1.718E+00	1.718E+00	15.16
	87.30	266	8.00	6.881E+00	1.449E+00	1.449E+00	25.65
	238.63	1122	44.60*	5.511E+00	1.368E+00	1.368E+00	12.56
	300.09	78	3.41	4.692E+00	1.459E+00	1.459E+00	65.75
PO-212	74.81	374	10.70	5.960E+00	1.758E+00	1.758E+00	23.99
	77.11	637	18.00	6.173E+00	1.718E+00	1.718E+00	15.16
	87.30	266	8.00	6.881E+00	1.449E+00	1.449E+00	25.65
	115.19	------	0.60	7.504E+00	------ Line Not Found		------
	238.63	1122	44.60*	5.511E+00	1.368E+00	1.368E+00	12.56
	300.09	78	3.41	4.692E+00	1.459E+00	1.459E+00	65.75

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
BI-214	609.31	388	46.30*	2.716E+00	9.258E-01	9.258E-01	18.72
	768.36	65	5.04	2.239E+00	1.722E+00	1.722E+00	40.62
	934.06	------	3.21	1.894E+00	------ Line Not Found		------
	1120.29	118	15.10	1.615E+00	1.451E+00	1.451E+00	30.89
	1238.11	------	5.94	1.481E+00	------ Line Not Found		------
	1377.67	------	4.11	1.351E+00	------ Line Not Found		------
	1764.49	75	15.80	1.107E+00	1.285E+00	1.285E+00	26.10
PB-214	74.81	374	6.21	5.960E+00	3.029E+00	3.029E+00	23.30
	77.11	637	10.50	6.173E+00	2.945E+00	2.945E+00	16.97
	87.30	266	4.67	6.881E+00	2.483E+00	2.483E+00	24.85
	241.98	302	7.49	5.466E+00	2.212E+00	2.212E+00	32.13
	295.21	333	19.20	4.749E+00	1.096E+00	1.096E+00	21.41
	351.92	620	37.20*	4.172E+00	1.198E+00	1.198E+00	15.91
PO-214	74.81	374	6.21	5.960E+00	3.029E+00	3.029E+00	23.30
	77.11	637	10.50	6.173E+00	2.945E+00	2.945E+00	16.97
	87.30	266	4.67	6.881E+00	2.483E+00	2.483E+00	24.85
	241.98	302	7.49	5.466E+00	2.212E+00	2.212E+00	32.13
	295.21	333	19.20	4.749E+00	1.096E+00	1.096E+00	21.41
	351.92	620	37.20*	4.172E+00	1.198E+00	1.198E+00	15.91
PO-216	74.81	374	10.70	5.960E+00	1.758E+00	1.758E+00	23.99
	77.11	637	18.00	6.173E+00	1.718E+00	1.718E+00	15.16
	87.30	266	8.00	6.881E+00	1.449E+00	1.449E+00	25.65
	238.63	1122	44.60*	5.511E+00	1.368E+00	1.368E+00	12.56
	300.09	78	3.41	4.692E+00	1.459E+00	1.459E+00	65.75
PO-218	74.81	374	6.21	5.960E+00	3.029E+00	3.029E+00	23.30
	77.11	637	10.50	6.173E+00	2.945E+00	2.945E+00	16.97
	87.30	266	4.67	6.881E+00	2.483E+00	2.483E+00	24.85
	241.98	302	7.49	5.466E+00	2.212E+00	2.212E+00	32.13
	295.21	333	19.20	4.749E+00	1.096E+00	1.096E+00	21.41
	351.92	620	37.20*	4.172E+00	1.198E+00	1.198E+00	15.91
RA-224	240.98	302	3.95*	5.466E+00	4.194E+00	4.194E+00	31.64
RA-226	609.31	388	46.30*	2.716E+00	9.258E-01	9.258E-01	18.72
	768.36	65	5.04	2.239E+00	1.722E+00	1.722E+00	40.62
	934.06	------	3.21	1.894E+00	------ Line Not Found		------
	1120.29	118	15.10	1.615E+00	1.451E+00	1.451E+00	30.89
	1238.11	------	5.94	1.481E+00	------ Line Not Found		------
	1377.67	------	4.11	1.351E+00	------ Line Not Found		------
	1764.49	75	15.80	1.107E+00	1.285E+00	1.285E+00	26.10
AC-228	338.32	171	11.40	4.297E+00	1.047E+00	1.047E+00	52.80
	911.07	271	27.70*	1.934E+00	1.517E+00	1.517E+00	20.93
	969.11	108	16.60	1.833E+00	1.062E+00	1.062E+00	48.63
RA-228	338.32	171	11.40	4.297E+00	1.047E+00	1.047E+00	52.80
	911.07	271	27.70*	1.934E+00	1.517E+00	1.517E+00	20.93
	969.11	108	16.60	1.833E+00	1.062E+00	1.062E+00	48.63
TH-228	84.40	------	1.21	6.710E+00	------ Line Not Found		------
	238.60	1122	44.60*	5.511E+00	1.368E+00	1.368E+00	12.56
	300.10	78	3.41	4.692E+00	1.459E+00	1.459E+00	87.91
TH-230	609.31	388	46.30*	2.716E+00	9.258E-01	9.258E-01	18.72
	768.36	65	5.04	2.239E+00	1.722E+00	1.722E+00	40.62

Sample ID : G232664005 Acquisition date : 14-JUL-2009 08:57:53

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	934.06	------	3.21	1.894E+00	------ Line Not Found		------
	1120.29	118	15.10	1.615E+00	1.451E+00	1.451E+00	30.89
	1238.11	------	5.94	1.481E+00	------ Line Not Found		------
	1377.67	------	4.11	1.351E+00	------ Line Not Found		------
	1764.49	75	15.80	1.107E+00	1.285E+00	1.285E+00	26.10
TH-232	338.32	171	11.40	4.297E+00	1.047E+00	1.047E+00	34.06
	911.07	271	27.70*	1.934E+00	1.517E+00	1.517E+00	20.93
	969.11	108	16.60	1.833E+00	1.062E+00	1.062E+00	48.63
TH-234	63.29	101	3.80*	4.587E+00	1.745E+00	1.745E+00	79.63
	92.38	326	5.41	7.145E+00	2.531E+00	2.531E+00	32.61
U-234	609.31	388	46.30*	2.716E+00	9.258E-01	9.258E-01	18.72
	768.36	65	5.04	2.239E+00	1.722E+00	1.722E+00	40.62
	934.06	------	3.21	1.894E+00	------ Line Not Found		------
	1120.29	118	15.10	1.615E+00	1.451E+00	1.451E+00	30.89
	1238.11	------	5.94	1.481E+00	------ Line Not Found		------
	1377.67	------	4.11	1.351E+00	------ Line Not Found		------
	1764.49	75	15.80	1.107E+00	1.285E+00	1.285E+00	26.10
NP-237	86.50	266	12.60*	6.881E+00	9.202E-01	9.202E-01	31.37
	95.87	------	2.60	7.235E+00	------ Line Not Found		------
U-238	63.29	101	3.80*	4.587E+00	1.745E+00	1.745E+00	79.63
	92.38	326	5.41	7.145E+00	2.531E+00	2.531E+00	28.48
AM-241	59.54	736	35.90*	4.048E+00	1.519E+00	1.519E+00	16.79
AM-243	74.67	374	66.00*	5.960E+00	2.850E-01	2.850E-01	22.10
	86.72	266	0.34	6.881E+00	3.451E+01	3.451E+01	23.62
	117.66	------	0.55	7.502E+00	------ Line Not Found		------
	142.18	------	0.13	7.249E+00	------ Line Not Found		------
ANH-511	511.00	119	100.00*	3.128E+00	1.142E-01	1.142E-01	56.84

Flag: "*" = Keyline

Sample ID : G232664005 Acquisition date : 14-JUL-2009 08:57:53

Total number of lines in spectrum 35
Number of unidentified lines 2
Number of lines tentatively identified by NID 33 94.29%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BE-7	53.44D	1.26	2.290E+00	2.889E+00	0.659E+00	22.82	
K-40	1.28E+09Y	1.00	2.370E+01	2.370E+01	0.216E+01	9.10	
CD-109	464.00D	1.03	3.117E+00	3.201E+00	0.756E+00	23.62	
SN-126	1.00E+05Y	1.00	3.134E-01	3.134E-01	0.740E-01	23.62	
CS-135	2.30E+06Y	1.00	4.721E-01	4.721E-01	2.348E-01	49.75	
BA-137M	30.17Y	1.00	1.184E+00	1.186E+00	0.142E+00	11.98	
CS-137	30.17Y	1.00	1.252E+00	1.253E+00	0.150E+00	12.00	
TL-208	1.41E+10Y	1.00	4.197E-01	4.197E-01	0.809E-01	19.27	
BI-210	22.26Y	1.00	1.412E+00	1.414E+00	2.750E+00	194.43	
PB-210	22.26Y	1.00	1.412E+00	1.414E+00	2.750E+00	194.43	
PO-210	22.26Y	1.00	1.412E+00	1.414E+00	2.749E+00	194.39	
BI-211	7.04E+08Y	1.00	3.444E+00	3.444E+00	0.518E+00	15.03	
BI-212	1.41E+10Y	1.00	9.065E-01	9.065E-01	3.682E-01	40.62	
PB-212	1.41E+10Y	1.00	1.368E+00	1.368E+00	0.172E+00	12.56	
PO-212	1.41E+10Y	1.00	1.368E+00	1.368E+00	0.172E+00	12.56	
BI-214	1600.00Y	1.00	9.258E-01	9.258E-01	1.733E-01	18.72	
PB-214	1600.00Y	1.00	1.198E+00	1.198E+00	0.191E+00	15.91	
PO-214	1600.00Y	1.00	1.198E+00	1.198E+00	0.191E+00	15.91	
PO-216	1.41E+10Y	1.00	1.368E+00	1.368E+00	0.172E+00	12.56	
PO-218	1600.00Y	1.00	1.198E+00	1.198E+00	0.191E+00	15.91	
RA-224	1.41E+10Y	1.00	4.194E+00	4.194E+00	1.327E+00	31.64	
RA-226	1600.00Y	1.00	9.258E-01	9.258E-01	1.733E-01	18.72	
AC-228	1.41E+10Y	1.00	1.517E+00	1.517E+00	0.317E+00	20.93	
RA-228	1.41E+10Y	1.00	1.517E+00	1.517E+00	0.317E+00	20.93	
TH-228	1.41E+10Y	1.00	1.368E+00	1.368E+00	0.172E+00	12.56	
TH-230	4.47E+09Y	1.00	9.258E-01	9.258E-01	1.733E-01	18.72	
TH-232	1.41E+10Y	1.00	1.517E+00	1.517E+00	0.317E+00	20.93	
TH-234	4.47E+09Y	1.00	1.745E+00	1.745E+00	1.390E+00	79.63	
U-234	4.47E+09Y	1.00	9.258E-01	9.258E-01	1.733E-01	18.72	
NP-237	2.14E+06Y	1.00	9.202E-01	9.202E-01	2.886E-01	31.37	
U-238	4.47E+09Y	1.00	1.745E+00	1.745E+00	1.390E+00	79.63	
AM-241	432.20Y	1.00	1.519E+00	1.519E+00	0.255E+00	16.79	
AM-243	7380.00Y	1.00	2.850E-01	2.850E-01	0.630E-01	22.10	
ANH-511	1.00E+09Y	1.00	1.142E-01	1.142E-01	0.649E-01	56.84	
	Total Activity :		6.917E+01	6.987E+01			

Grand Total Activity : 6.917E+01 6.987E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232664005 Acquisition date : 14-JUL-2009 08:57:53

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	89.90	173	310	1.04	179.70	172	11	2.40E-02	36.8	7.01E+00	T
0	186.19	188	430	1.40	372.00	367	12	2.61E-02	48.9	6.43E+00	T
0	209.07	74	219	0.91	417.70	414	7	1.03E-02	69.9	6.00E+00	T
0	463.25	77	142	1.45	925.53	919	13	1.07E-02	67.7	3.38E+00	T
0	794.41	61	30	3.22	1587.51	1582	11	8.46E-03	43.4	2.18E+00	T
0	1587.83	22	6	1.27	3175.22	3169	12	3.09E-03	61.1	1.20E+00	
0	1631.77	16	11	0.63	3263.22	3253	14	2.25E-03	98.8	1.18E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 10:59:40.79

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*****************************************************************************
*                            GEL Laboratories LLC                            *
*                              2040 Savage Road                              *
*                            Charleston, SC 29414                            *
*****************************************************************************
*                                                                           *
*                               DETECTOR DATA                               *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232664005.CNF;1  *
* Acquisition date : 14-JUL-2009 08:57:53  Detector SN#    :                *
* Detector ID      : GAM20                 Sensitivity     : 5.00000        *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:31.76         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 26-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232664005            Analyst initials: MXR1           *
* Batch Number     : 882713                Sample Quantity : 1.25240E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 30-SEP-2008 10:47:39.8MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1023-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.889E+00	6.593E-01	5.826E-01	4.850E-02	4.959
K-40	2.370E+01	2.156E+00	4.507E-01	2.892E-02	52.579
CD-109	3.201E+00	7.562E-01	1.139E+00	9.322E-02	2.810
SN-126	3.134E-01	7.402E-02	1.118E-01	9.113E-03	2.802
CS-135	4.721E-01	2.348E-01	2.168E-01	2.682E-02	2.177
BA-137M	1.186E+00	1.421E-01	5.146E-02	4.300E-03	23.042
CS-137	1.253E+00	1.504E-01	5.440E-02	4.554E-03	23.042
TL-208	4.197E-01	8.087E-02	5.490E-02	4.811E-03	7.645
BI-210	1.414E+00	2.750E+00	3.219E+00	2.483E-01	0.439
PB-210	1.414E+00	2.750E+00	3.219E+00	2.483E-01	0.439
PO-210	1.414E+00	2.749E+00	3.219E+00	2.132E-01	0.439
BI-211	3.444E+00	5.178E-01	2.850E-01	2.753E-02	12.084
BI-212	9.065E-01	3.682E-01	4.263E-01	4.357E-02	2.127
PB-212	1.368E+00	1.717E-01	8.047E-02	8.366E-03	16.993
PO-212	1.368E+00	1.717E-01	8.047E-02	8.366E-03	16.993
BI-214	9.258E-01	1.733E-01	9.998E-02	9.703E-03	9.260
PB-214	1.198E+00	1.907E-01	9.936E-02	1.087E-02	12.059
PO-214	1.198E+00	1.907E-01	9.936E-02	1.087E-02	12.059

Sample ID : G232664005 Acquisition date : 14-JUL-2009 08:57:53

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	1.368E+00	1.717E-01	8.047E-02	8.366E-03	16.993
PO-218	1.198E+00	1.907E-01	9.936E-02	1.087E-02	12.059
RA-224	4.194E+00	1.327E+00	9.155E-01	8.721E-02	4.581
RA-226	9.258E-01	1.733E-01	9.998E-02	9.703E-03	9.260
AC-228	1.517E+00	3.174E-01	1.674E-01	2.055E-02	9.061
RA-228	1.517E+00	3.174E-01	1.674E-01	2.055E-02	9.061
TH-228	1.368E+00	1.717E-01	8.047E-02	8.364E-03	16.995
TH-230	9.258E-01	1.733E-01	9.998E-02	9.703E-03	9.260
TH-232	1.517E+00	3.174E-01	1.674E-01	2.055E-02	9.061
TH-234	1.745E+00	1.390E+00	1.590E+00	2.732E-01	1.098
U-234	9.258E-01	1.733E-01	9.998E-02	9.703E-03	9.260
NP-237	9.202E-01	2.886E-01	3.651E-01	8.088E-02	2.520
U-238	1.745E+00	1.390E+00	1.590E+00	2.732E-01	1.098
AM-241	1.519E+00	2.550E-01	1.943E-01	1.462E-02	7.815
AM-243	2.850E-01	6.297E-02	7.522E-02	5.420E-03	3.789
ANH-511	1.142E-01	6.493E-02	4.043E-02	3.141E-03	2.825

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	-1.124E-02		3.662E-02	5.671E-02	3.389E-03	-0.198
NA-24	-9.751E+00		5.762E+00	Half-Life too short		
AL-26	1.417E-05		2.067E-02	3.400E-02	1.881E-03	0.000
TI-44	3.171E-01	+	4.807E-02	6.701E-02	4.982E-03	4.732
SC-46	6.762E-03		3.466E-02	5.836E-02	5.846E-03	0.116
V-48	-5.991E-02		7.024E-02	1.043E-01	9.420E-03	-0.575
CR-51	-2.285E-02		3.407E-01	5.623E-01	6.206E-02	-0.041
MN-52	2.127E-03		2.346E-01	3.929E-01	2.393E-02	0.005
MN-54	-8.396E-04		3.435E-02	5.688E-02	5.488E-03	-0.015
CO-56	1.505E-02		3.509E-02	6.041E-02	5.879E-03	0.249
CO-57	-9.621E-03		2.336E-02	3.679E-02	2.844E-03	-0.262
CO-58	-2.818E-02		3.197E-02	4.800E-02	4.560E-03	-0.587
FE-59	-3.647E-02		9.116E-02	1.425E-01	1.139E-02	-0.256
CO-60	2.849E-02		3.879E-02	6.763E-02	4.125E-03	0.421
ZN-65	-3.357E-02		8.866E-02	1.173E-01	8.061E-03	-0.286
GE-68	3.013E-01		1.136E+00	1.903E+00	1.439E-01	0.158
AS-73	-6.640E-01		6.383E-01	9.576E-01	6.396E-02	-0.693
AS-74	-4.290E-02		9.225E-02	1.413E-01	1.153E-02	-0.304
SE-75	1.039E-02		4.356E-02	6.525E-02	7.245E-03	0.159
BR-77	5.919E-02		2.100E+01	3.391E+01	2.652E+00	0.002
SR-82	-4.460E-02		3.203E-01	5.265E-01	4.862E-02	-0.085
RB-83	-5.240E-03		6.311E-02	1.012E-01	7.912E-03	-0.052
RB-84	1.493E-02		5.943E-02	1.008E-01	1.005E-02	0.148
KR-85	9.547E+00		7.040E+00	1.125E+01	8.761E-01	0.848
SR-85	5.039E-02		3.716E-02	5.939E-02	4.624E-03	0.848
RB-86	2.639E-02		8.073E-01	1.321E+00	1.001E-01	0.020
Y-88	7.070E-04		2.866E-02	4.859E-02	2.661E-03	0.015

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88	-4.308E-03		2.951E-02	4.795E-02	3.340E-03	-0.090
Y-91	-1.282E+01		1.839E+01	2.770E+01	1.602E+00	-0.463
NB-94	2.048E-03		2.920E-02	4.923E-02	4.272E-03	0.042
NB-95	1.752E-02		3.847E-02	5.900E-02	5.402E-03	0.297
NB-95M	1.047E-02		1.284E-01	1.913E-01	1.984E-02	0.055
ZR-95	8.937E-02		6.789E-02	1.238E-01	1.228E-02	0.722
NB-97	4.473E-01		7.470E-01	Half-Life too short		
ZR-97	3.635E+01		1.334E+01	Half-Life too short		
MO-99	2.149E+01		2.060E+01	3.691E+01	5.677E+00	0.582
TC-99M	5.163E+12		3.559E+13	Half-Life too short		
RH-101	-1.246E-04		2.892E-02	4.804E-02	3.382E-03	-0.003
RH-102	8.465E-02		3.399E-02	5.789E-02	4.375E-03	1.462
RU-103	2.512E-02		3.910E-02	6.617E-02	9.010E-03	0.380
RH-106	1.295E-02		2.907E-01	4.662E-01	6.116E-02	0.028
RU-106	1.295E-02		2.907E-01	4.662E-01	3.844E-02	0.028
AG-108M	-5.379E-03		3.031E-02	4.882E-02	3.751E-03	-0.110
AG-110M	6.398E-03		3.547E-02	5.305E-02	4.568E-03	0.121
IN-111	6.464E-01		1.872E+00	2.837E+00	2.781E-01	0.228
IN-113M	-1.955E-04		4.187E-02	6.867E-02	5.002E-03	-0.003
SN-113	-1.955E-04		4.187E-02	6.867E-02	5.002E-03	-0.003
IN-114M	-7.880E-02		1.874E-01	2.739E-01	1.818E-02	-0.288
CD-115	-2.406E-05		1.111E-05	Half-Life too short		
SN-117M	4.221E-03		5.702E-02	9.098E-02	5.327E-03	0.046
SB-122	2.608E+00		3.480E+00	5.954E+00	4.780E-01	0.438
I-123	2.671E+01		8.524E+01	Half-Life too short		
TE-123M	4.079E-03		2.603E-02	4.170E-02	2.464E-03	0.098
I-124	-3.123E-01		1.026E+00	1.465E+00	1.198E-01	-0.213
SB-124	9.585E-03		5.718E-02	9.800E-02	6.164E-03	0.098
SB-125	2.347E-02		9.028E-02	1.499E-01	1.114E-02	0.157
TE-125M	6.603E+00		8.560E+00	1.423E+01	1.360E+00	0.464
I-126	-3.701E-02		2.130E-01	3.060E-01	2.568E-02	-0.121
SB-126	3.035E-02		1.381E-01	2.299E-01	2.027E-02	0.132
SB-127	-1.183E+00		1.976E+00	3.146E+00	3.829E-01	-0.376
XE-127	-2.176E-02		4.428E-02	7.333E-02	5.351E-03	-0.297
I-131	-1.640E-02		1.246E-01	2.033E-01	1.838E-02	-0.081
TE-132	2.924E-01		1.089E+00	1.853E+00	3.024E-01	0.158
BA-133	-3.511E-02		4.239E-02	5.613E-02	7.551E-03	-0.626
I-133	-3.599E-02		2.331E-02	Half-Life too short		
CS-134	1.109E-01	+	4.920E-02	7.381E-02	6.961E-03	1.502
I-135	1.448E+12		2.404E+12	Half-Life too short		
CS-136	4.333E-02		1.124E-01	1.907E-01	1.612E-02	0.227
CE-139	-6.058E-03		2.714E-02	4.258E-02	2.334E-03	-0.142
BA-140	-2.846E-03		2.680E-01	4.315E-01	1.422E-01	-0.007
LA-140	-3.313E-02		8.406E-02	1.305E-01	7.761E-03	-0.254
CE-141	-3.813E-02		6.377E-02	9.694E-02	6.516E-03	-0.393
CE-143	2.239E-03		4.039E-04	Half-Life too short		
CE-144	-3.801E-02		1.882E-01	2.984E-01	4.411E-02	-0.127
PM-144	-1.094E-02		2.898E-02	4.708E-02	4.065E-03	-0.232

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144	-7.422E-01		1.967E+00	3.195E+00	2.757E-01	-0.232
PM-146	2.630E-02		4.347E-02	7.343E-02	7.186E-03	0.358
ND-147	-3.345E-01		5.647E-01	8.576E-01	1.246E-01	-0.390
PM-149	1.375E-05		9.331E-05	Half-Life too short		
EU-152	1.979E-02		1.013E-01	1.570E-01	1.577E-02	0.126
GD-153	-3.062E-02		7.784E-02	1.099E-01	8.588E-03	-0.279
EU-154	-4.006E-02		1.027E-01	1.572E-01	1.485E-02	-0.255
EU-155	5.029E-02		9.787E-02	1.614E-01	1.260E-02	0.312
TB-160	-3.484E-02		1.182E-01	1.893E-01	1.884E-02	-0.184
HO-166M	-1.694E-02		4.837E-02	7.843E-02	6.861E-03	-0.216
TM-171	-1.310E+01		2.497E+01	3.549E+01	2.432E+00	-0.369
LU-176	-1.684E-02		2.438E-02	3.561E-02	3.981E-03	-0.473
LU-177	2.150E+00	+	1.511E+00	2.342E+00	1.780E-01	0.918
LU-177M	-1.902E-01		1.750E-01	2.652E-01	1.891E-02	-0.717
HF-181	2.732E-02		5.057E-02	7.538E-02	5.729E-03	0.362
W-181	-6.456E-02		3.209E-01	4.661E-01	3.175E-02	-0.139
TA-182	-6.637E-02		1.853E-01	2.891E-01	1.685E-02	-0.230
RE-183	8.208E-02		1.027E-01	1.693E-01	9.585E-03	0.485
RE-184	6.524E-02		2.065E-01	3.512E-01	3.613E-02	0.186
OS-185	2.089E-03		3.690E-02	6.246E-02	5.195E-03	0.033
RE-188	-2.279E-02		1.623E-01	2.566E-01	1.549E-02	-0.089
W-188	-4.075E+00		7.494E+00	1.049E+01	1.231E+00	-0.388
IR-192	-1.461E-02		3.038E-02	4.883E-02	5.285E-03	-0.299
AU-195	2.733E-01		2.307E-01	3.530E-01	2.747E-02	0.774
TL-200	1.071E-04		1.170E-03	Half-Life too short		
TL-201	-1.100E+00		1.169E+01	1.845E+01	1.022E+00	-0.060
TL-202	5.262E-02		7.599E-02	1.296E-01	9.487E-03	0.406
HG-203	2.168E-02		3.754E-02	6.431E-02	7.881E-03	0.337
BI-207	3.068E-02		4.658E-02	8.102E-02	6.317E-03	0.379
TL-207	-6.368E-01		6.240E-01	9.546E-01	1.785E-01	-0.667
PO-209	4.839E-01		6.465E+00	1.075E+01	1.083E+00	0.045
PB-211	-5.763E-01		9.648E-01	1.405E+00	8.780E-01	-0.410
PO-215	-6.368E-01		6.240E-01	9.546E-01	1.785E-01	-0.667
RN-219	2.229E-01		3.856E-01	6.526E-01	9.253E-02	0.342
RN-220	2.542E+00		2.141E+01	3.484E+01	2.775E+00	0.073
RA-223	-6.368E-01		6.240E-01	9.546E-01	1.785E-01	-0.667
AC-227	1.001E-01		3.407E-01	5.781E-01	9.527E-02	0.173
TH-227	1.001E-01		3.408E-01	5.781E-01	1.100E-01	0.173
TH-229	3.927E-01		4.487E-01	7.858E-01	5.351E-02	0.500
PA-231	-4.960E-02		1.333E+00	2.217E+00	3.834E-01	-0.022
TH-231	-6.368E-01		6.240E-01	9.546E-01	1.785E-01	-0.667
U-231	-1.313E+00		1.641E+00	2.261E+00	1.777E-01	-0.581
PA-233	3.965E-02		5.484E-02	9.457E-02	1.057E-02	0.419
PA-234	-2.800E-01		2.751E-01	3.960E-01	7.601E-02	-0.707
PA-234M	-3.409E+00		6.413E+00	1.001E+01	1.132E+00	-0.341
U-235	2.219E-02		2.002E-01	3.151E-01	5.232E-02	0.070
NP-236	-3.673E-02		7.406E-02	1.148E-01	6.619E-03	-0.320
NP-239	-1.297E-01		1.721E-01	2.669E-01	2.048E-02	-0.486

Sample ID : G232664005 Acquisition date : 14-JUL-2009 08:57:53

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.629E-02		8.540E-02	1.412E-01	1.087E-02	0.328
CM-247	1.318E-02		3.490E-02	5.850E-02	4.121E-03	0.225
CF-249	5.804E-03		3.907E-02	6.469E-02	4.650E-03	0.090
CF-251	9.144E-02		1.150E-01	1.892E-01	1.128E-02	0.483

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                            DETECTOR DATA                              *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232664005       *
* Acquisition date  : 14-JUL-2009 08:57:53 Detector SN#     :           *
* Detector ID       : GAM20                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:31.76      Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                             SAMPLE DATA                               *
*                                                                       *
* Sample date       : 26-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232664005           Analyst initials: MXR1       *
* Batch Number      : 882713               Sample Quantity : 1.2524E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
*                                                                       *
* CALIB. DATE/TIME : 30-SEP-2008 10:47:39 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
BE-7	2.889E+00	6.461E-01	2.959E-01	3.296E-01
K-40	2.370E+01	2.113E+00	2.253E-01	1.078E+00
CD-109	3.201E+00	7.411E-01	5.922E-01	3.781E-01
SN-126	3.134E-01	7.254E-02	5.815E-02	3.701E-02
CS-135	4.721E-01	2.301E-01	1.110E-01	1.174E-01
BA-137M	1.186E+00	1.393E-01	2.602E-02	7.105E-02
CS-137	1.253E+00	1.473E-01	2.750E-02	7.518E-02
TL-208	4.197E-01	7.926E-02	2.781E-02	4.044E-02
BI-210	1.414E+00	2.695E+00	1.688E+00	1.375E+00
PB-210	1.414E+00	2.695E+00	1.688E+00	1.375E+00
PO-210	1.414E+00	2.694E+00	1.688E+00	1.375E+00
BI-211	3.444E+00	5.074E-01	1.454E-01	2.589E-01
BI-212	9.065E-01	3.608E-01	2.152E-01	1.841E-01
PB-212	1.368E+00	1.683E-01	4.127E-02	8.586E-02
PO-212	1.368E+00	1.683E-01	4.127E-02	8.586E-02
BI-214	9.258E-01	1.698E-01	5.061E-02	8.665E-02
PB-214	1.198E+00	1.868E-01	5.068E-02	9.533E-02
PO-214	1.198E+00	1.868E-01	5.068E-02	9.533E-02
PO-216	1.368E+00	1.683E-01	4.127E-02	8.586E-02
PO-218	1.198E+00	1.868E-01	5.068E-02	9.533E-02
RA-224	4.194E+00	1.300E+00	4.695E-01	6.635E-01
RA-226	9.258E-01	1.698E-01	5.061E-02	8.665E-02
AC-228	1.517E+00	3.111E-01	8.423E-02	1.587E-01
RA-228	1.517E+00	3.111E-01	8.423E-02	1.587E-01
TH-228	1.368E+00	1.683E-01	4.127E-02	8.586E-02
TH-230	9.258E-01	1.698E-01	5.061E-02	8.665E-02
TH-232	1.517E+00	3.111E-01	8.423E-02	1.587E-01
TH-234	1.745E+00	1.362E+00	8.303E-01	6.948E-01
U-234	9.258E-01	1.698E-01	5.061E-02	8.665E-02
NP-237	9.202E-01	2.828E-01	1.899E-01	1.443E-01
U-238	1.745E+00	1.362E+00	8.303E-01	6.948E-01
AM-241	1.519E+00	2.499E-01	1.016E-01	1.275E-01
AM-243	2.850E-01	6.171E-02	3.919E-02	3.149E-02
ANH-511	1.142E-01	6.363E-02	2.052E-02	3.247E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
NA-22	-1.124E-02	3.589E-02	2.841E-02	1.831E-02	NOT IDENT.
NA-24	-9.751E+06	1.129E+07	0.000E+00	5.762E+06	SHORT HLIF
AL-26	1.417E-05	2.026E-02	1.694E-02	1.034E-02	NOT IDENT.
TI-44	3.171E-01	4.711E-02	3.489E-02	2.404E-02	FAIL ABUN
SC-46	6.762E-03	3.397E-02	2.938E-02	1.733E-02	FAIL ABUN
V-48	-5.991E-02	6.884E-02	5.242E-02	3.512E-02	NOT IDENT.
CR-51	-2.285E-02	3.339E-01	2.872E-01	1.703E-01	NOT IDENT.
MN-52	2.127E-03	2.299E-01	1.965E-01	1.173E-01	NOT IDENT.
MN-54	-8.396E-04	3.367E-02	2.866E-02	1.718E-02	NOT IDENT.
CO-56	1.505E-02	3.439E-02	3.044E-02	1.755E-02	NOT IDENT.
CO-57	-9.621E-03	2.289E-02	1.904E-02	1.168E-02	NOT IDENT.
CO-58	-2.818E-02	3.133E-02	2.420E-02	1.599E-02	NOT IDENT.
FE-59	-3.647E-02	8.933E-02	7.154E-02	4.558E-02	NOT IDENT.
CO-60	2.849E-02	3.801E-02	3.385E-02	1.939E-02	NOT IDENT.
ZN-65	-3.357E-02	8.689E-02	5.886E-02	4.433E-02	NOT IDENT.
GE-68	3.013E-01	1.113E+00	9.554E-01	5.680E-01	NOT IDENT.
AS-73	-6.640E-01	6.255E-01	5.012E-01	3.192E-01	NOT IDENT.
AS-74	-4.290E-02	9.041E-02	7.156E-02	4.613E-02	NOT IDENT.
SE-75	1.039E-02	4.269E-02	3.342E-02	2.178E-02	NOT IDENT.
BR-77	5.919E-02	2.058E+01	1.720E+01	1.050E+01	FAIL ABUN
SR-82	-4.460E-02	3.139E-01	2.656E-01	1.602E-01	NOT IDENT.
RB-83	-5.240E-03	6.185E-02	5.133E-02	3.156E-02	NOT IDENT.
RB-84	1.493E-02	5.824E-02	5.077E-02	2.972E-02	NOT IDENT.
KR-85	9.547E+00	6.899E+00	5.710E+00	3.520E+00	NOT IDENT.
SR-85	5.039E-02	3.641E-02	3.014E-02	1.858E-02	NOT IDENT.
RB-86	2.639E-02	7.911E-01	6.634E-01	4.036E-01	NOT IDENT.
Y-88	7.070E-04	2.809E-02	2.421E-02	1.433E-02	NOT IDENT.
ZR-88	-4.308E-03	2.892E-02	2.442E-02	1.476E-02	NOT IDENT.
Y-91	-1.282E+01	1.802E+01	1.389E+01	9.193E+00	NOT IDENT.
NB-94	2.048E-03	2.862E-02	2.487E-02	1.460E-02	NOT IDENT.
NB-95	1.752E-02	3.770E-02	2.977E-02	1.923E-02	NOT IDENT.
NB-95M	1.047E-02	1.259E-01	9.812E-02	6.422E-02	NOT IDENT.
ZR-95	8.937E-02	6.653E-02	6.250E-02	3.394E-02	NOT IDENT.
NB-97	4.473E+05	1.464E+06	0.000E+00	7.470E+05	SHORT HLIF
ZR-97	3.635E+07	2.614E+07	0.000E+00	1.334E+07	SHORT HLIF
MO-99	2.149E+01	2.019E+01	1.863E+01	1.030E+01	NOT IDENT.
TC-99M	5.163E+18	6.975E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.246E-04	2.835E-02	2.470E-02	1.446E-02	NOT IDENT.
RH-102	8.465E-02	3.331E-02	2.941E-02	1.700E-02	NOT IDENT.
RU-103	2.512E-02	3.831E-02	3.359E-02	1.955E-02	FAIL ABUN
RH-106	1.295E-02	2.849E-01	2.359E-01	1.454E-01	FAIL ABUN
RU-106	1.295E-02	2.849E-01	2.359E-01	1.454E-01	FAIL ABUN
AG-108M	-5.379E-03	2.970E-02	2.483E-02	1.516E-02	NOT IDENT.
AG-110M	6.398E-03	3.476E-02	2.682E-02	1.773E-02	NOT IDENT.
IN-111	6.464E-01	1.834E+00	1.454E+00	9.358E-01	NOT IDENT.
IN-113M	-1.955E-04	4.104E-02	3.498E-02	2.094E-02	NOT IDENT.
SN-113	-1.955E-04	4.104E-02	3.498E-02	2.094E-02	NOT IDENT.
IN-114M	-7.880E-02	1.837E-01	1.409E-01	9.372E-02	NOT IDENT.
CD-115	-2.406E+01	2.177E+01	0.000E+00	1.111E+01	SHORT HLIF
SN-117M	4.221E-03	5.588E-02	4.693E-02	2.851E-02	NOT IDENT.
SB-122	2.608E+00	3.410E+00	3.017E+00	1.740E+00	NOT IDENT.
I-123	2.671E+07	1.671E+08	0.000E+00	8.524E+07	SHORT HLIF
TE-123M	4.079E-03	2.551E-02	2.151E-02	1.301E-02	NOT IDENT.
I-124	-3.123E-01	1.005E+00	7.416E-01	5.130E-01	NOT IDENT.
SB-124	9.585E-03	5.603E-02	4.888E-02	2.859E-02	FAIL ABUN
SB-125	2.347E-02	8.847E-02	7.623E-02	4.514E-02	FAIL ABUN
TE-125M	6.603E+00	8.388E+00	7.379E+00	4.280E+00	NOT IDENT.
I-126	-3.701E-02	2.087E-01	1.547E-01	1.065E-01	NOT IDENT.
SB-126	3.035E-02	1.354E-01	1.161E-01	6.906E-02	FAIL ABUN
SB-127	-1.183E+00	1.936E+00	1.590E+00	9.878E-01	FAIL ABUN
XE-127	-2.176E-02	4.339E-02	3.769E-02	2.214E-02	NOT IDENT.
I-131	-1.640E-02	1.221E-01	1.037E-01	6.230E-02	NOT IDENT.
TE-132	2.924E-01	1.067E+00	9.511E-01	5.445E-01	NOT IDENT.
BA-133	-3.511E-02	4.154E-02	2.863E-02	2.120E-02	NOT IDENT.
I-133	-3.599E+04	4.569E+04	0.000E+00	2.331E+04	SHORT HLIF
CS-134	1.109E-01	4.821E-02	3.722E-02	2.460E-02	FAIL ABUN
I-135	1.448E+18	4.712E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.333E-02	1.102E-01	9.581E-02	5.620E-02	FAIL ABUN
CE-139	-6.058E-03	2.660E-02	2.195E-02	1.357E-02	NOT IDENT.
BA-140	-2.846E-03	2.627E-01	2.188E-01	1.340E-01	NOT IDENT.
LA-140	-3.313E-02	8.238E-02	6.513E-02	4.203E-02	NOT IDENT.

CE-141	-3.813E-02	6.249E-02	5.006E-02	3.188E-02	NOT IDENT.
CE-143	2.239E+03	7.917E+02	0.000E+00	4.039E+02	SHORT HLIF
CE-144	-3.801E-02	1.844E-01	1.542E-01	9.410E-02	NOT IDENT.
PM-144	-1.094E-02	2.840E-02	2.379E-02	1.449E-02	FAIL ABUN
PR-144	-7.422E-01	1.928E+00	1.614E+00	9.835E-01	NOT IDENT.
PM-146	2.630E-02	4.260E-02	3.733E-02	2.174E-02	NOT IDENT.
ND-147	-3.345E-01	5.535E-01	4.349E-01	2.824E-01	FAIL ABUN
PM-149	1.375E+01	1.829E+02	0.000E+00	9.331E+01	SHORT HLIF
EU-152	1.979E-02	9.923E-02	8.009E-02	5.063E-02	NOT IDENT.
GD-153	-3.062E-02	7.628E-02	5.704E-02	3.892E-02	NOT IDENT.
EU-154	-4.006E-02	1.007E-01	7.875E-02	5.136E-02	NOT IDENT.
EU-155	5.029E-02	9.591E-02	8.372E-02	4.894E-02	FAIL ABUN
TB-160	-3.484E-02	1.158E-01	9.533E-02	5.911E-02	FAIL ABUN
HO-166M	-1.694E-02	4.740E-02	3.962E-02	2.418E-02	NOT IDENT.
TM-171	-1.310E+01	2.447E+01	1.852E+01	1.248E+01	FAIL ABUN
LU-176	-1.684E-02	2.389E-02	1.820E-02	1.219E-02	FAIL ABUN
LU-177	2.150E+00	1.481E+00	1.203E+00	7.555E-01	FAIL ABUN
LU-177M	-1.902E-01	1.715E-01	1.350E-01	8.751E-02	FAIL ABUN
HF-181	2.732E-02	4.956E-02	3.828E-02	2.528E-02	NOT IDENT.
W-181	-6.456E-02	3.144E-01	2.433E-01	1.604E-01	NOT IDENT.
TA-182	-6.637E-02	1.816E-01	1.449E-01	9.263E-02	FAIL ABUN
RE-183	8.208E-02	1.007E-01	8.730E-02	5.136E-02	FAIL ABUN
RE-184	6.524E-02	2.023E-01	1.800E-01	1.032E-01	FAIL ABUN
OS-185	2.089E-03	3.616E-02	3.159E-02	1.845E-02	FAIL ABUN
RE-188	-2.279E-02	1.591E-01	1.324E-01	8.117E-02	FAIL ABUN
W-188	-4.075E+00	7.344E+00	5.366E+00	3.747E+00	FAIL ABUN
IR-192	-1.461E-02	2.978E-02	2.495E-02	1.519E-02	FAIL ABUN
AU-195	2.733E-01	2.261E-01	1.832E-01	1.153E-01	FAIL ABUN
TL-200	1.071E+02	2.292E+03	0.000E+00	1.170E+03	SHORT HLIF
TL-201	-1.100E+00	1.145E+01	9.506E+00	5.843E+00	NOT IDENT.
TL-202	5.262E-02	7.447E-02	6.590E-02	3.799E-02	NOT IDENT.
HG-203	2.168E-02	3.679E-02	3.291E-02	1.877E-02	NOT IDENT.
BI-207	3.068E-02	4.565E-02	4.069E-02	2.329E-02	FAIL ABUN
TL-207	-6.368E-01	6.115E-01	4.875E-01	3.120E-01	FAIL ABUN
PO-209	4.839E-01	6.336E+00	5.414E+00	3.232E+00	NOT IDENT.
PB-211	-5.763E-01	9.455E-01	7.155E-01	4.824E-01	NOT IDENT.
PO-215	-6.368E-01	6.115E-01	4.875E-01	3.120E-01	FAIL ABUN
RN-219	2.229E-01	3.779E-01	3.323E-01	1.928E-01	FAIL ABUN
RN-220	2.542E+00	2.099E+01	1.766E+01	1.071E+01	NOT IDENT.
RA-223	-6.368E-01	6.115E-01	4.875E-01	3.120E-01	FAIL ABUN
AC-227	1.001E-01	3.338E-01	2.962E-01	1.703E-01	FAIL ABUN
TH-227	1.001E-01	3.340E-01	2.962E-01	1.704E-01	FAIL ABUN
TH-229	3.927E-01	4.397E-01	4.042E-01	2.243E-01	FAIL ABUN
PA-231	-4.960E-02	1.306E+00	1.134E+00	6.664E-01	FAIL ABUN
TH-231	-6.368E-01	6.115E-01	4.875E-01	3.120E-01	FAIL ABUN
U-231	-1.313E+00	1.608E+00	1.174E+00	8.206E-01	FAIL ABUN
PA-233	3.965E-02	5.374E-02	4.832E-02	2.742E-02	FAIL ABUN
PA-234	-2.800E-01	2.696E-01	1.992E-01	1.375E-01	FAIL ABUN
PA-234M	-3.409E+00	6.285E+00	5.030E+00	3.207E+00	NOT IDENT.
U-235	2.219E-02	1.962E-01	1.627E-01	1.001E-01	FAIL ABUN
NP-236	-3.673E-02	7.258E-02	5.920E-02	3.703E-02	FAIL ABUN
NP-239	-1.297E-01	1.687E-01	1.382E-01	8.606E-02	FAIL ABUN
CM-243	4.629E-02	8.369E-02	7.323E-02	4.270E-02	FAIL ABUN
CM-247	1.318E-02	3.420E-02	2.979E-02	1.745E-02	NOT IDENT.
CF-249	5.804E-03	3.829E-02	3.295E-02	1.953E-02	NOT IDENT.
CF-251	9.144E-02	1.127E-01	9.743E-02	5.752E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	319.9596
46.50	319.9596
46.50	319.9596
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49.72	351.0395
51.35	334.8310
52.39	362.3174
52.97	397.2401
53.15	397.3826
53.44	402.5464
54.07	423.7948
56.28	386.9333
56.28	386.9353
57.37	0.0000
57.53	419.1911
57.53	419.1921
57.60	419.2468
57.98	406.1116
57.98	406.1116
59.32	407.1378
59.32	407.1378
59.40	407.1979
59.54	407.3048
59.72	407.4418
60.01	335.7206
61.10	312.3690
61.14	312.3912
61.30	312.4832
63.00	298.3803
63.29	395.0319
63.29	395.0319
63.58	395.2373
64.28	422.9202
65.12	420.5245
65.20	420.5839
65.20	420.5839
66.05	384.8486
66.72	421.7043
66.83	427.8538
66.91	427.9140
67.20	428.1292
67.20	428.1292
67.75	390.5450
67.85	414.9299
68.90	445.6227
68.90	445.6227
69.30	469.2892
69.67	469.5853
70.82	423.1397
70.82	423.1397
70.83	423.1461
72.80	481.2413
72.87	453.7062
72.87	453.7062
74.67	447.8690
74.81	447.9713
74.81	447.9713
74.81	447.9713
74.81	447.9713
74.81	447.9713
74.81	447.9713
74.97	448.0868
75.28	448.3113
75.70	448.6136
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77.11	449.6272
77.11	449.6272

77.11	449.6272
77.11	449.6272
77.11	449.6272
78.38	419.0873
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79.80	376.6229
79.80	376.6229
80.11	376.8046
80.18	376.8454
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80.30	420.3465
80.57	420.5222
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81.07	411.5292
81.07	411.5292
81.07	411.5292
81.07	411.5292
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83.78	397.6399
84.21	380.7325
84.40	398.0114
84.90	360.8212
85.43	404.8792
86.29	435.1364
86.50	508.8614
86.54	508.8911
86.59	508.9283
86.72	509.0250
86.79	509.0771
86.94	474.7228
87.30	474.9748
87.30	474.9748
87.30	474.9748
87.30	474.9748
87.30	474.9748
87.30	474.9748
87.57	418.7072
87.88	418.8986
88.03	418.9903
88.36	419.1920
88.47	419.2592
89.95	321.0223
91.11	321.5577
92.29	322.0994
92.38	322.1414
92.38	322.1414
93.35	270.4008
94.00	270.6487
94.67	270.9005
94.67	270.9031
94.90	263.0655
94.90	263.0655
94.90	263.0655
94.90	263.0655
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95.87	338.0046
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97.43	313.2879
98.44	280.2784
98.44	280.2784
98.88	288.4135
99.55	263.6892
99.55	263.6892
99.86	266.9913
100.00	276.6176
100.10	276.6560
103.18	342.9711
103.76	271.5932
105.00	264.5393
105.31	288.2178
108.00	311.8037
109.28	267.0836
111.00	316.2356
111.00	316.2356

111.76	320.8603
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115.19	277.7500
116.30	282.4760
117.00	290.3297
117.00	290.3297
117.66	292.7397
121.11	229.4856
121.62	255.8673
121.78	264.6653
122.06	280.0703
122.32	288.9111
122.32	288.9111
122.32	288.9111
122.32	288.9111
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136.48	255.8184
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144.24	261.3476
144.24	261.3476
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147.16	275.6599
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152.70	222.9326
153.22	237.7710
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154.21	272.0142
154.21	272.0142
155.03	269.9725
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159.00	241.4437
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161.27	271.6697
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162.64	228.6031
163.35	245.9189
163.89	248.3390
165.85	244.2272
167.43	235.4151
171.28	208.6239
171.86	231.8031
172.10	231.8562
176.55	216.6125
176.60	216.6239
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184.41	254.8222
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186.00	252.3845
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193.63	226.7514
197.04	250.4340
198.01	227.6181
198.60	223.3012
200.40	245.8367
201.83	263.0198
202.84	264.1372
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208.81	262.7858

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209.75	247.6062
210.97	223.5016
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216.55	224.8878
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222.10	219.5717
223.80	203.5835
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227.20	200.5038
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228.18	201.5652
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236.00	245.5441
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238.63	201.3707
238.63	201.3707
238.63	201.3707
239.00	201.4278
240.98	201.7316
241.98	201.8826
241.98	201.8826
241.98	201.8826
244.69	139.7678
245.39	151.6170
247.94	154.8545
248.90	169.7233
249.79	168.9126
252.40	167.3869
252.85	171.1425
252.85	171.1425
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256.20	177.1251
256.20	177.1251
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260.90	0.0000
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268.79	155.7055
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269.46	161.9578
269.46	161.9578
269.46	161.9578
271.23	178.4680
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277.35	158.1409
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277.60	163.8180
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286.10	148.6680
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295.21	159.0980
295.96	159.1770

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297.23	159.3095
298.57	159.4496
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299.80	159.5770
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300.09	159.6076
300.09	159.6076
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303.76	153.2813
303.91	153.2959
304.40	159.4785
304.40	159.4785
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323.87	175.6144
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334.20	146.8475
334.30	146.8566
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338.28	156.6040
338.28	156.6040
338.28	156.6040
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338.32	156.6089
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351.92	122.3501
351.92	122.3501
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369.80	121.6128
374.96	129.9623
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387.95	135.9290
388.63	142.0220
391.69	122.0801
391.69	122.0801
392.90	127.2074
398.62	127.5977
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401.81	113.6116
402.60	119.7483
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427.89	117.2146
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439.89	112.7489
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444.90	98.5123
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445.03	98.5181
445.03	98.5181
445.03	98.5181
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511.85	82.3876
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513.99	75.3973
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569.50	84.4443
569.67	85.5482
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579.30	0.0000
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602.71	84.4725
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604.70	96.1058
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609.31	81.3475
609.31	81.3475

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610.33	81.3809
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614.37	82.1801
618.01	71.5605
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621.84	70.5482
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661.65	70.9313
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696.49	70.9111
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722.78	49.5690
722.89	49.5703
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747.13	46.8579
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752.31	70.4095
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755.35	57.3245
756.15	53.5794
756.87	58.2930
763.93	47.1216
765.79	50.2943
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766.84	47.1667
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768.36	48.7629
768.36	48.7629
768.36	48.7629
776.49	50.1559
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778.57	48.2956
778.89	44.5123
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796.30	38.0967
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867.82	42.6039
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875.33	0.0000
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880.27	43.9838
880.51	38.1221
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883.24	48.9148
884.67	42.0846
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911.07	41.4248
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926.50	41.6083
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934.06	53.6124
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964.01	73.4211
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968.20	72.1705
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969.11	38.4335
969.11	38.4335
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983.50	55.3625
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996.32	47.4750
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1001.68	55.6351
1004.76	58.7193
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1024.50	0.0000
1034.80	39.7998
1037.82	51.0645
1038.57	50.0551

1038.76	0.0000
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1046.59	48.1107
1048.07	45.0592
1050.47	49.1859
1050.47	49.1859
1063.62	41.1270
1076.63	50.5480
1077.35	46.4304
1085.78	45.4953
1099.22	60.1750
1112.02	49.9594
1112.84	41.6406
1115.52	52.0874
1120.29	50.4102
1120.29	50.4102
1120.29	50.4102
1120.29	50.4102
1120.51	47.9788
1121.28	47.9878
1124.00	0.0000
1129.67	49.1320
1131.51	0.0000
1147.95	0.0000
1167.94	50.6438
1173.22	52.8223
1175.09	43.3323
1177.93	41.2471
1189.05	47.7180
1204.90	69.1831
1205.75	0.0000
1213.00	62.9151
1221.42	65.1759
1230.97	70.6729
1235.34	67.5281
1236.41	0.0000
1238.11	65.4261
1238.11	65.4261
1238.11	65.4261
1238.11	65.4261
1238.25	68.6438
1246.25	47.2785
1260.41	0.0000
1271.85	31.3421
1274.45	40.0117
1274.54	38.9303
1291.56	36.9069
1298.22	0.0000
1312.09	30.5307
1325.50	31.7145
1325.50	31.7145
1332.49	31.7612
1333.61	28.4832
1360.21	26.6258
1362.66	0.0000
1365.15	23.8958
1368.21	25.7510
1368.53	0.0000
1376.25	23.0306
1377.67	20.2732
1377.67	20.2732
1377.67	20.2732
1377.67	20.2732
1384.27	25.8376
1394.10	18.4937
1395.20	19.4226
1407.95	33.3838
1434.06	15.8496
1436.60	19.5884
1457.56	0.0000
1460.81	19.6849
1489.15	21.6814
1509.49	16.0897
1596.49	21.1702
1620.62	21.0902
1678.03	0.0000
1691.02	8.8114
1691.02	8.8114

1706.46	0.0000
1750.46	0.0000
1764.49	11.9009
1764.49	11.9009
1764.49	11.9009
1764.49	11.9009
1770.23	5.1054
1771.40	3.4043
1791.20	0.0000
1808.65	6.9949
1836.01	8.0309

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232664005

Total Uranium Activity	5.2024E+00	ug/g
Total Uranium Counting Unc.	4.0526E+00	ug/g
Total Uranium Tpu	2.0676E-06	ug/g
Total Uranium Mda	2.4712E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232664005       *
*   ANALYST       : MXR1                      DETECTOR   : GAM20            *
*   SAMPLE DATE   : 26-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 08:57:53.68    SAMPLE ALQT:  125.240 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.599E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.342E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.654E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.774E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:00.92

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:44:32
Sample ID         : G232754001           Sample quantity  : 1.35030E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.21  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.74*	71	598	1.08	127.48	123	9	9.90E-03	64.0	
2	2	74.93*	617	669	1.52	149.87	143	19	8.58E-02	8.5	1.01E+01
3	2	77.37*	856	424	1.02	154.75	143	19	1.19E-01	5.1	
4	0	87.42*	276	505	1.11	174.85	172	7	3.83E-02	15.0	
5	0	90.13	120	413	0.96	180.27	178	6	1.66E-02	28.5	
6	0	93.28*	318	482	1.36	186.57	183	9	4.42E-02	14.5	
7	0	186.18*	238	357	1.02	372.35	368	10	3.31E-02	16.9	
8	0	209.87	124	451	1.13	419.74	414	12	1.72E-02	35.5	
9	5	238.87*	1599	173	0.98	477.73	470	19	2.22E-01	2.9	1.89E+00
10	5	241.88	404	258	1.71	483.77	470	19	5.61E-02	10.0	
11	0	270.47	121	237	1.51	540.94	537	10	1.68E-02	25.5	
12	0	277.65*	36	229	1.19	555.30	552	9	4.98E-03	79.0	
13	0	295.52	446	182	0.99	591.03	587	9	6.19E-02	7.3	
14	0	300.06	113	172	1.18	600.12	596	9	1.56E-02	23.0	
15	0	328.34*	74	162	1.27	656.68	653	9	1.03E-02	34.1	
16	0	338.58	309	228	1.11	677.16	670	13	4.30E-02	11.6	
17	0	352.09*	802	196	1.15	704.18	697	14	1.11E-01	5.2	
18	0	409.75	49	184	0.71	819.50	815	12	6.81E-03	57.0	
19	0	463.54	128	141	0.81	927.08	922	14	1.78E-02	21.5	
20	0	511.17*	100	184	1.37	1022.35	1015	15	1.39E-02	34.6	
21	0	583.61*	488	104	1.23	1167.22	1162	12	6.78E-02	6.3	
22	0	609.76*	518	113	1.29	1219.51	1214	12	7.19E-02	6.1	
23	0	728.07	88	111	1.57	1456.14	1448	13	1.22E-02	26.8	
24	0	768.75	79	78	1.45	1537.50	1531	12	1.10E-02	24.9	
25	0	795.12	77	69	1.23	1590.23	1584	13	1.07E-02	24.9	
26	0	861.70	63	78	1.73	1723.40	1715	13	8.73E-03	31.6	
27	0	911.76*	319	70	1.68	1823.53	1817	16	4.43E-02	8.2	
28	2	965.00	73	52	2.04	1930.00	1925	20	1.02E-02	21.4	1.63E+00
29	2	969.49*	223	50	1.90	1938.97	1925	20	3.10E-02	9.2	
30	0	1121.34*	99	104	2.21	2242.69	2233	16	1.37E-02	25.5	
31	0	1239.37	51	85	1.19	2478.75	2474	12	7.04E-03	38.9	
32	0	1379.31*	35	19	1.40	2758.61	2752	15	4.93E-03	35.4	
33	0	1461.27*	1672	69	2.01	2922.54	2914	20	2.32E-01	2.8	
34	0	1509.98*	25	25	0.59	3019.95	3012	19	3.45E-03	52.6	
35	0	1589.67	29	28	1.50	3179.34	3171	15	4.02E-03	45.0	
36	0	1729.77	23	7	2.63	3459.54	3451	14	3.19E-03	32.1	
37	0	1764.94*	74	8	1.73	3529.87	3524	11	1.02E-02	14.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 12:45:03

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:44:32
Sample ID : G232754001 Sample quantity : 135.03 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.21 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.549E+01	3.568E+00	5.212E-01	4.387E-02	68.092
CD-109	+	88.03	*	3.362E+00	1.046E+00	1.473E+00	1.271E-01	2.282
SN-126	+	64.28		5.882E-01	7.580E-01	8.861E-01	1.283E-01	0.664
	+	86.94		1.376E+00	7.023E-01	6.043E-01	2.498E-01	2.277
	+	87.57	*	3.310E-01	1.030E-01	1.474E-01	1.266E-02	2.245
TL-208	+	277.35		2.966E-01	4.698E-01	5.848E-01	6.103E-02	0.507
	+	510.84		4.123E-01	2.887E-01	2.102E-01	2.143E-02	1.962
	+	583.14	*	5.743E-01	8.289E-02	5.878E-02	4.049E-03	9.770
	+	860.37		7.059E-01	4.511E-01	4.229E-01	4.039E-02	1.669
BI-211		72.87		9.515E+00	3.645E+00	5.758E+00	4.369E-01	1.652
	+	351.07	*	4.134E+00	4.984E-01	2.994E-01	1.859E-02	13.809
PB-212	+	74.81		3.173E+00	6.642E-01	5.652E-01	6.838E-02	5.613
	+	77.11		2.476E+00	3.189E-01	3.196E-01	2.497E-02	7.747
	+	87.30		1.531E+00	5.005E-01	6.802E-01	8.956E-02	2.251
	+	238.63	*	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
	+	300.09		1.962E+00	9.156E-01	1.085E+00	8.798E-02	1.808
PO-212	+	74.81		3.173E+00	6.642E-01	5.652E-01	6.838E-02	5.613
	+	77.11		2.476E+00	3.189E-01	3.196E-01	2.497E-02	7.747
	+	87.30		1.531E+00	5.005E-01	6.802E-01	8.956E-02	2.251
		115.19		3.916E-02	3.780E+00	6.229E+00	3.986E-01	0.006
	+	238.63	*	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
	+	300.09		1.962E+00	9.156E-01	1.085E+00	8.798E-02	1.808
BI-214	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.199E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.486E-01	1.572E-02	4.858
PB-214	+	74.81		5.467E+00	1.101E+00	9.739E-01	1.039E-01	5.613
	+	77.11		4.245E+00	6.351E-01	5.479E-01	5.979E-02	7.747
	+	87.30		2.622E+00	8.410E-01	1.165E+00	1.343E-01	2.251
	+	241.98		2.758E+00	5.911E-01	5.424E-01	4.245E-02	5.085
	+	295.21		1.364E+00	2.288E-01	2.208E-01	1.852E-02	6.178

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-214	+	74.81		5.467E+00	1.101E+00	9.739E-01	1.039E-01	5.613
	+	77.11		4.245E+00	6.351E-01	5.479E-01	5.979E-02	7.747
	+	87.30		2.622E+00	8.410E-01	1.165E+00	1.343E-01	2.251
	+	241.98		2.758E+00	5.911E-01	5.424E-01	4.245E-02	5.085
	+	295.21		1.364E+00	2.288E-01	2.208E-01	1.852E-02	6.178
	+	351.92	*	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-216	+	74.81		3.173E+00	6.642E-01	5.652E-01	6.838E-02	5.613
	+	77.11		2.476E+00	3.189E-01	3.196E-01	2.497E-02	7.747
	+	87.30		1.531E+00	5.005E-01	6.802E-01	8.956E-02	2.251
	+	238.63	*	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
	+	300.09		1.962E+00	9.156E-01	1.085E+00	8.798E-02	1.808
PO-218	+	74.81		5.467E+00	1.101E+00	9.739E-01	1.039E-01	5.613
	+	77.11		4.245E+00	6.351E-01	5.479E-01	5.979E-02	7.747
	+	87.30		2.622E+00	8.410E-01	1.165E+00	1.343E-01	2.251
	+	241.98		2.758E+00	5.911E-01	5.424E-01	4.245E-02	5.085
	+	295.21		1.364E+00	2.288E-01	2.208E-01	1.852E-02	6.178
	+	351.92	*	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
RA-224	+	240.98	*	5.230E+00	1.082E+00	1.025E+00	5.594E-02	5.101
RA-226	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.199E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.486E-01	1.572E-02	4.858
AC-228	+	338.32		1.759E+00	8.238E-01	3.306E-01	1.347E-01	5.321
	+	911.07	*	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
	+	969.11		2.097E+00	6.248E-01	3.219E-01	7.533E-02	6.516
RA-228	+	338.32		1.759E+00	8.238E-01	3.306E-01	1.347E-01	5.321
	+	911.07	*	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
	+	969.11		2.097E+00	6.248E-01	3.219E-01	7.533E-02	6.516
TH-228		84.40		1.620E+00	3.220E+00	4.458E+00	5.772E-01	0.363
	+	238.60	*	1.819E+00	1.663E-01	9.014E-02	6.358E-03	20.176
	+	300.10		1.962E+00	1.466E+00	1.085E+00	6.392E-01	1.808
TH-230	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.198E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.485E-01	1.572E-02	4.858
TH-232	+	338.32		1.759E+00	4.181E-01	3.306E-01	1.844E-02	5.321
	+	911.07	*	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
	+	969.11		2.097E+00	6.248E-01	3.219E-01	7.533E-02	6.516
TH-234	+	63.29	*	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
	+	92.38		2.462E+00	8.376E-01	6.912E-01	1.232E-01	3.561
U-234	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.198E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.485E-01	1.572E-02	4.858
NP-237	+	86.50	*	9.719E-01	3.630E-01	4.135E-01	9.228E-02	2.350
		95.87		-2.170E-01	1.078E+00	1.552E+00	3.776E-01	-0.140
U-238	+	63.29	*	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
	+	92.38		2.462E+00	7.405E-01	6.912E-01	5.574E-02	3.561
AM-243	+	74.67	*	5.143E-01	9.636E-02	9.193E-02	7.057E-03	5.595
	+	86.72		3.645E+01	1.135E+01	1.592E+01	1.355E+00	2.290
		117.66		-2.315E+00	4.018E+00	6.401E+00	4.023E-01	-0.362
		142.18		-7.251E+00	1.775E+01	2.861E+01	1.592E+00	-0.253
ANH-511	+	511.00	*	8.906E-02	6.192E-02	4.542E-02	2.668E-03	1.961

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	9.288E-02	2.806E-01	4.723E-01	3.176E-02	0.197
NA-22		1274.54	*	-4.793E-03	4.537E-02	7.320E-02	5.441E-03	-0.065
NA-24		1368.53	*	1.141E-01	4.537E-02	Half-Life too short		
AL-26		1129.67		1.107E+00	2.007E+00	3.288E+00	2.096E-01	0.337
		1808.65	*	1.860E-02	1.889E-02	3.867E-02	2.309E-03	0.481
TI-44		67.85		-1.010E-02	5.900E-02	8.000E-02	5.918E-03	-0.126
	+	78.38	*	4.569E-01	5.884E-02	8.847E-02	6.980E-03	5.164
SC-46		889.25	*	2.384E-03	3.671E-02	6.149E-02	5.779E-03	0.039
	+	1120.51		1.989E-01	1.023E-01	1.291E-01	8.440E-03	1.541
V-48		944.10		-5.530E-01	8.400E-01	1.314E+00	1.193E-01	-0.421
		983.50	*	-3.724E-02	6.745E-02	1.063E-01	9.165E-03	-0.350
		1312.09		-1.506E-02	7.887E-02	1.257E-01	1.027E-02	-0.120
CR-51		320.08	*	4.986E-02	3.435E-01	5.800E-01	3.645E-02	0.086
MN-52		744.21		1.065E-01	2.070E-01	3.462E-01	2.494E-02	0.308
		848.13		-9.856E-02	5.624E+00	9.383E+00	8.206E-01	-0.011
		935.52		2.209E-01	2.243E-01	3.986E-01	3.656E-02	0.554
		1246.25		7.471E+00	7.324E+00	1.148E+01	7.894E-01	0.651
		1333.61		-1.046E-01	4.744E+00	7.691E+00	6.597E-01	-0.014
		1434.06	*	2.378E-01	1.832E-01	3.467E-01	2.867E-02	0.686
MN-54		834.83	*	-2.570E-02	3.862E-02	6.149E-02	5.251E-03	-0.418
CO-56		846.75	*	-1.565E-02	3.925E-02	6.356E-02	5.545E-03	-0.246
		977.42		-5.496E-01	2.875E+00	4.455E+00	3.875E-01	-0.123
		1037.82		5.647E-02	3.186E-01	5.335E-01	4.474E-02	0.106
		1175.09		-8.730E-01	2.319E+00	3.680E+00	2.051E-01	-0.237
	+	1238.25		1.680E-01	1.312E-01	1.872E-01	1.318E-02	0.898
		1360.21		1.895E-01	9.143E-01	1.523E+00	1.296E-01	0.124
		1771.40		-1.148E+00	3.549E-01	3.170E-01	1.988E-02	-3.620
CO-57		122.06	*	-1.479E-02	2.655E-02	4.249E-02	2.598E-03	-0.348
		136.48		6.007E-02	2.108E-01	3.489E-01	2.314E-02	0.172
CO-58		810.76	*	-7.979E-03	3.718E-02	6.123E-02	5.018E-03	-0.130

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		-1.222E+00	2.699E+00	4.344E+00	2.412E-01	-0.281
		192.34		1.189E-01	9.809E-01	1.476E+00	1.702E-01	0.081
		1099.22	*	2.087E-02	1.022E-01	1.707E-01	1.326E-02	0.122
		1291.56		3.138E-02	1.249E-01	2.082E-01	1.881E-02	0.151
CO-60		1173.22		-4.644E-03	4.881E-02	7.938E-02	4.397E-03	-0.059
		1332.49	*	-2.782E-03	4.155E-02	6.703E-02	5.751E-03	-0.042
ZN-65		1115.52	*	3.442E-02	1.071E-01	1.566E-01	1.040E-02	0.220
GE-68		1077.35	*	-1.327E-01	1.246E+00	2.034E+00	1.480E-01	-0.065
AS-73		53.44	*	3.128E-05	8.870E-01	1.491E+00	1.101E-01	0.000
AS-74		595.88	*	2.807E-02	8.568E-02	1.427E-01	8.630E-03	0.197
		634.78		1.264E-01	3.436E-01	5.721E-01	3.482E-02	0.221
SE-75		66.05		9.294E-01	5.614E+00	8.289E+00	7.802E-01	0.112
		96.73		-1.207E-01	8.584E-01	1.240E+00	1.614E-01	-0.097
		121.11		2.586E-02	1.410E-01	2.317E-01	2.190E-02	0.112
		136.00		1.294E-02	3.935E-02	6.524E-02	3.783E-03	0.198
		198.60		-3.174E-01	1.864E+00	2.936E+00	1.960E-01	-0.108
		264.65	*	-4.835E-03	4.735E-02	6.935E-02	3.885E-03	-0.070
		279.53		9.776E-02	1.208E-01	1.840E-01	1.115E-02	0.531
		303.91		-9.905E-02	2.197E+00	3.206E+00	3.021E-01	-0.031
		400.65		1.997E-01	2.494E-01	4.306E-01	3.824E-02	0.464
BR-77	+	87.88		5.173E+02	1.610E+02	2.538E+02	2.187E+01	2.038
		200.40		3.291E+01	1.173E+02	1.917E+02	1.006E+01	0.172
	+	239.00		2.076E+02	1.654E+01	2.700E+01	1.471E+00	7.691
		249.79		-4.040E+01	4.871E+01	7.486E+01	4.110E+00	-0.540
		281.68		-2.628E+01	7.093E+01	1.018E+02	5.678E+00	-0.258
		297.23		3.555E+02	6.330E+01	9.383E+01	5.253E+00	3.789
		303.76		-8.752E+00	1.339E+02	1.951E+02	1.093E+01	-0.045
		439.47		1.344E+02	9.411E+01	1.684E+02	9.465E+00	0.798
		484.57		-6.950E+01	1.518E+02	2.420E+02	1.402E+01	-0.287
		520.65	*	-2.680E-01	7.201E+00	1.178E+01	6.949E-01	-0.023
		574.64		2.833E+00	1.511E+02	2.468E+02	1.485E+01	0.011
		578.91		-6.413E+01	7.287E+01	9.376E+01	5.649E+00	-0.684
		585.48		1.628E+03	2.221E+02	4.026E+02	2.430E+01	4.045
		755.35		3.102E+01	1.262E+02	2.065E+02	1.520E+01	0.150
		817.79		-3.553E+01	8.837E+01	1.430E+02	1.184E+01	-0.248
SR-82		698.33		-1.490E+01	3.260E+01	5.075E+01	3.336E+00	-0.294
		776.49	*	-3.104E-02	3.825E-01	6.095E-01	4.672E-02	-0.051
		1395.20		1.390E-01	9.869E+00	1.602E+01	1.346E+00	0.009
RB-83		520.41	*	1.743E-03	6.660E-02	1.094E-01	6.454E-03	0.016
		529.64		4.821E-02	1.004E-01	1.697E-01	1.005E-02	0.284
		552.65		-2.352E-02	2.014E-01	3.266E-01	1.952E-02	-0.072
RB-84		881.50	*	2.938E-02	6.280E-02	1.087E-01	1.008E-02	0.270
KR-85		513.99	*	2.398E+01	8.414E+00	1.435E+01	8.439E-01	1.672
SR-85		513.99	*	1.215E-01	4.261E-02	7.266E-02	4.274E-03	1.672
RB-86		1076.63	*	2.569E-01	7.541E-01	1.278E+00	9.315E-02	0.201
Y-88		898.02		5.619E-03	4.038E-02	6.799E-02	6.512E-03	0.083
		1836.01	*	-5.829E-03	2.923E-02	4.638E-02	2.670E-03	-0.126
ZR-88		392.90	*	-1.709E-02	2.993E-02	4.819E-02	2.603E-03	-0.355
Y-91		1204.90	*	7.053E+00	1.942E+01	3.265E+01	1.994E+00	0.216

---- Non-Identified Nuclides ----

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NB-94		702.63	*	4.245E-03	3.471E-02	5.649E-02	3.746E-03	0.075
		871.10		-7.653E-03	3.109E-02	5.074E-02	4.621E-03	-0.151
NB-95		765.79	*	5.622E-02	5.065E-02	7.757E-02	5.826E-03	0.725
NB-95M		235.69	*	7.605E-02	1.410E-01	2.035E-01	1.475E-02	0.374
ZR-95		724.18		6.694E-02	1.065E-01	1.573E-01	1.232E-02	0.426
		756.15	*	-1.555E-02	7.354E-02	1.162E-01	9.731E-03	-0.134
NB-97		657.90	*	-4.388E-03	7.354E-02	Half-Life too short		
		1024.50		-1.022E+00	7.354E-02	Half-Life too short		
ZR-97		254.15		4.416E-01	7.354E-02	Half-Life too short		
		355.39		1.790E+00	7.354E-02	Half-Life too short		
		507.63	*	4.727E-01	7.354E-02	Half-Life too short		
		602.52		3.698E-01	7.354E-02	Half-Life too short		
		1021.30		-4.839E-01	7.354E-02	Half-Life too short		
		1147.95		-5.369E-01	7.354E-02	Half-Life too short		
		1362.66		-1.712E+00	7.354E-02	Half-Life too short		
		1750.46		-4.716E-01	7.354E-02	Half-Life too short		
MO-99		140.51		-9.321E+00	1.988E+01	3.126E+01	8.411E+00	-0.298
		181.06		6.199E+00	1.447E+01	2.096E+01	3.548E+00	0.296
		366.43		-2.214E+01	5.822E+01	9.498E+01	5.230E+00	-0.233
		739.58	*	-1.213E+00	8.731E+00	1.388E+01	1.998E+00	-0.087
		778.00		-1.378E+01	2.500E+01	4.026E+01	3.095E+00	-0.342
TC-99M		140.51	*	-7.186E+08	2.500E+01	Half-Life too short		
RH-101		127.23		5.751E-03	3.391E-02	5.601E-02	3.328E-03	0.103
		198.01	*	-1.054E-03	3.427E-02	5.429E-02	2.842E-03	-0.019
		325.23		-6.500E-02	2.473E-01	3.542E-01	1.983E-02	-0.184
RH-102		418.52		-4.547E-02	2.732E-01	4.483E-01	2.478E-02	-0.101
		475.06	*	-2.612E-02	2.657E-02	4.073E-02	2.345E-03	-0.641
		631.29		2.053E-02	5.439E-02	9.068E-02	5.517E-03	0.226
		697.49		-2.662E-02	7.531E-02	1.182E-01	7.759E-03	-0.225
		766.84		1.329E-01	1.413E-01	2.119E-01	1.595E-02	0.627
		1046.59		4.941E-02	1.208E-01	2.058E-01	1.596E-02	0.240
		1112.84		2.244E-01	2.649E-01	4.102E-01	2.739E-02	0.547
RU-103		497.08	*	-8.257E-03	3.757E-02	6.081E-02	7.698E-03	-0.136
	+	610.33		1.217E+01	2.404E+00	2.738E+00	4.249E-01	4.444
RH-106	+	511.85		4.439E-01	3.086E-01	4.029E-01	2.368E-02	1.102
		621.84	*	2.002E-02	3.127E-01	5.103E-01	6.061E-02	0.039
		1050.47		1.393E-01	2.514E+00	4.166E+00	3.207E-01	0.033
RU-106	+	511.85		4.439E-01	3.086E-01	4.029E-01	2.368E-02	1.102
		621.84	*	2.002E-02	3.127E-01	5.103E-01	3.101E-02	0.039
		1050.47		1.393E-01	2.514E+00	4.166E+00	3.207E-01	0.033
AG-108M		433.93	*	-2.232E-02	3.182E-02	5.038E-02	3.079E-03	-0.443
		614.37		1.711E-02	4.308E-02	6.286E-02	4.112E-03	0.272
		722.95		-9.103E-04	4.847E-02	6.713E-02	4.917E-03	-0.014
AG-110M		657.75	*	-3.145E-03	3.572E-02	5.746E-02	3.707E-03	-0.055
		677.61		-1.139E-02	3.218E-01	5.189E-01	3.440E-02	-0.022
		706.67		1.012E-01	2.259E-01	3.753E-01	2.623E-02	0.270
		763.93		1.275E-01	1.961E-01	2.893E-01	2.246E-02	0.441
		884.67		2.103E-03	4.545E-02	7.605E-02	7.286E-03	0.028
		937.48		-5.874E-02	1.124E-01	1.786E-01	1.687E-02	-0.329

---- Non-Identified Nuclides ----

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		1384.27		-7.520E-02	1.800E-01	2.290E-01	1.989E-02	-0.328
IN-111		171.28		-2.713E-01	7.934E-01	1.273E+00	6.469E-02	-0.213
		245.39	*	1.996E-01	9.126E-01	1.294E+00	7.084E-02	0.154
IN-113M		391.69	*	-5.894E-03	4.363E-02	7.200E-02	4.185E-03	-0.082
SN-113		391.69	*	-5.894E-03	4.363E-02	7.200E-02	4.185E-03	-0.082
IN-114M		190.27	*	-1.061E-01	2.005E-01	2.750E-01	1.427E-02	-0.386
CD-115		260.90		5.321E+01	9.440E+01	1.549E+02	8.565E+00	0.343
		492.35		-1.764E+01	2.483E+01	3.891E+01	2.263E+00	-0.453
		527.90	*	2.771E+00	7.222E+00	1.214E+01	7.184E-01	0.228
SN-117M		156.02		-1.153E-01	2.215E+00	3.606E+00	1.898E-01	-0.032
		158.56	*	-2.933E-02	5.232E-02	8.345E-02	4.346E-03	-0.351
SB-122		563.90	*	-1.388E-01	1.563E+00	2.537E+00	1.522E-01	-0.055
		692.80		-1.659E+00	3.193E+01	5.135E+01	3.338E+00	-0.032
I-123		159.00	*	-6.777E-01	3.193E+01	Half-Life too short		
		528.96		3.039E+01	3.193E+01	Half-Life too short		
TE-123M		159.00	*	-1.463E-02	2.834E-02	4.527E-02	2.393E-03	-0.323
I-124		602.71	*	1.271E-01	5.850E-01	8.787E-01	5.323E-02	0.145
		722.78		-3.577E-02	4.173E+00	5.786E+00	3.996E-01	-0.006
		1325.50		-1.317E+00	3.123E+01	5.054E+01	4.264E+00	-0.026
		1376.25		3.642E+01	2.899E+01	4.779E+01	4.044E+00	0.762
	+	1509.49		2.017E+01	2.128E+01	2.503E+01	1.989E+00	0.806
		1691.02		2.484E+00	2.627E+00	5.064E+00	3.479E-01	0.491
SB-124		602.71		8.846E-03	4.073E-02	6.117E-02	3.707E-03	0.145
		645.85		2.965E-01	5.180E-01	8.726E-01	5.936E-02	0.340
		709.31		-9.509E-01	3.001E+00	4.730E+00	3.179E-01	-0.201
		713.82		4.342E-01	1.713E+00	2.812E+00	3.036E-01	0.154
		722.78		-3.610E-03	4.211E-01	5.839E-01	4.167E-02	-0.006
	+	968.20		2.130E+01	4.351E+00	7.629E+00	6.719E-01	2.792
		1045.16		1.232E+00	2.496E+00	4.283E+00	3.331E-01	0.288
		1325.50		-1.419E-01	3.365E+00	5.447E+00	4.596E-01	-0.026
		1368.21		5.723E-01	1.715E+00	2.891E+00	3.871E-01	0.198
		1436.60		-8.266E-02	3.478E+00	5.604E+00	4.628E-01	-0.015
		1691.02	*	5.914E-02	6.254E-02	1.205E-01	8.791E-03	0.491
SB-125		427.89	*	-7.543E-02	9.131E-02	1.437E-01	8.374E-03	-0.525
	+	463.38		1.026E+00	4.473E-01	5.567E-01	3.725E-02	1.843
		600.56		-9.259E-02	1.797E-01	2.820E-01	1.954E-02	-0.328
		635.90		-9.537E-04	2.725E-01	4.420E-01	3.111E-02	-0.002
TE-125M		109.28	*	-4.912E+00	9.719E+00	1.575E+01	1.385E+00	-0.312
I-126		388.63		2.482E-01	1.858E-01	3.296E-01	1.784E-02	0.753
		666.33	*	4.560E-02	1.703E-01	2.808E-01	1.728E-02	0.162
		753.82		1.109E-01	1.450E+00	2.344E+00	1.720E-01	0.047
SB-126		223.80		-1.189E+00	3.756E+00	5.960E+00	3.204E-01	-0.199
	+	278.60		1.837E+00	2.905E+00	3.972E+00	2.214E-01	0.462
	+	296.50		1.272E+01	1.981E+00	3.342E+00	1.871E-01	3.806
		414.70		9.702E-03	7.626E-02	1.109E-01	6.110E-03	0.087
		415.30		-9.944E-02	6.421E+00	9.227E+00	5.087E-01	-0.011
		555.20		3.157E+00	3.691E+00	6.367E+00	3.808E-01	0.496
		573.80		2.287E-01	9.826E-01	1.628E+00	9.793E-02	0.141
		593.00		-8.476E-01	8.754E-01	1.324E+00	8.003E-02	-0.640

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		656.30		-4.609E-01	3.152E+00	5.049E+00	3.077E-01	-0.091
		666.33		1.900E-02	7.096E-02	1.170E-01	7.201E-03	0.162
		675.00		6.925E-01	1.928E+00	3.198E+00	2.004E-01	0.217
		695.00		3.086E-02	7.059E-02	1.177E-01	7.684E-03	0.262
		697.00		-1.068E-01	2.487E-01	3.880E-01	2.544E-02	-0.275
		720.50	*	7.391E-02	1.583E-01	2.307E-01	1.586E-02	0.320
		856.80		5.116E-02	4.464E-01	6.516E-01	5.787E-02	0.079
		989.30		6.747E-01	1.236E+00	2.132E+00	1.822E-01	0.317
		1034.80		2.193E+00	8.900E+00	1.498E+01	1.188E+00	0.146
		1213.00		6.281E-02	4.890E+00	8.002E+00	5.005E-01	0.008
SB-127		61.10		2.782E+01	5.266E+01	7.942E+01	7.757E+00	0.350
		252.40		-1.694E+00	3.604E+00	5.527E+00	2.289E+00	-0.307
		290.80		-7.122E+00	1.955E+01	2.803E+01	2.412E+00	-0.254
		411.60		1.188E+01	1.154E+01	1.770E+01	2.476E+00	0.671
		444.90		-1.037E+00	7.363E+00	1.206E+01	1.248E+00	-0.086
		473.00		-2.847E-01	1.237E+00	2.006E+00	2.168E-01	-0.142
		543.00		-2.026E+00	1.373E+01	2.224E+01	2.821E+00	-0.091
		603.60		2.140E+00	1.043E+01	1.495E+01	1.578E+00	0.143
		685.20	*	-2.785E-01	1.116E+00	1.768E+00	1.666E-01	-0.157
		698.50		-3.432E+00	1.197E+01	1.888E+01	2.746E+00	-0.182
		722.20		-2.175E+00	2.859E+01	3.935E+01	3.741E+00	-0.055
		783.80		1.703E+00	2.720E+00	4.758E+00	5.483E-01	0.358
XE-127		57.60		-1.544E+00	6.521E+00	1.049E+01	7.636E-01	-0.147
		145.22		4.936E-01	7.106E-01	1.177E+00	6.466E-02	0.420
		172.10		-4.935E-02	1.225E-01	1.961E-01	9.971E-03	-0.252
		202.84	*	-5.837E-02	5.013E-02	7.401E-02	3.895E-03	-0.789
		374.96		-3.391E-02	1.846E-01	3.044E-01	1.666E-02	-0.111
I-131		80.18		-4.019E+00	4.913E+00	6.943E+00	5.595E-01	-0.579
		284.30		-1.512E-01	1.385E+00	2.194E+00	1.370E-01	-0.069
		364.48	*	6.332E-02	9.451E-02	1.633E-01	1.014E-02	0.388
		636.97		-5.628E-01	1.414E+00	2.225E+00	1.500E-01	-0.253
		722.89		-1.120E-01	7.382E+00	1.023E+01	7.124E-01	-0.011
TE-132		49.72		-1.366E+01	1.697E+01	2.772E+01	2.643E+00	-0.493
		111.76		1.853E+01	2.471E+01	4.164E+01	3.729E+00	0.445
		116.30		-1.047E+01	2.259E+01	3.659E+01	3.218E+00	-0.286
		228.16	*	7.211E-02	5.598E-01	9.052E-01	1.265E-01	0.080
BA-133		53.15		5.103E-01	3.890E+00	6.566E+00	4.852E-01	0.078
		79.62		1.781E+00	1.559E+00	2.349E+00	3.492E-01	0.758
		81.00		-1.677E-01	1.217E-01	1.644E-01	2.562E-02	-1.020
	+	276.40		2.930E-01	4.646E-01	6.268E-01	8.062E-02	0.467
		302.84		6.808E-02	1.537E-01	2.313E-01	2.674E-02	0.294
		356.01	*	5.033E-02	4.318E-02	6.785E-02	7.756E-03	0.742
		383.85		-1.409E-01	2.858E-01	4.618E-01	4.933E-02	-0.305
I-133	+	510.53		3.556E-01	2.858E-01	Half-Life too short		
		529.87	*	9.421E-04	2.858E-01	Half-Life too short		
		706.58		7.981E-02	2.858E-01	Half-Life too short		
		856.28		-5.990E-02	2.858E-01	Half-Life too short		
		875.33		1.628E-02	2.858E-01	Half-Life too short		
		1236.41		5.923E-01	2.858E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1298.22		8.017E-03	2.858E-01	Half-Life too short		
CS-134		475.35		-1.148E+00	1.734E+00	2.725E+00	1.569E-01	-0.421
		563.23		5.231E-02	3.664E-01	6.038E-01	3.692E-02	0.087
		569.32		1.479E-02	2.199E-01	3.380E-01	2.087E-02	0.044
		604.70		-4.499E-04	3.781E-02	5.307E-02	3.232E-03	-0.008
	+	795.84	*	1.317E-01	6.651E-02	9.230E-02	7.400E-03	1.427
		801.93		-5.754E-01	4.575E-01	5.633E-01	4.558E-02	-1.022
		1038.57		-1.347E+00	4.055E+00	6.508E+00	5.125E-01	-0.207
		1167.94		1.523E+00	2.626E+00	4.499E+00	2.539E-01	0.338
		1365.15		-4.354E-01	1.245E+00	1.931E+00	1.718E-01	-0.225
CS-135		268.24	*	1.565E-01	1.786E-01	2.627E-01	1.962E-02	0.596
I-135		288.45		-6.554E+07	1.786E-01	Half-Life too short		
		417.63		-2.533E+06	1.786E-01	Half-Life too short		
		546.56		-1.592E+08	1.786E-01	Half-Life too short		
		836.80		3.948E+08	1.786E-01	Half-Life too short		
		1038.76		-4.144E+08	1.786E-01	Half-Life too short		
		1124.00		2.115E+09	1.786E-01	Half-Life too short		
		1131.51		4.571E+08	1.786E-01	Half-Life too short		
		1260.41	*	-2.994E+08	1.786E-01	Half-Life too short		
		1457.56		2.512E+10	1.786E-01	Half-Life too short		
		1678.03		-1.565E+08	1.786E-01	Half-Life too short		
		1706.46		9.366E+08	1.786E-01	Half-Life too short		
		1791.20		1.950E+08	1.786E-01	Half-Life too short		
CS-136		66.91		3.282E-01	8.664E-01	1.288E+00	1.903E-01	0.255
	+	86.29		4.061E+00	1.322E+00	2.038E+00	2.599E-01	1.993
		153.22		2.945E-01	6.532E-01	1.083E+00	7.408E-02	0.272
		163.89		3.124E-01	1.024E+00	1.686E+00	1.130E-01	0.185
		176.55		-1.157E-01	3.567E-01	5.721E-01	3.381E-02	-0.202
		273.65		-1.707E-01	6.717E-01	6.454E-01	4.134E-02	-0.264
		340.57		6.048E-01	1.494E-01	2.585E-01	1.539E-02	2.340
		818.51		-3.183E-02	6.727E-02	1.083E-01	8.988E-03	-0.294
		1048.07	*	-6.774E-02	1.120E-01	1.757E-01	1.430E-02	-0.386
		1235.34		1.078E-01	6.980E-01	9.922E-01	1.043E-01	0.109
BA-137M		661.65	*	-2.116E-02	3.838E-02	5.791E-02	3.529E-03	-0.365
CS-137		661.65	*	-2.237E-02	4.057E-02	6.122E-02	3.745E-03	-0.365
CE-139		165.85	*	-1.375E-02	3.088E-02	4.942E-02	2.500E-03	-0.278
BA-140		162.64		6.718E-01	7.092E-01	1.194E+00	7.082E-02	0.562
		304.84		5.019E-01	1.245E+00	1.862E+00	5.073E-01	0.270
		423.70		4.984E-01	1.712E+00	2.871E+00	9.111E-01	0.174
		537.32	*	6.234E-02	2.466E-01	4.089E-01	1.331E-01	0.152
LA-140	+	328.77		4.873E-01	3.334E-01	4.846E-01	3.059E-02	1.006
		432.53		1.218E+00	1.905E+00	3.265E+00	2.030E-01	0.373
		487.03		6.350E-02	1.241E-01	2.106E-01	1.383E-02	0.301
		751.79		7.427E-01	1.637E+00	2.722E+00	2.280E-01	0.273
		815.85		-4.773E-01	2.815E-01	3.957E-01	3.673E-02	-1.206
		867.82		1.339E-01	1.318E+00	1.996E+00	1.895E-01	0.067
		919.63		-3.640E-01	2.975E+00	4.195E+00	4.713E-01	-0.087
		925.24		1.115E+00	1.086E+00	1.918E+00	1.877E-01	0.582
		1596.49	*	6.182E-02	6.660E-02	1.163E-01	8.698E-03	0.532

---- Non-Identified Nuclides ----

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CE-141		145.44	*	5.186E-02	6.450E-02	1.072E-01	6.145E-03	0.484
CE-143		57.37		-2.588E-04	6.450E-02	Half-Life too short		
		231.56		9.742E-05	6.450E-02	Half-Life too short		
		293.26	*	4.011E-04	6.450E-02	Half-Life too short		
		350.59		1.613E-02	6.450E-02	Half-Life too short		
		490.36		-1.113E-03	6.450E-02	Half-Life too short		
		664.57		7.724E-04	6.450E-02	Half-Life too short		
		721.93		-1.210E-05	6.450E-02	Half-Life too short		
CE-144		80.11		-1.821E+00	2.500E+00	3.548E+00	2.839E-01	-0.513
		133.54	*	-2.073E-01	2.149E-01	3.371E-01	4.783E-02	-0.615
PM-144		476.78		-1.288E-03	6.059E-02	9.964E-02	6.888E-03	-0.013
		618.01		-2.167E-02	3.234E-02	4.996E-02	3.201E-03	-0.434
		696.49	*	-6.172E-03	3.387E-02	5.391E-02	3.533E-03	-0.114
		778.57		-9.119E-01	2.221E+00	3.615E+00	2.783E-01	-0.252
PR-144		696.49	*	-4.180E-01	2.294E+00	3.651E+00	2.391E-01	-0.114
		1489.15		2.533E+00	1.221E+01	2.025E+01	1.628E+00	0.125
PM-146		453.90	*	2.814E-02	4.278E-02	7.324E-02	6.256E-03	0.384
		633.02		4.314E-01	1.414E+00	2.330E+00	8.590E-01	0.185
		735.90		-9.421E-02	1.455E-01	2.169E-01	6.113E-02	-0.434
		747.13		-6.083E-03	9.195E-02	1.470E-01	1.946E-02	-0.041
ND-147	+	91.11		4.453E-01	2.568E-01	4.947E-01	4.432E-02	0.900
		319.41		2.146E-01	2.905E+00	4.889E+00	2.740E-01	0.044
		439.89		6.776E+00	5.079E+00	9.036E+00	5.083E-01	0.750
		531.02	*	-2.171E-01	5.169E-01	8.213E-01	1.115E-01	-0.264
PM-149		285.90	*	2.711E+01	6.131E+01	1.051E+02	1.480E+01	0.258
EU-152		121.78		-3.254E-02	7.764E-02	1.249E-01	9.806E-03	-0.261
		244.69		6.836E-01	3.837E-01	5.919E-01	3.238E-02	1.155
		344.27	*	1.031E-01	1.078E-01	1.504E-01	9.529E-03	0.686
		443.98		-9.049E-02	9.014E-01	1.480E+00	8.350E-02	-0.061
		778.89		-9.267E-02	2.579E-01	4.214E-01	3.245E-02	-0.220
		867.32		5.134E-01	8.552E-01	1.319E+00	1.193E-01	0.389
	+	964.01		7.928E-01	3.471E-01	5.814E-01	5.149E-02	1.364
		1085.78		-3.233E-02	3.894E-01	6.364E-01	4.543E-02	-0.051
		1112.02		1.226E-01	3.684E-01	5.609E-01	3.753E-02	0.219
		1407.95		1.113E-01	2.022E-01	3.519E-01	2.943E-02	0.316
GD-153		69.67		1.633E-01	1.927E+00	2.828E+00	2.109E-01	0.058
		83.37		8.685E+00	2.388E+01	2.598E+01	2.141E+00	0.334
		97.43	*	1.574E-02	8.769E-02	1.277E-01	9.643E-03	0.123
		103.18		-8.308E-02	1.083E-01	1.742E-01	1.235E-02	-0.477
EU-154		123.07		-3.471E-02	5.480E-02	8.733E-02	8.362E-03	-0.398
		247.94		3.510E-01	3.914E-01	6.069E-01	5.676E-02	0.578
		591.81		-2.066E-01	6.228E-01	9.607E-01	9.531E-02	-0.215
		723.30		-7.802E-02	2.092E-01	2.786E-01	2.234E-02	-0.280
		756.87		1.128E-01	8.166E-01	1.325E+00	1.474E-01	0.085
		873.19		2.999E-02	2.704E-01	4.552E-01	5.742E-02	0.066
		996.32		-2.802E-01	3.746E-01	5.753E-01	1.018E-01	-0.487
		1004.76		2.539E-02	2.254E-01	3.762E-01	4.303E-02	0.067
		1274.45	*	-1.443E-02	1.267E-01	2.043E-01	2.130E-02	-0.071
EU-155		48.70		-1.631E-01	2.769E+00	4.653E+00	3.375E-01	-0.035

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		60.01		2.995E+00	5.746E+00	8.673E+00	6.276E-01	0.345
	+	86.54		3.984E-01	1.241E-01	1.985E-01	1.705E-02	2.007
		105.31	*	2.625E-02	1.105E-01	1.840E-01	1.302E-02	0.143
TB-160	+	86.79		1.053E+00	3.278E-01	5.220E-01	4.448E-02	2.017
		197.04		-5.408E-01	5.808E-01	8.852E-01	4.629E-02	-0.611
		215.65		2.710E-01	8.877E-01	1.271E+00	6.778E-02	0.213
	+	298.57		2.823E-01	1.307E-01	1.975E-01	1.106E-02	1.429
		879.36	*	-4.083E-02	1.252E-01	2.027E-01	1.872E-02	-0.201
		962.29		3.847E-01	5.839E-01	8.975E-01	7.966E-02	0.429
	+	966.15		5.384E-01	2.357E-01	4.801E-01	4.240E-02	1.121
		1177.93		5.345E-02	3.706E-01	6.141E-01	3.453E-02	0.087
		1271.85		2.363E-01	7.288E-01	1.223E+00	9.011E-02	0.193
HO-166M		80.57		-3.958E-01	3.269E-01	4.535E-01	3.644E-02	-0.873
		184.41		1.008E-01	4.197E-02	6.566E-02	3.385E-03	1.535
		280.46		8.110E-02	9.147E-02	1.416E-01	7.898E-03	0.573
	+	410.95		3.275E-01	3.738E-01	4.349E-01	2.389E-02	0.753
		711.68	*	8.218E-03	6.472E-02	1.053E-01	7.112E-03	0.078
		752.31		5.756E-02	2.874E-01	4.688E-01	3.431E-02	0.123
		810.29		-8.290E-03	5.657E-02	9.368E-02	7.650E-03	-0.088
TM-171		51.35		-1.071E+00	3.347E+01	5.623E+01	4.158E+00	-0.019
		52.39		-4.574E+00	1.723E+01	2.871E+01	2.124E+00	-0.159
		59.40		3.250E+01	3.062E+01	4.722E+01	3.415E+00	0.688
		66.72	*	1.424E+01	3.323E+01	4.955E+01	3.649E+00	0.287
LU-176	+	88.36		7.850E-01	2.444E-01	3.972E-01	3.406E-02	1.977
		201.83		-2.766E-02	2.963E-02	4.603E-02	2.420E-03	-0.601
		306.84	*	-9.748E-04	2.416E-02	3.947E-02	2.212E-03	-0.025
		401.10		-1.438E-01	6.534E+00	1.084E+01	5.900E-01	-0.013
LU-177		112.95		1.052E-01	1.533E+00	2.533E+00	1.649E-01	0.042
		208.36	*	1.497E+00	1.201E+00	1.795E+00	9.501E-02	0.834
LU-177M		52.97		9.744E-02	1.760E+00	2.963E+00	2.191E-01	0.033
		54.07		1.480E-01	9.123E-01	1.541E+00	1.136E-01	0.096
		61.30		4.641E-01	1.700E+00	2.537E+00	1.841E-01	0.183
		121.62		-1.426E-01	3.960E-01	6.385E-01	3.907E-02	-0.223
		147.16		1.426E-01	6.851E-01	1.128E+00	6.149E-02	0.126
		171.86		-2.153E-01	5.018E-01	8.023E-01	4.079E-02	-0.268
		218.09		-4.163E-02	8.922E-01	1.435E+00	7.671E-02	-0.029
		268.79		1.258E+00	9.293E-01	1.401E+00	7.777E-02	0.897
		319.02		-1.277E-02	2.457E-01	4.111E-01	2.303E-02	-0.031
		367.43		-3.276E-01	8.490E-01	1.385E+00	7.619E-02	-0.237
		413.65	*	4.716E-02	1.911E-01	2.806E-01	1.545E-02	0.168
HF-181		56.28		-5.435E-01	9.934E-01	1.636E+00	1.197E-01	-0.332
		57.53		-1.646E-01	5.516E-01	8.857E-01	6.447E-02	-0.186
	+	65.20		1.127E+00	1.445E+00	1.708E+00	1.251E-01	0.660
		133.02		-1.007E-01	6.828E-02	1.058E-01	6.118E-03	-0.952
		136.25		1.620E-01	4.538E-01	7.532E-01	4.295E-02	0.215
		345.85		1.116E-01	1.999E-01	2.877E-01	1.601E-02	0.388
		482.03	*	-7.761E-03	3.857E-02	6.263E-02	3.622E-03	-0.124
W-181		56.28		-2.158E-01	3.937E-01	6.485E-01	4.744E-02	-0.333
		57.53		-6.536E-02	2.188E-01	3.513E-01	2.557E-02	-0.186

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	+	65.20	*	4.434E-01	5.686E-01	6.720E-01	4.924E-02	0.660
TA-182		67.75		-1.795E-02	1.401E-01	1.903E-01	1.407E-02	-0.094
		100.10		1.501E-01	1.800E-01	3.018E-01	2.210E-02	0.497
		152.43		3.445E-01	3.482E-01	5.874E-01	3.136E-02	0.587
		222.10		-1.800E-01	3.454E-01	5.432E-01	2.916E-02	-0.331
		1001.68		1.461E+00	2.041E+00	3.560E+00	2.987E-01	0.410
	+	1121.28		5.508E-01	2.833E-01	3.564E-01	2.326E-02	1.546
		1189.05		1.330E-01	3.473E-01	5.842E-01	3.400E-02	0.228
		1221.42	*	1.570E-01	2.184E-01	3.748E-01	2.402E-02	0.419
		1230.97		-1.222E-02	5.238E-01	8.349E-01	5.501E-02	-0.015
RE-183		57.98		-6.598E-03	2.233E-01	3.473E-01	2.524E-02	-0.019
		59.32		1.306E-01	1.247E-01	1.921E-01	1.390E-02	0.679
		67.20		9.373E-02	2.328E-01	3.468E-01	2.558E-02	0.270
		162.32	*	8.126E-02	1.089E-01	1.822E-01	9.347E-03	0.446
	+	208.81		2.240E+00	1.596E+00	1.784E+00	9.448E-02	1.256
		291.72		-3.678E-02	1.016E+00	1.487E+00	8.316E-02	-0.025
RE-184		57.98		-2.448E-02	8.283E-01	1.289E+00	9.364E-02	-0.019
		59.32		4.840E-01	4.621E-01	7.123E-01	5.152E-02	0.679
		67.20		3.476E-01	8.634E-01	1.286E+00	9.489E-02	0.270
		161.27		-9.475E-02	3.559E-01	5.741E-01	2.957E-02	-0.165
		216.55		1.653E-01	2.829E-01	4.514E-01	2.410E-02	0.366
		252.85	*	-1.824E-01	2.359E-01	3.631E-01	1.998E-02	-0.502
		318.01		-1.281E-01	4.168E-01	6.884E-01	3.857E-02	-0.186
		792.07		-2.476E-01	1.129E+00	1.608E+00	1.269E-01	-0.154
		903.28		7.779E-01	1.076E+00	1.810E+00	1.718E-01	0.430
		920.93		-1.813E-01	4.913E-01	7.290E-01	6.796E-02	-0.249
OS-185		59.72		1.610E-01	3.397E-01	5.119E-01	3.702E-02	0.314
		61.14		3.258E-02	1.861E-01	2.768E-01	2.008E-02	0.118
		69.30		9.922E-02	3.661E-01	5.065E-01	3.770E-02	0.196
		592.07		-7.652E-01	2.460E+00	3.917E+00	2.368E-01	-0.195
		646.12	*	4.332E-02	4.334E-02	7.507E-02	4.573E-03	0.577
		717.42		-5.819E-01	9.475E-01	1.455E+00	9.940E-02	-0.400
		874.81		8.793E-02	5.214E-01	8.821E-01	8.086E-02	0.100
		880.27		-4.989E-02	7.105E-01	1.177E+00	1.089E-01	-0.042
RE-188		155.03	*	5.337E-03	1.760E-01	2.875E-01	1.519E-02	0.019
		477.96		1.095E+00	2.712E+00	4.586E+00	2.646E-01	0.239
		633.10		8.622E-01	2.808E+00	4.656E+00	2.833E-01	0.185
W-188	+	63.58		5.904E+01	7.571E+01	9.619E+01	7.017E+00	0.614
		227.08		5.500E+00	1.285E+01	2.104E+01	1.135E+00	0.261
		290.67	*	-3.140E+00	8.254E+00	1.182E+01	6.610E-01	-0.266
IR-192	+	295.96		1.029E+00	1.605E-01	2.689E-01	1.531E-02	3.825
		308.46		1.019E-02	8.841E-02	1.493E-01	8.470E-03	0.068
		316.51	*	-1.047E-02	3.283E-02	5.261E-02	2.964E-03	-0.199
		468.07		3.997E-03	6.892E-02	9.898E-02	6.562E-03	0.040
		604.41		2.201E-03	5.067E-01	7.123E-01	8.180E-02	0.003
		612.46		5.037E+00	1.066E+00	1.860E+00	1.447E-01	2.708
AU-195	+	65.12		2.053E-01	2.633E-01	3.144E-01	2.303E-02	0.653
		66.83		5.221E-02	1.096E-01	1.637E-01	1.206E-02	0.319
	+	75.70		1.657E+00	3.105E-01	4.929E-01	3.810E-02	3.362

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	3.340E-02	2.458E-01	3.756E-01	2.788E-02	0.089
		129.76		4.204E+00	2.982E+00	5.104E+00	2.997E-01	0.824
TL-200		367.94	*	-6.071E-05	2.982E+00	Half-Life too short		
		579.30		-1.581E-03	2.982E+00	Half-Life too short		
		828.27		7.291E-04	2.982E+00	Half-Life too short		
		1205.75		4.361E-04	2.982E+00	Half-Life too short		
TL-201		68.90		6.837E-01	5.042E+00	6.302E+00	4.683E-01	0.108
		70.82		-1.463E+00	2.425E+00	3.474E+00	2.606E-01	-0.421
		80.30		-3.738E+00	4.535E+00	6.406E+00	5.135E-01	-0.583
		135.34		7.943E+00	1.950E+01	3.242E+01	1.856E+00	0.245
		167.43	*	3.929E-01	5.638E+00	9.199E+00	4.655E-01	0.043
TL-202		68.90		7.510E-02	5.539E-01	6.923E-01	5.144E-02	0.108
		70.82		-1.603E-01	2.657E-01	3.806E-01	2.855E-02	-0.421
		80.30		-4.096E-01	4.969E-01	7.020E-01	5.627E-02	-0.583
		439.56	*	8.667E-02	6.003E-02	1.075E-01	6.042E-03	0.806
HG-203		70.83		-7.301E-01	1.211E+00	1.732E+00	2.238E-01	-0.422
		72.87		1.860E+00	7.363E-01	1.125E+00	1.413E-01	1.652
		82.60		7.293E-01	1.507E+00	1.907E+00	2.569E-01	0.382
		279.20	*	3.206E-02	4.532E-02	6.863E-02	4.081E-03	0.467
BI-207		72.80		5.204E-01	2.115E-01	3.333E-01	2.528E-02	1.561
	+	74.97		9.232E-01	1.730E-01	2.401E-01	1.847E-02	3.845
		84.90		1.336E-01	2.248E-01	3.335E-01	2.789E-02	0.401
		569.67		-1.109E-02	3.464E-02	5.190E-02	3.119E-03	-0.214
		1063.62	*	1.108E-02	5.624E-02	9.416E-02	7.058E-03	0.118
		1770.23		-6.397E-02	3.850E-01	5.140E-01	3.228E-02	-0.124
TL-207		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
PO-209		260.50		3.759E+00	1.000E+01	1.628E+01	8.998E-01	0.231
		262.80		-1.146E+01	2.746E+01	4.299E+01	2.379E+00	-0.267
		896.60	*	-2.964E+00	7.275E+00	1.170E+01	1.114E+00	-0.253
BI-210		46.50	*	2.697E+00	4.096E+00	7.010E+00	5.536E-01	0.385
PB-210		46.50	*	2.697E+00	4.096E+00	7.010E+00	5.536E-01	0.385
PO-210		46.50	*	2.697E+00	4.095E+00	7.010E+00	4.794E-01	0.385
PB-211		404.84	*	-9.671E-01	1.201E+00	1.382E+00	8.610E-01	-0.700
		427.08		-1.782E+00	2.314E+00	3.198E+00	1.976E+00	-0.557
		831.96		-1.289E-01	1.189E+00	1.968E+00	1.233E+00	-0.066
BI-212	+	727.18	*	8.962E-01	4.866E-01	6.398E-01	5.518E-02	1.401
		785.46		6.055E-01	1.690E+00	2.920E+00	2.277E-01	0.207
		1620.62		1.813E+00	1.300E+00	2.518E+00	1.847E-01	0.720
PO-215		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
RN-219	+	271.23		6.295E-01	3.252E-01	4.454E-01	3.533E-02	1.413
		401.81	*	-1.213E-01	4.003E-01	6.531E-01	8.790E-02	-0.186
RN-220		549.76	*	-2.386E+00	2.593E+01	4.213E+01	2.515E+00	-0.057
RA-223		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
AC-227		79.80		1.107E+00	1.933E+00	2.872E+00	6.105E-01	0.385
		236.00		4.312E-01	2.751E-01	4.132E-01	4.237E-02	1.044
		256.20	*	-2.018E-01	3.978E-01	6.197E-01	8.578E-02	-0.326
		286.10		2.169E-01	1.500E+00	2.543E+00	2.913E-01	0.085
	+	299.80		3.636E+00	1.772E+00	2.534E+00	4.109E-01	1.435
		304.40		2.461E-01	1.976E+00	2.916E+00	5.026E-01	0.084
		334.20		-3.460E-04	2.950E+00	3.389E+00	6.190E-01	0.000
TH-227		79.80		1.107E+00	1.933E+00	2.872E+00	6.185E-01	0.385
	+	94.00		9.513E+00	3.436E+00	4.004E+00	8.609E-01	2.376
		236.00		4.312E-01	2.742E-01	4.132E-01	3.648E-02	1.044
		256.20	*	-2.018E-01	3.983E-01	6.197E-01	1.041E-01	-0.326
		286.10		2.169E-01	1.516E+00	2.543E+00	2.547E+00	0.085
	+	299.80		3.636E+00	1.772E+00	2.534E+00	4.109E-01	1.435
		304.40		2.461E-01	1.976E+00	2.916E+00	5.026E-01	0.084
		334.20		-3.460E-04	2.950E+00	3.389E+00	6.190E-01	0.000
TH-229		85.43		4.927E-01	2.282E-01	3.520E-01	2.959E-02	1.400
	+	88.47		4.519E-01	1.407E-01	2.296E-01	1.965E-02	1.968
		100.00		1.602E-01	1.884E-01	3.159E-01	2.316E-02	0.507
		193.63	*	2.370E-01	4.994E-01	8.237E-01	4.291E-02	0.288
	+	210.97		1.775E+00	1.265E+00	1.397E+00	7.418E-02	1.270
PA-231		283.67	*	-6.139E-01	1.626E+00	2.440E+00	3.340E-01	-0.252
	+	301.29		1.454E+00	6.852E-01	1.026E+00	1.062E-01	1.417
TH-231		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
U-231		84.21		3.027E+00	5.612E+00	7.792E+00	6.473E-01	0.388
	+	92.29		7.745E+00	2.330E+00	3.426E+00	2.766E-01	2.261
		95.87	*	-2.028E-01	1.006E+00	1.450E+00	1.116E-01	-0.140
		108.00		-9.512E-01	1.758E+00	2.847E+00	1.930E-01	-0.334
PA-233	+	75.28		2.694E+01	6.098E+00	7.336E+00	1.090E+00	3.672
	+	86.59		6.480E+00	2.603E+00	3.222E+00	8.629E-01	2.011
	+	300.12		1.014E+00	4.852E-01	7.111E-01	9.495E-02	1.426
		311.98	*	2.406E-02	5.995E-02	1.026E-01	6.128E-03	0.235
		340.50		3.237E+00	1.056E+00	1.347E+00	3.086E-01	2.403
		398.62		1.485E+00	2.113E+00	3.580E+00	9.227E-01	0.415
		415.76		4.699E-01	1.793E+00	2.632E+00	5.397E-01	0.179
PA-234	+	63.00		1.732E+00	2.233E+00	2.850E+00	4.219E-01	0.608
	+	94.67		8.483E-01	2.661E-01	3.317E-01	3.933E-02	2.557
		98.44		4.587E-02	1.075E-01	1.540E-01	8.565E-02	0.298
		99.86		4.172E-01	4.774E-01	8.012E-01	5.882E-02	0.521
		111.00		2.105E-01	1.966E-01	3.334E-01	3.583E-02	0.631
		131.20		8.139E-02	1.098E-01	1.845E-01	1.076E-02	0.441
		152.70		3.254E-01	3.436E-01	5.733E-01	8.967E-02	0.568
	+	186.00		5.190E+00	2.359E+00	2.513E+00	7.649E-01	2.065
		226.40		-5.712E-02	4.052E-01	6.478E-01	7.359E-02	-0.088
		227.20		1.797E-01	4.387E-01	7.179E-01	3.872E-02	0.250
		248.90		-2.838E-01	8.326E-01	1.309E+00	2.802E-01	-0.217
		293.70		5.159E+00	1.220E+00	1.648E+00	2.639E-01	3.130
		369.80		-1.423E-01	8.039E-01	1.326E+00	2.750E-01	-0.107
		568.70		6.109E-01	1.108E+00	1.755E+00	1.055E-01	0.348
		569.50		-8.043E-02	3.084E-01	4.643E-01	2.790E-02	-0.173
		574.00		3.283E-01	1.505E+00	2.491E+00	1.499E-01	0.132
		699.00		-1.081E-01	6.985E-01	1.113E+00	2.032E-01	-0.097
		706.10		9.580E-01	1.180E+00	1.884E+00	8.337E-01	0.509
		733.00		1.268E-01	3.966E-01	5.702E-01	1.234E-01	0.222
		742.81		4.157E-01	1.391E+00	2.245E+00	1.505E+00	0.185
	+	796.30		2.563E+00	1.451E+00	1.791E+00	4.808E-01	1.431
		805.60		8.817E-01	9.935E-01	1.709E+00	5.215E-01	0.516
		819.60		1.484E-01	1.176E+00	1.986E+00	7.540E-01	0.075
		826.30		-1.796E-01	8.201E-01	1.343E+00	6.002E-01	-0.134
		831.60		-1.174E-01	6.211E-01	1.023E+00	3.049E-01	-0.115
		876.40		-6.661E-02	7.600E-01	1.252E+00	1.288E+00	-0.053
		880.51		7.229E-02	2.538E-01	4.333E-01	4.011E-02	0.167
		883.24		6.951E-02	2.693E-01	4.518E-01	3.041E-01	0.154
		899.00		-6.790E-01	9.016E-01	1.326E+00	5.824E-01	-0.512
		925.00		1.412E+00	1.196E+00	2.157E+00	2.002E-01	0.655
		926.50		-4.361E-02	1.846E-01	2.972E-01	7.580E-02	-0.147
		946.00	*	-2.120E-01	3.015E-01	4.664E-01	8.847E-02	-0.454
		949.00		3.708E-01	4.722E-01	8.277E-01	7.471E-02	0.448
		980.50		1.124E-01	6.809E-01	1.145E+00	9.910E-02	0.098

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-4.116E-01	1.118E+00	1.664E+00	1.083E+00	-0.247
PA-234M		766.41		2.803E+01	3.047E+01	3.358E+01	2.571E+01	0.835
		1001.03	*	2.432E+00	6.744E+00	1.146E+01	1.262E+00	0.212
U-235	+	89.95		1.909E+00	1.236E+00	1.965E+00	6.049E-01	0.972
	+	93.35		2.959E+00	1.190E+00	1.267E+00	3.526E-01	2.335
		105.00		6.973E-01	1.086E+00	1.802E+00	5.298E-01	0.387
		143.76	*	-1.614E-01	2.212E-01	3.461E-01	5.611E-02	-0.466
		163.35		3.739E-01	4.819E-01	8.001E-01	1.422E-01	0.467
	+	185.71		1.922E-01	6.562E-02	9.316E-02	4.809E-03	2.063
		205.31		3.458E-01	6.025E-01	8.724E-01	1.555E-01	0.396
NP-236	+	94.67		6.434E-01	1.935E-01	2.517E-01	1.968E-02	2.556
		98.44		3.470E-02	7.902E-02	1.164E-01	8.685E-03	0.298
		111.00		1.592E-01	1.481E-01	2.522E-01	1.667E-02	0.631
		160.31	*	-1.010E-01	8.198E-02	1.271E-01	6.572E-03	-0.795
NP-239		99.55		8.366E-02	1.654E-01	2.664E-01	1.962E-02	0.314
		117.00	*	2.369E-02	1.982E-01	3.277E-01	2.070E-02	0.072
	+	209.75		1.788E+00	1.274E+00	1.427E+00	7.568E-02	1.252
		228.18		2.951E-02	2.348E-01	3.796E-01	2.049E-02	0.078
	+	277.60		1.430E-01	2.262E-01	3.060E-01	1.705E-02	0.467
		334.30		1.247E-02	1.672E+00	1.923E+00	1.074E-01	0.006
AM-241		59.54	*	9.817E-02	1.808E-01	2.731E-01	2.175E-02	0.359
CM-243		99.55		8.608E-02	1.702E-01	2.741E-01	2.019E-02	0.314
		103.76	*	1.908E-03	9.836E-02	1.627E-01	1.147E-02	0.012
		117.00		2.437E-02	2.039E-01	3.372E-01	2.129E-02	0.072
	+	209.75		1.762E+00	1.256E+00	1.407E+00	7.460E-02	1.252
		228.18		2.982E-02	2.372E-01	3.835E-01	2.070E-02	0.078
	+	277.60		1.442E-01	2.280E-01	3.085E-01	1.719E-02	0.467
CM-247	+	278.00		5.932E-01	9.381E-01	1.265E+00	7.047E-02	0.469
		287.40		5.896E-01	1.192E+00	2.049E+00	1.145E-01	0.288
		402.60	*	-2.998E-02	3.735E-02	5.744E-02	3.132E-03	-0.522
CF-249		252.85		-6.878E-01	8.894E-01	1.369E+00	7.531E-02	-0.502
		333.44		2.141E-01	2.283E-01	2.560E-01	1.430E-02	0.836
		387.95	*	5.757E-02	3.877E-02	6.922E-02	3.748E-03	0.832
CF-251		176.60	*	-4.365E-02	1.308E-01	2.097E-01	1.071E-02	-0.208
		227.00		2.321E-01	3.870E-01	6.384E-01	3.442E-02	0.364
		285.00		5.804E-03	1.718E+00	2.822E+00	1.576E-01	0.002

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001      *
* Acquisition date : 14-JUL-2009 10:44:32 Detector SN#     :               *
* Detector ID      : GAM16                Sensitivity     : 5.000          *
* Geometry         : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:02.21     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 30-JUN-2009 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G232754001           Analyst initials: MXR1            *
* Batch Number     : 882713               Sample Quantity : 1.3503E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.549E+01	3.497E+00	5.223E-01	0.000E+00
CD-109	3.362E+00	1.026E+00	1.554E+00	0.000E+00
SN-126	3.310E-01	1.010E-01	1.555E-01	0.000E+00
TL-208	5.743E-01	8.123E-02	5.993E-02	0.000E+00
BI-211	4.134E+00	4.884E-01	3.081E-01	0.000E+00
PB-212	1.819E+00	1.629E-01	9.341E-02	0.000E+00
PO-212	1.819E+00	1.629E-01	9.341E-02	0.000E+00
BI-214	1.150E+00	1.645E-01	1.160E-01	0.000E+00
PB-214	1.438E+00	1.851E-01	1.074E-01	0.000E+00
PO-214	1.438E+00	1.851E-01	1.074E-01	0.000E+00
PO-216	1.819E+00	1.629E-01	9.341E-02	0.000E+00
PO-218	1.438E+00	1.851E-01	1.074E-01	0.000E+00
RA-224	5.230E+00	1.060E+00	1.062E+00	0.000E+00
RA-226	1.150E+00	1.645E-01	1.160E-01	0.000E+00
AC-228	1.698E+00	3.361E-01	2.371E-01	0.000E+00
RA-228	1.698E+00	3.361E-01	2.371E-01	0.000E+00
TH-228	1.819E+00	1.629E-01	9.340E-02	0.000E+00
TH-230	1.150E+00	1.645E-01	1.160E-01	0.000E+00
TH-232	1.698E+00	3.361E-01	2.371E-01	0.000E+00
TH-234	1.486E+00	1.882E+00	2.378E+00	0.000E+00
U-234	1.150E+00	1.645E-01	1.160E-01	0.000E+00
NP-237	9.719E-01	3.557E-01	4.362E-01	0.000E+00
U-238	1.486E+00	1.882E+00	2.378E+00	0.000E+00
AM-243	5.143E-01	9.444E-02	9.721E-02	0.000E+00
ANH-511	8.906E-02	6.069E-02	4.642E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	9.288E-02	2.750E-01	4.833E-01	0.000E+00	NOT IDENT.
NA-22	-4.793E-03	4.446E-02	7.355E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	1.962E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.860E-02	1.851E-02	3.860E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.766E-02	9.348E-02	0.000E+00	FAIL ABUN
SC-46	2.384E-03	3.597E-02	6.220E-02	0.000E+00	FAIL ABUN
V-48	-3.724E-02	6.610E-02	1.073E-01	0.000E+00	NOT IDENT.
CR-51	4.986E-02	3.366E-01	5.979E-01	0.000E+00	NOT IDENT.
MN-52	2.378E-01	1.795E-01	3.476E-01	0.000E+00	NOT IDENT.
MN-54	-2.570E-02	3.785E-02	6.228E-02	0.000E+00	NOT IDENT.
CO-56	-1.565E-02	3.847E-02	6.436E-02	0.000E+00	FAIL ABUN
CO-57	-1.479E-02	2.602E-02	4.455E-02	0.000E+00	NOT IDENT.
CO-58	-7.979E-03	3.644E-02	6.206E-02	0.000E+00	NOT IDENT.
FE-59	2.087E-02	1.002E-01	1.720E-01	0.000E+00	NOT IDENT.
CO-60	-2.782E-03	4.072E-02	6.729E-02	0.000E+00	NOT IDENT.
ZN-65	3.442E-02	1.049E-01	1.577E-01	0.000E+00	NOT IDENT.
GE-68	-1.327E-01	1.221E+00	2.050E+00	0.000E+00	NOT IDENT.
AS-73	3.128E-05	8.693E-01	1.585E+00	0.000E+00	NOT IDENT.
AS-74	2.807E-02	8.397E-02	1.454E-01	0.000E+00	NOT IDENT.
SE-75	-4.835E-03	4.640E-02	7.173E-02	0.000E+00	NOT IDENT.
BR-77	-2.680E-01	7.057E+00	1.203E+01	0.000E+00	FAIL ABUN
SR-82	-3.104E-02	3.749E-01	6.182E-01	0.000E+00	NOT IDENT.
RB-83	1.743E-03	6.527E-02	1.118E-01	0.000E+00	NOT IDENT.
RB-84	2.938E-02	6.155E-02	1.100E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.246E+00	1.466E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.176E-02	7.425E-02	0.000E+00	NOT IDENT.
RB-86	2.569E-01	7.390E-01	1.288E+00	0.000E+00	NOT IDENT.
Y-88	-5.829E-03	2.864E-02	4.628E-02	0.000E+00	NOT IDENT.
ZR-88	-1.709E-02	2.934E-02	4.949E-02	0.000E+00	NOT IDENT.
Y-91	7.053E+00	1.903E+01	3.284E+01	0.000E+00	NOT IDENT.
NB-94	4.245E-03	3.402E-02	5.739E-02	0.000E+00	NOT IDENT.
NB-95	5.622E-02	4.964E-02	7.869E-02	0.000E+00	NOT IDENT.
NB-95M	7.605E-02	1.381E-01	2.109E-01	0.000E+00	NOT IDENT.
ZR-95	-1.555E-02	7.207E-02	1.179E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.086E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.908E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.213E+00	8.557E+00	1.409E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.501E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.054E-03	3.359E-02	5.644E-02	0.000E+00	NOT IDENT.
RH-102	-2.612E-02	2.604E-02	4.168E-02	0.000E+00	NOT IDENT.
RU-103	-8.257E-03	3.682E-02	6.218E-02	0.000E+00	FAIL ABUN
RH-106	2.002E-02	3.065E-01	5.197E-01	0.000E+00	FAIL ABUN
RU-106	2.002E-02	3.065E-01	5.197E-01	0.000E+00	FAIL ABUN
AG-108M	-2.232E-02	3.119E-02	5.165E-02	0.000E+00	NOT IDENT.
AG-110M	-3.145E-03	3.500E-02	5.846E-02	0.000E+00	NOT IDENT.
IN-111	1.996E-01	8.943E-01	1.341E+00	0.000E+00	NOT IDENT.
IN-113M	-5.894E-03	4.276E-02	7.395E-02	0.000E+00	NOT IDENT.
SN-113	-5.894E-03	4.276E-02	7.395E-02	0.000E+00	NOT IDENT.
IN-114M	-1.061E-01	1.965E-01	2.861E-01	0.000E+00	NOT IDENT.
CD-115	2.771E+00	7.078E+00	1.240E+01	0.000E+00	NOT IDENT.
SN-117M	-2.933E-02	5.127E-02	8.710E-02	0.000E+00	NOT IDENT.
SB-122	-1.388E-01	1.531E+00	2.588E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.286E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.463E-02	2.777E-02	4.725E-02	0.000E+00	NOT IDENT.
I-124	1.271E-01	5.733E-01	8.954E-01	0.000E+00	FAIL ABUN
SB-124	5.914E-02	6.129E-02	1.205E-01	0.000E+00	FAIL ABUN
SB-125	-7.543E-02	8.949E-02	1.474E-01	0.000E+00	FAIL ABUN
TE-125M	-4.912E+00	9.524E+00	1.655E+01	0.000E+00	NOT IDENT.
I-126	4.560E-02	1.668E-01	2.856E-01	0.000E+00	NOT IDENT.
SB-126	7.391E-02	1.552E-01	2.343E-01	0.000E+00	FAIL ABUN
SB-127	-2.785E-01	1.094E+00	1.798E+00	0.000E+00	NOT IDENT.
XE-127	-5.837E-02	4.913E-02	7.692E-02	0.000E+00	NOT IDENT.
I-131	6.332E-02	9.262E-02	1.680E-01	0.000E+00	NOT IDENT.
TE-132	7.211E-02	5.486E-01	9.387E-01	0.000E+00	NOT IDENT.
BA-133	5.033E-02	4.231E-02	6.981E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.245E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.518E-02	9.357E-02	0.000E+00	FAIL ABUN
CS-135	1.565E-01	1.750E-01	2.716E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.328E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-6.774E-02	1.098E-01	1.772E-01	0.000E+00	FAIL ABUN
BA-137M	-2.116E-02	3.762E-02	5.891E-02	0.000E+00	NOT IDENT.
CS-137	-2.237E-02	3.976E-02	6.227E-02	0.000E+00	NOT IDENT.
CE-139	-1.375E-02	3.026E-02	5.154E-02	0.000E+00	NOT IDENT.
BA-140	6.234E-02	2.416E-01	4.175E-01	0.000E+00	NOT IDENT.
LA-140	6.182E-02	6.527E-02	1.163E-01	0.000E+00	FAIL ABUN
CE-141	5.186E-02	6.321E-02	1.120E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.227E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.073E-01	2.106E-01	3.529E-01	0.000E+00	NOT IDENT.
PM-144	-6.172E-03	3.319E-02	5.479E-02	0.000E+00	NOT IDENT.
PR-144	-4.180E-01	2.248E+00	3.710E+00	0.000E+00	NOT IDENT.

PM-146	2.814E-02	4.193E-02	7.502E-02	0.000E+00	NOT IDENT.
ND-147	-2.171E-01	5.066E-01	8.389E-01	0.000E+00	FAIL ABUN
PM-149	2.711E+01	6.009E+01	1.085E+02	0.000E+00	NOT IDENT.
EU-152	1.031E-01	1.056E-01	1.549E-01	0.000E+00	FAIL ABUN
GD-153	1.574E-02	8.594E-02	1.344E-01	0.000E+00	NOT IDENT.
EU-154	-1.443E-02	1.242E-01	2.053E-01	0.000E+00	NOT IDENT.
EU-155	2.625E-02	1.083E-01	1.934E-01	0.000E+00	FAIL ABUN
TB-160	-4.083E-02	1.227E-01	2.051E-01	0.000E+00	FAIL ABUN
HO-166M	8.218E-03	6.343E-02	1.070E-01	0.000E+00	FAIL ABUN
TM-171	1.424E+01	3.256E+01	5.250E+01	0.000E+00	NOT IDENT.
LU-176	-9.748E-04	2.368E-02	4.072E-02	0.000E+00	FAIL ABUN
LU-177	1.497E+00	1.177E+00	1.864E+00	0.000E+00	NOT IDENT.
LU-177M	4.716E-02	1.873E-01	2.879E-01	0.000E+00	NOT IDENT.
HF-181	-7.761E-03	3.780E-02	6.408E-02	0.000E+00	FAIL ABUN
W-181	4.434E-01	5.572E-01	7.123E-01	0.000E+00	FAIL ABUN
TA-182	1.570E-01	2.140E-01	3.769E-01	0.000E+00	FAIL ABUN
RE-183	8.126E-02	1.067E-01	1.901E-01	0.000E+00	FAIL ABUN
RE-184	-1.824E-01	2.312E-01	3.758E-01	0.000E+00	NOT IDENT.
OS-185	4.332E-02	4.247E-02	7.640E-02	0.000E+00	NOT IDENT.
RE-188	5.337E-03	1.725E-01	3.002E-01	0.000E+00	NOT IDENT.
W-188	-3.140E+00	8.089E+00	1.221E+01	0.000E+00	FAIL ABUN
IR-192	-1.047E-02	3.217E-02	5.424E-02	0.000E+00	FAIL ABUN
AU-195	3.340E-02	2.409E-01	3.953E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.018E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.929E-01	5.526E+00	9.593E+00	0.000E+00	NOT IDENT.
TL-202	8.667E-02	5.883E-02	1.102E-01	0.000E+00	NOT IDENT.
HG-203	3.206E-02	4.441E-02	7.091E-02	0.000E+00	NOT IDENT.
BI-207	1.108E-02	5.512E-02	9.494E-02	0.000E+00	FAIL ABUN
TL-207	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
PO-209	-2.964E+00	7.129E+00	1.184E+01	0.000E+00	NOT IDENT.
BI-210	2.697E+00	4.014E+00	7.473E+00	0.000E+00	NOT IDENT.
PB-210	2.697E+00	4.014E+00	7.473E+00	0.000E+00	NOT IDENT.
PO-210	2.697E+00	4.013E+00	7.473E+00	0.000E+00	NOT IDENT.
PB-211	-9.671E-01	1.177E+00	1.418E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.768E-01	6.497E-01	0.000E+00	FAIL ABUN
PO-215	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
RN-219	-1.213E-01	3.923E-01	6.704E-01	0.000E+00	FAIL ABUN
RN-220	-2.386E+00	2.541E+01	4.300E+01	0.000E+00	NOT IDENT.
RA-223	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
AC-227	-2.018E-01	3.898E-01	6.413E-01	0.000E+00	FAIL ABUN
TH-227	-2.018E-01	3.903E-01	6.413E-01	0.000E+00	FAIL ABUN
TH-229	2.370E-01	4.894E-01	8.568E-01	0.000E+00	FAIL ABUN
PA-231	-6.139E-01	1.593E+00	2.521E+00	0.000E+00	FAIL ABUN
TH-231	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
U-231	-2.028E-01	9.859E-01	1.527E+00	0.000E+00	FAIL ABUN
PA-233	2.406E-02	5.875E-02	1.058E-01	0.000E+00	FAIL ABUN
PA-234	-2.120E-01	2.955E-01	4.713E-01	0.000E+00	FAIL ABUN
PA-234M	2.432E+00	6.609E+00	1.157E+01	0.000E+00	NOT IDENT.
U-235	-1.614E-01	2.168E-01	3.619E-01	0.000E+00	FAIL ABUN
NP-236	-1.010E-01	8.034E-02	1.326E-01	0.000E+00	FAIL ABUN
NP-239	2.369E-02	1.943E-01	3.439E-01	0.000E+00	FAIL ABUN
AM-241	9.817E-02	1.772E-01	2.899E-01	0.000E+00	NOT IDENT.
CM-243	1.908E-03	9.640E-02	1.710E-01	0.000E+00	FAIL ABUN
CM-247	-2.998E-02	3.660E-02	5.896E-02	0.000E+00	FAIL ABUN
CF-249	5.757E-02	3.800E-02	7.110E-02	0.000E+00	NOT IDENT.
CF-251	-4.365E-02	1.282E-01	2.184E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:01.90

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:44:32
Sample ID         : G232754001           Sample quantity  : 1.35030E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.21  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1672	10.67*	1.228E+00	3.549E+01	3.549E+01	10.06
CD-109	88.03	276	3.72*	6.263E+00	3.292E+00	3.362E+00	31.13
SN-126	64.28	71	9.60	3.508E+00	5.882E-01	5.882E-01	128.85
	86.94	276	8.90	6.263E+00	1.376E+00	1.376E+00	51.04
	87.57	276	37.00*	6.263E+00	3.310E-01	3.310E-01	31.13
TL-208	277.35	36	6.80	4.944E+00	2.966E-01	2.966E-01	158.39
	510.84	100	21.60	3.128E+00	4.123E-01	4.123E-01	70.03
	583.14	488	84.20*	2.806E+00	5.743E-01	5.743E-01	14.43
	860.37	63	12.46	1.987E+00	7.059E-01	7.059E-01	63.90
BI-211	72.87	------	1.27	4.802E+00	------ Line Not Found		------
	351.07	802	12.94*	4.166E+00	4.134E+00	4.134E+00	12.06
PB-212	74.81	617	10.70	5.057E+00	3.173E+00	3.173E+00	20.94
	77.11	856	18.00	5.338E+00	2.476E+00	2.476E+00	12.88
	87.30	276	8.00	6.263E+00	1.531E+00	1.531E+00	32.70
	238.63	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.09	113	3.41	4.679E+00	1.962E+00	1.962E+00	46.67
PO-212	74.81	617	10.70	5.057E+00	3.173E+00	3.173E+00	20.94
	77.11	856	18.00	5.338E+00	2.476E+00	2.476E+00	12.88
	87.30	276	8.00	6.263E+00	1.531E+00	1.531E+00	32.70
	115.19	------	0.60	7.278E+00	------ Line Not Found		------
	238.63	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.09	113	3.41	4.679E+00	1.962E+00	1.962E+00	46.67
BI-214	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
PB-214	74.81	617	6.21	5.057E+00	5.466E+00	5.467E+00	20.15
	77.11	856	10.50	5.338E+00	4.245E+00	4.245E+00	14.96
	87.30	276	4.67	6.263E+00	2.622E+00	2.622E+00	32.07

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	404	7.49	5.434E+00	2.758E+00	2.758E+00	21.43
	295.21	446	19.20	4.731E+00	1.364E+00	1.364E+00	16.78
	351.92	802	37.20*	4.166E+00	1.438E+00	1.438E+00	13.14
PO-214	74.81	617	6.21	5.057E+00	5.466E+00	5.467E+00	20.15
	77.11	856	10.50	5.338E+00	4.245E+00	4.245E+00	14.96
	87.30	276	4.67	6.263E+00	2.622E+00	2.622E+00	32.07
	241.98	404	7.49	5.434E+00	2.758E+00	2.758E+00	21.43
	295.21	446	19.20	4.731E+00	1.364E+00	1.364E+00	16.78
	351.92	802	37.20*	4.166E+00	1.438E+00	1.438E+00	13.14
PO-216	74.81	617	10.70	5.057E+00	3.173E+00	3.173E+00	20.94
	77.11	856	18.00	5.338E+00	2.476E+00	2.476E+00	12.88
	87.30	276	8.00	6.263E+00	1.531E+00	1.531E+00	32.70
	238.63	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.09	113	3.41	4.679E+00	1.962E+00	1.962E+00	46.67
PO-218	74.81	617	6.21	5.057E+00	5.466E+00	5.467E+00	20.15
	77.11	856	10.50	5.338E+00	4.245E+00	4.245E+00	14.96
	87.30	276	4.67	6.263E+00	2.622E+00	2.622E+00	32.07
	241.98	404	7.49	5.434E+00	2.758E+00	2.758E+00	21.43
	295.21	446	19.20	4.731E+00	1.364E+00	1.364E+00	16.78
	351.92	802	37.20*	4.166E+00	1.438E+00	1.438E+00	13.14
RA-224	240.98	404	3.95*	5.434E+00	5.230E+00	5.230E+00	20.68
RA-226	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
AC-228	338.32	309	11.40	4.288E+00	1.759E+00	1.759E+00	46.83
	911.07	319	27.70*	1.885E+00	1.698E+00	1.698E+00	20.20
	969.11	223	16.60	1.780E+00	2.097E+00	2.097E+00	29.79
RA-228	338.32	309	11.40	4.288E+00	1.759E+00	1.759E+00	46.83
	911.07	319	27.70*	1.885E+00	1.698E+00	1.698E+00	20.20
	969.11	223	16.60	1.780E+00	2.097E+00	2.097E+00	29.79
TH-228	84.40	------	1.21	6.023E+00	------ Line Not Found		------
	238.60	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.10	113	3.41	4.679E+00	1.962E+00	1.962E+00	74.72
TH-230	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
TH-232	338.32	309	11.40	4.288E+00	1.759E+00	1.759E+00	23.77
	911.07	319	27.70*	1.885E+00	1.698E+00	1.698E+00	20.20
	969.11	223	16.60	1.780E+00	2.097E+00	2.097E+00	29.79
TH-234	63.29	71	3.80*	3.508E+00	1.486E+00	1.486E+00	129.21
	92.38	318	5.41	6.640E+00	2.462E+00	2.462E+00	34.02

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
NP-237	86.50	276	12.60*	6.263E+00	9.719E-01	9.719E-01	37.35
	95.87	------	2.60	6.774E+00	------ Line Not Found		------
U-238	63.29	71	3.80*	3.508E+00	1.486E+00	1.486E+00	129.21
	92.38	318	5.41	6.640E+00	2.462E+00	2.462E+00	30.08
AM-243	74.67	617	66.00*	5.057E+00	5.143E-01	5.143E-01	18.74
	86.72	276	0.34	6.263E+00	3.645E+01	3.645E+01	31.13
	117.66	------	0.55	7.296E+00	------ Line Not Found		------
	142.18	------	0.13	7.157E+00	------ Line Not Found		------
ANH-511	511.00	100	100.00*	3.128E+00	8.906E-02	8.906E-02	69.53

Flag: "*" = Keyline

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

Total number of lines in spectrum 37
Number of unidentified lines 3
Number of lines tentatively identified by NID 34 91.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.549E+01	3.549E+01	0.357E+01	10.06	
CD-109	464.00D	1.02	3.292E+00	3.362E+00	1.046E+00	31.13	
SN-126	1.00E+05Y	1.00	3.310E-01	3.310E-01	1.030E-01	31.13	
TL-208	1.41E+10Y	1.00	5.743E-01	5.743E-01	0.829E-01	14.43	
BI-211	7.04E+08Y	1.00	4.134E+00	4.134E+00	0.498E+00	12.06	
PB-212	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
PO-212	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
BI-214	1600.00Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
PB-214	1600.00Y	1.00	1.438E+00	1.438E+00	0.189E+00	13.14	
PO-214	1600.00Y	1.00	1.438E+00	1.438E+00	0.189E+00	13.14	
PO-216	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
PO-218	1600.00Y	1.00	1.438E+00	1.438E+00	0.189E+00	13.14	
RA-224	1.41E+10Y	1.00	5.230E+00	5.230E+00	1.082E+00	20.68	
RA-226	1600.00Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
AC-228	1.41E+10Y	1.00	1.698E+00	1.698E+00	0.343E+00	20.20	
RA-228	1.41E+10Y	1.00	1.698E+00	1.698E+00	0.343E+00	20.20	
TH-228	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
TH-230	4.47E+09Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
TH-232	1.41E+10Y	1.00	1.698E+00	1.698E+00	0.343E+00	20.20	
TH-234	4.47E+09Y	1.00	1.486E+00	1.486E+00	1.920E+00	129.21	
U-234	4.47E+09Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
NP-237	2.14E+06Y	1.00	9.719E-01	9.719E-01	3.630E-01	37.35	
U-238	4.47E+09Y	1.00	1.486E+00	1.486E+00	1.920E+00	129.21	
AM-243	7380.00Y	1.00	5.143E-01	5.143E-01	0.964E-01	18.74	
ANH-511	1.00E+09Y	1.00	8.906E-02	8.906E-02	6.192E-02	69.53	
	Total Activity :		7.488E+01	7.495E+01			

Grand Total Activity : 7.488E+01 7.495E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	90.13	120	413	0.96	180.27	178	6	1.66E-02	57.0	6.45E+00	T
0	186.18	238	357	1.02	372.35	368	10	3.31E-02	33.7	6.39E+00	T
0	209.87	124	451	1.13	419.74	414	12	1.72E-02	71.1	5.95E+00	T
0	270.47	121	237	1.51	540.94	537	10	1.68E-02	51.1	5.04E+00	T
0	328.34	74	162	1.27	656.68	653	9	1.03E-02	68.1	4.38E+00	T
0	409.75	49	184	0.71	819.50	815	12	6.81E-03	****	3.72E+00	T
0	463.54	128	141	0.81	927.08	922	14	1.78E-02	43.1	3.38E+00	T
0	728.07	88	111	1.57	1456.14	1448	13	1.22E-02	53.6	2.32E+00	T
0	795.12	77	69	1.23	1590.23	1584	13	1.07E-02	49.8	2.14E+00	T
2	965.00	73	52	2.04	1930.00	1925	20	1.02E-02	42.9	1.79E+00	T
0	1379.31	35	19	1.40	2758.61	2752	15	4.93E-03	70.8	1.29E+00	
0	1509.98	25	25	0.59	3019.95	3012	19	3.45E-03	****	1.20E+00	T
0	1589.67	29	28	1.50	3179.34	3171	15	4.02E-03	90.0	1.15E+00	
0	1729.77	23	7	2.63	3459.54	3451	14	3.19E-03	64.2	1.09E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:06.60

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*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1 *
* Acquisition date  : 14-JUL-2009 10:44:32  Detector SN#     :             *
* Detector ID       : GAM16                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:02.21          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232754001            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.35030E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1023-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.549E+01	3.568E+00	5.212E-01	4.387E-02	68.092
CD-109	3.362E+00	1.046E+00	1.473E+00	1.271E-01	2.282
SN-126	3.310E-01	1.030E-01	1.474E-01	1.266E-02	2.245
TL-208	5.743E-01	8.289E-02	5.878E-02	4.049E-03	9.770
BI-211	4.134E+00	4.984E-01	2.994E-01	1.859E-02	13.809
PB-212	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
PO-212	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
BI-214	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
PB-214	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-214	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-216	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
PO-218	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
RA-224	5.230E+00	1.082E+00	1.025E+00	5.594E-02	5.101
RA-226	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
AC-228	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
RA-228	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
TH-228	1.819E+00	1.663E-01	9.014E-02	6.358E-03	20.176
TH-230	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
TH-234	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
U-234	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
NP-237	9.719E-01	3.630E-01	4.135E-01	9.228E-02	2.350
U-238	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
AM-243	5.143E-01	9.636E-02	9.193E-02	7.057E-03	5.595
ANH-511	8.906E-02	6.192E-02	4.542E-02	2.668E-03	1.961

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	9.288E-02		2.806E-01	4.723E-01	3.176E-02	0.197
NA-22	-4.793E-03		4.537E-02	7.320E-02	5.441E-03	-0.065
NA-24	1.141E-01		1.001E-01	Half-Life too short		
AL-26	1.860E-02		1.889E-02	3.867E-02	2.309E-03	0.481
TI-44	4.569E-01	+	5.884E-02	8.847E-02	6.980E-03	5.164
SC-46	2.384E-03		3.671E-02	6.149E-02	5.779E-03	0.039
V-48	-3.724E-02		6.745E-02	1.063E-01	9.165E-03	-0.350
CR-51	4.986E-02		3.435E-01	5.800E-01	3.645E-02	0.086
MN-52	2.378E-01		1.832E-01	3.467E-01	2.867E-02	0.686
MN-54	-2.570E-02		3.862E-02	6.149E-02	5.251E-03	-0.418
CO-56	-1.565E-02		3.925E-02	6.356E-02	5.545E-03	-0.246
CO-57	-1.479E-02		2.655E-02	4.249E-02	2.598E-03	-0.348
CO-58	-7.979E-03		3.718E-02	6.123E-02	5.018E-03	-0.130
FE-59	2.087E-02		1.022E-01	1.707E-01	1.326E-02	0.122
CO-60	-2.782E-03		4.155E-02	6.703E-02	5.751E-03	-0.042
ZN-65	3.442E-02		1.071E-01	1.566E-01	1.040E-02	0.220
GE-68	-1.327E-01		1.246E+00	2.034E+00	1.480E-01	-0.065
AS-73	3.128E-05		8.870E-01	1.491E+00	1.101E-01	0.000
AS-74	2.807E-02		8.568E-02	1.427E-01	8.630E-03	0.197
SE-75	-4.835E-03		4.735E-02	6.935E-02	3.885E-03	-0.070
BR-77	-2.680E-01		7.201E+00	1.178E+01	6.949E-01	-0.023
SR-82	-3.104E-02		3.825E-01	6.095E-01	4.672E-02	-0.051
RB-83	1.743E-03		6.660E-02	1.094E-01	6.454E-03	0.016
RB-84	2.938E-02		6.280E-02	1.087E-01	1.008E-02	0.270
KR-85	2.398E+01		8.414E+00	1.435E+01	8.439E-01	1.672
SR-85	1.215E-01		4.261E-02	7.266E-02	4.274E-03	1.672
RB-86	2.569E-01		7.541E-01	1.278E+00	9.315E-02	0.201
Y-88	-5.829E-03		2.923E-02	4.638E-02	2.670E-03	-0.126
ZR-88	-1.709E-02		2.993E-02	4.819E-02	2.603E-03	-0.355
Y-91	7.053E+00		1.942E+01	3.265E+01	1.994E+00	0.216
NB-94	4.245E-03		3.471E-02	5.649E-02	3.746E-03	0.075
NB-95	5.622E-02		5.065E-02	7.757E-02	5.826E-03	0.725
NB-95M	7.605E-02		1.410E-01	2.035E-01	1.475E-02	0.374
ZR-95	-1.555E-02		7.354E-02	1.162E-01	9.731E-03	-0.134
NB-97	-4.388E-03		1.575E-02	Half-Life too short		
ZR-97	4.727E-01		3.014E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	-1.213E+00		8.731E+00	1.388E+01	1.998E+00	-0.087
TC-99M	-7.186E+08		7.659E+08	Half-Life too short		
RH-101	-1.054E-03		3.427E-02	5.429E-02	2.842E-03	-0.019
RH-102	-2.612E-02		2.657E-02	4.073E-02	2.345E-03	-0.641
RU-103	-8.257E-03		3.757E-02	6.081E-02	7.698E-03	-0.136
RH-106	2.002E-02		3.127E-01	5.103E-01	6.061E-02	0.039
RU-106	2.002E-02		3.127E-01	5.103E-01	3.101E-02	0.039
AG-108M	-2.232E-02		3.182E-02	5.038E-02	3.079E-03	-0.443
AG-110M	-3.145E-03		3.572E-02	5.746E-02	3.707E-03	-0.055
IN-111	1.996E-01		9.126E-01	1.294E+00	7.084E-02	0.154
IN-113M	-5.894E-03		4.363E-02	7.200E-02	4.185E-03	-0.082
SN-113	-5.894E-03		4.363E-02	7.200E-02	4.185E-03	-0.082
IN-114M	-1.061E-01		2.005E-01	2.750E-01	1.427E-02	-0.386
CD-115	2.771E+00		7.222E+00	1.214E+01	7.184E-01	0.228
SN-117M	-2.933E-02		5.232E-02	8.345E-02	4.346E-03	-0.351
SB-122	-1.388E-01		1.563E+00	2.537E+00	1.522E-01	-0.055
I-123	-6.777E-01		6.564E-01	Half-Life too short		
TE-123M	-1.463E-02		2.834E-02	4.527E-02	2.393E-03	-0.323
I-124	1.271E-01		5.850E-01	8.787E-01	5.323E-02	0.145
SB-124	5.914E-02		6.254E-02	1.205E-01	8.791E-03	0.491
SB-125	-7.543E-02		9.131E-02	1.437E-01	8.374E-03	-0.525
TE-125M	-4.912E+00		9.719E+00	1.575E+01	1.385E+00	-0.312
I-126	4.560E-02		1.703E-01	2.808E-01	1.728E-02	0.162
SB-126	7.391E-02		1.583E-01	2.307E-01	1.586E-02	0.320
SB-127	-2.785E-01		1.116E+00	1.768E+00	1.666E-01	-0.157
XE-127	-5.837E-02		5.013E-02	7.401E-02	3.895E-03	-0.789
I-131	6.332E-02		9.451E-02	1.633E-01	1.014E-02	0.388
TE-132	7.211E-02		5.598E-01	9.052E-01	1.265E-01	0.080
BA-133	5.033E-02		4.318E-02	6.785E-02	7.756E-03	0.742
I-133	9.421E-04		1.145E-03	Half-Life too short		
CS-134	1.317E-01	+	6.651E-02	9.230E-02	7.400E-03	1.427
CS-135	1.565E-01		1.786E-01	2.627E-01	1.962E-02	0.596
I-135	-2.994E+08		1.698E+08	Half-Life too short		
CS-136	-6.774E-02		1.120E-01	1.757E-01	1.430E-02	-0.386
BA-137M	-2.116E-02		3.838E-02	5.791E-02	3.529E-03	-0.365
CS-137	-2.237E-02		4.057E-02	6.122E-02	3.745E-03	-0.365
CE-139	-1.375E-02		3.088E-02	4.942E-02	2.500E-03	-0.278
BA-140	6.234E-02		2.466E-01	4.089E-01	1.331E-01	0.152
LA-140	6.182E-02		6.660E-02	1.163E-01	8.698E-03	0.532
CE-141	5.186E-02		6.450E-02	1.072E-01	6.145E-03	0.484
CE-143	4.011E-04		6.261E-05	Half-Life too short		
CE-144	-2.073E-01		2.149E-01	3.371E-01	4.783E-02	-0.615
PM-144	-6.172E-03		3.387E-02	5.391E-02	3.533E-03	-0.114
PR-144	-4.180E-01		2.294E+00	3.651E+00	2.391E-01	-0.114
PM-146	2.814E-02		4.278E-02	7.324E-02	6.256E-03	0.384
ND-147	-2.171E-01		5.169E-01	8.213E-01	1.115E-01	-0.264
PM-149	2.711E+01		6.131E+01	1.051E+02	1.480E+01	0.258
EU-152	1.031E-01		1.078E-01	1.504E-01	9.529E-03	0.686

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	1.574E-02		8.769E-02	1.277E-01	9.643E-03	0.123
EU-154	-1.443E-02		1.267E-01	2.043E-01	2.130E-02	-0.071
EU-155	2.625E-02		1.105E-01	1.840E-01	1.302E-02	0.143
TB-160	-4.083E-02		1.252E-01	2.027E-01	1.872E-02	-0.201
HO-166M	8.218E-03		6.472E-02	1.053E-01	7.112E-03	0.078
TM-171	1.424E+01		3.323E+01	4.955E+01	3.649E+00	0.287
LU-176	-9.748E-04		2.416E-02	3.947E-02	2.212E-03	-0.025
LU-177	1.497E+00		1.201E+00	1.795E+00	9.501E-02	0.834
LU-177M	4.716E-02		1.911E-01	2.806E-01	1.545E-02	0.168
HF-181	-7.761E-03		3.857E-02	6.263E-02	3.622E-03	-0.124
W-181	4.434E-01	+	5.686E-01	6.720E-01	4.924E-02	0.660
TA-182	1.570E-01		2.184E-01	3.748E-01	2.402E-02	0.419
RE-183	8.126E-02		1.089E-01	1.822E-01	9.347E-03	0.446
RE-184	-1.824E-01		2.359E-01	3.631E-01	1.998E-02	-0.502
OS-185	4.332E-02		4.334E-02	7.507E-02	4.573E-03	0.577
RE-188	5.337E-03		1.760E-01	2.875E-01	1.519E-02	0.019
W-188	-3.140E+00		8.254E+00	1.182E+01	6.610E-01	-0.266
IR-192	-1.047E-02		3.283E-02	5.261E-02	2.964E-03	-0.199
AU-195	3.340E-02		2.458E-01	3.756E-01	2.788E-02	0.089
TL-200	-6.071E-05		1.030E-04	Half-Life too short		
TL-201	3.929E-01		5.638E+00	9.199E+00	4.655E-01	0.043
TL-202	8.667E-02		6.003E-02	1.075E-01	6.042E-03	0.806
HG-203	3.206E-02		4.532E-02	6.863E-02	4.081E-03	0.467
BI-207	1.108E-02		5.624E-02	9.416E-02	7.058E-03	0.118
TL-207	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
PO-209	-2.964E+00		7.275E+00	1.170E+01	1.114E+00	-0.253
BI-210	2.697E+00		4.096E+00	7.010E+00	5.536E-01	0.385
PB-210	2.697E+00		4.096E+00	7.010E+00	5.536E-01	0.385
PO-210	2.697E+00		4.095E+00	7.010E+00	4.794E-01	0.385
PB-211	-9.671E-01		1.201E+00	1.382E+00	8.610E-01	-0.700
BI-212	8.962E-01	+	4.866E-01	6.398E-01	5.518E-02	1.401
PO-215	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
RN-219	-1.213E-01		4.003E-01	6.531E-01	8.790E-02	-0.186
RN-220	-2.386E+00		2.593E+01	4.213E+01	2.515E+00	-0.057
RA-223	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
AC-227	-2.018E-01		3.978E-01	6.197E-01	8.578E-02	-0.326
TH-227	-2.018E-01		3.983E-01	6.197E-01	1.041E-01	-0.326
TH-229	2.370E-01		4.994E-01	8.237E-01	4.291E-02	0.288
PA-231	-6.139E-01		1.626E+00	2.440E+00	3.340E-01	-0.252
TH-231	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
U-231	-2.028E-01		1.006E+00	1.450E+00	1.116E-01	-0.140
PA-233	2.406E-02		5.995E-02	1.026E-01	6.128E-03	0.235
PA-234	-2.120E-01		3.015E-01	4.664E-01	8.847E-02	-0.454
PA-234M	2.432E+00		6.744E+00	1.146E+01	1.262E+00	0.212
U-235	-1.614E-01		2.212E-01	3.461E-01	5.611E-02	-0.466
NP-236	-1.010E-01		8.198E-02	1.271E-01	6.572E-03	-0.795
NP-239	2.369E-02		1.982E-01	3.277E-01	2.070E-02	0.072
AM-241	9.817E-02		1.808E-01	2.731E-01	2.175E-02	0.359

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.908E-03		9.836E-02	1.627E-01	1.147E-02	0.012
CM-247	-2.998E-02		3.735E-02	5.744E-02	3.132E-03	-0.522
CF-249	5.757E-02		3.877E-02	6.922E-02	3.748E-03	0.832
CF-251	-4.365E-02		1.308E-01	2.097E-01	1.071E-02	-0.208

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232754001           *
* Acquisition date  : 14-JUL-2009 10:44:32 Detector SN#     :               *
* Detector ID       : GAM16                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:02.21      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232754001           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.3503E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.549E+01	3.497E+00	2.613E-01	1.784E+00
CD-109	3.362E+00	1.026E+00	7.773E-01	5.232E-01
SN-126	3.310E-01	1.010E-01	7.778E-02	5.152E-02
TL-208	5.743E-01	8.123E-02	2.998E-02	4.144E-02
BI-211	4.134E+00	4.884E-01	1.541E-01	2.492E-01
PB-212	1.819E+00	1.629E-01	4.673E-02	8.313E-02
PO-212	1.819E+00	1.629E-01	4.673E-02	8.313E-02
BI-214	1.150E+00	1.645E-01	5.806E-02	8.395E-02
PB-214	1.438E+00	1.851E-01	5.372E-02	9.445E-02
PO-214	1.438E+00	1.851E-01	5.372E-02	9.445E-02
PO-216	1.819E+00	1.629E-01	4.673E-02	8.313E-02
PO-218	1.438E+00	1.851E-01	5.372E-02	9.445E-02
RA-224	5.230E+00	1.060E+00	5.314E-01	5.408E-01
RA-226	1.150E+00	1.645E-01	5.806E-02	8.395E-02
AC-228	1.698E+00	3.361E-01	1.186E-01	1.715E-01
RA-228	1.698E+00	3.361E-01	1.186E-01	1.715E-01
TH-228	1.819E+00	1.629E-01	4.673E-02	8.313E-02
TH-230	1.150E+00	1.645E-01	5.806E-02	8.395E-02
TH-232	1.698E+00	3.361E-01	1.186E-01	1.715E-01
TH-234	1.486E+00	1.882E+00	1.190E+00	9.601E-01
U-234	1.150E+00	1.645E-01	5.806E-02	8.395E-02
NP-237	9.719E-01	3.557E-01	2.182E-01	1.815E-01
U-238	1.486E+00	1.882E+00	1.190E+00	9.601E-01
AM-243	5.143E-01	9.444E-02	4.863E-02	4.818E-02
ANH-511	8.906E-02	6.069E-02	2.322E-02	3.096E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	9.288E-02	2.750E-01	2.418E-01	1.403E-01 NOT IDENT.
NA-22	-4.793E-03	4.446E-02	3.680E-02	2.268E-02 NOT IDENT.

NA-24	1.141E+05	1.962E+05	0.000E+00	1.001E+05	SHORT HLIF
AL-26	1.860E-02	1.851E-02	1.931E-02	9.445E-03	NOT IDENT.
TI-44	4.569E-01	5.766E-02	4.677E-02	2.942E-02	FAIL ABUN
SC-46	2.384E-03	3.597E-02	3.112E-02	1.835E-02	FAIL ABUN
V-48	-3.724E-02	6.610E-02	5.370E-02	3.373E-02	NOT IDENT.
CR-51	4.986E-02	3.366E-01	2.991E-01	1.717E-01	NOT IDENT.
MN-52	2.378E-01	1.795E-01	1.739E-01	9.158E-02	NOT IDENT.
MN-54	-2.570E-02	3.785E-02	3.116E-02	1.931E-02	NOT IDENT.
CO-56	-1.565E-02	3.847E-02	3.220E-02	1.963E-02	FAIL ABUN
CO-57	-1.479E-02	2.602E-02	2.229E-02	1.328E-02	NOT IDENT.
CO-58	-7.979E-03	3.644E-02	3.105E-02	1.859E-02	NOT IDENT.
FE-59	2.087E-02	1.002E-01	8.607E-02	5.111E-02	NOT IDENT.
CO-60	-2.782E-03	4.072E-02	3.367E-02	2.077E-02	NOT IDENT.
ZN-65	3.442E-02	1.049E-01	7.891E-02	5.353E-02	NOT IDENT.
GE-68	-1.327E-01	1.221E+00	1.026E+00	6.231E-01	NOT IDENT.
AS-73	3.128E-05	8.693E-01	7.931E-01	4.435E-01	NOT IDENT.
AS-74	2.807E-02	8.397E-02	7.274E-02	4.284E-02	NOT IDENT.
SE-75	-4.835E-03	4.640E-02	3.589E-02	2.367E-02	NOT IDENT.
BR-77	-2.680E-01	7.057E+00	6.020E+00	3.600E+00	FAIL ABUN
SR-82	-3.104E-02	3.749E-01	3.093E-01	1.913E-01	NOT IDENT.
RB-83	1.743E-03	6.527E-02	5.592E-02	3.330E-02	NOT IDENT.
RB-84	2.938E-02	6.155E-02	5.502E-02	3.140E-02	NOT IDENT.
KR-85	2.398E+01	8.246E+00	7.335E+00	4.207E+00	NOT IDENT.
SR-85	1.215E-01	4.176E-02	3.715E-02	2.131E-02	NOT IDENT.
RB-86	2.569E-01	7.390E-01	6.445E-01	3.770E-01	NOT IDENT.
Y-88	-5.829E-03	2.864E-02	2.315E-02	1.461E-02	NOT IDENT.
ZR-88	-1.709E-02	2.934E-02	2.476E-02	1.497E-02	NOT IDENT.
Y-91	7.053E+00	1.903E+01	1.643E+01	9.708E+00	NOT IDENT.
NB-94	4.245E-03	3.402E-02	2.871E-02	1.736E-02	NOT IDENT.
NB-95	5.622E-02	4.964E-02	3.937E-02	2.533E-02	NOT IDENT.
NB-95M	7.605E-02	1.381E-01	1.055E-01	7.048E-02	NOT IDENT.
ZR-95	-1.555E-02	7.207E-02	5.897E-02	3.677E-02	NOT IDENT.
NB-97	-4.388E+03	3.086E+04	0.000E+00	1.575E+04	SHORT HLIF
ZR-97	4.727E+05	5.908E+05	0.000E+00	3.014E+05	SHORT HLIF
MO-99	-1.213E+00	8.557E+00	7.051E+00	4.366E+00	NOT IDENT.
TC-99M	-7.186E+14	1.501E+15	0.000E+00	7.659E+14	SHORT HLIF
RH-101	-1.054E-03	3.359E-02	2.824E-02	1.714E-02	NOT IDENT.
RH-102	-2.612E-02	2.604E-02	2.085E-02	1.328E-02	NOT IDENT.
RU-103	-8.257E-03	3.682E-02	3.111E-02	1.878E-02	FAIL ABUN
RH-106	2.002E-02	3.065E-01	2.600E-01	1.564E-01	FAIL ABUN
RU-106	2.002E-02	3.065E-01	2.600E-01	1.564E-01	FAIL ABUN
AG-108M	-2.232E-02	3.119E-02	2.584E-02	1.591E-02	NOT IDENT.
AG-110M	-3.145E-03	3.500E-02	2.925E-02	1.786E-02	NOT IDENT.
IN-111	1.996E-01	8.943E-01	6.707E-01	4.563E-01	NOT IDENT.
IN-113M	-5.894E-03	4.276E-02	3.700E-02	2.181E-02	NOT IDENT.
SN-113	-5.894E-03	4.276E-02	3.700E-02	2.181E-02	NOT IDENT.
IN-114M	-1.061E-01	1.965E-01	1.432E-01	1.002E-01	NOT IDENT.
CD-115	2.771E+00	7.078E+00	6.202E+00	3.611E+00	NOT IDENT.
SN-117M	-2.933E-02	5.127E-02	4.358E-02	2.616E-02	NOT IDENT.
SB-122	-1.388E-01	1.531E+00	1.295E+00	7.813E-01	NOT IDENT.
I-123	-6.777E+05	1.286E+06	0.000E+00	6.564E+05	SHORT HLIF
TE-123M	-1.463E-02	2.777E-02	2.364E-02	1.417E-02	NOT IDENT.
I-124	1.271E-01	5.733E-01	4.480E-01	2.925E-01	FAIL ABUN
SB-124	5.914E-02	6.129E-02	6.027E-02	3.127E-02	FAIL ABUN
SB-125	-7.543E-02	8.949E-02	7.374E-02	4.566E-02	FAIL ABUN
TE-125M	-4.912E+00	9.524E+00	8.280E+00	4.859E+00	NOT IDENT.
I-126	4.560E-02	1.668E-01	1.429E-01	8.513E-02	NOT IDENT.
SB-126	7.391E-02	1.552E-01	1.172E-01	7.917E-02	FAIL ABUN
SB-127	-2.785E-01	1.094E+00	8.994E-01	5.581E-01	NOT IDENT.
XE-127	-5.837E-02	4.913E-02	3.848E-02	2.506E-02	NOT IDENT.
I-131	6.332E-02	9.262E-02	8.403E-02	4.726E-02	NOT IDENT.
TE-132	7.211E-02	5.486E-01	4.696E-01	2.799E-01	NOT IDENT.
BA-133	5.033E-02	4.231E-02	3.492E-02	2.159E-02	FAIL ABUN
I-133	9.421E+02	2.245E+03	0.000E+00	1.145E+03	SHORT HLIF
CS-134	1.317E-01	6.518E-02	4.681E-02	3.326E-02	FAIL ABUN
CS-135	1.565E-01	1.750E-01	1.359E-01	8.930E-02	NOT IDENT.
I-135	-2.994E+14	3.328E+14	0.000E+00	1.698E+14	SHORT HLIF
CS-136	-6.774E-02	1.098E-01	8.866E-02	5.601E-02	FAIL ABUN
BA-137M	-2.116E-02	3.762E-02	2.947E-02	1.919E-02	NOT IDENT.
CS-137	-2.237E-02	3.976E-02	3.115E-02	2.029E-02	NOT IDENT.
CE-139	-1.375E-02	3.026E-02	2.579E-02	1.544E-02	NOT IDENT.
BA-140	6.234E-02	2.416E-01	2.089E-01	1.233E-01	NOT IDENT.
LA-140	6.182E-02	6.527E-02	5.819E-02	3.330E-02	FAIL ABUN
CE-141	5.186E-02	6.321E-02	5.604E-02	3.225E-02	NOT IDENT.
CE-143	4.011E+02	1.227E+02	0.000E+00	6.261E+01	SHORT HLIF
CE-144	-2.073E-01	2.106E-01	1.766E-01	1.075E-01	NOT IDENT.
PM-144	-6.172E-03	3.319E-02	2.741E-02	1.694E-02	NOT IDENT.
PR-144	-4.180E-01	2.248E+00	1.856E+00	1.147E+00	NOT IDENT.

PM-146	2.814E-02	4.193E-02	3.753E-02	2.139E-02	NOT IDENT.
ND-147	-2.171E-01	5.066E-01	4.197E-01	2.585E-01	FAIL ABUN
PM-149	2.711E+01	6.009E+01	5.430E+01	3.066E+01	NOT IDENT.
EU-152	1.031E-01	1.056E-01	7.749E-02	5.389E-02	FAIL ABUN
GD-153	1.574E-02	8.594E-02	6.726E-02	4.384E-02	NOT IDENT.
EU-154	-1.443E-02	1.242E-01	1.027E-01	6.335E-02	NOT IDENT.
EU-155	2.625E-02	1.083E-01	9.676E-02	5.525E-02	FAIL ABUN
TB-160	-4.083E-02	1.227E-01	1.026E-01	6.259E-02	FAIL ABUN
HO-166M	8.218E-03	6.343E-02	5.351E-02	3.236E-02	FAIL ABUN
TM-171	1.424E+01	3.256E+01	2.626E+01	1.661E+01	NOT IDENT.
LU-176	-9.748E-04	2.368E-02	2.037E-02	1.208E-02	FAIL ABUN
LU-177	1.497E+00	1.177E+00	9.327E-01	6.005E-01	NOT IDENT.
LU-177M	4.716E-02	1.873E-01	1.440E-01	9.557E-02	NOT IDENT.
HF-181	-7.761E-03	3.780E-02	3.206E-02	1.929E-02	FAIL ABUN
W-181	4.434E-01	5.572E-01	3.563E-01	2.843E-01	FAIL ABUN
TA-182	1.570E-01	2.140E-01	1.885E-01	1.092E-01	FAIL ABUN
RE-183	8.126E-02	1.067E-01	9.512E-02	5.444E-02	FAIL ABUN
RE-184	-1.824E-01	2.312E-01	1.880E-01	1.179E-01	NOT IDENT.
OS-185	4.332E-02	4.247E-02	3.822E-02	2.167E-02	NOT IDENT.
RE-188	5.337E-03	1.725E-01	1.502E-01	8.800E-02	NOT IDENT.
W-188	-3.140E+00	8.089E+00	6.106E+00	4.127E+00	FAIL ABUN
IR-192	-1.047E-02	3.217E-02	2.714E-02	1.641E-02	FAIL ABUN
AU-195	3.340E-02	2.409E-01	1.978E-01	1.229E-01	FAIL ABUN
TL-200	-6.071E+01	2.018E+02	0.000E+00	1.030E+02	SHORT HLIF
TL-201	3.929E-01	5.526E+00	4.799E+00	2.819E+00	NOT IDENT.
TL-202	8.667E-02	5.883E-02	5.511E-02	3.002E-02	NOT IDENT.
HG-203	3.206E-02	4.441E-02	3.548E-02	2.266E-02	NOT IDENT.
BI-207	1.108E-02	5.512E-02	4.750E-02	2.812E-02	FAIL ABUN
TL-207	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
PO-209	-2.964E+00	7.129E+00	5.921E+00	3.637E+00	NOT IDENT.
BI-210	2.697E+00	4.014E+00	3.739E+00	2.048E+00	NOT IDENT.
PB-210	2.697E+00	4.014E+00	3.739E+00	2.048E+00	NOT IDENT.
PO-210	2.697E+00	4.013E+00	3.739E+00	2.047E+00	NOT IDENT.
PB-211	-9.671E-01	1.177E+00	7.096E-01	6.003E-01	NOT IDENT.
BI-212	8.962E-01	4.768E-01	3.250E-01	2.433E-01	FAIL ABUN
PO-215	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
RN-219	-1.213E-01	3.923E-01	3.354E-01	2.002E-01	FAIL ABUN
RN-220	-2.386E+00	2.541E+01	2.151E+01	1.296E+01	NOT IDENT.
RA-223	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
AC-227	-2.018E-01	3.898E-01	3.208E-01	1.989E-01	FAIL ABUN
TH-227	-2.018E-01	3.903E-01	3.208E-01	1.991E-01	FAIL ABUN
TH-229	2.370E-01	4.894E-01	4.286E-01	2.497E-01	FAIL ABUN
PA-231	-6.139E-01	1.593E+00	1.261E+00	8.128E-01	FAIL ABUN
TH-231	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
U-231	-2.028E-01	9.859E-01	7.640E-01	5.030E-01	FAIL ABUN
PA-233	2.406E-02	5.875E-02	5.291E-02	2.998E-02	FAIL ABUN
PA-234	-2.120E-01	2.955E-01	2.358E-01	1.508E-01	FAIL ABUN
PA-234M	2.432E+00	6.609E+00	5.790E+00	3.372E+00	NOT IDENT.
U-235	-1.614E-01	2.168E-01	1.811E-01	1.106E-01	FAIL ABUN
NP-236	-1.010E-01	8.034E-02	6.635E-02	4.099E-02	FAIL ABUN
NP-239	2.369E-02	1.943E-01	1.721E-01	9.911E-02	FAIL ABUN
AM-241	9.817E-02	1.772E-01	1.450E-01	9.038E-02	NOT IDENT.
CM-243	1.908E-03	9.640E-02	8.557E-02	4.918E-02	FAIL ABUN
CM-247	-2.998E-02	3.660E-02	2.950E-02	1.867E-02	FAIL ABUN
CF-249	5.757E-02	3.800E-02	3.557E-02	1.939E-02	NOT IDENT.
CF-251	-4.365E-02	1.282E-01	1.093E-01	6.539E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	390.2813
46.50	390.2813
46.50	390.2813
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52.97	402.9661
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54.07	397.3041
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56.28	441.0214
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57.53	447.1777
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57.98	436.0942
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59.32	401.8176
59.40	401.8682
59.54	431.5127
59.72	434.5921
60.01	434.7903
61.10	438.4943
61.14	463.7067
61.30	463.8223
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63.29	513.7359
63.29	513.7359
63.58	513.9632
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65.20	585.8396
65.20	585.8396
66.05	517.9246
66.72	515.4470
66.83	515.5333
66.91	524.5612
67.20	524.7840
67.20	524.7840
67.75	557.3768
67.85	557.4586
68.90	539.5759
68.90	539.5759
69.30	534.2641
69.67	547.6805
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74.97	556.4969
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75.70	557.0542
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77.11	558.1237
77.11	558.1237

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80.30	627.3093
80.57	664.0883
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81.07	685.8627
81.07	685.8627
81.07	685.8627
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83.78	583.7632
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84.90	586.6440
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86.59	623.2065
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86.79	660.2117
86.94	671.0873
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87.30	692.9005
87.30	692.9005
87.30	692.9005
87.30	692.9005
87.30	692.9005
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88.36	484.5951
88.47	484.6624
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92.38	363.3134
92.38	363.3134
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94.67	389.1190
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94.90	412.4867
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98.44	393.9675
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99.55	398.7076
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100.10	382.2458
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105.31	420.8044
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109.28	471.9140
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111.00	419.4975

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117.00	414.2369
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121.78	412.2958
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144.24	417.2722
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154.21	389.1146
154.21	389.1146
154.21	389.1146
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163.89	366.4295
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167.43	389.3855
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172.10	386.7143
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176.60	373.4453
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186.00	323.3997
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198.60	339.3307
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208.81	388.7686

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209.75	356.1093
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236.00	313.7941
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238.63	290.8567
238.63	290.8567
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241.98	291.5016
241.98	291.5016
241.98	291.5016
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249.79	279.7184
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252.85	268.0829
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256.20	273.0939
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268.24	225.4896
268.79	234.5175
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269.46	232.8225
269.46	232.8225
269.46	232.8225
271.23	233.0764
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277.60	235.0995
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284.30	228.1346
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286.10	226.1139
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295.21	240.9553
295.96	227.4170

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299.80	188.4118
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300.09	179.3239
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303.91	197.9887
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323.87	180.1679
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338.28	156.4192
338.28	156.4192
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351.92	156.5910
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388.63	136.5430
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391.69	168.2979
392.90	174.1353
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401.81	164.2994
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404.84	173.1907
410.95	154.3828
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413.65	143.3032
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427.89	163.3529
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433.93	151.1174
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439.56	101.6476
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444.90	126.3765
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484.57	120.5436
487.03	111.6910
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511.85	120.8687
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513.99	107.5286
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520.65	114.2111
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546.56	0.0000
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555.20	98.3156
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563.90	124.3204
568.70	111.1588
569.32	121.4801
569.50	130.7548
569.67	130.7610
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574.00	113.4375
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579.30	0.0000
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593.00	123.5613
595.88	101.8592
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602.52	0.0000
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602.71	108.6547
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604.70	116.4267
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609.31	121.8363
609.31	121.8363

609.31	121.8363
610.33	127.1025
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614.37	101.1295
618.01	118.3658
621.84	98.5921
621.84	98.5921
631.29	93.6521
633.02	97.9179
633.10	97.9202
634.78	95.8699
635.90	100.1211
636.97	106.4840
645.85	98.3425
646.12	87.7761
656.30	102.9299
657.75	107.2262
657.90	0.0000
661.65	117.9944
661.65	117.9944
664.57	0.0000
666.33	99.0123
666.33	99.0123
675.00	97.1563
677.61	104.7184
685.20	99.6185
692.80	97.7139
695.00	88.1120
696.49	99.9795
696.49	99.9795
697.00	104.2963
697.49	102.1621
698.33	105.4146
698.50	100.0431
699.00	98.9831
702.63	105.5582
706.10	97.0466
706.58	0.0000
706.67	108.9276
709.31	119.8128
711.68	104.7794
713.82	100.5245
717.42	112.5414
720.50	90.2629
721.93	0.0000
722.20	102.9542
722.78	99.3585
722.78	99.3585
722.89	99.3630
722.95	99.3652
723.30	110.2175
724.18	92.1740
727.18	100.9422
733.00	70.6764
735.90	88.1528
739.58	89.3392
742.81	81.7932
744.21	79.6459
747.13	87.3613
751.79	83.1083
752.31	91.8709
753.82	94.1024
755.35	95.2391
756.15	97.4524
756.87	94.1885
763.93	91.4591
765.79	91.5100
766.41	98.8484
766.84	113.5077
768.36	119.7856
768.36	119.7856
768.36	119.7856
768.36	119.7856
776.49	91.4317
778.00	95.5132
778.57	90.9353
778.89	90.9434
783.80	73.5954

785.46	77.3127
792.07	91.6890
795.84	60.1371
796.30	60.1450
801.93	101.4621
805.60	67.5791
810.29	78.7934
810.76	79.7309
815.85	89.1309
817.79	75.2454
818.51	80.8350
819.60	71.5656
826.30	82.8744
828.27	0.0000
831.60	87.6603
831.96	84.8719
834.83	107.3422
836.80	0.0000
846.75	87.0929
848.13	74.0111
856.28	0.0000
856.80	62.7833
860.37	65.7988
867.32	54.8907
867.82	62.1637
871.10	65.0469
873.19	60.3672
874.81	58.5072
875.33	0.0000
876.40	62.3074
879.36	65.1915
880.27	64.2633
880.51	57.6517
881.50	57.6665
883.24	60.5299
884.67	62.4457
889.25	65.3641
896.60	75.9326
898.02	70.2633
899.00	87.3768
903.28	73.0234
911.07	89.8315
911.07	89.8315
911.07	89.8315
919.63	70.3879
920.93	77.6896
925.00	58.3280
925.24	57.3755
926.50	78.4399
934.06	55.5892
934.06	55.5892
934.06	55.5892
934.06	55.5892
935.52	65.1985
937.48	82.4971
944.10	76.8717
946.00	78.8319
949.00	70.2331
962.29	72.8121
964.01	64.5652
966.15	54.1099
968.20	54.1372
969.11	54.1497
969.11	54.1497
969.11	54.1497
977.42	62.7882
980.50	57.2115
983.50	74.7222
989.30	67.0543
996.32	80.7980
1001.03	68.2212
1001.68	61.4081
1004.76	77.0616
1021.30	0.0000
1024.50	0.0000
1034.80	72.7083
1037.82	68.8265
1038.57	76.7051

1038.76	0.0000
1045.16	64.0214
1046.59	68.9689
1048.07	88.7036
1050.47	78.8932
1050.47	78.8932
1063.62	74.1913
1076.63	61.5156
1077.35	67.4798
1085.78	63.6328
1099.22	84.7717
1112.02	72.0146
1112.84	63.4544
1115.52	75.5022
1120.29	76.1577
1120.29	76.1577
1120.29	76.1577
1120.29	76.1577
1120.51	76.1608
1121.28	68.7277
1124.00	0.0000
1129.67	80.7337
1131.51	0.0000
1147.95	0.0000
1167.94	70.8830
1173.22	85.1587
1175.09	82.1503
1177.93	75.0960
1189.05	88.5010
1204.90	77.5710
1205.75	0.0000
1213.00	95.0851
1221.42	87.0614
1230.97	95.1647
1235.34	100.3742
1236.41	0.0000
1238.11	79.2868
1238.11	79.2868
1238.11	79.2868
1238.11	79.2868
1238.25	79.2899
1246.25	58.2426
1260.41	0.0000
1271.85	56.9224
1274.45	62.1289
1274.54	62.1313
1291.56	52.9922
1298.22	0.0000
1312.09	52.1667
1325.50	52.3051
1325.50	52.3051
1332.49	48.1881
1333.61	50.2930
1360.21	30.5435
1362.66	0.0000
1365.15	40.0596
1368.21	32.7004
1368.53	0.0000
1376.25	30.7888
1377.67	32.6087
1377.67	32.6087
1377.67	32.6087
1377.67	32.6087
1384.27	36.2779
1394.10	31.8018
1395.20	29.6885
1407.95	35.0732
1434.06	16.0205
1436.60	27.7816
1457.56	0.0000
1460.81	27.9064
1489.15	26.9714
1509.49	24.9036
1596.49	9.8939
1620.62	14.1922
1678.03	0.0000
1691.02	8.6155
1691.02	8.6155

1706.46	0.0000
1750.46	0.0000
1764.49	10.6551
1764.49	10.6551
1764.49	10.6551
1764.49	10.6551
1770.23	10.1799
1771.40	73.6966
1791.20	0.0000
1808.65	2.9261
1836.01	13.7129

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232754001

Total Uranium Activity	4.3464E+00	ug/g
Total Uranium Counting Unc.	5.5993E+00	ug/g
Total Uranium Tpu	2.8568E-06	ug/g
Total Uranium Mda	3.5402E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232754001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM16            *
*   SAMPLE DATE   : 30-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 10:44:32.05    SAMPLE ALQT:  135.030 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.062E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.600E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 4.298E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.094E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:23:39.22

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1
Sample date       : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 11:22:57
Sample ID         : G1201874832          Sample quantity  : 1.44470E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.64  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	1075.81	10	9	0.58	2150.38	2141	13	1.39E-03	71.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 13:23:41

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 7-JUL-2009 00:00:00 Acquisition date : 14-JUL-2009 11:22:57
Sample ID : G1201874832 Sample quantity : 144.47 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.64 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86	+	1076.63	*	4.005E-01	5.708E-01	5.488E-01	3.505E-02	0.730

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.503E-02	1.536E-01	2.457E-01	1.730E-02	-0.061
NA-22		1274.54	*	-1.239E-03	2.584E-02	4.145E-02	2.451E-03	-0.030
NA-24		1368.53	*	2.335E-05	2.584E-02	Half-Life too short		
AL-26		1129.67		9.437E-02	8.731E-01	1.467E+00	8.829E-02	0.064
		1808.65	*	6.492E-04	2.998E-02	4.991E-02	2.779E-03	0.013
K-40		1460.81	*	1.401E-01	3.153E-01	5.572E-01	3.546E-02	0.251
TI-44		67.85		1.017E-03	7.397E-03	1.220E-02	8.875E-04	0.083
		78.38	*	-2.974E-03	7.341E-03	1.147E-02	8.868E-04	-0.259
SC-46		889.25	*	-2.258E-02	2.347E-02	3.062E-02	2.199E-03	-0.738
		1120.51		1.502E-02	2.604E-02	4.791E-02	2.916E-03	0.314
V-48		944.10		3.811E-01	4.165E-01	8.009E-01	5.628E-02	0.476
		983.50	*	1.966E-02	3.794E-02	6.792E-02	4.673E-03	0.289
		1312.09		2.155E-02	4.086E-02	7.404E-02	4.425E-03	0.291
CR-51		320.08	*	-4.493E-02	1.646E-01	2.635E-01	1.714E-02	-0.171
MN-52		744.21		-7.946E-04	5.039E-02	8.386E-02	6.133E-03	-0.009
		848.13		1.814E-01	2.007E+00	3.376E+00	2.455E-01	0.054
		935.52		4.924E-02	6.976E-02	1.285E-01	9.069E-03	0.383
		1246.25		-8.047E-01	1.320E+00	1.720E+00	1.004E-01	-0.468
		1333.61		1.047E+00	1.364E+00	2.605E+00	1.567E-01	0.402
		1434.06	*	-6.918E-02	6.816E-02	7.168E-02	4.321E-03	-0.965
MN-54		834.83	*	-1.473E-02	2.603E-02	3.920E-02	2.859E-03	-0.376
CO-56		846.75	*	1.631E-02	2.819E-02	5.071E-02	3.690E-03	0.322
		977.42		-1.085E+00	1.916E+00	2.796E+00	1.931E-01	-0.388
		1037.82		-5.171E-02	2.333E-01	3.686E-01	2.655E-02	-0.140
		1175.09		8.375E-02	1.260E+00	2.087E+00	1.183E-01	0.040
		1238.25		2.999E-03	4.322E-02	7.145E-02	4.419E-03	0.042
		1360.21		2.122E-01	7.452E-01	1.284E+00	7.739E-02	0.165
		1771.40		3.738E-02	2.537E-01	4.340E-01	2.451E-02	0.086

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	3.780E-03	9.064E-03	1.515E-02	1.744E-03	0.249
		136.48		-1.493E-02	8.079E-02	1.270E-01	1.337E-02	-0.118
CO-58		810.76	*	-9.316E-03	2.202E-02	3.354E-02	2.463E-03	-0.278
FE-59		142.65		-3.296E-02	9.658E-01	1.540E+00	1.422E-01	-0.021
		192.34		1.877E-03	3.576E-01	6.005E-01	7.205E-02	0.003
		1099.22	*	-2.196E-02	5.792E-02	8.772E-02	6.291E-03	-0.250
		1291.56		-7.813E-02	7.144E-02	7.877E-02	5.930E-03	-0.992
CO-60		1173.22		-9.686E-04	2.763E-02	4.474E-02	2.535E-03	-0.022
		1332.49	*	6.596E-03	2.726E-02	4.680E-02	2.815E-03	0.141
ZN-65		1115.52	*	-2.489E-03	5.225E-02	8.460E-02	5.190E-03	-0.029
GE-68		1077.35	*	5.249E-01	9.049E-01	1.487E+00	9.488E-02	0.353
AS-73		53.44	*	2.123E-02	7.102E-02	1.194E-01	8.027E-03	0.178
AS-74		595.88	*	-2.515E-02	4.570E-02	6.699E-02	4.610E-03	-0.375
		634.78		1.712E-02	1.821E-01	2.970E-01	2.094E-02	0.058
SE-75		66.05		4.599E-01	6.947E-01	1.198E+00	1.116E-01	0.384
		96.73		-1.781E-01	2.117E-01	3.097E-01	4.295E-02	-0.575
		121.11		1.773E-02	4.526E-02	7.560E-02	1.018E-02	0.235
		136.00		-2.257E-03	1.483E-02	2.340E-02	2.355E-03	-0.096
		198.60		4.348E-01	7.218E-01	1.273E+00	9.480E-02	0.341
		264.65	*	-2.727E-03	2.091E-02	3.430E-02	2.075E-03	-0.079
		279.53		7.256E-03	4.595E-02	7.764E-02	4.897E-03	0.093
		303.91		2.088E-01	1.079E+00	1.821E+00	1.745E-01	0.115
		400.65		7.829E-02	1.392E-01	2.436E-01	2.167E-02	0.321
BR-77		87.88		8.704E-01	4.350E+00	7.181E+00	5.944E-01	0.121
		200.40		-2.364E+00	7.621E+00	1.242E+01	7.692E-01	-0.190
		239.00		3.035E-01	5.198E-01	8.784E-01	5.410E-02	0.346
		249.79		2.157E-01	3.203E+00	5.372E+00	3.279E-01	0.040
		281.68		2.510E+00	4.529E+00	7.963E+00	4.655E-01	0.315
		297.23		5.622E-01	2.927E+00	4.941E+00	2.898E-01	0.114
		303.76		1.507E+00	1.029E+01	1.728E+01	1.014E+00	0.087
		439.47		5.211E+00	1.043E+01	1.802E+01	1.048E+00	0.289
		484.57		1.325E+01	1.410E+01	2.604E+01	1.611E+00	0.509
		520.65	*	1.850E-01	7.128E-01	1.199E+00	7.730E-02	0.154
		574.64		-8.874E+00	1.460E+01	2.119E+01	1.435E+00	-0.419
		578.91		-1.925E+00	5.742E+00	8.745E+00	5.943E-01	-0.220
		585.48		6.678E+00	1.142E+01	1.999E+01	1.365E+00	0.334
		755.35		-1.155E+01	9.699E+00	1.177E+01	8.616E-01	-0.981
		817.79		7.923E+00	1.038E+01	1.922E+01	1.406E+00	0.412
SR-82		698.33		-1.175E+01	2.157E+01	3.360E+01	2.433E+00	-0.350
		776.49	*	1.080E-01	2.041E-01	3.680E-01	2.698E-02	0.293
		1395.20		6.442E+00	6.747E+00	1.334E+01	8.042E-01	0.483
RB-83		520.41	*	1.301E-02	4.058E-02	6.890E-02	4.440E-03	0.189
		529.64		-4.785E-03	5.445E-02	8.679E-02	5.646E-03	-0.055
		552.65		-3.615E-02	1.197E-01	1.840E-01	1.223E-02	-0.196
RB-84		881.50	*	-6.888E-03	4.191E-02	6.737E-02	4.851E-03	-0.102
KR-85		513.99	*	-9.011E-01	7.249E+00	1.163E+01	7.444E-01	-0.077
SR-85		513.99	*	-4.263E-03	3.430E-02	5.503E-02	3.522E-03	-0.077
Y-88		898.02		3.189E-03	2.659E-02	4.494E-02	3.238E-03	0.071
		1836.01	*	1.465E-02	3.600E-02	6.536E-02	3.607E-03	0.224

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	2.467E-03	1.722E-02	2.871E-02	1.548E-03	0.086
Y-91		1204.90	*	1.042E+00	1.153E+01	1.911E+01	1.098E+00	0.055
NB-94		702.63	*	-1.940E-03	2.341E-02	3.873E-02	2.808E-03	-0.050
		871.10		-2.650E-03	2.259E-02	3.661E-02	2.646E-03	-0.072
NB-95		765.79	*	5.445E-03	2.462E-02	4.245E-02	3.111E-03	0.128
NB-95M		235.69	*	-6.197E-02	5.205E-02	7.664E-02	5.991E-03	-0.809
ZR-95		724.18		-3.569E-02	4.723E-02	6.746E-02	5.503E-03	-0.529
		756.15	*	-3.389E-02	3.721E-02	5.025E-02	4.188E-03	-0.674
NB-97		657.90	*	8.596E-06	3.721E-02	Half-Life too short		
		1024.50		-3.458E-03	3.721E-02	Half-Life too short		
ZR-97		254.15		1.302E-03	3.721E-02	Half-Life too short		
		355.39		-7.717E-04	3.721E-02	Half-Life too short		
		507.63	*	-1.327E-03	3.721E-02	Half-Life too short		
		602.52		3.845E-04	3.721E-02	Half-Life too short		
		1021.30		1.798E-03	3.721E-02	Half-Life too short		
		1147.95		6.996E-04	3.721E-02	Half-Life too short		
		1362.66		2.933E-03	3.721E-02	Half-Life too short		
		1750.46		7.977E-04	3.721E-02	Half-Life too short		
MO-99		140.51		-9.759E-04	1.509E+00	2.415E+00	6.757E-01	0.000
		181.06		4.673E-01	1.075E+00	1.867E+00	3.222E-01	0.250
		366.43		1.701E+00	7.331E+00	1.237E+01	6.951E-01	0.138
		739.58	*	9.682E-01	1.053E+00	2.000E+00	2.896E-01	0.484
		778.00		-6.022E-02	3.358E+00	5.578E+00	4.090E-01	-0.011
TC-99M		140.51	*	-6.548E-03	3.358E+00	Half-Life too short		
RH-101		127.23		-1.674E-03	1.254E-02	1.988E-02	2.182E-03	-0.084
		198.01	*	1.010E-02	1.393E-02	2.479E-02	1.534E-03	0.407
		325.23		1.290E-02	1.168E-01	1.952E-01	1.139E-02	0.066
RH-102		418.52		-6.970E-02	1.749E-01	2.712E-01	1.528E-02	-0.257
		475.06	*	-2.232E-03	1.673E-02	2.666E-02	1.630E-03	-0.084
		631.29		8.312E-03	3.509E-02	5.865E-02	4.127E-03	0.142
		697.49		-1.878E-02	5.986E-02	9.628E-02	6.970E-03	-0.195
		766.84		1.086E-02	6.281E-02	1.077E-01	7.894E-03	0.101
		1046.59		-3.301E-02	9.189E-02	1.414E-01	9.290E-03	-0.233
		1112.84		-1.427E-02	1.353E-01	2.162E-01	1.328E-02	-0.066
RU-103		497.08	*	3.455E-03	2.321E-02	3.846E-02	4.950E-03	0.090
		610.33		-2.458E-02	3.976E-01	6.332E-01	1.006E-01	-0.039
RH-106		511.85		-4.932E-02	1.712E-01	3.241E-01	2.069E-02	-0.152
		621.84	*	-1.957E-01	2.181E-01	2.942E-01	3.641E-02	-0.665
		1050.47		3.675E-02	1.843E+00	3.035E+00	1.987E-01	0.012
RU-106		511.85		-4.932E-02	1.712E-01	3.241E-01	2.069E-02	-0.152
		621.84	*	-1.957E-01	2.172E-01	2.942E-01	2.059E-02	-0.665
		1050.47		3.675E-02	1.843E+00	3.035E+00	1.987E-01	0.012
AG-108M		433.93	*	7.511E-05	2.065E-02	3.374E-02	2.115E-03	0.002
		614.37		-5.196E-03	2.274E-02	3.506E-02	2.588E-03	-0.148
		722.95		-3.563E-03	2.349E-02	3.821E-02	2.936E-03	-0.093
CD-109		88.03	*	4.211E-02	1.855E-01	3.069E-01	2.543E-02	0.137
AG-110M		657.75	*	5.583E-03	1.851E-02	3.264E-02	2.428E-03	0.171
		677.61		7.378E-02	1.980E-01	3.498E-01	2.616E-02	0.211
		706.67		-5.741E-02	1.344E-01	2.101E-01	1.584E-02	-0.273

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		1.677E-03	1.053E-01	1.760E-01	1.340E-02	0.010
		884.67		2.853E-02	3.182E-02	6.083E-02	4.576E-03	0.469
		937.48		-1.921E-02	8.122E-02	1.286E-01	9.554E-03	-0.149
		1384.27		1.139E-01	1.247E-01	2.421E-01	1.543E-02	0.470
IN-111		171.28		2.600E-02	6.692E-02	1.162E-01	7.064E-03	0.224
		245.39	*	-3.361E-02	7.082E-02	1.119E-01	6.855E-03	-0.300
IN-113M		391.69	*	4.047E-03	2.459E-02	4.113E-02	2.385E-03	0.098
SN-113		391.69	*	4.047E-03	2.459E-02	4.113E-02	2.385E-03	0.098
IN-114M		190.27	*	-8.922E-03	7.250E-02	1.205E-01	7.427E-03	-0.074
CD-115		260.90		-7.978E-02	5.948E+00	9.879E+00	5.951E-01	-0.008
		492.35		1.040E+00	1.976E+00	3.460E+00	2.161E-01	0.301
		527.90	*	-3.885E-01	5.618E-01	7.924E-01	5.146E-02	-0.490
SN-117M		156.02		-4.330E-01	6.692E-01	9.991E-01	7.482E-02	-0.433
		158.56	*	1.236E-02	1.610E-02	2.751E-02	1.962E-03	0.449
SB-122		563.90	*	-2.962E-02	1.703E-01	2.668E-01	1.791E-02	-0.111
		692.80		9.346E-01	4.554E+00	7.826E+00	5.657E-01	0.119
I-123		159.00	*	1.085E-04	4.554E+00	Half-Life too short		
		528.96		-5.883E-03	4.554E+00	Half-Life too short		
TE-123M		159.00	*	8.229E-03	1.183E-02	2.010E-02	1.433E-03	0.409
I-124		602.71	*	1.931E-02	1.311E-01	2.155E-01	1.490E-02	0.090
		722.78		-4.824E-02	7.013E-01	1.158E+00	8.441E-02	-0.042
		1325.50		-3.657E+00	7.884E+00	1.141E+01	6.851E-01	-0.320
		1376.25		-4.564E+00	6.851E+00	9.256E+00	5.579E-01	-0.493
		1509.49		1.622E+00	3.748E+00	6.832E+00	4.098E-01	0.237
		1691.02		-5.019E-01	1.169E+00	1.736E+00	1.006E-01	-0.289
SB-124		602.71		3.650E-03	2.478E-02	4.074E-02	2.818E-03	0.090
		645.85		1.210E-02	2.829E-01	4.576E-01	3.529E-02	0.026
		709.31		-4.866E-01	1.692E+00	2.707E+00	1.967E-01	-0.180
		713.82		6.294E-01	1.004E+00	1.827E+00	2.030E-01	0.345
		722.78		-1.322E-02	1.922E-01	3.174E-01	2.382E-02	-0.042
		968.20		-1.925E-01	1.589E+00	2.565E+00	1.780E-01	-0.075
		1045.16		-1.072E+00	1.902E+00	2.824E+00	1.857E-01	-0.380
		1325.50		-1.070E+00	2.307E+00	3.340E+00	2.005E-01	-0.320
		1368.21		4.301E-01	1.172E+00	2.070E+00	2.481E-01	0.208
		1436.60		4.234E-01	2.371E+00	4.027E+00	2.427E-01	0.105
		1691.02	*	-3.244E-02	7.554E-02	1.122E-01	7.061E-03	-0.289
SB-125		427.89	*	-3.660E-02	5.493E-02	8.140E-02	4.857E-03	-0.450
		463.38		1.102E-01	1.732E-01	3.043E-01	2.116E-02	0.362
		600.56		1.392E-01	1.241E-01	2.295E-01	1.763E-02	0.607
		635.90		4.372E-02	1.853E-01	3.089E-01	2.437E-02	0.142
TE-125M		109.28	*	-1.841E+00	2.927E+00	4.084E+00	4.748E-01	-0.451
I-126		388.63		-4.479E-03	7.303E-02	1.188E-01	6.432E-03	-0.038
		666.33	*	6.899E-02	7.533E-02	1.424E-01	1.019E-02	0.485
		753.82		-2.128E-01	5.102E-01	7.757E-01	5.679E-02	-0.274
SB-126		223.80		-5.339E-01	1.188E+00	1.898E+00	1.177E-01	-0.281
		278.60		-2.942E-01	7.098E-01	1.120E+00	6.550E-02	-0.263
		296.50		-1.845E-01	5.162E-01	7.507E-01	4.403E-02	-0.246
		414.70		-6.993E-03	2.924E-02	4.634E-02	2.594E-03	-0.151
		415.30		5.935E-01	2.469E+00	4.158E+00	2.330E-01	0.143

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		4.408E-01	1.571E+00	2.654E+00	1.768E-01	0.166
		573.80		-3.524E-01	4.385E-01	6.109E-01	4.135E-02	-0.577
		593.00		-1.301E-01	3.551E-01	5.329E-01	3.660E-02	-0.244
		656.30		4.503E-01	1.240E+00	2.203E+00	1.570E-01	0.204
		666.33		2.833E-02	3.093E-02	5.847E-02	4.185E-03	0.485
		675.00		9.942E-01	8.813E-01	1.696E+00	1.218E-01	0.586
		695.00		3.411E-02	3.802E-02	7.048E-02	5.098E-03	0.484
		697.00		-9.229E-03	1.289E-01	2.137E-01	1.547E-02	-0.043
		720.50	*	-3.045E-03	5.691E-02	9.430E-02	6.868E-03	-0.032
		856.80		5.824E-02	2.187E-01	3.779E-01	2.743E-02	0.154
		989.30		1.468E-01	5.393E-01	9.597E-01	6.579E-02	0.153
		1034.80		-1.586E+00	4.815E+00	7.473E+00	4.957E-01	-0.212
		1213.00		9.963E-01	1.792E+00	3.255E+00	1.876E-01	0.306
SN-126		64.28		3.885E-02	7.487E-02	1.228E-01	1.769E-02	0.316
		86.94		1.890E-03	7.353E-02	1.194E-01	4.929E-02	0.016
		87.57	*	2.990E-03	1.796E-02	2.957E-02	2.441E-03	0.101
SB-127		61.10		2.584E-01	1.836E+00	3.035E+00	2.400E-01	0.085
		252.40		-3.776E-03	5.323E-01	8.857E-01	3.643E-01	-0.004
		290.80		-4.496E-01	2.779E+00	4.527E+00	3.094E-01	-0.099
		411.60		1.802E+00	1.737E+00	3.184E+00	4.103E-01	0.566
		444.90		-1.671E+00	1.519E+00	2.066E+00	1.839E-01	-0.809
		473.00		1.511E-01	2.320E-01	4.141E-01	3.939E-02	0.365
		543.00		-1.195E+00	3.173E+00	4.869E+00	5.728E-01	-0.246
		603.60		-1.686E+00	2.172E+00	3.099E+00	2.974E-01	-0.544
		685.20	*	-1.750E-01	2.060E-01	2.919E-01	2.431E-02	-0.599
		698.50		-9.522E-01	2.903E+00	4.650E+00	6.417E-01	-0.205
		722.20		-7.257E-01	4.500E+00	7.320E+00	5.922E-01	-0.099
		783.80		-2.129E-01	5.857E-01	9.141E-01	8.944E-02	-0.233
XE-127		57.60		1.957E-02	5.881E-01	9.638E-01	6.688E-02	0.020
		145.22		4.588E-02	2.379E-01	3.876E-01	3.454E-02	0.118
		172.10		2.512E-02	4.531E-02	7.963E-02	4.844E-03	0.315
		202.84	*	-6.565E-03	1.726E-02	2.790E-02	1.729E-03	-0.235
		374.96		-3.454E-02	1.003E-01	1.577E-01	8.751E-03	-0.219
I-131		80.18		-2.971E-01	5.088E-01	7.786E-01	6.106E-02	-0.382
		284.30		-1.251E-01	4.009E-01	6.429E-01	4.140E-02	-0.195
		364.48	*	5.277E-02	3.684E-02	6.937E-02	4.349E-03	0.761
		636.97		1.264E-01	5.501E-01	9.160E-01	6.955E-02	0.138
		722.89		-2.422E-01	2.060E+00	3.372E+00	2.463E-01	-0.072
TE-132		49.72		4.528E-02	2.521E-01	4.203E-01	3.082E-02	0.108
		111.76		1.046E-01	1.851E+00	2.998E+00	3.270E-01	0.035
		116.30		-4.251E-01	1.847E+00	2.899E+00	3.292E-01	-0.147
		228.16	*	4.611E-03	6.199E-02	1.043E-01	1.392E-02	0.044
BA-133		53.15		1.168E-01	3.292E-01	5.560E-01	3.729E-02	0.210
		79.62		-1.966E-01	2.692E-01	4.028E-01	5.951E-02	-0.488
		81.00		-4.161E-03	1.990E-02	3.159E-02	4.891E-03	-0.132
		276.40		-2.239E-02	1.532E-01	2.497E-01	3.245E-02	-0.090
		302.84		-6.611E-03	7.411E-02	1.215E-01	1.420E-02	-0.054
		356.01	*	-8.596E-03	2.662E-02	4.224E-02	4.861E-03	-0.203
		383.85		-9.660E-02	1.642E-01	2.473E-01	2.645E-02	-0.391

---- Non-Identified Nuclides ----

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I-133		510.53		-8.616E-04	1.642E-01	Half-Life too short		
		529.87	*	-1.488E-06	1.642E-01	Half-Life too short		
		706.58		-2.481E-04	1.642E-01	Half-Life too short		
		856.28		6.860E-05	1.642E-01	Half-Life too short		
		875.33		5.330E-05	1.642E-01	Half-Life too short		
		1236.41		4.492E-04	1.642E-01	Half-Life too short		
		1298.22		4.774E-04	1.642E-01	Half-Life too short		
CS-134		475.35		9.417E-02	1.077E+00	1.776E+00	1.086E-01	0.053
		563.23		-6.412E-02	2.051E-01	3.128E-01	2.132E-02	-0.205
		569.32		4.941E-02	1.480E-01	2.412E-01	1.663E-02	0.205
		604.70		-4.880E-03	2.377E-02	3.715E-02	2.582E-03	-0.131
		795.84	*	3.451E-03	2.878E-02	4.886E-02	3.617E-03	0.071
		801.93		1.551E-01	2.917E-01	4.867E-01	3.593E-02	0.319
		1038.57		-1.475E+00	3.130E+00	4.719E+00	3.121E-01	-0.313
		1167.94		-1.762E+00	1.667E+00	2.065E+00	1.179E-01	-0.853
		1365.15		-1.038E+00	1.079E+00	1.324E+00	8.709E-02	-0.784
CS-135		268.24	*	1.644E-02	7.632E-02	1.295E-01	1.007E-02	0.127
I-135		288.45		2.157E+01	7.632E-02	Half-Life too short		
		417.63		-1.542E+01	7.632E-02	Half-Life too short		
		546.56		1.061E+01	7.632E-02	Half-Life too short		
		836.80		6.514E+01	7.632E-02	Half-Life too short		
		1038.76		-2.835E+01	7.632E-02	Half-Life too short		
		1124.00		-2.222E+01	7.632E-02	Half-Life too short		
		1131.51		2.260E+00	7.632E-02	Half-Life too short		
		1260.41	*	-4.293E+00	7.632E-02	Half-Life too short		
		1457.56		-2.473E+01	7.632E-02	Half-Life too short		
		1678.03		7.786E+00	7.632E-02	Half-Life too short		
		1706.46		-9.837E+01	7.632E-02	Half-Life too short		
		1791.20		4.459E+01	7.632E-02	Half-Life too short		
CS-136		66.91		-1.113E-02	8.232E-02	1.324E-01	1.947E-02	-0.084
		86.29		4.376E-02	1.518E-01	2.529E-01	3.176E-02	0.173
		153.22		6.076E-02	1.732E-01	2.863E-01	2.567E-02	0.212
		163.89		-5.846E-02	2.946E-01	4.883E-01	3.758E-02	-0.120
		176.55		-7.981E-02	1.083E-01	1.705E-01	1.157E-02	-0.468
		273.65		-4.473E-02	1.606E-01	2.119E-01	1.419E-02	-0.211
		340.57		1.544E-02	4.601E-02	7.849E-02	4.818E-03	0.197
		818.51		2.167E-02	3.686E-02	6.662E-02	4.874E-03	0.325
		1048.07	*	-8.120E-03	6.019E-02	9.663E-02	6.790E-03	-0.084
		1235.34		2.071E-01	1.932E-01	3.874E-01	3.870E-02	0.535
BA-137M		661.65	*	-9.564E-03	2.045E-02	3.158E-02	2.256E-03	-0.303
CS-137		661.65	*	-1.011E-02	2.162E-02	3.338E-02	2.391E-03	-0.303
CE-139		165.85	*	-1.049E-03	1.170E-02	1.957E-02	1.186E-03	-0.054
BA-140		162.64		-8.486E-02	2.072E-01	3.372E-01	2.424E-02	-0.252
		304.84		-2.062E-02	4.554E-01	7.498E-01	2.047E-01	-0.027
		423.70		4.087E-01	7.434E-01	1.283E+00	4.075E-01	0.319
		537.32	*	1.035E-01	1.193E-01	2.083E-01	6.803E-02	0.497
LA-140		328.77		7.164E-02	9.589E-02	1.715E-01	1.118E-02	0.418
		432.53		-7.302E-02	8.194E-01	1.322E+00	8.421E-02	-0.055
		487.03		-1.279E-02	5.539E-02	8.689E-02	6.018E-03	-0.147

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		751.79		-1.589E-04	5.696E-01	9.503E-01	7.969E-02	0.000
		815.85		-1.869E-03	1.454E-01	2.412E-01	2.042E-02	-0.008
		867.82		2.040E-01	5.461E-01	9.711E-01	7.548E-02	0.210
		919.63		5.218E-01	1.252E+00	2.222E+00	2.102E-01	0.235
		925.24		-1.811E-01	4.710E-01	7.146E-01	5.528E-02	-0.253
		1596.49	*	-4.419E-02	5.002E-02	6.396E-02	3.790E-03	-0.691
CE-141		145.44	*	2.435E-03	2.107E-02	3.409E-02	3.080E-03	0.071
CE-143		57.37		-4.083E-01	2.457E+00	3.946E+00	3.279E-01	-0.103
		231.56		1.904E+01	2.490E+01	4.333E+01	1.342E+01	0.439
		293.26	*	-3.681E-01	1.390E+00	2.235E+00	4.572E-01	-0.165
		350.59		-3.819E+00	2.246E+01	3.476E+01	1.054E+01	-0.110
		490.36		-2.540E+01	3.742E+01	5.285E+01	1.637E+01	-0.481
		664.57		-4.237E+00	1.752E+01	2.825E+01	9.018E+00	-0.150
		721.93		-5.123E+00	1.778E+01	2.819E+01	8.111E+00	-0.182
CE-144		80.11		-1.849E-01	4.351E-01	6.765E-01	5.293E-02	-0.273
		133.54	*	2.288E-02	7.861E-02	1.294E-01	2.142E-02	0.177
PM-144		476.78		-2.793E-03	3.603E-02	5.787E-02	4.176E-03	-0.048
		618.01		-4.032E-03	1.937E-02	2.999E-02	2.181E-03	-0.134
		696.49	*	1.133E-02	2.510E-02	4.440E-02	3.214E-03	0.255
		778.57		7.123E-02	1.546E+00	2.594E+00	1.902E-01	0.027
PR-144		696.49	*	7.648E-01	1.694E+00	2.997E+00	2.169E-01	0.255
		1489.15		3.816E+00	9.196E+00	1.690E+01	1.015E+00	0.226
PM-146		453.90	*	3.145E-03	2.540E-02	4.212E-02	3.672E-03	0.075
		633.02		-1.111E-01	9.695E-01	1.527E+00	5.657E-01	-0.073
		735.90		1.184E-02	9.949E-02	1.691E-01	4.775E-02	0.070
		747.13		-1.310E-02	4.925E-02	7.774E-02	1.032E-02	-0.168
ND-147		91.11		4.760E-03	4.252E-02	6.974E-02	6.447E-03	0.068
		319.41		-5.064E-01	1.115E+00	1.747E+00	1.022E-01	-0.290
		439.89		1.276E+00	2.445E+00	4.230E+00	2.464E-01	0.302
		531.02	*	-6.510E-02	2.004E-01	3.059E-01	4.235E-02	-0.213
PM-149		285.90	*	1.198E+00	4.519E+00	7.683E+00	1.089E+00	0.156
EU-152		121.78		1.588E-02	2.619E-02	4.453E-02	5.559E-03	0.357
		244.69		-9.597E-02	1.487E-01	2.310E-01	1.416E-02	-0.415
		344.27	*	-1.395E-02	5.580E-02	8.934E-02	5.810E-03	-0.156
		443.98		-1.936E-01	5.914E-01	9.216E-01	5.399E-02	-0.210
		778.89		1.301E-02	1.769E-01	2.982E-01	2.186E-02	0.044
		867.32		1.034E-01	5.158E-01	8.875E-01	6.421E-02	0.117
		964.01		9.723E-02	1.925E-01	3.349E-01	2.330E-02	0.290
		1085.78		3.601E-03	2.040E-01	3.359E-01	2.125E-02	0.011
		1112.02		7.689E-04	1.877E-01	3.074E-01	1.890E-02	0.003
		1407.95		4.243E-03	1.656E-01	2.689E-01	1.622E-02	0.016
GD-153		69.67		-2.746E-01	2.756E-01	4.038E-01	2.965E-02	-0.680
		83.37		-1.981E-01	3.014E+00	4.854E+00	3.886E-01	-0.041
		97.43	*	1.013E-04	2.118E-02	3.424E-02	3.100E-03	0.003
		103.18		-3.198E-04	3.243E-02	5.228E-02	5.003E-03	-0.006
EU-154		123.07		-5.766E-03	1.982E-02	3.092E-02	4.205E-03	-0.187
		247.94		-7.936E-02	1.637E-01	2.582E-01	2.514E-02	-0.307
		591.81		-2.344E-01	3.453E-01	4.784E-01	4.994E-02	-0.490
		723.30		-4.469E-02	9.869E-02	1.514E-01	1.263E-02	-0.295

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		756.87		-2.772E-01	4.319E-01	6.249E-01	6.924E-02	-0.444
		873.19		1.300E-01	1.927E-01	3.569E-01	4.035E-02	0.364
		996.32		-2.619E-01	2.432E-01	2.951E-01	5.008E-02	-0.887
		1004.76		-1.250E-01	1.552E-01	2.143E-01	2.219E-02	-0.583
		1274.45	*	-3.475E-03	7.246E-02	1.162E-01	1.093E-02	-0.030
EU-155		48.70		-8.254E-02	1.494E-01	2.308E-01	1.506E-02	-0.358
		60.01		-2.850E-01	6.092E-01	9.482E-01	6.696E-02	-0.301
		86.54		5.761E-03	2.087E-02	3.475E-02	2.879E-03	0.166
		105.31	*	3.584E-02	3.332E-02	5.914E-02	5.832E-03	0.606
TB-160		86.79		1.222E-02	5.178E-02	8.590E-02	7.051E-03	0.142
		197.04		5.385E-02	2.215E-01	3.794E-01	2.347E-02	0.142
		215.65		5.530E-02	3.267E-01	5.544E-01	3.442E-02	0.100
		298.57		1.562E-02	5.305E-02	9.046E-02	5.307E-03	0.173
		879.36	*	-1.175E-01	9.279E-02	1.146E-01	8.262E-03	-1.025
		962.29		3.078E-02	3.055E-01	4.960E-01	3.455E-02	0.062
		966.15		5.188E-02	1.174E-01	2.082E-01	1.447E-02	0.249
		1177.93		-1.253E-01	2.009E-01	2.783E-01	1.580E-02	-0.450
		1271.85		-9.401E-02	4.002E-01	6.104E-01	3.598E-02	-0.154
HO-166M		80.57		-1.656E-02	5.632E-02	8.873E-02	6.964E-03	-0.187
		184.41		9.731E-03	1.436E-02	2.540E-02	1.560E-03	0.383
		280.46		8.330E-03	3.870E-02	6.575E-02	3.842E-03	0.127
		410.95		1.194E-01	1.356E-01	2.462E-01	1.370E-02	0.485
		711.68	*	-3.624E-03	4.306E-02	7.116E-02	5.172E-03	-0.051
		752.31		2.807E-02	1.315E-01	2.295E-01	1.680E-02	0.122
		810.29		9.164E-03	3.254E-02	5.717E-02	4.185E-03	0.160
TM-171		51.35		1.496E+00	2.331E+00	4.049E+00	2.683E-01	0.369
		52.39		1.133E+00	1.309E+00	2.314E+00	1.544E-01	0.490
		59.40		3.952E-01	3.048E+00	5.040E+00	3.551E-01	0.078
		66.72	*	-3.809E-02	4.392E+00	7.148E+00	5.172E-01	-0.005
LU-176		88.36		1.165E-02	4.354E-02	7.231E-02	6.010E-03	0.161
		201.83		1.484E-04	1.232E-02	2.068E-02	1.281E-03	0.007
		306.84	*	4.576E-03	1.338E-02	2.293E-02	1.345E-03	0.200
		401.10		1.652E+00	3.800E+00	6.561E+00	3.590E-01	0.252
LU-177		112.95		-2.457E-02	2.476E-01	3.946E-01	4.153E-02	-0.062
		208.36	*	5.930E-02	2.075E-01	3.563E-01	2.211E-02	0.166
LU-177M		52.97		7.579E-02	1.400E-01	2.405E-01	1.611E-02	0.315
		54.07		-1.153E-02	7.726E-02	1.245E-01	8.402E-03	-0.093
		61.30		-4.569E-03	1.835E-01	2.987E-01	2.117E-02	-0.015
		121.62		7.687E-02	1.297E-01	2.205E-01	2.525E-02	0.349
		147.16		2.386E-02	2.462E-01	3.975E-01	3.445E-02	0.060
		171.86		1.257E-01	2.025E-01	3.578E-01	2.176E-02	0.351
		218.09		2.651E-01	3.805E-01	6.744E-01	4.186E-02	0.393
		268.79		2.841E-01	3.546E-01	6.365E-01	3.789E-02	0.446
		319.02		-8.280E-02	1.389E-01	2.140E-01	1.252E-02	-0.387
		367.43		-3.921E-01	5.470E-01	8.236E-01	4.621E-02	-0.476
		413.65	*	-2.588E-02	1.050E-01	1.665E-01	9.306E-03	-0.155
HF-181		56.28		-4.871E-02	8.671E-02	1.335E-01	9.161E-03	-0.365
		57.53		-1.247E-03	5.007E-02	8.159E-02	5.658E-03	-0.015
		65.20		2.688E-02	1.301E-01	2.081E-01	1.496E-02	0.129

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		133.02		5.480E-03	2.243E-02	3.681E-02	3.809E-03	0.149
		136.25		-2.944E-02	1.592E-01	2.504E-01	2.500E-02	-0.118
		345.85		-3.499E-03	9.511E-02	1.560E-01	8.974E-03	-0.022
		482.03	*	3.124E-03	2.186E-02	3.631E-02	2.239E-03	0.086
W-181		56.28		-2.070E-02	3.682E-02	5.666E-02	3.890E-03	-0.365
		57.53		-5.664E-04	2.127E-02	3.465E-02	2.403E-03	-0.016
		65.20	*	1.133E-02	5.483E-02	8.772E-02	6.306E-03	0.129
TA-182		67.75		5.415E-03	1.666E-02	2.795E-02	2.032E-03	0.194
		100.10		-5.222E-02	5.003E-02	7.114E-02	6.608E-03	-0.734
		152.43		-4.084E-03	1.295E-01	2.062E-01	1.646E-02	-0.020
		222.10		-6.679E-02	1.522E-01	2.439E-01	1.513E-02	-0.274
		1001.68		1.168E+00	1.252E+00	2.407E+00	1.637E-01	0.485
		1121.28		5.976E-02	6.941E-02	1.351E-01	8.216E-03	0.442
		1189.05		3.061E-02	1.616E-01	2.752E-01	1.570E-02	0.111
		1221.42	*	2.828E-02	1.077E-01	1.854E-01	1.072E-02	0.153
		1230.97		-8.044E-02	2.362E-01	3.510E-01	2.037E-02	-0.229
RE-183		57.98		1.086E-02	2.019E-02	3.471E-02	2.416E-03	0.313
		59.32		1.604E-03	1.168E-02	1.933E-02	1.361E-03	0.083
		67.20		3.684E-03	2.867E-02	4.726E-02	3.427E-03	0.078
		162.32	*	-2.612E-03	4.198E-02	7.042E-02	4.638E-03	-0.037
		208.81		1.556E-01	3.766E-01	6.538E-01	4.057E-02	0.238
		291.72		-1.375E-01	4.578E-01	7.352E-01	4.310E-02	-0.187
RE-184		57.98		4.184E-02	7.779E-02	1.337E-01	9.307E-03	0.313
		59.32		6.174E-03	4.495E-02	7.438E-02	5.238E-03	0.083
		67.20		1.418E-02	1.104E-01	1.820E-01	1.320E-02	0.078
		161.27		6.908E-03	1.452E-01	2.458E-01	1.657E-02	0.028
		216.55		4.351E-02	1.219E-01	2.100E-01	1.304E-02	0.207
		252.85	*	1.707E-02	1.102E-01	1.862E-01	1.133E-02	0.092
		318.01		-5.141E-02	2.398E-01	3.869E-01	2.264E-02	-0.133
		792.07		-2.153E-01	6.175E-01	9.664E-01	7.084E-02	-0.223
		903.28		-1.126E+00	7.034E-01	7.803E-01	5.573E-02	-1.443
		920.93		1.992E-02	2.993E-01	5.007E-01	3.554E-02	0.040
OS-185		59.72		-9.069E-03	3.336E-02	5.299E-02	3.739E-03	-0.171
		61.14		1.014E-04	1.985E-02	3.240E-02	2.295E-03	0.003
		69.30		-2.954E-02	4.638E-02	7.073E-02	5.182E-03	-0.418
		592.07		-1.221E+00	1.413E+00	1.891E+00	1.298E-01	-0.646
		646.12	*	-6.696E-03	2.596E-02	3.971E-02	2.816E-03	-0.169
		717.42		-3.106E-03	5.783E-01	9.662E-01	7.032E-02	-0.003
		874.81		9.505E-02	3.549E-01	6.173E-01	4.456E-02	0.154
		880.27		-3.994E-01	4.920E-01	6.808E-01	4.905E-02	-0.587
RE-188		155.03	*	-7.877E-03	6.532E-02	1.030E-01	7.856E-03	-0.076
		477.96		-6.846E-01	1.583E+00	2.390E+00	1.467E-01	-0.286
		633.10		-2.512E-01	1.813E+00	2.846E+00	2.005E-01	-0.088
W-188		63.58		-2.984E+00	7.286E+00	1.101E+01	7.863E-01	-0.271
		227.08		7.075E-01	5.310E+00	8.981E+00	5.564E-01	0.079
		290.67	*	-4.238E-01	3.544E+00	5.801E+00	3.400E-01	-0.073
IR-192		295.96		-2.065E-03	5.658E-02	8.543E-02	5.088E-03	-0.024
		308.46		-1.649E-02	4.840E-02	7.705E-02	4.568E-03	-0.214
		316.51	*	4.161E-03	1.729E-02	2.932E-02	1.725E-03	0.142

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		468.07		-1.119E-02	3.679E-02	5.721E-02	3.954E-03	-0.196
		604.41		-1.168E-01	3.058E-01	4.652E-01	5.565E-02	-0.251
		612.46		-4.027E-01	4.001E-01	5.237E-01	4.447E-02	-0.769
AU-195		65.12		9.607E-03	2.550E-02	4.139E-02	2.975E-03	0.232
		66.83		-1.735E-03	1.435E-02	2.312E-02	1.674E-03	-0.075
		75.70		3.565E-02	3.558E-02	6.245E-02	4.746E-03	0.571
		98.88	*	1.295E-02	5.735E-02	9.497E-02	8.717E-03	0.136
		129.76		-4.475E-01	1.076E+00	1.656E+00	1.773E-01	-0.270
TL-200		367.94	*	-1.459E+00	2.151E+00	3.250E+00	1.822E-01	-0.449
		579.30		-2.718E+00	1.659E+01	2.604E+01	1.770E+00	-0.104
		828.27		1.083E+01	2.550E+01	4.532E+01	3.310E+00	0.239
		1205.75		-3.017E+00	1.335E+01	2.081E+01	1.196E+00	-0.145
TL-201		68.90		-5.889E-02	1.375E-01	2.145E-01	1.569E-02	-0.275
		70.82		-6.166E-02	8.291E-02	1.251E-01	9.241E-03	-0.493
		80.30		-1.040E-01	1.889E-01	2.901E-01	2.273E-02	-0.359
		135.34		8.893E-01	1.694E+00	2.851E+00	2.876E-01	0.312
		167.43	*	-1.571E-01	5.099E-01	8.364E-01	5.066E-02	-0.188
TL-202		68.90		-1.957E-02	4.570E-02	7.129E-02	5.213E-03	-0.275
		70.82		-2.043E-02	2.748E-02	4.146E-02	3.063E-03	-0.493
		80.30		-3.448E-02	6.262E-02	9.618E-02	7.535E-03	-0.359
		439.56	*	1.776E-02	3.030E-02	5.281E-02	3.074E-03	0.336
HG-203		70.83		-1.212E-01	1.645E-01	2.476E-01	3.184E-02	-0.489
		72.87		-3.484E-02	1.038E-01	1.636E-01	2.042E-02	-0.213
		82.60		2.402E-02	2.036E-01	3.340E-01	4.456E-02	0.072
		279.20	*	-5.990E-03	1.653E-02	2.628E-02	1.628E-03	-0.228
BI-207		72.80		-1.341E-02	3.388E-02	5.315E-02	3.969E-03	-0.252
		74.97		3.637E-02	1.966E-02	3.656E-02	2.767E-03	0.995
		84.90		-1.756E-02	4.056E-02	6.280E-02	5.084E-03	-0.280
		569.67		6.727E-04	2.353E-02	3.685E-02	2.486E-03	0.018
		1063.62	*	2.165E-02	3.011E-02	5.710E-02	3.693E-03	0.379
		1770.23		-5.765E-02	5.055E-01	8.140E-01	4.599E-02	-0.071
TL-207		81.07		-9.786E-03	4.394E-02	6.969E-02	5.489E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		94.90		4.509E-02	6.295E-02	1.084E-01	9.579E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.179
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.258E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192
		445.03		-1.565E+00	1.400E+00	1.893E+00	1.951E-01	-0.827
TL-208		277.35		-1.083E-01	1.593E-01	2.415E-01	2.558E-02	-0.448
		510.84		-1.310E-01	1.623E-01	2.966E-01	3.112E-02	-0.442
		583.14	*	5.226E-03	2.639E-02	4.301E-02	3.263E-03	0.121
		860.37		-3.135E-02	1.889E-01	3.040E-01	2.431E-02	-0.103
PO-209		260.50		-8.924E-01	4.780E+00	7.800E+00	4.701E-01	-0.114
		262.80		7.029E+00	1.303E+01	2.283E+01	1.371E+00	0.308
		896.60	*	2.613E+00	4.889E+00	8.862E+00	6.344E-01	0.295
BI-210		46.50	*	-9.202E-02	1.715E-01	2.654E-01	2.010E-02	-0.347

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PB-210		46.50	*	-9.202E-02	1.715E-01	2.654E-01	2.010E-02	-0.347
PO-210		46.50	*	-9.202E-02	1.715E-01	2.654E-01	1.715E-02	-0.347
BI-211		72.87		-1.963E-01	5.842E-01	9.215E-01	6.886E-02	-0.213
		351.07	*	-1.104E-02	1.359E-01	2.130E-01	1.355E-02	-0.052
PB-211		404.84	*	-5.992E-01	6.258E-01	6.759E-01	4.212E-01	-0.886
		427.08		-1.124E+00	1.415E+00	1.755E+00	1.085E+00	-0.640
		831.96		-4.658E-01	8.882E-01	1.261E+00	7.884E-01	-0.369
BI-212		727.18	*	2.395E-02	1.581E-01	2.713E-01	2.412E-02	0.088
		785.46		-2.967E-01	1.120E+00	1.780E+00	1.305E-01	-0.167
		1620.62		4.372E-01	1.005E+00	1.860E+00	1.096E-01	0.235
PB-212		74.81		1.232E-01	6.838E-02	1.252E-01	1.505E-02	0.983
		77.11		7.001E-03	4.040E-02	6.662E-02	5.109E-03	0.105
		87.30		9.059E-03	8.174E-02	1.339E-01	1.735E-02	0.068
		238.63	*	1.502E-02	3.021E-02	5.072E-02	3.864E-03	0.296
		300.09		-2.090E-01	3.987E-01	6.230E-01	5.168E-02	-0.336
PO-212		74.81		1.232E-01	6.838E-02	1.252E-01	1.505E-02	0.983
		77.11		7.001E-03	4.040E-02	6.662E-02	5.109E-03	0.105
		87.30		9.059E-03	8.174E-02	1.339E-01	1.735E-02	0.068
		115.19		9.549E-01	1.208E+00	2.088E+00	2.246E-01	0.457
		238.63	*	1.502E-02	3.021E-02	5.072E-02	3.864E-03	0.296
		300.09		-2.090E-01	3.987E-01	6.230E-01	5.168E-02	-0.336
BI-214		609.31	*	2.328E-02	4.268E-02	7.453E-02	6.459E-03	0.312
		768.36		-5.461E-02	4.246E-01	6.922E-01	6.536E-02	-0.079
		934.06		1.018E+00	8.169E-01	1.607E+00	1.513E-01	0.634
		1120.29		5.607E-02	1.704E-01	2.981E-01	2.681E-02	0.188
		1238.11		9.838E-02	4.467E-01	7.639E-01	6.236E-02	0.129
		1377.67		-3.693E-01	6.890E-01	9.487E-01	8.290E-02	-0.389
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.048E-02	-0.033
PB-214		74.81		2.122E-01	1.172E-01	2.158E-01	2.284E-02	0.983
		77.11		1.200E-02	6.927E-02	1.142E-01	1.235E-02	0.105
		87.30		1.552E-02	1.400E-01	2.293E-01	2.588E-02	0.068
		241.98		-1.361E-02	1.607E-01	2.659E-01	2.212E-02	-0.051
		295.21		-6.499E-03	7.981E-02	1.200E-01	1.029E-02	-0.054
		351.92	*	1.965E-03	4.753E-02	7.545E-02	6.207E-03	0.026
PO-214		74.81		2.122E-01	1.172E-01	2.158E-01	2.284E-02	0.983
		77.11		1.200E-02	6.927E-02	1.142E-01	1.235E-02	0.105
		87.30		1.552E-02	1.400E-01	2.293E-01	2.588E-02	0.068
		241.98		-1.361E-02	1.607E-01	2.659E-01	2.212E-02	-0.051
		295.21		-6.499E-03	7.981E-02	1.200E-01	1.029E-02	-0.054
		351.92	*	1.965E-03	4.753E-02	7.545E-02	6.207E-03	0.026
PO-215		81.07		-9.786E-03	4.394E-02	6.969E-02	5.489E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		94.90		4.509E-02	6.295E-02	1.084E-01	9.579E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.179
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.258E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-1.565E+00	1.400E+00	1.893E+00	1.951E-01	-0.827
PO-216		74.81		1.232E-01	6.838E-02	1.252E-01	1.505E-02	0.983
		77.11		7.001E-03	4.040E-02	6.662E-02	5.109E-03	0.105
		87.30		9.059E-03	8.174E-02	1.339E-01	1.735E-02	0.068
		238.63	*	1.502E-02	3.021E-02	5.072E-02	3.864E-03	0.296
		300.09		-2.090E-01	3.987E-01	6.230E-01	5.168E-02	-0.336
PO-218		74.81		2.122E-01	1.172E-01	2.158E-01	2.284E-02	0.983
		77.11		1.200E-02	6.927E-02	1.142E-01	1.235E-02	0.105
		87.30		1.552E-02	1.400E-01	2.293E-01	2.588E-02	0.068
		241.98		-1.361E-02	1.607E-01	2.659E-01	2.212E-02	-0.051
		295.21		-6.499E-03	7.981E-02	1.200E-01	1.029E-02	-0.054
		351.92	*	1.965E-03	4.753E-02	7.545E-02	6.207E-03	0.026
RN-219		271.23		3.876E-02	1.119E-01	1.924E-01	1.577E-02	0.201
		401.81	*	7.473E-02	2.270E-01	3.874E-01	5.219E-02	0.193
RN-220		549.76	*	1.964E+00	1.768E+01	2.905E+01	1.927E+00	0.068
RA-223		81.07		-9.786E-03	4.394E-02	6.969E-02	5.489E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		94.90		4.509E-02	6.295E-02	1.084E-01	9.579E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.179
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.258E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192
		445.03		-1.565E+00	1.400E+00	1.893E+00	1.951E-01	-0.827
RA-224		240.98	*	2.972E-01	3.065E-01	5.533E-01	3.403E-02	0.537
RA-226		609.31	*	2.328E-02	4.268E-02	7.453E-02	6.459E-03	0.312
		768.36		-5.461E-02	4.246E-01	6.922E-01	6.536E-02	-0.079
		934.06		1.018E+00	8.169E-01	1.607E+00	1.513E-01	0.634
		1120.29		5.607E-02	1.704E-01	2.981E-01	2.681E-02	0.188
		1238.11		9.838E-02	4.467E-01	7.639E-01	6.236E-02	0.129
		1377.67		-3.693E-01	6.890E-01	9.487E-01	8.290E-02	-0.389
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.048E-02	-0.033
AC-227		79.80		-2.394E-01	3.456E-01	5.166E-01	1.095E-01	-0.463
		236.00		-1.038E-01	1.048E-01	1.576E-01	1.681E-02	-0.658
		256.20	*	-3.958E-02	1.897E-01	3.091E-01	4.348E-02	-0.128
		286.10		3.987E-01	8.166E-01	1.417E+00	1.642E-01	0.281
		299.80		-2.050E-02	7.127E-01	1.176E+00	1.918E-01	-0.017
		304.40		4.919E-02	1.007E+00	1.675E+00	2.902E-01	0.029
		334.20		-1.474E-01	1.183E+00	1.922E+00	3.523E-01	-0.077
TH-227		79.80		-2.394E-01	3.457E-01	5.166E-01	1.109E-01	-0.463
		94.00		-1.468E-01	5.387E-01	8.512E-01	1.859E-01	-0.172
		236.00		-1.038E-01	1.047E-01	1.576E-01	1.466E-02	-0.658
		256.20	*	-3.958E-02	1.898E-01	3.091E-01	5.251E-02	-0.128
		286.10		3.987E-01	9.079E-01	1.417E+00	1.420E+00	0.281
		299.80		-2.050E-02	7.127E-01	1.176E+00	1.918E-01	-0.017
		304.40		4.919E-02	1.007E+00	1.675E+00	2.902E-01	0.029
		334.20		-1.474E-01	1.183E+00	1.922E+00	3.523E-01	-0.077
AC-228		338.32		4.333E-02	1.304E-01	2.205E-01	8.990E-02	0.196

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		911.07	*	1.781E-02	9.382E-02	1.600E-01	1.623E-02	0.111
		969.11		3.703E-02	1.641E-01	2.806E-01	6.388E-02	0.132
RA-228		338.32		4.333E-02	1.304E-01	2.205E-01	8.990E-02	0.196
		911.07	*	1.781E-02	9.382E-02	1.600E-01	1.623E-02	0.111
		969.11		3.703E-02	1.641E-01	2.806E-01	6.388E-02	0.132
TH-228		84.40		-2.859E-01	5.363E-01	8.190E-01	1.047E-01	-0.349
		238.60	*	1.509E-02	3.022E-02	5.073E-02	3.866E-03	0.298
		300.10		-2.090E-01	4.170E-01	6.230E-01	3.672E-01	-0.336
TH-229		85.43		-8.251E-03	4.018E-02	6.376E-02	5.181E-03	-0.129
		88.47		5.691E-03	2.497E-02	4.133E-02	3.439E-03	0.138
		100.00		-5.563E-02	5.444E-02	7.767E-02	7.207E-03	-0.716
		193.63	*	3.421E-03	2.153E-01	3.619E-01	2.235E-02	0.009
		210.97		-3.653E-02	3.267E-01	5.414E-01	3.360E-02	-0.067
TH-230		609.31	*	2.328E-02	4.268E-02	7.453E-02	6.459E-03	0.312
		768.36		-5.461E-02	4.246E-01	6.922E-01	6.536E-02	-0.079
		934.06		1.018E+00	8.169E-01	1.607E+00	1.513E-01	0.634
		1120.29		5.607E-02	1.704E-01	2.981E-01	2.681E-02	0.188
		1238.11		9.838E-02	4.467E-01	7.639E-01	6.236E-02	0.129
		1377.67		-3.693E-01	6.890E-01	9.487E-01	8.290E-02	-0.389
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.048E-02	-0.033
PA-231		283.67	*	-1.986E-01	7.966E-01	1.286E+00	1.775E-01	-0.154
		301.29		-1.096E-01	2.985E-01	4.749E-01	4.981E-02	-0.231
TH-231		81.07		-9.786E-03	4.394E-02	6.969E-02	5.489E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		94.90		4.509E-02	6.295E-02	1.084E-01	9.579E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.179
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.258E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192
		445.03		-1.565E+00	1.400E+00	1.893E+00	1.951E-01	-0.827
U-231		84.21		-1.803E-01	3.190E-01	4.859E-01	3.914E-02	-0.371
		92.29		4.367E-02	1.509E-01	2.511E-01	2.165E-02	0.174
		95.87	*	-2.913E-02	8.441E-02	1.316E-01	1.173E-02	-0.221
		108.00		1.445E-02	1.983E-01	3.013E-01	3.021E-02	0.048
TH-232		338.32		4.333E-02	1.292E-01	2.205E-01	1.277E-02	0.196
		911.07	*	1.781E-02	9.382E-02	1.600E-01	1.623E-02	0.111
		969.11		3.703E-02	1.641E-01	2.806E-01	6.388E-02	0.132
PA-233		75.28		1.003E+00	5.870E-01	1.060E+00	1.567E-01	0.947
		86.59		9.230E-02	3.409E-01	5.661E-01	1.511E-01	0.163
		300.12		-1.080E-01	2.064E-01	3.219E-01	4.335E-02	-0.336
		311.98	*	-1.932E-02	3.515E-02	5.454E-02	3.391E-03	-0.354
		340.50		1.437E-01	3.309E-01	5.679E-01	1.304E-01	0.253
		398.62		-8.041E-02	1.266E+00	2.058E+00	5.306E-01	-0.039
		415.76		3.104E-01	9.813E-01	1.666E+00	3.421E-01	0.186
PA-234		63.00		-7.251E-02	2.268E-01	3.453E-01	5.085E-02	-0.210
		94.67		3.074E-02	4.442E-02	7.625E-02	9.563E-03	0.403
		98.44		1.307E-02	2.489E-02	4.078E-02	2.278E-02	0.321

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		99.86		-1.309E-01	1.371E-01	1.974E-01	1.829E-02	-0.663
		111.00		-2.528E-02	5.890E-02	9.034E-02	1.207E-02	-0.280
		131.20		-4.844E-03	4.072E-02	6.455E-02	6.809E-03	-0.075
		152.70		2.517E-02	1.283E-01	2.089E-01	3.492E-02	0.120
		186.00		-2.727E-01	6.039E-01	9.081E-01	2.781E-01	-0.300
		226.40		6.101E-02	1.789E-01	3.083E-01	3.626E-02	0.198
		227.20		1.659E-02	1.927E-01	3.245E-01	2.010E-02	0.051
		248.90		-2.479E-01	3.821E-01	5.858E-01	1.264E-01	-0.423
		293.70		-4.013E-02	3.282E-01	5.366E-01	8.642E-02	-0.075
		369.80		-4.003E-01	5.107E-01	7.467E-01	1.551E-01	-0.536
		568.70		2.083E-01	7.747E-01	1.253E+00	8.449E-02	0.166
		569.50		1.889E-02	2.104E-01	3.325E-01	2.242E-02	0.057
		574.00		-7.895E-01	9.862E-01	1.379E+00	9.339E-02	-0.572
		699.00		-2.455E-01	5.245E-01	8.194E-01	1.516E-01	-0.300
		706.10		1.783E-01	6.712E-01	1.160E+00	5.143E-01	0.154
		733.00		2.510E-02	2.398E-01	4.072E-01	8.844E-02	0.062
		742.81		-4.770E-01	8.760E-01	1.213E+00	8.135E-01	-0.393
		796.30		-1.786E-02	5.817E-01	9.631E-01	2.568E-01	-0.019
		805.60		-6.515E-02	6.493E-01	1.061E+00	3.215E-01	-0.061
		819.60		8.703E-01	9.595E-01	1.714E+00	6.469E-01	0.508
		826.30		-1.536E-01	5.904E-01	9.316E-01	4.146E-01	-0.165
		831.60		-1.884E-01	4.351E-01	6.635E-01	1.957E-01	-0.284
		876.40		8.523E-02	4.901E-01	8.284E-01	8.507E-01	0.103
		880.51		-1.433E-01	1.900E-01	2.674E-01	1.927E-02	-0.536
		883.24		1.803E-01	2.195E-01	3.564E-01	2.390E-01	0.506
		899.00		3.037E-01	5.464E-01	9.703E-01	4.216E-01	0.313
		925.00		-2.848E-01	7.404E-01	1.124E+00	7.962E-02	-0.253
		926.50		-1.220E-01	1.202E-01	1.486E-01	3.684E-02	-0.821
		946.00	*	2.306E-02	1.940E-01	3.275E-01	5.922E-02	0.070
		949.00		-2.042E-01	2.952E-01	4.166E-01	2.921E-02	-0.490
		980.50		5.706E-03	5.300E-01	8.747E-01	6.029E-02	0.007
		1394.10		7.026E-01	1.078E+00	1.832E+00	1.187E+00	0.384
PA-234M		766.41		2.104E+00	1.087E+01	1.847E+01	1.414E+01	0.114
		1001.03	*	4.544E+00	4.203E+00	8.240E+00	8.113E-01	0.552
TH-234		63.29	*	-8.490E-02	1.958E-01	2.944E-01	5.100E-02	-0.288
		92.38		3.242E-02	1.401E-01	2.319E-01	4.194E-02	0.140
U-234		609.31	*	2.328E-02	4.268E-02	7.453E-02	6.459E-03	0.312
		768.36		-5.461E-02	4.246E-01	6.922E-01	6.536E-02	-0.079
		934.06		1.018E+00	8.169E-01	1.607E+00	1.513E-01	0.634
		1120.29		5.607E-02	1.704E-01	2.981E-01	2.681E-02	0.188
		1238.11		9.838E-02	4.467E-01	7.639E-01	6.236E-02	0.129
		1377.67		-3.693E-01	6.890E-01	9.487E-01	8.290E-02	-0.389
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.048E-02	-0.033
U-235		89.95		-1.862E-01	2.792E-01	4.141E-01	1.276E-01	-0.450
		93.35		-3.309E-02	1.695E-01	2.700E-01	7.574E-02	-0.123
		105.00		3.115E-01	3.413E-01	5.786E-01	1.747E-01	0.538
		143.76	*	-4.942E-02	8.567E-02	1.285E-01	2.281E-02	-0.384
		163.35		-1.023E-01	1.946E-01	3.120E-01	5.677E-02	-0.328
		185.71		-1.108E-02	2.206E-02	3.331E-02	2.048E-03	-0.333

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		205.31		4.047E-02	2.201E-01	3.746E-01	6.787E-02	0.108
NP-236		94.67		2.324E-02	3.362E-02	5.781E-02	5.097E-03	0.402
		98.44		9.887E-03	1.801E-02	3.083E-02	2.818E-03	0.321
		111.00		-1.912E-02	4.452E-02	6.833E-02	7.055E-03	-0.280
		160.31	*	1.730E-02	3.475E-02	5.802E-02	3.992E-03	0.298
NP-237		86.50	*	1.428E-02	5.113E-02	8.503E-02	1.888E-02	0.168
		95.87		-9.074E-02	2.638E-01	4.099E-01	1.014E-01	-0.221
U-238		63.29	*	-8.490E-02	1.958E-01	2.944E-01	5.100E-02	-0.288
		92.38		3.242E-02	1.400E-01	2.319E-01	2.001E-02	0.140
NP-239		99.55		-3.699E-02	4.482E-02	6.556E-02	6.057E-03	-0.564
		117.00	*	-2.697E-02	6.572E-02	1.010E-01	1.106E-02	-0.267
		209.75		-5.681E-02	3.253E-01	5.360E-01	3.327E-02	-0.106
		228.18		8.492E-03	1.031E-01	1.736E-01	1.075E-02	0.049
		277.60		-6.092E-02	7.894E-02	1.187E-01	6.955E-03	-0.513
		334.30		-6.785E-02	6.719E-01	1.095E+00	6.357E-02	-0.062
AM-241		59.54	*	2.082E-03	1.792E-02	2.959E-02	2.310E-03	0.070
AM-243		74.67	*	1.823E-02	1.093E-02	2.011E-02	1.519E-03	0.906
		86.72		4.752E-01	1.909E+00	3.171E+00	2.602E-01	0.150
		117.66		-5.049E-02	1.299E+00	2.080E+00	2.292E-01	-0.024
		142.18		2.856E+00	6.901E+00	1.148E+01	1.066E+00	0.249
CM-243		99.55		-3.804E-02	4.609E-02	6.743E-02	6.229E-03	-0.564
		103.76	*	-5.270E-03	3.057E-02	4.845E-02	4.662E-03	-0.109
		117.00		-2.773E-02	6.758E-02	1.039E-01	1.138E-02	-0.267
		209.75		-5.598E-02	3.206E-01	5.281E-01	3.278E-02	-0.106
		228.18		8.576E-03	1.042E-01	1.753E-01	1.086E-02	0.049
		277.60		-6.139E-02	7.955E-02	1.196E-01	7.008E-03	-0.513
CM-247		278.00		-3.090E-01	3.302E-01	4.851E-01	2.840E-02	-0.637
		287.40		9.856E-02	6.458E-01	1.087E+00	6.368E-02	0.091
		402.60	*	6.831E-03	1.927E-02	3.309E-02	1.815E-03	0.206
CF-249		252.85		6.610E-02	4.265E-01	7.209E-01	4.385E-02	0.092
		333.44		2.597E-02	8.711E-02	1.486E-01	8.629E-03	0.175
		387.95	*	2.591E-03	2.046E-02	3.415E-02	1.852E-03	0.076
CF-251		176.60	*	-3.373E-02	5.529E-02	8.813E-02	5.382E-03	-0.383
		227.00		2.576E-02	1.722E-01	2.918E-01	1.808E-02	0.088
		285.00		-1.042E-01	9.080E-01	1.488E+00	8.707E-02	-0.070
ANH-511		511.00	*	-2.552E-02	3.517E-02	6.467E-02	4.125E-03	-0.395

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                            DETECTOR DATA                              *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832 *
* Acquisition date : 14-JUL-2009 11:22:57 Detector SN#    :            *
* Detector ID        : GAM21               Sensitivity     : 5.000     *
* Geometry           : CAN                 Energy tolerance: 1.500     *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000    *
* Elapsed real time:    0 02:00:08.64      Half life ratio :  8.000    *
*************************************************************************
*                                                                       *
*                             SAMPLE DATA                               *
*                                                                       *
* Sample date        :  7-JUL-2009 00:00:00 Nuclide Library : SOLID     *
* Sample ID          : G1201874832         Analyst initials: MXR1      *
* Batch Number       : 882713              Sample Quantity : 1.4447E+02 GRAM *
* Recovery           :    1.00000          Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
* Standard Weight  :   0.00000                                          *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :             *
* MSD DPM          :    0.000            MSD Isotope     :             *
* LCS DPM          :    0.000            LCS Isotope     :             *
* LCSD DPM         :    0.000            LCSD Isotope    :             *
*************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
RB-86	4.005E-01	5.594E-01	5.555E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-1.503E-02	1.505E-01	2.534E-01	0.000E+00	NOT IDENT.
NA-22	-1.239E-03	2.532E-02	4.180E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.057E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	6.492E-04	2.938E-02	4.991E-02	0.000E+00	NOT IDENT.
K-40	1.401E-01	3.090E-01	5.601E-01	0.000E+00	NOT IDENT.
TI-44	-2.974E-03	7.194E-03	1.229E-02	0.000E+00	NOT IDENT.
SC-46	-2.258E-02	2.300E-02	3.113E-02	0.000E+00	NOT IDENT.
V-48	1.966E-02	3.718E-02	6.890E-02	0.000E+00	NOT IDENT.
CR-51	-4.493E-02	1.613E-01	2.740E-01	0.000E+00	NOT IDENT.
MN-52	-6.918E-02	6.679E-02	7.208E-02	0.000E+00	NOT IDENT.
MN-54	-1.473E-02	2.551E-02	3.991E-02	0.000E+00	NOT IDENT.
CO-56	1.631E-02	2.762E-02	5.162E-02	0.000E+00	NOT IDENT.
CO-57	3.780E-03	8.882E-03	1.609E-02	0.000E+00	NOT IDENT.
CO-58	-9.316E-03	2.157E-02	3.417E-02	0.000E+00	NOT IDENT.
FE-59	-2.196E-02	5.676E-02	8.875E-02	0.000E+00	NOT IDENT.
CO-60	6.596E-03	2.671E-02	4.714E-02	0.000E+00	NOT IDENT.
ZN-65	-2.489E-03	5.121E-02	8.557E-02	0.000E+00	NOT IDENT.
GE-68	5.249E-01	8.868E-01	1.505E+00	0.000E+00	NOT IDENT.
AS-73	2.123E-02	6.960E-02	1.290E-01	0.000E+00	NOT IDENT.
AS-74	-2.515E-02	4.479E-02	6.873E-02	0.000E+00	NOT IDENT.
SE-75	-2.727E-03	2.050E-02	3.583E-02	0.000E+00	NOT IDENT.
BR-77	1.850E-01	6.985E-01	1.234E+00	0.000E+00	NOT IDENT.
SR-82	1.080E-01	2.001E-01	3.753E-01	0.000E+00	NOT IDENT.
RB-83	1.301E-02	3.977E-02	7.091E-02	0.000E+00	NOT IDENT.
RB-84	-6.888E-03	4.107E-02	6.851E-02	0.000E+00	NOT IDENT.
KR-85	-9.011E-01	7.104E+00	1.197E+01	0.000E+00	NOT IDENT.

SR-85	-4.263E-03	3.361E-02	5.664E-02	0.000E+00	NOT IDENT.
Y-88	1.465E-02	3.528E-02	6.535E-02	0.000E+00	NOT IDENT.
ZR-88	2.467E-03	1.687E-02	2.973E-02	0.000E+00	NOT IDENT.
Y-91	1.042E+00	1.130E+01	1.929E+01	0.000E+00	NOT IDENT.
NB-94	-1.940E-03	2.294E-02	3.959E-02	0.000E+00	NOT IDENT.
NB-95	5.445E-03	2.413E-02	4.331E-02	0.000E+00	NOT IDENT.
NB-95M	-6.197E-02	5.101E-02	8.024E-02	0.000E+00	NOT IDENT.
ZR-95	-3.389E-02	3.646E-02	5.128E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.792E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.946E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	9.682E-01	1.032E+00	2.042E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	9.921E+06	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.010E-02	1.365E-02	2.606E-02	0.000E+00	NOT IDENT.
RH-102	-2.232E-03	1.640E-02	2.749E-02	0.000E+00	NOT IDENT.
RU-103	3.455E-03	2.274E-02	3.962E-02	0.000E+00	NOT IDENT.
RH-106	-1.957E-01	2.138E-01	3.016E-01	0.000E+00	NOT IDENT.
RU-106	-1.957E-01	2.129E-01	3.016E-01	0.000E+00	NOT IDENT.
AG-108M	7.511E-05	2.024E-02	3.486E-02	0.000E+00	NOT IDENT.
CD-109	4.211E-02	1.818E-01	3.281E-01	0.000E+00	NOT IDENT.
AG-110M	5.583E-03	1.814E-02	3.342E-02	0.000E+00	NOT IDENT.
IN-111	-3.361E-02	6.940E-02	1.170E-01	0.000E+00	NOT IDENT.
IN-113M	4.047E-03	2.410E-02	4.260E-02	0.000E+00	NOT IDENT.
SN-113	4.047E-03	2.410E-02	4.260E-02	0.000E+00	NOT IDENT.
IN-114M	-8.922E-03	7.105E-02	1.267E-01	0.000E+00	NOT IDENT.
CD-115	-3.885E-01	5.506E-01	8.152E-01	0.000E+00	NOT IDENT.
SN-117M	1.236E-02	1.578E-02	2.905E-02	0.000E+00	NOT IDENT.
SB-122	-2.962E-02	1.669E-01	2.741E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.529E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	8.229E-03	1.160E-02	2.122E-02	0.000E+00	NOT IDENT.
I-124	1.931E-02	1.285E-01	2.211E-01	0.000E+00	NOT IDENT.
SB-124	-3.244E-02	7.403E-02	1.124E-01	0.000E+00	NOT IDENT.
SB-125	-3.660E-02	5.383E-02	8.413E-02	0.000E+00	NOT IDENT.
TE-125M	-1.841E+00	2.869E+00	4.347E+00	0.000E+00	NOT IDENT.
I-126	6.899E-02	7.383E-02	1.457E-01	0.000E+00	NOT IDENT.
SB-126	-3.045E-03	5.577E-02	9.633E-02	0.000E+00	NOT IDENT.
SN-126	2.990E-03	1.760E-02	3.161E-02	0.000E+00	NOT IDENT.
SB-127	-1.750E-01	2.019E-01	2.985E-01	0.000E+00	NOT IDENT.
XE-127	-6.565E-03	1.691E-02	2.931E-02	0.000E+00	NOT IDENT.
I-131	5.277E-02	3.611E-02	7.195E-02	0.000E+00	NOT IDENT.
TE-132	4.611E-03	6.075E-02	1.092E-01	0.000E+00	NOT IDENT.
BA-133	-8.596E-03	2.609E-02	4.384E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.059E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.451E-03	2.820E-02	4.981E-02	0.000E+00	NOT IDENT.
CS-135	1.644E-02	7.479E-02	1.352E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.428E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-8.120E-03	5.899E-02	9.788E-02	0.000E+00	NOT IDENT.
BA-137M	-9.564E-03	2.004E-02	3.232E-02	0.000E+00	NOT IDENT.
CS-137	-1.011E-02	2.119E-02	3.417E-02	0.000E+00	NOT IDENT.
CE-139	-1.049E-03	1.147E-02	2.064E-02	0.000E+00	NOT IDENT.
BA-140	1.035E-01	1.169E-01	2.142E-01	0.000E+00	NOT IDENT.
LA-140	-4.419E-02	4.902E-02	6.416E-02	0.000E+00	NOT IDENT.
CE-141	2.435E-03	2.065E-02	3.606E-02	0.000E+00	NOT IDENT.
CE-143	-3.681E-01	1.362E+00	2.330E+00	0.000E+00	NOT IDENT.
CE-144	2.288E-02	7.704E-02	1.372E-01	0.000E+00	NOT IDENT.
PM-144	1.133E-02	2.460E-02	4.539E-02	0.000E+00	NOT IDENT.
PR-144	7.648E-01	1.660E+00	3.064E+00	0.000E+00	NOT IDENT.
PM-146	3.145E-03	2.489E-02	4.348E-02	0.000E+00	NOT IDENT.
ND-147	-6.510E-02	1.964E-01	3.147E-01	0.000E+00	NOT IDENT.
PM-149	1.198E+00	4.429E+00	8.012E+00	0.000E+00	NOT IDENT.
EU-152	-1.395E-02	5.469E-02	9.278E-02	0.000E+00	NOT IDENT.
GD-153	1.013E-04	2.076E-02	3.653E-02	0.000E+00	NOT IDENT.
EU-154	-3.475E-03	7.101E-02	1.172E-01	0.000E+00	NOT IDENT.
EU-155	3.584E-02	3.265E-02	6.298E-02	0.000E+00	NOT IDENT.
TB-160	-1.175E-01	9.094E-02	1.166E-01	0.000E+00	NOT IDENT.
HO-166M	-3.624E-03	4.220E-02	7.272E-02	0.000E+00	NOT IDENT.
TM-171	-3.809E-02	4.304E+00	7.685E+00	0.000E+00	NOT IDENT.
LU-176	4.576E-03	1.311E-02	2.387E-02	0.000E+00	NOT IDENT.
LU-177	5.930E-02	2.034E-01	3.741E-01	0.000E+00	NOT IDENT.
LU-177M	-2.588E-02	1.029E-01	1.722E-01	0.000E+00	NOT IDENT.
HF-181	3.124E-03	2.142E-02	3.743E-02	0.000E+00	NOT IDENT.
W-181	1.133E-02	5.373E-02	9.435E-02	0.000E+00	NOT IDENT.
TA-182	2.828E-02	1.056E-01	1.871E-01	0.000E+00	NOT IDENT.
RE-183	-2.612E-03	4.114E-02	7.432E-02	0.000E+00	NOT IDENT.
RE-184	1.707E-02	1.080E-01	1.947E-01	0.000E+00	NOT IDENT.
OS-185	-6.696E-03	2.544E-02	4.066E-02	0.000E+00	NOT IDENT.
RE-188	-7.877E-03	6.402E-02	1.088E-01	0.000E+00	NOT IDENT.
W-188	-4.238E-01	3.473E+00	6.047E+00	0.000E+00	NOT IDENT.
IR-192	4.161E-03	1.694E-02	3.051E-02	0.000E+00	NOT IDENT.

AU-195	1.295E-02	5.620E-02	1.013E-01	0.000E+00	NOT IDENT.
TL-200	-1.459E+00	2.108E+00	3.370E+00	0.000E+00	NOT IDENT.
TL-201	-1.571E-01	4.997E-01	8.822E-01	0.000E+00	NOT IDENT.
TL-202	1.776E-02	2.970E-02	5.455E-02	0.000E+00	NOT IDENT.
HG-203	-5.990E-03	1.620E-02	2.742E-02	0.000E+00	NOT IDENT.
BI-207	2.165E-02	2.951E-02	5.782E-02	0.000E+00	NOT IDENT.
TL-207	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
TL-208	5.226E-03	2.586E-02	4.415E-02	0.000E+00	NOT IDENT.
PO-209	2.613E+00	4.791E+00	9.008E+00	0.000E+00	NOT IDENT.
BI-210	-9.202E-02	1.681E-01	2.874E-01	0.000E+00	NOT IDENT.
PB-210	-9.202E-02	1.681E-01	2.874E-01	0.000E+00	NOT IDENT.
PO-210	-9.202E-02	1.680E-01	2.874E-01	0.000E+00	NOT IDENT.
BI-211	-1.104E-02	1.332E-01	2.211E-01	0.000E+00	NOT IDENT.
PB-211	-5.992E-01	6.132E-01	6.995E-01	0.000E+00	NOT IDENT.
BI-212	2.395E-02	1.549E-01	2.771E-01	0.000E+00	NOT IDENT.
PB-212	1.502E-02	2.961E-02	5.309E-02	0.000E+00	NOT IDENT.
PO-212	1.502E-02	2.961E-02	5.309E-02	0.000E+00	NOT IDENT.
BI-214	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
PB-214	1.965E-03	4.658E-02	7.832E-02	0.000E+00	NOT IDENT.
PO-214	1.965E-03	4.658E-02	7.832E-02	0.000E+00	NOT IDENT.
PO-215	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
PO-216	1.502E-02	2.961E-02	5.309E-02	0.000E+00	NOT IDENT.
PO-218	1.965E-03	4.658E-02	7.832E-02	0.000E+00	NOT IDENT.
RN-219	7.473E-02	2.225E-01	4.010E-01	0.000E+00	NOT IDENT.
RN-220	1.964E+00	1.733E+01	2.986E+01	0.000E+00	NOT IDENT.
RA-223	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
RA-224	2.972E-01	3.004E-01	5.791E-01	0.000E+00	NOT IDENT.
RA-226	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
AC-227	-3.958E-02	1.859E-01	3.230E-01	0.000E+00	NOT IDENT.
TH-227	-3.958E-02	1.860E-01	3.230E-01	0.000E+00	NOT IDENT.
AC-228	1.781E-02	9.195E-02	1.626E-01	0.000E+00	NOT IDENT.
RA-228	1.781E-02	9.195E-02	1.626E-01	0.000E+00	NOT IDENT.
TH-228	1.509E-02	2.961E-02	5.311E-02	0.000E+00	NOT IDENT.
TH-229	3.421E-03	2.110E-01	3.805E-01	0.000E+00	NOT IDENT.
TH-230	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
PA-231	-1.986E-01	7.807E-01	1.341E+00	0.000E+00	NOT IDENT.
TH-231	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
U-231	-2.913E-02	8.272E-02	1.404E-01	0.000E+00	NOT IDENT.
TH-232	1.781E-02	9.195E-02	1.626E-01	0.000E+00	NOT IDENT.
PA-233	-1.932E-02	3.445E-02	5.677E-02	0.000E+00	NOT IDENT.
PA-234	2.306E-02	1.901E-01	3.325E-01	0.000E+00	NOT IDENT.
PA-234M	4.544E+00	4.119E+00	8.355E+00	0.000E+00	NOT IDENT.
TH-234	-8.490E-02	1.919E-01	3.168E-01	0.000E+00	NOT IDENT.
U-234	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
U-235	-4.942E-02	8.396E-02	1.360E-01	0.000E+00	NOT IDENT.
NP-236	1.730E-02	3.406E-02	6.126E-02	0.000E+00	NOT IDENT.
NP-237	1.428E-02	5.011E-02	9.093E-02	0.000E+00	NOT IDENT.
U-238	-8.490E-02	1.919E-01	3.168E-01	0.000E+00	NOT IDENT.
NP-239	-2.697E-02	6.441E-02	1.074E-01	0.000E+00	NOT IDENT.
AM-241	2.082E-03	1.756E-02	3.189E-02	0.000E+00	NOT IDENT.
AM-243	1.823E-02	1.071E-02	2.157E-02	0.000E+00	NOT IDENT.
CM-243	-5.270E-03	2.995E-02	5.161E-02	0.000E+00	NOT IDENT.
CM-247	6.831E-03	1.889E-02	3.425E-02	0.000E+00	NOT IDENT.
CF-249	2.591E-03	2.005E-02	3.537E-02	0.000E+00	NOT IDENT.
CF-251	-3.373E-02	5.419E-02	9.285E-02	0.000E+00	NOT IDENT.
ANH-511	-2.552E-02	3.446E-02	6.658E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:23:40.19

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*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1
Sample date       : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 11:22:57
Sample ID         : G1201874832          Sample quantity  : 1.44470E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.64  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
RB-86	1076.63	10	8.78*	9.769E-01	3.029E-01	4.005E-01	142.53

Flag: "*" = Keyline

Sample ID : G1201874832 Acquisition date : 14-JUL-2009 11:22:57

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RB-86	18.66D	1.32	3.029E-01	4.005E-01	5.708E-01	142.53	
		Total Activity :	3.029E-01	4.005E-01			
		Grand Total Activity :	3.029E-01	4.005E-01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201874832
Acquisition date : 14-JUL-2009 11:22:57

None

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:23:44.98

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*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1 *
* Acquisition date : 14-JUL-2009 11:22:57  Detector SN#     :              *
* Detector ID      : GAM21                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:08.64         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 7-JUL-2009 00:00:00.  Nuclide Library : SOLID          *
* Sample ID        : G1201874832           Analyst initials: MXR1          *
* Batch Number     : 882713                Sample Quantity : 1.44470E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :               *
* MSD ID           :                       MSD Isotope     :               *
* LCS ID           : 1023-A                LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86	4.005E-01	5.708E-01	5.488E-01	3.505E-02	0.730

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.503E-02		1.536E-01	2.457E-01	1.730E-02	-0.061
NA-22	-1.239E-03		2.584E-02	4.145E-02	2.451E-03	-0.030
NA-24	2.335E-05		5.392E-05	Half-Life too short		
AL-26	6.492E-04		2.998E-02	4.991E-02	2.779E-03	0.013
K-40	1.401E-01		3.153E-01	5.572E-01	3.546E-02	0.251
TI-44	-2.974E-03		7.341E-03	1.147E-02	8.868E-04	-0.259
SC-46	-2.258E-02		2.347E-02	3.062E-02	2.199E-03	-0.738
V-48	1.966E-02		3.794E-02	6.792E-02	4.673E-03	0.289
CR-51	-4.493E-02		1.646E-01	2.635E-01	1.714E-02	-0.171
MN-52	-6.918E-02		6.816E-02	7.168E-02	4.321E-03	-0.965
MN-54	-1.473E-02		2.603E-02	3.920E-02	2.859E-03	-0.376

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-56	1.631E-02		2.819E-02	5.071E-02	3.690E-03	0.322
CO-57	3.780E-03		9.064E-03	1.515E-02	1.744E-03	0.249
CO-58	-9.316E-03		2.202E-02	3.354E-02	2.463E-03	-0.278
FE-59	-2.196E-02		5.792E-02	8.772E-02	6.291E-03	-0.250
CO-60	6.596E-03		2.726E-02	4.680E-02	2.815E-03	0.141
ZN-65	-2.489E-03		5.225E-02	8.460E-02	5.190E-03	-0.029
GE-68	5.249E-01		9.049E-01	1.487E+00	9.488E-02	0.353
AS-73	2.123E-02		7.102E-02	1.194E-01	8.027E-03	0.178
AS-74	-2.515E-02		4.570E-02	6.699E-02	4.610E-03	-0.375
SE-75	-2.727E-03		2.091E-02	3.430E-02	2.075E-03	-0.079
BR-77	1.850E-01		7.128E-01	1.199E+00	7.730E-02	0.154
SR-82	1.080E-01		2.041E-01	3.680E-01	2.698E-02	0.293
RB-83	1.301E-02		4.058E-02	6.890E-02	4.440E-03	0.189
RB-84	-6.888E-03		4.191E-02	6.737E-02	4.851E-03	-0.102
KR-85	-9.011E-01		7.249E+00	1.163E+01	7.444E-01	-0.077
SR-85	-4.263E-03		3.430E-02	5.503E-02	3.522E-03	-0.077
Y-88	1.465E-02		3.600E-02	6.536E-02	3.607E-03	0.224
ZR-88	2.467E-03		1.722E-02	2.871E-02	1.548E-03	0.086
Y-91	1.042E+00		1.153E+01	1.911E+01	1.098E+00	0.055
NB-94	-1.940E-03		2.341E-02	3.873E-02	2.808E-03	-0.050
NB-95	5.445E-03		2.462E-02	4.245E-02	3.111E-03	0.128
NB-95M	-6.197E-02		5.205E-02	7.664E-02	5.991E-03	-0.809
ZR-95	-3.389E-02		3.721E-02	5.025E-02	4.188E-03	-0.674
NB-97	8.596E-06		1.424E-05	Half-Life too short		
ZR-97	-1.327E-03		4.564E-04	Half-Life too short		
MO-99	9.682E-01		1.053E+00	2.000E+00	2.896E-01	0.484
TC-99M	-6.548E-03		5.062E+00	Half-Life too short		
RH-101	1.010E-02		1.393E-02	2.479E-02	1.534E-03	0.407
RH-102	-2.232E-03		1.673E-02	2.666E-02	1.630E-03	-0.084
RU-103	3.455E-03		2.321E-02	3.846E-02	4.950E-03	0.090
RH-106	-1.957E-01		2.181E-01	2.942E-01	3.641E-02	-0.665
RU-106	-1.957E-01		2.172E-01	2.942E-01	2.059E-02	-0.665
AG-108M	7.511E-05		2.065E-02	3.374E-02	2.115E-03	0.002
CD-109	4.211E-02		1.855E-01	3.069E-01	2.543E-02	0.137
AG-110M	5.583E-03		1.851E-02	3.264E-02	2.428E-03	0.171
IN-111	-3.361E-02		7.082E-02	1.119E-01	6.855E-03	-0.300
IN-113M	4.047E-03		2.459E-02	4.113E-02	2.385E-03	0.098
SN-113	4.047E-03		2.459E-02	4.113E-02	2.385E-03	0.098
IN-114M	-8.922E-03		7.250E-02	1.205E-01	7.427E-03	-0.074
CD-115	-3.885E-01		5.618E-01	7.924E-01	5.146E-02	-0.490
SN-117M	1.236E-02		1.610E-02	2.751E-02	1.962E-03	0.449
SB-122	-2.962E-02		1.703E-01	2.668E-01	1.791E-02	-0.111
I-123	1.085E-04		7.803E-05	Half-Life too short		
TE-123M	8.229E-03		1.183E-02	2.010E-02	1.433E-03	0.409
I-124	1.931E-02		1.311E-01	2.155E-01	1.490E-02	0.090
SB-124	-3.244E-02		7.554E-02	1.122E-01	7.061E-03	-0.289
SB-125	-3.660E-02		5.493E-02	8.140E-02	4.857E-03	-0.450
TE-125M	-1.841E+00		2.927E+00	4.084E+00	4.748E-01	-0.451

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-126	6.899E-02		7.533E-02	1.424E-01	1.019E-02	0.485
SB-126	-3.045E-03		5.691E-02	9.430E-02	6.868E-03	-0.032
SN-126	2.990E-03		1.796E-02	2.957E-02	2.441E-03	0.101
SB-127	-1.750E-01		2.060E-01	2.919E-01	2.431E-02	-0.599
XE-127	-6.565E-03		1.726E-02	2.790E-02	1.729E-03	-0.235
I-131	5.277E-02		3.684E-02	6.937E-02	4.349E-03	0.761
TE-132	4.611E-03		6.199E-02	1.043E-01	1.392E-02	0.044
BA-133	-8.596E-03		2.662E-02	4.224E-02	4.861E-03	-0.203
I-133	-1.488E-06		3.602E-06	Half-Life too short		
CS-134	3.451E-03		2.878E-02	4.886E-02	3.617E-03	0.071
CS-135	1.644E-02		7.632E-02	1.295E-01	1.007E-02	0.127
I-135	-4.293E+00		7.288E+00	Half-Life too short		
CS-136	-8.120E-03		6.019E-02	9.663E-02	6.790E-03	-0.084
BA-137M	-9.564E-03		2.045E-02	3.158E-02	2.256E-03	-0.303
CS-137	-1.011E-02		2.162E-02	3.338E-02	2.391E-03	-0.303
CE-139	-1.049E-03		1.170E-02	1.957E-02	1.186E-03	-0.054
BA-140	1.035E-01		1.193E-01	2.083E-01	6.803E-02	0.497
LA-140	-4.419E-02		5.002E-02	6.396E-02	3.790E-03	-0.691
CE-141	2.435E-03		2.107E-02	3.409E-02	3.080E-03	0.071
CE-143	-3.681E-01		1.390E+00	2.235E+00	4.572E-01	-0.165
CE-144	2.288E-02		7.861E-02	1.294E-01	2.142E-02	0.177
PM-144	1.133E-02		2.510E-02	4.440E-02	3.214E-03	0.255
PR-144	7.648E-01		1.694E+00	2.997E+00	2.169E-01	0.255
PM-146	3.145E-03		2.540E-02	4.212E-02	3.672E-03	0.075
ND-147	-6.510E-02		2.004E-01	3.059E-01	4.235E-02	-0.213
PM-149	1.198E+00		4.519E+00	7.683E+00	1.089E+00	0.156
EU-152	-1.395E-02		5.580E-02	8.934E-02	5.810E-03	-0.156
GD-153	1.013E-04		2.118E-02	3.424E-02	3.100E-03	0.003
EU-154	-3.475E-03		7.246E-02	1.162E-01	1.093E-02	-0.030
EU-155	3.584E-02		3.332E-02	5.914E-02	5.832E-03	0.606
TB-160	-1.175E-01		9.279E-02	1.146E-01	8.262E-03	-1.025
HO-166M	-3.624E-03		4.306E-02	7.116E-02	5.172E-03	-0.051
TM-171	-3.809E-02		4.392E+00	7.148E+00	5.172E-01	-0.005
LU-176	4.576E-03		1.338E-02	2.293E-02	1.345E-03	0.200
LU-177	5.930E-02		2.075E-01	3.563E-01	2.211E-02	0.166
LU-177M	-2.588E-02		1.050E-01	1.665E-01	9.306E-03	-0.155
HF-181	3.124E-03		2.186E-02	3.631E-02	2.239E-03	0.086
W-181	1.133E-02		5.483E-02	8.772E-02	6.306E-03	0.129
TA-182	2.828E-02		1.077E-01	1.854E-01	1.072E-02	0.153
RE-183	-2.612E-03		4.198E-02	7.042E-02	4.638E-03	-0.037
RE-184	1.707E-02		1.102E-01	1.862E-01	1.133E-02	0.092
OS-185	-6.696E-03		2.596E-02	3.971E-02	2.816E-03	-0.169
RE-188	-7.877E-03		6.532E-02	1.030E-01	7.856E-03	-0.076
W-188	-4.238E-01		3.544E+00	5.801E+00	3.400E-01	-0.073
IR-192	4.161E-03		1.729E-02	2.932E-02	1.725E-03	0.142
AU-195	1.295E-02		5.735E-02	9.497E-02	8.717E-03	0.136
TL-200	-1.459E+00		2.151E+00	3.250E+00	1.822E-01	-0.449
TL-201	-1.571E-01		5.099E-01	8.364E-01	5.066E-02	-0.188

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202	1.776E-02		3.030E-02	5.281E-02	3.074E-03	0.336
HG-203	-5.990E-03		1.653E-02	2.628E-02	1.628E-03	-0.228
BI-207	2.165E-02		3.011E-02	5.710E-02	3.693E-03	0.379
TL-207	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
TL-208	5.226E-03		2.639E-02	4.301E-02	3.263E-03	0.121
PO-209	2.613E+00		4.889E+00	8.862E+00	6.344E-01	0.295
BI-210	-9.202E-02		1.715E-01	2.654E-01	2.010E-02	-0.347
PB-210	-9.202E-02		1.715E-01	2.654E-01	2.010E-02	-0.347
PO-210	-9.202E-02		1.715E-01	2.654E-01	1.715E-02	-0.347
BI-211	-1.104E-02		1.359E-01	2.130E-01	1.355E-02	-0.052
PB-211	-5.992E-01		6.258E-01	6.759E-01	4.212E-01	-0.886
BI-212	2.395E-02		1.581E-01	2.713E-01	2.412E-02	0.088
PB-212	1.502E-02		3.021E-02	5.072E-02	3.864E-03	0.296
PO-212	1.502E-02		3.021E-02	5.072E-02	3.864E-03	0.296
BI-214	2.328E-02		4.268E-02	7.453E-02	6.459E-03	0.312
PB-214	1.965E-03		4.753E-02	7.545E-02	6.207E-03	0.026
PO-214	1.965E-03		4.753E-02	7.545E-02	6.207E-03	0.026
PO-215	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
PO-216	1.502E-02		3.021E-02	5.072E-02	3.864E-03	0.296
PO-218	1.965E-03		4.753E-02	7.545E-02	6.207E-03	0.026
RN-219	7.473E-02		2.270E-01	3.874E-01	5.219E-02	0.193
RN-220	1.964E+00		1.768E+01	2.905E+01	1.927E+00	0.068
RA-223	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
RA-224	2.972E-01		3.065E-01	5.533E-01	3.403E-02	0.537
RA-226	2.328E-02		4.268E-02	7.453E-02	6.459E-03	0.312
AC-227	-3.958E-02		1.897E-01	3.091E-01	4.348E-02	-0.128
TH-227	-3.958E-02		1.898E-01	3.091E-01	5.251E-02	-0.128
AC-228	1.781E-02		9.382E-02	1.600E-01	1.623E-02	0.111
RA-228	1.781E-02		9.382E-02	1.600E-01	1.623E-02	0.111
TH-228	1.509E-02		3.022E-02	5.073E-02	3.866E-03	0.298
TH-229	3.421E-03		2.153E-01	3.619E-01	2.235E-02	0.009
TH-230	2.328E-02		4.268E-02	7.453E-02	6.459E-03	0.312
PA-231	-1.986E-01		7.966E-01	1.286E+00	1.775E-01	-0.154
TH-231	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
U-231	-2.913E-02		8.441E-02	1.316E-01	1.173E-02	-0.221
TH-232	1.781E-02		9.382E-02	1.600E-01	1.623E-02	0.111
PA-233	-1.932E-02		3.515E-02	5.454E-02	3.391E-03	-0.354
PA-234	2.306E-02		1.940E-01	3.275E-01	5.922E-02	0.070
PA-234M	4.544E+00		4.203E+00	8.240E+00	8.113E-01	0.552
TH-234	-8.490E-02		1.958E-01	2.944E-01	5.100E-02	-0.288
U-234	2.328E-02		4.268E-02	7.453E-02	6.459E-03	0.312
U-235	-4.942E-02		8.567E-02	1.285E-01	2.281E-02	-0.384
NP-236	1.730E-02		3.475E-02	5.802E-02	3.992E-03	0.298
NP-237	1.428E-02		5.113E-02	8.503E-02	1.888E-02	0.168
U-238	-8.490E-02		1.958E-01	2.944E-01	5.100E-02	-0.288
NP-239	-2.697E-02		6.572E-02	1.010E-01	1.106E-02	-0.267
AM-241	2.082E-03		1.792E-02	2.959E-02	2.310E-03	0.070
AM-243	1.823E-02		1.093E-02	2.011E-02	1.519E-03	0.906

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-5.270E-03		3.057E-02	4.845E-02	4.662E-03	-0.109
CM-247	6.831E-03		1.927E-02	3.309E-02	1.815E-03	0.206
CF-249	2.591E-03		2.046E-02	3.415E-02	1.852E-03	0.076
CF-251	-3.373E-02		5.529E-02	8.813E-02	5.382E-03	-0.383
ANH-511	-2.552E-02		3.517E-02	6.467E-02	4.125E-03	-0.395

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201874832           *
* Acquisition date : 14-JUL-2009 11:22:57 Detector SN#    :                 *
* Detector ID      : GAM21                Sensitivity     : 5.000           *
* Geometry         : CAN                  Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:08.64     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      :  7-JUL-2009 00:00:00 Nuclide Library : SOLID           *
* Sample ID        : G1201874832          Analyst initials: MXR1            *
* Batch Number     : 882713               Sample Quantity : 1.4447E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
RB-86	4.005E-01	5.594E-01	2.779E-01	2.854E-01

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-1.503E-02	1.505E-01	1.268E-01	7.680E-02	NOT IDENT.
NA-22	-1.239E-03	2.532E-02	2.091E-02	1.292E-02	NOT IDENT.
NA-24	2.335E+01	1.057E+02	0.000E+00	5.392E+01	SHORT HLIF
AL-26	6.492E-04	2.938E-02	2.497E-02	1.499E-02	NOT IDENT.
K-40	1.401E-01	3.090E-01	2.802E-01	1.576E-01	NOT IDENT.
TI-44	-2.974E-03	7.194E-03	6.148E-03	3.670E-03	NOT IDENT.
SC-46	-2.258E-02	2.300E-02	1.558E-02	1.174E-02	NOT IDENT.
V-48	1.966E-02	3.718E-02	3.447E-02	1.897E-02	NOT IDENT.
CR-51	-4.493E-02	1.613E-01	1.371E-01	8.232E-02	NOT IDENT.
MN-52	-6.918E-02	6.679E-02	3.606E-02	3.408E-02	NOT IDENT.
MN-54	-1.473E-02	2.551E-02	1.997E-02	1.302E-02	NOT IDENT.
CO-56	1.631E-02	2.762E-02	2.583E-02	1.409E-02	NOT IDENT.
CO-57	3.780E-03	8.882E-03	8.048E-03	4.532E-03	NOT IDENT.
CO-58	-9.316E-03	2.157E-02	1.709E-02	1.101E-02	NOT IDENT.
FE-59	-2.196E-02	5.676E-02	4.440E-02	2.896E-02	NOT IDENT.
CO-60	6.596E-03	2.671E-02	2.358E-02	1.363E-02	NOT IDENT.
ZN-65	-2.489E-03	5.121E-02	4.281E-02	2.613E-02	NOT IDENT.
GE-68	5.249E-01	8.868E-01	7.528E-01	4.524E-01	NOT IDENT.
AS-73	2.123E-02	6.960E-02	6.454E-02	3.551E-02	NOT IDENT.
AS-74	-2.515E-02	4.479E-02	3.439E-02	2.285E-02	NOT IDENT.
SE-75	-2.727E-03	2.050E-02	1.792E-02	1.046E-02	NOT IDENT.
BR-77	1.850E-01	6.985E-01	6.174E-01	3.564E-01	NOT IDENT.
SR-82	1.080E-01	2.001E-01	1.878E-01	1.021E-01	NOT IDENT.
RB-83	1.301E-02	3.977E-02	3.548E-02	2.029E-02	NOT IDENT.
RB-84	-6.888E-03	4.107E-02	3.428E-02	2.095E-02	NOT IDENT.
KR-85	-9.011E-01	7.104E+00	5.989E+00	3.624E+00	NOT IDENT.

SR-85	-4.263E-03	3.361E-02	2.834E-02	1.715E-02	NOT IDENT.
Y-88	1.465E-02	3.528E-02	3.269E-02	1.800E-02	NOT IDENT.
ZR-88	2.467E-03	1.687E-02	1.487E-02	8.609E-03	NOT IDENT.
Y-91	1.042E+00	1.130E+01	9.652E+00	5.763E+00	NOT IDENT.
NB-94	-1.940E-03	2.294E-02	1.981E-02	1.171E-02	NOT IDENT.
NB-95	5.445E-03	2.413E-02	2.167E-02	1.231E-02	NOT IDENT.
NB-95M	-6.197E-02	5.101E-02	4.015E-02	2.603E-02	NOT IDENT.
ZR-95	-3.389E-02	3.646E-02	2.566E-02	1.860E-02	NOT IDENT.
NB-97	8.596E+00	2.792E+01	0.000E+00	1.424E+01	SHORT HLIF
ZR-97	-1.327E+03	8.946E+02	0.000E+00	4.564E+02	SHORT HLIF
MO-99	9.682E-01	1.032E+00	1.022E+00	5.265E-01	NOT IDENT.
TC-99M	-6.548E+03	9.921E+06	0.000E+00	5.062E+06	SHORT HLIF
RH-101	1.010E-02	1.365E-02	1.304E-02	6.963E-03	NOT IDENT.
RH-102	-2.232E-03	1.640E-02	1.375E-02	8.366E-03	NOT IDENT.
RU-103	3.455E-03	2.274E-02	1.982E-02	1.160E-02	NOT IDENT.
RH-106	-1.957E-01	2.138E-01	1.509E-01	1.091E-01	NOT IDENT.
RU-106	-1.957E-01	2.129E-01	1.509E-01	1.086E-01	NOT IDENT.
AG-108M	7.511E-05	2.024E-02	1.744E-02	1.033E-02	NOT IDENT.
CD-109	4.211E-02	1.818E-01	1.641E-01	9.274E-02	NOT IDENT.
AG-110M	5.583E-03	1.814E-02	1.672E-02	9.253E-03	NOT IDENT.
IN-111	-3.361E-02	6.940E-02	5.855E-02	3.541E-02	NOT IDENT.
IN-113M	4.047E-03	2.410E-02	2.131E-02	1.229E-02	NOT IDENT.
SN-113	4.047E-03	2.410E-02	2.131E-02	1.229E-02	NOT IDENT.
IN-114M	-8.922E-03	7.105E-02	6.340E-02	3.625E-02	NOT IDENT.
CD-115	-3.885E-01	5.506E-01	4.079E-01	2.809E-01	NOT IDENT.
SN-117M	1.236E-02	1.578E-02	1.453E-02	8.050E-03	NOT IDENT.
SB-122	-2.962E-02	1.669E-01	1.371E-01	8.516E-02	NOT IDENT.
I-123	1.085E+02	1.529E+02	0.000E+00	7.803E+01	SHORT HLIF
TE-123M	8.229E-03	1.160E-02	1.062E-02	5.917E-03	NOT IDENT.
I-124	1.931E-02	1.285E-01	1.106E-01	6.556E-02	NOT IDENT.
SB-124	-3.244E-02	7.403E-02	5.624E-02	3.777E-02	NOT IDENT.
SB-125	-3.660E-02	5.383E-02	4.209E-02	2.747E-02	NOT IDENT.
TE-125M	-1.841E+00	2.869E+00	2.175E+00	1.464E+00	NOT IDENT.
I-126	6.899E-02	7.383E-02	7.290E-02	3.767E-02	NOT IDENT.
SB-126	-3.045E-03	5.577E-02	4.819E-02	2.845E-02	NOT IDENT.
SN-126	2.990E-03	1.760E-02	1.581E-02	8.980E-03	NOT IDENT.
SB-127	-1.750E-01	2.019E-01	1.494E-01	1.030E-01	NOT IDENT.
XE-127	-6.565E-03	1.691E-02	1.466E-02	8.628E-03	NOT IDENT.
I-131	5.277E-02	3.611E-02	3.600E-02	1.842E-02	NOT IDENT.
TE-132	4.611E-03	6.075E-02	5.465E-02	3.100E-02	NOT IDENT.
BA-133	-8.596E-03	2.609E-02	2.193E-02	1.331E-02	NOT IDENT.
I-133	-1.488E+00	7.059E+00	0.000E+00	3.602E+00	SHORT HLIF
CS-134	3.451E-03	2.820E-02	2.492E-02	1.439E-02	NOT IDENT.
CS-135	1.644E-02	7.479E-02	6.766E-02	3.816E-02	NOT IDENT.
I-135	-4.293E+06	1.428E+07	0.000E+00	7.288E+06	SHORT HLIF
CS-136	-8.120E-03	5.899E-02	4.897E-02	3.010E-02	NOT IDENT.
BA-137M	-9.564E-03	2.004E-02	1.617E-02	1.023E-02	NOT IDENT.
CS-137	-1.011E-02	2.119E-02	1.709E-02	1.081E-02	NOT IDENT.
CE-139	-1.049E-03	1.147E-02	1.033E-02	5.850E-03	NOT IDENT.
BA-140	1.035E-01	1.169E-01	1.071E-01	5.965E-02	NOT IDENT.
LA-140	-4.419E-02	4.902E-02	3.210E-02	2.501E-02	NOT IDENT.
CE-141	2.435E-03	2.065E-02	1.804E-02	1.054E-02	NOT IDENT.
CE-143	-3.681E-01	1.362E+00	1.165E+00	6.949E-01	NOT IDENT.
CE-144	2.288E-02	7.704E-02	6.862E-02	3.931E-02	NOT IDENT.
PM-144	1.133E-02	2.460E-02	2.271E-02	1.255E-02	NOT IDENT.
PR-144	7.648E-01	1.660E+00	1.533E+00	8.471E-01	NOT IDENT.
PM-146	3.145E-03	2.489E-02	2.175E-02	1.270E-02	NOT IDENT.
ND-147	-6.510E-02	1.964E-01	1.574E-01	1.002E-01	NOT IDENT.
PM-149	1.198E+00	4.429E+00	4.008E+00	2.260E+00	NOT IDENT.
EU-152	-1.395E-02	5.469E-02	4.642E-02	2.790E-02	NOT IDENT.
GD-153	1.013E-04	2.076E-02	1.828E-02	1.059E-02	NOT IDENT.
EU-154	-3.475E-03	7.101E-02	5.864E-02	3.623E-02	NOT IDENT.
EU-155	3.584E-02	3.265E-02	3.151E-02	1.666E-02	NOT IDENT.
TB-160	-1.175E-01	9.094E-02	5.833E-02	4.640E-02	NOT IDENT.
HO-166M	-3.624E-03	4.220E-02	3.638E-02	2.153E-02	NOT IDENT.
TM-171	-3.809E-02	4.304E+00	3.845E+00	2.196E+00	NOT IDENT.
LU-176	4.576E-03	1.311E-02	1.194E-02	6.691E-03	NOT IDENT.
LU-177	5.930E-02	2.034E-01	1.871E-01	1.038E-01	NOT IDENT.
LU-177M	-2.588E-02	1.029E-01	8.617E-02	5.250E-02	NOT IDENT.
HF-181	3.124E-03	2.142E-02	1.873E-02	1.093E-02	NOT IDENT.
W-181	1.133E-02	5.373E-02	4.720E-02	2.742E-02	NOT IDENT.
TA-182	2.828E-02	1.056E-01	9.362E-02	5.387E-02	NOT IDENT.
RE-183	-2.612E-03	4.114E-02	3.718E-02	2.099E-02	NOT IDENT.
RE-184	1.707E-02	1.080E-01	9.739E-02	5.508E-02	NOT IDENT.
OS-185	-6.696E-03	2.544E-02	2.034E-02	1.298E-02	NOT IDENT.
RE-188	-7.877E-03	6.402E-02	5.445E-02	3.266E-02	NOT IDENT.
W-188	-4.238E-01	3.473E+00	3.025E+00	1.772E+00	NOT IDENT.
IR-192	4.161E-03	1.694E-02	1.526E-02	8.645E-03	NOT IDENT.

AU-195	1.295E-02	5.620E-02	5.067E-02	2.868E-02	NOT IDENT.
TL-200	-1.459E+00	2.108E+00	1.686E+00	1.076E+00	NOT IDENT.
TL-201	-1.571E-01	4.997E-01	4.414E-01	2.550E-01	NOT IDENT.
TL-202	1.776E-02	2.970E-02	2.729E-02	1.515E-02	NOT IDENT.
HG-203	-5.990E-03	1.620E-02	1.372E-02	8.264E-03	NOT IDENT.
BI-207	2.165E-02	2.951E-02	2.893E-02	1.506E-02	NOT IDENT.
TL-207	-5.650E-02	3.389E-01	2.914E-01	1.729E-01	NOT IDENT.
TL-208	5.226E-03	2.586E-02	2.209E-02	1.320E-02	NOT IDENT.
PO-209	2.613E+00	4.791E+00	4.507E+00	2.445E+00	NOT IDENT.
BI-210	-9.202E-02	1.681E-01	1.438E-01	8.576E-02	NOT IDENT.
PB-210	-9.202E-02	1.681E-01	1.438E-01	8.576E-02	NOT IDENT.
PO-210	-9.202E-02	1.680E-01	1.438E-01	8.574E-02	NOT IDENT.
BI-211	-1.104E-02	1.332E-01	1.106E-01	6.796E-02	NOT IDENT.
PB-211	-5.992E-01	6.132E-01	3.499E-01	3.129E-01	NOT IDENT.
BI-212	2.395E-02	1.549E-01	1.386E-01	7.904E-02	NOT IDENT.
PB-212	1.502E-02	2.961E-02	2.656E-02	1.511E-02	NOT IDENT.
PO-212	1.502E-02	2.961E-02	2.656E-02	1.511E-02	NOT IDENT.
BI-214	2.328E-02	4.183E-02	3.824E-02	2.134E-02	NOT IDENT.
PB-214	1.965E-03	4.658E-02	3.918E-02	2.377E-02	NOT IDENT.
PO-214	1.965E-03	4.658E-02	3.918E-02	2.377E-02	NOT IDENT.
PO-215	-5.650E-02	3.389E-01	2.914E-01	1.729E-01	NOT IDENT.
PO-216	1.502E-02	2.961E-02	2.656E-02	1.511E-02	NOT IDENT.
PO-218	1.965E-03	4.658E-02	3.918E-02	2.377E-02	NOT IDENT.
RN-219	7.473E-02	2.225E-01	2.006E-01	1.135E-01	NOT IDENT.
RN-220	1.964E+00	1.733E+01	1.494E+01	8.841E+00	NOT IDENT.
RA-223	-5.650E-02	3.389E-01	2.914E-01	1.729E-01	NOT IDENT.
RA-224	2.972E-01	3.004E-01	2.897E-01	1.533E-01	NOT IDENT.
RA-226	2.328E-02	4.183E-02	3.824E-02	2.134E-02	NOT IDENT.
AC-227	-3.958E-02	1.859E-01	1.616E-01	9.486E-02	NOT IDENT.
TH-227	-3.958E-02	1.860E-01	1.616E-01	9.488E-02	NOT IDENT.
AC-228	1.781E-02	9.195E-02	8.135E-02	4.691E-02	NOT IDENT.
RA-228	1.781E-02	9.195E-02	8.135E-02	4.691E-02	NOT IDENT.
TH-228	1.509E-02	2.961E-02	2.657E-02	1.511E-02	NOT IDENT.
TH-229	3.421E-03	2.110E-01	1.904E-01	1.077E-01	NOT IDENT.
TH-230	2.328E-02	4.183E-02	3.824E-02	2.134E-02	NOT IDENT.
PA-231	-1.986E-01	7.807E-01	6.711E-01	3.983E-01	NOT IDENT.
TH-231	-5.650E-02	3.389E-01	2.914E-01	1.729E-01	NOT IDENT.
U-231	-2.913E-02	8.272E-02	7.025E-02	4.220E-02	NOT IDENT.
TH-232	1.781E-02	9.195E-02	8.135E-02	4.691E-02	NOT IDENT.
PA-233	-1.932E-02	3.445E-02	2.840E-02	1.758E-02	NOT IDENT.
PA-234	2.306E-02	1.901E-01	1.663E-01	9.698E-02	NOT IDENT.
PA-234M	4.544E+00	4.119E+00	4.180E+00	2.101E+00	NOT IDENT.
TH-234	-8.490E-02	1.919E-01	1.585E-01	9.791E-02	NOT IDENT.
U-234	2.328E-02	4.183E-02	3.824E-02	2.134E-02	NOT IDENT.
U-235	-4.942E-02	8.396E-02	6.805E-02	4.283E-02	NOT IDENT.
NP-236	1.730E-02	3.406E-02	3.065E-02	1.738E-02	NOT IDENT.
NP-237	1.428E-02	5.011E-02	4.549E-02	2.557E-02	NOT IDENT.
U-238	-8.490E-02	1.919E-01	1.585E-01	9.791E-02	NOT IDENT.
NP-239	-2.697E-02	6.441E-02	5.373E-02	3.286E-02	NOT IDENT.
AM-241	2.082E-03	1.756E-02	1.595E-02	8.959E-03	NOT IDENT.
AM-243	1.823E-02	1.071E-02	1.079E-02	5.465E-03	NOT IDENT.
CM-243	-5.270E-03	2.995E-02	2.582E-02	1.528E-02	NOT IDENT.
CM-247	6.831E-03	1.889E-02	1.713E-02	9.635E-03	NOT IDENT.
CF-249	2.591E-03	2.005E-02	1.770E-02	1.023E-02	NOT IDENT.
CF-251	-3.373E-02	5.419E-02	4.645E-02	2.765E-02	NOT IDENT.
ANH-511	-2.552E-02	3.446E-02	3.331E-02	1.758E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	55.6060
46.50	55.6060
46.50	55.6060
48.70	56.7909
49.72	47.7304
51.35	44.7821
52.39	43.8248
52.97	49.9781
53.15	54.0706
53.44	52.0500
54.07	55.1570
56.28	58.3862
56.28	58.3864
57.37	54.3638
57.53	54.3747
57.53	54.3748
57.60	54.3795
57.98	45.1666
57.98	45.1666
59.32	50.3827
59.32	50.3827
59.40	50.3877
59.54	50.3964
59.72	57.6086
60.01	61.7453
61.10	55.6446
61.14	58.7387
61.30	57.7193
63.00	61.9683
63.29	64.0559
63.29	64.0559
63.58	64.0779
64.28	48.6153
65.12	50.7339
65.20	53.8450
65.20	53.8450
66.05	51.8251
66.72	61.2007
66.83	63.2835
66.91	63.2893
67.20	57.0832
67.20	57.0832
67.75	55.0420
67.85	58.1642
68.90	64.4727
68.90	64.4727
69.30	66.5825
69.67	72.8551
70.82	70.8643
70.82	70.8643
70.83	70.8651
72.80	75.1967
72.87	75.2024
72.87	75.2024
74.67	47.0934
74.81	45.0071
74.81	45.0071
74.81	45.0071
74.81	45.0071
74.81	45.0071
74.81	45.0071
74.97	45.0148
75.28	46.0771
75.70	59.7175
77.11	66.1026
77.11	66.1026
77.11	66.1026

77.11	66.1026
77.11	66.1026
77.11	66.1026
78.38	70.3937
79.62	67.3286
79.80	67.3413
79.80	67.3413
80.11	64.2052
80.18	68.4203
80.30	68.4287
80.30	68.4287
80.57	61.0765
81.00	56.8895
81.07	56.8936
81.07	56.8936
81.07	56.8936
81.07	56.8936
82.60	51.7064
83.37	53.8587
83.78	54.9378
83.78	54.9378
83.78	54.9378
83.78	54.9378
84.21	58.1322
84.40	58.1433
84.90	59.2302
85.43	57.1451
86.29	48.7208
86.50	48.7308
86.54	48.7327
86.59	48.7351
86.72	48.7415
86.79	48.7446
86.94	52.9913
87.30	51.9500
87.30	51.9500
87.30	51.9500
87.30	51.9500
87.30	51.9500
87.30	51.9500
87.57	53.0241
87.88	55.1619
88.03	55.1701
88.36	54.1264
88.47	54.1322
89.95	74.4060
91.11	51.0784
92.29	51.1360
92.38	52.2057
92.38	52.2057
93.35	57.5858
94.00	56.5541
94.67	50.1831
94.67	50.1833
94.90	51.2621
94.90	51.2621
94.90	51.2621
94.90	51.2621
95.87	58.7910
95.87	58.7910
96.73	64.1872
97.43	49.2417
98.44	37.5014
98.44	37.5014
98.88	40.7322
99.55	57.9180
99.55	57.9180
99.86	61.1528
100.00	62.2337
100.10	62.2395
103.18	55.9554
103.76	57.0610
105.00	43.1122
105.31	40.9678
108.00	48.6287
109.28	56.2553
111.00	55.2550
111.00	55.2550

111.76	49.8701
112.95	56.4317
115.19	45.6653
116.30	55.5021
117.00	57.7120
117.00	57.7120
117.66	52.2960
121.11	46.9807
121.62	47.0001
121.78	47.0062
122.06	51.3905
122.32	55.7758
122.32	55.7758
122.32	55.7758
122.32	55.7758
123.07	64.5639
127.23	68.0714
129.76	69.3063
131.20	62.7756
133.02	57.3495
133.54	57.3721
135.34	50.8217
136.00	61.9011
136.25	61.9127
136.48	61.9233
140.51	61.0009
140.51	0.0000
142.18	55.5241
142.65	63.3192
143.76	70.0413
144.24	68.9539
144.24	68.9539
144.24	68.9539
144.24	68.9539
145.22	57.8736
145.44	57.8827
147.16	55.7255
152.43	58.1727
152.70	53.7081
153.22	51.4892
154.21	53.7653
154.21	53.7653
154.21	53.7653
154.21	53.7653
155.03	60.5205
156.02	72.8989
158.56	53.9279
159.00	0.0000
159.00	55.0682
160.31	57.3672
161.27	64.8338
162.32	63.0778
162.64	68.4993
163.35	67.6305
163.89	64.0469
165.85	60.5184
167.43	64.1990
171.28	58.9237
171.86	56.2257
172.10	58.0484
176.55	72.7705
176.60	70.0440
181.06	58.3848
184.41	57.5940
185.71	58.5559
186.00	58.5668
190.27	64.2271
192.34	56.0404
193.63	55.1653
197.04	53.4365
198.01	47.9365
198.60	47.9537
200.40	60.0068
201.83	55.4377
202.84	58.2446
205.31	52.7744
208.36	51.9412
208.81	49.1712

209.75	56.6242
209.75	56.6242
210.97	56.6644
215.65	57.7481
216.55	55.9138
218.09	48.5012
222.10	58.8937
223.80	56.1423
226.40	45.9157
227.00	48.7430
227.08	48.7452
227.20	48.7484
228.16	50.6501
228.18	50.6507
228.18	50.6507
231.56	41.3475
235.69	69.6948
236.00	67.8226
236.00	67.8226
238.60	43.3914
238.63	43.3923
238.63	43.3923
238.63	43.3923
239.00	41.5137
240.98	45.3354
241.98	55.7547
241.98	55.7547
241.98	55.7547
244.69	52.0489
245.39	45.4412
247.94	46.4501
248.90	49.3187
249.79	39.8528
252.40	46.5578
252.85	45.6182
252.85	45.6182
254.15	0.0000
256.20	50.4568
256.20	50.4568
260.50	48.6592
260.90	45.8063
262.80	39.1637
264.65	46.8485
268.24	44.0594
268.79	34.4905
269.46	38.3354
269.46	38.3354
269.46	38.3354
269.46	38.3354
271.23	39.3284
273.65	39.3754
276.40	33.6584
277.35	39.4465
277.60	42.3382
277.60	42.3382
278.00	44.2711
278.60	39.4705
279.20	40.4450
279.53	33.7093
280.46	34.6882
281.68	32.7802
283.67	47.2875
284.30	47.3019
285.00	45.3861
285.90	45.4056
286.10	41.5455
286.10	41.5455
287.40	43.5048
288.45	0.0000
290.67	46.4771
290.80	46.4795
291.72	50.3750
293.26	47.5028
293.70	45.5737
295.21	41.7245
295.21	41.7245
295.21	41.7245
295.96	40.7685

296.50	43.6915
297.23	44.6776
298.57	41.7901
299.80	42.7861
299.80	42.7861
300.09	50.5724
300.09	50.5724
300.09	50.5724
300.10	50.5724
300.12	50.5730
301.29	49.6273
302.84	42.8463
303.76	42.8640
303.91	42.8672
304.40	43.8514
304.40	43.8514
304.84	44.8348
306.84	39.0225
308.46	44.9090
311.98	46.9362
316.51	37.2337
318.01	43.1412
319.02	47.0848
319.41	44.1491
320.08	41.2181
323.87	39.3213
323.87	39.3213
323.87	39.3213
323.87	39.3213
325.23	38.3611
328.77	28.5692
333.44	33.5630
334.20	37.5241
334.20	37.5241
334.30	37.5255
338.28	38.5792
338.28	38.5792
338.28	38.5792
338.28	38.5792
338.32	38.5796
338.32	38.5796
338.32	38.5796
340.50	37.6257
340.57	39.6069
344.27	42.6446
345.85	38.7034
350.59	34.8030
351.07	35.8049
351.92	34.8227
351.92	34.8227
351.92	34.8227
355.39	0.0000
356.01	46.8414
364.48	27.0026
366.43	35.0316
367.43	47.0614
367.94	45.0681
369.80	43.0976
374.96	38.1651
383.85	34.2689
387.95	25.2383
388.63	29.2843
391.69	31.3413
391.69	31.3413
392.90	33.3791
398.62	35.4807
400.65	26.3774
401.10	27.3968
401.81	26.3891
402.60	23.3515
404.84	36.5814
410.95	22.4071
411.60	21.3937
413.65	36.7036
414.70	33.6582
415.30	30.6050
415.76	28.5698
417.63	0.0000

418.52	35.7490
423.70	24.5607
427.08	36.8873
427.89	34.8483
432.53	29.7742
433.93	31.8439
439.47	31.9078
439.56	30.8796
439.89	31.9127
443.98	31.9597
444.90	37.1268
445.03	37.1285
445.03	37.1285
445.03	37.1285
445.03	37.1285
453.90	24.8306
463.38	25.9515
468.07	28.0731
473.00	16.6643
475.06	23.9720
475.35	21.8895
476.78	20.8574
477.59	19.8201
477.96	23.9959
482.03	21.9395
484.57	15.6846
487.03	26.1627
490.36	28.2874
492.35	18.8710
497.08	26.2509
507.63	0.0000
510.53	0.0000
510.84	32.6993
511.00	32.7010
511.85	24.2688
511.85	24.2688
513.99	78.1372
513.99	78.1372
520.41	21.1621
520.65	22.2218
527.90	22.2735
528.96	0.0000
529.64	18.0413
529.87	0.0000
531.02	21.2344
537.32	19.1492
543.00	35.1697
546.56	0.0000
549.76	24.5638
552.65	24.5857
555.20	18.1866
563.23	20.3763
563.90	20.3805
568.70	20.4106
569.32	18.2655
569.50	21.4897
569.67	21.4912
573.80	27.9735
574.00	29.0507
574.64	26.9043
578.91	23.7064
579.30	22.6314
583.14	19.4208
585.48	19.4344
591.81	19.4708
592.07	22.7175
593.00	19.4779
595.88	27.0752
600.56	18.4365
602.52	0.0000
602.71	26.0443
602.71	26.0443
603.60	36.9061
604.41	32.5715
604.70	30.4028
609.31	17.3965
609.31	17.3965
609.31	17.3965

609.31	17.3965
610.33	20.6644
612.46	27.2070
614.37	19.5996
618.01	19.6203
621.84	28.3715
621.84	28.3715
631.29	17.5066
633.02	22.9887
633.10	22.9893
634.78	20.8095
635.90	19.7205
636.97	19.7266
645.85	16.4799
646.12	19.7771
656.30	13.7729
657.75	12.8598
657.90	0.0000
661.65	19.3107
661.65	19.3107
664.57	22.0869
666.33	13.8110
666.33	13.8110
675.00	13.8437
677.61	17.5477
685.20	21.2855
692.80	25.0378
695.00	20.4133
696.49	23.2061
696.49	23.2061
697.00	26.9226
697.49	32.4971
698.33	34.3615
698.50	30.6481
699.00	29.7233
702.63	24.1735
706.10	17.6815
706.58	0.0000
706.67	23.2681
709.31	22.3530
711.68	23.2986
713.82	15.8521
717.42	20.5337
720.50	16.8138
721.93	18.6890
722.20	17.7557
722.78	15.8891
722.78	15.8891
722.89	15.8894
722.95	15.8898
723.30	17.7607
724.18	18.6995
727.18	13.0999
733.00	16.8680
735.90	17.8183
739.58	10.3255
742.81	17.8496
744.21	12.2171
747.13	13.1666
751.79	10.3575
752.31	8.4754
753.82	13.1888
755.35	17.9060
756.15	17.9099
756.87	16.0274
763.93	18.8892
765.79	17.0079
766.41	17.0105
766.84	15.1221
768.36	17.0189
768.36	17.0189
768.36	17.0189
768.36	17.0189
776.49	14.2108
778.00	18.0069
778.57	18.0096
778.89	17.0632
783.80	18.9819

785.46	18.0402
792.07	19.0202
795.84	15.2298
796.30	17.1357
801.93	9.5327
805.60	16.2197
810.29	9.5518
810.76	15.2845
815.85	16.2595
817.79	13.3964
818.51	15.3128
819.60	12.4448
826.30	19.1764
828.27	13.4298
831.60	20.1605
831.96	21.1223
834.83	23.0576
836.80	0.0000
846.75	16.3781
848.13	19.2745
856.28	0.0000
856.80	16.4158
860.37	16.4293
867.32	11.6157
867.82	9.6808
871.10	14.5322
873.19	9.6926
874.81	11.6355
875.33	0.0000
876.40	9.6997
879.36	23.2949
880.27	18.4457
880.51	18.4465
881.50	16.5085
883.24	7.7718
884.67	8.7460
889.25	17.5100
896.60	10.7182
898.02	13.6457
899.00	9.7489
903.28	26.3474
911.07	15.6400
911.07	15.6400
911.07	15.6400
919.63	11.7522
920.93	13.7146
925.00	13.7268
925.24	13.7276
926.50	18.6355
934.06	8.8418
934.06	8.8418
934.06	8.8418
934.06	8.8418
935.52	11.7927
937.48	18.6799
944.10	7.8763
946.00	11.8193
949.00	16.7548
962.29	8.8954
964.01	8.8986
966.15	12.8593
968.20	17.8129
969.11	14.8471
969.11	14.8471
969.11	14.8471
977.42	16.8561
980.50	14.8825
983.50	12.9064
989.30	7.9520
996.32	17.9180
1001.03	6.9748
1001.68	7.9723
1004.76	19.9434
1021.30	0.0000
1024.50	0.0000
1034.80	21.0692
1037.82	19.0742
1038.57	21.0846

1038.76	0.0000
1045.16	23.1235
1046.59	20.1131
1048.07	20.1188
1050.47	18.1157
1050.47	18.1157
1063.62	6.0544
1076.63	8.6712
1077.35	8.6726
1085.78	7.0940
1099.22	16.2572
1112.02	10.1860
1112.84	11.2063
1115.52	11.2122
1120.29	9.1816
1120.29	9.1816
1120.29	9.1816
1120.29	9.1816
1120.51	7.1416
1121.28	5.1019
1124.00	0.0000
1129.67	7.1541
1131.51	0.0000
1147.95	0.0000
1167.94	18.5281
1173.22	11.3339
1175.09	10.3072
1177.93	13.4063
1189.05	8.2666
1204.90	13.4718
1205.75	16.5833
1213.00	8.3027
1221.42	9.3545
1230.97	10.4118
1235.34	4.1680
1236.41	0.0000
1238.11	8.3398
1238.11	8.3398
1238.11	8.3398
1238.11	8.3398
1238.25	9.3827
1246.25	8.3519
1260.41	0.0000
1271.85	9.4380
1274.45	8.3932
1274.54	8.3932
1291.56	13.6792
1298.22	0.0000
1312.09	7.3916
1325.50	13.7585
1325.50	13.7585
1332.49	7.4170
1333.61	5.2989
1360.21	8.5160
1362.66	0.0000
1365.15	15.9802
1368.21	6.3955
1368.53	0.0000
1376.25	13.8749
1377.67	10.6755
1377.67	10.6755
1377.67	10.6755
1377.67	10.6755
1384.27	5.3436
1394.10	6.4226
1395.20	4.2824
1407.95	11.8012
1434.06	10.7731
1436.60	5.3888
1457.56	0.0000
1460.81	8.6553
1489.15	5.5886
1509.49	7.4749
1596.49	12.3067
1620.62	4.7501
1678.03	0.0000
1691.02	10.5561
1691.02	10.5561

1706.46	0.0000
1750.46	0.0000
1764.49	8.7253
1764.49	8.7253
1764.49	8.7253
1764.49	8.7253
1770.23	8.7322
1771.40	8.7335
1791.20	0.0000
1808.65	5.8518
1836.01	5.8732

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201874832

Total Uranium Activity	-2.7544E-01	ug/g
Total Uranium Counting Unc.	5.7222E-01	ug/g
Total Uranium Tpu	2.9195E-07	ug/g
Total Uranium Mda	4.7259E-01	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G1201874832      *
*   ANALYST       : MXR1                      DETECTOR   : GAM21            *
*   SAMPLE DATE   :  7-JUL-2009 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 11:22:57.85    SAMPLE ALQT:  144.470 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 2.660E-02
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.894E-02
        GROSS GAMMA MDA     (pCi/GRAM  )  : 9.943E-02
        GROSS GAMMA DLC     (pCi/GRAM  )  : 4.614E-02
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:24:36.71

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 11:23:48
Sample ID         : G1201874833          Sample quantity  : 1.33070E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.87  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.69*	125	678	1.17	94.56	90	11	1.73E-02	44.0	
2	0	62.92*	185	976	1.41	127.00	120	12	2.57E-02	35.0	
3	3	74.71*	734	552	1.20	150.58	143	16	1.02E-01	6.6	1.34E+00
4	3	76.95*	1038	520	1.10	155.05	143	16	1.44E-01	5.0	
5	2	84.33*	168	425	1.52	169.81	166	27	2.33E-02	21.5	2.79E+00
6	2	87.23	379	456	1.33	175.60	166	27	5.26E-02	11.2	
7	2	89.68	287	431	1.29	180.50	166	27	3.99E-02	14.4	
8	2	92.70*	354	454	1.53	186.53	166	27	4.92E-02	13.2	
9	0	185.99*	155	398	1.34	373.03	368	10	2.16E-02	26.3	
10	0	209.00	166	259	1.02	419.03	415	9	2.30E-02	19.1	
11	2	238.60*	1406	193	1.35	478.21	471	18	1.95E-01	3.2	4.62E+00
12	2	241.70	313	209	1.77	484.39	471	18	4.34E-02	11.0	
13	0	270.17	120	311	1.64	541.30	535	14	1.66E-02	32.7	
14	1	295.18	422	140	1.67	591.30	584	34	5.87E-02	7.2	2.86E+00
15	1	299.88	128	148	1.68	600.70	584	34	1.78E-02	20.2	
16	0	328.40	73	241	1.87	657.69	651	13	1.01E-02	45.6	
17	0	338.04	246	213	1.17	676.98	672	12	3.42E-02	13.4	
18	0	351.95*	660	161	1.55	704.78	699	12	9.17E-02	5.5	
19	0	408.72	54	113	2.73	818.23	815	10	7.53E-03	38.8	
20	0	463.16	67	116	1.88	927.04	922	11	9.27E-03	33.5	
21	0	510.66*	89	176	1.82	1021.98	1014	15	1.24E-02	38.4	
22	0	583.29*	362	123	1.54	1167.12	1160	14	5.03E-02	8.4	
23	0	609.38*	457	127	1.55	1219.26	1212	13	6.35E-02	7.0	
24	0	727.43	109	86	1.53	1455.16	1447	15	1.51E-02	21.0	
25	0	795.33	36	60	1.53	1590.83	1587	9	4.99E-03	42.0	
26	0	860.63	50	62	1.33	1721.30	1717	9	7.01E-03	31.6	
27	0	911.52*	286	100	1.89	1822.98	1814	18	3.97E-02	10.0	
28	2	964.51	54	68	2.40	1928.83	1920	43	7.47E-03	33.4	1.59E+00
29	2	969.01*	144	51	2.37	1937.83	1920	43	2.00E-02	14.2	
30	0	1120.21	109	38	1.46	2239.87	2234	11	1.51E-02	14.6	
31	0	1460.92*	1273	52	2.05	2920.37	2912	18	1.77E-01	3.1	
32	0	1729.72	23	3	1.61	3457.12	3450	13	3.20E-03	26.2	
33	0	1764.70	64	8	2.94	3526.94	3519	16	8.90E-03	15.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 13:24:39

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 11:23:48
Sample ID : G1201874833 Sample quantity : 133.07 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.87 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.355E+01	2.958E+00	7.838E-01	4.874E-02	42.808
CD-109	+	88.03	*	3.731E+00	8.820E-01	1.003E+00	7.640E-02	3.719
SN-126	+	64.28		6.735E-01	4.814E-01	4.162E-01	6.203E-02	1.618
	+	86.94		1.527E+00	7.155E-01	4.093E-01	1.685E-01	3.731
	+	87.57	*	3.674E-01	8.684E-02	9.864E-02	7.512E-03	3.724
TL-208		277.35		4.333E-01	4.529E-01	7.273E-01	9.329E-02	0.596
	+	510.84		4.580E-01	3.548E-01	2.684E-01	2.820E-02	1.706
	+	583.14	*	5.373E-01	9.881E-02	6.780E-02	4.989E-03	7.925
	+	860.37		7.189E-01	4.597E-01	5.155E-01	5.231E-02	1.394
BI-210	+	46.50	*	1.139E+00	1.006E+00	8.633E-01	6.735E-02	1.319
PB-210	+	46.50	*	1.139E+00	1.006E+00	8.633E-01	6.735E-02	1.319
PO-210	+	46.50	*	1.139E+00	1.005E+00	8.633E-01	5.807E-02	1.319
BI-211		72.87		1.188E+01	2.389E+00	4.121E+00	3.244E-01	2.882
	+	351.07	*	4.096E+00	5.574E-01	3.570E-01	2.829E-02	11.471
PB-212	+	74.81		2.409E+00	4.335E-01	3.748E-01	4.570E-02	6.427
	+	77.11		2.029E+00	2.572E-01	2.210E-01	1.720E-02	9.183
	+	87.30		1.699E+00	4.361E-01	4.559E-01	5.731E-02	3.727
	+	238.63	*	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
	+	300.09		2.649E+00	1.105E+00	1.256E+00	1.335E-01	2.109
PO-212	+	74.81		2.409E+00	4.335E-01	3.748E-01	4.570E-02	6.427
	+	77.11		2.029E+00	2.572E-01	2.210E-01	1.720E-02	9.183
	+	87.30		1.699E+00	4.361E-01	4.559E-01	5.731E-02	3.727
		115.19		1.904E+00	3.541E+00	5.952E+00	7.574E-01	0.320
	+	238.63	*	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
	+	300.09		2.649E+00	1.105E+00	1.256E+00	1.335E-01	2.109
BI-214	+	609.31	*	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
		768.36		9.582E-02	9.513E-01	1.600E+00	1.612E-01	0.060
		934.06		1.078E+00	1.456E+00	2.535E+00	2.942E-01	0.425
	+	1120.29		1.613E+00	4.968E-01	5.909E-01	5.644E-02	2.730
		1238.11		2.169E+00	1.230E+00	2.210E+00	1.803E-01	0.982
		1377.67		1.166E+00	1.257E+00	2.290E+00	1.969E-01	0.509
	+	1764.49		1.329E+00	4.298E-01	3.057E-01	1.767E-02	4.346
PB-214	+	74.81		4.151E+00	7.085E-01	6.458E-01	6.961E-02	6.427
	+	77.11		3.479E+00	5.144E-01	3.788E-01	4.126E-02	9.183

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.911E+00	7.237E-01	7.809E-01	8.464E-02	3.727
	+	241.98		2.491E+00	6.142E-01	5.625E-01	6.339E-02	4.428
	+	295.21		1.529E+00	2.768E-01	2.198E-01	2.403E-02	6.957
	+	351.92	*	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
PO-214	+	74.81		4.151E+00	7.085E-01	6.458E-01	6.961E-02	6.427
	+	77.11		3.479E+00	5.144E-01	3.788E-01	4.126E-02	9.183
	+	87.30		2.911E+00	7.237E-01	7.809E-01	8.464E-02	3.727
	+	241.98		2.491E+00	6.142E-01	5.625E-01	6.339E-02	4.428
	+	295.21		1.529E+00	2.768E-01	2.198E-01	2.403E-02	6.957
	+	351.92	*	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
PO-216	+	74.81		2.409E+00	4.335E-01	3.748E-01	4.570E-02	6.427
	+	77.11		2.029E+00	2.572E-01	2.210E-01	1.720E-02	9.183
	+	87.30		1.699E+00	4.361E-01	4.559E-01	5.731E-02	3.727
	+	238.63	*	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
	+	300.09		2.649E+00	1.105E+00	1.256E+00	1.335E-01	2.109
PO-218	+	74.81		4.151E+00	7.085E-01	6.458E-01	6.961E-02	6.427
	+	77.11		3.479E+00	5.144E-01	3.788E-01	4.126E-02	9.183
	+	87.30		2.911E+00	7.237E-01	7.809E-01	8.464E-02	3.727
	+	241.98		2.491E+00	6.142E-01	5.625E-01	6.339E-02	4.428
	+	295.21		1.529E+00	2.768E-01	2.198E-01	2.403E-02	6.957
	+	351.92	*	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
RA-224	+	240.98	*	4.724E+00	1.134E+00	1.114E+00	1.090E-01	4.242
RA-226	+	609.31	*	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
		768.36		9.582E-02	9.513E-01	1.600E+00	1.612E-01	0.060
		934.06		1.078E+00	1.456E+00	2.535E+00	2.942E-01	0.425
	+	1120.29		1.613E+00	4.968E-01	5.909E-01	5.644E-02	2.730
		1238.11		2.169E+00	1.230E+00	2.210E+00	1.803E-01	0.982
		1377.67		1.166E+00	1.257E+00	2.290E+00	1.969E-01	0.509
	+	1764.49		1.329E+00	4.298E-01	3.057E-01	1.767E-02	4.346
AC-228	+	338.32		1.674E+00	8.218E-01	4.178E-01	1.718E-01	4.006
	+	911.07	*	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
	+	969.11		1.713E+00	6.340E-01	3.971E-01	9.378E-02	4.315
RA-228	+	338.32		1.674E+00	8.218E-01	4.178E-01	1.718E-01	4.006
	+	911.07	*	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
	+	969.11		1.713E+00	6.340E-01	3.971E-01	9.378E-02	4.315
TH-228	+	84.40		4.943E+00	2.212E+00	2.989E+00	3.745E-01	1.654
	+	238.60	*	1.864E+00	2.342E-01	9.782E-02	1.055E-02	19.051
	+	300.10		2.649E+00	1.900E+00	1.256E+00	7.449E-01	2.109
TH-230	+	609.31	*	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
		768.36		9.582E-02	9.513E-01	1.600E+00	1.612E-01	0.060
		934.06		1.078E+00	1.456E+00	2.535E+00	2.942E-01	0.425
	+	1120.29		1.613E+00	4.968E-01	5.909E-01	5.644E-02	2.730
		1238.11		2.169E+00	1.230E+00	2.209E+00	1.803E-01	0.982
		1377.67		1.166E+00	1.257E+00	2.290E+00	1.969E-01	0.509
	+	1764.49		1.329E+00	4.298E-01	3.057E-01	1.767E-02	4.346
TH-232	+	338.32		1.674E+00	4.681E-01	4.178E-01	3.276E-02	4.006
	+	911.07	*	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
	+	969.11		1.713E+00	6.340E-01	3.971E-01	9.378E-02	4.315
TH-234	+	63.29	*	1.702E+00	1.227E+00	1.042E+00	1.852E-01	1.632

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.383E+00	7.606E-01	6.850E-01	1.231E-01	3.479
U-234	+	609.31	*	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
		768.36		9.582E-02	9.513E-01	1.600E+00	1.612E-01	0.060
		934.06		1.078E+00	1.456E+00	2.535E+00	2.942E-01	0.425
	+	1120.29		1.613E+00	4.968E-01	5.909E-01	5.644E-02	2.730
		1238.11		2.169E+00	1.230E+00	2.209E+00	1.803E-01	0.982
		1377.67		1.166E+00	1.257E+00	2.290E+00	1.969E-01	0.509
	+	1764.49		1.329E+00	4.298E-01	3.057E-01	1.767E-02	4.346
NP-237	+	86.50	*	1.079E+00	3.385E-01	2.887E-01	6.352E-02	3.736
		95.87		-5.467E-01	9.376E-01	1.319E+00	3.267E-01	-0.414
U-238	+	63.29	*	1.702E+00	1.227E+00	1.042E+00	1.852E-01	1.632
	+	92.38		2.383E+00	6.596E-01	6.850E-01	5.731E-02	3.479
AM-243	+	74.67	*	3.905E-01	6.006E-02	6.075E-02	4.758E-03	6.428
	+	86.72		4.046E+01	9.562E+00	1.083E+01	8.264E-01	3.734
		117.66		-1.741E+00	3.837E+00	6.221E+00	8.237E-01	-0.280
		142.18		6.602E+00	1.820E+01	3.024E+01	3.757E+00	0.218
ANH-511	+	511.00	*	9.893E-02	7.620E-02	5.800E-02	3.712E-03	1.706

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	7.318E-04	3.628E-01	5.958E-01	4.268E-02	0.001
NA-22		1274.54	*	-1.244E-02	5.921E-02	9.386E-02	5.467E-03	-0.132
NA-24		1368.53	*	2.539E-01	5.921E-02	Half-Life too short		
AL-26		1129.67		8.510E-01	2.153E+00	3.627E+00	2.430E-01	0.235
		1808.65	*	2.370E-02	3.241E-02	6.066E-02	3.480E-03	0.391
TI-44		67.85		2.999E-03	4.103E-02	4.440E-02	3.553E-03	0.068
	+	78.38	*	3.745E-01	4.746E-02	6.274E-02	4.868E-03	5.968
SC-46		889.25	*	-5.056E-03	4.601E-02	7.548E-02	7.582E-03	-0.067
	+	1120.51		2.735E-01	8.228E-02	1.452E-01	9.988E-03	1.884
V-48		944.10		-6.761E-01	1.035E+00	1.604E+00	1.552E-01	-0.421
		983.50	*	-8.271E-02	9.910E-02	1.239E-01	1.135E-02	-0.667
		1312.09		3.732E-02	9.658E-02	1.621E-01	9.400E-03	0.230
CR-51		320.08	*	4.720E-02	3.918E-01	6.439E-01	5.694E-02	0.073
MN-52		744.21		-2.414E-02	2.376E-01	3.948E-01	3.065E-02	-0.061
		848.13		8.665E-01	7.000E+00	1.175E+01	1.101E+00	0.074
		935.52		3.281E-01	2.884E-01	5.143E-01	5.027E-02	0.638
		1246.25		-5.422E+00	8.655E+00	1.327E+01	7.717E-01	-0.409
		1333.61		-6.760E-02	5.252E+00	8.450E+00	4.891E-01	-0.008
		1434.06	*	8.575E-02	2.339E-01	4.075E-01	2.386E-02	0.210
MN-54		834.83	*	-1.838E-02	4.648E-02	7.539E-02	6.906E-03	-0.244
CO-56		846.75	*	-1.413E-02	4.797E-02	7.780E-02	7.275E-03	-0.182
		977.42		1.762E+00	3.390E+00	5.839E+00	5.398E-01	0.302
		1037.82		2.653E-01	3.793E-01	6.590E-01	5.813E-02	0.403
		1175.09		7.117E-01	3.214E+00	5.312E+00	3.082E-01	0.134
		1238.25		2.130E-01	1.225E-01	2.207E-01	1.364E-02	0.965
		1360.21		-7.940E-01	1.089E+00	1.654E+00	9.610E-02	-0.480
		1771.40		-9.057E-02	2.842E-01	3.579E-01	2.067E-02	-0.253

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-3.816E-04	2.639E-02	4.351E-02	6.174E-03	-0.009
		136.48		1.290E-01	2.248E-01	3.761E-01	5.037E-02	0.343
CO-58		810.76	*	-1.733E-03	4.584E-02	7.613E-02	6.700E-03	-0.023
FE-59		142.65		8.569E-01	2.788E+00	4.623E+00	5.725E-01	0.185
		192.34		-9.964E-02	1.011E+00	1.633E+00	2.341E-01	-0.061
		1099.22	*	2.663E-02	1.090E-01	1.819E-01	1.473E-02	0.146
		1291.56		8.464E-02	1.603E-01	2.717E-01	2.018E-02	0.312
CO-60		1173.22		3.551E-02	6.437E-02	1.089E-01	6.319E-03	0.326
		1332.49	*	3.091E-02	4.598E-02	7.994E-02	4.626E-03	0.387
ZN-65		1115.52	*	2.034E-02	1.295E-01	1.845E-01	1.289E-02	0.110
GE-68		1077.35	*	1.610E+00	1.658E+00	2.918E+00	2.241E-01	0.552
AS-73		53.44	*	6.769E-02	2.422E-01	3.997E-01	3.009E-02	0.169
AS-74		595.88	*	-3.670E-02	1.006E-01	1.584E-01	1.042E-02	-0.232
		634.78		7.285E-02	3.934E-01	6.450E-01	4.251E-02	0.113
SE-75		66.05		-1.643E+00	2.945E+00	4.256E+00	4.245E-01	-0.386
		96.73		-6.193E-01	7.682E-01	1.073E+00	1.498E-01	-0.577
		121.11		-2.614E-02	1.392E-01	2.281E-01	3.584E-02	-0.115
		136.00		4.046E-02	4.261E-02	7.186E-02	9.371E-03	0.563
		198.60		-5.028E-01	2.013E+00	3.153E+00	3.409E-01	-0.159
		264.65	*	-3.428E-02	5.786E-02	7.698E-02	7.349E-03	-0.445
		279.53		2.879E-02	1.229E-01	2.092E-01	2.003E-02	0.138
		303.91		2.139E+00	2.247E+00	3.920E+00	4.545E-01	0.546
		400.65		2.548E-01	2.963E-01	5.126E-01	4.691E-02	0.497
BR-77	+	87.88		5.788E+02	1.368E+02	2.224E+02	1.693E+01	2.602
		200.40		-8.542E+00	1.273E+02	2.054E+02	2.050E+01	-0.042
	+	239.00		2.145E+02	2.518E+01	2.949E+01	2.890E+00	7.274
		249.79		-6.861E+00	5.162E+01	8.215E+01	7.965E+00	-0.084
		281.68		-5.773E+01	7.405E+01	1.202E+02	1.111E+01	-0.480
		297.23		2.942E+02	5.638E+01	1.004E+02	8.961E+00	2.931
		303.76		1.315E+02	1.378E+02	2.409E+02	2.116E+01	0.546
		439.47		1.406E+02	1.198E+02	2.109E+02	1.285E+01	0.667
		484.57		-5.768E+00	1.817E+02	2.975E+02	1.875E+01	-0.019
		520.65	*	-3.886E+00	8.721E+00	1.379E+01	8.869E-01	-0.282
		574.64		-5.094E+01	1.866E+02	2.886E+02	1.891E+01	-0.176
		578.91		2.732E+01	7.920E+01	1.152E+02	7.556E+00	0.237
		585.48		1.256E+03	2.321E+02	4.180E+02	2.745E+01	3.005
		755.35		4.686E+01	1.478E+02	2.527E+02	2.004E+01	0.185
		817.79		-2.895E+01	1.089E+02	1.771E+02	1.575E+01	-0.163
SR-82		698.33		1.721E+01	4.046E+01	6.707E+01	4.757E+00	0.257
		776.49	*	-4.033E-01	4.715E-01	7.366E-01	6.077E-02	-0.548
		1395.20		-7.407E+00	1.247E+01	1.929E+01	1.126E+00	-0.384
RB-83		520.41	*	-2.095E-02	7.951E-02	1.275E-01	8.197E-03	-0.164
		529.64		6.243E-03	1.118E-01	1.833E-01	1.183E-02	0.034
		552.65		4.995E-02	2.227E-01	3.688E-01	2.402E-02	0.135
RB-84		881.50	*	1.246E-02	8.122E-02	1.363E-01	1.352E-02	0.091
KR-85		513.99	*	1.719E+01	1.091E+01	1.720E+01	1.103E+00	0.999
SR-85		513.99	*	8.709E-02	5.525E-02	8.714E-02	5.586E-03	0.999
RB-86		1076.63	*	9.856E-01	9.896E-01	1.747E+00	1.344E-01	0.564
Y-88		898.02		2.398E-02	5.390E-02	9.218E-02	9.426E-03	0.260

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	-7.236E-03	3.857E-02	6.075E-02	3.476E-03	-0.119
ZR-88		392.90	*	-4.993E-04	3.437E-02	5.696E-02	3.317E-03	-0.009
Y-91		1204.90	*	1.532E+01	2.496E+01	4.241E+01	2.465E+00	0.361
NB-94		702.63	*	2.473E-02	4.218E-02	7.064E-02	5.054E-03	0.350
		871.10		2.118E-03	3.942E-02	6.568E-02	6.402E-03	0.032
NB-95		765.79	*	2.494E-02	5.635E-02	9.669E-02	7.820E-03	0.258
NB-95M		235.69	*	3.735E-01	1.696E-01	2.594E-01	2.838E-02	1.439
ZR-95		724.18		8.821E-02	1.206E-01	1.874E-01	1.558E-02	0.471
		756.15	*	1.462E-02	8.803E-02	1.490E-01	1.323E-02	0.098
NB-97		657.90	*	2.557E-02	8.803E-02	Half-Life too short		
		1024.50		1.576E+00	8.803E-02	Half-Life too short		
ZR-97		254.15		-6.111E-01	8.803E-02	Half-Life too short		
		355.39		8.138E-01	8.803E-02	Half-Life too short		
		507.63	*	1.290E+00	8.803E-02	Half-Life too short		
		602.52		1.272E-01	8.803E-02	Half-Life too short		
		1021.30		1.492E+00	8.803E-02	Half-Life too short		
		1147.95		-1.016E+00	8.803E-02	Half-Life too short		
		1362.66		-4.828E+00	8.803E-02	Half-Life too short		
		1750.46		-4.832E-01	8.803E-02	Half-Life too short		
MO-99		140.51		-2.861E+01	2.259E+01	3.269E+01	9.537E+00	-0.875
		181.06		1.103E+01	1.591E+01	2.331E+01	4.420E+00	0.473
		366.43		-5.212E+01	6.502E+01	1.027E+02	7.045E+00	-0.508
		739.58	*	-2.396E+00	1.029E+01	1.693E+01	2.486E+00	-0.142
		778.00		-9.856E+00	3.178E+01	5.186E+01	4.291E+00	-0.190
TC-99M		140.51	*	-2.362E+09	3.178E+01	Half-Life too short		
RH-101		127.23		4.058E-02	3.536E-02	5.977E-02	8.227E-03	0.679
		198.01	*	-6.277E-03	3.694E-02	5.809E-02	5.801E-03	-0.108
		325.23		1.177E-01	2.684E-01	4.032E-01	3.319E-02	0.292
RH-102		418.52		-1.089E-01	3.507E-01	5.619E-01	3.360E-02	-0.194
		475.06	*	-2.623E-02	3.409E-02	5.305E-02	3.323E-03	-0.495
		631.29		-4.605E-02	6.540E-02	9.950E-02	6.559E-03	-0.463
		697.49		1.211E-02	9.606E-02	1.558E-01	1.103E-02	0.078
		766.84		1.060E-01	1.449E-01	2.525E-01	2.046E-02	0.420
		1046.59		8.640E-04	1.340E-01	2.198E-01	1.804E-02	0.004
		1112.84		3.262E-01	3.122E-01	5.067E-01	3.561E-02	0.644
RU-103		497.08	*	-7.603E-03	4.440E-02	7.183E-02	9.272E-03	-0.106
	+	610.33		1.358E+01	2.855E+00	3.310E+00	5.208E-01	4.103
RH-106	+	511.85		4.931E-01	3.798E-01	5.015E-01	3.211E-02	0.983
		621.84	*	1.283E-01	3.803E-01	6.304E-01	7.659E-02	0.204
		1050.47		1.010E+00	2.760E+00	4.671E+00	3.803E-01	0.216
RU-106	+	511.85		4.931E-01	3.798E-01	5.015E-01	3.211E-02	0.983
		621.84	*	1.283E-01	3.800E-01	6.304E-01	4.156E-02	0.204
		1050.47		1.010E+00	2.760E+00	4.671E+00	3.803E-01	0.216
AG-108M		433.93	*	4.809E-03	3.840E-02	6.385E-02	4.178E-03	0.075
		614.37		-1.087E-02	5.557E-02	7.603E-02	5.342E-03	-0.143
		722.95		1.402E-02	4.942E-02	7.388E-02	5.791E-03	0.190
AG-110M		657.75	*	2.380E-02	4.363E-02	7.313E-02	5.055E-03	0.325
		677.61		2.832E-01	3.491E-01	5.991E-01	4.256E-02	0.473
		706.67		6.737E-03	2.553E-01	4.105E-01	3.077E-02	0.016

---- Non-Identified Nuclides ----

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		763.93		4.449E-02	2.193E-01	3.713E-01	3.089E-02	0.120
		884.67		-1.718E-02	6.004E-02	9.702E-02	9.905E-03	-0.177
		937.48		1.015E-01	1.431E-01	2.487E-01	2.494E-02	0.408
		1384.27		-1.231E-01	2.016E-01	3.137E-01	1.939E-02	-0.392
IN-111		171.28		-1.940E-01	8.455E-01	1.364E+00	1.357E-01	-0.142
		245.39	*	-3.467E-01	9.866E-01	1.345E+00	1.310E-01	-0.258
IN-113M		391.69	*	-2.439E-02	5.083E-02	8.202E-02	5.088E-03	-0.297
SN-113		391.69	*	-2.439E-02	5.083E-02	8.202E-02	5.088E-03	-0.297
IN-114M		190.27	*	1.509E-01	2.221E-01	3.266E-01	3.262E-02	0.462
CD-115		260.90		4.745E+01	1.005E+02	1.646E+02	1.573E+01	0.288
		492.35		1.621E+01	2.963E+01	5.031E+01	3.187E+00	0.322
		527.90	*	-1.675E-01	8.409E+00	1.371E+01	8.846E-01	-0.012
SN-117M		156.02		1.050E+00	2.381E+00	3.953E+00	4.359E-01	0.266
		158.56	*	1.308E-04	5.719E-02	9.345E-02	1.005E-02	0.001
SB-122		563.90	*	1.010E+00	1.890E+00	3.185E+00	2.081E-01	0.317
		692.80		-3.423E+01	4.091E+01	6.122E+01	4.294E+00	-0.559
I-123		159.00	*	-6.087E-01	4.091E+01	Half-Life too short		
		528.96		-4.035E+01	4.091E+01	Half-Life too short		
TE-123M		159.00	*	-1.270E-02	3.144E-02	5.052E-02	5.428E-03	-0.251
I-124		602.71	*	-1.478E-01	7.602E-01	1.041E+00	6.855E-02	-0.142
		722.78		-5.346E-02	4.416E+00	6.385E+00	4.755E-01	-0.008
		1325.50		-7.482E+00	3.414E+01	5.357E+01	3.102E+00	-0.140
		1376.25		2.579E+01	3.265E+01	5.893E+01	3.431E+00	0.438
		1509.49		3.484E+00	1.442E+01	2.471E+01	1.453E+00	0.141
		1691.02		5.047E-01	2.822E+00	4.831E+00	2.819E-01	0.104
SB-124		602.71		-1.024E-02	5.270E-02	7.219E-02	4.754E-03	-0.142
		645.85		-3.182E-01	6.204E-01	9.602E-01	6.962E-02	-0.331
		709.31		-2.996E+00	3.314E+00	5.197E+00	3.769E-01	-0.577
		713.82		6.269E-01	1.915E+00	3.286E+00	3.661E-01	0.191
		722.78		-5.372E-03	4.438E-01	6.416E-01	4.916E-02	-0.008
	+	968.20		1.741E+01	5.219E+00	8.342E+00	7.814E-01	2.087
		1045.16		-1.015E+00	2.855E+00	4.518E+00	3.717E-01	-0.225
		1325.50		-8.030E-01	3.664E+00	5.749E+00	3.329E-01	-0.140
		1368.21		2.109E+00	2.063E+00	3.804E+00	4.519E-01	0.555
		1436.60		-2.641E+00	4.659E+00	7.230E+00	4.235E-01	-0.365
		1691.02	*	1.196E-02	6.689E-02	1.145E-01	7.247E-03	0.104
SB-125		427.89	*	6.328E-02	1.093E-01	1.865E-01	1.169E-02	0.339
	+	463.38		6.621E-01	4.462E-01	6.081E-01	4.330E-02	1.089
		600.56		2.046E-01	2.073E-01	3.516E-01	2.600E-02	0.582
		635.90		1.850E-02	3.205E-01	5.200E-01	3.889E-02	0.036
TE-125M		109.28	*	8.096E+00	9.031E+00	1.531E+01	1.968E+00	0.529
I-126		388.63		-7.605E-02	2.242E-01	3.651E-01	2.173E-02	-0.208
		666.33	*	1.461E-01	2.070E-01	3.508E-01	2.329E-02	0.417
		753.82		8.578E-01	1.688E+00	2.923E+00	2.312E-01	0.293
SB-126		223.80		2.246E+00	4.129E+00	6.808E+00	6.746E-01	0.330
		278.60		2.550E+00	2.572E+00	4.498E+00	4.179E-01	0.567
	+	296.50		1.428E+01	2.427E+00	3.712E+00	3.320E-01	3.847
		414.70		8.501E-02	8.931E-02	1.383E-01	8.241E-03	0.615
		415.30		3.733E+00	7.484E+00	1.166E+01	6.950E-01	0.320

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		555.20		-8.026E-02	4.220E+00	6.861E+00	4.472E-01	-0.012
		573.80		-3.025E-01	1.174E+00	1.873E+00	1.227E-01	-0.162
		593.00		-1.210E-01	9.895E-01	1.589E+00	1.045E-01	-0.076
		656.30		2.527E+00	3.867E+00	6.537E+00	4.302E-01	0.387
		666.33		6.091E-02	8.625E-02	1.462E-01	9.709E-03	0.417
		675.00		-7.379E-01	2.159E+00	3.370E+00	2.279E-01	-0.219
		695.00		3.599E-02	9.121E-02	1.470E-01	1.036E-02	0.245
		697.00		-1.114E-01	3.312E-01	5.053E-01	3.575E-02	-0.220
		720.50	*	-7.414E-02	1.739E-01	2.393E-01	1.775E-02	-0.310
		856.80		2.114E-02	5.825E-01	8.360E-01	7.954E-02	0.025
		989.30		8.812E-01	1.572E+00	2.699E+00	2.450E-01	0.327
		1034.80		5.354E+00	1.067E+01	1.822E+01	1.530E+00	0.294
		1213.00		-3.784E+00	6.079E+00	9.376E+00	5.450E-01	-0.404
SB-127		61.10		2.937E+01	2.174E+01	3.751E+01	3.947E+00	0.783
		252.40		3.258E-02	3.816E+00	6.115E+00	2.579E+00	0.005
		290.80		-5.806E+00	1.995E+01	2.862E+01	3.201E+00	-0.203
		411.60		-3.418E+00	1.373E+01	1.932E+01	2.738E+00	-0.177
		444.90		-3.639E+00	9.332E+00	1.499E+01	1.594E+00	-0.243
		473.00		-8.743E-01	1.637E+00	2.592E+00	2.876E-01	-0.337
		543.00		6.088E+00	1.559E+01	2.611E+01	3.382E+00	0.233
		603.60		-4.395E+00	1.301E+01	1.754E+01	1.907E+00	-0.251
		685.20	*	1.004E+00	1.399E+00	2.367E+00	2.316E-01	0.424
		698.50		-1.156E+00	1.556E+01	2.485E+01	3.677E+00	-0.047
		722.20		-1.879E-01	2.922E+01	4.227E+01	4.191E+00	-0.004
		783.80		1.390E+00	3.520E+00	6.040E+00	7.210E-01	0.230
XE-127		57.60		2.064E+00	2.440E+00	3.750E+00	3.019E-01	0.550
		145.22		5.023E-01	7.393E-01	1.219E+00	1.479E-01	0.412
		172.10		8.416E-02	1.277E-01	2.130E-01	2.119E-02	0.395
		202.84	*	-5.371E-03	5.141E-02	7.986E-02	7.971E-03	-0.067
		374.96		9.219E-02	2.216E-01	3.766E-01	2.458E-02	0.245
I-131		80.18		2.524E+00	4.521E+00	5.024E+00	3.909E-01	0.502
		284.30		-1.421E-01	1.534E+00	2.574E+00	2.472E-01	-0.055
		364.48	*	-1.142E-01	1.108E-01	1.724E-01	1.293E-02	-0.662
		636.97		-1.494E-01	1.714E+00	2.749E+00	1.979E-01	-0.054
		722.89		2.241E+00	7.550E+00	1.130E+01	8.482E-01	0.198
TE-132		49.72		-3.233E+00	3.699E+00	5.306E+00	4.961E-01	-0.609
		111.76		-1.976E+01	2.318E+01	3.696E+01	4.982E+00	-0.535
		116.30		6.022E+00	2.162E+01	3.605E+01	5.163E+00	0.167
		228.16	*	-5.910E-01	6.022E-01	9.110E-01	1.480E-01	-0.649
BA-133		53.15		4.798E-01	1.019E+00	1.692E+00	1.268E-01	0.284
		79.62		1.494E+00	1.424E+00	1.617E+00	2.384E-01	0.924
		81.00		7.257E-02	1.058E-01	1.182E-01	1.820E-02	0.614
		276.40		3.772E-01	4.623E-01	7.086E-01	1.054E-01	0.532
		302.84		1.845E-01	1.566E-01	2.740E-01	3.673E-02	0.673
		356.01	*	-1.495E-02	5.213E-02	7.369E-02	9.100E-03	-0.203
		383.85		2.291E-02	3.529E-01	5.882E-01	6.509E-02	0.039
I-133	+	510.53		4.038E-01	3.529E-01	Half-Life too short		
		529.87	*	3.455E-04	3.529E-01	Half-Life too short		
		706.58		2.124E-02	3.529E-01	Half-Life too short		

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		856.28		4.080E-02	3.529E-01	Half-Life too short		
		875.33		2.005E-02	3.529E-01	Half-Life too short		
		1236.41		4.766E-01	3.529E-01	Half-Life too short		
		1298.22		-1.189E-01	3.529E-01	Half-Life too short		
CS-134		475.35		-1.924E+00	2.215E+00	3.419E+00	2.142E-01	-0.563
		563.23		2.082E-01	4.349E-01	7.306E-01	4.852E-02	0.285
		569.32		8.562E-02	2.438E-01	4.057E-01	2.718E-02	0.211
		604.70		-7.293E-03	4.543E-02	6.306E-02	4.170E-03	-0.116
	+	795.84	*	7.826E-02	6.609E-02	1.083E-01	9.330E-03	0.722
		801.93		-5.585E-01	5.435E-01	7.266E-01	6.315E-02	-0.769
		1038.57		1.099E+00	4.715E+00	7.893E+00	6.579E-01	0.139
		1167.94		-2.524E+00	3.482E+00	5.327E+00	3.150E-01	-0.474
		1365.15		-2.106E-01	1.318E+00	2.159E+00	1.378E-01	-0.098
CS-135		268.24	*	3.282E-01	2.149E-01	3.247E-01	3.473E-02	1.011
I-135		288.45		-3.971E+08	2.149E-01	Half-Life too short		
		417.63		-4.809E+08	2.149E-01	Half-Life too short		
		546.56		-7.706E+07	2.149E-01	Half-Life too short		
		836.80		5.607E+07	2.149E-01	Half-Life too short		
		1038.76		1.601E+08	2.149E-01	Half-Life too short		
		1124.00		-5.235E+08	2.149E-01	Half-Life too short		
		1131.51		2.555E+08	2.149E-01	Half-Life too short		
		1260.41	*	-1.488E+08	2.149E-01	Half-Life too short		
		1457.56		4.300E+10	2.149E-01	Half-Life too short		
		1678.03		-2.278E+07	2.149E-01	Half-Life too short		
		1706.46		4.866E+08	2.149E-01	Half-Life too short		
		1791.20		8.008E+08	2.149E-01	Half-Life too short		
CS-136		66.91		-1.155E-01	4.956E-01	6.772E-01	1.024E-01	-0.171
	+	86.29		4.514E+00	1.151E+00	1.635E+00	1.996E-01	2.761
		153.22		-3.156E-02	6.874E-01	1.123E+00	1.360E-01	-0.028
		163.89		-5.543E-01	1.100E+00	1.757E+00	1.940E-01	-0.316
		176.55		-3.479E-01	3.775E-01	5.875E-01	6.106E-02	-0.592
		273.65		-8.134E-01	5.699E-01	7.020E-01	6.948E-02	-1.159
		340.57		3.831E-01	1.632E-01	2.668E-01	2.146E-02	1.436
		818.51		-3.842E-02	8.068E-02	1.287E-01	1.147E-02	-0.298
		1048.07	*	4.139E-02	1.216E-01	2.054E-01	1.760E-02	0.201
		1235.34		4.170E-01	7.869E-01	1.320E+00	1.319E-01	0.316
BA-137M		661.65	*	-4.820E-02	4.737E-02	7.040E-02	4.630E-03	-0.685
CS-137		661.65	*	-5.095E-02	5.008E-02	7.442E-02	4.910E-03	-0.685
CE-139		165.85	*	-1.523E-02	3.252E-02	5.201E-02	5.163E-03	-0.293
BA-140		162.64		3.011E-01	7.622E-01	1.263E+00	1.353E-01	0.239
		304.84		8.164E-01	1.293E+00	2.203E+00	6.183E-01	0.371
		423.70		-2.231E+00	2.227E+00	3.266E+00	1.039E+00	-0.683
		537.32	*	-1.614E-01	2.748E-01	4.195E-01	1.370E-01	-0.385
LA-140	+	328.77		5.728E-01	5.251E-01	5.819E-01	5.028E-02	0.984
		432.53		-7.574E-01	2.296E+00	3.715E+00	2.467E-01	-0.204
		487.03		-4.147E-02	1.477E-01	2.376E-01	1.668E-02	-0.175
		751.79		-1.277E+00	1.951E+00	3.100E+00	2.751E-01	-0.412
		815.85		-2.127E-02	3.558E-01	5.896E-01	5.795E-02	-0.036
		867.82		9.382E-02	1.613E+00	2.568E+00	2.594E-01	0.037

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		-1.676E+00	3.814E+00	5.111E+00	6.009E-01	-0.328
		925.24		2.546E-01	1.246E+00	2.095E+00	2.173E-01	0.122
		1596.49	*	-2.730E-02	1.046E-01	1.671E-01	9.821E-03	-0.163
CE-141		145.44	*	3.812E-02	6.696E-02	1.101E-01	1.346E-02	0.346
CE-143		57.37		1.394E-04	6.696E-02	Half-Life too short		
		231.56		4.095E-04	6.696E-02	Half-Life too short		
		293.26	*	4.454E-04	6.696E-02	Half-Life too short		
	+	350.59		1.826E-02	6.696E-02	Half-Life too short		
		490.36		-1.531E-04	6.696E-02	Half-Life too short		
		664.57		7.918E-04	6.696E-02	Half-Life too short		
		721.93		-4.367E-05	6.696E-02	Half-Life too short		
CE-144		80.11		1.293E+00	2.288E+00	2.544E+00	1.966E-01	0.508
		133.54	*	-2.777E-01	2.335E-01	3.583E-01	6.634E-02	-0.775
PM-144		476.78		1.086E-02	7.732E-02	1.281E-01	9.407E-03	0.085
		618.01		3.453E-03	3.924E-02	6.390E-02	4.408E-03	0.054
		696.49	*	-1.410E-02	4.440E-02	6.774E-02	4.789E-03	-0.208
		778.57		1.218E+00	2.841E+00	4.887E+00	4.049E-01	0.249
PR-144		696.49	*	-9.549E-01	3.007E+00	4.587E+00	3.242E-01	-0.208
		1489.15		-5.848E+00	1.289E+01	1.994E+01	1.172E+00	-0.293
PM-146		453.90	*	-2.806E-02	4.841E-02	7.651E-02	6.789E-03	-0.367
		633.02		-7.380E-01	1.675E+00	2.573E+00	9.508E-01	-0.287
		735.90		-2.361E-02	1.832E-01	2.972E-01	8.417E-02	-0.079
		747.13		1.407E-02	1.034E-01	1.748E-01	2.370E-02	0.080
ND-147	+	91.11		8.969E-01	2.695E-01	4.457E-01	3.964E-02	2.013
		319.41		1.748E+00	3.206E+00	5.519E+00	4.631E-01	0.317
		439.89		7.514E+00	6.365E+00	1.120E+01	6.833E-01	0.671
		531.02	*	-7.919E-02	5.662E-01	9.141E-01	1.263E-01	-0.087
PM-149		285.90	*	4.045E+00	7.114E+01	1.201E+02	1.903E+01	0.034
EU-152		121.78		-1.135E-02	7.635E-02	1.253E-01	1.874E-02	-0.091
		244.69		2.683E-01	4.163E-01	6.065E-01	5.913E-02	0.442
		344.27	*	5.763E-02	1.282E-01	1.823E-01	1.499E-02	0.316
		443.98		1.214E-01	1.125E+00	1.866E+00	1.142E-01	0.065
		778.89		1.984E-01	3.261E-01	5.677E-01	4.704E-02	0.349
		867.32		-1.508E-04	1.033E+00	1.589E+00	1.538E-01	0.000
	+	964.01		7.352E-01	4.962E-01	6.990E-01	6.586E-02	1.052
		1085.78		4.462E-02	5.184E-01	8.538E-01	6.429E-02	0.052
		1112.02		3.084E-01	4.315E-01	6.986E-01	4.920E-02	0.441
		1407.95		4.800E-02	2.200E-01	3.760E-01	2.197E-02	0.128
GD-153		69.67		3.454E-01	1.108E+00	1.658E+00	1.318E-01	0.208
	+	83.37		2.830E+01	1.235E+01	1.951E+01	1.498E+00	1.450
		97.43	*	-1.234E-02	7.947E-02	1.144E-01	1.061E-02	-0.108
		103.18		3.556E-02	1.011E-01	1.696E-01	1.754E-02	0.210
EU-154		123.07		1.059E-03	5.471E-02	9.030E-02	1.439E-02	0.012
		247.94		-1.333E-01	4.094E-01	6.207E-01	7.647E-02	-0.215
		591.81		6.370E-02	7.009E-01	1.145E+00	1.174E-01	0.056
		723.30		4.242E-02	2.053E-01	3.044E-01	2.585E-02	0.139
		756.87		-3.362E-01	1.007E+00	1.645E+00	1.892E-01	-0.204
		873.19		-3.005E-01	3.583E-01	5.465E-01	7.152E-02	-0.550
		996.32		-9.735E-01	4.952E-01	6.110E-01	1.096E-01	-1.593

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		1004.76		-3.937E-01	2.644E-01	3.665E-01	4.331E-02	-1.074
		1274.45	*	-1.490E-02	1.631E-01	2.615E-01	2.445E-02	-0.057
EU-155		48.70		7.306E-01	5.251E-01	8.278E-01	5.770E-02	0.883
		60.01		1.358E+00	2.355E+00	3.575E+00	2.960E-01	0.380
	+	86.54		4.423E-01	1.047E-01	1.591E-01	1.229E-02	2.780
		105.31	*	-5.227E-02	1.089E-01	1.740E-01	1.885E-02	-0.300
TB-160	+	86.79		1.169E+00	2.763E-01	4.226E-01	3.223E-02	2.766
		197.04		2.636E-01	6.112E-01	9.849E-01	9.836E-02	0.268
		215.65		3.664E-01	8.117E-01	1.335E+00	1.328E-01	0.275
	+	298.57		3.812E-01	1.574E-01	2.343E-01	2.085E-02	1.627
		879.36	*	-4.167E-03	1.685E-01	2.787E-01	2.754E-02	-0.015
		962.29		1.270E+00	6.945E-01	1.170E+00	1.105E-01	1.085
		966.15		1.406E+00	3.245E-01	6.159E-01	5.786E-02	2.283
		1177.93		5.649E-03	5.079E-01	8.264E-01	4.795E-02	0.007
		1271.85		2.149E-01	9.123E-01	1.508E+00	8.763E-02	0.143
HO-166M		80.57		2.281E-01	2.901E-01	3.274E-01	2.528E-02	0.697
		184.41		6.914E-02	4.802E-02	7.319E-02	7.303E-03	0.945
		280.46		-9.282E-02	9.746E-02	1.569E-01	1.452E-02	-0.592
		410.95		-4.520E-02	3.350E-01	4.758E-01	2.824E-02	-0.095
		711.68	*	1.862E-02	7.104E-02	1.215E-01	8.850E-03	0.153
		752.31		-1.548E-02	3.310E-01	5.520E-01	4.352E-02	-0.028
		810.29		-3.520E-02	7.076E-02	1.130E-01	9.917E-03	-0.311
TM-171		51.35		1.225E+00	8.219E+00	1.236E+01	8.991E-01	0.099
		52.39		3.192E+00	4.638E+00	7.118E+00	5.267E-01	0.448
		59.40		1.280E+01	1.205E+01	1.860E+01	1.541E+00	0.688
		66.72	*	-7.468E+00	1.783E+01	2.593E+01	2.084E+00	-0.288
LU-176	+	88.36		8.714E-01	2.060E-01	3.398E-01	2.607E-02	2.564
		201.83		-2.694E-02	3.180E-02	4.939E-02	4.930E-03	-0.545
		306.84	*	6.190E-03	3.055E-02	4.530E-02	3.945E-03	0.137
		401.10		6.964E+00	7.773E+00	1.349E+01	7.929E-01	0.516
LU-177		112.95		2.557E-01	1.419E+00	2.361E+00	2.896E-01	0.108
	+	208.36	*	3.447E+00	1.362E+00	1.936E+00	1.930E-01	1.781
LU-177M		52.97		1.681E-01	4.518E-01	7.482E-01	5.589E-02	0.225
		54.07		8.353E-02	2.525E-01	4.306E-01	3.275E-02	0.194
		61.30		1.284E+00	7.029E-01	1.225E+00	1.007E-01	1.049
		121.62		-1.027E-01	3.906E-01	6.379E-01	8.986E-02	-0.161
		147.16		-5.655E-01	7.219E-01	1.144E+00	1.366E-01	-0.494
		171.86		3.497E-01	5.234E-01	8.736E-01	8.688E-02	0.400
		218.09		8.130E-01	9.543E-01	1.591E+00	1.581E-01	0.511
	+	268.79		2.429E+00	1.604E+00	1.679E+00	1.587E-01	1.447
		319.02		1.904E-01	2.692E-01	4.668E-01	3.921E-02	0.408
		367.43		-1.838E-01	9.213E-01	1.515E+00	1.033E-01	-0.121
		413.65	*	-2.134E-02	2.339E-01	3.332E-01	1.983E-02	-0.064
HF-181		56.28		-3.104E-01	3.498E-01	5.299E-01	4.176E-02	-0.586
		57.53		1.716E-01	2.052E-01	3.152E-01	2.535E-02	0.544
		65.20		2.282E-01	5.639E-01	8.459E-01	6.838E-02	0.270
		133.02		-8.714E-02	7.271E-02	1.130E-01	1.499E-02	-0.771
		136.25		3.838E-01	4.896E-01	8.231E-01	1.068E-01	0.466
		345.85		-7.416E-02	2.576E-01	3.442E-01	2.614E-02	-0.215

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		482.03	*	-1.297E-02	4.748E-02	7.645E-02	4.811E-03	-0.170
W-181		56.28		-1.226E-01	1.386E-01	2.100E-01	1.655E-02	-0.584
		57.53		6.800E-02	8.134E-02	1.250E-01	1.005E-02	0.544
		65.20	*	8.977E-02	2.218E-01	3.328E-01	2.690E-02	0.270
TA-182		67.75		2.276E-02	8.257E-02	1.050E-01	8.403E-03	0.217
		100.10		1.211E-01	1.670E-01	2.799E-01	2.732E-02	0.433
		152.43		4.152E-02	3.739E-01	6.144E-01	7.008E-02	0.068
		222.10		-9.315E-02	3.847E-01	6.129E-01	6.078E-02	-0.152
		1001.68		2.766E+00	2.396E+00	4.235E+00	3.770E-01	0.653
	+	1121.28		7.573E-01	2.278E-01	3.994E-01	2.741E-02	1.896
		1189.05		-2.335E-01	3.952E-01	6.092E-01	3.537E-02	-0.383
		1221.42	*	-9.711E-02	2.908E-01	4.603E-01	2.676E-02	-0.211
		1230.97		-5.286E-01	6.576E-01	9.992E-01	5.810E-02	-0.529
RE-183		57.98		8.158E-02	8.215E-02	1.268E-01	1.027E-02	0.643
		59.32		5.097E-02	4.883E-02	7.535E-02	6.237E-03	0.676
		67.20		-1.215E-02	1.341E-01	1.845E-01	1.480E-02	-0.066
		162.32	*	6.219E-02	1.178E-01	1.960E-01	2.026E-02	0.317
	+	208.81		3.448E+00	1.362E+00	1.958E+00	1.952E-01	1.761
		291.72		-7.381E-01	1.084E+00	1.509E+00	1.364E-01	-0.489
RE-184		57.98		3.026E-01	3.047E-01	4.705E-01	3.811E-02	0.643
		59.32		1.889E-01	1.810E-01	2.793E-01	2.312E-02	0.676
		67.20		-4.507E-02	4.973E-01	6.841E-01	5.487E-02	-0.066
		161.27		1.908E-01	3.782E-01	6.291E-01	6.574E-02	0.303
		216.55		3.960E-01	2.946E-01	4.989E-01	4.960E-02	0.794
		252.85	*	-2.393E-02	2.479E-01	3.950E-01	3.817E-02	-0.061
		318.01		2.368E-01	4.720E-01	8.108E-01	6.833E-02	0.292
		792.07		6.195E-01	1.401E+00	2.106E+00	1.788E-01	0.294
		903.28		-2.414E-01	1.549E+00	2.166E+00	2.195E-01	-0.111
		920.93		2.663E-02	5.728E-01	9.072E-01	9.021E-02	0.029
OS-185		59.72		9.729E-02	1.360E-01	2.074E-01	1.720E-02	0.469
		61.14		1.095E-01	7.542E-02	1.308E-01	1.077E-02	0.837
		69.30		3.390E-02	1.965E-01	2.927E-01	2.330E-02	0.116
		592.07		9.136E-01	2.836E+00	4.715E+00	3.100E-01	0.194
		646.12	*	-3.028E-02	5.283E-02	8.132E-02	5.357E-03	-0.372
		717.42		-1.940E-01	1.023E+00	1.655E+00	1.219E-01	-0.117
		874.81		-5.656E-03	6.990E-01	1.158E+00	1.136E-01	-0.005
		880.27		-5.654E-02	9.119E-01	1.503E+00	1.488E-01	-0.038
RE-188		155.03	*	1.311E-01	1.899E-01	3.175E-01	3.535E-02	0.413
		477.96		3.116E-01	3.494E+00	5.771E+00	3.622E-01	0.054
		633.10		-1.416E+00	3.309E+00	5.158E+00	3.400E-01	-0.275
W-188	+	63.58		6.762E+01	4.758E+01	4.889E+01	3.980E+00	1.383
		227.08		-1.944E+00	1.368E+01	2.187E+01	2.163E+00	-0.089
		290.67	*	-1.924E+00	8.411E+00	1.213E+01	1.099E+00	-0.159
IR-192	+	295.96		1.154E+00	1.964E-01	3.032E-01	2.733E-02	3.805
		308.46		2.602E-02	1.140E-01	1.693E-01	1.476E-02	0.154
		316.51	*	1.112E-02	3.612E-02	6.149E-02	5.218E-03	0.181
		468.07		7.222E-02	8.820E-02	1.345E-01	9.504E-03	0.537
		604.41		-2.264E-01	6.168E-01	8.367E-01	9.848E-02	-0.271
		612.46		3.454E+00	1.181E+00	1.974E+00	1.617E-01	1.750

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AU-195		65.12		6.043E-02	1.032E-01	1.558E-01	1.260E-02	0.388
		66.83		-2.470E-02	5.896E-02	8.574E-02	6.887E-03	-0.288
	+	75.70		1.258E+00	1.935E-01	3.764E-01	2.940E-02	3.343
		98.88	*	1.890E-01	2.235E-01	3.519E-01	3.356E-02	0.537
		129.76		5.203E+00	3.179E+00	5.389E+00	7.302E-01	0.966
TL-200		367.94	*	4.560E-05	3.179E+00	Half-Life too short		
		579.30		6.659E-04	3.179E+00	Half-Life too short		
		828.27		-4.550E-04	3.179E+00	Half-Life too short		
		1205.75		1.782E-03	3.179E+00	Half-Life too short		
TL-201		68.90		-6.403E-01	2.647E+00	3.617E+00	2.884E-01	-0.177
		70.82		1.086E+00	1.435E+00	2.178E+00	1.726E-01	0.499
		80.30		2.293E+00	4.198E+00	4.662E+00	3.601E-01	0.492
		135.34		1.777E+01	2.094E+01	3.527E+01	4.607E+00	0.504
		167.43	*	2.423E+00	5.887E+00	9.747E+00	9.676E-01	0.249
TL-202		68.90		-7.000E-02	2.894E-01	3.955E-01	3.153E-02	-0.177
		70.82		1.184E-01	1.565E-01	2.375E-01	1.882E-02	0.499
		80.30		2.501E-01	4.579E-01	5.085E-01	3.928E-02	0.492
		439.56	*	8.987E-02	7.591E-02	1.336E-01	8.147E-03	0.672
HG-203		70.83		5.409E-01	7.139E-01	1.080E+00	1.423E-01	0.501
		72.87		2.322E+00	5.217E-01	8.059E-01	1.026E-01	2.882
		82.60		1.085E+00	9.517E-01	1.445E+00	1.905E-01	0.751
		279.20	*	4.331E-02	4.496E-02	7.853E-02	7.467E-03	0.552
BI-207		72.80		6.326E-01	1.361E-01	2.359E-01	1.857E-02	2.682
	+	74.97		7.009E-01	1.078E-01	1.868E-01	1.462E-02	3.753
	+	84.90		3.672E-01	1.602E-01	2.747E-01	2.102E-02	1.337
		569.67		2.253E-02	3.798E-02	6.417E-02	4.200E-03	0.351
		1063.62	*	4.581E-02	6.136E-02	1.072E-01	8.488E-03	0.427
		1770.23		1.122E-01	5.797E-01	8.557E-01	4.942E-02	0.131
TL-207		81.07		8.737E-02	2.379E-01	2.609E-01	2.012E-02	0.335
	+	83.78		2.421E-01	1.057E-01	1.667E-01	1.279E-02	1.453
		94.90		4.060E-01	2.309E-01	3.587E-01	3.161E-02	1.132
		122.32		5.803E-02	1.842E+00	3.042E+00	4.430E-01	0.019
		144.24		2.867E-01	7.353E-01	1.203E+00	1.560E-01	0.238
		154.21		2.616E-01	4.393E-01	7.325E-01	8.712E-02	0.357
	+	269.46		5.715E-01	3.776E-01	4.012E-01	3.853E-02	1.424
		323.87	*	-2.857E-01	7.838E-01	1.108E+00	1.942E-01	-0.258
	+	338.28		6.990E+00	2.049E+00	2.701E+00	3.181E-01	2.588
		445.03		-1.101E+00	2.677E+00	4.295E+00	4.491E-01	-0.256
PO-209		260.50		9.219E+00	1.058E+01	1.764E+01	1.687E+00	0.523
		262.80		-2.750E+01	3.168E+01	4.619E+01	4.404E+00	-0.595
		896.60	*	-6.595E-01	9.531E+00	1.569E+01	1.595E+00	-0.042
PB-211		404.84	*	-4.954E-01	1.257E+00	1.691E+00	1.054E+00	-0.293
		427.08		2.288E+00	2.775E+00	4.163E+00	2.574E+00	0.550
		831.96		5.338E-01	1.460E+00	2.433E+00	1.526E+00	0.219
BI-212	+	727.18	*	1.405E+00	6.022E-01	7.989E-01	7.247E-02	1.758
		785.46		-1.088E+00	2.161E+00	3.471E+00	2.911E-01	-0.314
		1620.62		1.157E+00	1.426E+00	2.593E+00	1.522E-01	0.446
PO-215		81.07		8.737E-02	2.379E-01	2.609E-01	2.012E-02	0.335
	+	83.78		2.421E-01	1.057E-01	1.667E-01	1.279E-02	1.453

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		4.060E-01	2.309E-01	3.587E-01	3.161E-02	1.132
		122.32		5.803E-02	1.842E+00	3.042E+00	4.430E-01	0.019
		144.24		2.867E-01	7.353E-01	1.203E+00	1.560E-01	0.238
		154.21		2.616E-01	4.393E-01	7.325E-01	8.712E-02	0.357
	+	269.46		5.715E-01	3.776E-01	4.012E-01	3.853E-02	1.424
		323.87	*	-2.857E-01	7.838E-01	1.108E+00	1.942E-01	-0.258
	+	338.28		6.990E+00	2.049E+00	2.701E+00	3.181E-01	2.588
		445.03		-1.101E+00	2.677E+00	4.295E+00	4.491E-01	-0.256
RN-219	+	271.23		7.333E-01	4.860E-01	4.967E-01	5.455E-02	1.476
		401.81	*	2.715E-01	4.754E-01	8.104E-01	1.105E-01	0.335
RN-220		549.76	*	-9.907E+00	3.060E+01	4.865E+01	3.166E+00	-0.204
RA-223		81.07		8.737E-02	2.379E-01	2.609E-01	2.012E-02	0.335
	+	83.78		2.421E-01	1.057E-01	1.667E-01	1.279E-02	1.453
		94.90		4.060E-01	2.309E-01	3.587E-01	3.161E-02	1.132
		122.32		5.803E-02	1.842E+00	3.042E+00	4.430E-01	0.019
		144.24		2.867E-01	7.353E-01	1.203E+00	1.560E-01	0.238
		154.21		2.616E-01	4.393E-01	7.325E-01	8.712E-02	0.357
	+	269.46		5.715E-01	3.776E-01	4.012E-01	3.853E-02	1.424
		323.87	*	-2.857E-01	7.838E-01	1.108E+00	1.942E-01	-0.258
	+	338.28		6.990E+00	2.049E+00	2.701E+00	3.181E-01	2.588
		445.03		-1.101E+00	2.677E+00	4.295E+00	4.491E-01	-0.256
AC-227		79.80		1.546E+00	1.812E+00	2.024E+00	4.284E-01	0.764
		236.00		1.660E+00	3.998E-01	5.809E-01	7.622E-02	2.858
		256.20	*	-2.604E-01	4.189E-01	6.450E-01	1.028E-01	-0.404
		286.10		9.189E-01	1.674E+00	2.882E+00	3.907E-01	0.319
	+	299.80		4.909E+00	2.160E+00	3.005E+00	5.293E-01	1.634
		304.40		1.769E+00	2.035E+00	3.513E+00	6.501E-01	0.504
		334.20		5.376E-01	4.086E+00	4.069E+00	7.784E-01	0.132
TH-227		79.80		1.546E+00	1.813E+00	2.024E+00	4.340E-01	0.764
	+	94.00		9.208E+00	3.145E+00	3.389E+00	7.385E-01	2.717
		236.00		1.660E+00	3.903E-01	5.809E-01	6.993E-02	2.858
		256.20	*	-2.604E-01	4.197E-01	6.450E-01	1.197E-01	-0.404
		286.10		9.189E-01	1.907E+00	2.882E+00	2.894E+00	0.319
	+	299.80		4.909E+00	2.160E+00	3.005E+00	5.293E-01	1.634
		304.40		1.769E+00	2.035E+00	3.513E+00	6.501E-01	0.504
		334.20		5.376E-01	4.086E+00	4.069E+00	7.784E-01	0.132
TH-229	+	85.43		3.625E-01	1.582E-01	2.886E-01	2.206E-02	1.256
	+	88.47		3.825E-01	1.141E-01	1.949E-01	1.499E-02	1.963
		100.00		1.533E-01	1.736E-01	2.921E-01	2.846E-02	0.525
		193.63	*	-3.461E-01	5.560E-01	8.753E-01	8.741E-02	-0.395
		210.97		2.515E+00	9.502E-01	1.497E+00	1.492E-01	1.680
PA-231		283.67	*	1.345E-01	1.719E+00	2.906E+00	4.510E-01	0.046
	+	301.29		1.964E+00	8.287E-01	1.199E+00	1.486E-01	1.638
TH-231		81.07		8.737E-02	2.379E-01	2.609E-01	2.012E-02	0.335
	+	83.78		2.421E-01	1.057E-01	1.667E-01	1.279E-02	1.453
		94.90		4.060E-01	2.309E-01	3.587E-01	3.161E-02	1.132
		122.32		5.803E-02	1.842E+00	3.042E+00	4.430E-01	0.019
		144.24		2.867E-01	7.353E-01	1.203E+00	1.560E-01	0.238
		154.21		2.616E-01	4.393E-01	7.325E-01	8.712E-02	0.357

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.715E-01	3.776E-01	4.012E-01	3.853E-02	1.424
		323.87	*	-2.857E-01	7.838E-01	1.108E+00	1.942E-01	-0.258
	+	338.28		6.990E+00	2.049E+00	2.701E+00	3.181E-01	2.588
		445.03		-1.101E+00	2.677E+00	4.295E+00	4.491E-01	-0.256
U-231	+	84.21		8.636E+00	3.768E+00	6.025E+00	4.617E-01	1.433
	+	92.29		7.531E+00	2.085E+00	2.952E+00	2.465E-01	2.552
		95.87	*	-5.131E-01	8.719E-01	1.238E+00	1.113E-01	-0.414
		108.00		6.139E-02	1.679E+00	2.785E+00	3.139E-01	0.022
PA-233	+	75.28		2.046E+01	4.080E+00	5.845E+00	8.717E-01	3.500
	+	86.59		7.192E+00	2.495E+00	2.587E+00	6.861E-01	2.780
	+	300.12		1.369E+00	5.890E-01	8.381E-01	1.259E-01	1.633
		311.98	*	2.334E-02	7.264E-02	1.133E-01	1.001E-02	0.206
		340.50		2.213E+00	9.844E-01	1.406E+00	3.311E-01	1.573
		398.62		-6.879E-01	2.409E+00	3.918E+00	1.014E+00	-0.176
		415.76		5.202E-01	2.187E+00	3.340E+00	6.891E-01	0.156
PA-234	+	63.00		1.983E+00	1.419E+00	1.438E+00	2.193E-01	1.379
		94.67		5.074E-01	1.753E-01	2.695E-01	3.371E-02	1.883
		98.44		5.064E-02	9.868E-02	1.406E-01	7.862E-02	0.360
		99.86		3.814E-01	4.389E-01	7.381E-01	7.171E-02	0.517
		111.00		-1.483E-01	1.854E-01	2.962E-01	4.319E-02	-0.501
		131.20		-4.085E-02	1.175E-01	1.909E-01	2.563E-02	-0.214
		152.70		1.607E-02	3.623E-01	5.938E-01	1.104E-01	0.027
	+	186.00		3.869E+00	2.373E+00	2.721E+00	8.603E-01	1.422
		226.40		-1.062E-01	4.361E-01	6.935E-01	9.755E-02	-0.153
		227.20		-6.878E-02	4.673E-01	7.469E-01	7.386E-02	-0.092
		248.90		-7.002E-02	8.825E-01	1.408E+00	3.218E-01	-0.050
	+	293.70		7.340E+00	1.664E+00	1.807E+00	3.162E-01	4.061
		369.80		1.902E-01	8.932E-01	1.503E+00	3.173E-01	0.127
		568.70		9.786E-01	1.222E+00	2.092E+00	1.369E-01	0.468
		569.50		2.119E-01	3.331E-01	5.646E-01	3.695E-02	0.375
		574.00		-4.950E-01	1.777E+00	2.829E+00	1.853E-01	-0.175
		699.00		-1.797E-01	8.985E-01	1.420E+00	2.618E-01	-0.127
		706.10		6.047E-01	1.324E+00	2.156E+00	9.559E-01	0.280
		733.00		5.132E-02	4.981E-01	7.284E-01	1.589E-01	0.070
		742.81		-1.281E-01	1.588E+00	2.640E+00	1.772E+00	-0.049
	+	796.30		1.523E+00	1.344E+00	2.100E+00	5.677E-01	0.725
		805.60		5.426E-01	1.176E+00	2.011E+00	6.167E-01	0.270
		819.60		4.719E-01	1.414E+00	2.401E+00	9.147E-01	0.197
		826.30		-2.674E-01	9.498E-01	1.530E+00	6.857E-01	-0.175
		831.60		2.846E-01	7.551E-01	1.284E+00	3.852E-01	0.222
		876.40		8.776E-01	1.306E+00	1.691E+00	1.740E+00	0.519
		880.51		-7.543E-02	3.352E-01	5.447E-01	5.393E-02	-0.138
		883.24		-2.790E-01	3.934E-01	5.320E-01	3.586E-01	-0.525
		899.00		8.216E-01	1.146E+00	1.904E+00	8.386E-01	0.432
		925.00		6.813E-01	1.359E+00	2.343E+00	2.319E-01	0.291
		926.50		1.891E-02	1.994E-01	3.321E-01	8.547E-02	0.057
		946.00	*	-2.712E-01	3.624E-01	5.507E-01	1.061E-01	-0.492
		949.00		6.290E-01	5.332E-01	9.613E-01	9.240E-02	0.654
		980.50		-5.017E-01	9.896E-01	1.296E+00	1.193E-01	-0.387

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-2.188E-01	1.392E+00	2.269E+00	1.470E+00	-0.096
PA-234M		766.41		1.172E+01	2.472E+01	3.969E+01	3.041E+01	0.295
		1001.03	*	1.091E+01	7.777E+00	1.392E+01	1.588E+00	0.784
U-235	+	89.95		3.840E+00	1.614E+00	1.735E+00	5.323E-01	2.213
	+	93.35		2.865E+00	1.101E+00	1.093E+00	3.060E-01	2.621
		105.00		-2.632E-01	1.062E+00	1.709E+00	5.212E-01	-0.154
		143.76	*	2.632E-02	2.279E-01	3.694E-01	7.228E-02	0.071
		163.35		-2.278E-01	5.185E-01	8.284E-01	1.644E-01	-0.275
	+	185.71		1.433E-01	7.665E-02	1.011E-01	1.009E-02	1.417
		205.31		-2.628E-02	6.226E-01	8.772E-01	1.731E-01	-0.030
NP-236		94.67		3.872E-01	1.286E-01	2.046E-01	1.794E-02	1.892
		98.44		3.824E-02	7.155E-02	1.063E-01	1.005E-02	0.360
		111.00		-1.122E-01	1.399E-01	2.240E-01	2.659E-02	-0.501
		160.31	*	-5.548E-02	8.832E-02	1.404E-01	1.482E-02	-0.395
NP-239		99.55		1.304E-01	1.513E-01	2.471E-01	2.387E-02	0.528
		117.00	*	-2.387E-02	1.907E-01	3.136E-01	4.108E-02	-0.076
	+	209.75		2.751E+00	1.087E+00	1.582E+00	1.576E-01	1.739
		228.18		-2.441E-01	2.492E-01	3.803E-01	3.758E-02	-0.642
		277.60		2.702E-01	2.092E-01	3.524E-01	3.280E-02	0.767
		334.30		3.274E-01	2.316E+00	2.310E+00	1.840E-01	0.142
AM-241		59.54	*	4.742E-02	7.159E-02	1.090E-01	9.755E-03	0.435
CM-243		99.55		1.342E-01	1.557E-01	2.543E-01	2.456E-02	0.528
		103.76	*	5.218E-02	9.643E-02	1.595E-01	1.667E-02	0.327
		117.00		-2.455E-02	1.961E-01	3.226E-01	4.226E-02	-0.076
	+	209.75		2.712E+00	1.072E+00	1.559E+00	1.554E-01	1.739
		228.18		-2.466E-01	2.518E-01	3.842E-01	3.797E-02	-0.642
		277.60		2.724E-01	2.109E-01	3.553E-01	3.307E-02	0.767
CM-247		278.00		1.122E+00	8.687E-01	1.463E+00	1.361E-01	0.767
		287.40		1.957E-01	1.418E+00	2.273E+00	2.075E-01	0.086
		402.60	*	1.075E-02	4.484E-02	7.122E-02	4.191E-03	0.151
CF-249		252.85		-9.020E-02	9.346E-01	1.489E+00	1.439E-01	-0.061
		333.44		5.403E-02	3.029E-01	3.038E-01	2.427E-02	0.178
		387.95	*	-5.836E-03	4.682E-02	7.720E-02	4.617E-03	-0.076
CF-251		176.60	*	-1.280E-01	1.382E-01	2.151E-01	2.142E-02	-0.595
		227.00		-3.658E-02	4.144E-01	6.642E-01	6.569E-02	-0.055
		285.00		9.200E-02	1.974E+00	3.332E+00	3.057E-01	0.028

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833    *
* Acquisition date : 14-JUL-2009 11:23:48 Detector SN#     :               *
* Detector ID        : GAM05               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.87     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 30-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1201874833          Analyst initials: MXR1         *
* Batch Number       : 882713               Sample Quantity : 1.3307E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.355E+01	2.899E+00	7.850E-01	0.000E+00
CD-109	3.731E+00	8.643E-01	1.055E+00	0.000E+00
SN-126	3.674E-01	8.510E-02	1.037E-01	0.000E+00
TL-208	5.373E-01	9.683E-02	6.903E-02	0.000E+00
BI-210	1.139E+00	9.863E-01	9.172E-01	0.000E+00
PB-210	1.139E+00	9.863E-01	9.172E-01	0.000E+00
PO-210	1.139E+00	9.853E-01	9.172E-01	0.000E+00
BI-211	4.096E+00	5.463E-01	3.667E-01	0.000E+00
PB-212	1.864E+00	2.295E-01	1.012E-01	0.000E+00
PO-212	1.864E+00	2.295E-01	1.012E-01	0.000E+00
BI-214	1.283E+00	2.046E-01	1.374E-01	0.000E+00
PB-214	1.425E+00	2.035E-01	1.233E-01	0.000E+00
PO-214	1.425E+00	2.035E-01	1.233E-01	0.000E+00
PO-216	1.864E+00	2.295E-01	1.012E-01	0.000E+00
PO-218	1.425E+00	2.035E-01	1.233E-01	0.000E+00
RA-224	4.724E+00	1.112E+00	1.151E+00	0.000E+00
RA-226	1.283E+00	2.046E-01	1.374E-01	0.000E+00
AC-228	1.926E+00	4.453E-01	2.851E-01	0.000E+00
RA-228	1.926E+00	4.453E-01	2.851E-01	0.000E+00
TH-228	1.864E+00	2.295E-01	1.012E-01	0.000E+00
TH-230	1.283E+00	2.046E-01	1.374E-01	0.000E+00
TH-232	1.926E+00	4.453E-01	2.851E-01	0.000E+00
TH-234	1.702E+00	1.203E+00	1.102E+00	0.000E+00
U-234	1.283E+00	2.046E-01	1.374E-01	0.000E+00
NP-237	1.079E+00	3.317E-01	3.037E-01	0.000E+00
U-238	1.702E+00	1.203E+00	1.102E+00	0.000E+00
AM-243	3.905E-01	5.886E-02	6.405E-02	0.000E+00
ANH-511	9.893E-02	7.468E-02	5.919E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	7.318E-04	3.555E-01	6.088E-01	0.000E+00	NOT IDENT.
NA-22	-1.244E-02	5.803E-02	9.425E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.429E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.370E-02	3.176E-02	6.052E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.651E-02	6.610E-02	0.000E+00	FAIL ABUN
SC-46	-5.056E-03	4.509E-02	7.628E-02	0.000E+00	FAIL ABUN
V-48	-8.271E-02	9.712E-02	1.250E-01	0.000E+00	NOT IDENT.
CR-51	4.720E-02	3.840E-01	6.625E-01	0.000E+00	NOT IDENT.
MN-52	8.575E-02	2.292E-01	4.083E-01	0.000E+00	NOT IDENT.
MN-54	-1.838E-02	4.555E-02	7.627E-02	0.000E+00	NOT IDENT.
CO-56	-1.413E-02	4.701E-02	7.869E-02	0.000E+00	NOT IDENT.
CO-57	-3.816E-04	2.586E-02	4.550E-02	0.000E+00	NOT IDENT.
CO-58	-1.733E-03	4.492E-02	7.706E-02	0.000E+00	NOT IDENT.
FE-59	2.663E-02	1.068E-01	1.832E-01	0.000E+00	NOT IDENT.
CO-60	3.091E-02	4.506E-02	8.021E-02	0.000E+00	NOT IDENT.
ZN-65	2.034E-02	1.269E-01	1.857E-01	0.000E+00	NOT IDENT.
GE-68	1.610E+00	1.625E+00	2.939E+00	0.000E+00	NOT IDENT.
AS-73	6.769E-02	2.373E-01	4.237E-01	0.000E+00	NOT IDENT.
AS-74	-3.670E-02	9.860E-02	1.613E-01	0.000E+00	NOT IDENT.
SE-75	-3.428E-02	5.671E-02	7.945E-02	0.000E+00	NOT IDENT.
BR-77	-3.886E+00	8.547E+00	1.407E+01	0.000E+00	FAIL ABUN
SR-82	-4.033E-01	4.620E-01	7.462E-01	0.000E+00	NOT IDENT.
RB-83	-2.095E-02	7.792E-02	1.301E-01	0.000E+00	NOT IDENT.
RB-84	1.246E-02	7.959E-02	1.378E-01	0.000E+00	NOT IDENT.
KR-85	1.719E+01	1.069E+01	1.755E+01	0.000E+00	NOT IDENT.
SR-85	8.709E-02	5.415E-02	8.892E-02	0.000E+00	NOT IDENT.
RB-86	9.856E-01	9.698E-01	1.760E+00	0.000E+00	NOT IDENT.
Y-88	-7.236E-03	3.780E-02	6.060E-02	0.000E+00	NOT IDENT.
ZR-88	-4.993E-04	3.368E-02	5.840E-02	0.000E+00	NOT IDENT.
Y-91	1.532E+01	2.446E+01	4.263E+01	0.000E+00	NOT IDENT.
NB-94	2.473E-02	4.134E-02	7.169E-02	0.000E+00	NOT IDENT.
NB-95	2.494E-02	5.523E-02	9.797E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.663E-01	2.683E-01	0.000E+00	NOT IDENT.
ZR-95	1.462E-02	8.627E-02	1.510E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.849E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.301E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.396E+00	1.009E+01	1.717E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.823E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.277E-03	3.621E-02	6.026E-02	0.000E+00	NOT IDENT.
RH-102	-2.623E-02	3.341E-02	5.421E-02	0.000E+00	NOT IDENT.
RU-103	-7.603E-03	4.351E-02	7.334E-02	0.000E+00	FAIL ABUN
RH-106	1.283E-01	3.726E-01	6.412E-01	0.000E+00	FAIL ABUN
RU-106	1.283E-01	3.724E-01	6.412E-01	0.000E+00	FAIL ABUN
AG-108M	4.809E-03	3.763E-02	6.535E-02	0.000E+00	NOT IDENT.
AG-110M	2.380E-02	4.276E-02	7.430E-02	0.000E+00	NOT IDENT.
IN-111	-3.467E-01	9.669E-01	1.390E+00	0.000E+00	NOT IDENT.
IN-113M	-2.439E-02	4.982E-02	8.409E-02	0.000E+00	NOT IDENT.
SN-113	-2.439E-02	4.982E-02	8.409E-02	0.000E+00	NOT IDENT.
IN-114M	1.509E-01	2.176E-01	3.390E-01	0.000E+00	NOT IDENT.
CD-115	-1.675E-01	8.241E+00	1.398E+01	0.000E+00	NOT IDENT.
SN-117M	1.308E-04	5.604E-02	9.730E-02	0.000E+00	NOT IDENT.
SB-122	1.010E+00	1.852E+00	3.245E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.477E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.270E-02	3.081E-02	5.259E-02	0.000E+00	NOT IDENT.
I-124	-1.478E-01	7.450E-01	1.060E+00	0.000E+00	NOT IDENT.
SB-124	1.196E-02	6.555E-02	1.144E-01	0.000E+00	FAIL ABUN
SB-125	6.328E-02	1.071E-01	1.909E-01	0.000E+00	FAIL ABUN
TE-125M	8.096E+00	8.850E+00	1.604E+01	0.000E+00	NOT IDENT.
I-126	1.461E-01	2.028E-01	3.563E-01	0.000E+00	NOT IDENT.
SB-126	-7.414E-02	1.704E-01	2.428E-01	0.000E+00	FAIL ABUN
SB-127	1.004E+00	1.371E+00	2.403E+00	0.000E+00	NOT IDENT.
XE-127	-5.371E-03	5.039E-02	8.281E-02	0.000E+00	NOT IDENT.
I-131	-1.142E-01	1.086E-01	1.770E-01	0.000E+00	NOT IDENT.
TE-132	-5.910E-01	5.901E-01	9.427E-01	0.000E+00	NOT IDENT.
BA-133	-1.495E-02	5.109E-02	7.567E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.524E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.826E-02	6.477E-02	1.097E-01	0.000E+00	FAIL ABUN
CS-135	3.282E-01	2.106E-01	3.350E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.223E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.139E-02	1.192E-01	2.070E-01	0.000E+00	FAIL ABUN
BA-137M	-4.820E-02	4.642E-02	7.153E-02	0.000E+00	NOT IDENT.
CS-137	-5.095E-02	4.908E-02	7.561E-02	0.000E+00	NOT IDENT.
CE-139	-1.523E-02	3.187E-02	5.411E-02	0.000E+00	NOT IDENT.
BA-140	-1.614E-01	2.693E-01	4.278E-01	0.000E+00	NOT IDENT.
LA-140	-2.730E-02	1.025E-01	1.671E-01	0.000E+00	FAIL ABUN
CE-141	3.812E-02	6.562E-02	1.148E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.415E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-2.777E-01	2.288E-01	3.741E-01	0.000E+00	NOT IDENT.
PM-144	-1.410E-02	4.351E-02	6.875E-02	0.000E+00	NOT IDENT.
PR-144	-9.549E-01	2.946E+00	4.656E+00	0.000E+00	NOT IDENT.
PM-146	-2.806E-02	4.744E-02	7.824E-02	0.000E+00	NOT IDENT.
ND-147	-7.919E-02	5.549E-01	9.323E-01	0.000E+00	FAIL ABUN
PM-149	4.045E+00	6.971E+01	1.238E+02	0.000E+00	NOT IDENT.
EU-152	5.763E-02	1.256E-01	1.874E-01	0.000E+00	FAIL ABUN
GD-153	-1.234E-02	7.788E-02	1.201E-01	0.000E+00	FAIL ABUN
EU-154	-1.490E-02	1.599E-01	2.626E-01	0.000E+00	NOT IDENT.
EU-155	-5.227E-02	1.067E-01	1.824E-01	0.000E+00	FAIL ABUN
TB-160	-4.167E-03	1.651E-01	2.817E-01	0.000E+00	FAIL ABUN
HO-166M	1.862E-02	6.962E-02	1.232E-01	0.000E+00	NOT IDENT.
TM-171	-7.468E+00	1.747E+01	2.739E+01	0.000E+00	NOT IDENT.
LU-176	6.190E-03	2.994E-02	4.664E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.335E+00	2.006E+00	0.000E+00	FAIL ABUN
LU-177M	-2.134E-02	2.292E-01	3.413E-01	0.000E+00	FAIL ABUN
HF-181	-1.297E-02	4.653E-02	7.810E-02	0.000E+00	NOT IDENT.
W-181	8.977E-02	2.174E-01	3.516E-01	0.000E+00	NOT IDENT.
TA-182	-9.711E-02	2.850E-01	4.626E-01	0.000E+00	FAIL ABUN
RE-183	6.219E-02	1.155E-01	2.040E-01	0.000E+00	FAIL ABUN
RE-184	-2.393E-02	2.430E-01	4.080E-01	0.000E+00	NOT IDENT.
OS-185	-3.028E-02	5.177E-02	8.265E-02	0.000E+00	NOT IDENT.
RE-188	1.311E-01	1.861E-01	3.307E-01	0.000E+00	NOT IDENT.
W-188	-1.924E+00	8.243E+00	1.250E+01	0.000E+00	FAIL ABUN
IR-192	1.112E-02	3.540E-02	6.327E-02	0.000E+00	FAIL ABUN
AU-195	1.890E-01	2.191E-01	3.693E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.207E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.423E+00	5.769E+00	1.014E+01	0.000E+00	NOT IDENT.
TL-202	8.987E-02	7.439E-02	1.368E-01	0.000E+00	NOT IDENT.
HG-203	4.331E-02	4.406E-02	8.099E-02	0.000E+00	NOT IDENT.
BI-207	4.581E-02	6.014E-02	1.080E-01	0.000E+00	FAIL ABUN
TL-207	-2.857E-01	7.681E-01	1.139E+00	0.000E+00	FAIL ABUN
PO-209	-6.595E-01	9.340E+00	1.585E+01	0.000E+00	NOT IDENT.
PB-211	-4.954E-01	1.232E+00	1.732E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.902E-01	8.102E-01	0.000E+00	FAIL ABUN
PO-215	-2.857E-01	7.681E-01	1.139E+00	0.000E+00	FAIL ABUN
RN-219	2.715E-01	4.659E-01	8.305E-01	0.000E+00	FAIL ABUN
RN-220	-9.907E+00	2.999E+01	4.959E+01	0.000E+00	NOT IDENT.
RA-223	-2.857E-01	7.681E-01	1.139E+00	0.000E+00	FAIL ABUN
AC-227	-2.604E-01	4.106E-01	6.661E-01	0.000E+00	FAIL ABUN
TH-227	-2.604E-01	4.113E-01	6.661E-01	0.000E+00	FAIL ABUN
TH-229	-3.461E-01	5.449E-01	9.083E-01	0.000E+00	FAIL ABUN
PA-231	1.345E-01	1.685E+00	2.996E+00	0.000E+00	FAIL ABUN
TH-231	-2.857E-01	7.681E-01	1.139E+00	0.000E+00	FAIL ABUN
U-231	-5.131E-01	8.545E-01	1.300E+00	0.000E+00	FAIL ABUN
PA-233	2.334E-02	7.119E-02	1.167E-01	0.000E+00	FAIL ABUN
PA-234	-2.712E-01	3.552E-01	5.559E-01	0.000E+00	FAIL ABUN
PA-234M	1.091E+01	7.621E+00	1.404E+01	0.000E+00	NOT IDENT.
U-235	2.632E-02	2.233E-01	3.852E-01	0.000E+00	FAIL ABUN
NP-236	-5.548E-02	8.655E-02	1.462E-01	0.000E+00	NOT IDENT.
NP-239	-2.387E-02	1.869E-01	3.281E-01	0.000E+00	FAIL ABUN
AM-241	4.742E-02	7.015E-02	1.154E-01	0.000E+00	NOT IDENT.
CM-243	5.218E-02	9.450E-02	1.673E-01	0.000E+00	FAIL ABUN
CM-247	1.075E-02	4.395E-02	7.299E-02	0.000E+00	NOT IDENT.
CF-249	-5.836E-03	4.589E-02	7.916E-02	0.000E+00	NOT IDENT.
CF-251	-1.280E-01	1.354E-01	2.235E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:24:37.64

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 11:23:48
Sample ID         : G1201874833          Sample quantity  : 1.33070E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.87  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1273	10.67*	1.003E+00	3.355E+01	3.355E+01	8.82
CD-109	88.03	379	3.72*	7.859E+00	3.654E+00	3.731E+00	23.64
SN-126	64.28	185	9.60	8.063E+00	6.735E-01	6.735E-01	71.48
	86.94	379	8.90	7.859E+00	1.527E+00	1.527E+00	46.85
	87.57	379	37.00*	7.859E+00	3.674E-01	3.674E-01	23.64
TL-208	277.35	------	6.80	4.261E+00	------ Line Not Found		------
	510.84	89	21.60	2.545E+00	4.580E-01	4.580E-01	77.47
	583.14	362	84.20*	2.259E+00	5.373E-01	5.373E-01	18.39
	860.37	50	12.46	1.589E+00	7.189E-01	7.189E-01	63.94
BI-210	46.50	125	4.05*	7.641E+00	1.137E+00	1.139E+00	88.39
PB-210	46.50	125	4.05*	7.641E+00	1.137E+00	1.139E+00	88.39
PO-210	46.50	125	4.05*	7.641E+00	1.137E+00	1.139E+00	88.30
BI-211	72.87	------	1.27	8.052E+00	------ Line Not Found		------
	351.07	660	12.94*	3.515E+00	4.096E+00	4.096E+00	13.61
PB-212	74.81	734	10.70	8.037E+00	2.409E+00	2.409E+00	18.00
	77.11	1038	18.00	8.014E+00	2.029E+00	2.029E+00	12.67
	87.30	379	8.00	7.859E+00	1.699E+00	1.699E+00	25.66
	238.63	1406	44.60*	4.773E+00	1.864E+00	1.864E+00	12.57
	300.09	128	3.41	4.007E+00	2.649E+00	2.649E+00	41.71
PO-212	74.81	734	10.70	8.037E+00	2.409E+00	2.409E+00	18.00
	77.11	1038	18.00	8.014E+00	2.029E+00	2.029E+00	12.67
	87.30	379	8.00	7.859E+00	1.699E+00	1.699E+00	25.66
	115.19	------	0.60	7.241E+00	------ Line Not Found		------
	238.63	1406	44.60*	4.773E+00	1.864E+00	1.864E+00	12.57
	300.09	128	3.41	4.007E+00	2.649E+00	2.649E+00	41.71
BI-214	609.31	457	46.30*	2.171E+00	1.283E+00	1.283E+00	16.27
	768.36	------	5.04	1.760E+00	------ Line Not Found		------
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	109	15.10	1.258E+00	1.613E+00	1.613E+00	30.80
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	------	4.11	1.054E+00	------ Line Not Found		------
	1764.49	64	15.80	8.611E-01	1.329E+00	1.329E+00	32.35

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	734	6.21	8.037E+00	4.150E+00	4.151E+00	17.07
	77.11	1038	10.50	8.014E+00	3.479E+00	3.479E+00	14.79
	87.30	379	4.67	7.859E+00	2.911E+00	2.911E+00	24.86
	241.98	313	7.49	4.728E+00	2.491E+00	2.491E+00	24.66
	295.21	422	19.20	4.058E+00	1.529E+00	1.529E+00	18.10
	351.92	660	37.20*	3.515E+00	1.425E+00	1.425E+00	14.58
PO-214	74.81	734	6.21	8.037E+00	4.150E+00	4.151E+00	17.07
	77.11	1038	10.50	8.014E+00	3.479E+00	3.479E+00	14.79
	87.30	379	4.67	7.859E+00	2.911E+00	2.911E+00	24.86
	241.98	313	7.49	4.728E+00	2.491E+00	2.491E+00	24.66
	295.21	422	19.20	4.058E+00	1.529E+00	1.529E+00	18.10
	351.92	660	37.20*	3.515E+00	1.425E+00	1.425E+00	14.58
PO-216	74.81	734	10.70	8.037E+00	2.409E+00	2.409E+00	18.00
	77.11	1038	18.00	8.014E+00	2.029E+00	2.029E+00	12.67
	87.30	379	8.00	7.859E+00	1.699E+00	1.699E+00	25.66
	238.63	1406	44.60*	4.773E+00	1.864E+00	1.864E+00	12.57
	300.09	128	3.41	4.007E+00	2.649E+00	2.649E+00	41.71
PO-218	74.81	734	6.21	8.037E+00	4.150E+00	4.151E+00	17.07
	77.11	1038	10.50	8.014E+00	3.479E+00	3.479E+00	14.79
	87.30	379	4.67	7.859E+00	2.911E+00	2.911E+00	24.86
	241.98	313	7.49	4.728E+00	2.491E+00	2.491E+00	24.66
	295.21	422	19.20	4.058E+00	1.529E+00	1.529E+00	18.10
	351.92	660	37.20*	3.515E+00	1.425E+00	1.425E+00	14.58
RA-224	240.98	313	3.95*	4.728E+00	4.724E+00	4.724E+00	24.01
RA-226	609.31	457	46.30*	2.171E+00	1.283E+00	1.283E+00	16.27
	768.36	------	5.04	1.760E+00	------ Line Not Found		------
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	109	15.10	1.258E+00	1.613E+00	1.613E+00	30.80
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	------	4.11	1.054E+00	------ Line Not Found		------
	1764.49	64	15.80	8.611E-01	1.329E+00	1.329E+00	32.35
AC-228	338.32	246	11.40	3.635E+00	1.674E+00	1.674E+00	49.09
	911.07	286	27.70*	1.509E+00	1.926E+00	1.926E+00	23.59
	969.11	144	16.60	1.429E+00	1.713E+00	1.713E+00	37.00
RA-228	338.32	246	11.40	3.635E+00	1.674E+00	1.674E+00	49.09
	911.07	286	27.70*	1.509E+00	1.926E+00	1.926E+00	23.59
	969.11	144	16.60	1.429E+00	1.713E+00	1.713E+00	37.00
TH-228	84.40	168	1.21	7.909E+00	4.943E+00	4.943E+00	44.75
	238.60	1406	44.60*	4.773E+00	1.864E+00	1.864E+00	12.57
	300.10	128	3.41	4.007E+00	2.649E+00	2.649E+00	71.73
TH-230	609.31	457	46.30*	2.171E+00	1.283E+00	1.283E+00	16.27
	768.36	------	5.04	1.760E+00	------ Line Not Found		------
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	109	15.10	1.258E+00	1.613E+00	1.613E+00	30.80
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	------	4.11	1.054E+00	------ Line Not Found		------
	1764.49	64	15.80	8.611E-01	1.329E+00	1.329E+00	32.35
TH-232	338.32	246	11.40	3.635E+00	1.674E+00	1.674E+00	27.96
	911.07	286	27.70*	1.509E+00	1.926E+00	1.926E+00	23.59

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	144	16.60	1.429E+00	1.713E+00	1.713E+00	37.00
TH-234	63.29	185	3.80*	8.063E+00	1.702E+00	1.702E+00	72.12
	92.38	354	5.41	7.754E+00	2.383E+00	2.383E+00	31.92
U-234	609.31	457	46.30*	2.171E+00	1.283E+00	1.283E+00	16.27
	768.36	------	5.04	1.760E+00	------ Line Not Found		------
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	109	15.10	1.258E+00	1.613E+00	1.613E+00	30.80
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	------	4.11	1.054E+00	------ Line Not Found		------
	1764.49	64	15.80	8.611E-01	1.329E+00	1.329E+00	32.35
NP-237	86.50	379	12.60*	7.859E+00	1.079E+00	1.079E+00	31.38
	95.87	------	2.60	7.687E+00	------ Line Not Found		------
U-238	63.29	185	3.80*	8.063E+00	1.702E+00	1.702E+00	72.12
	92.38	354	5.41	7.754E+00	2.383E+00	2.383E+00	27.68
AM-243	74.67	734	66.00*	8.037E+00	3.905E-01	3.905E-01	15.38
	86.72	379	0.34	7.859E+00	4.046E+01	4.046E+01	23.64
	117.66	------	0.55	7.181E+00	------ Line Not Found		------
	142.18	------	0.13	6.593E+00	------ Line Not Found		------
ANH-511	511.00	89	100.00*	2.545E+00	9.893E-02	9.893E-02	77.02

Flag: "*" = Keyline

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

Total number of lines in spectrum 33
Number of unidentified lines 2
Number of lines tentatively identified by NID 31 93.94%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.355E+01	3.355E+01	0.296E+01	8.82	
CD-109	464.00D	1.02	3.654E+00	3.731E+00	0.882E+00	23.64	
SN-126	1.00E+05Y	1.00	3.674E-01	3.674E-01	0.868E-01	23.64	
TL-208	1.41E+10Y	1.00	5.373E-01	5.373E-01	0.988E-01	18.39	
BI-210	22.26Y	1.00	1.137E+00	1.139E+00	1.006E+00	88.39	
PB-210	22.26Y	1.00	1.137E+00	1.139E+00	1.006E+00	88.39	
PO-210	22.26Y	1.00	1.137E+00	1.139E+00	1.005E+00	88.30	
BI-211	7.04E+08Y	1.00	4.096E+00	4.096E+00	0.557E+00	13.61	
PB-212	1.41E+10Y	1.00	1.864E+00	1.864E+00	0.234E+00	12.57	
PO-212	1.41E+10Y	1.00	1.864E+00	1.864E+00	0.234E+00	12.57	
BI-214	1600.00Y	1.00	1.283E+00	1.283E+00	0.209E+00	16.27	
PB-214	1600.00Y	1.00	1.425E+00	1.425E+00	0.208E+00	14.58	
PO-214	1600.00Y	1.00	1.425E+00	1.425E+00	0.208E+00	14.58	
PO-216	1.41E+10Y	1.00	1.864E+00	1.864E+00	0.234E+00	12.57	
PO-218	1600.00Y	1.00	1.425E+00	1.425E+00	0.208E+00	14.58	
RA-224	1.41E+10Y	1.00	4.724E+00	4.724E+00	1.134E+00	24.01	
RA-226	1600.00Y	1.00	1.283E+00	1.283E+00	0.209E+00	16.27	
AC-228	1.41E+10Y	1.00	1.926E+00	1.926E+00	0.454E+00	23.59	
RA-228	1.41E+10Y	1.00	1.926E+00	1.926E+00	0.454E+00	23.59	
TH-228	1.41E+10Y	1.00	1.864E+00	1.864E+00	0.234E+00	12.57	
TH-230	4.47E+09Y	1.00	1.283E+00	1.283E+00	0.209E+00	16.27	
TH-232	1.41E+10Y	1.00	1.926E+00	1.926E+00	0.454E+00	23.59	
TH-234	4.47E+09Y	1.00	1.702E+00	1.702E+00	1.227E+00	72.12	
U-234	4.47E+09Y	1.00	1.283E+00	1.283E+00	0.209E+00	16.27	
NP-237	2.14E+06Y	1.00	1.079E+00	1.079E+00	0.339E+00	31.38	
U-238	4.47E+09Y	1.00	1.702E+00	1.702E+00	1.227E+00	72.12	
AM-243	7380.00Y	1.00	3.905E-01	3.905E-01	0.601E-01	15.38	
ANH-511	1.00E+09Y	1.00	9.893E-02	9.893E-02	7.620E-02	77.02	
		Total Activity :	7.795E+01	7.804E+01			

Grand Total Activity : 7.795E+01 7.804E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.68	287	431	1.29	180.50	166	27	3.99E-02	28.8	7.81E+00	T
0	185.99	155	398	1.34	373.03	368	10	2.16E-02	52.5	5.66E+00	T
0	209.00	166	259	1.02	419.03	415	9	2.30E-02	38.2	5.24E+00	T
0	270.17	120	311	1.64	541.30	535	14	1.66E-02	65.4	4.35E+00	T
0	328.40	73	241	1.87	657.69	651	13	1.01E-02	91.3	3.72E+00	T
0	408.72	54	113	2.73	818.23	815	10	7.53E-03	77.5	3.10E+00	
0	463.16	67	116	1.88	927.04	922	11	9.27E-03	67.0	2.78E+00	T
0	727.43	109	86	1.53	1455.16	1447	15	1.51E-02	41.9	1.85E+00	T
0	795.33	36	60	1.53	1590.83	1587	9	4.99E-03	84.0	1.71E+00	T
2	964.51	54	68	2.40	1928.83	1920	43	7.47E-03	66.8	1.44E+00	T
0	1729.72	23	3	1.61	3457.12	3450	13	3.20E-03	52.4	8.75E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:24:42.80

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833.CNF;1  *
* Acquisition date : 14-JUL-2009 11:23:48  Detector SN#     :               *
* Detector ID      : GAM05                 Sensitivity      : 5.00000       *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:01.87         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date      : 30-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G1201874833           Analyst initials: MXR1           *
* Batch Number     : 882713                Sample Quantity : 1.33070E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00.5MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1023-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.355E+01	2.958E+00	7.838E-01	4.874E-02	42.808
CD-109	3.731E+00	8.820E-01	1.003E+00	7.640E-02	3.719
SN-126	3.674E-01	8.684E-02	9.864E-02	7.512E-03	3.724
TL-208	5.373E-01	9.881E-02	6.780E-02	4.989E-03	7.925
BI-210	1.139E+00	1.006E+00	8.633E-01	6.735E-02	1.319
PB-210	1.139E+00	1.006E+00	8.633E-01	6.735E-02	1.319
PO-210	1.139E+00	1.005E+00	8.633E-01	5.807E-02	1.319
BI-211	4.096E+00	5.574E-01	3.570E-01	2.829E-02	11.471
PB-212	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
PO-212	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
BI-214	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
PB-214	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
PO-214	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
PO-216	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
PO-218	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
RA-224	4.724E+00	1.134E+00	1.114E+00	1.090E-01	4.242
RA-226	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
AC-228	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
TH-228	1.864E+00	2.342E-01	9.782E-02	1.055E-02	19.051
TH-230	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
TH-232	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
TH-234	1.702E+00	1.227E+00	1.042E+00	1.852E-01	1.632
U-234	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
NP-237	1.079E+00	3.385E-01	2.887E-01	6.352E-02	3.736
U-238	1.702E+00	1.227E+00	1.042E+00	1.852E-01	1.632
AM-243	3.905E-01	6.006E-02	6.075E-02	4.758E-03	6.428
ANH-511	9.893E-02	7.620E-02	5.800E-02	3.712E-03	1.706

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	7.318E-04		3.628E-01	5.958E-01	4.268E-02	0.001
NA-22	-1.244E-02		5.921E-02	9.386E-02	5.467E-03	-0.132
NA-24	2.539E-01		1.239E-01	Half-Life too short		
AL-26	2.370E-02		3.241E-02	6.066E-02	3.480E-03	0.391
TI-44	3.745E-01	+	4.746E-02	6.274E-02	4.868E-03	5.968
SC-46	-5.056E-03		4.601E-02	7.548E-02	7.582E-03	-0.067
V-48	-8.271E-02		9.910E-02	1.239E-01	1.135E-02	-0.667
CR-51	4.720E-02		3.918E-01	6.439E-01	5.694E-02	0.073
MN-52	8.575E-02		2.339E-01	4.075E-01	2.386E-02	0.210
MN-54	-1.838E-02		4.648E-02	7.539E-02	6.906E-03	-0.244
CO-56	-1.413E-02		4.797E-02	7.780E-02	7.275E-03	-0.182
CO-57	-3.816E-04		2.639E-02	4.351E-02	6.174E-03	-0.009
CO-58	-1.733E-03		4.584E-02	7.613E-02	6.700E-03	-0.023
FE-59	2.663E-02		1.090E-01	1.819E-01	1.473E-02	0.146
CO-60	3.091E-02		4.598E-02	7.994E-02	4.626E-03	0.387
ZN-65	2.034E-02		1.295E-01	1.845E-01	1.289E-02	0.110
GE-68	1.610E+00		1.658E+00	2.918E+00	2.241E-01	0.552
AS-73	6.769E-02		2.422E-01	3.997E-01	3.009E-02	0.169
AS-74	-3.670E-02		1.006E-01	1.584E-01	1.042E-02	-0.232
SE-75	-3.428E-02		5.786E-02	7.698E-02	7.349E-03	-0.445
BR-77	-3.886E+00		8.721E+00	1.379E+01	8.869E-01	-0.282
SR-82	-4.033E-01		4.715E-01	7.366E-01	6.077E-02	-0.548
RB-83	-2.095E-02		7.951E-02	1.275E-01	8.197E-03	-0.164
RB-84	1.246E-02		8.122E-02	1.363E-01	1.352E-02	0.091
KR-85	1.719E+01		1.091E+01	1.720E+01	1.103E+00	0.999
SR-85	8.709E-02		5.525E-02	8.714E-02	5.586E-03	0.999
RB-86	9.856E-01		9.896E-01	1.747E+00	1.344E-01	0.564
Y-88	-7.236E-03		3.857E-02	6.075E-02	3.476E-03	-0.119
ZR-88	-4.993E-04		3.437E-02	5.696E-02	3.317E-03	-0.009
Y-91	1.532E+01		2.496E+01	4.241E+01	2.465E+00	0.361
NB-94	2.473E-02		4.218E-02	7.064E-02	5.054E-03	0.350
NB-95	2.494E-02		5.635E-02	9.669E-02	7.820E-03	0.258
NB-95M	3.735E-01		1.696E-01	2.594E-01	2.838E-02	1.439

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	1.462E-02		8.803E-02	1.490E-01	1.323E-02	0.098
NB-97	2.557E-02		1.964E-02	Half-Life too short		
ZR-97	1.290E+00		3.725E-01	Half-Life too short		
MO-99	-2.396E+00		1.029E+01	1.693E+01	2.486E+00	-0.142
TC-99M	-2.362E+09		9.303E+08	Half-Life too short		
RH-101	-6.277E-03		3.694E-02	5.809E-02	5.801E-03	-0.108
RH-102	-2.623E-02		3.409E-02	5.305E-02	3.323E-03	-0.495
RU-103	-7.603E-03		4.440E-02	7.183E-02	9.272E-03	-0.106
RH-106	1.283E-01		3.803E-01	6.304E-01	7.659E-02	0.204
RU-106	1.283E-01		3.800E-01	6.304E-01	4.156E-02	0.204
AG-108M	4.809E-03		3.840E-02	6.385E-02	4.178E-03	0.075
AG-110M	2.380E-02		4.363E-02	7.313E-02	5.055E-03	0.325
IN-111	-3.467E-01		9.866E-01	1.345E+00	1.310E-01	-0.258
IN-113M	-2.439E-02		5.083E-02	8.202E-02	5.088E-03	-0.297
SN-113	-2.439E-02		5.083E-02	8.202E-02	5.088E-03	-0.297
IN-114M	1.509E-01		2.221E-01	3.266E-01	3.262E-02	0.462
CD-115	-1.675E-01		8.409E+00	1.371E+01	8.846E-01	-0.012
SN-117M	1.308E-04		5.719E-02	9.345E-02	1.005E-02	0.001
SB-122	1.010E+00		1.890E+00	3.185E+00	2.081E-01	0.317
I-123	-6.087E-01		7.535E-01	Half-Life too short		
TE-123M	-1.270E-02		3.144E-02	5.052E-02	5.428E-03	-0.251
I-124	-1.478E-01		7.602E-01	1.041E+00	6.855E-02	-0.142
SB-124	1.196E-02		6.689E-02	1.145E-01	7.247E-03	0.104
SB-125	6.328E-02		1.093E-01	1.865E-01	1.169E-02	0.339
TE-125M	8.096E+00		9.031E+00	1.531E+01	1.968E+00	0.529
I-126	1.461E-01		2.070E-01	3.508E-01	2.329E-02	0.417
SB-126	-7.414E-02		1.739E-01	2.393E-01	1.775E-02	-0.310
SB-127	1.004E+00		1.399E+00	2.367E+00	2.316E-01	0.424
XE-127	-5.371E-03		5.141E-02	7.986E-02	7.971E-03	-0.067
I-131	-1.142E-01		1.108E-01	1.724E-01	1.293E-02	-0.662
TE-132	-5.910E-01		6.022E-01	9.110E-01	1.480E-01	-0.649
BA-133	-1.495E-02		5.213E-02	7.369E-02	9.100E-03	-0.203
I-133	3.455E-04		1.288E-03	Half-Life too short		
CS-134	7.826E-02	+	6.609E-02	1.083E-01	9.330E-03	0.722
CS-135	3.282E-01		2.149E-01	3.247E-01	3.473E-02	1.011
I-135	-1.488E+08		2.154E+08	Half-Life too short		
CS-136	4.139E-02		1.216E-01	2.054E-01	1.760E-02	0.201
BA-137M	-4.820E-02		4.737E-02	7.040E-02	4.630E-03	-0.685
CS-137	-5.095E-02		5.008E-02	7.442E-02	4.910E-03	-0.685
CE-139	-1.523E-02		3.252E-02	5.201E-02	5.163E-03	-0.293
BA-140	-1.614E-01		2.748E-01	4.195E-01	1.370E-01	-0.385
LA-140	-2.730E-02		1.046E-01	1.671E-01	9.821E-03	-0.163
CE-141	3.812E-02		6.696E-02	1.101E-01	1.346E-02	0.346
CE-143	4.454E-04		7.221E-05	Half-Life too short		
CE-144	-2.777E-01		2.335E-01	3.583E-01	6.634E-02	-0.775
PM-144	-1.410E-02		4.440E-02	6.774E-02	4.789E-03	-0.208
PR-144	-9.549E-01		3.007E+00	4.587E+00	3.242E-01	-0.208
PM-146	-2.806E-02		4.841E-02	7.651E-02	6.789E-03	-0.367

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-7.919E-02		5.662E-01	9.141E-01	1.263E-01	-0.087
PM-149	4.045E+00		7.114E+01	1.201E+02	1.903E+01	0.034
EU-152	5.763E-02		1.282E-01	1.823E-01	1.499E-02	0.316
GD-153	-1.234E-02		7.947E-02	1.144E-01	1.061E-02	-0.108
EU-154	-1.490E-02		1.631E-01	2.615E-01	2.445E-02	-0.057
EU-155	-5.227E-02		1.089E-01	1.740E-01	1.885E-02	-0.300
TB-160	-4.167E-03		1.685E-01	2.787E-01	2.754E-02	-0.015
HO-166M	1.862E-02		7.104E-02	1.215E-01	8.850E-03	0.153
TM-171	-7.468E+00		1.783E+01	2.593E+01	2.084E+00	-0.288
LU-176	6.190E-03		3.055E-02	4.530E-02	3.945E-03	0.137
LU-177	3.447E+00	+	1.362E+00	1.936E+00	1.930E-01	1.781
LU-177M	-2.134E-02		2.339E-01	3.332E-01	1.983E-02	-0.064
HF-181	-1.297E-02		4.748E-02	7.645E-02	4.811E-03	-0.170
W-181	8.977E-02		2.218E-01	3.328E-01	2.690E-02	0.270
TA-182	-9.711E-02		2.908E-01	4.603E-01	2.676E-02	-0.211
RE-183	6.219E-02		1.178E-01	1.960E-01	2.026E-02	0.317
RE-184	-2.393E-02		2.479E-01	3.950E-01	3.817E-02	-0.061
OS-185	-3.028E-02		5.283E-02	8.132E-02	5.357E-03	-0.372
RE-188	1.311E-01		1.899E-01	3.175E-01	3.535E-02	0.413
W-188	-1.924E+00		8.411E+00	1.213E+01	1.099E+00	-0.159
IR-192	1.112E-02		3.612E-02	6.149E-02	5.218E-03	0.181
AU-195	1.890E-01		2.235E-01	3.519E-01	3.356E-02	0.537
TL-200	4.560E-05		1.126E-04	Half-Life too short		
TL-201	2.423E+00		5.887E+00	9.747E+00	9.676E-01	0.249
TL-202	8.987E-02		7.591E-02	1.336E-01	8.147E-03	0.672
HG-203	4.331E-02		4.496E-02	7.853E-02	7.467E-03	0.552
BI-207	4.581E-02		6.136E-02	1.072E-01	8.488E-03	0.427
TL-207	-2.857E-01		7.838E-01	1.108E+00	1.942E-01	-0.258
PO-209	-6.595E-01		9.531E+00	1.569E+01	1.595E+00	-0.042
PB-211	-4.954E-01		1.257E+00	1.691E+00	1.054E+00	-0.293
BI-212	1.405E+00	+	6.022E-01	7.989E-01	7.247E-02	1.758
PO-215	-2.857E-01		7.838E-01	1.108E+00	1.942E-01	-0.258
RN-219	2.715E-01		4.754E-01	8.104E-01	1.105E-01	0.335
RN-220	-9.907E+00		3.060E+01	4.865E+01	3.166E+00	-0.204
RA-223	-2.857E-01		7.838E-01	1.108E+00	1.942E-01	-0.258
AC-227	-2.604E-01		4.189E-01	6.450E-01	1.028E-01	-0.404
TH-227	-2.604E-01		4.197E-01	6.450E-01	1.197E-01	-0.404
TH-229	-3.461E-01		5.560E-01	8.753E-01	8.741E-02	-0.395
PA-231	1.345E-01		1.719E+00	2.906E+00	4.510E-01	0.046
TH-231	-2.857E-01		7.838E-01	1.108E+00	1.942E-01	-0.258
U-231	-5.131E-01		8.719E-01	1.238E+00	1.113E-01	-0.414
PA-233	2.334E-02		7.264E-02	1.133E-01	1.001E-02	0.206
PA-234	-2.712E-01		3.624E-01	5.507E-01	1.061E-01	-0.492
PA-234M	1.091E+01		7.777E+00	1.392E+01	1.588E+00	0.784
U-235	2.632E-02		2.279E-01	3.694E-01	7.228E-02	0.071
NP-236	-5.548E-02		8.832E-02	1.404E-01	1.482E-02	-0.395
NP-239	-2.387E-02		1.907E-01	3.136E-01	4.108E-02	-0.076
AM-241	4.742E-02		7.159E-02	1.090E-01	9.755E-03	0.435

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	5.218E-02		9.643E-02	1.595E-01	1.667E-02	0.327
CM-247	1.075E-02		4.484E-02	7.122E-02	4.191E-03	0.151
CF-249	-5.836E-03		4.682E-02	7.720E-02	4.617E-03	-0.076
CF-251	-1.280E-01		1.382E-01	2.151E-01	2.142E-02	-0.595

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201874833          *
* Acquisition date  : 14-JUL-2009 11:23:48 Detector SN#     :               *
* Detector ID       : GAM05                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:01.87     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201874833          Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.3307E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.355E+01	2.899E+00	3.928E-01	1.479E+00
CD-109	3.731E+00	8.643E-01	5.278E-01	4.410E-01
SN-126	3.674E-01	8.510E-02	5.189E-02	4.342E-02
TL-208	5.373E-01	9.683E-02	3.454E-02	4.940E-02
BI-210	1.139E+00	9.863E-01	4.589E-01	5.032E-01
PB-210	1.139E+00	9.863E-01	4.589E-01	5.032E-01
PO-210	1.139E+00	9.853E-01	4.589E-01	5.027E-01
BI-211	4.096E+00	5.463E-01	1.835E-01	2.787E-01
PB-212	1.864E+00	2.295E-01	5.061E-02	1.171E-01
PO-212	1.864E+00	2.295E-01	5.061E-02	1.171E-01
BI-214	1.283E+00	2.046E-01	6.876E-02	1.044E-01
PB-214	1.425E+00	2.035E-01	6.171E-02	1.038E-01
PO-214	1.425E+00	2.035E-01	6.171E-02	1.038E-01
PO-216	1.864E+00	2.295E-01	5.061E-02	1.171E-01
PO-218	1.425E+00	2.035E-01	6.171E-02	1.038E-01
RA-224	4.724E+00	1.112E+00	5.760E-01	5.671E-01
RA-226	1.283E+00	2.046E-01	6.876E-02	1.044E-01
AC-228	1.926E+00	4.453E-01	1.426E-01	2.272E-01
RA-228	1.926E+00	4.453E-01	1.426E-01	2.272E-01
TH-228	1.864E+00	2.295E-01	5.061E-02	1.171E-01
TH-230	1.283E+00	2.046E-01	6.876E-02	1.044E-01
TH-232	1.926E+00	4.453E-01	1.426E-01	2.272E-01
TH-234	1.702E+00	1.203E+00	5.513E-01	6.136E-01
U-234	1.283E+00	2.046E-01	6.876E-02	1.044E-01
NP-237	1.079E+00	3.317E-01	1.519E-01	1.693E-01
U-238	1.702E+00	1.203E+00	5.513E-01	6.136E-01
AM-243	3.905E-01	5.886E-02	3.204E-02	3.003E-02
ANH-511	9.893E-02	7.468E-02	2.961E-02	3.810E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	7.318E-04	3.555E-01	3.046E-01	1.814E-01	NOT IDENT.
NA-22	-1.244E-02	5.803E-02	4.715E-02	2.961E-02	NOT IDENT.
NA-24	2.539E+05	2.429E+05	0.000E+00	1.239E+05	SHORT HLIF
AL-26	2.370E-02	3.176E-02	3.028E-02	1.621E-02	NOT IDENT.
TI-44	3.745E-01	4.651E-02	3.307E-02	2.373E-02	FAIL ABUN
SC-46	-5.056E-03	4.509E-02	3.816E-02	2.301E-02	FAIL ABUN
V-48	-8.271E-02	9.712E-02	6.254E-02	4.955E-02	NOT IDENT.
CR-51	4.720E-02	3.840E-01	3.314E-01	1.959E-01	NOT IDENT.
MN-52	8.575E-02	2.292E-01	2.043E-01	1.170E-01	NOT IDENT.
MN-54	-1.838E-02	4.555E-02	3.816E-02	2.324E-02	NOT IDENT.
CO-56	-1.413E-02	4.701E-02	3.937E-02	2.399E-02	NOT IDENT.
CO-57	-3.816E-04	2.586E-02	2.277E-02	1.319E-02	NOT IDENT.
CO-58	-1.733E-03	4.492E-02	3.855E-02	2.292E-02	NOT IDENT.
FE-59	2.663E-02	1.068E-01	9.163E-02	5.449E-02	NOT IDENT.
CO-60	3.091E-02	4.506E-02	4.013E-02	2.299E-02	NOT IDENT.
ZN-65	2.034E-02	1.269E-01	9.293E-02	6.474E-02	NOT IDENT.
GE-68	1.610E+00	1.625E+00	1.470E+00	8.292E-01	NOT IDENT.
AS-73	6.769E-02	2.373E-01	2.120E-01	1.211E-01	NOT IDENT.
AS-74	-3.670E-02	9.860E-02	8.068E-02	5.031E-02	NOT IDENT.
SE-75	-3.428E-02	5.671E-02	3.975E-02	2.893E-02	NOT IDENT.
BR-77	-3.886E+00	8.547E+00	7.039E+00	4.361E+00	FAIL ABUN
SR-82	-4.033E-01	4.620E-01	3.733E-01	2.357E-01	NOT IDENT.
RB-83	-2.095E-02	7.792E-02	6.507E-02	3.976E-02	NOT IDENT.
RB-84	1.246E-02	7.959E-02	6.895E-02	4.061E-02	NOT IDENT.
KR-85	1.719E+01	1.069E+01	8.781E+00	5.453E+00	NOT IDENT.
SR-85	8.709E-02	5.415E-02	4.449E-02	2.763E-02	NOT IDENT.
RB-86	9.856E-01	9.698E-01	8.803E-01	4.948E-01	NOT IDENT.
Y-88	-7.236E-03	3.780E-02	3.032E-02	1.928E-02	NOT IDENT.
ZR-88	-4.993E-04	3.368E-02	2.922E-02	1.718E-02	NOT IDENT.
Y-91	1.532E+01	2.446E+01	2.133E+01	1.248E+01	NOT IDENT.
NB-94	2.473E-02	4.134E-02	3.587E-02	2.109E-02	NOT IDENT.
NB-95	2.494E-02	5.523E-02	4.902E-02	2.818E-02	NOT IDENT.
NB-95M	3.735E-01	1.663E-01	1.342E-01	8.482E-02	NOT IDENT.
ZR-95	1.462E-02	8.627E-02	7.554E-02	4.402E-02	NOT IDENT.
NB-97	2.557E+04	3.849E+04	0.000E+00	1.964E+04	SHORT HLIF
ZR-97	1.290E+06	7.301E+05	0.000E+00	3.725E+05	SHORT HLIF
MO-99	-2.396E+00	1.009E+01	8.590E+00	5.147E+00	NOT IDENT.
TC-99M	-2.362E+15	1.823E+15	0.000E+00	9.303E+14	SHORT HLIF
RH-101	-6.277E-03	3.621E-02	3.015E-02	1.847E-02	NOT IDENT.
RH-102	-2.623E-02	3.341E-02	2.712E-02	1.704E-02	NOT IDENT.
RU-103	-7.603E-03	4.351E-02	3.669E-02	2.220E-02	FAIL ABUN
RH-106	1.283E-01	3.726E-01	3.208E-01	1.901E-01	FAIL ABUN
RU-106	1.283E-01	3.724E-01	3.208E-01	1.900E-01	FAIL ABUN
AG-108M	4.809E-03	3.763E-02	3.269E-02	1.920E-02	NOT IDENT.
AG-110M	2.380E-02	4.276E-02	3.717E-02	2.181E-02	NOT IDENT.
IN-111	-3.467E-01	9.669E-01	6.952E-01	4.933E-01	NOT IDENT.
IN-113M	-2.439E-02	4.982E-02	4.207E-02	2.542E-02	NOT IDENT.
SN-113	-2.439E-02	4.982E-02	4.207E-02	2.542E-02	NOT IDENT.
IN-114M	1.509E-01	2.176E-01	1.696E-01	1.110E-01	NOT IDENT.
CD-115	-1.675E-01	8.241E+00	6.996E+00	4.205E+00	NOT IDENT.
SN-117M	1.308E-04	5.604E-02	4.868E-02	2.859E-02	NOT IDENT.
SB-122	1.010E+00	1.852E+00	1.623E+00	9.451E-01	NOT IDENT.
I-123	-6.087E+05	1.477E+06	0.000E+00	7.535E+05	SHORT HLIF
TE-123M	-1.270E-02	3.081E-02	2.631E-02	1.572E-02	NOT IDENT.
I-124	-1.478E-01	7.450E-01	5.301E-01	3.801E-01	NOT IDENT.
SB-124	1.196E-02	6.555E-02	5.723E-02	3.344E-02	FAIL ABUN
SB-125	6.328E-02	1.071E-01	9.550E-02	5.466E-02	FAIL ABUN
TE-125M	8.096E+00	8.850E+00	8.026E+00	4.516E+00	NOT IDENT.
I-126	1.461E-01	2.028E-01	1.783E-01	1.035E-01	NOT IDENT.
SB-126	-7.414E-02	1.704E-01	1.215E-01	8.693E-02	FAIL ABUN
SB-127	1.004E+00	1.371E+00	1.202E+00	6.994E-01	NOT IDENT.
XE-127	-5.371E-03	5.039E-02	4.143E-02	2.571E-02	NOT IDENT.
I-131	-1.142E-01	1.086E-01	8.855E-02	5.539E-02	NOT IDENT.
TE-132	-5.910E-01	5.901E-01	4.716E-01	3.011E-01	NOT IDENT.
BA-133	-1.495E-02	5.109E-02	3.786E-02	2.607E-02	NOT IDENT.
I-133	3.455E+02	2.524E+03	0.000E+00	1.288E+03	SHORT HLIF
CS-134	7.826E-02	6.477E-02	5.489E-02	3.305E-02	FAIL ABUN
CS-135	3.282E-01	2.106E-01	1.676E-01	1.074E-01	NOT IDENT.
I-135	-1.488E+14	4.223E+14	0.000E+00	2.154E+14	SHORT HLIF
CS-136	4.139E-02	1.192E-01	1.036E-01	6.082E-02	FAIL ABUN
BA-137M	-4.820E-02	4.642E-02	3.578E-02	2.369E-02	NOT IDENT.
CS-137	-5.095E-02	4.908E-02	3.783E-02	2.504E-02	NOT IDENT.
CE-139	-1.523E-02	3.187E-02	2.707E-02	1.626E-02	NOT IDENT.
BA-140	-1.614E-01	2.693E-01	2.140E-01	1.374E-01	NOT IDENT.
LA-140	-2.730E-02	1.025E-01	8.360E-02	5.228E-02	FAIL ABUN
CE-141	3.812E-02	6.562E-02	5.743E-02	3.348E-02	NOT IDENT.
CE-143	4.454E+02	1.415E+02	0.000E+00	7.221E+01	SHORT HLIF

CE-144	-2.777E-01	2.288E-01	1.872E-01	1.167E-01	NOT IDENT.
PM-144	-1.410E-02	4.351E-02	3.440E-02	2.220E-02	NOT IDENT.
PR-144	-9.549E-01	2.946E+00	2.329E+00	1.503E+00	NOT IDENT.
PM-146	-2.806E-02	4.744E-02	3.914E-02	2.421E-02	NOT IDENT.
ND-147	-7.919E-02	5.549E-01	4.664E-01	2.831E-01	FAIL ABUN
PM-149	4.045E+00	6.971E+01	6.194E+01	3.557E+01	NOT IDENT.
EU-152	5.763E-02	1.256E-01	9.374E-02	6.410E-02	FAIL ABUN
GD-153	-1.234E-02	7.788E-02	6.010E-02	3.974E-02	FAIL ABUN
EU-154	-1.490E-02	1.599E-01	1.314E-01	8.157E-02	NOT IDENT.
EU-155	-5.227E-02	1.067E-01	9.126E-02	5.443E-02	FAIL ABUN
TB-160	-4.167E-03	1.651E-01	1.409E-01	8.424E-02	FAIL ABUN
HO-166M	1.862E-02	6.962E-02	6.166E-02	3.552E-02	NOT IDENT.
TM-171	-7.468E+00	1.747E+01	1.370E+01	8.916E+00	NOT IDENT.
LU-176	6.190E-03	2.994E-02	2.333E-02	1.528E-02	FAIL ABUN
LU-177	3.447E+00	1.335E+00	1.004E+00	6.811E-01	FAIL ABUN
LU-177M	-2.134E-02	2.292E-01	1.707E-01	1.170E-01	FAIL ABUN
HF-181	-1.297E-02	4.653E-02	3.907E-02	2.374E-02	NOT IDENT.
W-181	8.977E-02	2.174E-01	1.759E-01	1.109E-01	NOT IDENT.
TA-182	-9.711E-02	2.850E-01	2.314E-01	1.454E-01	FAIL ABUN
RE-183	6.219E-02	1.155E-01	1.021E-01	5.891E-02	FAIL ABUN
RE-184	-2.393E-02	2.430E-01	2.041E-01	1.240E-01	NOT IDENT.
OS-185	-3.028E-02	5.177E-02	4.135E-02	2.641E-02	NOT IDENT.
RE-188	1.311E-01	1.861E-01	1.655E-01	9.495E-02	NOT IDENT.
W-188	-1.924E+00	8.243E+00	6.252E+00	4.206E+00	FAIL ABUN
IR-192	1.112E-02	3.540E-02	3.165E-02	1.806E-02	FAIL ABUN
AU-195	1.890E-01	2.191E-01	1.848E-01	1.118E-01	FAIL ABUN
TL-200	4.560E+01	2.207E+02	0.000E+00	1.126E+02	SHORT HLIF
TL-201	2.423E+00	5.769E+00	5.073E+00	2.943E+00	NOT IDENT.
TL-202	8.987E-02	7.439E-02	6.842E-02	3.796E-02	NOT IDENT.
HG-203	4.331E-02	4.406E-02	4.052E-02	2.248E-02	NOT IDENT.
BI-207	4.581E-02	6.014E-02	5.402E-02	3.068E-02	FAIL ABUN
TL-207	-2.857E-01	7.681E-01	5.700E-01	3.919E-01	FAIL ABUN
PO-209	-6.595E-01	9.340E+00	7.932E+00	4.765E+00	NOT IDENT.
PB-211	-4.954E-01	1.232E+00	8.668E-01	6.283E-01	NOT IDENT.
BI-212	1.405E+00	5.902E-01	4.054E-01	3.011E-01	FAIL ABUN
PO-215	-2.857E-01	7.681E-01	5.700E-01	3.919E-01	FAIL ABUN
RN-219	2.715E-01	4.659E-01	4.155E-01	2.377E-01	FAIL ABUN
RN-220	-9.907E+00	2.999E+01	2.481E+01	1.530E+01	NOT IDENT.
RA-223	-2.857E-01	7.681E-01	5.700E-01	3.919E-01	FAIL ABUN
AC-227	-2.604E-01	4.106E-01	3.332E-01	2.095E-01	FAIL ABUN
TH-227	-2.604E-01	4.113E-01	3.332E-01	2.098E-01	FAIL ABUN
TH-229	-3.461E-01	5.449E-01	4.544E-01	2.780E-01	FAIL ABUN
PA-231	1.345E-01	1.685E+00	1.499E+00	8.595E-01	FAIL ABUN
TH-231	-2.857E-01	7.681E-01	5.700E-01	3.919E-01	FAIL ABUN
U-231	-5.131E-01	8.545E-01	6.504E-01	4.360E-01	FAIL ABUN
PA-233	2.334E-02	7.119E-02	5.837E-02	3.632E-02	FAIL ABUN
PA-234	-2.712E-01	3.552E-01	2.781E-01	1.812E-01	FAIL ABUN
PA-234M	1.091E+01	7.621E+00	7.023E+00	3.888E+00	NOT IDENT.
U-235	2.632E-02	2.233E-01	1.927E-01	1.139E-01	FAIL ABUN
NP-236	-5.548E-02	8.655E-02	7.313E-02	4.416E-02	NOT IDENT.
NP-239	-2.387E-02	1.869E-01	1.642E-01	9.533E-02	FAIL ABUN
AM-241	4.742E-02	7.015E-02	5.772E-02	3.579E-02	NOT IDENT.
CM-243	5.218E-02	9.450E-02	8.370E-02	4.821E-02	FAIL ABUN
CM-247	1.075E-02	4.395E-02	3.652E-02	2.242E-02	NOT IDENT.
CF-249	-5.836E-03	4.589E-02	3.961E-02	2.341E-02	NOT IDENT.
CF-251	-1.280E-01	1.354E-01	1.118E-01	6.909E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
*****************************************************************************
```

ENERGY	MDA COUNTS
46.50	412.7643
46.50	412.7643
46.50	412.7643
48.70	407.3845
49.72	496.1032
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52.39	434.5980
52.97	444.2557
53.15	444.4092
53.44	466.0742
54.07	465.4864
56.28	545.4742
56.28	545.4777
57.37	0.0000
57.53	467.6041
57.53	467.6060
57.60	467.6636
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57.98	462.2290
59.32	495.1089
59.32	495.1089
59.40	495.1801
59.54	525.6295
59.72	525.7994
60.01	541.9693
61.10	590.9866
61.14	591.0290
61.30	591.1959
63.00	592.9564
63.29	593.2540
63.29	593.2540
63.58	609.3664
64.28	604.2760
65.12	634.3071
65.20	634.3927
65.20	634.3927
66.05	638.2270
66.72	638.9418
66.83	639.0618
66.91	627.0809
67.20	620.0693
67.20	620.0693
67.75	605.3804
67.85	622.5716
68.90	649.3304
68.90	649.3304
69.30	619.6528
69.67	609.7466
70.82	596.1638
70.82	596.1638
70.83	596.1712
72.80	601.7465
72.87	601.8137
72.87	601.8137
74.67	603.5223
74.81	603.6542
74.81	603.6542
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74.81	603.6542
74.97	603.8058
75.28	604.0969
75.70	604.4899
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77.11	590.1959
77.11	590.1959

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77.11	590.1959
77.11	590.1959
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79.80	518.7176
79.80	518.7176
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80.30	515.3712
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81.07	519.7017
81.07	519.7017
81.07	519.7017
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83.78	590.0948
83.78	590.0948
83.78	590.0948
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84.40	475.2822
84.90	475.6258
85.43	475.9887
86.29	476.5755
86.50	476.7183
86.54	476.7453
86.59	476.7801
86.72	476.8689
86.79	476.9152
86.94	477.0175
87.30	477.2607
87.30	477.2607
87.30	477.2607
87.30	477.2607
87.30	477.2607
87.30	477.2607
87.57	477.4441
87.88	477.6526
88.03	477.7549
88.36	477.9768
88.47	478.0502
89.95	479.0423
91.11	479.8125
92.29	480.5923
92.38	480.6521
92.38	480.6521
93.35	481.2891
94.00	371.6621
94.67	400.9626
94.67	400.9658
94.90	433.1156
94.90	433.1156
94.90	433.1156
94.90	433.1156
95.87	442.8430
95.87	442.8430
96.73	441.8239
97.43	402.4474
98.44	386.1288
98.44	386.1288
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99.55	381.4306
99.86	378.0202
100.00	378.0894
100.10	387.7379
103.18	410.4774
103.76	396.3172
105.00	421.0860
105.31	432.8447
108.00	413.9445
109.28	374.7915
111.00	428.1248
111.00	428.1248

111.76	422.6775
112.95	380.3729
115.19	361.8362
116.30	365.2510
117.00	371.4328
117.00	371.4328
117.66	380.5492
121.11	371.2489
121.62	380.3339
121.78	375.4771
122.06	375.5977
122.32	378.6680
122.32	378.6680
122.32	378.6680
122.32	378.6680
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127.23	388.7110
129.76	374.8888
131.20	434.2470
133.02	448.0819
133.54	445.3399
135.34	345.1579
136.00	353.4120
136.25	357.5121
136.48	357.5992
140.51	412.4430
140.51	0.0000
142.18	341.6174
142.65	352.8732
143.76	361.3541
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144.24	348.4060
144.24	348.4060
144.24	348.4060
145.22	341.6799
145.44	345.8017
147.16	410.2220
152.43	378.7988
152.70	379.9181
153.22	377.0572
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154.21	354.9854
154.21	354.9854
154.21	354.9854
155.03	357.3139
156.02	357.6611
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159.00	365.8738
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161.27	313.2654
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162.64	321.9025
163.35	352.9965
163.89	351.1177
165.85	348.6734
167.43	318.1960
171.28	336.9614
171.86	298.7600
172.10	298.8259
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176.60	334.4330
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184.41	365.9324
185.71	348.7023
186.00	348.7910
190.27	290.1891
192.34	302.1119
193.63	316.1910
197.04	263.0156
198.01	289.7646
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200.40	296.7249
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208.81	284.8533

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209.75	245.2035
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216.55	245.6733
218.09	262.1531
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223.80	245.9813
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227.20	255.3154
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228.18	279.4271
228.18	279.4271
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236.00	274.7328
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238.63	252.0363
238.63	252.0363
239.00	252.1065
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241.98	230.2487
241.98	230.2487
241.98	230.2487
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245.39	229.0583
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252.85	204.8237
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256.20	223.0649
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268.79	214.9424
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269.46	218.4020
269.46	218.4020
269.46	218.4020
271.23	218.6639
273.65	269.5642
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277.60	202.7087
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279.53	236.3437
280.46	260.8620
281.68	252.9434
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284.30	223.5151
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286.10	192.0707
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290.80	183.2651
291.72	198.5282
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295.21	170.4184
295.21	170.4184
295.96	170.5005

296.50	170.5599
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299.80	170.9160
300.09	170.9480
300.09	170.9480
300.09	170.9480
300.10	170.9491
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303.76	171.3429
303.91	171.3588
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304.40	171.4113
304.84	171.4593
306.84	175.9557
308.46	163.8808
311.98	155.2475
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319.41	148.9466
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323.87	166.9724
323.87	166.9724
323.87	166.9724
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334.20	163.3319
334.30	163.3405
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338.28	174.0117
338.28	174.0117
338.28	174.0117
338.32	174.0163
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338.32	174.0163
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351.92	143.3201
351.92	143.3201
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367.94	0.0000
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374.96	148.0220
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387.95	162.5160
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391.69	159.9452
392.90	145.5845
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439.89	112.5374
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445.03	136.5664
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477.59	113.5393
477.96	112.5537
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513.99	139.5536
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602.71	107.6361
603.60	111.2010
604.41	107.7056
604.70	102.4204
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609.31	107.1991
609.31	107.1991

609.31	107.1991
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621.84	86.3809
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636.97	92.2316
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661.65	125.5298
664.57	0.0000
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666.33	83.4649
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696.49	97.5024
697.00	101.9027
697.49	95.3432
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722.78	74.2194
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727.18	75.6471
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735.90	85.7923
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742.81	78.8228
744.21	77.0036
747.13	71.5060
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752.31	84.6497
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756.15	88.4827
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763.93	109.2471
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766.84	108.4149
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768.36	114.0796
768.36	114.0796
768.36	114.0796
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778.89	75.9968
783.80	77.9949

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796.30	75.4720
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805.60	66.2303
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810.76	72.0216
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884.67	70.7232
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898.02	72.9401
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911.07	81.0209
911.07	81.0209
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934.06	65.8250
934.06	65.8250
934.06	65.8250
935.52	63.8852
937.48	66.8711
944.10	71.9188
946.00	70.9702
949.00	49.3256
962.29	50.9195
964.01	51.5091
966.15	51.5387
968.20	51.5673
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969.11	51.5800
969.11	51.5800
977.42	51.6953
980.50	61.4042
983.50	75.1094
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1038.76	0.0000
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1050.47	55.7296
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1085.78	68.4913
1099.22	59.4892
1112.02	61.7334
1112.84	57.1147
1115.52	70.6111
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1120.29	73.1956
1120.29	73.1956
1120.29	73.1956
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1124.00	0.0000
1129.67	65.0969
1131.51	0.0000
1147.95	0.0000
1167.94	95.9269
1173.22	84.5596
1175.09	90.8657
1177.93	90.9259
1189.05	83.8249
1204.90	77.8210
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1213.00	101.1406
1221.42	114.0029
1230.97	110.0176
1235.34	103.7701
1236.41	0.0000
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1238.11	80.5243
1238.11	80.5243
1238.11	80.5243
1238.25	80.5273
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1271.85	57.6431
1274.45	65.1525
1274.54	68.3594
1291.56	52.5310
1298.22	0.0000
1312.09	44.1481
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1325.50	41.0352
1332.49	31.3624
1333.61	38.9429
1360.21	37.2949
1362.66	0.0000
1365.15	29.8672
1368.21	26.1494
1368.53	0.0000
1376.25	36.4836
1377.67	34.6230
1377.67	34.6230
1377.67	34.6230
1377.67	34.6230
1384.27	44.9766
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1395.20	37.5642
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1436.60	38.8265
1457.56	0.0000
1460.81	40.9154
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1596.49	32.2185
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1691.02	8.9366

1706.46	0.0000
1750.46	0.0000
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1764.49	10.0558
1764.49	10.0558
1764.49	10.0558
1770.23	12.3303
1771.40	14.0947
1791.20	0.0000
1808.65	8.1044
1836.01	14.2471

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201874833

Total Uranium Activity	5.0744E+00	ug/g
Total Uranium Counting Unc.	3.5796E+00	ug/g
Total Uranium Tpu	1.8263E-06	ug/g
Total Uranium Mda	1.6427E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G1201874833      *
*   ANALYST       : MXR1                      DETECTOR   : GAM05            *
*   SAMPLE DATE   : 30-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 11:23:48.91    SAMPLE ALQT:  133.070 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.019E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.464E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 4.075E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.988E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:34:14.89

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834.CNF;1
Sample date       : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 12:33:44
Sample ID         : G1201874834          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.74  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	49.99	197	1256	1.62	99.75	96	8	5.48E-02	31.8	
2	0	59.87	7500	1401	1.12	119.50	114	11	2.08E+00	1.5	
3	0	63.59*	14	418	1.19	126.94	125	6	3.86E-03	257.4	
4	3	75.15	269	466	1.22	150.08	143	16	7.47E-02	14.8	1.66E+00
5	3	77.34*	450	436	1.23	154.46	143	16	1.25E-01	9.4	
6	0	88.40	2614	700	1.14	176.58	172	11	7.26E-01	2.8	
7	0	93.07*	46	477	1.11	185.93	183	10	1.27E-02	98.7	
8	0	122.37	479	468	1.21	244.53	238	13	1.33E-01	10.4	
9	0	186.26*	135	363	1.02	372.34	367	11	3.74E-02	29.9	
10	0	238.83*	353	533	1.05	477.51	472	12	9.80E-02	14.2	
11	0	241.73	33	227	1.63	483.32	483	6	9.18E-03	75.5	
12	0	295.80*	178	233	1.67	591.47	585	12	4.93E-02	19.0	
13	0	338.47*	69	178	0.91	676.86	673	9	1.92E-02	37.1	
14	0	352.40*	222	209	1.10	704.72	700	10	6.18E-02	14.2	
15	0	511.13*	91	173	1.71	1022.26	1014	15	2.54E-02	35.0	
16	0	583.52*	92	140	1.36	1167.09	1163	9	2.55E-02	25.9	
17	0	610.12*	190	177	1.77	1220.31	1212	18	5.27E-02	18.2	
18	0	662.13	2136	148	1.62	1324.36	1316	16	5.93E-01	2.5	
19	0	910.94*	98	159	0.88	1822.17	1816	14	2.73E-02	29.2	
20	0	1173.83*	1786	38	1.92	2348.17	2340	17	4.96E-01	2.5	
21	0	1333.11	1582	19	2.00	2666.88	2657	19	4.39E-01	2.6	
22	0	1462.74	36	9	1.78	2926.26	2916	19	9.97E-03	26.5	
23	0	1765.42*	30	3	2.63	3531.94	3525	12	8.22E-03	23.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 13:34:17

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 7-JUL-2009 00:00:00 Acquisition date : 14-JUL-2009 12:33:44
Sample ID : G1201874834 Sample quantity : 155.44 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.74 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	4.118E-01	1.001E-01	6.241E-02	7.893E-03	6.598
		136.48		3.901E-01	3.154E-01	5.353E-01	6.266E-02	0.729
CO-60	+	1173.22		6.982E+00	5.187E-01	1.348E-01	7.409E-03	51.796
	+	1332.49	*	6.848E+00	5.277E-01	9.305E-02	5.293E-03	73.592
CD-109	+	88.03	*	4.745E+01	4.600E+00	1.778E+00	1.403E-01	26.693
SN-126	+	64.28		9.450E-02	4.868E-01	6.371E-01	9.920E-02	0.148
	+	86.94		1.961E+01	8.158E+00	7.658E-01	3.157E-01	25.612
	+	87.57	*	4.718E+00	4.573E-01	1.765E-01	1.396E-02	26.729
BA-137M	+	661.65	*	5.687E+00	5.447E-01	1.346E-01	1.098E-02	42.249
CS-137	+	661.65	*	6.012E+00	5.767E-01	1.423E-01	1.163E-02	42.249
TL-208		277.35		-1.100E-01	6.710E-01	1.100E+00	1.288E-01	-0.100
	+	510.84		8.065E-01	5.716E-01	4.793E-01	5.210E-02	1.683
	+	583.14	*	2.333E-01	1.225E-01	1.395E-01	1.154E-02	1.673
		860.37		2.564E-02	7.712E-01	1.283E+00	1.082E-01	0.020
BI-211		72.87		1.151E+00	2.941E+00	5.005E+00	4.377E-01	0.230
	+	351.07	*	2.377E+00	6.956E-01	6.435E-01	4.690E-02	3.694
PB-212	+	74.81		1.651E+00	5.323E-01	5.812E-01	7.393E-02	2.840
	+	77.11		1.644E+00	3.398E-01	3.474E-01	2.951E-02	4.731
	+	87.30		2.182E+01	3.039E+00	8.156E-01	1.041E-01	26.751
	+	238.63	*	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
		300.09		1.522E+00	1.494E+00	2.305E+00	2.193E-01	0.661
PO-212	+	74.81		1.651E+00	5.323E-01	5.812E-01	7.393E-02	2.840
	+	77.11		1.644E+00	3.398E-01	3.474E-01	2.951E-02	4.731
	+	87.30		2.182E+01	3.039E+00	8.156E-01	1.041E-01	26.751
		115.19		-7.988E-01	5.207E+00	8.462E+00	9.813E-01	-0.094
	+	238.63	*	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
		300.09		1.522E+00	1.494E+00	2.305E+00	2.193E-01	0.661
PB-214	+	74.81		2.844E+00	9.028E-01	1.001E+00	1.139E-01	2.840
	+	77.11		2.818E+00	6.209E-01	5.956E-01	6.796E-02	4.731
	+	87.30		3.738E+01	4.629E+00	1.397E+00	1.545E-01	26.751
	+	241.98		4.562E-01	6.902E-01	1.277E+00	1.236E-01	0.357
	+	295.21		1.111E+00	4.362E-01	3.849E-01	3.770E-02	2.886
	+	351.92	*	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
PO-214	+	74.81		2.844E+00	9.028E-01	1.001E+00	1.139E-01	2.840

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		2.818E+00	6.209E-01	5.956E-01	6.796E-02	4.731
	+	87.30		3.738E+01	4.629E+00	1.397E+00	1.545E-01	26.751
	+	241.98		4.562E-01	6.902E-01	1.277E+00	1.236E-01	0.357
	+	295.21		1.111E+00	4.362E-01	3.849E-01	3.770E-02	2.886
	+	351.92	*	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
PO-216	+	74.81		1.651E+00	5.323E-01	5.812E-01	7.393E-02	2.840
	+	77.11		1.644E+00	3.398E-01	3.474E-01	2.951E-02	4.731
	+	87.30		2.182E+01	3.039E+00	8.156E-01	1.041E-01	26.751
	+	238.63	*	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
		300.09		1.522E+00	1.494E+00	2.305E+00	2.193E-01	0.661
PO-218	+	74.81		2.844E+00	9.028E-01	1.001E+00	1.139E-01	2.840
	+	77.11		2.818E+00	6.209E-01	5.956E-01	6.796E-02	4.731
	+	87.30		3.738E+01	4.629E+00	1.397E+00	1.545E-01	26.751
	+	241.98		4.562E-01	6.902E-01	1.277E+00	1.236E-01	0.357
	+	295.21		1.111E+00	4.362E-01	3.849E-01	3.770E-02	2.886
	+	351.92	*	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
RA-224	+	240.98	*	8.651E-01	1.308E+00	2.467E+00	1.947E-01	0.351
TH-228		84.40		2.074E+00	3.627E+00	5.562E+00	7.116E-01	0.373
	+	238.60	*	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.642
		300.10		1.529E+00	1.741E+00	2.306E+00	1.363E+00	0.663
TH-234	+	63.29	*	2.387E-01	1.230E+00	1.512E+00	2.774E-01	0.158
	+	92.38		5.703E-01	1.131E+00	1.035E+00	1.863E-01	0.551
U-238	+	63.29	*	2.387E-01	1.230E+00	1.512E+00	2.774E-01	0.158
	+	92.38		5.703E-01	1.127E+00	1.035E+00	8.737E-02	0.551
AM-241	+	59.54	*	1.366E+01	1.447E+00	2.452E-01	2.493E-02	55.724
AM-243	+	74.67	*	2.676E-01	8.260E-02	9.419E-02	8.136E-03	2.841
		86.72		1.492E+02	2.113E+01	3.252E+01	2.588E+00	4.588
		117.66		-1.800E+00	6.184E+00	8.856E+00	1.060E+00	-0.203
		142.18		-5.825E+00	2.828E+01	4.519E+01	4.788E+00	-0.129
ANH-511	+	511.00	*	1.742E-01	1.226E-01	1.036E-01	7.228E-03	1.682

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.094E+00	6.997E-01	1.064E+00	8.000E-02	-1.028
NA-22		1274.54	*	-6.454E-02	6.364E-02	9.111E-02	5.142E-03	-0.708
NA-24		1368.53	*	-4.946E-05	6.364E-02	Half-Life too short		
AL-26		1129.67		-2.866E+00	3.840E+00	5.807E+00	3.442E-01	-0.493
		1808.65	*	4.048E-02	4.984E-02	9.586E-02	5.409E-03	0.422
K-40		1460.81	*	8.487E-01	7.231E-01	1.250E+00	7.643E-02	0.679
TI-44		67.85		2.797E-03	4.293E-02	6.945E-02	6.287E-03	0.040
	+	78.38	*	3.032E-01	6.269E-02	8.201E-02	6.907E-03	3.697
SC-46		889.25	*	3.071E-02	1.015E-01	1.712E-01	1.297E-02	0.179
		1120.51		1.307E-01	1.184E-01	2.059E-01	1.238E-02	0.635
V-48		944.10		-2.216E-01	2.060E+00	3.372E+00	2.462E-01	-0.066
		983.50	*	1.313E-01	1.442E-01	2.498E-01	1.767E-02	0.526
		1312.09		-1.085E-02	9.320E-02	1.522E-01	8.630E-03	-0.071
CR-51		320.08	*	4.273E-01	5.837E-01	9.903E-01	7.707E-02	0.431

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MN-52		744.21		-1.461E-01	2.303E-01	3.525E-01	2.862E-02	-0.414
		848.13		3.580E+00	6.759E+00	1.161E+01	9.039E-01	0.308
		935.52		-5.576E-04	3.084E-01	5.082E-01	3.733E-02	-0.001
		1246.25		-1.365E+00	4.254E+00	6.832E+00	3.824E-01	-0.200
	+	1333.61		3.432E+02	2.645E+01	4.011E+01	2.282E+00	8.556
		1434.06	*	-4.232E-02	1.406E-01	2.193E-01	1.260E-02	-0.193
MN-54		834.83	*	2.164E-02	8.508E-02	1.440E-01	1.130E-02	0.150
CO-56		846.75	*	-2.815E-02	9.700E-02	1.583E-01	1.234E-02	-0.178
		977.42		-1.188E+00	7.813E+00	1.269E+01	9.027E-01	-0.094
		1037.82		-2.684E-02	8.048E-01	1.310E+00	9.545E-02	-0.020
	+	1175.09		3.264E+02	2.425E+01	3.591E+01	1.975E+00	9.087
		1238.25		1.004E-01	1.323E-01	2.354E-01	1.404E-02	0.427
		1360.21		1.059E-01	1.507E+00	2.514E+00	1.435E-01	0.042
		1771.40		8.092E-02	4.337E-01	6.469E-01	3.670E-02	0.125
CO-58		810.76	*	2.024E-02	8.750E-02	1.483E-01	1.181E-02	0.136
FE-59		142.65		-6.061E-01	3.892E+00	6.234E+00	6.574E-01	-0.097
		192.34		6.279E-01	1.350E+00	2.263E+00	2.936E-01	0.277
		1099.22	*	-1.190E-02	2.280E-01	3.687E-01	2.634E-02	-0.032
		1291.56		-8.251E-03	1.397E-01	2.300E-01	1.679E-02	-0.036
ZN-65		1115.52	*	-1.820E-01	2.365E-01	3.623E-01	2.199E-02	-0.502
GE-68		1077.35	*	-3.425E-01	3.410E+00	5.506E+00	3.519E-01	-0.062
AS-73		53.44	*	-1.476E-01	6.369E-01	9.739E-01	8.227E-02	-0.152
AS-74		595.88	*	9.234E-02	1.464E-01	2.499E-01	1.919E-02	0.370
		634.78		-1.607E-01	5.974E-01	9.558E-01	7.616E-02	-0.168
SE-75		66.05		-3.411E+00	4.239E+00	6.199E+00	6.753E-01	-0.550
		96.73		-5.872E-01	1.081E+00	1.547E+00	2.147E-01	-0.379
	+	121.11		2.160E+00	5.474E-01	4.843E-01	6.981E-02	4.461
		136.00		2.735E-02	5.826E-02	9.631E-02	1.088E-02	0.284
		198.60		-6.265E-01	2.736E+00	4.541E+00	4.058E-01	-0.138
		264.65	*	-1.751E-03	7.793E-02	1.291E-01	1.012E-02	-0.014
		279.53		9.794E-02	1.889E-01	3.196E-01	2.572E-02	0.306
		303.91		-3.994E+00	3.912E+00	6.011E+00	6.386E-01	-0.665
		400.65		1.524E-01	5.343E-01	8.709E-01	8.004E-02	0.175
BR-77	+	87.88		1.126E+03	1.091E+02	1.073E+02	8.468E+00	10.491
		200.40		2.459E+01	2.893E+01	5.057E+01	4.006E+00	0.486
	+	239.00		1.414E+01	4.172E+00	5.079E+00	4.012E-01	2.784
		249.79		-3.380E+00	1.308E+01	2.152E+01	1.692E+00	-0.157
		281.68		-8.592E+00	1.839E+01	2.965E+01	2.273E+00	-0.290
	+	297.23		4.629E+01	1.794E+01	2.002E+01	1.506E+00	2.312
		303.76		-2.366E+01	3.703E+01	5.838E+01	4.349E+00	-0.405
		439.47		8.605E+00	3.660E+01	6.229E+01	3.935E+00	0.138
		484.57		2.385E+00	5.736E+01	9.599E+01	6.471E+00	0.025
		520.65	*	-6.629E-02	2.506E+00	4.153E+00	2.934E-01	-0.016
		574.64		-3.096E+01	5.004E+01	7.894E+01	5.931E+00	-0.392
		578.91		3.911E+00	2.324E+01	3.361E+01	2.537E+00	0.116
		585.48		1.302E+02	5.479E+01	8.974E+01	6.819E+00	1.451
		755.35		1.403E+01	4.418E+01	7.249E+01	5.870E+00	0.194
		817.79		1.016E+01	3.473E+01	5.907E+01	4.676E+00	0.172
SR-82		698.33		1.446E+01	6.663E+01	1.093E+02	8.920E+00	0.132

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		776.49	*	-3.721E-01	7.961E-01	1.296E+00	1.043E-01	-0.287
		1395.20		-5.922E+00	1.296E+01	1.968E+01	1.128E+00	-0.301
RB-83		520.41	*	-3.598E-02	1.437E-01	2.349E-01	1.658E-02	-0.153
		529.64		-1.953E-01	2.117E-01	3.289E-01	2.349E-02	-0.594
		552.65		3.280E-01	4.080E-01	7.063E-01	5.180E-02	0.464
RB-84		881.50	*	4.753E-02	1.634E-01	2.756E-01	2.099E-02	0.172
KR-85		513.99	*	2.638E+01	1.720E+01	2.764E+01	1.936E+00	0.954
SR-85		513.99	*	1.248E-01	8.143E-02	1.308E-01	9.164E-03	0.954
RB-86		1076.63	*	-6.828E-01	1.688E+00	2.667E+00	1.706E-01	-0.256
Y-88		898.02		7.153E-02	1.185E-01	2.025E-01	1.533E-02	0.353
		1836.01	*	6.542E-02	5.338E-02	1.089E-01	6.135E-03	0.601
ZR-88		392.90	*	-3.649E-03	6.494E-02	1.033E-01	6.053E-03	-0.035
Y-91		1204.90	*	-1.523E+01	2.537E+01	3.957E+01	2.193E+00	-0.385
NB-94		702.63	*	-7.769E-02	8.255E-02	1.245E-01	1.016E-02	-0.624
		871.10		1.052E-02	9.719E-02	1.623E-01	1.245E-02	0.065
NB-95		765.79	*	2.157E-03	9.080E-02	1.526E-01	1.232E-02	0.014
NB-95M		235.69	*	9.631E-02	2.054E-01	3.113E-01	2.879E-02	0.309
ZR-95		724.18		9.033E-03	1.975E-01	3.193E-01	2.851E-02	0.028
		756.15	*	8.311E-02	1.571E-01	2.616E-01	2.360E-02	0.318
NB-97		657.90	*	1.179E-04	1.571E-01	Half-Life too short		
		1024.50		1.803E-04	1.571E-01	Half-Life too short		
ZR-97		254.15		-1.194E-03	1.571E-01	Half-Life too short		
		355.39		-3.400E-04	1.571E-01	Half-Life too short		
		507.63	*	1.020E-03	1.571E-01	Half-Life too short		
		602.52		-6.012E-03	1.571E-01	Half-Life too short		
		1021.30		1.893E-03	1.571E-01	Half-Life too short		
		1147.95		1.640E-03	1.571E-01	Half-Life too short		
		1362.66		-5.269E-05	1.571E-01	Half-Life too short		
		1750.46		2.415E-03	1.571E-01	Half-Life too short		
MO-99		140.51		8.014E-01	5.998E+00	9.744E+00	2.771E+00	0.082
		181.06		1.006E+00	4.648E+00	6.567E+00	1.179E+00	0.153
		366.43		1.684E+01	2.414E+01	4.063E+01	2.613E+00	0.415
		739.58	*	6.274E-01	4.018E+00	6.535E+00	9.743E-01	0.096
		778.00		-3.415E+00	1.250E+01	2.059E+01	1.657E+00	-0.166
TC-99M		140.51	*	5.782E+00	1.250E+01	Half-Life too short		
RH-101		127.23		2.840E-02	5.343E-02	7.996E-02	9.710E-03	0.355
		198.01	*	-3.635E-02	5.281E-02	8.582E-02	6.795E-03	-0.424
		325.23		-3.203E-01	4.280E-01	6.693E-01	4.798E-02	-0.478
RH-102		418.52		1.827E-01	6.079E-01	9.894E-01	6.048E-02	0.185
		475.06	*	1.353E-02	6.826E-02	1.153E-01	7.673E-03	0.117
		631.29		-6.956E-02	1.210E-01	1.891E-01	1.502E-02	-0.368
		697.49		8.914E-02	1.826E-01	3.045E-01	2.486E-02	0.293
		766.84		3.558E-03	2.489E-01	4.180E-01	3.374E-02	0.009
		1046.59		2.182E-01	3.132E-01	5.342E-01	3.546E-02	0.408
		1112.84		1.983E-01	5.959E-01	9.879E-01	6.009E-02	0.201
RU-103		497.08	*	2.705E-02	7.868E-02	1.335E-01	1.757E-02	0.203
	+	610.33		8.628E+00	3.440E+00	3.562E+00	5.795E-01	2.422
RH-106	+	511.85		8.577E-01	6.037E-01	7.088E-01	4.952E-02	1.210
		621.84	*	-3.975E-01	6.699E-01	1.044E+00	1.345E-01	-0.381

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1050.47		-4.860E-01	6.232E+00	1.010E+01	6.674E-01	-0.048
RU-106	+	511.85		8.577E-01	6.037E-01	7.088E-01	4.952E-02	1.210
		621.84	*	-3.975E-01	6.687E-01	1.044E+00	8.219E-02	-0.381
		1050.47		-4.860E-01	6.232E+00	1.010E+01	6.674E-01	-0.048
AG-108M		433.93	*	1.746E-02	7.811E-02	1.330E-01	8.944E-03	0.131
		614.37		3.408E-02	9.208E-02	1.350E-01	1.106E-02	0.252
		722.95		-5.758E-02	9.743E-02	1.502E-01	1.277E-02	-0.383
AG-110M		657.75	*	4.341E-02	9.526E-02	1.393E-01	1.170E-02	0.312
		677.61		-3.659E-01	6.852E-01	1.066E+00	8.979E-02	-0.343
		706.67		3.032E-01	4.856E-01	8.162E-01	6.865E-02	0.371
		763.93		-2.179E-01	3.700E-01	5.972E-01	4.980E-02	-0.365
		884.67		-5.159E-02	1.344E-01	2.171E-01	1.718E-02	-0.238
		937.48		2.107E-01	3.341E-01	5.694E-01	4.384E-02	0.370
		1384.27		-1.391E-01	2.736E-01	4.189E-01	2.548E-02	-0.332
IN-111		171.28		3.654E-02	2.636E-01	4.226E-01	3.318E-02	0.086
		245.39	*	1.475E-01	3.369E-01	5.078E-01	4.001E-02	0.290
IN-113M		391.69	*	8.723E-02	9.330E-02	1.575E-01	9.813E-03	0.554
SN-113		391.69	*	8.723E-02	9.330E-02	1.575E-01	9.813E-03	0.554
IN-114M		190.27	*	-1.099E-01	3.065E-01	4.185E-01	3.308E-02	-0.262
CD-115		260.90		-6.650E+00	2.302E+01	3.770E+01	2.945E+00	-0.176
		492.35		1.190E+00	7.525E+00	1.266E+01	8.624E-01	0.094
		527.90	*	2.723E-01	2.191E+00	3.659E+00	2.608E-01	0.074
SN-117M		156.02		1.795E-01	2.415E+00	3.886E+00	3.511E-01	0.046
		158.56	*	5.098E-03	5.777E-02	9.267E-02	8.092E-03	0.055
SB-122		563.90	*	4.838E-01	6.568E-01	1.129E+00	8.385E-02	0.429
		692.80		-3.116E+00	1.511E+01	2.412E+01	1.969E+00	-0.129
I-123		159.00	*	-6.549E-07	1.511E+01	Half-Life too short		
		528.96		-2.889E-02	1.511E+01	Half-Life too short		
TE-123M		159.00	*	-4.790E-05	4.244E-02	6.775E-02	5.916E-03	-0.001
I-124		602.71	*	-2.230E-01	4.697E-01	6.352E-01	4.911E-02	-0.351
		722.78		-1.768E+00	2.861E+00	4.400E+00	3.585E-01	-0.402
		1325.50		-1.493E+01	2.103E+01	2.583E+01	1.467E+00	-0.578
		1376.25		5.626E+00	1.309E+01	2.289E+01	1.309E+00	0.246
		1509.49		-4.301E+00	6.845E+00	9.915E+00	5.716E-01	-0.434
		1691.02		1.348E+00	1.807E+00	3.350E+00	1.918E-01	0.402
SB-124		602.71		-4.197E-02	8.839E-02	1.195E-01	9.245E-03	-0.351
		645.85		5.521E-02	1.078E+00	1.761E+00	1.514E-01	0.031
		709.31		2.923E+00	6.029E+00	1.005E+01	8.200E-01	0.291
		713.82		-3.745E-01	3.445E+00	5.514E+00	6.457E-01	-0.068
		722.78		-4.824E-01	7.807E-01	1.200E+00	1.002E-01	-0.402
		968.20		3.502E+00	6.678E+00	1.128E+01	8.086E-01	0.310
		1045.16		-6.186E-01	6.218E+00	1.007E+01	6.694E-01	-0.061
		1325.50		-4.350E+00	6.129E+00	7.526E+00	4.276E-01	-0.578
		1368.21		-1.201E-01	2.430E+00	3.982E+00	4.711E-01	-0.030
		1436.60		-8.874E-01	5.406E+00	8.644E+00	4.968E-01	-0.103
		1691.02	*	8.675E-02	1.163E-01	2.156E-01	1.343E-02	0.402
SB-125		427.89	*	2.181E-02	2.125E-01	3.601E-01	2.317E-02	0.061
		463.38		-6.913E-02	6.954E-01	1.160E+00	8.599E-02	-0.060
		600.56		-8.723E-03	3.807E-01	6.231E-01	5.246E-02	-0.014

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		635.90		4.642E-02	5.947E-01	9.753E-01	8.509E-02	0.048
TE-125M		109.28	*	4.579E+00	1.175E+01	1.963E+01	2.382E+00	0.233
I-126		388.63		-1.619E-01	2.998E-01	4.669E-01	2.765E-02	-0.347
		666.33	*	-3.370E-03	3.269E-01	4.579E-01	3.736E-02	-0.007
		753.82		-3.977E-01	2.414E+00	3.829E+00	3.102E-01	-0.104
SB-126		223.80		7.417E-01	4.722E+00	7.980E+00	6.326E-01	0.093
		278.60		1.832E+00	2.895E+00	4.926E+00	3.789E-01	0.372
	+	296.50		7.226E+00	2.801E+00	3.372E+00	2.539E-01	2.143
		414.70		-7.577E-02	1.092E-01	1.672E-01	1.016E-02	-0.453
		415.30		-6.628E+00	8.914E+00	1.358E+01	8.259E-01	-0.488
		555.20		1.384E+00	5.889E+00	9.859E+00	7.252E-01	0.140
		573.80		3.037E-01	1.496E+00	2.494E+00	1.872E-01	0.122
		593.00		-7.083E-01	1.331E+00	2.103E+00	1.610E-01	-0.337
		656.30		-2.214E+00	6.141E+00	8.325E+00	6.759E-01	-0.266
		666.33		-1.384E-03	1.342E-01	1.881E-01	1.534E-02	-0.007
		675.00		-2.175E+00	2.990E+00	4.584E+00	3.742E-01	-0.475
		695.00		-4.005E-02	1.245E-01	1.971E-01	1.609E-02	-0.203
		697.00		4.950E-01	4.160E-01	7.220E-01	5.894E-02	0.686
		720.50	*	-7.722E-02	2.106E-01	3.298E-01	2.688E-02	-0.234
		856.80		1.776E-01	8.258E-01	1.389E+00	1.076E-01	0.128
		989.30		-1.737E+00	2.353E+00	3.662E+00	2.577E-01	-0.474
		1034.80		-4.769E+00	1.637E+01	2.619E+01	1.761E+00	-0.182
		1213.00		-2.038E+00	4.749E+00	7.580E+00	4.210E-01	-0.269
SB-127	+	61.10		1.343E+03	1.431E+02	5.731E+01	5.806E+00	23.441
		252.40		-9.816E-01	2.017E+00	3.210E+00	1.330E+00	-0.306
		290.80		-3.540E+00	1.143E+01	1.614E+01	1.351E+00	-0.219
		411.60		1.062E+01	7.009E+00	1.194E+01	1.564E+00	0.890
		444.90		-3.850E+00	5.652E+00	9.153E+00	8.464E-01	-0.421
		473.00		1.327E+00	1.036E+00	1.828E+00	1.804E-01	0.726
		543.00		-6.172E+00	9.345E+00	1.476E+01	1.794E+00	-0.418
		603.60		-1.051E+00	7.092E+00	9.910E+00	1.012E+00	-0.106
		685.20	*	1.260E-01	8.035E-01	1.316E+00	1.207E-01	0.096
		698.50		2.276E+00	9.325E+00	1.531E+01	2.191E+00	0.149
		722.20		-9.455E+00	1.705E+01	2.631E+01	2.336E+00	-0.359
		783.80		-2.840E-01	2.177E+00	3.616E+00	3.732E-01	-0.079
XE-127		57.60		7.335E+00	5.743E+00	9.039E+00	8.353E-01	0.811
		145.22		7.753E-02	9.935E-01	1.607E+00	1.649E-01	0.048
		172.10		6.596E-02	1.713E-01	2.779E-01	2.182E-02	0.237
		202.84	*	-2.413E-02	6.767E-02	1.127E-01	8.930E-03	-0.214
		374.96		2.687E-02	3.728E-01	6.038E-01	3.770E-02	0.044
I-131		80.18		-9.682E-01	2.918E+00	4.309E+00	3.591E-01	-0.225
		284.30		5.107E-01	1.458E+00	2.446E+00	1.982E-01	0.209
		364.48	*	-8.885E-02	1.182E-01	1.819E-01	1.279E-02	-0.489
		636.97		1.586E+00	1.761E+00	3.044E+00	2.575E-01	0.521
		722.89		-5.130E+00	8.505E+00	1.310E+01	1.069E+00	-0.392
TE-132	+	49.72		4.944E+00	3.170E+00	3.633E+00	3.054E-01	1.361
		111.76		-6.116E-01	8.498E+00	1.381E+01	1.597E+00	-0.044
		116.30		-2.301E+00	8.320E+00	1.277E+01	1.559E+00	-0.180
		228.16	*	8.843E-02	2.489E-01	4.230E-01	6.022E-02	0.209

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BA-133		53.15		-5.247E-01	2.877E+00	4.407E+00	3.699E-01	-0.119
		79.62		5.893E-02	1.589E+00	2.391E+00	3.604E-01	0.025
		81.00		-8.738E-02	1.278E-01	1.846E-01	2.896E-02	-0.473
		276.40		-3.226E-01	6.729E-01	1.084E+00	1.509E-01	-0.298
		302.84		-1.118E-01	2.697E-01	4.303E-01	5.408E-02	-0.260
		356.01	*	4.935E-02	1.007E-01	1.491E-01	1.790E-02	0.331
		383.85		2.015E-01	6.415E-01	1.051E+00	1.156E-01	0.192
I-133	+	510.53		4.016E-03	6.415E-01	Half-Life too short		
		529.87	*	-3.525E-05	6.415E-01	Half-Life too short		
		706.58		1.310E-03	6.415E-01	Half-Life too short		
		856.28		4.566E-05	6.415E-01	Half-Life too short		
		875.33		-5.531E-04	6.415E-01	Half-Life too short		
		1236.41		1.480E-03	6.415E-01	Half-Life too short		
		1298.22		1.387E-03	6.415E-01	Half-Life too short		
CS-134		475.35		-8.386E-01	4.506E+00	7.463E+00	4.968E-01	-0.112
		563.23		7.877E-01	8.032E-01	1.398E+00	1.051E-01	0.563
		569.32		3.433E-02	4.374E-01	7.240E-01	5.506E-02	0.047
		604.70		-1.277E-04	8.020E-02	1.137E-01	8.833E-03	-0.001
		795.84	*	3.051E-02	1.092E-01	1.857E-01	1.497E-02	0.164
		801.93		6.833E-01	1.034E+00	1.789E+00	1.435E-01	0.382
		1038.57		-1.040E+00	1.080E+01	1.751E+01	1.173E+00	-0.059
		1167.94		2.249E+00	5.078E+00	7.468E+00	4.145E-01	0.301
		1365.15		3.410E-01	1.781E+00	3.031E+00	1.906E-01	0.113
CS-135		268.24	*	-1.519E-01	2.913E-01	4.703E-01	4.344E-02	-0.323
I-135		288.45		-1.216E+02	2.913E-01	Half-Life too short		
		417.63		1.170E+02	2.913E-01	Half-Life too short		
		546.56		1.815E+01	2.913E-01	Half-Life too short		
		836.80		-1.003E+02	2.913E-01	Half-Life too short		
		1038.76		1.546E+01	2.913E-01	Half-Life too short		
		1124.00		-1.078E+02	2.913E-01	Half-Life too short		
		1131.51		-2.653E+01	2.913E-01	Half-Life too short		
		1260.41	*	-2.825E+01	2.913E-01	Half-Life too short		
		1457.56		4.735E+01	2.913E-01	Half-Life too short		
		1678.03		1.185E+01	2.913E-01	Half-Life too short		
		1706.46		-9.063E+01	2.913E-01	Half-Life too short		
		1791.20		9.031E+01	2.913E-01	Half-Life too short		
CS-136		66.91		8.743E-02	4.882E-01	7.474E-01	1.174E-01	0.117
		86.29		2.907E+00	1.220E+00	1.901E+00	2.362E-01	1.529
		153.22		6.604E-01	7.012E-01	1.172E+00	1.207E-01	0.564
		163.89		-7.909E-01	1.213E+00	1.867E+00	1.713E-01	-0.424
		176.55		2.665E-01	3.823E-01	6.295E-01	5.290E-02	0.423
		273.65		-1.592E-01	5.484E-01	8.946E-01	7.473E-02	-0.178
		340.57		2.810E-01	1.898E-01	2.962E-01	2.141E-02	0.949
		818.51		2.752E-02	1.179E-01	1.997E-01	1.581E-02	0.138
		1048.07	*	1.205E-02	1.972E-01	3.229E-01	2.288E-02	0.037
		1235.34		1.878E-01	5.841E-01	1.004E+00	9.898E-02	0.187
CE-139		165.85	*	1.555E-02	4.916E-02	7.963E-02	6.243E-03	0.195
BA-140		162.64		-4.696E-01	8.219E-01	1.271E+00	1.113E-01	-0.370
		304.84		-2.567E+00	1.770E+00	2.421E+00	6.703E-01	-1.060

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		423.70		1.587E-01	2.930E+00	4.690E+00	1.494E+00	0.034
		537.32	*	8.597E-02	3.866E-01	6.468E-01	2.121E-01	0.133
LA-140		328.77		1.369E-01	3.810E-01	6.326E-01	4.867E-02	0.216
		432.53		-8.923E-01	3.270E+00	5.439E+00	3.708E-01	-0.164
		487.03		-6.386E-02	2.117E-01	3.475E-01	2.582E-02	-0.184
		751.79		-4.033E-02	2.816E+00	4.516E+00	4.100E-01	-0.009
		815.85		8.110E-03	5.154E-01	8.609E-01	7.743E-02	0.009
		867.82		2.064E+00	2.618E+00	4.535E+00	3.718E-01	0.455
		919.63		-3.017E+00	5.905E+00	8.963E+00	8.698E-01	-0.337
		925.24		3.763E-02	2.324E+00	3.837E+00	3.078E-01	0.010
		1596.49	*	2.804E-02	9.898E-02	1.683E-01	9.699E-03	0.167
CE-141		145.44	*	1.424E-02	8.824E-02	1.432E-01	1.486E-02	0.099
CE-143		57.37		1.288E+01	2.423E+01	3.765E+01	3.873E+00	0.342
		231.56		-9.172E+01	9.769E+01	1.494E+02	4.686E+01	-0.614
		293.26	*	4.962E+00	6.027E+00	9.047E+00	1.901E+00	0.548
		350.59		3.562E+02	1.434E+02	1.630E+02	4.975E+01	2.185
		490.36		-3.700E+01	1.411E+02	2.311E+02	7.187E+01	-0.160
		664.57		2.662E+03	8.720E+02	3.590E+02	1.155E+02	7.417
		721.93		-3.782E+01	6.785E+01	1.034E+02	2.998E+01	-0.366
CE-144		80.11		-8.902E-01	2.538E+00	3.744E+00	3.116E-01	-0.238
		133.54	*	-3.045E-01	3.105E-01	4.714E-01	8.170E-02	-0.646
PM-144		476.78		-1.830E-01	1.557E-01	2.427E-01	1.865E-02	-0.754
		618.01		-3.674E-02	7.749E-02	1.041E-01	8.435E-03	-0.353
		696.49	*	8.487E-02	8.127E-02	1.399E-01	1.142E-02	0.607
		778.57		-9.933E-01	5.645E+00	9.355E+00	7.525E-01	-0.106
PR-144		696.49	*	5.728E+00	5.485E+00	9.442E+00	7.709E-01	0.607
		1489.15		-3.169E+00	2.148E+01	3.438E+01	1.981E+00	-0.092
PM-146		453.90	*	2.190E-02	1.050E-01	1.779E-01	1.615E-02	0.123
		633.02		-1.672E+00	3.089E+00	4.738E+00	1.764E+00	-0.353
		735.90		-4.140E-01	3.828E-01	5.362E-01	1.526E-01	-0.772
		747.13		1.026E-02	2.189E-01	3.529E-01	4.846E-02	0.029
ND-147		91.11		3.849E-01	2.845E-01	3.674E-01	3.312E-02	1.048
		319.41		7.277E-01	3.937E+00	6.500E+00	4.714E-01	0.112
		439.89		5.255E+00	8.406E+00	1.456E+01	9.204E-01	0.361
		531.02	*	-8.500E-01	7.475E-01	1.129E+00	1.598E-01	-0.753
PM-149		285.90	*	2.236E+00	1.591E+01	2.641E+01	3.961E+00	0.085
EU-152	+	121.78		1.217E+00	3.018E-01	3.038E-01	4.110E-02	4.007
		244.69		2.528E-01	6.766E-01	1.016E+00	8.008E-02	0.249
		344.27	*	3.026E-02	2.103E-01	3.189E-01	2.391E-02	0.095
		443.98		-1.220E+00	2.214E+00	3.619E+00	2.302E-01	-0.337
		778.89		-5.258E-02	6.671E-01	1.112E+00	8.946E-02	-0.047
		867.32		1.492E+00	2.373E+00	4.077E+00	3.136E-01	0.366
		964.01		2.034E-01	8.441E-01	1.405E+00	1.010E-01	0.145
		1085.78		-5.145E-01	1.128E+00	1.774E+00	1.121E-01	-0.290
		1112.02		6.172E-01	8.336E-01	1.419E+00	8.644E-02	0.435
		1407.95		-3.580E-02	3.223E-01	5.275E-01	3.025E-02	-0.068
GD-153		69.67		8.824E-01	1.651E+00	2.556E+00	2.285E-01	0.345
		83.37		5.910E+00	1.882E+01	3.037E+01	2.472E+00	0.195
		97.43	*	-1.723E-02	1.148E-01	1.686E-01	1.534E-02	-0.102

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		103.18		-1.059E-01	1.479E-01	2.357E-01	2.328E-02	-0.449
EU-154	+	123.07		8.542E-01	2.170E-01	2.135E-01	3.112E-02	4.001
		247.94		-1.396E-01	6.780E-01	1.081E+00	1.181E-01	-0.129
		591.81		-7.222E-01	1.349E+00	2.130E+00	2.337E-01	-0.339
		723.30		-4.354E-01	4.184E-01	6.215E-01	5.657E-02	-0.701
		756.87		5.344E-01	1.862E+00	3.049E+00	3.538E-01	0.175
		873.19		-7.916E-01	8.520E-01	1.323E+00	1.533E-01	-0.598
		996.32		6.533E-01	1.063E+00	1.798E+00	3.064E-01	0.363
		1004.76		-3.246E-01	6.003E-01	9.458E-01	9.887E-02	-0.343
		1274.45	*	-1.895E-01	1.779E-01	2.512E-01	2.321E-02	-0.754
EU-155	+	48.70		2.837E+00	1.817E+00	1.886E+00	1.423E-01	1.504
	+	60.01		4.431E+02	4.452E+01	2.453E+01	2.348E+00	18.062
		86.54		9.559E-01	1.909E-01	3.071E-01	2.476E-02	3.112
		105.31	*	8.958E-02	1.492E-01	2.517E-01	2.583E-02	0.356
TB-160		86.79		4.731E+00	6.159E-01	9.241E-01	7.349E-02	5.120
		197.04		-7.856E-01	8.216E-01	1.330E+00	1.053E-01	-0.591
		215.65		6.626E-01	1.199E+00	2.064E+00	1.637E-01	0.321
		298.57		-6.754E-02	2.126E-01	2.992E-01	2.247E-02	-0.226
		879.36	*	2.097E-01	3.492E-01	6.001E-01	4.578E-02	0.349
		962.29		1.556E+00	1.400E+00	2.434E+00	1.753E-01	0.639
		966.15		-1.705E-01	5.324E-01	8.587E-01	6.164E-02	-0.199
		1177.93		8.259E+00	1.308E+00	2.497E+00	1.374E-01	3.308
		1271.85		-4.930E-01	9.852E-01	1.533E+00	8.625E-02	-0.322
HO-166M		80.57		-1.836E-01	3.443E-01	5.033E-01	4.176E-02	-0.365
		184.41		1.310E-01	6.605E-02	1.029E-01	8.118E-03	1.273
		280.46		-1.458E-02	1.581E-01	2.598E-01	1.995E-02	-0.056
		410.95		8.377E-01	5.493E-01	9.488E-01	5.729E-02	0.883
		711.68	*	-5.154E-02	1.459E-01	2.295E-01	1.872E-02	-0.225
		752.31		8.461E-02	6.602E-01	1.070E+00	8.670E-02	0.079
		810.29		6.209E-02	1.414E-01	2.428E-01	1.929E-02	0.256
TM-171	+	51.35		4.521E+01	2.895E+01	3.369E+01	2.712E+00	1.342
		52.39		-2.743E+00	1.189E+01	1.822E+01	1.503E+00	-0.151
	+	59.40		2.320E+03	2.331E+02	1.274E+02	1.222E+01	18.203
		66.72	*	2.271E+00	2.605E+01	3.975E+01	3.627E+00	0.057
LU-176	+	88.36		1.119E+01	1.085E+00	1.075E+00	8.523E-02	10.413
		201.83		1.203E-02	4.751E-02	8.118E-02	6.433E-03	0.148
		306.84	*	3.521E-02	4.668E-02	7.946E-02	5.891E-03	0.443
		401.10		-1.966E+00	1.474E+01	2.345E+01	1.393E+00	-0.084
LU-177		112.95		3.812E-01	1.087E+00	1.798E+00	2.025E-01	0.212
		208.36	*	-3.542E-01	8.280E-01	1.372E+00	1.088E-01	-0.258
LU-177M		52.97		-8.924E-01	1.263E+00	1.904E+00	1.591E-01	-0.469
		54.07		-2.291E-01	7.104E-01	1.083E+00	9.276E-02	-0.212
	+	61.30		1.334E+02	1.340E+01	4.942E+00	4.687E-01	26.983
	+	121.62		6.048E+00	1.469E+00	1.486E+00	1.868E-01	4.071
		147.16		-9.387E-02	1.038E+00	1.664E+00	1.672E-01	-0.056
		171.86		1.179E-01	7.848E-01	1.259E+00	9.884E-02	0.094
		218.09		7.665E-01	1.430E+00	2.458E+00	1.949E-01	0.312
		268.79		-5.865E-01	1.435E+00	2.331E+00	1.809E-01	-0.252
		319.02		-9.040E-02	4.875E-01	7.890E-01	5.726E-02	-0.115

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		367.43		-3.268E-01	1.750E+00	2.795E+00	1.791E-01	-0.117
		413.65	*	-1.966E-01	3.867E-01	6.000E-01	3.639E-02	-0.328
HF-181		56.28		5.448E-01	8.146E-01	1.272E+00	1.143E-01	0.428
		57.53		3.872E-01	4.844E-01	7.567E-01	6.983E-02	0.512
		65.20		9.586E-02	7.536E-01	1.153E+00	1.064E-01	0.083
		133.02		-2.540E-02	8.544E-02	1.364E-01	1.576E-02	-0.186
		136.25		3.081E-01	6.281E-01	1.039E+00	1.166E-01	0.297
		345.85		-1.760E-01	3.607E-01	5.484E-01	3.747E-02	-0.321
		482.03	*	6.145E-02	8.688E-02	1.503E-01	1.010E-02	0.409
W-181		56.28		2.314E-01	3.458E-01	5.398E-01	4.852E-02	0.429
		57.53		1.638E-01	2.057E-01	3.213E-01	2.965E-02	0.510
		65.20	*	4.039E-02	3.175E-01	4.859E-01	4.482E-02	0.083
TA-182		67.75		3.750E-03	9.750E-02	1.576E-01	1.428E-02	0.024
		100.10		1.317E-01	2.403E-01	4.036E-01	3.817E-02	0.326
		152.43		-7.512E-02	5.126E-01	8.171E-01	7.724E-02	-0.092
		222.10		-3.005E-01	5.788E-01	9.499E-01	7.532E-02	-0.316
		1001.68		-6.662E+00	5.338E+00	8.035E+00	5.590E-01	-0.829
		1121.28		2.769E-01	3.296E-01	5.647E-01	3.391E-02	0.490
		1189.05		-2.597E-02	5.000E-01	8.327E-01	4.596E-02	-0.031
		1221.42	*	1.161E-01	2.820E-01	4.903E-01	2.729E-02	0.237
		1230.97		-3.483E-01	6.533E-01	1.026E+00	5.721E-02	-0.340
RE-183		57.98		1.385E+00	2.591E-01	3.919E-01	3.651E-02	3.533
	+	59.32		8.882E+00	8.924E-01	4.842E-01	4.635E-02	18.345
		67.20		9.239E-02	1.733E-01	2.690E-01	2.446E-02	0.343
		162.32	*	-6.246E-02	1.661E-01	2.595E-01	2.148E-02	-0.241
		208.81		7.072E-01	1.512E+00	2.597E+00	2.060E-01	0.272
		291.72		-4.167E-01	1.845E+00	2.622E+00	1.987E-01	-0.159
RE-184		57.98		5.333E+00	9.979E-01	1.509E+00	1.406E-01	3.533
	+	59.32		3.418E+01	3.434E+00	1.863E+00	1.784E-01	18.345
		67.20		3.557E-01	6.671E-01	1.036E+00	9.418E-02	0.343
		161.27		1.618E-01	5.495E-01	8.919E-01	7.496E-02	0.181
		216.55		3.410E-01	4.502E-01	7.800E-01	6.187E-02	0.437
		252.85	*	8.001E-03	3.955E-01	6.589E-01	5.173E-02	0.012
		318.01		-5.433E-01	8.634E-01	1.363E+00	9.909E-02	-0.399
		792.07		-1.992E+00	2.215E+00	3.475E+00	2.781E-01	-0.573
		903.28		-3.645E-01	3.201E+00	4.697E+00	3.522E-01	-0.078
		920.93		-1.233E+00	1.328E+00	2.063E+00	1.530E-01	-0.598
OS-185	+	59.72		2.470E+01	2.481E+00	1.375E+00	1.319E-01	17.967
	+	61.14		1.425E+01	1.432E+00	5.933E-01	5.633E-02	24.014
		69.30		1.861E-01	2.828E-01	4.400E-01	3.944E-02	0.423
		592.07		-2.791E+00	5.210E+00	8.231E+00	6.297E-01	-0.339
		646.12	*	-5.014E-03	9.267E-02	1.504E-01	1.210E-02	-0.033
		717.42		-1.857E-01	1.899E+00	3.041E+00	2.479E-01	-0.061
		874.81		-1.597E+00	1.579E+00	2.444E+00	1.871E-01	-0.653
		880.27		8.613E-01	2.039E+00	3.465E+00	2.642E-01	0.249
RE-188		155.03	*	7.196E-02	2.514E-01	4.088E-01	3.741E-02	0.176
		477.96		-7.772E+00	6.661E+00	1.040E+01	6.947E-01	-0.747
		633.10		-3.393E+00	5.672E+00	8.837E+00	7.031E-01	-0.384
W-188	+	63.58		8.893E+00	4.580E+01	7.127E+01	6.650E+00	0.125

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		227.08		1.164E+01	2.146E+01	3.676E+01	2.913E+00	0.316
		290.67	*	9.208E-01	1.415E+01	2.054E+01	1.559E+00	0.045
IR-192	+	295.96		7.888E-01	3.059E-01	3.764E-01	2.862E-02	2.096
		308.46		1.519E-01	1.734E-01	2.965E-01	2.208E-02	0.512
		316.51	*	1.431E-02	6.148E-02	1.018E-01	7.448E-03	0.141
		468.07		-1.019E-01	1.582E-01	2.566E-01	1.894E-02	-0.397
		604.41		-7.352E-02	1.013E+00	1.425E+00	1.776E-01	-0.052
		612.46		3.608E+00	1.768E+00	2.872E+00	2.642E-01	1.256
AU-195		65.12		4.896E-02	1.499E-01	2.311E-01	2.133E-02	0.212
		66.83		1.194E-02	8.477E-02	1.296E-01	1.182E-02	0.092
	+	75.70		8.415E-01	2.597E-01	4.037E-01	3.463E-02	2.084
		98.88	*	-1.089E-01	3.246E-01	5.022E-01	4.667E-02	-0.217
		129.76		-1.904E+00	4.183E+00	6.636E+00	7.891E-01	-0.287
TL-200		367.94	*	-1.486E+00	7.184E+00	1.146E+01	7.334E-01	-0.130
		579.30		3.496E+01	6.726E+01	1.003E+02	7.571E+00	0.349
		828.27		6.188E+01	9.513E+01	1.650E+02	1.299E+01	0.375
		1205.75		-2.351E+01	2.881E+01	4.374E+01	2.425E+00	-0.537
TL-201		68.90		1.754E-01	8.010E-01	1.301E+00	1.170E-01	0.135
		70.82		-1.514E-01	5.022E-01	7.504E-01	6.656E-02	-0.202
		80.30		-2.942E-01	1.087E+00	1.610E+00	1.338E-01	-0.183
		135.34		1.471E+00	6.818E+00	1.115E+01	1.263E+00	0.132
		167.43	*	1.850E+00	2.113E+00	3.504E+00	2.746E-01	0.528
TL-202		68.90		5.801E-02	2.649E-01	4.304E-01	3.868E-02	0.135
		70.82		-4.993E-02	1.656E-01	2.475E-01	2.195E-02	-0.202
		80.30		-9.708E-02	3.586E-01	5.311E-01	4.415E-02	-0.183
		439.56	*	6.004E-02	1.046E-01	1.808E-01	1.142E-02	0.332
HG-203		70.83		-3.000E-01	9.875E-01	1.475E+00	2.030E-01	-0.203
		72.87		2.044E-01	5.227E-01	8.888E-01	1.181E-01	0.230
		82.60		-6.345E-01	1.219E+00	1.986E+00	2.677E-01	-0.319
		279.20	*	4.059E-02	6.637E-02	1.128E-01	8.978E-03	0.360
BI-207		72.80		6.117E-02	1.711E-01	2.910E-01	2.546E-02	0.210
	+	74.97		4.802E-01	1.482E-01	2.147E-01	1.851E-02	2.237
		84.90		2.958E-01	2.651E-01	4.152E-01	3.345E-02	0.713
		569.67		9.901E-03	6.896E-02	1.146E-01	8.562E-03	0.086
		1063.62	*	5.817E-03	1.417E-01	2.313E-01	1.504E-02	0.025
		1770.23		7.803E-01	9.628E-01	1.641E+00	9.313E-02	0.475
TL-207		81.07		-1.933E-01	2.815E-01	4.083E-01	3.376E-02	-0.474
		83.78		1.605E-01	1.729E-01	2.694E-01	2.187E-02	0.596
		94.90		2.688E-01	3.307E-01	5.103E-01	4.474E-02	0.527
	+	122.32		2.902E+01	7.119E+00	7.274E+00	9.505E-01	3.990
		144.24		-1.961E-01	1.132E+00	1.811E+00	2.034E-01	-0.108
		154.21		4.169E-01	6.290E-01	1.040E+00	1.045E-01	0.401
		269.46		1.284E-01	3.429E-01	5.776E-01	4.596E-02	0.222
		323.87	*	-3.317E-01	1.276E+00	2.052E+00	3.499E-01	-0.162
	+	338.28		3.385E+00	2.541E+00	3.503E+00	3.929E-01	0.966
		445.03		-3.958E+00	5.197E+00	8.368E+00	8.872E-01	-0.473
PO-209		260.50		8.332E+00	1.762E+01	2.989E+01	2.335E+00	0.279
		262.80		-2.616E+01	4.953E+01	8.004E+01	6.243E+00	-0.327
		896.60	*	4.631E+00	2.206E+01	3.693E+01	2.781E+00	0.125

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BI-210		46.50	*	1.595E+00	1.193E+00	1.832E+00	1.493E-01	0.871
PB-210		46.50	*	1.595E+00	1.193E+00	1.832E+00	1.493E-01	0.871
PO-210		46.50	*	1.595E+00	1.191E+00	1.832E+00	1.306E-01	0.871
PB-211		404.84	*	2.507E-01	2.055E+00	3.306E+00	2.062E+00	0.076
		427.08		-1.196E-01	4.983E+00	7.936E+00	4.908E+00	-0.015
		831.96		-1.817E+00	3.189E+00	4.764E+00	2.981E+00	-0.381
BI-212		727.18	*	4.623E-01	7.093E-01	1.189E+00	1.142E-01	0.389
		785.46		2.151E-01	4.084E+00	6.860E+00	5.505E-01	0.031
		1620.62		-1.899E-01	1.974E+00	3.145E+00	1.810E-01	-0.060
BI-214	+	609.31	*	9.137E-01	3.434E-01	3.813E-01	3.565E-02	2.397
		768.36		-6.159E-02	1.748E+00	2.927E+00	2.935E-01	-0.021
		934.06		-1.908E+00	3.577E+00	5.710E+00	5.503E-01	-0.334
		1120.29		9.263E-01	7.433E-01	1.299E+00	1.162E-01	0.713
		1238.11		1.158E+00	1.383E+00	2.475E+00	1.980E-01	0.468
		1377.67		1.257E+00	1.540E+00	2.807E+00	2.394E-01	0.448
	+	1764.49		1.007E+00	4.740E-01	9.750E-01	5.537E-02	1.033
PO-215		81.07		-1.933E-01	2.815E-01	4.083E-01	3.376E-02	-0.474
		83.78		1.605E-01	1.729E-01	2.694E-01	2.187E-02	0.596
		94.90		2.688E-01	3.307E-01	5.103E-01	4.474E-02	0.527
	+	122.32		2.902E+01	7.119E+00	7.274E+00	9.505E-01	3.990
		144.24		-1.961E-01	1.132E+00	1.811E+00	2.034E-01	-0.108
		154.21		4.169E-01	6.290E-01	1.040E+00	1.045E-01	0.401
		269.46		1.284E-01	3.429E-01	5.776E-01	4.596E-02	0.222
		323.87	*	-3.317E-01	1.276E+00	2.052E+00	3.499E-01	-0.162
	+	338.28		3.385E+00	2.541E+00	3.503E+00	3.929E-01	0.966
		445.03		-3.958E+00	5.197E+00	8.368E+00	8.872E-01	-0.473
RN-219		271.23		3.205E-01	4.461E-01	7.611E-01	7.302E-02	0.421
		401.81	*	-1.690E-01	9.180E-01	1.456E+00	1.990E-01	-0.116
RN-220		549.76	*	-5.533E+01	5.830E+01	9.020E+01	6.594E+00	-0.613
RA-223		81.07		-1.933E-01	2.815E-01	4.083E-01	3.376E-02	-0.474
		83.78		1.605E-01	1.729E-01	2.694E-01	2.187E-02	0.596
		94.90		2.688E-01	3.307E-01	5.103E-01	4.474E-02	0.527
	+	122.32		2.902E+01	7.119E+00	7.274E+00	9.505E-01	3.990
		144.24		-1.961E-01	1.132E+00	1.811E+00	2.034E-01	-0.108
		154.21		4.169E-01	6.290E-01	1.040E+00	1.045E-01	0.401
		269.46		1.284E-01	3.429E-01	5.776E-01	4.596E-02	0.222
		323.87	*	-3.317E-01	1.276E+00	2.052E+00	3.499E-01	-0.162
	+	338.28		3.385E+00	2.541E+00	3.503E+00	3.929E-01	0.966
		445.03		-3.958E+00	5.197E+00	8.368E+00	8.872E-01	-0.473
RA-226	+	609.31	*	9.137E-01	3.434E-01	3.813E-01	3.565E-02	2.397
		768.36		-6.159E-02	1.748E+00	2.927E+00	2.935E-01	-0.021
		934.06		-1.908E+00	3.577E+00	5.710E+00	5.503E-01	-0.334
		1120.29		9.263E-01	7.433E-01	1.299E+00	1.162E-01	0.713
		1238.11		1.158E+00	1.383E+00	2.475E+00	1.980E-01	0.468
		1377.67		1.257E+00	1.540E+00	2.807E+00	2.394E-01	0.448
	+	1764.49		1.007E+00	4.740E-01	9.750E-01	5.537E-02	1.033
AC-227		79.80		-1.086E+00	2.034E+00	2.958E+00	6.328E-01	-0.367
		236.00		2.799E-01	4.166E-01	6.374E-01	7.492E-02	0.439
		256.20	*	-5.322E-01	7.052E-01	1.120E+00	1.671E-01	-0.475

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		286.10		2.028E-01	2.889E+00	4.780E+00	6.012E-01	0.042
		299.80		1.109E+00	2.848E+00	4.211E+00	7.143E-01	0.263
		304.40		-5.814E+00	3.816E+00	5.496E+00	9.846E-01	-1.058
		334.20		-1.467E+00	5.016E+00	6.978E+00	1.309E+00	-0.210
TH-227		79.80		-1.086E+00	2.035E+00	2.958E+00	6.409E-01	-0.367
	+	94.00		2.204E+00	4.378E+00	5.140E+00	1.120E+00	0.429
		236.00		2.799E-01	4.163E-01	6.374E-01	6.713E-02	0.439
		256.20	*	-5.322E-01	7.070E-01	1.120E+00	1.983E-01	-0.475
		286.10		2.028E-01	2.896E+00	4.780E+00	4.794E+00	0.042
		299.80		1.109E+00	2.848E+00	4.211E+00	7.143E-01	0.263
		304.40		-5.814E+00	3.816E+00	5.496E+00	9.846E-01	-1.058
		334.20		-1.467E+00	5.016E+00	6.978E+00	1.309E+00	-0.210
AC-228	+	338.32		8.105E-01	6.872E-01	8.403E-01	3.441E-01	0.965
	+	911.07	*	1.119E+00	6.640E-01	8.242E-01	8.558E-02	1.358
		969.11		3.385E-01	6.969E-01	1.169E+00	2.671E-01	0.289
RA-228	+	338.32		8.105E-01	6.872E-01	8.403E-01	3.441E-01	0.965
	+	911.07	*	1.119E+00	6.640E-01	8.242E-01	8.558E-02	1.358
		969.11		3.385E-01	6.969E-01	1.169E+00	2.671E-01	0.289
TH-229		85.43		1.240E-01	2.651E-01	4.054E-01	3.254E-02	0.306
	+	88.47		6.441E+00	6.243E-01	6.181E-01	4.911E-02	10.420
		100.00		1.338E-01	2.605E-01	4.371E-01	4.128E-02	0.306
		193.63	*	6.385E-01	8.031E-01	1.405E+00	1.112E-01	0.454
		210.97		1.011E+00	1.263E+00	2.195E+00	1.741E-01	0.460
TH-230	+	609.31	*	9.137E-01	3.434E-01	3.813E-01	3.565E-02	2.397
		768.36		-6.159E-02	1.748E+00	2.927E+00	2.935E-01	-0.021
		934.06		-1.908E+00	3.577E+00	5.710E+00	5.503E-01	-0.334
		1120.29		9.263E-01	7.432E-01	1.299E+00	1.162E-01	0.713
		1238.11		1.158E+00	1.383E+00	2.475E+00	1.980E-01	0.468
		1377.67		1.257E+00	1.540E+00	2.807E+00	2.394E-01	0.448
	+	1764.49		1.007E+00	4.740E-01	9.750E-01	5.537E-02	1.033
PA-231		283.67	*	5.493E-01	2.904E+00	4.835E+00	7.086E-01	0.114
		301.29		1.813E+00	1.142E+00	1.805E+00	2.070E-01	1.005
TH-231		81.07		-1.933E-01	2.815E-01	4.083E-01	3.376E-02	-0.474
		83.78		1.605E-01	1.729E-01	2.694E-01	2.187E-02	0.596
		94.90		2.688E-01	3.307E-01	5.103E-01	4.474E-02	0.527
	+	122.32		2.902E+01	7.119E+00	7.274E+00	9.505E-01	3.990
		144.24		-1.961E-01	1.132E+00	1.811E+00	2.034E-01	-0.108
		154.21		4.169E-01	6.290E-01	1.040E+00	1.045E-01	0.401
		269.46		1.284E-01	3.429E-01	5.776E-01	4.596E-02	0.222
		323.87	*	-3.317E-01	1.276E+00	2.052E+00	3.499E-01	-0.162
	+	338.28		3.385E+00	2.541E+00	3.503E+00	3.929E-01	0.966
		445.03		-3.958E+00	5.197E+00	8.368E+00	8.872E-01	-0.473
U-231		84.21		1.790E+00	2.150E+00	3.336E+00	2.700E-01	0.537
	+	92.29		6.194E-01	1.224E+00	1.471E+00	1.240E-01	0.421
		95.87	*	-1.505E-01	4.337E-01	6.302E-01	5.605E-02	-0.239
		108.00		-4.323E-01	8.168E-01	1.308E+00	1.380E-01	-0.331
TH-232	+	338.32		8.105E-01	6.044E-01	8.403E-01	5.851E-02	0.965
	+	911.07	*	1.119E+00	6.640E-01	8.242E-01	8.558E-02	1.358
		969.11		3.385E-01	6.969E-01	1.169E+00	2.671E-01	0.289

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	+	75.28		1.402E+01	4.678E+00	6.363E+00	9.760E-01	2.203
		86.59		1.862E+01	5.754E+00	5.234E+00	1.393E+00	3.558
		300.12		7.965E-01	7.772E-01	1.192E+00	1.699E-01	0.668
		311.98	*	-1.095E-01	1.243E-01	1.934E-01	1.477E-02	-0.566
		340.50		2.194E+00	1.465E+00	2.169E+00	5.049E-01	1.011
		398.62		-3.030E-01	4.585E+00	7.319E+00	1.894E+00	-0.041
		415.76		-3.314E+00	3.703E+00	5.490E+00	1.135E+00	-0.604
PA-234	+	63.00		2.783E-01	1.434E+00	2.185E+00	3.481E-01	0.127
		94.67		3.934E-01	2.473E-01	3.887E-01	4.853E-02	1.012
		98.44		-8.216E-02	1.522E-01	2.081E-01	1.163E-01	-0.395
		99.86		3.913E-02	6.683E-01	1.102E+00	1.039E-01	0.036
		111.00		-9.222E-02	2.632E-01	4.244E-01	5.887E-02	-0.217
		131.20		-1.883E-02	1.565E-01	2.525E-01	2.965E-02	-0.075
		152.70		-1.173E-01	5.250E-01	8.332E-01	1.455E-01	-0.141
	+	186.00		5.886E+00	3.960E+00	4.285E+00	1.329E+00	1.374
		226.40		4.576E-01	7.322E-01	1.256E+00	1.603E-01	0.364
		227.20		2.239E-01	7.881E-01	1.337E+00	1.059E-01	0.167
		248.90		-3.848E-01	1.505E+00	2.475E+00	5.478E-01	-0.155
		293.70		2.334E+00	1.494E+00	2.293E+00	3.851E-01	1.018
		369.80		-4.431E-01	1.766E+00	2.805E+00	5.888E-01	-0.158
		568.70		-1.551E+00	2.273E+00	3.580E+00	2.672E-01	-0.433
		569.50		6.844E-02	6.109E-01	1.013E+00	7.569E-02	0.068
		574.00		2.031E-01	3.259E+00	5.385E+00	4.043E-01	0.038
		699.00		2.752E-01	1.721E+00	2.811E+00	5.307E-01	0.098
		706.10		7.009E-01	2.506E+00	4.093E+00	1.822E+00	0.171
		733.00		-4.030E-01	9.225E-01	1.432E+00	3.151E-01	-0.281
		742.81		1.291E+00	3.351E+00	5.355E+00	3.597E+00	0.241
		796.30		-1.615E-01	2.174E+00	3.618E+00	9.717E-01	-0.045
		805.60		-2.224E+00	2.641E+00	4.029E+00	1.228E+00	-0.552
		819.60		1.031E+00	2.966E+00	5.020E+00	1.901E+00	0.205
		826.30		5.661E-01	2.008E+00	3.383E+00	1.509E+00	0.167
		831.60		-6.772E-01	1.540E+00	2.470E+00	7.318E-01	-0.274
		876.40		2.927E-01	2.318E+00	3.841E+00	3.946E+00	0.076
		880.51		3.054E-01	7.785E-01	1.321E+00	1.007E-01	0.231
		883.24		-4.675E-01	8.504E-01	1.260E+00	8.453E-01	-0.371
		899.00		1.674E+00	2.613E+00	4.308E+00	1.874E+00	0.389
		925.00		-4.751E-01	3.666E+00	6.002E+00	4.440E-01	-0.079
		926.50		3.015E-01	5.432E-01	9.159E-01	2.279E-01	0.329
		946.00	*	6.785E-01	9.474E-01	1.609E+00	2.928E-01	0.422
		949.00		-3.700E-01	1.395E+00	2.260E+00	1.644E-01	-0.164
		980.50		1.247E-02	2.113E+00	3.469E+00	2.460E-01	0.004
		1394.10		1.700E-01	1.702E+00	2.846E+00	1.844E+00	0.060
PA-234M		766.41		1.013E+01	4.041E+01	6.756E+01	5.176E+01	0.150
		1001.03	*	-1.812E+01	1.836E+01	2.818E+01	2.805E+00	-0.643
U-234	+	609.31	*	9.137E-01	3.434E-01	3.813E-01	3.565E-02	2.397
		768.36		-6.159E-02	1.748E+00	2.927E+00	2.935E-01	-0.021
		934.06		-1.908E+00	3.577E+00	5.710E+00	5.503E-01	-0.334
		1120.29		9.263E-01	7.432E-01	1.299E+00	1.162E-01	0.713
		1238.11		1.158E+00	1.383E+00	2.475E+00	1.980E-01	0.468

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		1.257E+00	1.540E+00	2.807E+00	2.394E-01	0.448
	+	1764.49		1.007E+00	4.740E-01	9.750E-01	5.537E-02	1.033
U-235		89.95		2.707E+01	8.656E+00	4.330E+00	1.331E+00	6.252
	+	93.35		6.856E-01	1.367E+00	1.666E+00	4.667E-01	0.411
		105.00		1.063E+00	1.505E+00	2.498E+00	7.571E-01	0.426
		143.76	*	-9.912E-02	3.508E-01	5.578E-01	1.030E-01	-0.178
		163.35		-6.524E-01	8.143E-01	1.232E+00	2.324E-01	-0.530
	+	185.71		2.180E-01	1.313E-01	1.576E-01	1.244E-02	1.383
		205.31		-2.328E-01	8.764E-01	1.450E+00	2.723E-01	-0.161
NP-236		94.67		3.025E-01	1.859E-01	2.953E-01	2.580E-02	1.024
		98.44		-6.213E-02	1.099E-01	1.573E-01	1.452E-02	-0.395
		111.00		-6.976E-02	1.990E-01	3.210E-01	3.526E-02	-0.217
		160.31	*	1.696E-02	1.249E-01	2.013E-01	1.716E-02	0.084
NP-237		86.50	*	1.973E+00	6.043E-01	7.227E-01	1.599E-01	2.730
		95.87		-4.668E-01	1.349E+00	1.954E+00	4.832E-01	-0.239
NP-239		99.55		-5.903E-02	2.230E-01	3.627E-01	3.403E-02	-0.163
		117.00	*	-1.357E-02	3.076E-01	4.482E-01	5.318E-02	-0.030
		209.75		1.378E+00	1.285E+00	2.253E+00	1.786E-01	0.612
		228.18		1.509E-01	4.104E-01	6.984E-01	5.533E-02	0.216
		277.60		3.099E-02	3.233E-01	5.369E-01	4.134E-02	0.058
		334.30		-1.384E+00	2.868E+00	3.933E+00	2.765E-01	-0.352
CM-243		99.55		-6.071E-02	2.293E-01	3.730E-01	3.500E-02	-0.163
		103.76	*	-1.816E-01	1.407E-01	2.169E-01	2.160E-02	-0.837
		117.00		-1.396E-02	3.163E-01	4.608E-01	5.469E-02	-0.030
		209.75		1.357E+00	1.266E+00	2.219E+00	1.760E-01	0.612
		228.18		1.523E-01	4.145E-01	7.054E-01	5.588E-02	0.216
		277.60		3.123E-02	3.258E-01	5.410E-01	4.166E-02	0.058
CM-247		278.00		2.158E-01	1.341E+00	2.233E+00	1.719E-01	0.097
		287.40		-8.708E-01	2.346E+00	3.794E+00	2.890E-01	-0.230
		402.60	*	-1.640E-02	8.228E-02	1.304E-01	7.766E-03	-0.126
CF-249		252.85		3.097E-02	1.531E+00	2.551E+00	2.002E-01	0.012
		333.44		-2.214E-02	3.781E-01	5.367E-01	3.780E-02	-0.041
		387.95	*	-7.953E-02	8.672E-02	1.318E-01	7.825E-03	-0.604
CF-251		176.60	*	1.160E-01	1.986E-01	3.252E-01	2.558E-02	0.357
		227.00		3.896E-01	6.953E-01	1.192E+00	9.446E-02	0.327
		285.00		1.817E+00	3.281E+00	5.555E+00	4.244E-01	0.327

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834      *
* Acquisition date : 14-JUL-2009 12:33:44 Detector SN#    :                 *
* Detector ID       : GAM13                Sensitivity     : 5.000          *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 01:00:01.74      Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       :  7-JUL-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201874834          Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.5544E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	4.118E-01	9.806E-02	6.721E-02	0.000E+00
CO-60	6.848E+00	5.172E-01	9.409E-02	0.000E+00
CD-109	4.745E+01	4.508E+00	1.930E+00	0.000E+00
SN-126	4.718E+00	4.481E-01	1.917E-01	0.000E+00
BA-137M	5.687E+00	5.338E-01	1.388E-01	0.000E+00
CS-137	6.012E+00	5.652E-01	1.467E-01	0.000E+00
TL-208	2.333E-01	1.200E-01	1.443E-01	0.000E+00
BI-211	2.377E+00	6.817E-01	6.746E-01	0.000E+00
PB-212	8.114E-01	2.373E-01	1.851E-01	0.000E+00
PO-212	8.114E-01	2.373E-01	1.851E-01	0.000E+00
PB-214	8.268E-01	2.409E-01	2.563E-01	0.000E+00
PO-214	8.268E-01	2.409E-01	2.563E-01	0.000E+00
PO-216	8.114E-01	2.373E-01	1.851E-01	0.000E+00
PO-218	8.268E-01	2.409E-01	2.563E-01	0.000E+00
RA-224	8.651E-01	1.282E+00	2.612E+00	0.000E+00
TH-228	8.114E-01	2.373E-01	1.851E-01	0.000E+00
TH-234	2.387E-01	1.205E+00	1.655E+00	0.000E+00
U-238	2.387E-01	1.205E+00	1.655E+00	0.000E+00
AM-241	1.366E+01	1.418E+00	2.687E-01	0.000E+00
AM-243	2.676E-01	8.095E-02	1.027E-01	0.000E+00
ANH-511	1.742E-01	1.202E-01	1.075E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-1.094E+00	6.857E-01	1.107E+00	0.000E+00	NOT IDENT.
NA-22	-6.454E-02	6.237E-02	9.224E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.357E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	4.048E-02	4.884E-02	9.609E-02	0.000E+00	NOT IDENT.
K-40	8.487E-01	7.086E-01	1.261E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.144E-02	8.929E-02	0.000E+00	FAIL ABUN

SC-46	3.071E-02	9.950E-02	1.751E-01	0.000E+00	NOT IDENT.
V-48	1.313E-01	1.413E-01	2.547E-01	0.000E+00	NOT IDENT.
CR-51	4.273E-01	5.721E-01	1.041E+00	0.000E+00	NOT IDENT.
MN-52	-4.232E-02	1.378E-01	2.213E-01	0.000E+00	FAIL ABUN
MN-54	2.164E-02	8.338E-02	1.475E-01	0.000E+00	NOT IDENT.
CO-56	-2.815E-02	9.506E-02	1.621E-01	0.000E+00	FAIL ABUN
CO-58	2.024E-02	8.575E-02	1.520E-01	0.000E+00	NOT IDENT.
FE-59	-1.190E-02	2.234E-01	3.748E-01	0.000E+00	NOT IDENT.
ZN-65	-1.820E-01	2.317E-01	3.681E-01	0.000E+00	NOT IDENT.
GE-68	-3.425E-01	3.342E+00	5.601E+00	0.000E+00	NOT IDENT.
AS-73	-1.476E-01	6.241E-01	1.070E+00	0.000E+00	NOT IDENT.
AS-74	9.234E-02	1.435E-01	2.583E-01	0.000E+00	NOT IDENT.
SE-75	-1.751E-03	7.638E-02	1.364E-01	0.000E+00	FAIL ABUN
BR-77	-6.629E-02	2.456E+00	4.309E+00	0.000E+00	FAIL ABUN
SR-82	-3.721E-01	7.802E-01	1.331E+00	0.000E+00	NOT IDENT.
RB-83	-3.598E-02	1.408E-01	2.437E-01	0.000E+00	NOT IDENT.
RB-84	4.753E-02	1.601E-01	2.819E-01	0.000E+00	NOT IDENT.
KR-85	2.638E+01	1.686E+01	2.869E+01	0.000E+00	NOT IDENT.
SR-85	1.248E-01	7.980E-02	1.358E-01	0.000E+00	NOT IDENT.
RB-86	-6.828E-01	1.654E+00	2.713E+00	0.000E+00	NOT IDENT.
Y-88	6.542E-02	5.231E-02	1.092E-01	0.000E+00	NOT IDENT.
ZR-88	-3.649E-03	6.365E-02	1.080E-01	0.000E+00	NOT IDENT.
Y-91	-1.523E+01	2.486E+01	4.012E+01	0.000E+00	NOT IDENT.
NB-94	-7.769E-02	8.090E-02	1.281E-01	0.000E+00	NOT IDENT.
NB-95	2.157E-03	8.898E-02	1.567E-01	0.000E+00	NOT IDENT.
NB-95M	9.631E-02	2.013E-01	3.297E-01	0.000E+00	NOT IDENT.
ZR-95	8.311E-02	1.540E-01	2.687E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.485E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.279E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	6.274E-01	3.937E+00	6.716E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.240E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.635E-02	5.175E-02	9.131E-02	0.000E+00	NOT IDENT.
RH-102	1.353E-02	6.690E-02	1.199E-01	0.000E+00	NOT IDENT.
RU-103	2.705E-02	7.710E-02	1.387E-01	0.000E+00	FAIL ABUN
RH-106	-3.975E-01	6.565E-01	1.078E+00	0.000E+00	FAIL ABUN
RU-106	-3.975E-01	6.553E-01	1.078E+00	0.000E+00	FAIL ABUN
AG-108M	1.746E-02	7.655E-02	1.386E-01	0.000E+00	NOT IDENT.
AG-110M	4.341E-02	9.336E-02	1.436E-01	0.000E+00	NOT IDENT.
IN-111	1.475E-01	3.302E-01	5.373E-01	0.000E+00	NOT IDENT.
IN-113M	8.723E-02	9.143E-02	1.647E-01	0.000E+00	NOT IDENT.
SN-113	8.723E-02	9.143E-02	1.647E-01	0.000E+00	NOT IDENT.
IN-114M	-1.099E-01	3.003E-01	4.458E-01	0.000E+00	NOT IDENT.
CD-115	2.723E-01	2.147E+00	3.795E+00	0.000E+00	NOT IDENT.
SN-117M	5.098E-03	5.662E-02	9.916E-02	0.000E+00	NOT IDENT.
SB-122	4.838E-01	6.436E-01	1.169E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.686E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-4.790E-05	4.159E-02	7.249E-02	0.000E+00	NOT IDENT.
I-124	-2.230E-01	4.603E-01	6.565E-01	0.000E+00	NOT IDENT.
SB-124	8.675E-02	1.139E-01	2.165E-01	0.000E+00	NOT IDENT.
SB-125	2.181E-02	2.082E-01	3.756E-01	0.000E+00	NOT IDENT.
TE-125M	4.579E+00	1.152E+01	2.120E+01	0.000E+00	NOT IDENT.
I-126	-3.370E-03	3.204E-01	4.720E-01	0.000E+00	NOT IDENT.
SB-126	-7.722E-02	2.063E-01	3.392E-01	0.000E+00	FAIL ABUN
SB-127	1.260E-01	7.874E-01	1.355E+00	0.000E+00	FAIL ABUN
XE-127	-2.413E-02	6.632E-02	1.198E-01	0.000E+00	NOT IDENT.
I-131	-8.885E-02	1.158E-01	1.905E-01	0.000E+00	NOT IDENT.
TE-132	8.843E-02	2.439E-01	4.484E-01	0.000E+00	FAIL ABUN
BA-133	4.935E-02	9.868E-02	1.562E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.889E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.051E-02	1.070E-01	1.905E-01	0.000E+00	NOT IDENT.
CS-135	-1.519E-01	2.854E-01	4.965E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.022E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.205E-02	1.933E-01	3.287E-01	0.000E+00	NOT IDENT.
CE-139	1.555E-02	4.817E-02	8.511E-02	0.000E+00	NOT IDENT.
BA-140	8.597E-02	3.789E-01	6.705E-01	0.000E+00	NOT IDENT.
LA-140	2.804E-02	9.700E-02	1.693E-01	0.000E+00	NOT IDENT.
CE-141	1.424E-02	8.648E-02	1.536E-01	0.000E+00	NOT IDENT.
CE-143	4.962E+00	5.907E+00	9.530E+00	0.000E+00	NOT IDENT.
CE-144	-3.045E-01	3.043E-01	5.066E-01	0.000E+00	NOT IDENT.
PM-144	8.487E-02	7.965E-02	1.440E-01	0.000E+00	NOT IDENT.
PR-144	5.728E+00	5.375E+00	9.720E+00	0.000E+00	NOT IDENT.
PM-146	2.190E-02	1.029E-01	1.853E-01	0.000E+00	NOT IDENT.
ND-147	-8.500E-01	7.326E-01	1.171E+00	0.000E+00	NOT IDENT.
PM-149	2.236E+00	1.559E+01	2.784E+01	0.000E+00	NOT IDENT.
EU-152	3.026E-02	2.061E-01	3.345E-01	0.000E+00	FAIL ABUN
GD-153	-1.723E-02	1.125E-01	1.826E-01	0.000E+00	NOT IDENT.
EU-154	-1.895E-01	1.743E-01	2.543E-01	0.000E+00	FAIL ABUN
EU-155	8.958E-02	1.462E-01	2.721E-01	0.000E+00	FAIL ABUN

TB-160	2.097E-01	3.422E-01	6.138E-01	0.000E+00	NOT IDENT.
HO-166M	-5.154E-02	1.429E-01	2.361E-01	0.000E+00	NOT IDENT.
TM-171	2.271E+00	2.553E+01	4.345E+01	0.000E+00	FAIL ABUN
LU-176	3.521E-02	4.574E-02	8.360E-02	0.000E+00	FAIL ABUN
LU-177	-3.542E-01	8.114E-01	1.458E+00	0.000E+00	NOT IDENT.
LU-177M	-1.966E-01	3.790E-01	6.263E-01	0.000E+00	FAIL ABUN
HF-181	6.145E-02	8.514E-02	1.563E-01	0.000E+00	NOT IDENT.
W-181	4.039E-02	3.112E-01	5.314E-01	0.000E+00	NOT IDENT.
TA-182	1.161E-01	2.763E-01	4.970E-01	0.000E+00	NOT IDENT.
RE-183	-6.246E-02	1.627E-01	2.775E-01	0.000E+00	FAIL ABUN
RE-184	8.001E-03	3.876E-01	6.968E-01	0.000E+00	FAIL ABUN
OS-185	-5.014E-03	9.082E-02	1.551E-01	0.000E+00	FAIL ABUN
RE-188	7.196E-02	2.464E-01	4.377E-01	0.000E+00	NOT IDENT.
W-188	9.208E-01	1.387E+01	2.164E+01	0.000E+00	FAIL ABUN
IR-192	1.431E-02	6.026E-02	1.071E-01	0.000E+00	FAIL ABUN
AU-195	-1.089E-01	3.181E-01	5.437E-01	0.000E+00	FAIL ABUN
TL-200	-1.486E+00	7.040E+00	1.200E+01	0.000E+00	NOT IDENT.
TL-201	1.850E+00	2.070E+00	3.744E+00	0.000E+00	NOT IDENT.
TL-202	6.004E-02	1.025E-01	1.884E-01	0.000E+00	NOT IDENT.
HG-203	4.059E-02	6.504E-02	1.189E-01	0.000E+00	NOT IDENT.
BI-207	5.817E-03	1.388E-01	2.354E-01	0.000E+00	FAIL ABUN
TL-207	-3.317E-01	1.250E+00	2.156E+00	0.000E+00	FAIL ABUN
PO-209	4.631E+00	2.161E+01	3.776E+01	0.000E+00	NOT IDENT.
BI-210	1.595E+00	1.169E+00	2.019E+00	0.000E+00	NOT IDENT.
PB-210	1.595E+00	1.169E+00	2.019E+00	0.000E+00	NOT IDENT.
PO-210	1.595E+00	1.167E+00	2.019E+00	0.000E+00	NOT IDENT.
PB-211	2.507E-01	2.014E+00	3.454E+00	0.000E+00	NOT IDENT.
BI-212	4.623E-01	6.951E-01	1.223E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	3.365E-01	3.939E-01	0.000E+00	FAIL ABUN
PO-215	-3.317E-01	1.250E+00	2.156E+00	0.000E+00	FAIL ABUN
RN-219	-1.690E-01	8.996E-01	1.521E+00	0.000E+00	NOT IDENT.
RN-220	-5.533E+01	5.713E+01	9.345E+01	0.000E+00	NOT IDENT.
RA-223	-3.317E-01	1.250E+00	2.156E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	3.365E-01	3.939E-01	0.000E+00	FAIL ABUN
AC-227	-5.322E-01	6.911E-01	1.184E+00	0.000E+00	NOT IDENT.
TH-227	-5.322E-01	6.929E-01	1.184E+00	0.000E+00	FAIL ABUN
AC-228	0.000E+00	6.507E-01	8.422E-01	0.000E+00	FAIL ABUN
RA-228	0.000E+00	6.507E-01	8.422E-01	0.000E+00	FAIL ABUN
TH-229	6.385E-01	7.871E-01	1.496E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	3.365E-01	3.939E-01	0.000E+00	FAIL ABUN
PA-231	5.493E-01	2.846E+00	5.097E+00	0.000E+00	NOT IDENT.
TH-231	-3.317E-01	1.250E+00	2.156E+00	0.000E+00	FAIL ABUN
U-231	-1.505E-01	4.250E-01	6.828E-01	0.000E+00	FAIL ABUN
TH-232	0.000E+00	6.507E-01	8.422E-01	0.000E+00	FAIL ABUN
PA-233	-1.095E-01	1.218E-01	2.034E-01	0.000E+00	FAIL ABUN
PA-234	6.785E-01	9.285E-01	1.643E+00	0.000E+00	FAIL ABUN
PA-234M	-1.812E+01	1.799E+01	2.872E+01	0.000E+00	NOT IDENT.
U-234	0.000E+00	3.365E-01	3.939E-01	0.000E+00	FAIL ABUN
U-235	-9.912E-02	3.438E-01	5.983E-01	0.000E+00	FAIL ABUN
NP-236	1.696E-02	1.224E-01	2.153E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	5.922E-01	7.850E-01	0.000E+00	NOT IDENT.
NP-239	-1.357E-02	3.015E-01	4.832E-01	0.000E+00	NOT IDENT.
CM-243	-1.816E-01	1.379E-01	2.345E-01	0.000E+00	NOT IDENT.
CM-247	-1.640E-02	8.064E-02	1.362E-01	0.000E+00	NOT IDENT.
CF-249	-7.953E-02	8.499E-02	1.378E-01	0.000E+00	NOT IDENT.
CF-251	1.160E-01	1.946E-01	3.470E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:34:15.90

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834.CNF;1
Sample date       : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 12:33:44
Sample ID         : G1201874834          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.74  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	479	85.51*	6.693E+00	4.039E-01	4.118E-01	24.30
	136.48	------	10.60	6.430E+00	------ Line Not Found		------
CO-60	1173.22	1786	100.00	1.239E+00	6.963E+00	6.982E+00	7.43
	1332.49	1582	100.00*	1.119E+00	6.829E+00	6.848E+00	7.71
CD-109	88.03	2614	3.72*	7.233E+00	4.692E+01	4.745E+01	9.69
SN-126	64.28	14	9.60	7.391E+00	9.450E-02	9.450E-02	515.12
	86.94	2614	8.90	7.233E+00	1.961E+01	1.961E+01	41.59
	87.57	2614	37.00*	7.233E+00	4.718E+00	4.718E+00	9.69
BA-137M	661.65	2136	89.98*	2.017E+00	5.684E+00	5.687E+00	9.58
CS-137	661.65	2136	85.12*	2.017E+00	6.009E+00	6.012E+00	9.59
TL-208	277.35	------	6.80	4.225E+00	------ Line Not Found		------
	510.84	91	21.60	2.535E+00	8.065E-01	8.065E-01	70.87
	583.14	92	84.20*	2.255E+00	2.333E-01	2.333E-01	52.50
	860.37	------	12.46	1.606E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	7.369E+00	------ Line Not Found		------
	351.07	222	12.94*	3.493E+00	2.377E+00	2.377E+00	29.27
PB-212	74.81	269	10.70	7.356E+00	1.651E+00	1.651E+00	32.25
	77.11	450	18.00	7.341E+00	1.644E+00	1.644E+00	20.68
	87.30	2614	8.00	7.233E+00	2.182E+01	2.182E+01	13.93
	238.63	353	44.60*	4.711E+00	8.114E-01	8.114E-01	29.84
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PO-212	74.81	269	10.70	7.356E+00	1.651E+00	1.651E+00	32.25
	77.11	450	18.00	7.341E+00	1.644E+00	1.644E+00	20.68
	87.30	2614	8.00	7.233E+00	2.182E+01	2.182E+01	13.93
	115.19	------	0.60	6.822E+00	------ Line Not Found		------
	238.63	353	44.60*	4.711E+00	8.114E-01	8.114E-01	29.84
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PB-214	74.81	269	6.21	7.356E+00	2.844E+00	2.844E+00	31.74
	77.11	450	10.50	7.341E+00	2.818E+00	2.818E+00	22.03
	87.30	2614	4.67	7.233E+00	3.738E+01	3.738E+01	12.38
	241.98	33	7.49	4.671E+00	4.562E-01	4.562E-01	151.28
	295.21	178	19.20	4.021E+00	1.111E+00	1.111E+00	39.27

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	222	37.20*	3.493E+00	8.268E-01	8.268E-01	29.73
PO-214	74.81	269	6.21	7.356E+00	2.844E+00	2.844E+00	31.74
	77.11	450	10.50	7.341E+00	2.818E+00	2.818E+00	22.03
	87.30	2614	4.67	7.233E+00	3.738E+01	3.738E+01	12.38
	241.98	33	7.49	4.671E+00	4.562E-01	4.562E-01	151.28
	295.21	178	19.20	4.021E+00	1.111E+00	1.111E+00	39.27
	351.92	222	37.20*	3.493E+00	8.268E-01	8.268E-01	29.73
PO-216	74.81	269	10.70	7.356E+00	1.651E+00	1.651E+00	32.25
	77.11	450	18.00	7.341E+00	1.644E+00	1.644E+00	20.68
	87.30	2614	8.00	7.233E+00	2.182E+01	2.182E+01	13.93
	238.63	353	44.60*	4.711E+00	8.114E-01	8.114E-01	29.84
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PO-218	74.81	269	6.21	7.356E+00	2.844E+00	2.844E+00	31.74
	77.11	450	10.50	7.341E+00	2.818E+00	2.818E+00	22.03
	87.30	2614	4.67	7.233E+00	3.738E+01	3.738E+01	12.38
	241.98	33	7.49	4.671E+00	4.562E-01	4.562E-01	151.28
	295.21	178	19.20	4.021E+00	1.111E+00	1.111E+00	39.27
	351.92	222	37.20*	3.493E+00	8.268E-01	8.268E-01	29.73
RA-224	240.98	33	3.95*	4.671E+00	8.651E-01	8.651E-01	151.18
TH-228	84.40	------	1.21	7.278E+00	------ Line Not Found		------
	238.60	353	44.60*	4.711E+00	8.114E-01	8.114E-01	29.84
	300.10	------	3.41	3.976E+00	------ Line Not Found		------
TH-234	63.29	14	3.80*	7.391E+00	2.387E-01	2.387E-01	515.21
	92.38	46	5.41	7.174E+00	5.703E-01	5.703E-01	198.27
U-238	63.29	14	3.80*	7.391E+00	2.387E-01	2.387E-01	515.21
	92.38	46	5.41	7.174E+00	5.703E-01	5.703E-01	197.63
AM-241	59.54	7500	35.90*	7.385E+00	1.366E+01	1.366E+01	10.59
AM-243	74.67	269	66.00*	7.356E+00	2.676E-01	2.676E-01	30.86
	86.72	------	0.34	7.252E+00	------ Line Not Found		------
	117.66	------	0.55	6.778E+00	------ Line Not Found		------
	142.18	------	0.13	6.323E+00	------ Line Not Found		------
ANH-511	511.00	91	100.00*	2.535E+00	1.742E-01	1.742E-01	70.38

Flag: "*" = Keyline

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

Total number of lines in spectrum 23
Number of unidentified lines 1
Number of lines tentatively identified by NID 22 95.65%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	4.039E-01	4.118E-01	1.001E-01	24.30	
CO-60	5.27Y	1.00	6.829E+00	6.848E+00	0.528E+00	7.71	
CD-109	464.00D	1.01	4.692E+01	4.745E+01	0.460E+01	9.69	
SN-126	1.00E+05Y	1.00	4.718E+00	4.718E+00	0.457E+00	9.69	
BA-137M	30.17Y	1.00	5.684E+00	5.687E+00	0.545E+00	9.58	
CS-137	30.17Y	1.00	6.009E+00	6.012E+00	0.577E+00	9.59	
TL-208	1.41E+10Y	1.00	2.333E-01	2.333E-01	1.225E-01	52.50	
BI-211	7.04E+08Y	1.00	2.377E+00	2.377E+00	0.696E+00	29.27	
PB-212	1.41E+10Y	1.00	8.114E-01	8.114E-01	2.421E-01	29.84	
PO-212	1.41E+10Y	1.00	8.114E-01	8.114E-01	2.421E-01	29.84	
PB-214	1600.00Y	1.00	8.268E-01	8.268E-01	2.458E-01	29.73	
PO-214	1600.00Y	1.00	8.268E-01	8.268E-01	2.458E-01	29.73	
PO-216	1.41E+10Y	1.00	8.114E-01	8.114E-01	2.421E-01	29.84	
PO-218	1600.00Y	1.00	8.268E-01	8.268E-01	2.458E-01	29.73	
RA-224	1.41E+10Y	1.00	8.651E-01	8.651E-01	13.08E-01	151.18	
TH-228	1.41E+10Y	1.00	8.114E-01	8.114E-01	2.421E-01	29.84	
TH-234	4.47E+09Y	1.00	2.387E-01	2.387E-01	12.30E-01	515.21	
U-238	4.47E+09Y	1.00	2.387E-01	2.387E-01	12.30E-01	515.21	
AM-241	432.20Y	1.00	1.366E+01	1.366E+01	0.145E+01	10.59	
AM-243	7380.00Y	1.00	2.676E-01	2.676E-01	0.826E-01	30.86	
ANH-511	1.00E+09Y	1.00	1.742E-01	1.742E-01	1.226E-01	70.38	
	Total Activity :		9.435E+01	9.491E+01			

Grand Total Activity : 9.435E+01 9.491E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	49.99	197	1256	1.62	99.75	96	8	5.48E-02	63.6	7.33E+00	T
0	186.26	135	363	1.02	372.34	367	11	3.74E-02	59.7	5.52E+00	T
0	338.47	69	178	0.91	676.86	673	9	1.92E-02	74.2	3.61E+00	T
0	610.12	190	177	1.77	1220.31	1212	18	5.27E-02	36.4	2.17E+00	T
0	910.94	98	159	0.88	1822.17	1816	14	2.73E-02	58.4	1.53E+00	T
0	1462.74	36	9	1.78	2926.26	2916	19	9.97E-03	52.9	1.04E+00	
0	1765.42	30	3	2.63	3531.94	3525	12	8.22E-03	46.7	8.98E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:34:21.43

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834.CNF;1  *
* Acquisition date  : 14-JUL-2009 12:33:44  Detector SN#     :              *
* Detector ID       : GAM13                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 01:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 01:00:01.74          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 7-JUL-2009 00:00:00.  Nuclide Library : SOLID        *
* Sample ID         : G1201874834           Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.55440E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 2-FEB-2009 10:41:22.03MS Isotope      :                *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1023-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	4.118E-01	1.001E-01	6.241E-02	7.893E-03	6.598
CO-60	6.848E+00	5.277E-01	9.305E-02	5.293E-03	73.592
CD-109	4.745E+01	4.600E+00	1.778E+00	1.403E-01	26.693
SN-126	4.718E+00	4.573E-01	1.765E-01	1.396E-02	26.729
BA-137M	5.687E+00	5.447E-01	1.346E-01	1.098E-02	42.249
CS-137	6.012E+00	5.767E-01	1.423E-01	1.163E-02	42.249
TL-208	2.333E-01	1.225E-01	1.395E-01	1.154E-02	1.673
BI-211	2.377E+00	6.956E-01	6.435E-01	4.690E-02	3.694
PB-212	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
PO-212	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
PB-214	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
PO-214	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
PO-216	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
PO-218	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
RA-224	8.651E-01	1.308E+00	2.467E+00	1.947E-01	0.351
TH-228	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.642
TH-234	2.387E-01	1.230E+00	1.512E+00	2.774E-01	0.158
U-238	2.387E-01	1.230E+00	1.512E+00	2.774E-01	0.158

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-241	1.366E+01	1.447E+00	2.452E-01	2.493E-02	55.724
AM-243	2.676E-01	8.260E-02	9.419E-02	8.136E-03	2.841
ANH-511	1.742E-01	1.226E-01	1.036E-01	7.228E-03	1.682

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.094E+00		6.997E-01	1.064E+00	8.000E-02	-1.028
NA-22	-6.454E-02		6.364E-02	9.111E-02	5.142E-03	-0.708
NA-24	-4.946E-05		1.203E-04	Half-Life too short		
AL-26	4.048E-02		4.984E-02	9.586E-02	5.409E-03	0.422
K-40	8.487E-01		7.231E-01	1.250E+00	7.643E-02	0.679
TI-44	3.032E-01	+	6.269E-02	8.201E-02	6.907E-03	3.697
SC-46	3.071E-02		1.015E-01	1.712E-01	1.297E-02	0.179
V-48	1.313E-01		1.442E-01	2.498E-01	1.767E-02	0.526
CR-51	4.273E-01		5.837E-01	9.903E-01	7.707E-02	0.431
MN-52	-4.232E-02		1.406E-01	2.193E-01	1.260E-02	-0.193
MN-54	2.164E-02		8.508E-02	1.440E-01	1.130E-02	0.150
CO-56	-2.815E-02		9.700E-02	1.583E-01	1.234E-02	-0.178
CO-58	2.024E-02		8.750E-02	1.483E-01	1.181E-02	0.136
FE-59	-1.190E-02		2.280E-01	3.687E-01	2.634E-02	-0.032
ZN-65	-1.820E-01		2.365E-01	3.623E-01	2.199E-02	-0.502
GE-68	-3.425E-01		3.410E+00	5.506E+00	3.519E-01	-0.062
AS-73	-1.476E-01		6.369E-01	9.739E-01	8.227E-02	-0.152
AS-74	9.234E-02		1.464E-01	2.499E-01	1.919E-02	0.370
SE-75	-1.751E-03		7.793E-02	1.291E-01	1.012E-02	-0.014
BR-77	-6.629E-02		2.506E+00	4.153E+00	2.934E-01	-0.016
SR-82	-3.721E-01		7.961E-01	1.296E+00	1.043E-01	-0.287
RB-83	-3.598E-02		1.437E-01	2.349E-01	1.658E-02	-0.153
RB-84	4.753E-02		1.634E-01	2.756E-01	2.099E-02	0.172
KR-85	2.638E+01		1.720E+01	2.764E+01	1.936E+00	0.954
SR-85	1.248E-01		8.143E-02	1.308E-01	9.164E-03	0.954
RB-86	-6.828E-01		1.688E+00	2.667E+00	1.706E-01	-0.256
Y-88	6.542E-02		5.338E-02	1.089E-01	6.135E-03	0.601
ZR-88	-3.649E-03		6.494E-02	1.033E-01	6.053E-03	-0.035
Y-91	-1.523E+01		2.537E+01	3.957E+01	2.193E+00	-0.385
NB-94	-7.769E-02		8.255E-02	1.245E-01	1.016E-02	-0.624
NB-95	2.157E-03		9.080E-02	1.526E-01	1.232E-02	0.014
NB-95M	9.631E-02		2.054E-01	3.113E-01	2.879E-02	0.309
ZR-95	8.311E-02		1.571E-01	2.616E-01	2.360E-02	0.318
NB-97	1.179E-04		7.578E-05	Half-Life too short		
ZR-97	1.020E-03		1.163E-03	Half-Life too short		
MO-99	6.274E-01		4.018E+00	6.535E+00	9.743E-01	0.096
TC-99M	5.782E+00		2.163E+01	Half-Life too short		
RH-101	-3.635E-02		5.281E-02	8.582E-02	6.795E-03	-0.424
RH-102	1.353E-02		6.826E-02	1.153E-01	7.673E-03	0.117
RU-103	2.705E-02		7.868E-02	1.335E-01	1.757E-02	0.203

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-106	-3.975E-01		6.699E-01	1.044E+00	1.345E-01	-0.381
RU-106	-3.975E-01		6.687E-01	1.044E+00	8.219E-02	-0.381
AG-108M	1.746E-02		7.811E-02	1.330E-01	8.944E-03	0.131
AG-110M	4.341E-02		9.526E-02	1.393E-01	1.170E-02	0.312
IN-111	1.475E-01		3.369E-01	5.078E-01	4.001E-02	0.290
IN-113M	8.723E-02		9.330E-02	1.575E-01	9.813E-03	0.554
SN-113	8.723E-02		9.330E-02	1.575E-01	9.813E-03	0.554
IN-114M	-1.099E-01		3.065E-01	4.185E-01	3.308E-02	-0.262
CD-115	2.723E-01		2.191E+00	3.659E+00	2.608E-01	0.074
SN-117M	5.098E-03		5.777E-02	9.267E-02	8.092E-03	0.055
SB-122	4.838E-01		6.568E-01	1.129E+00	8.385E-02	0.429
I-123	-6.549E-07		2.901E-04	Half-Life too short		
TE-123M	-4.790E-05		4.244E-02	6.775E-02	5.916E-03	-0.001
I-124	-2.230E-01		4.697E-01	6.352E-01	4.911E-02	-0.351
SB-124	8.675E-02		1.163E-01	2.156E-01	1.343E-02	0.402
SB-125	2.181E-02		2.125E-01	3.601E-01	2.317E-02	0.061
TE-125M	4.579E+00		1.175E+01	1.963E+01	2.382E+00	0.233
I-126	-3.370E-03		3.269E-01	4.579E-01	3.736E-02	-0.007
SB-126	-7.722E-02		2.106E-01	3.298E-01	2.688E-02	-0.234
SB-127	1.260E-01		8.035E-01	1.316E+00	1.207E-01	0.096
XE-127	-2.413E-02		6.767E-02	1.127E-01	8.930E-03	-0.214
I-131	-8.885E-02		1.182E-01	1.819E-01	1.279E-02	-0.489
TE-132	8.843E-02		2.489E-01	4.230E-01	6.022E-02	0.209
BA-133	4.935E-02		1.007E-01	1.491E-01	1.790E-02	0.331
I-133	-3.525E-05		1.474E-05	Half-Life too short		
CS-134	3.051E-02		1.092E-01	1.857E-01	1.497E-02	0.164
CS-135	-1.519E-01		2.913E-01	4.703E-01	4.344E-02	-0.323
I-135	-2.825E+01		2.052E+01	Half-Life too short		
CS-136	1.205E-02		1.972E-01	3.229E-01	2.288E-02	0.037
CE-139	1.555E-02		4.916E-02	7.963E-02	6.243E-03	0.195
BA-140	8.597E-02		3.866E-01	6.468E-01	2.121E-01	0.133
LA-140	2.804E-02		9.898E-02	1.683E-01	9.699E-03	0.167
CE-141	1.424E-02		8.824E-02	1.432E-01	1.486E-02	0.099
CE-143	4.962E+00		6.027E+00	9.047E+00	1.901E+00	0.548
CE-144	-3.045E-01		3.105E-01	4.714E-01	8.170E-02	-0.646
PM-144	8.487E-02		8.127E-02	1.399E-01	1.142E-02	0.607
PR-144	5.728E+00		5.485E+00	9.442E+00	7.709E-01	0.607
PM-146	2.190E-02		1.050E-01	1.779E-01	1.615E-02	0.123
ND-147	-8.500E-01		7.475E-01	1.129E+00	1.598E-01	-0.753
PM-149	2.236E+00		1.591E+01	2.641E+01	3.961E+00	0.085
EU-152	3.026E-02		2.103E-01	3.189E-01	2.391E-02	0.095
GD-153	-1.723E-02		1.148E-01	1.686E-01	1.534E-02	-0.102
EU-154	-1.895E-01		1.779E-01	2.512E-01	2.321E-02	-0.754
EU-155	8.958E-02		1.492E-01	2.517E-01	2.583E-02	0.356
TB-160	2.097E-01		3.492E-01	6.001E-01	4.578E-02	0.349
HO-166M	-5.154E-02		1.459E-01	2.295E-01	1.872E-02	-0.225
TM-171	2.271E+00		2.605E+01	3.975E+01	3.627E+00	0.057
LU-176	3.521E-02		4.668E-02	7.946E-02	5.891E-03	0.443

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	-3.542E-01		8.280E-01	1.372E+00	1.088E-01	-0.258
LU-177M	-1.966E-01		3.867E-01	6.000E-01	3.639E-02	-0.328
HF-181	6.145E-02		8.688E-02	1.503E-01	1.010E-02	0.409
W-181	4.039E-02		3.175E-01	4.859E-01	4.482E-02	0.083
TA-182	1.161E-01		2.820E-01	4.903E-01	2.729E-02	0.237
RE-183	-6.246E-02		1.661E-01	2.595E-01	2.148E-02	-0.241
RE-184	8.001E-03		3.955E-01	6.589E-01	5.173E-02	0.012
OS-185	-5.014E-03		9.267E-02	1.504E-01	1.210E-02	-0.033
RE-188	7.196E-02		2.514E-01	4.088E-01	3.741E-02	0.176
W-188	9.208E-01		1.415E+01	2.054E+01	1.559E+00	0.045
IR-192	1.431E-02		6.148E-02	1.018E-01	7.448E-03	0.141
AU-195	-1.089E-01		3.246E-01	5.022E-01	4.667E-02	-0.217
TL-200	-1.486E+00		7.184E+00	1.146E+01	7.334E-01	-0.130
TL-201	1.850E+00		2.113E+00	3.504E+00	2.746E-01	0.528
TL-202	6.004E-02		1.046E-01	1.808E-01	1.142E-02	0.332
HG-203	4.059E-02		6.637E-02	1.128E-01	8.978E-03	0.360
BI-207	5.817E-03		1.417E-01	2.313E-01	1.504E-02	0.025
TL-207	-3.317E-01		1.276E+00	2.052E+00	3.499E-01	-0.162
PO-209	4.631E+00		2.206E+01	3.693E+01	2.781E+00	0.125
BI-210	1.595E+00		1.193E+00	1.832E+00	1.493E-01	0.871
PB-210	1.595E+00		1.193E+00	1.832E+00	1.493E-01	0.871
PO-210	1.595E+00		1.191E+00	1.832E+00	1.306E-01	0.871
PB-211	2.507E-01		2.055E+00	3.306E+00	2.062E+00	0.076
BI-212	4.623E-01		7.093E-01	1.189E+00	1.142E-01	0.389
BI-214	9.137E-01	+	3.434E-01	3.813E-01	3.565E-02	2.397
PO-215	-3.317E-01		1.276E+00	2.052E+00	3.499E-01	-0.162
RN-219	-1.690E-01		9.180E-01	1.456E+00	1.990E-01	-0.116
RN-220	-5.533E+01		5.830E+01	9.020E+01	6.594E+00	-0.613
RA-223	-3.317E-01		1.276E+00	2.052E+00	3.499E-01	-0.162
RA-226	9.137E-01	+	3.434E-01	3.813E-01	3.565E-02	2.397
AC-227	-5.322E-01		7.052E-01	1.120E+00	1.671E-01	-0.475
TH-227	-5.322E-01		7.070E-01	1.120E+00	1.983E-01	-0.475
AC-228	1.119E+00	+	6.640E-01	8.242E-01	8.558E-02	1.358
RA-228	1.119E+00	+	6.640E-01	8.242E-01	8.558E-02	1.358
TH-229	6.385E-01		8.031E-01	1.405E+00	1.112E-01	0.454
TH-230	9.137E-01	+	3.434E-01	3.813E-01	3.565E-02	2.397
PA-231	5.493E-01		2.904E+00	4.835E+00	7.086E-01	0.114
TH-231	-3.317E-01		1.276E+00	2.052E+00	3.499E-01	-0.162
U-231	-1.505E-01		4.337E-01	6.302E-01	5.605E-02	-0.239
TH-232	1.119E+00	+	6.640E-01	8.242E-01	8.558E-02	1.358
PA-233	-1.095E-01		1.243E-01	1.934E-01	1.477E-02	-0.566
PA-234	6.785E-01		9.474E-01	1.609E+00	2.928E-01	0.422
PA-234M	-1.812E+01		1.836E+01	2.818E+01	2.805E+00	-0.643
U-234	9.137E-01	+	3.434E-01	3.813E-01	3.565E-02	2.397
U-235	-9.912E-02		3.508E-01	5.578E-01	1.030E-01	-0.178
NP-236	1.696E-02		1.249E-01	2.013E-01	1.716E-02	0.084
NP-237	1.973E+00		6.043E-01	7.227E-01	1.599E-01	2.730
NP-239	-1.357E-02		3.076E-01	4.482E-01	5.318E-02	-0.030

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.816E-01		1.407E-01	2.169E-01	2.160E-02	-0.837
CM-247	-1.640E-02		8.228E-02	1.304E-01	7.766E-03	-0.126
CF-249	-7.953E-02		8.672E-02	1.318E-01	7.825E-03	-0.604
CF-251	1.160E-01		1.986E-01	3.252E-01	2.558E-02	0.357

VAX/VMS Nuclide Identification Report Generated

```
*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                            DETECTOR DATA                              *
*                                                                       *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201874834      *
* Acquisition date : 14-JUL-2009 12:33:44 Detector SN#    :            *
* Detector ID      : GAM13                Sensitivity     : 5.000      *
* Geometry         : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 01:00:00.00     Abundance limit : 75.000     *
* Elapsed real time:    0 01:00:01.74     Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                             SAMPLE DATA                               *
*                                                                       *
* Sample date      :  7-JUL-2009 00:00:00 Nuclide Library : SOLID       *
* Sample ID        : G1201874834          Analyst initials: MXR1        *
* Batch Number     : 882713               Sample Quantity : 1.5544E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000   *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
*                                                                       *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
*************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	4.118E-01	9.806E-02	3.363E-02	5.003E-02
CO-60	6.848E+00	5.172E-01	4.707E-02	2.639E-01
CD-109	4.745E+01	4.508E+00	9.657E-01	2.300E+00
SN-126	4.718E+00	4.481E-01	9.588E-02	2.286E-01
BA-137M	5.687E+00	5.338E-01	6.942E-02	2.724E-01
CS-137	6.012E+00	5.652E-01	7.339E-02	2.884E-01
TL-208	2.333E-01	1.200E-01	7.217E-02	6.125E-02
BI-211	2.377E+00	6.817E-01	3.375E-01	3.478E-01
PB-212	8.114E-01	2.373E-01	9.261E-02	1.211E-01
PO-212	8.114E-01	2.373E-01	9.261E-02	1.211E-01
PB-214	8.268E-01	2.409E-01	1.282E-01	1.229E-01
PO-214	8.268E-01	2.409E-01	1.282E-01	1.229E-01
PO-216	8.114E-01	2.373E-01	9.261E-02	1.211E-01
PO-218	8.268E-01	2.409E-01	1.282E-01	1.229E-01
RA-224	8.651E-01	1.282E+00	1.307E+00	6.539E-01
TH-228	8.114E-01	2.373E-01	9.260E-02	1.211E-01
TH-234	2.387E-01	1.205E+00	8.278E-01	6.150E-01
U-238	2.387E-01	1.205E+00	8.278E-01	6.150E-01
AM-241	1.366E+01	1.418E+00	1.344E-01	7.233E-01
AM-243	2.676E-01	8.095E-02	5.137E-02	4.130E-02
ANH-511	1.742E-01	1.202E-01	5.379E-02	6.130E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-1.094E+00	6.857E-01	5.536E-01	3.499E-01	NOT IDENT.
NA-22	-6.454E-02	6.237E-02	4.615E-02	3.182E-02	NOT IDENT.
NA-24	-4.946E+01	2.357E+02	0.000E+00	1.203E+02	SHORT HLIF
AL-26	4.048E-02	4.884E-02	4.807E-02	2.492E-02	NOT IDENT.
K-40	8.487E-01	7.086E-01	6.308E-01	3.615E-01	NOT IDENT.
TI-44	3.032E-01	6.144E-02	4.467E-02	3.135E-02	FAIL ABUN

SC-46	3.071E-02	9.950E-02	8.760E-02	5.077E-02	NOT IDENT.
V-48	1.313E-01	1.413E-01	1.274E-01	7.211E-02	NOT IDENT.
CR-51	4.273E-01	5.721E-01	5.207E-01	2.919E-01	NOT IDENT.
MN-52	-4.232E-02	1.378E-01	1.107E-01	7.031E-02	FAIL ABUN
MN-54	2.164E-02	8.338E-02	7.381E-02	4.254E-02	NOT IDENT.
CO-56	-2.815E-02	9.506E-02	8.111E-02	4.850E-02	FAIL ABUN
CO-58	2.024E-02	8.575E-02	7.606E-02	4.375E-02	NOT IDENT.
FE-59	-1.190E-02	2.234E-01	1.875E-01	1.140E-01	NOT IDENT.
ZN-65	-1.820E-01	2.317E-01	1.842E-01	1.182E-01	NOT IDENT.
GE-68	-3.425E-01	3.342E+00	2.802E+00	1.705E+00	NOT IDENT.
AS-73	-1.476E-01	6.241E-01	5.354E-01	3.184E-01	NOT IDENT.
AS-74	9.234E-02	1.435E-01	1.292E-01	7.319E-02	NOT IDENT.
SE-75	-1.751E-03	7.638E-02	6.823E-02	3.897E-02	FAIL ABUN
BR-77	-6.629E-02	2.456E+00	2.156E+00	1.253E+00	FAIL ABUN
SR-82	-3.721E-01	7.802E-01	6.657E-01	3.981E-01	NOT IDENT.
RB-83	-3.598E-02	1.408E-01	1.219E-01	7.185E-02	NOT IDENT.
RB-84	4.753E-02	1.601E-01	1.410E-01	8.170E-02	NOT IDENT.
KR-85	2.638E+01	1.686E+01	1.435E+01	8.602E+00	NOT IDENT.
SR-85	1.248E-01	7.980E-02	6.793E-02	4.071E-02	NOT IDENT.
RB-86	-6.828E-01	1.654E+00	1.357E+00	8.438E-01	NOT IDENT.
Y-88	6.542E-02	5.231E-02	5.461E-02	2.669E-02	NOT IDENT.
ZR-88	-3.649E-03	6.365E-02	5.405E-02	3.247E-02	NOT IDENT.
Y-91	-1.523E+01	2.486E+01	2.007E+01	1.269E+01	NOT IDENT.
NB-94	-7.769E-02	8.090E-02	6.411E-02	4.127E-02	NOT IDENT.
NB-95	2.157E-03	8.898E-02	7.838E-02	4.540E-02	NOT IDENT.
NB-95M	9.631E-02	2.013E-01	1.650E-01	1.027E-01	NOT IDENT.
ZR-95	8.311E-02	1.540E-01	1.344E-01	7.857E-02	NOT IDENT.
NB-97	1.179E+02	1.485E+02	0.000E+00	7.578E+01	SHORT HLIF
ZR-97	1.020E+03	2.279E+03	0.000E+00	1.163E+03	SHORT HLIF
MO-99	6.274E-01	3.937E+00	3.360E+00	2.009E+00	NOT IDENT.
TC-99M	5.782E+06	4.240E+07	0.000E+00	2.163E+07	SHORT HLIF
RH-101	-3.635E-02	5.175E-02	4.568E-02	2.641E-02	NOT IDENT.
RH-102	1.353E-02	6.690E-02	6.000E-02	3.413E-02	NOT IDENT.
RU-103	2.705E-02	7.710E-02	6.939E-02	3.934E-02	FAIL ABUN
RH-106	-3.975E-01	6.565E-01	5.392E-01	3.349E-01	FAIL ABUN
RU-106	-3.975E-01	6.553E-01	5.392E-01	3.343E-01	FAIL ABUN
AG-108M	1.746E-02	7.655E-02	6.935E-02	3.906E-02	NOT IDENT.
AG-110M	4.341E-02	9.336E-02	7.185E-02	4.763E-02	NOT IDENT.
IN-111	1.475E-01	3.302E-01	2.688E-01	1.684E-01	NOT IDENT.
IN-113M	8.723E-02	9.143E-02	8.237E-02	4.665E-02	NOT IDENT.
SN-113	8.723E-02	9.143E-02	8.237E-02	4.665E-02	NOT IDENT.
IN-114M	-1.099E-01	3.003E-01	2.230E-01	1.532E-01	NOT IDENT.
CD-115	2.723E-01	2.147E+00	1.899E+00	1.095E+00	NOT IDENT.
SN-117M	5.098E-03	5.662E-02	4.961E-02	2.889E-02	NOT IDENT.
SB-122	4.838E-01	6.436E-01	5.848E-01	3.284E-01	NOT IDENT.
I-123	-6.549E-01	5.686E+02	0.000E+00	2.901E+02	SHORT HLIF
TE-123M	-4.790E-05	4.159E-02	3.627E-02	2.122E-02	NOT IDENT.
I-124	-2.230E-01	4.603E-01	3.284E-01	2.348E-01	NOT IDENT.
SB-124	8.675E-02	1.139E-01	1.083E-01	5.814E-02	NOT IDENT.
SB-125	2.181E-02	2.082E-01	1.879E-01	1.062E-01	NOT IDENT.
TE-125M	4.579E+00	1.152E+01	1.060E+01	5.877E+00	NOT IDENT.
I-126	-3.370E-03	3.204E-01	2.361E-01	1.635E-01	NOT IDENT.
SB-126	-7.722E-02	2.063E-01	1.697E-01	1.053E-01	FAIL ABUN
SB-127	1.260E-01	7.874E-01	6.779E-01	4.017E-01	FAIL ABUN
XE-127	-2.413E-02	6.632E-02	5.995E-02	3.384E-02	NOT IDENT.
I-131	-8.885E-02	1.158E-01	9.530E-02	5.908E-02	NOT IDENT.
TE-132	8.843E-02	2.439E-01	2.244E-01	1.244E-01	FAIL ABUN
BA-133	4.935E-02	9.868E-02	7.816E-02	5.035E-02	NOT IDENT.
I-133	-3.525E+01	2.889E+01	0.000E+00	1.474E+01	SHORT HLIF
CS-134	3.051E-02	1.070E-01	9.529E-02	5.458E-02	NOT IDENT.
CS-135	-1.519E-01	2.854E-01	2.484E-01	1.456E-01	NOT IDENT.
I-135	-2.825E+07	4.022E+07	0.000E+00	2.052E+07	SHORT HLIF
CS-136	1.205E-02	1.933E-01	1.644E-01	9.860E-02	NOT IDENT.
CE-139	1.555E-02	4.817E-02	4.258E-02	2.458E-02	NOT IDENT.
BA-140	8.597E-02	3.789E-01	3.354E-01	1.933E-01	NOT IDENT.
LA-140	2.804E-02	9.700E-02	8.471E-02	4.949E-02	NOT IDENT.
CE-141	1.424E-02	8.648E-02	7.684E-02	4.412E-02	NOT IDENT.
CE-143	4.962E+00	5.907E+00	4.768E+00	3.014E+00	NOT IDENT.
CE-144	-3.045E-01	3.043E-01	2.534E-01	1.552E-01	NOT IDENT.
PM-144	8.487E-02	7.965E-02	7.205E-02	4.064E-02	NOT IDENT.
PR-144	5.728E+00	5.375E+00	4.863E+00	2.743E+00	NOT IDENT.
PM-146	2.190E-02	1.029E-01	9.271E-02	5.249E-02	NOT IDENT.
ND-147	-8.500E-01	7.326E-01	5.859E-01	3.738E-01	NOT IDENT.
PM-149	2.236E+00	1.559E+01	1.393E+01	7.955E+00	NOT IDENT.
EU-152	3.026E-02	2.061E-01	1.674E-01	1.052E-01	FAIL ABUN
GD-153	-1.723E-02	1.125E-01	9.133E-02	5.739E-02	NOT IDENT.
EU-154	-1.895E-01	1.743E-01	1.272E-01	8.895E-02	FAIL ABUN
EU-155	8.958E-02	1.462E-01	1.361E-01	7.461E-02	FAIL ABUN

TB-160	2.097E-01	3.422E-01	3.071E-01	1.746E-01	NOT IDENT.
HO-166M	-5.154E-02	1.429E-01	1.181E-01	7.293E-02	NOT IDENT.
TM-171	2.271E+00	2.553E+01	2.174E+01	1.303E+01	FAIL ABUN
LU-176	3.521E-02	4.574E-02	4.183E-02	2.334E-02	FAIL ABUN
LU-177	-3.542E-01	8.114E-01	7.295E-01	4.140E-01	NOT IDENT.
LU-177M	-1.966E-01	3.790E-01	3.133E-01	1.934E-01	FAIL ABUN
HF-181	6.145E-02	8.514E-02	7.820E-02	4.344E-02	NOT IDENT.
W-181	4.039E-02	3.112E-01	2.659E-01	1.588E-01	NOT IDENT.
TA-182	1.161E-01	2.763E-01	2.486E-01	1.410E-01	NOT IDENT.
RE-183	-6.246E-02	1.627E-01	1.388E-01	8.303E-02	FAIL ABUN
RE-184	8.001E-03	3.876E-01	3.486E-01	1.978E-01	FAIL ABUN
OS-185	-5.014E-03	9.082E-02	7.759E-02	4.634E-02	FAIL ABUN
RE-188	7.196E-02	2.464E-01	2.190E-01	1.257E-01	NOT IDENT.
W-188	9.208E-01	1.387E+01	1.083E+01	7.075E+00	FAIL ABUN
IR-192	1.431E-02	6.026E-02	5.356E-02	3.074E-02	FAIL ABUN
AU-195	-1.089E-01	3.181E-01	2.720E-01	1.623E-01	FAIL ABUN
TL-200	-1.486E+00	7.040E+00	6.004E+00	3.592E+00	NOT IDENT.
TL-201	1.850E+00	2.070E+00	1.873E+00	1.056E+00	NOT IDENT.
TL-202	6.004E-02	1.025E-01	9.427E-02	5.231E-02	NOT IDENT.
HG-203	4.059E-02	6.504E-02	5.950E-02	3.319E-02	NOT IDENT.
BI-207	5.817E-03	1.388E-01	1.177E-01	7.084E-02	FAIL ABUN
TL-207	-3.317E-01	1.250E+00	1.079E+00	6.380E-01	FAIL ABUN
PO-209	4.631E+00	2.161E+01	1.889E+01	1.103E+01	NOT IDENT.
BI-210	1.595E+00	1.169E+00	1.010E+00	5.964E-01	NOT IDENT.
PB-210	1.595E+00	1.169E+00	1.010E+00	5.964E-01	NOT IDENT.
PO-210	1.595E+00	1.167E+00	1.010E+00	5.956E-01	NOT IDENT.
PB-211	2.507E-01	2.014E+00	1.728E+00	1.027E+00	NOT IDENT.
BI-212	4.623E-01	6.951E-01	6.119E-01	3.546E-01	NOT IDENT.
BI-214	9.137E-01	3.365E-01	1.971E-01	1.717E-01	FAIL ABUN
PO-215	-3.317E-01	1.250E+00	1.079E+00	6.380E-01	FAIL ABUN
RN-219	-1.690E-01	8.996E-01	7.610E-01	4.590E-01	NOT IDENT.
RN-220	-5.533E+01	5.713E+01	4.675E+01	2.915E+01	NOT IDENT.
RA-223	-3.317E-01	1.250E+00	1.079E+00	6.380E-01	FAIL ABUN
RA-226	9.137E-01	3.365E-01	1.971E-01	1.717E-01	FAIL ABUN
AC-227	-5.322E-01	6.911E-01	5.924E-01	3.526E-01	NOT IDENT.
TH-227	-5.322E-01	6.929E-01	5.924E-01	3.535E-01	FAIL ABUN
AC-228	1.119E+00	6.507E-01	4.214E-01	3.320E-01	FAIL ABUN
RA-228	1.119E+00	6.507E-01	4.214E-01	3.320E-01	FAIL ABUN
TH-229	6.385E-01	7.871E-01	7.484E-01	4.016E-01	FAIL ABUN
TH-230	9.137E-01	3.365E-01	1.971E-01	1.717E-01	FAIL ABUN
PA-231	5.493E-01	2.846E+00	2.550E+00	1.452E+00	NOT IDENT.
TH-231	-3.317E-01	1.250E+00	1.079E+00	6.380E-01	FAIL ABUN
U-231	-1.505E-01	4.250E-01	3.416E-01	2.168E-01	FAIL ABUN
TH-232	1.119E+00	6.507E-01	4.214E-01	3.320E-01	FAIL ABUN
PA-233	-1.095E-01	1.218E-01	1.017E-01	6.216E-02	FAIL ABUN
PA-234	6.785E-01	9.285E-01	8.220E-01	4.737E-01	FAIL ABUN
PA-234M	-1.812E+01	1.799E+01	1.437E+01	9.178E+00	NOT IDENT.
U-234	9.137E-01	3.365E-01	1.971E-01	1.717E-01	FAIL ABUN
U-235	-9.912E-02	3.438E-01	2.993E-01	1.754E-01	FAIL ABUN
NP-236	1.696E-02	1.224E-01	1.077E-01	6.247E-02	NOT IDENT.
NP-237	1.973E+00	5.922E-01	3.927E-01	3.021E-01	NOT IDENT.
NP-239	-1.357E-02	3.015E-01	2.417E-01	1.538E-01	NOT IDENT.
CM-243	-1.816E-01	1.379E-01	1.173E-01	7.037E-02	NOT IDENT.
CM-247	-1.640E-02	8.064E-02	6.816E-02	4.114E-02	NOT IDENT.
CF-249	-7.953E-02	8.499E-02	6.893E-02	4.336E-02	NOT IDENT.
CF-251	1.160E-01	1.946E-01	1.736E-01	9.928E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	428.6342
46.50	428.6342
46.50	428.6342
48.70	641.4492
49.72	831.1990
51.35	934.6563
52.39	962.6985
52.97	1001.8633
53.15	956.6517
53.44	957.7360
54.07	974.1633
56.28	943.6683
56.28	943.6794
57.37	1007.1532
57.53	1007.7490
57.53	1007.7578
57.60	1008.0098
57.98	999.0306
57.98	999.0306
59.32	836.8255
59.32	836.8255
59.40	837.0676
59.54	837.4906
59.72	838.0359
60.01	838.9113
61.10	354.7396
61.14	354.7901
61.30	354.9909
63.00	357.1111
63.29	357.4695
63.29	357.4695
63.58	401.5625
64.28	405.1852
65.12	438.3186
65.20	438.4372
65.20	438.4372
66.05	447.7129
66.72	415.2262
66.83	415.3823
66.91	415.4911
67.20	398.4502
67.20	398.4502
67.75	436.5367
67.85	436.6829
68.90	429.5504
68.90	429.5504
69.30	407.9530
69.67	412.5023
70.82	442.5295
70.82	442.5295
70.83	442.5444
72.80	412.5197
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72.87	412.6095
74.67	414.9136
74.81	415.0910
74.81	415.0910
74.81	415.0910
74.81	415.0910
74.81	415.0910
74.81	415.0910
74.97	415.2961
75.28	415.6878
75.70	416.2200
77.11	417.9942
77.11	417.9942
77.11	417.9942

77.11	417.9942
77.11	417.9942
77.11	417.9942
78.38	370.9506
79.62	391.8290
79.80	392.0348
79.80	392.0348
80.11	375.6317
80.18	375.7097
80.30	375.8390
80.30	375.8390
80.57	405.4982
81.00	422.8028
81.07	422.8892
81.07	422.8892
81.07	422.8892
81.07	422.8892
82.60	436.9390
83.37	411.5785
83.78	386.6588
83.78	386.6588
83.78	386.6588
83.78	386.6588
84.21	401.2557
84.40	418.4326
84.90	387.8754
85.43	418.2198
86.29	491.6916
86.50	491.9767
86.54	492.0295
86.59	492.0981
86.72	492.2723
86.79	483.8266
86.94	484.0289
87.30	443.1807
87.30	443.1807
87.30	443.1807
87.30	443.1807
87.30	443.1807
87.30	443.1807
87.57	443.5081
87.88	443.8830
88.03	444.0634
88.36	444.4620
88.47	444.5948
89.95	318.6288
91.11	319.6145
92.29	320.6104
92.38	320.6866
92.38	320.6866
93.35	285.2947
94.00	285.7757
94.67	286.2671
94.67	286.2716
94.90	286.4400
94.90	286.4400
94.90	286.4400
94.90	286.4400
95.87	278.4066
95.87	278.4066
96.73	284.8620
97.43	275.1195
98.44	300.7591
98.44	300.7591
98.88	290.2220
99.55	286.3904
99.55	286.3904
99.86	277.7764
100.00	258.2351
100.10	258.3007
103.18	289.9345
103.76	303.2218
105.00	234.5536
105.31	234.7264
108.00	256.2370
109.28	227.8867
111.00	251.9709
111.00	251.9709

111.76	243.3204
112.95	236.8910
115.19	246.2219
116.30	239.8918
117.00	228.3097
117.00	228.3097
117.66	233.2440
121.11	243.2370
121.62	243.5022
121.78	243.5851
122.06	243.7303
122.32	243.8647
122.32	243.8647
122.32	243.8647
122.32	243.8647
123.07	244.2525
127.23	227.0686
129.76	252.9073
131.20	229.4384
133.02	223.9388
133.54	251.6621
135.34	222.8473
136.00	224.1982
136.25	224.3077
136.48	199.9470
140.51	239.0245
140.51	0.0000
142.18	262.3651
142.65	247.5312
143.76	265.3063
144.24	260.1469
144.24	260.1469
144.24	260.1469
144.24	260.1469
145.22	249.8082
145.44	245.5841
147.16	262.6467
152.43	239.9746
152.70	248.8608
153.22	213.9775
154.21	218.7514
154.21	218.7514
154.21	218.7514
154.21	218.7514
155.03	224.5756
156.02	223.8650
158.56	206.0334
159.00	0.0000
159.00	209.5161
160.31	213.3242
161.27	217.0164
162.32	229.6712
162.64	239.8366
163.35	261.3457
163.89	252.6430
165.85	245.6287
167.43	228.2862
171.28	233.1393
171.86	228.8302
172.10	216.4527
176.55	182.6302
176.60	188.3525
181.06	219.0041
184.41	227.0832
185.71	214.2224
186.00	214.3184
190.27	229.1261
192.34	208.5350
193.63	207.4309
197.04	247.3477
198.01	243.2749
198.60	227.5475
200.40	218.3787
201.83	240.1804
202.84	256.5637
205.31	251.2132
208.36	272.0509
208.81	248.8630

209.75	231.1984
209.75	231.1984
210.97	231.5925
215.65	232.1836
216.55	231.5607
218.09	230.2271
222.10	253.4299
223.80	247.5838
226.40	241.0755
227.00	241.2654
227.08	241.2914
227.20	251.4594
228.16	246.2425
228.18	245.3263
228.18	245.3263
231.56	244.5533
235.69	208.6021
236.00	208.6841
236.00	208.6841
238.60	267.6981
238.63	267.7068
238.63	267.7068
238.63	267.7068
239.00	267.8314
240.98	412.4983
241.98	394.9912
241.98	394.9912
241.98	394.9912
244.69	227.5470
245.39	218.6930
247.94	220.4604
248.90	224.3700
249.79	218.9259
252.40	214.8648
252.85	195.9571
252.85	195.9571
254.15	0.0000
256.20	225.3957
256.20	225.3957
260.50	197.7488
260.90	225.6912
262.80	220.4181
264.65	208.3535
268.24	232.4634
268.79	235.5212
269.46	212.4202
269.46	212.4202
269.46	212.4202
269.46	212.4202
271.23	207.9917
273.65	221.2329
276.40	218.0048
277.35	204.5353
277.60	198.7192
277.60	198.7192
278.00	196.8503
278.60	186.2021
279.20	188.2881
279.53	187.3745
280.46	206.2285
281.68	214.3709
283.67	197.1039
284.30	189.3486
285.00	183.5734
285.90	194.6193
286.10	194.6613
286.10	194.6613
287.40	207.8018
288.45	0.0000
290.67	187.4834
290.80	201.8125
291.72	205.1938
293.26	194.3779
293.70	194.4703
295.21	175.6240
295.21	175.6240
295.21	175.6240
295.96	175.7637

296.50	195.0481
297.23	208.0000
298.57	193.8747
299.80	171.6624
299.80	171.6624
300.09	150.8521
300.09	150.8521
300.09	150.8521
300.10	150.8544
300.12	150.8567
301.29	146.2221
302.84	192.1250
303.76	199.3565
303.91	213.4848
304.40	227.7001
304.40	227.7001
304.84	217.7238
306.84	162.6214
308.46	167.9504
311.98	197.9993
316.51	169.3258
318.01	198.1828
319.02	183.0451
319.41	170.8402
320.08	156.6210
323.87	185.9824
323.87	185.9824
323.87	185.9824
323.87	185.9824
325.23	199.6066
328.77	186.8744
333.44	185.8527
334.20	182.6682
334.20	182.6682
334.30	189.3302
338.28	184.4218
338.28	184.4218
338.28	184.4218
338.28	184.4218
338.32	184.4299
338.32	184.4299
338.32	184.4299
340.50	170.4017
340.57	170.4142
344.27	173.2423
345.85	193.0883
350.59	166.9561
351.07	168.7158
351.92	200.5066
351.92	200.5066
351.92	200.5066
355.39	0.0000
356.01	157.6187
364.48	162.2422
366.43	132.5863
367.43	155.1776
367.94	157.3898
369.80	167.2996
374.96	177.7547
383.85	162.8426
387.95	190.6479
388.63	189.6673
391.69	157.3726
391.69	157.3726
392.90	176.1306
398.62	165.9811
400.65	165.1566
401.10	176.2341
401.81	180.7463
402.60	180.8640
404.84	171.2531
410.95	151.0099
411.60	146.6450
413.65	186.9467
414.70	179.3095
415.30	172.7100
415.76	178.3472
417.63	0.0000

418.52	144.1093
423.70	173.8665
427.08	186.7019
427.89	188.1689
432.53	203.3075
433.93	190.8633
439.47	183.5039
439.56	171.7058
439.89	171.7496
443.98	188.6929
444.90	184.2634
445.03	186.1052
445.03	186.1052
445.03	186.1052
445.03	186.1052
453.90	186.4294
463.38	220.1064
468.07	222.7178
473.00	153.6643
475.06	165.0840
475.35	176.3108
476.78	187.6990
477.59	202.7567
477.96	185.9868
482.03	146.2214
484.57	156.8132
487.03	163.6687
490.36	154.6208
492.35	138.7851
497.08	133.5576
507.63	0.0000
510.53	0.0000
510.84	136.7280
511.00	136.7429
511.85	136.8223
511.85	136.8223
513.99	121.3685
513.99	121.3685
520.41	135.6815
520.65	131.8525
527.90	120.8801
528.96	0.0000
529.64	133.6033
529.87	0.0000
531.02	135.6626
537.32	127.4627
543.00	135.7388
546.56	0.0000
549.76	140.2489
552.65	107.0973
555.20	124.0005
563.23	113.7450
563.90	117.7478
568.70	143.9026
569.32	127.0781
569.50	127.0938
569.67	127.1063
573.80	118.4683
574.00	118.4829
574.64	131.4779
578.91	118.1715
579.30	111.5413
583.14	139.1663
585.48	138.6913
591.81	119.7612
592.07	119.7786
593.00	120.8525
595.88	101.8926
600.56	117.3481
602.52	0.0000
602.71	126.6113
602.71	126.6113
603.60	116.5442
604.41	114.9077
604.70	114.9271
609.31	108.7973
609.31	108.7973
609.31	108.7973

609.31	108.7973
610.33	108.8626
612.46	108.6563
614.37	100.2779
618.01	109.0026
621.84	108.5594
621.84	108.5594
631.29	114.2899
633.02	110.2784
633.10	110.2837
634.78	112.4515
635.90	102.2001
636.97	88.8324
645.85	114.1841
646.12	111.0856
656.30	130.4993
657.75	118.4134
657.90	0.0000
661.65	118.3162
661.65	118.3162
664.57	103.1204
666.33	120.7135
666.33	120.7135
675.00	118.1113
677.61	111.9366
685.20	106.0254
692.80	129.8663
695.00	133.2092
696.49	105.5839
696.49	105.5839
697.00	101.3457
697.49	115.2431
698.33	122.7659
698.50	122.7743
699.00	122.8080
702.63	143.3663
706.10	114.6828
706.58	0.0000
706.67	108.2816
709.31	107.3535
711.68	120.3836
713.82	105.4481
717.42	99.1740
720.50	104.7250
721.93	112.3637
722.20	113.4595
722.78	122.1399
722.78	122.1399
722.89	123.2263
722.95	123.2319
723.30	136.2252
724.18	112.4906
727.18	113.7415
733.00	120.5906
735.90	127.2918
739.58	99.1824
742.81	97.1569
744.21	121.2572
747.13	103.9248
751.79	112.9329
752.31	104.1869
753.82	114.1410
755.35	105.4383
756.15	97.7892
756.87	102.2183
763.93	124.0714
765.79	122.3415
766.41	117.7786
766.84	124.2444
768.36	136.3080
768.36	136.3080
768.36	136.3080
768.36	136.3080
776.49	137.7565
778.00	124.9008
778.57	123.0829
778.89	124.0274
783.80	115.9643

785.46	107.6974
792.07	121.0683
795.84	109.1519
796.30	118.5044
801.93	115.0698
805.60	134.0043
810.29	95.7889
810.76	99.5669
815.85	100.7370
817.79	95.1724
818.51	93.3181
819.60	92.4193
826.30	97.4280
828.27	96.5651
831.60	116.6188
831.96	121.3802
834.83	100.6452
836.80	0.0000
846.75	124.0808
848.13	104.1013
856.28	0.0000
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860.37	129.6167
867.32	124.2260
867.82	119.4388
871.10	128.2863
873.19	144.8120
874.81	145.8788
875.33	0.0000
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879.36	106.4752
880.27	116.1987
880.51	116.2109
881.50	115.2885
883.24	129.9161
884.67	128.0549
889.25	115.6662
896.60	136.4966
898.02	133.6497
899.00	132.7267
903.28	146.6492
911.07	151.0454
911.07	151.0454
911.07	151.0454
919.63	152.3592
920.93	156.5771
925.00	150.9175
925.24	146.9872
926.50	135.2162
934.06	168.2983
934.06	168.2983
934.06	168.2983
934.06	168.2983
935.52	157.5023
937.48	138.7895
944.10	159.0365
946.00	137.2700
949.00	156.3580
962.29	136.1522
964.01	163.2918
966.15	168.4409
968.20	146.4990
969.11	140.5298
969.11	140.5298
969.11	140.5298
977.42	121.8493
980.50	123.0003
983.50	103.9660
989.30	130.4986
996.32	116.6471
1001.03	134.1270
1001.68	134.1619
1004.76	129.2298
1021.30	0.0000
1024.50	0.0000
1034.80	119.3607
1037.82	111.2520
1038.57	115.4043

1038.76	0.0000
1045.16	111.5508
1046.59	99.2070
1048.07	107.5335
1050.47	110.7312
1050.47	110.7312
1063.62	106.0549
1076.63	122.2178
1077.35	113.8876
1085.78	122.6129
1099.22	117.9245
1112.02	96.2395
1112.84	105.7861
1115.52	131.2959
1120.29	89.0894
1120.29	89.0894
1120.29	89.0894
1120.29	89.0894
1120.51	90.1569
1121.28	92.3030
1124.00	0.0000
1129.67	87.2451
1131.51	0.0000
1147.95	0.0000
1167.94	44.3387
1173.22	55.0570
1175.09	59.2567
1177.93	55.6055
1189.05	51.1558
1204.90	44.8744
1205.75	47.6915
1213.00	48.7391
1221.42	38.5319
1230.97	45.2478
1235.34	43.4218
1236.41	0.0000
1238.11	43.4587
1238.11	43.4587
1238.11	43.4587
1238.11	43.4587
1238.25	45.3516
1246.25	40.7279
1260.41	0.0000
1271.85	34.3677
1274.45	37.2617
1274.54	37.2630
1291.56	21.1291
1298.22	0.0000
1312.09	30.9219
1325.50	40.7461
1325.50	40.7461
1332.49	21.3877
1333.61	21.3946
1360.21	23.5204
1362.66	0.0000
1365.15	17.6654
1368.21	20.6272
1368.53	0.0000
1376.25	20.6748
1377.67	19.6987
1377.67	19.6987
1377.67	19.6987
1377.67	19.6987
1384.27	30.5902
1394.10	16.8215
1395.20	20.7861
1407.95	25.8277
1434.06	20.0112
1436.60	20.0251
1457.56	0.0000
1460.81	15.8741
1489.15	23.3578
1509.49	21.4417
1596.49	17.7477
1620.62	14.7031
1678.03	0.0000
1691.02	8.5458
1691.02	8.5458

1706.46	0.0000
1750.46	0.0000
1764.49	11.4097
1764.49	11.4097
1764.49	11.4097
1764.49	11.4097
1770.23	10.1549
1771.40	11.8509
1791.20	0.0000
1808.65	6.7221
1836.01	4.8306

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201874834

Total Uranium Activity	6.6438E-01	ug/g
Total Uranium Counting Unc.	3.5896E+00	ug/g
Total Uranium Tpu	1.8314E-06	ug/g
Total Uranium Mda	2.4666E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID   : G1201874834     *
*   ANALYST       : MXR1                      DETECTOR    : GAM13           *
*   SAMPLE DATE   :  7-JUL-2009 00:00:00.00   COUNT TIME :    0 01:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 12:33:44.30    SAMPLE ALQT:  155.440 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 2.910E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.529E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 5.954E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.921E+00
```

Radiochemistry Batch Checklist, Rev 9

Batch# 883020 Product: H3 Date: 7/16/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Dana Marie [illegible]

Secondary Review Performed By: [illegible]

LANL 7-22-09

Tritium Que Sheet

13-JUL-09

Batch #: 883020 **Analyst:** KXK2 **First Client Due Date** 22-JUL-09 **Internal Due Date:** 11-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** 0 KKG 7/13/09 **Expiration Date:** _____ **Vol:** _____

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.2

Prep Date: 7/10/09 **Initials:** KXK2 **Pipet ID:** 2970968 **Witness:** MSP 7/13/09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Total MOISTUI KKG 7/13 ~~Dist Vol (mL)~~
232347001-1	CAMO-09-10462	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6.2	1	KKG 7/14/09	382.65	357.78	24.87
232347002-1	CAMO-09-10460	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6.3	2		451.25	413.80	37.45
232347003-1	CAMO-09-10461	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6.4	3		524.03	463.77	60.26
232347004-1	CAMO-09-10467	SAMPLE		.25 pCi/mL	SOIL	LANL010	22-JUN-09	10	6.5	4		293.05	279.86	13.19
232582001-1	CAMO-09-10464	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	6.6	5		480.42	448.23	32.19
232582002-1	CAMO-09-10465	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	6.7	6		492.429.56	408.94	20.62
232585001-1	CAMO-09-6605	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-1	7		445.56	416.15	29.41
232585002-1	CAMO-09-6603	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-2	8		401.80	372.87	28.93
232585003-1	CAMO-09-6604	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-3	9		475.14	425.73	49.41
232591001-1	CAMO-09-9946	SAMPLE		.25 pCi/mL	SOIL	LANL010	25-JUN-09	10	41-4	10		665.38	541.44	124.54
232664001-1	CAMO-09-9942	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-5	11		416.90	367.71	49.19
232664002-1	CAMO-09-9941	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-6	12		502.20	447.96	54.24
232664003-1	CAMO-09-9943	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-7	13		521.28	449.34	71.94
232664004-1	CAMO-09-10030	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-8	14		480.98	432.88	48.10
232664005-1	CAMO-09-9989	SAMPLE		.25 pCi/mL	SOIL	LANL010	26-JUN-09	10	41-9	15		573.89	478.62	95.27
1201875586-1	MB for batch 883020	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	41-10	16		40.00	0	40.00
1201875587-1	~~CAMO-09-10462(232347001DUP)~~ CAMO-09-10462(232347003DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	22-JUN-09	10	41-11	3		524.03	463.77	60.26
1201875588-1	LCS for batch 883020	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	27-1	17		40.00	0	40.00

Bkg Rack #: 6-1

daitier

Comments: _____

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069128, Silver 7060656*

Bkg prepared with dead water? Yes/No

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Ecoscint Ultra (10 mL sample/13 mL Econscint Ultra)*

Data Reviewed By: Nana Manuelitt

DATE	7/10/2009	INITIALS	KXK2		BATCH NUMBER	883020

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232347001	382.65	0.065	24.87	357.78	10	602
232347002	451.25	0.083	37.45	413.80	10	18
232347003	524.03	0.115	60.26	463.77	10	11
232347004	293.05	0.045	13.19	279.86	10	722
232582001	480.42	0.067	32.19	448.23	10	521
232582002	429.56	0.048	20.62	408.94	10	908
232585001	445.56	0.066	29.41	416.15	10	200
232585002	401.80	0.072	28.93	372.87	10	55
232585003	475.14	0.104	49.41	425.73	10	40
232591001	665.98	0.187	124.54	541.44	10	50
232664001	416.90	0.118	49.19	367.71	10	85
232664002	502.20	0.108	54.24	447.96	10	812
232664003	521.28	0.138	71.94	449.34	10	62
232664004	480.98	0.100	48.10	432.88	10	49
232664005	573.89	0.166	95.27	478.62	10	614
MB			0.00	0.00	10	74
LCS			0.00	0.00	10	10

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.5

Batch : 883020
Analyst : KXK2
Prep Date : 7/10/2009

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL Ecoscint Ultra

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1.0 ml Stdev : +/- 0.005480 ml
Pipet, 5.0 ml Stdev : +/- 0.025729 ml

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2545.47
LCS Volume Added: 0.20

Procedure Code : LSC_VH3S
Parmname : Tritium
Required MDC : 250 pCi/L
Halflife of Tritium : 12.28 years

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232347001.1	382.65	0.0249	0.0100	2.5729E-05	357.78	6.50%	1	6/22/2009 12:00
2	232347002.1	451.25	0.0375	0.0100	2.5729E-05	413.80	8.30%	2	6/22/2009 12:00
3	232347003.1	524.03	0.0603	0.0100	2.5729E-05	463.77	11.50%	3	6/22/2009 12:00
4	232347004.1	293.05	0.0132	0.0100	2.5729E-05	279.86	4.50%	4	6/22/2009 12:00
5	232582001.1	480.42	0.0322	0.0100	2.5729E-05	448.23	6.70%	5	6/25/2009 12:00
6	232582002.1	429.56	0.0206	0.0100	2.5729E-05	408.94	4.80%	6	6/25/2009 12:00
7	232585001.1	445.56	0.0294	0.0100	2.5729E-05	416.15	6.60%	7	6/25/2009 12:00
8	232585002.1	401.80	0.0289	0.0100	2.5729E-05	372.87	7.20%	8	6/25/2009 12:00
9	232585003.1	475.14	0.0494	0.0100	2.5729E-05	425.73	10.40%	9	6/25/2009 12:00
10	232591001.1	665.38	0.1245	0.0100	2.5729E-05	541.44	18.63%	10	6/25/2009 12:00
11	232664001.1	416.90	0.0492	0.0100	2.5729E-05	367.71	11.80%	11	6/26/2009 12:00
12	232664002.1	502.20	0.0542	0.0100	2.5729E-05	447.96	10.80%	12	6/26/2009 12:00
13	232664003.1	521.28	0.0719	0.0100	2.5729E-05	449.34	13.80%	13	6/26/2009 12:00
14	232664004.1	480.98	0.0481	0.0100	2.5729E-05	432.88	10.00%	14	6/26/2009 12:00
15	232664005.1	573.89	0.0953	0.0100	2.5729E-05	478.62	16.60%	15	6/26/2009 12:00
16	1201875586.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	16	7/10/2009 0:00
17	1201875587.1	524.03	0.0603	0.0100	2.5729E-05	463.77	11.50%	3	6/22/2009 12:00
18	1201875588.1	40.00	0.0400	0.0100	2.5729E-05	0.00	100.00%	17	7/10/2009 0:00

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	6-2	95	129.2	7.93	6.06	95	7/14/2009 18:04	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2644	0.00792	6-1	7/14/2009 16:25
2	6-3	95	132.5	11.58	6.06	95	7/14/2009 19:43	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2585	0.00792	6-1	7/14/2009 16:25
3	6-4	95	132	12.78	6.06	95	7/14/2009 21:21	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2594	0.00792	6-1	7/14/2009 16:25
4	6-5	95	129.8	6.93	6.06	95	7/14/2009 22:59	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2833	0.00792	6-1	7/14/2009 16:25
5	6-6	95	133.6	9.14	6.06	95	7/15/2009 0:38	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2565	0.00792	6-1	7/14/2009 16:25
6	6-7	95	136.8	8.04	6.06	95	7/15/2009 2:16	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2508	0.00792	6-1	7/14/2009 16:25
7	41-1	95	136.1	6.61	6.06	95	7/15/2009 5:08	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2484	0.00792	6-1	7/14/2009 16:25
8	41-2	60	133.7	5.72	6.06	95	7/15/2009 7:41	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2564	0.00792	6-1	7/14/2009 16:25
9	41-3	60	128.9	7.18	6.06	95	7/15/2009 8:43	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2649	0.00792	6-1	7/14/2009 16:25
10	41-4	60	128.5	6.6	6.06	95	7/15/2009 9:46	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2656	0.00792	6-1	7/14/2009 16:25
11	41-5	60	129.1	6.02	6.06	95	7/15/2009 10:48	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2645	0.00792	6-1	7/14/2009 16:25
12	41-6	60	130.5	7.48	6.06	95	7/15/2009 11:51	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2621	0.00792	6-1	7/14/2009 16:25
13	41-7	60	128.4	6.85	6.06	95	7/15/2009 12:53	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2658	0.00792	6-1	7/14/2009 16:25
14	41-8	60	128.7	7.33	6.06	95	7/15/2009 13:56	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2652	0.00792	6-1	7/14/2009 16:25
15	41-9	60	129.3	6.7	6.06	95	7/15/2009 14:58	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2642	0.00792	6-1	7/14/2009 16:25
16	41-10	60	128.8	5.32	6.06	95	7/15/2009 16:01	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2651	0.00792	6-1	7/14/2009 16:25
17	41-11	60	132.3	12.07	6.06	95	7/15/2009 17:03	0.996	LSCSILVER	8/6/2008	8/31/2009	0.2589	0.00792	6-1	7/14/2009 16:25
18	29-1	15	130.3	42.87	6.06	95	7/15/2009 18:05	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2624	0.00792	6-1	7/14/2009 16:25

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

Results Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	142.2958	100.4620	250	206.3234	**319.7335**	0.205	1.870	0.384	65.6136	69.2895		SAMPLE				
2	145.5156	102.7353	250	210.9921	**965.1686**	0.079	5.520	0.431	75.3445	100.9729		SAMPLE				
3	145.0171	102.3833	250	210.2692	**1170.9623**	0.067	6.720	0.445	77.5983	112.5729		SAMPLE				
4	142.8712	100.8683	250	207.1578	**149.3545**	0.425	0.870	0.370	63.4807	64.3274		SAMPLE				
5	146.5684	103.4785	250	212.5185	**542.4323**	0.130	3.080	0.400	70.4457	79.9366		SAMPLE				
6	149.9428	105.8609	250	217.4113	**355.7346**	0.195	1.980	0.385	69.4109	73.7237		SAMPLE				
7	151.3714	106.8695	250	219.4827	**100.0371**	0.664	0.550	0.365	66.4240	66.7884		SAMPLE				
8	166.7009	117.6923	250	244.1968	**-59.9234**	1.173	-0.340	0.399	70.3046	70.3049		SAMPLE				
9	161.3397	113.9072	250	236.3432	**191.0462**	0.383	1.120	0.428	73.0612	74.2629		SAMPLE				
10	160.9146	113.6071	250	235.7206	**91.8689**	0.772	0.540	0.417	70.9229	71.2110		SAMPLE				
11	161.5311	114.0423	250	236.6236	**-6.8312**	10.128	-0.040	0.405	69.1863	69.1866		SAMPLE				
12	163.0536	115.1173	250	238.8540	**244.7925**	0.306	1.420	0.434	74.8368	76.7543		SAMPLE				
13	160.7870	113.5170	250	235.5336	**134.2942**	0.534	0.790	0.422	71.7112	72.3186		SAMPLE				
14	161.1087	113.7427	250	236.0020	**216.3200**	0.340	1.270	0.431	73.4511	74.9803		SAMPLE				
15	161.7504	114.1972	250	236.9449	**109.4472**	0.655	0.640	0.419	71.6323	72.0368		SAMPLE				
16	160.8795	113.5823	250	235.6691	**-125.6670**	0.528	-0.740	0.390	66.4129	66.4132		MB				
17	165.1751	116.6150	250	241.9617	**1049.5386**	0.086	6.010	0.515	89.8899	115.8597	232347003.1	DUP	10.9%	0.2658		
18	273.7888	193.2972	250	420.9553	**6324.1227**	0.047	36.810	1.709	293.6696	529.3829		LCS			5733.0311	110.3%

ID:TRITIUM 14 JUL 2009 16:15

USER: 2 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	6-1	95.00	129.3	6.06	9.08	43.93	3.14	2.66	98.03
2	6-2	95.00	129.2	7.93	7.72	45.81	3.06	2.19	196.53
3	6-3	95.00	132.5	11.58	6.35	52.07	2.88	2.49	295.12
4	6-4	95.00	132.0	12.78	5.99	51.79	2.88	2.21	393.67
5	6-5	95.00	129.8	6.93	8.06	44.73	3.08	1.15	491.96
6	6-6	95.00	133.6	9.14	7.09	47.08	3.02	1.87	590.42
7	6-7	95.00	136.8	8.04	7.53	46.39	3.03	1.48	688.79

QP

INSTRUMENT CALIBRATION: Maxi 15 JUL 2009 03:46
Calibration successful

QP

Calibrating Auto DPM
Counting Standard for 14C
Calibration Complete: 14C
Counting Standard for 3H
Calibration Complete: 3H
Calibration Successful

QPQP

ID:TRITIUM 15 JUL 2000 04:58

USER: 2 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	41-1	95.00	138.1	6.61	8.35	46.37	3.03	1.43	97.83
2	41-2	38.80	133.6	6.34	13.51	44.48	4.86	1.82	138.62
3	41-3	0.05	128.1	0.00	0.00	0.00	0.00	0.00	139.45
4	41-4	0.05	128.4	20.00	200.00	80.00	100.00	3.13	140.35
5	41-5	0.05	129.2	40.00	141.42	60.00	115.47	4.18	141.23
6	41-6	0.05	130.8	0.00	0.00	20.00	200.00	17.61	142.13
7	41-7	0.05	128.6	20.00	200.00	80.00	100.00	2.99	143.03
8	41-8	0.05	129.7	0.00	0.00	80.00	200.00	10.08	143.95
9	41-9	0.05	129.4	0.00	0.00	20.00	200.00	9.09	144.83
10	41-10	0.05	128.7	40.00	141.42	100.00	89.44	1.77	145.72
11	41-11	0.05	132.5	40.00	141.42	80.00	100.00	2.87	146.62
12	41-12	0.05	130.0	60.00	115.47	160.00	70.71	0.90	147.52

ID:TRITIUM 15 JUL 2009 07:22

USER: 2 COMMENT:SILVER

PRESET TIME : 60.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
2	41-2	60.00	133.7	5.72	11.55	42.37	4.00	2.01	62.01
3	41-3	60.00	128.9	7.18	10.14	46.35	3.82	1.77	124.55
4	41-4	60.00	128.5	6.60	10.50	45.68	3.85	1.43	187.03
5	41-5	60.00	129.1	6.02	11.11	45.95	3.84	1.59	249.54
6	41-6	60.00	130.5	7.48	9.90	46.02	3.84	1.72	312.05
7	41-7	60.00	128.4	6.85	10.25	45.47	3.85	1.29	374.51
8	41-8	60.00	128.7	7.33	9.88	45.47	3.85	1.25	436.97
9	41-9	60.00	129.3	6.70	10.23	45.85	3.83	0.85	499.36
10	41-10	60.00	128.8	5.32	11.48	43.70	3.92	0.72	561.73
11	41-11	60.00	132.3	12.07	7.58	50.98	3.63	1.03	624.18

QPQP

ID:TRITIUM 15 JUL 2009 17:57

USER: 3 COMMENT:SILVER

PRESET TIME : 15.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	29-1	15.00	130.3	42.87	7.90	81.20	5.74	0.33	15.80
MISSING SAMPLE									
13	30-1	15.00	127.5	6.60	21.29	44.13	7.84	2.02	32.40
14	30-2	15.00	127.6	9.60	17.46	44.27	7.84	2.26	48.76
15	30-3	15.00	127.7	13.13	14.68	51.80	7.23	1.67	65.11
16	30-4	15.00	128.5	7.53	19.79	46.33	7.65	1.96	81.47
17	30-5	15.00	128.4	5.53	23.36	42.47	7.99	2.00	97.83
18	30-6	15.00	124.2	6.20	21.93	43.67	7.88	1.86	114.20
19	30-7	15.00	128.0	7.67	19.52	43.73	7.87	1.96	130.56
20	30-8	15.00	128.5	22.07	11.17	60.87	6.66	1.31	146.93
21	30-9	15.00	121.9	19.60	11.88	58.07	6.82	1.43	163.30

QPQ'

SRB
7.15.09

Sample Count Start Time:	14 Jul 2009 16:25:55		
Data Capture Date	14 Jul 2009 18:01:14		
User Filename	S02071406-1A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	6-1	95.00
H#, Total Counts:	129.3	3859	
Start, End, X-Axis:	0	990	Channel Number

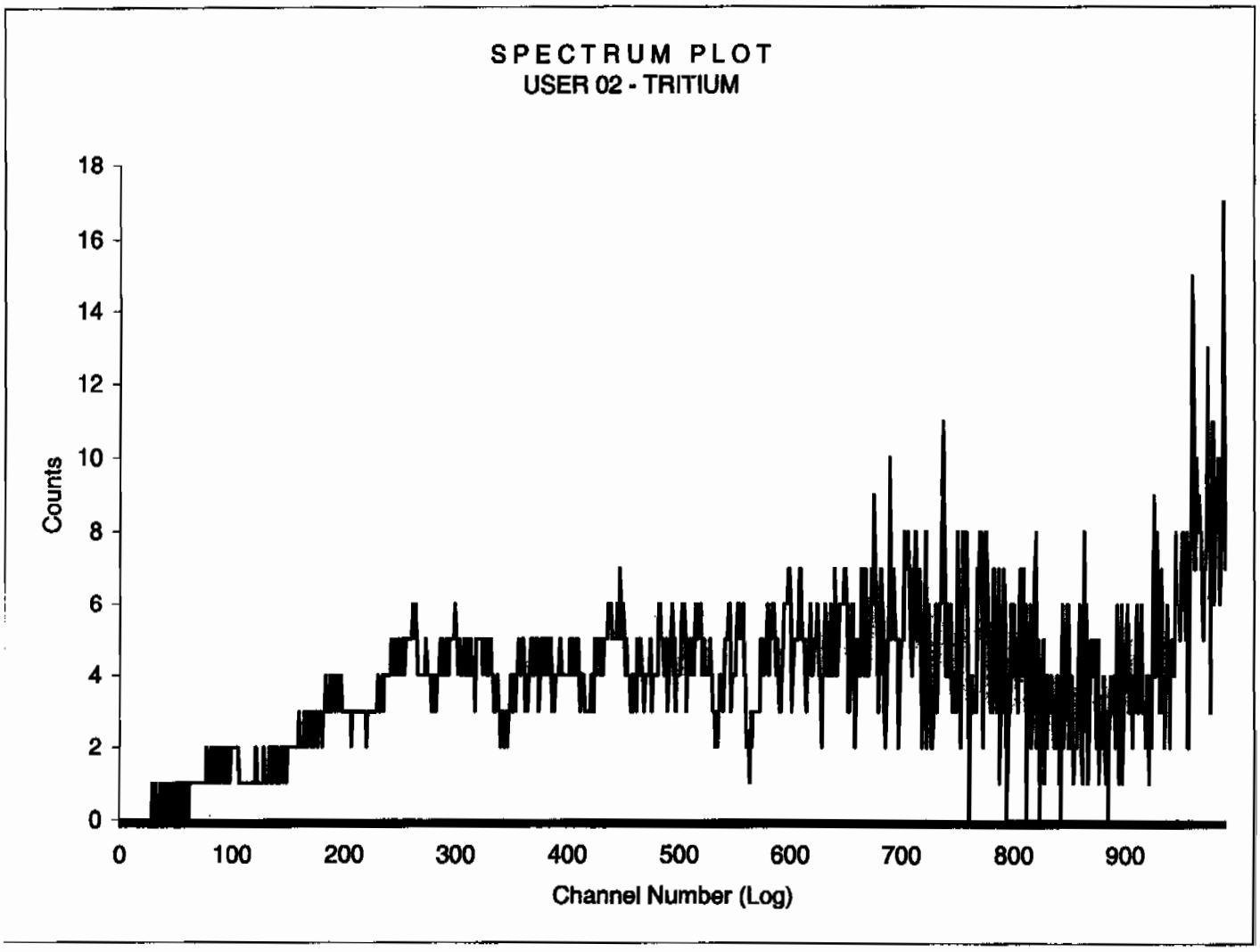

Sample Count Start Time:	14 Jul 2009 18:04:25		
Data Capture Date	14 Jul 2009 19:39:44		
User Filename	S02071406-2A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	6-2	95.00
H#, Total Counts:	129.2	4087	
Start, End, X-Axis:	0	990	Channel Number

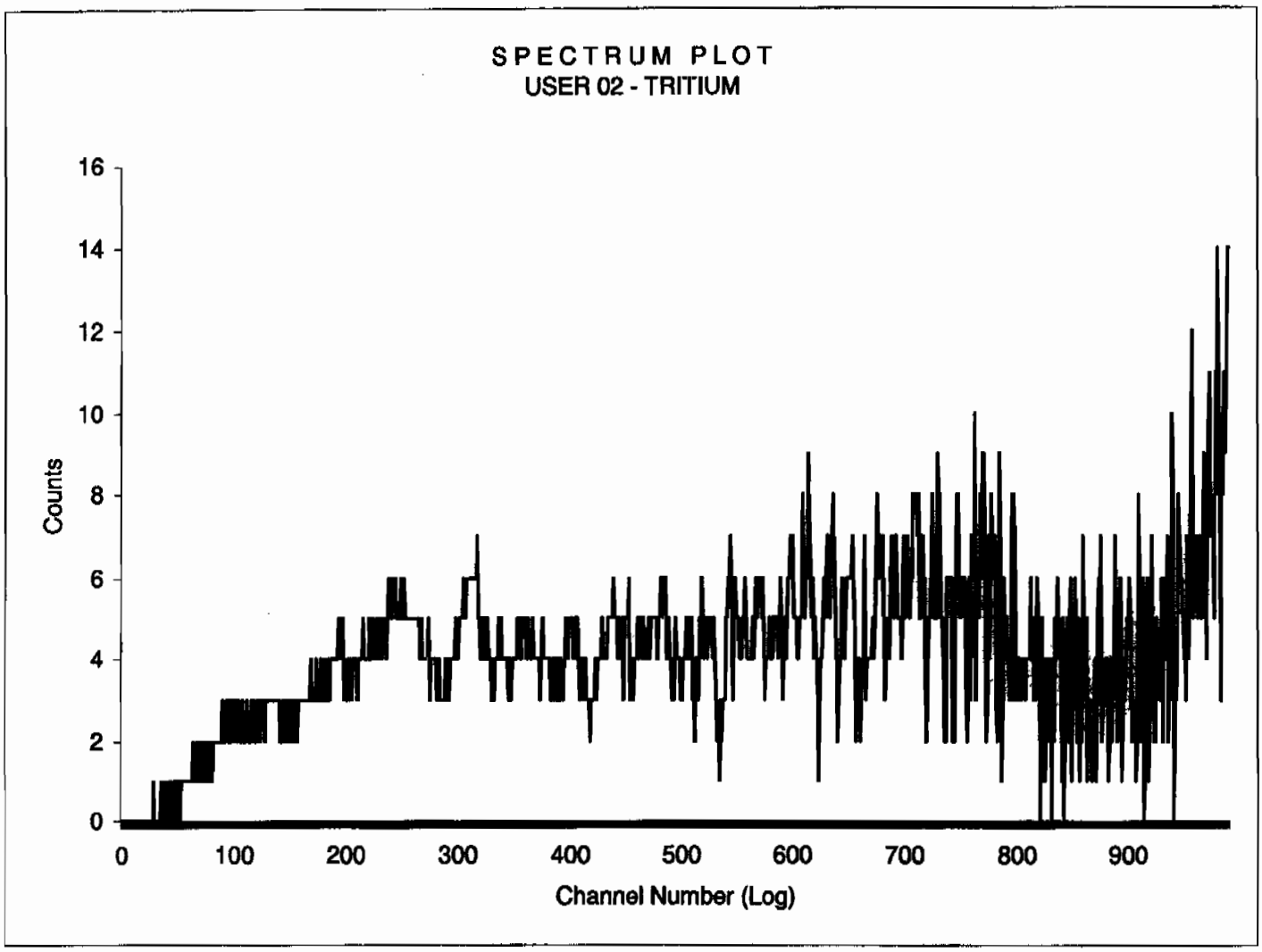

Sample Count Start Time:	14 Jul 2009 19:43:00		
Data Capture Date	14 Jul 2009 21:18:20		
User Filename	S02071406-3A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	6-3	95.00
H#, Total Counts:	132.5	4672	
Start, End, X-Axis:	0	990	Channel Number

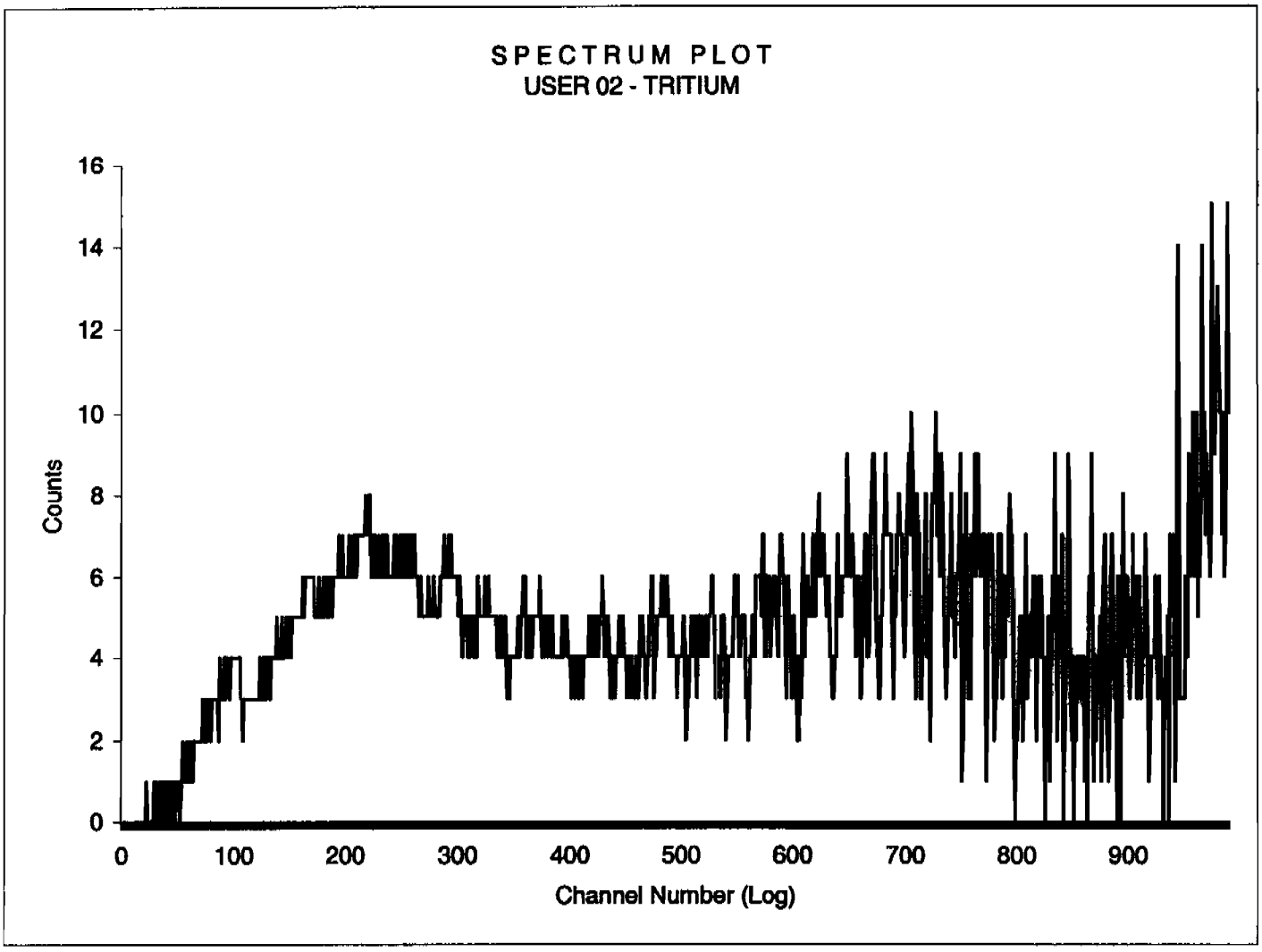

Sample Count Start Time:	14 Jul 2009 21:21:33		
Data Capture Date	14 Jul 2009 22:56:53		
User Filename	S02071406-4A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	6-4	95.00
H#, Total Counts:	132.0	4609	
Start, End, X-Axis:	0	990	Channel Number

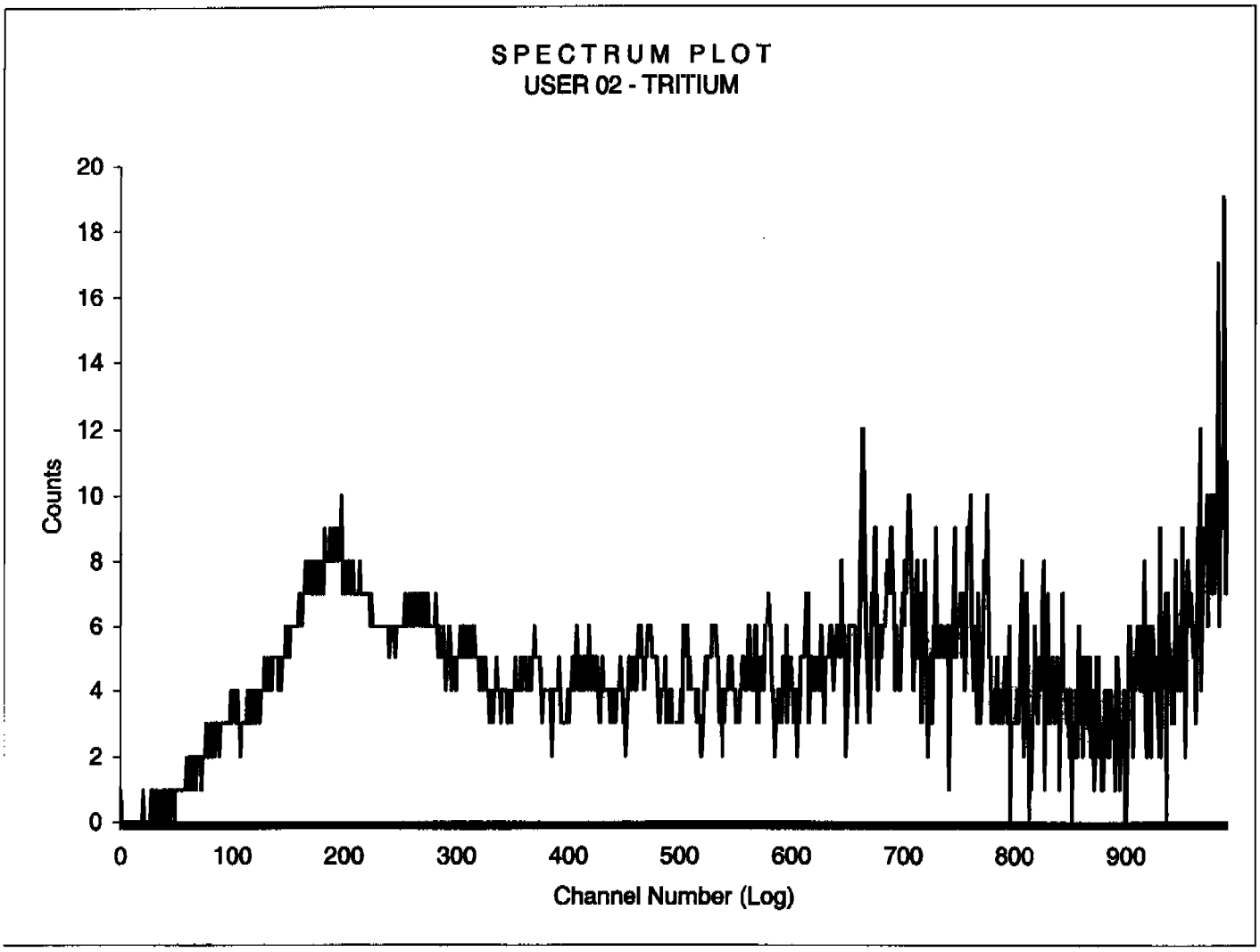

Sample Count Start Time:	14 Jul 2009 22:59:51		
Data Capture Date	15 Jul 2009 00:35:10		
User Filename	S02071506-5A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	6-5	95.00
H#, Total Counts:	129.8	3966	
Start, End, X-Axis:	0	990	Channel Number

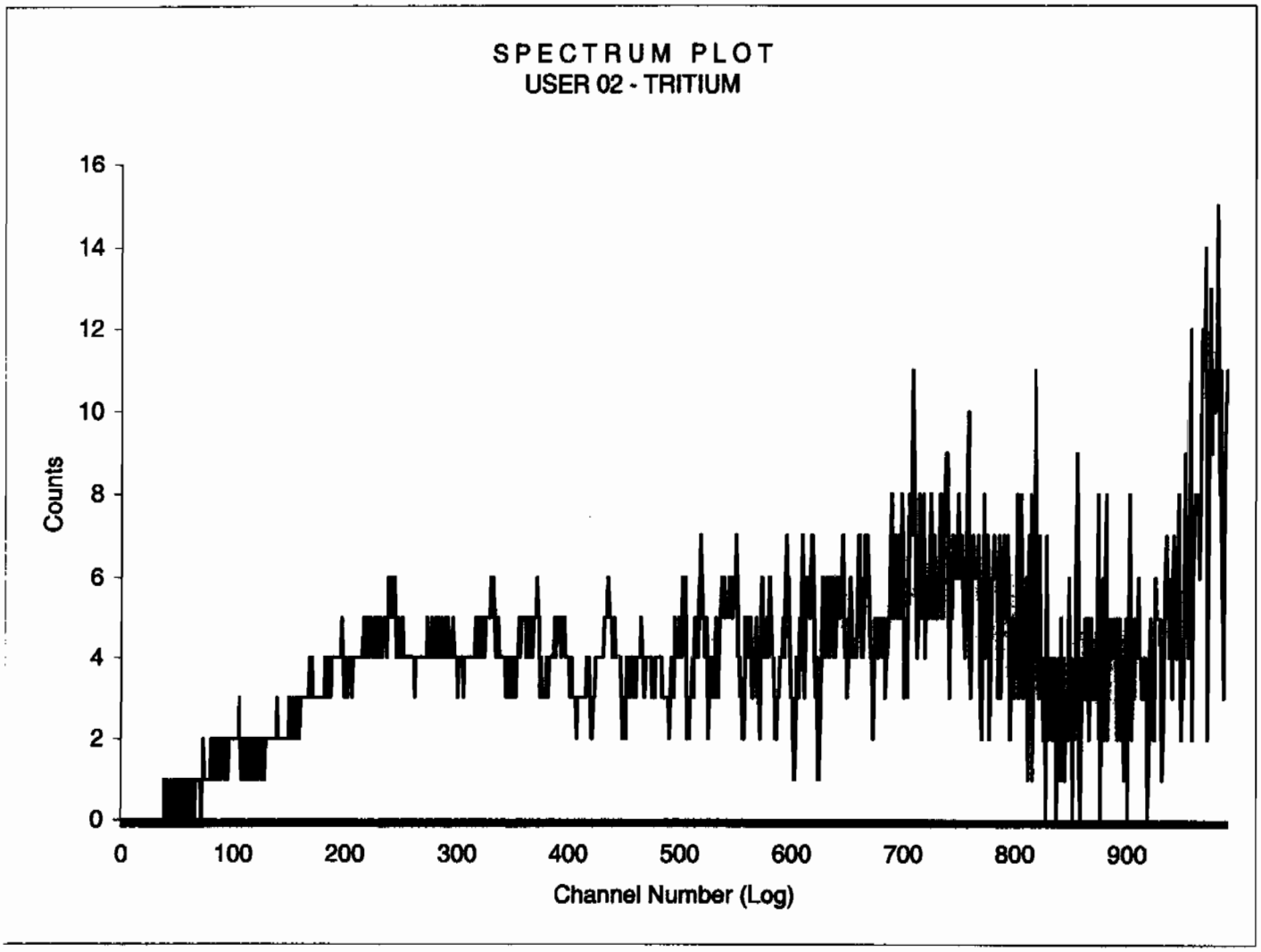

Sample Count Start Time:	15 Jul 2009 00:38:18		
Data Capture Date	15 Jul 2009 02:13:38		
User Filename	S02071506-6A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	6-6	95.00
H#, Total Counts:	133.6	4213	
Start, End, X-Axis:	0	990	Channel Number

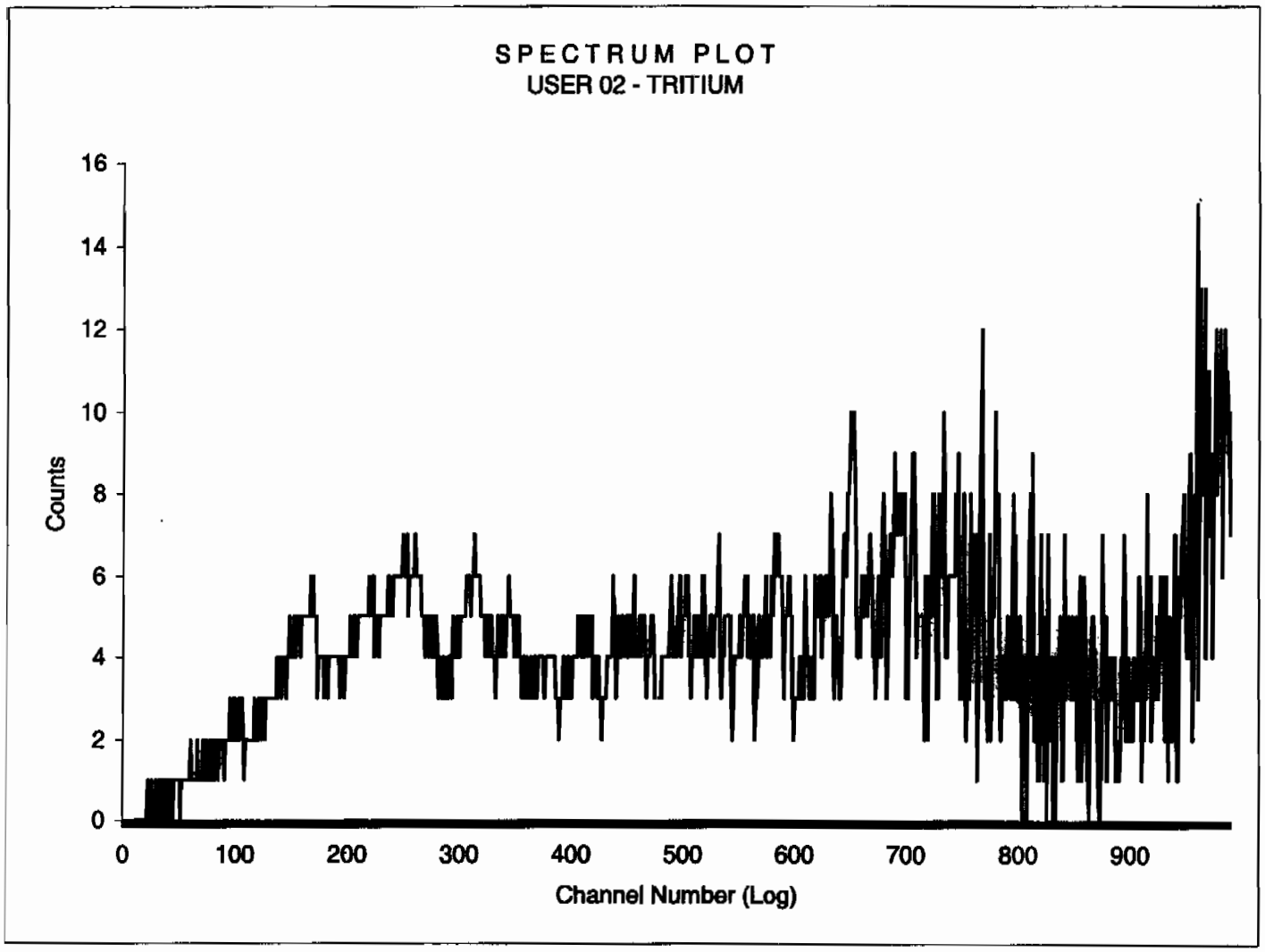

Sample Count Start Time:	15 Jul 2009 02:16:40		
Data Capture Date	15 Jul 2009 03:52:00		
User Filename	S02071506-7A.XLS		
	U02071406-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	6-7	95.00
H#, Total Counts:	136.8	4152	
Start, End, X-Axis:	0	990	Channel Number

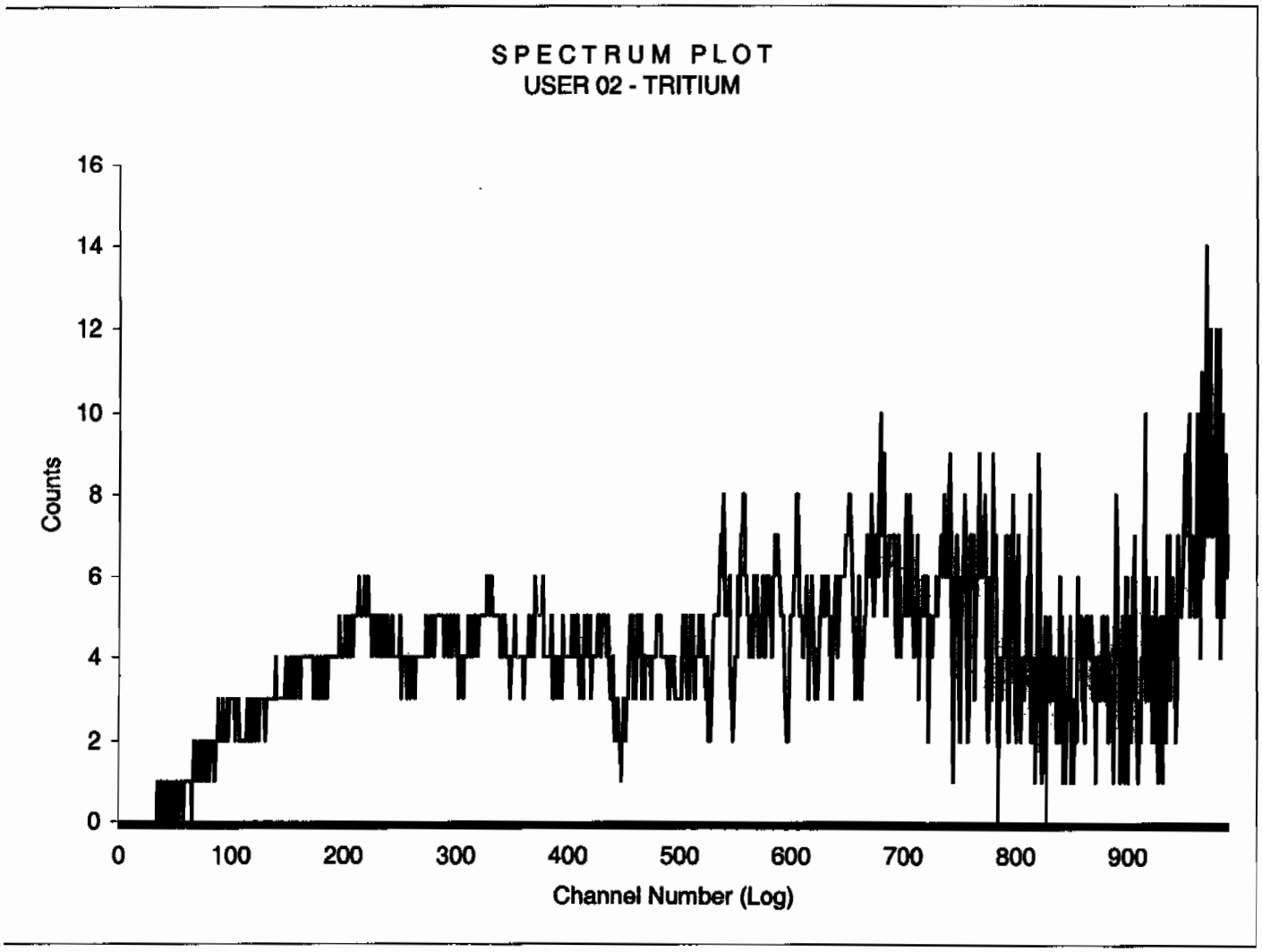

Sample Count Start Time:	15 Jul 2009 05:08:32		
Data Capture Date	15 Jul 2009 06:43:58		
User Filename	S02071541-1A.XLS		
	U02071541-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	41-1	95.00
H#, Total Counts:	138.1	4171	
Start, End, X-Axis:	0	990	Channel Number

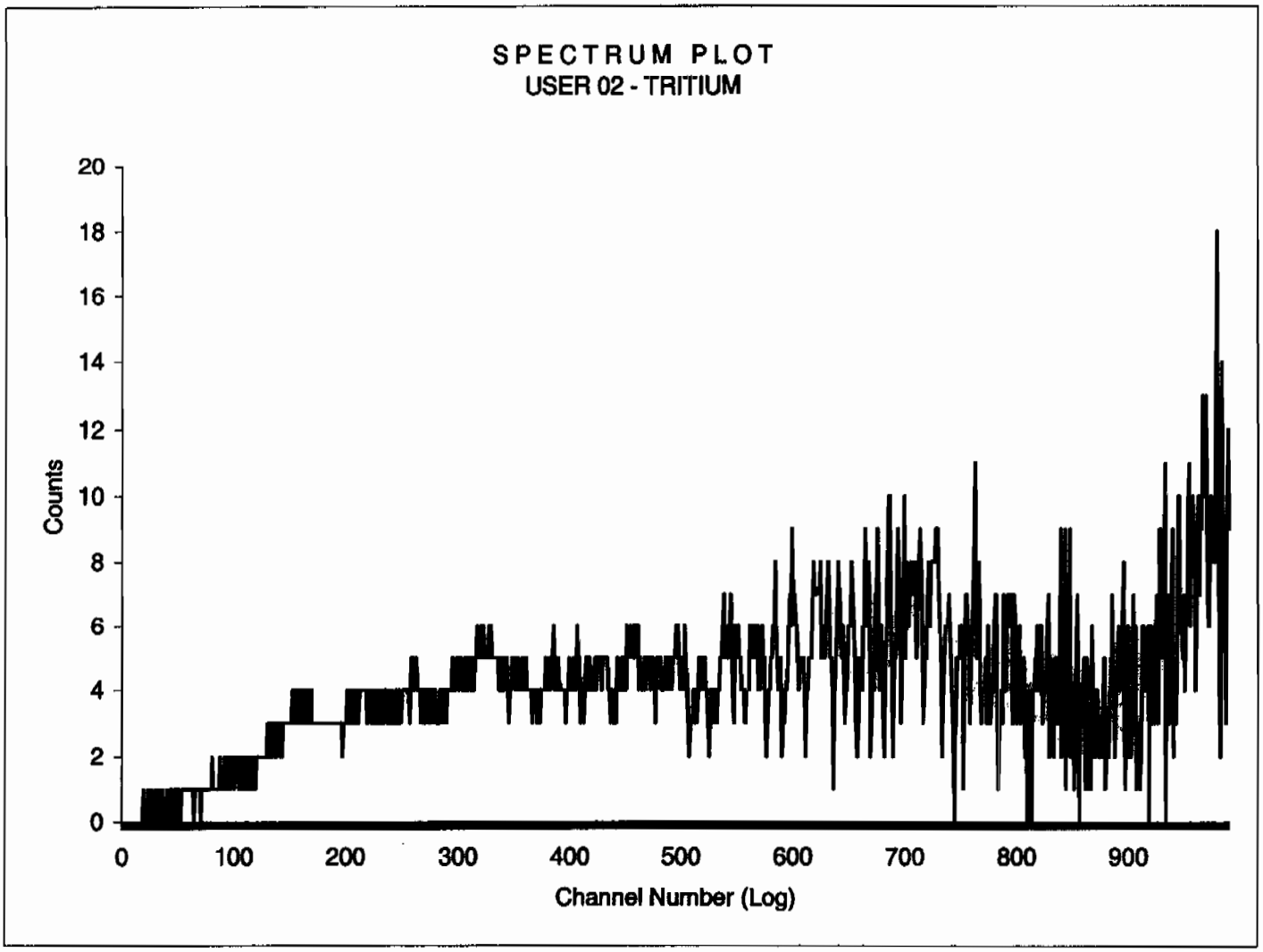

Sample Count Start Time:	15 Jul 2009 07:41:21		
Data Capture Date	15 Jul 2009 08:41:47		
User Filename	S02071541-2B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	41-2	60.00
H#, Total Counts:	133.7	2407	
Start, End, X-Axis:	0	990	Channel Number

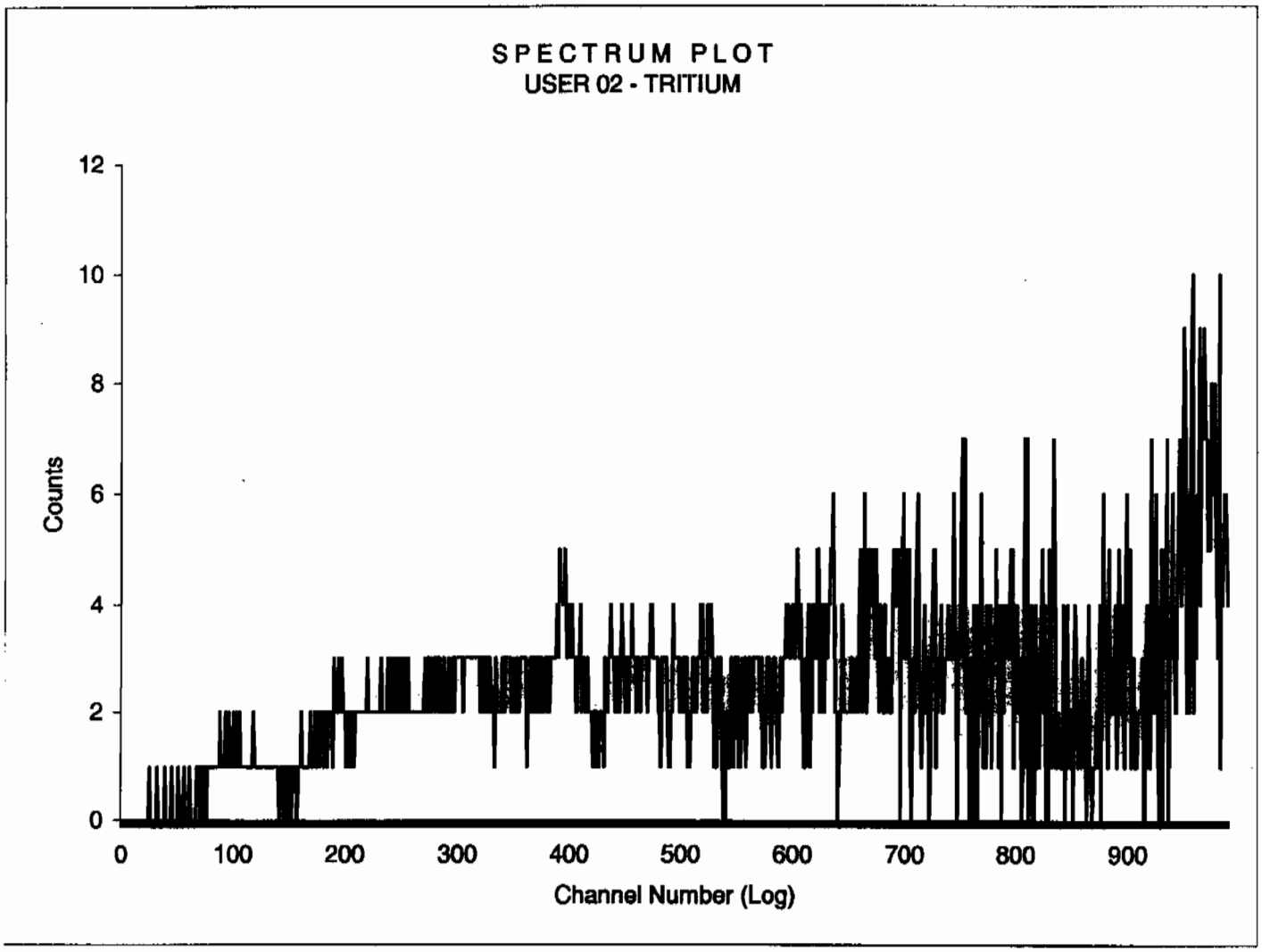

Sample Count Start Time:	15 Jul 2009 08:43:53		
Data Capture Date	15 Jul 2009 09:44:21		
User Filename	S02071541-3B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	41-3	60.00
H#, Total Counts:	128.9	2594	
Start, End, X-Axis:	0	990	Channel Number

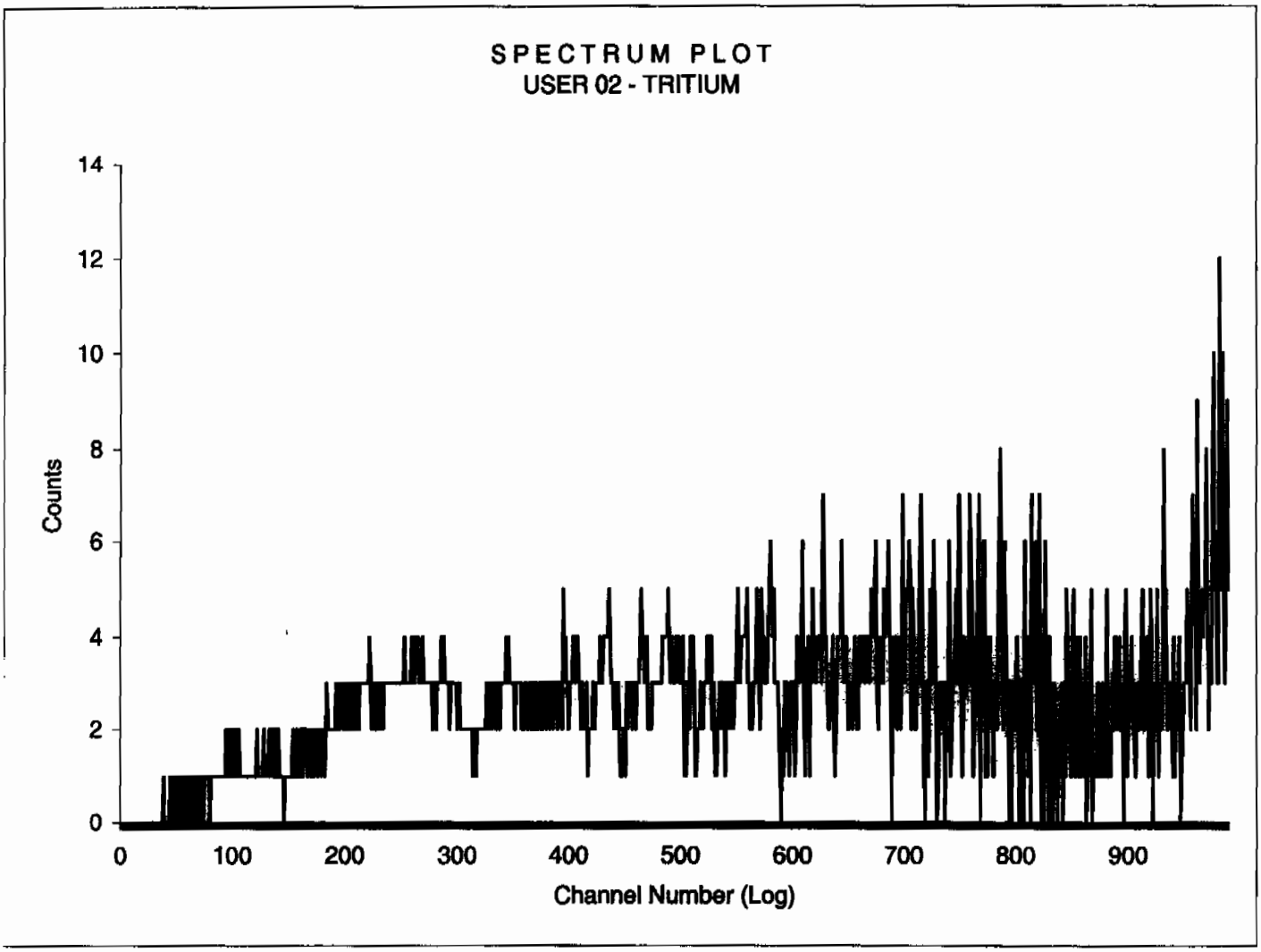

Sample Count Start Time:	15 Jul 2009 09:46:22		
Data Capture Date	15 Jul 2009 10:46:48		
User Filename	S02071541-4B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	41-4	60.00
H#, Total Counts:	128.5	2530	
Start, End, X-Axis:	0	990	Channel Number

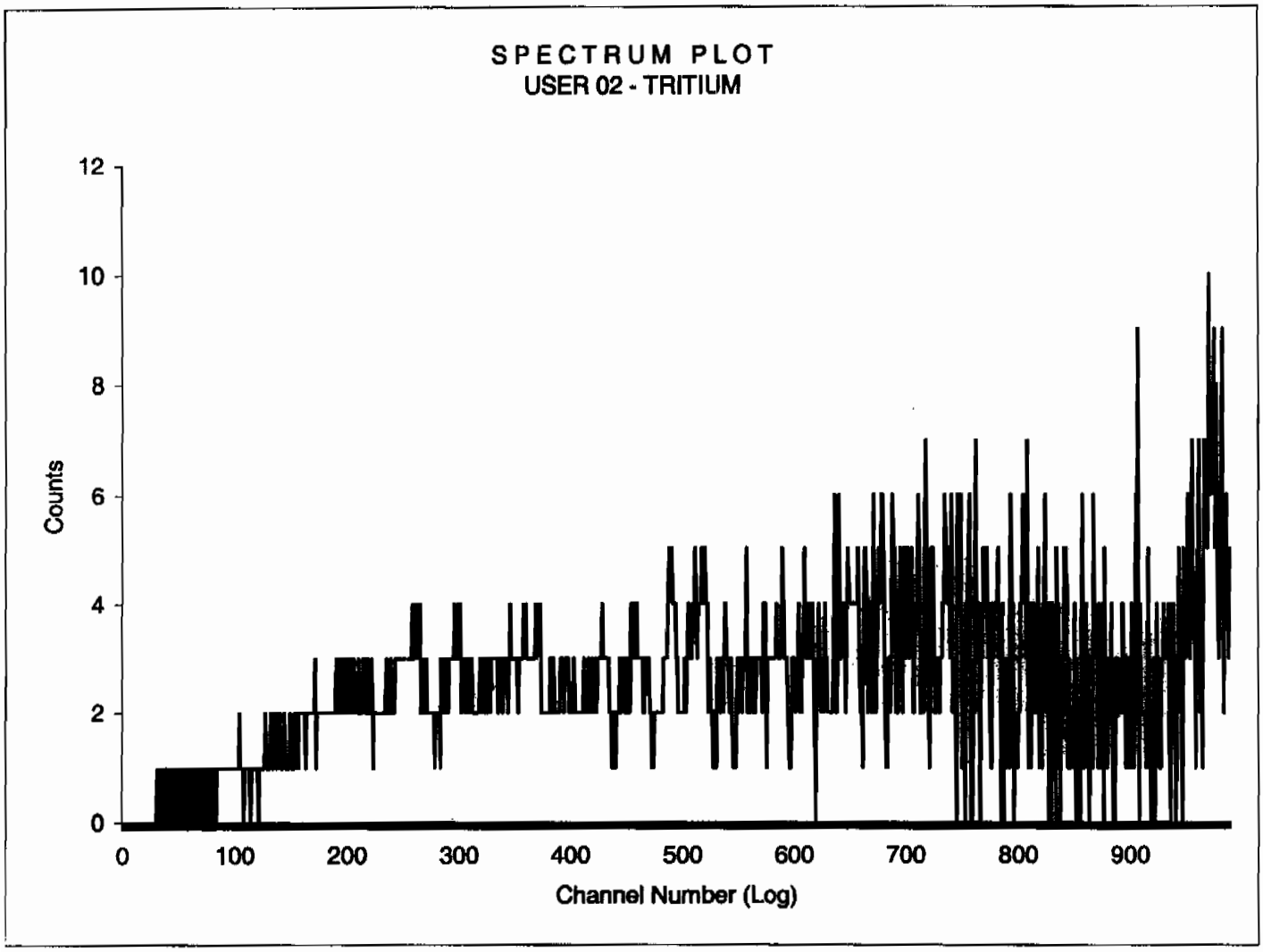

Sample Count Start Time:	15 Jul 2009 10:48:52		
Data Capture Date	15 Jul 2009 11:49:19		
User Filename	S02071541-5B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	41-5	60.00
H#, Total Counts:	129.1	2559	
Start, End, X-Axis:	0	990	Channel Number

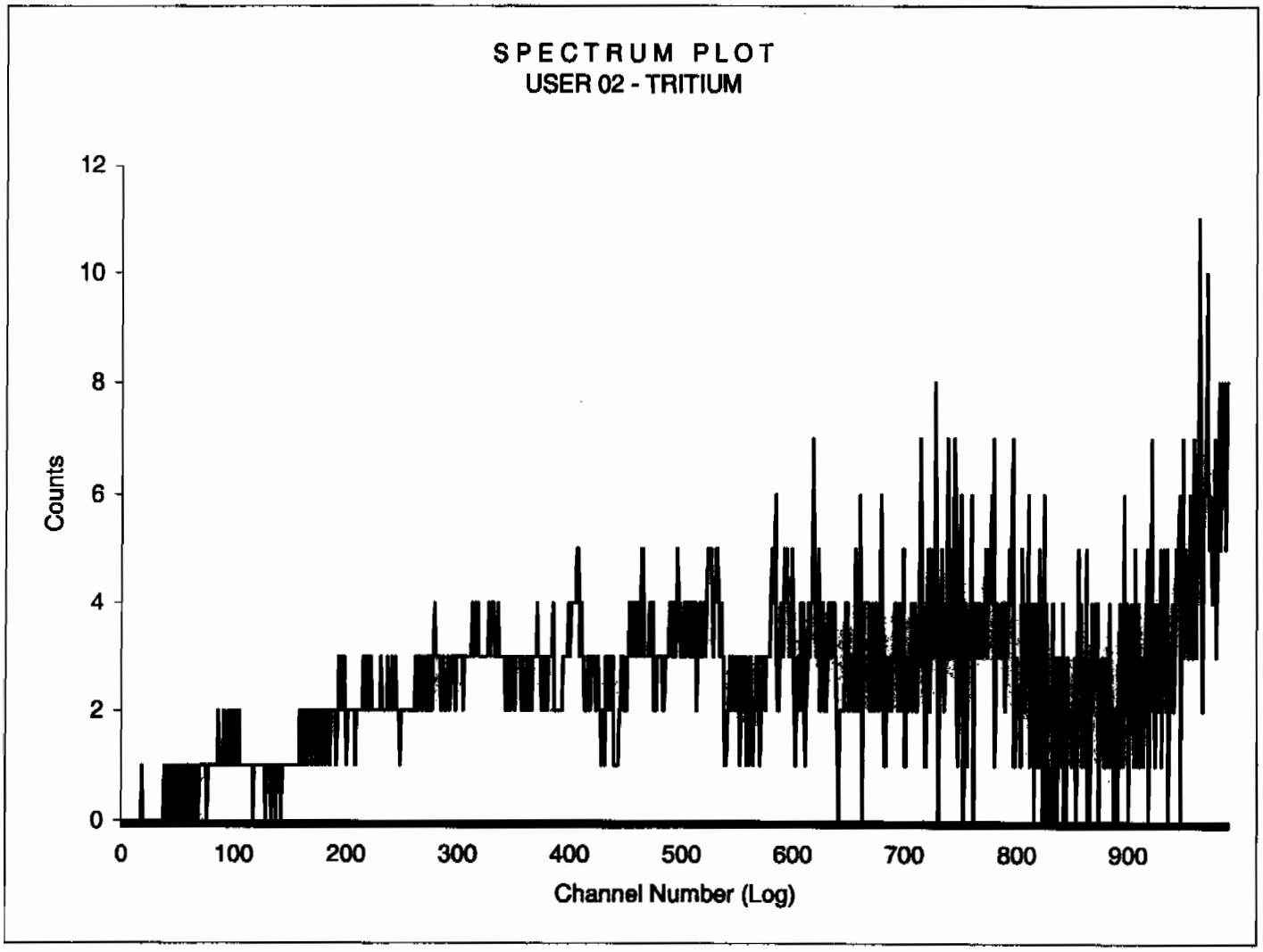

Sample Count Start Time:	15 Jul 2009 11:51:23		
Data Capture Date	15 Jul 2009 12:51:49		
User Filename	S02071541-6B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	41-6	60.00
H#, Total Counts:	130.5	2579	
Start, End, X-Axis:	0	990	Channel Number

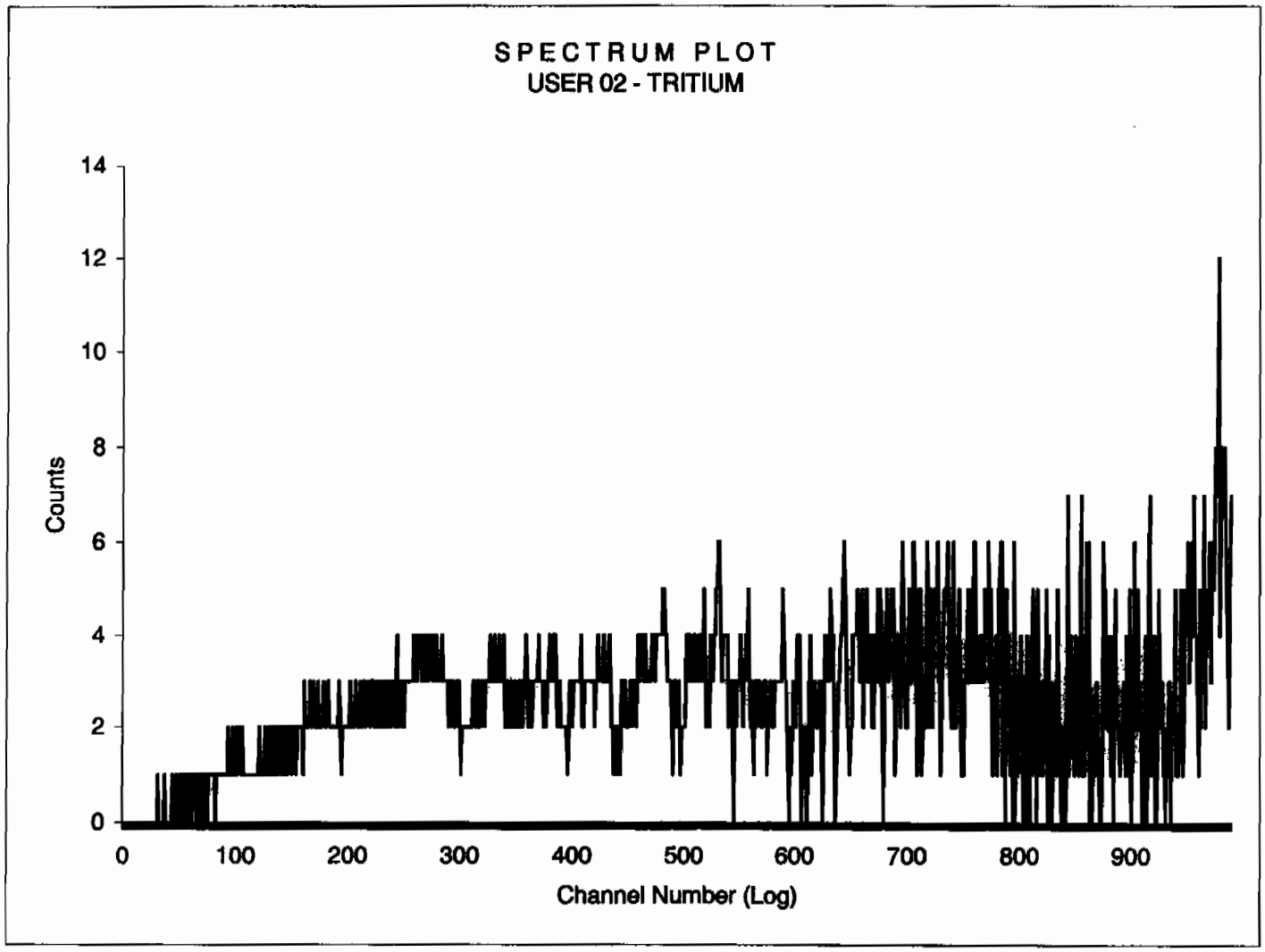

Sample Count Start Time:	15 Jul 2009 12:53:51		
Data Capture Date	15 Jul 2009 13:54:17		
User Filename	S02071541-7B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	41-7	60.00
H#, Total Counts:	128.4	2542	
Start, End, X-Axis:	0	990	Channel Number

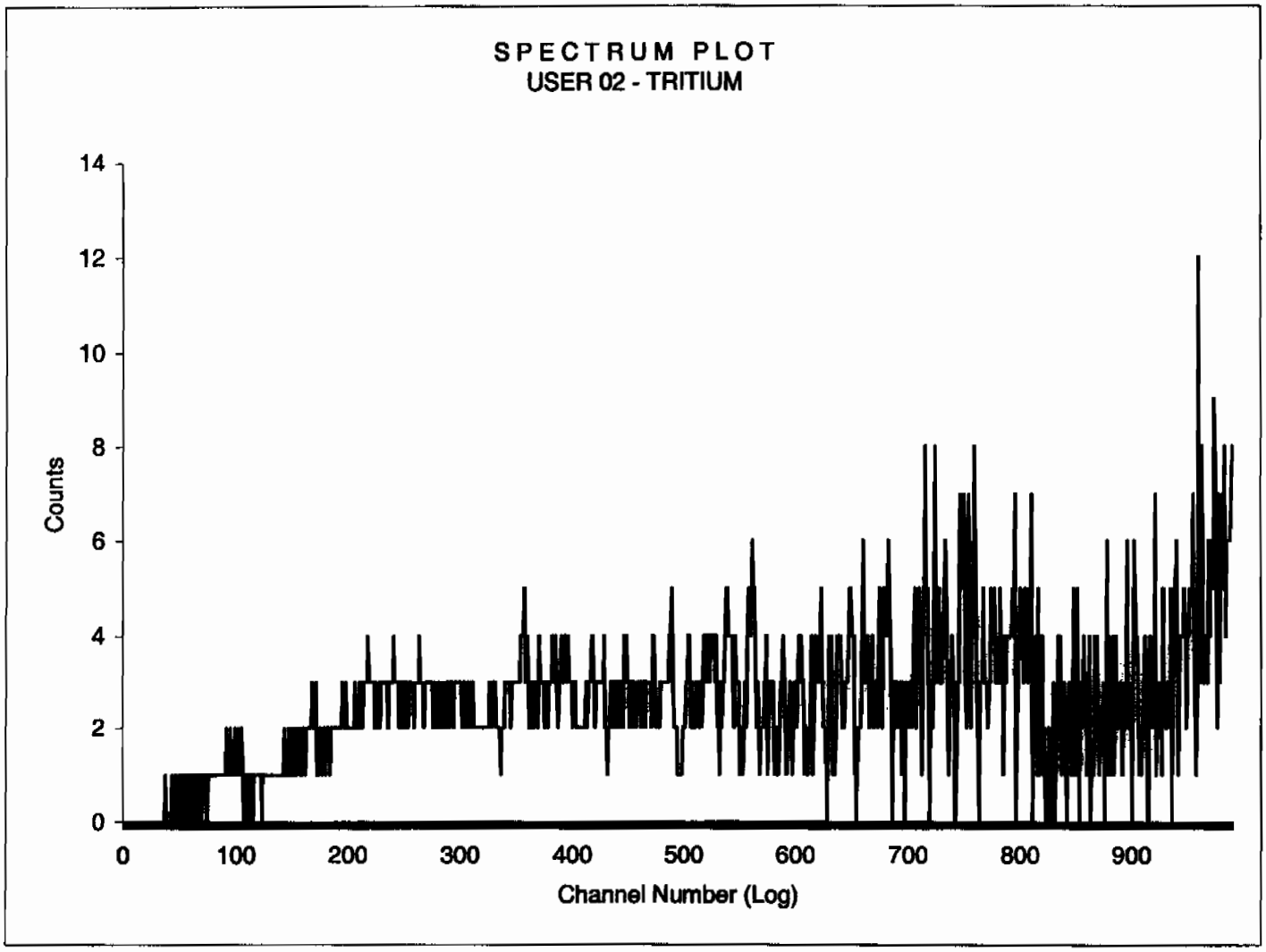

Sample Count Start Time:	15 Jul 2009 13:56:18		
Data Capture Date	15 Jul 2009 14:56:44		
User Filename	S02071541-8B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	41-8	60.00
H#, Total Counts:	128.7	2548	
Start, End, X-Axis:	0	990	Channel Number

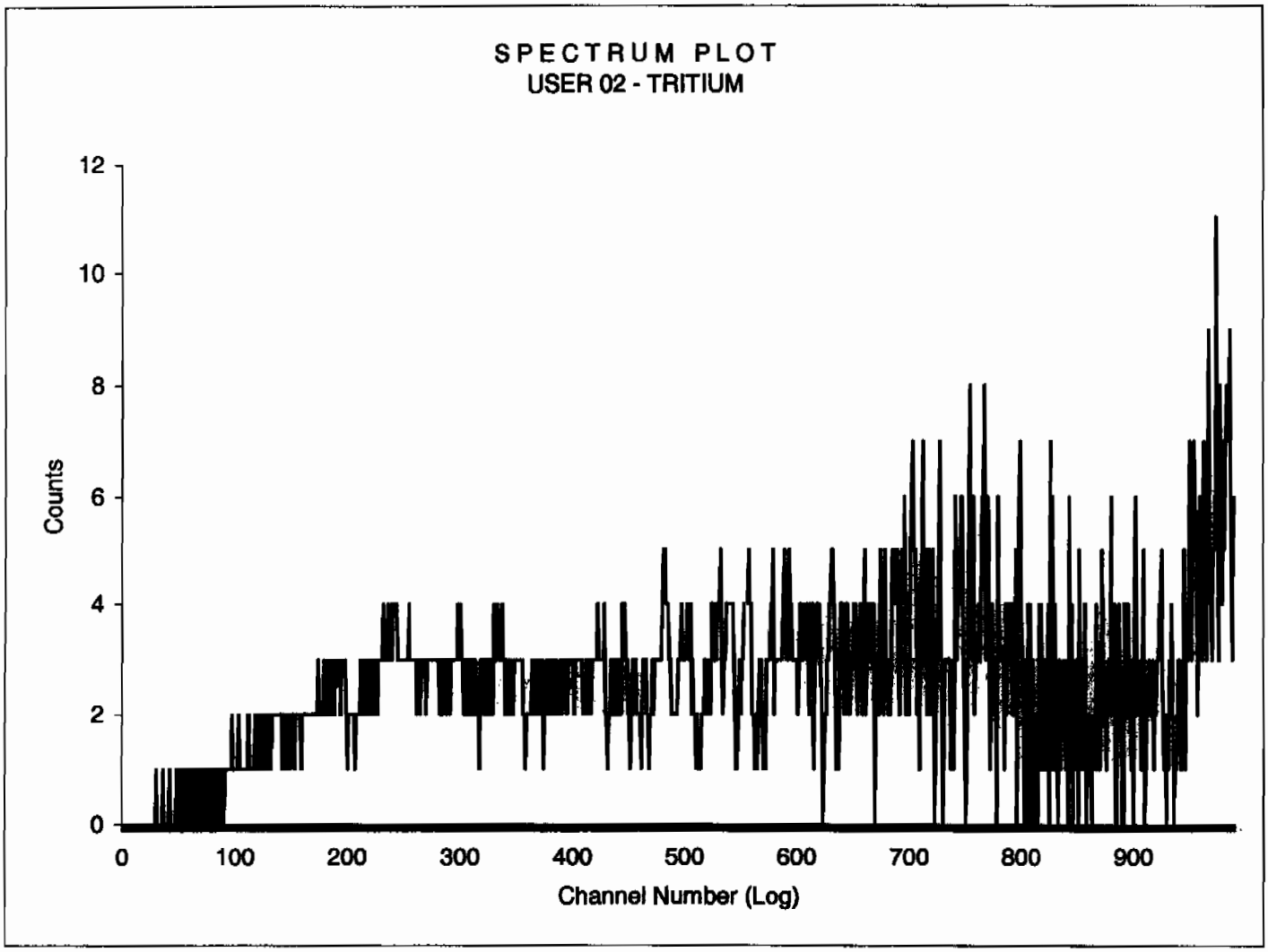

Sample Count Start Time:	15 Jul 2009 14:58:42		
Data Capture Date	15 Jul 2009 15:59:08		
User Filename	S02071541-9B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	41-9	60.00
H#, Total Counts:	129.3	2573	
Start, End, X-Axis:	0	990	Channel Number

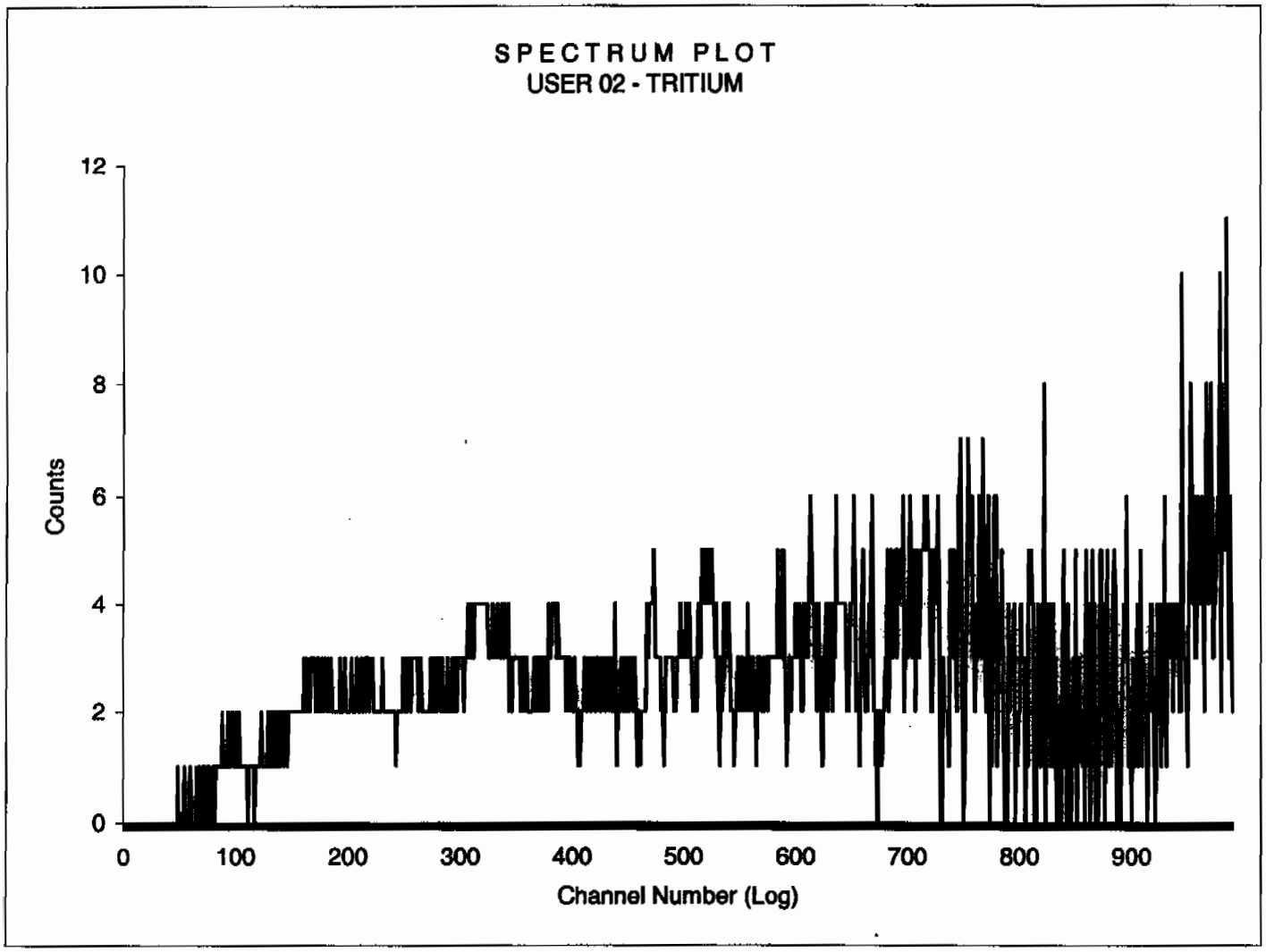

Sample Count Start Time:	15 Jul 2009 16:01:04		
Data Capture Date	15 Jul 2009 17:01:30		
User Filename	S02071541-10B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	41-10	60.00
H#, Total Counts:	128.8	2395	
Start, End, X-Axis:	0	990	Channel Number

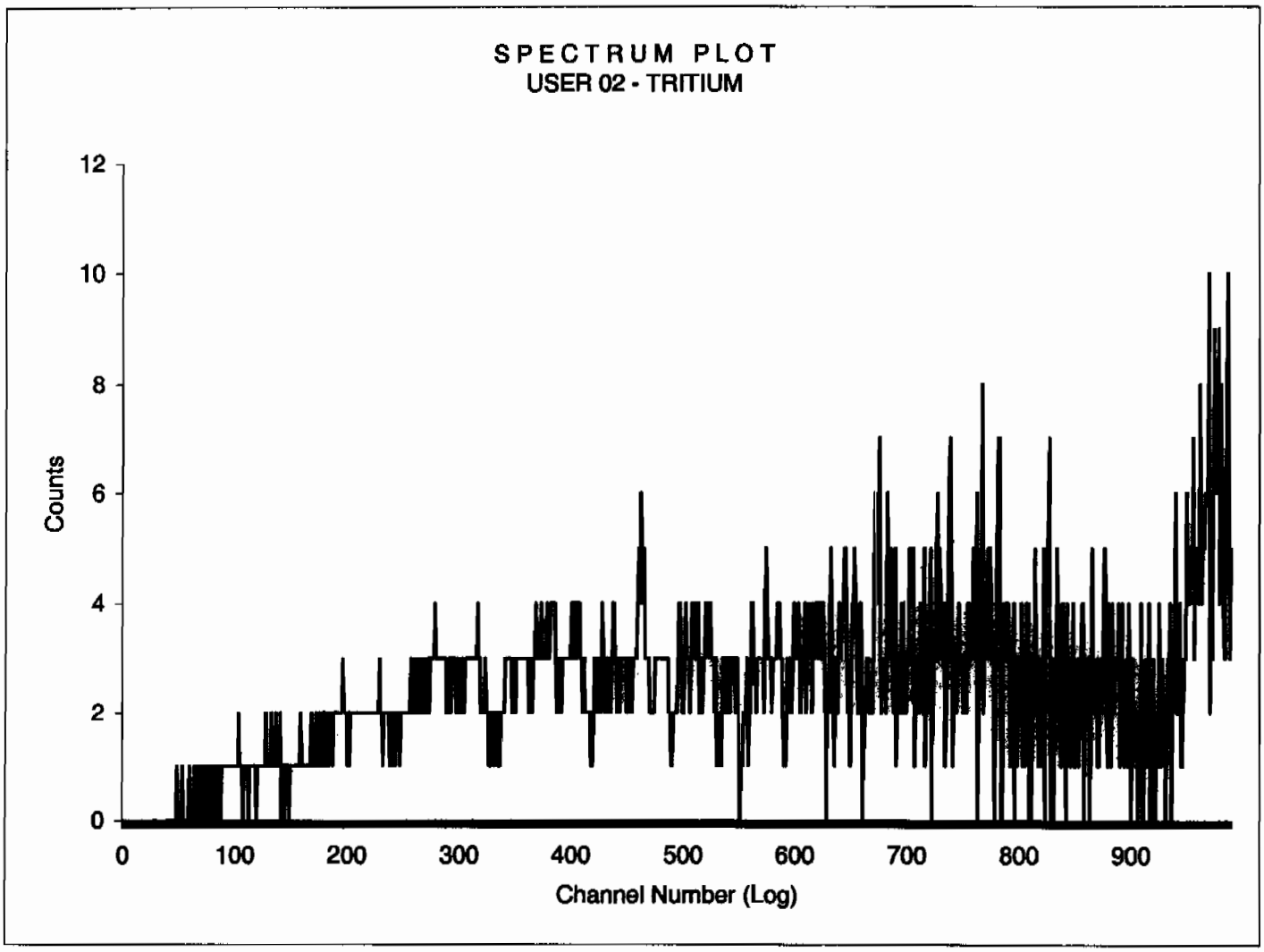

Sample Count Start Time:	15 Jul 2009 17:03:31		
Data Capture Date	15 Jul 2009 18:03:57		
User Filename	S02071541-11B.XLS		
	U02071541-2A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	41-11	60.00
H#, Total Counts:	132.3	2870	
Start, End, X-Axis:	0	990	Channel Number

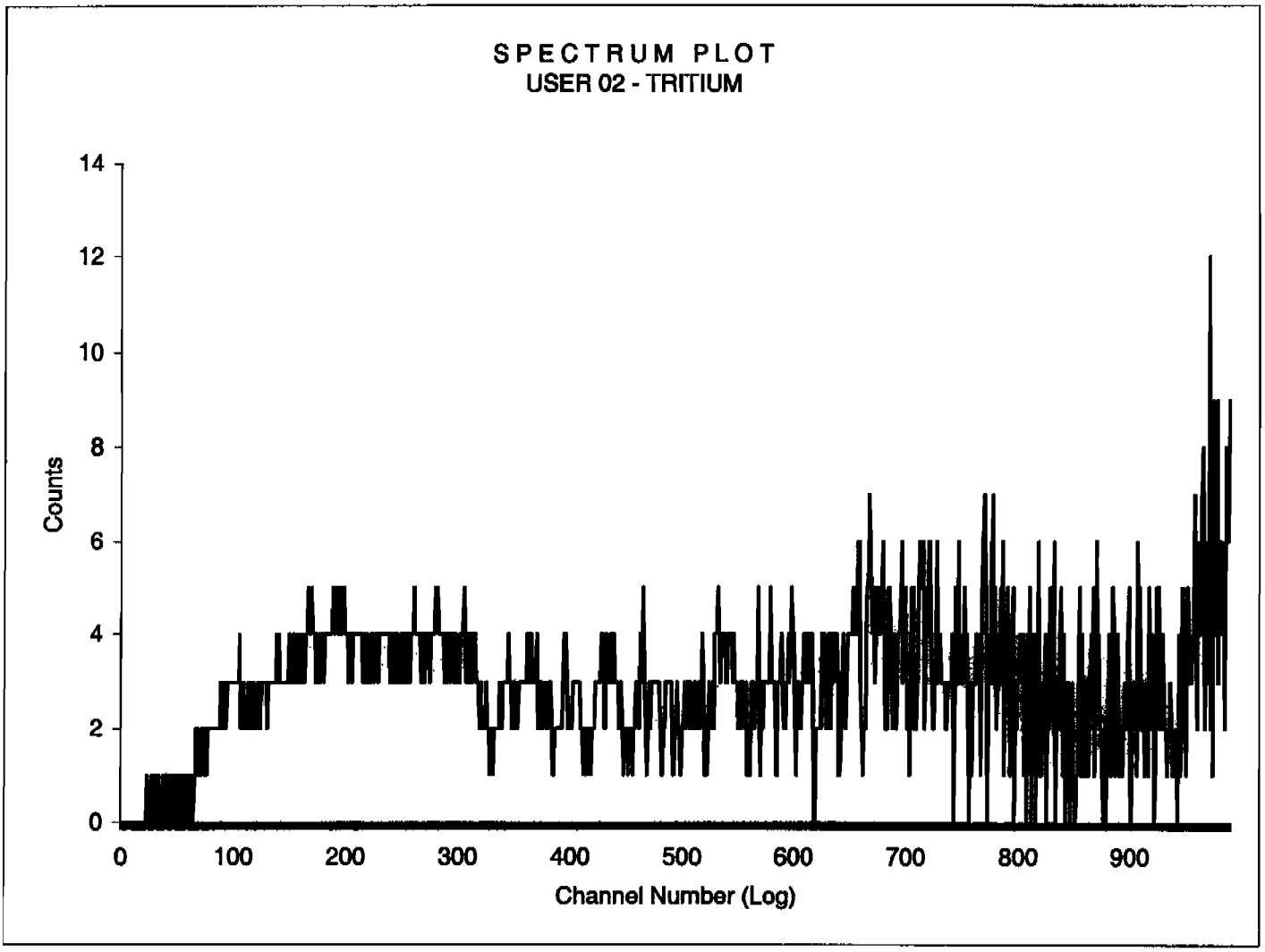

Sample Count Start Time:	15 Jul 2009 18:05:02		
Data Capture Date	15 Jul 2009 18:20:26		
User Filename	S03071529-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	29-1	15.00
H#, Total Counts:	130.3	1167	
Start, End, X-Axis:	0	990	Channel Number

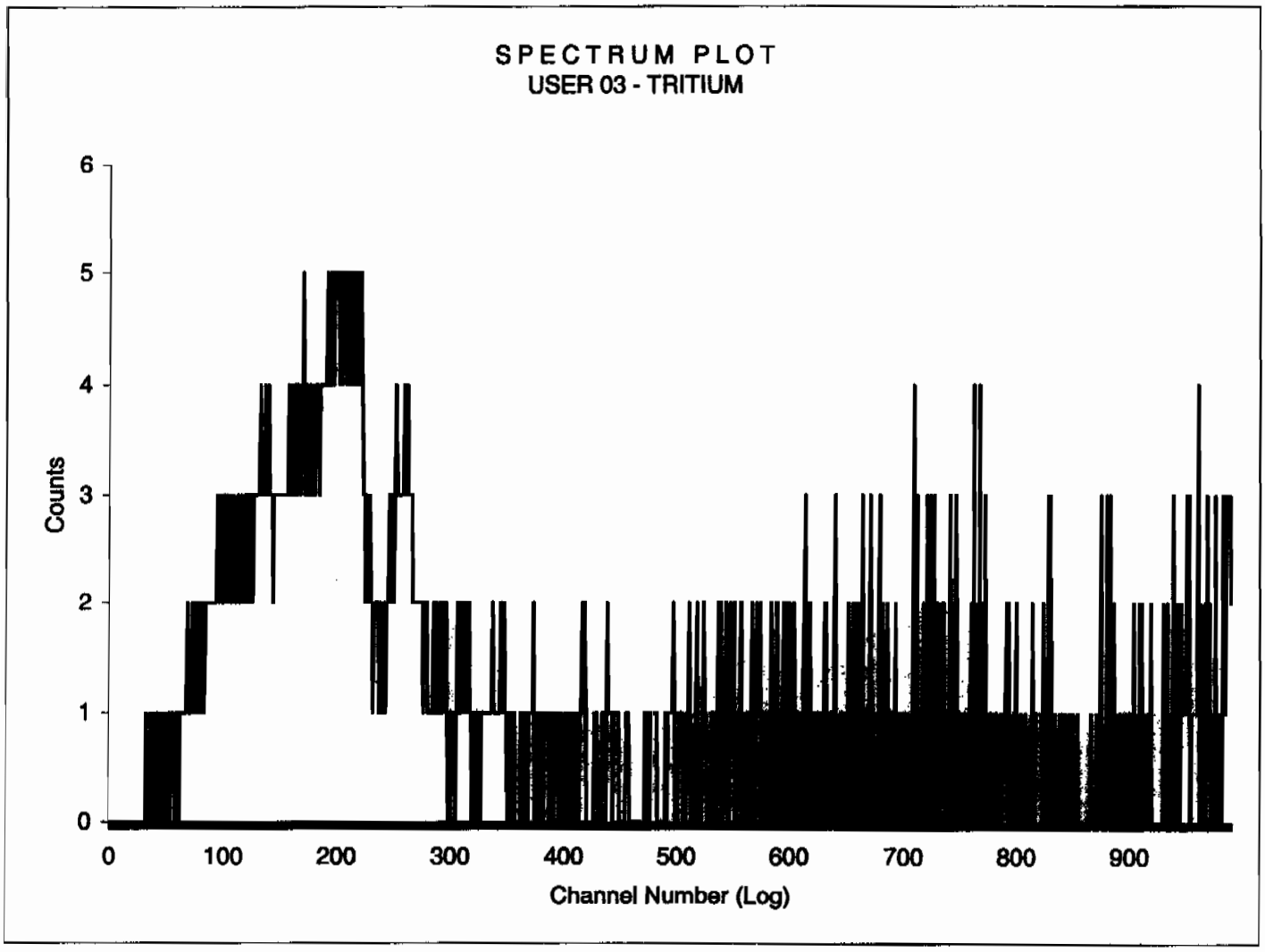

BACKGROUND AND EFFICIENCY DATA

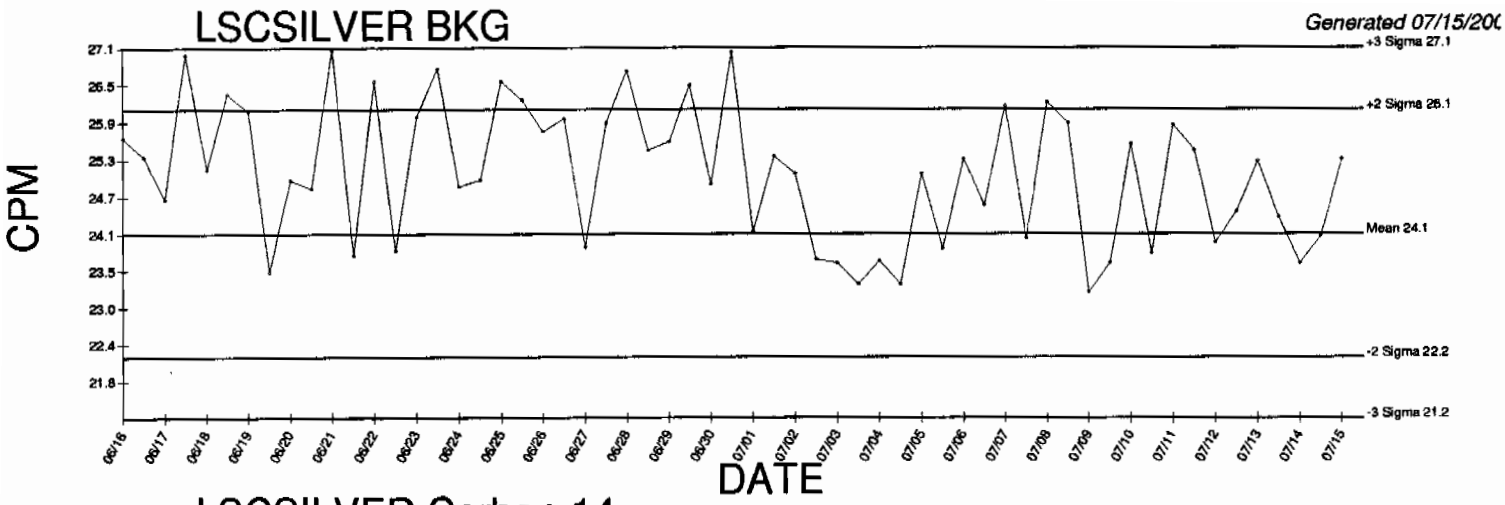

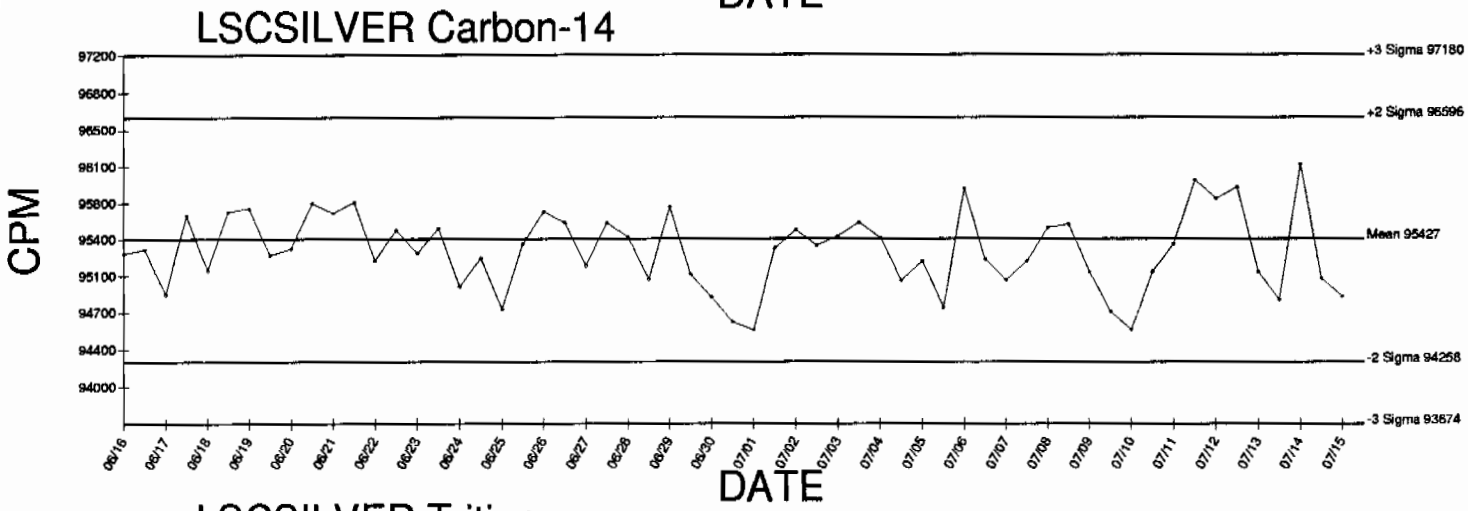

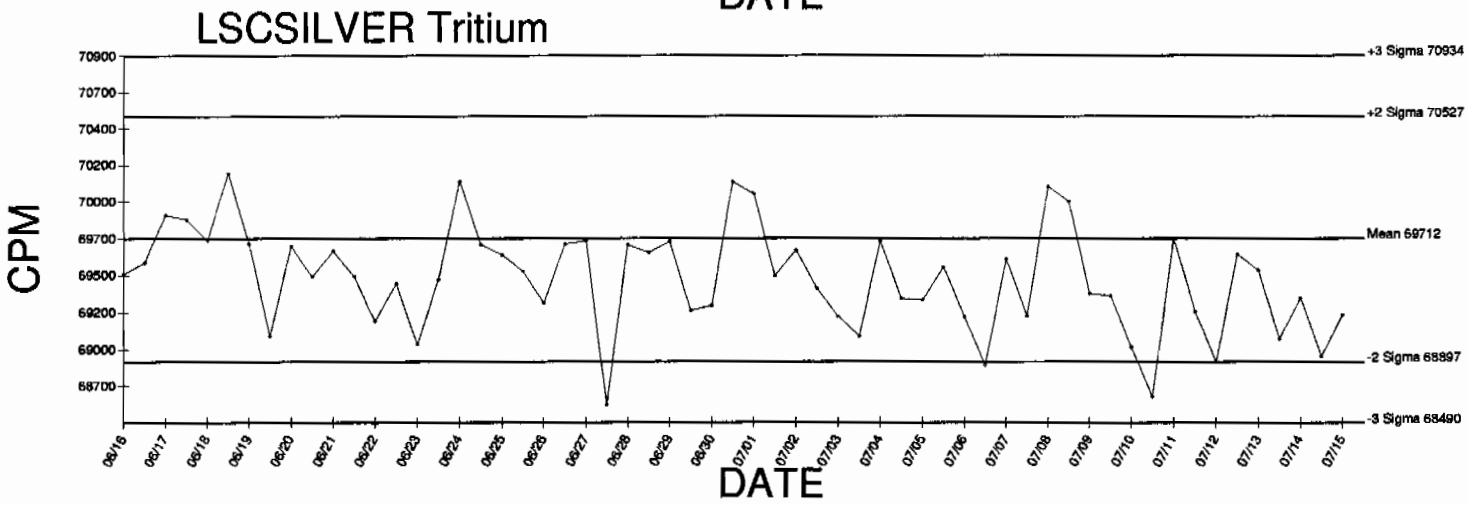

● Denotes Outlier

QA filename : DKA100:[ENV_ALPHA.QA.W]W035.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-JAN-2009 12:56:58 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.294859 through 0.314859

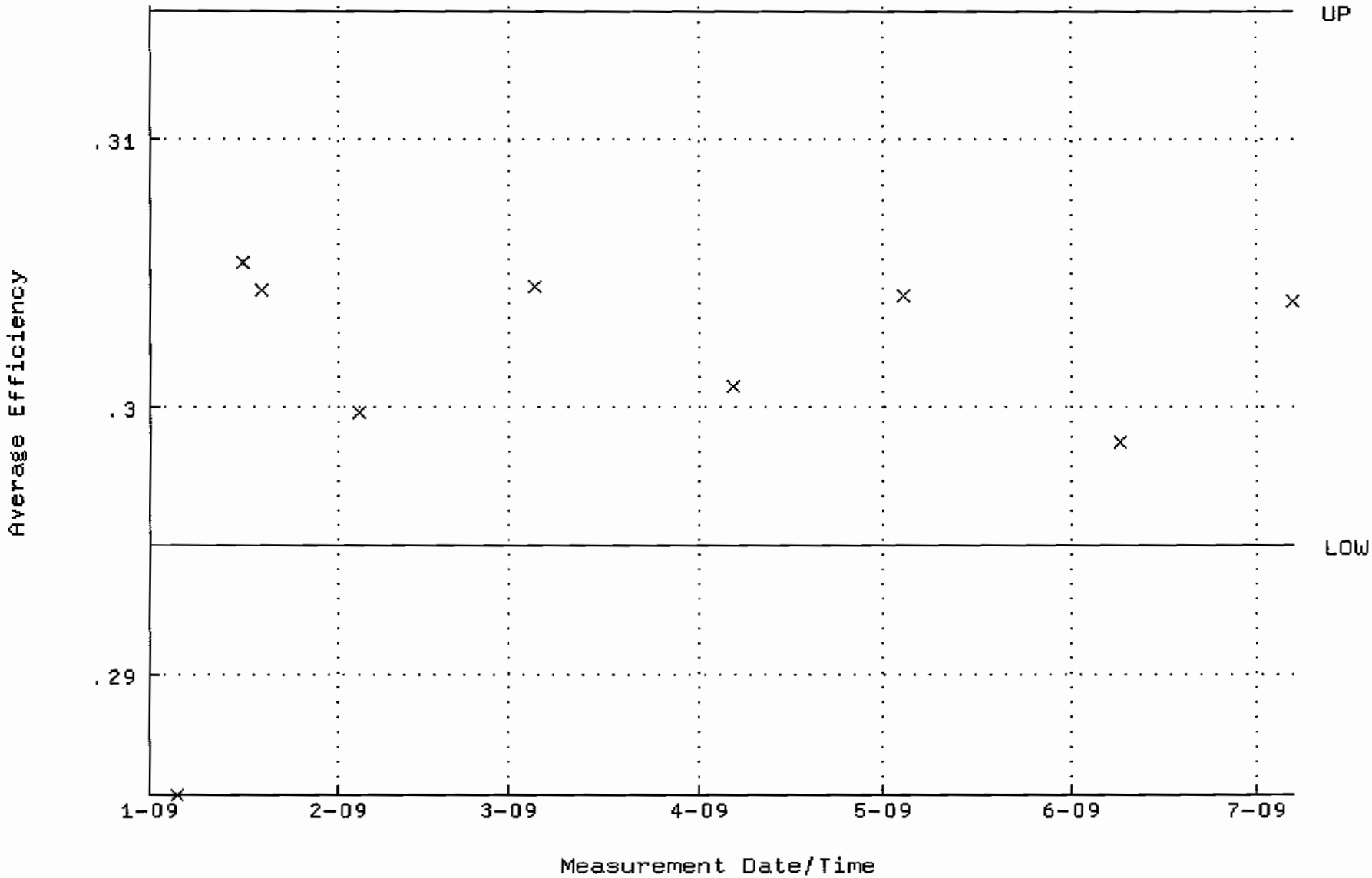

QA filename : DKA100:[ENV_ALPHA.QA.W]W035.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-JAN-2009 12:56:58 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 85.3984 through 94.3878

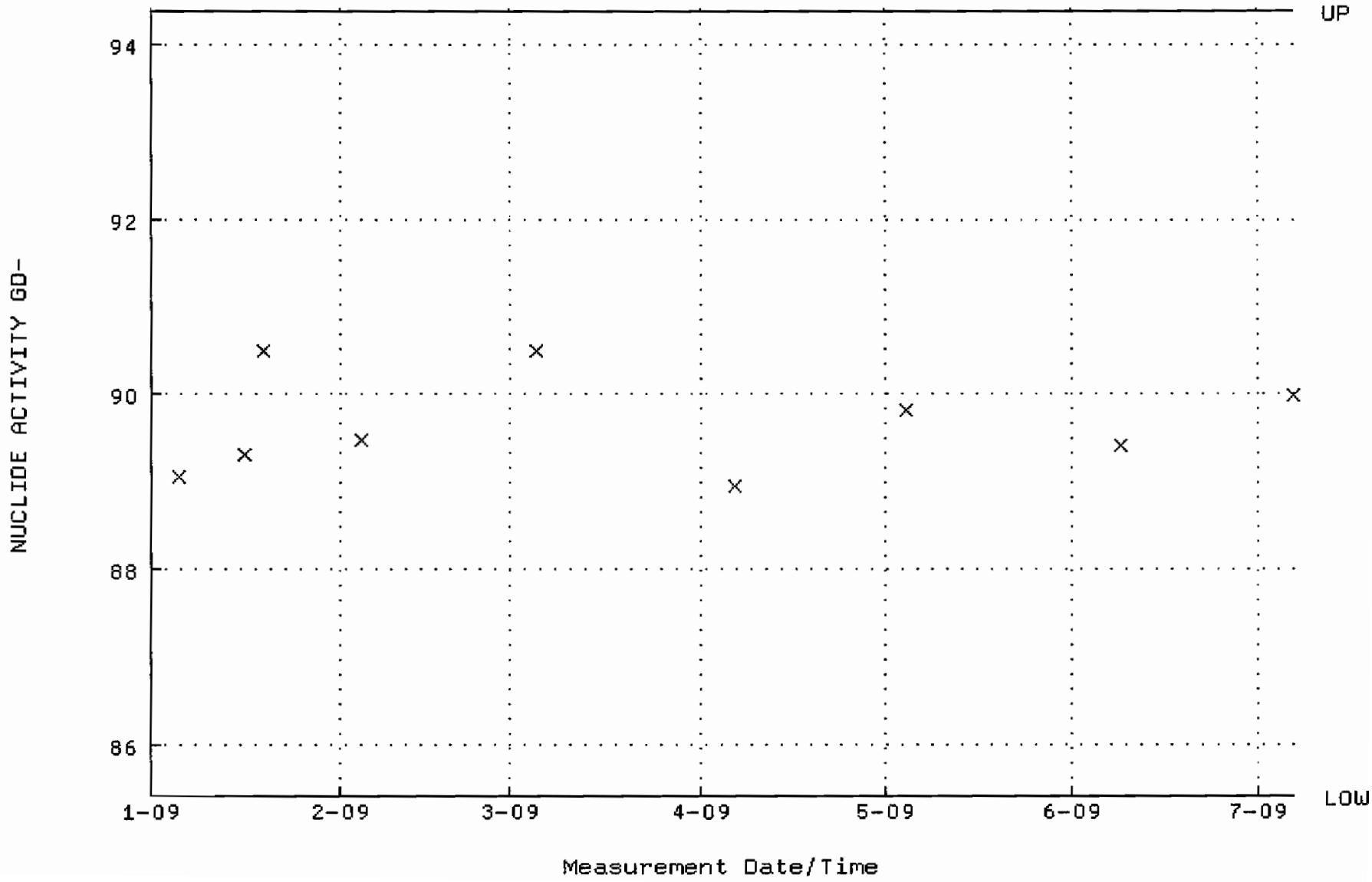

QA filename : DKA100:[ENV_ALPHA.QA.B]B035.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:28 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

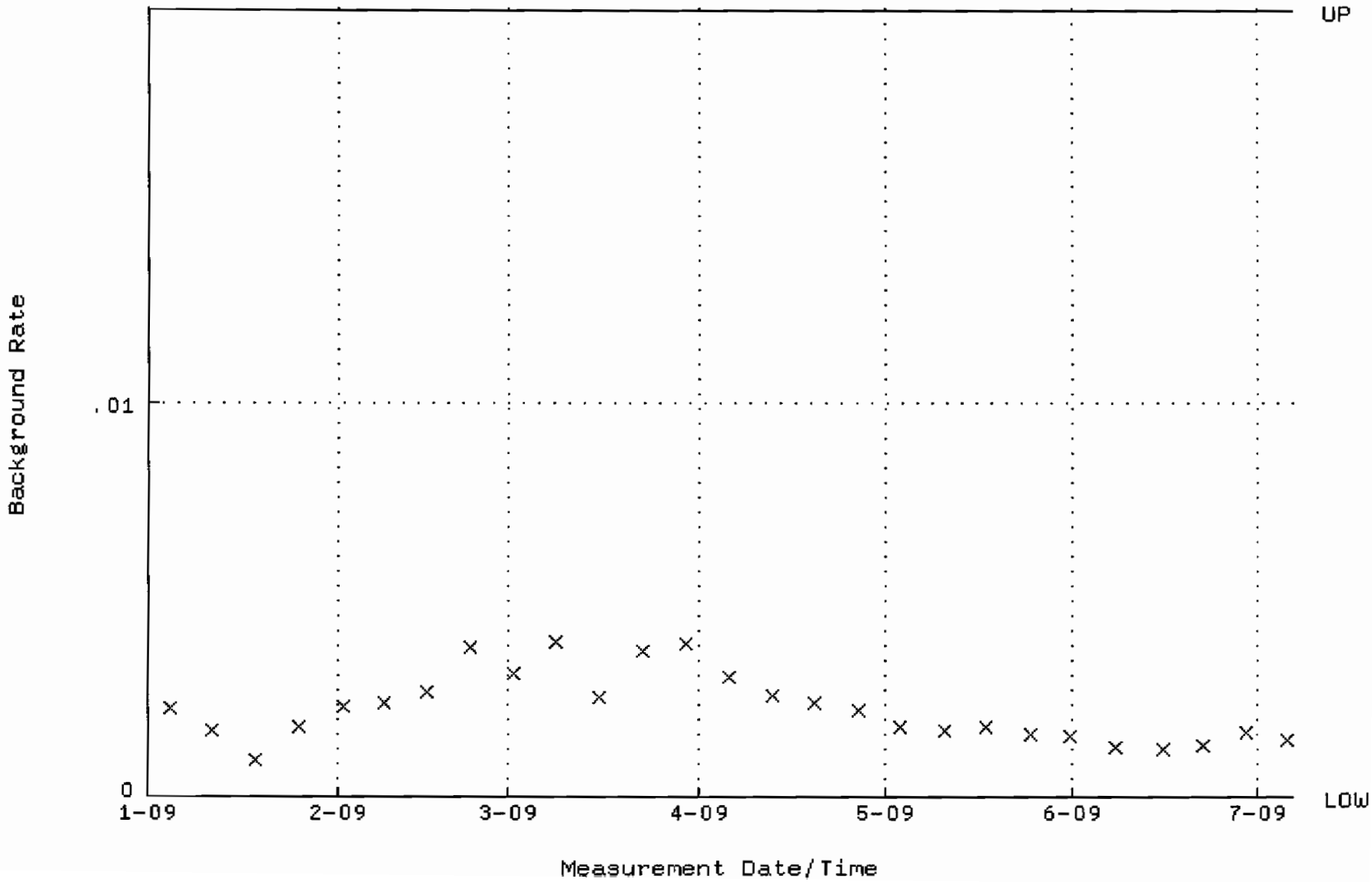

QA filename : DKA100:[ENV_ALPHA.QA.W]W036.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-JAN-2009 12:56:58 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.318717 through 0.338717

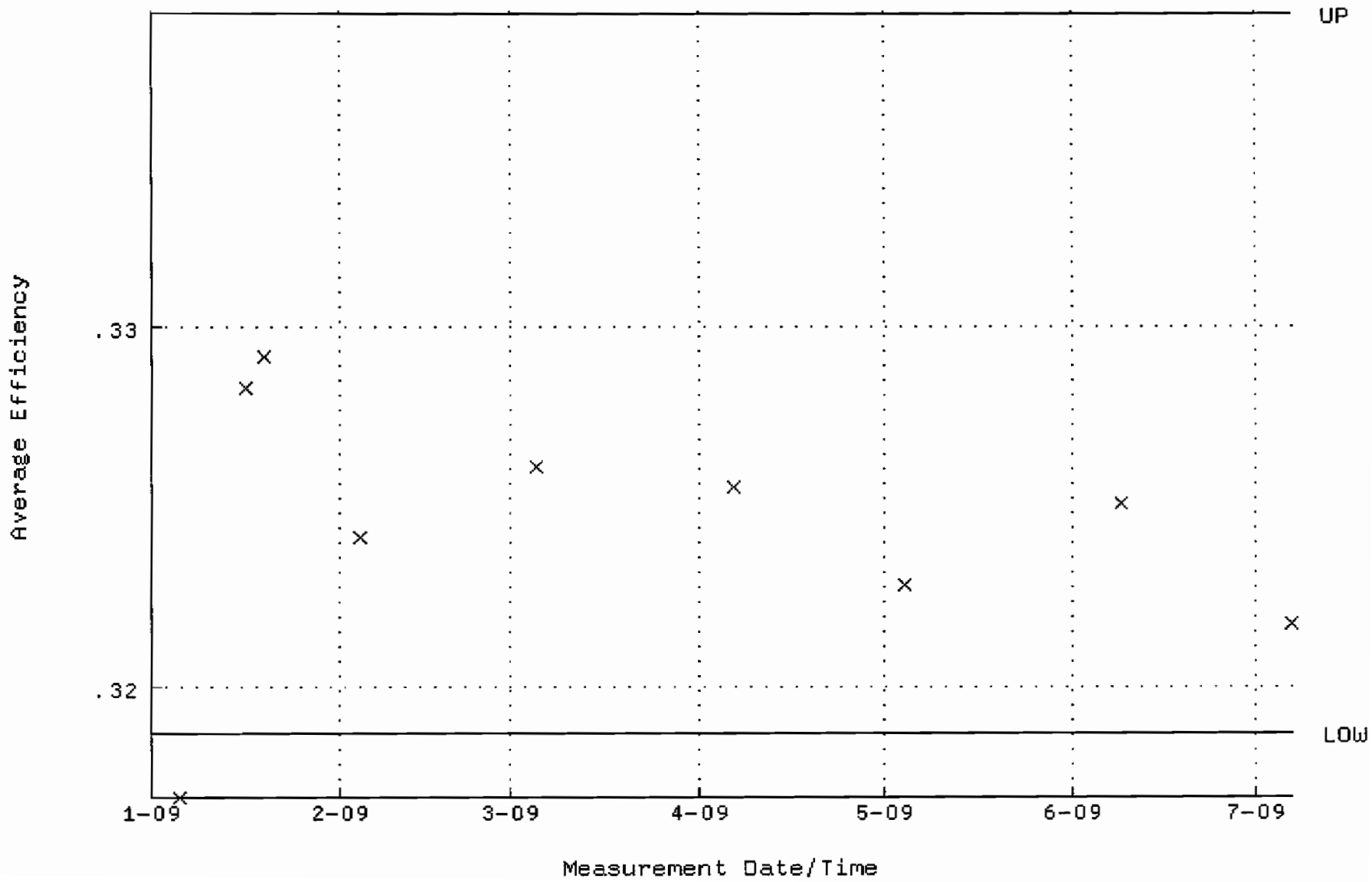

QA filename : DKA100:[ENV_ALPHA.QA.W]W036.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-JAN-2009 12:56:58 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 84.6422 through 93.5518

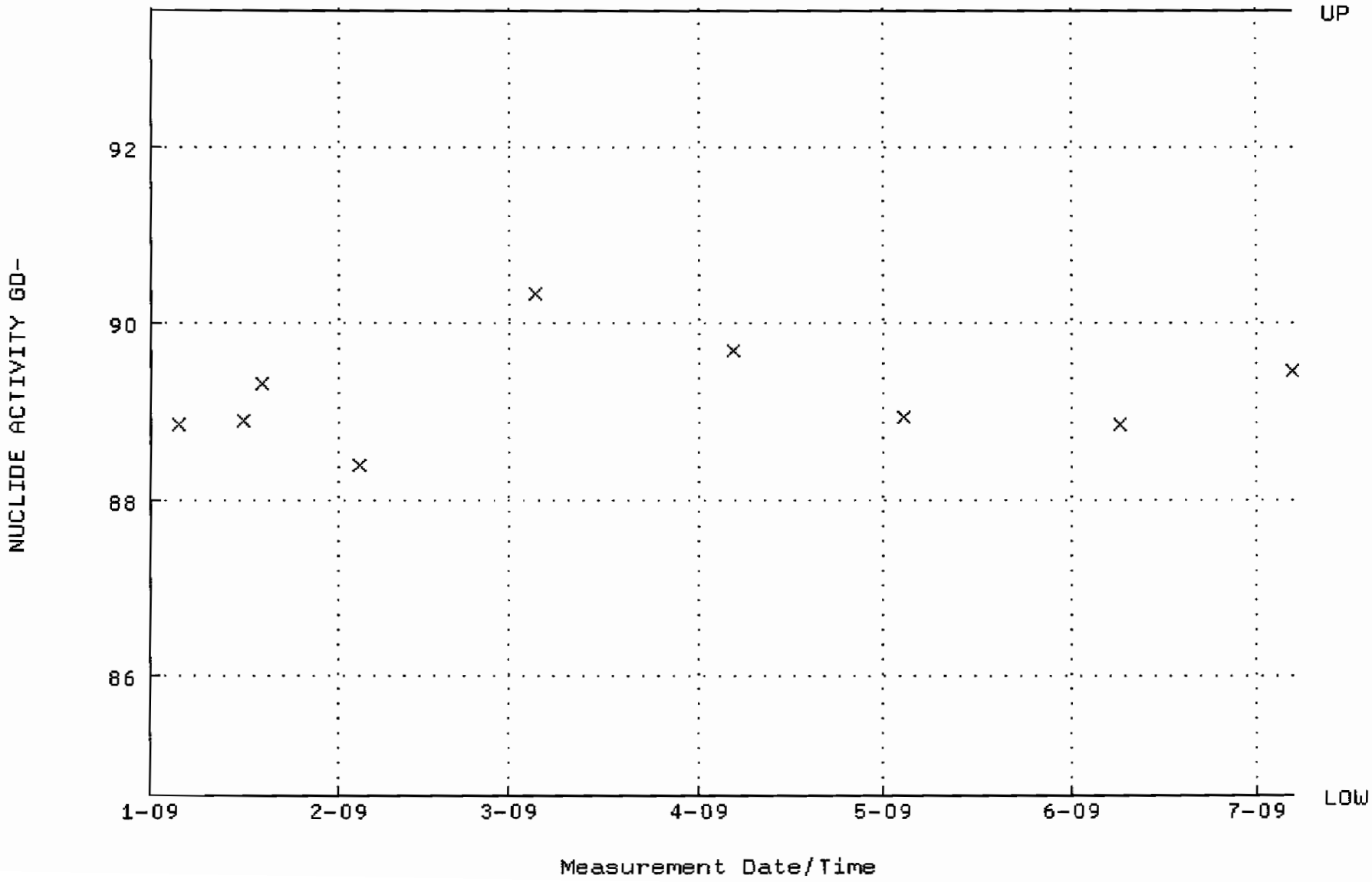

QA filename : DKA100:[ENV_ALPHA.QA.B]B036.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:28 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

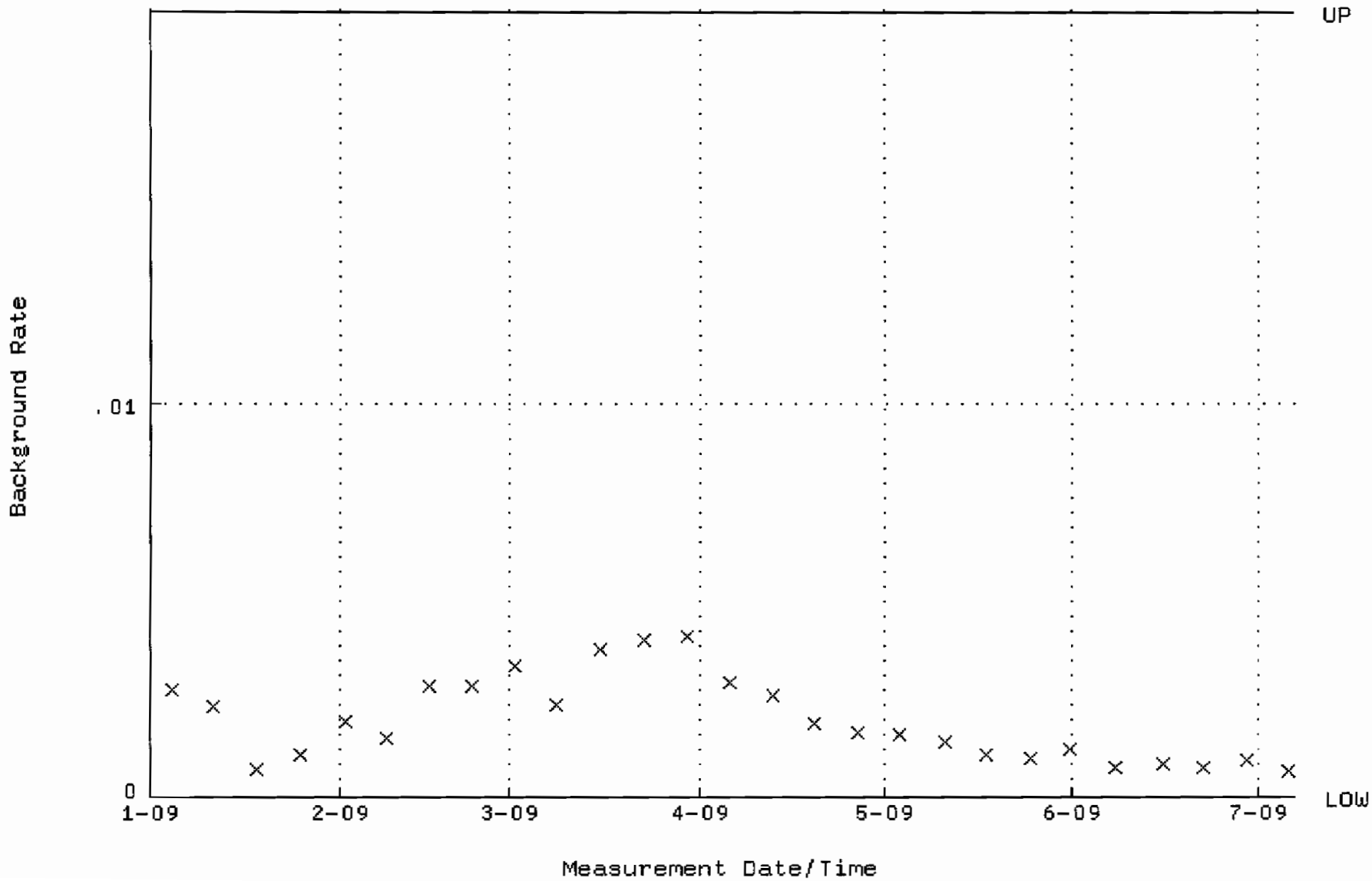

QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-JAN-2009 12:57:01 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000

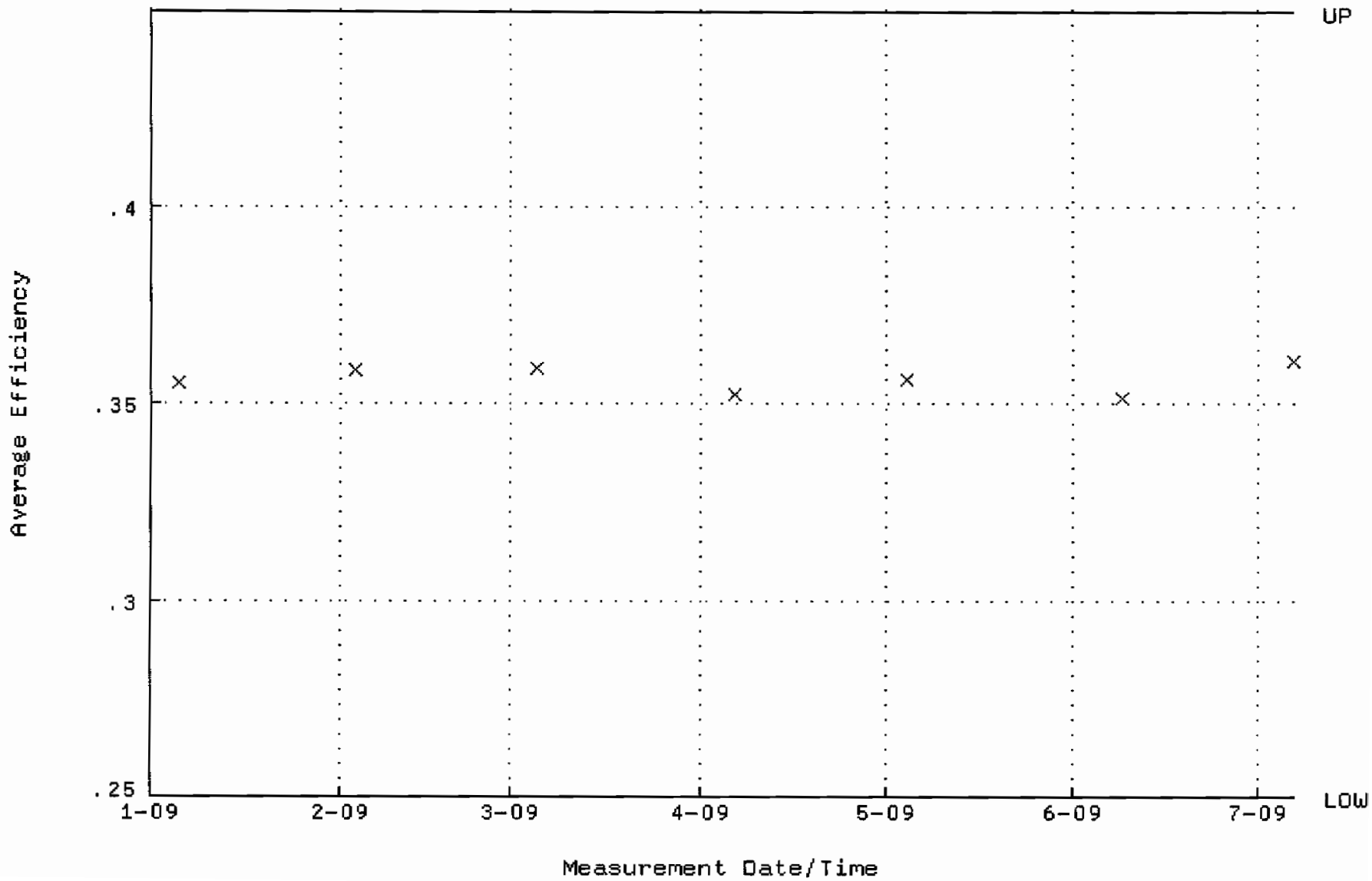

QA filename : DKA100:[ENV_ALPHA.QA.W]W037.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-JAN-2009 12:57:01 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000

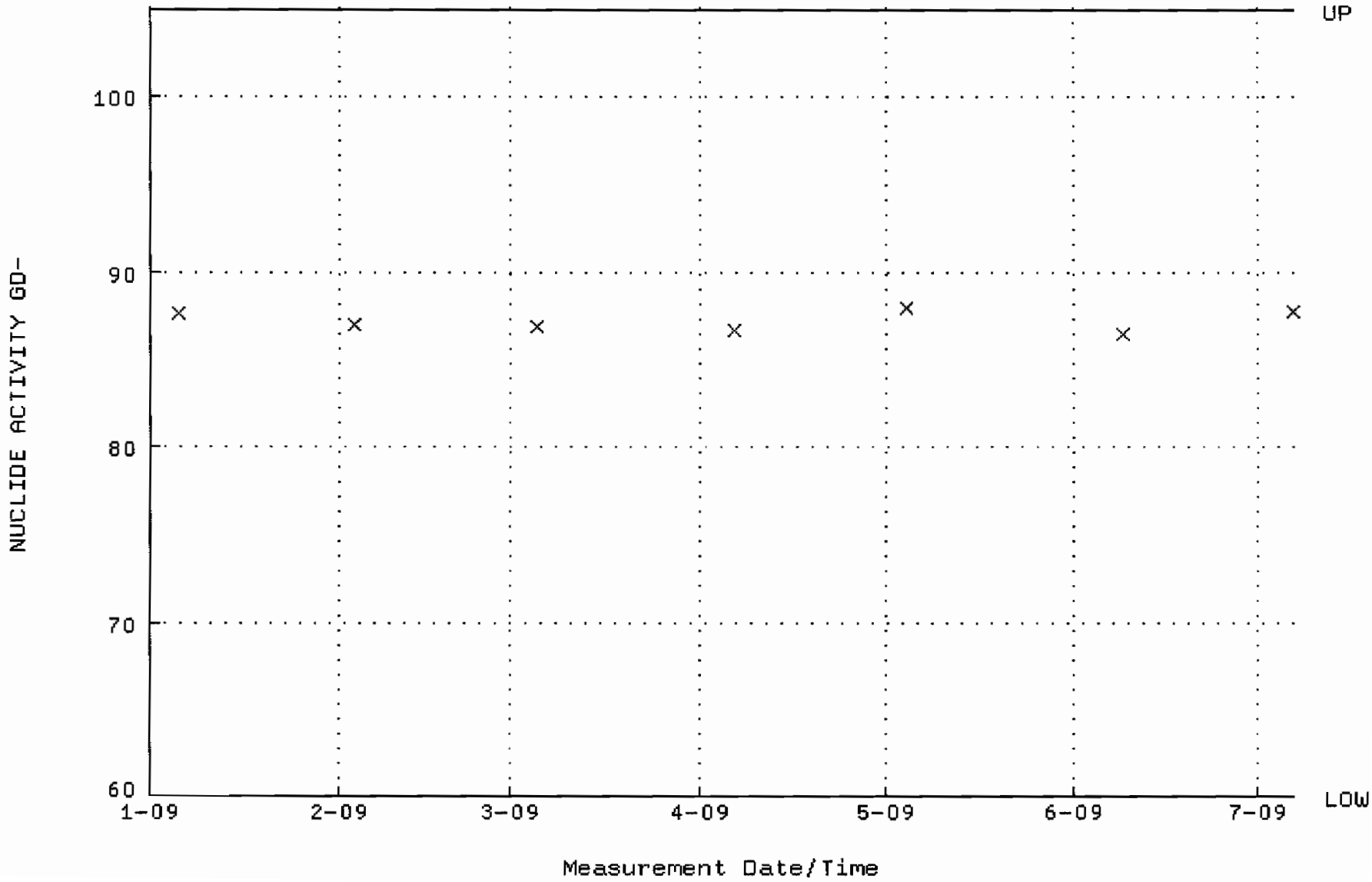

QA filename : DKA100:[ENV_ALPHA.QA.B]B037.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:29 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

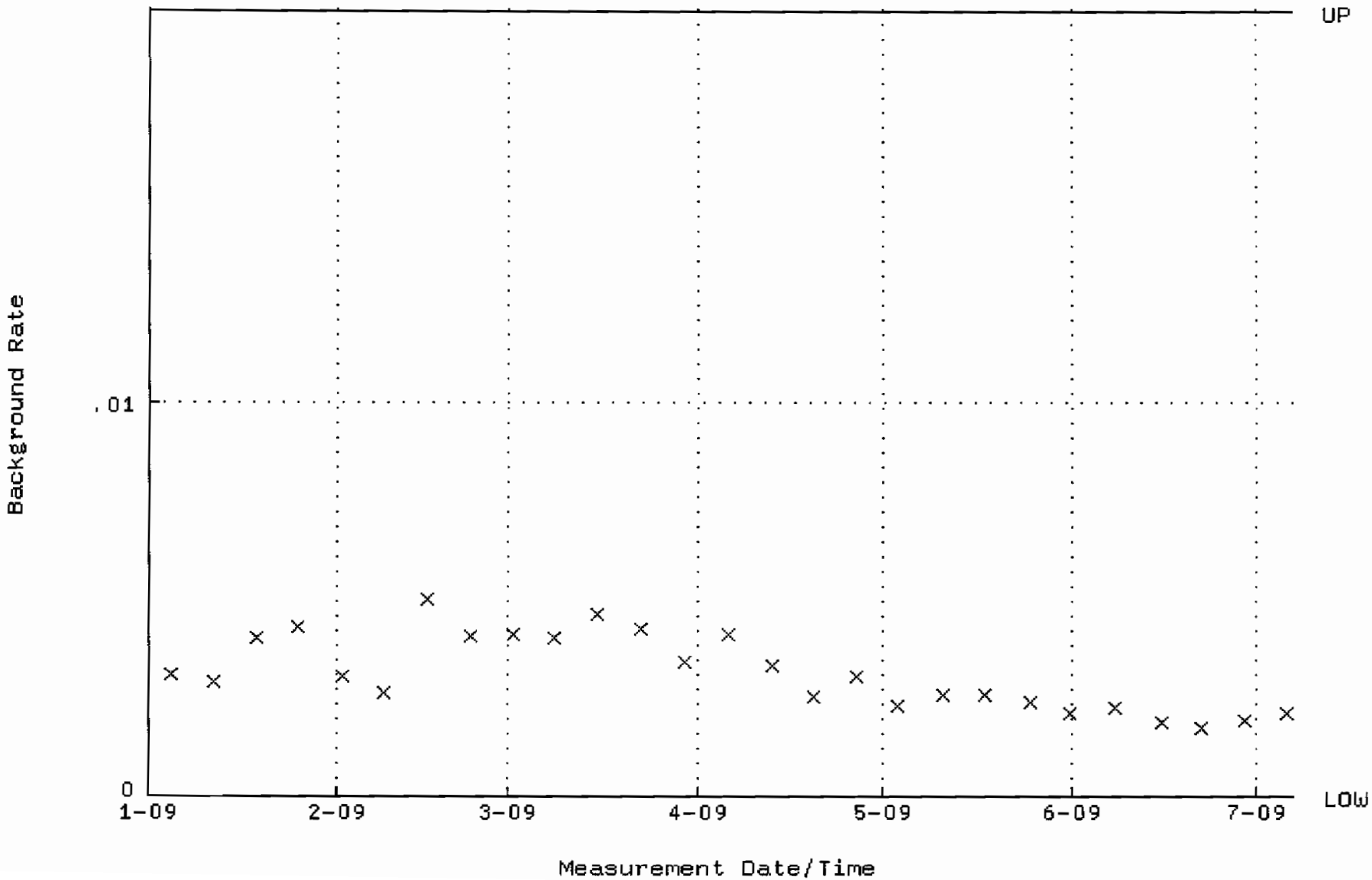

QA filename : DKA100:[ENV_ALPHA.QA.W]W038.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-JAN-2009 12:57:01 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.327380 through 0.362086

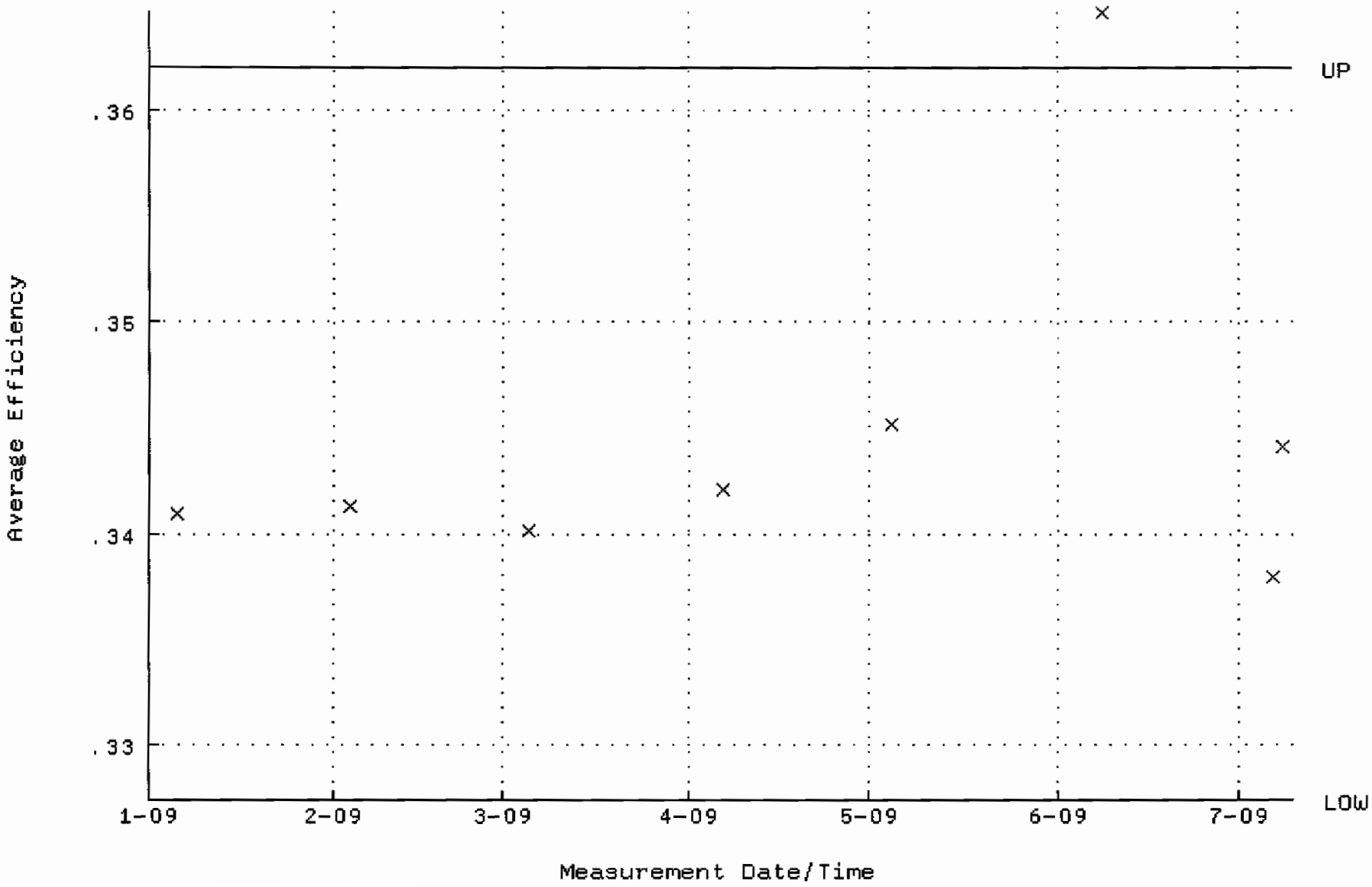

QA filename : DKA100:[ENV_ALPHA.QA.W]W038.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-JAN-2009 12:57:01 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 87.5715 through 92.1899

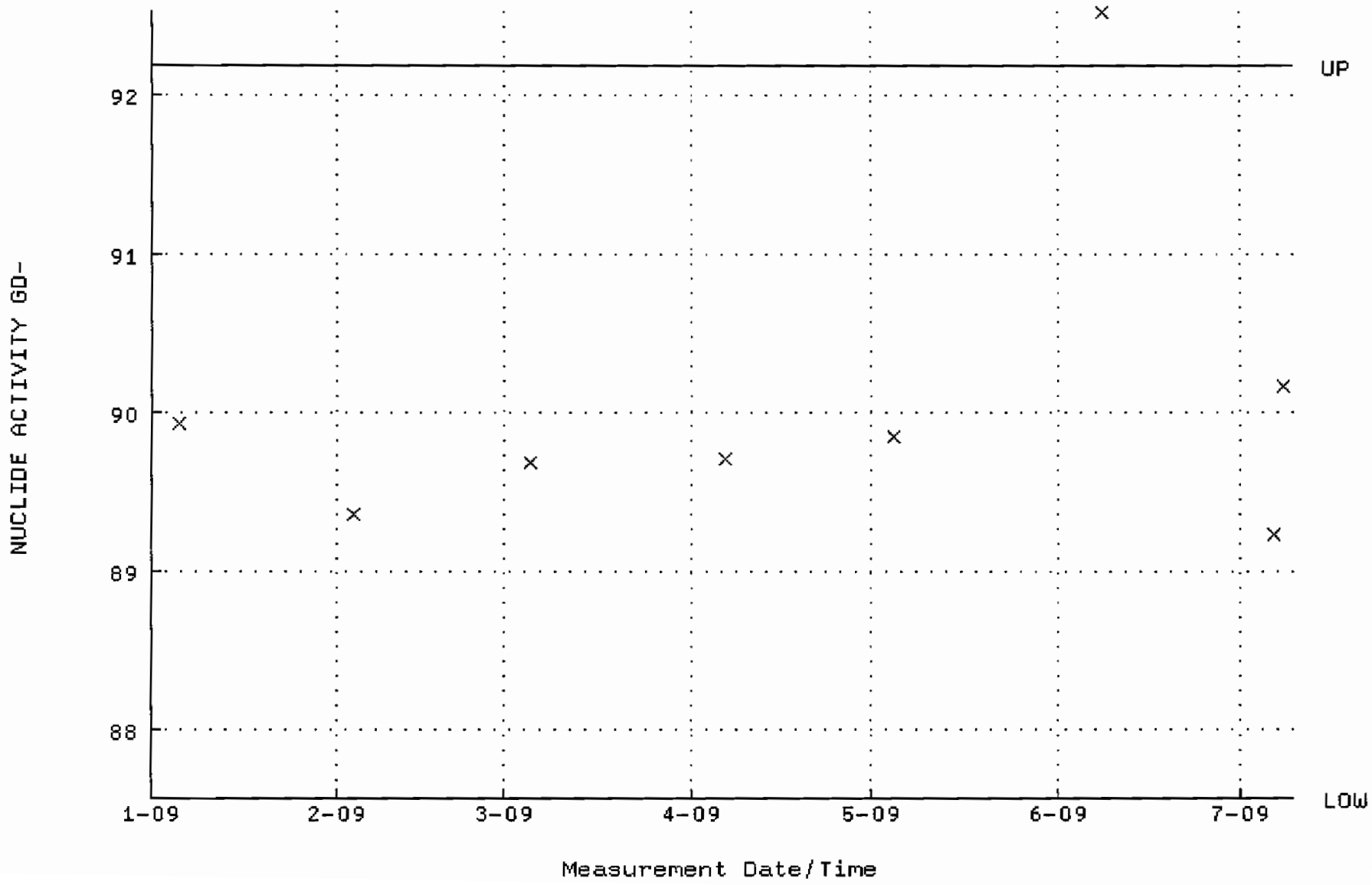

QA filename : DKA100:[ENV_ALPHA.QA.B]B038.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:29 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

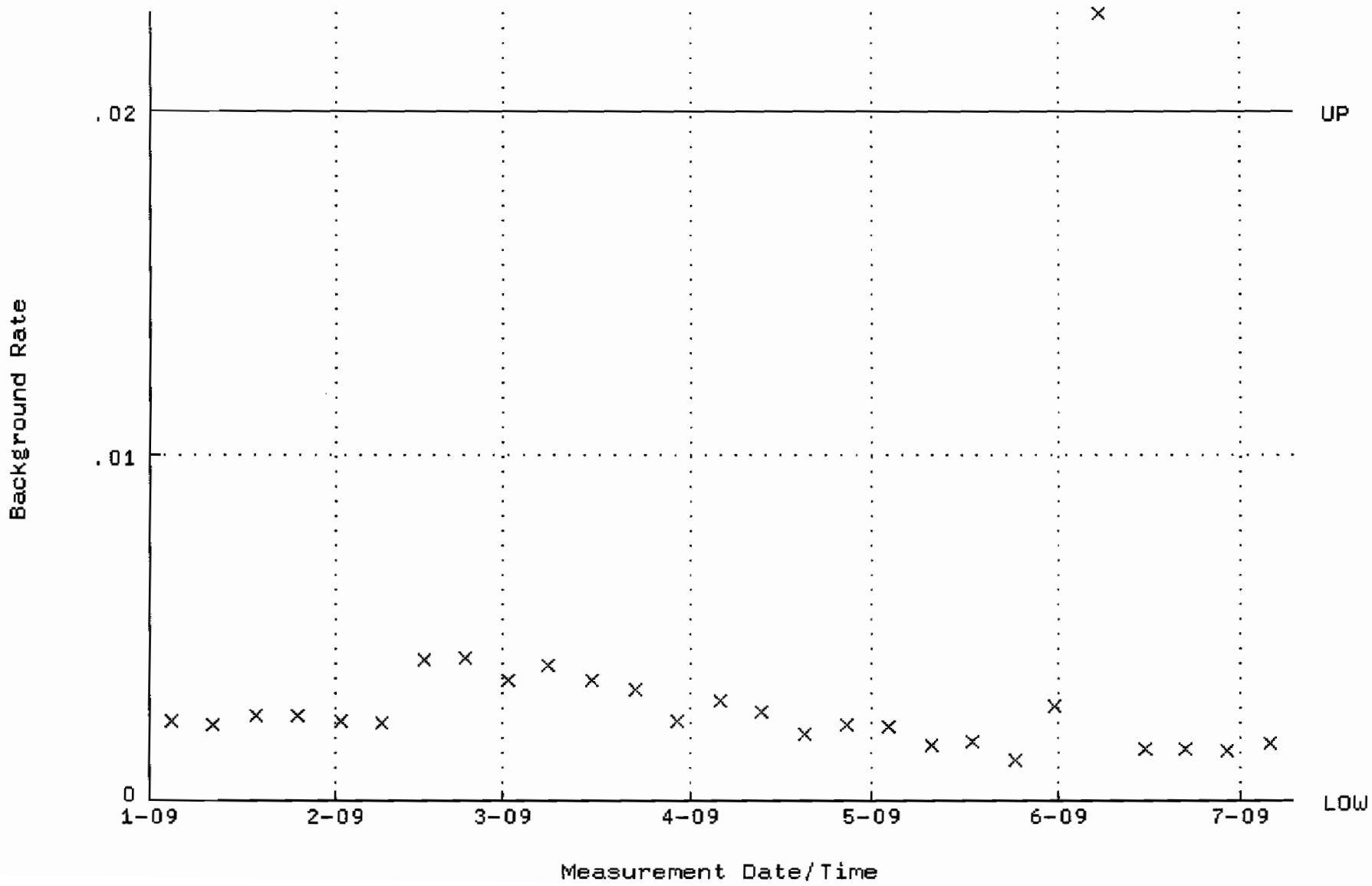

QA filename : DKA100:[ENV_ALPHA.QA.W]W039.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-JAN-2009 12:57:01 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000

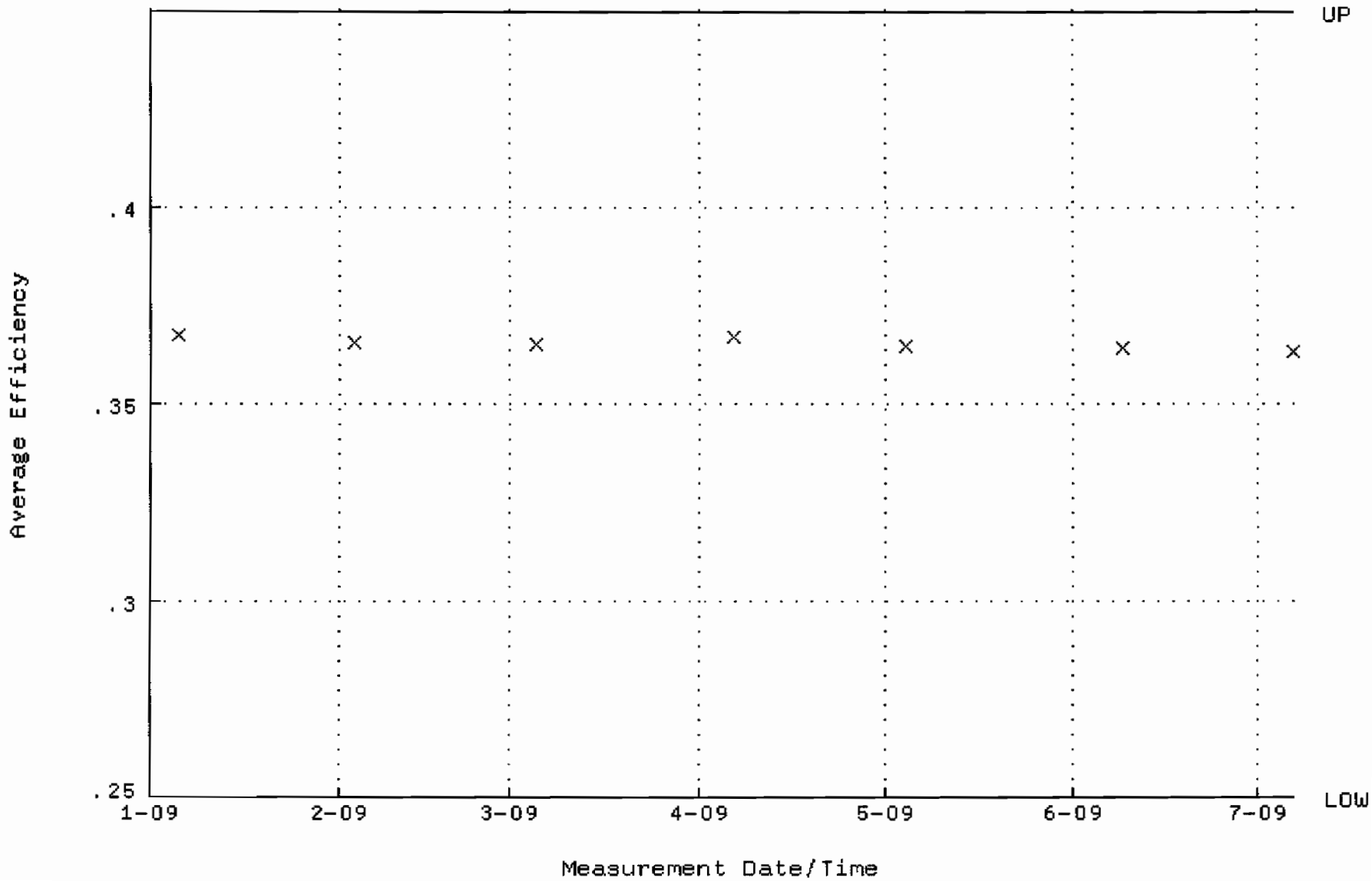

QA filename : DKA100:[ENV_ALPHA.QA.W]W039.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-JAN-2009 12:57:01 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000

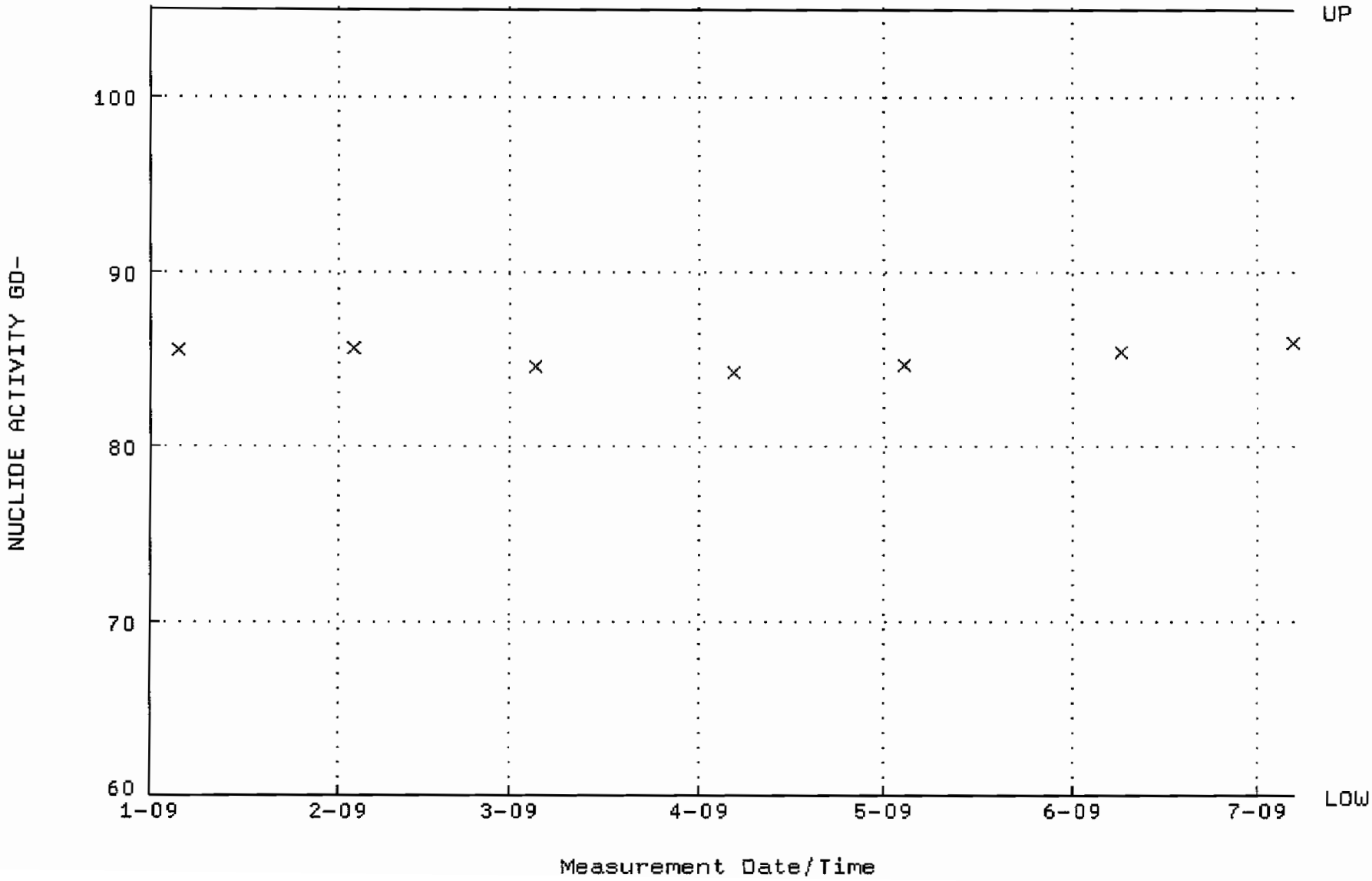

QA filename : DKA100:[ENV_ALPHA.QA.B]B039.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:29 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

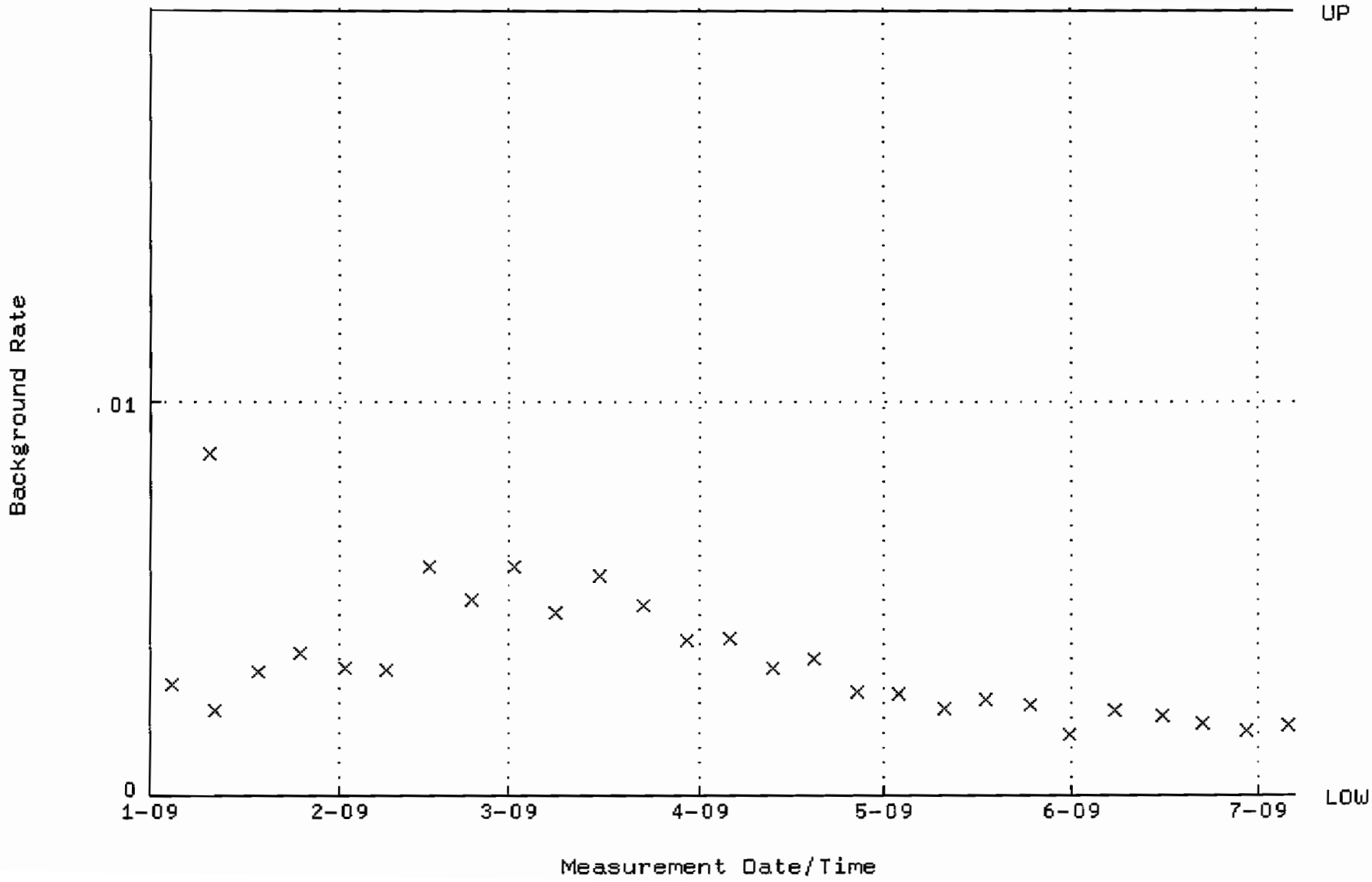

QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.302750 through 0.322750

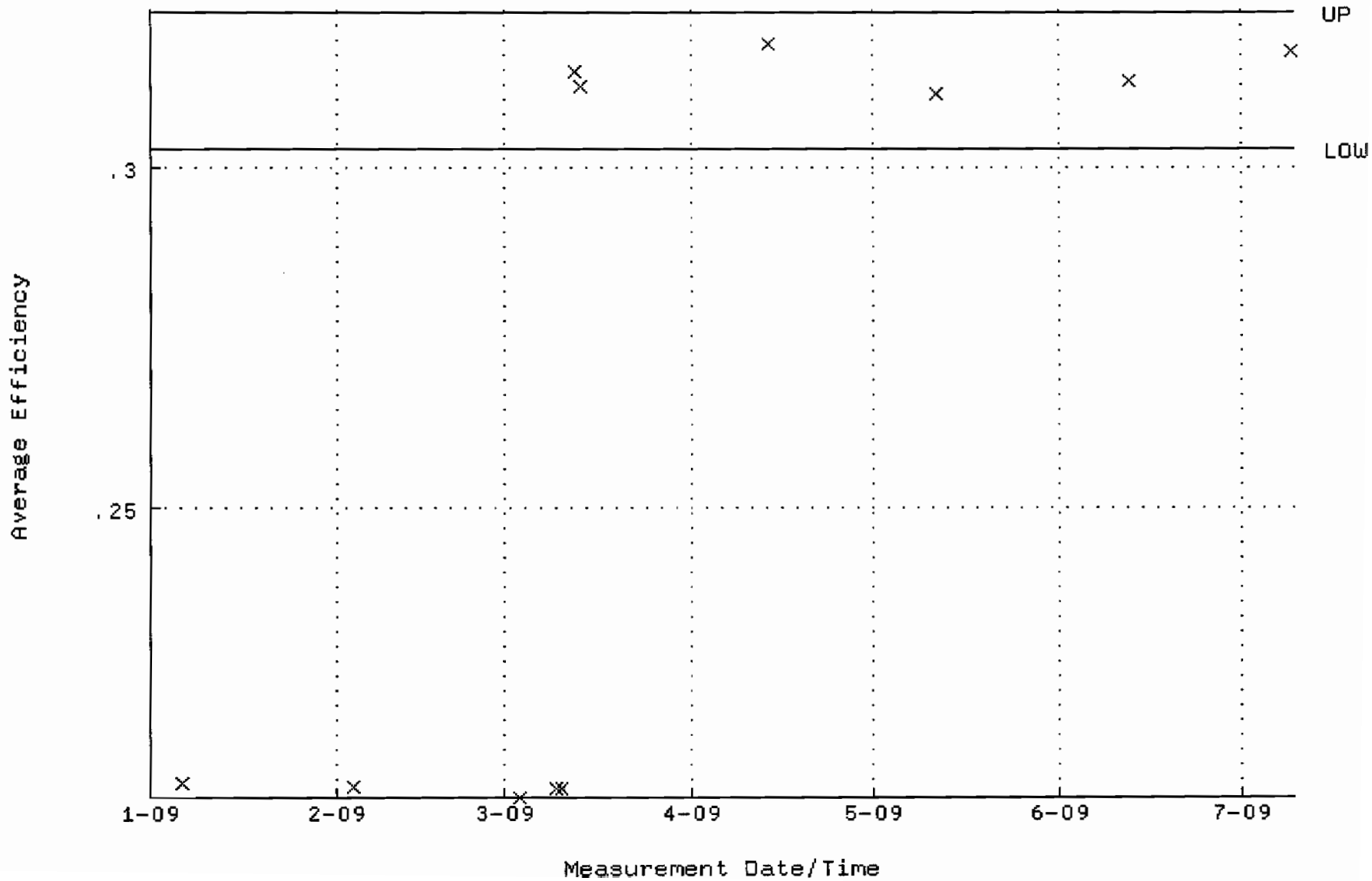

QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 86.8638 through 96.0074

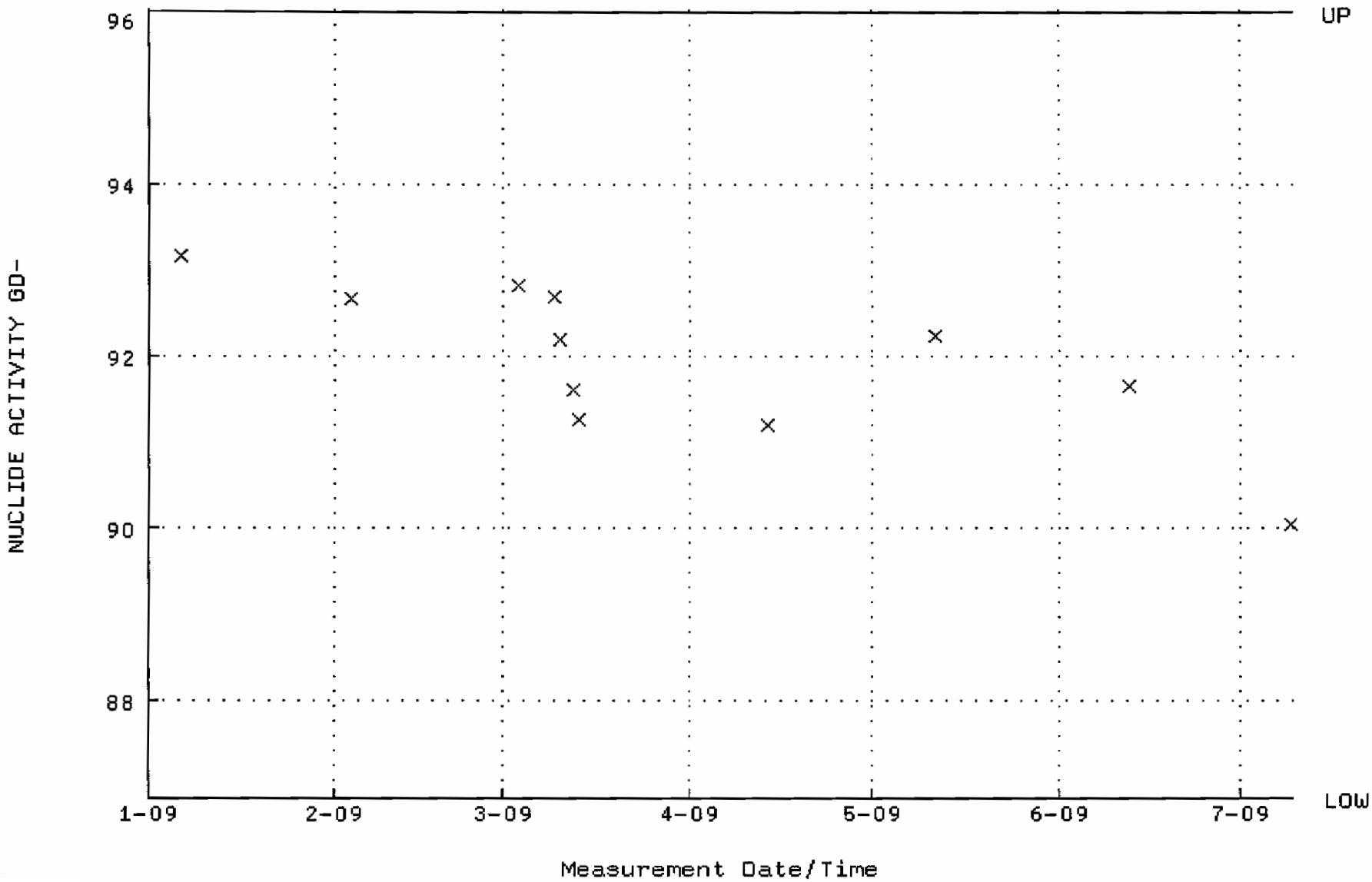

QA filename : DKA100:[ENV_ALPHA.QA.B]B065.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

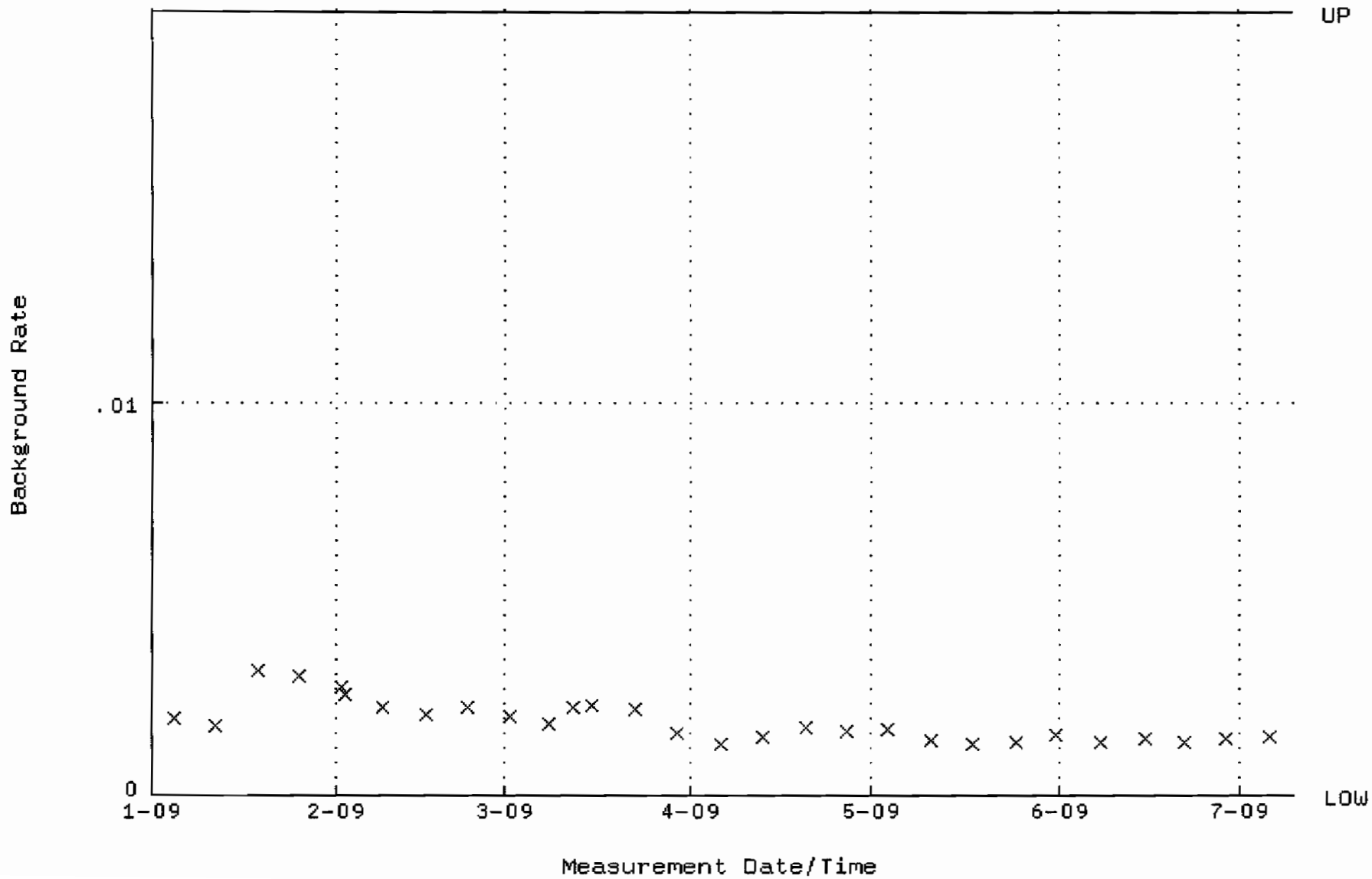

QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.316597 through 0.336597

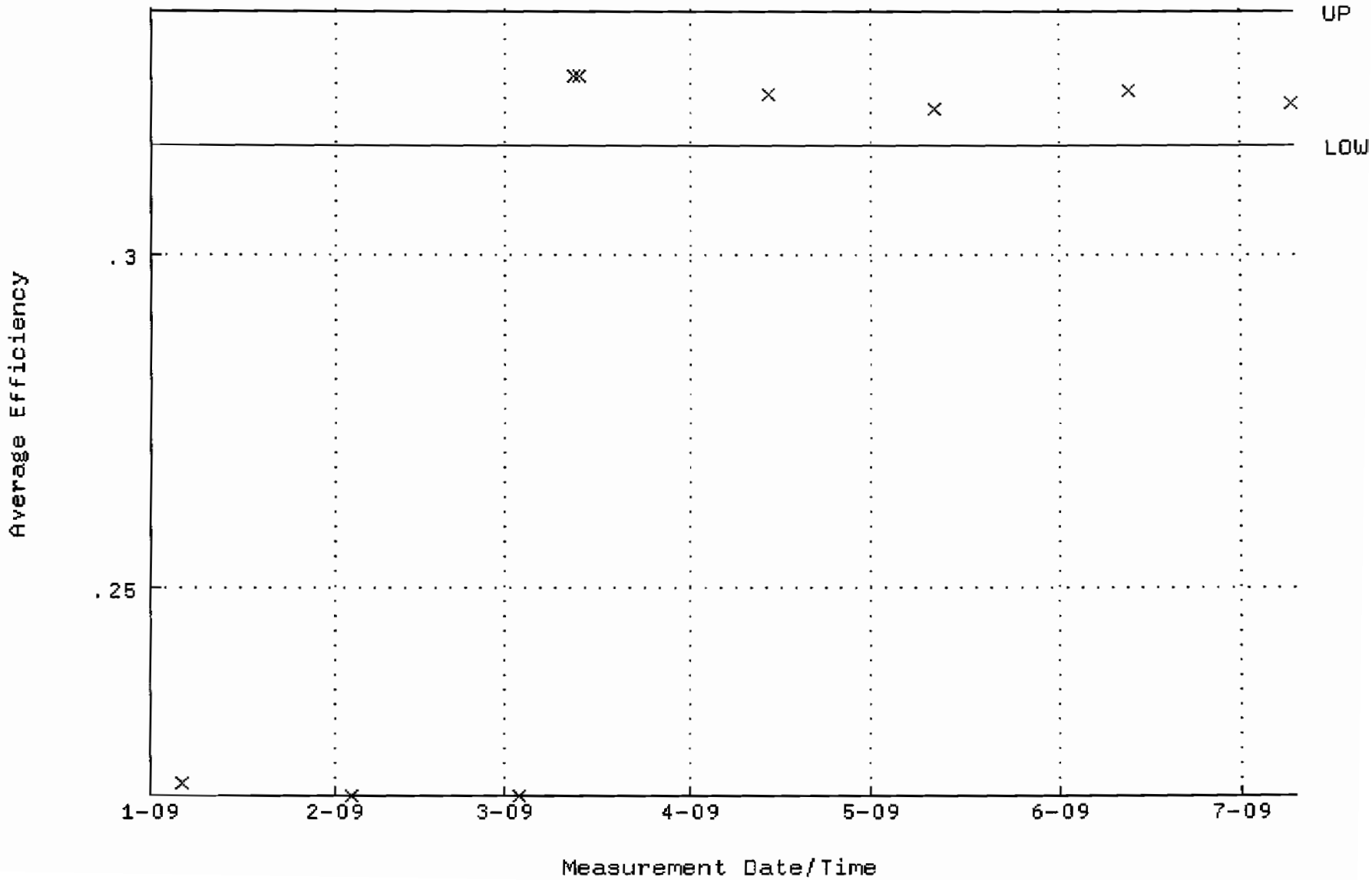

QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 86.2683 through 95.3491

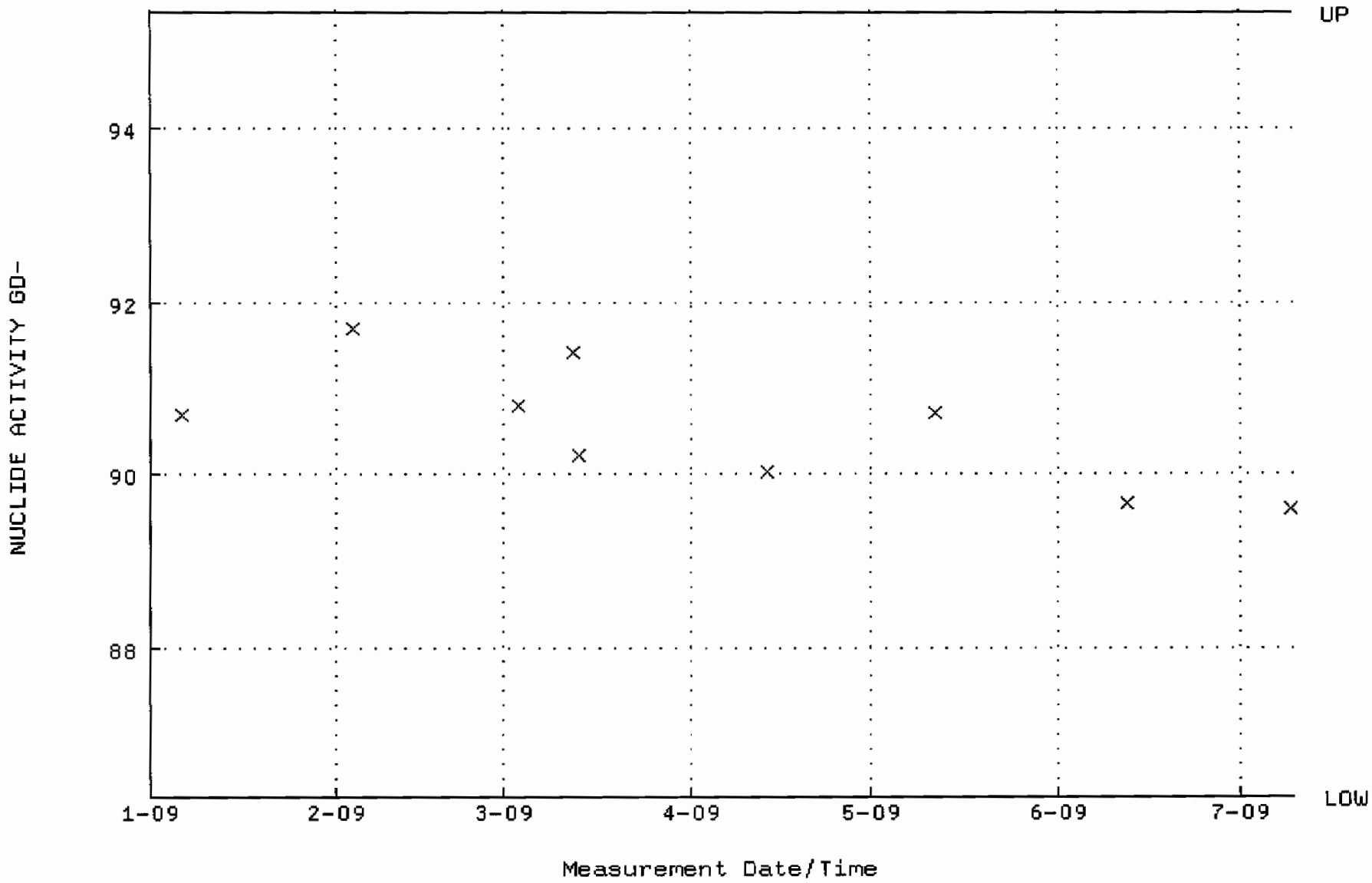

QA filename : DKA100:[ENV_ALPHA.QA.B]B067.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

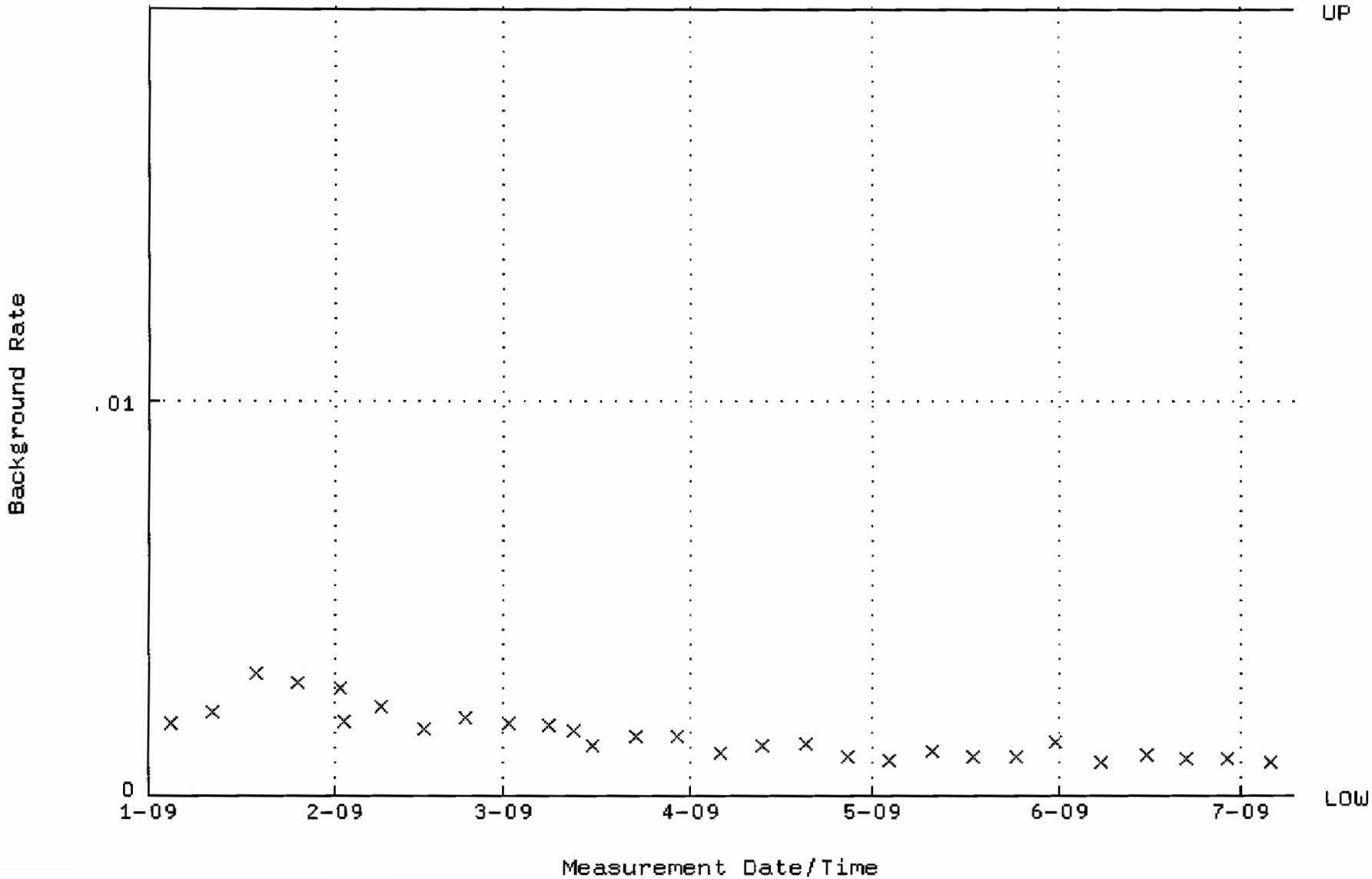

QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-FEB-2009 12:12:09 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.289178 through 0.309178

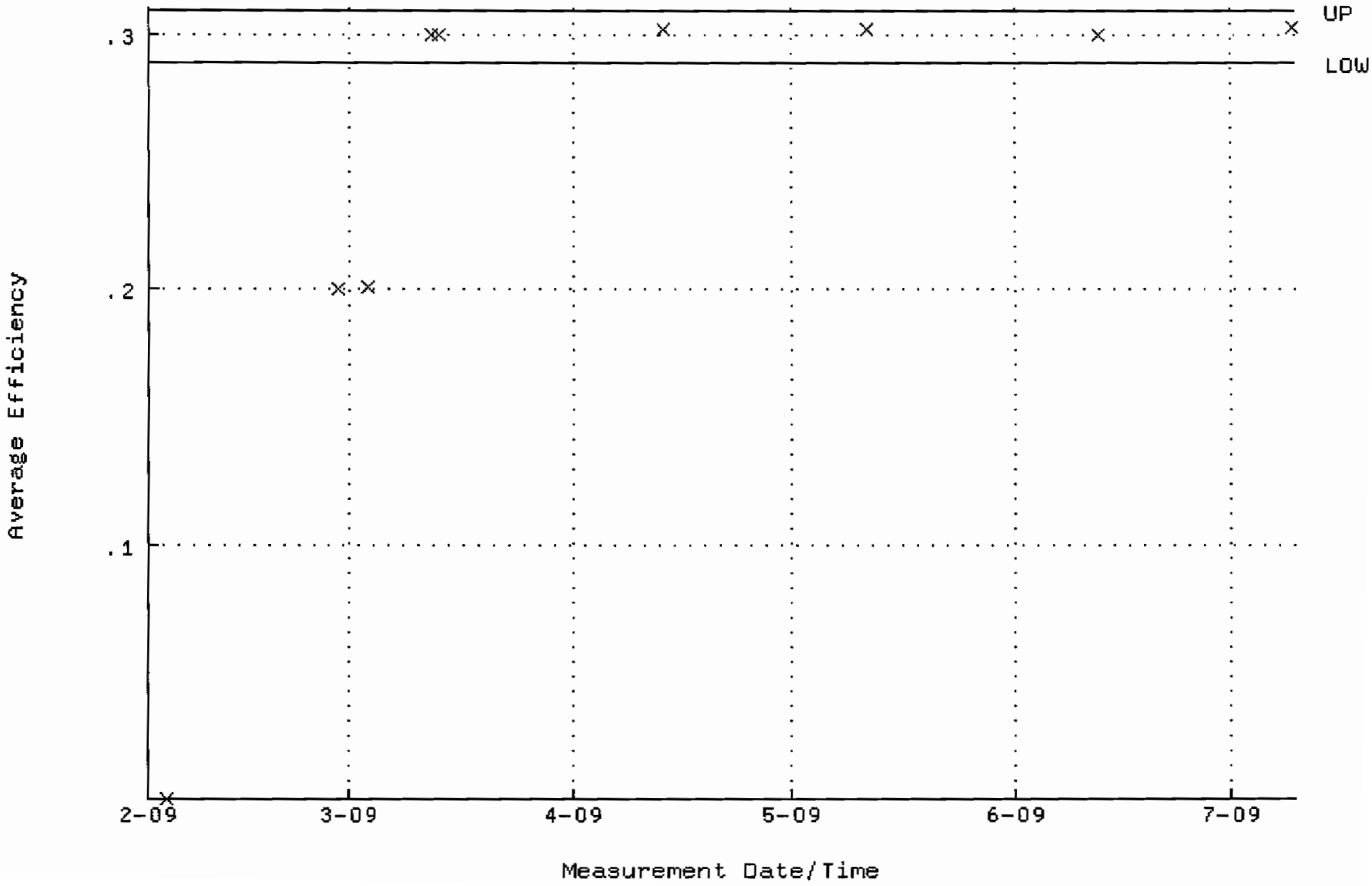

QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-FEB-2009 12:12:09 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 87.4419 through 96.6463

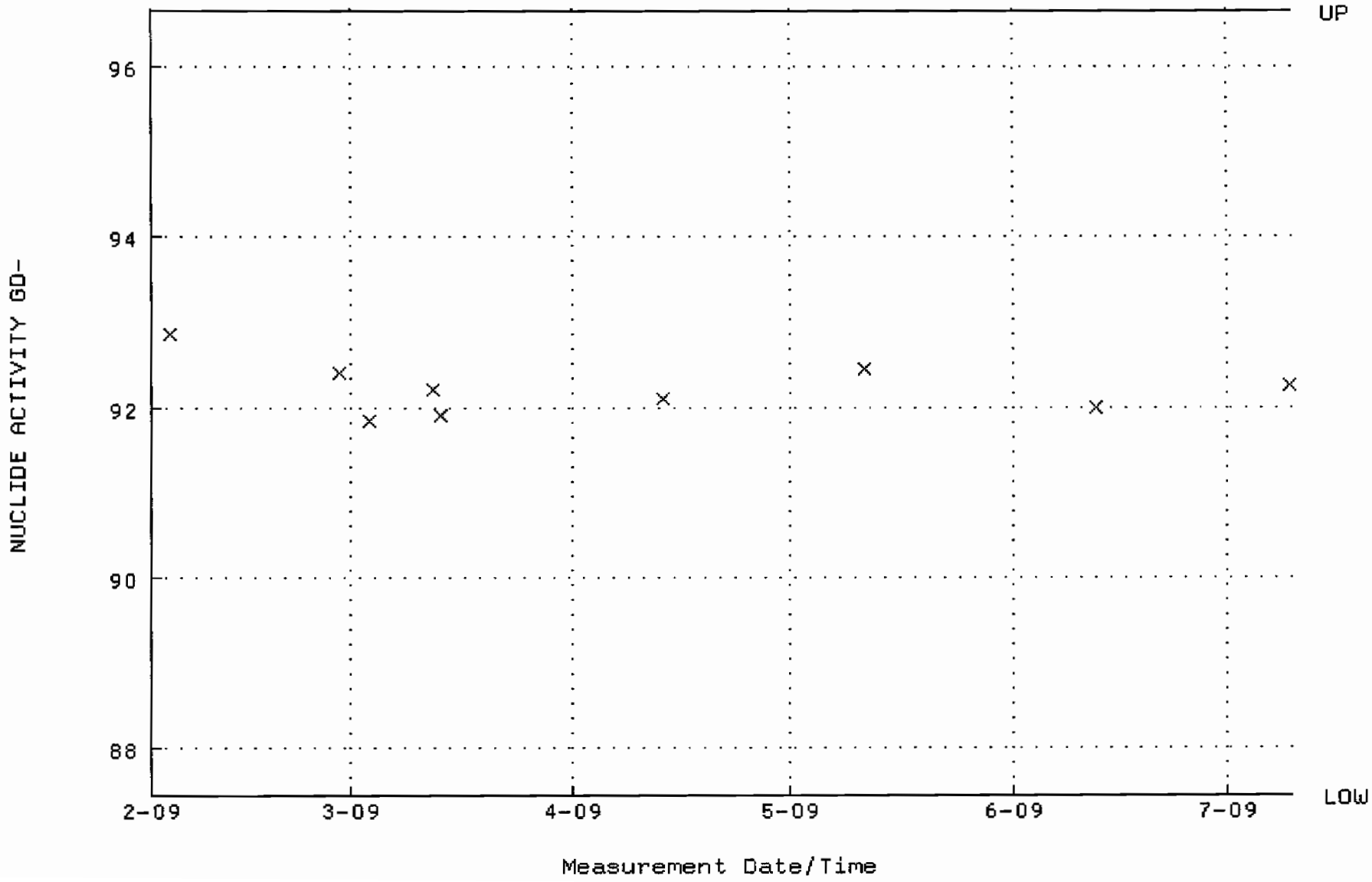

QA filename : DKA100:[ENV_ALPHA.QA.B]B068.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

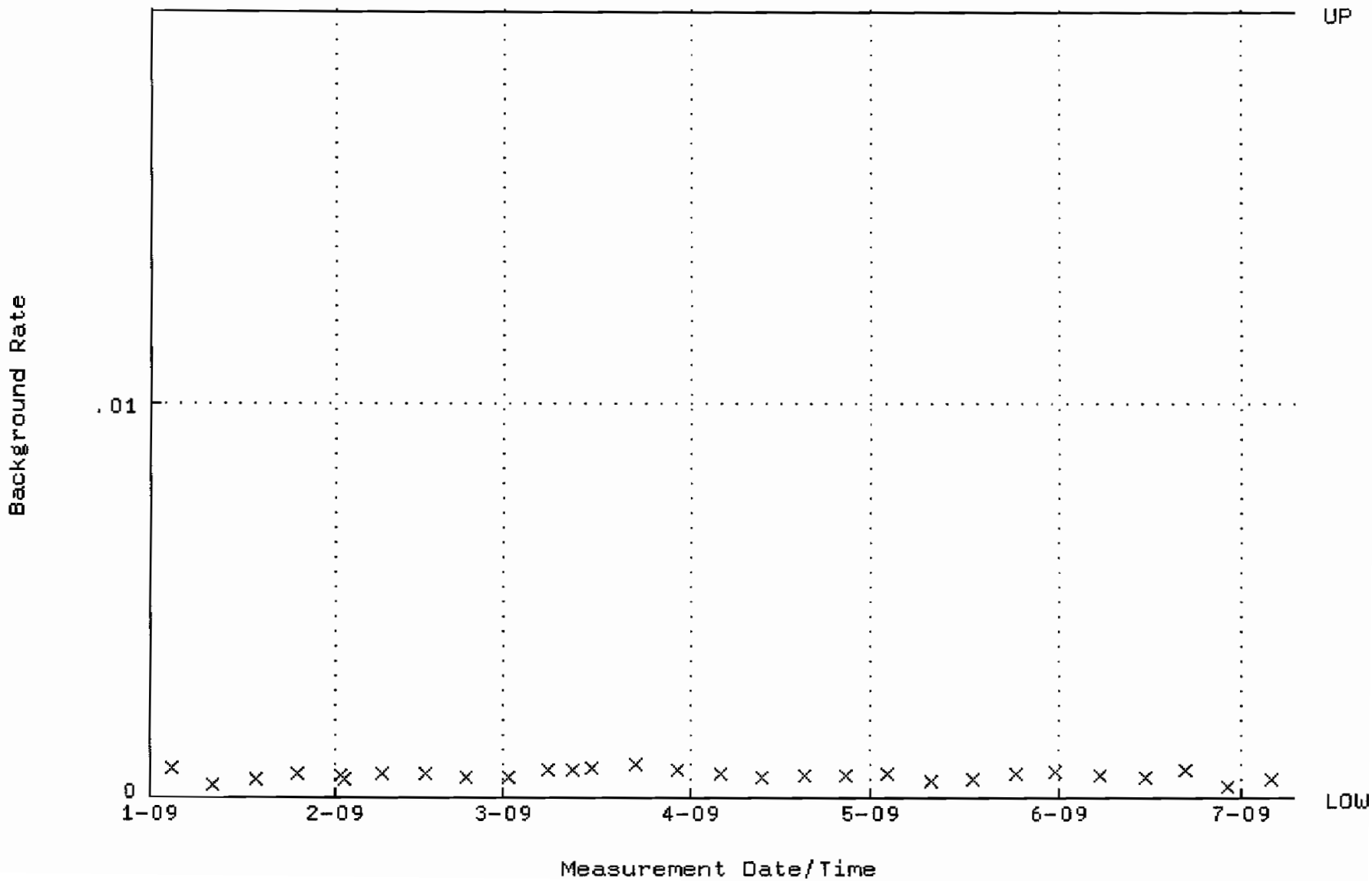

QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.306636 through 0.326636

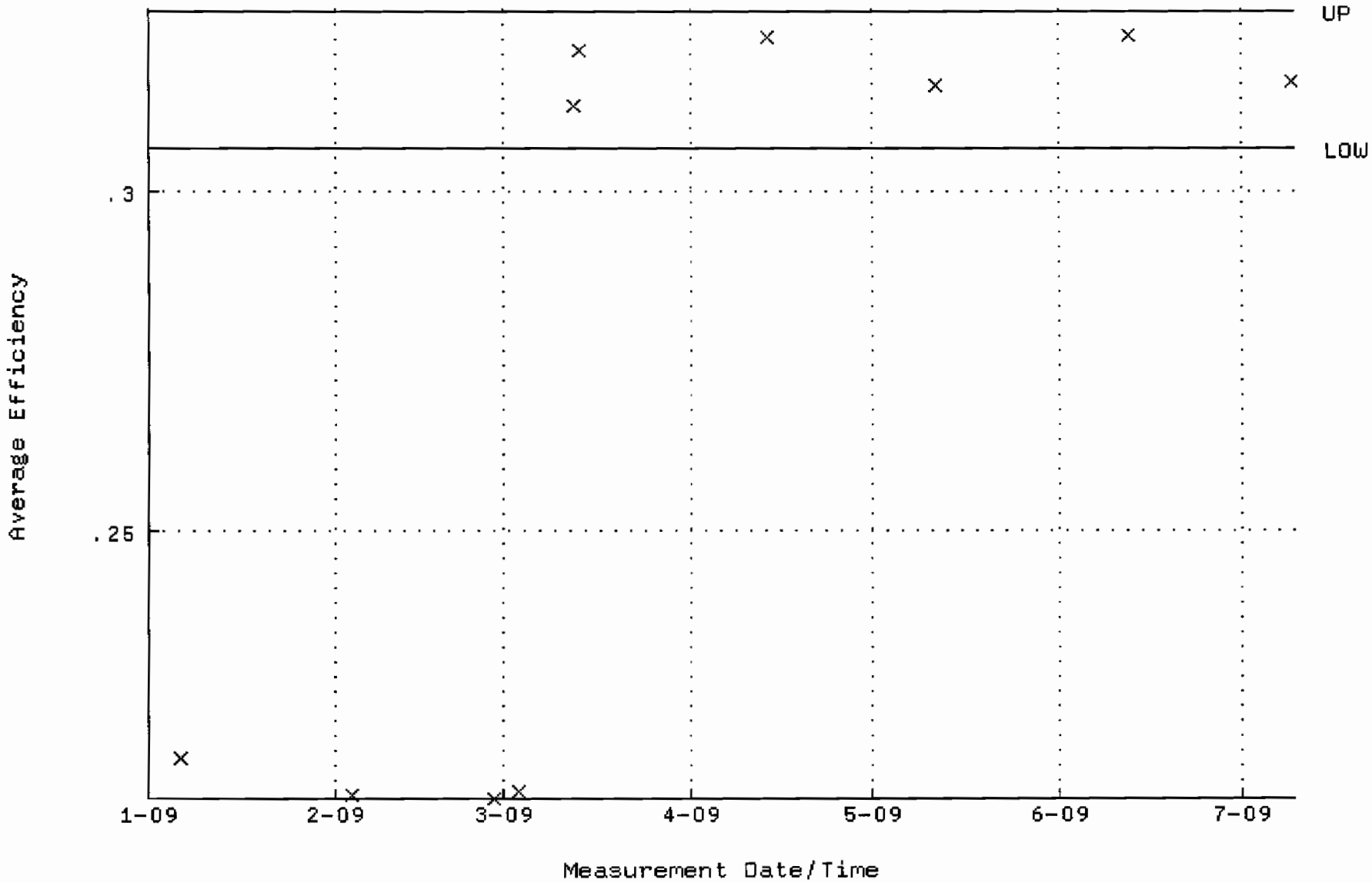

QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 89.6479 through 99.0845

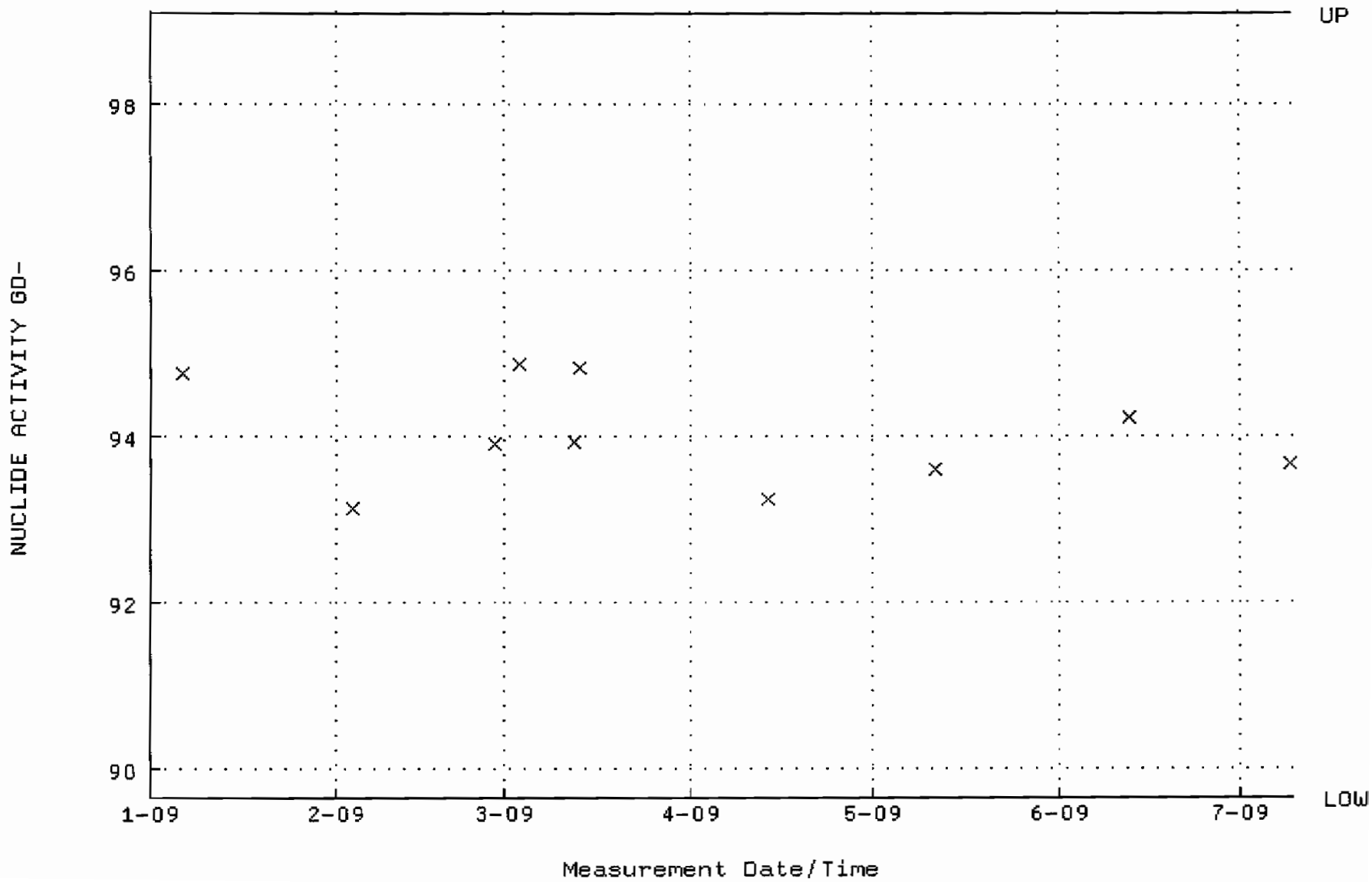

QA filename : DKA100:[ENV_ALPHA.QA.B]B069.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

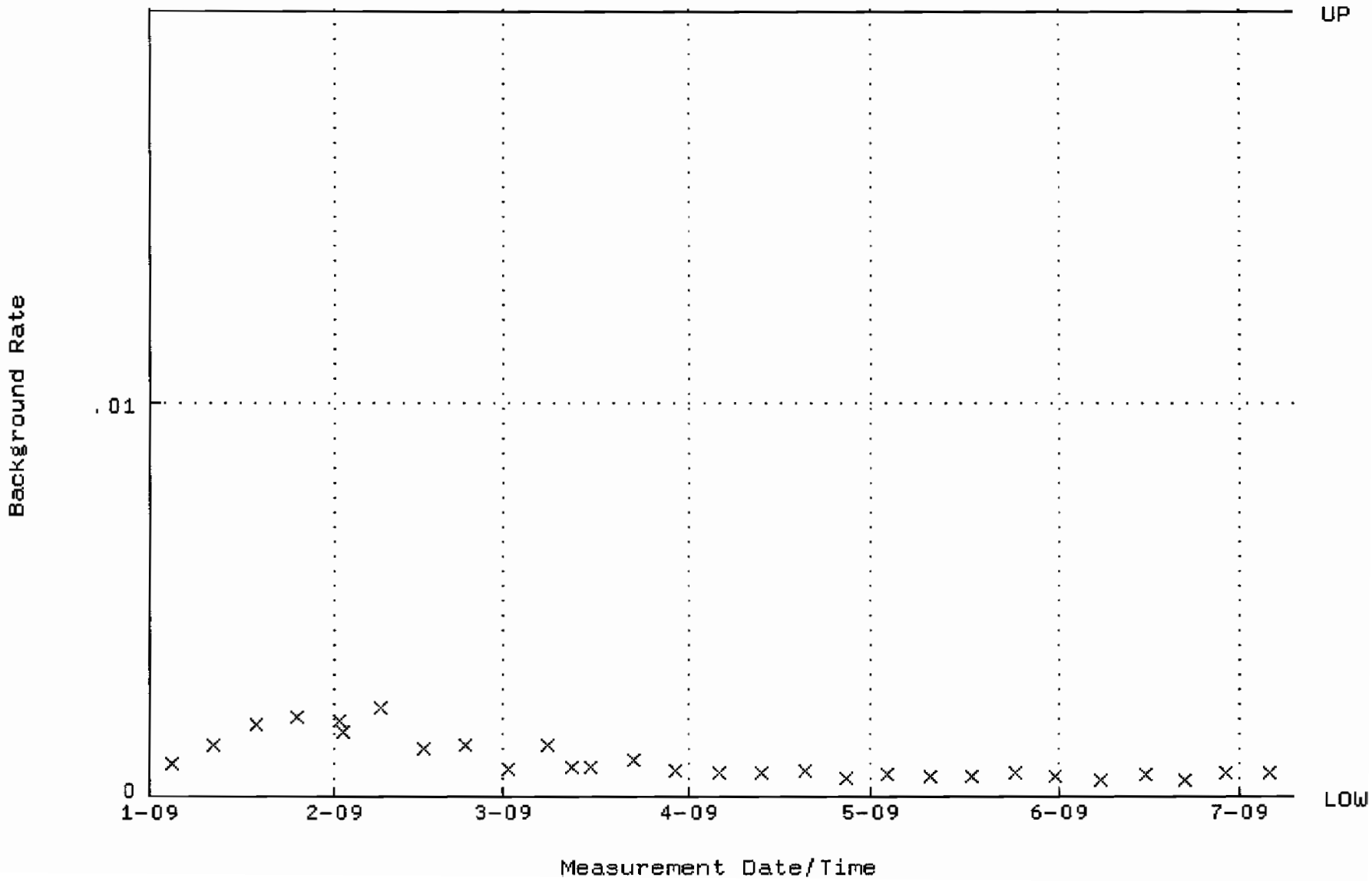

QA filename : DKA100:[ENV_ALPHA.QA.W]W121.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:23:19 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.237686 through 0.257686

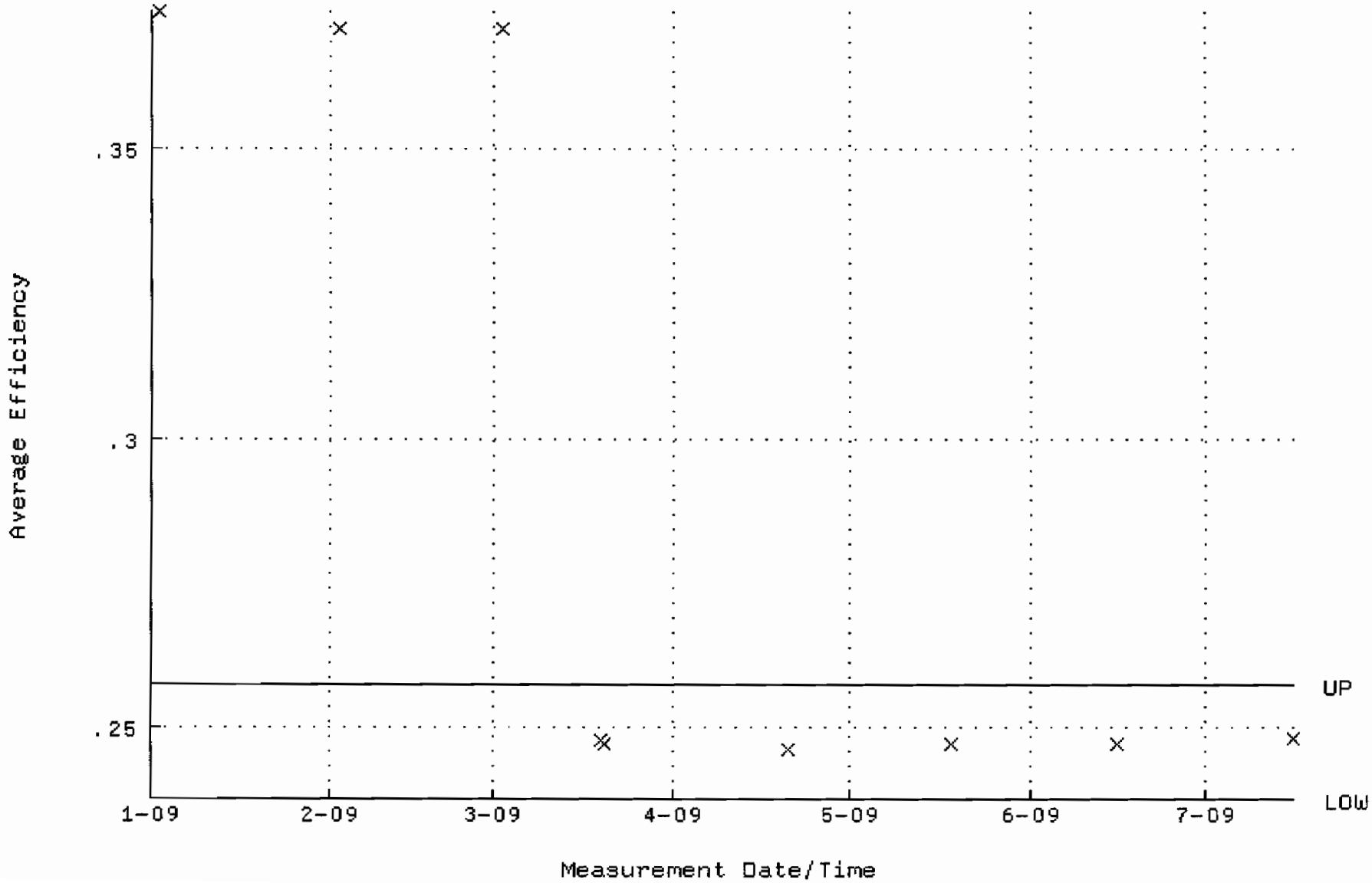

QA filename : DKA100:[ENV_ALPHA.QA.W]W121.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:23:19 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 89.4263 through 98.8395

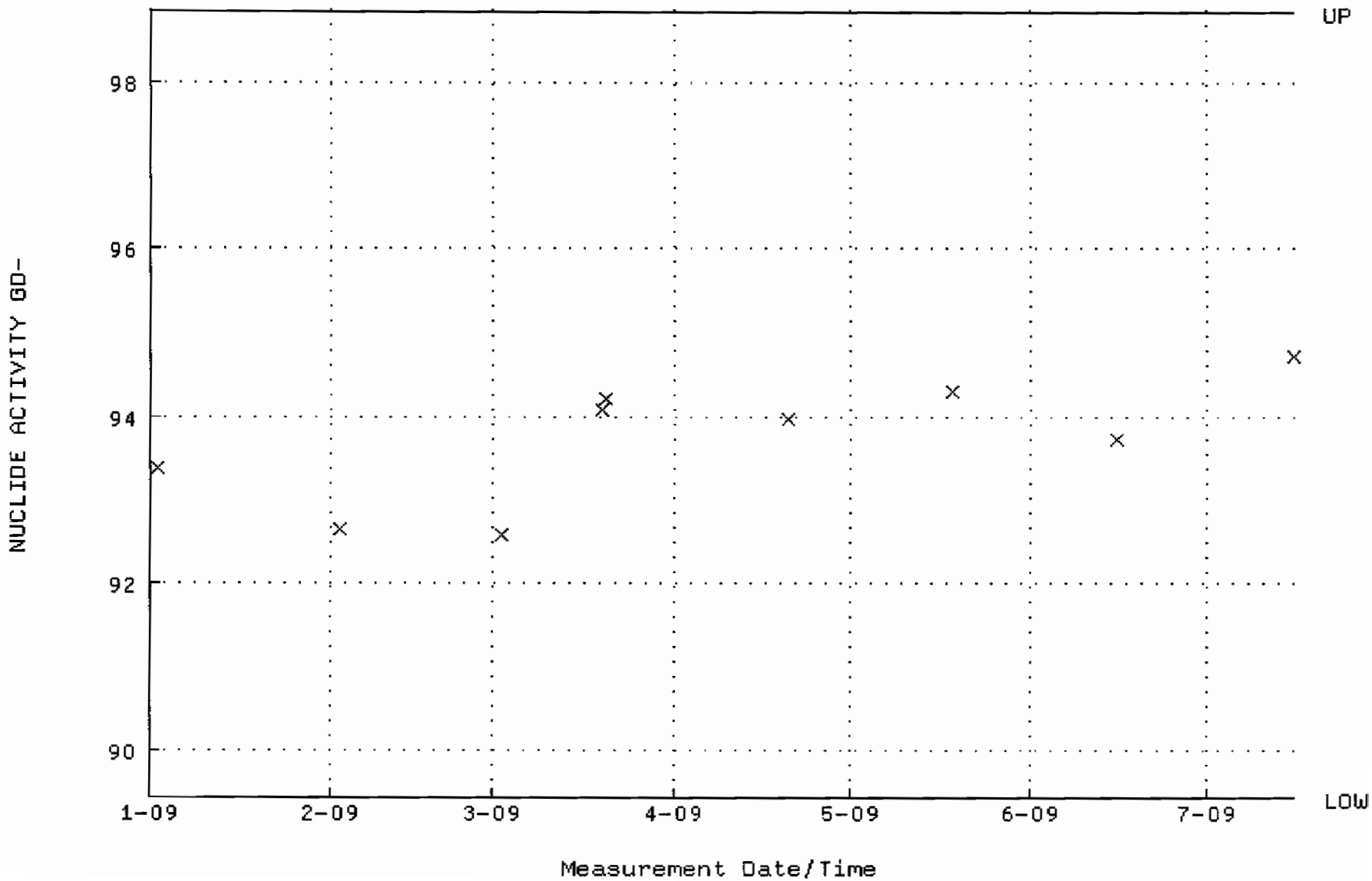

QA filename : DKA100:[ENV_ALPHA.QA.B]B121.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:22:23 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

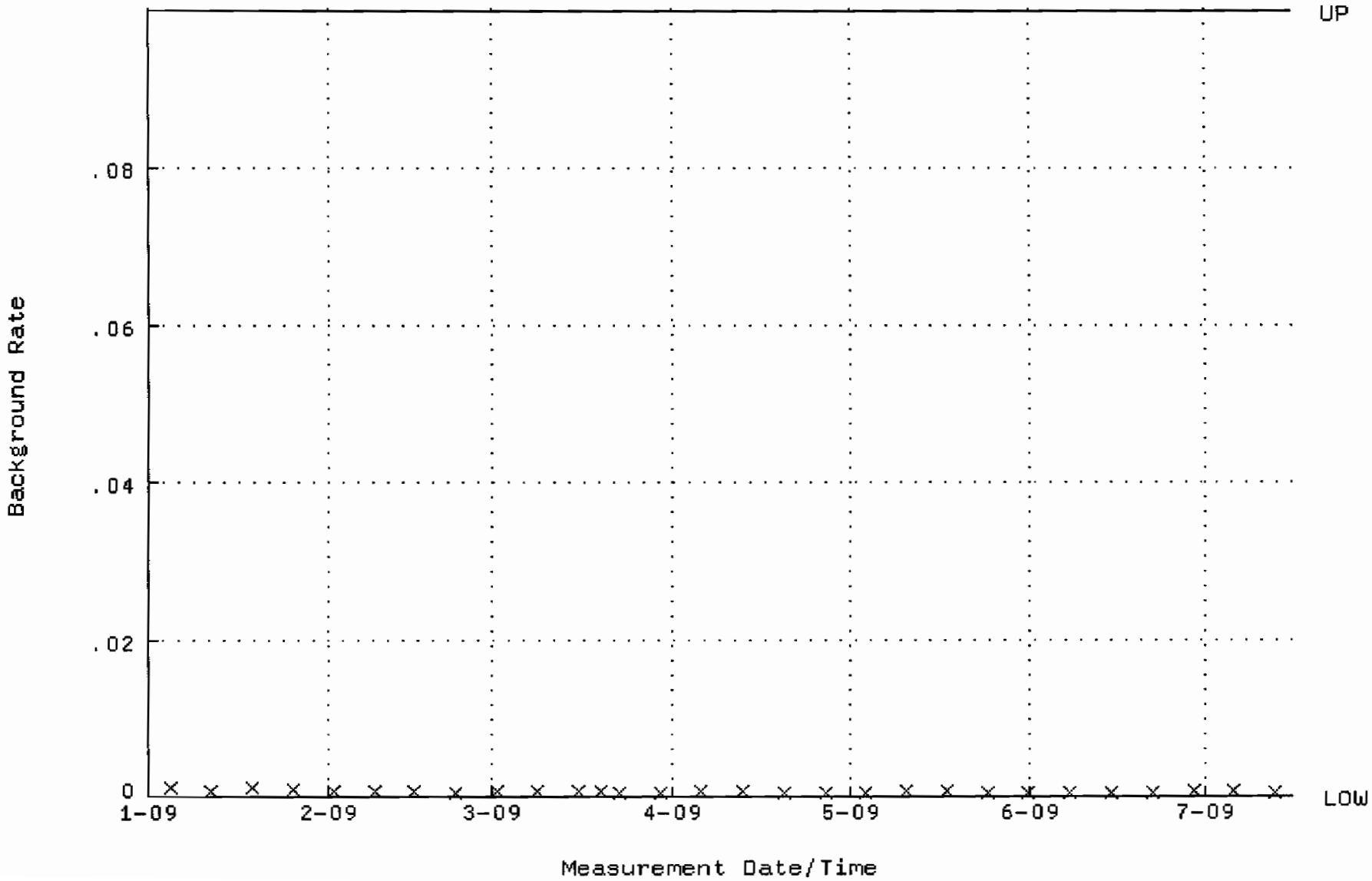

QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:23:23 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.242659 through 0.262659

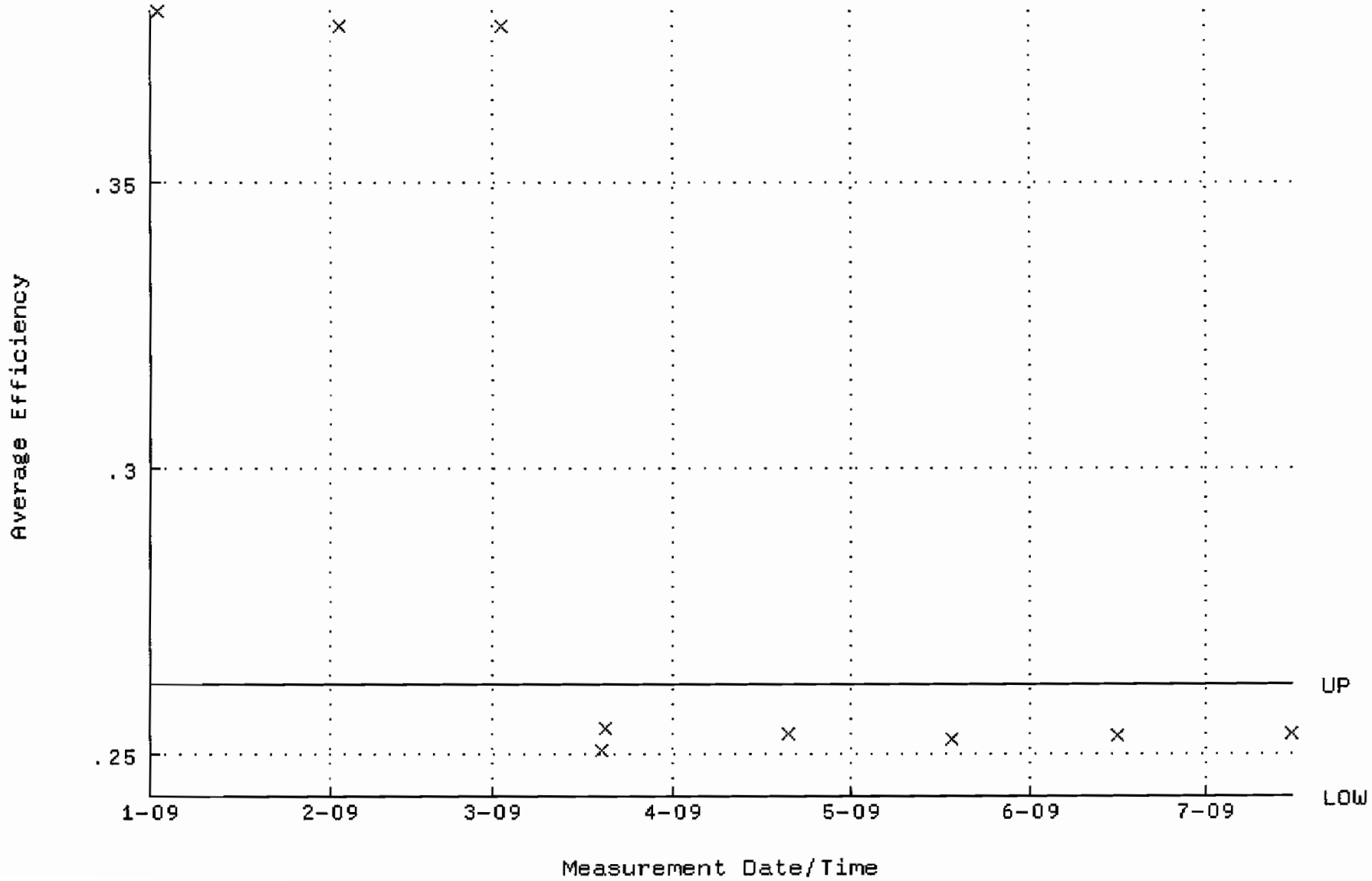

QA filename : DKA100:[ENV_ALPHA.QA.W]W122.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:23:23 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 90.5949 through 100.131

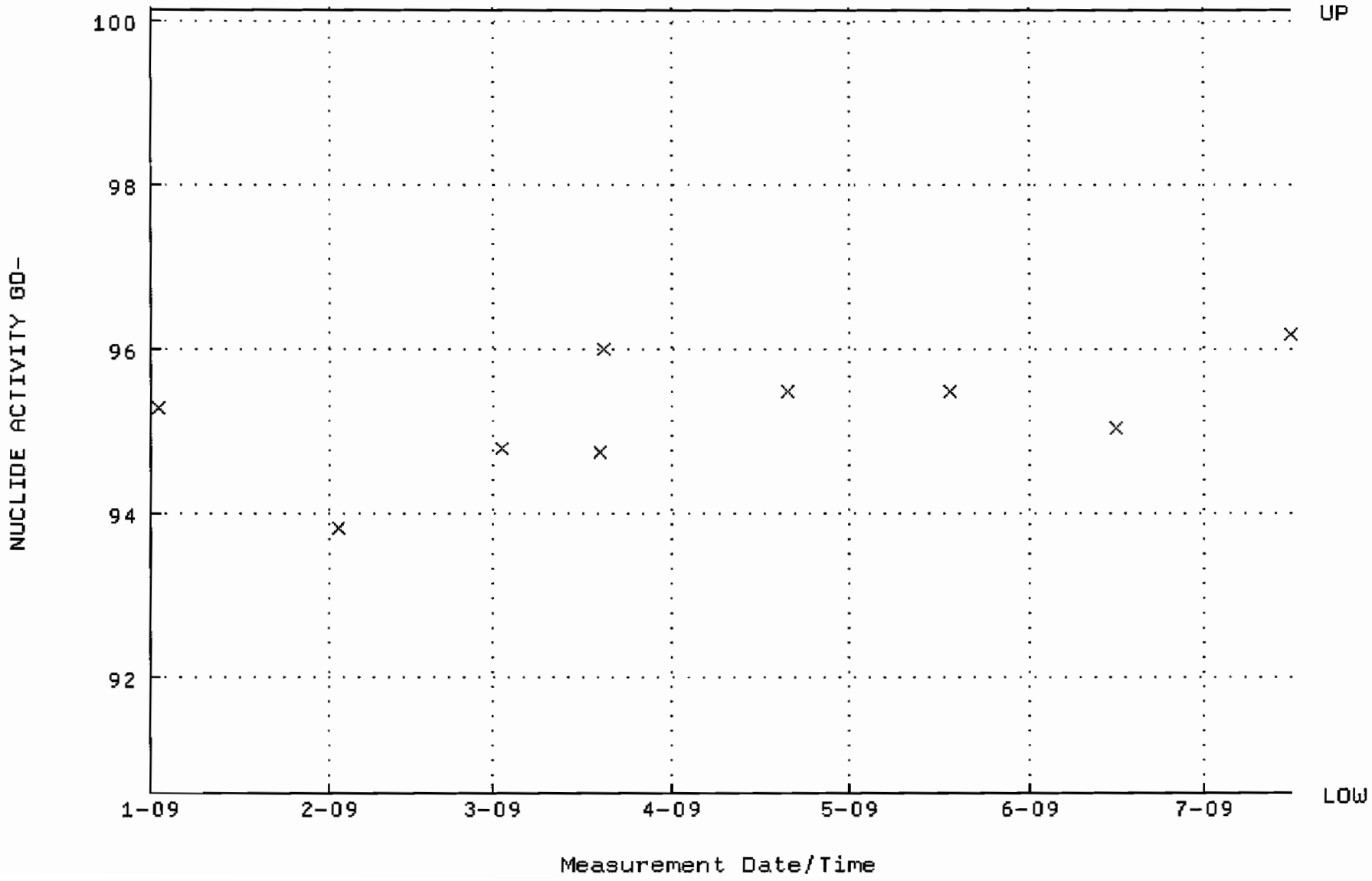

QA filename : DKA100:[ENV_ALPHA.QA.B]B122.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:22:26 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

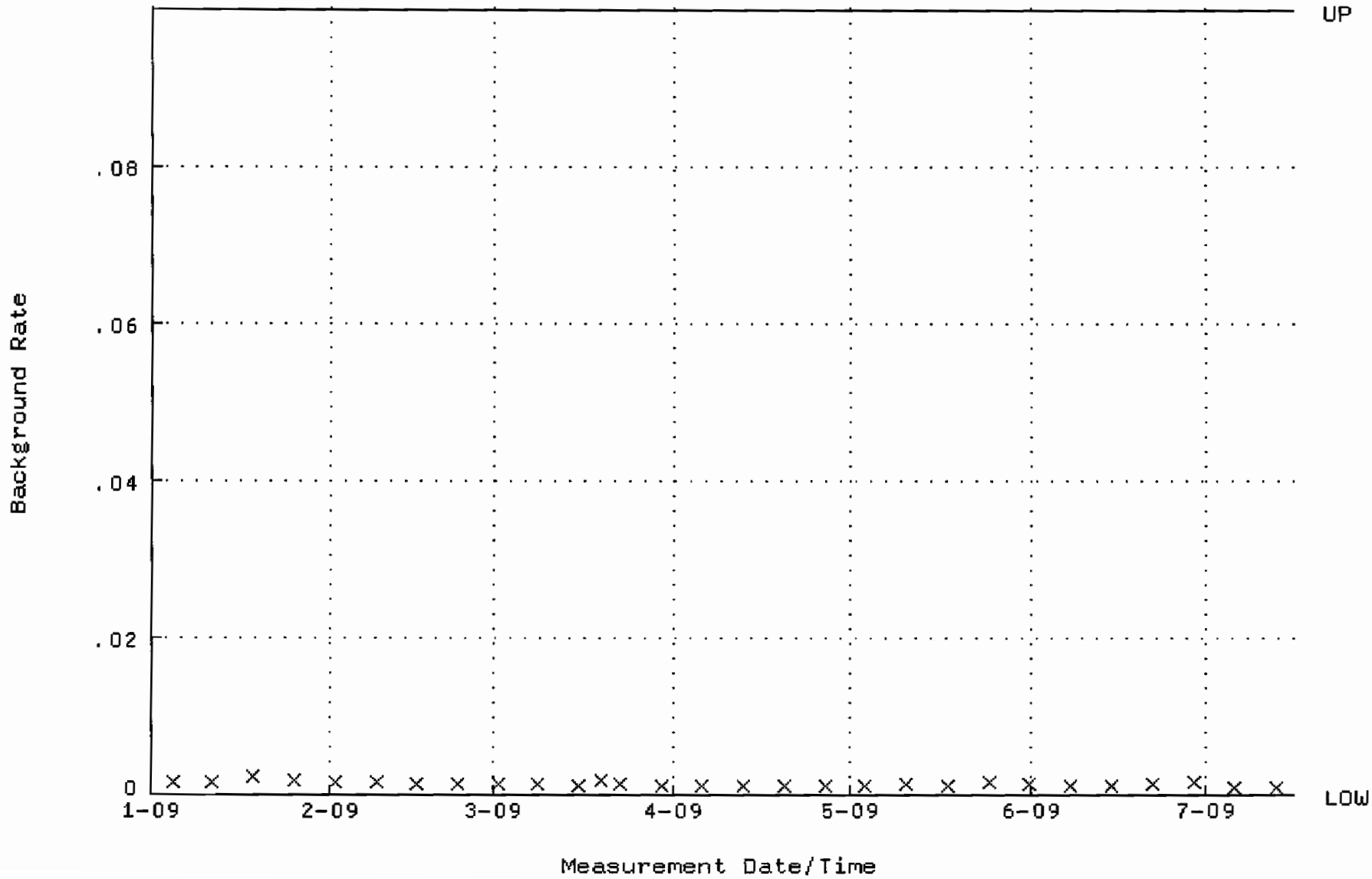

QA filename : DKA100:[ENV_ALPHA.QA.W]W123.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:23:29 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.249752 through 0.269752

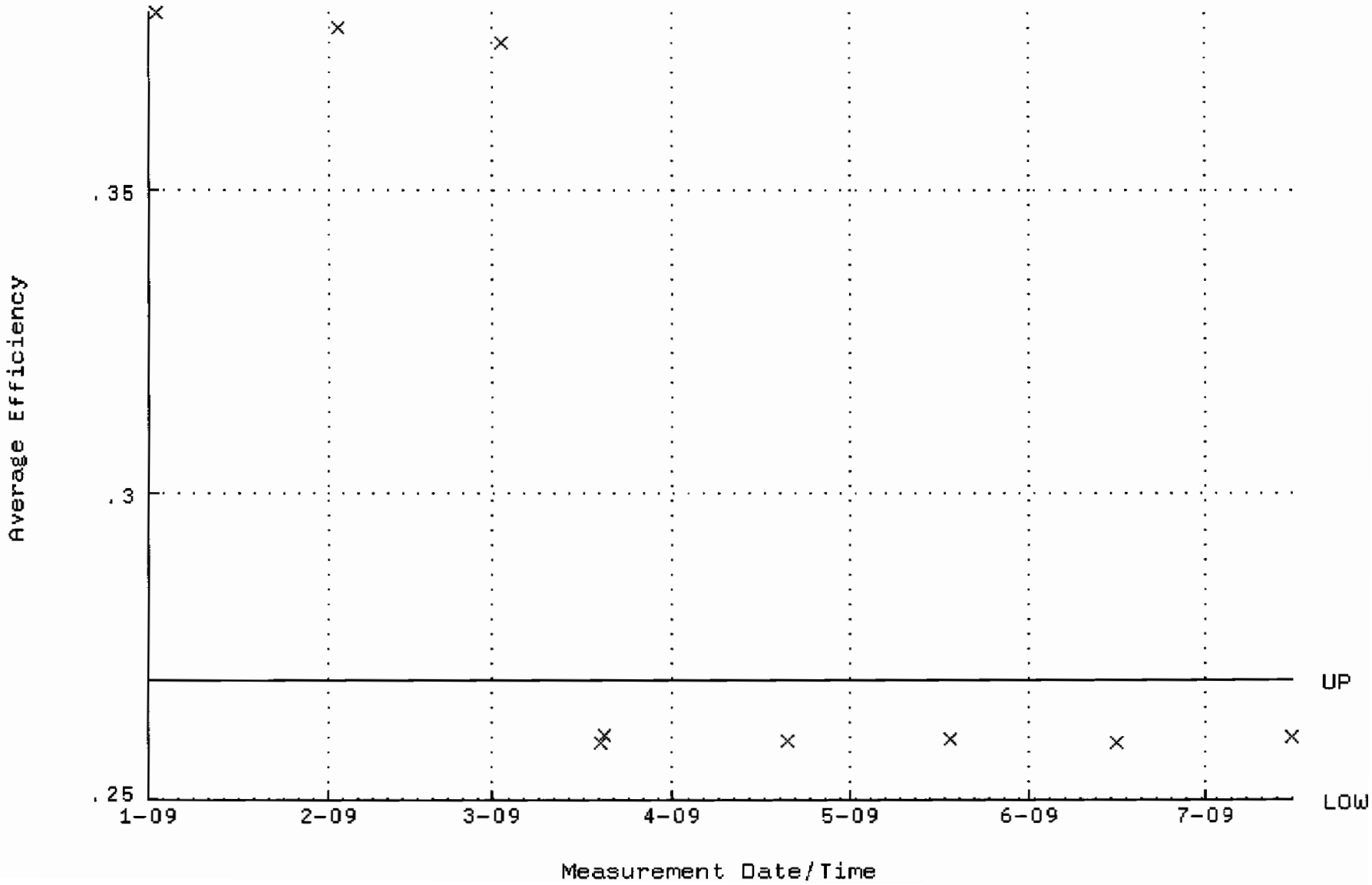

QA filename : DKA100:[ENV_ALPHA.QA.W]W123.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:23:29 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 86.0496 through 95.1074

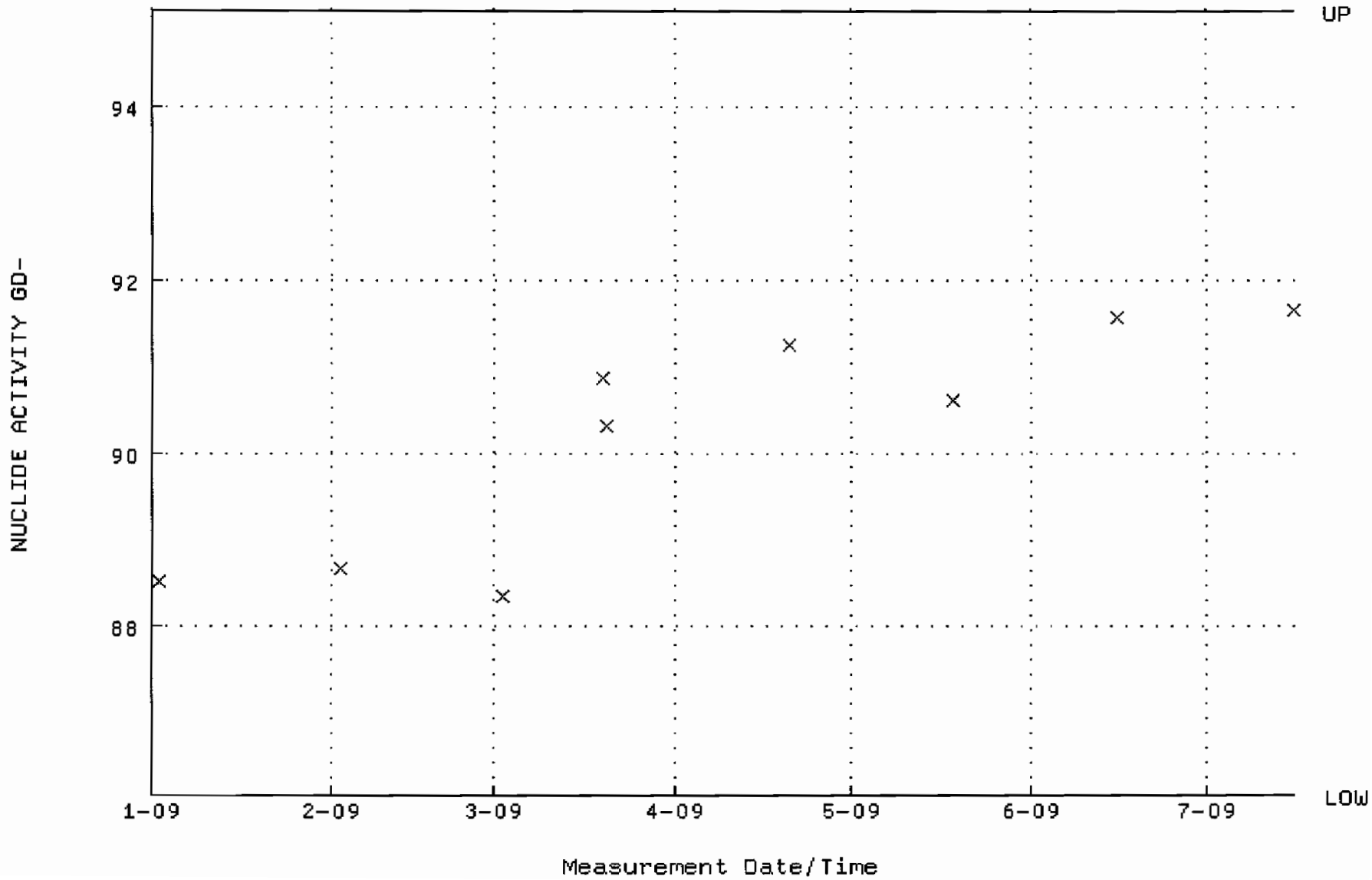

QA filename : DKA100:[ENV_ALPHA.QA.B]B123.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:22:30 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

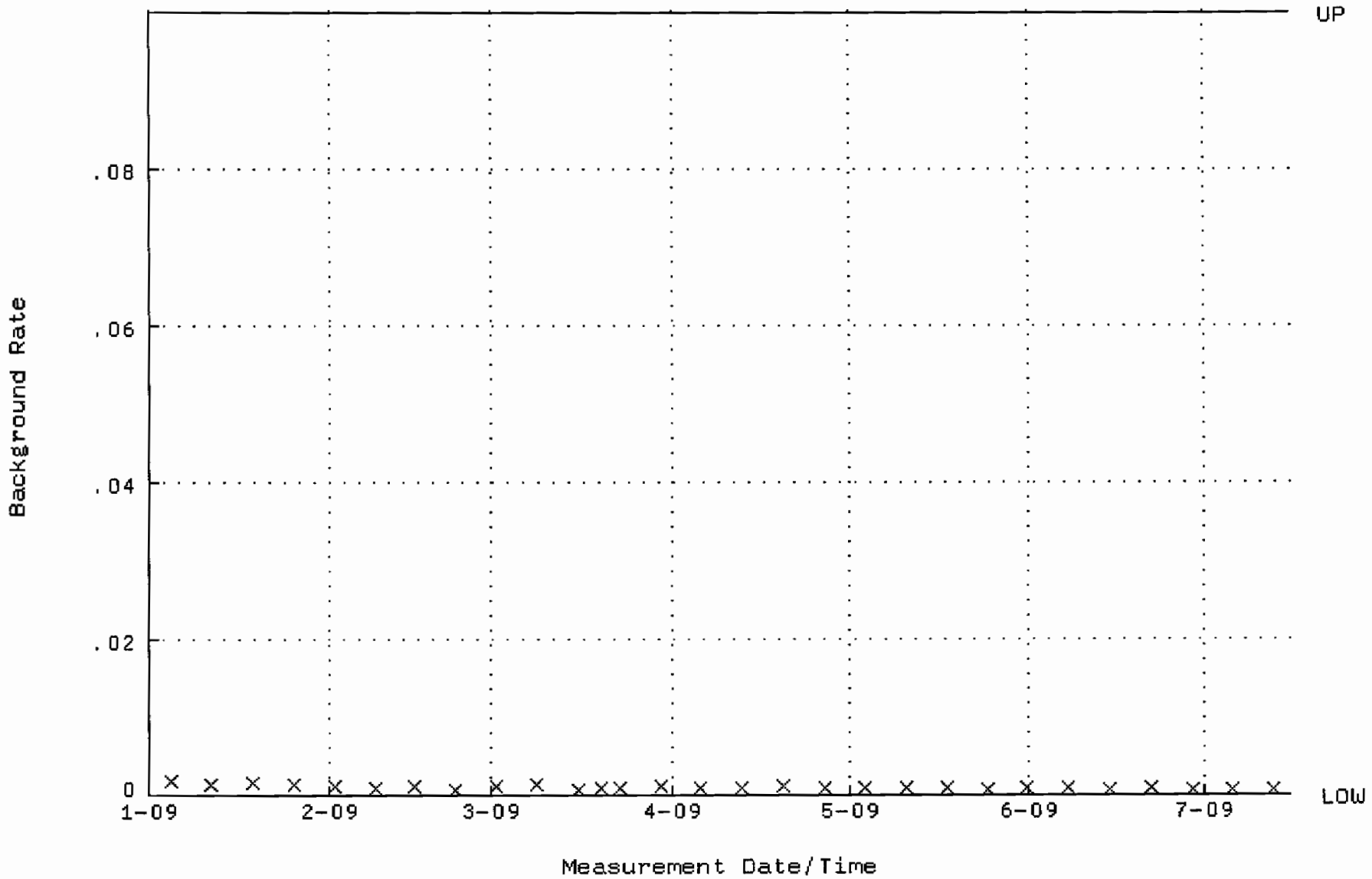

QA filename : DKA100:[ENV_ALPHA.QA.W]W124.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:23:33 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.251398 through 0.271398

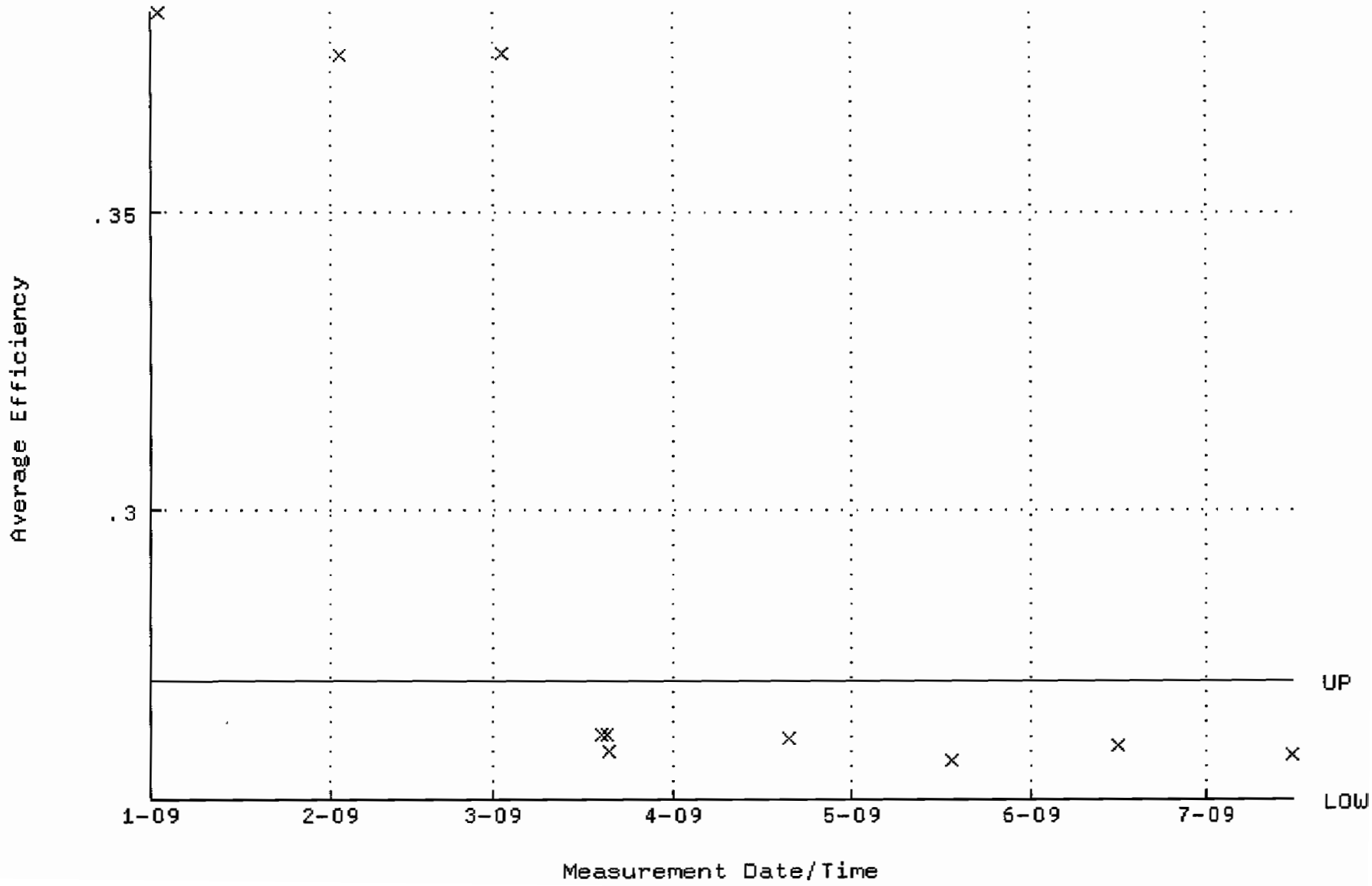

QA filename : DKA100:[ENV_ALPHA.QA.W]W124.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:23:33 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 86.8862 through 96.0322

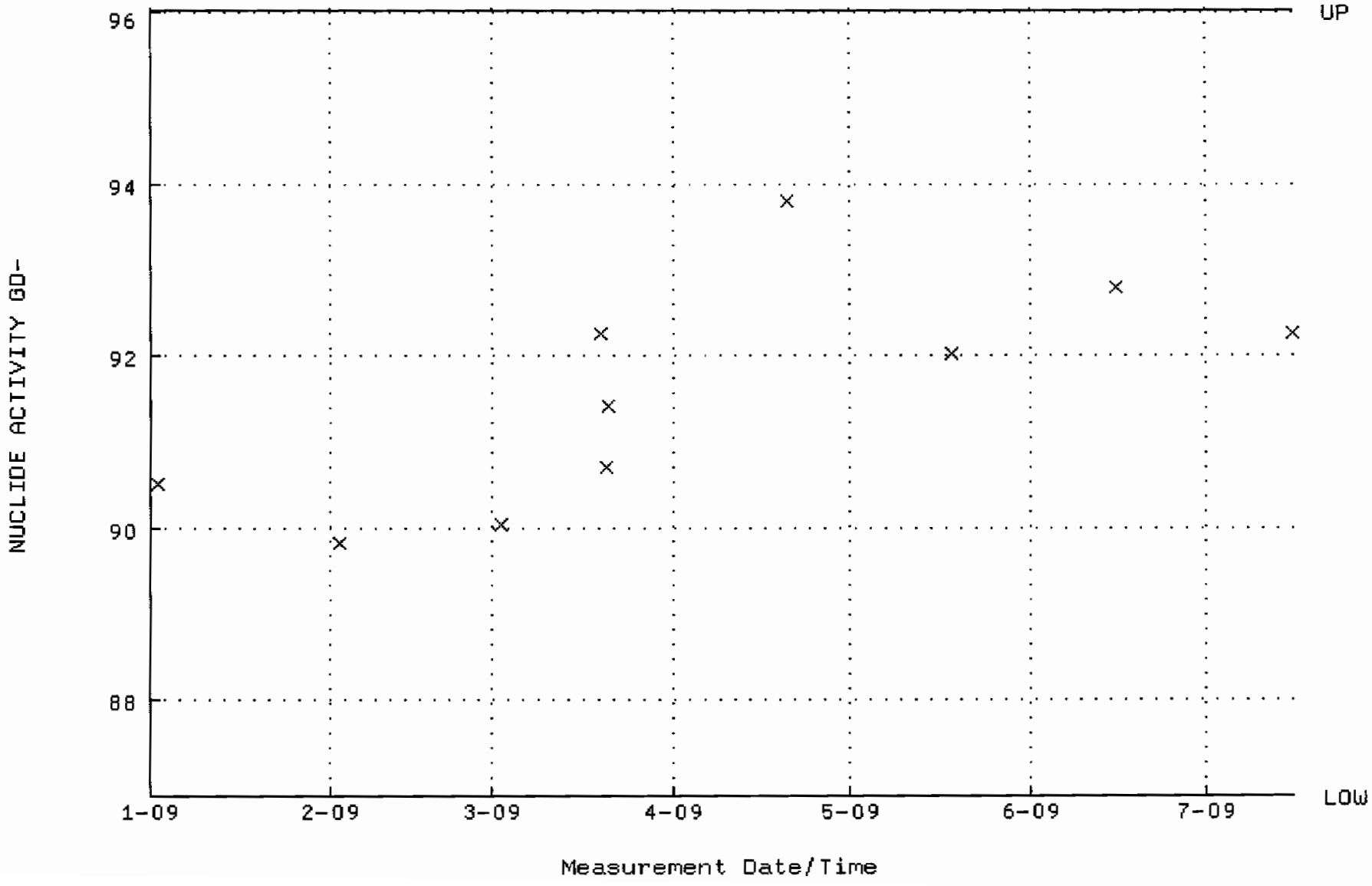

QA filename : DKA100:[ENV_ALPHA.QA.B]B124.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:22:35 through 15-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

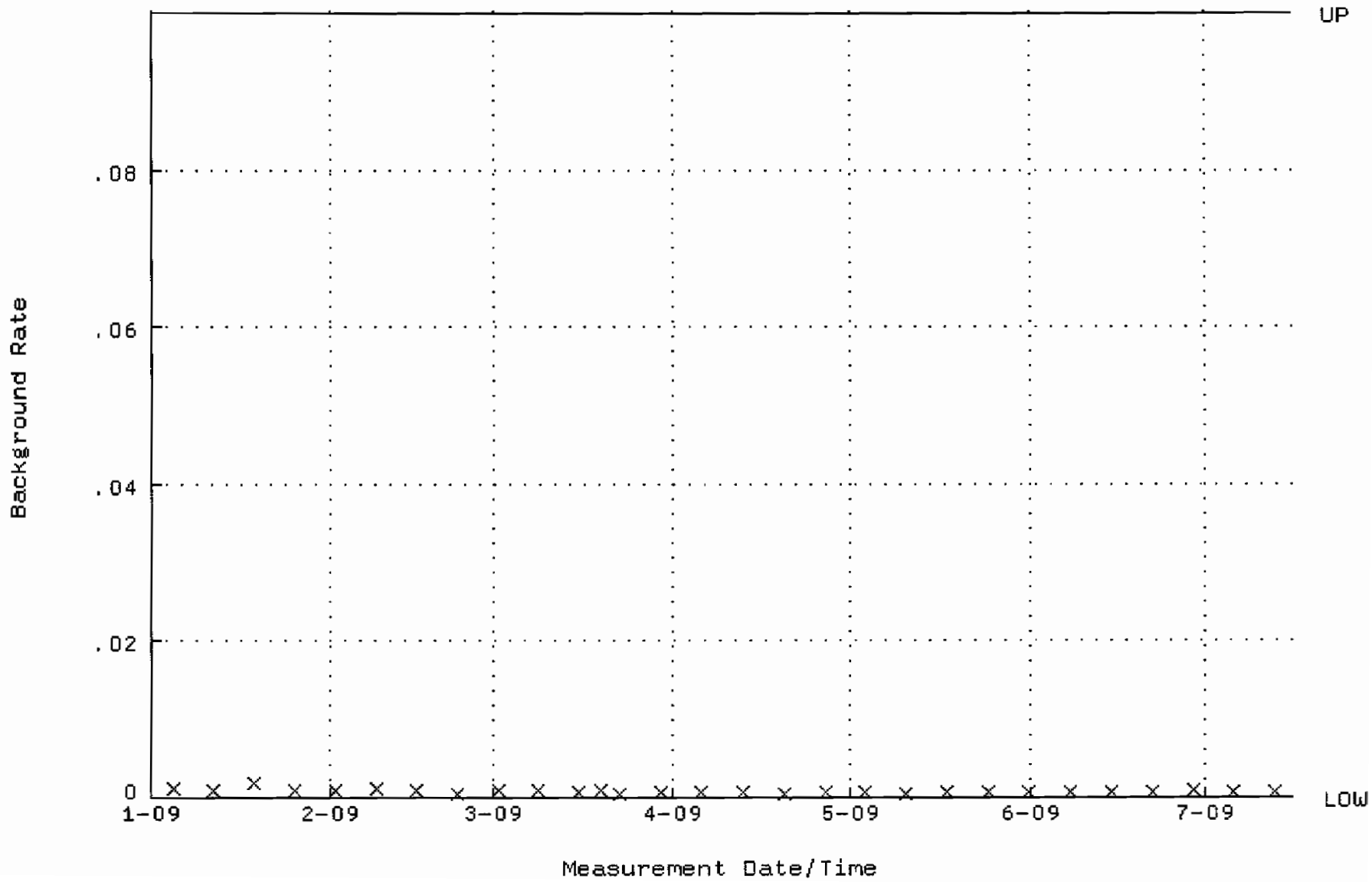

QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:23:44 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.243156 through 0.263156

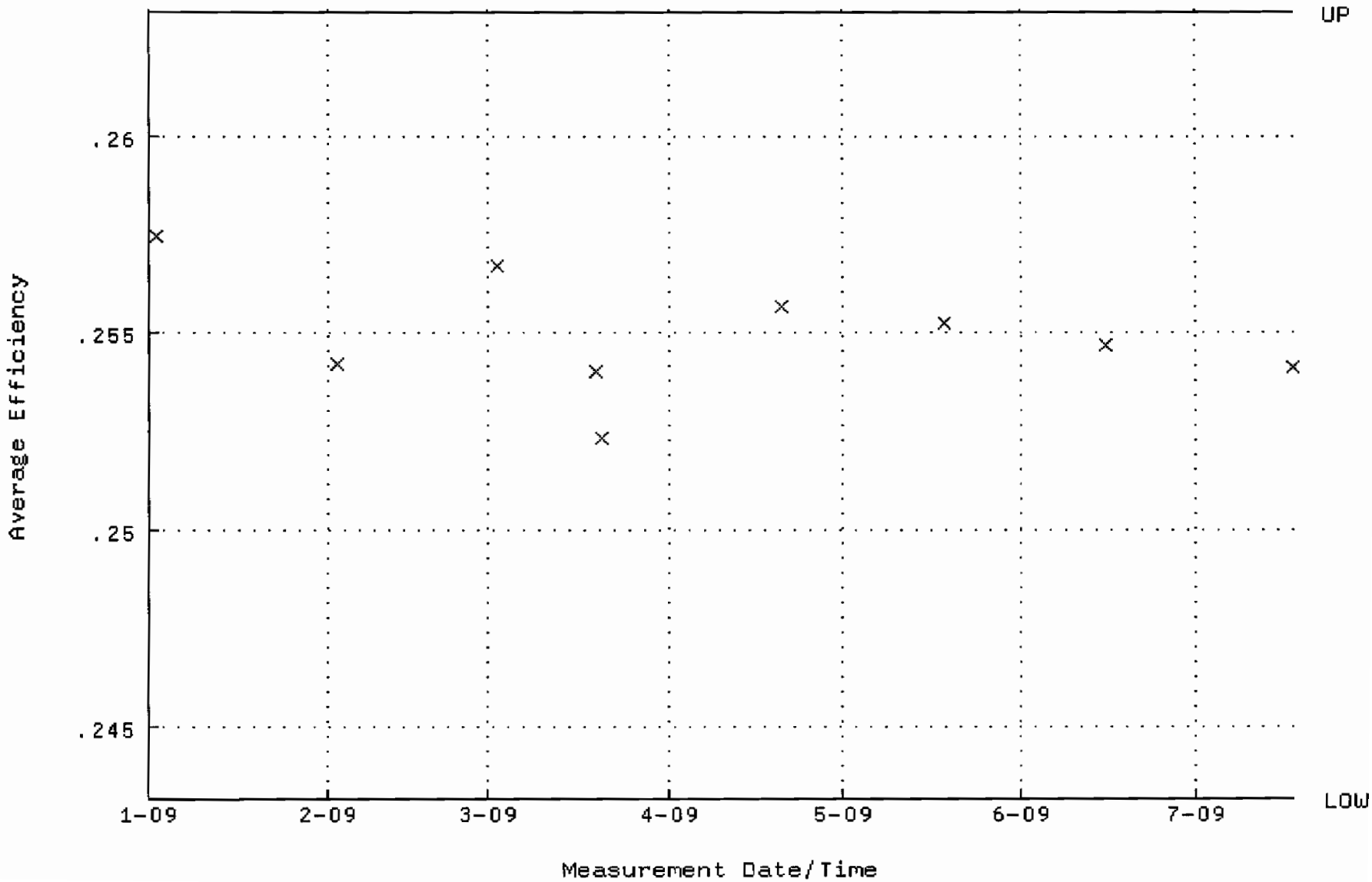

QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:23:44 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 85.7449 through 94.7707

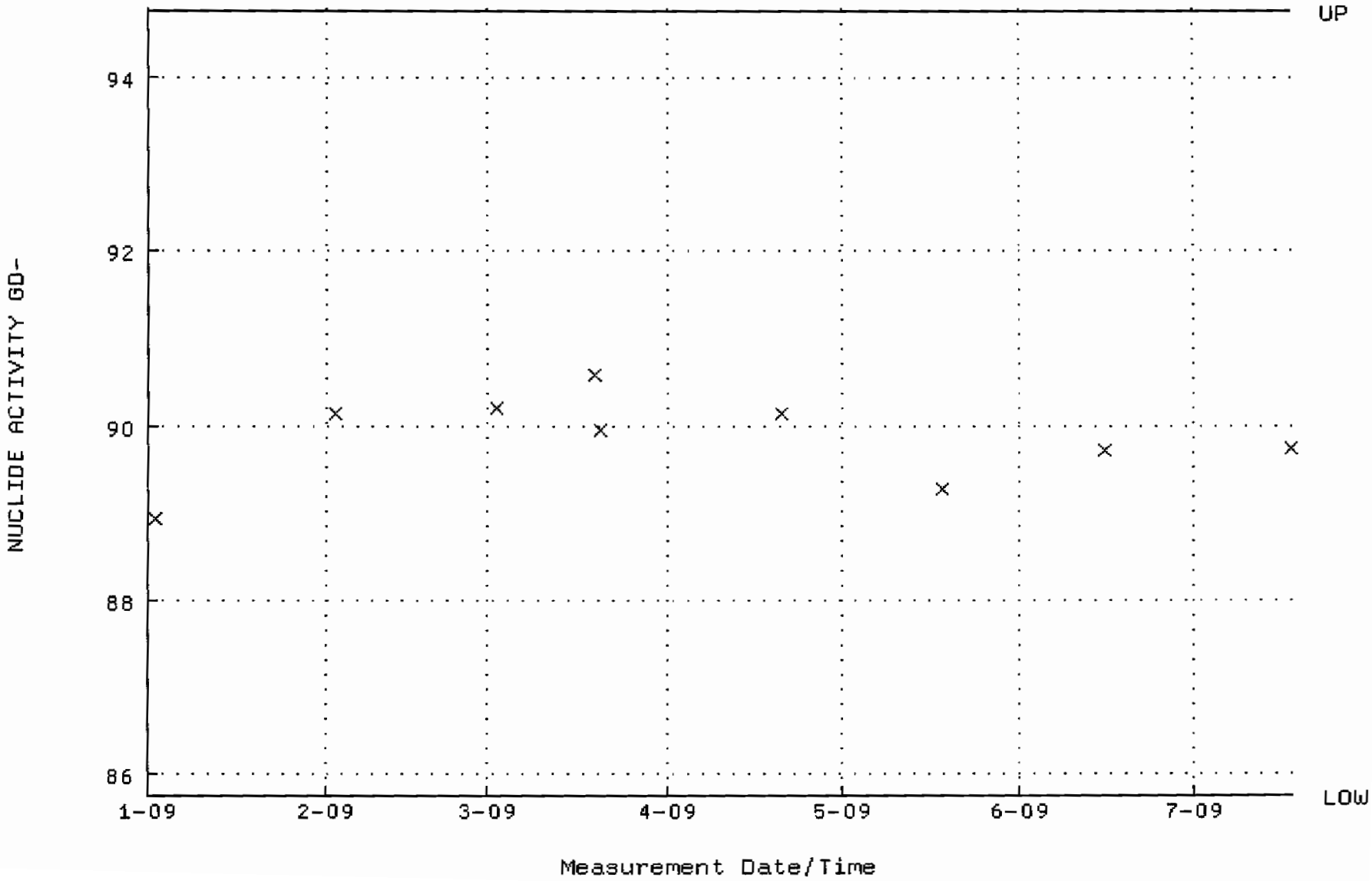

QA filename : DKA100:[ENV_ALPHA.QA.B]B126.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:22:43 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

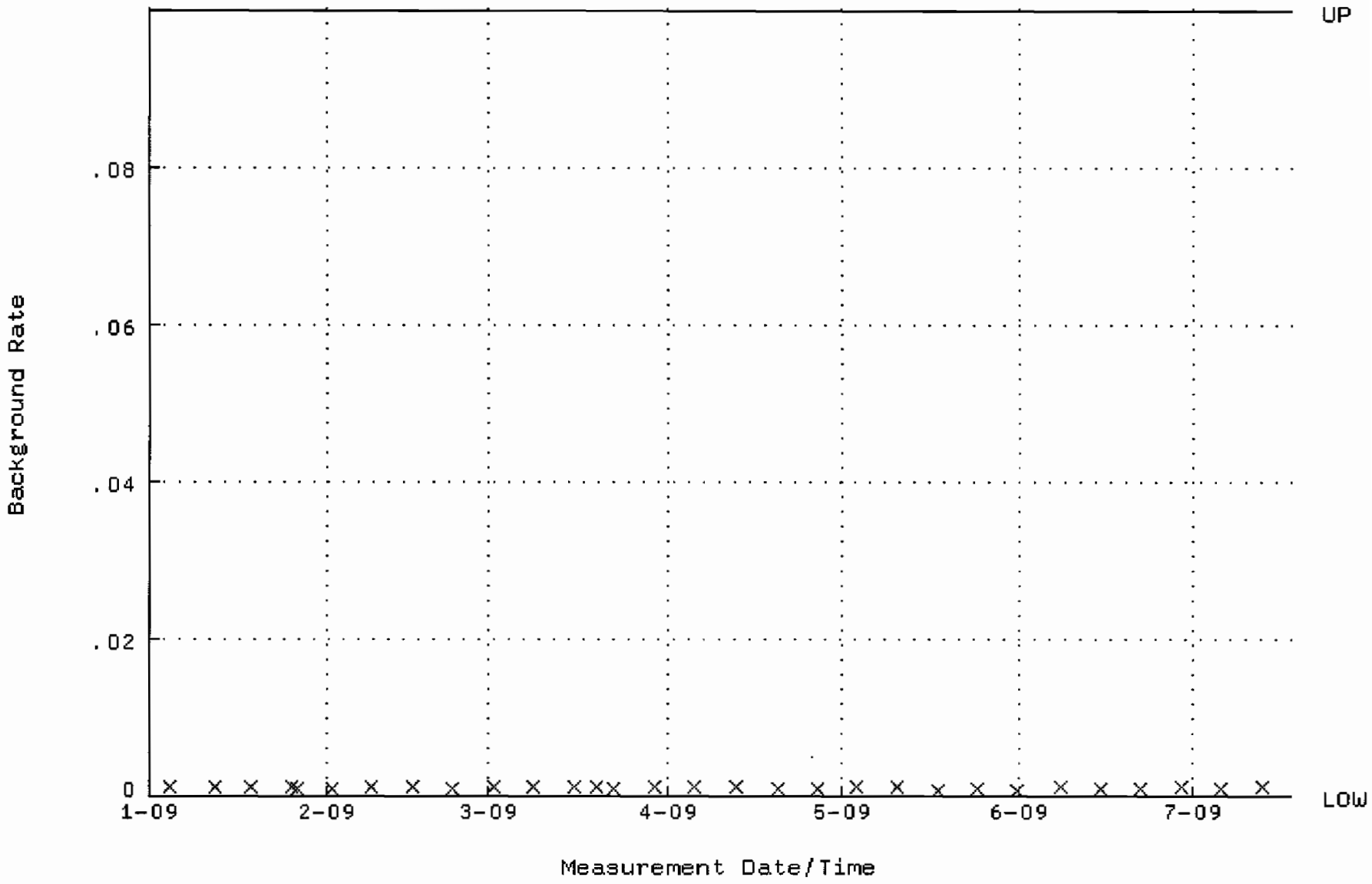

QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:04 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.239131 through 0.259131

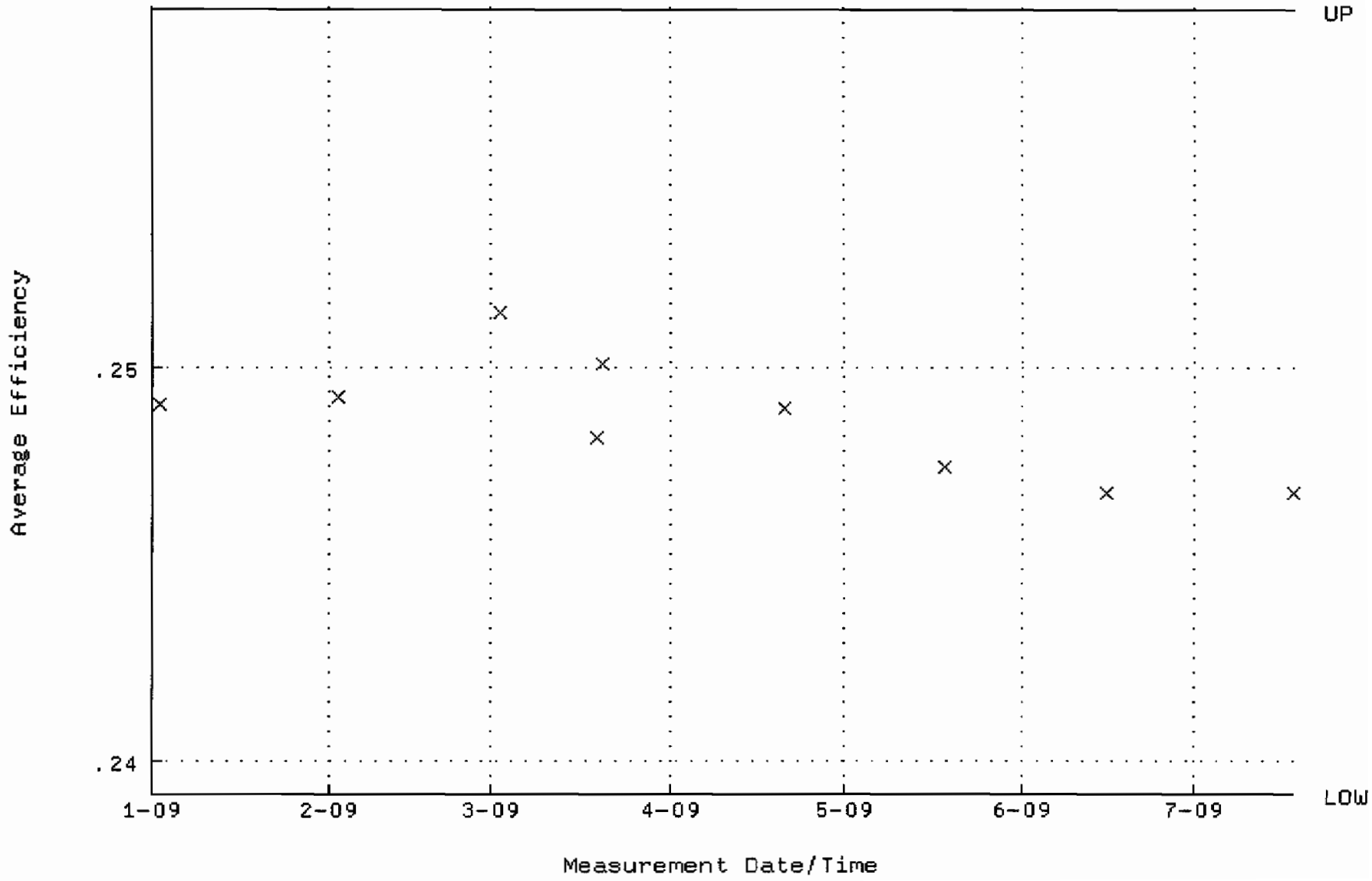

QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:04 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 88.1614 through 97.4416

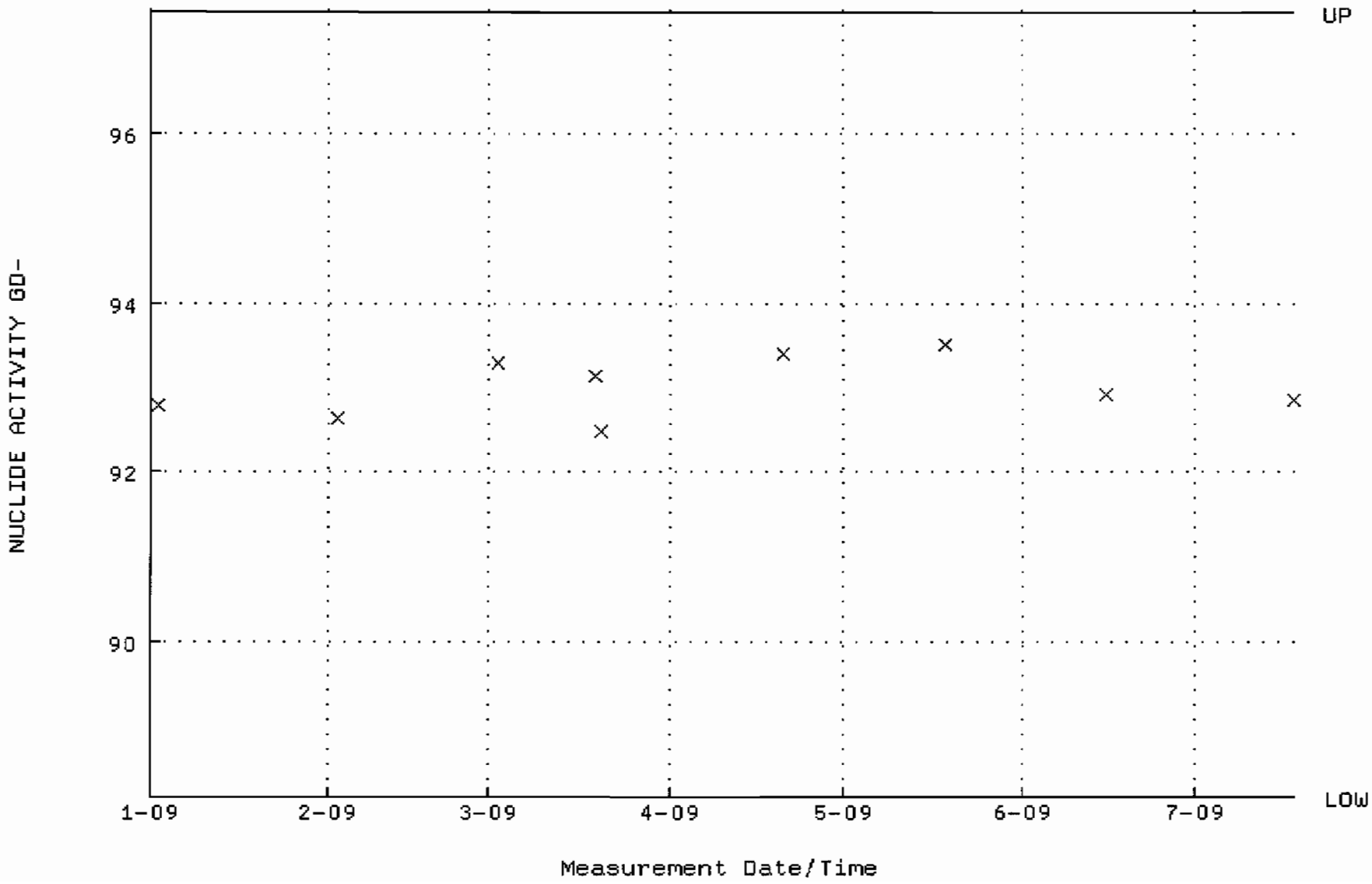

QA filename : DKA100:[ENV_ALPHA.QA.B]B130.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:01 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

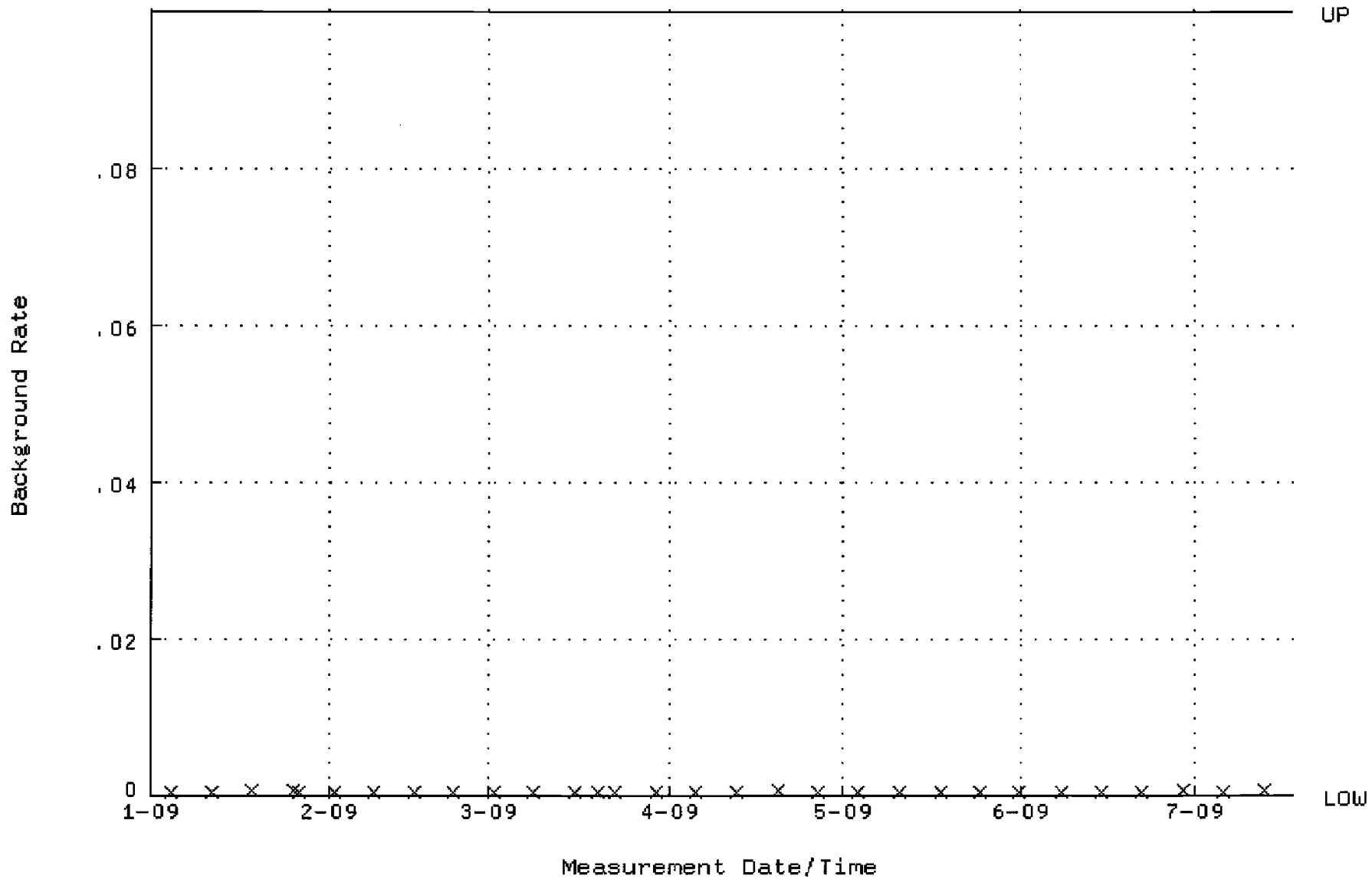

QA filename : DKA100:[ENV_ALPHA.QA.W]W132.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:14 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.240589 through 0.260589

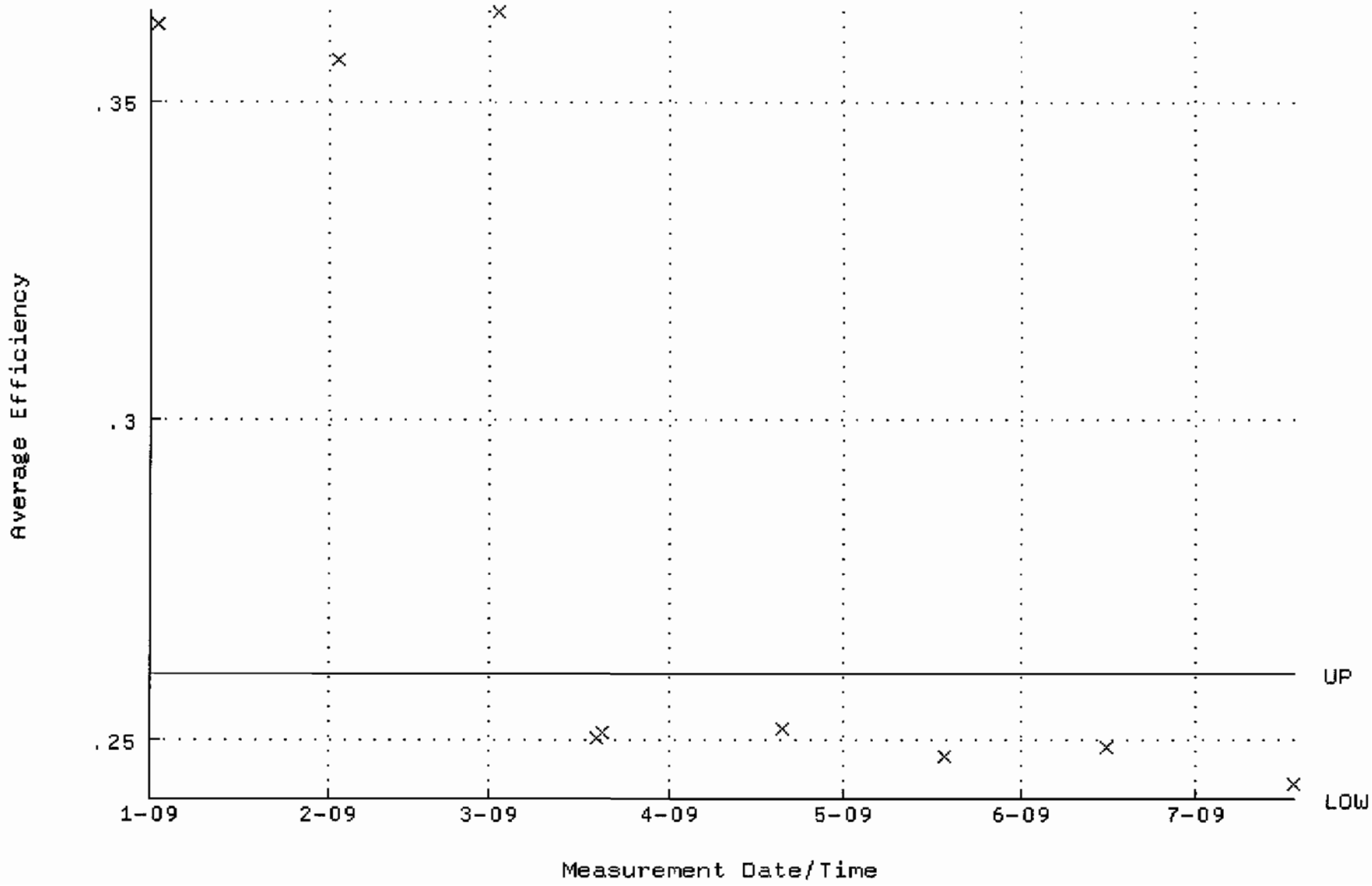

QA filename : DKA100:[ENV_ALPHA.QA.W]W132.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:14 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 88.1280 through 97.4046

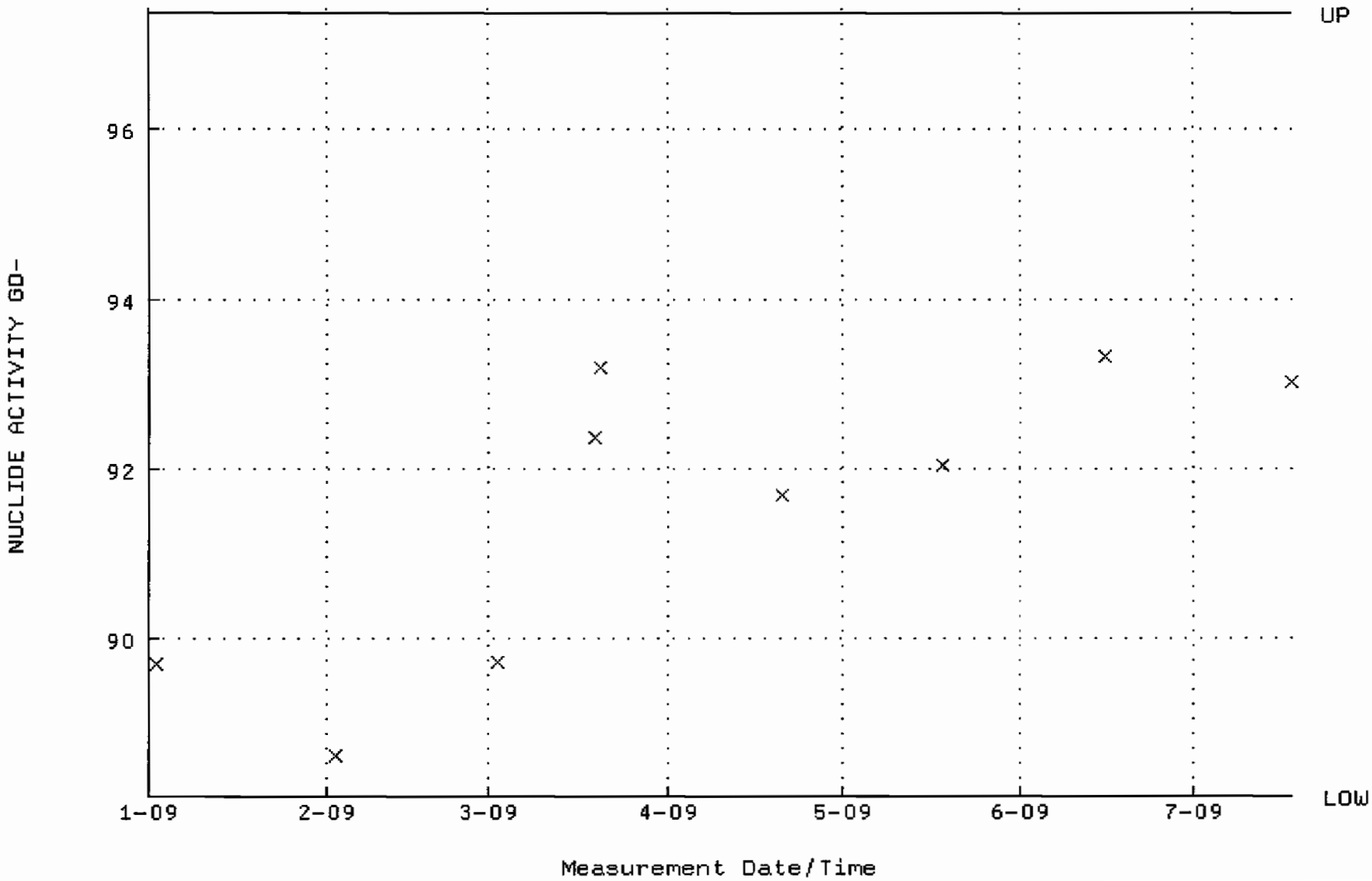

QA filename : DKA100:[ENV_ALPHA.QA.B]B132.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:10 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

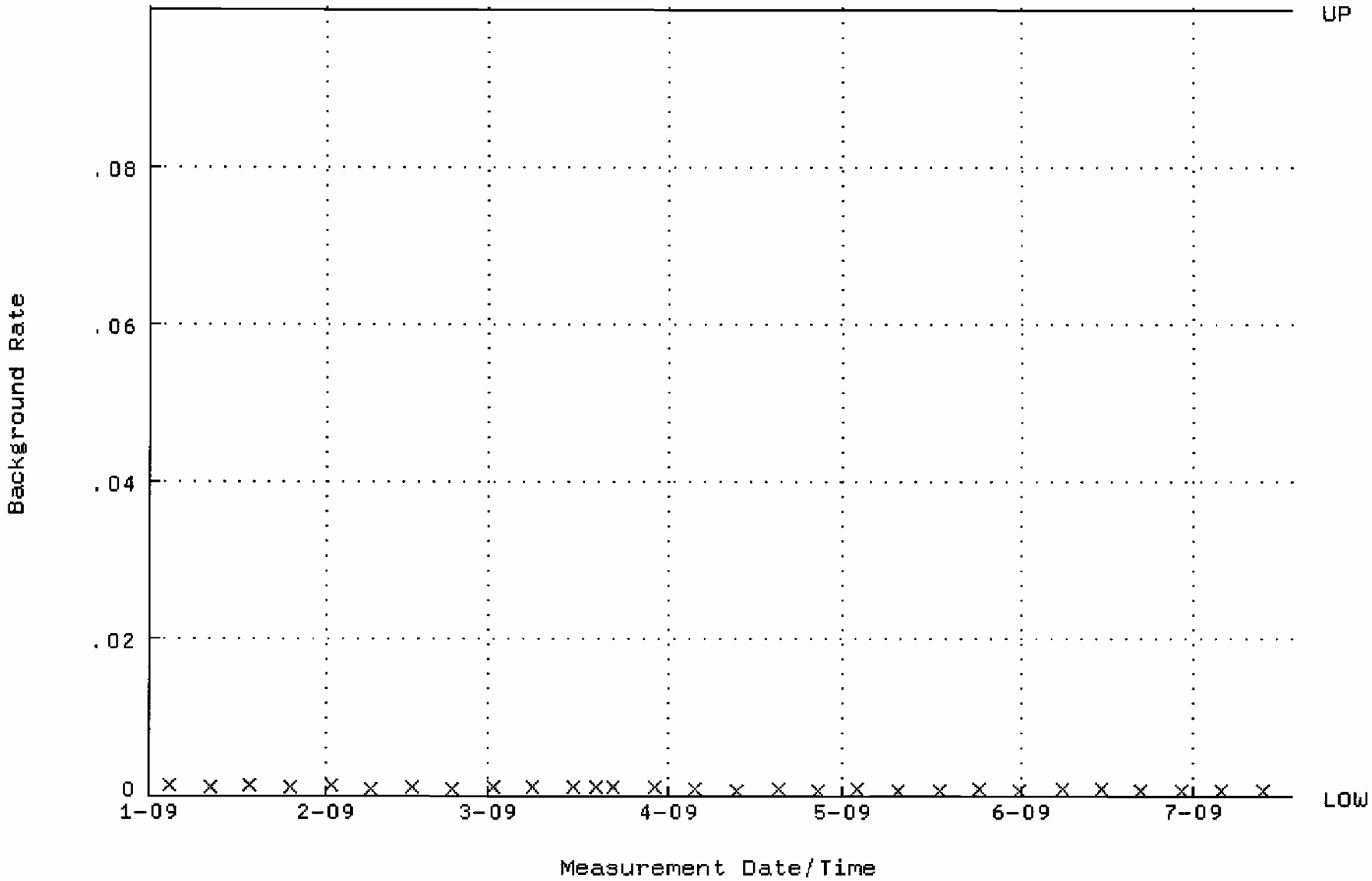

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:01 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

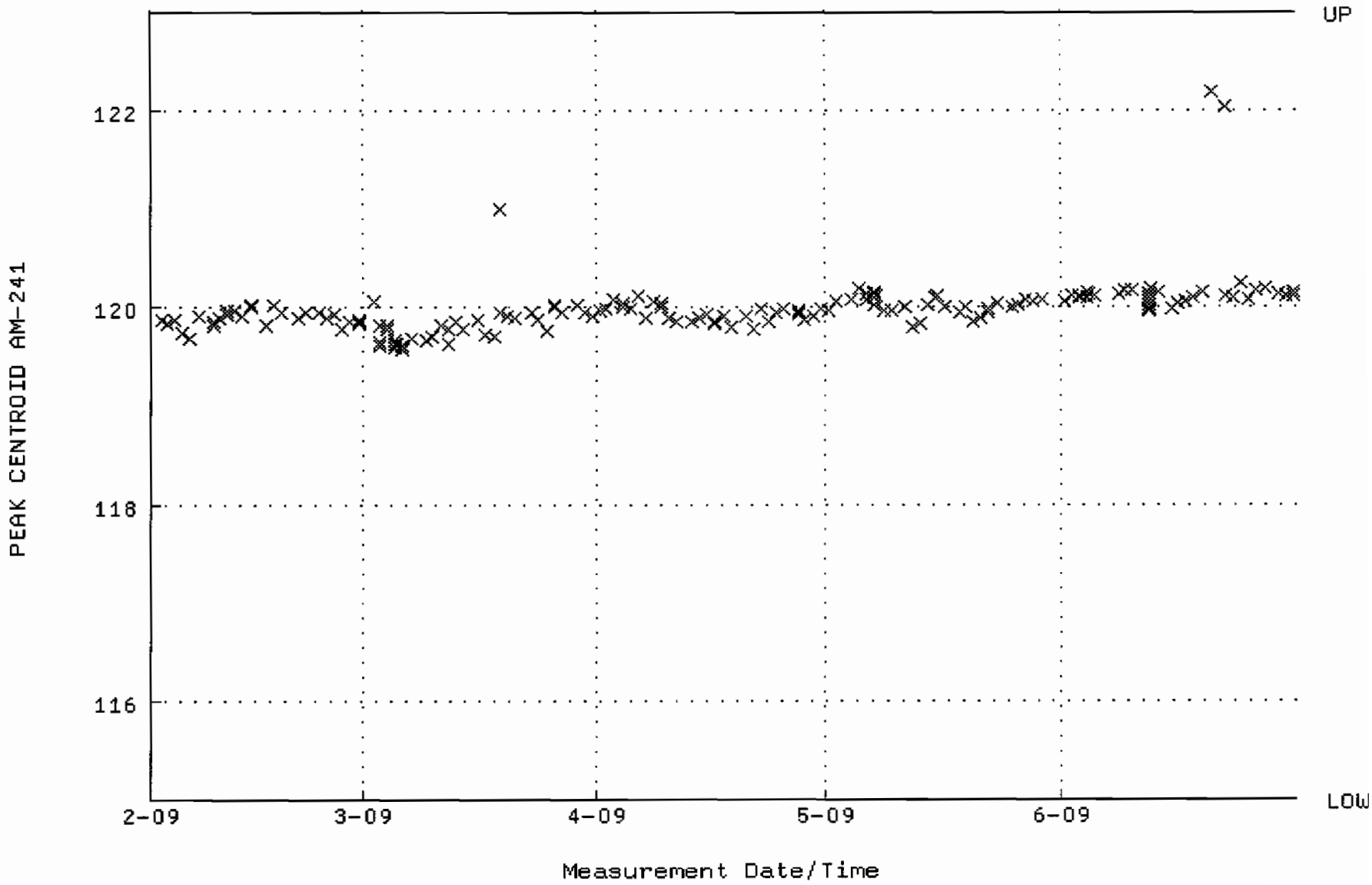

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM05.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.60580 through 1.72440

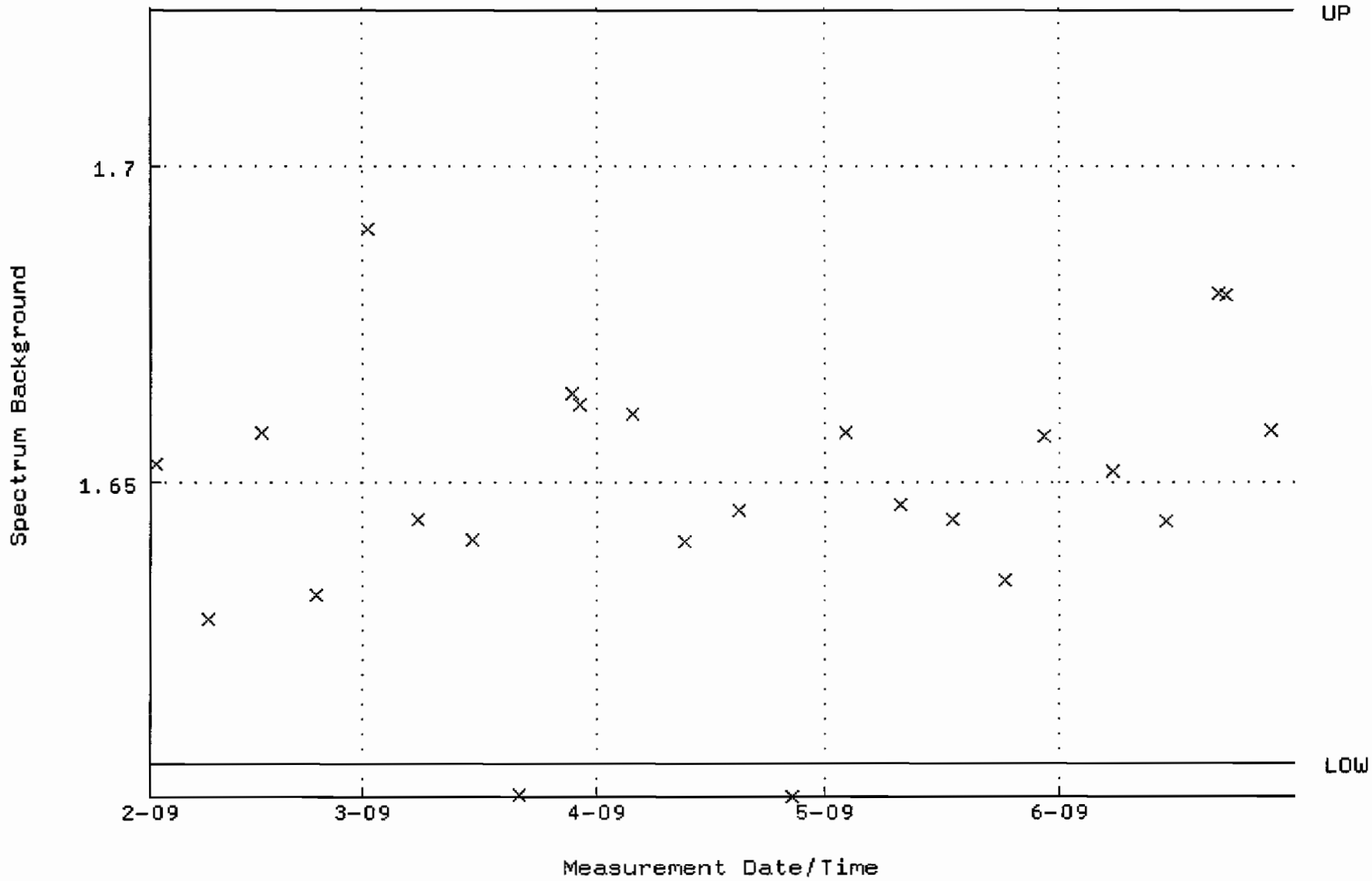

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-FEB-2009 16:33:12 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

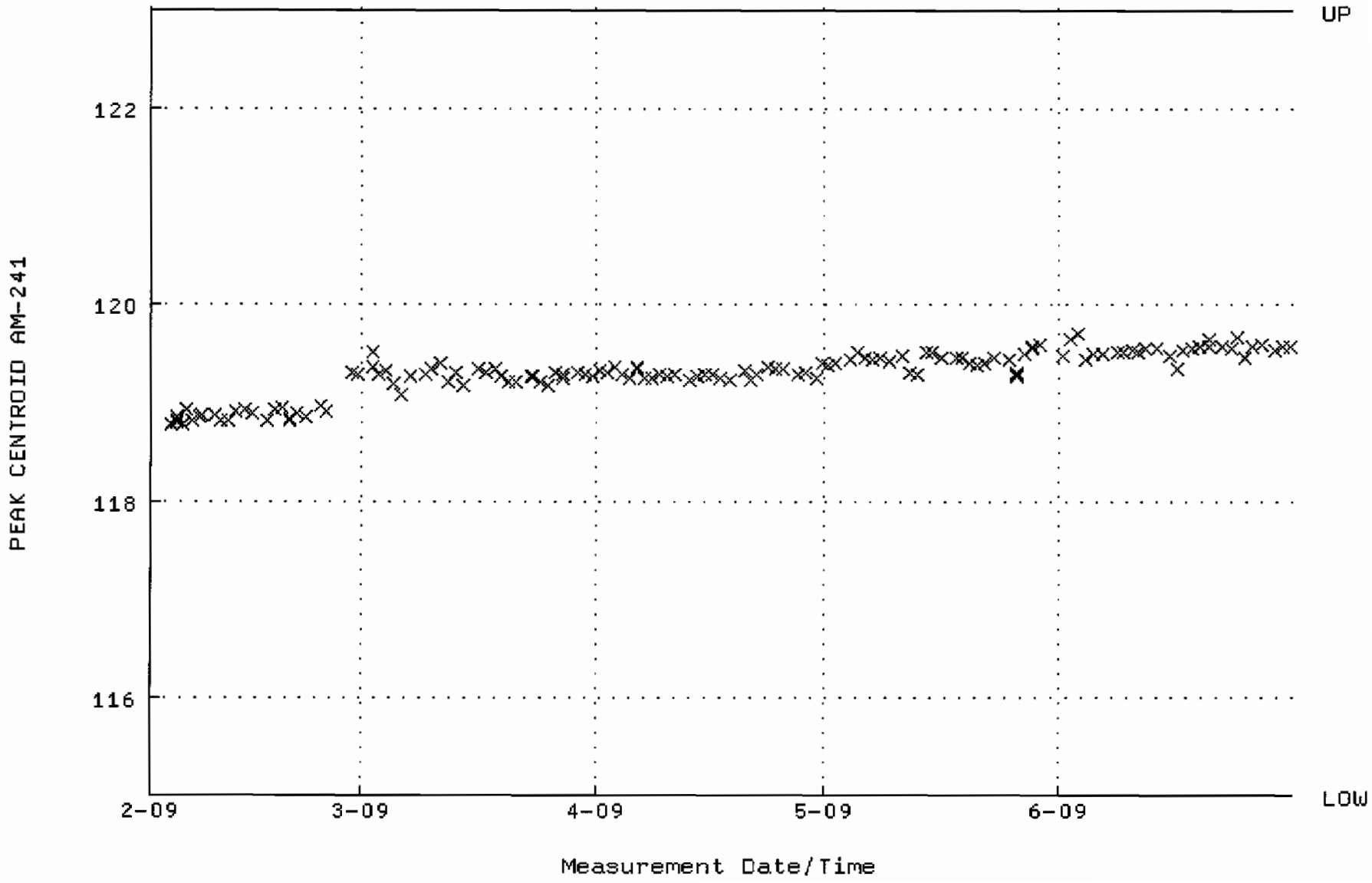

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM13.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:24 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.98827 through 3.65233

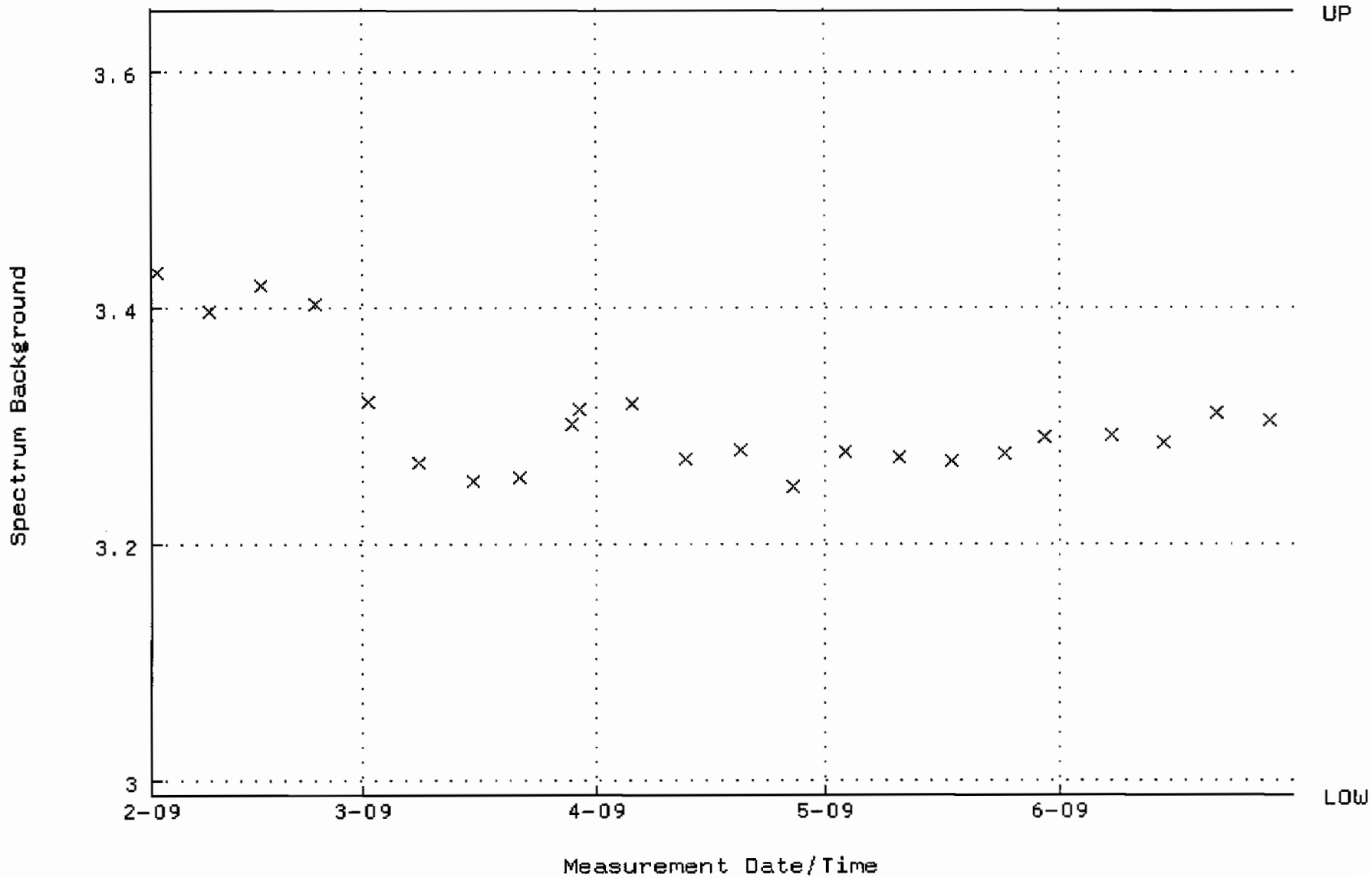

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

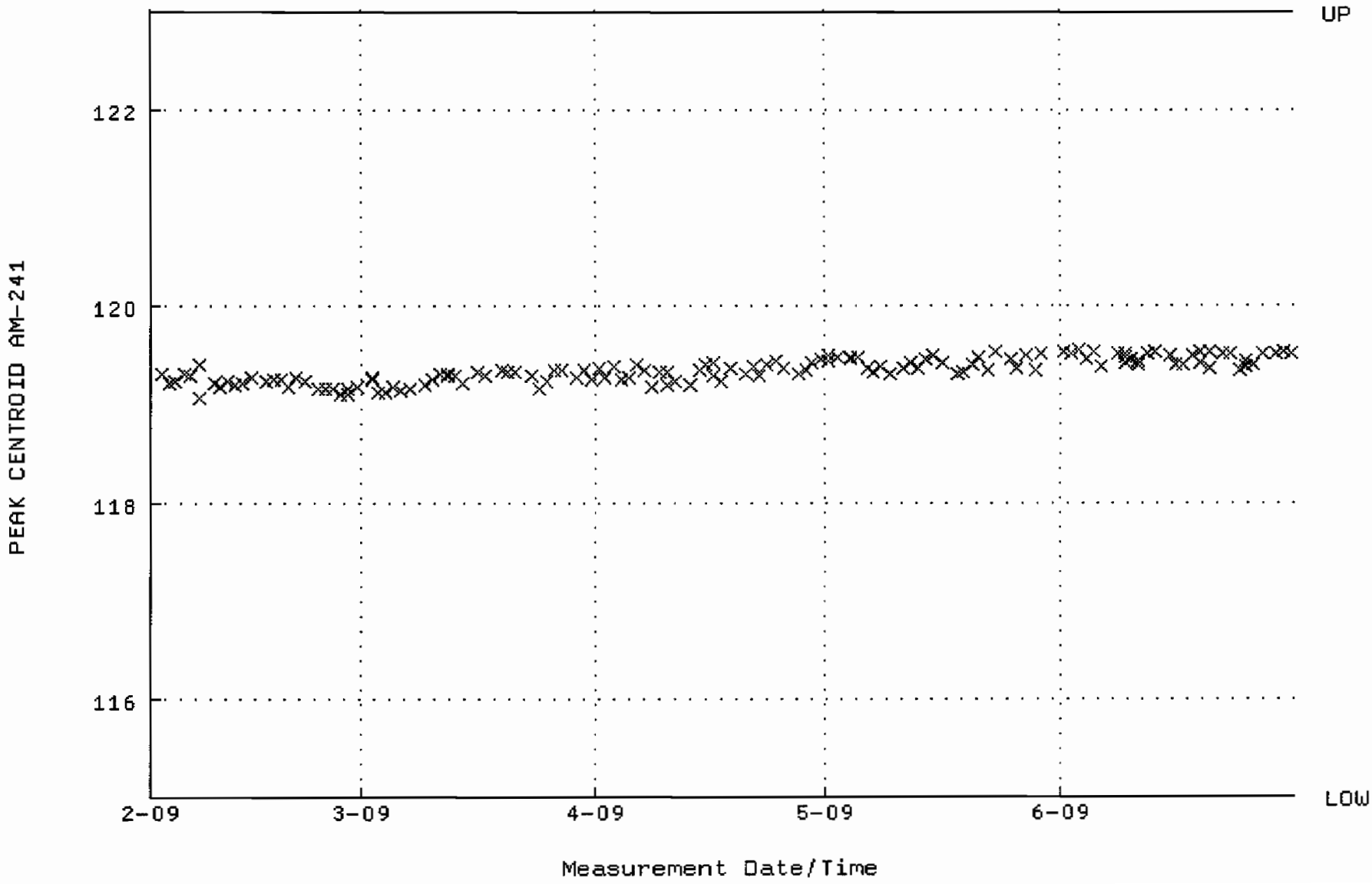

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM16.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:06 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.55150 through 1.89585

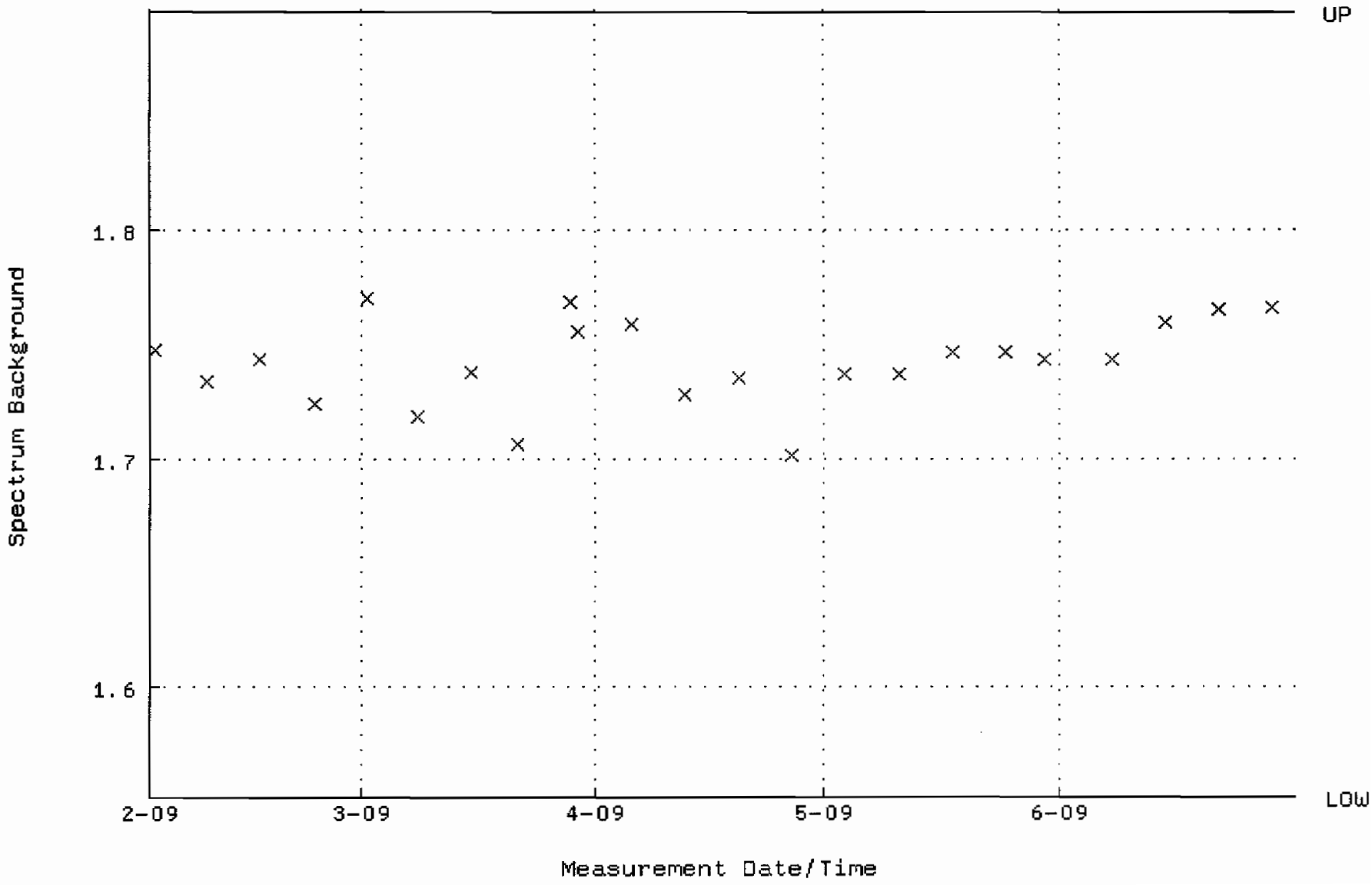

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:24:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

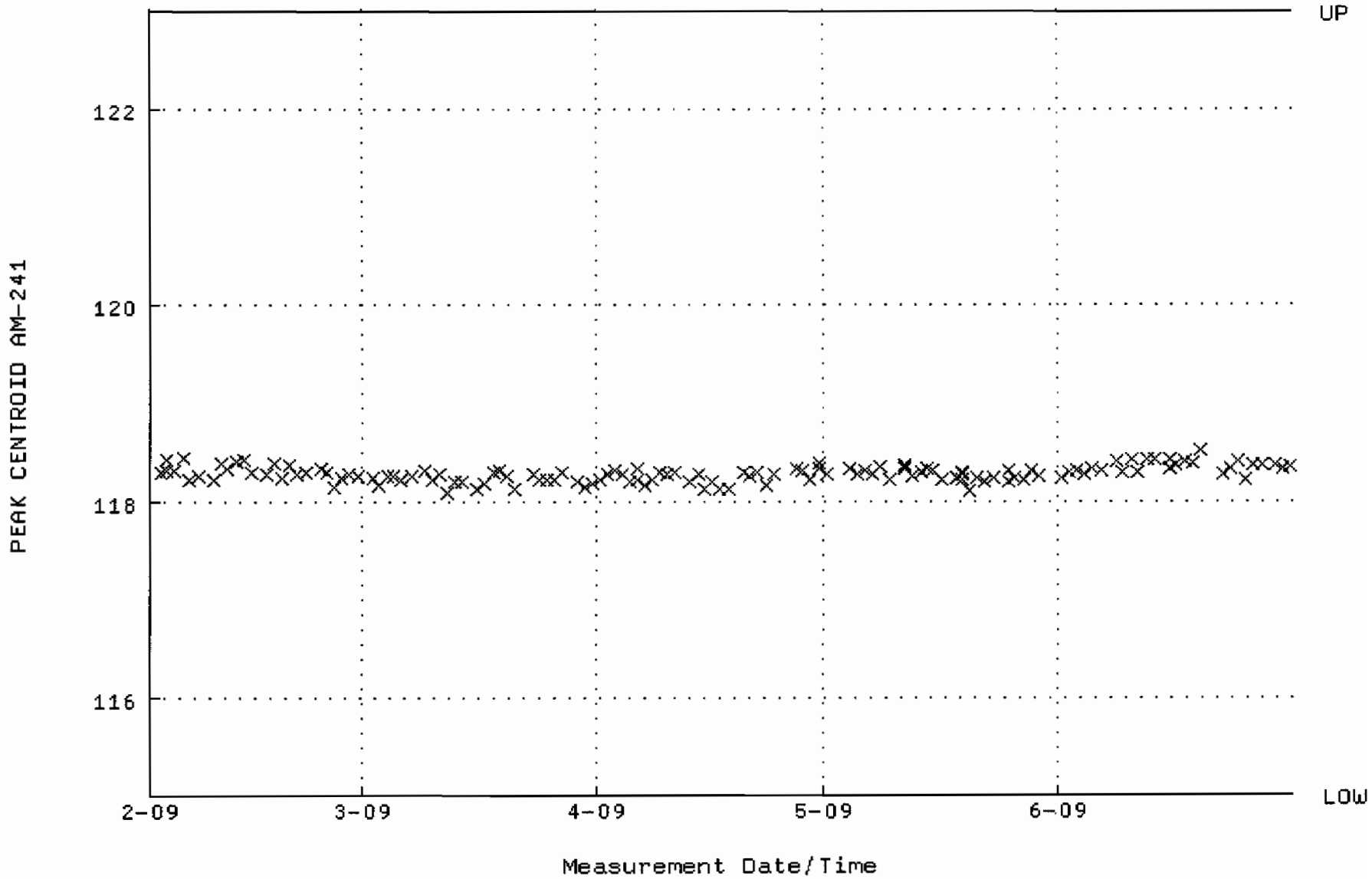

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.22710 through 2.72210

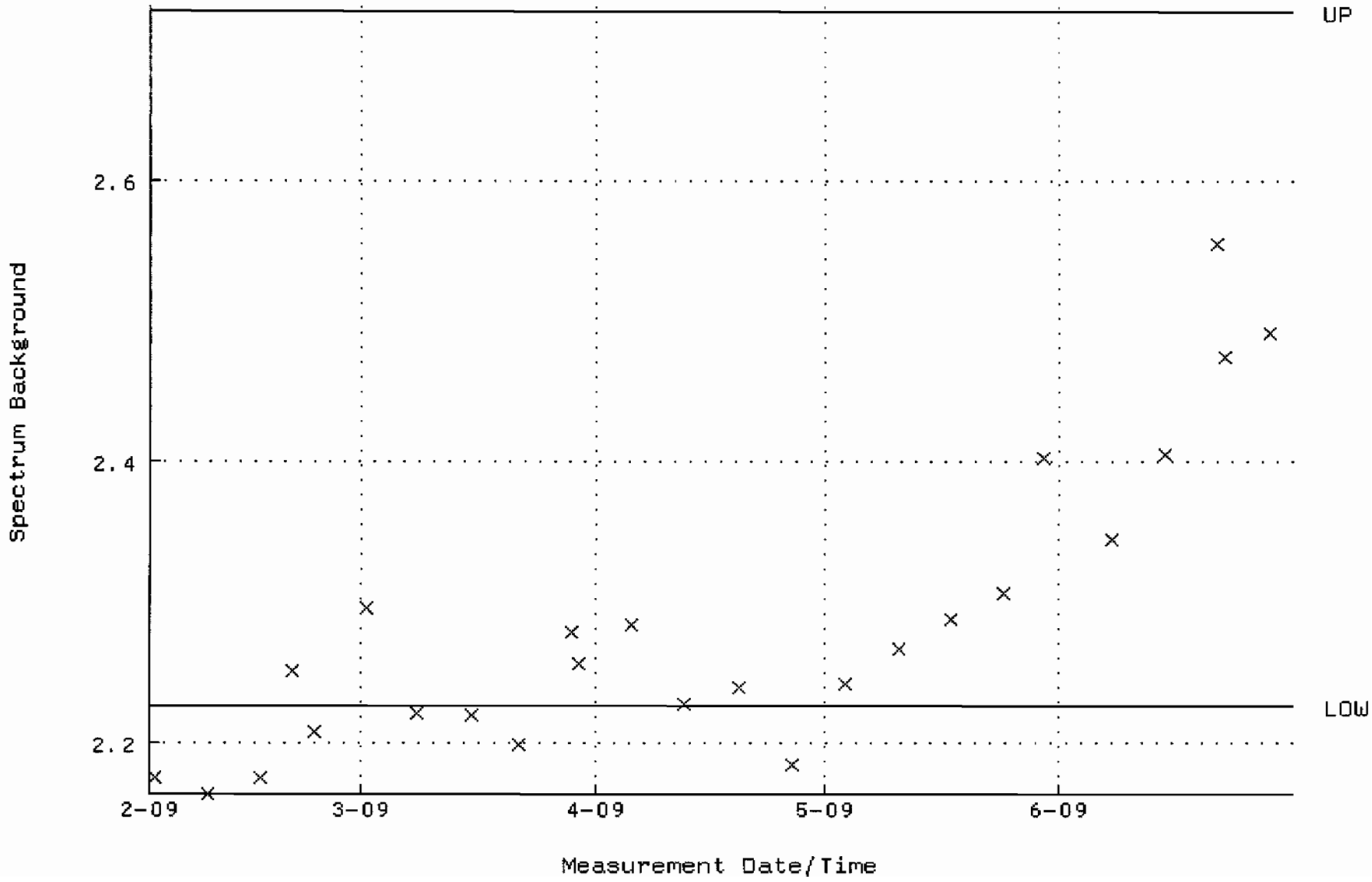

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM20_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:14:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

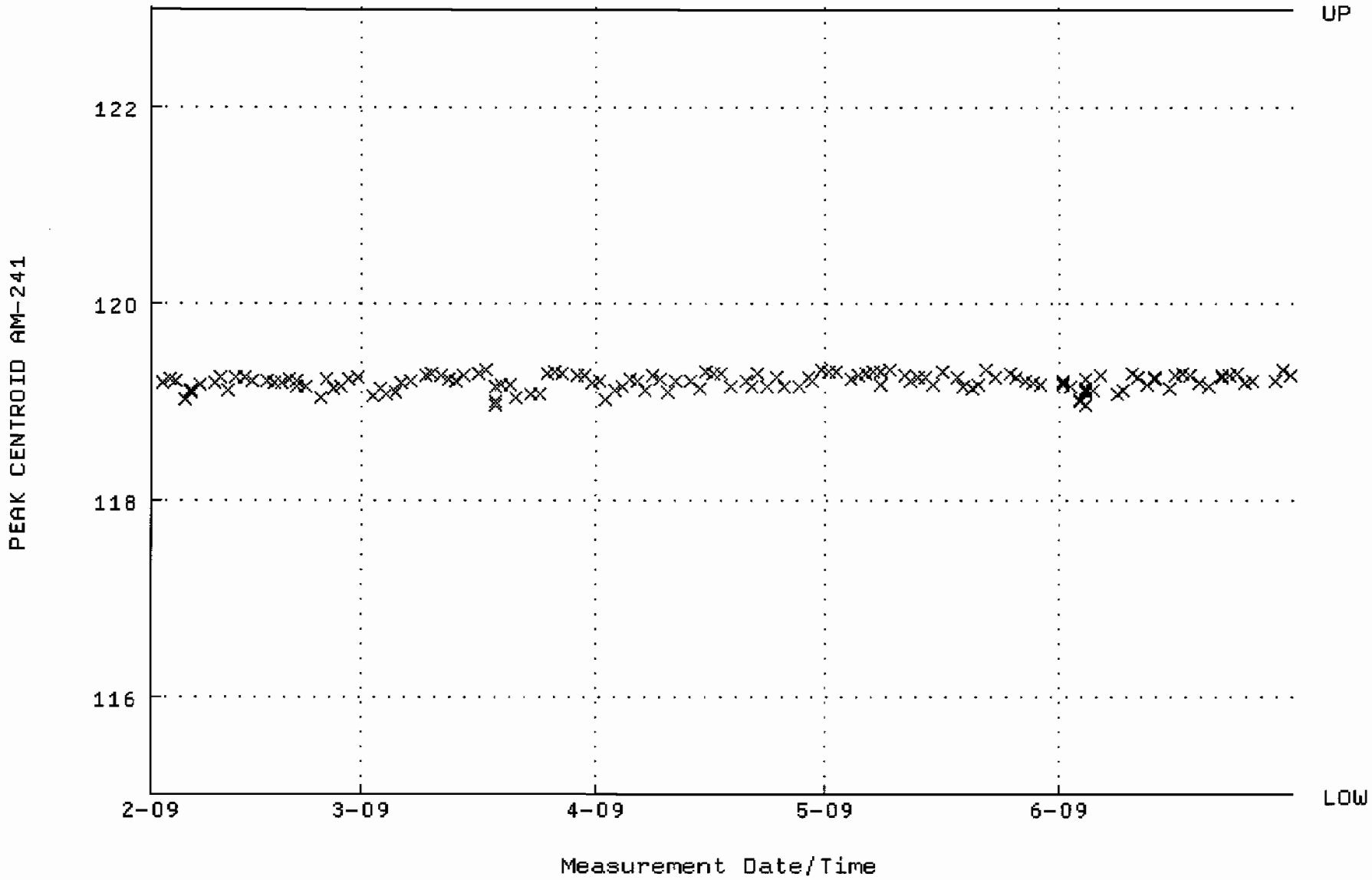

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM20.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:45 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.33092 through 1.62668

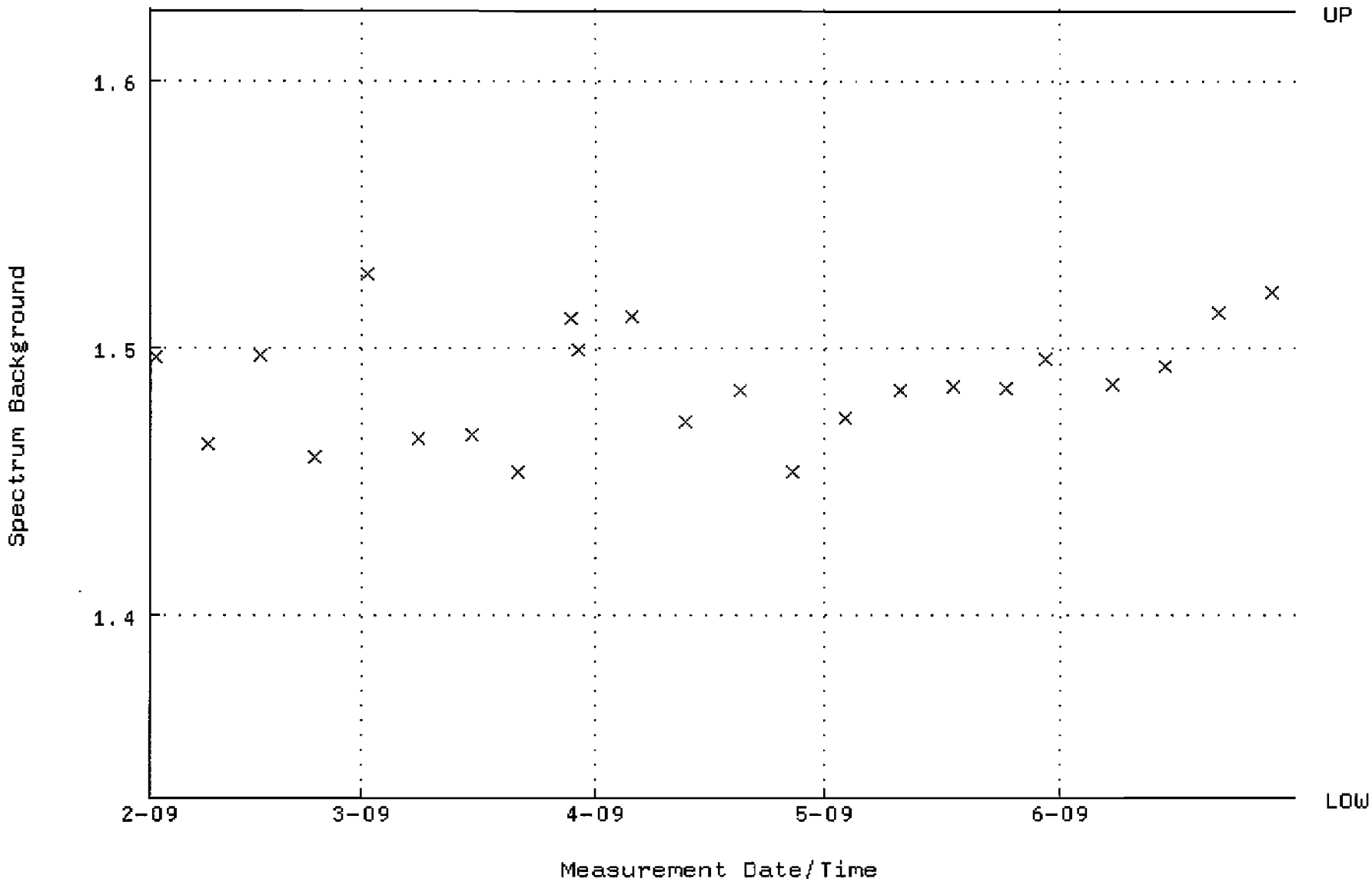

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:33:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

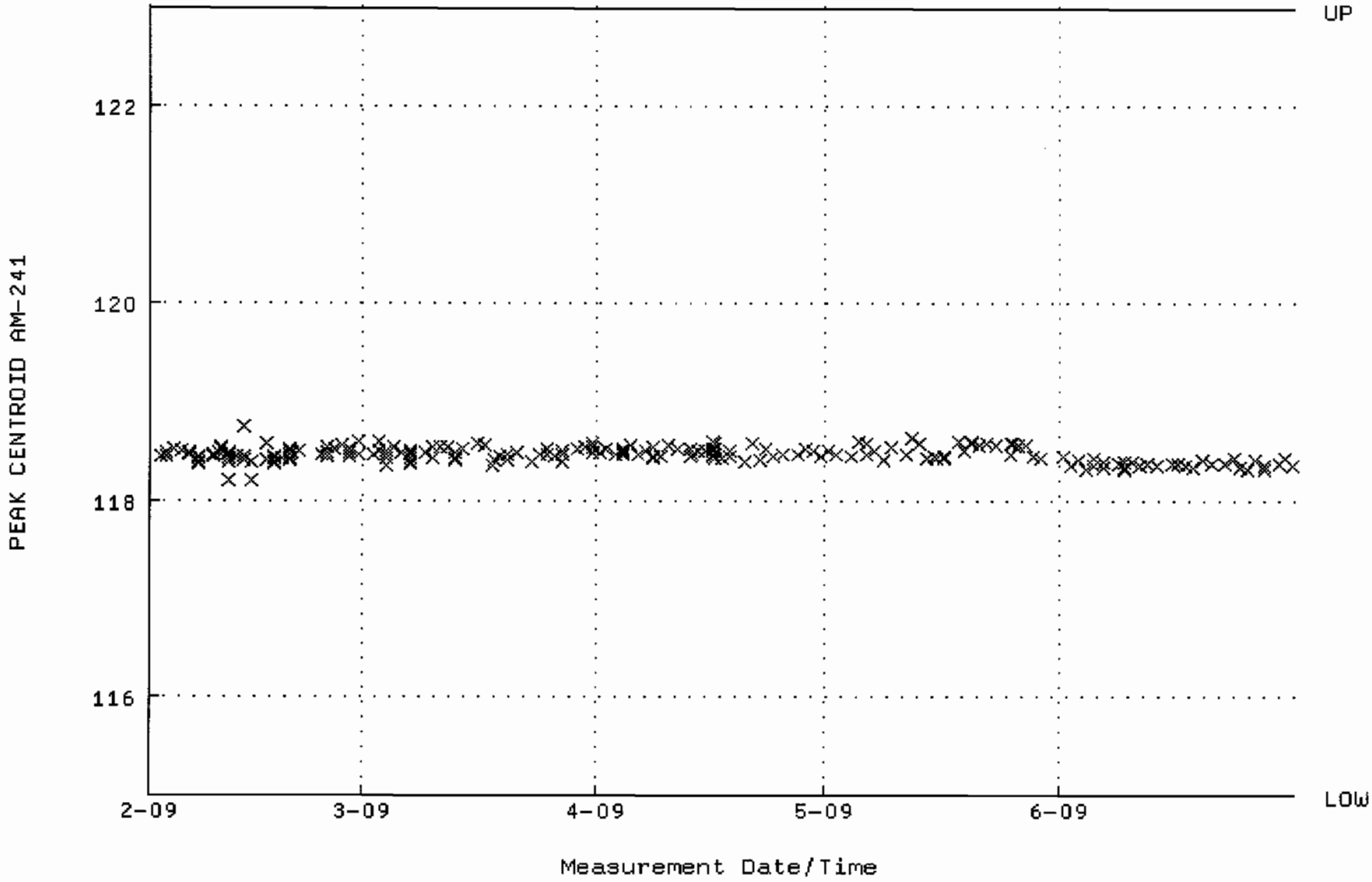

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM21.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:00 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.71450 through 2.09550

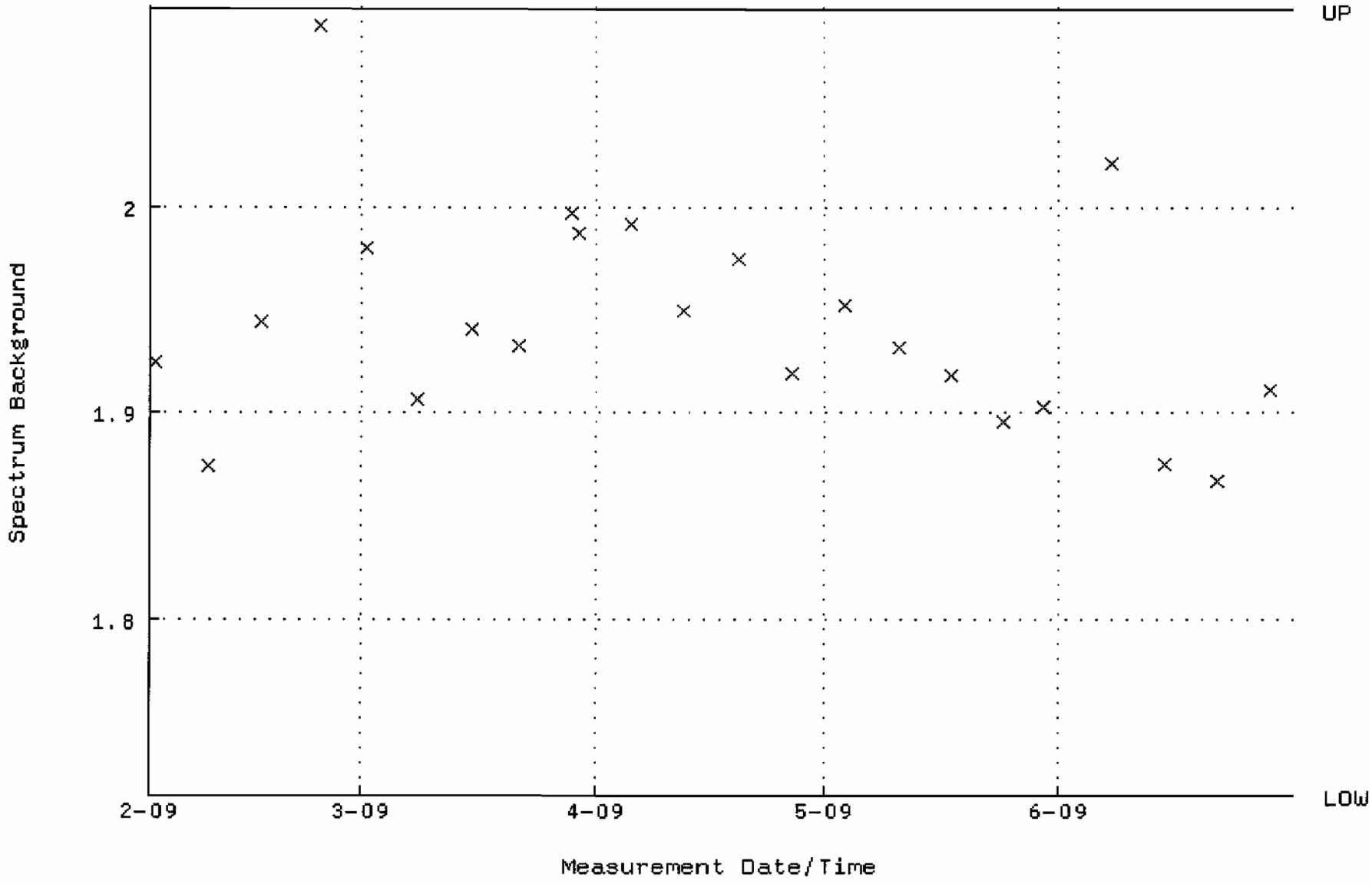

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
Parameter Name : PSCENTRO-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

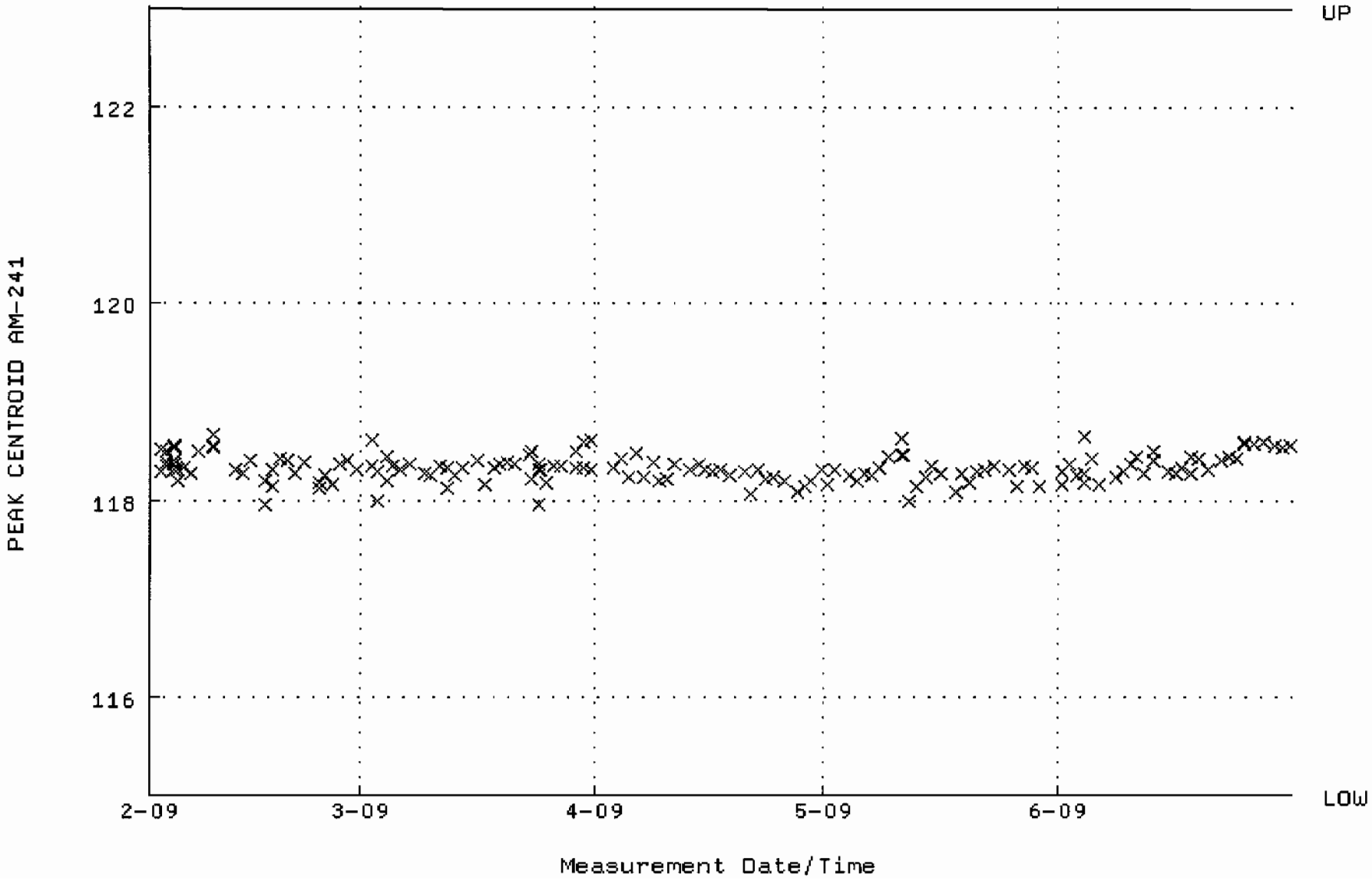

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM22.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.23300 through 2.45570

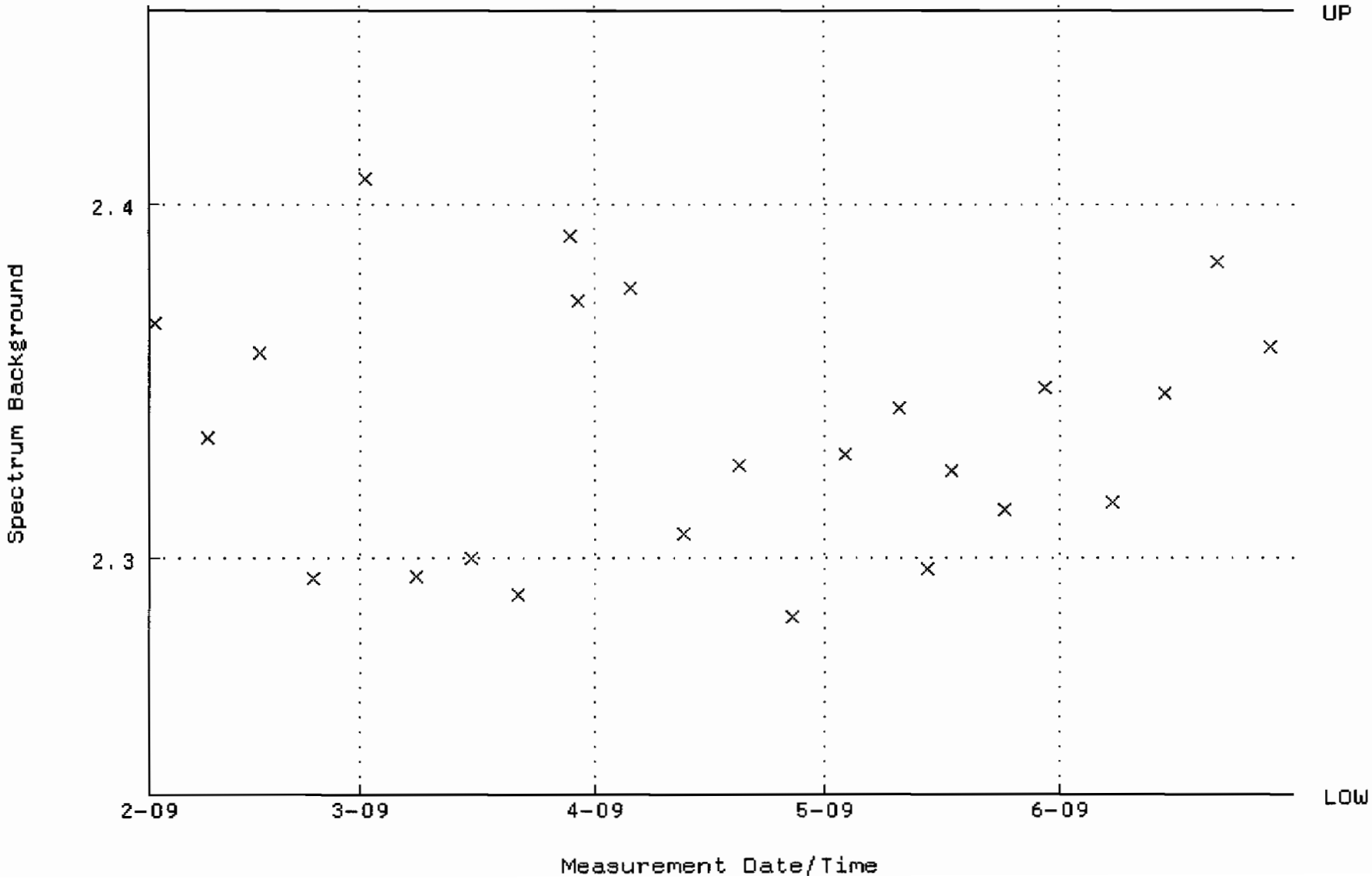

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:29:05 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

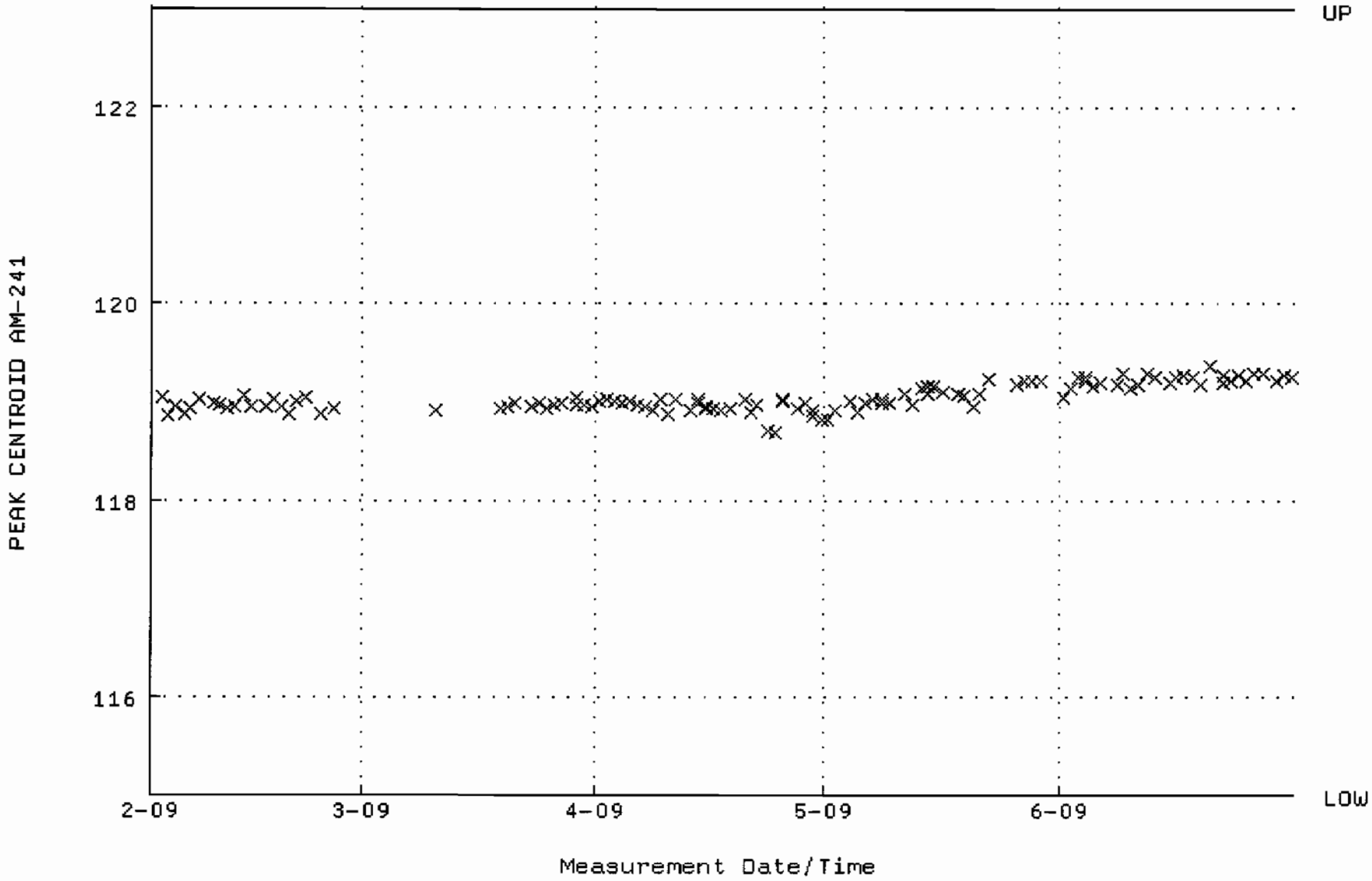

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM23.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:27 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.26405 through 1.54495

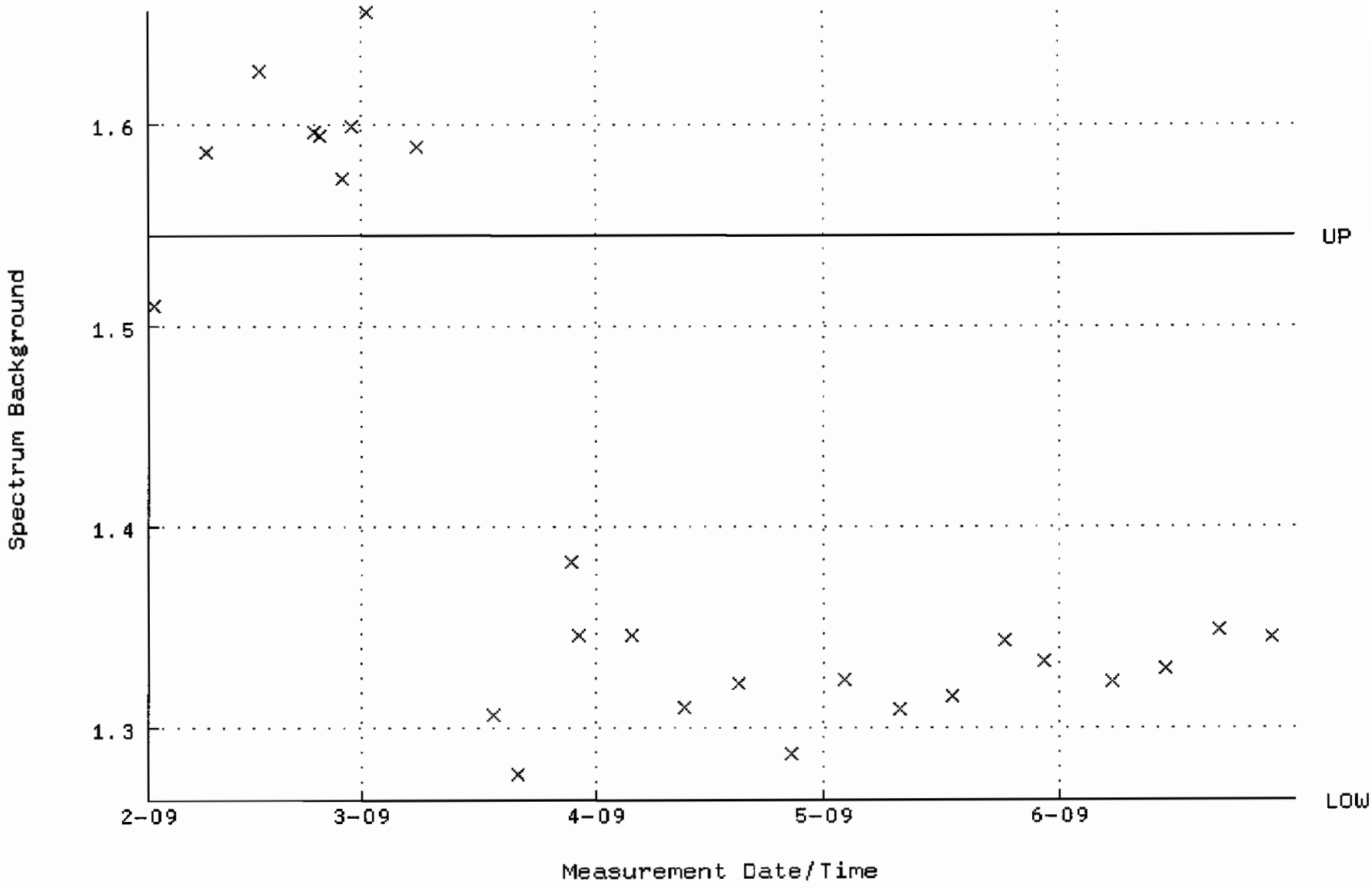

STANDARDS DATA

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
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Fax 404•352•2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

Rec'd 11/30/06
RC-S-045-073

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ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info	
Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David D[illegible] 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

Isotope	Result	
Mixed Gamma N1	440.7	pCi/L
Mixed Gamma N2	461.1	pCi/L
Mixed Gamma N3	467.4	pCi/L

Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**

Certificate Value =	444.3738739	pCi/L
Lower Limit =	428.4865624	pCi/L
Upper Limit =	484.3134376	pCi/L
Rule 1 (Pass/Fail)	**Pass**	
Two sigma =	27.91343762	
10 % of Mean =	45.64000000	
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David D 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr	**Isotope**	**Result**		
12/4/2008		**pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L		**Rule 3 (Pass/Fail)**
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

12/4/08
Amanda Fehr

Amersham International plc
Amersham Laboratories

0134

NAMAS
CALIBRATION No. 0146

Certificate of Calibration of Standardised Tritium Labelled Water

Description

Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement

Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy

The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity

No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data

Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks:

The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

RC-5-024-061

Amersham

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

Mary Fritdens 4/9/09
Amanda L. Tech 4/9/09

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATE 4/14/2000 Scott C Neff 12/1/04

Angela L. Johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	485 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01 -> 2

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE:
Carrier/Waybill No.: 7 2 6 4 9 4
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location — Tech Area VI — Building N/A — Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special Instructions Below	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

RMMA ☐ Yes ☒ No Ref. No.
Sample Disposal ☐ Return to Client ☒ Disposal by lab
Turnaround Time ☒ Normal ☐ Rush Required Report Date

Sample Tracking — SMO USE
Date Entered (mm/dd/yy)
Entered by

QC Limits

Special Instructions/QC Requirements
EDD ☐ Yes ☒ No
Raw data package ☐ Yes ☒ No
These "samples" are well interceptors and materials being sent to GEL on behalf of Mark Minteer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DEP	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original — To Accompany Samples, Laboratory Copy (White)
1st Copy — To Accompany Samples, Return to SMO (Blue)
2nd Copy — SMO Suspense Copy (Yellow)
3rd Copy — Field Copy (Pink)

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATA 4/14/2000

Amanda L. Fehr 4/30/04
Scott L. Kessel 5/5/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log-In

9911627-01-20

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: [illegible]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: [signature]
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special Instructions Below	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA		
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab

Sample Tracking SMO USE
Date Entered (mm/dd/yy)
Entered by

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized mud materials being sent to GEL on behalf of Hank Mistaer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Turnaround Time ☒Normal ☐Rush Required Report Date
QC Limits

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DEP	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. SNL	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

1262

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. f the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The mpoule should be opened only by persons qualified to handle both radioactive material and strong acid olution.

torage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The olution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The npoule (or any subsequent container) should always be clearly marked as containing radioactive material. the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the plicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good azardous material) both because of the radioactivity and because of the strong acid.

eparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation vision, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and ysical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The port aspects involved in the preparation, certification, and issuance of this SRM were coordinated through Standard Reference Materials Program.

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

hersburg, Maryland 20899
ary 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

RECEIVED 11/15/08

a, 30318

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH.

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994 [b]***
Massic activity of the solution [c]	**26.31 $Bq \cdot g^{-1}$**
Relative expanded uncertainty (k=2)	**0.72% [d] [e]**
Solution density	**(1.105 ± 0.002) $g \cdot mL^{-1}$ at 20 °C [f]**

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration ($mol \cdot L^{-1}$)	Mass Fraction ($g \cdot g^{-1}$)
	H_2O HNO_3 $^{242}Pu^{+6}$	50 3.2 8×10^{-7}	0.81 0.19 2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) $Bq \cdot g^{-1}$ [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: $(373\,500 \pm 1100)$ a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three $4\pi\alpha$ liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	^{239}Pu + ^{240}Pu <0.000 001 [u]	^{239}Pu + ^{240}Pu 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	^{238}Pu + ^{241}Am <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One µSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (µSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 $s^{-1} \cdot g^{-1}$ for energies less than 3.1 MeV,
0.03 $s^{-1} \cdot g^{-1}$ for energies between 3.1 and 4.4 MeV, and
0.003 $s^{-1} \cdot g^{-1}$ for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 19 and 39 keV,
7×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 49 and 92 keV,
2×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 106 and 507 keV,
1×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 515 and 1456 keV, and
5×10^{-6} $s^{-1} \cdot g^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i| \cdot (x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i| \cdot (x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i| \cdot u(x_i)/y = |\partial y/\partial x_i| \cdot (x_i/y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i| \cdot (x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}·{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1262
Prepared By:	Daniel Roy
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-048-143

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Mary Aders
Prep Date:	05/08/2009
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	1262-A
Dilution(mL):	200 mL
Mass of Parent(g):	5.3306 g
Density(g/mL):	1.0000
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (200 mL) = 42.0744 dpm/mL
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0000 g/mL) / (200 mL) = 42.0744 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1262-*A*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	1262-A	1.830	0.2560
	1262-A	1.890	0.2630
	1262-A	1.810	0.2520
Mean Value (Counting) =	1.843	97.26	**Pass**
Stdev =	0.04163332		**Rule 3 (Pass/Fail)**

Target =	1.90
Lower Limit =	1.760066693
Upper Limit =	1.926599973
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.08326664
10 % of Mean =	0.184333333
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1262-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-Y and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Five drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 48% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

Mary Jo. Aders 5/15/09

05/15/09

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404·352·8677
Fax 404·352·2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

RECEIVED 12/15/08

End of Certificate

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

Analyst: D. Roy	**Serial #**	**Value**		**Uncertainty**	
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L
Mean Value (Counting) =	2.407	pCi/L		**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L			**Rule 3 (Pass/Fail)**
Target =	2.397	pCi/L			
Lower Limit =	2.259244371	pCi/L			
Upper Limit =	2.554088963	pCi/L			
Rule 1 Pass/Fail	**Pass**				
Two sigma =	0.147422296				
10 % of Mean =	0.240666667				
Rule 2 (Pass/Fail)	**Pass**				

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09

RUNLOGS

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882703**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	CXM2	1013	11-JUL-09 15:57	DUSE		
232347002	SAMPLE	CXM2	1014	11-JUL-09 15:57	DUSE		
232347003	SAMPLE	CXM2	1015	11-JUL-09 15:57	DUSE		
232347004	SAMPLE	CXM2	1016	11-JUL-09 15:57	DUSE		
232664001	SAMPLE	CXM2	1017	11-JUL-09 15:57	DUSE		
232664002	SAMPLE	CXM2	1019	11-JUL-09 15:57	DUSE		
232664003	SAMPLE	CXM2	1020	11-JUL-09 15:57	DUSE		
232664004	SAMPLE	CXM2	1021	11-JUL-09 15:57	DUSE		
232664005	SAMPLE	CXM2	1022	11-JUL-09 15:57	DUSE		
232746001	SAMPLE	CXM2	1023	11-JUL-09 15:57	DUSE		
232746002	SAMPLE	CXM2	1024	11-JUL-09 15:57	DUSE		
232746003	SAMPLE	CXM2	1037	11-JUL-09 15:57	DUSE		
232746004	SAMPLE	CXM2	1038	11-JUL-09 15:57	DUSE		
232746005	SAMPLE	CXM2	1039	11-JUL-09 15:57	DUSE		
232746006	SAMPLE	CXM2	1040	11-JUL-09 15:57	DUSE		
232746007	SAMPLE	CXM2	1041	11-JUL-09 15:57	DUSE		
232746008	SAMPLE	CXM2	1042	11-JUL-09 15:57	DUSE		
232754001	SAMPLE	CXM2	1065	11-JUL-09 15:57	DUSE		
232754002	SAMPLE	CXM2	1066	11-JUL-09 15:57	DUSE		
232754003	SAMPLE	CXM2	1067	11-JUL-09 15:57	DUSE		
1201874791	MB	CXM2	1068	11-JUL-09 15:57	DUSE		
1201874792	DUP	CXM2	1069	11-JUL-09 15:57	DUSE		
1201874793	LCS	CXM2	1070	11-JUL-09 15:57	DUSE		
232347001	SAMPLE	CXM2	1031	16-JUL-09 10:10	DONE		
232347002	SAMPLE	CXM2	1032	16-JUL-09 10:10	DONE		
232347003	SAMPLE	CXM2	1033	16-JUL-09 10:10	DONE		
232664001	SAMPLE	CXM2	1035	16-JUL-09 10:10	DONE		
232664002	SAMPLE	CXM2	1036	16-JUL-09 10:10	DONE		
232664003	SAMPLE	CXM2	1037	16-JUL-09 10:10	DONE		
232664004	SAMPLE	CXM2	1038	16-JUL-09 10:10	DONE		
232664005	SAMPLE	CXM2	1039	16-JUL-09 10:10	DONE		
232746001	SAMPLE	CXM2	1040	16-JUL-09 10:10	DONE		
232746002	SAMPLE	CXM2	1041	16-JUL-09 10:10	DONE		
232746003	SAMPLE	CXM2	1042	16-JUL-09 10:10	DONE		
232746004	SAMPLE	CXM2	1043	16-JUL-09 10:10	DONE		
232746005	SAMPLE	CXM2	1044	16-JUL-09 10:10	DONE		
232746006	SAMPLE	CXM2	1045	16-JUL-09 10:10	DONE		
232746007	SAMPLE	CXM2	1046	16-JUL-09 10:10	DONE		
232746008	SAMPLE	CXM2	1047	16-JUL-09 10:10	DONE		
232754001	SAMPLE	CXM2	1048	16-JUL-09 10:10	DONE		
232754002	SAMPLE	CXM2	1065	16-JUL-09 10:10	DONE		
232754003	SAMPLE	CXM2	1066	16-JUL-09 10:10	DONE		
1201874791	MB	CXM2	1067	16-JUL-09 10:10	DONE		
1201874792	DUP	CXM2	1068	16-JUL-09 10:10	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1201874793	LCS	CXM2	1069	16-JUL-09 10:10	DONE		
232347004	SAMPLE	CXM2	1070	16-JUL-09 10:10	DONE		

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 882713**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232664001	SAMPLE	MXR1	GAM16	14-JUL-09 08:26	DONE	CAN	13-NOV-08 00:00
232664002	SAMPLE	MXR1	GAM18	14-JUL-09 08:27	DONE	CAN	23-APR-09 00:00
232664003	SAMPLE	MXR1	GAM22	14-JUL-09 08:37	DONE	CAN	18-FEB-09 00:00
232664004	SAMPLE	MXR1	GAM23	14-JUL-09 08:38	DONE	CAN	02-JUN-09 00:00
232664005	SAMPLE	MXR1	GAM20	14-JUL-09 08:57	DONE	CAN	30-SEP-08 00:00
232746001	SAMPLE	MXR1	GAM02	14-JUL-09 08:58	DONE	CAN	01-NOV-08 00:00
232746002	SAMPLE	MXR1	GAM09	14-JUL-09 08:58	DONE	CAN	16-MAR-09 00:00
232746003	SAMPLE	MXR1	GAM12	14-JUL-09 08:59	DONE	CAN	10-FEB-09 00:00
232746004	SAMPLE	MXR1	GAM05	14-JUL-09 09:13	DONE	CAN	11-JUN-09 00:00
232746005	SAMPLE	MXR1	GAM21	14-JUL-09 09:16	DONE	CAN	25-JUL-08 00:00
232746006	SAMPLE	MXR1	GAM14	14-JUL-09 10:20	DONE	CAN	06-MAR-09 00:00
232746007	SAMPLE	MXR1	GAM17	14-JUL-09 10:27	DONE	CAN	27-JAN-09 00:00
232746008	SAMPLE	MXR1	GAM13	14-JUL-09 10:28	DONE	CAN	02-FEB-09 00:00
232754001	SAMPLE	MXR1	GAM16	14-JUL-09 10:44	DONE	CAN	13-NOV-08 00:00
232754002	SAMPLE	MXR1	GAM18	14-JUL-09 10:45	DONE	CAN	23-APR-09 00:00
232754003	SAMPLE	MXR1	GAM22	14-JUL-09 10:48	DONE	CAN	18-FEB-09 00:00
232758002	SAMPLE	MXR1	GAM02	14-JUL-09 11:02	DONE	CAN	01-NOV-08 00:00
232758003	SAMPLE	MXR1	GAM12	14-JUL-09 11:03	DONE	CAN	10-FEB-09 00:00
232758004	SAMPLE	MXR1	GAM09	14-JUL-09 11:04	DONE	CAN	16-MAR-09 00:00
232758005	SAMPLE	MXR1	GAM20	14-JUL-09 11:05	DONE	CAN	30-SEP-08 00:00
1201874832	MB	MXR1	GAM21	14-JUL-09 11:22	DONE	CAN	25-JUL-08 00:00
1201874833	DUP	MXR1	GAM05	14-JUL-09 11:23	DONE	CAN	11-JUN-09 00:00
1201874834	LCS	MXR1	GAM13	14-JUL-09 12:33	DONE	CAN	02-FEB-09 00:00

Instrument Run Log

Instrument Type: LSC **Batch ID: 883020**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	KXK2	LSCSILVER	14-JUL-09 18:04	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347002	SAMPLE	KXK2	LSCSILVER	14-JUL-09 19:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347003	SAMPLE	KXK2	LSCSILVER	14-JUL-09 21:21	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232347004	SAMPLE	KXK2	LSCSILVER	14-JUL-09 22:59	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232582001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 00:38	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232582002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 02:16	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 05:08	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 07:41	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232585003	SAMPLE	KXK2	LSCSILVER	15-JUL-09 08:43	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232591001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 09:46	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664001	SAMPLE	KXK2	LSCSILVER	15-JUL-09 10:48	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664002	SAMPLE	KXK2	LSCSILVER	15-JUL-09 11:51	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664003	SAMPLE	KXK2	LSCSILVER	15-JUL-09 12:53	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664004	SAMPLE	KXK2	LSCSILVER	15-JUL-09 13:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232664005	SAMPLE	KXK2	LSCSILVER	15-JUL-09 14:58	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875586	MB	KXK2	LSCSILVER	15-JUL-09 16:01	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875587	DUP	KXK2	LSCSILVER	15-JUL-09 17:03	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875588	LCS	KXK2	LSCSILVER	15-JUL-09 18:05	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 885095**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232265001	SAMPLE	KXM4	1113	15-JUL-09 21:11	DONE		
232265002	SAMPLE	KXM4	1114	15-JUL-09 21:11	DONE		
232265003	SAMPLE	KXM4	1115	15-JUL-09 21:11	DONE		
232265004	SAMPLE	KXM4	1116	15-JUL-09 21:11	DONE		
232265005	SAMPLE	KXM4	1117	15-JUL-09 21:11	DONE		
232265006	SAMPLE	KXM4	1118	15-JUL-09 21:11	DONE		
232265007	SAMPLE	KXM4	1121	15-JUL-09 21:12	DONE		
232265008	SAMPLE	KXM4	1122	15-JUL-09 21:12	DONE		
232265009	SAMPLE	KXM4	1123	15-JUL-09 21:12	DONE		
232664001	SAMPLE	KXM4	1124	15-JUL-09 21:12	DONE		
232664002	SAMPLE	KXM4	1125	15-JUL-09 21:12	DUSE		
232664003	SAMPLE	KXM4	1126	15-JUL-09 21:12	DONE		
232664004	SAMPLE	KXM4	1127	15-JUL-09 21:12	DUSE		
232664005	SAMPLE	KXM4	1129	15-JUL-09 21:12	DUSE		
1201880626	MB	KXM4	1130	15-JUL-09 21:12	DONE		
1201880627	DUP	KXM4	1131	15-JUL-09 21:12	DUSE		
1201880628	LCS	KXM4	1132	15-JUL-09 21:12	DONE		
232664002	SAMPLE	KXM4	1121	16-JUL-09 19:50	DONE		
232664004	SAMPLE	KXM4	1122	16-JUL-09 19:50	DONE		
232664005	SAMPLE	KXM4	1123	16-JUL-09 19:50	DONE		
1201880627	DUP	KXM4	1124	16-JUL-09 19:50	DONE		

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2516

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2516

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/30/2009

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	EPA:353.2	1	CAMO-09-10024	W	6/26/2009	
	SW-846:6010B	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2516

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10024	W	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:6020	1	CAMO-09-10024	W	6/26/2009	
	SW-846:6850	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10024	W	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:9012A	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10024	W	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:9045C	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2516

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2516

REQUEST NUMBER: 09-2516

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10024	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10024	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-10024	1	POLY	SW-846:6850	Ice	W
CAMO-09-10024	1	POLY	TCN	Sodium Hydroxide	W
CAMO-09-9942	1	POLY	METALS-GEL	Ice	R
CAMO-09-9942	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9941	1	POLY	METALS-GEL	Ice	R
CAMO-09-9941	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9943	1	POLY	METALS-GEL	Ice	R
CAMO-09-9943	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10030	1	POLY	METALS-GEL	Ice	R
CAMO-09-10030	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9989	1	POLY	METALS-GEL	Ice	R
CAMO-09-9989	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]		6/30/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9941

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009 AG 6.26.09	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		AG 6.26.09 1100 0929	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605457	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	~~2.0~~ 3.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	~~3.0~~ 5.0	SCREEN/PORT DESC:		
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		NA

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Reg~~ AG 6.26.09 15-DAY	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown crushed tuff fill

FD: CAMO-09-10030

SAMPLE COMMENTS: Depth required for duplicate

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 19 dpm

β/γ ≤ 1059 dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9942

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	OBT4	Qbt 3
TIME COLLECTED (HH:MM)		0938	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605457	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	5.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	6.0	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Indurated Brown/gray tuff

SAMPLE COMMENTS: Interface @ 5.0' bgs

LOCATION DESC: 50-004(a).09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 19 dpm

β/γ ≤ 1373 dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gonnas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonnas	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9943

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	OBT4	qbt3
TIME COLLECTED (HH:MM)		1105	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605457	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	10.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	11.0	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Purple/gray tuff indurated

FR: CAMO-09-10024

SAMPLE COMMENTS: Advanced to depth w/ power auger, sample taken by hand auger 10.0 – 11.0' bgs

LOCATION DESC: 50-004(a) 09

FIELD SCREENING/MEASUREMENT RESULTS:

AG 6.25.09 ~~β~~ α ≤ 25

β/γ ≤ 1168

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A Goumas	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9989

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	QBT4	~~Fill~~ Sed
TIME COLLECTED (HH:MM)		1110	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605473	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	2.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	3.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown wet sediment w/ organic material (bark & roots) FTB: CAMO-09-10013

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a)-11, below drainage culvert (N) of NES MDAC

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 35 dpm

β/γ ≤ 937 dpm

PID Ambient / Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gomez **REVIEWED BY (PRINT)** J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1146	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10013

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1110	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-60847 3	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
NA 6.26.09 1 ~~2~~	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package

SAMPLE DESC: QC Sample of CAMO-09-9989

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a)-11

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gourmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gourmas (Signature) [signature]	6.26.09 1145	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/26/09 11:50
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10024

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1120	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-405457	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:		NA
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	5-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	Full Data Package
1		NO3NO2	~~250~~ ML POLY 500 AS 6.26.09	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-3943

SAMPLE COMMENTS: NONE

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gomas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomas (Signature) [signature]	6.26.09 1145	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/26/09 11:50
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10030

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		0929	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	UNK	MD-605457	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	5.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: QC Sample of CAMO-09-9941
Brown crushed tuff

SAMPLE COMMENTS: Depth required for duplicate

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 19$ dpm

$\beta/\gamma \leq 1059$ dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-9941 —> 9943
-10030
-9989

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10024
-10013

Reason: QC of Samples.

Print Last Name Branch **Signature** [signature] **Date** 6/26/09

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-9941	ARS Sample ID:	ARS2-09-00077-001
Sample Collection Date:	06/26/09 09:29	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 3 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	9.95	51.11	121.29	51.12	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	44.04	16.17	19.29	17.05		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	19.69	7.90	1.78	7.93		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	11.66	0.12	11.66	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	15.25	0.07	15.25	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.00	12.12	0.14	12.12	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.38	0.53	0.16	0.52		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA 226	1.87	0.82	0.51	0.83		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	0.27	0.31	0.30	0.31	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.95	3.08	1.20	3.28		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.52	0.37	0.12	0.37		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.11

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-9942	ARS Sample ID:	ARS2-09-00077-002
Sample Collection Date:	06/26/09 09:38	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:10

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	PQL	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	108.05	93.47	105.46	93.41		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	40.58	16.76	19.75	17.48		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	-0.51	-12.91	3.86	-12.91	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	11.98	0.18	11.98	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.05	0.09	0.09	0.09	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	15.68	0.08	15.68	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.00	12.46	0.14	12.46	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.53	0.57	0.18	0.57		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA-226	1.29	0.67	0.32	0.67		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	1.23	0.75	0.29	0.75		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.81	4.27	1.72	4.41		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.23	0.49	0.20	0.49		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.33

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-9943	ARS Sample ID:	ARS2-09-00077-003
Sample Collection Date:	06/26/09 11:05	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.84	86.53	128.32	86.99	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	31.80	16.53	21.48	16.99		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.08	0.15	0.13	0.15	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	-0.95	-18.05	3.58	-18.05	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	12.09	0.13	12.09	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	0.03	0.15	0.10	0.15	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.45	0.41	0.18	0.41	BI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.50	0.63	0.23	0.64		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA-226	1.10	1.03	0.24	1.02		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	-0.08	145.55	0.33	145.55	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	5.99	3.70	1.46	3.95		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.31	0.27	0.10	0.27		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.24

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00077
Client Sample ID: CAMO-09-9989
Sample Collection Date: 06/25/09 11:10
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00077-004
Date Received: 06/29/09 00:00
Report Date: 06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	17.51	58.18	125.00	58.22	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	21.49	13.98	20.31	14.22		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	0.65	4.90	2.76	4.90	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.15	0.13	0.09	0.13		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.15	0.10	0.07	0.10	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	0.82	0.34	0.06	0.34		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.33	0.30	0.10	0.30	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	0.76	0.35	0.12	0.35		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA 226	1.43	0.73	0.24	0.73		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	1.45	0.96	0.31	0.96		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	1.89	2.33	1.08	2.39		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	1.13	0.39	0.11	0.39		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 0.89

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-10030	ARS Sample ID:	ARS2-09-00077-005
Sample Collection Date:	06/26/09 09:29	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 1 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	18.00	51.07	121.29	51.09	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	37.43	15.41	19.29	16.08		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	26.64	9.76	2.03	9.80		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	13.30	0.13	13.30	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	41.30	0.09	41.30	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.46	0.53	0.20	0.53	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.48	0.56	0.15	0.56		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA 226	2.80	1.70	0.64	1.71		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	2.44	1.56	0.44	1.56		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.31	3.99	1.69	4.11		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.06	0.46	0.13	0.46		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 0.98

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2516 VALIDATION DATE: 07/28/2009 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards for both calibrations were not provided in the data package. No sample data were qualified as a result.
2. It should be noted that the MS/MSD %R calculations were performed incorrectly for the aqueous sample. The parent sample result was < the MDL and, thus, a result of 0 µg/L should have been used to calculate the %Rs. The laboratory subtracted the parent sample concentration. The %Rs were within the acceptance limits when calculated correctly. No sample results were qualified.
3. It should also be noted that the matrix QC for the soil samples were performed on a LANL parent sample from another RN and that the raw data for the parent sample were not included in the data package. No sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: Mary N. Dennison	DATE: 07/28/2009
Form 5121-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☒	☐	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☒	☐	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☒	☐	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☒	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10024

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516

GEL Sample ID: 232662001

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	08-JUL-09 14:24	per0708015a
	Perchlorate Isotope Ratio						1	08-JUL-09 14:24	per0708015a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	08-JUL-09 14:24	per0708015a
	Perchlorate-O(18)			0.477	ug/L		1	08-JUL-09 14:24	per0708015a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solic}}$$

MAD
07/28/09

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9942

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663001

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 88

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.567	2.27	0.567	ug/kg	U	1	09-JUL-09 18:23	per0709036a
	Perchlorate-O(18)			5.60	ug/kg		1	09-JUL-09 18:23	per0709036a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9941

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663002

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.561	2.24	0.905	ug/kg	J	1	09-JUL-09 18:35	per0709037a
	Perchlorate-O(18)			5.55	ug/kg		1	09-JUL-09 18:35	per0709037a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9943

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663003

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 86

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.581	2.32	0.581	ug/kg	U	1	09-JUL-09 18:46	per0709038a
	Perchlorate-O(18)			4.88	ug/kg		1	09-JUL-09 18:46	per0709038a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10030

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663004

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.556	2.22	0.913	ug/kg	J	1	09-JUL-09 18:58	per0709039a
	Perchlorate-O(18)			5.03	ug/kg		1	09-JUL-09 18:58	per0709039a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9989

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663005

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 83

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.6	2.4	0.600	ug/kg	U	1	09-JUL-09 19:10	per0709040a
	Perchlorate-O(18)			5.72	ug/kg		1	09-JUL-09 19:10	per0709040a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2516 VALIDATION DATE: 07/28/2009 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ HIGH EXPLOSIVES
- ☐ DIOXIN FURANS
- ☐ LCMSMS PERCHLORATES
- ☐ TPH-DRO
- ☒ METALS
- ☐ PCB CONGENERS
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ GENERAL CHEMISTRY
- ☐ RADIOCHEMISTRY
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the aqueous MB, V was detected. The associated sample result was a detect ≤5X the MB concentration and, thus, was qualified U,I4.
2. In a CCB associated with the aqueous sample, Tl was detected. The associated sample result was an ND and, thus, was not qualified.
3. In the FR blank, CAMO-09-10024, which was associated with all soil samples, Ba, Ca, K, Na and Zn were detected. All associated sample results for Na were detects ≤5X the FR blank concentration and, thus were qualified U,I4d. All remaining associated sample results were detects >5X the FR blank concentrations and, thus, were not qualified.
4. The aqueous MS %R was < the laboratory LAL but ≥10% for Tl. The associated sample result was an ND and, thus, was qualified UJ,I6a. The soil MS %Rs were > the laboratory UAL for Ca, Mg and K. The associated sample results were detects and, thus, were qualified J+,I6b. The soil MS %Rs were also > the laboratory UAL for Al and Fe. However, the associated parent sample concentrations were >4X the spike concentrations. Thus, the associated sample

DATA VALIDATION COVER SHEET

5118-1

Records Use only

Data Validation Cover Sheet

results were not qualified, based on professional judgment.

5. The sample results which were > the MDLs but < the PQLs were "J" flagged by the laboratory and, thus, were not further qualified J,I1.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: Mary A. Donovan DATE: 07/28/2009

Form 5118-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☐	☒	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☒	☐	☐	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☐	☒	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232662001 **BASIS:** As Received **DATE COLLECTED** 26-JUN-09

CLIENT ID: CAMO-09-10024 **LEVEL:** Low **DATE RECEIVED** 01-JUL-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/14/09 13:18	090714-2	882019
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-39-3	Barium	1.28	ug/L	J	1	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/14/09 13:18	090714-2	882019
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/14/09 13:18	090714-2	882019
7440-70-2	Calcium	52.7	ug/L	J	50	200	200	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	07/07/09 09:12	070709-1	881993
7439-89-6	Iron	100	ug/L	U	30	100	100	1	P	HSC	07/07/09 09:12	070709-1	881993
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/14/09 13:18	090714-2	882019
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	07/07/09 09:12	070709-1	881993
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/14/09 13:18	090714-2	882019
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	07/06/09 11:04	070609W1-3	882078
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-09-7	Potassium	347	ug/L		50	150	150	1	P	HSC	07/07/09 09:12	070709-1	881993
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-23-5	Sodium	238	ug/L	J	100	300	300	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-28-0	Thallium UJ,I6a	1	ug/L	UN	0.3	1	1	1	MS	PRB	07/14/09 13:18	090714-2	882019
7440-62-2	Vanadium U,I4	1.47	ug/L	J	1	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-66-6	Zinc	3.62	ug/L	J	3.3	10	10	1	P	HSC	07/07/09 09:12	070709-1	881993

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881993	881992	SW846 3005A	50	mL	50	mL	07/06/09	FGA
882019	882018	SW846 3005A	50	mL	50	mL	07/06/09	AXG2
882078	882077	SW846 7470A Prep	20	mL	20	mL	07/02/09	TXB3

MAD
07/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516-1 CONTRACT: LANL01004 METHOD TYPE: SW846

SAMPLE ID: 232663001 BASIS: Dry Weight DATE COLLECTED 26-JUN-09

CLIENT ID: CAMO-09-9942 LEVEL: Low DATE RECEIVED 01-JUL-09

MATRIX: SOIL %SOLIDS: 88

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2910000	ug/Kg	*	7460	21900	21900	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-36-0	Antimony	1100	ug/Kg	U	362	1100	1100	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-38-2	Arsenic	1380	ug/kg		218	1090	1090	2	MS	PRB	07/14/09 11:16	090714-2	882024
7440-39-3	Barium	38100	ug/Kg		110	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-41-7	Beryllium	750	ug/kg		21.8	109	109	2	MS	PRB	07/14/09 11:16	090714-2	882024
7440-43-9	Cadmium	549	ug/Kg	U	110	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-70-2	Calcium J+,I6b	643000	ug/Kg	*N	8780	27400	27400	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-47-3	Chromium	21300	ug/Kg	*	165	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-48-4	Cobalt	1660	ug/Kg		165	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-50-8	Copper	3570	ug/Kg		329	1100	1100	1	P	HSC	07/08/09 16:09	070809A-1	882005
7439-89-6	Iron	8620000	ug/Kg	E	8780	27400	27400	1	P	HSC	07/08/09 16:09	070809A-1	882005
7439-92-1	Lead	6030	ug/Kg		274	1100	1100	1	P	HSC	07/08/09 16:09	070809A-1	882005
7439-95-4	Magnesium J+,I6b	399000	ug/Kg	*N	9330	32900	32900	1	P	HSC	07/08/09 16:09	070809A-1	882005
7439-96-5	Manganese	223000	ug/Kg	N	219	1100	1100	1	P	HSC	07/08/09 16:09	070809A-1	882005
7439-97-6	Mercury	24.7	ug/kg		4.56	13.4	13.4	1	AV	JXL1	07/15/09 10:31	071509S1-3	882255
7440-02-0	Nickel	3450	ug/kg		109	436	436	2	MS	PRB	07/14/09 11:16	090714-2	882024
7440-09-7	Potassium J+,I6b	373000	ug/Kg	N	7020	27400	27400	1	P	HSC	07/08/09 16:09	070809A-1	882005
7782-49-2	Selenium	1090	ug/kg	U	545	1090	1090	2	MS	PRB	07/14/09 11:16	090714-2	882024
7440-22-4	Silver	354	ug/Kg	J	110	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-23-5	Sodium U,I4d	92400	ug/Kg		7680	27400	27400	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-28-0	Thallium	115	ug/kg	J	65.5	218	218	2	MS	PRB	07/14/09 11:16	090714-2	882024
7440-62-2	Vanadium	7330	ug/Kg		110	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-66-6	Zinc	38600	ug/Kg		362	1100	1100	1	P	HSC	07/08/09 16:09	070809A-1	882005

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882005	882004	SW846 3050B	0.517	g	50	mL	07/06/09	FGA
882024	882023	SW846 3050B	0.52	g	50	mL	07/06/09	BXA1
882255	882254	SW846 7471A Prep	0.508	g	30	mL	07/15/09	TXB3

MAD
07/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516-1 CONTRACT: LANL01004 METHOD TYPE: SW846

SAMPLE ID: 232663002 BASIS: Dry Weight DATE COLLECTED 26-JUN-09

CLIENT ID: CAMO-09-9941 LEVEL: Low DATE RECEIVED 01-JUL-09

MATRIX: SOIL %SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5500000	ug/Kg	*	7420	21800	21800	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-36-0	Antimony	1090	ug/Kg	U	360	1090	1090	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-38-2	Arsenic	1750	ug/kg		219	1100	1100	2	MS	PRB	07/14/09 11:42	090714-2	882024
7440-39-3	Barium	89400	ug/Kg		109	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-41-7	Beryllium	712	ug/kg		21.9	110	110	2	MS	PRB	07/14/09 13:40	090714-2	882024
7440-43-9	Cadmium	545	ug/Kg	U	109	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-70-2	Calcium J+,I6b	1460000	ug/Kg	*N	8730	27300	27300	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-47-3	Chromium	6850	ug/Kg	*	164	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-48-4	Cobalt	3160	ug/Kg		164	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-50-8	Copper	4860	ug/Kg		327	1090	1090	1	P	HSC	07/08/09 16:57	070809A-1	882005
7439-89-6	Iron	10200000	ug/Kg	E	8730	27300	27300	1	P	HSC	07/08/09 16:57	070809A-1	882005
7439-92-1	Lead	10300	ug/Kg		273	1090	1090	1	P	HSC	07/08/09 16:57	070809A-1	882005
7439-95-4	Magnesium J+,I6b	977000	ug/Kg	*N	9270	32700	32700	1	P	HSC	07/08/09 16:57	070809A-1	882005
7439-96-5	Manganese	346000	ug/Kg	N	218	1090	1090	1	P	HSC	07/08/09 16:57	070809A-1	882005
7439-97-6	Mercury	19.5	ug/kg		4.34	12.8	12.8	1	AV	JXL1	07/15/09 10:41	071509S1-3	882255
7440-02-0	Nickel	5930	ug/kg		110	439	439	2	MS	PRB	07/14/09 11:42	090714-2	882024
7440-09-7	Potassium J+,I6b	804000	ug/Kg	N	6980	27300	27300	1	P	HSC	07/08/09 16:57	070809A-1	882005
7782-49-2	Selenium	1100	ug/kg	U	549	1100	1100	2	MS	PRB	07/14/09 11:42	090714-2	882024
7440-22-4	Silver	501	ug/Kg	J	109	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-23-5	Sodium U,I4d	119000	ug/Kg		7630	27300	27300	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-28-0	Thallium	152	ug/kg	J	65.8	219	219	2	MS	PRB	07/14/09 11:42	090714-2	882024
7440-62-2	Vanadium	15000	ug/Kg		109	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-66-6	Zinc	32500	ug/Kg		360	1090	1090	1	P	HSC	07/08/09 16:57	070809A-1	882005

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882005	882004	SW846 3050B	0.514	g	50	mL	07/06/09	FGA
882024	882023	SW846 3050B	0.511	g	50	mL	07/06/09	BXA1
882255	882254	SW846 7471A Prep	0.527	g	30	mL	07/15/09	TXB3

MAD
07/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516-1 CONTRACT: LANL01004 METHOD TYPE: SW846

SAMPLE ID: 232663003 BASIS: Dry Weight DATE COLLECTED 26-JUN-09

CLIENT ID: CAMO-09-9943 LEVEL: Low DATE RECEIVED 01-JUL-09

MATRIX: SOIL %SOLIDS: 86

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2590000	ug/Kg	*	7730	22700	22700	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-36-0	Antimony	1140	ug/Kg	U	375	1140	1140	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-38-2	Arsenic	1330	ug/kg		226	1130	1130	2	MS	PRB	07/14/09 11:46	090714-2	882024
7440-39-3	Barium	32500	ug/Kg		114	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-41-7	Beryllium	679	ug/kg		22.6	113	113	2	MS	PRB	07/14/09 13:44	090714-2	882024
7440-43-9	Cadmium	568	ug/Kg	U	114	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-70-2	Calcium J+,I6b	497000	ug/Kg	*N	9090	28400	28400	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-47-3	Chromium	18800	ug/Kg	*	170	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-48-4	Cobalt	1150	ug/Kg		170	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-50-8	Copper	2960	ug/Kg		341	1140	1140	1	P	HSC	07/08/09 17:04	070809A-1	882005
7439-89-6	Iron	8670000	ug/Kg	E	9090	28400	28400	1	P	HSC	07/08/09 17:04	070809A-1	882005
7439-92-1	Lead	6200	ug/Kg		284	1140	1140	1	P	HSC	07/08/09 17:04	070809A-1	882005
7439-95-4	Magnesium J+,I6b	458000	ug/Kg	*N	9660	34100	34100	1	P	HSC	07/08/09 17:04	070809A-1	882005
7439-96-5	Manganese	176000	ug/Kg	N	227	1140	1140	1	P	HSC	07/08/09 17:04	070809A-1	882005
7439-97-6	Mercury	13.5	ug/kg		4.13	12.2	12.2	1	AV	JXL1	07/15/09 10:43	071509S1-3	882255
7440-02-0	Nickel	2600	ug/kg		113	451	451	2	MS	PRB	07/14/09 11:46	090714-2	882024
7440-09-7	Potassium J+,I6b	410000	ug/Kg	N	7270	28400	28400	1	P	HSC	07/08/09 17:04	070809A-1	882005
7782-49-2	Selenium	1130	ug/kg	U	564	1130	1130	2	MS	PRB	07/14/09 11:46	090714-2	882024
7440-22-4	Silver	353	ug/Kg	J	114	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-23-5	Sodium U,I4d	88000	ug/Kg		7950	28400	28400	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-28-0	Thallium	226	ug/kg	U	67.7	226	226	2	MS	PRB	07/14/09 11:46	090714-2	882024
7440-62-2	Vanadium	7290	ug/Kg		114	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-66-6	Zinc	45100	ug/Kg		375	1140	1140	1	P	HSC	07/08/09 17:04	070809A-1	882005

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882005	882004	SW846 3050B	0.511	g	50	mL	07/06/09	FGA
882024	882023	SW846 3050B	0.515	g	50	mL	07/06/09	BXA1
882255	882254	SW846 7471A Prep	0.573	g	30	mL	07/15/09	TXB3

MAD
07/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516-1 CONTRACT: LANL01004 METHOD TYPE: SW846

SAMPLE ID: 232663004 BASIS: Dry Weight DATE COLLECTED 26-JUN-09

CLIENT ID: CAMO-09-10030 LEVEL: Low DATE RECEIVED 01-JUL-09

MATRIX: SOIL %SOLIDS: 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5110000	ug/Kg	*	7420	21800	21800	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-36-0	Antimony	1090	ug/Kg	U	360	1090	1090	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-38-2	Arsenic	1480	ug/kg		215	1070	1070	2	MS	PRB	07/14/09 11:49	090714-2	882024
7440-39-3	Barium	84000	ug/Kg		109	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-41-7	Beryllium	724	ug/kg		21.5	107	107	2	MS	PRB	07/14/09 13:47	090714-2	882024
7440-43-9	Cadmium	546	ug/Kg	U	109	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-70-2	Calcium J+,I6b	1420000	ug/Kg	*N	8730	27300	27300	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-47-3	Chromium	6790	ug/Kg	*	164	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-48-4	Cobalt	3750	ug/Kg		164	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-50-8	Copper	4910	ug/Kg		327	1090	1090	1	P	HSC	07/08/09 17:11	070809A-1	882005
7439-89-6	Iron	11000000	ug/Kg	E	8730	27300	27300	1	P	HSC	07/08/09 17:11	070809A-1	882005
7439-92-1	Lead	13400	ug/Kg		273	1090	1090	1	P	HSC	07/08/09 17:11	070809A-1	882005
7439-95-4	Magnesium J+,I6b	913000	ug/Kg	*N	9280	32700	32700	1	P	HSC	07/08/09 17:11	070809A-1	882005
7439-96-5	Manganese	402000	ug/Kg	N	218	1090	1090	1	P	HSC	07/08/09 17:11	070809A-1	882005
7439-97-6	Mercury	18.9	ug/kg		3.92	11.5	11.5	1	AV	JXL1	07/15/09 10:45	071509S1-3	882255
7440-02-0	Nickel	5030	ug/kg		107	430	430	2	MS	PRB	07/14/09 11:49	090714-2	882024
7440-09-7	Potassium J+,I6b	767000	ug/Kg	N	6990	27300	27300	1	P	HSC	07/08/09 17:11	070809A-1	882005
7782-49-2	Selenium	1070	ug/kg	U	537	1070	1070	2	MS	PRB	07/14/09 11:49	090714-2	882024
7440-22-4	Silver	540	ug/Kg	J	109	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-23-5	Sodium U,I4d	113000	ug/Kg		7640	27300	27300	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-28-0	Thallium	114	ug/kg	J	64.5	215	215	2	MS	PRB	07/14/09 11:49	090714-2	882024
7440-62-2	Vanadium	17200	ug/Kg		109	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-66-6	Zinc	34200	ug/Kg		360	1090	1090	1	P	HSC	07/08/09 17:11	070809A-1	882005

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882005	882004	SW846 3050B	0.509	g	50	mL	07/06/09	FGA
882024	882023	SW846 3050B	0.517	g	50	mL	07/06/09	BXA1
882255	882254	SW846 7471A Prep	0.579	g	30	mL	07/15/09	TXB3

MAD
07/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516-1 CONTRACT: LANL01004 METHOD TYPE: SW846

SAMPLE ID: 232663005 BASIS: Dry Weight DATE COLLECTED 26-JUN-09

CLIENT ID: CAMO-09-9989 LEVEL: Low DATE RECEIVED 01-JUL-09

MATRIX: SOIL %SOLIDS: 83

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5410000	ug/Kg	*	7770	22900	22900	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-36-0	Antimony	1140	ug/Kg	U	377	1140	1140	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-38-2	Arsenic	1980	ug/kg		237	1180	1180	2	MS	PRB	07/14/09 11:53	090714-2	882024
7440-39-3	Barium	80800	ug/Kg		114	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-41-7	Beryllium	731	ug/kg		23.7	118	118	2	MS	PRB	07/14/09 13:51	090714-2	882024
7440-43-9	Cadmium	117	ug/Kg	J	114	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-70-2	Calcium J+,I6b	1510000	ug/Kg	*N	9140	28600	28600	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-47-3	Chromium	8400	ug/Kg	*	171	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-48-4	Cobalt	3830	ug/Kg		171	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-50-8	Copper	7660	ug/Kg		343	1140	1140	1	P	HSC	07/08/09 17:18	070809A-1	882005
7439-89-6	Iron	9080000	ug/Kg	E	9140	28600	28600	1	P	HSC	07/08/09 17:18	070809A-1	882005
7439-92-1	Lead	10800	ug/Kg		286	1140	1140	1	P	HSC	07/08/09 17:18	070809A-1	882005
7439-95-4	Magnesium J+,I6b	1030000	ug/Kg	*N	9720	34300	34300	1	P	HSC	07/08/09 17:18	070809A-1	882005
7439-96-5	Manganese	255000	ug/Kg	N	229	1140	1140	1	P	HSC	07/08/09 17:18	070809A-1	882005
7439-97-6	Mercury	28.8	ug/kg		4.36	12.8	12.8	1	AV	JXL1	07/15/09 10:51	071509S1-3	882255
7440-02-0	Nickel	6400	ug/kg		118	473	473	2	MS	PRB	07/14/09 11:53	090714-2	882024
7440-09-7	Potassium J+,I6b	1040000	ug/Kg	N	7320	28600	28600	1	P	HSC	07/08/09 17:18	070809A-1	882005
7782-49-2	Selenium	1180	ug/kg	U	592	1180	1180	2	MS	PRB	07/14/09 11:53	090714-2	882024
7440-22-4	Silver	580	ug/Kg		114	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-23-5	Sodium U,I4d	118000	ug/Kg		8000	28600	28600	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-28-0	Thallium	163	ug/kg	J	71	237	237	2	MS	PRB	07/14/09 11:53	090714-2	882024
7440-62-2	Vanadium	17500	ug/Kg		114	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-66-6	Zinc	48900	ug/Kg		377	1140	1140	1	P	HSC	07/08/09 17:18	070809A-1	882005

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882005	882004	SW846 3050B	0.525	g	50	mL	07/06/09	FGA
882024	882023	SW846 3050B	0.507	g	50	mL	07/06/09	BXA1
882255	882254	SW846 7471A Prep	0.562	g	30	mL	07/15/09	TXB3

MAD
07/28/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2516 VALIDATION DATE: 07/28/2009 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☒ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the aqueous MB, nitrate/nitrite as N was detected. The associated sample result was a detect >5X but ≤50X the MB concentration and, thus, was qualified J,I4a.
2. In one of the CCBs associated with both the aqueous and soil samples, total cyanide was detected. The sample results for CAMO -09-9941, -10030 and -9989 were detects ≤5X the CCB concentration and, thus, were qualified U,I4b. The remaining sample results were NDs and, thus, were not qualified.
3. In the FR blank, -10024, which was associated with all soil samples, nitrate/nitrite as N was detected. The associated sample results for -9941, -9943 and -10030 were detects ≤5X the FR blank concentration and, thus, were qualified U,I4d. The remaining associated sample results were NDs and, thus, were not qualified.
4. The aqueous MS %R was > the laboratory UAL for nitrate/nitrite as N. The associated sample result was a detect and, thus, was qualified J+,I6b.

Reviewed by: ETM Level: 1 Date: 7/29/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

VALIDATOR'S SIGNATURE: Mary A. Dominguez

DATE: 07/28/2009

Form 5120-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☒	☐	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☒	☐	☐	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☐	☒	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☒	☐	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 9, 2009

Client SDG: 09-2516

Client Sample ID:	CAMO-09-10024	Project:	LANL01004
Sample ID:	232662001	Client ID:	LANL010
Matrix:	W		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal											
SW9012A Cyanide, Total "As Received"											
Cyanide, Total	U	ND		1.66	5.00	ug/L	1	AXC2 07/07/09	1222	882142	1
Nutrient Analysis											
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"											
Nitrogen, Nitrate/Nitrite	J	0.0635	J,I4a	0.050	0.250	mg/L	5	AXH3 07/07/09	0848	881592	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0854	882141

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

MAD
07/28/09

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 10, 2009

Client SDG: 09-2516-1

Client Sample ID:	CAMO-09-9942	Project:	LANL01004
Sample ID:	232663001	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	11.9%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.7C	H	7.39	0.010	0.100	SU	1	RXG2 07/02/09	1017	882147	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	75.6	278	ug/kg	1	AXC2 07/07/09	1210	882139	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.337	1.12	mg/kg	1	VXP1 07/07/09	2027	882280	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/07/09	0919	882278
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0900	882136

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 10, 2009

Client SDG: 09-2516-1

Client Sample ID:	CAMO-09-9941	Project:	LANL01004
Sample ID:	232663002	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	10.8%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.5C	H	7.10		0.010	0.100	SU	1	RXG2 07/02/09	1018	882147	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	139	U,I4b	65.7	242	ug/kg	1	AXC2 07/07/09	1213	882139	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	1.18	U,I4d	0.336	1.12	mg/kg	1	VXP1 07/07/09	2159	882280	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/07/09	0919	882278
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0900	882136

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Certificate of Analysis

Company : Los Alamos National Laboratory
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TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 10, 2009

Client SDG: 09-2516-1

Client Sample ID:	CAMO-09-9943	Project:	LANL01004
Sample ID:	232663003	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	13.9%		

Parameter	Qualifier	Result		DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal												
SW9045C pH Federal "As Received"												
pH at Temp 20.5C	H	7.54		0.010	0.100	SU	1	RXG2	07/02/09	1019	882147	1
Flow Injection Analysis Federal												
SW9012A Cyanide, Total Federal "Dry Weight Corrected"												
Cyanide, Total	U	ND		77.4	285	ug/kg	1	AXC2	07/07/09	1214	882139	2
Ion Chromatography Federal												
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"												
Nitrate-N	HJh	0.818	U,l4d	0.337	1.12	mg/kg	1	VXP1	07/07/09	2222	882280	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/07/09	0919	882278
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0900	882136

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Certificate of Analysis

Company : Los Alamos National Laboratory
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TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 10, 2009

Client SDG: 09-2516-1

Client Sample ID:	CAMO-09-10030	Project:	LANL01004
Sample ID:	232663004	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	10%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.4C	H	7.07		0.010	0.100	SU	1	RXG2 07/02/09	1020	882147	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	83.8	U,I4b	64.0	235	ug/kg	1	AXC2 07/07/09	1215	882139	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	1.15	U,I4d	0.326	1.09	mg/kg	1	VXP1 07/07/09	2245	882280	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/07/09	0919	882278
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0900	882136

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 10, 2009

Client SDG: 09-2516-1

Client Sample ID:	CAMO-09-9989	Project:	LANL01004
Sample ID:	232663005	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	16.7%		

Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.5C	H	7.07		0.010	0.100	SU	1	RXC2 07/02/09	1022	882147	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	195	U,I4b	75.6	278	ug/kg	1	AXC2 07/07/09	1220	882139	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND		0.358	1.19	mg/kg	1	VXP1 07/07/09	2307	882280	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/07/09	0919	882278
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0900	882136

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

MAD
07/28/09

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2516

REQUEST NUMBER: 09-2516

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232662, 232663 °/.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10024	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10024	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-10024	1	POLY	SW-846:6850	Ice	W
CAMO-09-10024	1	POLY	TCN	Sodium Hydroxide	W
CAMO-09-9942	1	POLY	METALS-GEL	Ice	R
CAMO-09-9942	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9941	1	POLY	METALS-GEL	Ice	R
CAMO-09-9941	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9943	1	POLY	METALS-GEL	Ice	R
CAMO-09-9943	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10030	1	POLY	METALS-GEL	Ice	R
CAMO-09-10030	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9989	1	POLY	METALS-GEL	Ice	R
CAMO-09-9989	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
Jeff Lewis		6/30/09	1400	Patricia Dent	P. Dent	7/1/09	09:00
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: Date Time

Printed Name Signature

Remarks:

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2516

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2516

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/30/2009

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	EPA:353.2	1	CAMO-09-10024	W	6/26/2009	
	SW-846:6010B	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	

6

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2516

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10024	W	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:6020	1	CAMO-09-10024	W	6/26/2009	
	SW-846:6850	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10024	W	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:9012A	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10024	W	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:9045C	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2516

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 02, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Orders: 232662 232663
SDG: 09-2516

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on July 01, 2009, and analyzed for General Chemistry, Metals and Perchlorates by LCMSMS. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2516
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232662 and 232663
SDG: 09-2516

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232662 and 232663
SDG # : 09-2516

July 02, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on July 01, 2009 for analysis. The sample was prepared/analyzed within the required holding time. Shipping container temperature was checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The sample was delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232662001	CAMO-09-10024
232663001	CAMO-09-9942
232663002	CAMO-09-9941
232663003	CAMO-09-9943
232663004	CAMO-09-10030
232663005	CAMO-09-9989

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry, Metals and Perchlorates by LCMSMS.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for

Valerie Davis

Project Manager

List of current GEL Certifications as of 02 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2516

REQUEST NUMBER: 09-2516

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232662, 232663 %.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10024	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10024	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-10024	1	POLY	SW-846:6850	Ice	W
CAMO-09-10024	1	POLY	TCN	Sodium Hydroxide	W
CAMO-09-9942	1	POLY	METALS-GEL	Ice	R
CAMO-09-9942	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9941	1	POLY	METALS-GEL	Ice	R
CAMO-09-9941	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9943	1	POLY	METALS-GEL	Ice	R
CAMO-09-9943	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10030	1	POLY	METALS-GEL	Ice	R
CAMO-09-10030	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9989	1	POLY	METALS-GEL	Ice	R
CAMO-09-9989	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
Jeff Lewis		6/30/09	1400	Patricia Dent	P. Dent	7/1/09	09:00
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2516

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2516

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/30/2009

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	EPA:353.2	1	CAMO-09-10024	W	6/26/2009	
	SW-846:6010B	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2516

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10024	W	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:6020	1	CAMO-09-10024	W	6/26/2009	
	SW-846:6850	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10024	W	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:9012A	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10024	W	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:9045C	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2516

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2516**
Received By: Patricia Dent	**Date Received: JULY 1, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,4,6,24C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5626 6C
7209 7847 5815 4C
7209 7847 5804 24C
7209 7847 5837 2C

PM (or PMA) review: Initials _____ Date 7/2/09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 55.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-9171

FedEx Express

Ref: 6b010amr1a111550000

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5826 Form 0201

WED Deliver By: 01JUL09

29407 -SC-US

CHS A1

XX CHSA

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 55.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-9171

FedEx Express

Ref: 6b010amr1a015018bo

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5815 Form 0201

WED Deliver By: 01JUL09

29407 -SC-US

CHS A1

XX CHSA

156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 39.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-9171

FedEx Express

Ref: 6b010amr1a015018bo

[redacted]

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5804 Form 0201

WED
Deliver By:
01JUL09

CHS A1

29407 -SC-US XX CHSA

VRAT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 28.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-9171

FedEx Express

Ref: 6b010amr2a0512bgdo

[redacted]

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5837 Form 0201

WED
Deliver By:
01JUL09

CHS A1

29407 -SC-US XX CHSA

1# 156148-434 NRAT V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2516

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	882496
Prep Batch Number:	882495

Sample Analysis

Sample ID	Client ID
232662001	CAMO-09-10024
1201874307	Interference Check Sample (ICS)
1201874299	Method Blank (MB)
1201874300	Laboratory Control Sample (LCS)
1201874303	232662001(CAMO-09-10024) Matrix Spike (MS)
1201874305	232662001(CAMO-09-10024) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

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CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232662001 (CAMO-09-10024) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

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Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The sample in this SDG was not originally analyzed using EPA Method 314.0.

Additional Comments
The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

Perchlorate Isotope Ratio
The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Heather K Moore **Date:** 07/10/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10024

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516

GEL Sample ID: 232662001

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	08-JUL-09 14:24	per0708015a
	Perchlorate Isotope Ratio						1	08-JUL-09 14:24	per0708015a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	08-JUL-09 14:24	per0708015a
	Perchlorate-O(18)			0.477	ug/L		1	08-JUL-09 14:24	per0708015a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solic}}$$

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PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2516

Extract Batch Code: 882495

Date Filtered: 06–JUL–09

Matrix: WASTE WATER

Sample ID: 1201874300

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.185	ug/L	92.3		85 – 115
Perchlorate Isotope Ratio		2.96				–
Perchlorate–101	0.200	.193	ug/L	96.7		85 – 115
Perchlorate–O(18)		.466	ug/L			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2516

Extract Batch Code: 882495

Date Filtered: 06–JUL–09

Matrix: WATER

Sample ID: 1201874307

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.216	ug/L	108		70 – 130
Perchlorate Isotope Ratio		2.88				
Perchlorate–101	0.200	.232	ug/L	116		70 – 130
Perchlorate–O(18)		.526	ug/L			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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)uantify Sample Report MassLynx 4.0 SP4
'he GEL Group, LLC Analyst: Charles W. Wilson

)ataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

ast Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
'rinted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

lame: per0708014a
)ate: 08-Jul-2009
ime: 14:16:31
): 1201874307
'ial: 1:3,C

|LANL| 882496 |L2a| IC3 |1|

CWW
07-09-09

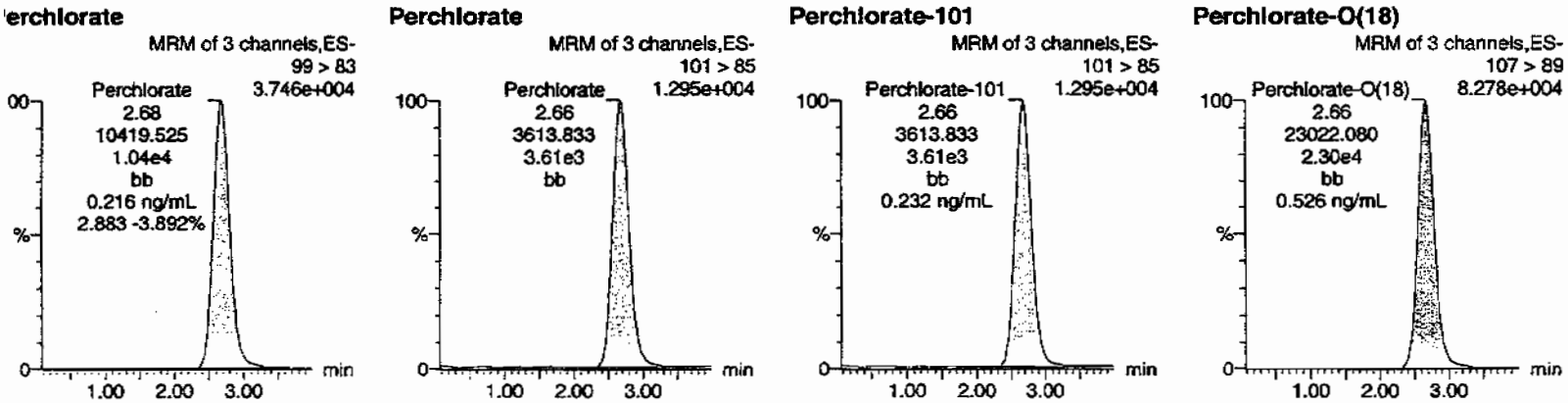

Hnm 07/10/09

)	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
201874307	Perchlorate	99 > 83	2.68	10419.525	10419.525	bb			0.2156	107.79	7.79	1619.5...	2.88
201874307	Perchlorate-101	101 > 85	2.66	3613.833	3613.833	bb			0.2321	116.05	16.05	2232.0...	
201874307	Perchlorate-O(18)	107 > 89	2.66	23022.080	23022.080	bb			0.5259	105.19	5.19	10284....	

23

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2516

Extract Batch Code: 882495

Date Extracted: 06–JUL–09

GEL MS/PS ID: 1201874303

Client ID: CAMO–09–10024

GEL MSD/PSD ID: 1201874305

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	0.200	0.00358	ug/L	0.200	98.4	.184	90.4	8.3	30	75 – 125
Perchlorate Isotope Ratio	0	0.00		3.15		3.02		0		–
Perchlorate–101	0.200	0.00558	ug/L	0.198	96.1	.19	92.2	4.08	30	75 – 125
Perchlorate–O(18)	0	0.477	ug/L	0.482		.47		2.48		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2516

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08-JUL-09	per0708001a	IPB001
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708001a	IPB001
Perchlorate	0.00	0	NA	08-JUL-09	per0708002a	IPB001
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708002a	IPB001

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uantify Sample Report MassLynx 4.0 SP4
ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

st Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
inted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

ethod: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
ılibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

ıme: per0708001a
ıte: 08-Jul-2009
ne: 12:35:59
: IPB001
al: 1:1,A

CWW 07-09-09

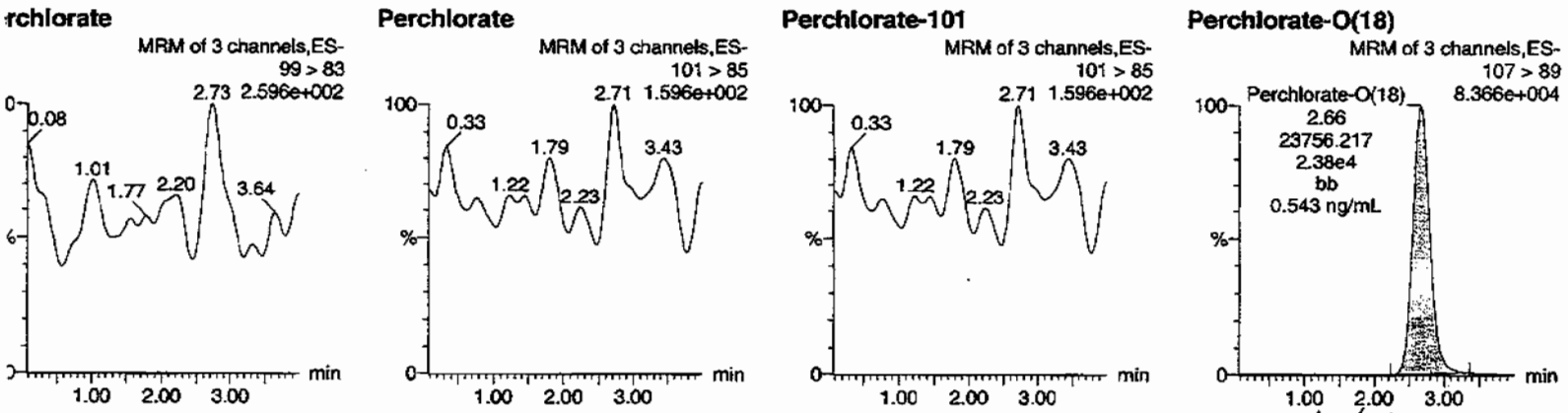

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
001	Perchlorate	99 > 83											0.00
001	Perchlorate-101	101 > 85											
001	Perchlorate-O(18)	107 > 89	2.66	23756.217	23756.217	bb			0.5427	108.54	8.54	2563.6...	

26

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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uantify Sample Report MassLynx 4.0 SP4
ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

ıst Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
inted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

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ıte: 08-Jul-2009
me: 12:43:43
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ow
07-01-09

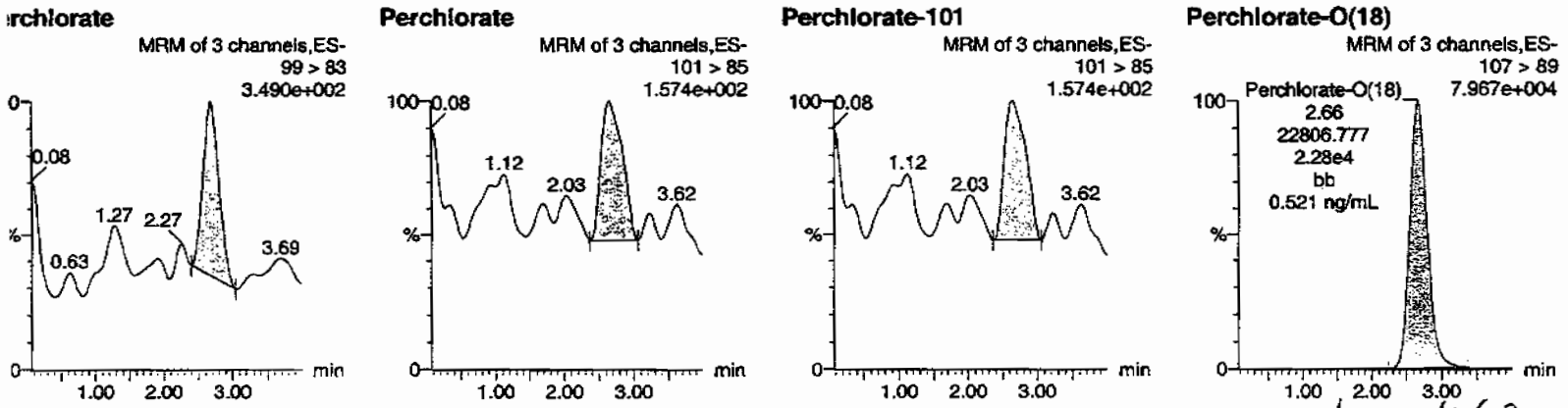

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
)001	Perchlorate	99 > 83	2.68	62.756	62.756	bb			0.0013			9.964	2.10
)001	Perchlorate-101	101 > 85	2.64	29.952	29.952	bb			0.0019			7.781	
)001	Perchlorate-O(18)	107 > 89	2.66	22806.777	22806.777	bb			0.5210	104.21	4.21	7277.3...	

OKAY
LW 0510

27

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2516

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08–JUL–09	per0708008a	IPB002
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708008a	IPB002
Perchlorate	0.00	0	NA	08–JUL–09	per0708010a	IPB003
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708010a	IPB003
Perchlorate	0.00	0	NA	08–JUL–09	per0708023a	IPB004
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708023a	IPB004

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ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

ıst Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
inted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

ıme: per0708008a
ıte: 08-Jul-2009
me: 13:30:03
: IPB002
al: 1:1,A

CWW 07-07-09

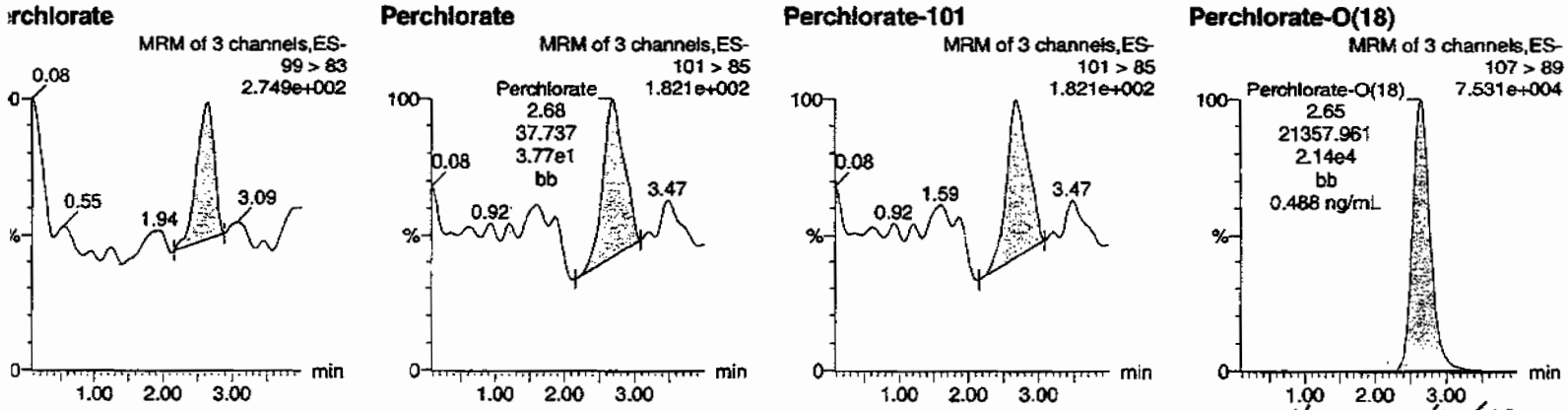

HMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3002	Perchlorate	99 > 83	2.64	40.789	40.789	bb			0.0008			16.642	1.08
3002	Perchlorate-101	101 > 85	2.68	37.737	37.737	bb			0.0024			9.640	
3002	Perchlorate-O(18)	107 > 89	2.65	21357.961	21357.961	bb			0.4879	97.59	-2.41	8484.7...	

OKAY
LO.0000

29

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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uantify Sample Report MassLynx 4.0 SP4
ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

ıst Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
ınted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

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ıte: 08-Jul-2009
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CWO
07-09-09

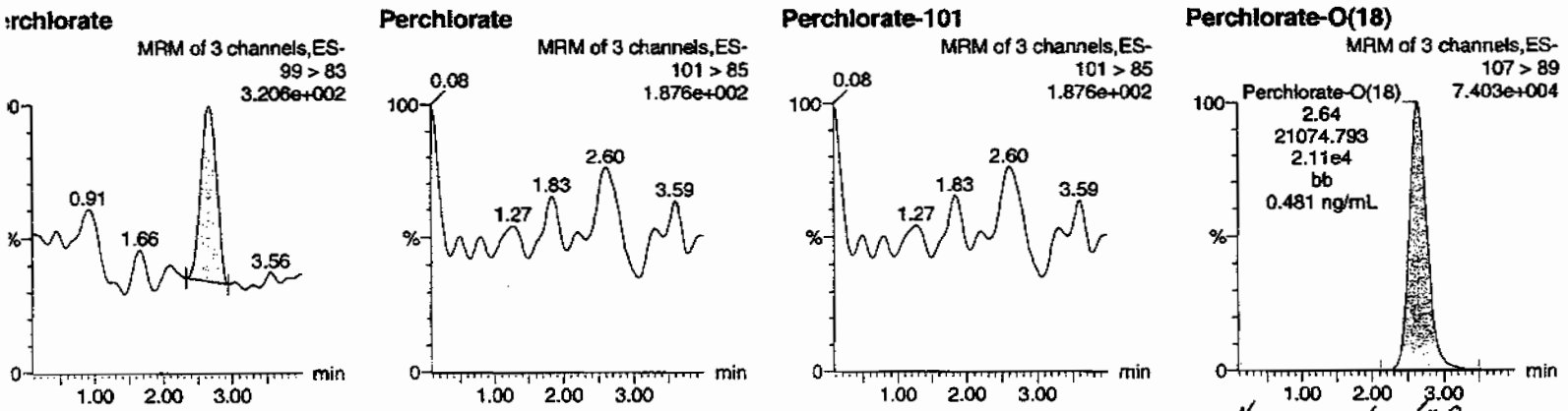

HMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3003	Perchlorate	99 > 83	2.66	56.577	56.577	bb			0.0012			14.377	0.00
3003	Perchlorate-101	101 > 85											
3003	Perchlorate-O(18)	107 > 89	2.64	21074.793	21074.793	bb			0.4815	96.29	-3.71	1018.8...	

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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uantify Sample Report MassLynx 4.0 SP4
ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

st Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
inted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

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ıte: 08-Jul-2009
me: 15:26:24
: IPB004
al: 1:1,A

CWW 07-09-09

rchlorate

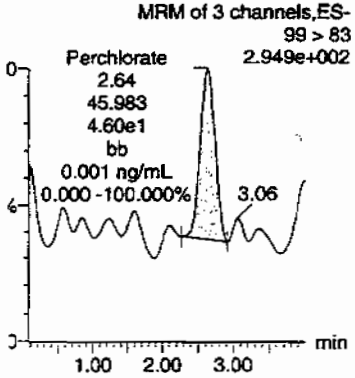

Perchlorate

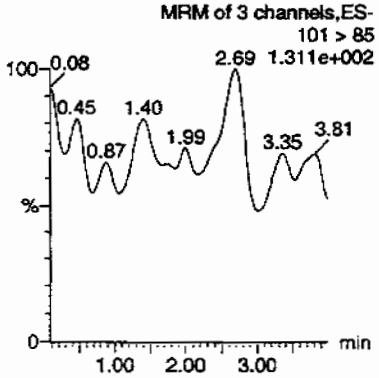

Perchlorate-101

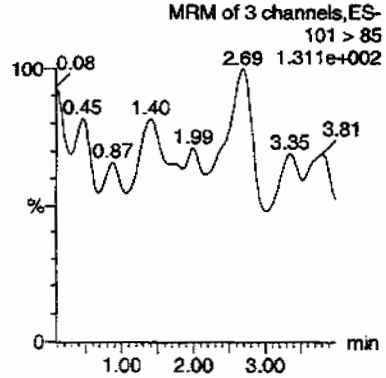

Perchlorate-O(18)

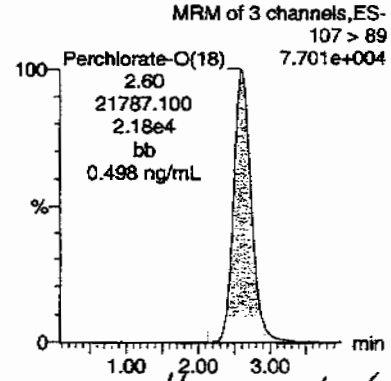

HMNL 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
004	Perchlorate	99 > 83	2.64	45.983	45.983	bb			0.0010			14.762	0.00
004	Perchlorate-101	101 > 85											
004	Perchlorate-O(18)	107 > 89	2.60	21787.100	21787.100	bb			0.4977	99.55	-0.45	5673.5...	

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWW 01-09-08

Data file: STATMS1 - Uncalibrated

7 matches of 7 tested references

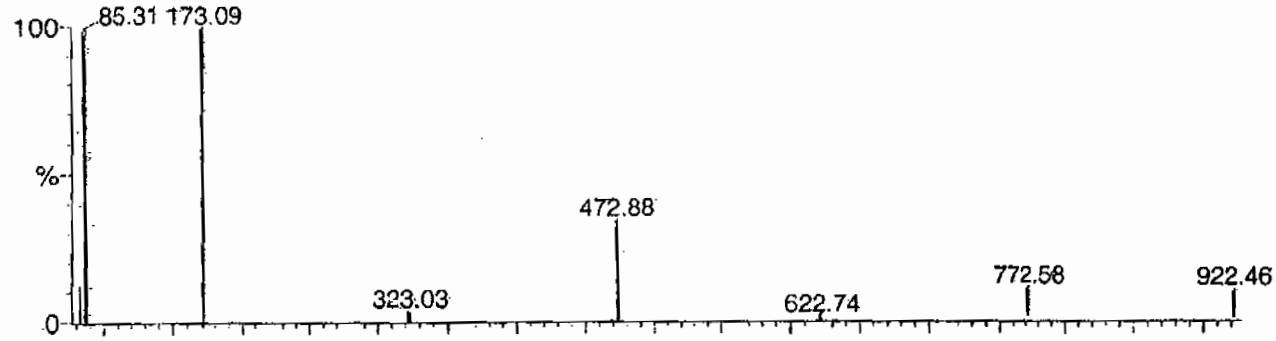

Reference file: Nairb

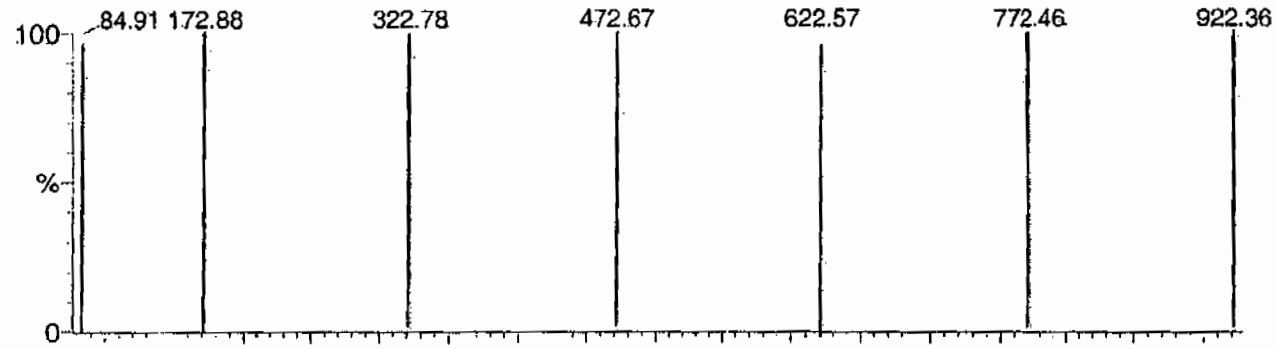

Mass difference (Raw - Ref mass)

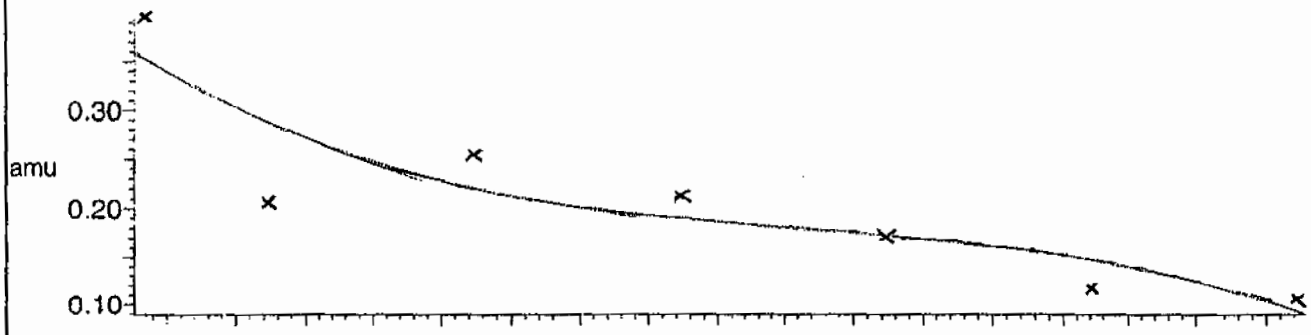

Residuals

Mean residual = 3.212012e-2 ± 0.024108

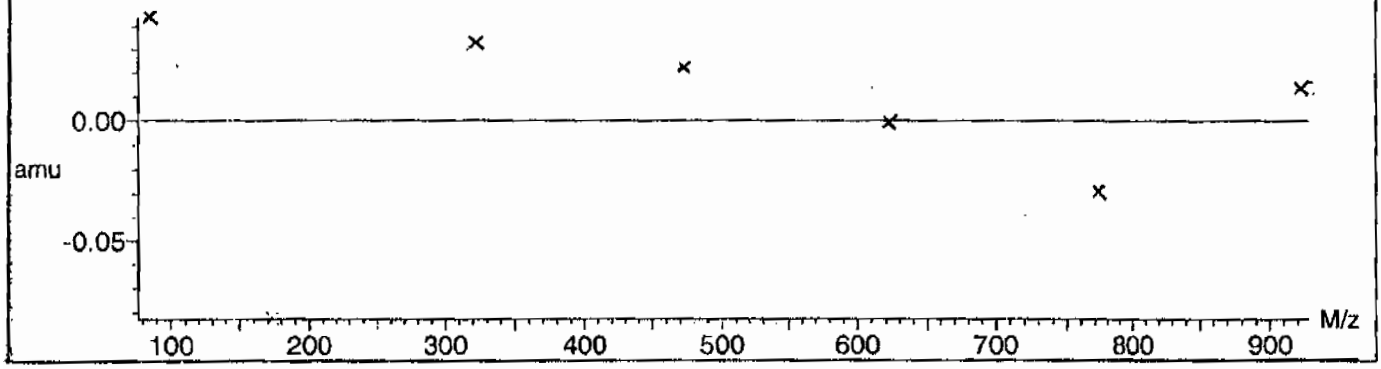

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

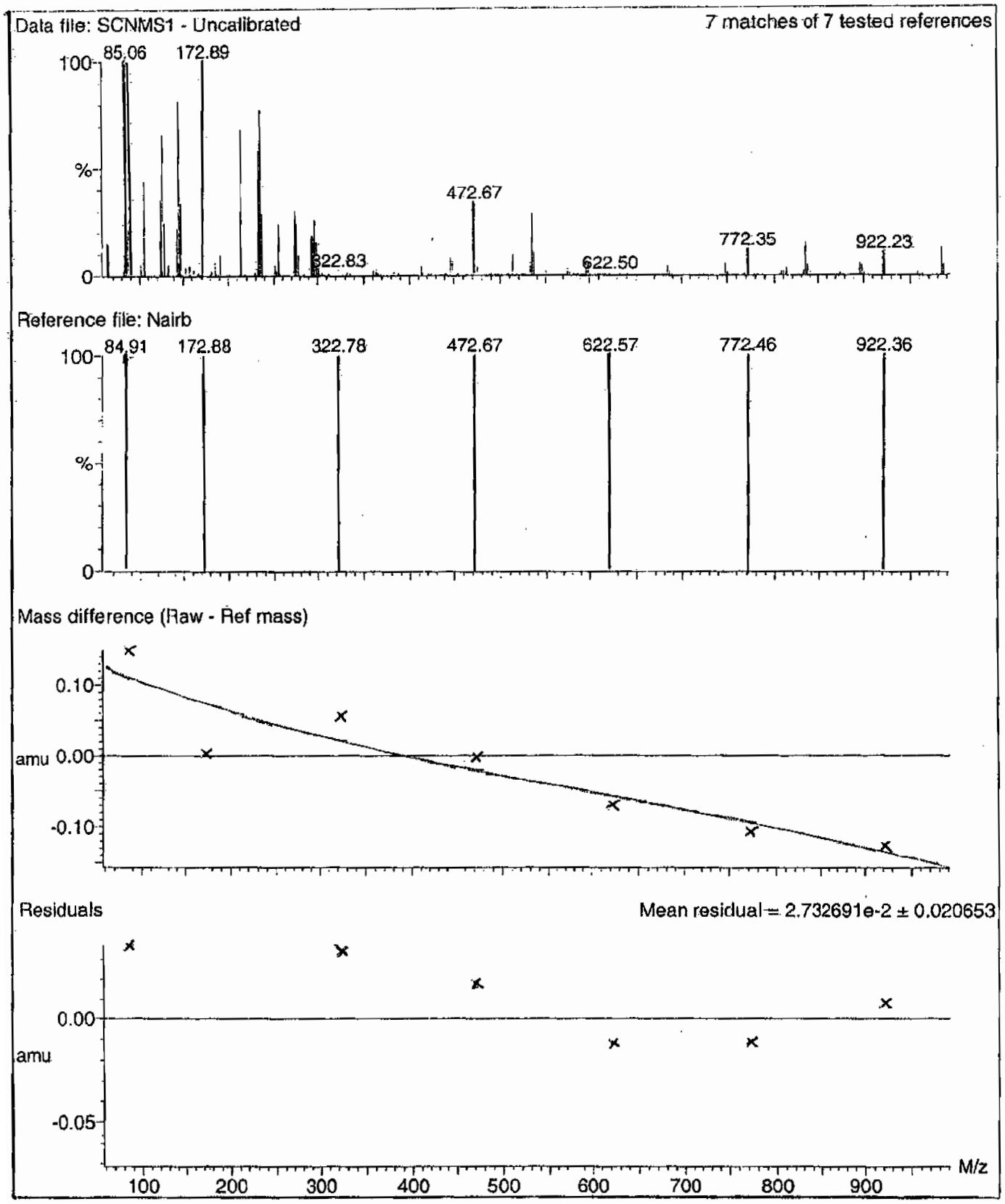

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Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

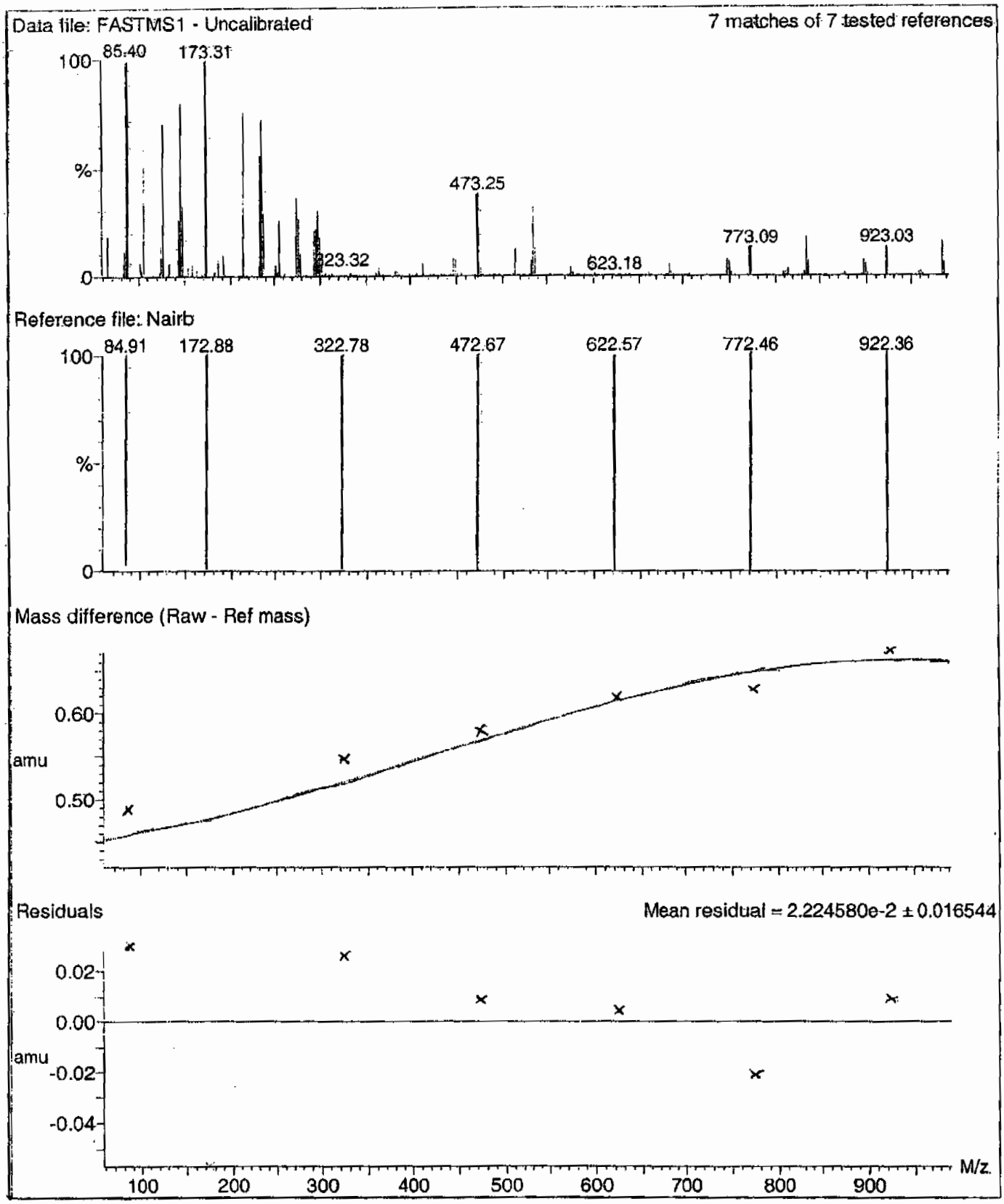

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

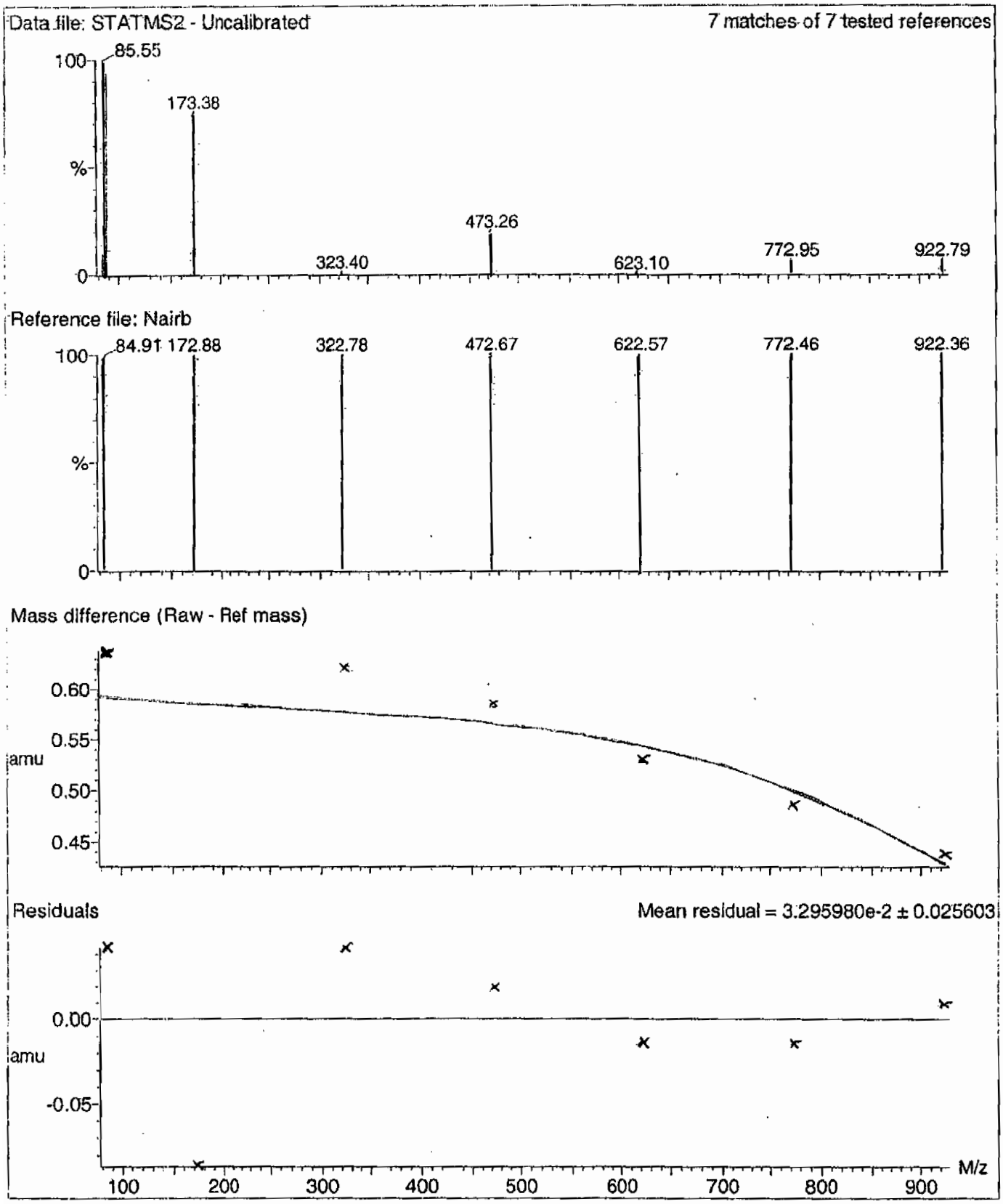

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Calibration Report - MS2 Scanning

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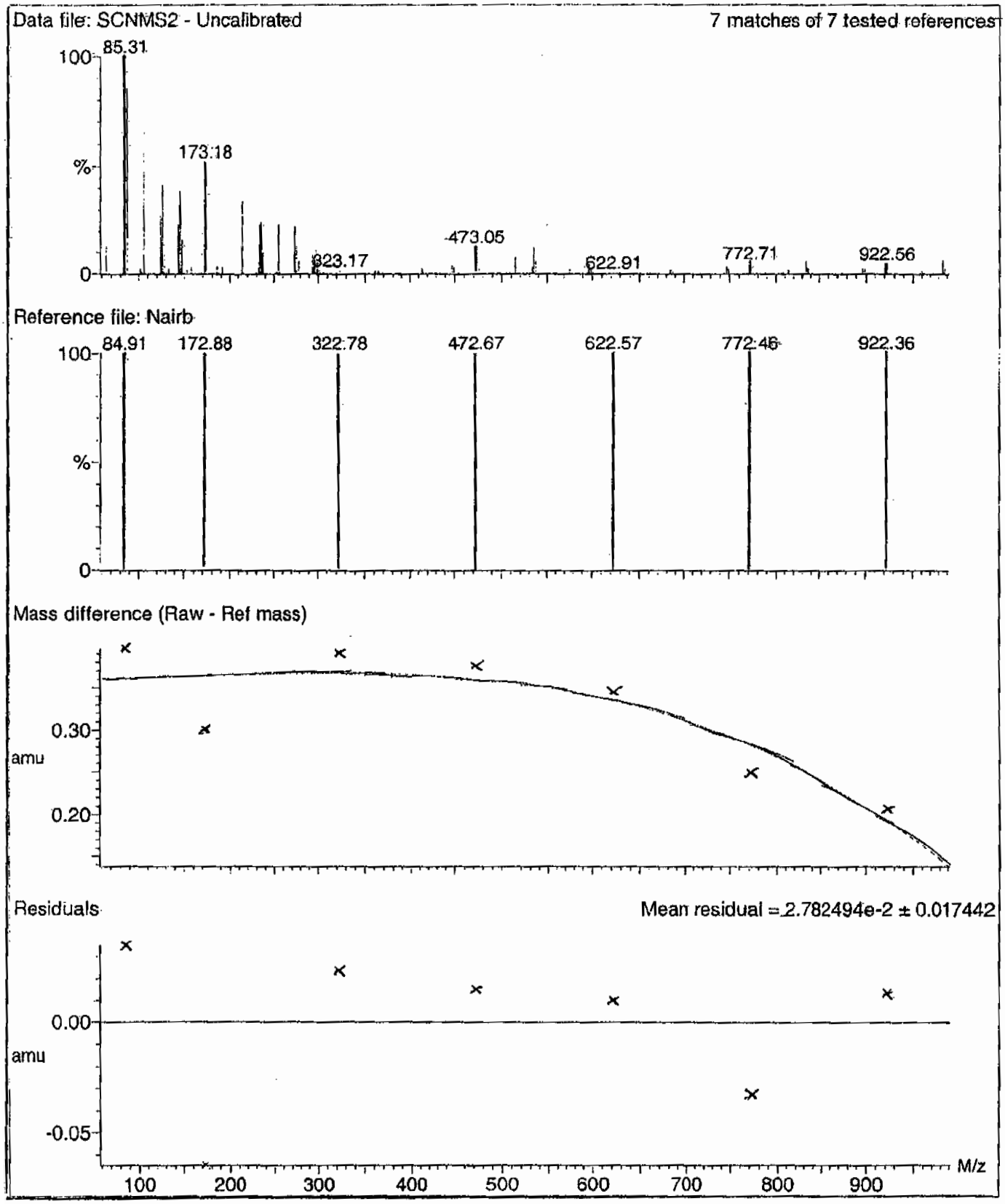

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

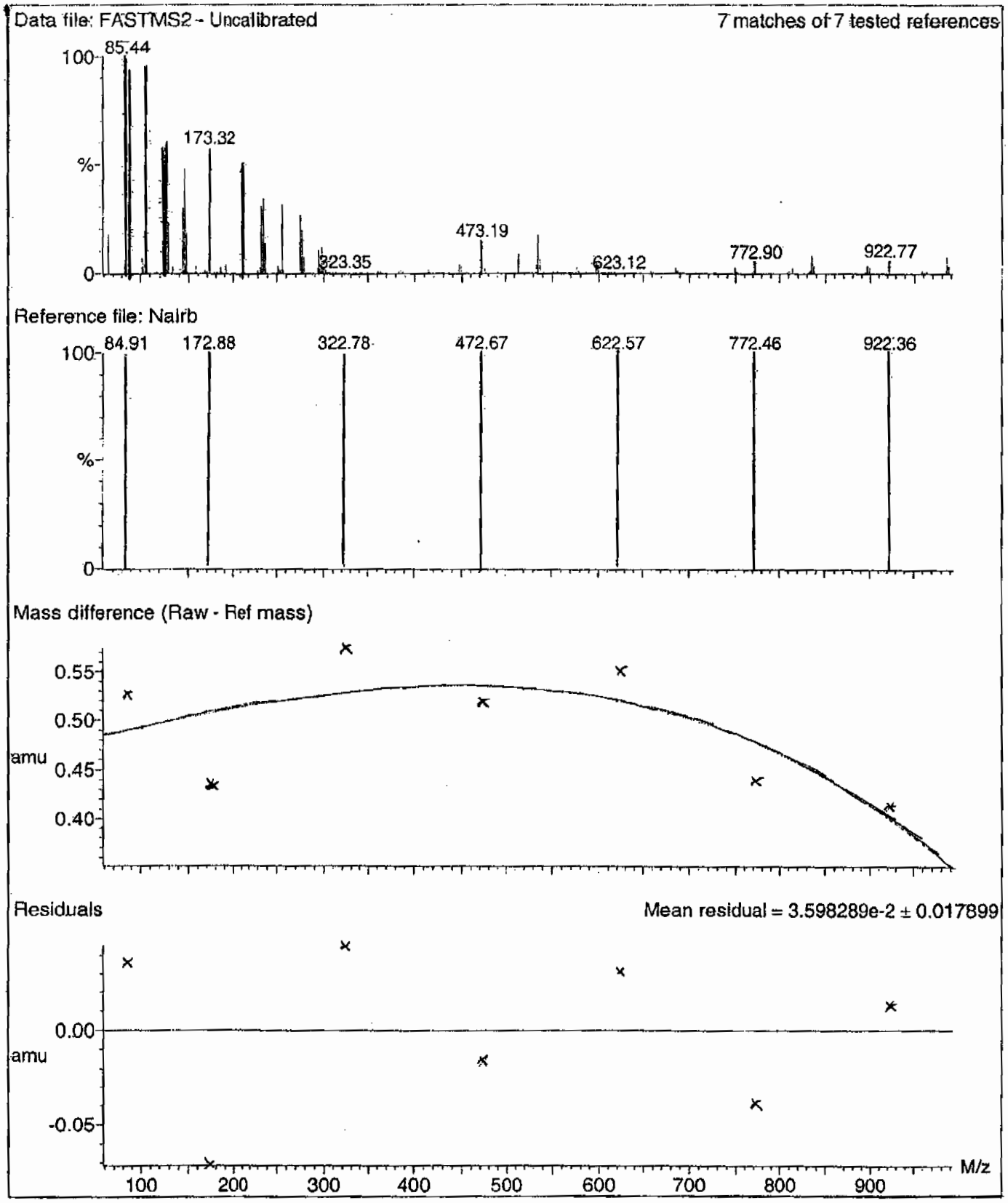

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Wednesday, July 08, 2009 11:04:53 Eastern Daylight Time

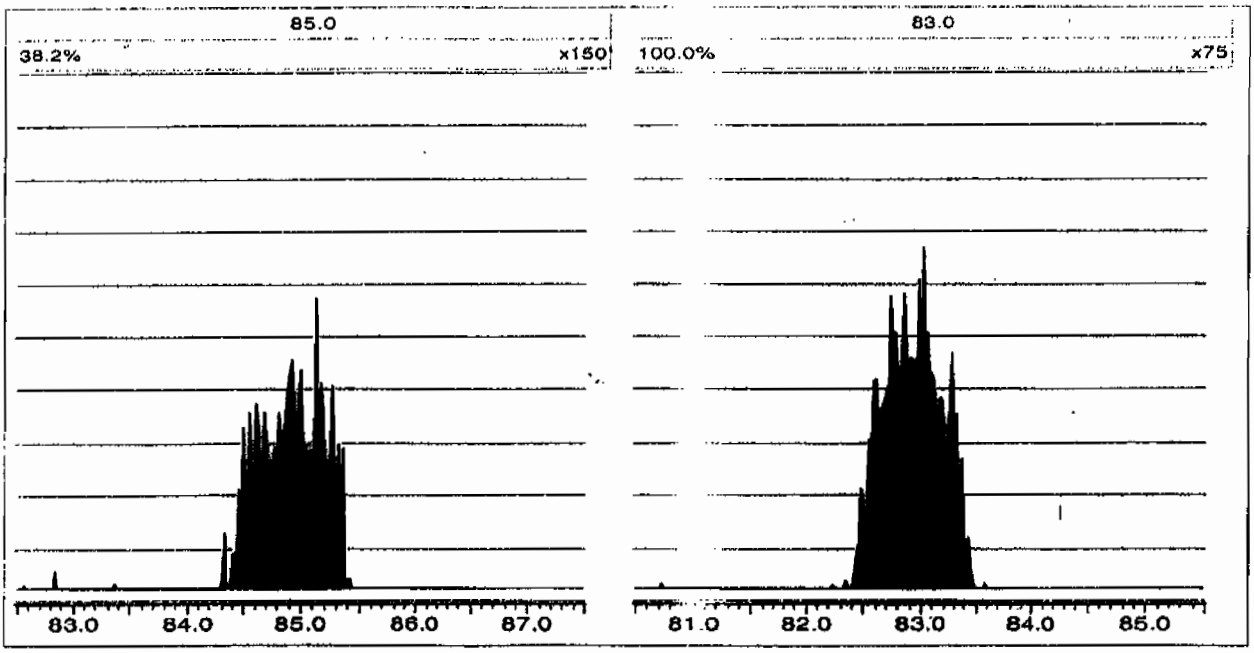

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2516

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0708006a**	**08–JUL–09**	**20767.2**				
Lower Area Limit			**10383.6**				
Upper Area Limit			**41534.4**				
1201874299	per0708012a	08–JUL–09 14:01	20440.2	2.64	2.66292	1.009	
1201874300	per0708013a	08–JUL–09 14:08	20419.3	2.64	2.65063	1.004	
1201874307	per0708014a	08–JUL–09 14:16	23022.1	2.66	2.67547	1.006	
232662001	per0708015a	08–JUL–09 14:24	20900.9	2.63	2.62565	.998	
1201874303	per0708016a	08–JUL–09 14:32	21089.8	2.63	2.65053	1.008	
1201874305	per0708017a	08–JUL–09 14:39	20574.2	2.63	2.63812	1.003	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10024

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516

GEL Sample ID: 232662001

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	08-JUL-09 14:24	per0708015a
	Perchlorate Isotope Ratio						1	08-JUL-09 14:24	per0708015a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	08-JUL-09 14:24	per0708015a
	Perchlorate-O(18)			0.477	ug/L		1	08-JUL-09 14:24	per0708015a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solid}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708015a
Date: 08-Jul-2009
Time: 14:24:15
ID: 232662001
Vial: 1:3,D

|LANL|832496|LZQ|1|

CWW 07 09 09

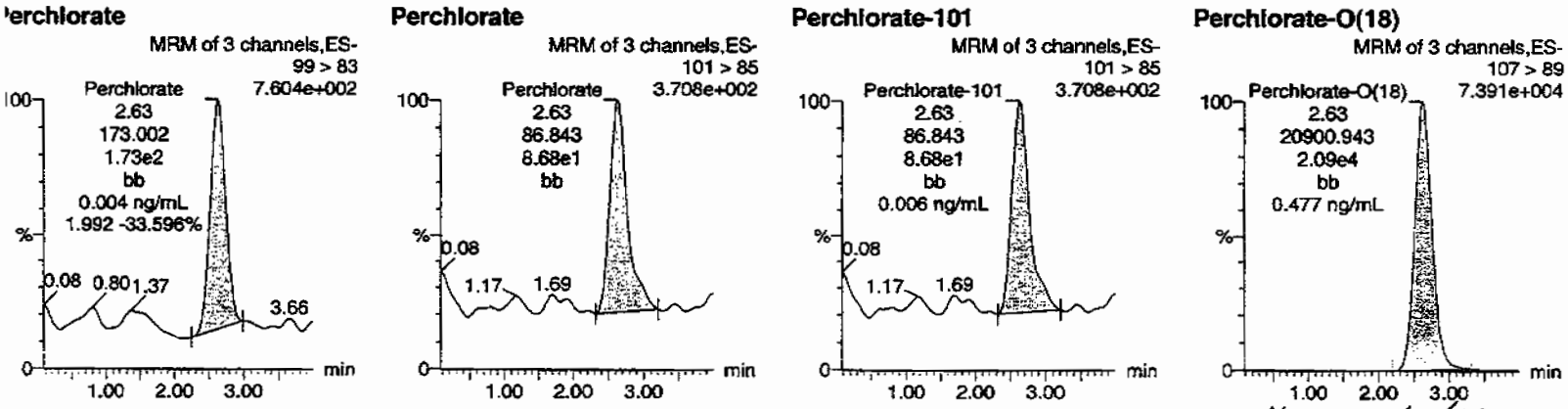

HM 07/10/09

D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
32662001	Perchlorate	99 > 83	2.63	173.002	173.002	bb			0.0036			39.722	1.99
32662001	Perchlorate-101	101 > 85	2.63	86.843	86.843	bb			0.0056			69.948	
32662001	Perchlorate-O(18)	107 > 89	2.63	20900.943	20900.943	bb			0.4775	95.50	-4.50	4880.1...	

OKAY LCOSOD

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2516

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 48333.4

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2516

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08-JUL-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 15570.4

Response Type: External Standard

Curve Type: RF

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uantify Calibration Report MassLynx 4.0 SP4
ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

.st Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
inted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

ethod: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
ılibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

ımpound name: Perchlorate
ısponse Factor: 48333.4
ıF SD: 3128.21, % Relative SD: 6.47216
ısponse type: External Std, Area
ırve type: RF

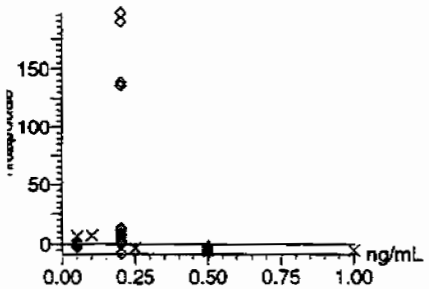

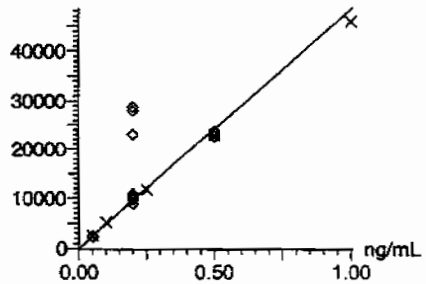

07-09-09

mpound name: Perchlorate-101
sponse Factor: 15570.4
F SD: 1259.19, % Relative SD: 8.08705
sponse type: External Std, Area
ve type: RF

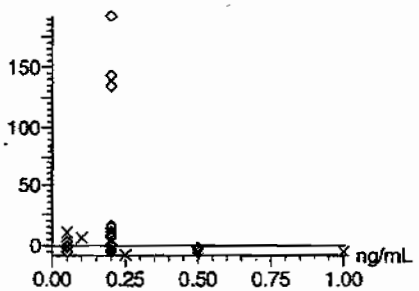

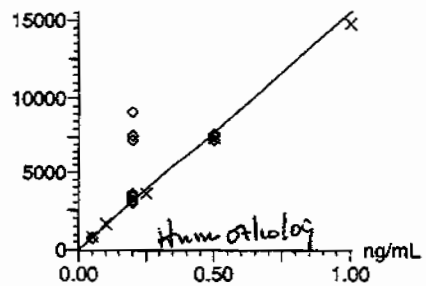

Hum ortho log

47

_ SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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uantify Calibration Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

st Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
inted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

mpound name: Perchlorate-O(18)
sponse Factor: 43772.6
RF SD: 1463.7, % Relative SD: 3.34387
sponse type: External Std, Area
rve type: RF

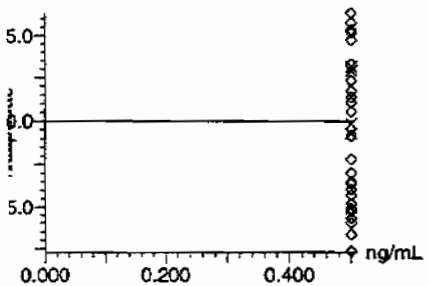

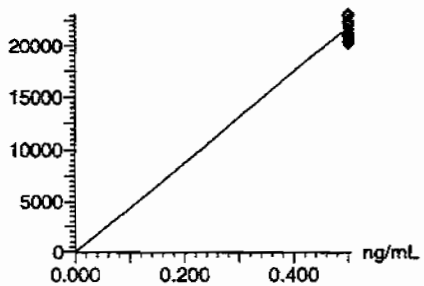

. SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2516

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	93.91	08–JUL–09 13:37	per0708009a
Perchlorate Isotope Ratio		2.99		08–JUL–09 13:37	per0708009a
Perchlorate–101	.5	.49	97.64	08–JUL–09 13:37	per0708009a

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ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

ıst Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
inted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

ıme: per0708009a
ıte: 08-Jul-2009
me: 13:37:46
: WCL090706-06ICV
al: 1:2,A

Pass
CWW
07-09-09

ırchlorate

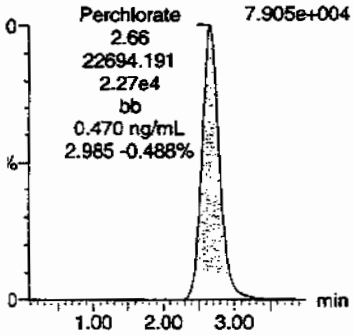

Perchlorate

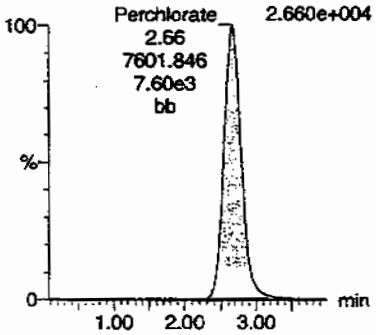

Perchlorate-101

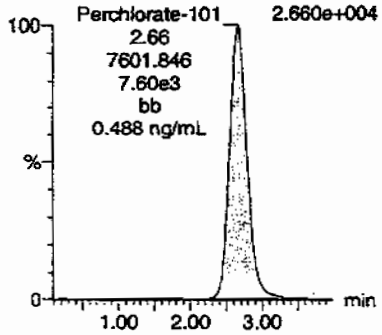

Perchlorate-O(18)

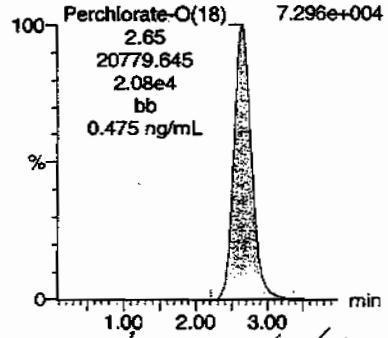

SMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-06ICV	Perchlorate	99 > 83	2.66	22694.191	22694.191	bb			0.4695	93.91	-6.09	2453.8...	2.99
CL090706-06ICV	Perchlorate-101	101 > 85	2.66	7601.846	7601.846	bb			0.4882	97.64	-2.36	2701.9...	
CL090706-06ICV	Perchlorate-O(18)	107 > 89	2.65	20779.645	20779.645	bb			0.4747	94.94	-5.06	3233.6...	

50

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2516

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.46	92.96	08–JUL–09 15:18	per0708022a
Perchlorate Isotope Ratio		3.07		08–JUL–09 15:18	per0708022a
Perchlorate–101	.5	.47	94.1	08–JUL–09 15:18	per0708022a

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itaset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

st Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
inted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

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ans
07-09-09

ime: per0708022a
ite: 08-Jul-2009
ne: 15:18:39
: WCL090706-06CCV
al: 1:2,A

rchlorate

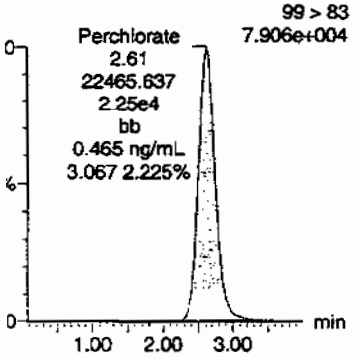

Perchlorate

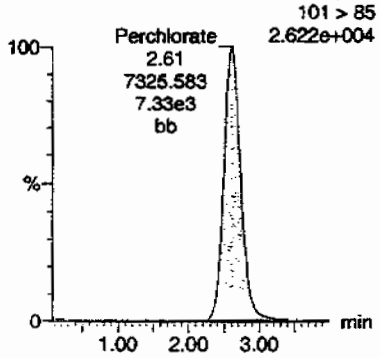

Perchlorate-101

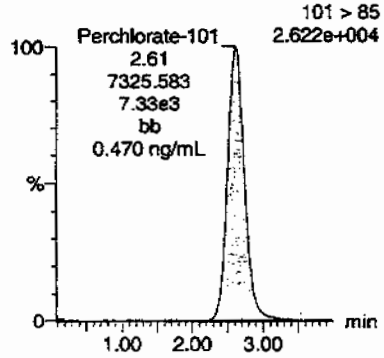

Perchlorate-O(18)

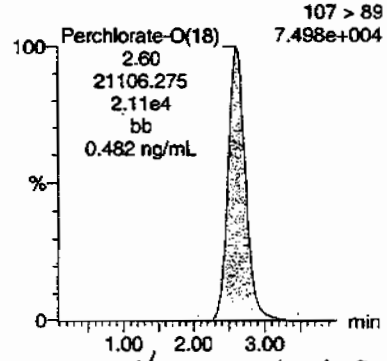

Hmc 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-06CCV	Perchlorate	99 > 83	2.61	22465.637	22465.637	bb			0.4648	92.96	-7.04	5659.4...	3.07
CL090706-06CCV	Perchlorate-101	101 > 85	2.61	7325.583	7325.583	bb			0.4705	94.10	-5.90	675.146	
CL090706-06CCV	Perchlorate-O(18)	107 > 89	2.60	21106.275	21106.275	bb			0.4822	96.44	-3.56	2111.2...	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2516

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	102.31	08–JUL–09 13:53	per0708011a
Perchlorate Isotope Ratio		3.35		08–JUL–09 13:53	per0708011a
Perchlorate–101	.05	.05	94.69	08–JUL–09 13:53	per0708011a
Perchlorate	.05	.05	97.69	08–JUL–09 15:34	per0708024a
Perchlorate Isotope Ratio		3.08		08–JUL–09 15:34	per0708024a
Perchlorate–101	.05	.05	98.51	08–JUL–09 15:34	per0708024a

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GEL Group, LLC Analyst: Charles W. Wilson

aset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

t Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
ted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

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e: 08-Jul-2009
e: 13:53:16
WCL090706-07CRI
l: 1:2,B

CWW 07-09-09

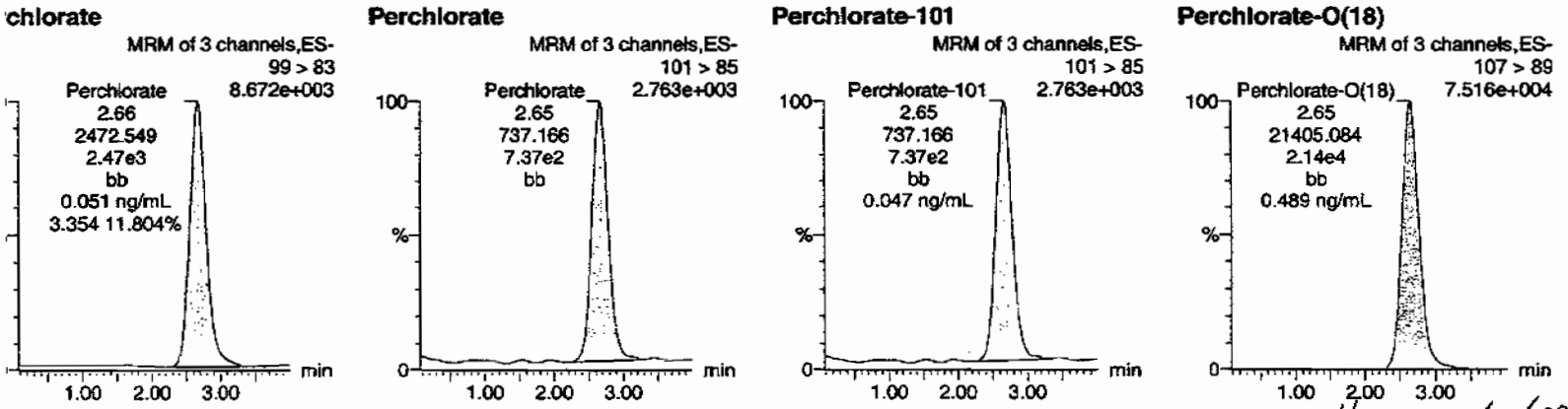

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
L090706-07CRI	Perchlorate	99 > 83	2.66	2472.549	2472.549	bb			0.0512	102.31	2.31	911.588	3.35
L090706-07CRI	Perchlorate-101	101 > 85	2.65	737.166	737.166	bb			0.0473	94.69	-5.31	141.523	
L090706-07CRI	Perchlorate-O(18)	107 > 89	2.65	21405.084	21405.084	bb			0.4890	97.80	-2.20	1236.3...	

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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taset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

st Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
nted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

me: per0708024a
te: 08-Jul-2009
ne: 15:34:09
WCL090706-07CRI
l: 1:2,B

Pass
AWS
07-09-09

rchlorate

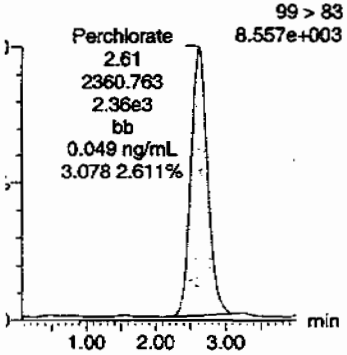

Perchlorate

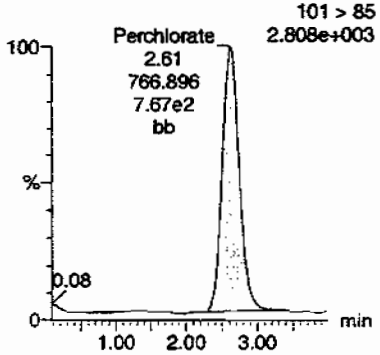

Perchlorate-101

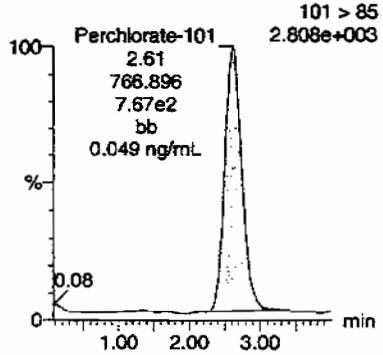

Perchlorate-O(18)

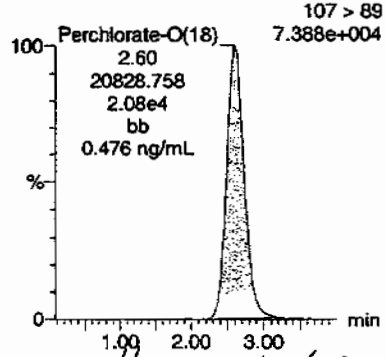

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
:L090706-07CRI	Perchlorate	99 > 83	2.61	2360.763	2360.763	bb			0.0488	97.69	-2.31	448.651	3.08
:L090706-07CRI	Perchlorate-101	101 > 85	2.61	766.896	766.896	bb			0.0493	98.51	-1.49	215.016	
:L090706-07CRI	Perchlorate-O(18)	107 > 89	2.60	20828.758	20828.758	bb			0.4758	95.17	-4.83	12080....	

55

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WASTE WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
MB

Date Received: 06–JUL–09

GEL Job No (SDG): 09–2516

GEL Sample ID: 1201874299

Date Filtered: 06–JUL–09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.050	ug/L	U	1	08–JUL–09 14:01	per0708012a
	Perchlorate Isotope Ratio						1	08–JUL–09 14:01	per0708012a
14797–73–0	Perchlorate–101	.05	.2	0.050	ug/L	U	1	08–JUL–09 14:01	per0708012a
	Perchlorate–O(18)			0.467	ug/L		1	08–JUL–09 14:01	per0708012a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solid}}$$

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luantify Sample Report MassLynx 4.0 SP4
he GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

ast Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
rinted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

lame: per0708012a
late: 08-Jul-2009
ime: 14:01:01
): 1201874299 ILANL|882496|LZQ|MB|1|
ial: 1:3,A

CWW 07-09-09

erchlorate

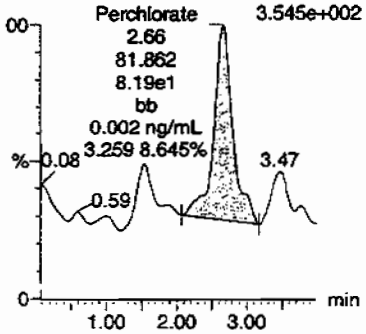

Perchlorate

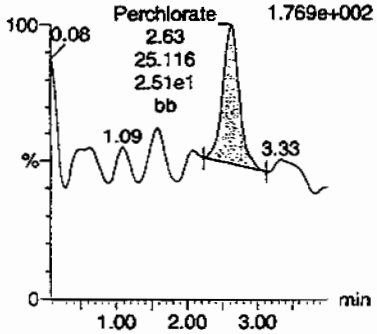

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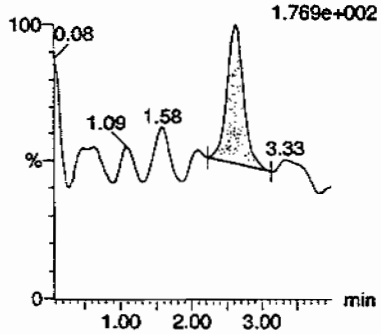

Perchlorate-O(18)

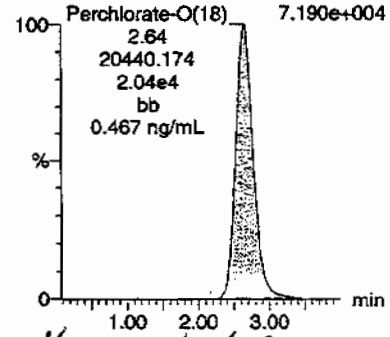

ofhme 07/10/09

)	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
201874299	Perchlorate	99 > 83	2.66	81.862	81.862	bb			0.0017			13.523	3.26
201874299	Perchlorate-101	101 > 85	2.63	25.116	25.116	bb			0.0016			21.942	
201874299	Perchlorate-O(18)	107 > 89	2.64	20440.174	20440.174	bb			0.4670	93.39	-6.61	5747.7...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WASTE WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
LCS

Date Received: 06–JUL–09

GEL Job No (SDG): 09–2516

GEL Sample ID: 1201874300

Date Filtered: 06–JUL–09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.185	ug/L	J	1	08–JUL–09 14:08	per0708013a
	Perchlorate Isotope Ratio			2.96			1	08–JUL–09 14:08	per0708013a
14797–73–0	Perchlorate–101	.05	.2	0.193	ug/L	J	1	08–JUL–09 14:08	per0708013a
	Perchlorate–O(18)			0.466	ug/L		1	08–JUL–09 14:08	per0708013a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solic}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708013a
Date: 08-Jul-2009
Time: 14:08:46
ID: 1201874300
Vial: 1:3,B

|LANL|882496|LCQ|LCS|1|

CWW 07-09-09

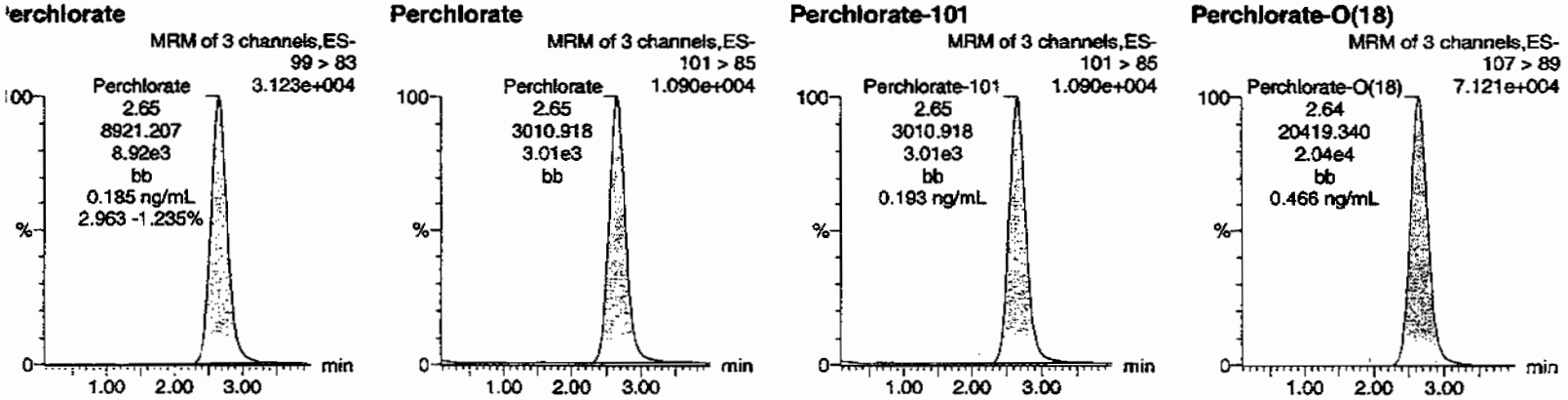

D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
201874300	Perchlorate	99 > 83	2.65	8921.207	8921.207	bb			0.1846	92.29	-7.71	2813.9...	2.96
201874300	Perchlorate-101	101 > 85	2.65	3010.918	3010.918	bb			0.1934	96.69	-3.31	536.716	
201874300	Perchlorate-O(18)	107 > 89	2.64	20419.340	20419.340	bb			0.4665	93.30	-6.70	2153.2...	

$\frac{8921.207}{48333.4} = 0.1846$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10024MS

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516

GEL Sample ID: 1201874303

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.200	ug/L		1	08-JUL-09 14:32	per0708016a
	Perchlorate Isotope Ratio			3.15			1	08-JUL-09 14:32	per0708016a
14797-73-0	Perchlorate-101	.05	.2	0.198	ug/L	J	1	08-JUL-09 14:32	per0708016a
	Perchlorate-O(18)			0.482	ug/L		1	08-JUL-09 14:32	per0708016a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solid}}$$

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luantify Sample Report MassLynx 4.0 SP4
he GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

ast Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
rinted: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

lame: per0708016a
ate: 08-Jul-2009
ime: 14:32:00
): 1201874303
ial: 1:3,E

|LANL|882496|LZQ|MS|1|

CWW 07-09-09

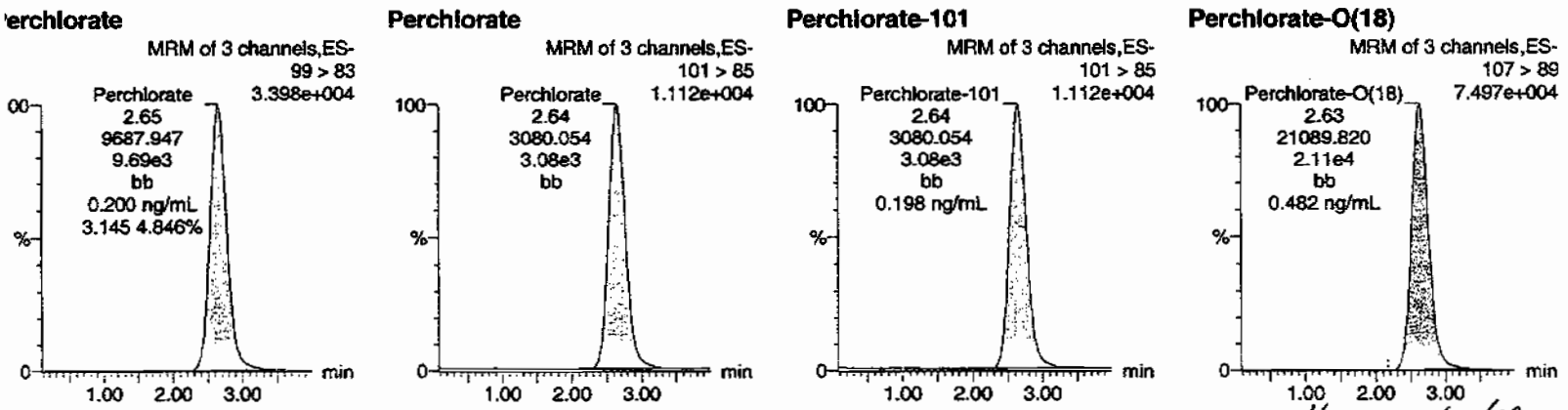

Hmm 07/10/09

D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
201874303	Perchlorate	99 > 83	2.65	9687.947	9687.947	bb			0.2004	100.22	0.22	5837.9...	3.15
201874303	Perchlorate-101	101 > 85	2.64	3080.054	3080.054	bb			0.1978	98.91	-1.09	564.807	
201874303	Perchlorate-O(18)	107 > 89	2.63	21089.820	21089.820	bb			0.4818	96.36	-3.64	2493.2...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10024MSD

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516

GEL Sample ID: 1201874305

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.184	ug/L	J	1	08-JUL-09 14:39	per0708017a
	Perchlorate Isotope Ratio			3.02			1	08-JUL-09 14:39	per0708017a
14797-73-0	Perchlorate-101	.05	.2	0.190	ug/L	J	1	08-JUL-09 14:39	per0708017a
	Perchlorate-O(18)			0.470	ug/L		1	08-JUL-09 14:39	per0708017a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solid}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708017a
Date: 08-Jul-2009
Time: 14:39:43
ID: 1201874305
Vial: 1:3,F

|LANL| 882496|LZQ|MSD|1|

Perchlorate

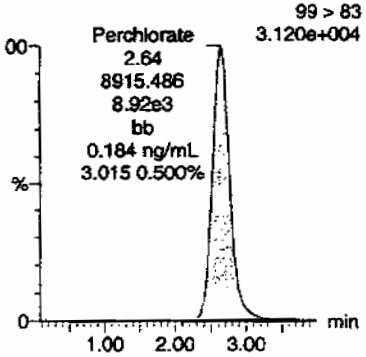

Perchlorate

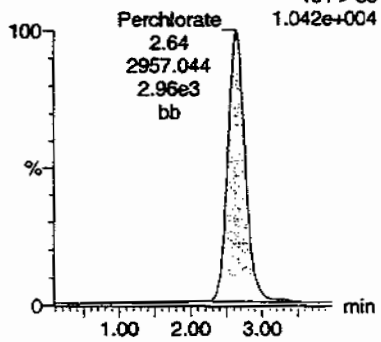

Perchlorate-101

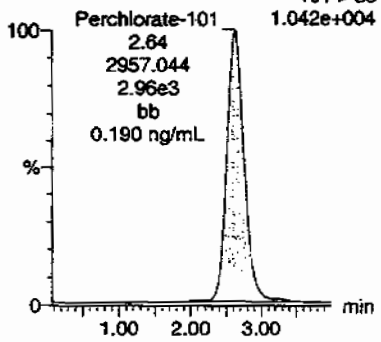

Perchlorate-O(18)

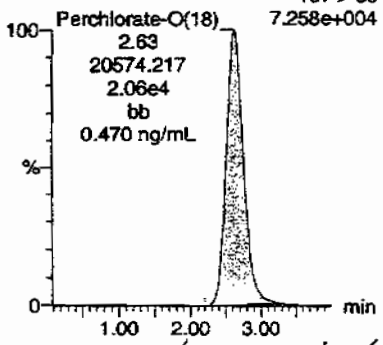

Hmk 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
201874305	Perchlorate	99 > 83	2.64	8915.486	8915.486	bb			0.1845	92.23	-7.77	1312.3...	3.01
201874305	Perchlorate-101	101 > 85	2.64	2957.044	2957.044	bb			0.1899	94.96	-5.04	1041.4...	
201874305	Perchlorate-O(18)	107 > 89	2.63	20574.217	20574.217	bb			0.4700	94.00	-6.00	4647.0...	

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 882495 Verified by:
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1201874299 MB	06-JUL-2009 10:36:36	10	10	1
1201874300 LCS	06-JUL-2009 10:36:36	10	10	1
232662001	06-JUL-2009 10:36:36	10	10	1
1201874303 MS (232662001)	06-JUL-2009 10:36:36	10	10	1
1201874305 MSD (232662001)	06-JUL-2009 10:36:36	10	10	1
232674001	06-JUL-2009 10:36:36	10	10	1
232675001	06-JUL-2009 10:36:36	10	10	1
1201874304 MS (232675001)	06-JUL-2009 10:36:36	10	10	1
1201874306 MSD (232675001)	06-JUL-2009 10:36:36	10	10	1
232742001	06-JUL-2009 10:36:36	10	10	1
232750001	06-JUL-2009 10:36:36	10	10	1
232755001	06-JUL-2009 10:36:36	10	10	1
232757001	06-JUL-2009 10:36:36	10	10	1
232759001	06-JUL-2009 10:36:36	10	10	1
232761001	06-JUL-2009 10:36:36	10	10	1
1201874301 MS (232761001)	06-JUL-2009 10:36:36	10	10	1
1201874302 MSD (232761001)	06-JUL-2009 10:36:36	10	10	1
1201874307 ICS	06-JUL-2009 10:36:36	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201874307	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
LCS	1201874300	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MS	1201874301	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MS	1201874303	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MS	1201874304	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MSD	1201874302	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MSD	1201874305	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MSD	1201874306	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
RGNT	All	500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1133543	10	mL
RGNT	All	O2SI HPLC Grade Water	1141273	10	mL

Comments:
Desalting cartridges used: 090408-1-Ba & 090608-1-H

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 07/08/09
Extr. Injection Volume: 20uL
Sequence Number: per070809a
Initial Calibration Date: 07/08/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: Hnm
Date: 07/10/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0708001a	IPB001	CWW	7/8/2009 12:35			1		USE	B
per0708002a	IPB001	CWW	7/8/2009 12:43			1		USE	B
per0708003a	WCLICAL-01	CWW	7/8/2009 12:51			1		USE	I
per0708004a	WCLICAL-02	CWW	7/8/2009 12:59			1		USE	I
per0708005a	WCLICAL-03	CWW	7/8/2009 13:06			1		USE	I
per0708006a	WCLICAL-04	CWW	7/8/2009 13:14			1		USE	I
per0708007a	WCLICAL-05	CWW	7/8/2009 13:22			1		USE	I
per0708008a	IPB002	CWW	7/8/2009 13:30			1		USE	B
per0708009a	WCLICV	CWW	7/8/2009 13:37			1		USE	C
per0708010a	IPB003	CWW	7/8/2009 13:45			1		USE	B
per0708011a	WCLCRI	CWW	7/8/2009 13:53			1		USE	C
per0708012a	1201874299	CWW	7/8/2009 14:01	882496	VARIOUS	1	LANL	USE	S
per0708013a	1201874300	CWW	7/8/2009 14:08	882496	VARIOUS	1	LANL	USE	S
per0708014a	1201874307	CWW	7/8/2009 14:16	882496	VARIOUS	1	LANL	USE	S
per0708015a	232662001	CWW	7/8/2009 14:24	882496	09-2516	1	LANL	USE	S
per0708016a	1201874303	CWW	7/8/2009 14:32	882496	09-2516	1	LANL	USE	S
per0708017a	1201874305	CWW	7/8/2009 14:39	882496	09-2516	1	LANL	USE	S
per0708018a	232674001	CWW	7/8/2009 14:47	882496	09-2519	1	LANL	USE	S
per0708019a	232675001	CWW	7/8/2009 14:55	882496	09-2522	1	LANL	USE	S
per0708020a	1201874304	CWW	7/8/2009 15:03	882496	09-2522	1	LANL	USE	S
per0708021a	1201874306	CWW	7/8/2009 15:10	882496	09-2522	1	LANL	USE	S
per0708022a	WCLCCV	CWW	7/8/2009 15:18			1		USE	C
per0708023a	IPB004	CWW	7/8/2009 15:26			1		USE	B
per0708024a	WCLCRI	CWW	7/8/2009 15:34			1		USE	C
per0708025a	232742001	CWW	7/8/2009 15:41	882496	09-2525	1	LANL	USE	S
per0708026a	232750001	CWW	7/8/2009 15:49	882496	09-2528	1	LANL	USE	S
per0708027a	232755001	CWW	7/8/2009 15:57	882496	09-2536-1	1	LANL	USE	S
per0708028a	232757001	CWW	7/8/2009 16:05	882496	09-2539	1	LANL	USE	S
per0708029a	232759001	CWW	7/8/2009 16:13	882496	09-2542	1	LANL	USE	S

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per0708030a	232761001	CWW	7/8/2009 16:20	882496	09-2543	1	LANL	USE	S
per0708031a	1201874301	CWW	7/8/2009 16:28	882496	09-2543	1	LANL	USE	S
per0708032a	1201874302	CWW	7/8/2009 16:36	882496	09-2543	1	LANL	USE	S
per0708033a	WCLCCV	CWW	7/8/2009 16:44			1		USE	C
per0708034a	IPB005	CWW	7/8/2009 16:51			1		USE	B
per0708035a	WCLCRI	CWW	7/8/2009 16:59			1		USE	C
per0708036a	1201876313	CWW	7/8/2009 17:07	883299	09-2549	1	LANL	USE	S
per0708037a	1201876314	CWW	7/8/2009 17:15	883299	09-2549	1	LANL	USE	S
per0708038a	1201876317	CWW	7/8/2009 17:22	883299	09-2549	1	LANL	USE	S
per0708039a	232855001	CWW	7/8/2009 17:30	883299	09-2549	1	LANL	USE	S
per0708040a	1201876315	CWW	7/8/2009 17:38	883299	09-2549	1	LANL	USE	S
per0708041a	1201876316	CWW	7/8/2009 17:46	883299	09-2549	1	LANL	USE	S
per0708042a	WCLCCV	CWW	7/8/2009 17:53			1		USE	C
per0708043a	IPB006	CWW	7/8/2009 18:01			1		USE	B
per0708044a	WCLCRI	CWW	7/8/2009 18:09			1		USE	C
per0708045a	1201872342	CWW	7/8/2009 18:17	881646	VARIOUS	1	LANL	USE	S
per0708046a	1201872343	CWW	7/8/2009 18:25	881646	VARIOUS	1	LANL	USE	S
per0708047a	1201872346	CWW	7/8/2009 18:32	881646	VARIOUS	1	LANL	USE	S
per0708048a	232509001	CWW	7/8/2009 18:40	881646	09-2500	1	LANL	DUSE-DL	S
per0708049a	232509002	CWW	7/8/2009 18:48	881646	09-2500	1	LANL	DUSE-RA	S
per0708050a	232509003	CWW	7/8/2009 18:55	881646	09-2500	1	LANL	USE	S
per0708051a	232509004	CWW	7/8/2009 19:03	881646	09-2500	1	LANL	DUSE-DL	S
per0708052a	232509005	CWW	7/8/2009 19:11	881646	09-2500	1	LANL	DUSE-DL	S
per0708053a	232509006	CWW	7/8/2009 19:19	881646	09-2500	1	LANL	DUSE-RA	S
per0708054a	WCLCCV	CWW	7/8/2009 19:26			1		USE	C
per0708055a	IPB007	CWW	7/8/2009 19:34			1		USE	B
per0708056a	WCLCRI	CWW	7/8/2009 19:42			1		USE	C
per0708057a	232582001	CWW	7/8/2009 19:50	881646	09-2508	1	LANL	USE	S
per0708058a	232582002	CWW	7/8/2009 19:58	881646	09-2508	1	LANL	USE	S
per0708059a	232585001	CWW	7/8/2009 20:05	881646	09-2506	1	LANL	USE	S
per0708060a	232585002	CWW	7/8/2009 20:13	881646	09-2506	1	LANL	USE	S
per0708061a	232585003	CWW	7/8/2009 20:21	881646	09-2506	1	LANL	USE	S
per0708062a	232591001	CWW	7/8/2009 20:29	881646	09-2510	1	LANL	USE	S
per0708063a	1201872344	CWW	7/8/2009 20:36	881646	09-2510	1	LANL	USE	S
per0708064a	1201872345	CWW	7/8/2009 20:44	881646	09-2510	1	LANL	USE	S
per0708065a	WCLCCV	CWW	7/8/2009 20:52			1		USE	C
per0708066a	IPB008	CWW	7/8/2009 21:00			1		USE	B

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per0708067a	WCLCRI	CWW	7/8/2009 21:08	1	USE	C

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2516-1

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	882499
Prep Batch Number:	882498

Sample Analysis

Sample ID	Client ID
232663001	CAMO-09-9942
232663002	CAMO-09-9941
232663003	CAMO-09-9943
232663004	CAMO-09-10030
232663005	CAMO-09-9989
1201874312	Interference Check Sample (ICS)
1201874308	Method Blank (MB)
1201874309	Laboratory Control Sample (LCS)
1201874310	232760001(CAMO-09-9962) Matrix Spike (MS)
1201874311	232760001(CAMO-09-9962) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

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Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232760001 (CAMO-09-9962) from SDG 09-2542-1 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

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Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert N. Maus **Date:** 07/13/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9942

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663001

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 88

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.567	2.27	0.567	ug/kg	U	1	09-JUL-09 18:23	per0709036a
	Perchlorate-O(18)			5.60	ug/kg		1	09-JUL-09 18:23	per0709036a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9941

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663002

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.561	2.24	0.905	ug/kg	J	1	09-JUL-09 18:35	per0709037a
	Perchlorate-O(18)			5.55	ug/kg		1	09-JUL-09 18:35	per0709037a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9943

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663003

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 86

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.581	2.32	0.581	ug/kg	U	1	09-JUL-09 18:46	per0709038a
	Perchlorate-O(18)			4.88	ug/kg		1	09-JUL-09 18:46	per0709038a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10030

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663004

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.556	2.22	0.913	ug/kg	J	1	09-JUL-09 18:58	per0709039a
	Perchlorate-O(18)			5.03	ug/kg		1	09-JUL-09 18:58	per0709039a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9989

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663005

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 83

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.6	2.4	0.600	ug/kg	U	1	09-JUL-09 19:10	per0709040a
	Perchlorate-O(18)			5.72	ug/kg		1	09-JUL-09 19:10	per0709040a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09-2516-1

Extract Batch Code: 882498

Date Filtered: 07-JUL-09

Matrix: SOIL

Sample ID: 1201874309

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.01	ug/kg	101		70 – 130
Perchlorate-O(18)		3.86	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2516–1

Extract Batch Code: 882498

Date Filtered: 07–JUL–09

Matrix: SOIL

Sample ID: 1201874312

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.2	ug/kg	110		70 – 130
Perchlorate–O(18)		3.8	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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ıantify Sample Report **MassLynx 4.0 SP4**
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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ne: 18:11:41
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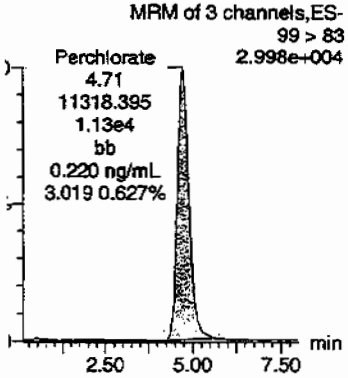

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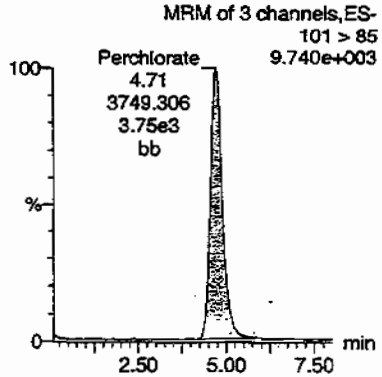

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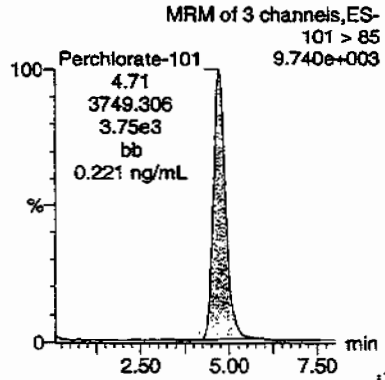

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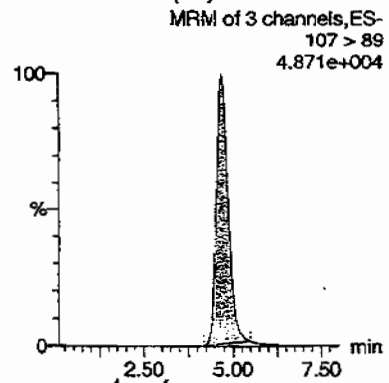

HMC 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1874312	Perchlorate	99 > 83	4.71	11318.395	11318.395	bb			0.2204	110.19	10.19	1076.4...	3.02
1874312	Perchlorate-101	101 > 85	4.71	3749.306	3749.306	bb			0.2210	110.49	10.49	1207.6...	
1874312	Perchlorate-O(18)	107 > 89	4.69	18192.236	18192.236	bb			0.3797	75.94	-24.06	3335.3...	

85

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09-2516-1

Extract Batch Code: 882498

Date Extracted: 07-JUL-09

GEL MS/PS ID: 1201874310

Client ID: CAMO-09-9962

GEL MSD/PSD ID: 1201874311

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.36	0.174	ug/kg	2.53	99.6	2.49	97.8	1.71	30	75 – 125
Perchlorate-O(18)	0	5.79	ug/kg	5.75		5.88		2.15		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2516–1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	09–JUL–09	per0709001a	IPB001
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709001a	IPB001
Perchlorate	0.00	0	NA	09–JUL–09	per0709002a	IPB001
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709002a	IPB001

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he GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ast Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
rinted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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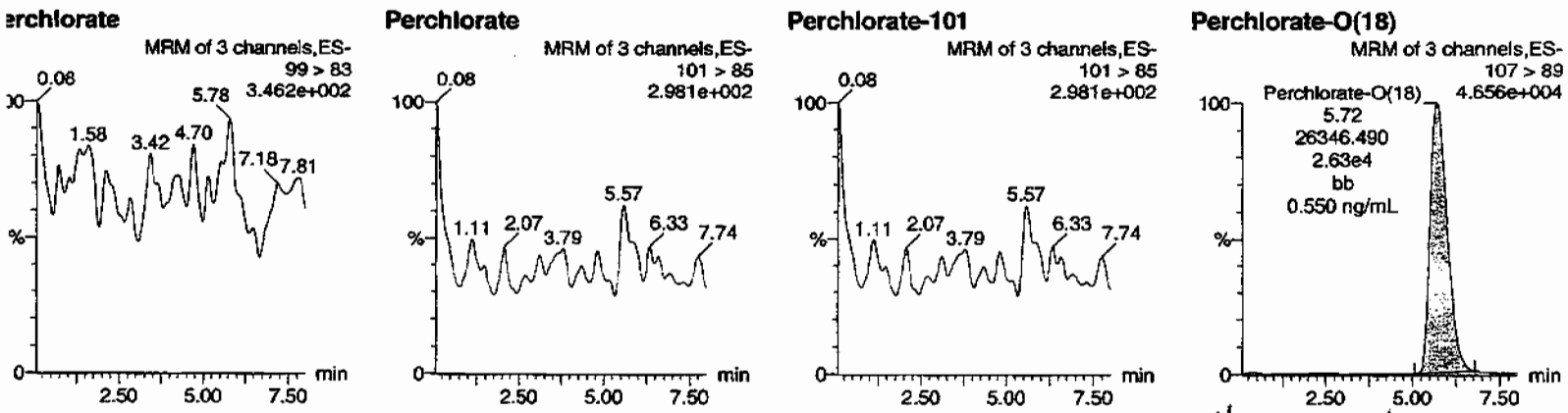

thm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3001	Perchlorate	99 > 83											0.00
3001	Perchlorate-101	101 > 85											
3001	Perchlorate-O(18)	107 > 89	5.72	26346.490	26346.490	bb			0.5499	109.97	9.97	2381.6...	

88

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ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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rinted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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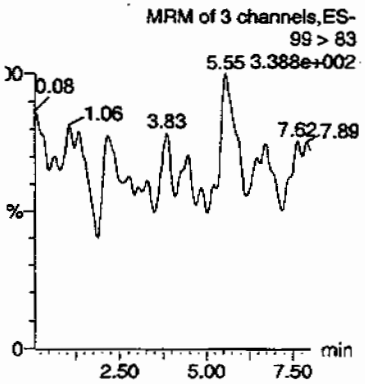

Perchlorate

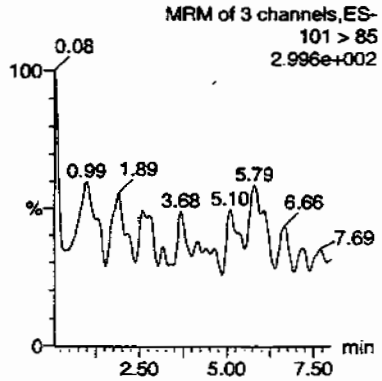

Perchlorate-101

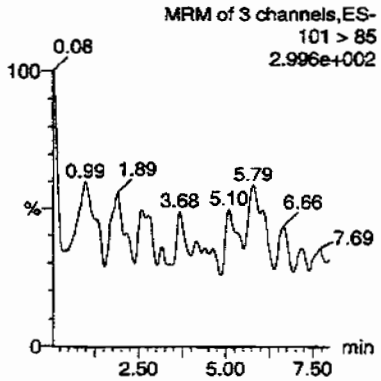

Perchlorate-O(18)

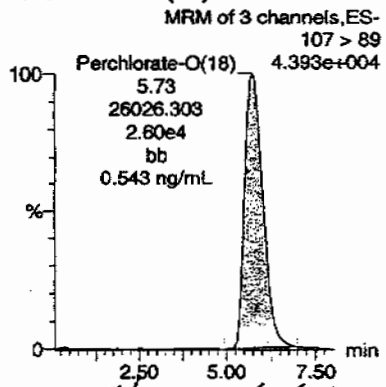

AMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3001	Perchlorate	99 > 83											0.00
3001	Perchlorate-101	101 > 85											
3001	Perchlorate-O(18)	107 > 89	5.73	26026.303	26026.303	bb			0.5432	108.64	8.64	1104.9...	

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2516–1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	09–JUL–09	per0709008a	IPB002
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709008a	IPB002
Perchlorate	0.00	0	NA	09–JUL–09	per0709010a	IPB003
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709010a	IPB003
Perchlorate	0.00	0	NA	09–JUL–09	per0709018a	IPB004
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709018a	IPB004
Perchlorate	0.00	0	NA	09–JUL–09	per0709031a	IPB005
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709031a	IPB005
Perchlorate	0.00	0	NA	09–JUL–09	per0709044a	IPB006
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709044a	IPB006

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uantify Sample Report MassLynx 4.0 SP4
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ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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09-10-09

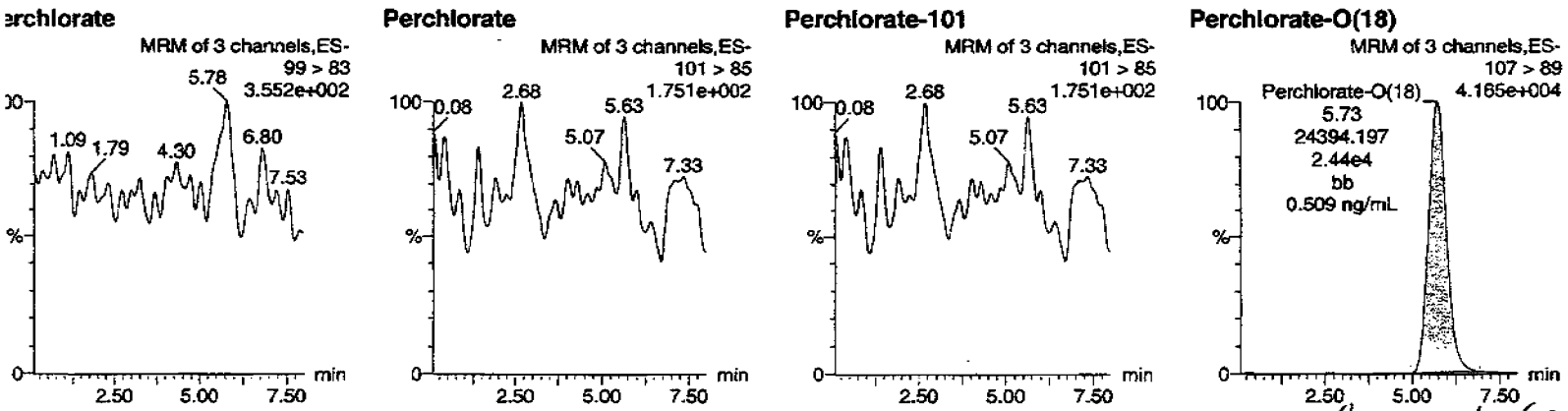

Hmc 07/10/09

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3002	Perchlorate	99 > 83											0.00
3002	Perchlorate-101	101 > 85											
3002	Perchlorate-O(18)	107 > 89	5.73	24394.197	24394.197	bb			0.5091	101.83	1.83	268.656	

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ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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erchlorate

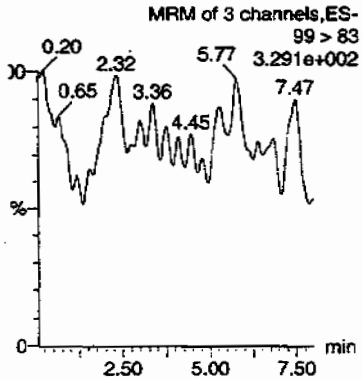

Perchlorate

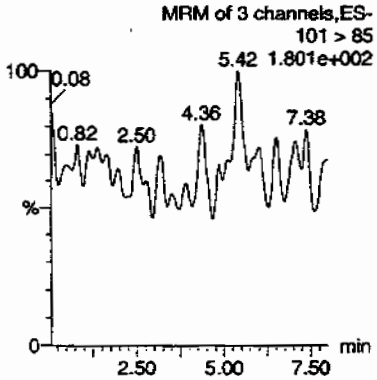

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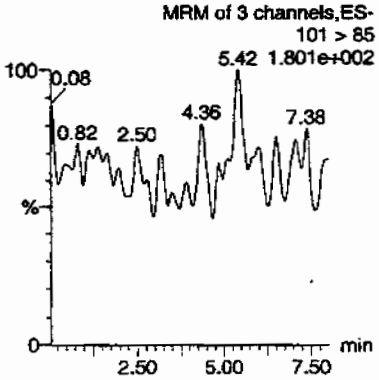

Perchlorate-O(18)

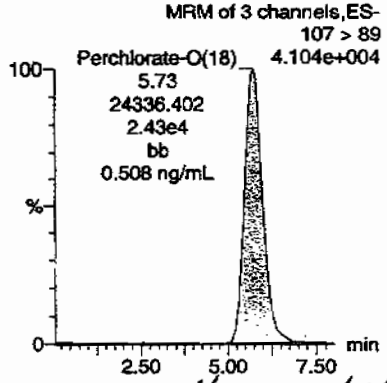

[illegible] 07-10-09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3003	Perchlorate	99 > 83											0.00
3003	Perchlorate-101	101 > 85											
3003	Perchlorate-O(18)	107 > 89	5.73	24336.402	24336.402	bb			0.5079	101.58	1.58	1846.7...	

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ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ıst Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
'inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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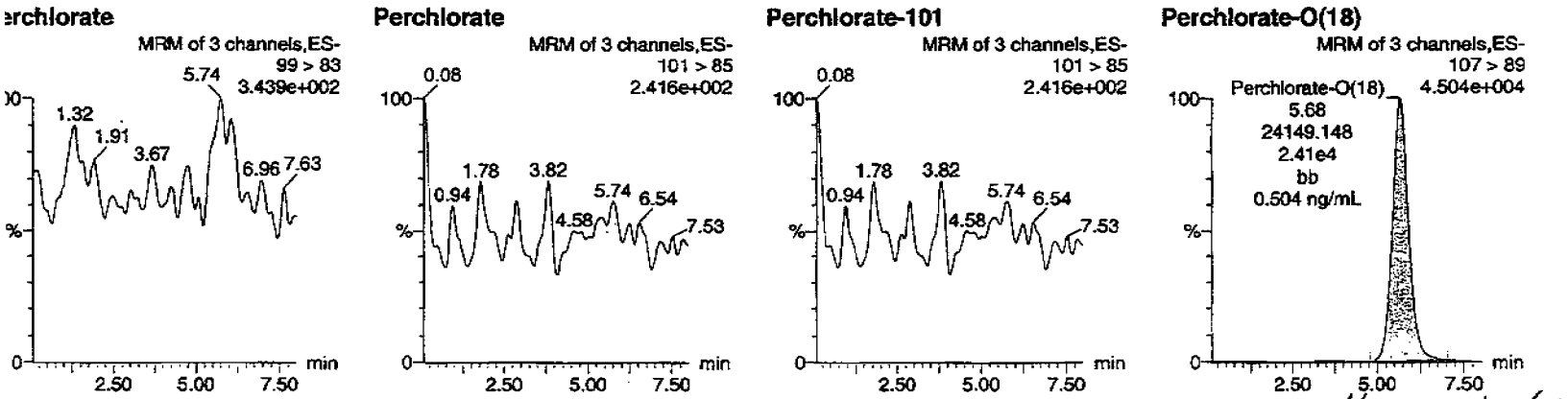

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	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3004	Perchlorate	99 > 83											0.00
3004	Perchlorate-101	101 > 85											
3004	Perchlorate-O(18)	107 > 89	5.68	24149.148	24149.148	bb			0.5040	100.80	0.80	2223.6...	

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luantify Sample Report MassLynx 4.0 SP4
he GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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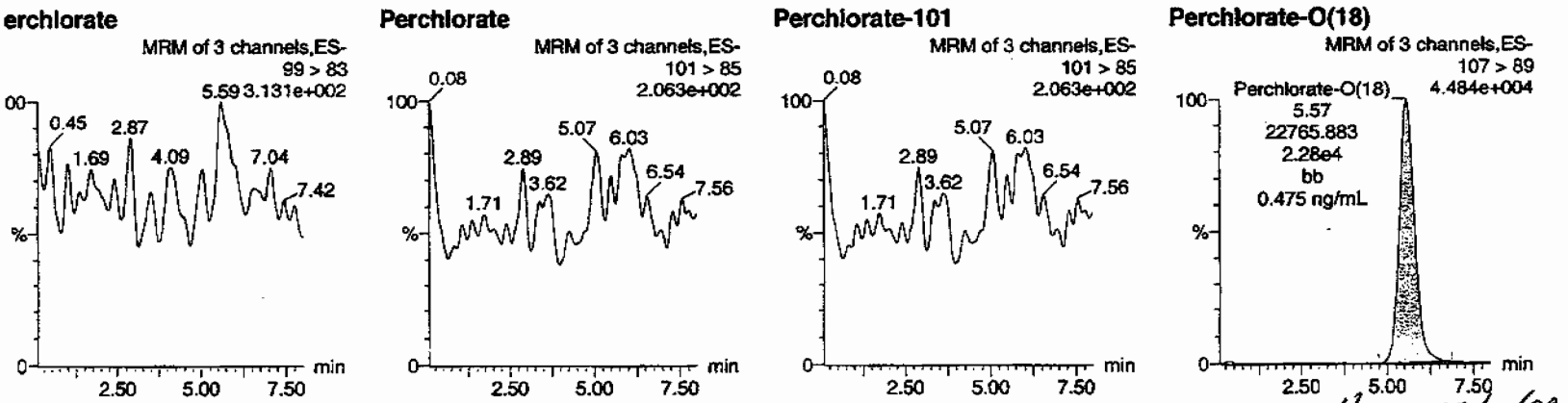

Amm 07/10/09

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'B005	Perchlorate	99 > 83											0.00
'B005	Perchlorate-101	101 > 85											
'B005	Perchlorate-O(18)	107 > 89	5.57	22765.883	22765.883	bb			0.4751	95.03	-4.97	2248.5...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709044a
Date: 09-Jul-2009
Time: 19:57:31
ID: IPB006
Vial: 1:1,A

CWW 07-10-09

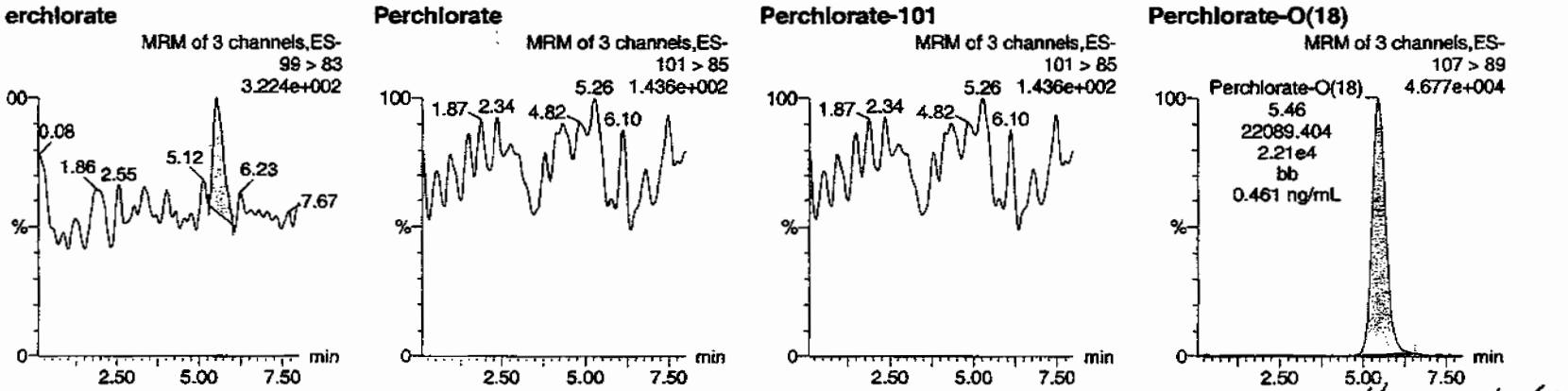

HMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
B006	Perchlorate	99 > 83	5.52	53.416	53.416	bb			0.0010			9.009	0.00
B006	Perchlorate-101	101 > 85											
B006	Perchlorate-O(18)	107 > 89	5.46	22089.404	22089.404	bb			0.4610	92.20	-7.80	1789.0...	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb 01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWW 01-07-08

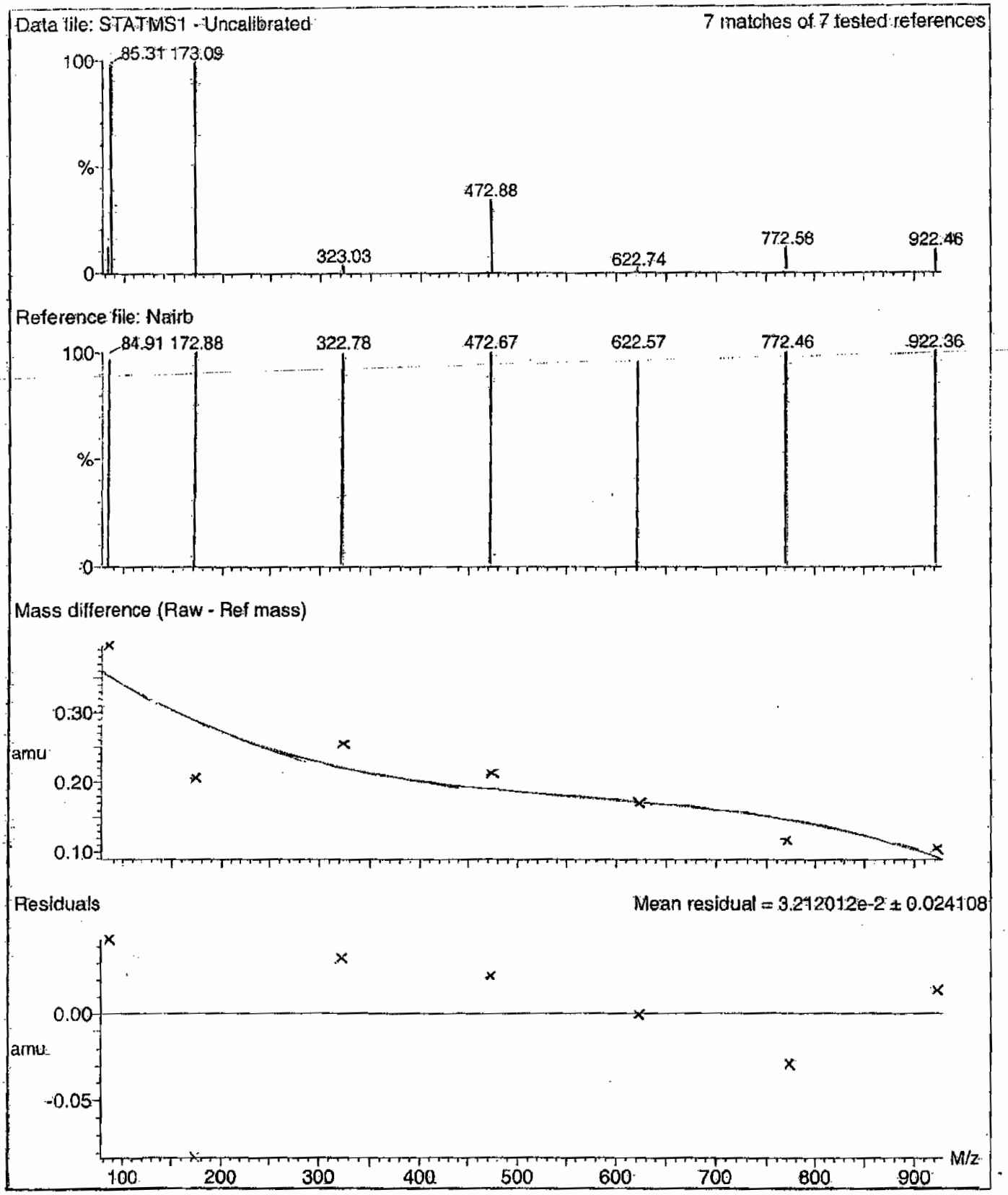

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

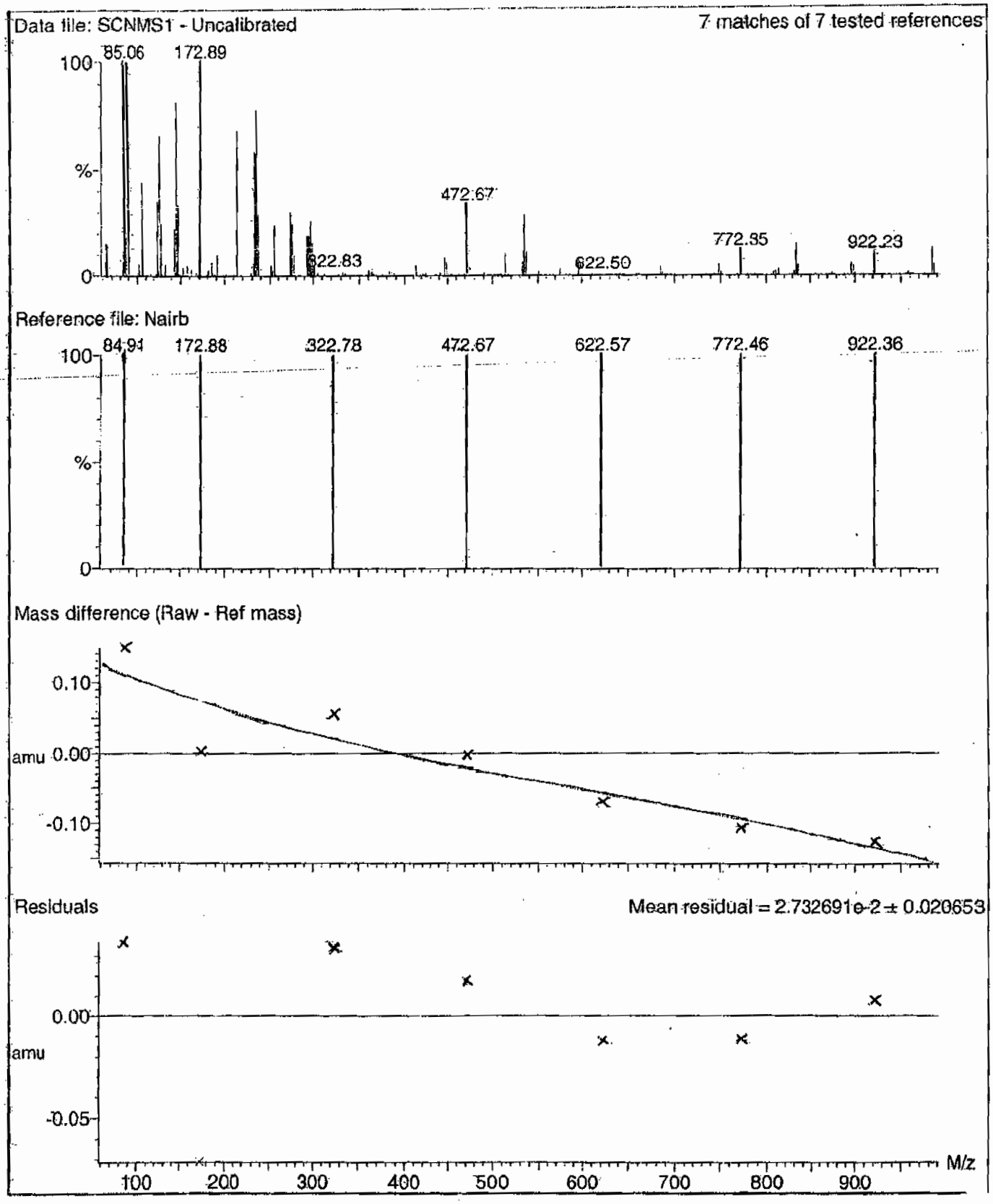

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

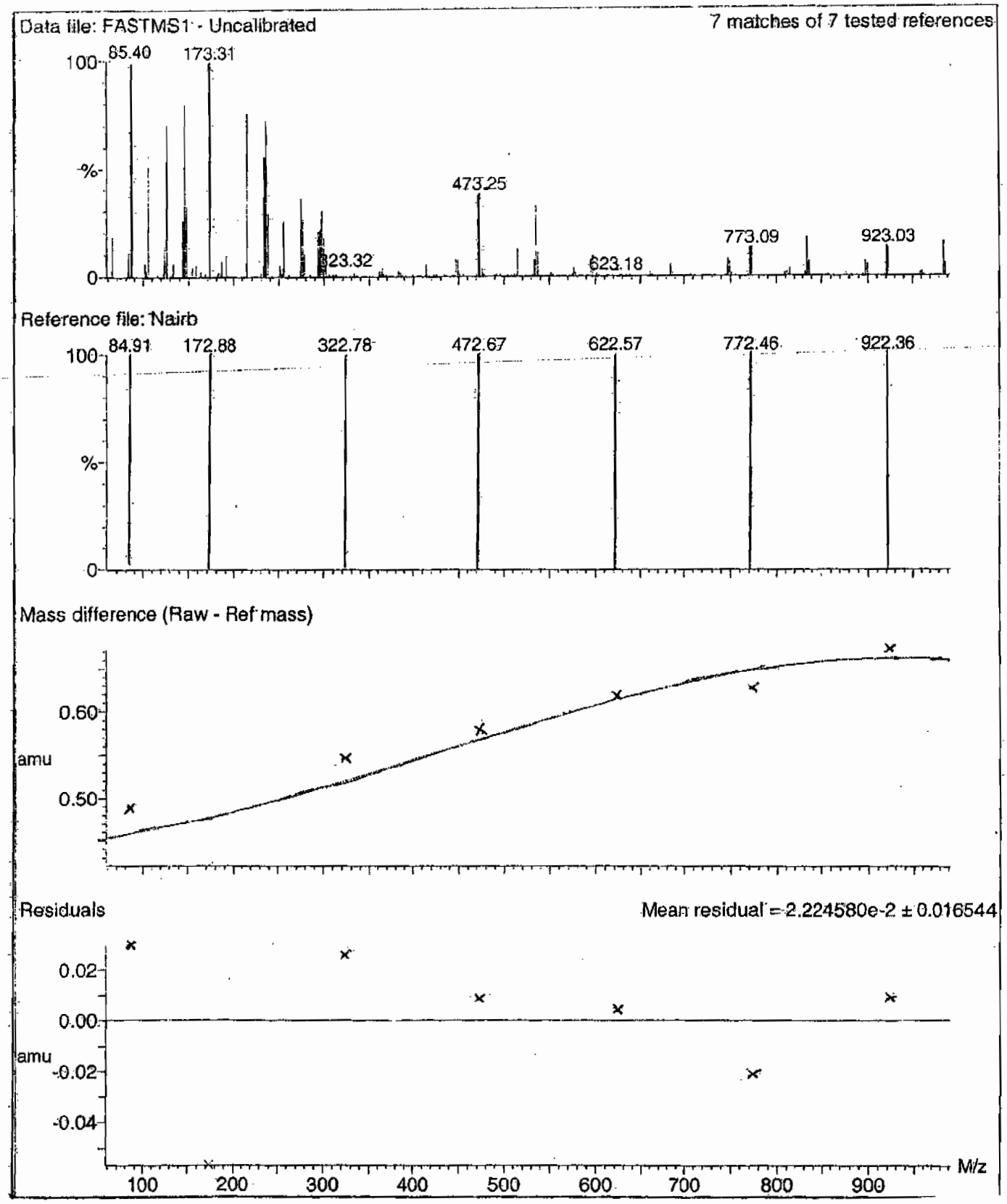

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

7 matches of 7 tested references

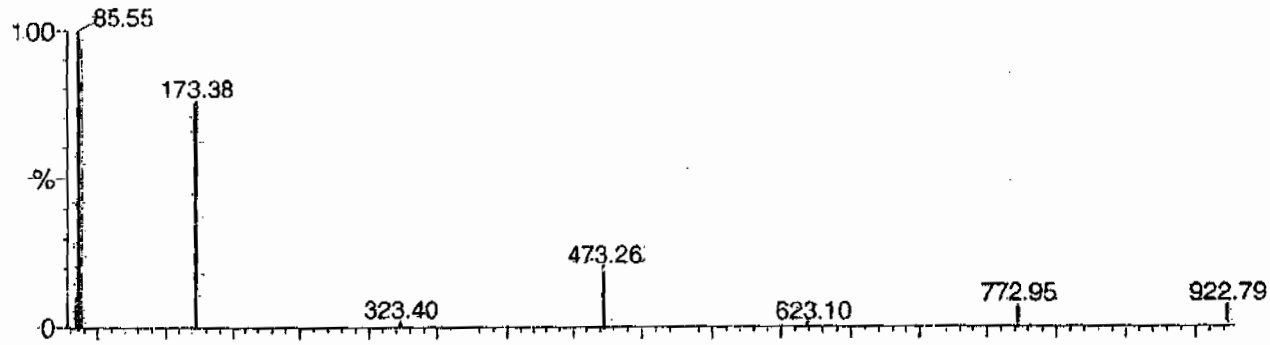

Reference file: Nairb

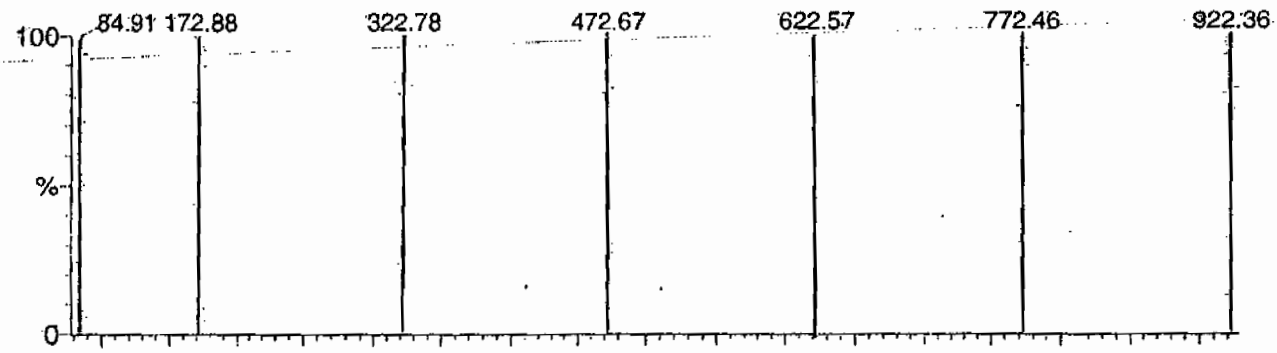

Mass difference (Raw - Ref mass)

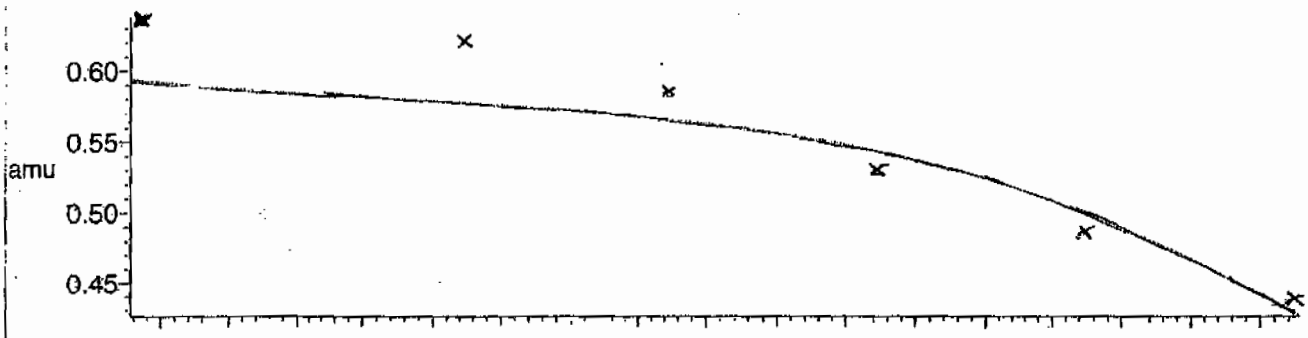

Residuals

Mean residual = 3.295980e-2 ± 0.025603

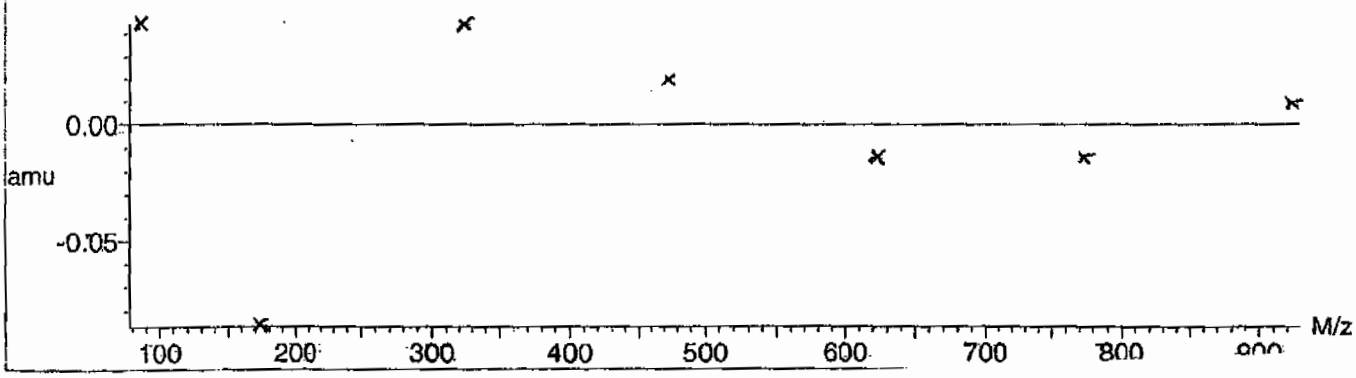

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Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

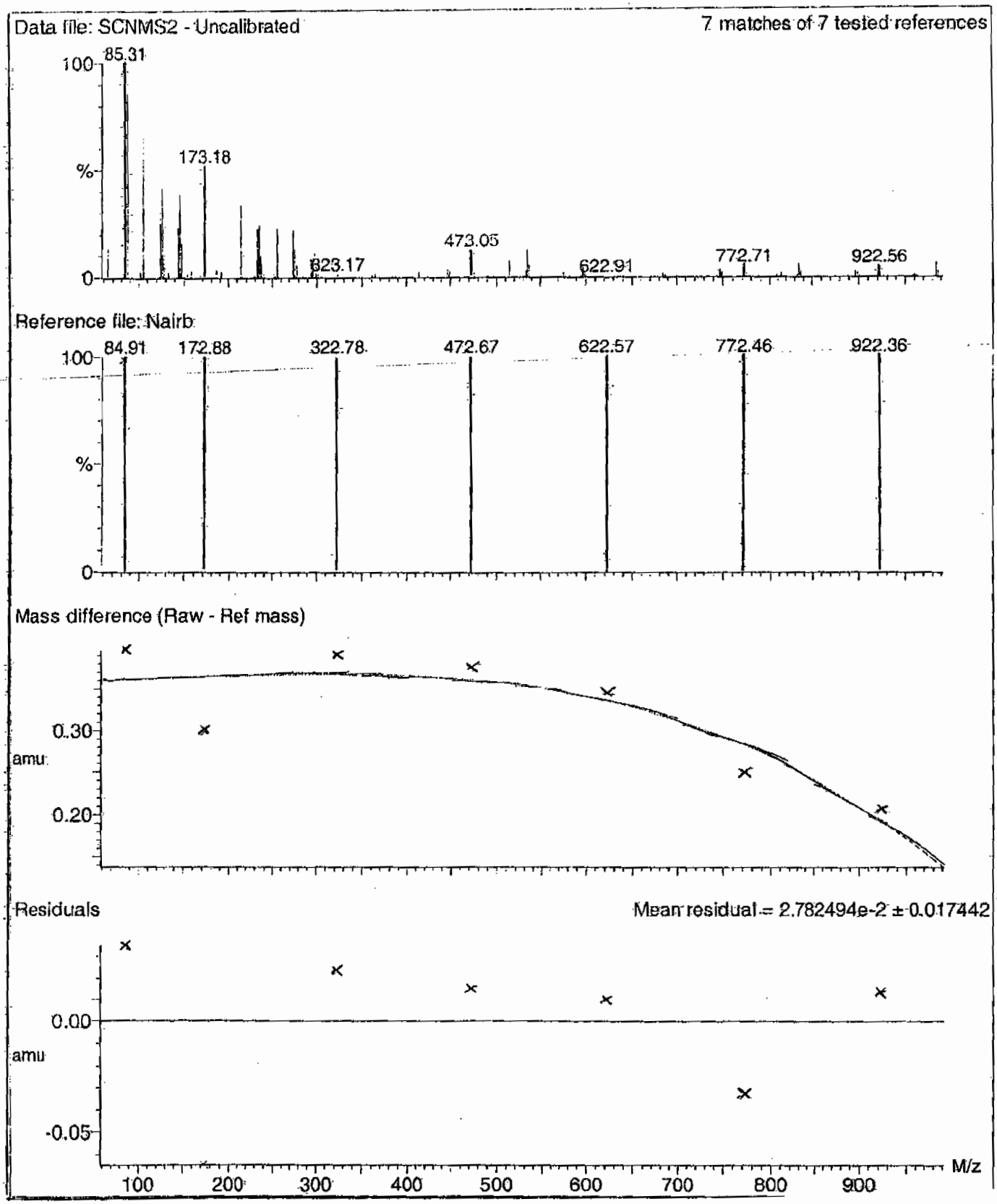

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

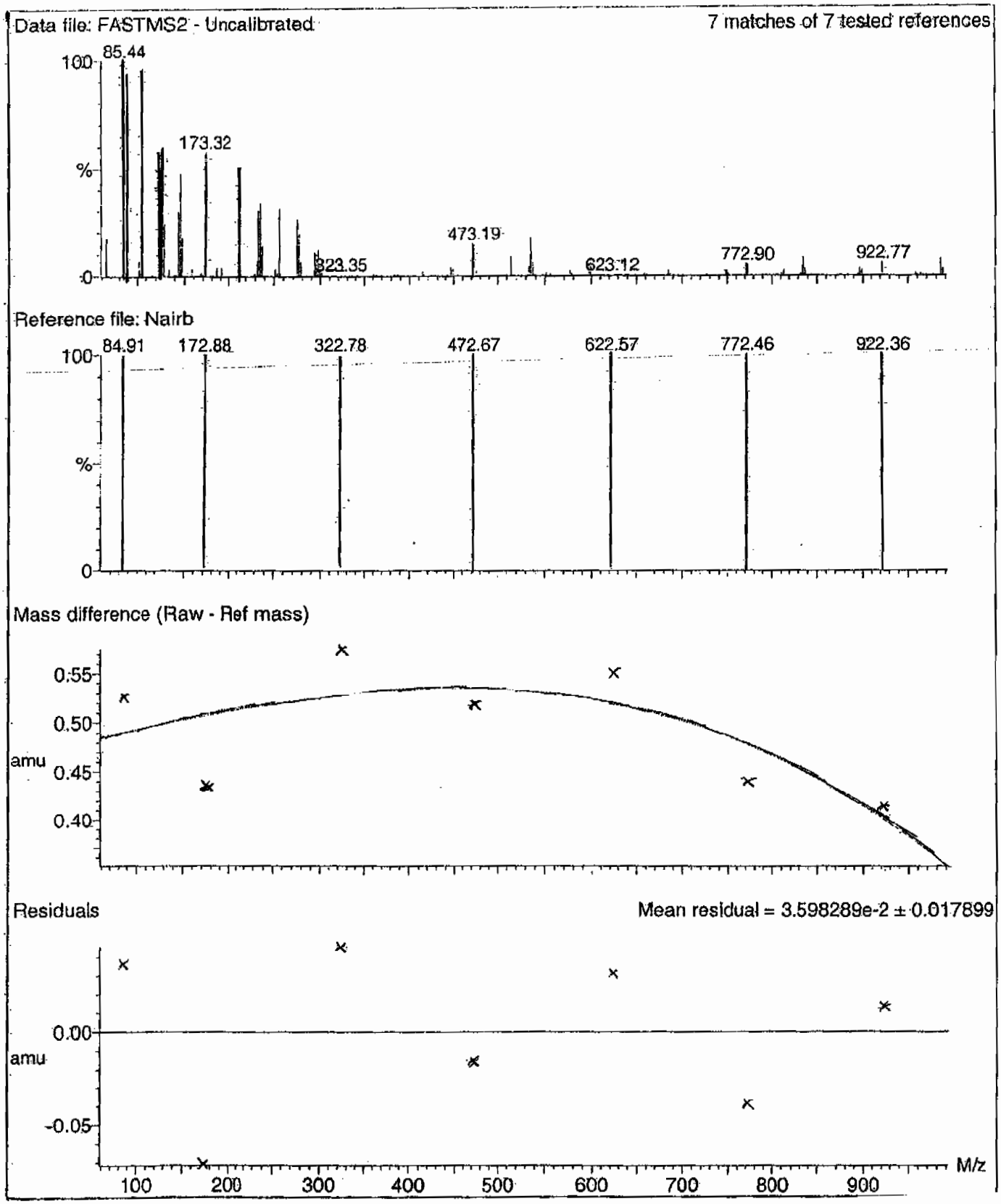

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Thursday, July 09, 2009 10:52:59 Eastern Daylight Time

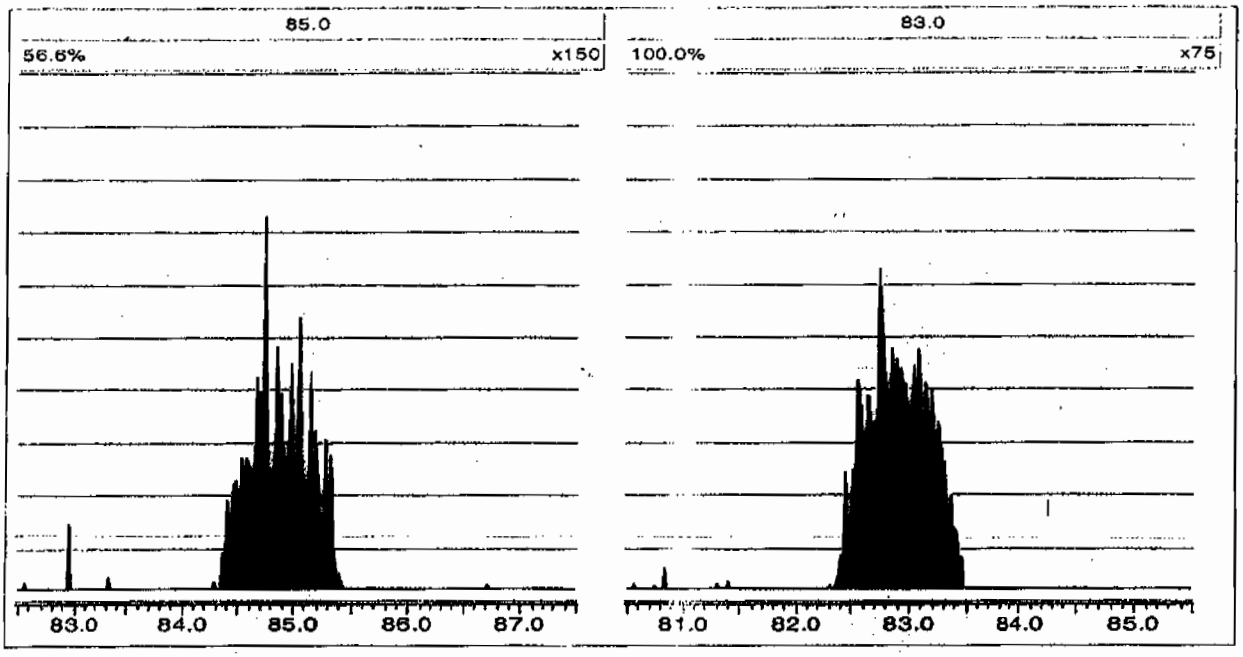

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2516–1

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0709006a**	**09–JUL–09**	**23518.3**				
Lower Area Limit			**11759.15**				
Upper Area Limit			**47036.6**				
1201874308	per0709033a	09–JUL–09 17:48	22060.5	5.56			
1201874309	per0709034a	09–JUL–09 17:59	18493.9	5.56	5.58243	1.004	
1201874312	per0709035a	09–JUL–09 18:11	18192.2	4.69	4.7127	1.005	
232663001	per0709036a	09–JUL–09 18:23	23662.6	5.57	5.58225	1.002	
232663002	per0709037a	09–JUL–09 18:35	23720.6	5.52	5.53253	1.002	
232663003	per0709038a	09–JUL–09 18:46	20112.4	5.56	5.5947	1.006	
232663004	per0709039a	09–JUL–09 18:58	21677.7	5.5	5.50767	1.001	
232663005	per0709040a	09–JUL–09 19:10	22826.3	5.62	5.65687	1.007	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9942

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663001

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 88

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.567	2.27	0.567	ug/kg	U	1	09-JUL-09 18:23	per0709036a
	Perchlorate-O(18)			5.60	ug/kg		1	09-JUL-09 18:23	per0709036a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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antify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

laset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709036a
te: 09-Jul-2009
ne: 18:23:24
232663001
I: 2:1,D

LANL | 882499 | 50120 | 11

07-10-09

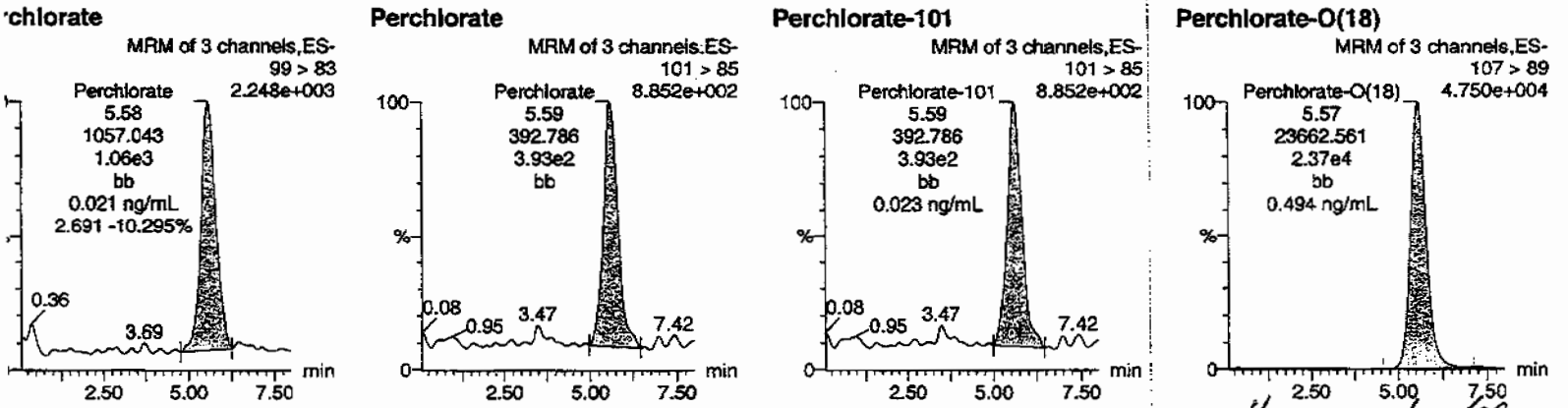

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
663001	Perchlorate	99 > 83	5.58	1057.043	1057.043	bb			0.0206			58.266	2.69
663001	Perchlorate-101	101 > 85	5.59	392.786	392.786	bb			0.0232			66.275	
663001	Perchlorate-O(18)	107 > 89	5.57	23662.561	23662.561	bb			0.4939	98.77	-1.23	1858.0...	

_ SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9941

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663002

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.561	2.24	0.905	ug/kg	J	1	09-JUL-09 18:35	per0709037a
	Perchlorate-O(18)			5.55	ug/kg		1	09-JUL-09 18:35	per0709037a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solid}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

aset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

t Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
ted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709037a
te: 09-Jul-2009
e: 18:35:07
232663002
l: 2:1,E

|LANL|882499|5020|1|

07-10-09

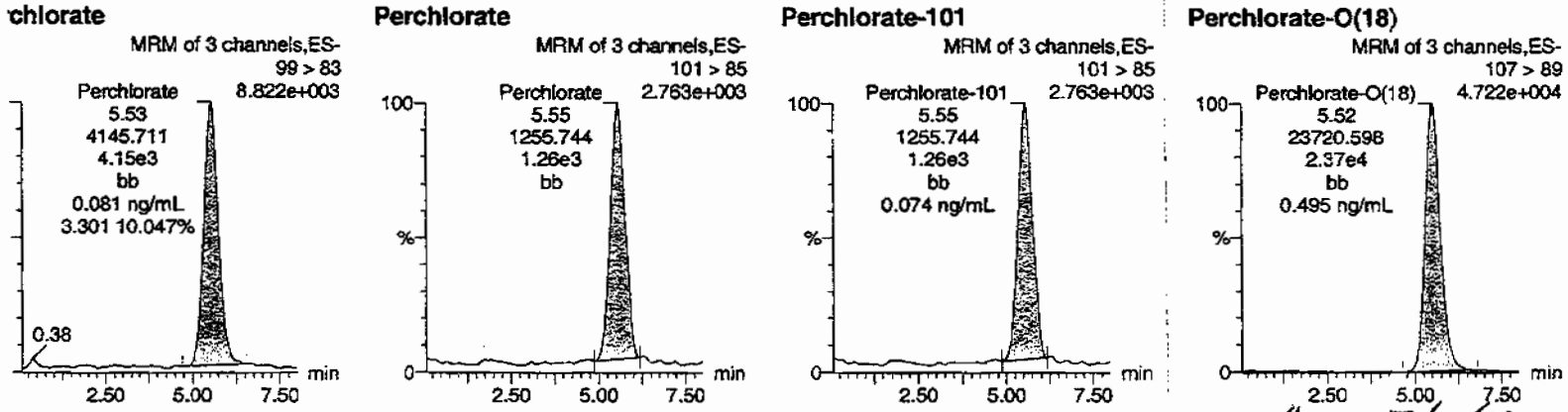

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
63002	Perchlorate	99 > 83	5.53	4145.711	4145.711	bb			0.0807			324.567	3.30
63002	Perchlorate-101	101 > 85	5.55	1255.744	1255.744	bb			0.0740			139.848	
63002	Perchlorate-O(18)	107 > 89	5.52	23720.598	23720.598	bb			0.4951	99.01	-0.99	1473.3...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9943

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663003

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 86

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.581	2.32	0.581	ug/kg	U	1	09-JUL-09 18:46	per0709038a
	Perchlorate-O(18)			4.88	ug/kg		1	09-JUL-09 18:46	per0709038a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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ıantify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709038a
te: 09-Jul-2009
ne: 18:46:51
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ıl: 2:1,F

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LWO 07-10-09

rchlorate

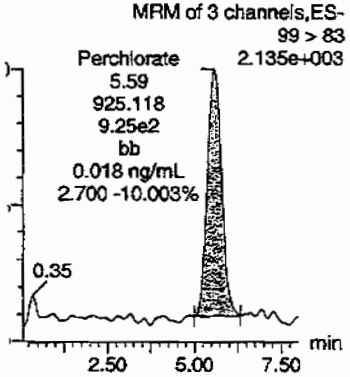

Perchlorate

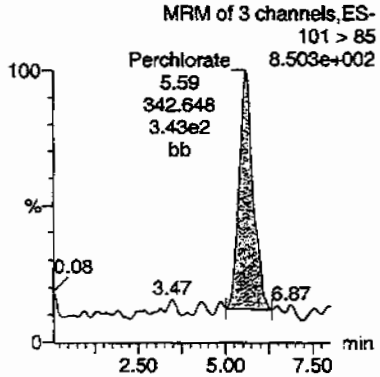

Perchlorate-101

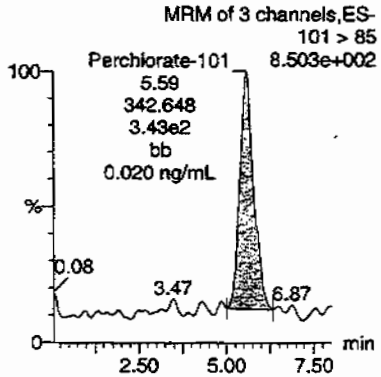

Perchlorate-O(18)

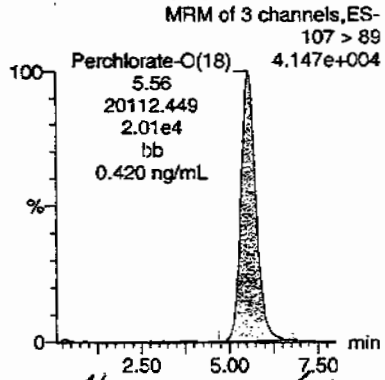

HMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
563003	Perchlorate	99 > 83	5.59	925.118	925.118	bb			0.0180			65.659	2.70
563003	Perchlorate-101	101 > 85	5.59	342.648	342.648	bb			0.0202			52.681	
563003	Perchlorate-O(18)	107 > 89	5.56	20112.449	20112.449	bb			0.4198	83.95	-16.05	1501.7...	

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. SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10030

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663004

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.556	2.22	0.913	ug/kg	J	1	09-JUL-09 18:58	per0709039a
	Perchlorate-O(18)			5.03	ug/kg		1	09-JUL-09 18:58	per0709039a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

ıantify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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rchlorate

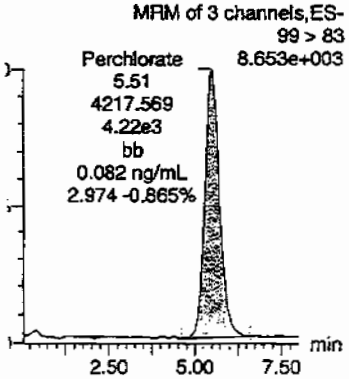

Perchlorate

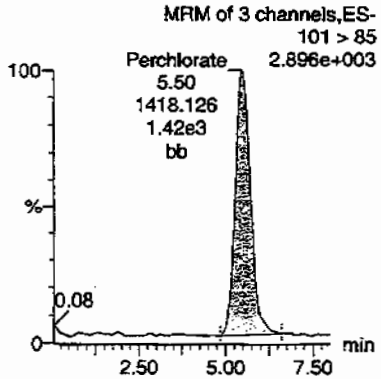

Perchlorate-101

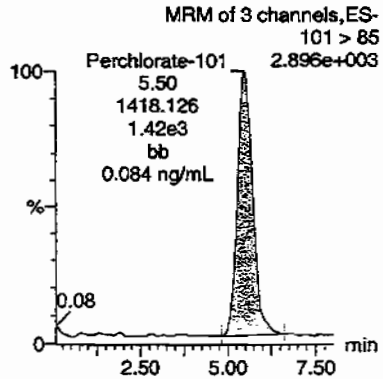

Perchlorate-O(18)

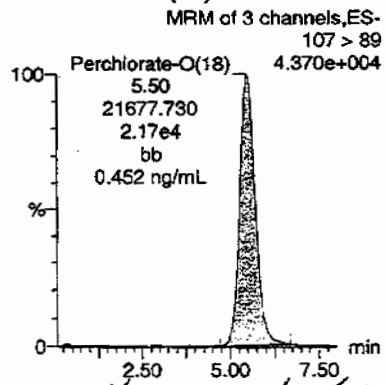

dmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N-fon	Ratio
663004	Perchlorate	99 > 83	5.51	4217.569	4217.569	bb			0.0821			332.334	2.97
663004	Perchlorate-101	101 > 85	5.50	1418.126	1418.126	bb			0.0836			54.464	
663004	Perchlorate-O(18)	107 > 89	5.50	21677.730	21677.730	bb			0.4524	90.49	-9.51	2202.0...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9989

Date Received: 01-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 232663005

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 83

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.6	2.4	0.600	ug/kg	U	1	09-JUL-09 19:10	per0709040a
	Perchlorate-O(18)			5.72	ug/kg		1	09-JUL-09 19:10	per0709040a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solic}}$$

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antify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709040a
te: 09-Jul-2009
ne: 19:10:18
232663005
l: 2:2,B

|LANL| 882499 |5020| 1|

CWO 07-10-09

rchlorate

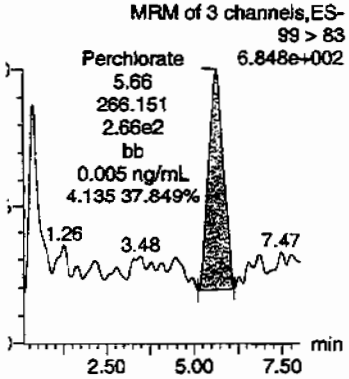

Perchlorate

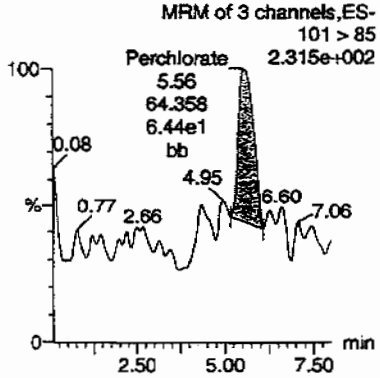

Perchlorate-101

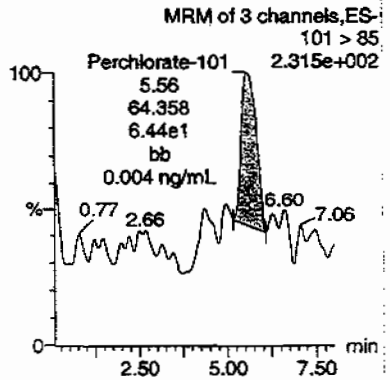

Perchlorate-O(18)

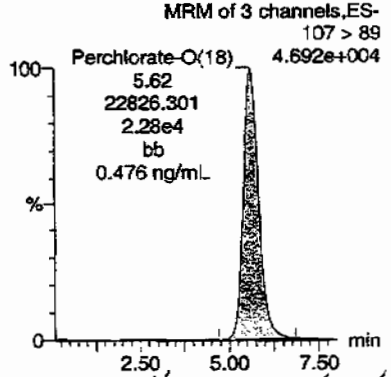

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
663005	Perchlorate	99 > 83	5.66	266.151	266.151	bb			0.0052			27.171	4.14
663005	Perchlorate-101	101 > 85	5.56	64.358	64.358	bb			0.0038			9.750	
663005	Perchlorate-O(18)	107 > 89	5.62	22826.301	22826.301	bb			0.4764	95.28	-4.72	3631.9...	

OKAY LAOSDO

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2516–1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 09–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 51358.26

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2516–1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 09–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 16966.94

Response Type: External Standard

Curve Type: RF

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uantify Calibration Report MassLynx 4.0 SP4
ıe GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ıst Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ethod: C:\MassLynx\Perchlorate.PRO\MethDB\per070909a.mdb 09 Jul 2009 12:57:10
alibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070909a.cdb 10 Jul 2009 12:34:11

ompound name: Perchlorate
esponse Factor: 51358.3
RF SD: 1527.39, % Relative SD: 2.97399
esponse type: External Std, Area
urve type: RF

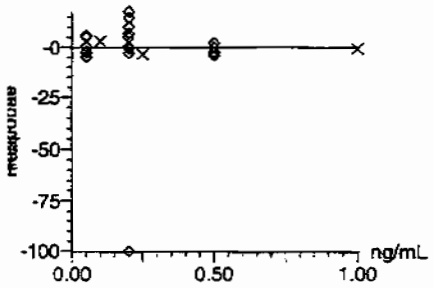

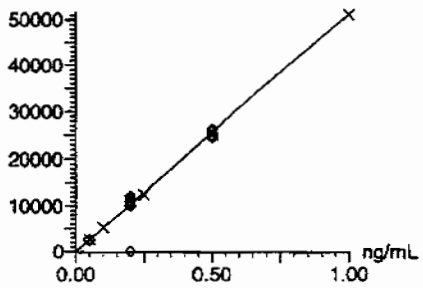

CWW
07-10-09

mpound name: Perchlorate-101
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IF SD: 317.037, % Relative SD: 1.86856
sponse type: External Std, Area
rve type: RF

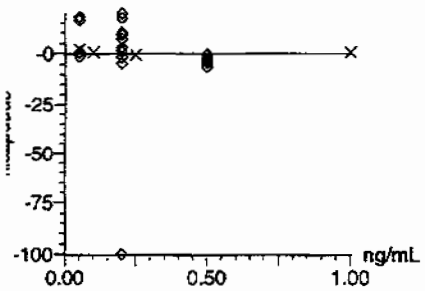

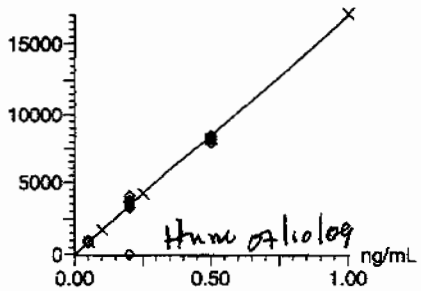

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ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ıst Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ɔmpound name: Perchlorate-O(18)
esponse Factor: 47913.7
RF SD: 906.151, % Relative SD: 1.89121
esponse type: External Std, Area
ırve type: RF

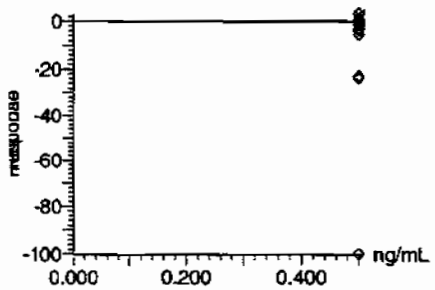

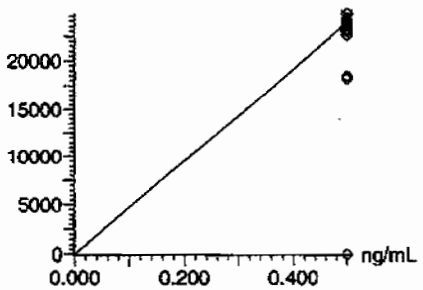

120

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2516–1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	97.75	09–JUL–09 13:04	per0709009a
Perchlorate Isotope Ratio		2.96		09–JUL–09 13:04	per0709009a
Perchlorate–101	.5	.5	99.96	09–JUL–09 13:04	per0709009a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709009a
Date: 09-Jul-2009
Time: 13:04:38
ID: WCL090706-06ICV
Vial: 1:2,A

Pwso
aww
07-10-09

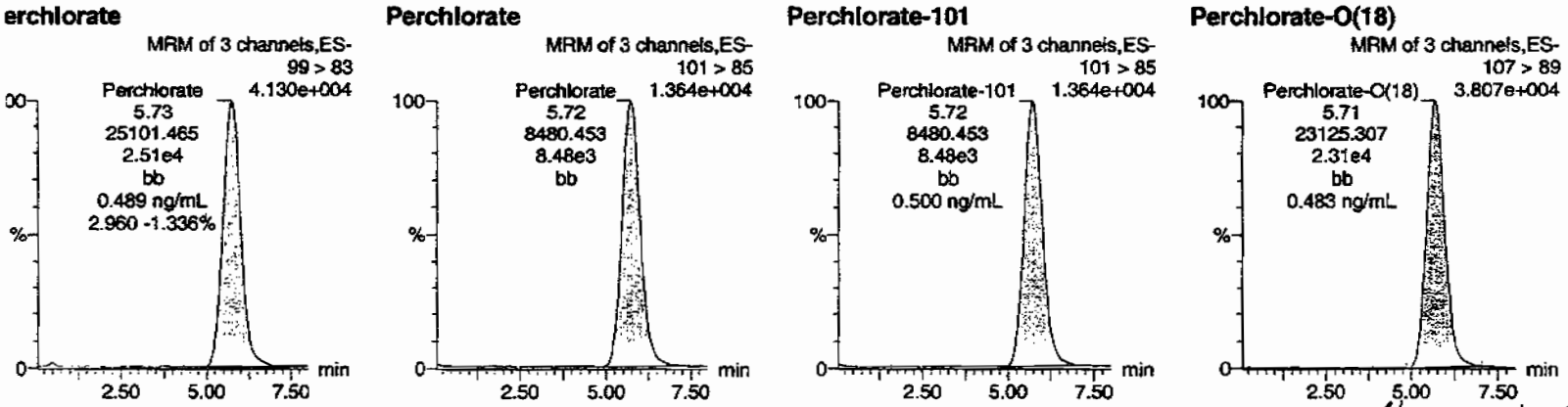

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-06ICV	Perchlorate	99 > 83	5.73	25101.465	25101.465	bb			0.4888	97.75	-2.25	1414.1...	2.96
CL090706-06ICV	Perchlorate-101	101 > 85	5.72	8480.453	8480.453	bb			0.4998	99.96	-0.04	260.261	
CL090706-06ICV	Perchlorate-O(18)	107 > 89	5.71	23125.307	23125.307	bb			0.4826	96.53	-3.47	1799.4...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2516-1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	100.03	09-JUL-09 14:39	per0709017a
Perchlorate Isotope Ratio		3.13		09-JUL-09 14:39	per0709017a
Perchlorate-101	.5	.48	96.77	09-JUL-09 14:39	per0709017a
Perchlorate	.5	.51	102.19	09-JUL-09 17:12	per0709030a
Perchlorate Isotope Ratio		3.16		09-JUL-09 17:12	per0709030a
Perchlorate-101	.5	.49	97.8	09-JUL-09 17:12	per0709030a
Perchlorate	.5	.48	95.64	09-JUL-09 19:45	per0709043a
Perchlorate Isotope Ratio		3.09		09-JUL-09 19:45	per0709043a
Perchlorate-101	.5	.47	93.69	09-JUL-09 19:45	per0709043a

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ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ast Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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ate: 09-Jul-2009
me: 14:39:53
: WCL090706-06CCV
al: 1:2,A

Pass
and
07-10-09

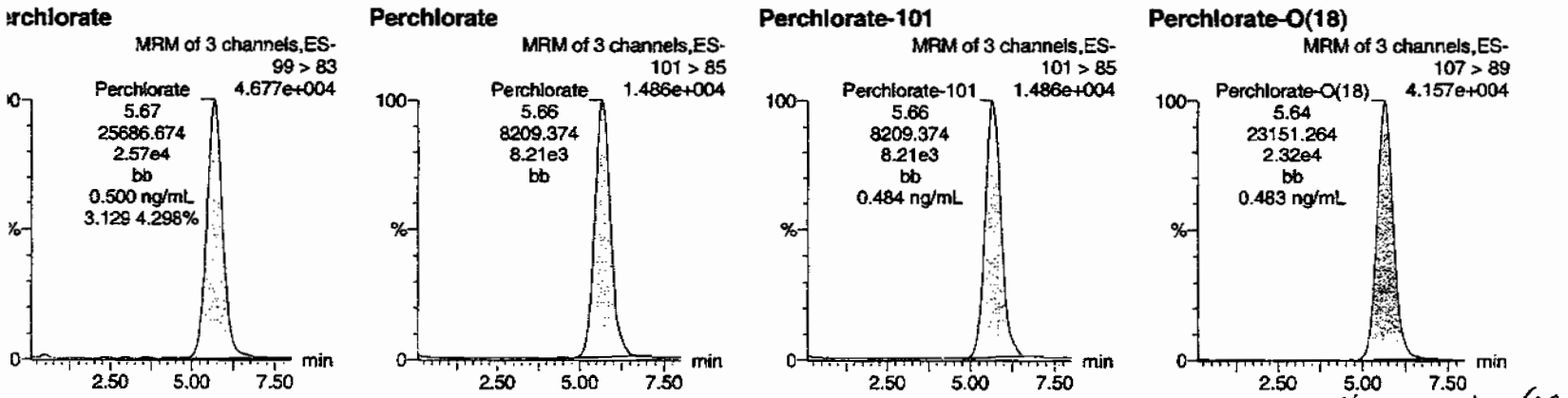

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-06CCV	Perchlorate	99 > 83	5.67	25686.674	25686.674	bb			0.5001	100.03	0.03	1875.1...	3.13
CL090706-06CCV	Perchlorate-101	101 > 85	5.66	8209.374	8209.374	bb			0.4838	96.77	-3.23	1077.0...	
CL090706-06CCV	Perchlorate-O(18)	107 > 89	5.64	23151.264	23151.264	bb			0.4832	96.64	-3.36	1990.8...	

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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uantify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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aw
07 10 09

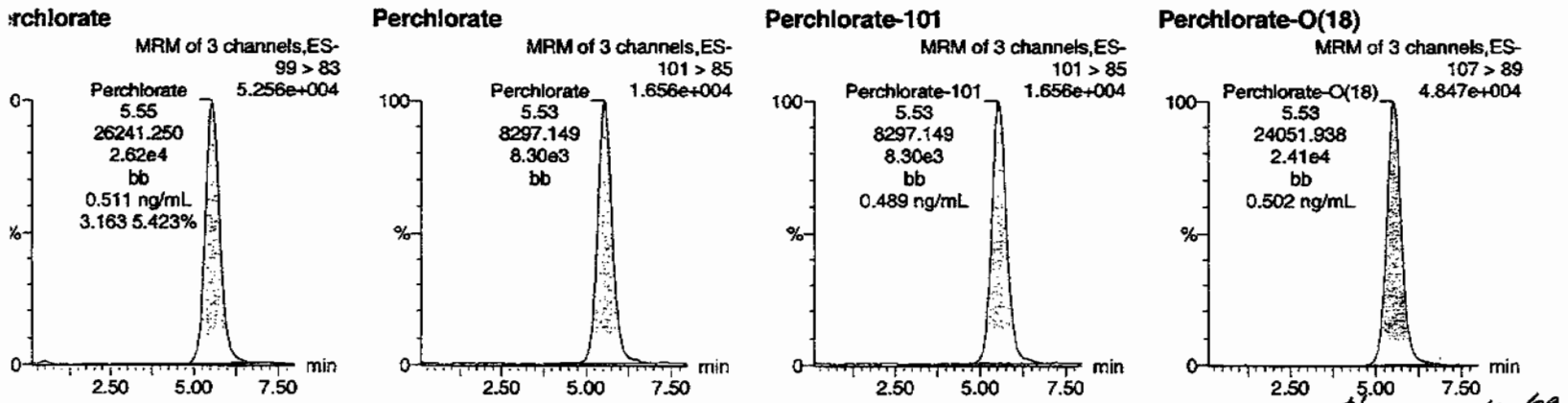

HM 12 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-06CCV	Perchlorate	99 > 83	5.55	26241.250	26241.250	bb			0.5109	102.19	2.19	1631.9...	3.16
CL090706-06CCV	Perchlorate-101	101 > 85	5.53	8297.149	8297.149	bb			0.4890	97.80	-2.20	1241.6...	
CL090706-06CCV	Perchlorate-O(18)	107 > 89	5.53	24051.938	24051.938	bb			0.5020	100.40	0.40	2903.7...	

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luantify Sample Report MassLynx 4.0 SP4
he GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ast Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
rinted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ame: per0709043a
ate: 09-Jul-2009
ime: 19:45:31
): WCL090706-06CCV
ial: 1:2,A

Pass
cmo
07-10-09

erchlorate

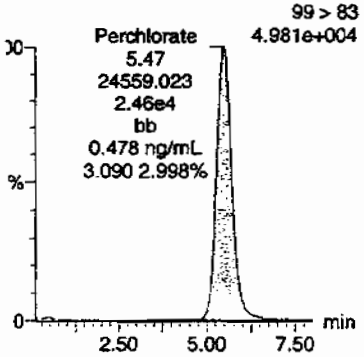

Perchlorate

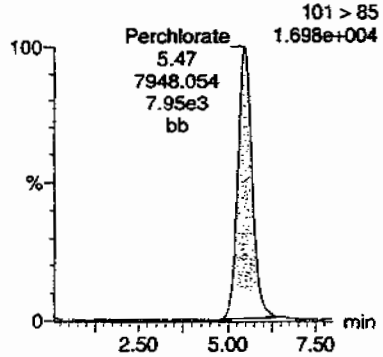

Perchlorate-101

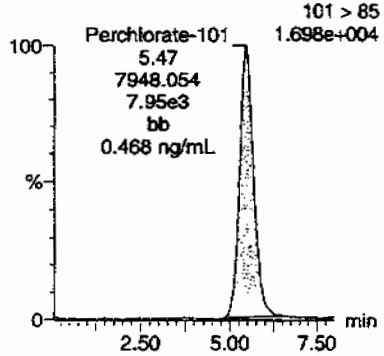

Perchlorate-O(18)

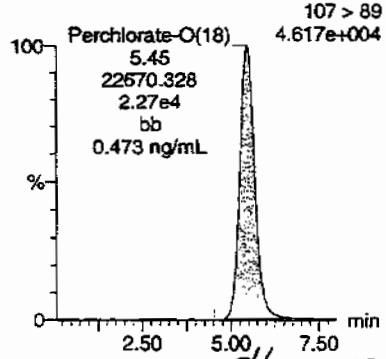

Hm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-06CCV	Perchlorate	99 > 83	5.47	24559.023	24559.023	bb			0.4782	95.64	-4.36	2112.9...	3.09
CL090706-06CCV	Perchlorate-101	101 > 85	5.47	7948.054	7948.054	bb			0.4684	93.69	-6.31	549.712	
CL090706-06CCV	Perchlorate-O(18)	107 > 89	5.45	22670.328	22670.328	bb			0.4731	94.63	-5.37	2273.7...	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2516–1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	95.54	09–JUL–09 13:28	per0709011a
Perchlorate Isotope Ratio		2.45		09–JUL–09 13:28	per0709011a
Perchlorate–101	.05	.06	117.82	09–JUL–09 13:28	per0709011a
Perchlorate	.05	.05	97.29	09–JUL–09 15:03	per0709019a
Perchlorate Isotope Ratio		2.99		09–JUL–09 15:03	per0709019a
Perchlorate–101	.05	.05	98.62	09–JUL–09 15:03	per0709019a
Perchlorate	.05	.05	105.04	09–JUL–09 17:36	per0709032a
Perchlorate Isotope Ratio		3.15		09–JUL–09 17:36	per0709032a
Perchlorate–101	.05	.05	100.81	09–JUL–09 17:36	per0709032a
Perchlorate	.05	.05	100.48	09–JUL–09 20:09	per0709045a
Perchlorate Isotope Ratio		3.03		09–JUL–09 20:09	per0709045a

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2516–1

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate–101	.05	.05	100.26	09–JUL–09 20:09	per0709045a

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uantify Sample Report MassLynx 4.0 SP4
ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ıst Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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al: 1:2,B

Pass
07-10-09

rchlorate

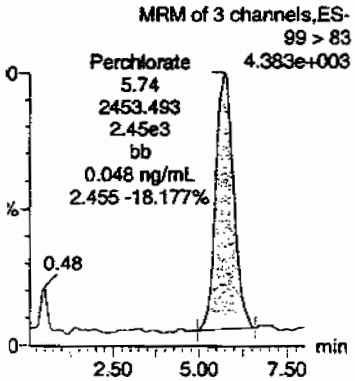

Perchlorate

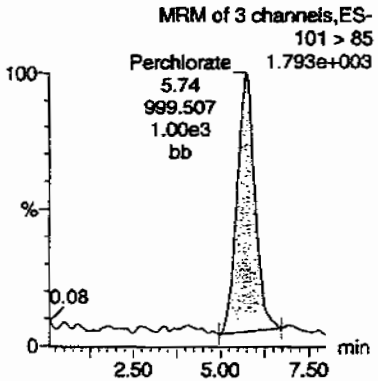

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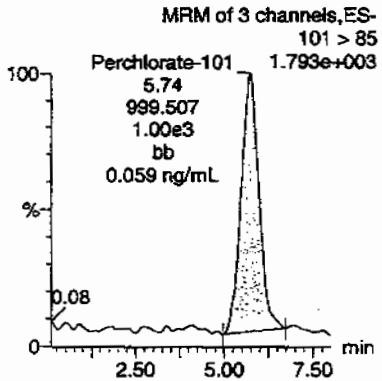

Perchlorate-O(18)

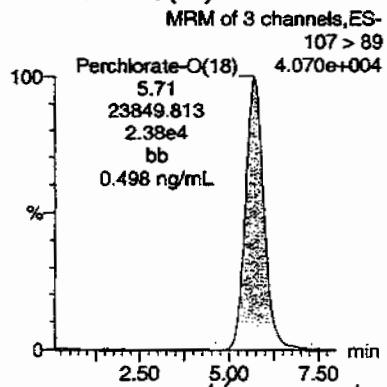

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	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-07CRI	Perchlorate	99 > 83	5.74	2453.493	2453.493	bb			0.0478	95.54	-4.46	80.551	2.45
CL090706-07CRI	Perchlorate-101	101 > 85	5.74	999.507	999.507	bb			0.0589	117.82	17.82	103.947	
CL090706-07CRI	Perchlorate-O(18)	107 > 89	5.71	23849.813	23849.813	bb			0.4978	99.55	-0.45	504.934	

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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ıtaset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ıst Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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me: 15:03:21
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Pass
amc
07-10-09

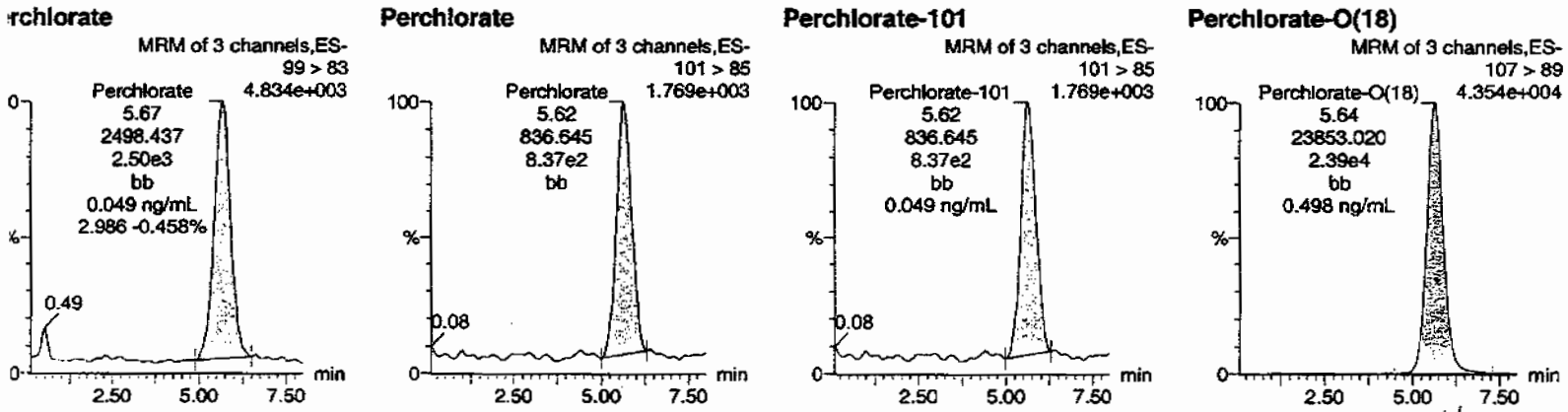

Amc 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-07CRI	Perchlorate	99 > 83	5.67	2498.437	2498.437	bb			0.0486	97.29	-2.71	7.903	2.99
CL090706-07CRI	Perchlorate-101	101 > 85	5.62	836.645	836.645	bb			0.0493	98.62	-1.38	72.784	
CL090706-07CRI	Perchlorate-O(18)	107 > 89	5.64	23853.020	23853.020	bb			0.4978	99.57	-0.43	928.339	

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luantify Sample Report MassLynx 4.0 SP4
he GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ast Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
rinted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

lame: per0709032a
ate: 09-Jul-2009
ime: 17:36:15
): WCL090706-07CRI
ial: 1:2,B

Pcas
07-10-09

erchlorate

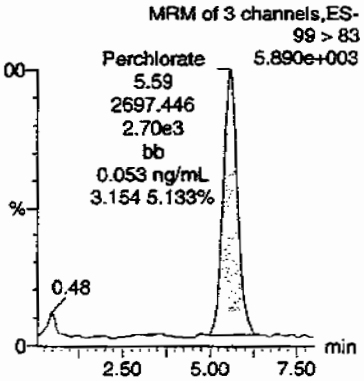

Perchlorate

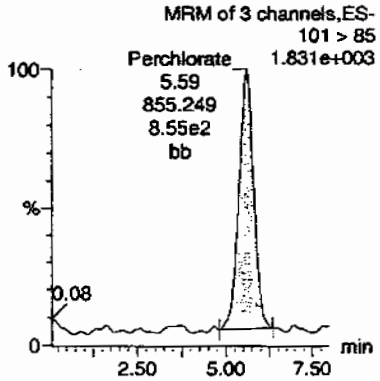

Perchlorate-101

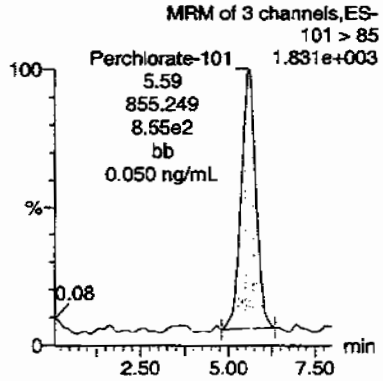

Perchlorate-O(18)

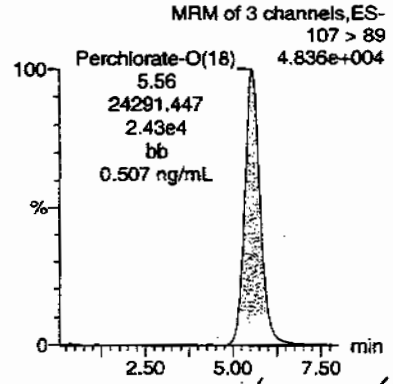

Htm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-07CRI	Perchlorate	99 > 83	5.59	2697.446	2697.446	bb			0.0525	105.04	5.04	312.338	3.15
CL090706-07CRI	Perchlorate-101	101 > 85	5.59	855.249	855.249	bb			0.0504	100.81	0.81	86.922	
CL090706-07CRI	Perchlorate-O(18)	107 > 89	5.56	24291.447	24291.447	bb			0.5070	101.40	1.40	2640.5...	

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ne GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ast Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
rinted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ame: per0709045a
ate: 09-Jul-2009
me: 20:09:15
: WCL090706-07CRI
al: 1:2,B

Pass
aw
07-10-09

erchlorate

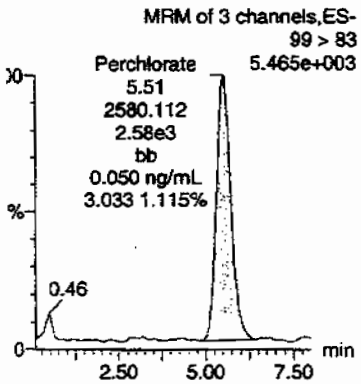

Perchlorate

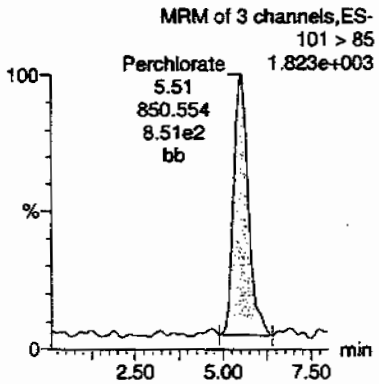

Perchlorate-101

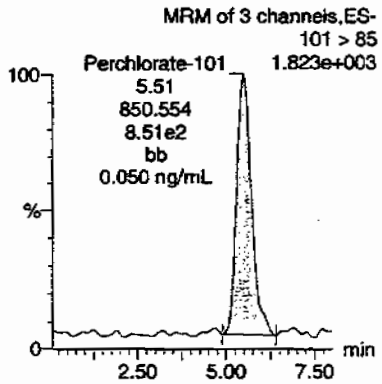

Perchlorate-O(18)

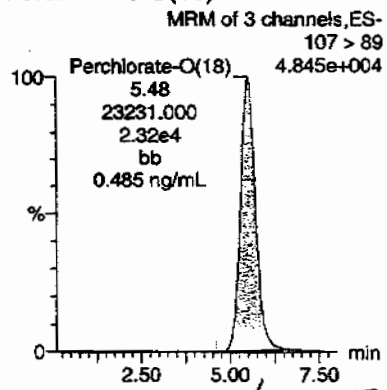

AMW 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-07CRI	Perchlorate	99 > 83	5.51	2580.112	2580.112	bb			0.0502	100.48	0.48	131.501	3.03
CL090706-07CRI	Perchlorate-101	101 > 85	5.51	850.554	850.554	bb			0.0501	100.26	0.26	75.482	
CL090706-07CRI	Perchlorate-O(18)	107 > 89	5.48	23231.000	23231.000	bb			0.4849	96.97	-3.03	2084.5...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 07-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 1201874308

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	09-JUL-09 17:48	per0709033a
	Perchlorate-O(18)			4.60	ug/kg		1	09-JUL-09 17:48	per0709033a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solid}}$$

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aset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

t Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
ted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ne: per0709033a
e: 09-Jul-2009
e: 17:48:02
1201874308
l: 2:1,A

LANL | 882499 | SOLID | MB | 11

cmw 07-10-09

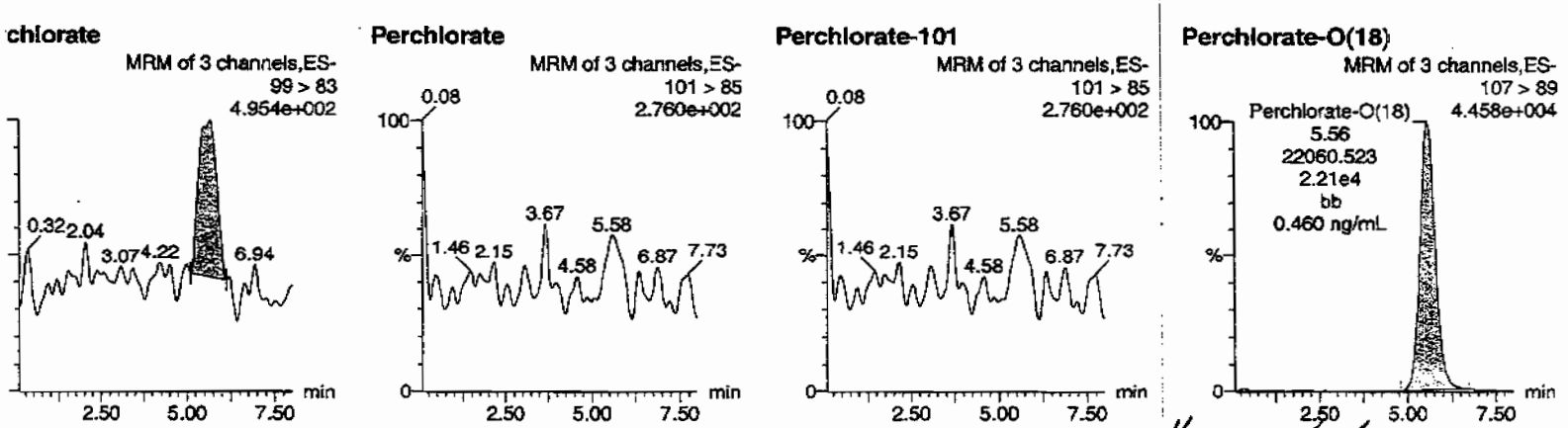

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1874308	Perchlorate	99 > 83	5.68	171.936	171.936	bb			0.0033			15.977	0.00
1874308	Perchlorate-101	101 > 85											
1874308	Perchlorate-O(18)	107 > 89	5.56	22060.523	22060.523	bb			0.4604	92.08	-7.92	495.394	

. SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 07-JUL-09

GEL Job No (SDG): 09-2516-1

GEL Sample ID: 1201874309

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.01	ug/kg		1	09-JUL-09 17:59	per0709034a
	Perchlorate-O(18)			3.86	ug/kg		1	09-JUL-09 17:59	per0709034a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709034a
Date: 09-Jul-2009
Time: 17:59:57
ID: 1201874309
Vial: 2:1,B

|LANL|882499|5020|LCS|1|

CWW 07-10-09

Perchlorate

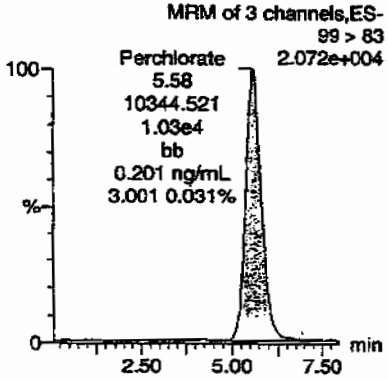

Perchlorate

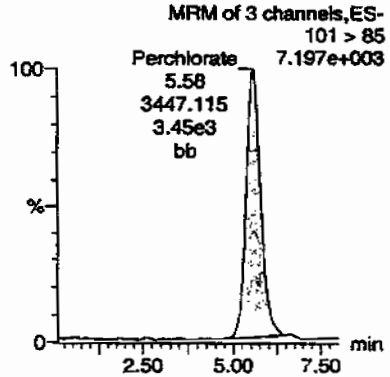

Perchlorate-101

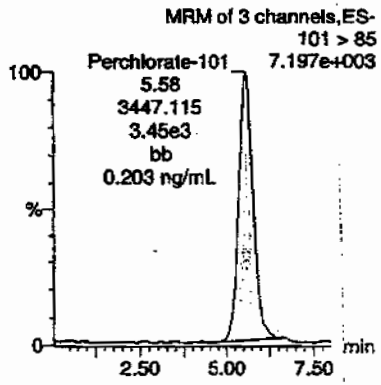

Perchlorate-O(18)

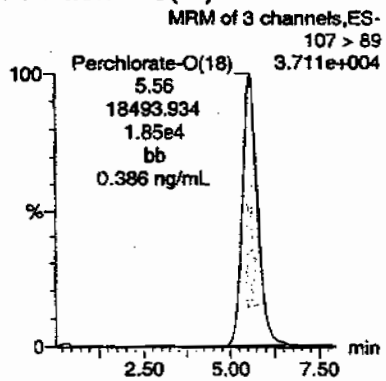

D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
201874309	Perchlorate	99 > 83	5.58	10344.521	10344.521	bb			0.2014	100.71	0.71	401.471	3.00
201874309	Perchlorate-101	101 > 85	5.58	3447.115	3447.115	bb			0.2032	101.58	1.58	386.302	
201874309	Perchlorate-O(18)	107 > 89	5.56	18493.934	18493.934	bb			0.3860	77.20	-22.80	1449.8...	

$$\frac{10344.521}{51358.3} = 0.2014$$

HMM 7/10/09

EL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 882498 **Verified by:** _____

Analyst: Jareth Shirley

Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6

Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201874308 MB	07-JUL-2009 09:53:45	2	20	10
1201874309 LCS	07-JUL-2009 09:53:45	2	20	10
232663001	07-JUL-2009 09:53:45	2	20	10
232663002	07-JUL-2009 09:53:45	2	20	10
232663003	07-JUL-2009 09:53:45	2	20	10
232663004	07-JUL-2009 09:53:45	2	20	10
232663005	07-JUL-2009 09:53:45	2	20	10
232744001	07-JUL-2009 09:53:45	2	20	10
232744002	07-JUL-2009 09:53:45	2	20	10
232744003	07-JUL-2009 09:53:45	2	20	10
232744004	07-JUL-2009 09:53:45	2	20	10
232744005	07-JUL-2009 09:53:45	2	20	10
232744006	07-JUL-2009 09:53:45	2	20	10
232744007	07-JUL-2009 09:53:45	2	20	10
232744008	07-JUL-2009 09:53:45	2	20	10
232754001	07-JUL-2009 09:53:45	2	20	10
232754002	07-JUL-2009 09:53:45	2	20	10
232754003	07-JUL-2009 09:53:45	2	20	10
232760001	07-JUL-2009 09:53:45	2	20	10
1201874310 MS (232760001)	07-JUL-2009 09:53:45	2	20	10
1201874311 MSD (232760001)	07-JUL-2009 09:53:45	2	20	10
232760002	07-JUL-2009 09:53:45	2	20	10
232760003	07-JUL-2009 09:53:45	2	20	10
232760004	07-JUL-2009 09:53:45	2	20	10
1201874312 ICS	07-JUL-2009 09:53:45	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201874312	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL
LCS	1201874309	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL
MS	1201874310	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL
MSD	1201874311	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL

Comments:

Desalting cartridges used: 090408-1-Ba & 090608-1-H

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 07/09/09
Extr. Injection Volume: 20uL
Sequence Number: per070909a
Initial Calibration Date: 07/09/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1152119, 1141273
Standard-Samp Reagent Lot#:: 1141273

Reviewed BY: Hnm
Date: 7/10/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0709001a	IPB001	CWW	7/9/2009 11:30			1		USE	B
per0709002a	IPB001	CWW	7/9/2009 11:42			1		USE	B
per0709003a	WCLICAL-01	CWW	7/9/2009 11:54			1		USE	I
per0709004a	WCLICAL-02	CWW	7/9/2009 12:05			1		USE	I
per0709005a	WCLICAL-03	CWW	7/9/2009 12:17			1		USE	I
per0709006a	WCLICAL-04	CWW	7/9/2009 12:29			1		USE	I
per0709007a	WCLICAL-05	CWW	7/9/2009 12:41			1		USE	I
per0709008a	IPB002	CWW	7/9/2009 12:52			1		USE	B
per0709009a	WCLICV	CWW	7/9/2009 13:04			1		USE	C
per0709010a	IPB003	CWW	7/9/2009 13:16			1		USE	B
per0709011a	WCLCRI	CWW	7/9/2009 13:28			1		USE	C
per0709012a	232509001	CWW	7/9/2009 13:41	881646	09-2500	100	LANL	USE	S
per0709013a	232509002	CWW	7/9/2009 13:52	881646	09-2500	1	LANL	USE	S
per0709014a	232509004	CWW	7/9/2009 14:04	881646	09-2500	100	LANL	USE	S
per0709015a	232509005	CWW	7/9/2009 14:16	881646	09-2500	100	LANL	USE	S
per0709016a	232509006	CWW	7/9/2009 14:28	881646	09-2500	1	LANL	USE	S
per0709017a	WCLCCV	CWW	7/9/2009 14:39			1		USE	C
per0709018a	IPB004	CWW	7/9/2009 14:51			1		USE	B
per0709019a	WCLCRI	CWW	7/9/2009 15:03			1		USE	C
per0709020a	1201872358	CWW	7/9/2009 15:15	881654	09-2512	1	LANL	USE	S
per0709021a	1201872359	CWW	7/9/2009 15:26	881654	09-2512	1	LANL	USE	S
per0709022a	1201872362	CWW	7/9/2009 15:38	881654	09-2512	1	LANL	DUSE-RA	S
per0709023a	232594001	CWW	7/9/2009 15:50	881654	09-2512	1	LANL	USE	S
per0709024a	1201872360	CWW	7/9/2009 16:02	881654	09-2512	1	LANL	USE	S
per0709025a	1201872361	CWW	7/9/2009 16:13	881654	09-2512	1	LANL	USE	S
per0709026a	232594002	CWW	7/9/2009 16:25	881654	09-2512	1	LANL	USE	S
per0709027a	232594003	CWW	7/9/2009 16:37	881654	09-2512	1	LANL	USE	S
per0709028a	232594004	CWW	7/9/2009 16:49	881654	09-2512	1	LANL	USE	S
per0709029a	232594005	CWW	7/9/2009 17:00	881654	09-2512	1	LANL	USE	S

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per0709030a	WCLCCV	CWW	7/9/2009 17:12			1		USE	C
per0709031a	IPB005	CWW	7/9/2009 17:24			1		USE	B
per0709032a	WCLCRI	CWW	7/9/2009 17:36			1		USE	C
per0709033a	1201874308	CWW	7/9/2009 17:48	882499	VARIOUS	1	LANL	USE	S
per0709034a	1201874309	CWW	7/9/2009 17:59	882499	VARIOUS	1	LANL	USE	S
per0709035a	1201874312	CWW	7/9/2009 18:11	882499	VARIOUS	1	LANL	USE	S
per0709036a	232663001	CWW	7/9/2009 18:23	882499	09-2516-1	1	LANL	USE	S
per0709037a	232663002	CWW	7/9/2009 18:35	882499	09-2516-1	1	LANL	USE	S
per0709038a	232663003	CWW	7/9/2009 18:46	882499	09-2516-1	1	LANL	USE	S
per0709039a	232663004	CWW	7/9/2009 18:58	882499	09-2516-1	1	LANL	USE	S
per0709040a	232663005	CWW	7/9/2009 19:10	882499	09-2516-1	1	LANL	USE	S
per0709041a	232744001	CWW	7/9/2009 19:22	882499	09-2525-1	1	LANL	USE	S
per0709042a	232744002	CWW	7/9/2009 19:33	882499	09-2525-1	1	LANL	USE	S
per0709043a	WCLCCV	CWW	7/9/2009 19:45			1		USE	C
per0709044a	IPB006	CWW	7/9/2009 19:57			1		USE	B
per0709045a	WCLCRI	CWW	7/9/2009 20:09			1		USE	C
per0709046a	232744003	CWW	7/9/2009 20:20	882499	09-2525-1	1	LANL	USE	S
per0709047a	232744004	CWW	7/9/2009 20:32	882499	09-2525-1	1	LANL	USE	S
per0709048a	232744005	CWW	7/9/2009 20:44	882499	09-2525-1	1	LANL	USE	S
per0709049a	232744006	CWW	7/9/2009 20:56	882499	09-2525-1	1	LANL	USE	S
per0709050a	232744007	CWW	7/9/2009 21:08	882499	09-2525-1	1	LANL	USE	S
per0709051a	232744008	CWW	7/9/2009 21:19	882499	09-2525-1	1	LANL	USE	S
per0709052a	232754001	CWW	7/9/2009 21:31	882499	09-2536	1	LANL	USE	S
per0709053a	232754002	CWW	7/9/2009 21:43	882499	09-2536	1	LANL	USE	S
per0709054a	232754003	CWW	7/9/2009 21:55	882499	09-2536	1	LANL	USE	S
per0709055a	WCLCCV	CWW	7/9/2009 22:06			1		USE	C
per0709056a	IPB007	CWW	7/9/2009 22:18			1		USE	B
per0709057a	WCLCRI	CWW	7/9/2009 22:30			1		USE	C
per0709058a	232760001	CWW	7/9/2009 22:42	882499	09-2542-1	1	LANL	USE	S
per0709059a	1201874310	CWW	7/9/2009 22:54	882499	09-2542-1	1	LANL	USE	S
per0709060a	1201874311	CWW	7/9/2009 23:05	882499	09-2542-1	1	LANL	USE	S
per0709061a	232760002	CWW	7/9/2009 23:17	882499	09-2542-1	1	LANL	USE	S
per0709062a	232760003	CWW	7/9/2009 23:29	882499	09-2542-1	1	LANL	USE	S
per0709063a	232760004	CWW	7/9/2009 23:41	882499	09-2542-1	1	LANL	USE	S
per0709064a	WCLCCV	CWW	7/9/2009 23:52			1		USE	C
per0709065a	IPB008	CWW	7/10/2009 0:04			1		USE	B
per0709066a	WCLCRI	CWW	7/10/2009 0:16			1		USE	C

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per0709067a	1201877137	CWW	7/10/2009 0:28	883633	09-2547	1	LANL	USE	S
per0709068a	1201877138	CWW	7/10/2009 0:40	883633	09-2547	1	LANL	USE	S
per0709069a	1201877142	CWW	7/10/2009 0:52	883633	09-2547	1	LANL	USE	S
per0709070a	232851001	CWW	7/10/2009 1:03	883633	09-2547	1	LANL	USE	S
per0709071a	1201877139	CWW	7/10/2009 1:15	883633	09-2547	1	LANL	USE	S
per0709072a	1201877140	CWW	7/10/2009 1:27	883633	09-2547	1	LANL	USE	S
per0709073a	232851002	CWW	7/10/2009 1:39	883633	09-2547	1	LANL	USE	S
per0709074a	IPB009	CWW	7/10/2009 1:50			1		USE	B
per0709075a	1201872362	CWW	7/10/2009 2:02	881654	09-2512	1	LANL	USE	S
per0709076a	WCLCCV	CWW	7/10/2009 2:14			1		USE	C
per0709077a	IPB010	CWW	7/10/2009 2:26			1		USE	B
per0709078a	WCLCRI	CWW	7/10/2009 2:38			1		USE	C

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ıantify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709059a
te: 09-Jul-2009
ne: 22:54:11
: 1201874310
ıl: 2:4,C

|LANL|882499|5020|MS|1|

CWW 07-10-09

rchlorate

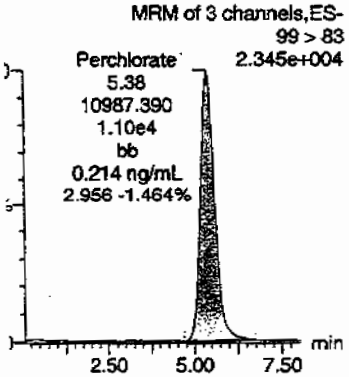

Perchlorate

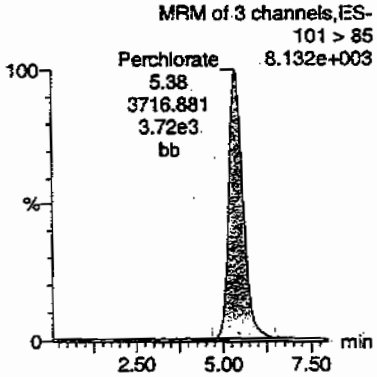

Perchlorate-101

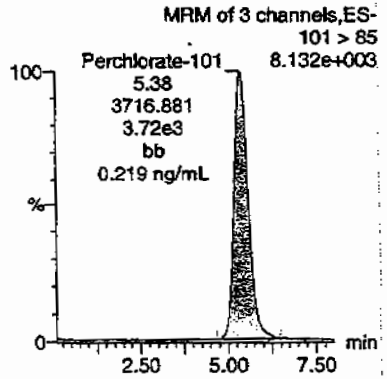

Perchlorate-O(18)

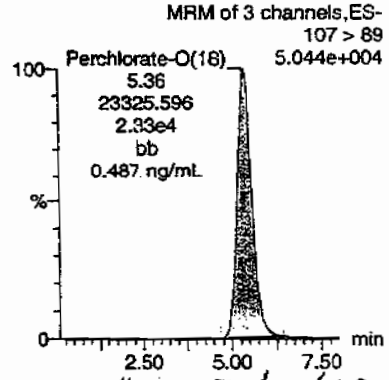

Hmm 07/10/09

	Name	Trace	R.T.	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1874310	Perchlorate	99 > 83	5.38	10987.390	10987.390	bb			0.2139	106.97	6.97	710.014	2.96
1874310	Perchlorate-101	101 > 85	5.38	3716.881	3716.881	bb			0.2191	109.53	9.53	185.266	
1874310	Perchlorate-O(18)	107 > 89	5.36	23325.596	23325.596	bb			0.4868	97.37	-2.63	3244.9...	

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ıantify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709060a
te: 09-Jul-2009
ne: 23:05:57
1201874311
ıl: 2:4,D

|LANL|882499|SOLID|MSD|1|

Cuo 07-10-09

rchlorate

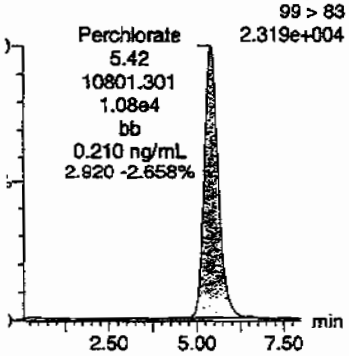

Perchlorate

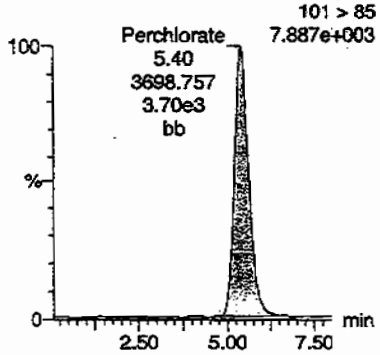

Perchlorate-101

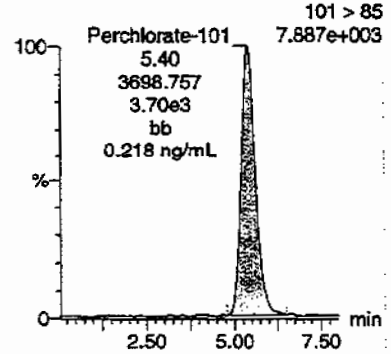

Perchlorate-O(18)

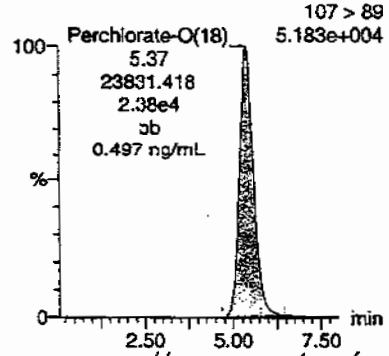

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1874311	Perchlorate	99 > 83	5.42	10801.301	10801.301	bb			0.2103	105.16	5.16	777.858	2.92
1874311	Perchlorate-101	101 > 85	5.40	3698.757	3698.757	bb			0.2180	109.00	9.00	330.142	
1874311	Perchlorate-O(18)	107 > 89	5.37	23831.418	23831.418	bb			0.4974	99.48	-0.52	2318.5...	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2516

Sample Analysis

Sample ID	Client ID
232662001	CAMO-09-10024
1201873174	Method Blank (MB) **ICP**
1201873175	Laboratory Control Sample (LCS)
1201873178	232662001(CAMO-09-10024L) Serial Dilution (SD)
1201873176	232662001(CAMO-09-10024D) Sample Duplicate (DUP)
1201873177	232662001(CAMO-09-10024S) Matrix Spike (MS)
1201873227	Method Blank (MB) **ICP-MS**
1201873228	Laboratory Control Sample (LCS)
1201873231	232662001(CAMO-09-10024L) Serial Dilution (SD)
1201873229	232662001(CAMO-09-10024D) Sample Duplicate (DUP)
1201873230	232662001(CAMO-09-10024S) Matrix Spike (MS)
1201873355	Method Blank (MB) **CVAA**
1201873356	Laboratory Control Sample (LCS)
1201873359	232662001(CAMO-09-10024L) Serial Dilution (SD)
1201873357	232662001(CAMO-09-10024D) Sample Duplicate (DUP)
1201873358	232662001(CAMO-09-10024S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Method/Analysis Information

Analytical Batch:	881993, 882019 and 882078
Prep Batch :	881992, 882018 and 882077
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3005/6010B, SW846 3005/6020 and SW846 7470A
Prep Method :	SW846 3005A and SW846 7470A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements

All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria for all applicable analytes, the exception of thallium in CCB06. However, the sample in this SDG did not contain thallium at a concentration greater than the PQL. Therefore, the data was not adversely affected.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232662001 (CAMO-09-10024)-ICP, CVAA and ICP-MS.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exception of thallium, as indicated by the "N" qualifier.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 711244. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: B. Davis **Date:** 7-20-09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232662001 **BASIS:** As Received **DATE COLLECTED** 26-JUN-09

CLIENT ID: CAMO-09-10024 **LEVEL:** Low **DATE RECEIVED** 01-JUL-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/14/09 13:18	090714-2	882019
7440-38-2	Arsenic	15	ug/L	U	5	15	15	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-39-3	Barium	1.28	ug/L	J	1	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/14/09 13:18	090714-2	882019
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/14/09 13:18	090714-2	882019
7440-70-2	Calcium	52.7	ug/L	J	50	200	200	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	07/07/09 09:12	070709-1	881993
7439-89-6	Iron	100	ug/L	U	30	100	100	1	P	HSC	07/07/09 09:12	070709-1	881993
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/14/09 13:18	090714-2	882019
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	07/07/09 09:12	070709-1	881993
7439-96-5	Manganese	5	ug/L	U	1	5	5	1	MS	PRB	07/14/09 13:18	090714-2	882019
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	07/06/09 11:04	070609W1-3	882078
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-09-7	Potassium	347	ug/L		50	150	150	1	P	HSC	07/07/09 09:12	070709-1	881993
7782-49-2	Selenium	15	ug/L	U	5	15	15	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-23-5	Sodium	238	ug/L	J	100	300	300	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-28-0	Thallium	1	ug/L	UN	0.3	1	1	1	MS	PRB	07/14/09 13:18	090714-2	882019
7440-62-2	Vanadium	1.47	ug/L	J	1	5	5	1	P	HSC	07/07/09 09:12	070709-1	881993
7440-66-6	Zinc	3.62	ug/L	J	3.3	10	10	1	P	HSC	07/07/09 09:12	070709-1	881993

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
881993	881992	SW846 3005A	50	mL	50	mL	07/06/09	FGA
882019	882018	SW846 3005A	50	mL	50	mL	07/06/09	AXG2
882078	882077	SW846 7470A Prep	20	mL	20	mL	07/02/09	TXB3

Quality Control Summary

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2516

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Mercury	5.07	ug/L	5	ug/L	101.4	90.0 – 110.0	AV	06–JUL–09 09:18	070609W1–3
	Aluminum	5340	ug/L	5000	ug/L	106.7	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Arsenic	475	ug/L	500	ug/L	94.9	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Barium	524	ug/L	500	ug/L	104.9	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Calcium	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Chromium	492	ug/L	500	ug/L	98.5	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Cobalt	465	ug/L	500	ug/L	92.9	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Copper	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Iron	5300	ug/L	5000	ug/L	105.9	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Magnesium	5480	ug/L	5000	ug/L	109.6	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Nickel	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Potassium	2560	ug/L	2500	ug/L	102.5	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Selenium	2550	ug/L	2500	ug/L	102	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Silver	247	ug/L	250	ug/L	98.8	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Sodium	2690	ug/L	2500	ug/L	107.7	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Vanadium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Zinc	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	07–JUL–09 07:26	070709–1
	Antimony	48.1	ug/L	50	ug/L	96.2	90.0 – 110.0	MS	14–JUL–09 10:43	090714–2
	Beryllium	50.8	ug/L	50	ug/L	101.6	90.0 – 110.0	MS	14–JUL–09 10:43	090714–2
	Cadmium	52.4	ug/L	50	ug/L	104.8	90.0 – 110.0	MS	14–JUL–09 10:43	090714–2
	Lead	51.3	ug/L	50	ug/L	102.6	90.0 – 110.0	MS	14–JUL–09 10:43	090714–2
	Manganese	48.8	ug/L	50	ug/L	97.6	90.0 – 110.0	MS	14–JUL–09 10:43	090714–2
	Thallium	50.2	ug/L	50	ug/L	100.4	90.0 – 110.0	MS	14–JUL–09 10:43	090714–2
CCV01										
	Mercury	5.02	ug/L	5	ug/L	100.3	80.0 – 120.0	AV	06–JUL–09 09:24	070609W1–3
	Aluminum	5270	ug/L	5000	ug/L	105.4	90.0 – 110.0	P	07–JUL–09 08:11	070709–1
	Arsenic	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	07–JUL–09 08:11	070709–1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	07–JUL–09 08:11	070709–1
	Calcium	5440	ug/L	5000	ug/L	108.8	90.0 – 110.0	P	07–JUL–09 08:11	070709–1
	Chromium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	07–JUL–09 08:11	070709–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	487	ug/L	500	ug/L	97.5	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Copper	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Iron	5280	ug/L	5000	ug/L	105.6	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Magnesium	5430	ug/L	5000	ug/L	108.6	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Nickel	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Potassium	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Selenium	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Silver	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Sodium	10500	ug/L	10000	ug/L	104.6	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Vanadium	500	ug/L	500	ug/L	100	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	07-JUL-09 08:11	070709-1
	Antimony	49.7	ug/L	50	ug/L	99.4	90.0 – 110.0	MS	14-JUL-09 11:01	090714-2
	Beryllium	50.3	ug/L	50	ug/L	100.5	90.0 – 110.0	MS	14-JUL-09 11:01	090714-2
	Cadmium	50	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	14-JUL-09 11:01	090714-2
	Lead	51.2	ug/L	50	ug/L	102.3	90.0 – 110.0	MS	14-JUL-09 11:01	090714-2
	Manganese	52.1	ug/L	50	ug/L	104.1	90.0 – 110.0	MS	14-JUL-09 11:01	090714-2
	Thallium	51	ug/L	50	ug/L	102.1	90.0 – 110.0	MS	14-JUL-09 11:01	090714-2
CCV02										
	Mercury	5.02	ug/L	5	ug/L	100.4	80.0 – 120.0	AV	06-JUL-09 09:47	070609W1-3
	Aluminum	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Arsenic	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Barium	490	ug/L	500	ug/L	98	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Calcium	5400	ug/L	5000	ug/L	108	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Chromium	489	ug/L	500	ug/L	97.7	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Cobalt	477	ug/L	500	ug/L	95.4	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Copper	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Iron	5240	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Magnesium	5360	ug/L	5000	ug/L	107.3	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Nickel	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Potassium	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	07-JUL-09 08:43	070709-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Selenium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Silver	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Sodium	10400	ug/L	10000	ug/L	103.8	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Vanadium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Zinc	483	ug/L	500	ug/L	96.6	90.0 – 110.0	P	07-JUL-09 08:43	070709-1
	Antimony	49.4	ug/L	50	ug/L	98.9	90.0 – 110.0	MS	14-JUL-09 11:35	090714-2
	Beryllium	48.1	ug/L	50	ug/L	96.2	90.0 – 110.0	MS	14-JUL-09 11:35	090714-2
	Cadmium	50.4	ug/L	50	ug/L	100.8	90.0 – 110.0	MS	14-JUL-09 11:35	090714-2
	Lead	50.5	ug/L	50	ug/L	101	90.0 – 110.0	MS	14-JUL-09 11:35	090714-2
	Manganese	53.5	ug/L	50	ug/L	107	90.0 – 110.0	MS	14-JUL-09 11:35	090714-2
	Thallium	50.8	ug/L	50	ug/L	101.5	90.0 – 110.0	MS	14-JUL-09 11:35	090714-2
CCV03										
	Mercury	5.07	ug/L	5	ug/L	101.5	80.0 – 120.0	AV	06-JUL-09 10:10	070609W1-3
	Aluminum	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Arsenic	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Barium	485	ug/L	500	ug/L	97.1	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Calcium	5270	ug/L	5000	ug/L	105.3	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Chromium	483	ug/L	500	ug/L	96.5	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Cobalt	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Copper	483	ug/L	500	ug/L	96.6	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Iron	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Magnesium	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Nickel	479	ug/L	500	ug/L	95.8	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Potassium	4870	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Selenium	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Silver	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Sodium	10200	ug/L	10000	ug/L	102.3	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Vanadium	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Zinc	478	ug/L	500	ug/L	95.7	90.0 – 110.0	P	07-JUL-09 09:39	070709-1
	Antimony	49	ug/L	50	ug/L	98	90.0 – 110.0	MS	14-JUL-09 11:57	090714-2

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	44.5	ug/L	50	ug/L	89	90.0 – 110.0	MS	14-JUL-09 11:57	090714-2
	Cadmium	49.9	ug/L	50	ug/L	99.7	90.0 – 110.0	MS	14-JUL-09 11:57	090714-2
	Lead	50.1	ug/L	50	ug/L	100.2	90.0 – 110.0	MS	14-JUL-09 11:57	090714-2
	Manganese	49.9	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	14-JUL-09 11:57	090714-2
	Thallium	50.5	ug/L	50	ug/L	101.1	90.0 – 110.0	MS	14-JUL-09 11:57	090714-2
CCV04										
	Mercury	5.12	ug/L	5	ug/L	102.4	80.0 – 120.0	AV	06-JUL-09 10:33	070609W1-3
	Antimony	49.5	ug/L	50	ug/L	99.1	90.0 – 110.0	MS	14-JUL-09 12:30	090714-2
	Beryllium	47.9	ug/L	50	ug/L	95.9	90.0 – 110.0	MS	14-JUL-09 12:30	090714-2
	Cadmium	49.8	ug/L	50	ug/L	99.6	90.0 – 110.0	MS	14-JUL-09 12:30	090714-2
	Lead	50.9	ug/L	50	ug/L	101.7	90.0 – 110.0	MS	14-JUL-09 12:30	090714-2
	Manganese	52.4	ug/L	50	ug/L	104.8	90.0 – 110.0	MS	14-JUL-09 12:30	090714-2
	Thallium	51.2	ug/L	50	ug/L	102.4	90.0 – 110.0	MS	14-JUL-09 12:30	090714-2
CCV05										
	Mercury	5.15	ug/L	5	ug/L	103	80.0 – 120.0	AV	06-JUL-09 10:56	070609W1-3
	Antimony	48.9	ug/L	50	ug/L	97.9	90.0 – 110.0	MS	14-JUL-09 13:03	090714-2
	Beryllium	47.9	ug/L	50	ug/L	95.8	90.0 – 110.0	MS	14-JUL-09 13:03	090714-2
	Cadmium	49.4	ug/L	50	ug/L	98.7	90.0 – 110.0	MS	14-JUL-09 13:03	090714-2
	Lead	50.1	ug/L	50	ug/L	100.1	90.0 – 110.0	MS	14-JUL-09 13:03	090714-2
	Manganese	53.5	ug/L	50	ug/L	106.9	90.0 – 110.0	MS	14-JUL-09 13:03	090714-2
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 – 110.0	MS	14-JUL-09 13:03	090714-2
CCV06										
	Mercury	5.18	ug/L	5	ug/L	103.5	80.0 – 120.0	AV	06-JUL-09 11:20	070609W1-3
	Antimony	49.4	ug/L	50	ug/L	98.8	90.0 – 110.0	MS	14-JUL-09 13:32	090714-2
	Beryllium	46.4	ug/L	50	ug/L	92.9	90.0 – 110.0	MS	14-JUL-09 13:32	090714-2
	Cadmium	50.1	ug/L	50	ug/L	100.3	90.0 – 110.0	MS	14-JUL-09 13:32	090714-2
	Lead	50	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	14-JUL-09 13:32	090714-2
	Manganese	53.5	ug/L	50	ug/L	107.1	90.0 – 110.0	MS	14-JUL-09 13:32	090714-2
	Thallium	48.4	ug/L	50	ug/L	96.8	90.0 – 110.0	MS	14-JUL-09 13:32	090714-2

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2516

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.183	ug/L	.2	ug/L	91.5	70.0 – 130.0	AV	06-JUL-09 09:22	070609W1-3
	Antimony	3.03	ug/L	3	ug/L	100.9	70.0 – 130.0	MS	14-JUL-09 10:50	090714-2
	Beryllium	.509	ug/L	.5	ug/L	101.8	70.0 – 130.0	MS	14-JUL-09 10:50	090714-2
	Lead	2.03	ug/L	2	ug/L	101.3	70.0 – 130.0	MS	14-JUL-09 10:50	090714-2
	Thallium	1.04	ug/L	1	ug/L	103.7	70.0 – 130.0	MS	14-JUL-09 10:50	090714-2
	Manganese	5.41	ug/L	5	ug/L	108.2	70.0 – 130.0	MS	14-JUL-09 10:50	090714-2
	Cadmium	.999	ug/L	1	ug/L	99.9	70.0 – 130.0	MS	14-JUL-09 10:50	090714-2
PQL01										
	Aluminum	231	ug/L	200	ug/L	115.6	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Arsenic	29.2	ug/L	30	ug/L	97.3	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Barium	5.18	ug/L	5	ug/L	103.5	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Calcium	210	ug/L	200	ug/L	105	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Chromium	4.78	ug/L	5	ug/L	95.6	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Cobalt	5.04	ug/L	5	ug/L	100.9	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Copper	10.3	ug/L	10	ug/L	103.2	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Iron	108	ug/L	100	ug/L	107.6	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Magnesium	298	ug/L	300	ug/L	99.2	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Nickel	5.34	ug/L	5	ug/L	106.9	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Potassium	152	ug/L	150	ug/L	101.5	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Selenium	33.7	ug/L	30	ug/L	112.4	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Silver	5.3	ug/L	5	ug/L	105.9	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Sodium	311	ug/L	300	ug/L	103.8	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Vanadium	5	ug/L	5	ug/L	100	70.0 – 130.0	P	07-JUL-09 07:39	070709-1
	Zinc	10.2	ug/L	10	ug/L	101.5	70.0 – 130.0	P	07-JUL-09 07:39	070709-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2516

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	06-JUL-09 09:20	070609W1-3
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	07-JUL-09 07:32	070709-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	07-JUL-09 07:32	070709-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 07:32	070709-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	07-JUL-09 07:32	070709-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 07:32	070709-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 07:32	070709-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	07-JUL-09 07:32	070709-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	07-JUL-09 07:32	070709-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	07-JUL-09 07:32	070709-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	07-JUL-09 07:32	070709-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	07-JUL-09 07:32	070709-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	07-JUL-09 07:32	070709-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 07:32	070709-1
	Sodium	100	+/-300	U	100	300	LIQ	P	07-JUL-09 07:32	070709-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 07:32	070709-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	07-JUL-09 07:32	070709-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	14-JUL-09 10:47	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	14-JUL-09 10:47	090714-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	14-JUL-09 10:47	090714-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	14-JUL-09 10:47	090714-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	14-JUL-09 10:47	090714-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	14-JUL-09 10:47	090714-2
CCB01										
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	06-JUL-09 09:26	070609W1-3
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	07-JUL-09 08:18	070709-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	07-JUL-09 08:18	070709-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 08:18	070709-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	07-JUL-09 08:18	070709-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 08:18	070709-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 08:18	070709-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2516

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	07-JUL-09 08:18	070709-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	07-JUL-09 08:18	070709-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	07-JUL-09 08:18	070709-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	07-JUL-09 08:18	070709-1
	Potassium	53.94	+/-150	J	50.0	150	LIQ	P	07-JUL-09 08:18	070709-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	07-JUL-09 08:18	070709-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 08:18	070709-1
	Sodium	100	+/-300	U	100	300	LIQ	P	07-JUL-09 08:18	070709-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 08:18	070709-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	07-JUL-09 08:18	070709-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	14-JUL-09 11:05	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	14-JUL-09 11:05	090714-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	14-JUL-09 11:05	090714-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	14-JUL-09 11:05	090714-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	14-JUL-09 11:05	090714-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	14-JUL-09 11:05	090714-2
CCB02										
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	06-JUL-09 09:49	070609W1-3
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	07-JUL-09 08:50	070709-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	07-JUL-09 08:50	070709-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 08:50	070709-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	07-JUL-09 08:50	070709-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 08:50	070709-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 08:50	070709-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	07-JUL-09 08:50	070709-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	07-JUL-09 08:50	070709-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	07-JUL-09 08:50	070709-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	07-JUL-09 08:50	070709-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	07-JUL-09 08:50	070709-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	07-JUL-09 08:50	070709-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 08:50	070709-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2516

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	100	+/-300	U	100	300	LIQ	P	07-JUL-09 08:50	070709-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 08:50	070709-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	07-JUL-09 08:50	070709-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	14-JUL-09 11:38	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	14-JUL-09 11:38	090714-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	14-JUL-09 11:38	090714-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	14-JUL-09 11:38	090714-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	14-JUL-09 11:38	090714-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	14-JUL-09 11:38	090714-2
CCB03										
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	06-JUL-09 10:12	070609W1-3
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	07-JUL-09 09:46	070709-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	07-JUL-09 09:46	070709-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 09:46	070709-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	07-JUL-09 09:46	070709-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 09:46	070709-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 09:46	070709-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	07-JUL-09 09:46	070709-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	07-JUL-09 09:46	070709-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	07-JUL-09 09:46	070709-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	07-JUL-09 09:46	070709-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	07-JUL-09 09:46	070709-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	07-JUL-09 09:46	070709-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 09:46	070709-1
	Sodium	100	+/-300	U	100	300	LIQ	P	07-JUL-09 09:46	070709-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	07-JUL-09 09:46	070709-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	07-JUL-09 09:46	070709-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	14-JUL-09 12:01	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	14-JUL-09 12:01	090714-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	14-JUL-09 12:01	090714-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	14-JUL-09 12:01	090714-2

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2516

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	14–JUL–09 12:01	090714–2
	Thallium	0.3	+/–1	U	0.3	1.0	LIQ	MS	14–JUL–09 12:01	090714–2
CCB04										
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	06–JUL–09 10:35	070609W1–3
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	14–JUL–09 12:34	090714–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	14–JUL–09 12:34	090714–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	14–JUL–09 12:34	090714–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	14–JUL–09 12:34	090714–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	14–JUL–09 12:34	090714–2
	Thallium	0.3	+/–1	U	0.3	1.0	LIQ	MS	14–JUL–09 12:34	090714–2
CCB05										
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	06–JUL–09 10:58	070609W1–3
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	14–JUL–09 13:07	090714–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	14–JUL–09 13:07	090714–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	14–JUL–09 13:07	090714–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	14–JUL–09 13:07	090714–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	14–JUL–09 13:07	090714–2
	Thallium	0.3	+/–1	U	0.3	1.0	LIQ	MS	14–JUL–09 13:07	090714–2
CCB06										
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	06–JUL–09 11:21	070609W1–3
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	14–JUL–09 13:36	090714–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	14–JUL–09 13:36	090714–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	14–JUL–09 13:36	090714–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	14–JUL–09 13:36	090714–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	14–JUL–09 13:36	090714–2
	Thallium	1.38	+/–1		0.3	1.0	LIQ	MS	14–JUL–09 13:36	090714–2

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 09-2516

Contract: LANL01004

Matrix: WATER

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201873174								
	Potassium	50	ug/L	+/-150	U	P	50	150
	Selenium	5	ug/L	+/-15.0	U	P	5	15
	Silver	1	ug/L	+/-5.0	U	P	1	5
	Sodium	100	ug/L	+/-300	U	P	100	300
	Arsenic	5	ug/L	+/-15.0	U	P	5	15
	Aluminum	68	ug/L	+/-200	U	P	68	200
	Vanadium	1.17	ug/L	+/-5.0	J	P	1	5
	Zinc	3.3	ug/L	+/-10.0	U	P	3.3	10
	Barium	1	ug/L	+/-5.0	U	P	1	5
	Nickel	1.5	ug/L	+/-5.0	U	P	1.5	5
	Magnesium	85	ug/L	+/-300	U	P	85	300
	Iron	30	ug/L	+/-100	U	P	30	100
	Copper	3	ug/L	+/-10.0	U	P	3	10
	Cobalt	1	ug/L	+/-5.0	U	P	1	5
	Chromium	1	ug/L	+/-5.0	U	P	1	5
	Calcium	50	ug/L	+/-200	U	P	50	200
1201873227								
	Antimony	1	ug/L	+/-3.0	U	MS	1	3
	Beryllium	0.1	ug/L	+/-0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/-1.0	U	MS	0.11	1
	Lead	0.5	ug/L	+/-2.0	U	MS	0.5	2
	Manganese	1	ug/L	+/-5.0	U	MS	1	5
	Thallium	0.3	ug/L	+/-1.0	U	MS	0.3	1
1201873355								
	Mercury	0.066	ug/L	+/-0.2	U	AV	0.066	0.2

METALS
-4-
Interference Check Sample

SDG No: 09-2516

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	518000	ug/L	500000	ug/L	104	80.0 - 120.0	07-JUL-09 07:46	070709-1
	Arsenic	8.8	ug/L					07-JUL-09 07:46	070709-1
	Barium	1.13	ug/L					07-JUL-09 07:46	070709-1
	Calcium	479000	ug/L	500000	ug/L	95.7	80.0 - 120.0	07-JUL-09 07:46	070709-1
	Chromium	-1.39	ug/L					07-JUL-09 07:46	070709-1
	Cobalt	-1.15	ug/L					07-JUL-09 07:46	070709-1
	Copper	4.16	ug/L					07-JUL-09 07:46	070709-1
	Iron	181000	ug/L	200000	ug/L	90.7	80.0 - 120.0	07-JUL-09 07:46	070709-1
	Magnesium	477000	ug/L	500000	ug/L	95.4	80.0 - 120.0	07-JUL-09 07:46	070709-1
	Nickel	5.28	ug/L					07-JUL-09 07:46	070709-1
	Potassium	-237.0	ug/L					07-JUL-09 07:46	070709-1
	Selenium	11.2	ug/L					07-JUL-09 07:46	070709-1
	Silver	-4.66	ug/L					07-JUL-09 07:46	070709-1
	Sodium	43.7	ug/L					07-JUL-09 07:46	070709-1
	Vanadium	-2.12	ug/L					07-JUL-09 07:46	070709-1
	Zinc	-4.51	ug/L					07-JUL-09 07:46	070709-1
ICSAB01									
	Aluminum	514000	ug/L	500000	ug/L	103	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Arsenic	516	ug/L	500	ug/L	103	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Barium	489	ug/L	500	ug/L	97.9	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Calcium	474000	ug/L	500000	ug/L	94.8	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Chromium	479	ug/L	500	ug/L	95.8	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Cobalt	453	ug/L	500	ug/L	90.7	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Copper	568	ug/L	500	ug/L	114	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Iron	181000	ug/L	200000	ug/L	90.4	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Magnesium	474000	ug/L	500000	ug/L	94.8	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Nickel	464	ug/L	500	ug/L	92.8	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Potassium	5050	ug/L	5000	ug/L	101	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Selenium	2520	ug/L	2500	ug/L	101	80.0 - 120.0	07-JUL-09 07:52	070709-1

METALS
-4-
Interference Check Sample

SDG No: 09-2516

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silver	276	ug/L	250	ug/L	110	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Sodium	5380	ug/L	5000	ug/L	108	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Vanadium	518	ug/L	500	ug/L	104	80.0 - 120.0	07-JUL-09 07:52	070709-1
	Zinc	483	ug/L	500	ug/L	96.7	80.0 - 120.0	07-JUL-09 07:52	070709-1

METALS
-4-
Interference Check Sample

SDG No: 09--2516

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.396	ug/L					14-JUL-09 10:54	090714-2
	Beryllium	0.093	ug/L					14-JUL-09 10:54	090714-2
	Cadmium	0.467	ug/L					14-JUL-09 10:54	090714-2
	Lead	0.17	ug/L					14-JUL-09 10:54	090714-2
	Manganese	5.89	ug/L					14-JUL-09 10:54	090714-2
	Thallium	0.056	ug/L					14-JUL-09 10:54	090714-2
ICSAB01									
	Antimony	21.2	ug/L	20.1	ug/L	105	80.0 - 120.0	14-JUL-09 10:58	090714-2
	Beryllium	20.4	ug/L	20	ug/L	102	80.0 - 120.0	14-JUL-09 10:58	090714-2
	Cadmium	20.7	ug/L	20.4	ug/L	101	80.0 - 120.0	14-JUL-09 10:58	090714-2
	Lead	20.3	ug/L	20.5	ug/L	99	80.0 - 120.0	14-JUL-09 10:58	090714-2
	Manganese	25.8	ug/L	25.8	ug/L	100	80.0 - 120.0	14-JUL-09 10:58	090714-2
	Thallium	19.4	ug/L	20	ug/L	97.2	80.0 - 120.0	14-JUL-09 10:58	090714-2

METALS
–5a–

Matrix Spike Summary

SDG NO. 09–2516 **Client ID** CAMO–09–10024S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232662001 **Spike ID:** 1201873177

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75–125	5020		68	U	5000	99.9		P
Arsenic	ug/L	75–125	476		5	U	500	95		P
Barium	ug/L	75–125	488		1.28	J	500	97.3		P
Calcium	ug/L	75–125	5120		52.7	J	5000	101		P
Chromium	ug/L	75–125	476		1	U	500	95.1		P
Cobalt	ug/L	75–125	462		1	U	500	92.2		P
Copper	ug/L	75–125	484		3	U	500	96.8		P
Iron	ug/L	75–125	4940		30	U	5000	98.9		P
Magnesium	ug/L	75–125	5060		85	U	5000	101		P
Nickel	ug/L	75–125	472		1.5	U	500	94.2		P
Potassium	ug/L	75–125	5150		347		5000	96		P
Selenium	ug/L	75–125	479		5	U	500	95.1		P
Silver	ug/L	75–125	478		1	U	500	95.5		P
Sodium	ug/L	75–125	5210		238	J	5000	99.4		P
Vanadium	ug/L	75–125	487		1.47	J	500	97		P
Zinc	ug/L	75–125	465		3.62	J	500	92.3		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2516 **Client ID** CAMO-09-10024S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232662001 **Spike ID:** 1201873230

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Beryllium	ug/L	75-125	44.3		0.1	U	50	88.5		MS
Cadmium	ug/L	75-125	5.26		0.11	U	5	105		MS
Lead	ug/L	75-125	20.6		0.5	U	20	103		MS
Manganese	ug/L	75-125	52.2		1	U	50	103		MS
Thallium	ug/L	75-125	26.3		0.3	U	50	52.1	N	MS
Antimony	ug/L	75-125	105		1	U	100	105		MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2516 **Client ID** CAMO-09-10024S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232662001 **Spike ID:** 1201873358

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75-125	2.17		0.066	U	2	109		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2516

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-10024D

Sample ID: 232662001 **Duplicate ID:** 1201873176 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68	U	68	U			P
Arsenic	ug/L		5	U	5	U			P
Barium	ug/L		1.28	J	1	U	200		P
Calcium	ug/L		52.7	J	50	U	200		P
Chromium	ug/L		1	U	1	U			P
Cobalt	ug/L		1	U	1	U			P
Copper	ug/L		3	U	3	U			P
Iron	ug/L		30	U	30	U			P
Magnesium	ug/L		85	U	85	U			P
Nickel	ug/L		1.5	U	1.5	U			P
Potassium	ug/L	+/-150	347		310		11.3		P
Selenium	ug/L		5	U	5	U			P
Silver	ug/L		1	U	1	U			P
Sodium	ug/L	+/-300	238	J	197	J	19.2		P
Vanadium	ug/L	+/-5	1.47	J	1.31	J	11.5		P
Zinc	ug/L		3.62	J	3.3	U	200		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2516

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO–09–10024D

Sample ID: 232662001 **Duplicate ID:** 1201873229 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		1	U	1	U			MS
Beryllium	ug/L		0.1	U	0.1	U			MS
Cadmium	ug/L		0.11	U	0.11	U			MS
Lead	ug/L		0.5	U	0.5	U			MS
Manganese	ug/L		1	U	1	U			MS
Thallium	ug/L		0.3	U	0.3	U			MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2516

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-10024D

Sample ID: 232662001 **Duplicate ID:** 1201873357 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066	U	0.066	U			AV

METALS
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Laboratory Control Sample Summary

SDG NO. 09-2516

Contract: LANL01004

Aqueous LCS Source: OS2I **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873175								
	Aluminum	ug/L	5000	4940		98.7	80-120	P
	Arsenic	ug/L	500	466		93.2	80-120	P
	Barium	ug/L	500	479		95.7	80-120	P
	Calcium	ug/L	5000	5000		99.9	80-120	P
	Chromium	ug/L	500	468		93.5	80-120	P
	Cobalt	ug/L	500	453		90.7	80-120	P
	Copper	ug/L	500	475		94.9	80-120	P
	Iron	ug/L	5000	4840		96.9	80-120	P
	Magnesium	ug/L	5000	4940		98.7	80-120	P
	Nickel	ug/L	500	464		92.9	80-120	P
	Potassium	ug/L	5000	4710		94.2	80-120	P
	Selenium	ug/L	500	476		95.3	80-120	P
	Silver	ug/L	500	469		93.8	80-120	P
	Sodium	ug/L	5000	4950		99.1	80-120	P
	Vanadium	ug/L	500	478		95.6	80-120	P
	Zinc	ug/L	500	458		91.6	80-120	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2516

Contract: LANL01004

Aqueous LCS Source:O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873228								
	Antimony	ug/L	50	53.1		106	80-120	MS
	Beryllium	ug/L	50	50.3		101	80-120	MS
	Cadmium	ug/L	50	53		106	80-120	MS
	Lead	ug/L	50	52.4		105	80-120	MS
	Manganese	ug/L	50	56.7		113	80-120	MS
	Thallium	ug/L	50	48.3		96.5	80-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2516

Contract: LANL01004

Aqueous LCS Source: GEL **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873356								
	Mercury	ug/L	2	2.22		111	80-120	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2516 **Client ID** CAMO-09-10024L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232662001 **Serial Dilution ID:** 1201873178

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Arsenic	5	U	25	U				P
Barium	1.28	J	5	U	100			P
Calcium	52.7	J	250	U	100			P
Chromium	1	U	5	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	30	U	150	U				P
Magnesium	85	U	425	U				P
Nickel	1.5	U	7.5	U				P
Potassium	347		250	U	100			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	238	J	500	U	100			P
Vanadium	1.47	J	5	U	100			P
Zinc	3.62	J	16.5	U	100			P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2516 **Client ID** CAMO-09-10024L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232662001 **Serial Dilution ID:** 1201873231

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	1	U	5	U				MS
Beryllium	.1	U	.5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	.5	U	2.5	U				MS
Manganese	1	U	5	U				MS
Thallium	.3	U	12.8					MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2516 **Client ID** CAMO-09-10024L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232662001 **Serial Dilution ID:** 1201873359

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2516 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	881992						
1201873174	MB for batch 881992	MB	W	06-JUL-09	50mL	50mL	
1201873175	LCS for batch 881992	LCS	W	06-JUL-09	50mL	50mL	
1201873177	CAMO-09-10024S	MS	W	06-JUL-09	50mL	50mL	
1201873176	CAMO-09-10024D	DUP	W	06-JUL-09	50mL	50mL	
232662001	CAMO-09-10024	SAMPLE	W	06-JUL-09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2516 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882018						
1201873227	MB for batch 882018	MB	W	06-JUL-09	50mL	50mL	
1201873228	LCS for batch 882018	LCS	W	06-JUL-09	50mL	50mL	
1201873230	CAMO-09-10024S	MS	W	06-JUL-09	50mL	50mL	
1201873229	CAMO-09-10024D	DUP	W	06-JUL-09	50mL	50mL	
232662001	CAMO-09-10024	SAMPLE	W	06-JUL-09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2516 **Method Type**: AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882077						
1201873355	MB for batch 882077	MB	W	02-JUL-09	20mL	20mL	
1201873356	LCS for batch 882077	LCS	W	02-JUL-09	20mL	20mL	
1201873358	CAMO-09-10024S	MS	W	02-JUL-09	20mL	20mL	
1201873357	CAMO-09-10024D	DUP	W	02-JUL-09	20mL	20mL	
232662001	CAMO-09-10024	SAMPLE	W	02-JUL-09	20mL	20mL	

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 07-JUL-09 **End Date:** 07-JUL-09

Client Sdg: 09-2516
Method P
Data File: 070709-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	06:53	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S0.1	1	07:00			X	X				X	X	X						X	X	X	X			X	X
S0.5	1	07:06	X		X	X			X	X	X	X			X			X	X	X	X			X	X
SCAL	1	07:13	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S10	1	07:20	X						X				X		X							X			
ICV01	1	07:26	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICB01	1	07:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
PQL01	1	07:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSA01	1	07:46	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSAB01	1	07:52	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR01	1	07:57	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR02	1	08:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV01	1	08:11	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB01	1	08:18	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR03	1	08:29	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR04	1	08:36	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV02	1	08:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB02	1	08:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873174	1	08:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873175	1	09:05	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
232662001	1	09:12	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873176	1	09:19	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873177	1	09:26	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873178	5	09:33	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV03	1	09:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB03	1	09:46	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: HG3
Start Date: 06–JUL–09 **End Date:** 06–JUL–09

Client Sdg: 09–2516
Method AV
Data File: 070609W1–3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:07															X								
S0.2	1	09:09															X								
S0.5	1	09:11															X								
S2.0	1	09:12															X								
S5.0	1	09:14															X								
S10.0	1	09:16															X								
ICV01	1	09:18															X								
ICB01	1	09:20															X								
CRDL01	1	09:22															X								
CCV01	1	09:24															X								
CCB01	1	09:26															X								
ZZZZZZ	1	09:28																							
ZZZZZZ	1	09:30																							
ZZZZZZ	1	09:32																							
ZZZZZZ	1	09:34																							
ZZZZZZ	1	09:36																							
ZZZZZZ	5	09:37																							
ZZZZZZ	1	09:39																							
ZZZZZZ	1	09:41																							
ZZZZZZ	1	09:43																							
ZZZZZZ	1	09:45																							
CCV02	1	09:47															X								
CCB02	1	09:49															X								
ZZZZZZ	1	09:51																							
ZZZZZZ	1	09:53																							
ZZZZZZ	1	09:55																							
ZZZZZZ	5	09:57																							
ZZZZZZ	1	09:59																							
ZZZZZZ	1	10:01																							
ZZZZZZ	1	10:02																							
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
ZZZZZZ	1	10:08																							
CCV03	1	10:10															X								
CCB03	1	10:12															X								
ZZZZZZ	1	10:14																							
ZZZZZZ	1	10:16																							
ZZZZZZ	1	10:18																							
ZZZZZZ	1	10:20																							
ZZZZZZ	1	10:22																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	1	10:24																						
ZZZZZZ	1	10:26																						
ZZZZZZ	1	10:28																						
ZZZZZZ	1	10:29																						
ZZZZZZ	1	10:31																						
CCV04	1	10:33														X								
CCB04	1	10:35														X								
ZZZZZZ	1	10:37																						
ZZZZZZ	1	10:39																						
ZZZZZZ	1	10:41																						
ZZZZZZ	5	10:43																						
ZZZZZZ	1	10:45																						
ZZZZZZ	1	10:47																						
ZZZZZZ	1	10:49																						
ZZZZZZ	1	10:51																						
ZZZZZZ	1	10:53																						
ZZZZZZ	1	10:54																						
CCV05	1	10:56														X								
CCB05	1	10:58														X								
1201873355	1	11:00														X								
1201873356	1	11:02														X								
232662001	1	11:04														X								
1201873357	1	11:06														X								
1201873358	1	11:08														X								
1201873359	5	11:10														X								
ZZZZZZ	1	11:12																						
ZZZZZZ	1	11:14																						
ZZZZZZ	1	11:16																						
ZZZZZZ	1	11:18																						
CCV06	1	11:20														X								
CCB06	1	11:21														X								

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 14–JUL–09 **End Date:** 14–JUL–09

Client Sdg: 09–2516
Method MS
Data File: 090714–2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	10:32		X			X	X						X		X							X		
S10	1	10:36		X			X	X						X		X							X		
S100	1	10:39		X			X	X						X		X							X		
ICV01	1	10:43		X			X	X						X		X							X		
ICB01	1	10:47		X			X	X						X		X							X		
CRDL01	1	10:50		X			X	X						X		X							X		
ICSA01	1	10:54		X			X	X						X		X							X		
ICSAB01	1	10:58		X			X	X						X		X							X		
CCV01	1	11:01		X			X	X						X		X							X		
CCB01	1	11:05		X			X	X						X		X							X		
ZZZZZZ	2	11:09																							
ZZZZZZ	40	11:12																							
ZZZZZZ	2	11:16																							
ZZZZZZ	2	11:20																							
ZZZZZZ	2	11:23																							
ZZZZZZ	2	11:27																							
ZZZZZZ	10	11:31																							
CCV02	1	11:35		X			X	X						X		X							X		
CCB02	1	11:38		X			X	X						X		X							X		
ZZZZZZ	2	11:42																							
ZZZZZZ	2	11:46																							
ZZZZZZ	2	11:49																							
ZZZZZZ	2	11:53																							
CCV03	1	11:57		X			X	X						X		X							X		
CCB03	1	12:01		X			X	X						X		X							X		
ZZZZZZ	2	12:04																							
ZZZZZZ	40	12:08																							
ZZZZZZ	2	12:12																							
ZZZZZZ	2	12:15																							
ZZZZZZ	2	12:19																							
ZZZZZZ	2	12:23																							
ZZZZZZ	10	12:27																							
CCV04	1	12:30		X			X	X						X		X							X		
CCB04	1	12:34		X			X	X						X		X							X		
ZZZZZZ	2	12:38																							
ZZZZZZ	2	12:41																							
ZZZZZZ	2	12:45																							
ZZZZZZ	2	12:49																							
ZZZZZZ	2	12:52																							
ZZZZZZ	2	12:56																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	2	13:00																						
CCV05	1	13:03		X			X	X						X		X						X		
CCB05	1	13:07		X			X	X						X		X						X		
1201873227	1	13:11		X			X	X						X		X						X		
1201873228	1	13:14		X			X	X						X		X						X		
232662001	1	13:18		X			X	X						X		X						X		
1201873229	1	13:21		X			X	X						X		X						X		
1201873230	1	13:25		X			X	X						X		X						X		
1201873231	5	13:29		X			X	X						X		X						X		
CCV06	1	13:32		X			X	X						X		X						X		
CCB06	1	13:36		X			X	X						X		X						X		

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2516

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		3.0	10
	Zinc		3.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2516

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Mercury		0.066	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2516

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	50.0	200
	Chromium	267.716	1.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	30.0	100
	Lead	220.353	3.3	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	100	300
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2516
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2516
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
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Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 09-2516
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-MAY-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2516
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2516
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2516
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2516

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2516

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09

Raw Data

-2.0	15.0	10322.0
-1.5	15.0	12891.1
-1.0	15.0	15454.9
-0.5	15.0	16018.0
0.0	15.0	15455.2
0.5	15.0	10174.1
1.0	15.0	5997.2
1.5	15.0	7437.5
2.0	15.0	6325.3
2.5	15.0	3939.4
3.0	15.0	3240.9
3.5	15.0	2711.7
4.0	15.0	2317.6
4.5	15.0	2169.7
5.0	15.0	2282.8
5.5	15.0	2619.3
6.0	15.0	3126.9
6.5	15.0	3530.7
7.0	15.0	3858.9

7/7/2009 06:43:33 aligned for analyte Mn 257.610
X viewing position set to -0.5 mm having Peak intensity 16018.0 for Radial viewing

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Analysis Begun

Start Time: 7/7/2009 06:53:45 **Plasma On Time: 7/7/2009 06:30:28**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070709.sif
Batch ID:
Results Data Set: 070709
Results Library: C:\pe\Optima3\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 7/7/2009 06:53:45**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7562.0	7562.0	99.1	%	06:55:38
1	Y RADIAL	6905.7	6905.7	98.50	%	06:55:38
1	Al 396.153Radial†	-84.6	-85.4	[0.00]	ug/L	06:55:38
1	Ca 317.933Radial†	24.9	25.2	[0.00]	ug/L	06:55:58
1	Fe 238.204 Radial†	36.5	36.9	[0.00]	ug/L	06:55:58
1	K 766.490 Radial†	2284.8	2306.0	[0.00]	ug/L	06:55:38
1	Mg 279.077 IEC†	1.8	1.8	[0.00]	ug/L	06:55:58
1	Na 589.592 Radial†	-521.5	-526.4	[0.00]	ug/L	06:55:38
1	Sr 421.552†	-56.3	-56.9	[0.00]	ug/L	06:55:38
1	Sc 361.383	789595.6	789595.6	100.05	%	06:56:55
1	Y 371.029	605881.2	605881.2	100.01	%	06:56:55
1	Ag 328.068†	774.1	773.7	[0.00]	ug/L	06:56:55
1	As 188.979†	-43.8	-43.8	[0.00]	ug/L	06:57:15
1	B 249.677†	-1105.9	-1105.3	[0.00]	ug/L	06:57:15
1	Ba 233.527†	-13.3	-13.3	[0.00]	ug/L	06:57:15
1	Be 313.107†	-6488.8	-6485.3	[0.00]	ug/L	06:56:55
1	Cd 226.502†	-315.9	-315.7	[0.00]	ug/L	06:57:15
1	Co 228.616†	-127.0	-126.9	[0.00]	ug/L	06:57:15
1	Cr 267.716†	-72.2	-72.2	[0.00]	ug/L	06:57:15
1	Cu 324.752†	8652.6	8647.9	[0.00]	ug/L	06:56:55
1	Mn 257.610†	857.2	856.7	[0.00]	ug/L	06:57:15
1	Mo 202.031†	21.4	21.4	[0.00]	ug/L	06:57:15
1	Ni 231.604†	139.1	139.0	[0.00]	ug/L	06:57:15
1	P 214.914†	337.7	337.5	[0.00]	ug/L	06:57:15

1	Pb 220.353†	-15.2	-15.2	[0.00]	ug/L	06:57:15
1	S 181.975 Axial†	107.1	107.1	[0.00]	ug/L	06:57:15
1	Sb 206.836†	66.6	66.6	[0.00]	ug/L	06:57:15
1	Se 196.026†	-26.1	-26.1	[0.00]	ug/L	06:57:15
1	Si 251.611†	687.3	686.9	[0.00]	ug/L	06:57:15
1	Sn 189.927†	5.8	5.8	[0.00]	ug/L	06:57:15
1	Ti 334.940†	-1802.8	-1801.8	[0.00]	ug/L	06:56:55
1	Tl 190.801†	-85.1	-85.1	[0.00]	ug/L	06:57:15
1	U 409.014†	-6201.8	-6198.5	[0.00]	ug/L	06:56:55
1	V 292.402†	-1962.5	-1961.5	[0.00]	ug/L	06:56:55
1	Zn 213.857†	1019.3	1018.8	[0.00]	ug/L	06:57:15
1	SiO2†	713.7	713.3	[0.00]	ug/L	06:58:11
2	Sc Radial	7644.0	7644.0	100	%	06:56:03
2	Y RADIAL	7052.0	7052.0	100.6	%	06:56:03
2	Al 396.153Radial†	-48.0	-47.9	[0.00]	ug/L	06:56:03
2	Ca 317.933Radial†	23.0	23.0	[0.00]	ug/L	06:56:23
2	Fe 238.204 Radial†	34.5	34.4	[0.00]	ug/L	06:56:23
2	K 766.490 Radial†	2142.6	2139.3	[0.00]	ug/L	06:56:03
2	Mg 279.077 IEC†	5.4	5.4	[0.00]	ug/L	06:56:23
2	Na 589.592 Radial†	-551.7	-550.8	[0.00]	ug/L	06:56:03
2	Sr 421.552†	-29.2	-29.1	[0.00]	ug/L	06:56:03
2	Sc 361.383	790484.3	790484.3	100.17	%	06:57:20
2	Y 371.029	607041.8	607041.8	100.20	%	06:57:20
2	Ag 328.068†	749.8	748.5	[0.00]	ug/L	06:57:20
2	As 188.979†	-38.7	-38.6	[0.00]	ug/L	06:57:40
2	B 249.677†	-1056.4	-1054.6	[0.00]	ug/L	06:57:40
2	Ba 233.527†	12.2	12.2	[0.00]	ug/L	06:57:40
2	Be 313.107†	-6453.8	-6443.1	[0.00]	ug/L	06:57:20
2	Cd 226.502†	-314.2	-313.7	[0.00]	ug/L	06:57:40
2	Co 228.616†	-112.2	-112.0	[0.00]	ug/L	06:57:40
2	Cr 267.716†	-68.7	-68.6	[0.00]	ug/L	06:57:40
2	Cu 324.752†	8640.0	8625.6	[0.00]	ug/L	06:57:20
2	Mn 257.610†	841.1	839.7	[0.00]	ug/L	06:57:40
2	Mo 202.031†	11.9	11.9	[0.00]	ug/L	06:57:40
2	Ni 231.604†	152.4	152.2	[0.00]	ug/L	06:57:40
2	P 214.914†	362.8	362.2	[0.00]	ug/L	06:57:40
2	Pb 220.353†	-12.9	-12.8	[0.00]	ug/L	06:57:40
2	S 181.975 Axial†	106.1	106.0	[0.00]	ug/L	06:57:40
2	Sb 206.836†	54.4	54.3	[0.00]	ug/L	06:57:40
2	Se 196.026†	-41.7	-41.7	[0.00]	ug/L	06:57:40
2	Si 251.611†	734.3	733.1	[0.00]	ug/L	06:57:40
2	Sn 189.927†	12.0	12.0	[0.00]	ug/L	06:57:40
2	Ti 334.940†	-1664.3	-1661.5	[0.00]	ug/L	06:57:20
2	Tl 190.801†	-69.2	-69.0	[0.00]	ug/L	06:57:40
2	U 409.014†	-6000.4	-5990.4	[0.00]	ug/L	06:57:20
2	V 292.402†	-1880.3	-1877.2	[0.00]	ug/L	06:57:20
2	Zn 213.857†	1045.0	1043.3	[0.00]	ug/L	06:57:40
2	SiO2†	816.8	815.4	[0.00]	ug/L	06:58:16
3	Sc Radial	7691.1	7691.1	101	%	06:56:28
3	Y RADIAL	7074.1	7074.1	100.9	%	06:56:28
3	Al 396.153Radial†	-65.8	-65.3	[0.00]	ug/L	06:56:28
3	Ca 317.933Radial†	26.0	25.8	[0.00]	ug/L	06:56:48
3	Fe 238.204 Radial†	32.7	32.4	[0.00]	ug/L	06:56:48
3	K 766.490 Radial†	2291.7	2274.2	[0.00]	ug/L	06:56:28
3	Mg 279.077 IEC†	2.6	2.6	[0.00]	ug/L	06:56:48
3	Na 589.592 Radial†	-551.4	-547.2	[0.00]	ug/L	06:56:28
3	Sr 421.552†	-113.9	-113.0	[0.00]	ug/L	06:56:28
3	Sc 361.383	787419.9	787419.9	99.779	%	06:57:45
3	Y 371.029	604503.8	604503.8	99.785	%	06:57:45
3	Ag 328.068†	772.1	773.8	[0.00]	ug/L	06:57:45
3	As 188.979†	-37.2	-37.2	[0.00]	ug/L	06:58:05
3	B 249.677†	-1099.1	-1101.5	[0.00]	ug/L	06:58:05
3	Ba 233.527†	6.0	6.0	[0.00]	ug/L	06:58:05
3	Be 313.107†	-6382.2	-6396.4	[0.00]	ug/L	06:57:45
3	Cd 226.502†	-326.5	-327.3	[0.00]	ug/L	06:58:05
3	Co 228.616†	-129.8	-130.0	[0.00]	ug/L	06:58:05
3	Cr 267.716†	-81.8	-82.0	[0.00]	ug/L	06:58:05
3	Cu 324.752†	8825.4	8845.0	[0.00]	ug/L	06:57:45
3	Mn 257.610†	856.9	858.8	[0.00]	ug/L	06:58:05
3	Mo 202.031†	27.8	27.8	[0.00]	ug/L	06:58:05
3	Ni 231.604†	139.5	139.8	[0.00]	ug/L	06:58:05

3	P 214.914†	354.4	355.2	[0.00]	ug/L	06:58:05
3	Pb 220.353†	-28.8	-28.9	[0.00]	ug/L	06:58:05
3	S 181.975 Axial†	100.9	101.1	[0.00]	ug/L	06:58:05
3	Sb 206.836†	61.4	61.5	[0.00]	ug/L	06:58:05
3	Se 196.026†	-42.3	-42.4	[0.00]	ug/L	06:58:05
3	Si 251.611†	724.4	726.0	[0.00]	ug/L	06:58:05
3	Sn 189.927†	15.7	15.7	[0.00]	ug/L	06:58:05
3	Ti 334.940†	-1751.7	-1755.6	[0.00]	ug/L	06:57:45
3	Tl 190.801†	-76.7	-76.9	[0.00]	ug/L	06:58:05
3	U 409.014†	-6116.6	-6130.2	[0.00]	ug/L	06:57:45
3	V 292.402†	-1862.8	-1866.9	[0.00]	ug/L	06:57:45
3	Zn 213.857†	1017.4	1019.6	[0.00]	ug/L	06:58:05
3	SiO2†	789.2	791.0	[0.00]	ug/L	06:58:21

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	789166.6	1576.62	0.20%	100.000	%
Sc Radial	7632.3	65.34	0.86%	100	%
Y 371.029	605808.9	1270.52	0.21%	100.00	%
Y RADIAL	7010.6	91.51	1.31%	100.0	%
Ag 328.068†	765.4	14.57	1.90%	[0.00]	ug/L
Al 396.153Radial†	-66.2	18.75	28.33%	[0.00]	ug/L
As 188.979†	-39.9	3.44	8.64%	[0.00]	ug/L
B 249.677†	-1087.2	28.24	2.60%	[0.00]	ug/L
Ba 233.527†	1.6	13.31	819.91%	[0.00]	ug/L
Be 313.107†	-6441.6	44.48	0.69%	[0.00]	ug/L
Ca 317.933Radial†	24.6	1.47	5.97%	[0.00]	ug/L
Cd 226.502†	-318.9	7.34	2.30%	[0.00]	ug/L
Co 228.616†	-123.0	9.65	7.85%	[0.00]	ug/L
Cr 267.716†	-74.2	6.95	9.36%	[0.00]	ug/L
Cu 324.752†	8706.1	120.75	1.39%	[0.00]	ug/L
Fe 238.204 Radial†	34.6	2.22	6.41%	[0.00]	ug/L
K 766.490 Radial†	2239.8	88.49	3.95%	[0.00]	ug/L
Mg 279.077 IEC†	3.3	1.89	57.97%	[0.00]	ug/L
Mn 257.610†	851.8	10.46	1.23%	[0.00]	ug/L
Mo 202.031†	20.4	8.05	39.51%	[0.00]	ug/L
Na 589.592 Radial†	-541.5	13.19	2.44%	[0.00]	ug/L
Ni 231.604†	143.7	7.37	5.13%	[0.00]	ug/L
P 214.914†	351.7	12.73	3.62%	[0.00]	ug/L
Pb 220.353†	-19.0	8.66	45.67%	[0.00]	ug/L
S 181.975 Axial†	104.7	3.17	3.03%	[0.00]	ug/L
Sb 206.836†	60.8	6.17	10.15%	[0.00]	ug/L
Se 196.026†	-36.7	9.20	25.07%	[0.00]	ug/L
Si 251.611†	715.3	24.85	3.47%	[0.00]	ug/L
Sn 189.927†	11.2	4.98	44.59%	[0.00]	ug/L
Sr 421.552†	-66.3	42.74	64.44%	[0.00]	ug/L
Ti 334.940†	-1739.6	71.51	4.11%	[0.00]	ug/L
Tl 190.801†	-77.0	8.02	10.41%	[0.00]	ug/L
U 409.014†	-6106.3	106.06	1.74%	[0.00]	ug/L
V 292.402†	-1901.9	51.87	2.73%	[0.00]	ug/L
Zn 213.857†	1027.2	13.91	1.35%	[0.00]	ug/L
SiO2†	773.2	53.33	6.90%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/7/2009 07:00:31
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7754.0	7754.0	102	%	07:02:29
1	Y RADIAL	7038.2	7038.2	100.4	%	07:02:29
1	K 766.490 Radial†	6852.2	4504.9	[1000]	ug/L	07:02:24
1	Sr 421.552†	34815.3	34335.5	[100]	ug/L	07:02:24
1	Sc 361.383	779118.0	779118.0	98.727	%	07:02:56
1	Y 371.029	596995.7	596995.7	98.545	%	07:02:56
1	Ag 328.068†	19218.9	18701.4	[100]	ug/L	07:02:56
1	As 188.979†	302.6	346.4	[100]	ug/L	07:03:16
1	B 249.677†	3455.7	4587.4	[100]	ug/L	07:02:56
1	Ba 233.527†	16393.0	16602.8	[100]	ug/L	07:02:56
1	Be 313.107†	247263.5	256894.2	[100]	ug/L	07:02:56
1	Cd 226.502†	8528.0	8956.9	[100]	ug/L	07:03:16
1	Co 228.616†	6646.4	6855.1	[100]	ug/L	07:03:16
1	Cr 267.716†	7762.2	7936.6	[100]	ug/L	07:02:56
1	Cu 324.752†	39514.5	31318.0	[100]	ug/L	07:02:56
1	Mn 257.610†	106684.1	107208.3	[100]	ug/L	07:02:56
1	Mo 202.031†	1626.6	1627.2	[100]	ug/L	07:03:16
1	Ni 231.604†	4330.8	4243.0	[100]	ug/L	07:03:16
1	P 214.914†	1604.2	1273.2	[500]	ug/L	07:03:16
1	Pb 220.353†	933.2	964.2	[100]	ug/L	07:03:16
1	S 181.975 Axial†	288.8	187.9	[200]	ug/L	07:03:16
1	Sb 206.836†	463.2	408.3	[100]	ug/L	07:03:16
1	Se 196.026†	231.8	271.5	[100]	ug/L	07:03:16
1	Si 251.611†	20150.6	19695.2	[500]	ug/L	07:02:56
1	Sn 189.927†	653.6	650.9	[100]	ug/L	07:03:16
1	Ti 334.940†	59684.3	62193.7	[100]	ug/L	07:02:56
1	Tl 190.801†	383.5	465.4	[100]	ug/L	07:03:16
1	U 409.014†	-2744.1	3326.9	[100]	ug/L	07:02:56
1	V 292.402†	10267.1	12301.4	[100]	ug/L	07:02:56
1	Zn 213.857†	13934.2	13086.7	[100]	ug/L	07:02:56
1	SiO2†	20091.0	19577.0	[1069.5]	ug/L	07:04:12
2	Sc Radial	7787.4	7787.4	102	%	07:02:39
2	Y RADIAL	7107.9	7107.9	101.4	%	07:02:39
2	K 766.490 Radial†	6945.2	4567.1	[1000]	ug/L	07:02:34
2	Sr 421.552†	34994.8	34364.4	[100]	ug/L	07:02:34
2	Sc 361.383	784164.8	784164.8	99.366	%	07:03:21
2	Y 371.029	599994.4	599994.4	99.040	%	07:03:21
2	Ag 328.068†	19418.3	18776.8	[100]	ug/L	07:03:21
2	As 188.979†	285.8	327.5	[100]	ug/L	07:03:41
2	B 249.677†	3464.9	4574.2	[100]	ug/L	07:03:21
2	Ba 233.527†	16488.3	16591.8	[100]	ug/L	07:03:21
2	Be 313.107†	248900.4	256929.6	[100]	ug/L	07:03:21
2	Cd 226.502†	8485.6	8858.6	[100]	ug/L	07:03:41
2	Co 228.616†	6614.1	6779.2	[100]	ug/L	07:03:41
2	Cr 267.716†	7799.3	7923.3	[100]	ug/L	07:03:21
2	Cu 324.752†	39938.3	31486.9	[100]	ug/L	07:03:21
2	Mn 257.610†	107555.6	107389.9	[100]	ug/L	07:03:21
2	Mo 202.031†	1612.0	1601.9	[100]	ug/L	07:03:41
2	Ni 231.604†	4294.7	4178.4	[100]	ug/L	07:03:41
2	P 214.914†	1598.9	1257.5	[500]	ug/L	07:03:41
2	Pb 220.353†	971.4	996.5	[100]	ug/L	07:03:41
2	S 181.975 Axial†	286.4	183.5	[200]	ug/L	07:03:41
2	Sb 206.836†	463.5	405.7	[100]	ug/L	07:03:41
2	Se 196.026†	231.5	269.7	[100]	ug/L	07:03:41
2	Si 251.611†	20241.1	19654.9	[500]	ug/L	07:03:21
2	Sn 189.927†	657.8	650.9	[100]	ug/L	07:03:41
2	Ti 334.940†	60228.8	62352.6	[100]	ug/L	07:03:21
2	Tl 190.801†	386.9	466.3	[100]	ug/L	07:03:41
2	U 409.014†	-2669.2	3420.1	[100]	ug/L	07:03:21

2	V 292.402†	10378.6	12346.7	[100]	ug/L	07:03:21
2	Zn 213.857†	14010.4	13072.5	[100]	ug/L	07:03:21
2	SiO2†	20040.1	19394.7	[1069.5]	ug/L	07:04:17
3	Sc Radial	7679.2	7679.2	101	%	07:02:49
3	Y RADIAL	6982.4	6982.4	99.60	%	07:02:49
3	K 766.490 Radial†	7192.8	4909.1	[1000]	ug/L	07:02:44
3	Sr 421.552†	35614.2	35463.0	[100]	ug/L	07:02:44
3	Sc 361.383	781238.6	781238.6	98.995	%	07:03:47
3	Y 371.029	598609.7	598609.7	98.812	%	07:03:47
3	Ag 328.068†	19252.6	18682.6	[100]	ug/L	07:03:47
3	As 188.979†	295.8	338.7	[100]	ug/L	07:04:07
3	B 249.677†	3372.1	4493.5	[100]	ug/L	07:03:47
3	Ba 233.527†	16387.9	16552.6	[100]	ug/L	07:03:47
3	Be 313.107†	247645.0	256599.7	[100]	ug/L	07:03:47
3	Cd 226.502†	8471.3	8876.1	[100]	ug/L	07:04:07
3	Co 228.616†	6610.5	6800.6	[100]	ug/L	07:04:07
3	Cr 267.716†	7696.4	7848.7	[100]	ug/L	07:03:47
3	Cu 324.752†	39520.1	31215.0	[100]	ug/L	07:03:47
3	Mn 257.610†	106606.7	106836.8	[100]	ug/L	07:03:47
3	Mo 202.031†	1622.8	1618.9	[100]	ug/L	07:04:07
3	Ni 231.604†	4297.8	4197.8	[100]	ug/L	07:04:07
3	P 214.914†	1602.5	1267.2	[500]	ug/L	07:04:07
3	Pb 220.353†	949.8	978.4	[100]	ug/L	07:04:07
3	S 181.975 Axial†	282.3	180.5	[200]	ug/L	07:04:07
3	Sb 206.836†	467.2	411.1	[100]	ug/L	07:04:07
3	Se 196.026†	216.9	255.8	[100]	ug/L	07:04:07
3	Si 251.611†	20239.8	19729.9	[500]	ug/L	07:03:47
3	Sn 189.927†	649.1	644.5	[100]	ug/L	07:04:07
3	Ti 334.940†	60051.3	62400.3	[100]	ug/L	07:03:47
3	Tl 190.801†	379.8	460.7	[100]	ug/L	07:04:07
3	U 409.014†	-2746.8	3331.7	[100]	ug/L	07:03:47
3	V 292.402†	10334.5	12341.2	[100]	ug/L	07:03:47
3	Zn 213.857†	13867.7	12981.2	[100]	ug/L	07:03:47
3	SiO2†	20108.2	19539.0	[1069.5]	ug/L	07:04:22

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	781507.1	2534.09	0.32%	99.029	%
Sc Radial	7740.2	55.36	0.72%	101	%
Y 371.029	598533.2	1500.79	0.25%	98.799	%
Y RADIAL	7042.8	62.86	0.89%	100.5	%
Ag 328.068†	18720.3	49.84	0.27%	[100]	ug/L
As 188.979†	337.5	9.47	2.81%	[100]	ug/L
B 249.677†	4551.7	50.84	1.12%	[100]	ug/L
Ba 233.527†	16582.4	26.41	0.16%	[100]	ug/L
Be 313.107†	256807.8	181.08	0.07%	[100]	ug/L
Cd 226.502†	8897.2	52.43	0.59%	[100]	ug/L
Co 228.616†	6811.6	39.10	0.57%	[100]	ug/L
Cr 267.716†	7902.9	47.35	0.60%	[100]	ug/L
Cu 324.752†	31340.0	137.27	0.44%	[100]	ug/L
K 766.490 Radial†	4660.3	217.63	4.67%	[1000]	ug/L
Mn 257.610†	107145.0	281.93	0.26%	[100]	ug/L
Mo 202.031†	1616.0	12.92	0.80%	[100]	ug/L
Ni 231.604†	4206.4	33.16	0.79%	[100]	ug/L
P 214.914†	1265.9	7.94	0.63%	[500]	ug/L
Pb 220.353†	979.7	16.22	1.66%	[100]	ug/L
S 181.975 Axial†	183.9	3.71	2.02%	[200]	ug/L
Sb 206.836†	408.4	2.71	0.66%	[100]	ug/L
Se 196.026†	265.7	8.57	3.23%	[100]	ug/L
Si 251.611†	19693.3	37.57	0.19%	[500]	ug/L
Sn 189.927†	648.7	3.68	0.57%	[100]	ug/L
Sr 421.552†	34720.9	642.78	1.85%	[100]	ug/L
Ti 334.940†	62315.5	108.15	0.17%	[100]	ug/L
Tl 190.801†	464.1	3.04	0.66%	[100]	ug/L
U 409.014†	3359.6	52.49	1.56%	[100]	ug/L
V 292.402†	12329.8	24.73	0.20%	[100]	ug/L
Zn 213.857†	13046.8	57.27	0.44%	[100]	ug/L
SiO2†	19503.5	96.16	0.49%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/7/2009 07:06:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7412.7	7412.7	97.1	%	07:08:46
1	Y RADIAL	6744.1	6744.1	96.20	%	07:08:46
1	Al 396.153Radial†	5977.5	6220.8	[5000]	ug/L	07:08:26
1	Ca 317.933Radial†	3828.3	3917.1	[5000]	ug/L	07:08:46
1	K 766.490 Radial†	25254.4	23762.8	[5000]	ug/L	07:08:26
1	Mg 279.077 IEC†	226.2	229.7	[5000]	ug/L	07:08:46
1	Sr 421.552†	173790.3	179005.2	[500]	ug/L	07:08:26
1	Sc 361.383	792767.0	792767.0	100.46	%	07:09:44
1	Y 371.029	600377.0	600377.0	99.103	%	07:09:44
1	Ag 328.068†	92192.2	91008.2	[500]	ug/L	07:09:44
1	As 188.979†	1644.7	1677.2	[500]	ug/L	07:10:05
1	B 249.677†	21794.6	22782.8	[500]	ug/L	07:09:44
1	Ba 233.527†	79233.2	78871.7	[500]	ug/L	07:09:44
1	Be 313.107†	1239191.4	1240005.0	[500]	ug/L	07:09:44
1	Cd 226.502†	43382.1	43503.9	[500]	ug/L	07:09:44
1	Co 228.616†	32154.6	32131.5	[500]	ug/L	07:10:05
1	Cr 267.716†	38001.0	37902.6	[500]	ug/L	07:09:44
1	Cu 324.752†	161983.5	152541.7	[500]	ug/L	07:09:44
1	Mn 257.610†	509529.2	506363.3	[500]	ug/L	07:09:44
1	Mo 202.031†	7924.2	7867.8	[500]	ug/L	07:10:05
1	Ni 231.604†	20499.1	20262.3	[500]	ug/L	07:10:05
1	P 214.914†	6443.9	6063.0	[2500]	ug/L	07:10:05
1	Pb 220.353†	4689.1	4686.7	[500]	ug/L	07:10:05
1	S 181.975 Axial†	1003.7	894.4	[1000]	ug/L	07:10:05
1	Sb 206.836†	2067.4	1997.2	[500]	ug/L	07:10:05
1	Se 196.026†	1246.8	1277.8	[500]	ug/L	07:10:05
1	Si 251.611†	97101.9	95945.6	[2500]	ug/L	07:09:44
1	Sn 189.927†	3142.3	3116.9	[500]	ug/L	07:10:05
1	Ti 334.940†	302588.8	302954.2	[500]	ug/L	07:09:44
1	Tl 190.801†	2116.2	2183.6	[500]	ug/L	07:10:05
1	U 409.014†	9765.9	15827.8	[500]	ug/L	07:09:44
1	V 292.402†	57795.3	59434.7	[500]	ug/L	07:09:44
1	Zn 213.857†	63550.2	62234.3	[500]	ug/L	07:09:44
1	SiO2†	98402.7	97182.6	[5347.5]	ug/L	07:11:05
2	Sc Radial	7505.9	7505.9	98.3	%	07:09:11
2	Y RADIAL	6834.1	6834.1	97.48	%	07:09:11
2	Al 396.153Radial†	5881.4	6046.6	[5000]	ug/L	07:08:51
2	Ca 317.933Radial†	3865.2	3905.7	[5000]	ug/L	07:09:11
2	K 766.490 Radial†	24871.4	23050.5	[5000]	ug/L	07:08:51
2	Mg 279.077 IEC†	226.3	226.8	[5000]	ug/L	07:09:11
2	Sr 421.552†	171728.3	174687.0	[500]	ug/L	07:08:51
2	Sc 361.383	791505.5	791505.5	100.30	%	07:10:12
2	Y 371.029	599316.5	599316.5	98.928	%	07:10:12
2	Ag 328.068†	91994.2	90957.1	[500]	ug/L	07:10:12
2	As 188.979†	1640.9	1676.0	[500]	ug/L	07:10:32
2	B 249.677†	21884.0	22906.5	[500]	ug/L	07:10:12
2	Ba 233.527†	78984.3	78749.2	[500]	ug/L	07:10:12
2	Be 313.107†	1236363.9	1239152.0	[500]	ug/L	07:10:12
2	Cd 226.502†	43163.7	43355.0	[500]	ug/L	07:10:12
2	Co 228.616†	32055.4	32083.7	[500]	ug/L	07:10:32
2	Cr 267.716†	38007.8	37969.7	[500]	ug/L	07:10:12
2	Cu 324.752†	162015.9	152831.0	[500]	ug/L	07:10:12
2	Mn 257.610†	508806.9	506451.6	[500]	ug/L	07:10:12
2	Mo 202.031†	7894.6	7850.9	[500]	ug/L	07:10:32
2	Ni 231.604†	20439.9	20235.8	[500]	ug/L	07:10:32
2	P 214.914†	6414.4	6043.8	[2500]	ug/L	07:10:32
2	Pb 220.353†	4677.9	4683.0	[500]	ug/L	07:10:32
2	S 181.975 Axial†	1008.0	900.4	[1000]	ug/L	07:10:32
2	Sb 206.836†	2065.0	1998.1	[500]	ug/L	07:10:32

2	Se 196.026†	1212.5	1245.6	[500]	ug/L	07:10:32
2	Si 251.611†	97255.5	96252.8	[2500]	ug/L	07:10:12
2	Sn 189.927†	3126.3	3105.9	[500]	ug/L	07:10:32
2	Ti 334.940†	302053.6	302900.6	[500]	ug/L	07:10:12
2	Tl 190.801†	2110.6	2181.3	[500]	ug/L	07:10:32
2	U 409.014†	9903.5	15980.6	[500]	ug/L	07:10:12
2	V 292.402†	57630.8	59362.3	[500]	ug/L	07:10:12
2	Zn 213.857†	63311.6	62097.3	[500]	ug/L	07:10:12
2	SiO2†	96981.4	95921.6	[5347.5]	ug/L	07:11:10
3	Sc Radial	7496.8	7496.8	98.2	%	07:09:36
3	Y RADIAL	6831.3	6831.3	97.44	%	07:09:36
3	Al 396.153Radial†	5917.0	6090.2	[5000]	ug/L	07:09:16
3	Ca 317.933Radial†	3865.0	3910.3	[5000]	ug/L	07:09:36
3	K 766.490 Radial†	24655.8	22861.8	[5000]	ug/L	07:09:16
3	Mg 279.077 IEC†	228.9	229.7	[5000]	ug/L	07:09:36
3	Sr 421.552†	170022.3	173163.2	[500]	ug/L	07:09:16
3	Sc 361.383	793045.9	793045.9	100.49	%	07:10:39
3	Y 371.029	600787.2	600787.2	99.171	%	07:10:39
3	Ag 328.068†	91959.5	90744.3	[500]	ug/L	07:10:39
3	As 188.979†	1635.4	1667.3	[500]	ug/L	07:10:59
3	B 249.677†	21925.2	22905.1	[500]	ug/L	07:10:39
3	Ba 233.527†	79160.7	78771.9	[500]	ug/L	07:10:39
3	Be 313.107†	1238515.0	1238898.2	[500]	ug/L	07:10:39
3	Cd 226.502†	43237.9	43345.2	[500]	ug/L	07:10:39
3	Co 228.616†	31924.9	31891.7	[500]	ug/L	07:10:59
3	Cr 267.716†	37981.3	37869.7	[500]	ug/L	07:10:39
3	Cu 324.752†	161949.7	152451.3	[500]	ug/L	07:10:39
3	Mn 257.610†	508736.9	505396.6	[500]	ug/L	07:10:39
3	Mo 202.031†	7861.0	7802.1	[500]	ug/L	07:10:59
3	Ni 231.604†	20350.9	20107.7	[500]	ug/L	07:10:59
3	P 214.914†	6393.6	6010.6	[2500]	ug/L	07:10:59
3	Pb 220.353†	4658.7	4654.9	[500]	ug/L	07:10:59
3	S 181.975 Axial†	1000.6	891.0	[1000]	ug/L	07:10:59
3	Sb 206.836†	2064.2	1993.3	[500]	ug/L	07:10:59
3	Se 196.026†	1201.2	1232.0	[500]	ug/L	07:10:59
3	Si 251.611†	97027.8	95837.9	[2500]	ug/L	07:10:39
3	Sn 189.927†	3129.7	3103.2	[500]	ug/L	07:10:59
3	Ti 334.940†	302320.7	302581.5	[500]	ug/L	07:10:39
3	Tl 190.801†	2094.4	2161.1	[500]	ug/L	07:10:59
3	U 409.014†	9769.4	15827.9	[500]	ug/L	07:10:39
3	V 292.402†	57651.0	59270.8	[500]	ug/L	07:10:39
3	Zn 213.857†	63395.6	62058.3	[500]	ug/L	07:10:39
3	SiO2†	97335.4	96086.0	[5347.5]	ug/L	07:11:15

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	792439.5	820.78	0.10%	100.41	%
Sc Radial	7471.8	51.37	0.69%	97.9	%
Y 371.029	600160.2	758.96	0.13%	99.068	%
Y RADIAL	6803.2	51.19	0.75%	97.04	%
Ag 328.068†	90903.2	139.95	0.15%	[500]	ug/L
Al 396.153Radial†	6119.2	90.64	1.48%	[5000]	ug/L
As 188.979†	1673.5	5.39	0.32%	[500]	ug/L
B 249.677†	22864.8	71.01	0.31%	[500]	ug/L
Ba 233.527†	78797.6	65.18	0.08%	[500]	ug/L
Be 313.107†	1239351.7	579.83	0.05%	[500]	ug/L
Ca 317.933Radial†	3911.0	5.73	0.15%	[5000]	ug/L
Cd 226.502†	43401.4	88.95	0.20%	[500]	ug/L
Co 228.616†	32035.6	126.94	0.40%	[500]	ug/L
Cr 267.716†	37914.0	50.97	0.13%	[500]	ug/L
Cu 324.752†	152608.0	198.34	0.13%	[500]	ug/L
K 766.490 Radial†	23225.0	475.16	2.05%	[5000]	ug/L
Mg 279.077 IEC†	228.7	1.67	0.73%	[5000]	ug/L
Mn 257.610†	506070.5	585.30	0.12%	[500]	ug/L
Mo 202.031†	7840.3	34.10	0.43%	[500]	ug/L
Ni 231.604†	20201.9	82.67	0.41%	[500]	ug/L
P 214.914†	6039.1	26.48	0.44%	[2500]	ug/L
Pb 220.353†	4674.9	17.40	0.37%	[500]	ug/L
S 181.975 Axial†	895.2	4.75	0.53%	[1000]	ug/L

Sb 206.836†	1996.2	2.55	0.13%	[500]	ug/L
Se 196.026†	1251.8	23.54	1.88%	[500]	ug/L
Si 251.611†	96012.1	215.31	0.22%	[2500]	ug/L
Sn 189.927†	3108.7	7.23	0.23%	[500]	ug/L
Sr 421.552†	175618.5	3030.37	1.73%	[500]	ug/L
Ti 334.940†	302812.1	201.51	0.07%	[500]	ug/L
Tl 190.801†	2175.3	12.34	0.57%	[500]	ug/L
U 409.014†	15878.8	88.17	0.56%	[500]	ug/L
V 292.402†	59355.9	82.13	0.14%	[500]	ug/L
Zn 213.857†	62130.0	92.45	0.15%	[500]	ug/L
SiO2†	96396.8	685.51	0.71%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/7/2009 07:13:26
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7440.7	7440.7	97.5	%	07:15:39
1	Y RADIAL	6783.0	6783.0	96.75	%	07:15:39
1	Al 396.153Radial†	11992.6	12367.7	[10000]	ug/L	07:15:19
1	Ca 317.933Radial†	7748.6	7923.6	[10000]	ug/L	07:15:19
1	Fe 238.204 Radial†	2597.7	2630.0	[10000]	ug/L	07:15:39
1	K 766.490 Radial†	47481.5	46464.8	[10000]	ug/L	07:15:19
1	Mg 279.077 IEC†	451.5	459.9	[10000]	ug/L	07:15:39
1	Na 589.592 Radial†	168878.3	173770.0	[10000]	ug/L	07:15:19
1	Sr 421.552†	345789.9	354763.8	[1000]	ug/L	07:15:19
1	Sc 361.383	773319.4	773319.4	97.992	%	07:16:43
1	Y 371.029	587805.5	587805.5	97.028	%	07:16:43
1	Ag 328.068†	184830.6	187852.9	[1000]	ug/L	07:16:43
1	As 188.979†	3376.8	3485.9	[1000]	ug/L	07:17:03
1	B 249.677†	45732.3	47756.6	[1000]	ug/L	07:16:43
1	Ba 233.527†	158670.2	161920.1	[1000]	ug/L	07:16:43
1	Be 313.107†	2547701.6	2606351.8	[1000]	ug/L	07:16:37
1	Cd 226.502†	86950.9	89051.6	[1000]	ug/L	07:16:43
1	Co 228.616†	65787.8	67258.9	[1000]	ug/L	07:16:43
1	Cr 267.716†	76827.7	78476.4	[1000]	ug/L	07:16:43
1	Cu 324.752†	318766.6	316592.7	[1000]	ug/L	07:16:43
1	Mn 257.610†	1035962.9	1056340.5	[1000]	ug/L	07:16:37
1	Mo 202.031†	15723.3	16025.1	[1000]	ug/L	07:17:03
1	Ni 231.604†	41358.1	42062.0	[1000]	ug/L	07:16:43
1	P 214.914†	12591.5	12497.8	[5000]	ug/L	07:17:03
1	Pb 220.353†	9317.4	9527.3	[1000]	ug/L	07:17:03
1	S 181.975 Axial†	1927.0	1861.8	[2000]	ug/L	07:17:03
1	Sb 206.836†	4115.2	4138.7	[1000]	ug/L	07:17:03
1	Se 196.026†	2502.3	2590.3	[1000]	ug/L	07:17:03
1	Si 251.611†	191782.0	194996.8	[5000]	ug/L	07:16:43
1	Sn 189.927†	6312.3	6430.4	[1000]	ug/L	07:17:03
1	Ti 334.940†	617805.0	632205.0	[1000]	ug/L	07:16:37
1	Tl 190.801†	4320.4	4485.9	[1000]	ug/L	07:17:03
1	U 409.014†	27625.7	34298.1	[1000]	ug/L	07:16:43
1	V 292.402†	118986.0	123326.1	[1000]	ug/L	07:16:43
1	Zn 213.857†	126390.3	127953.2	[1000]	ug/L	07:16:43
1	SiO2†	194363.1	197572.9	[10695]	ug/L	07:18:12
2	Sc Radial	7534.0	7534.0	98.7	%	07:16:04
2	Y RADIAL	6868.8	6868.8	97.98	%	07:16:04
2	Al 396.153Radial†	11951.4	12173.6	[10000]	ug/L	07:15:44
2	Ca 317.933Radial†	7700.6	7776.5	[10000]	ug/L	07:15:44
2	Fe 238.204 Radial†	2629.6	2629.4	[10000]	ug/L	07:16:04
2	K 766.490 Radial†	47349.6	45727.9	[10000]	ug/L	07:15:44
2	Mg 279.077 IEC†	461.1	463.9	[10000]	ug/L	07:16:04
2	Na 589.592 Radial†	168004.5	170739.4	[10000]	ug/L	07:15:44
2	Sr 421.552†	344042.3	348600.4	[1000]	ug/L	07:15:44
2	Sc 361.383	773645.7	773645.7	98.033	%	07:17:15
2	Y 371.029	587837.4	587837.4	97.033	%	07:17:15
2	Ag 328.068†	184722.3	187662.8	[1000]	ug/L	07:17:15
2	As 188.979†	3319.3	3425.8	[1000]	ug/L	07:17:35
2	B 249.677†	45832.2	47838.8	[1000]	ug/L	07:17:15
2	Ba 233.527†	158980.3	162168.1	[1000]	ug/L	07:17:15
2	Be 313.107†	2522797.9	2579851.9	[1000]	ug/L	07:17:09
2	Cd 226.502†	87172.4	89240.2	[1000]	ug/L	07:17:15
2	Co 228.616†	65748.8	67190.8	[1000]	ug/L	07:17:15
2	Cr 267.716†	76932.6	78550.3	[1000]	ug/L	07:17:15
2	Cu 324.752†	318868.5	316559.5	[1000]	ug/L	07:17:15
2	Mn 257.610†	1024097.7	1043791.4	[1000]	ug/L	07:17:09
2	Mo 202.031†	15605.7	15898.4	[1000]	ug/L	07:17:35
2	Ni 231.604†	41441.9	42129.6	[1000]	ug/L	07:17:15

2	P 214.914†	12458.1	12356.3	[5000]	ug/L	07:17:35
2	Pb 220.353†	9291.1	9496.4	[1000]	ug/L	07:17:35
2	S 181.975 Axial†	1901.2	1834.6	[2000]	ug/L	07:17:35
2	Sb 206.836†	4090.7	4111.9	[1000]	ug/L	07:17:35
2	Se 196.026†	2479.3	2565.7	[1000]	ug/L	07:17:35
2	Si 251.611†	192348.4	195492.0	[5000]	ug/L	07:17:15
2	Sn 189.927†	6254.7	6369.1	[1000]	ug/L	07:17:35
2	Ti 334.940†	611479.1	625486.3	[1000]	ug/L	07:17:09
2	Tl 190.801†	4289.3	4452.3	[1000]	ug/L	07:17:35
2	U 409.014†	27328.2	33982.8	[1000]	ug/L	07:17:15
2	V 292.402†	119119.8	123411.4	[1000]	ug/L	07:17:15
2	Zn 213.857†	126339.1	127846.5	[1000]	ug/L	07:17:15
2	SiO2†	192419.9	195507.0	[10695]	ug/L	07:18:17
3	Sc Radial	7463.5	7463.5	97.8	%	07:16:30
3	Y RADIAL	6787.1	6787.1	96.81	%	07:16:30
3	Al 396.153Radial†	14461.0	14854.3	[10000]	ug/L	07:16:10
3	Ca 317.933Radial†	7628.5	7776.5	[10000]	ug/L	07:16:10
3	Fe 238.204 Radial†	2609.7	2634.1	[10000]	ug/L	07:16:30
3	K 766.490 Radial†	46967.9	45790.5	[10000]	ug/L	07:16:10
3	Mg 279.077 IEC†	461.3	468.5	[10000]	ug/L	07:16:30
3	Na 589.592 Radial†	166475.6	170782.7	[10000]	ug/L	07:16:10
3	Sr 421.552†	340648.0	348419.8	[1000]	ug/L	07:16:10
3	Sc 361.383	779791.1	779791.1	98.812	%	07:17:47
3	Y 371.029	592717.4	592717.4	97.839	%	07:17:47
3	Ag 328.068†	186234.2	187708.0	[1000]	ug/L	07:17:47
3	As 188.979†	3332.8	3412.7	[1000]	ug/L	07:18:07
3	B 249.677†	46359.0	48003.5	[1000]	ug/L	07:17:47
3	Ba 233.527†	159666.8	161584.9	[1000]	ug/L	07:17:47
3	Be 313.107†	2495002.4	2531441.4	[1000]	ug/L	07:17:41
3	Cd 226.502†	87579.2	88951.0	[1000]	ug/L	07:17:47
3	Co 228.616†	66122.8	67040.8	[1000]	ug/L	07:17:47
3	Cr 267.716†	77345.3	78349.5	[1000]	ug/L	07:17:47
3	Cu 324.752†	321923.2	317087.6	[1000]	ug/L	07:17:47
3	Mn 257.610†	1015198.7	1026552.7	[1000]	ug/L	07:17:41
3	Mo 202.031†	15632.5	15800.1	[1000]	ug/L	07:18:07
3	Ni 231.604†	41697.1	42054.7	[1000]	ug/L	07:17:47
3	P 214.914†	12487.3	12285.8	[5000]	ug/L	07:18:07
3	Pb 220.353†	9289.4	9420.0	[1000]	ug/L	07:18:07
3	S 181.975 Axial†	1917.2	1835.5	[2000]	ug/L	07:18:07
3	Sb 206.836†	4076.1	4064.3	[1000]	ug/L	07:18:07
3	Se 196.026†	2486.4	2553.0	[1000]	ug/L	07:18:07
3	Si 251.611†	193567.6	195179.6	[5000]	ug/L	07:17:47
3	Sn 189.927†	6281.8	6346.2	[1000]	ug/L	07:18:07
3	Ti 334.940†	605409.2	614427.7	[1000]	ug/L	07:17:41
3	Tl 190.801†	4301.5	4430.2	[1000]	ug/L	07:18:07
3	U 409.014†	27484.1	33920.9	[1000]	ug/L	07:17:47
3	V 292.402†	119999.4	123344.0	[1000]	ug/L	07:17:47
3	Zn 213.857†	127212.7	127714.9	[1000]	ug/L	07:17:47
3	SiO2†	193587.8	195142.1	[10695]	ug/L	07:18:23

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	775585.4	3645.92	0.47%	98.279	%
Sc Radial	7479.4	48.64	0.65%	98.0	%
Y 371.029	589453.4	2826.67	0.48%	97.300	%
Y RADIAL	6813.0	48.36	0.71%	97.18	%
Ag 328.068†	187741.2	99.32	0.05%	[1000]	ug/L
Al 396.153Radial†	13131.9	1494.83	11.38%	[10000]	ug/L
As 188.979†	3441.5	39.05	1.13%	[1000]	ug/L
B 249.677†	47866.3	125.72	0.26%	[1000]	ug/L
Ba 233.527†	161891.0	292.71	0.18%	[1000]	ug/L
Be 313.107†	2572548.4	37985.49	1.48%	[1000]	ug/L
Ca 317.933Radial†	7825.5	84.93	1.09%	[10000]	ug/L
Cd 226.502†	89080.9	146.79	0.16%	[1000]	ug/L
Co 228.616†	67163.5	111.57	0.17%	[1000]	ug/L
Cr 267.716†	78458.7	101.55	0.13%	[1000]	ug/L
Cu 324.752†	316746.6	295.77	0.09%	[1000]	ug/L
Fe 238.204 Radial†	2631.2	2.57	0.10%	[10000]	ug/L
K 766.490 Radial†	45994.4	408.57	0.89%	[10000]	ug/L

Mg 279.077 IEC†	464.1	4.29	0.92%	[10000]	ug/L
Mn 257.610†	1042228.2	14955.29	1.43%	[1000]	ug/L
Mo 202.031†	15907.9	112.82	0.71%	[1000]	ug/L
Na 589.592 Radial†	171764.1	1737.36	1.01%	[10000]	ug/L
Ni 231.604†	42082.1	41.29	0.10%	[1000]	ug/L
P 214.914†	12380.0	107.98	0.87%	[5000]	ug/L
Pb 220.353†	9481.3	55.24	0.58%	[1000]	ug/L
S 181.975 Axial†	1844.0	15.44	0.84%	[2000]	ug/L
Sb 206.836†	4105.0	37.70	0.92%	[1000]	ug/L
Se 196.026†	2569.7	18.97	0.74%	[1000]	ug/L
Si 251.611†	195222.8	250.41	0.13%	[5000]	ug/L
Sn 189.927†	6381.9	43.57	0.68%	[1000]	ug/L
Sr 421.552†	350594.6	3611.69	1.03%	[1000]	ug/L
Ti 334.940†	624039.6	8976.50	1.44%	[1000]	ug/L
Tl 190.801†	4456.1	28.08	0.63%	[1000]	ug/L
U 409.014†	34067.3	202.29	0.59%	[1000]	ug/L
V 292.402†	123360.5	44.97	0.04%	[1000]	ug/L
Zn 213.857†	127838.2	119.32	0.09%	[1000]	ug/L
SiO2†	196074.0	1310.82	0.67%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/7/2009 07:20:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	7590.0	7590.0	99.4	%	07:22:47
1	Y RADIAL	6861.7	6861.7	97.88	%	07:22:47
1	Al 396.153Radial†	58261.1	58652.0	[50000]	ug/L	07:22:27
1	Ca 317.933Radial†	36620.5	36800.0	[50000]	ug/L	07:22:47
1	Fe 238.204 Radial†	5018.2	5011.6	[20000]	ug/L	07:22:47
1	Mg 279.077 IEC†	2158.5	2167.3	[50000]	ug/L	07:22:47
1	Na 589.592 Radial†	330275.8	332658.2	[20000]	ug/L	07:22:27
1	Sc 361.383	762839.3	762839.3	96.664	%	07:23:44
1	Y 371.029	575011.9	575011.9	94.916	%	07:23:44
2	Sc Radial	7689.3	7689.3	101	%	07:23:12
2	Y RADIAL	6939.9	6939.9	98.99	%	07:23:12
2	Al 396.153Radial†	58153.7	57788.7	[50000]	ug/L	07:22:52
2	Ca 317.933Radial†	36881.8	36583.7	[50000]	ug/L	07:23:12
2	Fe 238.204 Radial†	5068.5	4996.3	[20000]	ug/L	07:23:12
2	Mg 279.077 IEC†	2179.8	2160.4	[50000]	ug/L	07:23:12
2	Na 589.592 Radial†	329686.3	327783.4	[20000]	ug/L	07:22:52
2	Sc 361.383	777937.3	777937.3	98.577	%	07:23:50
2	Y 371.029	586334.4	586334.4	96.785	%	07:23:50
3	Sc Radial	7632.7	7632.7	100	%	07:23:37
3	Y RADIAL	6907.6	6907.6	98.53	%	07:23:37
3	Al 396.153Radial†	58159.0	58222.4	[50000]	ug/L	07:23:17
3	Ca 317.933Radial†	36672.4	36646.0	[50000]	ug/L	07:23:37
3	Fe 238.204 Radial†	5017.1	4982.3	[20000]	ug/L	07:23:37
3	Mg 279.077 IEC†	2146.1	2142.8	[50000]	ug/L	07:23:37
3	Na 589.592 Radial†	329513.8	330039.6	[20000]	ug/L	07:23:17
3	Sc 361.383	783618.0	783618.0	99.297	%	07:23:56
3	Y 371.029	590249.4	590249.4	97.432	%	07:23:56

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	774798.2	10739.17	1.39%	98.179	%
Sc Radial	7637.4	49.82	0.65%	100	%
Y 371.029	583865.2	7913.15	1.36%	96.378	%
Y RADIAL	6903.1	39.27	0.57%	98.47	%
Al 396.153Radial†	58221.1	431.64	0.74%	[50000]	ug/L
Ca 317.933Radial†	36676.6	111.35	0.30%	[50000]	ug/L
Fe 238.204 Radial†	4996.7	14.65	0.29%	[20000]	ug/L
Mg 279.077 IEC†	2156.8	12.65	0.59%	[50000]	ug/L
Na 589.592 Radial†	330160.4	2439.67	0.74%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	186.6	0.00000	0.999920	
Al 396.153Radial	3	Lin Thru 0	0.0	1.171	0.00000	0.999694	
As 188.979	3	Lin Thru 0	0.0	3.422	0.00000	0.999939	
B 249.677	3	Lin Thru 0	0.0	47.42	0.00000	0.999832	
Ba 233.527	3	Lin Thru 0	0.0	161.1	0.00000	0.999940	
Be 313.107	3	Lin Thru 0	0.0	2554	0.00000	0.999893	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.7359	0.00000	0.999900	
Cd 226.502	3	Lin Thru 0	0.0	88.63	0.00000	0.999948	
Co 228.616	3	Lin Thru 0	0.0	66.56	0.00000	0.999827	
Cr 267.716	3	Lin Thru 0	0.0	77.94	0.00000	0.999909	
Cu 324.752	3	Lin Thru 0	0.0	314.4	0.00000	0.999893	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.2525	0.00000	0.999779	
K 766.490 Radial	3	Lin Thru 0	0.0	4.609	0.00000	0.999992	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0433	0.00000	0.999880
Mn 257.610	3	Lin Thru 0	0.0	1036	0.00000	0.999929
Mo 202.031	3	Lin Thru 0	0.0	15.86	0.00000	0.999982
Na 589.592 Radia	2	Lin Thru 0	0.0	16.64	0.00000	0.999871
Ni 231.604	3	Lin Thru 0	0.0	41.75	0.00000	0.999872
P 214.914	3	Lin Thru 0	0.0	2.464	0.00000	0.999949
Pb 220.353	3	Lin Thru 0	0.0	9.458	0.00000	0.999980
S 181.975 Axial	3	Lin Thru 0	0.0	0.9167	0.00000	0.999932
Sb 206.836	3	Lin Thru 0	0.0	4.082	0.00000	0.999940
Se 196.026	3	Lin Thru 0	0.0	2.557	0.00000	0.999941
Si 251.611	3	Lin Thru 0	0.0	38.92	0.00000	0.999978
Sn 189.927	3	Lin Thru 0	0.0	6.350	0.00000	0.999945
Sr 421.552	3	Lin Thru 0	0.0	350.7	0.00000	0.999999
Ti 334.940	3	Lin Thru 0	0.0	620.4	0.00000	0.999930
Tl 190.801	3	Lin Thru 0	0.0	4.437	0.00000	0.999947
U 409.014	3	Lin Thru 0	0.0	33.61	0.00000	0.999625
V 292.402	3	Lin Thru 0	0.0	122.4	0.00000	0.999885
Zn 213.857	3	Lin Thru 0	0.0	127.1	0.00000	0.999934
SiO2	3	Lin Thru 0	0.0	18.27	0.00000	0.999978

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/7/2009 07:26:07
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7557.5	7557.5	99.0	%			07:28:19
1	Y RADIAL	6909.5	6909.5	98.56	%			07:28:19
1	Al 396.153Radial†	6234.9	6362.8	5413.0	ug/L	5413.0	ppb	07:27:59
1	Ca 317.933Radial†	3839.3	3852.7	5235.6	ug/L	5235.6	ppb	07:28:19
1	Fe 238.204 Radial†	1361.6	1340.6	5324.1	ug/L	5324.1	ppb	07:28:19
1	K 766.490 Radial†	14068.8	11968.3	2590.3	ug/L	2590.3	ppb	07:27:59
1	Mg 279.077 IEC†	240.2	239.3	5534.3	ug/L	5534.3	ppb	07:28:19
1	Na 589.592 Radial†	44745.2	45729.9	2747.9	ug/L	2747.9	ppb	07:27:59
1	Sr 421.552†	177587.5	179412.8	511.54	ug/L	511.54	ppb	07:27:59
1	Sc 361.383	787398.4	787398.4	99.776	%			07:29:17
1	Y 371.029	598802.3	598802.3	98.843	%			07:29:17
1	Ag 328.068†	46546.6	45885.8	249.01	ug/L	249.01	ppb	07:29:17
1	As 188.979†	1601.3	1644.8	483.99	ug/L	483.99	ppb	07:29:37
1	B 249.677†	22275.2	23412.4	492.13	ug/L	492.13	ppb	07:29:17
1	Ba 233.527†	84513.4	84701.5	527.13	ug/L	527.13	ppb	07:29:17
1	Be 313.107†	638144.1	646018.7	254.11	ug/L	254.11	ppb	07:29:17
1	Cd 226.502†	42600.7	43015.2	485.18	ug/L	485.18	ppb	07:29:37
1	Co 228.616†	31127.4	31320.3	470.86	ug/L	470.86	ppb	07:29:37
1	Cr 267.716†	38341.0	38501.3	494.67	ug/L	494.67	ppb	07:29:17
1	Cu 324.752†	168054.6	159725.8	508.29	ug/L	508.29	ppb	07:29:17
1	Mn 257.610†	527031.8	527363.5	509.31	ug/L	509.31	ppb	07:29:17
1	Mo 202.031†	8232.0	8230.2	519.09	ug/L	519.09	ppb	07:29:37
1	Ni 231.604†	21718.0	21623.1	517.63	ug/L	517.63	ppb	07:29:37
1	P 214.914†	6544.2	6207.2	2442.1	ug/L	2442.1	ppb	07:29:37
1	Pb 220.353†	4711.5	4741.1	502.89	ug/L	502.89	ppb	07:29:37
1	S 181.975 Axial†	2474.4	2375.2	2590.1	ug/L	2590.1	ppb	07:29:37
1	Sb 206.836†	2157.7	2101.7	523.22	ug/L	523.22	ppb	07:29:37
1	Se 196.026†	6504.5	6555.8	2581.9	ug/L	2581.9	ppb	07:29:37
1	Si 251.611†	189440.6	189150.7	4848.4	ug/L	4848.4	ppb	07:29:17
1	Sn 189.927†	3351.0	3347.4	527.82	ug/L	527.82	ppb	07:29:37
1	Ti 334.940†	305939.6	308366.3	496.98	ug/L	496.98	ppb	07:29:17
1	Tl 190.801†	2100.3	2182.0	493.70	ug/L	493.70	ppb	07:29:37
1	U 409.014†	10899.5	17030.3	505.17	ug/L	505.17	ppb	07:29:17
1	V 292.402†	57720.6	59752.1	494.18	ug/L	494.18	ppb	07:29:17
1	Zn 213.857†	64574.3	63692.1	496.16	ug/L	496.16	ppb	07:29:17
1	SiO2†	189870.6	189523.7	10347	ug/L	10347	ppb	07:30:35
2	Sc Radial	7600.6	7600.6	99.6	%			07:28:45
2	Y RADIAL	6967.5	6967.5	99.38	%			07:28:45
2	Al 396.153Radial†	6142.5	6234.3	5303.7	ug/L	5303.7	ppb	07:28:25
2	Ca 317.933Radial†	3855.6	3847.1	5228.0	ug/L	5228.0	ppb	07:28:45
2	Fe 238.204 Radial†	1358.5	1329.6	5280.4	ug/L	5280.4	ppb	07:28:45
2	K 766.490 Radial†	14011.0	11829.6	2560.3	ug/L	2560.3	ppb	07:28:25
2	Mg 279.077 IEC†	237.7	235.5	5445.4	ug/L	5445.4	ppb	07:28:45
2	Na 589.592 Radial†	43988.3	44713.1	2686.8	ug/L	2686.8	ppb	07:28:25
2	Sr 421.552†	175001.6	175797.5	501.23	ug/L	501.23	ppb	07:28:25
2	Sc 361.383	799574.8	799574.8	101.32	%			07:29:43
2	Y 371.029	607335.8	607335.8	100.25	%			07:29:43
2	Ag 328.068†	46671.3	45298.4	245.83	ug/L	245.83	ppb	07:29:43
2	As 188.979†	1582.2	1601.5	471.35	ug/L	471.35	ppb	07:30:03
2	B 249.677†	22723.6	23514.9	494.32	ug/L	494.32	ppb	07:29:43
2	Ba 233.527†	85283.2	84171.5	523.83	ug/L	523.83	ppb	07:29:43
2	Be 313.107†	645366.8	643407.5	253.08	ug/L	253.08	ppb	07:29:43
2	Cd 226.502†	42307.3	42075.5	474.58	ug/L	474.58	ppb	07:30:03
2	Co 228.616†	30921.1	30641.6	460.64	ug/L	460.64	ppb	07:30:03
2	Cr 267.716†	38689.0	38259.6	491.56	ug/L	491.56	ppb	07:29:43
2	Cu 324.752†	170762.0	159833.0	508.63	ug/L	508.63	ppb	07:29:43
2	Mn 257.610†	533155.5	525363.5	507.37	ug/L	507.37	ppb	07:29:43
2	Mo 202.031†	8200.3	8073.2	509.19	ug/L	509.19	ppb	07:30:03
2	Ni 231.604†	21627.2	21202.0	507.55	ug/L	507.55	ppb	07:30:03

2	P 214.914†	6499.1	6062.8	2383.3	ug/L	2383.3	ppb	07:30:03
2	Pb 220.353†	4709.6	4667.3	495.04	ug/L	495.04	ppb	07:30:03
2	S 181.975 Axial†	2461.3	2324.6	2534.8	ug/L	2534.8	ppb	07:30:03
2	Sb 206.836†	2146.7	2058.0	512.20	ug/L	512.20	ppb	07:30:03
2	Se 196.026†	6472.4	6424.9	2530.6	ug/L	2530.6	ppb	07:30:03
2	Si 251.611†	192013.2	188798.4	4839.6	ug/L	4839.6	ppb	07:29:43
2	Sn 189.927†	3340.6	3286.0	518.15	ug/L	518.15	ppb	07:30:03
2	Ti 334.940†	309842.4	307548.7	495.65	ug/L	495.65	ppb	07:29:43
2	Tl 190.801†	2088.1	2137.9	483.80	ug/L	483.80	ppb	07:30:03
2	U 409.014†	11571.1	17526.8	519.96	ug/L	519.96	ppb	07:29:43
2	V 292.402†	58463.1	59604.0	492.88	ug/L	492.88	ppb	07:29:43
2	Zn 213.857†	65345.1	63467.3	494.46	ug/L	494.46	ppb	07:29:43
2	SiO2†	188776.2	185545.6	10130	ug/L	10130	ppb	07:30:40
3	Sc Radial	7592.7	7592.7	99.5	%			07:29:10
3	Y RADIAL	6932.3	6932.3	98.88	%			07:29:10
3	Al 396.153Radial†	6121.1	6219.3	5290.8	ug/L	5290.8	ppb	07:28:50
3	Ca 317.933Radial†	3842.3	3837.8	5215.3	ug/L	5215.3	ppb	07:29:10
3	Fe 238.204 Radial†	1357.8	1330.3	5283.3	ug/L	5283.3	ppb	07:29:10
3	K 766.490 Radial†	13892.2	11724.9	2537.6	ug/L	2537.6	ppb	07:28:50
3	Mg 279.077 IEC†	238.1	236.1	5460.5	ug/L	5460.5	ppb	07:29:10
3	Na 589.592 Radial†	43268.8	44036.2	2646.1	ug/L	2646.1	ppb	07:28:50
3	Sr 421.552†	172417.7	173384.3	494.35	ug/L	494.35	ppb	07:28:50
3	Sc 361.383	800371.8	800371.8	101.42	%			07:30:09
3	Y 371.029	608880.3	608880.3	100.51	%			07:30:09
3	Ag 328.068†	46720.2	45300.8	245.85	ug/L	245.85	ppb	07:30:09
3	As 188.979†	1574.9	1592.8	468.78	ug/L	468.78	ppb	07:30:29
3	B 249.677†	22523.8	23295.6	489.69	ug/L	489.69	ppb	07:30:09
3	Ba 233.527†	85074.9	83882.3	522.03	ug/L	522.03	ppb	07:30:09
3	Be 313.107†	645647.8	643050.4	252.94	ug/L	252.94	ppb	07:30:09
3	Cd 226.502†	42468.7	42193.0	475.90	ug/L	475.90	ppb	07:30:29
3	Co 228.616†	31089.5	30777.2	462.68	ug/L	462.68	ppb	07:30:29
3	Cr 267.716†	38695.4	38227.9	491.15	ug/L	491.15	ppb	07:30:09
3	Cu 324.752†	170020.9	158934.5	505.77	ug/L	505.77	ppb	07:30:09
3	Mn 257.610†	531804.5	523507.4	505.58	ug/L	505.58	ppb	07:30:09
3	Mo 202.031†	8227.5	8091.9	510.37	ug/L	510.37	ppb	07:30:29
3	Ni 231.604†	21718.4	21270.7	509.19	ug/L	509.19	ppb	07:30:29
3	P 214.914†	6530.0	6086.9	2393.5	ug/L	2393.5	ppb	07:30:29
3	Pb 220.353†	4733.9	4686.6	497.09	ug/L	497.09	ppb	07:30:29
3	S 181.975 Axial†	2463.0	2323.9	2534.0	ug/L	2534.0	ppb	07:30:29
3	Sb 206.836†	2150.8	2059.9	512.70	ug/L	512.70	ppb	07:30:29
3	Se 196.026†	6493.1	6438.9	2536.1	ug/L	2536.1	ppb	07:30:29
3	Si 251.611†	191033.5	187643.7	4809.9	ug/L	4809.9	ppb	07:30:09
3	Sn 189.927†	3342.0	3284.0	517.84	ug/L	517.84	ppb	07:30:29
3	Ti 334.940†	309162.5	306573.9	494.09	ug/L	494.09	ppb	07:30:09
3	Tl 190.801†	2100.7	2148.3	486.10	ug/L	486.10	ppb	07:30:29
3	U 409.014†	11229.1	17178.2	509.58	ug/L	509.58	ppb	07:30:09
3	V 292.402†	58400.5	59484.8	491.91	ug/L	491.91	ppb	07:30:09
3	Zn 213.857†	65136.7	63197.5	492.33	ug/L	492.33	ppb	07:30:09
3	SiO2†	190353.9	186915.7	10205	ug/L	10205	ppb	07:30:45

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	795781.7	100.84	%	0.921				0.91%
Sc Radial	7583.6	99.4	%	0.30				0.30%
Y 371.029	605006.2	99.867	%	0.8960				0.90%
Y RADIAL	6936.4	98.94	%	0.416				0.42%
Ag 328.068†	45495.0	246.89	ug/L	1.830	246.89	ppb	1.830	0.74%
QC value within limits for Ag 328.068 Recovery = 98.76%								
Al 396.153Radial†	6272.1	5335.8	ug/L	67.17	5335.8	ppb	67.17	1.26%
QC value within limits for Al 396.153Radial Recovery = 106.72%								
As 188.979†	1613.0	474.71	ug/L	8.139	474.71	ppb	8.139	1.71%
QC value within limits for As 188.979 Recovery = 94.94%								
B 249.677†	23407.6	492.04	ug/L	2.316	492.04	ppb	2.316	0.47%
QC value within limits for B 249.677 Recovery = 98.41%								
Ba 233.527†	84251.8	524.33	ug/L	2.583	524.33	ppb	2.583	0.49%
QC value within limits for Ba 233.527 Recovery = 104.87%								
Be 313.107†	644158.8	253.38	ug/L	0.638	253.38	ppb	0.638	0.25%
QC value within limits for Be 313.107 Recovery = 101.35%								
Ca 317.933Radial†	3845.9	5226.3	ug/L	10.26	5226.3	ppb	10.26	0.20%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.53%
Cd 226.502†            42427.9      478.55 ug/L         5.778      478.55 ppb          5.778   1.21%
   QC value within limits for Cd 226.502  Recovery = 95.71%
Co 228.616†            30913.0      464.72 ug/L         5.408      464.72 ppb          5.408   1.16%
   QC value within limits for Co 228.616  Recovery = 92.94%
Cr 267.716†            38329.6      492.46 ug/L         1.922      492.46 ppb          1.922   0.39%
   QC value within limits for Cr 267.716  Recovery = 98.49%
Cu 324.752†           159497.8      507.56 ug/L         1.561      507.56 ppb          1.561   0.31%
   QC value within limits for Cu 324.752  Recovery = 101.51%
Fe 238.204 Radial†      1333.5      5296.0 ug/L        24.46      5296.0 ppb          24.46   0.46%
   QC value within limits for Fe 238.204 Radial  Recovery = 105.92%
K 766.490 Radial†      11840.9      2562.7 ug/L        26.47      2562.7 ppb          26.47   1.03%
   QC value within limits for K 766.490 Radial  Recovery = 102.51%
Mg 279.077 IEC†          237.0      5480.0 ug/L        47.55      5480.0 ppb          47.55   0.87%
   QC value within limits for Mg 279.077 IEC  Recovery = 109.60%
Mn 257.610†           525411.5      507.42 ug/L         1.862      507.42 ppb          1.862   0.37%
   QC value within limits for Mn 257.610  Recovery = 101.48%
Mo 202.031†            8131.7      512.89 ug/L         5.406      512.89 ppb          5.406   1.05%
   QC value within limits for Mo 202.031  Recovery = 102.58%
Na 589.592 Radial†     44826.4      2693.6 ug/L        51.23      2693.6 ppb          51.23   1.90%
   QC value within limits for Na 589.592 Radial  Recovery = 107.74%
Ni 231.604†            21365.2      511.46 ug/L         5.408      511.46 ppb          5.408   1.06%
   QC value within limits for Ni 231.604  Recovery = 102.29%
P 214.914†              6119.0      2406.3 ug/L        31.42      2406.3 ppb          31.42   1.31%
   QC value within limits for P 214.914  Recovery = 96.25%
Pb 220.353†             4698.3      498.34 ug/L         4.070      498.34 ppb          4.070   0.82%
   QC value within limits for Pb 220.353  Recovery = 99.67%
S 181.975 Axial†        2341.2      2553.0 ug/L        32.13      2553.0 ppb          32.13   1.26%
   QC value within limits for S 181.975 Axial  Recovery = 102.12%
Sb 206.836†             2073.2      516.04 ug/L         6.222      516.04 ppb          6.222   1.21%
   QC value within limits for Sb 206.836  Recovery = 103.21%
Se 196.026†             6473.2      2549.5 ug/L        28.19      2549.5 ppb          28.19   1.11%
   QC value within limits for Se 196.026  Recovery = 101.98%
Si 251.611†           188530.9      4832.6 ug/L        20.18      4832.6 ppb          20.18   0.42%
   QC value within limits for Si 251.611  Recovery = 96.65%
Sn 189.927†             3305.8      521.27 ug/L         5.674      521.27 ppb          5.674   1.09%
   QC value within limits for Sn 189.927  Recovery = 104.25%
Sr 421.552†           176198.2      502.38 ug/L         8.652      502.38 ppb          8.652   1.72%
   QC value within limits for Sr 421.552  Recovery = 100.48%
Ti 334.940†           307496.3      495.57 ug/L         1.447      495.57 ppb          1.447   0.29%
   QC value within limits for Ti 334.940  Recovery = 99.11%
Tl 190.801†             2156.1      487.86 ug/L         5.181      487.86 ppb          5.181   1.06%
   QC value within limits for Tl 190.801  Recovery = 97.57%
U 409.014†             17245.1      511.57 ug/L         7.592      511.57 ppb          7.592   1.48%
   QC value within limits for U 409.014  Recovery = 102.31%
V 292.402†             59613.6      492.99 ug/L         1.142      492.99 ppb          1.142   0.23%
   QC value within limits for V 292.402  Recovery = 98.60%
Zn 213.857†            63452.3      494.31 ug/L         1.917      494.31 ppb          1.917   0.39%
   QC value within limits for Zn 213.857  Recovery = 98.86%
SiO2†                 187328.3       10228 ug/L         110.4       10228 ppb          110.4   1.08%
   QC value within limits for SiO2  Recovery = 95.63%
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/7/2009 07:32:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7790.2	7790.2	102	%			07:34:49
1	Y RADIAL	7126.1	7126.1	101.6	%			07:34:49
1	Al 396.153Radial†	-55.2	12.1	10.285	ug/L	10.285	ppb	07:34:49
1	Ca 317.933Radial†	20.1	-5.0	-6.7302	ug/L	-6.7302	ppb	07:35:09
1	Fe 238.204 Radial†	37.4	2.1	8.3663	ug/L	8.3663	ppb	07:35:09
1	K 766.490 Radial†	2152.1	-131.3	-28.485	ug/L	-28.485	ppb	07:34:49
1	Mg 279.077 IEC†	1.9	-1.4	-32.048	ug/L	-32.048	ppb	07:35:09
1	Na 589.592 Radial†	-510.0	41.8	2.5117	ug/L	2.5117	ppb	07:34:49
1	Sr 421.552†	-59.3	8.2	0.0235	ug/L	0.0235	ppb	07:34:49
1	Sc 361.383	794799.7	794799.7	100.71	%			07:36:06
1	Y 371.029	612082.5	612082.5	101.04	%			07:36:06
1	Ag 328.068†	764.6	-6.2	-0.0334	ug/L	-0.0334	ppb	07:36:06
1	As 188.979†	-42.2	-2.0	-0.5786	ug/L	-0.5786	ppb	07:36:26
1	B 249.677†	-665.6	426.3	8.9875	ug/L	8.9875	ppb	07:36:26
1	Ba 233.527†	-8.5	-10.1	-0.0619	ug/L	-0.0619	ppb	07:36:26
1	Be 313.107†	-6385.4	101.4	0.0401	ug/L	0.0401	ppb	07:36:06
1	Cd 226.502†	-294.3	26.6	0.2998	ug/L	0.2998	ppb	07:36:26
1	Co 228.616†	-101.7	22.0	0.3323	ug/L	0.3323	ppb	07:36:26
1	Cr 267.716†	-89.1	-14.3	-0.1839	ug/L	-0.1839	ppb	07:36:26
1	Cu 324.752†	8880.6	111.5	0.3551	ug/L	0.3551	ppb	07:36:06
1	Mn 257.610†	905.1	47.0	0.0469	ug/L	0.0469	ppb	07:36:26
1	Mo 202.031†	34.9	14.3	0.9033	ug/L	0.9033	ppb	07:36:26
1	Ni 231.604†	140.4	-4.3	-0.1034	ug/L	-0.1034	ppb	07:36:26
1	P 214.914†	347.1	-7.0	-2.8831	ug/L	-2.8831	ppb	07:36:26
1	Pb 220.353†	-16.9	2.2	0.2387	ug/L	0.2387	ppb	07:36:26
1	S 181.975 Axial†	83.8	-21.5	-23.447	ug/L	-23.447	ppb	07:36:26
1	Sb 206.836†	65.3	4.0	1.0385	ug/L	1.0385	ppb	07:36:26
1	Se 196.026†	-32.1	4.8	1.9137	ug/L	1.9137	ppb	07:36:26
1	Si 251.611†	606.5	-113.1	-2.9176	ug/L	-2.9176	ppb	07:36:26
1	Sn 189.927†	20.9	9.6	1.5155	ug/L	1.5155	ppb	07:36:26
1	Ti 334.940†	-1656.3	95.0	0.1510	ug/L	0.1510	ppb	07:36:06
1	Tl 190.801†	-59.9	17.5	3.9450	ug/L	3.9450	ppb	07:36:26
1	U 409.014†	-6011.6	137.4	4.0867	ug/L	4.0867	ppb	07:36:06
1	V 292.402†	-1900.8	14.6	0.1367	ug/L	0.1367	ppb	07:36:06
1	Zn 213.857†	1040.2	5.6	0.0445	ug/L	0.0445	ppb	07:36:26
1	SiO2†	600.5	-177.0	-9.7096	ug/L	-9.7096	ppb	07:37:22
2	Sc Radial	7711.5	7711.5	101	%			07:35:14
2	Y RADIAL	7072.0	7072.0	100.9	%			07:35:14
2	Al 396.153Radial†	-76.1	-9.2	-7.8087	ug/L	-7.8087	ppb	07:35:14
2	Ca 317.933Radial†	22.9	-2.0	-2.6847	ug/L	-2.6847	ppb	07:35:35
2	Fe 238.204 Radial†	35.9	1.0	3.9558	ug/L	3.9558	ppb	07:35:35
2	K 766.490 Radial†	2364.7	100.5	21.810	ug/L	21.810	ppb	07:35:14
2	Mg 279.077 IEC†	4.3	1.0	24.070	ug/L	24.070	ppb	07:35:35
2	Na 589.592 Radial†	-522.1	24.7	1.4843	ug/L	1.4843	ppb	07:35:14
2	Sr 421.552†	-35.4	31.3	0.0893	ug/L	0.0893	ppb	07:35:14
2	Sc 361.383	785829.3	785829.3	99.577	%			07:36:32
2	Y 371.029	604495.9	604495.9	99.783	%			07:36:32
2	Ag 328.068†	805.8	43.8	0.2315	ug/L	0.2315	ppb	07:36:32
2	As 188.979†	-38.0	1.7	0.4930	ug/L	0.4930	ppb	07:36:52
2	B 249.677†	-651.6	432.8	9.1244	ug/L	9.1244	ppb	07:36:52
2	Ba 233.527†	-3.1	-4.7	-0.0280	ug/L	-0.0280	ppb	07:36:52
2	Be 313.107†	-6420.4	-6.1	-0.0019	ug/L	-0.0019	ppb	07:36:32
2	Cd 226.502†	-303.4	14.2	0.1599	ug/L	0.1599	ppb	07:36:52
2	Co 228.616†	-99.1	23.4	0.3504	ug/L	0.3504	ppb	07:36:52
2	Cr 267.716†	-98.9	-25.0	-0.3229	ug/L	-0.3229	ppb	07:36:52
2	Cu 324.752†	8857.7	189.1	0.6017	ug/L	0.6017	ppb	07:36:32
2	Mn 257.610†	915.3	67.4	0.0650	ug/L	0.0650	ppb	07:36:52
2	Mo 202.031†	11.0	-9.3	-0.5870	ug/L	-0.5870	ppb	07:36:52
2	Ni 231.604†	158.6	15.6	0.3737	ug/L	0.3737	ppb	07:36:52

2	P 214.914†	336.7	-13.6	-5.6100	ug/L	-5.6100	ppb	07:36:52
2	Pb 220.353†	-12.9	6.0	0.6270	ug/L	0.6270	ppb	07:36:52
2	S 181.975 Axial†	97.1	-7.2	-7.8044	ug/L	-7.8044	ppb	07:36:52
2	Sb 206.836†	57.5	-3.0	-0.7425	ug/L	-0.7425	ppb	07:36:52
2	Se 196.026†	-29.6	7.0	2.7604	ug/L	2.7604	ppb	07:36:52
2	Si 251.611†	602.8	-109.9	-2.8219	ug/L	-2.8219	ppb	07:36:52
2	Sn 189.927†	11.6	0.5	0.0736	ug/L	0.0736	ppb	07:36:52
2	Ti 334.940†	-1610.2	122.6	0.1941	ug/L	0.1941	ppb	07:36:32
2	Tl 190.801†	-81.2	-4.6	-1.0360	ug/L	-1.0360	ppb	07:36:52
2	U 409.014†	-5820.2	261.4	7.7784	ug/L	7.7784	ppb	07:36:32
2	V 292.402†	-1833.1	60.9	0.5051	ug/L	0.5051	ppb	07:36:32
2	Zn 213.857†	1056.4	33.6	0.2599	ug/L	0.2599	ppb	07:36:52
2	SiO2†	773.2	3.3	0.1850	ug/L	0.1850	ppb	07:37:27
3	Sc Radial	7900.7	7900.7	104	%			07:35:40
3	Y RADIAL	7238.8	7238.8	103.3	%			07:35:40
3	Al 396.153Radial†	-66.6	1.8	1.5542	ug/L	1.5542	ppb	07:35:40
3	Ca 317.933Radial†	21.1	-4.2	-5.7210	ug/L	-5.7210	ppb	07:36:00
3	Fe 238.204 Radial†	37.1	1.2	4.8572	ug/L	4.8572	ppb	07:36:00
3	K 766.490 Radial†	2233.1	-82.5	-17.910	ug/L	-17.910	ppb	07:35:40
3	Mg 279.077 IEC†	4.3	0.9	20.322	ug/L	20.322	ppb	07:36:00
3	Na 589.592 Radial†	-527.7	31.7	1.9025	ug/L	1.9025	ppb	07:35:40
3	Sr 421.552†	-94.4	-24.8	-0.0708	ug/L	-0.0708	ppb	07:35:40
3	Sc 361.383	796628.3	796628.3	100.95	%			07:36:57
3	Y 371.029	613635.3	613635.3	101.29	%			07:36:57
3	Ag 328.068†	859.9	86.5	0.4559	ug/L	0.4559	ppb	07:36:57
3	As 188.979†	-28.9	11.2	3.2800	ug/L	3.2800	ppb	07:37:17
3	B 249.677†	-657.8	435.5	9.1822	ug/L	9.1822	ppb	07:37:17
3	Ba 233.527†	20.4	18.6	0.1173	ug/L	0.1173	ppb	07:37:17
3	Be 313.107†	-6368.9	132.3	0.0524	ug/L	0.0524	ppb	07:36:57
3	Cd 226.502†	-305.8	15.9	0.1793	ug/L	0.1793	ppb	07:37:17
3	Co 228.616†	-100.4	23.5	0.3515	ug/L	0.3515	ppb	07:37:17
3	Cr 267.716†	-71.6	3.3	0.0392	ug/L	0.0392	ppb	07:37:17
3	Cu 324.752†	8894.4	105.0	0.3342	ug/L	0.3342	ppb	07:36:57
3	Mn 257.610†	932.8	72.3	0.0699	ug/L	0.0699	ppb	07:37:17
3	Mo 202.031†	14.1	-6.4	-0.4045	ug/L	-0.4045	ppb	07:37:17
3	Ni 231.604†	144.7	-0.3	-0.0068	ug/L	-0.0068	ppb	07:37:17
3	P 214.914†	344.8	-10.1	-4.1280	ug/L	-4.1280	ppb	07:37:17
3	Pb 220.353†	-11.6	7.5	0.7901	ug/L	0.7901	ppb	07:37:17
3	S 181.975 Axial†	82.7	-22.8	-24.871	ug/L	-24.871	ppb	07:37:17
3	Sb 206.836†	77.4	15.9	3.8908	ug/L	3.8908	ppb	07:37:17
3	Se 196.026†	-34.7	2.3	0.9171	ug/L	0.9171	ppb	07:37:17
3	Si 251.611†	581.6	-139.2	-3.5650	ug/L	-3.5650	ppb	07:37:17
3	Sn 189.927†	14.6	3.3	0.5123	ug/L	0.5123	ppb	07:37:17
3	Ti 334.940†	-1591.5	163.0	0.2560	ug/L	0.2560	ppb	07:36:57
3	Tl 190.801†	-70.8	6.8	1.5357	ug/L	1.5357	ppb	07:37:17
3	U 409.014†	-5671.9	487.6	14.508	ug/L	14.508	ppb	07:36:57
3	V 292.402†	-1825.1	93.9	0.7892	ug/L	0.7892	ppb	07:36:57
3	Zn 213.857†	1051.7	14.6	0.1132	ug/L	0.1132	ppb	07:37:17
3	SiO2†	552.9	-225.5	-12.318	ug/L	-12.318	ppb	07:37:32

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	792419.1	100.41	%	0.732				0.73%
Sc Radial	7800.8	102	%	1.2				1.22%
Y 371.029	610071.2	100.70	%	0.807				0.80%
Y RADIAL	7145.6	101.9	%	1.21				1.19%
Ag 328.068†	41.4	0.2180	ug/L	0.24491	0.2180	ppb	0.24491	112.33%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	1.6	1.3435	ug/L	9.04875	1.3435	ppb	9.04875	673.51%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.7	1.0648	ug/L	1.99183	1.0648	ppb	1.99183	187.06%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	431.5	9.0980	ug/L	0.09996	9.0980	ppb	0.09996	1.10%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	1.3	0.0091	ug/L	0.09521	0.0091	ppb	0.09521	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	75.9	0.0302	ug/L	0.02849	0.0302	ppb	0.02849	94.37%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.7	-5.0453	ug/L	2.10566	-5.0453	ppb	2.10566	41.73%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                18.9      0.2130 ug/L       0.07578      0.2130 ppb        0.07578  35.58%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                23.0      0.3447 ug/L       0.01080      0.3447 ppb        0.01080   3.13%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -12.0     -0.1559 ug/L       0.18269     -0.1559 ppb        0.18269 117.21%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               135.2      0.4304 ug/L       0.14880      0.4304 ppb        0.14880  34.58%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.4      5.7264 ug/L       2.33020      5.7264 ppb        2.33020  40.69%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -37.8     -8.1950 ug/L      26.51757     -8.1950 ppb       26.51757 323.58%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.2      4.1146 ug/L      31.37393      4.1146 ppb       31.37393 762.51%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                62.2      0.0606 ug/L       0.01212      0.0606 ppb        0.01212  20.00%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.5     -0.0294 ug/L       0.81288     -0.0294 ppb        0.81288 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         32.7      1.9662 ug/L       0.51665      1.9662 ppb        0.51665  26.28%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 3.7      0.0879 ug/L       0.25225      0.0879 ppb        0.25225 287.11%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -10.2     -4.2071 ug/L       1.36519     -4.2071 ppb        1.36519  32.45%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 5.2      0.5519 ug/L       0.28326      0.5519 ppb        0.28326  51.32%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -17.1     -18.708 ug/L       9.4692     -18.708 ppb         9.4692  50.62%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 5.6      1.3956 ug/L       2.33721      1.3956 ppb        2.33721 167.47%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 4.7      1.8638 ug/L       0.92269      1.8638 ppb        0.92269  49.51%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -120.8     -3.1015 ug/L       0.40425     -3.1015 ppb        0.40425  13.03%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 4.5      0.7004 ug/L       0.73914      0.7004 ppb        0.73914 105.52%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 4.9      0.0140 ug/L       0.08046      0.0140 ppb        0.08046 573.61%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               126.9      0.2004 ug/L       0.05278      0.2004 ppb        0.05278  26.34%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.6      1.4816 ug/L       2.49091      1.4816 ppb        2.49091 168.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                295.4      8.7911 ug/L       5.28403      8.7911 ppb        5.28403  60.11%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 56.5      0.4770 ug/L       0.32713      0.4770 ppb        0.32713  68.58%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                17.9      0.1392 ug/L       0.11004      0.1392 ppb        0.11004  79.05%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    -133.1     -7.2807 ug/L       6.59568     -7.2807 ppb        6.59568  90.59%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/7/2009 07:39:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7667.7	7667.7	100	%			07:41:37
1	Y RADIAL	7012.1	7012.1	100.0	%			07:41:37
1	Al 396.153Radial†	205.6	270.9	230.98	ug/L	230.98	ppb	07:41:37
1	Ca 317.933Radial†	180.8	155.3	211.05	ug/L	211.05	ppb	07:41:57
1	Fe 238.204 Radial†	63.6	28.7	113.96	ug/L	113.96	ppb	07:41:57
1	K 766.490 Radial†	2944.9	691.5	149.80	ug/L	149.80	ppb	07:41:37
1	Mg 279.077 IEC†	19.1	15.7	363.28	ug/L	363.28	ppb	07:41:57
1	Na 589.592 Radial†	4690.5	5210.3	313.09	ug/L	313.09	ppb	07:41:37
1	Sr 421.552†	1687.3	1745.9	4.9764	ug/L	4.9764	ppb	07:41:37
1	Sc 361.383	779282.3	779282.3	98.747	%			07:42:54
1	Y 371.029	599556.9	599556.9	98.968	%			07:42:54
1	Ag 328.068†	1703.7	959.9	5.1474	ug/L	5.1474	ppb	07:42:54
1	As 188.979†	52.2	92.7	27.105	ug/L	27.105	ppb	07:43:14
1	B 249.677†	1387.2	2492.0	52.526	ug/L	52.526	ppb	07:43:14
1	Ba 233.527†	839.0	848.0	5.2793	ug/L	5.2793	ppb	07:43:14
1	Be 313.107†	5989.6	12507.2	4.9095	ug/L	4.9095	ppb	07:42:54
1	Cd 226.502†	133.3	453.8	5.1134	ug/L	5.1134	ppb	07:43:14
1	Co 228.616†	212.2	337.9	5.0894	ug/L	5.0894	ppb	07:43:14
1	Cr 267.716†	295.0	373.0	4.7762	ug/L	4.7762	ppb	07:43:14
1	Cu 324.752†	11758.3	3201.3	10.188	ug/L	10.188	ppb	07:42:54
1	Mn 257.610†	11388.5	10681.1	10.311	ug/L	10.311	ppb	07:42:54
1	Mo 202.031†	171.7	153.5	9.6814	ug/L	9.6814	ppb	07:43:14
1	Ni 231.604†	352.1	212.9	5.0969	ug/L	5.0969	ppb	07:43:14
1	P 214.914†	704.3	361.6	145.18	ug/L	145.18	ppb	07:43:14
1	Pb 220.353†	80.0	100.0	10.627	ug/L	10.627	ppb	07:43:14
1	S 181.975 Axial†	178.0	75.5	82.321	ug/L	82.321	ppb	07:43:14
1	Sb 206.836†	115.2	55.8	13.904	ug/L	13.904	ppb	07:43:14
1	Se 196.026†	48.2	85.5	33.848	ug/L	33.848	ppb	07:43:14
1	Si 251.611†	4283.1	3622.1	92.821	ug/L	92.821	ppb	07:43:14
1	Sn 189.927†	61.3	50.9	8.0356	ug/L	8.0356	ppb	07:43:14
1	Ti 334.940†	1490.0	3248.6	5.2217	ug/L	5.2217	ppb	07:42:54
1	Tl 190.801†	31.7	109.1	24.650	ug/L	24.650	ppb	07:43:14
1	U 409.014†	-4098.8	1955.5	58.168	ug/L	58.168	ppb	07:42:54
1	V 292.402†	-1270.9	614.8	5.2397	ug/L	5.2397	ppb	07:42:54
1	Zn 213.857†	2308.4	1310.4	10.235	ug/L	10.235	ppb	07:43:14
1	SiO2†	4475.8	3759.3	205.21	ug/L	205.21	ppb	07:44:10
2	Sc Radial	7791.0	7791.0	102	%			07:42:02
2	Y RADIAL	7132.1	7132.1	101.7	%			07:42:02
2	Al 396.153Radial†	190.1	252.4	215.18	ug/L	215.18	ppb	07:42:02
2	Ca 317.933Radial†	181.7	153.4	208.43	ug/L	208.43	ppb	07:42:22
2	Fe 238.204 Radial†	63.1	27.3	108.22	ug/L	108.22	ppb	07:42:22
2	K 766.490 Radial†	3011.0	709.8	153.79	ug/L	153.79	ppb	07:42:02
2	Mg 279.077 IEC†	15.2	11.6	268.79	ug/L	268.79	ppb	07:42:22
2	Na 589.592 Radial†	4677.5	5123.6	307.88	ug/L	307.88	ppb	07:42:02
2	Sr 421.552†	1715.3	1746.7	4.9788	ug/L	4.9788	ppb	07:42:02
2	Sc 361.383	777298.7	777298.7	98.496	%			07:43:19
2	Y 371.029	598145.4	598145.4	98.735	%			07:43:19
2	Ag 328.068†	1720.6	981.5	5.2574	ug/L	5.2574	ppb	07:43:19
2	As 188.979†	56.0	96.7	28.274	ug/L	28.274	ppb	07:43:39
2	B 249.677†	1431.5	2540.5	53.551	ug/L	53.551	ppb	07:43:39
2	Ba 233.527†	815.8	826.6	5.1456	ug/L	5.1456	ppb	07:43:39
2	Be 313.107†	5933.9	12466.0	4.8933	ug/L	4.8933	ppb	07:43:19
2	Cd 226.502†	135.1	456.0	5.1384	ug/L	5.1384	ppb	07:43:39
2	Co 228.616†	206.0	332.1	5.0040	ug/L	5.0040	ppb	07:43:39
2	Cr 267.716†	296.0	374.8	4.7984	ug/L	4.7984	ppb	07:43:39
2	Cu 324.752†	11732.2	3205.2	10.200	ug/L	10.200	ppb	07:43:19
2	Mn 257.610†	11319.7	10640.7	10.274	ug/L	10.274	ppb	07:43:19
2	Mo 202.031†	174.5	156.7	9.8869	ug/L	9.8869	ppb	07:43:39
2	Ni 231.604†	355.3	217.0	5.1950	ug/L	5.1950	ppb	07:43:39

2	P 214.914†	691.3	350.2	140.58 ug/L	140.58 ppb	07:43:39
2	Pb 220.353†	81.3	101.5	10.790 ug/L	10.790 ppb	07:43:39
2	S 181.975 Axial†	181.4	79.5	86.665 ug/L	86.665 ppb	07:43:39
2	Sb 206.836†	116.6	57.6	14.381 ug/L	14.381 ppb	07:43:39
2	Se 196.026†	51.0	88.5	34.986 ug/L	34.986 ppb	07:43:39
2	Si 251.611†	4315.7	3666.3	93.945 ug/L	93.945 ppb	07:43:39
2	Sn 189.927†	74.8	64.8	10.222 ug/L	10.222 ppb	07:43:39
2	Ti 334.940†	1479.3	3241.5	5.2090 ug/L	5.2090 ppb	07:43:19
2	Tl 190.801†	32.6	110.1	24.873 ug/L	24.873 ppb	07:43:39
2	U 409.014†	-3998.6	2046.7	60.882 ug/L	60.882 ppb	07:43:19
2	V 292.402†	-1319.6	562.2	4.8165 ug/L	4.8165 ppb	07:43:19
2	Zn 213.857†	2311.3	1319.4	10.308 ug/L	10.308 ppb	07:43:39
2	SiO2†	4427.5	3721.8	203.14 ug/L	203.14 ppb	07:44:15
3	Sc Radial	7701.3	7701.3	101 %		07:42:27
3	Y RADIAL	7069.4	7069.4	100.8 %		07:42:27
3	Al 396.153Radial†	226.1	290.3	247.52 ug/L	247.52 ppb	07:42:27
3	Ca 317.933Radial†	181.0	154.8	210.34 ug/L	210.34 ppb	07:42:47
3	Fe 238.204 Radial†	60.5	25.4	100.73 ug/L	100.73 ppb	07:42:47
3	K 766.490 Radial†	2972.3	705.8	152.91 ug/L	152.91 ppb	07:42:27
3	Mg 279.077 IEC†	14.7	11.3	261.08 ug/L	261.08 ppb	07:42:47
3	Na 589.592 Radial†	4713.4	5212.6	313.23 ug/L	313.23 ppb	07:42:27
3	Sr 421.552†	1691.4	1742.5	4.9668 ug/L	4.9668 ppb	07:42:27
3	Sc 361.383	788506.0	788506.0	99.916 %		07:43:45
3	Y 371.029	607293.2	607293.2	100.25 %		07:43:45
3	Ag 328.068†	1788.7	1024.8	5.4818 ug/L	5.4818 ppb	07:43:45
3	As 188.979†	70.3	110.2	32.217 ug/L	32.217 ppb	07:44:05
3	B 249.677†	1422.2	2510.6	52.920 ug/L	52.920 ppb	07:44:05
3	Ba 233.527†	821.0	820.1	5.1051 ug/L	5.1051 ppb	07:44:05
3	Be 313.107†	6123.4	12570.1	4.9340 ug/L	4.9340 ppb	07:43:45
3	Cd 226.502†	115.7	434.7	4.8987 ug/L	4.8987 ppb	07:44:05
3	Co 228.616†	211.4	334.5	5.0408 ug/L	5.0408 ppb	07:44:05
3	Cr 267.716†	297.5	371.9	4.7595 ug/L	4.7595 ppb	07:44:05
3	Cu 324.752†	12015.3	3319.2	10.562 ug/L	10.562 ppb	07:43:45
3	Mn 257.610†	11486.9	10644.7	10.277 ug/L	10.277 ppb	07:43:45
3	Mo 202.031†	183.1	162.8	10.270 ug/L	10.270 ppb	07:44:05
3	Ni 231.604†	383.2	239.8	5.7415 ug/L	5.7415 ppb	07:44:05
3	P 214.914†	713.4	362.4	145.50 ug/L	145.50 ppb	07:44:05
3	Pb 220.353†	71.4	90.4	9.6234 ug/L	9.6234 ppb	07:44:05
3	S 181.975 Axial†	180.3	75.8	82.599 ug/L	82.599 ppb	07:44:05
3	Sb 206.836†	107.0	46.3	11.614 ug/L	11.614 ppb	07:44:05
3	Se 196.026†	45.0	81.7	32.315 ug/L	32.315 ppb	07:44:05
3	Si 251.611†	4314.8	3603.1	92.315 ug/L	92.315 ppb	07:44:05
3	Sn 189.927†	77.2	66.1	10.429 ug/L	10.429 ppb	07:44:05
3	Ti 334.940†	1474.6	3215.4	5.1640 ug/L	5.1640 ppb	07:43:45
3	Tl 190.801†	21.3	98.3	22.207 ug/L	22.207 ppb	07:44:05
3	U 409.014†	-3825.0	2278.2	67.770 ug/L	67.770 ppb	07:43:45
3	V 292.402†	-1325.8	575.0	4.9402 ug/L	4.9402 ppb	07:43:45
3	Zn 213.857†	2293.3	1268.0	9.9013 ug/L	9.9013 ppb	07:44:05
3	SiO2†	4478.6	3709.1	202.43 ug/L	202.43 ppb	07:44:20

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	781695.7	99.053	%	0.7579				0.77%
Sc Radial	7720.0	101	%	0.8				0.83%
Y 371.029	601665.2	99.316	%	0.8129				0.82%
Y RADIAL	7071.2	100.9	%	0.86				0.85%
Ag 328.068†	988.7	5.2955	ug/L	0.17043	5.2955	ppb	0.17043	3.22%
QC value within limits for Ag 328.068 Recovery = 105.91%								
Al 396.153Radial†	271.2	231.23	ug/L	16.173	231.23	ppb	16.173	6.99%
QC value within limits for Al 396.153Radial Recovery = 115.61%								
As 188.979†	99.9	29.199	ug/L	2.6782	29.199	ppb	2.6782	9.17%
QC value within limits for As 188.979 Recovery = 97.33%								
B 249.677†	2514.4	52.999	ug/L	0.5168	52.999	ppb	0.5168	0.98%
QC value within limits for B 249.677 Recovery = 106.00%								
Ba 233.527†	831.6	5.1767	ug/L	0.09117	5.1767	ppb	0.09117	1.76%
QC value within limits for Ba 233.527 Recovery = 103.53%								
Be 313.107†	12514.4	4.9123	ug/L	0.02047	4.9123	ppb	0.02047	0.42%
QC value within limits for Be 313.107 Recovery = 98.25%								
Ca 317.933Radial†	154.5	209.94	ug/L	1.354	209.94	ppb	1.354	0.65%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.97%
Cd 226.502†              448.2      5.0502 ug/L       0.13178      5.0502 ppb        0.13178   2.61%
   QC value within limits for Cd 226.502  Recovery = 101.00%
Co 228.616†              334.8      5.0447 ug/L       0.04283      5.0447 ppb        0.04283   0.85%
   QC value within limits for Co 228.616  Recovery = 100.89%
Cr 267.716†              373.2      4.7780 ug/L       0.01950      4.7780 ppb        0.01950   0.41%
   QC value within limits for Cr 267.716  Recovery = 95.56%
Cu 324.752†             3241.9      10.317 ug/L        0.2126      10.317 ppb         0.2126   2.06%
   QC value within limits for Cu 324.752  Recovery = 103.17%
Fe 238.204 Radial†       27.1       107.64 ug/L         6.632      107.64 ppb          6.632   6.16%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.64%
K 766.490 Radial†       702.4       152.17 ug/L         2.096      152.17 ppb          2.096   1.38%
   QC value within limits for K 766.490 Radial  Recovery = 101.44%
Mg 279.077 IEC†          12.9       297.72 ug/L        56.914      297.72 ppb         56.914  19.12%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.24%
Mn 257.610†            10655.5      10.287 ug/L        0.0210      10.287 ppb         0.0210   0.20%
   QC value within limits for Mn 257.610  Recovery = 102.87%
Mo 202.031†              157.7      9.9461 ug/L       0.29883      9.9461 ppb        0.29883   3.00%
   QC value within limits for Mo 202.031  Recovery = 99.46%
Na 589.592 Radial†      5182.2      311.40 ug/L         3.046      311.40 ppb          3.046   0.98%
   QC value within limits for Na 589.592 Radial  Recovery = 103.80%
Ni 231.604†              223.3      5.3445 ug/L       0.34732      5.3445 ppb        0.34732   6.50%
   QC value within limits for Ni 231.604  Recovery = 106.89%
P 214.914†               358.0      143.75 ug/L         2.753      143.75 ppb          2.753   1.92%
   QC value within limits for P 214.914  Recovery = 95.83%
Pb 220.353†               97.3      10.347 ug/L        0.6317      10.347 ppb         0.6317   6.11%
   QC value within limits for Pb 220.353  Recovery = 103.47%
S 181.975 Axial†          76.9      83.862 ug/L        2.4320      83.862 ppb         2.4320   2.90%
   QC value within limits for S 181.975 Axial  Recovery = 83.86%
Sb 206.836†               53.2      13.300 ug/L        1.4794      13.300 ppb         1.4794  11.12%
   QC value greater than the upper limit for Sb 206.836  Recovery = 133.00%
Se 196.026†               85.3      33.716 ug/L        1.3403      33.716 ppb         1.3403   3.98%
   QC value within limits for Se 196.026  Recovery = 112.39%
Si 251.611†             3630.5      93.027 ug/L        0.8341      93.027 ppb         0.8341   0.90%
   QC value within limits for Si 251.611  Recovery = 93.03%
Sn 189.927†               60.6      9.5623 ug/L       1.32621      9.5623 ppb        1.32621  13.87%
   QC value within limits for Sn 189.927  Recovery = 95.62%
Sr 421.552†             1745.0      4.9740 ug/L       0.00632      4.9740 ppb        0.00632   0.13%
   QC value within limits for Sr 421.552  Recovery = 99.48%
Ti 334.940†             3235.2      5.1983 ug/L       0.03031      5.1983 ppb        0.03031   0.58%
   QC value within limits for Ti 334.940  Recovery = 103.97%
Tl 190.801†              105.9      23.910 ug/L        1.4787      23.910 ppb         1.4787   6.18%
   QC value within limits for Tl 190.801  Recovery = 119.55%
U 409.014†              2093.5      62.273 ug/L        4.9498      62.273 ppb         4.9498   7.95%
   QC value within limits for U 409.014  Recovery = 124.55%
V 292.402†               584.0      4.9988 ug/L       0.21761      4.9988 ppb        0.21761   4.35%
   QC value within limits for V 292.402  Recovery = 99.98%
Zn 213.857†             1299.3      10.148 ug/L        0.2170      10.148 ppb         0.2170   2.14%
   QC value within limits for Zn 213.857  Recovery = 101.48%
SiO2†                   3730.1      203.59 ug/L         1.448      203.59 ppb          1.448   0.71%
   QC value within limits for SiO2  Recovery = 95.58%
QC Failed.  Continue with analysis.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/7/2009 07:46:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7202.5	7202.5	94.4	%			07:48:29
1	Y RADIAL	6471.0	6471.0	92.30	%			07:48:29
1	Al 396.153Radial†	570868.0	605006.1	516810	ug/L	516810	ppb	07:48:24
1	Ca 317.933Radial†	331794.6	351573.0	477770	ug/L	477770	ppb	07:48:24
1	Fe 238.204 Radial†	43324.1	45875.3	181690	ug/L	181690	ppb	07:48:29
1	K 766.490 Radial†	2019.9	-99.4	-232.88	ug/L	-232.88	ppb	07:48:29
1	Mg 279.077 IEC†	19541.0	20704.0	478150	ug/L	478150	ppb	07:48:29
1	Na 589.592 Radial†	159.1	710.0	42.665	ug/L	42.665	ppb	07:48:29
1	Sr 421.552†	1308.9	1453.4	-0.2842	ug/L	-0.2842	ppb	07:48:29
1	Sc 361.383	682344.7	682344.7	86.464	%			07:48:56
1	Y 371.029	514121.3	514121.3	84.865	%			07:48:56
1	Ag 328.068†	-8105.3	-10139.5	-5.2009	ug/L	-5.2009	ppb	07:48:56
1	As 188.979†	-111.4	-89.0	10.154	ug/L	10.154	ppb	07:49:17
1	B 249.677†	-172.4	887.8	6.3134	ug/L	6.3134	ppb	07:48:56
1	Ba 233.527†	-628.7	-728.8	0.9972	ug/L	0.9972	ppb	07:49:17
1	Be 313.107†	-6466.4	-1037.1	-0.4711	ug/L	-0.4711	ppb	07:48:56
1	Cd 226.502†	1084.8	1573.5	0.7397	ug/L	0.7397	ppb	07:49:17
1	Co 228.616†	-13.0	107.9	-0.9559	ug/L	-0.9559	ppb	07:49:17
1	Cr 267.716†	-428.5	-421.4	-1.8730	ug/L	-1.8730	ppb	07:49:17
1	Cu 324.752†	5796.1	-2002.6	4.1355	ug/L	4.1355	ppb	07:48:56
1	Mn 257.610†	-690.6	-1650.5	10.299	ug/L	10.299	ppb	07:48:56
1	Mo 202.031†	-224.8	-280.4	-6.6893	ug/L	-6.6893	ppb	07:49:17
1	Ni 231.604†	325.5	232.8	5.5751	ug/L	5.5751	ppb	07:49:17
1	P 214.914†	300.6	-4.0	27.189	ug/L	27.189	ppb	07:49:17
1	Pb 220.353†	-779.0	-881.9	1.2553	ug/L	1.2553	ppb	07:49:17
1	S 181.975 Axial†	135.5	52.1	-44.868	ug/L	-44.868	ppb	07:49:17
1	Sb 206.836†	124.8	83.6	4.4169	ug/L	4.4169	ppb	07:49:17
1	Se 196.026†	-1314.7	-1483.8	12.114	ug/L	12.114	ppb	07:49:17
1	Si 251.611†	392.9	-260.9	-6.1972	ug/L	-6.1972	ppb	07:49:17
1	Sn 189.927†	-326.5	-388.8	-4.7132	ug/L	-4.7132	ppb	07:49:17
1	Ti 334.940†	-16521.8	-17368.7	0.6731	ug/L	0.6731	ppb	07:48:56
1	Tl 190.801†	-111.5	-52.0	-9.0236	ug/L	-9.0236	ppb	07:49:17
1	U 409.014†	-4483.2	921.3	5.0973	ug/L	5.0973	ppb	07:48:56
1	V 292.402†	-63.4	1828.6	-2.0513	ug/L	-2.0513	ppb	07:49:17
1	Zn 213.857†	3918.8	3505.0	-4.6916	ug/L	-4.6916	ppb	07:49:17
1	SiO2†	395.8	-315.4	-16.162	ug/L	-16.162	ppb	07:50:13
2	Sc Radial	7209.6	7209.6	94.5	%			07:48:40
2	Y RADIAL	6475.4	6475.4	92.37	%			07:48:40
2	Al 396.153Radial†	575594.8	609407.0	520570	ug/L	520570	ppb	07:48:35
2	Ca 317.933Radial†	335012.4	354628.9	481920	ug/L	481920	ppb	07:48:35
2	Fe 238.204 Radial†	43236.4	45736.7	181140	ug/L	181140	ppb	07:48:40
2	K 766.490 Radial†	2000.7	-121.8	-239.93	ug/L	-239.93	ppb	07:48:40
2	Mg 279.077 IEC†	19434.7	20570.9	475080	ug/L	475080	ppb	07:48:40
2	Na 589.592 Radial†	75.2	621.1	37.321	ug/L	37.321	ppb	07:48:40
2	Sr 421.552†	1339.8	1484.6	-0.2335	ug/L	-0.2335	ppb	07:48:40
2	Sc 361.383	687096.9	687096.9	87.066	%			07:49:22
2	Y 371.029	517050.3	517050.3	85.349	%			07:49:22
2	Ag 328.068†	-7877.0	-9812.5	-3.6727	ug/L	-3.6727	ppb	07:49:22
2	As 188.979†	-110.6	-87.2	10.571	ug/L	10.571	ppb	07:49:42
2	B 249.677†	-205.4	851.2	5.5792	ug/L	5.5792	ppb	07:49:22
2	Ba 233.527†	-607.0	-698.8	1.1665	ug/L	1.1665	ppb	07:49:42
2	Be 313.107†	-6474.6	-994.8	-0.4547	ug/L	-0.4547	ppb	07:49:22
2	Cd 226.502†	1171.0	1663.8	1.8092	ug/L	1.8092	ppb	07:49:42
2	Co 228.616†	-28.4	90.4	-1.2098	ug/L	-1.2098	ppb	07:49:42
2	Cr 267.716†	-369.8	-350.5	-0.9721	ug/L	-0.9721	ppb	07:49:42
2	Cu 324.752†	5775.3	-2072.9	3.8803	ug/L	3.8803	ppb	07:49:22
2	Mn 257.610†	-451.2	-1370.0	10.566	ug/L	10.566	ppb	07:49:22
2	Mo 202.031†	-221.1	-274.3	-6.3375	ug/L	-6.3375	ppb	07:49:42
2	Ni 231.604†	313.5	216.5	5.1839	ug/L	5.1839	ppb	07:49:42

2	P 214.914†	281.4	-28.4	19.043 ug/L	19.043 ppb	07:49:42
2	Pb 220.353†	-764.1	-858.7	4.5542 ug/L	4.5542 ppb	07:49:42
2	S 181.975 Axial†	137.5	53.2	-44.403 ug/L	-44.403 ppb	07:49:42
2	Sb 206.836†	126.5	84.5	4.5509 ug/L	4.5509 ppb	07:49:42
2	Se 196.026†	-1336.4	-1498.2	5.0369 ug/L	5.0369 ppb	07:49:42
2	Si 251.611†	390.9	-266.3	-6.3507 ug/L	-6.3507 ppb	07:49:42
2	Sn 189.927†	-313.2	-370.9	-1.4379 ug/L	-1.4379 ppb	07:49:42
2	Ti 334.940†	-16667.6	-17404.0	0.8678 ug/L	0.8678 ppb	07:49:22
2	Tl 190.801†	-117.5	-57.9	-10.350 ug/L	-10.350 ppb	07:49:42
2	U 409.014†	-4692.7	716.5	-0.9302 ug/L	-0.9302 ppb	07:49:22
2	V 292.402†	-60.8	1832.1	-2.0060 ug/L	-2.0060 ppb	07:49:42
2	Zn 213.857†	4002.0	3569.2	-4.0298 ug/L	-4.0298 ppb	07:49:42
2	SiO2†	376.6	-340.7	-17.579 ug/L	-17.579 ppb	07:50:18
3	Sc Radial	7208.0	7208.0	94.4 %		07:48:50
3	Y RADIAL	6483.5	6483.5	92.48 %		07:48:50
3	Al 396.153Radial†	570142.7	603775.6	515760 ug/L	515760 ppb	07:48:45
3	Ca 317.933Radial†	331149.2	350620.7	476480 ug/L	476480 ppb	07:48:45
3	Fe 238.204 Radial†	43215.2	45724.9	181090 ug/L	181090 ppb	07:48:50
3	K 766.490 Radial†	2000.9	-121.1	-237.07 ug/L	-237.07 ppb	07:48:50
3	Mg 279.077 IEC†	19553.4	20701.3	478090 ug/L	478090 ppb	07:48:50
3	Na 589.592 Radial†	290.7	849.3	51.034 ug/L	51.034 ppb	07:48:50
3	Sr 421.552†	1425.0	1575.2	0.0753 ug/L	0.0753 ppb	07:48:50
3	Sc 361.383	689235.1	689235.1	87.337 %		07:49:47
3	Y 371.029	519045.7	519045.7	85.678 %		07:49:47
3	Ag 328.068†	-8146.9	-10093.5	-5.1202 ug/L	-5.1202 ppb	07:49:47
3	As 188.979†	-125.6	-103.9	5.6593 ug/L	5.6593 ppb	07:50:07
3	B 249.677†	-276.5	770.6	3.8835 ug/L	3.8835 ppb	07:49:47
3	Ba 233.527†	-599.0	-687.5	1.2349 ug/L	1.2349 ppb	07:50:07
3	Be 313.107†	-6564.2	-1074.4	-0.4864 ug/L	-0.4864 ppb	07:49:47
3	Cd 226.502†	1119.4	1600.5	1.0997 ug/L	1.0997 ppb	07:50:07
3	Co 228.616†	-32.7	85.5	-1.2804 ug/L	-1.2804 ppb	07:50:07
3	Cr 267.716†	-393.8	-376.6	-1.3111 ug/L	-1.3111 ppb	07:50:07
3	Cu 324.752†	5958.1	-1884.1	4.4778 ug/L	4.4778 ppb	07:49:47
3	Mn 257.610†	-564.8	-1498.5	10.378 ug/L	10.378 ppb	07:49:47
3	Mo 202.031†	-212.8	-264.1	-5.6957 ug/L	-5.6957 ppb	07:50:07
3	Ni 231.604†	310.3	211.6	5.0678 ug/L	5.0678 ppb	07:50:07
3	P 214.914†	301.1	-6.8	26.134 ug/L	26.134 ppb	07:50:07
3	Pb 220.353†	-780.2	-874.3	1.8872 ug/L	1.8872 ppb	07:50:07
3	S 181.975 Axial†	144.2	60.4	-35.569 ug/L	-35.569 ppb	07:50:07
3	Sb 206.836†	108.9	63.9	-0.3045 ug/L	-0.3045 ppb	07:50:07
3	Se 196.026†	-1314.3	-1468.2	16.320 ug/L	16.320 ppb	07:50:07
3	Si 251.611†	420.1	-234.3	-5.5413 ug/L	-5.5413 ppb	07:50:07
3	Sn 189.927†	-308.8	-364.8	-1.0944 ug/L	-1.0944 ppb	07:50:07
3	Ti 334.940†	-16835.9	-17537.3	0.3236 ug/L	0.3236 ppb	07:49:47
3	Tl 190.801†	-114.4	-54.0	-9.4978 ug/L	-9.4978 ppb	07:50:07
3	U 409.014†	-4542.8	904.8	4.6805 ug/L	4.6805 ppb	07:49:47
3	V 292.402†	-100.1	1787.2	-2.2966 ug/L	-2.2966 ppb	07:50:07
3	Zn 213.857†	3938.4	3482.2	-4.8152 ug/L	-4.8152 ppb	07:50:07
3	SiO2†	349.0	-373.6	-19.409 ug/L	-19.409 ppb	07:50:23

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	686225.5	86.956	%	0.4469				0.51%
Sc Radial	7206.7	94.4	%	0.05				0.05%
Y 371.029	516739.1	85.297	%	0.4089				0.48%
Y RADIAL	6476.6	92.38	%	0.090				0.10%
Ag 328.068†	-10015.2	-4.6646	ug/L	0.85994	-4.6646	ppb	0.85994	18.44%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	606062.9	517710	ug/L	2529.1	517710	ppb	2529.1	0.49%
QC value within limits for Al 396.153Radial Recovery = 103.54%								
As 188.979†	-93.4	8.7951	ug/L	2.72364	8.7951	ppb	2.72364	30.97%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	836.5	5.2587	ug/L	1.24627	5.2587	ppb	1.24627	23.70%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-705.0	1.1329	ug/L	0.12238	1.1329	ppb	0.12238	10.80%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1035.4	-0.4707	ug/L	0.01584	-0.4707	ppb	0.01584	3.36%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	352274.2	478720	ug/L	2845.7	478720	ppb	2845.7	0.59%

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   QC value within limits for Ca 317.933Radial  Recovery = 95.74%
Cd 226.502†            1612.6      1.2162 ug/L       0.54423      1.2162 ppb        0.54423  44.75%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              94.6     -1.1487 ug/L       0.17064     -1.1487 ppb        0.17064  14.85%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -382.8     -1.3854 ug/L       0.45501     -1.3854 ppb        0.45501  32.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -1986.5      4.1645 ug/L       0.29982      4.1645 ppb        0.29982   7.20%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    45779.0      181310 ug/L         331.2      181310 ppb          331.2   0.18%
   QC value within limits for Fe 238.204 Radial  Recovery = 90.65%
K 766.490 Radial†      -114.1     -236.63 ug/L         3.547     -236.63 ppb          3.547   1.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       20658.7      477110 ug/L        1757.8      477110 ppb         1757.8   0.37%
   QC value within limits for Mg 279.077 IEC  Recovery = 95.42%
Mn 257.610†           -1506.3      10.414 ug/L        0.1367      10.414 ppb         0.1367   1.31%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -272.9     -6.2408 ug/L       0.50379     -6.2408 ppb        0.50379   8.07%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      726.8      43.674 ug/L        6.9121      43.674 ppb         6.9121  15.83%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†             220.3      5.2756 ug/L       0.26576      5.2756 ppb        0.26576   5.04%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -13.1      24.122 ug/L        4.4303      24.122 ppb         4.4303  18.37%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -871.7      2.5655 ug/L       1.75095      2.5655 ppb        1.75095  68.25%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         55.2     -41.613 ug/L        5.2393     -41.613 ppb         5.2393  12.59%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              77.3      2.8878 ug/L       2.76537      2.8878 ppb        2.76537  95.76%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†           -1483.4      11.157 ug/L        5.7021      11.157 ppb         5.7021  51.11%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            -253.8     -6.0297 ug/L       0.42987     -6.0297 ppb        0.42987   7.13%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -374.8     -2.4152 ug/L       1.99756     -2.4152 ppb        1.99756  82.71%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†            1504.4     -0.1475 ug/L       0.19460     -0.1475 ppb        0.19460 131.97%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†          -17436.7      0.6215 ug/L       0.27573      0.6215 ppb        0.27573  44.37%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†             -54.7     -9.6238 ug/L       0.67212     -9.6238 ppb        0.67212   6.98%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              847.5      2.9492 ug/L       3.36611      2.9492 ppb        3.36611 114.14%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†             1816.0     -2.1180 ug/L       0.15635     -2.1180 ppb        0.15635   7.38%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            3518.8     -4.5122 ug/L       0.42233     -4.5122 ppb        0.42233   9.36%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                  -343.2     -17.717 ug/L        1.6276     -17.717 ppb         1.6276   9.19%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/7/2009 07:52:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7306.4	7306.4	95.7	%			07:54:32
1	Y RADIAL	6540.1	6540.1	93.29	%			07:54:32
1	Al 396.153Radial†	574187.7	599869.6	512400	ug/L	512400	ppb	07:54:27
1	Ca 317.933Radial†	332326.4	347127.5	471730	ug/L	471730	ppb	07:54:27
1	Fe 238.204 Radial†	43665.3	45578.7	180530	ug/L	180530	ppb	07:54:32
1	K 766.490 Radial†	25289.1	24177.4	5032.3	ug/L	5032.3	ppb	07:54:27
1	Mg 279.077 IEC†	19637.9	20510.7	473700	ug/L	473700	ppb	07:54:32
1	Na 589.592 Radial†	84836.7	89162.9	5357.8	ug/L	5357.8	ppb	07:54:27
1	Sr 421.552†	164418.8	171820.2	485.57	ug/L	485.57	ppb	07:54:27
1	Sc 361.383	697170.1	697170.1	88.343	%			07:55:00
1	Y 371.029	523367.6	523367.6	86.392	%			07:55:00
1	Ag 328.068†	37889.2	42123.6	276.26	ug/L	276.26	ppb	07:55:00
1	As 188.979†	1412.1	1638.3	517.06	ug/L	517.06	ppb	07:55:05
1	B 249.677†	21360.8	25266.7	519.29	ug/L	519.29	ppb	07:55:00
1	Ba 233.527†	68843.8	77926.6	490.45	ug/L	490.45	ppb	07:55:00
1	Be 313.107†	546664.4	625242.2	245.95	ug/L	245.95	ppb	07:55:00
1	Cd 226.502†	38124.6	43474.3	473.92	ug/L	473.92	ppb	07:55:05
1	Co 228.616†	27038.8	30729.7	459.42	ug/L	459.42	ppb	07:55:05
1	Cr 267.716†	32924.8	37343.7	483.27	ug/L	483.27	ppb	07:55:05
1	Cu 324.752†	162792.0	175567.5	568.80	ug/L	568.80	ppb	07:55:00
1	Mn 257.610†	434601.6	491098.5	485.65	ug/L	485.65	ppb	07:55:00
1	Mo 202.031†	6854.9	7739.1	498.73	ug/L	498.73	ppb	07:55:05
1	Ni 231.604†	17493.7	19658.5	470.58	ug/L	470.58	ppb	07:55:05
1	P 214.914†	5758.3	6166.5	2446.9	ug/L	2446.9	ppb	07:55:05
1	Pb 220.353†	3256.9	3705.6	486.28	ug/L	486.28	ppb	07:55:05
1	S 181.975 Axial†	2379.3	2588.6	2723.1	ug/L	2723.1	ppb	07:55:05
1	Sb 206.836†	2050.8	2260.6	545.95	ug/L	545.95	ppb	07:55:05
1	Se 196.026†	4383.5	4998.7	2544.8	ug/L	2544.8	ppb	07:55:05
1	Si 251.611†	180839.7	203987.4	5229.5	ug/L	5229.5	ppb	07:55:00
1	Sn 189.927†	2515.9	2836.8	502.51	ug/L	502.51	ppb	07:55:05
1	Ti 334.940†	264032.4	300613.0	512.48	ug/L	512.48	ppb	07:55:00
1	Tl 190.801†	1707.7	2010.0	457.44	ug/L	457.44	ppb	07:55:05
1	U 409.014†	10020.2	17448.8	496.12	ug/L	496.12	ppb	07:55:00
1	V 292.402†	55471.4	64693.1	518.06	ug/L	518.06	ppb	07:55:00
1	Zn 213.857†	59880.7	66755.2	489.14	ug/L	489.14	ppb	07:55:05
1	SiO2†	183463.7	206899.7	11298	ug/L	11298	ppb	07:55:32
2	Sc Radial	7303.2	7303.2	95.7	%			07:54:42
2	Y RADIAL	6590.2	6590.2	94.00	%			07:54:42
2	Al 396.153Radial†	570770.7	596562.0	509580	ug/L	509580	ppb	07:54:37
2	Ca 317.933Radial†	330486.9	345357.6	469320	ug/L	469320	ppb	07:54:37
2	Fe 238.204 Radial†	43711.9	45647.4	180800	ug/L	180800	ppb	07:54:42
2	K 766.490 Radial†	25130.7	24023.5	5000.2	ug/L	5000.2	ppb	07:54:37
2	Mg 279.077 IEC†	19623.5	20504.7	473560	ug/L	473560	ppb	07:54:42
2	Na 589.592 Radial†	84470.0	88818.6	5337.1	ug/L	5337.1	ppb	07:54:37
2	Sr 421.552†	163229.2	170652.5	482.26	ug/L	482.26	ppb	07:54:37
2	Sc 361.383	700522.7	700522.7	88.767	%			07:55:11
2	Y 371.029	526731.1	526731.1	86.947	%			07:55:11
2	Ag 328.068†	37939.0	41974.4	275.58	ug/L	275.58	ppb	07:55:11
2	As 188.979†	1416.4	1635.5	516.30	ug/L	516.30	ppb	07:55:16
2	B 249.677†	21548.3	25362.1	521.30	ug/L	521.30	ppb	07:55:11
2	Ba 233.527†	69053.5	77789.9	489.60	ug/L	489.60	ppb	07:55:11
2	Be 313.107†	548715.2	624591.1	245.69	ug/L	245.69	ppb	07:55:11
2	Cd 226.502†	37970.6	43094.2	469.60	ug/L	469.60	ppb	07:55:16
2	Co 228.616†	26811.9	30327.6	453.37	ug/L	453.37	ppb	07:55:16
2	Cr 267.716†	32854.2	37085.8	479.96	ug/L	479.96	ppb	07:55:16
2	Cu 324.752†	163194.2	175138.7	567.45	ug/L	567.45	ppb	07:55:11
2	Mn 257.610†	435817.7	490114.2	484.74	ug/L	484.74	ppb	07:55:11
2	Mo 202.031†	6839.1	7684.2	495.29	ug/L	495.29	ppb	07:55:16
2	Ni 231.604†	17312.5	19359.5	463.42	ug/L	463.42	ppb	07:55:16

2	P 214.914†	5713.4	6084.7	2412.6	ug/L	2412.6 ppb	07:55:16
2	Pb 220.353†	3219.6	3645.9	479.35	ug/L	479.35 ppb	07:55:16
2	S 181.975 Axial†	2371.0	2566.3	2699.4	ug/L	2699.4 ppb	07:55:16
2	Sb 206.836†	2059.3	2259.1	545.53	ug/L	545.53 ppb	07:55:16
2	Se 196.026†	4339.4	4925.2	2516.7	ug/L	2516.7 ppb	07:55:16
2	Si 251.611†	181553.0	203811.4	5225.1	ug/L	5225.1 ppb	07:55:11
2	Sn 189.927†	2479.3	2781.8	493.60	ug/L	493.60 ppb	07:55:16
2	Ti 334.940†	264683.4	299916.0	511.22	ug/L	511.22 ppb	07:55:11
2	Tl 190.801†	1748.2	2046.4	465.64	ug/L	465.64 ppb	07:55:16
2	U 409.014†	10097.3	17481.3	497.06	ug/L	497.06 ppb	07:55:11
2	V 292.402†	55659.6	64604.6	517.26	ug/L	517.26 ppb	07:55:11
2	Zn 213.857†	59583.3	66095.7	483.98	ug/L	483.98 ppb	07:55:16
2	SiO2†	180102.5	202119.4	11037	ug/L	11037 ppb	07:55:37
3	Sc Radial	7121.1	7121.1	93.3	%		07:54:53
3	Y RADIAL	6391.8	6391.8	91.17	%		07:54:53
3	Al 396.153Radial†	569193.9	610123.4	521160	ug/L	521160 ppb	07:54:48
3	Ca 317.933Radial†	329838.8	353493.8	480380	ug/L	480380 ppb	07:54:48
3	Fe 238.204 Radial†	42641.2	45668.0	180880	ug/L	180880 ppb	07:54:53
3	K 766.490 Radial†	25054.4	24613.3	5122.4	ug/L	5122.4 ppb	07:54:48
3	Mg 279.077 IEC†	19179.5	20553.2	474680	ug/L	474680 ppb	07:54:53
3	Na 589.592 Radial†	84104.8	90684.2	5449.2	ug/L	5449.2 ppb	07:54:48
3	Sr 421.552†	162884.4	174644.5	493.54	ug/L	493.54 ppb	07:54:48
3	Sc 361.383	701108.9	701108.9	88.842	%		07:55:22
3	Y 371.029	526868.1	526868.1	86.969	%		07:55:22
3	Ag 328.068†	37987.5	41993.3	275.54	ug/L	275.54 ppb	07:55:22
3	As 188.979†	1408.6	1625.4	513.36	ug/L	513.36 ppb	07:55:27
3	B 249.677†	21542.9	25335.8	520.75	ug/L	520.75 ppb	07:55:22
3	Ba 233.527†	68910.3	77563.7	488.20	ug/L	488.20 ppb	07:55:22
3	Be 313.107†	549351.4	624790.3	245.77	ug/L	245.77 ppb	07:55:22
3	Cd 226.502†	37559.8	42596.0	463.97	ug/L	463.97 ppb	07:55:27
3	Co 228.616†	26462.9	29909.5	447.07	ug/L	447.07 ppb	07:55:27
3	Cr 267.716†	32452.1	36602.2	473.76	ug/L	473.76 ppb	07:55:27
3	Cu 324.752†	163715.7	175571.9	568.83	ug/L	568.83 ppb	07:55:22
3	Mn 257.610†	435638.0	489501.5	484.13	ug/L	484.13 ppb	07:55:22
3	Mo 202.031†	6740.0	7566.2	487.85	ug/L	487.85 ppb	07:55:27
3	Ni 231.604†	17138.0	19146.8	458.33	ug/L	458.33 ppb	07:55:27
3	P 214.914†	5809.7	6187.7	2458.0	ug/L	2458.0 ppb	07:55:27
3	Pb 220.353†	3157.8	3573.3	474.09	ug/L	474.09 ppb	07:55:27
3	S 181.975 Axial†	2306.8	2491.8	2615.8	ug/L	2615.8 ppb	07:55:27
3	Sb 206.836†	2004.3	2195.3	529.47	ug/L	529.47 ppb	07:55:27
3	Se 196.026†	4268.2	4841.0	2484.7	ug/L	2484.7 ppb	07:55:27
3	Si 251.611†	181563.6	203652.2	5221.1	ug/L	5221.1 ppb	07:55:22
3	Sn 189.927†	2475.7	2775.5	493.85	ug/L	493.85 ppb	07:55:27
3	Ti 334.940†	264903.9	299914.8	511.88	ug/L	511.88 ppb	07:55:22
3	Tl 190.801†	1705.9	1997.2	454.64	ug/L	454.64 ppb	07:55:27
3	U 409.014†	10164.9	17547.9	499.04	ug/L	499.04 ppb	07:55:22
3	V 292.402†	55709.3	64608.1	517.21	ug/L	517.21 ppb	07:55:22
3	Zn 213.857†	58859.0	65224.3	477.11	ug/L	477.11 ppb	07:55:27
3	SiO2†	181328.4	203329.6	11103	ug/L	11103 ppb	07:55:43

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	699600.6	88.651	%	0.2693				0.30%
Sc Radial	7243.5	94.9	%	1.39				1.46%
Y 371.029	525655.6	86.769	%	0.3273				0.38%
Y RADIAL	6507.4	92.82	%	1.472				1.59%
Ag 328.068†	42030.5	275.80	ug/L	0.406	275.80	ppb	0.406	0.15%
QC value within limits for Ag 328.068 Recovery = 110.32%								
Al 396.153Radial†	602185.0	514380	ug/L	6040.4	514380	ppb	6040.4	1.17%
QC value within limits for Al 396.153Radial Recovery = 102.88%								
As 188.979†	1633.1	515.58	ug/L	1.953	515.58	ppb	1.953	0.38%
QC value within limits for As 188.979 Recovery = 103.12%								
B 249.677†	25321.5	520.45	ug/L	1.039	520.45	ppb	1.039	0.20%
QC value within limits for B 249.677 Recovery = 104.09%								
Ba 233.527†	77760.0	489.42	ug/L	1.134	489.42	ppb	1.134	0.23%
QC value within limits for Ba 233.527 Recovery = 97.88%								
Be 313.107†	624874.5	245.80	ug/L	0.132	245.80	ppb	0.132	0.05%
QC value within limits for Be 313.107 Recovery = 98.32%								
Ca 317.933Radial†	348659.6	473810	ug/L	5814.9	473810	ppb	5814.9	1.23%

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   QC value within limits for Ca 317.933Radial  Recovery = 94.76%
Cd 226.502†            43054.8      469.16 ug/L          4.989      469.16 ppb          4.989   1.06%
   QC value within limits for Cd 226.502  Recovery = 93.83%
Co 228.616†            30322.3      453.28 ug/L          6.177      453.28 ppb          6.177   1.36%
   QC value within limits for Co 228.616  Recovery = 90.66%
Cr 267.716†            37010.5      478.99 ug/L          4.827      478.99 ppb          4.827   1.01%
   QC value within limits for Cr 267.716  Recovery = 95.80%
Cu 324.752†           175426.0      568.36 ug/L          0.788      568.36 ppb          0.788   0.14%
   QC value within limits for Cu 324.752  Recovery = 113.67%
Fe 238.204 Radial†     45631.4      180740 ug/L          184.9      180740 ppb          184.9   0.10%
   QC value within limits for Fe 238.204 Radial  Recovery = 90.37%
K 766.490 Radial†      24271.4      5051.6 ug/L          63.37      5051.6 ppb          63.37   1.25%
   QC value within limits for K 766.490 Radial  Recovery = 101.03%
Mg 279.077 IEC†        20522.9      473980 ug/L          610.4      473980 ppb          610.4   0.13%
   QC value within limits for Mg 279.077 IEC  Recovery = 94.80%
Mn 257.610†           490238.0      484.84 ug/L          0.765      484.84 ppb          0.765   0.16%
   QC value within limits for Mn 257.610  Recovery = 96.97%
Mo 202.031†             7663.1      493.96 ug/L          5.560      493.96 ppb          5.560   1.13%
   QC value within limits for Mo 202.031  Recovery = 98.79%
Na 589.592 Radial†     89555.3      5381.4 ug/L          59.65      5381.4 ppb          59.65   1.11%
   QC value within limits for Na 589.592 Radial  Recovery = 107.63%
Ni 231.604†            19388.3      464.11 ug/L          6.153      464.11 ppb          6.153   1.33%
   QC value within limits for Ni 231.604  Recovery = 92.82%
P 214.914†              6146.3      2439.2 ug/L          23.67      2439.2 ppb          23.67   0.97%
   QC value within limits for P 214.914  Recovery = 97.57%
Pb 220.353†             3641.6      479.90 ug/L          6.117      479.90 ppb          6.117   1.27%
   QC value within limits for Pb 220.353  Recovery = 95.98%
S 181.975 Axial†        2548.9      2679.4 ug/L          56.37      2679.4 ppb          56.37   2.10%
   QC value within limits for S 181.975 Axial  Recovery = 107.18%
Sb 206.836†             2238.3      540.32 ug/L          9.396      540.32 ppb          9.396   1.74%
   QC value within limits for Sb 206.836  Recovery = 108.06%
Se 196.026†             4921.6      2515.4 ug/L          30.04      2515.4 ppb          30.04   1.19%
   QC value within limits for Se 196.026  Recovery = 100.62%
Si 251.611†           203817.0      5225.2 ug/L           4.21      5225.2 ppb           4.21   0.08%
   QC value within limits for Si 251.611  Recovery = 104.50%
Sn 189.927†             2798.0      496.65 ug/L          5.076      496.65 ppb          5.076   1.02%
   QC value within limits for Sn 189.927  Recovery = 99.33%
Sr 421.552†           172372.4      487.12 ug/L          5.799      487.12 ppb          5.799   1.19%
   QC value within limits for Sr 421.552  Recovery = 97.42%
Ti 334.940†           300147.9      511.86 ug/L          0.634      511.86 ppb          0.634   0.12%
   QC value within limits for Ti 334.940  Recovery = 102.37%
Tl 190.801†             2017.9      459.24 ug/L          5.718      459.24 ppb          5.718   1.25%
   QC value within limits for Tl 190.801  Recovery = 91.85%
U 409.014†             17492.7      497.41 ug/L          1.492      497.41 ppb          1.492   0.30%
   QC value within limits for U 409.014  Recovery = 99.48%
V 292.402†             64635.3      517.51 ug/L          0.479      517.51 ppb          0.479   0.09%
   QC value within limits for V 292.402  Recovery = 103.50%
Zn 213.857†            66025.1      483.41 ug/L          6.033      483.41 ppb          6.033   1.25%
   QC value within limits for Zn 213.857  Recovery = 96.68%
SiO2†                 204116.3       11146 ug/L          135.9       11146 ppb          135.9   1.22%
   QC value within limits for SiO2  Recovery = 104.22%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/7/2009 07:57:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	6994.5	6994.5	91.6	%			07:59:57
1	Y RADIAL	6350.4	6350.4	90.58	%			07:59:57
1	Al 396.153Radial†	565449.9	617080.7	527130	ug/L	527130	ppb	07:59:52
1	Ca 317.933Radial†	325071.9	354691.3	482010	ug/L	482010	ppb	07:59:52
1	Fe 238.204 Radial†	101777.5	111024.3	439710	ug/L	439710	ppb	07:59:52
1	K 766.490 Radial†	2091.3	42.1	-220.80	ug/L	-220.80	ppb	07:59:57
1	Mg 279.077 IEC†	18799.5	20510.6	473460	ug/L	473460	ppb	07:59:57
1	Na 589.592 Radial†	7893584.7	8613959.0	517610	ug/L	517610	ppb	07:59:47
1	Sr 421.552†	1705.6	1927.4	1.0283	ug/L	1.0283	ppb	07:59:57
1	Sc 361.383	685532.5	685532.5	86.868	%			08:00:39
1	Y 371.029	516900.0	516900.0	85.324	%			08:00:39
1	Ag 328.068†	-19141.1	-22800.1	-5.4853	ug/L	-5.4853	ppb	08:00:39
1	As 188.979†	-244.1	-241.2	17.333	ug/L	17.333	ppb	08:01:00
1	B 249.677†	770.0	1973.6	11.584	ug/L	11.584	ppb	08:00:39
1	Ba 233.527†	-1785.9	-2057.5	0.5650	ug/L	0.5650	ppb	08:01:00
1	Be 313.107†	-11470.4	-6762.8	-2.6928	ug/L	-2.6928	ppb	08:00:39
1	Cd 226.502†	3216.8	4022.0	4.1994	ug/L	4.1994	ppb	08:01:00
1	Co 228.616†	217.2	373.0	-0.7144	ug/L	-0.7144	ppb	08:01:00
1	Cr 267.716†	-272.5	-239.5	0.9169	ug/L	0.9169	ppb	08:01:00
1	Cu 324.752†	2954.4	-5305.1	8.5503	ug/L	8.5503	ppb	08:00:39
1	Mn 257.610†	-29183.6	-34447.1	8.7397	ug/L	8.7397	ppb	08:00:39
1	Mo 202.031†	-441.9	-529.1	-6.7610	ug/L	-6.7610	ppb	08:00:39
1	Ni 231.604†	443.2	366.6	8.7763	ug/L	8.7763	ppb	08:01:00
1	P 214.914†	763.8	527.6	39.997	ug/L	39.997	ppb	08:01:00
1	Pb 220.353†	-495.0	-550.9	17.923	ug/L	17.923	ppb	08:01:00
1	S 181.975 Axial†	168.7	89.5	-6.0949	ug/L	-6.0949	ppb	08:01:00
1	Sb 206.836†	99.3	53.5	0.9362	ug/L	0.9362	ppb	08:01:00
1	Se 196.026†	-3136.7	-3574.2	-11.468	ug/L	-11.468	ppb	08:01:00
1	Si 251.611†	-1026.7	-1897.2	-47.972	ug/L	-47.972	ppb	08:01:00
1	Sn 189.927†	-336.9	-399.0	-1.3136	ug/L	-1.3136	ppb	08:01:00
1	Ti 334.940†	-11894.5	-11953.0	3.4046	ug/L	3.4046	ppb	08:00:39
1	Tl 190.801†	-153.9	-100.2	-20.031	ug/L	-20.031	ppb	08:01:00
1	U 409.014†	408907.8	476830.0	14135	ug/L	14135	ppb	08:00:39
1	V 292.402†	1049.1	3109.6	0.4232	ug/L	0.4232	ppb	08:01:00
1	Zn 213.857†	7155.4	7209.9	2.3661	ug/L	2.3661	ppb	08:01:00
1	SiO2†	-1052.9	-1985.2	-106.97	ug/L	-106.97	ppb	08:01:56
2	Sc Radial	7095.2	7095.2	93.0	%			08:00:15
2	Y RADIAL	6388.7	6388.7	91.13	%			08:00:15
2	Al 396.153Radial†	561503.9	604078.2	516020	ug/L	516020	ppb	08:00:10
2	Ca 317.933Radial†	321356.3	345659.7	469730	ug/L	469730	ppb	08:00:10
2	Fe 238.204 Radial†	100650.6	108235.7	428670	ug/L	428670	ppb	08:00:10
2	K 766.490 Radial†	2250.4	181.0	-186.52	ug/L	-186.52	ppb	08:00:15
2	Mg 279.077 IEC†	18948.2	20379.4	470440	ug/L	470440	ppb	08:00:15
2	Na 589.592 Radial†	7960529.0	8563715.8	514590	ug/L	514590	ppb	08:00:05
2	Sr 421.552†	1731.2	1928.5	1.1452	ug/L	1.1452	ppb	08:00:15
2	Sc 361.383	686222.2	686222.2	86.955	%			08:01:05
2	Y 371.029	517262.2	517262.2	85.384	%			08:01:05
2	Ag 328.068†	-19314.6	-22977.5	-9.6874	ug/L	-9.6874	ppb	08:01:05
2	As 188.979†	-245.9	-242.9	14.602	ug/L	14.602	ppb	08:01:25
2	B 249.677†	756.9	1957.6	11.999	ug/L	11.999	ppb	08:01:05
2	Ba 233.527†	-1742.7	-2005.7	0.5533	ug/L	0.5533	ppb	08:01:25
2	Be 313.107†	-11526.8	-6814.5	-2.7137	ug/L	-2.7137	ppb	08:01:05
2	Cd 226.502†	3243.3	4048.7	5.5354	ug/L	5.5354	ppb	08:01:25
2	Co 228.616†	225.3	382.1	-0.4267	ug/L	-0.4267	ppb	08:01:25
2	Cr 267.716†	-254.8	-218.8	0.9608	ug/L	0.9608	ppb	08:01:25
2	Cu 324.752†	3090.1	-5152.4	8.3972	ug/L	8.3972	ppb	08:01:05
2	Mn 257.610†	-28988.2	-34188.6	7.7637	ug/L	7.7637	ppb	08:01:05
2	Mo 202.031†	-475.8	-567.6	-9.8575	ug/L	-9.8575	ppb	08:01:05
2	Ni 231.604†	422.8	342.6	8.2017	ug/L	8.2017	ppb	08:01:25

2	P 214.914†	796.8	564.6	60.033 ug/L	60.033 ppb	08:01:25
2	Pb 220.353†	-524.0	-583.6	12.996 ug/L	12.996 ppb	08:01:25
2	S 181.975 Axial†	169.1	89.8	-3.5603 ug/L	-3.5603 ppb	08:01:25
2	Sb 206.836†	122.1	79.6	7.4221 ug/L	7.4221 ppb	08:01:25
2	Se 196.026†	-3124.8	-3556.8	-39.366 ug/L	-39.366 ppb	08:01:25
2	Si 251.611†	-1012.1	-1879.3	-47.470 ug/L	-47.470 ppb	08:01:25
2	Sn 189.927†	-354.4	-418.7	-6.0047 ug/L	-6.0047 ppb	08:01:25
2	Ti 334.940†	-12069.6	-12140.6	2.3547 ug/L	2.3547 ppb	08:01:05
2	Tl 190.801†	-137.5	-81.1	-15.795 ug/L	-15.795 ppb	08:01:25
2	U 409.014†	410031.6	477649.3	14161 ug/L	14161 ppb	08:01:05
2	V 292.402†	1068.0	3130.1	2.0641 ug/L	2.0641 ppb	08:01:25
2	Zn 213.857†	7197.8	7250.4	3.7441 ug/L	3.7441 ppb	08:01:25
2	SiO2†	-1207.6	-2162.0	-116.56 ug/L	-116.56 ppb	08:02:01
3	Sc Radial	7151.0	7151.0	93.7 %		08:00:32
3	Y RADIAL	6451.3	6451.3	92.02 %		08:00:32
3	Al 396.153Radial†	571991.0	610560.4	521560 ug/L	521560 ppb	08:00:27
3	Ca 317.933Radial†	327514.7	349536.5	475000 ug/L	475000 ppb	08:00:27
3	Fe 238.204 Radial†	102408.6	109267.6	432760 ug/L	432760 ppb	08:00:27
3	K 766.490 Radial†	2145.9	50.5	-216.55 ug/L	-216.55 ppb	08:00:32
3	Mg 279.077 IEC†	19033.5	20311.5	468870 ug/L	468870 ppb	08:00:32
3	Na 589.592 Radial†	8010489.0	8550252.4	513780 ug/L	513780 ppb	08:00:22
3	Sr 421.552†	1747.6	1931.6	1.1050 ug/L	1.1050 ppb	08:00:32
3	Sc 361.383	684935.7	684935.7	86.792 %		08:01:31
3	Y 371.029	516620.3	516620.3	85.278 %		08:01:31
3	Ag 328.068†	-19127.6	-22803.7	-7.5691 ug/L	-7.5691 ppb	08:01:31
3	As 188.979†	-256.1	-255.1	11.866 ug/L	11.866 ppb	08:01:51
3	B 249.677†	593.7	1771.2	7.7901 ug/L	7.7901 ppb	08:01:31
3	Ba 233.527†	-1751.5	-2019.6	0.5899 ug/L	0.5899 ppb	08:01:51
3	Be 313.107†	-11560.9	-6878.6	-2.7373 ug/L	-2.7373 ppb	08:01:31
3	Cd 226.502†	3270.3	4086.8	5.5820 ug/L	5.5820 ppb	08:01:51
3	Co 228.616†	257.9	420.1	0.0816 ug/L	0.0816 ppb	08:01:51
3	Cr 267.716†	-242.2	-204.8	1.2206 ug/L	1.2206 ppb	08:01:51
3	Cu 324.752†	3000.8	-5248.7	8.3273 ug/L	8.3273 ppb	08:01:31
3	Mn 257.610†	-28956.1	-34214.3	8.2443 ug/L	8.2443 ppb	08:01:31
3	Mo 202.031†	-488.6	-583.3	-10.600 ug/L	-10.600 ppb	08:01:31
3	Ni 231.604†	413.7	333.0	7.9731 ug/L	7.9731 ppb	08:01:51
3	P 214.914†	780.7	547.8	51.884 ug/L	51.884 ppb	08:01:51
3	Pb 220.353†	-538.5	-601.5	11.941 ug/L	11.941 ppb	08:01:51
3	S 181.975 Axial†	179.0	101.5	8.1188 ug/L	8.1188 ppb	08:01:51
3	Sb 206.836†	120.3	77.8	6.8740 ug/L	6.8740 ppb	08:01:51
3	Se 196.026†	-3158.7	-3602.6	-44.357 ug/L	-44.357 ppb	08:01:51
3	Si 251.611†	-1071.9	-1950.4	-49.278 ug/L	-49.278 ppb	08:01:51
3	Sn 189.927†	-338.0	-400.6	-2.4895 ug/L	-2.4895 ppb	08:01:51
3	Ti 334.940†	-11679.1	-11716.8	3.3556 ug/L	3.3556 ppb	08:01:31
3	Tl 190.801†	-143.1	-87.9	-17.274 ug/L	-17.274 ppb	08:01:51
3	U 409.014†	409157.1	477527.4	14157 ug/L	14157 ppb	08:01:31
3	V 292.402†	1033.6	3092.7	1.1549 ug/L	1.1549 ppb	08:01:51
3	Zn 213.857†	7166.6	7229.9	3.2873 ug/L	3.2873 ppb	08:01:51
3	SiO2†	-1085.6	-2024.0	-108.97 ug/L	-108.97 ppb	08:02:06

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	685563.5	86.872	%	0.0816				0.09%
Sc Radial	7080.2	92.8	%	1.04				1.12%
Y 371.029	516927.5	85.328	%	0.0531				0.06%
Y RADIAL	6396.8	91.24	%	0.727				0.80%
Ag 328.068†	-22860.4	-7.5806	ug/L	2.10107	-7.5806	ppb	2.10107	27.72%
Al 396.153Radial†	610573.1	521570	ug/L	5553.5	521570	ppb	5553.5	1.06%
QC value within limits for Al 396.153Radial Recovery = 104.31%								
As 188.979†	-246.4	14.601	ug/L	2.7336	14.601	ppb	2.7336	18.72%
B 249.677†	1900.8	10.458	ug/L	2.3197	10.458	ppb	2.3197	22.18%
Ba 233.527†	-2027.6	0.5694	ug/L	0.01869	0.5694	ppb	0.01869	3.28%
Be 313.107†	-6818.6	-2.7146	ug/L	0.02223	-2.7146	ppb	0.02223	0.82%
Ca 317.933Radial†	349962.5	475580	ug/L	6157.2	475580	ppb	6157.2	1.29%
QC value within limits for Ca 317.933Radial Recovery = 95.12%								
Cd 226.502†	4052.5	5.1056	ug/L	0.78516	5.1056	ppb	0.78516	15.38%
Co 228.616†	391.7	-0.3531	ug/L	0.40307	-0.3531	ppb	0.40307	114.14%
Cr 267.716†	-221.0	1.0328	ug/L	0.16417	1.0328	ppb	0.16417	15.90%
Cu 324.752†	-5235.4	8.4249	ug/L	0.11405	8.4249	ppb	0.11405	1.35%

Fe 238.204 Radial†	109509.2	433710	ug/L	5583.9	433710	ppb	5583.9	1.29%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 86.74%								
K 766.490 Radial†	91.2	-207.95	ug/L	18.687	-207.95	ppb	18.687	8.99%
Mg 279.077 IEC†	20400.5	470930	ug/L	2334.6	470930	ppb	2334.6	0.50%
QC value within limits for Mg 279.077 IEC Recovery = 94.19%								
Mn 257.610†	-34283.3	8.2492	ug/L	0.48802	8.2492	ppb	0.48802	5.92%
Mo 202.031†	-560.0	-9.0729	ug/L	2.03625	-9.0729	ppb	2.03625	22.44%
Na 589.592 Radial†	8575975.7	515330	ug/L	2017.6	515330	ppb	2017.6	0.39%
QC value within limits for Na 589.592 Radial Recovery = 103.07%								
Ni 231.604†	347.4	8.3170	ug/L	0.41384	8.3170	ppb	0.41384	4.98%
P 214.914†	546.7	50.638	ug/L	10.0761	50.638	ppb	10.0761	19.90%
Pb 220.353†	-578.7	14.287	ug/L	3.1925	14.287	ppb	3.1925	22.35%
S 181.975 Axial†	93.6	-0.5122	ug/L	7.58126	-0.5122	ppb	7.58126	>999.9%
Sb 206.836†	70.3	5.0774	ug/L	3.59689	5.0774	ppb	3.59689	70.84%
Se 196.026†	-3577.9	-31.730	ug/L	17.7244	-31.730	ppb	17.7244	55.86%
Si 251.611†	-1909.0	-48.240	ug/L	0.9336	-48.240	ppb	0.9336	1.94%
Sn 189.927†	-406.1	-3.2693	ug/L	2.44083	-3.2693	ppb	2.44083	74.66%
Sr 421.552†	1929.2	1.0928	ug/L	0.05943	1.0928	ppb	0.05943	5.44%
Ti 334.940†	-11936.8	3.0383	ug/L	0.59254	3.0383	ppb	0.59254	19.50%
Tl 190.801†	-89.7	-17.700	ug/L	2.1498	-17.700	ppb	2.1498	12.15%
U 409.014†	477335.6	14151	ug/L	13.8	14151	ppb	13.8	0.10%
QC value within limits for U 409.014 Recovery = 94.34%								
V 292.402†	3110.8	1.2141	ug/L	0.82202	1.2141	ppb	0.82202	67.71%
Zn 213.857†	7230.1	3.1325	ug/L	0.70191	3.1325	ppb	0.70191	22.41%
SiO2†	-2057.1	-110.83	ug/L	5.057	-110.83	ppb	5.057	4.56%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/7/2009 08:04:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7388.4	7388.4	96.8	%			08:06:15
1	Y RADIAL	6705.2	6705.2	95.64	%			08:06:15
1	Al 396.153Radial†	491.2	573.6	84.166	ug/L	84.166	ppb	08:06:15
1	Ca 317.933Radial†	73.1	50.9	69.166	ug/L	69.166	ppb	08:06:35
1	Fe 238.204 Radial†	-34.5	-70.2	23.648	ug/L	23.648	ppb	08:06:35
1	K 766.490 Radial†	1327918.8	1369513.7	297060	ug/L	297060	ppb	08:06:10
1	Mg 279.077 IEC†	-7.7	-11.2	-65.911	ug/L	-65.911	ppb	08:06:35
1	Na 589.592 Radial†	2431.2	3052.9	183.45	ug/L	183.45	ppb	08:06:15
1	Sr 421.552†	3304395.2	3413539.9	9733.6	ug/L	9733.6	ppb	08:06:10
1	Sc 361.383	792123.5	792123.5	100.37	%			08:07:54
1	Y 371.029	594881.8	594881.8	98.196	%			08:07:54
1	Ag 328.068†	-5505.9	-6250.7	5.0980	ug/L	5.0980	ppb	08:07:59
1	As 188.979†	32938.7	32855.6	9650.9	ug/L	9650.9	ppb	08:07:59
1	B 249.677†	233332.8	233549.0	4900.5	ug/L	4900.5	ppb	08:07:54
1	Ba 233.527†	2127376.4	2119433.4	13181	ug/L	13181	ppb	08:07:54
1	Be 313.107†	7230922.3	7210371.4	2845.6	ug/L	2845.6	ppb	08:07:47
1	Cd 226.502†	876522.1	873569.0	9862.9	ug/L	9862.9	ppb	08:07:54
1	Co 228.616†	638521.2	636260.6	9560.8	ug/L	9560.8	ppb	08:07:54
1	Cr 267.716†	1867576.8	1860679.5	23888	ug/L	23888	ppb	08:07:54
1	Cu 324.752†	6333734.3	6301384.8	20041	ug/L	20041	ppb	08:07:47
1	Mn 257.610†	9616968.0	9580216.8	9242.9	ug/L	9242.9	ppb	08:07:47
1	Mo 202.031†	150962.0	150378.1	9478.7	ug/L	9478.7	ppb	08:07:59
1	Ni 231.604†	410848.8	409171.5	9794.6	ug/L	9794.6	ppb	08:07:54
1	P 214.914†	42669.2	42158.3	14032	ug/L	14032	ppb	08:07:59
1	Pb 220.353†	224133.5	223315.8	23620	ug/L	23620	ppb	08:07:59
1	S 181.975 Axial†	45408.0	45133.8	49236	ug/L	49236	ppb	08:07:59
1	Sb 206.836†	41868.7	41651.6	9998.8	ug/L	9998.8	ppb	08:07:59
1	Se 196.026†	25057.0	25000.2	9805.5	ug/L	9805.5	ppb	08:07:59
1	Si 251.611†	1826272.9	1818740.3	46435	ug/L	46435	ppb	08:07:54
1	Sn 189.927†	64292.7	64041.5	10085	ug/L	10085	ppb	08:07:59
1	Ti 334.940†	5979911.6	5959328.7	9597.6	ug/L	9597.6	ppb	08:07:47
1	Tl 190.801†	42009.9	41930.1	9479.8	ug/L	9479.8	ppb	08:07:59
1	U 409.014†	-4242.3	1879.9	9.8619	ug/L	9.8619	ppb	08:07:59
1	V 292.402†	1209927.6	1207312.9	9960.5	ug/L	9960.5	ppb	08:07:54
1	Zn 213.857†	1787355.8	1779656.5	13902	ug/L	13902	ppb	08:07:54
1	SiO2†	1769628.1	1762249.0	95800	ug/L	95800	ppb	08:08:46
2	Sc Radial	7433.2	7433.2	97.4	%			08:06:46
2	Y RADIAL	6728.2	6728.2	95.97	%			08:06:46
2	Al 396.153Radial†	507.8	587.6	91.645	ug/L	91.645	ppb	08:06:46
2	Ca 317.933Radial†	63.3	40.3	54.807	ug/L	54.807	ppb	08:07:06
2	Fe 238.204 Radial†	-35.7	-71.2	19.711	ug/L	19.711	ppb	08:07:06
2	K 766.490 Radial†	1346154.0	1379970.5	299330	ug/L	299330	ppb	08:06:41
2	Mg 279.077 IEC†	-8.3	-11.8	-78.692	ug/L	-78.692	ppb	08:07:06
2	Na 589.592 Radial†	2373.3	2978.4	178.97	ug/L	178.97	ppb	08:06:46
2	Sr 421.552†	3350189.9	3439990.0	9809.1	ug/L	9809.1	ppb	08:06:41
2	Sc 361.383	775588.2	775588.2	98.279	%			08:08:14
2	Y 371.029	582940.7	582940.7	96.225	%			08:08:14
2	Ag 328.068†	-5269.3	-6126.9	5.8177	ug/L	5.8177	ppb	08:08:19
2	As 188.979†	32605.6	33216.3	9757.1	ug/L	9757.1	ppb	08:08:19
2	B 249.677†	228454.0	233540.8	4900.3	ug/L	4900.3	ppb	08:08:14
2	Ba 233.527†	2091444.1	2128058.0	13234	ug/L	13234	ppb	08:08:14
2	Be 313.107†	7188056.5	7320341.3	2889.0	ug/L	2889.0	ppb	08:08:07
2	Cd 226.502†	858953.7	874310.5	9871.3	ug/L	9871.3	ppb	08:08:14
2	Co 228.616†	625699.1	636776.4	9568.5	ug/L	9568.5	ppb	08:08:14
2	Cr 267.716†	1834310.3	1866498.3	23963	ug/L	23963	ppb	08:08:14
2	Cu 324.752†	6296943.6	6398479.7	20349	ug/L	20349	ppb	08:08:07
2	Mn 257.610†	9557599.4	9724075.1	9381.7	ug/L	9381.7	ppb	08:08:07
2	Mo 202.031†	149437.9	152033.7	9583.1	ug/L	9583.1	ppb	08:08:19
2	Ni 231.604†	402552.0	409455.9	9801.5	ug/L	9801.5	ppb	08:08:14

2	P 214.914†	42095.6	42480.9	14115	ug/L	14115	ppb	08:08:19
2	Pb 220.353†	222050.4	225956.9	23899	ug/L	23899	ppb	08:08:19
2	S 181.975 Axial†	44961.6	45644.1	49793	ug/L	49793	ppb	08:08:19
2	Sb 206.836†	41369.5	42032.9	10094	ug/L	10094	ppb	08:08:19
2	Se 196.026†	24795.1	25265.9	9909.7	ug/L	9909.7	ppb	08:08:19
2	Si 251.611†	1792001.9	1822659.6	46532	ug/L	46532	ppb	08:08:14
2	Sn 189.927†	63591.1	64693.3	10188	ug/L	10188	ppb	08:08:19
2	Ti 334.940†	5942499.8	6048276.4	9740.9	ug/L	9740.9	ppb	08:08:07
2	Tl 190.801†	41622.3	42428.0	9593.4	ug/L	9593.4	ppb	08:08:19
2	U 409.014†	-4304.8	1726.2	5.1430	ug/L	5.1430	ppb	08:08:19
2	V 292.402†	1186312.6	1208983.6	9975.3	ug/L	9975.3	ppb	08:08:14
2	Zn 213.857†	1755541.4	1785248.9	13945	ug/L	13945	ppb	08:08:14
2	SiO2†	1820056.8	1851147.8	100660	ug/L	100660	ppb	08:08:54
3	Sc Radial	7472.0	7472.0	97.9	%			08:07:17
3	Y RADIAL	6809.4	6809.4	97.13	%			08:07:17
3	Al 396.153Radial†	474.2	550.6	62.492	ug/L	62.492	ppb	08:07:17
3	Ca 317.933Radial†	69.9	46.8	63.608	ug/L	63.608	ppb	08:07:37
3	Fe 238.204 Radial†	-34.8	-70.1	24.159	ug/L	24.159	ppb	08:07:37
3	K 766.490 Radial†	1291717.5	1317187.8	285710	ug/L	285710	ppb	08:07:12
3	Mg 279.077 IEC†	-6.4	-9.8	-34.061	ug/L	-34.061	ppb	08:07:37
3	Na 589.592 Radial†	2395.2	2988.1	179.55	ug/L	179.55	ppb	08:07:17
3	Sr 421.552†	3199489.9	3268192.4	9319.2	ug/L	9319.2	ppb	08:07:12
3	Sc 361.383	777483.5	777483.5	98.520	%			08:08:34
3	Y 371.029	584447.4	584447.4	96.474	%			08:08:34
3	Ag 328.068†	-5275.4	-6120.1	5.8558	ug/L	5.8558	ppb	08:08:39
3	As 188.979†	32502.9	33031.2	9702.6	ug/L	9702.6	ppb	08:08:39
3	B 249.677†	228695.1	233218.8	4893.5	ug/L	4893.5	ppb	08:08:34
3	Ba 233.527†	2095072.2	2126552.7	13225	ug/L	13225	ppb	08:08:34
3	Be 313.107†	7160085.5	7274120.0	2870.8	ug/L	2870.8	ppb	08:08:27
3	Cd 226.502†	862248.3	875524.0	9885.0	ug/L	9885.0	ppb	08:08:34
3	Co 228.616†	627351.8	636901.8	9570.4	ug/L	9570.4	ppb	08:08:34
3	Cr 267.716†	1839196.5	1866907.9	23968	ug/L	23968	ppb	08:08:34
3	Cu 324.752†	6268212.8	6353697.6	20207	ug/L	20207	ppb	08:08:27
3	Mn 257.610†	9515552.5	9657688.7	9317.7	ug/L	9317.7	ppb	08:08:27
3	Mo 202.031†	148906.4	151123.6	9525.7	ug/L	9525.7	ppb	08:08:39
3	Ni 231.604†	403775.9	409699.7	9807.3	ug/L	9807.3	ppb	08:08:34
3	P 214.914†	41956.2	42235.0	14037	ug/L	14037	ppb	08:08:39
3	Pb 220.353†	220935.4	224274.3	23721	ug/L	23721	ppb	08:08:39
3	S 181.975 Axial†	44730.2	45297.7	49415	ug/L	49415	ppb	08:08:39
3	Sb 206.836†	41162.2	41720.0	10015	ug/L	10015	ppb	08:08:39
3	Se 196.026†	24633.2	25040.1	9821.3	ug/L	9821.3	ppb	08:08:39
3	Si 251.611†	1795198.2	1821458.9	46507	ug/L	46507	ppb	08:08:34
3	Sn 189.927†	63253.6	64192.9	10109	ug/L	10109	ppb	08:08:39
3	Ti 334.940†	5916242.3	6006883.9	9674.2	ug/L	9674.2	ppb	08:08:27
3	Tl 190.801†	41397.4	42096.5	9518.0	ug/L	9518.0	ppb	08:08:39
3	U 409.014†	-4423.2	1616.7	1.8752	ug/L	1.8752	ppb	08:08:39
3	V 292.402†	1189128.3	1208898.9	9974.0	ug/L	9974.0	ppb	08:08:34
3	Zn 213.857†	1760046.0	1785466.5	13947	ug/L	13947	ppb	08:08:34
3	SiO2†	1812323.1	1838783.2	99996	ug/L	99996	ppb	08:09:01

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	781731.7	99.058	%	1.1467				1.16%
Sc Radial	7431.2	97.4	%	0.55				0.56%
Y 371.029	587423.3	96.965	%	1.0734				1.11%
Y RADIAL	6747.6	96.25	%	0.781				0.81%
Ag 328.068†	-6165.9	5.5905	ug/L	0.42697	5.5905	ppb	0.42697	7.64%
Al 396.153Radial†	570.6	79.435	ug/L	15.1414	79.435	ppb	15.1414	19.06%
As 188.979†	33034.4	9703.5	ug/L	53.10	9703.5	ppb	53.10	0.55%
QC value within limits for As 188.979 Recovery = 97.04%								
B 249.677†	233436.2	4898.1	ug/L	3.98	4898.1	ppb	3.98	0.08%
QC value within limits for B 249.677 Recovery = 97.96%								
Ba 233.527†	2124681.4	13213	ug/L	28.6	13213	ppb	28.6	0.22%
QC value less than the lower limit for Ba 233.527 Recovery = 88.09%								
Be 313.107†	7268277.6	2868.5	ug/L	21.79	2868.5	ppb	21.79	0.76%
QC value within limits for Be 313.107 Recovery = 95.62%								
Ca 317.933Radial†	46.0	62.527	ug/L	7.2405	62.527	ppb	7.2405	11.58%
Cd 226.502†	874467.8	9873.0	ug/L	11.14	9873.0	ppb	11.14	0.11%
QC value within limits for Cd 226.502 Recovery = 98.73%								

Co 228.616†	636646.3	9566.6 ug/L	5.08	9566.6 ppb	5.08	0.05%
QC value within limits for Co 228.616 Recovery = 95.67%						
Cr 267.716†	1864695.2	23939 ug/L	44.7	23939 ppb	44.7	0.19%
QC value within limits for Cr 267.716 Recovery = 95.76%						
Cu 324.752†	6351187.4	20199 ug/L	154.6	20199 ppb	154.6	0.77%
QC value within limits for Cu 324.752 Recovery = 100.99%						
Fe 238.204 Radial†	-70.5	22.506 ug/L	2.4340	22.506 ppb	2.4340	10.81%
K 766.490 Radial†	1355557.3	294030 ug/L	7298.3	294030 ppb	7298.3	2.48%
QC value within limits for K 766.490 Radial Recovery = 98.01%						
Mg 279.077 IEC†	-10.9	-59.555 ug/L	22.9840	-59.555 ppb	22.9840	38.59%
Mn 257.610†	9653993.5	9314.1 ug/L	69.47	9314.1 ppb	69.47	0.75%
QC value within limits for Mn 257.610 Recovery = 93.14%						
Mo 202.031†	151178.5	9529.2 ug/L	52.27	9529.2 ppb	52.27	0.55%
QC value within limits for Mo 202.031 Recovery = 95.29%						
Na 589.592 Radial†	3006.4	180.66 ug/L	2.436	180.66 ppb	2.436	1.35%
Ni 231.604†	409442.3	9801.1 ug/L	6.33	9801.1 ppb	6.33	0.06%
QC value within limits for Ni 231.604 Recovery = 98.01%						
P 214.914†	42291.4	14061 ug/L	46.5	14061 ppb	46.5	0.33%
QC value within limits for P 214.914 Recovery = 93.74%						
Pb 220.353†	224515.6	23747 ug/L	141.4	23747 ppb	141.4	0.60%
QC value within limits for Pb 220.353 Recovery = 94.99%						
S 181.975 Axial†	45358.5	49481 ug/L	284.2	49481 ppb	284.2	0.57%
QC value within limits for S 181.975 Axial Recovery = 98.96%						
Sb 206.836†	41801.5	10036 ug/L	51.0	10036 ppb	51.0	0.51%
QC value within limits for Sb 206.836 Recovery = 100.36%						
Se 196.026†	25102.0	9845.5 ug/L	56.18	9845.5 ppb	56.18	0.57%
QC value within limits for Se 196.026 Recovery = 98.46%						
Si 251.611†	1820953.0	46491 ug/L	50.8	46491 ppb	50.8	0.11%
QC value within limits for Si 251.611 Recovery = 92.98%						
Sn 189.927†	64309.2	10127 ug/L	53.7	10127 ppb	53.7	0.53%
QC value within limits for Sn 189.927 Recovery = 101.27%						
Sr 421.552†	3373907.4	9620.6 ug/L	263.77	9620.6 ppb	263.77	2.74%
QC value within limits for Sr 421.552 Recovery = 96.21%						
Ti 334.940†	6004829.7	9670.9 ug/L	71.73	9670.9 ppb	71.73	0.74%
QC value within limits for Ti 334.940 Recovery = 96.71%						
Tl 190.801†	42151.5	9530.4 ug/L	57.83	9530.4 ppb	57.83	0.61%
QC value within limits for Tl 190.801 Recovery = 95.30%						
U 409.014†	1740.9	5.6267 ug/L	4.01526	5.6267 ppb	4.01526	71.36%
V 292.402†	1208398.5	9969.9 ug/L	8.16	9969.9 ppb	8.16	0.08%
QC value within limits for V 292.402 Recovery = 99.70%						
Zn 213.857†	1783457.3	13932 ug/L	25.7	13932 ppb	25.7	0.18%
QC value within limits for Zn 213.857 Recovery = 92.88%						
SiO2†	1817393.3	98819 ug/L	2634.7	98819 ppb	2634.7	2.67%
QC value within limits for SiO2 Recovery = 92.35%						

QC Failed. Continue with analysis.

Sequence No.: 13
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/7/2009 08:11:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7549.0	7549.0	98.9	%			08:13:23
1	Y RADIAL	6912.9	6912.9	98.61	%			08:13:23
1	Al 396.153Radial†	6045.8	6178.8	5256.5	ug/L	5256.5	ppb	08:13:03
1	Ca 317.933Radial†	3980.0	3999.3	5434.9	ug/L	5434.9	ppb	08:13:23
1	Fe 238.204 Radial†	1344.6	1324.9	5262.6	ug/L	5262.6	ppb	08:13:23
1	K 766.490 Radial†	26014.5	24061.8	5213.2	ug/L	5213.2	ppb	08:13:03
1	Mg 279.077 IEC†	233.8	233.2	5392.1	ug/L	5392.1	ppb	08:13:23
1	Na 589.592 Radial†	171876.1	174314.8	10475	ug/L	10475	ppb	08:13:03
1	Sr 421.552†	175012.1	177010.2	504.69	ug/L	504.69	ppb	08:13:03
1	Sc 361.383	800431.4	800431.4	101.43	%			08:14:22
1	Y 371.029	606531.5	606531.5	100.12	%			08:14:22
1	Ag 328.068†	94123.7	92033.7	496.38	ug/L	496.38	ppb	08:14:22
1	As 188.979†	1701.2	1717.1	505.13	ug/L	505.13	ppb	08:14:42
1	B 249.677†	23957.2	24707.2	519.39	ug/L	519.39	ppb	08:14:22
1	Ba 233.527†	81005.2	79863.5	497.10	ug/L	497.10	ppb	08:14:22
1	Be 313.107†	1268164.3	1256758.4	493.25	ug/L	493.25	ppb	08:14:22
1	Cd 226.502†	43048.4	42761.4	482.31	ug/L	482.31	ppb	08:14:42
1	Co 228.616†	32707.6	32370.3	486.58	ug/L	486.58	ppb	08:14:42
1	Cr 267.716†	38989.2	38514.7	494.85	ug/L	494.85	ppb	08:14:22
1	Cu 324.752†	166343.0	155295.8	494.20	ug/L	494.20	ppb	08:14:22
1	Mn 257.610†	520821.7	512640.2	495.10	ug/L	495.10	ppb	08:14:22
1	Mo 202.031†	8110.9	7976.4	503.09	ug/L	503.09	ppb	08:14:42
1	Ni 231.604†	20893.9	20456.2	489.67	ug/L	489.67	ppb	08:14:42
1	P 214.914†	6491.2	6048.2	2379.4	ug/L	2379.4	ppb	08:14:42
1	Pb 220.353†	4836.6	4787.4	507.74	ug/L	507.74	ppb	08:14:42
1	S 181.975 Axial†	1017.2	898.2	978.81	ug/L	978.81	ppb	08:14:42
1	Sb 206.836†	2090.4	2000.2	497.55	ug/L	497.55	ppb	08:14:42
1	Se 196.026†	1243.2	1262.4	511.74	ug/L	511.74	ppb	08:14:42
1	Si 251.611†	99631.6	97514.2	2493.4	ug/L	2493.4	ppb	08:14:22
1	Sn 189.927†	3240.5	3183.8	502.08	ug/L	502.08	ppb	08:14:42
1	Ti 334.940†	310699.9	308066.9	496.51	ug/L	496.51	ppb	08:14:22
1	Tl 190.801†	2154.9	2201.5	497.91	ug/L	497.91	ppb	08:14:42
1	U 409.014†	10648.3	16604.7	492.51	ug/L	492.51	ppb	08:14:22
1	V 292.402†	59414.0	60479.7	499.90	ug/L	499.90	ppb	08:14:22
1	Zn 213.857†	65096.2	63152.8	492.13	ug/L	492.13	ppb	08:14:22
1	SiO2†	99984.0	97803.7	5326.5	ug/L	5326.5	ppb	08:15:42
2	Sc Radial	7627.5	7627.5	99.9	%			08:13:48
2	Y RADIAL	7014.9	7014.9	100.1	%			08:13:48
2	Al 396.153Radial†	6091.5	6161.5	5241.9	ug/L	5241.9	ppb	08:13:28
2	Ca 317.933Radial†	4023.4	4001.3	5437.6	ug/L	5437.6	ppb	08:13:48
2	Fe 238.204 Radial†	1366.2	1332.5	5292.5	ug/L	5292.5	ppb	08:13:48
2	K 766.490 Radial†	25891.3	23667.7	5127.7	ug/L	5127.7	ppb	08:13:28
2	Mg 279.077 IEC†	239.6	236.5	5469.9	ug/L	5469.9	ppb	08:13:48
2	Na 589.592 Radial†	171870.6	172520.3	10367	ug/L	10367	ppb	08:13:28
2	Sr 421.552†	175123.6	175300.2	499.81	ug/L	499.81	ppb	08:13:28
2	Sc 361.383	800786.8	800786.8	101.47	%			08:14:49
2	Y 371.029	607403.6	607403.6	100.26	%			08:14:49
2	Ag 328.068†	94338.5	92204.2	497.30	ug/L	497.30	ppb	08:14:49
2	As 188.979†	1679.4	1694.9	498.65	ug/L	498.65	ppb	08:15:10
2	B 249.677†	23937.7	24677.5	518.77	ug/L	518.77	ppb	08:14:49
2	Ba 233.527†	81158.4	79979.1	497.82	ug/L	497.82	ppb	08:14:49
2	Be 313.107†	1271349.8	1259342.8	494.26	ug/L	494.26	ppb	08:14:49
2	Cd 226.502†	42766.9	42465.2	478.96	ug/L	478.96	ppb	08:15:10
2	Co 228.616†	32520.6	32171.7	483.59	ug/L	483.59	ppb	08:15:10
2	Cr 267.716†	39012.9	38521.1	494.93	ug/L	494.93	ppb	08:14:49
2	Cu 324.752†	167063.1	155932.7	496.22	ug/L	496.22	ppb	08:14:49
2	Mn 257.610†	521373.7	512956.2	495.41	ug/L	495.41	ppb	08:14:49
2	Mo 202.031†	8074.6	7937.1	500.62	ug/L	500.62	ppb	08:15:10
2	Ni 231.604†	20809.2	20363.6	487.45	ug/L	487.45	ppb	08:15:10

2	P 214.914†	6458.0	6012.6	2364.6	ug/L	2364.6 ppb	08:15:10
2	Pb 220.353†	4771.6	4721.3	500.73	ug/L	500.73 ppb	08:15:10
2	S 181.975 Axial†	1010.3	890.9	970.90	ug/L	970.90 ppb	08:15:10
2	Sb 206.836†	2093.5	2002.3	497.97	ug/L	497.97 ppb	08:15:10
2	Se 196.026†	1232.5	1251.3	507.48	ug/L	507.48 ppb	08:15:10
2	Si 251.611†	99654.3	97492.9	2493.0	ug/L	2493.0 ppb	08:14:49
2	Sn 189.927†	3224.4	3166.4	499.35	ug/L	499.35 ppb	08:15:10
2	Ti 334.940†	311234.4	308457.7	497.14	ug/L	497.14 ppb	08:14:49
2	Tl 190.801†	2145.5	2191.3	495.63	ug/L	495.63 ppb	08:15:10
2	U 409.014†	10903.4	16851.5	499.85	ug/L	499.85 ppb	08:14:49
2	V 292.402†	59419.4	60459.1	499.72	ug/L	499.72 ppb	08:14:49
2	Zn 213.857†	65094.2	63122.4	491.89	ug/L	491.89 ppb	08:14:49
2	SiO2†	99363.6	97148.5	5290.8	ug/L	5290.8 ppb	08:15:47
3	Sc Radial	7655.8	7655.8	100	%		08:14:14
3	Y RADIAL	7044.9	7044.9	100.5	%		08:14:14
3	Al 396.153Radial†	6190.4	6237.6	5306.5	ug/L	5306.5 ppb	08:13:54
3	Ca 317.933Radial†	4050.5	4013.5	5454.2	ug/L	5454.2 ppb	08:14:14
3	Fe 238.204 Radial†	1370.0	1331.3	5287.9	ug/L	5287.9 ppb	08:14:14
3	K 766.490 Radial†	26451.7	24130.9	5228.2	ug/L	5228.2 ppb	08:13:54
3	Mg 279.077 IEC†	238.5	234.5	5423.8	ug/L	5423.8 ppb	08:14:14
3	Na 589.592 Radial†	175160.1	175165.2	10526	ug/L	10526 ppb	08:13:54
3	Sr 421.552†	178187.5	177708.2	506.68	ug/L	506.68 ppb	08:13:54
3	Sc 361.383	794472.2	794472.2	100.67	%		08:15:17
3	Y 371.029	603352.5	603352.5	99.595	%		08:15:17
3	Ag 328.068†	93617.7	92227.2	497.43	ug/L	497.43 ppb	08:15:17
3	As 188.979†	1701.5	1730.1	508.91	ug/L	508.91 ppb	08:15:37
3	B 249.677†	23682.0	24611.0	517.35	ug/L	517.35 ppb	08:15:17
3	Ba 233.527†	80324.8	79786.7	496.63	ug/L	496.63 ppb	08:15:17
3	Be 313.107†	1262322.9	1260334.4	494.65	ug/L	494.65 ppb	08:15:17
3	Cd 226.502†	43153.8	43184.5	487.08	ug/L	487.08 ppb	08:15:37
3	Co 228.616†	32819.5	32723.3	491.90	ug/L	491.90 ppb	08:15:37
3	Cr 267.716†	38865.4	38680.1	496.97	ug/L	496.97 ppb	08:15:17
3	Cu 324.752†	165916.1	156101.9	496.76	ug/L	496.76 ppb	08:15:17
3	Mn 257.610†	517113.8	512808.6	495.26	ug/L	495.26 ppb	08:15:17
3	Mo 202.031†	8150.8	8076.0	509.37	ug/L	509.37 ppb	08:15:37
3	Ni 231.604†	21012.0	20728.0	496.18	ug/L	496.18 ppb	08:15:37
3	P 214.914†	6511.0	6115.9	2406.6	ug/L	2406.6 ppb	08:15:37
3	Pb 220.353†	4835.2	4821.9	511.40	ug/L	511.40 ppb	08:15:37
3	S 181.975 Axial†	1020.1	908.6	990.15	ug/L	990.15 ppb	08:15:37
3	Sb 206.836†	2111.6	2036.7	506.68	ug/L	506.68 ppb	08:15:37
3	Se 196.026†	1250.8	1279.2	518.39	ug/L	518.39 ppb	08:15:37
3	Si 251.611†	98826.8	97451.5	2491.7	ug/L	2491.7 ppb	08:15:17
3	Sn 189.927†	3255.4	3222.4	508.17	ug/L	508.17 ppb	08:15:37
3	Ti 334.940†	309011.7	308687.7	497.51	ug/L	497.51 ppb	08:15:17
3	Tl 190.801†	2176.5	2239.0	506.33	ug/L	506.33 ppb	08:15:37
3	U 409.014†	10594.6	16630.2	493.26	ug/L	493.26 ppb	08:15:17
3	V 292.402†	59011.5	60519.3	500.30	ug/L	500.30 ppb	08:15:17
3	Zn 213.857†	64633.0	63174.1	492.24	ug/L	492.24 ppb	08:15:17
3	SiO2†	99826.7	98386.8	5358.1	ug/L	5358.1 ppb	08:15:53

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	798563.5	101.19	%	0.450				0.44%
Sc Radial	7610.8	99.7	%	0.72				0.73%
Y 371.029	605762.5	99.992	%	0.3520				0.35%
Y RADIAL	6990.9	99.72	%	0.987				0.99%
Ag 328.068†	92155.0	497.03	ug/L	0.570	497.03	ppb	0.570	0.11%
QC value within limits for Ag 328.068 Recovery = 99.41%								
Al 396.153Radial†	6192.6	5268.3	ug/L	33.89	5268.3	ppb	33.89	0.64%
QC value within limits for Al 396.153Radial Recovery = 105.37%								
As 188.979†	1714.0	504.23	ug/L	5.190	504.23	ppb	5.190	1.03%
QC value within limits for As 188.979 Recovery = 100.85%								
B 249.677†	24665.2	518.51	ug/L	1.047	518.51	ppb	1.047	0.20%
QC value within limits for B 249.677 Recovery = 103.70%								
Ba 233.527†	79876.5	497.18	ug/L	0.601	497.18	ppb	0.601	0.12%
QC value within limits for Ba 233.527 Recovery = 99.44%								
Be 313.107†	1258811.9	494.05	ug/L	0.724	494.05	ppb	0.724	0.15%
QC value within limits for Be 313.107 Recovery = 98.81%								
Ca 317.933Radial†	4004.7	5442.2	ug/L	10.44	5442.2	ppb	10.44	0.19%

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   QC value within limits for Ca 317.933Radial  Recovery = 108.84%
Cd 226.502†            42803.7      482.78 ug/L         4.082      482.78 ppb          4.082   0.85%
   QC value within limits for Cd 226.502  Recovery = 96.56%
Co 228.616†            32421.7      487.35 ug/L         4.208      487.35 ppb          4.208   0.86%
   QC value within limits for Co 228.616  Recovery = 97.47%
Cr 267.716†            38572.0      495.58 ug/L         1.203      495.58 ppb          1.203   0.24%
   QC value within limits for Cr 267.716  Recovery = 99.12%
Cu 324.752†           155776.8      495.73 ug/L         1.353      495.73 ppb          1.353   0.27%
   QC value within limits for Cu 324.752  Recovery = 99.15%
Fe 238.204 Radial†      1329.5      5281.0 ug/L        16.12      5281.0 ppb         16.12   0.31%
   QC value within limits for Fe 238.204 Radial  Recovery = 105.62%
K 766.490 Radial†      23953.5      5189.7 ug/L        54.21      5189.7 ppb         54.21   1.04%
   QC value within limits for K 766.490 Radial  Recovery = 103.79%
Mg 279.077 IEC†          234.7      5428.6 ug/L        39.16      5428.6 ppb         39.16   0.72%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.57%
Mn 257.610†           512801.7      495.26 ug/L         0.154      495.26 ppb          0.154   0.03%
   QC value within limits for Mn 257.610  Recovery = 99.05%
Mo 202.031†             7996.5      504.36 ug/L         4.512      504.36 ppb          4.512   0.89%
   QC value within limits for Mo 202.031  Recovery = 100.87%
Na 589.592 Radial†    174000.1       10456 ug/L          81.1       10456 ppb           81.1   0.78%
   QC value within limits for Na 589.592 Radial  Recovery = 104.56%
Ni 231.604†            20515.9      491.10 ug/L         4.534      491.10 ppb          4.534   0.92%
   QC value within limits for Ni 231.604  Recovery = 98.22%
P 214.914†              6058.9      2383.5 ug/L        21.29      2383.5 ppb         21.29   0.89%
   QC value within limits for P 214.914  Recovery = 95.34%
Pb 220.353†             4776.9      506.62 ug/L         5.423      506.62 ppb          5.423   1.07%
   QC value within limits for Pb 220.353  Recovery = 101.32%
S 181.975 Axial†         899.3      979.95 ug/L         9.677      979.95 ppb          9.677   0.99%
   QC value within limits for S 181.975 Axial  Recovery = 98.00%
Sb 206.836†             2013.0      500.73 ug/L         5.157      500.73 ppb          5.157   1.03%
   QC value within limits for Sb 206.836  Recovery = 100.15%
Se 196.026†             1264.3      512.54 ug/L         5.497      512.54 ppb          5.497   1.07%
   QC value within limits for Se 196.026  Recovery = 102.51%
Si 251.611†            97486.2      2492.7 ug/L         0.90      2492.7 ppb          0.90   0.04%
   QC value within limits for Si 251.611  Recovery = 99.71%
Sn 189.927†             3190.9      503.20 ug/L         4.517      503.20 ppb          4.517   0.90%
   QC value within limits for Sn 189.927  Recovery = 100.64%
Sr 421.552†           176672.9      503.73 ug/L         3.533      503.73 ppb          3.533   0.70%
   QC value within limits for Sr 421.552  Recovery = 100.75%
Ti 334.940†           308404.1      497.06 ug/L         0.506      497.06 ppb          0.506   0.10%
   QC value within limits for Ti 334.940  Recovery = 99.41%
Tl 190.801†             2210.6      499.96 ug/L         5.633      499.96 ppb          5.633   1.13%
   QC value within limits for Tl 190.801  Recovery = 99.99%
U 409.014†             16695.5      495.21 ug/L         4.039      495.21 ppb          4.039   0.82%
   QC value within limits for U 409.014  Recovery = 99.04%
V 292.402†             60486.0      499.97 ug/L         0.300      499.97 ppb          0.300   0.06%
   QC value within limits for V 292.402  Recovery = 99.99%
Zn 213.857†            63149.8      492.09 ug/L         0.179      492.09 ppb          0.179   0.04%
   QC value within limits for Zn 213.857  Recovery = 98.42%
SiO2†                  97779.7      5325.2 ug/L        33.67      5325.2 ppb         33.67   0.63%
   QC value within limits for SiO2  Recovery = 99.58%
All analyte(s) passed QC.
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Sequence No.: 14
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/7/2009 08:18:02
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	8048.3	8048.3	105	%			08:19:55
1	Y RADIAL	7337.6	7337.6	104.7	%			08:19:55
1	Al 396.153Radial†	-50.1	18.7	15.906	ug/L	15.906	ppb	08:19:55
1	Ca 317.933Radial†	31.7	5.5	7.4341	ug/L	7.4341	ppb	08:20:15
1	Fe 238.204 Radial†	31.6	-4.6	-18.061	ug/L	-18.061	ppb	08:20:15
1	K 766.490 Radial†	2629.5	253.8	55.056	ug/L	55.056	ppb	08:19:55
1	Mg 279.077 IEC†	5.2	1.7	39.116	ug/L	39.116	ppb	08:20:15
1	Na 589.592 Radial†	56.0	594.6	35.730	ug/L	35.730	ppb	08:19:55
1	Sr 421.552†	-70.0	-0.0	-0.0001	ug/L	-0.0001	ppb	08:19:55
1	Sc 361.383	800576.2	800576.2	101.45	%			08:21:12
1	Y 371.029	616117.9	616117.9	101.70	%			08:21:12
1	Ag 328.068†	776.6	0.2	-0.0145	ug/L	-0.0145	ppb	08:21:12
1	As 188.979†	-30.9	9.4	2.7322	ug/L	2.7322	ppb	08:21:32
1	B 249.677†	-33.6	1054.0	22.226	ug/L	22.226	ppb	08:21:32
1	Ba 233.527†	71.3	68.6	0.4281	ug/L	0.4281	ppb	08:21:32
1	Be 313.107†	-6255.9	274.8	0.1088	ug/L	0.1088	ppb	08:21:12
1	Cd 226.502†	-274.1	48.7	0.5509	ug/L	0.5509	ppb	08:21:32
1	Co 228.616†	-99.0	25.4	0.3838	ug/L	0.3838	ppb	08:21:32
1	Cr 267.716†	-44.6	30.2	0.3838	ug/L	0.3838	ppb	08:21:32
1	Cu 324.752†	8753.7	-77.2	-0.2465	ug/L	-0.2465	ppb	08:21:12
1	Mn 257.610†	783.0	-79.9	-0.0799	ug/L	-0.0799	ppb	08:21:32
1	Mo 202.031†	37.0	16.1	1.0157	ug/L	1.0157	ppb	08:21:32
1	Ni 231.604†	162.4	16.5	0.3940	ug/L	0.3940	ppb	08:21:32
1	P 214.914†	332.1	-24.3	-9.7897	ug/L	-9.7897	ppb	08:21:32
1	Pb 220.353†	7.1	25.9	2.7478	ug/L	2.7478	ppb	08:21:32
1	S 181.975 Axial†	93.7	-12.4	-13.483	ug/L	-13.483	ppb	08:21:32
1	Sb 206.836†	67.5	5.7	1.4262	ug/L	1.4262	ppb	08:21:32
1	Se 196.026†	-29.4	7.7	2.9533	ug/L	2.9533	ppb	08:21:32
1	Si 251.611†	643.5	-81.0	-2.1189	ug/L	-2.1189	ppb	08:21:32
1	Sn 189.927†	13.4	2.0	0.3202	ug/L	0.3202	ppb	08:21:32
1	Ti 334.940†	-1449.3	311.0	0.4942	ug/L	0.4942	ppb	08:21:12
1	Tl 190.801†	-66.9	11.0	2.4796	ug/L	2.4796	ppb	08:21:32
1	U 409.014†	-5627.7	558.8	16.630	ug/L	16.630	ppb	08:21:12
1	V 292.402†	-1791.7	135.7	1.1555	ug/L	1.1555	ppb	08:21:12
1	Zn 213.857†	1122.6	79.4	0.6222	ug/L	0.6222	ppb	08:21:32
1	SiO2†	659.0	-123.6	-6.8461	ug/L	-6.8461	ppb	08:22:28
2	Sc Radial	8174.7	8174.7	107	%			08:20:20
2	Y RADIAL	7462.0	7462.0	106.4	%			08:20:20
2	Al 396.153Radial†	-66.2	4.4	3.7392	ug/L	3.7392	ppb	08:20:20
2	Ca 317.933Radial†	33.8	6.9	9.3728	ug/L	9.3728	ppb	08:20:40
2	Fe 238.204 Radial†	36.3	-0.6	-2.5362	ug/L	-2.5362	ppb	08:20:40
2	K 766.490 Radial†	2714.7	294.7	63.938	ug/L	63.938	ppb	08:20:20
2	Mg 279.077 IEC†	2.2	-1.2	-27.561	ug/L	-27.561	ppb	08:20:40
2	Na 589.592 Radial†	-84.8	462.3	27.778	ug/L	27.778	ppb	08:20:20
2	Sr 421.552†	-48.6	20.9	0.0595	ug/L	0.0595	ppb	08:20:20
2	Sc 361.383	802105.3	802105.3	101.64	%			08:21:37
2	Y 371.029	617431.0	617431.0	101.92	%			08:21:37
2	Ag 328.068†	692.6	-83.9	-0.4686	ug/L	-0.4686	ppb	08:21:37
2	As 188.979†	-33.7	6.7	1.9516	ug/L	1.9516	ppb	08:21:57
2	B 249.677†	-18.8	1068.7	22.534	ug/L	22.534	ppb	08:21:57
2	Ba 233.527†	56.4	53.9	0.3354	ug/L	0.3354	ppb	08:21:57
2	Be 313.107†	-6267.9	274.8	0.1087	ug/L	0.1087	ppb	08:21:37
2	Cd 226.502†	-298.7	25.0	0.2822	ug/L	0.2822	ppb	08:21:57
2	Co 228.616†	-94.4	30.1	0.4509	ug/L	0.4509	ppb	08:21:57
2	Cr 267.716†	-64.0	11.2	0.1373	ug/L	0.1373	ppb	08:21:57
2	Cu 324.752†	8814.1	-34.2	-0.1090	ug/L	-0.1090	ppb	08:21:37
2	Mn 257.610†	802.5	-62.2	-0.0597	ug/L	-0.0597	ppb	08:21:57
2	Mo 202.031†	21.8	1.1	0.0661	ug/L	0.0661	ppb	08:21:57
2	Ni 231.604†	136.4	-9.5	-0.2270	ug/L	-0.2270	ppb	08:21:57

2	P 214.914†	349.6	-7.7	-3.0620 ug/L	-3.0620 ppb	08:21:57
2	Pb 220.353†	10.7	29.4	3.1147 ug/L	3.1147 ppb	08:21:57
2	S 181.975 Axial†	95.7	-10.5	-11.470 ug/L	-11.470 ppb	08:21:57
2	Sb 206.836†	61.7	-0.1	0.0271 ug/L	0.0271 ppb	08:21:57
2	Se 196.026†	-22.8	14.3	5.5820 ug/L	5.5820 ppb	08:21:57
2	Si 251.611†	646.9	-78.9	-2.0567 ug/L	-2.0567 ppb	08:21:57
2	Sn 189.927†	26.9	15.3	2.4071 ug/L	2.4071 ppb	08:21:57
2	Ti 334.940†	-1474.0	289.4	0.4570 ug/L	0.4570 ppb	08:21:37
2	Tl 190.801†	-67.4	10.7	2.4029 ug/L	2.4029 ppb	08:21:57
2	U 409.014†	-5431.3	762.7	22.696 ug/L	22.696 ppb	08:21:37
2	V 292.402†	-1880.6	51.6	0.4660 ug/L	0.4660 ppb	08:21:37
2	Zn 213.857†	1123.3	77.9	0.6158 ug/L	0.6158 ppb	08:21:57
2	SiO2†	627.2	-156.2	-8.6128 ug/L	-8.6128 ppb	08:22:33
3	Sc Radial	7992.1	7992.1	105 %		08:20:45
3	Y RADIAL	7352.5	7352.5	104.9 %		08:20:45
3	Al 396.153Radial†	-64.2	4.8	4.1352 ug/L	4.1352 ppb	08:20:45
3	Ca 317.933Radial†	31.1	5.1	6.8974 ug/L	6.8974 ppb	08:21:05
3	Fe 238.204 Radial†	37.9	1.6	6.2783 ug/L	6.2783 ppb	08:21:05
3	K 766.490 Radial†	2552.2	197.4	42.831 ug/L	42.831 ppb	08:20:45
3	Mg 279.077 IEC†	2.3	-1.0	-24.160 ug/L	-24.160 ppb	08:21:05
3	Na 589.592 Radial†	-53.6	490.3	29.460 ug/L	29.460 ppb	08:20:45
3	Sr 421.552†	-73.2	-3.6	-0.0103 ug/L	-0.0103 ppb	08:20:45
3	Sc 361.383	788248.8	788248.8	99.884 %		08:22:03
3	Y 371.029	607358.6	607358.6	100.26 %		08:22:03
3	Ag 328.068†	676.3	-88.3	-0.4876 ug/L	-0.4876 ppb	08:22:03
3	As 188.979†	-32.8	7.0	2.0474 ug/L	2.0474 ppb	08:22:23
3	B 249.677†	-15.0	1072.1	22.606 ug/L	22.606 ppb	08:22:23
3	Ba 233.527†	60.5	59.0	0.3691 ug/L	0.3691 ppb	08:22:23
3	Be 313.107†	-6171.0	263.4	0.1040 ug/L	0.1040 ppb	08:22:03
3	Cd 226.502†	-283.3	35.2	0.3970 ug/L	0.3970 ppb	08:22:23
3	Co 228.616†	-105.1	17.8	0.2662 ug/L	0.2662 ppb	08:22:23
3	Cr 267.716†	-74.1	0.0	-0.0054 ug/L	-0.0054 ppb	08:22:23
3	Cu 324.752†	8737.5	41.5	0.1324 ug/L	0.1324 ppb	08:22:03
3	Mn 257.610†	802.4	-48.4	-0.0455 ug/L	-0.0455 ppb	08:22:23
3	Mo 202.031†	19.5	-0.8	-0.0509 ug/L	-0.0509 ppb	08:22:23
3	Ni 231.604†	155.3	11.8	0.2833 ug/L	0.2833 ppb	08:22:23
3	P 214.914†	344.9	-6.4	-2.6021 ug/L	-2.6021 ppb	08:22:23
3	Pb 220.353†	0.1	19.1	2.0176 ug/L	2.0176 ppb	08:22:23
3	S 181.975 Axial†	96.7	-7.9	-8.5746 ug/L	-8.5746 ppb	08:22:23
3	Sb 206.836†	56.2	-4.6	-1.0967 ug/L	-1.0967 ppb	08:22:23
3	Se 196.026†	-34.6	2.1	0.8481 ug/L	0.8481 ppb	08:22:23
3	Si 251.611†	635.3	-79.3	-2.0544 ug/L	-2.0544 ppb	08:22:23
3	Sn 189.927†	19.6	8.4	1.3306 ug/L	1.3306 ppb	08:22:23
3	Ti 334.940†	-1507.0	230.9	0.3618 ug/L	0.3618 ppb	08:22:03
3	Tl 190.801†	-63.3	13.7	3.0773 ug/L	3.0773 ppb	08:22:23
3	U 409.014†	-5281.1	819.1	24.375 ug/L	24.375 ppb	08:22:03
3	V 292.402†	-1755.8	144.0	1.2213 ug/L	1.2213 ppb	08:22:03
3	Zn 213.857†	1147.3	121.4	0.9531 ug/L	0.9531 ppb	08:22:23
3	SiO2†	641.1	-131.4	-7.2294 ug/L	-7.2294 ppb	08:22:38

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	796976.8	100.99	%	0.963				0.95%
Sc Radial	8071.7	106	%	1.2				1.16%
Y 371.029	613635.8	101.29	%	0.904				0.89%
Y RADIAL	7384.0	105.3	%	0.97				0.92%
Ag 328.068†	-57.3	-0.3235	ug/L	0.26779	-0.3235	ppb	0.26779	82.77%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.3	7.9267	ug/L	6.91273	7.9267	ppb	6.91273	87.21%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.7	2.2437	ug/L	0.42572	2.2437	ppb	0.42572	18.97%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1064.9	22.455	ug/L	0.2018	22.455	ppb	0.2018	0.90%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	60.5	0.3775	ug/L	0.04691	0.3775	ppb	0.04691	12.43%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	271.0	0.1072	ug/L	0.00272	0.1072	ppb	0.00272	2.54%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.8	7.9014	ug/L	1.30221	7.9014	ppb	1.30221	16.48%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              36.3      0.4100 ug/L       0.13484      0.4100 ppb        0.13484  32.89%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              24.4      0.3669 ug/L       0.09351      0.3669 ppb        0.09351  25.48%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              13.8      0.1719 ug/L       0.19690      0.1719 ppb        0.19690 114.53%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -23.3     -0.0744 ug/L       0.19178     -0.0744 ppb        0.19178 257.90%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       -1.2     -4.7729 ug/L      12.32269     -4.7729 ppb       12.32269 258.18%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       248.6      53.942 ug/L       10.5975      53.942 ppb        10.5975  19.65%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.2     -4.2016 ug/L      37.55223     -4.2016 ppb       37.55223 893.76%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -63.5     -0.0617 ug/L       0.01731     -0.0617 ppb        0.01731  28.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.5      0.3436 ug/L       0.58498      0.3436 ppb        0.58498 170.23%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      515.7      30.989 ug/L        4.1905      30.989 ppb         4.1905  13.52%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               6.3      0.1501 ug/L       0.33125      0.1501 ppb        0.33125 220.69%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -12.8     -5.1512 ug/L       4.02359     -5.1512 ppb        4.02359  78.11%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              24.8      2.6267 ug/L       0.55848      2.6267 ppb        0.55848  21.26%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†        -10.2     -11.176 ug/L        2.4674     -11.176 ppb         2.4674  22.08%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               0.4      0.1189 ug/L       1.26397      0.1189 ppb        1.26397 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               8.0      3.1278 ug/L       2.37174      3.1278 ppb        2.37174  75.83%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -79.7     -2.0766 ug/L       0.03657     -2.0766 ppb        0.03657   1.76%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               8.6      1.3526 ug/L       1.04367      1.3526 ppb        1.04367  77.16%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               5.8      0.0164 ug/L       0.03771      0.0164 ppb        0.03771 230.39%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             277.1      0.4377 ug/L       0.06829      0.4377 ppb        0.06829  15.60%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              11.8      2.6533 ug/L       0.36920      2.6533 ppb        0.36920  13.91%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              713.6      21.234 ug/L        4.0740      21.234 ppb         4.0740  19.19%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              110.4      0.9476 ug/L       0.41839      0.9476 ppb        0.41839  44.15%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              92.9      0.7304 ug/L       0.19293      0.7304 ppb        0.19293  26.41%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                  -137.0     -7.5628 ug/L       0.92934     -7.5628 ppb        0.92934  12.29%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/7/2009 08:29:20
Plasma On Time: 7/7/2009 06:30:28
Logged In Analyst: Optima3
Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070709.sif
Batch ID:
Results Data Set: 070709
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX
Method Last Saved: 7/3/2009 13:44:19
IEC File: 070309.iec
MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1
Autosampler Location: 36
Sample ID: LR1
Date Collected: 7/7/2009 08:29:21
Analyst: HSC
Data Type: Original
Initial Sample Wt:
Initial Sample Vol:
Dilution:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	7852.3	7852.3	103	%			08:31:15
1	Y RADIAL	7191.2	7191.2	102.6	%			08:31:15
1	Al 396.153Radial†	-33.1	34.0	30.042	ug/L	30.042	ppb	08:31:15

1	Ca 317.933Radial†	38.7	13.0	17.709 ug/L	17.709 ppb	08:31:35
1	Fe 238.204 Radial†	98803.7	96001.4	380210 ug/L	380210 ppb	08:31:15
1	K 766.490 Radial†	2269.5	-33.9	76.286 ug/L	76.286 ppb	08:31:15
1	Mg 279.077 IEC†	17.4	13.7	-9.6447 ug/L	-9.6447 ppb	08:31:35
1	Na 589.592 Radial†	178.4	714.8	42.953 ug/L	42.953 ppb	08:31:15
1	Sr 421.552†	108.1	171.4	0.4887 ug/L	0.4887 ppb	08:31:15
1	Sc 361.383	790037.9	790037.9	100.11 %		08:32:32
1	Y 371.029	603263.1	603263.1	99.580 %		08:32:32
1	Ag 328.068†	-20777.0	-21519.4	2.2107 ug/L	2.2107 ppb	08:32:32
1	As 188.979†	-289.8	-249.6	3.0831 ug/L	3.0831 ppb	08:32:52
1	B 249.677†	1396.5	2482.2	26.372 ug/L	26.372 ppb	08:32:32
1	Ba 233.527†	-1990.5	-1989.9	-0.7501 ug/L	-0.7501 ppb	08:32:52
1	Be 313.107†	-6146.6	301.8	0.1198 ug/L	0.1198 ppb	08:32:32
1	Cd 226.502†	3004.8	3320.3	1.8530 ug/L	1.8530 ppb	08:32:52
1	Co 228.616†	191.7	314.5	-0.7616 ug/L	-0.7616 ppb	08:32:52
1	Cr 267.716†	-727.3	-652.3	-0.9509 ug/L	-0.9509 ppb	08:32:52
1	Cu 324.752†	1159.6	-7547.8	-2.0224 ug/L	-2.0224 ppb	08:32:32
1	Mn 257.610†	-45373.4	-46175.1	-0.3543 ug/L	-0.3543 ppb	08:32:32
1	Mo 202.031†	-361.6	-381.6	-1.0612 ug/L	-1.0612 ppb	08:32:52
1	Ni 231.604†	338.8	194.7	4.6614 ug/L	4.6614 ppb	08:32:52
1	P 214.914†	1013.5	660.7	-34.672 ug/L	-34.672 ppb	08:32:52
1	Pb 220.353†	284.5	303.1	1.8393 ug/L	1.8393 ppb	08:32:52
1	S 181.975 Axial†	116.5	11.6	12.677 ug/L	12.677 ppb	08:32:52
1	Sb 206.836†	54.9	-5.9	5.2092 ug/L	5.2092 ppb	08:32:52
1	Se 196.026†	-2806.3	-2766.5	86.964 ug/L	86.964 ppb	08:32:52
1	Si 251.611†	-1235.0	-1949.0	-49.643 ug/L	-49.643 ppb	08:32:52
1	Sn 189.927†	-10.6	-21.7	3.3875 ug/L	3.3875 ppb	08:32:52
1	Ti 334.940†	-1318.2	422.9	0.6468 ug/L	0.6468 ppb	08:32:52
1	Tl 190.801†	-67.5	9.6	1.7695 ug/L	1.7695 ppb	08:32:52
1	U 409.014†	-3150.8	2959.0	41.343 ug/L	41.343 ppb	08:32:32
1	V 292.402†	4604.9	6501.7	1.0998 ug/L	1.0998 ppb	08:32:52
1	Zn 213.857†	5967.0	4933.2	6.0365 ug/L	6.0365 ppb	08:32:52
1	SiO2†	-1321.3	-2093.1	-113.62 ug/L	-113.62 ppb	08:33:48
2	Sc Radial	7853.2	7853.2	103 %		08:31:40
2	Y RADIAL	7183.7	7183.7	102.5 %		08:31:40
2	Al 396.153Radial†	-61.9	6.0	6.0862 ug/L	6.0862 ppb	08:31:40
2	Ca 317.933Radial†	41.3	15.6	21.138 ug/L	21.138 ppb	08:32:00
2	Fe 238.204 Radial†	99355.6	96526.3	382290 ug/L	382290 ppb	08:31:40
2	K 766.490 Radial†	2267.1	-36.5	76.188 ug/L	76.188 ppb	08:31:40
2	Mg 279.077 IEC†	18.6	14.8	15.061 ug/L	15.061 ppb	08:32:00
2	Na 589.592 Radial†	118.3	656.4	39.444 ug/L	39.444 ppb	08:31:40
2	Sr 421.552†	204.3	264.9	0.7551 ug/L	0.7551 ppb	08:31:40
2	Sc 361.383	795349.7	795349.7	100.78 %		08:32:57
2	Y 371.029	607827.3	607827.3	100.33 %		08:32:57
2	Ag 328.068†	-20822.3	-21425.8	3.3415 ug/L	3.3415 ppb	08:32:57
2	As 188.979†	-282.4	-240.3	6.2140 ug/L	6.2140 ppb	08:33:17
2	B 249.677†	1341.4	2418.1	24.878 ug/L	24.878 ppb	08:32:57
2	Ba 233.527†	-1967.7	-1954.0	-0.4685 ug/L	-0.4685 ppb	08:33:17
2	Be 313.107†	-6208.5	281.4	0.1118 ug/L	0.1118 ppb	08:32:57
2	Cd 226.502†	3021.6	3316.9	1.6208 ug/L	1.6208 ppb	08:33:17
2	Co 228.616†	220.9	342.2	-0.3718 ug/L	-0.3718 ppb	08:33:17
2	Cr 267.716†	-729.2	-649.3	-0.8771 ug/L	-0.8771 ppb	08:33:17
2	Cu 324.752†	1371.1	-7345.7	-1.2595 ug/L	-1.2595 ppb	08:32:57
2	Mn 257.610†	-45534.4	-46032.2	0.0246 ug/L	0.0246 ppb	08:32:57
2	Mo 202.031†	-343.0	-360.7	0.3781 ug/L	0.3781 ppb	08:33:17
2	Ni 231.604†	387.2	240.5	5.7582 ug/L	5.7582 ppb	08:33:17
2	P 214.914†	1017.2	657.7	-37.694 ug/L	-37.694 ppb	08:33:17
2	Pb 220.353†	283.2	299.9	1.3380 ug/L	1.3380 ppb	08:33:17
2	S 181.975 Axial†	122.4	16.7	18.219 ug/L	18.219 ppb	08:33:17
2	Sb 206.836†	72.2	10.9	9.3828 ug/L	9.3828 ppb	08:33:17
2	Se 196.026†	-2797.5	-2739.1	104.09 ug/L	104.09 ppb	08:33:17
2	Si 251.611†	-1181.4	-1887.5	-48.086 ug/L	-48.086 ppb	08:33:17
2	Sn 189.927†	-11.5	-22.6	3.2814 ug/L	3.2814 ppb	08:33:17
2	Ti 334.940†	-1331.3	418.7	0.6371 ug/L	0.6371 ppb	08:33:17
2	Tl 190.801†	-76.4	1.2	-0.1235 ug/L	-0.1235 ppb	08:33:17
2	U 409.014†	-2932.8	3196.4	48.152 ug/L	48.152 ppb	08:32:57
2	V 292.402†	4421.8	6289.3	-0.8884 ug/L	-0.8884 ppb	08:33:17
2	Zn 213.857†	5954.3	4880.7	5.4358 ug/L	5.4358 ppb	08:33:17
2	SiO2†	-1306.5	-2069.6	-112.38 ug/L	-112.38 ppb	08:33:53
3	Sc Radial	7857.2	7857.2	103 %		08:32:05
3	Y RADIAL	7200.7	7200.7	102.7 %		08:32:05

3	Al 396.153Radial†	-88.9	-20.1	-16.169	ug/L	-16.169 ppb	08:32:05
3	Ca 317.933Radial†	47.8	21.8	29.652	ug/L	29.652 ppb	08:32:25
3	Fe 238.204 Radial†	99489.0	96607.1	382610	ug/L	382610 ppb	08:32:05
3	K 766.490 Radial†	2340.9	34.0	91.554	ug/L	91.554 ppb	08:32:05
3	Mg 279.077 IEC†	16.0	12.3	-42.839	ug/L	-42.839 ppb	08:32:25
3	Na 589.592 Radial†	276.8	810.3	48.692	ug/L	48.692 ppb	08:32:05
3	Sr 421.552†	161.7	223.4	0.6367	ug/L	0.6367 ppb	08:32:05
3	Sc 361.383	795640.8	795640.8	100.82	%		08:33:23
3	Y 371.029	608749.0	608749.0	100.49	%		08:33:23
3	Ag 328.068†	-20754.0	-21350.5	3.8484	ug/L	3.8484 ppb	08:33:23
3	As 188.979†	-292.3	-250.0	3.4325	ug/L	3.4325 ppb	08:33:43
3	B 249.677†	1225.3	2302.4	22.419	ug/L	22.419 ppb	08:33:23
3	Ba 233.527†	-1976.4	-1962.0	-0.5066	ug/L	-0.5066 ppb	08:33:43
3	Be 313.107†	-6106.4	384.9	0.1526	ug/L	0.1526 ppb	08:33:23
3	Cd 226.502†	3037.6	3331.7	1.7562	ug/L	1.7562 ppb	08:33:43
3	Co 228.616†	195.9	317.3	-0.7540	ug/L	-0.7540 ppb	08:33:43
3	Cr 267.716†	-684.8	-605.0	-0.3008	ug/L	-0.3008 ppb	08:33:43
3	Cu 324.752†	1225.8	-7490.3	-1.7009	ug/L	-1.7009 ppb	08:33:23
3	Mn 257.610†	-45754.7	-46234.2	-0.1319	ug/L	-0.1319 ppb	08:33:23
3	Mo 202.031†	-366.3	-383.7	-1.0500	ug/L	-1.0500 ppb	08:33:43
3	Ni 231.604†	280.6	134.7	3.2225	ug/L	3.2225 ppb	08:33:43
3	P 214.914†	998.8	639.0	-45.513	ug/L	-45.513 ppb	08:33:43
3	Pb 220.353†	293.8	310.4	2.4051	ug/L	2.4051 ppb	08:33:43
3	S 181.975 Axial†	111.4	5.8	6.3329	ug/L	6.3329 ppb	08:33:43
3	Sb 206.836†	59.6	-1.7	6.1946	ug/L	6.1946 ppb	08:33:43
3	Se 196.026†	-2858.5	-2798.6	81.809	ug/L	81.809 ppb	08:33:43
3	Si 251.611†	-1182.8	-1888.5	-48.079	ug/L	-48.079 ppb	08:33:43
3	Sn 189.927†	-36.6	-47.4	-0.6169	ug/L	-0.6169 ppb	08:33:43
3	Ti 334.940†	-1241.2	508.5	0.7833	ug/L	0.7833 ppb	08:33:43
3	Tl 190.801†	-80.7	-3.0	-1.0836	ug/L	-1.0836 ppb	08:33:43
3	U 409.014†	-3020.8	3110.1	45.545	ug/L	45.545 ppb	08:33:23
3	V 292.402†	4496.0	6361.3	-0.3686	ug/L	-0.3686 ppb	08:33:43
3	Zn 213.857†	5992.8	4916.8	5.7106	ug/L	5.7106 ppb	08:33:43
3	SiO2†	-1301.8	-2064.4	-112.03	ug/L	-112.03 ppb	08:33:58

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	793676.1	100.57	%	0.400				0.40%
Sc Radial	7854.2	103	%	0.0				0.03%
Y 371.029	606613.1	100.13	%	0.485				0.48%
Y RADIAL	7191.9	102.6	%	0.12				0.12%
Ag 328.068†	-21431.9	3.1335	ug/L	0.83842	3.1335	ppb	0.83842	26.76%
Al 396.153Radial†	6.6	6.6528	ug/L	23.11070	6.6528	ppb	23.11070	347.38%
As 188.979†	-246.6	4.2432	ug/L	1.71566	4.2432	ppb	1.71566	40.43%
B 249.677†	2400.9	24.556	ug/L	1.9963	24.556	ppb	1.9963	8.13%
Ba 233.527†	-1968.6	-0.5751	ug/L	0.15277	-0.5751	ppb	0.15277	26.57%
Be 313.107†	322.7	0.1280	ug/L	0.02165	0.1280	ppb	0.02165	16.91%
Ca 317.933Radial†	16.8	22.833	ug/L	6.1491	22.833	ppb	6.1491	26.93%
Cd 226.502†	3323.0	1.7433	ug/L	0.11663	1.7433	ppb	0.11663	6.69%
Co 228.616†	324.7	-0.6291	ug/L	0.22290	-0.6291	ppb	0.22290	35.43%
Cr 267.716†	-635.5	-0.7096	ug/L	0.35594	-0.7096	ppb	0.35594	50.16%
Cu 324.752†	-7461.3	-1.6609	ug/L	0.38305	-1.6609	ppb	0.38305	23.06%
Fe 238.204 Radial†	96378.3	381710	ug/L	1302.4	381710	ppb	1302.4	0.34%
K 766.490 Radial†	-12.1	81.343	ug/L	8.8432	81.343	ppb	8.8432	10.87%
Mg 279.077 IEC†	13.6	-12.474	ug/L	29.0536	-12.474	ppb	29.0536	232.91%
Mn 257.610†	-46147.2	-0.1539	ug/L	0.19044	-0.1539	ppb	0.19044	123.77%
Mo 202.031†	-375.3	-0.5777	ug/L	0.82775	-0.5777	ppb	0.82775	143.29%
Na 589.592 Radial†	727.2	43.696	ug/L	4.6687	43.696	ppb	4.6687	10.68%
Ni 231.604†	190.0	4.5474	ug/L	1.27169	4.5474	ppb	1.27169	27.97%
P 214.914†	652.5	-39.293	ug/L	5.5949	-39.293	ppb	5.5949	14.24%
Pb 220.353†	304.5	1.8608	ug/L	0.53389	1.8608	ppb	0.53389	28.69%
S 181.975 Axial†	11.4	12.409	ug/L	5.9475	12.409	ppb	5.9475	47.93%
Sb 206.836†	1.1	6.9289	ug/L	2.18155	6.9289	ppb	2.18155	31.48%
Se 196.026†	-2768.1	90.956	ug/L	11.6670	90.956	ppb	11.6670	12.83%
Si 251.611†	-1908.3	-48.603	ug/L	0.9013	-48.603	ppb	0.9013	1.85%
Sn 189.927†	-30.6	2.0173	ug/L	2.28190	2.0173	ppb	2.28190	113.11%
Sr 421.552†	219.9	0.6269	ug/L	0.13348	0.6269	ppb	0.13348	21.29%
Ti 334.940†	450.0	0.6891	ug/L	0.08175	0.6891	ppb	0.08175	11.86%
Tl 190.801†	2.6	0.1875	ug/L	1.45176	0.1875	ppb	1.45176	774.28%

U 409.014†	3088.5	45.013 ug/L	3.4353	45.013 ppb	3.4353	7.63%
V 292.402†	6384.1	-0.0524 ug/L	1.03113	-0.0524 ppb	1.03113	>999.9%
Zn 213.857†	4910.2	5.7276 ug/L	0.30074	5.7276 ppb	0.30074	5.25%
SiO2†	-2075.7	-112.67 ug/L	0.835	-112.67 ppb	0.835	0.74%

Sequence No.: 2
Sample ID: LR2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/7/2009 08:36:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	8073.1	8073.1	106	%			08:38:03
1	Y RADIAL	7403.7	7403.7	105.6	%			08:38:03
1	Al 396.153Radial†	-66.3	3.5	3.0172	ug/L	3.0172	ppb	08:38:03
1	Ca 317.933Radial†	36.7	10.1	13.676	ug/L	13.676	ppb	08:38:23
1	Fe 238.204 Radial†	36.1	-0.4	-1.9308	ug/L	-1.9308	ppb	08:38:23
1	K 766.490 Radial†	2443.0	69.8	15.141	ug/L	15.141	ppb	08:38:03
1	Mg 279.077 IEC†	3.5	0.0	0.9702	ug/L	0.9702	ppb	08:38:23
1	Na 589.592 Radial†	-202.8	349.7	21.013	ug/L	21.013	ppb	08:38:03
1	Sr 421.552†	0.5	66.8	0.1904	ug/L	0.1904	ppb	08:38:03
1	Sc 361.383	798083.1	798083.1	101.13	%			08:39:20
1	Y 371.029	612030.8	612030.8	101.03	%			08:39:20
1	Ag 328.068†	704.0	-69.2	-0.3744	ug/L	-0.3744	ppb	08:39:26
1	As 188.979†	-38.9	1.4	0.4108	ug/L	0.4108	ppb	08:39:46
1	B 249.677†	-453.9	638.4	13.473	ug/L	13.473	ppb	08:39:46
1	Ba 233.527†	1635943.5	1617664.4	10043	ug/L	10043	ppb	08:39:20
1	Be 313.107†	-6185.8	324.9	0.1280	ug/L	0.1280	ppb	08:39:26
1	Cd 226.502†	-286.5	35.5	0.4016	ug/L	0.4016	ppb	08:39:46
1	Co 228.616†	-442.9	-315.0	-0.2197	ug/L	-0.2197	ppb	08:39:46
1	Cr 267.716†	-42.2	32.5	0.4164	ug/L	0.4164	ppb	08:39:46
1	Cu 324.752†	8777.3	-26.9	-0.0855	ug/L	-0.0855	ppb	08:39:26
1	Mn 257.610†	706.5	-153.1	-0.1480	ug/L	-0.1480	ppb	08:39:46
1	Mo 202.031†	19.7	-0.9	-0.0549	ug/L	-0.0549	ppb	08:39:46
1	Ni 231.604†	174.4	28.8	0.6929	ug/L	0.6929	ppb	08:39:46
1	P 214.914†	334.9	-20.5	-8.3071	ug/L	-8.3071	ppb	08:39:46
1	Pb 220.353†	-28.0	-8.7	-0.9205	ug/L	-0.9205	ppb	08:39:46
1	S 181.975 Axial†	91.9	-13.8	-15.058	ug/L	-15.058	ppb	08:39:46
1	Sb 206.836†	59.2	-2.3	-0.5525	ug/L	-0.5525	ppb	08:39:46
1	Se 196.026†	-32.9	4.2	1.6267	ug/L	1.6267	ppb	08:39:46
1	Si 251.611†	537.5	-183.8	-4.7305	ug/L	-4.7305	ppb	08:39:46
1	Sn 189.927†	17.7	6.3	0.9967	ug/L	0.9967	ppb	08:39:46
1	Ti 334.940†	-1561.5	195.6	0.3116	ug/L	0.3116	ppb	08:39:26
1	Tl 190.801†	-65.6	12.1	2.7494	ug/L	2.7494	ppb	08:39:46
1	U 409.014†	-5839.7	331.8	9.8742	ug/L	9.8742	ppb	08:39:26
1	V 292.402†	-1746.1	175.2	1.4494	ug/L	1.4494	ppb	08:39:26
1	Zn 213.857†	1123.8	84.1	0.6570	ug/L	0.6570	ppb	08:39:46
1	SiO2†	548.6	-230.8	-12.645	ug/L	-12.645	ppb	08:40:52
2	Sc Radial	8050.0	8050.0	105	%			08:38:28
2	Y RADIAL	7407.3	7407.3	105.7	%			08:38:28
2	Al 396.153Radial†	-36.7	31.4	26.868	ug/L	26.868	ppb	08:38:28
2	Ca 317.933Radial†	44.2	17.3	23.451	ug/L	23.451	ppb	08:38:48
2	Fe 238.204 Radial†	37.6	1.1	4.0452	ug/L	4.0452	ppb	08:38:48
2	K 766.490 Radial†	2310.0	-49.7	-10.797	ug/L	-10.797	ppb	08:38:28
2	Mg 279.077 IEC†	6.2	2.6	60.514	ug/L	60.514	ppb	08:38:48
2	Na 589.592 Radial†	-193.1	358.4	21.534	ug/L	21.534	ppb	08:38:28
2	Sr 421.552†	-59.2	10.2	0.0288	ug/L	0.0288	ppb	08:38:28
2	Sc 361.383	809103.1	809103.1	102.53	%			08:39:51
2	Y 371.029	621496.0	621496.0	102.59	%			08:39:51
2	Ag 328.068†	734.4	-49.1	-0.2680	ug/L	-0.2680	ppb	08:39:56
2	As 188.979†	-29.0	11.6	3.3905	ug/L	3.3905	ppb	08:40:16
2	B 249.677†	-493.2	606.1	12.793	ug/L	12.793	ppb	08:40:16
2	Ba 233.527†	1628468.7	1588341.1	9861.2	ug/L	9861.2	ppb	08:39:51
2	Be 313.107†	-6239.3	356.1	0.1402	ug/L	0.1402	ppb	08:39:56
2	Cd 226.502†	-284.4	41.5	0.4682	ug/L	0.4682	ppb	08:40:16
2	Co 228.616†	-449.9	-315.8	-0.3158	ug/L	-0.3158	ppb	08:40:16
2	Cr 267.716†	-63.7	12.1	0.1531	ug/L	0.1531	ppb	08:40:16
2	Cu 324.752†	8748.0	-173.7	-0.5522	ug/L	-0.5522	ppb	08:39:56
2	Mn 257.610†	719.4	-150.1	-0.1455	ug/L	-0.1455	ppb	08:40:16
2	Mo 202.031†	12.8	-7.9	-0.4984	ug/L	-0.4984	ppb	08:40:16
2	Ni 231.604†	173.0	25.1	0.6044	ug/L	0.6044	ppb	08:40:16

2	P 214.914†	320.3	-39.3	-15.848	ug/L	-15.848 ppb	08:40:16
2	Pb 220.353†	-19.5	-0.0	0.0023	ug/L	0.0023 ppb	08:40:16
2	S 181.975 Axial†	87.3	-19.5	-21.286	ug/L	-21.286 ppb	08:40:16
2	Sb 206.836†	61.4	-0.9	-0.2565	ug/L	-0.2565 ppb	08:40:16
2	Se 196.026†	-33.0	4.5	1.7793	ug/L	1.7793 ppb	08:40:16
2	Si 251.611†	552.0	-176.9	-4.5298	ug/L	-4.5298 ppb	08:40:16
2	Sn 189.927†	5.5	-5.8	-0.9125	ug/L	-0.9125 ppb	08:40:16
2	Ti 334.940†	-1570.9	207.4	0.3314	ug/L	0.3314 ppb	08:39:56
2	Tl 190.801†	-66.7	12.0	2.7211	ug/L	2.7211 ppb	08:40:16
2	U 409.014†	-5931.8	320.7	9.5434	ug/L	9.5434 ppb	08:39:56
2	V 292.402†	-1879.3	68.9	0.5751	ug/L	0.5751 ppb	08:39:56
2	Zn 213.857†	1097.6	43.3	0.3350	ug/L	0.3350 ppb	08:40:16
2	SiO2†	547.2	-239.5	-13.073	ug/L	-13.073 ppb	08:40:57
3	Sc Radial	8073.6	8073.6	106	%		08:38:54
3	Y RADIAL	7396.4	7396.4	105.5	%		08:38:54
3	Al 396.153Radial†	-45.9	22.8	19.498	ug/L	19.498 ppb	08:38:54
3	Ca 317.933Radial†	37.3	10.6	14.467	ug/L	14.467 ppb	08:39:14
3	Fe 238.204 Radial†	35.9	-0.7	-2.7706	ug/L	-2.7706 ppb	08:39:14
3	K 766.490 Radial†	2454.4	80.4	17.429	ug/L	17.429 ppb	08:38:54
3	Mg 279.077 IEC†	2.0	-1.3	-31.174	ug/L	-31.174 ppb	08:39:14
3	Na 589.592 Radial†	-276.7	279.9	16.816	ug/L	16.816 ppb	08:38:54
3	Sr 421.552†	-14.8	52.3	0.1490	ug/L	0.1490 ppb	08:38:54
3	Sc 361.383	809828.7	809828.7	102.62	%		08:40:22
3	Y 371.029	621577.4	621577.4	102.60	%		08:40:22
3	Ag 328.068†	726.1	-57.8	-0.3231	ug/L	-0.3231 ppb	08:40:27
3	As 188.979†	-35.9	4.9	1.4249	ug/L	1.4249 ppb	08:40:47
3	B 249.677†	-509.1	591.1	12.476	ug/L	12.476 ppb	08:40:47
3	Ba 233.527†	1670724.0	1628095.1	10108	ug/L	10108 ppb	08:40:22
3	Be 313.107†	-6305.8	296.6	0.1169	ug/L	0.1169 ppb	08:40:27
3	Cd 226.502†	-265.4	60.3	0.6809	ug/L	0.6809 ppb	08:40:47
3	Co 228.616†	-454.4	-319.9	-0.2643	ug/L	-0.2643 ppb	08:40:47
3	Cr 267.716†	-63.9	12.0	0.1494	ug/L	0.1494 ppb	08:40:47
3	Cu 324.752†	8798.1	-132.5	-0.4214	ug/L	-0.4214 ppb	08:40:27
3	Mn 257.610†	716.1	-153.9	-0.1482	ug/L	-0.1482 ppb	08:40:47
3	Mo 202.031†	19.2	-1.6	-0.1021	ug/L	-0.1021 ppb	08:40:47
3	Ni 231.604†	176.5	28.3	0.6821	ug/L	0.6821 ppb	08:40:47
3	P 214.914†	314.7	-45.0	-18.172	ug/L	-18.172 ppb	08:40:47
3	Pb 220.353†	7.0	25.8	2.7347	ug/L	2.7347 ppb	08:40:47
3	S 181.975 Axial†	88.2	-18.8	-20.511	ug/L	-20.511 ppb	08:40:47
3	Sb 206.836†	57.1	-5.2	-1.2535	ug/L	-1.2535 ppb	08:40:47
3	Se 196.026†	-35.7	1.9	0.7365	ug/L	0.7365 ppb	08:40:47
3	Si 251.611†	546.8	-182.5	-4.6944	ug/L	-4.6944 ppb	08:40:47
3	Sn 189.927†	16.7	5.1	0.8118	ug/L	0.8118 ppb	08:40:47
3	Ti 334.940†	-1579.9	200.0	0.3154	ug/L	0.3154 ppb	08:40:27
3	Tl 190.801†	-51.7	26.6	6.0274	ug/L	6.0274 ppb	08:40:47
3	U 409.014†	-5653.9	596.7	17.757	ug/L	17.757 ppb	08:40:27
3	V 292.402†	-1863.9	85.5	0.7311	ug/L	0.7311 ppb	08:40:27
3	Zn 213.857†	1119.4	63.6	0.4982	ug/L	0.4982 ppb	08:40:47
3	SiO2†	515.3	-271.0	-14.848	ug/L	-14.848 ppb	08:41:02

Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	805671.7	102.09	%	0.834				0.82%
Sc Radial	8065.6	106	%	0.2				0.17%
Y 371.029	618368.1	102.07	%	0.906				0.89%
Y RADIAL	7402.5	105.6	%	0.08				0.07%
Ag 328.068†	-58.7	-0.3219	ug/L	0.05321	-0.3219	ppb	0.05321	16.53%
Al 396.153Radial†	19.3	16.461	ug/L	12.2122	16.461	ppb	12.2122	74.19%
As 188.979†	6.0	1.7421	ug/L	1.51497	1.7421	ppb	1.51497	86.96%
B 249.677†	611.9	12.914	ug/L	0.5094	12.914	ppb	0.5094	3.94%
Ba 233.527†	1611366.9	10004	ug/L	128.0	10004	ppb	128.0	1.28%
Be 313.107†	325.9	0.1284	ug/L	0.01165	0.1284	ppb	0.01165	9.08%
Ca 317.933Radial†	12.7	17.198	ug/L	5.4297	17.198	ppb	5.4297	31.57%
Cd 226.502†	45.8	0.5169	ug/L	0.14586	0.5169	ppb	0.14586	28.22%
Co 228.616†	-316.9	-0.2666	ug/L	0.04810	-0.2666	ppb	0.04810	18.04%
Cr 267.716†	18.9	0.2396	ug/L	0.15309	0.2396	ppb	0.15309	63.89%
Cu 324.752†	-111.0	-0.3530	ug/L	0.24072	-0.3530	ppb	0.24072	68.19%
Fe 238.204 Radial†	-0.0	-0.2188	ug/L	3.71646	-0.2188	ppb	3.71646	>999.9%
K 766.490 Radial†	33.5	7.2578	ug/L	15.67748	7.2578	ppb	15.67748	216.01%

Mg 279.077 IEC†	0.4	10.103	ug/L	46.5213	10.103	ppb	46.5213 460.46%
Mn 257.610†	-152.4	-0.1472	ug/L	0.00148	-0.1472	ppb	0.00148 1.01%
Mo 202.031†	-3.5	-0.2185	ug/L	0.24359	-0.2185	ppb	0.24359 111.49%
Na 589.592 Radial†	329.3	19.788	ug/L	2.5864	19.788	ppb	2.5864 13.07%
Ni 231.604†	27.4	0.6598	ug/L	0.04831	0.6598	ppb	0.04831 7.32%
P 214.914†	-34.9	-14.109	ug/L	5.1571	-14.109	ppb	5.1571 36.55%
Pb 220.353†	5.7	0.6055	ug/L	1.90076	0.6055	ppb	1.90076 313.93%
S 181.975 Axial†	-17.4	-18.952	ug/L	3.3939	-18.952	ppb	3.3939 17.91%
Sb 206.836†	-2.8	-0.6875	ug/L	0.51203	-0.6875	ppb	0.51203 74.48%
Se 196.026†	3.5	1.3809	ug/L	0.56319	1.3809	ppb	0.56319 40.79%
Si 251.611†	-181.1	-4.6516	ug/L	0.10696	-4.6516	ppb	0.10696 2.30%
Sn 189.927†	1.9	0.2986	ug/L	1.05298	0.2986	ppb	1.05298 352.60%
Sr 421.552†	43.1	0.1228	ug/L	0.08395	0.1228	ppb	0.08395 68.38%
Ti 334.940†	201.0	0.3195	ug/L	0.01054	0.3195	ppb	0.01054 3.30%
Tl 190.801†	16.9	3.8326	ug/L	1.90077	3.8326	ppb	1.90077 49.59%
U 409.014†	416.4	12.392	ug/L	4.6495	12.392	ppb	4.6495 37.52%
V 292.402†	109.9	0.9185	ug/L	0.46632	0.9185	ppb	0.46632 50.77%
Zn 213.857†	63.7	0.4967	ug/L	0.16098	0.4967	ppb	0.16098 32.41%
SiO2†	-247.1	-13.522	ug/L	1.1683	-13.522	ppb	1.1683 8.64%

Sequence No.: 3
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/7/2009 08:43:14
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7639.5	7639.5	100	%			08:45:26
1	Y RADIAL	7021.7	7021.7	100.2	%			08:45:26
1	Al 396.153Radial†	6136.8	6197.2	5272.8	ug/L	5272.8	ppb	08:45:06
1	Ca 317.933Radial†	3997.4	3969.0	5393.6	ug/L	5393.6	ppb	08:45:26
1	Fe 238.204 Radial†	1348.1	1312.2	5212.1	ug/L	5212.1	ppb	08:45:26
1	K 766.490 Radial†	25291.9	23028.2	4989.0	ug/L	4989.0	ppb	08:45:06
1	Mg 279.077 IEC†	236.9	233.4	5397.6	ug/L	5397.6	ppb	08:45:26
1	Na 589.592 Radial†	171921.7	172300.9	10354	ug/L	10354	ppb	08:45:06
1	Sr 421.552†	176048.7	175949.0	501.66	ug/L	501.66	ppb	08:45:06
1	Sc 361.383	814041.4	814041.4	103.15	%			08:46:25
1	Y 371.029	617352.3	617352.3	101.91	%			08:46:25
1	Ag 328.068†	94559.2	90904.4	490.29	ug/L	490.29	ppb	08:46:25
1	As 188.979†	1674.7	1663.4	489.41	ug/L	489.41	ppb	08:46:45
1	B 249.677†	22905.4	23292.6	489.60	ug/L	489.60	ppb	08:46:25
1	Ba 233.527†	81178.1	78695.9	489.84	ug/L	489.84	ppb	08:46:25
1	Be 313.107†	1273998.8	1241510.6	487.26	ug/L	487.26	ppb	08:46:25
1	Cd 226.502†	42716.7	41730.2	470.67	ug/L	470.67	ppb	08:46:45
1	Co 228.616†	32488.5	31618.7	475.27	ug/L	475.27	ppb	08:46:45
1	Cr 267.716†	39103.2	37982.5	488.01	ug/L	488.01	ppb	08:46:25
1	Cu 324.752†	166928.5	153121.6	487.28	ug/L	487.28	ppb	08:46:25
1	Mn 257.610†	521829.6	505032.3	487.75	ug/L	487.75	ppb	08:46:25
1	Mo 202.031†	8066.5	7799.7	491.95	ug/L	491.95	ppb	08:46:45
1	Ni 231.604†	20789.8	20010.8	479.01	ug/L	479.01	ppb	08:46:45
1	P 214.914†	6453.5	5904.6	2322.1	ug/L	2322.1	ppb	08:46:45
1	Pb 220.353†	4718.6	4593.4	487.20	ug/L	487.20	ppb	08:46:45
1	S 181.975 Axial†	1014.2	878.5	957.32	ug/L	957.32	ppb	08:46:45
1	Sb 206.836†	2077.5	1953.3	485.71	ug/L	485.71	ppb	08:46:45
1	Se 196.026†	1254.5	1252.9	507.82	ug/L	507.82	ppb	08:46:45
1	Si 251.611†	99169.6	95424.0	2440.0	ug/L	2440.0	ppb	08:46:25
1	Sn 189.927†	3192.4	3083.7	486.32	ug/L	486.32	ppb	08:46:45
1	Ti 334.940†	311377.7	303602.5	489.32	ug/L	489.32	ppb	08:46:25
1	Tl 190.801†	2146.6	2158.0	488.09	ug/L	488.09	ppb	08:46:45
1	U 409.014†	10890.3	16663.9	494.29	ug/L	494.29	ppb	08:46:25
1	V 292.402†	59735.0	59811.6	494.33	ug/L	494.33	ppb	08:46:25
1	Zn 213.857†	64928.3	61917.1	482.49	ug/L	482.49	ppb	08:46:25
1	SiO2†	99574.0	95758.1	5215.2	ug/L	5215.2	ppb	08:47:45
2	Sc Radial	7626.6	7626.6	99.9	%			08:45:51
2	Y RADIAL	6993.7	6993.7	99.76	%			08:45:51
2	Al 396.153Radial†	6099.2	6170.0	5249.3	ug/L	5249.3	ppb	08:45:31
2	Ca 317.933Radial†	3992.0	3970.4	5395.5	ug/L	5395.5	ppb	08:45:51
2	Fe 238.204 Radial†	1352.6	1319.0	5239.0	ug/L	5239.0	ppb	08:45:51
2	K 766.490 Radial†	25273.1	23052.4	4994.3	ug/L	4994.3	ppb	08:45:31
2	Mg 279.077 IEC†	234.6	231.6	5355.1	ug/L	5355.1	ppb	08:45:51
2	Na 589.592 Radial†	172359.8	173031.9	10397	ug/L	10397	ppb	08:45:31
2	Sr 421.552†	176162.3	176362.1	502.84	ug/L	502.84	ppb	08:45:31
2	Sc 361.383	808631.6	808631.6	102.47	%			08:46:53
2	Y 371.029	613445.7	613445.7	101.26	%			08:46:53
2	Ag 328.068†	94068.8	91039.1	491.02	ug/L	491.02	ppb	08:46:53
2	As 188.979†	1663.0	1662.9	489.24	ug/L	489.24	ppb	08:47:13
2	B 249.677†	22760.3	23299.6	489.74	ug/L	489.74	ppb	08:46:53
2	Ba 233.527†	80603.4	78661.5	489.62	ug/L	489.62	ppb	08:46:53
2	Be 313.107†	1264497.3	1240500.5	486.87	ug/L	486.87	ppb	08:46:53
2	Cd 226.502†	42818.2	42106.4	474.91	ug/L	474.91	ppb	08:47:13
2	Co 228.616†	32509.3	31849.8	478.75	ug/L	478.75	ppb	08:47:13
2	Cr 267.716†	38851.7	37990.8	488.12	ug/L	488.12	ppb	08:46:53
2	Cu 324.752†	166150.1	153444.4	488.31	ug/L	488.31	ppb	08:46:53
2	Mn 257.610†	518553.9	505219.8	487.94	ug/L	487.94	ppb	08:46:53
2	Mo 202.031†	8066.7	7852.1	495.26	ug/L	495.26	ppb	08:47:13
2	Ni 231.604†	20849.8	20204.2	483.64	ug/L	483.64	ppb	08:47:13

2	P 214.914†	6448.1	5941.2	2336.8 ug/L	2336.8 ppb	08:47:13
2	Pb 220.353†	4739.1	4644.0	492.55 ug/L	492.55 ppb	08:47:13
2	S 181.975 Axial†	993.9	865.3	942.92 ug/L	942.92 ppb	08:47:13
2	Sb 206.836†	2091.2	1980.1	492.43 ug/L	492.43 ppb	08:47:13
2	Se 196.026†	1228.8	1235.9	501.27 ug/L	501.27 ppb	08:47:13
2	Si 251.611†	98729.8	95637.9	2445.5 ug/L	2445.5 ppb	08:46:53
2	Sn 189.927†	3201.3	3113.1	490.95 ug/L	490.95 ppb	08:47:13
2	Ti 334.940†	309493.7	303783.4	489.61 ug/L	489.61 ppb	08:46:53
2	Tl 190.801†	2151.6	2176.8	492.31 ug/L	492.31 ppb	08:47:13
2	U 409.014†	10767.9	16615.0	492.83 ug/L	492.83 ppb	08:46:53
2	V 292.402†	59300.9	59775.3	494.07 ug/L	494.07 ppb	08:46:53
2	Zn 213.857†	64583.9	62002.0	483.13 ug/L	483.13 ppb	08:46:53
2	SiO2†	98945.2	95790.2	5216.8 ug/L	5216.8 ppb	08:47:51
3	Sc Radial	7660.0	7660.0	100 %		08:46:17
3	Y RADIAL	7053.0	7053.0	100.6 %		08:46:17
3	Al 396.153Radial†	6103.7	6147.8	5230.5 ug/L	5230.5 ppb	08:45:57
3	Ca 317.933Radial†	4016.8	3977.6	5405.4 ug/L	5405.4 ppb	08:46:17
3	Fe 238.204 Radial†	1363.7	1324.2	5259.4 ug/L	5259.4 ppb	08:46:17
3	K 766.490 Radial†	25330.2	22998.8	4982.7 ug/L	4982.7 ppb	08:45:57
3	Mg 279.077 IEC†	234.9	230.8	5338.1 ug/L	5338.1 ppb	08:46:17
3	Na 589.592 Radial†	172797.6	172714.4	10378 ug/L	10378 ppb	08:45:57
3	Sr 421.552†	176627.8	176055.6	501.97 ug/L	501.97 ppb	08:45:57
3	Sc 361.383	807431.2	807431.2	102.31 %		08:47:20
3	Y 371.029	612522.2	612522.2	101.11 %		08:47:20
3	Ag 328.068†	93808.9	90921.6	490.40 ug/L	490.40 ppb	08:47:20
3	As 188.979†	1657.7	1660.1	488.44 ug/L	488.44 ppb	08:47:40
3	B 249.677†	22764.8	23337.0	490.53 ug/L	490.53 ppb	08:47:20
3	Ba 233.527†	80631.2	78805.7	490.52 ug/L	490.52 ppb	08:47:20
3	Be 313.107†	1263286.8	1241152.0	487.12 ug/L	487.12 ppb	08:47:20
3	Cd 226.502†	42573.4	41929.2	472.91 ug/L	472.91 ppb	08:47:40
3	Co 228.616†	32300.8	31693.1	476.39 ug/L	476.39 ppb	08:47:40
3	Cr 267.716†	38908.2	38102.3	489.55 ug/L	489.55 ppb	08:47:20
3	Cu 324.752†	165791.9	153335.4	487.96 ug/L	487.96 ppb	08:47:20
3	Mn 257.610†	518422.5	505843.7	488.54 ug/L	488.54 ppb	08:47:20
3	Mo 202.031†	8022.7	7820.9	493.29 ug/L	493.29 ppb	08:47:40
3	Ni 231.604†	20696.4	20084.6	480.78 ug/L	480.78 ppb	08:47:40
3	P 214.914†	6425.3	5928.3	2331.6 ug/L	2331.6 ppb	08:47:40
3	Pb 220.353†	4704.5	4617.0	489.69 ug/L	489.69 ppb	08:47:40
3	S 181.975 Axial†	1001.5	874.1	952.54 ug/L	952.54 ppb	08:47:40
3	Sb 206.836†	2069.5	1961.9	487.88 ug/L	487.88 ppb	08:47:40
3	Se 196.026†	1239.0	1247.6	505.92 ug/L	505.92 ppb	08:47:40
3	Si 251.611†	98585.0	95639.6	2445.5 ug/L	2445.5 ppb	08:47:20
3	Sn 189.927†	3189.9	3106.6	489.92 ug/L	489.92 ppb	08:47:40
3	Ti 334.940†	309161.7	303907.9	489.81 ug/L	489.81 ppb	08:47:20
3	Tl 190.801†	2138.0	2166.6	490.03 ug/L	490.03 ppb	08:47:40
3	U 409.014†	10746.2	16609.4	492.66 ug/L	492.66 ppb	08:47:20
3	V 292.402†	59324.3	59884.2	494.93 ug/L	494.93 ppb	08:47:20
3	Zn 213.857†	64589.5	62101.2	483.92 ug/L	483.92 ppb	08:47:20
3	SiO2†	97729.8	94745.8	5159.8 ug/L	5159.8 ppb	08:47:56

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	810034.7	102.64	%	0.446				0.43%
Sc Radial	7642.0	100	%	0.2				0.22%
Y 371.029	614440.0	101.42	%	0.423				0.42%
Y RADIAL	7022.8	100.2	%	0.42				0.42%
Ag 328.068†	90955.0	490.57	ug/L	0.394	490.57	ppb	0.394	0.08%
QC value within limits for Ag 328.068 Recovery = 98.11%								
Al 396.153Radial†	6171.7	5250.9	ug/L	21.16	5250.9	ppb	21.16	0.40%
QC value within limits for Al 396.153Radial Recovery = 105.02%								
As 188.979†	1662.1	489.03	ug/L	0.517	489.03	ppb	0.517	0.11%
QC value within limits for As 188.979 Recovery = 97.81%								
B 249.677†	23309.8	489.95	ug/L	0.502	489.95	ppb	0.502	0.10%
QC value within limits for B 249.677 Recovery = 97.99%								
Ba 233.527†	78721.0	489.99	ug/L	0.469	489.99	ppb	0.469	0.10%
QC value within limits for Ba 233.527 Recovery = 98.00%								
Be 313.107†	1241054.3	487.08	ug/L	0.200	487.08	ppb	0.200	0.04%
QC value within limits for Be 313.107 Recovery = 97.42%								
Ca 317.933Radial†	3972.3	5398.2	ug/L	6.32	5398.2	ppb	6.32	0.12%

QC value within limits for Ca 317.933Radial Recovery = 107.96%

Cd 226.502†	41921.9	472.83 ug/L	2.123	472.83 ppb	2.123	0.45%

QC value within limits for Cd 226.502 Recovery = 94.57%

Co 228.616†	31720.5	476.81 ug/L	1.776	476.81 ppb	1.776	0.37%

QC value within limits for Co 228.616 Recovery = 95.36%

Cr 267.716†	38025.2	488.56 ug/L	0.860	488.56 ppb	0.860	0.18%

QC value within limits for Cr 267.716 Recovery = 97.71%

Cu 324.752†	153300.5	487.85 ug/L	0.523	487.85 ppb	0.523	0.11%

QC value within limits for Cu 324.752 Recovery = 97.57%

Fe 238.204 Radial†	1318.5	5236.8 ug/L	23.76	5236.8 ppb	23.76	0.45%

QC value within limits for Fe 238.204 Radial Recovery = 104.74%

K 766.490 Radial†	23026.5	4988.7 ug/L	5.83	4988.7 ppb	5.83	0.12%

QC value within limits for K 766.490 Radial Recovery = 99.77%

Mg 279.077 IEC†	231.9	5363.6 ug/L	30.66	5363.6 ppb	30.66	0.57%

QC value within limits for Mg 279.077 IEC Recovery = 107.27%

Mn 257.610†	505365.2	488.08 ug/L	0.413	488.08 ppb	0.413	0.08%

QC value within limits for Mn 257.610 Recovery = 97.62%

Mo 202.031†	7824.2	493.50 ug/L	1.664	493.50 ppb	1.664	0.34%

QC value within limits for Mo 202.031 Recovery = 98.70%

Na 589.592 Radial†	172682.4	10376 ug/L	22.0	10376 ppb	22.0	0.21%

QC value within limits for Na 589.592 Radial Recovery = 103.76%

Ni 231.604†	20099.9	481.14 ug/L	2.337	481.14 ppb	2.337	0.49%

QC value within limits for Ni 231.604 Recovery = 96.23%

P 214.914†	5924.7	2330.2 ug/L	7.45	2330.2 ppb	7.45	0.32%

QC value within limits for P 214.914 Recovery = 93.21%

Pb 220.353†	4618.1	489.82 ug/L	2.678	489.82 ppb	2.678	0.55%

QC value within limits for Pb 220.353 Recovery = 97.96%

S 181.975 Axial†	872.6	950.93 ug/L	7.334	950.93 ppb	7.334	0.77%

QC value within limits for S 181.975 Axial Recovery = 95.09%

Sb 206.836†	1965.1	488.67 ug/L	3.429	488.67 ppb	3.429	0.70%

QC value within limits for Sb 206.836 Recovery = 97.73%

Se 196.026†	1245.5	505.00 ug/L	3.373	505.00 ppb	3.373	0.67%

QC value within limits for Se 196.026 Recovery = 101.00%

Si 251.611†	95567.2	2443.7 ug/L	3.16	2443.7 ppb	3.16	0.13%

QC value within limits for Si 251.611 Recovery = 97.75%

Sn 189.927†	3101.1	489.06 ug/L	2.432	489.06 ppb	2.432	0.50%

QC value within limits for Sn 189.927 Recovery = 97.81%

Sr 421.552†	176122.2	502.16 ug/L	0.612	502.16 ppb	0.612	0.12%

QC value within limits for Sr 421.552 Recovery = 100.43%

Ti 334.940†	303764.6	489.58 ug/L	0.248	489.58 ppb	0.248	0.05%

QC value within limits for Ti 334.940 Recovery = 97.92%

Tl 190.801†	2167.1	490.14 ug/L	2.108	490.14 ppb	2.108	0.43%

QC value within limits for Tl 190.801 Recovery = 98.03%

U 409.014†	16629.4	493.26 ug/L	0.895	493.26 ppb	0.895	0.18%

QC value within limits for U 409.014 Recovery = 98.65%

V 292.402†	59823.7	494.44 ug/L	0.441	494.44 ppb	0.441	0.09%

QC value within limits for V 292.402 Recovery = 98.89%

Zn 213.857†	62006.8	483.18 ug/L	0.718	483.18 ppb	0.718	0.15%

QC value within limits for Zn 213.857 Recovery = 96.64%

SiO2†	95431.4	5197.3 ug/L	32.50	5197.3 ppb	32.50	0.63%

QC value within limits for SiO2 Recovery = 97.19%

All analyte(s) passed QC.

Sequence No.: 4
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/7/2009 08:50:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	8026.6	8026.6	105	%			08:51:58
1	Y RADIAL	7325.1	7325.1	104.5	%			08:51:58
1	Al 396.153Radial†	-35.5	32.5	27.726	ug/L	27.726	ppb	08:51:58
1	Ca 317.933Radial†	31.6	5.5	7.4223	ug/L	7.4223	ppb	08:52:18
1	Fe 238.204 Radial†	33.2	-3.0	-11.715	ug/L	-11.715	ppb	08:52:18
1	K 766.490 Radial†	2377.2	20.6	4.4541	ug/L	4.4541	ppb	08:51:58
1	Mg 279.077 IEC†	2.9	-0.5	-12.183	ug/L	-12.183	ppb	08:52:18
1	Na 589.592 Radial†	-267.3	287.2	17.260	ug/L	17.260	ppb	08:51:58
1	Sr 421.552†	-44.0	24.5	0.0698	ug/L	0.0698	ppb	08:51:58
1	Sc 361.383	789410.6	789410.6	100.03	%			08:53:15
1	Y 371.029	608602.3	608602.3	100.46	%			08:53:15
1	Ag 328.068†	800.6	35.0	0.1708	ug/L	0.1708	ppb	08:53:15
1	As 188.979†	-23.9	16.0	4.6779	ug/L	4.6779	ppb	08:53:35
1	B 249.677†	-508.1	579.2	12.212	ug/L	12.212	ppb	08:53:15
1	Ba 233.527†	43.7	42.1	0.2629	ug/L	0.2629	ppb	08:53:35
1	Be 313.107†	-6218.4	225.1	0.0888	ug/L	0.0888	ppb	08:53:15
1	Cd 226.502†	-279.5	39.5	0.4464	ug/L	0.4464	ppb	08:53:35
1	Co 228.616†	-86.4	36.6	0.5494	ug/L	0.5494	ppb	08:53:35
1	Cr 267.716†	-108.2	-33.9	-0.4404	ug/L	-0.4404	ppb	08:53:15
1	Cu 324.752†	8791.4	82.6	0.2620	ug/L	0.2620	ppb	08:53:15
1	Mn 257.610†	701.7	-150.3	-0.1461	ug/L	-0.1461	ppb	08:53:15
1	Mo 202.031†	19.6	-0.7	-0.0472	ug/L	-0.0472	ppb	08:53:35
1	Ni 231.604†	143.4	-0.3	-0.0070	ug/L	-0.0070	ppb	08:53:35
1	P 214.914†	336.6	-15.1	-6.1581	ug/L	-6.1581	ppb	08:53:35
1	Pb 220.353†	-5.8	13.2	1.4015	ug/L	1.4015	ppb	08:53:35
1	S 181.975 Axial†	93.7	-11.1	-12.086	ug/L	-12.086	ppb	08:53:35
1	Sb 206.836†	65.2	4.4	1.0916	ug/L	1.0916	ppb	08:53:35
1	Se 196.026†	-23.6	13.1	5.1075	ug/L	5.1075	ppb	08:53:35
1	Si 251.611†	513.1	-202.4	-5.2018	ug/L	-5.2018	ppb	08:53:35
1	Sn 189.927†	13.9	2.7	0.4225	ug/L	0.4225	ppb	08:53:35
1	Ti 334.940†	-1573.7	166.4	0.2603	ug/L	0.2603	ppb	08:53:15
1	Tl 190.801†	-49.8	27.2	6.1197	ug/L	6.1197	ppb	08:53:35
1	U 409.014†	-5455.7	652.3	19.413	ug/L	19.413	ppb	08:53:15
1	V 292.402†	-1788.6	113.8	0.9680	ug/L	0.9680	ppb	08:53:15
1	Zn 213.857†	1051.7	24.1	0.1907	ug/L	0.1907	ppb	08:53:35
1	SiO2†	521.7	-251.7	-13.778	ug/L	-13.778	ppb	08:54:31
2	Sc Radial	7954.6	7954.6	104	%			08:52:23
2	Y RADIAL	7266.2	7266.2	103.6	%			08:52:23
2	Al 396.153Radial†	-66.5	2.4	1.9960	ug/L	1.9960	ppb	08:52:23
2	Ca 317.933Radial†	37.3	11.2	15.179	ug/L	15.179	ppb	08:52:43
2	Fe 238.204 Radial†	35.2	-0.8	-3.1012	ug/L	-3.1012	ppb	08:52:43
2	K 766.490 Radial†	2312.3	-21.3	-4.6159	ug/L	-4.6159	ppb	08:52:23
2	Mg 279.077 IEC†	1.6	-1.8	-40.477	ug/L	-40.477	ppb	08:52:43
2	Na 589.592 Radial†	-300.6	253.0	15.203	ug/L	15.203	ppb	08:52:23
2	Sr 421.552†	-12.2	54.6	0.1556	ug/L	0.1556	ppb	08:52:23
2	Sc 361.383	788568.3	788568.3	99.924	%			08:53:40
2	Y 371.029	607174.8	607174.8	100.23	%			08:53:40
2	Ag 328.068†	719.6	-45.2	-0.2583	ug/L	-0.2583	ppb	08:53:40
2	As 188.979†	-28.8	11.1	3.2309	ug/L	3.2309	ppb	08:54:00
2	B 249.677†	-507.9	578.8	12.205	ug/L	12.205	ppb	08:53:40
2	Ba 233.527†	49.4	47.8	0.2963	ug/L	0.2963	ppb	08:54:00
2	Be 313.107†	-6284.1	152.7	0.0605	ug/L	0.0605	ppb	08:53:40
2	Cd 226.502†	-306.2	12.5	0.1412	ug/L	0.1412	ppb	08:54:00
2	Co 228.616†	-108.0	14.9	0.2249	ug/L	0.2249	ppb	08:54:00
2	Cr 267.716†	-42.4	31.8	0.4019	ug/L	0.4019	ppb	08:53:40
2	Cu 324.752†	8683.9	-15.7	-0.0500	ug/L	-0.0500	ppb	08:53:40
2	Mn 257.610†	693.3	-157.9	-0.1519	ug/L	-0.1519	ppb	08:53:40
2	Mo 202.031†	29.0	8.6	0.5429	ug/L	0.5429	ppb	08:54:00
2	Ni 231.604†	161.6	18.1	0.4331	ug/L	0.4331	ppb	08:54:00

2	P 214.914†	317.5	-33.9	-13.706	ug/L	-13.706 ppb	08:54:00
2	Pb 220.353†	-2.5	16.5	1.7470	ug/L	1.7470 ppb	08:54:00
2	S 181.975 Axial†	88.9	-15.8	-17.193	ug/L	-17.193 ppb	08:54:00
2	Sb 206.836†	60.0	-0.7	-0.1451	ug/L	-0.1451 ppb	08:54:00
2	Se 196.026†	-24.3	12.3	4.8210	ug/L	4.8210 ppb	08:54:00
2	Si 251.611†	498.1	-216.9	-5.5861	ug/L	-5.5861 ppb	08:54:00
2	Sn 189.927†	23.7	12.6	1.9808	ug/L	1.9808 ppb	08:54:00
2	Ti 334.940†	-1561.3	177.1	0.2789	ug/L	0.2789 ppb	08:53:40
2	Tl 190.801†	-72.0	5.0	1.1232	ug/L	1.1232 ppb	08:54:00
2	U 409.014†	-5544.9	557.2	16.581	ug/L	16.581 ppb	08:53:40
2	V 292.402†	-1914.5	-14.1	-0.0768	ug/L	-0.0768 ppb	08:53:40
2	Zn 213.857†	1052.7	26.2	0.2054	ug/L	0.2054 ppb	08:54:00
2	SiO2†	547.4	-225.4	-12.365	ug/L	-12.365 ppb	08:54:36
3	Sc Radial	7931.9	7931.9	104	%		08:52:48
3	Y RADIAL	7270.6	7270.6	103.7	%		08:52:48
3	Al 396.153Radial†	-73.9	-4.9	-4.2287	ug/L	-4.2287 ppb	08:52:48
3	Ca 317.933Radial†	28.2	2.5	3.3655	ug/L	3.3655 ppb	08:53:08
3	Fe 238.204 Radial†	34.5	-1.3	-5.2726	ug/L	-5.2726 ppb	08:53:08
3	K 766.490 Radial†	2251.3	-73.6	-15.972	ug/L	-15.972 ppb	08:52:48
3	Mg 279.077 IEC†	3.0	-0.4	-9.0138	ug/L	-9.0138 ppb	08:53:08
3	Na 589.592 Radial†	-288.5	263.9	15.857	ug/L	15.857 ppb	08:52:48
3	Sr 421.552†	-43.6	24.4	0.0695	ug/L	0.0695 ppb	08:52:48
3	Sc 361.383	790479.0	790479.0	100.17	%		08:54:06
3	Y 371.029	608432.1	608432.1	100.43	%		08:54:06
3	Ag 328.068†	741.6	-25.0	-0.1526	ug/L	-0.1526 ppb	08:54:06
3	As 188.979†	-44.5	-4.6	-1.3400	ug/L	-1.3400 ppb	08:54:26
3	B 249.677†	-546.8	541.3	11.413	ug/L	11.413 ppb	08:54:06
3	Ba 233.527†	76.5	74.7	0.4652	ug/L	0.4652 ppb	08:54:26
3	Be 313.107†	-6297.3	154.8	0.0614	ug/L	0.0614 ppb	08:54:06
3	Cd 226.502†	-286.0	33.4	0.3772	ug/L	0.3772 ppb	08:54:26
3	Co 228.616†	-109.8	13.3	0.2006	ug/L	0.2006 ppb	08:54:26
3	Cr 267.716†	-63.0	11.3	0.1388	ug/L	0.1388 ppb	08:54:06
3	Cu 324.752†	8743.0	22.3	0.0707	ug/L	0.0707 ppb	08:54:06
3	Mn 257.610†	732.5	-120.5	-0.1167	ug/L	-0.1167 ppb	08:54:06
3	Mo 202.031†	26.9	6.5	0.4084	ug/L	0.4084 ppb	08:54:26
3	Ni 231.604†	149.2	5.3	0.1266	ug/L	0.1266 ppb	08:54:26
3	P 214.914†	332.5	-19.7	-7.9867	ug/L	-7.9867 ppb	08:54:26
3	Pb 220.353†	-17.9	1.1	0.1153	ug/L	0.1153 ppb	08:54:26
3	S 181.975 Axial†	97.4	-7.5	-8.1910	ug/L	-8.1910 ppb	08:54:26
3	Sb 206.836†	55.9	-5.0	-1.1939	ug/L	-1.1939 ppb	08:54:26
3	Se 196.026†	-29.0	7.8	3.0368	ug/L	3.0368 ppb	08:54:26
3	Si 251.611†	506.4	-209.8	-5.3970	ug/L	-5.3970 ppb	08:54:26
3	Sn 189.927†	22.9	11.7	1.8477	ug/L	1.8477 ppb	08:54:26
3	Ti 334.940†	-1521.8	220.3	0.3451	ug/L	0.3451 ppb	08:54:06
3	Tl 190.801†	-75.7	1.4	0.3243	ug/L	0.3243 ppb	08:54:26
3	U 409.014†	-5341.5	773.7	23.023	ug/L	23.023 ppb	08:54:06
3	V 292.402†	-1822.4	82.5	0.7239	ug/L	0.7239 ppb	08:54:06
3	Zn 213.857†	1059.9	30.9	0.2431	ug/L	0.2431 ppb	08:54:26
3	SiO2†	529.8	-244.3	-13.384	ug/L	-13.384 ppb	08:54:41

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	789486.0	100.04	%	0.121				0.12%
Sc Radial	7971.0	104	%	0.6				0.62%
Y 371.029	608069.8	100.37	%	0.129				0.13%
Y RADIAL	7287.3	103.9	%	0.47				0.45%
Ag 328.068†	-11.8	-0.0800	ug/L	0.22360	-0.0800	ppb	0.22360	279.39%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	10.0	8.4978	ug/L	16.94063	8.4978	ppb	16.94063	199.35%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.5	2.1896	ug/L	3.14118	2.1896	ppb	3.14118	143.46%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	566.4	11.944	ug/L	0.4593	11.944	ppb	0.4593	3.85%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	54.9	0.3415	ug/L	0.10845	0.3415	ppb	0.10845	31.76%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	177.5	0.0702	ug/L	0.01607	0.0702	ppb	0.01607	22.88%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	6.4	8.6557	ug/L	6.00276	8.6557	ppb	6.00276	69.35%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                28.4      0.3216 ug/L       0.15998      0.3216 ppb        0.15998  49.74%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                21.6      0.3250 ug/L       0.19473      0.3250 ppb        0.19473  59.92%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 3.1      0.0334 ug/L       0.43094      0.0334 ppb        0.43094 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                29.7      0.0942 ug/L       0.15731      0.0942 ppb        0.15731 166.96%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -1.7     -6.6963 ug/L       4.48007     -6.6963 ppb        4.48007  66.90%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -24.8     -5.3779 ug/L      10.23420     -5.3779 ppb       10.23420 190.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.9    -20.558 ug/L       17.3231     -20.558 ppb        17.3231  84.26%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -142.9     -0.1382 ug/L       0.01892     -0.1382 ppb        0.01892  13.69%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 4.8      0.3014 ug/L       0.30926      0.3014 ppb        0.30926 102.61%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        268.0     16.107 ug/L        1.0510     16.107 ppb         1.0510   6.53%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 7.7      0.1842 ug/L       0.22566      0.1842 ppb        0.22566 122.51%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -22.9     -9.2836 ug/L       3.93758     -9.2836 ppb        3.93758  42.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                10.3      1.0879 ug/L       0.85985      1.0879 ppb        0.85985  79.04%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -11.4    -12.490 ug/L        4.5147    -12.490 ppb         4.5147  36.15%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -0.5     -0.0824 ug/L       1.14405     -0.0824 ppb        1.14405 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                11.1      4.3218 ug/L       1.12200      4.3218 ppb        1.12200  25.96%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -209.7     -5.3950 ug/L       0.19215     -5.3950 ppb        0.19215   3.56%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.0      1.4170 ug/L       0.86388      1.4170 ppb        0.86388  60.96%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                34.5      0.0983 ug/L       0.04965      0.0983 ppb        0.04965  50.51%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               187.9      0.2948 ug/L       0.04459      0.2948 ppb        0.04459  15.13%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                11.2      2.5224 ug/L       3.14088      2.5224 ppb        3.14088 124.52%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                661.1     19.672 ug/L        3.2289     19.672 ppb         3.2289  16.41%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 60.7      0.5384 ug/L       0.54656      0.5384 ppb        0.54656 101.52%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                27.1      0.2131 ug/L       0.02702      0.2131 ppb        0.02702  12.68%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    -240.4    -13.176 ug/L        0.7293    -13.176 ppb         0.7293   5.54%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/7/2009 08:59:02
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601
Plasma On Time: 7/7/2009 06:30:28
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070709.sif
Batch ID:
Results Data Set: 070709
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: 1201873174|881993|1
Analyst: HSC
Initial Sample Wt:
Dilution:
Autosampler Location: 38
Date Collected: 7/7/2009 08:59:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873174|881993|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	8160.8	8160.8	107	%			09:00:56
1	Y RADIAL	7469.5	7469.5	106.5	%			09:00:56
1	Al 396.153Radial†	-47.9	21.4	18.264	ug/L	18.264	ppb	09:00:56
1	Ca 317.933Radial†	38.1	11.0	15.000	ug/L	15.000	ppb	09:01:16
1	Fe 238.204 Radial†	36.8	-0.1	-0.4377	ug/L	-0.4377	ppb	09:01:16
1	K 766.490 Radial†	2294.2	-94.2	-20.441	ug/L	-20.441	ppb	09:00:56
1	Mg 279.077 IEC†	0.1	-3.2	-72.844	ug/L	-72.844	ppb	09:01:16
1	Na 589.592 Radial†	-157.3	394.4	23.697	ug/L	23.697	ppb	09:00:56
1	Sr 421.552†	17.4	82.6	0.2353	ug/L	0.2353	ppb	09:00:56
1	Sc 361.383	801981.7	801981.7	101.62	%			09:02:13
1	Y 371.029	617475.9	617475.9	101.93	%			09:02:13
1	Ag 328.068†	785.2	7.3	0.0169	ug/L	0.0169	ppb	09:02:13
1	As 188.979†	-48.6	-7.9	-2.3087	ug/L	-2.3087	ppb	09:02:33
1	B 249.677†	-555.0	541.0	11.406	ug/L	11.406	ppb	09:02:33
1	Ba 233.527†	64.5	61.8	0.3851	ug/L	0.3851	ppb	09:02:33
1	Be 313.107†	-6177.4	362.9	0.1437	ug/L	0.1437	ppb	09:02:13
1	Cd 226.502†	-309.5	14.3	0.1621	ug/L	0.1621	ppb	09:02:33
1	Co 228.616†	-78.4	45.8	0.6870	ug/L	0.6870	ppb	09:02:33
1	Cr 267.716†	-48.3	26.7	0.3348	ug/L	0.3348	ppb	09:02:33
1	Cu 324.752†	8761.4	-84.8	-0.2696	ug/L	-0.2696	ppb	09:02:13
1	Mn 257.610†	753.4	-110.4	-0.1051	ug/L	-0.1051	ppb	09:02:33
1	Mo 202.031†	23.7	2.9	0.1852	ug/L	0.1852	ppb	09:02:33
1	Ni 231.604†	155.2	9.0	0.2163	ug/L	0.2163	ppb	09:02:33
1	P 214.914†	349.9	-7.4	-2.9173	ug/L	-2.9173	ppb	09:02:33
1	Pb 220.353†	-7.4	11.6	1.2358	ug/L	1.2358	ppb	09:02:33
1	S 181.975 Axial†	86.1	-20.0	-21.772	ug/L	-21.772	ppb	09:02:33
1	Sb 206.836†	75.5	13.5	3.3220	ug/L	3.3220	ppb	09:02:33
1	Se 196.026†	-36.7	0.6	0.2420	ug/L	0.2420	ppb	09:02:33
1	Si 251.611†	859.4	130.4	3.3491	ug/L	3.3491	ppb	09:02:33
1	Sn 189.927†	20.3	8.8	1.3837	ug/L	1.3837	ppb	09:02:33
1	Ti 334.940†	-1316.3	444.4	0.7045	ug/L	0.7045	ppb	09:02:13
1	Tl 190.801†	-68.9	9.2	2.0674	ug/L	2.0674	ppb	09:02:33
1	U 409.014†	-5225.5	964.4	28.696	ug/L	28.696	ppb	09:02:13
1	V 292.402†	-1855.1	76.4	0.6803	ug/L	0.6803	ppb	09:02:13
1	Zn 213.857†	1182.5	136.4	1.0745	ug/L	1.0745	ppb	09:02:33
1	SiO2†	874.1	86.9	4.7536	ug/L	4.7536	ppb	09:03:29
2	Sc Radial	8196.3	8196.3	107	%			09:01:21
2	Y RADIAL	7503.2	7503.2	107.0	%			09:01:21
2	Al 396.153Radial†	-60.9	9.4	8.0498	ug/L	8.0498	ppb	09:01:21
2	Ca 317.933Radial†	38.4	11.1	15.070	ug/L	15.070	ppb	09:01:41
2	Fe 238.204 Radial†	36.4	-0.7	-2.7078	ug/L	-2.7078	ppb	09:01:41
2	K 766.490 Radial†	2260.6	-134.8	-29.257	ug/L	-29.257	ppb	09:01:21
2	Mg 279.077 IEC†	2.1	-1.3	-30.270	ug/L	-30.270	ppb	09:01:41
2	Na 589.592 Radial†	-172.5	380.9	22.886	ug/L	22.886	ppb	09:01:21
2	Sr 421.552†	-42.1	27.1	0.0771	ug/L	0.0771	ppb	09:01:21
2	Sc 361.383	813025.7	813025.7	103.02	%			09:02:38
2	Y 371.029	625352.5	625352.5	103.23	%			09:02:38

2	Ag 328.068†	746.9	-40.4	-0.2412 ug/L	-0.2412 ppb	09:02:38
2	As 188.979†	-37.9	3.1	0.9151 ug/L	0.9151 ppb	09:02:58
2	B 249.677†	-588.5	515.9	10.878 ug/L	10.878 ppb	09:02:58
2	Ba 233.527†	44.7	41.8	0.2622 ug/L	0.2622 ppb	09:02:58
2	Be 313.107†	-6312.5	314.3	0.1246 ug/L	0.1246 ppb	09:02:38
2	Cd 226.502†	-309.5	18.4	0.2082 ug/L	0.2082 ppb	09:02:58
2	Co 228.616†	-91.8	33.9	0.5084 ug/L	0.5084 ppb	09:02:58
2	Cr 267.716†	-44.5	31.1	0.3897 ug/L	0.3897 ppb	09:02:58
2	Cu 324.752†	8974.5	5.0	0.0158 ug/L	0.0158 ppb	09:02:38
2	Mn 257.610†	746.1	-127.6	-0.1228 ug/L	-0.1228 ppb	09:02:58
2	Mo 202.031†	26.1	5.0	0.3152 ug/L	0.3152 ppb	09:02:58
2	Ni 231.604†	167.8	19.2	0.4592 ug/L	0.4592 ppb	09:02:58
2	P 214.914†	344.7	-17.1	-6.9170 ug/L	-6.9170 ppb	09:02:58
2	Pb 220.353†	-10.2	9.0	0.9570 ug/L	0.9570 ppb	09:02:58
2	S 181.975 Axial†	93.4	-14.0	-15.290 ug/L	-15.290 ppb	09:02:58
2	Sb 206.836†	69.1	6.3	1.5603 ug/L	1.5603 ppb	09:02:58
2	Se 196.026†	-37.6	0.2	0.0824 ug/L	0.0824 ppb	09:02:58
2	Si 251.611†	868.1	127.4	3.2743 ug/L	3.2743 ppb	09:02:58
2	Sn 189.927†	15.8	4.1	0.6543 ug/L	0.6543 ppb	09:02:58
2	Ti 334.940†	-1379.2	400.9	0.6321 ug/L	0.6321 ppb	09:02:38
2	Tl 190.801†	-66.9	12.1	2.7252 ug/L	2.7252 ppb	09:02:58
2	U 409.014†	-5125.1	1131.6	33.674 ug/L	33.674 ppb	09:02:38
2	V 292.402†	-1792.3	162.1	1.3925 ug/L	1.3925 ppb	09:02:38
2	Zn 213.857†	1182.9	120.9	0.9493 ug/L	0.9493 ppb	09:02:58
2	SiO2†	869.8	71.1	3.8961 ug/L	3.8961 ppb	09:03:34
3	Sc Radial	8449.7	8449.7	111 %		09:01:46
3	Y RADIAL	7727.4	7727.4	110.2 %		09:01:46
3	Al 396.153Radial†	-37.8	32.1	27.390 ug/L	27.390 ppb	09:01:46
3	Ca 317.933Radial†	42.7	14.0	18.987 ug/L	18.987 ppb	09:02:06
3	Fe 238.204 Radial†	32.4	-5.3	-20.890 ug/L	-20.890 ppb	09:02:06
3	K 766.490 Radial†	2177.7	-272.8	-59.209 ug/L	-59.209 ppb	09:01:46
3	Mg 279.077 IEC†	-1.7	-4.8	-109.89 ug/L	-109.89 ppb	09:02:06
3	Na 589.592 Radial†	-228.2	335.3	20.148 ug/L	20.148 ppb	09:01:46
3	Sr 421.552†	-58.2	13.7	0.0390 ug/L	0.0390 ppb	09:01:46
3	Sc 361.383	811492.4	811492.4	102.83 %		09:03:04
3	Y 371.029	624657.9	624657.9	103.11 %		09:03:04
3	Ag 328.068†	610.2	-172.0	-0.9483 ug/L	-0.9483 ppb	09:03:04
3	As 188.979†	-36.4	4.5	1.3000 ug/L	1.3000 ppb	09:03:24
3	B 249.677†	-556.1	546.3	11.520 ug/L	11.520 ppb	09:03:24
3	Ba 233.527†	58.7	55.5	0.3470 ug/L	0.3470 ppb	09:03:24
3	Be 313.107†	-6261.2	352.7	0.1400 ug/L	0.1400 ppb	09:03:04
3	Cd 226.502†	-313.3	14.2	0.1626 ug/L	0.1626 ppb	09:03:24
3	Co 228.616†	-98.7	27.0	0.4042 ug/L	0.4042 ppb	09:03:24
3	Cr 267.716†	-71.6	4.6	0.0513 ug/L	0.0513 ppb	09:03:24
3	Cu 324.752†	8864.6	-85.4	-0.2729 ug/L	-0.2729 ppb	09:03:04
3	Mn 257.610†	757.6	-115.0	-0.1113 ug/L	-0.1113 ppb	09:03:24
3	Mo 202.031†	18.7	-2.2	-0.1408 ug/L	-0.1408 ppb	09:03:24
3	Ni 231.604†	154.7	6.8	0.1630 ug/L	0.1630 ppb	09:03:24
3	P 214.914†	325.0	-35.6	-14.354 ug/L	-14.354 ppb	09:03:24
3	Pb 220.353†	1.2	20.1	2.1319 ug/L	2.1319 ppb	09:03:24
3	S 181.975 Axial†	99.2	-8.3	-9.0091 ug/L	-9.0091 ppb	09:03:24
3	Sb 206.836†	67.8	5.1	1.2869 ug/L	1.2869 ppb	09:03:24
3	Se 196.026†	-31.0	6.6	2.5185 ug/L	2.5185 ppb	09:03:24
3	Si 251.611†	859.9	120.9	3.1226 ug/L	3.1226 ppb	09:03:24
3	Sn 189.927†	24.0	12.2	1.9235 ug/L	1.9235 ppb	09:03:24
3	Ti 334.940†	-1274.9	499.8	0.7937 ug/L	0.7937 ppb	09:03:04
3	Tl 190.801†	-68.8	10.1	2.2707 ug/L	2.2707 ppb	09:03:24
3	U 409.014†	-5257.4	993.6	29.569 ug/L	29.569 ppb	09:03:04
3	V 292.402†	-1782.4	168.5	1.4320 ug/L	1.4320 ppb	09:03:04
3	Zn 213.857†	1176.3	116.7	0.9229 ug/L	0.9229 ppb	09:03:24
3	SiO2†	865.4	68.4	3.7797 ug/L	3.7797 ppb	09:03:39

Mean Data: 1201873174|881993|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	808833.2	102.49	%	0.758				0.74%
Sc Radial	8268.9	108	%	2.1				1.91%
Y 371.029	622495.4	102.75	%	0.720				0.70%
Y RADIAL	7566.7	107.9	%	2.00				1.85%
Ag 328.068†	-68.3	-0.3909	ug/L	0.49972	-0.3909	ppb	0.49972	127.85%

Al 396.153Radial†	21.0	17.901	ug/L	9.6753	17.901	ppb	9.6753	54.05%
As 188.979†	-0.1	-0.0312	ug/L	1.98173	-0.0312	ppb	1.98173	>999.9%
B 249.677†	534.4	11.268	ug/L	0.3429	11.268	ppb	0.3429	3.04%
Ba 233.527†	53.0	0.3314	ug/L	0.06288	0.3314	ppb	0.06288	18.97%
Be 313.107†	343.3	0.1361	ug/L	0.01015	0.1361	ppb	0.01015	7.46%
Ca 317.933Radial†	12.0	16.352	ug/L	2.2819	16.352	ppb	2.2819	13.95%
Cd 226.502†	15.7	0.1776	ug/L	0.02651	0.1776	ppb	0.02651	14.93%
Co 228.616†	35.6	0.5332	ug/L	0.14300	0.5332	ppb	0.14300	26.82%
Cr 267.716†	20.8	0.2586	ug/L	0.18158	0.2586	ppb	0.18158	70.22%
Cu 324.752†	-55.1	-0.1756	ug/L	0.16572	-0.1756	ppb	0.16572	94.38%
Fe 238.204 Radial†	-2.0	-8.0119	ug/L	11.21060	-8.0119	ppb	11.21060	139.92%
K 766.490 Radial†	-167.3	-36.303	ug/L	20.3215	-36.303	ppb	20.3215	55.98%
Mg 279.077 IEC†	-3.1	-70.999	ug/L	39.8399	-70.999	ppb	39.8399	56.11%
Mn 257.610†	-117.6	-0.1131	ug/L	0.00898	-0.1131	ppb	0.00898	7.94%
Mo 202.031†	1.9	0.1199	ug/L	0.23491	0.1199	ppb	0.23491	195.93%
Na 589.592 Radial†	370.2	22.243	ug/L	1.8598	22.243	ppb	1.8598	8.36%
Ni 231.604†	11.7	0.2795	ug/L	0.15787	0.2795	ppb	0.15787	56.48%
P 214.914†	-20.0	-8.0628	ug/L	5.80386	-8.0628	ppb	5.80386	71.98%
Pb 220.353†	13.6	1.4416	ug/L	0.61390	1.4416	ppb	0.61390	42.59%
S 181.975 Axial†	-14.1	-15.357	ug/L	6.3819	-15.357	ppb	6.3819	41.56%
Sb 206.836†	8.3	2.0564	ug/L	1.10457	2.0564	ppb	1.10457	53.71%
Se 196.026†	2.5	0.9476	ug/L	1.36279	0.9476	ppb	1.36279	143.81%
Si 251.611†	126.2	3.2487	ug/L	0.11540	3.2487	ppb	0.11540	3.55%
Sn 189.927†	8.4	1.3205	ug/L	0.63697	1.3205	ppb	0.63697	48.24%
Sr 421.552†	41.1	0.1171	ug/L	0.10407	0.1171	ppb	0.10407	88.85%
Ti 334.940†	448.4	0.7101	ug/L	0.08096	0.7101	ppb	0.08096	11.40%
Tl 190.801†	10.5	2.3544	ug/L	0.33679	2.3544	ppb	0.33679	14.30%
U 409.014†	1029.9	30.647	ug/L	2.6578	30.647	ppb	2.6578	8.67%
V 292.402†	135.7	1.1683	ug/L	0.42304	1.1683	ppb	0.42304	36.21%
Zn 213.857†	124.7	0.9822	ug/L	0.08097	0.9822	ppb	0.08097	8.24%
SiO2†	75.5	4.1431	ug/L	0.53186	4.1431	ppb	0.53186	12.84%

Sequence No.: 2
Sample ID: 1201873175|881993|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 39
Date Collected: 7/7/2009 09:05:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873175|881993|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	8271.1	8271.1	108	%			09:07:43
1	Y RADIAL	7522.4	7522.4	107.3	%			09:07:43
1	Al 396.153Radial†	6188.8	5777.0	4914.8	ug/L	4914.8	ppb	09:07:43
1	Ca 317.933Radial†	4003.3	3669.5	4986.7	ug/L	4986.7	ppb	09:07:43
1	Fe 238.204 Radial†	1345.7	1207.2	4795.5	ug/L	4795.5	ppb	09:08:03
1	K 766.490 Radial†	25894.5	21654.7	4692.0	ug/L	4692.0	ppb	09:07:43
1	Mg 279.077 IEC†	230.7	209.7	4848.8	ug/L	4848.8	ppb	09:08:03
1	Na 589.592 Radial†	88812.4	82494.6	4957.1	ug/L	4957.1	ppb	09:07:43
1	Sr 421.552†	180041.8	166202.8	473.88	ug/L	473.88	ppb	09:07:43
1	Sc 361.383	823748.9	823748.9	104.38	%			09:09:02
1	Y 371.029	625521.5	625521.5	103.25	%			09:09:02
1	Ag 328.068†	91652.4	87039.3	469.39	ug/L	469.39	ppb	09:09:02
1	As 188.979†	1630.4	1601.8	471.26	ug/L	471.26	ppb	09:09:22
1	B 249.677†	21859.8	22029.3	463.04	ug/L	463.04	ppb	09:09:02
1	Ba 233.527†	80326.8	76953.0	478.97	ug/L	478.97	ppb	09:09:02
1	Be 313.107†	1232913.0	1187594.8	466.11	ug/L	466.11	ppb	09:09:02
1	Cd 226.502†	42406.5	40945.1	461.84	ug/L	461.84	ppb	09:09:22
1	Co 228.616†	31525.7	30325.2	455.82	ug/L	455.82	ppb	09:09:22
1	Cr 267.716†	38032.2	36509.8	469.09	ug/L	469.09	ppb	09:09:02
1	Cu 324.752†	164749.5	149126.9	474.55	ug/L	474.55	ppb	09:09:02
1	Mn 257.610†	510172.5	487902.9	471.19	ug/L	471.19	ppb	09:09:02
1	Mo 202.031†	7781.9	7434.9	468.93	ug/L	468.93	ppb	09:09:22
1	Ni 231.604†	20515.8	19510.9	467.05	ug/L	467.05	ppb	09:09:22
1	P 214.914†	1670.2	1248.4	434.97	ug/L	434.97	ppb	09:09:22
1	Pb 220.353†	4650.2	4474.0	474.49	ug/L	474.49	ppb	09:09:22
1	S 181.975 Axial†	4547.9	4252.2	4637.8	ug/L	4637.8	ppb	09:09:22
1	Sb 206.836†	2114.3	1964.7	488.38	ug/L	488.38	ppb	09:09:22
1	Se 196.026†	1185.6	1172.6	475.03	ug/L	475.03	ppb	09:09:22
1	Si 251.611†	189152.5	180496.2	4626.4	ug/L	4626.4	ppb	09:09:02
1	Sn 189.927†	3188.0	3043.0	479.86	ug/L	479.86	ppb	09:09:22
1	Ti 334.940†	303535.9	292532.6	471.45	ug/L	471.45	ppb	09:09:02
1	Tl 190.801†	2094.0	2083.1	471.16	ug/L	471.16	ppb	09:09:22
1	U 409.014†	11050.5	16692.9	495.24	ug/L	495.24	ppb	09:09:02
1	V 292.402†	58462.6	57910.1	478.58	ug/L	478.58	ppb	09:09:02
1	Zn 213.857†	62564.8	58911.0	459.00	ug/L	459.00	ppb	09:09:02
1	SiO2†	188844.4	180143.1	9834.7	ug/L	9834.7	ppb	09:10:22
2	Sc Radial	8303.1	8303.1	109	%			09:08:08
2	Y RADIAL	7536.2	7536.2	107.5	%			09:08:08
2	Al 396.153Radial†	6252.2	5813.3	4946.0	ug/L	4946.0	ppb	09:08:08
2	Ca 317.933Radial†	4017.9	3668.6	4985.5	ug/L	4985.5	ppb	09:08:08
2	Fe 238.204 Radial†	1335.7	1193.3	4740.1	ug/L	4740.1	ppb	09:08:28
2	K 766.490 Radial†	25982.3	21643.4	4689.6	ug/L	4689.6	ppb	09:08:08
2	Mg 279.077 IEC†	231.7	209.7	4851.0	ug/L	4851.0	ppb	09:08:28
2	Na 589.592 Radial†	88794.5	82162.6	4937.2	ug/L	4937.2	ppb	09:08:08
2	Sr 421.552†	180928.4	166378.4	474.38	ug/L	474.38	ppb	09:08:08
2	Sc 361.383	826578.3	826578.3	104.74	%			09:09:29
2	Y 371.029	627603.9	627603.9	103.60	%			09:09:29
2	Ag 328.068†	91729.3	86812.2	468.14	ug/L	468.14	ppb	09:09:29
2	As 188.979†	1607.5	1574.6	463.30	ug/L	463.30	ppb	09:09:49
2	B 249.677†	22029.2	22119.3	464.95	ug/L	464.95	ppb	09:09:29
2	Ba 233.527†	80602.8	76953.0	478.97	ug/L	478.97	ppb	09:09:29
2	Be 313.107†	1238835.0	1189205.8	466.74	ug/L	466.74	ppb	09:09:29
2	Cd 226.502†	42130.7	40542.6	457.30	ug/L	457.30	ppb	09:09:49
2	Co 228.616†	31279.4	29986.6	450.72	ug/L	450.72	ppb	09:09:49
2	Cr 267.716†	38056.6	36408.3	467.78	ug/L	467.78	ppb	09:09:29
2	Cu 324.752†	165188.9	149006.2	474.16	ug/L	474.16	ppb	09:09:29
2	Mn 257.610†	510831.1	486858.7	470.17	ug/L	470.17	ppb	09:09:29
2	Mo 202.031†	7713.2	7343.7	463.18	ug/L	463.18	ppb	09:09:49
2	Ni 231.604†	20363.0	19297.7	461.94	ug/L	461.94	ppb	09:09:49

2	P 214.914†	1649.3	1223.0	424.71 ug/L	424.71 ppb	09:09:49
2	Pb 220.353†	4592.2	4403.3	467.02 ug/L	467.02 ppb	09:09:49
2	S 181.975 Axial†	4509.6	4200.8	4581.7 ug/L	4581.7 ppb	09:09:49
2	Sb 206.836†	2079.1	1924.2	478.31 ug/L	478.31 ppb	09:09:49
2	Se 196.026†	1195.7	1178.3	477.10 ug/L	477.10 ppb	09:09:49
2	Si 251.611†	189256.6	179975.4	4613.1 ug/L	4613.1 ppb	09:09:29
2	Sn 189.927†	3186.1	3030.7	477.92 ug/L	477.92 ppb	09:09:49
2	Ti 334.940†	304425.0	292386.1	471.22 ug/L	471.22 ppb	09:09:29
2	Tl 190.801†	2101.9	2083.7	471.33 ug/L	471.33 ppb	09:09:49
2	U 409.014†	11290.0	16885.3	500.98 ug/L	500.98 ppb	09:09:29
2	V 292.402†	58536.0	57788.5	477.54 ug/L	477.54 ppb	09:09:29
2	Zn 213.857†	62575.6	58716.1	457.51 ug/L	457.51 ppb	09:09:29
2	SiO2†	190891.8	181478.7	9908.1 ug/L	9908.1 ppb	09:10:27
3	Sc Radial	7973.5	7973.5	104 %		09:08:33
3	Y RADIAL	7312.8	7312.8	104.3 %		09:08:33
3	Al 396.153Radial†	6007.6	5816.7	4948.8 ug/L	4948.8 ppb	09:08:33
3	Ca 317.933Radial†	3880.8	3690.1	5014.7 ug/L	5014.7 ppb	09:08:33
3	Fe 238.204 Radial†	1349.6	1257.3	4993.8 ug/L	4993.8 ppb	09:08:53
3	K 766.490 Radial†	25260.8	21940.0	4754.0 ug/L	4754.0 ppb	09:08:33
3	Mg 279.077 IEC†	234.1	220.8	5107.0 ug/L	5107.0 ppb	09:08:53
3	Na 589.592 Radial†	85753.0	82625.0	4964.9 ug/L	4964.9 ppb	09:08:33
3	Sr 421.552†	174360.3	166965.6	476.05 ug/L	476.05 ppb	09:08:33
3	Sc 361.383	825070.4	825070.4	104.55 %		09:09:56
3	Y 371.029	626809.0	626809.0	103.47 %		09:09:56
3	Ag 328.068†	91769.9	87011.1	469.29 ug/L	469.29 ppb	09:09:56
3	As 188.979†	1606.6	1576.6	463.92 ug/L	463.92 ppb	09:10:16
3	B 249.677†	21972.9	22103.9	464.60 ug/L	464.60 ppb	09:09:56
3	Ba 233.527†	80326.7	76829.6	478.21 ug/L	478.21 ppb	09:09:56
3	Be 313.107†	1234130.2	1186867.3	465.82 ug/L	465.82 ppb	09:09:56
3	Cd 226.502†	42344.8	40821.0	460.42 ug/L	460.42 ppb	09:10:16
3	Co 228.616†	31410.8	30166.9	453.44 ug/L	453.44 ppb	09:10:16
3	Cr 267.716†	37835.1	36262.9	465.92 ug/L	465.92 ppb	09:09:56
3	Cu 324.752†	165227.2	149331.1	475.21 ug/L	475.21 ppb	09:09:56
3	Mn 257.610†	508892.9	485896.1	469.27 ug/L	469.27 ppb	09:09:56
3	Mo 202.031†	7749.6	7392.0	466.24 ug/L	466.24 ppb	09:10:16
3	Ni 231.604†	20435.5	19402.6	464.45 ug/L	464.45 ppb	09:10:16
3	P 214.914†	1659.5	1235.6	429.48 ug/L	429.48 ppb	09:10:16
3	Pb 220.353†	4609.1	4427.5	469.56 ug/L	469.56 ppb	09:10:16
3	S 181.975 Axial†	4545.0	4242.5	4627.1 ug/L	4627.1 ppb	09:10:16
3	Sb 206.836†	2077.6	1926.4	479.00 ug/L	479.00 ppb	09:10:16
3	Se 196.026†	1190.9	1175.8	476.92 ug/L	476.92 ppb	09:10:16
3	Si 251.611†	188865.6	179931.6	4611.9 ug/L	4611.9 ppb	09:09:56
3	Sn 189.927†	3187.7	3037.8	479.04 ug/L	479.04 ppb	09:10:16
3	Ti 334.940†	304060.8	292568.9	471.51 ug/L	471.51 ppb	09:09:56
3	Tl 190.801†	2104.4	2089.9	472.69 ug/L	472.69 ppb	09:10:16
3	U 409.014†	11276.5	16892.1	501.15 ug/L	501.15 ppb	09:09:56
3	V 292.402†	58507.5	57863.3	478.16 ug/L	478.16 ppb	09:09:56
3	Zn 213.857†	62489.1	58742.6	457.66 ug/L	457.66 ppb	09:09:56
3	SiO2†	189328.0	180316.0	9844.3 ug/L	9844.3 ppb	09:10:32

Mean Data: 1201873175|881993|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	825132.6	104.56	%	0.179				0.17%
Sc Radial	8182.6	107	%	2.4				2.22%
Y 371.029	626644.8	103.44	%	0.173				0.17%
Y RADIAL	7457.1	106.4	%	1.79				1.68%
Ag 328.068†	86954.2	468.94	ug/L	0.691	468.94	ppb	0.691	0.15%
Al 396.153Radial†	5802.3	4936.5	ug/L	18.88	4936.5	ppb	18.88	0.38%
As 188.979†	1584.4	466.16	ug/L	4.426	466.16	ppb	4.426	0.95%
B 249.677†	22084.1	464.20	ug/L	1.020	464.20	ppb	1.020	0.22%
Ba 233.527†	76911.9	478.71	ug/L	0.438	478.71	ppb	0.438	0.09%
Be 313.107†	1187889.3	466.22	ug/L	0.468	466.22	ppb	0.468	0.10%
Ca 317.933Radial†	3676.1	4995.6	ug/L	16.54	4995.6	ppb	16.54	0.33%
Cd 226.502†	40769.6	459.85	ug/L	2.322	459.85	ppb	2.322	0.50%
Co 228.616†	30159.6	453.33	ug/L	2.552	453.33	ppb	2.552	0.56%
Cr 267.716†	36393.7	467.59	ug/L	1.592	467.59	ppb	1.592	0.34%
Cu 324.752†	149154.7	474.64	ug/L	0.530	474.64	ppb	0.530	0.11%
Fe 238.204 Radial†	1219.3	4843.1	ug/L	133.35	4843.1	ppb	133.35	2.75%
K 766.490 Radial†	21746.1	4711.8	ug/L	36.49	4711.8	ppb	36.49	0.77%

Mg 279.077 IEC†	213.4	4935.6	ug/L	148.48	4935.6	ppb	148.48	3.01%
Mn 257.610†	486885.9	470.21	ug/L	0.960	470.21	ppb	0.960	0.20%
Mo 202.031†	7390.2	466.12	ug/L	2.876	466.12	ppb	2.876	0.62%
Na 589.592 Radial†	82427.4	4953.1	ug/L	14.32	4953.1	ppb	14.32	0.29%
Ni 231.604†	19403.7	464.48	ug/L	2.551	464.48	ppb	2.551	0.55%
P 214.914†	1235.7	429.72	ug/L	5.132	429.72	ppb	5.132	1.19%
Pb 220.353†	4434.9	470.36	ug/L	3.800	470.36	ppb	3.800	0.81%
S 181.975 Axial†	4231.8	4615.5	ug/L	29.80	4615.5	ppb	29.80	0.65%
Sb 206.836†	1938.4	481.90	ug/L	5.623	481.90	ppb	5.623	1.17%
Se 196.026†	1175.6	476.35	ug/L	1.145	476.35	ppb	1.145	0.24%
Si 251.611†	180134.4	4617.1	ug/L	8.03	4617.1	ppb	8.03	0.17%
Sn 189.927†	3037.2	478.94	ug/L	0.974	478.94	ppb	0.974	0.20%
Sr 421.552†	166515.6	474.77	ug/L	1.139	474.77	ppb	1.139	0.24%
Ti 334.940†	292495.9	471.39	ug/L	0.157	471.39	ppb	0.157	0.03%
Tl 190.801†	2085.6	471.73	ug/L	0.838	471.73	ppb	0.838	0.18%
U 409.014†	16823.4	499.12	ug/L	3.363	499.12	ppb	3.363	0.67%
V 292.402†	57854.0	478.09	ug/L	0.526	478.09	ppb	0.526	0.11%
Zn 213.857†	58789.9	458.06	ug/L	0.821	458.06	ppb	0.821	0.18%
SiO2†	180645.9	9862.4	ug/L	39.87	9862.4	ppb	39.87	0.40%

Sequence No.: 3
Sample ID: 232662001|881993|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 40
Date Collected: 7/7/2009 09:12:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232662001|881993|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	8240.6	8240.6	108	%			09:14:36
1	Y RADIAL	7541.4	7541.4	107.6	%			09:14:36
1	Al 396.153Radial†	-34.0	34.7	29.658	ug/L	29.658	ppb	09:14:36
1	Ca 317.933Radial†	67.2	37.7	51.165	ug/L	51.165	ppb	09:14:56
1	Fe 238.204 Radial†	35.8	-1.5	-5.7335	ug/L	-5.7335	ppb	09:14:56
1	K 766.490 Radial†	4161.0	1614.0	350.13	ug/L	350.13	ppb	09:14:36
1	Mg 279.077 IEC†	7.2	3.4	77.892	ug/L	77.892	ppb	09:14:56
1	Na 589.592 Radial†	3686.1	3955.4	237.68	ug/L	237.68	ppb	09:14:36
1	Sr 421.552†	-8.6	58.4	0.1660	ug/L	0.1660	ppb	09:14:36
1	Sc 361.383	818623.2	818623.2	103.73	%			09:15:53
1	Y 371.029	629408.1	629408.1	103.90	%			09:15:53
1	Ag 328.068†	766.3	-26.7	-0.1640	ug/L	-0.1640	ppb	09:15:53
1	As 188.979†	-40.7	0.6	0.1758	ug/L	0.1758	ppb	09:16:13
1	B 249.677†	-142.7	949.6	20.023	ug/L	20.023	ppb	09:16:13
1	Ba 233.527†	198.8	190.0	1.1843	ug/L	1.1843	ppb	09:16:13
1	Be 313.107†	-6366.6	304.1	0.1210	ug/L	0.1210	ppb	09:15:53
1	Cd 226.502†	-334.8	-3.9	-0.0426	ug/L	-0.0426	ppb	09:16:13
1	Co 228.616†	-86.2	39.9	0.5978	ug/L	0.5978	ppb	09:16:13
1	Cr 267.716†	-49.6	26.4	0.3318	ug/L	0.3318	ppb	09:16:13
1	Cu 324.752†	9056.2	24.2	0.0767	ug/L	0.0767	ppb	09:15:53
1	Mn 257.610†	1401.1	498.9	0.4791	ug/L	0.4791	ppb	09:16:13
1	Mo 202.031†	18.1	-2.9	-0.1826	ug/L	-0.1826	ppb	09:16:13
1	Ni 231.604†	182.2	32.0	0.7649	ug/L	0.7649	ppb	09:16:13
1	P 214.914†	348.5	-15.7	-6.3594	ug/L	-6.3594	ppb	09:16:13
1	Pb 220.353†	-16.9	2.7	0.2866	ug/L	0.2866	ppb	09:16:13
1	S 181.975 Axial†	137.5	27.9	30.413	ug/L	30.413	ppb	09:16:13
1	Sb 206.836†	57.9	-4.9	-1.2114	ug/L	-1.2114	ppb	09:16:13
1	Se 196.026†	-32.8	5.1	1.9629	ug/L	1.9629	ppb	09:16:13
1	Si 251.611†	44954.2	42621.3	1095.0	ug/L	1095.0	ppb	09:15:53
1	Sn 189.927†	14.6	2.9	0.4680	ug/L	0.4680	ppb	09:16:13
1	Ti 334.940†	-1270.7	514.7	0.8188	ug/L	0.8188	ppb	09:15:53
1	Tl 190.801†	-75.8	3.9	0.8764	ug/L	0.8764	ppb	09:16:13
1	U 409.014†	-5252.0	1043.4	31.048	ug/L	31.048	ppb	09:15:53
1	V 292.402†	-1716.8	246.8	2.0750	ug/L	2.0750	ppb	09:15:53
1	Zn 213.857†	1527.9	445.7	3.4980	ug/L	3.4980	ppb	09:16:13
1	SiO2†	45029.0	42635.5	2333.2	ug/L	2333.2	ppb	09:17:09
2	Sc Radial	8344.0	8344.0	109	%			09:15:01
2	Y RADIAL	7647.0	7647.0	109.1	%			09:15:01
2	Al 396.153Radial†	-62.7	8.8	7.5100	ug/L	7.5100	ppb	09:15:01
2	Ca 317.933Radial†	68.2	37.8	51.338	ug/L	51.338	ppb	09:15:21
2	Fe 238.204 Radial†	37.6	-0.1	-0.5748	ug/L	-0.5748	ppb	09:15:21
2	K 766.490 Radial†	4163.5	1568.6	340.27	ug/L	340.27	ppb	09:15:01
2	Mg 279.077 IEC†	3.8	0.2	5.6010	ug/L	5.6010	ppb	09:15:21
2	Na 589.592 Radial†	3784.0	4002.7	240.52	ug/L	240.52	ppb	09:15:01
2	Sr 421.552†	51.3	113.3	0.3226	ug/L	0.3226	ppb	09:15:01
2	Sc 361.383	814837.8	814837.8	103.25	%			09:16:18
2	Y 371.029	627315.3	627315.3	103.55	%			09:16:18
2	Ag 328.068†	832.7	41.1	0.1994	ug/L	0.1994	ppb	09:16:18
2	As 188.979†	-40.5	0.7	0.1851	ug/L	0.1851	ppb	09:16:38
2	B 249.677†	-135.9	955.5	20.148	ug/L	20.148	ppb	09:16:38
2	Ba 233.527†	222.0	213.4	1.3275	ug/L	1.3275	ppb	09:16:38
2	Be 313.107†	-6146.1	489.1	0.1935	ug/L	0.1935	ppb	09:16:18
2	Cd 226.502†	-298.2	30.0	0.3396	ug/L	0.3396	ppb	09:16:38
2	Co 228.616†	-108.6	17.8	0.2660	ug/L	0.2660	ppb	09:16:38
2	Cr 267.716†	-56.1	19.9	0.2474	ug/L	0.2474	ppb	09:16:38
2	Cu 324.752†	9058.8	67.3	0.2140	ug/L	0.2140	ppb	09:16:18
2	Mn 257.610†	1395.4	499.7	0.4819	ug/L	0.4819	ppb	09:16:38
2	Mo 202.031†	23.5	2.4	0.1500	ug/L	0.1500	ppb	09:16:38
2	Ni 231.604†	185.1	35.6	0.8522	ug/L	0.8522	ppb	09:16:38

2	P 214.914†	351.7	-11.1	-4.5366	ug/L	-4.5366	ppb	09:16:38
2	Pb 220.353†	-19.4	0.1	0.0166	ug/L	0.0166	ppb	09:16:38
2	S 181.975 Axial†	135.3	26.4	28.768	ug/L	28.768	ppb	09:16:38
2	Sb 206.836†	63.7	0.9	0.2128	ug/L	0.2128	ppb	09:16:38
2	Se 196.026†	-28.2	9.4	3.6908	ug/L	3.6908	ppb	09:16:38
2	Si 251.611†	44713.9	42589.9	1094.2	ug/L	1094.2	ppb	09:16:18
2	Sn 189.927†	5.8	-5.5	-0.8646	ug/L	-0.8646	ppb	09:16:38
2	Ti 334.940†	-1243.2	535.6	0.8538	ug/L	0.8538	ppb	09:16:18
2	Tl 190.801†	-55.2	23.6	5.3177	ug/L	5.3177	ppb	09:16:38
2	U 409.014†	-5317.7	956.2	28.453	ug/L	28.453	ppb	09:16:18
2	V 292.402†	-1825.9	133.5	1.1465	ug/L	1.1465	ppb	09:16:18
2	Zn 213.857†	1545.9	470.0	3.6906	ug/L	3.6906	ppb	09:16:38
2	SiO2†	45300.9	43100.5	2358.6	ug/L	2358.6	ppb	09:17:14
3	Sc Radial	8206.8	8206.8	108	%			09:15:26
3	Y RADIAL	7523.8	7523.8	107.3	%			09:15:26
3	Al 396.153Radial†	-24.9	43.0	36.716	ug/L	36.716	ppb	09:15:26
3	Ca 317.933Radial†	70.5	41.0	55.656	ug/L	55.656	ppb	09:15:46
3	Fe 238.204 Radial†	38.2	1.0	3.8163	ug/L	3.8163	ppb	09:15:46
3	K 766.490 Radial†	4140.1	1610.5	349.36	ug/L	349.36	ppb	09:15:26
3	Mg 279.077 IEC†	3.9	0.4	8.7293	ug/L	8.7293	ppb	09:15:46
3	Na 589.592 Radial†	3661.3	3946.5	237.14	ug/L	237.14	ppb	09:15:26
3	Sr 421.552†	9.8	75.5	0.2147	ug/L	0.2147	ppb	09:15:26
3	Sc 361.383	813056.5	813056.5	103.03	%			09:16:44
3	Y 371.029	625703.3	625703.3	103.28	%			09:16:44
3	Ag 328.068†	792.6	4.0	-0.0033	ug/L	-0.0033	ppb	09:16:44
3	As 188.979†	-38.7	2.3	0.6686	ug/L	0.6686	ppb	09:17:04
3	B 249.677†	-107.9	982.4	20.715	ug/L	20.715	ppb	09:17:04
3	Ba 233.527†	223.9	215.7	1.3417	ug/L	1.3417	ppb	09:17:04
3	Be 313.107†	-6271.5	354.3	0.1410	ug/L	0.1410	ppb	09:16:44
3	Cd 226.502†	-303.5	24.3	0.2741	ug/L	0.2741	ppb	09:17:04
3	Co 228.616†	-105.6	20.5	0.3095	ug/L	0.3095	ppb	09:17:04
3	Cr 267.716†	-46.6	29.0	0.3629	ug/L	0.3629	ppb	09:17:04
3	Cu 324.752†	9049.6	77.5	0.2468	ug/L	0.2468	ppb	09:16:44
3	Mn 257.610†	1390.1	497.5	0.4803	ug/L	0.4803	ppb	09:17:04
3	Mo 202.031†	40.2	18.7	1.1779	ug/L	1.1779	ppb	09:17:04
3	Ni 231.604†	187.0	37.9	0.9073	ug/L	0.9073	ppb	09:17:04
3	P 214.914†	349.5	-12.4	-5.0494	ug/L	-5.0494	ppb	09:17:04
3	Pb 220.353†	-35.0	-15.1	-1.5813	ug/L	-1.5813	ppb	09:17:04
3	S 181.975 Axial†	134.8	26.2	28.530	ug/L	28.530	ppb	09:17:04
3	Sb 206.836†	49.4	-12.9	-3.1146	ug/L	-3.1146	ppb	09:17:04
3	Se 196.026†	-25.6	11.8	4.6445	ug/L	4.6445	ppb	09:17:04
3	Si 251.611†	45362.0	43313.9	1112.7	ug/L	1112.7	ppb	09:16:44
3	Sn 189.927†	18.8	7.0	1.1151	ug/L	1.1151	ppb	09:17:04
3	Ti 334.940†	-1162.0	611.8	0.9743	ug/L	0.9743	ppb	09:16:44
3	Tl 190.801†	-63.8	15.1	3.4017	ug/L	3.4017	ppb	09:17:04
3	U 409.014†	-5104.3	1152.0	34.279	ug/L	34.279	ppb	09:16:44
3	V 292.402†	-1819.4	135.9	1.1897	ug/L	1.1897	ppb	09:16:44
3	Zn 213.857†	1538.6	466.2	3.6595	ug/L	3.6595	ppb	09:17:04
3	SiO2†	44693.9	42607.4	2331.6	ug/L	2331.6	ppb	09:17:19

Mean Data: 232662001|881993|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	815505.8	103.34	%	0.360				0.35%
Sc Radial	8263.8	108	%	0.9				0.86%
Y 371.029	627475.6	103.58	%	0.307				0.30%
Y RADIAL	7570.7	108.0	%	0.95				0.88%
Ag 328.068†	6.1	0.0107	ug/L	0.18209	0.0107	ppb	0.18209	>999.9%
Al 396.153Radial†	28.8	24.628	ug/L	15.2388	24.628	ppb	15.2388	61.88%
As 188.979†	1.2	0.3432	ug/L	0.28188	0.3432	ppb	0.28188	82.14%
B 249.677†	962.5	20.295	ug/L	0.3687	20.295	ppb	0.3687	1.82%
Ba 233.527†	206.4	1.2845	ug/L	0.08706	1.2845	ppb	0.08706	6.78%
Be 313.107†	382.5	0.1518	ug/L	0.03745	0.1518	ppb	0.03745	24.66%
Ca 317.933Radial†	38.8	52.720	ug/L	2.5445	52.720	ppb	2.5445	4.83%
Cd 226.502†	16.8	0.1904	ug/L	0.20438	0.1904	ppb	0.20438	107.36%
Co 228.616†	26.1	0.3911	ug/L	0.18034	0.3911	ppb	0.18034	46.11%
Cr 267.716†	25.1	0.3140	ug/L	0.05974	0.3140	ppb	0.05974	19.02%
Cu 324.752†	56.4	0.1792	ug/L	0.09026	0.1792	ppb	0.09026	50.37%
Fe 238.204 Radial†	-0.2	-0.8307	ug/L	4.78007	-0.8307	ppb	4.78007	575.45%
K 766.490 Radial†	1597.7	346.59	ug/L	5.481	346.59	ppb	5.481	1.58%

Mg 279.077 IEC†	1.3	30.741	ug/L	40.8643	30.741	ppb	40.8643 132.93%
Mn 257.610†	498.7	0.4805	ug/L	0.00140	0.4805	ppb	0.00140 0.29%
Mo 202.031†	6.1	0.3817	ug/L	0.70925	0.3817	ppb	0.70925 185.79%
Na 589.592 Radial†	3968.2	238.45	ug/L	1.816	238.45	ppb	1.816 0.76%
Ni 231.604†	35.1	0.8415	ug/L	0.07178	0.8415	ppb	0.07178 8.53%
P 214.914†	-13.1	-5.3151	ug/L	0.94002	-5.3151	ppb	0.94002 17.69%
Pb 220.353†	-4.1	-0.4260	ug/L	1.00955	-0.4260	ppb	1.00955 236.96%
S 181.975 Axial†	26.8	29.237	ug/L	1.0251	29.237	ppb	1.0251 3.51%
Sb 206.836†	-5.6	-1.3711	ug/L	1.66940	-1.3711	ppb	1.66940 121.76%
Se 196.026†	8.8	3.4327	ug/L	1.35928	3.4327	ppb	1.35928 39.60%
Si 251.611†	42841.7	1100.6	ug/L	10.50	1100.6	ppb	10.50 0.95%
Sn 189.927†	1.5	0.2395	ug/L	1.00943	0.2395	ppb	1.00943 421.43%
Sr 421.552†	82.4	0.2344	ug/L	0.08013	0.2344	ppb	0.08013 34.18%
Ti 334.940†	554.0	0.8823	ug/L	0.08156	0.8823	ppb	0.08156 9.24%
Tl 190.801†	14.2	3.1986	ug/L	2.22762	3.1986	ppb	2.22762 69.64%
U 409.014†	1050.5	31.260	ug/L	2.9186	31.260	ppb	2.9186 9.34%
V 292.402†	172.1	1.4704	ug/L	0.52408	1.4704	ppb	0.52408 35.64%
Zn 213.857†	460.6	3.6160	ug/L	0.10341	3.6160	ppb	0.10341 2.86%
SiO2†	42781.1	2341.1	ug/L	15.17	2341.1	ppb	15.17 0.65%

Sequence No.: 4
Sample ID: 1201873176|881993|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 41
Date Collected: 7/7/2009 09:19:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873176|881993|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	8265.9	8265.9	108	%			09:21:22
1	Y RADIAL	7557.2	7557.2	107.8	%			09:21:22
1	Al 396.153Radial†	-47.6	22.2	18.917	ug/L	18.917	ppb	09:21:22
1	Ca 317.933Radial†	69.1	39.2	53.252	ug/L	53.252	ppb	09:21:42
1	Fe 238.204 Radial†	38.2	0.7	2.6155	ug/L	2.6155	ppb	09:21:42
1	K 766.490 Radial†	3959.0	1415.7	307.11	ug/L	307.11	ppb	09:21:22
1	Mg 279.077 IEC†	5.5	1.8	42.484	ug/L	42.484	ppb	09:21:42
1	Na 589.592 Radial†	2855.5	3178.0	190.97	ug/L	190.97	ppb	09:21:22
1	Sr 421.552†	38.0	101.4	0.2886	ug/L	0.2886	ppb	09:21:22
1	Sc 361.383	826131.9	826131.9	104.68	%			09:22:39
1	Y 371.029	634875.4	634875.4	104.80	%			09:22:39
1	Ag 328.068†	682.3	-113.6	-0.6360	ug/L	-0.6360	ppb	09:22:39
1	As 188.979†	-43.2	-1.3	-0.3943	ug/L	-0.3943	ppb	09:22:59
1	B 249.677†	-223.0	874.1	18.431	ug/L	18.431	ppb	09:22:39
1	Ba 233.527†	87.9	82.3	0.5142	ug/L	0.5142	ppb	09:22:59
1	Be 313.107†	-6302.4	421.2	0.1671	ug/L	0.1671	ppb	09:22:39
1	Cd 226.502†	-280.4	51.0	0.5751	ug/L	0.5751	ppb	09:22:59
1	Co 228.616†	-83.8	42.9	0.6449	ug/L	0.6449	ppb	09:22:59
1	Cr 267.716†	-25.2	50.1	0.6328	ug/L	0.6328	ppb	09:22:39
1	Cu 324.752†	9059.0	-52.5	-0.1667	ug/L	-0.1667	ppb	09:22:39
1	Mn 257.610†	1461.3	544.1	0.5244	ug/L	0.5244	ppb	09:22:39
1	Mo 202.031†	37.5	15.4	0.9727	ug/L	0.9727	ppb	09:22:59
1	Ni 231.604†	163.3	12.4	0.2955	ug/L	0.2955	ppb	09:22:59
1	P 214.914†	355.5	-12.0	-4.8588	ug/L	-4.8588	ppb	09:22:59
1	Pb 220.353†	-29.5	-9.2	-0.9647	ug/L	-0.9647	ppb	09:22:59
1	S 181.975 Axial†	129.8	19.3	21.001	ug/L	21.001	ppb	09:22:59
1	Sb 206.836†	73.4	9.3	2.2772	ug/L	2.2772	ppb	09:22:59
1	Se 196.026†	-22.6	15.1	5.9164	ug/L	5.9164	ppb	09:22:59
1	Si 251.611†	45834.5	43068.3	1106.5	ug/L	1106.5	ppb	09:22:39
1	Sn 189.927†	10.3	-1.3	-0.2029	ug/L	-0.2029	ppb	09:22:59
1	Ti 334.940†	-1209.0	584.8	0.9288	ug/L	0.9288	ppb	09:22:39
1	Tl 190.801†	-78.7	1.8	0.4049	ug/L	0.4049	ppb	09:22:59
1	U 409.014†	-5053.5	1279.0	38.057	ug/L	38.057	ppb	09:22:39
1	V 292.402†	-1821.8	161.6	1.4047	ug/L	1.4047	ppb	09:22:39
1	Zn 213.857†	1242.1	159.3	1.2496	ug/L	1.2496	ppb	09:22:59
1	SiO2†	44894.8	42112.8	2304.6	ug/L	2304.6	ppb	09:23:56
2	Sc Radial	8308.2	8308.2	109	%			09:21:47
2	Y RADIAL	7585.0	7585.0	108.2	%			09:21:47
2	Al 396.153Radial†	-40.1	29.4	25.075	ug/L	25.075	ppb	09:21:47
2	Ca 317.933Radial†	65.8	35.9	48.725	ug/L	48.725	ppb	09:22:07
2	Fe 238.204 Radial†	36.7	-0.9	-3.3995	ug/L	-3.3995	ppb	09:22:07
2	K 766.490 Radial†	3907.5	1349.8	292.81	ug/L	292.81	ppb	09:21:47
2	Mg 279.077 IEC†	4.5	0.9	20.893	ug/L	20.893	ppb	09:22:07
2	Na 589.592 Radial†	3004.9	3301.9	198.41	ug/L	198.41	ppb	09:21:47
2	Sr 421.552†	52.1	114.2	0.3252	ug/L	0.3252	ppb	09:21:47
2	Sc 361.383	815225.4	815225.4	103.30	%			09:23:05
2	Y 371.029	627248.3	627248.3	103.54	%			09:23:05
2	Ag 328.068†	728.7	-59.9	-0.3439	ug/L	-0.3439	ppb	09:23:05
2	As 188.979†	-36.1	5.0	1.4424	ug/L	1.4424	ppb	09:23:25
2	B 249.677†	-278.6	817.4	17.236	ug/L	17.236	ppb	09:23:05
2	Ba 233.527†	65.9	62.1	0.3881	ug/L	0.3881	ppb	09:23:25
2	Be 313.107†	-6287.2	355.3	0.1410	ug/L	0.1410	ppb	09:23:05
2	Cd 226.502†	-301.7	26.8	0.3033	ug/L	0.3033	ppb	09:23:25
2	Co 228.616†	-93.3	32.7	0.4911	ug/L	0.4911	ppb	09:23:25
2	Cr 267.716†	-85.1	-8.1	-0.1122	ug/L	-0.1122	ppb	09:23:05
2	Cu 324.752†	8888.8	-101.5	-0.3230	ug/L	-0.3230	ppb	09:23:05
2	Mn 257.610†	1452.1	553.9	0.5336	ug/L	0.5336	ppb	09:23:05
2	Mo 202.031†	31.6	10.2	0.6420	ug/L	0.6420	ppb	09:23:25
2	Ni 231.604†	179.2	29.8	0.7131	ug/L	0.7131	ppb	09:23:25

2	P 214.914†	342.6	-20.0	-8.0478	ug/L	-8.0478	ppb	09:23:25
2	Pb 220.353†	-20.2	-0.6	-0.0513	ug/L	-0.0513	ppb	09:23:25
2	S 181.975 Axial†	130.5	21.7	23.615	ug/L	23.615	ppb	09:23:25
2	Sb 206.836†	52.3	-10.2	-2.4640	ug/L	-2.4640	ppb	09:23:25
2	Se 196.026†	-34.6	3.3	1.2643	ug/L	1.2643	ppb	09:23:25
2	Si 251.611†	45090.1	42933.4	1103.0	ug/L	1103.0	ppb	09:23:05
2	Sn 189.927†	15.0	3.4	0.5359	ug/L	0.5359	ppb	09:23:25
2	Ti 334.940†	-1277.5	503.0	0.8007	ug/L	0.8007	ppb	09:23:05
2	Tl 190.801†	-70.7	8.6	1.9384	ug/L	1.9384	ppb	09:23:25
2	U 409.014†	-5285.7	989.6	29.448	ug/L	29.448	ppb	09:23:05
2	V 292.402†	-1830.6	129.8	1.1253	ug/L	1.1253	ppb	09:23:05
2	Zn 213.857†	1206.1	140.3	1.0993	ug/L	1.0993	ppb	09:23:25
2	SiO2†	45192.4	42974.6	2351.7	ug/L	2351.7	ppb	09:24:01
3	Sc Radial	8307.7	8307.7	109	%			09:22:12
3	Y RADIAL	7572.4	7572.4	108.0	%			09:22:12
3	Al 396.153Radial†	-57.7	13.2	11.261	ug/L	11.261	ppb	09:22:12
3	Ca 317.933Radial†	63.0	33.2	45.135	ug/L	45.135	ppb	09:22:32
3	Fe 238.204 Radial†	39.5	1.7	6.7776	ug/L	6.7776	ppb	09:22:32
3	K 766.490 Radial†	4088.7	1516.4	328.96	ug/L	328.96	ppb	09:22:12
3	Mg 279.077 IEC†	1.4	-1.9	-44.669	ug/L	-44.669	ppb	09:22:32
3	Na 589.592 Radial†	3043.3	3337.3	200.54	ug/L	200.54	ppb	09:22:12
3	Sr 421.552†	-5.3	61.5	0.1749	ug/L	0.1749	ppb	09:22:12
3	Sc 361.383	812088.4	812088.4	102.90	%			09:23:30
3	Y 371.029	624918.5	624918.5	103.15	%			09:23:30
3	Ag 328.068†	791.6	3.9	0.0022	ug/L	0.0022	ppb	09:23:30
3	As 188.979†	-32.4	8.4	2.4474	ug/L	2.4474	ppb	09:23:50
3	B 249.677†	-317.6	778.6	16.415	ug/L	16.415	ppb	09:23:30
3	Ba 233.527†	79.7	75.8	0.4737	ug/L	0.4737	ppb	09:23:50
3	Be 313.107†	-6196.9	419.6	0.1664	ug/L	0.1664	ppb	09:23:30
3	Cd 226.502†	-310.2	17.4	0.1958	ug/L	0.1958	ppb	09:23:50
3	Co 228.616†	-84.9	40.5	0.6066	ug/L	0.6066	ppb	09:23:50
3	Cr 267.716†	-32.1	43.1	0.5450	ug/L	0.5450	ppb	09:23:30
3	Cu 324.752†	9018.6	57.9	0.1846	ug/L	0.1846	ppb	09:23:30
3	Mn 257.610†	1436.9	544.6	0.5271	ug/L	0.5271	ppb	09:23:30
3	Mo 202.031†	24.7	3.6	0.2290	ug/L	0.2290	ppb	09:23:50
3	Ni 231.604†	161.4	13.2	0.3164	ug/L	0.3164	ppb	09:23:50
3	P 214.914†	328.1	-32.8	-13.365	ug/L	-13.365	ppb	09:23:50
3	Pb 220.353†	9.7	28.4	3.0046	ug/L	3.0046	ppb	09:23:50
3	S 181.975 Axial†	137.5	28.9	31.540	ug/L	31.540	ppb	09:23:50
3	Sb 206.836†	79.4	16.4	4.0010	ug/L	4.0010	ppb	09:23:50
3	Se 196.026†	-31.9	5.7	2.2389	ug/L	2.2389	ppb	09:23:50
3	Si 251.611†	44998.4	43013.0	1105.0	ug/L	1105.0	ppb	09:23:30
3	Sn 189.927†	8.8	-2.6	-0.4085	ug/L	-0.4085	ppb	09:23:50
3	Ti 334.940†	-1228.2	546.1	0.8696	ug/L	0.8696	ppb	09:23:30
3	Tl 190.801†	-57.5	21.2	4.7687	ug/L	4.7687	ppb	09:23:50
3	U 409.014†	-5256.4	998.3	29.704	ug/L	29.704	ppb	09:23:30
3	V 292.402†	-1787.7	164.7	1.4026	ug/L	1.4026	ppb	09:23:30
3	Zn 213.857†	1264.7	201.8	1.5854	ug/L	1.5854	ppb	09:23:50
3	SiO2†	44695.8	42661.0	2334.6	ug/L	2334.6	ppb	09:24:06

Mean Data: 1201873176|881993|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	817815.2	103.63	%	0.934				0.90%
Sc Radial	8294.0	109	%	0.3				0.29%
Y 371.029	629014.1	103.83	%	0.860				0.83%
Y RADIAL	7571.6	108.0	%	0.20				0.18%
Ag 328.068†	-56.5	-0.3259	ug/L	0.31946	-0.3259	ppb	0.31946	98.03%
Al 396.153Radial†	21.6	18.418	ug/L	6.9205	18.418	ppb	6.9205	37.57%
As 188.979†	4.0	1.1652	ug/L	1.44099	1.1652	ppb	1.44099	123.67%
B 249.677†	823.4	17.361	ug/L	1.0135	17.361	ppb	1.0135	5.84%
Ba 233.527†	73.4	0.4587	ug/L	0.06437	0.4587	ppb	0.06437	14.03%
Be 313.107†	398.7	0.1582	ug/L	0.01486	0.1582	ppb	0.01486	9.39%
Ca 317.933Radial†	36.1	49.038	ug/L	4.0675	49.038	ppb	4.0675	8.29%
Cd 226.502†	31.7	0.3581	ug/L	0.19551	0.3581	ppb	0.19551	54.60%
Co 228.616†	38.7	0.5809	ug/L	0.08006	0.5809	ppb	0.08006	13.78%
Cr 267.716†	28.3	0.3552	ug/L	0.40719	0.3552	ppb	0.40719	114.64%
Cu 324.752†	-32.0	-0.1017	ug/L	0.25998	-0.1017	ppb	0.25998	255.70%
Fe 238.204 Radial†	0.5	1.9978	ug/L	5.11659	1.9978	ppb	5.11659	256.11%
K 766.490 Radial†	1427.3	309.63	ug/L	18.208	309.63	ppb	18.208	5.88%

Mg 279.077 IEC†	0.3	6.2360	ug/L	45.38757	6.2360	ppb	45.38757	727.83%
Mn 257.610†	547.6	0.5284	ug/L	0.00473	0.5284	ppb	0.00473	0.90%
Mo 202.031†	9.7	0.6146	ug/L	0.37260	0.6146	ppb	0.37260	60.63%
Na 589.592 Radial†	3272.4	196.64	ug/L	5.025	196.64	ppb	5.025	2.56%
Ni 231.604†	18.5	0.4417	ug/L	0.23531	0.4417	ppb	0.23531	53.28%
P 214.914†	-21.6	-8.7573	ug/L	4.29734	-8.7573	ppb	4.29734	49.07%
Pb 220.353†	6.2	0.6629	ug/L	2.07882	0.6629	ppb	2.07882	313.61%
S 181.975 Axial†	23.3	25.386	ug/L	5.4880	25.386	ppb	5.4880	21.62%
Sb 206.836†	5.2	1.2714	ug/L	3.34777	1.2714	ppb	3.34777	263.32%
Se 196.026†	8.0	3.1399	ug/L	2.45342	3.1399	ppb	2.45342	78.14%
Si 251.611†	43004.9	1104.8	ug/L	1.74	1104.8	ppb	1.74	0.16%
Sn 189.927†	-0.2	-0.0251	ug/L	0.49666	-0.0251	ppb	0.49666	>999.9%
Sr 421.552†	92.3	0.2629	ug/L	0.07839	0.2629	ppb	0.07839	29.82%
Ti 334.940†	544.6	0.8664	ug/L	0.06409	0.8664	ppb	0.06409	7.40%
Tl 190.801†	10.5	2.3707	ug/L	2.21378	2.3707	ppb	2.21378	93.38%
U 409.014†	1088.9	32.403	ug/L	4.8983	32.403	ppb	4.8983	15.12%
V 292.402†	152.0	1.3109	ug/L	0.16074	1.3109	ppb	0.16074	12.26%
Zn 213.857†	167.1	1.3114	ug/L	0.24888	1.3114	ppb	0.24888	18.98%
SiO2†	42582.8	2330.3	ug/L	23.88	2330.3	ppb	23.88	1.02%

Sequence No.: 5
Sample ID: 1201873177|881993|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 42
Date Collected: 7/7/2009 09:26:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873177|881993|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	8144.0	8144.0	107	%			09:28:09
1	Y RADIAL	7463.5	7463.5	106.5	%			09:28:09
1	Al 396.153Radial†	6203.7	5880.1	5002.7	ug/L	5002.7	ppb	09:28:09
1	Ca 317.933Radial†	4060.9	3781.1	5138.3	ug/L	5138.3	ppb	09:28:09
1	Fe 238.204 Radial†	1369.9	1249.2	4962.1	ug/L	4962.1	ppb	09:28:29
1	K 766.490 Radial†	27763.1	23779.0	5152.8	ug/L	5152.8	ppb	09:28:09
1	Mg 279.077 IEC†	234.8	216.8	5014.1	ug/L	5014.1	ppb	09:28:29
1	Na 589.592 Radial†	91822.6	86594.9	5203.5	ug/L	5203.5	ppb	09:28:09
1	Sr 421.552†	180433.6	169163.5	482.32	ug/L	482.32	ppb	09:28:09
1	Sc 361.383	822646.1	822646.1	104.24	%			09:29:28
1	Y 371.029	624814.7	624814.7	103.14	%			09:29:28
1	Ag 328.068†	93484.3	88914.4	479.51	ug/L	479.51	ppb	09:29:28
1	As 188.979†	1631.6	1605.1	472.28	ug/L	472.28	ppb	09:29:48
1	B 249.677†	22798.5	22957.8	482.59	ug/L	482.59	ppb	09:29:28
1	Ba 233.527†	81854.9	78522.0	488.74	ug/L	488.74	ppb	09:29:28
1	Be 313.107†	1258919.6	1214126.5	476.52	ug/L	476.52	ppb	09:29:28
1	Cd 226.502†	42807.6	41384.3	466.78	ug/L	466.78	ppb	09:29:48
1	Co 228.616†	31771.0	30601.0	459.96	ug/L	459.96	ppb	09:29:48
1	Cr 267.716†	38677.9	37178.0	477.67	ug/L	477.67	ppb	09:29:28
1	Cu 324.752†	168735.9	153162.6	487.39	ug/L	487.39	ppb	09:29:28
1	Mn 257.610†	518137.1	496198.6	479.21	ug/L	479.21	ppb	09:29:28
1	Mo 202.031†	7842.3	7502.8	473.22	ug/L	473.22	ppb	09:29:48
1	Ni 231.604†	20663.2	19678.6	471.06	ug/L	471.06	ppb	09:29:48
1	P 214.914†	1663.7	1244.4	431.22	ug/L	431.22	ppb	09:29:48
1	Pb 220.353†	4683.2	4511.6	478.47	ug/L	478.47	ppb	09:29:48
1	S 181.975 Axial†	4628.3	4335.2	4728.3	ug/L	4728.3	ppb	09:29:48
1	Sb 206.836†	2099.4	1953.1	485.51	ug/L	485.51	ppb	09:29:48
1	Se 196.026†	1194.2	1182.3	479.39	ug/L	479.39	ppb	09:29:48
1	Si 251.611†	237355.9	226980.8	5820.5	ug/L	5820.5	ppb	09:29:28
1	Sn 189.927†	3216.2	3074.1	484.78	ug/L	484.78	ppb	09:29:48
1	Ti 334.940†	309106.9	298266.7	480.70	ug/L	480.70	ppb	09:29:28
1	Tl 190.801†	2040.1	2034.0	460.15	ug/L	460.15	ppb	09:29:48
1	U 409.014†	11542.4	17179.0	509.67	ug/L	509.67	ppb	09:29:28
1	V 292.402†	59661.5	59135.3	488.64	ug/L	488.64	ppb	09:29:28
1	Zn 213.857†	63476.0	59865.4	466.44	ug/L	466.44	ppb	09:29:28
1	SiO2†	236920.0	226504.7	12372	ug/L	12372	ppb	09:30:48
2	Sc Radial	8266.1	8266.1	108	%			09:28:34
2	Y RADIAL	7542.1	7542.1	107.6	%			09:28:34
2	Al 396.153Radial†	6253.6	5840.3	4968.7	ug/L	4968.7	ppb	09:28:34
2	Ca 317.933Radial†	4061.3	3725.3	5062.5	ug/L	5062.5	ppb	09:28:34
2	Fe 238.204 Radial†	1374.5	1234.5	4903.9	ug/L	4903.9	ppb	09:28:54
2	K 766.490 Radial†	27830.5	23456.8	5082.9	ug/L	5082.9	ppb	09:28:34
2	Mg 279.077 IEC†	238.9	217.4	5026.8	ug/L	5026.8	ppb	09:28:54
2	Na 589.592 Radial†	92295.5	85760.4	5153.3	ug/L	5153.3	ppb	09:28:34
2	Sr 421.552†	181265.7	167433.8	477.39	ug/L	477.39	ppb	09:28:34
2	Sc 361.383	825003.5	825003.5	104.54	%			09:29:55
2	Y 371.029	626768.6	626768.6	103.46	%			09:29:55
2	Ag 328.068†	93113.0	88303.0	476.20	ug/L	476.20	ppb	09:29:55
2	As 188.979†	1650.8	1619.0	476.32	ug/L	476.32	ppb	09:30:15
2	B 249.677†	22633.1	22737.2	477.95	ug/L	477.95	ppb	09:29:55
2	Ba 233.527†	81648.5	78100.2	486.11	ug/L	486.11	ppb	09:29:55
2	Be 313.107†	1255832.0	1207722.1	474.00	ug/L	474.00	ppb	09:29:55
2	Cd 226.502†	42812.9	41272.1	465.52	ug/L	465.52	ppb	09:30:15
2	Co 228.616†	31829.0	30569.4	459.49	ug/L	459.49	ppb	09:30:15
2	Cr 267.716†	38535.9	36936.2	474.56	ug/L	474.56	ppb	09:29:55
2	Cu 324.752†	167650.7	151662.0	482.62	ug/L	482.62	ppb	09:29:55
2	Mn 257.610†	516544.6	493254.9	476.36	ug/L	476.36	ppb	09:29:55
2	Mo 202.031†	7844.2	7483.1	471.98	ug/L	471.98	ppb	09:30:15
2	Ni 231.604†	20658.7	19617.6	469.60	ug/L	469.60	ppb	09:30:15

2	P 214.914†	1684.1	1259.3	438.09	ug/L	438.09	ppb	09:30:15
2	Pb 220.353†	4682.8	4498.4	477.07	ug/L	477.07	ppb	09:30:15
2	S 181.975 Axial†	4637.5	4331.4	4724.1	ug/L	4724.1	ppb	09:30:15
2	Sb 206.836†	2096.7	1944.9	483.57	ug/L	483.57	ppb	09:30:15
2	Se 196.026†	1179.2	1164.7	472.30	ug/L	472.30	ppb	09:30:15
2	Si 251.611†	236168.8	225194.7	5774.6	ug/L	5774.6	ppb	09:29:55
2	Sn 189.927†	3241.1	3089.2	487.13	ug/L	487.13	ppb	09:30:15
2	Ti 334.940†	307760.9	296131.9	477.25	ug/L	477.25	ppb	09:29:55
2	Tl 190.801†	2058.6	2046.2	462.86	ug/L	462.86	ppb	09:30:15
2	U 409.014†	11523.2	17129.0	508.20	ug/L	508.20	ppb	09:29:55
2	V 292.402†	59272.5	58599.7	484.26	ug/L	484.26	ppb	09:29:55
2	Zn 213.857†	63274.1	59498.3	463.57	ug/L	463.57	ppb	09:29:55
2	SiO2†	237277.1	226196.9	12355	ug/L	12355	ppb	09:30:53
3	Sc Radial	8103.9	8103.9	106	%			09:28:59
3	Y RADIAL	7357.1	7357.1	104.9	%			09:28:59
3	Al 396.153Radial†	6276.3	5977.3	5085.5	ug/L	5085.5	ppb	09:28:59
3	Ca 317.933Radial†	4049.6	3789.3	5149.5	ug/L	5149.5	ppb	09:28:59
3	Fe 238.204 Radial†	1363.3	1249.4	4963.0	ug/L	4963.0	ppb	09:29:19
3	K 766.490 Radial†	27855.7	23994.9	5199.6	ug/L	5199.6	ppb	09:28:59
3	Mg 279.077 IEC†	239.1	221.9	5132.5	ug/L	5132.5	ppb	09:29:19
3	Na 589.592 Radial†	92502.4	87660.9	5267.5	ug/L	5267.5	ppb	09:28:59
3	Sr 421.552†	181430.2	170938.7	487.38	ug/L	487.38	ppb	09:28:59
3	Sc 361.383	820552.9	820552.9	103.98	%			09:30:22
3	Y 371.029	622546.1	622546.1	102.76	%			09:30:22
3	Ag 328.068†	92799.5	88484.5	477.21	ug/L	477.21	ppb	09:30:22
3	As 188.979†	1647.5	1624.3	477.89	ug/L	477.89	ppb	09:30:42
3	B 249.677†	22697.4	22916.4	481.71	ug/L	481.71	ppb	09:30:22
3	Ba 233.527†	81602.5	78479.5	488.47	ug/L	488.47	ppb	09:30:22
3	Be 313.107†	1251275.0	1209855.1	474.84	ug/L	474.84	ppb	09:30:22
3	Cd 226.502†	43139.1	41807.9	471.57	ug/L	471.57	ppb	09:30:42
3	Co 228.616†	32060.2	30956.9	465.32	ug/L	465.32	ppb	09:30:42
3	Cr 267.716†	38375.6	36982.0	475.16	ug/L	475.16	ppb	09:30:22
3	Cu 324.752†	166820.8	151733.7	482.85	ug/L	482.85	ppb	09:30:22
3	Mn 257.610†	516671.5	496057.0	479.07	ug/L	479.07	ppb	09:30:22
3	Mo 202.031†	7895.4	7573.0	477.65	ug/L	477.65	ppb	09:30:42
3	Ni 231.604†	20804.2	19864.8	475.52	ug/L	475.52	ppb	09:30:42
3	P 214.914†	1704.3	1287.5	449.57	ug/L	449.57	ppb	09:30:42
3	Pb 220.353†	4728.0	4566.1	484.27	ug/L	484.27	ppb	09:30:42
3	S 181.975 Axial†	4660.2	4377.2	4774.1	ug/L	4774.1	ppb	09:30:42
3	Sb 206.836†	2102.5	1961.3	487.81	ug/L	487.81	ppb	09:30:42
3	Se 196.026†	1206.2	1196.7	485.04	ug/L	485.04	ppb	09:30:42
3	Si 251.611†	235648.7	225919.7	5793.1	ug/L	5793.1	ppb	09:30:22
3	Sn 189.927†	3259.0	3123.1	492.50	ug/L	492.50	ppb	09:30:42
3	Ti 334.940†	307289.1	297274.9	479.10	ug/L	479.10	ppb	09:30:22
3	Tl 190.801†	2072.3	2070.1	468.24	ug/L	468.24	ppb	09:30:42
3	U 409.014†	11439.8	17108.6	507.58	ug/L	507.58	ppb	09:30:22
3	V 292.402†	59274.0	58908.6	486.84	ug/L	486.84	ppb	09:30:22
3	Zn 213.857†	63244.3	59798.0	465.88	ug/L	465.88	ppb	09:30:22
3	SiO2†	234937.6	225178.0	12299	ug/L	12299	ppb	09:30:58

Mean Data: 1201873177|881993|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	822734.2	104.25	%	0.282				0.27%
Sc Radial	8171.3	107	%	1.1				1.03%
Y 371.029	624709.8	103.12	%	0.349				0.34%
Y RADIAL	7454.2	106.3	%	1.32				1.25%
Ag 328.068†	88567.3	477.64	ug/L	1.698	477.64	ppb	1.698	0.36%
Al 396.153Radial†	5899.2	5019.0	ug/L	60.07	5019.0	ppb	60.07	1.20%
As 188.979†	1616.1	475.50	ug/L	2.896	475.50	ppb	2.896	0.61%
B 249.677†	22870.4	480.75	ug/L	2.467	480.75	ppb	2.467	0.51%
Ba 233.527†	78367.2	487.77	ug/L	1.448	487.77	ppb	1.448	0.30%
Be 313.107†	1210567.9	475.12	ug/L	1.281	475.12	ppb	1.281	0.27%
Ca 317.933Radial†	3765.2	5116.8	ug/L	47.32	5116.8	ppb	47.32	0.92%
Cd 226.502†	41488.1	467.96	ug/L	3.189	467.96	ppb	3.189	0.68%
Co 228.616†	30709.1	461.59	ug/L	3.241	461.59	ppb	3.241	0.70%
Cr 267.716†	37032.1	475.80	ug/L	1.651	475.80	ppb	1.651	0.35%
Cu 324.752†	152186.1	484.29	ug/L	2.693	484.29	ppb	2.693	0.56%
Fe 238.204 Radial†	1244.4	4943.0	ug/L	33.88	4943.0	ppb	33.88	0.69%
K 766.490 Radial†	23743.5	5145.1	ug/L	58.72	5145.1	ppb	58.72	1.14%

Mg 279.077 IEC†	218.7	5057.8	ug/L	64.98	5057.8	ppb	64.98	1.28%
Mn 257.610†	495170.2	478.21	ug/L	1.605	478.21	ppb	1.605	0.34%
Mo 202.031†	7519.6	474.28	ug/L	2.980	474.28	ppb	2.980	0.63%
Na 589.592 Radial†	86672.1	5208.1	ug/L	57.24	5208.1	ppb	57.24	1.10%
Ni 231.604†	19720.4	472.06	ug/L	3.082	472.06	ppb	3.082	0.65%
P 214.914†	1263.7	439.63	ug/L	9.275	439.63	ppb	9.275	2.11%
Pb 220.353†	4525.4	479.94	ug/L	3.816	479.94	ppb	3.816	0.80%
S 181.975 Axial†	4347.9	4742.2	ug/L	27.73	4742.2	ppb	27.73	0.58%
Sb 206.836†	1953.1	485.63	ug/L	2.120	485.63	ppb	2.120	0.44%
Se 196.026†	1181.2	478.91	ug/L	6.387	478.91	ppb	6.387	1.33%
Si 251.611†	226031.7	5796.1	ug/L	23.07	5796.1	ppb	23.07	0.40%
Sn 189.927†	3095.5	488.14	ug/L	3.955	488.14	ppb	3.955	0.81%
Sr 421.552†	169178.7	482.36	ug/L	4.997	482.36	ppb	4.997	1.04%
Ti 334.940†	297224.5	479.02	ug/L	1.724	479.02	ppb	1.724	0.36%
Tl 190.801†	2050.1	463.75	ug/L	4.118	463.75	ppb	4.118	0.89%
U 409.014†	17138.9	508.48	ug/L	1.075	508.48	ppb	1.075	0.21%
V 292.402†	58881.2	486.58	ug/L	2.202	486.58	ppb	2.202	0.45%
Zn 213.857†	59720.6	465.30	ug/L	1.520	465.30	ppb	1.520	0.33%
SiO2†	225959.9	12342	ug/L	38.2	12342	ppb	38.2	0.31%

Sequence No.: 6
Sample ID: 1201873178|881993|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 43
Date Collected: 7/7/2009 09:33:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873178|881993|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	8120.6	8120.6	106	%			09:35:02
1	Y RADIAL	7416.1	7416.1	105.8	%			09:35:02
1	Al 396.153Radial†	-26.6	41.1	35.147	ug/L	35.147	ppb	09:35:02
1	Ca 317.933Radial†	54.7	26.8	36.445	ug/L	36.445	ppb	09:35:22
1	Fe 238.204 Radial†	33.7	-2.9	-11.603	ug/L	-11.603	ppb	09:35:22
1	K 766.490 Radial†	2538.9	146.4	31.738	ug/L	31.738	ppb	09:35:02
1	Mg 279.077 IEC†	3.9	0.4	8.6951	ug/L	8.6951	ppb	09:35:22
1	Na 589.592 Radial†	460.6	974.4	58.549	ug/L	58.549	ppb	09:35:02
1	Sr 421.552†	-36.1	32.4	0.0921	ug/L	0.0921	ppb	09:35:02
1	Sc 361.383	800937.4	800937.4	101.49	%			09:36:18
1	Y 371.029	616208.3	616208.3	101.72	%			09:36:18
1	Ag 328.068†	857.6	79.7	0.4011	ug/L	0.4011	ppb	09:36:18
1	As 188.979†	-42.1	-1.6	-0.4785	ug/L	-0.4785	ppb	09:36:38
1	B 249.677†	-540.8	554.3	11.689	ug/L	11.689	ppb	09:36:38
1	Ba 233.527†	70.8	68.2	0.4257	ug/L	0.4257	ppb	09:36:38
1	Be 313.107†	-6168.4	363.8	0.1436	ug/L	0.1436	ppb	09:36:18
1	Cd 226.502†	-302.3	21.0	0.2380	ug/L	0.2380	ppb	09:36:38
1	Co 228.616†	-123.5	1.2	0.0175	ug/L	0.0175	ppb	09:36:38
1	Cr 267.716†	-75.8	-0.4	-0.0138	ug/L	-0.0138	ppb	09:36:38
1	Cu 324.752†	8782.1	-53.1	-0.1697	ug/L	-0.1697	ppb	09:36:18
1	Mn 257.610†	880.4	15.7	0.0136	ug/L	0.0136	ppb	09:36:38
1	Mo 202.031†	17.8	-2.8	-0.1781	ug/L	-0.1781	ppb	09:36:38
1	Ni 231.604†	165.0	18.9	0.4530	ug/L	0.4530	ppb	09:36:38
1	P 214.914†	343.4	-13.3	-5.3453	ug/L	-5.3453	ppb	09:36:38
1	Pb 220.353†	-30.5	-11.1	-1.1667	ug/L	-1.1667	ppb	09:36:38
1	S 181.975 Axial†	87.0	-19.0	-20.688	ug/L	-20.688	ppb	09:36:38
1	Sb 206.836†	53.1	-8.5	-2.0793	ug/L	-2.0793	ppb	09:36:38
1	Se 196.026†	-28.6	8.6	3.3161	ug/L	3.3161	ppb	09:36:38
1	Si 251.611†	9007.8	8160.1	209.65	ug/L	209.65	ppb	09:36:38
1	Sn 189.927†	13.7	2.3	0.3697	ug/L	0.3697	ppb	09:36:38
1	Ti 334.940†	-1464.9	296.3	0.4660	ug/L	0.4660	ppb	09:36:18
1	Tl 190.801†	-54.5	23.3	5.2573	ug/L	5.2573	ppb	09:36:38
1	U 409.014†	-5132.7	1049.0	31.218	ug/L	31.218	ppb	09:36:18
1	V 292.402†	-1779.1	148.9	1.2760	ug/L	1.2760	ppb	09:36:18
1	Zn 213.857†	1328.6	281.9	2.2151	ug/L	2.2151	ppb	09:36:38
1	SiO2†	9442.0	8530.0	466.83	ug/L	466.83	ppb	09:37:35
2	Sc Radial	8120.3	8120.3	106	%			09:35:27
2	Y RADIAL	7366.5	7366.5	105.1	%			09:35:27
2	Al 396.153Radial†	-48.3	20.8	17.780	ug/L	17.780	ppb	09:35:27
2	Ca 317.933Radial†	50.2	22.6	30.681	ug/L	30.681	ppb	09:35:47
2	Fe 238.204 Radial†	36.7	-0.1	-0.3753	ug/L	-0.3753	ppb	09:35:47
2	K 766.490 Radial†	2569.9	175.7	38.086	ug/L	38.086	ppb	09:35:27
2	Mg 279.077 IEC†	3.3	-0.2	-3.6714	ug/L	-3.6714	ppb	09:35:47
2	Na 589.592 Radial†	545.8	1054.4	63.361	ug/L	63.361	ppb	09:35:27
2	Sr 421.552†	-9.0	57.8	0.1646	ug/L	0.1646	ppb	09:35:27
2	Sc 361.383	801595.6	801595.6	101.57	%			09:36:44
2	Y 371.029	616357.2	616357.2	101.74	%			09:36:44
2	Ag 328.068†	700.0	-76.2	-0.4342	ug/L	-0.4342	ppb	09:36:44
2	As 188.979†	-51.3	-10.6	-3.1077	ug/L	-3.1077	ppb	09:37:04
2	B 249.677†	-553.8	541.9	11.427	ug/L	11.427	ppb	09:37:04
2	Ba 233.527†	69.3	66.6	0.4131	ug/L	0.4131	ppb	09:37:04
2	Be 313.107†	-6161.0	376.1	0.1488	ug/L	0.1488	ppb	09:36:44
2	Cd 226.502†	-289.8	33.5	0.3783	ug/L	0.3783	ppb	09:37:04
2	Co 228.616†	-98.1	26.4	0.3934	ug/L	0.3934	ppb	09:37:04
2	Cr 267.716†	-81.6	-6.1	-0.0883	ug/L	-0.0883	ppb	09:37:04
2	Cu 324.752†	8772.5	-69.6	-0.2215	ug/L	-0.2215	ppb	09:36:44
2	Mn 257.610†	917.1	51.1	0.0493	ug/L	0.0493	ppb	09:37:04
2	Mo 202.031†	9.2	-11.3	-0.7105	ug/L	-0.7105	ppb	09:37:04
2	Ni 231.604†	129.3	-16.4	-0.3922	ug/L	-0.3922	ppb	09:37:04

2	P 214.914†	351.2	-5.9	-2.3461	ug/L	-2.3461	ppb	09:37:04
2	Pb 220.353†	-26.3	-6.9	-0.7280	ug/L	-0.7280	ppb	09:37:04
2	S 181.975 Axial†	104.1	-2.2	-2.4423	ug/L	-2.4423	ppb	09:37:04
2	Sb 206.836†	61.0	-0.8	-0.1773	ug/L	-0.1773	ppb	09:37:04
2	Se 196.026†	-33.3	4.0	1.5424	ug/L	1.5424	ppb	09:37:04
2	Si 251.611†	9117.6	8260.9	212.25	ug/L	212.25	ppb	09:37:04
2	Sn 189.927†	19.8	8.4	1.3205	ug/L	1.3205	ppb	09:37:04
2	Ti 334.940†	-1364.1	396.7	0.6284	ug/L	0.6284	ppb	09:36:44
2	Tl 190.801†	-57.7	20.2	4.5541	ug/L	4.5541	ppb	09:37:04
2	U 409.014†	-5203.9	983.1	29.254	ug/L	29.254	ppb	09:36:44
2	V 292.402†	-1937.7	-5.7	0.0002	ug/L	0.0002	ppb	09:36:44
2	Zn 213.857†	1326.5	278.7	2.1949	ug/L	2.1949	ppb	09:37:04
2	SiO2†	9304.3	8386.8	459.00	ug/L	459.00	ppb	09:37:40
3	Sc Radial	8057.4	8057.4	106	%			09:35:52
3	Y RADIAL	7375.2	7375.2	105.2	%			09:35:52
3	Al 396.153Radial†	-58.8	10.5	8.9888	ug/L	8.9888	ppb	09:35:52
3	Ca 317.933Radial†	52.5	25.1	34.136	ug/L	34.136	ppb	09:36:12
3	Fe 238.204 Radial†	35.3	-1.2	-4.5568	ug/L	-4.5568	ppb	09:36:12
3	K 766.490 Radial†	2602.8	225.7	48.937	ug/L	48.937	ppb	09:35:52
3	Mg 279.077 IEC†	3.7	0.3	6.3669	ug/L	6.3669	ppb	09:36:12
3	Na 589.592 Radial†	507.7	1022.4	61.433	ug/L	61.433	ppb	09:35:52
3	Sr 421.552†	-37.0	31.3	0.0889	ug/L	0.0889	ppb	09:35:52
3	Sc 361.383	800133.7	800133.7	101.39	%			09:37:09
3	Y 371.029	615212.0	615212.0	101.55	%			09:37:09
3	Ag 328.068†	748.7	-26.9	-0.1673	ug/L	-0.1673	ppb	09:37:09
3	As 188.979†	-31.1	9.2	2.6871	ug/L	2.6871	ppb	09:37:29
3	B 249.677†	-597.3	498.0	10.501	ug/L	10.501	ppb	09:37:29
3	Ba 233.527†	59.1	56.6	0.3529	ug/L	0.3529	ppb	09:37:29
3	Be 313.107†	-6221.7	305.2	0.1208	ug/L	0.1208	ppb	09:37:09
3	Cd 226.502†	-291.2	31.7	0.3576	ug/L	0.3576	ppb	09:37:29
3	Co 228.616†	-96.0	28.3	0.4220	ug/L	0.4220	ppb	09:37:29
3	Cr 267.716†	-74.9	0.4	-0.0033	ug/L	-0.0033	ppb	09:37:29
3	Cu 324.752†	8821.4	-5.6	-0.0181	ug/L	-0.0181	ppb	09:37:09
3	Mn 257.610†	907.4	43.2	0.0410	ug/L	0.0410	ppb	09:37:29
3	Mo 202.031†	6.3	-14.1	-0.8918	ug/L	-0.8918	ppb	09:37:29
3	Ni 231.604†	146.9	1.2	0.0287	ug/L	0.0287	ppb	09:37:29
3	P 214.914†	347.2	-9.2	-3.7041	ug/L	-3.7041	ppb	09:37:29
3	Pb 220.353†	-5.3	13.7	1.4517	ug/L	1.4517	ppb	09:37:29
3	S 181.975 Axial†	107.1	0.9	0.9632	ug/L	0.9632	ppb	09:37:29
3	Sb 206.836†	50.9	-10.6	-2.5872	ug/L	-2.5872	ppb	09:37:29
3	Se 196.026†	-36.1	1.1	0.4333	ug/L	0.4333	ppb	09:37:29
3	Si 251.611†	9038.7	8199.5	210.67	ug/L	210.67	ppb	09:37:29
3	Sn 189.927†	19.0	7.6	1.1949	ug/L	1.1949	ppb	09:37:29
3	Ti 334.940†	-1413.7	345.3	0.5465	ug/L	0.5465	ppb	09:37:09
3	Tl 190.801†	-75.9	2.2	0.4888	ug/L	0.4888	ppb	09:37:29
3	U 409.014†	-5250.7	927.6	27.605	ug/L	27.605	ppb	09:37:09
3	V 292.402†	-1845.8	81.3	0.7067	ug/L	0.7067	ppb	09:37:09
3	Zn 213.857†	1343.3	297.7	2.3412	ug/L	2.3412	ppb	09:37:29
3	SiO2†	9311.5	8410.7	460.30	ug/L	460.30	ppb	09:37:45

Mean Data: 1201873178|881993|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	800888.9	101.49	%	0.093				0.09%
Sc Radial	8099.4	106	%	0.5				0.45%
Y 371.029	615925.8	101.67	%	0.103				0.10%
Y RADIAL	7385.9	105.4	%	0.38				0.36%
Ag 328.068†	-7.8	-0.0668	ug/L	0.42663	-0.0668	ppb	0.42663	639.00%
Al 396.153Radial†	24.1	20.638	ug/L	13.3110	20.638	ppb	13.3110	64.50%
As 188.979†	-1.0	-0.2997	ug/L	2.90153	-0.2997	ppb	2.90153	968.14%
B 249.677†	531.4	11.205	ug/L	0.6238	11.205	ppb	0.6238	5.57%
Ba 233.527†	63.8	0.3972	ug/L	0.03890	0.3972	ppb	0.03890	9.79%
Be 313.107†	348.4	0.1377	ug/L	0.01488	0.1377	ppb	0.01488	10.80%
Ca 317.933Radial†	24.8	33.754	ug/L	2.9007	33.754	ppb	2.9007	8.59%
Cd 226.502†	28.7	0.3246	ug/L	0.07576	0.3246	ppb	0.07576	23.34%
Co 228.616†	18.6	0.2777	ug/L	0.22577	0.2777	ppb	0.22577	81.31%
Cr 267.716†	-2.1	-0.0352	ug/L	0.04637	-0.0352	ppb	0.04637	131.91%
Cu 324.752†	-42.8	-0.1364	ug/L	0.10568	-0.1364	ppb	0.10568	77.46%
Fe 238.204 Radial†	-1.4	-5.5118	ug/L	5.67451	-5.5118	ppb	5.67451	102.95%
K 766.490 Radial†	182.6	39.587	ug/L	8.6971	39.587	ppb	8.6971	21.97%

Mg 279.077 IEC†	0.2	3.7969	ug/L	6.57166	3.7969	ppb	6.57166 173.08%
Mn 257.610†	36.6	0.0346	ug/L	0.01869	0.0346	ppb	0.01869 53.97%
Mo 202.031†	-9.4	-0.5935	ug/L	0.37097	-0.5935	ppb	0.37097 62.51%
Na 589.592 Radial†	1017.0	61.114	ug/L	2.4217	61.114	ppb	2.4217 3.96%
Ni 231.604†	1.3	0.0298	ug/L	0.42261	0.0298	ppb	0.42261 >999.9%
P 214.914†	-9.5	-3.7985	ug/L	1.50181	-3.7985	ppb	1.50181 39.54%
Pb 220.353†	-1.4	-0.1477	ug/L	1.40231	-0.1477	ppb	1.40231 949.66%
S 181.975 Axial†	-6.8	-7.3892	ug/L	11.64271	-7.3892	ppb	11.64271 157.56%
Sb 206.836†	-6.6	-1.6146	ug/L	1.27038	-1.6146	ppb	1.27038 78.68%
Se 196.026†	4.6	1.7639	ug/L	1.45412	1.7639	ppb	1.45412 82.44%
Si 251.611†	8206.8	210.86	ug/L	1.308	210.86	ppb	1.308 0.62%
Sn 189.927†	6.1	0.9617	ug/L	0.51650	0.9617	ppb	0.51650 53.71%
Sr 421.552†	40.5	0.1152	ug/L	0.04283	0.1152	ppb	0.04283 37.18%
Ti 334.940†	346.1	0.5470	ug/L	0.08123	0.5470	ppb	0.08123 14.85%
Tl 190.801†	15.2	3.4334	ug/L	2.57421	3.4334	ppb	2.57421 74.98%
U 409.014†	986.6	29.359	ug/L	1.8088	29.359	ppb	1.8088 6.16%
V 292.402†	74.8	0.6610	ug/L	0.63914	0.6610	ppb	0.63914 96.70%
Zn 213.857†	286.1	2.2504	ug/L	0.07932	2.2504	ppb	0.07932 3.52%
SiO2†	8442.5	462.04	ug/L	4.194	462.04	ppb	4.194 0.91%

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/7/2009 09:39:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7738.7	7738.7	101	%			09:42:07
1	Y RADIAL	6936.0	6936.0	98.94	%			09:42:07
1	Al 396.153Radial†	6119.7	6101.8	5191.2	ug/L	5191.2	ppb	09:41:47
1	Ca 317.933Radial†	3982.4	3903.1	5304.1	ug/L	5304.1	ppb	09:42:07
1	Fe 238.204 Radial†	1355.4	1302.2	5172.5	ug/L	5172.5	ppb	09:42:07
1	K 766.490 Radial†	25114.5	22529.5	4881.0	ug/L	4881.0	ppb	09:41:47
1	Mg 279.077 IEC†	235.5	229.0	5295.9	ug/L	5295.9	ppb	09:42:07
1	Na 589.592 Radial†	172735.3	170903.2	10270	ug/L	10270	ppb	09:41:47
1	Sr 421.552†	176435.2	174077.2	496.33	ug/L	496.33	ppb	09:41:47
1	Sc 361.383	810427.5	810427.5	102.69	%			09:43:06
1	Y 371.029	615902.9	615902.9	101.67	%			09:43:06
1	Ag 328.068†	92911.6	89708.8	483.85	ug/L	483.85	ppb	09:43:06
1	As 188.979†	1667.9	1664.0	489.54	ug/L	489.54	ppb	09:43:26
1	B 249.677†	22101.7	22609.0	475.18	ug/L	475.18	ppb	09:43:06
1	Ba 233.527†	79715.6	77622.7	483.16	ug/L	483.16	ppb	09:43:06
1	Be 313.107†	1248891.6	1222569.5	479.83	ug/L	479.83	ppb	09:43:06
1	Cd 226.502†	42756.7	41953.9	473.20	ug/L	473.20	ppb	09:43:26
1	Co 228.616†	32512.2	31782.2	477.75	ug/L	477.75	ppb	09:43:26
1	Cr 267.716†	38355.4	37423.4	480.83	ug/L	480.83	ppb	09:43:06
1	Cu 324.752†	164231.9	151217.3	481.22	ug/L	481.22	ppb	09:43:06
1	Mn 257.610†	511851.7	497572.0	480.55	ug/L	480.55	ppb	09:43:06
1	Mo 202.031†	8055.2	7823.5	493.45	ug/L	493.45	ppb	09:43:26
1	Ni 231.604†	20779.9	20091.1	480.93	ug/L	480.93	ppb	09:43:26
1	P 214.914†	6457.5	5936.4	2336.1	ug/L	2336.1	ppb	09:43:26
1	Pb 220.353†	4742.3	4636.8	491.79	ug/L	491.79	ppb	09:43:26
1	S 181.975 Axial†	1000.4	869.4	947.43	ug/L	947.43	ppb	09:43:26
1	Sb 206.836†	2096.3	1980.5	492.66	ug/L	492.66	ppb	09:43:26
1	Se 196.026†	1239.0	1243.2	503.92	ug/L	503.92	ppb	09:43:26
1	Si 251.611†	97505.0	94231.7	2409.4	ug/L	2409.4	ppb	09:43:06
1	Sn 189.927†	3203.0	3107.8	490.10	ug/L	490.10	ppb	09:43:26
1	Ti 334.940†	306030.8	299742.0	483.09	ug/L	483.09	ppb	09:43:06
1	Tl 190.801†	2127.3	2148.5	485.89	ug/L	485.89	ppb	09:43:26
1	U 409.014†	10607.6	16435.7	487.52	ug/L	487.52	ppb	09:43:06
1	V 292.402†	58503.5	58870.5	486.66	ug/L	486.66	ppb	09:43:06
1	Zn 213.857†	63834.6	61132.7	476.33	ug/L	476.33	ppb	09:43:06
1	SiO2†	97491.1	94160.3	5127.8	ug/L	5127.8	ppb	09:44:26
2	Sc Radial	7777.4	7777.4	102	%			09:42:32
2	Y RADIAL	6973.0	6973.0	99.46	%			09:42:32
2	Al 396.153Radial†	6219.4	6169.6	5249.1	ug/L	5249.1	ppb	09:42:12
2	Ca 317.933Radial†	3964.0	3865.5	5253.0	ug/L	5253.0	ppb	09:42:32
2	Fe 238.204 Radial†	1346.7	1287.0	5112.3	ug/L	5112.3	ppb	09:42:32
2	K 766.490 Radial†	25471.3	22756.4	4930.2	ug/L	4930.2	ppb	09:42:12
2	Mg 279.077 IEC†	234.0	226.3	5234.5	ug/L	5234.5	ppb	09:42:32
2	Na 589.592 Radial†	175308.5	172580.7	10370	ug/L	10370	ppb	09:42:12
2	Sr 421.552†	179248.3	175971.9	501.73	ug/L	501.73	ppb	09:42:12
2	Sc 361.383	807526.0	807526.0	102.33	%			09:43:33
2	Y 371.029	612933.7	612933.7	101.18	%			09:43:33
2	Ag 328.068†	93028.4	90148.0	486.19	ug/L	486.19	ppb	09:43:33
2	As 188.979†	1668.7	1670.7	491.48	ug/L	491.48	ppb	09:43:54
2	B 249.677†	22143.8	22727.5	477.68	ug/L	477.68	ppb	09:43:33
2	Ba 233.527†	79792.6	77976.8	485.36	ug/L	485.36	ppb	09:43:33
2	Be 313.107†	1248601.4	1226655.6	481.43	ug/L	481.43	ppb	09:43:33
2	Cd 226.502†	42645.4	41994.7	473.66	ug/L	473.66	ppb	09:43:54
2	Co 228.616†	32468.4	31853.2	478.81	ug/L	478.81	ppb	09:43:54
2	Cr 267.716†	38386.6	37588.1	482.94	ug/L	482.94	ppb	09:43:33
2	Cu 324.752†	163957.6	151523.9	482.19	ug/L	482.19	ppb	09:43:33
2	Mn 257.610†	512519.3	500015.2	482.90	ug/L	482.90	ppb	09:43:33
2	Mo 202.031†	8036.4	7833.3	494.06	ug/L	494.06	ppb	09:43:54
2	Ni 231.604†	20749.4	20134.0	481.96	ug/L	481.96	ppb	09:43:54

2	P 214.914†	6459.9	5961.4	2346.1 ug/L	2346.1 ppb	09:43:54
2	Pb 220.353†	4742.6	4653.7	493.60 ug/L	493.60 ppb	09:43:54
2	S 181.975 Axial†	1003.3	875.7	954.31 ug/L	954.31 ppb	09:43:54
2	Sb 206.836†	2092.4	1984.0	493.48 ug/L	493.48 ppb	09:43:54
2	Se 196.026†	1241.1	1249.6	506.24 ug/L	506.24 ppb	09:43:54
2	Si 251.611†	97596.0	94661.8	2420.4 ug/L	2420.4 ppb	09:43:33
2	Sn 189.927†	3189.1	3105.4	489.72 ug/L	489.72 ppb	09:43:54
2	Ti 334.940†	305955.4	300739.0	484.70 ug/L	484.70 ppb	09:43:33
2	Tl 190.801†	2140.3	2168.7	490.44 ug/L	490.44 ppb	09:43:54
2	U 409.014†	10631.2	16495.8	489.31 ug/L	489.31 ppb	09:43:33
2	V 292.402†	58545.1	59115.9	488.68 ug/L	488.68 ppb	09:43:33
2	Zn 213.857†	63874.1	61394.7	478.39 ug/L	478.39 ppb	09:43:33
2	SiO2†	98068.1	95065.3	5177.3 ug/L	5177.3 ppb	09:44:31
3	Sc Radial	7775.7	7775.7	102 %		09:42:58
3	Y RADIAL	6954.7	6954.7	99.20 %		09:42:58
3	Al 396.153Radial†	6011.6	5967.0	5076.4 ug/L	5076.4 ppb	09:42:37
3	Ca 317.933Radial†	3952.3	3854.8	5238.5 ug/L	5238.5 ppb	09:42:58
3	Fe 238.204 Radial†	1335.9	1276.7	5071.3 ug/L	5071.3 ppb	09:42:58
3	K 766.490 Radial†	24788.1	22091.3	4785.9 ug/L	4785.9 ppb	09:42:37
3	Mg 279.077 IEC†	230.8	223.3	5165.1 ug/L	5165.1 ppb	09:42:58
3	Na 589.592 Radial†	169655.9	167070.1	10039 ug/L	10039 ppb	09:42:37
3	Sr 421.552†	173470.0	170338.8	485.67 ug/L	485.67 ppb	09:42:37
3	Sc 361.383	817207.2	817207.2	103.55 %		09:44:01
3	Y 371.029	619935.7	619935.7	102.33 %		09:44:01
3	Ag 328.068†	94461.3	90454.7	487.83 ug/L	487.83 ppb	09:44:01
3	As 188.979†	1660.7	1643.7	483.60 ug/L	483.60 ppb	09:44:21
3	B 249.677†	22698.8	23007.1	483.60 ug/L	483.60 ppb	09:44:01
3	Ba 233.527†	81115.2	78330.3	487.56 ug/L	487.56 ppb	09:44:01
3	Be 313.107†	1270257.9	1233113.4	483.97 ug/L	483.97 ppb	09:44:01
3	Cd 226.502†	42476.1	41337.5	466.25 ug/L	466.25 ppb	09:44:21
3	Co 228.616†	32371.5	31383.7	471.73 ug/L	471.73 ppb	09:44:21
3	Cr 267.716†	38953.1	37690.7	484.26 ug/L	484.26 ppb	09:44:01
3	Cu 324.752†	166901.8	152468.8	485.19 ug/L	485.19 ppb	09:44:01
3	Mn 257.610†	520748.3	502028.2	484.84 ug/L	484.84 ppb	09:44:01
3	Mo 202.031†	8006.9	7711.8	486.40 ug/L	486.40 ppb	09:44:21
3	Ni 231.604†	20682.1	19828.8	474.65 ug/L	474.65 ppb	09:44:21
3	P 214.914†	6403.5	5832.1	2293.0 ug/L	2293.0 ppb	09:44:21
3	Pb 220.353†	4704.3	4561.9	483.83 ug/L	483.83 ppb	09:44:21
3	S 181.975 Axial†	990.8	852.1	928.52 ug/L	928.52 ppb	09:44:21
3	Sb 206.836†	2094.8	1962.1	487.78 ug/L	487.78 ppb	09:44:21
3	Se 196.026†	1219.8	1214.7	492.42 ug/L	492.42 ppb	09:44:21
3	Si 251.611†	99279.0	95157.2	2433.4 ug/L	2433.4 ppb	09:44:01
3	Sn 189.927†	3176.1	3056.0	481.93 ug/L	481.93 ppb	09:44:21
3	Ti 334.940†	311200.3	302261.8	487.15 ug/L	487.15 ppb	09:44:01
3	Tl 190.801†	2134.1	2137.9	483.55 ug/L	483.55 ppb	09:44:21
3	U 409.014†	10893.0	16625.6	493.18 ug/L	493.18 ppb	09:44:01
3	V 292.402†	59608.8	59465.3	491.45 ug/L	491.45 ppb	09:44:01
3	Zn 213.857†	64890.3	61636.5	480.34 ug/L	480.34 ppb	09:44:01
3	SiO2†	98576.4	94420.7	5142.4 ug/L	5142.4 ppb	09:44:37

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	811720.2	102.86	%	0.630				0.61%
Sc Radial	7763.9	102	%	0.3				0.28%
Y 371.029	616257.4	101.72	%	0.580				0.57%
Y RADIAL	6954.6	99.20	%	0.264				0.27%
Ag 328.068†	90103.8	485.95	ug/L	2.001	485.95	ppb	2.001	0.41%
QC value within limits for Ag 328.068 Recovery = 97.19%								
Al 396.153Radial†	6079.5	5172.2	ug/L	87.91	5172.2	ppb	87.91	1.70%
QC value within limits for Al 396.153Radial Recovery = 103.44%								
As 188.979†	1659.4	488.21	ug/L	4.106	488.21	ppb	4.106	0.84%
QC value within limits for As 188.979 Recovery = 97.64%								
B 249.677†	22781.2	478.82	ug/L	4.322	478.82	ppb	4.322	0.90%
QC value within limits for B 249.677 Recovery = 95.76%								
Ba 233.527†	77976.6	485.36	ug/L	2.200	485.36	ppb	2.200	0.45%
QC value within limits for Ba 233.527 Recovery = 97.07%								
Be 313.107†	1227446.2	481.75	ug/L	2.086	481.75	ppb	2.086	0.43%
QC value within limits for Be 313.107 Recovery = 96.35%								
Ca 317.933Radial†	3874.5	5265.2	ug/L	34.44	5265.2	ppb	34.44	0.65%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.30%
Cd 226.502†            41762.0      471.04 ug/L         4.153      471.04 ppb          4.153   0.88%
   QC value within limits for Cd 226.502  Recovery = 94.21%
Co 228.616†            31673.0      476.10 ug/L         3.816      476.10 ppb          3.816   0.80%
   QC value within limits for Co 228.616  Recovery = 95.22%
Cr 267.716†            37567.4      482.68 ug/L         1.732      482.68 ppb          1.732   0.36%
   QC value within limits for Cr 267.716  Recovery = 96.54%
Cu 324.752†           151736.6      482.87 ug/L         2.072      482.87 ppb          2.072   0.43%
   QC value within limits for Cu 324.752  Recovery = 96.57%
Fe 238.204 Radial†      1288.6      5118.7 ug/L        50.92      5118.7 ppb         50.92   0.99%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.37%
K 766.490 Radial†      22459.1      4865.7 ug/L        73.36      4865.7 ppb         73.36   1.51%
   QC value within limits for K 766.490 Radial  Recovery = 97.31%
Mg 279.077 IEC†          226.2      5231.8 ug/L        65.40      5231.8 ppb         65.40   1.25%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.64%
Mn 257.610†           499871.8      482.77 ug/L         2.148      482.77 ppb          2.148   0.45%
   QC value within limits for Mn 257.610  Recovery = 96.55%
Mo 202.031†             7789.5      491.31 ug/L         4.258      491.31 ppb          4.258   0.87%
   QC value within limits for Mo 202.031  Recovery = 98.26%
Na 589.592 Radial†    170184.7       10226 ug/L       169.7        10226 ppb        169.7   1.66%
   QC value within limits for Na 589.592 Radial  Recovery = 102.26%
Ni 231.604†            20017.9      479.18 ug/L         3.955      479.18 ppb          3.955   0.83%
   QC value within limits for Ni 231.604  Recovery = 95.84%
P 214.914†              5910.0      2325.1 ug/L        28.19      2325.1 ppb         28.19   1.21%
   QC value within limits for P 214.914  Recovery = 93.00%
Pb 220.353†             4617.5      489.74 ug/L         5.196      489.74 ppb          5.196   1.06%
   QC value within limits for Pb 220.353  Recovery = 97.95%
S 181.975 Axial†         865.7      943.42 ug/L        13.351      943.42 ppb         13.351   1.42%
   QC value within limits for S 181.975 Axial  Recovery = 94.34%
Sb 206.836†             1975.5      491.30 ug/L         3.081      491.30 ppb          3.081   0.63%
   QC value within limits for Sb 206.836  Recovery = 98.26%
Se 196.026†             1235.8      500.86 ug/L         7.400      500.86 ppb          7.400   1.48%
   QC value within limits for Se 196.026  Recovery = 100.17%
Si 251.611†            94683.6      2421.1 ug/L        11.99      2421.1 ppb         11.99   0.50%
   QC value within limits for Si 251.611  Recovery = 96.84%
Sn 189.927†             3089.7      487.25 ug/L         4.607      487.25 ppb          4.607   0.95%
   QC value within limits for Sn 189.927  Recovery = 97.45%
Sr 421.552†           173462.6      494.58 ug/L         8.173      494.58 ppb          8.173   1.65%
   QC value within limits for Sr 421.552  Recovery = 98.92%
Ti 334.940†           300914.3      484.98 ug/L         2.042      484.98 ppb          2.042   0.42%
   QC value within limits for Ti 334.940  Recovery = 97.00%
Tl 190.801†             2151.7      486.62 ug/L         3.505      486.62 ppb          3.505   0.72%
   QC value within limits for Tl 190.801  Recovery = 97.32%
U 409.014†             16519.0      490.00 ug/L         2.891      490.00 ppb          2.891   0.59%
   QC value within limits for U 409.014  Recovery = 98.00%
V 292.402†             59150.6      488.93 ug/L         2.403      488.93 ppb          2.403   0.49%
   QC value within limits for V 292.402  Recovery = 97.79%
Zn 213.857†            61388.0      478.35 ug/L         2.005      478.35 ppb          2.005   0.42%
   QC value within limits for Zn 213.857  Recovery = 95.67%
SiO2†                  94548.8      5149.2 ug/L        25.41      5149.2 ppb         25.41   0.49%
   QC value within limits for SiO2  Recovery = 96.29%
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/7/2009 09:46:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	7959.0	7959.0	104	%			09:48:39
1	Y RADIAL	7265.8	7265.8	103.6	%			09:48:39
1	Al 396.153Radial†	-55.6	12.9	11.025	ug/L	11.025	ppb	09:48:39
1	Ca 317.933Radial†	29.2	3.4	4.5908	ug/L	4.5908	ppb	09:48:59
1	Fe 238.204 Radial†	34.8	-1.2	-4.6139	ug/L	-4.6139	ppb	09:48:59
1	K 766.490 Radial†	2282.7	-50.9	-11.047	ug/L	-11.047	ppb	09:48:39
1	Mg 279.077 IEC†	3.7	0.3	6.4745	ug/L	6.4745	ppb	09:48:59
1	Na 589.592 Radial†	-353.4	202.6	12.174	ug/L	12.174	ppb	09:48:39
1	Sr 421.552†	-39.4	28.5	0.0813	ug/L	0.0813	ppb	09:48:39
1	Sc 361.383	790947.8	790947.8	100.23	%			09:49:56
1	Y 371.029	609528.1	609528.1	100.61	%			09:49:56
1	Ag 328.068†	722.4	-44.5	-0.2536	ug/L	-0.2536	ppb	09:49:56
1	As 188.979†	-37.5	2.5	0.7179	ug/L	0.7179	ppb	09:50:16
1	B 249.677†	-710.2	378.5	7.9808	ug/L	7.9808	ppb	09:49:56
1	Ba 233.527†	46.0	44.2	0.2752	ug/L	0.2752	ppb	09:50:16
1	Be 313.107†	-6099.4	356.0	0.1400	ug/L	0.1400	ppb	09:49:56
1	Cd 226.502†	-287.7	31.8	0.3598	ug/L	0.3598	ppb	09:50:16
1	Co 228.616†	-98.1	25.1	0.3752	ug/L	0.3752	ppb	09:50:16
1	Cr 267.716†	-17.2	57.1	0.7277	ug/L	0.7277	ppb	09:49:56
1	Cu 324.752†	8744.5	18.7	0.0591	ug/L	0.0591	ppb	09:49:56
1	Mn 257.610†	787.4	-66.1	-0.0645	ug/L	-0.0645	ppb	09:49:56
1	Mo 202.031†	9.8	-10.6	-0.6710	ug/L	-0.6710	ppb	09:50:16
1	Ni 231.604†	165.7	21.7	0.5195	ug/L	0.5195	ppb	09:50:16
1	P 214.914†	333.3	-19.1	-7.7461	ug/L	-7.7461	ppb	09:50:16
1	Pb 220.353†	-32.8	-13.8	-1.4565	ug/L	-1.4565	ppb	09:50:16
1	S 181.975 Axial†	95.1	-9.8	-10.713	ug/L	-10.713	ppb	09:50:16
1	Sb 206.836†	52.9	-8.1	-2.0121	ug/L	-2.0121	ppb	09:50:16
1	Se 196.026†	-33.6	3.2	1.2340	ug/L	1.2340	ppb	09:50:16
1	Si 251.611†	501.4	-215.1	-5.5097	ug/L	-5.5097	ppb	09:50:16
1	Sn 189.927†	9.2	-2.0	-0.3081	ug/L	-0.3081	ppb	09:50:16
1	Ti 334.940†	-1579.1	164.1	0.2569	ug/L	0.2569	ppb	09:49:56
1	Tl 190.801†	-47.9	29.2	6.5851	ug/L	6.5851	ppb	09:50:16
1	U 409.014†	-5536.8	582.0	17.317	ug/L	17.317	ppb	09:49:56
1	V 292.402†	-1863.1	42.9	0.3759	ug/L	0.3759	ppb	09:49:56
1	Zn 213.857†	1066.1	36.5	0.2836	ug/L	0.2836	ppb	09:50:16
1	SiO2†	545.4	-229.1	-12.502	ug/L	-12.502	ppb	09:51:12
2	Sc Radial	8014.2	8014.2	105	%			09:49:04
2	Y RADIAL	7331.0	7331.0	104.6	%			09:49:04
2	Al 396.153Radial†	-53.9	14.8	12.677	ug/L	12.677	ppb	09:49:04
2	Ca 317.933Radial†	34.2	7.9	10.775	ug/L	10.775	ppb	09:49:24
2	Fe 238.204 Radial†	34.2	-2.0	-7.9154	ug/L	-7.9154	ppb	09:49:24
2	K 766.490 Radial†	2183.3	-160.6	-34.849	ug/L	-34.849	ppb	09:49:04
2	Mg 279.077 IEC†	5.5	2.0	45.544	ug/L	45.544	ppb	09:49:24
2	Na 589.592 Radial†	-181.0	369.1	22.179	ug/L	22.179	ppb	09:49:04
2	Sr 421.552†	-6.7	59.9	0.1708	ug/L	0.1708	ppb	09:49:04
2	Sc 361.383	796793.7	796793.7	100.97	%			09:50:21
2	Y 371.029	613814.0	613814.0	101.32	%			09:50:21
2	Ag 328.068†	662.5	-109.2	-0.6091	ug/L	-0.6091	ppb	09:50:21
2	As 188.979†	-37.4	2.8	0.8169	ug/L	0.8169	ppb	09:50:41
2	B 249.677†	-735.1	359.1	7.5720	ug/L	7.5720	ppb	09:50:21
2	Ba 233.527†	24.8	22.9	0.1434	ug/L	0.1434	ppb	09:50:41
2	Be 313.107†	-6184.6	316.2	0.1247	ug/L	0.1247	ppb	09:50:21
2	Cd 226.502†	-285.5	36.1	0.4084	ug/L	0.4084	ppb	09:50:41
2	Co 228.616†	-101.2	22.7	0.3391	ug/L	0.3391	ppb	09:50:41
2	Cr 267.716†	-45.5	29.2	0.3668	ug/L	0.3668	ppb	09:50:21
2	Cu 324.752†	8828.9	38.2	0.1211	ug/L	0.1211	ppb	09:50:21
2	Mn 257.610†	777.4	-81.8	-0.0808	ug/L	-0.0808	ppb	09:50:21
2	Mo 202.031†	13.9	-6.7	-0.4198	ug/L	-0.4198	ppb	09:50:41
2	Ni 231.604†	183.3	37.9	0.9076	ug/L	0.9076	ppb	09:50:41

2	P 214.914†	334.0	-20.9	-8.4767	ug/L	-8.4767 ppb	09:50:41
2	Pb 220.353†	3.9	22.8	2.4109	ug/L	2.4109 ppb	09:50:41
2	S 181.975 Axial†	85.8	-19.7	-21.483	ug/L	-21.483 ppb	09:50:41
2	Sb 206.836†	60.1	-1.3	-0.3136	ug/L	-0.3136 ppb	09:50:41
2	Se 196.026†	-21.8	15.1	5.8923	ug/L	5.8923 ppb	09:50:41
2	Si 251.611†	511.5	-208.7	-5.3469	ug/L	-5.3469 ppb	09:50:41
2	Sn 189.927†	16.3	4.9	0.7791	ug/L	0.7791 ppb	09:50:41
2	Ti 334.940†	-1505.3	248.8	0.3895	ug/L	0.3895 ppb	09:50:21
2	Tl 190.801†	-68.2	9.5	2.1309	ug/L	2.1309 ppb	09:50:41
2	U 409.014†	-5236.6	919.8	27.372	ug/L	27.372 ppb	09:50:21
2	V 292.402†	-1848.7	70.9	0.6281	ug/L	0.6281 ppb	09:50:21
2	Zn 213.857†	1070.5	33.0	0.2525	ug/L	0.2525 ppb	09:50:41
2	SiO2†	541.8	-236.6	-12.911	ug/L	-12.911 ppb	09:51:17
3	Sc Radial	7967.7	7967.7	104	%		09:49:29
3	Y RADIAL	7260.6	7260.6	103.6	%		09:49:29
3	Al 396.153Radial†	-40.5	27.3	23.363	ug/L	23.363 ppb	09:49:29
3	Ca 317.933Radial†	30.6	4.6	6.3118	ug/L	6.3118 ppb	09:49:49
3	Fe 238.204 Radial†	33.0	-3.0	-11.729	ug/L	-11.729 ppb	09:49:49
3	K 766.490 Radial†	2128.7	-200.7	-43.560	ug/L	-43.560 ppb	09:49:29
3	Mg 279.077 IEC†	3.9	0.5	11.584	ug/L	11.584 ppb	09:49:49
3	Na 589.592 Radial†	-255.6	296.6	17.822	ug/L	17.822 ppb	09:49:29
3	Sr 421.552†	-38.7	29.2	0.0833	ug/L	0.0833 ppb	09:49:29
3	Sc 361.383	796184.7	796184.7	100.89	%		09:50:47
3	Y 371.029	613195.3	613195.3	101.22	%		09:50:47
3	Ag 328.068†	815.1	42.6	0.2088	ug/L	0.2088 ppb	09:50:47
3	As 188.979†	-38.2	2.1	0.5984	ug/L	0.5984 ppb	09:51:07
3	B 249.677†	-677.4	415.7	8.7649	ug/L	8.7649 ppb	09:50:47
3	Ba 233.527†	60.6	58.4	0.3638	ug/L	0.3638 ppb	09:51:07
3	Be 313.107†	-6192.3	303.9	0.1198	ug/L	0.1198 ppb	09:50:47
3	Cd 226.502†	-295.1	26.4	0.2992	ug/L	0.2992 ppb	09:51:07
3	Co 228.616†	-89.5	34.3	0.5134	ug/L	0.5134 ppb	09:51:07
3	Cr 267.716†	-6.8	67.5	0.8594	ug/L	0.8594 ppb	09:50:47
3	Cu 324.752†	8781.5	-2.0	-0.0070	ug/L	-0.0070 ppb	09:50:47
3	Mn 257.610†	762.1	-96.4	-0.0946	ug/L	-0.0946 ppb	09:50:47
3	Mo 202.031†	17.2	-3.3	-0.2102	ug/L	-0.2102 ppb	09:51:07
3	Ni 231.604†	151.0	6.0	0.1432	ug/L	0.1432 ppb	09:51:07
3	P 214.914†	329.8	-24.8	-10.023	ug/L	-10.023 ppb	09:51:07
3	Pb 220.353†	-16.1	3.0	0.3232	ug/L	0.3232 ppb	09:51:07
3	S 181.975 Axial†	91.2	-14.3	-15.628	ug/L	-15.628 ppb	09:51:07
3	Sb 206.836†	57.0	-4.3	-1.0712	ug/L	-1.0712 ppb	09:51:07
3	Se 196.026†	-28.2	8.8	3.4089	ug/L	3.4089 ppb	09:51:07
3	Si 251.611†	532.4	-187.6	-4.8029	ug/L	-4.8029 ppb	09:51:07
3	Sn 189.927†	14.3	3.0	0.4796	ug/L	0.4796 ppb	09:51:07
3	Ti 334.940†	-1534.0	219.2	0.3440	ug/L	0.3440 ppb	09:50:47
3	Tl 190.801†	-51.8	25.7	5.7803	ug/L	5.7803 ppb	09:51:07
3	U 409.014†	-5441.6	712.7	21.207	ug/L	21.207 ppb	09:50:47
3	V 292.402†	-1841.9	76.2	0.6616	ug/L	0.6616 ppb	09:50:47
3	Zn 213.857†	1074.2	37.5	0.2944	ug/L	0.2944 ppb	09:51:07
3	SiO2†	550.7	-227.4	-12.407	ug/L	-12.407 ppb	09:51:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	794642.1	100.69	%	0.407				0.40%
Sc Radial	7980.3	105	%	0.4				0.37%
Y 371.029	612179.1	101.05	%	0.382				0.38%
Y RADIAL	7285.8	103.9	%	0.56				0.54%
Ag 328.068†	-37.1	-0.2180	ug/L	0.41014	-0.2180	ppb	0.41014	188.17%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	18.3	15.688	ug/L	6.6973	15.688	ppb	6.6973	42.69%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.4	0.7111	ug/L	0.10942	0.7111	ppb	0.10942	15.39%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	384.4	8.1059	ug/L	0.60618	8.1059	ppb	0.60618	7.48%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	41.9	0.2608	ug/L	0.11088	0.2608	ppb	0.11088	42.52%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	325.3	0.1282	ug/L	0.01052	0.1282	ppb	0.01052	8.21%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.3	7.2257	ug/L	3.19153	7.2257	ppb	3.19153	44.17%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                31.4      0.3558 ug/L       0.05472      0.3558 ppb        0.05472  15.38%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                27.4      0.4092 ug/L       0.09198      0.4092 ppb        0.09198  22.47%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                51.3      0.6513 ug/L       0.25505      0.6513 ppb        0.25505  39.16%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                18.3      0.0577 ug/L       0.06407      0.0577 ppb        0.06407 110.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -2.0     -8.0861 ug/L       3.56062     -8.0861 ppb        3.56062  44.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -137.4     -29.819 ug/L       16.8303     -29.819 ppb        16.8303  56.44%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.9      21.201 ug/L       21.2363      21.201 ppb        21.2363 100.17%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -81.4     -0.0799 ug/L       0.01506     -0.0799 ppb        0.01506  18.84%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -6.9     -0.4337 ug/L       0.23068     -0.4337 ppb        0.23068  53.19%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        289.4      17.391 ug/L        5.0164      17.391 ppb         5.0164  28.84%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.9      0.5234 ug/L       0.38225      0.5234 ppb        0.38225  73.03%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -21.6     -8.7486 ug/L       1.16258     -8.7486 ppb        1.16258  13.29%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 4.0      0.4259 ug/L       1.93574      0.4259 ppb        1.93574 454.51%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -14.6     -15.941 ug/L        5.3916     -15.941 ppb         5.3916  33.82%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -4.5     -1.1323 ug/L       0.85087     -1.1323 ppb        0.85087  75.15%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 9.0      3.5117 ug/L       2.33083      3.5117 ppb        2.33083  66.37%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -203.8     -5.2199 ug/L       0.37014     -5.2199 ppb        0.37014   7.09%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 2.0      0.3169 ug/L       0.56154      0.3169 ppb        0.56154 177.22%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                39.2      0.1118 ug/L       0.05111      0.1118 ppb        0.05111  45.72%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               210.7      0.3301 ug/L       0.06739      0.3301 ppb        0.06739  20.41%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                21.4      4.8321 ug/L       2.37368      4.8321 ppb        2.37368  49.12%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                738.2      21.965 ug/L        5.0700      21.965 ppb         5.0700  23.08%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 63.3      0.5552 ug/L       0.15616      0.5552 ppb        0.15616  28.13%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                35.6      0.2768 ug/L       0.02175      0.2768 ppb        0.02175   7.86%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    -231.0     -12.607 ug/L        0.2678     -12.607 ppb         0.2678   2.12%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, July 14, 2009 10:01:13
Sample Description:
Method File: c:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.1393
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1230.1	1230.053	41.210	3.4
	Mg	24.0	9359.1	9359.065	124.920	1.3
	Co	58.9	32902.3	32902.250	400.686	1.2
	Rh	102.9	67477.8	67477.793	428.437	0.6
	In	114.9	88913.0	88913.039	375.261	0.4
	Pb	208.0	47408.7	47408.742	476.634	1.0
⌈>	Ba	137.9	90490.6	90490.609	728.117	0.8
⌊	Ba++	69.0	2406.9	0.027	0.000	1.5
⌈>	Ce	139.9	108163.8	108163.769	1107.155	1.0
⌊	CeO	155.9	1870.4	0.017	0.000	2.5
	Bkgd	220.0	20.9	20.900	2.702	12.9

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-1687.50	Analog Stage Voltage
900.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current AutoIens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	5.8	1852.1
Co	59	25	6.0	34771.9
In	115	25	6.8	138669.1

ICPMS#3 Instrument Tuning Report

File Name: 090714.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	575	2070	0.637
Be	9.0	9.0	2052	2070	0.632
Mg	24.0	24.0	5704	2120	0.619
Mg	25.0	25.0	5911	2050	0.662
Mg	26.0	26.0	6208	2130	0.666
Co	58.9	58.9	14195	2110	0.697
Rh	102.9	102.9	24904	2170	0.670
In	114.9	114.9	27821	2180	0.670
Ce	139.9	139.9	33905	2200	0.698
Pb	206.0	206.0	49992	2270	0.683
Pb	207.0	207.0	50269	2300	0.687
Pb	208.0	208.0	50486	2320	0.629
U	238.1	238.0	57817	2340	0.667

Report Date/Time: Tuesday, July 14, 2009 10:00:56
Page 1

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 10:32:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Blank.001

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		ug/L		20	
	B	11		ug/L		221	
>	Sc	45		ug/L		415899	
	Cr	52		ug/L		-2876	
	Cr	53		ug/L		195078	
	Mn	55		ug/L		1211	
	Ni	60		ug/L		93	
>	Ge	74		ug/L		287910	
	As	75		ug/L		1924	
	Se	77		ug/L		9769	
	Se	82		ug/L		3	
	Ag	107		ug/L		36	
	Cd	111		ug/L		13	
	Cd	114		ug/L		37	
>	In	115		ug/L		178663	
	Sb	121		ug/L		186	
	Sb	123		ug/L		172	
	Ba	135		ug/L		59	
	Ba	137		ug/L		86	
>	Lu	175		ug/L		246888	
	Tl	205		ug/L		139	
	Pb	208		ug/L		411	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Simple Linear	
B	11	Simple Linear	
Sc	45	Simple Linear	
Cr	52	Simple Linear	
Cr	53	Simple Linear	
Mn	55	Simple Linear	
Ni	60	Simple Linear	
Ge	74	Simple Linear	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	82	Simple Linear	
Ag	107	Simple Linear	
Cd	111	Simple Linear	
Cd	114	Simple Linear	
In	115	Simple Linear	
Sb	121	Simple Linear	
Sb	123	Simple Linear	
Ba	135	Simple Linear	
Ba	137	Simple Linear	
Lu	175	Simple Linear	
Tl	205	Simple Linear	
Pb	208	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 10:36:16
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Standard 1.002

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**10.000**	**ug/L**	2.148	1432	0.004
	B	11	**20.000**	**ug/L**	4.374	1764	0.004
>	Sc	45		**ug/L**		396561	396560.511
	Cr	52	**10.000**	**ug/L**	1.155	24167	0.068
	Cr	53		**ug/L**		203132	0.043
	Mn	55	**10.000**	**ug/L**	0.245	45329	0.111
	Ni	60	**10.000**	**ug/L**	1.798	7723	0.019
>	Ge	74		**ug/L**		278369	278369.020
	As	75	**10.000**	**ug/L**	6.574	9544	0.028
	Se	77		**ug/L**		9950	0.002
	Se	82	**10.000**	**ug/L**	7.104	500	0.002
	Ag	107	**10.000**	**ug/L**	1.568	31970	0.184
	Cd	111	**10.000**	**ug/L**	0.546	7372	0.042
	Cd	114		**ug/L**		17803	0.102
>	In	115		**ug/L**		173855	173855.437
	Sb	121	**10.000**	**ug/L**	3.313	31170	0.178
	Sb	123		**ug/L**		24315	0.139
	Ba	135		**ug/L**		8918	0.037
	Ba	137	**10.000**	**ug/L**	0.765	16054	0.067
>	Lu	175		**ug/L**		236938	236938.420
	Tl	205	**10.000**	**ug/L**	0.792	88906	0.375
	Pb	208	**10.000**	**ug/L**	1.095	100916	0.424

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 10:39:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Standard 2.003

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**99.994**	**ug/L**	1.059	13719	0.035
	B	11	**200.000**	**ug/L**	2.311	15374	0.039
>	Sc	45		**ug/L**		387223	387222.809
	Cr	52	**99.956**	**ug/L**	0.938	248945	0.650
	Cr	53		**ug/L**		228458	0.121
	Mn	55	**99.921**	**ug/L**	3.328	400455	1.032
	Ni	60	**99.954**	**ug/L**	1.835	71308	0.184
>	Ge	74		**ug/L**		264902	264902.149
	As	75	**99.952**	**ug/L**	2.271	71512	0.263
	Se	77		**ug/L**		12374	0.013
	Se	82	**100.012**	**ug/L**	1.894	4795	0.018
	Ag	107	**99.972**	**ug/L**	1.041	287137	1.787
	Cd	111	**99.994**	**ug/L**	2.016	67580	0.421
	Cd	114		**ug/L**		161716	1.006
>	In	115		**ug/L**		160673	160672.643
	Sb	121	**100.046**	**ug/L**	2.340	300375	1.869
	Sb	123		**ug/L**		235318	1.464
	Ba	135		**ug/L**		83883	0.368
	Ba	137	**99.957**	**ug/L**	0.542	147237	0.646
>	Lu	175		**ug/L**		227711	227710.841
	Tl	205	**99.964**	**ug/L**	0.806	822932	3.614
	Pb	208	**99.972**	**ug/L**	0.882	940063	4.127

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 10:43:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 1.004

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.805**	**ug/L**	1.066	6935	0.018
	B	11	**105.317**	**ug/L**	1.507	8139	0.021
>	Sc	45		**ug/L**		384692	384692.492
	Cr	52	**51.335**	**ug/L**	0.731	125729	0.334
	Cr	53		**ug/L**		214985	0.090
	Mn	55	**48.822**	**ug/L**	0.948	195022	0.504
	Ni	60	**53.061**	**ug/L**	1.141	37652	0.098
>	Ge	74		**ug/L**		263745	263745.016
	As	75	**49.437**	**ug/L**	0.441	36105	0.130
	Se	77		**ug/L**		10519	0.006
	Se	82	**49.415**	**ug/L**	3.575	2360	0.009
	Ag	107	**50.085**	**ug/L**	0.949	145071	0.895
	Cd	111	**52.391**	**ug/L**	1.863	35713	0.220
	Cd	114		**ug/L**		85381	0.527
>	In	115		**ug/L**		162004	162004.486
	Sb	121	**48.073**	**ug/L**	0.990	145652	0.898
	Sb	123		**ug/L**		113715	0.701
	Ba	135		**ug/L**		41959	0.187
	Ba	137	**51.094**	**ug/L**	1.992	73982	0.330
>	Lu	175		**ug/L**		223754	223754.006
	Tl	205	**50.218**	**ug/L**	1.615	406276	1.815
	Pb	208	**51.320**	**ug/L**	1.088	474348	2.118

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.609				
	B	11	105.317				
>	Sc	45		92.5			
	Cr	52	102.670				
	Cr	53					
	Mn	55	97.644				
	Ni	60	106.122				
>	Ge	74		91.6			
	As	75	98.873				
	Se	77					
	Se	82	98.830				
	Ag	107	100.171				
	Cd	111	104.781				
	Cd	114					
>	In	115		90.7			
	Sb	121	96.146				
	Sb	123					
	Ba	135					
	Ba	137	102.188				
>	Lu	175		90.6			
	Tl	205	100.436				
	Pb	208	102.640				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 10:47:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 2.005

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.022**	**ug/L**	164.363	24	0.000
	B	11	**3.178**	**ug/L**	32.360	485	0.001
>	Sc	45		**ug/L**		426009	426008.630
	Cr	52	**-0.294**	**ug/L**	105.001	-3689	-0.002
	Cr	53		**ug/L**		197185	0.001
	Mn	55	**-0.006**	**ug/L**	726.887	1192	-0.000
	Ni	60	**0.005**	**ug/L**	430.166	98	0.000
>	Ge	74		**ug/L**		271130	271129.740
	As	75	**-0.329**	**ug/L**	162.020	1577	-0.001
	Se	77		**ug/L**		8937	-0.001
	Se	82	**-0.391**	**ug/L**	88.021	-17	-0.000
	Ag	107	**0.012**	**ug/L**	39.228	69	0.000
	Cd	111	**-0.002**	**ug/L**	250.645	10	-0.000
	Cd	114		**ug/L**		47	0.000
>	In	115		**ug/L**		164685	164685.044
	Sb	121	**0.738**	**ug/L**	7.419	2442	0.014
	Sb	123		**ug/L**		1926	0.011
	Ba	135		**ug/L**		59	0.000
	Ba	137	**0.001**	**ug/L**	398.291	81	0.000
>	Lu	175		**ug/L**		228511	228510.848
	Tl	205	**0.171**	**ug/L**	13.895	1539	0.006
	Pb	208	**0.013**	**ug/L**	25.851	506	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		102.4			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.2			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.2			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		92.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 10:50:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 3.006

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.509**	**ug/L**	2.329	87	0.000
	B	11	**16.114**	**ug/L**	1.447	1406	0.003
>	Sc	45		**ug/L**		381407	381406.622
	Cr	52	**9.960**	**ug/L**	1.145	22057	0.065
	Cr	53		**ug/L**		199727	0.054
	Mn	55	**5.410**	**ug/L**	3.405	22407	0.056
	Ni	60	**2.083**	**ug/L**	5.155	1547	0.004
>	Ge	74		**ug/L**		268733	268733.206
	As	75	**5.455**	**ug/L**	10.166	5658	0.014
	Se	77		**ug/L**		9240	0.000
	Se	82	**5.230**	**ug/L**	1.216	257	0.001
	Ag	107	**1.034**	**ug/L**	2.475	3159	0.018
	Cd	111	**0.999**	**ug/L**	3.922	722	0.004
	Cd	114		**ug/L**		1732	0.010
>	In	115		**ug/L**		169050	169049.759
	Sb	121	**3.027**	**ug/L**	2.386	9736	0.057
	Sb	123		**ug/L**		7470	0.043
	Ba	135		**ug/L**		1765	0.007
	Ba	137	**1.974**	**ug/L**	2.131	3030	0.013
>	Lu	175		**ug/L**		231160	231160.227
	Tl	205	**1.037**	**ug/L**	2.605	8800	0.038
	Pb	208	**2.025**	**ug/L**	0.839	19706	0.084

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.768				
	B	11	107.429				
>	Sc	45			91.7		
	Cr	52	99.599				
	Cr	53					
	Mn	55	108.206				
	Ni	60	104.159				
>	Ge	74			93.3		
	As	75	109.092				
	Se	77					
	Se	82	104.590				
	Ag	107	103.432				
	Cd	111	99.856				
	Cd	114					
>	In	115			94.6		
	Sb	121	100.907				
	Sb	123					
	Ba	135					
	Ba	137	98.677				
>	Lu	175			93.6		
	Tl	205	103.746				
	Pb	208	101.245				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 10:54:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 4.007

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.093**	**ug/L**	75.551	29	0.000
	B	11	**2.588**	**ug/L**	19.089	364	0.001
>	Sc	45		**ug/L**		351348	351348.023
	Cr	52	**4.606**	**ug/L**	4.966	8093	0.030
	Cr	53		**ug/L**		185269	0.058
	Mn	55	**5.887**	**ug/L**	0.561	22379	0.061
	Ni	60	**2.515**	**ug/L**	2.491	1705	0.005
>	Ge	74		**ug/L**		243437	243437.056
	As	75	**0.033**	**ug/L**	2592.830	1647	0.000
	Se	77		**ug/L**		8625	0.001
	Se	82	**-0.627**	**ug/L**	44.435	-25	-0.000
	Ag	107	**0.066**	**ug/L**	3.015	199	0.001
	Cd	111	**0.467**	**ug/L**	10.990	292	0.002
	Cd	114		**ug/L**		3493	0.024
>	In	115		**ug/L**		143661	143661.060
	Sb	121	**0.396**	**ug/L**	13.150	1212	0.007
	Sb	123		**ug/L**		947	0.006
	Ba	135		**ug/L**		577	0.002
	Ba	137	**0.632**	**ug/L**	3.792	946	0.004
>	Lu	175		**ug/L**		213459	213459.094
	Tl	205	**0.056**	**ug/L**	7.708	551	0.002
	Pb	208	**0.170**	**ug/L**	1.712	1851	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			84.5		
	Cr	52	124.478				
	Cr	53					
	Mn	55	101.505				
	Ni	60	93.133				
>	Ge	74			84.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111	116.696				
	Cd	114					
>	In	115			80.4		
	Sb	121	395.564				
	Sb	123					
	Ba	135					
	Ba	137	94.288				
>	Lu	175			86.5		
	Tl	205					
	Pb	208	84.898				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 10:58:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 5.008

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**20.399**	**ug/L**	1.663	2585	0.007
	B	11	**21.869**	**ug/L**	2.578	1712	0.004
>	Sc	45		**ug/L**		355787	355786.573
	Cr	52	**24.639**	**ug/L**	1.731	54538	0.160
	Cr	53		**ug/L**		192388	0.072
	Mn	55	**25.815**	**ug/L**	2.052	95842	0.267
	Ni	60	**21.754**	**ug/L**	0.452	14324	0.040
>	Ge	74		**ug/L**		243260	243259.779
	As	75	**21.340**	**ug/L**	2.259	15299	0.056
	Se	77		**ug/L**		9414	0.005
	Se	82	**21.127**	**ug/L**	2.951	932	0.004
	Ag	107	**20.178**	**ug/L**	0.997	52262	0.361
	Cd	111	**20.663**	**ug/L**	0.830	12597	0.087
	Cd	114		**ug/L**		32538	0.224
>	In	115		**ug/L**		144819	144818.886
	Sb	121	**21.198**	**ug/L**	1.971	57493	0.396
	Sb	123		**ug/L**		45120	0.311
	Ba	135		**ug/L**		15804	0.075
	Ba	137	**20.535**	**ug/L**	0.514	28110	0.133
>	Lu	175		**ug/L**		211178	211177.551
	Tl	205	**19.439**	**ug/L**	0.917	148513	0.703
	Pb	208	**20.285**	**ug/L**	0.319	177177	0.837

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.996				
	B	11	109.343				
>	Sc	45			85.5		
	Cr	52	103.962				
	Cr	53					
	Mn	55	100.057				
	Ni	60	95.834				
>	Ge	74			84.5		
	As	75	106.699				
	Se	77					
	Se	82	105.635				
	Ag	107	100.890				
	Cd	111	101.289				
	Cd	114					
>	In	115			81.1		
	Sb	121	105.463				
	Sb	123					
	Ba	135					
	Ba	137	99.349				
>	Lu	175			85.5		
	Tl	205	97.194				
	Pb	208	100.420				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:01:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.009

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.247**	**ug/L**	2.150	6733	0.018
	B	11	**103.252**	**ug/L**	3.469	7836	0.020
>	Sc	45		**ug/L**		377598	377598.236
	Cr	52	**51.459**	**ug/L**	0.825	123726	0.335
	Cr	53		**ug/L**		206048	0.077
	Mn	55	**52.050**	**ug/L**	0.812	204012	0.537
	Ni	60	**51.752**	**ug/L**	1.004	36052	0.095
>	Ge	74		**ug/L**		264018	264017.641
	As	75	**49.827**	**ug/L**	1.501	36413	0.131
	Se	77		**ug/L**		10100	0.004
	Se	82	**50.241**	**ug/L**	4.489	2402	0.009
	Ag	107	**51.110**	**ug/L**	0.445	149008	0.914
	Cd	111	**49.953**	**ug/L**	2.196	34273	0.210
	Cd	114		**ug/L**		82796	0.508
>	In	115		**ug/L**		163063	163062.963
	Sb	121	**49.697**	**ug/L**	2.238	151536	0.928
	Sb	123		**ug/L**		119015	0.729
	Ba	135		**ug/L**		42911	0.190
	Ba	137	**51.537**	**ug/L**	0.707	75303	0.333
>	Lu	175		**ug/L**		225776	225775.817
	Tl	205	**51.034**	**ug/L**	1.367	416661	1.845
	Pb	208	**51.156**	**ug/L**	0.896	477125	2.112

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	100.493				
	B	11	103.252				
>	Sc	45			90.8		
	Cr	52	102.918				
	Cr	53					
	Mn	55	104.101				
	Ni	60	103.505				
>	Ge	74			91.7		
	As	75	99.653				
	Se	77					
	Se	82	100.482				
	Ag	107	102.220				
	Cd	111	99.906				
	Cd	114					
>	In	115			91.3		
	Sb	121	99.394				
	Sb	123					
	Ba	135					
	Ba	137	103.075				
>	Lu	175			91.4		
	Tl	205	102.069				
	Pb	208	102.312				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 11:05:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.010

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.013**	ug/L	301.991	20	0.000
	B	11	**2.817**	ug/L	22.420	407	0.001
>	Sc	45		ug/L		377185	377184.956
	Cr	52	**-0.408**	ug/L	58.303	-3590	-0.003
	Cr	53		ug/L		185845	0.025
	Mn	55	**0.030**	ug/L	103.317	1210	0.000
	Ni	60	**0.022**	ug/L	54.529	99	0.000
>	Ge	74		ug/L		269129	269128.915
	As	75	**0.387**	ug/L	56.071	2071	0.001
	Se	77		ug/L		8218	-0.003
	Se	82	**-0.199**	ug/L	216.699	-7	-0.000
	Ag	107	**0.012**	ug/L	58.396	71	0.000
	Cd	111	**0.016**	ug/L	42.543	23	0.000
	Cd	114		ug/L		52	0.000
>	In	115		ug/L		169437	169437.099
	Sb	121	**0.392**	ug/L	12.616	1413	0.007
	Sb	123		ug/L		1134	0.006
	Ba	135		ug/L		59	0.000
	Ba	137	**0.004**	ug/L	249.461	87	0.000
>	Lu	175		ug/L		231537	231537.082
	Tl	205	**0.188**	ug/L	19.937	1694	0.007
	Pb	208	**0.014**	ug/L	14.713	516	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			90.7		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			93.5		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.8		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			93.8		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:35:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.018

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**48.105**	**ug/L**	3.520	6430	0.017
	B	11	**92.218**	**ug/L**	3.573	7002	0.018
>	Sc	45		**ug/L**		376681	376680.729
	Cr	52	**52.885**	**ug/L**	2.086	126901	0.344
	Cr	53		**ug/L**		185048	0.022
	Mn	55	**53.509**	**ug/L**	1.071	209174	0.552
	Ni	60	**52.848**	**ug/L**	1.480	36720	0.097
>	Ge	74		**ug/L**		276538	276537.741
	As	75	**50.257**	**ug/L**	1.850	38452	0.132
	Se	77		**ug/L**		9618	0.001
	Se	82	**49.879**	**ug/L**	2.049	2498	0.009
	Ag	107	**50.237**	**ug/L**	0.735	156776	0.898
	Cd	111	**50.381**	**ug/L**	1.726	37002	0.212
	Cd	114		**ug/L**		89438	0.512
>	In	115		**ug/L**		174547	174546.633
	Sb	121	**49.441**	**ug/L**	0.978	161382	0.924
	Sb	123		**ug/L**		126642	0.725
	Ba	135		**ug/L**		44706	0.189
	Ba	137	**51.172**	**ug/L**	1.244	78425	0.331
>	Lu	175		**ug/L**		236822	236822.296
	Tl	205	**50.760**	**ug/L**	0.913	434672	1.835
	Pb	208	**50.522**	**ug/L**	1.455	494243	2.086

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	96.210				
	B	11	92.218				
>	Sc	45			90.6		
	Cr	52	105.770				
	Cr	53					
	Mn	55	107.017				
	Ni	60	105.697				
>	Ge	74			96.0		
	As	75	100.515				
	Se	77					
	Se	82	99.757				
	Ag	107	100.473				
	Cd	111	100.763				
	Cd	114					
>	In	115			97.7		
	Sb	121	98.882				
	Sb	123					
	Ba	135					
	Ba	137	102.344				
>	Lu	175			95.9		
	Tl	205	101.520				
	Pb	208	101.044				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 11:38:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.019

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.018**	**ug/L**	43.329	21	0.000
	B	11	**2.226**	**ug/L**	4.509	368	0.000
>	Sc	45		**ug/L**		380776	380776.062
	Cr	52	**0.067**	**ug/L**	208.187	-2467	0.000
	Cr	53		**ug/L**		168900	-0.025
	Mn	55	**0.036**	**ug/L**	50.110	1251	0.000
	Ni	60	**0.005**	**ug/L**	138.036	89	0.000
>	Ge	74		**ug/L**		281751	281750.796
	As	75	**0.103**	**ug/L**	338.550	1960	0.000
	Se	77		**ug/L**		7812	-0.006
	Se	82	**0.213**	**ug/L**	183.516	13	0.000
	Ag	107	**0.008**	**ug/L**	36.161	60	0.000
	Cd	111	**-0.001**	**ug/L**	1049.401	12	-0.000
	Cd	114		**ug/L**		48	0.000
>	In	115		**ug/L**		177939	177938.883
	Sb	121	**0.392**	**ug/L**	6.661	1490	0.007
	Sb	123		**ug/L**		1135	0.005
	Ba	135		**ug/L**		52	-0.000
	Ba	137	**-0.001**	**ug/L**	160.755	84	-0.000
>	Lu	175		**ug/L**		244746	244745.658
	Tl	205	**0.175**	**ug/L**	13.302	1685	0.006
	Pb	208	**0.010**	**ug/L**	29.191	506	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		91.6			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		97.9			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.6			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.1			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:57:23
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.024

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**44.477**	**ug/L**	14.322	6329	0.016
	B	11	**86.024**	**ug/L**	13.290	6976	0.017
>	Sc	45		**ug/L**		406367	406367.152
	Cr	52	**49.478**	**ug/L**	13.695	126230	0.322
	Cr	53		**ug/L**		177205	-0.029
	Mn	55	**49.930**	**ug/L**	13.042	208092	0.515
	Ni	60	**48.881**	**ug/L**	11.895	36241	0.090
>	Ge	74		**ug/L**		275360	275359.598
	As	75	**50.199**	**ug/L**	1.074	38248	0.132
	Se	77		**ug/L**		8843	-0.002
	Se	82	**49.834**	**ug/L**	3.165	2484	0.009
	Ag	107	**50.027**	**ug/L**	1.608	155360	0.894
	Cd	111	**49.868**	**ug/L**	1.123	36448	0.210
	Cd	114		**ug/L**		88443	0.509
>	In	115		**ug/L**		173701	173701.110
	Sb	121	**48.997**	**ug/L**	1.322	159168	0.915
	Sb	123		**ug/L**		123879	0.712
	Ba	135		**ug/L**		44241	0.186
	Ba	137	**50.564**	**ug/L**	0.566	77651	0.327
>	Lu	175		**ug/L**		237288	237287.644
	Tl	205	**50.543**	**ug/L**	0.754	433651	1.827
	Pb	208	**50.112**	**ug/L**	1.456	491187	2.069

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	88.954				
	B	11	86.024				
>	Sc	45		97.7			
	Cr	52	98.955				
	Cr	53					
	Mn	55	99.861				
	Ni	60	97.763				
>	Ge	74		95.6			
	As	75	100.397				
	Se	77					
	Se	82	99.667				
	Ag	107	100.053				
	Cd	111	99.736				
	Cd	114					
>	In	115		97.2			
	Sb	121	97.994				
	Sb	123					
	Ba	135					
	Ba	137	101.128				
>	Lu	175		96.1			
	Tl	205	101.086				
	Pb	208	100.224				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Be	9CCV is out of limits (+/- 10%)
QC Std 6	B	11CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 12:01:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.025

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.016**	ug/L	153.468	20	0.000
	B	11	**2.153**	ug/L	15.319	356	0.000
>	Sc	45		ug/L		373781	373781.303
	Cr	52	**0.008**	ug/L	1397.570	-2566	0.000
	Cr	53		ug/L		163124	-0.033
	Mn	55	**0.081**	ug/L	18.413	1400	0.001
	Ni	60	**0.025**	ug/L	85.463	100	0.000
>	Ge	74		ug/L		274030	274029.756
	As	75	**-0.594**	ug/L	29.550	1400	-0.002
	Se	77		ug/L		7048	-0.008
	Se	82	**0.242**	ug/L	108.715	15	0.000
	Ag	107	**0.011**	ug/L	37.033	69	0.000
	Cd	111	**0.010**	ug/L	113.284	20	0.000
	Cd	114		ug/L		40	0.000
>	In	115		ug/L		175346	175346.490
	Sb	121	**0.383**	ug/L	2.734	1438	0.007
	Sb	123		ug/L		1109	0.005
	Ba	135		ug/L		66	0.000
	Ba	137	**0.008**	ug/L	156.791	96	0.000
>	Lu	175		ug/L		240306	240306.382
	Tl	205	**0.139**	ug/L	12.520	1343	0.005
	Pb	208	**0.014**	ug/L	35.656	540	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			89.9		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.2		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			97.3		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 12:30:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.033

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**47.943**	**ug/L**	1.932	6281	0.017
	B	11	**93.801**	**ug/L**	2.668	6977	0.018
>	Sc	45		**ug/L**		369172	369171.825
	Cr	52	**51.660**	**ug/L**	0.718	121444	0.336
	Cr	53		**ug/L**		185124	0.032
	Mn	55	**52.380**	**ug/L**	1.354	200697	0.541
	Ni	60	**51.723**	**ug/L**	1.212	35223	0.095
>	Ge	74		**ug/L**		267611	267611.111
	As	75	**50.209**	**ug/L**	0.897	37180	0.132
	Se	77		**ug/L**		8853	-0.001
	Se	82	**48.203**	**ug/L**	1.705	2336	0.009
	Ag	107	**49.543**	**ug/L**	1.226	148048	0.886
	Cd	111	**49.812**	**ug/L**	2.417	35029	0.210
	Cd	114		**ug/L**		85011	0.508
>	In	115		**ug/L**		167145	167144.782
	Sb	121	**49.536**	**ug/L**	0.618	154843	0.925
	Sb	123		**ug/L**		121349	0.725
	Ba	135		**ug/L**		42975	0.189
	Ba	137	**51.291**	**ug/L**	1.891	75471	0.332
>	Lu	175		**ug/L**		227378	227377.593
	Tl	205	**51.199**	**ug/L**	0.521	420960	1.851
	Pb	208	**50.855**	**ug/L**	1.143	477672	2.099

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	95.886				
	B	11	93.801				
>	Sc	45		88.8			
	Cr	52	103.320				
	Cr	53					
	Mn	55	104.759				
	Ni	60	103.445				
>	Ge	74		92.9			
	As	75	100.419				
	Se	77					
	Se	82	96.407				
	Ag	107	99.087				
	Cd	111	99.624				
	Cd	114					
>	In	115		93.6			
	Sb	121	99.072				
	Sb	123					
	Ba	135					
	Ba	137	102.583				
>	Lu	175		92.1			
	Tl	205	102.399				
	Pb	208	101.709				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 12:34:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.034

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.014**	**ug/L**	77.247	16	-0.000
	B	11	**1.741**	**ug/L**	31.705	325	0.000
>	Sc	45		**ug/L**		372927	372927.058
	Cr	52	**-0.048**	**ug/L**	252.076	-2696	-0.000
	Cr	53		**ug/L**		168491	-0.017
	Mn	55	**0.081**	**ug/L**	8.330	1397	0.001
	Ni	60	**0.027**	**ug/L**	76.994	102	0.000
>	Ge	74		**ug/L**		275339	275338.808
	As	75	**-0.615**	**ug/L**	34.337	1394	-0.002
	Se	77		**ug/L**		7060	-0.008
	Se	82	**0.099**	**ug/L**	144.150	8	0.000
	Ag	107	**0.008**	**ug/L**	15.403	58	0.000
	Cd	111	**-0.000**	**ug/L**	5013.281	12	-0.000
	Cd	114		**ug/L**		51	0.000
>	In	115		**ug/L**		172305	172305.231
	Sb	121	**0.357**	**ug/L**	5.437	1328	0.007
	Sb	123		**ug/L**		1077	0.005
	Ba	135		**ug/L**		60	0.000
	Ba	137	**0.002**	**ug/L**	465.255	86	0.000
>	Lu	175		**ug/L**		235172	235172.256
	Tl	205	**0.182**	**ug/L**	13.968	1679	0.007
	Pb	208	**0.011**	**ug/L**	25.911	497	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			89.7		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			96.4		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			95.3		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 13:03:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.042

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**47.878**	**ug/L**	3.213	6256	0.017
	B	11	**91.629**	**ug/L**	2.424	6802	0.018
>	Sc	45		**ug/L**		368215	368215.406
	Cr	52	**52.211**	**ug/L**	0.997	122442	0.339
	Cr	53		**ug/L**		173350	0.002
	Mn	55	**53.462**	**ug/L**	0.524	204303	0.552
	Ni	60	**51.825**	**ug/L**	1.158	35205	0.095
>	Ge	74		**ug/L**		270945	270944.703
	As	75	**49.258**	**ug/L**	1.601	36968	0.130
	Se	77		**ug/L**		8430	-0.003
	Se	82	**48.388**	**ug/L**	2.560	2373	0.009
	Ag	107	**50.203**	**ug/L**	0.157	152065	0.897
	Cd	111	**49.361**	**ug/L**	0.574	35187	0.208
	Cd	114		**ug/L**		86214	0.509
>	In	115		**ug/L**		169408	169408.056
	Sb	121	**48.935**	**ug/L**	1.564	155040	0.914
	Sb	123		**ug/L**		121721	0.718
	Ba	135		**ug/L**		43141	0.185
	Ba	137	**50.412**	**ug/L**	1.074	76076	0.326
>	Lu	175		**ug/L**		233175	233174.917
	Tl	205	**49.916**	**ug/L**	1.379	420875	1.804
	Pb	208	**50.066**	**ug/L**	0.392	482277	2.067

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	95.756				
	B	11	91.629				
>	Sc	45		88.5			
	Cr	52	104.422				
	Cr	53					
	Mn	55	106.924				
	Ni	60	103.651				
>	Ge	74		94.1			
	As	75	98.516				
	Se	77					
	Se	82	96.776				
	Ag	107	100.407				
	Cd	111	98.722				
	Cd	114					
>	In	115		94.8			
	Sb	121	97.869				
	Sb	123					
	Ba	135					
	Ba	137	100.824				
>	Lu	175		94.4			
	Tl	205	99.833				
	Pb	208	100.132				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 13:07:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.043

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.023**	ug/L	120.763	21	0.000
	B	11	**1.559**	ug/L	17.929	312	0.000
>	Sc	45		ug/L		372853	372853.080
	Cr	52	**0.022**	ug/L	701.175	-2526	0.000
	Cr	53		ug/L		158760	-0.043
	Mn	55	**0.129**	ug/L	12.551	1582	0.001
	Ni	60	**0.014**	ug/L	145.480	93	0.000
>	Ge	74		ug/L		274401	274401.442
	As	75	**-0.438**	ug/L	157.772	1519	-0.001
	Se	77		ug/L		6595	-0.010
	Se	82	**-0.132**	ug/L	188.546	-4	-0.000
	Ag	107	**0.008**	ug/L	14.136	60	0.000
	Cd	111	**-0.002**	ug/L	662.517	11	-0.000
	Cd	114		ug/L		61	0.000
>	In	115		ug/L		176528	176528.451
	Sb	121	**0.352**	ug/L	4.585	1345	0.007
	Sb	123		ug/L		1073	0.005
	Ba	135		ug/L		58	0.000
	Ba	137	**0.000**	ug/L	6539.808	84	0.000
>	Lu	175		ug/L		239566	239566.104
	Tl	205	**0.138**	ug/L	18.536	1332	0.005
	Pb	208	**0.011**	ug/L	3.944	505	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			89.6		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.3		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.8		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			97.0		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873227
Sample Date/Time: Tuesday, July 14, 2009 13:11:05
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 882019|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873227.044

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.043**	**ug/L**	137.173	23	0.000
	B	11	**0.855**	**ug/L**	15.060	247	0.000
>	Sc	45		**ug/L**		353459	353458.664
	Cr	52	**-0.667**	**ug/L**	20.755	-3979	-0.004
	Cr	53		**ug/L**		341412	0.497
	Mn	55	**0.376**	**ug/L**	4.269	2403	0.004
	Ni	60	**0.167**	**ug/L**	8.259	187	0.000
>	Ge	74		**ug/L**		274124	274123.779
	As	75	**2.215**	**ug/L**	41.918	3433	0.006
	Se	77		**ug/L**		19520	0.037
	Se	82	**0.036**	**ug/L**	522.526	4	0.000
	Ag	107	**0.003**	**ug/L**	59.095	44	0.000
	Cd	111	**0.006**	**ug/L**	318.729	16	0.000
	Cd	114		**ug/L**		31	-0.000
>	In	115		**ug/L**		170209	170208.539
	Sb	121	**0.384**	**ug/L**	13.296	1399	0.007
	Sb	123		**ug/L**		1083	0.005
	Ba	135		**ug/L**		76	0.000
	Ba	137	**0.027**	**ug/L**	26.339	123	0.000
>	Lu	175		**ug/L**		235286	235285.757
	Tl	205	**0.042**	**ug/L**	10.611	492	0.002
	Pb	208	**0.002**	**ug/L**	138.555	407	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		85.0			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		95.2			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.3			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		95.3			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873228
Sample Date/Time: Tuesday, July 14, 2009 13:14:42
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 882019|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873228.045

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.318**	**ug/L**	1.891	6241	0.018
	B	11	**95.028**	**ug/L**	0.597	6690	0.019
>	Sc	45		**ug/L**		349557	349556.582
	Cr	52	**53.292**	**ug/L**	0.832	118701	0.346
	Cr	53		**ug/L**		391361	0.651
	Mn	55	**56.690**	**ug/L**	1.610	205588	0.585
	Ni	60	**55.327**	**ug/L**	1.748	35671	0.102
>	Ge	74		**ug/L**		272839	272838.942
	As	75	**55.767**	**ug/L**	2.164	41897	0.147
	Se	77		**ug/L**		23323	0.052
	Se	82	**52.351**	**ug/L**	2.350	2586	0.009
	Ag	107	**51.680**	**ug/L**	0.734	155257	0.924
	Cd	111	**53.033**	**ug/L**	1.143	37493	0.223
	Cd	114		**ug/L**		90502	0.538
>	In	115		**ug/L**		168030	168029.720
	Sb	121	**53.127**	**ug/L**	1.466	166918	0.992
	Sb	123		**ug/L**		129518	0.770
	Ba	135		**ug/L**		44539	0.190
	Ba	137	**51.689**	**ug/L**	1.572	78332	0.334
>	Lu	175		**ug/L**		234166	234165.911
	Tl	205	**48.266**	**ug/L**	0.910	408696	1.745
	Pb	208	**52.409**	**ug/L**	0.391	506981	2.163

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		84.0			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.8			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.0			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		94.8			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232662001
Sample Date/Time: Tuesday, July 14, 2009 13:18:20
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882019|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232662001.046

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.018**	**ug/L**	124.337	21	0.000
	B	11	**10.530**	**ug/L**	16.052	970	0.002
>	Sc	45		**ug/L**		378311	378310.950
	Cr	52	**-0.702**	**ug/L**	43.535	-4274	-0.005
	Cr	53		**ug/L**		372182	0.526
	Mn	55	**0.933**	**ug/L**	16.372	4693	0.010
	Ni	60	**0.180**	**ug/L**	26.229	208	0.000
>	Ge	74		**ug/L**		274439	274438.584
	As	75	**3.722**	**ug/L**	18.206	4524	0.010
	Se	77		**ug/L**		20867	0.042
	Se	82	**-0.322**	**ug/L**	99.759	-13	-0.000
	Ag	107	**0.011**	**ug/L**	19.158	68	0.000
	Cd	111	**0.013**	**ug/L**	136.837	21	0.000
	Cd	114		**ug/L**		57	0.000
>	In	115		**ug/L**		168661	168660.840
	Sb	121	**0.268**	**ug/L**	10.877	1019	0.005
	Sb	123		**ug/L**		810	0.004
	Ba	135		**ug/L**		298	0.001
	Ba	137	**0.281**	**ug/L**	3.967	510	0.002
>	Lu	175		**ug/L**		235853	235853.110
	Tl	205	**0.294**	**ug/L**	11.348	2638	0.011
	Pb	208	**0.033**	**ug/L**	13.994	714	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			91.0		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.3		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.4		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			95.5		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873229
Sample Date/Time: Tuesday, July 14, 2009 13:21:58
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 882019|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873229.047

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.008**	**ug/L**	480.833	18	0.000
	B	11	**10.377**	**ug/L**	7.625	874	0.002
>	Sc	45		**ug/L**		341159	341159.195
	Cr	52	**-0.999**	**ug/L**	7.741	-4574	-0.006
	Cr	53		**ug/L**		368818	0.612
	Mn	55	**0.979**	**ug/L**	0.839	4442	0.010
	Ni	60	**0.104**	**ug/L**	29.091	142	0.000
>	Ge	74		**ug/L**		273784	273784.393
	As	75	**3.994**	**ug/L**	28.611	4710	0.011
	Se	77		**ug/L**		20634	0.041
	Se	82	**0.086**	**ug/L**	106.418	7	0.000
	Ag	107	**0.003**	**ug/L**	124.026	43	0.000
	Cd	111	**0.015**	**ug/L**	113.863	23	0.000
	Cd	114		**ug/L**		46	0.000
>	In	115		**ug/L**		172046	172046.050
	Sb	121	**0.203**	**ug/L**	2.380	832	0.004
	Sb	123		**ug/L**		644	0.003
	Ba	135		**ug/L**		289	0.001
	Ba	137	**0.279**	**ug/L**	5.619	511	0.002
>	Lu	175		**ug/L**		237702	237701.805
	Tl	205	**0.098**	**ug/L**	7.144	975	0.004
	Pb	208	**0.022**	**ug/L**	5.904	609	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		82.0			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		95.1			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.3			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		96.3			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873230
Sample Date/Time: Tuesday, July 14, 2009 13:25:37
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 882019|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873230.048

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**44.267**	**ug/L**	10.841	5753	0.016
	B	11	**92.318**	**ug/L**	11.425	6810	0.018
>	Sc	45		**ug/L**		369764	369763.567
	Cr	52	**50.353**	**ug/L**	11.461	117212	0.327
	Cr	53		**ug/L**		382446	0.578
	Mn	55	**52.221**	**ug/L**	12.921	198045	0.539
	Ni	60	**51.096**	**ug/L**	14.459	34390	0.094
>	Ge	74		**ug/L**		272511	272510.756
	As	75	**43.145**	**ug/L**	2.719	32793	0.114
	Se	77		**ug/L**		20604	0.042
	Se	82	**9.793**	**ug/L**	3.107	485	0.002
	Ag	107	**51.221**	**ug/L**	1.842	156688	0.916
	Cd	111	**5.263**	**ug/L**	1.897	3800	0.022
	Cd	114		**ug/L**		9060	0.053
>	In	115		**ug/L**		171095	171095.445
	Sb	121	**105.085**	**ug/L**	1.459	336031	1.963
	Sb	123		**ug/L**		264005	1.542
	Ba	135		**ug/L**		45487	0.191
	Ba	137	**51.558**	**ug/L**	1.691	79404	0.333
>	Lu	175		**ug/L**		238013	238013.111
	Tl	205	**26.324**	**ug/L**	7.464	226434	0.952
	Pb	208	**20.554**	**ug/L**	2.220	202289	0.848

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		88.9			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.7			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.8			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		96.4			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873231
Sample Date/Time: Tuesday, July 14, 2009 13:29:17
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 882019|5|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873231.049

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.016**	ug/L	341.979	19	0.000
	B	11	**3.496**	ug/L	18.722	424	0.001
>	Sc	45		ug/L		349221	349221.077
	Cr	52	**-0.592**	ug/L	30.780	-3759	-0.004
	Cr	53		ug/L		227274	0.182
	Mn	55	**0.244**	ug/L	6.435	1896	0.003
	Ni	60	**0.059**	ug/L	45.526	116	0.000
>	Ge	74		ug/L		268737	268737.258
	As	75	**1.337**	ug/L	18.492	2741	0.004
	Se	77		ug/L		10283	0.004
	Se	82	**0.108**	ug/L	127.466	8	0.000
	Ag	107	**0.007**	ug/L	22.919	58	0.000
	Cd	111	**-0.005**	ug/L	444.511	9	-0.000
	Cd	114		ug/L		34	-0.000
>	In	115		ug/L		174617	174616.594
	Sb	121	**0.164**	ug/L	17.022	716	0.003
	Sb	123		ug/L		549	0.002
	Ba	135		ug/L		92	0.000
	Ba	137	**0.035**	ug/L	18.283	137	0.000
>	Lu	175		ug/L		239663	239663.274
	Tl	205	**2.545**	ug/L	7.891	22192	0.092
	Pb	208	**-0.004**	ug/L	51.120	360	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			84.0		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			93.3		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			97.7		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			97.1		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 13:32:57
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.050

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**46.429**	ug/L	0.474	5775	0.016
	B	11	**89.494**	ug/L	2.052	6328	0.018
>	Sc	45		ug/L		350458	350457.681
	Cr	52	**51.792**	ug/L	2.813	115584	0.337
	Cr	53		ug/L		201269	0.105
	Mn	55	**53.544**	ug/L	0.027	194750	0.553
	Ni	60	**52.719**	ug/L	0.745	34081	0.097
>	Ge	74		ug/L		263704	263703.604
	As	75	**49.670**	ug/L	0.290	36260	0.131
	Se	77		ug/L		9630	0.003
	Se	82	**49.413**	ug/L	3.371	2360	0.009
	Ag	107	**50.163**	ug/L	1.982	150614	0.897
	Cd	111	**50.135**	ug/L	1.485	35428	0.211
	Cd	114		ug/L		85224	0.507
>	In	115		ug/L		167937	167937.151
	Sb	121	**49.390**	ug/L	0.915	155112	0.923
	Sb	123		ug/L		121113	0.720
	Ba	135		ug/L		42911	0.184
	Ba	137	**49.996**	ug/L	0.570	75248	0.323
>	Lu	175		ug/L		232559	232558.732
	Tl	205	**48.400**	ug/L	1.176	406993	1.750
	Pb	208	**49.960**	ug/L	0.888	479968	2.062

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	92.857				
	B	11	89.494				
>	Sc	45		84.3			
	Cr	52	103.583				
	Cr	53					
	Mn	55	107.087				
	Ni	60	105.439				
>	Ge	74		91.6			
	As	75	99.339				
	Se	77					
	Se	82	98.826				
	Ag	107	100.326				
	Cd	111	100.271				
	Cd	114					
>	In	115		94.0			
	Sb	121	98.780				
	Sb	123					
	Ba	135					
	Ba	137	99.992				
>	Lu	175		94.2			
	Tl	205	96.799				
	Pb	208	99.920				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	B	11CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 13:36:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.051

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.070**	**ug/L**	32.137	26	0.000
	B	11	**2.272**	**ug/L**	10.543	344	0.000
>	Sc	45		**ug/L**		352952	352951.579
	Cr	52	**-0.200**	**ug/L**	76.001	-2892	-0.001
	Cr	53		**ug/L**		172952	0.022
	Mn	55	**0.041**	**ug/L**	40.410	1176	0.000
	Ni	60	**0.018**	**ug/L**	34.398	90	0.000
>	Ge	74		**ug/L**		267631	267631.227
	As	75	**0.089**	**ug/L**	906.074	1845	0.000
	Se	77		**ug/L**		7587	-0.006
	Se	82	**-0.417**	**ug/L**	13.045	-18	-0.000
	Ag	107	**0.009**	**ug/L**	36.432	60	0.000
	Cd	111	**0.008**	**ug/L**	97.806	18	0.000
	Cd	114		**ug/L**		43	0.000
>	In	115		**ug/L**		169983	169982.559
	Sb	121	**0.382**	**ug/L**	5.458	1389	0.007
	Sb	123		**ug/L**		1081	0.005
	Ba	135		**ug/L**		55	-0.000
	Ba	137	**-0.000**	**ug/L**	2524.961	83	-0.000
>	Lu	175		**ug/L**		239218	239218.285
	Tl	205	**1.379**	**ug/L**	1.757	12056	0.050
	Pb	208	**0.011**	**ug/L**	47.965	508	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		84.9			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		93.0			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.1			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		96.9			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

Analysis Begun

Logged In Analyst: Administrator
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: S10

Sample Information File: C:\data-AA\Administrator\Sample Information\070609W1.sif
Batch ID:
Results Data Set: 070609W1
Results Library: C:\data-AA\Administrator\Results\Results.mdb

Method Loaded
Method Name: WATER
Method Last Saved: 7/1/2009 13:54:20
Method Description: 7470A, 245.2, ILM04 ANALYST JXL1

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib Blank
Date Collected: 7/6/2009 09:05:36
Analyst:
Data Type: Original

Replicate Data: Calib Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	0.0003	0.0001	09:06:38	Yes
2		[0.00]	0.0002	0.0006	0.0002	09:07:13	Yes
Mean:		[0.00]	0.0001				
SD:		0.00	0.0000				
%RSD:		0.00	15.54				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: S0.2
Date Collected: 7/6/2009 09:07:32
Analyst:
Data Type: Original

Replicate Data: S0.2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0026	0.0134	0.0028	09:08:33	Yes
2		[0.2]	0.0026	0.0131	0.0027	09:09:07	Yes
Mean:		[0.2]	0.0026				
SD:		0.0	0.0000				
%RSD:		0.0	1.19				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.01312 Intercept: 0.00000

Sequence No.: 3
Autosampler Location: 3
Sample ID: S0.5
Date Collected: 7/6/2009 09:09:26
Analyst:
Data Type: Original

Replicate Data: S0.5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0066	0.0330	0.0067	09:10:27	Yes
2		[0.5]	0.0066	0.0328	0.0067	09:11:02	Yes
Mean:		[0.5]	0.0066				
SD:		0.0	0.0000				
%RSD:		0.0	0.18				

Standard number 2 applied. [0.5]
Correlation Coef.: 1.000000 Slope: 0.01312 Intercept: -0.00000

Sequence No.: 4
Autosampler Location: 4
Sample ID: S2.0
Date Collected: 7/6/2009 09:11:22
Analyst:
Data Type: Original

Replicate Data: S2.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0262	0.1308	0.0263	09:12:23	Yes
2		[2.0]	0.0259	0.1282	0.0261	09:12:58	Yes
Mean:		[2.0]	0.0261				
SD:		0.0	0.0002				
%RSD:		0.0	0.70				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999998 Slope: 0.01302 Intercept: 0.00002

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S5.0 **Date Collected: 7/6/2009 09:13:18**
Analyst: **Data Type: Original**

Replicate Data: S5.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0631	0.3118	0.0632	09:14:20	Yes
2		[5.0]	0.0621	0.3095	0.0622	09:14:54	Yes
Mean:		[5.0]	0.0626				
SD:		0.0	0.0007				
%RSD:		0.0	1.09				

Standard number 4 applied. [5.0]
Correlation Coef.: 0.999865 Slope: 0.01251 Intercept: 0.00029

Sequence No.: 6 **Autosampler Location: 6**
Sample ID: S10.0 **Date Collected: 7/6/2009 09:15:15**
Analyst: **Data Type: Original**

Replicate Data: S10.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1247	0.6277	0.1249	09:16:15	Yes
2		[10.0]	0.1242	0.6137	0.1244	09:16:49	Yes
Mean:		[10.0]	0.1245				
SD:		0.0	0.0004				
%RSD:		0.0	0.31				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999962 Slope: 0.01243 Intercept: 0.00039

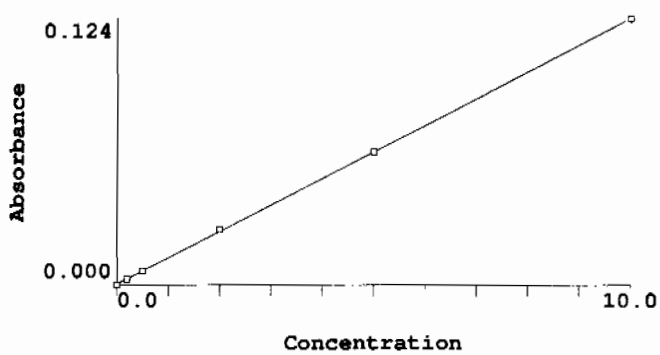

Calibration data for Hg 253.7 **Equation: Linear, Calculated Intercept**

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	-0.031	0.00	15.5
S0.2	0.0026	0.2	0.180	0.00	1.2
S0.5	0.0066	0.5	0.497	0.00	0.2
S2.0	0.0261	2.0	2.065	0.00	0.7

S5.0	0.0626	5.0	5.004	0.00	1.1
S10.0	0.1245	10.0	9.986	0.00	0.3

Correlation Coef.: 0.999962 Slope: 0.01243 Intercept: 0.00039

Sequence No.: 7 **Autosampler Location: 9**
Sample ID: ICV **Date Collected: 7/6/2009 09:17:08**
Analyst: **Data Type: Original**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.078	5.078	0.0635	0.3146	0.0636	09:18:09	Yes
2	5.062	5.062	0.0633	0.3133	0.0634	09:18:44	Yes
Mean:	5.070	5.070	0.0634				
SD:	0.012	0.012	0.0001				
%RSD:	0.232	0.232	0.23				

QC value within limits for Hg 253.7 Recovery = 101.40%
All analyte(s) passed QC.

Sequence No.: 8 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 7/6/2009 09:19:04**
Analyst: **Data Type: Original**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.026	-0.026	0.0001	0.0006	0.0002	09:20:05	Yes
2	-0.025	-0.025	0.0001	0.0008	0.0002	09:20:40	Yes
Mean:	-0.025	-0.025	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	3.088	3.088	12.93				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 9 **Autosampler Location: 11**
Sample ID: CRDL **Date Collected: 7/6/2009 09:21:00**
Analyst: **Data Type: Original**

Replicate Data: CRDL

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.186	0.186	0.0027	0.0140	0.0028	09:22:01	Yes
2	0.179	0.179	0.0026	0.0133	0.0028	09:22:36	Yes
Mean:	0.183	0.183	0.0027				
SD:	0.005	0.005	0.0001				
%RSD:	2.530	2.530	2.16				

QC value within limits for Hg 253.7 Recovery = 91.32%
All analyte(s) passed QC.

Sequence No.: 10 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/6/2009 09:22:56**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.023	5.023	0.0628	0.3134	0.0630	09:23:56	Yes
2	5.007	5.007	0.0626	0.3124	0.0627	09:24:31	Yes
Mean:	5.015	5.015	0.0627				
SD:	0.012	0.012	0.0001				
%RSD:	0.233	0.233	0.23				

QC value within limits for Hg 253.7 Recovery = 100.30%
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCB
Analyst:

Autosampler Location: 8
Date Collected: 7/6/2009 09:24:50
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.031	-0.031	0.0000	0.0004	0.0001	09:25:51	Yes
2	-0.028	-0.028	0.0000	0.0007	0.0002	09:26:26	Yes
Mean:	-0.029	-0.029	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	5.797	5.797	93.50				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12
Sample ID: 1201873333|882066|1
Analyst: JXL

Autosampler Location: 12
Date Collected: 7/6/2009 09:26:45
Data Type: Original

Replicate Data: 1201873333|882066|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.030	-0.030	0.0000	0.0005	0.0002	09:27:47	Yes
2	-0.029	-0.029	0.0000	0.0007	0.0002	09:28:22	Yes
Mean:	-0.029	-0.029	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	4.130	4.130	66.38				

Sequence No.: 13
Sample ID: 1201873334|882066|1
Analyst: JXL

Autosampler Location: 13
Date Collected: 7/6/2009 09:28:42
Data Type: Original

Replicate Data: 1201873334|882066|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.152	2.152	0.0271	0.1352	0.0273	09:29:44	Yes
2	2.145	2.145	0.0270	0.1348	0.0272	09:30:19	Yes
Mean:	2.149	2.149	0.0271				
SD:	0.005	0.005	0.0001				
%RSD:	0.251	0.251	0.25				

Sequence No.: 14
Sample ID: 232674001|882066|1
Analyst: JXL

Autosampler Location: 14
Date Collected: 7/6/2009 09:30:39
Data Type: Original

Replicate Data: 232674001|882066|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.026	-0.026	0.0001	0.0008	0.0002	09:31:40	Yes
2	-0.026	-0.026	0.0001	0.0008	0.0002	09:32:14	Yes
Mean:	-0.026	-0.026	0.0001				
SD:	0.000	0.000	0.0000				
%RSD:	0.533	0.533	2.79				

Sequence No.: 15
Sample ID: 1201873335|882066|1
Analyst: JXL

Autosampler Location: 15
Date Collected: 7/6/2009 09:32:33
Data Type: Original

Replicate Data: 1201873335|882066|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

Replicate Data: 1201873349|882075|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.023	-0.023	0.0001	0.0019	0.0002	09:43:06	Yes
2	-0.019	-0.019	0.0001	0.0021	0.0003	09:43:42	Yes
Mean:	-0.021	-0.021	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	10.73	10.73	22.06				

Sequence No.: 21 Autosampler Location: 21
Sample ID: 1201873350|882075|1 Date Collected: 7/6/2009 09:44:01
Analyst: JXL Data Type: Original

Replicate Data: 1201873350|882075|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.054	2.054	0.0259	0.1325	0.0261	09:45:02	Yes
2	2.040	2.040	0.0257	0.1322	0.0259	09:45:37	Yes
Mean:	2.047	2.047	0.0258				
SD:	0.010	0.010	0.0001				
%RSD:	0.469	0.469	0.46				

Sequence No.: 22 Autosampler Location: 7
Sample ID: CCV Date Collected: 7/6/2009 09:45:57
Analyst: Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.006	5.006	0.0626	0.3161	0.0627	09:46:57	Yes
2	5.033	5.033	0.0629	0.3155	0.0631	09:47:32	Yes
Mean:	5.020	5.020	0.0628				
SD:	0.019	0.019	0.0002				
%RSD:	0.374	0.374	0.37				

QC value within limits for Hg 253.7 Recovery = 100.39%
All analyte(s) passed QC.

Sequence No.: 23 Autosampler Location: 8
Sample ID: CCB Date Collected: 7/6/2009 09:47:51
Analyst: Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.030	-0.030	0.0000	0.0005	0.0002	09:48:52	Yes
2	-0.028	-0.028	0.0000	0.0007	0.0002	09:49:26	Yes
Mean:	-0.029	-0.029	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	4.643	4.643	59.71				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 24 Autosampler Location: 22
Sample ID: 232140001|882075|1 Date Collected: 7/6/2009 09:49:46
Analyst: JXL Data Type: Original

Replicate Data: 232140001|882075|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.027	-0.027	0.0000	0.0005	0.0002	09:50:47	Yes
2	-0.030	-0.030	0.0000	0.0007	0.0002	09:51:22	Yes

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.033	-0.033	-0.0000	0.0004	0.0001	10:00:27	Yes
2	-0.031	-0.031	0.0000	0.0006	0.0002	10:01:03	Yes
Mean:	-0.032	-0.032	-0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	4.740	4.740	498.21				

Sequence No.: 30 **Autosampler Location: 28**
Sample ID: 232140004|882075|1 **Date Collected: 7/6/2009 10:01:22**
Analyst: JXL **Data Type: Original**

Replicate Data: 232140004|882075|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0009	0.0002	10:02:22	Yes
2	-0.032	-0.032	-0.0000	0.0005	0.0001	10:02:57	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	5.220	5.220	186.70				

Sequence No.: 31 **Autosampler Location: 29**
Sample ID: 232140005|882075|1 **Date Collected: 7/6/2009 10:03:16**
Analyst: JXL **Data Type: Original**

Replicate Data: 232140005|882075|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.030	-0.030	0.0000	0.0007	0.0002	10:04:17	Yes
2	-0.028	-0.028	0.0000	0.0010	0.0002	10:04:52	Yes
Mean:	-0.029	-0.029	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	3.531	3.531	47.14				

Sequence No.: 32 **Autosampler Location: 30**
Sample ID: 232140006|882075|1 **Date Collected: 7/6/2009 10:05:11**
Analyst: JXL **Data Type: Original**

Replicate Data: 232140006|882075|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.024	-0.024	0.0001	0.0013	0.0002	10:06:12	Yes
2	-0.025	-0.025	0.0001	0.0013	0.0002	10:06:46	Yes
Mean:	-0.024	-0.024	0.0001				
SD:	0.000	0.000	0.0000				
%RSD:	1.812	1.812	6.31				

Sequence No.: 33 **Autosampler Location: 31**
Sample ID: 232140007|882075|1 **Date Collected: 7/6/2009 10:07:05**
Analyst: JXL **Data Type: Original**

Replicate Data: 232140007|882075|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.028	-0.028	0.0000	0.0012	0.0002	10:08:06	Yes
2	-0.026	-0.026	0.0001	0.0012	0.0002	10:08:42	Yes
Mean:	-0.027	-0.027	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	3.225	3.225	20.58				

Sequence No.: 34 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/6/2009 10:09:01**

Analyst: Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.103	5.103	0.0638	0.3208	0.0639	10:10:01	Yes
2	5.043	5.043	0.0631	0.3182	0.0632	10:10:37	Yes
Mean:	5.073	5.073	0.0634				
SD:	0.043	0.043	0.0005				
%RSD:	0.843	0.843	0.84				

QC value within limits for Hg 253.7 Recovery = 101.46%
All analyte(s) passed QC.

Sequence No.: 35 Autosampler Location: 8
Sample ID: CCB Date Collected: 7/6/2009 10:10:55
Analyst: Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.001	-0.001	0.0004	0.0046	0.0005	10:11:56	Yes
2	0.000	0.000	0.0004	0.0048	0.0005	10:12:31	Yes
Mean:	-0.001	-0.001	0.0004				
SD:	0.000	0.000	0.0000				
%RSD:	59.82	59.82	1.36				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 36 Autosampler Location: 32
Sample ID: 232143001|882075|1 Date Collected: 7/6/2009 10:12:50
Analyst: JXL Data Type: Original

Replicate Data: 232143001|882075|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.025	-0.025	0.0001	0.0012	0.0002	10:13:51	Yes
2	-0.019	-0.019	0.0002	0.0020	0.0003	10:14:26	Yes
Mean:	-0.022	-0.022	0.0001				
SD:	0.004	0.004	0.0001				
%RSD:	19.68	19.68	48.90				

Sequence No.: 37 Autosampler Location: 33
Sample ID: 232143002|882075|1 Date Collected: 7/6/2009 10:14:45
Analyst: JXL Data Type: Original

Replicate Data: 232143002|882075|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.021	0.021	0.0006	0.0039	0.0008	10:15:47	Yes
2	-0.032	-0.032	-0.0000	0.0003	0.0001	10:16:22	Yes
Mean:	-0.006	-0.006	0.0003				
SD:	0.037	0.037	0.0005				
%RSD:	677.0	677.0	145.26				

Sequence No.: 38 Autosampler Location: 34
Sample ID: 232143003|882075|1 Date Collected: 7/6/2009 10:16:41
Analyst: JXL Data Type: Original

Replicate Data: 232143003|882075|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0010	0.0002	10:17:43	Yes

Replicate Data: 1201870987|882072|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.030	-0.030	0.0000	0.0006	0.0002	10:27:25	Yes
2	-0.030	-0.030	0.0000	0.0008	0.0002	10:28:00	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	1.299	1.299	27.68				

==========

Sequence No.: 44 **Autosampler Location: 40**
Sample ID: 1201873343|882072|1 **Date Collected: 7/6/2009 10:28:19**
Analyst: JXL **Data Type: Original**

Replicate Data: 1201873343|882072|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0009	0.0002	10:29:20	Yes
2	0.003	0.003	0.0004	0.0034	0.0006	10:29:55	Yes
Mean:	-0.013	-0.013	0.0002				
SD:	0.022	0.022	0.0003				
%RSD:	171.3	171.3	123.21				

==========

Sequence No.: 45 **Autosampler Location: 41**
Sample ID: 1201873344|882072|1 **Date Collected: 7/6/2009 10:30:15**
Analyst: JXL **Data Type: Original**

Replicate Data: 1201873344|882072|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.168	2.168	0.0273	0.1369	0.0275	10:31:16	Yes
2	2.169	2.169	0.0273	0.1364	0.0275	10:31:50	Yes
Mean:	2.168	2.168	0.0273				
SD:	0.001	0.001	0.0000				
%RSD:	0.043	0.043	0.04				

==========

Sequence No.: 46 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/6/2009 10:32:10**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.131	5.131	0.0641	0.3209	0.0643	10:33:11	Yes
2	5.113	5.113	0.0639	0.3209	0.0641	10:33:46	Yes
Mean:	5.122	5.122	0.0640				
SD:	0.012	0.012	0.0002				
%RSD:	0.238	0.238	0.24				

QC value within limits for Hg 253.7 Recovery = 102.44%
All analyte(s) passed QC.

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Sequence No.: 47 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/6/2009 10:34:04**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.030	-0.030	0.0000	0.0005	0.0002	10:35:05	Yes
2	-0.028	-0.028	0.0000	0.0010	0.0002	10:35:41	Yes
Mean:	-0.029	-0.029	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	6.027	6.027	72.01				

QC value within limits for Hg 253.7 Recovery = Not calculated

Replicate Data: 232138007|882072|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.028	-0.028	0.0000	0.0005	0.0002	10:54:23	Yes
2	-0.032	-0.032	-0.0000	0.0003	0.0001	10:54:59	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	9.045	9.045	216.70				

Sequence No.: 58
Sample ID: CCV
Analyst:
Autosampler Location: 7
Date Collected: 7/6/2009 10:55:18
Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.163	5.163	0.0646	0.3259	0.0647	10:56:19	Yes
2	5.134	5.134	0.0642	0.3225	0.0643	10:56:54	Yes
Mean:	5.149	5.149	0.0644				
SD:	0.021	0.021	0.0003				
%RSD:	0.408	0.408	0.41				

QC value within limits for Hg 253.7 Recovery = 102.97%
All analyte(s) passed QC.

Sequence No.: 59
Sample ID: CCB
Analyst:
Autosampler Location: 8
Date Collected: 7/6/2009 10:57:13
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.004	-0.004	0.0003	0.0031	0.0005	10:58:14	Yes
2	-0.031	-0.031	0.0000	0.0003	0.0001	10:58:49	Yes
Mean:	-0.018	-0.018	0.0002				
SD:	0.019	0.019	0.0002				
%RSD:	108.9	108.9	139.71				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 60
Sample ID: 1201873355|882078|1
Analyst: JXL
Autosampler Location: 52
Date Collected: 7/6/2009 10:59:08
Data Type: Original

Replicate Data: 1201873355|882078|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.024	-0.024	0.0001	0.0010	0.0002	11:00:09	Yes
2	-0.024	-0.024	0.0001	0.0012	0.0002	11:00:44	Yes
Mean:	-0.024	-0.024	0.0001				
SD:	0.000	0.000	0.0000				
%RSD:	0.706	0.706	2.45				

Sequence No.: 61
Sample ID: 1201873356|882078|1
Analyst: JXL
Autosampler Location: 53
Date Collected: 7/6/2009 11:01:03
Data Type: Original

Replicate Data: 1201873356|882078|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.224	2.224	0.0280	0.1411	0.0282	11:02:04	Yes
2	2.212	2.212	0.0279	0.1396	0.0280	11:02:40	Yes
Mean:	2.218	2.218	0.0280				

SD:	0.009	0.009	0.0001
%RSD:	0.384	0.384	0.38

Sequence No.: 62
Sample ID: 232662001|882078|1
Analyst: JXL
Autosampler Location: 54
Date Collected: 7/6/2009 11:02:59
Data Type: Original

Replicate Data: 232662001|882078|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.010	-0.010	0.0003	-0.0023	0.0004	11:04:01	Yes
2	-0.041	-0.041	-0.0001	-0.0014	0.0000	11:04:35	Yes
Mean:	-0.025	-0.025	0.0001				
SD:	0.021	0.021	0.0003				
%RSD:	84.65	84.65	364.98				

Sequence No.: 63
Sample ID: 1201873357|882078|1
Analyst: JXL
Autosampler Location: 55
Date Collected: 7/6/2009 11:04:55
Data Type: Original

Replicate Data: 1201873357|882078|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.027	-0.027	0.0000	0.0010	0.0002	11:05:57	Yes
2	-0.028	-0.028	0.0000	0.0010	0.0002	11:06:31	Yes
Mean:	-0.028	-0.028	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.831	0.831	6.37				

Sequence No.: 64
Sample ID: 1201873358|882078|1
Analyst: JXL
Autosampler Location: 56
Date Collected: 7/6/2009 11:06:51
Data Type: Original

Replicate Data: 1201873358|882078|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.182	2.182	0.0275	0.1384	0.0276	11:07:52	Yes
2	2.159	2.159	0.0272	0.1370	0.0274	11:08:27	Yes
Mean:	2.171	2.171	0.0274				
SD:	0.016	0.016	0.0002				
%RSD:	0.739	0.739	0.73				

Sequence No.: 65
Sample ID: 1201873359|882078|5
Analyst: JXL
Autosampler Location: 57
Date Collected: 7/6/2009 11:08:46
Data Type: Original

Replicate Data: 1201873359|882078|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.021	-0.021	0.0001	-0.0056	0.0003	11:09:48	Yes
2	-0.033	-0.033	-0.0000	-0.0000	0.0001	11:10:22	Yes
Mean:	-0.027	-0.027	0.0000				
SD:	0.008	0.008	0.0001				
%RSD:	30.95	30.95	216.96				

Sequence No.: 66
Sample ID: 1201869503|880457|1
Analyst: JXL
Autosampler Location: 58
Date Collected: 7/6/2009 11:10:42
Data Type: Original

Replicate Data: 1201869503|880457|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.030	-0.030	0.0000	0.0006	0.0002	11:11:43	Yes
2	-0.028	-0.028	0.0000	0.0007	0.0002	11:12:18	Yes
Mean:	-0.029	-0.029	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	5.241	5.241	70.68				

Sequence No.: 67 **Autosampler Location: 59**
Sample ID: 1201869504|880457|1 **Date Collected: 7/6/2009 11:12:38**
Analyst: JXL **Data Type: Original**

Replicate Data: 1201869504|880457|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.155	2.155	0.0272	0.1342	0.0273	11:13:39	Yes
2	2.140	2.140	0.0270	0.1351	0.0271	11:14:14	Yes
Mean:	2.148	2.148	0.0271				
SD:	0.010	0.010	0.0001				
%RSD:	0.470	0.470	0.46				

Sequence No.: 68 **Autosampler Location: 60**
Sample ID: 232372001|880457|1 **Date Collected: 7/6/2009 11:14:34**
Analyst: JXL **Data Type: Original**

Replicate Data: 232372001|880457|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.039	-0.039	-0.0001	-0.0000	0.0000	11:15:36	Yes
2	-0.032	-0.032	-0.0000	0.0009	0.0001	11:16:10	Yes
Mean:	-0.035	-0.035	-0.0001				
SD:	0.005	0.005	0.0001				
%RSD:	13.23	13.23	111.78				

Sequence No.: 69 **Autosampler Location: 61**
Sample ID: 232372002|880457|1 **Date Collected: 7/6/2009 11:16:30**
Analyst: JXL **Data Type: Original**

Replicate Data: 232372002|880457|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.023	-0.023	0.0001	0.0016	0.0002	11:17:32	Yes
2	-0.029	-0.029	0.0000	0.0007	0.0002	11:18:07	Yes
Mean:	-0.026	-0.026	0.0001				
SD:	0.004	0.004	0.0001				
%RSD:	16.73	16.73	89.40				

Sequence No.: 70 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/6/2009 11:18:27**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.168	5.168	0.0646	0.3217	0.0648	11:19:28	Yes
2	5.182	5.182	0.0648	0.3208	0.0649	11:20:03	Yes
Mean:	5.175	5.175	0.0647				
SD:	0.010	0.010	0.0001				
%RSD:	0.195	0.195	0.19				

QC value within limits for Hg 253.7 Recovery = 103.50%
All analyte(s) passed QC.

Sequence No.: 71 **Autosampler Location: 8**

Sample ID: CCB
Analyst:
Date Collected: 7/6/2009 11:20:21
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.028	-0.028	0.0000	0.0011	0.0002	11:21:22	Yes
2	-0.035	-0.035	-0.0000	-0.0002	0.0001	11:21:57	Yes
Mean:	-0.031	-0.031	-0.0000				
SD:	0.005	0.005	0.0001				
%RSD:	16.65	16.65	>999.9%				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 72
Sample ID: 232372003|880457|1
Analyst: JXL
Autosampler Location: 62
Date Collected: 7/6/2009 11:22:16
Data Type: Original

Replicate Data: 232372003|880457|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0008	0.0002	11:23:18	Yes
2	-0.023	-0.023	0.0001	0.0012	0.0002	11:23:53	Yes
Mean:	-0.026	-0.026	0.0001				
SD:	0.004	0.004	0.0001				
%RSD:	17.03	17.03	85.74				

Sequence No.: 73
Sample ID: 232372004|880457|1
Analyst: JXL
Autosampler Location: 63
Date Collected: 7/6/2009 11:24:13
Data Type: Original

Replicate Data: 232372004|880457|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.008	-0.008	0.0003	-0.0001	0.0004	11:25:14	Yes
2	-0.027	-0.027	0.0001	0.0011	0.0002	11:25:49	Yes
Mean:	-0.018	-0.018	0.0002				
SD:	0.013	0.013	0.0002				
%RSD:	75.60	75.60	96.39				

Sequence No.: 74
Sample ID: 232372005|880457|1
Analyst: JXL
Autosampler Location: 64
Date Collected: 7/6/2009 11:26:09
Data Type: Original

Replicate Data: 232372005|880457|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0010	0.0002	11:27:10	Yes
2	-0.031	-0.031	0.0000	-0.0017	0.0001	11:27:45	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	5.613	5.613	112.49				

Sequence No.: 75
Sample ID: 232372006|880457|1
Analyst: JXL
Autosampler Location: 65
Date Collected: 7/6/2009 11:28:04
Data Type: Original

Replicate Data: 232372006|880457|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0007	0.0002	11:29:06	Yes
2	-0.032	-0.032	-0.0000	0.0006	0.0001	11:29:41	Yes

Miscellaneous

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 882077

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873356	WHG090702-13	.2	mL
MS	1201873358	WHG090702-13	.2	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873355		SW846 7470A Prep	02-JUL-2009 09:15	20 mL	20 mL	1	WATER
LCS	1201873356		SW846 7470A Prep	02-JUL-2009 09:15	20 mL	20 mL	1	WATER
SAMPLE	232662001		SW846 7470A Prep	02-JUL-2009 09:15	20 mL	20 mL	1	WATER
DUP	1201873357	232662001	SW846 7470A Prep	02-JUL-2009 09:15	20 mL	20 mL	1	WATER
MS	1201873358	232662001	SW846 7470A Prep	02-JUL-2009 09:15	20 mL	20 mL	1	WATER
SDILT	1201873359	232662001	SW846 7470A Prep	02-JUL-2009 09:15	20 mL	20 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143839	1 mL	Sulfuric Acid, Concentrated
1136798-1	.5 mL	NITRIC ACID
1125381-C	1.5 mL	5% Potassium Persulfate
1144332-C	3 mL	5% KMnO4 solution
1144356-C	1 mL	Hg reducing agent
WHG090702-06	500 uL	Mercury Working 2nd Source 5.0/ICV
WHG090702-01	20 uL	Mercury Working 1st Source CAL 0.2/CRA
WHG090702-02	50 uL	Mercury Working 1st Source CAL 0.5
WHG090702-05	1 mL	Mercury Working 1st Source CAL 10.0
WHG090702-03	200 uL	Mercury Working 1st Source CAL 2.0
WHG090702-04	500 uL	Mercury Working 1st Source CAL 5.0/CCV

Comments Digestion Start Date: 02-JUL-09 09:15
Digestion End Date: 02-JUL-09 11:15

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 882018

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873228	UI090622-A	.5	mL
LCS	1201873228	UI090622-B	.5	mL
MS	1201873230	UI090612-A	.5	mL
MS	1201873230	UI090612-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873227		SW846 3005A	06-JUL-2009 08:20	50 mL	50 mL	1	WATER
LCS	1201873228		SW846 3005A	06-JUL-2009 08:20	50 mL	50 mL	1	WATER
SAMPLE	232662001		SW846 3005A	06-JUL-2009 08:20	50 mL	50 mL	1	WATER
DUP	1201873229	232662001	SW846 3005A	06-JUL-2009 08:20	50 mL	50 mL	1	WATER
MS	1201873230	232662001	SW846 3005A	06-JUL-2009 08:20	50 mL	50 mL	1	WATER
SDILT	1201873231	232662001	SW846 3005A	06-JUL-2009 08:20	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: FGA Verified by:_____

Batch: 881992

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873175	UI090622-01	.25	mL
LCS	1201873175	UI090622-06	.25	mL
MS	1201873177	UI090622-01	.25	mL
MS	1201873177	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873174		SW846 3005A	06-JUL-2009 14:00	50 mL	50 mL	1	WATER
LCS	1201873175		SW846 3005A	06-JUL-2009 14:00	50 mL	50 mL	1	WATER
SAMPLE	232662001		SW846 3005A	06-JUL-2009 14:00	50 mL	50 mL	1	WATER
DUP	1201873176	232662001	SW846 3005A	06-JUL-2009 14:00	50 mL	50 mL	1	WATER
MS	1201873177	232662001	SW846 3005A	06-JUL-2009 14:00	50 mL	50 mL	1	WATER
SDILT	1201873178	232662001	SW846 3005A	06-JUL-2009 14:00	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 711244
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
14-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3005/6020	Liquid	LANL
Batch ID:	**Sample Numbers:**		
882019	See Below		

Potentially affected work order(s)(SDG): 232662(09-2516)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201873230MS	The matrix spike recovery failed outside of the control limits for Tl due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Paul Boyd 15-JUL-09

Data Validator/Group Leader:

Paul Boyd

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Standard Logbook

Serial ID:	UI090320-41	**Opened:**	20-APR-09	**Amount :**	500 mL
Name:	TRACE CALSTD#1B SOUF	**Received:**	20-MAR-09	**Catalog Number :**	HP2270-2-500
Type:	Source Material	**Expires:**	20-APR-10	**Lot Number :**	0907201
Employee:	Helen Camello			**Solvent :**	HNO3
Supplier:	Environmental Express				
Description:	Trace Calibration Standard #1B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID:	UI090320-42	**Opened:**	04-MAY-09	**Amount :**	200 mL
Name:	SILICON	**Received:**	16-APR-09	**Catalog Number :**	HP100050-4F
Type:	Source Material	**Expires:**	04-MAY-10	**Lot Number :**	0901403
Employee:	Helen Camello			**Solvent :**	H20/tr HF
Supplier:	ENVIRNMENTAL EXPRESS				
Description:	SILICON 1000mg/L H20/tr HF				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID:	UI090413-12	**Opened:**	13-APR-09	**Amount :**	250 mL
Name:	ICP-MS ICSAB Master B	**Received:**	13-APR-09	**Catalog Number :**	160033-02
Type:	Source Material	**Expires:**	13-APR-10	**Lot Number :**	1015648
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% in 2% HNO3
Supplier:	02SI				
Description:	ICPMS ICSAB Master B				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Standard Logbook

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L

Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.17 **Opened:** 07-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 08-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Standard Logbook

Serial ID: UI090612-A **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE liquid Spike Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	4 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	.5 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	2 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	1 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	5 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090612-B **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE Liquid Spike Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Standard Logbook

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090622-A **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Standard Logbook

Serial ID: UI090622-B **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L

Analyte	Concentration	Analyte	Concentration
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Standard Logbook

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Zirconium	10 mg/L		

Serial ID: IHG090702-01 **Opened:** 02-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 02-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 03-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090702-02 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 02-JUL-09
Type: Intermediate **Expires:** 03-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090702-01 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.2CRA **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

Serial ID: WHG090702-02 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.5 **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG090702-03 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL2.0 **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Serial ID: WHG090702-04 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL5.0CCV **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090702-05 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL10.0 **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG090702-06 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORK5.0ICV **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090702-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090702-13 **Opened:** 02-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGLIQLCSMSSPIKE **Received:** 02-JUL-09
Type: Working **Expires:** 08-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury working intermediate standard for LCS/MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090707-42 **Opened:** 07-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 08-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090707-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090707-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090707-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090707-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090707-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090707-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090707-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090707-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090707-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090707-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090707-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090707-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090707-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090707-43 **Opened:** 07-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 08-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090707-44 **Opened:** 07-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1150990

Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09

Type: Working **Expires:** 08-JUL-09

Employee: Helen Camello

Supplier: o2si

Description: Trace ICP Calibration Standard 1.0ppm

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090707-45 **Opened:** 07-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1150990
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 08-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090707-46 **Opened:** 07-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1150990
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 08-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090707-47 **Opened:** 07-JUL-09 **Solvent :** 3%HCL &1%HNO3-1150990
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 08-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090714-04 **Opened:** 14-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl-1153776
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090714-04A **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS Cal Standard 10 **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090714-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090714-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090714-05 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICV **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090714-06 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS CRDL **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090714-07 **Opened:** 14-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-08 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICSAB **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1116812 **Opened:** 29-APR-09 **Lot Number :** E45475
Name: B-K2S2O8S-MER **Received:** 29-APR-09
Type: Reagent/Solvent **Expires:** 29-APR-10
Employee: Tara Griffin
Supplier: J.T BAKER
Description: Potassium Persulfate Concentrate.
Comments: None

Standard Logbook

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1125381-C **Opened:** 21-MAY-09
Name: B-K2S2O8-MER **Received:** 21-MAY-09
Type: Reagent/Solvent **Expires:** 21-NOV-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% Potassium Persulfate
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1116812	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1143839 **Opened:** 29-JUN-09 **Lot Number :** G45010
Name: B-H2SO4-MER **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 29-JUN-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Sulfuric Acid, Concentrated
Comments: None

Standard Logbook

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1150990 **Opened:** 06-JUL-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 06-JUL-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 13-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Louise Smith
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1153776 **Opened:** 13-JUL-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 13-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Standard Logbook

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817

Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08

Type: Reagent/Solvent **Expires:** 22-DEC-09

Employee: Tara Griffin

Supplier: Fisher Scientific

Description: Hydroxlyamine Hydrochloride

Comments: None

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2516-1

Sample Analysis

Sample ID	Client ID
232663001	CAMO-09-9942
232663002	CAMO-09-9941
232663003	CAMO-09-9943
232663004	CAMO-09-10030
232663005	CAMO-09-9989
1201873203	Method Blank (MB) **ICP**
1201873204	Laboratory Control Sample (LCS)
1201873207	232663001(CAMO-09-9942L) Serial Dilution (SD)
1201873205	232663001(CAMO-09-9942D) Sample Duplicate (DUP)
1201873206	232663001(CAMO-09-9942S) Matrix Spike (MS)
1201873208	232663001(CAMO-09-9942SD) Matrix Spike Duplicate (MSD)
1201873237	Method Blank (MB) **ICP-MS**
1201873238	Laboratory Control Sample (LCS)
1201873241	232663001(CAMO-09-9942L) Serial Dilution (SD)
1201873239	232663001(CAMO-09-9942D) Sample Duplicate (DUP)
1201873240	232663001(CAMO-09-9942S) Matrix Spike (MS)
1201873242	232663001(CAMO-09-9942SD) Matrix Spike Duplicate (MSD)
1201873758	Method Blank (MB) **CVAA**
1201873759	Laboratory Control Sample (LCS)
1201873765	232663001(CAMO-09-9942L) Serial Dilution (SD)
1201873760	232663001(CAMO-09-9942D) Sample Duplicate (DUP)
1201873761	232663001(CAMO-09-9942S) Matrix Spike (MS)
1201873766	232663001(CAMO-09-9942SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	882005, 882024 and 882255
Prep Batch :	882004, 882023 and 882254
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements

All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria, with the exception of thallium in CCB06. However, the samples in this SDG contain thallium at concentrations less than the amount in the CCB. Therefore, the data was not adversely affected.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232663001 (CAMO-09-9942)-ICP, CVAA and ICP-MS.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exceptions of calcium, magnesium and potassium, as indicated by the "N" qualifiers.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes, with the exception of manganese, as indicated by the "N" qualifier.

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated matrix spike duplicate (MSD) is evaluated based on acceptance criteria of 20%. The RPD between qualifying elements results in the MS and MSD were within the acceptance limits of 20%, with the exceptions of aluminum, calcium and magnesium, as indicated by the "*" qualifiers.

Duplicate Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements, with the exception of chromium, as indicated by the "*" qualifier.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D), with the exception of iron, as indicated by the "E" qualifier.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 710446. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: By Davis **Date:** 7-20-09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232663001 **BASIS:** Dry Weight **DATE COLLECTED** 26-JUN-09

CLIENT ID: CAMO-09-9942 **LEVEL:** Low **DATE RECEIVED** 01-JUL-09

MATRIX: SOIL **%SOLIDS:** 88

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2910000	ug/Kg	*	7460	21900	21900	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-36-0	Antimony	1100	ug/Kg	U	362	1100	1100	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-38-2	Arsenic	1380	ug/kg		218	1090	1090	2	MS	PRB	07/14/09 11:16	090714-2	882024
7440-39-3	Barium	38100	ug/Kg		110	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-41-7	Beryllium	750	ug/kg		21.8	109	109	2	MS	PRB	07/14/09 11:16	090714-2	882024
7440-43-9	Cadmium	549	ug/Kg	U	110	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-70-2	Calcium	643000	ug/Kg	*N	8780	27400	27400	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-47-3	Chromium	21300	ug/Kg	*	165	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-48-4	Cobalt	1660	ug/Kg		165	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-50-8	Copper	3570	ug/Kg		329	1100	1100	1	P	HSC	07/08/09 16:09	070809A-1	882005
7439-89-6	Iron	8620000	ug/Kg	E	8780	27400	27400	1	P	HSC	07/08/09 16:09	070809A-1	882005
7439-92-1	Lead	6030	ug/Kg		274	1100	1100	1	P	HSC	07/08/09 16:09	070809A-1	882005
7439-95-4	Magnesium	399000	ug/Kg	*N	9330	32900	32900	1	P	HSC	07/08/09 16:09	070809A-1	882005
7439-96-5	Manganese	223000	ug/Kg	N	219	1100	1100	1	P	HSC	07/08/09 16:09	070809A-1	882005
7439-97-6	Mercury	24.7	ug/kg		4.56	13.4	13.4	1	AV	JXL1	07/15/09 10:31	071509S1-3	882255
7440-02-0	Nickel	3450	ug/kg		109	436	436	2	MS	PRB	07/14/09 11:16	090714-2	882024
7440-09-7	Potassium	373000	ug/Kg	N	7020	27400	27400	1	P	HSC	07/08/09 16:09	070809A-1	882005
7782-49-2	Selenium	1090	ug/kg	U	545	1090	1090	2	MS	PRB	07/14/09 11:16	090714-2	882024
7440-22-4	Silver	354	ug/Kg	J	110	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-23-5	Sodium	92400	ug/Kg		7680	27400	27400	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-28-0	Thallium	115	ug/kg	J	65.5	218	218	2	MS	PRB	07/14/09 11:16	090714-2	882024
7440-62-2	Vanadium	7330	ug/Kg		110	549	549	1	P	HSC	07/08/09 16:09	070809A-1	882005
7440-66-6	Zinc	38600	ug/Kg		362	1100	1100	1	P	HSC	07/08/09 16:09	070809A-1	882005

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882005	882004	SW846 3050B	0.517	g	50	mL	07/06/09	FGA
882024	882023	SW846 3050B	0.52	g	50	mL	07/06/09	BXA1
882255	882254	SW846 7471A Prep	0.508	g	30	mL	07/15/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232663002 **BASIS:** Dry Weight **DATE COLLECTED** 26-JUN-09

CLIENT ID: CAMO-09-9941 **LEVEL:** Low **DATE RECEIVED** 01-JUL-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5500000	ug/Kg	*	7420	21800	21800	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-36-0	Antimony	1090	ug/Kg	U	360	1090	1090	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-38-2	Arsenic	1750	ug/kg		219	1100	1100	2	MS	PRB	07/14/09 11:42	090714-2	882024
7440-39-3	Barium	89400	ug/Kg		109	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-41-7	Beryllium	712	ug/kg		21.9	110	110	2	MS	PRB	07/14/09 13:40	090714-2	882024
7440-43-9	Cadmium	545	ug/Kg	U	109	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-70-2	Calcium	1460000	ug/Kg	*N	8730	27300	27300	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-47-3	Chromium	6850	ug/Kg	*	164	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-48-4	Cobalt	3160	ug/Kg		164	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-50-8	Copper	4860	ug/Kg		327	1090	1090	1	P	HSC	07/08/09 16:57	070809A-1	882005
7439-89-6	Iron	10200000	ug/Kg	E	8730	27300	27300	1	P	HSC	07/08/09 16:57	070809A-1	882005
7439-92-1	Lead	10300	ug/Kg		273	1090	1090	1	P	HSC	07/08/09 16:57	070809A-1	882005
7439-95-4	Magnesium	977000	ug/Kg	*N	9270	32700	32700	1	P	HSC	07/08/09 16:57	070809A-1	882005
7439-96-5	Manganese	346000	ug/Kg	N	218	1090	1090	1	P	HSC	07/08/09 16:57	070809A-1	882005
7439-97-6	Mercury	19.5	ug/kg		4.34	12.8	12.8	1	AV	JXL1	07/15/09 10:41	071509S1-3	882255
7440-02-0	Nickel	5930	ug/kg		110	439	439	2	MS	PRB	07/14/09 11:42	090714-2	882024
7440-09-7	Potassium	804000	ug/Kg	N	6980	27300	27300	1	P	HSC	07/08/09 16:57	070809A-1	882005
7782-49-2	Selenium	1100	ug/kg	U	549	1100	1100	2	MS	PRB	07/14/09 11:42	090714-2	882024
7440-22-4	Silver	501	ug/Kg	J	109	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-23-5	Sodium	119000	ug/Kg		7630	27300	27300	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-28-0	Thallium	152	ug/kg	J	65.8	219	219	2	MS	PRB	07/14/09 11:42	090714-2	882024
7440-62-2	Vanadium	15000	ug/Kg		109	545	545	1	P	HSC	07/08/09 16:57	070809A-1	882005
7440-66-6	Zinc	32500	ug/Kg		360	1090	1090	1	P	HSC	07/08/09 16:57	070809A-1	882005

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882005	882004	SW846 3050B	0.514	g	50	mL	07/06/09	FGA
882024	882023	SW846 3050B	0.511	g	50	mL	07/06/09	BXA1
882255	882254	SW846 7471A Prep	0.527	g	30	mL	07/15/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232663003 **BASIS:** Dry Weight **DATE COLLECTED** 26-JUN-09

CLIENT ID: CAMO-09-9943 **LEVEL:** Low **DATE RECEIVED** 01-JUL-09

MATRIX: SOIL **%SOLIDS:** 86

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2590000	ug/Kg	*	7730	22700	22700	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-36-0	Antimony	1140	ug/Kg	U	375	1140	1140	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-38-2	Arsenic	1330	ug/kg		226	1130	1130	2	MS	PRB	07/14/09 11:46	090714-2	882024
7440-39-3	Barium	32500	ug/Kg		114	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-41-7	Beryllium	679	ug/kg		22.6	113	113	2	MS	PRB	07/14/09 13:44	090714-2	882024
7440-43-9	Cadmium	568	ug/Kg	U	114	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-70-2	Calcium	497000	ug/Kg	*N	9090	28400	28400	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-47-3	Chromium	18800	ug/Kg	*	170	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-48-4	Cobalt	1150	ug/Kg		170	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-50-8	Copper	2960	ug/Kg		341	1140	1140	1	P	HSC	07/08/09 17:04	070809A-1	882005
7439-89-6	Iron	8670000	ug/Kg	E	9090	28400	28400	1	P	HSC	07/08/09 17:04	070809A-1	882005
7439-92-1	Lead	6200	ug/Kg		284	1140	1140	1	P	HSC	07/08/09 17:04	070809A-1	882005
7439-95-4	Magnesium	458000	ug/Kg	*N	9660	34100	34100	1	P	HSC	07/08/09 17:04	070809A-1	882005
7439-96-5	Manganese	176000	ug/Kg	N	227	1140	1140	1	P	HSC	07/08/09 17:04	070809A-1	882005
7439-97-6	Mercury	13.5	ug/kg		4.13	12.2	12.2	1	AV	JXL1	07/15/09 10:43	071509S1-3	882255
7440-02-0	Nickel	2600	ug/kg		113	451	451	2	MS	PRB	07/14/09 11:46	090714-2	882024
7440-09-7	Potassium	410000	ug/Kg	N	7270	28400	28400	1	P	HSC	07/08/09 17:04	070809A-1	882005
7782-49-2	Selenium	1130	ug/kg	U	564	1130	1130	2	MS	PRB	07/14/09 11:46	090714-2	882024
7440-22-4	Silver	353	ug/Kg	J	114	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-23-5	Sodium	88000	ug/Kg		7950	28400	28400	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-28-0	Thallium	226	ug/kg	U	67.7	226	226	2	MS	PRB	07/14/09 11:46	090714-2	882024
7440-62-2	Vanadium	7290	ug/Kg		114	568	568	1	P	HSC	07/08/09 17:04	070809A-1	882005
7440-66-6	Zinc	45100	ug/Kg		375	1140	1140	1	P	HSC	07/08/09 17:04	070809A-1	882005

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882005	882004	SW846 3050B	0.511	g	50	mL	07/06/09	FGA
882024	882023	SW846 3050B	0.515	g	50	mL	07/06/09	BXA1
882255	882254	SW846 7471A Prep	0.573	g	30	mL	07/15/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232663004 **BASIS:** Dry Weight **DATE COLLECTED** 26-JUN-09

CLIENT ID: CAMO-09-10030 **LEVEL:** Low **DATE RECEIVED** 01-JUL-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5110000	ug/Kg	*	7420	21800	21800	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-36-0	Antimony	1090	ug/Kg	U	360	1090	1090	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-38-2	Arsenic	1480	ug/kg		215	1070	1070	2	MS	PRB	07/14/09 11:49	090714-2	882024
7440-39-3	Barium	84000	ug/Kg		109	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-41-7	Beryllium	724	ug/kg		21.5	107	107	2	MS	PRB	07/14/09 13:47	090714-2	882024
7440-43-9	Cadmium	546	ug/Kg	U	109	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-70-2	Calcium	1420000	ug/Kg	*N	8730	27300	27300	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-47-3	Chromium	6790	ug/Kg	*	164	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-48-4	Cobalt	3750	ug/Kg		164	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-50-8	Copper	4910	ug/Kg		327	1090	1090	1	P	HSC	07/08/09 17:11	070809A-1	882005
7439-89-6	Iron	11000000	ug/Kg	E	8730	27300	27300	1	P	HSC	07/08/09 17:11	070809A-1	882005
7439-92-1	Lead	13400	ug/Kg		273	1090	1090	1	P	HSC	07/08/09 17:11	070809A-1	882005
7439-95-4	Magnesium	913000	ug/Kg	*N	9280	32700	32700	1	P	HSC	07/08/09 17:11	070809A-1	882005
7439-96-5	Manganese	402000	ug/Kg	N	218	1090	1090	1	P	HSC	07/08/09 17:11	070809A-1	882005
7439-97-6	Mercury	18.9	ug/kg		3.92	11.5	11.5	1	AV	JXL1	07/15/09 10:45	071509S1-3	882255
7440-02-0	Nickel	5030	ug/kg		107	430	430	2	MS	PRB	07/14/09 11:49	090714-2	882024
7440-09-7	Potassium	767000	ug/Kg	N	6990	27300	27300	1	P	HSC	07/08/09 17:11	070809A-1	882005
7782-49-2	Selenium	1070	ug/kg	U	537	1070	1070	2	MS	PRB	07/14/09 11:49	090714-2	882024
7440-22-4	Silver	540	ug/Kg	J	109	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-23-5	Sodium	113000	ug/Kg		7640	27300	27300	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-28-0	Thallium	114	ug/kg	J	64.5	215	215	2	MS	PRB	07/14/09 11:49	090714-2	882024
7440-62-2	Vanadium	17200	ug/Kg		109	546	546	1	P	HSC	07/08/09 17:11	070809A-1	882005
7440-66-6	Zinc	34200	ug/Kg		360	1090	1090	1	P	HSC	07/08/09 17:11	070809A-1	882005

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882005	882004	SW846 3050B	0.509	g	50	mL	07/06/09	FGA
882024	882023	SW846 3050B	0.517	g	50	mL	07/06/09	BXA1
882255	882254	SW846 7471A Prep	0.579	g	30	mL	07/15/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2516-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232663005 **BASIS:** Dry Weight **DATE COLLECTED** 26-JUN-09

CLIENT ID: CAMO-09-9989 **LEVEL:** Low **DATE RECEIVED** 01-JUL-09

MATRIX: SOIL **%SOLIDS:** 83

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5410000	ug/Kg	*	7770	22900	22900	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-36-0	Antimony	1140	ug/Kg	U	377	1140	1140	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-38-2	Arsenic	1980	ug/kg		237	1180	1180	2	MS	PRB	07/14/09 11:53	090714-2	882024
7440-39-3	Barium	80800	ug/Kg		114	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-41-7	Beryllium	731	ug/kg		23.7	118	118	2	MS	PRB	07/14/09 13:51	090714-2	882024
7440-43-9	Cadmium	117	ug/Kg	J	114	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-70-2	Calcium	1510000	ug/Kg	*N	9140	28600	28600	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-47-3	Chromium	8400	ug/Kg	*	171	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-48-4	Cobalt	3830	ug/Kg		171	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-50-8	Copper	7660	ug/Kg		343	1140	1140	1	P	HSC	07/08/09 17:18	070809A-1	882005
7439-89-6	Iron	9080000	ug/Kg	E	9140	28600	28600	1	P	HSC	07/08/09 17:18	070809A-1	882005
7439-92-1	Lead	10800	ug/Kg		286	1140	1140	1	P	HSC	07/08/09 17:18	070809A-1	882005
7439-95-4	Magnesium	1030000	ug/Kg	*N	9720	34300	34300	1	P	HSC	07/08/09 17:18	070809A-1	882005
7439-96-5	Manganese	255000	ug/Kg	N	229	1140	1140	1	P	HSC	07/08/09 17:18	070809A-1	882005
7439-97-6	Mercury	28.8	ug/kg		4.36	12.8	12.8	1	AV	JXL1	07/15/09 10:51	071509S1-3	882255
7440-02-0	Nickel	6400	ug/kg		118	473	473	2	MS	PRB	07/14/09 11:53	090714-2	882024
7440-09-7	Potassium	1040000	ug/Kg	N	7320	28600	28600	1	P	HSC	07/08/09 17:18	070809A-1	882005
7782-49-2	Selenium	1180	ug/kg	U	592	1180	1180	2	MS	PRB	07/14/09 11:53	090714-2	882024
7440-22-4	Silver	580	ug/Kg		114	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-23-5	Sodium	118000	ug/Kg		8000	28600	28600	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-28-0	Thallium	163	ug/kg	J	71	237	237	2	MS	PRB	07/14/09 11:53	090714-2	882024
7440-62-2	Vanadium	17500	ug/Kg		114	572	572	1	P	HSC	07/08/09 17:18	070809A-1	882005
7440-66-6	Zinc	48900	ug/Kg		377	1140	1140	1	P	HSC	07/08/09 17:18	070809A-1	882005

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882005	882004	SW846 3050B	0.525	g	50	mL	07/06/09	FGA
882024	882023	SW846 3050B	0.507	g	50	mL	07/06/09	BXA1
882255	882254	SW846 7471A Prep	0.562	g	30	mL	07/15/09	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Antimony	535	ug/L	500	ug/L	107.1	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Barium	539	ug/L	500	ug/L	107.8	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Cadmium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Chromium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Cobalt	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Copper	527	ug/L	500	ug/L	105.3	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Iron	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Lead	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Magnesium	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Manganese	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Potassium	2510	ug/L	2500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Silver	256	ug/L	250	ug/L	102.4	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Sodium	2550	ug/L	2500	ug/L	101.9	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	08-JUL-09 10:01	070809A-1
	Arsenic	49.4	ug/L	50	ug/L	98.9	90.0 – 110.0	MS	14-JUL-09 10:43	090714-2
	Beryllium	50.8	ug/L	50	ug/L	101.6	90.0 – 110.0	MS	14-JUL-09 10:43	090714-2
	Nickel	53.1	ug/L	50	ug/L	106.1	90.0 – 110.0	MS	14-JUL-09 10:43	090714-2
	Selenium	49.4	ug/L	50	ug/L	98.8	90.0 – 110.0	MS	14-JUL-09 10:43	090714-2
	Thallium	50.2	ug/L	50	ug/L	100.4	90.0 – 110.0	MS	14-JUL-09 10:43	090714-2
	Mercury	4.99	ug/L	5	ug/L	99.9	90.0 – 110.0	AV	15-JUL-09 10:17	071509S1-3
CCV01										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Antimony	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Barium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Cadmium	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Lead	504	ug/L	500	ug/L	100.9	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Manganese	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Potassium	5270	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Sodium	9980	ug/L	10000	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Arsenic	49.8	ug/L	50	ug/L	99.7	90.0 - 110.0	MS	14-JUL-09 11:01	090714-2
	Beryllium	50.3	ug/L	50	ug/L	100.5	90.0 - 110.0	MS	14-JUL-09 11:01	090714-2
	Nickel	51.8	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	14-JUL-09 11:01	090714-2
	Selenium	50.2	ug/L	50	ug/L	100.5	90.0 - 110.0	MS	14-JUL-09 11:01	090714-2
	Thallium	51	ug/L	50	ug/L	102.1	90.0 - 110.0	MS	14-JUL-09 11:01	090714-2
	Mercury	5.02	ug/L	5	ug/L	100.5	80.0 - 120.0	AV	15-JUL-09 10:23	071509S1-3
CCV02										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Antimony	500	ug/L	500	ug/L	99.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Cadmium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Chromium	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Cobalt	485	ug/L	500	ug/L	97	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Copper	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Lead	501	ug/L	500	ug/L	100.2	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Magnesium	5200	ug/L	5000	ug/L	103.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Manganese	495	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Silver	499	ug/L	500	ug/L	99.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Sodium	9940	ug/L	10000	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Arsenic	50.3	ug/L	50	ug/L	100.5	90.0 - 110.0	MS	14-JUL-09 11:35	090714-2
	Beryllium	48.1	ug/L	50	ug/L	96.2	90.0 - 110.0	MS	14-JUL-09 11:35	090714-2
	Nickel	52.9	ug/L	50	ug/L	105.7	90.0 - 110.0	MS	14-JUL-09 11:35	090714-2
	Selenium	49.9	ug/L	50	ug/L	99.8	90.0 - 110.0	MS	14-JUL-09 11:35	090714-2
	Thallium	50.8	ug/L	50	ug/L	101.5	90.0 - 110.0	MS	14-JUL-09 11:35	090714-2
	Mercury	4.86	ug/L	5	ug/L	97.2	80.0 - 120.0	AV	15-JUL-09 10:47	071509S1-3
CCV03										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Antimony	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Cobalt	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Iron	5000	ug/L	5000	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Lead	505	ug/L	500	ug/L	101	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Potassium	5150	ug/L	5000	ug/L	103.1	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Sodium	10300	ug/L	10000	ug/L	102.9	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 - 110.0	MS	14-JUL-09 11:57	090714-2

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	44.5	ug/L	50	ug/L	89	90.0 - 110.0	MS	14-JUL-09 11:57	090714-2
	Nickel	48.9	ug/L	50	ug/L	97.8	90.0 - 110.0	MS	14-JUL-09 11:57	090714-2
	Selenium	49.8	ug/L	50	ug/L	99.7	90.0 - 110.0	MS	14-JUL-09 11:57	090714-2
	Thallium	50.5	ug/L	50	ug/L	101.1	90.0 - 110.0	MS	14-JUL-09 11:57	090714-2
	Mercury	4.97	ug/L	5	ug/L	99.3	80.0 - 120.0	AV	15-JUL-09 11:11	071509S1-3
CCV04										
	Aluminum	4910	ug/L	5000	ug/L	98.2	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Antimony	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Iron	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Lead	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Magnesium	5130	ug/L	5000	ug/L	102.7	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Manganese	496	ug/L	500	ug/L	99.3	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Potassium	5170	ug/L	5000	ug/L	103.5	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Sodium	10700	ug/L	10000	ug/L	106.5	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 - 110.0	MS	14-JUL-09 12:30	090714-2
	Beryllium	47.9	ug/L	50	ug/L	95.9	90.0 - 110.0	MS	14-JUL-09 12:30	090714-2
	Nickel	51.7	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	14-JUL-09 12:30	090714-2
	Selenium	48.2	ug/L	50	ug/L	96.4	90.0 - 110.0	MS	14-JUL-09 12:30	090714-2
	Thallium	51.2	ug/L	50	ug/L	102.4	90.0 - 110.0	MS	14-JUL-09 12:30	090714-2
CCV05										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Antimony	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Calcium	4900	ug/L	5000	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Iron	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Lead	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Arsenic	49.3	ug/L	50	ug/L	98.5	90.0 - 110.0	MS	14-JUL-09 13:03	090714-2
	Beryllium	47.9	ug/L	50	ug/L	95.8	90.0 - 110.0	MS	14-JUL-09 13:03	090714-2
	Nickel	51.8	ug/L	50	ug/L	103.7	90.0 - 110.0	MS	14-JUL-09 13:03	090714-2
	Selenium	48.4	ug/L	50	ug/L	96.8	90.0 - 110.0	MS	14-JUL-09 13:03	090714-2
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 - 110.0	MS	14-JUL-09 13:03	090714-2
CCV06										
	Aluminum	4900	ug/L	5000	ug/L	97.9	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Antimony	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Silver	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Arsenic	49.7	ug/L	50	ug/L	99.3	90.0 - 110.0	MS	14-JUL-09 13:32	090714-2
	Beryllium	46.4	ug/L	50	ug/L	92.9	90.0 - 110.0	MS	14-JUL-09 13:32	090714-2
	Nickel	52.7	ug/L	50	ug/L	105.4	90.0 - 110.0	MS	14-JUL-09 13:32	090714-2
	Selenium	49.4	ug/L	50	ug/L	98.8	90.0 - 110.0	MS	14-JUL-09 13:32	090714-2
	Thallium	48.4	ug/L	50	ug/L	96.8	90.0 - 110.0	MS	14-JUL-09 13:32	090714-2
CCV07										
	Aluminum	4870	ug/L	5000	ug/L	97.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Antimony	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.6	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.7	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Lead	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Manganese	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Potassium	5110	ug/L	5000	ug/L	102.1	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Arsenic	49.6	ug/L	50	ug/L	99.1	90.0 - 110.0	MS	14-JUL-09 13:55	090714-2
	Beryllium	46.7	ug/L	50	ug/L	93.5	90.0 - 110.0	MS	14-JUL-09 13:55	090714-2
	Nickel	51.7	ug/L	50	ug/L	103.4	90.0 - 110.0	MS	14-JUL-09 13:55	090714-2
	Selenium	49	ug/L	50	ug/L	98	90.0 - 110.0	MS	14-JUL-09 13:55	090714-2
	Thallium	48.9	ug/L	50	ug/L	97.8	90.0 - 110.0	MS	14-JUL-09 13:55	090714-2
CCV08										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Antimony	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.1	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Iron	4940	ug/L	5000	ug/L	98.7	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Silver	503	ug/L	500	ug/L	100.6	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Sodium	9800	ug/L	10000	ug/L	98	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.7	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
CCV09										
	Aluminum	4880	ug/L	5000	ug/L	97.5	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Antimony	507	ug/L	500	ug/L	101.4	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.7	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Iron	4870	ug/L	5000	ug/L	97.4	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Lead	504	ug/L	500	ug/L	100.7	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Magnesium	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Manganese	497	ug/L	500	ug/L	99.3	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Silver	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Sodium	9570	ug/L	10000	ug/L	95.8	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Zinc	494	ug/L	500	ug/L	98.7	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Arsenic	5.46	ug/L	5	ug/L	109.1	70.0 - 130.0	MS	14-JUL-09 10:50	090714-2
	Beryllium	.509	ug/L	.5	ug/L	101.8	70.0 - 130.0	MS	14-JUL-09 10:50	090714-2
	Nickel	2.08	ug/L	2	ug/L	104.2	70.0 - 130.0	MS	14-JUL-09 10:50	090714-2
	Selenium	5.23	ug/L	5	ug/L	104.6	70.0 - 130.0	MS	14-JUL-09 10:50	090714-2
	Thallium	1.04	ug/L	1	ug/L	103.7	70.0 - 130.0	MS	14-JUL-09 10:50	090714-2
	Mercury	.168	ug/L	.2	ug/L	83.9	70.0 - 130.0	AV	15-JUL-09 10:21	071509S1-3
PQL01										
	Aluminum	200	ug/L	200	ug/L	99.8	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Antimony	11.1	ug/L	10	ug/L	111.2	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Barium	5.03	ug/L	5	ug/L	100.6	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Cadmium	4.87	ug/L	5	ug/L	97.4	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Calcium	198	ug/L	200	ug/L	99	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Chromium	4.84	ug/L	5	ug/L	96.8	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Cobalt	5	ug/L	5	ug/L	100	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Copper	9.77	ug/L	10	ug/L	97.7	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Iron	102	ug/L	100	ug/L	102.1	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Lead	11.3	ug/L	10	ug/L	113.1	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Magnesium	326	ug/L	300	ug/L	108.5	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Manganese	10.4	ug/L	10	ug/L	104.4	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Potassium	172	ug/L	150	ug/L	114.5	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Silver	5.23	ug/L	5	ug/L	104.6	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Sodium	281	ug/L	300	ug/L	93.6	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Vanadium	5.27	ug/L	5	ug/L	105.3	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Zinc	9.6	ug/L	10	ug/L	96	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2516–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 10:08	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 10:08	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	14–JUL–09 10:47	090714–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	14–JUL–09 10:47	090714–2
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	14–JUL–09 10:47	090714–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	14–JUL–09 10:47	090714–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	14–JUL–09 10:47	090714–2
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	15–JUL–09 10:19	071509S1–3
CCB01										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 11:10	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 11:10	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 11:10	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 11:10	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 11:10	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 11:10	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 11:10	070809A–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2516-1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:10	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Potassium	146.16	+/-250	J	64.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 11:05	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 11:05	090714-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 11:05	090714-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 11:05	090714-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 11:05	090714-2
	Mercury	-0.08	+/-.2	J	0.068	0.2	SOL	AV	15-JUL-09 10:25	071509S1-3
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 11:31	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:31	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2516-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 11:38	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 11:38	090714-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 11:38	090714-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 11:38	090714-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 11:38	090714-2
	Mercury	-0.094	+/-.2	J	0.068	0.2	SOL	AV	15-JUL-09 10:49	071509S1-3
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 12:44	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 12:44	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Potassium	65.21	+/-250	J	64.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 12:01	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 12:01	090714-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 12:01	090714-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 12:01	090714-2

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2516-1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 12:01	090714-2
	Mercury	-0.101	+/-.2	J	0.068	0.2	SOL	AV	15-JUL-09 11:13	071509S1-3
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 13:37	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 13:37	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 12:34	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 12:34	090714-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 12:34	090714-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 12:34	090714-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 12:34	090714-2
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 13:57	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:57	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2516-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:57	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 13:57	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 13:57	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 13:57	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:57	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:57	070809A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 13:07	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 13:07	090714-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 13:07	090714-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 13:07	090714-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 13:07	090714-2
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 14:53	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 14:53	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 14:53	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2516-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 13:36	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 13:36	090714-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 13:36	090714-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 13:36	090714-2
	Thallium	1.38	+/-1		0.3	1.0	SOL	MS	14-JUL-09 13:36	090714-2
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 15:48	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 15:48	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 13:58	090714-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 13:58	090714-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 13:58	090714-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 13:58	090714-2

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2516-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Thallium	0.586	+/-1	J	0.3	1.0	SOL	MS	14-JUL-09 13:58	090714-2
CCB08										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 16:50	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 16:50	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 16:50	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 16:50	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 16:50	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 16:50	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 16:50	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 16:50	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 16:50	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 16:50	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 16:50	070809A-1
CCB09										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 17:32	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 17:32	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 17:32	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 17:32	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 17:32	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 17:32	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 17:32	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2516-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 17:32	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 17:32	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 17:32	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 17:32	070809A-1

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 09-2516-1

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201873203								
	Aluminum	6680	ug/Kg	+/-19646.365	U	P	6680	19600
	Antimony	324	ug/Kg	+/-982.318	U	P	324	982
	Barium	98.2	ug/Kg	+/-491.159	U	P	98.2	491
	Cadmium	98.2	ug/Kg	+/-491.159	U	P	98.2	491
	Calcium	7860	ug/Kg	+/-24557.957	U	P	7860	24600
	Chromium	147	ug/Kg	+/-491.159	U	P	147	491
	Cobalt	147	ug/Kg	+/-491.159	U	P	147	491
	Copper	295	ug/Kg	+/-982.318	U	P	295	982
	Iron	7860	ug/Kg	+/-24557.957	U	P	7860	24600
	Lead	246	ug/Kg	+/-982.318	U	P	246	982
	Magnesium	8350	ug/Kg	+/-29469.548	U	P	8350	29500
	Manganese	196	ug/Kg	+/-982.318	U	P	196	982
	Potassium	6290	ug/Kg	+/-24557.957	U	P	6290	24600
	Silver	98.2	ug/Kg	+/-491.159	U	P	98.2	491
	Sodium	6880	ug/Kg	+/-24557.957	U	P	6880	24600
	Vanadium	98.2	ug/Kg	+/-491.159	U	P	98.2	491
	Zinc	324	ug/Kg	+/-982.318	U	P	324	982
1201873237								
	Arsenic	198	ug/kg	+/-990.099	U	MS	198	990
	Beryllium	19.8	ug/kg	+/-99.01	U	MS	19.8	99
	Nickel	99	ug/kg	+/-396.04	U	MS	99	396
	Selenium	495	ug/kg	+/-990.099	U	MS	495	990
	Thallium	59.4	ug/kg	+/-198.02	U	MS	59.4	198
1201873758								
	Mercury	3.89	ug/kg	+/-11.429	U	AV	3.89	11.4

METALS
-4-
Interference Check Sample

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Antimony	0.994	ug/L					08-JUL-09 10:22	070809A-1
	Barium	1.28	ug/L					08-JUL-09 10:22	070809A-1
	Cadmium	-1.01	ug/L					08-JUL-09 10:22	070809A-1
	Calcium	470000	ug/L	500000	ug/L	93.9	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Chromium	0.679	ug/L					08-JUL-09 10:22	070809A-1
	Cobalt	-1.77	ug/L					08-JUL-09 10:22	070809A-1
	Copper	4.61	ug/L					08-JUL-09 10:22	070809A-1
	Iron	185000	ug/L	200000	ug/L	92.3	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Lead	-1.9	ug/L					08-JUL-09 10:22	070809A-1
	Magnesium	493000	ug/L	500000	ug/L	98.6	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Manganese	11.9	ug/L					08-JUL-09 10:22	070809A-1
	Potassium	0.032	ug/L					08-JUL-09 10:22	070809A-1
	Silver	1.27	ug/L					08-JUL-09 10:22	070809A-1
	Sodium	-23.6	ug/L					08-JUL-09 10:22	070809A-1
	Vanadium	-2.21	ug/L					08-JUL-09 10:22	070809A-1
	Zinc	-8.84	ug/L					08-JUL-09 10:22	070809A-1
ICSAB01									
	Aluminum	513000	ug/L	500000	ug/L	103	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Antimony	568	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Barium	500	ug/L	500	ug/L	100	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cadmium	462	ug/L	500	ug/L	92.4	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Calcium	471000	ug/L	500000	ug/L	94.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Chromium	483	ug/L	500	ug/L	96.5	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cobalt	456	ug/L	500	ug/L	91.3	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Copper	571	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Iron	184000	ug/L	200000	ug/L	91.9	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Lead	475	ug/L	500	ug/L	95	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Magnesium	494000	ug/L	500000	ug/L	98.8	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
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Interference Check Sample

SDG No: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	494	ug/L	500	ug/L	98.7	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Potassium	5890	ug/L	5000	ug/L	118	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Silver	284	ug/L	250	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Sodium	5600	ug/L	5000	ug/L	112	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Vanadium	523	ug/L	500	ug/L	105	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
–4–
Interference Check Sample

SDG No: 09–2516–1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	0.033	ug/L					14–JUL–09 10:54	090714–2
	Beryllium	0.093	ug/L					14–JUL–09 10:54	090714–2
	Nickel	2.52	ug/L					14–JUL–09 10:54	090714–2
	Selenium	–0.627	ug/L					14–JUL–09 10:54	090714–2
	Thallium	0.056	ug/L					14–JUL–09 10:54	090714–2
ICSAB01									
	Arsenic	21.3	ug/L	20	ug/L	107	80.0 – 120.0	14–JUL–09 10:58	090714–2
	Beryllium	20.4	ug/L	20	ug/L	102	80.0 – 120.0	14–JUL–09 10:58	090714–2
	Nickel	21.8	ug/L	22.7	ug/L	95.8	80.0 – 120.0	14–JUL–09 10:58	090714–2
	Selenium	21.1	ug/L	20	ug/L	106	80.0 – 120.0	14–JUL–09 10:58	090714–2
	Thallium	19.4	ug/L	20	ug/L	97.2	80.0 – 120.0	14–JUL–09 10:58	090714–2

METALS
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Matrix Spike Summary

SDG NO. 09-2516-1 **Client ID** CAMO-09-9942S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 88

Sample ID: 232663001 **Spike ID:** 1201873206

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		7620000		2910000		566000	832	N/A	P
Antimony	ug/Kg	75-125	53200		362	U	56600	93.8		P
Barium	ug/Kg	75-125	103000		38100		56600	114		P
Cadmium	ug/Kg	75-125	53600		110	U	56600	94.7		P
Calcium	ug/Kg	75-125	1400000		643000		566000	133	N	P
Chromium	ug/Kg	75-125	72400		21300		56600	90.3		P
Cobalt	ug/Kg	75-125	54600		1660		56600	93.4		P
Copper	ug/Kg	75-125	61300		3570		56600	102		P
Iron	ug/Kg		10200000		8620000		566000	285	N/A	P
Lead	ug/Kg	75-125	62100		6030		56600	99.1		P
Magnesium	ug/Kg	75-125	1290000		399000		566000	158	N	P
Manganese	ug/Kg	75-125	274000		223000		56600	91.5		P
Potassium	ug/Kg	75-125	1210000		373000		566000	147	N	P
Silver	ug/Kg	75-125	55500		354	J	56600	97.4		P
Sodium	ug/Kg	75-125	601000		92400		566000	89.8		P
Vanadium	ug/Kg	75-125	63400		7330		56600	99.1		P
Zinc	ug/Kg	75-125	94600		38600		56600	99		P

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2516-1 **Client ID** CAMO-09-9942SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 88

Sample ID: 232663001 **Spike ID:** 1201873208

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		5360000		2910000		559000	437	N/A	P
Antimony	ug/Kg	75-125	54800		362	U	55900	97.8		P
Barium	ug/Kg	75-125	86600		38100		55900	86.7		P
Cadmium	ug/Kg	75-125	53900		110	U	55900	96.4		P
Calcium	ug/Kg	75-125	1090000		643000		559000	79.2		P
Chromium	ug/Kg	75-125	71000		21300		55900	88.8		P
Cobalt	ug/Kg	75-125	52400		1660		55900	90.7		P
Copper	ug/Kg	75-125	59700		3570		55900	100		P
Iron	ug/Kg		8570000		8620000		559000	-8.42	N/A	P
Lead	ug/Kg	75-125	59900		6030		55900	96.2		P
Magnesium	ug/Kg	75-125	1030000		399000		559000	113		P
Manganese	ug/Kg	75-125	257000		223000		55900	61.7	N	P
Potassium	ug/Kg	75-125	1010000		373000		559000	113		P
Silver	ug/Kg	75-125	54900		354	J	55900	97.5		P
Sodium	ug/Kg	75-125	616000		92400		559000	93.6		P
Vanadium	ug/Kg	75-125	59800		7330		55900	93.9		P
Zinc	ug/Kg	75-125	89600		38600		55900	91.1		P

METALS
-5a-

Matrix Spike Summary

SDG NO. 09-2516-1 **Client ID** CAMO-09-9942S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 88

Sample ID: 232663001 **Spike ID:** 1201873240

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Beryllium	ug/kg	75-125	6360		750		5640	99.5		MS
Nickel	ug/kg	75-125	9240		3450		5640	103		MS
Selenium	ug/kg	75-125	2360		545	U	2260	96		MS
Thallium	ug/kg	75-125	10800		115	J	11300	94.6		MS
Arsenic	ug/kg	75-125	10500		1380		9020	101		MS

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2516-1 **Client ID** CAMO-09-9942SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 88

Sample ID: 232663001 **Spike ID:** 1201873242

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	9750		1380		8810	94.9		MS
Nickel	ug/kg	75-125	8650		3450		5510	94.3		MS
Selenium	ug/kg	75-125	2120		545	U	2200	87.7		MS
Thallium	ug/kg	75-125	10100		115	J	11000	90.8		MS
Beryllium	ug/kg	75-125	5890		750		5510	93.3		MS

METALS
-5a-

Matrix Spike Summary

SDG NO. 09-2516-1 **Client ID** CAMO-09-9942S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 88

Sample ID: 232663001 **Spike ID:** 1201873761

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	152		24.7		128	99.1		AV

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2516-1 **Client ID** CAMO-09-9942SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 88

Sample ID: 232663001 **Spike ID:** 1201873766

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	137		24.7		121	93		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9942D

Sample ID: 232663001 **Duplicate ID:** 1201873205 **Percent Solids for Dup:** 88

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	2910000		2960000		1.68		P
Antimony	ug/Kg		362	U	371	U			P
Barium	ug/Kg	+/-20%	38100		36400		4.55		P
Cadmium	ug/Kg		110	U	113	U			P
Calcium	ug/Kg	+/-20%	643000		646000		.394		P
Chromium	ug/Kg	+/-20%	21300		16300		26.5	*	P
Cobalt	ug/Kg	+/-563	1660		1710		2.96		P
Copper	ug/Kg	+/-1130	3570		3440		3.78		P
Iron	ug/Kg	+/-20%	8620000		8160000		5.48		P
Lead	ug/Kg	+/-20%	6030		5740		4.87		P
Magnesium	ug/Kg	+/-20%	399000		428000		7.03		P
Manganese	ug/Kg	+/-20%	223000		219000		1.68		P
Potassium	ug/Kg	+/-20%	373000		380000		1.87		P
Silver	ug/Kg	+/-563	354	J	295	J	18.1		P
Sodium	ug/Kg	+/-28100	92400		92300		.162		P
Vanadium	ug/Kg	+/-20%	7330		7380		.659		P
Zinc	ug/Kg	+/-20%	38600		37200		3.56		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2516–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–9942SD

Sample ID: 1201873206 **Duplicate ID:** 1201873208 **Percent Solids for Dup:** 88

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	7620000		5360000		34.9	*	P
Antimony	ug/Kg	+/–20	53200		54800		2.97		P
Barium	ug/Kg	+/–20	103000		86600		17.2		P
Cadmium	ug/Kg	+/–20	53600		53900		.547		P
Calcium	ug/Kg	+/–20	1400000		1090000		25	*	P
Chromium	ug/Kg	+/–20	72400		71000		1.96		P
Cobalt	ug/Kg	+/–20	54600		52400		4.04		P
Copper	ug/Kg	+/–20	61300		59700		2.64		P
Iron	ug/Kg	+/–20	10200000		8570000		17.6		P
Lead	ug/Kg	+/–20	62100		59900		3.71		P
Magnesium	ug/Kg	+/–20	1290000		1030000		22.4	*	P
Manganese	ug/Kg	+/–20	274000		257000		6.5		P
Potassium	ug/Kg	+/–20	1210000		1010000		18.1		P
Silver	ug/Kg	+/–20	55500		54900		1.07		P
Sodium	ug/Kg	+/–20	601000		616000		2.56		P
Vanadium	ug/Kg	+/–20	63400		59800		5.84		P
Zinc	ug/Kg	+/–20	94600		89600		5.51		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9942D

Sample ID: 232663001 **Duplicate ID:** 1201873239 **Percent Solids for Dup:** 88

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-1100	1380		1410		1.8		MS
Beryllium	ug/kg	+/-20%	750		770		2.68		MS
Nickel	ug/kg	+/-20%	3450		3060		12.1		MS
Selenium	ug/kg		545	U	549	U			MS
Thallium	ug/kg		115	J	65.8	U	200		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9942SD

Sample ID: 1201873240 **Duplicate ID:** 1201873242 **Percent Solids for Dup:** 88

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-20	10500		9750		7.71		MS
Beryllium	ug/kg	+/-20	6360		5890		7.75		MS
Nickel	ug/kg	+/-20	9240		8650		6.67		MS
Selenium	ug/kg	+/-20	2360		2120		10.5		MS
Thallium	ug/kg	+/-20	10800		10100		6.31		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9942D

Sample ID: 232663001 **Duplicate ID:** 1201873760 **Percent Solids for Dup:** 88

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-12.2	24.7		14.2		54.5		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2516-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9942SD

Sample ID: 1201873761 **Duplicate ID:** 1201873766 **Percent Solids for Dup:** 88

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	152		137		10.4		AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2516-1

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873204								
	Aluminum	ug/Kg	7290000	6340000		86.9	63.5-118	P
	Antimony	ug/Kg	121000	109000		90.2	39.1-132.1	P
	Barium	ug/Kg	475000	458000		96.4	82-110.6	P
	Cadmium	ug/Kg	116000	113000		97.8	77.9-115.2	P
	Calcium	ug/Kg	3720000	3370000		90.7	77.4-111.7	P
	Chromium	ug/Kg	84000	74400		88.5	66.6-116.5	P
	Cobalt	ug/Kg	83000	78500		94.6	79-113.9	P
	Copper	ug/Kg	105000	99700		95	77.6-112	P
	Iron	ug/Kg	20000000	17000000		85.2	51.5-145.5	P
	Lead	ug/Kg	161000	164000		102	83.1-114.7	P
	Magnesium	ug/Kg	2980000	2800000		93.9	81-114.3	P
	Manganese	ug/Kg	398000	353000		88.8	76.6-106.6	P
	Potassium	ug/Kg	2390000	2190000		91.8	72.2-111.1	P
	Silver	ug/Kg	133000	131000		98.5	81.7-115.7	P
	Sodium	ug/Kg	614000	545000		88.7	71.5-109.3	P
	Vanadium	ug/Kg	166000	144000		87	65-118.6	P
	Zinc	ug/Kg	195000	192000		98.4	82.8-111.9	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2516-1

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873238								
	Beryllium	ug/kg	90000	84700		94.1	81.2-126.8	MS
	Nickel	ug/kg	101000	106000		105	83.3-121.4	MS
	Selenium	ug/kg	173000	178000		103	80.2-125.9	MS
	Thallium	ug/kg	202000	194000		96	78-123.2	MS
	Arsenic	ug/kg	257000	250000		97.3	83-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2516-1

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873759								
	Mercury	ug/kg	5150	5080		98.6	71.6-128.3	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2516-1 **Client ID** CAMO-09-9942L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232663001 **Serial Dilution ID:** 1201873207

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	26600		27300		2.44		10	P
Antimony	3.3	U	16.5	U				P
Barium	347		367		5.62		10	P
Cadmium	1	U	5	U				P
Calcium	5860		6350		8.36		10	P
Chromium	194		206		5.93		10	P
Cobalt	15.1		16	J	5.63			P
Copper	32.6		31.8	J	2.61			P
Iron	78500		86500		10.2	E	10	P
Lead	54.9		62		12.9			P
Magnesium	3640		4440		22			P
Manganese	2030		2190		7.88		10	P
Potassium	3400		3710		9.12		10	P
Silver	3.23	J	5	U	100			P
Sodium	842		765	J	9.14			P
Vanadium	66.8		71		6.29		10	P
Zinc	352		370		4.97		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2516-1 **Client ID** CAMO-09-9942L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232663001 **Serial Dilution ID:** 1201873241

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	6.33		5	U	100			MS
Beryllium	3.44		3.81		10.6			MS
Nickel	15.8		16.8		6.33			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.526	J	1.5	U	100			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2516-1 **Client ID** CAMO-09-9942L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232663001 **Serial Dilution ID:** 1201873765

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.369		.34	U	100			AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2516-1 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882004						
1201873203	MB for batch 882004	MB	S	06-JUL-09	.509g	50mL	
1201873204	LCS for batch 882004	LCS	S	06-JUL-09	.5g	50mL	
1201873206	CAMO-09-9942S	MS	S	06-JUL-09	.501g	50mL	
1201873208	CAMO-09-9942SD	MSD	S	06-JUL-09	.507g	50mL	
1201873205	CAMO-09-9942D	DUP	S	06-JUL-09	.504g	50mL	
232663001	CAMO-09-9942	SAMPLE	S	06-JUL-09	.517g	50mL	
232663002	CAMO-09-9941	SAMPLE	S	06-JUL-09	.514g	50mL	
232663003	CAMO-09-9943	SAMPLE	S	06-JUL-09	.511g	50mL	
232663004	CAMO-09-10030	SAMPLE	S	06-JUL-09	.509g	50mL	
232663005	CAMO-09-9989	SAMPLE	S	06-JUL-09	.525g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2516-1 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882023						
1201873237	MB for batch 882023	MB	S	06-JUL-09	.505g	50mL	
1201873238	LCS for batch 882023	LCS	S	06-JUL-09	.514g	50mL	
1201873240	CAMO-09-9942S	MS	S	06-JUL-09	.503g	50mL	
1201873242	CAMO-09-9942SD	MSD	S	06-JUL-09	.515g	50mL	
1201873239	CAMO-09-9942D	DUP	S	06-JUL-09	.517g	50mL	
232663001	CAMO-09-9942	SAMPLE	S	06-JUL-09	.52g	50mL	
232663002	CAMO-09-9941	SAMPLE	S	06-JUL-09	.511g	50mL	
232663003	CAMO-09-9943	SAMPLE	S	06-JUL-09	.515g	50mL	
232663004	CAMO-09-10030	SAMPLE	S	06-JUL-09	.517g	50mL	
232663005	CAMO-09-9989	SAMPLE	S	06-JUL-09	.507g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2516-1 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882254						
1201873758	MB for batch 882254	MB	S	15-JUL-09	.525g	30mL	
1201873759	LCS for batch 882254	LCS	S	15-JUL-09	.206g	30mL	
1201873761	CAMO-09-9942S	MS	S	15-JUL-09	.53g	30mL	
1201873766	CAMO-09-9942SD	MSD	S	15-JUL-09	.564g	30mL	
1201873760	CAMO-09-9942D	DUP	S	15-JUL-09	.556g	30mL	
232663001	CAMO-09-9942	SAMPLE	S	15-JUL-09	.508g	30mL	
232663002	CAMO-09-9941	SAMPLE	S	15-JUL-09	.527g	30mL	
232663003	CAMO-09-9943	SAMPLE	S	15-JUL-09	.573g	30mL	
232663004	CAMO-09-10030	SAMPLE	S	15-JUL-09	.579g	30mL	
232663005	CAMO-09-9989	SAMPLE	S	15-JUL-09	.562g	30mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 08-JUL-09 **End Date:** 08-JUL-09

Client Sdg: 09-2516-1
Method P
Data File: 070809A-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	09:35		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	09:41	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	09:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	09:55	X						X				X		X							X			
ICV01	1	10:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	10:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	10:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	10:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	10:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	10:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	10:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	10:47																							
ZZZZZZ	1	10:54																							
CCV01	1	11:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	11:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR03	1	11:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV02	1	11:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	11:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	11:42																							
ZZZZZZ	2	11:49																							
ZZZZZZ	1	11:56																							
ZZZZZZ	1	12:03																							
ZZZZZZ	1	12:10																							
ZZZZZZ	1	12:17																							
ZZZZZZ	5	12:23																							
ZZZZZZ	1	12:30																							
CCV03	1	12:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	12:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	5	12:49																							
ZZZZZZ	5	12:56																							
ZZZZZZ	5	13:03																							
ZZZZZZ	5	13:10																							
ZZZZZZ	25	13:16																							
ZZZZZZ	5	13:23																							
CCV04	1	13:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	13:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV05	1	13:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	13:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	14:04																							

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	2	14:11																							
ZZZZZZ	1	14:18																							
ZZZZZZ	1	14:25																							
ZZZZZZ	1	14:32																							
ZZZZZZ	1	14:39																							
CCV06	1	14:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	14:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	15:00																							
ZZZZZZ	1	15:07																							
ZZZZZZ	1	15:14																							
ZZZZZZ	1	15:22																							
ZZZZZZ	1	15:28																							
ZZZZZZ	5	15:34																							
CCV07	1	15:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	15:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873203	1	15:55	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873204	2	16:02	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232663001	1	16:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873205	1	16:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873206	1	16:23	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873208	1	16:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873207	5	16:36	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV08	1	16:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB08	1	16:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232663002	1	16:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232663003	1	17:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232663004	1	17:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232663005	1	17:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV09	1	17:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB09	1	17:32	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 15-JUL-09 **End Date:** 15-JUL-09

Client Sdg: 09-2516-1
Method AV
Data File: 071509S1-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	10:05															X								
S0.2	1	10:07															X								
S0.5	1	10:09															X								
S2.0	1	10:11															X								
S5.0	1	10:13															X								
S10	1	10:15															X								
ICV01	1	10:17															X								
ICB01	1	10:19															X								
CRDL01	1	10:21															X								
CCV01	1	10:23															X								
CCB01	1	10:25															X								
1201873758	1	10:27															X								
1201873759	10	10:29															X								
232663001	1	10:31															X								
1201873760	1	10:33															X								
1201873761	1	10:35															X								
1201873766	1	10:37															X								
1201873765	5	10:39															X								
232663002	1	10:41															X								
232663003	1	10:43															X								
232663004	1	10:45															X								
CCV02	1	10:47															X								
CCB02	1	10:49															X								
232663005	1	10:51															X								
ZZZZZZ	1	10:53																							
ZZZZZZ	1	10:55																							
ZZZZZZ	1	10:57																							
ZZZZZZ	1	10:59																							
ZZZZZZ	1	11:01																							
ZZZZZZ	1	11:03																							
ZZZZZZ	5	11:05																							
ZZZZZZ	1	11:07																							
ZZZZZZ	1	11:09																							
CCV03	1	11:11															X								
CCB03	1	11:13															X								

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 14–JUL–09 **End Date:** 14–JUL–09

Client Sdg: 09–2516–1
Method MS
Data File: 090714–2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	10:32			X		X											X		X			X		
S10	1	10:36			X		X											X		X			X		
S100	1	10:39			X		X											X		X			X		
ICV01	1	10:43			X		X											X		X			X		
ICB01	1	10:47			X		X											X		X			X		
CRDL01	1	10:50			X		X											X		X			X		
ICSA01	1	10:54			X		X											X		X			X		
ICSAB01	1	10:58			X		X											X		X			X		
CCV01	1	11:01			X		X											X		X			X		
CCB01	1	11:05			X		X											X		X			X		
1201873237	2	11:09			X		X											X		X			X		
1201873238	40	11:12			X		X											X		X			X		
232663001	2	11:16			X		X											X		X			X		
1201873239	2	11:20			X		X											X		X			X		
1201873240	2	11:23			X		X											X		X			X		
1201873242	2	11:27			X		X											X		X			X		
1201873241	10	11:31			X		X											X		X			X		
CCV02	1	11:35			X		X											X		X			X		
CCB02	1	11:38			X		X											X		X			X		
232663002	2	11:42			X													X		X			X		
232663003	2	11:46			X													X		X			X		
232663004	2	11:49			X													X		X			X		
232663005	2	11:53			X													X		X			X		
CCV03	1	11:57			X		X											X		X			X		
CCB03	1	12:01			X		X											X		X			X		
ZZZZZZ	2	12:04																							
ZZZZZZ	40	12:08																							
ZZZZZZ	2	12:12																							
ZZZZZZ	2	12:15																							
ZZZZZZ	2	12:19																							
ZZZZZZ	2	12:23																							
ZZZZZZ	10	12:27																							
CCV04	1	12:30			X		X											X		X			X		
CCB04	1	12:34			X		X											X		X			X		
ZZZZZZ	2	12:38																							
ZZZZZZ	2	12:41																							
ZZZZZZ	2	12:45																							
ZZZZZZ	2	12:49																							
ZZZZZZ	2	12:52																							
ZZZZZZ	2	12:56																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	2	13:00																							
CCV05	1	13:03			X		X										X		X			X		
CCB05	1	13:07			X		X										X		X			X		
ZZZZZZ	1	13:11																						
ZZZZZZ	1	13:14																						
ZZZZZZ	1	13:18																						
ZZZZZZ	1	13:21																						
ZZZZZZ	1	13:25																						
ZZZZZZ	5	13:29																						
CCV06	1	13:32			X		X										X		X			X		
CCB06	1	13:36			X		X										X		X			X		
232663002	2	13:40					X																	
232663003	2	13:44					X																	
232663004	2	13:47					X																	
232663005	2	13:51					X																	
CCV07	1	13:55			X		X										X		X			X		
CCB07	1	13:58			X		X										X		X			X		

Standards

METALS
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Instrument Detection Limits

SDG NO. 09-2516-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2516-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2516-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2516-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2516-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2516-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2516-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09--2516-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 09-2516-1
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-MAY-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2516-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

METALS
-12-
Linear Ranges

SDG NO. 09-2516-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09

Raw Data

Reprocessing Begun
Logged In Analyst: Optima3 Technique: ICP Continuous

Results Data Set (original): 070809
Results Library (original): C:\pe\Optima3\Results\Results.mdb
Results Data Set (reprocessed): 070809A
Results Library (reprocessed): C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX Method Last Saved: 7/8/2009 11:38:58
IEC File: 070309.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 8
Sample ID: S0 Date Collected: 7/8/2009 09:28:56
Analyst: Data Type: Reprocessed on 7/8/2009 11:40:03
Logged In Analyst (Original) : Optima3
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1059810.6	1059810.6	99.899	%	09:32:05
1	Sc Radial	5668.6	5668.6	102	%	09:30:49
1	Y 371.029	851543.7	851543.7	99.804	%	09:32:05
1	Y RADIAL	4889.8	4889.8	101.5	%	09:30:49
1	Ag 328.068†	593.9	594.5	[0.00]	ug/L	09:32:10

1	Al 396.153Radial†	-88.0	-86.4	[0.00]	ug/L	09:30:49
1	As 188.979†	-33.0	-33.0	[0.00]	ug/L	09:32:31
1	B 249.677†	-395.5	-395.9	[0.00]	ug/L	09:32:31
1	Ba 233.527†	22.7	22.7	[0.00]	ug/L	09:32:31
1	Be 313.107†	-7253.6	-7260.9	[0.00]	ug/L	09:32:10
1	Ca 317.933Radial†	19.9	19.6	[0.00]	ug/L	09:31:09
1	Cd 226.502†	-262.6	-262.9	[0.00]	ug/L	09:32:31
1	Co 228.616†	-86.2	-86.3	[0.00]	ug/L	09:32:31
1	Cr 267.716†	-35.2	-35.2	[0.00]	ug/L	09:32:31
1	Cu 324.752†	10171.2	10181.5	[0.00]	ug/L	09:32:10
1	Fe 238.204 Radial†	0.0	0.0	[0.00]	ug/L	09:31:09
1	K 766.490 Radial†	1428.1	1402.0	[0.00]	ug/L	09:30:49
1	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:09
1	Mn 257.610†	823.1	823.9	[0.00]	ug/L	09:32:31
1	Mo 202.031†	40.3	40.4	[0.00]	ug/L	09:32:31
1	Na 589.592 Radial†	-169.9	-166.8	[0.00]	ug/L	09:31:09
1	Ni 231.604†	160.5	160.7	[0.00]	ug/L	09:32:31
1	P 214.914†	340.8	341.2	[0.00]	ug/L	09:32:31
1	Pb 220.353†	-23.8	-23.8	[0.00]	ug/L	09:32:31
1	S 181.975 Axial†	74.8	74.8	[0.00]	ug/L	09:32:31
1	Sb 206.836†	39.3	39.4	[0.00]	ug/L	09:32:31
1	Se 196.026†	-21.9	-21.9	[0.00]	ug/L	09:32:31
1	Si 251.611†	569.0	569.6	[0.00]	ug/L	09:32:31
1	Sn 189.927†	4.8	4.8	[0.00]	ug/L	09:32:31
1	Sr 421.552†	-1.3	-1.3	[0.00]	ug/L	09:31:09
1	Ti 334.940†	-1079.9	-1081.0	[0.00]	ug/L	09:32:10
1	Tl 190.801†	-58.7	-58.8	[0.00]	ug/L	09:32:31
1	U 409.014†	-3815.0	-3818.9	[0.00]	ug/L	09:32:05
1	V 292.402†	-1684.3	-1686.1	[0.00]	ug/L	09:32:10
1	Zn 213.857†	1110.4	1111.5	[0.00]	ug/L	09:32:31
1	SiO2†	589.5	590.1	[0.00]	ug/L	09:33:36
2	Sc 361.383	1062041.1	1062041.1	100.11	%	09:32:36
2	Sc Radial	5550.5	5550.5	99.7	%	09:31:14
2	Y 371.029	854666.6	854666.6	100.17	%	09:32:36
2	Y RADIAL	4806.6	4806.6	99.81	%	09:31:14
2	Ag 328.068†	684.5	683.8	[0.00]	ug/L	09:32:41
2	Al 396.153Radial†	-103.1	-103.4	[0.00]	ug/L	09:31:14
2	As 188.979†	-37.3	-37.3	[0.00]	ug/L	09:33:01
2	B 249.677†	-376.8	-376.4	[0.00]	ug/L	09:33:01
2	Ba 233.527†	27.0	27.0	[0.00]	ug/L	09:33:01
2	Be 313.107†	-7342.2	-7334.2	[0.00]	ug/L	09:32:41
2	Ca 317.933Radial†	15.3	15.3	[0.00]	ug/L	09:31:34
2	Cd 226.502†	-297.3	-297.0	[0.00]	ug/L	09:33:01
2	Co 228.616†	-91.0	-90.9	[0.00]	ug/L	09:33:01
2	Cr 267.716†	-33.4	-33.4	[0.00]	ug/L	09:33:01
2	Cu 324.752†	10260.8	10249.6	[0.00]	ug/L	09:32:41
2	Fe 238.204 Radial†	0.2	0.2	[0.00]	ug/L	09:31:34
2	K 766.490 Radial†	1490.1	1493.9	[0.00]	ug/L	09:31:14
2	Mg 279.077 IEC†	-0.2	-0.2	[0.00]	ug/L	09:31:34
2	Mn 257.610†	833.3	832.3	[0.00]	ug/L	09:33:01
2	Mo 202.031†	24.6	24.6	[0.00]	ug/L	09:33:01
2	Na 589.592 Radial†	-169.2	-169.6	[0.00]	ug/L	09:31:34
2	Ni 231.604†	145.4	145.2	[0.00]	ug/L	09:33:01
2	P 214.914†	336.1	335.8	[0.00]	ug/L	09:33:01
2	Pb 220.353†	-39.7	-39.7	[0.00]	ug/L	09:33:01
2	S 181.975 Axial†	63.8	63.7	[0.00]	ug/L	09:33:01
2	Sb 206.836†	49.0	48.9	[0.00]	ug/L	09:33:01
2	Se 196.026†	-25.3	-25.3	[0.00]	ug/L	09:33:01
2	Si 251.611†	569.7	569.1	[0.00]	ug/L	09:33:01
2	Sn 189.927†	5.1	5.0	[0.00]	ug/L	09:33:01
2	Sr 421.552†	11.5	11.5	[0.00]	ug/L	09:31:34
2	Ti 334.940†	-1116.4	-1115.1	[0.00]	ug/L	09:32:41
2	Tl 190.801†	-57.5	-57.4	[0.00]	ug/L	09:33:01
2	U 409.014†	-3873.4	-3869.2	[0.00]	ug/L	09:32:36
2	V 292.402†	-1699.0	-1697.1	[0.00]	ug/L	09:32:41
2	Zn 213.857†	1115.6	1114.3	[0.00]	ug/L	09:33:01
2	SiO2†	600.0	599.4	[0.00]	ug/L	09:33:42
3	Sc 361.383	1060796.0	1060796.0	99.992	%	09:33:06
3	Sc Radial	5475.5	5475.5	98.4	%	09:31:39
3	Y 371.029	853433.0	853433.0	100.03	%	09:33:06
3	Y RADIAL	4750.8	4750.8	98.65	%	09:31:39

3	Ag 328.068†	637.4	637.5	[0.00]	ug/L	09:33:11
3	Al 396.153Radial†	-85.4	-86.8	[0.00]	ug/L	09:31:39
3	As 188.979†	-40.4	-40.4	[0.00]	ug/L	09:33:31
3	B 249.677†	-372.3	-372.3	[0.00]	ug/L	09:33:31
3	Ba 233.527†	23.1	23.1	[0.00]	ug/L	09:33:31
3	Be 313.107†	-7353.0	-7353.6	[0.00]	ug/L	09:33:11
3	Ca 317.933Radial†	15.7	15.9	[0.00]	ug/L	09:31:59
3	Cd 226.502†	-273.1	-273.1	[0.00]	ug/L	09:33:31
3	Co 228.616†	-94.1	-94.1	[0.00]	ug/L	09:33:31
3	Cr 267.716†	-17.2	-17.2	[0.00]	ug/L	09:33:31
3	Cu 324.752†	10141.9	10142.7	[0.00]	ug/L	09:33:11
3	Fe 238.204 Radial†	0.8	0.8	[0.00]	ug/L	09:31:59
3	K 766.490 Radial†	1498.9	1523.4	[0.00]	ug/L	09:31:39
3	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:59
3	Mn 257.610†	824.8	824.9	[0.00]	ug/L	09:33:31
3	Mo 202.031†	30.4	30.4	[0.00]	ug/L	09:33:31
3	Na 589.592 Radial†	-172.0	-174.9	[0.00]	ug/L	09:31:59
3	Ni 231.604†	138.9	138.9	[0.00]	ug/L	09:33:31
3	P 214.914†	333.9	333.9	[0.00]	ug/L	09:33:31
3	Pb 220.353†	-23.7	-23.8	[0.00]	ug/L	09:33:31
3	S 181.975 Axial†	64.9	64.9	[0.00]	ug/L	09:33:31
3	Sb 206.836†	48.0	48.0	[0.00]	ug/L	09:33:31
3	Se 196.026†	-17.7	-17.7	[0.00]	ug/L	09:33:31
3	Si 251.611†	541.6	541.6	[0.00]	ug/L	09:33:31
3	Sn 189.927†	6.6	6.6	[0.00]	ug/L	09:33:31
3	Sr 421.552†	6.1	6.2	[0.00]	ug/L	09:31:59
3	Ti 334.940†	-1131.5	-1131.6	[0.00]	ug/L	09:33:11
3	Tl 190.801†	-67.9	-67.9	[0.00]	ug/L	09:33:31
3	U 409.014†	-3815.9	-3816.2	[0.00]	ug/L	09:33:06
3	V 292.402†	-1575.1	-1575.2	[0.00]	ug/L	09:33:11
3	Zn 213.857†	1141.3	1141.4	[0.00]	ug/L	09:33:31
3	SiO2†	617.5	617.6	[0.00]	ug/L	09:33:47

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1060882.6	1117.80	0.11%	100.00	%
Sc Radial	5564.8	97.34	1.75%	100	%
Y 371.029	853214.5	1572.88	0.18%	100.000	%
Y RADIAL	4815.7	69.94	1.45%	100.0	%
Ag 328.068†	638.6	44.64	6.99%	[0.00]	ug/L
Al 396.153Radial†	-92.2	9.68	10.50%	[0.00]	ug/L
As 188.979†	-36.9	3.70	10.03%	[0.00]	ug/L
B 249.677†	-381.5	12.62	3.31%	[0.00]	ug/L
Ba 233.527†	24.3	2.36	9.74%	[0.00]	ug/L
Be 313.107†	-7316.2	48.87	0.67%	[0.00]	ug/L
Ca 317.933Radial†	16.9	2.30	13.61%	[0.00]	ug/L
Cd 226.502†	-277.6	17.49	6.30%	[0.00]	ug/L
Co 228.616†	-90.4	3.95	4.37%	[0.00]	ug/L
Cr 267.716†	-28.6	9.91	34.66%	[0.00]	ug/L
Cu 324.752†	10191.3	54.11	0.53%	[0.00]	ug/L
Fe 238.204 Radial†	0.3	0.40	120.31%	[0.00]	ug/L
K 766.490 Radial†	1473.1	63.31	4.30%	[0.00]	ug/L
Mg 279.077 IEC†	0.2	0.34	192.62%	[0.00]	ug/L
Mn 257.610†	827.0	4.63	0.56%	[0.00]	ug/L
Mo 202.031†	31.8	8.00	25.18%	[0.00]	ug/L
Na 589.592 Radial†	-170.4	4.09	2.40%	[0.00]	ug/L
Ni 231.604†	148.3	11.22	7.57%	[0.00]	ug/L
P 214.914†	336.9	3.77	1.12%	[0.00]	ug/L
Pb 220.353†	-29.1	9.17	31.52%	[0.00]	ug/L
S 181.975 Axial†	67.8	6.10	8.99%	[0.00]	ug/L
Sb 206.836†	45.4	5.28	11.62%	[0.00]	ug/L
Se 196.026†	-21.6	3.82	17.66%	[0.00]	ug/L
Si 251.611†	560.1	16.01	2.86%	[0.00]	ug/L
Sn 189.927†	5.5	0.95	17.40%	[0.00]	ug/L
Sr 421.552†	5.5	6.43	117.38%	[0.00]	ug/L
Ti 334.940†	-1109.3	25.82	2.33%	[0.00]	ug/L
Tl 190.801†	-61.4	5.70	9.29%	[0.00]	ug/L
U 409.014†	-3834.7	29.86	0.78%	[0.00]	ug/L
V 292.402†	-1652.8	67.41	4.08%	[0.00]	ug/L

Zn 213.857†	1122.4	16.48	1.47%	[0.00] ug/L
SiO2†	602.4	13.95	2.32%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/8/2009 09:35:57
Data Type: Reprocessed on 7/8/2009 11:40:04

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1043904.5	1043904.5	98.400	%	09:38:07
1	Sc Radial	5586.9	5586.9	100	%	09:37:49
1	Y 371.029	838768.8	838768.8	98.307	%	09:38:07
1	Y RADIAL	4867.7	4867.7	101.1	%	09:37:49
1	Ag 328.068†	25884.2	25666.6	[100]	ug/L	09:38:07
1	As 188.979†	393.4	436.7	[100]	ug/L	09:38:27
1	B 249.677†	5686.4	6160.4	[100]	ug/L	09:38:07
1	Ba 233.527†	20371.1	20678.1	[100]	ug/L	09:38:07
1	Be 313.107†	314654.5	327088.3	[100]	ug/L	09:38:07
1	Cd 226.502†	13132.5	13623.8	[100]	ug/L	09:38:27
1	Co 228.616†	8083.3	8305.1	[100]	ug/L	09:38:27
1	Cr 267.716†	11753.9	11973.6	[100]	ug/L	09:38:07
1	Cu 324.752†	50132.0	40756.1	[100]	ug/L	09:38:07
1	K 766.490 Radial†	3887.5	2399.0	[1000]	ug/L	09:37:49
1	Mn 257.610†	129366.8	130643.8	[100]	ug/L	09:38:07
1	Mo 202.031†	2580.5	2590.7	[100]	ug/L	09:38:27
1	Ni 231.604†	6525.4	6483.3	[100]	ug/L	09:38:27
1	P 214.914†	1779.1	1471.1	[500]	ug/L	09:38:27
1	Pb 220.353†	1342.2	1393.1	[100]	ug/L	09:38:27
1	S 181.975 Axial†	300.2	237.3	[200]	ug/L	09:38:27
1	Sb 206.836†	547.4	510.9	[100]	ug/L	09:38:27
1	Se 196.026†	295.6	322.0	[100]	ug/L	09:38:27
1	Si 251.611†	24511.6	24350.2	[500]	ug/L	09:38:07
1	Sn 189.927†	971.4	981.7	[100]	ug/L	09:38:27
1	Sr 421.552†	6665.1	6633.3	[100]	ug/L	09:37:49
1	Ti 334.940†	74671.4	76995.2	[100]	ug/L	09:38:07
1	Tl 190.801†	543.4	613.6	[100]	ug/L	09:38:27
1	U 409.014†	237.6	4076.2	[100]	ug/L	09:38:07
1	V 292.402†	15937.1	17849.1	[100]	ug/L	09:38:07
1	Zn 213.857†	19207.8	18397.8	[100]	ug/L	09:38:07
1	SiO2†	24699.0	24498.4	[1069.5]	ug/L	09:39:24
2	Sc 361.383	1055210.6	1055210.6	99.465	%	09:38:33
2	Sc Radial	5609.2	5609.2	101	%	09:37:55
2	Y 371.029	845639.6	845639.6	99.112	%	09:38:33
2	Y RADIAL	4877.8	4877.8	101.3	%	09:37:55
2	Ag 328.068†	26093.0	25594.7	[100]	ug/L	09:38:33
2	As 188.979†	391.5	430.5	[100]	ug/L	09:38:53
2	B 249.677†	5785.4	6198.0	[100]	ug/L	09:38:33
2	Ba 233.527†	20469.8	20555.5	[100]	ug/L	09:38:33
2	Be 313.107†	317338.9	326360.9	[100]	ug/L	09:38:33
2	Cd 226.502†	13157.8	13506.1	[100]	ug/L	09:38:53
2	Co 228.616†	8095.3	8229.3	[100]	ug/L	09:38:53
2	Cr 267.716†	11903.1	11995.7	[100]	ug/L	09:38:33
2	Cu 324.752†	50854.5	40936.6	[100]	ug/L	09:38:33
2	K 766.490 Radial†	3819.2	2315.9	[1000]	ug/L	09:37:55
2	Mn 257.610†	130782.0	130658.0	[100]	ug/L	09:38:33
2	Mo 202.031†	2603.2	2585.4	[100]	ug/L	09:38:53
2	Ni 231.604†	6538.1	6425.0	[100]	ug/L	09:38:53
2	P 214.914†	1796.1	1468.9	[500]	ug/L	09:38:53
2	Pb 220.353†	1350.1	1386.4	[100]	ug/L	09:38:53
2	S 181.975 Axial†	299.5	233.3	[200]	ug/L	09:38:53
2	Sb 206.836†	557.9	515.5	[100]	ug/L	09:38:53
2	Se 196.026†	303.1	326.3	[100]	ug/L	09:38:53
2	Si 251.611†	24790.1	24363.3	[500]	ug/L	09:38:33
2	Sn 189.927†	961.1	960.8	[100]	ug/L	09:38:53
2	Sr 421.552†	6653.8	6595.7	[100]	ug/L	09:37:55
2	Ti 334.940†	75608.5	77124.2	[100]	ug/L	09:38:33
2	Tl 190.801†	543.4	607.7	[100]	ug/L	09:38:53

2	U 409.014†	413.3	4250.3	[100]	ug/L	09:38:33
2	V 292.402†	16008.2	17747.0	[100]	ug/L	09:38:33
2	Zn 213.857†	19396.4	18378.2	[100]	ug/L	09:38:33
2	SiO2†	24456.8	23985.9	[1069.5]	ug/L	09:39:29
3	Sc 361.383	1055128.5	1055128.5	99.458	%	09:38:59
3	Sc Radial	5546.9	5546.9	99.7	%	09:38:00
3	Y 371.029	846188.4	846188.4	99.177	%	09:38:59
3	Y RADIAL	4841.3	4841.3	100.5	%	09:38:00
3	Ag 328.068†	26072.8	25576.4	[100]	ug/L	09:38:59
3	As 188.979†	395.1	434.2	[100]	ug/L	09:39:19
3	B 249.677†	5816.4	6229.6	[100]	ug/L	09:38:59
3	Ba 233.527†	20495.9	20583.4	[100]	ug/L	09:38:59
3	Be 313.107†	317444.7	326492.1	[100]	ug/L	09:38:59
3	Cd 226.502†	13125.5	13474.7	[100]	ug/L	09:39:19
3	Co 228.616†	8079.1	8213.6	[100]	ug/L	09:39:19
3	Cr 267.716†	11888.0	11981.4	[100]	ug/L	09:38:59
3	Cu 324.752†	50658.9	40743.9	[100]	ug/L	09:38:59
3	K 766.490 Radial†	3845.0	2384.3	[1000]	ug/L	09:38:00
3	Mn 257.610†	131078.2	130966.0	[100]	ug/L	09:38:59
3	Mo 202.031†	2603.9	2586.4	[100]	ug/L	09:39:19
3	Ni 231.604†	6537.8	6425.2	[100]	ug/L	09:39:19
3	P 214.914†	1782.9	1455.7	[500]	ug/L	09:39:19
3	Pb 220.353†	1365.6	1402.1	[100]	ug/L	09:39:19
3	S 181.975 Axial†	309.0	242.8	[200]	ug/L	09:39:19
3	Sb 206.836†	556.1	513.7	[100]	ug/L	09:39:19
3	Se 196.026†	279.5	302.7	[100]	ug/L	09:39:19
3	Si 251.611†	24805.8	24381.0	[500]	ug/L	09:38:59
3	Sn 189.927†	963.2	962.9	[100]	ug/L	09:39:19
3	Sr 421.552†	6580.5	6596.3	[100]	ug/L	09:38:00
3	Ti 334.940†	75559.4	77080.7	[100]	ug/L	09:38:59
3	Tl 190.801†	539.9	604.2	[100]	ug/L	09:39:19
3	U 409.014†	236.8	4072.8	[100]	ug/L	09:38:59
3	V 292.402†	16050.8	17791.1	[100]	ug/L	09:38:59
3	Zn 213.857†	19356.9	18340.1	[100]	ug/L	09:38:59
3	SiO2†	24872.7	24406.0	[1069.5]	ug/L	09:39:34

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051414.5	6504.03	0.62%	99.108	%
Sc Radial	5581.0	31.57	0.57%	100	%
Y 371.029	843532.3	4134.44	0.49%	98.865	%
Y RADIAL	4862.3	18.86	0.39%	101.0	%
Ag 328.068†	25612.5	47.66	0.19%	[100]	ug/L
As 188.979†	433.8	3.14	0.72%	[100]	ug/L
B 249.677†	6196.0	34.67	0.56%	[100]	ug/L
Ba 233.527†	20605.7	64.24	0.31%	[100]	ug/L
Be 313.107†	326647.1	387.66	0.12%	[100]	ug/L
Cd 226.502†	13534.9	78.59	0.58%	[100]	ug/L
Co 228.616†	8249.3	48.95	0.59%	[100]	ug/L
Cr 267.716†	11983.6	11.20	0.09%	[100]	ug/L
Cu 324.752†	40812.2	107.89	0.26%	[100]	ug/L
K 766.490 Radial†	2366.4	44.37	1.88%	[1000]	ug/L
Mn 257.610†	130755.9	182.06	0.14%	[100]	ug/L
Mo 202.031†	2587.5	2.81	0.11%	[100]	ug/L
Ni 231.604†	6444.5	33.62	0.52%	[100]	ug/L
P 214.914†	1465.2	8.32	0.57%	[500]	ug/L
Pb 220.353†	1393.9	7.86	0.56%	[100]	ug/L
S 181.975 Axial†	237.8	4.79	2.02%	[200]	ug/L
Sb 206.836†	513.3	2.30	0.45%	[100]	ug/L
Se 196.026†	317.0	12.62	3.98%	[100]	ug/L
Si 251.611†	24364.8	15.45	0.06%	[500]	ug/L
Sn 189.927†	968.5	11.51	1.19%	[100]	ug/L
Sr 421.552†	6608.4	21.50	0.33%	[100]	ug/L
Ti 334.940†	77066.7	65.66	0.09%	[100]	ug/L
Tl 190.801†	608.5	4.73	0.78%	[100]	ug/L
U 409.014†	4133.1	101.47	2.46%	[100]	ug/L
V 292.402†	17795.7	51.23	0.29%	[100]	ug/L
Zn 213.857†	18372.0	29.33	0.16%	[100]	ug/L
SiO2†	24296.8	273.12	1.12%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/8/2009 09:41:45
Data Type: Reprocessed on 7/8/2009 11:40:06

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1064607.4	1064607.4	100.35	%	09:44:57
1	Sc Radial	5461.3	5461.3	98.1	%	09:43:38
1	Y 371.029	846628.0	846628.0	99.228	%	09:44:57
1	Y RADIAL	4696.9	4696.9	97.53	%	09:43:38
1	Ag 328.068†	126803.5	125721.3	[500]	ug/L	09:44:57
1	Al 396.153Radial†	5174.4	5364.7	[5000]	ug/L	09:43:38
1	As 188.979†	2072.9	2102.5	[500]	ug/L	09:45:17
1	B 249.677†	31257.3	31529.4	[500]	ug/L	09:44:57
1	Ba 233.527†	98225.0	97857.1	[500]	ug/L	09:44:57
1	Be 313.107†	1595363.0	1597097.3	[500]	ug/L	09:44:57
1	Ca 317.933Radial†	1956.1	1976.3	[5000]	ug/L	09:43:58
1	Cd 226.502†	66327.4	66373.0	[500]	ug/L	09:44:57
1	Co 228.616†	39082.0	39035.6	[500]	ug/L	09:45:17
1	Cr 267.716†	58209.2	58034.2	[500]	ug/L	09:44:57
1	Cu 324.752†	212770.9	201835.2	[500]	ug/L	09:44:57
1	K 766.490 Radial†	12752.1	11520.9	[5000]	ug/L	09:43:38
1	Mg 279.077 IEC†	62.9	63.9	[5000]	ug/L	09:43:58
1	Mn 257.610†	630898.9	627864.5	[500]	ug/L	09:44:57
1	Mo 202.031†	12608.3	12532.4	[500]	ug/L	09:45:17
1	Ni 231.604†	30724.5	30468.8	[500]	ug/L	09:45:17
1	P 214.914†	7382.5	7019.8	[2500]	ug/L	09:45:17
1	Pb 220.353†	6649.1	6654.9	[500]	ug/L	09:45:17
1	S 181.975 Axial†	1242.8	1170.6	[1000]	ug/L	09:45:17
1	Sb 206.836†	2606.1	2551.6	[500]	ug/L	09:45:17
1	Se 196.026†	1514.2	1530.5	[500]	ug/L	09:45:17
1	Si 251.611†	122499.0	121510.3	[2500]	ug/L	09:44:57
1	Sn 189.927†	4778.2	4756.0	[500]	ug/L	09:45:17
1	Sr 421.552†	28452.4	28986.5	[500]	ug/L	09:43:38
1	Ti 334.940†	380085.1	379864.5	[500]	ug/L	09:44:57
1	Tl 190.801†	2870.2	2921.5	[500]	ug/L	09:45:17
1	U 409.014†	15794.5	19574.0	[500]	ug/L	09:44:57
1	V 292.402†	85607.5	86960.7	[500]	ug/L	09:44:57
1	Zn 213.857†	90358.1	88919.6	[500]	ug/L	09:44:57
1	SiO2†	122852.3	121820.1	[5347.5]	ug/L	09:46:17
2	Sc 361.383	1044221.1	1044221.1	98.429	%	09:45:24
2	Sc Radial	5389.0	5389.0	96.8	%	09:44:03
2	Y 371.029	829032.4	829032.4	97.166	%	09:45:24
2	Y RADIAL	4652.3	4652.3	96.61	%	09:44:03
2	Ag 328.068†	124967.2	126322.6	[500]	ug/L	09:45:24
2	Al 396.153Radial†	5096.7	5355.2	[5000]	ug/L	09:44:03
2	As 188.979†	2073.2	2143.2	[500]	ug/L	09:45:44
2	B 249.677†	30724.1	31595.8	[500]	ug/L	09:45:24
2	Ba 233.527†	97214.1	98740.9	[500]	ug/L	09:45:24
2	Be 313.107†	1569041.1	1601392.7	[500]	ug/L	09:45:24
2	Ca 317.933Radial†	1923.3	1969.1	[5000]	ug/L	09:44:23
2	Cd 226.502†	65506.0	66828.8	[500]	ug/L	09:45:24
2	Co 228.616†	39155.7	39870.9	[500]	ug/L	09:45:44
2	Cr 267.716†	57418.9	58363.7	[500]	ug/L	09:45:24
2	Cu 324.752†	208685.4	201823.9	[500]	ug/L	09:45:24
2	K 766.490 Radial†	12541.0	11477.1	[5000]	ug/L	09:44:03
2	Mg 279.077 IEC†	61.0	62.8	[5000]	ug/L	09:44:23
2	Mn 257.610†	623183.7	632300.1	[500]	ug/L	09:45:24
2	Mo 202.031†	12645.3	12815.3	[500]	ug/L	09:45:44
2	Ni 231.604†	30816.1	31159.5	[500]	ug/L	09:45:44
2	P 214.914†	7382.7	7163.6	[2500]	ug/L	09:45:44
2	Pb 220.353†	6652.5	6787.7	[500]	ug/L	09:45:44
2	S 181.975 Axial†	1248.0	1200.1	[1000]	ug/L	09:45:44
2	Sb 206.836†	2600.7	2596.7	[500]	ug/L	09:45:44

2	Se 196.026†	1507.7	1553.3	[500]	ug/L	09:45:44
2	Si 251.611†	120777.2	122144.2	[2500]	ug/L	09:45:24
2	Sn 189.927†	4796.7	4867.8	[500]	ug/L	09:45:44
2	Sr 421.552†	27876.2	28780.3	[500]	ug/L	09:44:03
2	Ti 334.940†	374439.3	381523.0	[500]	ug/L	09:45:24
2	Tl 190.801†	2885.2	2992.7	[500]	ug/L	09:45:44
2	U 409.014†	15437.6	19518.7	[500]	ug/L	09:45:24
2	V 292.402†	84337.2	87335.7	[500]	ug/L	09:45:24
2	Zn 213.857†	89070.9	89369.7	[500]	ug/L	09:45:24
2	SiO2†	121800.6	123141.7	[5347.5]	ug/L	09:46:22
3	Sc 361.383	1046590.0	1046590.0	98.653	%	09:45:52
3	Sc Radial	5352.8	5352.8	96.2	%	09:44:28
3	Y 371.029	832934.3	832934.3	97.623	%	09:45:52
3	Y RADIAL	4634.7	4634.7	96.24	%	09:44:28
3	Ag 328.068†	125631.5	126708.6	[500]	ug/L	09:45:52
3	Al 396.153Radial†	5102.6	5396.9	[5000]	ug/L	09:44:28
3	As 188.979†	2098.8	2164.3	[500]	ug/L	09:46:12
3	B 249.677†	30976.6	31781.2	[500]	ug/L	09:45:52
3	Ba 233.527†	97581.9	98890.3	[500]	ug/L	09:45:52
3	Be 313.107†	1579797.0	1608687.5	[500]	ug/L	09:45:52
3	Ca 317.933Radial†	1928.2	1987.6	[5000]	ug/L	09:44:48
3	Cd 226.502†	65857.4	67034.4	[500]	ug/L	09:45:52
3	Co 228.616†	39345.8	39973.6	[500]	ug/L	09:46:12
3	Cr 267.716†	57872.1	58691.1	[500]	ug/L	09:45:52
3	Cu 324.752†	210164.3	202843.1	[500]	ug/L	09:45:52
3	K 766.490 Radial†	12562.3	11586.7	[5000]	ug/L	09:44:28
3	Mg 279.077 IEC†	60.6	62.8	[5000]	ug/L	09:44:48
3	Mn 257.610†	626191.1	633915.6	[500]	ug/L	09:45:52
3	Mo 202.031†	12686.5	12828.0	[500]	ug/L	09:46:12
3	Ni 231.604†	31017.8	31293.1	[500]	ug/L	09:46:12
3	P 214.914†	7417.6	7182.0	[2500]	ug/L	09:46:12
3	Pb 220.353†	6707.4	6828.1	[500]	ug/L	09:46:12
3	S 181.975 Axial†	1249.2	1198.4	[1000]	ug/L	09:46:12
3	Sb 206.836†	2624.9	2615.3	[500]	ug/L	09:46:12
3	Se 196.026†	1511.8	1554.0	[500]	ug/L	09:46:12
3	Si 251.611†	121349.2	122446.3	[2500]	ug/L	09:45:52
3	Sn 189.927†	4809.3	4869.5	[500]	ug/L	09:46:12
3	Sr 421.552†	27833.2	28930.1	[500]	ug/L	09:44:28
3	Ti 334.940†	376623.4	382875.9	[500]	ug/L	09:45:52
3	Tl 190.801†	2901.3	3002.3	[500]	ug/L	09:46:12
3	U 409.014†	15617.2	19665.2	[500]	ug/L	09:45:52
3	V 292.402†	84908.9	87721.2	[500]	ug/L	09:45:52
3	Zn 213.857†	89582.5	89683.5	[500]	ug/L	09:45:52
3	SiO2†	122195.3	123261.7	[5347.5]	ug/L	09:46:27

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051806.2	11149.30	1.06%	99.144	%
Sc Radial	5401.0	55.21	1.02%	97.1	%
Y 371.029	836198.2	9240.74	1.11%	98.006	%
Y RADIAL	4661.3	32.06	0.69%	96.79	%
Ag 328.068†	126250.8	497.54	0.39%	[500]	ug/L
Al 396.153Radial†	5372.3	21.86	0.41%	[5000]	ug/L
As 188.979†	2136.7	31.42	1.47%	[500]	ug/L
B 249.677†	31635.5	130.46	0.41%	[500]	ug/L
Ba 233.527†	98496.1	558.43	0.57%	[500]	ug/L
Be 313.107†	1602392.5	5859.39	0.37%	[500]	ug/L
Ca 317.933Radial†	1977.7	9.33	0.47%	[5000]	ug/L
Cd 226.502†	66745.4	338.47	0.51%	[500]	ug/L
Co 228.616†	39626.7	514.43	1.30%	[500]	ug/L
Cr 267.716†	58363.0	328.45	0.56%	[500]	ug/L
Cu 324.752†	202167.4	585.22	0.29%	[500]	ug/L
K 766.490 Radial†	11528.2	55.20	0.48%	[5000]	ug/L
Mg 279.077 IEC†	63.2	0.61	0.97%	[5000]	ug/L
Mn 257.610†	631360.0	3133.16	0.50%	[500]	ug/L
Mo 202.031†	12725.2	167.14	1.31%	[500]	ug/L
Ni 231.604†	30973.8	442.43	1.43%	[500]	ug/L
P 214.914†	7121.8	88.83	1.25%	[2500]	ug/L
Pb 220.353†	6756.9	90.64	1.34%	[500]	ug/L

S 181.975 Axial†	1189.7	16.55	1.39%	[1000]	ug/L
Sb 206.836†	2587.9	32.79	1.27%	[500]	ug/L
Se 196.026†	1546.0	13.38	0.87%	[500]	ug/L
Si 251.611†	122033.6	477.69	0.39%	[2500]	ug/L
Sn 189.927†	4831.1	65.06	1.35%	[500]	ug/L
Sr 421.552†	28899.0	106.56	0.37%	[500]	ug/L
Ti 334.940†	381421.2	1508.28	0.40%	[500]	ug/L
Tl 190.801†	2972.2	44.12	1.48%	[500]	ug/L
U 409.014†	19586.0	73.99	0.38%	[500]	ug/L
V 292.402†	87339.2	380.24	0.44%	[500]	ug/L
Zn 213.857†	89324.3	383.98	0.43%	[500]	ug/L
SiO2†	122741.2	799.91	0.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/8/2009 09:48:38
Data Type: Reprocessed on 7/8/2009 11:40:07

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1052663.5	1052663.5	99.225	%	09:51:50
1	Sc Radial	5805.9	5805.9	104	%	09:50:31
1	Y 371.029	835045.6	835045.6	97.871	%	09:51:50
1	Y RADIAL	5007.7	5007.7	104.0	%	09:50:31
1	Ag 328.068†	252879.2	254215.1	[1000]	ug/L	09:51:55
1	Al 396.153Radial†	10753.9	10399.5	[10000]	ug/L	09:50:31
1	As 188.979†	4213.7	4283.5	[1000]	ug/L	09:52:15
1	B 249.677†	63888.7	64769.0	[1000]	ug/L	09:51:55
1	Ba 233.527†	197687.1	199206.4	[1000]	ug/L	09:51:55
1	Be 313.107†	3194923.7	3227185.7	[1000]	ug/L	09:51:50
1	Ca 317.933Radial†	4055.7	3870.4	[10000]	ug/L	09:50:31
1	Cd 226.502†	133744.7	135066.6	[1000]	ug/L	09:51:55
1	Co 228.616†	80516.0	81235.0	[1000]	ug/L	09:51:55
1	Cr 267.716†	117606.8	118553.7	[1000]	ug/L	09:51:55
1	Cu 324.752†	414400.4	407444.8	[1000]	ug/L	09:51:55
1	Fe 238.204 Radial†	287.2	275.0	[10000]	ug/L	09:50:51
1	K 766.490 Radial†	24918.9	22410.9	[10000]	ug/L	09:50:31
1	Mg 279.077 IEC†	131.8	126.2	[10000]	ug/L	09:50:51
1	Mn 257.610†	1260730.8	1269747.4	[1000]	ug/L	09:51:50
1	Mo 202.031†	24798.5	24960.4	[1000]	ug/L	09:52:15
1	Na 589.592 Radial†	3522.0	3546.2	[10000]	ug/L	09:50:31
1	Ni 231.604†	62750.5	63092.2	[1000]	ug/L	09:51:55
1	P 214.914†	14401.2	14176.7	[5000]	ug/L	09:52:15
1	Pb 220.353†	13201.7	13333.9	[1000]	ug/L	09:52:15
1	S 181.975 Axial†	2419.1	2370.2	[2000]	ug/L	09:52:15
1	Sb 206.836†	5119.1	5113.6	[1000]	ug/L	09:52:15
1	Se 196.026†	3047.7	3093.1	[1000]	ug/L	09:52:15
1	Si 251.611†	242154.4	243485.1	[5000]	ug/L	09:51:55
1	Sn 189.927†	9581.3	9650.6	[1000]	ug/L	09:52:15
1	Sr 421.552†	68083.4	65250.5	[1000]	ug/L	09:50:31
1	Ti 334.940†	758941.9	765976.9	[1000]	ug/L	09:51:50
1	Tl 190.801†	5824.9	5931.8	[1000]	ug/L	09:52:15
1	U 409.014†	36638.9	40759.8	[1000]	ug/L	09:51:55
1	V 292.402†	175178.4	178199.0	[1000]	ug/L	09:51:55
1	Zn 213.857†	180211.9	180496.5	[1000]	ug/L	09:51:55
1	SiO2†	241738.8	243023.9	[10695]	ug/L	09:53:25
2	Sc 361.383	1058804.9	1058804.9	99.804	%	09:52:22
2	Sc Radial	5593.3	5593.3	101	%	09:50:56
2	Y 371.029	839441.5	839441.5	98.386	%	09:52:22
2	Y RADIAL	4835.2	4835.2	100.4	%	09:50:56
2	Ag 328.068†	252282.7	252139.2	[1000]	ug/L	09:52:27
2	Al 396.153Radial†	10627.1	10665.3	[10000]	ug/L	09:50:56
2	As 188.979†	4198.8	4244.0	[1000]	ug/L	09:52:48
2	B 249.677†	63795.4	64302.1	[1000]	ug/L	09:52:27
2	Ba 233.527†	196404.5	196765.7	[1000]	ug/L	09:52:27
2	Be 313.107†	3201165.9	3214763.8	[1000]	ug/L	09:52:22
2	Ca 317.933Radial†	4012.0	3974.7	[10000]	ug/L	09:50:56
2	Cd 226.502†	132496.4	133034.0	[1000]	ug/L	09:52:27
2	Co 228.616†	79902.6	80149.8	[1000]	ug/L	09:52:27
2	Cr 267.716†	116813.2	117071.0	[1000]	ug/L	09:52:27
2	Cu 324.752†	414708.3	405330.8	[1000]	ug/L	09:52:27
2	Fe 238.204 Radial†	289.6	287.8	[10000]	ug/L	09:51:16
2	K 766.490 Radial†	24624.2	23025.9	[10000]	ug/L	09:50:56
2	Mg 279.077 IEC†	127.7	126.9	[10000]	ug/L	09:51:16
2	Mn 257.610†	1263110.3	1264761.9	[1000]	ug/L	09:52:22
2	Mo 202.031†	24699.2	24715.9	[1000]	ug/L	09:52:48
2	Na 589.592 Radial†	3465.5	3618.3	[10000]	ug/L	09:50:56
2	Ni 231.604†	62172.3	62146.1	[1000]	ug/L	09:52:27

2	P 214.914†	14342.8	14034.0	[5000]	ug/L	09:52:48
2	Pb 220.353†	13188.3	13243.2	[1000]	ug/L	09:52:48
2	S 181.975 Axial†	2410.9	2347.8	[2000]	ug/L	09:52:48
2	Sb 206.836†	5080.8	5045.3	[1000]	ug/L	09:52:48
2	Se 196.026†	3016.0	3043.5	[1000]	ug/L	09:52:48
2	Si 251.611†	241232.5	241145.8	[5000]	ug/L	09:52:27
2	Sn 189.927†	9534.0	9547.2	[1000]	ug/L	09:52:48
2	Sr 421.552†	66922.4	66576.7	[1000]	ug/L	09:50:56
2	Ti 334.940†	761509.7	764113.3	[1000]	ug/L	09:52:22
2	Tl 190.801†	5811.7	5884.5	[1000]	ug/L	09:52:48
2	U 409.014†	36579.5	40486.0	[1000]	ug/L	09:52:27
2	V 292.402†	173954.8	175949.0	[1000]	ug/L	09:52:27
2	Zn 213.857†	179274.3	178503.7	[1000]	ug/L	09:52:27
2	SiO2†	237359.4	237222.8	[10695]	ug/L	09:53:31
3	Sc 361.383	1057400.6	1057400.6	99.672	%	09:52:54
3	Sc Radial	5464.1	5464.1	98.2	%	09:51:21
3	Y 371.029	838883.9	838883.9	98.320	%	09:52:54
3	Y RADIAL	4771.4	4771.4	99.08	%	09:51:21
3	Ag 328.068†	251287.3	251476.2	[1000]	ug/L	09:53:00
3	Al 396.153Radial†	10656.6	10945.2	[10000]	ug/L	09:51:21
3	As 188.979†	4194.8	4245.6	[1000]	ug/L	09:53:20
3	B 249.677†	63568.3	64159.1	[1000]	ug/L	09:53:00
3	Ba 233.527†	196293.8	196915.9	[1000]	ug/L	09:53:00
3	Be 313.107†	3195458.9	3213297.7	[1000]	ug/L	09:52:54
3	Ca 317.933Radial†	4035.9	4093.3	[10000]	ug/L	09:51:21
3	Cd 226.502†	132396.2	133109.8	[1000]	ug/L	09:53:00
3	Co 228.616†	79823.3	80176.5	[1000]	ug/L	09:53:00
3	Cr 267.716†	116636.7	117049.4	[1000]	ug/L	09:53:00
3	Cu 324.752†	412621.4	403788.9	[1000]	ug/L	09:53:00
3	Fe 238.204 Radial†	285.3	290.2	[10000]	ug/L	09:51:41
3	K 766.490 Radial†	24699.5	23681.6	[10000]	ug/L	09:51:21
3	Mg 279.077 IEC†	125.8	127.9	[10000]	ug/L	09:51:41
3	Mn 257.610†	1259027.5	1262346.4	[1000]	ug/L	09:52:54
3	Mo 202.031†	24845.2	24895.3	[1000]	ug/L	09:53:20
3	Na 589.592 Radial†	3441.7	3675.5	[10000]	ug/L	09:51:21
3	Ni 231.604†	62152.7	62209.1	[1000]	ug/L	09:53:00
3	P 214.914†	14439.3	14149.9	[5000]	ug/L	09:53:20
3	Pb 220.353†	13219.9	13292.5	[1000]	ug/L	09:53:20
3	S 181.975 Axial†	2417.3	2357.4	[2000]	ug/L	09:53:20
3	Sb 206.836†	5111.4	5082.8	[1000]	ug/L	09:53:20
3	Se 196.026†	3040.7	3072.3	[1000]	ug/L	09:53:20
3	Si 251.611†	240711.3	240943.9	[5000]	ug/L	09:53:00
3	Sn 189.927†	9583.2	9609.3	[1000]	ug/L	09:53:20
3	Sr 421.552†	66963.1	68191.7	[1000]	ug/L	09:51:21
3	Ti 334.940†	758629.2	762236.6	[1000]	ug/L	09:52:54
3	Tl 190.801†	5861.7	5942.4	[1000]	ug/L	09:53:20
3	U 409.014†	36527.5	40482.6	[1000]	ug/L	09:53:00
3	V 292.402†	173694.3	175919.0	[1000]	ug/L	09:53:00
3	Zn 213.857†	178849.9	178316.4	[1000]	ug/L	09:53:00
3	SiO2†	243076.9	243275.0	[10695]	ug/L	09:53:36

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1056289.6	3217.89	0.30%	99.567	%
Sc Radial	5621.1	172.60	3.07%	101	%
Y 371.029	837790.3	2393.27	0.29%	98.192	%
Y RADIAL	4871.4	122.27	2.51%	101.2	%
Ag 328.068†	252610.2	1428.92	0.57%	[1000]	ug/L
Al 396.153Radial†	10670.0	272.89	2.56%	[10000]	ug/L
As 188.979†	4257.7	22.40	0.53%	[1000]	ug/L
B 249.677†	64410.1	318.97	0.50%	[1000]	ug/L
Ba 233.527†	197629.3	1367.84	0.69%	[1000]	ug/L
Be 313.107†	3218415.7	7630.29	0.24%	[1000]	ug/L
Ca 317.933Radial†	3979.5	111.54	2.80%	[10000]	ug/L
Cd 226.502†	133736.8	1152.25	0.86%	[1000]	ug/L
Co 228.616†	80520.5	618.97	0.77%	[1000]	ug/L
Cr 267.716†	117558.0	862.30	0.73%	[1000]	ug/L
Cu 324.752†	405521.5	1835.38	0.45%	[1000]	ug/L
Fe 238.204 Radial†	284.3	8.19	2.88%	[10000]	ug/L

K 766.490 Radial†	23039.5	635.42	2.76%	[10000]	ug/L
Mg 279.077 IEC†	127.0	0.88	0.69%	[10000]	ug/L
Mn 257.610†	1265618.6	3774.16	0.30%	[1000]	ug/L
Mo 202.031†	24857.2	126.63	0.51%	[1000]	ug/L
Na 589.592 Radial†	3613.3	64.84	1.79%	[10000]	ug/L
Ni 231.604†	62482.4	529.00	0.85%	[1000]	ug/L
P 214.914†	14120.2	75.84	0.54%	[5000]	ug/L
Pb 220.353†	13289.9	45.38	0.34%	[1000]	ug/L
S 181.975 Axial†	2358.5	11.23	0.48%	[2000]	ug/L
Sb 206.836†	5080.6	34.22	0.67%	[1000]	ug/L
Se 196.026†	3069.7	24.93	0.81%	[1000]	ug/L
Si 251.611†	241858.2	1412.48	0.58%	[5000]	ug/L
Sn 189.927†	9602.4	52.05	0.54%	[1000]	ug/L
Sr 421.552†	66673.0	1472.96	2.21%	[1000]	ug/L
Ti 334.940†	764108.9	1870.18	0.24%	[1000]	ug/L
Tl 190.801†	5919.6	30.81	0.52%	[1000]	ug/L
U 409.014†	40576.1	159.04	0.39%	[1000]	ug/L
V 292.402†	176689.0	1307.77	0.74%	[1000]	ug/L
Zn 213.857†	179105.5	1208.27	0.67%	[1000]	ug/L
SiO2†	241173.9	3424.04	1.42%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/8/2009 09:55:46
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1045205.1	1045205.1	98.522	%	09:58:57
1	Sc Radial	5445.4	5445.4	97.9	%	09:58:00
1	Y 371.029	824719.2	824719.2	96.660	%	09:58:57
1	Y RADIAL	4697.0	4697.0	97.54	%	09:58:00
1	Al 396.153Radial†	53617.0	54885.6	[50000]	ug/L	09:57:40
1	Ca 317.933Radial†	19630.1	20043.9	[50000]	ug/L	09:57:40
1	Fe 238.204 Radial†	559.3	571.2	[20000]	ug/L	09:58:00
1	Mg 279.077 IEC†	611.6	624.9	[50000]	ug/L	09:58:00
1	Na 589.592 Radial†	7093.1	7419.2	[20000]	ug/L	09:57:40
2	Sc 361.383	1039938.4	1039938.4	98.026	%	09:59:03
2	Sc Radial	5322.6	5322.6	95.6	%	09:58:25
2	Y 371.029	821364.5	821364.5	96.267	%	09:59:03
2	Y RADIAL	4573.5	4573.5	94.97	%	09:58:25
2	Al 396.153Radial†	52922.6	55423.3	[50000]	ug/L	09:58:05
2	Ca 317.933Radial†	19349.8	20213.5	[50000]	ug/L	09:58:05
2	Fe 238.204 Radial†	548.4	573.0	[20000]	ug/L	09:58:25
2	Mg 279.077 IEC†	611.0	638.7	[50000]	ug/L	09:58:25
2	Na 589.592 Radial†	6990.6	7479.1	[20000]	ug/L	09:58:05
3	Sc 361.383	1037774.1	1037774.1	97.822	%	09:59:09
3	Sc Radial	5437.5	5437.5	97.7	%	09:58:50
3	Y 371.029	819757.6	819757.6	96.079	%	09:59:09
3	Y RADIAL	4679.6	4679.6	97.17	%	09:58:50
3	Al 396.153Radial†	53368.0	54709.6	[50000]	ug/L	09:58:30
3	Ca 317.933Radial†	19552.5	19993.3	[50000]	ug/L	09:58:30
3	Fe 238.204 Radial†	554.5	567.2	[20000]	ug/L	09:58:50
3	Mg 279.077 IEC†	615.8	630.0	[50000]	ug/L	09:58:50
3	Na 589.592 Radial†	7083.3	7419.6	[20000]	ug/L	09:58:30

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1040972.5	3821.89	0.37%	98.123	%
Sc Radial	5401.8	68.73	1.27%	97.1	%
Y 371.029	821947.1	2531.58	0.31%	96.335	%
Y RADIAL	4650.1	66.85	1.44%	96.56	%
Al 396.153Radial†	55006.2	371.83	0.68%	[50000]	ug/L
Ca 317.933Radial†	20083.6	115.30	0.57%	[50000]	ug/L
Fe 238.204 Radial†	570.5	2.97	0.52%	[20000]	ug/L
Mg 279.077 IEC†	631.2	6.96	1.10%	[50000]	ug/L
Na 589.592 Radial†	7439.3	34.51	0.46%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	252.6	0.00000	0.999999	
Al 396.153Radial	3	Lin Thru 0	0.0	1.099	0.00000	0.999981	
As 188.979	3	Lin Thru 0	0.0	4.261	0.00000	0.999998	
B 249.677	3	Lin Thru 0	0.0	64.16	0.00000	0.999970	
Ba 233.527	3	Lin Thru 0	0.0	197.6	0.00000	0.999992	
Be 313.107	3	Lin Thru 0	0.0	3216	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.4015	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	133.7	0.00000	0.999999	
Co 228.616	3	Lin Thru 0	0.0	80.28	0.00000	0.999977	
Cr 267.716	3	Lin Thru 0	0.0	117.4	0.00000	0.999994	
Cu 324.752	3	Lin Thru 0	0.0	405.3	0.00000	0.999999	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0285	0.00000	0.999999	

K 766.490 Radial	3	Lin Thru 0	0.0	2.305	0.00000	0.999997
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0126	0.00000	0.999999
Mn 257.610	3	Lin Thru 0	0.0	1265	0.00000	0.999995
Mo 202.031	3	Lin Thru 0	0.0	24.98	0.00000	0.999950
Na 589.592 Radia	2	Lin Thru 0	0.0	0.3698	0.00000	0.999934
Ni 231.604	3	Lin Thru 0	0.0	62.39	0.00000	0.999990
P 214.914	3	Lin Thru 0	0.0	2.830	0.00000	0.999989
Pb 220.353	3	Lin Thru 0	0.0	13.34	0.00000	0.999970
S 181.975 Axial	3	Lin Thru 0	0.0	1.181	0.00000	0.999994
Sb 206.836	3	Lin Thru 0	0.0	5.100	0.00000	0.999972
Se 196.026	3	Lin Thru 0	0.0	3.075	0.00000	0.999992
Si 251.611	3	Lin Thru 0	0.0	48.46	0.00000	0.999993
Sn 189.927	3	Lin Thru 0	0.0	9.615	0.00000	0.999997
Sr 421.552	3	Lin Thru 0	0.0	64.91	0.00000	0.998518
Ti 334.940	3	Lin Thru 0	0.0	763.9	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	5.926	0.00000	0.999996
U 409.014	3	Lin Thru 0	0.0	40.30	0.00000	0.999901
V 292.402	3	Lin Thru 0	0.0	176.3	0.00000	0.999989
Zn 213.857	3	Lin Thru 0	0.0	179.1	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	22.63	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/8/2009 10:01:20
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1055963.1	1055963.1	99.536	%			10:04:31
1	Sc Radial	5613.9	5613.9	101	%			10:03:13
1	Y 371.029	843980.3	843980.3	98.918	%			10:04:31
1	Y RADIAL	4850.5	4850.5	100.7	%			10:03:13
1	Ag 328.068†	64392.7	64054.1	256.65	ug/L	256.65	ppb	10:04:31
1	Al 396.153Radial†	5477.4	5521.7	5003.5	ug/L	5003.5	ppb	10:03:13
1	As 188.979†	2018.5	2064.8	487.93	ug/L	487.93	ppb	10:04:51
1	B 249.677†	32013.9	32544.6	505.32	ug/L	505.32	ppb	10:04:31
1	Ba 233.527†	105864.5	106333.4	539.45	ug/L	539.45	ppb	10:04:31
1	Be 313.107†	824616.8	835774.7	261.06	ug/L	261.06	ppb	10:04:31
1	Ca 317.933Radial†	1980.0	1945.8	4846.6	ug/L	4846.6	ppb	10:03:33
1	Cd 226.502†	67172.4	67763.0	506.57	ug/L	506.57	ppb	10:04:31
1	Co 228.616†	37965.2	38232.5	476.49	ug/L	476.49	ppb	10:04:51
1	Cr 267.716†	59214.9	59519.4	507.63	ug/L	507.63	ppb	10:04:31
1	Cu 324.752†	223133.1	213981.3	528.24	ug/L	528.24	ppb	10:04:31
1	Fe 238.204 Radial†	145.6	144.0	5067.1	ug/L	5067.1	ppb	10:03:33
1	K 766.490 Radial†	7308.0	5771.0	2501.1	ug/L	2501.1	ppb	10:03:13
1	Mg 279.077 IEC†	65.6	64.8	5140.2	ug/L	5140.2	ppb	10:03:33
1	Mn 257.610†	657421.5	659657.3	521.87	ug/L	521.87	ppb	10:04:31
1	Mo 202.031†	13087.3	13116.5	525.36	ug/L	525.36	ppb	10:04:51
1	Na 589.592 Radial†	775.6	939.2	2539.6	ug/L	2539.6	ppb	10:03:33
1	Ni 231.604†	33519.4	33527.3	537.06	ug/L	537.06	ppb	10:04:31
1	P 214.914†	7515.0	7213.0	2469.3	ug/L	2469.3	ppb	10:04:51
1	Pb 220.353†	6757.4	6817.9	512.49	ug/L	512.49	ppb	10:04:51
1	S 181.975 Axial†	3135.7	3082.5	2608.2	ug/L	2608.2	ppb	10:04:51
1	Sb 206.836†	2711.8	2679.0	533.63	ug/L	533.63	ppb	10:04:51
1	Se 196.026†	7950.7	8009.4	2624.5	ug/L	2624.5	ppb	10:04:51
1	Si 251.611†	241856.0	242422.6	4990.7	ug/L	4990.7	ppb	10:04:31
1	Sn 189.927†	5102.2	5120.5	533.02	ug/L	533.02	ppb	10:04:51
1	Sr 421.552†	33892.8	33591.0	517.48	ug/L	517.48	ppb	10:03:13
1	Ti 334.940†	386933.6	389845.5	510.25	ug/L	510.25	ppb	10:04:31
1	Tl 190.801†	2870.1	2944.9	498.92	ug/L	498.92	ppb	10:04:51
1	U 409.014†	16738.6	20651.3	510.79	ug/L	510.79	ppb	10:04:31
1	V 292.402†	86386.8	88442.0	507.92	ug/L	507.92	ppb	10:04:31
1	Zn 213.857†	92798.7	92108.6	509.43	ug/L	509.43	ppb	10:04:31
1	SiO2†	240647.4	241166.2	10631	ug/L	10631	ppb	10:05:48
2	Sc 361.383	1061154.8	1061154.8	100.03	%			10:04:57
2	Sc Radial	5574.6	5574.6	100	%			10:03:38
2	Y 371.029	847082.8	847082.8	99.281	%			10:04:57
2	Y RADIAL	4828.4	4828.4	100.3	%			10:03:38
2	Ag 328.068†	64498.9	63843.8	255.81	ug/L	255.81	ppb	10:04:57
2	Al 396.153Radial†	5433.4	5516.1	4998.6	ug/L	4998.6	ppb	10:03:38
2	As 188.979†	2002.8	2039.2	481.91	ug/L	481.91	ppb	10:05:17
2	B 249.677†	32167.6	32540.8	505.28	ug/L	505.28	ppb	10:04:57
2	Ba 233.527†	106144.9	106093.4	538.23	ug/L	538.23	ppb	10:04:57
2	Be 313.107†	824477.0	831581.7	259.75	ug/L	259.75	ppb	10:04:57
2	Ca 317.933Radial†	1968.2	1947.8	4851.6	ug/L	4851.6	ppb	10:03:58
2	Cd 226.502†	67276.9	67537.3	504.89	ug/L	504.89	ppb	10:04:57
2	Co 228.616†	37893.6	37974.3	473.26	ug/L	473.26	ppb	10:05:17
2	Cr 267.716†	59208.0	59221.4	505.09	ug/L	505.09	ppb	10:04:57
2	Cu 324.752†	224086.8	213838.1	527.89	ug/L	527.89	ppb	10:04:57
2	Fe 238.204 Radial†	144.3	143.7	5055.6	ug/L	5055.6	ppb	10:03:58
2	K 766.490 Radial†	7330.2	5844.2	2532.9	ug/L	2532.9	ppb	10:03:38
2	Mg 279.077 IEC†	68.0	67.7	5365.3	ug/L	5365.3	ppb	10:03:58
2	Mn 257.610†	658788.7	657792.7	520.39	ug/L	520.39	ppb	10:04:57
2	Mo 202.031†	13056.1	13020.9	521.54	ug/L	521.54	ppb	10:05:17
2	Na 589.592 Radial†	764.6	933.7	2524.5	ug/L	2524.5	ppb	10:03:58
2	Ni 231.604†	33627.1	33470.2	536.15	ug/L	536.15	ppb	10:04:57

2	P 214.914†	7509.3	7170.5	2454.3 ug/L	2454.3 ppb	10:05:17
2	Pb 220.353†	6755.8	6783.1	509.87 ug/L	509.87 ppb	10:05:17
2	S 181.975 Axial†	3111.7	3043.1	2574.9 ug/L	2574.9 ppb	10:05:17
2	Sb 206.836†	2721.3	2675.2	532.82 ug/L	532.82 ppb	10:05:17
2	Se 196.026†	7952.2	7971.8	2612.2 ug/L	2612.2 ppb	10:05:17
2	Si 251.611†	242445.6	241823.3	4978.4 ug/L	4978.4 ppb	10:04:57
2	Sn 189.927†	5103.9	5097.1	530.59 ug/L	530.59 ppb	10:05:17
2	Sr 421.552†	33672.4	33607.8	517.74 ug/L	517.74 ppb	10:03:38
2	Ti 334.940†	387671.3	388681.1	508.73 ug/L	508.73 ppb	10:04:57
2	Tl 190.801†	2874.3	2934.9	497.25 ug/L	497.25 ppb	10:05:17
2	U 409.014†	16726.6	20557.1	508.46 ug/L	508.46 ppb	10:04:57
2	V 292.402†	86445.6	88076.2	505.80 ug/L	505.80 ppb	10:04:57
2	Zn 213.857†	92897.2	91751.0	507.43 ug/L	507.43 ppb	10:04:57
2	SiO2†	237580.2	236916.9	10443 ug/L	10443 ppb	10:05:54
3	Sc 361.383	1046189.2	1046189.2	98.615 %		10:05:23
3	Sc Radial	5513.6	5513.6	99.1 %		10:04:03
3	Y 371.029	834847.1	834847.1	97.847 %		10:05:23
3	Y RADIAL	4760.8	4760.8	98.86 %		10:04:03
3	Ag 328.068†	63545.9	63799.7	255.72 ug/L	255.72 ppb	10:05:23
3	Al 396.153Radial†	5377.5	5519.7	5001.6 ug/L	5001.6 ppb	10:04:03
3	As 188.979†	2001.8	2066.8	488.43 ug/L	488.43 ppb	10:05:43
3	B 249.677†	31566.1	32390.9	502.89 ug/L	502.89 ppb	10:05:23
3	Ba 233.527†	104823.4	106271.3	539.14 ug/L	539.14 ppb	10:05:23
3	Be 313.107†	812519.1	831246.8	259.64 ug/L	259.64 ppb	10:05:23
3	Ca 317.933Radial†	1993.1	1994.7	4968.4 ug/L	4968.4 ppb	10:04:23
3	Cd 226.502†	66540.9	67753.1	506.47 ug/L	506.47 ppb	10:05:23
3	Co 228.616†	37778.7	38399.7	478.58 ug/L	478.58 ppb	10:05:43
3	Cr 267.716†	58457.7	59307.3	505.83 ug/L	505.83 ppb	10:05:23
3	Cu 324.752†	219384.3	212274.2	524.04 ug/L	524.04 ppb	10:05:23
3	Fe 238.204 Radial†	150.5	151.5	5330.8 ug/L	5330.8 ppb	10:04:23
3	K 766.490 Radial†	7160.3	5753.8	2493.9 ug/L	2493.9 ppb	10:04:03
3	Mg 279.077 IEC†	66.6	67.1	5318.0 ug/L	5318.0 ppb	10:04:23
3	Mn 257.610†	650091.5	658394.7	520.91 ug/L	520.91 ppb	10:05:23
3	Mo 202.031†	13030.1	13181.3	527.98 ug/L	527.98 ppb	10:05:43
3	Na 589.592 Radial†	777.1	954.8	2581.6 ug/L	2581.6 ppb	10:04:23
3	Ni 231.604†	33207.7	33525.8	537.04 ug/L	537.04 ppb	10:05:23
3	P 214.914†	7486.1	7254.4	2484.4 ug/L	2484.4 ppb	10:05:43
3	Pb 220.353†	6694.0	6817.1	512.41 ug/L	512.41 ppb	10:05:43
3	S 181.975 Axial†	3113.7	3089.6	2614.2 ug/L	2614.2 ppb	10:05:43
3	Sb 206.836†	2715.5	2708.2	539.48 ug/L	539.48 ppb	10:05:43
3	Se 196.026†	7890.8	8023.3	2629.9 ug/L	2629.9 ppb	10:05:43
3	Si 251.611†	238657.3	241449.0	4970.5 ug/L	4970.5 ppb	10:05:23
3	Sn 189.927†	5067.2	5132.9	534.33 ug/L	534.33 ppb	10:05:43
3	Sr 421.552†	33182.0	33485.1	515.84 ug/L	515.84 ppb	10:04:03
3	Ti 334.940†	381414.1	387880.2	507.69 ug/L	507.69 ppb	10:05:23
3	Tl 190.801†	2873.4	2975.2	504.01 ug/L	504.01 ppb	10:05:43
3	U 409.014†	16428.1	20493.6	506.85 ug/L	506.85 ppb	10:05:23
3	V 292.402†	84994.3	87840.8	504.50 ug/L	504.50 ppb	10:05:23
3	Zn 213.857†	91642.8	91807.5	507.72 ug/L	507.72 ppb	10:05:23
3	SiO2†	239859.9	242626.3	10695 ug/L	10695 ppb	10:05:59

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054435.7	99.392	%	0.7163				0.72%
Sc Radial	5567.4	100	%	0.9				0.91%
Y 371.029	841970.1	98.682	%	0.7455				0.76%
Y RADIAL	4813.2	99.95	%	0.971				0.97%
Ag 328.068†	63899.2	256.06	ug/L	0.515	256.06	ppb	0.515	0.20%
QC value within limits for Ag 328.068 Recovery = 102.42%								
Al 396.153Radial†	5519.1	5001.2	ug/L	2.50	5001.2	ppb	2.50	0.05%
QC value within limits for Al 396.153Radial Recovery = 100.02%								
As 188.979†	2056.9	486.09	ug/L	3.628	486.09	ppb	3.628	0.75%
QC value within limits for As 188.979 Recovery = 97.22%								
B 249.677†	32492.1	504.50	ug/L	1.392	504.50	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.90%								
Ba 233.527†	106232.7	538.94	ug/L	0.633	538.94	ppb	0.633	0.12%
QC value within limits for Ba 233.527 Recovery = 107.79%								
Be 313.107†	832867.8	260.15	ug/L	0.787	260.15	ppb	0.787	0.30%
QC value within limits for Be 313.107 Recovery = 104.06%								

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Ca 317.933Radial†        1962.7      4888.9 ug/L        68.91      4888.9 ppb        68.91   1.41%
   QC value within limits for Ca 317.933Radial  Recovery = 97.78%
Cd 226.502†             67684.5      505.98 ug/L        0.945      505.98 ppb        0.945   0.19%
   QC value within limits for Cd 226.502  Recovery = 101.20%
Co 228.616†             38202.2      476.11 ug/L        2.677      476.11 ppb        2.677   0.56%
   QC value within limits for Co 228.616  Recovery = 95.22%
Cr 267.716†             59349.4      506.19 ug/L        1.307      506.19 ppb        1.307   0.26%
   QC value within limits for Cr 267.716  Recovery = 101.24%
Cu 324.752†            213364.5      526.72 ug/L        2.327      526.72 ppb        2.327   0.44%
   QC value within limits for Cu 324.752  Recovery = 105.34%
Fe 238.204 Radial†       146.4      5151.2 ug/L       155.66      5151.2 ppb       155.66   3.02%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.02%
K 766.490 Radial†        5789.7      2509.3 ug/L        20.76      2509.3 ppb        20.76   0.83%
   QC value within limits for K 766.490 Radial  Recovery = 100.37%
Mg 279.077 IEC†            66.5      5274.5 ug/L       118.66      5274.5 ppb       118.66   2.25%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.49%
Mn 257.610†            658614.9      521.06 ug/L        0.751      521.06 ppb        0.751   0.14%
   QC value within limits for Mn 257.610  Recovery = 104.21%
Mo 202.031†             13106.2      524.96 ug/L        3.238      524.96 ppb        3.238   0.62%
   QC value within limits for Mo 202.031  Recovery = 104.99%
Na 589.592 Radial†       942.6      2548.6 ug/L        29.60      2548.6 ppb        29.60   1.16%
   QC value within limits for Na 589.592 Radial  Recovery = 101.94%
Ni 231.604†             33507.8      536.75 ug/L        0.520      536.75 ppb        0.520   0.10%
   QC value within limits for Ni 231.604  Recovery = 107.35%
P 214.914†               7212.6      2469.3 ug/L        15.04      2469.3 ppb        15.04   0.61%
   QC value within limits for P 214.914  Recovery = 98.77%
Pb 220.353†              6806.1      511.59 ug/L        1.490      511.59 ppb        1.490   0.29%
   QC value within limits for Pb 220.353  Recovery = 102.32%
S 181.975 Axial†         3071.7      2599.1 ug/L        21.20      2599.1 ppb        21.20   0.82%
   QC value within limits for S 181.975 Axial  Recovery = 103.96%
Sb 206.836†              2687.5      535.31 ug/L        3.632      535.31 ppb        3.632   0.68%
   QC value within limits for Sb 206.836  Recovery = 107.06%
Se 196.026†              8001.5      2622.2 ug/L         9.08      2622.2 ppb         9.08   0.35%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†            241898.3      4979.9 ug/L        10.15      4979.9 ppb        10.15   0.20%
   QC value within limits for Si 251.611  Recovery = 99.60%
Sn 189.927†              5116.8      532.64 ug/L        1.897      532.64 ppb        1.897   0.36%
   QC value within limits for Sn 189.927  Recovery = 106.53%
Sr 421.552†             33561.3      517.02 ug/L        1.026      517.02 ppb        1.026   0.20%
   QC value within limits for Sr 421.552  Recovery = 103.40%
Ti 334.940†            388802.3      508.89 ug/L        1.289      508.89 ppb        1.289   0.25%
   QC value within limits for Ti 334.940  Recovery = 101.78%
Tl 190.801†              2951.7      500.06 ug/L        3.524      500.06 ppb        3.524   0.70%
   QC value within limits for Tl 190.801  Recovery = 100.01%
U 409.014†              20567.3      508.70 ug/L        1.982      508.70 ppb        1.982   0.39%
   QC value within limits for U 409.014  Recovery = 101.74%
V 292.402†              88119.7      506.07 ug/L        1.724      506.07 ppb        1.724   0.34%
   QC value within limits for V 292.402  Recovery = 101.21%
Zn 213.857†             91889.0      508.19 ug/L        1.080      508.19 ppb        1.080   0.21%
   QC value within limits for Zn 213.857  Recovery = 101.64%
SiO2†                  240236.5       10590 ug/L        130.9       10590 ppb        130.9   1.24%
   QC value within limits for SiO2  Recovery = 99.02%
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/8/2009 10:08:09
Data Type: Reprocessed on 7/8/2009 11:40:09

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1062518.9	1062518.9	100.15	%			10:11:19
1	Sc Radial	5619.2	5619.2	101	%			10:10:02
1	Y 371.029	855063.0	855063.0	100.22	%			10:11:19
1	Y RADIAL	4891.2	4891.2	101.6	%			10:10:02
1	Ag 328.068†	686.9	47.3	0.1796	ug/L	0.1796	ppb	10:11:24
1	Al 396.153Radial†	-95.5	-2.4	-2.1842	ug/L	-2.1842	ppb	10:10:02
1	As 188.979†	-51.6	-14.6	-3.4416	ug/L	-3.4416	ppb	10:11:44
1	B 249.677†	-113.0	268.7	4.1899	ug/L	4.1899	ppb	10:11:24
1	Ba 233.527†	27.7	3.4	0.0163	ug/L	0.0163	ppb	10:11:44
1	Be 313.107†	-7419.2	-91.5	-0.0284	ug/L	-0.0284	ppb	10:11:24
1	Ca 317.933Radial†	20.0	2.8	7.0382	ug/L	7.0382	ppb	10:10:22
1	Cd 226.502†	-268.6	9.5	0.0735	ug/L	0.0735	ppb	10:11:44
1	Co 228.616†	-84.2	6.3	0.0795	ug/L	0.0795	ppb	10:11:44
1	Cr 267.716†	-63.7	-35.0	-0.2989	ug/L	-0.2989	ppb	10:11:24
1	Cu 324.752†	10404.8	197.5	0.4861	ug/L	0.4861	ppb	10:11:24
1	Fe 238.204 Radial†	-0.3	-0.6	-22.095	ug/L	-22.095	ppb	10:10:22
1	K 766.490 Radial†	1537.8	49.9	21.622	ug/L	21.622	ppb	10:10:02
1	Mg 279.077 IEC†	-0.3	-0.5	-40.804	ug/L	-40.804	ppb	10:10:22
1	Mn 257.610†	863.6	35.2	0.0257	ug/L	0.0257	ppb	10:11:44
1	Mo 202.031†	34.2	2.4	0.0952	ug/L	0.0952	ppb	10:11:44
1	Na 589.592 Radial†	-172.2	-0.1	-0.2094	ug/L	-0.2094	ppb	10:10:22
1	Ni 231.604†	165.5	17.0	0.2724	ug/L	0.2724	ppb	10:11:44
1	P 214.914†	359.3	21.8	7.6434	ug/L	7.6434	ppb	10:11:44
1	Pb 220.353†	-14.3	14.8	1.1103	ug/L	1.1103	ppb	10:11:44
1	S 181.975 Axial†	61.3	-6.6	-5.6162	ug/L	-5.6162	ppb	10:11:44
1	Sb 206.836†	50.7	5.2	1.0374	ug/L	1.0374	ppb	10:11:44
1	Se 196.026†	-15.1	6.5	2.0343	ug/L	2.0343	ppb	10:11:44
1	Si 251.611†	605.7	44.7	0.9121	ug/L	0.9121	ppb	10:11:44
1	Sn 189.927†	10.2	4.7	0.4889	ug/L	0.4889	ppb	10:11:44
1	Sr 421.552†	8.2	2.6	0.0401	ug/L	0.0401	ppb	10:10:22
1	Ti 334.940†	-1098.3	12.6	0.0172	ug/L	0.0172	ppb	10:11:24
1	Tl 190.801†	-61.2	0.3	0.0480	ug/L	0.0480	ppb	10:11:44
1	U 409.014†	-3850.0	-9.3	-0.2275	ug/L	-0.2275	ppb	10:11:19
1	V 292.402†	-1677.0	-21.6	-0.1194	ug/L	-0.1194	ppb	10:11:24
1	Zn 213.857†	1258.4	134.0	0.7499	ug/L	0.7499	ppb	10:11:44
1	SiO2†	620.8	17.5	0.7492	ug/L	0.7492	ppb	10:12:50
2	Sc 361.383	1069316.7	1069316.7	100.80	%			10:11:49
2	Sc Radial	5629.3	5629.3	101	%			10:10:27
2	Y 371.029	858517.5	858517.5	100.62	%			10:11:49
2	Y RADIAL	4855.9	4855.9	100.8	%			10:10:27
2	Ag 328.068†	676.2	32.3	0.1208	ug/L	0.1208	ppb	10:11:54
2	Al 396.153Radial†	-91.2	2.0	1.8521	ug/L	1.8521	ppb	10:10:27
2	As 188.979†	-44.8	-7.5	-1.7654	ug/L	-1.7654	ppb	10:12:14
2	B 249.677†	-123.3	259.2	4.0408	ug/L	4.0408	ppb	10:11:54
2	Ba 233.527†	23.9	-0.6	-0.0030	ug/L	-0.0030	ppb	10:12:14
2	Be 313.107†	-7510.8	-135.4	-0.0419	ug/L	-0.0419	ppb	10:11:54
2	Ca 317.933Radial†	16.0	-1.1	-2.7930	ug/L	-2.7930	ppb	10:10:47
2	Cd 226.502†	-288.6	-8.6	-0.0630	ug/L	-0.0630	ppb	10:12:14
2	Co 228.616†	-88.3	2.8	0.0352	ug/L	0.0352	ppb	10:12:14
2	Cr 267.716†	-28.7	0.1	0.0000	ug/L	0.0000	ppb	10:11:54
2	Cu 324.752†	10297.6	25.1	0.0611	ug/L	0.0611	ppb	10:11:54
2	Fe 238.204 Radial†	-0.0	-0.4	-13.229	ug/L	-13.229	ppb	10:10:47
2	K 766.490 Radial†	1552.5	61.7	26.759	ug/L	26.759	ppb	10:10:27
2	Mg 279.077 IEC†	2.2	2.0	160.02	ug/L	160.02	ppb	10:10:47
2	Mn 257.610†	868.0	34.2	0.0222	ug/L	0.0222	ppb	10:12:14
2	Mo 202.031†	38.9	6.8	0.2725	ug/L	0.2725	ppb	10:12:14
2	Na 589.592 Radial†	-186.1	-13.6	-36.706	ug/L	-36.706	ppb	10:10:47
2	Ni 231.604†	162.3	12.7	0.2043	ug/L	0.2043	ppb	10:12:14

2	P 214.914†	334.4	-5.1	-1.8065 ug/L	-1.8065 ppb	10:12:14
2	Pb 220.353†	-20.2	9.0	0.6783 ug/L	0.6783 ppb	10:12:14
2	S 181.975 Axial†	69.9	1.5	1.2588 ug/L	1.2588 ppb	10:12:14
2	Sb 206.836†	55.1	9.2	1.8205 ug/L	1.8205 ppb	10:12:14
2	Se 196.026†	-16.1	5.6	1.7877 ug/L	1.7877 ppb	10:12:14
2	Si 251.611†	597.5	32.7	0.6587 ug/L	0.6587 ppb	10:12:14
2	Sn 189.927†	12.0	6.5	0.6728 ug/L	0.6728 ppb	10:12:14
2	Sr 421.552†	-0.3	-5.8	-0.0892 ug/L	-0.0892 ppb	10:10:47
2	Ti 334.940†	-1058.2	59.4	0.0757 ug/L	0.0757 ppb	10:11:54
2	Tl 190.801†	-64.4	-2.5	-0.4195 ug/L	-0.4195 ppb	10:12:14
2	U 409.014†	-3694.3	169.6	4.2087 ug/L	4.2087 ppb	10:11:49
2	V 292.402†	-1628.9	36.7	0.2243 ug/L	0.2243 ppb	10:11:54
2	Zn 213.857†	1236.8	104.6	0.5788 ug/L	0.5788 ppb	10:12:14
2	SiO2†	605.7	-1.5	-0.0994 ug/L	-0.0994 ppb	10:12:55
3	Sc 361.383	1062135.4	1062135.4	100.12 %		10:12:20
3	Sc Radial	5726.3	5726.3	103 %		10:10:52
3	Y 371.029	854170.1	854170.1	100.11 %		10:12:20
3	Y RADIAL	4978.7	4978.7	103.4 %		10:10:52
3	Ag 328.068†	596.6	-42.7	-0.1739 ug/L	-0.1739 ppb	10:12:25
3	Al 396.153Radial†	-64.8	29.2	26.595 ug/L	26.595 ppb	10:10:52
3	As 188.979†	-48.3	-11.4	-2.6739 ug/L	-2.6739 ppb	10:12:45
3	B 249.677†	-137.5	244.2	3.8077 ug/L	3.8077 ppb	10:12:25
3	Ba 233.527†	32.8	8.5	0.0434 ug/L	0.0434 ppb	10:12:45
3	Be 313.107†	-7462.3	-137.3	-0.0426 ug/L	-0.0426 ppb	10:12:25
3	Ca 317.933Radial†	21.3	3.8	9.4766 ug/L	9.4766 ppb	10:11:12
3	Cd 226.502†	-293.9	-15.9	-0.1159 ug/L	-0.1159 ppb	10:12:45
3	Co 228.616†	-77.2	13.3	0.1659 ug/L	0.1659 ppb	10:12:45
3	Cr 267.716†	9.4	38.0	0.3245 ug/L	0.3245 ppb	10:12:25
3	Cu 324.752†	10285.9	82.5	0.2022 ug/L	0.2022 ppb	10:12:25
3	Fe 238.204 Radial†	-0.3	-0.6	-22.364 ug/L	-22.364 ppb	10:11:12
3	K 766.490 Radial†	1501.0	-14.5	-6.2704 ug/L	-6.2704 ppb	10:10:52
3	Mg 279.077 IEC†	-1.8	-1.9	-151.32 ug/L	-151.32 ppb	10:11:12
3	Mn 257.610†	857.0	29.0	0.0229 ug/L	0.0229 ppb	10:12:45
3	Mo 202.031†	36.6	4.8	0.1888 ug/L	0.1888 ppb	10:12:45
3	Na 589.592 Radial†	-183.0	-7.4	-20.091 ug/L	-20.091 ppb	10:11:12
3	Ni 231.604†	155.8	7.4	0.1180 ug/L	0.1180 ppb	10:12:45
3	P 214.914†	337.7	0.4	0.1410 ug/L	0.1410 ppb	10:12:45
3	Pb 220.353†	-5.3	23.7	1.7877 ug/L	1.7877 ppb	10:12:45
3	S 181.975 Axial†	71.0	3.0	2.5743 ug/L	2.5743 ppb	10:12:45
3	Sb 206.836†	52.0	6.6	1.2846 ug/L	1.2846 ppb	10:12:45
3	Se 196.026†	-12.9	8.7	2.7668 ug/L	2.7668 ppb	10:12:45
3	Si 251.611†	618.9	58.0	1.1952 ug/L	1.1952 ppb	10:12:45
3	Sn 189.927†	7.7	2.3	0.2347 ug/L	0.2347 ppb	10:12:45
3	Sr 421.552†	-1.2	-6.6	-0.1023 ug/L	-0.1023 ppb	10:11:12
3	Ti 334.940†	-1088.2	22.3	0.0301 ug/L	0.0301 ppb	10:12:25
3	Tl 190.801†	-57.0	4.4	0.7456 ug/L	0.7456 ppb	10:12:45
3	U 409.014†	-3872.6	-33.3	-0.8247 ug/L	-0.8247 ppb	10:12:20
3	V 292.402†	-1572.8	81.8	0.4653 ug/L	0.4653 ppb	10:12:25
3	Zn 213.857†	1256.5	132.6	0.7473 ug/L	0.7473 ppb	10:12:45
3	SiO2†	684.3	81.2	3.5825 ug/L	3.5825 ppb	10:13:00

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1064657.0	100.36	%	0.381				0.38%
Sc Radial	5658.3	102	%	1.1				1.05%
Y 371.029	855916.8	100.32	%	0.269				0.27%
Y RADIAL	4908.6	101.9	%	1.31				1.29%
Ag 328.068†	12.3	0.0422	ug/L	0.18942	0.0422	ppb	0.18942	448.85%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.6	8.7543	ug/L	15.58188	8.7543	ppb	15.58188	177.99%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.2	-2.6270	ug/L	0.83913	-2.6270	ppb	0.83913	31.94%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	257.3	4.0128	ug/L	0.19262	4.0128	ppb	0.19262	4.80%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.7	0.0189	ug/L	0.02328	0.0189	ppb	0.02328	123.18%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.4	-0.0376	ug/L	0.00800	-0.0376	ppb	0.00800	21.25%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          1.8      4.5739 ug/L       6.49541      4.5739 ppb        6.49541 142.01%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -5.0     -0.0351 ug/L       0.09773     -0.0351 ppb        0.09773 278.26%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                7.5      0.0936 ug/L       0.06649      0.0936 ppb        0.06649  71.07%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                1.1      0.0085 ug/L       0.31178      0.0085 ppb        0.31178 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              101.7      0.2498 ug/L       0.21648      0.2498 ppb        0.21648  86.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5    -19.229 ug/L        5.1983    -19.229 ppb         5.1983  27.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         32.4     14.037 ug/L       17.7734     14.037 ppb        17.7734 126.62%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.1    -10.703 ug/L      157.8385    -10.703 ppb       157.8385 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               32.8      0.0236 ug/L       0.00188      0.0236 ppb        0.00188   7.96%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.7      0.1855 ug/L       0.08870      0.1855 ppb        0.08870  47.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -7.0    -19.002 ug/L       18.2728    -19.002 ppb        18.2728  96.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               12.4      0.1983 ug/L       0.07739      0.1983 ppb        0.07739  39.03%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 5.7      1.9926 ug/L       4.98968      1.9926 ppb        4.98968 250.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               15.9      1.1921 ug/L       0.55921      1.1921 ppb        0.55921  46.91%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.7     -0.5944 ug/L       4.39850     -0.5944 ppb        4.39850 740.05%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.0      1.3808 ug/L       0.40029      1.3808 ppb        0.40029  28.99%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                7.0      2.1962 ug/L       0.50925      2.1962 ppb        0.50925  23.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               45.1      0.9220 ug/L       0.26841      0.9220 ppb        0.26841  29.11%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.5      0.4655 ug/L       0.22000      0.4655 ppb        0.22000  47.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -3.3     -0.0505 ug/L       0.07870     -0.0505 ppb        0.07870 155.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               31.5      0.0410 ug/L       0.03074      0.0410 ppb        0.03074  74.91%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.7      0.1247 ug/L       0.58632      0.1247 ppb        0.58632 470.17%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                42.3      1.0522 ug/L       2.74987      1.0522 ppb        2.74987 261.36%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                32.3      0.1900 ug/L       0.29386      0.1900 ppb        0.29386 154.62%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              123.8      0.6920 ug/L       0.09801      0.6920 ppb        0.09801  14.16%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     32.4      1.4108 ug/L       1.92802      1.4108 ppb        1.92802 136.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/8/2009 10:15:11
Data Type: Reprocessed on 7/8/2009 11:40:11

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1047868.8	1047868.8	98.773	%			10:18:21
1	Sc Radial	5489.2	5489.2	98.6	%			10:17:05
1	Y 371.029	843324.4	843324.4	98.841	%			10:18:21
1	Y RADIAL	4749.6	4749.6	98.63	%			10:17:05
1	Ag 328.068†	1908.9	1294.0	5.1281	ug/L	5.1281	ppb	10:18:26
1	Al 396.153Radial†	137.4	231.5	210.24	ug/L	210.24	ppb	10:17:05
1	As 188.979†	70.2	108.0	25.354	ug/L	25.354	ppb	10:18:47
1	B 249.677†	2924.9	3342.8	52.070	ug/L	52.070	ppb	10:18:26
1	Ba 233.527†	1019.6	1008.0	5.1161	ug/L	5.1161	ppb	10:18:47
1	Be 313.107†	8654.4	16078.1	5.0107	ug/L	5.0107	ppb	10:18:26
1	Ca 317.933Radial†	95.1	79.5	197.91	ug/L	197.91	ppb	10:17:25
1	Cd 226.502†	377.6	659.9	4.9265	ug/L	4.9265	ppb	10:18:47
1	Co 228.616†	298.6	392.8	4.9073	ug/L	4.9073	ppb	10:18:47
1	Cr 267.716†	559.7	595.3	5.0626	ug/L	5.0626	ppb	10:18:47
1	Cu 324.752†	13982.0	3964.4	9.7874	ug/L	9.7874	ppb	10:18:26
1	Fe 238.204 Radial†	3.4	3.1	108.63	ug/L	108.63	ppb	10:17:25
1	K 766.490 Radial†	1881.1	433.9	188.09	ug/L	188.09	ppb	10:17:05
1	Mg 279.077 IEC†	3.4	3.3	260.55	ug/L	260.55	ppb	10:17:25
1	Mn 257.610†	13937.0	13283.1	10.506	ug/L	10.506	ppb	10:18:26
1	Mo 202.031†	283.1	254.8	10.207	ug/L	10.207	ppb	10:18:47
1	Na 589.592 Radial†	-73.9	95.5	258.17	ug/L	258.17	ppb	10:17:25
1	Ni 231.604†	470.7	328.3	5.2585	ug/L	5.2585	ppb	10:18:47
1	P 214.914†	747.0	419.3	146.74	ug/L	146.74	ppb	10:18:47
1	Pb 220.353†	129.9	160.5	12.084	ug/L	12.084	ppb	10:18:47
1	S 181.975 Axial†	177.5	111.8	94.633	ug/L	94.633	ppb	10:18:47
1	Sb 206.836†	107.1	63.0	12.627	ug/L	12.627	ppb	10:18:47
1	Se 196.026†	79.0	101.6	33.458	ug/L	33.458	ppb	10:18:47
1	Si 251.611†	5379.4	4886.1	100.55	ug/L	100.55	ppb	10:18:26
1	Sn 189.927†	102.0	97.8	10.192	ug/L	10.192	ppb	10:18:47
1	Sr 421.552†	343.2	342.5	5.2744	ug/L	5.2744	ppb	10:17:25
1	Ti 334.940†	2629.6	3771.5	4.9245	ug/L	4.9245	ppb	10:18:26
1	Tl 190.801†	45.6	107.5	18.194	ug/L	18.194	ppb	10:18:47
1	U 409.014†	-1614.8	2199.9	54.559	ug/L	54.559	ppb	10:18:21
1	V 292.402†	-733.6	910.1	5.3790	ug/L	5.3790	ppb	10:18:26
1	Zn 213.857†	2833.5	1746.3	9.6832	ug/L	9.6832	ppb	10:18:47
1	SiO2†	5363.4	4827.7	212.72	ug/L	212.72	ppb	10:19:53
2	Sc 361.383	1047486.5	1047486.5	98.737	%			10:18:52
2	Sc Radial	5556.3	5556.3	99.8	%			10:17:30
2	Y 371.029	843422.2	843422.2	98.852	%			10:18:52
2	Y RADIAL	4839.9	4839.9	100.5	%			10:17:30
2	Ag 328.068†	1979.1	1365.8	5.4057	ug/L	5.4057	ppb	10:18:57
2	Al 396.153Radial†	131.7	224.1	203.50	ug/L	203.50	ppb	10:17:30
2	As 188.979†	79.1	117.0	27.460	ug/L	27.460	ppb	10:19:17
2	B 249.677†	2837.5	3255.3	50.709	ug/L	50.709	ppb	10:18:57
2	Ba 233.527†	999.5	988.0	5.0149	ug/L	5.0149	ppb	10:19:17
2	Be 313.107†	8590.8	16016.9	4.9918	ug/L	4.9918	ppb	10:18:57
2	Ca 317.933Radial†	97.2	80.4	200.20	ug/L	200.20	ppb	10:17:50
2	Cd 226.502†	375.2	657.6	4.9119	ug/L	4.9119	ppb	10:19:17
2	Co 228.616†	313.3	407.7	5.0943	ug/L	5.0943	ppb	10:19:17
2	Cr 267.716†	522.4	557.7	4.7420	ug/L	4.7420	ppb	10:19:17
2	Cu 324.752†	14012.6	4000.6	9.8754	ug/L	9.8754	ppb	10:18:57
2	Fe 238.204 Radial†	2.8	2.4	85.690	ug/L	85.690	ppb	10:17:50
2	K 766.490 Radial†	1891.7	421.5	182.69	ug/L	182.69	ppb	10:17:30
2	Mg 279.077 IEC†	3.4	3.3	259.03	ug/L	259.03	ppb	10:17:50
2	Mn 257.610†	13825.0	13174.8	10.418	ug/L	10.418	ppb	10:18:57
2	Mo 202.031†	288.8	260.7	10.442	ug/L	10.442	ppb	10:19:17
2	Na 589.592 Radial†	-60.0	110.3	298.35	ug/L	298.35	ppb	10:17:50
2	Ni 231.604†	467.6	325.3	5.2109	ug/L	5.2109	ppb	10:19:17

2	P 214.914†	747.1	419.7	146.89 ug/L	146.89 ppb	10:19:17
2	Pb 220.353†	109.3	139.8	10.531 ug/L	10.531 ppb	10:19:17
2	S 181.975 Axial†	174.7	109.1	92.292 ug/L	92.292 ppb	10:19:17
2	Sb 206.836†	103.9	59.8	12.037 ug/L	12.037 ppb	10:19:17
2	Se 196.026†	78.5	101.1	33.226 ug/L	33.226 ppb	10:19:17
2	Si 251.611†	5425.5	4934.8	101.55 ug/L	101.55 ppb	10:18:57
2	Sn 189.927†	110.5	106.5	11.091 ug/L	11.091 ppb	10:19:17
2	Sr 421.552†	350.2	345.2	5.3169 ug/L	5.3169 ppb	10:17:50
2	Ti 334.940†	2664.9	3808.2	4.9728 ug/L	4.9728 ppb	10:18:57
2	Tl 190.801†	64.2	126.4	21.375 ug/L	21.375 ppb	10:19:17
2	U 409.014†	-1616.1	2197.9	54.515 ug/L	54.515 ppb	10:18:52
2	V 292.402†	-696.6	947.3	5.5964 ug/L	5.5964 ppb	10:18:57
2	Zn 213.857†	2826.6	1740.4	9.6528 ug/L	9.6528 ppb	10:19:17
2	SiO2†	5326.0	4791.8	211.13 ug/L	211.13 ppb	10:19:58
3	Sc 361.383	1064715.9	1064715.9	100.36 %		10:19:22
3	Sc Radial	5636.0	5636.0	101 %		10:17:55
3	Y 371.029	857151.8	857151.8	100.46 %		10:19:22
3	Y RADIAL	4900.5	4900.5	101.8 %		10:17:55
3	Ag 328.068†	1947.8	1302.2	5.1615 ug/L	5.1615 ppb	10:19:27
3	Al 396.153Radial†	113.0	203.8	185.06 ug/L	185.06 ppb	10:17:55
3	As 188.979†	78.8	115.4	27.092 ug/L	27.092 ppb	10:19:47
3	B 249.677†	2917.2	3288.2	51.219 ug/L	51.219 ppb	10:19:27
3	Ba 233.527†	1004.9	977.0	4.9582 ug/L	4.9582 ppb	10:19:47
3	Be 313.107†	8767.1	16051.7	5.0025 ug/L	5.0025 ppb	10:19:27
3	Ca 317.933Radial†	96.9	78.7	196.13 ug/L	196.13 ppb	10:18:15
3	Cd 226.502†	363.6	640.0	4.7768 ug/L	4.7768 ppb	10:19:47
3	Co 228.616†	310.3	399.6	4.9919 ug/L	4.9919 ppb	10:19:47
3	Cr 267.716†	528.2	554.9	4.7188 ug/L	4.7188 ppb	10:19:47
3	Cu 324.752†	14146.2	3904.0	9.6387 ug/L	9.6387 ppb	10:19:27
3	Fe 238.204 Radial†	3.6	3.2	111.85 ug/L	111.85 ppb	10:18:15
3	K 766.490 Radial†	1829.8	333.6	144.57 ug/L	144.57 ppb	10:17:55
3	Mg 279.077 IEC†	6.0	5.8	456.93 ug/L	456.93 ppb	10:18:15
3	Mn 257.610†	14031.0	13153.4	10.401 ug/L	10.401 ppb	10:19:27
3	Mo 202.031†	277.9	245.2	9.8210 ug/L	9.8210 ppb	10:19:47
3	Na 589.592 Radial†	-65.4	105.8	286.15 ug/L	286.15 ppb	10:18:15
3	Ni 231.604†	473.1	323.1	5.1761 ug/L	5.1761 ppb	10:19:47
3	P 214.914†	766.3	426.6	149.31 ug/L	149.31 ppb	10:19:47
3	Pb 220.353†	121.9	150.5	11.326 ug/L	11.326 ppb	10:19:47
3	S 181.975 Axial†	173.4	104.9	88.788 ug/L	88.788 ppb	10:19:47
3	Sb 206.836†	88.6	42.9	8.6819 ug/L	8.6819 ppb	10:19:47
3	Se 196.026†	79.8	101.1	33.313 ug/L	33.313 ppb	10:19:47
3	Si 251.611†	5402.9	4823.3	99.277 ug/L	99.277 ppb	10:19:27
3	Sn 189.927†	103.1	97.3	10.137 ug/L	10.137 ppb	10:19:47
3	Sr 421.552†	361.1	351.1	5.4073 ug/L	5.4073 ppb	10:18:15
3	Ti 334.940†	2655.9	3755.6	4.9047 ug/L	4.9047 ppb	10:19:27
3	Tl 190.801†	61.2	122.4	20.700 ug/L	20.700 ppb	10:19:47
3	U 409.014†	-1729.9	2111.1	52.358 ug/L	52.358 ppb	10:19:22
3	V 292.402†	-842.5	813.3	4.8240 ug/L	4.8240 ppb	10:19:27
3	Zn 213.857†	2842.9	1710.3	9.4754 ug/L	9.4754 ppb	10:19:47
3	SiO2†	5379.4	4757.6	209.68 ug/L	209.68 ppb	10:20:03

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1053357.1	99.291	%	0.9274				0.93%
Sc Radial	5560.5	99.9	%	1.32				1.32%
Y 371.029	847966.2	99.385	%	0.9324				0.94%
Y RADIAL	4830.0	100.3	%	1.58				1.57%
Ag 328.068†	1320.7	5.2318	ug/L	0.15157	5.2318	ppb	0.15157	2.90%
QC value within limits for Ag 328.068 Recovery = 104.64%								
Al 396.153Radial†	219.8	199.60	ug/L	13.038	199.60	ppb	13.038	6.53%
QC value within limits for Al 396.153Radial Recovery = 99.80%								
As 188.979†	113.5	26.635	ug/L	1.1249	26.635	ppb	1.1249	4.22%
QC value within limits for As 188.979 Recovery = 88.78%								
B 249.677†	3295.4	51.333	ug/L	0.6874	51.333	ppb	0.6874	1.34%
QC value within limits for B 249.677 Recovery = 102.67%								
Ba 233.527†	991.0	5.0297	ug/L	0.08000	5.0297	ppb	0.08000	1.59%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	16048.9	5.0017	ug/L	0.00949	5.0017	ppb	0.00949	0.19%
QC value within limits for Be 313.107 Recovery = 100.03%								

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Ca 317.933Radial†          79.5      198.08 ug/L         2.042      198.08 ppb          2.042   1.03%
   QC value within limits for Ca 317.933Radial  Recovery = 99.04%
Cd 226.502†               652.5      4.8717 ug/L       0.08254      4.8717 ppb        0.08254   1.69%
   QC value within limits for Cd 226.502  Recovery = 97.43%
Co 228.616†               400.0      4.9978 ug/L       0.09363      4.9978 ppb        0.09363   1.87%
   QC value within limits for Co 228.616  Recovery = 99.96%
Cr 267.716†               569.3      4.8411 ug/L       0.19215      4.8411 ppb        0.19215   3.97%
   QC value within limits for Cr 267.716  Recovery = 96.82%
Cu 324.752†              3956.3      9.7672 ug/L       0.11961      9.7672 ppb        0.11961   1.22%
   QC value within limits for Cu 324.752  Recovery = 97.67%
Fe 238.204 Radial†         2.9      102.06 ug/L        14.266      102.06 ppb         14.266  13.98%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.06%
K 766.490 Radial†         396.3      171.78 ug/L        23.724      171.78 ppb         23.724  13.81%
   QC value within limits for K 766.490 Radial  Recovery = 114.52%
Mg 279.077 IEC†            4.1      325.50 ug/L       113.822      325.50 ppb        113.822  34.97%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.50%
Mn 257.610†            13203.8      10.442 ug/L        0.0568      10.442 ppb         0.0568   0.54%
   QC value within limits for Mn 257.610  Recovery = 104.42%
Mo 202.031†               253.6      10.157 ug/L        0.3133      10.157 ppb         0.3133   3.09%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†        103.9      280.89 ug/L        20.599      280.89 ppb         20.599   7.33%
   QC value within limits for Na 589.592 Radial  Recovery = 93.63%
Ni 231.604†               325.6      5.2152 ug/L       0.04137      5.2152 ppb        0.04137   0.79%
   QC value within limits for Ni 231.604  Recovery = 104.30%
P 214.914†                421.9      147.65 ug/L         1.445      147.65 ppb          1.445   0.98%
   QC value within limits for P 214.914  Recovery = 98.43%
Pb 220.353†               150.3      11.314 ug/L        0.7766      11.314 ppb         0.7766   6.86%
   QC value within limits for Pb 220.353  Recovery = 113.14%
S 181.975 Axial†          108.6      91.904 ug/L        2.9414      91.904 ppb         2.9414   3.20%
   QC value within limits for S 181.975 Axial  Recovery = 91.90%
Sb 206.836†                55.2      11.115 ug/L        2.1279      11.115 ppb         2.1279  19.14%
   QC value within limits for Sb 206.836  Recovery = 111.15%
Se 196.026†               101.3      33.332 ug/L        0.1173      33.332 ppb         0.1173   0.35%
   QC value within limits for Se 196.026  Recovery = 111.11%
Si 251.611†              4881.4      100.46 ug/L         1.140      100.46 ppb          1.140   1.13%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†               100.5      10.473 ug/L        0.5359      10.473 ppb         0.5359   5.12%
   QC value within limits for Sn 189.927  Recovery = 104.73%
Sr 421.552†               346.3      5.3328 ug/L       0.06788      5.3328 ppb        0.06788   1.27%
   QC value within limits for Sr 421.552  Recovery = 106.66%
Ti 334.940†              3778.5      4.9340 ug/L       0.03506      4.9340 ppb        0.03506   0.71%
   QC value within limits for Ti 334.940  Recovery = 98.68%
Tl 190.801†               118.8      20.090 ug/L        1.6764      20.090 ppb         1.6764   8.34%
   QC value within limits for Tl 190.801  Recovery = 100.45%
U 409.014†               2169.6      53.811 ug/L        1.2585      53.811 ppb         1.2585   2.34%
   QC value within limits for U 409.014  Recovery = 107.62%
V 292.402†                890.2      5.2665 ug/L       0.39826      5.2665 ppb        0.39826   7.56%
   QC value within limits for V 292.402  Recovery = 105.33%
Zn 213.857†              1732.3      9.6038 ug/L       0.11224      9.6038 ppb        0.11224   1.17%
   QC value within limits for Zn 213.857  Recovery = 96.04%
SiO2†                    4792.4      211.18 ug/L         1.524      211.18 ppb          1.524   0.72%
   QC value within limits for SiO2  Recovery = 99.14%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: ICSA
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/8/2009 10:22:14
Data Type: Reprocessed on 7/8/2009 11:40:12

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	895501.5	895501.5	84.411	%			10:25:25
1	Sc Radial	5081.7	5081.7	91.3	%			10:24:27
1	Y 371.029	714523.0	714523.0	83.745	%			10:25:25
1	Y RADIAL	4391.8	4391.8	91.20	%			10:24:27
1	Ag 328.068†	-10393.0	-12951.0	1.0699	ug/L	1.0699	ppb	10:25:25
1	Al 396.153Radial†	511366.0	560078.8	509800	ug/L	509800	ppb	10:24:07
1	As 188.979†	-139.2	-128.0	6.5707	ug/L	6.5707	ppb	10:25:45
1	B 249.677†	908.6	1457.9	-1.6992	ug/L	-1.6992	ppb	10:25:25
1	Ba 233.527†	-495.8	-611.7	1.2025	ug/L	1.2025	ppb	10:25:45
1	Be 313.107†	-7530.9	-1605.5	-0.5734	ug/L	-0.5734	ppb	10:25:25
1	Ca 317.933Radial†	172461.7	188842.4	470380	ug/L	470380	ppb	10:24:07
1	Cd 226.502†	2108.2	2775.1	-0.9878	ug/L	-0.9878	ppb	10:25:45
1	Co 228.616†	-24.7	61.1	-1.8391	ug/L	-1.8391	ppb	10:25:45
1	Cr 267.716†	-320.2	-350.7	0.5961	ug/L	0.5961	ppb	10:25:45
1	Cu 324.752†	6421.7	-2583.6	4.2681	ug/L	4.2681	ppb	10:25:25
1	Fe 238.204 Radial†	4791.8	5247.1	184080	ug/L	184080	ppb	10:24:27
1	K 766.490 Radial†	1268.1	-84.4	17.211	ug/L	17.211	ppb	10:24:07
1	Mg 279.077 IEC†	5667.1	6205.7	491320	ug/L	491320	ppb	10:24:27
1	Mn 257.610†	-1965.4	-3155.4	12.011	ug/L	12.011	ppb	10:25:25
1	Mo 202.031†	-328.7	-421.2	-4.2268	ug/L	-4.2268	ppb	10:25:45
1	Na 589.592 Radial†	-173.4	-19.4	-52.528	ug/L	-52.528	ppb	10:24:27
1	Ni 231.604†	337.4	251.5	4.0300	ug/L	4.0300	ppb	10:25:45
1	P 214.914†	293.5	10.8	28.559	ug/L	28.559	ppb	10:25:45
1	Pb 220.353†	-942.6	-1087.6	0.6717	ug/L	0.6717	ppb	10:25:45
1	S 181.975 Axial†	128.7	84.6	-28.638	ug/L	-28.638	ppb	10:25:45
1	Sb 206.836†	101.4	74.7	-0.8382	ug/L	-0.8382	ppb	10:25:45
1	Se 196.026†	-1802.9	-2114.3	-13.357	ug/L	-13.357	ppb	10:25:45
1	Si 251.611†	614.8	168.2	3.9128	ug/L	3.9128	ppb	10:25:45
1	Sn 189.927†	-348.4	-418.3	-4.5225	ug/L	-4.5225	ppb	10:25:45
1	Sr 421.552†	258.7	277.9	-0.0791	ug/L	-0.0791	ppb	10:24:27
1	Ti 334.940†	-21523.1	-24388.8	-0.4475	ug/L	-0.4475	ppb	10:25:25
1	Tl 190.801†	-123.2	-84.6	-11.647	ug/L	-11.647	ppb	10:25:45
1	U 409.014†	-2645.4	700.7	-5.2282	ug/L	-5.2282	ppb	10:25:25
1	V 292.402†	867.3	2680.3	-1.8957	ug/L	-1.8957	ppb	10:25:45
1	Zn 213.857†	5199.0	5036.8	-8.7856	ug/L	-8.7856	ppb	10:25:45
1	SiO2†	554.5	54.6	3.3717	ug/L	3.3717	ppb	10:26:41
2	Sc 361.383	894719.3	894719.3	84.337	%			10:25:50
2	Sc Radial	5092.9	5092.9	91.5	%			10:24:53
2	Y 371.029	715579.1	715579.1	83.869	%			10:25:50
2	Y RADIAL	4406.9	4406.9	91.51	%			10:24:53
2	Ag 328.068†	-10345.8	-12905.8	1.4483	ug/L	1.4483	ppb	10:25:50
2	Al 396.153Radial†	515497.0	563358.3	512790	ug/L	512790	ppb	10:24:33
2	As 188.979†	-138.6	-127.5	6.8312	ug/L	6.8312	ppb	10:26:10
2	B 249.677†	761.2	1284.1	-4.5082	ug/L	-4.5082	ppb	10:25:50
2	Ba 233.527†	-460.6	-570.4	1.4270	ug/L	1.4270	ppb	10:26:10
2	Be 313.107†	-7458.7	-1527.7	-0.5517	ug/L	-0.5517	ppb	10:25:50
2	Ca 317.933Radial†	173876.6	189972.1	473190	ug/L	473190	ppb	10:24:33
2	Cd 226.502†	2120.9	2792.4	-0.9470	ug/L	-0.9470	ppb	10:26:10
2	Co 228.616†	-11.2	77.1	-1.6492	ug/L	-1.6492	ppb	10:26:10
2	Cr 267.716†	-331.2	-364.1	0.4968	ug/L	0.4968	ppb	10:26:10
2	Cu 324.752†	6524.1	-2455.6	4.6269	ug/L	4.6269	ppb	10:25:50
2	Fe 238.204 Radial†	4821.9	5268.4	184820	ug/L	184820	ppb	10:24:53
2	K 766.490 Radial†	1216.4	-143.9	-8.5744	ug/L	-8.5744	ppb	10:24:33
2	Mg 279.077 IEC†	5711.8	6240.9	494110	ug/L	494110	ppb	10:24:53
2	Mn 257.610†	-2242.7	-3486.2	11.793	ug/L	11.793	ppb	10:25:50
2	Mo 202.031†	-331.9	-425.4	-4.3417	ug/L	-4.3417	ppb	10:26:10
2	Na 589.592 Radial†	-158.9	-3.3	-8.8064	ug/L	-8.8064	ppb	10:24:53
2	Ni 231.604†	322.8	234.5	3.7578	ug/L	3.7578	ppb	10:26:10

2	P 214.914†	282.3	-2.2	24.298	ug/L	24.298 ppb	10:26:10
2	Pb 220.353†	-980.2	-1133.2	-2.2283	ug/L	-2.2283 ppb	10:26:10
2	S 181.975 Axial†	133.9	90.9	-23.927	ug/L	-23.927 ppb	10:26:10
2	Sb 206.836†	107.1	81.5	0.3983	ug/L	0.3983 ppb	10:26:10
2	Se 196.026†	-1828.8	-2146.8	-21.144	ug/L	-21.144 ppb	10:26:10
2	Si 251.611†	621.0	176.2	4.0917	ug/L	4.0917 ppb	10:26:10
2	Sn 189.927†	-354.8	-426.2	-5.1179	ug/L	-5.1179 ppb	10:26:10
2	Sr 421.552†	253.4	271.4	-0.2039	ug/L	-0.2039 ppb	10:24:53
2	Ti 334.940†	-22184.0	-25194.7	-1.3121	ug/L	-1.3121 ppb	10:25:50
2	Tl 190.801†	-105.2	-63.3	-8.0480	ug/L	-8.0480 ppb	10:26:10
2	U 409.014†	-2792.9	523.2	-9.7248	ug/L	-9.7248 ppb	10:25:50
2	V 292.402†	765.0	2559.9	-2.6434	ug/L	-2.6434 ppb	10:26:10
2	Zn 213.857†	5183.7	5024.0	-9.0326	ug/L	-9.0326 ppb	10:26:10
2	SiO2†	499.4	-10.2	0.5414	ug/L	0.5414 ppb	10:26:46
3	Sc 361.383	893780.1	893780.1	84.249	%		10:26:15
3	Sc Radial	5118.7	5118.7	92.0	%		10:25:18
3	Y 371.029	713970.1	713970.1	83.680	%		10:26:15
3	Y RADIAL	4426.1	4426.1	91.91	%		10:25:18
3	Ag 328.068†	-10409.3	-12994.0	1.2796	ug/L	1.2796 ppb	10:26:15
3	Al 396.153Radial†	508361.4	552762.3	503140	ug/L	503140 ppb	10:24:58
3	As 188.979†	-128.5	-115.7	9.6416	ug/L	9.6416 ppb	10:26:36
3	B 249.677†	835.5	1373.2	-3.1464	ug/L	-3.1464 ppb	10:26:15
3	Ba 233.527†	-496.7	-613.9	1.2131	ug/L	1.2131 ppb	10:26:36
3	Be 313.107†	-7571.9	-1671.3	-0.5963	ug/L	-0.5963 ppb	10:26:15
3	Ca 317.933Radial†	171828.3	186787.9	465260	ug/L	465260 ppb	10:24:58
3	Cd 226.502†	2103.7	2774.7	-1.1037	ug/L	-1.1037 ppb	10:26:36
3	Co 228.616†	-21.9	64.4	-1.8116	ug/L	-1.8116 ppb	10:26:36
3	Cr 267.716†	-287.1	-312.1	0.9428	ug/L	0.9428 ppb	10:26:36
3	Cu 324.752†	6618.2	-2335.7	4.9347	ug/L	4.9347 ppb	10:26:15
3	Fe 238.204 Radial†	4851.7	5274.3	185030	ug/L	185030 ppb	10:25:18
3	K 766.490 Radial†	1220.8	-145.9	-8.5400	ug/L	-8.5400 ppb	10:24:58
3	Mg 279.077 IEC†	5734.1	6233.7	493540	ug/L	493540 ppb	10:25:18
3	Mn 257.610†	-2195.1	-3432.5	11.873	ug/L	11.873 ppb	10:26:15
3	Mo 202.031†	-345.3	-441.6	-4.9774	ug/L	-4.9774 ppb	10:26:36
3	Na 589.592 Radial†	-160.0	-3.5	-9.5568	ug/L	-9.5568 ppb	10:25:18
3	Ni 231.604†	344.5	260.6	4.1763	ug/L	4.1763 ppb	10:26:36
3	P 214.914†	258.2	-30.4	10.851	ug/L	10.851 ppb	10:26:36
3	Pb 220.353†	-979.4	-1133.4	-4.1545	ug/L	-4.1545 ppb	10:26:36
3	S 181.975 Axial†	130.4	86.9	-25.395	ug/L	-25.395 ppb	10:26:36
3	Sb 206.836†	118.6	95.4	3.4218	ug/L	3.4218 ppb	10:26:36
3	Se 196.026†	-1802.6	-2118.0	-11.599	ug/L	-11.599 ppb	10:26:36
3	Si 251.611†	555.6	99.4	2.5199	ug/L	2.5199 ppb	10:26:36
3	Sn 189.927†	-358.0	-430.4	-6.1399	ug/L	-6.1399 ppb	10:26:36
3	Sr 421.552†	264.5	282.1	0.0330	ug/L	0.0330 ppb	10:25:18
3	Ti 334.940†	-22156.0	-25189.1	-1.8382	ug/L	-1.8382 ppb	10:26:15
3	Tl 190.801†	-115.0	-75.1	-10.083	ug/L	-10.083 ppb	10:26:36
3	U 409.014†	-2610.1	736.7	-4.4537	ug/L	-4.4537 ppb	10:26:15
3	V 292.402†	851.7	2663.7	-2.0904	ug/L	-2.0904 ppb	10:26:36
3	Zn 213.857†	5227.2	5082.1	-8.7142	ug/L	-8.7142 ppb	10:26:36
3	SiO2†	573.2	78.0	4.4641	ug/L	4.4641 ppb	10:26:51

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	894667.0	84.332	%	0.0812				0.10%
Sc Radial	5097.8	91.6	%	0.34				0.37%
Y 371.029	714690.7	83.764	%	0.0958				0.11%
Y RADIAL	4408.3	91.54	%	0.357				0.39%
Ag 328.068†	-12950.3	1.2659	ug/L	0.18957	1.2659	ppb	0.18957	14.97%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	558733.1	508580	ug/L	4937.7	508580	ppb	4937.7	0.97%
QC value within limits for Al 396.153Radial Recovery = 101.72%								
As 188.979†	-123.7	7.6812	ug/L	1.70280	7.6812	ppb	1.70280	22.17%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1371.7	-3.1179	ug/L	1.40468	-3.1179	ppb	1.40468	45.05%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-598.7	1.2809	ug/L	0.12664	1.2809	ppb	0.12664	9.89%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1601.5	-0.5738	ug/L	0.02233	-0.5738	ppb	0.02233	3.89%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†     188534.1      469610 ug/L        4021.0      469610 ppb        4021.0   0.86%
   QC value within limits for Ca 317.933Radial  Recovery = 93.92%
Cd 226.502†             2780.7     -1.0128 ug/L       0.08129     -1.0128 ppb       0.08129   8.03%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               67.6     -1.7666 ug/L       0.10262     -1.7666 ppb       0.10262   5.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -342.3      0.6786 ug/L       0.23414      0.6786 ppb       0.23414  34.51%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -2458.3      4.6099 ug/L       0.33361      4.6099 ppb       0.33361   7.24%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†      5263.2      184640 ug/L         500.8      184640 ppb         500.8   0.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 92.32%
K 766.490 Radial†       -124.8      0.0323 ug/L      14.87743      0.0323 ppb      14.87743 >999.9%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†         6226.8      492990 ug/L        1472.2      492990 ppb        1472.2   0.30%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.60%
Mn 257.610†            -3358.1      11.893 ug/L        0.1103      11.893 ppb        0.1103   0.93%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -429.4     -4.5153 ug/L       0.40430     -4.5153 ppb       0.40430   8.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.630 ug/L       25.0287     -23.630 ppb       25.0287 105.92%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              248.9      3.9880 ug/L       0.21242      3.9880 ppb       0.21242   5.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -7.3      21.236 ug/L        9.2429      21.236 ppb        9.2429  43.52%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -1118.1     -1.9037 ug/L       2.42937     -1.9037 ppb       2.42937 127.61%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          87.5     -25.987 ug/L        2.4107     -25.987 ppb        2.4107   9.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               83.9      0.9940 ug/L       2.19156      0.9940 ppb       2.19156 220.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†            -2126.4     -15.367 ug/L        5.0800     -15.367 ppb        5.0800  33.06%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              148.0      3.5081 ug/L       0.86048      3.5081 ppb       0.86048  24.53%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -424.9     -5.2601 ug/L       0.81802     -5.2601 ppb       0.81802  15.55%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              277.1     -0.0833 ug/L       0.11853     -0.0833 ppb       0.11853 142.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†           -24924.2     -1.1993 ug/L       0.70220     -1.1993 ppb       0.70220  58.55%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -74.3     -9.9258 ug/L       1.80446     -9.9258 ppb       1.80446  18.18%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               653.6     -6.4689 ug/L       2.84611     -6.4689 ppb       2.84611  44.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              2634.7     -2.2098 ug/L       0.38789     -2.2098 ppb       0.38789  17.55%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             5047.6     -8.8442 ug/L       0.16704     -8.8442 ppb       0.16704   1.89%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    40.8      2.7924 ug/L       2.02453      2.7924 ppb       2.02453  72.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/8/2009 10:29:02
Data Type: Reprocessed on 7/8/2009 11:40:13

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	922949.8	922949.8	86.998	%			10:31:27
1	Sc Radial	5088.8	5088.8	91.4	%			10:30:59
1	Y 371.029	724486.5	724486.5	84.913	%			10:31:27
1	Y RADIAL	4396.5	4396.5	91.29	%			10:30:59
1	Ag 328.068†	51134.8	58138.2	284.08	ug/L	284.08	ppb	10:31:27
1	Al 396.153Radial†	511214.8	559124.8	508910	ug/L	508910	ppb	10:30:54
1	As 188.979†	1778.1	2080.7	527.29	ug/L	527.29	ppb	10:31:32
1	B 249.677†	30305.4	35216.0	523.28	ug/L	523.28	ppb	10:31:27
1	Ba 233.527†	84926.5	97594.3	499.43	ug/L	499.43	ppb	10:31:27
1	Be 313.107†	685114.1	794819.0	248.28	ug/L	248.28	ppb	10:31:27
1	Ca 317.933Radial†	171487.2	187510.8	467060	ug/L	467060	ppb	10:30:54
1	Cd 226.502†	56191.8	64867.2	463.74	ug/L	463.74	ppb	10:31:32
1	Co 228.616†	32068.4	36951.4	457.93	ug/L	457.93	ppb	10:31:32
1	Cr 267.716†	48976.1	56324.0	483.93	ug/L	483.93	ppb	10:31:32
1	Cu 324.752†	206474.7	227140.6	571.05	ug/L	571.05	ppb	10:31:27
1	Fe 238.204 Radial†	4792.9	5240.9	183870	ug/L	183870	ppb	10:30:59
1	K 766.490 Radial†	13633.7	13435.9	5876.8	ug/L	5876.8	ppb	10:30:59
1	Mg 279.077 IEC†	5720.0	6254.8	495220	ug/L	495220	ppb	10:30:59
1	Mn 257.610†	527932.1	606003.4	493.31	ug/L	493.31	ppb	10:31:27
1	Mo 202.031†	10741.5	12315.0	505.56	ug/L	505.56	ppb	10:31:32
1	Na 589.592 Radial†	1742.5	2075.9	5612.9	ug/L	5612.9	ppb	10:30:59
1	Ni 231.604†	24947.6	28527.7	456.94	ug/L	456.94	ppb	10:31:32
1	P 214.914†	6681.5	7343.1	2535.6	ug/L	2535.6	ppb	10:31:32
1	Pb 220.353†	4555.0	5264.8	477.54	ug/L	477.54	ppb	10:31:32
1	S 181.975 Axial†	2933.7	3304.3	2696.9	ug/L	2696.9	ppb	10:31:32
1	Sb 206.836†	2595.0	2937.4	568.65	ug/L	568.65	ppb	10:31:32
1	Se 196.026†	4971.6	5736.2	2540.6	ug/L	2540.6	ppb	10:31:32
1	Si 251.611†	227538.2	260983.1	5373.3	ug/L	5373.3	ppb	10:31:27
1	Sn 189.927†	3829.4	4396.2	495.92	ug/L	495.92	ppb	10:31:32
1	Sr 421.552†	32732.9	35789.2	547.06	ug/L	547.06	ppb	10:30:59
1	Ti 334.940†	325076.1	374767.2	521.46	ug/L	521.46	ppb	10:31:27
1	Tl 190.801†	2320.9	2729.1	464.98	ug/L	464.98	ppb	10:31:32
1	U 409.014†	14389.0	20374.2	482.00	ug/L	482.00	ppb	10:31:27
1	V 292.402†	80410.6	94080.6	523.26	ug/L	523.26	ppb	10:31:27
1	Zn 213.857†	83783.0	95181.8	490.76	ug/L	490.76	ppb	10:31:27
1	SiO2†	225071.9	258106.1	11379	ug/L	11379	ppb	10:31:59
2	Sc 361.383	922512.9	922512.9	86.957	%			10:31:38
2	Sc Radial	5114.2	5114.2	91.9	%			10:31:09
2	Y 371.029	723615.1	723615.1	84.810	%			10:31:38
2	Y RADIAL	4434.0	4434.0	92.07	%			10:31:09
2	Ag 328.068†	51203.8	58245.4	284.11	ug/L	284.11	ppb	10:31:38
2	Al 396.153Radial†	516287.7	561868.9	511410	ug/L	511410	ppb	10:31:04
2	As 188.979†	1781.2	2085.2	528.14	ug/L	528.14	ppb	10:31:43
2	B 249.677†	30212.2	35125.3	522.01	ug/L	522.01	ppb	10:31:38
2	Ba 233.527†	84896.2	97605.7	499.46	ug/L	499.46	ppb	10:31:38
2	Be 313.107†	684415.6	794388.8	248.15	ug/L	248.15	ppb	10:31:38
2	Ca 317.933Radial†	173685.3	188971.4	470700	ug/L	470700	ppb	10:31:04
2	Cd 226.502†	56169.1	64871.7	463.90	ug/L	463.90	ppb	10:31:43
2	Co 228.616†	32009.7	36901.3	457.33	ug/L	457.33	ppb	10:31:43
2	Cr 267.716†	48984.7	56360.6	484.22	ug/L	484.22	ppb	10:31:43
2	Cu 324.752†	206739.8	227557.9	572.02	ug/L	572.02	ppb	10:31:38
2	Fe 238.204 Radial†	4789.5	5211.1	182830	ug/L	182830	ppb	10:31:09
2	K 766.490 Radial†	13696.8	13430.5	5873.6	ug/L	5873.6	ppb	10:31:09
2	Mg 279.077 IEC†	5700.6	6202.7	491090	ug/L	491090	ppb	10:31:09
2	Mn 257.610†	527491.9	605784.5	493.08	ug/L	493.08	ppb	10:31:38
2	Mo 202.031†	10795.6	12383.1	508.21	ug/L	508.21	ppb	10:31:43
2	Na 589.592 Radial†	1739.5	2063.2	5578.5	ug/L	5578.5	ppb	10:31:09
2	Ni 231.604†	25007.5	28610.2	458.26	ug/L	458.26	ppb	10:31:43

2	P 214.914†	6657.3	7318.9	2528.5	ug/L	2528.5	ppb	10:31:43
2	Pb 220.353†	4521.9	5229.2	475.47	ug/L	475.47	ppb	10:31:43
2	S 181.975 Axial†	2966.6	3343.8	2729.8	ug/L	2729.8	ppb	10:31:43
2	Sb 206.836†	2571.5	2911.7	563.53	ug/L	563.53	ppb	10:31:43
2	Se 196.026†	5128.9	5919.8	2596.7	ug/L	2596.7	ppb	10:31:43
2	Si 251.611†	227663.7	261251.4	5378.8	ug/L	5378.8	ppb	10:31:38
2	Sn 189.927†	3812.8	4379.2	494.42	ug/L	494.42	ppb	10:31:43
2	Sr 421.552†	32971.9	35871.6	548.29	ug/L	548.29	ppb	10:31:09
2	Ti 334.940†	325093.7	374964.5	521.96	ug/L	521.96	ppb	10:31:38
2	Tl 190.801†	2278.3	2681.4	456.94	ug/L	456.94	ppb	10:31:43
2	U 409.014†	14518.6	20531.0	486.02	ug/L	486.02	ppb	10:31:38
2	V 292.402†	80202.9	93885.5	522.26	ug/L	522.26	ppb	10:31:38
2	Zn 213.857†	83836.4	95288.9	491.61	ug/L	491.61	ppb	10:31:38
2	SiO2†	226952.2	260390.9	11480	ug/L	11480	ppb	10:32:04
3	Sc 361.383	916394.6	916394.6	86.380	%			10:31:49
3	Sc Radial	5092.1	5092.1	91.5	%			10:31:20
3	Y 371.029	718336.1	718336.1	84.192	%			10:31:49
3	Y RADIAL	4424.4	4424.4	91.87	%			10:31:20
3	Ag 328.068†	50974.6	58373.2	285.14	ug/L	285.14	ppb	10:31:49
3	Al 396.153Radial†	519866.9	568222.7	517200	ug/L	517200	ppb	10:31:15
3	As 188.979†	1750.1	2062.9	523.28	ug/L	523.28	ppb	10:31:54
3	B 249.677†	30095.4	35222.0	523.28	ug/L	523.28	ppb	10:31:49
3	Ba 233.527†	84510.6	97811.1	500.55	ug/L	500.55	ppb	10:31:49
3	Be 313.107†	680536.4	795152.9	248.38	ug/L	248.38	ppb	10:31:49
3	Ca 317.933Radial†	174798.8	191009.9	475780	ug/L	475780	ppb	10:31:15
3	Cd 226.502†	55239.4	64226.6	458.85	ug/L	458.85	ppb	10:31:54
3	Co 228.616†	31559.8	36626.3	453.86	ug/L	453.86	ppb	10:31:54
3	Cr 267.716†	48208.5	55838.2	479.81	ug/L	479.81	ppb	10:31:54
3	Cu 324.752†	204835.2	226940.4	570.60	ug/L	570.60	ppb	10:31:49
3	Fe 238.204 Radial†	4816.3	5263.1	184650	ug/L	184650	ppb	10:31:20
3	K 766.490 Radial†	13730.6	13532.3	5918.2	ug/L	5918.2	ppb	10:31:20
3	Mg 279.077 IEC†	5726.3	6257.7	495450	ug/L	495450	ppb	10:31:20
3	Mn 257.610†	525190.6	607170.3	494.33	ug/L	494.33	ppb	10:31:49
3	Mo 202.031†	10571.3	12206.3	501.26	ug/L	501.26	ppb	10:31:54
3	Na 589.592 Radial†	1746.4	2079.0	5621.3	ug/L	5621.3	ppb	10:31:20
3	Ni 231.604†	24590.8	28319.8	453.61	ug/L	453.61	ppb	10:31:54
3	P 214.914†	6490.6	7177.1	2479.1	ug/L	2479.1	ppb	10:31:54
3	Pb 220.353†	4444.7	5174.6	472.31	ug/L	472.31	ppb	10:31:54
3	S 181.975 Axial†	2922.3	3315.2	2704.5	ug/L	2704.5	ppb	10:31:54
3	Sb 206.836†	2597.2	2961.2	572.95	ug/L	572.95	ppb	10:31:54
3	Se 196.026†	4938.2	5738.4	2544.4	ug/L	2544.4	ppb	10:31:54
3	Si 251.611†	226292.7	261412.2	5382.3	ug/L	5382.3	ppb	10:31:49
3	Sn 189.927†	3753.4	4339.7	490.73	ug/L	490.73	ppb	10:31:54
3	Sr 421.552†	32971.1	36026.6	550.64	ug/L	550.64	ppb	10:31:20
3	Ti 334.940†	322933.2	374959.4	522.30	ug/L	522.30	ppb	10:31:49
3	Tl 190.801†	2336.1	2765.8	471.25	ug/L	471.25	ppb	10:31:54
3	U 409.014†	14229.3	20307.5	480.26	ug/L	480.26	ppb	10:31:49
3	V 292.402†	79923.8	94178.2	523.65	ug/L	523.65	ppb	10:31:49
3	Zn 213.857†	83231.3	95232.0	490.97	ug/L	490.97	ppb	10:31:49
3	SiO2†	228890.9	264377.8	11656	ug/L	11656	ppb	10:32:10

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	920619.1	86.779	%	0.3455				0.40%
Sc Radial	5098.4	91.6	%	0.25				0.27%
Y 371.029	722145.9	84.638	%	0.3901				0.46%
Y RADIAL	4418.3	91.75	%	0.405				0.44%
Ag 328.068†	58252.3	284.44	ug/L	0.602	284.44	ppb	0.602	0.21%
QC value within limits for Ag 328.068 Recovery = 113.78%								
Al 396.153Radial†	563072.2	512510	ug/L	4248.0	512510	ppb	4248.0	0.83%
QC value within limits for Al 396.153Radial Recovery = 102.50%								
As 188.979†	2076.3	526.24	ug/L	2.594	526.24	ppb	2.594	0.49%
QC value within limits for As 188.979 Recovery = 105.25%								
B 249.677†	35187.8	522.85	ug/L	0.735	522.85	ppb	0.735	0.14%
QC value within limits for B 249.677 Recovery = 104.57%								
Ba 233.527†	97670.4	499.82	ug/L	0.636	499.82	ppb	0.636	0.13%
QC value within limits for Ba 233.527 Recovery = 99.96%								
Be 313.107†	794786.9	248.27	ug/L	0.119	248.27	ppb	0.119	0.05%
QC value within limits for Be 313.107 Recovery = 99.31%								

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Ca 317.933Radial†     189164.0      471180 ug/L        4377.5      471180 ppb         4377.5   0.93%
   QC value within limits for Ca 317.933Radial  Recovery = 94.24%
Cd 226.502†            64655.2      462.16 ug/L         2.867      462.16 ppb          2.867   0.62%
   QC value within limits for Cd 226.502  Recovery = 92.43%
Co 228.616†            36826.3      456.37 ug/L         2.197      456.37 ppb          2.197   0.48%
   QC value within limits for Co 228.616  Recovery = 91.27%
Cr 267.716†            56174.3      482.66 ug/L         2.467      482.66 ppb          2.467   0.51%
   QC value within limits for Cr 267.716  Recovery = 96.53%
Cu 324.752†           227213.0      571.22 ug/L         0.725      571.22 ppb          0.725   0.13%
   QC value within limits for Cu 324.752  Recovery = 114.24%
Fe 238.204 Radial†      5238.4      183780 ug/L         913.9      183780 ppb          913.9   0.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.89%
K 766.490 Radial†      13466.2      5889.5 ug/L         24.91      5889.5 ppb          24.91   0.42%
   QC value within limits for K 766.490 Radial  Recovery = 117.79%
Mg 279.077 IEC†         6238.4      493920 ug/L        2453.5      493920 ppb         2453.5   0.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.78%
Mn 257.610†           606319.4      493.58 ug/L         0.664      493.58 ppb          0.664   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.72%
Mo 202.031†            12301.5      505.01 ug/L         3.509      505.01 ppb          3.509   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.00%
Na 589.592 Radial†      2072.7      5604.3 ug/L         22.66      5604.3 ppb          22.66   0.40%
   QC value within limits for Na 589.592 Radial  Recovery = 112.09%
Ni 231.604†            28485.9      456.27 ug/L         2.398      456.27 ppb          2.398   0.53%
   QC value within limits for Ni 231.604  Recovery = 91.25%
P 214.914†              7279.7      2514.4 ug/L         30.79      2514.4 ppb          30.79   1.22%
   QC value within limits for P 214.914  Recovery = 100.58%
Pb 220.353†             5222.9      475.11 ug/L         2.633      475.11 ppb          2.633   0.55%
   QC value within limits for Pb 220.353  Recovery = 95.02%
S 181.975 Axial†        3321.1      2710.4 ug/L         17.23      2710.4 ppb          17.23   0.64%
   QC value within limits for S 181.975 Axial  Recovery = 108.42%
Sb 206.836†             2936.8      568.38 ug/L         4.717      568.38 ppb          4.717   0.83%
   QC value within limits for Sb 206.836  Recovery = 113.68%
Se 196.026†             5798.1      2560.6 ug/L         31.38      2560.6 ppb          31.38   1.23%
   QC value within limits for Se 196.026  Recovery = 102.42%
Si 251.611†           261215.6      5378.2 ug/L          4.51      5378.2 ppb           4.51   0.08%
   QC value within limits for Si 251.611  Recovery = 107.56%
Sn 189.927†             4371.7      493.69 ug/L         2.669      493.69 ppb          2.669   0.54%
   QC value within limits for Sn 189.927  Recovery = 98.74%
Sr 421.552†            35895.8      548.66 ug/L         1.817      548.66 ppb          1.817   0.33%
   QC value within limits for Sr 421.552  Recovery = 109.73%
Ti 334.940†           374897.0      521.91 ug/L         0.421      521.91 ppb          0.421   0.08%
   QC value within limits for Ti 334.940  Recovery = 104.38%
Tl 190.801†             2725.5      464.39 ug/L         7.171      464.39 ppb          7.171   1.54%
   QC value within limits for Tl 190.801  Recovery = 92.88%
U 409.014†             20404.2      482.76 ug/L         2.954      482.76 ppb          2.954   0.61%
   QC value within limits for U 409.014  Recovery = 96.55%
V 292.402†             94048.1      523.06 ug/L         0.714      523.06 ppb          0.714   0.14%
   QC value within limits for V 292.402  Recovery = 104.61%
Zn 213.857†            95234.2      491.11 ug/L         0.439      491.11 ppb          0.439   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.22%
SiO2†                 260958.2       11505 ug/L         140.4       11505 ppb          140.4   1.22%
   QC value within limits for SiO2  Recovery = 107.57%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/8/2009 10:34:19
Data Type: Reprocessed on 7/8/2009 11:40:14

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	903068.1	903068.1	85.124	%			10:37:30
1	Sc Radial	4907.1	4907.1	88.2	%			10:36:32
1	Y 371.029	711048.9	711048.9	83.338	%			10:37:30
1	Y RADIAL	4267.0	4267.0	88.60	%			10:36:32
1	Ag 328.068†	-24652.6	-29599.4	5.2180	ug/L	5.2180	ppb	10:37:30
1	Al 396.153Radial†	501001.0	568251.7	517240	ug/L	517240	ppb	10:36:12
1	As 188.979†	-286.0	-299.1	17.474	ug/L	17.474	ppb	10:37:35
1	B 249.677†	2112.7	2863.4	-13.637	ug/L	-13.637	ppb	10:37:30
1	Ba 233.527†	-1436.5	-1711.8	1.5622	ug/L	1.5622	ppb	10:37:35
1	Be 313.107†	-14446.8	-9655.2	-3.0542	ug/L	-3.0542	ppb	10:37:35
1	Ca 317.933Radial†	166917.5	189275.7	471460	ug/L	471460	ppb	10:36:12
1	Cd 226.502†	5594.5	6849.8	-0.6386	ug/L	-0.6386	ppb	10:37:35
1	Co 228.616†	294.3	436.1	-0.8830	ug/L	-0.8830	ppb	10:37:35
1	Cr 267.716†	-12.1	14.4	4.1493	ug/L	4.1493	ppb	10:37:35
1	Cu 324.752†	3503.0	-6076.1	10.395	ug/L	10.395	ppb	10:37:30
1	Fe 238.204 Radial†	11037.4	12516.6	439100	ug/L	439100	ppb	10:36:32
1	K 766.490 Radial†	1318.5	22.1	26.226	ug/L	26.226	ppb	10:36:12
1	Mg 279.077 IEC†	5521.4	6261.4	495510	ug/L	495510	ppb	10:36:32
1	Mn 257.610†	-38315.8	-45838.6	11.430	ug/L	11.430	ppb	10:37:30
1	Mo 202.031†	-778.9	-946.7	-7.7594	ug/L	-7.7594	ppb	10:37:35
1	Na 589.592 Radial†	171624.9	194801.4	526720	ug/L	526720	ppb	10:36:12
1	Ni 231.604†	465.6	398.7	6.3863	ug/L	6.3863	ppb	10:37:35
1	P 214.914†	838.8	648.5	52.119	ug/L	52.119	ppb	10:37:35
1	Pb 220.353†	-640.5	-723.3	5.3786	ug/L	5.3786	ppb	10:37:35
1	S 181.975 Axial†	149.8	108.1	-10.229	ug/L	-10.229	ppb	10:37:35
1	Sb 206.836†	146.8	127.0	13.157	ug/L	13.157	ppb	10:37:35
1	Se 196.026†	-4401.3	-5148.9	-103.95	ug/L	-103.95	ppb	10:37:35
1	Si 251.611†	-979.0	-1710.1	-34.481	ug/L	-34.481	ppb	10:37:35
1	Sn 189.927†	-388.8	-462.3	-4.5333	ug/L	-4.5333	ppb	10:37:35
1	Sr 421.552†	319.3	356.6	1.1243	ug/L	1.1243	ppb	10:36:32
1	Ti 334.940†	-15490.5	-17088.2	2.9945	ug/L	2.9945	ppb	10:37:35
1	Tl 190.801†	-133.6	-95.5	-13.648	ug/L	-13.648	ppb	10:37:35
1	U 409.014†	478080.9	565462.0	13976	ug/L	13976	ppb	10:37:30
1	V 292.402†	2200.9	4238.3	-0.8487	ug/L	-0.8487	ppb	10:37:35
1	Zn 213.857†	10091.7	10732.9	-4.6503	ug/L	-4.6503	ppb	10:37:35
1	SiO2†	-858.7	-1611.1	-69.439	ug/L	-69.439	ppb	10:38:03
2	Sc 361.383	901598.6	901598.6	84.986	%			10:37:41
2	Sc Radial	4913.8	4913.8	88.3	%			10:36:57
2	Y 371.029	709120.5	709120.5	83.112	%			10:37:41
2	Y RADIAL	4292.7	4292.7	89.14	%			10:36:57
2	Ag 328.068†	-24814.9	-29837.5	4.1617	ug/L	4.1617	ppb	10:37:41
2	Al 396.153Radial†	499453.7	565720.2	514940	ug/L	514940	ppb	10:36:37
2	As 188.979†	-323.1	-343.3	7.0255	ug/L	7.0255	ppb	10:37:46
2	B 249.677†	2057.8	2802.9	-14.529	ug/L	-14.529	ppb	10:37:41
2	Ba 233.527†	-1538.0	-1834.0	0.9343	ug/L	0.9343	ppb	10:37:46
2	Be 313.107†	-14278.5	-9484.8	-2.9994	ug/L	-2.9994	ppb	10:37:46
2	Ca 317.933Radial†	166575.3	188628.5	469840	ug/L	469840	ppb	10:36:37
2	Cd 226.502†	5560.2	6820.2	-0.8124	ug/L	-0.8124	ppb	10:37:46
2	Co 228.616†	329.8	478.5	-0.3494	ug/L	-0.3494	ppb	10:37:46
2	Cr 267.716†	64.5	104.5	4.9068	ug/L	4.9068	ppb	10:37:46
2	Cu 324.752†	3384.0	-6209.4	10.043	ug/L	10.043	ppb	10:37:41
2	Fe 238.204 Radial†	11042.3	12505.0	438690	ug/L	438690	ppb	10:36:57
2	K 766.490 Radial†	1363.1	70.6	47.960	ug/L	47.960	ppb	10:36:37
2	Mg 279.077 IEC†	5523.4	6255.1	495010	ug/L	495010	ppb	10:36:57
2	Mn 257.610†	-38665.9	-46324.0	11.003	ug/L	11.003	ppb	10:37:41
2	Mo 202.031†	-762.0	-928.4	-7.0553	ug/L	-7.0553	ppb	10:37:46
2	Na 589.592 Radial†	171230.3	194087.6	524790	ug/L	524790	ppb	10:36:37
2	Ni 231.604†	460.5	393.6	6.3048	ug/L	6.3048	ppb	10:37:46

2	P 214.914†	942.4	772.0	95.294	ug/L	95.294 ppb	10:37:46
2	Pb 220.353†	-620.4	-700.9	6.6499	ug/L	6.6499 ppb	10:37:46
2	S 181.975 Axial†	185.9	150.9	26.429	ug/L	26.429 ppb	10:37:46
2	Sb 206.836†	108.8	82.6	4.4435	ug/L	4.4435 ppb	10:37:46
2	Se 196.026†	-4291.9	-5028.5	-66.360	ug/L	-66.360 ppb	10:37:46
2	Si 251.611†	-923.9	-1647.3	-33.191	ug/L	-33.191 ppb	10:37:46
2	Sn 189.927†	-421.4	-501.3	-8.7146	ug/L	-8.7146 ppb	10:37:46
2	Sr 421.552†	322.3	359.5	1.1835	ug/L	1.1835 ppb	10:36:57
2	Ti 334.940†	-14961.4	-16495.3	3.6589	ug/L	3.6589 ppb	10:37:46
2	Tl 190.801†	-157.6	-124.0	-18.471	ug/L	-18.471 ppb	10:37:46
2	U 409.014†	477587.6	565796.9	13984	ug/L	13984 ppb	10:37:41
2	V 292.402†	2214.6	4258.6	-0.6621	ug/L	-0.6621 ppb	10:37:46
2	Zn 213.857†	9931.6	10563.8	-5.5320	ug/L	-5.5320 ppb	10:37:46
2	SiO2†	-947.4	-1717.2	-74.141	ug/L	-74.141 ppb	10:38:08
3	Sc 361.383	901333.6	901333.6	84.961	%		10:37:52
3	Sc Radial	4898.6	4898.6	88.0	%		10:37:23
3	Y 371.029	709314.8	709314.8	83.134	%		10:37:52
3	Y RADIAL	4273.7	4273.7	88.74	%		10:37:23
3	Ag 328.068†	-24785.9	-29811.9	3.2059	ug/L	3.2059 ppb	10:37:52
3	Al 396.153Radial†	500210.2	568328.0	517310	ug/L	517310 ppb	10:37:02
3	As 188.979†	-299.6	-315.7	12.839	ug/L	12.839 ppb	10:37:57
3	B 249.677†	2166.2	2931.2	-12.096	ug/L	-12.096 ppb	10:37:52
3	Ba 233.527†	-1531.2	-1826.5	0.8994	ug/L	0.8994 ppb	10:37:57
3	Be 313.107†	-14414.9	-9650.3	-3.0517	ug/L	-3.0517 ppb	10:37:57
3	Ca 317.933Radial†	166348.8	188954.3	470650	ug/L	470650 ppb	10:37:02
3	Cd 226.502†	5540.8	6799.3	-0.5842	ug/L	-0.5842 ppb	10:37:57
3	Co 228.616†	326.0	474.1	-0.3588	ug/L	-0.3588 ppb	10:37:57
3	Cr 267.716†	-19.8	5.3	3.9998	ug/L	3.9998 ppb	10:37:57
3	Cu 324.752†	3399.1	-6190.5	9.9012	ug/L	9.9012 ppb	10:37:52
3	Fe 238.204 Radial†	10926.4	12412.0	435430	ug/L	435430 ppb	10:37:23
3	K 766.490 Radial†	1311.1	16.4	22.386	ug/L	22.386 ppb	10:37:02
3	Mg 279.077 IEC†	5483.5	6229.0	492950	ug/L	492950 ppb	10:37:23
3	Mn 257.610†	-38504.0	-46146.8	10.758	ug/L	10.758 ppb	10:37:52
3	Mo 202.031†	-779.9	-949.7	-8.1288	ug/L	-8.1288 ppb	10:37:57
3	Na 589.592 Radial†	170529.0	193890.3	524260	ug/L	524260 ppb	10:37:02
3	Ni 231.604†	397.1	319.1	5.1105	ug/L	5.1105 ppb	10:37:57
3	P 214.914†	880.7	699.7	73.222	ug/L	73.222 ppb	10:37:57
3	Pb 220.353†	-643.4	-728.2	5.3697	ug/L	5.3697 ppb	10:37:57
3	S 181.975 Axial†	158.0	118.1	-1.7772	ug/L	-1.7772 ppb	10:37:57
3	Sb 206.836†	116.9	92.2	6.2449	ug/L	6.2449 ppb	10:37:57
3	Se 196.026†	-4293.9	-5032.4	-78.955	ug/L	-78.955 ppb	10:37:57
3	Si 251.611†	-893.4	-1611.7	-32.442	ug/L	-32.442 ppb	10:37:57
3	Sn 189.927†	-398.8	-474.9	-5.9803	ug/L	-5.9803 ppb	10:37:57
3	Sr 421.552†	302.5	338.2	0.8478	ug/L	0.8478 ppb	10:37:23
3	Ti 334.940†	-15207.4	-16790.1	3.3272	ug/L	3.3272 ppb	10:37:57
3	Tl 190.801†	-172.7	-141.9	-21.477	ug/L	-21.477 ppb	10:37:57
3	U 409.014†	477482.3	565838.3	13986	ug/L	13986 ppb	10:37:52
3	V 292.402†	2380.5	4454.7	0.8529	ug/L	0.8529 ppb	10:37:57
3	Zn 213.857†	9939.8	10576.9	-5.0280	ug/L	-5.0280 ppb	10:37:57
3	SiO2†	-939.4	-1708.1	-73.708	ug/L	-73.708 ppb	10:38:13

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	902000.1	85.024	%	0.0881				0.10%
Sc Radial	4906.5	88.2	%	0.14				0.15%
Y 371.029	709828.1	83.195	%	0.1244				0.15%
Y RADIAL	4277.8	88.83	%	0.277				0.31%
Ag 328.068†	-29749.6	4.1952	ug/L	1.00645	4.1952	ppb	1.00645	23.99%
Al 396.153Radial†	567433.3	516500	ug/L	1350.9	516500	ppb	1350.9	0.26%
QC value within limits for Al 396.153Radial Recovery = 103.30%								
As 188.979†	-319.4	12.446	ug/L	5.2351	12.446	ppb	5.2351	42.06%
B 249.677†	2865.8	-13.421	ug/L	1.2309	-13.421	ppb	1.2309	9.17%
Ba 233.527†	-1790.8	1.1320	ug/L	0.37301	1.1320	ppb	0.37301	32.95%
Be 313.107†	-9596.8	-3.0351	ug/L	0.03096	-3.0351	ppb	0.03096	1.02%
Ca 317.933Radial†	188952.8	470650	ug/L	805.9	470650	ppb	805.9	0.17%
QC value within limits for Ca 317.933Radial Recovery = 94.13%								
Cd 226.502†	6823.1	-0.6784	ug/L	0.11915	-0.6784	ppb	0.11915	17.56%
Co 228.616†	462.9	-0.5304	ug/L	0.30543	-0.5304	ppb	0.30543	57.59%
Cr 267.716†	41.4	4.3520	ug/L	0.48630	4.3520	ppb	0.48630	11.17%

Cu 324.752†	-6158.7	10.113 ug/L	0.2544	10.113 ppb	0.2544	2.52%
Fe 238.204 Radial†	12477.9	437740 ug/L	2010.7	437740 ppb	2010.7	0.46%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.55%						
K 766.490 Radial†	36.3	32.190 ug/L	13.7909	32.190 ppb	13.7909	42.84%
Mg 279.077 IEC†	6248.5	494490 ug/L	1357.9	494490 ppb	1357.9	0.27%
QC value within limits for Mg 279.077 IEC Recovery = 98.90%						
Mn 257.610†	-46103.1	11.063 ug/L	0.3401	11.063 ppb	0.3401	3.07%
Mo 202.031†	-941.6	-7.6478 ug/L	0.54541	-7.6478 ppb	0.54541	7.13%
Na 589.592 Radial†	194259.8	525260 ug/L	1296.0	525260 ppb	1296.0	0.25%
QC value within limits for Na 589.592 Radial Recovery = 105.05%						
Ni 231.604†	370.5	5.9339 ug/L	0.71420	5.9339 ppb	0.71420	12.04%
P 214.914†	706.7	73.545 ug/L	21.5891	73.545 ppb	21.5891	29.35%
Pb 220.353†	-717.5	5.7994 ug/L	0.73655	5.7994 ppb	0.73655	12.70%
S 181.975 Axial†	125.7	4.8073 ug/L	19.19563	4.8073 ppb	19.19563	399.30%
Sb 206.836†	100.6	7.9483 ug/L	4.59954	7.9483 ppb	4.59954	57.87%
Se 196.026†	-5069.9	-83.089 ug/L	19.1336	-83.089 ppb	19.1336	23.03%
Si 251.611†	-1656.4	-33.371 ug/L	1.0313	-33.371 ppb	1.0313	3.09%
Sn 189.927†	-479.5	-6.4094 ug/L	2.12342	-6.4094 ppb	2.12342	33.13%
Sr 421.552†	351.4	1.0519 ug/L	0.17919	1.0519 ppb	0.17919	17.04%
Ti 334.940†	-16791.2	3.3269 ug/L	0.33215	3.3269 ppb	0.33215	9.98%
Tl 190.801†	-120.5	-17.865 ug/L	3.9499	-17.865 ppb	3.9499	22.11%
U 409.014†	565699.1	13982 ug/L	5.3	13982 ppb	5.3	0.04%
QC value within limits for U 409.014 Recovery = 93.21%						
V 292.402†	4317.2	-0.2193 ug/L	0.93321	-0.2193 ppb	0.93321	425.48%
Zn 213.857†	10624.5	-5.0701 ug/L	0.44239	-5.0701 ppb	0.44239	8.73%
SiO2†	-1678.8	-72.429 ug/L	2.5989	-72.429 ppb	2.5989	3.59%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/8/2009 10:40:22
Data Type: Reprocessed on 7/8/2009 11:40:15

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1014953.4	1014953.4	95.671	%			10:43:57
1	Sc Radial	5417.4	5417.4	97.3	%			10:42:20
1	Y 371.029	800941.5	800941.5	93.873	%			10:43:57
1	Y RADIAL	4706.4	4706.4	97.73	%			10:42:20
1	Ag 328.068†	-7110.5	-8070.8	7.1415	ug/L	7.1415	ppb	10:44:02
1	Al 396.153Radial†	449.0	553.4	87.615	ug/L	87.615	ppb	10:42:20
1	As 188.979†	40482.4	42351.3	9989.0	ug/L	9989.0	ppb	10:44:02
1	B 249.677†	309866.7	324270.4	5029.0	ug/L	5029.0	ppb	10:43:57
1	Ba 233.527†	2664318.6	2784861.5	14118	ug/L	14118	ppb	10:43:57
1	Be 313.107†	8856992.8	9265110.5	2903.5	ug/L	2903.5	ppb	10:43:50
1	Ca 317.933Radial†	25.7	9.5	23.698	ug/L	23.698	ppb	10:42:40
1	Cd 226.502†	1280128.2	1338334.9	10016	ug/L	10016	ppb	10:43:57
1	Co 228.616†	749635.6	783648.9	9762.7	ug/L	9762.7	ppb	10:43:57
1	Cr 267.716†	2711737.5	2834479.1	24157	ug/L	24157	ppb	10:43:57
1	Cu 324.752†	7865610.7	8211358.3	20260	ug/L	20260	ppb	10:43:50
1	Fe 238.204 Radial†	-7.6	-8.1	23.148	ug/L	23.148	ppb	10:42:40
1	K 766.490 Radial†	684372.6	701529.4	304300	ug/L	304300	ppb	10:42:15
1	Mg 279.077 IEC†	-2.9	-3.1	-51.980	ug/L	-51.980	ppb	10:42:40
1	Mn 257.610†	11427294.3	11943581.3	9438.7	ug/L	9438.7	ppb	10:43:50
1	Mo 202.031†	232338.7	242820.8	9719.4	ug/L	9719.4	ppb	10:44:02
1	Na 589.592 Radial†	-122.5	44.6	120.62	ug/L	120.62	ppb	10:42:40
1	Ni 231.604†	591314.2	617924.4	9897.7	ug/L	9897.7	ppb	10:43:57
1	P 214.914†	48706.9	50574.1	14767	ug/L	14767	ppb	10:44:02
1	Pb 220.353†	309384.9	323414.5	24253	ug/L	24253	ppb	10:44:02
1	S 181.975 Axial†	58295.0	60865.2	51520	ug/L	51520	ppb	10:44:02
1	Sb 206.836†	53440.0	55812.8	10745	ug/L	10745	ppb	10:44:02
1	Se 196.026†	29668.4	31032.6	10122	ug/L	10122	ppb	10:44:02
1	Si 251.611†	2155853.2	2252850.9	46184	ug/L	46184	ppb	10:43:57
1	Sn 189.927†	95946.9	100283.2	10430	ug/L	10430	ppb	10:44:02
1	Sr 421.552†	646073.6	663655.5	10225	ug/L	10225	ppb	10:42:15
1	Ti 334.940†	7127693.7	7451349.2	9745.7	ug/L	9745.7	ppb	10:43:50
1	Tl 190.801†	55066.4	57619.7	9753.1	ug/L	9753.1	ppb	10:44:02
1	U 409.014†	-2611.3	1105.2	-19.174	ug/L	-19.174	ppb	10:44:02
1	V 292.402†	1681684.2	1759437.4	10082	ug/L	10082	ppb	10:43:57
1	Zn 213.857†	2418310.9	2526623.2	14016	ug/L	14016	ppb	10:43:57
1	SiO2†	2181096.5	2279194.3	100050	ug/L	100050	ppb	10:44:49
2	Sc 361.383	1029870.2	1029870.2	97.077	%			10:44:17
2	Sc Radial	5497.9	5497.9	98.8	%			10:42:50
2	Y 371.029	811966.1	811966.1	95.166	%			10:44:17
2	Y RADIAL	4740.4	4740.4	98.44	%			10:42:50
2	Ag 328.068†	-7088.1	-7940.1	6.7301	ug/L	6.7301	ppb	10:44:22
2	Al 396.153Radial†	473.1	571.1	109.77	ug/L	109.77	ppb	10:42:50
2	As 188.979†	40474.1	41729.8	9842.3	ug/L	9842.3	ppb	10:44:22
2	B 249.677†	307090.3	316719.2	4911.8	ug/L	4911.8	ppb	10:44:17
2	Ba 233.527†	2644634.7	2724248.1	13811	ug/L	13811	ppb	10:44:17
2	Be 313.107†	8832006.5	9105280.2	2853.4	ug/L	2853.4	ppb	10:44:10
2	Ca 317.933Radial†	28.1	11.5	28.754	ug/L	28.754	ppb	10:43:10
2	Cd 226.502†	1271277.6	1309837.1	9803.0	ug/L	9803.0	ppb	10:44:17
2	Co 228.616†	743954.7	766447.7	9548.5	ug/L	9548.5	ppb	10:44:17
2	Cr 267.716†	2688484.5	2769471.3	23603	ug/L	23603	ppb	10:44:17
2	Cu 324.752†	7842993.7	8068977.9	19908	ug/L	19908	ppb	10:44:10
2	Fe 238.204 Radial†	-5.8	-6.2	84.443	ug/L	84.443	ppb	10:43:10
2	K 766.490 Radial†	684716.9	691584.4	299980	ug/L	299980	ppb	10:42:45
2	Mg 279.077 IEC†	-2.0	-2.2	19.126	ug/L	19.126	ppb	10:43:10
2	Mn 257.610†	11404692.0	11747293.6	9283.6	ug/L	9283.6	ppb	10:44:10
2	Mo 202.031†	232311.4	239275.2	9577.5	ug/L	9577.5	ppb	10:44:22
2	Na 589.592 Radial†	-129.4	39.4	106.58	ug/L	106.58	ppb	10:43:10
2	Ni 231.604†	586038.5	603537.6	9667.2	ug/L	9667.2	ppb	10:44:17

2	P 214.914†	48755.1	49886.4	14579 ug/L	14579 ppb		10:44:22
2	Pb 220.353†	309441.3	318788.5	23906 ug/L	23906 ppb		10:44:22
2	S 181.975 Axial†	58411.2	60102.3	50874 ug/L	50874 ppb		10:44:22
2	Sb 206.836†	53362.1	54923.6	10578 ug/L	10578 ppb		10:44:22
2	Se 196.026†	29761.5	30679.3	10007 ug/L	10007 ppb		10:44:22
2	Si 251.611†	2138710.2	2202552.9	45150 ug/L	45150 ppb		10:44:17
2	Sn 189.927†	95957.5	98841.5	10280 ug/L	10280 ppb		10:44:22
2	Sr 421.552†	646581.7	654452.3	10083 ug/L	10083 ppb		10:42:45
2	Ti 334.940†	7109976.4	7325187.8	9580.8 ug/L	9580.8 ppb		10:44:10
2	Tl 190.801†	55268.7	56994.4	9647.5 ug/L	9647.5 ppb		10:44:22
2	U 409.014†	-2581.0	1176.0	-16.357 ug/L	-16.357 ppb		10:44:22
2	V 292.402†	1665056.2	1716848.7	9839.4 ug/L	9839.4 ppb		10:44:17
2	Zn 213.857†	2400720.5	2471890.8	13712 ug/L	13712 ppb		10:44:17
2	SiO2†	2194108.9	2259577.6	99188 ug/L	99188 ppb		10:44:57
3	Sc 361.383	1027984.8	1027984.8	96.899 %			10:44:37
3	Sc Radial	5311.1	5311.1	95.4 %			10:43:20
3	Y 371.029	810508.3	810508.3	94.995 %			10:44:37
3	Y RADIAL	4586.5	4586.5	95.24 %			10:43:20
3	Ag 328.068†	-7268.9	-8140.1	6.0153 ug/L	6.0153 ppb		10:44:42
3	Al 396.153Radial†	472.0	586.8	121.54 ug/L	121.54 ppb		10:43:20
3	As 188.979†	40697.9	42037.3	9914.2 ug/L	9914.2 ppb		10:44:42
3	B 249.677†	308195.5	318440.0	4938.5 ug/L	4938.5 ppb		10:44:37
3	Ba 233.527†	2647831.5	2732543.7	13853 ug/L	13853 ppb		10:44:37
3	Be 313.107†	8792922.6	9081631.8	2846.1 ug/L	2846.1 ppb		10:44:30
3	Ca 317.933Radial†	29.0	13.4	33.386 ug/L	33.386 ppb		10:43:40
3	Cd 226.502†	1272287.1	1313280.7	9828.8 ug/L	9828.8 ppb		10:44:37
3	Co 228.616†	745426.9	769372.6	9585.2 ug/L	9585.2 ppb		10:44:37
3	Cr 267.716†	2688412.8	2774476.6	23645 ug/L	23645 ppb		10:44:37
3	Cu 324.752†	7782720.1	8021593.1	19791 ug/L	19791 ppb		10:44:30
3	Fe 238.204 Radial†	-6.7	-7.3	44.771 ug/L	44.771 ppb		10:43:40
3	K 766.490 Radial†	683971.3	715172.9	310220 ug/L	310220 ppb		10:43:15
3	Mg 279.077 IEC†	-3.7	-4.1	-128.19 ug/L	-128.19 ppb		10:43:40
3	Mn 257.610†	11381446.6	11744851.0	9281.7 ug/L	9281.7 ppb		10:44:30
3	Mo 202.031†	233312.1	240746.8	9636.4 ug/L	9636.4 ppb		10:44:42
3	Na 589.592 Radial†	-122.9	41.6	112.55 ug/L	112.55 ppb		10:43:40
3	Ni 231.604†	587015.1	605652.6	9701.1 ug/L	9701.1 ppb		10:44:37
3	P 214.914†	49152.9	50388.9	14776 ug/L	14776 ppb		10:44:42
3	Pb 220.353†	310539.8	320506.8	24035 ug/L	24035 ppb		10:44:42
3	S 181.975 Axial†	58718.6	60529.9	51236 ug/L	51236 ppb		10:44:42
3	Sb 206.836†	53615.8	55286.2	10651 ug/L	10651 ppb		10:44:42
3	Se 196.026†	29842.3	30818.9	10053 ug/L	10053 ppb		10:44:42
3	Si 251.611†	2145121.2	2213209.7	45366 ug/L	45366 ppb		10:44:37
3	Sn 189.927†	96345.6	99423.4	10341 ug/L	10341 ppb		10:44:42
3	Sr 421.552†	646025.5	676882.0	10428 ug/L	10428 ppb		10:43:15
3	Ti 334.940†	7084549.3	7312379.8	9564.0 ug/L	9564.0 ppb		10:44:30
3	Tl 190.801†	55398.8	57233.1	9687.5 ug/L	9687.5 ppb		10:44:42
3	U 409.014†	-2499.7	1255.0	-14.474 ug/L	-14.474 ppb		10:44:42
3	V 292.402†	1665986.8	1720954.9	9863.5 ug/L	9863.5 ppb		10:44:37
3	Zn 213.857†	2405918.3	2481790.6	13767 ug/L	13767 ppb		10:44:37
3	SiO2†	2167381.8	2236140.5	98142 ug/L	98142 ppb		10:45:04

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1024269.4	96.549	%	0.7657				0.79%
Sc Radial	5408.8	97.2	%	1.68				1.73%
Y 371.029	807805.3	94.678	%	0.7019				0.74%
Y RADIAL	4677.8	97.14	%	1.679				1.73%
Ag 328.068†	-8050.3	6.6290	ug/L	0.56988	6.6290	ppb	0.56988	8.60%
Al 396.153Radial†	570.4	106.31	ug/L	17.224	106.31	ppb	17.224	16.20%
As 188.979†	42039.5	9915.2	ug/L	73.36	9915.2	ppb	73.36	0.74%
QC value within limits for As 188.979 Recovery = 99.15%								
B 249.677†	319809.9	4959.8	ug/L	61.39	4959.8	ppb	61.39	1.24%
QC value within limits for B 249.677 Recovery = 99.20%								
Ba 233.527†	2747217.8	13927	ug/L	166.6	13927	ppb	166.6	1.20%
QC value within limits for Ba 233.527 Recovery = 92.85%								
Be 313.107†	9150674.2	2867.7	ug/L	31.27	2867.7	ppb	31.27	1.09%
QC value within limits for Be 313.107 Recovery = 95.59%								
Ca 317.933Radial†	11.5	28.613	ug/L	4.8452	28.613	ppb	4.8452	16.93%
Cd 226.502†	1320484.3	9882.7	ug/L	116.42	9882.7	ppb	116.42	1.18%

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   QC value within limits for Cd 226.502  Recovery = 98.83%
Co 228.616†          773156.4      9632.2 ug/L       114.57      9632.2 ppb        114.57   1.19%
   QC value within limits for Co 228.616  Recovery = 96.32%
Cr 267.716†         2792809.0       23802 ug/L        308.3       23802 ppb         308.3   1.30%
   QC value within limits for Cr 267.716  Recovery = 95.21%
Cu 324.752†         8100643.1       19986 ug/L        243.7       19986 ppb         243.7   1.22%
   QC value within limits for Cu 324.752  Recovery = 99.93%
Fe 238.204 Radial†       -7.2      50.787 ug/L      31.0875      50.787 ppb       31.0875  61.21%
K 766.490 Radial†    702762.2      304830 ug/L       5138.4      304830 ppb        5138.4   1.69%
   QC value within limits for K 766.490 Radial  Recovery = 101.61%
Mg 279.077 IEC†          -3.1     -53.681 ug/L      73.6715     -53.681 ppb       73.6715 137.24%
Mn 257.610†        11811908.6      9334.7 ug/L        90.12      9334.7 ppb         90.12   0.97%
   QC value within limits for Mn 257.610  Recovery = 93.35%
Mo 202.031†          240947.6      9644.5 ug/L        71.30      9644.5 ppb         71.30   0.74%
   QC value within limits for Mo 202.031  Recovery = 96.44%
Na 589.592 Radial†       41.9      113.25 ug/L        7.046      113.25 ppb         7.046   6.22%
Ni 231.604†          609038.2      9755.3 ug/L       124.43      9755.3 ppb        124.43   1.28%
   QC value within limits for Ni 231.604  Recovery = 97.55%
P 214.914†            50283.1       14707 ug/L        111.5       14707 ppb         111.5   0.76%
   QC value within limits for P 214.914  Recovery = 98.05%
Pb 220.353†          320903.3       24065 ug/L        175.3       24065 ppb         175.3   0.73%
   QC value within limits for Pb 220.353  Recovery = 96.26%
S 181.975 Axial†      60499.1       51210 ug/L        323.6       51210 ppb         323.6   0.63%
   QC value within limits for S 181.975 Axial  Recovery = 102.42%
Sb 206.836†           55340.9       10658 ug/L         83.6       10658 ppb          83.6   0.78%
   QC value within limits for Sb 206.836  Recovery = 106.58%
Se 196.026†           30843.6       10061 ug/L         58.0       10061 ppb          58.0   0.58%
   QC value within limits for Se 196.026  Recovery = 100.61%
Si 251.611†         2222871.2       45567 ug/L        545.3       45567 ppb         545.3   1.20%
   QC value within limits for Si 251.611  Recovery = 91.13%
Sn 189.927†           99516.1       10350 ug/L         75.4       10350 ppb          75.4   0.73%
   QC value within limits for Sn 189.927  Recovery = 103.50%
Sr 421.552†          664996.6       10245 ug/L        173.7       10245 ppb         173.7   1.70%
   QC value within limits for Sr 421.552  Recovery = 102.45%
Ti 334.940†         7362972.3      9630.2 ug/L       100.43      9630.2 ppb        100.43   1.04%
   QC value within limits for Ti 334.940  Recovery = 96.30%
Tl 190.801†           57282.4      9696.0 ug/L        53.30      9696.0 ppb         53.30   0.55%
   QC value within limits for Tl 190.801  Recovery = 96.96%
U 409.014†             1178.7     -16.669 ug/L       2.3653     -16.669 ppb        2.3653  14.19%
V 292.402†          1732413.7      9928.4 ug/L       133.88      9928.4 ppb        133.88   1.35%
   QC value within limits for V 292.402  Recovery = 99.28%
Zn 213.857†         2493434.9       13832 ug/L        161.7       13832 ppb         161.7   1.17%
   QC value within limits for Zn 213.857  Recovery = 92.21%
SiO2†               2258304.1       99125 ug/L        953.1       99125 ppb         953.1   0.96%
   QC value within limits for SiO2  Recovery = 92.64%
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:03:37
Data Type: Reprocessed on 7/8/2009 11:40:18

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1067409.9	1067409.9	100.62	%			11:06:48
1	Sc Radial	5545.0	5545.0	99.6	%			11:05:29
1	Y 371.029	849738.5	849738.5	99.593	%			11:06:48
1	Y RADIAL	4788.0	4788.0	99.42	%			11:05:29
1	Ag 328.068†	127524.3	126105.9	502.25	ug/L	502.25	ppb	11:06:48
1	Al 396.153Radial†	5299.4	5410.6	4903.4	ug/L	4903.4	ppb	11:05:29
1	As 188.979†	2078.4	2102.6	496.72	ug/L	496.72	ppb	11:07:08
1	B 249.677†	31751.6	31939.0	495.88	ug/L	495.88	ppb	11:06:48
1	Ba 233.527†	98259.2	97634.0	495.40	ug/L	495.40	ppb	11:06:48
1	Be 313.107†	1589957.2	1587550.7	494.78	ug/L	494.78	ppb	11:06:48
1	Ca 317.933Radial†	2000.8	1991.0	4959.2	ug/L	4959.2	ppb	11:05:49
1	Cd 226.502†	66514.3	66385.2	496.24	ug/L	496.24	ppb	11:06:48
1	Co 228.616†	38913.1	38765.6	483.08	ug/L	483.08	ppb	11:07:08
1	Cr 267.716†	58344.9	58016.7	494.83	ug/L	494.83	ppb	11:06:48
1	Cu 324.752†	211137.7	199655.3	492.89	ug/L	492.89	ppb	11:06:48
1	Fe 238.204 Radial†	142.3	142.5	5015.0	ug/L	5015.0	ppb	11:05:49
1	K 766.490 Radial†	13511.2	12086.4	5238.2	ug/L	5238.2	ppb	11:05:29
1	Mg 279.077 IEC†	62.2	62.2	4932.1	ug/L	4932.1	ppb	11:05:49
1	Mn 257.610†	629929.2	625250.1	494.68	ug/L	494.68	ppb	11:06:48
1	Mo 202.031†	12643.5	12534.4	502.06	ug/L	502.06	ppb	11:07:08
1	Na 589.592 Radial†	3490.6	3673.5	9932.6	ug/L	9932.6	ppb	11:05:29
1	Ni 231.604†	30743.5	30407.2	487.05	ug/L	487.05	ppb	11:07:08
1	P 214.914†	7354.4	6972.5	2389.5	ug/L	2389.5	ppb	11:07:08
1	Pb 220.353†	6693.1	6681.2	502.20	ug/L	502.20	ppb	11:07:08
1	S 181.975 Axial†	1258.3	1182.8	1000.2	ug/L	1000.2	ppb	11:07:08
1	Sb 206.836†	2588.5	2527.3	503.10	ug/L	503.10	ppb	11:07:08
1	Se 196.026†	1499.7	1512.2	511.22	ug/L	511.22	ppb	11:07:08
1	Si 251.611†	122687.2	121376.8	2492.5	ug/L	2492.5	ppb	11:06:48
1	Sn 189.927†	4831.3	4796.3	499.31	ug/L	499.31	ppb	11:07:08
1	Sr 421.552†	33822.5	33937.9	522.82	ug/L	522.82	ppb	11:05:29
1	Ti 334.940†	380487.1	379269.6	496.43	ug/L	496.43	ppb	11:06:48
1	Tl 190.801†	2880.1	2923.9	495.14	ug/L	495.14	ppb	11:07:08
1	U 409.014†	15659.6	19398.6	479.74	ug/L	479.74	ppb	11:06:48
1	V 292.402†	85512.2	86642.1	497.38	ug/L	497.38	ppb	11:06:48
1	Zn 213.857†	90296.7	88622.2	490.34	ug/L	490.34	ppb	11:06:48
1	SiO2†	123097.1	121742.0	5353.1	ug/L	5353.1	ppb	11:08:09
2	Sc 361.383	1057828.3	1057828.3	99.712	%			11:07:16
2	Sc Radial	5453.0	5453.0	98.0	%			11:05:54
2	Y 371.029	842848.9	842848.9	98.785	%			11:07:16
2	Y RADIAL	4734.2	4734.2	98.31	%			11:05:54
2	Ag 328.068†	126253.5	125979.4	501.76	ug/L	501.76	ppb	11:07:16
2	Al 396.153Radial†	5204.3	5403.2	4896.6	ug/L	4896.6	ppb	11:05:54
2	As 188.979†	2077.1	2120.0	500.82	ug/L	500.82	ppb	11:07:36
2	B 249.677†	31594.9	32067.6	497.87	ug/L	497.87	ppb	11:07:16
2	Ba 233.527†	97420.0	97677.0	495.62	ug/L	495.62	ppb	11:07:16
2	Be 313.107†	1578761.2	1590635.7	495.74	ug/L	495.74	ppb	11:07:16
2	Ca 317.933Radial†	1973.0	1996.5	4973.1	ug/L	4973.1	ppb	11:06:14
2	Cd 226.502†	65741.0	66208.5	494.92	ug/L	494.92	ppb	11:07:16
2	Co 228.616†	38917.3	39120.1	487.50	ug/L	487.50	ppb	11:07:36
2	Cr 267.716†	57810.8	58006.3	494.74	ug/L	494.74	ppb	11:07:16
2	Cu 324.752†	209446.8	199860.3	493.40	ug/L	493.40	ppb	11:07:16
2	Fe 238.204 Radial†	140.5	143.1	5035.0	ug/L	5035.0	ppb	11:06:14
2	K 766.490 Radial†	13401.9	12203.6	5289.1	ug/L	5289.1	ppb	11:05:54
2	Mg 279.077 IEC†	61.6	62.7	4968.4	ug/L	4968.4	ppb	11:06:14
2	Mn 257.610†	623982.1	624956.7	494.45	ug/L	494.45	ppb	11:07:16
2	Mo 202.031†	12615.6	12620.3	505.50	ug/L	505.50	ppb	11:07:36
2	Na 589.592 Radial†	3446.1	3687.2	9969.7	ug/L	9969.7	ppb	11:05:54
2	Ni 231.604†	30735.8	30676.3	491.36	ug/L	491.36	ppb	11:07:36

2	P 214.914†	7337.1	7021.4	2406.8 ug/L	2406.8 ppb	11:07:36
2	Pb 220.353†	6673.6	6722.0	505.26 ug/L	505.26 ppb	11:07:36
2	S 181.975 Axial†	1264.2	1200.1	1014.8 ug/L	1014.8 ppb	11:07:36
2	Sb 206.836†	2593.9	2556.0	508.91 ug/L	508.91 ppb	11:07:36
2	Se 196.026†	1503.2	1529.2	516.82 ug/L	516.82 ppb	11:07:36
2	Si 251.611†	121455.1	121245.6	2489.7 ug/L	2489.7 ppb	11:07:16
2	Sn 189.927†	4839.5	4848.0	504.69 ug/L	504.69 ppb	11:07:36
2	Sr 421.552†	33228.1	33904.0	522.30 ug/L	522.30 ppb	11:05:54
2	Ti 334.940†	377267.8	379466.3	496.69 ug/L	496.69 ppb	11:07:16
2	Tl 190.801†	2881.9	2951.6	499.79 ug/L	499.79 ppb	11:07:36
2	U 409.014†	15609.8	19489.6	482.00 ug/L	482.00 ppb	11:07:16
2	V 292.402†	84902.2	86800.1	498.32 ug/L	498.32 ppb	11:07:16
2	Zn 213.857†	89406.2	88541.9	489.86 ug/L	489.86 ppb	11:07:16
2	SiO2†	122640.5	122392.2	5381.6 ug/L	5381.6 ppb	11:08:14
3	Sc 361.383	1055071.7	1055071.7	99.452 %		11:07:43
3	Sc Radial	5432.7	5432.7	97.6 %		11:06:19
3	Y 371.029	840276.0	840276.0	98.484 %		11:07:43
3	Y RADIAL	4696.8	4696.8	97.53 %		11:06:19
3	Ag 328.068†	126120.7	126176.7	502.55 ug/L	502.55 ppb	11:07:43
3	Al 396.153Radial†	5181.8	5400.1	4893.7 ug/L	4893.7 ppb	11:06:19
3	As 188.979†	2085.4	2133.8	504.06 ug/L	504.06 ppb	11:08:03
3	B 249.677†	31427.7	31982.3	496.53 ug/L	496.53 ppb	11:07:43
3	Ba 233.527†	97457.1	97969.6	497.10 ug/L	497.10 ppb	11:07:43
3	Be 313.107†	1576182.4	1592179.6	496.22 ug/L	496.22 ppb	11:07:43
3	Ca 317.933Radial†	1975.0	2006.1	4996.9 ug/L	4996.9 ppb	11:06:39
3	Cd 226.502†	65930.8	66571.6	497.63 ug/L	497.63 ppb	11:07:43
3	Co 228.616†	38836.3	39140.6	487.76 ug/L	487.76 ppb	11:08:03
3	Cr 267.716†	57863.2	58210.5	496.48 ug/L	496.48 ppb	11:07:43
3	Cu 324.752†	208532.5	199489.8	492.49 ug/L	492.49 ppb	11:07:43
3	Fe 238.204 Radial†	141.4	144.5	5084.1 ug/L	5084.1 ppb	11:06:39
3	K 766.490 Radial†	13356.4	12208.3	5291.1 ug/L	5291.1 ppb	11:06:19
3	Mg 279.077 IEC†	60.3	61.6	4883.3 ug/L	4883.3 ppb	11:06:39
3	Mn 257.610†	623827.7	626436.5	495.63 ug/L	495.63 ppb	11:07:43
3	Mo 202.031†	12607.0	12644.6	506.48 ug/L	506.48 ppb	11:08:03
3	Na 589.592 Radial†	3459.6	3714.2	10043 ug/L	10043 ppb	11:06:19
3	Ni 231.604†	30656.7	30677.3	491.38 ug/L	491.38 ppb	11:08:03
3	P 214.914†	7338.8	7042.2	2414.3 ug/L	2414.3 ppb	11:08:03
3	Pb 220.353†	6655.9	6721.6	505.23 ug/L	505.23 ppb	11:08:03
3	S 181.975 Axial†	1273.7	1212.9	1025.7 ug/L	1025.7 ppb	11:08:03
3	Sb 206.836†	2578.9	2547.6	507.27 ug/L	507.27 ppb	11:08:03
3	Se 196.026†	1491.2	1521.0	514.35 ug/L	514.35 ppb	11:08:03
3	Si 251.611†	121268.2	121376.0	2492.4 ug/L	2492.4 ppb	11:07:43
3	Sn 189.927†	4839.7	4860.9	506.04 ug/L	506.04 ppb	11:08:03
3	Sr 421.552†	33109.5	33909.5	522.38 ug/L	522.38 ppb	11:06:19
3	Ti 334.940†	376709.4	379893.4	497.25 ug/L	497.25 ppb	11:07:43
3	Tl 190.801†	2882.8	2960.1	501.23 ug/L	501.23 ppb	11:08:03
3	U 409.014†	15694.8	19616.0	485.13 ug/L	485.13 ppb	11:07:43
3	V 292.402†	84699.0	86818.3	498.43 ug/L	498.43 ppb	11:07:43
3	Zn 213.857†	89588.7	88959.8	492.20 ug/L	492.20 ppb	11:07:43
3	SiO2†	121565.4	121632.6	5348.0 ug/L	5348.0 ppb	11:08:19

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060103.3	99.927	%	0.6104				0.61%
Sc Radial	5476.9	98.4	%	1.08				1.09%
Y 371.029	844287.8	98.954	%	0.5734				0.58%
Y RADIAL	4739.7	98.42	%	0.952				0.97%
Ag 328.068†	126087.3	502.19	ug/L	0.401	502.19	ppb	0.401	0.08%
QC value within limits for Ag 328.068 Recovery = 100.44%								
Al 396.153Radial†	5404.6	4897.9	ug/L	5.00	4897.9	ppb	5.00	0.10%
QC value within limits for Al 396.153Radial Recovery = 97.96%								
As 188.979†	2118.8	500.53	ug/L	3.674	500.53	ppb	3.674	0.73%
QC value within limits for As 188.979 Recovery = 100.11%								
B 249.677†	31996.3	496.76	ug/L	1.015	496.76	ppb	1.015	0.20%
QC value within limits for B 249.677 Recovery = 99.35%								
Ba 233.527†	97760.2	496.04	ug/L	0.926	496.04	ppb	0.926	0.19%
QC value within limits for Ba 233.527 Recovery = 99.21%								
Be 313.107†	1590122.0	495.58	ug/L	0.734	495.58	ppb	0.734	0.15%
QC value within limits for Be 313.107 Recovery = 99.12%								

Ca 317.933Radial†	1997.9	4976.4 ug/L	19.05	4976.4 ppb	19.05	0.38%
QC value within limits for Ca 317.933Radial Recovery = 99.53%						
Cd 226.502†	66388.4	496.27 ug/L	1.355	496.27 ppb	1.355	0.27%
QC value within limits for Cd 226.502 Recovery = 99.25%						
Co 228.616†	39008.8	486.11 ug/L	2.631	486.11 ppb	2.631	0.54%
QC value within limits for Co 228.616 Recovery = 97.22%						
Cr 267.716†	58077.8	495.35 ug/L	0.980	495.35 ppb	0.980	0.20%
QC value within limits for Cr 267.716 Recovery = 99.07%						
Cu 324.752†	199668.4	492.93 ug/L	0.457	492.93 ppb	0.457	0.09%
QC value within limits for Cu 324.752 Recovery = 98.59%						
Fe 238.204 Radial†	143.4	5044.7 ug/L	35.56	5044.7 ppb	35.56	0.70%
QC value within limits for Fe 238.204 Radial Recovery = 100.89%						
K 766.490 Radial†	12166.1	5272.8 ug/L	29.98	5272.8 ppb	29.98	0.57%
QC value within limits for K 766.490 Radial Recovery = 105.46%						
Mg 279.077 IEC†	62.1	4927.9 ug/L	42.66	4927.9 ppb	42.66	0.87%
QC value within limits for Mg 279.077 IEC Recovery = 98.56%						
Mn 257.610†	625547.8	494.92 ug/L	0.624	494.92 ppb	0.624	0.13%
QC value within limits for Mn 257.610 Recovery = 98.98%						
Mo 202.031†	12599.8	504.68 ug/L	2.320	504.68 ppb	2.320	0.46%
QC value within limits for Mo 202.031 Recovery = 100.94%						
Na 589.592 Radial†	3691.6	9981.7 ug/L	56.08	9981.7 ppb	56.08	0.56%
QC value within limits for Na 589.592 Radial Recovery = 99.82%						
Ni 231.604†	30586.9	489.93 ug/L	2.493	489.93 ppb	2.493	0.51%
QC value within limits for Ni 231.604 Recovery = 97.99%						
P 214.914†	7012.0	2403.5 ug/L	12.69	2403.5 ppb	12.69	0.53%
QC value within limits for P 214.914 Recovery = 96.14%						
Pb 220.353†	6708.3	504.23 ug/L	1.758	504.23 ppb	1.758	0.35%
QC value within limits for Pb 220.353 Recovery = 100.85%						
S 181.975 Axial†	1198.6	1013.6 ug/L	12.78	1013.6 ppb	12.78	1.26%
QC value within limits for S 181.975 Axial Recovery = 101.36%						
Sb 206.836†	2543.6	506.43 ug/L	2.994	506.43 ppb	2.994	0.59%
QC value within limits for Sb 206.836 Recovery = 101.29%						
Se 196.026†	1520.8	514.13 ug/L	2.806	514.13 ppb	2.806	0.55%
QC value within limits for Se 196.026 Recovery = 102.83%						
Si 251.611†	121332.8	2491.6 ug/L	1.58	2491.6 ppb	1.58	0.06%
QC value within limits for Si 251.611 Recovery = 99.66%						
Sn 189.927†	4835.1	503.35 ug/L	3.557	503.35 ppb	3.557	0.71%
QC value within limits for Sn 189.927 Recovery = 100.67%						
Sr 421.552†	33917.1	522.50 ug/L	0.280	522.50 ppb	0.280	0.05%
QC value within limits for Sr 421.552 Recovery = 104.50%						
Ti 334.940†	379543.1	496.79 ug/L	0.417	496.79 ppb	0.417	0.08%
QC value within limits for Ti 334.940 Recovery = 99.36%						
Tl 190.801†	2945.2	498.72 ug/L	3.184	498.72 ppb	3.184	0.64%
QC value within limits for Tl 190.801 Recovery = 99.74%						
U 409.014†	19501.4	482.29 ug/L	2.703	482.29 ppb	2.703	0.56%
QC value within limits for U 409.014 Recovery = 96.46%						
V 292.402†	86753.5	498.04 ug/L	0.579	498.04 ppb	0.579	0.12%
QC value within limits for V 292.402 Recovery = 99.61%						
Zn 213.857†	88708.0	490.80 ug/L	1.232	490.80 ppb	1.232	0.25%
QC value within limits for Zn 213.857 Recovery = 98.16%						
SiO2†	121922.3	5360.9 ug/L	18.12	5360.9 ppb	18.12	0.34%
QC value within limits for SiO2 Recovery = 100.25%						

All analyte(s) passed QC.

Sequence No.: 16
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:10:29
Data Type: Reprocessed on 7/8/2009 11:40:19

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1056286.1	1056286.1	99.567	%			11:13:38
1	Sc Radial	5577.8	5577.8	100	%			11:12:21
1	Y 371.029	851747.2	851747.2	99.828	%			11:13:38
1	Y RADIAL	4867.5	4867.5	101.1	%			11:12:21
1	Ag 328.068†	792.7	157.6	0.6291	ug/L	0.6291	ppb	11:13:43
1	Al 396.153Radial†	-60.0	32.4	29.446	ug/L	29.446	ppb	11:12:21
1	As 188.979†	-47.8	-11.1	-2.5990	ug/L	-2.5990	ppb	11:14:03
1	B 249.677†	436.8	820.2	12.780	ug/L	12.780	ppb	11:13:43
1	Ba 233.527†	31.5	7.4	0.0373	ug/L	0.0373	ppb	11:14:03
1	Be 313.107†	-7422.8	-138.9	-0.0432	ug/L	-0.0432	ppb	11:13:43
1	Ca 317.933Radial†	33.6	16.5	41.209	ug/L	41.209	ppb	11:12:41
1	Cd 226.502†	-287.1	-10.7	-0.0827	ug/L	-0.0827	ppb	11:14:03
1	Co 228.616†	-82.2	7.8	0.0972	ug/L	0.0972	ppb	11:14:03
1	Cr 267.716†	-32.4	-4.0	-0.0341	ug/L	-0.0341	ppb	11:14:03
1	Cu 324.752†	10356.0	209.8	0.5189	ug/L	0.5189	ppb	11:13:43
1	Fe 238.204 Radial†	1.0	0.7	23.570	ug/L	23.570	ppb	11:12:41
1	K 766.490 Radial†	1855.2	377.8	163.93	ug/L	163.93	ppb	11:12:21
1	Mg 279.077 IEC†	1.4	1.2	93.519	ug/L	93.519	ppb	11:12:41
1	Mn 257.610†	821.4	-2.0	-0.0003	ug/L	-0.0003	ppb	11:14:03
1	Mo 202.031†	33.3	1.7	0.0702	ug/L	0.0702	ppb	11:14:03
1	Na 589.592 Radial†	-185.2	-14.4	-38.901	ug/L	-38.901	ppb	11:12:41
1	Ni 231.604†	168.8	21.3	0.3412	ug/L	0.3412	ppb	11:14:03
1	P 214.914†	333.0	-2.5	-0.9562	ug/L	-0.9562	ppb	11:14:03
1	Pb 220.353†	11.5	40.6	3.0505	ug/L	3.0505	ppb	11:14:03
1	S 181.975 Axial†	72.5	5.0	4.2399	ug/L	4.2399	ppb	11:14:03
1	Sb 206.836†	55.9	10.7	2.1229	ug/L	2.1229	ppb	11:14:03
1	Se 196.026†	-17.3	4.3	1.4749	ug/L	1.4749	ppb	11:14:03
1	Si 251.611†	665.9	108.7	2.1852	ug/L	2.1852	ppb	11:14:03
1	Sn 189.927†	14.7	9.3	0.9689	ug/L	0.9689	ppb	11:14:03
1	Sr 421.552†	24.7	19.1	0.2942	ug/L	0.2942	ppb	11:12:41
1	Ti 334.940†	-1110.3	-5.8	-0.0052	ug/L	-0.0052	ppb	11:13:43
1	Tl 190.801†	-57.1	4.0	0.6835	ug/L	0.6835	ppb	11:14:03
1	U 409.014†	-3785.0	33.2	0.8217	ug/L	0.8217	ppb	11:13:38
1	V 292.402†	-1685.0	-39.6	-0.2237	ug/L	-0.2237	ppb	11:13:43
1	Zn 213.857†	1105.7	-11.9	-0.0751	ug/L	-0.0751	ppb	11:14:03
1	SiO2†	681.4	82.0	3.4918	ug/L	3.4918	ppb	11:15:09
2	Sc 361.383	1055939.4	1055939.4	99.534	%			11:14:08
2	Sc Radial	5379.7	5379.7	96.7	%			11:12:46
2	Y 371.029	851096.0	851096.0	99.752	%			11:14:08
2	Y RADIAL	4702.4	4702.4	97.65	%			11:12:46
2	Ag 328.068†	776.8	141.8	0.5427	ug/L	0.5427	ppb	11:14:13
2	Al 396.153Radial†	-76.7	12.9	11.716	ug/L	11.716	ppb	11:12:46
2	As 188.979†	-40.2	-3.5	-0.8491	ug/L	-0.8491	ppb	11:14:33
2	B 249.677†	486.5	870.3	13.572	ug/L	13.572	ppb	11:14:13
2	Ba 233.527†	62.3	38.3	0.1924	ug/L	0.1924	ppb	11:14:33
2	Be 313.107†	-7290.4	-8.3	-0.0025	ug/L	-0.0025	ppb	11:14:13
2	Ca 317.933Radial†	28.6	12.6	31.463	ug/L	31.463	ppb	11:13:06
2	Cd 226.502†	-289.0	-12.7	-0.0867	ug/L	-0.0867	ppb	11:14:33
2	Co 228.616†	-77.8	12.3	0.1535	ug/L	0.1535	ppb	11:14:33
2	Cr 267.716†	-16.8	11.7	0.0997	ug/L	0.0997	ppb	11:14:33
2	Cu 324.752†	10238.9	95.6	0.2319	ug/L	0.2319	ppb	11:14:13
2	Fe 238.204 Radial†	-1.5	-1.9	-67.871	ug/L	-67.871	ppb	11:13:06
2	K 766.490 Radial†	1812.4	401.6	174.21	ug/L	174.21	ppb	11:12:46
2	Mg 279.077 IEC†	1.0	0.8	66.268	ug/L	66.268	ppb	11:13:06
2	Mn 257.610†	855.6	32.6	0.0157	ug/L	0.0157	ppb	11:14:33
2	Mo 202.031†	30.0	-1.6	-0.0706	ug/L	-0.0706	ppb	11:14:33
2	Na 589.592 Radial†	-174.9	-10.5	-28.379	ug/L	-28.379	ppb	11:13:06
2	Ni 231.604†	168.3	20.8	0.3332	ug/L	0.3332	ppb	11:14:33

2	P 214.914†	337.1	1.8	0.6504 ug/L	0.6504 ppb		11:14:33
2	Pb 220.353†	-5.9	23.2	1.7452 ug/L	1.7452 ppb		11:14:33
2	S 181.975 Axial†	79.7	12.3	10.368 ug/L	10.368 ppb		11:14:33
2	Sb 206.836†	62.7	17.5	3.4466 ug/L	3.4466 ppb		11:14:33
2	Se 196.026†	-10.1	11.5	3.4915 ug/L	3.4915 ppb		11:14:33
2	Si 251.611†	654.2	97.1	1.9448 ug/L	1.9448 ppb		11:14:33
2	Sn 189.927†	12.6	7.2	0.7527 ug/L	0.7527 ppb		11:14:33
2	Sr 421.552†	34.7	30.4	0.4675 ug/L	0.4675 ppb		11:13:06
2	Ti 334.940†	-1082.3	21.9	0.0326 ug/L	0.0326 ppb		11:14:13
2	Tl 190.801†	-39.2	22.0	3.7138 ug/L	3.7138 ppb		11:14:33
2	U 409.014†	-3991.4	-175.3	-4.3425 ug/L	-4.3425 ppb		11:14:08
2	V 292.402†	-1651.7	-6.6	-0.0367 ug/L	-0.0367 ppb		11:14:13
2	Zn 213.857†	1118.7	1.5	0.0109 ug/L	0.0109 ppb		11:14:33
2	SiO2†	678.0	78.8	3.3488 ug/L	3.3488 ppb		11:15:14
3	Sc 361.383	1066175.5	1066175.5	100.50 %			11:14:39
3	Sc Radial	5571.9	5571.9	100 %			11:13:11
3	Y 371.029	858182.7	858182.7	100.58 %			11:14:39
3	Y RADIAL	4847.5	4847.5	100.7 %			11:13:11
3	Ag 328.068†	733.0	90.7	0.3451 ug/L	0.3451 ppb		11:14:44
3	Al 396.153Radial†	-63.8	28.4	25.885 ug/L	25.885 ppb		11:13:11
3	As 188.979†	-36.2	0.9	0.1978 ug/L	0.1978 ppb		11:15:04
3	B 249.677†	438.0	817.4	12.743 ug/L	12.743 ppb		11:14:44
3	Ba 233.527†	45.2	20.7	0.1045 ug/L	0.1045 ppb		11:15:04
3	Be 313.107†	-7375.6	-22.8	-0.0070 ug/L	-0.0070 ppb		11:14:44
3	Ca 317.933Radial†	31.4	14.4	35.975 ug/L	35.975 ppb		11:13:31
3	Cd 226.502†	-275.1	4.0	0.0342 ug/L	0.0342 ppb		11:15:04
3	Co 228.616†	-85.2	5.6	0.0709 ug/L	0.0709 ppb		11:15:04
3	Cr 267.716†	-11.4	17.3	0.1457 ug/L	0.1457 ppb		11:15:04
3	Cu 324.752†	10202.8	-39.1	-0.0986 ug/L	-0.0986 ppb		11:14:44
3	Fe 238.204 Radial†	-0.7	-1.1	-36.971 ug/L	-36.971 ppb		11:13:31
3	K 766.490 Radial†	1706.6	231.3	100.35 ug/L	100.35 ppb		11:13:11
3	Mg 279.077 IEC†	0.4	0.2	14.946 ug/L	14.946 ppb		11:13:31
3	Mn 257.610†	832.1	0.9	-0.0044 ug/L	-0.0044 ppb		11:15:04
3	Mo 202.031†	38.5	6.5	0.2593 ug/L	0.2593 ppb		11:15:04
3	Na 589.592 Radial†	-180.8	-10.1	-27.397 ug/L	-27.397 ppb		11:13:31
3	Ni 231.604†	170.2	21.1	0.3376 ug/L	0.3376 ppb		11:15:04
3	P 214.914†	362.2	23.5	8.3827 ug/L	8.3827 ppb		11:15:04
3	Pb 220.353†	-20.1	9.1	0.6925 ug/L	0.6925 ppb		11:15:04
3	S 181.975 Axial†	80.7	12.5	10.586 ug/L	10.586 ppb		11:15:04
3	Sb 206.836†	62.0	16.3	3.2114 ug/L	3.2114 ppb		11:15:04
3	Se 196.026†	-17.5	4.2	1.2231 ug/L	1.2231 ppb		11:15:04
3	Si 251.611†	661.8	98.4	1.9887 ug/L	1.9887 ppb		11:15:04
3	Sn 189.927†	17.9	12.4	1.2868 ug/L	1.2868 ppb		11:15:04
3	Sr 421.552†	29.8	24.3	0.3745 ug/L	0.3745 ppb		11:13:31
3	Ti 334.940†	-1085.5	29.2	0.0391 ug/L	0.0391 ppb		11:14:44
3	Tl 190.801†	-66.9	-5.2	-0.8818 ug/L	-0.8818 ppb		11:15:04
3	U 409.014†	-3721.1	132.1	3.2823 ug/L	3.2823 ppb		11:14:39
3	V 292.402†	-1611.3	49.5	0.2955 ug/L	0.2955 ppb		11:14:44
3	Zn 213.857†	1113.1	-14.8	-0.0813 ug/L	-0.0813 ppb		11:15:04
3	SiO2†	689.8	84.0	3.6182 ug/L	3.6182 ppb		11:15:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1059467.0	99.867	%	0.5479				0.55%
Sc Radial	5509.8	99.0	%	2.03				2.05%
Y 371.029	853675.3	100.05	%	0.459				0.46%
Y RADIAL	4805.8	99.79	%	1.872				1.88%
Ag 328.068†	130.0	0.5056	ug/L	0.14559	0.5056	ppb	0.14559	28.79%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	24.6	22.349	ug/L	9.3789	22.349	ppb	9.3789	41.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.6	-1.0834	ug/L	1.41306	-1.0834	ppb	1.41306	130.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	836.0	13.032	ug/L	0.4684	13.032	ppb	0.4684	3.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.1	0.1114	ug/L	0.07778	0.1114	ppb	0.07778	69.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-56.7	-0.0176	ug/L	0.02232	-0.0176	ppb	0.02232	127.00%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          14.5      36.216 ug/L        4.8774      36.216 ppb        4.8774  13.47%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.5     -0.0451 ug/L       0.06867     -0.0451 ppb       0.06867 152.40%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 8.6      0.1072 ug/L       0.04222      0.1072 ppb       0.04222  39.39%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 8.3      0.0704 ug/L       0.09343      0.0704 ppb       0.09343 132.64%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                88.8      0.2174 ug/L       0.30899      0.2174 ppb       0.30899 142.11%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.8     -27.091 ug/L       46.5144     -27.091 ppb       46.5144 171.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         336.9      146.16 ug/L        40.010      146.16 ppb        40.010  27.37%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.7      58.244 ug/L       39.8965      58.244 ppb       39.8965  68.50%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                10.5      0.0036 ug/L       0.01059      0.0036 ppb       0.01059 290.42%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.2      0.0863 ug/L       0.16552      0.0863 ppb       0.16552 191.79%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -11.7     -31.559 ug/L        6.3772     -31.559 ppb        6.3772  20.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.1      0.3373 ug/L       0.00401      0.3373 ppb       0.00401   1.19%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  7.6      2.6923 ug/L       4.99307      2.6923 ppb       4.99307 185.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                24.3      1.8294 ug/L       1.18127      1.8294 ppb       1.18127  64.57%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            9.9      8.3978 ug/L       3.60254      8.3978 ppb       3.60254  42.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                14.8      2.9269 ug/L       0.70621      2.9269 ppb       0.70621  24.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 6.6      2.0632 ug/L       1.24335      2.0632 ppb       1.24335  60.26%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               101.4      2.0396 ug/L       0.12804      2.0396 ppb       0.12804   6.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.6      1.0028 ug/L       0.26867      1.0028 ppb       0.26867  26.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                24.6      0.3787 ug/L       0.08674      0.3787 ppb       0.08674  22.90%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                15.1      0.0222 ug/L       0.02395      0.0222 ppb       0.02395 107.99%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.1719 ug/L       2.33641      1.1719 ppb       2.33641 199.38%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 -3.3     -0.0795 ug/L       3.89151     -0.0795 ppb       3.89151 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  1.1      0.0117 ug/L       0.26296      0.0117 ppb       0.26296 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                -8.4     -0.0485 ug/L       0.05156     -0.0485 ppb       0.05156 106.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      81.6      3.4863 ug/L       0.13480      3.4863 ppb       0.13480   3.87%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: LR1
Analyst: HSC
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/8/2009 11:17:30
Data Type: Reprocessed on 7/8/2009 11:40:20

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1046705.1	1046705.1	98.664	%			11:20:42
1	Sc Radial	5285.9	5285.9	95.0	%			11:19:24
1	Y 371.029	838520.8	838520.8	98.278	%			11:20:42
1	Y RADIAL	4594.7	4594.7	95.41	%			11:19:24
1	Ag 328.068†	-28259.2	-29280.5	9.7367	ug/L	9.7367	ppb	11:20:42
1	Al 396.153Radial†	-104.1	-17.4	-14.625	ug/L	-14.625	ppb	11:19:24
1	As 188.979†	-375.6	-343.8	-2.6523	ug/L	-2.6523	ppb	11:21:02
1	B 249.677†	2868.7	3289.1	-0.5237	ug/L	-0.5237	ppb	11:20:42
1	Ba 233.527†	-1751.7	-1799.7	0.0492	ug/L	0.0492	ppb	11:21:02
1	Be 313.107†	-7239.6	-21.4	-0.0064	ug/L	-0.0064	ppb	11:20:42
1	Ca 317.933Radial†	22.3	6.5	16.305	ug/L	16.305	ppb	11:19:44
1	Cd 226.502†	5204.4	5552.6	-4.5755	ug/L	-4.5755	ppb	11:21:02
1	Co 228.616†	250.1	343.9	-1.3538	ug/L	-1.3538	ppb	11:21:02
1	Cr 267.716†	-824.6	-807.2	0.7505	ug/L	0.7505	ppb	11:21:02
1	Cu 324.752†	802.5	-9377.9	-0.5740	ug/L	-0.5740	ppb	11:20:42
1	Fe 238.204 Radial†	10567.5	11124.8	390270	ug/L	390270	ppb	11:19:24
1	K 766.490 Radial†	1599.4	210.8	389.48	ug/L	389.48	ppb	11:19:24
1	Mg 279.077 IEC†	6.2	6.3	166.70	ug/L	166.70	ppb	11:19:44
1	Mn 257.610†	-57355.3	-58959.2	4.2573	ug/L	4.2573	ppb	11:20:42
1	Mo 202.031†	-642.9	-683.4	-0.5684	ug/L	-0.5684	ppb	11:20:42
1	Na 589.592 Radial†	-176.8	-15.7	-42.375	ug/L	-42.375	ppb	11:19:44
1	Ni 231.604†	294.0	149.8	2.3977	ug/L	2.3977	ppb	11:21:02
1	P 214.914†	1226.8	906.5	9.2980	ug/L	9.2980	ppb	11:21:02
1	Pb 220.353†	427.8	462.7	-2.1099	ug/L	-2.1099	ppb	11:21:02
1	S 181.975 Axial†	88.8	22.2	18.788	ug/L	18.788	ppb	11:21:02
1	Sb 206.836†	15.9	-29.3	0.9649	ug/L	0.9649	ppb	11:21:02
1	Se 196.026†	-3818.0	-3848.1	119.57	ug/L	119.57	ppb	11:21:02
1	Si 251.611†	-912.5	-1484.9	-30.180	ug/L	-30.180	ppb	11:21:02
1	Sn 189.927†	-36.6	-42.6	2.5556	ug/L	2.5556	ppb	11:21:02
1	Sr 421.552†	22.5	18.2	0.2804	ug/L	0.2804	ppb	11:19:44
1	Ti 334.940†	-991.5	104.3	0.1206	ug/L	0.1206	ppb	11:21:02
1	Tl 190.801†	-76.4	-16.1	-3.1221	ug/L	-3.1221	ppb	11:21:02
1	U 409.014†	-2034.4	1772.8	-3.9602	ug/L	-3.9602	ppb	11:20:42
1	V 292.402†	7424.0	9177.3	-1.4441	ug/L	-1.4441	ppb	11:21:02
1	Zn 213.857†	8001.3	6987.3	-3.0916	ug/L	-3.0916	ppb	11:21:02
1	SiO2†	-992.8	-1608.6	-70.084	ug/L	-70.084	ppb	11:22:00
2	Sc 361.383	1052226.2	1052226.2	99.184	%			11:21:08
2	Sc Radial	5401.8	5401.8	97.1	%			11:19:49
2	Y 371.029	842665.3	842665.3	98.764	%			11:21:08
2	Y RADIAL	4714.0	4714.0	97.89	%			11:19:49
2	Ag 328.068†	-28377.9	-29249.9	9.3733	ug/L	9.3733	ppb	11:21:08
2	Al 396.153Radial†	-122.8	-34.3	-30.134	ug/L	-30.134	ppb	11:19:49
2	As 188.979†	-364.1	-330.2	0.2438	ug/L	0.2438	ppb	11:21:28
2	B 249.677†	3058.2	3464.9	2.4165	ug/L	2.4165	ppb	11:21:08
2	Ba 233.527†	-1739.0	-1777.6	0.1263	ug/L	0.1263	ppb	11:21:28
2	Be 313.107†	-7287.8	-31.5	-0.0094	ug/L	-0.0094	ppb	11:21:08
2	Ca 317.933Radial†	23.0	6.7	16.789	ug/L	16.789	ppb	11:20:09
2	Cd 226.502†	5255.4	5576.3	-4.2206	ug/L	-4.2206	ppb	11:21:28
2	Co 228.616†	235.9	328.3	-1.5227	ug/L	-1.5227	ppb	11:21:28
2	Cr 267.716†	-795.1	-773.0	1.0118	ug/L	1.0118	ppb	11:21:28
2	Cu 324.752†	938.3	-9245.3	-0.3338	ug/L	-0.3338	ppb	11:21:08
2	Fe 238.204 Radial†	10757.5	11081.9	388770	ug/L	388770	ppb	11:19:49
2	K 766.490 Radial†	1494.6	66.6	325.81	ug/L	325.81	ppb	11:19:49
2	Mg 279.077 IEC†	5.9	5.9	130.42	ug/L	130.42	ppb	11:20:09
2	Mn 257.610†	-57434.3	-58733.8	4.2400	ug/L	4.2400	ppb	11:21:08
2	Mo 202.031†	-612.5	-649.3	0.6913	ug/L	0.6913	ppb	11:21:08
2	Na 589.592 Radial†	-180.6	-15.6	-42.212	ug/L	-42.212	ppb	11:20:09
2	Ni 231.604†	278.0	132.1	2.1139	ug/L	2.1139	ppb	11:21:28

2	P 214.914†	1227.8	901.0	8.4921	ug/L	8.4921 ppb	11:21:28
2	Pb 220.353†	449.1	481.9	-0.5307	ug/L	-0.5307 ppb	11:21:28
2	S 181.975 Axial†	80.8	13.6	11.530	ug/L	11.530 ppb	11:21:28
2	Sb 206.836†	33.2	-12.0	4.3505	ug/L	4.3505 ppb	11:21:28
2	Se 196.026†	-3813.6	-3823.4	122.34	ug/L	122.34 ppb	11:21:28
2	Si 251.611†	-923.6	-1491.3	-30.313	ug/L	-30.313 ppb	11:21:28
2	Sn 189.927†	-40.9	-46.7	2.1032	ug/L	2.1032 ppb	11:21:28
2	Sr 421.552†	35.7	31.3	0.4814	ug/L	0.4814 ppb	11:20:09
2	Ti 334.940†	-974.5	126.7	0.1495	ug/L	0.1495 ppb	11:21:28
2	Tl 190.801†	-70.5	-9.6	-2.0337	ug/L	-2.0337 ppb	11:21:28
2	U 409.014†	-2005.9	1812.3	-2.7948	ug/L	-2.7948 ppb	11:21:08
2	V 292.402†	7472.6	9186.8	-1.1665	ug/L	-1.1665 ppb	11:21:28
2	Zn 213.857†	8017.0	6960.5	-3.0760	ug/L	-3.0760 ppb	11:21:28
2	SiO2†	-1024.5	-1635.3	-71.266	ug/L	-71.266 ppb	11:22:05
3	Sc 361.383	1038864.2	1038864.2	97.925	%		11:21:35
3	Sc Radial	5569.7	5569.7	100	%		11:20:14
3	Y 371.029	832242.4	832242.4	97.542	%		11:21:35
3	Y RADIAL	4850.2	4850.2	100.7	%		11:20:14
3	Ag 328.068†	-28102.1	-29336.3	7.7693	ug/L	7.7693 ppb	11:21:35
3	Al 396.153Radial†	-102.4	-10.1	-8.1423	ug/L	-8.1423 ppb	11:20:14
3	As 188.979†	-361.3	-332.1	-0.9980	ug/L	-0.9980 ppb	11:21:55
3	B 249.677†	2847.5	3289.3	0.2032	ug/L	0.2032 ppb	11:21:35
3	Ba 233.527†	-1784.8	-1846.9	-0.3157	ug/L	-0.3157 ppb	11:21:55
3	Be 313.107†	-7215.4	-52.1	-0.0159	ug/L	-0.0159 ppb	11:21:35
3	Ca 317.933Radial†	20.5	3.5	8.8182	ug/L	8.8182 ppb	11:20:34
3	Cd 226.502†	5264.7	5654.0	-3.1736	ug/L	-3.1736 ppb	11:21:55
3	Co 228.616†	244.1	339.7	-1.3213	ug/L	-1.3213 ppb	11:21:55
3	Cr 267.716†	-801.4	-789.8	0.7943	ug/L	0.7943 ppb	11:21:55
3	Cu 324.752†	902.1	-9270.0	-0.6227	ug/L	-0.6227 ppb	11:21:35
3	Fe 238.204 Radial†	10979.5	10969.5	384830	ug/L	384830 ppb	11:20:14
3	K 766.490 Radial†	1427.0	-47.3	273.35	ug/L	273.35 ppb	11:20:14
3	Mg 279.077 IEC†	6.1	5.9	137.86	ug/L	137.86 ppb	11:20:34
3	Mn 257.610†	-56773.9	-58804.2	3.6706	ug/L	3.6706 ppb	11:21:35
3	Mo 202.031†	-575.4	-619.4	1.6175	ug/L	1.6175 ppb	11:21:35
3	Na 589.592 Radial†	-177.6	-7.0	-19.058	ug/L	-19.058 ppb	11:20:34
3	Ni 231.604†	287.7	145.5	2.3298	ug/L	2.3298 ppb	11:21:55
3	P 214.914†	1224.2	913.2	16.013	ug/L	16.013 ppb	11:21:55
3	Pb 220.353†	422.9	460.9	-1.7263	ug/L	-1.7263 ppb	11:21:55
3	S 181.975 Axial†	81.7	15.6	13.165	ug/L	13.165 ppb	11:21:55
3	Sb 206.836†	38.2	-6.4	5.3941	ug/L	5.3941 ppb	11:21:55
3	Se 196.026†	-3850.1	-3910.1	80.299	ug/L	80.299 ppb	11:21:55
3	Si 251.611†	-924.9	-1504.6	-30.592	ug/L	-30.592 ppb	11:21:55
3	Sn 189.927†	-42.3	-48.7	1.8220	ug/L	1.8220 ppb	11:21:55
3	Sr 421.552†	28.6	23.1	0.3559	ug/L	0.3559 ppb	11:20:34
3	Ti 334.940†	-986.5	101.9	0.1187	ug/L	0.1187 ppb	11:21:55
3	Tl 190.801†	-94.3	-34.9	-6.3034	ug/L	-6.3034 ppb	11:21:55
3	U 409.014†	-2185.9	1602.5	-7.5175	ug/L	-7.5175 ppb	11:21:35
3	V 292.402†	7401.4	9211.1	-0.4859	ug/L	-0.4859 ppb	11:21:55
3	Zn 213.857†	8037.4	7085.4	-1.9547	ug/L	-1.9547 ppb	11:21:55
3	SiO2†	-936.7	-1558.9	-67.898	ug/L	-67.898 ppb	11:22:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1045931.8	98.591	%	0.6329				0.64%
Sc Radial	5419.1	97.4	%	2.56				2.63%
Y 371.029	837809.5	98.194	%	0.6151				0.63%
Y RADIAL	4719.6	98.00	%	2.655				2.71%
Ag 328.068†	-29288.9	8.9598	ug/L	1.04683	8.9598	ppb	1.04683	11.68%
Al 396.153Radial†	-20.6	-17.634	ug/L	11.3004	-17.634	ppb	11.3004	64.08%
As 188.979†	-335.4	-1.1355	ug/L	1.45294	-1.1355	ppb	1.45294	127.95%
B 249.677†	3347.8	0.6987	ug/L	1.53142	0.6987	ppb	1.53142	219.19%
Ba 233.527†	-1808.0	-0.0467	ug/L	0.23610	-0.0467	ppb	0.23610	505.55%
Be 313.107†	-35.0	-0.0105	ug/L	0.00487	-0.0105	ppb	0.00487	46.13%
Ca 317.933Radial†	5.6	13.971	ug/L	4.4688	13.971	ppb	4.4688	31.99%
Cd 226.502†	5594.3	-3.9899	ug/L	0.72889	-3.9899	ppb	0.72889	18.27%
Co 228.616†	337.3	-1.3993	ug/L	0.10812	-1.3993	ppb	0.10812	7.73%
Cr 267.716†	-790.0	0.8522	ug/L	0.13996	0.8522	ppb	0.13996	16.42%
Cu 324.752†	-9297.7	-0.5102	ug/L	0.15464	-0.5102	ppb	0.15464	30.31%
Fe 238.204 Radial†	11058.7	387960	ug/L	2812.7	387960	ppb	2812.7	0.72%

K 766.490 Radial†	76.7	329.55	ug/L	58.152	329.55	ppb	58.152	17.65%
Mg 279.077 1EC†	6.0	144.99	ug/L	19.161	144.99	ppb	19.161	13.21%
Mn 257.610†	-58832.4	4.0559	ug/L	0.33383	4.0559	ppb	0.33383	8.23%
Mo 202.031†	-650.7	0.5801	ug/L	1.09717	0.5801	ppb	1.09717	189.12%
Na 589.592 Radial†	-12.8	-34.548	ug/L	13.4155	-34.548	ppb	13.4155	38.83%
Ni 231.604†	142.4	2.2805	ug/L	0.14816	2.2805	ppb	0.14816	6.50%
P 214.914†	906.9	11.268	ug/L	4.1293	11.268	ppb	4.1293	36.65%
Pb 220.353†	468.5	-1.4556	ug/L	0.82364	-1.4556	ppb	0.82364	56.58%
S 181.975 Axial†	17.1	14.494	ug/L	3.8072	14.494	ppb	3.8072	26.27%
Sb 206.836†	-15.9	3.5699	ug/L	2.31548	3.5699	ppb	2.31548	64.86%
Se 196.026†	-3860.5	107.40	ug/L	23.512	107.40	ppb	23.512	21.89%
Si 251.611†	-1493.6	-30.362	ug/L	0.2100	-30.362	ppb	0.2100	0.69%
Sn 189.927†	-46.0	2.1603	ug/L	0.37012	2.1603	ppb	0.37012	17.13%
Sr 421.552†	24.2	0.3726	ug/L	0.10154	0.3726	ppb	0.10154	27.25%
Ti 334.940†	111.0	0.1296	ug/L	0.01724	0.1296	ppb	0.01724	13.30%
Tl 190.801†	-20.2	-3.8197	ug/L	2.21870	-3.8197	ppb	2.21870	58.09%
U 409.014†	1729.2	-4.7575	ug/L	2.46022	-4.7575	ppb	2.46022	51.71%
V 292.402†	9191.8	-1.0321	ug/L	0.49303	-1.0321	ppb	0.49303	47.77%
Zn 213.857†	7011.0	-2.7074	ug/L	0.65195	-2.7074	ppb	0.65195	24.08%
SiO2†	-1600.9	-69.749	ug/L	1.7089	-69.749	ppb	1.7089	2.45%

Sequence No.: 18
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:24:21
Data Type: Reprocessed on 7/8/2009 11:40:21

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc 361.383	1059944.6	1059944.6	99.912	%			11:27:33
1	Sc Radial	5479.4	5479.4	98.5	%			11:26:14
1	Y 371.029	844640.7	844640.7	98.995	%			11:27:33
1	Y RADIAL	4754.7	4754.7	98.73	%			11:26:14
1	Ag 328.068†	125630.8	125103.4	498.29	ug/L	498.29	ppb	11:27:33
1	Al 396.153Radial†	5189.1	5362.2	4859.2	ug/L	4859.2	ppb	11:26:14
1	As 188.979†	2086.1	2124.9	501.95	ug/L	501.95	ppb	11:27:53
1	B 249.677†	31012.2	31421.1	487.79	ug/L	487.79	ppb	11:27:33
1	Ba 233.527†	97648.8	97711.0	495.79	ug/L	495.79	ppb	11:27:33
1	Be 313.107†	1580190.1	1588904.8	495.20	ug/L	495.20	ppb	11:27:33
1	Ca 317.933Radial†	1996.6	2010.8	5008.6	ug/L	5008.6	ppb	11:26:34
1	Cd 226.502†	66244.6	66580.8	497.71	ug/L	497.71	ppb	11:27:33
1	Co 228.616†	39192.8	39317.9	489.98	ug/L	489.98	ppb	11:27:53
1	Cr 267.716†	57869.2	57949.0	494.25	ug/L	494.25	ppb	11:27:33
1	Cu 324.752†	208005.6	197998.5	488.80	ug/L	488.80	ppb	11:27:33
1	Fe 238.204 Radial†	141.0	142.8	5026.5	ug/L	5026.5	ppb	11:26:34
1	K 766.490 Radial†	13180.0	11912.5	5162.7	ug/L	5162.7	ppb	11:26:14
1	Mg 279.077 IEC†	65.0	65.8	5216.9	ug/L	5216.9	ppb	11:26:34
1	Mn 257.610†	624970.8	624696.8	494.24	ug/L	494.24	ppb	11:27:33
1	Mo 202.031†	12690.5	12670.0	507.49	ug/L	507.49	ppb	11:27:53
1	Na 589.592 Radial†	3480.4	3705.1	10018	ug/L	10018	ppb	11:26:14
1	Ni 231.604†	30935.7	30814.9	493.58	ug/L	493.58	ppb	11:27:53
1	P 214.914†	7423.2	7092.8	2432.7	ug/L	2432.7	ppb	11:27:53
1	Pb 220.353†	6700.4	6735.4	506.26	ug/L	506.26	ppb	11:27:53
1	S 181.975 Axial†	1257.4	1190.7	1006.9	ug/L	1006.9	ppb	11:27:53
1	Sb 206.836†	2570.6	2527.4	503.36	ug/L	503.36	ppb	11:27:53
1	Se 196.026†	1498.7	1521.6	514.33	ug/L	514.33	ppb	11:27:53
1	Si 251.611†	121332.8	120880.1	2482.2	ug/L	2482.2	ppb	11:27:33
1	Sn 189.927†	4849.4	4848.2	504.72	ug/L	504.72	ppb	11:27:53
1	Sr 421.552†	33394.2	33909.5	522.38	ug/L	522.38	ppb	11:26:14
1	Ti 334.940†	376930.4	378373.2	495.26	ug/L	495.26	ppb	11:27:33
1	Tl 190.801†	2903.5	2967.5	502.45	ug/L	502.45	ppb	11:27:53
1	U 409.014†	15423.9	19272.3	476.61	ug/L	476.61	ppb	11:27:33
1	V 292.402†	84907.4	86635.3	497.41	ug/L	497.41	ppb	11:27:33
1	Zn 213.857†	89673.2	88630.1	490.34	ug/L	490.34	ppb	11:27:33
1	SiO2†	121738.4	121243.8	5330.9	ug/L	5330.9	ppb	11:28:53
2	Sc 361.383	1066729.6	1066729.6	100.55	%			11:28:00
2	Sc Radial	5456.8	5456.8	98.1	%			11:26:39
2	Y 371.029	848088.2	848088.2	99.399	%			11:28:00
2	Y RADIAL	4734.1	4734.1	98.31	%			11:26:39
2	Ag 328.068†	126873.6	125539.5	500.03	ug/L	500.03	ppb	11:28:00
2	Al 396.153Radial†	5194.2	5389.3	4884.0	ug/L	4884.0	ppb	11:26:39
2	As 188.979†	2073.2	2098.8	495.85	ug/L	495.85	ppb	11:28:20
2	B 249.677†	31532.7	31741.4	492.78	ug/L	492.78	ppb	11:28:00
2	Ba 233.527†	98315.7	97752.5	496.00	ug/L	496.00	ppb	11:28:00
2	Be 313.107†	1590346.7	1588945.7	495.21	ug/L	495.21	ppb	11:28:00
2	Ca 317.933Radial†	1979.2	2001.5	4985.4	ug/L	4985.4	ppb	11:26:59
2	Cd 226.502†	66641.4	66553.8	497.50	ug/L	497.50	ppb	11:28:00
2	Co 228.616†	39043.6	38920.0	485.00	ug/L	485.00	ppb	11:28:20
2	Cr 267.716†	58361.0	58069.7	495.28	ug/L	495.28	ppb	11:28:00
2	Cu 324.752†	210274.7	198930.9	491.11	ug/L	491.11	ppb	11:28:00
2	Fe 238.204 Radial†	141.8	144.2	5075.0	ug/L	5075.0	ppb	11:26:59
2	K 766.490 Radial†	13045.1	11830.3	5127.1	ug/L	5127.1	ppb	11:26:39
2	Mg 279.077 IEC†	64.4	65.5	5190.8	ug/L	5190.8	ppb	11:26:59
2	Mn 257.610†	630407.8	626125.3	495.37	ug/L	495.37	ppb	11:28:00
2	Mo 202.031†	12642.8	12541.7	502.36	ug/L	502.36	ppb	11:28:20
2	Na 589.592 Radial†	3436.0	3674.5	9935.3	ug/L	9935.3	ppb	11:26:39
2	Ni 231.604†	30760.2	30443.3	487.63	ug/L	487.63	ppb	11:28:20

2	P 214.914†	7393.8	7016.4	2405.2 ug/L	2405.2 ppb	11:28:20
2	Pb 220.353†	6660.2	6652.8	500.06 ug/L	500.06 ppb	11:28:20
2	S 181.975 Axial†	1241.1	1166.5	986.41 ug/L	986.41 ppb	11:28:20
2	Sb 206.836†	2563.0	2503.6	498.42 ug/L	498.42 ppb	11:28:20
2	Se 196.026†	1509.3	1522.7	514.83 ug/L	514.83 ppb	11:28:20
2	Si 251.611†	122522.7	121291.0	2490.8 ug/L	2490.8 ppb	11:28:00
2	Sn 189.927†	4810.7	4778.9	497.51 ug/L	497.51 ppb	11:28:20
2	Sr 421.552†	33200.1	33852.0	521.50 ug/L	521.50 ppb	11:26:39
2	Ti 334.940†	380050.3	379076.4	496.18 ug/L	496.18 ppb	11:28:00
2	Tl 190.801†	2886.0	2931.6	496.43 ug/L	496.43 ppb	11:28:20
2	U 409.014†	15484.1	19233.9	475.65 ug/L	475.65 ppb	11:28:00
2	V 292.402†	85441.7	86626.2	497.28 ug/L	497.28 ppb	11:28:00
2	Zn 213.857†	90424.6	88806.6	491.36 ug/L	491.36 ppb	11:28:00
2	SiO2†	122259.9	120987.4	5319.9 ug/L	5319.9 ppb	11:28:58
3	Sc 361.383	1082048.6	1082048.6	102.00 %		11:28:28
3	Sc Radial	5526.8	5526.8	99.3 %		11:27:04
3	Y 371.029	860676.7	860676.7	100.87 %		11:28:28
3	Y RADIAL	4799.7	4799.7	99.67 %		11:27:04
3	Ag 328.068†	128584.5	125430.6	499.55 ug/L	499.55 ppb	11:28:28
3	Al 396.153Radial†	5214.3	5342.4	4841.4 ug/L	4841.4 ppb	11:27:04
3	As 188.979†	2101.0	2096.8	495.36 ug/L	495.36 ppb	11:28:48
3	B 249.677†	31978.4	31734.4	492.71 ug/L	492.71 ppb	11:28:28
3	Ba 233.527†	99589.5	97617.2	495.31 ug/L	495.31 ppb	11:28:28
3	Be 313.107†	1612564.5	1588337.3	495.03 ug/L	495.03 ppb	11:28:28
3	Ca 317.933Radial†	1986.9	1983.6	4940.9 ug/L	4940.9 ppb	11:27:24
3	Cd 226.502†	67416.7	66375.6	496.18 ug/L	496.18 ppb	11:28:28
3	Co 228.616†	39220.9	38544.1	480.32 ug/L	480.32 ppb	11:28:48
3	Cr 267.716†	58998.1	57872.6	493.60 ug/L	493.60 ppb	11:28:28
3	Cu 324.752†	213337.9	198973.6	491.20 ug/L	491.20 ppb	11:28:28
3	Fe 238.204 Radial†	139.2	139.9	4921.4 ug/L	4921.4 ppb	11:27:24
3	K 766.490 Radial†	13032.9	11649.4	5048.6 ug/L	5048.6 ppb	11:27:04
3	Mg 279.077 IEC†	65.0	65.3	5178.3 ug/L	5178.3 ppb	11:27:24
3	Mn 257.610†	638129.7	624820.2	494.32 ug/L	494.32 ppb	11:28:28
3	Mo 202.031†	12745.8	12464.7	499.27 ug/L	499.27 ppb	11:28:48
3	Na 589.592 Radial†	3456.2	3650.4	9870.2 ug/L	9870.2 ppb	11:27:04
3	Ni 231.604†	30951.5	30197.8	483.70 ug/L	483.70 ppb	11:28:48
3	P 214.914†	7425.2	6943.1	2379.4 ug/L	2379.4 ppb	11:28:48
3	Pb 220.353†	6701.0	6599.0	496.02 ug/L	496.02 ppb	11:28:48
3	S 181.975 Axial†	1257.6	1165.2	985.32 ug/L	985.32 ppb	11:28:48
3	Sb 206.836†	2594.2	2498.0	497.25 ug/L	497.25 ppb	11:28:48
3	Se 196.026†	1502.3	1494.6	505.14 ug/L	505.14 ppb	11:28:48
3	Si 251.611†	124261.8	121271.0	2490.5 ug/L	2490.5 ppb	11:28:28
3	Sn 189.927†	4852.5	4752.1	494.71 ug/L	494.71 ppb	11:28:48
3	Sr 421.552†	33364.0	33587.9	517.43 ug/L	517.43 ppb	11:27:04
3	Ti 334.940†	385685.4	379250.3	496.41 ug/L	496.41 ppb	11:28:28
3	Tl 190.801†	2899.8	2904.5	491.88 ug/L	491.88 ppb	11:28:48
3	U 409.014†	15696.4	19224.1	475.43 ug/L	475.43 ppb	11:28:28
3	V 292.402†	86520.6	86480.9	496.44 ug/L	496.44 ppb	11:28:28
3	Zn 213.857†	91402.4	88492.1	489.64 ug/L	489.64 ppb	11:28:28
3	SiO2†	123096.2	120085.9	5280.2 ug/L	5280.2 ppb	11:29:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1069574.3	100.82	%	1.067				1.06%
Sc Radial	5487.7	98.6	%	0.64				0.65%
Y 371.029	851135.2	99.756	%	0.9893				0.99%
Y RADIAL	4762.9	98.90	%	0.696				0.70%
Ag 328.068†	125357.9	499.29	ug/L	0.900	499.29	ppb	0.900	0.18%
QC value within limits for Ag 328.068 Recovery = 99.86%								
Al 396.153Radial†	5364.6	4861.5	ug/L	21.38	4861.5	ppb	21.38	0.44%
QC value within limits for Al 396.153Radial Recovery = 97.23%								
As 188.979†	2106.8	497.72	ug/L	3.671	497.72	ppb	3.671	0.74%
QC value within limits for As 188.979 Recovery = 99.54%								
B 249.677†	31632.3	491.09	ug/L	2.863	491.09	ppb	2.863	0.58%
QC value within limits for B 249.677 Recovery = 98.22%								
Ba 233.527†	97693.6	495.70	ug/L	0.354	495.70	ppb	0.354	0.07%
QC value within limits for Ba 233.527 Recovery = 99.14%								
Be 313.107†	1588729.2	495.15	ug/L	0.105	495.15	ppb	0.105	0.02%
QC value within limits for Be 313.107 Recovery = 99.03%								

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Ca 317.933Radial†       1998.7      4978.3 ug/L        34.43      4978.3 ppb        34.43   0.69%
   QC value within limits for Ca 317.933Radial  Recovery = 99.57%
Cd 226.502†            66503.4      497.13 ug/L         0.828      497.13 ppb         0.828  0.17%
   QC value within limits for Cd 226.502  Recovery = 99.43%
Co 228.616†            38927.4      485.10 ug/L         4.831      485.10 ppb         4.831  1.00%
   QC value within limits for Co 228.616  Recovery = 97.02%
Cr 267.716†            57963.8      494.38 ug/L         0.848      494.38 ppb         0.848  0.17%
   QC value within limits for Cr 267.716  Recovery = 98.88%
Cu 324.752†           198634.3      490.37 ug/L         1.359      490.37 ppb         1.359  0.28%
   QC value within limits for Cu 324.752  Recovery = 98.07%
Fe 238.204 Radial†       142.3      5007.6 ug/L        78.49      5007.6 ppb        78.49   1.57%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.15%
K 766.490 Radial†      11797.4      5112.8 ug/L        58.43      5112.8 ppb        58.43   1.14%
   QC value within limits for K 766.490 Radial  Recovery = 102.26%
Mg 279.077 IEC†           65.5      5195.3 ug/L        19.71      5195.3 ppb        19.71   0.38%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.91%
Mn 257.610†           625214.1      494.64 ug/L         0.633      494.64 ppb         0.633  0.13%
   QC value within limits for Mn 257.610  Recovery = 98.93%
Mo 202.031†            12558.8      503.04 ug/L         4.154      503.04 ppb         4.154  0.83%
   QC value within limits for Mo 202.031  Recovery = 100.61%
Na 589.592 Radial†      3676.6      9941.2 ug/L        74.10      9941.2 ppb        74.10   0.75%
   QC value within limits for Na 589.592 Radial  Recovery = 99.41%
Ni 231.604†            30485.3      488.30 ug/L         4.976      488.30 ppb         4.976  1.02%
   QC value within limits for Ni 231.604  Recovery = 97.66%
P 214.914†              7017.4      2405.8 ug/L        26.68      2405.8 ppb        26.68   1.11%
   QC value within limits for P 214.914  Recovery = 96.23%
Pb 220.353†             6662.4      500.78 ug/L         5.161      500.78 ppb         5.161  1.03%
   QC value within limits for Pb 220.353  Recovery = 100.16%
S 181.975 Axial†        1174.1      992.89 ug/L        12.183      992.89 ppb        12.183  1.23%
   QC value within limits for S 181.975 Axial  Recovery = 99.29%
Sb 206.836†             2509.7      499.68 ug/L         3.243      499.68 ppb         3.243  0.65%
   QC value within limits for Sb 206.836  Recovery = 99.94%
Se 196.026†             1512.9      511.43 ug/L         5.455      511.43 ppb         5.455  1.07%
   QC value within limits for Se 196.026  Recovery = 102.29%
Si 251.611†           121147.3      2487.8 ug/L         4.88      2487.8 ppb          4.88  0.20%
   QC value within limits for Si 251.611  Recovery = 99.51%
Sn 189.927†             4793.1      498.98 ug/L         5.163      498.98 ppb         5.163  1.03%
   QC value within limits for Sn 189.927  Recovery = 99.80%
Sr 421.552†            33783.1      520.44 ug/L         2.642      520.44 ppb         2.642  0.51%
   QC value within limits for Sr 421.552  Recovery = 104.09%
Ti 334.940†           378899.9      495.95 ug/L         0.606      495.95 ppb         0.606  0.12%
   QC value within limits for Ti 334.940  Recovery = 99.19%
Tl 190.801†             2934.5      496.92 ug/L         5.303      496.92 ppb         5.303  1.07%
   QC value within limits for Tl 190.801  Recovery = 99.38%
U 409.014†             19243.5      475.90 ug/L         0.628      475.90 ppb         0.628  0.13%
   QC value within limits for U 409.014  Recovery = 95.18%
V 292.402†             86580.8      497.04 ug/L         0.527      497.04 ppb         0.527  0.11%
   QC value within limits for V 292.402  Recovery = 99.41%
Zn 213.857†            88642.9      490.45 ug/L         0.862      490.45 ppb         0.862  0.18%
   QC value within limits for Zn 213.857  Recovery = 98.09%
SiO2†                 120772.4      5310.3 ug/L        26.66      5310.3 ppb        26.66   0.50%
   QC value within limits for SiO2  Recovery = 99.30%
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:31:14
Data Type: Reprocessed on 7/8/2009 11:40:22

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1063802.9	1063802.9	100.28	%			11:34:23
1	Sc Radial	5561.9	5561.9	99.9	%			11:33:06
1	Y 371.029	855860.4	855860.4	100.31	%			11:34:23
1	Y RADIAL	4822.6	4822.6	100.1	%			11:33:06
1	Ag 328.068†	690.4	49.9	0.1978	ug/L	0.1978	ppb	11:34:28
1	Al 396.153Radial†	-87.8	4.4	3.9546	ug/L	3.9546	ppb	11:33:06
1	As 188.979†	-50.4	-13.3	-3.1357	ug/L	-3.1357	ppb	11:34:48
1	B 249.677†	268.9	649.6	10.124	ug/L	10.124	ppb	11:34:28
1	Ba 233.527†	37.8	13.4	0.0677	ug/L	0.0677	ppb	11:34:48
1	Be 313.107†	-7293.5	42.7	0.0128	ug/L	0.0128	ppb	11:34:28
1	Ca 317.933Radial†	28.8	11.8	29.483	ug/L	29.483	ppb	11:33:26
1	Cd 226.502†	-277.0	1.4	0.0100	ug/L	0.0100	ppb	11:34:48
1	Co 228.616†	-86.2	4.5	0.0585	ug/L	0.0585	ppb	11:34:48
1	Cr 267.716†	-5.4	23.2	0.1973	ug/L	0.1973	ppb	11:34:48
1	Cu 324.752†	10006.5	-212.2	-0.5235	ug/L	-0.5235	ppb	11:34:28
1	Fe 238.204 Radial†	0.4	0.1	3.2855	ug/L	3.2855	ppb	11:33:26
1	K 766.490 Radial†	1523.7	51.4	22.290	ug/L	22.290	ppb	11:33:06
1	Mg 279.077 IEC†	-1.0	-1.1	-89.992	ug/L	-89.992	ppb	11:33:26
1	Mn 257.610†	795.0	-34.2	-0.0249	ug/L	-0.0249	ppb	11:34:48
1	Mo 202.031†	53.0	21.1	0.8462	ug/L	0.8462	ppb	11:34:48
1	Na 589.592 Radial†	-162.4	7.9	21.478	ug/L	21.478	ppb	11:33:26
1	Ni 231.604†	144.6	-4.1	-0.0650	ug/L	-0.0650	ppb	11:34:48
1	P 214.914†	355.6	17.7	6.3689	ug/L	6.3689	ppb	11:34:48
1	Pb 220.353†	-11.4	17.7	1.3309	ug/L	1.3309	ppb	11:34:48
1	S 181.975 Axial†	60.0	-8.0	-6.7972	ug/L	-6.7972	ppb	11:34:48
1	Sb 206.836†	53.2	7.6	1.5394	ug/L	1.5394	ppb	11:34:48
1	Se 196.026†	-14.3	7.3	2.4023	ug/L	2.4023	ppb	11:34:48
1	Si 251.611†	618.5	56.7	1.1410	ug/L	1.1410	ppb	11:34:48
1	Sn 189.927†	25.8	20.2	2.1070	ug/L	2.1070	ppb	11:34:48
1	Sr 421.552†	21.5	16.0	0.2468	ug/L	0.2468	ppb	11:33:26
1	Ti 334.940†	-1262.3	-149.6	-0.1941	ug/L	-0.1941	ppb	11:34:28
1	Tl 190.801†	-62.7	-1.1	-0.1937	ug/L	-0.1937	ppb	11:34:48
1	U 409.014†	-3836.3	9.0	0.2216	ug/L	0.2216	ppb	11:34:23
1	V 292.402†	-1663.5	-6.2	-0.0256	ug/L	-0.0256	ppb	11:34:28
1	Zn 213.857†	1135.7	10.2	0.0608	ug/L	0.0608	ppb	11:34:48
1	SiO2†	634.2	30.1	1.2681	ug/L	1.2681	ppb	11:35:54
2	Sc 361.383	1062791.4	1062791.4	100.18	%			11:34:53
2	Sc Radial	5538.6	5538.6	99.5	%			11:33:31
2	Y 371.029	855845.5	855845.5	100.31	%			11:34:53
2	Y RADIAL	4808.4	4808.4	99.85	%			11:33:31
2	Ag 328.068†	769.1	129.1	0.5079	ug/L	0.5079	ppb	11:34:58
2	Al 396.153Radial†	-67.1	24.8	22.522	ug/L	22.522	ppb	11:33:31
2	As 188.979†	-45.9	-8.9	-2.0961	ug/L	-2.0961	ppb	11:35:18
2	B 249.677†	275.1	656.1	10.227	ug/L	10.227	ppb	11:34:58
2	Ba 233.527†	41.5	17.1	0.0865	ug/L	0.0865	ppb	11:35:18
2	Be 313.107†	-7364.6	-35.1	-0.0111	ug/L	-0.0111	ppb	11:34:58
2	Ca 317.933Radial†	27.0	10.2	25.462	ug/L	25.462	ppb	11:33:51
2	Cd 226.502†	-277.0	1.1	0.0093	ug/L	0.0093	ppb	11:35:18
2	Co 228.616†	-96.9	-6.3	-0.0770	ug/L	-0.0770	ppb	11:35:18
2	Cr 267.716†	3.5	32.1	0.2730	ug/L	0.2730	ppb	11:35:18
2	Cu 324.752†	10207.0	-2.6	-0.0068	ug/L	-0.0068	ppb	11:34:58
2	Fe 238.204 Radial†	0.1	-0.2	-6.6396	ug/L	-6.6396	ppb	11:33:51
2	K 766.490 Radial†	1591.7	126.2	54.709	ug/L	54.709	ppb	11:33:31
2	Mg 279.077 IEC†	3.9	3.7	294.15	ug/L	294.15	ppb	11:33:51
2	Mn 257.610†	810.3	-18.2	-0.0209	ug/L	-0.0209	ppb	11:35:18
2	Mo 202.031†	40.3	8.4	0.3367	ug/L	0.3367	ppb	11:35:18
2	Na 589.592 Radial†	-165.4	4.2	11.404	ug/L	11.404	ppb	11:33:51
2	Ni 231.604†	155.5	7.0	0.1119	ug/L	0.1119	ppb	11:35:18

2	P 214.914†	350.7	13.1	4.6724	ug/L	4.6724 ppb	11:35:18
2	Pb 220.353†	1.3	30.4	2.2862	ug/L	2.2862 ppb	11:35:18
2	S 181.975 Axial†	62.4	-5.5	-4.6975	ug/L	-4.6975 ppb	11:35:18
2	Sb 206.836†	46.9	1.4	0.3030	ug/L	0.3030 ppb	11:35:18
2	Se 196.026†	-24.0	-2.3	-0.7802	ug/L	-0.7802 ppb	11:35:18
2	Si 251.611†	641.1	79.9	1.6204	ug/L	1.6204 ppb	11:35:18
2	Sn 189.927†	17.4	11.9	1.2429	ug/L	1.2429 ppb	11:35:18
2	Sr 421.552†	27.5	22.2	0.3413	ug/L	0.3413 ppb	11:33:51
2	Ti 334.940†	-1173.5	-62.1	-0.0801	ug/L	-0.0801 ppb	11:34:58
2	Tl 190.801†	-57.3	4.2	0.7097	ug/L	0.7097 ppb	11:35:18
2	U 409.014†	-3809.4	32.2	0.7987	ug/L	0.7987 ppb	11:34:53
2	V 292.402†	-1655.4	0.3	0.0135	ug/L	0.0135 ppb	11:34:58
2	Zn 213.857†	1139.0	14.5	0.0708	ug/L	0.0708 ppb	11:35:18
2	SiO2†	668.5	65.0	2.8084	ug/L	2.8084 ppb	11:35:59
3	Sc 361.383	1063088.1	1063088.1	100.21	%		11:35:23
3	Sc Radial	5440.7	5440.7	97.8	%		11:33:56
3	Y 371.029	856947.0	856947.0	100.44	%		11:35:23
3	Y RADIAL	4756.3	4756.3	98.77	%		11:33:56
3	Ag 328.068†	752.9	112.7	0.4282	ug/L	0.4282 ppb	11:35:29
3	Al 396.153Radial†	-61.7	29.0	26.426	ug/L	26.426 ppb	11:33:56
3	As 188.979†	-51.0	-14.0	-3.3000	ug/L	-3.3000 ppb	11:35:49
3	B 249.677†	248.8	629.8	9.8225	ug/L	9.8225 ppb	11:35:29
3	Ba 233.527†	49.3	24.9	0.1240	ug/L	0.1240 ppb	11:35:49
3	Be 313.107†	-7424.6	-93.0	-0.0288	ug/L	-0.0288 ppb	11:35:29
3	Ca 317.933Radial†	29.0	12.8	31.771	ug/L	31.771 ppb	11:34:16
3	Cd 226.502†	-284.9	-6.6	-0.0439	ug/L	-0.0439 ppb	11:35:49
3	Co 228.616†	-101.2	-10.6	-0.1306	ug/L	-0.1306 ppb	11:35:49
3	Cr 267.716†	-30.9	-2.2	-0.0206	ug/L	-0.0206 ppb	11:35:49
3	Cu 324.752†	10236.2	23.7	0.0558	ug/L	0.0558 ppb	11:35:29
3	Fe 238.204 Radial†	-1.0	-1.4	-48.298	ug/L	-48.298 ppb	11:34:16
3	K 766.490 Radial†	1505.5	66.8	28.927	ug/L	28.927 ppb	11:33:56
3	Mg 279.077 IEC†	0.6	0.4	33.239	ug/L	33.239 ppb	11:34:16
3	Mn 257.610†	805.7	-23.0	-0.0251	ug/L	-0.0251 ppb	11:35:49
3	Mo 202.031†	36.0	4.1	0.1614	ug/L	0.1614 ppb	11:35:49
3	Na 589.592 Radial†	-166.0	0.6	1.7302	ug/L	1.7302 ppb	11:34:16
3	Ni 231.604†	154.3	5.8	0.0925	ug/L	0.0925 ppb	11:35:49
3	P 214.914†	333.2	-4.4	-1.5177	ug/L	-1.5177 ppb	11:35:49
3	Pb 220.353†	8.6	37.6	2.8325	ug/L	2.8325 ppb	11:35:49
3	S 181.975 Axial†	65.9	-2.0	-1.7280	ug/L	-1.7280 ppb	11:35:49
3	Sb 206.836†	54.2	8.7	1.7131	ug/L	1.7131 ppb	11:35:49
3	Se 196.026†	-34.5	-12.8	-4.3231	ug/L	-4.3231 ppb	11:35:49
3	Si 251.611†	617.8	56.4	1.1483	ug/L	1.1483 ppb	11:35:49
3	Sn 189.927†	12.9	7.4	0.7752	ug/L	0.7752 ppb	11:35:49
3	Sr 421.552†	24.1	19.1	0.2946	ug/L	0.2946 ppb	11:34:16
3	Ti 334.940†	-1056.8	54.6	0.0735	ug/L	0.0735 ppb	11:35:29
3	Tl 190.801†	-54.8	6.7	1.1352	ug/L	1.1352 ppb	11:35:49
3	U 409.014†	-3836.0	6.7	0.1717	ug/L	0.1717 ppb	11:35:23
3	V 292.402†	-1740.9	-84.5	-0.4699	ug/L	-0.4699 ppb	11:35:29
3	Zn 213.857†	1112.0	-12.7	-0.0677	ug/L	-0.0677 ppb	11:35:49
3	SiO2†	666.7	63.0	2.7492	ug/L	2.7492 ppb	11:36:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1063227.5	100.22	%	0.049				0.05%
Sc Radial	5513.8	99.1	%	1.16				1.17%
Y 371.029	856217.6	100.35	%	0.074				0.07%
Y RADIAL	4795.8	99.59	%	0.725				0.73%
Ag 328.068†	97.2	0.3779	ug/L	0.16103	0.3779	ppb	0.16103	42.61%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.4	17.634	ug/L	12.0065	17.634	ppb	12.0065	68.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.1	-2.8439	ug/L	0.65284	-2.8439	ppb	0.65284	22.96%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	645.2	10.058	ug/L	0.2102	10.058	ppb	0.2102	2.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	18.5	0.0927	ug/L	0.02864	0.0927	ppb	0.02864	30.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-28.5	-0.0090	ug/L	0.02087	-0.0090	ppb	0.02087	231.41%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          11.6      28.906 ug/L        3.1943      28.906 ppb        3.1943  11.05%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -1.4      -0.0082 ug/L       0.03088     -0.0082 ppb       0.03088 375.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -4.1      -0.0497 ug/L       0.09746     -0.0497 ppb       0.09746 196.02%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.7      0.1499 ug/L        0.15243      0.1499 ppb       0.15243 101.68%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -63.7      -0.1582 ug/L       0.31790     -0.1582 ppb       0.31790 200.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.5      -17.217 ug/L       27.3704     -17.217 ppb       27.3704 158.97%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          81.4      35.309 ug/L        17.1254      35.309 ppb       17.1254  48.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.0      79.132 ug/L       196.1394      79.132 ppb      196.1394 247.86%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -25.1      -0.0236 ug/L       0.00236     -0.0236 ppb       0.00236   9.98%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                11.2      0.4481 ug/L        0.35572      0.4481 ppb       0.35572  79.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†          4.3      11.538 ug/L         9.8746      11.538 ppb        9.8746  85.59%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 2.9      0.0465 ug/L        0.09700      0.0465 ppb       0.09700 208.67%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  8.8      3.1745 ug/L        4.15119      3.1745 ppb       4.15119 130.77%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                28.6      2.1499 ug/L        0.76002      2.1499 ppb       0.76002  35.35%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.2      -4.4076 ug/L       2.54698     -4.4076 ppb       2.54698  57.79%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 5.9      1.1852 ug/L        0.76889      1.1852 ppb       0.76889  64.88%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.6      -0.9003 ug/L       3.36431     -0.9003 ppb       3.36431 373.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                64.3      1.3033 ug/L        0.27467      1.3033 ppb       0.27467  21.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                13.2      1.3751 ug/L        0.67567      1.3751 ppb       0.67567  49.14%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                19.1      0.2942 ug/L        0.04727      0.2942 ppb       0.04727  16.07%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -52.4      -0.0669 ug/L       0.13429     -0.0669 ppb       0.13429 200.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.3      0.5504 ug/L        0.67863      0.5504 ppb       0.67863 123.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 15.9      0.3973 ug/L        0.34848      0.3973 ppb       0.34848  87.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -30.1      -0.1607 ug/L       0.26848     -0.1607 ppb       0.26848 167.11%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 4.0      0.0213 ug/L        0.07726      0.0213 ppb       0.07726 362.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      52.7      2.2752 ug/L        0.87275      2.2752 ppb       0.87275  38.36%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 12:37:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5606.1	5606.1	101	%			12:39:25
1	Y RADIAL	4851.1	4851.1	100.7	%			12:39:25
1	Al 396.153Radial†	5378.2	5430.8	4921.6	ug/L	4921.6	ppb	12:39:25
1	Ca 317.933Radial†	2021.2	1989.4	4955.2	ug/L	4955.2	ppb	12:39:45
1	Fe 238.204 Radial†	140.8	139.5	4908.3	ug/L	4908.3	ppb	12:39:45
1	K 766.490 Radial†	13453.7	11881.6	5149.1	ug/L	5149.1	ppb	12:39:25
1	Mg 279.077 IEC†	63.3	62.7	4971.3	ug/L	4971.3	ppb	12:39:45
1	Na 589.592 Radial†	3647.9	3791.5	10252	ug/L	10252	ppb	12:39:25
1	Sr 421.552†	35108.7	34844.6	536.79	ug/L	536.79	ppb	12:39:25
1	Sc 361.383	1058412.2	1058412.2	99.767	%			12:40:44
1	Y 371.029	842280.3	842280.3	98.718	%			12:40:44
1	Ag 328.068†	126383.3	126039.7	501.96	ug/L	501.96	ppb	12:40:44
1	As 188.979†	2067.2	2108.9	498.21	ug/L	498.21	ppb	12:41:04
1	B 249.677†	31249.4	31703.9	492.21	ug/L	492.21	ppb	12:40:44
1	Ba 233.527†	97896.4	98100.6	497.76	ug/L	497.76	ppb	12:40:44
1	Be 313.107†	1582299.5	1593308.9	496.58	ug/L	496.58	ppb	12:40:44
1	Cd 226.502†	66319.2	66751.6	499.00	ug/L	499.00	ppb	12:40:44
1	Co 228.616†	39106.2	39287.9	489.60	ug/L	489.60	ppb	12:41:04
1	Cr 267.716†	58017.2	58181.2	496.23	ug/L	496.23	ppb	12:40:44
1	Cu 324.752†	209452.1	199749.8	493.12	ug/L	493.12	ppb	12:40:44
1	Mn 257.610†	627242.3	627879.2	496.74	ug/L	496.74	ppb	12:40:44
1	Mo 202.031†	12652.8	12650.6	506.70	ug/L	506.70	ppb	12:41:04
1	Ni 231.604†	30863.4	30787.2	493.14	ug/L	493.14	ppb	12:41:04
1	P 214.914†	7409.4	7089.8	2431.0	ug/L	2431.0	ppb	12:41:04
1	Pb 220.353†	6655.3	6699.9	503.62	ug/L	503.62	ppb	12:41:04
1	S 181.975 Axial†	1267.1	1202.2	1016.6	ug/L	1016.6	ppb	12:41:04
1	Sb 206.836†	2567.2	2527.8	503.31	ug/L	503.31	ppb	12:41:04
1	Se 196.026†	1499.0	1524.1	514.74	ug/L	514.74	ppb	12:41:04
1	Si 251.611†	123740.7	123469.4	2535.6	ug/L	2535.6	ppb	12:40:44
1	Sn 189.927†	4813.6	4819.3	501.70	ug/L	501.70	ppb	12:41:04
1	Ti 334.940†	379065.1	381059.1	498.77	ug/L	498.77	ppb	12:40:44
1	Tl 190.801†	2892.3	2960.4	501.29	ug/L	501.29	ppb	12:41:04
1	U 409.014†	15455.7	19326.6	477.97	ug/L	477.97	ppb	12:40:44
1	V 292.402†	85007.9	86859.1	498.67	ug/L	498.67	ppb	12:40:44
1	Zn 213.857†	90043.3	89131.1	493.16	ug/L	493.16	ppb	12:40:44
1	SiO2†	124276.3	123964.1	5451.2	ug/L	5451.2	ppb	12:42:04
2	Sc Radial	5585.7	5585.7	100	%			12:39:50
2	Y RADIAL	4837.6	4837.6	100.5	%			12:39:50
2	Al 396.153Radial†	5301.2	5373.6	4869.5	ug/L	4869.5	ppb	12:39:50
2	Ca 317.933Radial†	2018.6	1994.2	4967.2	ug/L	4967.2	ppb	12:40:10
2	Fe 238.204 Radial†	146.6	145.8	5129.1	ug/L	5129.1	ppb	12:40:10
2	K 766.490 Radial†	13445.7	11922.5	5167.1	ug/L	5167.1	ppb	12:39:50
2	Mg 279.077 IEC†	62.9	62.5	4955.1	ug/L	4955.1	ppb	12:40:10
2	Na 589.592 Radial†	3631.8	3788.6	10244	ug/L	10244	ppb	12:39:50
2	Sr 421.552†	34927.0	34791.2	535.97	ug/L	535.97	ppb	12:39:50
2	Sc 361.383	1052564.2	1052564.2	99.216	%			12:41:12
2	Y 371.029	837846.1	837846.1	98.199	%			12:41:12
2	Ag 328.068†	125844.2	126200.1	502.67	ug/L	502.67	ppb	12:41:12
2	As 188.979†	2073.2	2126.5	502.37	ug/L	502.37	ppb	12:41:32
2	B 249.677†	31117.5	31744.9	492.82	ug/L	492.82	ppb	12:41:12
2	Ba 233.527†	97205.3	97949.3	496.99	ug/L	496.99	ppb	12:41:12
2	Be 313.107†	1572088.7	1591829.1	496.11	ug/L	496.11	ppb	12:41:12
2	Cd 226.502†	65885.5	66683.9	498.47	ug/L	498.47	ppb	12:41:12
2	Co 228.616†	38903.8	39301.7	489.77	ug/L	489.77	ppb	12:41:32
2	Cr 267.716†	57670.9	58155.3	496.01	ug/L	496.01	ppb	12:41:12
2	Cu 324.752†	208260.2	199714.8	493.05	ug/L	493.05	ppb	12:41:12
2	Mn 257.610†	622713.6	626807.8	495.92	ug/L	495.92	ppb	12:41:12
2	Mo 202.031†	12649.0	12717.2	509.38	ug/L	509.38	ppb	12:41:32
2	Ni 231.604†	30707.2	30801.6	493.37	ug/L	493.37	ppb	12:41:32

2	P 214.914†	7360.8	7082.0	2428.1 ug/L	2428.1 ppb	12:41:32
2	Pb 220.353†	6668.7	6750.4	507.38 ug/L	507.38 ppb	12:41:32
2	S 181.975 Axial†	1268.3	1210.5	1023.7 ug/L	1023.7 ppb	12:41:32
2	Sb 206.836†	2554.2	2529.0	503.61 ug/L	503.61 ppb	12:41:32
2	Se 196.026†	1489.9	1523.3	515.24 ug/L	515.24 ppb	12:41:32
2	Si 251.611†	122736.1	123146.0	2528.9 ug/L	2528.9 ppb	12:41:12
2	Sn 189.927†	4784.8	4817.1	501.48 ug/L	501.48 ppb	12:41:32
2	Ti 334.940†	376326.4	380409.8	497.92 ug/L	497.92 ppb	12:41:12
2	Tl 190.801†	2869.4	2953.4	500.11 ug/L	500.11 ppb	12:41:32
2	U 409.014†	15348.9	19304.9	477.40 ug/L	477.40 ppb	12:41:12
2	V 292.402†	84354.4	86673.8	497.63 ug/L	497.63 ppb	12:41:12
2	Zn 213.857†	89243.2	88826.1	491.43 ug/L	491.43 ppb	12:41:12
2	SiO2†	123446.6	123819.8	5444.7 ug/L	5444.7 ppb	12:42:10
3	Sc Radial	5622.4	5622.4	101 %		12:40:15
3	Y RADIAL	4895.1	4895.1	101.6 %		12:40:15
3	Al 396.153Radial†	5385.6	5422.7	4914.2 ug/L	4914.2 ppb	12:40:15
3	Ca 317.933Radial†	2021.8	1984.1	4942.2 ug/L	4942.2 ppb	12:40:35
3	Fe 238.204 Radial†	143.1	141.3	4973.4 ug/L	4973.4 ppb	12:40:35
3	K 766.490 Radial†	13475.9	11864.8	5141.9 ug/L	5141.9 ppb	12:40:15
3	Mg 279.077 IEC†	64.9	64.0	5076.8 ug/L	5076.8 ppb	12:40:35
3	Na 589.592 Radial†	3704.4	3836.9	10375 ug/L	10375 ppb	12:40:15
3	Sr 421.552†	35367.4	34999.8	539.18 ug/L	539.18 ppb	12:40:15
3	Sc 361.383	1055266.8	1055266.8	99.471 %		12:41:39
3	Y 371.029	840466.9	840466.9	98.506 %		12:41:39
3	Ag 328.068†	125875.6	125906.9	501.45 ug/L	501.45 ppb	12:41:39
3	As 188.979†	2070.2	2118.1	500.36 ug/L	500.36 ppb	12:41:59
3	B 249.677†	31096.7	31643.7	491.26 ug/L	491.26 ppb	12:41:39
3	Ba 233.527†	97326.4	97820.1	496.34 ug/L	496.34 ppb	12:41:39
3	Be 313.107†	1575608.3	1591309.3	495.95 ug/L	495.95 ppb	12:41:39
3	Cd 226.502†	65831.5	66459.5	496.81 ug/L	496.81 ppb	12:41:39
3	Co 228.616†	38937.8	39235.4	488.94 ug/L	488.94 ppb	12:41:59
3	Cr 267.716†	57725.3	58061.1	495.21 ug/L	495.21 ppb	12:41:39
3	Cu 324.752†	208650.8	199569.9	492.68 ug/L	492.68 ppb	12:41:39
3	Mn 257.610†	623476.5	625967.4	495.24 ug/L	495.24 ppb	12:41:39
3	Mo 202.031†	12620.8	12656.2	506.93 ug/L	506.93 ppb	12:41:59
3	Ni 231.604†	30715.0	30730.2	492.22 ug/L	492.22 ppb	12:41:59
3	P 214.914†	7373.4	7075.7	2426.1 ug/L	2426.1 ppb	12:41:59
3	Pb 220.353†	6643.3	6707.8	504.20 ug/L	504.20 ppb	12:41:59
3	S 181.975 Axial†	1267.5	1206.4	1020.2 ug/L	1020.2 ppb	12:41:59
3	Sb 206.836†	2557.1	2525.3	502.87 ug/L	502.87 ppb	12:41:59
3	Se 196.026†	1494.6	1524.2	514.98 ug/L	514.98 ppb	12:41:59
3	Si 251.611†	122713.6	122806.5	2522.0 ug/L	2522.0 ppb	12:41:39
3	Sn 189.927†	4806.5	4826.6	502.46 ug/L	502.46 ppb	12:41:59
3	Ti 334.940†	376677.4	379791.2	497.11 ug/L	497.11 ppb	12:41:39
3	Tl 190.801†	2887.1	2963.8	501.86 ug/L	501.86 ppb	12:41:59
3	U 409.014†	15446.1	19363.0	478.87 ug/L	478.87 ppb	12:41:39
3	V 292.402†	84553.0	86655.7	497.52 ug/L	497.52 ppb	12:41:39
3	Zn 213.857†	89401.2	88754.6	491.05 ug/L	491.05 ppb	12:41:39
3	SiO2†	122933.1	122984.9	5407.9 ug/L	5407.9 ppb	12:42:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055414.4	99.485	%	0.2759				0.28%
Sc Radial	5604.7	101	%	0.3				0.33%
Y 371.029	840197.8	98.474	%	0.2613				0.27%
Y RADIAL	4861.2	100.9	%	0.62				0.62%
Ag 328.068†	126048.9	502.03	ug/L	0.609	502.03	ppb	0.609	0.12%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5409.0	4901.8	ug/L	28.21	4901.8	ppb	28.21	0.58%
QC value within limits for Al 396.153Radial Recovery = 98.04%								
As 188.979†	2117.9	500.31	ug/L	2.082	500.31	ppb	2.082	0.42%
QC value within limits for As 188.979 Recovery = 100.06%								
B 249.677†	31697.5	492.10	ug/L	0.784	492.10	ppb	0.784	0.16%
QC value within limits for B 249.677 Recovery = 98.42%								
Ba 233.527†	97956.7	497.03	ug/L	0.711	497.03	ppb	0.711	0.14%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1592149.1	496.21	ug/L	0.324	496.21	ppb	0.324	0.07%
QC value within limits for Be 313.107 Recovery = 99.24%								
Ca 317.933Radial†	1989.2	4954.9	ug/L	12.52	4954.9	ppb	12.52	0.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.10%
Cd 226.502†            66631.7      498.09 ug/L         1.144      498.09 ppb          1.144   0.23%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39275.0      489.44 ug/L         0.436      489.44 ppb          0.436   0.09%
   QC value within limits for Co 228.616  Recovery = 97.89%
Cr 267.716†            58132.5      495.82 ug/L         0.539      495.82 ppb          0.539   0.11%
   QC value within limits for Cr 267.716  Recovery = 99.16%
Cu 324.752†           199678.2      492.95 ug/L         0.236      492.95 ppb          0.236   0.05%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†       142.2      5003.6 ug/L        113.48      5003.6 ppb         113.48   2.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.07%
K 766.490 Radial†      11889.6      5152.7 ug/L         12.97      5152.7 ppb          12.97   0.25%
   QC value within limits for K 766.490 Radial  Recovery = 103.05%
Mg 279.077 IEC†           63.1      5001.1 ug/L         66.09      5001.1 ppb          66.09   1.32%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.02%
Mn 257.610†           626884.8      495.97 ug/L         0.753      495.97 ppb          0.753   0.15%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†            12674.6      507.67 ug/L         1.485      507.67 ppb          1.485   0.29%
   QC value within limits for Mo 202.031  Recovery = 101.53%
Na 589.592 Radial†      3805.7       10290 ug/L          73.3       10290 ppb           73.3   0.71%
   QC value within limits for Na 589.592 Radial  Recovery = 102.90%
Ni 231.604†            30773.0      492.91 ug/L         0.605      492.91 ppb          0.605   0.12%
   QC value within limits for Ni 231.604  Recovery = 98.58%
P 214.914†              7082.5      2428.4 ug/L          2.49      2428.4 ppb           2.49   0.10%
   QC value within limits for P 214.914  Recovery = 97.14%
Pb 220.353†             6719.4      505.07 ug/L         2.026      505.07 ppb          2.026   0.40%
   QC value within limits for Pb 220.353  Recovery = 101.01%
S 181.975 Axial†        1206.4      1020.2 ug/L          3.51      1020.2 ppb           3.51   0.34%
   QC value within limits for S 181.975 Axial  Recovery = 102.02%
Sb 206.836†             2527.4      503.26 ug/L         0.369      503.26 ppb          0.369   0.07%
   QC value within limits for Sb 206.836  Recovery = 100.65%
Se 196.026†             1523.9      514.99 ug/L         0.251      514.99 ppb          0.251   0.05%
   QC value within limits for Se 196.026  Recovery = 103.00%
Si 251.611†           123140.6      2528.8 ug/L          6.84      2528.8 ppb           6.84   0.27%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†             4821.0      501.88 ug/L         0.511      501.88 ppb          0.511   0.10%
   QC value within limits for Sn 189.927  Recovery = 100.38%
Sr 421.552†            34878.5      537.31 ug/L         1.669      537.31 ppb          1.669   0.31%
   QC value within limits for Sr 421.552  Recovery = 107.46%
Ti 334.940†           380420.0      497.94 ug/L         0.830      497.94 ppb          0.830   0.17%
   QC value within limits for Ti 334.940  Recovery = 99.59%
Tl 190.801†             2959.2      501.08 ug/L         0.893      501.08 ppb          0.893   0.18%
   QC value within limits for Tl 190.801  Recovery = 100.22%
U 409.014†             19331.5      478.08 ug/L         0.738      478.08 ppb          0.738   0.15%
   QC value within limits for U 409.014  Recovery = 95.62%
V 292.402†             86729.6      497.94 ug/L         0.638      497.94 ppb          0.638   0.13%
   QC value within limits for V 292.402  Recovery = 99.59%
Zn 213.857†            88903.9      491.88 ug/L         1.123      491.88 ppb          1.123   0.23%
   QC value within limits for Zn 213.857  Recovery = 98.38%
SiO2†                 123589.6      5434.6 ug/L         23.34      5434.6 ppb          23.34   0.43%
   QC value within limits for SiO2  Recovery = 101.63%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 12:44:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5518.3	5518.3	99.2	%			12:46:17
1	Y RADIAL	4806.7	4806.7	99.81	%			12:46:17
1	Al 396.153Radial†	-80.6	10.9	9.9589	ug/L	9.9589	ppb	12:46:17
1	Ca 317.933Radial†	44.1	27.5	68.573	ug/L	68.573	ppb	12:46:37
1	Fe 238.204 Radial†	0.0	-0.3	-9.9293	ug/L	-9.9293	ppb	12:46:37
1	K 766.490 Radial†	1698.7	239.9	104.08	ug/L	104.08	ppb	12:46:17
1	Mg 279.077 IEC†	-1.8	-2.0	-155.04	ug/L	-155.04	ppb	12:46:37
1	Na 589.592 Radial†	-174.1	-5.2	-13.943	ug/L	-13.943	ppb	12:46:37
1	Sr 421.552†	32.4	27.2	0.4180	ug/L	0.4180	ppb	12:46:37
1	Sc 361.383	1052130.1	1052130.1	99.175	%			12:47:34
1	Y 371.029	846654.6	846654.6	99.231	%			12:47:34
1	Ag 328.068†	745.4	113.0	0.4445	ug/L	0.4445	ppb	12:47:39
1	As 188.979†	-50.6	-14.1	-3.3222	ug/L	-3.3222	ppb	12:47:59
1	B 249.677†	375.6	760.3	11.850	ug/L	11.850	ppb	12:47:39
1	Ba 233.527†	45.5	21.6	0.1076	ug/L	0.1076	ppb	12:47:59
1	Be 313.107†	-7407.1	-152.6	-0.0474	ug/L	-0.0474	ppb	12:47:39
1	Cd 226.502†	-302.4	-27.3	-0.2026	ug/L	-0.2026	ppb	12:47:59
1	Co 228.616†	-78.2	11.6	0.1438	ug/L	0.1438	ppb	12:47:59
1	Cr 267.716†	-24.3	4.1	0.0351	ug/L	0.0351	ppb	12:47:59
1	Cu 324.752†	10111.8	4.6	0.0108	ug/L	0.0108	ppb	12:47:39
1	Mn 257.610†	869.1	49.3	0.0406	ug/L	0.0406	ppb	12:47:59
1	Mo 202.031†	26.7	-4.8	-0.1934	ug/L	-0.1934	ppb	12:47:59
1	Ni 231.604†	157.5	10.6	0.1698	ug/L	0.1698	ppb	12:47:59
1	P 214.914†	363.5	29.6	10.483	ug/L	10.483	ppb	12:47:59
1	Pb 220.353†	-2.2	26.8	2.0130	ug/L	2.0130	ppb	12:47:59
1	S 181.975 Axial†	74.3	7.1	5.9751	ug/L	5.9751	ppb	12:47:59
1	Sb 206.836†	39.2	-5.9	-1.1554	ug/L	-1.1554	ppb	12:47:59
1	Se 196.026†	-23.4	-2.0	-0.6703	ug/L	-0.6703	ppb	12:47:59
1	Si 251.611†	1253.7	704.0	14.495	ug/L	14.495	ppb	12:47:59
1	Sn 189.927†	8.5	3.1	0.3237	ug/L	0.3237	ppb	12:47:59
1	Ti 334.940†	-1083.2	17.0	0.0287	ug/L	0.0287	ppb	12:47:39
1	Tl 190.801†	-53.7	7.3	1.2282	ug/L	1.2282	ppb	12:47:59
1	U 409.014†	-3965.4	-163.6	-4.0586	ug/L	-4.0586	ppb	12:47:34
1	V 292.402†	-1733.9	-95.6	-0.5536	ug/L	-0.5536	ppb	12:47:39
1	Zn 213.857†	1100.4	-12.8	-0.0663	ug/L	-0.0663	ppb	12:47:59
1	SiO2†	1196.6	604.2	26.624	ug/L	26.624	ppb	12:49:05
2	Sc Radial	5530.0	5530.0	99.4	%			12:46:42
2	Y RADIAL	4804.0	4804.0	99.76	%			12:46:42
2	Al 396.153Radial†	-46.8	45.1	41.028	ug/L	41.028	ppb	12:46:42
2	Ca 317.933Radial†	43.2	26.6	66.161	ug/L	66.161	ppb	12:47:02
2	Fe 238.204 Radial†	0.2	-0.1	-3.2086	ug/L	-3.2086	ppb	12:47:02
2	K 766.490 Radial†	1500.2	36.5	15.864	ug/L	15.864	ppb	12:46:42
2	Mg 279.077 IEC†	0.1	-0.0	-2.9802	ug/L	-2.9802	ppb	12:47:02
2	Na 589.592 Radial†	-185.3	-16.0	-43.367	ug/L	-43.367	ppb	12:47:02
2	Sr 421.552†	24.3	19.0	0.2916	ug/L	0.2916	ppb	12:47:02
2	Sc 361.383	1055228.2	1055228.2	99.467	%			12:48:04
2	Y 371.029	850024.5	850024.5	99.626	%			12:48:04
2	Ag 328.068†	646.4	11.3	0.0443	ug/L	0.0443	ppb	12:48:09
2	As 188.979†	-42.6	-5.9	-1.4010	ug/L	-1.4010	ppb	12:48:29
2	B 249.677†	320.9	704.1	10.974	ug/L	10.974	ppb	12:48:09
2	Ba 233.527†	61.0	37.0	0.1867	ug/L	0.1867	ppb	12:48:29
2	Be 313.107†	-7402.9	-126.4	-0.0393	ug/L	-0.0393	ppb	12:48:09
2	Cd 226.502†	-287.6	-11.5	-0.0851	ug/L	-0.0851	ppb	12:48:29
2	Co 228.616†	-95.0	-5.1	-0.0621	ug/L	-0.0621	ppb	12:48:29
2	Cr 267.716†	-27.2	1.3	0.0113	ug/L	0.0113	ppb	12:48:29
2	Cu 324.752†	10074.9	-62.4	-0.1541	ug/L	-0.1541	ppb	12:48:09
2	Mn 257.610†	873.6	51.3	0.0402	ug/L	0.0402	ppb	12:48:29
2	Mo 202.031†	40.5	8.9	0.3563	ug/L	0.3563	ppb	12:48:29
2	Ni 231.604†	174.4	27.0	0.4336	ug/L	0.4336	ppb	12:48:29

2	P 214.914†	361.0	26.0	9.2291	ug/L	9.2291 ppb	12:48:29
2	Pb 220.353†	-10.0	19.1	1.4379	ug/L	1.4379 ppb	12:48:29
2	S 181.975 Axial†	81.6	14.2	11.973	ug/L	11.973 ppb	12:48:29
2	Sb 206.836†	42.3	-2.9	-0.5447	ug/L	-0.5447 ppb	12:48:29
2	Se 196.026†	-24.2	-2.7	-0.8785	ug/L	-0.8785 ppb	12:48:29
2	Si 251.611†	1175.1	621.2	12.805	ug/L	12.805 ppb	12:48:29
2	Sn 189.927†	14.8	9.4	0.9833	ug/L	0.9833 ppb	12:48:29
2	Ti 334.940†	-1119.7	-16.5	-0.0158	ug/L	-0.0158 ppb	12:48:09
2	Tl 190.801†	-65.4	-4.3	-0.7287	ug/L	-0.7287 ppb	12:48:29
2	U 409.014†	-3934.1	-120.4	-2.9874	ug/L	-2.9874 ppb	12:48:04
2	V 292.402†	-1688.4	-44.7	-0.2542	ug/L	-0.2542 ppb	12:48:09
2	Zn 213.857†	1094.3	-22.2	-0.1261	ug/L	-0.1261 ppb	12:48:29
2	SiO2†	1154.6	558.4	24.643	ug/L	24.643 ppb	12:49:10
3	Sc Radial	5536.9	5536.9	99.5	%		12:47:07
3	Y RADIAL	4795.3	4795.3	99.58	%		12:47:07
3	Al 396.153Radial†	-88.7	3.1	2.7784	ug/L	2.7784 ppb	12:47:07
3	Ca 317.933Radial†	38.0	21.3	52.934	ug/L	52.934 ppb	12:47:27
3	Fe 238.204 Radial†	0.3	-0.0	-1.5937	ug/L	-1.5937 ppb	12:47:27
3	K 766.490 Radial†	1639.2	174.4	75.680	ug/L	75.680 ppb	12:47:07
3	Mg 279.077 IEC†	-0.9	-1.1	-89.124	ug/L	-89.124 ppb	12:47:27
3	Na 589.592 Radial†	-174.5	-4.9	-13.365	ug/L	-13.365 ppb	12:47:27
3	Sr 421.552†	25.1	19.8	0.3045	ug/L	0.3045 ppb	12:47:27
3	Sc 361.383	1057181.0	1057181.0	99.651	%		12:48:34
3	Y 371.029	851270.4	851270.4	99.772	%		12:48:34
3	Ag 328.068†	674.9	38.7	0.1554	ug/L	0.1554 ppb	12:48:39
3	As 188.979†	-44.5	-7.8	-1.8396	ug/L	-1.8396 ppb	12:48:59
3	B 249.677†	378.7	761.6	11.869	ug/L	11.869 ppb	12:48:39
3	Ba 233.527†	63.9	39.8	0.2017	ug/L	0.2017 ppb	12:48:59
3	Be 313.107†	-7375.2	-84.8	-0.0266	ug/L	-0.0266 ppb	12:48:39
3	Cd 226.502†	-299.1	-22.5	-0.1676	ug/L	-0.1676 ppb	12:48:59
3	Co 228.616†	-94.7	-4.6	-0.0558	ug/L	-0.0558 ppb	12:48:59
3	Cr 267.716†	-31.6	-3.1	-0.0251	ug/L	-0.0251 ppb	12:48:59
3	Cu 324.752†	10184.5	28.9	0.0711	ug/L	0.0711 ppb	12:48:39
3	Mn 257.610†	910.4	86.5	0.0699	ug/L	0.0699 ppb	12:48:59
3	Mo 202.031†	44.9	13.3	0.5325	ug/L	0.5325 ppb	12:48:59
3	Ni 231.604†	167.2	19.5	0.3133	ug/L	0.3133 ppb	12:48:59
3	P 214.914†	336.4	0.6	0.2154	ug/L	0.2154 ppb	12:48:59
3	Pb 220.353†	-22.4	6.6	0.4997	ug/L	0.4997 ppb	12:48:59
3	S 181.975 Axial†	69.3	1.8	1.4809	ug/L	1.4809 ppb	12:48:59
3	Sb 206.836†	57.9	12.6	2.5004	ug/L	2.5004 ppb	12:48:59
3	Se 196.026†	-30.6	-9.1	-2.9626	ug/L	-2.9626 ppb	12:48:59
3	Si 251.611†	1139.2	583.1	11.995	ug/L	11.995 ppb	12:48:59
3	Sn 189.927†	11.6	6.1	0.6428	ug/L	0.6428 ppb	12:48:59
3	Ti 334.940†	-1167.7	-62.5	-0.0766	ug/L	-0.0766 ppb	12:48:39
3	Tl 190.801†	-61.2	0.0	0.0020	ug/L	0.0020 ppb	12:48:59
3	U 409.014†	-3975.3	-154.5	-3.8330	ug/L	-3.8330 ppb	12:48:34
3	V 292.402†	-1637.3	9.7	0.0534	ug/L	0.0534 ppb	12:48:39
3	Zn 213.857†	1125.6	7.1	0.0408	ug/L	0.0408 ppb	12:48:59
3	SiO2†	1173.0	574.8	25.317	ug/L	25.317 ppb	12:49:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054846.5	99.431	%	0.2401				0.24%
Sc Radial	5528.4	99.3	%	0.17				0.17%
Y 371.029	849316.5	99.543	%	0.2799				0.28%
Y RADIAL	4802.0	99.72	%	0.125				0.12%
Ag 328.068†	54.3	0.2147	ug/L	0.20658	0.2147	ppb	0.20658	96.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.7	17.922	ug/L	20.3303	17.922	ppb	20.3303	113.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-9.3	-2.1876	ug/L	1.00674	-2.1876	ppb	1.00674	46.02%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	742.0	11.565	ug/L	0.5111	11.565	ppb	0.5111	4.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.8	0.1653	ug/L	0.05052	0.1653	ppb	0.05052	30.56%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.3	-0.0378	ug/L	0.01050	-0.0378	ppb	0.01050	27.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	25.1	62.556	ug/L	8.4198	62.556	ppb	8.4198	13.46%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -20.4     -0.1518 ug/L       0.06032     -0.1518 ppb        0.06032  39.74%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                0.6      0.0086 ug/L       0.11710      0.0086 ppb        0.11710 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                0.8      0.0071 ug/L       0.03031      0.0071 ppb        0.03031 424.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -9.6     -0.0240 ug/L       0.11658     -0.0240 ppb        0.11658 485.05%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.1     -4.9105 ug/L       4.42071     -4.9105 ppb        4.42071  90.02%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        150.3      65.208 ug/L       45.0299      65.208 ppb        45.0299  69.06%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.0     -82.381 ug/L       76.2536     -82.381 ppb        76.2536  92.56%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               62.3      0.0502 ug/L       0.01702      0.0502 ppb        0.01702  33.90%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                5.8      0.2318 ug/L       0.37863      0.2318 ppb        0.37863 163.36%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.558 ug/L       17.1571     -23.558 ppb        17.1571  72.83%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               19.1      0.3055 ug/L       0.13208      0.3055 ppb        0.13208  43.23%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                18.7      6.6426 ug/L       5.60129      6.6426 ppb        5.60129  84.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               17.5      1.3169 ug/L       0.76385      1.3169 ppb        0.76385  58.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           7.7      6.4762 ug/L       5.26375      6.4762 ppb        5.26375  81.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                1.3      0.2668 ug/L       1.95832      0.2668 ppb        1.95832 734.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.6     -1.5038 ug/L       1.26762     -1.5038 ppb        1.26762  84.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              636.1      13.098 ug/L        1.2757      13.098 ppb         1.2757   9.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.2      0.6499 ug/L       0.32985      0.6499 ppb        0.32985  50.75%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               22.0      0.3380 ug/L       0.06959      0.3380 ppb        0.06959  20.59%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -20.6     -0.0212 ug/L       0.05284     -0.0212 ppb        0.05284 248.77%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.0      0.1672 ug/L       0.98883      0.1672 ppb        0.98883 591.54%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -146.2     -3.6263 ug/L       0.56469     -3.6263 ppb        0.56469  15.57%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -43.5     -0.2515 ug/L       0.30350     -0.2515 ppb        0.30350 120.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -9.3     -0.0505 ug/L       0.08455     -0.0505 ppb        0.08455 167.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    579.1      25.528 ug/L        1.0068      25.528 ppb         1.0068   3.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 13:30:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5593.8	5593.8	101	%			13:32:15
1	Y RADIAL	4842.5	4842.5	100.6	%			13:32:15
1	Al 396.153Radial†	5375.4	5439.8	4930.0	ug/L	4930.0	ppb	13:32:15
1	Ca 317.933Radial†	2030.0	2002.6	4988.1	ug/L	4988.1	ppb	13:32:35
1	Fe 238.204 Radial†	143.1	142.0	4997.8	ug/L	4997.8	ppb	13:32:35
1	K 766.490 Radial†	13576.3	12032.8	5214.6	ug/L	5214.6	ppb	13:32:15
1	Mg 279.077 IEC†	64.5	64.0	5074.9	ug/L	5074.9	ppb	13:32:35
1	Na 589.592 Radial†	3820.6	3971.3	10738	ug/L	10738	ppb	13:32:15
1	Sr 421.552†	36184.6	35991.7	554.46	ug/L	554.46	ppb	13:32:15
1	Sc 361.383	1067935.1	1067935.1	100.66	%			13:33:34
1	Y 371.029	850350.6	850350.6	99.664	%			13:33:34
1	Ag 328.068†	127384.2	125904.4	501.45	ug/L	501.45	ppb	13:33:34
1	As 188.979†	2071.9	2095.1	494.98	ug/L	494.98	ppb	13:33:49
1	B 249.677†	31471.2	31644.9	491.29	ug/L	491.29	ppb	13:33:34
1	Ba 233.527†	98516.8	97841.9	496.45	ug/L	496.45	ppb	13:33:34
1	Be 313.107†	1595916.3	1592693.3	496.38	ug/L	496.38	ppb	13:33:34
1	Cd 226.502†	66618.5	66456.2	496.78	ug/L	496.78	ppb	13:33:34
1	Co 228.616†	39113.3	38945.4	485.32	ug/L	485.32	ppb	13:33:49
1	Cr 267.716†	58357.9	58001.1	494.70	ug/L	494.70	ppb	13:33:34
1	Cu 324.752†	211740.1	200150.5	494.11	ug/L	494.11	ppb	13:33:34
1	Mn 257.610†	631157.2	626162.1	495.39	ug/L	495.39	ppb	13:33:34
1	Mo 202.031†	12651.2	12535.9	502.12	ug/L	502.12	ppb	13:33:49
1	Ni 231.604†	30868.2	30516.1	488.79	ug/L	488.79	ppb	13:33:49
1	P 214.914†	7390.5	7004.7	2400.7	ug/L	2400.7	ppb	13:33:49
1	Pb 220.353†	6658.3	6643.4	499.37	ug/L	499.37	ppb	13:33:49
1	S 181.975 Axial†	1261.6	1185.4	1002.5	ug/L	1002.5	ppb	13:33:49
1	Sb 206.836†	2570.5	2508.1	499.32	ug/L	499.32	ppb	13:33:49
1	Se 196.026†	1503.6	1515.3	512.16	ug/L	512.16	ppb	13:33:49
1	Si 251.611†	123414.2	122039.0	2506.2	ug/L	2506.2	ppb	13:33:34
1	Sn 189.927†	4826.6	4789.2	498.58	ug/L	498.58	ppb	13:33:49
1	Ti 334.940†	381885.1	380472.4	498.01	ug/L	498.01	ppb	13:33:34
1	Tl 190.801†	2890.2	2932.5	496.60	ug/L	496.60	ppb	13:33:49
1	U 409.014†	15716.9	19447.9	480.97	ug/L	480.97	ppb	13:33:34
1	V 292.402†	85492.2	86580.4	497.03	ug/L	497.03	ppb	13:33:34
1	Zn 213.857†	90459.6	88739.9	490.98	ug/L	490.98	ppb	13:33:34
1	SiO2†	121080.0	119678.0	5261.9	ug/L	5261.9	ppb	13:34:50
2	Sc Radial	5672.4	5672.4	102	%			13:32:40
2	Y RADIAL	4945.5	4945.5	102.7	%			13:32:40
2	Al 396.153Radial†	5436.6	5425.7	4917.2	ug/L	4917.2	ppb	13:32:40
2	Ca 317.933Radial†	2037.9	1982.3	4937.6	ug/L	4937.6	ppb	13:33:00
2	Fe 238.204 Radial†	144.7	141.6	4983.6	ug/L	4983.6	ppb	13:33:00
2	K 766.490 Radial†	13656.0	11923.8	5167.3	ug/L	5167.3	ppb	13:32:40
2	Mg 279.077 IEC†	65.5	64.0	5077.9	ug/L	5077.9	ppb	13:33:00
2	Na 589.592 Radial†	3830.1	3927.9	10620	ug/L	10620	ppb	13:32:40
2	Sr 421.552†	36620.5	35920.3	553.36	ug/L	553.36	ppb	13:32:40
2	Sc 361.383	1070653.1	1070653.1	100.92	%			13:33:57
2	Y 371.029	851300.7	851300.7	99.776	%			13:33:57
2	Ag 328.068†	127724.7	125920.6	501.52	ug/L	501.52	ppb	13:33:57
2	As 188.979†	2076.5	2094.5	494.83	ug/L	494.83	ppb	13:34:17
2	B 249.677†	31609.9	31703.0	492.20	ug/L	492.20	ppb	13:33:57
2	Ba 233.527†	98878.2	97951.6	497.00	ug/L	497.00	ppb	13:33:57
2	Be 313.107†	1599999.7	1592714.8	496.39	ug/L	496.39	ppb	13:33:57
2	Cd 226.502†	67082.9	66748.4	498.96	ug/L	498.96	ppb	13:33:57
2	Co 228.616†	39157.1	38890.2	484.63	ug/L	484.63	ppb	13:34:17
2	Cr 267.716†	58566.4	58060.5	495.20	ug/L	495.20	ppb	13:33:57
2	Cu 324.752†	211700.3	199577.1	492.70	ug/L	492.70	ppb	13:33:57
2	Mn 257.610†	634065.3	627452.0	496.41	ug/L	496.41	ppb	13:33:57
2	Mo 202.031†	12650.3	12503.1	500.81	ug/L	500.81	ppb	13:34:17
2	Ni 231.604†	30868.0	30438.0	487.54	ug/L	487.54	ppb	13:34:17

2	P 214.914†	7401.9	6997.4	2398.4	ug/L	2398.4	ppb	13:34:17
2	Pb 220.353†	6676.9	6645.0	499.48	ug/L	499.48	ppb	13:34:17
2	S 181.975 Axial†	1250.3	1171.1	990.32	ug/L	990.32	ppb	13:34:17
2	Sb 206.836†	2582.9	2513.9	500.41	ug/L	500.41	ppb	13:34:17
2	Se 196.026†	1510.6	1518.4	513.14	ug/L	513.14	ppb	13:34:17
2	Si 251.611†	123797.7	122107.8	2507.7	ug/L	2507.7	ppb	13:33:57
2	Sn 189.927†	4829.4	4779.9	497.60	ug/L	497.60	ppb	13:34:17
2	Ti 334.940†	383068.5	380682.0	498.28	ug/L	498.28	ppb	13:33:57
2	Tl 190.801†	2883.4	2918.5	494.24	ug/L	494.24	ppb	13:34:17
2	U 409.014†	15572.6	19265.3	476.44	ug/L	476.44	ppb	13:33:57
2	V 292.402†	85872.5	86741.7	497.92	ug/L	497.92	ppb	13:33:57
2	Zn 213.857†	90799.4	88848.4	491.60	ug/L	491.60	ppb	13:33:57
2	SiO2†	123201.1	121474.4	5341.4	ug/L	5341.4	ppb	13:34:55
3	Sc Radial	5530.2	5530.2	99.4	%			13:33:05
3	Y RADIAL	4824.8	4824.8	100.2	%			13:33:05
3	Al 396.153Radial†	5269.6	5394.8	4888.9	ug/L	4888.9	ppb	13:33:05
3	Ca 317.933Radial†	2016.5	2012.2	5012.0	ug/L	5012.0	ppb	13:33:25
3	Fe 238.204 Radial†	142.0	142.6	5017.8	ug/L	5017.8	ppb	13:33:25
3	K 766.490 Radial†	13240.5	11850.4	5135.5	ug/L	5135.5	ppb	13:33:05
3	Mg 279.077 IEC†	66.0	66.2	5249.4	ug/L	5249.4	ppb	13:33:25
3	Na 589.592 Radial†	3727.2	3921.0	10602	ug/L	10602	ppb	13:33:05
3	Sr 421.552†	35503.6	35720.6	550.29	ug/L	550.29	ppb	13:33:05
3	Sc 361.383	1058446.8	1058446.8	99.770	%			13:34:24
3	Y 371.029	840681.7	840681.7	98.531	%			13:34:24
3	Ag 328.068†	126248.3	125900.3	501.44	ug/L	501.44	ppb	13:34:24
3	As 188.979†	2075.8	2117.5	500.23	ug/L	500.23	ppb	13:34:44
3	B 249.677†	31241.6	31695.0	492.06	ug/L	492.06	ppb	13:34:24
3	Ba 233.527†	97802.6	98003.4	497.27	ug/L	497.27	ppb	13:34:24
3	Be 313.107†	1580830.6	1591784.7	496.10	ug/L	496.10	ppb	13:34:24
3	Cd 226.502†	66147.2	66577.1	497.68	ug/L	497.68	ppb	13:34:24
3	Co 228.616†	38965.8	39145.9	487.83	ug/L	487.83	ppb	13:34:44
3	Cr 267.716†	57808.5	57970.1	494.43	ug/L	494.43	ppb	13:34:24
3	Cu 324.752†	209941.6	200233.4	494.32	ug/L	494.32	ppb	13:34:24
3	Mn 257.610†	627495.4	628112.4	496.93	ug/L	496.93	ppb	13:34:24
3	Mo 202.031†	12657.7	12655.1	506.89	ug/L	506.89	ppb	13:34:44
3	Ni 231.604†	30736.2	30658.7	491.08	ug/L	491.08	ppb	13:34:44
3	P 214.914†	7364.3	7044.3	2414.7	ug/L	2414.7	ppb	13:34:44
3	Pb 220.353†	6650.9	6695.3	503.26	ug/L	503.26	ppb	13:34:44
3	S 181.975 Axial†	1250.1	1185.1	1002.2	ug/L	1002.2	ppb	13:34:44
3	Sb 206.836†	2580.3	2540.8	505.92	ug/L	505.92	ppb	13:34:44
3	Se 196.026†	1500.2	1525.3	515.51	ug/L	515.51	ppb	13:34:44
3	Si 251.611†	122421.6	122143.2	2508.3	ug/L	2508.3	ppb	13:34:24
3	Sn 189.927†	4816.0	4821.6	501.94	ug/L	501.94	ppb	13:34:44
3	Ti 334.940†	378995.5	380976.9	498.67	ug/L	498.67	ppb	13:34:24
3	Tl 190.801†	2891.6	2959.6	501.16	ug/L	501.16	ppb	13:34:44
3	U 409.014†	15388.1	19258.2	476.26	ug/L	476.26	ppb	13:34:24
3	V 292.402†	84860.2	86708.3	497.81	ug/L	497.81	ppb	13:34:24
3	Zn 213.857†	89990.4	89075.1	492.83	ug/L	492.83	ppb	13:34:24
3	SiO2†	121574.6	121252.0	5331.3	ug/L	5331.3	ppb	13:35:00

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065678.3	100.45	%	0.604				0.60%
Sc Radial	5598.8	101	%	1.3				1.27%
Y 371.029	847444.4	99.324	%	0.6887				0.69%
Y RADIAL	4870.9	101.1	%	1.35				1.34%
Ag 328.068†	125908.4	501.47	ug/L	0.040	501.47	ppb	0.040	0.01%
QC value within limits for Ag 328.068 Recovery = 100.29%								
Al 396.153Radial†	5420.1	4912.0	ug/L	21.04	4912.0	ppb	21.04	0.43%
QC value within limits for Al 396.153Radial Recovery = 98.24%								
As 188.979†	2102.3	496.68	ug/L	3.073	496.68	ppb	3.073	0.62%
QC value within limits for As 188.979 Recovery = 99.34%								
B 249.677†	31681.0	491.85	ug/L	0.490	491.85	ppb	0.490	0.10%
QC value within limits for B 249.677 Recovery = 98.37%								
Ba 233.527†	97932.3	496.91	ug/L	0.418	496.91	ppb	0.418	0.08%
QC value within limits for Ba 233.527 Recovery = 99.38%								
Be 313.107†	1592397.6	496.29	ug/L	0.164	496.29	ppb	0.164	0.03%
QC value within limits for Be 313.107 Recovery = 99.26%								
Ca 317.933Radial†	1999.0	4979.2	ug/L	37.99	4979.2	ppb	37.99	0.76%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.58%
Cd 226.502†            66593.9      497.81 ug/L         1.099      497.81 ppb          1.099   0.22%
   QC value within limits for Cd 226.502  Recovery = 99.56%
Co 228.616†            38993.8      485.92 ug/L         1.684      485.92 ppb          1.684   0.35%
   QC value within limits for Co 228.616  Recovery = 97.18%
Cr 267.716†            58010.6      494.78 ug/L         0.391      494.78 ppb          0.391   0.08%
   QC value within limits for Cr 267.716  Recovery = 98.96%
Cu 324.752†           199987.0      493.71 ug/L         0.883      493.71 ppb          0.883   0.18%
   QC value within limits for Cu 324.752  Recovery = 98.74%
Fe 238.204 Radial†       142.1      4999.7 ug/L         17.21      4999.7 ppb          17.21   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.99%
K 766.490 Radial†      11935.7      5172.5 ug/L         39.80      5172.5 ppb          39.80   0.77%
   QC value within limits for K 766.490 Radial  Recovery = 103.45%
Mg 279.077 IEC†           64.8      5134.0 ug/L         99.90      5134.0 ppb          99.90   1.95%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.68%
Mn 257.610†           627242.2      496.25 ug/L         0.783      496.25 ppb          0.783   0.16%
   QC value within limits for Mn 257.610  Recovery = 99.25%
Mo 202.031†            12564.7      503.27 ug/L         3.202      503.27 ppb          3.202   0.64%
   QC value within limits for Mo 202.031  Recovery = 100.65%
Na 589.592 Radial†      3940.0       10653 ug/L          73.7       10653 ppb           73.7   0.69%
   QC value within limits for Na 589.592 Radial  Recovery = 106.53%
Ni 231.604†            30537.6      489.14 ug/L         1.792      489.14 ppb          1.792   0.37%
   QC value within limits for Ni 231.604  Recovery = 97.83%
P 214.914†              7015.5      2404.6 ug/L          8.82      2404.6 ppb           8.82   0.37%
   QC value within limits for P 214.914  Recovery = 96.18%
Pb 220.353†             6661.2      500.70 ug/L         2.213      500.70 ppb          2.213   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.14%
S 181.975 Axial†        1180.6      998.33 ug/L         6.940      998.33 ppb          6.940   0.70%
   QC value within limits for S 181.975 Axial  Recovery = 99.83%
Sb 206.836†             2520.9      501.88 ug/L         3.538      501.88 ppb          3.538   0.70%
   QC value within limits for Sb 206.836  Recovery = 100.38%
Se 196.026†             1519.7      513.60 ug/L         1.722      513.60 ppb          1.722   0.34%
   QC value within limits for Se 196.026  Recovery = 102.72%
Si 251.611†           122096.7      2507.4 ug/L          1.07      2507.4 ppb           1.07   0.04%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4796.9      499.37 ug/L         2.279      499.37 ppb          2.279   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.87%
Sr 421.552†            35877.5      552.70 ug/L         2.165      552.70 ppb          2.165   0.39%
   QC value greater than the upper limit for Sr 421.552  Recovery = 110.54%
Ti 334.940†           380710.4      498.32 ug/L         0.334      498.32 ppb          0.334   0.07%
   QC value within limits for Ti 334.940  Recovery = 99.66%
Tl 190.801†             2936.9      497.33 ug/L         3.520      497.33 ppb          3.520   0.71%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19323.8      477.89 ug/L         2.668      477.89 ppb          2.668   0.56%
   QC value within limits for U 409.014  Recovery = 95.58%
V 292.402†             86676.8      497.59 ug/L         0.485      497.59 ppb          0.485   0.10%
   QC value within limits for V 292.402  Recovery = 99.52%
Zn 213.857†            88887.8      491.81 ug/L         0.941      491.81 ppb          0.941   0.19%
   QC value within limits for Zn 213.857  Recovery = 98.36%
SiO2†                 120801.5      5311.6 ug/L         43.27      5311.6 ppb          43.27   0.81%
   QC value within limits for SiO2  Recovery = 99.33%
QC Failed.  Continue with analysis.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:37:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5413.7	5413.7	97.3	%			13:39:02
1	Y RADIAL	4722.7	4722.7	98.07	%			13:39:02
1	Al 396.153Radial†	-76.0	14.1	12.785	ug/L	12.785	ppb	13:39:02
1	Ca 317.933Radial†	35.2	19.2	47.934	ug/L	47.934	ppb	13:39:22
1	Fe 238.204 Radial†	1.2	0.9	31.911	ug/L	31.911	ppb	13:39:22
1	K 766.490 Radial†	1580.2	151.2	65.626	ug/L	65.626	ppb	13:39:02
1	Mg 279.077 IEC†	-0.2	-0.4	-31.882	ug/L	-31.882	ppb	13:39:22
1	Na 589.592 Radial†	-172.1	-6.5	-17.590	ug/L	-17.590	ppb	13:39:22
1	Sr 421.552†	25.9	21.2	0.3255	ug/L	0.3255	ppb	13:39:22
1	Sc 361.383	1053963.2	1053963.2	99.348	%			13:40:19
1	Y 371.029	848397.9	848397.9	99.435	%			13:40:19
1	Ag 328.068†	697.3	63.3	0.2597	ug/L	0.2597	ppb	13:40:24
1	As 188.979†	-43.2	-6.6	-1.5430	ug/L	-1.5430	ppb	13:40:44
1	B 249.677†	186.7	569.4	8.8696	ug/L	8.8696	ppb	13:40:24
1	Ba 233.527†	25.2	1.1	0.0062	ug/L	0.0062	ppb	13:40:44
1	Be 313.107†	-7423.5	-156.0	-0.0488	ug/L	-0.0488	ppb	13:40:24
1	Cd 226.502†	-280.8	-5.0	-0.0412	ug/L	-0.0412	ppb	13:40:44
1	Co 228.616†	-84.6	5.2	0.0655	ug/L	0.0655	ppb	13:40:44
1	Cr 267.716†	-15.0	13.5	0.1154	ug/L	0.1154	ppb	13:40:44
1	Cu 324.752†	10214.2	90.0	0.2240	ug/L	0.2240	ppb	13:40:24
1	Mn 257.610†	861.8	40.4	0.0367	ug/L	0.0367	ppb	13:40:44
1	Mo 202.031†	34.4	2.9	0.1183	ug/L	0.1183	ppb	13:40:44
1	Ni 231.604†	156.3	9.1	0.1453	ug/L	0.1453	ppb	13:40:44
1	P 214.914†	354.0	19.4	6.7924	ug/L	6.7924	ppb	13:40:44
1	Pb 220.353†	-16.7	12.3	0.9181	ug/L	0.9181	ppb	13:40:44
1	S 181.975 Axial†	70.6	3.2	2.7071	ug/L	2.7071	ppb	13:40:44
1	Sb 206.836†	39.9	-5.3	-1.0467	ug/L	-1.0467	ppb	13:40:44
1	Se 196.026†	-22.9	-1.5	-0.3668	ug/L	-0.3668	ppb	13:40:44
1	Si 251.611†	869.2	314.8	6.4745	ug/L	6.4745	ppb	13:40:44
1	Sn 189.927†	0.9	-4.6	-0.4731	ug/L	-0.4731	ppb	13:40:44
1	Ti 334.940†	-1211.1	-109.8	-0.1404	ug/L	-0.1404	ppb	13:40:24
1	Tl 190.801†	-59.9	1.1	0.1786	ug/L	0.1786	ppb	13:40:44
1	U 409.014†	-3817.1	-7.5	-0.1890	ug/L	-0.1890	ppb	13:40:19
1	V 292.402†	-1664.4	-22.5	-0.1316	ug/L	-0.1316	ppb	13:40:24
1	Zn 213.857†	1133.9	18.9	0.1021	ug/L	0.1021	ppb	13:40:44
1	SiO2†	854.9	258.2	11.358	ug/L	11.358	ppb	13:41:50
2	Sc Radial	5529.6	5529.6	99.4	%			13:39:27
2	Y RADIAL	4800.3	4800.3	99.68	%			13:39:27
2	Al 396.153Radial†	-66.9	24.8	22.617	ug/L	22.617	ppb	13:39:27
2	Ca 317.933Radial†	32.0	15.3	38.110	ug/L	38.110	ppb	13:39:47
2	Fe 238.204 Radial†	-0.4	-0.7	-24.391	ug/L	-24.391	ppb	13:39:47
2	K 766.490 Radial†	1456.8	-7.0	-3.0184	ug/L	-3.0184	ppb	13:39:27
2	Mg 279.077 IEC†	-1.1	-1.3	-105.28	ug/L	-105.28	ppb	13:39:47
2	Na 589.592 Radial†	-182.7	-13.4	-36.229	ug/L	-36.229	ppb	13:39:47
2	Sr 421.552†	13.5	8.1	0.1251	ug/L	0.1251	ppb	13:39:47
2	Sc 361.383	1050298.1	1050298.1	99.002	%			13:40:49
2	Y 371.029	845092.6	845092.6	99.048	%			13:40:49
2	Ag 328.068†	722.6	91.3	0.3522	ug/L	0.3522	ppb	13:40:54
2	As 188.979†	-47.8	-11.4	-2.6790	ug/L	-2.6790	ppb	13:41:14
2	B 249.677†	113.4	496.1	7.7347	ug/L	7.7347	ppb	13:40:54
2	Ba 233.527†	39.8	15.9	0.0791	ug/L	0.0791	ppb	13:41:14
2	Be 313.107†	-7481.4	-240.6	-0.0748	ug/L	-0.0748	ppb	13:40:54
2	Cd 226.502†	-281.1	-6.3	-0.0443	ug/L	-0.0443	ppb	13:41:14
2	Co 228.616†	-106.2	-16.8	-0.2105	ug/L	-0.2105	ppb	13:41:14
2	Cr 267.716†	-17.2	11.3	0.0951	ug/L	0.0951	ppb	13:41:14
2	Cu 324.752†	10211.9	123.5	0.3033	ug/L	0.3033	ppb	13:40:54
2	Mn 257.610†	849.4	30.9	0.0233	ug/L	0.0233	ppb	13:41:14
2	Mo 202.031†	18.3	-13.3	-0.5352	ug/L	-0.5352	ppb	13:41:14
2	Ni 231.604†	164.4	17.8	0.2854	ug/L	0.2854	ppb	13:41:14

2	P 214.914†	350.8	17.5	6.1379	ug/L	6.1379 ppb	13:41:14
2	Pb 220.353†	-10.6	18.4	1.3861	ug/L	1.3861 ppb	13:41:14
2	S 181.975 Axial†	62.6	-4.6	-3.8702	ug/L	-3.8702 ppb	13:41:14
2	Sb 206.836†	45.8	0.8	0.1341	ug/L	0.1341 ppb	13:41:14
2	Se 196.026†	-24.4	-3.1	-1.0828	ug/L	-1.0828 ppb	13:41:14
2	Si 251.611†	863.1	311.7	6.4431	ug/L	6.4431 ppb	13:41:14
2	Sn 189.927†	0.2	-5.3	-0.5453	ug/L	-0.5453 ppb	13:41:14
2	Ti 334.940†	-1096.8	1.4	0.0048	ug/L	0.0048 ppb	13:40:54
2	Tl 190.801†	-63.6	-2.9	-0.4817	ug/L	-0.4817 ppb	13:41:14
2	U 409.014†	-3840.4	-44.4	-1.0988	ug/L	-1.0988 ppb	13:40:49
2	V 292.402†	-1708.7	-73.1	-0.4221	ug/L	-0.4221 ppb	13:40:54
2	Zn 213.857†	1132.6	21.6	0.1245	ug/L	0.1245 ppb	13:41:14
2	SiO2†	832.1	238.2	10.549	ug/L	10.549 ppb	13:41:55
3	Sc Radial	5577.9	5577.9	100	%		13:39:52
3	Y RADIAL	4835.1	4835.1	100.4	%		13:39:52
3	Al 396.153Radial†	-70.3	22.1	20.104	ug/L	20.104 ppb	13:39:52
3	Ca 317.933Radial†	35.5	18.5	45.957	ug/L	45.957 ppb	13:40:12
3	Fe 238.204 Radial†	0.8	0.4	15.248	ug/L	15.248 ppb	13:40:12
3	K 766.490 Radial†	1595.4	118.6	51.472	ug/L	51.472 ppb	13:39:52
3	Mg 279.077 IEC†	1.1	0.9	72.486	ug/L	72.486 ppb	13:40:12
3	Na 589.592 Radial†	-180.7	-9.9	-26.682	ug/L	-26.682 ppb	13:40:12
3	Sr 421.552†	20.5	15.0	0.2301	ug/L	0.2301 ppb	13:40:12
3	Sc 361.383	1059808.1	1059808.1	99.899	%		13:41:19
3	Y 371.029	852835.7	852835.7	99.956	%		13:41:19
3	Ag 328.068†	652.2	14.3	0.0614	ug/L	0.0614 ppb	13:41:24
3	As 188.979†	-45.4	-8.6	-2.0185	ug/L	-2.0185 ppb	13:41:44
3	B 249.677†	65.4	446.9	6.9635	ug/L	6.9635 ppb	13:41:24
3	Ba 233.527†	22.1	-2.1	-0.0105	ug/L	-0.0105 ppb	13:41:44
3	Be 313.107†	-7445.6	-136.9	-0.0427	ug/L	-0.0427 ppb	13:41:24
3	Cd 226.502†	-289.9	-12.6	-0.0960	ug/L	-0.0960 ppb	13:41:44
3	Co 228.616†	-93.1	-2.8	-0.0344	ug/L	-0.0344 ppb	13:41:44
3	Cr 267.716†	-11.2	17.4	0.1485	ug/L	0.1485 ppb	13:41:44
3	Cu 324.752†	10243.7	62.8	0.1558	ug/L	0.1558 ppb	13:41:24
3	Mn 257.610†	848.9	22.8	0.0186	ug/L	0.0186 ppb	13:41:44
3	Mo 202.031†	37.0	5.3	0.2126	ug/L	0.2126 ppb	13:41:44
3	Ni 231.604†	140.9	-7.2	-0.1159	ug/L	-0.1159 ppb	13:41:44
3	P 214.914†	339.1	2.5	0.8606	ug/L	0.8606 ppb	13:41:44
3	Pb 220.353†	-19.1	9.9	0.7469	ug/L	0.7469 ppb	13:41:44
3	S 181.975 Axial†	72.1	4.4	3.7018	ug/L	3.7018 ppb	13:41:44
3	Sb 206.836†	45.8	0.4	0.0909	ug/L	0.0909 ppb	13:41:44
3	Se 196.026†	-18.5	3.1	1.0727	ug/L	1.0727 ppb	13:41:44
3	Si 251.611†	817.6	258.4	5.3084	ug/L	5.3084 ppb	13:41:44
3	Sn 189.927†	11.2	5.7	0.5975	ug/L	0.5975 ppb	13:41:44
3	Ti 334.940†	-1138.5	-30.4	-0.0364	ug/L	-0.0364 ppb	13:41:24
3	Tl 190.801†	-59.9	1.4	0.2410	ug/L	0.2410 ppb	13:41:44
3	U 409.014†	-3866.5	-35.7	-0.8885	ug/L	-0.8885 ppb	13:41:19
3	V 292.402†	-1658.7	-7.6	-0.0432	ug/L	-0.0432 ppb	13:41:24
3	Zn 213.857†	1144.7	23.5	0.1274	ug/L	0.1274 ppb	13:41:44
3	SiO2†	856.3	254.8	11.208	ug/L	11.208 ppb	13:42:00

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054689.8	99.416	%	0.4521				0.45%
Sc Radial	5507.0	99.0	%	1.52				1.53%
Y 371.029	848775.4	99.480	%	0.4554				0.46%
Y RADIAL	4786.0	99.38	%	1.195				1.20%
Ag 328.068†	56.3	0.2244	ug/L	0.14858	0.2244	ppb	0.14858	66.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.3	18.502	ug/L	5.1080	18.502	ppb	5.1080	27.61%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-8.9	-2.0802	ug/L	0.57051	-2.0802	ppb	0.57051	27.43%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	504.1	7.8559	ug/L	0.95880	7.8559	ppb	0.95880	12.20%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.0	0.0249	ug/L	0.04766	0.0249	ppb	0.04766	191.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-177.8	-0.0554	ug/L	0.01705	-0.0554	ppb	0.01705	30.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	17.7	44.000	ug/L	5.1960	44.000	ppb	5.1960	11.81%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 8.0     -0.0605 ug/L       0.03078     -0.0605 ppb        0.03078  50.88%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -4.8     -0.0598 ug/L       0.13974     -0.0598 ppb        0.13974 233.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.0      0.1197 ug/L       0.02695      0.1197 ppb        0.02695  22.52%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                92.1      0.2277 ug/L       0.07381      0.2277 ppb        0.07381  32.42%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.2      7.5897 ug/L      28.92162      7.5897 ppb       28.92162 381.07%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          87.6     38.027 ug/L       36.2437      38.027 ppb        36.2437  95.31%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -21.559 ug/L       89.3317     -21.559 ppb        89.3317 414.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                31.4      0.0262 ug/L       0.00940      0.0262 ppb        0.00940  35.89%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -1.7     -0.0681 ug/L       0.40727     -0.0681 ppb        0.40727 597.93%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -9.9     -26.834 ug/L        9.3203     -26.834 ppb         9.3203  34.73%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 6.5      0.1049 ug/L       0.20368      0.1049 ppb        0.20368 194.15%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 13.1      4.5970 ug/L       3.25230      4.5970 ppb        3.25230  70.75%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                13.5      1.0170 ug/L       0.33087      1.0170 ppb        0.33087  32.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            1.0      0.8462 ug/L       4.11469      0.8462 ppb        4.11469 486.24%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -1.4     -0.2739 ug/L       0.66961     -0.2739 ppb        0.66961 244.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -0.5     -0.1256 ug/L       1.09782     -0.1256 ppb        1.09782 873.95%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               295.0      6.0753 ug/L       0.66436      6.0753 ppb        0.66436  10.94%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.4     -0.1403 ug/L       0.63995     -0.1403 ppb        0.63995 456.09%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                14.8      0.2269 ug/L       0.10024      0.2269 ppb        0.10024  44.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -46.3     -0.0574 ug/L       0.07484     -0.0574 ppb        0.07484 130.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -0.1     -0.0207 ug/L       0.40044     -0.0207 ppb        0.40044 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -29.2     -0.7254 ug/L       0.47631     -0.7254 ppb        0.47631  65.66%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -34.4     -0.1990 ug/L       0.19822     -0.1990 ppb        0.19822  99.63%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                21.3      0.1180 ug/L       0.01386      0.1180 ppb        0.01386  11.75%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     250.4     11.038 ug/L        0.4304     11.038 ppb         0.4304   3.90%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/8/2009 13:50:46
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601

Plasma On Time: 00:00:00
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070809A.sif
Batch ID:
Results Data Set: 070809A
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 13:50:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5532.4	5532.4	99.4	%			13:52:39
1	Y RADIAL	4797.0	4797.0	99.61	%			13:52:39
1	Al 396.153Radial†	5229.0	5351.8	4849.9	ug/L	4849.9	ppb	13:52:39
1	Ca 317.933Radial†	1958.2	1952.7	4863.9	ug/L	4863.9	ppb	13:52:59
1	Fe 238.204 Radial†	138.6	139.1	4894.2	ug/L	4894.2	ppb	13:52:59
1	K 766.490 Radial†	13095.3	11698.9	5070.2	ug/L	5070.2	ppb	13:52:39
1	Mg 279.077 IEC†	62.6	62.8	4978.5	ug/L	4978.5	ppb	13:52:59
1	Na 589.592 Radial†	3365.0	3555.1	9612.7	ug/L	9612.7	ppb	13:52:39
1	Sr 421.552†	32629.9	32815.6	505.53	ug/L	505.53	ppb	13:52:39
1	Sc 361.383	1065706.7	1065706.7	100.45	%			13:53:58
1	Y 371.029	846819.9	846819.9	99.251	%			13:53:58
1	Ag 328.068†	126960.9	125747.6	500.80	ug/L	500.80	ppb	13:53:58
1	As 188.979†	2061.4	2089.0	493.53	ug/L	493.53	ppb	13:54:18
1	B 249.677†	31314.7	31554.4	489.90	ug/L	489.90	ppb	13:53:58
1	Ba 233.527†	98387.1	97917.5	496.83	ug/L	496.83	ppb	13:53:58
1	Be 313.107†	1590293.1	1590410.5	495.67	ug/L	495.67	ppb	13:53:58
1	Cd 226.502†	66680.2	66656.0	498.28	ug/L	498.28	ppb	13:53:58
1	Co 228.616†	38914.5	38828.7	483.86	ug/L	483.86	ppb	13:54:18
1	Cr 267.716†	58123.4	57888.9	493.74	ug/L	493.74	ppb	13:53:58
1	Cu 324.752†	211262.3	200114.7	494.02	ug/L	494.02	ppb	13:53:58
1	Mn 257.610†	631066.9	627383.2	496.35	ug/L	496.35	ppb	13:53:58
1	Mo 202.031†	12608.8	12520.0	501.47	ug/L	501.47	ppb	13:54:18
1	Ni 231.604†	30720.7	30433.4	487.47	ug/L	487.47	ppb	13:54:18
1	P 214.914†	7349.3	6979.1	2391.7	ug/L	2391.7	ppb	13:54:18
1	Pb 220.353†	6619.8	6619.0	497.53	ug/L	497.53	ppb	13:54:18
1	S 181.975 Axial†	1249.9	1176.4	994.81	ug/L	994.81	ppb	13:54:18
1	Sb 206.836†	2566.6	2509.6	499.57	ug/L	499.57	ppb	13:54:18
1	Se 196.026†	1498.0	1512.8	511.00	ug/L	511.00	ppb	13:54:18
1	Si 251.611†	122865.0	121748.7	2500.3	ug/L	2500.3	ppb	13:53:58
1	Sn 189.927†	4783.6	4756.4	495.16	ug/L	495.16	ppb	13:54:18
1	Ti 334.940†	381207.0	380590.6	498.15	ug/L	498.15	ppb	13:53:58
1	Tl 190.801†	2869.1	2917.5	494.08	ug/L	494.08	ppb	13:54:18
1	U 409.014†	15602.1	19366.2	478.96	ug/L	478.96	ppb	13:53:58
1	V 292.402†	85431.5	86697.6	497.70	ug/L	497.70	ppb	13:53:58
1	Zn 213.857†	90487.4	88955.4	492.21	ug/L	492.21	ppb	13:53:58
1	SiO2†	122908.9	121750.2	5353.7	ug/L	5353.7	ppb	13:55:18
2	Sc Radial	5478.6	5478.6	98.5	%			13:53:04
2	Y RADIAL	4737.8	4737.8	98.38	%			13:53:04
2	Al 396.153Radial†	5218.1	5392.4	4886.9	ug/L	4886.9	ppb	13:53:04
2	Ca 317.933Radial†	1985.5	1999.9	4981.3	ug/L	4981.3	ppb	13:53:24
2	Fe 238.204 Radial†	138.0	139.8	4919.3	ug/L	4919.3	ppb	13:53:24
2	K 766.490 Radial†	13047.9	11780.2	5105.5	ug/L	5105.5	ppb	13:53:04
2	Mg 279.077 IEC†	63.8	64.6	5122.0	ug/L	5122.0	ppb	13:53:24
2	Na 589.592 Radial†	3309.4	3531.9	9549.8	ug/L	9549.8	ppb	13:53:04
2	Sr 421.552†	32384.5	32888.7	506.66	ug/L	506.66	ppb	13:53:04
2	Sc 361.383	1063461.6	1063461.6	100.24	%			13:54:25
2	Y 371.029	846126.2	846126.2	99.169	%			13:54:25

2	Ag 328.068†	126811.5	125865.3	501.27 ug/L	501.27 ppb	13:54:25
2	As 188.979†	2058.4	2090.4	493.85 ug/L	493.85 ppb	13:54:45
2	B 249.677†	31323.3	31628.9	491.05 ug/L	491.05 ppb	13:54:25
2	Ba 233.527†	98085.9	97823.8	496.36 ug/L	496.36 ppb	13:54:25
2	Be 313.107†	1587952.8	1591418.1	495.99 ug/L	495.99 ppb	13:54:25
2	Cd 226.502†	66376.1	66492.8	497.06 ug/L	497.06 ppb	13:54:25
2	Co 228.616†	38816.9	38813.2	483.67 ug/L	483.67 ppb	13:54:45
2	Cr 267.716†	58135.0	58022.7	494.88 ug/L	494.88 ppb	13:54:25
2	Cu 324.752†	210177.7	199476.8	492.45 ug/L	492.45 ppb	13:54:25
2	Mn 257.610†	628370.5	626019.6	495.27 ug/L	495.27 ppb	13:54:25
2	Mo 202.031†	12579.9	12517.6	501.38 ug/L	501.38 ppb	13:54:45
2	Ni 231.604†	30677.7	30455.1	487.82 ug/L	487.82 ppb	13:54:45
2	P 214.914†	7338.8	6984.1	2393.7 ug/L	2393.7 ppb	13:54:45
2	Pb 220.353†	6619.2	6632.2	498.52 ug/L	498.52 ppb	13:54:45
2	S 181.975 Axial†	1248.9	1178.1	996.23 ug/L	996.23 ppb	13:54:45
2	Sb 206.836†	2544.9	2493.3	496.34 ug/L	496.34 ppb	13:54:45
2	Se 196.026†	1498.5	1516.5	512.27 ug/L	512.27 ppb	13:54:45
2	Si 251.611†	122326.0	121469.2	2494.5 ug/L	2494.5 ppb	13:54:25
2	Sn 189.927†	4769.0	4752.0	494.70 ug/L	494.70 ppb	13:54:45
2	Ti 334.940†	380132.8	380320.2	497.81 ug/L	497.81 ppb	13:54:25
2	Tl 190.801†	2870.3	2924.7	495.28 ug/L	495.28 ppb	13:54:45
2	U 409.014†	15658.2	19455.0	481.15 ug/L	481.15 ppb	13:54:25
2	V 292.402†	85307.7	86753.6	498.02 ug/L	498.02 ppb	13:54:25
2	Zn 213.857†	90245.0	88903.8	491.92 ug/L	491.92 ppb	13:54:25
2	SiO2†	123285.6	122384.3	5381.7 ug/L	5381.7 ppb	13:55:23
3	Sc Radial	5573.7	5573.7	100 %		13:53:29
3	Y RADIAL	4812.9	4812.9	99.94 %		13:53:29
3	Al 396.153Radial†	5255.8	5339.6	4838.8 ug/L	4838.8 ppb	13:53:29
3	Ca 317.933Radial†	1973.1	1953.0	4864.6 ug/L	4864.6 ppb	13:53:49
3	Fe 238.204 Radial†	139.2	138.6	4878.6 ug/L	4878.6 ppb	13:53:49
3	K 766.490 Radial†	13120.0	11626.0	5038.5 ug/L	5038.5 ppb	13:53:29
3	Mg 279.077 IEC†	64.1	63.8	5056.8 ug/L	5056.8 ppb	13:53:49
3	Na 589.592 Radial†	3353.7	3518.8	9514.4 ug/L	9514.4 ppb	13:53:29
3	Sr 421.552†	32719.5	32661.7	503.16 ug/L	503.16 ppb	13:53:29
3	Sc 361.383	1058179.3	1058179.3	99.745 %		13:54:53
3	Y 371.029	842497.6	842497.6	98.744 %		13:54:53
3	Ag 328.068†	126330.4	126014.5	501.86 ug/L	501.86 ppb	13:54:53
3	As 188.979†	2057.5	2099.7	496.03 ug/L	496.03 ppb	13:55:13
3	B 249.677†	31210.0	31671.2	491.71 ug/L	491.71 ppb	13:54:53
3	Ba 233.527†	97758.5	97984.0	497.17 ug/L	497.17 ppb	13:54:53
3	Be 313.107†	1583127.1	1594487.7	496.94 ug/L	496.94 ppb	13:54:53
3	Cd 226.502†	66127.5	66574.1	497.67 ug/L	497.67 ppb	13:54:53
3	Co 228.616†	38831.5	39021.1	486.27 ug/L	486.27 ppb	13:55:13
3	Cr 267.716†	57986.8	58163.5	496.08 ug/L	496.08 ppb	13:54:53
3	Cu 324.752†	209484.3	199828.2	493.31 ug/L	493.31 ppb	13:54:53
3	Mn 257.610†	626333.1	627106.1	496.12 ug/L	496.12 ppb	13:54:53
3	Mo 202.031†	12578.2	12578.6	503.82 ug/L	503.82 ppb	13:55:13
3	Ni 231.604†	30631.5	30561.5	489.52 ug/L	489.52 ppb	13:55:13
3	P 214.914†	7330.3	7012.1	2403.5 ug/L	2403.5 ppb	13:55:13
3	Pb 220.353†	6608.7	6654.6	500.21 ug/L	500.21 ppb	13:55:13
3	S 181.975 Axial†	1242.9	1178.2	996.34 ug/L	996.34 ppb	13:55:13
3	Sb 206.836†	2548.0	2509.1	499.55 ug/L	499.55 ppb	13:55:13
3	Se 196.026†	1496.7	1522.2	513.99 ug/L	513.99 ppb	13:55:13
3	Si 251.611†	122075.1	121826.8	2501.8 ug/L	2501.8 ppb	13:54:53
3	Sn 189.927†	4792.6	4799.3	499.62 ug/L	499.62 ppb	13:55:13
3	Ti 334.940†	378543.4	380619.7	498.19 ug/L	498.19 ppb	13:54:53
3	Tl 190.801†	2875.5	2944.2	498.57 ug/L	498.57 ppb	13:55:13
3	U 409.014†	15463.5	19337.7	478.25 ug/L	478.25 ppb	13:54:53
3	V 292.402†	84999.2	86869.1	498.70 ug/L	498.70 ppb	13:54:53
3	Zn 213.857†	89816.3	88923.4	492.02 ug/L	492.02 ppb	13:54:53
3	SiO2†	121842.0	121550.9	5344.7 ug/L	5344.7 ppb	13:55:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1062449.2	100.15	%	0.364				0.36%
Sc Radial	5528.3	99.3	%	0.86				0.86%
Y 371.029	845147.9	99.055	%	0.2721				0.27%
Y RADIAL	4782.6	99.31	%	0.822				0.83%
Ag 328.068†	125875.8	501.31	ug/L	0.529	501.31	ppb	0.529	0.11%

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   QC value within limits for Ag 328.068  Recovery = 100.26%
Al 396.153Radial†       5361.3      4858.5 ug/L         25.19      4858.5 ppb          25.19   0.52%
   QC value within limits for Al 396.153Radial  Recovery = 97.17%
As 188.979†             2093.0      494.47 ug/L         1.360      494.47 ppb          1.360   0.27%
   QC value within limits for As 188.979  Recovery = 98.89%
B 249.677†             31618.2      490.89 ug/L         0.920      490.89 ppb          0.920   0.19%
   QC value within limits for B 249.677  Recovery = 98.18%
Ba 233.527†            97908.4      496.78 ug/L         0.408      496.78 ppb          0.408   0.08%
   QC value within limits for Ba 233.527  Recovery = 99.36%
Be 313.107†          1592105.4      496.20 ug/L         0.661      496.20 ppb          0.661   0.13%
   QC value within limits for Be 313.107  Recovery = 99.24%
Ca 317.933Radial†       1968.5      4903.3 ug/L         67.61      4903.3 ppb          67.61   1.38%
   QC value within limits for Ca 317.933Radial  Recovery = 98.07%
Cd 226.502†            66574.3      497.67 ug/L         0.612      497.67 ppb          0.612   0.12%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            38887.7      484.60 ug/L         1.446      484.60 ppb          1.446   0.30%
   QC value within limits for Co 228.616  Recovery = 96.92%
Cr 267.716†            58025.0      494.90 ug/L         1.170      494.90 ppb          1.170   0.24%
   QC value within limits for Cr 267.716  Recovery = 98.98%
Cu 324.752†           199806.6      493.26 ug/L         0.788      493.26 ppb          0.788   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.65%
Fe 238.204 Radial†       139.2      4897.4 ug/L         20.54      4897.4 ppb          20.54   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.95%
K 766.490 Radial†      11701.7      5071.4 ug/L         33.47      5071.4 ppb          33.47   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 101.43%
Mg 279.077 IEC†           63.7      5052.4 ug/L         71.88      5052.4 ppb          71.88   1.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.05%
Mn 257.610†           626836.3      495.91 ug/L         0.569      495.91 ppb          0.569   0.11%
   QC value within limits for Mn 257.610  Recovery = 99.18%
Mo 202.031†            12538.7      502.23 ug/L         1.381      502.23 ppb          1.381   0.27%
   QC value within limits for Mo 202.031  Recovery = 100.45%
Na 589.592 Radial†      3535.3      9559.0 ug/L         49.77      9559.0 ppb          49.77   0.52%
   QC value within limits for Na 589.592 Radial  Recovery = 95.59%
Ni 231.604†            30483.3      488.27 ug/L         1.098      488.27 ppb          1.098   0.22%
   QC value within limits for Ni 231.604  Recovery = 97.65%
P 214.914†              6991.7      2396.3 ug/L          6.34      2396.3 ppb           6.34   0.26%
   QC value within limits for P 214.914  Recovery = 95.85%
Pb 220.353†             6635.3      498.75 ug/L         1.354      498.75 ppb          1.354   0.27%
   QC value within limits for Pb 220.353  Recovery = 99.75%
S 181.975 Axial†        1177.6      995.80 ug/L         0.853      995.80 ppb          0.853   0.09%
   QC value within limits for S 181.975 Axial  Recovery = 99.58%
Sb 206.836†             2504.0      498.48 ug/L         1.857      498.48 ppb          1.857   0.37%
   QC value within limits for Sb 206.836  Recovery = 99.70%
Se 196.026†             1517.2      512.42 ug/L         1.501      512.42 ppb          1.501   0.29%
   QC value within limits for Se 196.026  Recovery = 102.48%
Si 251.611†           121681.6      2498.9 ug/L          3.87      2498.9 ppb           3.87   0.15%
   QC value within limits for Si 251.611  Recovery = 99.96%
Sn 189.927†             4769.3      496.49 ug/L         2.717      496.49 ppb          2.717   0.55%
   QC value within limits for Sn 189.927  Recovery = 99.30%
Sr 421.552†            32788.7      505.12 ug/L         1.785      505.12 ppb          1.785   0.35%
   QC value within limits for Sr 421.552  Recovery = 101.02%
Ti 334.940†           380510.2      498.05 ug/L         0.212      498.05 ppb          0.212   0.04%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2928.8      495.98 ug/L         2.322      495.98 ppb          2.322   0.47%
   QC value within limits for Tl 190.801  Recovery = 99.20%
U 409.014†             19386.3      479.45 ug/L         1.515      479.45 ppb          1.515   0.32%
   QC value within limits for U 409.014  Recovery = 95.89%
V 292.402†             86773.4      498.14 ug/L         0.513      498.14 ppb          0.513   0.10%
   QC value within limits for V 292.402  Recovery = 99.63%
Zn 213.857†            88927.5      492.05 ug/L         0.150      492.05 ppb          0.150   0.03%
   QC value within limits for Zn 213.857  Recovery = 98.41%
SiO2†                 121895.1      5360.0 ug/L         19.26      5360.0 ppb          19.26   0.36%
   QC value within limits for SiO2  Recovery = 100.23%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:57:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5512.4	5512.4	99.1	%			13:59:32
1	Y RADIAL	4836.2	4836.2	100.4	%			13:59:32
1	Al 396.153Radial†	-55.4	36.2	32.965	ug/L	32.965	ppb	13:59:32
1	Ca 317.933Radial†	28.9	12.2	30.392	ug/L	30.392	ppb	13:59:52
1	Fe 238.204 Radial†	1.4	1.1	39.203	ug/L	39.203	ppb	13:59:52
1	K 766.490 Radial†	1556.0	97.7	42.443	ug/L	42.443	ppb	13:59:32
1	Mg 279.077 IEC†	-0.5	-0.7	-54.448	ug/L	-54.448	ppb	13:59:52
1	Na 589.592 Radial†	-170.4	-1.6	-4.3331	ug/L	-4.3331	ppb	13:59:52
1	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431	ppb	13:59:52
1	Sc 361.383	1045095.6	1045095.6	98.512	%			14:00:48
1	Y 371.029	840297.9	840297.9	98.486	%			14:00:48
1	Ag 328.068†	669.1	40.6	0.1714	ug/L	0.1714	ppb	14:00:53
1	As 188.979†	-47.0	-10.8	-2.5308	ug/L	-2.5308	ppb	14:01:14
1	B 249.677†	41.0	423.1	6.5884	ug/L	6.5884	ppb	14:00:53
1	Ba 233.527†	26.8	2.9	0.0152	ug/L	0.0152	ppb	14:01:14
1	Be 313.107†	-7456.8	-253.3	-0.0788	ug/L	-0.0788	ppb	14:00:53
1	Cd 226.502†	-287.1	-13.8	-0.1077	ug/L	-0.1077	ppb	14:01:14
1	Co 228.616†	-82.7	6.5	0.0810	ug/L	0.0810	ppb	14:01:14
1	Cr 267.716†	-22.8	5.4	0.0463	ug/L	0.0463	ppb	14:01:14
1	Cu 324.752†	10117.6	79.2	0.1976	ug/L	0.1976	ppb	14:00:53
1	Mn 257.610†	832.3	17.8	0.0203	ug/L	0.0203	ppb	14:01:14
1	Mo 202.031†	36.8	5.6	0.2251	ug/L	0.2251	ppb	14:01:14
1	Ni 231.604†	175.4	29.8	0.4780	ug/L	0.4780	ppb	14:01:14
1	P 214.914†	347.7	16.0	5.6120	ug/L	5.6120	ppb	14:01:14
1	Pb 220.353†	-10.0	18.9	1.4202	ug/L	1.4202	ppb	14:01:14
1	S 181.975 Axial†	68.0	1.2	0.9994	ug/L	0.9994	ppb	14:01:14
1	Sb 206.836†	66.3	21.9	4.3017	ug/L	4.3017	ppb	14:01:14
1	Se 196.026†	-16.7	4.6	1.6497	ug/L	1.6497	ppb	14:01:14
1	Si 251.611†	727.7	178.6	3.6667	ug/L	3.6667	ppb	14:01:14
1	Sn 189.927†	7.0	1.6	0.1723	ug/L	0.1723	ppb	14:01:14
1	Ti 334.940†	-1108.8	-16.3	-0.0199	ug/L	-0.0199	ppb	14:00:53
1	Tl 190.801†	-63.4	-2.9	-0.4929	ug/L	-0.4929	ppb	14:01:14
1	U 409.014†	-3726.3	52.2	1.2899	ug/L	1.2899	ppb	14:00:48
1	V 292.402†	-1652.5	-24.6	-0.1406	ug/L	-0.1406	ppb	14:00:53
1	Zn 213.857†	1130.3	25.0	0.1340	ug/L	0.1340	ppb	14:01:14
1	SiO2†	726.7	135.3	5.9362	ug/L	5.9362	ppb	14:02:19
2	Sc Radial	5511.5	5511.5	99.0	%			13:59:57
2	Y RADIAL	4786.2	4786.2	99.39	%			13:59:57
2	Al 396.153Radial†	-72.0	19.5	17.796	ug/L	17.796	ppb	13:59:57
2	Ca 317.933Radial†	29.7	13.1	32.554	ug/L	32.554	ppb	14:00:17
2	Fe 238.204 Radial†	-0.3	-0.7	-23.581	ug/L	-23.581	ppb	14:00:17
2	K 766.490 Radial†	1595.9	138.3	59.989	ug/L	59.989	ppb	13:59:57
2	Mg 279.077 IEC†	-0.0	-0.2	-16.582	ug/L	-16.582	ppb	14:00:17
2	Na 589.592 Radial†	-181.5	-12.8	-34.604	ug/L	-34.604	ppb	14:00:17
2	Sr 421.552†	12.3	7.0	0.1070	ug/L	0.1070	ppb	14:00:17
2	Sc 361.383	1050518.5	1050518.5	99.023	%			14:01:19
2	Y 371.029	845673.2	845673.2	99.116	%			14:01:19
2	Ag 328.068†	645.1	12.9	0.0438	ug/L	0.0438	ppb	14:01:24
2	As 188.979†	-49.5	-13.1	-3.0770	ug/L	-3.0770	ppb	14:01:44
2	B 249.677†	118.8	501.5	7.8188	ug/L	7.8188	ppb	14:01:24
2	Ba 233.527†	40.4	16.5	0.0832	ug/L	0.0832	ppb	14:01:44
2	Be 313.107†	-7364.0	-120.4	-0.0373	ug/L	-0.0373	ppb	14:01:24
2	Cd 226.502†	-300.7	-26.0	-0.1917	ug/L	-0.1917	ppb	14:01:44
2	Co 228.616†	-75.1	14.6	0.1807	ug/L	0.1807	ppb	14:01:44
2	Cr 267.716†	-8.5	20.0	0.1703	ug/L	0.1703	ppb	14:01:44
2	Cu 324.752†	10243.6	153.4	0.3772	ug/L	0.3772	ppb	14:01:24
2	Mn 257.610†	843.7	25.0	0.0170	ug/L	0.0170	ppb	14:01:44
2	Mo 202.031†	21.8	-9.8	-0.3926	ug/L	-0.3926	ppb	14:01:44
2	Ni 231.604†	171.6	25.1	0.4014	ug/L	0.4014	ppb	14:01:44

2	P 214.914†	348.3	14.8	5.2050	ug/L	5.2050	ppb	14:01:44
2	Pb 220.353†	-12.7	16.3	1.2244	ug/L	1.2244	ppb	14:01:44
2	S 181.975 Axial†	60.3	-6.9	-5.8538	ug/L	-5.8538	ppb	14:01:44
2	Sb 206.836†	37.3	-7.8	-1.5329	ug/L	-1.5329	ppb	14:01:44
2	Se 196.026†	-18.7	2.7	0.8056	ug/L	0.8056	ppb	14:01:44
2	Si 251.611†	723.3	170.4	3.5003	ug/L	3.5003	ppb	14:01:44
2	Sn 189.927†	11.3	6.0	0.6230	ug/L	0.6230	ppb	14:01:44
2	Ti 334.940†	-1056.9	41.9	0.0571	ug/L	0.0571	ppb	14:01:24
2	Tl 190.801†	-56.2	4.7	0.7874	ug/L	0.7874	ppb	14:01:44
2	U 409.014†	-3810.6	-13.5	-0.3320	ug/L	-0.3320	ppb	14:01:19
2	V 292.402†	-1611.2	25.7	0.1429	ug/L	0.1429	ppb	14:01:24
2	Zn 213.857†	1136.7	25.5	0.1424	ug/L	0.1424	ppb	14:01:44
2	SiO2†	739.3	144.2	6.3394	ug/L	6.3394	ppb	14:02:24
3	Sc Radial	5518.7	5518.7	99.2	%			14:00:22
3	Y RADIAL	4792.7	4792.7	99.52	%			14:00:22
3	Al 396.153Radial†	-86.9	4.6	4.1447	ug/L	4.1447	ppb	14:00:22
3	Ca 317.933Radial†	25.9	9.2	22.974	ug/L	22.974	ppb	14:00:42
3	Fe 238.204 Radial†	-0.1	-0.4	-15.497	ug/L	-15.497	ppb	14:00:42
3	K 766.490 Radial†	1555.4	95.3	41.343	ug/L	41.343	ppb	14:00:22
3	Mg 279.077 IEC†	-0.0	-0.2	-17.227	ug/L	-17.227	ppb	14:00:42
3	Na 589.592 Radial†	-174.6	-5.6	-15.194	ug/L	-15.194	ppb	14:00:42
3	Sr 421.552†	23.6	18.4	0.2827	ug/L	0.2827	ppb	14:00:42
3	Sc 361.383	1057245.8	1057245.8	99.657	%			14:01:49
3	Y 371.029	850037.2	850037.2	99.628	%			14:01:49
3	Ag 328.068†	694.9	58.7	0.2256	ug/L	0.2256	ppb	14:01:54
3	As 188.979†	-47.5	-10.8	-2.5338	ug/L	-2.5338	ppb	14:02:14
3	B 249.677†	68.0	449.8	7.0124	ug/L	7.0124	ppb	14:01:54
3	Ba 233.527†	35.7	11.5	0.0574	ug/L	0.0574	ppb	14:02:14
3	Be 313.107†	-7483.5	-193.0	-0.0600	ug/L	-0.0600	ppb	14:01:54
3	Cd 226.502†	-289.4	-12.7	-0.0931	ug/L	-0.0931	ppb	14:02:14
3	Co 228.616†	-98.9	-8.8	-0.1094	ug/L	-0.1094	ppb	14:02:14
3	Cr 267.716†	5.9	34.5	0.2927	ug/L	0.2927	ppb	14:02:14
3	Cu 324.752†	10251.7	95.7	0.2352	ug/L	0.2352	ppb	14:01:54
3	Mn 257.610†	869.3	45.2	0.0341	ug/L	0.0341	ppb	14:02:14
3	Mo 202.031†	34.7	3.0	0.1197	ug/L	0.1197	ppb	14:02:14
3	Ni 231.604†	157.2	9.4	0.1515	ug/L	0.1515	ppb	14:02:14
3	P 214.914†	335.6	-0.2	-0.0906	ug/L	-0.0906	ppb	14:02:14
3	Pb 220.353†	2.8	31.9	2.3909	ug/L	2.3909	ppb	14:02:14
3	S 181.975 Axial†	65.8	-1.8	-1.5179	ug/L	-1.5179	ppb	14:02:14
3	Sb 206.836†	43.4	-1.9	-0.3829	ug/L	-0.3829	ppb	14:02:14
3	Se 196.026†	-16.8	4.8	1.5002	ug/L	1.5002	ppb	14:02:14
3	Si 251.611†	726.0	168.4	3.4599	ug/L	3.4599	ppb	14:02:14
3	Sn 189.927†	2.6	-2.9	-0.3010	ug/L	-0.3010	ppb	14:02:14
3	Ti 334.940†	-1099.9	5.6	0.0087	ug/L	0.0087	ppb	14:01:54
3	Tl 190.801†	-56.6	4.6	0.7834	ug/L	0.7834	ppb	14:02:14
3	U 409.014†	-3812.4	9.3	0.2316	ug/L	0.2316	ppb	14:01:49
3	V 292.402†	-1702.0	-55.1	-0.3086	ug/L	-0.3086	ppb	14:01:54
3	Zn 213.857†	1134.7	16.2	0.0914	ug/L	0.0914	ppb	14:02:14
3	SiO2†	754.5	154.7	6.8042	ug/L	6.8042	ppb	14:02:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1050953.3	99.064	%	0.5737				0.58%
Sc Radial	5514.2	99.1	%	0.07				0.07%
Y 371.029	845336.1	99.077	%	0.5718				0.58%
Y RADIAL	4805.0	99.78	%	0.565				0.57%
Ag 328.068†	37.4	0.1469	ug/L	0.09332	0.1469	ppb	0.09332	63.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.1	18.302	ug/L	14.4166	18.302	ppb	14.4166	78.77%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.5	-2.7138	ug/L	0.31447	-2.7138	ppb	0.31447	11.59%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	458.1	7.1399	ug/L	0.62502	7.1399	ppb	0.62502	8.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.3	0.0519	ug/L	0.03434	0.0519	ppb	0.03434	66.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-188.9	-0.0587	ug/L	0.02078	-0.0587	ppb	0.02078	35.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.5	28.640	ug/L	5.0242	28.640	ppb	5.0242	17.54%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -17.5     -0.1308 ug/L       0.05322     -0.1308 ppb        0.05322  40.67%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.1      0.0508 ug/L       0.14740      0.0508 ppb        0.14740 290.21%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               20.0      0.1698 ug/L       0.12323      0.1698 ppb        0.12323  72.58%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              109.4      0.2700 ug/L       0.09473      0.2700 ppb        0.09473  35.09%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.0      0.0417 ug/L      34.15450      0.0417 ppb       34.15450 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.4      47.925 ug/L       10.4622      47.925 ppb        10.4622  21.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4     -29.419 ug/L       21.6782     -29.419 ppb        21.6782  73.69%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               29.4      0.0238 ug/L       0.00904      0.0238 ppb        0.00904  38.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.4     -0.0160 ug/L       0.33043     -0.0160 ppb        0.33043 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -6.7     -18.043 ug/L       15.3353     -18.043 ppb        15.3353  84.99%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.4      0.3436 ug/L       0.17075      0.3436 ppb        0.17075  49.69%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                10.2      3.5755 ug/L       3.18145      3.5755 ppb        3.18145  88.98%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               22.3      1.6785 ug/L       0.62466      1.6785 ppb        0.62466  37.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -2.5     -2.1241 ug/L       3.46659     -2.1241 ppb        3.46659 163.20%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.1      0.7953 ug/L       3.09058      0.7953 ppb        3.09058 388.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.1      1.3185 ug/L       0.45042      1.3185 ppb        0.45042  34.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              172.4      3.5423 ug/L       0.10965      3.5423 ppb        0.10965   3.10%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.6      0.1647 ug/L       0.46206      0.1647 ppb        0.46206 280.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               15.9      0.2443 ug/L       0.12268      0.2443 ppb        0.12268  50.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               10.4      0.0153 ug/L       0.03894      0.0153 ppb        0.03894 254.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                2.1      0.3593 ug/L       0.73803      0.3593 ppb        0.73803 205.41%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                16.0      0.3965 ug/L       0.82342      0.3965 ppb        0.82342 207.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -18.0     -0.1021 ug/L       0.22820     -0.1021 ppb        0.22820 223.47%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               22.2      0.1226 ug/L       0.02735      0.1226 ppb        0.02735  22.32%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    144.8      6.3599 ug/L       0.43437      6.3599 ppb        0.43437   6.83%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 14:46:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5663.2	5663.2	102	%			14:48:38
1	Y RADIAL	4921.9	4921.9	102.2	%			14:48:38
1	Al 396.153Radial†	5410.9	5409.1	4902.2	ug/L	4902.2	ppb	14:48:38
1	Ca 317.933Radial†	1995.4	1943.8	4841.7	ug/L	4841.7	ppb	14:48:58
1	Fe 238.204 Radial†	141.6	138.8	4883.9	ug/L	4883.9	ppb	14:48:58
1	K 766.490 Radial†	13474.7	11767.5	5099.6	ug/L	5099.6	ppb	14:48:38
1	Mg 279.077 IEC†	63.7	62.4	4947.6	ug/L	4947.6	ppb	14:48:58
1	Na 589.592 Radial†	3686.9	3793.3	10257	ug/L	10257	ppb	14:48:38
1	Sr 421.552†	35305.4	34686.6	534.36	ug/L	534.36	ppb	14:48:38
1	Sc 361.383	1067499.7	1067499.7	100.62	%			14:49:57
1	Y 371.029	849118.5	849118.5	99.520	%			14:49:57
1	Ag 328.068†	127285.3	125857.7	501.23	ug/L	501.23	ppb	14:49:57
1	As 188.979†	2071.6	2095.7	495.11	ug/L	495.11	ppb	14:50:17
1	B 249.677†	31156.7	31345.1	486.64	ug/L	486.64	ppb	14:49:57
1	Ba 233.527†	98393.7	97759.6	496.03	ug/L	496.03	ppb	14:49:57
1	Be 313.107†	1596893.7	1594311.3	496.89	ug/L	496.89	ppb	14:49:57
1	Cd 226.502†	66558.7	66423.8	496.55	ug/L	496.55	ppb	14:49:57
1	Co 228.616†	38907.9	38757.1	482.97	ug/L	482.97	ppb	14:50:17
1	Cr 267.716†	58242.4	57910.0	493.92	ug/L	493.92	ppb	14:49:57
1	Cu 324.752†	211606.8	200103.9	493.99	ug/L	493.99	ppb	14:49:57
1	Mn 257.610†	631676.1	626933.6	495.99	ug/L	495.99	ppb	14:49:57
1	Mo 202.031†	12587.0	12477.2	499.76	ug/L	499.76	ppb	14:50:17
1	Ni 231.604†	30647.6	30309.4	485.48	ug/L	485.48	ppb	14:50:17
1	P 214.914†	7375.2	6992.6	2396.5	ug/L	2396.5	ppb	14:50:17
1	Pb 220.353†	6646.8	6634.7	498.71	ug/L	498.71	ppb	14:50:17
1	S 181.975 Axial†	1245.2	1169.7	989.10	ug/L	989.10	ppb	14:50:17
1	Sb 206.836†	2573.9	2512.6	500.11	ug/L	500.11	ppb	14:50:17
1	Se 196.026†	1503.7	1516.0	511.99	ug/L	511.99	ppb	14:50:17
1	Si 251.611†	123652.9	122326.3	2512.2	ug/L	2512.2	ppb	14:49:57
1	Sn 189.927†	4790.4	4755.2	495.03	ug/L	495.03	ppb	14:50:17
1	Ti 334.940†	382199.7	380939.8	498.61	ug/L	498.61	ppb	14:49:57
1	Tl 190.801†	2862.4	2906.0	492.14	ug/L	492.14	ppb	14:50:17
1	U 409.014†	15590.1	19328.2	478.01	ug/L	478.01	ppb	14:49:57
1	V 292.402†	85513.5	86636.2	497.33	ug/L	497.33	ppb	14:49:57
1	Zn 213.857†	90612.3	88928.3	492.08	ug/L	492.08	ppb	14:49:57
1	SiO2†	124200.5	122828.2	5401.3	ug/L	5401.3	ppb	14:51:17
2	Sc Radial	5446.9	5446.9	97.9	%			14:49:03
2	Y RADIAL	4712.8	4712.8	97.86	%			14:49:03
2	Al 396.153Radial†	5213.9	5419.0	4910.9	ug/L	4910.9	ppb	14:49:03
2	Ca 317.933Radial†	1989.6	2015.7	5020.8	ug/L	5020.8	ppb	14:49:23
2	Fe 238.204 Radial†	140.2	142.9	5030.3	ug/L	5030.3	ppb	14:49:23
2	K 766.490 Radial†	13037.0	11846.3	5133.9	ug/L	5133.9	ppb	14:49:03
2	Mg 279.077 IEC†	62.1	63.2	5014.8	ug/L	5014.8	ppb	14:49:23
2	Na 589.592 Radial†	3542.3	3789.5	10246	ug/L	10246	ppb	14:49:03
2	Sr 421.552†	33787.9	34514.2	531.70	ug/L	531.70	ppb	14:49:03
2	Sc 361.383	1055183.8	1055183.8	99.463	%			14:50:24
2	Y 371.029	838651.5	838651.5	98.293	%			14:50:24
2	Ag 328.068†	126214.7	126257.7	502.87	ug/L	502.87	ppb	14:50:24
2	As 188.979†	2075.2	2123.3	501.61	ug/L	501.61	ppb	14:50:44
2	B 249.677†	30917.9	31466.4	488.49	ug/L	488.49	ppb	14:50:24
2	Ba 233.527†	97565.5	98068.1	497.60	ug/L	497.60	ppb	14:50:24
2	Be 313.107†	1577953.1	1593791.5	496.73	ug/L	496.73	ppb	14:50:24
2	Cd 226.502†	66051.4	66685.8	498.49	ug/L	498.49	ppb	14:50:24
2	Co 228.616†	39043.3	39344.5	490.30	ug/L	490.30	ppb	14:50:44
2	Cr 267.716†	57589.2	57928.8	494.08	ug/L	494.08	ppb	14:50:24
2	Cu 324.752†	209513.9	200454.2	494.86	ug/L	494.86	ppb	14:50:24
2	Mn 257.610†	625453.1	628004.0	496.86	ug/L	496.86	ppb	14:50:24
2	Mo 202.031†	12625.4	12661.8	507.16	ug/L	507.16	ppb	14:50:44
2	Ni 231.604†	30744.2	30762.0	492.73	ug/L	492.73	ppb	14:50:44

2	P 214.914†	7400.3	7103.3	2435.4 ug/L	2435.4 ppb	14:50:44
2	Pb 220.353†	6622.3	6687.2	502.65 ug/L	502.65 ppb	14:50:44
2	S 181.975 Axial†	1258.3	1197.3	1012.5 ug/L	1012.5 ppb	14:50:44
2	Sb 206.836†	2580.0	2548.5	507.42 ug/L	507.42 ppb	14:50:44
2	Se 196.026†	1502.6	1532.3	517.83 ug/L	517.83 ppb	14:50:44
2	Si 251.611†	122528.7	122630.3	2518.3 ug/L	2518.3 ppb	14:50:24
2	Sn 189.927†	4790.5	4810.9	500.83 ug/L	500.83 ppb	14:50:44
2	Ti 334.940†	378341.9	381494.5	499.35 ug/L	499.35 ppb	14:50:24
2	Tl 190.801†	2870.9	2947.8	499.17 ug/L	499.17 ppb	14:50:44
2	U 409.014†	15257.4	19174.6	474.18 ug/L	474.18 ppb	14:50:24
2	V 292.402†	84668.4	86778.5	498.20 ug/L	498.20 ppb	14:50:24
2	Zn 213.857†	89929.9	89293.2	494.05 ug/L	494.05 ppb	14:50:24
2	SiO2†	124500.2	124570.2	5478.0 ug/L	5478.0 ppb	14:51:22
3	Sc Radial	5449.0	5449.0	97.9 %		14:49:28
3	Y RADIAL	4751.1	4751.1	98.66 %		14:49:28
3	Al 396.153Radial†	5174.8	5377.0	4872.7 ug/L	4872.7 ppb	14:49:28
3	Ca 317.933Radial†	2014.0	2039.9	5081.0 ug/L	5081.0 ppb	14:49:48
3	Fe 238.204 Radial†	143.3	146.0	5137.0 ug/L	5137.0 ppb	14:49:48
3	K 766.490 Radial†	13008.8	11812.4	5119.3 ug/L	5119.3 ppb	14:49:28
3	Mg 279.077 IEC†	65.2	66.4	5266.1 ug/L	5266.1 ppb	14:49:48
3	Na 589.592 Radial†	3500.5	3745.4	10127 ug/L	10127 ppb	14:49:28
3	Sr 421.552†	33740.1	34452.0	530.74 ug/L	530.74 ppb	14:49:28
3	Sc 361.383	1058649.0	1058649.0	99.789 %		14:50:52
3	Y 371.029	841526.8	841526.8	98.630 %		14:50:52
3	Ag 328.068†	126556.5	126184.9	502.61 ug/L	502.61 ppb	14:50:52
3	As 188.979†	2067.1	2108.3	498.11 ug/L	498.11 ppb	14:51:12
3	B 249.677†	31071.1	31518.1	489.29 ug/L	489.29 ppb	14:50:52
3	Ba 233.527†	97563.9	97745.5	495.96 ug/L	495.96 ppb	14:50:52
3	Be 313.107†	1581052.4	1591704.4	496.08 ug/L	496.08 ppb	14:50:52
3	Cd 226.502†	66155.8	66573.0	497.64 ug/L	497.64 ppb	14:50:52
3	Co 228.616†	38962.9	39135.5	487.69 ug/L	487.69 ppb	14:51:12
3	Cr 267.716†	57794.8	57945.3	494.22 ug/L	494.22 ppb	14:50:52
3	Cu 324.752†	210072.8	200324.8	494.55 ug/L	494.55 ppb	14:50:52
3	Mn 257.610†	626128.3	626622.3	495.77 ug/L	495.77 ppb	14:50:52
3	Mo 202.031†	12621.3	12616.2	505.34 ug/L	505.34 ppb	14:51:12
3	Ni 231.604†	30683.7	30600.2	490.14 ug/L	490.14 ppb	14:51:12
3	P 214.914†	7387.7	7066.4	2422.3 ug/L	2422.3 ppb	14:51:12
3	Pb 220.353†	6644.7	6687.8	502.68 ug/L	502.68 ppb	14:51:12
3	S 181.975 Axial†	1254.7	1189.5	1005.9 ug/L	1005.9 ppb	14:51:12
3	Sb 206.836†	2576.1	2536.1	504.89 ug/L	504.89 ppb	14:51:12
3	Se 196.026†	1509.7	1534.5	518.90 ug/L	518.90 ppb	14:51:12
3	Si 251.611†	122635.6	122334.2	2512.3 ug/L	2512.3 ppb	14:50:52
3	Sn 189.927†	4780.2	4784.8	498.13 ug/L	498.13 ppb	14:51:12
3	Ti 334.940†	379019.7	380928.6	498.61 ug/L	498.61 ppb	14:50:52
3	Tl 190.801†	2889.3	2956.8	500.68 ug/L	500.68 ppb	14:51:12
3	U 409.014†	15553.0	19420.5	480.27 ug/L	480.27 ppb	14:50:52
3	V 292.402†	84924.5	86756.4	498.05 ug/L	498.05 ppb	14:50:52
3	Zn 213.857†	89838.3	88905.4	491.88 ug/L	491.88 ppb	14:50:52
3	SiO2†	123331.7	122989.5	5408.2 ug/L	5408.2 ppb	14:51:27

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060444.2	99.959	%	0.5987				0.60%
Sc Radial	5519.7	99.2	%	2.23				2.25%
Y 371.029	843098.9	98.814	%	0.6338				0.64%
Y RADIAL	4795.3	99.58	%	2.312				2.32%
Ag 328.068†	126100.1	502.23	ug/L	0.878	502.23	ppb	0.878	0.17%
QC value within limits for Ag 328.068 Recovery = 100.45%								
Al 396.153Radial†	5401.7	4895.3	ug/L	19.99	4895.3	ppb	19.99	0.41%
QC value within limits for Al 396.153Radial Recovery = 97.91%								
As 188.979†	2109.1	498.28	ug/L	3.254	498.28	ppb	3.254	0.65%
QC value within limits for As 188.979 Recovery = 99.66%								
B 249.677†	31443.2	488.14	ug/L	1.360	488.14	ppb	1.360	0.28%
QC value within limits for B 249.677 Recovery = 97.63%								
Ba 233.527†	97857.7	496.53	ug/L	0.924	496.53	ppb	0.924	0.19%
QC value within limits for Ba 233.527 Recovery = 99.31%								
Be 313.107†	1593269.0	496.56	ug/L	0.429	496.56	ppb	0.429	0.09%
QC value within limits for Be 313.107 Recovery = 99.31%								
Ca 317.933Radial†	1999.8	4981.2	ug/L	124.51	4981.2	ppb	124.51	2.50%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.62%
Cd 226.502†            66560.8      497.56 ug/L          0.976      497.56 ppb          0.976   0.20%
   QC value within limits for Cd 226.502  Recovery = 99.51%
Co 228.616†            39079.1      486.99 ug/L          3.717      486.99 ppb          3.717   0.76%
   QC value within limits for Co 228.616  Recovery = 97.40%
Cr 267.716†            57928.0      494.08 ug/L          0.153      494.08 ppb          0.153   0.03%
   QC value within limits for Cr 267.716  Recovery = 98.82%
Cu 324.752†           200294.3      494.47 ug/L          0.442      494.47 ppb          0.442   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.89%
Fe 238.204 Radial†       142.6      5017.1 ug/L        127.10      5017.1 ppb        127.10   2.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.34%
K 766.490 Radial†      11808.7      5117.6 ug/L         17.20      5117.6 ppb         17.20   0.34%
   QC value within limits for K 766.490 Radial  Recovery = 102.35%
Mg 279.077 IEC†           64.0      5076.2 ug/L        167.87      5076.2 ppb        167.87   3.31%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.52%
Mn 257.610†           627186.6      496.21 ug/L          0.573      496.21 ppb          0.573   0.12%
   QC value within limits for Mn 257.610  Recovery = 99.24%
Mo 202.031†            12585.1      504.09 ug/L          3.856      504.09 ppb          3.856   0.76%
   QC value within limits for Mo 202.031  Recovery = 100.82%
Na 589.592 Radial†      3776.0       10210 ug/L           71.9       10210 ppb           71.9   0.70%
   QC value within limits for Na 589.592 Radial  Recovery = 102.10%
Ni 231.604†            30557.2      489.45 ug/L          3.673      489.45 ppb          3.673   0.75%
   QC value within limits for Ni 231.604  Recovery = 97.89%
P 214.914†              7054.1      2418.1 ug/L         19.82      2418.1 ppb         19.82   0.82%
   QC value within limits for P 214.914  Recovery = 96.72%
Pb 220.353†             6669.9      501.35 ug/L          2.283      501.35 ppb          2.283   0.46%
   QC value within limits for Pb 220.353  Recovery = 100.27%
S 181.975 Axial†        1185.5      1002.5 ug/L         12.05      1002.5 ppb         12.05   1.20%
   QC value within limits for S 181.975 Axial  Recovery = 100.25%
Sb 206.836†             2532.4      504.14 ug/L          3.715      504.14 ppb          3.715   0.74%
   QC value within limits for Sb 206.836  Recovery = 100.83%
Se 196.026†             1527.6      516.24 ug/L          3.717      516.24 ppb          3.717   0.72%
   QC value within limits for Se 196.026  Recovery = 103.25%
Si 251.611†           122430.3      2514.3 ug/L          3.52      2514.3 ppb          3.52   0.14%
   QC value within limits for Si 251.611  Recovery = 100.57%
Sn 189.927†             4783.6      498.00 ug/L          2.905      498.00 ppb          2.905   0.58%
   QC value within limits for Sn 189.927  Recovery = 99.60%
Sr 421.552†            34550.9      532.27 ug/L          1.873      532.27 ppb          1.873   0.35%
   QC value within limits for Sr 421.552  Recovery = 106.45%
Ti 334.940†           381121.0      498.86 ug/L          0.427      498.86 ppb          0.427   0.09%
   QC value within limits for Ti 334.940  Recovery = 99.77%
Tl 190.801†             2936.9      497.33 ug/L          4.557      497.33 ppb          4.557   0.92%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19307.8      477.49 ug/L          3.078      477.49 ppb          3.078   0.64%
   QC value within limits for U 409.014  Recovery = 95.50%
V 292.402†             86723.7      497.86 ug/L          0.468      497.86 ppb          0.468   0.09%
   QC value within limits for V 292.402  Recovery = 99.57%
Zn 213.857†            89042.3      492.67 ug/L          1.200      492.67 ppb          1.200   0.24%
   QC value within limits for Zn 213.857  Recovery = 98.53%
SiO2†                 123462.7      5429.2 ug/L         42.40      5429.2 ppb         42.40   0.78%
   QC value within limits for SiO2  Recovery = 101.53%
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 14:53:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5472.3	5472.3	98.3	%			14:55:30
1	Y RADIAL	4760.3	4760.3	98.85	%			14:55:30
1	Al 396.153Radial†	-81.1	9.7	8.8083	ug/L	8.8083	ppb	14:55:30
1	Ca 317.933Radial†	30.8	14.4	35.761	ug/L	35.761	ppb	14:55:50
1	Fe 238.204 Radial†	0.5	0.2	5.6899	ug/L	5.6899	ppb	14:55:50
1	K 766.490 Radial†	1569.9	123.4	53.550	ug/L	53.550	ppb	14:55:30
1	Mg 279.077 IEC†	-0.7	-0.9	-68.768	ug/L	-68.768	ppb	14:55:50
1	Na 589.592 Radial†	-177.5	-10.1	-27.266	ug/L	-27.266	ppb	14:55:50
1	Sr 421.552†	35.3	30.4	0.4686	ug/L	0.4686	ppb	14:55:50
1	Sc 361.383	1053868.2	1053868.2	99.339	%			14:56:47
1	Y 371.029	847547.6	847547.6	99.336	%			14:56:47
1	Ag 328.068†	611.0	-23.5	-0.0912	ug/L	-0.0912	ppb	14:56:52
1	As 188.979†	-59.7	-23.1	-5.4331	ug/L	-5.4331	ppb	14:57:12
1	B 249.677†	-115.7	265.0	4.1295	ug/L	4.1295	ppb	14:56:52
1	Ba 233.527†	39.3	15.3	0.0772	ug/L	0.0772	ppb	14:57:12
1	Be 313.107†	-7467.3	-200.8	-0.0623	ug/L	-0.0623	ppb	14:56:52
1	Cd 226.502†	-282.8	-7.0	-0.0528	ug/L	-0.0528	ppb	14:57:12
1	Co 228.616†	-98.5	-8.7	-0.1082	ug/L	-0.1082	ppb	14:57:12
1	Cr 267.716†	-17.9	10.6	0.0901	ug/L	0.0901	ppb	14:57:12
1	Cu 324.752†	10191.0	67.6	0.1671	ug/L	0.1671	ppb	14:56:52
1	Mn 257.610†	957.5	136.8	0.1102	ug/L	0.1102	ppb	14:57:12
1	Mo 202.031†	35.6	4.1	0.1634	ug/L	0.1634	ppb	14:57:12
1	Ni 231.604†	164.1	16.9	0.2714	ug/L	0.2714	ppb	14:57:12
1	P 214.914†	332.8	-1.9	-0.6902	ug/L	-0.6902	ppb	14:57:12
1	Pb 220.353†	-0.7	28.4	2.1276	ug/L	2.1276	ppb	14:57:12
1	S 181.975 Axial†	64.3	-3.1	-2.6380	ug/L	-2.6380	ppb	14:57:12
1	Sb 206.836†	50.1	5.0	0.9831	ug/L	0.9831	ppb	14:57:12
1	Se 196.026†	-20.4	1.0	0.3567	ug/L	0.3567	ppb	14:57:12
1	Si 251.611†	771.9	216.9	4.4555	ug/L	4.4555	ppb	14:57:12
1	Sn 189.927†	3.4	-2.0	-0.2090	ug/L	-0.2090	ppb	14:57:12
1	Ti 334.940†	-1048.8	53.5	0.0729	ug/L	0.0729	ppb	14:56:52
1	Tl 190.801†	-48.9	12.2	2.0617	ug/L	2.0617	ppb	14:57:12
1	U 409.014†	-3860.6	-51.6	-1.2803	ug/L	-1.2803	ppb	14:56:47
1	V 292.402†	-1672.4	-30.8	-0.1770	ug/L	-0.1770	ppb	14:56:52
1	Zn 213.857†	1170.2	55.5	0.3100	ug/L	0.3100	ppb	14:57:12
1	SiO2†	796.6	199.5	8.7725	ug/L	8.7725	ppb	14:58:18
2	Sc Radial	5640.5	5640.5	101	%			14:55:55
2	Y RADIAL	4909.7	4909.7	102.0	%			14:55:55
2	Al 396.153Radial†	-62.3	30.8	28.013	ug/L	28.013	ppb	14:55:55
2	Ca 317.933Radial†	30.3	12.9	32.245	ug/L	32.245	ppb	14:56:15
2	Fe 238.204 Radial†	-0.5	-0.8	-29.760	ug/L	-29.760	ppb	14:56:15
2	K 766.490 Radial†	1516.6	23.1	10.017	ug/L	10.017	ppb	14:55:55
2	Mg 279.077 IEC†	0.3	0.1	8.2285	ug/L	8.2285	ppb	14:56:15
2	Na 589.592 Radial†	-177.1	-4.3	-11.518	ug/L	-11.518	ppb	14:56:15
2	Sr 421.552†	6.1	0.6	0.0086	ug/L	0.0086	ppb	14:56:15
2	Sc 361.383	1063342.1	1063342.1	100.23	%			14:57:17
2	Y 371.029	854778.4	854778.4	100.18	%			14:57:17
2	Ag 328.068†	643.4	3.4	0.0032	ug/L	0.0032	ppb	14:57:22
2	As 188.979†	-51.2	-14.2	-3.3303	ug/L	-3.3303	ppb	14:57:42
2	B 249.677†	-29.0	352.6	5.4981	ug/L	5.4981	ppb	14:57:22
2	Ba 233.527†	26.1	1.8	0.0085	ug/L	0.0085	ppb	14:57:42
2	Be 313.107†	-7456.4	-123.0	-0.0382	ug/L	-0.0382	ppb	14:57:22
2	Cd 226.502†	-288.4	-10.1	-0.0717	ug/L	-0.0717	ppb	14:57:42
2	Co 228.616†	-70.3	20.3	0.2517	ug/L	0.2517	ppb	14:57:42
2	Cr 267.716†	-12.6	16.0	0.1359	ug/L	0.1359	ppb	14:57:42
2	Cu 324.752†	10255.5	40.5	0.0983	ug/L	0.0983	ppb	14:57:22
2	Mn 257.610†	981.3	152.0	0.1161	ug/L	0.1161	ppb	14:57:42
2	Mo 202.031†	22.2	-9.6	-0.3874	ug/L	-0.3874	ppb	14:57:42
2	Ni 231.604†	156.9	8.2	0.1321	ug/L	0.1321	ppb	14:57:42

2	P 214.914†	349.2	11.4	4.0629 ug/L	4.0629 ppb	14:57:42
2	Pb 220.353†	-26.9	2.3	0.1761 ug/L	0.1761 ppb	14:57:42
2	S 181.975 Axial†	69.4	1.4	1.1802 ug/L	1.1802 ppb	14:57:42
2	Sb 206.836†	51.9	6.4	1.2457 ug/L	1.2457 ppb	14:57:42
2	Se 196.026†	-27.8	-6.2	-2.1074 ug/L	-2.1074 ppb	14:57:42
2	Si 251.611†	798.7	236.8	4.8879 ug/L	4.8879 ppb	14:57:42
2	Sn 189.927†	9.7	4.2	0.4366 ug/L	0.4366 ppb	14:57:42
2	Ti 334.940†	-1103.0	8.8	0.0133 ug/L	0.0133 ppb	14:57:22
2	Tl 190.801†	-47.5	14.0	2.3645 ug/L	2.3645 ppb	14:57:42
2	U 409.014†	-3819.8	23.8	0.5932 ug/L	0.5932 ppb	14:57:17
2	V 292.402†	-1637.6	19.0	0.1084 ug/L	0.1084 ppb	14:57:22
2	Zn 213.857†	1144.2	19.2	0.1089 ug/L	0.1089 ppb	14:57:42
2	SiO2†	764.0	159.9	7.0706 ug/L	7.0706 ppb	14:58:23
3	Sc Radial	5502.0	5502.0	98.9 %		14:56:20
3	Y RADIAL	4784.6	4784.6	99.35 %		14:56:20
3	Al 396.153Radial†	-79.0	12.3	11.188 ug/L	11.188 ppb	14:56:20
3	Ca 317.933Radial†	25.1	8.5	21.069 ug/L	21.069 ppb	14:56:40
3	Fe 238.204 Radial†	1.2	0.9	30.106 ug/L	30.106 ppb	14:56:40
3	K 766.490 Radial†	1574.7	119.6	51.922 ug/L	51.922 ppb	14:56:20
3	Mg 279.077 IEC†	2.6	2.5	197.62 ug/L	197.62 ppb	14:56:40
3	Na 589.592 Radial†	-180.3	-11.9	-32.235 ug/L	-32.235 ppb	14:56:40
3	Sr 421.552†	15.5	10.2	0.1562 ug/L	0.1562 ppb	14:56:40
3	Sc 361.383	1051449.5	1051449.5	99.111 %		14:57:47
3	Y 371.029	846638.2	846638.2	99.229 %		14:57:47
3	Ag 328.068†	588.3	-45.1	-0.1673 ug/L	-0.1673 ppb	14:57:52
3	As 188.979†	-54.8	-18.3	-4.3026 ug/L	-4.3026 ppb	14:58:13
3	B 249.677†	-85.6	295.2	4.5964 ug/L	4.5964 ppb	14:57:52
3	Ba 233.527†	31.6	7.6	0.0395 ug/L	0.0395 ppb	14:58:13
3	Be 313.107†	-7461.5	-212.2	-0.0661 ug/L	-0.0661 ppb	14:57:52
3	Cd 226.502†	-273.8	1.4	0.0072 ug/L	0.0072 ppb	14:58:13
3	Co 228.616†	-94.2	-4.7	-0.0576 ug/L	-0.0576 ppb	14:58:13
3	Cr 267.716†	-11.6	16.9	0.1449 ug/L	0.1449 ppb	14:58:13
3	Cu 324.752†	10178.7	78.7	0.1959 ug/L	0.1959 ppb	14:57:52
3	Mn 257.610†	987.9	169.8	0.1343 ug/L	0.1343 ppb	14:58:13
3	Mo 202.031†	39.6	8.2	0.3293 ug/L	0.3293 ppb	14:58:13
3	Ni 231.604†	164.9	18.1	0.2903 ug/L	0.2903 ppb	14:58:13
3	P 214.914†	362.0	28.3	9.9383 ug/L	9.9383 ppb	14:58:13
3	Pb 220.353†	-9.5	19.5	1.4654 ug/L	1.4654 ppb	14:58:13
3	S 181.975 Axial†	64.0	-3.2	-2.7432 ug/L	-2.7432 ppb	14:58:13
3	Sb 206.836†	52.1	7.2	1.4070 ug/L	1.4070 ppb	14:58:13
3	Se 196.026†	-24.8	-3.4	-0.9905 ug/L	-0.9905 ppb	14:58:13
3	Si 251.611†	779.4	226.3	4.6478 ug/L	4.6478 ppb	14:58:13
3	Sn 189.927†	2.2	-3.2	-0.3355 ug/L	-0.3355 ppb	14:58:13
3	Ti 334.940†	-1145.5	-46.5	-0.0588 ug/L	-0.0588 ppb	14:57:52
3	Tl 190.801†	-50.5	10.5	1.7647 ug/L	1.7647 ppb	14:58:13
3	U 409.014†	-3862.5	-62.4	-1.5531 ug/L	-1.5531 ppb	14:57:47
3	V 292.402†	-1624.6	13.6	0.0773 ug/L	0.0773 ppb	14:57:52
3	Zn 213.857†	1159.9	47.9	0.2551 ug/L	0.2551 ppb	14:58:13
3	SiO2†	806.9	211.8	9.3098 ug/L	9.3098 ppb	14:58:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056219.9	99.560	%	0.5925				0.60%
Sc Radial	5538.3	99.5	%	1.61				1.62%
Y 371.029	849654.7	99.583	%	0.5228				0.52%
Y RADIAL	4818.2	100.1	%	1.66				1.66%
Ag 328.068†	-21.7	-0.0851	ug/L	0.08542	-0.0851	ppb	0.08542	100.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.6	16.003	ug/L	10.4684	16.003	ppb	10.4684	65.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-18.6	-4.3553	ug/L	1.05239	-4.3553	ppb	1.05239	24.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	304.2	4.7413	ug/L	0.69569	4.7413	ppb	0.69569	14.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.2	0.0417	ug/L	0.03442	0.0417	ppb	0.03442	82.50%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-178.7	-0.0555	ug/L	0.01513	-0.0555	ppb	0.01513	27.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.9	29.692	ug/L	7.6715	29.692	ppb	7.6715	25.84%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -5.2      -0.0391 ug/L       0.04120      -0.0391 ppb        0.04120 105.48%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 2.3       0.0286 ug/L       0.19481       0.0286 ppb        0.19481 680.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.5       0.1236 ug/L       0.02938       0.1236 ppb        0.02938  23.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                62.3       0.1538 ug/L       0.05016       0.1538 ppb        0.05016  32.62%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.1       2.0121 ug/L      30.10210       2.0121 ppb       30.10210 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          88.7      38.496 ug/L       24.6777      38.496 ppb        24.6777  64.10%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.6      45.694 ug/L      137.0902      45.694 ppb       137.0902 300.02%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               152.9       0.1202 ug/L       0.01255       0.1202 ppb        0.01255  10.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 0.9       0.0351 ug/L       0.37516       0.0351 ppb        0.37516 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -8.8     -23.673 ug/L       10.8153     -23.673 ppb        10.8153  45.69%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.4       0.2313 ug/L       0.08644       0.2313 ppb        0.08644  37.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 12.6       4.4370 ug/L       5.32411       4.4370 ppb        5.32411 119.99%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                16.7       1.2563 ug/L       0.99239       1.2563 ppb        0.99239  78.99%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -1.7      -1.4003 ug/L       2.23542      -1.4003 ppb        2.23542 159.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.2       1.2119 ug/L       0.21396       1.2119 ppb        0.21396  17.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.8      -0.9137 ug/L       1.23385      -0.9137 ppb        1.23385 135.04%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               226.7       4.6637 ug/L       0.21666       4.6637 ppb        0.21666   4.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -0.4      -0.0360 ug/L       0.41410      -0.0360 ppb        0.41410 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                13.7       0.2112 ug/L       0.23488       0.2112 ppb        0.23488 111.23%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 5.2       0.0091 ug/L       0.06596       0.0091 ppb        0.06596 721.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                12.2       2.0636 ug/L       0.29992       2.0636 ppb        0.29992  14.53%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -30.1      -0.7468 ug/L       1.16839      -0.7468 ppb        1.16839 156.46%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  0.6       0.0029 ug/L       0.15653       0.0029 ppb        0.15653 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                40.9       0.2247 ug/L       0.10391       0.2247 ppb        0.10391  46.25%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     190.4       8.3843 ug/L       1.16902       8.3843 ppb        1.16902  13.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 15:41:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5550.0	5550.0	99.7	%			15:43:35
1	Y RADIAL	4798.2	4798.2	99.64	%			15:43:35
1	Al 396.153Radial†	5250.4	5356.7	4854.3	ug/L	4854.3	ppb	15:43:35
1	Ca 317.933Radial†	1970.4	1958.7	4878.8	ug/L	4878.8	ppb	15:43:55
1	Fe 238.204 Radial†	137.3	137.4	4834.0	ug/L	4834.0	ppb	15:43:55
1	K 766.490 Radial†	13208.1	11770.2	5101.0	ug/L	5101.0	ppb	15:43:35
1	Mg 279.077 IEC†	62.7	62.7	4968.1	ug/L	4968.1	ppb	15:43:55
1	Na 589.592 Radial†	3392.0	3571.5	9656.9	ug/L	9656.9	ppb	15:43:35
1	Sr 421.552†	32852.9	32935.1	507.37	ug/L	507.37	ppb	15:43:35
1	Sc 361.383	1064992.1	1064992.1	100.39	%			15:44:54
1	Y 371.029	848241.6	848241.6	99.417	%			15:44:54
1	Ag 328.068†	127421.5	126291.3	502.94	ug/L	502.94	ppb	15:44:54
1	As 188.979†	2061.8	2090.8	493.94	ug/L	493.94	ppb	15:45:14
1	B 249.677†	31095.4	31357.0	486.83	ug/L	486.83	ppb	15:44:54
1	Ba 233.527†	98115.4	97712.5	495.79	ug/L	495.79	ppb	15:44:54
1	Be 313.107†	1594280.0	1595444.2	497.24	ug/L	497.24	ppb	15:44:54
1	Cd 226.502†	66508.1	66529.1	497.34	ug/L	497.34	ppb	15:44:54
1	Co 228.616†	38950.3	38890.4	484.63	ug/L	484.63	ppb	15:45:14
1	Cr 267.716†	58229.3	58033.2	494.97	ug/L	494.97	ppb	15:44:54
1	Cu 324.752†	211193.1	200186.9	494.19	ug/L	494.19	ppb	15:44:54
1	Mn 257.610†	629952.0	626694.1	495.80	ug/L	495.80	ppb	15:44:54
1	Mo 202.031†	12627.7	12547.2	502.56	ug/L	502.56	ppb	15:45:14
1	Ni 231.604†	30770.4	30503.4	488.59	ug/L	488.59	ppb	15:45:14
1	P 214.914†	7365.6	7000.2	2399.2	ug/L	2399.2	ppb	15:45:14
1	Pb 220.353†	6628.4	6631.9	498.51	ug/L	498.51	ppb	15:45:14
1	S 181.975 Axial†	1254.4	1181.7	999.29	ug/L	999.29	ppb	15:45:14
1	Sb 206.836†	2567.0	2511.7	499.99	ug/L	499.99	ppb	15:45:14
1	Se 196.026†	1506.6	1522.4	513.89	ug/L	513.89	ppb	15:45:14
1	Si 251.611†	123069.6	122034.6	2506.1	ug/L	2506.1	ppb	15:44:54
1	Sn 189.927†	4784.8	4760.9	495.62	ug/L	495.62	ppb	15:45:14
1	Ti 334.940†	381087.6	380726.3	498.33	ug/L	498.33	ppb	15:44:54
1	Tl 190.801†	2886.0	2936.3	497.24	ug/L	497.24	ppb	15:45:14
1	U 409.014†	15577.1	19351.8	478.60	ug/L	478.60	ppb	15:44:54
1	V 292.402†	85505.0	86827.9	498.46	ug/L	498.46	ppb	15:44:54
1	Zn 213.857†	90597.9	89125.9	493.16	ug/L	493.16	ppb	15:44:54
1	SiO2†	122068.2	120994.8	5320.2	ug/L	5320.2	ppb	15:46:14
2	Sc Radial	5447.3	5447.3	97.9	%			15:44:00
2	Y RADIAL	4711.7	4711.7	97.84	%			15:44:00
2	Al 396.153Radial†	5172.6	5376.3	4872.0	ug/L	4872.0	ppb	15:44:00
2	Ca 317.933Radial†	1978.6	2004.4	4992.5	ug/L	4992.5	ppb	15:44:20
2	Fe 238.204 Radial†	139.0	141.6	4983.9	ug/L	4983.9	ppb	15:44:20
2	K 766.490 Radial†	12957.8	11764.2	5098.5	ug/L	5098.5	ppb	15:44:00
2	Mg 279.077 IEC†	62.4	63.6	5042.1	ug/L	5042.1	ppb	15:44:20
2	Na 589.592 Radial†	3337.3	3579.7	9679.1	ug/L	9679.1	ppb	15:44:00
2	Sr 421.552†	32178.4	32867.1	506.32	ug/L	506.32	ppb	15:44:00
2	Sc 361.383	1051068.9	1051068.9	99.075	%			15:45:22
2	Y 371.029	835857.7	835857.7	97.966	%			15:45:22
2	Ag 328.068†	126172.9	126712.4	504.65	ug/L	504.65	ppb	15:45:22
2	As 188.979†	2053.8	2109.9	498.46	ug/L	498.46	ppb	15:45:42
2	B 249.677†	30728.4	31396.9	487.41	ug/L	487.41	ppb	15:45:22
2	Ba 233.527†	97233.2	98116.8	497.84	ug/L	497.84	ppb	15:45:22
2	Be 313.107†	1574216.1	1596230.6	497.49	ug/L	497.49	ppb	15:45:22
2	Cd 226.502†	65742.7	66634.2	498.11	ug/L	498.11	ppb	15:45:22
2	Co 228.616†	38877.4	39330.9	490.13	ug/L	490.13	ppb	15:45:42
2	Cr 267.716†	57664.8	58231.8	496.66	ug/L	496.66	ppb	15:45:22
2	Cu 324.752†	208926.4	200685.8	495.43	ug/L	495.43	ppb	15:45:22
2	Mn 257.610†	623851.7	628849.5	497.52	ug/L	497.52	ppb	15:45:22
2	Mo 202.031†	12603.0	12688.9	508.24	ug/L	508.24	ppb	15:45:42
2	Ni 231.604†	30731.8	30870.5	494.47	ug/L	494.47	ppb	15:45:42

2	P 214.914†	7351.1	7082.8	2428.1 ug/L	2428.1 ppb	15:45:42
2	Pb 220.353†	6620.8	6711.7	504.49 ug/L	504.49 ppb	15:45:42
2	S 181.975 Axial†	1262.4	1206.4	1020.2 ug/L	1020.2 ppb	15:45:42
2	Sb 206.836†	2541.1	2519.4	501.67 ug/L	501.67 ppb	15:45:42
2	Se 196.026†	1500.7	1536.3	518.98 ug/L	518.98 ppb	15:45:42
2	Si 251.611†	121951.6	122530.2	2516.3 ug/L	2516.3 ppb	15:45:22
2	Sn 189.927†	4769.9	4808.9	500.63 ug/L	500.63 ppb	15:45:42
2	Ti 334.940†	377304.3	381936.4	499.92 ug/L	499.92 ppb	15:45:22
2	Tl 190.801†	2878.0	2966.2	502.28 ug/L	502.28 ppb	15:45:42
2	U 409.014†	15599.1	19579.5	484.23 ug/L	484.23 ppb	15:45:22
2	V 292.402†	84556.2	86998.4	499.49 ug/L	499.49 ppb	15:45:22
2	Zn 213.857†	89634.5	89349.0	494.35 ug/L	494.35 ppb	15:45:22
2	SiO2†	124157.3	124714.2	5484.3 ug/L	5484.3 ppb	15:46:20
3	Sc Radial	5536.4	5536.4	99.5 %		15:44:25
3	Y RADIAL	4822.5	4822.5	100.1 %		15:44:25
3	Al 396.153Radial†	5265.5	5384.7	4879.5 ug/L	4879.5 ppb	15:44:25
3	Ca 317.933Radial†	1962.2	1955.4	4870.5 ug/L	4870.5 ppb	15:44:45
3	Fe 238.204 Radial†	137.2	137.6	4842.9 ug/L	4842.9 ppb	15:44:45
3	K 766.490 Radial†	13216.2	11810.9	5118.7 ug/L	5118.7 ppb	15:44:25
3	Mg 279.077 IEC†	62.7	62.8	4983.0 ug/L	4983.0 ppb	15:44:45
3	Na 589.592 Radial†	3349.3	3536.8	9563.2 ug/L	9563.2 ppb	15:44:25
3	Sr 421.552†	32669.2	32831.2	505.77 ug/L	505.77 ppb	15:44:25
3	Sc 361.383	1057782.7	1057782.7	99.708 %		15:45:49
3	Y 371.029	842128.4	842128.4	98.701 %		15:45:49
3	Ag 328.068†	126824.6	126557.6	504.00 ug/L	504.00 ppb	15:45:49
3	As 188.979†	2088.9	2131.9	503.59 ug/L	503.59 ppb	15:46:09
3	B 249.677†	31037.4	31509.9	489.19 ug/L	489.19 ppb	15:45:49
3	Ba 233.527†	97777.3	98039.6	497.45 ug/L	497.45 ppb	15:45:49
3	Be 313.107†	1585103.6	1597065.1	497.75 ug/L	497.75 ppb	15:45:49
3	Cd 226.502†	66249.3	66721.1	498.78 ug/L	498.78 ppb	15:45:49
3	Co 228.616†	39095.7	39300.7	489.76 ug/L	489.76 ppb	15:46:09
3	Cr 267.716†	57940.4	58138.8	495.87 ug/L	495.87 ppb	15:45:49
3	Cu 324.752†	210463.9	200889.4	495.93 ug/L	495.93 ppb	15:45:49
3	Mn 257.610†	627057.2	628067.8	496.88 ug/L	496.88 ppb	15:45:49
3	Mo 202.031†	12692.2	12697.7	508.58 ug/L	508.58 ppb	15:46:09
3	Ni 231.604†	30844.9	30787.0	493.13 ug/L	493.13 ppb	15:46:09
3	P 214.914†	7405.1	7089.9	2430.6 ug/L	2430.6 ppb	15:46:09
3	Pb 220.353†	6652.2	6700.8	503.69 ug/L	503.69 ppb	15:46:09
3	S 181.975 Axial†	1250.4	1186.2	1003.1 ug/L	1003.1 ppb	15:46:09
3	Sb 206.836†	2566.7	2528.8	503.51 ug/L	503.51 ppb	15:46:09
3	Se 196.026†	1528.1	1554.1	524.28 ug/L	524.28 ppb	15:46:09
3	Si 251.611†	122522.5	122321.5	2511.9 ug/L	2511.9 ppb	15:45:49
3	Sn 189.927†	4781.4	4789.9	498.63 ug/L	498.63 ppb	15:46:09
3	Ti 334.940†	379146.9	381367.2	499.17 ug/L	499.17 ppb	15:45:49
3	Tl 190.801†	2882.7	2952.6	499.96 ug/L	499.96 ppb	15:46:09
3	U 409.014†	15482.2	19362.3	478.86 ug/L	478.86 ppb	15:45:49
3	V 292.402†	85105.0	87007.2	499.55 ug/L	499.55 ppb	15:45:49
3	Zn 213.857†	90130.2	89272.0	493.95 ug/L	493.95 ppb	15:45:49
3	SiO2†	121770.0	121524.5	5343.3 ug/L	5343.3 ppb	15:46:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1057947.9	99.723	%	0.6563				0.66%
Sc Radial	5511.3	99.0	%	1.00				1.01%
Y 371.029	842075.9	98.695	%	0.7257				0.74%
Y RADIAL	4777.5	99.21	%	1.210				1.22%
Ag 328.068†	126520.4	503.86	ug/L	0.864	503.86	ppb	0.864	0.17%
QC value within limits for Ag 328.068 Recovery = 100.77%								
Al 396.153Radial†	5372.6	4868.6	ug/L	12.94	4868.6	ppb	12.94	0.27%
QC value within limits for Al 396.153Radial Recovery = 97.37%								
As 188.979†	2110.9	498.66	ug/L	4.828	498.66	ppb	4.828	0.97%
QC value within limits for As 188.979 Recovery = 99.73%								
B 249.677†	31421.2	487.81	ug/L	1.234	487.81	ppb	1.234	0.25%
QC value within limits for B 249.677 Recovery = 97.56%								
Ba 233.527†	97956.3	497.03	ug/L	1.089	497.03	ppb	1.089	0.22%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1596246.7	497.49	ug/L	0.253	497.49	ppb	0.253	0.05%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	1972.8	4913.9	ug/L	68.18	4913.9	ppb	68.18	1.39%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.28%
Cd 226.502†            66628.1      498.08 ug/L          0.720      498.08 ppb          0.720   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39174.0      488.17 ug/L          3.072      488.17 ppb          3.072   0.63%
   QC value within limits for Co 228.616  Recovery = 97.63%
Cr 267.716†            58134.6      495.83 ug/L          0.848      495.83 ppb          0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 99.17%
Cu 324.752†           200587.4      495.18 ug/L          0.893      495.18 ppb          0.893   0.18%
   QC value within limits for Cu 324.752  Recovery = 99.04%
Fe 238.204 Radial†       138.9      4886.9 ug/L          84.13      4886.9 ppb          84.13   1.72%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.74%
K 766.490 Radial†      11781.8      5106.1 ug/L          11.02      5106.1 ppb          11.02   0.22%
   QC value within limits for K 766.490 Radial  Recovery = 102.12%
Mg 279.077 IEC†           63.0      4997.8 ug/L          39.10      4997.8 ppb          39.10   0.78%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.96%
Mn 257.610†           627870.5      496.73 ug/L          0.871      496.73 ppb          0.871   0.18%
   QC value within limits for Mn 257.610  Recovery = 99.35%
Mo 202.031†            12644.6      506.46 ug/L          3.383      506.46 ppb          3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.29%
Na 589.592 Radial†      3562.7      9633.1 ug/L          61.49      9633.1 ppb          61.49   0.64%
   QC value within limits for Na 589.592 Radial  Recovery = 96.33%
Ni 231.604†            30720.3      492.07 ug/L          3.082      492.07 ppb          3.082   0.63%
   QC value within limits for Ni 231.604  Recovery = 98.41%
P 214.914†              7057.6      2419.3 ug/L          17.48      2419.3 ppb          17.48   0.72%
   QC value within limits for P 214.914  Recovery = 96.77%
Pb 220.353†             6681.5      502.23 ug/L          3.248      502.23 ppb          3.248   0.65%
   QC value within limits for Pb 220.353  Recovery = 100.45%
S 181.975 Axial†        1191.4      1007.5 ug/L          11.14      1007.5 ppb          11.14   1.11%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             2520.0      501.72 ug/L          1.761      501.72 ppb          1.761   0.35%
   QC value within limits for Sb 206.836  Recovery = 100.34%
Se 196.026†             1537.6      519.05 ug/L          5.195      519.05 ppb          5.195   1.00%
   QC value within limits for Se 196.026  Recovery = 103.81%
Si 251.611†           122295.4      2511.5 ug/L           5.07      2511.5 ppb           5.07   0.20%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†             4786.6      498.30 ug/L          2.522      498.30 ppb          2.522   0.51%
   QC value within limits for Sn 189.927  Recovery = 99.66%
Sr 421.552†            32877.8      506.49 ug/L          0.813      506.49 ppb          0.813   0.16%
   QC value within limits for Sr 421.552  Recovery = 101.30%
Ti 334.940†           381343.3      499.14 ug/L          0.795      499.14 ppb          0.795   0.16%
   QC value within limits for Ti 334.940  Recovery = 99.83%
Tl 190.801†             2951.7      499.83 ug/L          2.522      499.83 ppb          2.522   0.50%
   QC value within limits for Tl 190.801  Recovery = 99.97%
U 409.014†             19431.2      480.57 ug/L          3.177      480.57 ppb          3.177   0.66%
   QC value within limits for U 409.014  Recovery = 96.11%
V 292.402†             86944.5      499.16 ug/L          0.613      499.16 ppb          0.613   0.12%
   QC value within limits for V 292.402  Recovery = 99.83%
Zn 213.857†            89249.0      493.82 ug/L          0.604      493.82 ppb          0.604   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.76%
SiO2†                 122411.2      5382.6 ug/L          88.82      5382.6 ppb          88.82   1.65%
   QC value within limits for SiO2  Recovery = 100.66%
All analyte(s) passed QC.
```

Sequence No.: 18
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 15:48:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5444.7	5444.7	97.8	%			15:50:26
1	Y RADIAL	4754.6	4754.6	98.73	%			15:50:26
1	Al 396.153Radial†	-89.0	1.3	1.1300	ug/L	1.1300	ppb	15:50:26
1	Ca 317.933Radial†	24.6	8.2	20.486	ug/L	20.486	ppb	15:50:46
1	Fe 238.204 Radial†	1.6	1.3	45.016	ug/L	45.016	ppb	15:50:46
1	K 766.490 Radial†	1541.6	102.5	44.484	ug/L	44.484	ppb	15:50:26
1	Mg 279.077 IEC†	0.2	0.0	0.5452	ug/L	0.5452	ppb	15:50:46
1	Na 589.592 Radial†	-165.9	0.9	2.3237	ug/L	2.3237	ppb	15:50:46
1	Sr 421.552†	27.6	22.8	0.3506	ug/L	0.3506	ppb	15:50:46
1	Sc 361.383	1056924.6	1056924.6	99.627	%			15:51:43
1	Y 371.029	852084.4	852084.4	99.868	%			15:51:43
1	Ag 328.068†	677.5	41.4	0.1786	ug/L	0.1786	ppb	15:51:48
1	As 188.979†	-48.7	-12.0	-2.7987	ug/L	-2.7987	ppb	15:52:08
1	B 249.677†	-15.3	366.2	5.7014	ug/L	5.7014	ppb	15:51:48
1	Ba 233.527†	58.9	34.8	0.1773	ug/L	0.1773	ppb	15:52:08
1	Be 313.107†	-7518.0	-229.9	-0.0713	ug/L	-0.0713	ppb	15:51:48
1	Cd 226.502†	-272.1	4.5	0.0287	ug/L	0.0287	ppb	15:52:08
1	Co 228.616†	-101.3	-11.3	-0.1398	ug/L	-0.1398	ppb	15:52:08
1	Cr 267.716†	-33.1	-4.6	-0.0380	ug/L	-0.0380	ppb	15:51:48
1	Cu 324.752†	10167.5	14.3	0.0379	ug/L	0.0379	ppb	15:51:48
1	Mn 257.610†	919.8	96.2	0.0819	ug/L	0.0819	ppb	15:52:08
1	Mo 202.031†	42.0	10.4	0.4188	ug/L	0.4188	ppb	15:52:08
1	Ni 231.604†	169.3	21.7	0.3482	ug/L	0.3482	ppb	15:52:08
1	P 214.914†	354.3	18.7	6.5814	ug/L	6.5814	ppb	15:52:08
1	Pb 220.353†	-16.7	12.4	0.9234	ug/L	0.9234	ppb	15:52:08
1	S 181.975 Axial†	61.6	-6.0	-5.0843	ug/L	-5.0843	ppb	15:52:08
1	Sb 206.836†	53.3	8.1	1.6077	ug/L	1.6077	ppb	15:52:08
1	Se 196.026†	-12.1	9.5	3.2413	ug/L	3.2413	ppb	15:52:08
1	Si 251.611†	756.7	199.4	4.0905	ug/L	4.0905	ppb	15:52:08
1	Sn 189.927†	12.1	6.6	0.6931	ug/L	0.6931	ppb	15:52:08
1	Ti 334.940†	-1028.7	76.7	0.1021	ug/L	0.1021	ppb	15:51:48
1	Tl 190.801†	-51.6	9.6	1.6197	ug/L	1.6197	ppb	15:52:08
1	U 409.014†	-3848.7	-28.4	-0.7103	ug/L	-0.7103	ppb	15:51:43
1	V 292.402†	-1650.6	-3.9	-0.0247	ug/L	-0.0247	ppb	15:51:48
1	Zn 213.857†	1092.3	-26.1	-0.1527	ug/L	-0.1527	ppb	15:52:08
1	SiO2†	812.7	213.4	9.3760	ug/L	9.3760	ppb	15:53:14
2	Sc Radial	5363.3	5363.3	96.4	%			15:50:52
2	Y RADIAL	4689.7	4689.7	97.38	%			15:50:52
2	Al 396.153Radial†	-93.9	-5.3	-4.8063	ug/L	-4.8063	ppb	15:50:52
2	Ca 317.933Radial†	33.6	17.9	44.640	ug/L	44.640	ppb	15:51:12
2	Fe 238.204 Radial†	-0.5	-0.8	-29.258	ug/L	-29.258	ppb	15:51:12
2	K 766.490 Radial†	1469.5	51.7	22.381	ug/L	22.381	ppb	15:50:52
2	Mg 279.077 IEC†	0.5	0.4	29.965	ug/L	29.965	ppb	15:51:12
2	Na 589.592 Radial†	-167.6	-3.4	-9.2756	ug/L	-9.2756	ppb	15:51:12
2	Sr 421.552†	18.3	13.5	0.2083	ug/L	0.2083	ppb	15:51:12
2	Sc 361.383	1064727.6	1064727.6	100.36	%			15:52:14
2	Y 371.029	856448.2	856448.2	100.38	%			15:52:14
2	Ag 328.068†	654.6	13.6	0.0456	ug/L	0.0456	ppb	15:52:19
2	As 188.979†	-55.1	-18.0	-4.2429	ug/L	-4.2429	ppb	15:52:39
2	B 249.677†	-27.0	354.6	5.5302	ug/L	5.5302	ppb	15:52:19
2	Ba 233.527†	26.3	1.9	0.0090	ug/L	0.0090	ppb	15:52:39
2	Be 313.107†	-7608.1	-264.4	-0.0820	ug/L	-0.0820	ppb	15:52:19
2	Cd 226.502†	-292.9	-14.2	-0.1025	ug/L	-0.1025	ppb	15:52:39
2	Co 228.616†	-105.7	-14.9	-0.1859	ug/L	-0.1859	ppb	15:52:39
2	Cr 267.716†	-9.5	19.1	0.1627	ug/L	0.1627	ppb	15:52:19
2	Cu 324.752†	10209.3	-18.8	-0.0481	ug/L	-0.0481	ppb	15:52:19
2	Mn 257.610†	890.8	60.5	0.0435	ug/L	0.0435	ppb	15:52:39
2	Mo 202.031†	30.8	-1.1	-0.0470	ug/L	-0.0470	ppb	15:52:39
2	Ni 231.604†	166.7	17.8	0.2862	ug/L	0.2862	ppb	15:52:39

2	P 214.914†	351.3	13.1	4.6814	ug/L	4.6814 ppb	15:52:39
2	Pb 220.353†	0.4	29.5	2.2147	ug/L	2.2147 ppb	15:52:39
2	S 181.975 Axial†	58.3	-9.7	-8.2376	ug/L	-8.2376 ppb	15:52:39
2	Sb 206.836†	44.7	-0.9	-0.1791	ug/L	-0.1791 ppb	15:52:39
2	Se 196.026†	-22.7	-1.0	-0.4269	ug/L	-0.4269 ppb	15:52:39
2	Si 251.611†	732.9	170.1	3.5028	ug/L	3.5028 ppb	15:52:39
2	Sn 189.927†	9.3	3.8	0.3997	ug/L	0.3997 ppb	15:52:39
2	Ti 334.940†	-1052.4	60.6	0.0833	ug/L	0.0833 ppb	15:52:19
2	Tl 190.801†	-73.7	-12.1	-2.0323	ug/L	-2.0323 ppb	15:52:39
2	U 409.014†	-3937.4	-88.5	-2.1916	ug/L	-2.1916 ppb	15:52:14
2	V 292.402†	-1664.6	-5.8	-0.0333	ug/L	-0.0333 ppb	15:52:19
2	Zn 213.857†	1086.7	-39.7	-0.2212	ug/L	-0.2212 ppb	15:52:39
2	SiO2†	810.0	204.8	9.0296	ug/L	9.0296 ppb	15:53:19
3	Sc Radial	5503.9	5503.9	98.9	%		15:51:17
3	Y RADIAL	4786.1	4786.1	99.38	%		15:51:17
3	Al 396.153Radial†	-55.5	36.1	32.846	ug/L	32.846 ppb	15:51:17
3	Ca 317.933Radial†	29.6	13.0	32.437	ug/L	32.437 ppb	15:51:37
3	Fe 238.204 Radial†	1.1	0.8	28.650	ug/L	28.650 ppb	15:51:37
3	K 766.490 Radial†	1444.0	-13.2	-5.6858	ug/L	-5.6858 ppb	15:51:17
3	Mg 279.077 IEC†	-0.3	-0.5	-38.345	ug/L	-38.345 ppb	15:51:37
3	Na 589.592 Radial†	-167.4	1.1	3.0210	ug/L	3.0210 ppb	15:51:37
3	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431 ppb	15:51:37
3	Sc 361.383	1059763.4	1059763.4	99.895	%		15:52:44
3	Y 371.029	853150.8	853150.8	99.993	%		15:52:44
3	Ag 328.068†	638.8	0.9	0.0116	ug/L	0.0116 ppb	15:52:49
3	As 188.979†	-47.8	-11.0	-2.5746	ug/L	-2.5746 ppb	15:53:09
3	B 249.677†	-68.1	313.4	4.8798	ug/L	4.8798 ppb	15:52:49
3	Ba 233.527†	39.3	15.1	0.0771	ug/L	0.0771 ppb	15:53:09
3	Be 313.107†	-7522.3	-214.0	-0.0666	ug/L	-0.0666 ppb	15:52:49
3	Cd 226.502†	-285.9	-8.6	-0.0673	ug/L	-0.0673 ppb	15:53:09
3	Co 228.616†	-84.6	5.7	0.0719	ug/L	0.0719 ppb	15:53:09
3	Cr 267.716†	-51.0	-22.5	-0.1911	ug/L	-0.1911 ppb	15:52:49
3	Cu 324.752†	9963.6	-217.1	-0.5340	ug/L	-0.5340 ppb	15:52:49
3	Mn 257.610†	951.3	125.3	0.1035	ug/L	0.1035 ppb	15:53:09
3	Mo 202.031†	38.3	6.6	0.2645	ug/L	0.2645 ppb	15:53:09
3	Ni 231.604†	159.8	11.7	0.1876	ug/L	0.1876 ppb	15:53:09
3	P 214.914†	347.1	10.6	3.7978	ug/L	3.7978 ppb	15:53:09
3	Pb 220.353†	-25.4	3.7	0.2791	ug/L	0.2791 ppb	15:53:09
3	S 181.975 Axial†	64.7	-3.1	-2.6014	ug/L	-2.6014 ppb	15:53:09
3	Sb 206.836†	43.5	-1.9	-0.3719	ug/L	-0.3719 ppb	15:53:09
3	Se 196.026†	-24.2	-2.6	-0.7417	ug/L	-0.7417 ppb	15:53:09
3	Si 251.611†	723.7	164.4	3.3914	ug/L	3.3914 ppb	15:53:09
3	Sn 189.927†	-1.8	-7.3	-0.7591	ug/L	-0.7591 ppb	15:53:09
3	Ti 334.940†	-1125.7	-17.7	-0.0213	ug/L	-0.0213 ppb	15:52:49
3	Tl 190.801†	-47.4	13.9	2.3508	ug/L	2.3508 ppb	15:53:09
3	U 409.014†	-3791.5	39.2	0.9702	ug/L	0.9702 ppb	15:52:44
3	V 292.402†	-1640.9	10.2	0.0584	ug/L	0.0584 ppb	15:52:49
3	Zn 213.857†	1086.8	-34.5	-0.1947	ug/L	-0.1947 ppb	15:53:09
3	SiO2†	778.6	177.1	7.8246	ug/L	7.8246 ppb	15:53:24

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060471.9	99.961	%	0.3723				0.37%
Sc Radial	5437.3	97.7	%	1.27				1.30%
Y 371.029	853894.4	100.08	%	0.267				0.27%
Y RADIAL	4743.4	98.50	%	1.020				1.04%
Ag 328.068†	18.6	0.0786	ug/L	0.08825	0.0786	ppb	0.08825	112.24%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	10.7	9.7234	ug/L	20.24395	9.7234	ppb	20.24395	208.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-13.7	-3.2054	ug/L	0.90543	-3.2054	ppb	0.90543	28.25%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	344.7	5.3705	ug/L	0.43345	5.3705	ppb	0.43345	8.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	17.3	0.0878	ug/L	0.08464	0.0878	ppb	0.08464	96.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-236.1	-0.0733	ug/L	0.00791	-0.0733	ppb	0.00791	10.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.1	32.521	ug/L	12.0776	32.521	ppb	12.0776	37.14%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.1     -0.0470 ug/L       0.06789     -0.0470 ppb        0.06789 144.30%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -6.8     -0.0846 ug/L       0.13746     -0.0846 ppb        0.13746 162.45%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -2.7     -0.0221 ug/L       0.17746     -0.0221 ppb        0.17746 801.61%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -73.9     -0.1814 ug/L       0.30837     -0.1814 ppb        0.30837 170.01%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.4      14.803 ug/L      39.0249      14.803 ppb       39.0249 263.64%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          47.0      20.393 ug/L      25.1438      20.393 ppb       25.1438 123.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.0      -2.6115 ug/L     34.26394      -2.6115 ppb      34.26394 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                94.0       0.0763 ug/L      0.03041       0.0763 ppb       0.03041  39.87%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 5.3       0.2121 ug/L      0.23732       0.2121 ppb       0.23732 111.89%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -0.5      -1.3103 ug/L      6.90696      -1.3103 ppb       6.90696 527.13%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                17.1       0.2740 ug/L      0.08098       0.2740 ppb       0.08098  29.55%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 14.1       5.0202 ug/L      1.42236       5.0202 ppb       1.42236  28.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                15.2       1.1391 ug/L      0.98566       1.1391 ppb       0.98566  86.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -6.3      -5.3078 ug/L      2.82471      -5.3078 ppb       2.82471  53.22%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 1.8       0.3522 ug/L      1.09156       0.3522 ppb       1.09156 309.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 2.0       0.6909 ug/L      2.21432       0.6909 ppb       2.21432 320.50%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               178.0       3.6616 ug/L      0.37560       3.6616 ppb       0.37560  10.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.0       0.1112 ug/L      0.76790       0.1112 ppb       0.76790 690.45%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                19.5       0.3006 ug/L      0.08009       0.3006 ppb       0.08009  26.64%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                39.9       0.0547 ug/L      0.06651       0.0547 ppb       0.06651 121.59%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.8       0.6461 ug/L      2.34820       0.6461 ppb       2.34820 363.46%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -25.9      -0.6439 ug/L      1.58194      -0.6439 ppb       1.58194 245.69%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  0.1       0.0001 ug/L      0.05062       0.0001 ppb       0.05062 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -33.4      -0.1895 ug/L      0.03453      -0.1895 ppb       0.03453  18.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     198.4       8.7434 ug/L      0.81433       8.7434 ppb       0.81433   9.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: 1201873203|882005|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 50
Date Collected: 7/8/2009 15:55:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873203|882005|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5664.8	5664.8	102	%			15:57:28
1	Y RADIAL	4956.4	4956.4	102.9	%			15:57:28
1	Al 396.153Radial†	-67.4	25.9	23.586	ug/L	23.586	ppb	15:57:28
1	Ca 317.933Radial†	26.7	9.3	23.235	ug/L	23.235	ppb	15:57:48
1	Fe 238.204 Radial†	2.2	1.8	64.369	ug/L	64.369	ppb	15:57:48
1	K 766.490 Radial†	1522.9	22.9	9.9949	ug/L	9.9949	ppb	15:57:28
1	Mg 279.077 IEC†	-0.9	-1.1	-86.163	ug/L	-86.163	ppb	15:57:48
1	Na 589.592 Radial†	-187.1	-13.4	-36.303	ug/L	-36.303	ppb	15:57:48
1	Sr 421.552†	6.2	0.7	0.0099	ug/L	0.0099	ppb	15:57:48
1	Sc 361.383	1048336.2	1048336.2	98.817	%			15:58:44
1	Y 371.029	842742.3	842742.3	98.773	%			15:58:44
1	Ag 328.068†	680.5	50.1	0.2177	ug/L	0.2177	ppb	15:58:49
1	As 188.979†	-57.2	-20.9	-4.9017	ug/L	-4.9017	ppb	15:59:09
1	B 249.677†	-232.2	146.5	2.2754	ug/L	2.2754	ppb	15:58:49
1	Ba 233.527†	54.7	31.1	0.1586	ug/L	0.1586	ppb	15:59:09
1	Be 313.107†	-7457.0	-230.1	-0.0707	ug/L	-0.0707	ppb	15:58:49
1	Cd 226.502†	-292.4	-18.3	-0.1440	ug/L	-0.1440	ppb	15:59:09
1	Co 228.616†	-96.9	-7.6	-0.0949	ug/L	-0.0949	ppb	15:59:09
1	Cr 267.716†	10.9	39.6	0.3381	ug/L	0.3381	ppb	15:58:49
1	Cu 324.752†	10098.9	28.5	0.0741	ug/L	0.0741	ppb	15:58:49
1	Mn 257.610†	2257.1	1457.1	1.1615	ug/L	1.1615	ppb	15:58:49
1	Mo 202.031†	44.2	12.9	0.5227	ug/L	0.5227	ppb	15:59:09
1	Ni 231.604†	160.2	13.9	0.2226	ug/L	0.2226	ppb	15:59:09
1	P 214.914†	354.6	21.9	7.7186	ug/L	7.7186	ppb	15:59:09
1	Pb 220.353†	-3.0	26.0	1.9510	ug/L	1.9510	ppb	15:59:09
1	S 181.975 Axial†	65.5	-1.6	-1.3274	ug/L	-1.3274	ppb	15:59:09
1	Sb 206.836†	47.9	3.0	0.6402	ug/L	0.6402	ppb	15:59:09
1	Se 196.026†	-22.0	-0.6	0.0238	ug/L	0.0238	ppb	15:59:09
1	Si 251.611†	1465.4	922.8	19.021	ug/L	19.021	ppb	15:59:09
1	Sn 189.927†	32.0	26.9	2.8033	ug/L	2.8033	ppb	15:59:09
1	Ti 334.940†	-837.4	261.9	0.3441	ug/L	0.3441	ppb	15:58:49
1	Tl 190.801†	-48.4	12.4	2.1016	ug/L	2.1016	ppb	15:59:09
1	U 409.014†	-3773.9	15.7	0.3804	ug/L	0.3804	ppb	15:58:44
1	V 292.402†	-1658.3	-25.4	-0.1473	ug/L	-0.1473	ppb	15:58:49
1	Zn 213.857†	1295.5	188.6	1.0477	ug/L	1.0477	ppb	15:59:09
1	SiO2†	1585.7	1002.3	44.243	ug/L	44.243	ppb	16:00:15
2	Sc Radial	5584.4	5584.4	100	%			15:57:53
2	Y RADIAL	4862.7	4862.7	101.0	%			15:57:53
2	Al 396.153Radial†	-56.7	35.7	32.510	ug/L	32.510	ppb	15:57:53
2	Ca 317.933Radial†	24.5	7.4	18.514	ug/L	18.514	ppb	15:58:13
2	Fe 238.204 Radial†	0.8	0.5	17.540	ug/L	17.540	ppb	15:58:13
2	K 766.490 Radial†	1554.3	75.8	32.883	ug/L	32.883	ppb	15:57:53
2	Mg 279.077 IEC†	1.9	1.7	133.73	ug/L	133.73	ppb	15:58:13
2	Na 589.592 Radial†	-189.9	-18.8	-50.842	ug/L	-50.842	ppb	15:58:13
2	Sr 421.552†	0.3	-5.1	-0.0792	ug/L	-0.0792	ppb	15:58:13
2	Sc 361.383	1051541.0	1051541.0	99.119	%			15:59:15
2	Y 371.029	845045.7	845045.7	99.043	%			15:59:15
2	Ag 328.068†	669.1	36.4	0.1486	ug/L	0.1486	ppb	15:59:20
2	As 188.979†	-50.4	-14.0	-3.2803	ug/L	-3.2803	ppb	15:59:40
2	B 249.677†	-150.4	229.8	3.5785	ug/L	3.5785	ppb	15:59:20
2	Ba 233.527†	37.8	13.9	0.0708	ug/L	0.0708	ppb	15:59:40
2	Be 313.107†	-7469.7	-219.9	-0.0678	ug/L	-0.0678	ppb	15:59:20
2	Cd 226.502†	-290.8	-15.7	-0.1197	ug/L	-0.1197	ppb	15:59:40
2	Co 228.616†	-95.6	-6.1	-0.0771	ug/L	-0.0771	ppb	15:59:40
2	Cr 267.716†	9.7	38.4	0.3271	ug/L	0.3271	ppb	15:59:20
2	Cu 324.752†	10147.9	46.8	0.1165	ug/L	0.1165	ppb	15:59:20
2	Mn 257.610†	2315.5	1509.0	1.1923	ug/L	1.1923	ppb	15:59:20
2	Mo 202.031†	25.3	-6.2	-0.2483	ug/L	-0.2483	ppb	15:59:40
2	Ni 231.604†	160.3	13.5	0.2163	ug/L	0.2163	ppb	15:59:40

2	P 214.914†	339.9	6.0	2.1128	ug/L	2.1128	ppb	15:59:40
2	Pb 220.353†	-5.7	23.3	1.7529	ug/L	1.7529	ppb	15:59:40
2	S 181.975 Axial†	80.0	12.8	10.868	ug/L	10.868	ppb	15:59:40
2	Sb 206.836†	55.5	10.5	2.0755	ug/L	2.0755	ppb	15:59:40
2	Se 196.026†	-13.1	8.4	2.8082	ug/L	2.8082	ppb	15:59:40
2	Si 251.611†	1489.8	942.9	19.446	ug/L	19.446	ppb	15:59:40
2	Sn 189.927†	19.0	13.6	1.4211	ug/L	1.4211	ppb	15:59:40
2	Ti 334.940†	-912.9	188.2	0.2469	ug/L	0.2469	ppb	15:59:20
2	Tl 190.801†	-61.9	-1.1	-0.1737	ug/L	-0.1737	ppb	15:59:40
2	U 409.014†	-3745.9	55.5	1.3754	ug/L	1.3754	ppb	15:59:15
2	V 292.402†	-1634.2	4.1	0.0221	ug/L	0.0221	ppb	15:59:20
2	Zn 213.857†	1300.2	189.4	1.0494	ug/L	1.0494	ppb	15:59:40
2	SiO2†	1482.6	893.4	39.453	ug/L	39.453	ppb	16:00:21
3	Sc Radial	5545.8	5545.8	99.7	%			15:58:18
3	Y RADIAL	4864.7	4864.7	101.0	%			15:58:18
3	Al 396.153Radial†	-94.9	-3.0	-2.7438	ug/L	-2.7438	ppb	15:58:18
3	Ca 317.933Radial†	26.4	9.5	23.771	ug/L	23.771	ppb	15:58:38
3	Fe 238.204 Radial†	1.2	0.8	29.061	ug/L	29.061	ppb	15:58:38
3	K 766.490 Radial†	1493.4	25.5	11.092	ug/L	11.092	ppb	15:58:18
3	Mg 279.077 IEC†	-0.5	-0.6	-50.647	ug/L	-50.647	ppb	15:58:38
3	Na 589.592 Radial†	-197.9	-28.1	-76.006	ug/L	-76.006	ppb	15:58:38
3	Sr 421.552†	12.1	6.7	0.1029	ug/L	0.1029	ppb	15:58:38
3	Sc 361.383	1063798.2	1063798.2	100.27	%			15:59:45
3	Y 371.029	856251.7	856251.7	100.36	%			15:59:45
3	Ag 328.068†	551.2	-88.9	-0.3468	ug/L	-0.3468	ppb	15:59:50
3	As 188.979†	-43.0	-6.0	-1.4059	ug/L	-1.4059	ppb	16:00:10
3	B 249.677†	-119.1	262.8	4.0921	ug/L	4.0921	ppb	15:59:50
3	Ba 233.527†	52.6	28.1	0.1424	ug/L	0.1424	ppb	16:00:10
3	Be 313.107†	-7405.5	-69.0	-0.0207	ug/L	-0.0207	ppb	15:59:50
3	Cd 226.502†	-290.3	-11.9	-0.0920	ug/L	-0.0920	ppb	16:00:10
3	Co 228.616†	-105.3	-14.6	-0.1821	ug/L	-0.1821	ppb	16:00:10
3	Cr 267.716†	8.2	36.8	0.3124	ug/L	0.3124	ppb	15:59:50
3	Cu 324.752†	10136.7	-82.4	-0.2015	ug/L	-0.2015	ppb	15:59:50
3	Mn 257.610†	2270.6	1437.4	1.1407	ug/L	1.1407	ppb	15:59:50
3	Mo 202.031†	39.2	7.3	0.2959	ug/L	0.2959	ppb	16:00:10
3	Ni 231.604†	174.4	25.6	0.4112	ug/L	0.4112	ppb	16:00:10
3	P 214.914†	358.9	21.0	7.4659	ug/L	7.4659	ppb	16:00:10
3	Pb 220.353†	2.4	31.5	2.3603	ug/L	2.3603	ppb	16:00:10
3	S 181.975 Axial†	76.0	7.9	6.7039	ug/L	6.7039	ppb	16:00:10
3	Sb 206.836†	51.0	5.4	1.0929	ug/L	1.0929	ppb	16:00:10
3	Se 196.026†	-21.9	-0.2	0.0388	ug/L	0.0388	ppb	16:00:10
3	Si 251.611†	1447.2	883.1	18.209	ug/L	18.209	ppb	16:00:10
3	Sn 189.927†	22.3	16.8	1.7501	ug/L	1.7501	ppb	16:00:10
3	Ti 334.940†	-870.3	241.3	0.3161	ug/L	0.3161	ppb	15:59:50
3	Tl 190.801†	-65.8	-4.3	-0.7097	ug/L	-0.7097	ppb	16:00:10
3	U 409.014†	-3722.7	122.2	3.0280	ug/L	3.0280	ppb	15:59:45
3	V 292.402†	-1708.4	-51.0	-0.2848	ug/L	-0.2848	ppb	15:59:50
3	Zn 213.857†	1285.5	159.6	0.8878	ug/L	0.8878	ppb	16:00:10
3	SiO2†	1517.6	911.1	40.226	ug/L	40.226	ppb	16:00:26

Mean Data: 1201873203|882005|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054558.5	99.404	%	0.7692				0.77%
Sc Radial	5598.3	101	%	1.1				1.08%
Y 371.029	848013.2	99.390	%	0.8470				0.85%
Y RADIAL	4894.6	101.6	%	1.11				1.09%
Ag 328.068†	-0.8	0.0065	ug/L	0.30792	0.0065	ppb	0.30792	>999.9%
Al 396.153Radial†	19.5	17.784	ug/L	18.3289	17.784	ppb	18.3289	103.06%
As 188.979†	-13.7	-3.1960	ug/L	1.74942	-3.1960	ppb	1.74942	54.74%
B 249.677†	213.0	3.3154	ug/L	0.93651	3.3154	ppb	0.93651	28.25%
Ba 233.527†	24.4	0.1239	ug/L	0.04674	0.1239	ppb	0.04674	37.71%
Be 313.107†	-173.0	-0.0531	ug/L	0.02808	-0.0531	ppb	0.02808	52.89%
Ca 317.933Radial†	8.8	21.840	ug/L	2.8926	21.840	ppb	2.8926	13.24%
Cd 226.502†	-15.3	-0.1186	ug/L	0.02600	-0.1186	ppb	0.02600	21.93%
Co 228.616†	-9.4	-0.1180	ug/L	0.05620	-0.1180	ppb	0.05620	47.61%
Cr 267.716†	38.3	0.3258	ug/L	0.01288	0.3258	ppb	0.01288	3.95%
Cu 324.752†	-2.3	-0.0036	ug/L	0.17269	-0.0036	ppb	0.17269	>999.9%
Fe 238.204 Radial†	1.1	36.990	ug/L	24.4006	36.990	ppb	24.4006	65.97%
K 766.490 Radial†	41.4	17.990	ug/L	12.9095	17.990	ppb	12.9095	71.76%

Mg 279.077 IEC†	-0.0	-1.0266	ug/L	118.04567	-1.0266	ppb	118.04567 >999.9%
Mn 257.610†	1467.8	1.1648	ug/L	0.02594	1.1648	ppb	0.02594 2.23%
Mo 202.031†	4.7	0.1901	ug/L	0.39625	0.1901	ppb	0.39625 208.44%
Na 589.592 Radial†	-20.1	-54.383	ug/L	20.0871	-54.383	ppb	20.0871 36.94%
Ni 231.604†	17.7	0.2834	ug/L	0.11074	0.2834	ppb	0.11074 39.08%
P 214.914†	16.3	5.7658	ug/L	3.16606	5.7658	ppb	3.16606 54.91%
Pb 220.353†	27.0	2.0214	ug/L	0.30976	2.0214	ppb	0.30976 15.32%
S 181.975 Axial†	6.4	5.4148	ug/L	6.19900	5.4148	ppb	6.19900 114.48%
Sb 206.836†	6.3	1.2695	ug/L	0.73378	1.2695	ppb	0.73378 57.80%
Se 196.026†	2.5	0.9569	ug/L	1.60326	0.9569	ppb	1.60326 167.54%
Si 251.611†	916.3	18.892	ug/L	0.6288	18.892	ppb	0.6288 3.33%
Sn 189.927†	19.1	1.9915	ug/L	0.72204	1.9915	ppb	0.72204 36.26%
Sr 421.552†	0.7	0.0112	ug/L	0.09106	0.0112	ppb	0.09106 815.06%
Ti 334.940†	230.5	0.3023	ug/L	0.05003	0.3023	ppb	0.05003 16.55%
Tl 190.801†	2.4	0.4061	ug/L	1.49261	0.4061	ppb	1.49261 367.59%
U 409.014†	64.5	1.5946	ug/L	1.33736	1.5946	ppb	1.33736 83.87%
V 292.402†	-24.1	-0.1367	ug/L	0.15370	-0.1367	ppb	0.15370 112.45%
Zn 213.857†	179.2	0.9950	ug/L	0.09281	0.9950	ppb	0.09281 9.33%
SiO2†	935.6	41.307	ug/L	2.5712	41.307	ppb	2.5712 6.22%

Sequence No.: 20
Sample ID: 1201873204|882005|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 51
Date Collected: 7/8/2009 16:02:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873204|882005|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5680.8	5680.8	102	%			16:04:29
1	Y RADIAL	5197.8	5197.8	107.9	%			16:04:29
1	Al 396.153Radial†	35335.9	34707.0	31574	ug/L	31574	ppb	16:04:29
1	Ca 317.933Radial†	6921.6	6763.4	16847	ug/L	16847	ppb	16:04:29
1	Fe 238.204 Radial†	2451.0	2400.6	84230	ug/L	84230	ppb	16:04:49
1	K 766.490 Radial†	26965.4	24942.0	10863	ug/L	10863	ppb	16:04:29
1	Mg 279.077 IEC†	178.4	174.6	13761	ug/L	13761	ppb	16:04:49
1	Na 589.592 Radial†	838.0	991.3	2680.5	ug/L	2680.5	ppb	16:04:49
1	Sr 421.552†	53163.3	52072.8	802.11	ug/L	802.11	ppb	16:04:29
1	Sc 361.383	1081051.8	1081051.8	101.90	%			16:05:48
1	Y 371.029	912746.5	912746.5	106.98	%			16:05:48
1	Ag 328.068†	161693.8	158038.5	655.42	ug/L	655.42	ppb	16:05:48
1	As 188.979†	5362.3	5299.1	1269.2	ug/L	1269.2	ppb	16:06:08
1	B 249.677†	42972.1	42551.9	650.99	ug/L	650.99	ppb	16:05:48
1	Ba 233.527†	460194.7	451584.5	2289.3	ug/L	2289.3	ppb	16:05:48
1	Be 313.107†	1412845.6	1393802.3	436.90	ug/L	436.90	ppb	16:05:48
1	Cd 226.502†	78394.1	77209.2	567.85	ug/L	567.85	ppb	16:05:48
1	Co 228.616†	32218.6	31707.9	392.47	ug/L	392.47	ppb	16:06:08
1	Cr 267.716†	44113.1	43318.7	371.74	ug/L	371.74	ppb	16:05:48
1	Cu 324.752†	214609.5	200414.3	499.34	ug/L	499.34	ppb	16:05:48
1	Mn 257.610†	2264688.1	2221608.6	1766.4	ug/L	1766.4	ppb	16:05:48
1	Mo 202.031†	10297.4	10073.5	409.00	ug/L	409.00	ppb	16:06:08
1	Ni 231.604†	31866.9	31124.1	498.60	ug/L	498.60	ppb	16:05:48
1	P 214.914†	10796.0	10257.6	3495.8	ug/L	3495.8	ppb	16:06:08
1	Pb 220.353†	11131.3	10952.7	819.91	ug/L	819.91	ppb	16:06:08
1	S 181.975 Axial†	1349.2	1256.2	1057.1	ug/L	1057.1	ppb	16:06:08
1	Sb 206.836†	2844.8	2746.3	545.94	ug/L	545.94	ppb	16:06:08
1	Se 196.026†	1929.8	1915.4	921.80	ug/L	921.80	ppb	16:06:08
1	Si 251.611†	278186.8	272436.6	5609.3	ug/L	5609.3	ppb	16:05:48
1	Sn 189.927†	5252.0	5148.6	538.09	ug/L	538.09	ppb	16:06:08
1	Ti 334.940†	1176755.0	1155909.5	1514.2	ug/L	1514.2	ppb	16:05:48
1	Tl 190.801†	5682.0	5637.4	965.43	ug/L	965.43	ppb	16:06:08
1	U 409.014†	-9091.2	-5086.9	-137.28	ug/L	-137.28	ppb	16:05:48
1	V 292.402†	129711.4	128944.2	723.16	ug/L	723.16	ppb	16:05:48
1	Zn 213.857†	178908.6	174448.3	960.75	ug/L	960.75	ppb	16:05:48
1	SiO2†	275839.8	270091.1	11907	ug/L	11907	ppb	16:07:09
2	Sc Radial	5653.4	5653.4	102	%			16:04:54
2	Y RADIAL	5216.4	5216.4	108.3	%			16:04:54
2	Al 396.153Radial†	35304.2	34843.5	31699	ug/L	31699	ppb	16:04:54
2	Ca 317.933Radial†	6894.3	6769.4	16861	ug/L	16861	ppb	16:04:54
2	Fe 238.204 Radial†	2452.8	2414.0	84700	ug/L	84700	ppb	16:05:14
2	K 766.490 Radial†	27118.2	25220.4	10984	ug/L	10984	ppb	16:04:54
2	Mg 279.077 IEC†	180.9	177.9	14024	ug/L	14024	ppb	16:05:14
2	Na 589.592 Radial†	850.0	1007.1	2723.1	ug/L	2723.1	ppb	16:05:14
2	Sr 421.552†	53053.6	52217.3	804.33	ug/L	804.33	ppb	16:04:54
2	Sc 361.383	1077743.2	1077743.2	101.59	%			16:06:16
2	Y 371.029	911044.0	911044.0	106.78	%			16:06:16
2	Ag 328.068†	160779.4	157625.6	653.92	ug/L	653.92	ppb	16:06:16
2	As 188.979†	5337.9	5291.3	1267.5	ug/L	1267.5	ppb	16:06:36
2	B 249.677†	42745.1	42457.9	649.47	ug/L	649.47	ppb	16:06:16
2	Ba 233.527†	457646.0	450462.2	2283.6	ug/L	2283.6	ppb	16:06:16
2	Be 313.107†	1409600.8	1394864.7	437.23	ug/L	437.23	ppb	16:06:16
2	Cd 226.502†	77812.4	76872.7	565.27	ug/L	565.27	ppb	16:06:16
2	Co 228.616†	31956.0	31546.5	390.46	ug/L	390.46	ppb	16:06:36
2	Cr 267.716†	43910.4	43252.1	371.18	ug/L	371.18	ppb	16:06:16
2	Cu 324.752†	213457.0	199926.3	498.17	ug/L	498.17	ppb	16:06:16
2	Mn 257.610†	2253534.4	2217452.2	1763.2	ug/L	1763.2	ppb	16:06:16
2	Mo 202.031†	10243.2	10051.2	408.13	ug/L	408.13	ppb	16:06:36
2	Ni 231.604†	31620.1	30977.1	496.24	ug/L	496.24	ppb	16:06:16

2	P 214.914†	10718.2	10213.6	3480.0	ug/L	3480.0 ppb	16:06:36
2	Pb 220.353†	11053.2	10909.3	816.64	ug/L	816.64 ppb	16:06:36
2	S 181.975 Axial†	1347.9	1259.0	1059.4	ug/L	1059.4 ppb	16:06:36
2	Sb 206.836†	2827.8	2738.1	544.28	ug/L	544.28 ppb	16:06:36
2	Se 196.026†	1937.0	1928.4	927.66	ug/L	927.66 ppb	16:06:36
2	Si 251.611†	275278.5	270411.8	5567.6	ug/L	5567.6 ppb	16:06:16
2	Sn 189.927†	5211.4	5124.4	535.59	ug/L	535.59 ppb	16:06:36
2	Ti 334.940†	1171827.0	1154603.8	1512.5	ug/L	1512.5 ppb	16:06:16
2	Tl 190.801†	5646.3	5619.4	962.39	ug/L	962.39 ppb	16:06:36
2	U 409.014†	-9009.6	-5033.9	-136.02	ug/L	-136.02 ppb	16:06:16
2	V 292.402†	128905.3	128541.5	720.81	ug/L	720.81 ppb	16:06:16
2	Zn 213.857†	177746.2	173843.0	957.32	ug/L	957.32 ppb	16:06:16
2	SiO2†	277342.2	272401.0	12009	ug/L	12009 ppb	16:07:14
3	Sc Radial	5584.3	5584.3	100	%		16:05:19
3	Y RADIAL	5131.6	5131.6	106.6	%		16:05:19
3	Al 396.153Radial†	34980.2	34950.8	31796	ug/L	31796 ppb	16:05:19
3	Ca 317.933Radial†	6830.8	6790.1	16913	ug/L	16913 ppb	16:05:19
3	Fe 238.204 Radial†	2461.6	2452.7	86057	ug/L	86057 ppb	16:05:39
3	K 766.490 Radial†	26835.4	25269.0	11006	ug/L	11006 ppb	16:05:19
3	Mg 279.077 IEC†	180.8	180.0	14188	ug/L	14188 ppb	16:05:39
3	Na 589.592 Radial†	857.0	1024.4	2769.9	ug/L	2769.9 ppb	16:05:39
3	Sr 421.552†	52340.2	52152.6	803.34	ug/L	803.34 ppb	16:05:19
3	Sc 361.383	1075324.2	1075324.2	101.36	%		16:06:43
3	Y 371.029	908949.9	908949.9	106.53	%		16:06:43
3	Ag 328.068†	160655.1	157858.9	655.29	ug/L	655.29 ppb	16:06:43
3	As 188.979†	5368.5	5333.3	1277.6	ug/L	1277.6 ppb	16:07:03
3	B 249.677†	42658.6	42467.2	649.43	ug/L	649.43 ppb	16:06:43
3	Ba 233.527†	458821.3	452635.1	2294.6	ug/L	2294.6 ppb	16:06:43
3	Be 313.107†	1408723.8	1397120.8	437.93	ug/L	437.93 ppb	16:06:43
3	Cd 226.502†	78076.7	77305.8	568.36	ug/L	568.36 ppb	16:06:43
3	Co 228.616†	32219.2	31876.9	394.56	ug/L	394.56 ppb	16:07:03
3	Cr 267.716†	43966.1	43404.3	372.51	ug/L	372.51 ppb	16:06:43
3	Cu 324.752†	213143.5	200089.7	498.65	ug/L	498.65 ppb	16:06:43
3	Mn 257.610†	2255932.0	2224807.8	1769.2	ug/L	1769.2 ppb	16:06:43
3	Mo 202.031†	10317.7	10147.4	412.08	ug/L	412.08 ppb	16:07:03
3	Ni 231.604†	31704.9	31130.8	498.70	ug/L	498.70 ppb	16:06:43
3	P 214.914†	10803.0	10321.0	3517.0	ug/L	3517.0 ppb	16:07:03
3	Pb 220.353†	11159.0	11038.2	826.20	ug/L	826.20 ppb	16:07:03
3	S 181.975 Axial†	1345.5	1259.5	1059.9	ug/L	1059.9 ppb	16:07:03
3	Sb 206.836†	2836.8	2753.3	547.41	ug/L	547.41 ppb	16:07:03
3	Se 196.026†	1943.1	1938.6	935.77	ug/L	935.77 ppb	16:07:03
3	Si 251.611†	275588.7	271327.5	5586.4	ug/L	5586.4 ppb	16:06:43
3	Sn 189.927†	5246.4	5170.5	540.41	ug/L	540.41 ppb	16:07:03
3	Ti 334.940†	1170710.0	1156096.6	1514.5	ug/L	1514.5 ppb	16:06:43
3	Tl 190.801†	5700.8	5685.6	973.58	ug/L	973.58 ppb	16:07:03
3	U 409.014†	-9125.2	-5167.9	-139.51	ug/L	-139.51 ppb	16:06:43
3	V 292.402†	128869.4	128791.5	722.09	ug/L	722.09 ppb	16:06:43
3	Zn 213.857†	177988.2	174475.5	960.69	ug/L	960.69 ppb	16:06:43
3	SiO2†	280526.4	276156.6	12175	ug/L	12175 ppb	16:07:19

Mean Data: 1201873204|882005|2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1078039.7	101.62	%	0.271				0.27%
Sc Radial	5639.5	101	%	0.9				0.88%
Y 371.029	910913.5	106.76	%	0.223				0.21%
Y RADIAL	5181.9	107.6	%	0.92				0.86%
Ag 328.068†	157841.0	654.88	ug/L	0.828	654.88	ppb	0.828	0.13%
Al 396.153Radial†	34833.7	31690	ug/L	111.2	31690	ppb	111.2	0.35%
As 188.979†	5307.9	1271.4	ug/L	5.42	1271.4	ppb	5.42	0.43%
B 249.677†	42492.3	649.96	ug/L	0.892	649.96	ppb	0.892	0.14%
Ba 233.527†	451560.6	2289.2	ug/L	5.52	2289.2	ppb	5.52	0.24%
Be 313.107†	1395262.6	437.35	ug/L	0.528	437.35	ppb	0.528	0.12%
Ca 317.933Radial†	6774.3	16874	ug/L	34.9	16874	ppb	34.9	0.21%
Cd 226.502†	77129.2	567.16	ug/L	1.652	567.16	ppb	1.652	0.29%
Co 228.616†	31710.4	392.50	ug/L	2.053	392.50	ppb	2.053	0.52%
Cr 267.716†	43325.0	371.81	ug/L	0.665	371.81	ppb	0.665	0.18%
Cu 324.752†	200143.4	498.72	ug/L	0.592	498.72	ppb	0.592	0.12%
Fe 238.204 Radial†	2422.5	84996	ug/L	948.4	84996	ppb	948.4	1.12%
K 766.490 Radial†	25143.8	10951	ug/L	77.1	10951	ppb	77.1	0.70%

Mg 279.077 IEC†	177.5	13991	ug/L	215.5	13991	ppb	215.5	1.54%
Mn 257.610†	2221289.5	1766.2	ug/L	3.00	1766.2	ppb	3.00	0.17%
Mo 202.031†	10090.7	409.74	ug/L	2.073	409.74	ppb	2.073	0.51%
Na 589.592 Radial†	1007.6	2724.5	ug/L	44.72	2724.5	ppb	44.72	1.64%
Ni 231.604†	31077.4	497.85	ug/L	1.391	497.85	ppb	1.391	0.28%
P 214.914†	10264.1	3497.6	ug/L	18.52	3497.6	ppb	18.52	0.53%
Pb 220.353†	10966.7	820.92	ug/L	4.859	820.92	ppb	4.859	0.59%
S 181.975 Axial†	1258.2	1058.8	ug/L	1.50	1058.8	ppb	1.50	0.14%
Sb 206.836†	2745.9	545.88	ug/L	1.564	545.88	ppb	1.564	0.29%
Se 196.026†	1927.5	928.41	ug/L	7.015	928.41	ppb	7.015	0.76%
Si 251.611†	271391.9	5587.8	ug/L	20.93	5587.8	ppb	20.93	0.37%
Sn 189.927†	5147.8	538.03	ug/L	2.412	538.03	ppb	2.412	0.45%
Sr 421.552†	52147.6	803.26	ug/L	1.115	803.26	ppb	1.115	0.14%
Ti 334.940†	1155536.6	1513.7	ug/L	1.07	1513.7	ppb	1.07	0.07%
Tl 190.801†	5647.5	967.14	ug/L	5.786	967.14	ppb	5.786	0.60%
U 409.014†	-5096.2	-137.60	ug/L	1.769	-137.60	ppb	1.769	1.29%
V 292.402†	128759.1	722.02	ug/L	1.177	722.02	ppb	1.177	0.16%
Zn 213.857†	174255.6	959.59	ug/L	1.959	959.59	ppb	1.959	0.20%
SiO2†	272882.9	12031	ug/L	135.1	12031	ppb	135.1	1.12%

Sequence No.: 21
Sample ID: 232663001|882005|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 52
Date Collected: 7/8/2009 16:09:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232663001|882005|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5647.5	5647.5	101	%			16:11:23
1	Y RADIAL	6146.6	6146.6	127.6	%			16:11:23
1	Al 396.153Radial†	29620.5	29279.0	26650	ug/L	26650	ppb	16:11:23
1	Ca 317.933Radial†	2405.6	2353.5	5862.1	ug/L	5862.1	ppb	16:11:43
1	Fe 238.204 Radial†	2267.5	2234.0	78372	ug/L	78372	ppb	16:11:43
1	K 766.490 Radial†	9399.9	7789.2	3414.5	ug/L	3414.5	ppb	16:11:23
1	Mg 279.077 IEC†	46.3	45.5	3535.4	ug/L	3535.4	ppb	16:11:43
1	Na 589.592 Radial†	142.1	310.5	839.52	ug/L	839.52	ppb	16:11:43
1	Sr 421.552†	3392.7	3337.6	51.366	ug/L	51.366	ppb	16:11:23
1	Sc 361.383	1084814.5	1084814.5	102.26	%			16:12:40
1	Y 371.029	1074371.9	1074371.9	125.92	%			16:12:40
1	Ag 328.068†	-5092.7	-5618.9	3.4139	ug/L	3.4139	ppb	16:12:46
1	As 188.979†	-42.9	-5.1	26.636	ug/L	26.636	ppb	16:13:06
1	B 249.677†	765.4	1130.0	7.1638	ug/L	7.1638	ppb	16:12:46
1	Ba 233.527†	69221.8	67670.4	344.51	ug/L	344.51	ppb	16:12:46
1	Be 313.107†	-1374.4	5972.2	6.2586	ug/L	6.2586	ppb	16:12:46
1	Cd 226.502†	899.5	1157.3	-0.5392	ug/L	-0.5392	ppb	16:13:06
1	Co 228.616†	1566.2	1622.1	15.169	ug/L	15.169	ppb	16:13:06
1	Cr 267.716†	22835.1	22359.9	192.17	ug/L	192.17	ppb	16:12:46
1	Cu 324.752†	21928.6	11253.6	32.297	ug/L	32.297	ppb	16:12:46
1	Mn 257.610†	2614155.8	2555658.2	2029.8	ug/L	2029.8	ppb	16:12:40
1	Mo 202.031†	309.0	270.4	16.202	ug/L	16.202	ppb	16:13:06
1	Ni 231.604†	6487.7	6196.3	99.300	ug/L	99.300	ppb	16:13:06
1	P 214.914†	2488.6	2096.7	682.39	ug/L	682.39	ppb	16:13:06
1	Pb 220.353†	753.6	766.1	55.260	ug/L	55.260	ppb	16:13:06
1	S 181.975 Axial†	249.9	176.5	144.17	ug/L	144.17	ppb	16:13:06
1	Sb 206.836†	94.0	46.5	0.0532	ug/L	0.0532	ppb	16:13:06
1	Se 196.026†	-789.9	-750.8	32.627	ug/L	32.627	ppb	16:13:06
1	Si 251.611†	333548.7	325630.2	6717.9	ug/L	6717.9	ppb	16:12:46
1	Sn 189.927†	43.8	37.4	5.4752	ug/L	5.4752	ppb	16:13:06
1	Ti 334.940†	1478187.8	1446687.0	1894.2	ug/L	1894.2	ppb	16:12:40
1	Tl 190.801†	-218.0	-151.8	-4.7723	ug/L	-4.7723	ppb	16:13:06
1	U 409.014†	-15162.7	-10993.4	-282.76	ug/L	-282.76	ppb	16:12:40
1	V 292.402†	12644.7	14018.5	66.328	ug/L	66.328	ppb	16:12:46
1	Zn 213.857†	66700.8	64106.9	348.77	ug/L	348.77	ppb	16:12:46
1	SiO2†	342989.8	334820.8	14792	ug/L	14792	ppb	16:14:13
2	Sc Radial	5554.7	5554.7	99.8	%			16:11:48
2	Y RADIAL	6007.7	6007.7	124.8	%			16:11:48
2	Al 396.153Radial†	29109.5	29254.6	26628	ug/L	26628	ppb	16:11:48
2	Ca 317.933Radial†	2408.9	2396.4	5969.0	ug/L	5969.0	ppb	16:12:08
2	Fe 238.204 Radial†	2272.1	2275.9	79841	ug/L	79841	ppb	16:12:08
2	K 766.490 Radial†	9265.3	7809.0	3424.3	ug/L	3424.3	ppb	16:11:48
2	Mg 279.077 IEC†	48.4	48.3	3756.1	ug/L	3756.1	ppb	16:12:08
2	Na 589.592 Radial†	143.4	314.1	849.23	ug/L	849.23	ppb	16:12:08
2	Sr 421.552†	3297.2	3297.8	50.752	ug/L	50.752	ppb	16:11:48
2	Sc 361.383	1088872.8	1088872.8	102.64	%			16:13:11
2	Y 371.029	1078357.9	1078357.9	126.39	%			16:13:11
2	Ag 328.068†	-5175.8	-5681.3	3.6392	ug/L	3.6392	ppb	16:13:16
2	As 188.979†	-31.9	5.8	29.463	ug/L	29.463	ppb	16:13:37
2	B 249.677†	909.2	1267.3	9.1082	ug/L	9.1082	ppb	16:13:16
2	Ba 233.527†	70304.1	68472.6	348.60	ug/L	348.60	ppb	16:13:16
2	Be 313.107†	-1150.3	6195.4	6.3163	ug/L	6.3163	ppb	16:13:16
2	Cd 226.502†	866.1	1121.5	-0.9808	ug/L	-0.9808	ppb	16:13:37
2	Co 228.616†	1569.1	1619.2	15.123	ug/L	15.123	ppb	16:13:37
2	Cr 267.716†	23276.9	22707.1	195.16	ug/L	195.16	ppb	16:13:16
2	Cu 324.752†	22094.3	11335.1	32.583	ug/L	32.583	ppb	16:13:16
2	Mn 257.610†	2618554.2	2550415.5	2025.9	ug/L	2025.9	ppb	16:13:11
2	Mo 202.031†	305.9	266.2	16.136	ug/L	16.136	ppb	16:13:37
2	Ni 231.604†	6483.4	6168.5	98.855	ug/L	98.855	ppb	16:13:37

2	P 214.914†	2503.8	2102.5	683.20	ug/L	683.20	ppb	16:13:37
2	Pb 220.353†	738.0	748.1	53.771	ug/L	53.771	ppb	16:13:37
2	S 181.975 Axial†	254.1	179.7	146.91	ug/L	146.91	ppb	16:13:37
2	Sb 206.836†	93.9	46.1	-0.0797	ug/L	-0.0797	ppb	16:13:37
2	Se 196.026†	-804.3	-762.0	34.145	ug/L	34.145	ppb	16:13:37
2	Si 251.611†	337266.8	328037.0	6767.6	ug/L	6767.6	ppb	16:13:16
2	Sn 189.927†	36.1	29.7	4.7150	ug/L	4.7150	ppb	16:13:37
2	Ti 334.940†	1479787.4	1442857.7	1889.2	ug/L	1889.2	ppb	16:13:11
2	Tl 190.801†	-218.4	-151.4	-4.7456	ug/L	-4.7456	ppb	16:13:37
2	U 409.014†	-15190.6	-10965.3	-282.25	ug/L	-282.25	ppb	16:13:11
2	V 292.402†	12772.9	14097.4	66.582	ug/L	66.582	ppb	16:13:16
2	Zn 213.857†	67729.2	64865.8	352.85	ug/L	352.85	ppb	16:13:16
2	SiO2†	340876.3	331511.5	14645	ug/L	14645	ppb	16:14:18
3	Sc Radial	5713.6	5713.6	103	%			16:12:13
3	Y RADIAL	6161.0	6161.0	127.9	%			16:12:13
3	Al 396.153Radial†	29701.6	29020.6	26415	ug/L	26415	ppb	16:12:13
3	Ca 317.933Radial†	2392.2	2313.0	5761.3	ug/L	5761.3	ppb	16:12:33
3	Fe 238.204 Radial†	2265.8	2206.5	77408	ug/L	77408	ppb	16:12:33
3	K 766.490 Radial†	9367.8	7650.8	3353.7	ug/L	3353.7	ppb	16:12:13
3	Mg 279.077 IEC†	47.9	46.5	3616.2	ug/L	3616.2	ppb	16:12:33
3	Na 589.592 Radial†	143.5	310.2	838.63	ug/L	838.63	ppb	16:12:33
3	Sr 421.552†	3410.5	3316.3	51.039	ug/L	51.039	ppb	16:12:13
3	Sc 361.383	1082805.8	1082805.8	102.07	%			16:13:42
3	Y 371.029	1071049.3	1071049.3	125.53	%			16:13:42
3	Ag 328.068†	-5206.6	-5739.8	2.6329	ug/L	2.6329	ppb	16:13:47
3	As 188.979†	-43.0	-5.2	26.387	ug/L	26.387	ppb	16:14:08
3	B 249.677†	798.4	1163.7	7.8167	ug/L	7.8167	ppb	16:13:47
3	Ba 233.527†	69887.7	68448.4	348.43	ug/L	348.43	ppb	16:13:47
3	Be 313.107†	-1205.3	6135.3	6.2991	ug/L	6.2991	ppb	16:13:47
3	Cd 226.502†	875.0	1134.9	-0.5922	ug/L	-0.5922	ppb	16:14:08
3	Co 228.616†	1551.8	1610.8	15.050	ug/L	15.050	ppb	16:14:08
3	Cr 267.716†	23105.5	22666.3	194.76	ug/L	194.76	ppb	16:13:47
3	Cu 324.752†	22116.0	11476.9	32.792	ug/L	32.792	ppb	16:13:47
3	Mn 257.610†	2610180.9	2556506.3	2030.4	ug/L	2030.4	ppb	16:13:42
3	Mo 202.031†	291.1	253.4	15.457	ug/L	15.457	ppb	16:14:08
3	Ni 231.604†	6490.0	6210.3	99.525	ug/L	99.525	ppb	16:14:08
3	P 214.914†	2505.2	2117.6	690.36	ug/L	690.36	ppb	16:14:08
3	Pb 220.353†	757.9	771.7	55.723	ug/L	55.723	ppb	16:14:08
3	S 181.975 Axial†	256.6	183.6	150.23	ug/L	150.23	ppb	16:14:08
3	Sb 206.836†	102.6	55.1	1.6734	ug/L	1.6734	ppb	16:14:08
3	Se 196.026†	-797.6	-759.8	26.317	ug/L	26.317	ppb	16:14:08
3	Si 251.611†	336053.5	328689.4	6781.1	ug/L	6781.1	ppb	16:13:47
3	Sn 189.927†	45.3	38.9	5.6133	ug/L	5.6133	ppb	16:14:08
3	Ti 334.940†	1472025.5	1443331.1	1889.8	ug/L	1889.8	ppb	16:13:42
3	Tl 190.801†	-218.7	-152.8	-4.9615	ug/L	-4.9615	ppb	16:14:08
3	U 409.014†	-15208.3	-11065.6	-284.44	ug/L	-284.44	ppb	16:13:42
3	V 292.402†	12811.1	14204.5	67.508	ug/L	67.508	ppb	16:13:47
3	Zn 213.857†	67435.4	64947.7	353.57	ug/L	353.57	ppb	16:13:47
3	SiO2†	339598.9	332120.8	14672	ug/L	14672	ppb	16:14:24

Mean Data: 232663001|882005|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1085497.7	102.32	%	0.291				0.28%
Sc Radial	5638.6	101	%	1.4				1.42%
Y 371.029	1074593.0	125.95	%	0.429				0.34%
Y RADIAL	6105.1	126.8	%	1.76				1.39%
Ag 328.068†	-5680.0	3.2286	ug/L	0.52810	3.2286	ppb	0.52810	16.36%
Al 396.153Radial†	29184.7	26564	ug/L	129.9	26564	ppb	129.9	0.49%
As 188.979†	-1.5	27.495	ug/L	1.7084	27.495	ppb	1.7084	6.21%
B 249.677†	1187.0	8.0296	ug/L	0.98953	8.0296	ppb	0.98953	12.32%
Ba 233.527†	68197.1	347.18	ug/L	2.315	347.18	ppb	2.315	0.67%
Be 313.107†	6101.0	6.2913	ug/L	0.02966	6.2913	ppb	0.02966	0.47%
Ca 317.933Radial†	2354.3	5864.1	ug/L	103.83	5864.1	ppb	103.83	1.77%
Cd 226.502†	1137.9	-0.7041	ug/L	0.24110	-0.7041	ppb	0.24110	34.24%
Co 228.616†	1617.4	15.114	ug/L	0.0597	15.114	ppb	0.0597	0.40%
Cr 267.716†	22577.8	194.03	ug/L	1.622	194.03	ppb	1.622	0.84%
Cu 324.752†	11355.2	32.557	ug/L	0.2487	32.557	ppb	0.2487	0.76%
Fe 238.204 Radial†	2238.8	78540	ug/L	1225.4	78540	ppb	1225.4	1.56%
K 766.490 Radial†	7749.7	3397.5	ug/L	38.22	3397.5	ppb	38.22	1.12%

Mg 279.077 IEC†	46.8	3635.9	ug/L	111.67	3635.9	ppb	111.67	3.07%
Mn 257.610†	2554193.3	2028.7	ug/L	2.46	2028.7	ppb	2.46	0.12%
Mo 202.031†	263.4	15.932	ug/L	0.4126	15.932	ppb	0.4126	2.59%
Na 589.592 Radial†	311.6	842.46	ug/L	5.879	842.46	ppb	5.879	0.70%
Ni 231.604†	6191.7	99.226	ug/L	0.3410	99.226	ppb	0.3410	0.34%
P 214.914†	2105.6	685.31	ug/L	4.388	685.31	ppb	4.388	0.64%
Pb 220.353†	762.0	54.918	ug/L	1.0198	54.918	ppb	1.0198	1.86%
S 181.975 Axial†	180.0	147.10	ug/L	3.035	147.10	ppb	3.035	2.06%
Sb 206.836†	49.2	0.5490	ug/L	0.97607	0.5490	ppb	0.97607	177.80%
Se 196.026†	-757.6	31.030	ug/L	4.1512	31.030	ppb	4.1512	13.38%
Si 251.611†	327452.2	6755.6	ug/L	33.26	6755.6	ppb	33.26	0.49%
Sn 189.927†	35.3	5.2678	ug/L	0.48369	5.2678	ppb	0.48369	9.18%
Sr 421.552†	3317.2	51.052	ug/L	0.3074	51.052	ppb	0.3074	0.60%
Ti 334.940†	1444291.9	1891.1	ug/L	2.73	1891.1	ppb	2.73	0.14%
Tl 190.801†	-152.0	-4.8265	ug/L	0.11768	-4.8265	ppb	0.11768	2.44%
U 409.014†	-11008.1	-283.15	ug/L	1.145	-283.15	ppb	1.145	0.40%
V 292.402†	14106.8	66.806	ug/L	0.6209	66.806	ppb	0.6209	0.93%
Zn 213.857†	64640.1	351.73	ug/L	2.586	351.73	ppb	2.586	0.74%
SiO2†	332817.7	14703	ug/L	77.8	14703	ppb	77.8	0.53%

Sequence No.: 22
Sample ID: 1201873205|882005|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 53
Date Collected: 7/8/2009 16:16:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873205|882005|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5638.0	5638.0	101	%			16:18:27
1	Y RADIAL	6002.1	6002.1	124.6	%			16:18:27
1	Al 396.153Radial†	29337.0	29048.4	26441	ug/L	26441	ppb	16:18:27
1	Ca 317.933Radial†	2379.1	2331.3	5806.8	ug/L	5806.8	ppb	16:18:47
1	Fe 238.204 Radial†	2116.7	2088.9	73282	ug/L	73282	ppb	16:18:47
1	K 766.490 Radial†	9363.9	7769.2	3403.0	ug/L	3403.0	ppb	16:18:27
1	Mg 279.077 IEC†	50.4	49.6	3865.2	ug/L	3865.2	ppb	16:18:47
1	Na 589.592 Radial†	140.7	309.3	836.38	ug/L	836.38	ppb	16:18:47
1	Sr 421.552†	3363.3	3314.2	51.007	ug/L	51.007	ppb	16:18:27
1	Sc 361.383	1072133.9	1072133.9	101.06	%			16:19:44
1	Y 371.029	1046925.9	1046925.9	122.70	%			16:19:44
1	Ag 328.068†	-4777.6	-5366.0	2.7518	ug/L	2.7518	ppb	16:19:50
1	As 188.979†	-46.8	-9.4	24.251	ug/L	24.251	ppb	16:20:10
1	B 249.677†	593.3	968.5	5.3223	ug/L	5.3223	ppb	16:19:50
1	Ba 233.527†	65067.2	64360.1	327.63	ug/L	327.63	ppb	16:19:50
1	Be 313.107†	-4806.3	2560.3	5.0684	ug/L	5.0684	ppb	16:19:50
1	Cd 226.502†	802.1	1071.3	-0.5965	ug/L	-0.5965	ppb	16:20:10
1	Co 228.616†	1539.7	1613.9	15.258	ug/L	15.258	ppb	16:20:10
1	Cr 267.716†	17163.1	17011.6	146.51	ug/L	146.51	ppb	16:19:50
1	Cu 324.752†	21309.5	10894.6	31.117	ug/L	31.117	ppb	16:19:50
1	Mn 257.610†	2477238.1	2450414.0	1946.0	ug/L	1946.0	ppb	16:19:44
1	Mo 202.031†	208.1	174.1	11.999	ug/L	11.999	ppb	16:20:10
1	Ni 231.604†	4855.7	4656.5	74.621	ug/L	74.621	ppb	16:20:10
1	P 214.914†	2099.3	1740.3	560.60	ug/L	560.60	ppb	16:20:10
1	Pb 220.353†	686.3	708.2	51.352	ug/L	51.352	ppb	16:20:10
1	S 181.975 Axial†	272.1	201.4	165.25	ug/L	165.25	ppb	16:20:10
1	Sb 206.836†	87.6	41.3	0.1174	ug/L	0.1174	ppb	16:20:10
1	Se 196.026†	-737.5	-708.2	28.604	ug/L	28.604	ppb	16:20:10
1	Si 251.611†	322369.1	318426.0	6569.4	ug/L	6569.4	ppb	16:19:50
1	Sn 189.927†	26.7	20.9	3.6721	ug/L	3.6721	ppb	16:20:10
1	Ti 334.940†	1417950.0	1404178.8	1838.6	ug/L	1838.6	ppb	16:19:44
1	Tl 190.801†	-220.5	-156.8	-6.3587	ug/L	-6.3587	ppb	16:20:10
1	U 409.014†	-13813.4	-9833.7	-253.28	ug/L	-253.28	ppb	16:19:44
1	V 292.402†	12352.4	13875.5	66.303	ug/L	66.303	ppb	16:19:50
1	Zn 213.857†	63215.9	61430.0	334.52	ug/L	334.52	ppb	16:19:50
1	SiO2†	324957.1	320944.5	14179	ug/L	14179	ppb	16:21:17
2	Sc Radial	5722.2	5722.2	103	%			16:18:52
2	Y RADIAL	6053.7	6053.7	125.7	%			16:18:52
2	Al 396.153Radial†	29550.3	28829.6	26241	ug/L	26241	ppb	16:18:52
2	Ca 317.933Radial†	2390.2	2307.5	5747.6	ug/L	5747.6	ppb	16:19:12
2	Fe 238.204 Radial†	2131.5	2072.5	72707	ug/L	72707	ppb	16:19:12
2	K 766.490 Radial†	9379.0	7648.0	3350.0	ug/L	3350.0	ppb	16:18:52
2	Mg 279.077 IEC†	50.2	48.6	3790.2	ug/L	3790.2	ppb	16:19:12
2	Na 589.592 Radial†	141.4	307.9	832.49	ug/L	832.49	ppb	16:19:12
2	Sr 421.552†	3382.0	3283.5	50.533	ug/L	50.533	ppb	16:18:52
2	Sc 361.383	1085336.9	1085336.9	102.31	%			16:20:15
2	Y 371.029	1057194.1	1057194.1	123.91	%			16:20:15
2	Ag 328.068†	-4817.9	-5347.9	2.6361	ug/L	2.6361	ppb	16:20:21
2	As 188.979†	-47.3	-9.4	24.136	ug/L	24.136	ppb	16:20:41
2	B 249.677†	635.2	1002.4	5.9270	ug/L	5.9270	ppb	16:20:21
2	Ba 233.527†	65035.2	63545.6	323.50	ug/L	323.50	ppb	16:20:21
2	Be 313.107†	-4946.0	2481.6	5.0419	ug/L	5.0419	ppb	16:20:21
2	Cd 226.502†	803.8	1063.3	-0.5900	ug/L	-0.5900	ppb	16:20:41
2	Co 228.616†	1549.4	1604.9	15.155	ug/L	15.155	ppb	16:20:41
2	Cr 267.716†	17199.7	16840.7	145.04	ug/L	145.04	ppb	16:20:21
2	Cu 324.752†	21484.0	10808.7	30.872	ug/L	30.872	ppb	16:20:21
2	Mn 257.610†	2505888.0	2448599.4	1944.5	ug/L	1944.5	ppb	16:20:15
2	Mo 202.031†	216.3	179.7	12.181	ug/L	12.181	ppb	16:20:41
2	Ni 231.604†	4782.9	4526.9	72.543	ug/L	72.543	ppb	16:20:41

2	P 214.914†	2109.6	1725.1	555.65	ug/L	555.65 ppb	16:20:41
2	Pb 220.353†	686.3	700.0	50.749	ug/L	50.749 ppb	16:20:41
2	S 181.975 Axial†	290.2	215.9	177.57	ug/L	177.57 ppb	16:20:41
2	Sb 206.836†	92.4	44.9	0.8486	ug/L	0.8486 ppb	16:20:41
2	Se 196.026†	-726.6	-688.6	32.931	ug/L	32.931 ppb	16:20:41
2	Si 251.611†	322638.8	314809.1	6494.7	ug/L	6494.7 ppb	16:20:21
2	Sn 189.927†	23.2	17.2	3.2730	ug/L	3.2730 ppb	16:20:41
2	Ti 334.940†	1434725.0	1403507.6	1837.7	ug/L	1837.7 ppb	16:20:15
2	Tl 190.801†	-222.2	-155.8	-6.2016	ug/L	-6.2016 ppb	16:20:41
2	U 409.014†	-13943.1	-9794.2	-252.22	ug/L	-252.22 ppb	16:20:15
2	V 292.402†	12387.0	13760.7	65.735	ug/L	65.735 ppb	16:20:21
2	Zn 213.857†	63410.5	60859.3	331.41	ug/L	331.41 ppb	16:20:21
2	SiO2†	326179.9	318228.2	14059	ug/L	14059 ppb	16:21:22
3	Sc Radial	5783.7	5783.7	104	%		16:19:17
3	Y RADIAL	6162.6	6162.6	128.0	%		16:19:17
3	Al 396.153Radial†	29964.6	28922.9	26326	ug/L	26326 ppb	16:19:17
3	Ca 317.933Radial†	2380.7	2273.7	5663.3	ug/L	5663.3 ppb	16:19:37
3	Fe 238.204 Radial†	2117.1	2036.6	71449	ug/L	71449 ppb	16:19:37
3	K 766.490 Radial†	9532.4	7698.6	3371.0	ug/L	3371.0 ppb	16:19:17
3	Mg 279.077 IEC†	50.2	48.2	3752.6	ug/L	3752.6 ppb	16:19:37
3	Na 589.592 Radial†	126.9	292.5	790.99	ug/L	790.99 ppb	16:19:37
3	Sr 421.552†	3429.0	3293.7	50.693	ug/L	50.693 ppb	16:19:17
3	Sc 361.383	1076729.1	1076729.1	101.49	%		16:20:46
3	Y 371.029	1049855.4	1049855.4	123.05	%		16:20:46
3	Ag 328.068†	-4713.1	-5282.3	2.4863	ug/L	2.4863 ppb	16:20:52
3	As 188.979†	-53.0	-15.3	22.490	ug/L	22.490 ppb	16:21:12
3	B 249.677†	630.3	1002.6	6.0960	ug/L	6.0960 ppb	16:20:52
3	Ba 233.527†	63627.6	62666.9	319.02	ug/L	319.02 ppb	16:20:52
3	Be 313.107†	-4766.4	2620.0	5.0825	ug/L	5.0825 ppb	16:20:52
3	Cd 226.502†	813.1	1078.8	-0.3247	ug/L	-0.3247 ppb	16:21:12
3	Co 228.616†	1532.4	1600.2	15.116	ug/L	15.116 ppb	16:21:12
3	Cr 267.716†	16850.3	16630.9	143.23	ug/L	143.23 ppb	16:20:52
3	Cu 324.752†	20861.4	10363.1	29.699	ug/L	29.699 ppb	16:20:52
3	Mn 257.610†	2485050.7	2447650.5	1943.6	ug/L	1943.6 ppb	16:20:46
3	Mo 202.031†	219.9	184.9	12.306	ug/L	12.306 ppb	16:21:12
3	Ni 231.604†	4831.3	4611.9	73.906	ug/L	73.906 ppb	16:21:12
3	P 214.914†	2111.2	1743.2	563.26	ug/L	563.26 ppb	16:21:12
3	Pb 220.353†	680.7	699.8	50.872	ug/L	50.872 ppb	16:21:12
3	S 181.975 Axial†	273.8	201.9	165.74	ug/L	165.74 ppb	16:21:12
3	Sb 206.836†	92.3	45.6	1.0043	ug/L	1.0043 ppb	16:21:12
3	Se 196.026†	-735.1	-702.7	23.949	ug/L	23.949 ppb	16:21:12
3	Si 251.611†	313974.0	308793.0	6370.6	ug/L	6370.6 ppb	16:20:52
3	Sn 189.927†	21.1	15.3	3.0420	ug/L	3.0420 ppb	16:21:12
3	Ti 334.940†	1422559.3	1402732.4	1836.7	ug/L	1836.7 ppb	16:20:46
3	Tl 190.801†	-202.6	-138.2	-3.2502	ug/L	-3.2502 ppb	16:21:12
3	U 409.014†	-13770.5	-9733.0	-250.55	ug/L	-250.55 ppb	16:20:46
3	V 292.402†	12059.7	13535.0	64.633	ug/L	64.633 ppb	16:20:52
3	Zn 213.857†	62033.6	59998.3	326.73	ug/L	326.73 ppb	16:20:52
3	SiO2†	323590.4	318225.7	14058	ug/L	14058 ppb	16:21:28

Mean Data: 1201873205|882005|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1078066.6	101.62	%	0.632				0.62%
Sc Radial	5714.7	103	%	1.3				1.28%
Y 371.029	1051325.1	123.22	%	0.620				0.50%
Y RADIAL	6072.8	126.1	%	1.70				1.35%
Ag 328.068†	-5332.1	2.6247	ug/L	0.13310	2.6247	ppb	0.13310	5.07%
Al 396.153Radial†	28933.6	26336	ug/L	99.9	26336	ppb	99.9	0.38%
As 188.979†	-11.3	23.626	ug/L	0.9855	23.626	ppb	0.9855	4.17%
B 249.677†	991.2	5.7818	ug/L	0.40676	5.7818	ppb	0.40676	7.04%
Ba 233.527†	63524.2	323.38	ug/L	4.310	323.38	ppb	4.310	1.33%
Be 313.107†	2554.0	5.0643	ug/L	0.02064	5.0643	ppb	0.02064	0.41%
Ca 317.933Radial†	2304.1	5739.2	ug/L	72.11	5739.2	ppb	72.11	1.26%
Cd 226.502†	1071.1	-0.5037	ug/L	0.15510	-0.5037	ppb	0.15510	30.79%
Co 228.616†	1606.3	15.176	ug/L	0.0736	15.176	ppb	0.0736	0.48%
Cr 267.716†	16827.7	144.92	ug/L	1.644	144.92	ppb	1.644	1.13%
Cu 324.752†	10688.8	30.562	ug/L	0.7575	30.562	ppb	0.7575	2.48%
Fe 238.204 Radial†	2066.0	72480	ug/L	937.3	72480	ppb	937.3	1.29%
K 766.490 Radial†	7705.3	3374.7	ug/L	26.70	3374.7	ppb	26.70	0.79%

Mg 279.077 IEC†	48.8	3802.7	ug/L	57.31	3802.7	ppb	57.31	1.51%
Mn 257.610†	2448888.0	1944.7	ug/L	1.22	1944.7	ppb	1.22	0.06%
Mo 202.031†	179.6	12.162	ug/L	0.1545	12.162	ppb	0.1545	1.27%
Na 589.592 Radial†	303.3	819.95	ug/L	25.158	819.95	ppb	25.158	3.07%
Ni 231.604†	4598.4	73.690	ug/L	1.0556	73.690	ppb	1.0556	1.43%
P 214.914†	1736.2	559.84	ug/L	3.863	559.84	ppb	3.863	0.69%
Pb 220.353†	702.6	50.991	ug/L	0.3184	50.991	ppb	0.3184	0.62%
S 181.975 Axial†	206.4	169.52	ug/L	6.972	169.52	ppb	6.972	4.11%
Sb 206.836†	43.9	0.6568	ug/L	0.47355	0.6568	ppb	0.47355	72.10%
Se 196.026†	-699.8	28.495	ug/L	4.4917	28.495	ppb	4.4917	15.76%
Si 251.611†	314009.4	6478.2	ug/L	100.41	6478.2	ppb	100.41	1.55%
Sn 189.927†	17.8	3.3290	ug/L	0.31878	3.3290	ppb	0.31878	9.58%
Sr 421.552†	3297.1	50.744	ug/L	0.2408	50.744	ppb	0.2408	0.47%
Ti 334.940†	1403472.9	1837.7	ug/L	0.95	1837.7	ppb	0.95	0.05%
Tl 190.801†	-150.3	-5.2701	ug/L	1.75110	-5.2701	ppb	1.75110	33.23%
U 409.014†	-9787.0	-252.02	ug/L	1.377	-252.02	ppb	1.377	0.55%
V 292.402†	13723.7	65.557	ug/L	0.8490	65.557	ppb	0.8490	1.30%
Zn 213.857†	60762.5	330.89	ug/L	3.920	330.89	ppb	3.920	1.18%
SiO2†	319132.8	14099	ug/L	69.3	14099	ppb	69.3	0.49%

Sequence No.: 23
Sample ID: 1201873206|882005|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 54
Date Collected: 7/8/2009 16:23:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873206|882005|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5495.1	5495.1	98.7	%			16:25:31
1	Y RADIAL	6076.7	6076.7	126.2	%			16:25:31
1	Al 396.153Radial†	73418.3	74441.7	67739	ug/L	67739	ppb	16:25:31
1	Ca 317.933Radial†	4918.7	4964.2	12365	ug/L	12365	ppb	16:25:31
1	Fe 238.204 Radial†	2569.2	2601.4	91278	ug/L	91278	ppb	16:25:51
1	K 766.490 Radial†	25796.6	24650.7	10736	ug/L	10736	ppb	16:25:31
1	Mg 279.077 IEC†	146.2	147.9	11642	ug/L	11642	ppb	16:25:51
1	Na 589.592 Radial†	1793.3	1986.4	5371.1	ug/L	5371.1	ppb	16:25:31
1	Sr 421.552†	34463.4	34895.1	537.50	ug/L	537.50	ppb	16:25:31
1	Sc 361.383	1079220.1	1079220.1	101.73	%			16:26:50
1	Y 371.029	1088343.2	1088343.2	127.56	%			16:26:50
1	Ag 328.068†	118629.3	115975.0	490.32	ug/L	490.32	ppb	16:26:50
1	As 188.979†	1991.0	1994.1	504.21	ug/L	504.21	ppb	16:26:55
1	B 249.677†	30998.3	30853.1	467.50	ug/L	467.50	ppb	16:26:50
1	Ba 233.527†	181784.5	178671.4	907.74	ug/L	907.74	ppb	16:26:50
1	Be 313.107†	1573673.6	1554250.8	490.08	ug/L	490.08	ppb	16:26:50
1	Cd 226.502†	65387.0	64553.6	472.40	ug/L	472.40	ppb	16:26:55
1	Co 228.616†	39639.7	39056.6	480.34	ug/L	480.34	ppb	16:26:55
1	Cr 267.716†	76047.8	74784.3	639.52	ug/L	639.52	ppb	16:26:50
1	Cu 324.752†	231290.3	217169.1	541.09	ug/L	541.09	ppb	16:26:50
1	Mn 257.610†	3103865.9	3050299.6	2422.3	ug/L	2422.3	ppb	16:26:50
1	Mo 202.031†	11947.1	11712.3	475.08	ug/L	475.08	ppb	16:26:55
1	Ni 231.604†	35437.8	34687.4	555.65	ug/L	555.65	ppb	16:26:55
1	P 214.914†	4104.5	3697.8	1176.8	ug/L	1176.8	ppb	16:26:55
1	Pb 220.353†	7388.2	7291.7	552.00	ug/L	552.00	ppb	16:26:55
1	S 181.975 Axial†	6138.5	5966.4	5037.0	ug/L	5037.0	ppb	16:26:55
1	Sb 206.836†	2498.3	2410.4	468.25	ug/L	468.25	ppb	16:26:55
1	Se 196.026†	558.2	570.4	511.28	ug/L	511.28	ppb	16:26:55
1	Si 251.611†	626315.2	615113.1	12679	ug/L	12679	ppb	16:26:50
1	Sn 189.927†	4686.3	4601.2	480.43	ug/L	480.43	ppb	16:26:55
1	Ti 334.940†	2275417.2	2237863.8	2930.0	ug/L	2930.0	ppb	16:26:50
1	Tl 190.801†	2598.3	2615.6	466.25	ug/L	466.25	ppb	16:26:55
1	U 409.014†	4234.7	7997.5	185.99	ug/L	185.99	ppb	16:26:50
1	V 292.402†	100414.0	100360.6	559.83	ug/L	559.83	ppb	16:26:50
1	Zn 213.857†	155893.1	152121.8	834.94	ug/L	834.94	ppb	16:26:50
1	SiO2†	632625.3	621273.7	27423	ug/L	27423	ppb	16:27:26
2	Sc Radial	5623.2	5623.2	101	%			16:25:56
2	Y RADIAL	6180.6	6180.6	128.3	%			16:25:56
2	Al 396.153Radial†	74419.9	73739.6	67100	ug/L	67100	ppb	16:25:56
2	Ca 317.933Radial†	5022.2	4953.1	12337	ug/L	12337	ppb	16:25:56
2	Fe 238.204 Radial†	2578.7	2551.6	89529	ug/L	89529	ppb	16:26:16
2	K 766.490 Radial†	26123.1	24378.9	10617	ug/L	10617	ppb	16:25:56
2	Mg 279.077 IEC†	145.6	143.9	11330	ug/L	11330	ppb	16:26:16
2	Na 589.592 Radial†	1800.5	1952.3	5278.7	ug/L	5278.7	ppb	16:25:56
2	Sr 421.552†	35011.5	34642.6	533.61	ug/L	533.61	ppb	16:25:56
2	Sc 361.383	1074972.7	1074972.7	101.33	%			16:27:03
2	Y 371.029	1083680.2	1083680.2	127.01	%			16:27:03
2	Ag 328.068†	118177.0	115989.4	489.82	ug/L	489.82	ppb	16:27:03
2	As 188.979†	2023.6	2034.0	513.22	ug/L	513.22	ppb	16:27:08
2	B 249.677†	30980.3	30955.7	469.31	ug/L	469.31	ppb	16:27:03
2	Ba 233.527†	181246.7	178846.7	908.59	ug/L	908.59	ppb	16:27:03
2	Be 313.107†	1567022.9	1553799.5	489.94	ug/L	489.94	ppb	16:27:03
2	Cd 226.502†	65818.1	65233.0	477.69	ug/L	477.69	ppb	16:27:08
2	Co 228.616†	40027.6	39593.4	487.06	ug/L	487.06	ppb	16:27:08
2	Cr 267.716†	75757.8	74793.4	639.56	ug/L	639.56	ppb	16:27:03
2	Cu 324.752†	230545.1	217332.0	541.39	ug/L	541.39	ppb	16:27:03
2	Mn 257.610†	3094161.9	3052778.4	2424.0	ug/L	2424.0	ppb	16:27:03
2	Mo 202.031†	11974.0	11785.3	477.88	ug/L	477.88	ppb	16:27:08
2	Ni 231.604†	35631.5	35016.3	560.92	ug/L	560.92	ppb	16:27:08

2	P 214.914†	4070.3	3680.0	1171.7 ug/L	1171.7 ppb	16:27:08
2	Pb 220.353†	7370.0	7302.5	552.85 ug/L	552.85 ppb	16:27:08
2	S 181.975 Axial†	6209.3	6060.1	5116.4 ug/L	5116.4 ppb	16:27:08
2	Sb 206.836†	2514.3	2435.9	473.36 ug/L	473.36 ppb	16:27:08
2	Se 196.026†	593.3	607.2	517.08 ug/L	517.08 ppb	16:27:08
2	Si 251.611†	625973.4	617208.4	12723 ug/L	12723 ppb	16:27:03
2	Sn 189.927†	4704.6	4637.5	484.17 ug/L	484.17 ppb	16:27:08
2	Ti 334.940†	2267079.6	2238473.3	2930.8 ug/L	2930.8 ppb	16:27:03
2	Tl 190.801†	2612.5	2639.6	470.29 ug/L	470.29 ppb	16:27:08
2	U 409.014†	4258.6	8037.5	187.19 ug/L	187.19 ppb	16:27:03
2	V 292.402†	100050.1	100391.5	560.28 ug/L	560.28 ppb	16:27:03
2	Zn 213.857†	155476.9	152316.6	836.19 ug/L	836.19 ppb	16:27:03
2	SiO2†	627046.5	618225.2	27288 ug/L	27288 ppb	16:27:31
3	Sc Radial	5591.6	5591.6	100 %		16:26:22
3	Y RADIAL	6143.3	6143.3	127.6 %		16:26:22
3	Al 396.153Radial†	74020.3	73757.8	67117 ug/L	67117 ppb	16:26:22
3	Ca 317.933Radial†	4985.6	4944.8	12317 ug/L	12317 ppb	16:26:22
3	Fe 238.204 Radial†	2583.5	2570.7	90201 ug/L	90201 ppb	16:26:42
3	K 766.490 Radial†	26024.6	24426.8	10638 ug/L	10638 ppb	16:26:22
3	Mg 279.077 IEC†	144.8	144.0	11335 ug/L	11335 ppb	16:26:42
3	Na 589.592 Radial†	1784.3	1946.2	5262.3 ug/L	5262.3 ppb	16:26:22
3	Sr 421.552†	34579.8	34408.6	530.00 ug/L	530.00 ppb	16:26:22
3	Sc 361.383	1083589.9	1083589.9	102.14 %		16:27:15
3	Y 371.029	1090717.7	1090717.7	127.84 %		16:27:15
3	Ag 328.068†	119040.6	115907.4	489.71 ug/L	489.71 ppb	16:27:15
3	As 188.979†	1981.8	1977.1	500.04 ug/L	500.04 ppb	16:27:20
3	B 249.677†	31255.5	30982.0	469.66 ug/L	469.66 ppb	16:27:15
3	Ba 233.527†	182818.1	178962.8	909.19 ug/L	909.19 ppb	16:27:15
3	Be 313.107†	1578158.1	1552403.0	489.52 ug/L	489.52 ppb	16:27:15
3	Cd 226.502†	65410.2	64317.1	470.75 ug/L	470.75 ppb	16:27:20
3	Co 228.616†	39617.7	38877.9	478.12 ug/L	478.12 ppb	16:27:20
3	Cr 267.716†	76313.0	74742.4	639.14 ug/L	639.14 ppb	16:27:15
3	Cu 324.752†	232658.4	217591.6	542.07 ug/L	542.07 ppb	16:27:15
3	Mn 257.610†	3119518.7	3053320.3	2424.5 ug/L	2424.5 ppb	16:27:15
3	Mo 202.031†	11887.2	11606.3	470.76 ug/L	470.76 ppb	16:27:20
3	Ni 231.604†	35442.1	34551.1	553.47 ug/L	553.47 ppb	16:27:20
3	P 214.914†	4087.6	3665.0	1165.7 ug/L	1165.7 ppb	16:27:20
3	Pb 220.353†	7270.3	7147.1	541.12 ug/L	541.12 ppb	16:27:20
3	S 181.975 Axial†	6138.8	5942.3	5016.7 ug/L	5016.7 ppb	16:27:20
3	Sb 206.836†	2502.4	2404.5	466.95 ug/L	466.95 ppb	16:27:20
3	Se 196.026†	580.7	590.1	513.88 ug/L	513.88 ppb	16:27:20
3	Si 251.611†	630830.0	617050.5	12720 ug/L	12720 ppb	16:27:15
3	Sn 189.927†	4676.5	4573.1	477.48 ug/L	477.48 ppb	16:27:20
3	Ti 334.940†	2287357.1	2240533.4	2933.5 ug/L	2933.5 ppb	16:27:15
3	Tl 190.801†	2554.2	2562.1	457.26 ug/L	457.26 ppb	16:27:20
3	U 409.014†	4404.2	8146.6	189.82 ug/L	189.82 ppb	16:27:15
3	V 292.402†	100967.5	100504.4	560.74 ug/L	560.74 ppb	16:27:15
3	Zn 213.857†	156757.0	152349.6	836.35 ug/L	836.35 ppb	16:27:15
3	SiO2†	634497.8	620599.1	27393 ug/L	27393 ppb	16:27:37

Mean Data: 1201873206|882005|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1079260.9	101.73	%	0.406				0.40%
Sc Radial	5570.0	100	%	1.2				1.20%
Y 371.029	1087580.4	127.47	%	0.420				0.33%
Y RADIAL	6133.5	127.4	%	1.09				0.86%
Ag 328.068†	115957.3	489.95	ug/L	0.327	489.95	ppb	0.327	0.07%
Al 396.153Radial†	73979.7	67319	ug/L	364.3	67319	ppb	364.3	0.54%
As 188.979†	2001.7	505.82	ug/L	6.733	505.82	ppb	6.733	1.33%
B 249.677†	30930.3	468.82	ug/L	1.160	468.82	ppb	1.160	0.25%
Ba 233.527†	178827.0	908.51	ug/L	0.729	908.51	ppb	0.729	0.08%
Be 313.107†	1553484.5	489.85	ug/L	0.295	489.85	ppb	0.295	0.06%
Ca 317.933Radial†	4954.0	12340	ug/L	24.2	12340	ppb	24.2	0.20%
Cd 226.502†	64701.3	473.61	ug/L	3.624	473.61	ppb	3.624	0.77%
Co 228.616†	39176.0	481.84	ug/L	4.657	481.84	ppb	4.657	0.97%
Cr 267.716†	74773.3	639.41	ug/L	0.232	639.41	ppb	0.232	0.04%
Cu 324.752†	217364.2	541.52	ug/L	0.502	541.52	ppb	0.502	0.09%
Fe 238.204 Radial†	2574.6	90336	ug/L	882.3	90336	ppb	882.3	0.98%
K 766.490 Radial†	24485.4	10664	ug/L	63.6	10664	ppb	63.6	0.60%

Mg 279.077 IEC†	145.2	11436	ug/L	179.1	11436	ppb	179.1	1.57%
Mn 257.610†	3052132.8	2423.6	ug/L	1.18	2423.6	ppb	1.18	0.05%
Mo 202.031†	11701.3	474.57	ug/L	3.585	474.57	ppb	3.585	0.76%
Na 589.592 Radial†	1961.6	5304.0	ug/L	58.65	5304.0	ppb	58.65	1.11%
Ni 231.604†	34751.6	556.68	ug/L	3.830	556.68	ppb	3.830	0.69%
P 214.914†	3680.9	1171.4	ug/L	5.58	1171.4	ppb	5.58	0.48%
Pb 220.353†	7247.1	548.66	ug/L	6.540	548.66	ppb	6.540	1.19%
S 181.975 Axial†	5989.6	5056.7	ug/L	52.68	5056.7	ppb	52.68	1.04%
Sb 206.836†	2416.9	469.52	ug/L	3.391	469.52	ppb	3.391	0.72%
Se 196.026†	589.2	514.08	ug/L	2.906	514.08	ppb	2.906	0.57%
Si 251.611†	616457.4	12707	ug/L	24.1	12707	ppb	24.1	0.19%
Sn 189.927†	4603.9	480.70	ug/L	3.353	480.70	ppb	3.353	0.70%
Sr 421.552†	34648.8	533.70	ug/L	3.748	533.70	ppb	3.748	0.70%
Ti 334.940†	2238956.8	2931.4	ug/L	1.83	2931.4	ppb	1.83	0.06%
Tl 190.801†	2605.8	464.60	ug/L	6.669	464.60	ppb	6.669	1.44%
U 409.014†	8060.5	187.67	ug/L	1.960	187.67	ppb	1.960	1.04%
V 292.402†	100418.8	560.28	ug/L	0.454	560.28	ppb	0.454	0.08%
Zn 213.857†	152262.7	835.82	ug/L	0.773	835.82	ppb	0.773	0.09%
SiO2†	620032.7	27368	ug/L	70.8	27368	ppb	70.8	0.26%

Sequence No.: 24
Sample ID: 1201873208|882005|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 55
Date Collected: 7/8/2009 16:29:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873208|882005|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5566.5	5566.5	100	%			16:31:40
1	Y RADIAL	6112.8	6112.8	126.9	%			16:31:40
1	Al 396.153Radial†	52747.5	52823.8	48062	ug/L	48062	ppb	16:31:40
1	Ca 317.933Radial†	3932.8	3914.6	9750.8	ug/L	9750.8	ppb	16:31:40
1	Fe 238.204 Radial†	2220.4	2219.4	77876	ug/L	77876	ppb	16:32:00
1	K 766.490 Radial†	22147.8	20668.1	8998.7	ug/L	8998.7	ppb	16:31:40
1	Mg 279.077 IEC†	119.9	119.7	9420.7	ug/L	9420.7	ppb	16:32:00
1	Na 589.592 Radial†	1864.8	2034.7	5501.5	ug/L	5501.5	ppb	16:31:40
1	Sr 421.552†	35019.0	35003.0	539.19	ug/L	539.19	ppb	16:31:40
1	Sc 361.383	1074493.3	1074493.3	101.28	%			16:32:59
1	Y 371.029	1078169.4	1078169.4	126.37	%			16:32:59
1	Ag 328.068†	119436.0	117284.6	491.11	ug/L	491.11	ppb	16:32:59
1	As 188.979†	1972.1	1984.0	495.98	ug/L	495.98	ppb	16:33:19
1	B 249.677†	31456.3	31439.3	478.45	ug/L	478.45	ppb	16:32:59
1	Ba 233.527†	154329.2	152350.0	774.14	ug/L	774.14	ppb	16:32:59
1	Be 313.107†	1569075.7	1556516.3	489.64	ug/L	489.64	ppb	16:32:59
1	Cd 226.502†	66129.4	65569.4	481.58	ug/L	481.58	ppb	16:32:59
1	Co 228.616†	38376.5	37980.8	468.13	ug/L	468.13	ppb	16:33:19
1	Cr 267.716†	75153.5	74230.2	634.49	ug/L	634.49	ppb	16:32:59
1	Cu 324.752†	227766.1	214689.7	534.20	ug/L	534.20	ppb	16:32:59
1	Mn 257.610†	2933722.4	2895733.6	2298.4	ug/L	2298.4	ppb	16:32:59
1	Mo 202.031†	11949.3	11766.2	476.31	ug/L	476.31	ppb	16:33:19
1	Ni 231.604†	35335.6	34739.7	556.50	ug/L	556.50	ppb	16:32:59
1	P 214.914†	3655.0	3271.8	1031.5	ug/L	1031.5	ppb	16:33:19
1	Pb 220.353†	7163.0	7101.3	535.15	ug/L	535.15	ppb	16:33:19
1	S 181.975 Axial†	6077.3	5932.5	5012.2	ug/L	5012.2	ppb	16:33:19
1	Sb 206.836†	2578.8	2500.7	487.99	ug/L	487.99	ppb	16:33:19
1	Se 196.026†	764.6	776.5	530.18	ug/L	530.18	ppb	16:33:19
1	Si 251.611†	487275.1	480542.6	9903.1	ug/L	9903.1	ppb	16:32:59
1	Sn 189.927†	4723.5	4658.2	486.13	ug/L	486.13	ppb	16:33:19
1	Ti 334.940†	1883141.8	1860397.1	2435.7	ug/L	2435.7	ppb	16:32:59
1	Tl 190.801†	2612.3	2640.6	467.40	ug/L	467.40	ppb	16:33:19
1	U 409.014†	5020.8	8792.0	207.36	ug/L	207.36	ppb	16:32:59
1	V 292.402†	94969.2	95419.0	534.21	ug/L	534.21	ppb	16:32:59
1	Zn 213.857†	148609.9	145605.1	800.07	ug/L	800.07	ppb	16:32:59
1	SiO2†	484054.7	477320.8	21063	ug/L	21063	ppb	16:34:20
2	Sc Radial	5643.7	5643.7	101	%			16:32:05
2	Y RADIAL	6172.8	6172.8	128.2	%			16:32:05
2	Al 396.153Radial†	53112.7	52462.9	47733	ug/L	47733	ppb	16:32:05
2	Ca 317.933Radial†	3959.2	3887.0	9681.8	ug/L	9681.8	ppb	16:32:05
2	Fe 238.204 Radial†	2202.9	2171.8	76204	ug/L	76204	ppb	16:32:25
2	K 766.490 Radial†	22480.5	20693.3	9008.4	ug/L	9008.4	ppb	16:32:05
2	Mg 279.077 IEC†	117.7	115.9	9120.0	ug/L	9120.0	ppb	16:32:25
2	Na 589.592 Radial†	1895.6	2039.5	5514.6	ug/L	5514.6	ppb	16:32:05
2	Sr 421.552†	35428.7	34928.2	538.03	ug/L	538.03	ppb	16:32:05
2	Sc 361.383	1073235.6	1073235.6	101.16	%			16:33:27
2	Y 371.029	1077171.6	1077171.6	126.25	%			16:33:27
2	Ag 328.068†	119110.3	117100.7	489.85	ug/L	489.85	ppb	16:33:27
2	As 188.979†	1997.1	2011.0	501.97	ug/L	501.97	ppb	16:33:47
2	B 249.677†	31347.4	31368.1	477.55	ug/L	477.55	ppb	16:33:27
2	Ba 233.527†	154188.3	152389.3	774.30	ug/L	774.30	ppb	16:33:27
2	Be 313.107†	1569469.1	1558720.6	490.32	ug/L	490.32	ppb	16:33:27
2	Cd 226.502†	66112.7	65629.4	482.22	ug/L	482.22	ppb	16:33:27
2	Co 228.616†	38569.2	38215.7	471.09	ug/L	471.09	ppb	16:33:47
2	Cr 267.716†	75139.2	74303.0	635.08	ug/L	635.08	ppb	16:33:27
2	Cu 324.752†	226983.0	214179.2	532.84	ug/L	532.84	ppb	16:33:27
2	Mn 257.610†	2932225.0	2897647.8	2299.7	ug/L	2299.7	ppb	16:33:27
2	Mo 202.031†	12010.5	11840.5	479.17	ug/L	479.17	ppb	16:33:47
2	Ni 231.604†	35319.3	34764.5	556.89	ug/L	556.89	ppb	16:33:27

2	P 214.914†	3681.7	3302.4	1043.8	ug/L	1043.8 ppb	16:33:47
2	Pb 220.353†	7182.9	7129.3	537.35	ug/L	537.35 ppb	16:33:47
2	S 181.975 Axial†	6104.2	5966.1	5040.7	ug/L	5040.7 ppb	16:33:47
2	Sb 206.836†	2599.4	2524.1	492.66	ug/L	492.66 ppb	16:33:47
2	Se 196.026†	763.1	775.9	524.11	ug/L	524.11 ppb	16:33:47
2	Si 251.611†	485119.6	478975.7	9870.7	ug/L	9870.7 ppb	16:33:27
2	Sn 189.927†	4747.5	4687.3	489.13	ug/L	489.13 ppb	16:33:47
2	Ti 334.940†	1881009.5	1860468.2	2435.8	ug/L	2435.8 ppb	16:33:27
2	Tl 190.801†	2647.5	2678.5	473.77	ug/L	473.77 ppb	16:33:47
2	U 409.014†	5077.1	8853.4	209.08	ug/L	209.08 ppb	16:33:27
2	V 292.402†	95076.7	95635.2	535.69	ug/L	535.69 ppb	16:33:27
2	Zn 213.857†	148654.7	145821.2	801.47	ug/L	801.47 ppb	16:33:27
2	SiO2†	480057.7	473929.8	20913	ug/L	20913 ppb	16:34:26
3	Sc Radial	5625.9	5625.9	101	%		16:32:30
3	Y RADIAL	6184.8	6184.8	128.4	%		16:32:30
3	Al 396.153Radial†	53074.6	52590.8	47850	ug/L	47850 ppb	16:32:30
3	Ca 317.933Radial†	3954.9	3895.1	9702.0	ug/L	9702.0 ppb	16:32:30
3	Fe 238.204 Radial†	2182.0	2158.0	75720	ug/L	75720 ppb	16:32:50
3	K 766.490 Radial†	22401.3	20685.1	9004.5	ug/L	9004.5 ppb	16:32:30
3	Mg 279.077 IEC†	118.1	116.6	9180.9	ug/L	9180.9 ppb	16:32:50
3	Na 589.592 Radial†	1885.5	2035.5	5503.7	ug/L	5503.7 ppb	16:32:30
3	Sr 421.552†	35471.9	35081.5	540.40	ug/L	540.40 ppb	16:32:30
3	Sc 361.383	1082045.5	1082045.5	101.99	%		16:33:54
3	Y 371.029	1085371.0	1085371.0	127.21	%		16:33:54
3	Ag 328.068†	120358.5	117365.9	490.74	ug/L	490.74 ppb	16:33:54
3	As 188.979†	1983.3	1981.4	494.94	ug/L	494.94 ppb	16:34:15
3	B 249.677†	31747.6	31508.2	479.81	ug/L	479.81 ppb	16:33:54
3	Ba 233.527†	155253.4	152192.6	773.29	ug/L	773.29 ppb	16:33:54
3	Be 313.107†	1579022.7	1555455.9	489.31	ug/L	489.31 ppb	16:33:54
3	Cd 226.502†	66605.2	65580.2	481.91	ug/L	481.91 ppb	16:33:54
3	Co 228.616†	38440.2	37778.7	465.64	ug/L	465.64 ppb	16:34:15
3	Cr 267.716†	75624.9	74174.4	633.97	ug/L	633.97 ppb	16:33:54
3	Cu 324.752†	229393.0	214715.2	534.14	ug/L	534.14 ppb	16:33:54
3	Mn 257.610†	2952197.3	2893630.4	2296.5	ug/L	2296.5 ppb	16:33:54
3	Mo 202.031†	11978.9	11712.8	474.03	ug/L	474.03 ppb	16:34:15
3	Ni 231.604†	35571.9	34727.9	556.31	ug/L	556.31 ppb	16:33:54
3	P 214.914†	3661.3	3252.8	1026.3	ug/L	1026.3 ppb	16:34:15
3	Pb 220.353†	7175.9	7064.7	532.56	ug/L	532.56 ppb	16:34:15
3	S 181.975 Axial†	6094.8	5907.8	4991.3	ug/L	4991.3 ppb	16:34:15
3	Sb 206.836†	2596.5	2500.3	487.76	ug/L	487.76 ppb	16:34:15
3	Se 196.026†	771.4	778.0	523.06	ug/L	523.06 ppb	16:34:15
3	Si 251.611†	490022.4	479878.3	9889.5	ug/L	9889.5 ppb	16:33:54
3	Sn 189.927†	4717.3	4619.5	482.07	ug/L	482.07 ppb	16:34:15
3	Ti 334.940†	1896794.4	1860805.6	2436.2	ug/L	2436.2 ppb	16:33:54
3	Tl 190.801†	2630.9	2640.8	467.44	ug/L	467.44 ppb	16:34:15
3	U 409.014†	5217.9	8950.6	211.56	ug/L	211.56 ppb	16:33:54
3	V 292.402†	95645.2	95427.3	534.52	ug/L	534.52 ppb	16:33:54
3	Zn 213.857†	149573.7	145525.9	799.87	ug/L	799.87 ppb	16:33:54
3	SiO2†	486543.3	476425.0	21024	ug/L	21024 ppb	16:34:31

Mean Data: 1201873208|882005|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1076591.5	101.48	%	0.449				0.44%
Sc Radial	5612.0	101	%	0.7				0.72%
Y 371.029	1080237.3	126.61	%	0.524				0.41%
Y RADIAL	6156.8	127.8	%	0.80				0.63%
Ag 328.068†	117250.4	490.56	ug/L	0.648	490.56	ppb	0.648	0.13%
Al 396.153Radial†	52625.9	47882	ug/L	166.6	47882	ppb	166.6	0.35%
As 188.979†	1992.1	497.63	ug/L	3.796	497.63	ppb	3.796	0.76%
B 249.677†	31438.5	478.61	ug/L	1.138	478.61	ppb	1.138	0.24%
Ba 233.527†	152310.6	773.91	ug/L	0.542	773.91	ppb	0.542	0.07%
Be 313.107†	1556897.6	489.76	ug/L	0.517	489.76	ppb	0.517	0.11%
Ca 317.933Radial†	3898.9	9711.5	ug/L	35.43	9711.5	ppb	35.43	0.36%
Cd 226.502†	65593.0	481.91	ug/L	0.323	481.91	ppb	0.323	0.07%
Co 228.616†	37991.8	468.29	ug/L	2.728	468.29	ppb	2.728	0.58%
Cr 267.716†	74235.8	634.52	ug/L	0.554	634.52	ppb	0.554	0.09%
Cu 324.752†	214528.0	533.73	ug/L	0.766	533.73	ppb	0.766	0.14%
Fe 238.204 Radial†	2183.1	76600	ug/L	1131.2	76600	ppb	1131.2	1.48%
K 766.490 Radial†	20682.2	9003.9	ug/L	4.86	9003.9	ppb	4.86	0.05%

Mg 279.077 IEC†	117.4	9240.5	ug/L	158.98	9240.5	ppb	158.98	1.72%
Mn 257.610†	2895670.6	2298.2	ug/L	1.63	2298.2	ppb	1.63	0.07%
Mo 202.031†	11773.2	476.50	ug/L	2.576	476.50	ppb	2.576	0.54%
Na 589.592 Radial†	2036.5	5506.6	ug/L	7.03	5506.6	ppb	7.03	0.13%
Ni 231.604†	34744.0	556.57	ug/L	0.298	556.57	ppb	0.298	0.05%
P 214.914†	3275.7	1033.9	ug/L	8.96	1033.9	ppb	8.96	0.87%
Pb 220.353†	7098.4	535.02	ug/L	2.397	535.02	ppb	2.397	0.45%
S 181.975 Axial†	5935.5	5014.7	ug/L	24.78	5014.7	ppb	24.78	0.49%
Sb 206.836†	2508.3	489.47	ug/L	2.766	489.47	ppb	2.766	0.57%
Se 196.026†	776.8	525.78	ug/L	3.847	525.78	ppb	3.847	0.73%
Si 251.611†	479798.9	9887.8	ug/L	16.26	9887.8	ppb	16.26	0.16%
Sn 189.927†	4655.0	485.78	ug/L	3.544	485.78	ppb	3.544	0.73%
Sr 421.552†	35004.2	539.21	ug/L	1.181	539.21	ppb	1.181	0.22%
Ti 334.940†	1860557.0	2435.9	ug/L	0.28	2435.9	ppb	0.28	0.01%
Tl 190.801†	2653.3	469.54	ug/L	3.668	469.54	ppb	3.668	0.78%
U 409.014†	8865.3	209.33	ug/L	2.112	209.33	ppb	2.112	1.01%
V 292.402†	95493.8	534.81	ug/L	0.785	534.81	ppb	0.785	0.15%
Zn 213.857†	145650.7	800.47	ug/L	0.870	800.47	ppb	0.870	0.11%
SiO2†	475891.9	21000	ug/L	77.7	21000	ppb	77.7	0.37%

Sequence No.: 25
Sample ID: 1201873207|882005|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 56
Date Collected: 7/8/2009 16:36:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873207|882005|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5631.5	5631.5	101	%			16:38:35
1	Y RADIAL	5110.2	5110.2	106.1	%			16:38:35
1	Al 396.153Radial†	5958.3	5980.0	5443.1	ug/L	5443.1	ppb	16:38:35
1	Ca 317.933Radial†	524.3	501.2	1248.4	ug/L	1248.4	ppb	16:38:55
1	Fe 238.204 Radial†	488.6	482.5	16927	ug/L	16927	ppb	16:38:55
1	K 766.490 Radial†	3127.6	1617.5	709.35	ug/L	709.35	ppb	16:38:35
1	Mg 279.077 IEC†	12.2	11.9	924.13	ug/L	924.13	ppb	16:38:55
1	Na 589.592 Radial†	-119.1	52.7	142.60	ug/L	142.60	ppb	16:38:55
1	Sr 421.552†	756.6	742.1	11.422	ug/L	11.422	ppb	16:38:35
1	Sc 361.383	1064961.8	1064961.8	100.38	%			16:39:52
1	Y 371.029	898318.3	898318.3	105.29	%			16:39:52
1	Ag 328.068†	-578.5	-1214.8	0.7294	ug/L	0.7294	ppb	16:39:57
1	As 188.979†	-41.0	-4.0	5.0028	ug/L	5.0028	ppb	16:40:17
1	B 249.677†	121.6	502.7	5.5773	ug/L	5.5773	ppb	16:39:57
1	Ba 233.527†	14399.9	14320.5	72.914	ug/L	72.914	ppb	16:39:57
1	Be 313.107†	-6211.2	1128.8	1.2764	ug/L	1.2764	ppb	16:39:57
1	Cd 226.502†	-65.1	212.8	-0.3944	ug/L	-0.3944	ppb	16:40:17
1	Co 228.616†	263.4	352.8	3.3295	ug/L	3.3295	ppb	16:40:17
1	Cr 267.716†	4737.9	4748.3	40.814	ug/L	40.814	ppb	16:39:57
1	Cu 324.752†	12345.1	2106.6	6.1761	ug/L	6.1761	ppb	16:39:57
1	Mn 257.610†	554261.2	551311.1	437.88	ug/L	437.88	ppb	16:39:52
1	Mo 202.031†	88.1	56.0	3.4034	ug/L	3.4034	ppb	16:40:17
1	Ni 231.604†	1466.1	1312.3	21.030	ug/L	21.030	ppb	16:40:17
1	P 214.914†	789.9	450.0	146.38	ug/L	146.38	ppb	16:40:17
1	Pb 220.353†	153.4	181.9	13.107	ug/L	13.107	ppb	16:40:17
1	S 181.975 Axial†	106.2	37.9	31.028	ug/L	31.028	ppb	16:40:17
1	Sb 206.836†	48.0	2.4	-1.4409	ug/L	-1.4409	ppb	16:40:17
1	Se 196.026†	-178.1	-155.8	9.1054	ug/L	9.1054	ppb	16:40:17
1	Si 251.611†	69683.0	68856.0	1420.5	ug/L	1420.5	ppb	16:39:57
1	Sn 189.927†	10.5	4.9	0.8596	ug/L	0.8596	ppb	16:40:17
1	Ti 334.940†	304211.2	304155.2	398.25	ug/L	398.25	ppb	16:39:52
1	Tl 190.801†	-88.0	-26.3	0.0065	ug/L	0.0065	ppb	16:40:17
1	U 409.014†	-6090.1	-2232.1	-57.539	ug/L	-57.539	ppb	16:39:52
1	V 292.402†	1370.8	3018.4	14.293	ug/L	14.293	ppb	16:39:57
1	Zn 213.857†	14674.9	13496.3	73.375	ug/L	73.375	ppb	16:39:57
1	SiO2†	71068.4	70193.9	3101.0	ug/L	3101.0	ppb	16:41:23
2	Sc Radial	5553.2	5553.2	99.8	%			16:39:00
2	Y RADIAL	5022.0	5022.0	104.3	%			16:39:00
2	Al 396.153Radial†	5862.7	5967.2	5431.5	ug/L	5431.5	ppb	16:39:00
2	Ca 317.933Radial†	518.3	502.5	1251.6	ug/L	1251.6	ppb	16:39:20
2	Fe 238.204 Radial†	487.4	488.1	17122	ug/L	17122	ppb	16:39:20
2	K 766.490 Radial†	3183.9	1717.5	752.86	ug/L	752.86	ppb	16:39:00
2	Mg 279.077 IEC†	11.0	10.8	844.08	ug/L	844.08	ppb	16:39:20
2	Na 589.592 Radial†	-102.9	67.3	181.86	ug/L	181.86	ppb	16:39:20
2	Sr 421.552†	702.7	698.7	10.753	ug/L	10.753	ppb	16:39:00
2	Sc 361.383	1066106.1	1066106.1	100.49	%			16:40:22
2	Y 371.029	898158.9	898158.9	105.27	%			16:40:22
2	Ag 328.068†	-575.4	-1211.2	0.8075	ug/L	0.8075	ppb	16:40:27
2	As 188.979†	-48.2	-11.1	3.3875	ug/L	3.3875	ppb	16:40:48
2	B 249.677†	84.0	465.1	4.9670	ug/L	4.9670	ppb	16:40:27
2	Ba 233.527†	14550.9	14455.3	73.601	ug/L	73.601	ppb	16:40:27
2	Be 313.107†	-6360.9	986.5	1.2336	ug/L	1.2336	ppb	16:40:27
2	Cd 226.502†	-40.8	237.1	-0.2363	ug/L	-0.2363	ppb	16:40:48
2	Co 228.616†	251.2	340.4	3.1708	ug/L	3.1708	ppb	16:40:48
2	Cr 267.716†	4796.0	4801.1	41.267	ug/L	41.267	ppb	16:40:27
2	Cu 324.752†	12466.7	2214.3	6.4533	ug/L	6.4533	ppb	16:40:27
2	Mn 257.610†	555228.6	551681.2	438.20	ug/L	438.20	ppb	16:40:22
2	Mo 202.031†	86.1	53.9	3.3319	ug/L	3.3319	ppb	16:40:48
2	Ni 231.604†	1447.2	1291.8	20.703	ug/L	20.703	ppb	16:40:48

2	P 214.914†	783.7	442.9	143.69 ug/L	143.69 ppb	16:40:48
2	Pb 220.353†	156.5	184.8	13.301 ug/L	13.301 ppb	16:40:48
2	S 181.975 Axial†	103.5	35.2	28.727 ug/L	28.727 ppb	16:40:48
2	Sb 206.836†	62.2	16.5	1.3057 ug/L	1.3057 ppb	16:40:48
2	Se 196.026†	-175.1	-152.6	10.820 ug/L	10.820 ppb	16:40:48
2	Si 251.611†	70413.7	69508.6	1434.0 ug/L	1434.0 ppb	16:40:27
2	Sn 189.927†	8.7	3.1	0.6749 ug/L	0.6749 ppb	16:40:48
2	Ti 334.940†	305025.7	304640.5	398.89 ug/L	398.89 ppb	16:40:22
2	Tl 190.801†	-85.1	-23.3	0.5259 ug/L	0.5259 ppb	16:40:48
2	U 409.014†	-6144.2	-2279.4	-58.738 ug/L	-58.738 ppb	16:40:22
2	V 292.402†	1363.3	3009.4	14.210 ug/L	14.210 ppb	16:40:27
2	Zn 213.857†	14833.1	13638.0	74.150 ug/L	74.150 ppb	16:40:27
2	SiO2†	70315.9	69369.0	3064.5 ug/L	3064.5 ppb	16:41:28
3	Sc Radial	5362.2	5362.2	96.4 %		16:39:25
3	Y RADIAL	4896.7	4896.7	101.7 %		16:39:25
3	Al 396.153Radial†	5710.7	6018.7	5478.3 ug/L	5478.3 ppb	16:39:25
3	Ca 317.933Radial†	524.4	527.3	1313.3 ug/L	1313.3 ppb	16:39:45
3	Fe 238.204 Radial†	487.1	505.2	17722 ug/L	17722 ppb	16:39:45
3	K 766.490 Radial†	3097.6	1741.6	763.77 ug/L	763.77 ppb	16:39:25
3	Mg 279.077 IEC†	11.2	11.5	894.57 ug/L	894.57 ppb	16:39:45
3	Na 589.592 Radial†	-116.6	49.4	133.70 ug/L	133.70 ppb	16:39:45
3	Sr 421.552†	681.6	701.8	10.801 ug/L	10.801 ppb	16:39:25
3	Sc 361.383	1069222.6	1069222.6	100.79 %		16:40:53
3	Y 371.029	899357.8	899357.8	105.41 %		16:40:53
3	Ag 328.068†	-623.4	-1257.1	0.8184 ug/L	0.8184 ppb	16:40:58
3	As 188.979†	-49.2	-11.9	3.3164 ug/L	3.3164 ppb	16:41:18
3	B 249.677†	61.3	442.4	4.5327 ug/L	4.5327 ppb	16:40:58
3	Ba 233.527†	14540.1	14402.4	73.347 ug/L	73.347 ppb	16:40:58
3	Be 313.107†	-6515.6	851.4	1.1931 ug/L	1.1931 ppb	16:40:58
3	Cd 226.502†	-37.4	240.5	-0.2814 ug/L	-0.2814 ppb	16:41:18
3	Co 228.616†	243.9	332.4	3.0625 ug/L	3.0625 ppb	16:41:18
3	Cr 267.716†	4800.4	4791.5	41.198 ug/L	41.198 ppb	16:40:58
3	Cu 324.752†	12471.3	2182.8	6.4101 ug/L	6.4101 ppb	16:40:58
3	Mn 257.610†	558044.6	552864.8	439.21 ug/L	439.21 ppb	16:40:53
3	Mo 202.031†	100.6	68.1	3.9420 ug/L	3.9420 ppb	16:41:18
3	Ni 231.604†	1462.1	1302.5	20.873 ug/L	20.873 ppb	16:41:18
3	P 214.914†	773.0	430.1	138.69 ug/L	138.69 ppb	16:41:18
3	Pb 220.353†	123.2	151.3	10.746 ug/L	10.746 ppb	16:41:18
3	S 181.975 Axial†	108.0	39.4	32.241 ug/L	32.241 ppb	16:41:18
3	Sb 206.836†	53.0	7.2	-0.4699 ug/L	-0.4699 ppb	16:41:18
3	Se 196.026†	-174.3	-151.3	13.352 ug/L	13.352 ppb	16:41:18
3	Si 251.611†	71268.1	70152.1	1447.3 ug/L	1447.3 ppb	16:40:58
3	Sn 189.927†	18.2	12.6	1.6762 ug/L	1.6762 ppb	16:41:18
3	Ti 334.940†	306418.0	305137.2	399.54 ug/L	399.54 ppb	16:40:53
3	Tl 190.801†	-89.2	-27.1	-0.1165 ug/L	-0.1165 ppb	16:41:18
3	U 409.014†	-6219.9	-2336.7	-60.234 ug/L	-60.234 ppb	16:40:53
3	V 292.402†	1351.7	2993.9	14.045 ug/L	14.045 ppb	16:40:58
3	Zn 213.857†	14879.3	13640.9	74.098 ug/L	74.098 ppb	16:40:58
3	SiO2†	69248.1	68105.6	3008.7 ug/L	3008.7 ppb	16:41:34

Mean Data: 1201873207|882005|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1066763.5	100.55	%	0.208				0.21%
Sc Radial	5515.6	99.1	%	2.49				2.51%
Y 371.029	898611.7	105.32	%	0.076				0.07%
Y RADIAL	5009.6	104.0	%	2.23				2.14%
Ag 328.068†	-1227.7	0.7851	ug/L	0.04852	0.7851	ppb	0.04852	6.18%
Al 396.153Radial†	5988.6	5450.9	ug/L	24.39	5450.9	ppb	24.39	0.45%
As 188.979†	-9.0	3.9023	ug/L	0.95375	3.9023	ppb	0.95375	24.44%
B 249.677†	470.1	5.0257	ug/L	0.52479	5.0257	ppb	0.52479	10.44%
Ba 233.527†	14392.7	73.287	ug/L	0.3473	73.287	ppb	0.3473	0.47%
Be 313.107†	988.9	1.2344	ug/L	0.04163	1.2344	ppb	0.04163	3.37%
Ca 317.933Radial†	510.3	1271.1	ug/L	36.61	1271.1	ppb	36.61	2.88%
Cd 226.502†	230.1	-0.3040	ug/L	0.08143	-0.3040	ppb	0.08143	26.78%
Co 228.616†	341.9	3.1876	ug/L	0.13428	3.1876	ppb	0.13428	4.21%
Cr 267.716†	4780.3	41.093	ug/L	0.2443	41.093	ppb	0.2443	0.59%
Cu 324.752†	2167.9	6.3465	ug/L	0.14913	6.3465	ppb	0.14913	2.35%
Fe 238.204 Radial†	491.9	17257	ug/L	414.5	17257	ppb	414.5	2.40%
K 766.490 Radial†	1692.2	741.99	ug/L	28.789	741.99	ppb	28.789	3.88%

Mg 279.077 1EC†	11.4	887.59	ug/L	40.478	887.59	ppb	40.478	4.56%
Mn 257.610†	551952.4	438.43	ug/L	0.695	438.43	ppb	0.695	0.16%
Mo 202.031†	59.3	3.5591	ug/L	0.33350	3.5591	ppb	0.33350	9.37%
Na 589.592 Radial†	56.5	152.72	ug/L	25.625	152.72	ppb	25.625	16.78%
Ni 231.604†	1302.2	20.869	ug/L	0.1636	20.869	ppb	0.1636	0.78%
P 214.914†	441.0	142.92	ug/L	3.902	142.92	ppb	3.902	2.73%
Pb 220.353†	172.7	12.385	ug/L	1.4224	12.385	ppb	1.4224	11.49%
S 181.975 Axial†	37.5	30.665	ug/L	1.7846	30.665	ppb	1.7846	5.82%
Sb 206.836†	8.7	-0.2017	ug/L	1.39279	-0.2017	ppb	1.39279	690.60%
Se 196.026†	-153.2	11.092	ug/L	2.1362	11.092	ppb	2.1362	19.26%
Si 251.611†	69505.5	1433.9	ug/L	13.36	1433.9	ppb	13.36	0.93%
Sn 189.927†	6.9	1.0702	ug/L	0.53285	1.0702	ppb	0.53285	49.79%
Sr 421.552†	714.2	10.992	ug/L	0.3731	10.992	ppb	0.3731	3.39%
Ti 334.940†	304644.3	398.89	ug/L	0.645	398.89	ppb	0.645	0.16%
Tl 190.801†	-25.6	0.1386	ug/L	0.34096	0.1386	ppb	0.34096	245.94%
U 409.014†	-2282.7	-58.837	ug/L	1.3499	-58.837	ppb	1.3499	2.29%
V 292.402†	3007.2	14.183	ug/L	0.1263	14.183	ppb	0.1263	0.89%
Zn 213.857†	13591.7	73.874	ug/L	0.4333	73.874	ppb	0.4333	0.59%
SiO2†	69222.8	3058.1	ug/L	46.51	3058.1	ppb	46.51	1.52%

Sequence No.: 26
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 16:43:44
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5597.1	5597.1	101	%			16:45:36
1	Y RADIAL	4814.6	4814.6	99.98	%			16:45:36
1	Al 396.153Radial†	5291.4	5353.1	4850.9	ug/L	4850.9	ppb	16:45:36
1	Ca 317.933Radial†	1969.7	1941.4	4835.8	ug/L	4835.8	ppb	16:45:56
1	Fe 238.204 Radial†	141.1	139.9	4923.6	ug/L	4923.6	ppb	16:45:56
1	K 766.490 Radial†	13282.0	11732.5	5084.7	ug/L	5084.7	ppb	16:45:36
1	Mg 279.077 IEC†	64.2	63.7	5049.0	ug/L	5049.0	ppb	16:45:56
1	Na 589.592 Radial†	3478.7	3629.0	9812.5	ug/L	9812.5	ppb	16:45:36
1	Sr 421.552†	33699.4	33499.9	516.07	ug/L	516.07	ppb	16:45:36
1	Sc 361.383	1055693.0	1055693.0	99.511	%			16:46:55
1	Y 371.029	841824.0	841824.0	98.665	%			16:46:55
1	Ag 328.068†	126236.5	126218.5	502.68	ug/L	502.68	ppb	16:46:55
1	As 188.979†	2073.2	2120.3	500.88	ug/L	500.88	ppb	16:47:15
1	B 249.677†	30744.7	31277.4	485.56	ug/L	485.56	ppb	16:46:55
1	Ba 233.527†	97307.6	97761.7	496.04	ug/L	496.04	ppb	16:46:55
1	Be 313.107†	1578588.0	1593664.1	496.68	ug/L	496.68	ppb	16:46:55
1	Cd 226.502†	65945.7	66547.5	497.47	ug/L	497.47	ppb	16:46:55
1	Co 228.616†	38927.4	39209.2	488.62	ug/L	488.62	ppb	16:47:15
1	Cr 267.716†	57770.3	58082.9	495.39	ug/L	495.39	ppb	16:46:55
1	Cu 324.752†	208599.2	199433.4	492.34	ug/L	492.34	ppb	16:46:55
1	Mn 257.610†	623792.7	626032.1	495.28	ug/L	495.28	ppb	16:46:55
1	Mo 202.031†	12621.7	12652.0	506.76	ug/L	506.76	ppb	16:47:15
1	Ni 231.604†	30738.4	30741.2	492.40	ug/L	492.40	ppb	16:47:15
1	P 214.914†	7365.8	7065.1	2422.4	ug/L	2422.4	ppb	16:47:15
1	Pb 220.353†	6645.4	6707.2	504.15	ug/L	504.15	ppb	16:47:15
1	S 181.975 Axial†	1239.8	1178.0	996.19	ug/L	996.19	ppb	16:47:15
1	Sb 206.836†	2557.9	2525.1	502.76	ug/L	502.76	ppb	16:47:15
1	Se 196.026†	1503.3	1532.3	517.44	ug/L	517.44	ppb	16:47:15
1	Si 251.611†	121982.3	122021.8	2505.8	ug/L	2505.8	ppb	16:46:55
1	Sn 189.927†	4773.2	4791.1	498.76	ug/L	498.76	ppb	16:47:15
1	Ti 334.940†	377055.7	380018.4	497.40	ug/L	497.40	ppb	16:46:55
1	Tl 190.801†	2878.5	2954.1	500.21	ug/L	500.21	ppb	16:47:15
1	U 409.014†	15585.6	19497.0	482.20	ug/L	482.20	ppb	16:46:55
1	V 292.402†	84900.3	86970.4	499.32	ug/L	499.32	ppb	16:46:55
1	Zn 213.857†	89663.2	88981.5	492.32	ug/L	492.32	ppb	16:46:55
1	SiO2†	122414.8	122414.2	5382.8	ug/L	5382.8	ppb	16:48:15
2	Sc Radial	5519.9	5519.9	99.2	%			16:46:01
2	Y RADIAL	4754.7	4754.7	98.73	%			16:46:01
2	Al 396.153Radial†	5239.1	5374.0	4870.0	ug/L	4870.0	ppb	16:46:01
2	Ca 317.933Radial†	1981.4	1980.6	4933.4	ug/L	4933.4	ppb	16:46:21
2	Fe 238.204 Radial†	139.0	139.8	4918.1	ug/L	4918.1	ppb	16:46:21
2	K 766.490 Radial†	13106.1	11739.7	5087.8	ug/L	5087.8	ppb	16:46:01
2	Mg 279.077 IEC†	59.9	60.2	4773.1	ug/L	4773.1	ppb	16:46:21
2	Na 589.592 Radial†	3431.2	3629.6	9813.9	ug/L	9813.9	ppb	16:46:01
2	Sr 421.552†	33035.5	33298.9	512.98	ug/L	512.98	ppb	16:46:01
2	Sc 361.383	1059556.7	1059556.7	99.875	%			16:47:22
2	Y 371.029	842609.2	842609.2	98.757	%			16:47:22
2	Ag 328.068†	126889.4	126409.6	503.43	ug/L	503.43	ppb	16:47:22
2	As 188.979†	2080.2	2119.7	500.75	ug/L	500.75	ppb	16:47:42
2	B 249.677†	30878.4	31298.5	485.90	ug/L	485.90	ppb	16:47:22
2	Ba 233.527†	97940.4	98038.7	497.45	ug/L	497.45	ppb	16:47:22
2	Be 313.107†	1583527.7	1592825.4	496.43	ug/L	496.43	ppb	16:47:22
2	Cd 226.502†	66320.9	66681.6	498.47	ug/L	498.47	ppb	16:47:22
2	Co 228.616†	38932.4	39071.6	486.89	ug/L	486.89	ppb	16:47:42
2	Cr 267.716†	58077.3	58178.5	496.21	ug/L	496.21	ppb	16:47:22
2	Cu 324.752†	209952.3	200023.8	493.80	ug/L	493.80	ppb	16:47:22
2	Mn 257.610†	627659.1	627617.4	496.54	ug/L	496.54	ppb	16:47:22
2	Mo 202.031†	12605.9	12589.9	504.27	ug/L	504.27	ppb	16:47:42
2	Ni 231.604†	30761.6	30651.8	490.97	ug/L	490.97	ppb	16:47:42

2	P 214.914†	7365.8	7038.1	2412.6	ug/L	2412.6 ppb	16:47:42
2	Pb 220.353†	6639.4	6676.8	501.87	ug/L	501.87 ppb	16:47:42
2	S 181.975 Axial†	1247.6	1181.3	998.95	ug/L	998.95 ppb	16:47:42
2	Sb 206.836†	2570.2	2528.0	503.22	ug/L	503.22 ppb	16:47:42
2	Se 196.026†	1493.9	1517.4	512.58	ug/L	512.58 ppb	16:47:42
2	Si 251.611†	122683.6	122277.0	2511.1	ug/L	2511.1 ppb	16:47:22
2	Sn 189.927†	4775.2	4775.7	497.17	ug/L	497.17 ppb	16:47:42
2	Ti 334.940†	379382.3	380966.3	498.65	ug/L	498.65 ppb	16:47:22
2	Tl 190.801†	2885.6	2950.6	499.65	ug/L	499.65 ppb	16:47:42
2	U 409.014†	15590.0	19444.3	480.89	ug/L	480.89 ppb	16:47:22
2	V 292.402†	85139.3	86898.7	498.87	ug/L	498.87 ppb	16:47:22
2	Zn 213.857†	90179.2	89169.6	493.39	ug/L	493.39 ppb	16:47:22
2	SiO2†	123659.1	123211.5	5418.1	ug/L	5418.1 ppb	16:48:20
3	Sc Radial	5473.4	5473.4	98.4	%		16:46:26
3	Y RADIAL	4752.6	4752.6	98.69	%		16:46:26
3	Al 396.153Radial†	5183.0	5361.8	4859.1	ug/L	4859.1 ppb	16:46:26
3	Ca 317.933Radial†	1970.6	1986.6	4948.3	ug/L	4948.3 ppb	16:46:46
3	Fe 238.204 Radial†	139.1	141.1	4963.8	ug/L	4963.8 ppb	16:46:46
3	K 766.490 Radial†	12871.7	11613.8	5033.2	ug/L	5033.2 ppb	16:46:26
3	Mg 279.077 IEC†	64.4	65.3	5176.9	ug/L	5176.9 ppb	16:46:46
3	Na 589.592 Radial†	3390.1	3617.1	9780.3	ug/L	9780.3 ppb	16:46:26
3	Sr 421.552†	32728.5	33270.0	512.53	ug/L	512.53 ppb	16:46:26
3	Sc 361.383	1060641.0	1060641.0	99.977	%		16:47:50
3	Y 371.029	844977.1	844977.1	99.035	%		16:47:50
3	Ag 328.068†	126897.6	126287.9	502.96	ug/L	502.96 ppb	16:47:50
3	As 188.979†	2059.7	2097.1	495.44	ug/L	495.44 ppb	16:48:10
3	B 249.677†	31014.3	31402.9	487.53	ug/L	487.53 ppb	16:47:50
3	Ba 233.527†	97758.4	97756.4	496.02	ug/L	496.02 ppb	16:47:50
3	Be 313.107†	1584935.6	1592612.9	496.36	ug/L	496.36 ppb	16:47:50
3	Cd 226.502†	66218.9	66511.6	497.19	ug/L	497.19 ppb	16:47:50
3	Co 228.616†	38515.7	38614.9	481.20	ug/L	481.20 ppb	16:48:10
3	Cr 267.716†	57895.8	57937.6	494.15	ug/L	494.15 ppb	16:47:50
3	Cu 324.752†	210307.1	200163.8	494.14	ug/L	494.14 ppb	16:47:50
3	Mn 257.610†	626815.7	626131.5	495.36	ug/L	495.36 ppb	16:47:50
3	Mo 202.031†	12523.0	12494.1	500.44	ug/L	500.44 ppb	16:48:10
3	Ni 231.604†	30451.6	30310.3	485.50	ug/L	485.50 ppb	16:48:10
3	P 214.914†	7303.3	6968.0	2387.6	ug/L	2387.6 ppb	16:48:10
3	Pb 220.353†	6596.2	6626.8	498.11	ug/L	498.11 ppb	16:48:10
3	S 181.975 Axial†	1228.8	1161.2	981.95	ug/L	981.95 ppb	16:48:10
3	Sb 206.836†	2537.6	2492.7	496.19	ug/L	496.19 ppb	16:48:10
3	Se 196.026†	1501.2	1523.2	514.61	ug/L	514.61 ppb	16:48:10
3	Si 251.611†	122882.0	122349.9	2512.7	ug/L	2512.7 ppb	16:47:50
3	Sn 189.927†	4732.3	4727.9	492.20	ug/L	492.20 ppb	16:48:10
3	Ti 334.940†	379321.6	380517.2	498.06	ug/L	498.06 ppb	16:47:50
3	Tl 190.801†	2851.7	2913.7	493.44	ug/L	493.44 ppb	16:48:10
3	U 409.014†	15623.2	19461.5	481.31	ug/L	481.31 ppb	16:47:50
3	V 292.402†	85069.4	86741.5	497.93	ug/L	497.93 ppb	16:47:50
3	Zn 213.857†	90087.4	88985.6	492.38	ug/L	492.38 ppb	16:47:50
3	SiO2†	121377.6	120802.9	5311.9	ug/L	5311.9 ppb	16:48:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1058630.2	99.788	%	0.2452				0.25%
Sc Radial	5530.1	99.4	%	1.12				1.13%
Y 371.029	843136.8	98.819	%	0.1924				0.19%
Y RADIAL	4774.0	99.13	%	0.731				0.74%
Ag 328.068†	126305.3	503.02	ug/L	0.380	503.02	ppb	0.380	0.08%
QC value within limits for Ag 328.068 Recovery = 100.60%								
Al 396.153Radial†	5363.0	4860.0	ug/L	9.59	4860.0	ppb	9.59	0.20%
QC value within limits for Al 396.153Radial Recovery = 97.20%								
As 188.979†	2112.4	499.02	ug/L	3.104	499.02	ppb	3.104	0.62%
QC value within limits for As 188.979 Recovery = 99.80%								
B 249.677†	31326.3	486.33	ug/L	1.054	486.33	ppb	1.054	0.22%
QC value within limits for B 249.677 Recovery = 97.27%								
Ba 233.527†	97852.3	496.50	ug/L	0.817	496.50	ppb	0.817	0.16%
QC value within limits for Ba 233.527 Recovery = 99.30%								
Be 313.107†	1593034.2	496.49	ug/L	0.172	496.49	ppb	0.172	0.03%
QC value within limits for Be 313.107 Recovery = 99.30%								
Ca 317.933Radial†	1969.5	4905.8	ug/L	61.11	4905.8	ppb	61.11	1.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.12%
Cd 226.502†            66580.2      497.71 ug/L        0.673      497.71 ppb         0.673   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.54%
Co 228.616†            38965.2      485.57 ug/L        3.884      485.57 ppb         3.884   0.80%
   QC value within limits for Co 228.616  Recovery = 97.11%
Cr 267.716†            58066.3      495.25 ug/L        1.034      495.25 ppb         1.034   0.21%
   QC value within limits for Cr 267.716  Recovery = 99.05%
Cu 324.752†           199873.6      493.43 ug/L        0.957      493.43 ppb         0.957   0.19%
   QC value within limits for Cu 324.752  Recovery = 98.69%
Fe 238.204 Radial†       140.2      4935.2 ug/L       24.97      4935.2 ppb        24.97   0.51%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.70%
K 766.490 Radial†      11695.3      5068.6 ug/L       30.68      5068.6 ppb        30.68   0.61%
   QC value within limits for K 766.490 Radial  Recovery = 101.37%
Mg 279.077 IEC†           63.1      4999.6 ug/L      206.36      4999.6 ppb       206.36   4.13%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.99%
Mn 257.610†           626593.7      495.73 ug/L        0.704      495.73 ppb         0.704   0.14%
   QC value within limits for Mn 257.610  Recovery = 99.15%
Mo 202.031†            12578.6      503.83 ug/L        3.182      503.83 ppb         3.182   0.63%
   QC value within limits for Mo 202.031  Recovery = 100.77%
Na 589.592 Radial†      3625.2      9802.2 ug/L       19.00      9802.2 ppb        19.00   0.19%
   QC value within limits for Na 589.592 Radial  Recovery = 98.02%
Ni 231.604†            30567.8      489.62 ug/L        3.643      489.62 ppb         3.643   0.74%
   QC value within limits for Ni 231.604  Recovery = 97.92%
P 214.914†              7023.7      2407.5 ug/L       17.90      2407.5 ppb        17.90   0.74%
   QC value within limits for P 214.914  Recovery = 96.30%
Pb 220.353†             6670.3      501.38 ug/L        3.053      501.38 ppb         3.053   0.61%
   QC value within limits for Pb 220.353  Recovery = 100.28%
S 181.975 Axial†        1173.5      992.36 ug/L        9.120      992.36 ppb         9.120   0.92%
   QC value within limits for S 181.975 Axial  Recovery = 99.24%
Sb 206.836†             2515.3      500.72 ug/L        3.933      500.72 ppb         3.933   0.79%
   QC value within limits for Sb 206.836  Recovery = 100.14%
Se 196.026†             1524.3      514.87 ug/L        2.440      514.87 ppb         2.440   0.47%
   QC value within limits for Se 196.026  Recovery = 102.97%
Si 251.611†           122216.2      2509.9 ug/L         3.62      2509.9 ppb          3.62   0.14%
   QC value within limits for Si 251.611  Recovery = 100.40%
Sn 189.927†             4764.9      496.04 ug/L        3.424      496.04 ppb         3.424   0.69%
   QC value within limits for Sn 189.927  Recovery = 99.21%
Sr 421.552†            33356.3      513.86 ug/L        1.930      513.86 ppb         1.930   0.38%
   QC value within limits for Sr 421.552  Recovery = 102.77%
Ti 334.940†           380500.7      498.04 ug/L        0.624      498.04 ppb         0.624   0.13%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2939.5      497.77 ug/L        3.754      497.77 ppb         3.754   0.75%
   QC value within limits for Tl 190.801  Recovery = 99.55%
U 409.014†             19467.6      481.46 ug/L        0.668      481.46 ppb         0.668   0.14%
   QC value within limits for U 409.014  Recovery = 96.29%
V 292.402†             86870.2      498.71 ug/L        0.706      498.71 ppb         0.706   0.14%
   QC value within limits for V 292.402  Recovery = 99.74%
Zn 213.857†            89045.6      492.70 ug/L        0.601      492.70 ppb         0.601   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.54%
SiO2†                 122142.9      5370.9 ug/L       54.09      5370.9 ppb        54.09   1.01%
   QC value within limits for SiO2  Recovery = 100.44%
All analyte(s) passed QC.
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Sequence No.: 27
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 16:50:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5637.8	5637.8	101	%			16:52:27
1	Y RADIAL	4889.3	4889.3	101.5	%			16:52:27
1	Al 396.153Radial†	-89.7	3.7	3.3326	ug/L	3.3326	ppb	16:52:27
1	Ca 317.933Radial†	30.9	13.6	33.800	ug/L	33.800	ppb	16:52:47
1	Fe 238.204 Radial†	-0.2	-0.5	-18.635	ug/L	-18.635	ppb	16:52:47
1	K 766.490 Radial†	1458.1	-33.9	-14.718	ug/L	-14.718	ppb	16:52:27
1	Mg 279.077 IEC†	0.7	0.5	40.762	ug/L	40.762	ppb	16:52:47
1	Na 589.592 Radial†	-176.3	-3.6	-9.6025	ug/L	-9.6025	ppb	16:52:47
1	Sr 421.552†	22.0	16.3	0.2505	ug/L	0.2505	ppb	16:52:47
1	Sc 361.383	1052646.6	1052646.6	99.224	%			16:53:44
1	Y 371.029	847796.7	847796.7	99.365	%			16:53:44
1	Ag 328.068†	563.6	-70.6	-0.2853	ug/L	-0.2853	ppb	16:53:49
1	As 188.979†	-58.2	-21.7	-5.1093	ug/L	-5.1093	ppb	16:54:09
1	B 249.677†	-76.7	304.2	4.7431	ug/L	4.7431	ppb	16:53:49
1	Ba 233.527†	31.3	7.3	0.0361	ug/L	0.0361	ppb	16:54:09
1	Be 313.107†	-7536.0	-278.7	-0.0865	ug/L	-0.0865	ppb	16:53:49
1	Cd 226.502†	-287.5	-12.1	-0.0884	ug/L	-0.0884	ppb	16:54:09
1	Co 228.616†	-75.7	14.1	0.1761	ug/L	0.1761	ppb	16:54:09
1	Cr 267.716†	-16.5	12.0	0.1017	ug/L	0.1017	ppb	16:54:09
1	Cu 324.752†	10011.6	-101.3	-0.2511	ug/L	-0.2511	ppb	16:53:49
1	Mn 257.610†	915.0	95.2	0.0720	ug/L	0.0720	ppb	16:54:09
1	Mo 202.031†	37.5	6.0	0.2405	ug/L	0.2405	ppb	16:54:09
1	Ni 231.604†	163.3	16.3	0.2617	ug/L	0.2617	ppb	16:54:09
1	P 214.914†	335.5	1.2	0.4897	ug/L	0.4897	ppb	16:54:09
1	Pb 220.353†	-27.9	1.0	0.0777	ug/L	0.0777	ppb	16:54:09
1	S 181.975 Axial†	66.8	-0.5	-0.4272	ug/L	-0.4272	ppb	16:54:09
1	Sb 206.836†	51.9	6.9	1.3833	ug/L	1.3833	ppb	16:54:09
1	Se 196.026†	-20.7	0.8	0.1817	ug/L	0.1817	ppb	16:54:09
1	Si 251.611†	822.0	268.4	5.5329	ug/L	5.5329	ppb	16:54:09
1	Sn 189.927†	21.2	15.9	1.6590	ug/L	1.6590	ppb	16:54:09
1	Ti 334.940†	-1030.0	71.2	0.0958	ug/L	0.0958	ppb	16:53:49
1	Tl 190.801†	-46.8	14.3	2.4065	ug/L	2.4065	ppb	16:54:09
1	U 409.014†	-3844.2	-39.5	-0.9782	ug/L	-0.9782	ppb	16:53:44
1	V 292.402†	-1655.2	-15.3	-0.0826	ug/L	-0.0826	ppb	16:53:49
1	Zn 213.857†	1103.5	-10.2	-0.0578	ug/L	-0.0578	ppb	16:54:09
1	SiO2†	826.3	230.4	10.170	ug/L	10.170	ppb	16:55:15
2	Sc Radial	5525.3	5525.3	99.3	%			16:52:52
2	Y RADIAL	4806.4	4806.4	99.81	%			16:52:52
2	Al 396.153Radial†	-79.8	11.8	10.725	ug/L	10.725	ppb	16:52:52
2	Ca 317.933Radial†	28.6	11.9	29.523	ug/L	29.523	ppb	16:53:12
2	Fe 238.204 Radial†	0.5	0.2	7.1114	ug/L	7.1114	ppb	16:53:12
2	K 766.490 Radial†	1519.6	57.3	24.898	ug/L	24.898	ppb	16:52:52
2	Mg 279.077 IEC†	0.1	-0.1	-7.6474	ug/L	-7.6474	ppb	16:53:12
2	Na 589.592 Radial†	-180.6	-11.5	-30.978	ug/L	-30.978	ppb	16:53:12
2	Sr 421.552†	28.8	23.5	0.3617	ug/L	0.3617	ppb	16:53:12
2	Sc 361.383	1065998.9	1065998.9	100.48	%			16:54:14
2	Y 371.029	857217.7	857217.7	100.47	%			16:54:14
2	Ag 328.068†	636.1	-5.5	-0.0199	ug/L	-0.0199	ppb	16:54:19
2	As 188.979†	-46.4	-9.3	-2.1871	ug/L	-2.1871	ppb	16:54:39
2	B 249.677†	-25.5	356.1	5.5488	ug/L	5.5488	ppb	16:54:19
2	Ba 233.527†	44.3	19.8	0.1010	ug/L	0.1010	ppb	16:54:39
2	Be 313.107†	-7582.2	-229.6	-0.0713	ug/L	-0.0713	ppb	16:54:19
2	Cd 226.502†	-281.0	-2.0	-0.0154	ug/L	-0.0154	ppb	16:54:39
2	Co 228.616†	-87.2	3.6	0.0458	ug/L	0.0458	ppb	16:54:39
2	Cr 267.716†	-4.9	23.8	0.2025	ug/L	0.2025	ppb	16:54:39
2	Cu 324.752†	10193.3	-46.9	-0.1154	ug/L	-0.1154	ppb	16:54:19
2	Mn 257.610†	912.6	81.2	0.0653	ug/L	0.0653	ppb	16:54:39
2	Mo 202.031†	39.5	7.5	0.3018	ug/L	0.3018	ppb	16:54:39
2	Ni 231.604†	159.8	10.8	0.1729	ug/L	0.1729	ppb	16:54:39

2	P 214.914†	333.9	-4.6	-1.6265 ug/L	-1.6265 ppb	16:54:39
2	Pb 220.353†	-17.2	11.9	0.8971 ug/L	0.8971 ppb	16:54:39
2	S 181.975 Axial†	56.6	-11.5	-9.7195 ug/L	-9.7195 ppb	16:54:39
2	Sb 206.836†	42.2	-3.4	-0.6744 ug/L	-0.6744 ppb	16:54:39
2	Se 196.026†	-21.2	0.5	0.1913 ug/L	0.1913 ppb	16:54:39
2	Si 251.611†	796.3	232.3	4.7815 ug/L	4.7815 ppb	16:54:39
2	Sn 189.927†	2.5	-3.0	-0.3049 ug/L	-0.3049 ppb	16:54:39
2	Ti 334.940†	-1074.6	39.8	0.0534 ug/L	0.0534 ppb	16:54:19
2	Tl 190.801†	-64.5	-2.8	-0.4750 ug/L	-0.4750 ppb	16:54:39
2	U 409.014†	-3795.8	57.2	1.4168 ug/L	1.4168 ppb	16:54:14
2	V 292.402†	-1607.8	52.7	0.3041 ug/L	0.3041 ppb	16:54:19
2	Zn 213.857†	1078.2	-49.4	-0.2772 ug/L	-0.2772 ppb	16:54:39
2	SiO2†	798.6	192.4	8.4742 ug/L	8.4742 ppb	16:55:20
3	Sc Radial	5418.8	5418.8	97.4 %		16:53:17
3	Y RADIAL	4718.6	4718.6	97.98 %		16:53:17
3	Al 396.153Radial†	-92.6	-2.9	-2.6166 ug/L	-2.6166 ppb	16:53:17
3	Ca 317.933Radial†	27.6	11.4	28.350 ug/L	28.350 ppb	16:53:37
3	Fe 238.204 Radial†	-1.0	-1.3	-45.979 ug/L	-45.979 ppb	16:53:37
3	K 766.490 Radial†	1489.0	56.1	24.297 ug/L	24.297 ppb	16:53:17
3	Mg 279.077 IEC†	-1.0	-1.2	-94.823 ug/L	-94.823 ppb	16:53:37
3	Na 589.592 Radial†	-169.9	-4.0	-10.940 ug/L	-10.940 ppb	16:53:37
3	Sr 421.552†	29.6	24.9	0.3833 ug/L	0.3833 ppb	16:53:37
3	Sc 361.383	1048913.1	1048913.1	98.872 %		16:54:44
3	Y 371.029	844446.0	844446.0	98.972 %		16:54:44
3	Ag 328.068†	724.6	94.3	0.3605 ug/L	0.3605 ppb	16:54:49
3	As 188.979†	-43.9	-7.5	-1.7627 ug/L	-1.7627 ppb	16:55:09
3	B 249.677†	-81.0	299.6	4.6757 ug/L	4.6757 ppb	16:54:49
3	Ba 233.527†	22.9	-1.1	-0.0069 ug/L	-0.0069 ppb	16:55:09
3	Be 313.107†	-7424.8	-193.3	-0.0604 ug/L	-0.0604 ppb	16:54:49
3	Cd 226.502†	-281.1	-6.7	-0.0443 ug/L	-0.0443 ppb	16:55:09
3	Co 228.616†	-89.7	-0.3	-0.0020 ug/L	-0.0020 ppb	16:55:09
3	Cr 267.716†	-10.7	17.8	0.1514 ug/L	0.1514 ppb	16:55:09
3	Cu 324.752†	10087.7	11.6	0.0258 ug/L	0.0258 ppb	16:54:49
3	Mn 257.610†	912.8	96.2	0.0718 ug/L	0.0718 ppb	16:55:09
3	Mo 202.031†	35.1	3.7	0.1462 ug/L	0.1462 ppb	16:55:09
3	Ni 231.604†	166.7	20.4	0.3263 ug/L	0.3263 ppb	16:55:09
3	P 214.914†	344.7	11.7	4.1662 ug/L	4.1662 ppb	16:55:09
3	Pb 220.353†	-8.6	20.3	1.5296 ug/L	1.5296 ppb	16:55:09
3	S 181.975 Axial†	63.9	-3.2	-2.6879 ug/L	-2.6879 ppb	16:55:09
3	Sb 206.836†	50.5	5.6	1.1035 ug/L	1.1035 ppb	16:55:09
3	Se 196.026†	-25.9	-4.6	-1.6417 ug/L	-1.6417 ppb	16:55:09
3	Si 251.611†	799.8	248.9	5.1246 ug/L	5.1246 ppb	16:55:09
3	Sn 189.927†	4.6	-0.8	-0.0793 ug/L	-0.0793 ppb	16:55:09
3	Ti 334.940†	-1198.8	-103.2	-0.1319 ug/L	-0.1319 ppb	16:54:49
3	Tl 190.801†	-54.4	6.4	1.0751 ug/L	1.0751 ppb	16:55:09
3	U 409.014†	-3918.3	-128.2	-3.1763 ug/L	-3.1763 ppb	16:54:44
3	V 292.402†	-1643.2	-9.2	-0.0517 ug/L	-0.0517 ppb	16:54:49
3	Zn 213.857†	1094.4	-15.5	-0.0806 ug/L	-0.0806 ppb	16:55:09
3	SiO2†	790.9	197.6	8.7080 ug/L	8.7080 ppb	16:55:25

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055852.9	99.526	%	0.8467				0.85%
Sc Radial	5527.3	99.3	%	1.97				1.98%
Y 371.029	849820.2	99.602	%	0.7761				0.78%
Y RADIAL	4804.8	99.77	%	1.772				1.78%
Ag 328.068†	6.1	0.0184	ug/L	0.32461	0.0184	ppb	0.32461	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	4.2	3.8136	ug/L	6.68379	3.8136	ppb	6.68379	175.26%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.8	-3.0197	ug/L	1.82201	-3.0197	ppb	1.82201	60.34%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	320.0	4.9892	ug/L	0.48577	4.9892	ppb	0.48577	9.74%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.6	0.0434	ug/L	0.05433	0.0434	ppb	0.05433	125.26%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-233.9	-0.0727	ug/L	0.01307	-0.0727	ppb	0.01307	17.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	12.3	30.557	ug/L	2.8686	30.557	ppb	2.8686	9.39%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.9     -0.0494 ug/L       0.03675     -0.0494 ppb        0.03675  74.46%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 5.8      0.0733 ug/L       0.09218      0.0733 ppb        0.09218 125.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.8      0.1519 ug/L       0.05038      0.1519 ppb        0.05038  33.17%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -45.6     -0.1135 ug/L       0.13847     -0.1135 ppb        0.13847 121.95%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.5     -19.167 ug/L       26.5490     -19.167 ppb        26.5490 138.51%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          26.5      11.492 ug/L       22.7011      11.492 ppb        22.7011 197.53%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -20.569 ug/L       68.7102     -20.569 ppb        68.7102 334.04%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                90.9      0.0697 ug/L       0.00384      0.0697 ppb        0.00384   5.51%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 5.8      0.2295 ug/L       0.07837      0.2295 ppb        0.07837  34.15%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -6.4     -17.174 ug/L       11.9739     -17.174 ppb        11.9739  69.72%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                15.8      0.2536 ug/L       0.07702      0.2536 ppb        0.07702  30.37%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  2.7      1.0098 ug/L       2.93118      1.0098 ppb        2.93118 290.27%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                11.1      0.8348 ug/L       0.72795      0.8348 ppb        0.72795  87.20%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.1     -4.2782 ug/L       4.84597     -4.2782 ppb        4.84597 113.27%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 3.0      0.6042 ug/L       1.11604      0.6042 ppb        1.11604 184.72%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -1.1     -0.4229 ug/L       1.05551     -0.4229 ppb        1.05551 249.59%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               249.8      5.1463 ug/L       0.37613      5.1463 ppb        0.37613   7.31%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 4.1      0.4249 ug/L       1.07467      0.4249 ppb        1.07467 252.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                21.6      0.3318 ug/L       0.07124      0.3318 ppb        0.07124  21.47%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 2.6      0.0058 ug/L       0.12109      0.0058 ppb        0.12109 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.9      1.0022 ug/L       1.44215      1.0022 ppb        1.44215 143.90%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -36.9     -0.9126 ug/L       2.29725     -0.9126 ppb        2.29725 251.73%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  9.4      0.0566 ug/L       0.21490      0.0566 ppb        0.21490 379.82%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -25.0     -0.1385 ug/L       0.12064     -0.1385 ppb        0.12064  87.09%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     206.8      9.1173 ug/L       0.91882      9.1173 ppb        0.91882  10.08%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 28
Sample ID: 232663002|882005|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 57
Date Collected: 7/8/2009 16:57:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232663002|882005|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5636.1	5636.1	101	%			16:59:27
1	Y RADIAL	5722.2	5722.2	118.8	%			16:59:27
1	Al 396.153Radial†	55963.7	55348.3	50380	ug/L	50380	ppb	16:59:27
1	Ca 317.933Radial†	5461.8	5375.8	13390	ug/L	13390	ppb	16:59:27
1	Fe 238.204 Radial†	2718.5	2683.8	94153	ug/L	94153	ppb	16:59:47
1	K 766.490 Radial†	18593.0	16884.8	7358.5	ug/L	7358.5	ppb	16:59:27
1	Mg 279.077 IEC†	113.8	112.2	8801.7	ug/L	8801.7	ppb	16:59:47
1	Na 589.592 Radial†	246.1	413.4	1117.8	ug/L	1117.8	ppb	16:59:47
1	Sr 421.552†	8578.6	8464.7	130.29	ug/L	130.29	ppb	16:59:27
1	Sc 361.383	1088481.4	1088481.4	102.60	%			17:00:45
1	Y 371.029	1008851.5	1008851.5	118.24	%			17:00:45
1	Ag 328.068†	-6042.6	-6528.0	5.0109	ug/L	5.0109	ppb	17:01:11
1	As 188.979†	-52.2	-14.0	35.362	ug/L	35.362	ppb	17:01:11
1	B 249.677†	1249.5	1599.3	12.343	ug/L	12.343	ppb	17:00:51
1	Ba 233.527†	164183.4	159996.2	812.35	ug/L	812.35	ppb	17:00:51
1	Be 313.107†	-12922.9	-5279.0	5.5413	ug/L	5.5413	ppb	17:00:51
1	Cd 226.502†	1191.6	1439.0	-0.3293	ug/L	-0.3293	ppb	17:01:11
1	Co 228.616†	2897.8	2914.8	28.742	ug/L	28.742	ppb	17:01:11
1	Cr 267.716†	7267.3	7111.6	62.695	ug/L	62.695	ppb	17:01:11
1	Cu 324.752†	26457.0	15595.0	43.920	ug/L	43.920	ppb	17:00:51
1	Mn 257.610†	4116298.4	4011101.2	3182.0	ug/L	3182.0	ppb	17:00:45
1	Mo 202.031†	119.6	84.8	9.8562	ug/L	9.8562	ppb	17:01:11
1	Ni 231.604†	3205.9	2976.4	47.681	ug/L	47.681	ppb	17:01:11
1	P 214.914†	2652.5	2248.3	729.47	ug/L	729.47	ppb	17:01:11
1	Pb 220.353†	1236.1	1233.8	93.446	ug/L	93.446	ppb	17:01:11
1	S 181.975 Axial†	618.7	535.1	443.06	ug/L	443.06	ppb	17:01:11
1	Sb 206.836†	100.7	52.8	0.5053	ug/L	0.5053	ppb	17:01:11
1	Se 196.026†	-950.3	-904.6	39.324	ug/L	39.324	ppb	17:01:11
1	Si 251.611†	426975.1	415588.9	8573.1	ug/L	8573.1	ppb	17:00:51
1	Sn 189.927†	-17.2	-22.2	-0.0692	ug/L	-0.0692	ppb	17:01:11
1	Ti 334.940†	2421027.9	2360751.1	3091.3	ug/L	3091.3	ppb	17:00:45
1	Tl 190.801†	-289.8	-221.1	-4.0470	ug/L	-4.0470	ppb	17:01:11
1	U 409.014†	-12532.0	-8379.5	-219.60	ug/L	-219.60	ppb	17:00:51
1	V 292.402†	25916.4	26912.1	136.16	ug/L	136.16	ppb	17:01:11
1	Zn 213.857†	57415.0	54836.8	295.43	ug/L	295.43	ppb	17:00:51
1	SiO2†	429815.7	418315.2	18478	ug/L	18478	ppb	17:02:20
2	Sc Radial	5673.0	5673.0	102	%			16:59:52
2	Y RADIAL	5770.0	5770.0	119.8	%			16:59:52
2	Al 396.153Radial†	56383.9	55401.4	50428	ug/L	50428	ppb	16:59:52
2	Ca 317.933Radial†	5511.2	5389.2	13424	ug/L	13424	ppb	16:59:52
2	Fe 238.204 Radial†	2714.8	2662.7	93414	ug/L	93414	ppb	17:00:12
2	K 766.490 Radial†	18785.1	16953.9	7388.2	ug/L	7388.2	ppb	16:59:52
2	Mg 279.077 IEC†	119.3	116.9	9175.0	ug/L	9175.0	ppb	17:00:12
2	Na 589.592 Radial†	223.1	389.3	1052.6	ug/L	1052.6	ppb	17:00:12
2	Sr 421.552†	8647.7	8477.4	130.48	ug/L	130.48	ppb	16:59:52
2	Sc 361.383	1090579.4	1090579.4	102.80	%			17:01:17
2	Y 371.029	1013682.5	1013682.5	118.81	%			17:01:17
2	Ag 328.068†	-6093.4	-6566.0	4.6220	ug/L	4.6220	ppb	17:01:43
2	As 188.979†	-61.2	-22.6	33.146	ug/L	33.146	ppb	17:01:43
2	B 249.677†	1244.5	1592.1	12.329	ug/L	12.329	ppb	17:01:22
2	Ba 233.527†	163923.4	159435.4	809.49	ug/L	809.49	ppb	17:01:22
2	Be 313.107†	-13043.6	-5372.3	5.4924	ug/L	5.4924	ppb	17:01:22
2	Cd 226.502†	1193.9	1439.0	-0.2419	ug/L	-0.2419	ppb	17:01:43
2	Co 228.616†	2897.4	2908.9	28.696	ug/L	28.696	ppb	17:01:43
2	Cr 267.716†	7247.5	7078.8	62.401	ug/L	62.401	ppb	17:01:43
2	Cu 324.752†	26542.7	15628.6	43.961	ug/L	43.961	ppb	17:01:22
2	Mn 257.610†	4098013.2	3985596.2	3161.7	ug/L	3161.7	ppb	17:01:17
2	Mo 202.031†	116.9	82.0	9.6921	ug/L	9.6921	ppb	17:01:43
2	Ni 231.604†	3241.9	3005.4	48.146	ug/L	48.146	ppb	17:01:43

2	P 214.914†	2648.7	2239.6	726.98	ug/L	726.98 ppb	17:01:43
2	Pb 220.353†	1242.1	1237.4	93.793	ug/L	93.793 ppb	17:01:43
2	S 181.975 Axial†	605.9	521.6	431.58	ug/L	431.58 ppb	17:01:43
2	Sb 206.836†	93.5	45.6	-0.9060	ug/L	-0.9060 ppb	17:01:43
2	Se 196.026†	-944.7	-897.4	39.076	ug/L	39.076 ppb	17:01:43
2	Si 251.611†	425374.6	413231.4	8524.4	ug/L	8524.4 ppb	17:01:22
2	Sn 189.927†	-24.0	-28.8	-0.7630	ug/L	-0.7630 ppb	17:01:43
2	Ti 334.940†	2418993.8	2354233.2	3082.8	ug/L	3082.8 ppb	17:01:17
2	Tl 190.801†	-320.0	-249.9	-9.0638	ug/L	-9.0638 ppb	17:01:43
2	U 409.014†	-12521.2	-8345.5	-218.66	ug/L	-218.66 ppb	17:01:22
2	V 292.402†	26004.4	26949.1	136.49	ug/L	136.49 ppb	17:01:43
2	Zn 213.857†	57335.8	54652.2	294.46	ug/L	294.46 ppb	17:01:22
2	SiO2†	431894.9	419531.9	18532	ug/L	18532 ppb	17:02:25
3	Sc Radial	5720.5	5720.5	103	%		17:00:17
3	Y RADIAL	5800.1	5800.1	120.4	%		17:00:17
3	Al 396.153Radial†	56840.5	55386.0	50414	ug/L	50414 ppb	17:00:17
3	Ca 317.933Radial†	5552.1	5384.1	13411	ug/L	13411 ppb	17:00:17
3	Fe 238.204 Radial†	2724.8	2650.3	92977	ug/L	92977 ppb	17:00:37
3	K 766.490 Radial†	18920.9	16932.9	7378.6	ug/L	7378.6 ppb	17:00:17
3	Mg 279.077 IEC†	116.6	113.2	8886.1	ug/L	8886.1 ppb	17:00:37
3	Na 589.592 Radial†	241.2	405.0	1095.2	ug/L	1095.2 ppb	17:00:37
3	Sr 421.552†	8711.6	8469.1	130.36	ug/L	130.36 ppb	17:00:17
3	Sc 361.383	1074300.3	1074300.3	101.26	%		17:01:49
3	Y 371.029	999302.6	999302.6	117.12	%		17:01:49
3	Ag 328.068†	-6090.2	-6652.7	4.1590	ug/L	4.1590 ppb	17:02:14
3	As 188.979†	-68.0	-30.2	31.282	ug/L	31.282 ppb	17:02:14
3	B 249.677†	1260.8	1626.5	12.922	ug/L	12.922 ppb	17:01:54
3	Ba 233.527†	166957.2	164847.6	836.88	ug/L	836.88 ppb	17:01:54
3	Be 313.107†	-13057.6	-5578.3	5.4322	ug/L	5.4322 ppb	17:01:54
3	Cd 226.502†	1201.9	1464.6	0.0013	ug/L	0.0013 ppb	17:02:14
3	Co 228.616†	2913.7	2967.8	29.444	ug/L	29.444 ppb	17:02:14
3	Cr 267.716†	7243.9	7182.0	63.280	ug/L	63.280 ppb	17:02:14
3	Cu 324.752†	26865.9	16339.0	45.688	ug/L	45.688 ppb	17:01:54
3	Mn 257.610†	4051297.8	3999871.2	3173.0	ug/L	3173.0 ppb	17:01:49
3	Mo 202.031†	115.0	81.8	9.6555	ug/L	9.6555 ppb	17:02:14
3	Ni 231.604†	3225.8	3037.2	48.656	ug/L	48.656 ppb	17:02:14
3	P 214.914†	2683.7	2313.2	753.06	ug/L	753.06 ppb	17:02:14
3	Pb 220.353†	1239.7	1253.3	95.022	ug/L	95.022 ppb	17:02:14
3	S 181.975 Axial†	618.7	543.2	449.86	ug/L	449.86 ppb	17:02:14
3	Sb 206.836†	95.9	49.3	-0.2091	ug/L	-0.2091 ppb	17:02:14
3	Se 196.026†	-935.8	-902.5	35.875	ug/L	35.875 ppb	17:02:14
3	Si 251.611†	432323.6	426363.9	8795.4	ug/L	8795.4 ppb	17:01:54
3	Sn 189.927†	-27.4	-32.5	-1.1562	ug/L	-1.1562 ppb	17:02:14
3	Ti 334.940†	2384152.4	2355484.2	3084.4	ug/L	3084.4 ppb	17:01:49
3	Tl 190.801†	-316.0	-250.7	-9.1359	ug/L	-9.1359 ppb	17:02:14
3	U 409.014†	-12878.6	-8883.0	-231.95	ug/L	-231.95 ppb	17:01:54
3	V 292.402†	26028.8	27356.5	138.83	ug/L	138.83 ppb	17:02:14
3	Zn 213.857†	58256.1	56406.1	304.31	ug/L	304.31 ppb	17:01:54
3	SiO2†	428609.8	422654.2	18670	ug/L	18670 ppb	17:02:30

Mean Data: 232663002|882005|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1084453.7	102.22	%	0.835				0.82%
Sc Radial	5676.5	102	%	0.8				0.75%
Y 371.029	1007278.9	118.06	%	0.858				0.73%
Y RADIAL	5764.1	119.7	%	0.82				0.68%
Ag 328.068†	-6582.3	4.5973	ug/L	0.42645	4.5973	ppb	0.42645	9.28%
Al 396.153Radial†	55378.6	50407	ug/L	24.9	50407	ppb	24.9	0.05%
As 188.979†	-22.3	33.263	ug/L	2.0428	33.263	ppb	2.0428	6.14%
B 249.677†	1606.0	12.531	ug/L	0.3380	12.531	ppb	0.3380	2.70%
Ba 233.527†	161426.4	819.57	ug/L	15.057	819.57	ppb	15.057	1.84%
Be 313.107†	-5409.8	5.4886	ug/L	0.05463	5.4886	ppb	0.05463	1.00%
Ca 317.933Radial†	5383.0	13408	ug/L	16.9	13408	ppb	16.9	0.13%
Cd 226.502†	1447.5	-0.1899	ug/L	0.17131	-0.1899	ppb	0.17131	90.19%
Co 228.616†	2930.5	28.961	ug/L	0.4192	28.961	ppb	0.4192	1.45%
Cr 267.716†	7124.1	62.792	ug/L	0.4472	62.792	ppb	0.4472	0.71%
Cu 324.752†	15854.2	44.523	ug/L	1.0092	44.523	ppb	1.0092	2.27%
Fe 238.204 Radial†	2665.6	93515	ug/L	594.8	93515	ppb	594.8	0.64%
K 766.490 Radial†	16923.9	7375.1	ug/L	15.13	7375.1	ppb	15.13	0.21%

Mg 279.077 IEC†	114.1	8954.2	ug/L	195.79	8954.2	ppb	195.79	2.19%
Mn 257.610†	3998856.2	3172.2	ug/L	10.15	3172.2	ppb	10.15	0.32%
Mo 202.031†	82.9	9.7346	ug/L	0.10692	9.7346	ppb	0.10692	1.10%
Na 589.592 Radial†	402.6	1088.5	ug/L	33.12	1088.5	ppb	33.12	3.04%
Ni 231.604†	3006.3	48.161	ug/L	0.4877	48.161	ppb	0.4877	1.01%
P 214.914†	2267.1	736.51	ug/L	14.390	736.51	ppb	14.390	1.95%
Pb 220.353†	1241.5	94.087	ug/L	0.8281	94.087	ppb	0.8281	0.88%
S 181.975 Axial†	533.3	441.50	ug/L	9.238	441.50	ppb	9.238	2.09%
Sb 206.836†	49.2	-0.2033	ug/L	0.70567	-0.2033	ppb	0.70567	347.14%
Se 196.026†	-901.5	38.092	ug/L	1.9240	38.092	ppb	1.9240	5.05%
Si 251.611†	418394.7	8630.9	ug/L	144.47	8630.9	ppb	144.47	1.67%
Sn 189.927†	-27.8	-0.6628	ug/L	0.55039	-0.6628	ppb	0.55039	83.04%
Sr 421.552†	8470.4	130.38	ug/L	0.099	130.38	ppb	0.099	0.08%
Ti 334.940†	2356822.8	3086.2	ug/L	4.53	3086.2	ppb	4.53	0.15%
Tl 190.801†	-240.5	-7.4156	ug/L	2.91753	-7.4156	ppb	2.91753	39.34%
U 409.014†	-8536.0	-223.40	ug/L	7.415	-223.40	ppb	7.415	3.32%
V 292.402†	27072.6	137.16	ug/L	1.453	137.16	ppb	1.453	1.06%
Zn 213.857†	55298.4	298.06	ug/L	5.427	298.06	ppb	5.427	1.82%
SiO2†	420167.1	18560	ug/L	98.9	18560	ppb	98.9	0.53%

Sequence No.: 29
Sample ID: 232663003|882005|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 58
Date Collected: 7/8/2009 17:04:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232663003|882005|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5743.6	5743.6	103	%			17:06:34
1	Y RADIAL	6210.2	6210.2	129.0	%			17:06:34
1	Al 396.153Radial†	25776.6	25066.7	22816	ug/L	22816	ppb	17:06:34
1	Ca 317.933Radial†	1806.5	1733.3	4317.4	ug/L	4317.4	ppb	17:06:54
1	Fe 238.204 Radial†	2220.6	2151.2	75468	ug/L	75468	ppb	17:06:54
1	K 766.490 Radial†	9982.7	8198.9	3596.0	ug/L	3596.0	ppb	17:06:34
1	Mg 279.077 IEC†	53.0	51.2	3989.3	ug/L	3989.3	ppb	17:06:54
1	Na 589.592 Radial†	114.4	281.3	760.61	ug/L	760.61	ppb	17:06:54
1	Sr 421.552†	2734.5	2643.9	40.693	ug/L	40.693	ppb	17:06:34
1	Sc 361.383	1074290.7	1074290.7	101.26	%			17:07:51
1	Y 371.029	1063344.8	1063344.8	124.63	%			17:07:51
1	Ag 328.068†	-4884.6	-5462.3	3.0892	ug/L	3.0892	ppb	17:07:57
1	As 188.979†	-56.7	-19.1	23.123	ug/L	23.123	ppb	17:08:17
1	B 249.677†	675.8	1048.9	6.2966	ug/L	6.2966	ppb	17:07:57
1	Ba 233.527†	56583.1	55852.6	284.62	ug/L	284.62	ppb	17:07:57
1	Be 313.107†	-5916.3	1473.7	4.9847	ug/L	4.9847	ppb	17:07:57
1	Cd 226.502†	840.4	1107.6	-0.5796	ug/L	-0.5796	ppb	17:08:17
1	Co 228.616†	1148.9	1225.0	10.128	ug/L	10.128	ppb	17:08:17
1	Cr 267.716†	19316.8	19104.3	164.37	ug/L	164.37	ppb	17:07:57
1	Cu 324.752†	19101.6	8671.9	25.759	ug/L	25.759	ppb	17:07:57
1	Mn 257.610†	1974498.7	1949028.1	1550.0	ug/L	1550.0	ppb	17:07:51
1	Mo 202.031†	255.3	220.3	13.998	ug/L	13.998	ppb	17:08:17
1	Ni 231.604†	5262.9	5049.0	80.914	ug/L	80.914	ppb	17:08:17
1	P 214.914†	2389.5	2022.8	658.32	ug/L	658.32	ppb	17:08:17
1	Pb 220.353†	753.3	773.0	55.305	ug/L	55.305	ppb	17:08:17
1	S 181.975 Axial†	207.2	136.8	111.27	ug/L	111.27	ppb	17:08:17
1	Sb 206.836†	91.2	44.6	0.2603	ug/L	0.2603	ppb	17:08:17
1	Se 196.026†	-770.0	-738.8	26.132	ug/L	26.132	ppb	17:08:17
1	Si 251.611†	285710.8	281584.8	5809.1	ug/L	5809.1	ppb	17:07:57
1	Sn 189.927†	51.2	45.1	6.1347	ug/L	6.1347	ppb	17:08:17
1	Ti 334.940†	1505389.6	1487710.3	1947.8	ug/L	1947.8	ppb	17:07:51
1	Tl 190.801†	-213.9	-149.8	-6.9687	ug/L	-6.9687	ppb	17:08:17
1	U 409.014†	-13935.1	-9926.5	-255.88	ug/L	-255.88	ppb	17:07:51
1	V 292.402†	12006.0	13508.9	63.819	ug/L	63.819	ppb	17:07:57
1	Zn 213.857†	74375.7	72325.0	395.10	ug/L	395.10	ppb	17:07:57
1	SiO2†	299168.4	294832.2	13025	ug/L	13025	ppb	17:09:24
2	Sc Radial	5690.9	5690.9	102	%			17:06:59
2	Y RADIAL	6132.2	6132.2	127.3	%			17:06:59
2	Al 396.153Radial†	25466.6	24994.6	22751	ug/L	22751	ppb	17:06:59
2	Ca 317.933Radial†	1811.6	1754.5	4370.2	ug/L	4370.2	ppb	17:07:19
2	Fe 238.204 Radial†	2214.0	2164.6	75939	ug/L	75939	ppb	17:07:19
2	K 766.490 Radial†	9865.9	8174.2	3585.6	ug/L	3585.6	ppb	17:06:59
2	Mg 279.077 IEC†	53.4	52.1	4059.4	ug/L	4059.4	ppb	17:07:19
2	Na 589.592 Radial†	124.1	291.8	788.93	ug/L	788.93	ppb	17:07:19
2	Sr 421.552†	2708.2	2642.7	40.674	ug/L	40.674	ppb	17:06:59
2	Sc 361.383	1079841.5	1079841.5	101.79	%			17:08:22
2	Y 371.029	1068398.8	1068398.8	125.22	%			17:08:22
2	Ag 328.068†	-5004.9	-5555.6	2.8701	ug/L	2.8701	ppb	17:08:28
2	As 188.979†	-52.2	-14.4	24.314	ug/L	24.314	ppb	17:08:48
2	B 249.677†	702.9	1072.1	6.5957	ug/L	6.5957	ppb	17:08:28
2	Ba 233.527†	57192.1	56163.7	286.21	ug/L	286.21	ppb	17:08:28
2	Be 313.107†	-5932.9	1487.5	4.9877	ug/L	4.9877	ppb	17:08:28
2	Cd 226.502†	855.0	1117.6	-0.5600	ug/L	-0.5600	ppb	17:08:48
2	Co 228.616†	1157.0	1227.1	10.149	ug/L	10.149	ppb	17:08:48
2	Cr 267.716†	19649.0	19332.6	166.33	ug/L	166.33	ppb	17:08:28
2	Cu 324.752†	19217.9	8689.2	25.829	ug/L	25.829	ppb	17:08:28
2	Mn 257.610†	1984034.2	1948373.2	1549.6	ug/L	1549.6	ppb	17:08:22
2	Mo 202.031†	254.2	218.0	13.937	ug/L	13.937	ppb	17:08:48
2	Ni 231.604†	5299.8	5058.5	81.066	ug/L	81.066	ppb	17:08:48

2	P 214.914†	2390.1	2011.2	653.82	ug/L	653.82 ppb	17:08:48
2	Pb 220.353†	750.5	766.4	54.751	ug/L	54.751 ppb	17:08:48
2	S 181.975 Axial†	220.9	149.2	121.81	ug/L	121.81 ppb	17:08:48
2	Sb 206.836†	89.5	42.5	-0.1779	ug/L	-0.1779 ppb	17:08:48
2	Se 196.026†	-788.2	-752.7	23.249	ug/L	23.249 ppb	17:08:48
2	Si 251.611†	289406.6	283765.4	5854.1	ug/L	5854.1 ppb	17:08:28
2	Sn 189.927†	53.2	46.8	6.3225	ug/L	6.3225 ppb	17:08:48
2	Ti 334.940†	1512738.7	1487288.7	1947.3	ug/L	1947.3 ppb	17:08:22
2	Tl 190.801†	-208.1	-143.1	-5.8361	ug/L	-5.8361 ppb	17:08:48
2	U 409.014†	-13898.8	-9820.1	-253.30	ug/L	-253.30 ppb	17:08:22
2	V 292.402†	12160.9	13600.1	64.277	ug/L	64.277 ppb	17:08:28
2	Zn 213.857†	75346.3	72901.1	398.26	ug/L	398.26 ppb	17:08:28
2	SiO2†	294640.5	288865.1	12761	ug/L	12761 ppb	17:09:29
3	Sc Radial	5562.5	5562.5	100.0	%		17:07:24
3	Y RADIAL	5991.1	5991.1	124.4	%		17:07:24
3	Al 396.153Radial†	24975.0	25077.9	22826	ug/L	22826 ppb	17:07:24
3	Ca 317.933Radial†	1797.3	1781.2	4436.6	ug/L	4436.6 ppb	17:07:44
3	Fe 238.204 Radial†	2208.6	2209.2	77504	ug/L	77504 ppb	17:07:44
3	K 766.490 Radial†	9770.6	8301.6	3642.1	ug/L	3642.1 ppb	17:07:24
3	Mg 279.077 IEC†	52.0	51.8	4036.4	ug/L	4036.4 ppb	17:07:44
3	Na 589.592 Radial†	115.3	285.8	772.64	ug/L	772.64 ppb	17:07:44
3	Sr 421.552†	2636.6	2632.3	40.513	ug/L	40.513 ppb	17:07:24
3	Sc 361.383	1080023.5	1080023.5	101.80	%		17:08:53
3	Y 371.029	1068170.5	1068170.5	125.19	%		17:08:53
3	Ag 328.068†	-5008.5	-5558.3	3.3667	ug/L	3.3667 ppb	17:08:59
3	As 188.979†	-34.0	3.5	28.837	ug/L	28.837 ppb	17:09:19
3	B 249.677†	768.4	1136.3	7.3885	ug/L	7.3885 ppb	17:08:59
3	Ba 233.527†	57256.4	56217.4	286.51	ug/L	286.51 ppb	17:08:59
3	Be 313.107†	-6257.8	1169.3	4.8939	ug/L	4.8939 ppb	17:08:59
3	Cd 226.502†	854.5	1117.0	-0.7499	ug/L	-0.7499 ppb	17:09:19
3	Co 228.616†	1164.4	1234.2	10.211	ug/L	10.211 ppb	17:09:19
3	Cr 267.716†	19540.6	19222.8	165.42	ug/L	165.42 ppb	17:08:59
3	Cu 324.752†	19448.4	8912.5	26.470	ug/L	26.470 ppb	17:08:59
3	Mn 257.610†	1989461.7	1953376.1	1553.7	ug/L	1553.7 ppb	17:08:53
3	Mo 202.031†	258.4	222.1	14.209	ug/L	14.209 ppb	17:09:19
3	Ni 231.604†	5305.5	5063.3	81.143	ug/L	81.143 ppb	17:09:19
3	P 214.914†	2382.2	2003.0	649.63	ug/L	649.63 ppb	17:09:19
3	Pb 220.353†	737.1	753.1	53.621	ug/L	53.621 ppb	17:09:19
3	S 181.975 Axial†	217.4	145.7	118.82	ug/L	118.82 ppb	17:09:19
3	Sb 206.836†	81.1	34.3	-1.7472	ug/L	-1.7472 ppb	17:09:19
3	Se 196.026†	-751.2	-716.3	40.609	ug/L	40.609 ppb	17:09:19
3	Si 251.611†	290131.4	284429.4	5867.7	ug/L	5867.7 ppb	17:08:59
3	Sn 189.927†	56.4	49.9	6.6851	ug/L	6.6851 ppb	17:09:19
3	Ti 334.940†	1514708.2	1488972.8	1949.5	ug/L	1949.5 ppb	17:08:53
3	Tl 190.801†	-228.7	-163.3	-9.2134	ug/L	-9.2134 ppb	17:09:19
3	U 409.014†	-14103.1	-10018.4	-258.41	ug/L	-258.41 ppb	17:08:53
3	V 292.402†	12201.7	13638.2	64.270	ug/L	64.270 ppb	17:08:59
3	Zn 213.857†	75380.0	72921.7	398.21	ug/L	398.21 ppb	17:08:59
3	SiO2†	291149.9	285387.6	12607	ug/L	12607 ppb	17:09:35

Mean Data: 232663003|882005|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1078051.9	101.62	%	0.307				0.30%
Sc Radial	5665.7	102	%	1.7				1.64%
Y 371.029	1066638.0	125.01	%	0.335				0.27%
Y RADIAL	6111.2	126.9	%	2.31				1.82%
Ag 328.068†	-5525.4	3.1087	ug/L	0.24889	3.1087	ppb	0.24889	8.01%
Al 396.153Radial†	25046.4	22798	ug/L	41.1	22798	ppb	41.1	0.18%
As 188.979†	-10.0	25.425	ug/L	3.0147	25.425	ppb	3.0147	11.86%
B 249.677†	1085.7	6.7603	ug/L	0.56423	6.7603	ppb	0.56423	8.35%
Ba 233.527†	56077.9	285.78	ug/L	1.017	285.78	ppb	1.017	0.36%
Be 313.107†	1376.8	4.9554	ug/L	0.05332	4.9554	ppb	0.05332	1.08%
Ca 317.933Radial†	1756.3	4374.7	ug/L	59.72	4374.7	ppb	59.72	1.37%
Cd 226.502†	1114.1	-0.6299	ug/L	0.10443	-0.6299	ppb	0.10443	16.58%
Co 228.616†	1228.8	10.163	ug/L	0.0430	10.163	ppb	0.0430	0.42%
Cr 267.716†	19219.9	165.37	ug/L	0.978	165.37	ppb	0.978	0.59%
Cu 324.752†	8757.9	26.019	ug/L	0.3920	26.019	ppb	0.3920	1.51%
Fe 238.204 Radial†	2175.0	76303	ug/L	1065.7	76303	ppb	1065.7	1.40%
K 766.490 Radial†	8224.9	3607.9	ug/L	30.03	3607.9	ppb	30.03	0.83%

Mg 279.077 IEC†	51.7	4028.4	ug/L	35.75	4028.4	ppb	35.75	0.89%
Mn 257.610†	1950259.2	1551.1	ug/L	2.28	1551.1	ppb	2.28	0.15%
Mo 202.031†	220.1	14.048	ug/L	0.1429	14.048	ppb	0.1429	1.02%
Na 589.592 Radial†	286.3	774.06	ug/L	14.216	774.06	ppb	14.216	1.84%
Ni 231.604†	5056.9	81.041	ug/L	0.1165	81.041	ppb	0.1165	0.14%
P 214.914†	2012.3	653.92	ug/L	4.347	653.92	ppb	4.347	0.66%
Pb 220.353†	764.2	54.559	ug/L	0.8581	54.559	ppb	0.8581	1.57%
S 181.975 Axial†	143.9	117.30	ug/L	5.430	117.30	ppb	5.430	4.63%
Sb 206.836†	40.5	-0.5549	ug/L	1.05555	-0.5549	ppb	1.05555	190.22%
Se 196.026†	-735.9	29.997	ug/L	9.3027	29.997	ppb	9.3027	31.01%
Si 251.611†	283259.8	5843.6	ug/L	30.70	5843.6	ppb	30.70	0.53%
Sn 189.927†	47.3	6.3808	ug/L	0.27982	6.3808	ppb	0.27982	4.39%
Sr 421.552†	2639.6	40.627	ug/L	0.0990	40.627	ppb	0.0990	0.24%
Ti 334.940†	1487990.6	1948.2	ug/L	1.15	1948.2	ppb	1.15	0.06%
Tl 190.801†	-152.0	-7.3394	ug/L	1.71888	-7.3394	ppb	1.71888	23.42%
U 409.014†	-9921.7	-255.87	ug/L	2.556	-255.87	ppb	2.556	1.00%
V 292.402†	13582.4	64.122	ug/L	0.2623	64.122	ppb	0.2623	0.41%
Zn 213.857†	72715.9	397.19	ug/L	1.811	397.19	ppb	1.811	0.46%
SiO2†	289695.0	12798	ug/L	211.1	12798	ppb	211.1	1.65%

Sequence No.: 30
Sample ID: 232663004|882005|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 59
Date Collected: 7/8/2009 17:11:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232663004|882005|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5627.5	5627.5	101	%			17:13:38
1	Y RADIAL	5732.7	5732.7	119.0	%			17:13:38
1	Al 396.153Radial†	52026.4	51539.6	46913	ug/L	46913	ppb	17:13:38
1	Ca 317.933Radial†	5316.9	5240.8	13054	ug/L	13054	ppb	17:13:38
1	Fe 238.204 Radial†	2915.5	2882.7	101130	ug/L	101130	ppb	17:13:58
1	K 766.490 Radial†	17810.7	16139.4	7034.1	ug/L	7034.1	ppb	17:13:38
1	Mg 279.077 IEC†	109.3	107.9	8459.7	ug/L	8459.7	ppb	17:13:58
1	Na 589.592 Radial†	223.0	390.9	1056.9	ug/L	1056.9	ppb	17:13:58
1	Sr 421.552†	8198.5	8101.8	124.70	ug/L	124.70	ppb	17:13:38
1	Sc 361.383	1091503.0	1091503.0	102.89	%			17:14:57
1	Y 371.029	1022718.0	1022718.0	119.87	%			17:14:57
1	Ag 328.068†	-6634.7	-7087.1	5.1482	ug/L	5.1482	ppb	17:15:22
1	As 188.979†	-46.0	-7.8	38.259	ug/L	38.259	ppb	17:15:22
1	B 249.677†	1112.1	1462.4	9.2684	ug/L	9.2684	ppb	17:15:02
1	Ba 233.527†	156107.9	151704.3	770.59	ug/L	770.59	ppb	17:15:02
1	Be 313.107†	-10223.4	-2620.4	6.3813	ug/L	6.3813	ppb	17:15:02
1	Cd 226.502†	1336.8	1576.9	-0.1200	ug/L	-0.1200	ppb	17:15:22
1	Co 228.616†	3398.9	3393.9	34.581	ug/L	34.581	ppb	17:15:22
1	Cr 267.716†	7232.8	7058.5	62.417	ug/L	62.417	ppb	17:15:22
1	Cu 324.752†	26869.9	15924.9	45.138	ug/L	45.138	ppb	17:15:02
1	Mn 257.610†	4778372.6	4643495.9	3682.7	ug/L	3682.7	ppb	17:14:57
1	Mo 202.031†	128.7	93.3	10.677	ug/L	10.677	ppb	17:15:22
1	Ni 231.604†	3442.3	3197.4	51.221	ug/L	51.221	ppb	17:15:22
1	P 214.914†	3553.4	3116.8	1029.4	ug/L	1029.4	ppb	17:15:22
1	Pb 220.353†	1647.5	1630.4	121.84	ug/L	121.84	ppb	17:15:22
1	S 181.975 Axial†	597.5	512.9	424.89	ug/L	424.89	ppb	17:15:22
1	Sb 206.836†	96.9	48.8	0.0180	ug/L	0.0180	ppb	17:15:22
1	Se 196.026†	-1046.8	-995.8	33.992	ug/L	33.992	ppb	17:15:22
1	Si 251.611†	455983.3	442631.3	9131.2	ug/L	9131.2	ppb	17:15:02
1	Sn 189.927†	-32.4	-37.0	-1.4643	ug/L	-1.4643	ppb	17:15:22
1	Ti 334.940†	2432270.9	2365146.7	3097.1	ug/L	3097.1	ppb	17:14:57
1	Tl 190.801†	-340.0	-269.0	-9.2851	ug/L	-9.2851	ppb	17:15:22
1	U 409.014†	-13192.3	-8987.5	-235.54	ug/L	-235.54	ppb	17:15:02
1	V 292.402†	30125.3	30933.0	157.98	ug/L	157.98	ppb	17:15:02
1	Zn 213.857†	60975.3	58142.3	313.12	ug/L	313.12	ppb	17:15:02
1	SiO2†	465519.0	451857.3	19961	ug/L	19961	ppb	17:16:31
2	Sc Radial	5633.3	5633.3	101	%			17:14:03
2	Y RADIAL	5757.5	5757.5	119.6	%			17:14:03
2	Al 396.153Radial†	52036.8	51496.8	46874	ug/L	46874	ppb	17:14:03
2	Ca 317.933Radial†	5331.2	5249.5	13076	ug/L	13076	ppb	17:14:03
2	Fe 238.204 Radial†	2890.3	2854.9	100160	ug/L	100160	ppb	17:14:24
2	K 766.490 Radial†	17866.4	16176.3	7049.2	ug/L	7049.2	ppb	17:14:03
2	Mg 279.077 IEC†	109.0	107.5	8424.7	ug/L	8424.7	ppb	17:14:24
2	Na 589.592 Radial†	218.0	385.7	1043.0	ug/L	1043.0	ppb	17:14:24
2	Sr 421.552†	8179.6	8074.8	124.28	ug/L	124.28	ppb	17:14:03
2	Sc 361.383	1090665.8	1090665.8	102.81	%			17:15:28
2	Y 371.029	1020523.8	1020523.8	119.61	%			17:15:28
2	Ag 328.068†	-6584.8	-7043.6	5.0044	ug/L	5.0044	ppb	17:15:54
2	As 188.979†	-43.4	-5.3	38.665	ug/L	38.665	ppb	17:15:54
2	B 249.677†	1242.9	1590.4	11.394	ug/L	11.394	ppb	17:15:34
2	Ba 233.527†	156002.1	151717.8	770.64	ug/L	770.64	ppb	17:15:34
2	Be 313.107†	-10010.1	-2420.5	6.4525	ug/L	6.4525	ppb	17:15:34
2	Cd 226.502†	1339.5	1580.5	0.0218	ug/L	0.0218	ppb	17:15:54
2	Co 228.616†	3366.5	3364.9	34.225	ug/L	34.225	ppb	17:15:54
2	Cr 267.716†	7185.4	7017.8	62.051	ug/L	62.051	ppb	17:15:54
2	Cu 324.752†	26799.4	15876.3	44.962	ug/L	44.962	ppb	17:15:34
2	Mn 257.610†	4784657.9	4653174.6	3690.2	ug/L	3690.2	ppb	17:15:28
2	Mo 202.031†	128.1	92.8	10.588	ug/L	10.588	ppb	17:15:54
2	Ni 231.604†	3400.5	3159.4	50.610	ug/L	50.610	ppb	17:15:54

2	P 214.914†	3558.9	3124.8	1033.1	ug/L	1033.1	ppb	17:15:54
2	Pb 220.353†	1650.1	1634.1	122.21	ug/L	122.21	ppb	17:15:54
2	S 181.975 Axial†	599.3	515.1	426.75	ug/L	426.75	ppb	17:15:54
2	Sb 206.836†	97.6	49.5	0.1509	ug/L	0.1509	ppb	17:15:54
2	Se 196.026†	-1016.5	-967.1	39.902	ug/L	39.902	ppb	17:15:54
2	Si 251.611†	455357.6	442362.9	9125.6	ug/L	9125.6	ppb	17:15:34
2	Sn 189.927†	-30.2	-34.9	-1.2628	ug/L	-1.2628	ppb	17:15:54
2	Ti 334.940†	2433477.6	2368135.1	3101.0	ug/L	3101.0	ppb	17:15:28
2	Tl 190.801†	-334.9	-264.4	-8.4348	ug/L	-8.4348	ppb	17:15:54
2	U 409.014†	-12973.1	-8784.1	-230.37	ug/L	-230.37	ppb	17:15:34
2	V 292.402†	30203.2	31031.2	158.68	ug/L	158.68	ppb	17:15:34
2	Zn 213.857†	60975.1	58187.6	313.49	ug/L	313.49	ppb	17:15:34
2	SiO2†	466699.1	453352.4	20027	ug/L	20027	ppb	17:16:37
3	Sc Radial	5687.9	5687.9	102	%			17:14:29
3	Y RADIAL	5802.3	5802.3	120.5	%			17:14:29
3	Al 396.153Radial†	52268.3	51229.6	46631	ug/L	46631	ppb	17:14:29
3	Ca 317.933Radial†	5322.3	5190.2	12928	ug/L	12928	ppb	17:14:29
3	Fe 238.204 Radial†	2906.6	2843.4	99751	ug/L	99751	ppb	17:14:49
3	K 766.490 Radial†	17932.2	16071.1	7003.4	ug/L	7003.4	ppb	17:14:29
3	Mg 279.077 IEC†	107.3	104.8	8216.4	ug/L	8216.4	ppb	17:14:49
3	Na 589.592 Radial†	207.6	373.6	1010.1	ug/L	1010.1	ppb	17:14:49
3	Sr 421.552†	8236.0	8052.3	123.94	ug/L	123.94	ppb	17:14:29
3	Sc 361.383	1089998.3	1089998.3	102.74	%			17:16:00
3	Y 371.029	1019879.9	1019879.9	119.53	%			17:16:00
3	Ag 328.068†	-6628.3	-7089.9	4.6897	ug/L	4.6897	ppb	17:16:26
3	As 188.979†	-35.7	2.2	40.343	ug/L	40.343	ppb	17:16:26
3	B 249.677†	1249.8	1597.9	11.564	ug/L	11.564	ppb	17:16:06
3	Ba 233.527†	155471.0	151293.8	768.48	ug/L	768.48	ppb	17:16:06
3	Be 313.107†	-10050.2	-2465.6	6.4391	ug/L	6.4391	ppb	17:16:06
3	Cd 226.502†	1329.0	1571.2	-0.0007	ug/L	-0.0007	ppb	17:16:26
3	Co 228.616†	3355.7	3356.5	34.125	ug/L	34.125	ppb	17:16:26
3	Cr 267.716†	7203.8	7039.9	62.230	ug/L	62.230	ppb	17:16:26
3	Cu 324.752†	26723.7	15818.6	44.796	ug/L	44.796	ppb	17:16:06
3	Mn 257.610†	4778561.9	4650091.3	3687.7	ug/L	3687.7	ppb	17:16:00
3	Mo 202.031†	138.1	102.6	10.954	ug/L	10.954	ppb	17:16:26
3	Ni 231.604†	3376.7	3138.2	50.272	ug/L	50.272	ppb	17:16:26
3	P 214.914†	3543.6	3112.1	1028.8	ug/L	1028.8	ppb	17:16:26
3	Pb 220.353†	1677.3	1661.6	124.26	ug/L	124.26	ppb	17:16:26
3	S 181.975 Axial†	607.1	523.1	433.57	ug/L	433.57	ppb	17:16:26
3	Sb 206.836†	105.6	57.3	1.6715	ug/L	1.6715	ppb	17:16:26
3	Se 196.026†	-1029.0	-979.9	34.306	ug/L	34.306	ppb	17:16:26
3	Si 251.611†	454036.2	441348.0	9104.7	ug/L	9104.7	ppb	17:16:06
3	Sn 189.927†	-33.3	-37.8	-1.5873	ug/L	-1.5873	ppb	17:16:26
3	Ti 334.940†	2432175.1	2368316.8	3101.2	ug/L	3101.2	ppb	17:16:00
3	Tl 190.801†	-317.8	-247.9	-5.6690	ug/L	-5.6690	ppb	17:16:26
3	U 409.014†	-13109.7	-8924.7	-233.81	ug/L	-233.81	ppb	17:16:06
3	V 292.402†	29866.1	30721.1	156.97	ug/L	156.97	ppb	17:16:06
3	Zn 213.857†	60748.0	58002.9	312.51	ug/L	312.51	ppb	17:16:06
3	SiO2†	460564.9	447660.1	19775	ug/L	19775	ppb	17:16:42

Mean Data: 232663004|882005|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1090722.3	102.81	%	0.071				0.07%
Sc Radial	5649.5	102	%	0.6				0.59%
Y 371.029	1021040.6	119.67	%	0.174				0.15%
Y RADIAL	5764.2	119.7	%	0.73				0.61%
Ag 328.068†	-7073.5	4.9474	ug/L	0.23453	4.9474	ppb	0.23453	4.74%
Al 396.153Radial†	51422.0	46806	ug/L	152.9	46806	ppb	152.9	0.33%
As 188.979†	-3.6	39.089	ug/L	1.1051	39.089	ppb	1.1051	2.83%
B 249.677†	1550.2	10.742	ug/L	1.2793	10.742	ppb	1.2793	11.91%
Ba 233.527†	151572.0	769.90	ug/L	1.233	769.90	ppb	1.233	0.16%
Be 313.107†	-2502.2	6.4243	ug/L	0.03785	6.4243	ppb	0.03785	0.59%
Ca 317.933Radial†	5226.8	13019	ug/L	79.8	13019	ppb	79.8	0.61%
Cd 226.502†	1576.2	-0.0330	ug/L	0.07620	-0.0330	ppb	0.07620	231.23%
Co 228.616†	3371.8	34.310	ug/L	0.2394	34.310	ppb	0.2394	0.70%
Cr 267.716†	7038.7	62.233	ug/L	0.1832	62.233	ppb	0.1832	0.29%
Cu 324.752†	15873.3	44.965	ug/L	0.1710	44.965	ppb	0.1710	0.38%
Fe 238.204 Radial†	2860.3	100350	ug/L	709.3	100350	ppb	709.3	0.71%
K 766.490 Radial†	16128.9	7028.9	ug/L	23.38	7028.9	ppb	23.38	0.33%

Mg 279.077 IEC†	106.7	8367.0	ug/L	131.54	8367.0	ppb	131.54	1.57%
Mn 257.610†	4648920.6	3686.9	ug/L	3.83	3686.9	ppb	3.83	0.10%
Mo 202.031†	96.3	10.739	ug/L	0.1908	10.739	ppb	0.1908	1.78%
Na 589.592 Radial†	383.4	1036.7	ug/L	24.07	1036.7	ppb	24.07	2.32%
Ni 231.604†	3165.0	50.701	ug/L	0.4809	50.701	ppb	0.4809	0.95%
P 214.914†	3117.9	1030.4	ug/L	2.29	1030.4	ppb	2.29	0.22%
Pb 220.353†	1642.1	122.77	ug/L	1.302	122.77	ppb	1.302	1.06%
S 181.975 Axial†	517.0	428.41	ug/L	4.568	428.41	ppb	4.568	1.07%
Sb 206.836†	51.9	0.6135	ug/L	0.91868	0.6135	ppb	0.91868	149.75%
Se 196.026†	-980.9	36.067	ug/L	3.3249	36.067	ppb	3.3249	9.22%
Si 251.611†	442114.1	9120.5	ug/L	13.96	9120.5	ppb	13.96	0.15%
Sn 189.927†	-36.6	-1.4381	ug/L	0.16383	-1.4381	ppb	0.16383	11.39%
Sr 421.552†	8076.3	124.31	ug/L	0.381	124.31	ppb	0.381	0.31%
Ti 334.940†	2367199.5	3099.7	ug/L	2.33	3099.7	ppb	2.33	0.08%
Tl 190.801†	-260.4	-7.7963	ug/L	1.89073	-7.7963	ppb	1.89073	24.25%
U 409.014†	-8898.8	-233.24	ug/L	2.630	-233.24	ppb	2.630	1.13%
V 292.402†	30895.1	157.87	ug/L	0.860	157.87	ppb	0.860	0.54%
Zn 213.857†	58111.0	313.04	ug/L	0.495	313.04	ppb	0.495	0.16%
SiO2†	450956.6	19921	ug/L	130.4	19921	ppb	130.4	0.65%

Sequence No.: 31
Sample ID: 232663005|882005|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 60
Date Collected: 7/8/2009 17:18:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232663005|882005|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5714.9	5714.9	103	%			17:20:47
1	Y RADIAL	5561.2	5561.2	115.5	%			17:20:47
1	Al 396.153Radial†	53456.8	52145.6	47465	ug/L	47465	ppb	17:20:47
1	Ca 317.933Radial†	5441.1	5281.3	13155	ug/L	13155	ppb	17:20:47
1	Fe 238.204 Radial†	2309.8	2248.8	78894	ug/L	78894	ppb	17:21:07
1	K 766.490 Radial†	22969.4	20893.3	9097.8	ug/L	9097.8	ppb	17:20:47
1	Mg 279.077 IEC†	117.3	114.0	8963.1	ug/L	8963.1	ppb	17:21:07
1	Na 589.592 Radial†	217.2	381.9	1032.6	ug/L	1032.6	ppb	17:21:07
1	Sr 421.552†	7583.7	7379.1	113.57	ug/L	113.57	ppb	17:20:47
1	Sc 361.383	1072655.5	1072655.5	101.11	%			17:22:05
1	Y 371.029	957287.1	957287.1	112.20	%			17:22:05
1	Ag 328.068†	-4708.9	-5295.8	5.0117	ug/L	5.0117	ppb	17:22:25
1	As 188.979†	-84.3	-46.5	27.054	ug/L	27.054	ppb	17:22:25
1	B 249.677†	805.4	1178.1	7.7880	ug/L	7.7880	ppb	17:22:05
1	Ba 233.527†	140794.9	139225.3	706.89	ug/L	706.89	ppb	17:22:05
1	Be 313.107†	-19368.0	-11839.2	4.3552	ug/L	4.3552	ppb	17:22:05
1	Cd 226.502†	1126.0	1391.2	1.1173	ug/L	1.1173	ppb	17:22:25
1	Co 228.616†	3311.4	3365.5	33.745	ug/L	33.745	ppb	17:22:25
1	Cr 267.716†	8486.9	8422.4	73.574	ug/L	73.574	ppb	17:22:25
1	Cu 324.752†	35869.3	25284.3	66.944	ug/L	66.944	ppb	17:22:05
1	Mn 257.610†	2838229.6	2806251.7	2227.8	ug/L	2227.8	ppb	17:22:05
1	Mo 202.031†	158.7	125.2	10.426	ug/L	10.426	ppb	17:22:25
1	Ni 231.604†	3285.4	3101.1	49.677	ug/L	49.677	ppb	17:22:25
1	P 214.914†	3075.6	2704.9	898.29	ug/L	898.29	ppb	17:22:25
1	Pb 220.353†	1233.2	1248.7	95.418	ug/L	95.418	ppb	17:22:25
1	S 181.975 Axial†	1012.2	933.2	780.60	ug/L	780.60	ppb	17:22:25
1	Sb 206.836†	101.7	55.2	-0.4559	ug/L	-0.4559	ppb	17:22:25
1	Se 196.026†	-816.2	-785.6	24.263	ug/L	24.263	ppb	17:22:25
1	Si 251.611†	446201.3	440743.9	9091.5	ug/L	9091.5	ppb	17:22:05
1	Sn 189.927†	-28.1	-33.3	-1.4775	ug/L	-1.4775	ppb	17:22:25
1	Ti 334.940†	2669544.2	2641353.9	3458.6	ug/L	3458.6	ppb	17:22:05
1	Tl 190.801†	-299.2	-234.5	-10.200	ug/L	-10.200	ppb	17:22:25
1	U 409.014†	-10752.6	-6799.9	-178.55	ug/L	-178.55	ppb	17:22:05
1	V 292.402†	28234.9	29577.8	153.05	ug/L	153.05	ppb	17:22:05
1	Zn 213.857†	80179.1	78176.7	427.37	ug/L	427.37	ppb	17:22:05
1	SiO2†	445910.3	440413.9	19453	ug/L	19453	ppb	17:23:25
2	Sc Radial	5671.2	5671.2	102	%			17:21:12
2	Y RADIAL	5514.5	5514.5	114.5	%			17:21:12
2	Al 396.153Radial†	52520.8	51628.2	46994	ug/L	46994	ppb	17:21:12
2	Ca 317.933Radial†	5389.7	5271.7	13131	ug/L	13131	ppb	17:21:12
2	Fe 238.204 Radial†	2306.1	2262.5	79374	ug/L	79374	ppb	17:21:32
2	K 766.490 Radial†	22687.9	20789.4	9053.0	ug/L	9053.0	ppb	17:21:12
2	Mg 279.077 IEC†	117.1	114.8	9021.2	ug/L	9021.2	ppb	17:21:32
2	Na 589.592 Radial†	219.5	385.8	1043.3	ug/L	1043.3	ppb	17:21:32
2	Sr 421.552†	7424.6	7279.9	112.04	ug/L	112.04	ppb	17:21:12
2	Sc 361.383	1070778.3	1070778.3	100.93	%			17:22:32
2	Y 371.029	954274.0	954274.0	111.84	%			17:22:32
2	Ag 328.068†	-4740.6	-5335.3	5.0126	ug/L	5.0126	ppb	17:22:52
2	As 188.979†	-83.7	-46.1	27.275	ug/L	27.275	ppb	17:22:52
2	B 249.677†	831.0	1204.9	8.1428	ug/L	8.1428	ppb	17:22:32
2	Ba 233.527†	140423.1	139101.1	706.28	ug/L	706.28	ppb	17:22:32
2	Be 313.107†	-19203.6	-11710.0	4.4058	ug/L	4.4058	ppb	17:22:32
2	Cd 226.502†	1118.0	1385.3	1.0160	ug/L	1.0160	ppb	17:22:52
2	Co 228.616†	3273.4	3333.6	33.332	ug/L	33.332	ppb	17:22:52
2	Cr 267.716†	8469.9	8420.2	73.566	ug/L	73.566	ppb	17:22:52
2	Cu 324.752†	35871.4	25348.6	67.131	ug/L	67.131	ppb	17:22:32
2	Mn 257.610†	2833792.2	2806776.3	2228.3	ug/L	2228.3	ppb	17:22:32
2	Mo 202.031†	167.6	134.3	10.822	ug/L	10.822	ppb	17:22:52
2	Ni 231.604†	3276.2	3097.7	49.622	ug/L	49.622	ppb	17:22:52

2	P 214.914†	3053.8	2688.6	891.94	ug/L	891.94	ppb	17:22:52
2	Pb 220.353†	1212.8	1230.6	93.925	ug/L	93.925	ppb	17:22:52
2	S 181.975 Axial†	1020.5	943.2	789.14	ug/L	789.14	ppb	17:22:52
2	Sb 206.836†	115.1	68.6	2.1731	ug/L	2.1731	ppb	17:22:52
2	Se 196.026†	-803.1	-774.0	29.687	ug/L	29.687	ppb	17:22:52
2	Si 251.611†	445604.4	440926.2	9095.3	ug/L	9095.3	ppb	17:22:32
2	Sn 189.927†	-43.0	-48.1	-3.0009	ug/L	-3.0009	ppb	17:22:52
2	Ti 334.940†	2668331.1	2644780.6	3463.1	ug/L	3463.1	ppb	17:22:32
2	Tl 190.801†	-278.0	-214.1	-6.7275	ug/L	-6.7275	ppb	17:22:52
2	U 409.014†	-10766.4	-6832.1	-179.41	ug/L	-179.41	ppb	17:22:32
2	V 292.402†	28268.9	29660.4	153.46	ug/L	153.46	ppb	17:22:32
2	Zn 213.857†	80146.0	78282.9	427.91	ug/L	427.91	ppb	17:22:32
2	SiO2†	449358.8	444603.7	19639	ug/L	19639	ppb	17:23:30
3	Sc Radial	5614.8	5614.8	101	%			17:21:37
3	Y RADIAL	5501.3	5501.3	114.2	%			17:21:37
3	Al 396.153Radial†	52531.0	52155.8	47474	ug/L	47474	ppb	17:21:37
3	Ca 317.933Radial†	5376.1	5311.3	13230	ug/L	13230	ppb	17:21:37
3	Fe 238.204 Radial†	2305.2	2284.4	80141	ug/L	80141	ppb	17:21:57
3	K 766.490 Radial†	22761.9	21086.3	9182.5	ug/L	9182.5	ppb	17:21:37
3	Mg 279.077 IEC†	117.1	115.9	9108.3	ug/L	9108.3	ppb	17:21:57
3	Na 589.592 Radial†	210.2	378.8	1024.2	ug/L	1024.2	ppb	17:21:57
3	Sr 421.552†	7441.2	7369.5	113.42	ug/L	113.42	ppb	17:21:37
3	Sc 361.383	1073565.8	1073565.8	101.20	%			17:22:59
3	Y 371.029	957864.3	957864.3	112.27	%			17:22:59
3	Ag 328.068†	-4765.2	-5347.5	5.2065	ug/L	5.2065	ppb	17:23:19
3	As 188.979†	-76.9	-39.1	29.065	ug/L	29.065	ppb	17:23:19
3	B 249.677†	831.3	1203.0	8.0119	ug/L	8.0119	ppb	17:22:59
3	Ba 233.527†	140862.3	139173.9	706.66	ug/L	706.66	ppb	17:22:59
3	Be 313.107†	-19359.1	-11814.2	4.3750	ug/L	4.3750	ppb	17:22:59
3	Cd 226.502†	1124.2	1388.6	0.9498	ug/L	0.9498	ppb	17:23:19
3	Co 228.616†	3289.9	3341.5	33.417	ug/L	33.417	ppb	17:23:19
3	Cr 267.716†	8470.3	8398.9	73.397	ug/L	73.397	ppb	17:23:19
3	Cu 324.752†	35905.8	25290.4	67.031	ug/L	67.031	ppb	17:22:59
3	Mn 257.610†	2839741.8	2805365.9	2227.3	ug/L	2227.3	ppb	17:22:59
3	Mo 202.031†	161.7	128.0	10.625	ug/L	10.625	ppb	17:23:19
3	Ni 231.604†	3289.3	3102.2	49.694	ug/L	49.694	ppb	17:23:19
3	P 214.914†	3042.9	2670.1	884.94	ug/L	884.94	ppb	17:23:19
3	Pb 220.353†	1217.6	1232.3	94.070	ug/L	94.070	ppb	17:23:19
3	S 181.975 Axial†	1005.8	926.1	774.59	ug/L	774.59	ppb	17:23:19
3	Sb 206.836†	104.0	57.3	-0.0527	ug/L	-0.0527	ppb	17:23:19
3	Se 196.026†	-825.4	-794.1	25.892	ug/L	25.892	ppb	17:23:19
3	Si 251.611†	445458.3	439635.5	9068.6	ug/L	9068.6	ppb	17:22:59
3	Sn 189.927†	-46.1	-51.0	-3.2908	ug/L	-3.2908	ppb	17:23:19
3	Ti 334.940†	2675810.1	2645307.2	3463.8	ug/L	3463.8	ppb	17:22:59
3	Tl 190.801†	-298.4	-233.5	-10.009	ug/L	-10.009	ppb	17:23:19
3	U 409.014†	-10872.7	-6909.5	-181.42	ug/L	-181.42	ppb	17:22:59
3	V 292.402†	28118.0	29438.6	152.09	ug/L	152.09	ppb	17:22:59
3	Zn 213.857†	80283.3	78212.5	427.43	ug/L	427.43	ppb	17:22:59
3	SiO2†	450305.6	444383.3	19629	ug/L	19629	ppb	17:23:36

Mean Data: 232663005|882005|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1072333.2	101.08	%	0.134				0.13%
Sc Radial	5666.9	102	%	0.9				0.89%
Y 371.029	956475.2	112.10	%	0.226				0.20%
Y RADIAL	5525.6	114.7	%	0.65				0.57%
Ag 328.068†	-5326.2	5.0769	ug/L	0.11220	5.0769	ppb	0.11220	2.21%
Al 396.153Radial†	51976.6	47311	ug/L	274.6	47311	ppb	274.6	0.58%
As 188.979†	-43.9	27.798	ug/L	1.1028	27.798	ppb	1.1028	3.97%
B 249.677†	1195.3	7.9809	ug/L	0.17940	7.9809	ppb	0.17940	2.25%
Ba 233.527†	139166.7	706.61	ug/L	0.311	706.61	ppb	0.311	0.04%
Be 313.107†	-11787.8	4.3787	ug/L	0.02551	4.3787	ppb	0.02551	0.58%
Ca 317.933Radial†	5288.1	13172	ug/L	51.4	13172	ppb	51.4	0.39%
Cd 226.502†	1388.4	1.0277	ug/L	0.08436	1.0277	ppb	0.08436	8.21%
Co 228.616†	3346.8	33.498	ug/L	0.2179	33.498	ppb	0.2179	0.65%
Cr 267.716†	8413.8	73.512	ug/L	0.0996	73.512	ppb	0.0996	0.14%
Cu 324.752†	25307.7	67.035	ug/L	0.0932	67.035	ppb	0.0932	0.14%
Fe 238.204 Radial†	2265.3	79470	ug/L	629.3	79470	ppb	629.3	0.79%
K 766.490 Radial†	20923.0	9111.1	ug/L	65.74	9111.1	ppb	65.74	0.72%

Mg 279.077 IEC†	114.9	9030.9	ug/L	73.10	9030.9	ppb	73.10	0.81%
Mn 257.610†	2806131.3	2227.8	ug/L	0.51	2227.8	ppb	0.51	0.02%
Mo 202.031†	129.2	10.624	ug/L	0.1978	10.624	ppb	0.1978	1.86%
Na 589.592 Radial†	382.2	1033.4	ug/L	9.57	1033.4	ppb	9.57	0.93%
Ni 231.604†	3100.3	49.664	ug/L	0.0374	49.664	ppb	0.0374	0.08%
P 214.914†	2687.9	891.72	ug/L	6.676	891.72	ppb	6.676	0.75%
Pb 220.353†	1237.2	94.471	ug/L	0.8234	94.471	ppb	0.8234	0.87%
S 181.975 Axial†	934.2	781.44	ug/L	7.310	781.44	ppb	7.310	0.94%
Sb 206.836†	60.4	0.5549	ug/L	1.41586	0.5549	ppb	1.41586	255.18%
Se 196.026†	-784.6	26.614	ug/L	2.7829	26.614	ppb	2.7829	10.46%
Si 251.611†	440435.2	9085.1	ug/L	14.43	9085.1	ppb	14.43	0.16%
Sn 189.927†	-44.1	-2.5898	ug/L	0.97408	-2.5898	ppb	0.97408	37.61%
Sr 421.552†	7342.8	113.01	ug/L	0.843	113.01	ppb	0.843	0.75%
Ti 334.940†	2643813.9	3461.8	ug/L	2.81	3461.8	ppb	2.81	0.08%
Tl 190.801†	-227.4	-8.9789	ug/L	1.95212	-8.9789	ppb	1.95212	21.74%
U 409.014†	-6847.2	-179.79	ug/L	1.474	-179.79	ppb	1.474	0.82%
V 292.402†	29559.0	152.87	ug/L	0.703	152.87	ppb	0.703	0.46%
Zn 213.857†	78224.0	427.57	ug/L	0.296	427.57	ppb	0.296	0.07%
SiO2†	443133.6	19574	ug/L	104.2	19574	ppb	104.2	0.53%

Sequence No.: 32
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 17:25:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5539.4	5539.4	99.5	%			17:27:39
1	Y RADIAL	4807.5	4807.5	99.83	%			17:27:39
1	Al 396.153Radial†	5253.1	5369.4	4865.4	ug/L	4865.4	ppb	17:27:39
1	Ca 317.933Radial†	1951.8	1943.8	4841.6	ug/L	4841.6	ppb	17:27:59
1	Fe 238.204 Radial†	137.8	138.1	4860.6	ug/L	4860.6	ppb	17:27:59
1	K 766.490 Radial†	13071.3	11658.2	5052.5	ug/L	5052.5	ppb	17:27:39
1	Mg 279.077 IEC†	64.6	64.7	5131.4	ug/L	5131.4	ppb	17:27:59
1	Na 589.592 Radial†	3360.6	3546.4	9589.2	ug/L	9589.2	ppb	17:27:39
1	Sr 421.552†	32599.6	32743.8	504.42	ug/L	504.42	ppb	17:27:39
1	Sc 361.383	1049901.1	1049901.1	98.965	%			17:28:58
1	Y 371.029	835003.9	835003.9	97.866	%			17:28:58
1	Ag 328.068†	125920.8	126599.3	504.17	ug/L	504.17	ppb	17:28:58
1	As 188.979†	2090.3	2149.0	507.62	ug/L	507.62	ppb	17:29:18
1	B 249.677†	30513.8	31214.5	484.57	ug/L	484.57	ppb	17:28:58
1	Ba 233.527†	97512.1	98507.8	499.82	ug/L	499.82	ppb	17:28:58
1	Be 313.107†	1576169.0	1599971.3	498.65	ug/L	498.65	ppb	17:28:58
1	Cd 226.502†	66064.4	67033.1	501.11	ug/L	501.11	ppb	17:28:58
1	Co 228.616†	39231.6	39732.4	495.15	ug/L	495.15	ppb	17:29:18
1	Cr 267.716†	57815.1	58448.4	498.51	ug/L	498.51	ppb	17:28:58
1	Cu 324.752†	208555.4	200545.5	495.08	ug/L	495.08	ppb	17:28:58
1	Mn 257.610†	625103.5	630814.8	499.05	ug/L	499.05	ppb	17:28:58
1	Mo 202.031†	12722.0	12823.3	513.61	ug/L	513.61	ppb	17:29:18
1	Ni 231.604†	30913.5	31088.6	497.96	ug/L	497.96	ppb	17:29:18
1	P 214.914†	7419.6	7160.2	2455.7	ug/L	2455.7	ppb	17:29:18
1	Pb 220.353†	6688.7	6787.7	510.21	ug/L	510.21	ppb	17:29:18
1	S 181.975 Axial†	1250.0	1195.2	1010.7	ug/L	1010.7	ppb	17:29:18
1	Sb 206.836†	2601.6	2583.4	514.35	ug/L	514.35	ppb	17:29:18
1	Se 196.026†	1504.4	1541.7	520.31	ug/L	520.31	ppb	17:29:18
1	Si 251.611†	121912.3	122627.4	2518.2	ug/L	2518.2	ppb	17:28:58
1	Sn 189.927†	4798.2	4842.9	504.15	ug/L	504.15	ppb	17:29:18
1	Ti 334.940†	377727.5	382787.6	501.03	ug/L	501.03	ppb	17:28:58
1	Tl 190.801†	2906.4	2998.2	507.65	ug/L	507.65	ppb	17:29:18
1	U 409.014†	15367.9	19363.4	478.88	ug/L	478.88	ppb	17:28:58
1	V 292.402†	84597.3	87135.0	500.33	ug/L	500.33	ppb	17:28:58
1	Zn 213.857†	89790.9	89607.7	495.78	ug/L	495.78	ppb	17:28:58
1	SiO2†	122218.8	122894.8	5403.7	ug/L	5403.7	ppb	17:30:18
2	Sc Radial	5629.9	5629.9	101	%			17:28:04
2	Y RADIAL	4857.3	4857.3	100.9	%			17:28:04
2	Al 396.153Radial†	5366.1	5396.3	4890.4	ug/L	4890.4	ppb	17:28:04
2	Ca 317.933Radial†	1971.8	1932.1	4812.5	ug/L	4812.5	ppb	17:28:24
2	Fe 238.204 Radial†	137.6	135.7	4776.2	ug/L	4776.2	ppb	17:28:24
2	K 766.490 Radial†	13341.0	11713.7	5076.5	ug/L	5076.5	ppb	17:28:04
2	Mg 279.077 IEC†	61.6	60.7	4814.0	ug/L	4814.0	ppb	17:28:24
2	Na 589.592 Radial†	3421.8	3552.7	9606.1	ug/L	9606.1	ppb	17:28:04
2	Sr 421.552†	33077.1	32689.3	503.59	ug/L	503.59	ppb	17:28:04
2	Sc 361.383	1063568.3	1063568.3	100.25	%			17:29:25
2	Y 371.029	845239.1	845239.1	99.065	%			17:29:25
2	Ag 328.068†	127204.2	126244.4	502.73	ug/L	502.73	ppb	17:29:25
2	As 188.979†	2061.8	2093.4	494.56	ug/L	494.56	ppb	17:29:45
2	B 249.677†	30965.4	31268.8	485.46	ug/L	485.46	ppb	17:29:25
2	Ba 233.527†	97922.6	97651.1	495.48	ug/L	495.48	ppb	17:29:25
2	Be 313.107†	1583977.6	1587293.9	494.71	ug/L	494.71	ppb	17:29:25
2	Cd 226.502†	66312.1	66422.3	496.55	ug/L	496.55	ppb	17:29:25
2	Co 228.616†	38852.8	38845.1	484.07	ug/L	484.07	ppb	17:29:45
2	Cr 267.716†	58017.2	57899.3	493.82	ug/L	493.82	ppb	17:29:25
2	Cu 324.752†	211181.4	200456.9	494.86	ug/L	494.86	ppb	17:29:25
2	Mn 257.610†	628518.3	626104.1	495.32	ug/L	495.32	ppb	17:29:25
2	Mo 202.031†	12594.6	12531.1	501.91	ug/L	501.91	ppb	17:29:45
2	Ni 231.604†	30580.0	30354.6	486.21	ug/L	486.21	ppb	17:29:45

2	P 214.914†	7357.2	7001.7	2399.6	ug/L	2399.6 ppb	17:29:45
2	Pb 220.353†	6615.9	6628.3	498.24	ug/L	498.24 ppb	17:29:45
2	S 181.975 Axial†	1245.1	1174.1	992.88	ug/L	992.88 ppb	17:29:45
2	Sb 206.836†	2576.2	2524.3	502.40	ug/L	502.40 ppb	17:29:45
2	Se 196.026†	1488.5	1506.3	508.47	ug/L	508.47 ppb	17:29:45
2	Si 251.611†	122813.3	121943.1	2504.3	ug/L	2504.3 ppb	17:29:25
2	Sn 189.927†	4739.9	4722.4	491.61	ug/L	491.61 ppb	17:29:45
2	Ti 334.940†	380922.6	381070.0	498.78	ug/L	498.78 ppb	17:29:25
2	Tl 190.801†	2872.9	2927.1	495.68	ug/L	495.68 ppb	17:29:45
2	U 409.014†	15705.5	19500.6	482.31	ug/L	482.31 ppb	17:29:25
2	V 292.402†	85226.8	86664.4	497.53	ug/L	497.53 ppb	17:29:25
2	Zn 213.857†	90283.4	88933.0	492.11	ug/L	492.11 ppb	17:29:25
2	SiO2†	121642.5	120733.0	5308.7	ug/L	5308.7 ppb	17:30:23
3	Sc Radial	5511.7	5511.7	99.0	%		17:28:29
3	Y RADIAL	4751.0	4751.0	98.66	%		17:28:29
3	Al 396.153Radial†	5237.8	5380.5	4875.9	ug/L	4875.9 ppb	17:28:29
3	Ca 317.933Radial†	2008.0	2010.5	5007.8	ug/L	5007.8 ppb	17:28:49
3	Fe 238.204 Radial†	140.3	141.3	4973.5	ug/L	4973.5 ppb	17:28:49
3	K 766.490 Radial†	13077.8	11730.9	5084.1	ug/L	5084.1 ppb	17:28:29
3	Mg 279.077 IEC†	63.6	64.1	5080.5	ug/L	5080.5 ppb	17:28:49
3	Na 589.592 Radial†	3321.6	3524.0	9528.6	ug/L	9528.6 ppb	17:28:29
3	Sr 421.552†	32347.5	32654.1	503.04	ug/L	503.04 ppb	17:28:29
3	Sc 361.383	1061197.1	1061197.1	100.03	%		17:29:52
3	Y 371.029	845321.1	845321.1	99.075	%		17:29:52
3	Ag 328.068†	126943.7	126267.5	502.89	ug/L	502.89 ppb	17:29:52
3	As 188.979†	2071.6	2107.9	497.99	ug/L	497.99 ppb	17:30:12
3	B 249.677†	30895.5	31267.8	485.42	ug/L	485.42 ppb	17:29:52
3	Ba 233.527†	97861.2	97807.9	496.28	ug/L	496.28 ppb	17:29:52
3	Be 313.107†	1587603.5	1594449.2	496.93	ug/L	496.93 ppb	17:29:52
3	Cd 226.502†	66310.3	66568.3	497.62	ug/L	497.62 ppb	17:29:52
3	Co 228.616†	38901.6	38980.5	485.76	ug/L	485.76 ppb	17:30:12
3	Cr 267.716†	58079.5	58090.9	495.46	ug/L	495.46 ppb	17:29:52
3	Cu 324.752†	210546.0	200292.3	494.46	ug/L	494.46 ppb	17:29:52
3	Mn 257.610†	627659.6	626646.5	495.77	ug/L	495.77 ppb	17:29:52
3	Mo 202.031†	12635.4	12599.9	504.68	ug/L	504.68 ppb	17:30:12
3	Ni 231.604†	30693.6	30536.2	489.12	ug/L	489.12 ppb	17:30:12
3	P 214.914†	7347.5	7008.4	2401.9	ug/L	2401.9 ppb	17:30:12
3	Pb 220.353†	6654.8	6681.9	502.25	ug/L	502.25 ppb	17:30:12
3	S 181.975 Axial†	1249.6	1181.4	999.01	ug/L	999.01 ppb	17:30:12
3	Sb 206.836†	2580.4	2534.2	504.45	ug/L	504.45 ppb	17:30:12
3	Se 196.026†	1488.1	1509.3	510.13	ug/L	510.13 ppb	17:30:12
3	Si 251.611†	122353.4	121757.1	2500.4	ug/L	2500.4 ppb	17:29:52
3	Sn 189.927†	4767.3	4760.4	495.58	ug/L	495.58 ppb	17:30:12
3	Ti 334.940†	380073.7	381070.3	498.79	ug/L	498.79 ppb	17:29:52
3	Tl 190.801†	2879.5	2940.1	497.87	ug/L	497.87 ppb	17:30:12
3	U 409.014†	15472.5	19302.7	477.37	ug/L	477.37 ppb	17:29:52
3	V 292.402†	85270.4	86897.9	498.86	ug/L	498.86 ppb	17:29:52
3	Zn 213.857†	90239.3	89090.2	492.94	ug/L	492.94 ppb	17:29:52
3	SiO2†	123260.9	122622.0	5392.0	ug/L	5392.0 ppb	17:30:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1058222.2	99.749	%	0.6884				0.69%
Sc Radial	5560.3	99.9	%	1.11				1.11%
Y 371.029	841854.7	98.669	%	0.6954				0.70%
Y RADIAL	4805.3	99.78	%	1.105				1.11%
Ag 328.068†	126370.4	503.26	ug/L	0.792	503.26	ppb	0.792	0.16%
QC value within limits for Ag 328.068 Recovery = 100.65%								
Al 396.153Radial†	5382.0	4877.2	ug/L	12.53	4877.2	ppb	12.53	0.26%
QC value within limits for Al 396.153Radial Recovery = 97.54%								
As 188.979†	2116.8	500.06	ug/L	6.771	500.06	ppb	6.771	1.35%
QC value within limits for As 188.979 Recovery = 100.01%								
B 249.677†	31250.3	485.15	ug/L	0.499	485.15	ppb	0.499	0.10%
QC value within limits for B 249.677 Recovery = 97.03%								
Ba 233.527†	97988.9	497.19	ug/L	2.312	497.19	ppb	2.312	0.46%
QC value within limits for Ba 233.527 Recovery = 99.44%								
Be 313.107†	1593904.8	496.76	ug/L	1.979	496.76	ppb	1.979	0.40%
QC value within limits for Be 313.107 Recovery = 99.35%								
Ca 317.933Radial†	1962.1	4887.3	ug/L	105.33	4887.3	ppb	105.33	2.16%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.75%
Cd 226.502†            66674.6      498.43 ug/L         2.388      498.43 ppb          2.388   0.48%
   QC value within limits for Cd 226.502  Recovery = 99.69%
Co 228.616†            39186.0      488.32 ug/L         5.967      488.32 ppb          5.967   1.22%
   QC value within limits for Co 228.616  Recovery = 97.66%
Cr 267.716†            58146.2      495.93 ug/L         2.377      495.93 ppb          2.377   0.48%
   QC value within limits for Cr 267.716  Recovery = 99.19%
Cu 324.752†           200431.6      494.80 ug/L         0.313      494.80 ppb          0.313   0.06%
   QC value within limits for Cu 324.752  Recovery = 98.96%
Fe 238.204 Radial†       138.4      4870.1 ug/L        98.98      4870.1 ppb         98.98   2.03%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.40%
K 766.490 Radial†      11700.9      5071.0 ug/L        16.50      5071.0 ppb         16.50   0.33%
   QC value within limits for K 766.490 Radial  Recovery = 101.42%
Mg 279.077 IEC†           63.2      5008.6 ug/L       170.47      5008.6 ppb        170.47   3.40%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.17%
Mn 257.610†           627855.1      496.72 ug/L         2.035      496.72 ppb          2.035   0.41%
   QC value within limits for Mn 257.610  Recovery = 99.34%
Mo 202.031†            12651.4      506.73 ug/L         6.117      506.73 ppb          6.117   1.21%
   QC value within limits for Mo 202.031  Recovery = 101.35%
Na 589.592 Radial†      3541.1      9574.6 ug/L        40.77      9574.6 ppb         40.77   0.43%
   QC value within limits for Na 589.592 Radial  Recovery = 95.75%
Ni 231.604†            30659.8      491.10 ug/L         6.124      491.10 ppb          6.124   1.25%
   QC value within limits for Ni 231.604  Recovery = 98.22%
P 214.914†              7056.8      2419.1 ug/L        31.74      2419.1 ppb         31.74   1.31%
   QC value within limits for P 214.914  Recovery = 96.76%
Pb 220.353†             6699.3      503.57 ug/L         6.094      503.57 ppb          6.094   1.21%
   QC value within limits for Pb 220.353  Recovery = 100.71%
S 181.975 Axial†        1183.6      1000.9 ug/L         9.08      1000.9 ppb          9.08   0.91%
   QC value within limits for S 181.975 Axial  Recovery = 100.09%
Sb 206.836†             2547.3      507.06 ug/L         6.391      507.06 ppb          6.391   1.26%
   QC value within limits for Sb 206.836  Recovery = 101.41%
Se 196.026†             1519.1      512.97 ug/L         6.409      512.97 ppb          6.409   1.25%
   QC value within limits for Se 196.026  Recovery = 102.59%
Si 251.611†           122109.2      2507.6 ug/L         9.35      2507.6 ppb          9.35   0.37%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4775.2      497.11 ug/L         6.406      497.11 ppb          6.406   1.29%
   QC value within limits for Sn 189.927  Recovery = 99.42%
Sr 421.552†            32695.7      503.68 ug/L         0.697      503.68 ppb          0.697   0.14%
   QC value within limits for Sr 421.552  Recovery = 100.74%
Ti 334.940†           381642.6      499.53 ug/L         1.295      499.53 ppb          1.295   0.26%
   QC value within limits for Ti 334.940  Recovery = 99.91%
Tl 190.801†             2955.1      500.40 ug/L         6.373      500.40 ppb          6.373   1.27%
   QC value within limits for Tl 190.801  Recovery = 100.08%
U 409.014†             19388.9      479.52 ug/L         2.530      479.52 ppb          2.530   0.53%
   QC value within limits for U 409.014  Recovery = 95.90%
V 292.402†             86899.1      498.91 ug/L         1.401      498.91 ppb          1.401   0.28%
   QC value within limits for V 292.402  Recovery = 99.78%
Zn 213.857†            89210.3      493.61 ug/L         1.926      493.61 ppb          1.926   0.39%
   QC value within limits for Zn 213.857  Recovery = 98.72%
SiO2†                 122083.2      5368.2 ug/L        51.81      5368.2 ppb         51.81   0.97%
   QC value within limits for SiO2  Recovery = 100.39%
All analyte(s) passed QC.
```

Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 17:32:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5490.0	5490.0	98.7	%			17:34:30
1	Y RADIAL	4741.3	4741.3	98.46	%			17:34:30
1	Al 396.153Radial†	-82.2	8.9	8.0672	ug/L	8.0672	ppb	17:34:30
1	Ca 317.933Radial†	29.1	12.5	31.210	ug/L	31.210	ppb	17:34:50
1	Fe 238.204 Radial†	0.2	-0.1	-3.5649	ug/L	-3.5649	ppb	17:34:50
1	K 766.490 Radial†	1409.6	-44.3	-19.236	ug/L	-19.236	ppb	17:34:30
1	Mg 279.077 IEC†	-0.1	-0.3	-22.440	ug/L	-22.440	ppb	17:34:50
1	Na 589.592 Radial†	-171.9	-3.9	-10.476	ug/L	-10.476	ppb	17:34:50
1	Sr 421.552†	14.4	9.1	0.1405	ug/L	0.1405	ppb	17:34:50
1	Sc 361.383	1052333.1	1052333.1	99.194	%			17:35:46
1	Y 371.029	846567.3	846567.3	99.221	%			17:35:46
1	Ag 328.068†	700.7	67.8	0.2703	ug/L	0.2703	ppb	17:35:52
1	As 188.979†	-56.9	-20.4	-4.8012	ug/L	-4.8012	ppb	17:36:12
1	B 249.677†	-83.7	297.1	4.6311	ug/L	4.6311	ppb	17:35:52
1	Ba 233.527†	37.5	13.5	0.0689	ug/L	0.0689	ppb	17:36:12
1	Be 313.107†	-7492.9	-237.6	-0.0739	ug/L	-0.0739	ppb	17:35:52
1	Cd 226.502†	-287.7	-12.4	-0.0922	ug/L	-0.0922	ppb	17:36:12
1	Co 228.616†	-83.5	6.3	0.0779	ug/L	0.0779	ppb	17:36:12
1	Cr 267.716†	-16.0	12.5	0.1079	ug/L	0.1079	ppb	17:36:12
1	Cu 324.752†	10095.6	-13.7	-0.0339	ug/L	-0.0339	ppb	17:35:52
1	Mn 257.610†	935.4	116.0	0.0917	ug/L	0.0917	ppb	17:36:12
1	Mo 202.031†	29.0	-2.5	-0.1006	ug/L	-0.1006	ppb	17:36:12
1	Ni 231.604†	147.3	0.2	0.0037	ug/L	0.0037	ppb	17:36:12
1	P 214.914†	352.0	17.9	6.3333	ug/L	6.3333	ppb	17:36:12
1	Pb 220.353†	-24.4	4.4	0.3349	ug/L	0.3349	ppb	17:36:12
1	S 181.975 Axial†	63.1	-4.2	-3.5764	ug/L	-3.5764	ppb	17:36:12
1	Sb 206.836†	58.3	13.3	2.6045	ug/L	2.6045	ppb	17:36:12
1	Se 196.026†	-13.4	8.1	2.6090	ug/L	2.6090	ppb	17:36:12
1	Si 251.611†	709.7	155.4	3.2163	ug/L	3.2163	ppb	17:36:12
1	Sn 189.927†	1.0	-4.4	-0.4598	ug/L	-0.4598	ppb	17:36:12
1	Ti 334.940†	-1111.3	-11.0	-0.0110	ug/L	-0.0110	ppb	17:35:52
1	Tl 190.801†	-55.2	5.7	0.9641	ug/L	0.9641	ppb	17:36:12
1	U 409.014†	-3930.0	-127.2	-3.1558	ug/L	-3.1558	ppb	17:35:46
1	V 292.402†	-1594.3	45.5	0.2510	ug/L	0.2510	ppb	17:35:52
1	Zn 213.857†	1093.9	-19.7	-0.1086	ug/L	-0.1086	ppb	17:36:12
1	SiO2†	708.1	111.5	4.9498	ug/L	4.9498	ppb	17:37:18
2	Sc Radial	5463.6	5463.6	98.2	%			17:34:55
2	Y RADIAL	4760.8	4760.8	98.86	%			17:34:55
2	Al 396.153Radial†	-66.9	24.1	21.917	ug/L	21.917	ppb	17:34:55
2	Ca 317.933Radial†	30.2	13.8	34.350	ug/L	34.350	ppb	17:35:15
2	Fe 238.204 Radial†	-0.5	-0.9	-30.858	ug/L	-30.858	ppb	17:35:15
2	K 766.490 Radial†	1480.7	35.0	15.177	ug/L	15.177	ppb	17:34:55
2	Mg 279.077 IEC†	-0.3	-0.5	-37.640	ug/L	-37.640	ppb	17:35:15
2	Na 589.592 Radial†	-174.4	-7.2	-19.603	ug/L	-19.603	ppb	17:35:15
2	Sr 421.552†	22.0	17.0	0.2613	ug/L	0.2613	ppb	17:35:15
2	Sc 361.383	1054664.8	1054664.8	99.414	%			17:36:17
2	Y 371.029	849471.0	849471.0	99.561	%			17:36:17
2	Ag 328.068†	636.0	1.2	-0.0053	ug/L	-0.0053	ppb	17:36:22
2	As 188.979†	-41.2	-4.6	-1.0850	ug/L	-1.0850	ppb	17:36:42
2	B 249.677†	-129.1	251.7	3.9268	ug/L	3.9268	ppb	17:36:22
2	Ba 233.527†	58.7	34.8	0.1755	ug/L	0.1755	ppb	17:36:42
2	Be 313.107†	-7492.3	-220.2	-0.0683	ug/L	-0.0683	ppb	17:36:22
2	Cd 226.502†	-289.0	-13.1	-0.0941	ug/L	-0.0941	ppb	17:36:42
2	Co 228.616†	-101.5	-11.7	-0.1447	ug/L	-0.1447	ppb	17:36:42
2	Cr 267.716†	7.6	36.2	0.3079	ug/L	0.3079	ppb	17:36:42
2	Cu 324.752†	10005.9	-126.4	-0.3136	ug/L	-0.3136	ppb	17:36:22
2	Mn 257.610†	926.3	104.7	0.0794	ug/L	0.0794	ppb	17:36:42
2	Mo 202.031†	39.4	7.9	0.3125	ug/L	0.3125	ppb	17:36:42
2	Ni 231.604†	160.5	13.2	0.2113	ug/L	0.2113	ppb	17:36:42

2	P 214.914†	348.7	13.8	4.9695 ug/L	4.9695 ppb	17:36:42
2	Pb 220.353†	-13.8	15.2	1.1514 ug/L	1.1514 ppb	17:36:42
2	S 181.975 Axial†	69.8	2.4	2.0331 ug/L	2.0331 ppb	17:36:42
2	Sb 206.836†	39.5	-5.7	-1.1067 ug/L	-1.1067 ppb	17:36:42
2	Se 196.026†	-4.7	16.9	5.3908 ug/L	5.3908 ppb	17:36:42
2	Si 251.611†	691.5	135.5	2.7848 ug/L	2.7848 ppb	17:36:42
2	Sn 189.927†	8.2	2.8	0.2919 ug/L	0.2919 ppb	17:36:42
2	Ti 334.940†	-1031.6	71.6	0.0960 ug/L	0.0960 ppb	17:36:22
2	Tl 190.801†	-63.5	-2.5	-0.4257 ug/L	-0.4257 ppb	17:36:42
2	U 409.014†	-3824.1	-11.9	-0.2911 ug/L	-0.2911 ppb	17:36:17
2	V 292.402†	-1634.2	9.0	0.0575 ug/L	0.0575 ppb	17:36:22
2	Zn 213.857†	1102.1	-13.8	-0.0730 ug/L	-0.0730 ppb	17:36:42
2	SiO2†	713.1	114.9	5.0540 ug/L	5.0540 ppb	17:37:23
3	Sc Radial	5371.8	5371.8	96.5 %		17:35:20
3	Y RADIAL	4656.4	4656.4	96.69 %		17:35:20
3	Al 396.153Radial†	-47.5	43.0	39.121 ug/L	39.121 ppb	17:35:20
3	Ca 317.933Radial†	28.5	12.6	31.325 ug/L	31.325 ppb	17:35:40
3	Fe 238.204 Radial†	-1.6	-2.0	-69.949 ug/L	-69.949 ppb	17:35:40
3	K 766.490 Radial†	1509.0	90.1	39.047 ug/L	39.047 ppb	17:35:20
3	Mg 279.077 IEC†	1.1	0.9	73.109 ug/L	73.109 ppb	17:35:40
3	Na 589.592 Radial†	-173.4	-9.2	-24.998 ug/L	-24.998 ppb	17:35:40
3	Sr 421.552†	26.4	21.9	0.3366 ug/L	0.3366 ppb	17:35:40
3	Sc 361.383	1050946.8	1050946.8	99.063 %		17:36:47
3	Y 371.029	846133.3	846133.3	99.170 %		17:36:47
3	Ag 328.068†	637.6	5.0	-0.0063 ug/L	-0.0063 ppb	17:36:52
3	As 188.979†	-45.7	-9.2	-2.1868 ug/L	-2.1868 ppb	17:37:12
3	B 249.677†	-129.1	251.2	3.9248 ug/L	3.9248 ppb	17:36:52
3	Ba 233.527†	54.3	30.5	0.1524 ug/L	0.1524 ppb	17:37:12
3	Be 313.107†	-7441.9	-196.1	-0.0612 ug/L	-0.0612 ppb	17:36:52
3	Cd 226.502†	-273.5	1.6	0.0201 ug/L	0.0201 ppb	17:37:12
3	Co 228.616†	-94.7	-5.1	-0.0633 ug/L	-0.0633 ppb	17:37:12
3	Cr 267.716†	-24.7	3.7	0.0290 ug/L	0.0290 ppb	17:37:12
3	Cu 324.752†	10095.2	-0.6	-0.0056 ug/L	-0.0056 ppb	17:36:52
3	Mn 257.610†	958.1	140.2	0.1002 ug/L	0.1002 ppb	17:37:12
3	Mo 202.031†	26.9	-4.6	-0.1879 ug/L	-0.1879 ppb	17:37:12
3	Ni 231.604†	162.9	16.2	0.2601 ug/L	0.2601 ppb	17:37:12
3	P 214.914†	329.6	-4.2	-1.3934 ug/L	-1.3934 ppb	17:37:12
3	Pb 220.353†	-4.5	24.6	1.8558 ug/L	1.8558 ppb	17:37:12
3	S 181.975 Axial†	59.5	-7.8	-6.6180 ug/L	-6.6180 ppb	17:37:12
3	Sb 206.836†	58.7	13.8	2.7186 ug/L	2.7186 ppb	17:37:12
3	Se 196.026†	-29.2	-7.9	-2.8017 ug/L	-2.8017 ppb	17:37:12
3	Si 251.611†	692.2	138.6	2.8475 ug/L	2.8475 ppb	17:37:12
3	Sn 189.927†	16.1	10.7	1.1174 ug/L	1.1174 ppb	17:37:12
3	Ti 334.940†	-1170.3	-72.1	-0.0937 ug/L	-0.0937 ppb	17:36:52
3	Tl 190.801†	-56.9	4.0	0.6686 ug/L	0.6686 ppb	17:37:12
3	U 409.014†	-3679.4	120.5	2.9987 ug/L	2.9987 ppb	17:36:47
3	V 292.402†	-1672.2	-35.2	-0.1855 ug/L	-0.1855 ppb	17:36:52
3	Zn 213.857†	1090.3	-21.8	-0.1184 ug/L	-0.1184 ppb	17:37:12
3	SiO2†	671.7	75.7	3.3133 ug/L	3.3133 ppb	17:37:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1052648.3	99.224	%	0.1771				0.18%
Sc Radial	5441.8	97.8	%	1.11				1.14%
Y 371.029	847390.6	99.317	%	0.2127				0.21%
Y RADIAL	4719.5	98.00	%	1.153				1.18%
Ag 328.068†	24.7	0.0862	ug/L	0.15943	0.0862	ppb	0.15943	184.88%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	25.3	23.035	ug/L	15.5573	23.035	ppb	15.5573	67.54%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.4	-2.6910	ug/L	1.90870	-2.6910	ppb	1.90870	70.93%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	266.7	4.1609	ug/L	0.40719	4.1609	ppb	0.40719	9.79%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.3	0.1323	ug/L	0.05607	0.1323	ppb	0.05607	42.39%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-217.9	-0.0678	ug/L	0.00637	-0.0678	ppb	0.00637	9.40%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.0	32.295	ug/L	1.7810	32.295	ppb	1.7810	5.51%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -8.0     -0.0554 ug/L       0.06535     -0.0554 ppb        0.06535 117.98%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -3.5     -0.0434 ug/L       0.11262     -0.0434 ppb        0.11262 259.50%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.5      0.1483 ug/L       0.14376      0.1483 ppb        0.14376  96.96%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -46.9     -0.1177 ug/L       0.17025     -0.1177 ppb        0.17025 144.65%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -1.0     -34.790 ug/L       33.3662     -34.790 ppb        33.3662  95.91%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          26.9      11.663 ug/L       29.3000      11.663 ppb        29.3000 251.23%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.1      4.3431 ug/L      60.03582      4.3431 ppb       60.03582 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               120.3      0.0904 ug/L       0.01045      0.0904 ppb        0.01045  11.56%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 0.3      0.0080 ug/L       0.26733      0.0080 ppb        0.26733 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -6.8     -18.359 ug/L        7.3401     -18.359 ppb         7.3401  39.98%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 9.9      0.1584 ug/L       0.13612      0.1584 ppb        0.13612  85.96%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  9.2      3.3031 ug/L       4.12410      3.3031 ppb        4.12410 124.85%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                14.8      1.1140 ug/L       0.76116      1.1140 ppb        0.76116  68.33%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -3.2     -2.7204 ug/L       4.38863     -2.7204 ppb        4.38863 161.32%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 7.2      1.4055 ug/L       2.17635      1.4055 ppb        2.17635 154.85%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.7      1.7327 ug/L       4.16593      1.7327 ppb        4.16593 240.43%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               143.2      2.9495 ug/L       0.23314      2.9495 ppb        0.23314   7.90%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 3.0      0.3165 ug/L       0.78890      0.3165 ppb        0.78890 249.25%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                16.0      0.2461 ug/L       0.09894      0.2461 ppb        0.09894  40.20%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                -3.9     -0.0029 ug/L       0.09509     -0.0029 ppb        0.09509 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 2.4      0.4023 ug/L       0.73219      0.4023 ppb        0.73219 181.98%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 -6.2     -0.1494 ug/L       3.07967     -0.1494 ppb        3.07967 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  6.4      0.0410 ug/L       0.21872      0.0410 ppb        0.21872 533.08%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -18.4     -0.1000 ug/L       0.02387     -0.1000 ppb        0.02387  23.86%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     100.7      4.4390 ug/L       0.97632      4.4390 ppb        0.97632  21.99%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, July 14, 2009 10:01:13
Sample Description:
Method File: c:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.1393
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1230.1	1230.053	41.210	3.4
	Mg	24.0	9359.1	9359.065	124.920	1.3
	Co	58.9	32902.3	32902.250	400.686	1.2
	Rh	102.9	67477.8	67477.793	428.437	0.6
	In	114.9	88913.0	88913.039	375.261	0.4
	Pb	208.0	47408.7	47408.742	476.634	1.0
⌈>	Ba	137.9	90490.6	90490.609	728.117	0.8
⌊	Ba++	69.0	2406.9	0.027	0.000	1.5
⌈>	Ce	139.9	108163.8	108163.769	1107.155	1.0
⌊	CeO	155.9	1870.4	0.017	0.000	2.5
	Bkgd	220.0	20.9	20.900	2.702	12.9

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-1687.50	Analog Stage Voltage
900.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	5.8	1852.1
Co	59	25	6.0	34771.9
In	115	25	6.8	138669.1

ICPMS#3 Instrument Tuning Report

File Name: 090714.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	575	2070	0.637
Be	9.0	9.0	2052	2070	0.632
Mg	24.0	24.0	5704	2120	0.619
Mg	25.0	25.0	5911	2050	0.662
Mg	26.0	26.0	6208	2130	0.666
Co	58.9	58.9	14195	2110	0.697
Rh	102.9	102.9	24904	2170	0.670
In	114.9	114.9	27821	2180	0.670
Ce	139.9	139.9	33905	2200	0.698
Pb	206.0	206.0	49992	2270	0.683
Pb	207.0	207.0	50269	2300	0.687
Pb	208.0	208.0	50486	2320	0.629
U	238.1	238.0	57817	2340	0.667

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 10:32:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Blank.001

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		ug/L		20	
	B	11		ug/L		221	
>	Sc	45		ug/L		415899	
	Cr	52		ug/L		-2876	
	Cr	53		ug/L		195078	
	Mn	55		ug/L		1211	
	Ni	60		ug/L		93	
>	Ge	74		ug/L		287910	
	As	75		ug/L		1924	
	Se	77		ug/L		9769	
	Se	82		ug/L		3	
	Ag	107		ug/L		36	
	Cd	111		ug/L		13	
	Cd	114		ug/L		37	
>	In	115		ug/L		178663	
	Sb	121		ug/L		186	
	Sb	123		ug/L		172	
	Ba	135		ug/L		59	
	Ba	137		ug/L		86	
>	Lu	175		ug/L		246888	
	Tl	205		ug/L		139	
	Pb	208		ug/L		411	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Simple Linear	
B	11	Simple Linear	
Sc	45	Simple Linear	
Cr	52	Simple Linear	
Cr	53	Simple Linear	
Mn	55	Simple Linear	
Ni	60	Simple Linear	
Ge	74	Simple Linear	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	82	Simple Linear	
Ag	107	Simple Linear	
Cd	111	Simple Linear	
Cd	114	Simple Linear	
In	115	Simple Linear	
Sb	121	Simple Linear	
Sb	123	Simple Linear	
Ba	135	Simple Linear	
Ba	137	Simple Linear	
Lu	175	Simple Linear	
Tl	205	Simple Linear	
Pb	208	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 10:36:16
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Standard 1.002

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**10.000**	**ug/L**	2.148	1432	0.004
	B	11	**20.000**	**ug/L**	4.374	1764	0.004
>	Sc	45		**ug/L**		396561	396560.511
	Cr	52	**10.000**	**ug/L**	1.155	24167	0.068
	Cr	53		**ug/L**		203132	0.043
	Mn	55	**10.000**	**ug/L**	0.245	45329	0.111
	Ni	60	**10.000**	**ug/L**	1.798	7723	0.019
>	Ge	74		**ug/L**		278369	278369.020
	As	75	**10.000**	**ug/L**	6.574	9544	0.028
	Se	77		**ug/L**		9950	0.002
	Se	82	**10.000**	**ug/L**	7.104	500	0.002
	Ag	107	**10.000**	**ug/L**	1.568	31970	0.184
	Cd	111	**10.000**	**ug/L**	0.546	7372	0.042
	Cd	114		**ug/L**		17803	0.102
>	In	115		**ug/L**		173855	173855.437
	Sb	121	**10.000**	**ug/L**	3.313	31170	0.178
	Sb	123		**ug/L**		24315	0.139
	Ba	135		**ug/L**		8918	0.037
	Ba	137	**10.000**	**ug/L**	0.765	16054	0.067
>	Lu	175		**ug/L**		236938	236938.420
	Tl	205	**10.000**	**ug/L**	0.792	88906	0.375
	Pb	208	**10.000**	**ug/L**	1.095	100916	0.424

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 10:39:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Standard 2.003

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**99.994**	**ug/L**	1.059	13719	0.035
	B	11	**200.000**	**ug/L**	2.311	15374	0.039
>	Sc	45		**ug/L**		387223	387222.809
	Cr	52	**99.956**	**ug/L**	0.938	248945	0.650
	Cr	53		**ug/L**		228458	0.121
	Mn	55	**99.921**	**ug/L**	3.328	400455	1.032
	Ni	60	**99.954**	**ug/L**	1.835	71308	0.184
>	Ge	74		**ug/L**		264902	264902.149
	As	75	**99.952**	**ug/L**	2.271	71512	0.263
	Se	77		**ug/L**		12374	0.013
	Se	82	**100.012**	**ug/L**	1.894	4795	0.018
	Ag	107	**99.972**	**ug/L**	1.041	287137	1.787
	Cd	111	**99.994**	**ug/L**	2.016	67580	0.421
	Cd	114		**ug/L**		161716	1.006
>	In	115		**ug/L**		160673	160672.643
	Sb	121	**100.046**	**ug/L**	2.340	300375	1.869
	Sb	123		**ug/L**		235318	1.464
	Ba	135		**ug/L**		83883	0.368
	Ba	137	**99.957**	**ug/L**	0.542	147237	0.646
>	Lu	175		**ug/L**		227711	227710.841
	Tl	205	**99.964**	**ug/L**	0.806	822932	3.614
	Pb	208	**99.972**	**ug/L**	0.882	940063	4.127

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 10:43:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 1.004

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.805**	ug/L	1.066	6935	0.018
	B	11	**105.317**	ug/L	1.507	8139	0.021
>	Sc	45		ug/L		384692	384692.492
	Cr	52	**51.335**	ug/L	0.731	125729	0.334
	Cr	53		ug/L		214985	0.090
	Mn	55	**48.822**	ug/L	0.948	195022	0.504
	Ni	60	**53.061**	ug/L	1.141	37652	0.098
>	Ge	74		ug/L		263745	263745.016
	As	75	**49.437**	ug/L	0.441	36105	0.130
	Se	77		ug/L		10519	0.006
	Se	82	**49.415**	ug/L	3.575	2360	0.009
	Ag	107	**50.085**	ug/L	0.949	145071	0.895
	Cd	111	**52.391**	ug/L	1.863	35713	0.220
	Cd	114		ug/L		85381	0.527
>	In	115		ug/L		162004	162004.486
	Sb	121	**48.073**	ug/L	0.990	145652	0.898
	Sb	123		ug/L		113715	0.701
	Ba	135		ug/L		41959	0.187
	Ba	137	**51.094**	ug/L	1.992	73982	0.330
>	Lu	175		ug/L		223754	223754.006
	Tl	205	**50.218**	ug/L	1.615	406276	1.815
	Pb	208	**51.320**	ug/L	1.088	474348	2.118

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.609				
	B	11	105.317				
>	Sc	45			92.5		
	Cr	52	102.670				
	Cr	53					
	Mn	55	97.644				
	Ni	60	106.122				
>	Ge	74			91.6		
	As	75	98.873				
	Se	77					
	Se	82	98.830				
	Ag	107	100.171				
	Cd	111	104.781				
	Cd	114					
>	In	115			90.7		
	Sb	121	96.146				
	Sb	123					
	Ba	135					
	Ba	137	102.188				
>	Lu	175			90.6		
	Tl	205	100.436				
	Pb	208	102.640				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 10:47:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 2.005

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.022**	**ug/L**	164.363	24	0.000
	B	11	**3.178**	**ug/L**	32.360	485	0.001
>	Sc	45		**ug/L**		426009	426008.630
	Cr	52	**-0.294**	**ug/L**	105.001	-3689	-0.002
	Cr	53		**ug/L**		197185	0.001
	Mn	55	**-0.006**	**ug/L**	726.887	1192	-0.000
	Ni	60	**0.005**	**ug/L**	430.166	98	0.000
>	Ge	74		**ug/L**		271130	271129.740
	As	75	**-0.329**	**ug/L**	162.020	1577	-0.001
	Se	77		**ug/L**		8937	-0.001
	Se	82	**-0.391**	**ug/L**	88.021	-17	-0.000
	Ag	107	**0.012**	**ug/L**	39.228	69	0.000
	Cd	111	**-0.002**	**ug/L**	250.645	10	-0.000
	Cd	114		**ug/L**		47	0.000
>	In	115		**ug/L**		164685	164685.044
	Sb	121	**0.738**	**ug/L**	7.419	2442	0.014
	Sb	123		**ug/L**		1926	0.011
	Ba	135		**ug/L**		59	0.000
	Ba	137	**0.001**	**ug/L**	398.291	81	0.000
>	Lu	175		**ug/L**		228511	228510.848
	Tl	205	**0.171**	**ug/L**	13.895	1539	0.006
	Pb	208	**0.013**	**ug/L**	25.851	506	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		102.4			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.2			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.2			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		92.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 10:50:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 3.006

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.509**	ug/L	2.329	87	0.000
	B	11	**16.114**	ug/L	1.447	1406	0.003
>	Sc	45		ug/L		381407	381406.622
	Cr	52	**9.960**	ug/L	1.145	22057	0.065
	Cr	53		ug/L		199727	0.054
	Mn	55	**5.410**	ug/L	3.405	22407	0.056
	Ni	60	**2.083**	ug/L	5.155	1547	0.004
>	Ge	74		ug/L		268733	268733.206
	As	75	**5.455**	ug/L	10.166	5658	0.014
	Se	77		ug/L		9240	0.000
	Se	82	**5.230**	ug/L	1.216	257	0.001
	Ag	107	**1.034**	ug/L	2.475	3159	0.018
	Cd	111	**0.999**	ug/L	3.922	722	0.004
	Cd	114		ug/L		1732	0.010
>	In	115		ug/L		169050	169049.759
	Sb	121	**3.027**	ug/L	2.386	9736	0.057
	Sb	123		ug/L		7470	0.043
	Ba	135		ug/L		1765	0.007
	Ba	137	**1.974**	ug/L	2.131	3030	0.013
>	Lu	175		ug/L		231160	231160.227
	Tl	205	**1.037**	ug/L	2.605	8800	0.038
	Pb	208	**2.025**	ug/L	0.839	19706	0.084

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.768				
	B	11	107.429				
>	Sc	45			91.7		
	Cr	52	99.599				
	Cr	53					
	Mn	55	108.206				
	Ni	60	104.159				
>	Ge	74			93.3		
	As	75	109.092				
	Se	77					
	Se	82	104.590				
	Ag	107	103.432				
	Cd	111	99.856				
	Cd	114					
>	In	115			94.6		
	Sb	121	100.907				
	Sb	123					
	Ba	135					
	Ba	137	98.677				
>	Lu	175			93.6		
	Tl	205	103.746				
	Pb	208	101.245				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 10:54:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 4.007

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.093**	ug/L	75.551	29	0.000
	B	11	**2.588**	ug/L	19.089	364	0.001
>	Sc	45		ug/L		351348	351348.023
	Cr	52	**4.606**	ug/L	4.966	8093	0.030
	Cr	53		ug/L		185269	0.058
	Mn	55	**5.887**	ug/L	0.561	22379	0.061
	Ni	60	**2.515**	ug/L	2.491	1705	0.005
>	Ge	74		ug/L		243437	243437.056
	As	75	**0.033**	ug/L	2592.830	1647	0.000
	Se	77		ug/L		8625	0.001
	Se	82	**-0.627**	ug/L	44.435	-25	-0.000
	Ag	107	**0.066**	ug/L	3.015	199	0.001
	Cd	111	**0.467**	ug/L	10.990	292	0.002
	Cd	114		ug/L		3493	0.024
>	In	115		ug/L		143661	143661.060
	Sb	121	**0.396**	ug/L	13.150	1212	0.007
	Sb	123		ug/L		947	0.006
	Ba	135		ug/L		577	0.002
	Ba	137	**0.632**	ug/L	3.792	946	0.004
>	Lu	175		ug/L		213459	213459.094
	Tl	205	**0.056**	ug/L	7.708	551	0.002
	Pb	208	**0.170**	ug/L	1.712	1851	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			84.5		
	Cr	52	124.478				
	Cr	53					
	Mn	55	101.505				
	Ni	60	93.133				
>	Ge	74			84.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111	116.696				
	Cd	114					
>	In	115			80.4		
	Sb	121	395.564				
	Sb	123					
	Ba	135					
	Ba	137	94.288				
>	Lu	175			86.5		
	Tl	205					
	Pb	208	84.898				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 10:58:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 5.008

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**20.399**	**ug/L**	1.663	2585	0.007
	B	11	**21.869**	**ug/L**	2.578	1712	0.004
>	Sc	45		**ug/L**		355787	355786.573
	Cr	52	**24.639**	**ug/L**	1.731	54538	0.160
	Cr	53		**ug/L**		192388	0.072
	Mn	55	**25.815**	**ug/L**	2.052	95842	0.267
	Ni	60	**21.754**	**ug/L**	0.452	14324	0.040
>	Ge	74		**ug/L**		243260	243259.779
	As	75	**21.340**	**ug/L**	2.259	15299	0.056
	Se	77		**ug/L**		9414	0.005
	Se	82	**21.127**	**ug/L**	2.951	932	0.004
	Ag	107	**20.178**	**ug/L**	0.997	52262	0.361
	Cd	111	**20.663**	**ug/L**	0.830	12597	0.087
	Cd	114		**ug/L**		32538	0.224
>	In	115		**ug/L**		144819	144818.886
	Sb	121	**21.198**	**ug/L**	1.971	57493	0.396
	Sb	123		**ug/L**		45120	0.311
	Ba	135		**ug/L**		15804	0.075
	Ba	137	**20.535**	**ug/L**	0.514	28110	0.133
>	Lu	175		**ug/L**		211178	211177.551
	Tl	205	**19.439**	**ug/L**	0.917	148513	0.703
	Pb	208	**20.285**	**ug/L**	0.319	177177	0.837

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.996				
	B	11	109.343				
>	Sc	45			85.5		
	Cr	52	103.962				
	Cr	53					
	Mn	55	100.057				
	Ni	60	95.834				
>	Ge	74			84.5		
	As	75	106.699				
	Se	77					
	Se	82	105.635				
	Ag	107	100.890				
	Cd	111	101.289				
	Cd	114					
>	In	115			81.1		
	Sb	121	105.463				
	Sb	123					
	Ba	135					
	Ba	137	99.349				
>	Lu	175			85.5		
	Tl	205	97.194				
	Pb	208	100.420				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:01:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.009

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.247**	**ug/L**	2.150	6733	0.018
	B	11	**103.252**	**ug/L**	3.469	7836	0.020
>	Sc	45		**ug/L**		377598	377598.236
	Cr	52	**51.459**	**ug/L**	0.825	123726	0.335
	Cr	53		**ug/L**		206048	0.077
	Mn	55	**52.050**	**ug/L**	0.812	204012	0.537
	Ni	60	**51.752**	**ug/L**	1.004	36052	0.095
>	Ge	74		**ug/L**		264018	264017.641
	As	75	**49.827**	**ug/L**	1.501	36413	0.131
	Se	77		**ug/L**		10100	0.004
	Se	82	**50.241**	**ug/L**	4.489	2402	0.009
	Ag	107	**51.110**	**ug/L**	0.445	149008	0.914
	Cd	111	**49.953**	**ug/L**	2.196	34273	0.210
	Cd	114		**ug/L**		82796	0.508
>	In	115		**ug/L**		163063	163062.963
	Sb	121	**49.697**	**ug/L**	2.238	151536	0.928
	Sb	123		**ug/L**		119015	0.729
	Ba	135		**ug/L**		42911	0.190
	Ba	137	**51.537**	**ug/L**	0.707	75303	0.333
>	Lu	175		**ug/L**		225776	225775.817
	Tl	205	**51.034**	**ug/L**	1.367	416661	1.845
	Pb	208	**51.156**	**ug/L**	0.896	477125	2.112

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	100.493				
	B	11	103.252				
>	Sc	45			90.8		
	Cr	52	102.918				
	Cr	53					
	Mn	55	104.101				
	Ni	60	103.505				
>	Ge	74			91.7		
	As	75	99.653				
	Se	77					
	Se	82	100.482				
	Ag	107	102.220				
	Cd	111	99.906				
	Cd	114					
>	In	115			91.3		
	Sb	121	99.394				
	Sb	123					
	Ba	135					
	Ba	137	103.075				
>	Lu	175			91.4		
	Tl	205	102.069				
	Pb	208	102.312				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 11:05:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.010

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.013**	**ug/L**	301.991	20	0.000
	B	11	**2.817**	**ug/L**	22.420	407	0.001
>	Sc	45		**ug/L**		377185	377184.956
	Cr	52	**-0.408**	**ug/L**	58.303	-3590	-0.003
	Cr	53		**ug/L**		185845	0.025
	Mn	55	**0.030**	**ug/L**	103.317	1210	0.000
	Ni	60	**0.022**	**ug/L**	54.529	99	0.000
>	Ge	74		**ug/L**		269129	269128.915
	As	75	**0.387**	**ug/L**	56.071	2071	0.001
	Se	77		**ug/L**		8218	-0.003
	Se	82	**-0.199**	**ug/L**	216.699	-7	-0.000
	Ag	107	**0.012**	**ug/L**	58.396	71	0.000
	Cd	111	**0.016**	**ug/L**	42.543	23	0.000
	Cd	114		**ug/L**		52	0.000
>	In	115		**ug/L**		169437	169437.099
	Sb	121	**0.392**	**ug/L**	12.616	1413	0.007
	Sb	123		**ug/L**		1134	0.006
	Ba	135		**ug/L**		59	0.000
	Ba	137	**0.004**	**ug/L**	249.461	87	0.000
>	Lu	175		**ug/L**		231537	231537.082
	Tl	205	**0.188**	**ug/L**	19.937	1694	0.007
	Pb	208	**0.014**	**ug/L**	14.713	516	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			90.7		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			93.5		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.8		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			93.8		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873237
Sample Date/Time: Tuesday, July 14, 2009 11:09:05
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873237.011

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.015**	**ug/L**	170.775	21	0.000
	B	11	**1.087**	**ug/L**	20.548	284	0.000
>	Sc	45		**ug/L**		381673	381672.983
	Cr	52	**0.206**	**ug/L**	120.981	-2126	0.001
	Cr	53		**ug/L**		161523	-0.046
	Mn	55	**0.267**	**ug/L**	7.378	2165	0.003
	Ni	60	**0.078**	**ug/L**	36.368	140	0.000
>	Ge	74		**ug/L**		270544	270543.896
	As	75	**-0.471**	**ug/L**	119.689	1475	-0.001
	Se	77		**ug/L**		6638	-0.009
	Se	82	**-0.071**	**ug/L**	625.533	-1	-0.000
	Ag	107	**0.004**	**ug/L**	88.742	47	0.000
	Cd	111	**-0.009**	**ug/L**	157.380	6	-0.000
	Cd	114		**ug/L**		38	0.000
>	In	115		**ug/L**		170509	170509.201
	Sb	121	**0.190**	**ug/L**	13.303	782	0.004
	Sb	123		**ug/L**		583	0.002
	Ba	135		**ug/L**		150	0.000
	Ba	137	**0.132**	**ug/L**	8.677	283	0.001
>	Lu	175		**ug/L**		235834	235834.076
	Tl	205	**0.062**	**ug/L**	8.105	660	0.002
	Pb	208	**1.245**	**ug/L**	1.378	12509	0.051

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		91.8			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.0			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.4			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		95.5			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873238
Sample Date/Time: Tuesday, July 14, 2009 11:12:48
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 882024|40|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873238.012

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**21.764**	ug/L	1.513	3004	0.008
	B	11	**33.104**	ug/L	1.153	2718	0.006
>	Sc	45		ug/L		387510	387509.699
	Cr	52	**18.079**	ug/L	0.755	42867	0.118
	Cr	53		ug/L		180663	-0.003
	Mn	55	**97.955**	ug/L	0.712	392994	1.011
	Ni	60	**27.239**	ug/L	2.300	19510	0.050
>	Ge	74		ug/L		279676	279676.223
	As	75	**64.236**	ug/L	2.227	49181	0.169
	Se	77		ug/L		9759	0.001
	Se	82	**45.865**	ug/L	2.679	2322	0.008
	Ag	107	**4.827**	ug/L	2.308	15232	0.086
	Cd	111	**30.232**	ug/L	0.802	22414	0.127
	Cd	114		ug/L		54667	0.310
>	In	115		ug/L		176162	176161.501
	Sb	121	**8.790**	ug/L	1.920	29105	0.164
	Sb	123		ug/L		22470	0.127
	Ba	135		ug/L		107897	0.449
	Ba	137	**121.668**	ug/L	0.484	188826	0.787
>	Lu	175		ug/L		239950	239950.172
	Tl	205	**49.856**	ug/L	1.511	432587	1.802
	Pb	208	**42.943**	ug/L	0.471	425747	1.773

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			93.2		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			97.1		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.6		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			97.2		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232663001
Sample Date/Time: Tuesday, July 14, 2009 11:16:31
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232663001.013

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.437**	**ug/L**	4.597	513	0.001
	B	11	**7.447**	**ug/L**	3.555	806	0.001
>	Sc	45		**ug/L**		405234	405233.965
	Cr	52	**21.928**	**ug/L**	1.426	54975	0.143
	Cr	53		**ug/L**		158336	-0.078
	Mn	55	**951.195**	**ug/L**	0.334	3980637	9.820
	Ni	60	**15.814**	**ug/L**	1.851	11884	0.029
>	Ge	74		**ug/L**		272689	272689.347
	As	75	**6.328**	**ug/L**	6.933	6370	0.017
	Se	77		**ug/L**		6201	-0.011
	Se	82	**0.867**	**ug/L**	107.680	45	0.000
	Ag	107	**0.208**	**ug/L**	3.695	688	0.004
	Cd	111	**0.533**	**ug/L**	12.090	405	0.002
	Cd	114		**ug/L**		402	0.002
>	In	115		**ug/L**		175211	175211.482
	Sb	121	**0.387**	**ug/L**	4.973	1450	0.007
	Sb	123		**ug/L**		1138	0.006
	Ba	135		**ug/L**		181284	0.719
	Ba	137	**193.957**	**ug/L**	1.422	316293	1.254
>	Lu	175		**ug/L**		252159	252158.848
	Tl	205	**0.526**	**ug/L**	11.637	4932	0.019
	Pb	208	**25.708**	**ug/L**	1.107	268009	1.061

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			97.4		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			94.7		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			102.1		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873239
Sample Date/Time: Tuesday, July 14, 2009 11:20:14
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873239.014

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.510**	ug/L	2.882	521	0.001
	B	11	**5.919**	ug/L	1.732	683	0.001
>	Sc	45		ug/L		403984	403984.317
	Cr	52	**19.456**	ug/L	2.685	48311	0.126
	Cr	53		ug/L		149500	-0.099
	Mn	55	**878.419**	ug/L	0.410	3664814	9.069
	Ni	60	**13.926**	ug/L	0.682	10446	0.026
>	Ge	74		ug/L		278668	278668.156
	As	75	**6.406**	ug/L	2.253	6564	0.017
	Se	77		ug/L		5965	-0.013
	Se	82	**0.808**	ug/L	33.839	43	0.000
	Ag	107	**0.197**	ug/L	3.090	663	0.004
	Cd	111	**0.499**	ug/L	5.662	387	0.002
	Cd	114		ug/L		292	0.001
>	In	115		ug/L		178131	178130.673
	Sb	121	**0.332**	ug/L	3.413	1290	0.006
	Sb	123		ug/L		996	0.005
	Ba	135		ug/L		156876	0.607
	Ba	137	**164.647**	ug/L	1.248	275021	1.064
>	Lu	175		ug/L		258282	258282.192
	Tl	205	**0.298**	ug/L	2.047	2924	0.011
	Pb	208	**22.516**	ug/L	1.182	240480	0.929

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			97.1		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			96.8		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			99.7		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			104.6		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873240
Sample Date/Time: Tuesday, July 14, 2009 11:23:58
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873240.015

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**28.201**	**ug/L**	2.426	4036	0.010
	B	11	**52.501**	**ug/L**	5.465	4351	0.010
>	Sc	45		**ug/L**		402525	402524.886
	Cr	52	**48.026**	**ug/L**	0.972	122900	0.312
	Cr	53		**ug/L**		154071	-0.086
	Mn	55	**916.390**	**ug/L**	0.278	3809348	9.461
	Ni	60	**40.977**	**ug/L**	0.393	30448	0.075
>	Ge	74		**ug/L**		277026	277026.490
	As	75	**46.669**	**ug/L**	2.134	35899	0.123
	Se	77		**ug/L**		6080	-0.012
	Se	82	**10.443**	**ug/L**	5.975	526	0.002
	Ag	107	**25.581**	**ug/L**	0.623	80492	0.457
	Cd	111	**5.835**	**ug/L**	2.931	4330	0.025
	Cd	114		**ug/L**		9628	0.055
>	In	115		**ug/L**		175955	175955.113
	Sb	121	**49.278**	**ug/L**	1.981	162135	0.921
	Sb	123		**ug/L**		126745	0.719
	Ba	135		**ug/L**		200209	0.771
	Ba	137	**209.196**	**ug/L**	0.390	351031	1.352
>	Lu	175		**ug/L**		259482	259482.307
	Tl	205	**47.788**	**ug/L**	2.536	448381	1.727
	Pb	208	**121.237**	**ug/L**	1.308	1298994	5.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			96.8		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			96.2		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.5		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			105.1		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873242
Sample Date/Time: Tuesday, July 14, 2009 11:27:42
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873242.016

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**26.719**	**ug/L**	0.995	3864	0.009
	B	11	**51.293**	**ug/L**	1.242	4300	0.010
>	Sc	45		**ug/L**		406603	406602.725
	Cr	52	**45.389**	**ug/L**	1.526	117190	0.295
	Cr	53		**ug/L**		152477	-0.094
	Mn	55	**908.814**	**ug/L**	2.208	3815629	9.383
	Ni	60	**39.245**	**ug/L**	1.965	29455	0.072
>	Ge	74		**ug/L**		280404	280404.381
	As	75	**44.234**	**ug/L**	1.598	34545	0.117
	Se	77		**ug/L**		6000	-0.013
	Se	82	**9.627**	**ug/L**	7.109	491	0.002
	Ag	107	**24.456**	**ug/L**	1.997	77483	0.437
	Cd	111	**5.470**	**ug/L**	5.405	4088	0.023
	Cd	114		**ug/L**		9273	0.052
>	In	115		**ug/L**		177171	177171.333
	Sb	121	**47.065**	**ug/L**	1.121	155940	0.879
	Sb	123		**ug/L**		123102	0.694
	Ba	135		**ug/L**		198520	0.763
	Ba	137	**206.053**	**ug/L**	0.764	346553	1.332
>	Lu	175		**ug/L**		260071	260071.226
	Tl	205	**45.936**	**ug/L**	1.177	432009	1.661
	Pb	208	**113.908**	**ug/L**	0.825	1223279	4.702

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			97.8		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			97.4		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			99.2		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			105.3		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873241
Sample Date/Time: Tuesday, July 14, 2009 11:31:24
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 882024|10|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873241.017

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.761**	**ug/L**	8.469	123	0.000
	B	11	**2.501**	**ug/L**	2.607	393	0.000
>	Sc	45		**ug/L**		385478	385478.054
	Cr	52	**4.795**	**ug/L**	1.725	9351	0.031
	Cr	53		**ug/L**		155219	-0.066
	Mn	55	**161.417**	**ug/L**	1.575	643444	1.666
	Ni	60	**3.361**	**ug/L**	2.217	2470	0.006
>	Ge	74		**ug/L**		281614	281613.803
	As	75	**0.802**	**ug/L**	47.424	2477	0.002
	Se	77		**ug/L**		6714	-0.010
	Se	82	**0.039**	**ug/L**	947.485	5	0.000
	Ag	107	**0.042**	**ug/L**	7.494	172	0.001
	Cd	111	**0.084**	**ug/L**	13.625	77	0.000
	Cd	114		**ug/L**		113	0.000
>	In	115		**ug/L**		182255	182255.171
	Sb	121	**0.182**	**ug/L**	2.897	809	0.003
	Sb	123		**ug/L**		632	0.003
	Ba	135		**ug/L**		37366	0.148
	Ba	137	**40.248**	**ug/L**	1.610	65513	0.260
>	Lu	175		**ug/L**		251452	251451.934
	Tl	205	**0.234**	**ug/L**	9.129	2273	0.008
	Pb	208	**5.299**	**ug/L**	0.250	55426	0.219

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			92.7		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			97.8		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			102.0		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			101.8		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:35:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.018

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**48.105**	**ug/L**	3.520	6430	0.017
	B	11	**92.218**	**ug/L**	3.573	7002	0.018
>	Sc	45		**ug/L**		376681	376680.729
	Cr	52	**52.885**	**ug/L**	2.086	126901	0.344
	Cr	53		**ug/L**		185048	0.022
	Mn	55	**53.509**	**ug/L**	1.071	209174	0.552
	Ni	60	**52.848**	**ug/L**	1.480	36720	0.097
>	Ge	74		**ug/L**		276538	276537.741
	As	75	**50.257**	**ug/L**	1.850	38452	0.132
	Se	77		**ug/L**		9618	0.001
	Se	82	**49.879**	**ug/L**	2.049	2498	0.009
	Ag	107	**50.237**	**ug/L**	0.735	156776	0.898
	Cd	111	**50.381**	**ug/L**	1.726	37002	0.212
	Cd	114		**ug/L**		89438	0.512
>	In	115		**ug/L**		174547	174546.633
	Sb	121	**49.441**	**ug/L**	0.978	161382	0.924
	Sb	123		**ug/L**		126642	0.725
	Ba	135		**ug/L**		44706	0.189
	Ba	137	**51.172**	**ug/L**	1.244	78425	0.331
>	Lu	175		**ug/L**		236822	236822.296
	Tl	205	**50.760**	**ug/L**	0.913	434672	1.835
	Pb	208	**50.522**	**ug/L**	1.455	494243	2.086

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	96.210				
	B	11	92.218				
>	Sc	45		90.6			
	Cr	52	105.770				
	Cr	53					
	Mn	55	107.017				
	Ni	60	105.697				
>	Ge	74		96.0			
	As	75	100.515				
	Se	77					
	Se	82	99.757				
	Ag	107	100.473				
	Cd	111	100.763				
	Cd	114					
>	In	115		97.7			
	Sb	121	98.882				
	Sb	123					
	Ba	135					
	Ba	137	102.344				
>	Lu	175		95.9			
	Tl	205	101.520				
	Pb	208	101.044				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 11:38:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.019

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.018**	**ug/L**	43.329	21	0.000
	B	11	**2.226**	**ug/L**	4.509	368	0.000
>	Sc	45		**ug/L**		380776	380776.062
	Cr	52	**0.067**	**ug/L**	208.187	-2467	0.000
	Cr	53		**ug/L**		168900	-0.025
	Mn	55	**0.036**	**ug/L**	50.110	1251	0.000
	Ni	60	**0.005**	**ug/L**	138.036	89	0.000
>	Ge	74		**ug/L**		281751	281750.796
	As	75	**0.103**	**ug/L**	338.550	1960	0.000
	Se	77		**ug/L**		7812	-0.006
	Se	82	**0.213**	**ug/L**	183.516	13	0.000
	Ag	107	**0.008**	**ug/L**	36.161	60	0.000
	Cd	111	**-0.001**	**ug/L**	1049.401	12	-0.000
	Cd	114		**ug/L**		48	0.000
>	In	115		**ug/L**		177939	177938.883
	Sb	121	**0.392**	**ug/L**	6.661	1490	0.007
	Sb	123		**ug/L**		1135	0.005
	Ba	135		**ug/L**		52	-0.000
	Ba	137	**-0.001**	**ug/L**	160.755	84	-0.000
>	Lu	175		**ug/L**		244746	244745.658
	Tl	205	**0.175**	**ug/L**	13.302	1685	0.006
	Pb	208	**0.010**	**ug/L**	29.191	506	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			91.6		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			97.9		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			99.6		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			99.1		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232663002
Sample Date/Time: Tuesday, July 14, 2009 11:42:29
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232663002.020

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.496**	**ug/L**	1.540	513	0.001
	B	11	**12.488**	**ug/L**	1.108	1188	0.002
>	Sc	45		**ug/L**		399053	399052.928
	Cr	52	**33.201**	**ug/L**	2.218	83345	0.216
	Cr	53		**ug/L**		152886	-0.085
	Mn	55	**2059.225**	**ug/L**	3.663	8479295	21.260
	Ni	60	**27.034**	**ug/L**	2.713	19936	0.050
>	Ge	74		**ug/L**		271635	271635.400
	As	75	**7.954**	**ug/L**	3.644	7511	0.021
	Se	77		**ug/L**		5660	-0.013
	Se	82	**0.500**	**ug/L**	58.304	27	0.000
	Ag	107	**0.278**	**ug/L**	1.979	902	0.005
	Cd	111	**0.651**	**ug/L**	10.187	489	0.003
	Cd	114		**ug/L**		626	0.003
>	In	115		**ug/L**		174294	174293.873
	Sb	121	**0.422**	**ug/L**	7.049	1553	0.008
	Sb	123		**ug/L**		1257	0.006
	Ba	135		**ug/L**		429450	1.737
	Ba	137	**466.330**	**ug/L**	0.987	745523	3.015
>	Lu	175		**ug/L**		247263	247262.702
	Tl	205	**0.691**	**ug/L**	0.693	6316	0.025
	Pb	208	**46.699**	**ug/L**	0.708	477039	1.928

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			95.9		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			94.3		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			97.6		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			100.2		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232663003
Sample Date/Time: Tuesday, July 14, 2009 11:46:12
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232663003.021

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.214**	**ug/L**	2.526	473	0.001
	B	11	**5.398**	**ug/L**	7.210	633	0.001
>	Sc	45		**ug/L**		398948	398947.859
	Cr	52	**18.054**	**ug/L**	0.587	44069	0.117
	Cr	53		**ug/L**		138698	-0.122
	Mn	55	**872.377**	**ug/L**	1.127	3594069	9.006
	Ni	60	**11.545**	**ug/L**	2.482	8565	0.021
>	Ge	74		**ug/L**		278794	278794.290
	As	75	**5.911**	**ug/L**	5.127	6204	0.016
	Se	77		**ug/L**		5297	-0.015
	Se	82	**1.464**	**ug/L**	30.181	77	0.000
	Ag	107	**0.210**	**ug/L**	4.802	714	0.004
	Cd	111	**0.533**	**ug/L**	3.949	417	0.002
	Cd	114		**ug/L**		313	0.002
>	In	115		**ug/L**		180417	180416.818
	Sb	121	**0.392**	**ug/L**	2.578	1510	0.007
	Sb	123		**ug/L**		1211	0.006
	Ba	135		**ug/L**		132356	0.505
	Ba	137	**138.331**	**ug/L**	0.251	234485	0.894
>	Lu	175		**ug/L**		262085	262084.684
	Tl	205	**0.253**	**ug/L**	1.461	2542	0.009
	Pb	208	**24.142**	**ug/L**	0.180	261613	0.997

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		95.9			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		96.8			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		101.0			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		106.2			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232663004
Sample Date/Time: Tuesday, July 14, 2009 11:49:56
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232663004.022

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.422**	ug/L	9.269	509	0.001
	B	11	**10.034**	ug/L	2.796	1009	0.002
>	Sc	45		ug/L		404443	404442.768
	Cr	52	**29.394**	ug/L	0.648	74489	0.191
	Cr	53		ug/L		140426	-0.122
	Mn	55	**1703.860**	ug/L	1.388	7114694	17.591
	Ni	60	**23.421**	ug/L	2.418	17520	0.043
>	Ge	74		ug/L		274068	274068.175
	As	75	**6.881**	ug/L	5.736	6802	0.018
	Se	77		ug/L		5186	-0.015
	Se	82	**0.543**	ug/L	92.573	30	0.000
	Ag	107	**0.247**	ug/L	1.835	822	0.004
	Cd	111	**0.578**	ug/L	7.133	446	0.002
	Cd	114		ug/L		576	0.003
>	In	115		ug/L		178377	178377.491
	Sb	121	**0.315**	ug/L	2.709	1237	0.006
	Sb	123		ug/L		979	0.005
	Ba	135		ug/L		344426	1.355
	Ba	137	**365.813**	ug/L	0.600	600986	2.365
>	Lu	175		ug/L		254076	254075.846
	Tl	205	**0.532**	ug/L	2.084	5027	0.019
	Pb	208	**41.554**	ug/L	1.098	436206	1.715

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			97.2		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.2		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			99.8		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			102.9		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232663005
Sample Date/Time: Tuesday, July 14, 2009 11:53:40
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232663005.023

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.989**	ug/L	7.754	446	0.001
	B	11	**11.002**	ug/L	1.404	1083	0.002
>	Sc	45		ug/L		403251	403250.714
	Cr	52	**36.796**	ug/L	1.935	93678	0.239
	Cr	53		ug/L		142415	-0.116
	Mn	55	**1229.499**	ug/L	1.711	5119374	12.693
	Ni	60	**27.040**	ug/L	1.307	20157	0.050
>	Ge	74		ug/L		273330	273329.683
	As	75	**8.378**	ug/L	4.353	7858	0.022
	Se	77		ug/L		5005	-0.016
	Se	82	**0.543**	ug/L	180.864	30	0.000
	Ag	107	**0.340**	ug/L	6.376	1108	0.006
	Cd	111	**0.636**	ug/L	11.032	484	0.003
	Cd	114		ug/L		632	0.003
>	In	115		ug/L		176443	176442.610
	Sb	121	**0.392**	ug/L	7.794	1477	0.007
	Sb	123		ug/L		1146	0.006
	Ba	135		ug/L		326949	1.316
	Ba	137	**357.058**	ug/L	1.079	573563	2.308
>	Lu	175		ug/L		248456	248455.836
	Tl	205	**0.688**	ug/L	1.943	6322	0.025
	Pb	208	**46.285**	ug/L	1.336	475043	1.911

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			97.0		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			94.9		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.8		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			100.6		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:57:23
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.024

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**44.477**	**ug/L**	14.322	6329	0.016
	B	11	**86.024**	**ug/L**	13.290	6976	0.017
>	Sc	45		**ug/L**		406367	406367.152
	Cr	52	**49.478**	**ug/L**	13.695	126230	0.322
	Cr	53		**ug/L**		177205	-0.029
	Mn	55	**49.930**	**ug/L**	13.042	208092	0.515
	Ni	60	**48.881**	**ug/L**	11.895	36241	0.090
>	Ge	74		**ug/L**		275360	275359.598
	As	75	**50.199**	**ug/L**	1.074	38248	0.132
	Se	77		**ug/L**		8843	-0.002
	Se	82	**49.834**	**ug/L**	3.165	2484	0.009
	Ag	107	**50.027**	**ug/L**	1.608	155360	0.894
	Cd	111	**49.868**	**ug/L**	1.123	36448	0.210
	Cd	114		**ug/L**		88443	0.509
>	In	115		**ug/L**		173701	173701.110
	Sb	121	**48.997**	**ug/L**	1.322	159168	0.915
	Sb	123		**ug/L**		123879	0.712
	Ba	135		**ug/L**		44241	0.186
	Ba	137	**50.564**	**ug/L**	0.566	77651	0.327
>	Lu	175		**ug/L**		237288	237287.644
	Tl	205	**50.543**	**ug/L**	0.754	433651	1.827
	Pb	208	**50.112**	**ug/L**	1.456	491187	2.069

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	88.954				
	B	11	86.024				
>	Sc	45			97.7		
	Cr	52	98.955				
	Cr	53					
	Mn	55	99.861				
	Ni	60	97.763				
>	Ge	74			95.6		
	As	75	100.397				
	Se	77					
	Se	82	99.667				
	Ag	107	100.053				
	Cd	111	99.736				
	Cd	114					
>	In	115			97.2		
	Sb	121	97.994				
	Sb	123					
	Ba	135					
	Ba	137	101.128				
>	Lu	175			96.1		
	Tl	205	101.086				
	Pb	208	100.224				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Be	9CCV is out of limits (+/- 10%)
QC Std 6	B	11CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 12:01:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.025

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.016**	**ug/L**	153.468	20	0.000
	B	11	**2.153**	**ug/L**	15.319	356	0.000
>	Sc	45		**ug/L**		373781	373781.303
	Cr	52	**0.008**	**ug/L**	1397.570	-2566	0.000
	Cr	53		**ug/L**		163124	-0.033
	Mn	55	**0.081**	**ug/L**	18.413	1400	0.001
	Ni	60	**0.025**	**ug/L**	85.463	100	0.000
>	Ge	74		**ug/L**		274030	274029.756
	As	75	**-0.594**	**ug/L**	29.550	1400	-0.002
	Se	77		**ug/L**		7048	-0.008
	Se	82	**0.242**	**ug/L**	108.715	15	0.000
	Ag	107	**0.011**	**ug/L**	37.033	69	0.000
	Cd	111	**0.010**	**ug/L**	113.284	20	0.000
	Cd	114		**ug/L**		40	0.000
>	In	115		**ug/L**		175346	175346.490
	Sb	121	**0.383**	**ug/L**	2.734	1438	0.007
	Sb	123		**ug/L**		1109	0.005
	Ba	135		**ug/L**		66	0.000
	Ba	137	**0.008**	**ug/L**	156.791	96	0.000
>	Lu	175		**ug/L**		240306	240306.382
	Tl	205	**0.139**	**ug/L**	12.520	1343	0.005
	Pb	208	**0.014**	**ug/L**	35.656	540	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			89.9		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.2		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			97.3		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 12:30:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.033

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**47.943**	**ug/L**	1.932	6281	0.017
	B	11	**93.801**	**ug/L**	2.668	6977	0.018
>	Sc	45		**ug/L**		369172	369171.825
	Cr	52	**51.660**	**ug/L**	0.718	121444	0.336
	Cr	53		**ug/L**		185124	0.032
	Mn	55	**52.380**	**ug/L**	1.354	200697	0.541
	Ni	60	**51.723**	**ug/L**	1.212	35223	0.095
>	Ge	74		**ug/L**		267611	267611.111
	As	75	**50.209**	**ug/L**	0.897	37180	0.132
	Se	77		**ug/L**		8853	-0.001
	Se	82	**48.203**	**ug/L**	1.705	2336	0.009
	Ag	107	**49.543**	**ug/L**	1.226	148048	0.886
	Cd	111	**49.812**	**ug/L**	2.417	35029	0.210
	Cd	114		**ug/L**		85011	0.508
>	In	115		**ug/L**		167145	167144.782
	Sb	121	**49.536**	**ug/L**	0.618	154843	0.925
	Sb	123		**ug/L**		121349	0.725
	Ba	135		**ug/L**		42975	0.189
	Ba	137	**51.291**	**ug/L**	1.891	75471	0.332
>	Lu	175		**ug/L**		227378	227377.593
	Tl	205	**51.199**	**ug/L**	0.521	420960	1.851
	Pb	208	**50.855**	**ug/L**	1.143	477672	2.099

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	95.886				
	B	11	93.801				
>	Sc	45			88.8		
	Cr	52	103.320				
	Cr	53					
	Mn	55	104.759				
	Ni	60	103.445				
>	Ge	74			92.9		
	As	75	100.419				
	Se	77					
	Se	82	96.407				
	Ag	107	99.087				
	Cd	111	99.624				
	Cd	114					
>	In	115			93.6		
	Sb	121	99.072				
	Sb	123					
	Ba	135					
	Ba	137	102.583				
>	Lu	175			92.1		
	Tl	205	102.399				
	Pb	208	101.709				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 12:34:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.034

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.014**	**ug/L**	77.247	16	-0.000
	B	11	**1.741**	**ug/L**	31.705	325	0.000
>	Sc	45		**ug/L**		372927	372927.058
	Cr	52	**-0.048**	**ug/L**	252.076	-2696	-0.000
	Cr	53		**ug/L**		168491	-0.017
	Mn	55	**0.081**	**ug/L**	8.330	1397	0.001
	Ni	60	**0.027**	**ug/L**	76.994	102	0.000
>	Ge	74		**ug/L**		275339	275338.808
	As	75	**-0.615**	**ug/L**	34.337	1394	-0.002
	Se	77		**ug/L**		7060	-0.008
	Se	82	**0.099**	**ug/L**	144.150	8	0.000
	Ag	107	**0.008**	**ug/L**	15.403	58	0.000
	Cd	111	**-0.000**	**ug/L**	5013.281	12	-0.000
	Cd	114		**ug/L**		51	0.000
>	In	115		**ug/L**		172305	172305.231
	Sb	121	**0.357**	**ug/L**	5.437	1328	0.007
	Sb	123		**ug/L**		1077	0.005
	Ba	135		**ug/L**		60	0.000
	Ba	137	**0.002**	**ug/L**	465.255	86	0.000
>	Lu	175		**ug/L**		235172	235172.256
	Tl	205	**0.182**	**ug/L**	13.968	1679	0.007
	Pb	208	**0.011**	**ug/L**	25.911	497	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			89.7		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			96.4		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			95.3		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 13:03:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.042

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**47.878**	**ug/L**	3.213	6256	0.017
	B	11	**91.629**	**ug/L**	2.424	6802	0.018
>	Sc	45		**ug/L**		368215	368215.406
	Cr	52	**52.211**	**ug/L**	0.997	122442	0.339
	Cr	53		**ug/L**		173350	0.002
	Mn	55	**53.462**	**ug/L**	0.524	204303	0.552
	Ni	60	**51.825**	**ug/L**	1.158	35205	0.095
>	Ge	74		**ug/L**		270945	270944.703
	As	75	**49.258**	**ug/L**	1.601	36968	0.130
	Se	77		**ug/L**		8430	-0.003
	Se	82	**48.388**	**ug/L**	2.560	2373	0.009
	Ag	107	**50.203**	**ug/L**	0.157	152065	0.897
	Cd	111	**49.361**	**ug/L**	0.574	35187	0.208
	Cd	114		**ug/L**		86214	0.509
>	In	115		**ug/L**		169408	169408.056
	Sb	121	**48.935**	**ug/L**	1.564	155040	0.914
	Sb	123		**ug/L**		121721	0.718
	Ba	135		**ug/L**		43141	0.185
	Ba	137	**50.412**	**ug/L**	1.074	76076	0.326
>	Lu	175		**ug/L**		233175	233174.917
	Tl	205	**49.916**	**ug/L**	1.379	420875	1.804
	Pb	208	**50.066**	**ug/L**	0.392	482277	2.067

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	95.756				
	B	11	91.629				
>	Sc	45			88.5		
	Cr	52	104.422				
	Cr	53					
	Mn	55	106.924				
	Ni	60	103.651				
>	Ge	74			94.1		
	As	75	98.516				
	Se	77					
	Se	82	96.776				
	Ag	107	100.407				
	Cd	111	98.722				
	Cd	114					
>	In	115			94.8		
	Sb	121	97.869				
	Sb	123					
	Ba	135					
	Ba	137	100.824				
>	Lu	175			94.4		
	Tl	205	99.833				
	Pb	208	100.132				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 13:07:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.043

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.023**	**ug/L**	120.763	21	0.000
	B	11	**1.559**	**ug/L**	17.929	312	0.000
>	Sc	45		**ug/L**		372853	372853.080
	Cr	52	**0.022**	**ug/L**	701.175	-2526	0.000
	Cr	53		**ug/L**		158760	-0.043
	Mn	55	**0.129**	**ug/L**	12.551	1582	0.001
	Ni	60	**0.014**	**ug/L**	145.480	93	0.000
>	Ge	74		**ug/L**		274401	274401.442
	As	75	**-0.438**	**ug/L**	157.772	1519	-0.001
	Se	77		**ug/L**		6595	-0.010
	Se	82	**-0.132**	**ug/L**	188.546	-4	-0.000
	Ag	107	**0.008**	**ug/L**	14.136	60	0.000
	Cd	111	**-0.002**	**ug/L**	662.517	11	-0.000
	Cd	114		**ug/L**		61	0.000
>	In	115		**ug/L**		176528	176528.451
	Sb	121	**0.352**	**ug/L**	4.585	1345	0.007
	Sb	123		**ug/L**		1073	0.005
	Ba	135		**ug/L**		58	0.000
	Ba	137	**0.000**	**ug/L**	6539.808	84	0.000
>	Lu	175		**ug/L**		239566	239566.104
	Tl	205	**0.138**	**ug/L**	18.536	1332	0.005
	Pb	208	**0.011**	**ug/L**	3.944	505	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		89.6			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		95.3			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.8			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		97.0			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 13:32:57
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.050

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**46.429**	**ug/L**	0.474	5775	0.016
	B	11	**89.494**	**ug/L**	2.052	6328	0.018
>	Sc	45		**ug/L**		350458	350457.681
	Cr	52	**51.792**	**ug/L**	2.813	115584	0.337
	Cr	53		**ug/L**		201269	0.105
	Mn	55	**53.544**	**ug/L**	0.027	194750	0.553
	Ni	60	**52.719**	**ug/L**	0.745	34081	0.097
>	Ge	74		**ug/L**		263704	263703.604
	As	75	**49.670**	**ug/L**	0.290	36260	0.131
	Se	77		**ug/L**		9630	0.003
	Se	82	**49.413**	**ug/L**	3.371	2360	0.009
	Ag	107	**50.163**	**ug/L**	1.982	150614	0.897
	Cd	111	**50.135**	**ug/L**	1.485	35428	0.211
	Cd	114		**ug/L**		85224	0.507
>	In	115		**ug/L**		167937	167937.151
	Sb	121	**49.390**	**ug/L**	0.915	155112	0.923
	Sb	123		**ug/L**		121113	0.720
	Ba	135		**ug/L**		42911	0.184
	Ba	137	**49.996**	**ug/L**	0.570	75248	0.323
>	Lu	175		**ug/L**		232559	232558.732
	Tl	205	**48.400**	**ug/L**	1.176	406993	1.750
	Pb	208	**49.960**	**ug/L**	0.888	479968	2.062

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	92.857				
	B	11	89.494				
>	Sc	45			84.3		
	Cr	52	103.583				
	Cr	53					
	Mn	55	107.087				
	Ni	60	105.439				
>	Ge	74			91.6		
	As	75	99.339				
	Se	77					
	Se	82	98.826				
	Ag	107	100.326				
	Cd	111	100.271				
	Cd	114					
>	In	115			94.0		
	Sb	121	98.780				
	Sb	123					
	Ba	135					
	Ba	137	99.992				
>	Lu	175			94.2		
	Tl	205	96.799				
	Pb	208	99.920				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	B	11CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 13:36:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.051

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.070**	**ug/L**	32.137	26	0.000
	B	11	**2.272**	**ug/L**	10.543	344	0.000
>	Sc	45		**ug/L**		352952	352951.579
	Cr	52	**-0.200**	**ug/L**	76.001	-2892	-0.001
	Cr	53		**ug/L**		172952	0.022
	Mn	55	**0.041**	**ug/L**	40.410	1176	0.000
	Ni	60	**0.018**	**ug/L**	34.398	90	0.000
>	Ge	74		**ug/L**		267631	267631.227
	As	75	**0.089**	**ug/L**	906.074	1845	0.000
	Se	77		**ug/L**		7587	-0.006
	Se	82	**-0.417**	**ug/L**	13.045	-18	-0.000
	Ag	107	**0.009**	**ug/L**	36.432	60	0.000
	Cd	111	**0.008**	**ug/L**	97.806	18	0.000
	Cd	114		**ug/L**		43	0.000
>	In	115		**ug/L**		169983	169982.559
	Sb	121	**0.382**	**ug/L**	5.458	1389	0.007
	Sb	123		**ug/L**		1081	0.005
	Ba	135		**ug/L**		55	-0.000
	Ba	137	**-0.000**	**ug/L**	2524.961	83	-0.000
>	Lu	175		**ug/L**		239218	239218.285
	Tl	205	**1.379**	**ug/L**	1.757	12056	0.050
	Pb	208	**0.011**	**ug/L**	47.965	508	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			84.9		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			93.0		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			95.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			96.9		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232663002
Sample Date/Time: Tuesday, July 14, 2009 13:40:20
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232663002.052

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.243**	**ug/L**	4.131	457	0.001
	B	11	**11.248**	**ug/L**	1.106	1044	0.002
>	Sc	45		**ug/L**		381998	381997.899
	Cr	52	**31.712**	**ug/L**	1.742	76116	0.206
	Cr	53		**ug/L**		152734	-0.069
	Mn	55	**2002.685**	**ug/L**	2.432	7898210	20.676
	Ni	60	**26.309**	**ug/L**	2.129	18580	0.048
>	Ge	74		**ug/L**		263884	263884.003
	As	75	**8.109**	**ug/L**	2.488	7401	0.021
	Se	77		**ug/L**		5669	-0.012
	Se	82	**0.499**	**ug/L**	149.497	26	0.000
	Ag	107	**0.273**	**ug/L**	4.541	865	0.005
	Cd	111	**0.613**	**ug/L**	3.113	452	0.003
	Cd	114		**ug/L**		616	0.003
>	In	115		**ug/L**		170514	170513.930
	Sb	121	**0.415**	**ug/L**	5.395	1500	0.008
	Sb	123		**ug/L**		1174	0.006
	Ba	135		**ug/L**		413383	1.674
	Ba	137	**454.705**	**ug/L**	0.667	725882	2.940
>	Lu	175		**ug/L**		246897	246897.066
	Tl	205	**1.924**	**ug/L**	3.130	17312	0.070
	Pb	208	**45.543**	**ug/L**	0.657	464562	1.880

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			91.8		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			91.7		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			95.4		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			100.0		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232663003
Sample Date/Time: Tuesday, July 14, 2009 13:44:03
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232663003.053

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.013**	**ug/L**	1.442	422	0.001
	B	11	**5.033**	**ug/L**	4.234	573	0.001
>	Sc	45		**ug/L**		378176	378175.583
	Cr	52	**17.736**	**ug/L**	1.997	40992	0.115
	Cr	53		**ug/L**		140860	-0.097
	Mn	55	**853.549**	**ug/L**	1.172	3333459	8.812
	Ni	60	**11.398**	**ug/L**	2.985	8016	0.021
>	Ge	74		**ug/L**		266813	266813.220
	As	75	**5.944**	**ug/L**	6.445	5960	0.016
	Se	77		**ug/L**		5203	-0.014
	Se	82	**0.960**	**ug/L**	70.782	49	0.000
	Ag	107	**0.193**	**ug/L**	3.516	642	0.003
	Cd	111	**0.515**	**ug/L**	7.937	394	0.002
	Cd	114		**ug/L**		293	0.001
>	In	115		**ug/L**		176135	176134.832
	Sb	121	**0.373**	**ug/L**	5.803	1411	0.007
	Sb	123		**ug/L**		1135	0.005
	Ba	135		**ug/L**		127980	0.502
	Ba	137	**134.662**	**ug/L**	0.530	221755	0.871
>	Lu	175		**ug/L**		254622	254622.259
	Tl	205	**1.030**	**ug/L**	1.643	9627	0.037
	Pb	208	**24.203**	**ug/L**	0.847	254819	0.999

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		90.9			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		92.7			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.6			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		103.1			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232663004
Sample Date/Time: Tuesday, July 14, 2009 13:47:46
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232663004.054

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.369**	**ug/L**	2.323	483	0.001
	B	11	**9.753**	**ug/L**	4.812	950	0.002
>	Sc	45		**ug/L**		389223	389223.050
	Cr	52	**28.922**	**ug/L**	0.553	70498	0.188
	Cr	53		**ug/L**		142033	-0.104
	Mn	55	**1672.801**	**ug/L**	0.977	6722879	17.270
	Ni	60	**23.509**	**ug/L**	0.818	16927	0.043
>	Ge	74		**ug/L**		265705	265705.411
	As	75	**7.167**	**ug/L**	4.894	6790	0.019
	Se	77		**ug/L**		5085	-0.015
	Se	82	**0.604**	**ug/L**	98.630	31	0.000
	Ag	107	**0.239**	**ug/L**	5.430	765	0.004
	Cd	111	**0.636**	**ug/L**	16.061	469	0.003
	Cd	114		**ug/L**		541	0.003
>	In	115		**ug/L**		171055	171055.010
	Sb	121	**0.303**	**ug/L**	1.376	1147	0.006
	Sb	123		**ug/L**		916	0.004
	Ba	135		**ug/L**		330612	1.336
	Ba	137	**360.085**	**ug/L**	0.823	576073	2.328
>	Lu	175		**ug/L**		247412	247411.587
	Tl	205	**1.067**	**ug/L**	1.629	9680	0.039
	Pb	208	**41.249**	**ug/L**	0.897	421661	1.703

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			93.6		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			92.3		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			95.7		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			100.2		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232663005
Sample Date/Time: Tuesday, July 14, 2009 13:51:31
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882024|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232663005.055

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.086**	**ug/L**	8.163	434	0.001
	B	11	**11.463**	**ug/L**	1.319	1057	0.002
>	Sc	45		**ug/L**		380693	380692.927
	Cr	52	**37.007**	**ug/L**	3.057	88915	0.241
	Cr	53		**ug/L**		145093	-0.087
	Mn	55	**1252.281**	**ug/L**	2.173	4921172	12.929
	Ni	60	**28.148**	**ug/L**	0.393	19807	0.052
>	Ge	74		**ug/L**		260331	260331.087
	As	75	**8.007**	**ug/L**	8.811	7220	0.021
	Se	77		**ug/L**		5140	-0.014
	Se	82	**0.476**	**ug/L**	116.970	25	0.000
	Ag	107	**0.354**	**ug/L**	0.878	1085	0.006
	Cd	111	**0.595**	**ug/L**	4.556	428	0.003
	Cd	114		**ug/L**		612	0.003
>	In	115		**ug/L**		166373	166372.757
	Sb	121	**0.393**	**ug/L**	2.963	1395	0.007
	Sb	123		**ug/L**		1077	0.006
	Ba	135		**ug/L**		317800	1.334
	Ba	137	**364.001**	**ug/L**	2.801	560951	2.353
>	Lu	175		**ug/L**		238506	238506.316
	Tl	205	**1.092**	**ug/L**	2.544	9544	0.039
	Pb	208	**47.247**	**ug/L**	4.878	464950	1.950

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			91.5		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			90.4		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			93.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			96.6		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 13:55:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.056

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**46.727**	**ug/L**	2.817	5985	0.017
	B	11	**93.355**	**ug/L**	3.803	6789	0.018
>	Sc	45		**ug/L**		360966	360966.353
	Cr	52	**51.773**	**ug/L**	0.727	119003	0.337
	Cr	53		**ug/L**		178786	0.026
	Mn	55	**53.019**	**ug/L**	2.137	198605	0.547
	Ni	60	**51.674**	**ug/L**	1.420	34407	0.095
>	Ge	74		**ug/L**		263977	263977.473
	As	75	**49.547**	**ug/L**	1.035	36212	0.131
	Se	77		**ug/L**		8578	-0.001
	Se	82	**49.010**	**ug/L**	2.956	2342	0.009
	Ag	107	**49.700**	**ug/L**	1.405	147409	0.888
	Cd	111	**49.457**	**ug/L**	1.566	34522	0.208
	Cd	114		**ug/L**		83565	0.503
>	In	115		**ug/L**		165914	165913.579
	Sb	121	**48.835**	**ug/L**	4.013	151456	0.912
	Sb	123		**ug/L**		117784	0.709
	Ba	135		**ug/L**		42507	0.185
	Ba	137	**49.965**	**ug/L**	2.234	74385	0.323
>	Lu	175		**ug/L**		230069	230068.709
	Tl	205	**48.884**	**ug/L**	1.453	406620	1.767
	Pb	208	**50.003**	**ug/L**	1.945	475168	2.064

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	93.454				
	B	11	93.355				
>	Sc	45		86.8			
	Cr	52	103.547				
	Cr	53					
	Mn	55	106.037				
	Ni	60	103.348				
>	Ge	74		91.7			
	As	75	99.095				
	Se	77					
	Se	82	98.021				
	Ag	107	99.400				
	Cd	111	98.914				
	Cd	114					
>	In	115		92.9			
	Sb	121	97.671				
	Sb	123					
	Ba	135					
	Ba	137	99.931				
>	Lu	175		93.2			
	Tl	205	97.767				
	Pb	208	100.006				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 13:58:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.057

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.022**	**ug/L**	261.323	21	0.000
	B	11	**1.921**	**ug/L**	40.966	334	0.000
>	Sc	45		**ug/L**		368892	368891.928
	Cr	52	**-0.109**	**ug/L**	142.677	-2811	-0.001
	Cr	53		**ug/L**		165297	-0.021
	Mn	55	**0.124**	**ug/L**	7.556	1545	0.001
	Ni	60	**0.011**	**ug/L**	108.551	90	0.000
>	Ge	74		**ug/L**		270560	270559.772
	As	75	**-0.154**	**ug/L**	247.030	1699	-0.000
	Se	77		**ug/L**		6906	-0.008
	Se	82	**-0.091**	**ug/L**	66.683	-2	-0.000
	Ag	107	**0.007**	**ug/L**	37.308	55	0.000
	Cd	111	**0.012**	**ug/L**	64.126	21	0.000
	Cd	114		**ug/L**		48	0.000
>	In	115		**ug/L**		171610	171609.905
	Sb	121	**0.356**	**ug/L**	5.825	1321	0.007
	Sb	123		**ug/L**		1109	0.005
	Ba	135		**ug/L**		63	0.000
	Ba	137	**0.005**	**ug/L**	216.271	91	0.000
>	Lu	175		**ug/L**		240089	240089.466
	Tl	205	**0.586**	**ug/L**	3.189	5223	0.021
	Pb	208	**0.009**	**ug/L**	44.412	492	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			88.7		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			94.0		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			96.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			97.2		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL
Method Description: 7471A, ILM04 ANALYST JXL1
Element: Hg

Date: 07/15/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 071509S1.SIF Results Data Set Name: 071509S1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/15/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0036	0.0036	10:04:59	No
2			0.0036	0.0036	10:05:34	No
Mean:			0.0036			
SD :			0.0000			
%RSD:			1.0026			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/15/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0028	0.0064	10:06:57	No
2			0.0028	0.0064	10:07:31	No
Mean:			0.0028			
SD :			0.0000			
%RSD:			0.7866			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.01411
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/15/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0067	0.0103	10:08:55	No
2			0.0067	0.0103	10:09:30	No
Mean:			0.0067			
SD :			0.0000			
%RSD:			0.3331			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99974 Slope: 0.01340
Intercept : 0.00005

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/15/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0277	0.0312	10:10:54	No
2			0.0276	0.0312	10:11:29	No
Mean:			0.0276			
SD :			0.0001			
%RSD:			0.1857			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99996 Slope: 0.01381
Intercept : -0.00003

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/15/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0687	0.0723	10:12:54	No
2			0.0679	0.0714	10:13:29	No
Mean:			0.0683			
SD :			0.0006			
%RSD:			0.8640			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99998 Slope: 0.01366
Intercept : 0.00005

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/15/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1308	0.1344	10:14:55	No
2			0.1331	0.1367	10:15:30	No
Mean:			0.1320			
SD :			0.0016			
%RSD:			1.1918			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99984 Slope: 0.01323
Intercept : 0.00053

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0036	---	----	----	----
S0.2	0.0028	0.200	0.173	0.0000	0.8
S0.5	0.0067	0.500	0.467	0.0000	0.3
S2.0	0.0276	2.000	2.047	0.0001	0.2
S5.0	0.0683	5.000	5.120	0.0006	0.9
S10	0.1320	10.000	9.933	0.0016	1.2

Correlation Coefficient: 0.99984 Slope: 0.01323 Intercept: 0.0005

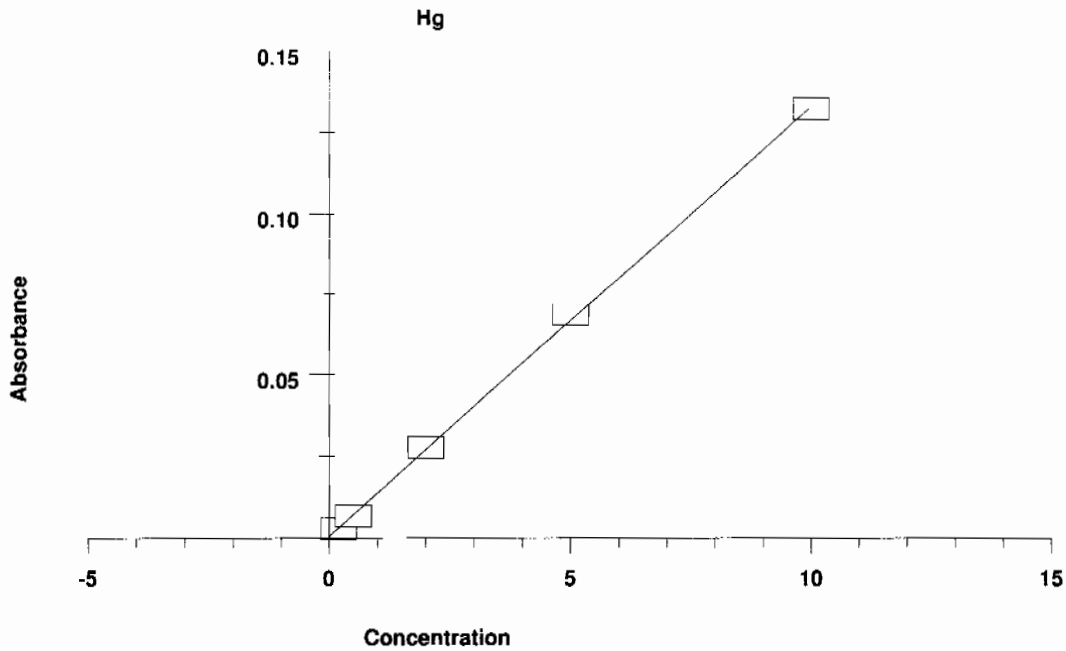

==========

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/15/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.999	4.999	0.0667	0.0703	10:16:58	No
2	4.988	4.988	0.0665	0.0701	10:17:33	No
Mean:	4.993	4.993	0.0666			
SD :	0.0073	0.0073	0.0001			
%RSD:	0.1	0.1	0.1459			

QC value within specified limits.

==========

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/15/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	-0.0002	0.0034	10:18:55	No
2	-0.061	-0.061	-0.0003	0.0033	10:19:29	No
Mean:	-0.059	-0.059	-0.0002			
SD :	0.0023	0.0023	0.0000			
%RSD:	3.8	3.8	11.9857			

QC value within specified limits.

==========

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/15/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.175	0.175	0.0028	0.0064	10:20:53	No
2	0.161	0.161	0.0027	0.0063	10:21:28	No
Mean:	0.168	0.168	0.0028			
SD :	0.0095	0.0095	0.0001			
%RSD:	5.7	5.7	4.5866			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/15/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.933	4.933	0.0658	0.0694	10:22:53	No
2	5.117	5.117	0.0682	0.0718	10:23:28	No
Mean:	5.025	5.025	0.0670			
SD :	0.1304	0.1304	0.0017			
%RSD:	2.6	2.6	2.5742			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/15/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.075	-0.075	-0.0005	0.0031	10:24:55	No
2	-0.085	-0.085	-0.0006	0.0030	10:25:30	No
Mean:	-0.080	-0.080	-0.0005			
SD :	0.0071	0.0071	0.0001			
%RSD:	8.9	8.9	17.7853			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/15/2009
Sample ID: 1201873758|i||882255|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.015	-0.015	0.0003	0.0039	10:26:56	No
2	-0.012	-0.012	0.0004	0.0040	10:27:31	No
Mean:	-0.014	-0.014	0.0004			
SD :	0.0015	0.0015	0.0000			
%RSD:	11.2	11.2	5.7094			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/15/2009
Sample ID: 1201873759|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.517	3.517	0.0471	0.0507	10:28:55	No
2	3.458	3.458	0.0463	0.0499	10:29:30	No
Mean:	3.487	3.487	0.0467			
SD :	0.0419	0.0419	0.0006			
%RSD:	1.2	1.2	1.1870			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/15/2009
Sample ID: 232663001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.372	0.372	0.0055	0.0090	10:30:56	No
2	0.367	0.367	0.0054	0.0090	10:31:31	No
Mean:	0.369	0.369	0.0054			
SD :	0.0036	0.0036	0.0000			
%RSD:	1.0	1.0	0.8795			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/15/2009
Sample ID: 1201873760|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.236	0.236	0.0037	0.0072	10:32:58	No
2	0.227	0.227	0.0035	0.0071	10:33:33	No
Mean:	0.231	0.231	0.0036			
SD :	0.0065	0.0065	0.0001			
%RSD:	2.8	2.8	2.4104			

Element: Hg Seq. No.: 16 AS Loc.: 16 Date: 07/15/2009
Sample ID: 1201873761|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.371	2.371	0.0319	0.0355	10:35:01	No
2	2.362	2.362	0.0318	0.0354	10:35:36	No
Mean:	2.366	2.366	0.0318			
SD :	0.0061	0.0061	0.0001			
%RSD:	0.3	0.3	0.2548			

Element: Hg Seq. No.: 17 AS Loc.: 17 Date: 07/15/2009
Sample ID: 1201873766|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.284	2.284	0.0308	0.0343	10:37:00	No
2	2.254	2.254	0.0304	0.0340	10:37:35	No
Mean:	2.269	2.269	0.0306			
SD :	0.0210	0.0210	0.0003			
%RSD:	0.9	0.9	0.9080			

Element: Hg Seq. No.: 18 AS Loc.: 18 Date: 07/15/2009
Sample ID: 1201873765|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.036	-0.036	0.0001	0.0037	10:38:56	No
2	-0.038	-0.038	0.0000	0.0036	10:39:31	No
Mean:	-0.037	-0.037	0.0000			
SD :	0.0013	0.0013	0.0000			
%RSD:	3.6	3.6	36.9244			

Element: Hg Seq. No.: 19 AS Loc.: 19 Date: 07/15/2009
Sample ID: 232663002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.310	0.310	0.0046	0.0082	10:40:52	No
2	0.303	0.303	0.0045	0.0081	10:41:28	No
Mean:	0.306	0.306	0.0046			
SD :	0.0050	0.0050	0.0001			
%RSD:	1.6	1.6	1.4578			

Element: Hg Seq. No.: 20 AS Loc.: 20 Date: 07/15/2009
Sample ID: 232663003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.237	0.237	0.0037	0.0073	10:42:50	No
2	0.208	0.208	0.0033	0.0069	10:43:24	No
Mean:	0.222	0.222	0.0035			
SD :	0.0211	0.0211	0.0003			

%RSD: 9.5 9.5 8.0441

==========

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/15/2009
Sample ID: 232663004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.333	0.333	0.0049	0.0085	10:44:47	No
2	0.322	0.322	0.0048	0.0084	10:45:22	No
Mean:	0.328	0.328	0.0049			
SD :	0.0077	0.0077	0.0001			
%RSD:	2.4	2.4	2.1019			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/15/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.820	4.820	0.0643	0.0679	10:46:46	No
2	4.899	4.899	0.0653	0.0689	10:47:21	No
Mean:	4.859	4.859	0.0648			
SD :	0.0560	0.0560	0.0007			
%RSD:	1.2	1.2	1.1429			

QC value within specified limits.

==========

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/15/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.089	-0.089	-0.0007	0.0029	10:48:49	No
2	-0.099	-0.099	-0.0008	0.0028	10:49:23	No
Mean:	-0.094	-0.094	-0.0007			
SD :	0.0072	0.0072	0.0001			
%RSD:	7.6	7.6	13.2091			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/15/2009
Sample ID: 232663005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.448	0.448	0.0065	0.0100	10:50:48	No
2	0.452	0.452	0.0065	0.0101	10:51:22	No
Mean:	0.450	0.450	0.0065			
SD :	0.0033	0.0033	0.0000			
%RSD:	0.7	0.7	0.6815			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/15/2009
Sample ID: 1201875356|i||882946|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0005	0.0031	10:52:45	No
2	-0.075	-0.075	-0.0005	0.0031	10:53:19	No
Mean:	-0.075	-0.075	-0.0005			
SD :	0.0005	0.0005	0.0000			
%RSD:	0.6	0.6	1.2997			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/15/2009
Sample ID: 1201875357|i|||LCS

%RSD: 2.0 2.0 2.9216

==========

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/15/2009
Sample ID: 232864002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.078	0.078	0.0016	0.0052	11:06:47	No
2	0.068	0.068	0.0014	0.0050	11:07:22	No
Mean:	0.073	0.073	0.0015			
SD :	0.0072	0.0072	0.0001			
%RSD:	9.9	9.9	6.3666			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/15/2009
Sample ID: 232864003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.007	0.007	0.0006	0.0042	11:08:50	No
2	0.000	0.000	0.0005	0.0041	11:09:24	No
Mean:	0.003	0.003	0.0006			
SD :	0.0055	0.0055	0.0001			
%RSD:	161.5	161.5	12.5542			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/15/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	4.961	4.961	0.0662	0.0698	11:10:51	No
2	4.973	4.973	0.0663	0.0699	11:11:25	No
Mean:	4.967	4.967	0.0662			
SD :	0.0087	0.0087	0.0001			
%RSD:	0.2	0.2	0.1728			

QC value within specified limits.

==========

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/15/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.097	-0.097	-0.0008	0.0028	11:12:53	No
2	-0.104	-0.104	-0.0008	0.0027	11:13:28	No
Mean:	-0.101	-0.101	-0.0008			
SD :	0.0050	0.0050	0.0001			
%RSD:	5.0	5.0	8.3098			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/15/2009
Sample ID: 232864004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.001	0.001	0.0005	0.0041	11:14:52	No
2	-0.011	-0.011	0.0004	0.0040	11:15:27	No
Mean:	-0.005	-0.005	0.0005			
SD :	0.0087	0.0087	0.0001			
%RSD:	176.5	176.5	24.6157			

==========

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/15/2009
Sample ID: 232864005|i|||

Miscellaneous

Prep LogBook

Analyst: FGA Verified by:_____

Batch: 882004

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873204	UI652380	.5	g
MS	1201873206	UI090622-01	.25	mL
MS	1201873206	UI090622-06	.25	mL
MSD	1201873208	UI090622-01	.25	mL
MSD	1201873208	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873203		SW846 3050B	06-JUL-2009 14:00	0.509 g	50 mL	98.23183	SOIL
LCS	1201873204		SW846 3050B	06-JUL-2009 14:00	0.5 g	50 mL	100	SOIL
SAMPLE	232663001		SW846 3050B	06-JUL-2009 14:00	0.517 g	50 mL	96.7118	SOIL
DUP	1201873205	232663001	SW846 3050B	06-JUL-2009 14:00	0.504 g	50 mL	99.20635	SOIL
MS	1201873206	232663001	SW846 3050B	06-JUL-2009 14:00	0.501 g	50 mL	99.8004	SOIL
MSD	1201873208	232663001	SW846 3050B	06-JUL-2009 14:00	0.507 g	50 mL	98.61933	SOIL
SDILT	1201873207	232663001	SW846 3050B	06-JUL-2009 14:00	0.517 g	50 mL	96.7118	SOIL
SAMPLE	232663002		SW846 3050B	06-JUL-2009 14:00	0.514 g	50 mL	97.27626	SOIL
SAMPLE	232663003		SW846 3050B	06-JUL-2009 14:00	0.511 g	50 mL	97.84736	SOIL
SAMPLE	232663004		SW846 3050B	06-JUL-2009 14:00	0.509 g	50 mL	98.23183	SOIL
SAMPLE	232663005		SW846 3050B	06-JUL-2009 14:00	0.525 g	50 mL	95.2381	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments Dark,grey soil

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 882023

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873238	UI652380	.514	g
MS	1201873240	UI042709-A	.5	mL
MS	1201873240	UI042709-B	.5	mL
MSD	1201873242	UI042709-A	.5	mL
MSD	1201873242	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873237		SW846 3050B	06-JUL-2009 15:21	0.505 g	50 mL	99.0099	SOIL
LCS	1201873238		SW846 3050B	06-JUL-2009 15:21	0.514 g	50 mL	97.27626	SOIL
SAMPLE	232663001		SW846 3050B	06-JUL-2009 15:21	0.52 g	50 mL	96.15385	SOIL
DUP	1201873239	232663001	SW846 3050B	06-JUL-2009 15:21	0.517 g	50 mL	96.7118	SOIL
MS	1201873240	232663001	SW846 3050B	06-JUL-2009 15:21	0.503 g	50 mL	99.40358	SOIL
MSD	1201873242	232663001	SW846 3050B	06-JUL-2009 15:21	0.515 g	50 mL	97.08738	SOIL
SDILT	1201873241	232663001	SW846 3050B	06-JUL-2009 15:21	0.52 g	50 mL	96.15385	SOIL
SAMPLE	232663002		SW846 3050B	06-JUL-2009 15:21	0.511 g	50 mL	97.84736	SOIL
SAMPLE	232663003		SW846 3050B	06-JUL-2009 15:21	0.515 g	50 mL	97.08738	SOIL
SAMPLE	232663004		SW846 3050B	06-JUL-2009 15:21	0.517 g	50 mL	96.7118	SOIL
SAMPLE	232663005		SW846 3050B	06-JUL-2009 15:21	0.507 g	50 mL	98.61933	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments sample#232663001 is a dark, gray soil.

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 882254

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873759	UI031809A	.206	g
MS	1201873761	WHG090715-14	.3	mL
MSD	1201873766	WHG090715-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873758		SW846 7471A Prep	15-JUL-2009 07:50	0.525 g	30 mL	57.14286	SOIL
LCS	1201873759		SW846 7471A Prep	15-JUL-2009 07:50	0.206 g	30 mL	145.63107	SOIL
SAMPLE	232663001		SW846 7471A Prep	15-JUL-2009 07:50	0.508 g	30 mL	59.05512	SOIL
DUP	1201873760	232663001	SW846 7471A Prep	15-JUL-2009 07:50	0.556 g	30 mL	53.95683	SOIL
MS	1201873761	232663001	SW846 7471A Prep	15-JUL-2009 07:50	0.53 g	30 mL	56.60377	SOIL
MSD	1201873766	232663001	SW846 7471A Prep	15-JUL-2009 07:50	0.564 g	30 mL	53.19149	SOIL
SDILT	1201873765	232663001	SW846 7471A Prep	15-JUL-2009 07:50	0.508 g	30 mL	59.05512	SOIL
SAMPLE	232663002		SW846 7471A Prep	15-JUL-2009 07:50	0.527 g	30 mL	56.926	SOIL
SAMPLE	232663003		SW846 7471A Prep	15-JUL-2009 07:50	0.573 g	30 mL	52.35602	SOIL
SAMPLE	232663004		SW846 7471A Prep	15-JUL-2009 07:50	0.579 g	30 mL	51.81347	SOIL
SAMPLE	232663005		SW846 7471A Prep	15-JUL-2009 07:50	0.562 g	30 mL	53.38078	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution
1144356-C	2 mL	Hg reducing agent
WHG090715-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090715-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG090715-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090715-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090715-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090715-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

Comments Sample 232663001 is a brown soil.
Digestion Start Date: 15-JUL-09 07:50
Digestion End Date: 15-JUL-09 08:20

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
10-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
882005	See Below		

Potentially affected work order(s)(SDG): 232663(09-2516-1)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for MS/MSD, or PS/PSD

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201873206MS 2. Failed RPD for DUP: QC 1201873205DUP 3. Failed RPD for MS/MSD, or PS/PSD: QC 1201873208MSD 4. Failed Recovery for MSD/PSD: QC 1201873208MSD	1. The matrix spike recovery failed outside of the control limits for calcium,magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The sample and sample duplicate % RPD failed outside the control limits for chromium due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike and matrix spike duplicate % RPD failed outside of the control limits for aluminum,calcium and magnesium due to possible matrix interferences and/or sample non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 4. The matrix spike duplicate recovery failed outside of the control limits for manganese due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:
Helen Camello 10-JUL-09

Data Validator/Group Leader:
Louise Smith 13-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.18 **Opened:** 08-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 09-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L

Analyte	Concentration	Analyte	Concentration
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Standard Logbook

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L

Analyte	Concentration	Analyte	Concentration
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Standard Logbook

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090714-01 **Opened:** 14-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 14-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 15-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090714-02 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 14-JUL-09
Type: Intermediate **Expires:** 15-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090715-01 **Opened:** 15-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 15-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 16-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: IHG090715-02 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 15-JUL-09
Type: Intermediate **Expires:** 16-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090714-07 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090714-08 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090714-09 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Standard Logbook

Serial ID: WHG090714-10 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090714-11 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090714-12 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090715-07 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Standard Logbook

Serial ID: WHG090715-08 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090715-09 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090715-10 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090715-11 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Standard Logbook

Serial ID: WHG090715-12 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090715-14 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090708-42 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090708-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090708-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090708-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090708-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090708-43 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090708-44 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1150990
Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090708-45 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1150990
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090708-46 **Opened:** 08-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1150990
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090708-47 **Opened:** 08-JUL-09 **Solvent :** 3%HCL &1%HNO3-1150990
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090714-04 **Opened:** 14-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl-1153776
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090714-04A **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS Cal Standard 10 **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090714-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090714-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090714-05 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICV **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090714-06 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS CRDL **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090714-07 **Opened:** 14-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-08 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICSAB **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Standard Logbook

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1150990 **Opened:** 06-JUL-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 06-JUL-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 13-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Louise Smith
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1153776 **Opened:** 13-JUL-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 13-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Standard Logbook

Serial ID:	908024-A	**Opened:**	22-DEC-08	**Lot Number :**	48053817
Name:	B-NH2OH.HCl-MER	**Received:**	22-DEC-08		
Type:	Reagent/Solvent	**Expires:**	22-DEC-09		
Employee:	Tara Griffin				
Supplier:	Fisher Scientific				
Description:	Hydroxlyamine Hydrochloride				
Comments:	None				

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2516

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	882142	**Method:**	SW846 9012A
Prep Batch :	882141	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232662001	CAMO-09-10024
1201873558	Method Blank (MB)
1201873559	232662001(CAMO-09-10024) Sample Duplicate (DUP)
1201873560	232677001(NPDES03A130-09-8922) Sample Duplicate (DUP)
1201873561	232662001(CAMO-09-10024) Matrix Spike (MS)
1201873562	232677001(NPDES03A130-09-8922) Matrix Spike (MS)
1201873563	232662001(CAMO-09-10024) Matrix Spike Duplicate (MSD)
1201873564	232677001(NPDES03A130-09-8922) Matrix Spike Duplicate (MSD)
1201873565	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within

acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232662001 (CAMO-09-10024) and 232677001 (NPDES03A130-09-8922).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201873559 (CAMO-09-10024), 1201873560 (NPDES03A130-09-8922) and 232662001 (CAMO-09-10024).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Negative Bias
No Chlorinated Cyanide results exceed the Total Cyanide results by more than three times the PQL

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product: **Nitrate Nitrite by Cadmium Reduction**

Analytical Batch: 881592 **Method:** EPA 353.2

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 353.2:

Sample ID	Client ID
232662001	CAMO-09-10024
1201872211	Method Blank (MB)
1201872214	Laboratory Control Sample (LCS)
1201873538	232662001(CAMO-09-10024) Sample Duplicate (DUP)
1201873540	232662001(CAMO-09-10024) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-128 REV# 5.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8500 Series.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232662001 (CAMO-09-10024).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201873540 (CAMO-09-10024).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following samples in this sample group were diluted due to matrix interference: 1201873538 (CAMO-09-10024), 1201873540 (CAMO-09-10024) and 232662001 (CAMO-09-10024).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 708745 1201873540 (CAMO-09-10024).

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 21July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2516 GEL Work Order: 232662

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by Tom Lewis, Jr.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 9, 2009

Client SDG: 09-2516

Client Sample ID:	CAMO-09-10024	Project:	LANL01004
Sample ID:	232662001	Client ID:	LANL010
Matrix:	W		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal										
SW9012A Cyanide, Total "As Received"										
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2 07/07/09	1222	882142	1
Nutrient Analysis										
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"										
Nitrogen, Nitrate/Nitrite	J	0.0635	0.050	0.250	mg/L	5	AXH3 07/07/09	0848	881592	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0854	882141

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 9, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232662

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Flow Injection Analysis											
Batch 882142											
QC1201873559 232662001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)	AXC2	07/07/09 12:23
QC1201873560 232677001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)		07/07/09 12:32
QC1201873565 LCS											
Cyanide, Total	50.0				52.4	ug/L		105	(90%-110%)		07/07/09 12:21
QC1201873558 MB											
Cyanide, Total				U	5.00	ug/L					07/07/09 12:20
QC1201873561 232662001 MS											
Cyanide, Total	100	U	ND		106	ug/L		106	(60%-127%)		07/07/09 12:24
QC1201873562 232677001 MS											
Cyanide, Total	100	U	ND		104	ug/L		104	(60%-127%)		07/07/09 12:33
QC1201873563 232662001 MSD											
Cyanide, Total	100	U	ND		107	ug/L	0.939	107	(0%-20%)		07/07/09 12:25
QC1201873564 232677001 MSD											
Cyanide, Total	100	U	ND		105	ug/L	0.957	105	(0%-20%)		07/07/09 12:34
Nutrient Analysis											
Batch 881592											
QC1201873538 232662001 DUP											
Nitrogen, Nitrate/Nitrite		J	0.0635	J	0.0635	mg/L	N/A ^		(+/-0.250)	AXH3	07/07/09 08:49
QC1201872214 LCS											
Nitrogen, Nitrate/Nitrite	1.00				1.04	mg/L		104	(90%-110%)		07/07/09 08:08
QC1201872211 MB											
Nitrogen, Nitrate/Nitrite				J	0.0122	mg/L					07/07/09 08:07
QC1201873540 232662001 PS											
Nitrogen, Nitrate/Nitrite	1.00	J	0.0127		1.22	mg/L		121*	(90%-110%)		07/07/09 08:50

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range

QC Summary

Workorder: 232662

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 09-JUL-2009 10:56

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2516

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**07-JUL-2009 10:47:46**	**OM_7-7-2009_10-38-00**	**151**	**150**	**101**	**(90%-110%)**	**Yes**
CCV	07-JUL-2009 12:16:26	OM_7-7-2009_11-38-18	103	100	103	(90%-110%)	Yes
CCV	07-JUL-2009 12:28:55	OM_7-7-2009_11-38-18	105	100	105	(90%-110%)	Yes
CCV	07-JUL-2009 12:41:21	OM_7-7-2009_11-38-18	101	100	101	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**07-JUL-2009 10:49:36**	**OM_7-7-2009_10-38-00**	**-1.33**	**5**	**Yes**
CCB	07-JUL-2009 12:18:16	OM_7-7-2009_11-38-18	-1.19	5	Yes
CCB	07-JUL-2009 12:30:45	OM_7-7-2009_11-38-18	4.02	5	Yes
CCB	07-JUL-2009 12:43:12	OM_7-7-2009_11-38-18	-0.381	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 09-JUL-2009 10:56

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2516

Nutrient Analysis

Method: EPA 353.2 Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8500 Series

Parmname: Nitrogen, Nitrate/Nitrite

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**07-JUL-2009 07:57:54**	**OM_7-7-2009_07-47-40**	**1.02**	**1**	**102**	**(90%-110%)**	**Yes**
CCV	07-JUL-2009 08:19:23	OM_7-7-2009_07-47-40	1.01	1	101	(90%-110%)	Yes
CCV	07-JUL-2009 08:36:09	OM_7-7-2009_07-47-40	1.02	1	102	(90%-110%)	Yes
CCV	07-JUL-2009 08:52:54	OM_7-7-2009_07-47-40	1.01	1	101	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**07-JUL-2009 08:00:16**	**OM_7-7-2009_07-47-40**	**0.00372**	**0.05**	**Yes**
CCB	07-JUL-2009 08:21:45	OM_7-7-2009_07-47-40	0.00372	0.05	Yes
CCB	07-JUL-2009 08:38:31	OM_7-7-2009_07-47-40	0.0026	0.05	Yes
CCB	07-JUL-2009 08:55:16	OM_7-7-2009_07-47-40	0.00293	0.05	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 882141

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873565	URF1091135-02	.0125	mL
MS	1201873561	URF1091135-02	.025	mL
MS	1201873562	URF1091135-02	.025	mL
MSD	1201873563	URF1091135-02	.025	mL
MSD	1201873564	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873558		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
LCS	1201873565		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232662001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
DUP	1201873559	232662001	SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
MS	1201873561	232662001	SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
MSD	1201873563	232662001	SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232674001		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232674002		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232677001		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
DUP	1201873560	232677001	EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
MS	1201873562	232677001	EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
MSD	1201873564	232677001	EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232703001		EPA 335.4	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232728001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232728003		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232742001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232753001		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232755001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232759001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090707-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/7/2009 10:40:37	OM_7-7-2009_10-38-00
150 ppb		1	axc2	7/7/2009 10:41:29	OM_7-7-2009_10-38-00
100 ppb		1	axc2	7/7/2009 10:42:22	OM_7-7-2009_10-38-00
50 ppb		1	axc2	7/7/2009 10:43:14	OM_7-7-2009_10-38-00
10 ppb		1	axc2	7/7/2009 10:44:07	OM_7-7-2009_10-38-00
CRDL 5.0 ppb		1	axc2	7/7/2009 10:45:01	OM_7-7-2009_10-38-00
ICAL-00		1	axc2	7/7/2009 10:45:55	OM_7-7-2009_10-38-00
ICV		1	axc2	7/7/2009 10:47:46	OM_7-7-2009_10-38-00
ICB		1	axc2	7/7/2009 10:49:36	OM_7-7-2009_10-38-00
CRDL		1	axc2	7/7/2009 10:51:26	OM_7-7-2009_10-38-00
1201870890	881039	1	axc2	7/7/2009 10:53:16	OM_7-7-2009_10-38-00
1201870897	881039	50	axc2	7/7/2009 10:54:09	OM_7-7-2009_10-38-00
232429001	881039	1	axc2	7/7/2009 10:55:02	OM_7-7-2009_10-38-00
1201870891	881039	1	axc2	7/7/2009 10:55:55	OM_7-7-2009_10-38-00
1201870893	881039	1	axc2	7/7/2009 10:56:48	OM_7-7-2009_10-38-00
1201870895	881039	1	axc2	7/7/2009 10:57:41	OM_7-7-2009_10-38-00
232429002	881039	1	axc2	7/7/2009 10:58:34	OM_7-7-2009_10-38-00
1201870892	881039	1	axc2	7/7/2009 10:59:26	OM_7-7-2009_10-38-00
1201870894	881039	1	axc2	7/7/2009 11:00:19	OM_7-7-2009_10-38-00
1201870896	881039	1	axc2	7/7/2009 11:01:11	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:02:04	OM_7-7-2009_10-38-00
CCB		1	axc2	7/7/2009 11:03:54	OM_7-7-2009_10-38-00
232429003*	881039	1	axc2	7/7/2009 11:05:42	OM_7-7-2009_10-38-00
232429004*	881039	1	axc2	7/7/2009 11:06:34	OM_7-7-2009_10-38-00
232429005*	881039	1	axc2	7/7/2009 11:07:26	OM_7-7-2009_10-38-00
232429006*	881039	1	axc2	7/7/2009 11:08:18	OM_7-7-2009_10-38-00
232429007*	881039	1	axc2	7/7/2009 11:09:09	OM_7-7-2009_10-38-00
232429008*	881039	1	axc2	7/7/2009 11:10:03	OM_7-7-2009_10-38-00
232429009*	881039	1	axc2	7/7/2009 11:10:57	OM_7-7-2009_10-38-00
232429010*	881039	1	axc2	7/7/2009 11:11:50	OM_7-7-2009_10-38-00
232429011*	881039	1	axc2	7/7/2009 11:12:43	OM_7-7-2009_10-38-00
232429012*	881039	1	axc2	7/7/2009 11:13:36	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:14:28	OM_7-7-2009_10-38-00

Author: axc2 Date : 7/7/2009

Original Run Filename: OM_7-7-2009_10-38-00.OMN created 7/7/2009 10:38:00
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_10-38-00.OMN last modified 7/7/2009 11:15:33
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-01	1	S1	200	8.66	7/7/2009@10:40:37			200 ppb
WCN090707-02	1	S2	150	6.58	7/7/2009@10:41:29			150 ppb
WCN090707-03	1	S3	100	4.25	7/7/2009@10:42:22			100 ppb
WCN090707-04	1	S4	50.0	2.32	7/7/2009@10:43:14			50 ppb
WCN090707-05	1	S5	10.0	0.530	7/7/2009@10:44:07			10 ppb
WCN090707-06	1	S6	5.00	0.393	7/7/2009@10:45:01			CRDL 5.0 ppb
WCN090707-08	1	S7	0.00	-0.00192	7/7/2009@10:45:55			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99969 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090707-07	1	S8	151	6.56	7/7/2009@10:47:46			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090707-08	1	S7	-1.33	0.0378	7/7/2009@10:49:36			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.33 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.33 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090707-06	1	S6	6.83	0.387	7/7/2009@10:51:26			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.83 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.83 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870890|881039|MB	1	1	0.258	0.106	7/7/2009@10:53:16			
1201870897||LCS	1	2	33.3	1.52	7/7/2009@10:54:09		50.00	
232429001	1	3	2.24	0.191	7/7/2009@10:55:02			
1201870891||DUP	1	4	1.10	0.142	7/7/2009@10:55:55			
1201870893||MS	1	5	89.8	3.94	7/7/2009@10:56:48			
1201870895||MSD	1	6	92.5	4.06	7/7/2009@10:57:41			
232429002	1	7	4.27	0.278	7/7/2009@10:58:34			
1201870892||DUP	1	8	2.79	0.214	7/7/2009@10:59:26			
1201870894||MS	1	9	93.8	4.12	7/7/2009@11:00:19			
1201870896||MSD	1	10	90.6	3.98	7/7/2009@11:01:11			
WCN090707-03	1	S3	90.0	3.95	7/7/2009@11:02:04			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-10.0 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-10.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-2.73	-0.0223	7/7/2009@11:03:54			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.73 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.73 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232429003	1	11	1.07	0.141	7/7/2009@11:05:42			
232429004	1	12	-2.99	-0.0332	7/7/2009@11:06:34			
232429005	1	13	2.06	0.183	7/7/2009@11:07:26			
232429006	1	14	-3.41	-0.0512	7/7/2009@11:08:18			
232429007	1	15	-3.40	-0.0507	7/7/2009@11:09:09			
232429008	1	16	1.30	0.151	7/7/2009@11:10:03			
232429009	1	17	3.29	0.236	7/7/2009@11:10:57			
232429010	1	18	2.25	0.191	7/7/2009@11:11:50			
232429011	1	19	-3.42	-0.0518	7/7/2009@11:12:43			
232429012	1	20	-4.64	-0.104	7/7/2009@11:13:36			
WCN090707-03	1	S3	40.7	1.84	7/7/2009@11:14:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-59.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-59.3 < 10.0					
		Message	CCV Failed					
		Action	Stop Run					

Analyte Properties Table for OM_7-7-2009_10-38-00.OMN

Property	Channel 1 TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/7/2009

Channel 1: Current View

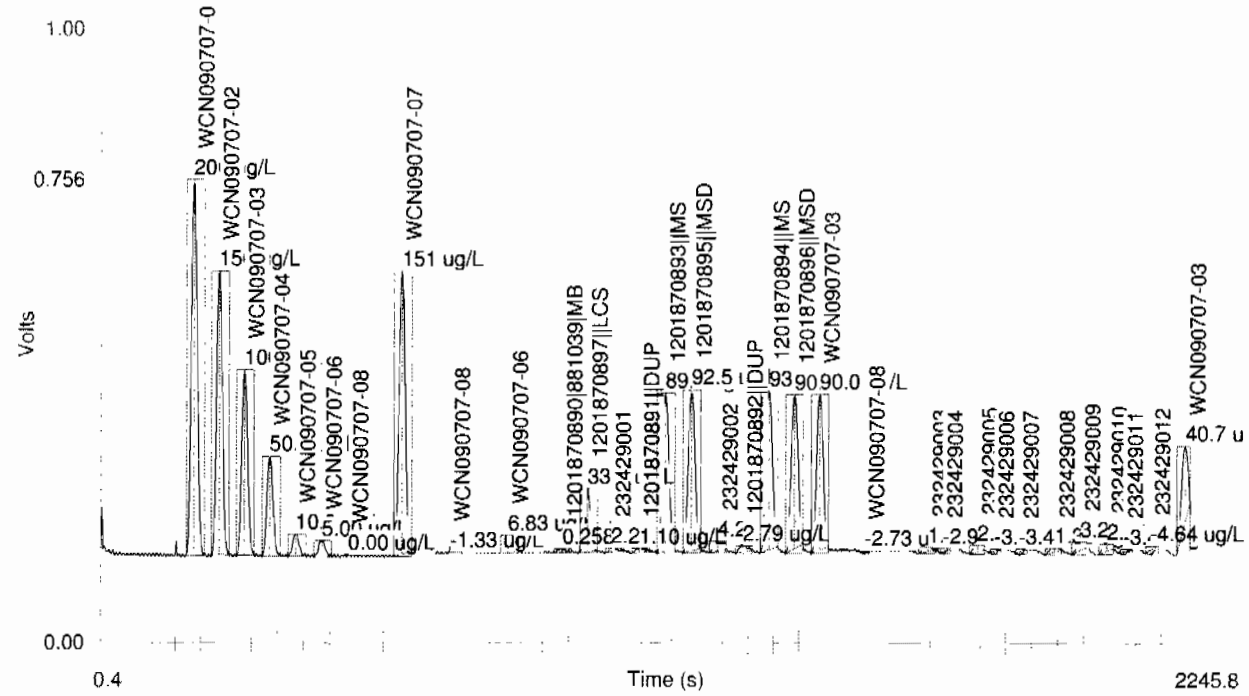

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

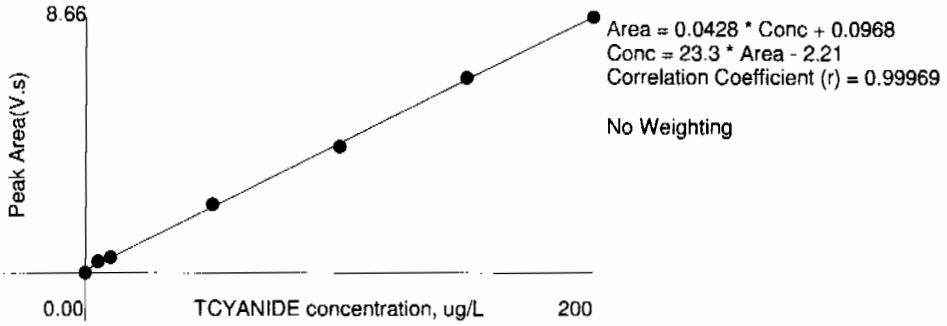

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	7/7/2009 11:39:05	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:40:56	OM_7-7-2009_11-38-18
232429003	881039	1	axc2	7/7/2009 11:42:44	OM_7-7-2009_11-38-18
232429004	881039	1	axc2	7/7/2009 11:43:36	OM_7-7-2009_11-38-18
232429005	881039	1	axc2	7/7/2009 11:44:28	OM_7-7-2009_11-38-18
232429006	881039	1	axc2	7/7/2009 11:45:20	OM_7-7-2009_11-38-18
232429007	881039	1	axc2	7/7/2009 11:46:12	OM_7-7-2009_11-38-18
232429008	881039	1	axc2	7/7/2009 11:47:05	OM_7-7-2009_11-38-18
232429009	881039	1	axc2	7/7/2009 11:47:59	OM_7-7-2009_11-38-18
232429010	881039	1	axc2	7/7/2009 11:48:53	OM_7-7-2009_11-38-18
232429011	881039	1	axc2	7/7/2009 11:49:46	OM_7-7-2009_11-38-18
232429012	881039	1	axc2	7/7/2009 11:50:39	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 11:51:31	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:53:21	OM_7-7-2009_11-38-18
232429013	881039	1	axc2	7/7/2009 11:55:10	OM_7-7-2009_11-38-18
232429014	881039	1	axc2	7/7/2009 11:56:03	OM_7-7-2009_11-38-18
232429015	881039	1	axc2	7/7/2009 11:56:56	OM_7-7-2009_11-38-18
232509001	881039	1	axc2	7/7/2009 11:57:49	OM_7-7-2009_11-38-18
232509002	881039	1	axc2	7/7/2009 11:58:41	OM_7-7-2009_11-38-18
232509003	881039	1	axc2	7/7/2009 11:59:34	OM_7-7-2009_11-38-18
232509004	881039	1	axc2	7/7/2009 12:00:25	OM_7-7-2009_11-38-18
232509005	881039	1	axc2	7/7/2009 12:01:18	OM_7-7-2009_11-38-18
1201873553	882139	1	axc2	7/7/2009 12:02:10	OM_7-7-2009_11-38-18
1201873557	882139	50	axc2	7/7/2009 12:03:01	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:03:53	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:05:44	OM_7-7-2009_11-38-18
232494013	882139	1	axc2	7/7/2009 12:07:35	OM_7-7-2009_11-38-18
232494014	882139	1	axc2	7/7/2009 12:08:28	OM_7-7-2009_11-38-18
232494015	882139	1	axc2	7/7/2009 12:09:22	OM_7-7-2009_11-38-18
232663001	882139	1	axc2	7/7/2009 12:10:15	OM_7-7-2009_11-38-18
1201873554	882139	1	axc2	7/7/2009 12:11:08	OM_7-7-2009_11-38-18
1201873555	882139	1	axc2	7/7/2009 12:12:02	OM_7-7-2009_11-38-18
1201873556	882139	1	axc2	7/7/2009 12:12:55	OM_7-7-2009_11-38-18
232663002	882139	1	axc2	7/7/2009 12:13:47	OM_7-7-2009_11-38-18
232663003	882139	1	axc2	7/7/2009 12:14:40	OM_7-7-2009_11-38-18
232663004	882139	1	axc2	7/7/2009 12:15:33	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:16:26	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:18:16	OM_7-7-2009_11-38-18
232663005	882139	1	axc2	7/7/2009 12:20:04	OM_7-7-2009_11-38-18
1201873558	882142	1	axc2	7/7/2009 12:20:57	OM_7-7-2009_11-38-18
1201873565	882142	1	axc2	7/7/2009 12:21:49	OM_7-7-2009_11-38-18
232662001	882142	1	axc2	7/7/2009 12:22:42	OM_7-7-2009_11-38-18
1201873559	882142	1	axc2	7/7/2009 12:23:33	OM_7-7-2009_11-38-18
1201873561	882142	1	axc2	7/7/2009 12:24:27	OM_7-7-2009_11-38-18
1201873563	882142	1	axc2	7/7/2009 12:25:22	OM_7-7-2009_11-38-18
232674001	882142	1	axc2	7/7/2009 12:26:16	OM_7-7-2009_11-38-18
232674002	882142	1	axc2	7/7/2009 12:27:10	OM_7-7-2009_11-38-18
232677001	882142	1	axc2	7/7/2009 12:28:03	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:28:55	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:30:45	OM_7-7-2009_11-38-18
1201873560	882142	1	axc2	7/7/2009 12:32:35	OM_7-7-2009_11-38-18
1201873562	882142	1	axc2	7/7/2009 12:33:29	OM_7-7-2009_11-38-18
1201873564	882142	1	axc2	7/7/2009 12:34:21	OM_7-7-2009_11-38-18
232703001	882142	1	axc2	7/7/2009 12:35:14	OM_7-7-2009_11-38-18
232728001	882142	1	axc2	7/7/2009 12:36:07	OM_7-7-2009_11-38-18
232728003	882142	1	axc2	7/7/2009 12:36:59	OM_7-7-2009_11-38-18
232742001	882142	1	axc2	7/7/2009 12:37:52	OM_7-7-2009_11-38-18
232753001	882142	1	axc2	7/7/2009 12:38:44	OM_7-7-2009_11-38-18

232755001	882142	1	axc2	7/7/2009	12:39:36	OM_7-7-2009_11-38-18
232759001	882142	1	axc2	7/7/2009	12:40:28	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:41:21	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:43:12	OM_7-7-2009_11-38-18
1201873547	882134	1	axc2	7/7/2009	12:45:02	OM_7-7-2009_11-38-18
1201873548	882134	1	axc2	7/7/2009	12:45:57	OM_7-7-2009_11-38-18
1201873549	882134	1	axc2	7/7/2009	12:46:51	OM_7-7-2009_11-38-18
232494013	882134	1	axc2	7/7/2009	12:47:44	OM_7-7-2009_11-38-18
232494014	882134	1	axc2	7/7/2009	12:48:38	OM_7-7-2009_11-38-18
232494015	882134	1	axc2	7/7/2009	12:49:31	OM_7-7-2009_11-38-18
1201873566	882146	1	axc2	7/7/2009	12:50:26	OM_7-7-2009_11-38-18
1201873568	882146	250	axc2	7/7/2009	12:51:18	OM_7-7-2009_11-38-18
232653001	882146	1	axc2	7/7/2009	12:52:11	OM_7-7-2009_11-38-18
1201873567	882146	1	axc2	7/7/2009	12:53:04	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:53:58	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:55:47	OM_7-7-2009_11-38-18
232657001	882146	1	axc2	7/7/2009	12:57:36	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:58:28	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	13:00:19	OM_7-7-2009_11-38-18

Author: axc2 Date : 7/7/2009

Original Run Filename: OM_7-7-2009_11-38-18.OMN created 7/7/2009 11:38:18
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_11-38-18.OMN last modified 7/7/2009 13:01:23
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-03	1	S3	98.3	4.31	7/7/2009@11:39:05			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	-1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	-1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.68	0.0229	7/7/2009@11:40:56			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.68 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.68 > -5.00					
		Message	CCB Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
232429003|881039|	1	11	0.101	0.0991	7/7/2009@11:42:44			
232429004	1	12	-0.0267	0.0937	7/7/2009@11:43:36			
232429005	1	13	3.58	0.248	7/7/2009@11:44:28			
232429006	1	14	-0.107	0.0902	7/7/2009@11:45:20			
232429007	1	15	-0.282	0.0827	7/7/2009@11:46:12			
232429008	1	16	0.519	0.117	7/7/2009@11:47:05			
232429009	1	17	4.44	0.285	7/7/2009@11:47:59			
232429010	1	18	2.86	0.217	7/7/2009@11:48:53			
232429011	1	19	-0.0810	0.0913	7/7/2009@11:49:46			
232429012	1	20	2.81	0.215	7/7/2009@11:50:39			
WCN090707-03	1	S3	99.9	4.38	7/7/2009@11:51:31			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	-0.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	-0.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-2.22	-3.66e-4	7/7/2009@11:53:21			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-2.22 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-2.22 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232429013	1	21	0.103	0.0992	7/7/2009@11:55:10			
232429014	1	22	2.62	0.207	7/7/2009@11:56:03			
232429015	1	23	1.61	0.164	7/7/2009@11:56:56			
232509001	1	24	2.95	0.221	7/7/2009@11:57:49			
232509002	1	25	2.61	0.207	7/7/2009@11:58:41			

232509003	1	26	2.35	0.195	7/7/2009@11:59:34			
232509004	1	27	0.637	0.122	7/7/2009@12:00:25			
232509005	1	28	1.34	0.152	7/7/2009@12:01:18			
1201873553|882139|MB	1	29	0.978	0.137	7/7/2009@12:02:10			
1201873557||LCS	1	30	34.2	1.56	7/7/2009@12:03:01		50.00	
WCN090707-03	1	S3	102	4.45	7/7/2009@12:03:53			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
	Result:		1.7 < 10.0					
	Message		CCV Passed					
	Action		Continue					
DQM Test: < - Percent Relative Difference								
	Result:		1.7 < 10.0					
	Message		CCV Passed					
	Action		Continue					
WCN090707-08	1	S7	-1.41	0.0343	7/7/2009@12:05:44			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
	Result:		-1.41 < 5.00					
	Message		CCB Passed					
	Action		Continue					
DQM Test: < - Concentration Limit								
	Result:		-1.41 > -5.00					
	Message		CCB Passed					
	Action		Continue					
232494013	1	31	12.4	0.627	7/7/2009@12:07:35			
232494014	1	32	16.5	0.800	7/7/2009@12:08:28			
232494015	1	33	8.15	0.444	7/7/2009@12:09:22			
232663001	1	34	0.469	0.115	7/7/2009@12:10:15			
1201873554||DUP	1	35	0.919	0.134	7/7/2009@12:11:08			
1201873555||MS	1	36	100	4.39	7/7/2009@12:12:02			
1201873556||MSD	1	37	99.9	4.38	7/7/2009@12:12:55			
232663002	1	38	2.87	0.218	7/7/2009@12:13:47			
232663003	1	39	0.612	0.121	7/7/2009@12:14:40			
232663004	1	40	1.78	0.171	7/7/2009@12:15:33			
WCN090707-03	1	S3	103	4.51	7/7/2009@12:16:26			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
	Result:		3.0 < 10.0					
	Message		CCV Passed					
	Action		Continue					
DQM Test: < - Percent Relative Difference								
	Result:		3.0 < 10.0					
	Message		CCV Passed					
	Action		Continue					
WCN090707-08	1	S7	-1.19	0.0436	7/7/2009@12:18:16			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
	Result:		-1.19 < 5.00					
	Message		CCB Passed					
	Action		Continue					
DQM Test: < - Concentration Limit								
	Result:		-1.19 > -5.00					
	Message		CCB Passed					
	Action		Continue					
232663005	1	41	3.51	0.245	7/7/2009@12:20:04			
1201873558|882142|MB	1	42	0.654	0.123	7/7/2009@12:20:57			
1201873565||LCS	1	43	52.4	2.34	7/7/2009@12:21:49			
232662001	1	44	-0.601	0.0690	7/7/2009@12:22:42			
1201873559||DUP	1	45	-0.744	0.0629	7/7/2009@12:23:33			
1201873561||MS	1	46	106	4.66	7/7/2009@12:24:27			
1201873563||MSD	1	47	107	4.68	7/7/2009@12:25:22			
232674001	1	48	2.16	0.187	7/7/2009@12:26:16			
232674002	1	49	0.310	0.108	7/7/2009@12:27:10			
232677001	1	50	-0.639	0.0674	7/7/2009@12:28:03			
WCN090707-03	1	S3	105	4.58	7/7/2009@12:28:55			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								

		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	4.02	0.267	7/7/2009@12:30:45			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	4.02 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	4.02 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873560||DUP	1	51	-0.895	0.0565	7/7/2009@12:32:35			
1201873562||MS	1	52	104	4.54	7/7/2009@12:33:29			
1201873564||MSD	1	53	105	4.61	7/7/2009@12:34:21			
232703001	1	54	5.73	0.340	7/7/2009@12:35:14			
232728001	1	55	-1.14	0.0458	7/7/2009@12:36:07			
232728003	1	56	-1.16	0.0449	7/7/2009@12:36:59			
232742001	1	57	-0.968	0.0533	7/7/2009@12:37:52			
232753001	1	58	0.512	0.117	7/7/2009@12:38:44			
232755001	1	59	-1.02	0.0510	7/7/2009@12:39:36			
232759001	1	60	-0.784	0.0612	7/7/2009@12:40:28			
WCN090707-03	1	S3	101	4.40	7/7/2009@12:41:21			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.381	0.0785	7/7/2009@12:43:12			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.381 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.381 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873547|882134|MB	1	61	-0.997	0.0521	7/7/2009@12:45:02			
1201873548||LCS	1	62	-1.28	0.0400	7/7/2009@12:45:57			
1201873549||LCSD	1	63	-0.406	0.0774	7/7/2009@12:46:51			
232494013	1	64	16.1	0.786	7/7/2009@12:47:44			
232494014	1	65	16.8	0.815	7/7/2009@12:48:38			
232494015	1	66	7.54	0.418	7/7/2009@12:49:31			
1201873566|882146|MB	1	67	-0.184	0.0869	7/7/2009@12:50:26			
1201873568||LCS	1	68	52.2	2.33	7/7/2009@12:51:18		250.00	
232653001	1	69	-0.792	0.0609	7/7/2009@12:52:11			
1201873567||DUP	1	70	-0.809	0.0602	7/7/2009@12:53:04			
WCN090707-03	1	S3	108	4.72	7/7/2009@12:53:58			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.41	0.0344	7/7/2009@12:55:47			CCB

		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.41 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.41 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232657001	1	71	2.86	0.217	7/7/2009@12:57:36			
WCN090707-03	1	S3	101	4.43	7/7/2009@12:58:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	1.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	1.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.0967	0.0907	7/7/2009@13:00:19			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.0967 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.0967 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_7-7-2009_11-38-18.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/7/2009

Channel 1: Current View

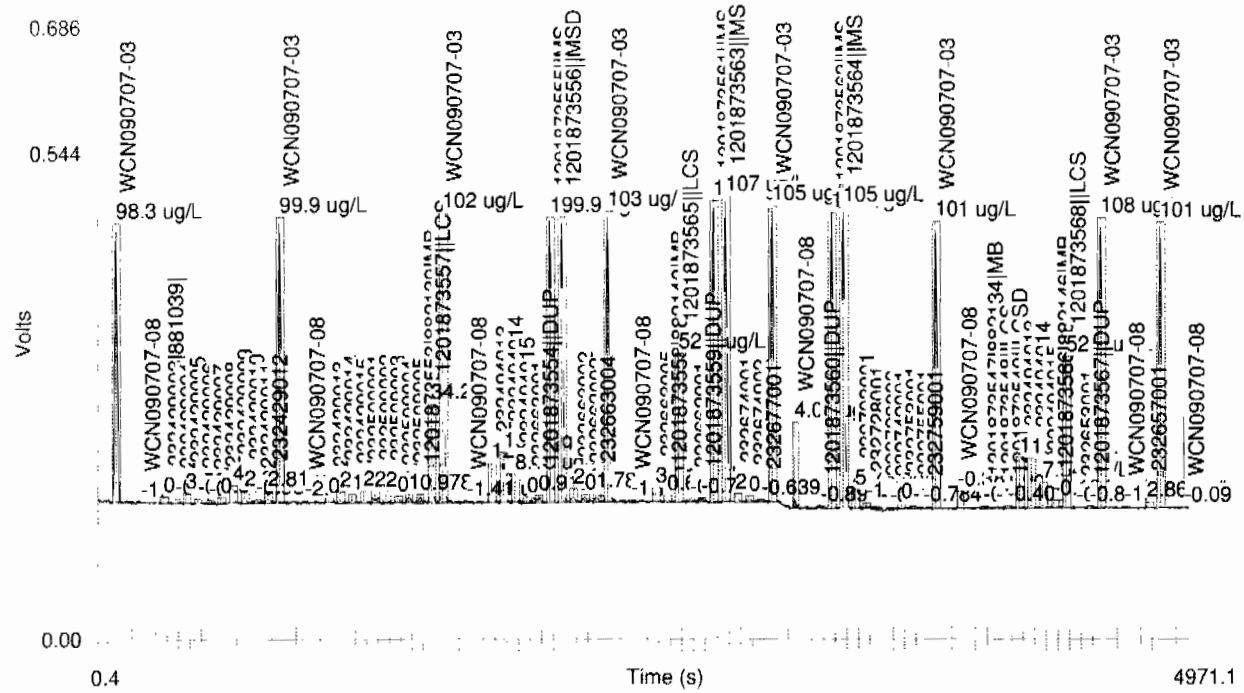

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

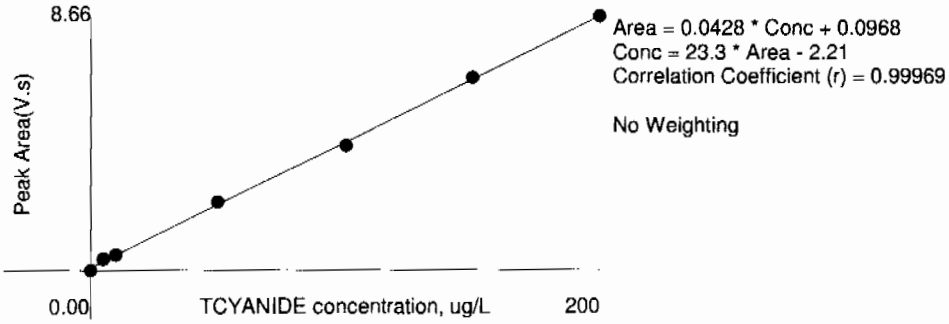

Nitrate Nitrite by Cadmium Reduction

This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
		1	axh3	7/7/2009 7:49:27	OM_7-7-2009_07-47-40
1.0 PPM		1	axh3	7/7/2009 7:50:38	OM_7-7-2009_07-47-40
0.5 ppm		1	axh3	7/7/2009 7:51:51	OM_7-7-2009_07-47-40
0.1 ppm		1	axh3	7/7/2009 7:53:05	OM_7-7-2009_07-47-40
0.05 ppm		1	axh3	7/7/2009 7:54:18	OM_7-7-2009_07-47-40
ICAL-00		1	axh3	7/7/2009 7:55:32	OM_7-7-2009_07-47-40
1.0 ppm ICV		1	axh3	7/7/2009 7:57:54	OM_7-7-2009_07-47-40
ICB		1	axh3	7/7/2009 8:00:16	OM_7-7-2009_07-47-40
Nitrate 1.0 ppm		1	axh3	7/7/2009 8:02:35	OM_7-7-2009_07-47-40
Nitrite 1.0 ppm		1	axh3	7/7/2009 8:04:55	OM_7-7-2009_07-47-40
1201872211	881592	1	axh3	7/7/2009 8:07:16	OM_7-7-2009_07-47-40
1201872214	881592	1	axh3	7/7/2009 8:08:30	OM_7-7-2009_07-47-40
231823002	881592	10	axh3	7/7/2009 8:09:43	OM_7-7-2009_07-47-40
1201873539	881592	10	axh3	7/7/2009 8:10:56	OM_7-7-2009_07-47-40
1201873541	881592	10	axh3	7/7/2009 8:12:09	OM_7-7-2009_07-47-40
231823004	881592	25	axh3	7/7/2009 8:13:21	OM_7-7-2009_07-47-40
231823006	881592	50	axh3	7/7/2009 8:14:34	OM_7-7-2009_07-47-40
231823008*	881592	100	axh3	7/7/2009 8:15:47	OM_7-7-2009_07-47-40
231823010	881592	50	axh3	7/7/2009 8:16:58	OM_7-7-2009_07-47-40
231823012	881592	1	axh3	7/7/2009 8:18:11	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 8:19:23	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 8:21:45	OM_7-7-2009_07-47-40
231823008	881592	100	axh3	7/7/2009 8:24:05	OM_7-7-2009_07-47-40
231823014	881592	100	axh3	7/7/2009 8:25:17	OM_7-7-2009_07-47-40
231823016	881592	50	axh3	7/7/2009 8:26:30	OM_7-7-2009_07-47-40
231917002	881592	100	axh3	7/7/2009 8:27:42	OM_7-7-2009_07-47-40
231917004	881592	100	axh3	7/7/2009 8:28:53	OM_7-7-2009_07-47-40
232015002	881592	50	axh3	7/7/2009 8:30:04	OM_7-7-2009_07-47-40
232609001	881592	100	axh3	7/7/2009 8:31:18	OM_7-7-2009_07-47-40
232609002	881592	5	axh3	7/7/2009 8:32:31	OM_7-7-2009_07-47-40
1201872212	881592	5	axh3	7/7/2009 8:33:44	OM_7-7-2009_07-47-40
1201872213	881592	5	axh3	7/7/2009 8:34:57	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 8:36:09	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 8:38:31	OM_7-7-2009_07-47-40
232674001	881592	1	axh3	7/7/2009 8:40:51	OM_7-7-2009_07-47-40
232609003	881592	5	axh3	7/7/2009 8:42:03	OM_7-7-2009_07-47-40
232609004	881592	5	axh3	7/7/2009 8:43:16	OM_7-7-2009_07-47-40
232609005	881592	5	axh3	7/7/2009 8:44:29	OM_7-7-2009_07-47-40
232609006	881592	10	axh3	7/7/2009 8:45:41	OM_7-7-2009_07-47-40
232609007	881592	5	axh3	7/7/2009 8:46:54	OM_7-7-2009_07-47-40
232662001	881592	5	axh3	7/7/2009 8:48:06	OM_7-7-2009_07-47-40
1201873538	881592	5	axh3	7/7/2009 8:49:17	OM_7-7-2009_07-47-40
1201873540	881592	5	axh3	7/7/2009 8:50:30	OM_7-7-2009_07-47-40
1201874237	882466	1	axh3	7/7/2009 8:51:41	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 8:52:54	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 8:55:16	OM_7-7-2009_07-47-40
1201874242	882466	1	axh3	7/7/2009 8:57:35	OM_7-7-2009_07-47-40
232742001	882466	5	axh3	7/7/2009 8:58:48	OM_7-7-2009_07-47-40
1201874239	882466	5	axh3	7/7/2009 9:00:01	OM_7-7-2009_07-47-40
1201874241	882466	5	axh3	7/7/2009 9:01:14	OM_7-7-2009_07-47-40
232750002	882466	1	axh3	7/7/2009 9:02:27	OM_7-7-2009_07-47-40
232755001	882466	1	axh3	7/7/2009 9:03:40	OM_7-7-2009_07-47-40
232759001	882466	1	axh3	7/7/2009 9:04:52	OM_7-7-2009_07-47-40
232761001	882466	25	axh3	7/7/2009 9:06:05	OM_7-7-2009_07-47-40
1201874238	882466	25	axh3	7/7/2009 9:07:18	OM_7-7-2009_07-47-40
1201874240	882466	25	axh3	7/7/2009 9:08:30	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 9:09:42	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 9:12:04	OM_7-7-2009_07-47-40

232855002	882466	1	axh3	7/7/2009	9:14:24	OM_7-7-2009_07-47-40
232869003	882466	5	axh3	7/7/2009	9:15:36	OM_7-7-2009_07-47-40
232750002	882466	5	axh3	7/7/2009	9:16:49	OM_7-7-2009_07-47-40
232855002	882466	5	axh3	7/7/2009	9:18:01	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009	9:20:21	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009	9:22:43	OM_7-7-2009_07-47-40

Author: lachat

Date : 7/7/2009

Original Run Filename: OM_7-7-2009_07-47-40.OMN created 7/7/2009 07:47:40
Original Run Author's Signature: [lachat]
Current Run Filename: OM_7-7-2009_07-47-40.OMN last modified 7/7/2009 09:24:04
Current Run Author's Signature: [lachat]
Description: EPA 353.2
Cadmium Colum 9056CAJ
LCS nominal 1.0 mg/L

Sample	Rep.	Cup No.	Channel 1 NO3 + NO2 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR090707-26	1	S9	1.50	16.0	7/7/2009@07:49:27			
WTR090707-25	1	S10	1.00	10.9	7/7/2009@07:50:38			1.0 PPM
WTR090707-24	1	S11	0.500	5.44	7/7/2009@07:51:51			0.5 ppm
WTR090707-23	1	S12	0.100	1.07	7/7/2009@07:53:05			0.1 ppm
WTR090707-21	1	S13	0.0500	0.324	7/7/2009@07:54:18			0.05 ppm
0.0ppm	1	S15	0.00	1.22e-4	7/7/2009@07:55:32			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
Result:			0.99982 > 0.99500					
Message			Calibration Passed					
Action			Continue					
WTR090707-27 ICV	1	S16	1.02	11.0	7/7/2009@07:57:54			1.0 ppm ICV
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			1.02 < 1.10					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			1.02 > 0.894					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
ICB	1	S15	0.00372	-5.58e-5	7/7/2009@08:00:16			ICB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			0.00372 < 0.0500					
Message			ICB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.00372 > -0.0500					
Message			ICB Passed					
Action			Continue					
WTR090707-22	1	S1	1.00	10.7	7/7/2009@08:02:35			Nitrate 1.0 ppm
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			1.00 < 1.10					
Message			Nitrate Standard Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			1.00 > 0.894					
Message			Nitrate Standard Passed					
Action			Continue					
WTR090707-28	1	S2	0.980	10.5	7/7/2009@08:04:55			Nitrite 1.0 ppm
Known Conc:			1.00					
DQM Test: > + Concentration Limit								
Result:			0.980 < 1.10					
Message			Nitrite Standard Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.980 > 0.894					
Message			Nitrite Standard Passed					
Action			Continue					
1201872211|881592|MB	1	1	0.0122	0.0918	7/7/2009@08:07:16			
1201872214||LCS	1	2	1.04	11.1	7/7/2009@08:08:30			
231823002	1	3	0.516	5.52	7/7/2009@08:09:43		10.00	
1201873539||DUP	1	4	0.560	6.00	7/7/2009@08:10:56		10.00	
1201873541||PS	1	5	1.50	16.2	7/7/2009@08:12:09		10.00	

231823004	1	6	0.389	4.16	7/7/2009@08:13:21	25.00	
231823006	1	7	0.321	3.42	7/7/2009@08:14:34	50.00	
231823008	1	8	6.33	68.2	7/7/2009@08:15:47	100.00	
231823010	1	9	0.341	3.64	7/7/2009@08:16:58	50.00	
231823012	1	10	-0.0182	-0.237	7/7/2009@08:18:11		
WTR090707-25 CCV	1	S10	1.01	10.8	7/7/2009@08:19:23		1.0 ppm CCV
	Known Conc:		1.00				
DQM Test: > + Concentration Limit							
Result:			1.01 < 1.10				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			1.01 > 0.894				
Message			CCV Passed				
Action			Continue				
CCB	1	S15	0.00372	-6.33e-5	7/7/2009@08:21:45		CCB
	Known Conc:		0.00				
DQM Test: > + Concentration Limit							
Result:			0.00372 < 0.0500				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.00372 > -0.0500				
Message			CCB Passed				
Action			Continue				
231823008	1	8	0.270	2.87	7/7/2009@08:24:05	100.00	
231823014	1	11	0.313	3.34	7/7/2009@08:25:17	100.00	
231823016	1	12	0.370	3.95	7/7/2009@08:26:30	50.00	
231917002	1	13	0.291	3.10	7/7/2009@08:27:42	100.00	
231917004	1	14	0.231	2.45	7/7/2009@08:28:53	100.00	
232015002	1	15	0.327	3.49	7/7/2009@08:30:04	50.00	
232609001	1	16	0.458	4.90	7/7/2009@08:31:18	100.00	
232609002	1	17	0.555	5.95	7/7/2009@08:32:31	5.00	
1201872212||DUP	1	18	0.536	5.75	7/7/2009@08:33:44	5.00	
1201872213||PS	1	19	1.51	16.3	7/7/2009@08:34:57	5.00	
WTR090707-25 CCV	1	S10	1.02	10.9	7/7/2009@08:36:09		1.0 ppm CCV
	Known Conc:		1.00				
DQM Test: > + Concentration Limit							
Result:			1.02 < 1.10				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			1.02 > 0.894				
Message			CCV Passed				
Action			Continue				
CCB	1	S15	0.00260	-0.0121	7/7/2009@08:38:31		CCB
	Known Conc:		0.00				
DQM Test: > + Concentration Limit							
Result:			0.00260 < 0.0500				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.00260 > -0.0500				
Message			CCB Passed				
Action			Continue				
232674001	1	28	-0.0140	-0.191	7/7/2009@08:40:51		
232609003	1	20	0.344	3.68	7/7/2009@08:42:03	5.00	
232609004	1	21	0.435	4.66	7/7/2009@08:43:16	5.00	
232609005	1	22	0.434	4.64	7/7/2009@08:44:29	5.00	
232609006	1	23	0.892	9.59	7/7/2009@08:45:41	10.00	
232609007	1	24	0.387	4.13	7/7/2009@08:46:54	5.00	
232662001	1	25	0.0127	0.0963	7/7/2009@08:48:06	5.00	
1201873538||DUP	1	26	0.0127	0.0965	7/7/2009@08:49:17	5.00	
1201873540||PS	1	27	1.22	13.2	7/7/2009@08:50:30	5.00	
1201874237|882466|MB	1	29	0.0112	0.0812	7/7/2009@08:51:41		
WTR090707-25 CCV	1	S10	1.01	10.9	7/7/2009@08:52:54		1.0 ppm CCV
	Known Conc:		1.00				
DQM Test: > + Concentration Limit							

		Result:	1.01 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.01 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00293	-0.00858	7/7/2009@08:55:16			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00293 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.00293 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
1201874242||LCS	1	30	1.04	11.2	7/7/2009@08:57:35			
232742001	1	31	0.00934	0.0606	7/7/2009@08:58:48		5.00	
1201874239||DUP	1	32	0.00881	0.0549	7/7/2009@09:00:01		5.00	
1201874241||PS	1	33	0.994	10.7	7/7/2009@09:01:14		5.00	
232750002	1	34	0.102	1.06	7/7/2009@09:02:27			
232755001	1	35	-0.0144	-0.195	7/7/2009@09:03:40			
232759001	1	36	-0.0169	-0.223	7/7/2009@09:04:52			
232761001	1	37	0.471	5.04	7/7/2009@09:06:05		25.00	
1201874238||DUP	1	38	0.465	4.98	7/7/2009@09:07:18		25.00	
1201874240||PS	1	39	1.44	15.5	7/7/2009@09:08:30		25.00	
WTR090707-25 CCV	1	S10	1.02	10.9	7/7/2009@09:09:42			1.0 ppm CCV
		Known Conc:	1.00					
			DQM Test: > + Concentration Limit					
		Result:	1.02 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.02 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00372	-8.31e-5	7/7/2009@09:12:04			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00372 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.00372 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
232855002	1	40	0.134	1.40	7/7/2009@09:14:24			
232869003	1	42	0.774	8.31	7/7/2009@09:15:36		5.00	
232750002	1	34	0.0852	0.879	7/7/2009@09:16:49		5.00	
232855002	1	40	0.123	1.29	7/7/2009@09:18:01		5.00	
WTR090707-25 CCV	1	S10	1.02	10.9	7/7/2009@09:20:21			1.0 ppm CCV
		Known Conc:	1.00					
			DQM Test: > + Concentration Limit					
		Result:	1.02 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.02 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00262	-0.0119	7/7/2009@09:22:43			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00262 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					

Author: lachat

Date : 7/7/2009

Result:	0.00262 > -0.0500
Message	CCB Passed
Action	Continue

Channel 1 (NO3 + NO2) : Current View

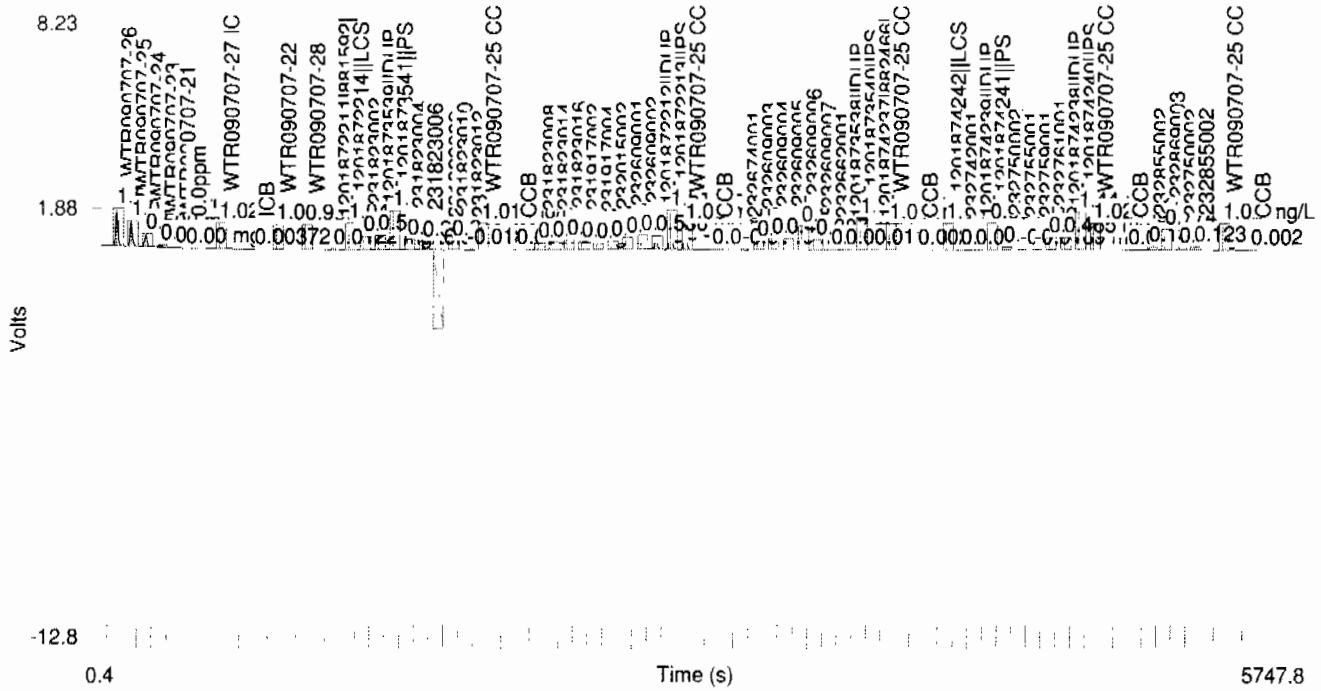

Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	16.0	1.27	0.8	7/7/2009	07:50:46
2	1.00	1	10.9	0.866	-1.4	7/7/2009	07:51:58
3	0.500	1	5.44	0.431	-1.5	7/7/2009	07:53:11
4	0.100	1	1.07	0.0852	-2.9	7/7/2009	07:54:24
5	0.0500	1	0.324	0.0253	35.4	7/7/2009	07:55:38
6	0.00	1	1.22e-4	4.40e-4		7/7/2009	07:56:52

Author: lachat

Date : 7/7/2009

Figure 1: NO3 + NO2

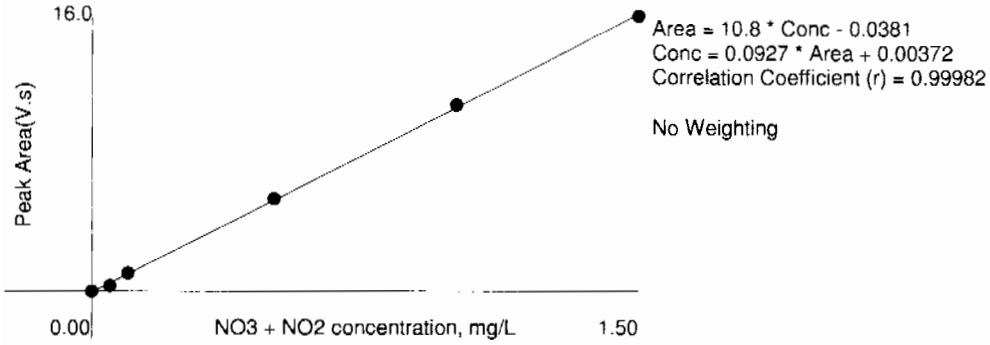

Area = 10.8 * Conc - 0.0381
Conc = 0.0927 * Area + 0.00372
Correlation Coefficient (r) = 0.99982

No Weighting

Miscellaneous

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 708745
Revision No.: 2

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
07-JUL-09	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LACHAT Flow Injection Analyzer	EPA 353.2	Liquid	ESHL, LANL
Batch ID:	**Sample Numbers:**		
881592	See Below		

Potentially affected work order(s)(SDG): 231823,231917,232015,232609(09062410),232662(09-2516),232674(09-2519)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for PS: QC 1201873540PS	1. The spike recovery falls outside of the GEL acceptance limits but within the client specified limits.

Originator's Name:

Aubrey Kingsbury 07-JUL-09

Data Validator/Group Leader:

Elzbieta Szulc 08-JUL-09

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2516-1

Method/Analysis Information

Product: **pH**

Analytical Batch: 882147 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232663001	CAMO-09-9942
232663002	CAMO-09-9941
232663003	CAMO-09-9943
232663004	CAMO-09-10030
232663005	CAMO-09-9989
1201873569	232663001(CAMO-09-9942) Sample Duplicate (DUP)
1201873570	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHecT LogR pH/ISE.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232663001 (CAMO-09-9942).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232663001 (CAMO-09-9942), 232663002 (CAMO-09-9941), 232663003 (CAMO-09-9943), 232663004 (CAMO-09-10030) and 232663005 (CAMO-09-9989).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	882139	**Method:**	SW846 9012A
Prep Batch :	882136	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232663001	CAMO-09-9942
232663002	CAMO-09-9941
232663003	CAMO-09-9943
232663004	CAMO-09-10030
232663005	CAMO-09-9989
1201873553	Method Blank (MB)
1201873554	232663001(CAMO-09-9942) Sample Duplicate (DUP)
1201873555	232663001(CAMO-09-9942) Matrix Spike (MS)
1201873556	232663001(CAMO-09-9942) Matrix Spike Duplicate (MSD)
1201873557	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232663001 (CAMO-09-9942).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recovery for this sample set was within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recovery for this sample set was within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201873554 (CAMO-09-9942) and 232663001 (CAMO-09-9942).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Negative Bias
No Chlorinated Cyanide results exceed the Total Cyanide results by more than three times the PQL

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1201873557 (LCS).

Sample Re-analysis

The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation

An NCR was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	882280	**Method:**	EPA 300.0
Prep Batch :	882278	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232663001	CAMO-09-9942
232663002	CAMO-09-9941
232663003	CAMO-09-9943
232663004	CAMO-09-10030
232663005	CAMO-09-9989
1201873802	Method Blank (MB)
1201873803	Laboratory Control Sample (LCS)
1201873804	232663001(CAMO-09-9942) Sample Duplicate (DUP)
1201873805	232663001(CAMO-09-9942) Matrix Spike (MS)
1201873807	232663001(CAMO-09-9942) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following sample was selected for QC analysis: 232663001 (CAMO-09-9942).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The spike recovery falls outside of the GEL acceptance limits but within the client specified limits. 1201873805 (CAMO-09-9942).

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recovery for this sample set was within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232663001 (CAMO-09-9942), 232663002 (CAMO-09-9941), 232663003 (CAMO-09-9943), 232663004 (CAMO-09-10030) and 232663005 (CAMO-09-9989).

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 709515 1201873805 (CAMO-09-9942).

Manual Integrations
The following sample from this sample group had to be manually integrated due to errors in the instrument software peak integration: 232663003 (CAMO-09-9943).

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 21July09

Sample Data Summary

GEL LABORATORIES LLC

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Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2516-1 GEL Work Order: 232663

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2516-1

Client Sample ID:	CAMO-09-9942	Project:	LANL01004
Sample ID:	232663001	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	11.9%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.7C	H	7.39	0.010	0.100	SU	1	RXG2 07/02/09	1017	882147	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	75.6	278	ug/kg	1	AXC2 07/07/09	1210	882139	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.337	1.12	mg/kg	1	VXP1 07/07/09	2027	882280	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/07/09	0919	882278
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0900	882136

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2516-1

Client Sample ID:	CAMO-09-9941	Project:	LANL01004
Sample ID:	232663002	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	10.8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.5C	H	7.10	0.010	0.100	SU	1	RXG2 07/02/09	1018	882147	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	139	65.7	242	ug/kg	1	AXC2 07/07/09	1213	882139	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.18	0.336	1.12	mg/kg	1	VXP1 07/07/09	2159	882280	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/07/09	0919	882278
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0900	882136

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2516-1

Client Sample ID:	CAMO-09-9943	Project:	LANL01004
Sample ID:	232663003	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	13.9%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.5C	H	7.54	0.010	0.100	SU	1	RXG2 07/02/09	1019	882147	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	77.4	285	ug/kg	1	AXC2 07/07/09	1214	882139	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HJh	0.818	0.337	1.12	mg/kg	1	VXP1 07/07/09	2222	882280	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/07/09	0919	882278
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0900	882136

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2516-1

Client Sample ID:	CAMO-09-10030	Project:	LANL01004
Sample ID:	232663004	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	10%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.4C	H	7.07	0.010	0.100	SU	1	RXG2 07/02/09	1020	882147	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	83.8	64.0	235	ug/kg	1	AXC2 07/07/09	1215	882139	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.15	0.326	1.09	mg/kg	1	VXP1 07/07/09	2245	882280	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/07/09	0919	882278
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0900	882136

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 10, 2009

Client SDG: 09-2516-1

Client Sample ID:	CAMO-09-9989	Project:	LANL01004
Sample ID:	232663005	Client ID:	LANL010
Matrix:	R		
Collect Date:	26-JUN-09 12:00		
Receive Date:	01-JUL-09		
Collector:	Client		
Moisture:	16.7%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.5C	H	7.07	0.010	0.100	SU	1	RXG2 07/02/09	1022	882147	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	195	75.6	278	ug/kg	1	AXC2 07/07/09	1220	882139	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.358	1.19	mg/kg	1	VXP1 07/07/09	2307	882280	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VXP1	07/07/09	0919	882278
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0900	882136

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 10, 2009
Page 1 of 2

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232663

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis											
Batch 882147											
QC1201873569 232663001 DUP											
pH		H	7.39	H	7.46	SU	0.943		(0%-10%)	RXG2	07/02/09 10:17
QC1201873570 LCS											
pH	7.00				7.00	SU		100	(95%-105%)		07/02/09 10:05
Flow Injection Analysis											
Batch 882139											
QC1201873554 232663001 DUP											
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		(+/-253)	AXC2	07/07/09 12:11
QC1201873557 LCS											
Cyanide, Total	174000				171000	ug/kg		98.3	(46%-145%)		07/07/09 12:03
QC1201873553 MB											
Cyanide, Total				U	250	ug/kg					07/07/09 12:02
QC1201873555 232663001 MS											
Cyanide, Total	5560	U	ND		5560	ug/kg		99.5	(50%-130%)		07/07/09 12:12
QC1201873556 232663001 MSD											
Cyanide, Total	4890	U	ND		4890	ug/kg	12.9	99.4	(0%-30%)		07/07/09 12:12
Ion Chromatography											
Batch 882280											
QC1201873804 232663001 DUP											
Nitrate-N		HUh	ND	HUh	ND	mg/kg	N/A		(+/-1.13)	VXP1	07/07/09 20:50
QC1201873803 LCS											
Nitrate-N	50.0				47.4	mg/kg		94.7	(90%-110%)		07/07/09 20:04
QC1201873802 MB											
Nitrate-N				U	1.00	mg/kg					07/07/09 19:41
QC1201873805 232663001 MS											
Nitrate-N	55.8	HUh	ND	Hh	50.1	mg/kg		89.9*	(90%-110%)		07/07/09 21:13
QC1201873807 232663001 MSD											
Nitrate-N	56.2	HUh	ND	Hh	50.7	mg/kg	1.08	90.2	(0%-20%)		07/07/09 21:36

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

QC Summary

Workorder: 232663

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 10-JUL-2009 15:46

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2516-1

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**07-JUL-2009 10:47:46**	**OM_7-7-2009_10-38-00**	**151**	**150**	**101**	**(90%-110%)**	**Yes**
CCV	07-JUL-2009 11:51:31	OM_7-7-2009_11-38-18	99.9	100	100	(90%-110%)	Yes
CCV	07-JUL-2009 12:03:53	OM_7-7-2009_11-38-18	102	100	102	(90%-110%)	Yes
CCV	07-JUL-2009 12:16:26	OM_7-7-2009_11-38-18	103	100	103	(90%-110%)	Yes
CCV	07-JUL-2009 12:28:55	OM_7-7-2009_11-38-18	105	100	105	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**07-JUL-2009 10:49:36**	**OM_7-7-2009_10-38-00**	**-1.33**	**5**	**Yes**
CCB	07-JUL-2009 11:53:21	OM_7-7-2009_11-38-18	-2.22	5	Yes
CCB	07-JUL-2009 12:05:44	OM_7-7-2009_11-38-18	-1.41	5	Yes
CCB	07-JUL-2009 12:18:16	OM_7-7-2009_11-38-18	-1.19	5	Yes
CCB	07-JUL-2009 12:30:45	OM_7-7-2009_11-38-18	4.02	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 10-JUL-2009 15:46

GEL Laboratories LLC
Contract: LANL01004
SDG #: 09-2516-1

Ion Chromatography
Method: EPA 300.0 Concentration Units:mg/L
Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**07-JUL-2009 10:08:00**	**090707**	**4.783**	**5**	**96**	**(90%-110%)**	**Yes**
CCV	07-JUL-2009 18:56:00	090707	4.7801	5	96	(90%-110%)	Yes
CCV	07-JUL-2009 23:30:00	090707	7.277	7.5	97	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**07-JUL-2009 10:31:00**	**090707**	**0**	**0.1**	**Yes**
CCB	07-JUL-2009 19:18:00	090707	0	0.1	Yes
CCB	07-JUL-2009 23:53:00	090707	0	0.1	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 882136

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873557	URF071009-01	.25	g
MS	1201873555	URF1091135-02	.025	mL
MSD	1201873556	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873553		SW846 9010B Prep	07-JUL-2009 09:00	>12	0.5 g	25 mL	50	SOIL
LCS	1201873557		SW846 9010B Prep	07-JUL-2009 09:00	>12	0.25 g	25 mL	100	SOIL
SAMPLE	232494013		SW846 9010B Prep	07-JUL-2009 09:00	>12	0.5 g	25 mL	50	MISC SOLID
SAMPLE	232494014		SW846 9010B Prep	07-JUL-2009 09:00	>12	0.538 g	25 mL	46.4684	MISC SOLID
SAMPLE	232494015		SW846 9010B Prep	07-JUL-2009 09:00	>12	0.51 g	25 mL	49.01961	MISC SOLID
SAMPLE	232663001		SW846 9010B Prep	07-JUL-2009 09:00	>12	0.51 g	25 mL	49.01961	SOIL
DUP	1201873554	232663001	SW846 9010B Prep	07-JUL-2009 09:00	>12	0.56 g	25 mL	44.64286	SOIL
MS	1201873555	232663001	SW846 9010B Prep	07-JUL-2009 09:00	>12	0.51 g	25 mL	49.01961	SOIL
MSD	1201873556	232663001	SW846 9010B Prep	07-JUL-2009 09:00	>12	0.58 g	25 mL	43.10345	SOIL
SAMPLE	232663002		SW846 9010B Prep	07-JUL-2009 09:00	>12	0.58 g	25 mL	43.10345	SOIL
SAMPLE	232663003		SW846 9010B Prep	07-JUL-2009 09:00	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232663004		SW846 9010B Prep	07-JUL-2009 09:00	>12	0.59 g	25 mL	42.37288	SOIL
SAMPLE	232663005		SW846 9010B Prep	07-JUL-2009 09:00	>12	0.54 g	25 mL	46.2963	SOIL

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090707-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/7/2009 10:40:37	OM_7-7-2009_10-38-00
150 ppb		1	axc2	7/7/2009 10:41:29	OM_7-7-2009_10-38-00
100 ppb		1	axc2	7/7/2009 10:42:22	OM_7-7-2009_10-38-00
50 ppb		1	axc2	7/7/2009 10:43:14	OM_7-7-2009_10-38-00
10 ppb		1	axc2	7/7/2009 10:44:07	OM_7-7-2009_10-38-00
CRDL 5.0 ppb		1	axc2	7/7/2009 10:45:01	OM_7-7-2009_10-38-00
ICAL-00		1	axc2	7/7/2009 10:45:55	OM_7-7-2009_10-38-00
ICV		1	axc2	7/7/2009 10:47:46	OM_7-7-2009_10-38-00
ICB		1	axc2	7/7/2009 10:49:36	OM_7-7-2009_10-38-00
CRDL		1	axc2	7/7/2009 10:51:26	OM_7-7-2009_10-38-00
1201870890	881039	1	axc2	7/7/2009 10:53:16	OM_7-7-2009_10-38-00
1201870897	881039	50	axc2	7/7/2009 10:54:09	OM_7-7-2009_10-38-00
232429001	881039	1	axc2	7/7/2009 10:55:02	OM_7-7-2009_10-38-00
1201870891	881039	1	axc2	7/7/2009 10:55:55	OM_7-7-2009_10-38-00
1201870893	881039	1	axc2	7/7/2009 10:56:48	OM_7-7-2009_10-38-00
1201870895	881039	1	axc2	7/7/2009 10:57:41	OM_7-7-2009_10-38-00
232429002	881039	1	axc2	7/7/2009 10:58:34	OM_7-7-2009_10-38-00
1201870892	881039	1	axc2	7/7/2009 10:59:26	OM_7-7-2009_10-38-00
1201870894	881039	1	axc2	7/7/2009 11:00:19	OM_7-7-2009_10-38-00
1201870896	881039	1	axc2	7/7/2009 11:01:11	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:02:04	OM_7-7-2009_10-38-00
CCB		1	axc2	7/7/2009 11:03:54	OM_7-7-2009_10-38-00
232429003*	881039	1	axc2	7/7/2009 11:05:42	OM_7-7-2009_10-38-00
232429004*	881039	1	axc2	7/7/2009 11:06:34	OM_7-7-2009_10-38-00
232429005*	881039	1	axc2	7/7/2009 11:07:26	OM_7-7-2009_10-38-00
232429006*	881039	1	axc2	7/7/2009 11:08:18	OM_7-7-2009_10-38-00
232429007*	881039	1	axc2	7/7/2009 11:09:09	OM_7-7-2009_10-38-00
232429008*	881039	1	axc2	7/7/2009 11:10:03	OM_7-7-2009_10-38-00
232429009*	881039	1	axc2	7/7/2009 11:10:57	OM_7-7-2009_10-38-00
232429010*	881039	1	axc2	7/7/2009 11:11:50	OM_7-7-2009_10-38-00
232429011*	881039	1	axc2	7/7/2009 11:12:43	OM_7-7-2009_10-38-00
232429012*	881039	1	axc2	7/7/2009 11:13:36	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:14:28	OM_7-7-2009_10-38-00

Author: axc2 Date : 7/7/2009

Original Run Filename: OM_7-7-2009_10-38-00.OMN created 7/7/2009 10:38:00
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_10-38-00.OMN last modified 7/7/2009 11:15:33
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-01	1	S1	200	8.66	7/7/2009@10:40:37			200 ppb
WCN090707-02	1	S2	150	6.58	7/7/2009@10:41:29			150 ppb
WCN090707-03	1	S3	100	4.25	7/7/2009@10:42:22			100 ppb
WCN090707-04	1	S4	50.0	2.32	7/7/2009@10:43:14			50 ppb
WCN090707-05	1	S5	10.0	0.530	7/7/2009@10:44:07			10 ppb
WCN090707-06	1	S6	5.00	0.393	7/7/2009@10:45:01			CRDL 5.0 ppb
WCN090707-08	1	S7	0.00	-0.00192	7/7/2009@10:45:55			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99969 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090707-07	1	S8	151	6.56	7/7/2009@10:47:46			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090707-08	1	S7	-1.33	0.0378	7/7/2009@10:49:36			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.33 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.33 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090707-06	1	S6	6.83	0.387	7/7/2009@10:51:26			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.83 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.83 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870890|881039|MB	1	1	0.258	0.106	7/7/2009@10:53:16			
1201870897||LCS	1	2	33.3	1.52	7/7/2009@10:54:09		50.00	
232429001	1	3	2.24	0.191	7/7/2009@10:55:02			
1201870891||DUP	1	4	1.10	0.142	7/7/2009@10:55:55			
1201870893||MS	1	5	89.8	3.94	7/7/2009@10:56:48			
1201870895||MSD	1	6	92.5	4.06	7/7/2009@10:57:41			
232429002	1	7	4.27	0.278	7/7/2009@10:58:34			
1201870892||DUP	1	8	2.79	0.214	7/7/2009@10:59:26			
1201870894||MS	1	9	93.8	4.12	7/7/2009@11:00:19			
1201870896||MSD	1	10	90.6	3.98	7/7/2009@11:01:11			
WCN090707-03	1	S3	90.0	3.95	7/7/2009@11:02:04			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-10.0 < 10.0					

		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	-10.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-2.73	-0.0223	7/7/2009@11:03:54			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-2.73 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-2.73 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232429003	1	11	1.07	0.141	7/7/2009@11:05:42			
232429004	1	12	-2.99	-0.0332	7/7/2009@11:06:34			
232429005	1	13	2.06	0.183	7/7/2009@11:07:26			
232429006	1	14	-3.41	-0.0512	7/7/2009@11:08:18			
232429007	1	15	-3.40	-0.0507	7/7/2009@11:09:09			
232429008	1	16	1.30	0.151	7/7/2009@11:10:03			
232429009	1	17	3.29	0.236	7/7/2009@11:10:57			
232429010	1	18	2.25	0.191	7/7/2009@11:11:50			
232429011	1	19	-3.42	-0.0518	7/7/2009@11:12:43			
232429012	1	20	-4.64	-0.104	7/7/2009@11:13:36			
WCN090707-03	1	S3	40.7	1.84	7/7/2009@11:14:28			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	-59.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	-59.3 < 10.0					
		Message	CCV Failed					
		Action	Stop Run					

Analyte Properties Table for OM_7-7-2009_10-38-00.OMN

Property	Channel 1 TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2

Date : 7/7/2009

Channel 1: Current View

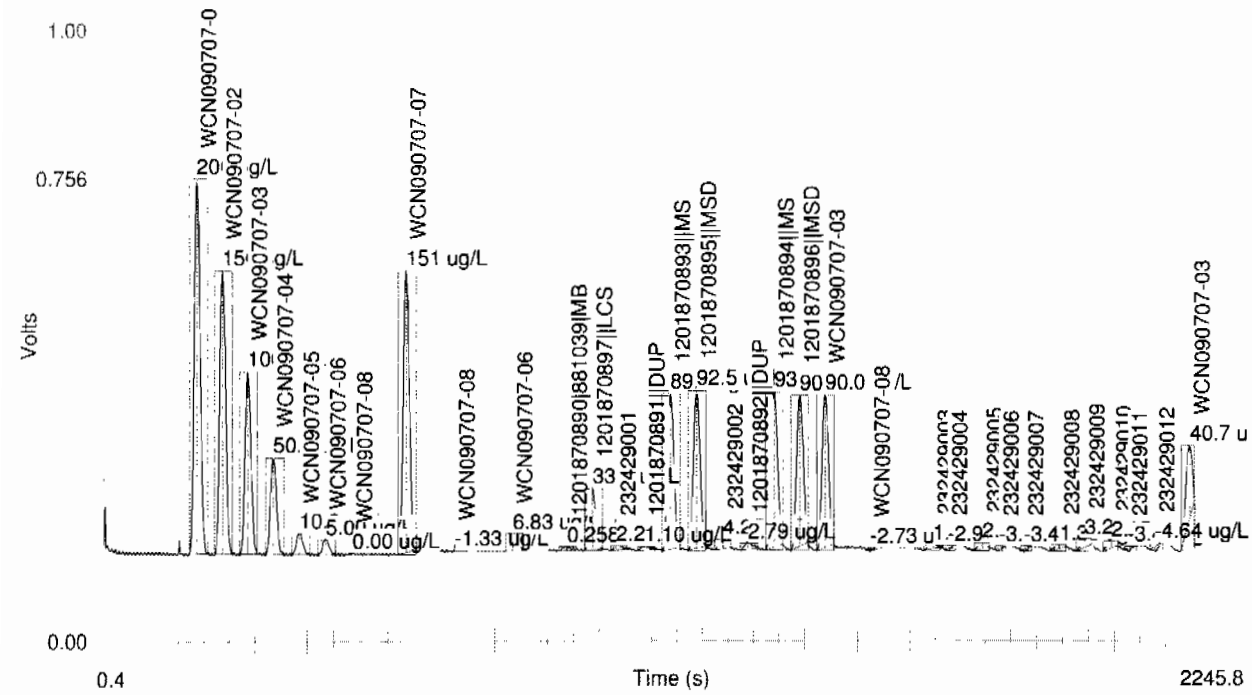

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

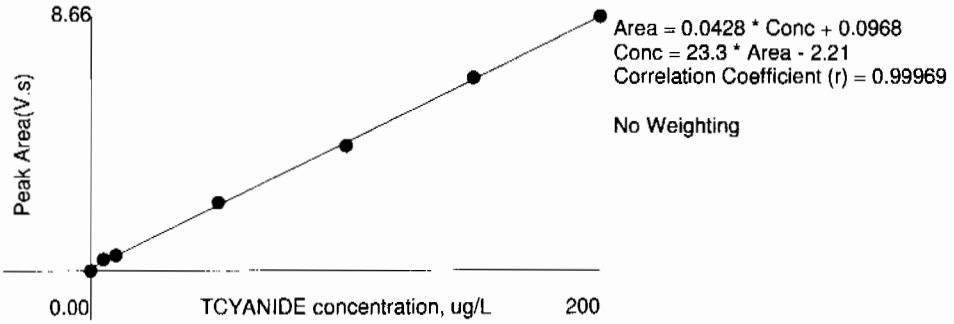

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	7/7/2009 11:39:05	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:40:56	OM_7-7-2009_11-38-18
232429003	881039	1	axc2	7/7/2009 11:42:44	OM_7-7-2009_11-38-18
232429004	881039	1	axc2	7/7/2009 11:43:36	OM_7-7-2009_11-38-18
232429005	881039	1	axc2	7/7/2009 11:44:28	OM_7-7-2009_11-38-18
232429006	881039	1	axc2	7/7/2009 11:45:20	OM_7-7-2009_11-38-18
232429007	881039	1	axc2	7/7/2009 11:46:12	OM_7-7-2009_11-38-18
232429008	881039	1	axc2	7/7/2009 11:47:05	OM_7-7-2009_11-38-18
232429009	881039	1	axc2	7/7/2009 11:47:59	OM_7-7-2009_11-38-18
232429010	881039	1	axc2	7/7/2009 11:48:53	OM_7-7-2009_11-38-18
232429011	881039	1	axc2	7/7/2009 11:49:46	OM_7-7-2009_11-38-18
232429012	881039	1	axc2	7/7/2009 11:50:39	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 11:51:31	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:53:21	OM_7-7-2009_11-38-18
232429013	881039	1	axc2	7/7/2009 11:55:10	OM_7-7-2009_11-38-18
232429014	881039	1	axc2	7/7/2009 11:56:03	OM_7-7-2009_11-38-18
232429015	881039	1	axc2	7/7/2009 11:56:56	OM_7-7-2009_11-38-18
232509001	881039	1	axc2	7/7/2009 11:57:49	OM_7-7-2009_11-38-18
232509002	881039	1	axc2	7/7/2009 11:58:41	OM_7-7-2009_11-38-18
232509003	881039	1	axc2	7/7/2009 11:59:34	OM_7-7-2009_11-38-18
232509004	881039	1	axc2	7/7/2009 12:00:25	OM_7-7-2009_11-38-18
232509005	881039	1	axc2	7/7/2009 12:01:18	OM_7-7-2009_11-38-18
1201873553	882139	1	axc2	7/7/2009 12:02:10	OM_7-7-2009_11-38-18
1201873557	882139	50	axc2	7/7/2009 12:03:01	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:03:53	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:05:44	OM_7-7-2009_11-38-18
232494013	882139	1	axc2	7/7/2009 12:07:35	OM_7-7-2009_11-38-18
232494014	882139	1	axc2	7/7/2009 12:08:28	OM_7-7-2009_11-38-18
232494015	882139	1	axc2	7/7/2009 12:09:22	OM_7-7-2009_11-38-18
232663001	882139	1	axc2	7/7/2009 12:10:15	OM_7-7-2009_11-38-18
1201873554	882139	1	axc2	7/7/2009 12:11:08	OM_7-7-2009_11-38-18
1201873555	882139	1	axc2	7/7/2009 12:12:02	OM_7-7-2009_11-38-18
1201873556	882139	1	axc2	7/7/2009 12:12:55	OM_7-7-2009_11-38-18
232663002	882139	1	axc2	7/7/2009 12:13:47	OM_7-7-2009_11-38-18
232663003	882139	1	axc2	7/7/2009 12:14:40	OM_7-7-2009_11-38-18
232663004	882139	1	axc2	7/7/2009 12:15:33	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:16:26	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:18:16	OM_7-7-2009_11-38-18
232663005	882139	1	axc2	7/7/2009 12:20:04	OM_7-7-2009_11-38-18
1201873558	882142	1	axc2	7/7/2009 12:20:57	OM_7-7-2009_11-38-18
1201873565	882142	1	axc2	7/7/2009 12:21:49	OM_7-7-2009_11-38-18
232662001	882142	1	axc2	7/7/2009 12:22:42	OM_7-7-2009_11-38-18
1201873559	882142	1	axc2	7/7/2009 12:23:33	OM_7-7-2009_11-38-18
1201873561	882142	1	axc2	7/7/2009 12:24:27	OM_7-7-2009_11-38-18
1201873563	882142	1	axc2	7/7/2009 12:25:22	OM_7-7-2009_11-38-18
232674001	882142	1	axc2	7/7/2009 12:26:16	OM_7-7-2009_11-38-18
232674002	882142	1	axc2	7/7/2009 12:27:10	OM_7-7-2009_11-38-18
232677001	882142	1	axc2	7/7/2009 12:28:03	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:28:55	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:30:45	OM_7-7-2009_11-38-18
1201873560	882142	1	axc2	7/7/2009 12:32:35	OM_7-7-2009_11-38-18
1201873562	882142	1	axc2	7/7/2009 12:33:29	OM_7-7-2009_11-38-18
1201873564	882142	1	axc2	7/7/2009 12:34:21	OM_7-7-2009_11-38-18
232703001	882142	1	axc2	7/7/2009 12:35:14	OM_7-7-2009_11-38-18
232728001	882142	1	axc2	7/7/2009 12:36:07	OM_7-7-2009_11-38-18
232728003	882142	1	axc2	7/7/2009 12:36:59	OM_7-7-2009_11-38-18
232742001	882142	1	axc2	7/7/2009 12:37:52	OM_7-7-2009_11-38-18
232753001	882142	1	axc2	7/7/2009 12:38:44	OM_7-7-2009_11-38-18

232755001	882142	1	axc2	7/7/2009	12:39:36	OM_7-7-2009_11-38-18
232759001	882142	1	axc2	7/7/2009	12:40:28	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:41:21	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:43:12	OM_7-7-2009_11-38-18
1201873547	882134	1	axc2	7/7/2009	12:45:02	OM_7-7-2009_11-38-18
1201873548	882134	1	axc2	7/7/2009	12:45:57	OM_7-7-2009_11-38-18
1201873549	882134	1	axc2	7/7/2009	12:46:51	OM_7-7-2009_11-38-18
232494013	882134	1	axc2	7/7/2009	12:47:44	OM_7-7-2009_11-38-18
232494014	882134	1	axc2	7/7/2009	12:48:38	OM_7-7-2009_11-38-18
232494015	882134	1	axc2	7/7/2009	12:49:31	OM_7-7-2009_11-38-18
1201873566	882146	1	axc2	7/7/2009	12:50:26	OM_7-7-2009_11-38-18
1201873568	882146	250	axc2	7/7/2009	12:51:18	OM_7-7-2009_11-38-18
232653001	882146	1	axc2	7/7/2009	12:52:11	OM_7-7-2009_11-38-18
1201873567	882146	1	axc2	7/7/2009	12:53:04	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:53:58	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:55:47	OM_7-7-2009_11-38-18
232657001	882146	1	axc2	7/7/2009	12:57:36	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:58:28	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	13:00:19	OM_7-7-2009_11-38-18

Author: axc2 Date : 7/7/2009

Original Run Filename: OM_7-7-2009_11-38-18.OMN created 7/7/2009 11:38:18
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_11-38-18.OMN last modified 7/7/2009 13:01:23
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-03	1	S3	98.3	4.31	7/7/2009@11:39:05			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	-1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	-1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.68	0.0229	7/7/2009@11:40:56			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.68 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.68 > -5.00					
		Message	CCB Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
232429003|881039|	1	11	0.101	0.0991	7/7/2009@11:42:44			
232429004	1	12	-0.0267	0.0937	7/7/2009@11:43:36			
232429005	1	13	3.58	0.248	7/7/2009@11:44:28			
232429006	1	14	-0.107	0.0902	7/7/2009@11:45:20			
232429007	1	15	-0.282	0.0827	7/7/2009@11:46:12			
232429008	1	16	0.519	0.117	7/7/2009@11:47:05			
232429009	1	17	4.44	0.285	7/7/2009@11:47:59			
232429010	1	18	2.86	0.217	7/7/2009@11:48:53			
232429011	1	19	-0.0810	0.0913	7/7/2009@11:49:46			
232429012	1	20	2.81	0.215	7/7/2009@11:50:39			
WCN090707-03	1	S3	99.9	4.38	7/7/2009@11:51:31			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	-0.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	-0.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-2.22	-3.66e-4	7/7/2009@11:53:21			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-2.22 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-2.22 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232429013	1	21	0.103	0.0992	7/7/2009@11:55:10			
232429014	1	22	2.62	0.207	7/7/2009@11:56:03			
232429015	1	23	1.61	0.164	7/7/2009@11:56:56			
232509001	1	24	2.95	0.221	7/7/2009@11:57:49			
232509002	1	25	2.61	0.207	7/7/2009@11:58:41			

232509003	1	26	2.35	0.195	7/7/2009@11:59:34			
232509004	1	27	0.637	0.122	7/7/2009@12:00:25			
232509005	1	28	1.34	0.152	7/7/2009@12:01:18			
1201873553|882139|MB	1	29	0.978	0.137	7/7/2009@12:02:10			
1201873557||LCS	1	30	34.2	1.56	7/7/2009@12:03:01		50.00	
WCN090707-03	1	S3	102	4.45	7/7/2009@12:03:53			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
		Result:	1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.41	0.0343	7/7/2009@12:05:44			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.41 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.41 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232494013	1	31	12.4	0.627	7/7/2009@12:07:35			
232494014	1	32	16.5	0.800	7/7/2009@12:08:28			
232494015	1	33	8.15	0.444	7/7/2009@12:09:22			
232663001	1	34	0.469	0.115	7/7/2009@12:10:15			
1201873554||DUP	1	35	0.919	0.134	7/7/2009@12:11:08			
1201873555||MS	1	36	100	4.39	7/7/2009@12:12:02			
1201873556||MSD	1	37	99.9	4.38	7/7/2009@12:12:55			
232663002	1	38	2.87	0.218	7/7/2009@12:13:47			
232663003	1	39	0.612	0.121	7/7/2009@12:14:40			
232663004	1	40	1.78	0.171	7/7/2009@12:15:33			
WCN090707-03	1	S3	103	4.51	7/7/2009@12:16:26			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
		Result:	3.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	3.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.19	0.0436	7/7/2009@12:18:16			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.19 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.19 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232663005	1	41	3.51	0.245	7/7/2009@12:20:04			
1201873558|882142|MB	1	42	0.654	0.123	7/7/2009@12:20:57			
1201873565||LCS	1	43	52.4	2.34	7/7/2009@12:21:49			
232662001	1	44	-0.601	0.0690	7/7/2009@12:22:42			
1201873559||DUP	1	45	-0.744	0.0629	7/7/2009@12:23:33			
1201873561||MS	1	46	106	4.66	7/7/2009@12:24:27			
1201873563||MSD	1	47	107	4.68	7/7/2009@12:25:22			
232674001	1	48	2.16	0.187	7/7/2009@12:26:16			
232674002	1	49	0.310	0.108	7/7/2009@12:27:10			
232677001	1	50	-0.639	0.0674	7/7/2009@12:28:03			
WCN090707-03	1	S3	105	4.58	7/7/2009@12:28:55			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								

		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	4.02	0.267	7/7/2009@12:30:45			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	4.02 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	4.02 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873560||DUP	1	51	-0.895	0.0565	7/7/2009@12:32:35			
1201873562||MS	1	52	104	4.54	7/7/2009@12:33:29			
1201873564||MSD	1	53	105	4.61	7/7/2009@12:34:21			
232703001	1	54	5.73	0.340	7/7/2009@12:35:14			
232728001	1	55	-1.14	0.0458	7/7/2009@12:36:07			
232728003	1	56	-1.16	0.0449	7/7/2009@12:36:59			
232742001	1	57	-0.968	0.0533	7/7/2009@12:37:52			
232753001	1	58	0.512	0.117	7/7/2009@12:38:44			
232755001	1	59	-1.02	0.0510	7/7/2009@12:39:36			
232759001	1	60	-0.784	0.0612	7/7/2009@12:40:28			
WCN090707-03	1	S3	101	4.40	7/7/2009@12:41:21			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.381	0.0785	7/7/2009@12:43:12			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.381 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.381 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873547|882134|MB	1	61	-0.997	0.0521	7/7/2009@12:45:02			
1201873548||LCS	1	62	-1.28	0.0400	7/7/2009@12:45:57			
1201873549||LCSD	1	63	-0.406	0.0774	7/7/2009@12:46:51			
232494013	1	64	16.1	0.786	7/7/2009@12:47:44			
232494014	1	65	16.8	0.815	7/7/2009@12:48:38			
232494015	1	66	7.54	0.418	7/7/2009@12:49:31			
1201873566|882146|MB	1	67	-0.184	0.0869	7/7/2009@12:50:26			
1201873568||LCS	1	68	52.2	2.33	7/7/2009@12:51:18		250.00	
232653001	1	69	-0.792	0.0609	7/7/2009@12:52:11			
1201873567||DUP	1	70	-0.809	0.0602	7/7/2009@12:53:04			
WCN090707-03	1	S3	108	4.72	7/7/2009@12:53:58			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.41	0.0344	7/7/2009@12:55:47			CCB

		Known Conc:	0.00						
DQM Test: > + Concentration Limit									
		Result:	-1.41 < 5.00						
		Message	CCB Passed						
		Action	Continue						
DQM Test: < - Concentration Limit									
		Result:	-1.41 > -5.00						
		Message	CCB Passed						
		Action	Continue						
232657001	1	71	2.86	0.217	7/7/2009@12:57:36				
WCN090707-03	1	S3	101	4.43	7/7/2009@12:58:28				CCV
		Known Conc:	100						
DQM Test: > + Percent Relative Difference									
		Result:	1.2 < 10.0						
		Message	CCV Passed						
		Action	Continue						
DQM Test: < - Percent Relative Difference									
		Result:	1.2 < 10.0						
		Message	CCV Passed						
		Action	Continue						
WCN090707-08	1	S7	-0.0967	0.0907	7/7/2009@13:00:19				CCB
		Known Conc:	0.00						
DQM Test: > + Concentration Limit									
		Result:	-0.0967 < 5.00						
		Message	CCB Passed						
		Action	Continue						
DQM Test: < - Concentration Limit									
		Result:	-0.0967 > -5.00						
		Message	CCB Passed						
		Action	Continue						

Analyte Properties Table for OM_7-7-2009_11-38-18.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/7/2009

Channel 1: Current View

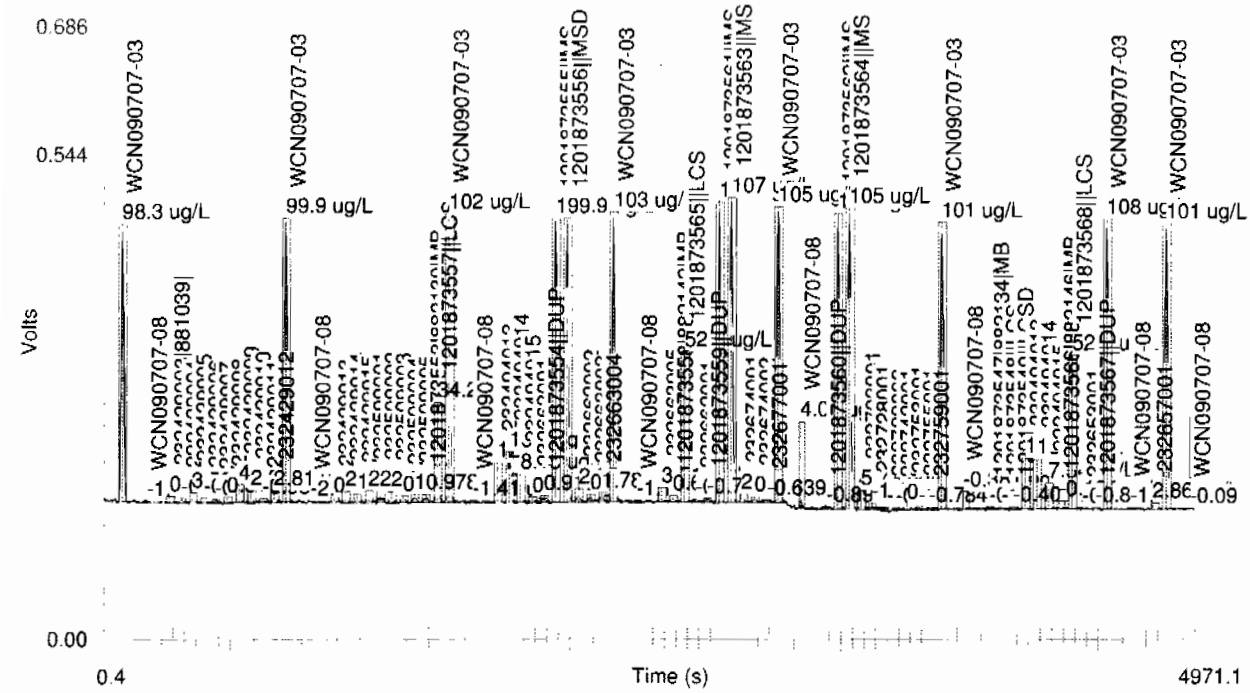

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

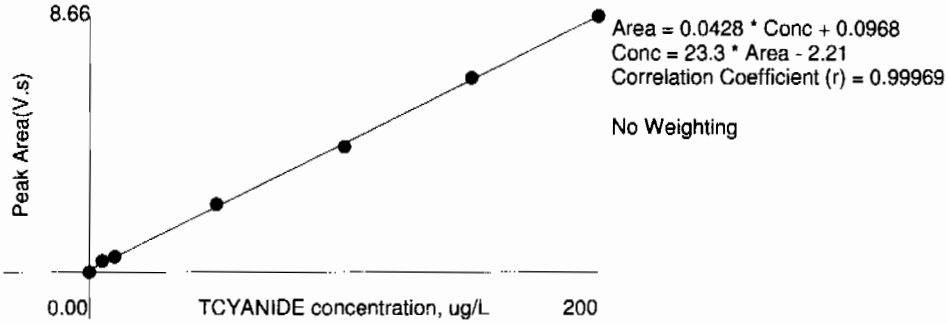

Ion Chromatography

Prep LogBook

Analyst: VXP1 Verified by:_____

Batch: 882278

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873803	UIC090627SPK	.8	mL
MS	1201873805	UIC090627SPK	.8	mL
MSD	1201873807	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873802		EPA 300.0 PREP	07-JUL-2009 09:19	4 g	40 mL	10	SOIL
LCS	1201873803		EPA 300.0 PREP	07-JUL-2009 09:19	4 g	40 mL	10	SOIL
SAMPLE	232663001		EPA 300.0 PREP	07-JUL-2009 09:19	4.04 g	40 mL	9.90099	SOIL
DUP	1201873804	232663001	EPA 300.0 PREP	07-JUL-2009 09:19	4.02 g	40 mL	9.95025	SOIL
MS	1201873805	232663001	EPA 300.0 PREP	07-JUL-2009 09:19	4.07 g	40 mL	9.82801	SOIL
MSD	1201873807	232663001	EPA 300.0 PREP	07-JUL-2009 09:19	4.04 g	40 mL	9.90099	SOIL
SAMPLE	232663002		EPA 300.0 PREP	07-JUL-2009 09:19	4 g	40 mL	10	SOIL
SAMPLE	232663003		EPA 300.0 PREP	07-JUL-2009 09:19	4.14 g	40 mL	9.66184	SOIL
SAMPLE	232663004		EPA 300.0 PREP	07-JUL-2009 09:19	4.09 g	40 mL	9.77995	SOIL
SAMPLE	232663005		EPA 300.0 PREP	07-JUL-2009 09:19	4.02 g	40 mL	9.95025	SOIL
SAMPLE	232851001		EPA 300.0 PREP	07-JUL-2009 09:19	4.06 g	40 mL	9.85222	SOIL
SAMPLE	232851002		EPA 300.0 PREP	07-JUL-2009 09:19	4.13 g	40 mL	9.68523	SOIL

Comments

This is runlog for Sequence 090706.seq for IC7

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	07/02/09 15:44		1	090706	VXP1
ICAL-06	07/02/09 16:07		1	090706	VXP1
ICAL-05	07/02/09 16:30		1	090706	VXP1
ICAL-04	07/02/09 16:53		1	090706	VXP1
ICAL-03	07/02/09 17:15		1	090706	VXP1
ICAL-02	07/02/09 17:38		1	090706	VXP1
ICAL-01	07/02/09 18:01		1	090706	VXP1
ICAL-07	07/02/09 15:44		1	090706	VXP1
ICAL-06	07/02/09 16:07		1	090706	VXP1
ICAL-05	07/02/09 16:30		1	090706	VXP1
ICAL-04	07/02/09 16:53		1	090706	VXP1
ICAL-03	07/02/09 17:15		1	090706	VXP1
ICAL-02	07/02/09 17:38		1	090706	VXP1
ICAL-01	07/02/09 18:01		1	090706	VXP1

5 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:44	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

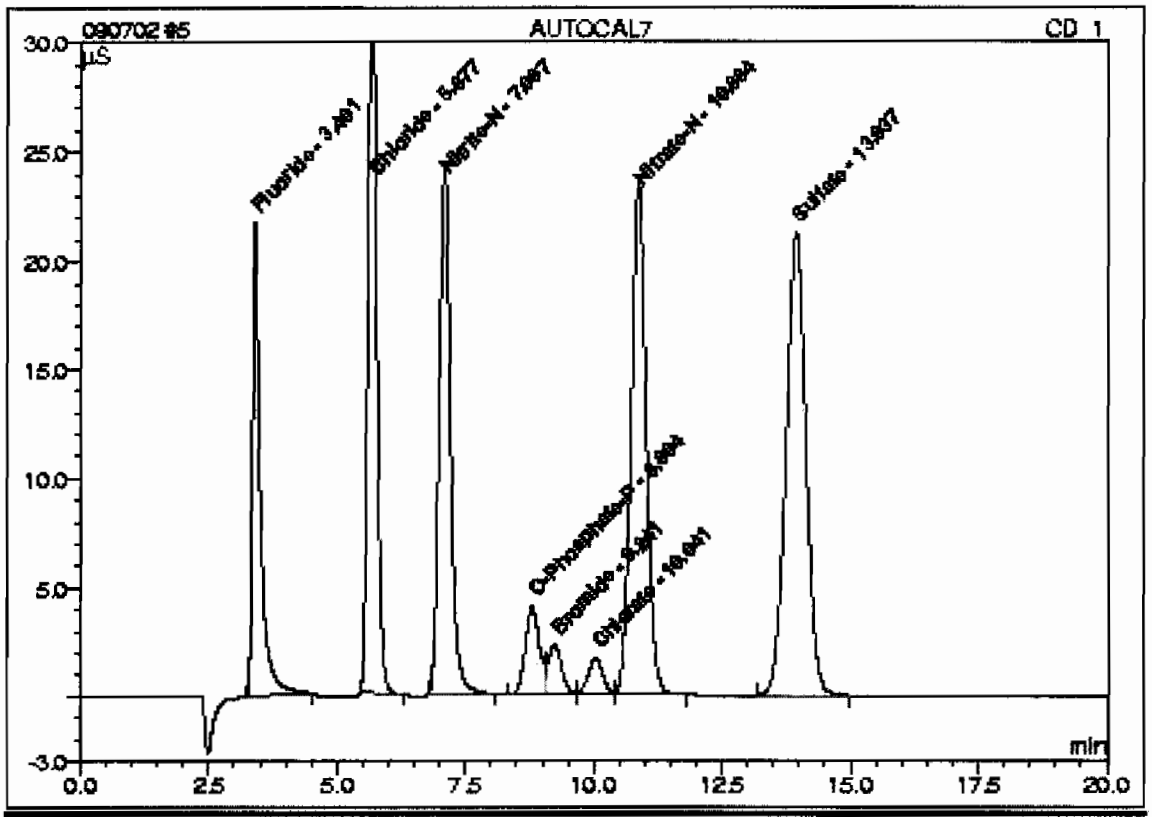

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.40	Fluoride	10.0000	10.0029		4.00162	10.82
2	5.68	Chloride	20.0000	20.0175		6.70740	18.14
3	7.09	Nitrite-N	10.0000	10.0045		6.08863	16.47
4	8.80	O-Phosphate-P	5.0000	4.9507		1.28703	3.48
5	9.24	Bromide	5.0000	4.9021		0.72043	1.95
6	10.04	Chlorate	5.0000	4.9137		0.56214	1.52
7	10.86	Nitrate-N	10.0000	10.0073		8.03747	21.74
8	13.94	Sulfate	40.0000	40.0276		9.57336	25.89
Total:				104.8263	0.000	36.978	100.00

5 AUTOCAL7

Sample Name:	**AUTOCAL7**	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	**AS9_HC**	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:44	Analyst:	**VXP1**
Run Time (min):	20.00	Column:	**AS9HC-014108;GLGCE086;300;9056**

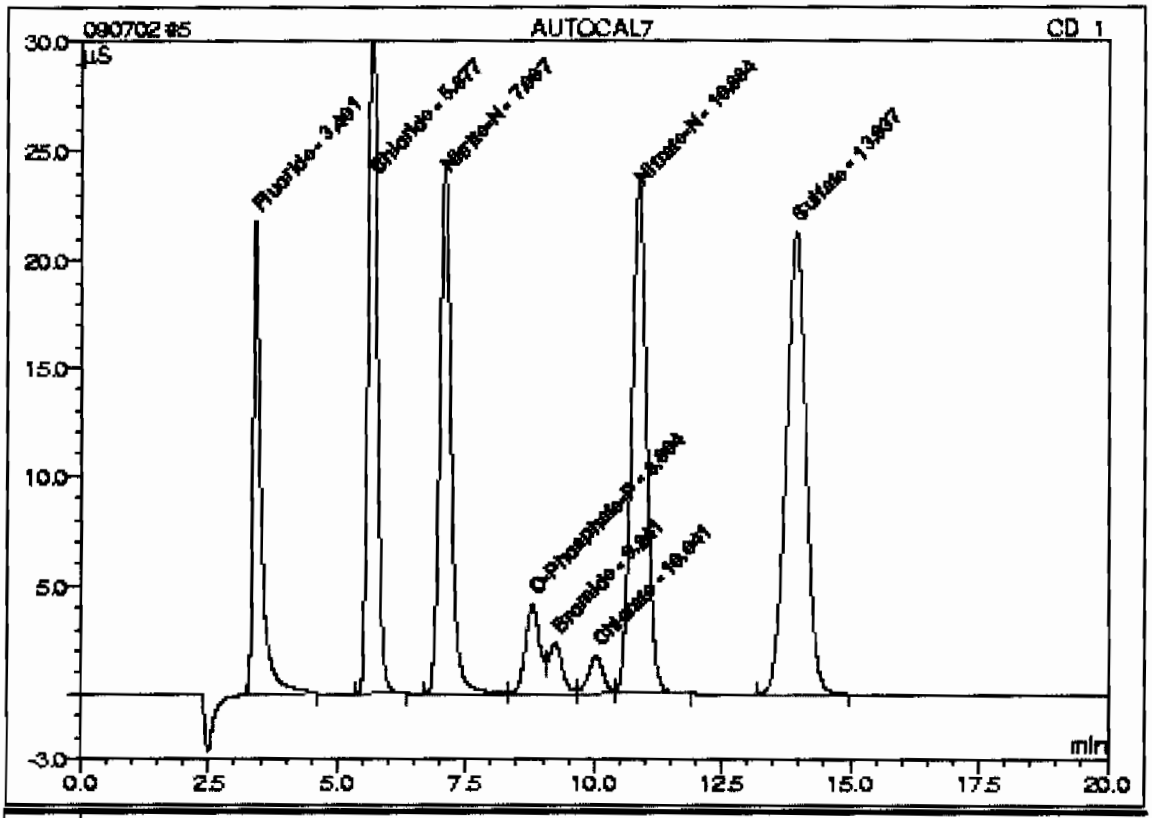

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	10.0000	10.0272		4.06060	10.88
2	5.68	Chloride	20.0000	20.2456		6.79171	18.19
3	7.09	Nitrite-N	10.0000	10.0377		6.23265	16.69
4	8.80	O-Phosphate-P	5.0000	4.9258		1.30977	3.51
5	9.24	Bromide	5.0000	4.9240		0.73625	1.97
6	10.04	Chlorate	5.0000	4.9072		0.57734	1.55
7	10.86	Nitrate-N	10.0000	10.0920		8.05280	21.57
8	13.94	Sulfate	40.0000	40.3281		9.57336	25.64
Total:				105.4876	0.000	37.334	100.00

5 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:44	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

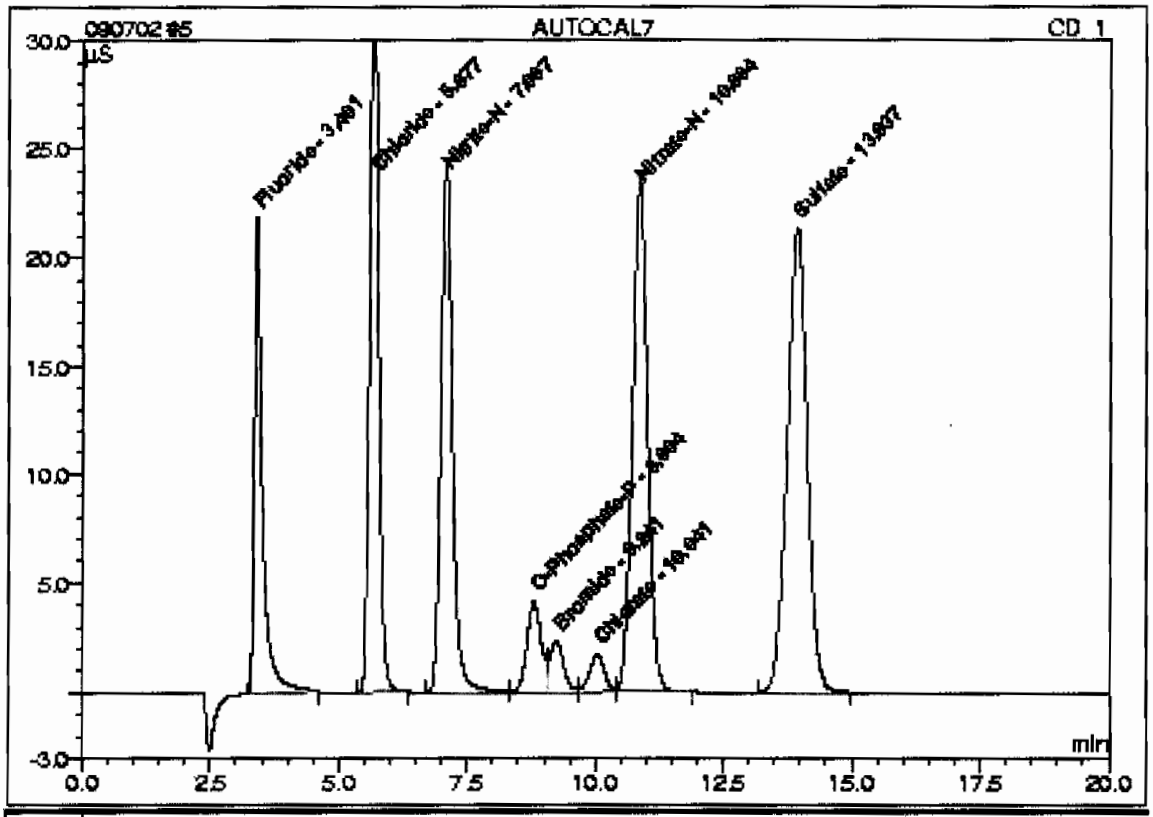

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	10.0000	10.0272		4.06060	10.88
2	5.68	Chloride	20.0000	20.2456		6.79171	18.19
3	7.09	Nitrite-N	10.0000	10.0377		6.23265	16.69
4	8.80	O-Phosphate-P	5.0000	4.9258		1.30977	3.51
5	9.24	Bromide	5.0000	4.9240		0.73625	1.97
6	10.04	Chlorate	5.0000	4.9072		0.57734	1.55
7	10.86	Nitrate-N	10.0000	10.0920		8.05280	21.57
8	13.94	Sulfate	40.0000	40.3281		9.57336	25.64
Total:				105.4876	0.000	37.334	100.00

5 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:44	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

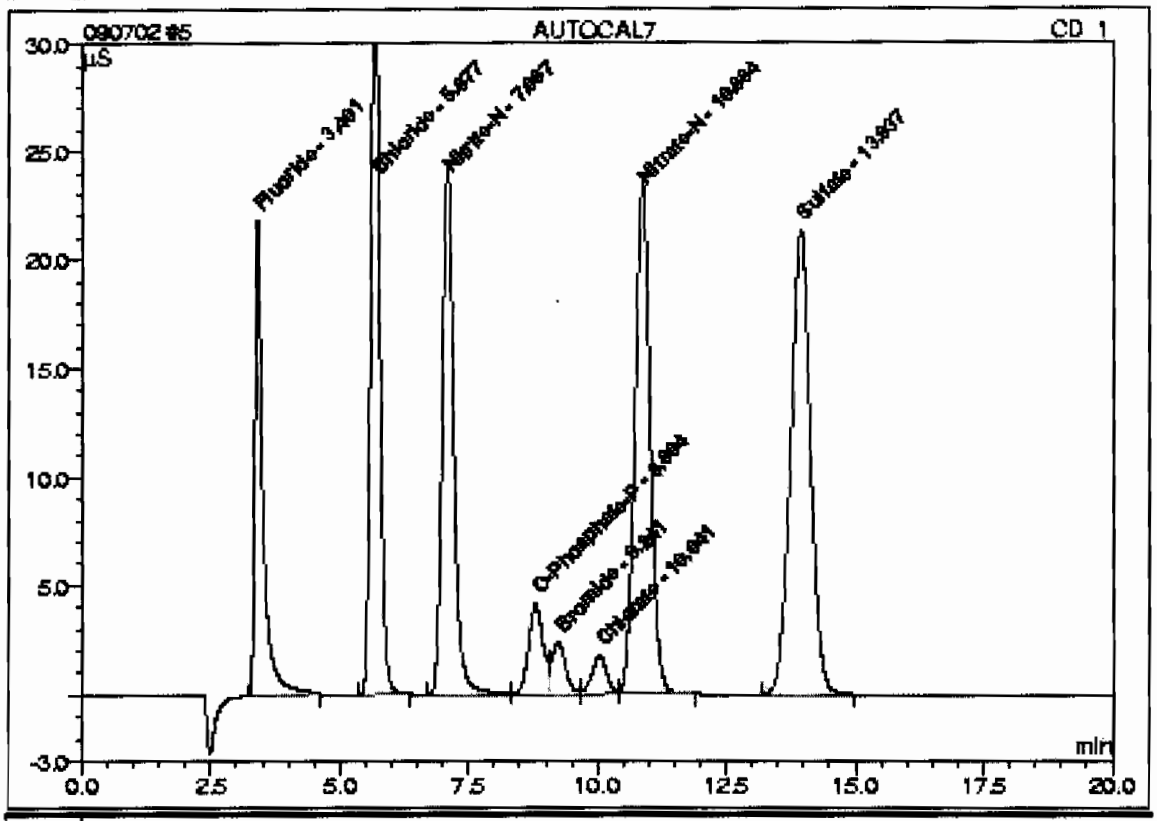

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	10.0000	10.0272		4.06060	10.88
2	5.68	Chloride	20.0000	20.2456		6.79171	18.19
3	7.09	Nitrite-N	10.0000	10.0377		6.23265	16.69
4	8.80	O-Phosphate-P	5.0000	4.9258		1.30977	3.51
5	9.24	Bromide	5.0000	4.9240		0.73625	1.97
6	10.04	Chlorate	5.0000	4.9072		0.57734	1.55
7	10.86	Nitrate-N	10.0000	10.0920		8.05280	21.57
8	13.94	Sulfate	40.0000	40.3281		9.57336	25.64
Total:				105.4876	0.000	37.334	100.00

6 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	6	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

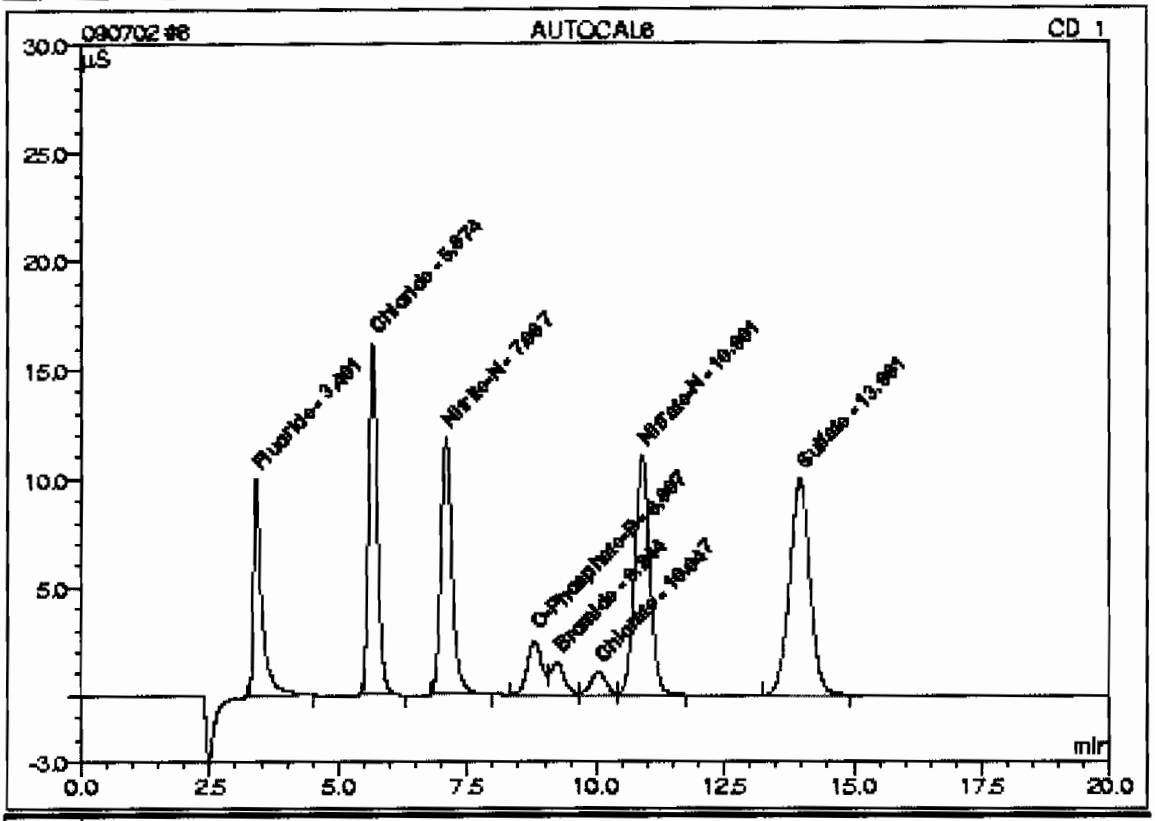

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	5.0000	4.9118		1.95166	10.82
2	5.67	Chloride	10.0000	9.5000		3.12801	17.34
3	7.09	Nitrite-N	5.0000	4.9201		2.97401	16.48
4	8.81	O-Phosphate-P	3.0000	3.0361		0.80197	4.44
5	9.24	Bromide	3.0000	3.0615		0.45599	2.53
6	10.05	Chlorate	3.0000	3.0938		0.35521	1.97
7	10.90	Nitrate-N	5.0000	4.8066		3.80491	21.09
8	13.96	Sulfate	20.0000	19.3484		4.57153	25.34
Total:				52.6783	0.000	18.043	100.00

6 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	6	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

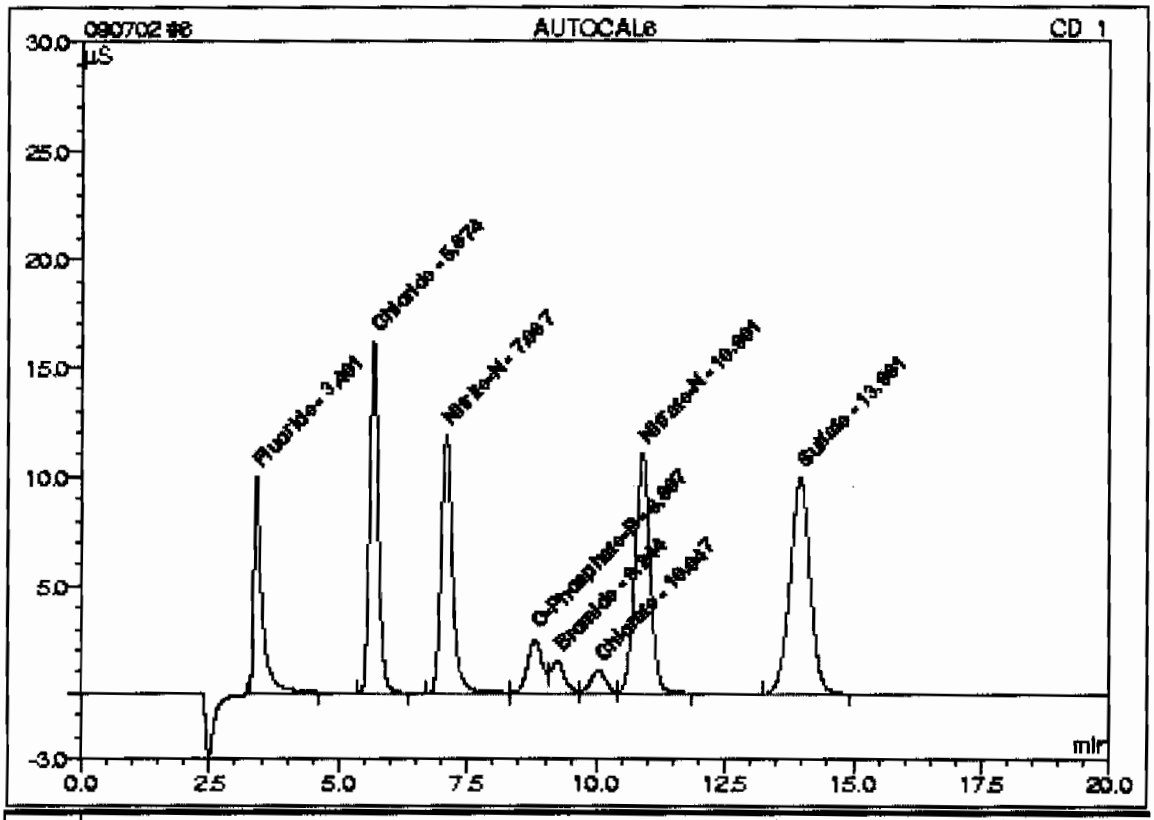

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	5.0000	4.9544		1.99823	10.95
2	5.67	Chloride	10.0000	9.5233		3.17030	17.38
3	7.09	Nitrite-N	5.0000	4.9309		3.04659	16.70
4	8.81	O-Phosphate-P	3.0000	2.9900		0.81237	4.45
5	9.24	Bromide	3.0000	3.0592		0.46337	2.54
6	10.05	Chlorate	3.0000	3.0620		0.36299	1.99
7	10.90	Nitrate-N	5.0000	4.8193		3.81571	20.92
8	13.96	Sulfate	20.0000	19.3666		4.57159	25.06
Total:				52.7057	0.000	18.241	100.00

6 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	6	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

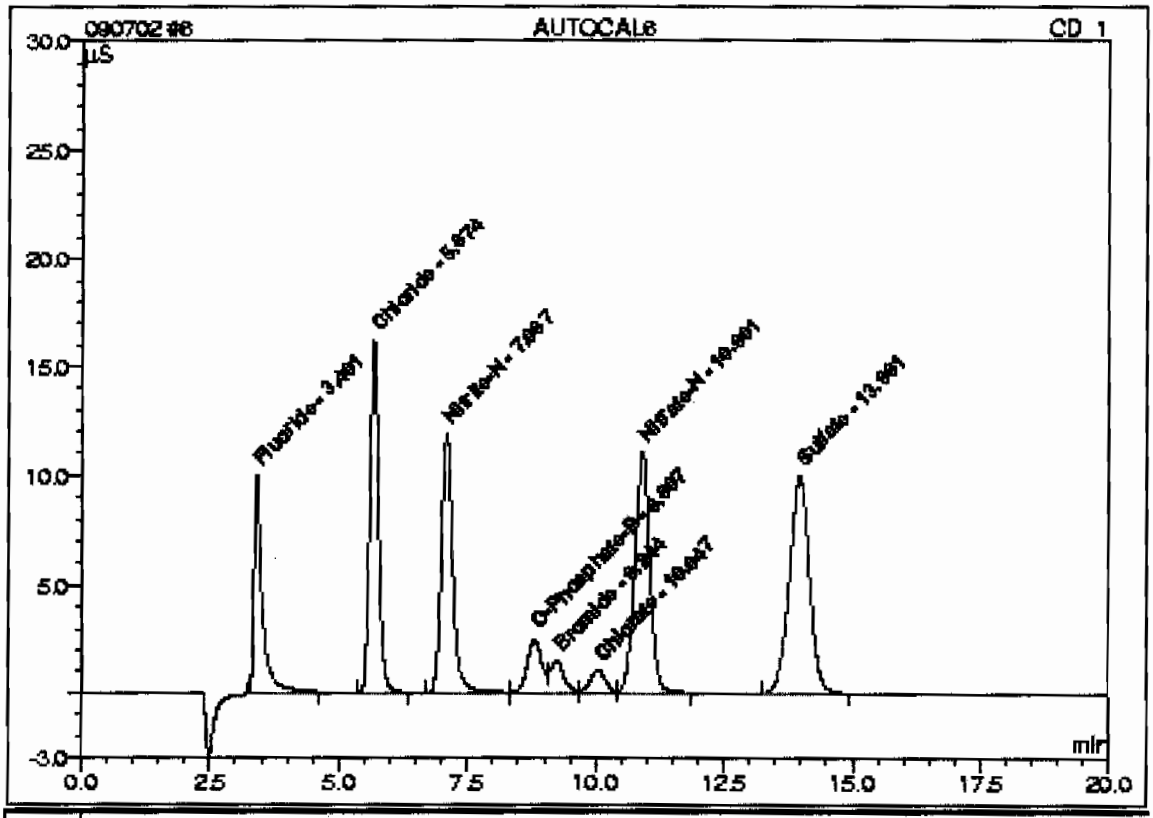

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.40	Fluoride	5.0000	4.9544		1.99823	10.95
2	5.67	Chloride	10.0000	9.5233		3.17030	17.38
3	7.09	Nitrite-N	5.0000	4.9309		3.04659	16.70
4	8.81	O-Phosphate-P	3.0000	2.9900		0.81237	4.45
5	9.24	Bromide	3.0000	3.0592		0.46337	2.54
6	10.05	Chlorate	3.0000	3.0620		0.36299	1.99
7	10.90	Nitrate-N	5.0000	4.8193		3.81571	20.92
8	13.96	Sulfate	20.0000	19.3666		4.57153	25.06
Total:				52.7057	0.000	18.241	100.00

6 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	6	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 16:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

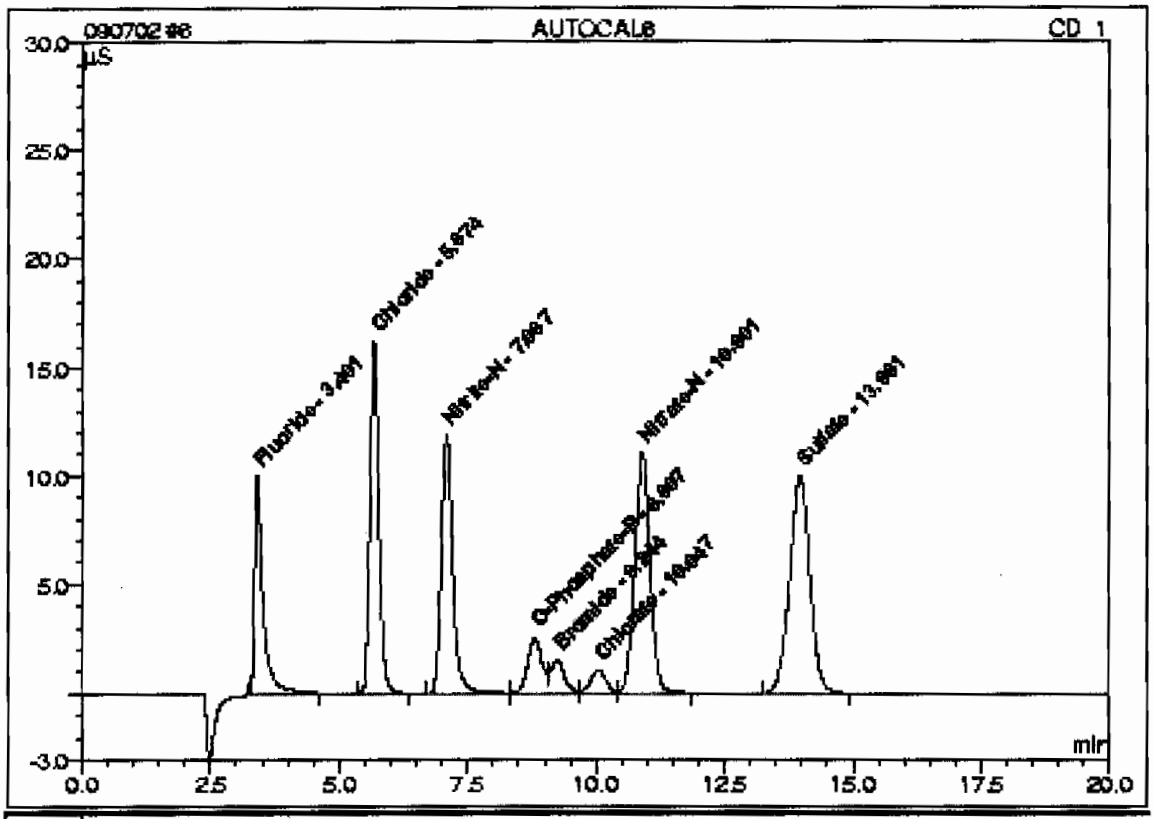

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	5.0000	4.9544		1.99823	10.95
2	5.67	Chloride	10.0000	9.5233		3.17030	17.38
3	7.09	Nitrite-N	5.0000	4.9309		3.04659	16.70
4	8.81	O-Phosphate-P	3.0000	2.9900		0.81237	4.45
5	9.24	Bromide	3.0000	3.0592		0.46337	2.54
6	10.05	Chlorate	3.0000	3.0620		0.36299	1.99
7	10.90	Nitrate-N	5.0000	4.8193		3.81571	20.92
8	13.96	Sulfate	20.0000	19.3666		4.57153	25.06
Total:				52.7057	0.000	18.241	100.00

7 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	50.0
Vial Number:	7	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:30	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

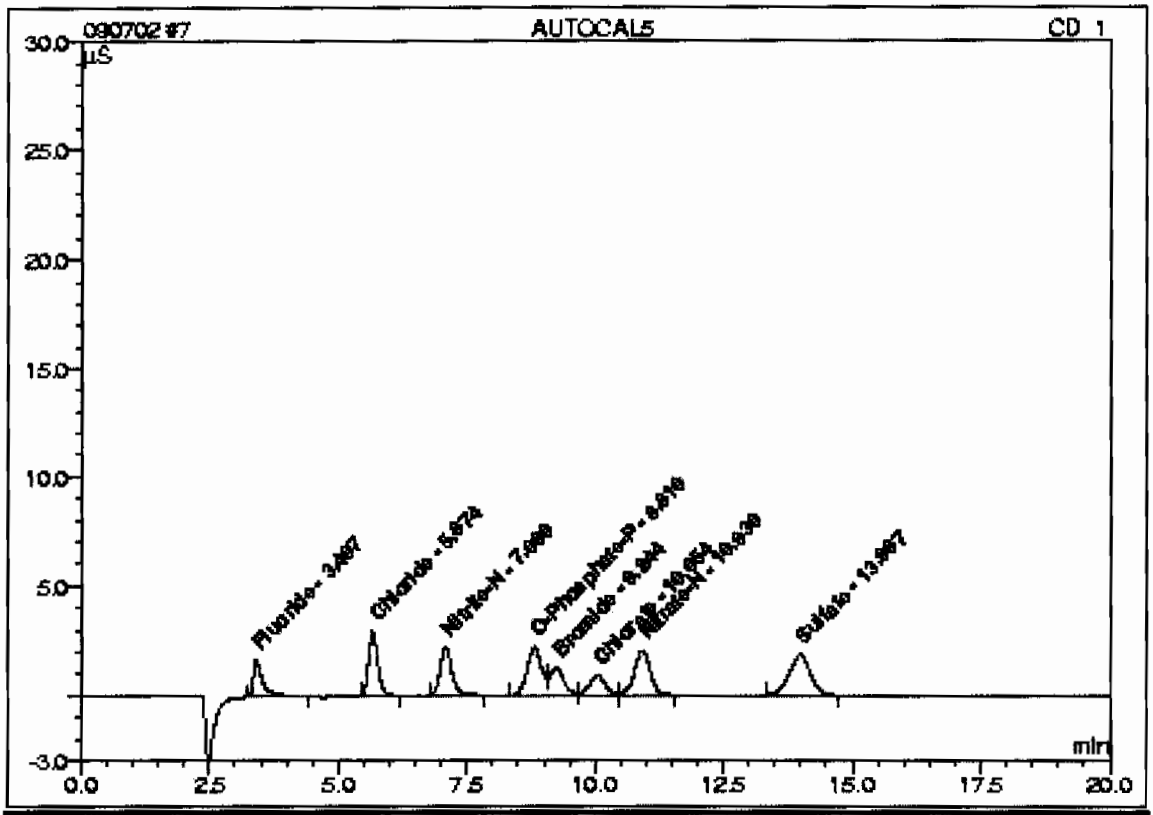

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	1.0000	0.9669		0.37282	8.25
2	5.67	Chloride	2.0000	1.8916		0.58770	13.01
3	7.09	Nitrite-N	1.0000	0.9662		0.56494	12.51
4	8.81	O-Phosphate-P	2.5000	2.6463		0.70832	15.68
5	9.24	Bromide	2.5000	2.5860		0.38867	8.60
6	10.05	Chlorate	2.5000	2.6495		0.30800	6.82
7	10.93	Nitrate-N	1.0000	0.9580		0.71945	15.93
8	13.99	Sulfate	4.0000	3.8387		0.86722	19.20
Total:				16.5033	0.000	4.517	100.00

7 AUTOCAL5

Sample Name:	**AUTOCAL5**	*Injection Volume:*	50.0
Vial Number:	7	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	**AS9_HC**	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:30	Analyst:	**VXP1**
Run Time (min):	20.00	Column:	**AS9HC-014108;GLGCE086;300;9056**

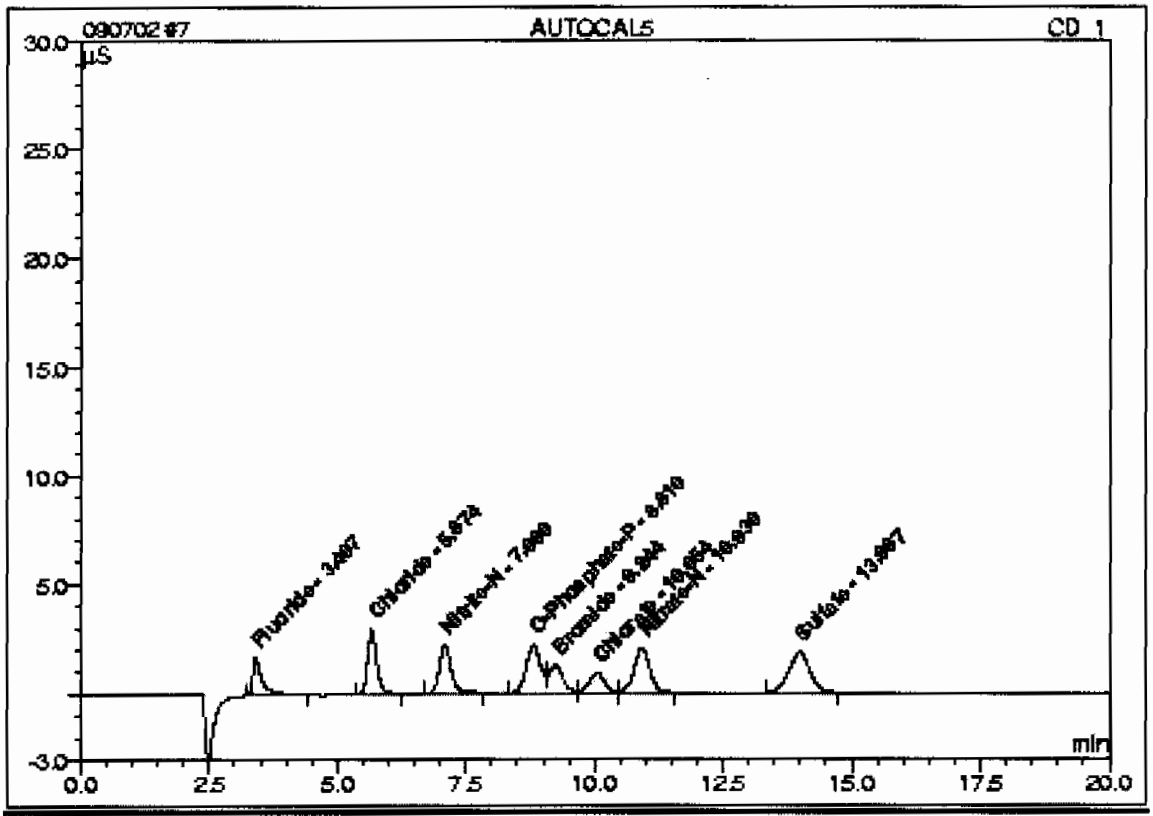

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	1.0000	0.9563		0.37282	8.22
2	5.67	Chloride	2.0000	1.9006		0.59575	13.14
3	7.09	Nitrite-N	1.0000	0.9669		0.57346	12.65
4	8.81	O-Phosphate-P	2.5000	2.5851		0.70832	15.62
5	9.24	Bromide	2.5000	2.5487		0.38867	8.57
6	10.05	Chlorate	2.5000	2.5896		0.30800	6.79
7	10.93	Nitrate-N	1.0000	0.9662		0.71945	15.87
8	13.99	Sulfate	4.0000	3.8427		0.86722	19.13
Total:				16.3550	0.000	4.534	100.00

7 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	50.0
Vial Number:	7	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 16:30	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E086;300;9056

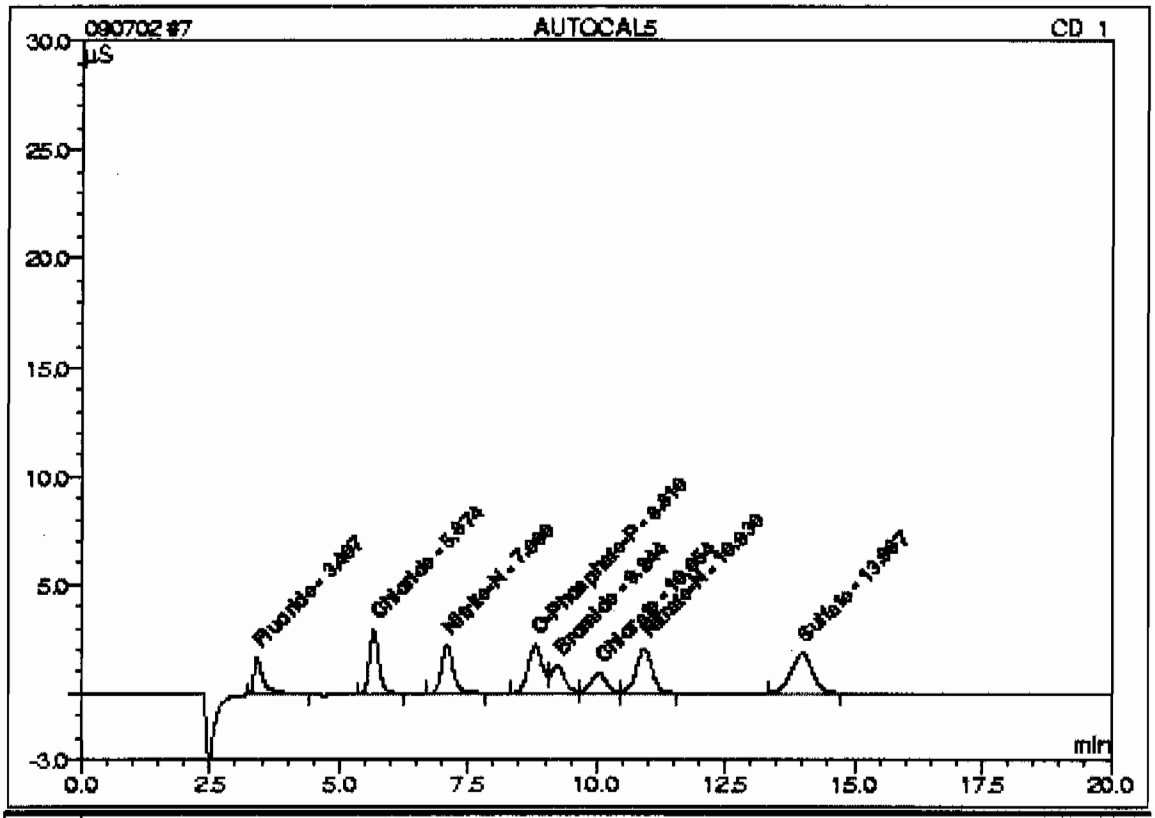

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	1.0000	0.9563		0.37282	8.22
2	5.67	Chloride	2.0000	1.9006		0.59575	13.14
3	7.09	Nitrite-N	1.0000	0.9669		0.57346	12.65
4	8.81	O-Phosphate-P	2.5000	2.5851		0.70832	15.62
5	9.24	Bromide	2.5000	2.5487		0.38867	8.57
6	10.05	Chlorate	2.5000	2.5896		0.30800	6.79
7	10.93	Nitrate-N	1.0000	0.9662		0.71945	15.87
8	13.99	Sulfate	4.0000	3.8427		0.86722	19.13
Total:				16.3550	0.000	4.534	100.00

7 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	50.0
Vial Number:	7	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 16:30	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

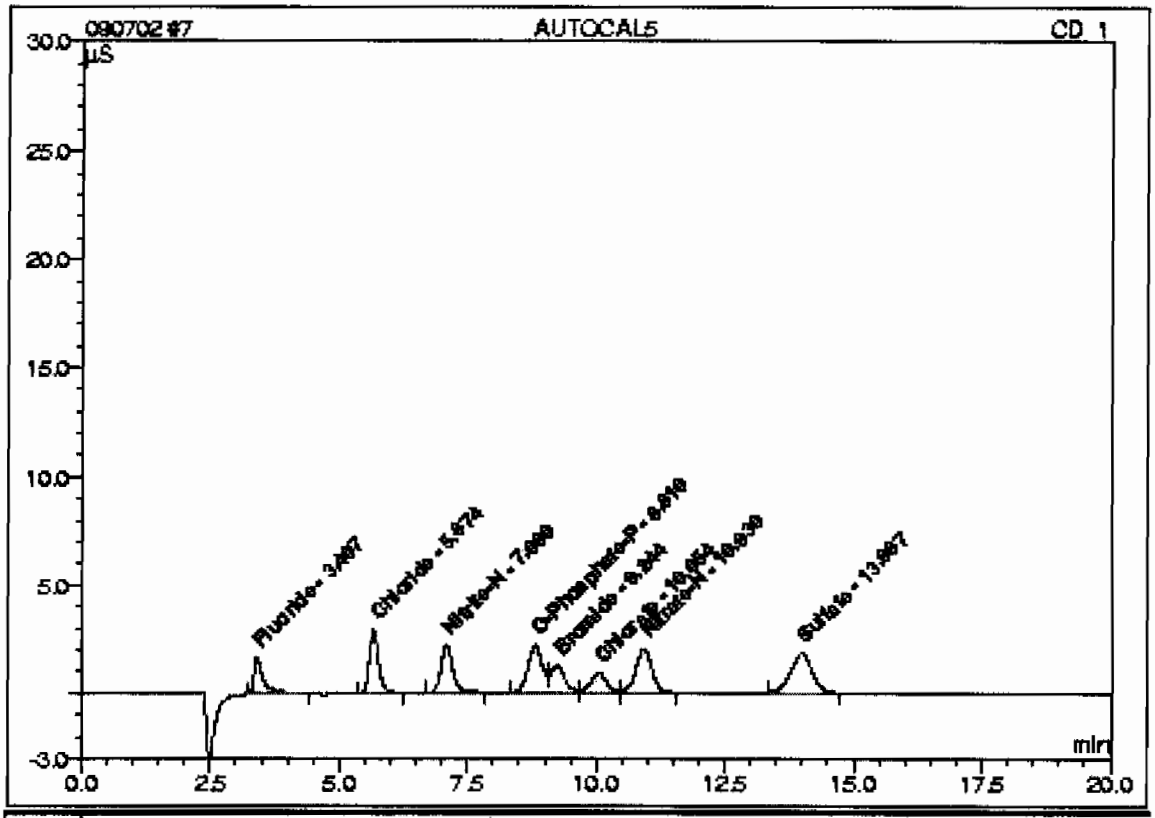

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	1.0000	0.9563		0.37282	8.22
2	5.67	Chloride	2.0000	1.9006		0.59575	13.14
3	7.09	Nitrite-N	1.0000	0.9669		0.57346	12.65
4	8.81	O-Phosphate-P	2.5000	2.5851		0.70832	15.62
5	9.24	Bromide	2.5000	2.5487		0.38867	8.57
6	10.05	Chlorate	2.5000	2.5886		0.30800	6.79
7	10.93	Nitrate-N	1.0000	0.9662		0.71945	15.87
8	13.99	Sulfate	4.0000	3.8427		0.86722	19.13
Total:				16.3550	0.000	4.534	100.00

8 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

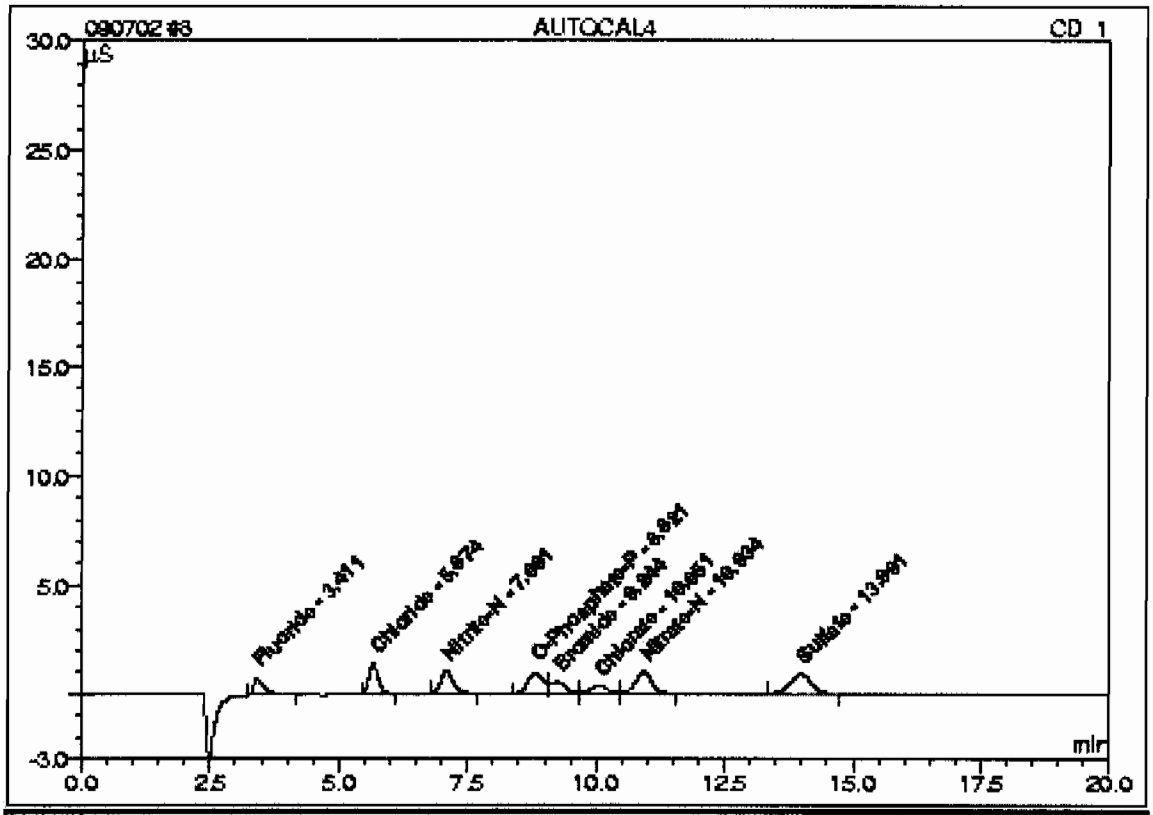

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.5000	0.4973		0.18235	8.44
2	5.67	Chloride	1.0000	1.0120		0.28418	13.15
3	7.09	Nitrite-N	0.5000	0.4965		0.27652	12.80
4	8.82	O-Phosphate-P	1.0000	1.1686		0.33112	15.33
5	9.24	Bromide	1.0000	1.0661		0.17026	7.88
6	10.05	Chlorate	1.0000	1.0780		0.12975	6.01
7	10.93	Nitrate-N	0.5000	0.5112		0.35605	16.48
8	13.99	Sulfate	2.0000	2.0272		0.43032	19.92
Total:				7.8570	0.000	2.161	100.00

8 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 16:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

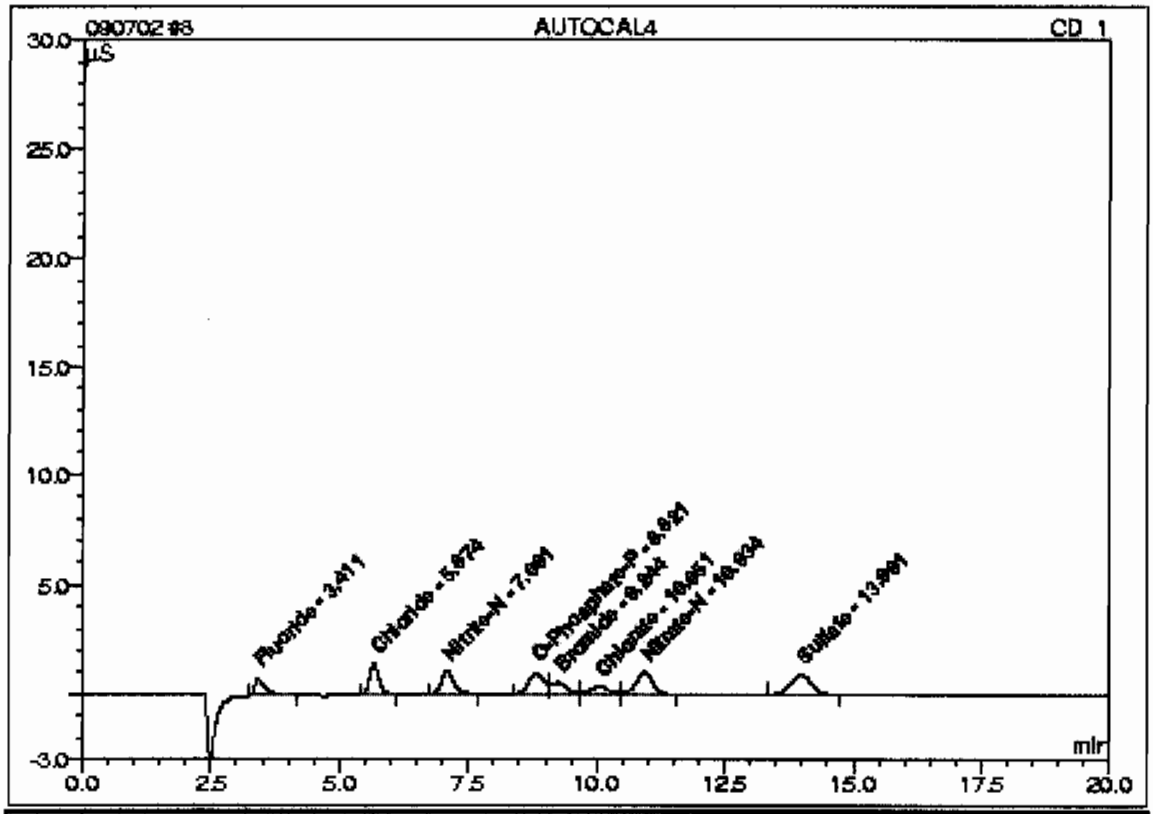

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.5000	0.4878		0.18235	8.42
2	5.67	Chloride	1.0000	0.9844		0.28631	13.22
3	7.09	Nitrite-N	0.5000	0.4947		0.27886	12.88
4	8.82	O-Phosphate-P	1.0000	1.1171		0.33112	15.29
5	9.24	Bromide	1.0000	1.0561		0.17026	7.86
6	10.05	Chlorate	1.0000	1.0541		0.12975	5.99
7	10.93	Nitrate-N	0.5000	0.5140		0.35605	16.45
8	13.99	Sulfate	2.0000	2.0118		0.43032	19.88
Total:				7.7199	0.000	2.165	100.00

8 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 15:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

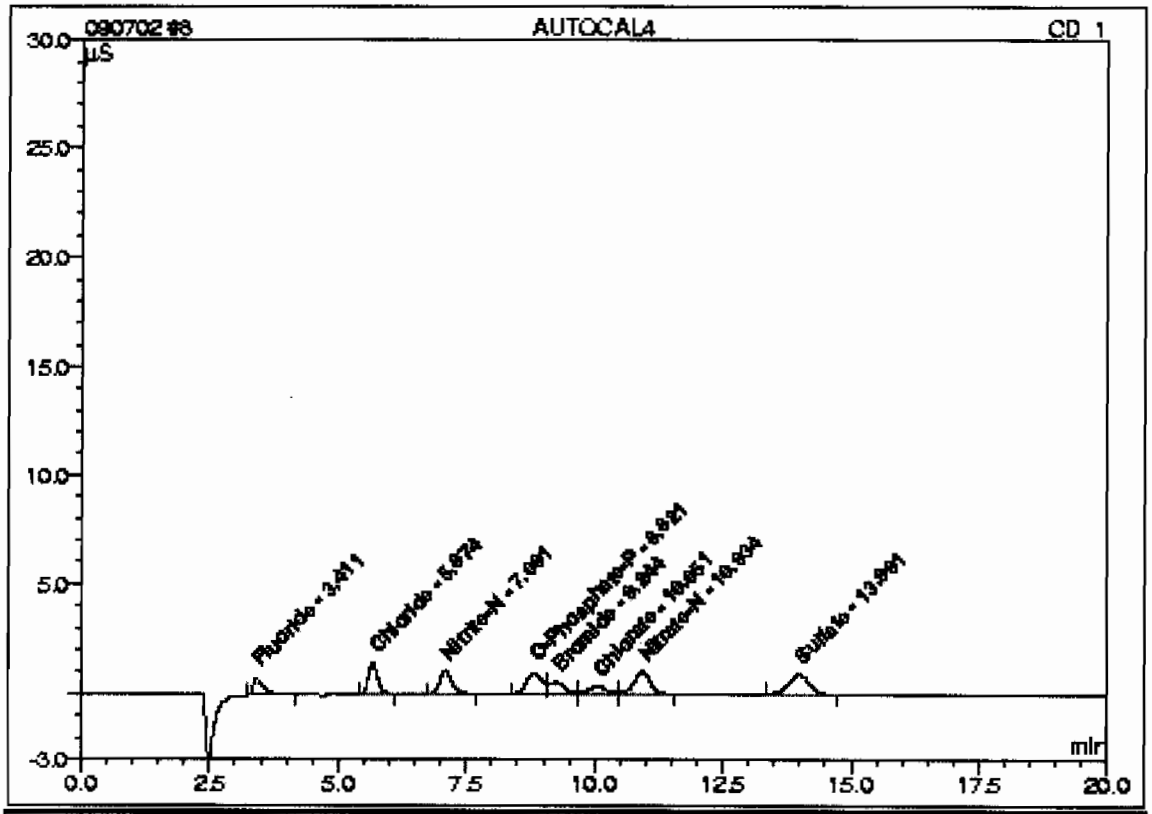

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.5000	0.4878		0.18235	8.42
2	5.67	Chloride	1.0000	0.9844		0.28631	13.22
3	7.09	Nitrite-N	0.5000	0.4947		0.27886	12.88
4	8.82	O-Phosphate-P	1.0000	1.1171		0.33112	15.29
5	9.24	Bromide	1.0000	1.0561		0.17026	7.86
6	10.05	Chlorate	1.0000	1.0541		0.12975	5.99
7	10.93	Nitrate-N	0.5000	0.5140		0.35605	16.45
8	13.99	Sulfate	2.0000	2.0118		0.43032	19.88
Total:				7.7199	0.000	2.165	100.00

8 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	8	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 16:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

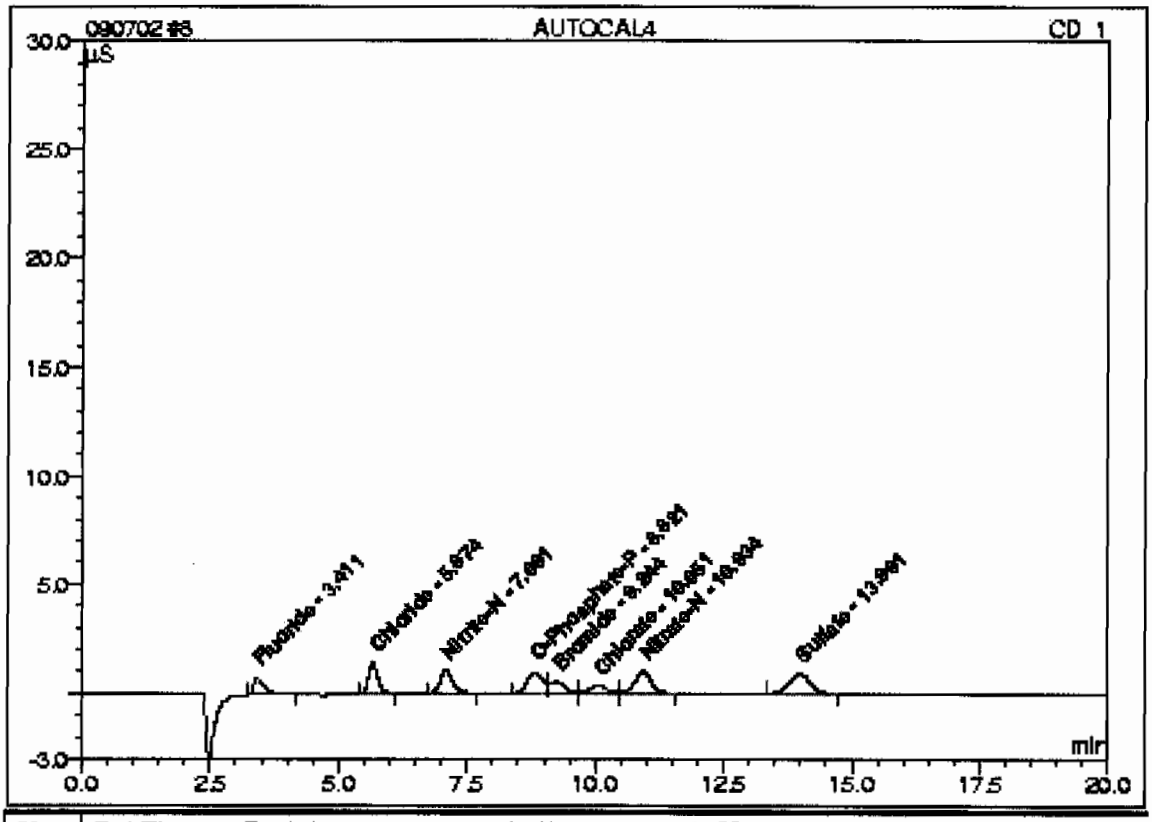

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.5000	0.4878		0.18235	8.42
2	5.67	Chloride	1.0000	0.9844		0.28631	13.22
3	7.09	Nitrite-N	0.5000	0.4947		0.27886	12.88
4	8.82	O-Phosphate-P	1.0000	1.1171		0.33112	15.29
5	9.24	Bromide	1.0000	1.0561		0.17026	7.86
6	10.05	Chlorate	1.0000	1.0541		0.12975	5.99
7	10.93	Nitrate-N	0.5000	0.5140		0.35605	16.45
8	13.99	Sulfate	2.0000	2.0118		0.43032	19.88
Total:				7.7199	0.000	2.165	100.00

9 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:15	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

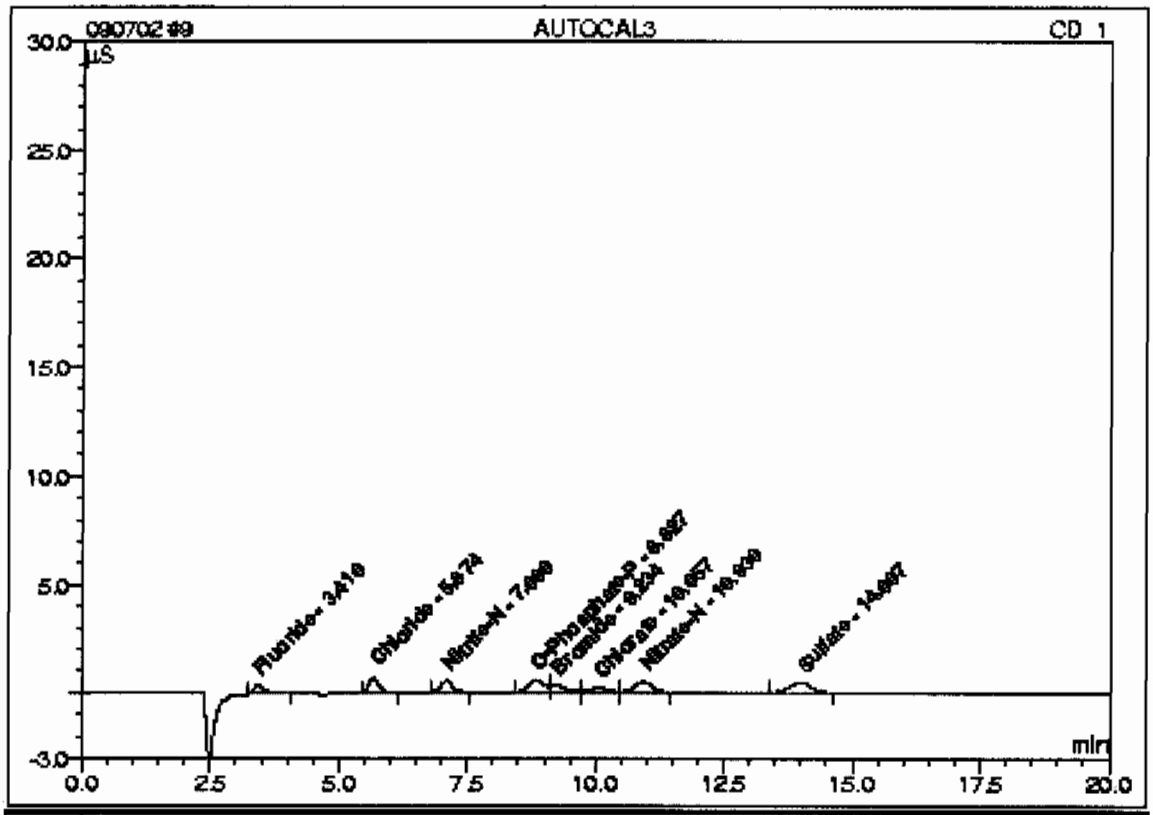

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.2500	0.2721		0.09172	8.05
2	5.67	Chloride	0.5000	0.6222		0.15210	13.34
3	7.09	Nitrite-N	0.2500	0.2625		0.13142	11.53
4	8.83	O-Phosphate-P	0.5000	0.6362		0.20562	18.04
5	9.23	Bromide	0.5000	0.5484		0.09891	8.68
6	10.06	Chlorate	0.5000	0.5056		0.07009	6.15
7	10.93	Nitrate-N	0.2500	0.2939		0.18071	15.85
8	14.01	Sulfate	1.0000	1.1254		0.20942	18.37
Total:				4.2663	0.000	1.140	100.00

9 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:15	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

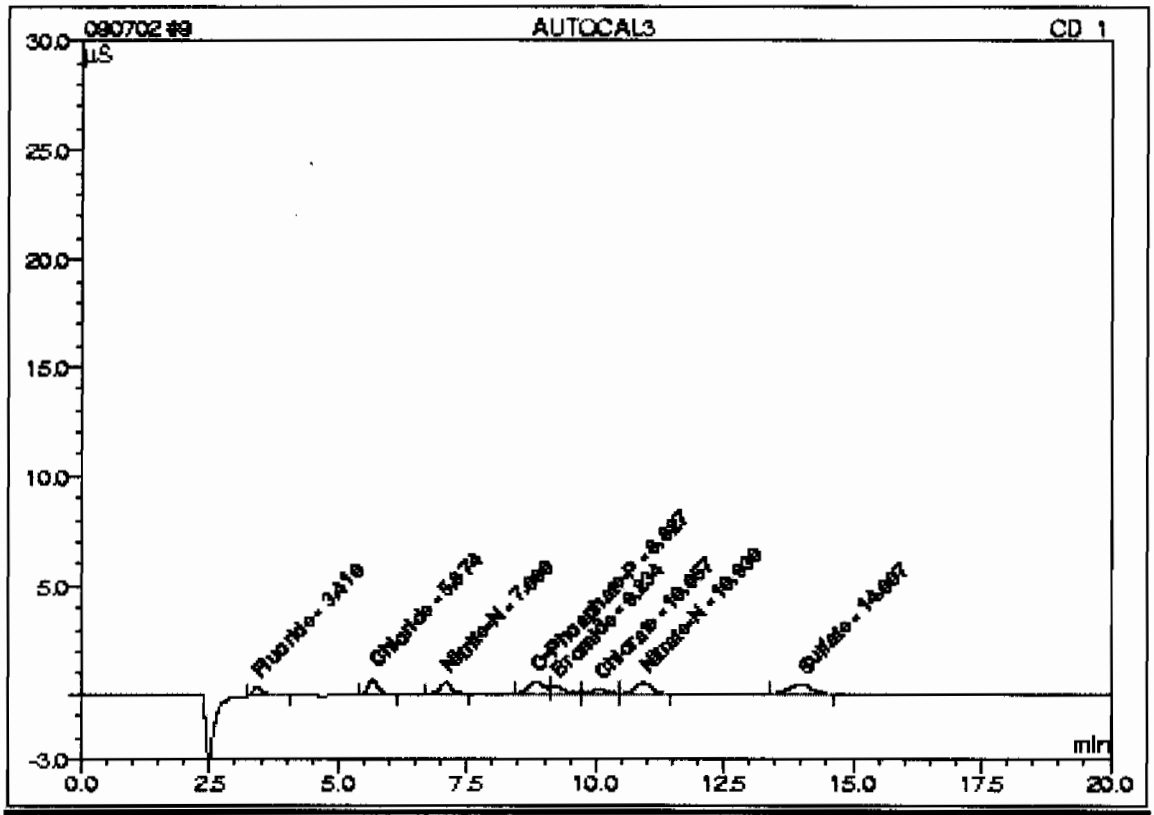

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.2500	0.2648		0.09172	8.01
2	5.67	Chloride	0.5000	0.5932		0.15418	13.46
3	7.09	Nitrite-N	0.2500	0.2640		0.13495	11.78
4	8.93	O-Phosphate-P	0.5000	0.6287		0.20562	17.95
5	9.23	Bromide	0.5000	0.5695		0.09891	8.63
6	10.06	Chlorate	0.5000	0.5406		0.07009	6.12
7	10.93	Nitrate-N	0.2500	0.2958		0.18071	15.77
8	14.01	Sulfate	1.0000	1.0860		0.20942	18.28
Total:				4.2416	0.000	1.146	100.00

9 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:15	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

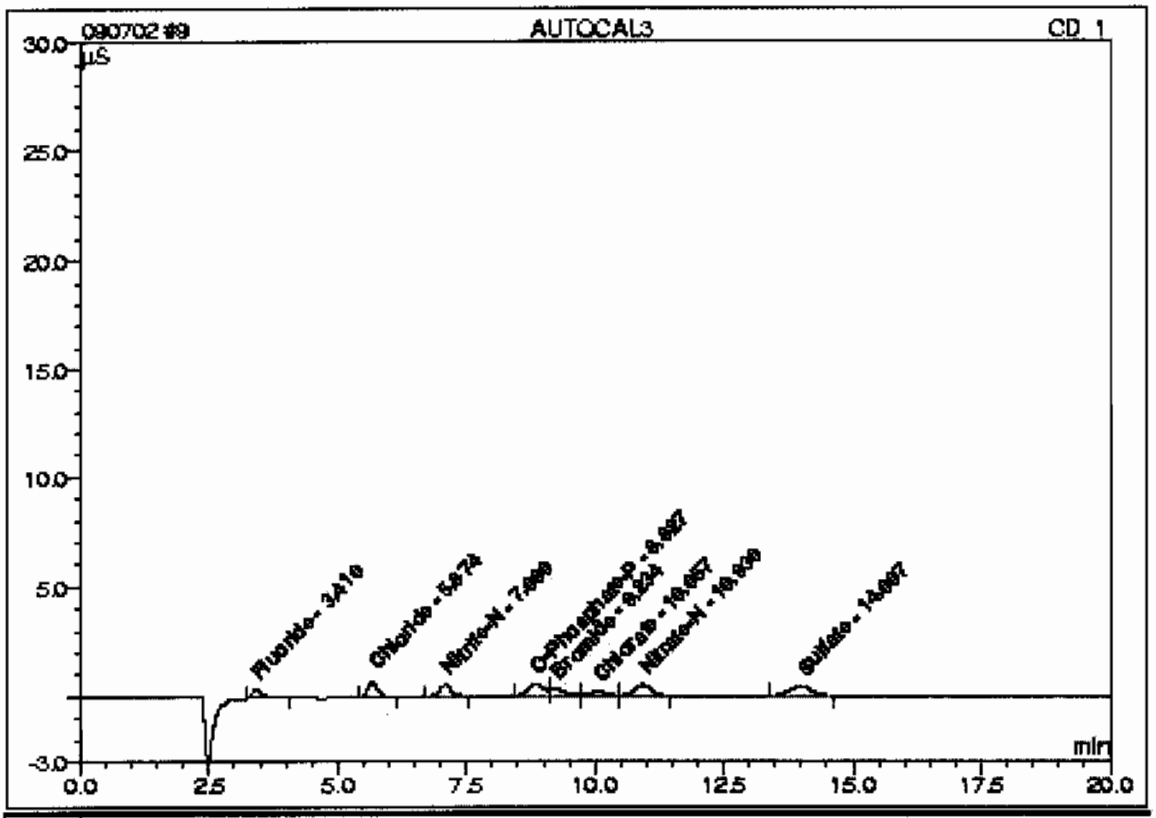

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.2500	0.2648		0.09172	8.01
2	5.67	Chloride	0.5000	0.5932		0.15418	13.46
3	7.09	Nitrite-N	0.2500	0.2640		0.13495	11.78
4	8.83	O-Phosphate-P	0.5000	0.6287		0.20562	17.95
5	9.23	Bromide	0.5000	0.5695		0.09891	8.63
6	10.06	Chlorate	0.5000	0.5406		0.07009	6.12
7	10.93	Nitrate-N	0.2500	0.2958		0.18071	15.77
8	14.01	Sulfate	1.0000	1.0860		0.20942	18.28
Total:				4.2416	0.000	1.146	100.00

9 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	9	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:15	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC8086;300;9058

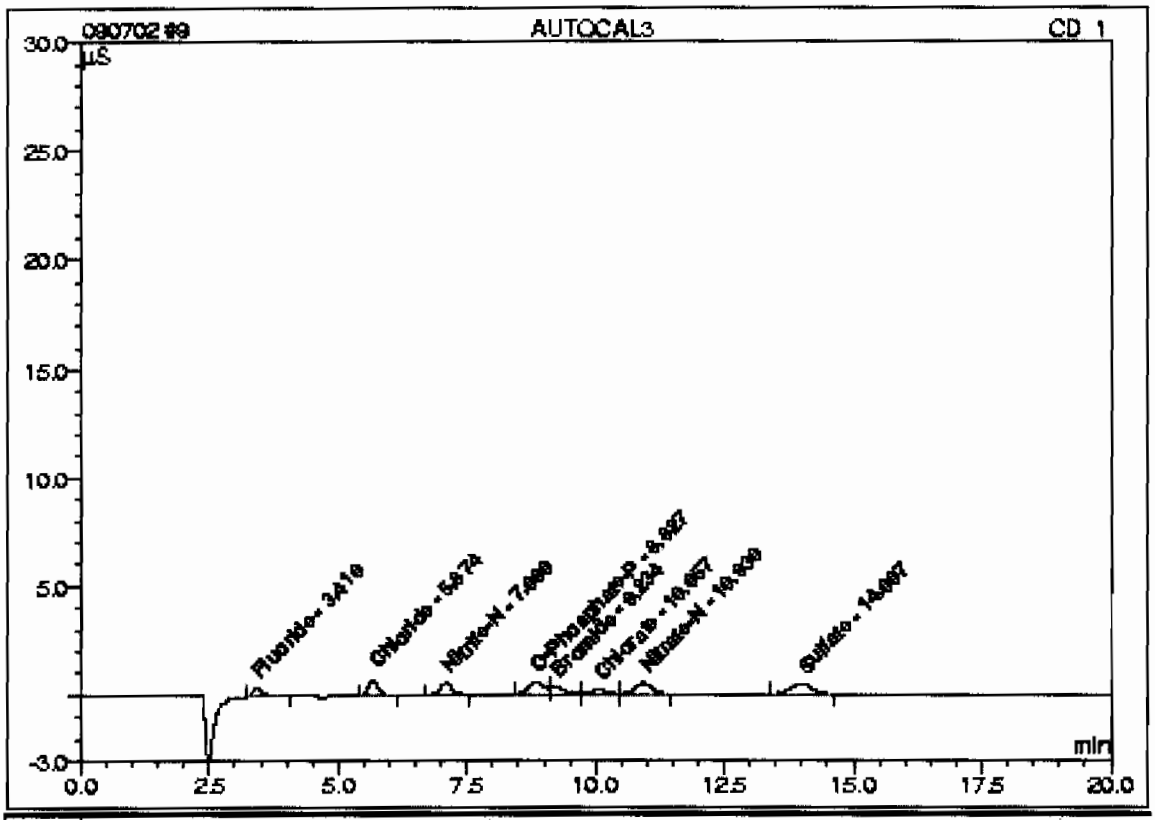

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.2500	0.2648		0.09172	8.01
2	5.67	Chloride	0.5000	0.5932		0.15418	13.46
3	7.09	Nitrite-N	0.2500	0.2640		0.13495	11.78
4	8.83	O-Phosphate-P	0.5000	0.6287		0.20562	17.95
5	9.23	Bromide	0.5000	0.5685		0.09891	8.63
6	10.06	Chlorate	0.5000	0.5406		0.07009	6.12
7	10.93	Nitrate-N	0.2500	0.2958		0.18071	15.77
8	14.01	Sulfate	1.0000	1.0860		0.20942	18.28
Total:				4.2416	0.000	1.146	100.00

10 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:38	*Analyst:*	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E088;300;9058

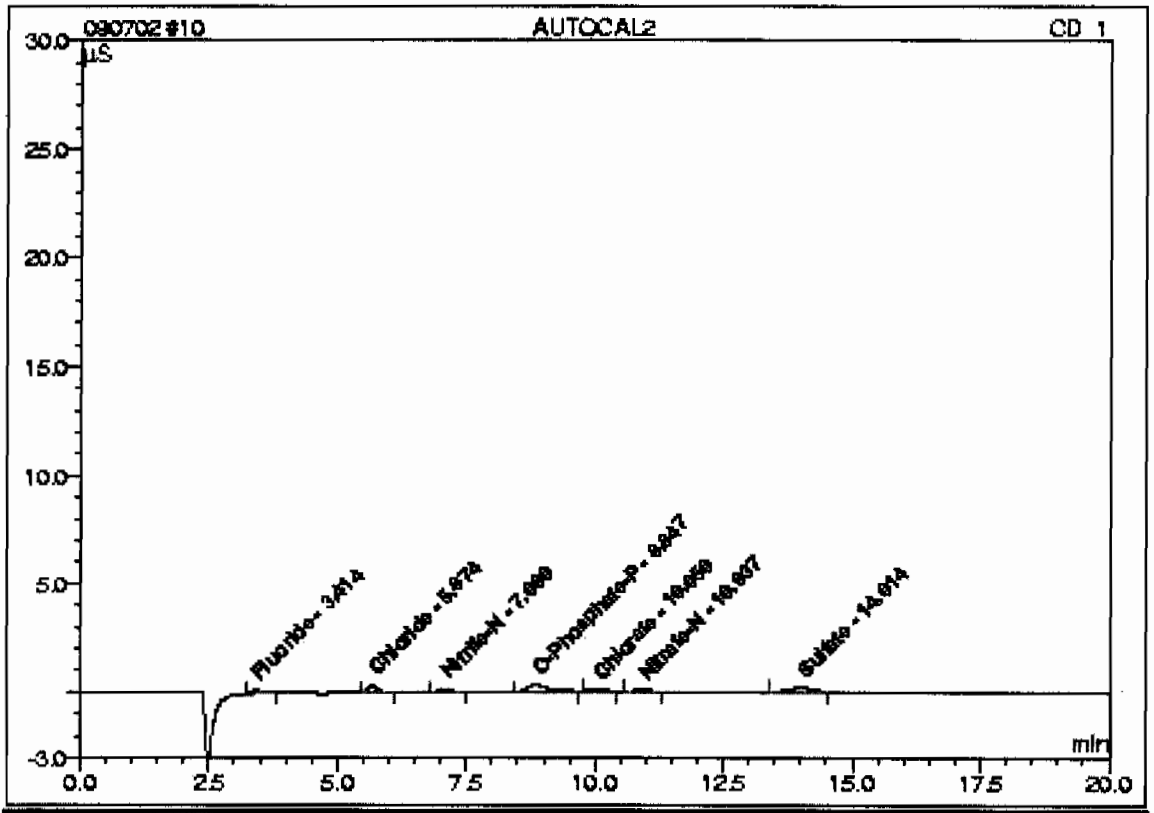

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.1000	0.1201		0.03295	8.42
2	5.67	Chloride	0.2000	0.3153		0.05938	15.18
3	7.09	Nitrite-N	0.1000	0.1058		0.03678	9.40
4	8.85	O-Phosphate-P	0.2000	0.3098		0.14213	36.33
n.a.	n.a.	Bromide	0.2000	n.a.	n.a.	n.a.	n.a.
5	10.05	Chlorate	0.2000	0.0972		0.02012	5.14
6	10.94	Nitrate-N	0.1000	0.0916		0.01678	4.29
7	14.01	Sulfate	0.4000	0.5564		0.08305	21.23
Total:				1.5962	0.000	0.391	100.00

10 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:38	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9058

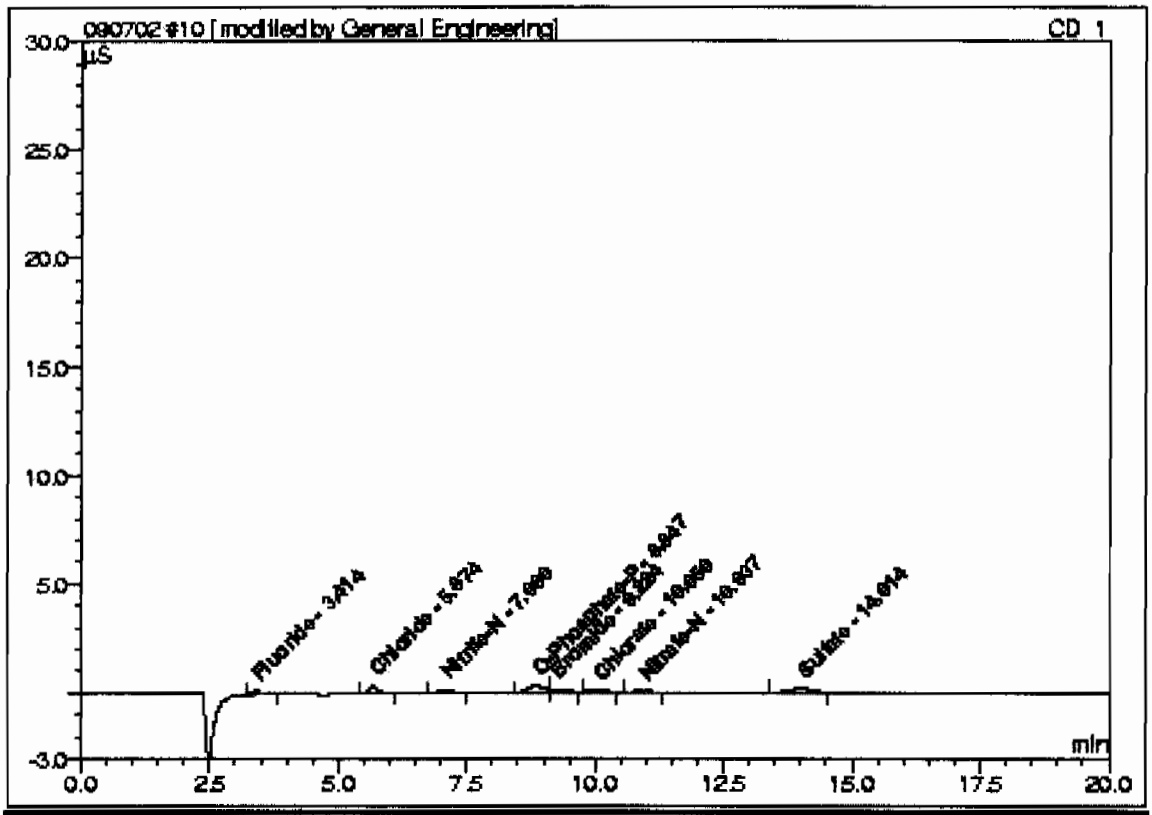

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.1000	0.1203		0.03295	8.38
2	5.67	Chloride	0.2000	0.3163		0.06067	15.42
3	7.09	Nitrite-N	0.1000	0.1081		0.03769	9.58
4	8.85	O-Phosphate-P	0.2000	0.2344 *		0.10432	26.52
5	9.22	Bromide	0.2000	0.1509 *		0.03781	9.61
6	10.05	Chlorate	0.2000	0.1104		0.02012	5.12
7	10.94	Nitrate-N	0.1000	0.0918		0.01678	4.27
8	14.01	Sulfate	0.4000	0.5564		0.08305	21.11
Total:				1.6887	0.000	0.393	100.00

10 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:38	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9055

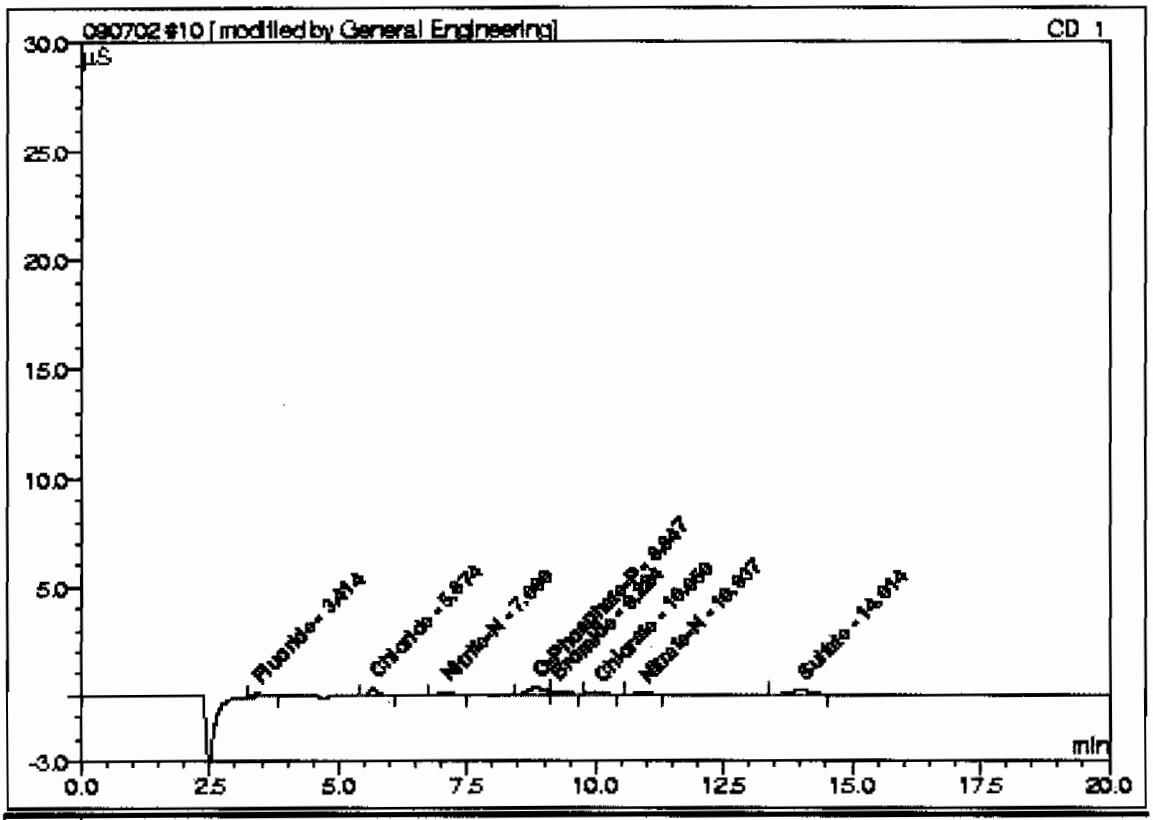

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.1000	0.1203		0.03295	8.38
2	5.67	Chloride	0.2000	0.3163		0.06067	15.42
3	7.09	Nitrite-N	0.1000	0.1081		0.03769	9.58
4	8.85	O-Phosphate-P	0.2000	0.2344 *		0.10432	26.52
5	9.22	Bromide	0.2000	0.1509 *		0.03781	9.61
6	10.05	Chlorate	0.2000	0.1104		0.02012	5.12
7	10.94	Nitrate-N	0.1000	0.0918		0.01678	4.27
8	14.01	Sulfate	0.4000	0.5564		0.08905	21.11
Total:				1.6887	0.000	0.393	100.00

10 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 17:38	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

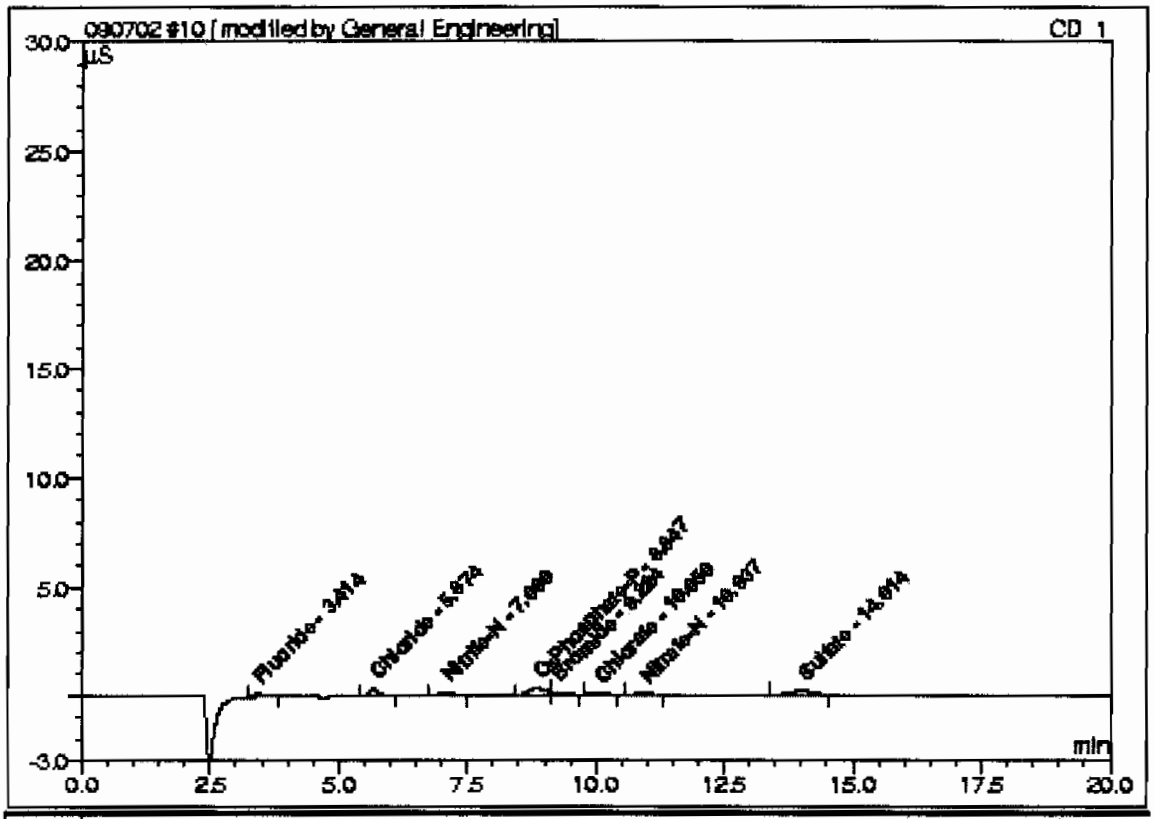

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	0.1000	0.1203		0.03295	8.38
2	5.67	Chloride	0.2000	0.3163		0.06067	15.42
3	7.09	Nitrite-N	0.1000	0.1081		0.03769	9.58
4	8.85	O-Phosphate-P	0.2000	0.2344 *		0.10432	26.52
5	9.22	Bromide	0.2000	0.1509 *		0.03781	9.61
6	10.05	Chlorate	0.2000	0.1104		0.02012	5.12
7	10.94	Nitrate-N	0.1000	0.0918		0.01678	4.27
8	14.01	Sulfate	0.4000	0.5564		0.08305	21.11
Total:				1.6897	0.000	0.393	100.00

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:01	*Analyst:*	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E088;300;9058

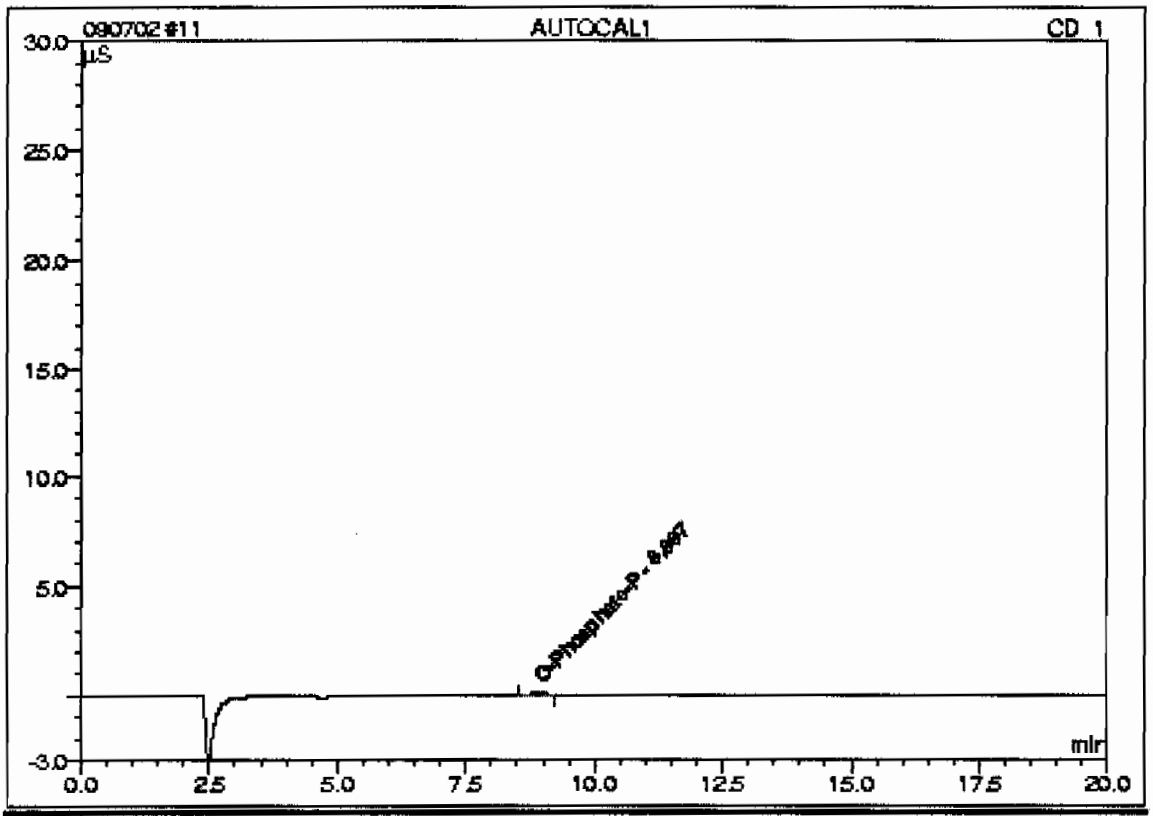

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	0.0000	-0.1529		0.01594	100.00
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				-0.1529	0.000	0.016	100.00

11 AUTOCAL1

Sample Name:	**AUTOCAL1**	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	**CD_1**
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	**AS9_HC**	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/2009 18:01	Analyst:	**VXP1**
Run Time (min):	20.00	Column:	**AS9HC-015952;GLGCE085;300;9055**

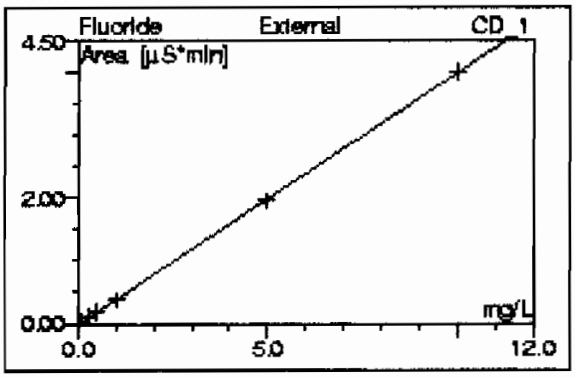

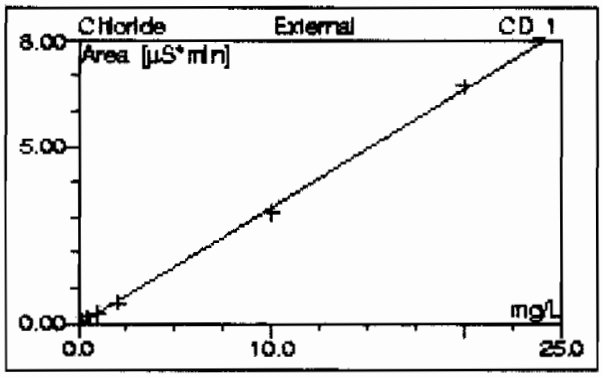

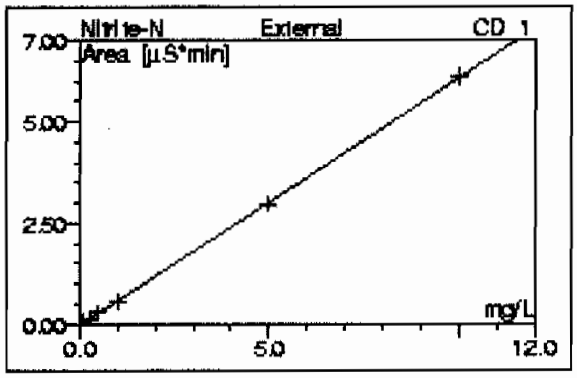

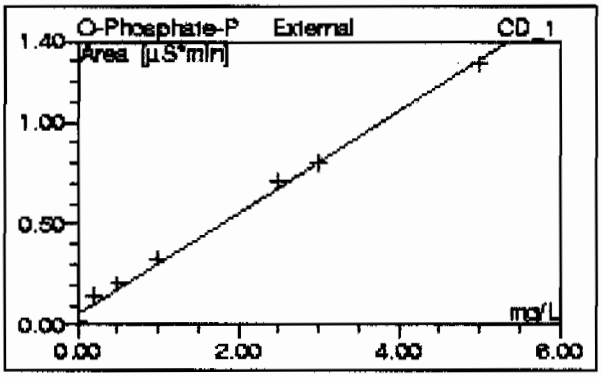

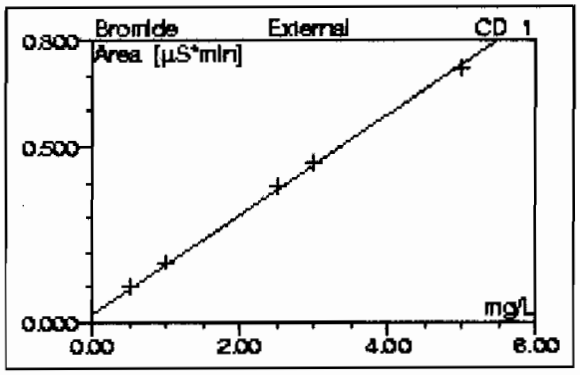

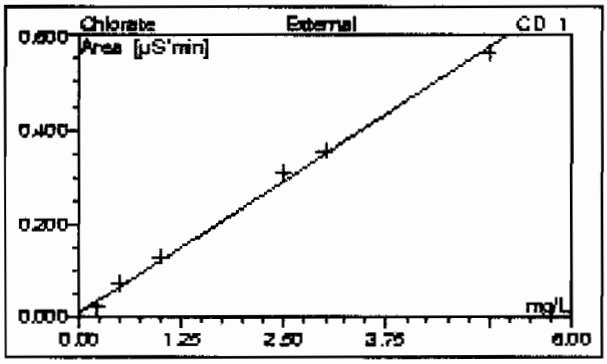

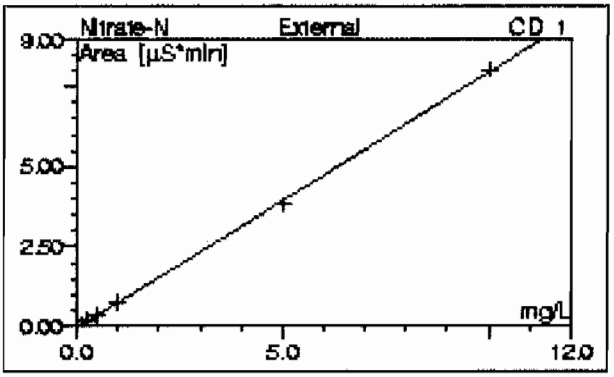

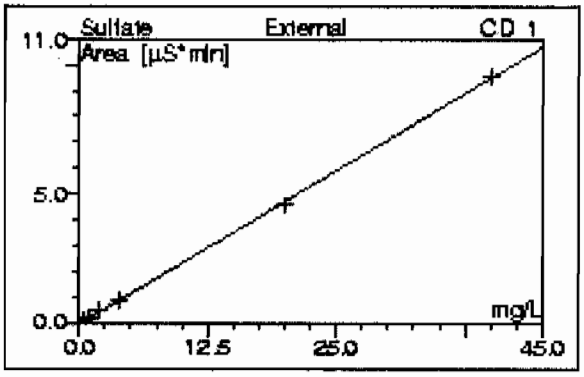

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9870	-0.0151	0.3999	0.0000
n.a.	n.a.	Chloride	0LOff	99.8968	-0.0458	0.3335	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9902	-0.0277	0.6093	0.0000
1	8.90	O-Phosphate-P	0LOff	99.5578	0.0543	0.2507	0.0000
n.a.	n.a.	Bromide	0LOff	99.8133	0.0208	0.1425	0.0000
n.a.	n.a.	Chlorate	0LOff	99.6813	0.0091	0.1132	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.9418	-0.0567	0.8019	0.0000
n.a.	n.a.	Sulfate	0LOff	99.9554	-0.0497	0.2386	0.0000
Average:				99.8530	-0.0138	0.3612	0.0000

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

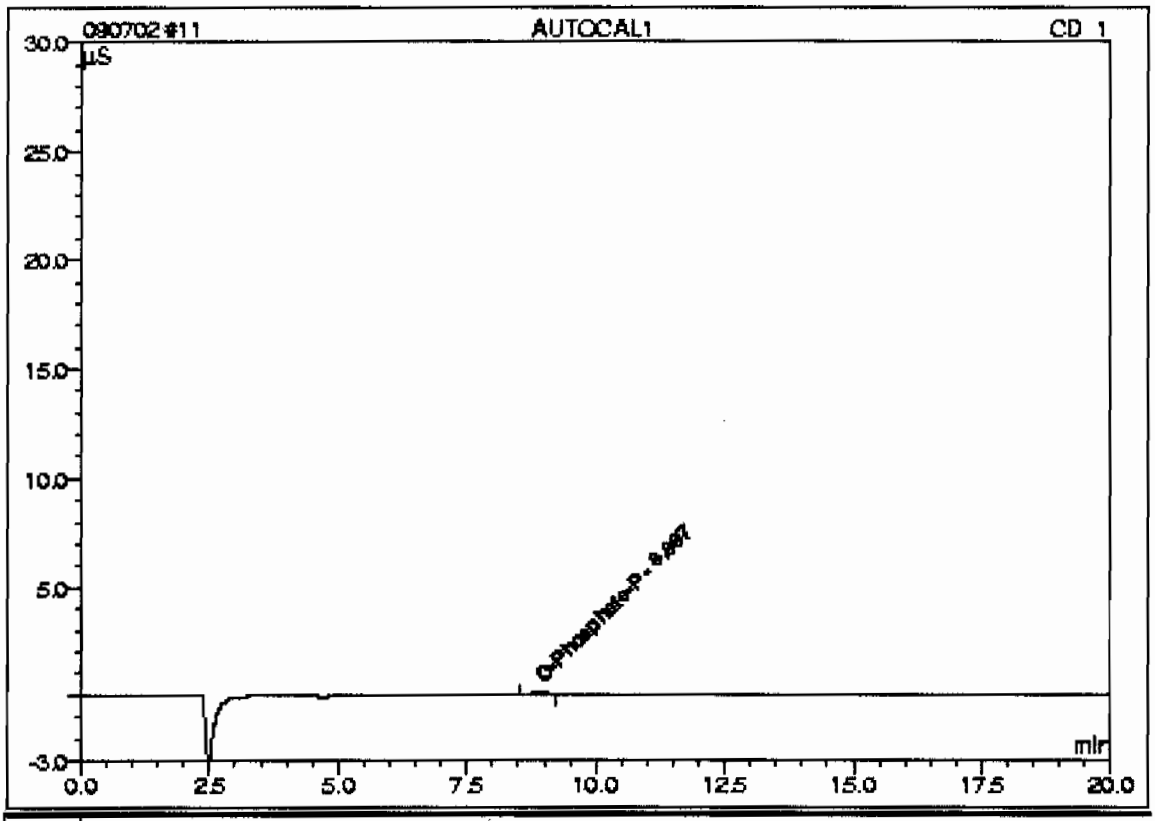

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	0.0000	-0.1095		0.01594	100.00
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				-0.1095	0.000	0.016	100.00

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/2009 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-015952;GLGCE096;300;9055

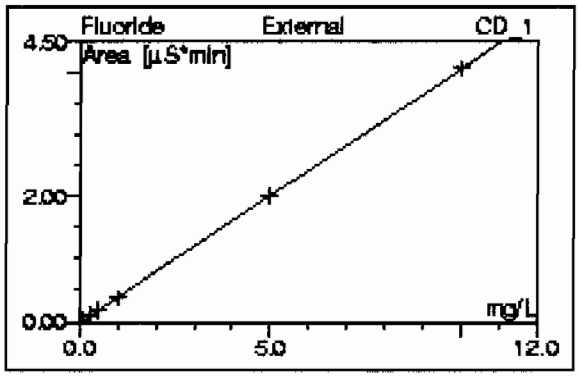

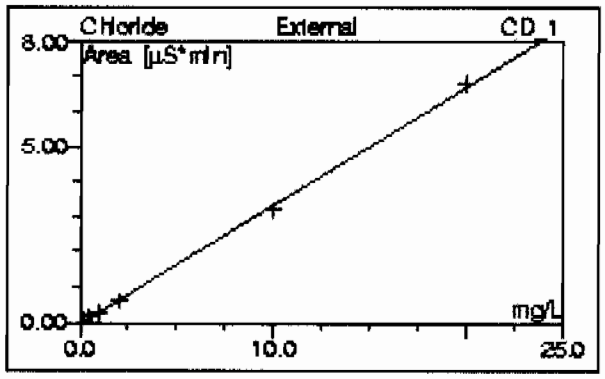

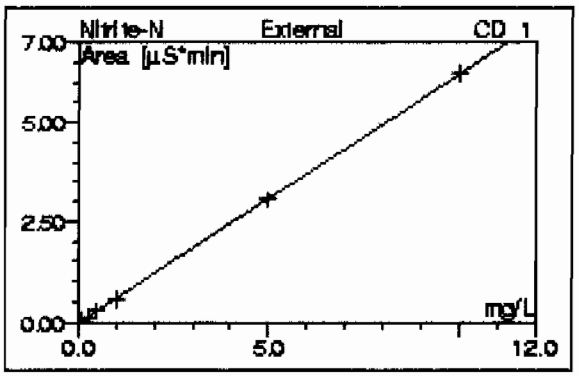

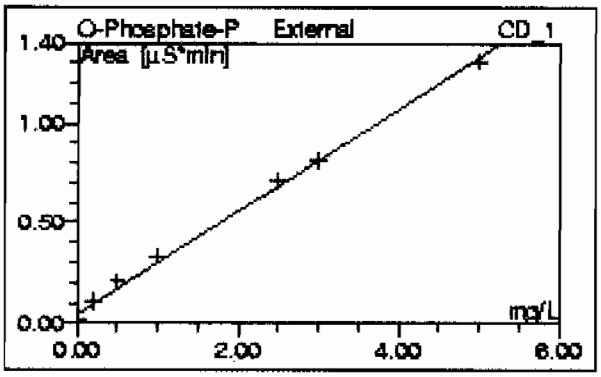

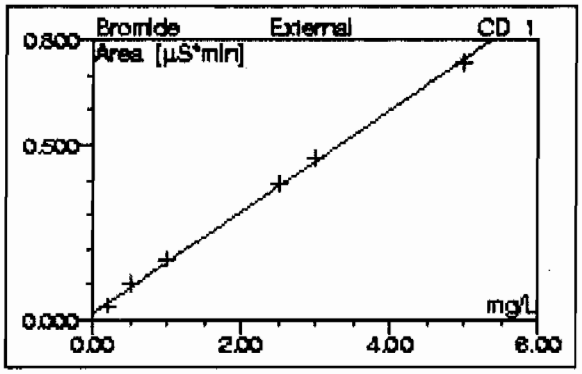

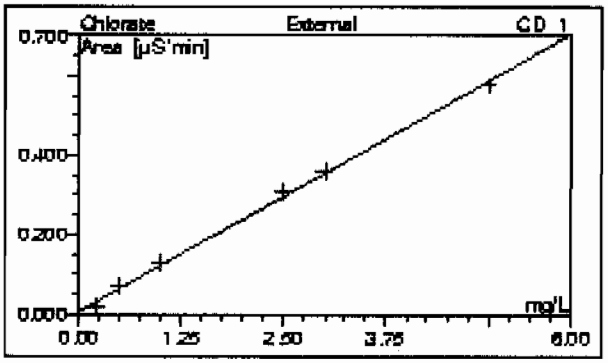

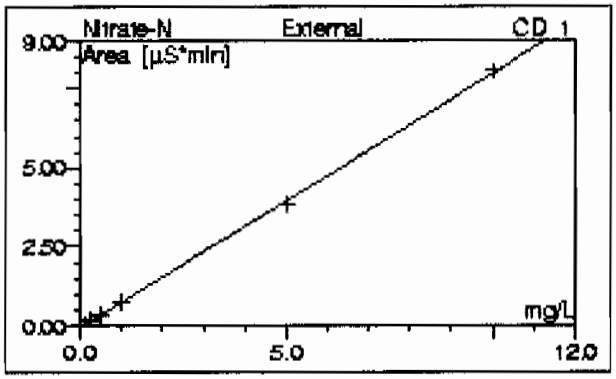

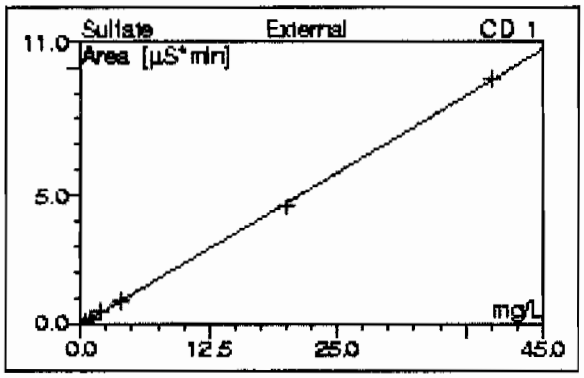

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9930	-0.0160	0.4065	0.0000
n.a.	n.a.	Chloride	0LOff	99.8994	-0.0462	0.3377	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9904	-0.0298	0.6239	0.0000
1	8.90	O-Phosphate-P	0LOff	99.7147	0.0441	0.2570	0.0000
n.a.	n.a.	Bromide	0LOff	99.8658	0.0157	0.1463	0.0000
n.a.	n.a.	Chlorate	0LOff	99.8007	0.0073	0.1162	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.9438	-0.0570	0.8036	0.0000
n.a.	n.a.	Sulfate	0LOff	99.9554	-0.0497	0.2396	0.0000
Average:				99.8954	-0.0164	0.3662	0.0000

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

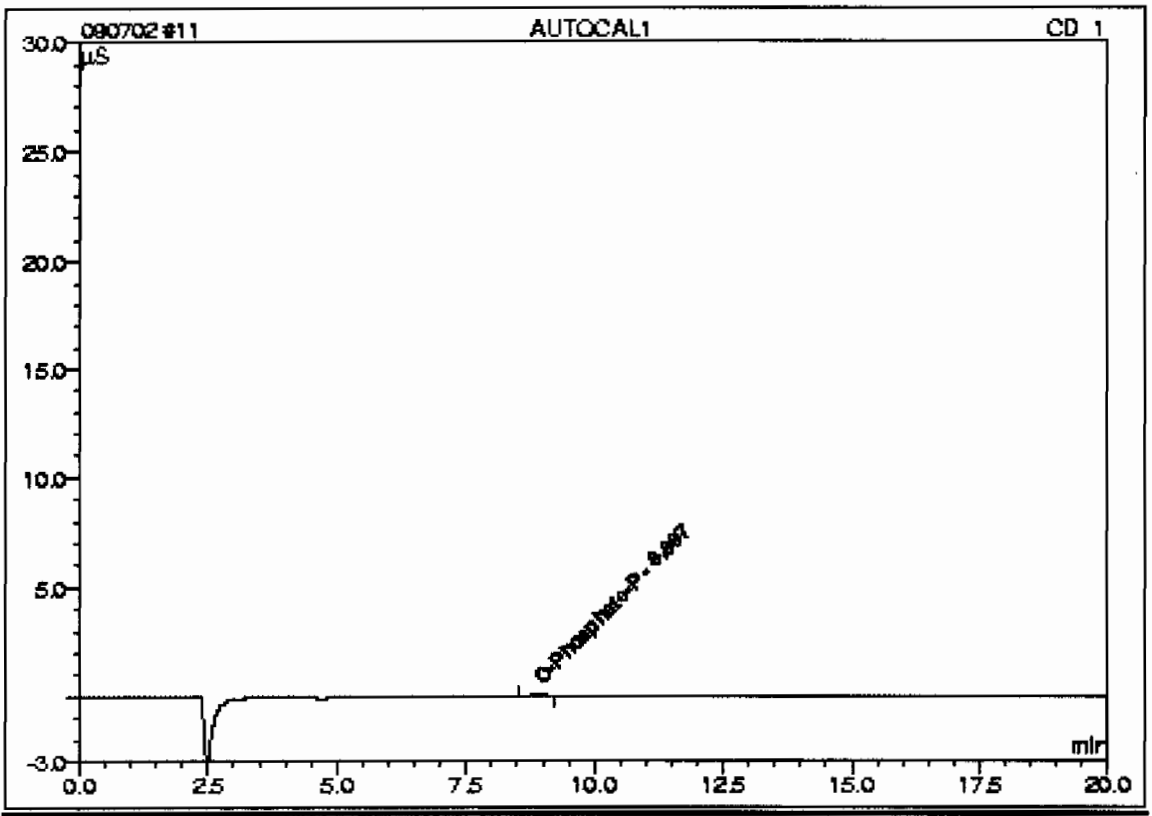

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	0.0000	-0.1095		0.01594	100.00
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				-0.1095	0.000	0.016	100.00

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/2009 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-015952;GLGCE086;300;9056

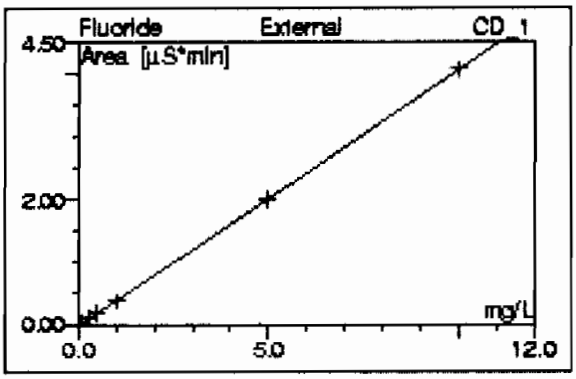

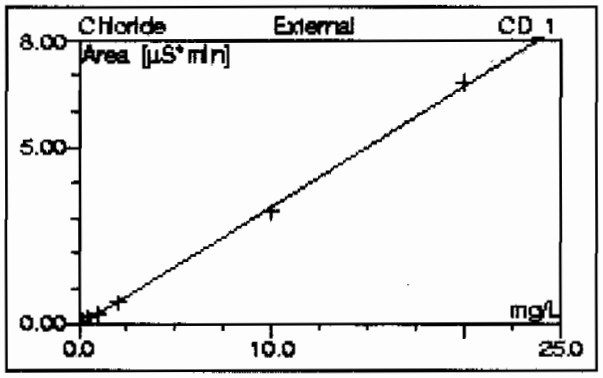

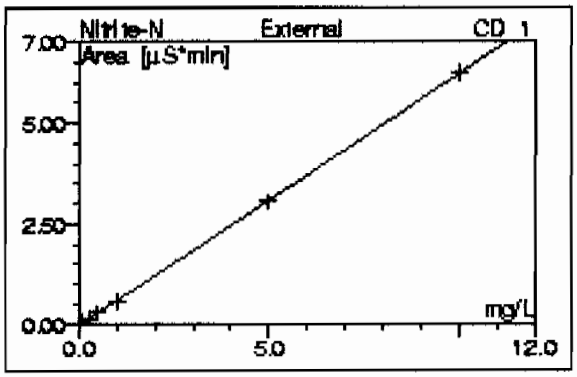

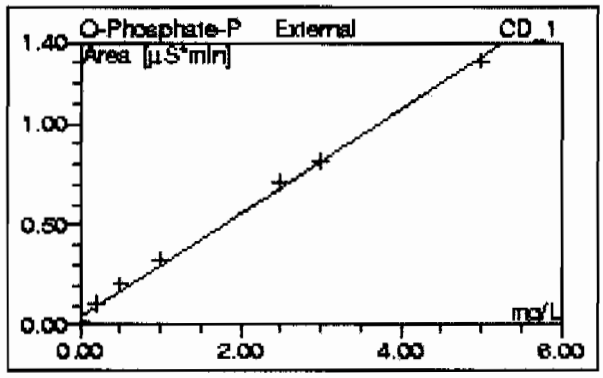

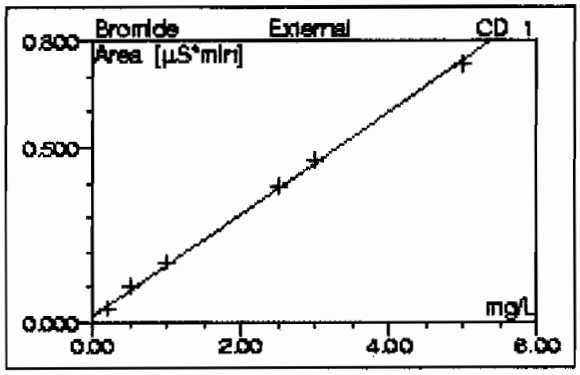

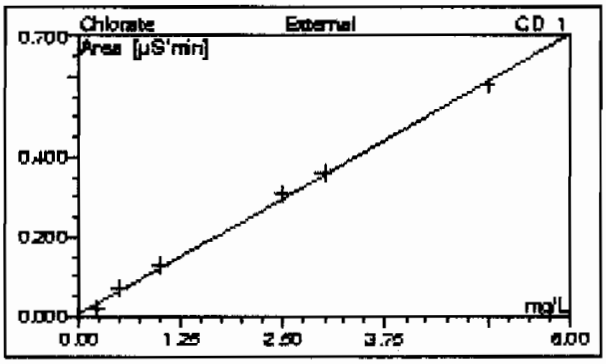

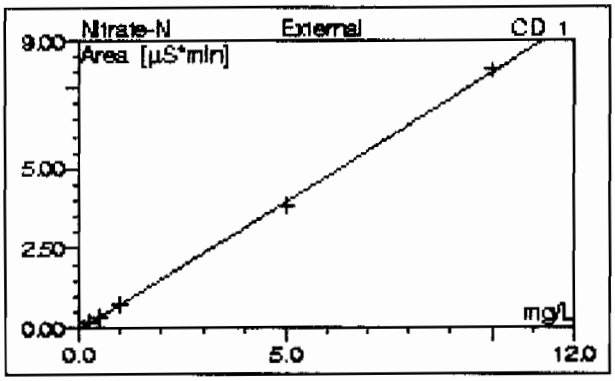

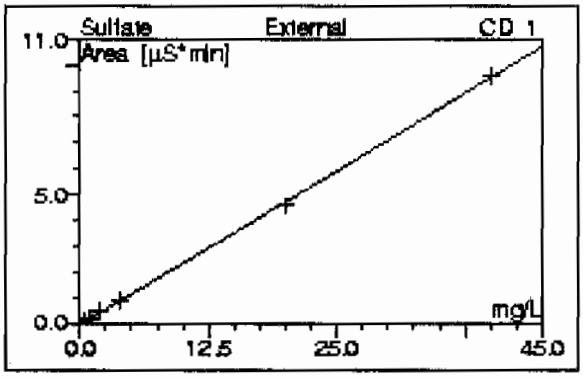

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9930	-0.0160	0.4065	0.0000
n.a.	n.a.	Chloride	0LOff	99.8994	-0.0462	0.3377	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9904	-0.0299	0.6239	0.0000
1	8.90	O-Phosphate-P	0LOff	99.7147	0.0441	0.2570	0.0000
n.a.	n.a.	Bromide	0LOff	99.8658	0.0157	0.1463	0.0000
n.a.	n.a.	Chlorate	0LOff	99.8007	0.0073	0.1162	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.9438	-0.0570	0.8036	0.0000
n.a.	n.a.	Sulfate	0LOff	99.9554	-0.0497	0.2386	0.0000
Average:				99.8954	-0.0164	0.3662	0.0000

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

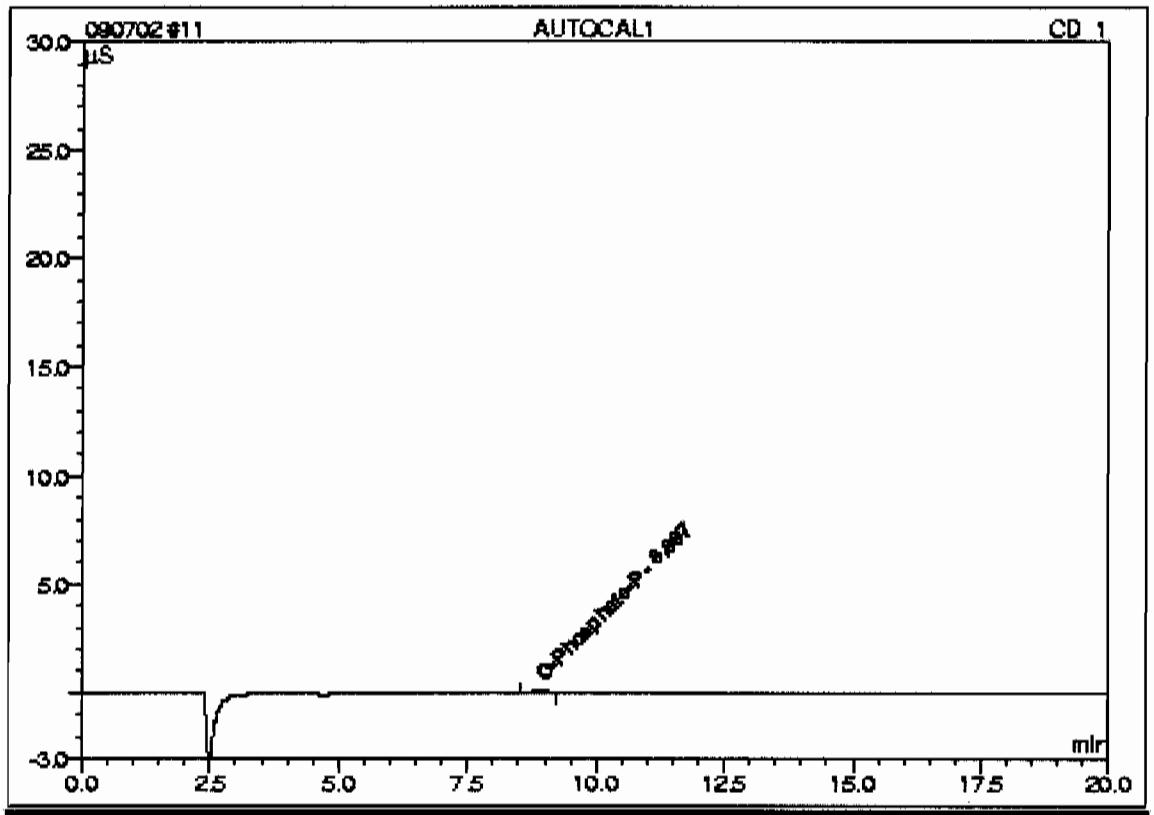

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	0.0000	-0.1095		0.01594	100.00
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				-0.1095	0.000	0.016	100.00

11 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702b	*Sample Amount:*	1.0000
Recording Time:	7/2/2009 18:01	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-015982;GLGCE085;300;9056

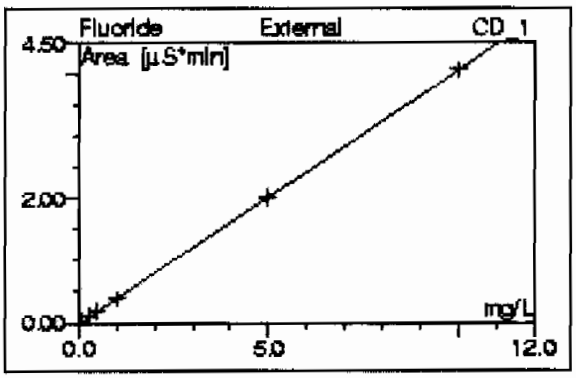

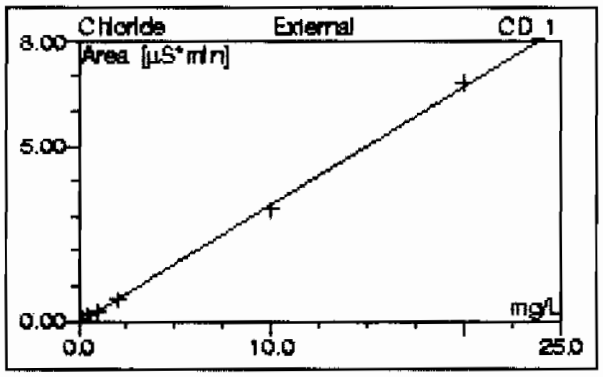

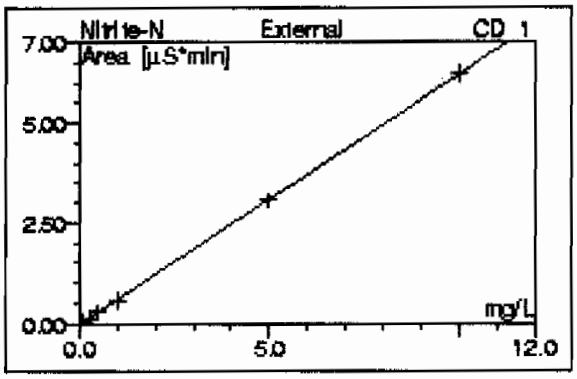

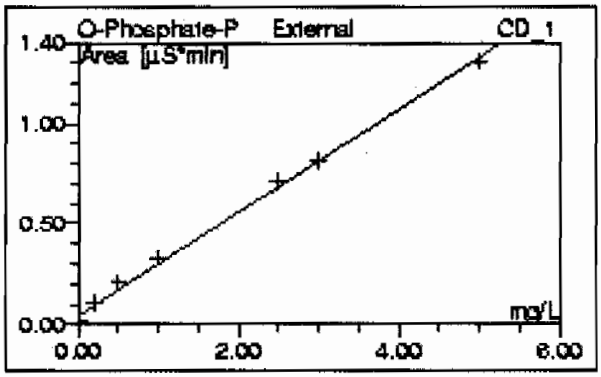

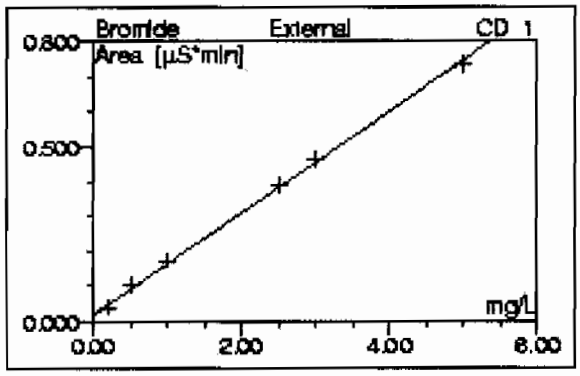

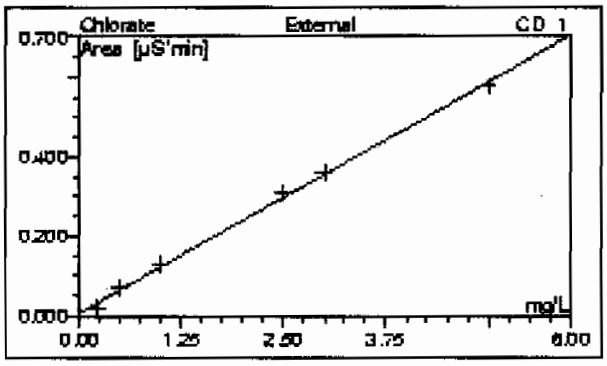

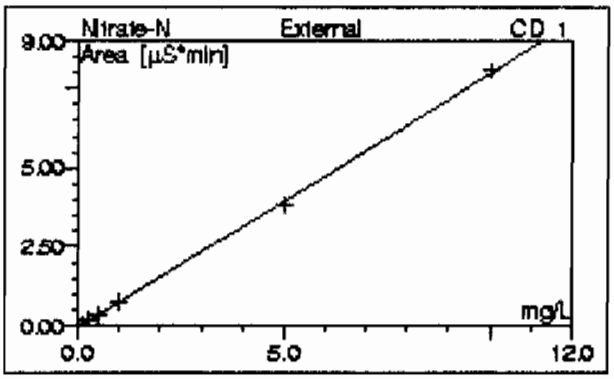

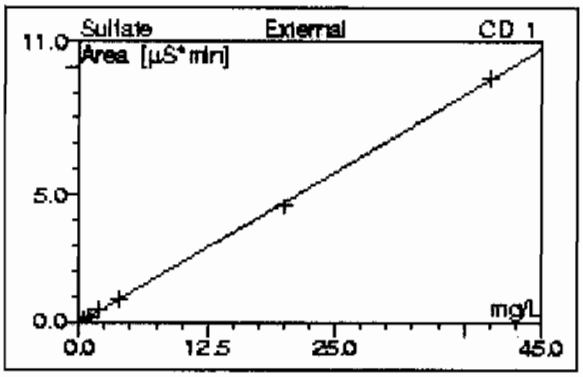

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9930	-0.0160	0.4065	0.0000
n.a.	n.a.	Chloride	0LOff	99.8994	-0.0462	0.3377	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9904	-0.0298	0.6239	0.0000
1	8.90	O-Phosphate-P	0LOff	99.7147	0.0441	0.2570	0.0000
n.a.	n.a.	Bromide	0LOff	99.8658	0.0157	0.1463	0.0000
n.a.	n.a.	Chlorate	0LOff	99.8007	0.0073	0.1162	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.9438	-0.0570	0.8036	0.0000
n.a.	n.a.	Sulfate	0LOff	99.9554	-0.0497	0.2386	0.0000
Average:				99.8954	-0.0164	0.3662	0.0000

This is runlog for Sequence 090702.seq for IC7

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/02/09 14:13		1	090702	VXP1
BLK	07/02/09 14:35		1	090702	VXP1
BLK	07/02/09 15:21		1	090702	VXP1
ICAL-07	07/02/09 15:44		1	090702	VXP1
ICAL-06	07/02/09 16:07		1	090702	VXP1
ICAL-05	07/02/09 16:30		1	090702	VXP1
ICAL-04	07/02/09 16:53		1	090702	VXP1
ICAL-03	07/02/09 17:15		1	090702	VXP1
ICAL-02	07/02/09 17:38		1	090702	VXP1
ICAL-01	07/02/09 18:01		1	090702	VXP1
ICV	07/02/09 18:24		1	090702	VXP1
ICB	07/02/09 18:47		1	090702	VXP1
1201870628	07/02/09 19:10	880959	1	090702	VXP1
1201870629	07/02/09 19:32	880959	1	090702	VXP1
232429001	07/02/09 19:55	880959	1	090702	VXP1
1201870630	07/02/09 20:18	880959	1	090702	VXP1
1201870631	07/02/09 20:41	880959	1	090702	VXP1
1201870636	07/02/09 21:04	880959	1	090702	VXP1
232429002	07/02/09 21:27	880959	1	090702	VXP1
232429003	07/02/09 21:50	880959	1	090702	VXP1
232429004	07/02/09 22:13	880959	1	090702	VXP1
232429005	07/02/09 22:36	880959	1	090702	VXP1
CVH	07/02/09 22:59		1	090702	VXP1
CCB	07/02/09 23:21		1	090702	VXP1
232429006	07/02/09 23:44	880959	1	090702	VXP1

12 WIC090702-02ICV

Sample Name:	WIC090702-02ICV	*Injection Volume:*	50.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:24	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E086;300;9056

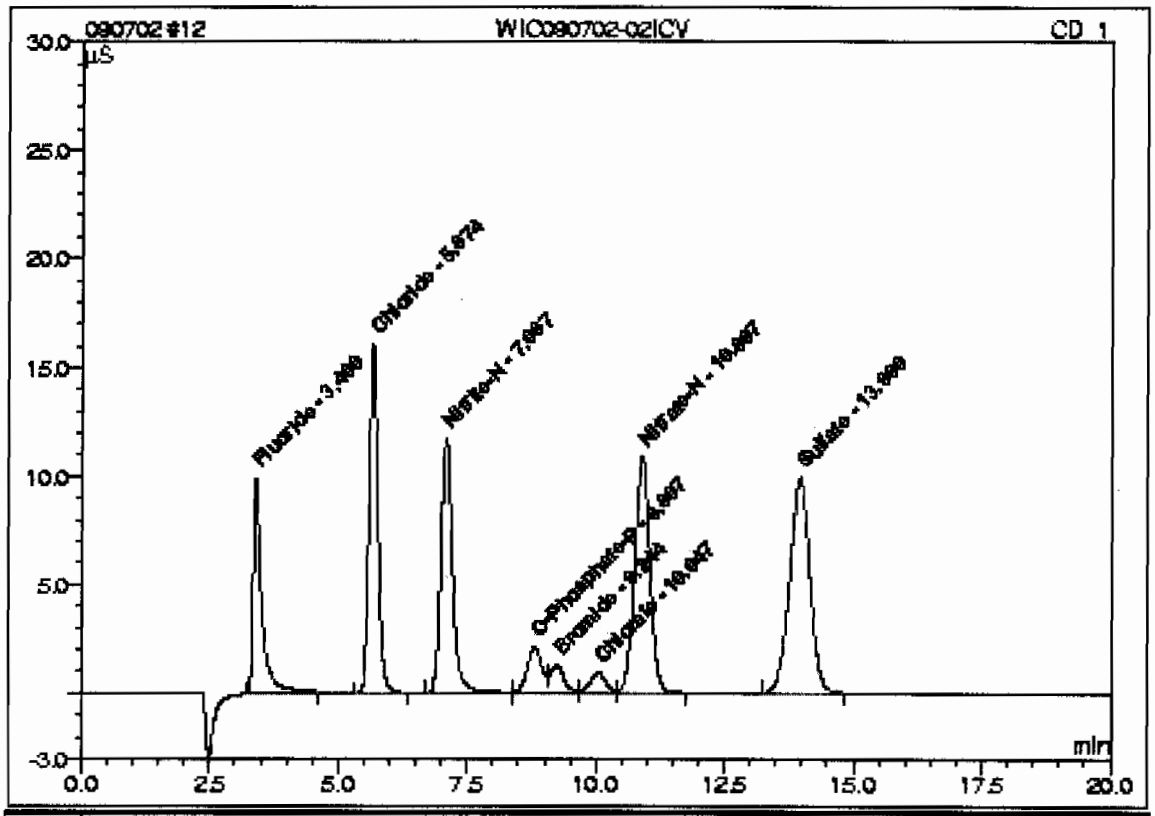

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.9197		1.98416	11.12
2	5.67	Chloride	n.a.	9.4490		3.14519	17.63
3	7.09	Nitrite-N	n.a.	4.8962		3.02494	16.95
4	8.81	O-Phosphate-P	n.a.	2.5085		0.68864	3.86
5	9.24	Bromide	n.a.	2.5209		0.38461	2.16
6	10.05	Chlorate	n.a.	2.5682		0.30563	1.71
7	10.90	Nitrate-N	n.a.	4.7705		3.77655	21.17
8	13.96	Sulfate	n.a.	19.2037		4.53266	25.40
Total:				50.8368	0.000	17.842	100.00

12 WIC090702-02ICV

Sample Name:	WIC090702-02ICV	*Injection Volume:*	50.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:24	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014109;GLGCE085;300;9058

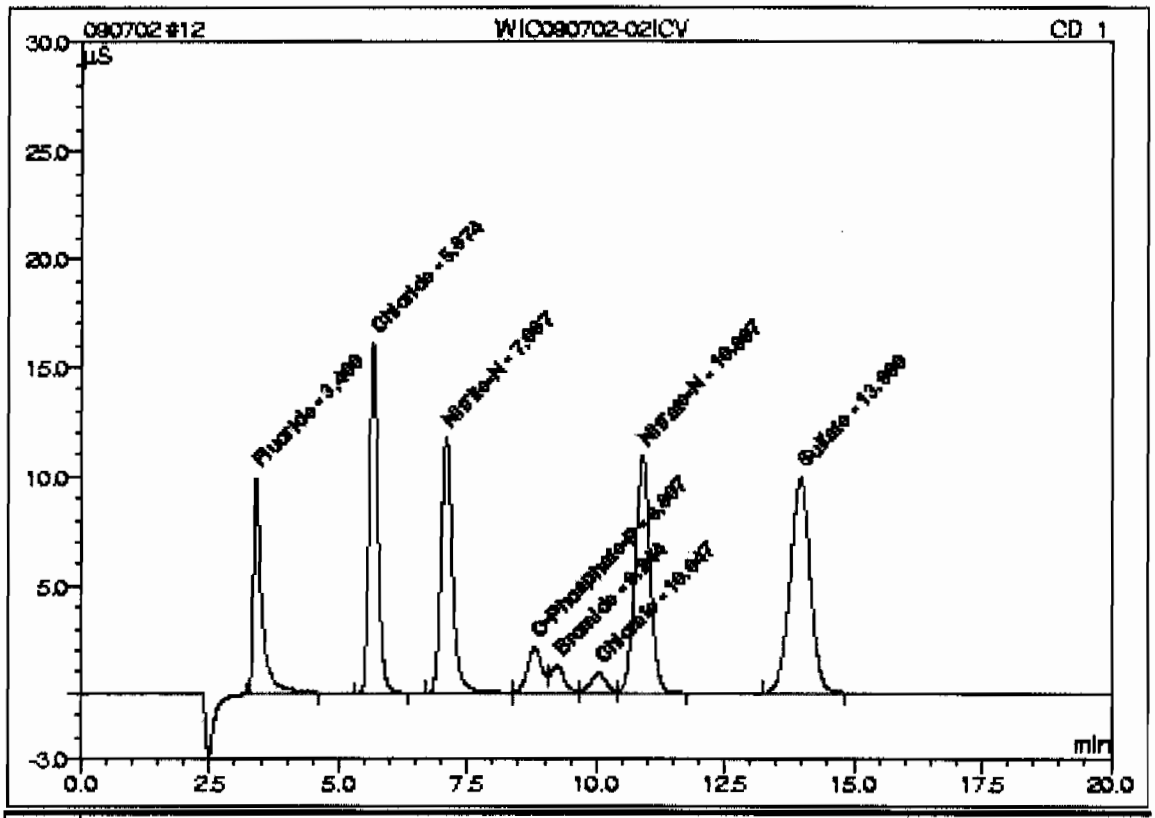

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.9197		1.98416	11.12
2	5.67	Chloride	n.a.	9.4490		3.14519	17.63
3	7.09	Nitrite-N	n.a.	4.8962		3.02494	16.95
4	8.81	O-Phosphate-P	n.a.	2.5085		0.68964	3.86
5	9.24	Bromide	n.a.	2.5209		0.38461	2.16
6	10.05	Chlorate	n.a.	2.5682		0.30563	1.71
7	10.90	Nitrate-N	n.a.	4.7705		3.77655	21.17
8	13.96	Sulfate	n.a.	19.2097		4.53266	25.40
Total:				50.8368	0.000	17.842	100.00

12 WIC090702-02ICV

Sample Name:	WIC090702-02ICV	*Injection Volume:*	50.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:24	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCB085;300;9055

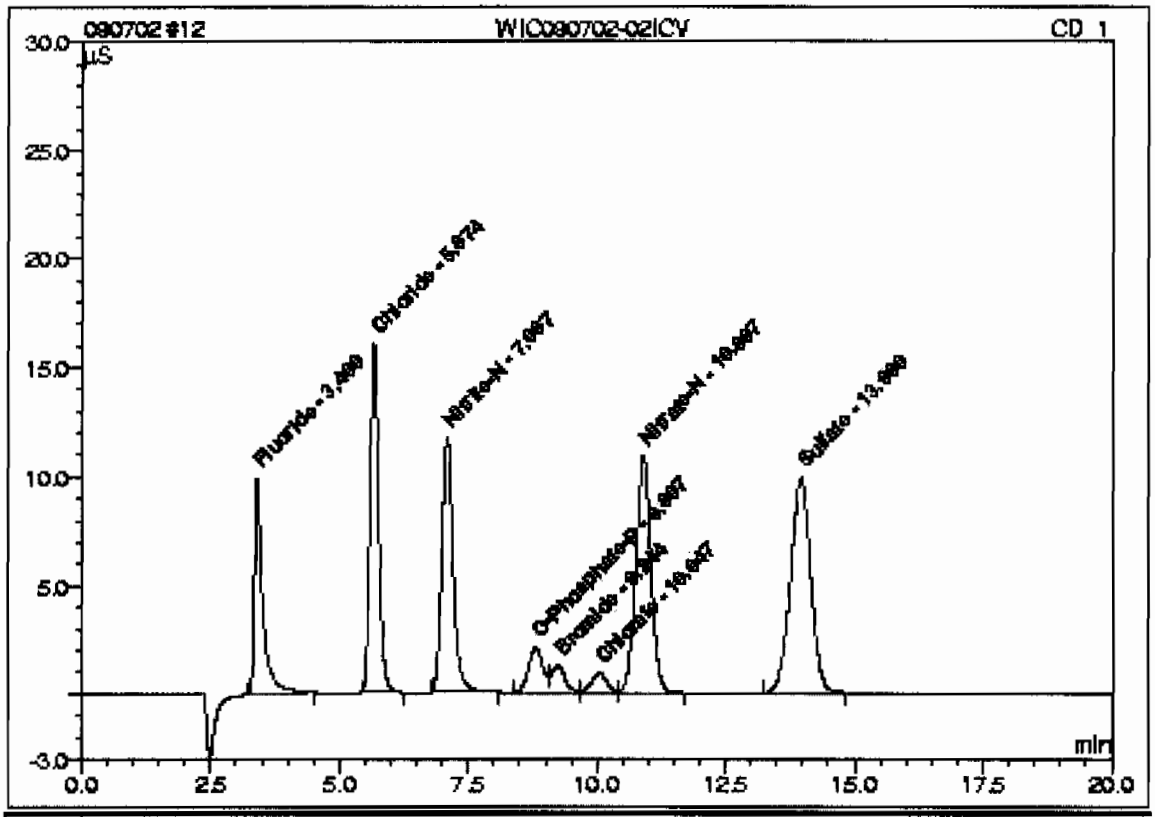

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.8926		1.94155	10.99
2	5.67	Chloride	n.a.	9.4468		3.10481	17.57
3	7.09	Nitrite-N	n.a.	4.9034		2.95977	16.75
4	8.81	O-Phosphate-P	n.a.	2.4988		0.68059	3.85
5	9.24	Bromide	n.a.	2.5150		0.37909	2.15
6	10.05	Chlorate	n.a.	2.5728		0.30046	1.70
7	10.90	Nitrate-N	n.a.	4.7749		3.77237	21.35
8	13.96	Sulfate	n.a.	19.2037		4.53266	25.65
Total:				50.8081	0.000	17.671	100.00

13 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:47	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E088;300;9058

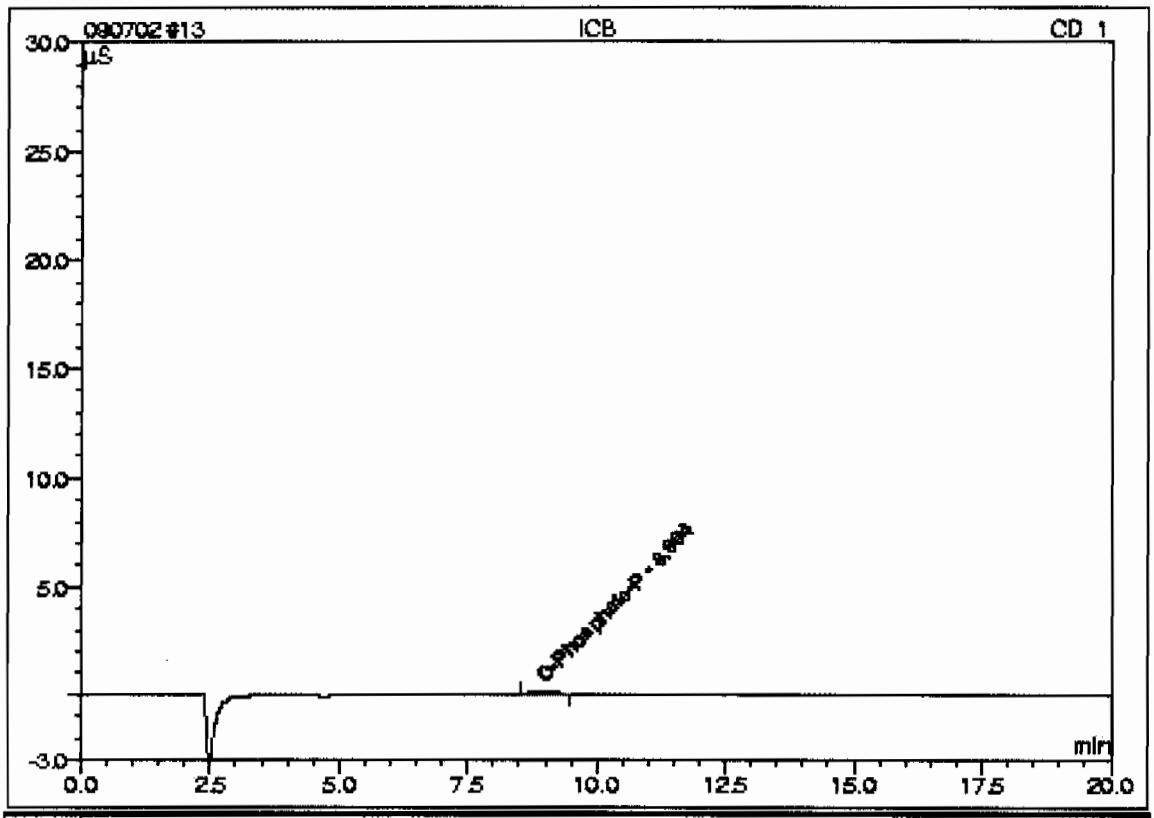

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	n.a.	-0.0901		0.03168	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.0901	0.000	0.032	100.00

13 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:47	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGC E088;300;9058

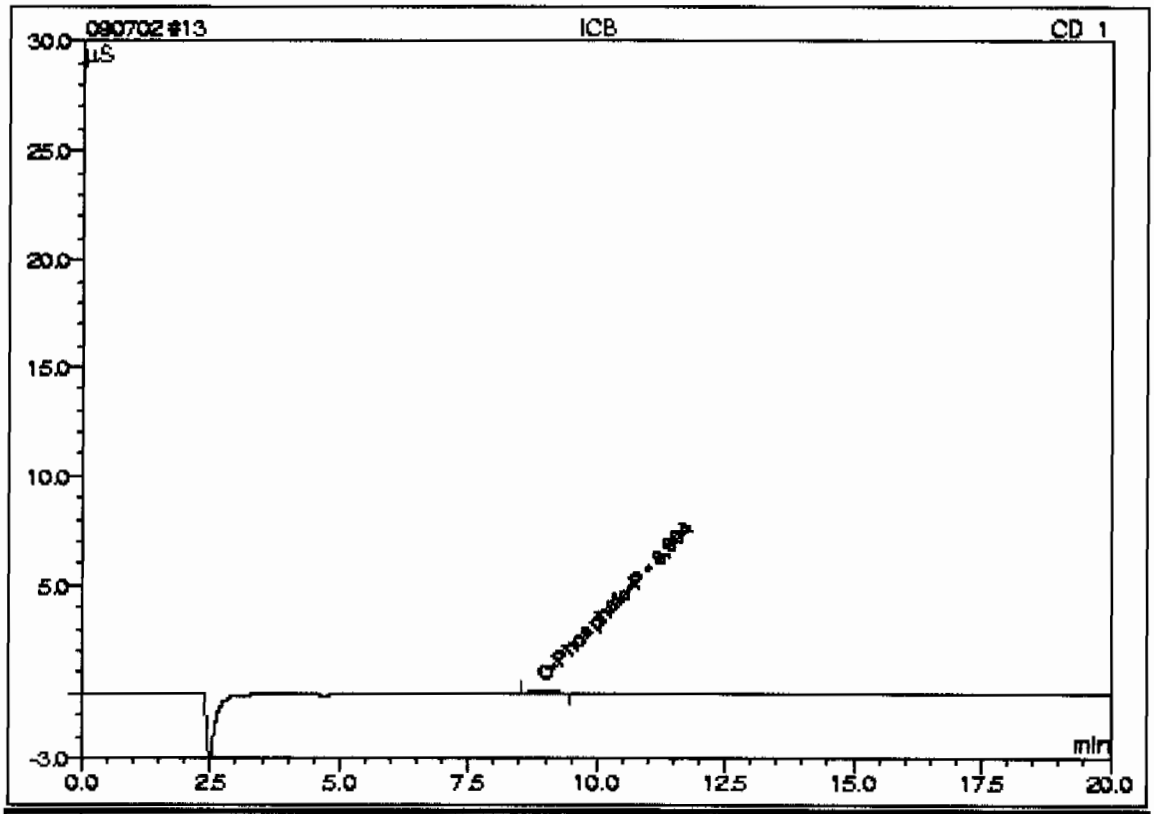

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	n.a.	-0.0483		0.03168	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.0483	0.000	0.032	100.00

13 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/2/09 18:47	*Analyst:*	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9058

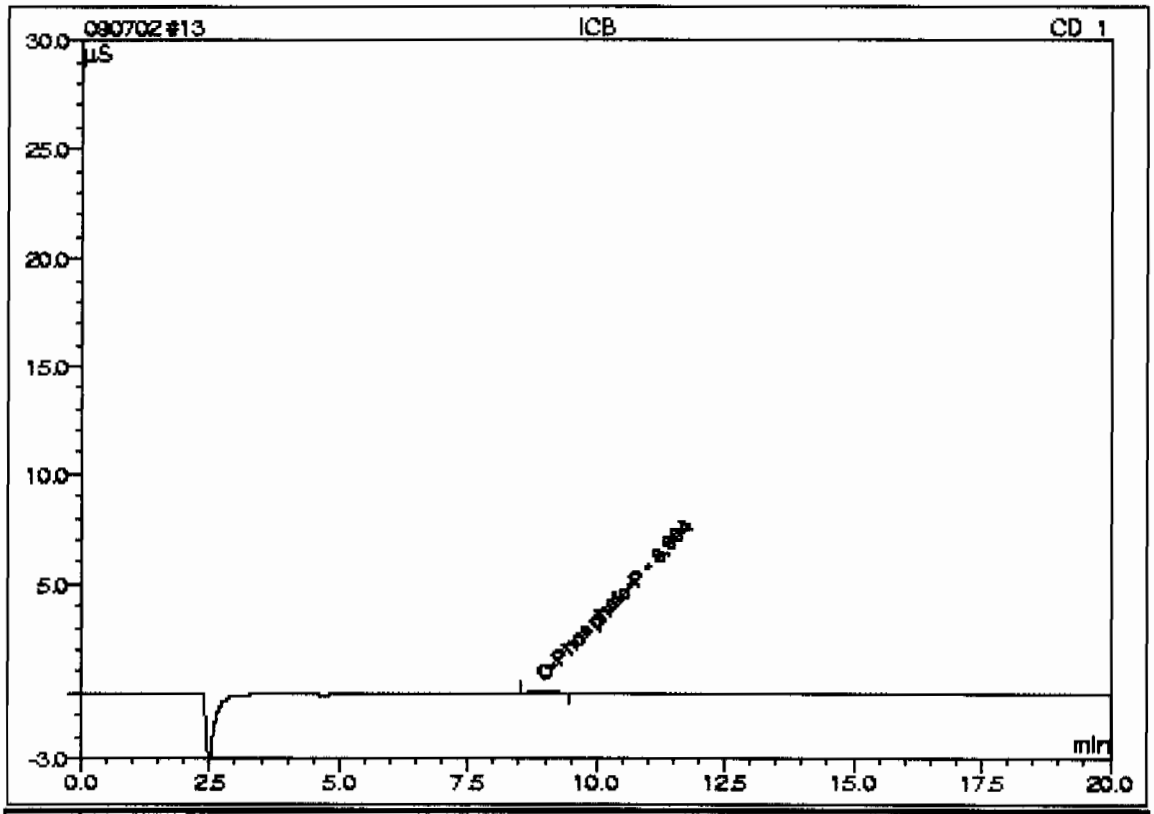

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	8.90	O-Phosphate-P	n.a.	-0.0483		0.03168	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.0483	0.000	0.032	100.00

This is runlog for Sequence 090707.seq for IC7

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/07/09 09:00		1	090707	VXP1
BLK	07/07/09 09:22		1	090707	VXP1
BLK	07/07/09 09:45		1	090707	VXP1
ICV	07/07/09 10:08		1	090707	VXP1
ICB	07/07/09 10:31		1	090707	VXP1
1201869185	07/07/09 10:54	880321	1	090707	VXP1
1201869186	07/07/09 11:16	880321	1	090707	VXP1
232372001	07/07/09 11:39	880321	100	090707	VXP1
232372002	07/07/09 12:02	880321	100	090707	VXP1
CVH	07/07/09 14:22		1	090707	VXP1
CCB	07/07/09 14:44		1	090707	VXP1
232372003	07/07/09 15:07	880321	100	090707	VXP1
232372004	07/07/09 15:29	880321	100	090707	VXP1
232372005	07/07/09 15:52	880321	100	090707	VXP1
232372006	07/07/09 16:15	880321	100	090707	VXP1
1201869187	07/07/09 16:38	880321	100	090707	VXP1
1201869188	07/07/09 17:01	880321	100	090707	VXP1
CVH	07/07/09 17:24		1	090707	VXP1
CCB	07/07/09 17:47		1	090707	VXP1
232372008	07/07/09 18:10	880321	100	090707	VXP1
232372009	07/07/09 18:33	880321	100	090707	VXP1
CCV	07/07/09 18:56		1	090707	VXP1
CCB	07/07/09 19:18		1	090707	VXP1
1201873802	07/07/09 19:41	882280	1	090707	VXP1
1201873803	07/07/09 20:04	882280	1	090707	VXP1
232663001	07/07/09 20:27	882280	1	090707	VXP1
1201873804	07/07/09 20:50	882280	1	090707	VXP1
1201873805	07/07/09 21:13	882280	1	090707	VXP1

1201873807	07/07/09	21:36	882280	1	090707	VXP1
232663002	07/07/09	21:59	882280	1	090707	VXP1
232663003	07/07/09	22:22	882280	1	090707	VXP1
232663004	07/07/09	22:45	882280	1	090707	VXP1
232663005	07/07/09	23:07	882280	1	090707	VXP1
CVH	07/07/09	23:30		1	090707	VXP1
CCB	07/07/09	23:53		1	090707	VXP1

11 WIC090707-02ICV

Sample Name:	WIC090707-02ICV	*Injection Volume:*	50.0
Vial Number:	4	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 10:08	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCB088;300;9058	

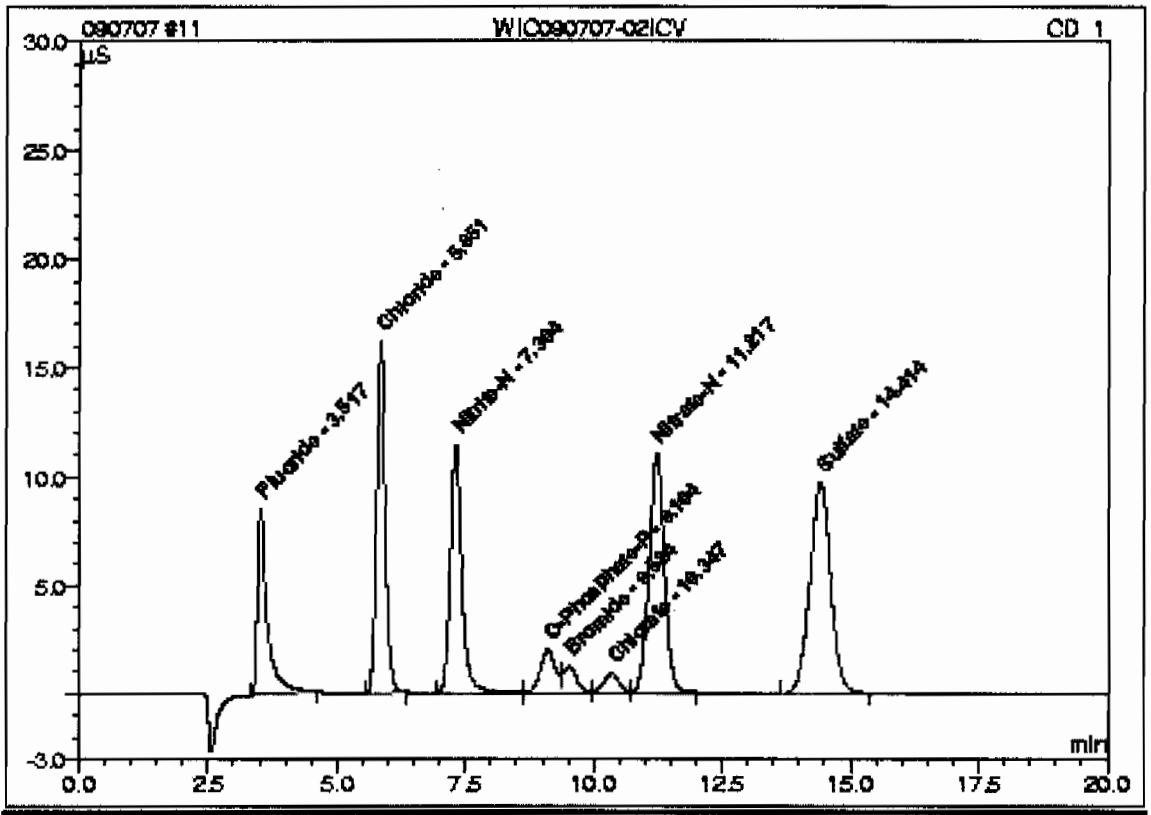

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.52	Fluoride	n.a.	4.6191		1.86195	10.56
2	5.85	Chloride	n.a.	9.4367		3.14105	17.81
3	7.30	Nitrite-N	n.a.	4.8097		2.97095	16.85
4	9.10	O-Phosphate-P	n.a.	2.3373		0.64466	3.66
5	9.52	Bromide	n.a.	2.5200		0.38447	2.18
6	10.35	Chlorate	n.a.	2.5553		0.30413	1.72
7	11.22	Nitrate-N	n.a.	4.7830		3.78653	21.47
8	14.41	Sulfate	n.a.	19.2315		4.53929	25.74
Total:				50.2925	0.000	17.633	100.00

12 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	5	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 10:31	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

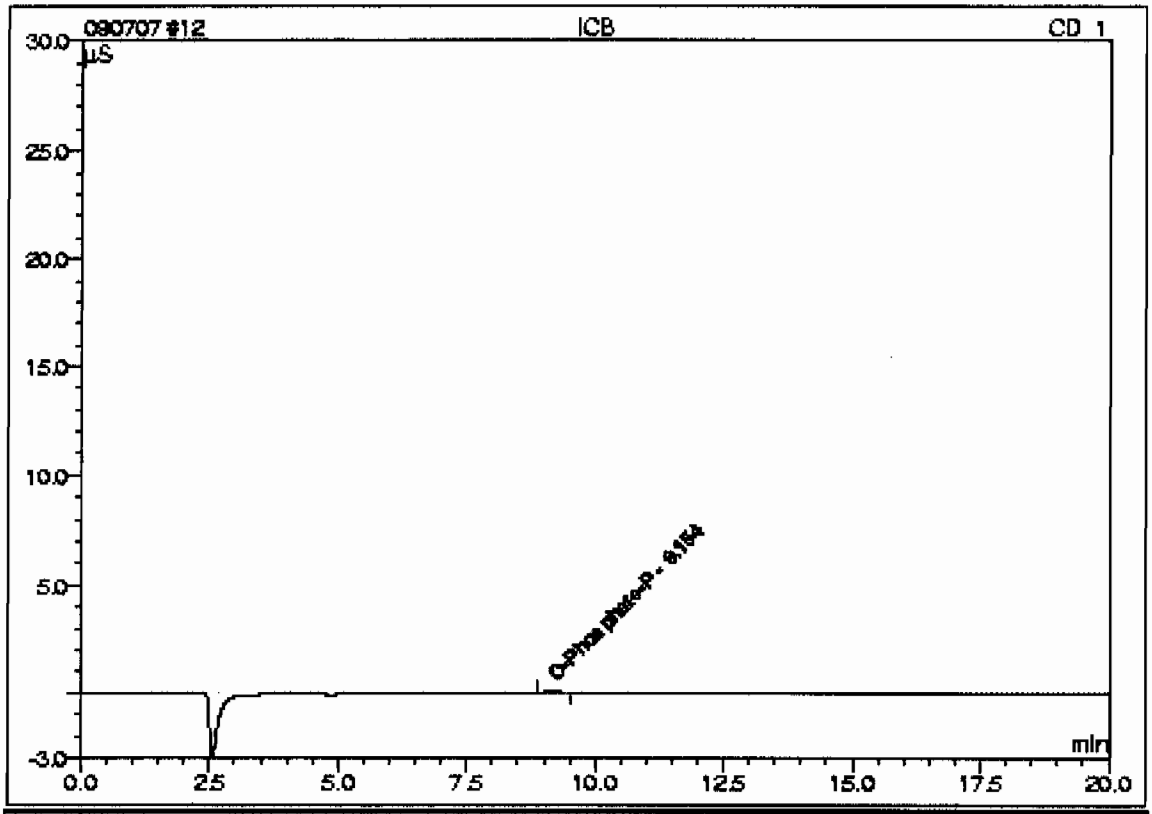

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified ?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
1	9.15	O-Phosphate-P	n.a.	-0.1097		0.01589	100.00
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				-0.1097	0.000	0.016	100.00

29 WIC090707-02CCV

Sample Name:	WIC090707-02CCV	*Injection Volume:*	50.0
Vial Number:	22	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 18:55	*Analyst:*	VXP1
Run Time (min):	20.00	*Column:*	AS9HC-014108;GLGCE088;300;9055

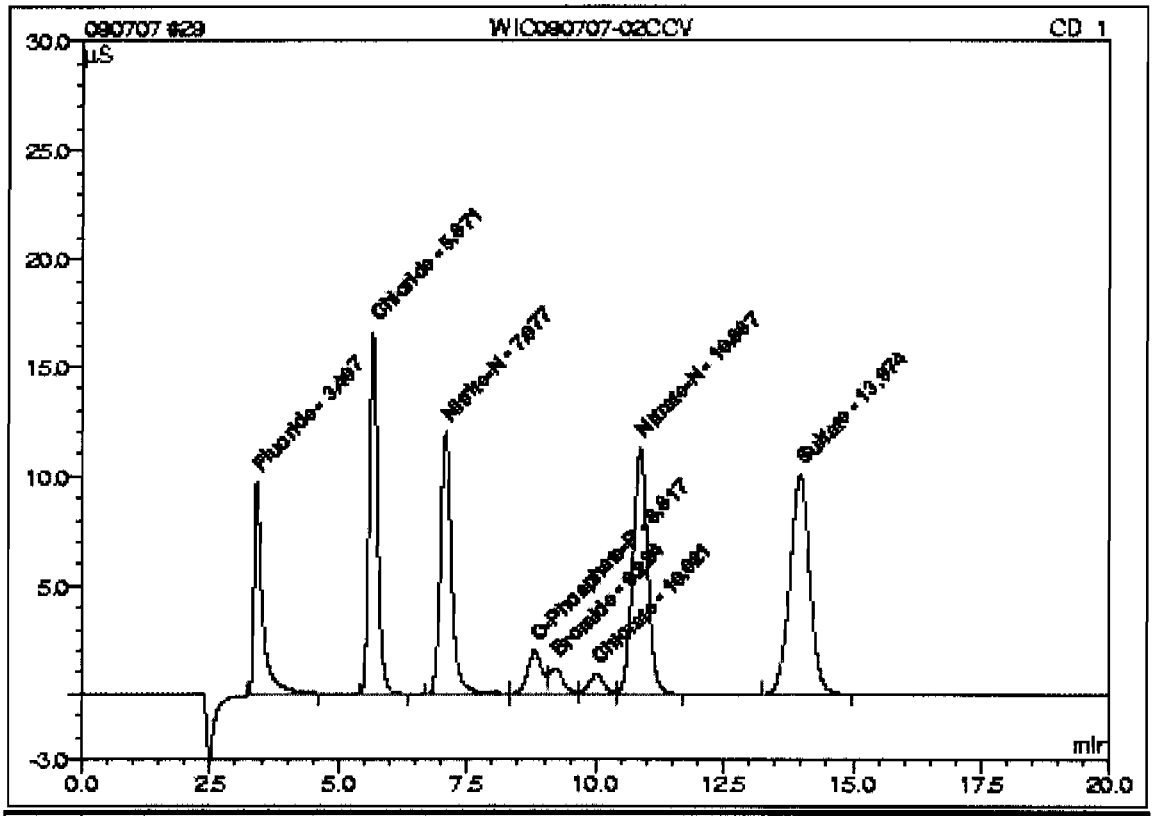

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	4.8998		1.97200	11.10
2	5.67	Chloride	n.a.	9.4872		3.15809	17.78
3	7.08	Nitrite-N	n.a.	4.8760		3.01232	16.96
4	8.82	O-Phosphate-P	n.a.	2.3010		0.63533	3.58
5	9.22	Bromide	n.a.	2.3446		0.35980	2.02
6	10.02	Chlorate	n.a.	2.4366		0.29035	1.63
7	10.87	Nitrate-N	n.a.	4.7801		3.78422	21.30
8	13.97	Sulfate	n.a.	19.2886		4.55291	25.63
Total:				50.4038	0.000	17.764	100.00

30 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	23	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 19:18	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9056

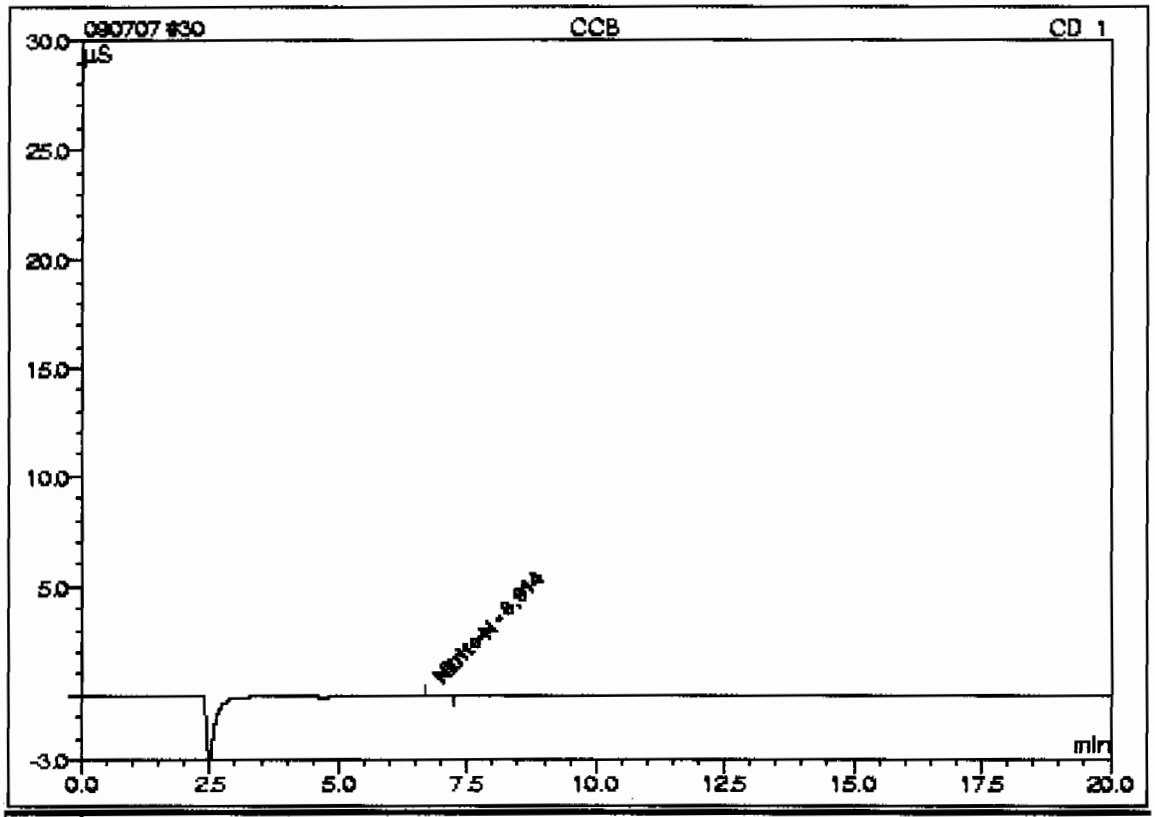

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
1	6.91	Nitrite-N	n.a.	0.0642		0.01029	100.00
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0642	0.000	0.010	100.00

31 1201873802/882280/1/1/MB

Sample Name:	1201873802/882280/1/1/MB	*Injection Volume:*	50.0
Vial Number:	24	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 19:41	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;900;9056	

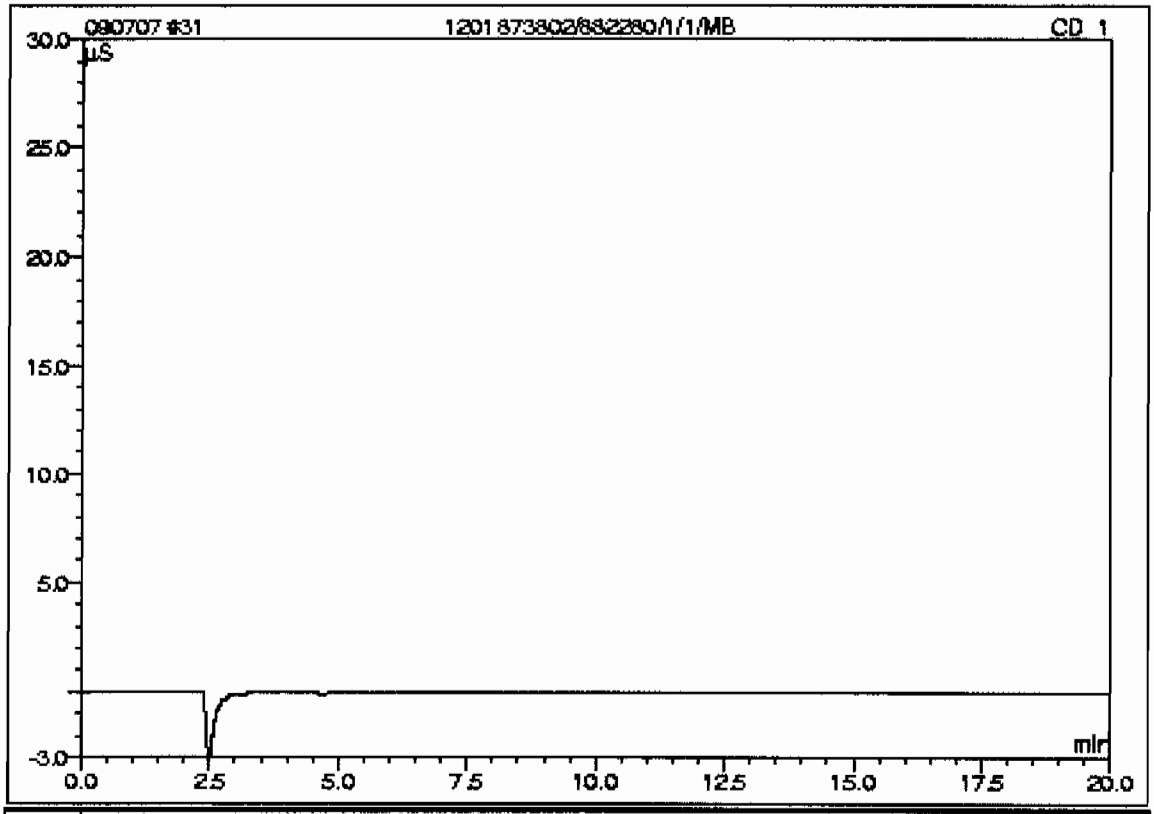

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

32 1201873803/882280/1/1/LCS

Sample Name:	1201873803/882280/1/1/LCS	*Injection Volume:*	50.0
Vial Number:	25	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 20:04	*Analyst:*	VXP1
Run Time (min):	20.00	*Column:*	AS9HC-014108;GLGCE086;300;9056

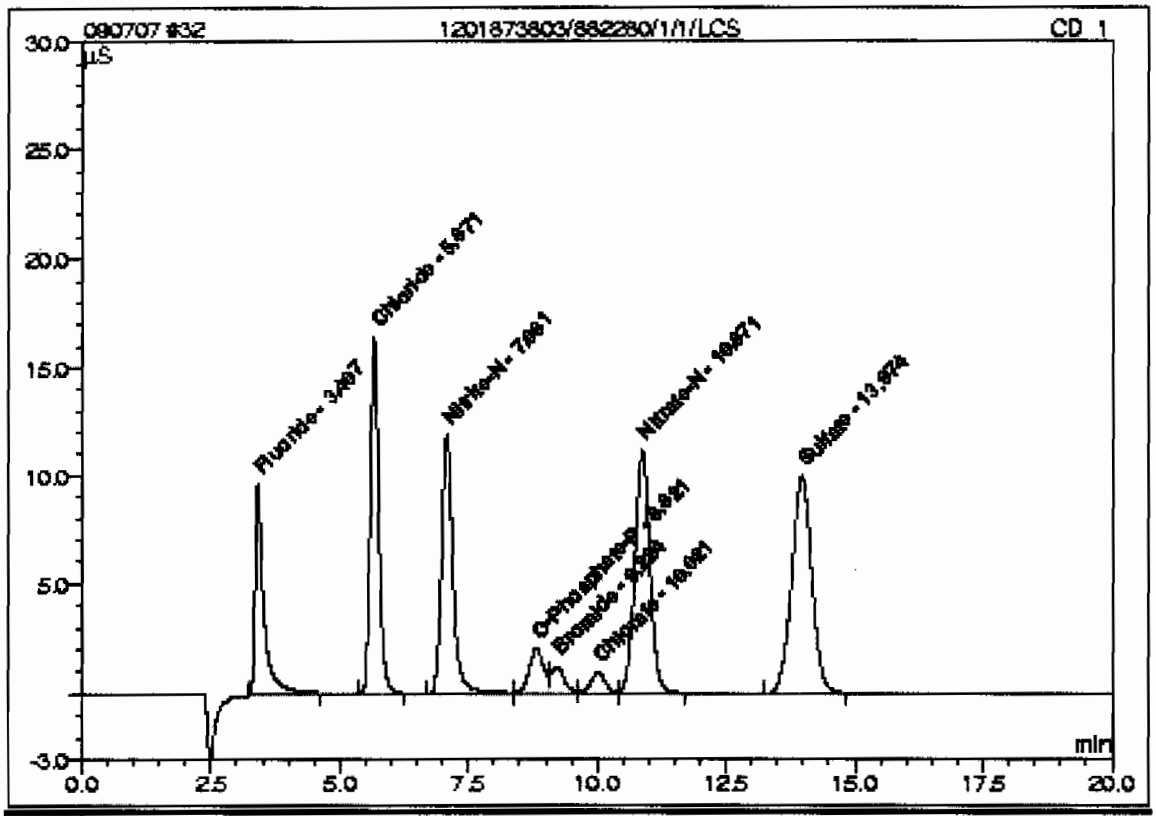

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	4.8288		1.94719	11.08
2	5.67	Chloride	n.a.	9.3457		3.11031	17.70
3	7.08	Nitrite-N	n.a.	4.8424		2.99139	17.02
4	8.82	O-Phosphate-P	n.a.	2.3257		0.64167	3.65
5	9.22	Bromide	n.a.	2.3552		0.36036	2.05
6	10.02	Chlorate	n.a.	2.4660		0.29976	1.67
7	10.87	Nitrate-N	n.a.	4.7351		3.74805	21.32
8	13.97	Sulfate	n.a.	18.9973		4.48941	25.51
Total:				49.8963	0.000	17.576	100.00

33 232663001/882280/1/1/

Sample Name:	232663001/882280/1/1/	*Injection Volume:*	50.0
Vial Number:	26	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 20:27	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE086;300;9055	

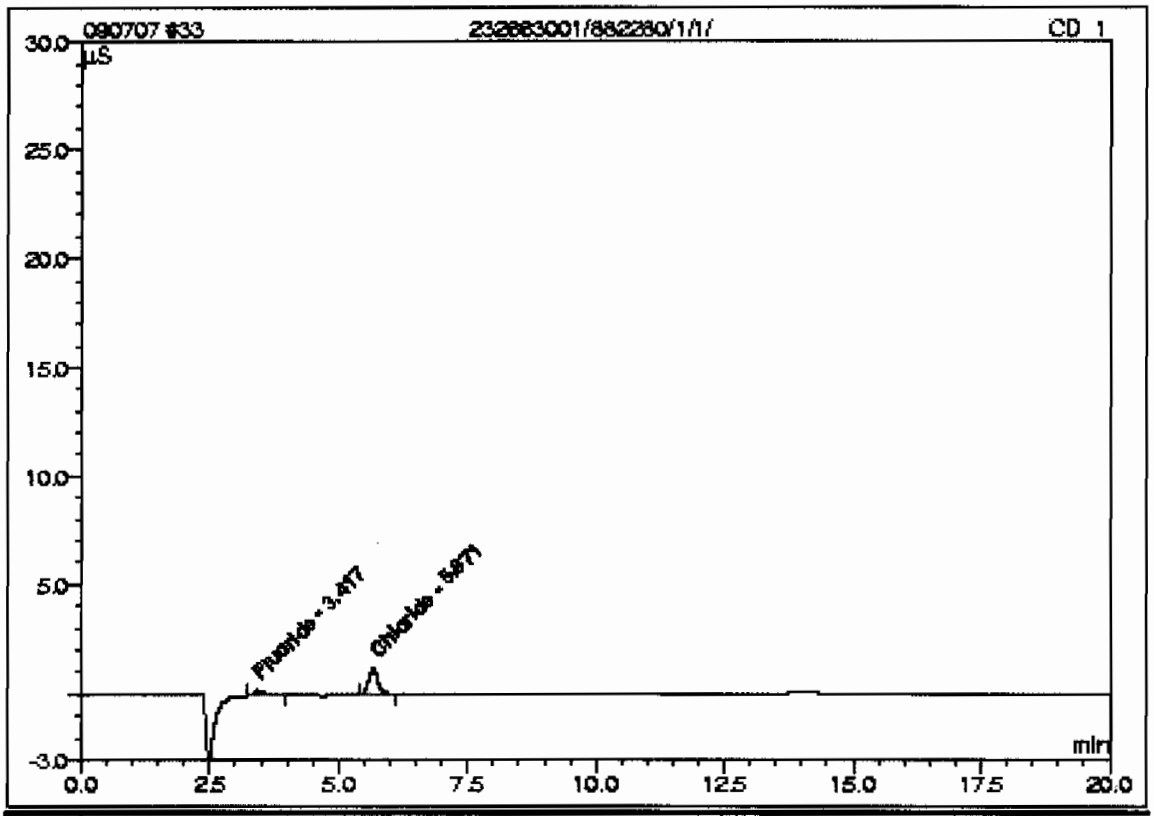

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.1706		0.05342	18.57
2	5.67	Chloride	n.a.	0.8302		0.23423	81.43
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				1.0008	0.000	0.288	100.00

34 1201873804/882280/1/1/DUP

Sample Name:	1201873804/882280/1/1/DUP	*Injection Volume:*	50.0
Vial Number:	27	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 20:50	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

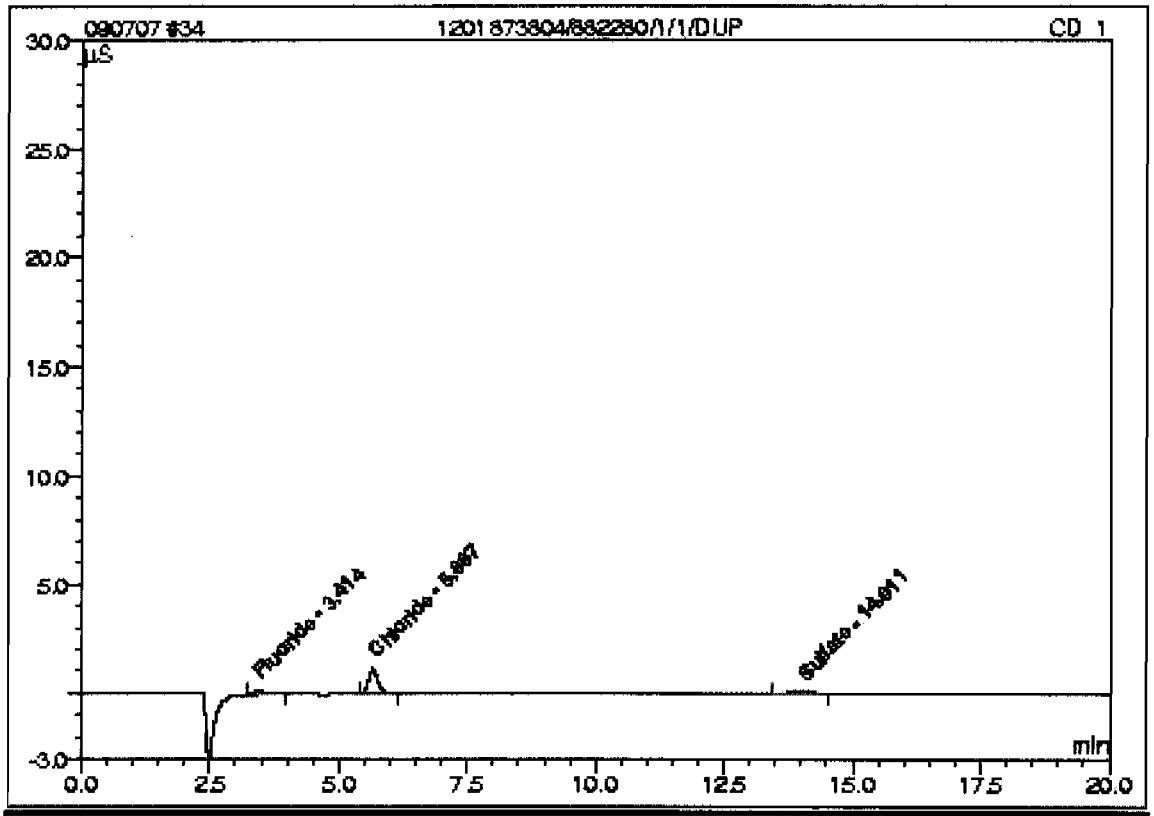

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	0.1695		0.05253	15.57
2	5.67	Chloride	n.a.	0.8144		0.22889	67.86
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.01	Sulfate	n.a.	0.4426		0.05590	16.57
Total:				1.4255	0.000	0.337	100.00

35 1201873805/882280/1/1/MS

Sample Name:	1201873805/882280/1/1/MS	*Injection Volume:*	50.0
Vial Number:	28	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 21:13	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE085;300;9055	

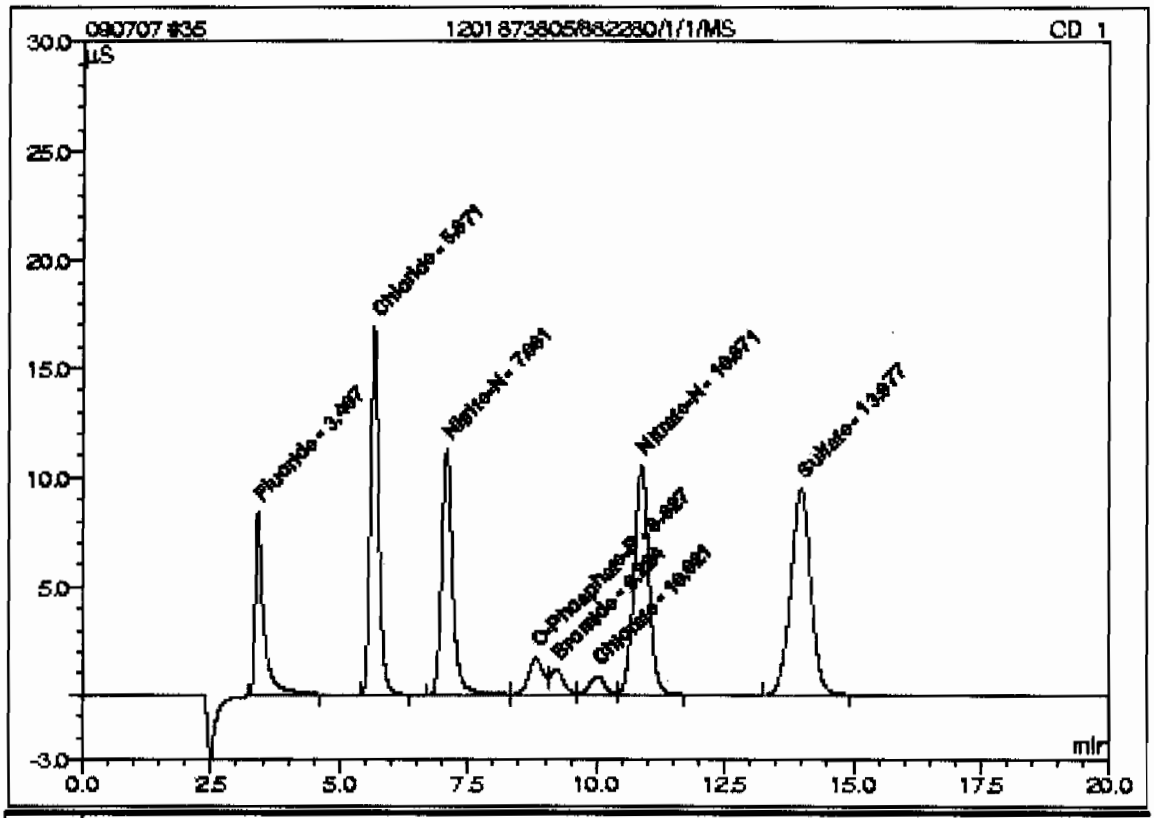

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.41	Fluoride	n.a.	4.2974		1.73113	10.29
2	5.67	Chloride	n.a.	9.6508		3.21337	19.09
3	7.08	Nitrite-N	n.a.	4.5928		2.83564	16.85
4	8.83	O-Phosphate-P	n.a.	1.9643		0.54882	3.26
5	9.22	Bromide	n.a.	2.2723		0.34822	2.07
6	10.02	Chlorate	n.a.	2.3510		0.28040	1.67
7	10.87	Nitrate-N	n.a.	4.4946		3.55484	21.12
8	13.98	Sulfate	n.a.	18.3090		4.31916	25.66
Total:				47.9322	0.000	16.832	100.00

36 1201873807/882280/1/1/MSD

Sample Name:	1201873807/882280/1/1/MSD	*Injection Volume:*	50.0
Vial Number:	29	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 21:35	*Analyst:*	VXP1
Run Time (min):	20.00	*Column:*	AS9HC-014108;GLGCE085;300;9055

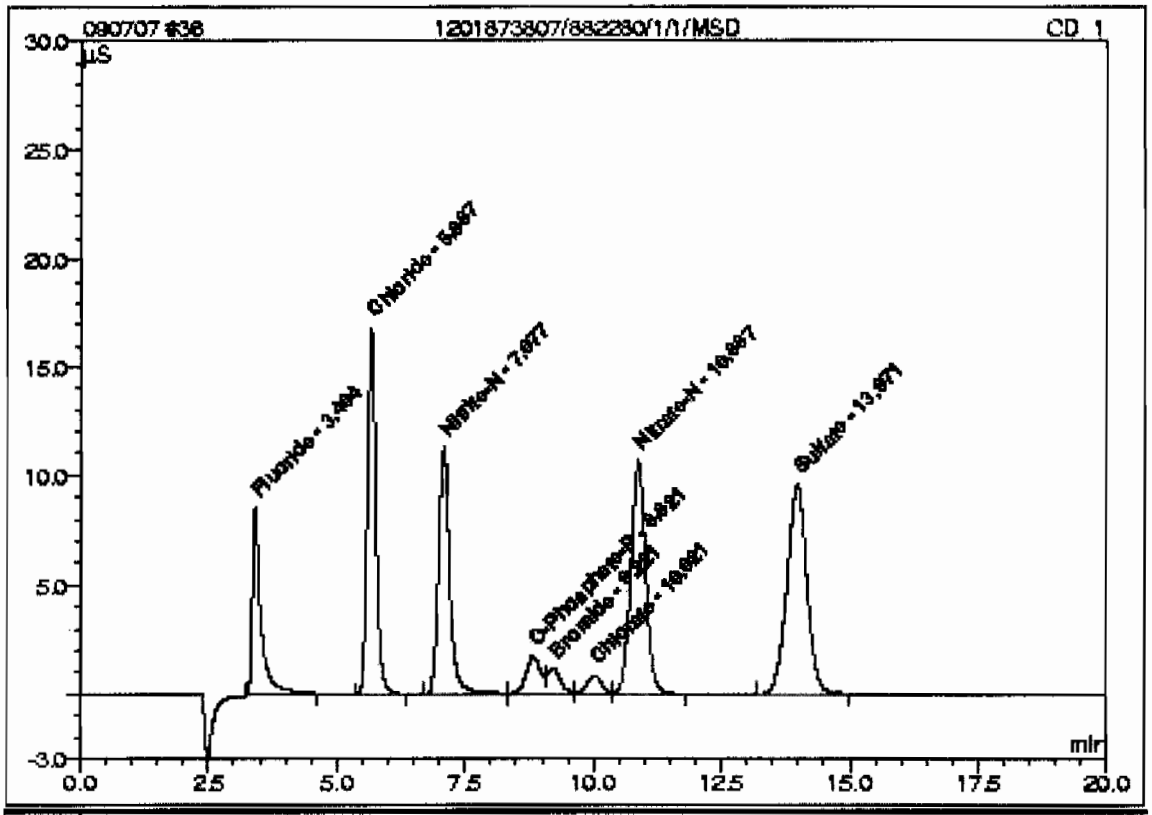

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	4.3282		1.74367	10.32
2	5.67	Chloride	n.a.	9.6268		3.20525	18.98
3	7.08	Nitrite-N	n.a.	4.6035		2.84234	16.83
4	8.82	O-Phosphate-P	n.a.	1.9961		0.55697	3.30
5	9.22	Bromide	n.a.	2.2805		0.34943	2.07
6	10.02	Chlorate	n.a.	2.3523		0.28055	1.66
7	10.87	Nitrate-N	n.a.	4.5097		3.56692	21.12
8	13.97	Sulfate	n.a.	18.4119		4.34372	25.72
Total:				48.1090	0.000	16.889	100.00

37 232663002/882280/1/1/

Sample Name:	232663002/882280/1/1/	*Injection Volume:*	50.0
Vial Number:	30	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 21:59	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9055

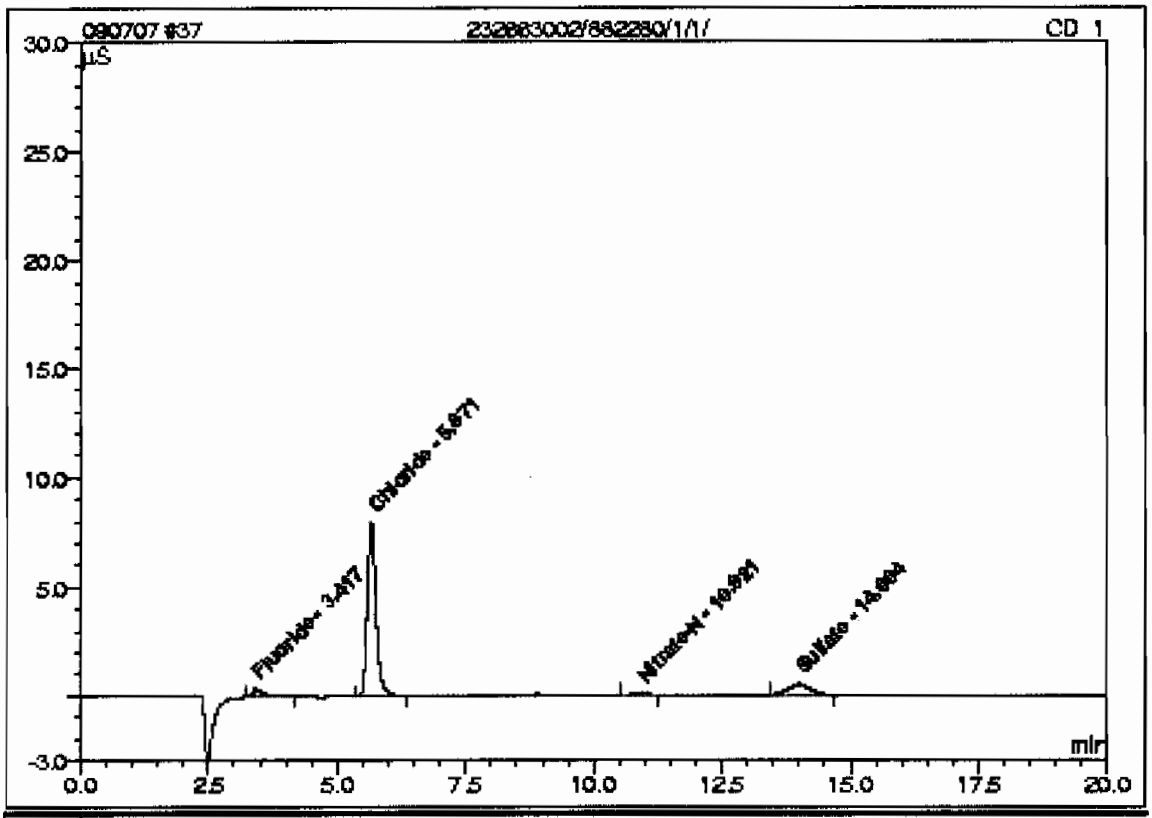

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.2585		0.08912	4.71
2	5.67	Chloride	n.a.	4.6990		1.54091	81.37
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	10.92	Nitrate-N	n.a.	0.1051		0.02744	1.45
4	14.00	Sulfate	n.a.	1.1987		0.23631	12.49
Total:				6.2612	0.000	1.894	100.00

38 232663003/882280/1/1/

Sample Name:	232663003/882280/1/1/	*Injection Volume:*	50.0
Vial Number:	31	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 22:22	Analyst:	VXP1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE085;300;9055	

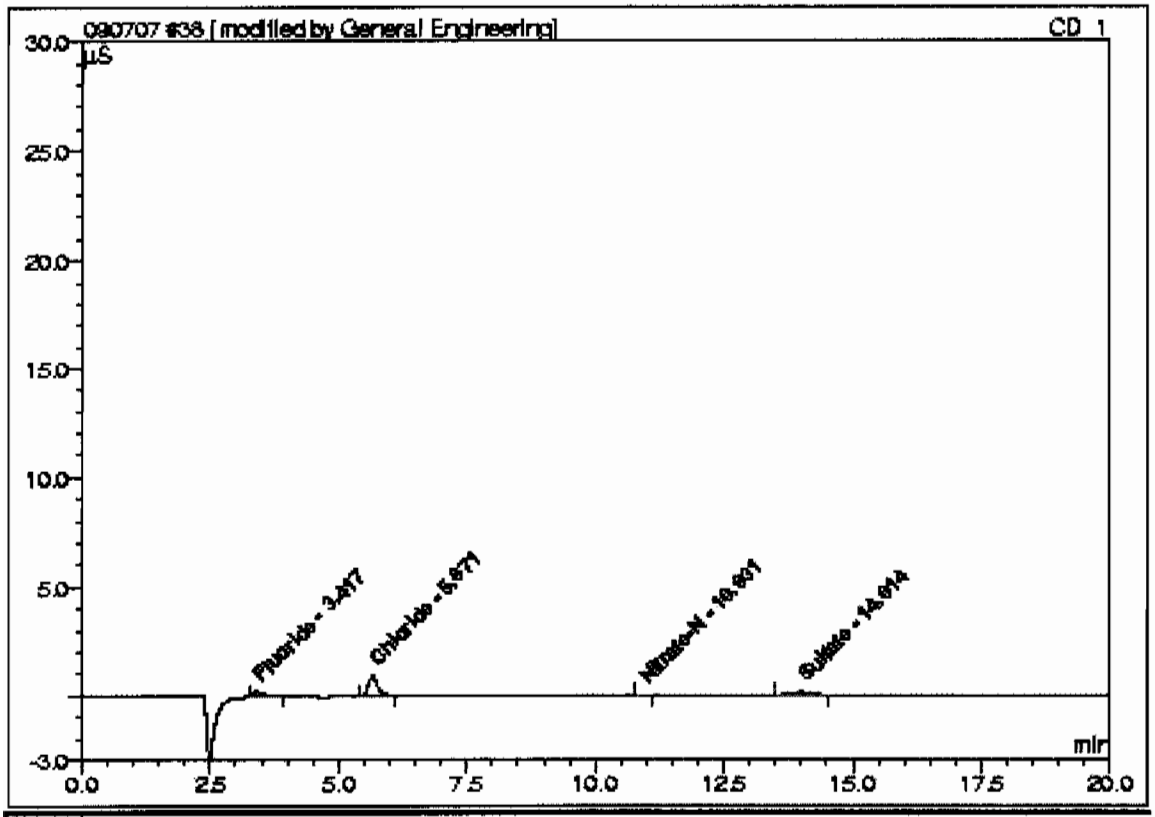

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.1704		0.05331	17.52
2	5.67	Chloride	n.a.	0.6857		0.18544	60.95
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	10.93	Nitrate-N	n.a.	0.0729 *		0.00161	0.53
4	14.01	Sulfate	n.a.	0.4760		0.06387	20.99
Total:				1.4051	0.000	0.304	100.00

38 232663003/882280/1/1/

Sample Name:	232663003/882280/1/1/	*Injection Volume:*	50.0
Vial Number:	31	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 22:22	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

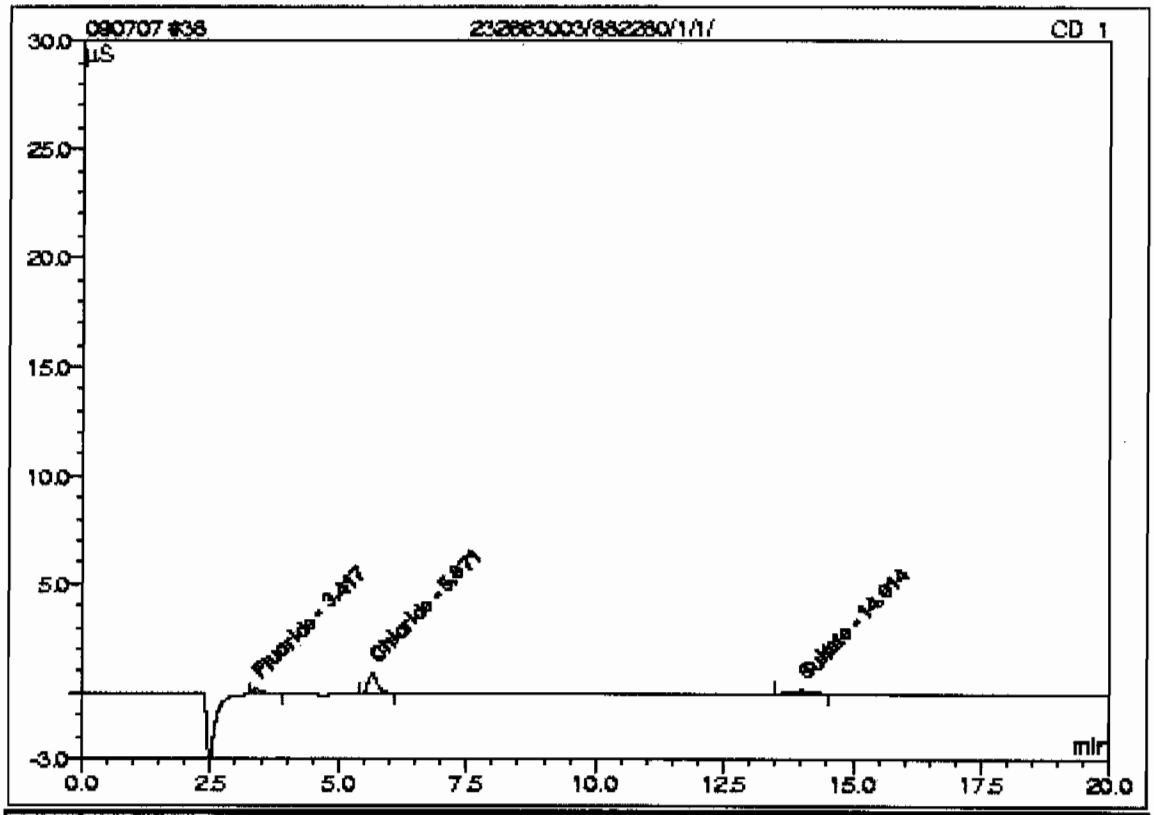

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.1704		0.05331	17.62
2	5.67	Chloride	n.a.	0.6857		0.18544	61.28
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.01	Sulfate	n.a.	0.4760		0.06387	21.11
Total:				1.3321	0.000	0.303	100.00

39 232663004/882280/1/1/

Sample Name:	232663004/882280/1/1/	*Injection Volume:*	50.0
Vial Number:	32	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 22:45	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

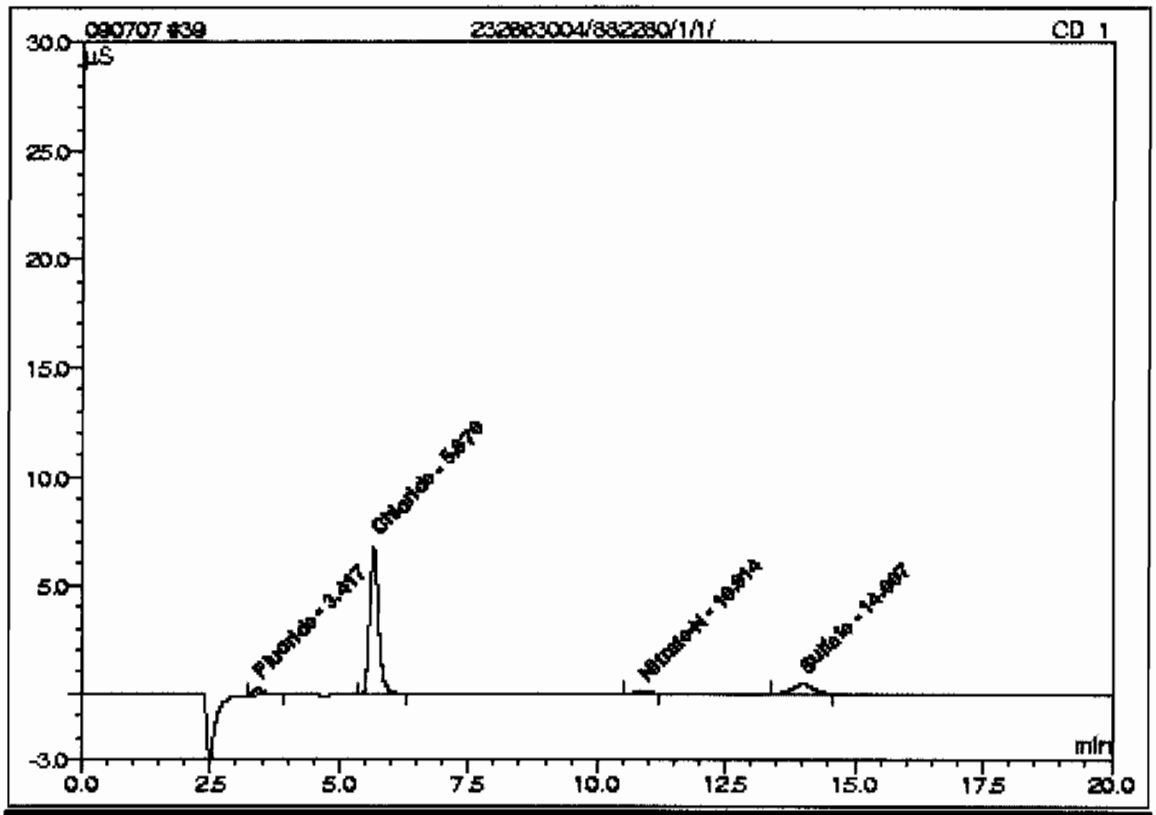

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.2118		0.07017	4.31
2	5.67	Chloride	n.a.	4.0708		1.32875	81.69
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	10.91	Nitrate-N	n.a.	0.1056		0.02787	1.71
4	14.01	Sulfate	n.a.	1.0456		0.19977	12.28
Total:				5.4339	0.000	1.627	100.00

40 232663005/882280/1/1/

Sample Name:	232663005/882280/1/1/	*Injection Volume:*	50.0
Vial Number:	33	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 23:07	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9056

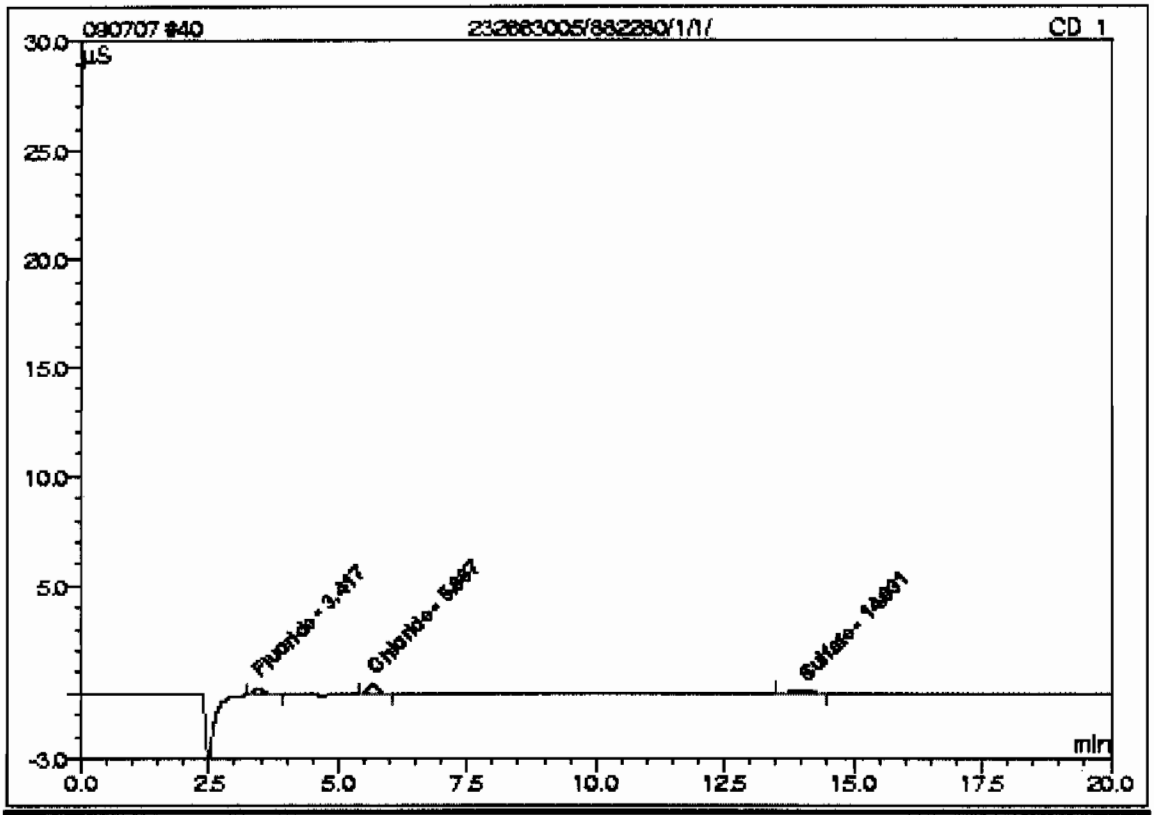

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.42	Fluoride	n.a.	0.2204		0.07364	34.23
2	5.67	Chloride	n.a.	0.4183		0.09512	44.21
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.03	Sulfate	n.a.	0.4028		0.04638	21.56
Total:				1.0414	0.000	0.215	100.00

41 WIC090707-02CVH

Sample Name:	WIC090707-02CVH	*Injection Volume:*	50.0
Vial Number:	34	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 23:30	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

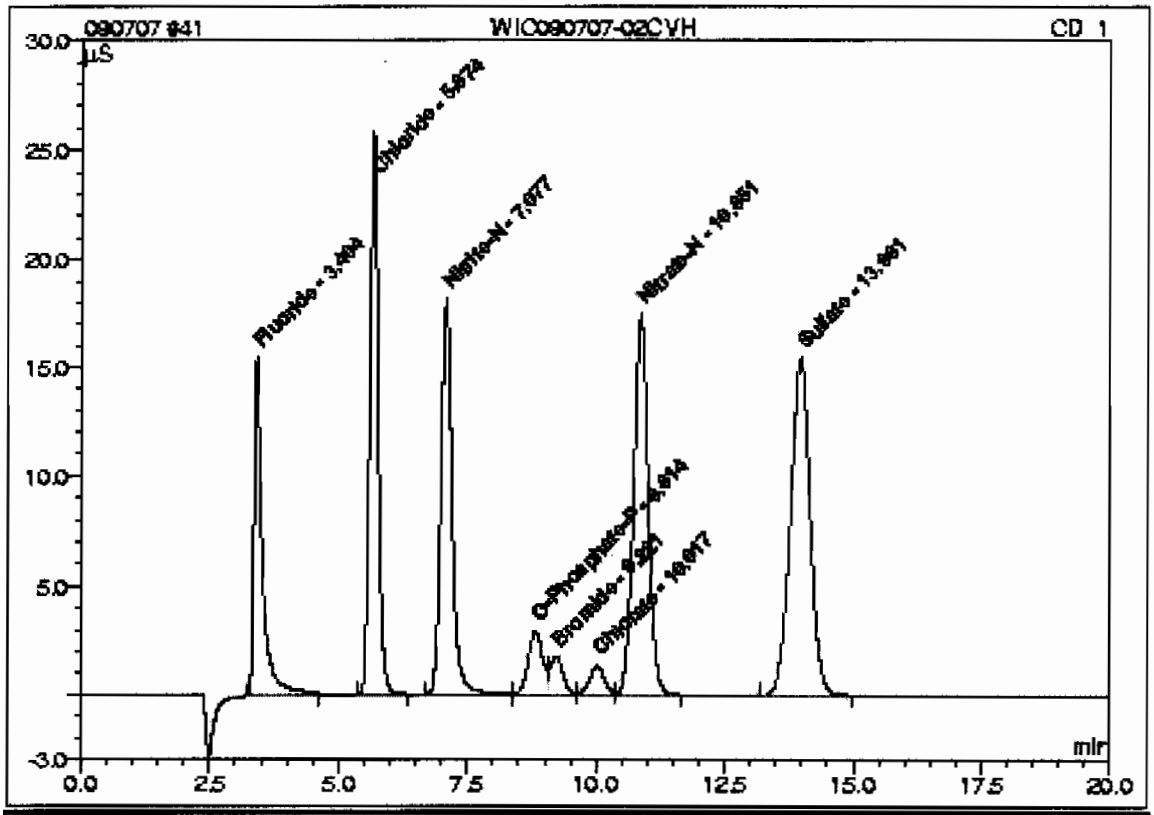

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.40	Fluoride	n.a.	7.3107		2.95620	10.96
2	5.67	Chloride	n.a.	14.5454		4.86648	18.05
3	7.08	Nitrite-N	n.a.	7.3098		4.53072	16.80
4	8.81	O-Phosphate-P	n.a.	3.4783		0.93783	3.48
5	9.22	Bromide	n.a.	3.4733		0.52396	1.94
6	10.02	Chlorate	n.a.	3.6418		0.43035	1.60
7	10.85	Nitrate-N	n.a.	7.2770		5.79070	21.48
8	13.96	Sulfate	n.a.	29.2410		6.92776	25.69
Total:				76.2772	0.000	26.964	100.00

42 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	35	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	090702	*Sample Amount:*	1.0000
Recording Time:	7/7/09 23:53	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

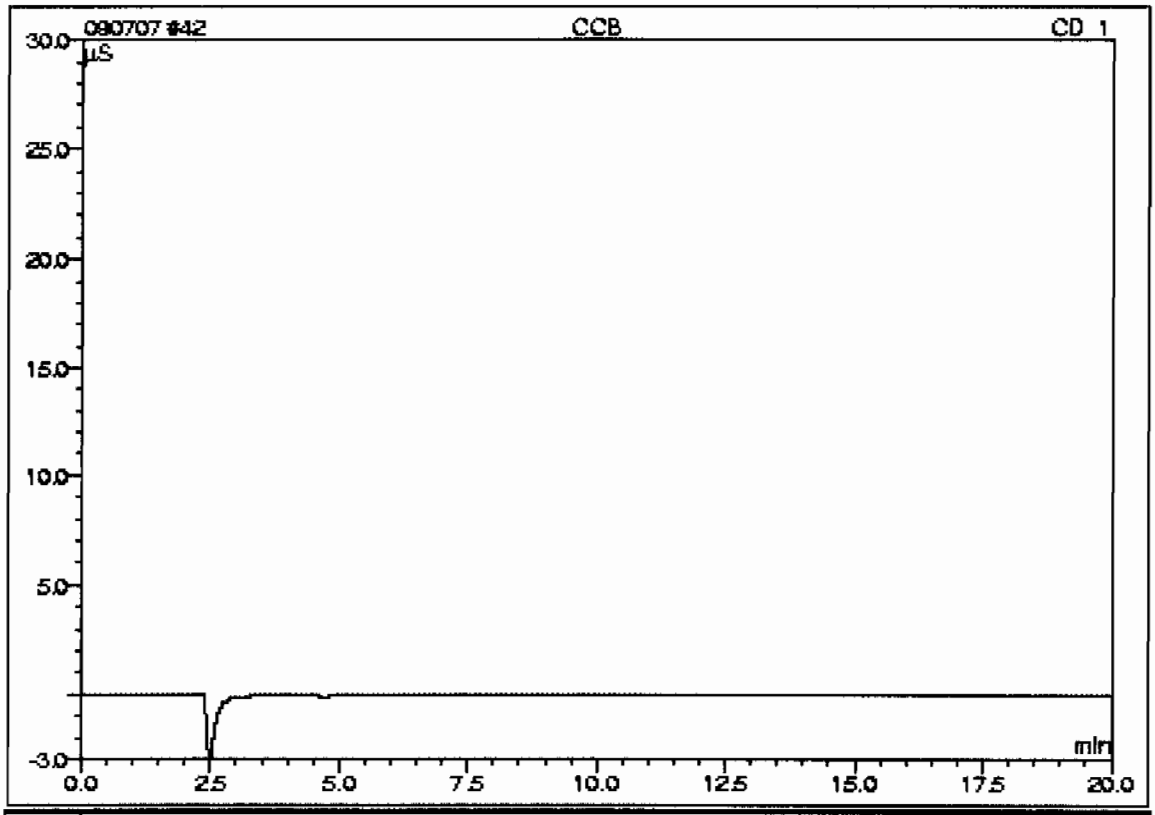

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

pH

pH / Corrosivity LogBook

Analyst: RXG2
Batch: 882147
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201873570	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201873570 LCS		Soil	09:00	09:05	02-JUL-09 10:05	pH	20	20	7	20.7'C	7	100	
1201873570 LCS		Soil	09:00	09:05	02-JUL-09 10:05	pH 2	20	20	7	20.7'C	7	100	
232653001		Solid	09:00	09:05	02-JUL-09 10:11	pH	20	20	12.57	22.3'C			
232653001		Solid	09:00	09:05	02-JUL-09 10:11	pH 2	20	20	12.57	22.3'C			
232657001		Solid	09:00	09:05	02-JUL-09 10:13	pH	5	15	7.51	22.3'C			
232657001		Solid	09:00	09:05	02-JUL-09 10:13	pH 2	5	15	7.51	22.3'C			
232663001		Soil	09:00	09:05	02-JUL-09 10:17	pH	20	20	7.39	20.7'C			
232663001		Soil	09:00	09:05	02-JUL-09 10:17	pH 2	20	20	7.39	20.7'C			
1201873569 DUP	232663001	Soil	09:00	09:05	02-JUL-09 10:17	pH	20	20	7.46	20.7'C			.943
1201873569 DUP	232663001	Soil	09:00	09:05	02-JUL-09 10:17	pH 2	20	20	7.46	20.7'C			.943
CCV			09:00	09:05	02-JUL-09 10:17	pH	20	20	7.01	20.7'C	7	100.143	
CCV			09:00	09:05	02-JUL-09 10:17	pH 2	20	20	7.01	20.7'C	7	100.143	
232663002		Soil	09:00	09:05	02-JUL-09 10:18	pH	20	20	7.1	20.5'C			
232663002		Soil	09:00	09:05	02-JUL-09 10:18	pH 2	20	20	7.1	20.5'C			
232663003		Soil	09:00	09:05	02-JUL-09 10:19	pH	20	20	7.54	20.5'C			
232663003		Soil	09:00	09:05	02-JUL-09 10:19	pH 2	20	20	7.54	20.5'C			
232663004		Soil	09:00	09:05	02-JUL-09 10:20	pH	20	20	7.07	20.4'C			
232663004		Soil	09:00	09:05	02-JUL-09 10:20	pH 2	20	20	7.07	20.4'C			
232663005		Soil	09:00	09:05	02-JUL-09 10:22	pH	20	20	7.07	20.5'C			
232663005		Soil	09:00	09:05	02-JUL-09 10:22	pH 2	20	20	7.07	20.5'C			
CCV			09:00	09:05	02-JUL-09 10:23	pH	20	20	7.01	20.6'C	7	100.143	
CCV			09:00	09:05	02-JUL-09 10:23	pH 2	20	20	7.01	20.6'C	7	100.143	

Calibration Information:
Run Date: 02-JUL-09 09:14
Instrument: PHX742
Analyst: RXG2

Standard	Observed	Theoretical		C	%Recovery
IMM090702-PH1	4.01	4	SU	21.4	100.25
IMM090702-PH-	7.01	7	SU	21.4	100.14
UPH090702b3-2	10.04	10	SU	21.5	100.4
UPH090702-03e-	2.08	2	SU	21.5	104
090702F30-2	11.94	12	SU	21.5	99.5
IMM090702g3-2	7.01	7	SU	21.4	100.14

Comments:

Miscellaneous

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 709515
Revision No.: 2

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
08-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
IC	EPA 300.0	Solid	LANL
Batch ID:	**Sample Numbers:**		
882280	See Below		

Potentially affected work order(s)(SDG): 232663(09-2516-1),232851(09-2547)

Application Issues:

Failed Recovery for MS/PS

Sample Analyzed out of Holding

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS: QC 1201873805MS 2. Sample Analyzed out of Holding: 232851 001,002	1. The post spike recovery for Nitrate falls outside of the GEL acceptance limits but within the client specified limits. 2. The samples were not available for analysis until after the holding time had expired.

Originator's Name:

Vanessa Parsons 08-JUL-09

Data Validator/Group Leader:

Julia Hamilton 10-JUL-09

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2515

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2515

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 6/30/2009

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:8260B	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10013	S	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:8270C	1	CAMO-09-9941	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2515

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2515

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2515

REQUEST NUMBER: 09-2515

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10013	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-9942	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9942	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9941	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9941	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9943	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9943	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10030	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10030	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-9989	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9989	1	AMBER GLASS	8270C+8082	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/30/09	1405				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		Date	Time	Remarks:
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9941

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009 AG 6.26.09	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		AG 6.26.09 1100 0929	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605457	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	~~2.0~~ 3.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	~~2.0~~ 5.0	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Reg~~ AG 6.26.09 15-DAY	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+ N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown crushed tuff fill

FD: CAMO-09-10030

SAMPLE COMMENTS: Depth required for duplicate

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 19 dpm

β/γ ≤ 1059 dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9942

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	QBT4	Qbt 3
TIME COLLECTED (HH:MM)		0938	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605457	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	5.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	6.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Indurated Brown/gray tuff

SAMPLE COMMENTS: Interface @ 5.0' bgs

LOCATION DESC: 50-004(a).09

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 19 dpm

β/γ 1373 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9943

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/25/2009	MEDIA:	OBT4	qbt3
TIME COLLECTED (HH:MM)		1105	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605457	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	10.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	11.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Purple/gray tuff indurated

FR: CAMO-09-10024

SAMPLE COMMENTS: Advanced to depth w/ power auger, sample taken by hand auger 10.0 – 11.0' bgs

LOCATION DESC: 50-004(a) 09

FIELD SCREENING/MEASUREMENT RESULTS:

6.25.09 NO ~~B~~ α ≤ 25

β/γ ≤ 1168

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A Goumas	6.26.09	(Printed Name) Sherri Sherwood	6/26/09
(Signature) [signature]	1145	(Signature) Sherri Sherwood	11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9989

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	OBT4	~~Fill~~ Sed
TIME COLLECTED (HH:MM)		1110	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605473	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	2.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	3.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	Sed	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Brown wet sediment w/ organic material (bark & roots) FTB: CAMO-09-10013

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a)-11, below drainage culvert (N) of NES MDAC

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 35 dpm

β/γ ≤ 937 dpm

PID Ambient/Reading = 0.0/0.0 ppm

COLLECTED BY (PRINT) A. Gurney

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gurney (Signature) [signature]	6.26.09 1146	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/26/09 11:50

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10013

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1110	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-605473	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
NA 6.26.09 1 ~~2~~	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package

SAMPLE DESC: QC Sample of CAMO-09-9989

SAMPLE COMMENTS: NONE

LOCATION DESC: 50-004(a)-11

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature) [signature]	6.26.09 1145	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/26/09 11:50
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10024

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1120	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-406457	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	5-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	Full Data Package
1		NO3NO2	~~250~~ 500 ML POLY AG 6.26.09	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09 - 9943

SAMPLE COMMENTS: NONE

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gomas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomas (Signature) A. Gomas	6.26.09 1145	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/26/09 11:50
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10030

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/26/2009	MEDIA:	OBT4	Fill
TIME COLLECTED (HH:MM)		0929	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	UNK	MO-605457	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	5.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C+8082	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: QC Sample of CAMO-09-9741
Brown crushed tuff

SAMPLE COMMENTS: Depth required for duplicate

LOCATION DESC: 50-004(a)-09

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 19$ dpm

$\beta/\gamma \leq 1059$ dpm

PID Ambient Reading: 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gomez

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez (Signature) [signature]	6.26.09 1145	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/26/09 11:50

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-9941 —> 9943

-10030

-9989

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10024

-10013

Reason: QC of Samples.

Print Last Name Branch **Signature** [signature] **Date** 6/26/09

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CANO-09-9941	ARS Sample ID:	ARS2-09-00077-001
Sample Collection Date:	06/26/09 09:29	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 1 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	9.95	51.11	121.29	51.12	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	44.04	16.17	19.29	17.05		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.11	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	19.69	7.90	1.78	7.93		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	11.66	0.12	11.66	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	15.25	0.07	15.25	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.00	12.12	0.14	12.12	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.38	0.52	0.16	0.52		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA 226	1.67	0.82	0.31	0.83		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	0.27	0.31	0.30	0.31	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.95	3.08	1.20	3.28		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.52	0.37	0.12	0.37		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.11

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-9942	ARS Sample ID:	ARS2-09-00077-002
Sample Collection Date:	06/26/09 09:35	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	108.05	92.47	108.46	93.41		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	40.58	16.76	19.75	17.48		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.12	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	-0.51	-12.91	3.86	-12.91	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	11.98	0.12	11.98	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.05	0.09	0.09	0.09	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	15.68	0.08	15.68	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.00	12.46	0.14	12.46	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.53	0.57	0.18	0.57		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA-226	1.29	0.67	0.52	0.67		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	1.23	0.75	0.29	0.75		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.81	4.27	1.72	4.41		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.23	0.49	0.20	0.49		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.33

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00077	Request or PO Number:	
Client Sample ID:	CAMO-09-9943	ARS Sample ID:	ARS2-09-00077-003
Sample Collection Date:	06/26/09 11:05	Date Received:	06/29/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/30/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 σ	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	72.84	86.53	128.32	86.99	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	31.80	16.53	21.40	16.99		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.16	0.13	0.15	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	-0.95	-18.05	3.58	-18.05	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	12.00	0.19	12.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	0.03	0.15	0.10	0.15	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.45	0.41	0.15	0.41	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.50	0.63	0.23	0.64		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA-226	1.10	1.02	0.24	1.03		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	-0.08	145.55	0.33	145.55	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	5.99	3.70	1.46	3.95		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.31	0.27	0.10	0.27		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 1.24

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00077
Client Sample ID: CAMO-09-9989
Sample Collection Date: 06/26/09 11:10
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00077-004
Date Received: 06/29/09 00:00
Report Date: 06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	17.51	58.18	128.00	58.22	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	21.49	13.96	20.31	14.22		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	0.65	4.90	2.76	4.90	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.15	0.13	0.09	0.13		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.16	0.10	0.07	0.10	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	0.82	0.34	0.06	0.34		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.33	0.30	0.10	0.30	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	0.75	0.35	0.12	0.35		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA 226	1.43	0.75	0.34	0.73		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	1.45	0.96	0.31	0.96		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	1.89	2.35	1.08	2.39		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	1.13	0.39	0.11	0.39		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 0.89

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-09-00077
Client Sample ID: CAMO-09-10030
Sample Collection Date: 06/26/09 09:29
Sample Matrix: Soil/Solid

Request or PO Number:
ARS Sample ID: ARS2-09-00077-005
Date Received: 06/29/09 00:00
Report Date: 06/29/09 15:16

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	19.00	51.07	121.29	51.09	U	pCi/g	EPA 900.0M	6/29/2009	LR	N/A
GROSS BETA	37.43	18.41	19.29	16.08		pCi/g	EPA 900.0M	6/29/2009	LR	N/A
NA-22	0.00	0.00	0.13	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
K-40	26.64	9.76	2.03	9.80		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CO-60	0.00	12.30	0.12	12.30	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-134	0.00	0.00	0.10	0.00	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
CS-137	-0.01	41.30	0.09	41.30	U	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
EU-152	0.46	0.53	0.20	0.52	SI	pCi/g	EPA 901.1M	6/29/2009	ME	N/A
PB-212	1.49	0.56	0.15	0.56		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
RA 226	2.59	1.70	0.64	1.71		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-235	2.44	1.56	0.44	1.56		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
U-238	4.31	3.99	1.59	4.11		pCi/g	EPA 901.1M	6/29/2009	ME	N/A
AM-241	0.86	0.46	0.13	0.46		pCi/g	EPA 901.1M	6/29/2009	ME	N/A

NOTES: % Moisture: 0.98

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2515 VALIDATION DATE: 07/27/2009 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ HIGH EXPLOSIVES
- ☐ DIOXIN FURANS
- ☐ LCMSMS PERCHLORATES
- ☐ TPH-DRO
- ☐ METALS
- ☐ PCB CONGENERS
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ GENERAL CHEMISTRY
- ☐ RADIOCHEMISTRY
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ OTHER (DESCRIBE): VOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the FTB, sample CAMO-09-10013 which was associated with sample -9989, acetone was detected. The associated sample result was an ND and, thus, was not qualified.
2. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
3. The ICV and/or CCV %Ds were >20% for dichlorodifluoromethane, acetone, 2-butanone, 2-hexanone and isopropylbenzene. The acetone result for sample -10013 was a detect and, thus, was qualified J,V7c. All other associated sample results were NDs and, thus, were qualified UJ,V7c.
4. The IS area counts for 1,4-dichlorobenzene-d4 were <50% but ≥10% of the daily CCV IS area counts in sample -9989. The associated sample result for 1,2,4-trimethylbenzene was a detect and, thus, was qualified J,V1b. All other associated sample results were NDs and, thus, were qualified UJ,V1b.
5. It should be noted that trichlorotrifluoroethane was not spiked into the MS/MSD. No sample data were qualified as a

DATA VALIDATION COVER SHEET

5114-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

result.

Reviewed by: CLL Level: 1 Date: 7/28/09

VALIDATOR'S SIGNATURE: Mary A. Dennison DATE: 07/27/2009

Form 5114-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☐	☒	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☒	☐	☐	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☒	☐	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☐	☒	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☐	☒	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☒	☐	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☒	☐	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☒	☐	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	S
Lab Sample ID:	232661001	**Date Received:**	07/01/2009 09:00		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10013	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 14:49	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:25	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t213.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00	UJ,V7c
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00	
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00	
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00	
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00	
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00	
67-64-1	Acetone	J	4.17	ug/kg	1.66	5.00	J,V7c
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00	
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00	
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00	
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00	
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00	
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00	
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00	
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00	
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00	
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00	
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00	
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00	
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00	
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00	
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00	
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00	
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00	
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00	
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00	
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00	
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00	
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00	
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00	
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00	
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00	

MAD
07/27/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	S
Lab Sample ID:	232661001	**Date Received:**	07/01/2009 09:00		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10013	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 14:49	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:25	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t213.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00	
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00	
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00	
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00	
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00	
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00	
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00	
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00	
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00	
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00	
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00	
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

MAD
07/27/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661005	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10030	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 16:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:31	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t217.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.378	1.11	UJ,V7c
74-87-3	Chloromethane	U	1.11	ug/kg	0.333	1.11	
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.333	1.11	
74-83-9	Bromomethane	U	1.11	ug/kg	0.333	1.11	
75-00-3	Chloroethane	U	1.11	ug/kg	0.333	1.11	
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.633	1.11	
67-64-1	Acetone	U	5.56	ug/kg	1.84	5.56	UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.333	1.11	
74-88-4	Iodomethane	U	5.56	ug/kg	1.78	5.56	
75-09-2	Methylene chloride	U	5.56	ug/kg	2.22	5.56	
75-15-0	Carbon disulfide	U	5.56	ug/kg	1.39	5.56	
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11	
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.333	1.11	
78-93-3	2-Butanone	U	5.56	ug/kg	1.67	5.56	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11	
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11	
67-66-3	Chloroform	U	1.11	ug/kg	0.333	1.11	
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.367	1.11	
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.333	1.11	
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.333	1.11	
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.333	1.11	
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.333	1.11	
71-43-2	Benzene	U	1.11	ug/kg	0.333	1.11	
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.367	1.11	
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11	
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.333	1.11	
74-95-3	Dibromomethane	U	1.11	ug/kg	0.333	1.11	
108-10-1	4-Methyl-2-pentanone	U	5.56	ug/kg	1.39	5.56	
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11	
108-88-3	Toluene	J	0.525	ug/kg	0.333	1.11	
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11	
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.333	1.11	
591-78-6	2-Hexanone	U	5.56	ug/kg	1.67	5.56	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.333	1.11	
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.333	1.11	
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.333	1.11	
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.333	1.11	
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.333	1.11	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661005	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10030	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 16:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:31	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t217.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.333	1.11	
179601-23-1	m,p-Xylenes	U	2.22	ug/kg	0.333	2.22	
95-47-6	o-Xylene	U	1.11	ug/kg	0.333	1.11	
100-42-5	Styrene	U	1.11	ug/kg	0.333	1.11	
75-25-2	Bromoform	U	1.11	ug/kg	0.333	1.11	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11	
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.333	1.11	
108-86-1	Bromobenzene	U	1.11	ug/kg	0.333	1.11	
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.333	1.11	
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.333	1.11	
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.333	1.11	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11	
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.333	1.11	
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.333	1.11	
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11	
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.333	1.11	
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.333	1.11	
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11	
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11	
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.333	1.11	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.333	1.11	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.56	ug/kg	1.78	5.56	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11	
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	23.4	ug/kg		J

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Volatile
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Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661003	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9941	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t215.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.381	1.12	UJ,V7c
74-87-3	Chloromethane	U	1.12	ug/kg	0.336	1.12	
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.336	1.12	
74-83-9	Bromomethane	U	1.12	ug/kg	0.336	1.12	
75-00-3	Chloroethane	U	1.12	ug/kg	0.336	1.12	
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.639	1.12	
67-64-1	Acetone	U	5.61	ug/kg	1.86	5.61	UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.336	1.12	
74-88-4	Iodomethane	U	5.61	ug/kg	1.79	5.61	
75-09-2	Methylene chloride	U	5.61	ug/kg	2.24	5.61	
75-15-0	Carbon disulfide	U	5.61	ug/kg	1.40	5.61	
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.336	1.12	
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.336	1.12	
78-93-3	2-Butanone	U	5.61	ug/kg	1.68	5.61	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.336	1.12	
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.336	1.12	
67-66-3	Chloroform	U	1.12	ug/kg	0.336	1.12	
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.370	1.12	
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.336	1.12	
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.336	1.12	
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.336	1.12	
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.336	1.12	
71-43-2	Benzene	U	1.12	ug/kg	0.336	1.12	
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.370	1.12	
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.336	1.12	
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.336	1.12	
74-95-3	Dibromomethane	U	1.12	ug/kg	0.336	1.12	
108-10-1	4-Methyl-2-pentanone	U	5.61	ug/kg	1.40	5.61	
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.336	1.12	
108-88-3	Toluene	J	0.512	ug/kg	0.336	1.12	
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.336	1.12	
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.336	1.12	
591-78-6	2-Hexanone	U	5.61	ug/kg	1.68	5.61	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.336	1.12	
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.336	1.12	
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.336	1.12	
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.336	1.12	
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.336	1.12	

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Volatile
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Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661003	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9941	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t215.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.336	1.12	
179601-23-1	m,p-Xylenes	U	2.24	ug/kg	0.336	2.24	
95-47-6	o-Xylene	U	1.12	ug/kg	0.336	1.12	
100-42-5	Styrene	U	1.12	ug/kg	0.336	1.12	
75-25-2	Bromoform	U	1.12	ug/kg	0.336	1.12	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.336	1.12	
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.336	1.12	
108-86-1	Bromobenzene	U	1.12	ug/kg	0.336	1.12	
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.336	1.12	
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.336	1.12	
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.336	1.12	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.336	1.12	
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.336	1.12	
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.336	1.12	
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.336	1.12	
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.336	1.12	
99-87-6	4-Isopropyltoluene	U	1.12	ug/kg	0.336	1.12	
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.336	1.12	
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.336	1.12	
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.336	1.12	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.336	1.12	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.61	ug/kg	1.79	5.61	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.336	1.12	
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.336	1.12	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	40.9	ug/kg		J
	Unknown	20	41.8	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661002	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9942	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:20	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t214.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.386	1.13	UJ,V7c
74-87-3	Chloromethane	U	1.13	ug/kg	0.340	1.13	
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.340	1.13	
74-83-9	Bromomethane	U	1.13	ug/kg	0.340	1.13	
75-00-3	Chloroethane	U	1.13	ug/kg	0.340	1.13	
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.647	1.13	
67-64-1	Acetone	U	5.67	ug/kg	1.88	5.67	UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.340	1.13	
74-88-4	Iodomethane	U	5.67	ug/kg	1.82	5.67	
75-09-2	Methylene chloride	U	5.67	ug/kg	2.27	5.67	
75-15-0	Carbon disulfide	U	5.67	ug/kg	1.42	5.67	
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.340	1.13	
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.340	1.13	
78-93-3	2-Butanone	U	5.67	ug/kg	1.70	5.67	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.340	1.13	
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.340	1.13	
67-66-3	Chloroform	U	1.13	ug/kg	0.340	1.13	
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.374	1.13	
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.340	1.13	
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.340	1.13	
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.340	1.13	
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.340	1.13	
71-43-2	Benzene	U	1.13	ug/kg	0.340	1.13	
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.374	1.13	
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.340	1.13	
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.340	1.13	
74-95-3	Dibromomethane	U	1.13	ug/kg	0.340	1.13	
108-10-1	4-Methyl-2-pentanone	U	5.67	ug/kg	1.42	5.67	
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.340	1.13	
108-88-3	Toluene	U	1.13	ug/kg	0.340	1.13	
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.340	1.13	
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.340	1.13	
591-78-6	2-Hexanone	U	5.67	ug/kg	1.70	5.67	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.340	1.13	
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.340	1.13	
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.340	1.13	
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.340	1.13	
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.340	1.13	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661002	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9942	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:20	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t214.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.340	1.13	
179601-23-1	m,p-Xylenes	U	2.27	ug/kg	0.340	2.27	
95-47-6	o-Xylene	U	1.13	ug/kg	0.340	1.13	
100-42-5	Styrene	U	1.13	ug/kg	0.340	1.13	
75-25-2	Bromoform	U	1.13	ug/kg	0.340	1.13	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.340	1.13	
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.340	1.13	
108-86-1	Bromobenzene	U	1.13	ug/kg	0.340	1.13	
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.340	1.13	
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.340	1.13	
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.340	1.13	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.340	1.13	
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.340	1.13	
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.340	1.13	
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.340	1.13	
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.340	1.13	
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.340	1.13	
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.340	1.13	
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.340	1.13	
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.340	1.13	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.340	1.13	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.67	ug/kg	1.82	5.67	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.340	1.13	
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.340	1.13	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	15.2	ug/kg		J
	Unknown	20	7.64	ug/kg		J

MAD
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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661004	**Date Received:**	07/01/2009 09:00	**%Moisture:**	13.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9943	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 16:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t216.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.16	ug/kg	0.395	1.16	UJ,V7c
74-87-3	Chloromethane	U	1.16	ug/kg	0.348	1.16	
75-01-4	Vinyl chloride	U	1.16	ug/kg	0.348	1.16	
74-83-9	Bromomethane	U	1.16	ug/kg	0.348	1.16	
75-00-3	Chloroethane	U	1.16	ug/kg	0.348	1.16	
75-69-4	Trichlorofluoromethane	U	1.16	ug/kg	0.662	1.16	
67-64-1	Acetone	U	5.81	ug/kg	1.93	5.81	UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.16	ug/kg	0.348	1.16	
74-88-4	Iodomethane	U	5.81	ug/kg	1.86	5.81	
75-09-2	Methylene chloride	U	5.81	ug/kg	2.32	5.81	
75-15-0	Carbon disulfide	U	5.81	ug/kg	1.45	5.81	
156-60-5	trans-1,2-Dichloroethylene	U	1.16	ug/kg	0.348	1.16	
75-34-3	1,1-Dichloroethane	U	1.16	ug/kg	0.348	1.16	
78-93-3	2-Butanone	U	5.81	ug/kg	1.74	5.81	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.16	ug/kg	0.348	1.16	
594-20-7	2,2-Dichloropropane	U	1.16	ug/kg	0.348	1.16	
67-66-3	Chloroform	U	1.16	ug/kg	0.348	1.16	
74-97-5	Bromochloromethane	U	1.16	ug/kg	0.383	1.16	
71-55-6	1,1,1-Trichloroethane	U	1.16	ug/kg	0.348	1.16	
563-58-6	1,1-Dichloropropene	U	1.16	ug/kg	0.348	1.16	
56-23-5	Carbon tetrachloride	U	1.16	ug/kg	0.348	1.16	
107-06-2	1,2-Dichloroethane	U	1.16	ug/kg	0.348	1.16	
71-43-2	Benzene	U	1.16	ug/kg	0.348	1.16	
79-01-6	Trichloroethylene	U	1.16	ug/kg	0.383	1.16	
78-87-5	1,2-Dichloropropane	U	1.16	ug/kg	0.348	1.16	
75-27-4	Bromodichloromethane	U	1.16	ug/kg	0.348	1.16	
74-95-3	Dibromomethane	U	1.16	ug/kg	0.348	1.16	
108-10-1	4-Methyl-2-pentanone	U	5.81	ug/kg	1.45	5.81	
10061-01-5	cis-1,3-Dichloropropylene	U	1.16	ug/kg	0.348	1.16	
108-88-3	Toluene	U	1.16	ug/kg	0.348	1.16	
10061-02-6	trans-1,3-Dichloropropylene	U	1.16	ug/kg	0.348	1.16	
79-00-5	1,1,2-Trichloroethane	U	1.16	ug/kg	0.348	1.16	
591-78-6	2-Hexanone	U	5.81	ug/kg	1.74	5.81	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.16	ug/kg	0.348	1.16	
127-18-4	Tetrachloroethylene	U	1.16	ug/kg	0.348	1.16	
124-48-1	Dibromochloromethane	U	1.16	ug/kg	0.348	1.16	
106-93-4	1,2-Dibromoethane	U	1.16	ug/kg	0.348	1.16	
108-90-7	Chlorobenzene	U	1.16	ug/kg	0.348	1.16	

MAD
07/27/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661004	**Date Received:**	07/01/2009 09:00	**%Moisture:**	13.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9943	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 16:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t216.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.16	ug/kg	0.348	1.16	
179601-23-1	m,p-Xylenes	U	2.32	ug/kg	0.348	2.32	
95-47-6	o-Xylene	U	1.16	ug/kg	0.348	1.16	
100-42-5	Styrene	U	1.16	ug/kg	0.348	1.16	
75-25-2	Bromoform	U	1.16	ug/kg	0.348	1.16	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.16	ug/kg	0.348	1.16	
96-18-4	1,2,3-Trichloropropane	U	1.16	ug/kg	0.348	1.16	
108-86-1	Bromobenzene	U	1.16	ug/kg	0.348	1.16	
103-65-1	n-Propylbenzene	U	1.16	ug/kg	0.348	1.16	
95-49-8	2-Chlorotoluene	U	1.16	ug/kg	0.348	1.16	
98-82-8	Isopropylbenzene	U	1.16	ug/kg	0.348	1.16	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.16	ug/kg	0.348	1.16	
106-43-4	4-Chlorotoluene	U	1.16	ug/kg	0.348	1.16	
98-06-6	tert-Butylbenzene	U	1.16	ug/kg	0.348	1.16	
95-63-6	1,2,4-Trimethylbenzene	U	1.16	ug/kg	0.348	1.16	
135-98-8	sec-Butylbenzene	U	1.16	ug/kg	0.348	1.16	
99-87-6	4-Isopropyltoluene	U	1.16	ug/kg	0.348	1.16	
541-73-1	1,3-Dichlorobenzene	U	1.16	ug/kg	0.348	1.16	
106-46-7	1,4-Dichlorobenzene	U	1.16	ug/kg	0.348	1.16	
104-51-8	n-Butylbenzene	U	1.16	ug/kg	0.348	1.16	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.16	ug/kg	0.348	1.16	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.81	ug/kg	1.86	5.81	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.16	ug/kg	0.348	1.16	
95-50-1	1,2-Dichlorobenzene	U	1.16	ug/kg	0.348	1.16	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	25.5	ug/kg		J
	Unknown	20	24.8	ug/kg		J

MAD
07/27/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 17:23	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t218.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.20	ug/kg	0.408	1.20	UJ,V7c
74-87-3	Chloromethane	U	1.20	ug/kg	0.360	1.20	
75-01-4	Vinyl chloride	U	1.20	ug/kg	0.360	1.20	
74-83-9	Bromomethane	U	1.20	ug/kg	0.360	1.20	
75-00-3	Chloroethane	U	1.20	ug/kg	0.360	1.20	
75-69-4	Trichlorofluoromethane	U	1.20	ug/kg	0.684	1.20	
67-64-1	Acetone	U	6.00	ug/kg	1.99	6.00	UJ,V7c
75-35-4	1,1-Dichloroethylene	J	0.502	ug/kg	0.360	1.20	
74-88-4	Iodomethane	U	6.00	ug/kg	1.92	6.00	
75-09-2	Methylene chloride	U	6.00	ug/kg	2.40	6.00	
75-15-0	Carbon disulfide	U	6.00	ug/kg	1.50	6.00	
156-60-5	trans-1,2-Dichloroethylene	U	1.20	ug/kg	0.360	1.20	
75-34-3	1,1-Dichloroethane	U	1.20	ug/kg	0.360	1.20	
78-93-3	2-Butanone	U	6.00	ug/kg	1.80	6.00	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.20	ug/kg	0.360	1.20	
594-20-7	2,2-Dichloropropane	U	1.20	ug/kg	0.360	1.20	
67-66-3	Chloroform	U	1.20	ug/kg	0.360	1.20	
74-97-5	Bromochloromethane	U	1.20	ug/kg	0.396	1.20	
71-55-6	1,1,1-Trichloroethane	U	1.20	ug/kg	0.360	1.20	
563-58-6	1,1-Dichloropropene	U	1.20	ug/kg	0.360	1.20	
56-23-5	Carbon tetrachloride	U	1.20	ug/kg	0.360	1.20	
107-06-2	1,2-Dichloroethane	U	1.20	ug/kg	0.360	1.20	
71-43-2	Benzene	U	1.20	ug/kg	0.360	1.20	
79-01-6	Trichloroethylene	U	1.20	ug/kg	0.396	1.20	
78-87-5	1,2-Dichloropropane	U	1.20	ug/kg	0.360	1.20	
75-27-4	Bromodichloromethane	U	1.20	ug/kg	0.360	1.20	
74-95-3	Dibromomethane	U	1.20	ug/kg	0.360	1.20	
108-10-1	4-Methyl-2-pentanone	U	6.00	ug/kg	1.50	6.00	
10061-01-5	cis-1,3-Dichloropropylene	U	1.20	ug/kg	0.360	1.20	
108-88-3	Toluene	U	1.20	ug/kg	0.360	1.20	
10061-02-6	trans-1,3-Dichloropropylene	U	1.20	ug/kg	0.360	1.20	
79-00-5	1,1,2-Trichloroethane	U	1.20	ug/kg	0.360	1.20	
591-78-6	2-Hexanone	U	6.00	ug/kg	1.80	6.00	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.20	ug/kg	0.360	1.20	
127-18-4	Tetrachloroethylene	U	1.20	ug/kg	0.360	1.20	
124-48-1	Dibromochloromethane	U	1.20	ug/kg	0.360	1.20	
106-93-4	1,2-Dibromoethane	U	1.20	ug/kg	0.360	1.20	
108-90-7	Chlorobenzene	U	1.20	ug/kg	0.360	1.20	

MAD
07/27/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 17:23	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t218.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.20	ug/kg	0.360	1.20	
179601-23-1	m,p-Xylenes	U	2.40	ug/kg	0.360	2.40	
95-47-6	o-Xylene	U	1.20	ug/kg	0.360	1.20	
100-42-5	Styrene	U	1.20	ug/kg	0.360	1.20	
75-25-2	Bromoform	U	1.20	ug/kg	0.360	1.20	UJ,V1b
79-34-5	1,1,2,2-Tetrachloroethane	U	1.20	ug/kg	0.360	1.20	
96-18-4	1,2,3-Trichloropropane	U	1.20	ug/kg	0.360	1.20	
108-86-1	Bromobenzene	U	1.20	ug/kg	0.360	1.20	
103-65-1	n-Propylbenzene	U	1.20	ug/kg	0.360	1.20	
95-49-8	2-Chlorotoluene	U	1.20	ug/kg	0.360	1.20	
98-82-8	Isopropylbenzene	U	1.20	ug/kg	0.360	1.20	UJ,V7c
108-67-8	1,3,5-Trimethylbenzene	U	1.20	ug/kg	0.360	1.20	UJ,V1b
106-43-4	4-Chlorotoluene	U	1.20	ug/kg	0.360	1.20	
98-06-6	tert-Butylbenzene	U	1.20	ug/kg	0.360	1.20	
95-63-6	1,2,4-Trimethylbenzene	J	0.574	ug/kg	0.360	1.20	J,V1b
135-98-8	sec-Butylbenzene	U	1.20	ug/kg	0.360	1.20	UJ,V1b
99-87-6	4-Isopropyltoluene	U	1.20	ug/kg	0.360	1.20	
541-73-1	1,3-Dichlorobenzene	U	1.20	ug/kg	0.360	1.20	
106-46-7	1,4-Dichlorobenzene	U	1.20	ug/kg	0.360	1.20	
104-51-8	n-Butylbenzene	U	1.20	ug/kg	0.360	1.20	
96-12-8	1,2-Dibromo-3-chloropropane	U	1.20	ug/kg	0.360	1.20	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.00	ug/kg	1.92	6.00	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.20	ug/kg	0.360	1.20	
95-50-1	1,2-Dichlorobenzene	U	1.20	ug/kg	0.360	1.20	UJ,V1b

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

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07/27/09

DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2515 VALIDATION DATE: 07/27/2009 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): SVOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. The ICAL r^2 values were <0.995 for 4-chloroaniline and 2,4-dinitrophenol. All associated sample results were NDs and, thus, were qualified UJ,SV7a.
3. The ICV %Ds were >20% for benzoic acid and 2-methyl-4,6-dinitrophenol. The CCV %Ds were >20% for 4-chloroaniline and 3-nitroaniline. All associated sample results were NDs and, thus, were qualified UJ,SV7c.
4. It should be noted that the parent sample for the MS/MSD was a LANL sample from another RN and that the raw data for the parent sample were not included in the data package. The analysis of an MS or MSD was not required for SVOCs and, thus, no sample data were qualified.

Reviewed by: CLL Level: 1 Date: 7/28/09

VALIDATOR'S SIGNATURE: Mary A. Dominguez	DATE: 07/27/2009
Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☒	☐	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST	
5115-2 **Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☐	☒	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☒	☐	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☒	☐	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**	**Date Collected:**	**06/26/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232661005**	**Date Received:**	**07/01/2009 09:00**	**%Moisture:**	**10**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10030**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 10:38**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30.01 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0709.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	370	ug/kg	74.1	370	
108-95-2	Phenol	U	370	ug/kg	74.1	370	
95-57-8	2-Chlorophenol	U	370	ug/kg	74.1	370	
106-46-7	1,4-Dichlorobenzene	U	370	ug/kg	74.1	370	
621-64-7	N-Nitrosodipropylamine	U	370	ug/kg	74.1	370	
59-50-7	4-Chloro-3-methylphenol	U	370	ug/kg	74.1	370	
83-32-9	Acenaphthene	U	37.0	ug/kg	12.2	37.0	
121-14-2	2,4-Dinitrotoluene	U	370	ug/kg	37.0	370	
100-02-7	4-Nitrophenol	U	370	ug/kg	122	370	
87-86-5	Pentachlorophenol	U	370	ug/kg	92.6	370	
129-00-0	Pyrene	U	37.0	ug/kg	11.1	37.0	
110-86-1	Pyridine	U	370	ug/kg	74.1	370	
62-53-3	Aniline	U	370	ug/kg	111	370	
111-44-4	bis(2-Chloroethyl) ether	U	370	ug/kg	74.1	370	
541-73-1	1,3-Dichlorobenzene	U	370	ug/kg	74.1	370	
100-51-6	Benzyl alcohol	U	370	ug/kg	111	370	
95-50-1	1,2-Dichlorobenzene	U	370	ug/kg	74.1	370	
108-60-1	bis(2-Chloroisopropyl)ether	U	370	ug/kg	74.1	370	
95-48-7	o-Cresol	U	370	ug/kg	74.1	370	
65794-96-9	m,p-Cresols	U	370	ug/kg	111	370	
67-72-1	Hexachloroethane	U	370	ug/kg	74.1	370	
98-95-3	Nitrobenzene	U	370	ug/kg	74.1	370	
78-59-1	Isophorone	U	370	ug/kg	74.1	370	
88-75-5	2-Nitrophenol	U	370	ug/kg	74.1	370	
105-67-9	2,4-Dimethylphenol	U	370	ug/kg	130	370	
111-91-1	bis(2-Chloroethoxy)methane	U	370	ug/kg	74.1	370	
120-83-2	2,4-Dichlorophenol	U	370	ug/kg	74.1	370	
65-85-0	Benzoic acid	U	741	ug/kg	185	741	UJ,SV7c
91-20-3	Naphthalene	U	37.0	ug/kg	11.1	37.0	
106-47-8	4-Chloroaniline	U	370	ug/kg	74.1	370	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	370	ug/kg	74.1	370	
91-57-6	2-Methylnaphthalene	U	37.0	ug/kg	7.41	37.0	
77-47-4	Hexachlorocyclopentadiene	U	370	ug/kg	74.1	370	
88-06-2	2,4,6-Trichlorophenol	U	370	ug/kg	74.1	370	
95-95-4	2,4,5-Trichlorophenol	U	370	ug/kg	74.1	370	
91-58-7	2-Chloronaphthalene	U	37.0	ug/kg	12.2	37.0	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	370	ug/kg	74.1	370	
99-09-2	3-Nitroaniline	U	370	ug/kg	74.1	370	UJ,SV7c

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Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661005	Date Received:	07/01/2009 09:00	%Moisture:	10
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10030	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 10:38	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5g0709.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	370	ug/kg	74.1	370	
606-20-2	2,6-Dinitrotoluene	U	370	ug/kg	37.0	370	
208-96-8	Acenaphthylene	U	37.0	ug/kg	11.1	37.0	
51-28-5	2,4-Dinitrophenol	U	741	ug/kg	141	741	UJ,SV7a
132-64-9	Dibenzofuran	U	370	ug/kg	74.1	370	
84-66-2	Diethylphthalate	U	370	ug/kg	74.1	370	
86-73-7	Fluorene	U	37.0	ug/kg	11.1	37.0	
7005-72-3	4-Chlorophenylphenylether	U	370	ug/kg	74.1	370	
534-52-1	2-Methyl-4,6-dinitrophenol	U	370	ug/kg	74.1	370	UJ,SV7c
100-01-6	4-Nitroaniline	U	370	ug/kg	111	370	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	370	ug/kg	74.1	370	
122-66-7	Azobenzene	U	370	ug/kg	74.1	370	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	370	ug/kg	74.1	370	
118-74-1	Hexachlorobenzene	U	370	ug/kg	74.1	370	
85-01-8	Phenanthrene	U	37.0	ug/kg	11.1	37.0	
120-12-7	Anthracene	U	37.0	ug/kg	7.41	37.0	
84-74-2	Di-n-butylphthalate	U	370	ug/kg	74.1	370	
206-44-0	Fluoranthene	U	37.0	ug/kg	11.1	37.0	
85-68-7	Butylbenzylphthalate	U	370	ug/kg	74.1	370	
56-55-3	Benzo(a)anthracene	U	37.0	ug/kg	11.1	37.0	
91-94-1	3,3'-Dichlorobenzidine	U	370	ug/kg	111	370	
218-01-9	Chrysene	U	37.0	ug/kg	11.1	37.0	
117-81-7	bis(2-Ethylhexyl)phthalate	U	370	ug/kg	74.1	370	
117-84-0	Di-n-octylphthalate	U	370	ug/kg	74.1	370	
205-99-2	Benzo(b)fluoranthene	U	37.0	ug/kg	11.1	37.0	
207-08-9	Benzo(k)fluoranthene	U	37.0	ug/kg	11.1	37.0	
50-32-8	Benzo(a)pyrene	U	37.0	ug/kg	11.1	37.0	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.0	ug/kg	11.1	37.0	
53-70-3	Dibenzo(a,h)anthracene	U	37.0	ug/kg	11.1	37.0	
191-24-2	Benzo(ghi)perylene	U	37.0	ug/kg	11.1	37.0	
120-82-1	1,2,4-Trichlorobenzene	U	370	ug/kg	74.1	370	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.21	169	ug/kg		J
	Unknown Aldol Condensate	3.02	429	ug/kg		JA

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661005	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10030	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 10:38	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0709.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.15	305	ug/kg	92	NJ

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661003	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9941	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 09:41	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0707.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	374	ug/kg	74.7	374	
108-95-2	Phenol	U	374	ug/kg	74.7	374	
95-57-8	2-Chlorophenol	U	374	ug/kg	74.7	374	
106-46-7	1,4-Dichlorobenzene	U	374	ug/kg	74.7	374	
621-64-7	N-Nitrosodipropylamine	U	374	ug/kg	74.7	374	
59-50-7	4-Chloro-3-methylphenol	U	374	ug/kg	74.7	374	
83-32-9	Acenaphthene	U	37.4	ug/kg	12.3	37.4	
121-14-2	2,4-Dinitrotoluene	U	374	ug/kg	37.4	374	
100-02-7	4-Nitrophenol	U	374	ug/kg	123	374	
87-86-5	Pentachlorophenol	U	374	ug/kg	93.4	374	
129-00-0	Pyrene	U	37.4	ug/kg	11.2	37.4	
110-86-1	Pyridine	U	374	ug/kg	74.7	374	
62-53-3	Aniline	U	374	ug/kg	112	374	
111-44-4	bis(2-Chloroethyl) ether	U	374	ug/kg	74.7	374	
541-73-1	1,3-Dichlorobenzene	U	374	ug/kg	74.7	374	
100-51-6	Benzyl alcohol	U	374	ug/kg	112	374	
95-50-1	1,2-Dichlorobenzene	U	374	ug/kg	74.7	374	
108-60-1	bis(2-Chloroisopropyl)ether	U	374	ug/kg	74.7	374	
95-48-7	o-Cresol	U	374	ug/kg	74.7	374	
65794-96-9	m,p-Cresols	U	374	ug/kg	112	374	
67-72-1	Hexachloroethane	U	374	ug/kg	74.7	374	
98-95-3	Nitrobenzene	U	374	ug/kg	74.7	374	
78-59-1	Isophorone	U	374	ug/kg	74.7	374	
88-75-5	2-Nitrophenol	U	374	ug/kg	74.7	374	
105-67-9	2,4-Dimethylphenol	U	374	ug/kg	131	374	
111-91-1	bis(2-Chloroethoxy)methane	U	374	ug/kg	74.7	374	
120-83-2	2,4-Dichlorophenol	U	374	ug/kg	74.7	374	
65-85-0	Benzoic acid	U	747	ug/kg	187	747	UJ,SV7c
91-20-3	Naphthalene	U	37.4	ug/kg	11.2	37.4	
106-47-8	4-Chloroaniline	U	374	ug/kg	74.7	374	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	374	ug/kg	74.7	374	
91-57-6	2-Methylnaphthalene	U	37.4	ug/kg	7.47	37.4	
77-47-4	Hexachlorocyclopentadiene	U	374	ug/kg	74.7	374	
88-06-2	2,4,6-Trichlorophenol	U	374	ug/kg	74.7	374	
95-95-4	2,4,5-Trichlorophenol	U	374	ug/kg	74.7	374	
91-58-7	2-Chloronaphthalene	U	37.4	ug/kg	12.3	37.4	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	374	ug/kg	74.7	374	
99-09-2	3-Nitroaniline	U	374	ug/kg	74.7	374	UJ,SV7c

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661003	Date Received:	07/01/2009 09:00	%Moisture:	10.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9941	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 09:41	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0707.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	374	ug/kg	74.7	374	
606-20-2	2,6-Dinitrotoluene	U	374	ug/kg	37.4	374	
208-96-8	Acenaphthylene	U	37.4	ug/kg	11.2	37.4	
51-28-5	2,4-Dinitrophenol	U	747	ug/kg	142	747	UJ,SV7a
132-64-9	Dibenzofuran	U	374	ug/kg	74.7	374	
84-66-2	Diethylphthalate	U	374	ug/kg	74.7	374	
86-73-7	Fluorene	U	37.4	ug/kg	11.2	37.4	
7005-72-3	4-Chlorophenylphenylether	U	374	ug/kg	74.7	374	
534-52-1	2-Methyl-4,6-dinitrophenol	U	374	ug/kg	74.7	374	UJ,SV7c
100-01-6	4-Nitroaniline	U	374	ug/kg	112	374	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	374	ug/kg	74.7	374	
122-66-7	Azobenzene	U	374	ug/kg	74.7	374	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	374	ug/kg	74.7	374	
118-74-1	Hexachlorobenzene	U	374	ug/kg	74.7	374	
85-01-8	Phenanthrene	U	37.4	ug/kg	11.2	37.4	
120-12-7	Anthracene	U	37.4	ug/kg	7.47	37.4	
84-74-2	Di-n-butylphthalate	U	374	ug/kg	74.7	374	
206-44-0	Fluoranthene	U	37.4	ug/kg	11.2	37.4	
85-68-7	Butylbenzylphthalate	U	374	ug/kg	74.7	374	
56-55-3	Benzo(a)anthracene	U	37.4	ug/kg	11.2	37.4	
91-94-1	3,3'-Dichlorobenzidine	U	374	ug/kg	112	374	
218-01-9	Chrysene	U	37.4	ug/kg	11.2	37.4	
117-81-7	bis(2-Ethylhexyl)phthalate	U	374	ug/kg	74.7	374	
117-84-0	Di-n-octylphthalate	U	374	ug/kg	74.7	374	
205-99-2	Benzo(b)fluoranthene	U	37.4	ug/kg	11.2	37.4	
207-08-9	Benzo(k)fluoranthene	U	37.4	ug/kg	11.2	37.4	
50-32-8	Benzo(a)pyrene	U	37.4	ug/kg	11.2	37.4	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.4	ug/kg	11.2	37.4	
53-70-3	Dibenzo(a,h)anthracene	U	37.4	ug/kg	11.2	37.4	
191-24-2	Benzo(ghi)perylene	U	37.4	ug/kg	11.2	37.4	
120-82-1	1,2,4-Trichlorobenzene	U	374	ug/kg	74.7	374	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	401	ug/kg		JA
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.15	226	ug/kg	97	NJ

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661003	Date Received:	07/01/2009 09:00	%Moisture:	10.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9941	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 09:41	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0707.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	16.69	203	ug/kg		J

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661002	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9942	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 09:13	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0706.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	378	ug/kg	75.6	378	
108-95-2	Phenol	U	378	ug/kg	75.6	378	
95-57-8	2-Chlorophenol	U	378	ug/kg	75.6	378	
106-46-7	1,4-Dichlorobenzene	U	378	ug/kg	75.6	378	
621-64-7	N-Nitrosodipropylamine	U	378	ug/kg	75.6	378	
59-50-7	4-Chloro-3-methylphenol	U	378	ug/kg	75.6	378	
83-32-9	Acenaphthene	U	37.8	ug/kg	12.5	37.8	
121-14-2	2,4-Dinitrotoluene	U	378	ug/kg	37.8	378	
100-02-7	4-Nitrophenol	U	378	ug/kg	125	378	
87-86-5	Pentachlorophenol	U	378	ug/kg	94.5	378	
129-00-0	Pyrene	U	37.8	ug/kg	11.3	37.8	
110-86-1	Pyridine	U	378	ug/kg	75.6	378	
62-53-3	Aniline	U	378	ug/kg	113	378	
111-44-4	bis(2-Chloroethyl) ether	U	378	ug/kg	75.6	378	
541-73-1	1,3-Dichlorobenzene	U	378	ug/kg	75.6	378	
100-51-6	Benzyl alcohol	U	378	ug/kg	113	378	
95-50-1	1,2-Dichlorobenzene	U	378	ug/kg	75.6	378	
108-60-1	bis(2-Chloroisopropyl)ether	U	378	ug/kg	75.6	378	
95-48-7	o-Cresol	U	378	ug/kg	75.6	378	
65794-96-9	m,p-Cresols	U	378	ug/kg	113	378	
67-72-1	Hexachloroethane	U	378	ug/kg	75.6	378	
98-95-3	Nitrobenzene	U	378	ug/kg	75.6	378	
78-59-1	Isophorone	U	378	ug/kg	75.6	378	
88-75-5	2-Nitrophenol	U	378	ug/kg	75.6	378	
105-67-9	2,4-Dimethylphenol	U	378	ug/kg	132	378	
111-91-1	bis(2-Chloroethoxy)methane	U	378	ug/kg	75.6	378	
120-83-2	2,4-Dichlorophenol	U	378	ug/kg	75.6	378	
65-85-0	Benzoic acid	U	756	ug/kg	189	756	UJ,SV7c
91-20-3	Naphthalene	U	37.8	ug/kg	11.3	37.8	
106-47-8	4-Chloroaniline	U	378	ug/kg	75.6	378	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	378	ug/kg	75.6	378	
91-57-6	2-Methylnaphthalene	U	37.8	ug/kg	7.56	37.8	
77-47-4	Hexachlorocyclopentadiene	U	378	ug/kg	75.6	378	
88-06-2	2,4,6-Trichlorophenol	U	378	ug/kg	75.6	378	
95-95-4	2,4,5-Trichlorophenol	U	378	ug/kg	75.6	378	
91-58-7	2-Chloronaphthalene	U	37.8	ug/kg	12.5	37.8	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	378	ug/kg	75.6	378	
99-09-2	3-Nitroaniline	U	378	ug/kg	75.6	378	UJ,SV7c

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661002	Date Received:	07/01/2009 09:00	%Moisture:	11.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9942	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 09:13	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0706.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	378	ug/kg	75.6	378	
606-20-2	2,6-Dinitrotoluene	U	378	ug/kg	37.8	378	
208-96-8	Acenaphthylene	U	37.8	ug/kg	11.3	37.8	
51-28-5	2,4-Dinitrophenol	U	756	ug/kg	144	756	UJ,SV7a
132-64-9	Dibenzofuran	U	378	ug/kg	75.6	378	
84-66-2	Diethylphthalate	U	378	ug/kg	75.6	378	
86-73-7	Fluorene	U	37.8	ug/kg	11.3	37.8	
7005-72-3	4-Chlorophenylphenylether	U	378	ug/kg	75.6	378	
534-52-1	2-Methyl-4,6-dinitrophenol	U	378	ug/kg	75.6	378	UJ,SV7c
100-01-6	4-Nitroaniline	U	378	ug/kg	113	378	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	378	ug/kg	75.6	378	
122-66-7	Azobenzene	U	378	ug/kg	75.6	378	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	378	ug/kg	75.6	378	
118-74-1	Hexachlorobenzene	U	378	ug/kg	75.6	378	
85-01-8	Phenanthrene	U	37.8	ug/kg	11.3	37.8	
120-12-7	Anthracene	U	37.8	ug/kg	7.56	37.8	
84-74-2	Di-n-butylphthalate	U	378	ug/kg	75.6	378	
206-44-0	Fluoranthene	U	37.8	ug/kg	11.3	37.8	
85-68-7	Butylbenzylphthalate	U	378	ug/kg	75.6	378	
56-55-3	Benzo(a)anthracene	U	37.8	ug/kg	11.3	37.8	
91-94-1	3,3'-Dichlorobenzidine	U	378	ug/kg	113	378	
218-01-9	Chrysene	U	37.8	ug/kg	11.3	37.8	
117-81-7	bis(2-Ethylhexyl)phthalate	U	378	ug/kg	75.6	378	
117-84-0	Di-n-octylphthalate	U	378	ug/kg	75.6	378	
205-99-2	Benzo(b)fluoranthene	U	37.8	ug/kg	11.3	37.8	
207-08-9	Benzo(k)fluoranthene	U	37.8	ug/kg	11.3	37.8	
50-32-8	Benzo(a)pyrene	U	37.8	ug/kg	11.3	37.8	
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.8	ug/kg	11.3	37.8	
53-70-3	Dibenzo(a,h)anthracene	U	37.8	ug/kg	11.3	37.8	
191-24-2	Benzo(ghi)perylene	U	37.8	ug/kg	11.3	37.8	
120-82-1	1,2,4-Trichlorobenzene	U	378	ug/kg	75.6	378	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	388	ug/kg		JA

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661004	Date Received:	07/01/2009 09:00	%Moisture:	13.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9943	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 10:10	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0708.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	387	ug/kg	77.3	387	
108-95-2	Phenol	U	387	ug/kg	77.3	387	
95-57-8	2-Chlorophenol	U	387	ug/kg	77.3	387	
106-46-7	1,4-Dichlorobenzene	U	387	ug/kg	77.3	387	
621-64-7	N-Nitrosodipropylamine	U	387	ug/kg	77.3	387	
59-50-7	4-Chloro-3-methylphenol	U	387	ug/kg	77.3	387	
83-32-9	Acenaphthene	U	38.7	ug/kg	12.8	38.7	
121-14-2	2,4-Dinitrotoluene	U	387	ug/kg	38.7	387	
100-02-7	4-Nitrophenol	U	387	ug/kg	128	387	
87-86-5	Pentachlorophenol	U	387	ug/kg	96.7	387	
129-00-0	Pyrene	J	17.6	ug/kg	11.6	38.7	
110-86-1	Pyridine	U	387	ug/kg	77.3	387	
62-53-3	Aniline	U	387	ug/kg	116	387	
111-44-4	bis(2-Chloroethyl) ether	U	387	ug/kg	77.3	387	
541-73-1	1,3-Dichlorobenzene	U	387	ug/kg	77.3	387	
100-51-6	Benzyl alcohol	U	387	ug/kg	116	387	
95-50-1	1,2-Dichlorobenzene	U	387	ug/kg	77.3	387	
108-60-1	bis(2-Chloroisopropyl)ether	U	387	ug/kg	77.3	387	
95-48-7	o-Cresol	U	387	ug/kg	77.3	387	
65794-96-9	m,p-Cresols	U	387	ug/kg	116	387	
67-72-1	Hexachloroethane	U	387	ug/kg	77.3	387	
98-95-3	Nitrobenzene	U	387	ug/kg	77.3	387	
78-59-1	Isophorone	U	387	ug/kg	77.3	387	
88-75-5	2-Nitrophenol	U	387	ug/kg	77.3	387	
105-67-9	2,4-Dimethylphenol	U	387	ug/kg	135	387	
111-91-1	bis(2-Chloroethoxy)methane	U	387	ug/kg	77.3	387	
120-83-2	2,4-Dichlorophenol	U	387	ug/kg	77.3	387	
65-85-0	Benzoic acid	U	773	ug/kg	193	773	UJ,SV7c
91-20-3	Naphthalene	U	38.7	ug/kg	11.6	38.7	
106-47-8	4-Chloroaniline	U	387	ug/kg	77.3	387	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	387	ug/kg	77.3	387	
91-57-6	2-Methylnaphthalene	U	38.7	ug/kg	7.73	38.7	
77-47-4	Hexachlorocyclopentadiene	U	387	ug/kg	77.3	387	
88-06-2	2,4,6-Trichlorophenol	U	387	ug/kg	77.3	387	
95-95-4	2,4,5-Trichlorophenol	U	387	ug/kg	77.3	387	
91-58-7	2-Chloronaphthalene	U	38.7	ug/kg	12.8	38.7	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	387	ug/kg	77.3	387	
99-09-2	3-Nitroaniline	U	387	ug/kg	77.3	387	UJ,SV7c

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661004	**Date Received:**	07/01/2009 09:00	**%Moisture:**	13.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9943	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 10:10	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s5g0708.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	387	ug/kg	77.3	387	
606-20-2	2,6-Dinitrotoluene	U	387	ug/kg	38.7	387	
208-96-8	Acenaphthylene	U	38.7	ug/kg	11.6	38.7	
51-28-5	2,4-Dinitrophenol	U	773	ug/kg	147	773	UJ,SV7a
132-64-9	Dibenzofuran	U	387	ug/kg	77.3	387	
84-66-2	Diethylphthalate	U	387	ug/kg	77.3	387	
86-73-7	Fluorene	U	38.7	ug/kg	11.6	38.7	
7005-72-3	4-Chlorophenylphenylether	U	387	ug/kg	77.3	387	
534-52-1	2-Methyl-4,6-dinitrophenol	U	387	ug/kg	77.3	387	UJ,SV7c
100-01-6	4-Nitroaniline	U	387	ug/kg	116	387	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	387	ug/kg	77.3	387	
122-66-7	Azobenzene	U	387	ug/kg	77.3	387	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	387	ug/kg	77.3	387	
118-74-1	Hexachlorobenzene	U	387	ug/kg	77.3	387	
85-01-8	Phenanthrene	U	38.7	ug/kg	11.6	38.7	
120-12-7	Anthracene	U	38.7	ug/kg	7.73	38.7	
84-74-2	Di-n-butylphthalate	U	387	ug/kg	77.3	387	
206-44-0	Fluoranthene	J	17.5	ug/kg	11.6	38.7	
85-68-7	Butylbenzylphthalate	U	387	ug/kg	77.3	387	
56-55-3	Benzo(a)anthracene	J	12.5	ug/kg	11.6	38.7	
91-94-1	3,3'-Dichlorobenzidine	U	387	ug/kg	116	387	
218-01-9	Chrysene	U	38.7	ug/kg	11.6	38.7	
117-81-7	bis(2-Ethylhexyl)phthalate	U	387	ug/kg	77.3	387	
117-84-0	Di-n-octylphthalate	U	387	ug/kg	77.3	387	
205-99-2	Benzo(b)fluoranthene	U	38.7	ug/kg	11.6	38.7	
207-08-9	Benzo(k)fluoranthene	U	38.7	ug/kg	11.6	38.7	
50-32-8	Benzo(a)pyrene	U	38.7	ug/kg	11.6	38.7	
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.7	ug/kg	11.6	38.7	
53-70-3	Dibenzo(a,h)anthracene	U	38.7	ug/kg	11.6	38.7	
191-24-2	Benzo(ghi)perylene	U	38.7	ug/kg	11.6	38.7	
120-82-1	1,2,4-Trichlorobenzene	U	387	ug/kg	77.3	387	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.21	164	ug/kg		J
	Unknown Aldol Condensate	3.02	430	ug/kg		JA

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661006	Date Received:	07/01/2009 09:00	%Moisture:	16.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9989	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 11:07	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0710.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	400	ug/kg	80.0	400	
108-95-2	Phenol	U	400	ug/kg	80.0	400	
95-57-8	2-Chlorophenol	U	400	ug/kg	80.0	400	
106-46-7	1,4-Dichlorobenzene	U	400	ug/kg	80.0	400	
621-64-7	N-Nitrosodipropylamine	U	400	ug/kg	80.0	400	
59-50-7	4-Chloro-3-methylphenol	U	400	ug/kg	80.0	400	
83-32-9	Acenaphthene	U	40.0	ug/kg	13.2	40.0	
121-14-2	2,4-Dinitrotoluene	U	400	ug/kg	40.0	400	
100-02-7	4-Nitrophenol	U	400	ug/kg	132	400	
87-86-5	Pentachlorophenol	U	400	ug/kg	100	400	
129-00-0	Pyrene		70.1	ug/kg	12.0	40.0	
110-86-1	Pyridine	U	400	ug/kg	80.0	400	
62-53-3	Aniline	U	400	ug/kg	120	400	
111-44-4	bis(2-Chloroethyl) ether	U	400	ug/kg	80.0	400	
541-73-1	1,3-Dichlorobenzene	U	400	ug/kg	80.0	400	
100-51-6	Benzyl alcohol	U	400	ug/kg	120	400	
95-50-1	1,2-Dichlorobenzene	U	400	ug/kg	80.0	400	
108-60-1	bis(2-Chloroisopropyl)ether	U	400	ug/kg	80.0	400	
95-48-7	o-Cresol	U	400	ug/kg	80.0	400	
65794-96-9	m,p-Cresols	U	400	ug/kg	120	400	
67-72-1	Hexachloroethane	U	400	ug/kg	80.0	400	
98-95-3	Nitrobenzene	U	400	ug/kg	80.0	400	
78-59-1	Isophorone	U	400	ug/kg	80.0	400	
88-75-5	2-Nitrophenol	U	400	ug/kg	80.0	400	
105-67-9	2,4-Dimethylphenol	U	400	ug/kg	140	400	
111-91-1	bis(2-Chloroethoxy)methane	U	400	ug/kg	80.0	400	
120-83-2	2,4-Dichlorophenol	U	400	ug/kg	80.0	400	
65-85-0	Benzoic acid	U	800	ug/kg	200	800	UJ,SV7c
91-20-3	Naphthalene	U	40.0	ug/kg	12.0	40.0	
106-47-8	4-Chloroaniline	U	400	ug/kg	80.0	400	UJ,SV7a
87-68-3	Hexachlorobutadiene	U	400	ug/kg	80.0	400	
91-57-6	2-Methylnaphthalene	U	40.0	ug/kg	8.00	40.0	
77-47-4	Hexachlorocyclopentadiene	U	400	ug/kg	80.0	400	
88-06-2	2,4,6-Trichlorophenol	U	400	ug/kg	80.0	400	
95-95-4	2,4,5-Trichlorophenol	U	400	ug/kg	80.0	400	
91-58-7	2-Chloronaphthalene	U	40.0	ug/kg	13.2	40.0	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	400	ug/kg	80.0	400	
99-09-2	3-Nitroaniline	U	400	ug/kg	80.0	400	UJ,SV7c

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661006	Date Received:	07/01/2009 09:00	%Moisture:	16.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9989	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 11:07	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0710.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	400	ug/kg	80.0	400	
606-20-2	2,6-Dinitrotoluene	U	400	ug/kg	40.0	400	
208-96-8	Acenaphthylene	U	40.0	ug/kg	12.0	40.0	
51-28-5	2,4-Dinitrophenol	U	800	ug/kg	152	800	UJ,SV7a
132-64-9	Dibenzofuran	U	400	ug/kg	80.0	400	
84-66-2	Diethylphthalate	U	400	ug/kg	80.0	400	
86-73-7	Fluorene	U	40.0	ug/kg	12.0	40.0	
7005-72-3	4-Chlorophenylphenylether	U	400	ug/kg	80.0	400	
534-52-1	2-Methyl-4,6-dinitrophenol	U	400	ug/kg	80.0	400	UJ,SV7c
100-01-6	4-Nitroaniline	U	400	ug/kg	120	400	
	p-Nitroaniline						
122-39-4	Diphenylamine	U	400	ug/kg	80.0	400	
122-66-7	Azobenzene	U	400	ug/kg	80.0	400	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	400	ug/kg	80.0	400	
118-74-1	Hexachlorobenzene	U	400	ug/kg	80.0	400	
85-01-8	Phenanthrene	J	23.4	ug/kg	12.0	40.0	
120-12-7	Anthracene	U	40.0	ug/kg	8.00	40.0	
84-74-2	Di-n-butylphthalate	U	400	ug/kg	80.0	400	
206-44-0	Fluoranthene		80.0	ug/kg	12.0	40.0	
85-68-7	Butylbenzylphthalate	U	400	ug/kg	80.0	400	
56-55-3	Benzo(a)anthracene	J	34.8	ug/kg	12.0	40.0	
91-94-1	3,3'-Dichlorobenzidine	U	400	ug/kg	120	400	
218-01-9	Chrysene		49.1	ug/kg	12.0	40.0	
117-81-7	bis(2-Ethylhexyl)phthalate	U	400	ug/kg	80.0	400	
117-84-0	Di-n-octylphthalate	U	400	ug/kg	80.0	400	
205-99-2	Benzo(b)fluoranthene		65.8	ug/kg	12.0	40.0	
207-08-9	Benzo(k)fluoranthene	J	23.1	ug/kg	12.0	40.0	
50-32-8	Benzo(a)pyrene		40.8	ug/kg	12.0	40.0	
193-39-5	Indeno(1,2,3-cd)pyrene	J	25.1	ug/kg	12.0	40.0	
53-70-3	Dibenzo(a,h)anthracene	U	40.0	ug/kg	12.0	40.0	
191-24-2	Benzo(ghi)perylene	J	31.0	ug/kg	12.0	40.0	
120-82-1	1,2,4-Trichlorobenzene	U	400	ug/kg	80.0	400	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	363	ug/kg		JA
65899-10-7	trans-1,2-Bis(methyldichlorosilyl)ethyle	9.15	163	ug/kg	96	NJ

MAD
07/27/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 11:07	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0710.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1000214-20-7	Stigmasterol, 22,23-dihydro-	14.02	516	ug/kg	93	NJ
	Unknown	15.32	209	ug/kg		J
	Unknown	18.56	345	ug/kg		J
	Unknown	19.33	191	ug/kg		J
	Unknown	19.34	160	ug/kg		J

MAD
07/27/09

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2515 VALIDATION DATE: 07/27/2009 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Mary Donivan ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☒ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE): PCBs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.

Reviewed by: CLL Level: 1 Date: 7/28/09

VALIDATOR'S SIGNATURE: Mary A. Donivan DATE: 07/27/2009

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, P9	J-, P9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, P9b	R, P9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, P7	J, P7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, P7a	J, P7a
☐	☒	☐	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, P7d	J, P7d
☐	☒	☐	8. The multicomponent standard was not analyzed within 72 hours of the Initial analysis.	R, P7e	J, P7e
☐	☒	☐	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
☐	☐	☒	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	11. The breakdown criteria have been exceeded. This can cause high bias in the reported results and potential false positive results for the breakdown products Endrin ketone, Endrin aldehyde, DDD, and DDE.	UJ, P13a	J+, P13a
☐	☐	☒	12. The breakdown documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P13b	R, P13b
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, P4	N/A
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X.	N/A	J, P4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	UJ, P4b	N/A
☐	☐	☒	16. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, P4d	N/A
☐	☒	☐	17. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P4e	R, P4e
☐	☒	☐	18. The analyte RT shifted by more than 0.05 minutes from the mid-level standard of the initial calibration.	R, P0	J, P0
☐	☒	☐	19. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P0b	R, P0b
☐	☒	☐	20. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, P3	J-, P3

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, P3a	J-, P3a
☐	☒	☐	22. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P3b
☐	☒	☐	23. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, P3c	J, P3c
☐	☒	☐	24. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P3d	R, P3d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, P12	J-, P12
☐	☒	☐	26. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, P12a	J-, P12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P12c	R, P12c
☐	☒	☐	29. The analyte was not confirmed on a second dissimilar column.	N/A	R, P8
☐	☒	☐	30. The second dissimilar column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P8a	R, P8a
☐	☒	☐	31. Duplicate, Dilution, or reanalysis.	UJ, P88	J, P88

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2 Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, P15	R, P15
☒	☐	☐	33. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, P19	J, R, P19

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661005	Date Received:	07/01/2009 09:00	%Moisture:	10
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10030	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	884634	Inst:	ECD1A.I	Dilution:	1
Run Date:	07/14/2009 11:22	Analyst:	YS1	Inj. Vol:	1 uL
Prep Date:	07/13/2009 20:17	Aliquot:	30 g	Final Volume:	1 mL
Data File:	027f2701.d	Column:	1 CLP1	Level:	LOW
	027b2701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.70	ug/kg	1.23	3.70	1
11104-28-2	Aroclor-1221	U	3.70	ug/kg	1.23	3.70	1
11141-16-5	Aroclor-1232	U	3.70	ug/kg	1.23	3.70	1
53469-21-9	Aroclor-1242	U	3.70	ug/kg	1.23	3.70	1
12672-29-6	Aroclor-1248	U	3.70	ug/kg	1.23	3.70	1
11097-69-1	Aroclor-1254		7.10	ug/kg	1.23	3.70	1
11096-82-5	Aroclor-1260		8.90	ug/kg	1.23	3.70	2

MAD
07/27/09

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09–2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661006	Date Received:	07/01/2009 09:00	%Moisture:	16.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO–09–9989	Method:	SW846 8082	SOP Ref:	GL–OA–E–040
Batch ID:	884634	Inst:	ECD1A.I	Dilution:	5
Run Date:	07/14/2009 11:58	Analyst:	YS1	Inj. Vol:	1 uL
Prep Date:	07/13/2009 20:17	Aliquot:	30.08 g	Final Volume:	1 mL
Data File:	030f3001.d	Column:	1 CLP1	Level:	LOW
	030b3001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	20.0	ug/kg	6.64	20.0	1
11104–28–2	Aroclor–1221	U	20.0	ug/kg	6.64	20.0	1
11141–16–5	Aroclor–1232	U	20.0	ug/kg	6.64	20.0	1
53469–21–9	Aroclor–1242	U	20.0	ug/kg	6.64	20.0	1
12672–29–6	Aroclor–1248	U	20.0	ug/kg	6.64	20.0	1
11097–69–1	Aroclor–1254	U	20.0	ug/kg	6.64	20.0	1
11096–82–5	Aroclor–1260		64.4	ug/kg	6.64	20.0	2

MAD
07/27/09

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2515

REQUEST NUMBER: 09-2515

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS: 232661 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10013	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-9942	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9942	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9941	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9941	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9943	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9943	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10030	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10030	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-9989	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9989	1	AMBER GLASS	8270C+8082	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/30/09	1405	Patricia Dent	P. Dent	7/1/09	09:00
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2515

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2515
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 6/30/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:8260B	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10013	S	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:8270C	1	CAMO-09-9941	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2515

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2515

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 02, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232661
SDG: 09-2515

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on July 01, 2009, and analyzed for GC Semivolatile PCB, GC/MS Semivolatile and GC/MS Volatile. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2515
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232661
SDG: 09-2515

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- QC Summary 211
- Sample Data 230
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- QC Data 358
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GC Semivolatile PCB Analysis **406**
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- Quality Control Summary 415
- Sample Data 421
- Standards Data 438
- Quality Control Data 502
- Miscellaneous Data 533

Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232661
SDG # : 09-2515

July 02, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on July 01, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232661001	CAMO-09-10013
232661002	CAMO-09-9942
232661003	CAMO-09-9941
232661004	CAMO-09-9943
232661005	CAMO-09-10030
232661006	CAMO-09-9989

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC Semivolatile PCB, GC/MS Semivolatile and GC/MS Volatile.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis

Project Manager

List of current GEL Certifications as of 02 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88–0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH–0169
Dept. of Navy	NFESC 413
EPA Region 5	WG–15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C–SC–01
Kansas – NELAP	E–10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M–SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68–00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235–07B–TX
U.S. Dept. of Agriculture	S–52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Tuesday, June 30, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2515

REQUEST NUMBER: 09-2515

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232661 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10013	1	SEPTUM AMBER GLASS	8260B Trip Blank	Ice	S
CAMO-09-9942	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9942	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9941	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9941	1	AMBER GLASS	8270C	Ice	R
CAMO-09-9943	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9943	1	AMBER GLASS	8270C	Ice	R
CAMO-09-10030	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-10030	1	AMBER GLASS	8270C+8082	Ice	R
CAMO-09-9989	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-9989	1	AMBER GLASS	8270C+8082	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	6/30/09	1405	Patricia Dent	P. Dent	7/1/09	09:00
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2515

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2515
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 6/30/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8082	1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:8260B	1	CAMO-09-9941	R	6/26/2009	
		1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9989	R	6/26/2009	
		1	CAMO-09-10013	S	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	
	SW-846:8270C	1	CAMO-09-9941	R	6/26/2009	

Tuesday, June 30, 2009

REQUEST NUMBER: 09-2515

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:8270C	1	CAMO-09-9942	R	6/26/2009	
		1	CAMO-09-9943	R	6/26/2009	
		1	CAMO-09-9969	R	6/26/2009	
		1	CAMO-09-10030	R	6/26/2009	

Final Page of REQUEST NUMBER 09-2515

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2515**
Received By: Patricia Dent	**Date Received: JULY 1, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: **40 C.P.M.**
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **blue ice** dry ice **none** other (describe) **2,4,6,24C**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5626 6C
7209 7847 5815 4C
7209 7847 5804 24C
7209 7847 5837 2C

PM (or PMA) review: Initials _____ Date 7/2/09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 55.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

(843) 556-8171

FedEx Express

CHARLESTON, SC 29407

Ref: 5b618aue611550000

Delivery Address Barcode

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BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5826 Form 0201

WED
Deliver By:
01JUL09

29407 -SC-US

CHS
A1

XX CHSA

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 50.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

(843) 556-8171

FedEx Express

CHARLESTON, SC 29407

Ref: 5b618amr1a015818bo

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5815 Form 0201

WED
Deliver By:
01JUL09

29407 -SC-US

CHS
A1

XX CHSA

rt # 150148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 30.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018amr1a015018bc

[redacted]

Delivery Address Barcode

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BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5804 Form 0201

WED
Deliver By:
01JUL09

CHS A1

29407 -SC-US XX CHSA

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 30JUN09
ActWgt: 20.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b018amr2a0012bgdc

[redacted]

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5837 Form 0201

WED
Deliver By:
01JUL09

CHS A1

29407 -SC-US XX CHSA

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

GC/MS Volatile Organics
Los Alamos National Laboratory (LANL)
SDG 09-2515

Method/Analysis Information

Procedure:	Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
Analytical Method:	SW846 8260B
Prep Method:	SW846 5030
Analytical Batch Number:	883144
Prep Batch Number:	883143

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232661001	CAMO-09-10013
232661002	CAMO-09-9942
232661003	CAMO-09-9941
232661004	CAMO-09-9943
232661005	CAMO-09-10030
232661006	CAMO-09-9989
1201875931	Method Blank (MB)
1201875934	Laboratory Control Sample (LCS)
1201875935	Laboratory Control Sample (LCS)
1201875932	232661002(CAMO-09-9942) Post Spike (PS)
1201875933	232661002(CAMO-09-9942) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

Samples 232661 002, 003, 004, 005 and 006 in this SDG were analyzed on an "dry weight" basis. Samples 232661 001 in this SDG were analyzed on a "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 19.1.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration

All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements

All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

QC Sample Designation

Sample 232661002 (CAMO-09-9942) was designated for spike analysis in this SDG.

Matrix Spike (PS) Recovery Statement

The spike recoveries for this SDG were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement

The spike duplicate recoveries for this SDG were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
For Sample ID 232661006 (CAMO-09-9989), internal standard response was outside the required acceptance criteria. Sample reanalysis confirmed matrix interference.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Sample ID 232661006 (CAMO-09-9989) was re-analyzed due to unacceptable recoveries in the initial analysis.

Miscellaneous Information

Electronic Package Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
NCR# 711491 was generated for this SDG.

Manual Integrations
Data files associated with the initial calibration, continuing calibration check, and samples did not require manual integrations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA1.I	Gas Chromatograph/Mass Spectrometer	HP6890/HP5973	RTX-624	Restek, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: _____ Date: 07/22/09

Roadmap for LANL 09-2515 VOA

This roadmap was analyzed by ron01469 on 07-10-2009, 12:59.
This roadmap was reviewed by ACJ on 07-14-2009, 20:18.

Sample

exclude	manual	datafile	smpid	clientid	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA1.i/070709v1/1t213.d	232661001	CAMO-09-10013	07-JUL-2009	14:49	09-2515.sub	1	883144	
☐	N	/chem/VOA1.i/070709v1/1t214.d	232661002	CAMO-09-9942	07-JUL-2009	15:20	09-2515.sub	1	883144	
☐	N	/chem/VOA1.i/070709v1/1t215.d	232661003	CAMO-09-9941	07-JUL-2009	15:51	09-2515.sub	1	883144	
☐	N	/chem/VOA1.i/070709v1/1t216.d	232661004	CAMO-09-9943	07-JUL-2009	16:22	09-2515.sub	1	883144	
☐	N	/chem/VOA1.i/070709v1/1t217.d	232661005	CAMO-09-10030	07-JUL-2009	16:53	09-2515.sub	1	883144	
☐	N	/chem/VOA1.i/070709v1/1t218.d	232661006	CAMO-09-9989	07-JUL-2009	17:23	09-2515.sub	1	883144	
■	N	/chem/VOA1.i/070909v1/1t431.d	232661006	CAMO-09-9989	09-JUL-2009	23:23	09-2515.sub	1	883144	confirmation

QC Sample

exclude	manual	datafile	smpid	clientid	sampletype	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA1.i/070709v1/1t203LA.d	1201875934	LCS	lcs	07-JUL-2009	08:48	all.sub	1	883144	
☐	N	/chem/VOA1.i/070709v1/1t205sLA.d	1201875935	LCS	lcs	07-JUL-2009	10:09	all.sub	1	883144	
☐	N	/chem/VOA1.i/070709v1/1t207BA.d	1201875931	BLANK	mb	07-JUL-2009	11:10	all.sub	1	883144	
☐	N	/chem/VOA1.i/070709v1/1t219.d	1201875932	CAMO-09-9942MS	ms	07-JUL-2009	17:54	09-2515.sub	1	883144	
☐	N	/chem/VOA1.i/070709v1/1t220.d	1201875933	CAMO-09-9942MSD	msd	07-JUL-2009	18:24	09-2515.sub	1	883144	

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**	**Date Collected:**	**06/26/2009 12:00**	**Matrix:**	**S**
Lab Sample ID:	**232661001**	**Date Received:**	**07/01/2009 09:00**		
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10013**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883144**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 14:49**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/07/2009 13:25**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t213.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	J	4.17	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	S
Lab Sample ID:	232661001	**Date Received:**	07/01/2009 09:00		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10013	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 14:49	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:25	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t213.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661005	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10030	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 16:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:31	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t217.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.378	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.333	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.333	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.333	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.333	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.633	1.11
67-64-1	Acetone	U	5.56	ug/kg	1.84	5.56
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
74-88-4	Iodomethane	U	5.56	ug/kg	1.78	5.56
75-09-2	Methylene chloride	U	5.56	ug/kg	2.22	5.56
75-15-0	Carbon disulfide	U	5.56	ug/kg	1.39	5.56
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.333	1.11
78-93-3	2-Butanone	U	5.56	ug/kg	1.67	5.56
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.333	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.367	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.333	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.333	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.333	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.333	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.333	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.367	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.333	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.333	1.11
108-10-1	4-Methyl-2-pentanone	U	5.56	ug/kg	1.39	5.56
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11
108-88-3	Toluene	J	0.525	ug/kg	0.333	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.333	1.11
591-78-6	2-Hexanone	U	5.56	ug/kg	1.67	5.56
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.333	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.333	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.333	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.333	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.333	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661005	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10030	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 16:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:31	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t217.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.333	1.11
179601-23-1	m,p-Xylenes	U	2.22	ug/kg	0.333	2.22
95-47-6	o-Xylene	U	1.11	ug/kg	0.333	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.333	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.333	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.333	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.333	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.333	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.333	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.333	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.333	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.333	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.333	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.333	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.333	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.333	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.56	ug/kg	1.78	5.56
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	23.4	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661003	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9941	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t215.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.381	1.12
74-87-3	Chloromethane	U	1.12	ug/kg	0.336	1.12
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.336	1.12
74-83-9	Bromomethane	U	1.12	ug/kg	0.336	1.12
75-00-3	Chloroethane	U	1.12	ug/kg	0.336	1.12
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.639	1.12
67-64-1	Acetone	U	5.61	ug/kg	1.86	5.61
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.336	1.12
74-88-4	Iodomethane	U	5.61	ug/kg	1.79	5.61
75-09-2	Methylene chloride	U	5.61	ug/kg	2.24	5.61
75-15-0	Carbon disulfide	U	5.61	ug/kg	1.40	5.61
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.336	1.12
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.336	1.12
78-93-3	2-Butanone	U	5.61	ug/kg	1.68	5.61
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.336	1.12
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.336	1.12
67-66-3	Chloroform	U	1.12	ug/kg	0.336	1.12
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.370	1.12
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.336	1.12
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.336	1.12
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.336	1.12
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.336	1.12
71-43-2	Benzene	U	1.12	ug/kg	0.336	1.12
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.370	1.12
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.336	1.12
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.336	1.12
74-95-3	Dibromomethane	U	1.12	ug/kg	0.336	1.12
108-10-1	4-Methyl-2-pentanone	U	5.61	ug/kg	1.40	5.61
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.336	1.12
108-88-3	Toluene	J	0.512	ug/kg	0.336	1.12
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.336	1.12
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.336	1.12
591-78-6	2-Hexanone	U	5.61	ug/kg	1.68	5.61
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.336	1.12
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.336	1.12
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.336	1.12
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.336	1.12
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.336	1.12

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661003	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9941	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t215.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.336	1.12
179601-23-1	m,p-Xylenes	U	2.24	ug/kg	0.336	2.24
95-47-6	o-Xylene	U	1.12	ug/kg	0.336	1.12
100-42-5	Styrene	U	1.12	ug/kg	0.336	1.12
75-25-2	Bromoform	U	1.12	ug/kg	0.336	1.12
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.336	1.12
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.336	1.12
108-86-1	Bromobenzene	U	1.12	ug/kg	0.336	1.12
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.336	1.12
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.336	1.12
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.336	1.12
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.336	1.12
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.336	1.12
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.336	1.12
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.336	1.12
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.336	1.12
99-87-6	4-Isopropyltoluene	U	1.12	ug/kg	0.336	1.12
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.336	1.12
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.336	1.12
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.336	1.12
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.336	1.12
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.61	ug/kg	1.79	5.61
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.336	1.12
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.336	1.12

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	40.9	ug/kg		J
	Unknown	20	41.8	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661002	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9942	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:20	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t214.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.386	1.13
74-87-3	Chloromethane	U	1.13	ug/kg	0.340	1.13
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.340	1.13
74-83-9	Bromomethane	U	1.13	ug/kg	0.340	1.13
75-00-3	Chloroethane	U	1.13	ug/kg	0.340	1.13
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.647	1.13
67-64-1	Acetone	U	5.67	ug/kg	1.88	5.67
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.340	1.13
74-88-4	Iodomethane	U	5.67	ug/kg	1.82	5.67
75-09-2	Methylene chloride	U	5.67	ug/kg	2.27	5.67
75-15-0	Carbon disulfide	U	5.67	ug/kg	1.42	5.67
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.340	1.13
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.340	1.13
78-93-3	2-Butanone	U	5.67	ug/kg	1.70	5.67
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.340	1.13
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.340	1.13
67-66-3	Chloroform	U	1.13	ug/kg	0.340	1.13
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.374	1.13
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.340	1.13
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.340	1.13
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.340	1.13
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.340	1.13
71-43-2	Benzene	U	1.13	ug/kg	0.340	1.13
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.374	1.13
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.340	1.13
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.340	1.13
74-95-3	Dibromomethane	U	1.13	ug/kg	0.340	1.13
108-10-1	4-Methyl-2-pentanone	U	5.67	ug/kg	1.42	5.67
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.340	1.13
108-88-3	Toluene	U	1.13	ug/kg	0.340	1.13
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.340	1.13
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.340	1.13
591-78-6	2-Hexanone	U	5.67	ug/kg	1.70	5.67
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.340	1.13
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.340	1.13
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.340	1.13
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.340	1.13
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.340	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661002	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9942	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:20	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t214.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.340	1.13
179601-23-1	m,p-Xylenes	U	2.27	ug/kg	0.340	2.27
95-47-6	o-Xylene	U	1.13	ug/kg	0.340	1.13
100-42-5	Styrene	U	1.13	ug/kg	0.340	1.13
75-25-2	Bromoform	U	1.13	ug/kg	0.340	1.13
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.340	1.13
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.340	1.13
108-86-1	Bromobenzene	U	1.13	ug/kg	0.340	1.13
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.340	1.13
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.340	1.13
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.340	1.13
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.340	1.13
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.340	1.13
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.340	1.13
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.340	1.13
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.340	1.13
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.340	1.13
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.340	1.13
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.340	1.13
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.340	1.13
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.340	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.67	ug/kg	1.82	5.67
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.340	1.13
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.340	1.13

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	15.2	ug/kg		J
	Unknown	20	7.64	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661004	**Date Received:**	07/01/2009 09:00	**%Moisture:**	13.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9943	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 16:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t216.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.16	ug/kg	0.395	1.16
74-87-3	Chloromethane	U	1.16	ug/kg	0.348	1.16
75-01-4	Vinyl chloride	U	1.16	ug/kg	0.348	1.16
74-83-9	Bromomethane	U	1.16	ug/kg	0.348	1.16
75-00-3	Chloroethane	U	1.16	ug/kg	0.348	1.16
75-69-4	Trichlorofluoromethane	U	1.16	ug/kg	0.662	1.16
67-64-1	Acetone	U	5.81	ug/kg	1.93	5.81
75-35-4	1,1-Dichloroethylene	U	1.16	ug/kg	0.348	1.16
74-88-4	Iodomethane	U	5.81	ug/kg	1.86	5.81
75-09-2	Methylene chloride	U	5.81	ug/kg	2.32	5.81
75-15-0	Carbon disulfide	U	5.81	ug/kg	1.45	5.81
156-60-5	trans-1,2-Dichloroethylene	U	1.16	ug/kg	0.348	1.16
75-34-3	1,1-Dichloroethane	U	1.16	ug/kg	0.348	1.16
78-93-3	2-Butanone	U	5.81	ug/kg	1.74	5.81
156-59-2	cis-1,2-Dichloroethylene	U	1.16	ug/kg	0.348	1.16
594-20-7	2,2-Dichloropropane	U	1.16	ug/kg	0.348	1.16
67-66-3	Chloroform	U	1.16	ug/kg	0.348	1.16
74-97-5	Bromochloromethane	U	1.16	ug/kg	0.383	1.16
71-55-6	1,1,1-Trichloroethane	U	1.16	ug/kg	0.348	1.16
563-58-6	1,1-Dichloropropene	U	1.16	ug/kg	0.348	1.16
56-23-5	Carbon tetrachloride	U	1.16	ug/kg	0.348	1.16
107-06-2	1,2-Dichloroethane	U	1.16	ug/kg	0.348	1.16
71-43-2	Benzene	U	1.16	ug/kg	0.348	1.16
79-01-6	Trichloroethylene	U	1.16	ug/kg	0.383	1.16
78-87-5	1,2-Dichloropropane	U	1.16	ug/kg	0.348	1.16
75-27-4	Bromodichloromethane	U	1.16	ug/kg	0.348	1.16
74-95-3	Dibromomethane	U	1.16	ug/kg	0.348	1.16
108-10-1	4-Methyl-2-pentanone	U	5.81	ug/kg	1.45	5.81
10061-01-5	cis-1,3-Dichloropropylene	U	1.16	ug/kg	0.348	1.16
108-88-3	Toluene	U	1.16	ug/kg	0.348	1.16
10061-02-6	trans-1,3-Dichloropropylene	U	1.16	ug/kg	0.348	1.16
79-00-5	1,1,2-Trichloroethane	U	1.16	ug/kg	0.348	1.16
591-78-6	2-Hexanone	U	5.81	ug/kg	1.74	5.81
142-28-9	1,3-Dichloropropane	U	1.16	ug/kg	0.348	1.16
127-18-4	Tetrachloroethylene	U	1.16	ug/kg	0.348	1.16
124-48-1	Dibromochloromethane	U	1.16	ug/kg	0.348	1.16
106-93-4	1,2-Dibromoethane	U	1.16	ug/kg	0.348	1.16
108-90-7	Chlorobenzene	U	1.16	ug/kg	0.348	1.16

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661004	**Date Received:**	07/01/2009 09:00	**%Moisture:**	13.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9943	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 16:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t216.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.16	ug/kg	0.348	1.16
179601-23-1	m,p-Xylenes	U	2.32	ug/kg	0.348	2.32
95-47-6	o-Xylene	U	1.16	ug/kg	0.348	1.16
100-42-5	Styrene	U	1.16	ug/kg	0.348	1.16
75-25-2	Bromoform	U	1.16	ug/kg	0.348	1.16
79-34-5	1,1,2,2-Tetrachloroethane	U	1.16	ug/kg	0.348	1.16
96-18-4	1,2,3-Trichloropropane	U	1.16	ug/kg	0.348	1.16
108-86-1	Bromobenzene	U	1.16	ug/kg	0.348	1.16
103-65-1	n-Propylbenzene	U	1.16	ug/kg	0.348	1.16
95-49-8	2-Chlorotoluene	U	1.16	ug/kg	0.348	1.16
98-82-8	Isopropylbenzene	U	1.16	ug/kg	0.348	1.16
108-67-8	1,3,5-Trimethylbenzene	U	1.16	ug/kg	0.348	1.16
106-43-4	4-Chlorotoluene	U	1.16	ug/kg	0.348	1.16
98-06-6	tert-Butylbenzene	U	1.16	ug/kg	0.348	1.16
95-63-6	1,2,4-Trimethylbenzene	U	1.16	ug/kg	0.348	1.16
135-98-8	sec-Butylbenzene	U	1.16	ug/kg	0.348	1.16
99-87-6	4-Isopropyltoluene	U	1.16	ug/kg	0.348	1.16
541-73-1	1,3-Dichlorobenzene	U	1.16	ug/kg	0.348	1.16
106-46-7	1,4-Dichlorobenzene	U	1.16	ug/kg	0.348	1.16
104-51-8	n-Butylbenzene	U	1.16	ug/kg	0.348	1.16
96-12-8	1,2-Dibromo-3-chloropropane	U	1.16	ug/kg	0.348	1.16
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.81	ug/kg	1.86	5.81
630-20-6	1,1,1,2-Tetrachloroethane	U	1.16	ug/kg	0.348	1.16
95-50-1	1,2-Dichlorobenzene	U	1.16	ug/kg	0.348	1.16

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	25.5	ug/kg		J
	Unknown	20	24.8	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 17:23	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t218.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.20	ug/kg	0.408	1.20
74-87-3	Chloromethane	U	1.20	ug/kg	0.360	1.20
75-01-4	Vinyl chloride	U	1.20	ug/kg	0.360	1.20
74-83-9	Bromomethane	U	1.20	ug/kg	0.360	1.20
75-00-3	Chloroethane	U	1.20	ug/kg	0.360	1.20
75-69-4	Trichlorofluoromethane	U	1.20	ug/kg	0.684	1.20
67-64-1	Acetone	U	6.00	ug/kg	1.99	6.00
75-35-4	1,1-Dichloroethylene	J	0.502	ug/kg	0.360	1.20
74-88-4	Iodomethane	U	6.00	ug/kg	1.92	6.00
75-09-2	Methylene chloride	U	6.00	ug/kg	2.40	6.00
75-15-0	Carbon disulfide	U	6.00	ug/kg	1.50	6.00
156-60-5	trans-1,2-Dichloroethylene	U	1.20	ug/kg	0.360	1.20
75-34-3	1,1-Dichloroethane	U	1.20	ug/kg	0.360	1.20
78-93-3	2-Butanone	U	6.00	ug/kg	1.80	6.00
156-59-2	cis-1,2-Dichloroethylene	U	1.20	ug/kg	0.360	1.20
594-20-7	2,2-Dichloropropane	U	1.20	ug/kg	0.360	1.20
67-66-3	Chloroform	U	1.20	ug/kg	0.360	1.20
74-97-5	Bromochloromethane	U	1.20	ug/kg	0.396	1.20
71-55-6	1,1,1-Trichloroethane	U	1.20	ug/kg	0.360	1.20
563-58-6	1,1-Dichloropropene	U	1.20	ug/kg	0.360	1.20
56-23-5	Carbon tetrachloride	U	1.20	ug/kg	0.360	1.20
107-06-2	1,2-Dichloroethane	U	1.20	ug/kg	0.360	1.20
71-43-2	Benzene	U	1.20	ug/kg	0.360	1.20
79-01-6	Trichloroethylene	U	1.20	ug/kg	0.396	1.20
78-87-5	1,2-Dichloropropane	U	1.20	ug/kg	0.360	1.20
75-27-4	Bromodichloromethane	U	1.20	ug/kg	0.360	1.20
74-95-3	Dibromomethane	U	1.20	ug/kg	0.360	1.20
108-10-1	4-Methyl-2-pentanone	U	6.00	ug/kg	1.50	6.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.20	ug/kg	0.360	1.20
108-88-3	Toluene	U	1.20	ug/kg	0.360	1.20
10061-02-6	trans-1,3-Dichloropropylene	U	1.20	ug/kg	0.360	1.20
79-00-5	1,1,2-Trichloroethane	U	1.20	ug/kg	0.360	1.20
591-78-6	2-Hexanone	U	6.00	ug/kg	1.80	6.00
142-28-9	1,3-Dichloropropane	U	1.20	ug/kg	0.360	1.20
127-18-4	Tetrachloroethylene	U	1.20	ug/kg	0.360	1.20
124-48-1	Dibromochloromethane	U	1.20	ug/kg	0.360	1.20
106-93-4	1,2-Dibromoethane	U	1.20	ug/kg	0.360	1.20
108-90-7	Chlorobenzene	U	1.20	ug/kg	0.360	1.20

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 17:23	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t218.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.20	ug/kg	0.360	1.20
179601-23-1	m,p-Xylenes	U	2.40	ug/kg	0.360	2.40
95-47-6	o-Xylene	U	1.20	ug/kg	0.360	1.20
100-42-5	Styrene	U	1.20	ug/kg	0.360	1.20
75-25-2	Bromoform	U	1.20	ug/kg	0.360	1.20
79-34-5	1,1,2,2-Tetrachloroethane	U	1.20	ug/kg	0.360	1.20
96-18-4	1,2,3-Trichloropropane	U	1.20	ug/kg	0.360	1.20
108-86-1	Bromobenzene	U	1.20	ug/kg	0.360	1.20
103-65-1	n-Propylbenzene	U	1.20	ug/kg	0.360	1.20
95-49-8	2-Chlorotoluene	U	1.20	ug/kg	0.360	1.20
98-82-8	Isopropylbenzene	U	1.20	ug/kg	0.360	1.20
108-67-8	1,3,5-Trimethylbenzene	U	1.20	ug/kg	0.360	1.20
106-43-4	4-Chlorotoluene	U	1.20	ug/kg	0.360	1.20
98-06-6	tert-Butylbenzene	U	1.20	ug/kg	0.360	1.20
95-63-6	1,2,4-Trimethylbenzene	J	0.574	ug/kg	0.360	1.20
135-98-8	sec-Butylbenzene	U	1.20	ug/kg	0.360	1.20
99-87-6	4-Isopropyltoluene	U	1.20	ug/kg	0.360	1.20
541-73-1	1,3-Dichlorobenzene	U	1.20	ug/kg	0.360	1.20
106-46-7	1,4-Dichlorobenzene	U	1.20	ug/kg	0.360	1.20
104-51-8	n-Butylbenzene	U	1.20	ug/kg	0.360	1.20
96-12-8	1,2-Dibromo-3-chloropropane	U	1.20	ug/kg	0.360	1.20
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.00	ug/kg	1.92	6.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.20	ug/kg	0.360	1.20
95-50-1	1,2-Dichlorobenzene	U	1.20	ug/kg	0.360	1.20

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

QC Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2515

Matrix Type: SOLID

CAP Column (1) : RTX-Volatiles

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201875934	LCS for batch 883143	101	100	100
1201875935	LCS for batch 883143	100	100	100
1201875931	MB for batch 883143	105	103	105
232661001	CAMO-09-10013	107	100	103
232661002	CAMO-09-9942	107	99	104
232661003	CAMO-09-9941	107	100	109
232661004	CAMO-09-9943	109	100	106
232661005	CAMO-09-10030	110	102	111
232661006	CAMO-09-9989	108	106	120
1201875932	CAMO-09-9942PS	107	98	98
1201875933	CAMO-09-9942PSD	108	101	101

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-9942PS
Lab Sample ID: 1201875932
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 11.9
Analysis Date: 07/07/2009 17:54
Prep Batch ID 883143
Batch ID: 883144
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	60.9	122	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	52.2	104	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	48.1	96	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	51.7	103	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	50.3	101	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	63.0	126	51-151
67-64-1	PS	Acetone	250	0.00	U	111	44	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	48.7	97	61-125
74-88-4	PS	Iodomethane	250	0.00	U	234	93	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	49.5	99	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	250	100	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	45.9	92	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	48.2	96	62-125
78-93-3	PS	2-Butanone	250	0.00	U	149	60	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	50.6	101	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	55.3	111	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	48.7	97	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	47.3	95	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	52.8	106	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	50.3	101	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	53.0	106	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	50.6	101	58-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-9942PS
Lab Sample ID: 1201875932
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 11.9
Analysis Date: 07/07/2009 17:54
Prep Batch ID: 883143
Batch ID: 883144
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	45.1	90	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	48.3	97	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	48.9	98	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	52.3	105	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	48.2	96	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	230	92	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	49.8	100	54-133
108-88-3	PS	Toluene	50.0	0.00	U	43.3	87	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	48.5	97	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	47.3	95	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	166	67	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	46.9	94	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	43.6	87	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	48.9	98	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	46.4	93	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	45.5	91	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	45.3	91	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	91.9	92	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	48.1	96	52-127
100-42-5	PS	Styrene	50.0	0.00	U	46.6	93	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	49.5	99	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	45.7	91	63-127

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-9942PS
Lab Sample ID: 1201875932
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 11.9
Analysis Date: 07/07/2009 17:54
Prep Batch ID 883143
Batch ID: 883144

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	50.6	101	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	42.5	85	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	43.0	86	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	44.2	88	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	40.6	81	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	44.5	89	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	44.0	88	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	46.3	93	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	44.6	89	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	44.7	89	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	46.1	92	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	42.6	85	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	41.1	82	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	43.8	88	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	47.7	95	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	48.3	97	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	42.9	86	43-129

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-9942PSD
Lab Sample ID: 1201875933
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 11.9
Analysis Date: 07/07/2009 18:24
Dilution: 1
Prep Batch ID: 883143
Batch ID: 883144

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	62.2	124	25-149	2	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	53.7	107	39-140	3	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	49.2	98	47-129	2	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	50.8	102	31-135	2	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	51.0	102	53-128	1	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	62.9	126	51-151	0	0-25
67-64-1	PSD	Acetone	250	0.00	U	112	45	21-153	1	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	49.2	98	61-125	1	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	234	94	53-142	0	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	50.0	100	59-136	1	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	255	102	46-129	2	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	46.1	92	56-126	0	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	48.4	97	62-125	0	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	152	61	26-152	2	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	50.3	101	60-130	0	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	53.5	107	55-135	3	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	48.0	96	60-127	1	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	47.1	94	61-131	1	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	51.8	104	59-131	2	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	50.3	101	57-128	0	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	51.9	104	58-136	2	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	49.3	99	58-126	2	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-9942PSD
Lab Sample ID: 1201875933
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 11.9
Analysis Date: 07/07/2009 18:24
Prep Batch ID: 883143
Batch ID: 883144
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	45.0	90	56-123	0	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	47.7	95	51-137	1	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	48.8	98	60-126	0	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	51.5	103	55-138	1	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	48.0	96	60-132	0	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	245	98	58-136	6	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	49.3	99	54-133	1	0-25
108-88-3	PSD	Toluene	50.0	0.00	U	43.9	88	52-128	1	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	49.5	99	53-137	2	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	48.1	96	59-130	2	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	172	69	31-148	4	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	48.5	97	57-127	3	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	43.4	87	51-128	0	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	49.1	98	59-139	0	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	47.2	94	57-133	2	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	44.9	90	53-122	1	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	44.4	89	51-125	2	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	89.9	90	50-126	2	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	47.4	95	52-127	1	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	45.6	91	49-135	2	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	51.2	102	57-149	3	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	47.8	96	63-127	5	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-9942PSD
Lab Sample ID: 1201875933
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 11.9
Analysis Date: 07/07/2009 18:24
Prep Batch ID: 883143
Batch ID: 883144
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	51.5	103	57-149	2	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	42.5	85	49-131	0	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	42.7	85	40-136	1	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	44.1	88	44-135	0	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	40.4	81	44-140	0	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	44.7	89	42-140	0	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	43.6	87	44-132	1	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	45.4	91	42-142	2	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	43.8	88	43-137	2	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	43.6	87	39-139	3	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	45.4	91	38-145	2	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	41.7	83	43-129	2	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	40.3	81	44-125	2	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	42.5	85	36-141	3	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	48.9	98	47-151	3	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	47.9	96	59-131	1	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	42.4	85	43-129	1	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 883143

Matrix: SOIL

Lab Sample ID: 1201875934

Instrument: VOA1.I

Analysis Date: 07/07/2009 08:48

Dilution: 1

Analyst: RXM4

Prep Batch ID: 883143

Purge Vol: 5 mL

Batch ID: 883144

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	60.1	120	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	50.3	101	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	44.4	89	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	47.2	94	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	47.3	95	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	58.0	116	67-151
67-64-1	LCS	Acetone	250	0.0	126	50	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	46.2	92	70-125
74-88-4	LCS	Iodomethane	250	0.0	226	90	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	46.7	93	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	244	98	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	44.2	88	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	45.2	90	75-120
78-93-3	LCS	2-Butanone	250	0.0	159	64	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	48.7	97	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	49.7	99	74-135
67-66-3	LCS	Chloroform	50.0	0.0	44.7	89	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	45.0	90	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	46.8	94	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	48.1	96	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	46.7	93	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	45.9	92	72-120

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515 **Sample Type:** Laboratory Control Sample
Client ID: LCS for batch 883143 **Matrix:** SOIL
Lab Sample ID: 1201875934
Instrument: VOA1.I **Analysis Date:** 07/07/2009 08:48 **Dilution:** 1
Analyst: RXM4 **Prep Batch ID** 883143
Purge Vol: 5 mL **Batch ID:** 883144

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	43.1	86	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	46.0	92	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	47.4	95	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	48.5	97	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	46.8	94	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	242	97	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	51.3	103	80-125
108-88-3	LCS	Toluene	50.0	0.0	42.2	84	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	50.6	101	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	47.6	95	76-120
591-78-6	LCS	2-Hexanone	250	0.0	179	72	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	46.5	93	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	43.0	86	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	47.1	94	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	47.2	94	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	45.2	90	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	44.4	89	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	91.3	91	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	48.1	96	74-120
100-42-5	LCS	Styrene	50.0	0.0	48.2	96	76-125
75-25-2	LCS	Bromoform	50.0	0.0	49.9	100	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	47.5	95	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 883143
Matrix: SOIL
Lab Sample ID: 1201875934
Instrument: VOA1.I
Analysis Date: 07/07/2009 08:48
Dilution: 1
Analyst: RXM4
Prep Batch ID: 883143
Purge Vol: 5 mL
Batch ID: 883144

CAS No	Parmname		Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	50.3	101	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	44.2	88	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	45.4	91	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	45.7	91	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	40.2	80	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	47.1	94	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	47.1	94	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	47.7	95	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	47.1	94	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	48.2	96	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	50.5	101	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	46.2	92	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	45.0	90	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	50.8	102	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	52.4	105	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	46.3	93	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	46.2	92	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: LCS for batch 883143
Lab Sample ID: 1201875935
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/07/2009 10:09
Prep Batch ID: 883143
Batch ID: 883144
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	266	106	52-139

Method Blank Summary

SDG Number:	09-2515	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 883143	Instrument ID:	VOA1.I	Data File:	1t207BA.d
Lab Sample ID:	1201875931	Prep Date:	07/07/2009 08:00	Analyzed:	07/07/09 11:10
Column:	RTX-Volatiles	Heated Purge:	Yes		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 883143	1201875934	1t203LA.d	07/07/09	0848
02	LCS for batch 883143	1201875935	1t205sLA.d	07/07/09	1009
03	CAMO-09-10013	232661001	1t213.d	07/07/09	1449
04	CAMO-09-9942	232661002	1t214.d	07/07/09	1520
05	CAMO-09-9941	232661003	1t215.d	07/07/09	1551
06	CAMO-09-9943	232661004	1t216.d	07/07/09	1622
07	CAMO-09-10030	232661005	1t217.d	07/07/09	1653
08	CAMO-09-9989	232661006	1t218.d	07/07/09	1723
09	CAMO-09-9942PS	1201875932	1t219.d	07/07/09	1754
10	CAMO-09-9942PSD	1201875933	1t220.d	07/07/09	1824

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2515

Instrument ID: VOA1.I **Injection Date/Time:** 01-JUL-09 14:32

Column Description: RTX-Volatiles **Lab File ID** /070109v1/1s309.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	20
75	30.0 - 60.0% of mass 95	48.2
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	73
175	5.0 -9.0% of mass 174	7.5
176	95.0 - 101.0% of mass 174	98
177	5.0 - 9.0% of mass 176	6.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD0005	W1VM090701-05	/070109v1/1s310.d	01-JUL-09 15:01
VSTD001	W1VM090701-06	/070109v1/1s311.d	01-JUL-09 15:31
VSTD002	W1VM090701-08	/070109v1/1s313.d	01-JUL-09 16:32
VSTD005	W1VM090701-09	/070109v1/1s314.d	01-JUL-09 17:02
VSTD010	W1VM090701-10	/070109v1/1s315.d	01-JUL-09 17:32
VSTD020	W1VM090701-11	/070109v1/1s316.d	01-JUL-09 18:02
VSTD050	W1VM090701-12	/070109v1/1s317.d	01-JUL-09 18:33
VSTD100	W1VM090701-13	/070109v1/1s318.d	01-JUL-09 19:04
VSTD005S	W1VM090701-14	/070109v1/1s320.d	01-JUL-09 20:05
VSTD010S	W1VM090701-15	/070109v1/1s321.d	01-JUL-09 20:36
VSTD025S	W1VM090701-16	/070109v1/1s322.d	01-JUL-09 21:06
VSTD050S	W1VM090701-17	/070109v1/1s323.d	01-JUL-09 21:36
VSTD100S	W1VM090701-18	/070109v1/1s324.d	01-JUL-09 22:07
VSTD250S	W1VM090701-19	/070109v1/1s325.d	01-JUL-09 22:38
VSTD500S	W1VM090701-20	/070109v1/1s326.d	01-JUL-09 23:08
ICV	W1VM090701-22	/070109v1/1s329.d	02-JUL-09 00:41
SHORT ICV	W1VM090701-23	/070109v1/1s330.d	02-JUL-09 01:12

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2515

Instrument ID: VOA1.I **Injection Date/Time:** 07-JUL-09 07:49

Column Description: RTX-Volatiles **Lab File ID** /070709v1/1t201.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	49.1
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	73.4
175	5.0 -9.0% of mass 174	7.1
176	95.0 - 101.0% of mass 174	97.1
177	5.0 - 9.0% of mass 176	6.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD050	W1VM090707-01	/070709v1/1t202.d	07-JUL-09 08:18
LCS	1201875934	/070709v1/1t203LA.d	07-JUL-09 08:48
VSTD250S	W1VM090707-03	/070709v1/1t204.d	07-JUL-09 09:39
LCS	1201875935	/070709v1/1t205sLA.d	07-JUL-09 10:09
BLANK	1201875931	/070709v1/1t207BA.d	07-JUL-09 11:10
CAMO-09-10013	232661001	/070709v1/1t213.d	07-JUL-09 14:49
CAMO-09-9942	232661002	/070709v1/1t214.d	07-JUL-09 15:20
CAMO-09-9941	232661003	/070709v1/1t215.d	07-JUL-09 15:51
CAMO-09-9943	232661004	/070709v1/1t216.d	07-JUL-09 16:22
CAMO-09-10030	232661005	/070709v1/1t217.d	07-JUL-09 16:53
CAMO-09-9989	232661006	/070709v1/1t218.d	07-JUL-09 17:23
CAMO-09-9942MS	1201875932	/070709v1/1t219.d	07-JUL-09 17:54
CAMO-09-9942MSD	1201875933	/070709v1/1t220.d	07-JUL-09 18:24

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA1.I

GC Column: RTX-Volatiles

Client SDG: 09-2515

STD Analysis Time: 07-JUL-09 08:18

Data File: 1t202.d

	Fluorobenzene				Chlorobenzene-d5				1,4-Dichlorobenzene-d4			
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 Hour STD	1247908		13.7		1068523		17.2		579140		19.6	
Upper Limit	2495816		14.2		2137046		17.7		1158280		20.1	
Lower Limit	623954		13.2		534262		16.7		289570		19.1	
Sample ID												
BLK01LCS	1262847		13.7		1080636		17.2		582610		19.6	
BLK01SLCS	1294104		13.7		1081992		17.2		573878		19.6	
BLK01	1126782		13.7		942767		17.2		490796		19.6	
CAMO-09-10013	1095190		13.7		925604		17.2		477360		19.6	
CAMO-09-9942	1097561		13.7		926850		17.2		474295		19.6	
CAMO-09-9941	1062964		13.7		886837		17.2		432064		19.6	
CAMO-09-9943	1039192		13.7		873440		17.2		448234		19.6	
CAMO-09-10030	1022086		13.7		845076		17.2		393710		19.6	
CAMO-09-9989	956225		13.7		727921		17.2		278396	*	19.6	
CAMO-09-9942MS	1055080		13.7		928948		17.2		513037		19.6	
CAMO-09-9942MSD	1117333		13.7		958392		17.2		517616		19.6	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	S
Lab Sample ID:	232661001	**Date Received:**	07/01/2009 09:00		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10013	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 14:49	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:25	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t213.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	J	4.17	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	S
Lab Sample ID:	232661001	**Date Received:**	07/01/2009 09:00		
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10013	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 14:49	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:25	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t213.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t213.d
Lab Smp Id: 232661001 Client Smp ID: CAMO-09-10013
Inj Date : 07-JUL-2009 14:49
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661001|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1095190	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	925604	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	477360	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.350	13.341	(0.975)	496256	53.2713	53.3
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1603311	49.7569	49.8
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	631439	51.3592	51.4
16 Acetone	43	9.263	9.249	(0.677)	20965	4.17248	4.2(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 1t213.d
Report Date: 07/09/2009 07:30
Lab. ID: 232661001 SampleType: SAMPLE
Injection Date: 07-JUL-2009 14:49
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232661001|883144|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070609v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: all
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
16 Acetone			CAS#: 67-64-1			
43	20965	9.26	9.26	80-120	100	( )
58	6444	9.27	9.26	3- 63	31	( )
20 Allyl chloride			CAS#: 107-05-1			
76	2076	9.54	9.86	80-120	100	(T)
41	1815	10.00	9.86	284-344	87	(QT)
51 1,2-Dichloroethane			CAS#: 107-06-2			
62	16246	13.70	13.45	80-120	100	(T)
64	2795	13.69	13.45	2- 62	17	(T)
62 2-Nitropropane			CAS#: 79-46-9			
43	8015	15.53	15.09	80-120	100	(T)
41	5344	15.54	15.09	53-113	67	(T)
64 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	15280	15.52	15.37	80-120	100	(T)
43	8015	15.53	15.37	214-274	52	(QT)
100	1073069	15.53	15.37	0- 60	7022	(QT)
53 n-Butyl alcohol			CAS#: 71-36-3			
56	7028	13.70	13.94	80-120	100	(T)
41	999	13.94	13.94	38- 98	14	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
75 1-Chlorohexane			CAS#: 544-10-5			
55	10783	17.16	17.17	80-120	100	( )
91	2080	17.17	17.17	0- 52	19	( )
56	6658	17.17	17.17	37- 97	62	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t213.d
Lab Smp Id: 232661001 Client Smp ID: CAMO-09-10013
Inj Date : 07-JUL-2009 14:49
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661001|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/070709v1/1t213.d
Date : 07-JUL-2009 14:49
Client ID: CAMO-09-10013
Sample Info: |23266100|883144|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

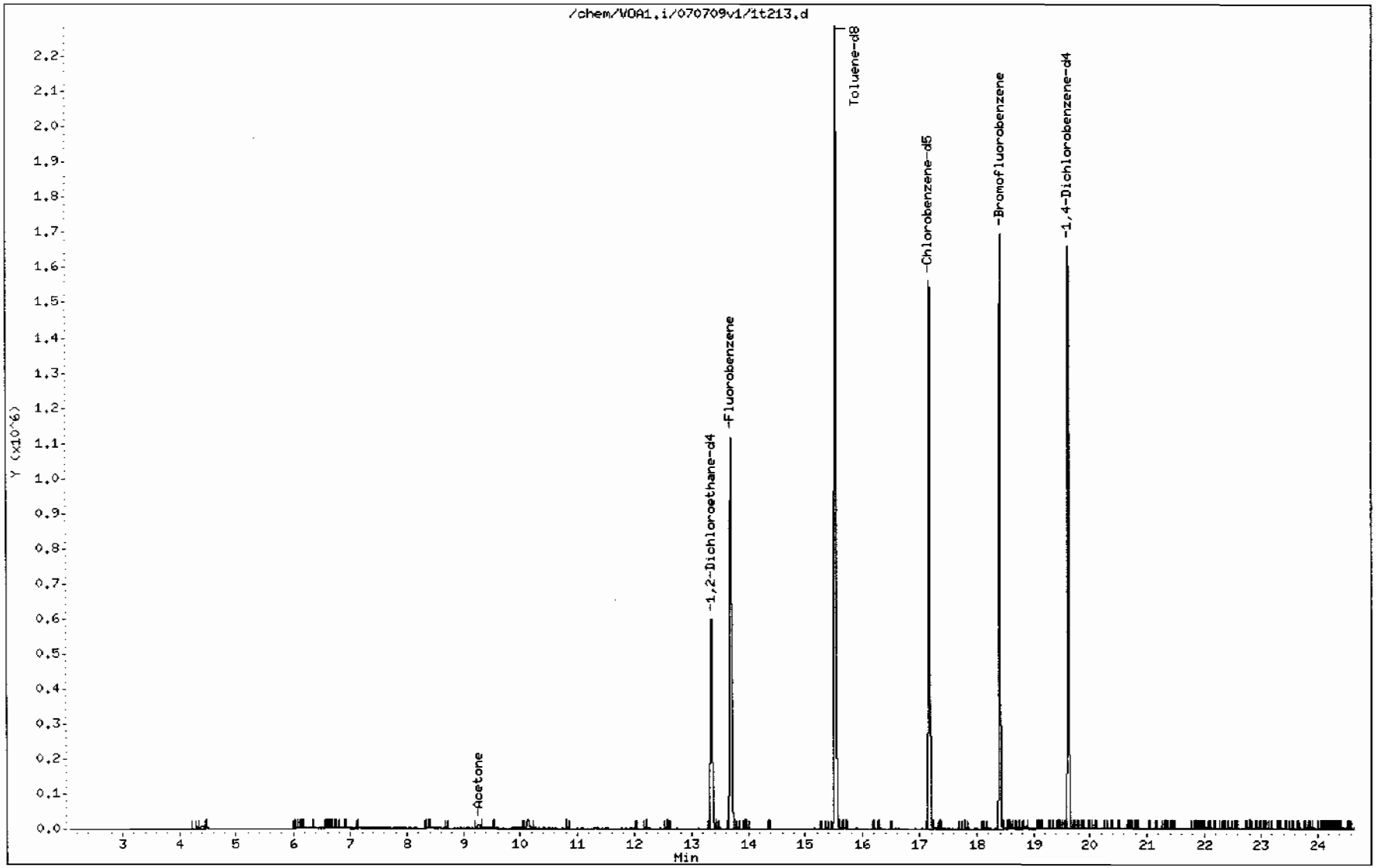

Data File: /chem/VOA1.i/070709v1/1t213.d

Date : 07-JUL-2009 14:49

Client ID: CAMO-09-10013

Instrument: VOA1.i

Sample Info: |23266100|88314411|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

16 Acetone

Concentration: 4.2 ug/Kg

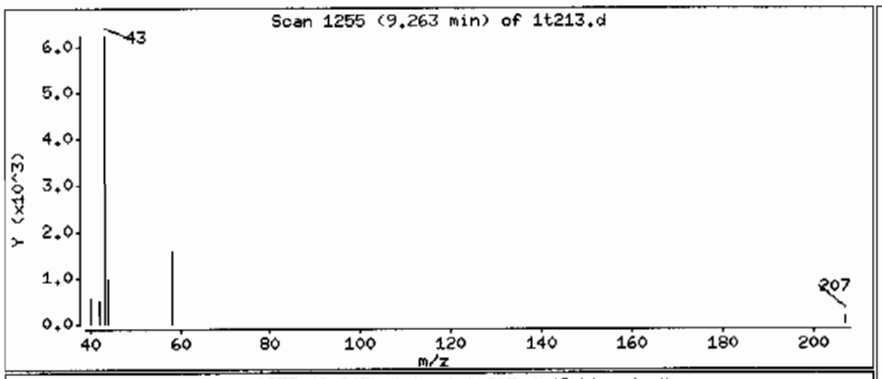

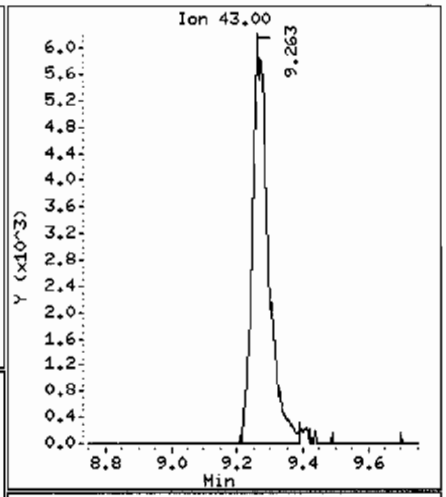

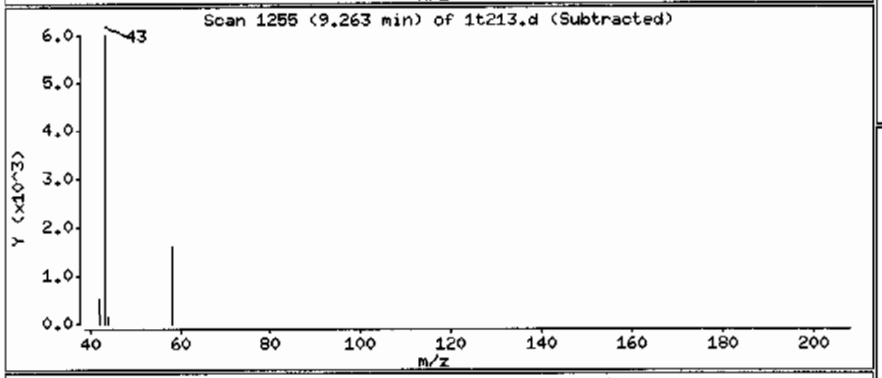

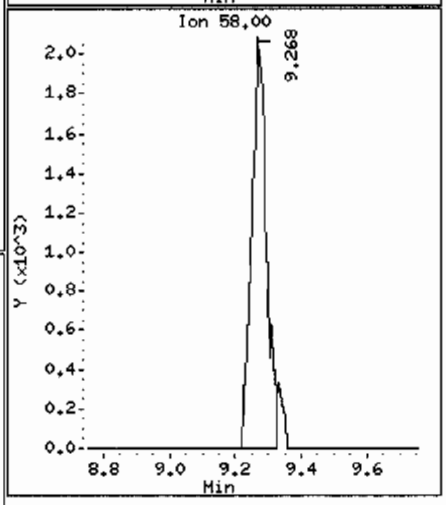

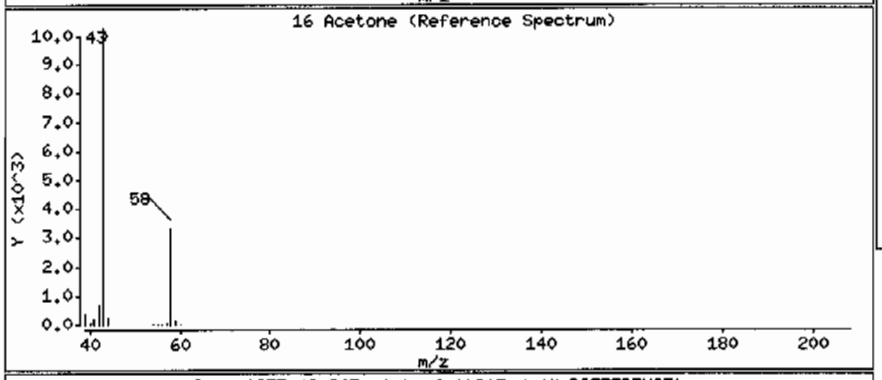

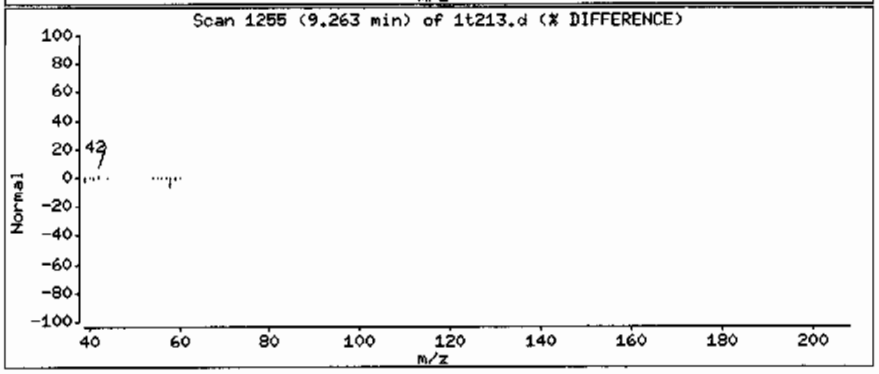

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661005	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10030	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 16:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:31	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t217.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.378	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.333	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.333	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.333	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.333	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.633	1.11
67-64-1	Acetone	U	5.56	ug/kg	1.84	5.56
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
74-88-4	Iodomethane	U	5.56	ug/kg	1.78	5.56
75-09-2	Methylene chloride	U	5.56	ug/kg	2.22	5.56
75-15-0	Carbon disulfide	U	5.56	ug/kg	1.39	5.56
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.333	1.11
78-93-3	2-Butanone	U	5.56	ug/kg	1.67	5.56
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.333	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.367	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.333	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.333	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.333	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.333	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.333	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.367	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.333	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.333	1.11
108-10-1	4-Methyl-2-pentanone	U	5.56	ug/kg	1.39	5.56
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11
108-88-3	Toluene	J	0.525	ug/kg	0.333	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.333	1.11
591-78-6	2-Hexanone	U	5.56	ug/kg	1.67	5.56
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.333	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.333	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.333	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.333	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.333	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661005	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10030	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOAI.I	**Dilution:**	1
Run Date:	07/07/2009 16:53	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:31	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t217.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.333	1.11
179601-23-1	m,p-Xylenes	U	2.22	ug/kg	0.333	2.22
95-47-6	o-Xylene	U	1.11	ug/kg	0.333	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.333	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.333	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.333	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.333	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.333	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.333	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.333	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.333	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.333	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.333	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.333	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.333	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.333	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.56	ug/kg	1.78	5.56
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	23.4	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t217.d
Lab Smp Id: 232661005 Client Smp ID: CAMO-09-10030
Inj Date : 07-JUL-2009 16:53
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661005|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.00810	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1022086	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	845076	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	393710	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	479225	55.1225	61.2
$ 65 Toluene-d8	98	15.528	15.523	(0.904)	1501425	51.0351	56.7
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	565085	55.7275	61.9
66 Toluene	92	15.606	15.601	(0.909)	8394	0.47203	0.52(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 1t217.d
Report Date: 07/09/2009 07:33
Lab. ID: 232661005 SampleType: SAMPLE
Injection Date: 07-JUL-2009 16:53
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232661005|883144|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070609v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: all
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
20 Allyl chloride			CAS#: 107-05-1			
76	896	9.59	9.86	80-120	100	(T)
41	210	9.99	9.86	284-344	23	(QT)
51 1,2-Dichloroethane			CAS#: 107-06-2			
62	15720	13.69	13.45	80-120	100	(T)
64	2975	13.69	13.45	2- 62	19	(T)
62 2-Nitropropane			CAS#: 79-46-9			
43	7403	15.53	15.09	80-120	100	(T)
41	5107	15.53	15.09	53-113	69	(T)
64 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	14692	15.52	15.37	80-120	100	(T)
43	7403	15.53	15.37	214-274	50	(QT)
100	994346	15.53	15.37	0- 60	6768	(QT)
66 Toluene			CAS#: 108-88-3			
92	8394	15.61	15.61	80-120	100	( )
91	13796	15.61	15.61	137-197	164	( )
82 Styrene			CAS#: 100-42-5			
104	6726	18.09	17.82	80-120	100	(T)
78	210	17.81	17.82	22- 82	3	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
75 1-Chlorohexane			CAS#: 544-10-5			
55	9929	17.17	17.17	80-120	100	( )
91	1792	17.17	17.17	0- 52	18	( )
56	6077	17.17	17.17	37- 97	61	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t217.d
Lab Smp Id: 232661005 Client Smp ID: CAMO-09-10030
Inj Date : 07-JUL-2009 16:53
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661005|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.00810	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.171	2657886	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
18.087	1117292	21.0184201	23.4	0		0	76

Data File: /chem/VOA1.i/070709v1/1t217.d
Date : 07-JUL-2009 16:53
Client ID: CAMO-09-10030
Sample Info: |2326610051883144|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

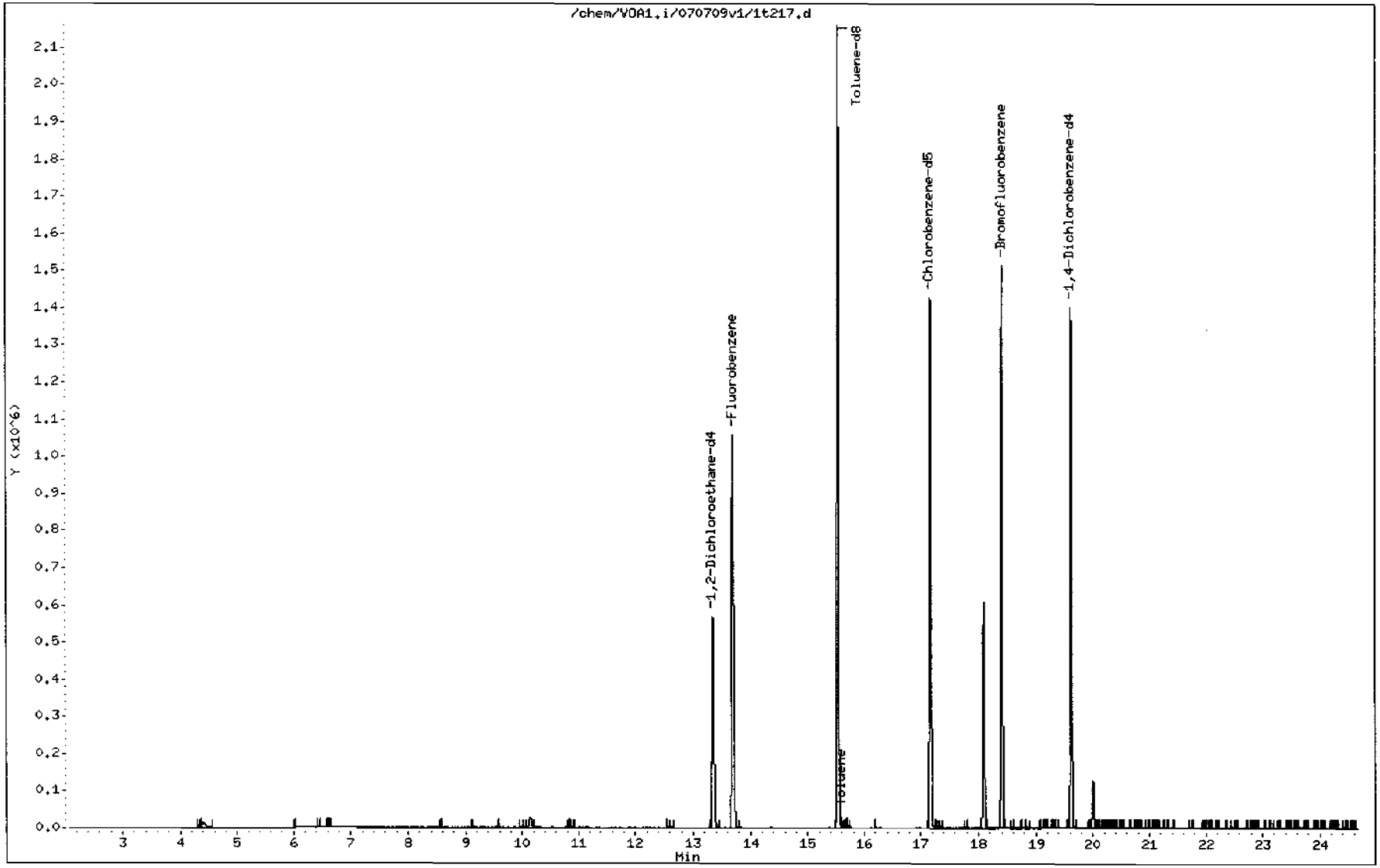

Data File: /chem/VOA1.i/070709v1/1t217.d

Date : 07-JUL-2009 16:53

Client ID: CAMO-09-10030

Instrument: VOA1.i

Sample Info: |2326610051883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

66 Toluene

Concentration: 0.52 ug/Kg

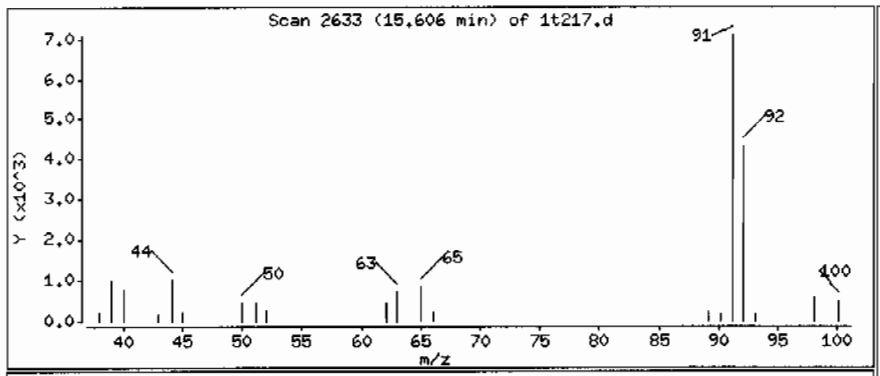

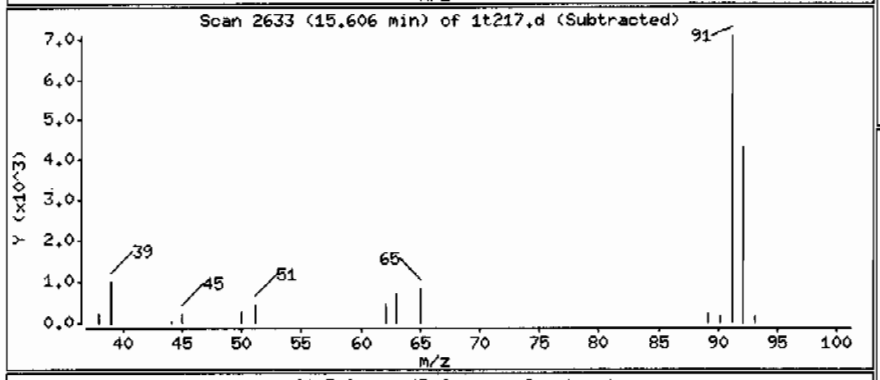

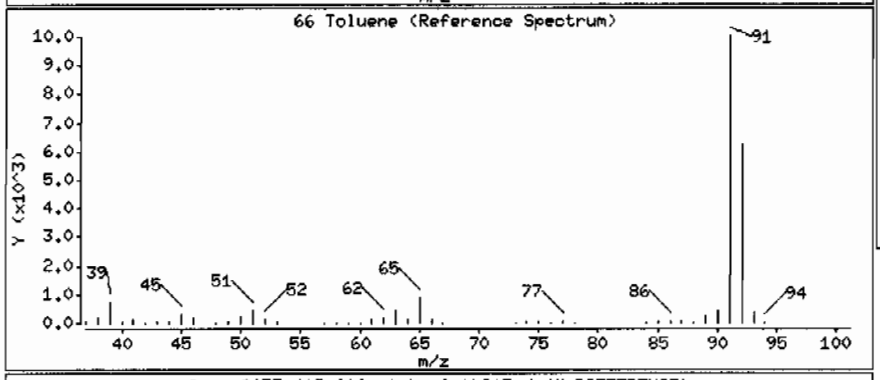

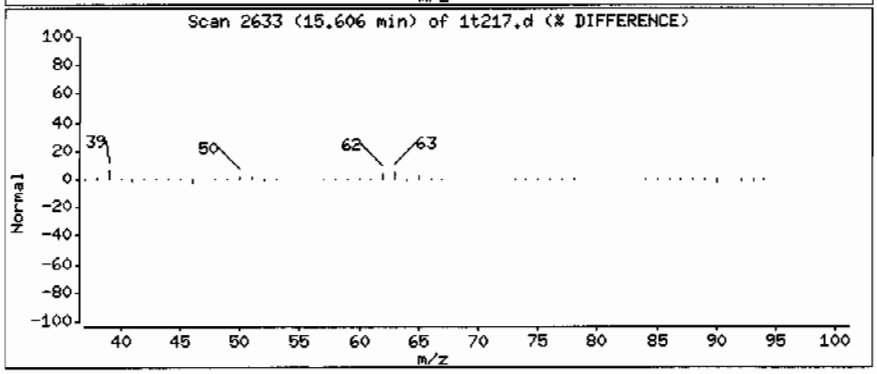

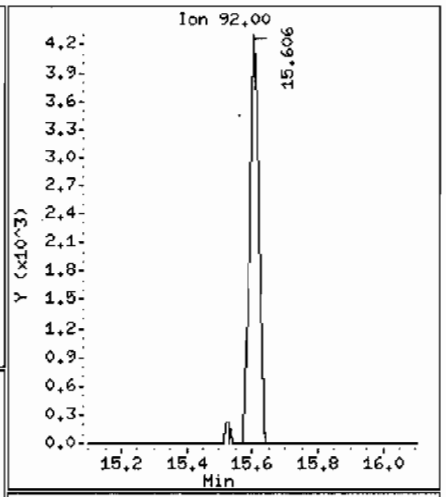

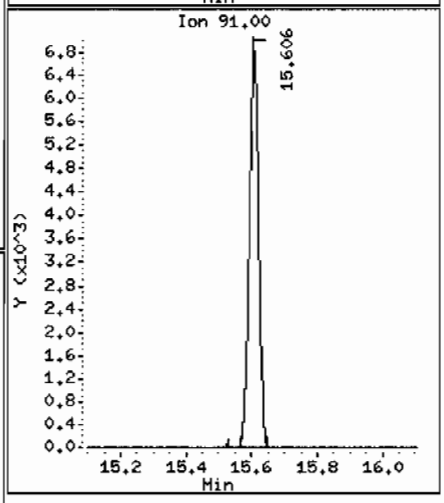

Data File: /chem/VOA1.i/070709v1/1t217.d

Date : 07-JUL-2009 16:53

Client ID: CAHO-09-10030

Instrument: VOA1.i

Sample Info: |2326610051883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Anthracene, 9,10-dihydro-9,10-dimethyl-	22566-43-4	NIST05.L	63100	25	C16H16	208
6-Methylphenanthridine	3955-65-5	NIST05.L	52077	25	C14H11N	193
Anthracene, 9-ethyl-9,10-dihydro-9-methy	54947-85-2	NIST05.L	73091	22	C17H18	222

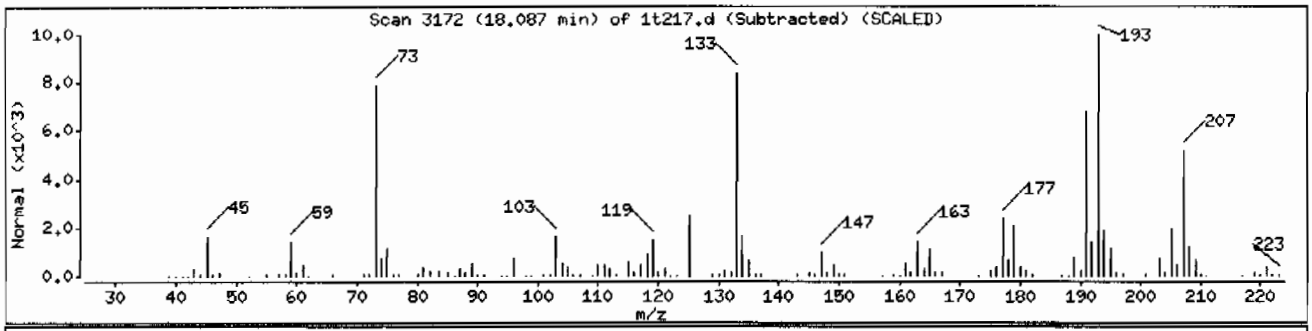

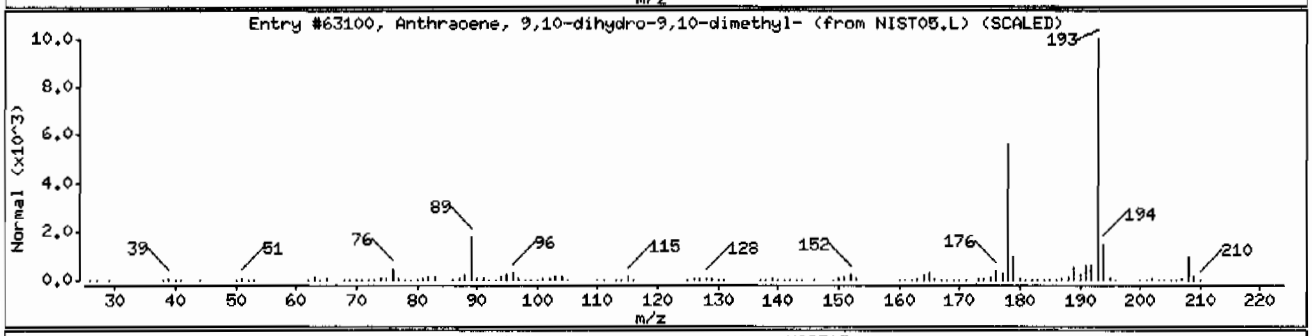

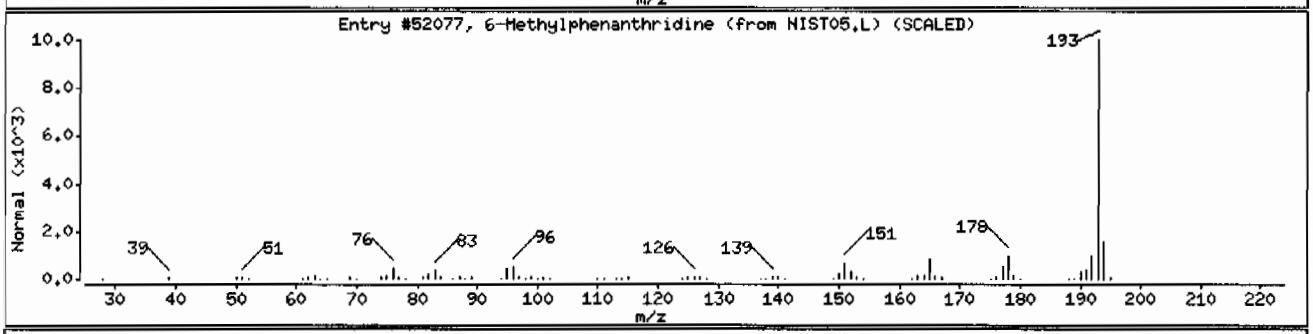

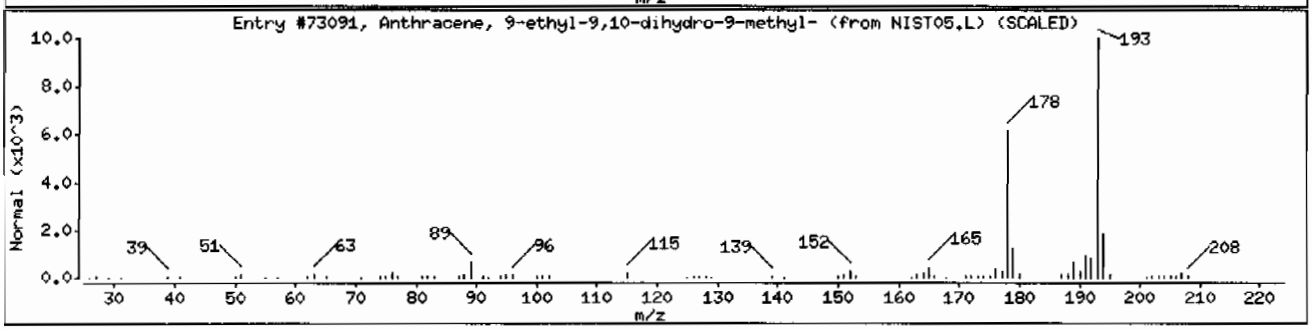

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661003	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9941	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t215.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.12	ug/kg	0.381	1.12
74-87-3	Chloromethane	U	1.12	ug/kg	0.336	1.12
75-01-4	Vinyl chloride	U	1.12	ug/kg	0.336	1.12
74-83-9	Bromomethane	U	1.12	ug/kg	0.336	1.12
75-00-3	Chloroethane	U	1.12	ug/kg	0.336	1.12
75-69-4	Trichlorofluoromethane	U	1.12	ug/kg	0.639	1.12
67-64-1	Acetone	U	5.61	ug/kg	1.86	5.61
75-35-4	1,1-Dichloroethylene	U	1.12	ug/kg	0.336	1.12
74-88-4	Iodomethane	U	5.61	ug/kg	1.79	5.61
75-09-2	Methylene chloride	U	5.61	ug/kg	2.24	5.61
75-15-0	Carbon disulfide	U	5.61	ug/kg	1.40	5.61
156-60-5	trans-1,2-Dichloroethylene	U	1.12	ug/kg	0.336	1.12
75-34-3	1,1-Dichloroethane	U	1.12	ug/kg	0.336	1.12
78-93-3	2-Butanone	U	5.61	ug/kg	1.68	5.61
156-59-2	cis-1,2-Dichloroethylene	U	1.12	ug/kg	0.336	1.12
594-20-7	2,2-Dichloropropane	U	1.12	ug/kg	0.336	1.12
67-66-3	Chloroform	U	1.12	ug/kg	0.336	1.12
74-97-5	Bromochloromethane	U	1.12	ug/kg	0.370	1.12
71-55-6	1,1,1-Trichloroethane	U	1.12	ug/kg	0.336	1.12
563-58-6	1,1-Dichloropropene	U	1.12	ug/kg	0.336	1.12
56-23-5	Carbon tetrachloride	U	1.12	ug/kg	0.336	1.12
107-06-2	1,2-Dichloroethane	U	1.12	ug/kg	0.336	1.12
71-43-2	Benzene	U	1.12	ug/kg	0.336	1.12
79-01-6	Trichloroethylene	U	1.12	ug/kg	0.370	1.12
78-87-5	1,2-Dichloropropane	U	1.12	ug/kg	0.336	1.12
75-27-4	Bromodichloromethane	U	1.12	ug/kg	0.336	1.12
74-95-3	Dibromomethane	U	1.12	ug/kg	0.336	1.12
108-10-1	4-Methyl-2-pentanone	U	5.61	ug/kg	1.40	5.61
10061-01-5	cis-1,3-Dichloropropylene	U	1.12	ug/kg	0.336	1.12
108-88-3	Toluene	J	0.512	ug/kg	0.336	1.12
10061-02-6	trans-1,3-Dichloropropylene	U	1.12	ug/kg	0.336	1.12
79-00-5	1,1,2-Trichloroethane	U	1.12	ug/kg	0.336	1.12
591-78-6	2-Hexanone	U	5.61	ug/kg	1.68	5.61
142-28-9	1,3-Dichloropropane	U	1.12	ug/kg	0.336	1.12
127-18-4	Tetrachloroethylene	U	1.12	ug/kg	0.336	1.12
124-48-1	Dibromochloromethane	U	1.12	ug/kg	0.336	1.12
106-93-4	1,2-Dibromoethane	U	1.12	ug/kg	0.336	1.12
108-90-7	Chlorobenzene	U	1.12	ug/kg	0.336	1.12

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661003	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9941	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:51	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:29	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t215.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.12	ug/kg	0.336	1.12
179601-23-1	m,p-Xylenes	U	2.24	ug/kg	0.336	2.24
95-47-6	o-Xylene	U	1.12	ug/kg	0.336	1.12
100-42-5	Styrene	U	1.12	ug/kg	0.336	1.12
75-25-2	Bromoform	U	1.12	ug/kg	0.336	1.12
79-34-5	1,1,2,2-Tetrachloroethane	U	1.12	ug/kg	0.336	1.12
96-18-4	1,2,3-Trichloropropane	U	1.12	ug/kg	0.336	1.12
108-86-1	Bromobenzene	U	1.12	ug/kg	0.336	1.12
103-65-1	n-Propylbenzene	U	1.12	ug/kg	0.336	1.12
95-49-8	2-Chlorotoluene	U	1.12	ug/kg	0.336	1.12
98-82-8	Isopropylbenzene	U	1.12	ug/kg	0.336	1.12
108-67-8	1,3,5-Trimethylbenzene	U	1.12	ug/kg	0.336	1.12
106-43-4	4-Chlorotoluene	U	1.12	ug/kg	0.336	1.12
98-06-6	tert-Butylbenzene	U	1.12	ug/kg	0.336	1.12
95-63-6	1,2,4-Trimethylbenzene	U	1.12	ug/kg	0.336	1.12
135-98-8	sec-Butylbenzene	U	1.12	ug/kg	0.336	1.12
99-87-6	4-Isopropyltoluene	U	1.12	ug/kg	0.336	1.12
541-73-1	1,3-Dichlorobenzene	U	1.12	ug/kg	0.336	1.12
106-46-7	1,4-Dichlorobenzene	U	1.12	ug/kg	0.336	1.12
104-51-8	n-Butylbenzene	U	1.12	ug/kg	0.336	1.12
96-12-8	1,2-Dibromo-3-chloropropane	U	1.12	ug/kg	0.336	1.12
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.61	ug/kg	1.79	5.61
630-20-6	1,1,1,2-Tetrachloroethane	U	1.12	ug/kg	0.336	1.12
95-50-1	1,2-Dichlorobenzene	U	1.12	ug/kg	0.336	1.12

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	40.9	ug/kg		J
	Unknown	20	41.8	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t215.d
Lab Smp Id: 232661003 Client Smp ID: CAMO-09-9941
Inj Date : 07-JUL-2009 15:51
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661003|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.81180	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1062964	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	886837	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	432064	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.350	13.341	(0.975)	485277	53.6720	60.2
$ 65 Toluene-d8	98	15.527	15.523	(0.904)	1548803	50.1665	56.2
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	605523	54.4146	61.0
66 Toluene	92	15.606	15.601	(0.909)	8522	0.45666	0.51(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 1t215.d
Report Date: 07/09/2009 07:31
Lab. ID: 232661003 SampleType: SAMPLE
Injection Date: 07-JUL-2009 15:51
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232661003|883144|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070609v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: all
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
20 Allyl chloride			CAS#: 107-05-1			
76	1399	9.58	9.86	80-120	100	(T)
41	403	10.00	9.86	284-344	29	(QT)
51 1,2-Dichloroethane			CAS#: 107-06-2			
62	16800	13.69	13.45	80-120	100	(T)
64	2825	13.69	13.45	2- 62	17	(T)
62 2-Nitropropane			CAS#: 79-46-9			
43	7982	15.53	15.09	80-120	100	(T)
41	5466	15.53	15.09	53-113	68	(T)
64 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	14985	15.53	15.37	80-120	100	(T)
43	7982	15.53	15.37	214-274	53	(QT)
100	1031538	15.53	15.37	0- 60	6884	(QT)
66 Toluene			CAS#: 108-88-3			
92	8522	15.61	15.61	80-120	100	( )
91	14921	15.61	15.61	137-197	175	( )
82 Styrene			CAS#: 100-42-5			
104	11829	18.09	17.82	80-120	100	(T)
78	373	17.80	17.82	22- 82	3	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
84 Isopropylbenzene			CAS#: 98-82-8			
105	9256	18.09	18.14	80-120	100	( )
120	4302	18.08	18.14	0- 54	46	( )
107 bis(2-Chloroisopropyl)ether			CAS#: 108-60-1			
45	64751	20.00	20.18	80-120	100	(T)
121	1652	20.00	20.18	0- 49	3	(T)
53 n-Butyl alcohol			CAS#: 71-36-3			
56	6698	13.70	13.94	80-120	100	(T)
41	132	13.96	13.94	38- 98	2	(Q)
75 1-Chlorohexane			CAS#: 544-10-5			
55	10186	17.17	17.17	80-120	100	( )
91	1981	17.17	17.17	0- 52	19	( )
56	6588	17.17	17.17	37- 97	65	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t215.d
Lab Smp Id: 232661003 Client Smp ID: CAMO-09-9941
Inj Date : 07-JUL-2009 15:51
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661003|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	10.81180	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.171	2781564	50.000
* 102 1,4-Dichlorobenzene-d4	19.620	2706834	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
18.082	2028550	36.4641953	40.9	0		0	76

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown				CAS #:			
20.002	2016937	37.2563800	41.8	0		0	102

Data File: /chem/VOA1.i/070709v1/1t215.d
Date : 07-JUL-2009 15:51
Client ID: CAMO-09-9941
Sample Info: |2326610031883144|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

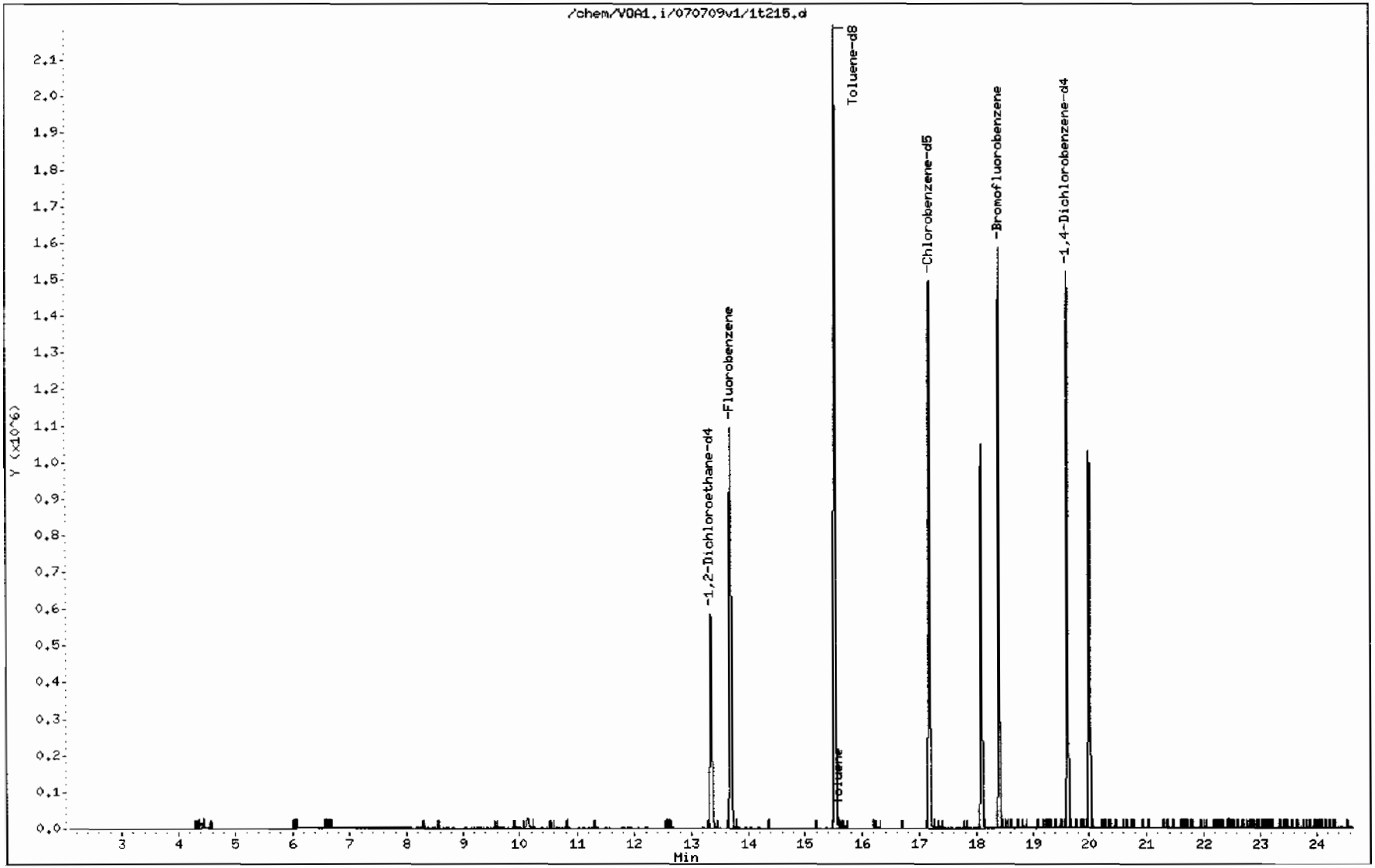

Data File: /chem/VOA1.i/070709v1/1t215.d

Date : 07-JUL-2009 15:51

Client ID: CAMO-09-9941

Instrument: VOA1.i

Sample Info: |2326610031883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

66 Toluene

Concentration: 0.51 ug/Kg

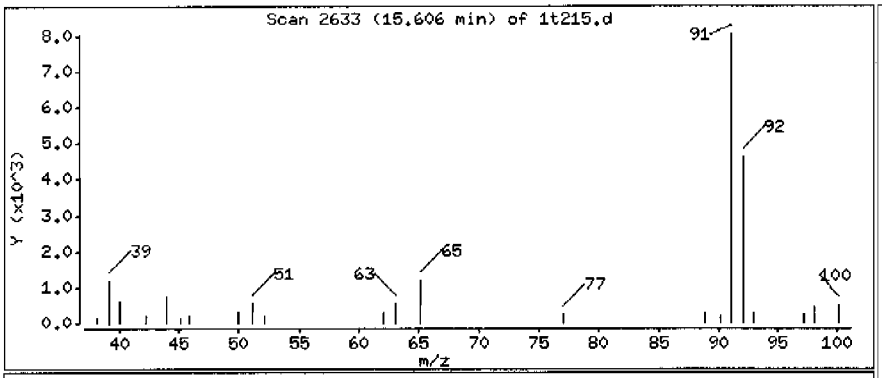

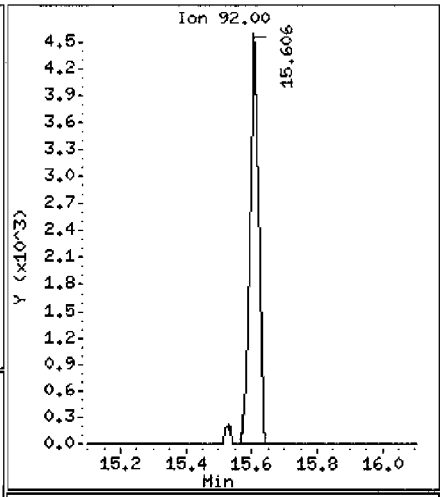

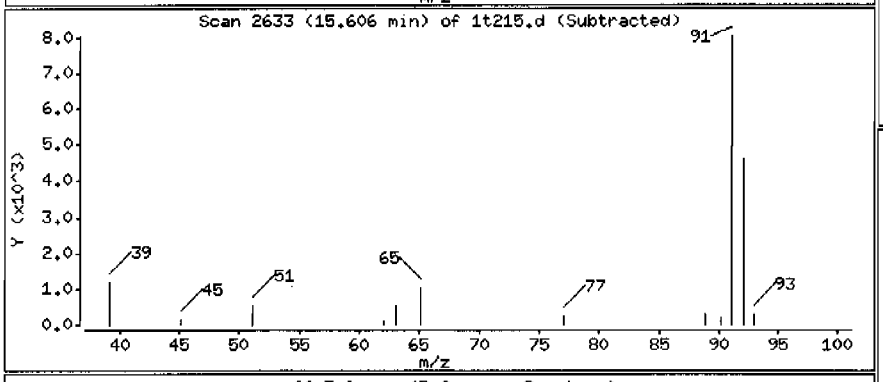

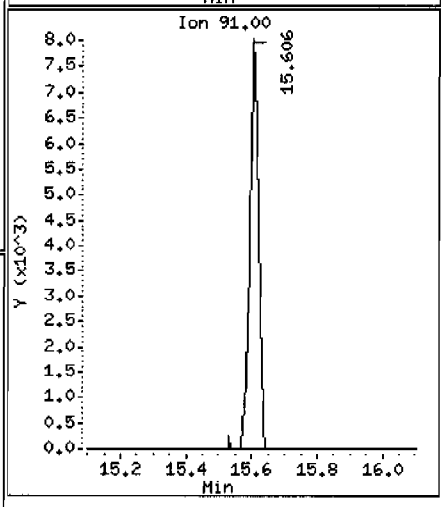

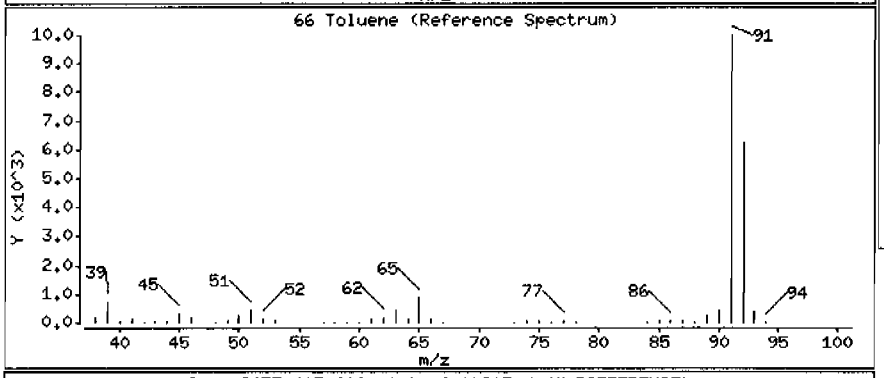

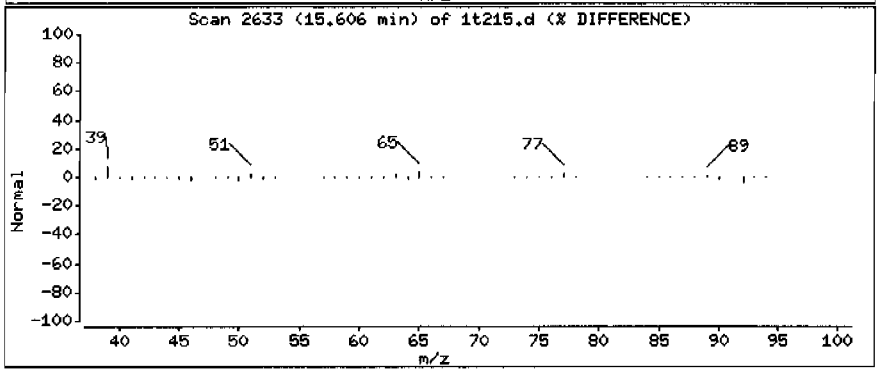

Data File: /chem/VOA1.i/070709v1/1t215.d

Date : 07-JUL-2009 15:51

Client ID: CAMO-09-9941

Instrument: VOA1.i

Sample Info: |2326610031883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Cyclotrisiloxane, hexamethyl-	541-05-9	NIST05.L	73123	35	C6H18O3Si3	222
Anthracene, 9,10-dihydro-9,10-dimethyl-	22566-43-4	NIST05.L	63100	25	C16H16	208
Trisiloxane, 1,1,3,3,5,5-hexamethyl-	1189-93-1	NIST05.L	63149	22	C6H20O2Si3	208

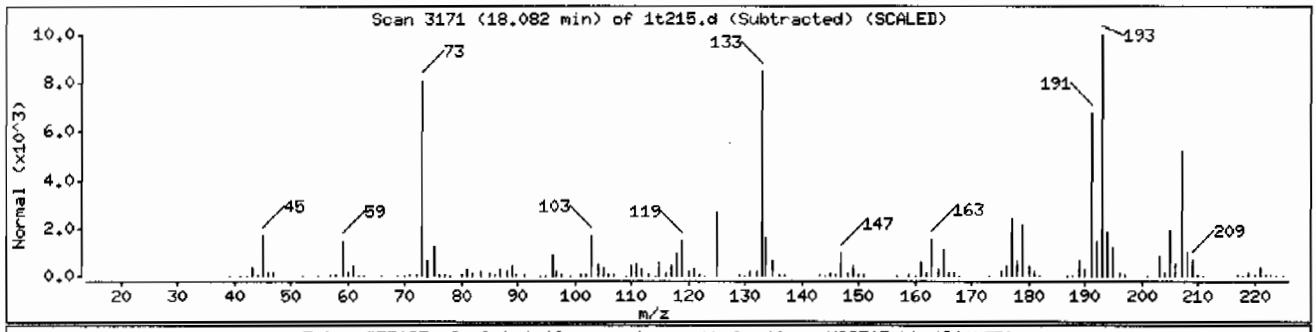

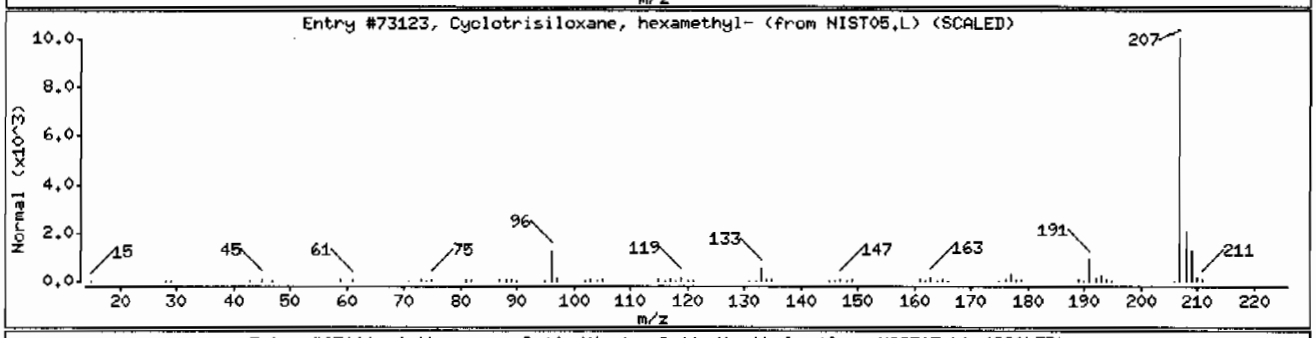

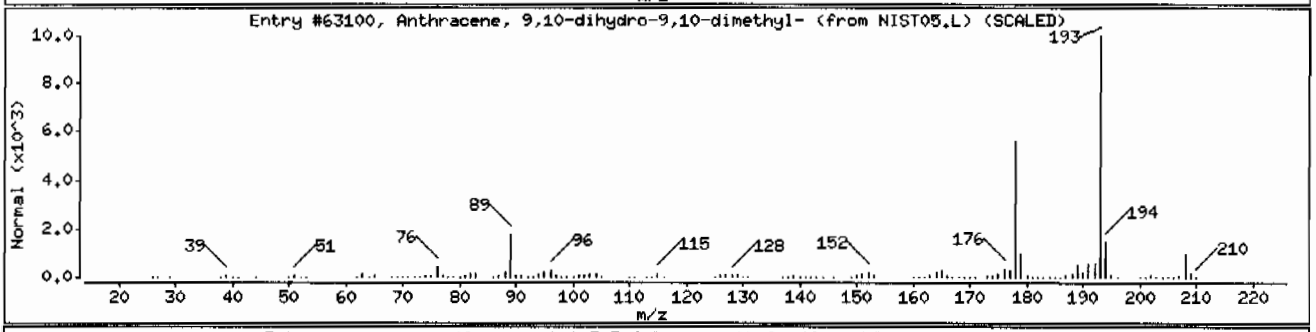

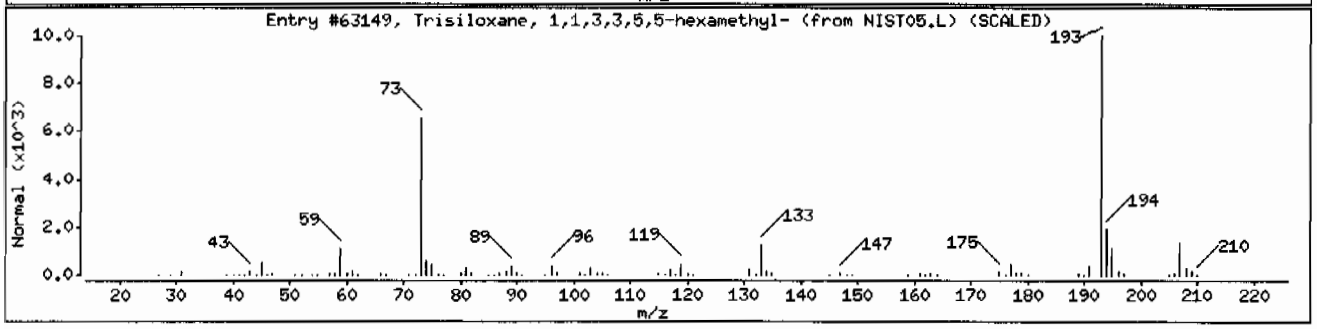

Data File: /chem/VOA1.i/070709v1/1t215.d

Date : 07-JUL-2009 15:51

Client ID: CAMO-09-9941

Instrument: VOA1.i

Sample Info: |2326610031883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,3-Cyclopentadiene, 5,5-dimethyl-1-(tri	1000163-65-0	NIST05.L	43043	23	C11H20Si	180

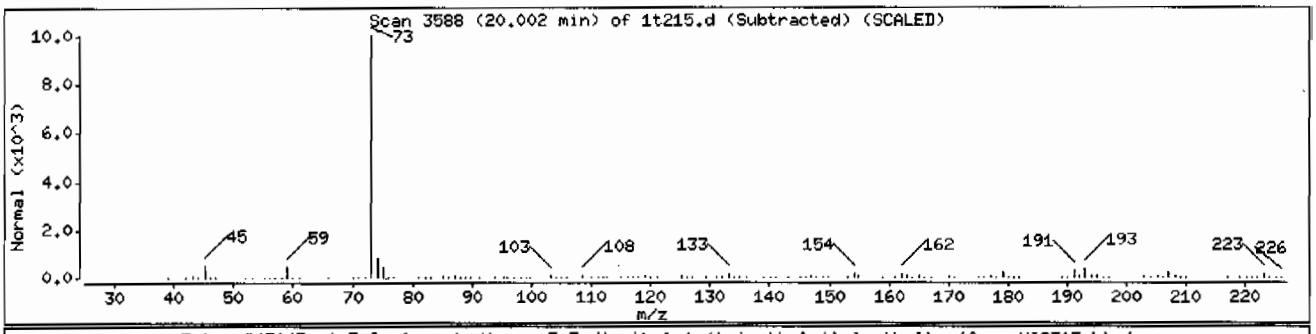

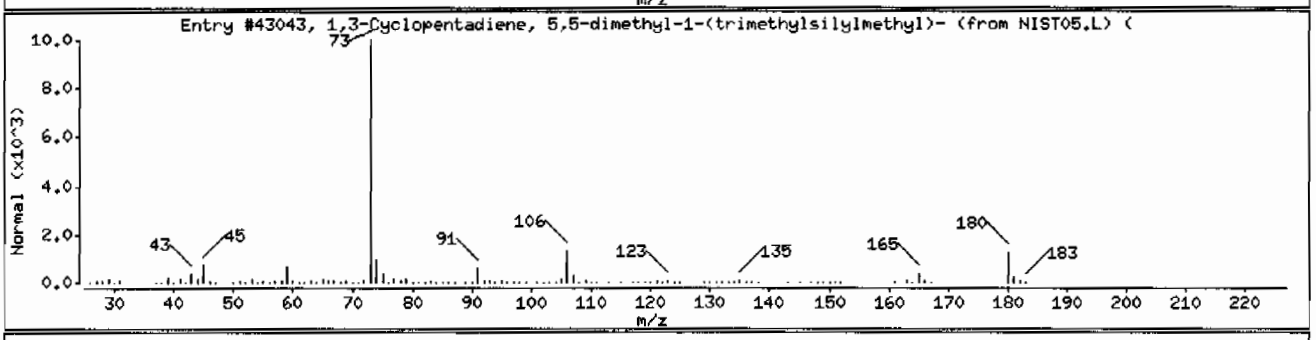

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661002	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9942	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:20	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t214.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.13	ug/kg	0.386	1.13
74-87-3	Chloromethane	U	1.13	ug/kg	0.340	1.13
75-01-4	Vinyl chloride	U	1.13	ug/kg	0.340	1.13
74-83-9	Bromomethane	U	1.13	ug/kg	0.340	1.13
75-00-3	Chloroethane	U	1.13	ug/kg	0.340	1.13
75-69-4	Trichlorofluoromethane	U	1.13	ug/kg	0.647	1.13
67-64-1	Acetone	U	5.67	ug/kg	1.88	5.67
75-35-4	1,1-Dichloroethylene	U	1.13	ug/kg	0.340	1.13
74-88-4	Iodomethane	U	5.67	ug/kg	1.82	5.67
75-09-2	Methylene chloride	U	5.67	ug/kg	2.27	5.67
75-15-0	Carbon disulfide	U	5.67	ug/kg	1.42	5.67
156-60-5	trans-1,2-Dichloroethylene	U	1.13	ug/kg	0.340	1.13
75-34-3	1,1-Dichloroethane	U	1.13	ug/kg	0.340	1.13
78-93-3	2-Butanone	U	5.67	ug/kg	1.70	5.67
156-59-2	cis-1,2-Dichloroethylene	U	1.13	ug/kg	0.340	1.13
594-20-7	2,2-Dichloropropane	U	1.13	ug/kg	0.340	1.13
67-66-3	Chloroform	U	1.13	ug/kg	0.340	1.13
74-97-5	Bromochloromethane	U	1.13	ug/kg	0.374	1.13
71-55-6	1,1,1-Trichloroethane	U	1.13	ug/kg	0.340	1.13
563-58-6	1,1-Dichloropropene	U	1.13	ug/kg	0.340	1.13
56-23-5	Carbon tetrachloride	U	1.13	ug/kg	0.340	1.13
107-06-2	1,2-Dichloroethane	U	1.13	ug/kg	0.340	1.13
71-43-2	Benzene	U	1.13	ug/kg	0.340	1.13
79-01-6	Trichloroethylene	U	1.13	ug/kg	0.374	1.13
78-87-5	1,2-Dichloropropane	U	1.13	ug/kg	0.340	1.13
75-27-4	Bromodichloromethane	U	1.13	ug/kg	0.340	1.13
74-95-3	Dibromomethane	U	1.13	ug/kg	0.340	1.13
108-10-1	4-Methyl-2-pentanone	U	5.67	ug/kg	1.42	5.67
10061-01-5	cis-1,3-Dichloropropylene	U	1.13	ug/kg	0.340	1.13
108-88-3	Toluene	U	1.13	ug/kg	0.340	1.13
10061-02-6	trans-1,3-Dichloropropylene	U	1.13	ug/kg	0.340	1.13
79-00-5	1,1,2-Trichloroethane	U	1.13	ug/kg	0.340	1.13
591-78-6	2-Hexanone	U	5.67	ug/kg	1.70	5.67
142-28-9	1,3-Dichloropropane	U	1.13	ug/kg	0.340	1.13
127-18-4	Tetrachloroethylene	U	1.13	ug/kg	0.340	1.13
124-48-1	Dibromochloromethane	U	1.13	ug/kg	0.340	1.13
106-93-4	1,2-Dibromoethane	U	1.13	ug/kg	0.340	1.13
108-90-7	Chlorobenzene	U	1.13	ug/kg	0.340	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661002	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9942	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 15:20	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t214.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.13	ug/kg	0.340	1.13
179601-23-1	m,p-Xylenes	U	2.27	ug/kg	0.340	2.27
95-47-6	o-Xylene	U	1.13	ug/kg	0.340	1.13
100-42-5	Styrene	U	1.13	ug/kg	0.340	1.13
75-25-2	Bromoform	U	1.13	ug/kg	0.340	1.13
79-34-5	1,1,2,2-Tetrachloroethane	U	1.13	ug/kg	0.340	1.13
96-18-4	1,2,3-Trichloropropane	U	1.13	ug/kg	0.340	1.13
108-86-1	Bromobenzene	U	1.13	ug/kg	0.340	1.13
103-65-1	n-Propylbenzene	U	1.13	ug/kg	0.340	1.13
95-49-8	2-Chlorotoluene	U	1.13	ug/kg	0.340	1.13
98-82-8	Isopropylbenzene	U	1.13	ug/kg	0.340	1.13
108-67-8	1,3,5-Trimethylbenzene	U	1.13	ug/kg	0.340	1.13
106-43-4	4-Chlorotoluene	U	1.13	ug/kg	0.340	1.13
98-06-6	tert-Butylbenzene	U	1.13	ug/kg	0.340	1.13
95-63-6	1,2,4-Trimethylbenzene	U	1.13	ug/kg	0.340	1.13
135-98-8	sec-Butylbenzene	U	1.13	ug/kg	0.340	1.13
99-87-6	4-Isopropyltoluene	U	1.13	ug/kg	0.340	1.13
541-73-1	1,3-Dichlorobenzene	U	1.13	ug/kg	0.340	1.13
106-46-7	1,4-Dichlorobenzene	U	1.13	ug/kg	0.340	1.13
104-51-8	n-Butylbenzene	U	1.13	ug/kg	0.340	1.13
96-12-8	1,2-Dibromo-3-chloropropane	U	1.13	ug/kg	0.340	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.67	ug/kg	1.82	5.67
630-20-6	1,1,1,2-Tetrachloroethane	U	1.13	ug/kg	0.340	1.13
95-50-1	1,2-Dichlorobenzene	U	1.13	ug/kg	0.340	1.13

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	15.2	ug/kg		J
	Unknown	20	7.64	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t214.d
Lab Smp Id: 232661002 Client Smp ID: CAMO-09-9942
Inj Date : 07-JUL-2009 15:20
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661002|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.86210	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1097561	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	926850	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	474295	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	497591	53.2992	60.5
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1589885	49.2740	55.9
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	636266	52.0862	59.1

ION RATIO REPORT

VOA REPORT

Data file: lt214.d
Report Date: 07/09/2009 07:31
Lab. ID: 232661002 SampleType: SAMPLE
Injection Date: 07-JUL-2009 15:20
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232661002|883144|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070609v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: all
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
20 Allyl chloride			CAS#: 107-05-1			
76	431	9.61	9.86	80-120	100	(T)
41	114	9.97	9.86	284-344	27	(QT)
51 1,2-Dichloroethane			CAS#: 107-06-2			
62	16633	13.69	13.45	80-120	100	(T)
64	3066	13.70	13.45	2- 62	18	(T)
62 2-Nitropropane			CAS#: 79-46-9			
43	8064	15.53	15.09	80-120	100	(T)
41	5448	15.53	15.09	53-113	68	(T)
64 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	15247	15.52	15.37	80-120	100	(T)
43	8064	15.53	15.37	214-274	53	(QT)
100	1060176	15.53	15.37	0- 60	6953	(QT)
53 n-Butyl alcohol			CAS#: 71-36-3			
56	6766	13.69	13.94	80-120	100	(T)
41	528	13.95	13.94	38- 98	8	(Q)
75 1-Chlorohexane			CAS#: 544-10-5			
55	10800	17.17	17.17	80-120	100	( )
91	2008	17.17	17.17	0- 52	19	( )
56	6906	17.17	17.17	37- 97	64	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t214.d
Lab Smp Id: 232661002 Client Smp ID: CAMO-09-9942
Inj Date : 07-JUL-2009 15:20
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661002|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.86210	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.166	2894406	50.000
* 102 1,4-Dichlorobenzene-d4	19.620	2937583	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
18.082	777975	13.4392869	15.2	0		0	76

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	========	======
Unknown					CAS #:		
20.002	395850	6.73767692	7.6	0		0	102

Data File: /chem/VOA1.i/070709v1/1t214.d
Date : 07-JUL-2009 15:20
Client ID: CAMO-09-9942
Sample Info: |2326610021883144|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

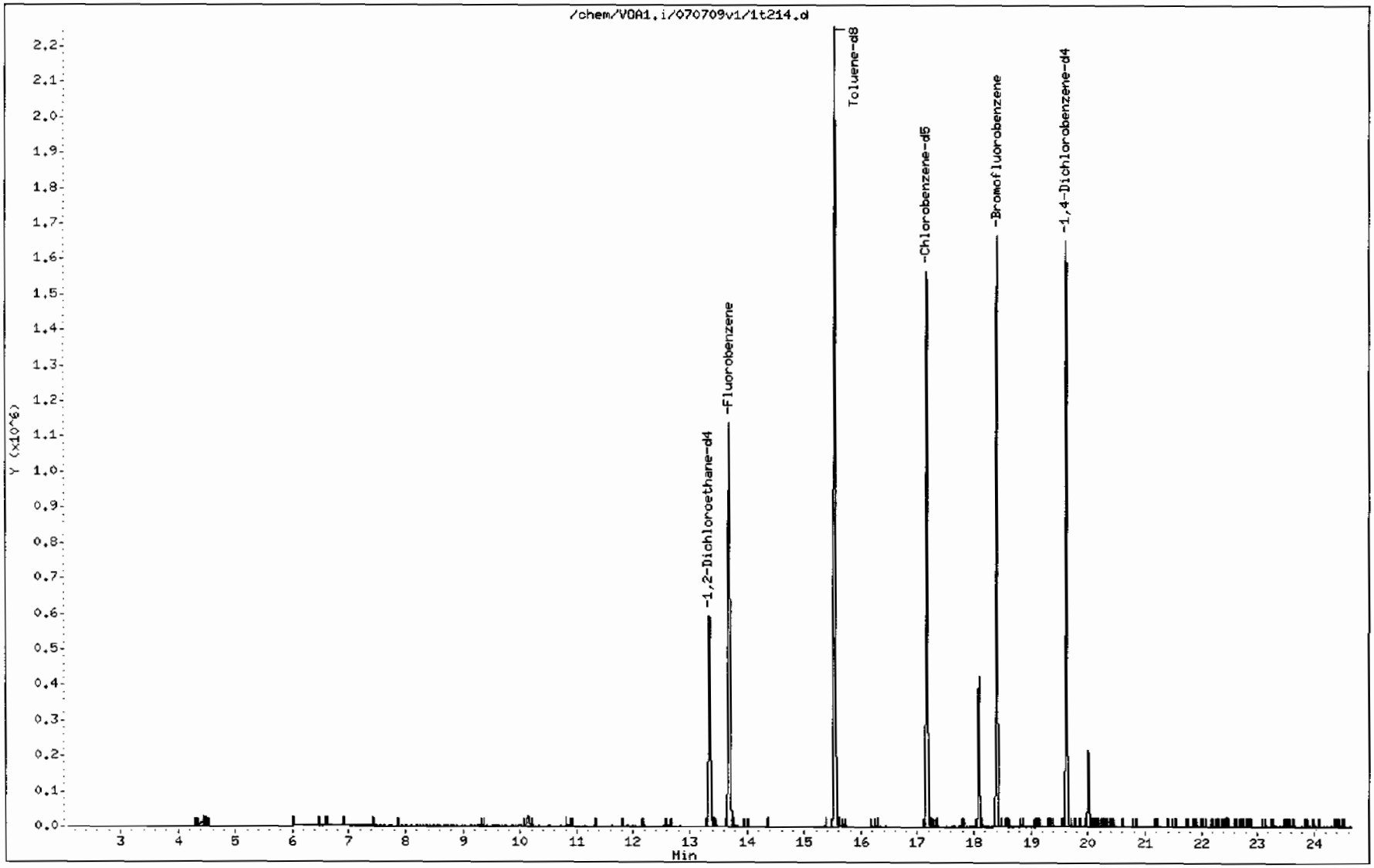

Data File: /chem/VOA1.i/070709v1/1t214.d

Date : 07-JUL-2009 15:20

Client ID: CAHO-09-9942

Instrument: VOA1.i

Sample Info: |2326610021883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Trisiloxane, 1,1,3,3,5,5-hexamethyl-	1189-93-1	NIST05.L	63148	27	C6H20O2Si3	208
Anthracene, 9,10-dihydro-9,10-dimethyl-	22566-43-4	NIST05.L	63100	25	C16H16	208
6-Methylphenanthridine	3955-65-5	NIST05.L	52077	22	C14H11N	193

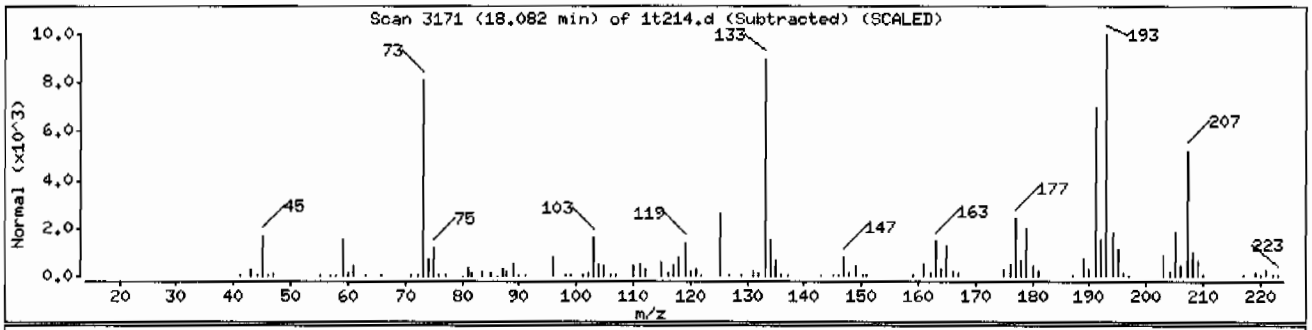

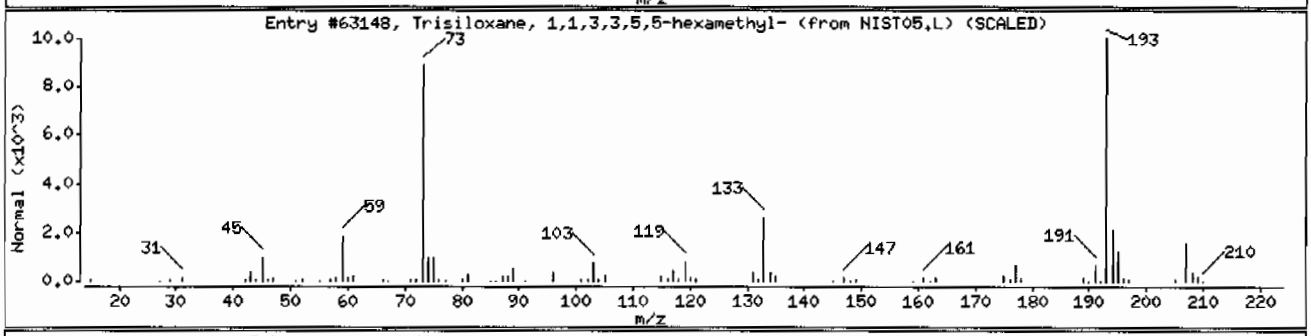

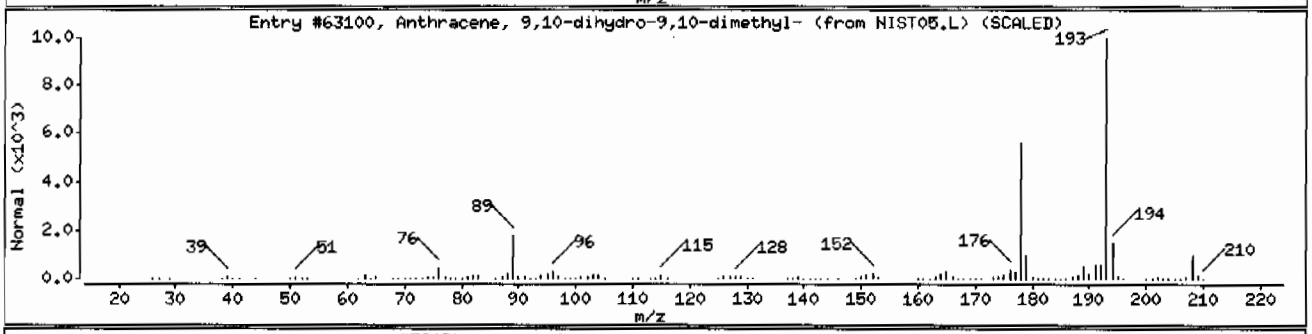

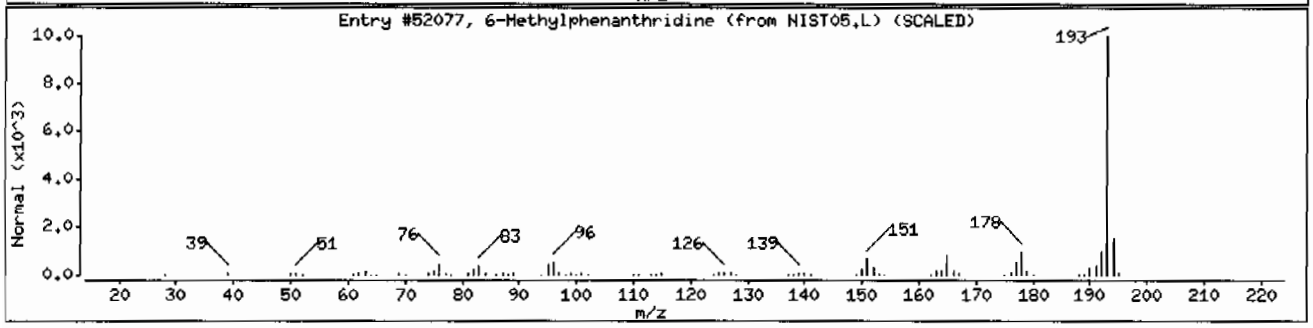

Data File: /chem/VOA1.i/070709v1/1t214.d

Date : 07-JUL-2009 15:20

Client ID: CAMO-09-9942

Instrument: VOA1.i

Sample Info: |2326610021883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0

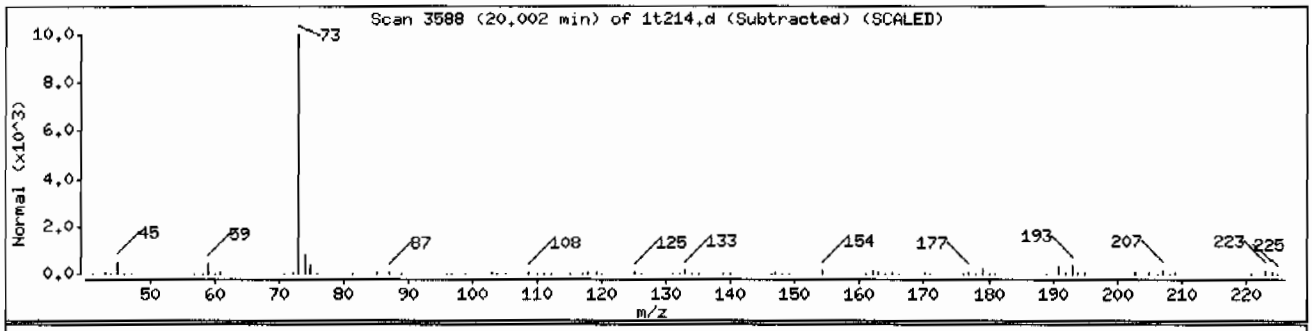

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**	**Date Collected:**	**06/26/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232661004**	**Date Received:**	**07/01/2009 09:00**	**%Moisture:**	**13.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9943**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883144**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 16:22**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/07/2009 13:30**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t216.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.16	ug/kg	0.395	1.16
74-87-3	Chloromethane	U	1.16	ug/kg	0.348	1.16
75-01-4	Vinyl chloride	U	1.16	ug/kg	0.348	1.16
74-83-9	Bromomethane	U	1.16	ug/kg	0.348	1.16
75-00-3	Chloroethane	U	1.16	ug/kg	0.348	1.16
75-69-4	Trichlorofluoromethane	U	1.16	ug/kg	0.662	1.16
67-64-1	Acetone	U	5.81	ug/kg	1.93	5.81
75-35-4	1,1-Dichloroethylene	U	1.16	ug/kg	0.348	1.16
74-88-4	Iodomethane	U	5.81	ug/kg	1.86	5.81
75-09-2	Methylene chloride	U	5.81	ug/kg	2.32	5.81
75-15-0	Carbon disulfide	U	5.81	ug/kg	1.45	5.81
156-60-5	trans-1,2-Dichloroethylene	U	1.16	ug/kg	0.348	1.16
75-34-3	1,1-Dichloroethane	U	1.16	ug/kg	0.348	1.16
78-93-3	2-Butanone	U	5.81	ug/kg	1.74	5.81
156-59-2	cis-1,2-Dichloroethylene	U	1.16	ug/kg	0.348	1.16
594-20-7	2,2-Dichloropropane	U	1.16	ug/kg	0.348	1.16
67-66-3	Chloroform	U	1.16	ug/kg	0.348	1.16
74-97-5	Bromochloromethane	U	1.16	ug/kg	0.383	1.16
71-55-6	1,1,1-Trichloroethane	U	1.16	ug/kg	0.348	1.16
563-58-6	1,1-Dichloropropene	U	1.16	ug/kg	0.348	1.16
56-23-5	Carbon tetrachloride	U	1.16	ug/kg	0.348	1.16
107-06-2	1,2-Dichloroethane	U	1.16	ug/kg	0.348	1.16
71-43-2	Benzene	U	1.16	ug/kg	0.348	1.16
79-01-6	Trichloroethylene	U	1.16	ug/kg	0.383	1.16
78-87-5	1,2-Dichloropropane	U	1.16	ug/kg	0.348	1.16
75-27-4	Bromodichloromethane	U	1.16	ug/kg	0.348	1.16
74-95-3	Dibromomethane	U	1.16	ug/kg	0.348	1.16
108-10-1	4-Methyl-2-pentanone	U	5.81	ug/kg	1.45	5.81
10061-01-5	cis-1,3-Dichloropropylene	U	1.16	ug/kg	0.348	1.16
108-88-3	Toluene	U	1.16	ug/kg	0.348	1.16
10061-02-6	trans-1,3-Dichloropropylene	U	1.16	ug/kg	0.348	1.16
79-00-5	1,1,2-Trichloroethane	U	1.16	ug/kg	0.348	1.16
591-78-6	2-Hexanone	U	5.81	ug/kg	1.74	5.81
142-28-9	1,3-Dichloropropane	U	1.16	ug/kg	0.348	1.16
127-18-4	Tetrachloroethylene	U	1.16	ug/kg	0.348	1.16
124-48-1	Dibromochloromethane	U	1.16	ug/kg	0.348	1.16
106-93-4	1,2-Dibromoethane	U	1.16	ug/kg	0.348	1.16
108-90-7	Chlorobenzene	U	1.16	ug/kg	0.348	1.16

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661004	**Date Received:**	07/01/2009 09:00	**%Moisture:**	13.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9943	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 16:22	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:30	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t216.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.16	ug/kg	0.348	1.16
179601-23-1	m,p-Xylenes	U	2.32	ug/kg	0.348	2.32
95-47-6	o-Xylene	U	1.16	ug/kg	0.348	1.16
100-42-5	Styrene	U	1.16	ug/kg	0.348	1.16
75-25-2	Bromoform	U	1.16	ug/kg	0.348	1.16
79-34-5	1,1,2,2-Tetrachloroethane	U	1.16	ug/kg	0.348	1.16
96-18-4	1,2,3-Trichloropropane	U	1.16	ug/kg	0.348	1.16
108-86-1	Bromobenzene	U	1.16	ug/kg	0.348	1.16
103-65-1	n-Propylbenzene	U	1.16	ug/kg	0.348	1.16
95-49-8	2-Chlorotoluene	U	1.16	ug/kg	0.348	1.16
98-82-8	Isopropylbenzene	U	1.16	ug/kg	0.348	1.16
108-67-8	1,3,5-Trimethylbenzene	U	1.16	ug/kg	0.348	1.16
106-43-4	4-Chlorotoluene	U	1.16	ug/kg	0.348	1.16
98-06-6	tert-Butylbenzene	U	1.16	ug/kg	0.348	1.16
95-63-6	1,2,4-Trimethylbenzene	U	1.16	ug/kg	0.348	1.16
135-98-8	sec-Butylbenzene	U	1.16	ug/kg	0.348	1.16
99-87-6	4-Isopropyltoluene	U	1.16	ug/kg	0.348	1.16
541-73-1	1,3-Dichlorobenzene	U	1.16	ug/kg	0.348	1.16
106-46-7	1,4-Dichlorobenzene	U	1.16	ug/kg	0.348	1.16
104-51-8	n-Butylbenzene	U	1.16	ug/kg	0.348	1.16
96-12-8	1,2-Dibromo-3-chloropropane	U	1.16	ug/kg	0.348	1.16
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.81	ug/kg	1.86	5.81
630-20-6	1,1,1,2-Tetrachloroethane	U	1.16	ug/kg	0.348	1.16
95-50-1	1,2-Dichlorobenzene	U	1.16	ug/kg	0.348	1.16

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.08	25.5	ug/kg		J
	Unknown	20	24.8	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t216.d
Lab Smp Id: 232661004 Client Smp ID: CAMO-09-9943
Inj Date : 07-JUL-2009 16:22
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661004|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	13.89590	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1039192	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	873440	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	448234	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.350	13.341	(0.975)	480415	54.3497	63.1
$ 65 Toluene-d8	98	15.528	15.523	(0.904)	1526857	50.2142	58.3
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	614520	53.2309	61.8

ION RATIO REPORT

VOA REPORT

Data file: 1t216.d
Report Date: 07/09/2009 07:32
Lab. ID: 232661004 SampleType: SAMPLE
Injection Date: 07-JUL-2009 16:22
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232661004|883144|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070609v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: all
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
20 Allyl chloride			CAS#: 107-05-1			
76	644	9.57	9.86	80-120	100	(T)
41	271	10.00	9.86	284-344	42	(QT)
51 1,2-Dichloroethane			CAS#: 107-06-2			
62	16098	13.69	13.45	80-120	100	(T)
64	2895	13.69	13.45	2- 62	18	(T)
62 2-Nitropropane			CAS#: 79-46-9			
43	8007	15.52	15.09	80-120	100	(T)
41	5288	15.53	15.09	53-113	66	(T)
64 4-Methyl-2-pentanone			CAS#: 108-10-1			
58	14633	15.53	15.37	80-120	100	(T)
43	8007	15.52	15.37	214-274	55	(QT)
100	1015853	15.53	15.37	0- 60	6942	(QT)
82 Styrene			CAS#: 100-42-5			
104	7241	18.09	17.82	80-120	100	(T)
78	112	17.82	17.82	22- 82	2	(Q)
107 bis(2-Chloroisopropyl)ether			CAS#: 108-60-1			
45	39370	20.00	20.18	80-120	100	(T)
121	765	20.00	20.18	0- 49	2	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
53 n-Butyl alcohol			CAS#: 71-36-3			
56	6345	13.70	13.94	80-120	100	(T)
41	111	13.94	13.94	38- 98	2	(Q)
75 1-Chlorohexane			CAS#: 544-10-5			
55	10647	17.17	17.17	80-120	100	( )
91	2076	17.17	17.17	0- 52	20	( )
56	6362	17.17	17.17	37- 97	60	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t216.d
Lab Smp Id: 232661004 Client Smp ID: CAMO-09-9943
Inj Date : 07-JUL-2009 16:22
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661004|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	13.89590	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.171	2740103	50.000
* 102 1,4-Dichlorobenzene-d4	19.620	2799400	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane					CAS #:		
18.082	1204595	21.9808335	25.5	0		0	76

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown					CAS #:		
20.002	1195716	21.3566475	24.8	0		0	102

Data File: /chem/VOA1.i/070709v1/1t216.d
Date : 07-JUL-2009 16:22
Client ID: CAMO-09-9943
Sample Info: |2326610041883144|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXH4
Column diameter: 0.25

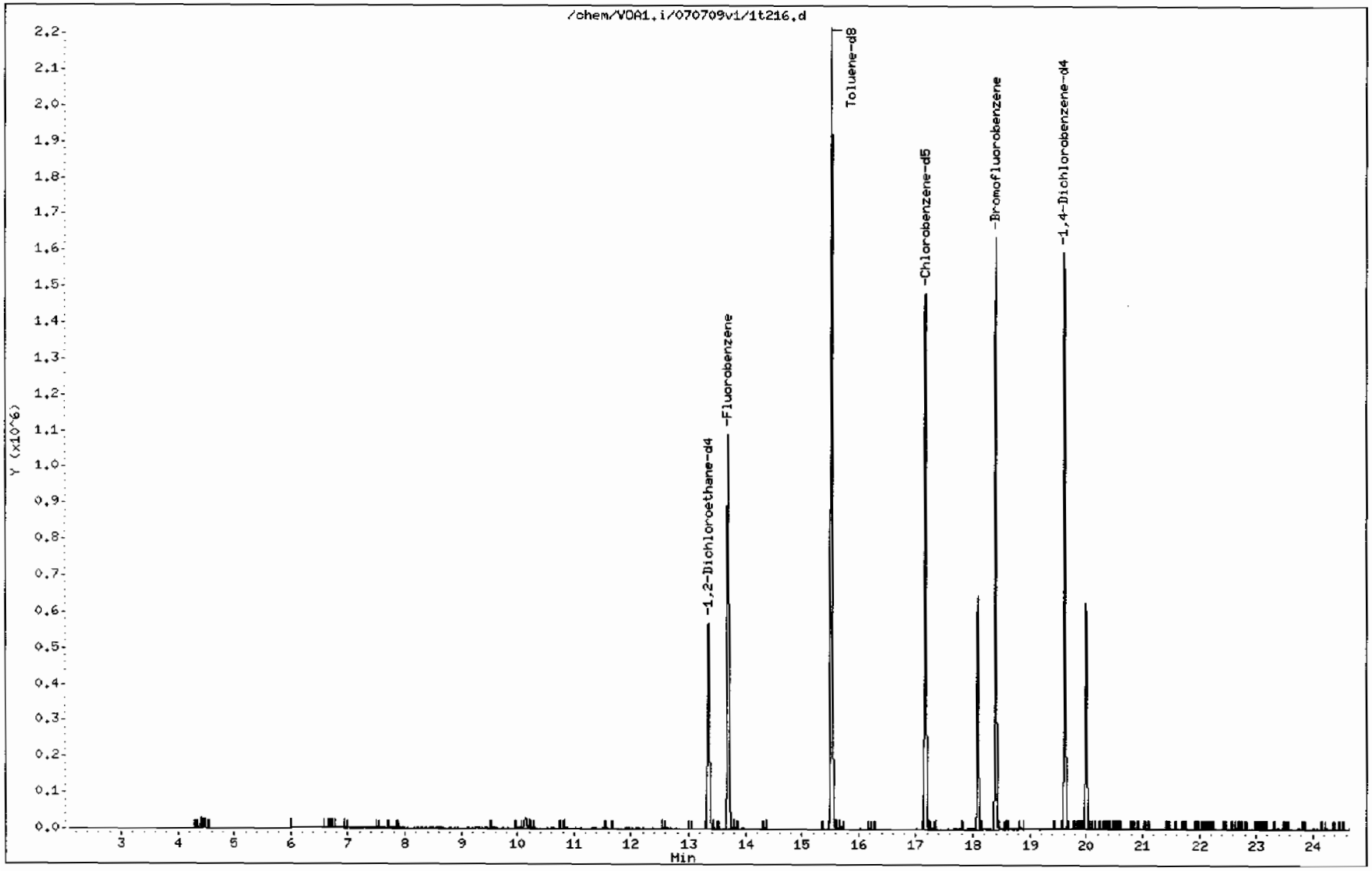

Data File: /chem/VOA1.i/070709v1/1t216.d

Date : 07-JUL-2009 16:22

Client ID: CAMO-09-9943

Instrument: VOA1.i

Sample Info: |232661004|883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Anthracene, 9,10-dihydro-9,10-dimethyl-	22566-43-4	NIST05.L	63100	25	C16H16	208
Trisiloxane, 1,1,3,3,5,5-hexamethyl-	1189-93-1	NIST05.L	63149	22	C6H20O2Si3	208
1H-Isoindole-1,3(2H)-dithione, 2-methyl-	35373-10-5	NIST05.L	52227	18	C9H7NS2	193

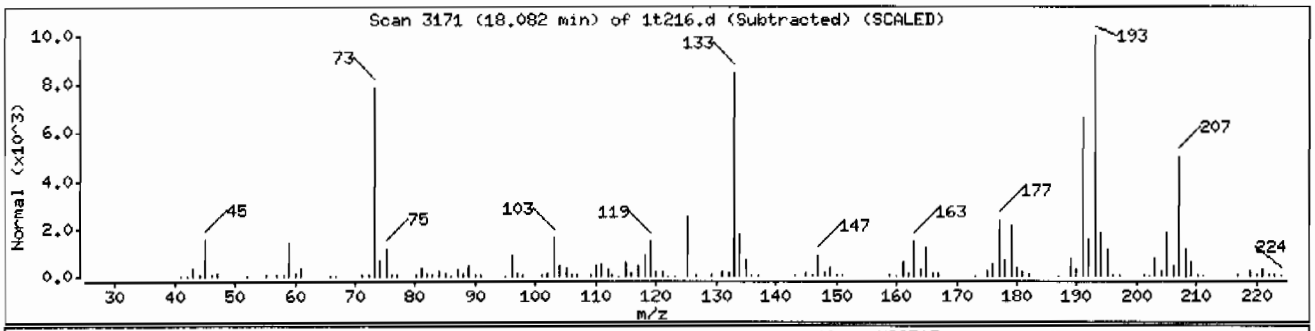

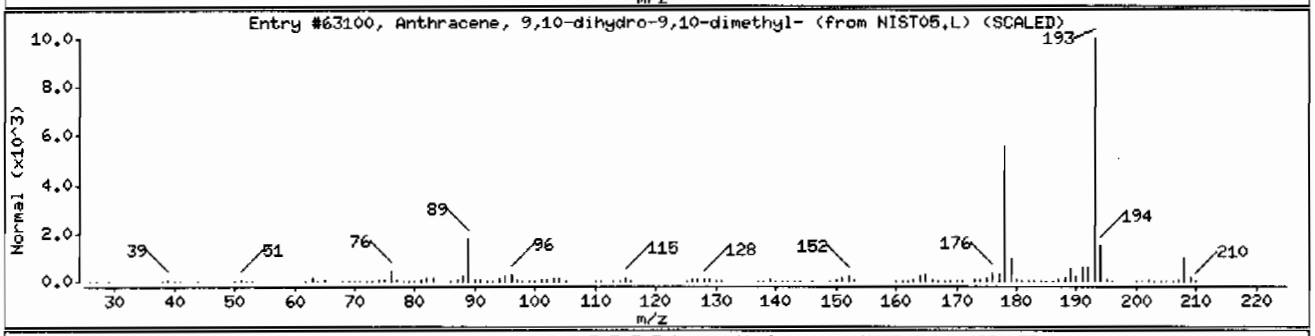

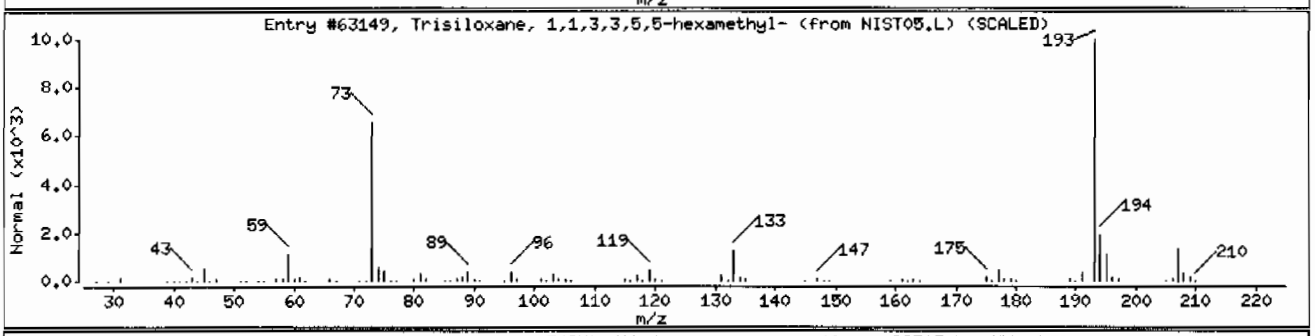

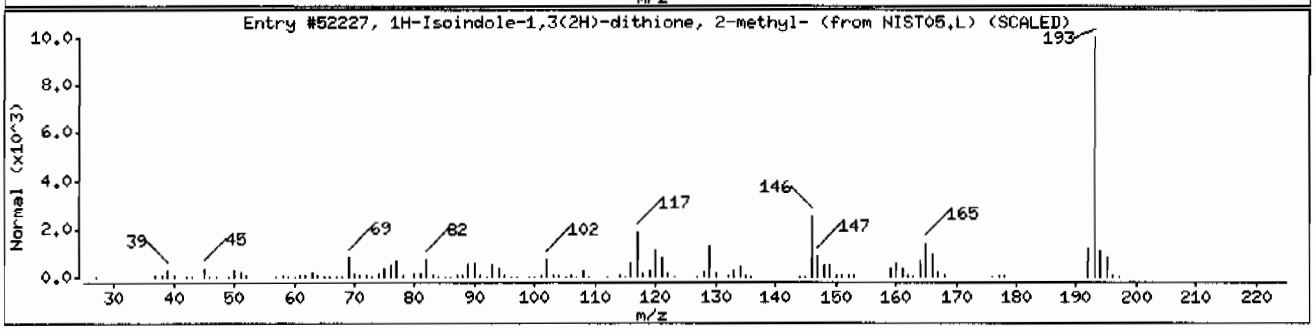

Data File: /chem/VOA1.i/070709v1/1t216.d

Date : 07-JUL-2009 16:22

Client ID: CAMO-09-9943 Instrument: VOA1.i

Sample Info: |2326610041883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,3-Cyclopentadiene, 5,5-dimethyl-1-(tri	1000163-65-0	NIST05.L	43043	23	C11H20Si	180

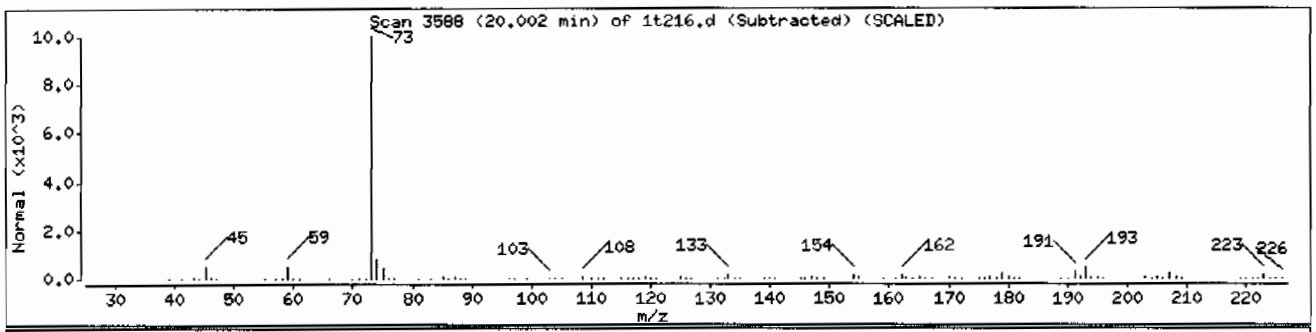

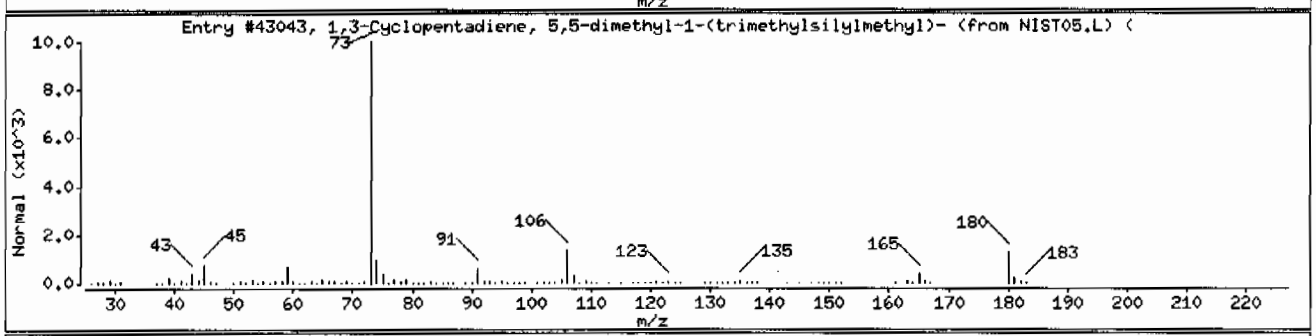

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 17:23	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t218.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.20	ug/kg	0.408	1.20
74-87-3	Chloromethane	U	1.20	ug/kg	0.360	1.20
75-01-4	Vinyl chloride	U	1.20	ug/kg	0.360	1.20
74-83-9	Bromomethane	U	1.20	ug/kg	0.360	1.20
75-00-3	Chloroethane	U	1.20	ug/kg	0.360	1.20
75-69-4	Trichlorofluoromethane	U	1.20	ug/kg	0.684	1.20
67-64-1	Acetone	U	6.00	ug/kg	1.99	6.00
75-35-4	1,1-Dichloroethylene	J	0.502	ug/kg	0.360	1.20
74-88-4	Iodomethane	U	6.00	ug/kg	1.92	6.00
75-09-2	Methylene chloride	U	6.00	ug/kg	2.40	6.00
75-15-0	Carbon disulfide	U	6.00	ug/kg	1.50	6.00
156-60-5	trans-1,2-Dichloroethylene	U	1.20	ug/kg	0.360	1.20
75-34-3	1,1-Dichloroethane	U	1.20	ug/kg	0.360	1.20
78-93-3	2-Butanone	U	6.00	ug/kg	1.80	6.00
156-59-2	cis-1,2-Dichloroethylene	U	1.20	ug/kg	0.360	1.20
594-20-7	2,2-Dichloropropane	U	1.20	ug/kg	0.360	1.20
67-66-3	Chloroform	U	1.20	ug/kg	0.360	1.20
74-97-5	Bromochloromethane	U	1.20	ug/kg	0.396	1.20
71-55-6	1,1,1-Trichloroethane	U	1.20	ug/kg	0.360	1.20
563-58-6	1,1-Dichloropropene	U	1.20	ug/kg	0.360	1.20
56-23-5	Carbon tetrachloride	U	1.20	ug/kg	0.360	1.20
107-06-2	1,2-Dichloroethane	U	1.20	ug/kg	0.360	1.20
71-43-2	Benzene	U	1.20	ug/kg	0.360	1.20
79-01-6	Trichloroethylene	U	1.20	ug/kg	0.396	1.20
78-87-5	1,2-Dichloropropane	U	1.20	ug/kg	0.360	1.20
75-27-4	Bromodichloromethane	U	1.20	ug/kg	0.360	1.20
74-95-3	Dibromomethane	U	1.20	ug/kg	0.360	1.20
108-10-1	4-Methyl-2-pentanone	U	6.00	ug/kg	1.50	6.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.20	ug/kg	0.360	1.20
108-88-3	Toluene	U	1.20	ug/kg	0.360	1.20
10061-02-6	trans-1,3-Dichloropropylene	U	1.20	ug/kg	0.360	1.20
79-00-5	1,1,2-Trichloroethane	U	1.20	ug/kg	0.360	1.20
591-78-6	2-Hexanone	U	6.00	ug/kg	1.80	6.00
142-28-9	1,3-Dichloropropane	U	1.20	ug/kg	0.360	1.20
127-18-4	Tetrachloroethylene	U	1.20	ug/kg	0.360	1.20
124-48-1	Dibromochloromethane	U	1.20	ug/kg	0.360	1.20
106-93-4	1,2-Dibromoethane	U	1.20	ug/kg	0.360	1.20
108-90-7	Chlorobenzene	U	1.20	ug/kg	0.360	1.20

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 17:23	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:32	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t218.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.20	ug/kg	0.360	1.20
179601-23-1	m,p-Xylenes	U	2.40	ug/kg	0.360	2.40
95-47-6	o-Xylene	U	1.20	ug/kg	0.360	1.20
100-42-5	Styrene	U	1.20	ug/kg	0.360	1.20
75-25-2	Bromoform	U	1.20	ug/kg	0.360	1.20
79-34-5	1,1,2,2-Tetrachloroethane	U	1.20	ug/kg	0.360	1.20
96-18-4	1,2,3-Trichloropropane	U	1.20	ug/kg	0.360	1.20
108-86-1	Bromobenzene	U	1.20	ug/kg	0.360	1.20
103-65-1	n-Propylbenzene	U	1.20	ug/kg	0.360	1.20
95-49-8	2-Chlorotoluene	U	1.20	ug/kg	0.360	1.20
98-82-8	Isopropylbenzene	U	1.20	ug/kg	0.360	1.20
108-67-8	1,3,5-Trimethylbenzene	U	1.20	ug/kg	0.360	1.20
106-43-4	4-Chlorotoluene	U	1.20	ug/kg	0.360	1.20
98-06-6	tert-Butylbenzene	U	1.20	ug/kg	0.360	1.20
95-63-6	1,2,4-Trimethylbenzene	J	0.574	ug/kg	0.360	1.20
135-98-8	sec-Butylbenzene	U	1.20	ug/kg	0.360	1.20
99-87-6	4-Isopropyltoluene	U	1.20	ug/kg	0.360	1.20
541-73-1	1,3-Dichlorobenzene	U	1.20	ug/kg	0.360	1.20
106-46-7	1,4-Dichlorobenzene	U	1.20	ug/kg	0.360	1.20
104-51-8	n-Butylbenzene	U	1.20	ug/kg	0.360	1.20
96-12-8	1,2-Dibromo-3-chloropropane	U	1.20	ug/kg	0.360	1.20
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	6.00	ug/kg	1.92	6.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.20	ug/kg	0.360	1.20
95-50-1	1,2-Dichlorobenzene	U	1.20	ug/kg	0.360	1.20

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t218.d
Lab Smp Id: 232661006 Client Smp ID: CAMO-09-9989
Inj Date : 07-JUL-2009 17:23
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661006|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	16.68180	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	956225	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	727921	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	278396	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	438631	53.9282	64.7
$ 65 Toluene-d8	98	15.527	15.523	(0.904)	1340620	52.9033	63.5
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	428591	59.7740	71.7
15 1,1-Dichloroethylene	61	9.074	9.079	(0.663)	4758	0.41816	0.50(a)
97 1,2,4-Trimethylbenzene	105	19.145	19.145	(0.976)	7865	0.47792	0.57(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

VOA REPORT

Data file: 1t218.d
Report Date: 07/09/2009 07:34
Lab. ID: 232661006 SampleType: SAMPLE
Injection Date: 07-JUL-2009 17:23
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232661006|883144|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/070609v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: all
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
15 1,1-Dichloroethylene				CAS#: 75-35-4		
61	4758	9.07	9.09	80-120	100	( )
63	1479	9.07	9.09	2- 62	31	( )
96	2606	9.07	9.09	24- 84	55	( )
20 Allyl chloride				CAS#: 107-05-1		
76	201	9.62	9.86	80-120	100	(T)
41	110	9.98	9.86	284-344	55	(QT)
51 1,2-Dichloroethane				CAS#: 107-06-2		
62	15243	13.70	13.45	80-120	100	(T)
64	2510	13.69	13.45	2- 62	16	(T)
62 2-Nitropropane				CAS#: 79-46-9		
43	6869	15.53	15.09	80-120	100	(T)
41	4480	15.53	15.09	53-113	65	(T)
64 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	12740	15.53	15.37	80-120	100	(T)
43	6869	15.53	15.37	214-274	54	(QT)
100	889015	15.53	15.37	0- 60	6978	(QT)
85 cis-1,4-Dichloro-2-butene				CAS#: 1476-11-5		
53	2625	18.11	18.28	80-120	100	(T)
88	17466	18.40	18.28	74-134	665	(QT)
77	8378	18.11	18.28	3- 63	319	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
90 trans-1,4-Dichloro-2-butene				CAS#: 110-57-6		
53	2580	18.11	18.58	80-120	100	(T)
88	17466	18.40	18.58	18- 78	677	(QT)
75	218964	18.40	18.58	96-156	8486	(QT)
89 n-Propylbenzene				CAS#: 103-65-1		
91	13126	18.11	18.57	80-120	100	(T)
120	163	18.11	18.57	0- 51	1	(T)
93 1,3,5-Trimethylbenzene				CAS#: 108-67-8		
105	7865	19.15	18.73	80-120	100	(T)
120	1168	19.15	18.73	15- 75	15	(QT)
97 1,2,4-Trimethylbenzene				CAS#: 95-63-6		
105	7865	19.15	19.15	80-120	100	( )
120	1168	19.15	19.15	12- 72	15	( )
96 tert-Butylbenzene				CAS#: 98-06-6		
119	9348	19.15	19.09	80-120	100	( )
91	30127	19.15	19.09	45-105	322	(Q)
134	2523	19.14	19.09	0- 54	27	( )
99 sec-Butylbenzene				CAS#: 135-98-8		
105	7865	19.15	19.32	80-120	100	(T)
134	2523	19.14	19.32	0- 48	32	(T)
100 4-Isopropyltoluene				CAS#: 99-87-6		
119	9212	19.15	19.44	80-120	100	(T)
134	2523	19.14	19.44	0- 56	27	(T)
91	30062	19.15	19.44	0- 56	326	(QT)
75 1-Chlorohexane				CAS#: 544-10-5		
55	8168	17.17	17.17	80-120	100	( )
91	1635	17.17	17.17	0- 52	20	( )
56	5383	17.17	17.17	37- 97	66	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t218.d
Lab Smp Id: 232661006 Client Smp ID: CAMO-09-9989
Inj Date : 07-JUL-2009 17:23
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232661006|883144|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/070709v1/1t218.d
Date : 07-JUL-2009 17:23
Client ID: CAMO-09-9989
Sample Info: |2326610006|883144|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

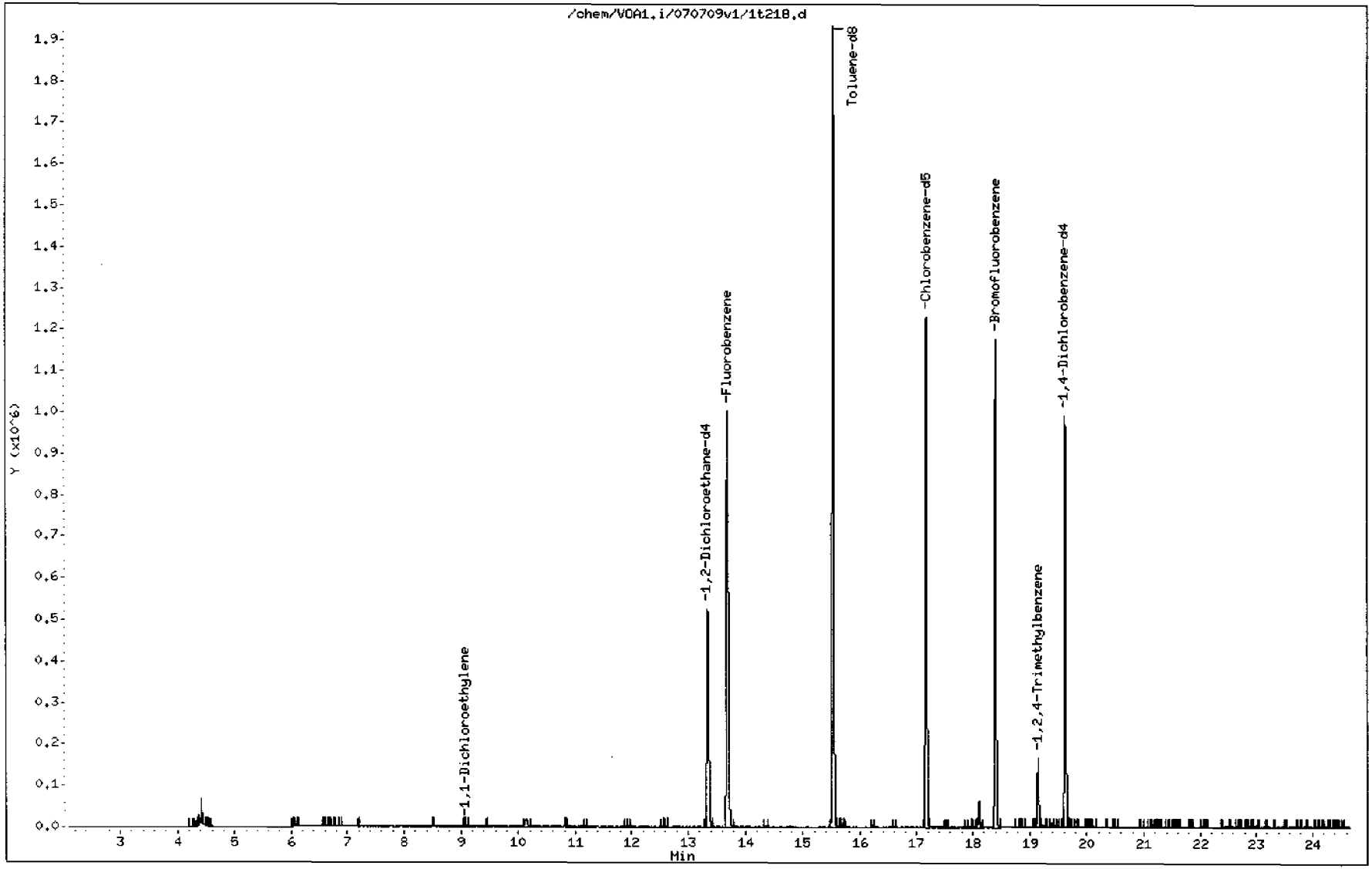

Data File: /chem/VOA1.i/070709v1/1t218.d

Date : 07-JUL-2009 17:23

Client ID: CAMO-09-9989

Instrument: VOA1.i

Sample Info: |2326610061883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

15 1,1-Dichloroethylene

Concentration: 0.50 ug/Kg

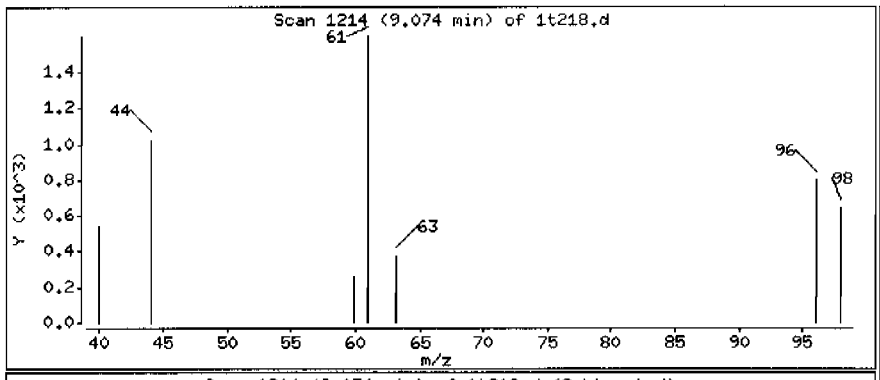

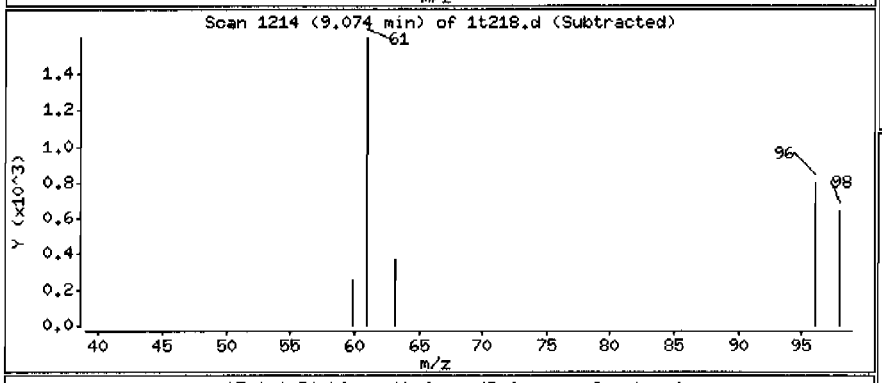

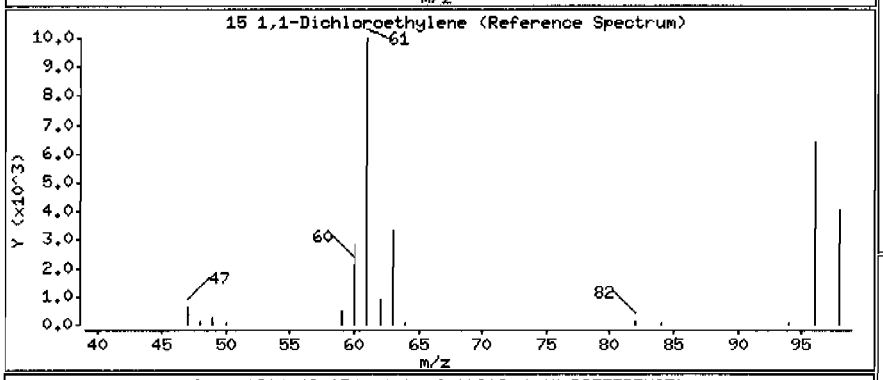

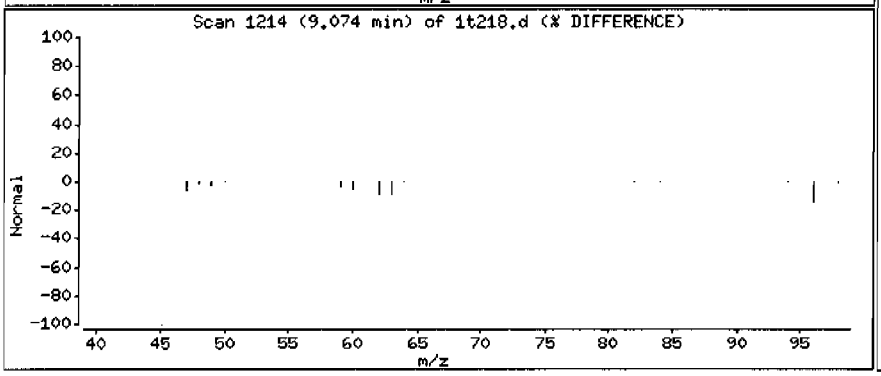

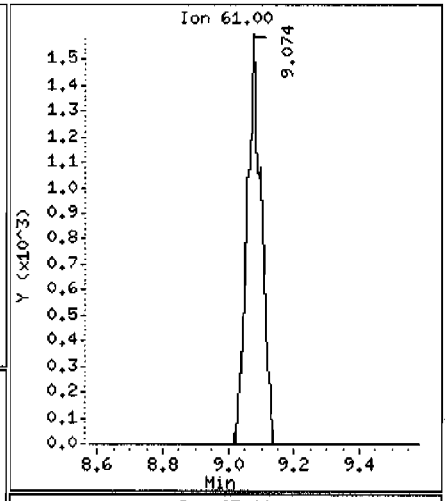

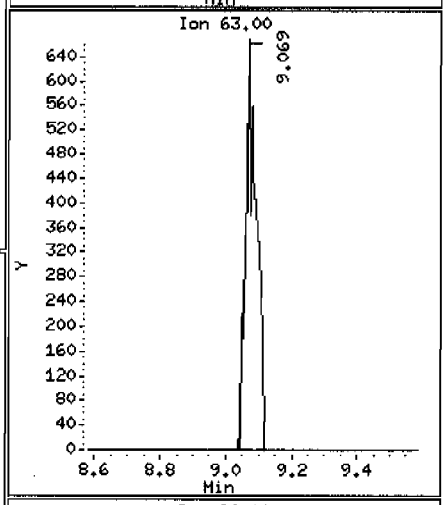

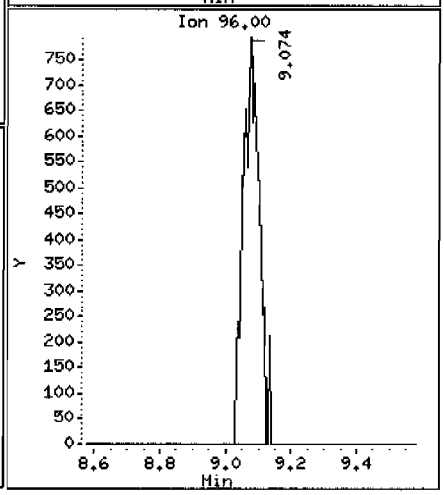

Data File: /chem/VOA1.i/070709v1/1t218.d

Date : 07-JUL-2009 17:23

Client ID: CAMO-09-9989

Instrument: VOA1.i

Sample Info: |2326610061883144|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

97 1,2,4-Trimethylbenzene

Concentration: 0.57 ug/Kg

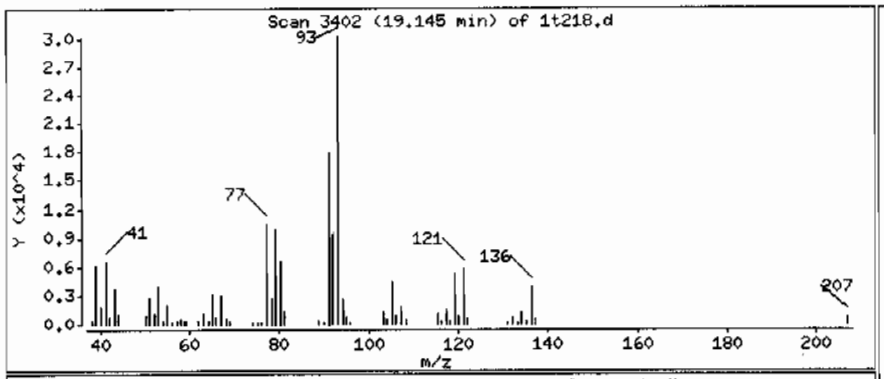

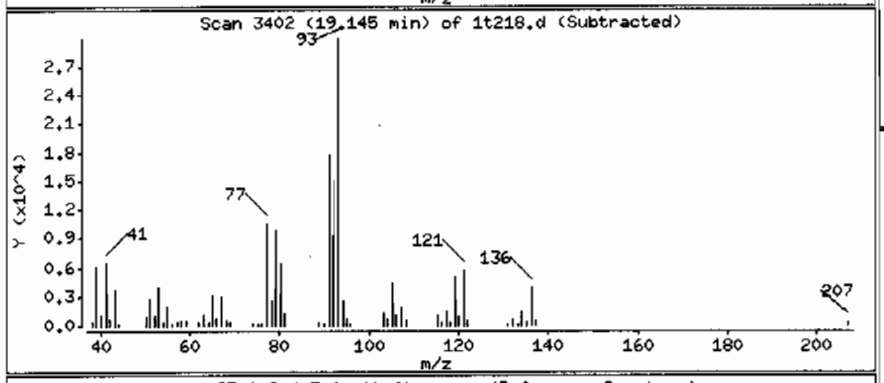

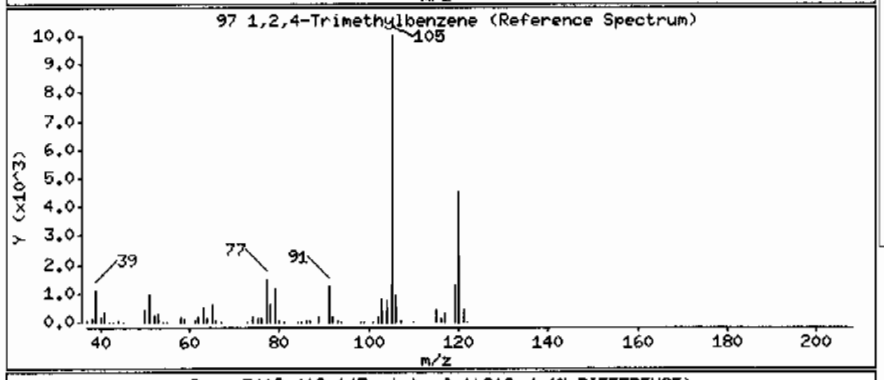

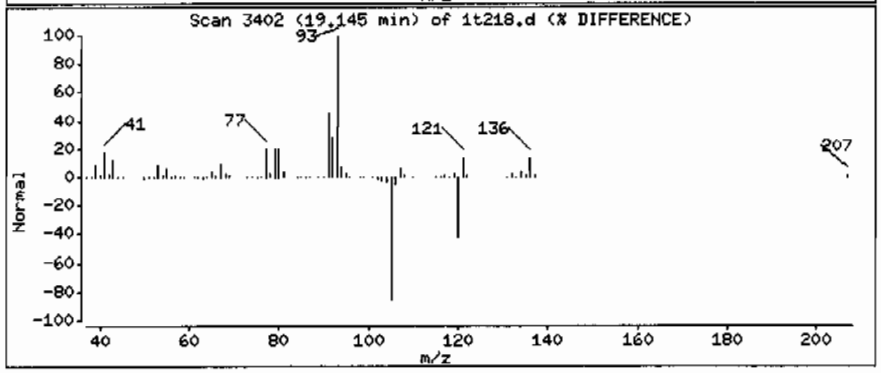

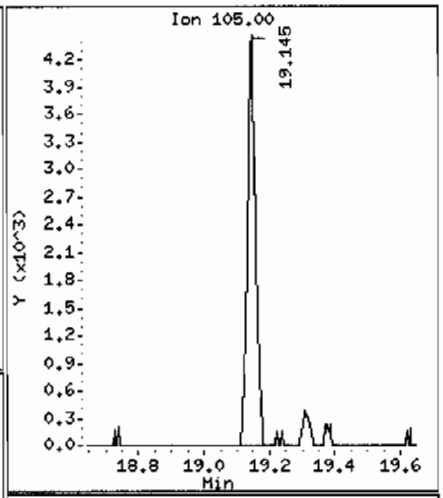

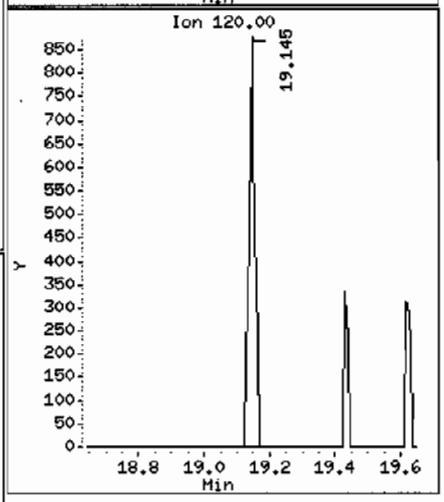

Standard Data

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
Fluorobenzene (IS)									
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Report Date: 07-Jul-2009 09:28

Calibration History

Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Start Cal Date: 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
01-JUL-2009 20:05	ICALsubS	/chem/VOA1.i/070109v1/1s320.d
01-JUL-2009 15:31	ICALsubL+	/chem/VOA1.i/070109v1/1s311.d
Cal Level: 2 , Cal Amount: 2.00000		
01-JUL-2009 20:36	ICALsubS	/chem/VOA1.i/070109v1/1s321.d
01-JUL-2009 16:32	ICALsubL+	/chem/VOA1.i/070109v1/1s313.d
Cal Level: 3 , Cal Amount: 5.00000		
01-JUL-2009 21:06	ICALsubS	/chem/VOA1.i/070109v1/1s322.d
01-JUL-2009 17:02	ICALsubL+	/chem/VOA1.i/070109v1/1s314.d
Cal Level: 4 , Cal Amount: 10.00000		
01-JUL-2009 21:36	ICALsubS	/chem/VOA1.i/070109v1/1s323.d
01-JUL-2009 17:32	ICALsubL+	/chem/VOA1.i/070109v1/1s315.d
Cal Level: 5 , Cal Amount: 20.00000		
01-JUL-2009 22:07	ICALsubS	/chem/VOA1.i/070109v1/1s324.d
01-JUL-2009 18:02	ICALsubL+	/chem/VOA1.i/070109v1/1s316.d
Cal Level: 6 , Cal Amount: 50.00000		
01-JUL-2009 22:38	ICALsubS	/chem/VOA1.i/070109v1/1s325.d
01-JUL-2009 18:33	ICALsubL+	/chem/VOA1.i/070109v1/1s317.d
Cal Level: 7 , Cal Amount: 100.00000		
01-JUL-2009 23:08	ICALsubS	/chem/VOA1.i/070109v1/1s326.d
01-JUL-2009 19:04	ICALsubL+	/chem/VOA1.i/070109v1/1s318.d
Cal Level: 8 , Cal Amount: 200.00000		
01-JUL-2009 15:01	BENZENE+	/chem/VOA1.i/070109v1/1s310.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

| Ccal Level: 6 , Ccal Amount: 50.0 |

07-JUL-2009 08:18	CALsubL+	/chem/VOA1.i/070709v1/1t202.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Calibration File Names:
Level 1: /chem/VOA1.i/070109v1/1s320.d
Level 2: /chem/VOA1.i/070109v1/1s321.d
Level 3: /chem/VOA1.i/070109v1/1s322.d
Level 4: /chem/VOA1.i/070109v1/1s323.d
Level 5: /chem/VOA1.i/070109v1/1s324.d
Level 6: /chem/VOA1.i/070109v1/1s325.d
Level 7: /chem/VOA1.i/070109v1/1s326.d
Level 8: /chem/VOA1.i/070109v1/1s310.d

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
M 1 Xylenes (total)	0.63742	0.69307	0.71573	0.71943	0.73946	0.68749					
	0.64982	+++++					AVRG		0.69178		5.39184
M 2 1,2-Dichloroethylene (total)	0.32788	0.33738	0.34683	0.33689	0.34479	0.32967					
	0.31727	+++++					AVRG		0.33439		3.07833
M 3 1,3-Dichloropropylene	0.55477	0.55186	0.59320	0.59302	0.62220	0.61476					
	0.61636	+++++					AVRG		0.59231		4.88471
4 Chlorotrifluoroethylene	+++++	0.15817	0.18048	0.16606	0.19195	0.22587					
	0.21863	+++++					AVRG		0.19019		14.46938
5 Dichlorodifluoromethane	0.20632	0.20427	0.22782	0.22758	0.24392	0.24683					
	0.24622	+++++					AVRG		0.22899		7.90587

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
6 Chloromethane	0.45944	0.44185	0.45669	0.43521	0.44598	0.44230					
	0.41328	+++++					AVRG		0.44211		3.46324
7 Vinyl chloride	0.40464	0.37453	0.36050	0.33937	0.32232	0.30711					
	0.29856	+++++					AVRG		0.34386		11.13694
8 2-Chloro-1,1,1-trifluoroethan	-+++++	0.33951	0.33712	0.34484	0.34565	0.34536					
	0.33039	+++++					AVRG		0.34048		1.77924
9 Bromomethane	0.23528	0.23489	0.24562	0.23527	0.23982	0.23784					
	0.22252	+++++					AVRG		0.23589		2.96933
10 Chloroethane	0.25488	0.24919	0.27580	0.25358	0.25901	0.26045					
	0.25180	+++++					AVRG		0.25782		3.42847
11 Trichlorofluoromethane	0.29908	0.30975	0.33790	0.32430	0.33766	0.33952					
	0.33111	+++++					AVRG		0.32562		4.81819
12 Ethyl Ether	0.28323	0.26535	0.29293	0.27952	0.29122	0.30219					
	0.29467	+++++					AVRG		0.28702		4.22281
13 Acrolein	0.04645	0.04741	0.05129	0.05174	0.05387	0.05109					
	0.04441	+++++					AVRG		0.04947		6.87869
14 Trichlorotrifluoroethane	0.30167	0.30505	0.30545	0.28816	0.27868	0.25372					
	0.23745	+++++					AVRG		0.28145		9.51098

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
15 1,1-Dichloroethylene	0.58633	0.59852	0.61194	0.60535	0.62516	0.57999					
	0.55744	+++++					AVRG		0.59496		3.77574
16 Acetone	0.27649	0.24089	0.23620	0.21911	0.20456	0.21940					
	0.20910	+++++					AVRG		0.22939		10.72331
17 Isopropyl Alcohol	+++++	0.01903	0.01848	0.01937	0.01689	0.02192					
	0.02133	+++++					AVRG		0.01950		9.53962
18 Iodomethane	0.47169	0.47936	0.50244	0.48655	0.49232	0.46886					
	0.43739	+++++					AVRG		0.47694		4.40006
19 Carbon disulfide	0.94241	0.98959	1.00350	0.97652	0.98129	0.91611					
	0.88668	+++++					AVRG		0.95658		4.48087
20 Allyl chloride	11825	25078	68054	154967	339827	930196					
	1941178	+++++					LINR	0.10458	0.14018		0.99985
21 Methyl acetate	0.30042	0.26814	0.26181	0.25233	0.25898	0.24408					
	0.22827	+++++					AVRG		0.25915		8.65589
22 Acetonitrile	0.04401	0.04236	0.04219	0.04208	0.03937	0.04098					
	0.03948	+++++					AVRG		0.04150		4.02704
23 Methylene chloride	+++++	45400	86731	102507	229407	486437					
	1000803	+++++					LINR	-0.08086	0.32678		0.99824

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
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Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
24 tert-Butyl Alcohol	0.02763	0.03053	0.02951	0.03125	0.02699	0.03504					
	0.03341	+++++					AVRG		0.03062		9.52456
25 tert-Butyl methyl ether	0.80459	0.85216	0.80875	0.86628	0.87306	0.85045					
	0.84198	+++++					AVRG		0.84247		3.15261
26 trans-1,2-Dichloroethylene	0.31895	0.33623	0.33538	0.32788	0.33529	0.32120					
	0.31023	+++++					AVRG		0.32645		3.07043
27 Acrylonitrile	0.10755	0.10844	0.11306	0.11361	0.11675	0.11761					
	0.11246	+++++					AVRG		0.11278		3.35889
28 Isopropyl ether	+++++	1.07710	1.08781	1.16279	1.19797	1.25502					
	1.19456	+++++					AVRG		1.16254		5.92447
29 Vinyl acetate	0.41643	0.46281	0.53553	0.53867	0.48575	0.56484					
	0.52591	+++++					AVRG		0.50428		10.26480
30 1,1-Dichloroethane	0.65284	0.66928	0.68115	0.65627	0.65730	0.63135					
	0.59933	+++++					AVRG		0.64965		4.14793
31 2-Chloro-1,3-butadiene	0.38690	0.39861	0.44120	0.44446	0.47248	0.48524					
	0.47521	+++++					AVRG		0.44344		8.64196
32 Ethyl tert-butyl ether	+++++	0.92556	0.96820	1.02086	1.06883	1.12074					
	1.09267	+++++					AVRG		1.03281		7.30147

GEL Laboratories LLC

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Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
33 2,2-Dichloropropane	0.33247	0.34211	0.34943	0.33062	0.33228	0.33275					
	0.32222	+++++					AVRG		0.33455		2.61340
34 Ethyl acetate	0.38164	0.33676	0.30866	0.30424	0.30932	0.29939					
	0.28047	+++++					AVRG		0.31721		10.37983
35 2-Butanone	0.26815	0.25900	0.26099	0.25451	0.24319	0.26629					
	0.24429	+++++					AVRG		0.25663		3.85743
36 cis-1,2-Dichloroethylene	0.33682	0.33854	0.35827	0.34590	0.35430	0.33813					
	0.32432	+++++					AVRG		0.34232		3.36605
37 Propionitrile	0.04329	0.04599	0.04588	0.04568	0.04700	0.04674					
	0.04519	+++++					AVRG		0.04568		2.67174
38 Tetrahydrofuran	0.22029	0.22977	0.22377	0.22605	0.23556	0.23596					
	0.22266	+++++					AVRG		0.22772		2.73431
39 Bromochloromethane	0.15645	0.16431	0.16271	0.15768	0.16039	0.15335					
	0.14755	+++++					AVRG		0.15749		3.65976
40 Methacrylonitrile	0.21475	0.23375	0.23677	0.24017	0.24375	0.24120					
	0.22345	+++++					AVRG		0.23340		4.53488
41 Chloroform	0.60646	0.59906	0.60013	0.57961	0.59162	0.56875					
	0.54762	+++++					AVRG		0.58475		3.57452

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
42 Cyclohexane	0.57075	0.58050	0.61393	0.62030	0.65216	0.62351					
	0.60504	+++++					AVRG		0.60946		4.50126
43 1,1,1-Trichloroethane	0.37096	0.37376	0.39116	0.37314	0.38143	0.36685					
	0.35213	+++++					AVRG		0.37278		3.24628
44 Carbon tetrachloride	0.37013	0.40086	0.41182	0.38843	0.40660	0.38432					
	0.37196	+++++					AVRG		0.39059		4.20967
45 1,1-Dichloropropene	0.39691	0.41672	0.42535	0.41776	0.44198	0.42560					
	0.41493	+++++					AVRG		0.41989		3.25058
46 Isobutyl alcohol	0.00854	0.00893	0.00965	0.01013	0.00872	0.01120					
	0.01066	+++++					AVRG		0.00969		10.55116
47 Benzene	1.39449	1.46750	1.41356	1.35299	1.40086	1.31677					
	1.26683	1.51325					AVRG		1.39078		5.68698
49 Methyl tert-amyl ether	+++++	0.77402	0.79681	0.83942	0.87387	0.93349					
	0.91006	+++++					AVRG		0.85461		7.35148
50 Cyclohexene	0.41493	0.47837	0.47993	0.47186	0.50345	0.47582					
	0.46267	+++++					AVRG		0.46958		5.77312
51 1,2-Dichloroethane	0.49042	0.47001	0.49409	0.46993	0.47311	0.45474					
	0.43564	+++++					AVRG		0.46971		4.27552

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
53 n-Butyl alcohol	0.00764	0.00811	0.00875	0.00932	0.00776	0.01022					
	0.00990	0.00723					AVRG		0.00862		12.86198
54 Trichloroethylene	0.31564	0.33648	0.34197	0.33142	0.34778	0.32371					
	0.31947	+++++					AVRG		0.33093		3.60488
55 Methylcyclohexane	0.48351	0.51949	0.55612	0.54714	0.57893	0.55558					
	0.53835	+++++					AVRG		0.53987		5.70100
56 Methyl methacrylate	0.15877	0.16659	0.18170	0.19222	0.19896	0.20156					
	0.18963	+++++					AVRG		0.18420		8.79914
57 1,2-Dichloropropane	0.36236	0.37297	0.38103	0.36522	0.38019	0.36451					
	0.35578	+++++					AVRG		0.36887		2.56917
58 1,4-Dioxane	0.00239	0.00259	0.00278	0.00279	0.00295	0.00289					
	0.00289	+++++					AVRG		0.00275		7.25832
59 Dibromomethane	0.21417	0.19938	0.20546	0.19903	0.20141	0.19814					
	0.19045	+++++					AVRG		0.20115		3.62711
60 Bromodichloromethane	0.42624	0.42295	0.44563	0.43221	0.44757	0.43834					
	0.42585	+++++					AVRG		0.43411		2.28390
61 2-Chloroethylvinyl ether	0.14887	0.14797	0.17549	0.17681	0.19232	0.20036					
	0.18662	+++++					AVRG		0.17549		11.61553

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
62 2-Nitropropane	0.06048	0.06760	0.07470	0.08031	0.08763	0.09044					
	0.08889	+++++					AVRG		0.07858		14.64738
63 cis-1,3-Dichloropropylene	0.48756	0.48284	0.52873	0.52083	0.54741	0.54533					
	0.53277	+++++					AVRG		0.52078		4.99583
64 4-Methyl-2-pentanone	0.14782	0.15429	0.16272	0.16142	0.16519	0.16937					
	0.16545	+++++					AVRG		0.16089		4.60510
66 Toluene	1.13113	1.09224	1.08809	1.03710	1.06393	0.98601					
	0.96656	+++++					AVRG		1.05215		5.64994
67 Ethyl methacrylate	0.37984	0.39715	0.43645	0.46502	0.48032	0.47739					
	0.43267	+++++					AVRG		0.43841		8.90923
68 trans-1,3-Dichloropropylene	0.52796	0.51933	0.55262	0.55817	0.59005	0.58620					
	0.59001	+++++					AVRG		0.56062		5.26429
69 1,1,2-Trichloroethane	0.28530	0.29644	0.29642	0.29740	0.29230	0.28013					
	0.27689	+++++					AVRG		0.28927		2.92817
70 Tetrachloroethylene	0.32329	0.33887	0.30967	0.30777	0.30966	0.28616					
	0.27627	+++++					AVRG		0.30738		6.86655
71 2-Hexanone	0.36867	0.37735	0.41796	0.39231	0.40164	0.41658					
	0.39543	+++++					AVRG		0.39571		4.66544

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
72 1,3-Dichloropropane	0.62050	0.62012	0.62391	0.61130	0.61237	0.58505					
	0.57129	+++++					AVRG		0.60636		3.32717
73 Dibromochloromethane	0.33323	0.34691	0.35991	0.36270	0.37774	0.37051					
	0.36748	+++++					AVRG		0.35978		4.20841
74 1,2-Dibromoethane	0.32347	0.32547	0.32709	0.32483	0.33127	0.32168					
	0.31965	+++++					AVRG		0.32478		1.16321
75 1-Chlorohexane	+++++	0.30553	0.31129	0.33948	0.35041	0.36061					
	0.34080	+++++					AVRG		0.33469		6.51503
77 Chlorobenzene	1.07007	1.11894	1.10866	1.06375	1.06937	1.01055					
	0.95085	+++++					AVRG		1.05603		5.50719
78 Ethylbenzene	1.86980	1.94783	1.96801	1.94555	2.01579	1.85661					
	1.78345	+++++					AVRG		1.91243		4.14445
79 1,1,1,2-Tetrachloroethane	0.34282	0.36441	0.37391	0.36744	0.37328	0.35568					
	0.35107	+++++					AVRG		0.36123		3.25137
80 m,p-Xylenes	0.65605	0.71176	0.73123	0.72861	0.74849	0.68471					
	0.64142	+++++					AVRG		0.70032		5.79417
81 o-Xylene	0.60017	0.65571	0.68473	0.70109	0.72140	0.69303					
	0.66661	+++++					AVRG		0.67468		5.83391

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
82 Styrene	1.03580	1.09802	1.20570	1.21427	1.28019	1.22726					
	1.18675	+++++					AVRG		1.17829		7.07070
83 Bromoform	0.39081	0.40179	0.40914	0.41890	0.43989	0.44680					
	0.44947	+++++					AVRG		0.42240		5.50563
84 Isopropylbenzene	2.94591	3.23534	3.34391	3.41243	3.62700	3.42641					
	3.32247	+++++					AVRG		3.33035		6.26108
85 cis-1,4-Dichloro-2-butene	0.23617	0.25186	0.27708	0.28678	0.29845	0.29689					
	0.27683	+++++					AVRG		0.27487		8.42676
86 Cyclohexanone	0.05523	0.05656	0.05762	0.05962	0.06115	0.06777					
	0.05607	+++++					AVRG		0.05915		7.31819
88 1,1,2,2-Tetrachloroethane	0.90072	0.87226	0.84547	0.83529	0.81511	0.81891					
	0.80723	+++++					AVRG		0.84214		4.02248
89 n-Propylbenzene	4.04987	4.28142	4.24485	4.25599	4.42302	4.19700					
	4.03168	+++++					AVRG		4.21198		3.23486
90 trans-1,4-Dichloro-2-butene	0.24090	0.25718	0.26682	0.26814	0.27962	0.27825					
	0.26249	+++++					AVRG		0.26477		4.99726
91 Bromobenzene	0.89018	0.87881	0.87665	0.85304	0.85181	0.80797					
	0.77454	+++++					AVRG		0.84757		4.95580

GEL Laboratories LLC

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End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
92 1,2,3-Trichloropropane	0.22747	0.22342	0.21233	0.20823	0.20225	0.19958					
	0.19405	+++++					AVRG		0.20962		5.89382
93 1,3,5-Trimethylbenzene	2.51031	2.72431	2.88255	2.92274	3.05427	2.93501					
	2.81037	+++++					AVRG		2.83423		6.21753
94 2-Chlorotoluene	2.78674	3.02174	2.99428	2.95239	3.02505	2.86110					
	2.74147	+++++					AVRG		2.91182		3.98006
95 4-Chlorotoluene	2.48531	2.62664	2.63816	2.62773	2.70483	2.60436					
	2.53638	+++++					AVRG		2.60334		2.76398
96 tert-Butylbenzene	2.06305	2.20843	2.31301	2.34602	2.46194	2.36335					
	2.27287	+++++					AVRG		2.28981		5.55461
97 1,2,4-Trimethylbenzene	2.59369	2.83735	3.06488	3.05432	3.15003	3.05593					
	2.93303	+++++					AVRG		2.95560		6.40510
98 Pentachloroethane	0.19347	0.17011	0.20735	0.19822	0.18406	0.18595					
	0.15090	+++++					AVRG		0.18429		10.21986
99 sec-Butylbenzene	3.47707	3.79894	3.92758	3.95919	4.13231	3.94113					
	3.76469	+++++					AVRG		3.85727		5.33974
100 4-Isopropyltoluene	2.44681	2.73492	2.85033	2.91831	3.06839	2.90522					
	2.83037	+++++					AVRG		2.82205		6.87926

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
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Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
101 1,3-Dichlorobenzene	1.70464	1.68434	1.66071	1.64839	1.64732	1.55602					
	1.51174	+++++					AVRG		1.63045		4.30527
103 1,4-Dichlorobenzene	1.85318	1.78158	1.70716	1.64151	1.65701	1.58116					
	1.52422	+++++					AVRG		1.67797		6.75413
104 Benzyl chloride	1.20768	1.25335	1.34065	1.38827	1.44828	1.41999					
	1.26672	+++++					AVRG		1.33213		6.88050
105 n-Butylbenzene	2.68203	2.89691	3.06940	3.12080	3.30027	3.16184					
	3.05387	+++++					AVRG		3.04073		6.56078
106 1,2-Dichlorobenzene	1.57728	1.58898	1.56911	1.53679	1.56346	1.49121					
	1.46860	+++++					AVRG		1.54220		2.97644
107 bis(2-Chloroisopropyl)ether	0.32849	0.34538	0.37251	0.38535	0.42051	0.43022					
	0.40346	+++++					AVRG		0.38370		9.84055
108 1,2-Dibromo-3-chloropropane	0.13303	0.12798	0.13270	0.13246	0.13578	0.14510					
	0.15104	+++++					AVRG		0.13687		5.96947
109 1,2,4-Trichlorobenzene	1.06040	0.99119	1.01214	1.00264	1.01910	0.96691					
	0.96541	+++++					AVRG		1.00254		3.28080
110 Hexachlorobutadiene	0.60216	0.61753	0.61676	0.58430	0.60106	0.54635					
	0.53755	+++++					AVRG		0.58653		5.54598

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
111 Naphthalene	2.19216	2.05679	2.11133	2.16086	2.26430	2.22815					
	2.26133	+++++					AVRG		2.18213		3.57027
112 1,2,3-Trichlorobenzene	0.93774	0.87907	0.91495	0.89203	0.90422	0.83521					
	0.83174	+++++					AVRG		0.88500		4.48407
$ 48 1,2-Dichloroethane-d4	0.43165	0.42329	0.43625	0.43027	0.43244	0.41983					
	0.40336	+++++					AVRG		0.42530		2.63096
$ 65 Toluene-d8	1.73503	1.73326	1.78247	1.75638	1.75210	1.73005					
	1.69520	+++++					AVRG		1.74064		1.55429
$ 87 Bromofluorobenzene	1.31083	1.28212	1.29820	1.28398	1.28276	1.28008					
	1.27640	+++++					AVRG		1.28777		0.95123

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Cal Date : 07-Jul-2009 08:40 ron01469

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 02-JUL-2009 00:41
Lab File ID: 1s329.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 19:04
Lab Sample ID: W1VM090701-22 Quant Type: ISTD
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	1 Xylenes (total)	0.69178	0.69099	0.69099	0.050	-0.11307	60.00000	Averaged	
M	2 1,2-Dichloroethylene (total	0.33439	0.33348	0.33348	0.050	-0.27052	60.00000	Averaged	
M	3 1,3-Dichloropropylene	0.59231	0.62667	0.62667	0.050	5.80071	60.00000	Averaged	
	5 Dichlorodifluoromethane	0.22899	0.28395	0.28395	0.050	23.99958	60.00000	Averaged	
	6 Chloromethane	0.44211	0.46191	0.46191	0.100	4.47901	60.00000	Averaged	spcc
	7 Vinyl chloride	0.34386	0.31618	0.31618	0.050	-8.05070	20.00000	Averaged	ccc
	9 Bromomethane	0.23589	0.24192	0.24192	0.050	2.55626	60.00000	Averaged	
	10 Chloroethane	0.25782	0.25807	0.25807	0.050	0.09885	60.00000	Averaged	
	11 Trichlorofluoromethane	0.32562	0.36747	0.36747	0.050	12.85233	60.00000	Averaged	
	12 Ethyl Ether	0.28702	0.31356	0.31356	0.010	9.24758	60.00000	Averaged	
	16 Acetone	0.22939	0.10981	0.10981	0.000	-52.12872	60.00000	Averaged	
	22 Acetonitrile	0.04150	0.04348	0.04348	0.010	4.77078	60.00000	Averaged	
	15 1,1-Dichloroethylene	0.59496	0.58444	0.58444	0.050	-1.76751	20.00000	Averaged	ccc
	21 Methyl acetate	0.25915	0.25688	0.25688	0.010	-0.87437	60.00000	Averaged	
	18 Iodomethane	0.47694	0.46686	0.46686	0.050	-2.11460	60.00000	Averaged	
	23 Methylene chloride	49.37745	50.00000	0.34913	0.000	-1.24510	60.00000	Linear	
	19 Carbon disulfide	0.95658	0.96988	0.96988	0.050	1.39020	60.00000	Averaged	
	25 tert-Butyl methyl ether	0.84247	0.87925	0.87925	0.050	4.36558	60.00000	Averaged	
	26 trans-1,2-Dichloroethylene	0.32645	0.30827	0.30827	0.050	-5.57103	60.00000	Averaged	
	29 Vinyl acetate	0.50428	0.47242	0.47242	0.010	-6.31723	60.00000	Averaged	
	30 1,1-Dichloroethane	0.64965	0.63260	0.63260	0.100	-2.62347	60.00000	Averaged	spcc
	35 2-Butanone	0.25663	0.16288	0.16288	0.030	-36.53172	60.00000	Averaged	
	36 cis-1,2-Dichloroethylene	0.34232	0.35870	0.35870	0.050	4.78423	60.00000	Averaged	
	33 2,2-Dichloropropane	0.33455	0.33990	0.33990	0.050	1.59794	60.00000	Averaged	
	41 Chloroform	0.58475	0.56790	0.56790	0.010	-2.88189	20.00000	Averaged	ccc
	39 Bromochloromethane	0.15749	0.15380	0.15380	0.010	-2.34019	60.00000	Averaged	
	43 1,1,1-Trichloroethane	0.37278	0.36883	0.36883	0.010	-1.05836	60.00000	Averaged	
	42 Cyclohexane	0.60946	0.63025	0.63025	0.010	3.41141	60.00000	Averaged	
	45 1,1-Dichloropropene	0.41989	0.43075	0.43075	0.010	2.58653	60.00000	Averaged	
	53 n-Butyl alcohol	0.00862	0.01124	0.01124	0.001	30.46837	60.00000	Averaged	
	44 Carbon tetrachloride	0.39059	0.38407	0.38407	0.010	-1.66998	60.00000	Averaged	
S	48 1,2-Dichloroethane-d4	0.42530	0.43340	0.43340	0.010	1.90521	60.00000	Averaged	
	51 1,2-Dichloroethane	0.46971	0.45910	0.45910	0.010	-2.25899	60.00000	Averaged	
	47 Benzene	1.39078	1.30256	1.30256	0.010	-6.34341	60.00000	Averaged	
	50 Cyclohexene	0.46958	0.48749	0.48749	0.010	3.81418	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 02-JUL-2009 00:41
Lab File ID: 1s329.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 19:04
Lab Sample ID: W1VM090701-22 Quant Type: ISTD
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
54 Trichloroethylene	0.33093	0.33688	0.33688	0.010	1.80000	60.00000	Averaged	
57 1,2-Dichloropropane	0.36887	0.37359	0.37359	0.010	1.28008	20.00000	Averaged	ccc
55 Methylcyclohexane	0.53987	0.56735	0.56735	0.010	5.08861	60.00000	Averaged	
60 Bromodichloromethane	0.43411	0.45428	0.45428	0.010	4.64458	60.00000	Averaged	
59 Dibromomethane	0.20115	0.19940	0.19940	0.010	-0.87067	60.00000	Averaged	
61 2-Chloroethylvinyl ether	0.17549	0.18878	0.18878	0.000	7.57059	60.00000	Averaged	
64 4-Methyl-2-pentanone	0.16089	0.16292	0.16292	0.010	1.25758	60.00000	Averaged	
63 cis-1,3-Dichloropropylene	0.52078	0.54956	0.54956	0.010	5.52669	60.00000	Averaged	
$ 65 Toluene-d8	1.74064	1.75470	1.75470	0.010	0.80797	60.00000	Averaged	
66 Toluene	1.05215	0.98353	0.98353	0.010	-6.52143	20.00000	Averaged	ccc
68 trans-1,3-Dichloropropylene	0.56062	0.59964	0.59964	0.010	6.96056	60.00000	Averaged	
69 1,1,2-Trichloroethane	0.28927	0.29141	0.29141	0.010	0.74219	60.00000	Averaged	
71 2-Hexanone	0.39571	0.29363	0.29363	0.010	-25.79494	60.00000	Averaged	
72 1,3-Dichloropropane	0.60636	0.60613	0.60613	0.010	-0.03879	60.00000	Averaged	
70 Tetrachloroethylene	0.30738	0.28293	0.28293	0.010	-7.95603	60.00000	Averaged	
73 Dibromochloromethane	0.35978	0.36546	0.36546	0.010	1.57906	60.00000	Averaged	
74 1,2-Dibromoethane	0.32478	0.32881	0.32881	0.010	1.24189	60.00000	Averaged	
77 Chlorobenzene	1.05603	1.03831	1.03831	0.300	-1.67816	60.00000	Averaged	spcc
79 1,1,1,2-Tetrachloroethane	0.36123	0.36199	0.36199	0.010	0.21007	60.00000	Averaged	
78 Ethylbenzene	1.91243	1.85146	1.85146	0.010	-3.18848	20.00000	Averaged	ccc
80 m,p-Xylenes	0.70032	0.68536	0.68536	0.010	-2.13634	60.00000	Averaged	
81 o-Xylene	0.67468	0.70225	0.70225	0.010	4.08728	60.00000	Averaged	
82 Styrene	1.17829	1.21703	1.21703	0.010	3.28830	60.00000	Averaged	
83 Bromoform	0.42240	0.45176	0.45176	0.100	6.95130	60.00000	Averaged	spcc
84 Isopropylbenzene	3.33035	2.92102	2.92102	0.010	-12.29109	60.00000	Averaged	
88 1,1,2,2-Tetrachloroethane	0.84214	0.81538	0.81538	0.300	-3.17812	60.00000	Averaged	spcc
$ 87 Bromofluorobenzene	1.28777	1.29862	1.29862	0.010	0.84289	60.00000	Averaged	
92 1,2,3-Trichloropropane	0.20962	0.23043	0.23043	0.010	9.92846	60.00000	Averaged	
91 Bromobenzene	0.84757	0.81481	0.81481	0.010	-3.86540	60.00000	Averaged	
89 n-Propylbenzene	4.21198	4.05325	4.05325	0.010	-3.76854	60.00000	Averaged	
94 2-Chlorotoluene	2.91182	2.87996	2.87996	0.010	-1.09418	60.00000	Averaged	
93 1,3,5-Trimethylbenzene	2.83423	2.85267	2.85267	0.010	0.65086	60.00000	Averaged	
95 4-Chlorotoluene	2.60334	2.59987	2.59987	0.010	-0.13330	60.00000	Averaged	
96 tert-Butylbenzene	2.28981	2.36366	2.36366	0.010	3.22505	60.00000	Averaged	
97 1,2,4-Trimethylbenzene	2.95560	2.95341	2.95341	0.010	-0.07431	60.00000	Averaged	
99 sec-Butylbenzene	3.85727	3.90621	3.90621	0.010	1.26878	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 02-JUL-2009 00:41
Lab File ID: 1s329.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 19:04
Lab Sample ID: W1VM090701-22 Quant Type: ISTD
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
100 4-Isopropyltoluene	2.82205	2.92025	2.92025	0.010	3.47968	60.00000	Averaged
101 1,3-Dichlorobenzene	1.63045	1.57857	1.57857	0.010	-3.18209	60.00000	Averaged
103 1,4-Dichlorobenzene	1.67797	1.57318	1.57318	0.010	-6.24555	60.00000	Averaged
105 n-Butylbenzene	3.04073	3.04200	3.04200	0.010	0.04164	60.00000	Averaged
106 1,2-Dichlorobenzene	1.54220	1.50957	1.50957	0.010	-2.11580	60.00000	Averaged
108 1,2-Dibromo-3-chloropropane	0.13687	0.15514	0.15514	0.010	13.35051	60.00000	Averaged
109 1,2,4-Trichlorobenzene	1.00254	0.93020	0.93020	0.010	-7.21589	60.00000	Averaged
110 Hexachlorobutadiene	0.58653	0.51957	0.51957	0.010	-11.41679	60.00000	Averaged
111 Naphthalene	2.18213	2.26958	2.26958	0.010	4.00766	60.00000	Averaged
112 1,2,3-Trichlorobenzene	0.88500	0.86180	0.86180	0.010	-2.62146	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.52480
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070109v1/1s329.d
Lab Smp Id: W1VM090701-22 Client Smp ID: ICV
Inj Date : 02-JUL-2009 00:41
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090701-22|ICV|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090605-01D/IVM090630-01
Comment :
Method : /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m
Meth Date : 02-Jul-2009 08:37 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 19:04 Cal File: 1s318.d
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 1 Xylenes (total)	106				2342600	150.000	150
M 2 1,2-Dichloroethylene (total)	96				896533	100.000	99.6
M 3 1,3-Dichloropropylene	75				1416353	100.000	106
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	381684	50.0000	62.0
6 Chloromethane	50	5.535	5.535	(0.404)	620892	50.0000	52.2
7 Vinyl chloride	62	5.908	5.908	(0.432)	425003	50.0000	46.0
9 Bromomethane	96	6.948	6.948	(0.507)	325187	50.0000	51.3
10 Chloroethane	64	7.215	7.215	(0.527)	346895	50.0000	50.0
11 Trichlorofluoromethane	101	7.854	7.854	(0.574)	493945	50.0000	56.4
12 Ethyl Ether	59	8.485	8.485	(0.620)	421484	50.0000	54.6
16 Acetone	43	9.263	9.263	(0.677)	738053	250.000	120
22 Acetonitrile	41	9.986	9.986	(0.729)	1460985	1250.00	1310
15 1,1-Dichloroethylene	61	9.088	9.088	(0.664)	785606	50.0000	49.1
21 Methyl acetate	43	9.843	9.843	(0.719)	1726492	250.000	248
18 Iodomethane	142	9.470	9.470	(0.692)	3137738	250.000	245
23 Methylene chloride	84	10.147	10.147	(0.741)	469296	50.0000	49.4

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
19 Carbon disulfide	76	9.585	9.585	(0.700)	6518547	250.000	253
25 tert-Butyl methyl ether	73	10.451	10.451	(0.763)	1181876	50.0000	52.2
26 trans-1,2-Dichloroethylene	96	10.552	10.552	(0.771)	414368	50.0000	47.2
29 Vinyl acetate	43	11.307	11.307	(0.826)	3175126	250.000	234
30 1,1-Dichloroethane	63	11.325	11.325	(0.827)	850340	50.0000	48.7
35 2-Butanone	43	12.195	12.195	(0.891)	1094712	250.000	159
36 cis-1,2-Dichloroethylene	96	12.204	12.204	(0.891)	482165	50.0000	52.4
33 2,2-Dichloropropane	77	12.172	12.172	(0.889)	456891	50.0000	50.8
41 Chloroform	83	12.619	12.619	(0.922)	763361	50.0000	48.6
39 Bromochloromethane	128	12.563	12.563	(0.918)	206742	50.0000	48.8
43 1,1,1-Trichloroethane	97	12.853	12.853	(0.939)	495779	50.0000	49.5
42 Cyclohexane	56	12.849	12.849	(0.938)	847173	50.0000	51.7
45 1,1-Dichloropropene	75	13.060	13.060	(0.954)	579014	50.0000	51.3
53 n-Butyl alcohol	56	13.940	13.940	(1.018)	1511201	5000.00	6520
44 Carbon tetrachloride	117	13.033	13.033	(0.952)	516259	50.0000	49.2
$ 48 1,2-Dichloroethane-d4	65	13.350	13.350	(0.975)	582574	50.0000	51.0
51 1,2-Dichloroethane	62	13.447	13.447	(0.982)	617112	50.0000	48.9
47 Benzene	78	13.341	13.341	(0.974)	1750887	50.0000	46.8
50 Cyclohexene	54	13.406	13.406	(0.979)	655276	50.0000	51.9
* 52 Fluorobenzene	96	13.691	13.691	(1.000)	1344192	50.0000	
54 Trichloroethylene	95	14.124	14.124	(1.032)	452834	50.0000	50.9
57 1,2-Dichloropropane	63	14.469	14.469	(1.057)	502173	50.0000	50.6
55 Methylcyclohexane	83	14.294	14.294	(1.044)	762622	50.0000	52.5
60 Bromodichloromethane	83	14.759	14.759	(1.078)	610633	50.0000	52.3
59 Dibromomethane	93	14.630	14.630	(1.069)	268028	50.0000	49.6
61 2-Chloroethylvinyl ether	63	15.040	15.040	(1.099)	1268768	250.000	269
64 4-Methyl-2-pentanone	58	15.371	15.371	(0.895)	920527	250.000	253
63 cis-1,3-Dichloropropylene	75	15.265	15.265	(1.115)	738719	50.0000	52.8
$ 65 Toluene-d8	98	15.528	15.528	(0.904)	1982927	50.0000	50.4
66 Toluene	92	15.606	15.606	(0.909)	1111457	50.0000	46.7
68 trans-1,3-Dichloropropylene	75	15.887	15.887	(0.925)	677634	50.0000	53.5
69 1,1,2-Trichloroethane	83	16.112	16.112	(0.938)	329317	50.0000	50.4
71 2-Hexanone	43	16.278	16.278	(0.948)	1659126	250.000	186
72 1,3-Dichloropropane	76	16.315	16.315	(0.950)	684963	50.0000	50.0
70 Tetrachloroethylene	164	16.200	16.200	(0.943)	319727	50.0000	46.0
73 Dibromochloromethane	129	16.554	16.554	(0.964)	412996	50.0000	50.8
74 1,2-Dibromoethane	107	16.738	16.738	(0.975)	371579	50.0000	50.6
* 76 Chlorobenzene-d5	117	17.171	17.171	(1.000)	1130064	50.0000	
77 Chlorobenzene	112	17.203	17.203	(1.002)	1173351	50.0000	49.2
79 1,1,1,2-Tetrachloroethane	131	17.272	17.272	(1.006)	409068	50.0000	50.1
78 Ethylbenzene	91	17.231	17.231	(1.003)	2092263	50.0000	48.4
80 m,p-Xylenes	106	17.346	17.346	(1.010)	1549009	100.000	97.9
81 o-Xylene	106	17.792	17.792	(1.036)	793591	50.0000	52.0
82 Styrene	104	17.815	17.815	(1.038)	1375322	50.0000	51.6
83 Bromoform	173	18.115	18.115	(0.923)	270432	50.0000	53.5
84 Isopropylbenzene	105	18.142	18.142	(0.925)	1748572	50.0000	43.8
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	488097	50.0000	48.4

Compounds	QUANT STD MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
$ 87 Bromofluorobenzene	95	18.400	18.400	(0.938)	777377	50.0000	50.4
92 1,2,3-Trichloropropane	110	18.616	18.616	(0.949)	137939	50.0000	55.0
91 Bromobenzene	156	18.602	18.602	(0.948)	487758	50.0000	48.1
89 n-Propylbenzene	91	18.570	18.570	(0.946)	2426343	50.0000	48.1
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1723997	50.0000	49.4
93 1,3,5-Trimethylbenzene	105	18.731	18.731	(0.955)	1707659	50.0000	50.3
95 4-Chlorotoluene	91	18.865	18.865	(0.962)	1556330	50.0000	49.9
96 tert-Butylbenzene	119	19.090	19.090	(0.973)	1414927	50.0000	51.6
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1767961	50.0000	50.0
99 sec-Butylbenzene	105	19.316	19.316	(0.984)	2338328	50.0000	50.6
100 4-Isopropyltoluene	119	19.436	19.436	(0.991)	1748111	50.0000	51.7
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	944959	50.0000	48.4
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	598617	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	941730	50.0000	46.9
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1820993	50.0000	50.0
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	903656	50.0000	48.9
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	92871	50.0000	56.7
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	556834	50.0000	46.4
110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	311021	50.0000	44.3
111 Naphthalene	128	22.455	22.455	(1.145)	1358612	50.0000	52.0
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	515885	50.0000	48.7

Data File: /chem/VOA1.i/070109v1/1s329.d
Date : 02-JUL-2009 00:41
Client ID: ICV
Sample Info: |WAVH090701-221ICV|1|VOAF|1|
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

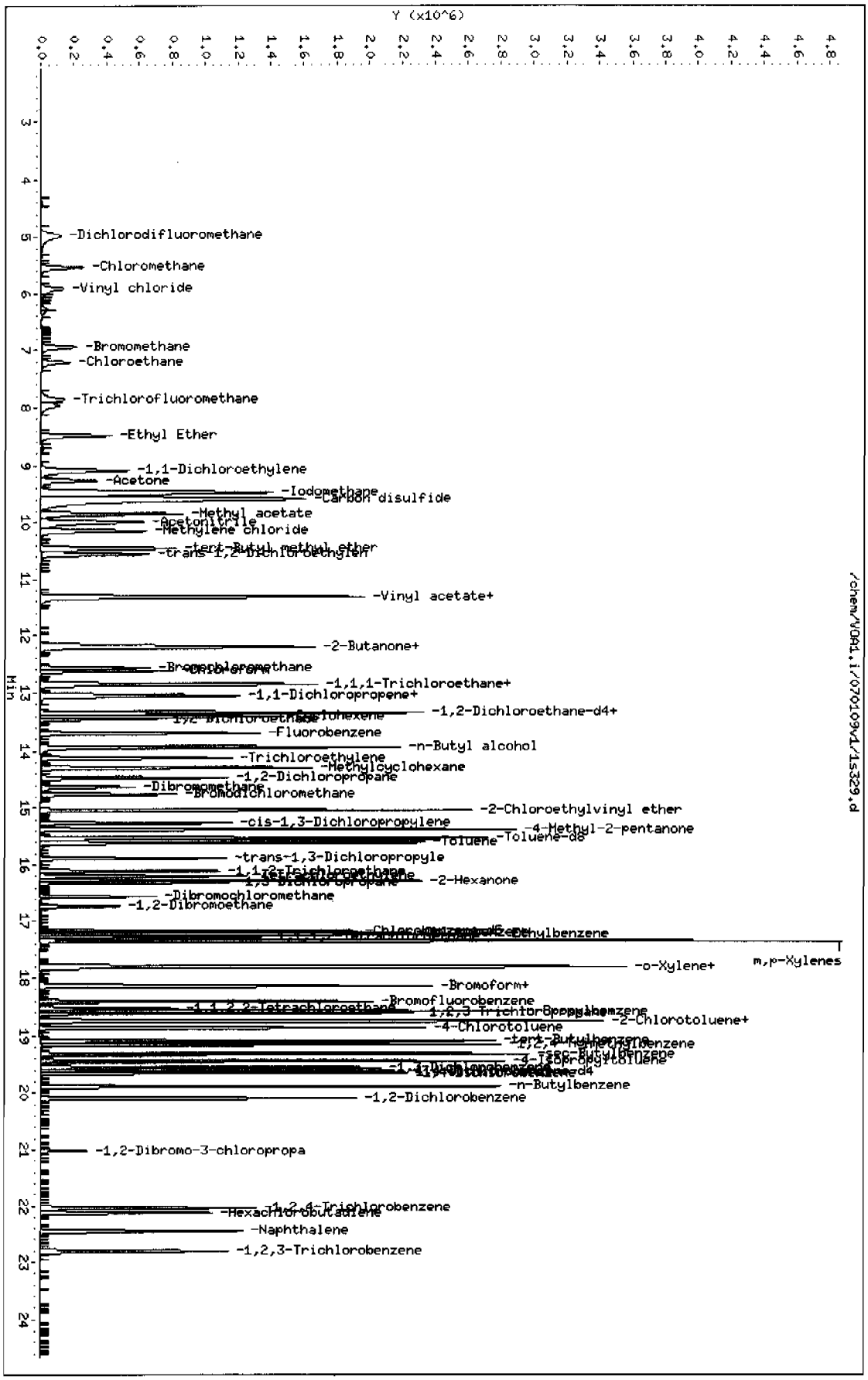

Page 1

Data File: /chem/VOA1.i/070109v1/1s330.d
Report Date: 02-Jul-2009 14:30

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1s330.d
Analysis Type: WATER
Lab Sample ID: W1VM090701-23
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

Injection Date: 02-JUL-2009 01:12
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
4 Chlorotrifluoroethylene	0.19019	0.17560	0.17560	0.010	-7.67423	60.00000	Averaged
8 2-Chloro-1,1,1-trifluoroeth	0.34048	0.33492	0.33492	0.010	-1.63260	60.00000	Averaged
13 Acrolein	0.04947	0.05557	0.05557	0.001	12.33149	60.00000	Averaged
14 Trichlorotrifluoroethane	0.28145	0.26997	0.26997	0.030	-4.08137	60.00000	Averaged
17 Isopropyl Alcohol	0.01950	0.02260	0.02260	0.000	15.89812	60.00000	Averaged
20 Allyl chloride	226	250	0.12353	0.010	-9.78593	60.00000	Linear
24 tert-Butyl Alcohol	0.03062	0.03521	0.03521	0.010	14.98536	60.00000	Averaged
27 Acrylonitrile	0.11278	0.11450	0.11450	0.010	1.52364	60.00000	Averaged
28 Isopropyl ether	1.16254	1.22253	1.22253	0.010	5.15998	60.00000	Averaged
31 2-Chloro-1,3-butadiene	0.44344	0.50184	0.50184	0.010	13.16949	60.00000	Averaged
32 Ethyl tert-butyl ether	1.03281	1.11176	1.11176	0.010	7.64399	60.00000	Averaged
37 Propionitrile	0.04568	0.04645	0.04645	0.010	1.67818	60.00000	Averaged
34 Ethyl acetate	0.31721	0.29400	0.29400	0.010	-7.31606	60.00000	Averaged
40 Methacrylonitrile	0.23340	0.23672	0.23672	0.010	1.42136	60.00000	Averaged
38 Tetrahydrofuran	0.22772	0.23864	0.23864	0.010	4.79383	60.00000	Averaged
46 Isobutyl alcohol	0.00969	0.01087	0.01087	0.001	12.20050	60.00000	Averaged
49 Methyl tert-amyl ether	0.85461	0.90854	0.90854	0.010	6.31010	60.00000	Averaged
56 Methyl methacrylate	0.18420	0.20151	0.20151	0.010	9.39565	60.00000	Averaged
67 Ethyl methacrylate	0.43841	0.45868	0.45868	0.010	4.62443	60.00000	Averaged
75 1-Chlorohexane	0.33469	0.34952	0.34952	0.000	4.43165	60.00000	Averaged
58 1,4-Dioxane	0.00275	0.00290	0.00290	0.001	5.12077	60.00000	Averaged
62 2-Nitropropane	0.07858	0.08874	0.08874	0.000	12.93389	60.00000	Averaged
85 cis-1,4-Dichloro-2-butene	0.27487	0.28014	0.28014	0.010	1.92061	60.00000	Averaged
86 Cyclohexanone	0.05915	0.06299	0.06299	0.010	6.49868	60.00000	Averaged
90 trans-1,4-Dichloro-2-butene	0.26477	0.26300	0.26300	0.010	-0.66843	60.00000	Averaged
98 Pentachloroethane	0.18429	0.16521	0.16521	0.010	-10.35572	60.00000	Averaged
104 Benzyl chloride	1.33213	1.23309	1.23309	0.010	-7.43482	60.00000	Averaged
107 bis(2-Chloroisopropyl)ether	0.38370	0.40845	0.40845	0.010	6.44894	60.00000	Averaged
$ 48 1,2-Dichloroethane-d4	0.42530	0.41230	0.41230	0.010	-3.05727	60.00000	Averaged
$ 65 Toluene-d8	1.74064	1.72808	1.72808	0.010	-0.72137	60.00000	Averaged
$ 87 Bromofluorobenzene	1.28777	1.30124	1.30124	0.010	1.04628	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 02-JUL-2009 01:12
Lab File ID: 1s330.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090701-23 Quant Type: ISTD
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

Average %D / Drift Results.	
Calculated Average %D/Drift =	6.52467
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070109v1/1s330.d
Lab Smp Id: W1VM090701-23 Client Smp ID: SHORT ICV
Inj Date : 02-JUL-2009 01:12
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090701-23|SHORT ICV|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090701-08A/UVM090624-02A
Comment :
Method : /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m
Meth Date : 02-Jul-2009 14:30 slg Quant Type: ISTD
Cal Date : 01-JUL-2009 22:38 Cal File: 1s325.d
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
4 Chlorotrifluoroethylene	116	4.876	4.876	(0.356)	738922	150.000	138
8 2-Chloro-1,1,1-trifluoroethane	118	6.289	6.289	(0.459)	1409368	150.000	148
13 Acrolein	56	8.950	8.950	(0.654)	389715	250.000	281
14 Trichlorotrifluoroethane	101	8.996	8.996	(0.657)	1893394	250.000	240
17 Isopropyl Alcohol	45	9.452	9.452	(0.690)	1585372	2500.00	2900
20 Allyl chloride	76	9.852	9.852	(0.720)	866349	250.000	226
24 tert-Butyl Alcohol	59	10.207	10.207	(0.745)	2469524	2500.00	2870
27 Acrylonitrile	53	10.681	10.681	(0.780)	803051	250.000	254
28 Isopropyl ether	45	11.210	11.210	(0.819)	1714824	50.0000	52.6
31 2-Chloro-1,3-butadiene	53	11.399	11.399	(0.833)	703926	50.0000	56.6
32 Ethyl tert-butyl ether	59	11.767	11.767	(0.859)	1559450	50.0000	53.8
37 Propionitrile	54	12.416	12.416	(0.907)	325746	250.000	254
34 Ethyl acetate	43	12.177	12.177	(0.889)	2061981	250.000	232
40 Methacrylonitrile	41	12.573	12.573	(0.918)	1660231	250.000	254
38 Tetrahydrofuran	42	12.545	12.545	(0.639)	716928	250.000	262

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
46 Isobutyl alcohol	41	13.116	13.116	(0.958)	762605	2500.00	2800
49 Methyl tert-amyl ether	73	13.360	13.360	(0.976)	1274397	50.0000	53.2
56 Methyl methacrylate	69	14.446	14.446	(1.055)	1413280	250.000	273
67 Ethyl methacrylate	69	15.822	15.822	(0.922)	2660724	250.000	262
75 1-Chlorohexane	55	17.042	17.042	(1.245)	490265	50.0000	52.2
58 1,4-Dioxane	88	14.556	14.556	(1.063)	203109	2500.00	2630
62 2-Nitropropane	43	15.090	15.090	(1.102)	622384	250.000	282
85 cis-1,4-Dichloro-2-butene	53	18.285	18.285	(0.932)	841616	250.000	255
86 Cyclohexanone	55	18.395	18.395	(1.072)	1826998	1250.00	1330
90 trans-1,4-Dichloro-2-butene	53	18.579	18.579	(0.947)	790118	250.000	248
98 Pentachloroethane	167	19.206	19.206	(0.979)	496323	250.000	224
104 Benzyl chloride	91	19.785	19.785	(1.008)	3704479	250.000	231
107 bis(2-Chloroisopropyl)ether	45	20.181	20.181	(1.029)	1227064	250.000	266
* 52 Fluorobenzene	96	13.691	13.691	(1.000)	1402688	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	1160167	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	600844	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.346	(0.975)	578322	50.0000	48.5
$ 65 Toluene-d8	98	15.528	15.528	(0.905)	2004865	50.0000	49.6
$ 87 Bromofluorobenzene	95	18.400	18.400	(0.938)	781843	50.0000	50.5

Data File: /chem/VOA1.i/070109v1/1s330.d
Date : 02-JUL-2009 01:12
Client ID: SHORT ICV
Sample Info: IW1VH090701-231SHORT ICV|1|VOAF1|1
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

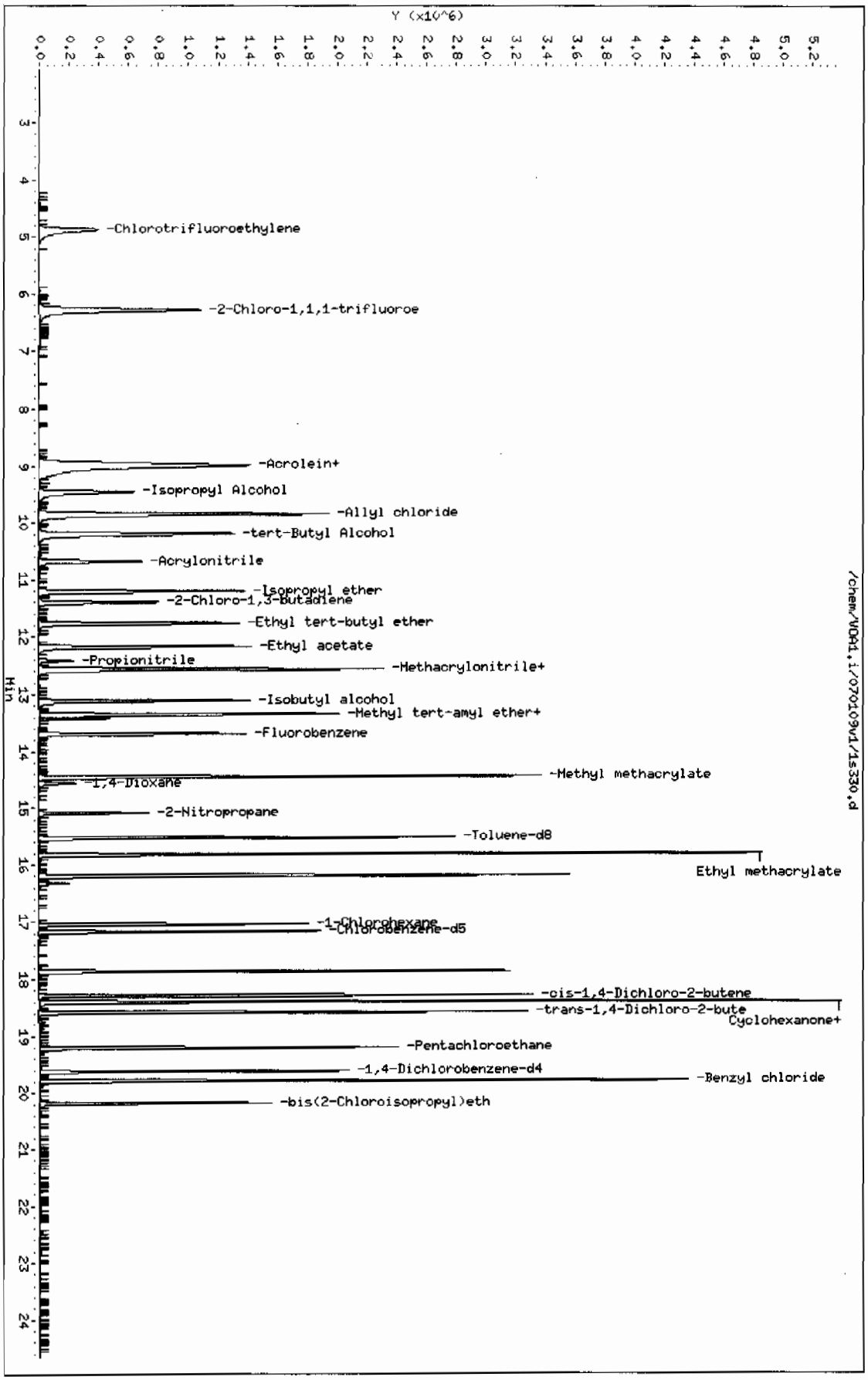

Page 1

Data File: /chem/VOA1.i/070709v1/1t202.d
Report Date: 13-Jul-2009 09:48

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1t202.d
Analysis Type: WATER
Lab Sample ID: W1VM090707-01
Method: /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m

Injection Date: 07-JUL-2009 08:18
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	1 Xylenes (total)	0.69178	0.62004	0.62004	0.050	-10.37038	60.00000	Averaged	
M	2 1,2-Dichloroethylene (total	0.33440	0.30175	0.30175	0.050	-9.76331	60.00000	Averaged	
M	3 1,3-Dichloropropylene	0.59231	0.56877	0.56877	0.050	-3.97421	60.00000	Averaged	
	5 Dichlorodifluoromethane	0.22899	0.27306	0.27306	0.050	19.24152	60.00000	Averaged	
	6 Chloromethane	0.44211	0.43786	0.43786	0.100	-0.96051	60.00000	Averaged	spcc
	7 Vinyl chloride	0.34386	0.32243	0.32243	0.050	-6.23367	20.00000	Averaged	ccc
	9 Bromomethane	0.23589	0.22323	0.22323	0.050	-5.36792	60.00000	Averaged	
	10 Chloroethane	0.25782	0.24372	0.24372	0.050	-5.46567	60.00000	Averaged	
	11 Trichlorofluoromethane	0.32562	0.37864	0.37864	0.050	16.28378	60.00000	Averaged	
	12 Ethyl Ether	0.28700	0.28467	0.28467	0.010	-0.81197	60.00000	Averaged	
	16 Acetone	0.22939	0.11217	0.11217	0.000	-51.10300	60.00000	Averaged	
	22 Acetonitrile	0.04150	0.04124	0.04124	0.010	-0.61859	60.00000	Averaged	
	15 1,1-Dichloroethylene	0.59494	0.54610	0.54610	0.050	-8.20926	20.00000	Averaged	ccc
	21 Methyl acetate	0.25915	0.24249	0.24249	0.010	-6.42900	60.00000	Averaged	
	18 Iodomethane	0.47694	0.42819	0.42819	0.050	-10.22300	60.00000	Averaged	
	23 Methylene chloride	45.43744	50.00000	0.32338	0.000	-9.12513	60.00000	Linear	
	19 Carbon disulfide	0.95659	0.93506	0.93506	0.050	-2.25074	60.00000	Averaged	
	25 tert-Butyl methyl ether	0.84245	0.79361	0.79361	0.050	-5.79727	60.00000	Averaged	
	26 trans-1,2-Dichloroethylene	0.32645	0.28203	0.28203	0.050	-13.60745	60.00000	Averaged	
	29 Vinyl acetate	0.50428	0.60178	0.60178	0.010	19.33530	60.00000	Averaged	
	30 1,1-Dichloroethane	0.64965	0.57823	0.57823	0.100	-10.99390	60.00000	Averaged	spcc
	35 2-Butanone	0.25663	0.15761	0.15761	0.030	-38.58730	60.00000	Averaged	
	36 cis-1,2-Dichloroethylene	0.34235	0.32147	0.32147	0.050	-6.09767	60.00000	Averaged	
	33 2,2-Dichloropropane	0.33455	0.33199	0.33199	0.050	-0.76694	60.00000	Averaged	
	41 Chloroform	0.58475	0.51280	0.51280	0.010	-12.30354	20.00000	Averaged	ccc
	39 Bromochloromethane	0.15749	0.13897	0.13897	0.010	-11.75817	60.00000	Averaged	
	43 1,1,1-Trichloroethane	0.37279	0.34441	0.34441	0.010	-7.61347	60.00000	Averaged	
	42 Cyclohexane	0.60946	0.60059	0.60059	0.010	-1.45475	60.00000	Averaged	
	45 1,1-Dichloropropene	0.41989	0.39417	0.39417	0.010	-6.12573	60.00000	Averaged	
	53 n-Butyl alcohol	0.00862	0.01036	0.01036	0.001	20.27364	60.00000	Averaged	
	44 Carbon tetrachloride	0.39059	0.36337	0.36337	0.010	-6.96844	60.00000	Averaged	
$	48 1,2-Dichloroethane-d4	0.42530	0.44299	0.44299	0.010	4.15975	60.00000	Averaged	
	51 1,2-Dichloroethane	0.46971	0.41736	0.41736	0.010	-11.14476	60.00000	Averaged	
	47 Benzene	1.39078	1.16693	1.16693	0.010	-16.09528	60.00000	Averaged	
	50 Cyclohexene	0.46958	0.45313	0.45313	0.010	-3.50218	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 07-JUL-2009 08:18
Lab File ID: 1t202.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090707-01 Quant Type: ISTD
Method: /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
54 Trichloroethylene	0.33093	0.29702	0.29702	0.010	-10.24509	60.00000	Averaged	
57 1,2-Dichloropropane	0.36887	0.33571	0.33571	0.010	-8.98789	20.00000	Averaged	ccc
55 Methylcyclohexane	0.53987	0.54093	0.54093	0.010	0.19631	60.00000	Averaged	
60 Bromodichloromethane	0.43411	0.40656	0.40656	0.010	-6.34721	60.00000	Averaged	
59 Dibromomethane	0.20115	0.17926	0.17926	0.010	-10.87981	60.00000	Averaged	
61 2-Chloroethylvinyl ether	0.17549	0.15934	0.15934	0.000	-9.20130	60.00000	Averaged	
64 4-Methyl-2-pentanone	0.16089	0.15127	0.15127	0.010	-5.98072	60.00000	Averaged	
63 cis-1,3-Dichloropropylene	0.52078	0.50862	0.50862	0.010	-2.33568	60.00000	Averaged	
$ 65 Toluene-d8	1.74064	1.75049	1.75049	0.010	0.56603	60.00000	Averaged	
66 Toluene	1.05215	0.87129	0.87129	0.010	-17.18966	20.00000	Averaged	ccc
68 trans-1,3-Dichloropropylene	0.56062	0.54354	0.54354	0.010	-3.04698	60.00000	Averaged	
69 1,1,2-Trichloroethane	0.28927	0.26363	0.26363	0.010	-8.86327	60.00000	Averaged	
71 2-Hexanone	0.39571	0.28232	0.28232	0.010	-28.65416	60.00000	Averaged	
72 1,3-Dichloropropane	0.60636	0.54448	0.54448	0.010	-10.20627	60.00000	Averaged	
70 Tetrachloroethylene	0.30738	0.25628	0.25628	0.010	-16.62614	60.00000	Averaged	
73 Dibromochloromethane	0.35978	0.32564	0.32564	0.010	-9.48868	60.00000	Averaged	
74 1,2-Dibromoethane	0.32478	0.29837	0.29837	0.010	-8.13151	60.00000	Averaged	
77 Chlorobenzene	1.05603	0.92058	0.92058	0.300	-12.82655	60.00000	Averaged	spcc
79 1,1,1,2-Tetrachloroethane	0.36123	0.32147	0.32147	0.010	-11.00572	60.00000	Averaged	
78 Ethylbenzene	1.91243	1.64722	1.64722	0.010	-13.86790	20.00000	Averaged	ccc
80 m,p-Xylenes	0.70032	0.61741	0.61741	0.010	-11.84001	60.00000	Averaged	
81 o-Xylene	0.67468	0.62529	0.62529	0.010	-7.31939	60.00000	Averaged	
82 Styrene	1.17829	1.09214	1.09214	0.010	-7.31090	60.00000	Averaged	
83 Bromoform	0.42240	0.40288	0.40288	0.100	-4.62036	60.00000	Averaged	spcc
84 Isopropylbenzene	3.33035	2.56810	2.56810	0.010	-22.88805	60.00000	Averaged	
88 1,1,2,2-Tetrachloroethane	0.84214	0.76769	0.76769	0.300	-8.84072	60.00000	Averaged	spcc
$ 87 Bromofluorobenzene	1.28777	1.27812	1.27812	0.010	-0.74922	60.00000	Averaged	
92 1,2,3-Trichloropropane	0.20962	0.20438	0.20438	0.010	-2.49797	60.00000	Averaged	
91 Bromobenzene	0.84757	0.71666	0.71666	0.010	-15.44508	60.00000	Averaged	
89 n-Propylbenzene	4.21198	3.67769	3.67769	0.010	-12.68492	60.00000	Averaged	
94 2-Chlorotoluene	2.91182	2.57905	2.57905	0.010	-11.42840	60.00000	Averaged	
93 1,3,5-Trimethylbenzene	2.83423	2.58128	2.58128	0.010	-8.92452	60.00000	Averaged	
95 4-Chlorotoluene	2.60334	2.35184	2.35184	0.010	-9.66094	60.00000	Averaged	
96 tert-Butylbenzene	2.28981	2.12276	2.12276	0.010	-7.29526	60.00000	Averaged	
97 1,2,4-Trimethylbenzene	2.95560	2.67291	2.67291	0.010	-9.56455	60.00000	Averaged	
99 sec-Butylbenzene	3.85727	3.61401	3.61401	0.010	-6.30653	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 07-JUL-2009 08:18
Lab File ID: 1t202.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090707-01 Quant Type: ISTD
Method: /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
100 4-Isopropyltoluene	2.82205	2.76048	2.76048	0.010	-2.18180	60.00000	Averaged
101 1,3-Dichlorobenzene	1.63045	1.46321	1.46321	0.010	-10.25750	60.00000	Averaged
103 1,4-Dichlorobenzene	1.67797	1.45785	1.45785	0.010	-13.11867	60.00000	Averaged
105 n-Butylbenzene	3.04073	3.01890	3.01890	0.010	-0.71803	60.00000	Averaged
106 1,2-Dichlorobenzene	1.54220	1.37148	1.37148	0.010	-11.06995	60.00000	Averaged
108 1,2-Dibromo-3-chloropropane	0.13687	0.13978	0.13978	0.010	2.12931	60.00000	Averaged
109 1,2,4-Trichlorobenzene	1.00254	0.94726	0.94726	0.010	-5.51376	60.00000	Averaged
110 Hexachlorobutadiene	0.58653	0.53233	0.53233	0.010	-9.24151	60.00000	Averaged
111 Naphthalene	2.18213	2.09072	2.09072	0.010	-4.18929	60.00000	Averaged
112 1,2,3-Trichlorobenzene	0.88500	0.84128	0.84128	0.010	-4.93996	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 9.48643
Maximum Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t202.d
Lab Smp Id: W1VM090707-01 Client Smp ID: VSTD050
Inj Date : 07-JUL-2009 08:18
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090707-01|CCV/LCS|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090605-01E/IVM090623-01
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 09:48 slg Quant Type: ISTD
Cal Date : 01-JUL-2009 22:38 Cal File: 1s325.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
M 1 Xylenes (total)	106				1987568	150.000	134
M 2 1,2-Dichloroethylene (total)	96				753119	100.000	90.1
M 3 1,3-Dichloropropylene	75				1215491	100.000	97.3
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	340748	50.0000	59.6
6 Chloromethane	50	5.535	5.535	(0.405)	546408	50.0000	49.5
7 Vinyl chloride	62	5.908	5.908	(0.432)	402357	50.0000	46.9
9 Bromomethane	96	6.938	6.938	(0.507)	278568	50.0000	47.3
10 Chloroethane	64	7.201	7.201	(0.526)	304145	50.0000	47.3
11 Trichlorofluoromethane	101	7.831	7.831	(0.572)	472510	50.0000	58.1
12 Ethyl Ether	59	8.471	8.471	(0.619)	355237	50.0000	49.6
16 Acetone	43	9.249	9.249	(0.676)	699868	250.000	122
22 Acetonitrile	41	9.972	9.972	(0.729)	1286566	1250.00	1240
15 1,1-Dichloroethylene	61	9.079	9.079	(0.664)	681484	50.0000	45.9
21 Methyl acetate	43	9.834	9.834	(0.719)	1513007	250.000	234
18 Iodomethane	142	9.461	9.461	(0.691)	2671683	250.000	224

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	23 Methylene chloride	84	10.133	10.133	(0.741)	403547	50.0000	45.4
	19 Carbon disulfide	76	9.571	9.571	(0.700)	5834358	250.000	244
	25 tert-Butyl methyl ether	73	10.437	10.437	(0.763)	990348	50.0000	47.1
	26 trans-1,2-Dichloroethylene	96	10.542	10.542	(0.771)	351948	50.0000	43.2
	29 Vinyl acetate	43	11.293	11.293	(0.825)	3754839	250.000	298
	30 1,1-Dichloroethane	63	11.316	11.316	(0.827)	721579	50.0000	44.5
	35 2-Butanone	43	12.186	12.186	(0.891)	983383	250.000	154
	36 cis-1,2-Dichloroethylene	96	12.195	12.195	(0.891)	401171	50.0000	47.0
	33 2,2-Dichloropropane	77	12.158	12.158	(0.889)	414291	50.0000	49.6
	41 Chloroform	83	12.609	12.609	(0.922)	639931	50.0000	43.8
	39 Bromochloromethane	128	12.554	12.554	(0.918)	173424	50.0000	44.1
	43 1,1,1-Trichloroethane	97	12.844	12.844	(0.939)	429789	50.0000	46.2
	42 Cyclohexane	56	12.839	12.839	(0.938)	749481	50.0000	49.3
	45 1,1-Dichloropropene	75	13.051	13.051	(0.954)	491889	50.0000	46.9
	53 n-Butyl alcohol	56	13.930	13.930	(1.018)	1293328	5000.00	6010
	44 Carbon tetrachloride	117	13.023	13.023	(0.952)	453454	50.0000	46.5
$	48 1,2-Dichloroethane-d4	65	13.341	13.341	(0.975)	552810	50.0000	52.1
	51 1,2-Dichloroethane	62	13.438	13.438	(0.982)	520825	50.0000	44.4
	47 Benzene	78	13.332	13.332	(0.974)	1456221	50.0000	42.0
	50 Cyclohexene	54	13.396	13.396	(0.979)	565466	50.0000	48.2
*	52 Fluorobenzene	96	13.682	13.682	(1.000)	1247908	50.0000	
	54 Trichloroethylene	95	14.114	14.114	(1.032)	370656	50.0000	44.9
	57 1,2-Dichloropropane	63	14.460	14.460	(1.057)	418938	50.0000	45.5
	55 Methylcyclohexane	83	14.285	14.285	(1.044)	675036	50.0000	50.1
	60 Bromodichloromethane	83	14.754	14.754	(1.078)	507348	50.0000	46.8
	59 Dibromomethane	93	14.625	14.625	(1.069)	223705	50.0000	44.6
	61 2-Chloroethylvinyl ether	63	15.035	15.035	(1.099)	994236	250.000	227
	64 4-Methyl-2-pentanone	58	15.366	15.366	(0.895)	808178	250.000	235
	63 cis-1,3-Dichloropropylene	75	15.261	15.261	(1.115)	634708	50.0000	48.8
$	65 Toluene-d8	98	15.523	15.523	(0.904)	1870441	50.0000	50.3
	66 Toluene	92	15.601	15.601	(0.909)	930992	50.0000	41.4
	68 trans-1,3-Dichloropropylene	75	15.882	15.882	(0.925)	580783	50.0000	48.5
	69 1,1,2-Trichloroethane	83	16.107	16.107	(0.938)	281694	50.0000	45.6
	71 2-Hexanone	43	16.278	16.278	(0.948)	1508327	250.000	178
	72 1,3-Dichloropropane	76	16.315	16.315	(0.950)	581785	50.0000	44.9
	70 Tetrachloroethylene	164	16.195	16.195	(0.943)	273839	50.0000	41.7
	73 Dibromochloromethane	129	16.554	16.554	(0.964)	347957	50.0000	45.2
	74 1,2-Dibromoethane	107	16.733	16.733	(0.975)	318815	50.0000	45.9
*	76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	1068523	50.0000	
	77 Chlorobenzene	112	17.198	17.198	(1.002)	983656	50.0000	43.6
	79 1,1,1,2-Tetrachloroethane	131	17.267	17.267	(1.006)	343501	50.0000	44.5
	78 Ethylbenzene	91	17.226	17.226	(1.003)	1760091	50.0000	43.1
	80 m,p-Xylenes	106	17.346	17.346	(1.010)	1319426	100.000	88.2
	81 o-Xylene	106	17.792	17.792	(1.036)	668142	50.0000	46.3
	82 Styrene	104	17.811	17.811	(1.038)	1166979	50.0000	46.3
	83 Bromoform	173	18.110	18.110	(0.923)	233326	50.0000	47.7
	84 Isopropylbenzene	105	18.137	18.137	(0.924)	1487290	50.0000	38.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	444599	50.0000	45.6
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	740210	50.0000	49.6
92 1,2,3-Trichloropropane	110	18.612	18.612	(0.949)	118366	50.0000	48.8
91 Bromobenzene	156	18.598	18.598	(0.948)	415048	50.0000	42.3
89 n-Propylbenzene	91	18.570	18.570	(0.946)	2129897	50.0000	43.6
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1493631	50.0000	44.3
93 1,3,5-Trimethylbenzene	105	18.731	18.731	(0.955)	1494925	50.0000	45.5
95 4-Chlorotoluene	91	18.865	18.865	(0.962)	1362043	50.0000	45.2
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1229377	50.0000	46.4
97 1,2,4-Trimethylbenzene	105	19.145	19.145	(0.976)	1547991	50.0000	45.2
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	2093020	50.0000	46.8
100 4-Isopropyltoluene	119	19.435	19.435	(0.991)	1598703	50.0000	48.9
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	847403	50.0000	44.9
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	579140	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	844297	50.0000	43.4
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1748365	50.0000	49.6
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	794280	50.0000	44.5
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	80955	50.0000	51.1
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	548599	50.0000	47.2
110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	308291	50.0000	45.4
111 Naphthalene	128	22.455	22.455	(1.145)	1210817	50.0000	47.9
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	487217	50.0000	47.5

Data File: /chem/VOA1.i/070709v1/1t202.d
Date : 07-JUL-2009 08:18
Client ID: VSTD050
Sample Info: IWUHO90707-01ICCV/LCS1iVOAF1I1
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

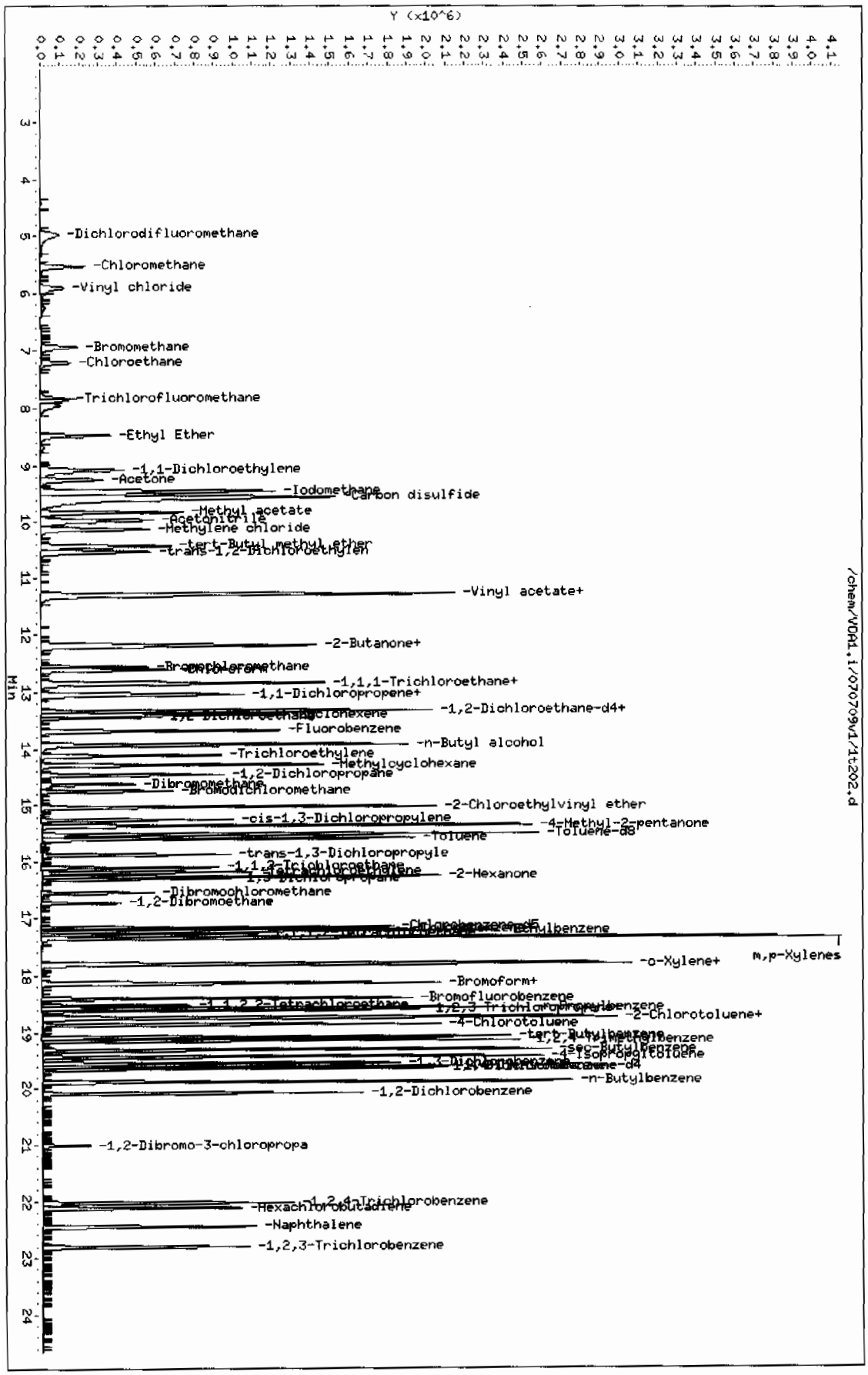

Page 1

Data File: /chem/VOA1.i/070709v1/1t204.d
Report Date: 07-Jul-2009 10:00

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 07-JUL-2009 09:39
Lab File ID: 1t204.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090707-03 Quant Type: ISTD
Method: /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
13 Acrolein	0.04947	0.06024	0.06024	0.001	21.76999	60.00000	Averaged
14 Trichlorotrifluoroethane	0.28145	0.29347	0.29347	0.030	4.26929	60.00000	Averaged
20 Allyl chloride	241	250	0.13227	0.010	-3.54810	60.00000	Linear
27 Acrylonitrile	0.11278	0.11932	0.11932	0.010	5.79487	60.00000	Averaged
31 2-Chloro-1,3-butadiene	0.44344	0.51809	0.51809	0.010	16.83333	60.00000	Averaged
37 Propionitrile	0.04568	0.04902	0.04902	0.010	7.30244	60.00000	Averaged
34 Ethyl acetate	0.31721	0.30588	0.30588	0.010	-3.57157	60.00000	Averaged
40 Methacrylonitrile	0.23340	0.24441	0.24441	0.010	4.71713	60.00000	Averaged
38 Tetrahydrofuran	0.22772	0.24513	0.24513	0.010	7.64492	60.00000	Averaged
46 Isobutyl alcohol	0.00969	0.01192	0.01192	0.001	23.01412	60.00000	Averaged
56 Methyl methacrylate	0.18420	0.20708	0.20708	0.010	12.42084	60.00000	Averaged
67 Ethyl methacrylate	0.43841	0.46097	0.46097	0.010	5.14678	60.00000	Averaged
58 1,4-Dioxane	0.00275	0.00313	0.00313	0.001	13.50575	60.00000	Averaged
62 2-Nitropropane	0.07858	0.09485	0.09485	0.000	20.70500	60.00000	Averaged
85 cis-1,4-Dichloro-2-butene	0.27487	0.30601	0.30601	0.010	11.32956	60.00000	Averaged
86 Cyclohexanone	0.05915	0.07082	0.07082	0.010	19.74108	60.00000	Averaged
90 trans-1,4-Dichloro-2-butene	0.26477	0.29194	0.29194	0.010	10.26159	60.00000	Averaged
98 Pentachloroethane	0.18429	0.35014	0.35014	0.010	89.98862	60.00000	Averaged <-
104 Benzyl chloride	1.33213	1.69672	1.69672	0.010	27.36892	60.00000	Averaged
107 bis(2-Chloroisopropyl)ether	0.38370	0.42819	0.42819	0.010	11.59487	60.00000	Averaged
$ 48 1,2-Dichloroethane-d4	0.42530	0.41402	0.41402	0.010	-2.65228	60.00000	Averaged
$ 65 Toluene-d8	1.74064	1.68334	1.68334	0.010	-3.29198	60.00000	Averaged
$ 87 Bromofluorobenzene	1.28777	1.25905	1.25905	0.010	-2.22982	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 31.85772
Maximun Average %D/Drift = 20.00000
* Failed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t204.d
Lab Smp Id: W1VM090707-03 Client Smp ID: VSTD250S
Inj Date : 07-JUL-2009 09:39
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090707-03|SHORT|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090701-08A/UVM090624-02A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 07-Jul-2009 09:58 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
13 Acrolein	56	8.931	8.931	(0.653)	398100	250.000	304
14 Trichlorotrifluoroethane	101	8.982	8.982	(0.656)	1939549	250.000	261
20 Allyl chloride	76	9.838	9.838	(0.719)	874182	250.000	241
27 Acrylonitrile	53	10.662	10.662	(0.779)	788582	250.000	264
31 2-Chloro-1,3-butadiene	53	11.385	11.385	(0.832)	684811	50.0000	58.4
37 Propionitrile	54	12.402	12.402	(0.906)	323942	250.000	268
34 Ethyl acetate	43	12.163	12.163	(0.889)	2021583	250.000	241
40 Methacrylonitrile	41	12.559	12.559	(0.918)	1615337	250.000	262
38 Tetrahydrofuran	42	12.536	12.536	(0.639)	710883	250.000	269
46 Isobutyl alcohol	41	13.102	13.102	(0.958)	787891	2500.00	3080
56 Methyl methacrylate	69	14.441	14.441	(1.056)	1368615	250.000	281
67 Ethyl methacrylate	69	15.818	15.818	(0.922)	2551722	250.000	263
58 1,4-Dioxane	88	14.547	14.547	(1.063)	206664	2500.00	2840
62 2-Nitropropane	43	15.081	15.081	(1.102)	626853	250.000	302
85 cis-1,4-Dichloro-2-butene	53	18.280	18.280	(0.932)	887416	250.000	278

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
86 Cyclohexanone	55	18.391	18.391	(1.072)	1960233	1250.00	1500
90 trans-1,4-Dichloro-2-butene	53	18.575	18.575	(0.947)	846630	250.000	276
98 Pentachloroethane	167	19.205	19.205	(0.979)	1015393	250.000	475(A)
104 Benzyl chloride	91	19.781	19.781	(1.008)	4920483	250.000	318
107 bis(2-Chloroisopropyl)ether	45	20.177	20.177	(1.028)	1241752	250.000	279
* 52 Fluorobenzene	96	13.682	13.682	(1.000)	1321805	50.0000	
* 76 Chlorobenzene-d5	117	17.162	17.162	(1.000)	1107111	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	579998	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.336	13.336	(0.975)	547251	50.0000	48.7
$ 65 Toluene-d8	98	15.518	15.518	(0.904)	1863642	50.0000	48.4
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	730248	50.0000	48.9

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/VOA1.i/070709v1/1t204.d
Date : 07-JUL-2009 09:39
Client ID: VSTD250S
Sample Info: |W1VM090707-03|SHORT|1|VOAF|1|
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

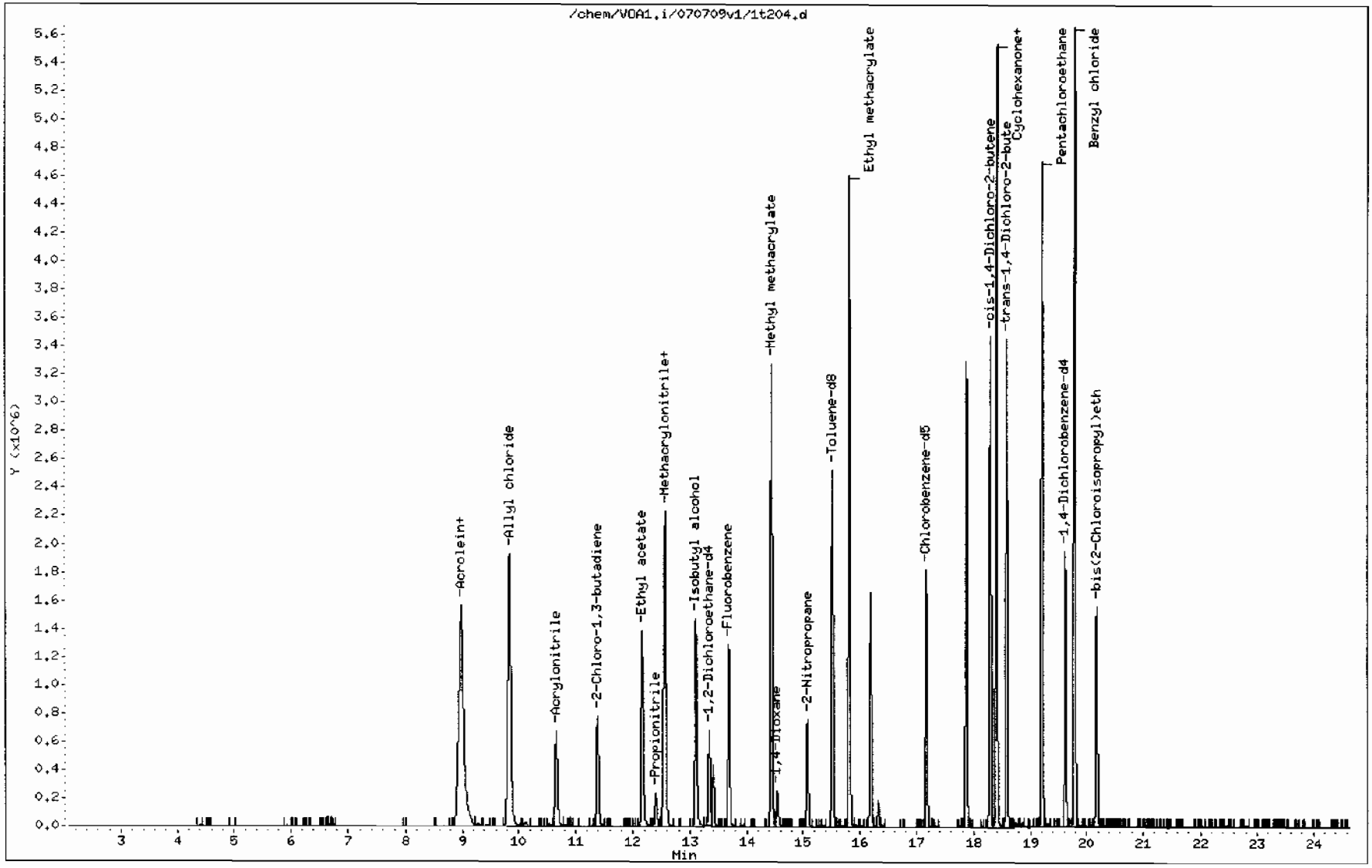

QC Data

Data File: /chem/VOA1.i/070109v1/1s309.d

Date : 01-JUL-2009 14:32

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

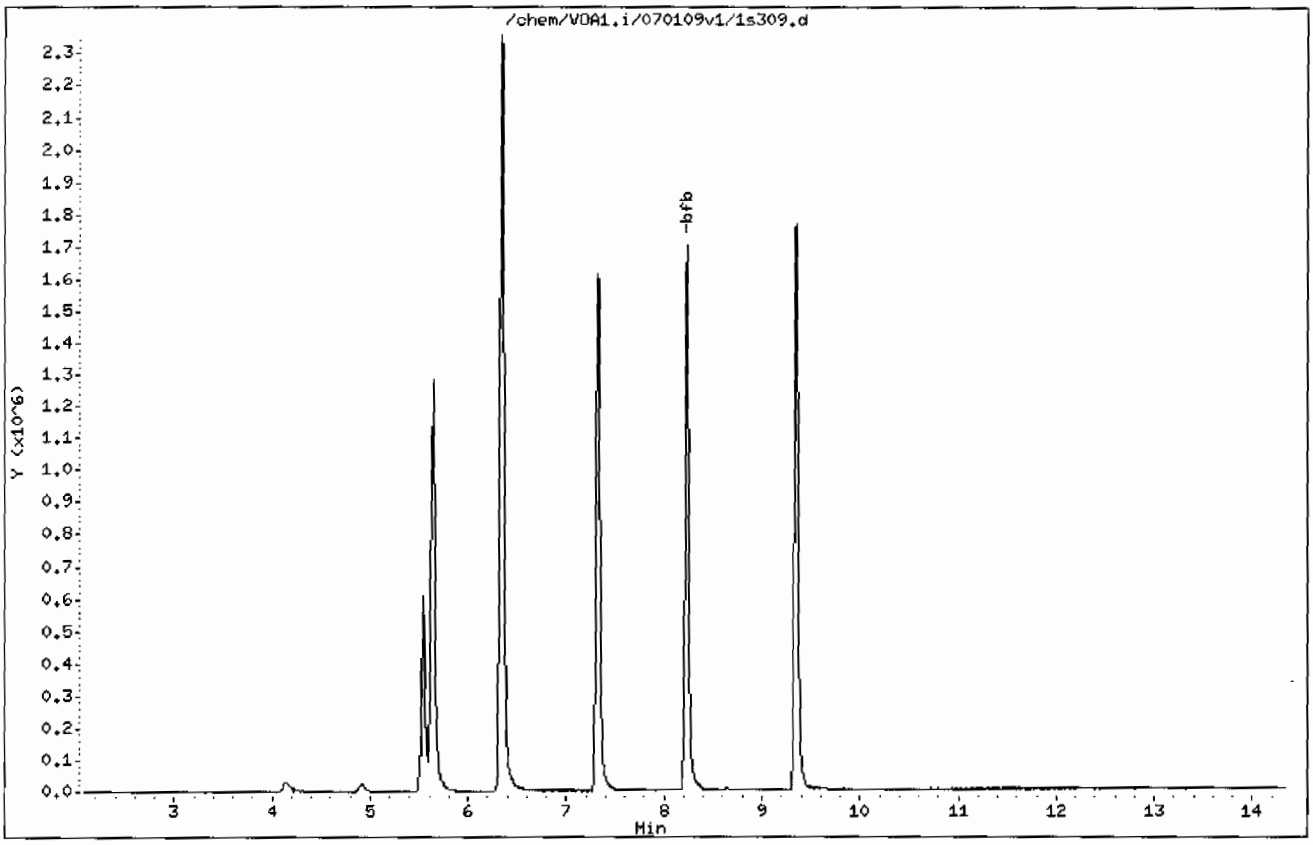

Data File: /chem/VOA1.i/070109v1/1s309.d

Date : 01-JUL-2009 14:32

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

1 bfb

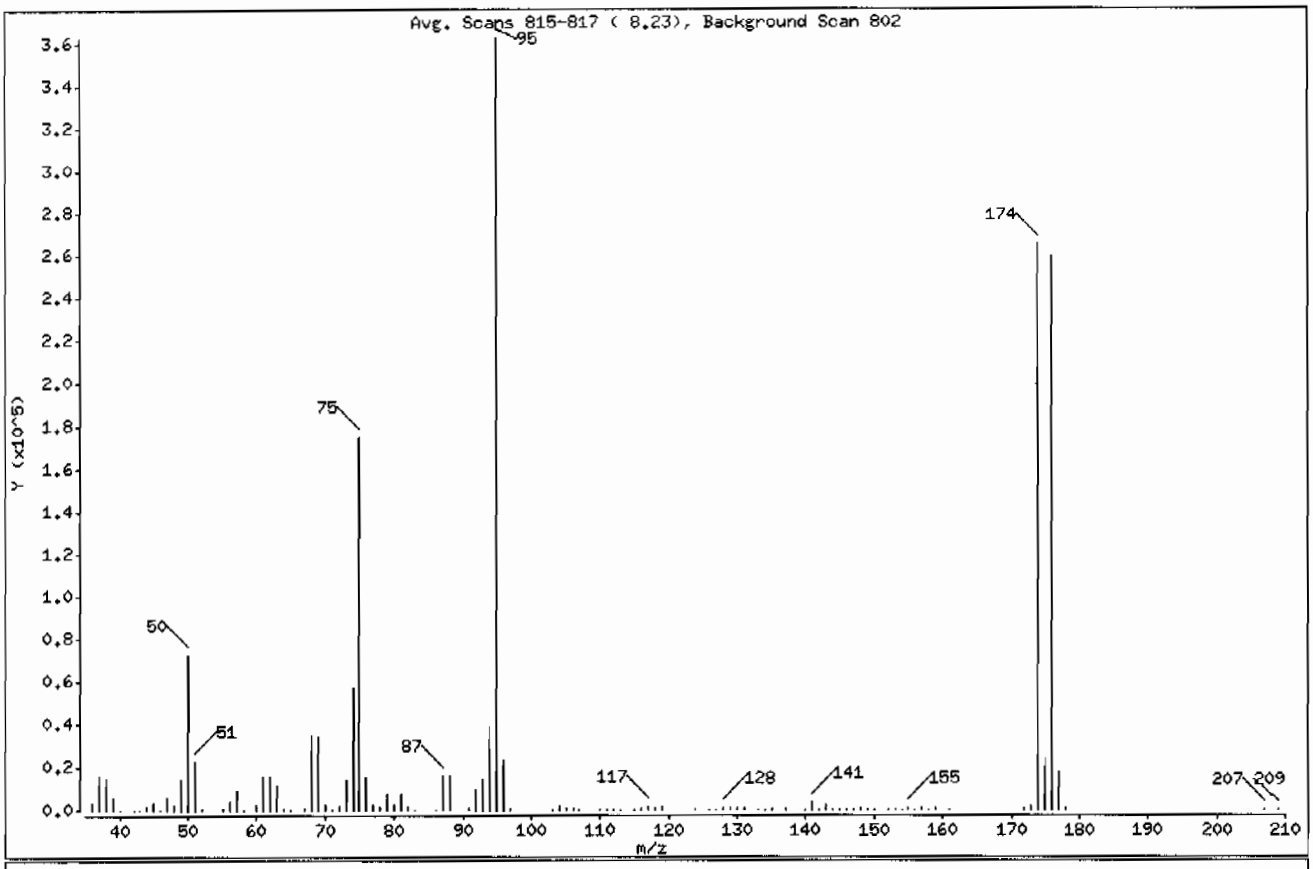

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.99
75	30.00 - 60.00% of mass 95	48.22
96	5.00 - 9.00% of mass 95	6.52
173	Less than 2.00% of mass 174	0.51 (0.70)
174	50.00 - 100.00% of mass 95	72.99
175	5.00 - 9.00% of mass 174	5.47 (7.49)
176	95.00 - 101.00% of mass 174	71.54 (98.02)
177	5.00 - 9.00% of mass 176	4.75 (6.63)

Data File: /chem/VOA1.i/070109v1/1s309.d

Date : 01-JUL-2009 14:32

Client ID: BFB01 Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles Column diameter: 0.25

Data File: 1s309.d
Spectrum: Avg. Scans 815-817 (8.23), Background Scan 802
Location of Maximum: 95.00
Number of points: 107

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2987	68.00	35144	104.00	1379	143.00	2894
37.00	15962	69.00	33824	105.00	452	144.00	194
38.00	15049	70.00	2527	106.00	1148	145.00	326
39.00	5607	71.00	65	107.00	197	146.00	410
40.00	46	72.00	1757	110.00	207	147.00	269
42.00	56	73.00	13802	111.00	228	148.00	792
43.00	203	74.00	56696	112.00	122	149.00	198
44.00	1542	75.00	174720	113.00	201	150.00	398
45.00	2973	76.00	15205	115.00	268	152.00	104
46.00	141	77.00	2174	116.00	994	153.00	135
47.00	6030	78.00	1423	117.00	1788	154.00	51
48.00	2091	79.00	7784	118.00	1022	155.00	775
49.00	14352	80.00	2513	119.00	1547	156.00	51
50.00	72416	81.00	7510	124.00	149	157.00	540
51.00	22592	82.00	1769	126.00	56	158.00	50
52.00	1046	83.00	251	127.00	56	159.00	476
55.00	931	86.00	317	128.00	1115	161.00	242
56.00	4576	87.00	16104	129.00	570	172.00	425
57.00	9188	88.00	15611	130.00	1059	173.00	1854
58.00	364	91.00	1103	131.00	456	174.00	264448
60.00	2757	92.00	9230	133.00	110	175.00	19800
61.00	15582	93.00	14536	134.00	68	176.00	259200
62.00	15896	94.00	38184	135.00	542	177.00	17192
63.00	11969	95.00	362304	137.00	472	178.00	441
64.00	1209	96.00	23624	140.00	121	207.00	96
65.00	341	97.00	792	141.00	2972	209.00	120
67.00	883	103.00	248	142.00	308		

Data File: /chem/VOA1.i/070709v1/1t201.d

Date : 07-JUL-2009 07:49

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

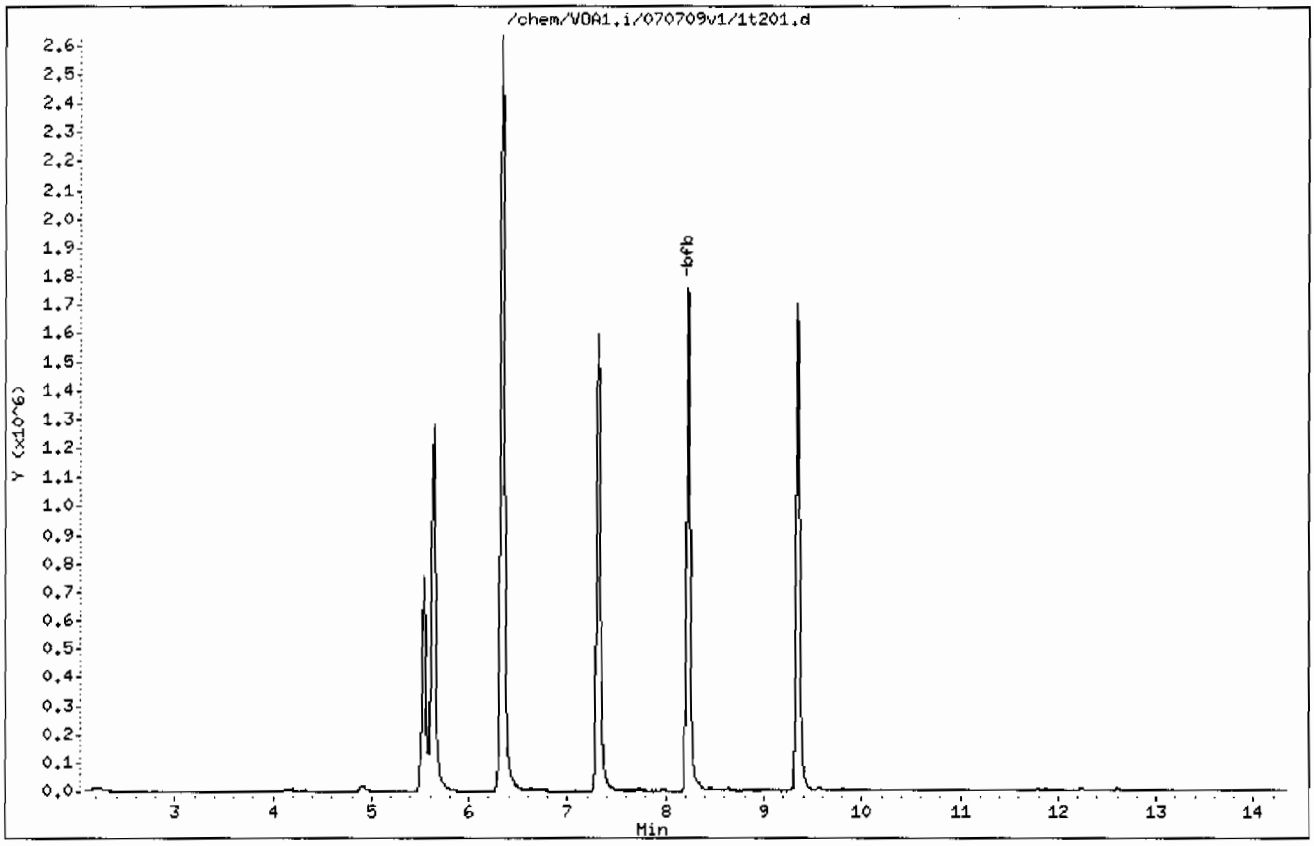

Data File: /chem/VOA1.i/070709v1/1t201.d

Date : 07-JUL-2009 07:49

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

1 bfb

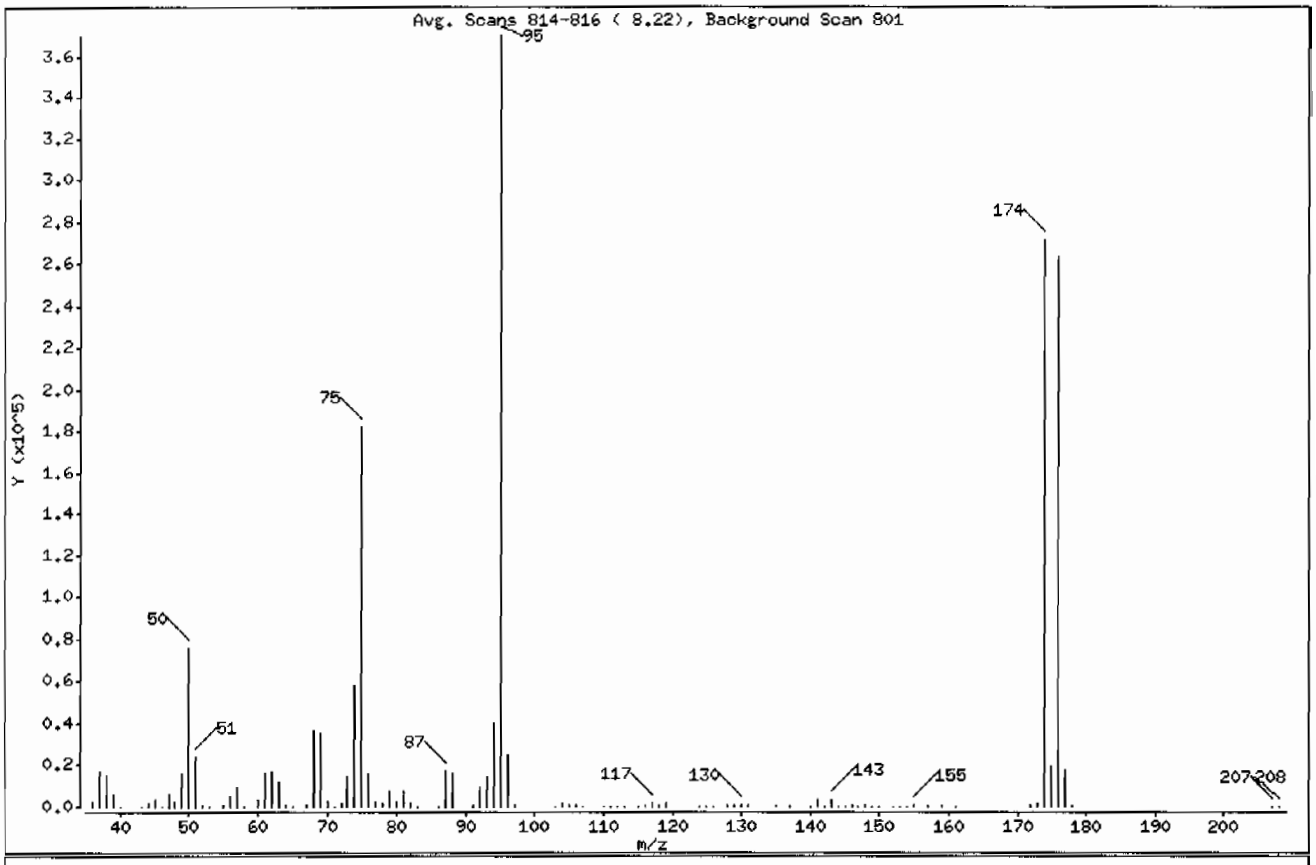

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.47
75	30.00 - 60.00% of mass 95	49.11
96	5.00 - 9.00% of mass 95	6.75
173	Less than 2.00% of mass 174	0.51 (0.70)
174	50.00 - 100.00% of mass 95	73.36
175	5.00 - 9.00% of mass 174	5.21 (7.10)
176	95.00 - 101.00% of mass 174	71.26 (97.14)
177	5.00 - 9.00% of mass 176	4.75 (6.66)

Data File: /chem/VOA1.i/070709v1/1t201.d

Date : 07-JUL-2009 07:49

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Data File: 1t201.d
Spectrum: Avg. Scans 814-816 (8.22), Background Scan 801
Location of Maximum: 95.00
Number of points: 103

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2953	67.00	942	97.00	694	142.00	406
37.00	16600	68.00	36416	103.00	67	143.00	3138
38.00	15474	69.00	35880	104.00	1282	144.00	169
39.00	6053	70.00	2739	105.00	500	145.00	308
40.00	237	71.00	55	106.00	1167	146.00	550
43.00	279	72.00	1759	107.00	291	147.00	134
44.00	1814	73.00	14820	110.00	219	148.00	824
45.00	3214	74.00	57912	111.00	256	149.00	156
46.00	172	75.00	181632	112.00	138	150.00	337
47.00	6222	76.00	16119	113.00	194	152.00	141
48.00	2248	77.00	2224	115.00	319	153.00	286
49.00	15918	78.00	1544	116.00	1081	154.00	61
50.00	75712	79.00	7790	117.00	1828	155.00	738
51.00	23800	80.00	2442	118.00	1072	157.00	564
52.00	1026	81.00	8065	119.00	1576	159.00	471
53.00	65	82.00	1802	124.00	196	161.00	331
55.00	871	83.00	133	125.00	63	172.00	575
56.00	5248	86.00	378	126.00	78	173.00	1895
57.00	9757	87.00	16832	128.00	1040	174.00	271296
58.00	356	88.00	16109	129.00	610	175.00	19264
60.00	3495	91.00	1072	130.00	1105	176.00	263552
61.00	15986	92.00	9326	131.00	448	177.00	17560
62.00	16880	93.00	14432	135.00	570	178.00	452
63.00	11948	94.00	39712	137.00	702	207.00	321
64.00	961	95.00	369792	140.00	210	208.00	58
65.00	391	96.00	24960	141.00	2983		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201875931**				
Client Sample:	**QC for batch 883143**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 883143**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883144**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 11:10**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/07/2009 08:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t207BA.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515			**Matrix:**	SOIL
Lab Sample ID:	1201875931				
Client Sample:	QC for batch 883143	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 883143	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 11:10	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:00	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t207BA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found					

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t207BA.d
Lab Smp Id: 1201875931 Client Smp ID: BLANK
Inj Date : 07-JUL-2009 11:10
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201875931|883144|1|VOAF|1|
Misc Info : GEL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	504861	52.6755	52.7
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1126782	50.0000	
$ 65 Toluene-d8	98	15.528	15.523	(0.904)	1691497	51.5381	51.5
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	942767	50.0000	
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	661840	52.3582	52.4
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	490796	50.0000	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t207BA.d
Lab Smp Id: 1201875931 Client Smp ID: BLANK
Inj Date : 07-JUL-2009 11:10
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201875931|883144|1|VOAF|1|
Misc Info : GEL 5G N/A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/070709v1/1t207BA.d
Date : 07-JUL-2009 11:10
Client ID: BLANK
Sample Info: |1201875931|883144|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

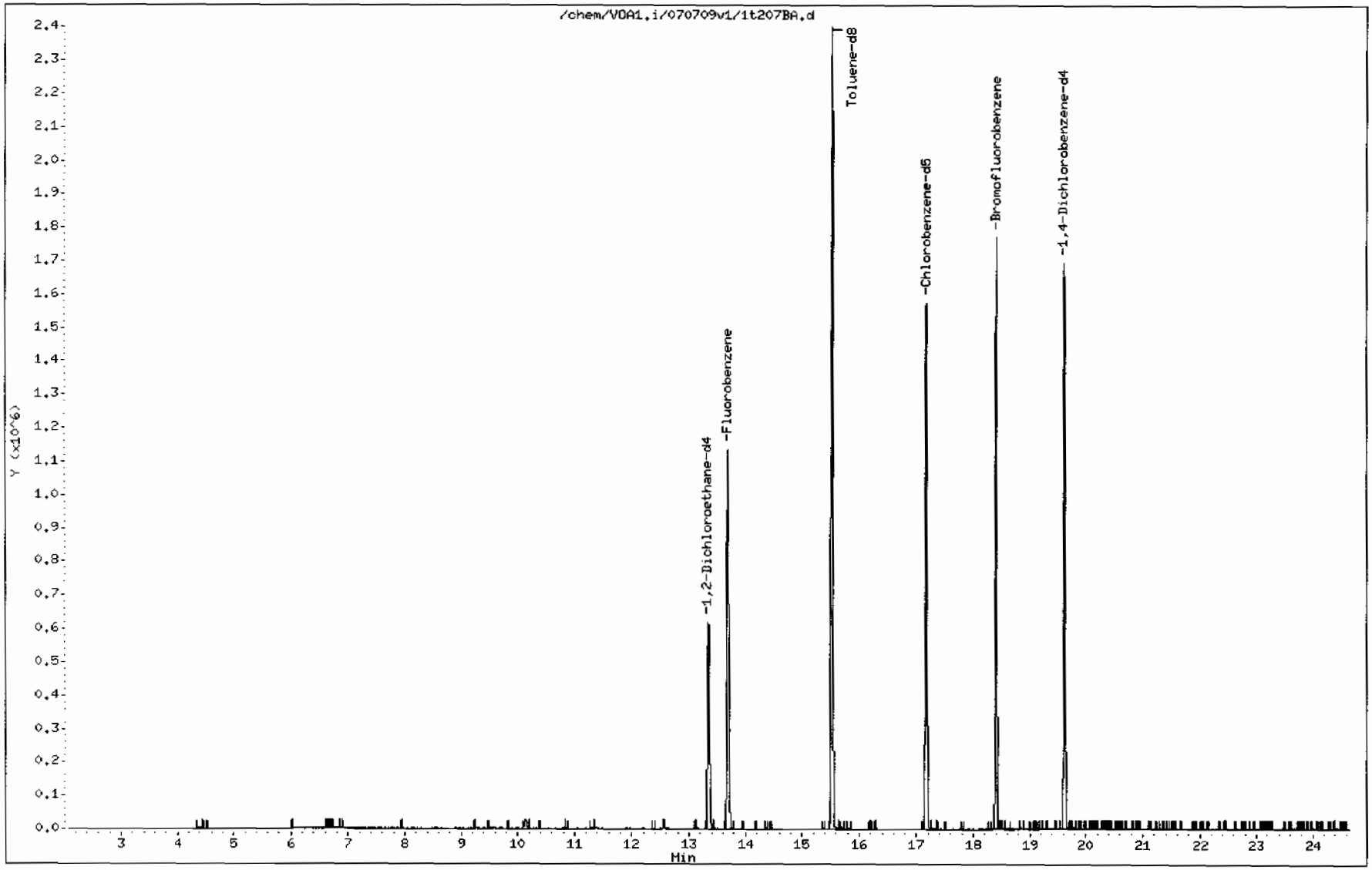

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515			**Matrix:**	SOIL
Lab Sample ID:	1201875934				
Client Sample:	QC for batch 883143	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883143	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 08:48	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t203LA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		60.1	ug/kg	0.340	1.00
74-87-3	Chloromethane		50.3	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		44.4	ug/kg	0.300	1.00
74-83-9	Bromomethane		47.2	ug/kg	0.300	1.00
75-00-3	Chloroethane		47.3	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		58.0	ug/kg	0.570	1.00
67-64-1	Acetone		126	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		46.2	ug/kg	0.300	1.00
74-88-4	Iodomethane		226	ug/kg	1.60	5.00
75-09-2	Methylene chloride		46.7	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		244	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		44.2	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		45.2	ug/kg	0.300	1.00
78-93-3	2-Butanone		159	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		48.7	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		49.7	ug/kg	0.300	1.00
67-66-3	Chloroform		44.7	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		45.0	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		46.8	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		48.1	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		46.7	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		45.9	ug/kg	0.300	1.00
71-43-2	Benzene		43.1	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		46.0	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		47.4	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		48.5	ug/kg	0.300	1.00
74-95-3	Dibromomethane		46.8	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		242	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		51.3	ug/kg	0.300	1.00
108-88-3	Toluene		42.2	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		50.6	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		47.6	ug/kg	0.300	1.00
591-78-6	2-Hexanone		179	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		46.5	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		43.0	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		47.1	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		47.2	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		45.2	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201875934**				
Client Sample:	**QC for batch 883143**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 883143**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883144**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 08:48**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/07/2009 08:01**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t203LA.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		44.4	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		91.3	ug/kg	0.300	2.00
95-47-6	o-Xylene		48.1	ug/kg	0.300	1.00
100-42-5	Styrene		48.2	ug/kg	0.300	1.00
75-25-2	Bromoform		49.9	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		47.5	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		50.3	ug/kg	0.300	1.00
108-86-1	Bromobenzene		44.2	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		45.4	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		45.7	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		40.2	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		47.1	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		47.1	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		47.7	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		47.1	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		48.2	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		50.5	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		46.2	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		45.0	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		50.8	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		52.4	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		46.3	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		46.2	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t203LA.d
Lab Smp Id: 1201875934 Client Smp ID: LCS
Inj Date : 07-JUL-2009 08:48
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201875934|883144|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090605-01E/IVM090623-01
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1 Xylenes (total)	106				2083501	139.415	139
M 2 1,2-Dichloroethylene (total)	96				785148	92.8586	92.8
M 3 1,3-Dichloropropylene	75				1287715	101.891	102
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	347377	60.0616	60.1
6 Chloromethane	50	5.542	5.535	(0.405)	561681	50.3017	50.3
7 Vinyl chloride	62	5.908	5.908	(0.432)	385232	44.3567	44.4
9 Bromomethane	96	6.947	6.938	(0.507)	280955	47.1570	47.2
10 Chloroethane	64	7.219	7.201	(0.527)	307785	47.2670	47.3
11 Trichlorofluoromethane	101	7.845	7.831	(0.573)	477403	58.0493	58.0
12 Ethyl Ether	59	8.485	8.471	(0.620)	373852	51.5716	51.6
15 1,1-Dichloroethylene	61	9.088	9.079	(0.664)	693515	46.1516	46.2
16 Acetone	43	9.263	9.249	(0.677)	728145	125.677	126

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
18 Iodomethane	142	9.470	9.461	(0.692)	2722982	226.046	226
19 Carbon disulfide	76	9.580	9.571	(0.700)	5898350	244.133	244
21 Methyl acetate	43	9.843	9.834	(0.719)	1561391	238.552	238
22 Acetonitrile	41	9.985	9.972	(0.729)	1360595	1298.21	1300
23 Methylene chloride	84	10.142	10.133	(0.741)	418542	46.6689	46.7
25 tert-Butyl methyl ether	73	10.450	10.437	(0.763)	1038401	48.8013	48.8
26 trans-1,2-Dichloroethylene	96	10.552	10.542	(0.771)	364333	44.1874	44.2
29 Vinyl acetate	43	11.306	11.293	(0.826)	3861672	303.197	303
30 1,1-Dichloroethane	63	11.325	11.316	(0.827)	740969	45.1588	45.2
33 2,2-Dichloropropane	77	12.172	12.158	(0.889)	419857	49.6883	49.7
35 2-Butanone	43	12.199	12.186	(0.891)	1032330	159.267	159
36 cis-1,2-Dichloroethylene	96	12.204	12.195	(0.891)	420815	48.6712	48.7
39 Bromochloromethane	128	12.563	12.554	(0.918)	179064	45.0169	45.0
41 Chloroform	83	12.618	12.609	(0.922)	660731	44.7379	44.7
42 Cyclohexane	56	12.848	12.839	(0.938)	765263	49.7150	49.7
43 1,1,1-Trichloroethane	97	12.853	12.844	(0.939)	440286	46.7634	46.8
44 Carbon tetrachloride	117	13.033	13.023	(0.952)	460285	46.6580	46.6
45 1,1-Dichloropropene	75	13.060	13.051	(0.954)	509710	48.0623	48.1
47 Benzene	78	13.341	13.332	(0.974)	1513781	43.0947	43.1
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	540128	50.2832	50.3
50 Cyclohexene	54	13.405	13.396	(0.979)	580325	48.9310	48.9
51 1,2-Dichloroethane	62	13.447	13.438	(0.982)	544712	45.9156	45.9
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1262847	50.0000	
53 n-Butyl alcohol	56	13.935	13.930	(1.018)	1367643	6284.00	6280
54 Trichloroethylene	95	14.124	14.114	(1.032)	384310	45.9802	46.0
55 Methylcyclohexane	83	14.289	14.285	(1.044)	693827	50.8836	50.9
57 1,2-Dichloropropane	63	14.469	14.460	(1.057)	441337	47.3720	47.4
59 Dibromomethane	93	14.630	14.625	(1.069)	237875	46.8221	46.8
60 Bromodichloromethane	83	14.759	14.754	(1.078)	531250	48.4524	48.4
61 2-Chloroethylvinyl ether	63	15.040	15.035	(1.099)	1054990	238.018	238
63 cis-1,3-Dichloropropylene	75	15.265	15.261	(1.115)	674301	51.2646	51.3
64 4-Methyl-2-pentanone	58	15.371	15.366	(0.895)	841059	241.869	242
$ 65 Toluene-d8	98	15.527	15.523	(0.904)	1888882	50.2096	50.2
66 Toluene	92	15.606	15.601	(0.909)	959363	42.1887	42.2
68 trans-1,3-Dichloropropylene	75	15.886	15.882	(0.925)	613414	50.6262	50.6
69 1,1,2-Trichloroethane	83	16.112	16.107	(0.938)	297894	47.6488	47.6
70 Tetrachloroethylene	164	16.200	16.195	(0.943)	285935	43.0404	43.0
71 2-Hexanone	43	16.278	16.278	(0.948)	1530832	178.997	179
72 1,3-Dichloropropane	76	16.315	16.315	(0.950)	609976	46.5448	46.5
73 Dibromochloromethane	129	16.554	16.554	(0.964)	366364	47.1156	47.1
74 1,2-Dibromoethane	107	16.733	16.733	(0.975)	331287	47.1962	47.2
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	1080636	50.0000	
77 Chlorobenzene	112	17.203	17.198	(1.002)	1030729	45.1606	45.2
78 Ethylbenzene	91	17.231	17.226	(1.003)	1833284	44.3541	44.4
79 1,1,1,2-Tetrachloroethane	131	17.267	17.267	(1.006)	361565	46.3121	46.3
80 m,p-Xylenes	106	17.346	17.346	(1.010)	1381799	91.2927	91.3
81 o-Xylene	106	17.792	17.792	(1.036)	701702	48.1224	48.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
82 Styrene	104	17.815	17.811	(1.038)	1227705	48.2097	48.2
83 Bromoform	173	18.114	18.110	(0.923)	245835	49.9473	49.9
84 Isopropylbenzene	105	18.142	18.137	(0.925)	1558282	40.1557	40.2
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	747399	49.8089	49.8
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	465848	47.4736	47.5
89 n-Propylbenzene	91	18.570	18.570	(0.946)	2230499	45.4473	45.4
91 Bromobenzene	156	18.602	18.598	(0.948)	436611	44.2090	44.2
92 1,2,3-Trichloropropane	110	18.616	18.612	(0.949)	122761	50.2600	50.3
93 1,3,5-Trimethylbenzene	105	18.731	18.731	(0.955)	1554332	47.0654	47.1
94 2-Chlorotoluene	91	18.754	18.750	(0.956)	1551693	45.7333	45.7
95 4-Chlorotoluene	91	18.865	18.865	(0.962)	1427574	47.0608	47.1
96 tert-Butylbenzene	119	19.090	19.086	(0.973)	1273529	47.7311	47.7
97 1,2,4-Trimethylbenzene	105	19.145	19.145	(0.976)	1622959	47.1252	47.1
99 sec-Butylbenzene	105	19.316	19.311	(0.984)	2166052	48.1926	48.2
100 4-Isopropyltoluene	119	19.435	19.435	(0.991)	1660305	50.4912	50.5
101 1,3-Dichlorobenzene	146	19.555	19.551	(0.997)	878085	46.2190	46.2
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	582610	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	880547	45.0360	45.0
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1798975	50.7737	50.8
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	831045	46.2461	46.2
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	83638	52.4428	52.4
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	567932	48.6167	48.6
110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	315658	46.1869	46.2
111 Naphthalene	128	22.455	22.455	(1.145)	1237011	48.6502	48.6
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	498103	48.3026	48.3

Data File: /chem/VOA1.i/070709v1/1t203LA.d
Date : 07-JUL-2009 08:48
Client ID: LCS
Sample Info: !120187593418831441!!VOAF!1!
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

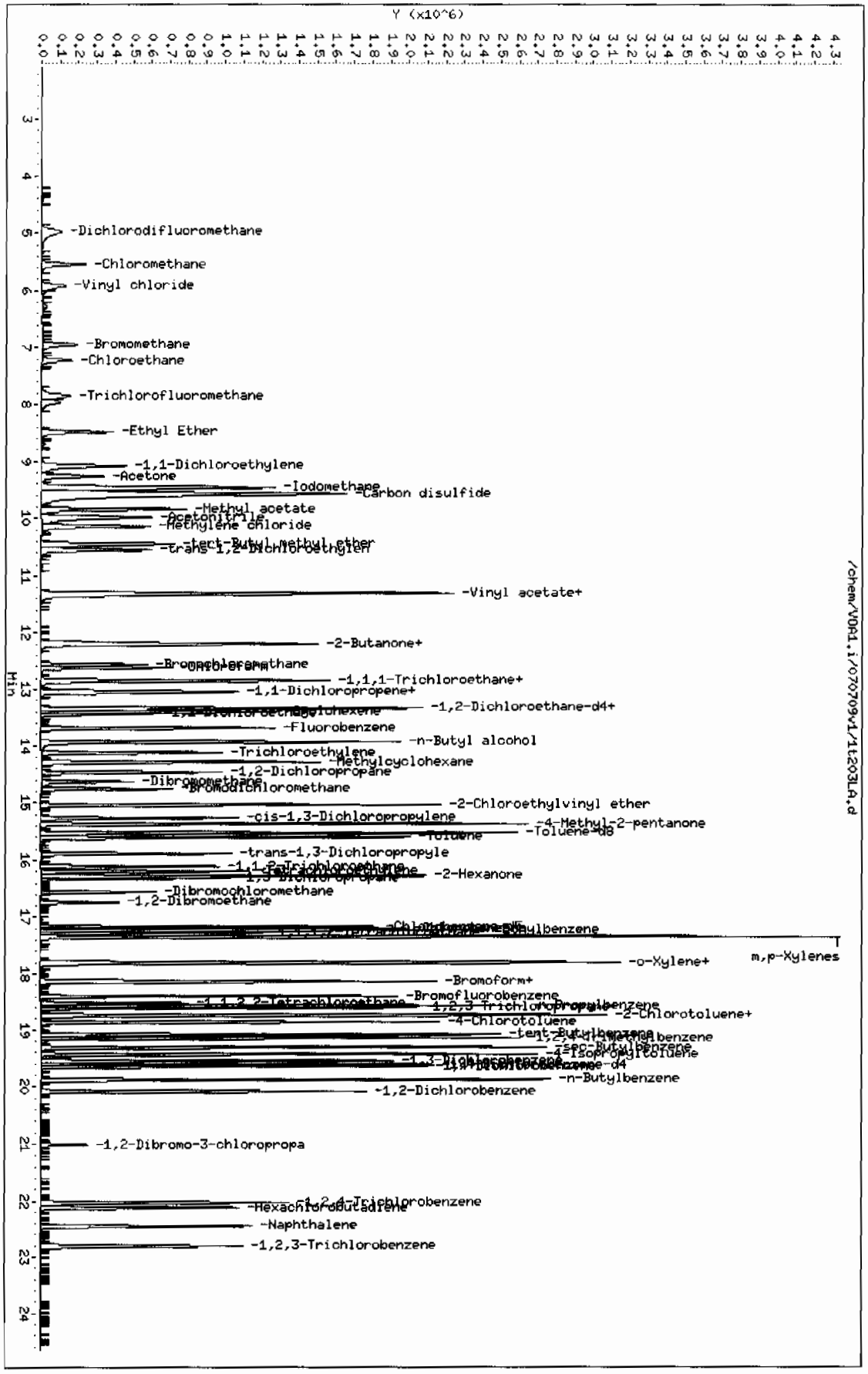

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201875935**				
Client Sample:	**QC for batch 883143**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 883143**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**883144**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 10:09**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/07/2009 08:02**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1t205sLA.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515			**Matrix:**	SOIL
Lab Sample ID:	1201875935				
Client Sample:	QC for batch 883143	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 883143	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 10:09	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 08:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t205sLA.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		266	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t205sLA.d
Lab Smp Id: 1201875935 Client Smp ID: LCS
Inj Date : 07-JUL-2009 10:09
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201875935|883144|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090701-08A/UVM090624-02A
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
13 Acrolein	56	8.945	8.931	(0.653)	387868	302.950	303
14 Trichlorotrifluoroethane	101	8.991	8.982	(0.657)	1934828	265.605	266
20 Allyl chloride	76	9.852	9.838	(0.720)	889480	250.396	250(Q)
27 Acrylonitrile	53	10.681	10.662	(0.780)	784269	268.671	269
31 2-Chloro-1,3-butadiene	53	11.399	11.385	(0.833)	692369	60.3256	60.3
34 Ethyl acetate	43	12.177	12.163	(0.889)	1994444	242.926	243
37 Propionitrile	54	12.416	12.402	(0.907)	312899	264.658	265
38 Tetrahydrofuran	42	12.549	12.536	(0.640)	698519	267.252	267
40 Methacrylonitrile	41	12.572	12.559	(0.918)	1604165	265.547	266
46 Isobutyl alcohol	41	13.116	13.102	(0.958)	761401	3035.57	3040
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	549154	49.8886	49.9
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1294104	50.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
56 Methyl methacrylate	69	14.450	14.441	(1.055)	1373062	288.001	288
58 1,4-Dioxane	88	14.556	14.547	(1.063)	198683	2786.45	2790
62 2-Nitropropane	43	15.090	15.081	(1.102)	623379	306.514	306
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1890876	50.1996	50.2
67 Ethyl methacrylate	69	15.822	15.818	(0.922)	2557558	269.585	270
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	1081992	50.0000	
85 cis-1,4-Dichloro-2-butene	53	18.285	18.280	(0.932)	892774	282.990	283
86 Cyclohexanone	55	18.395	18.391	(1.072)	1924435	1503.54	1500
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	741820	50.1893	50.2
90 trans-1,4-Dichloro-2-butene	53	18.579	18.575	(0.947)	844967	278.046	278
98 Pentachloroethane	167	19.205	19.205	(0.979)	1006562	475.862	476(AR)
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	573878	50.0000	
104 Benzyl chloride	91	19.785	19.781	(1.008)	4913658	321.372	321
107 bis(2-Chloroisopropyl)ether	45	20.181	20.177	(1.029)	1198653	272.176	272

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA1.i/070709v1/1t205sLA.d
Date : 07-JUL-2009 10:09
Client ID: LCS
Sample Info: |1201875935|883144|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

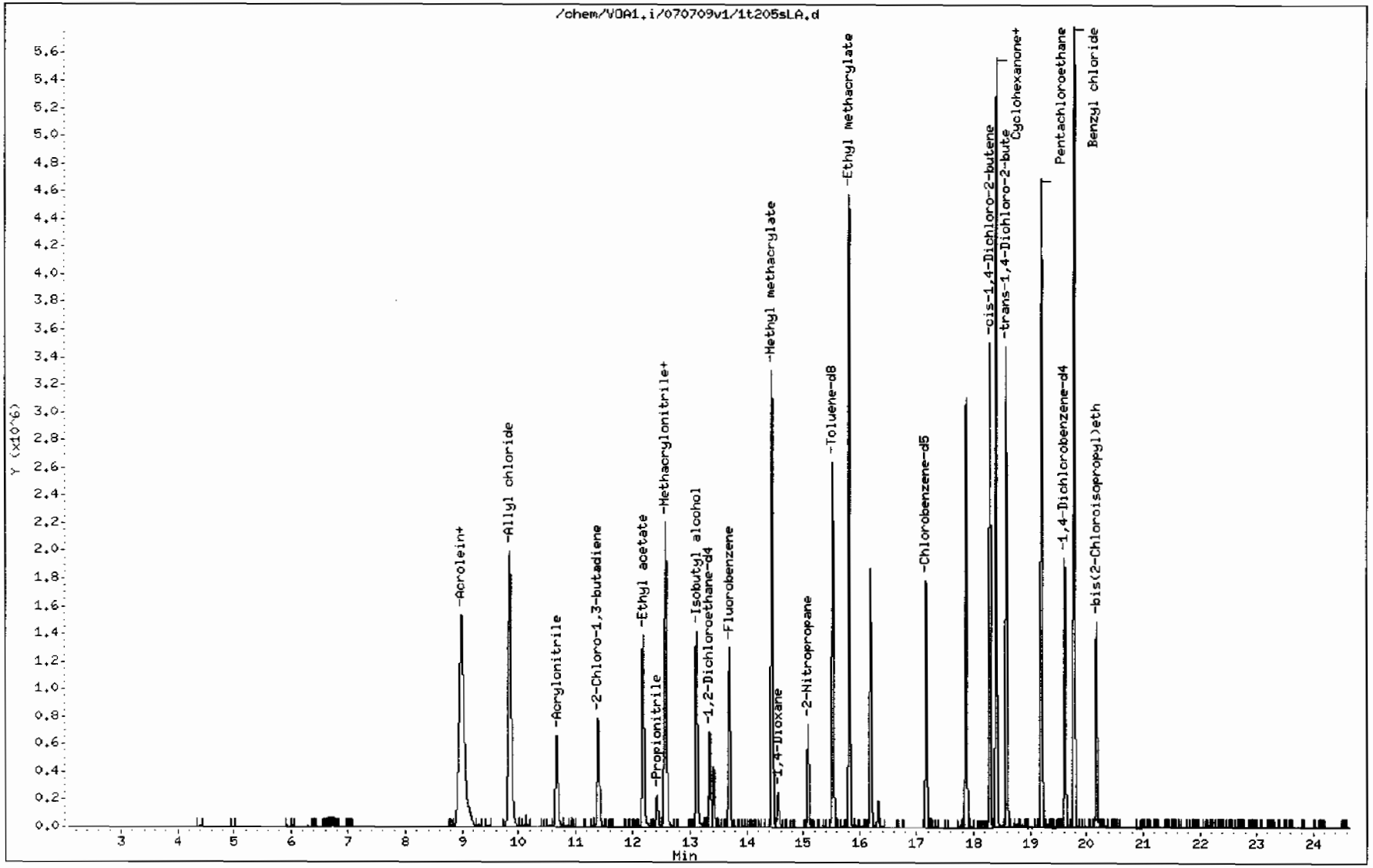

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201875932	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
Client Sample:	QC for batch 883143	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9942PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 17:54	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:27	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t219.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		69.1	ug/kg	0.386	1.13
74-87-3	Chloromethane		59.3	ug/kg	0.340	1.13
75-01-4	Vinyl chloride		54.5	ug/kg	0.340	1.13
74-83-9	Bromomethane		58.7	ug/kg	0.340	1.13
75-00-3	Chloroethane		57.0	ug/kg	0.340	1.13
75-69-4	Trichlorofluoromethane		71.4	ug/kg	0.647	1.13
67-64-1	Acetone		126	ug/kg	1.88	5.67
75-35-4	1,1-Dichloroethylene		55.3	ug/kg	0.340	1.13
74-88-4	Iodomethane		265	ug/kg	1.82	5.67
75-09-2	Methylene chloride		56.2	ug/kg	2.27	5.67
75-15-0	Carbon disulfide		284	ug/kg	1.42	5.67
156-60-5	trans-1,2-Dichloroethylene		52.1	ug/kg	0.340	1.13
75-34-3	1,1-Dichloroethane		54.7	ug/kg	0.340	1.13
78-93-3	2-Butanone		169	ug/kg	1.70	5.67
156-59-2	cis-1,2-Dichloroethylene		57.4	ug/kg	0.340	1.13
594-20-7	2,2-Dichloropropane		62.8	ug/kg	0.340	1.13
67-66-3	Chloroform		55.3	ug/kg	0.340	1.13
74-97-5	Bromochloromethane		53.7	ug/kg	0.374	1.13
71-55-6	1,1,1-Trichloroethane		59.9	ug/kg	0.340	1.13
563-58-6	1,1-Dichloropropene		57.1	ug/kg	0.340	1.13
56-23-5	Carbon tetrachloride		60.1	ug/kg	0.340	1.13
107-06-2	1,2-Dichloroethane		57.4	ug/kg	0.340	1.13
71-43-2	Benzene		51.2	ug/kg	0.340	1.13
79-01-6	Trichloroethylene		54.8	ug/kg	0.374	1.13
78-87-5	1,2-Dichloropropane		55.5	ug/kg	0.340	1.13
75-27-4	Bromodichloromethane		59.3	ug/kg	0.340	1.13
74-95-3	Dibromomethane		54.7	ug/kg	0.340	1.13
108-10-1	4-Methyl-2-pentanone		261	ug/kg	1.42	5.67
10061-01-5	cis-1,3-Dichloropropylene		56.5	ug/kg	0.340	1.13
108-88-3	Toluene		49.2	ug/kg	0.340	1.13
10061-02-6	trans-1,3-Dichloropropylene		55.0	ug/kg	0.340	1.13
79-00-5	1,1,2-Trichloroethane		53.7	ug/kg	0.340	1.13
591-78-6	2-Hexanone		189	ug/kg	1.70	5.67
142-28-9	1,3-Dichloropropane		53.2	ug/kg	0.340	1.13
127-18-4	Tetrachloroethylene		49.4	ug/kg	0.340	1.13
124-48-1	Dibromochloromethane		55.5	ug/kg	0.340	1.13
106-93-4	1,2-Dibromoethane		52.6	ug/kg	0.340	1.13
108-90-7	Chlorobenzene		51.6	ug/kg	0.340	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201875932	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
Client Sample:	QC for batch 883143	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9942PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 17:54	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:27	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t219.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		51.4	ug/kg	0.340	1.13
179601-23-1	m,p-Xylenes		104	ug/kg	0.340	2.27
95-47-6	o-Xylene		54.5	ug/kg	0.340	1.13
100-42-5	Styrene		52.8	ug/kg	0.340	1.13
75-25-2	Bromoform		56.1	ug/kg	0.340	1.13
79-34-5	1,1,2,2-Tetrachloroethane		51.8	ug/kg	0.340	1.13
96-18-4	1,2,3-Trichloropropane		57.4	ug/kg	0.340	1.13
108-86-1	Bromobenzene		48.2	ug/kg	0.340	1.13
103-65-1	n-Propylbenzene		48.8	ug/kg	0.340	1.13
95-49-8	2-Chlorotoluene		50.2	ug/kg	0.340	1.13
98-82-8	Isopropylbenzene		46.1	ug/kg	0.340	1.13
108-67-8	1,3,5-Trimethylbenzene		50.5	ug/kg	0.340	1.13
106-43-4	4-Chlorotoluene		50.0	ug/kg	0.340	1.13
98-06-6	tert-Butylbenzene		52.5	ug/kg	0.340	1.13
95-63-6	1,2,4-Trimethylbenzene		50.6	ug/kg	0.340	1.13
135-98-8	sec-Butylbenzene		50.8	ug/kg	0.340	1.13
99-87-6	4-Isopropyltoluene		52.4	ug/kg	0.340	1.13
541-73-1	1,3-Dichlorobenzene		48.4	ug/kg	0.340	1.13
106-46-7	1,4-Dichlorobenzene		46.6	ug/kg	0.340	1.13
104-51-8	n-Butylbenzene		49.7	ug/kg	0.340	1.13
96-12-8	1,2-Dibromo-3-chloropropane		54.1	ug/kg	0.340	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.67	ug/kg	1.82	5.67
630-20-6	1,1,1,2-Tetrachloroethane		54.8	ug/kg	0.340	1.13
95-50-1	1,2-Dichlorobenzene		48.7	ug/kg	0.340	1.13

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t219.d
Lab Smp Id: 1201875932 Client Smp ID: CAMO-09-9942MS
Inj Date : 07-JUL-2009 17:54
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201875932|883144|1|VOAF|1|
Misc Info : LANL 5G N/A MS 223661002
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 19 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.86210	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.695	13.682	(1.000)	1055080	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	928948	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	513037	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.974)	481432	53.6446	60.9
$ 65 Toluene-d8	98	15.527	15.523	(0.904)	1581674	48.9088	55.5
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	647920	49.0349	55.6
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	294358	60.9168	69.1
6 Chloromethane	50	5.542	5.535	(0.405)	487293	52.2335	59.3
7 Vinyl chloride	62	5.915	5.908	(0.432)	348704	48.0573	54.5
9 Bromomethane	96	6.952	6.938	(0.508)	257540	51.7391	58.7
10 Chloroethane	64	7.210	7.201	(0.526)	273448	50.2633	57.0
11 Trichlorofluoromethane	101	7.850	7.831	(0.573)	432554	62.9532	71.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
16 Acetone	43	9.263	9.249	(0.676)	535645	110.657	126
15 1,1-Dichloroethylene	61	9.092	9.079	(0.664)	611906	48.7395	55.3
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	707113	41.0700	46.6
18 Iodomethane	142	9.474	9.461	(0.692)	2351656	233.664	265
23 Methylene chloride	84	10.146	10.133	(0.741)	369504	49.5435	56.2
19 Carbon disulfide	76	9.585	9.571	(0.700)	5054297	250.393	284
26 trans-1,2-Dichloroethylene	96	10.552	10.542	(0.770)	316419	45.9333	52.1
30 1,1-Dichloroethane	63	11.325	11.316	(0.827)	660998	48.2179	54.7
35 2-Butanone	43	12.199	12.186	(0.891)	806450	148.919	169
36 cis-1,2-Dichloroethylene	96	12.204	12.195	(0.891)	365240	50.5620	57.4
101 1,3-Dichlorobenzene	146	19.550	19.551	(0.996)	713497	42.6486	48.4
33 2,2-Dichloropropane	77	12.172	12.158	(0.889)	390531	55.3189	62.8
41 Chloroform	83	12.618	12.609	(0.921)	601321	48.7329	55.3
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	679294	42.9277	48.7
39 Bromochloromethane	128	12.563	12.554	(0.917)	157232	47.3122	53.7
43 1,1,1-Trichloroethane	97	12.853	12.844	(0.938)	415045	52.7633	59.9
45 1,1-Dichloropropene	75	13.056	13.051	(0.953)	445756	50.3088	57.1
44 Carbon tetrachloride	117	13.033	13.023	(0.952)	436842	53.0016	60.1
51 1,2-Dichloroethane	62	13.447	13.438	(0.982)	501037	50.5508	57.4
47 Benzene	78	13.341	13.332	(0.974)	1324277	45.1237	51.2
54 Trichloroethylene	95	14.123	14.114	(1.031)	337066	48.2691	54.8
57 1,2-Dichloropropane	63	14.469	14.460	(1.056)	380608	48.8984	55.5
60 Bromodichloromethane	83	14.759	14.754	(1.078)	479057	52.2961	59.3
59 Dibromomethane	93	14.630	14.625	(1.068)	204466	48.1713	54.6
64 4-Methyl-2-pentanone	58	15.371	15.366	(0.895)	688843	230.443	261
63 cis-1,3-Dichloropropylene	75	15.265	15.261	(1.115)	546767	49.7544	56.4
66 Toluene	92	15.606	15.601	(0.909)	847210	43.3403	49.2
68 trans-1,3-Dichloropropylene	75	15.886	15.882	(0.925)	505181	48.5017	55.0
69 1,1,2-Trichloroethane	83	16.112	16.107	(0.938)	254324	47.3223	53.7
71 2-Hexanone	43	16.278	16.278	(0.948)	1223920	166.479	189
72 1,3-Dichloropropane	76	16.315	16.315	(0.950)	528529	46.9153	53.2
70 Tetrachloroethylene	164	16.199	16.195	(0.943)	248761	43.5591	49.4
73 Dibromochloromethane	129	16.554	16.554	(0.964)	327057	48.9287	55.5
74 1,2-Dibromoethane	107	16.738	16.733	(0.975)	279875	46.3825	52.6
77 Chlorobenzene	112	17.203	17.198	(1.002)	892687	45.4991	51.6
79 1,1,1,2-Tetrachloroethane	131	17.267	17.267	(1.006)	324408	48.3379	54.8
78 Ethylbenzene	91	17.231	17.226	(1.003)	1609399	45.2956	51.4
80 m,p-Xylenes	106	17.346	17.346	(1.010)	1195247	91.8622	104
81 o-Xylene	106	17.797	17.792	(1.036)	602480	48.0646	54.5
82 Styrene	104	17.815	17.811	(1.038)	1019496	46.5708	52.8
83 Bromoform	173	18.114	18.110	(0.923)	214404	49.4687	56.1
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	394849	45.6950	51.8
92 1,2,3-Trichloropropane	110	18.611	18.612	(0.949)	108727	50.5509	57.4(Q)
91 Bromobenzene	156	18.602	18.598	(0.948)	369341	42.4691	48.2
89 n-Propylbenzene	91	18.570	18.570	(0.946)	1857405	42.9776	48.8
94 2-Chlorotoluene	91	18.754	18.750	(0.956)	1320931	44.2116	50.2
84 Isopropylbenzene	105	18.142	18.137	(0.925)	1388198	40.6240	46.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
93 1,3,5-Trimethylbenzene	105	18.731	18.731	(0.955)	1295028	44.5314	50.5
95 4-Chlorotoluene	91	18.865	18.865	(0.962)	1176149	44.0303	50.0
96 tert-Butylbenzene	119	19.090	19.086	(0.973)	1086902	46.2607	52.5
97 1,2,4-Trimethylbenzene	105	19.145	19.145	(0.976)	1351520	44.5654	50.6
99 sec-Butylbenzene	105	19.316	19.311	(0.984)	1770796	44.7414	50.8
100 4-Isopropyltoluene	119	19.435	19.435	(0.991)	1336239	46.1467	52.4
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1366622	43.8018	49.7
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	66944	47.6676	54.1

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA1.i/070709v1/1t219.d
Date : 07-JUL-2009 17:54
Client ID: CAMO-09-9942MS
Sample Info: |120187593218831441|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

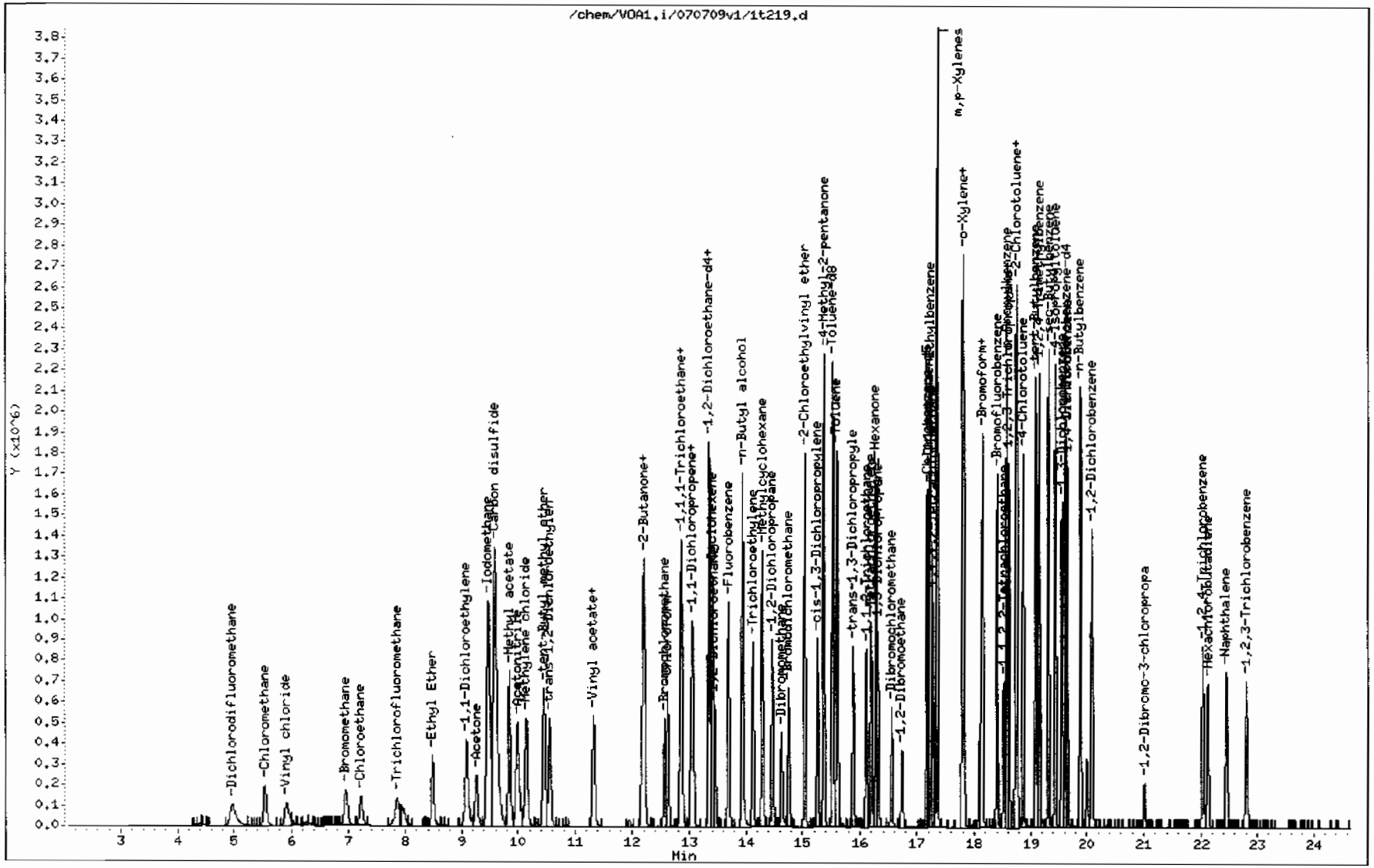

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201875933	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
Client Sample:	QC for batch 883143	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9942PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 18:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:28	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t220.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		70.5	ug/kg	0.386	1.13
74-87-3	Chloromethane		61.0	ug/kg	0.340	1.13
75-01-4	Vinyl chloride		55.8	ug/kg	0.340	1.13
74-83-9	Bromomethane		57.7	ug/kg	0.340	1.13
75-00-3	Chloroethane		57.8	ug/kg	0.340	1.13
75-69-4	Trichlorofluoromethane		71.4	ug/kg	0.647	1.13
67-64-1	Acetone		127	ug/kg	1.88	5.67
75-35-4	1,1-Dichloroethylene		55.9	ug/kg	0.340	1.13
74-88-4	Iodomethane		265	ug/kg	1.82	5.67
75-09-2	Methylene chloride		56.8	ug/kg	2.27	5.67
75-15-0	Carbon disulfide		289	ug/kg	1.42	5.67
156-60-5	trans-1,2-Dichloroethylene		52.4	ug/kg	0.340	1.13
75-34-3	1,1-Dichloroethane		54.9	ug/kg	0.340	1.13
78-93-3	2-Butanone		172	ug/kg	1.70	5.67
156-59-2	cis-1,2-Dichloroethylene		57.1	ug/kg	0.340	1.13
594-20-7	2,2-Dichloropropane		60.7	ug/kg	0.340	1.13
67-66-3	Chloroform		54.5	ug/kg	0.340	1.13
74-97-5	Bromochloromethane		53.4	ug/kg	0.374	1.13
71-55-6	1,1,1-Trichloroethane		58.8	ug/kg	0.340	1.13
563-58-6	1,1-Dichloropropene		57.1	ug/kg	0.340	1.13
56-23-5	Carbon tetrachloride		58.8	ug/kg	0.340	1.13
107-06-2	1,2-Dichloroethane		56.0	ug/kg	0.340	1.13
71-43-2	Benzene		51.0	ug/kg	0.340	1.13
79-01-6	Trichloroethylene		54.2	ug/kg	0.374	1.13
78-87-5	1,2-Dichloropropane		55.4	ug/kg	0.340	1.13
75-27-4	Bromodichloromethane		58.5	ug/kg	0.340	1.13
74-95-3	Dibromomethane		54.4	ug/kg	0.340	1.13
108-10-1	4-Methyl-2-pentanone		278	ug/kg	1.42	5.67
10061-01-5	cis-1,3-Dichloropropylene		55.9	ug/kg	0.340	1.13
108-88-3	Toluene		49.8	ug/kg	0.340	1.13
10061-02-6	trans-1,3-Dichloropropylene		56.1	ug/kg	0.340	1.13
79-00-5	1,1,2-Trichloroethane		54.6	ug/kg	0.340	1.13
591-78-6	2-Hexanone		196	ug/kg	1.70	5.67
142-28-9	1,3-Dichloropropane		55.0	ug/kg	0.340	1.13
127-18-4	Tetrachloroethylene		49.2	ug/kg	0.340	1.13
124-48-1	Dibromochloromethane		55.8	ug/kg	0.340	1.13
106-93-4	1,2-Dibromoethane		53.6	ug/kg	0.340	1.13
108-90-7	Chlorobenzene		51.0	ug/kg	0.340	1.13

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201875933	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
Client Sample:	QC for batch 883143	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-9942PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	883144	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/07/2009 18:24	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/07/2009 13:28	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1t220.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		50.3	ug/kg	0.340	1.13
179601-23-1	m,p-Xylenes		102	ug/kg	0.340	2.27
95-47-6	o-Xylene		53.8	ug/kg	0.340	1.13
100-42-5	Styrene		51.7	ug/kg	0.340	1.13
75-25-2	Bromoform		58.1	ug/kg	0.340	1.13
79-34-5	1,1,2,2-Tetrachloroethane		54.3	ug/kg	0.340	1.13
96-18-4	1,2,3-Trichloropropane		58.4	ug/kg	0.340	1.13
108-86-1	Bromobenzene		48.3	ug/kg	0.340	1.13
103-65-1	n-Propylbenzene		48.4	ug/kg	0.340	1.13
95-49-8	2-Chlorotoluene		50.1	ug/kg	0.340	1.13
98-82-8	Isopropylbenzene		45.9	ug/kg	0.340	1.13
108-67-8	1,3,5-Trimethylbenzene		50.7	ug/kg	0.340	1.13
106-43-4	4-Chlorotoluene		49.4	ug/kg	0.340	1.13
98-06-6	tert-Butylbenzene		51.5	ug/kg	0.340	1.13
95-63-6	1,2,4-Trimethylbenzene		49.6	ug/kg	0.340	1.13
135-98-8	sec-Butylbenzene		49.5	ug/kg	0.340	1.13
99-87-6	4-Isopropyltoluene		51.5	ug/kg	0.340	1.13
541-73-1	1,3-Dichlorobenzene		47.3	ug/kg	0.340	1.13
106-46-7	1,4-Dichlorobenzene		45.7	ug/kg	0.340	1.13
104-51-8	n-Butylbenzene		48.2	ug/kg	0.340	1.13
96-12-8	1,2-Dibromo-3-chloropropane		55.5	ug/kg	0.340	1.13
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.67	ug/kg	1.82	5.67
630-20-6	1,1,1,2-Tetrachloroethane		54.3	ug/kg	0.340	1.13
95-50-1	1,2-Dichlorobenzene		48.1	ug/kg	0.340	1.13

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070709v1/1t220.d
Lab Smp Id: 1201875933 Client Smp ID: CAMO-09-9942MSD
Inj Date : 07-JUL-2009 18:24
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201875933|883144|1|VOAF|1|
Misc Info : LANL 5G N/A MSD 223661002
Comment :
Method : /chem/VOA1.i/070709v1/VOA1-8260ox-070109.m
Meth Date : 09-Jul-2009 07:40 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 20 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	11.86210	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1117333	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	958392	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	517616	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.341	(0.975)	512246	53.8980	61.2
$ 65 Toluene-d8	98	15.528	15.523	(0.904)	1681162	50.3881	57.2
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	675487	50.6689	57.5
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	318129	62.1681	70.5
6 Chloromethane	50	5.535	5.535	(0.404)	530982	53.7454	61.0
7 Vinyl chloride	62	5.908	5.908	(0.432)	377788	49.1647	55.8
9 Bromomethane	96	6.943	6.938	(0.507)	267933	50.8280	57.7
10 Chloroethane	64	7.210	7.201	(0.527)	293626	50.9651	57.8
11 Trichlorofluoromethane	101	7.850	7.831	(0.573)	457761	62.9099	71.4
16 Acetone	43	9.258	9.249	(0.676)	575251	112.218	127

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
15 1,1-Dichloroethylene	61	9.088	9.079	(0.664)	654706	49.2431	55.9
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	699615	40.2751	45.7
18 Iodomethane	142	9.470	9.461	(0.692)	2493899	233.991	265
23 Methylene chloride	84	10.142	10.133	(0.741)	394848	50.0286	56.8
19 Carbon disulfide	76	9.576	9.571	(0.699)	5443338	254.642	289
26 trans-1,2-Dichloroethylene	96	10.547	10.542	(0.770)	336634	46.1451	52.4
30 1,1-Dichloroethane	63	11.325	11.316	(0.827)	702763	48.4082	54.9
35 2-Butanone	43	12.195	12.186	(0.891)	869688	151.649	172
36 cis-1,2-Dichloroethylene	96	12.204	12.195	(0.891)	385010	50.3293	57.1
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	703651	41.6880	47.3
33 2,2-Dichloropropane	77	12.167	12.158	(0.889)	400272	53.5397	60.7
41 Chloroform	83	12.614	12.609	(0.921)	627743	48.0398	54.5
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	677349	42.4261	48.1
39 Bromochloromethane	128	12.563	12.554	(0.918)	165675	47.0752	53.4
43 1,1,1-Trichloroethane	97	12.853	12.844	(0.939)	431802	51.8351	58.8
45 1,1-Dichloropropene	75	13.056	13.051	(0.954)	472120	50.3155	57.1
44 Carbon tetrachloride	117	13.033	13.023	(0.952)	452606	51.8546	58.8
51 1,2-Dichloroethane	62	13.447	13.438	(0.982)	517680	49.3199	56.0
47 Benzene	78	13.341	13.332	(0.974)	1397558	44.9675	51.0
54 Trichloroethylene	95	14.124	14.114	(1.032)	353078	47.7450	54.2
57 1,2-Dichloropropane	63	14.469	14.460	(1.057)	402466	48.8257	55.4
60 Bromodichloromethane	83	14.759	14.754	(1.078)	500056	51.5470	58.5
59 Dibromomethane	93	14.630	14.625	(1.069)	215637	47.9726	54.4
64 4-Methyl-2-pentanone	58	15.371	15.366	(0.895)	754999	244.814	278
63 cis-1,3-Dichloropropylene	75	15.265	15.261	(1.115)	573530	49.2820	55.9
66 Toluene	92	15.606	15.601	(0.909)	884704	43.8679	49.8
68 trans-1,3-Dichloropropylene	75	15.887	15.882	(0.925)	531394	49.4510	56.1
69 1,1,2-Trichloroethane	83	16.112	16.107	(0.938)	266900	48.1366	54.6
71 2-Hexanone	43	16.278	16.278	(0.948)	1308303	172.489	196
72 1,3-Dichloropropane	76	16.315	16.315	(0.950)	563254	48.4617	55.0
70 Tetrachloroethylene	164	16.200	16.195	(0.943)	255728	43.4034	49.2
73 Dibromochloromethane	129	16.559	16.554	(0.964)	338942	49.1489	55.8
74 1,2-Dibromoethane	107	16.734	16.733	(0.975)	294025	47.2305	53.6
77 Chlorobenzene	112	17.203	17.198	(1.002)	909206	44.9173	51.0
79 1,1,1,2-Tetrachloroethane	131	17.268	17.267	(1.006)	331575	47.8880	54.3
78 Ethylbenzene	91	17.231	17.226	(1.003)	1626570	44.3724	50.3
80 m,p-Xylenes	106	17.346	17.346	(1.010)	1206333	89.8658	102
81 o-Xylene	106	17.797	17.792	(1.036)	612696	47.3779	53.8
82 Styrene	104	17.815	17.811	(1.038)	1029263	45.5725	51.7
83 Bromoform	173	18.114	18.110	(0.923)	223955	51.2152	58.1
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	417113	47.8445	54.3
92 1,2,3-Trichloropropane	110	18.616	18.612	(0.949)	111757	51.5000	58.4(Q)
91 Bromobenzene	156	18.602	18.598	(0.948)	373160	42.5286	48.2
89 n-Propylbenzene	91	18.570	18.570	(0.946)	1861582	42.6932	48.4
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1330047	44.1229	50.1
84 Isopropylbenzene	105	18.142	18.137	(0.925)	1393732	40.4251	45.9
93 1,3,5-Trimethylbenzene	105	18.731	18.731	(0.955)	1311919	44.7131	50.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
95 4-Chlorotoluene	91	18.865	18.865	(0.962)	1173885	43.5568	49.4
96 tert-Butylbenzene	119	19.090	19.086	(0.973)	1076418	45.4092	51.5
97 1,2,4-Trimethylbenzene	105	19.146	19.145	(0.976)	1338915	43.7592	49.6
99 sec-Butylbenzene	105	19.316	19.311	(0.984)	1740787	43.5941	49.5
100 4-Isopropyltoluene	119	19.436	19.435	(0.991)	1325975	45.3872	51.5
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1337306	42.4830	48.2
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	69250	48.8734	55.4

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA1.i/070709v1/1t220.d
Date : 07-JUL-2009 18:24
Client ID: CAMO-09-9942WSD
Sample Info: I120187593318831441|VOAF11|
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

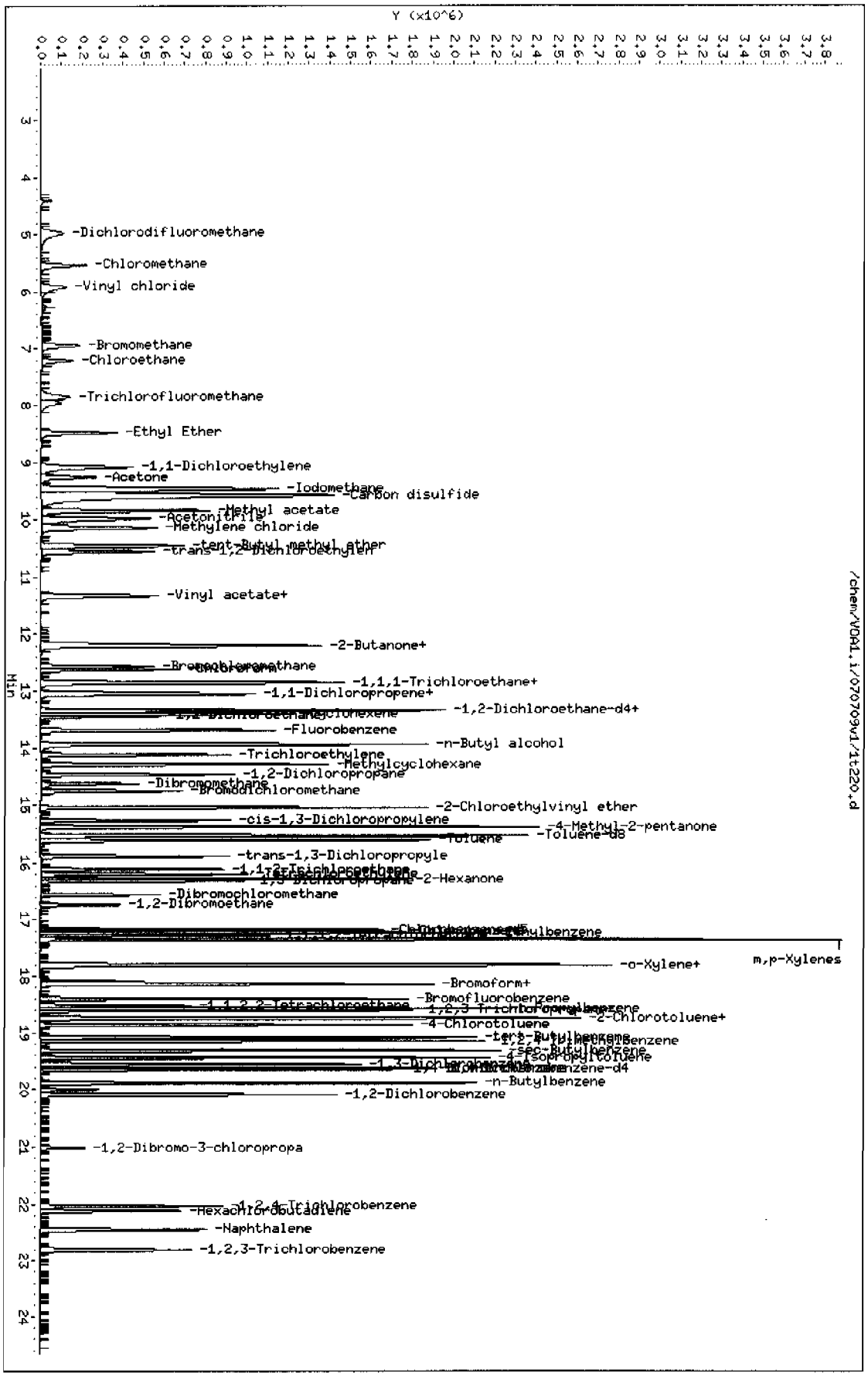

Page 1

Miscellaneous Data

Prep LogBook

Analyst: RXM4 Verified by:_____

Batch: 883143

Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201875931		SW846 5030	07-JUL-2009 08:00	5 g	5 mL	1	SOIL
LCS	1201875934		SW846 5030	07-JUL-2009 08:01	5 g	5 mL	1	SOIL
LCS	1201875935		SW846 5030	07-JUL-2009 08:02	5 g	5 mL	1	SOIL
SAMPLE	232661001		SW846 5030	07-JUL-2009 13:25	5 g	5 mL	1	SOIL
SAMPLE	232661002		SW846 5030	07-JUL-2009 13:26	5 g	5 mL	1	SOIL
PS	1201875932	232661002	SW846 5030	07-JUL-2009 13:27	5 g	5 mL	1	SOIL
PSD	1201875933	232661002	SW846 5030	07-JUL-2009 13:28	5 g	5 mL	1	SOIL
SAMPLE	232661003		SW846 5030	07-JUL-2009 13:29	5 g	5 mL	1	SOIL
SAMPLE	232661004		SW846 5030	07-JUL-2009 13:30	5 g	5 mL	1	SOIL
SAMPLE	232661005		SW846 5030	07-JUL-2009 13:31	5 g	5 mL	1	SOIL
SAMPLE	232661006		SW846 5030	07-JUL-2009 13:32	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/1/2009 Method 8260B/624 Operator: RJM

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 81710

Sequence Number: 070109v1

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090701-03		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090701-04			5+5	
BFB	UVM090413-02				1
SHORT	W1VM090701-23		5+5	5+5	

Purge Amount	
5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable O/X	Comments
1 Jul 2009 08:55	1S301.D	UVM090413-02	GEL	BFB	5ML	1	N/A	1	W	RXM4	N/A	X	See 1S309
1 Jul 2009 09:23	1S302.D	W1VM090701-01	GEL	CCV/LCS	5ML	1	N/A	2	S	RXM4	N/A	X	UVM090605-01C/IVM090630-01
1 Jul 2009 09:54	1S303.D	W1VM090701-021	GEL	LCS	5G	1	N/A	3	W	RXM4	N/A	X	UVM090605-01C/IVM090630-01
1 Jul 2009 12:01	1S304.D	120187---	GEL	BLANK	5ML	1	N/A	4	W	RXM4	N/A	X	
1 Jul 2009 12:31	1S305.D	W1VM090701-03	GEL	CCV/LCS	5ML	1	N/A	5	W	RXM4	N/A	X	UVM090605-01D/IVM090630-01
1 Jul 2009 13:01	1S306.D	W1VM090701-04	GEL	LCS	5G	1	N/A	6	S	RXM4	N/A	X	UVM090605-01D/IVM090630-01
1 Jul 2009 13:31	1S307.D	12018--	GEL	BLANK	5ML	1	N/A	7	W	RXM4	N/A	X	
1 Jul 2009 14:04	1S308.D	12018--	GEL	BLANK	5ML	1	N/A	8	W	RXM4	N/A	X	
1 Jul 2009 14:32	1S309.D	UVM090413-02	GEL	BFB	5ML	1	N/A	9	W	RXM4	N/A	O	Passed.
1 Jul 2009 15:01	1S310.D	W1VM090701-05	GEL	VSTD0005	5ML	1	N/A	10	W	RXM4	N/A	O	UVM090603-01B/UVM090617-01C
1 Jul 2009 15:31	1S311.D	W1VM090701-06	GEL	VSTD001	5ML	1	N/A	11	W	RXM4	N/A	O	UVM090603-02B/UVM090617-02C
1 Jul 2009 16:01	1S312.D	W1VM090701-07	GEL	VSTD001	5ML	1	N/A	12	W	RXM4	N/A	X	UVM090603-02B/UVM090617-02C; not needed.
1 Jul 2009 16:32	1S313.D	W1VM090701-08	GEL	VSTD002	5ML	1	N/A	13	W	RXM4	N/A	O	UVM090603-03B/UVM090617-03C
1 Jul 2009 17:02	1S314.D	W1VM090701-09	GEL	VSTD005	5ML	1	N/A	14	W	RXM4	N/A	O	UVM090603-04B/UVM090617-04C
1 Jul 2009 17:32	1S315.D	W1VM090701-10	GEL	VSTD010	5ML	1	N/A	15	W	RXM4	N/A	O	UVM090603-05B/UVM090617-05C
1 Jul 2009 18:02	1S316.D	W1VM090701-11	GEL	VSTD020	5ML	1	N/A	16	W	RXM4	N/A	O	UVM090603-06B/UVM090617-06C
1 Jul 2009 18:33	1S317.D	W1VM090701-12	GEL	VSTD050	5ML	1	N/A	17	W	RXM4	N/A	O	UVM090603-07B/UVM090617-07C
1 Jul 2009 19:04	1S318.D	W1VM090701-13	GEL	VSTD100	5ML	1	N/A	18	W	RXM4	N/A	O	UVM090603-08B/UVM090617-08C
1 Jul 2009 19:34	1S319.D	12018--	GEL	BLANK	5ML	1	N/A	19	W	RXM4	N/A	X	
1 Jul 2009 20:05	1S320.D	W1VM090701-14	GEL	VSTD005S	5ML	1	N/A	20	W	RXM4	N/A	O	UVM090701-01/UVM090625-01A
1 Jul 2009 20:36	1S321.D	W1VM090701-15	GEL	VSTD010S	5ML	1	N/A	21	W	RXM4	N/A	O	UVM090701-02/UVM090625-02A
1 Jul 2009 21:06	1S322.D	W1VM090701-16	GEL	VSTD025S	5ML	1	N/A	22	W	RXM4	N/A	O	UVM090701-03/UVM090625-03A
1 Jul 2009 21:36	1S323.D	W1VM090701-17	GEL	VSTD050S	5ML	1	N/A	23	W	RXM4	N/A	O	UVM090701-04/UVM090625-04A
1 Jul 2009 22:07	1S324.D	W1VM090701-18	GEL	VSTD100S	5ML	1	N/A	24	W	RXM4	N/A	O	UVM090701-05/UVM090625-05A
1 Jul 2009 22:38	1S325.D	W1VM090701-19	GEL	VSTD250S	5ML	1	N/A	25	W	RXM4	N/A	O	UVM090701-06/UVM090625-06A
1 Jul 2009 23:08	1S326.D	W1VM090701-20	GEL	VSTD500S	5ML	1	N/A	26	W	RXM4	N/A	O	UVM090701-07/UVM090625-07A
1 Jul 2009 23:39	1S327.D	12018--	GEL	BLANK	5ML	1	N/A	27	W	RXM4	N/A	X	

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/1/2009 Method 8260B/624 Operator: RJM

REVIEWED BY:
DATE:

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

CI test lot # 81710

Sequence Number: 070109v1

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090701-03		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090701-04			5+5	
BFB	UVM090413-02				1
SHORT	W1VM090701-23		5+5	5+5	

Purge Amount	
5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable O/X	Comments
2 Jul 2009 00:10	1S328.D	W1VM090701-21	GEL	ICV	5ML	1	N/A	28	W	RXM4	N/A	X	UVM090527-01E/IVM090630-01; Vinyl Chloride low
2 Jul 2009 00:41	1S329.D	W1VM090701-22	GEL	ICV	5ML	1	N/A	29	W	RXM4	N/A	O	UVM090605-01D/IVM090630-01
2 Jul 2009 01:12	1S330.D	W1VM090701-23	GEL	SHORT ICV	5ML	1	N/A	30	W	RXM4	N/A	O	UVM090701-01/UVM090527-01E

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/7/2009 Method 8260B/624 Operator: RJM

REVIEWED BY: AS
DATE: 07/14/09

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 81710

Sequence Number: 070709v1

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090707-01		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090707-01/02			5+5	
BFB	UVM090413-02				1
SHORT	UVM090701-08A		5	5	

Purge Amount	
5	Water Purge Vol:ML
5	Soil Purge Wt.:G
	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

RJm 7/9/09

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable O/X	Comments
7 Jul 2009 07:49	1T201.D	UVM090413-02	GEL	BFB	5ML	1	N/A	1	W	RXM4	N/A	O	
7 Jul 2009 08:18	1T202.D	W1VM090707-01	GEL	CCV/LCS	5ML	1	N/A	2	W	RXM4	N/A	O	UVM090605-01E/IVM090630-01
7 Jul 2009 08:48	1T203.D	W1VM090707-02	GEL	LCS	5G	1	N/A	3	S	RXM4	N/A	O	UVM090605-01E/IVM090630-01
7 Jul 2009 09:39	1T204.D	UVM090701-08A	GEL	SHORT	5ML	1	N/A	4	W	RXM4	N/A	O	UVM090701-08A
7 Jul 2009 10:09	1T205.D	UVM090701-08A	GEL	SHORT	5G	1	N/A	5	S	RXM4	N/A	O	UVM090701-08A
7 Jul 2009 10:40	1T206.D	120187--	GEL	BLANK	5ML	1	N/A	6	W	RXM4	N/A	O	
7 Jul 2009 11:10	1T207.D	120187--	GEL	BLANK	5G	1	N/A	7	S	RXM4	N/A	O	
7 Jul 2009 11:40	1T208.D	232749001	LANL	883057	5ML	1	PH7	8	W	RXM4	N	O	
7 Jul 2009 12:21	1T209.D	232854001	LANL	883057	5ML	1	PH7	9	W	RXM4	N	O	
7 Jul 2009 13:17	1T210.D	1201875723	LANL	883057	5ML	1	PH7	10	W	RXM4	N	O	MS 232749001
7 Jul 2009 13:48	1T211.D	1201875724	LANL	883057	5ML	1	PH7	11	W	RXM4	N	O	MSD 232749001
7 Jul 2009 14:19	1T212.D	120187--	GEL	BLANK	5ML	1	N/A	12	W	RXM4	N/A	X	Rinse
7 Jul 2009 14:49	1T213.D	232661001	LANL	883144	5G	1	N/A	13	S	RXM4	N/A	O	
7 Jul 2009 15:20	1T214.D	232661002	LANL	883144	5G	1	N/A	14	S	RXM4	N/A	O	
7 Jul 2009 15:51	1T215.D	232661003	LANL	883144	5G	1	N/A	15	S	RXM4	N/A	O	
7 Jul 2009 16:22	1T216.D	232661004	LANL	883144	5G	1	N/A	16	S	RXM4	N/A	O	
7 Jul 2009 16:53	1T217.D	232661005	LANL	883144	5G	1	N/A	17	S	RXM4	N/A	O	
7 Jul 2009 17:23	1T218.D	232661006	LANL	883144	5G	1	N/A	18	S	RXM4	N/A	O	
7 Jul 2009 17:54	1T219.D	1201875932	LANL	883144	5G	1	N/A	19	S	RXM4	N/A	O	MS 223661002
7 Jul 2009 18:24	1T220.D	1201875933	LANL	883144	5G	1	N/A	20	S	RXM4	N/A	O	MSD 223661002

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GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 711491
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
14-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
VOA GC/MS	SW846 8260B	Solid	LANL
Batch ID:	**Sample Numbers:**		
883144	232661006		

Potentially affected work order(s)(SDG): 232661(09-2515)

Application Issues:

Other

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Sample 232661006 was outside the internal standard response recovery acceptance criteria for 1,4-Dichlorobenzene-d4 (-51.93%, limits +100% to -50%).	1. Narrate and report data. The sample was analyzed twice with similar results. It is believed matrix interference has been demonstrated.

Originator's Name:

Amy Jamison 14-JUL-09

Data Validator/Group Leader:

Erin Haubert 15-JUL-09

GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2515

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	882565
Prep Batch Number:	882563

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232661002	CAMO-09-9942
232661003	CAMO-09-9941
232661004	CAMO-09-9943
232661005	CAMO-09-10030
232661006	CAMO-09-9989
1201874482	Method Blank (MB)
1201874483	Laboratory Control Sample (LCS)
1201874484	232741002(CAMO-09-9956) Matrix Spike (MS)
1201874485	232741002(CAMO-09-9956) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various

calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
The non-SDG sample 232741002 (CAMO-09-9956) was selected for analysis as the matrix spike and matrix spike duplicate. Please see the associated raw data files located in the Miscellaneous Section of the data report.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for confirmations and/or dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Additional Comments
Additional comments were not required for this SDG.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration

The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD5.I	HP Mass Spectrometer	HP6890/HP5973	DB-5MS	25m x 0.2mm, 0.33um (5% Phenylmethylpolysiloxane)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

Reviewer: Dan Benkum **Date:** 7-20-09

Roadmap for LANL 09-2515 SVOA

This roadmap was analyzed by rmb on 07-08-2009, 09:16.
This roadmap was reviewed by jcb on 07-08-2009, 11:01.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD5.i/s070709.b/s5g0706.d	232661002	07-JUL-2009	09:13	09-2515.sub	CAMO-09-9942	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0707.d	232661003	07-JUL-2009	09:41	09-2515.sub	CAMO-09-9941	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0708.d	232661004	07-JUL-2009	10:10	09-2515.sub	CAMO-09-9943	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0709.d	232661005	07-JUL-2009	10:38	09-2515.sub	CAMO-09-10030	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0710.d	232661006	07-JUL-2009	11:07	09-2515.sub	CAMO-09-9989	1	882565	

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD5.i/s070709.b/s5g0704.d	1201874482	mb	07-JUL-2009	08:17	09-2515.sub	SBLK01	1	882565	
☐	N	/chem/MSD5.i/s070709.b/s5g0705.d	1201874483	lcs	07-JUL-2009	08:45	09-2515.sub	SBLK01LCS	1	882565	

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661005	Date Received:	07/01/2009 09:00	%Moisture:	10
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10030	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 10:38	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5g0709.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	370	ug/kg	74.1	370
108-95-2	Phenol	U	370	ug/kg	74.1	370
95-57-8	2-Chlorophenol	U	370	ug/kg	74.1	370
106-46-7	1,4-Dichlorobenzene	U	370	ug/kg	74.1	370
621-64-7	N-Nitrosodipropylamine	U	370	ug/kg	74.1	370
59-50-7	4-Chloro-3-methylphenol	U	370	ug/kg	74.1	370
83-32-9	Acenaphthene	U	37.0	ug/kg	12.2	37.0
121-14-2	2,4-Dinitrotoluene	U	370	ug/kg	37.0	370
100-02-7	4-Nitrophenol	U	370	ug/kg	122	370
87-86-5	Pentachlorophenol	U	370	ug/kg	92.6	370
129-00-0	Pyrene	U	37.0	ug/kg	11.1	37.0
110-86-1	Pyridine	U	370	ug/kg	74.1	370
62-53-3	Aniline	U	370	ug/kg	111	370
111-44-4	bis(2-Chloroethyl) ether	U	370	ug/kg	74.1	370
541-73-1	1,3-Dichlorobenzene	U	370	ug/kg	74.1	370
100-51-6	Benzyl alcohol	U	370	ug/kg	111	370
95-50-1	1,2-Dichlorobenzene	U	370	ug/kg	74.1	370
108-60-1	bis(2-Chloroisopropyl)ether	U	370	ug/kg	74.1	370
95-48-7	o-Cresol	U	370	ug/kg	74.1	370
65794-96-9	m,p-Cresols	U	370	ug/kg	111	370
67-72-1	Hexachloroethane	U	370	ug/kg	74.1	370
98-95-3	Nitrobenzene	U	370	ug/kg	74.1	370
78-59-1	Isophorone	U	370	ug/kg	74.1	370
88-75-5	2-Nitrophenol	U	370	ug/kg	74.1	370
105-67-9	2,4-Dimethylphenol	U	370	ug/kg	130	370
111-91-1	bis(2-Chloroethoxy)methane	U	370	ug/kg	74.1	370
120-83-2	2,4-Dichlorophenol	U	370	ug/kg	74.1	370
65-85-0	Benzoic acid	U	741	ug/kg	185	741
91-20-3	Naphthalene	U	37.0	ug/kg	11.1	37.0
106-47-8	4-Chloroaniline	U	370	ug/kg	74.1	370
87-68-3	Hexachlorobutadiene	U	370	ug/kg	74.1	370
91-57-6	2-Methylnaphthalene	U	37.0	ug/kg	7.41	37.0
77-47-4	Hexachlorocyclopentadiene	U	370	ug/kg	74.1	370
88-06-2	2,4,6-Trichlorophenol	U	370	ug/kg	74.1	370
95-95-4	2,4,5-Trichlorophenol	U	370	ug/kg	74.1	370
91-58-7	2-Chloronaphthalene	U	37.0	ug/kg	12.2	37.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	370	ug/kg	74.1	370
99-09-2	3-Nitroaniline	U	370	ug/kg	74.1	370

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**	**Date Collected:**	**06/26/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232661005**	**Date Received:**	**07/01/2009 09:00**	**%Moisture:**	**10**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10030**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 10:38**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30.01 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0709.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	370	ug/kg	74.1	370
606-20-2	2,6-Dinitrotoluene	U	370	ug/kg	37.0	370
208-96-8	Acenaphthylene	U	37.0	ug/kg	11.1	37.0
51-28-5	2,4-Dinitrophenol	U	741	ug/kg	141	741
132-64-9	Dibenzofuran	U	370	ug/kg	74.1	370
84-66-2	Diethylphthalate	U	370	ug/kg	74.1	370
86-73-7	Fluorene	U	37.0	ug/kg	11.1	37.0
7005-72-3	4-Chlorophenylphenylether	U	370	ug/kg	74.1	370
534-52-1	2-Methyl-4,6-dinitrophenol	U	370	ug/kg	74.1	370
100-01-6	4-Nitroaniline	U	370	ug/kg	111	370
	p-Nitroaniline					
122-39-4	Diphenylamine	U	370	ug/kg	74.1	370
122-66-7	Azobenzene	U	370	ug/kg	74.1	370
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	370	ug/kg	74.1	370
118-74-1	Hexachlorobenzene	U	370	ug/kg	74.1	370
85-01-8	Phenanthrene	U	37.0	ug/kg	11.1	37.0
120-12-7	Anthracene	U	37.0	ug/kg	7.41	37.0
84-74-2	Di-n-butylphthalate	U	370	ug/kg	74.1	370
206-44-0	Fluoranthene	U	37.0	ug/kg	11.1	37.0
85-68-7	Butylbenzylphthalate	U	370	ug/kg	74.1	370
56-55-3	Benzo(a)anthracene	U	37.0	ug/kg	11.1	37.0
91-94-1	3,3'-Dichlorobenzidine	U	370	ug/kg	111	370
218-01-9	Chrysene	U	37.0	ug/kg	11.1	37.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	370	ug/kg	74.1	370
117-84-0	Di-n-octylphthalate	U	370	ug/kg	74.1	370
205-99-2	Benzo(b)fluoranthene	U	37.0	ug/kg	11.1	37.0
207-08-9	Benzo(k)fluoranthene	U	37.0	ug/kg	11.1	37.0
50-32-8	Benzo(a)pyrene	U	37.0	ug/kg	11.1	37.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.0	ug/kg	11.1	37.0
53-70-3	Dibenzo(a,h)anthracene	U	37.0	ug/kg	11.1	37.0
191-24-2	Benzo(ghi)perylene	U	37.0	ug/kg	11.1	37.0
120-82-1	1,2,4-Trichlorobenzene	U	370	ug/kg	74.1	370

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.21	169	ug/kg		J
	Unknown Aldol Condensate	3.02	429	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661005	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10030	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 10:38	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0709.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.15	305	ug/kg	92	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661003	Date Received:	07/01/2009 09:00	%Moisture:	10.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9941	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 09:41	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0707.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	374	ug/kg	74.7	374
108-95-2	Phenol	U	374	ug/kg	74.7	374
95-57-8	2-Chlorophenol	U	374	ug/kg	74.7	374
106-46-7	1,4-Dichlorobenzene	U	374	ug/kg	74.7	374
621-64-7	N-Nitrosodipropylamine	U	374	ug/kg	74.7	374
59-50-7	4-Chloro-3-methylphenol	U	374	ug/kg	74.7	374
83-32-9	Acenaphthene	U	37.4	ug/kg	12.3	37.4
121-14-2	2,4-Dinitrotoluene	U	374	ug/kg	37.4	374
100-02-7	4-Nitrophenol	U	374	ug/kg	123	374
87-86-5	Pentachlorophenol	U	374	ug/kg	93.4	374
129-00-0	Pyrene	U	37.4	ug/kg	11.2	37.4
110-86-1	Pyridine	U	374	ug/kg	74.7	374
62-53-3	Aniline	U	374	ug/kg	112	374
111-44-4	bis(2-Chloroethyl) ether	U	374	ug/kg	74.7	374
541-73-1	1,3-Dichlorobenzene	U	374	ug/kg	74.7	374
100-51-6	Benzyl alcohol	U	374	ug/kg	112	374
95-50-1	1,2-Dichlorobenzene	U	374	ug/kg	74.7	374
108-60-1	bis(2-Chloroisopropyl)ether	U	374	ug/kg	74.7	374
95-48-7	o-Cresol	U	374	ug/kg	74.7	374
65794-96-9	m,p-Cresols	U	374	ug/kg	112	374
67-72-1	Hexachloroethane	U	374	ug/kg	74.7	374
98-95-3	Nitrobenzene	U	374	ug/kg	74.7	374
78-59-1	Isophorone	U	374	ug/kg	74.7	374
88-75-5	2-Nitrophenol	U	374	ug/kg	74.7	374
105-67-9	2,4-Dimethylphenol	U	374	ug/kg	131	374
111-91-1	bis(2-Chloroethoxy)methane	U	374	ug/kg	74.7	374
120-83-2	2,4-Dichlorophenol	U	374	ug/kg	74.7	374
65-85-0	Benzoic acid	U	747	ug/kg	187	747
91-20-3	Naphthalene	U	37.4	ug/kg	11.2	37.4
106-47-8	4-Chloroaniline	U	374	ug/kg	74.7	374
87-68-3	Hexachlorobutadiene	U	374	ug/kg	74.7	374
91-57-6	2-Methylnaphthalene	U	37.4	ug/kg	7.47	37.4
77-47-4	Hexachlorocyclopentadiene	U	374	ug/kg	74.7	374
88-06-2	2,4,6-Trichlorophenol	U	374	ug/kg	74.7	374
95-95-4	2,4,5-Trichlorophenol	U	374	ug/kg	74.7	374
91-58-7	2-Chloronaphthalene	U	37.4	ug/kg	12.3	37.4
88-74-4	2-Nitroaniline	U	374	ug/kg	74.7	374
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	374	ug/kg	74.7	374

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661003	Date Received:	07/01/2009 09:00	%Moisture:	10.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9941	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 09:41	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0707.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	374	ug/kg	74.7	374
606-20-2	2,6-Dinitrotoluene	U	374	ug/kg	37.4	374
208-96-8	Acenaphthylene	U	37.4	ug/kg	11.2	37.4
51-28-5	2,4-Dinitrophenol	U	747	ug/kg	142	747
132-64-9	Dibenzofuran	U	374	ug/kg	74.7	374
84-66-2	Diethylphthalate	U	374	ug/kg	74.7	374
86-73-7	Fluorene	U	37.4	ug/kg	11.2	37.4
7005-72-3	4-Chlorophenylphenylether	U	374	ug/kg	74.7	374
534-52-1	2-Methyl-4,6-dinitrophenol	U	374	ug/kg	74.7	374
100-01-6	4-Nitroaniline	U	374	ug/kg	112	374
	p-Nitroaniline					
122-39-4	Diphenylamine	U	374	ug/kg	74.7	374
122-66-7	Azobenzene	U	374	ug/kg	74.7	374
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	374	ug/kg	74.7	374
118-74-1	Hexachlorobenzene	U	374	ug/kg	74.7	374
85-01-8	Phenanthrene	U	37.4	ug/kg	11.2	37.4
120-12-7	Anthracene	U	37.4	ug/kg	7.47	37.4
84-74-2	Di-n-butylphthalate	U	374	ug/kg	74.7	374
206-44-0	Fluoranthene	U	37.4	ug/kg	11.2	37.4
85-68-7	Butylbenzylphthalate	U	374	ug/kg	74.7	374
56-55-3	Benzo(a)anthracene	U	37.4	ug/kg	11.2	37.4
91-94-1	3,3'-Dichlorobenzidine	U	374	ug/kg	112	374
218-01-9	Chrysene	U	37.4	ug/kg	11.2	37.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	374	ug/kg	74.7	374
117-84-0	Di-n-octylphthalate	U	374	ug/kg	74.7	374
205-99-2	Benzo(b)fluoranthene	U	37.4	ug/kg	11.2	37.4
207-08-9	Benzo(k)fluoranthene	U	37.4	ug/kg	11.2	37.4
50-32-8	Benzo(a)pyrene	U	37.4	ug/kg	11.2	37.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.4	ug/kg	11.2	37.4
53-70-3	Dibenzo(a,h)anthracene	U	37.4	ug/kg	11.2	37.4
191-24-2	Benzo(ghi)perylene	U	37.4	ug/kg	11.2	37.4
120-82-1	1,2,4-Trichlorobenzene	U	374	ug/kg	74.7	374

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Flt	Qual
	Unknown Aldol Condensate	3.02	401	ug/kg		JA
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.15	226	ug/kg	97	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661003	Date Received:	07/01/2009 09:00	%Moisture:	10.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9941	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 09:41	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0707.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	16.69	203	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661002	Date Received:	07/01/2009 09:00	%Moisture:	11.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9942	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 09:13	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0706.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	378	ug/kg	75.6	378
108-95-2	Phenol	U	378	ug/kg	75.6	378
95-57-8	2-Chlorophenol	U	378	ug/kg	75.6	378
106-46-7	1,4-Dichlorobenzene	U	378	ug/kg	75.6	378
621-64-7	N-Nitrosodipropylamine	U	378	ug/kg	75.6	378
59-50-7	4-Chloro-3-methylphenol	U	378	ug/kg	75.6	378
83-32-9	Acenaphthene	U	37.8	ug/kg	12.5	37.8
121-14-2	2,4-Dinitrotoluene	U	378	ug/kg	37.8	378
100-02-7	4-Nitrophenol	U	378	ug/kg	125	378
87-86-5	Pentachlorophenol	U	378	ug/kg	94.5	378
129-00-0	Pyrene	U	37.8	ug/kg	11.3	37.8
110-86-1	Pyridine	U	378	ug/kg	75.6	378
62-53-3	Aniline	U	378	ug/kg	113	378
111-44-4	bis(2-Chloroethyl) ether	U	378	ug/kg	75.6	378
541-73-1	1,3-Dichlorobenzene	U	378	ug/kg	75.6	378
100-51-6	Benzyl alcohol	U	378	ug/kg	113	378
95-50-1	1,2-Dichlorobenzene	U	378	ug/kg	75.6	378
108-60-1	bis(2-Chloroisopropyl)ether	U	378	ug/kg	75.6	378
95-48-7	o-Cresol	U	378	ug/kg	75.6	378
65794-96-9	m,p-Cresols	U	378	ug/kg	113	378
67-72-1	Hexachloroethane	U	378	ug/kg	75.6	378
98-95-3	Nitrobenzene	U	378	ug/kg	75.6	378
78-59-1	Isophorone	U	378	ug/kg	75.6	378
88-75-5	2-Nitrophenol	U	378	ug/kg	75.6	378
105-67-9	2,4-Dimethylphenol	U	378	ug/kg	132	378
111-91-1	bis(2-Chloroethoxy)methane	U	378	ug/kg	75.6	378
120-83-2	2,4-Dichlorophenol	U	378	ug/kg	75.6	378
65-85-0	Benzoic acid	U	756	ug/kg	189	756
91-20-3	Naphthalene	U	37.8	ug/kg	11.3	37.8
106-47-8	4-Chloroaniline	U	378	ug/kg	75.6	378
87-68-3	Hexachlorobutadiene	U	378	ug/kg	75.6	378
91-57-6	2-Methylnaphthalene	U	37.8	ug/kg	7.56	37.8
77-47-4	Hexachlorocyclopentadiene	U	378	ug/kg	75.6	378
88-06-2	2,4,6-Trichlorophenol	U	378	ug/kg	75.6	378
95-95-4	2,4,5-Trichlorophenol	U	378	ug/kg	75.6	378
91-58-7	2-Chloronaphthalene	U	37.8	ug/kg	12.5	37.8
88-74-4	2-Nitroaniline	U	378	ug/kg	75.6	378
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	378	ug/kg	75.6	378

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661002	Date Received:	07/01/2009 09:00	%Moisture:	11.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9942	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 09:13	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0706.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	378	ug/kg	75.6	378
606-20-2	2,6-Dinitrotoluene	U	378	ug/kg	37.8	378
208-96-8	Acenaphthylene	U	37.8	ug/kg	11.3	37.8
51-28-5	2,4-Dinitrophenol	U	756	ug/kg	144	756
132-64-9	Dibenzofuran	U	378	ug/kg	75.6	378
84-66-2	Diethylphthalate	U	378	ug/kg	75.6	378
86-73-7	Fluorene	U	37.8	ug/kg	11.3	37.8
7005-72-3	4-Chlorophenylphenylether	U	378	ug/kg	75.6	378
534-52-1	2-Methyl-4,6-dinitrophenol	U	378	ug/kg	75.6	378
100-01-6	4-Nitroaniline	U	378	ug/kg	113	378
	p-Nitroaniline					
122-39-4	Diphenylamine	U	378	ug/kg	75.6	378
122-66-7	Azobenzene	U	378	ug/kg	75.6	378
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	378	ug/kg	75.6	378
118-74-1	Hexachlorobenzene	U	378	ug/kg	75.6	378
85-01-8	Phenanthrene	U	37.8	ug/kg	11.3	37.8
120-12-7	Anthracene	U	37.8	ug/kg	7.56	37.8
84-74-2	Di-n-butylphthalate	U	378	ug/kg	75.6	378
206-44-0	Fluoranthene	U	37.8	ug/kg	11.3	37.8
85-68-7	Butylbenzylphthalate	U	378	ug/kg	75.6	378
56-55-3	Benzo(a)anthracene	U	37.8	ug/kg	11.3	37.8
91-94-1	3,3'-Dichlorobenzidine	U	378	ug/kg	113	378
218-01-9	Chrysene	U	37.8	ug/kg	11.3	37.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	378	ug/kg	75.6	378
117-84-0	Di-n-octylphthalate	U	378	ug/kg	75.6	378
205-99-2	Benzo(b)fluoranthene	U	37.8	ug/kg	11.3	37.8
207-08-9	Benzo(k)fluoranthene	U	37.8	ug/kg	11.3	37.8
50-32-8	Benzo(a)pyrene	U	37.8	ug/kg	11.3	37.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.8	ug/kg	11.3	37.8
53-70-3	Dibenzo(a,h)anthracene	U	37.8	ug/kg	11.3	37.8
191-24-2	Benzo(ghi)perylene	U	37.8	ug/kg	11.3	37.8
120-82-1	1,2,4-Trichlorobenzene	U	378	ug/kg	75.6	378

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	388	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661004	Date Received:	07/01/2009 09:00	%Moisture:	13.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9943	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 10:10	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0708.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	387	ug/kg	77.3	387
108-95-2	Phenol	U	387	ug/kg	77.3	387
95-57-8	2-Chlorophenol	U	387	ug/kg	77.3	387
106-46-7	1,4-Dichlorobenzene	U	387	ug/kg	77.3	387
621-64-7	N-Nitrosodipropylamine	U	387	ug/kg	77.3	387
59-50-7	4-Chloro-3-methylphenol	U	387	ug/kg	77.3	387
83-32-9	Acenaphthene	U	38.7	ug/kg	12.8	38.7
121-14-2	2,4-Dinitrotoluene	U	387	ug/kg	38.7	387
100-02-7	4-Nitrophenol	U	387	ug/kg	128	387
87-86-5	Pentachlorophenol	U	387	ug/kg	96.7	387
129-00-0	Pyrene	J	17.6	ug/kg	11.6	38.7
110-86-1	Pyridine	U	387	ug/kg	77.3	387
62-53-3	Aniline	U	387	ug/kg	116	387
111-44-4	bis(2-Chloroethyl) ether	U	387	ug/kg	77.3	387
541-73-1	1,3-Dichlorobenzene	U	387	ug/kg	77.3	387
100-51-6	Benzyl alcohol	U	387	ug/kg	116	387
95-50-1	1,2-Dichlorobenzene	U	387	ug/kg	77.3	387
108-60-1	bis(2-Chloroisopropyl)ether	U	387	ug/kg	77.3	387
95-48-7	o-Cresol	U	387	ug/kg	77.3	387
65794-96-9	m,p-Cresols	U	387	ug/kg	116	387
67-72-1	Hexachloroethane	U	387	ug/kg	77.3	387
98-95-3	Nitrobenzene	U	387	ug/kg	77.3	387
78-59-1	Isophorone	U	387	ug/kg	77.3	387
88-75-5	2-Nitrophenol	U	387	ug/kg	77.3	387
105-67-9	2,4-Dimethylphenol	U	387	ug/kg	135	387
111-91-1	bis(2-Chloroethoxy)methane	U	387	ug/kg	77.3	387
120-83-2	2,4-Dichlorophenol	U	387	ug/kg	77.3	387
65-85-0	Benzoic acid	U	773	ug/kg	193	773
91-20-3	Naphthalene	U	38.7	ug/kg	11.6	38.7
106-47-8	4-Chloroaniline	U	387	ug/kg	77.3	387
87-68-3	Hexachlorobutadiene	U	387	ug/kg	77.3	387
91-57-6	2-Methylnaphthalene	U	38.7	ug/kg	7.73	38.7
77-47-4	Hexachlorocyclopentadiene	U	387	ug/kg	77.3	387
88-06-2	2,4,6-Trichlorophenol	U	387	ug/kg	77.3	387
95-95-4	2,4,5-Trichlorophenol	U	387	ug/kg	77.3	387
91-58-7	2-Chloronaphthalene	U	38.7	ug/kg	12.8	38.7
88-74-4	2-Nitroaniline	U	387	ug/kg	77.3	387
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	387	ug/kg	77.3	387

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661004	Date Received:	07/01/2009 09:00	%Moisture:	13.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9943	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 10:10	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0708.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	387	ug/kg	77.3	387
606-20-2	2,6-Dinitrotoluene	U	387	ug/kg	38.7	387
208-96-8	Acenaphthylene	U	38.7	ug/kg	11.6	38.7
51-28-5	2,4-Dinitrophenol	U	773	ug/kg	147	773
132-64-9	Dibenzofuran	U	387	ug/kg	77.3	387
84-66-2	Diethylphthalate	U	387	ug/kg	77.3	387
86-73-7	Fluorene	U	38.7	ug/kg	11.6	38.7
7005-72-3	4-Chlorophenylphenylether	U	387	ug/kg	77.3	387
534-52-1	2-Methyl-4,6-dinitrophenol	U	387	ug/kg	77.3	387
100-01-6	4-Nitroaniline	U	387	ug/kg	116	387
	p-Nitroaniline					
122-39-4	Diphenylamine	U	387	ug/kg	77.3	387
122-66-7	Azobenzene	U	387	ug/kg	77.3	387
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	387	ug/kg	77.3	387
118-74-1	Hexachlorobenzene	U	387	ug/kg	77.3	387
85-01-8	Phenanthrene	U	38.7	ug/kg	11.6	38.7
120-12-7	Anthracene	U	38.7	ug/kg	7.73	38.7
84-74-2	Di-n-butylphthalate	U	387	ug/kg	77.3	387
206-44-0	Fluoranthene	J	17.5	ug/kg	11.6	38.7
85-68-7	Butylbenzylphthalate	U	387	ug/kg	77.3	387
56-55-3	Benzo(a)anthracene	J	12.5	ug/kg	11.6	38.7
91-94-1	3,3'-Dichlorobenzidine	U	387	ug/kg	116	387
218-01-9	Chrysene	U	38.7	ug/kg	11.6	38.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	387	ug/kg	77.3	387
117-84-0	Di-n-octylphthalate	U	387	ug/kg	77.3	387
205-99-2	Benzo(b)fluoranthene	U	38.7	ug/kg	11.6	38.7
207-08-9	Benzo(k)fluoranthene	U	38.7	ug/kg	11.6	38.7
50-32-8	Benzo(a)pyrene	U	38.7	ug/kg	11.6	38.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.7	ug/kg	11.6	38.7
53-70-3	Dibenzo(a,h)anthracene	U	38.7	ug/kg	11.6	38.7
191-24-2	Benzo(ghi)perylene	U	38.7	ug/kg	11.6	38.7
120-82-1	1,2,4-Trichlorobenzene	U	387	ug/kg	77.3	387

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.21	164	ug/kg		J
	Unknown Aldol Condensate	3.02	430	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661006	Date Received:	07/01/2009 09:00	%Moisture:	16.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9989	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 11:07	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0710.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	400	ug/kg	80.0	400
108-95-2	Phenol	U	400	ug/kg	80.0	400
95-57-8	2-Chlorophenol	U	400	ug/kg	80.0	400
106-46-7	1,4-Dichlorobenzene	U	400	ug/kg	80.0	400
621-64-7	N-Nitrosodipropylamine	U	400	ug/kg	80.0	400
59-50-7	4-Chloro-3-methylphenol	U	400	ug/kg	80.0	400
83-32-9	Acenaphthene	U	40.0	ug/kg	13.2	40.0
121-14-2	2,4-Dinitrotoluene	U	400	ug/kg	40.0	400
100-02-7	4-Nitrophenol	U	400	ug/kg	132	400
87-86-5	Pentachlorophenol	U	400	ug/kg	100	400
129-00-0	Pyrene		70.1	ug/kg	12.0	40.0
110-86-1	Pyridine	U	400	ug/kg	80.0	400
62-53-3	Aniline	U	400	ug/kg	120	400
111-44-4	bis(2-Chloroethyl) ether	U	400	ug/kg	80.0	400
541-73-1	1,3-Dichlorobenzene	U	400	ug/kg	80.0	400
100-51-6	Benzyl alcohol	U	400	ug/kg	120	400
95-50-1	1,2-Dichlorobenzene	U	400	ug/kg	80.0	400
108-60-1	bis(2-Chloroisopropyl)ether	U	400	ug/kg	80.0	400
95-48-7	o-Cresol	U	400	ug/kg	80.0	400
65794-96-9	m,p-Cresols	U	400	ug/kg	120	400
67-72-1	Hexachloroethane	U	400	ug/kg	80.0	400
98-95-3	Nitrobenzene	U	400	ug/kg	80.0	400
78-59-1	Isophorone	U	400	ug/kg	80.0	400
88-75-5	2-Nitrophenol	U	400	ug/kg	80.0	400
105-67-9	2,4-Dimethylphenol	U	400	ug/kg	140	400
111-91-1	bis(2-Chloroethoxy)methane	U	400	ug/kg	80.0	400
120-83-2	2,4-Dichlorophenol	U	400	ug/kg	80.0	400
65-85-0	Benzoic acid	U	800	ug/kg	200	800
91-20-3	Naphthalene	U	40.0	ug/kg	12.0	40.0
106-47-8	4-Chloroaniline	U	400	ug/kg	80.0	400
87-68-3	Hexachlorobutadiene	U	400	ug/kg	80.0	400
91-57-6	2-Methylnaphthalene	U	40.0	ug/kg	8.00	40.0
77-47-4	Hexachlorocyclopentadiene	U	400	ug/kg	80.0	400
88-06-2	2,4,6-Trichlorophenol	U	400	ug/kg	80.0	400
95-95-4	2,4,5-Trichlorophenol	U	400	ug/kg	80.0	400
91-58-7	2-Chloronaphthalene	U	40.0	ug/kg	13.2	40.0
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	400	ug/kg	80.0	400
99-09-2	3-Nitroaniline	U	400	ug/kg	80.0	400

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 11:07	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0710.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	400	ug/kg	80.0	400
606-20-2	2,6-Dinitrotoluene	U	400	ug/kg	40.0	400
208-96-8	Acenaphthylene	U	40.0	ug/kg	12.0	40.0
51-28-5	2,4-Dinitrophenol	U	800	ug/kg	152	800
132-64-9	Dibenzofuran	U	400	ug/kg	80.0	400
84-66-2	Diethylphthalate	U	400	ug/kg	80.0	400
86-73-7	Fluorene	U	40.0	ug/kg	12.0	40.0
7005-72-3	4-Chlorophenylphenylether	U	400	ug/kg	80.0	400
534-52-1	2-Methyl-4,6-dinitrophenol	U	400	ug/kg	80.0	400
100-01-6	4-Nitroaniline	U	400	ug/kg	120	400
	p-Nitroaniline					
122-39-4	Diphenylamine	U	400	ug/kg	80.0	400
122-66-7	Azobenzene	U	400	ug/kg	80.0	400
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	400	ug/kg	80.0	400
118-74-1	Hexachlorobenzene	U	400	ug/kg	80.0	400
85-01-8	Phenanthrene	J	23.4	ug/kg	12.0	40.0
120-12-7	Anthracene	U	40.0	ug/kg	8.00	40.0
84-74-2	Di-n-butylphthalate	U	400	ug/kg	80.0	400
206-44-0	Fluoranthene		80.0	ug/kg	12.0	40.0
85-68-7	Butylbenzylphthalate	U	400	ug/kg	80.0	400
56-55-3	Benzo(a)anthracene	J	34.8	ug/kg	12.0	40.0
91-94-1	3,3'-Dichlorobenzidine	U	400	ug/kg	120	400
218-01-9	Chrysene		49.1	ug/kg	12.0	40.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	400	ug/kg	80.0	400
117-84-0	Di-n-octylphthalate	U	400	ug/kg	80.0	400
205-99-2	Benzo(b)fluoranthene		65.8	ug/kg	12.0	40.0
207-08-9	Benzo(k)fluoranthene	J	23.1	ug/kg	12.0	40.0
50-32-8	Benzo(a)pyrene		40.8	ug/kg	12.0	40.0
193-39-5	Indeno(1,2,3-cd)pyrene	J	25.1	ug/kg	12.0	40.0
53-70-3	Dibenzo(a,h)anthracene	U	40.0	ug/kg	12.0	40.0
191-24-2	Benzo(ghi)perylene	J	31.0	ug/kg	12.0	40.0
120-82-1	1,2,4-Trichlorobenzene	U	400	ug/kg	80.0	400

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	363	ug/kg		JA
65899-10-7	trans-1,2-Bis(methyldichlorosilyl)ethyle	9.15	163	ug/kg	96	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 11:07	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0710.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1000214-20-7	Stigmasterol, 22,23-dihydro-	14.02	516	ug/kg	93	NJ
	Unknown	15.32	209	ug/kg		J
	Unknown	18.56	345	ug/kg		J
	Unknown	19.33	191	ug/kg		J
	Unknown	19.34	160	ug/kg		J

QC Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 09-2515

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201874482	MB for batch 882563	78	78	77	83	74	102
1201874483	LCS for batch 882563	78	74	71	81	85	95
232661002	CAMO-09-9942	67	66	61	67	78	89
232661003	CAMO-09-9941	72	73	72	78	79	91
232661004	CAMO-09-9943	57	59	54	61	75	89
232661005	CAMO-09-10030	72	73	70	77	83	94
232661006	CAMO-09-9989	59	61	58	66	68	78

Surrogate		Acceptance Limits
2FP	= 2-Fluorophenol	(35%-96%)
PHL	= Phenol-d5	(36%-96%)
NBZ	= Nitrobenzene-d5	(34%-104%)
FBP	= 2-Fluorobiphenyl	(36%-100%)
TBP	= 2,4,6-Tribromophenol	(37%-106%)
TPH	= p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882563 **Matrix:** SOIL

Lab Sample ID: 1201874483

Instrument: MSD5.I **Analysis Date:** 07/07/2009 08:45 **Dilution:** 1

Analyst: RMB **Prep Batch ID:** 882563

Inj. Vol: .5 uL **Batch ID:** 882565

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1280	77	31-95
108-95-2	LCS	Phenol	1670	0.0	1300	78	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1370	82	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	1230	74	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1370	82	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1400	84	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1370	82	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1340	81	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1380	83	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	1370	82	38-116
129-00-0	LCS	Pyrene	1670	0.0	1510	90	43-108
110-86-1	LCS	Pyridine	1670	0.0	1280	77	13-129
62-53-3	LCS	Aniline	1670	0.0	1390	83	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1230	74	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	1260	75	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	1320	79	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	1320	79	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1330	80	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1300	78	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1460	87	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	1270	76	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1280	77	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 882563
Matrix: SOIL
Lab Sample ID: 1201874483
Instrument: MSD5.I
Analysis Date: 07/07/2009 08:45
Dilution: 1
Analyst: RMB
Prep Batch ID: 882563
Inj. Vol: .5 uL
Batch ID: 882565

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1360	82	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1310	79	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1280	77	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1290	77	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1370	82	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	779	47	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1210	73	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1210	73	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1350	81	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1460	87	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1330	80	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1460	87	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1480	89	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1370	82	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1380	83	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1700	102	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1560	94	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1360	82	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1460	88	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	1350	81	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1430	86	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1590	95	50-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882563 **Matrix:** SOIL

Lab Sample ID: 1201874483

Instrument: MSD5.I **Analysis Date:** 07/07/2009 08:45 **Dilution:** 1

Analyst: RMB **Prep Batch ID** 882563

Inj. Vol: .5 uL **Batch ID:** 882565

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1360	82	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1390	83	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	1320	79	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	2160	129	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1580	95	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1420	85	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1360	81	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1430	86	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1390	83	45-107
120-12-7	LCS	Anthracene	1670	0.0	1430	86	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1630	98	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1450	87	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1660	99	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1390	83	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1410	85	45-98
218-01-9	LCS	Chrysene	1670	0.0	1450	87	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1700	102	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1700	102	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1430	86	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1490	90	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1480	89	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1530	92	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882563 **Matrix:** SOIL

Lab Sample ID: 1201874483

Instrument: MSD5.I **Analysis Date:** 07/07/2009 08:45 **Dilution:** 1

Analyst: RMB **Prep Batch ID:** 882563

Inj. Vol: .5 uL **Batch ID:** 882565

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1570	94	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1530	92	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1300	78	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-9956MS
Lab Sample ID: 1201874484
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 14.1
Analysis Date: 07/07/2009 12:03
Prep Batch ID: 882563
Batch ID: 882565

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	1940	0.00	U	1170	60	32-90
108-95-2	MS	Phenol	1940	0.00	U	1310	67	32-105
95-57-8	MS	2-Chlorophenol	1940	0.00	U	1320	68	33-106
106-46-7	MS	1,4-Dichlorobenzene	1940	0.00	U	1070	55	33-95
621-64-7	MS	N-Nitrosodipropylamine	1940	0.00	U	1360	70	31-109
59-50-7	MS	4-Chloro-3-methylphenol	1940	0.00	U	1620	84	38-119
83-32-9	MS	Acenaphthene	1940	0.00	U	1440	74	39-100
121-14-2	MS	2,4-Dinitrotoluene	1940	0.00	U	1550	80	42-107
100-02-7	MS	4-Nitrophenol	1940	0.00	U	1730	89	24-120
87-86-5	MS	Pentachlorophenol	1940	0.00	U	1620	84	26-121
129-00-0	MS	Pyrene	1940	24.6	J	1690	86	34-120
110-86-1	MS	Pyridine	1940	0.00	U	1170	61	30-95
62-53-3	MS	Aniline	1940	0.00	U	1320	68	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	1940	0.00	U	1170	60	34-101
541-73-1	MS	1,3-Dichlorobenzene	1940	0.00	U	1060	55	31-97
100-51-6	MS	Benzyl alcohol	1940	0.00	U	1260	65	17-120
95-50-1	MS	1,2-Dichlorobenzene	1940	0.00	U	1140	59	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	1940	0.00	U	1230	64	32-113
95-48-7	MS	o-Cresol	1940	0.00	U	1320	68	31-119
65794-96-9	MS	m,p-Cresols	1940	0.00	U	1510	78	35-125
67-72-1	MS	Hexachloroethane	1940	0.00	U	1010	52	30-100
98-95-3	MS	Nitrobenzene	1940	0.00	U	1240	64	33-108

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2515

Client ID: CAMO-09-9956MS

Lab Sample ID: 1201874484

Instrument: MSD5.I

Analyst: RMB

Inj. Vol: .5 uL

Sample Type: Matrix Spike

Matrix: R

%Moisture: 14.1

Analysis Date: 07/07/2009 12:03

Dilution: 1

Prep Batch ID: 882563

Batch ID: 882565

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	1940	0.00	U	1350	69	34-110
88-75-5	MS	2-Nitrophenol	1940	0.00	U	1320	68	32-108
105-67-9	MS	2,4-Dimethylphenol	1940	0.00	U	1310	68	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	1940	0.00	U	1290	66	35-108
120-83-2	MS	2,4-Dichlorophenol	1940	0.00	U	1460	75	38-110
65-85-0	MS	Benzoic acid	1940	0.00	U	834	43	18-134
91-20-3	MS	Naphthalene	1940	0.00	U	1160	60	31-105
106-47-8	MS	4-Chloroaniline	1940	0.00	U	1390	72	29-123
87-68-3	MS	Hexachlorobutadiene	1940	0.00	U	1190	61	31-109
91-57-6	MS	2-Methylnaphthalene	1940	0.00	U	1460	75	32-110
77-47-4	MS	Hexachlorocyclopentadiene	1940	0.00	U	874	45	21-122
88-06-2	MS	2,4,6-Trichlorophenol	1940	0.00	U	1570	81	37-108
95-95-4	MS	2,4,5-Trichlorophenol	1940	0.00	U	1690	87	37-116
91-58-7	MS	2-Chloronaphthalene	1940	0.00	U	1430	74	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	1940	0.00	U	1590	82	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	1940	0.00	U	2090	108	39-117
131-11-3	MS	Dimethylphthalate	1940	0.00	U	1730	89	41-105
606-20-2	MS	2,6-Dinitrotoluene	1940	0.00	U	1520	79	41-103
208-96-8	MS	Acenaphthylene	1940	0.00	U	1570	81	41-103
51-28-5	MS	2,4-Dinitrophenol	1940	0.00	U	1180	61	25-104
132-64-9	MS	Dibenzofuran	1940	0.00	U	1610	83	40-114
84-66-2	MS	Diethylphthalate	1940	0.00	U	1790	93	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-9956MS
Lab Sample ID: 1201874484
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 14.1
Analysis Date: 07/07/2009 12:03
Prep Batch ID: 882563
Batch ID: 882565
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	1940	0.00	U	1560	80	48-99
7005-72-3	MS	4-Chlorophenylphenylether	1940	0.00	U	1550	80	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	1940	0.00	U	1310	67	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	1940	0.00	U	2690	139	35-139
122-39-4	MS	Diphenylamine	1940	0.00	U	1660	85	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	1940	0.00	U	1540	79	37-118
101-55-3	MS	4-Bromophenylphenylether	1940	0.00	U	1530	79	39-112
118-74-1	MS	Hexachlorobenzene	1940	0.00	U	1490	77	38-113
85-01-8	MS	Phenanthrene	1940	14.1	J	1620	83	38-110
120-12-7	MS	Anthracene	1940	0.00	U	1620	83	38-112
84-74-2	MS	Di-n-butylphthalate	1940	0.00	U	1830	94	42-119
206-44-0	MS	Fluoranthene	1940	25.6	J	1740	88	38-119
85-68-7	MS	Butylbenzylphthalate	1940	0.00	U	1780	92	39-126
56-55-3	MS	Benzo(a)anthracene	1940	0.00	U	1570	81	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	1940	0.00	U	1130	58	35-106
218-01-9	MS	Chrysene	1940	0.00	U	1610	83	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	1940	0.00	U	1790	92	40-125
117-84-0	MS	Di-n-octylphthalate	1940	0.00	U	1910	98	30-147
205-99-2	MS	Benzo(b)fluoranthene	1940	13.2	J	1650	84	38-117
207-08-9	MS	Benzo(k)fluoranthene	1940	0.00	U	1670	86	39-120
50-32-8	MS	Benzo(a)pyrene	1940	0.00	U	1650	85	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	1940	0.00	U	1390	72	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-9956MS
Lab Sample ID: 1201874484
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 14.1
Analysis Date: 07/07/2009 12:03
Prep Batch ID: 882563
Batch ID: 882565
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	1940	0.00	U	1430	74	32-124
191-24-2	MS	Benzo(ghi)perylene	1940	0.00	U	1280	66	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	1940	0.00	U	1200	62	31-105

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2515

Client ID: CAMO-09-9956MSD

Lab Sample ID: 1201874485

Instrument: MSD5.I

Analyst: RMB

Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate

Matrix: R

%Moisture: 14.1

Analysis Date: 07/07/2009 12:31

Dilution: 1

Prep Batch ID: 882563

Batch ID: 882565

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD N-Methyl-N-nitrosomethylam	1940	0.00	U	1360	70	32-90	15	0-30
108-95-2	MSD Phenol	1940	0.00	U	1420	73	32-105	9	0-30
95-57-8	MSD 2-Chlorophenol	1940	0.00	U	1420	73	33-106	8	0-30
106-46-7	MSD 1,4-Dichlorobenzene	1940	0.00	U	1190	61	33-95	11	0-30
621-64-7	MSD N-Nitrosodipropylamine	1940	0.00	U	1510	78	31-109	11	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	1940	0.00	U	1670	86	38-119	3	0-30
83-32-9	MSD Acenaphthene	1940	0.00	U	1520	78	39-100	6	0-30
121-14-2	MSD 2,4-Dinitrotoluene	1940	0.00	U	1580	81	42-107	2	0-30
100-02-7	MSD 4-Nitrophenol	1940	0.00	U	1550	80	24-120	11	0-30
87-86-5	MSD Pentachlorophenol	1940	0.00	U	1650	85	26-121	2	0-30
129-00-0	MSD Pyrene	1940	24.6	J	1680	85	34-120	1	0-30
110-86-1	MSD Pyridine	1940	0.00	U	1200	62	30-95	2	0-30
62-53-3	MSD Aniline	1940	0.00	U	1270	65	34-111	4	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	1940	0.00	U	1290	67	34-101	10	0-30
541-73-1	MSD 1,3-Dichlorobenzene	1940	0.00	U	1200	62	31-97	13	0-30
100-51-6	MSD Benzyl alcohol	1940	0.00	U	1380	71	17-120	9	0-30
95-50-1	MSD 1,2-Dichlorobenzene	1940	0.00	U	1280	66	32-102	11	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	1940	0.00	U	1350	70	32-113	9	0-30
95-48-7	MSD o-Cresol	1940	0.00	U	1440	74	31-119	9	0-30
65794-96-9	MSD m,p-Cresols	1940	0.00	U	1590	82	35-125	5	0-30
67-72-1	MSD Hexachloroethane	1940	0.00	U	1150	59	30-100	13	0-30
98-95-3	MSD Nitrobenzene	1940	0.00	U	1400	72	33-108	12	0-30

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2515

Client ID: CAMO-09-9956MSD

Lab Sample ID: 1201874485

Instrument: MSD5.I

Analyst: RMB

Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate

Matrix: R

%Moisture: 14.1

Analysis Date: 07/07/2009 12:31

Dilution: 1

Prep Batch ID: 882563

Batch ID: 882565

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD Isophorone	1940	0.00	U	1450	75	34-110	8	0-30
88-75-5	MSD 2-Nitrophenol	1940	0.00	U	1520	78	32-108	14	0-30
105-67-9	MSD 2,4-Dimethylphenol	1940	0.00	U	1360	70	32-115	3	0-30
111-91-1	MSD bis(2-Chloroethoxy)methane	1940	0.00	U	1430	74	35-108	11	0-30
120-83-2	MSD 2,4-Dichlorophenol	1940	0.00	U	1540	79	38-110	6	0-30
65-85-0	MSD Benzoic acid	1940	0.00	U	963	50	18-134	14	0-30
91-20-3	MSD Naphthalene	1940	0.00	U	1280	66	31-105	10	0-30
106-47-8	MSD 4-Chloroaniline	1940	0.00	U	1330	69	29-123	4	0-30
87-68-3	MSD Hexachlorobutadiene	1940	0.00	U	1340	69	31-109	11	0-30
91-57-6	MSD 2-Methylnaphthalene	1940	0.00	U	1550	80	32-110	6	0-30
77-47-4	MSD Hexachlorocyclopentadiene	1940	0.00	U	1140	59	21-122	26	0-30
88-06-2	MSD 2,4,6-Trichlorophenol	1940	0.00	U	1620	84	37-108	3	0-30
95-95-4	MSD 2,4,5-Trichlorophenol	1940	0.00	U	1740	90	37-116	3	0-30
91-58-7	MSD 2-Chloronaphthalene	1940	0.00	U	1520	78	37-103	6	0-30
88-74-4	MSD 2-Nitroaniline *o-Nitroaniline*	1940	0.00	U	1650	85	36-115	3	0-30
99-09-2	MSD 3-Nitroaniline *m-Nitroaniline*	1940	0.00	U	2020	104	39-117	4	0-30
131-11-3	MSD Dimethylphthalate	1940	0.00	U	1760	91	41-105	2	0-30
606-20-2	MSD 2,6-Dinitrotoluene	1940	0.00	U	1570	81	41-103	3	0-30
208-96-8	MSD Acenaphthylene	1940	0.00	U	1620	84	41-103	3	0-30
51-28-5	MSD 2,4-Dinitrophenol	1940	0.00	U	1260	65	25-104	7	0-30
132-64-9	MSD Dibenzofuran	1940	0.00	U	1640	85	40-114	2	0-30
84-66-2	MSD Diethylphthalate	1940	0.00	U	1820	94	43-110	1	0-30

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2515

Client ID: CAMO-09-9956MSD

Lab Sample ID: 1201874485

Instrument: MSD5.I

Analyst: RMB

Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate

Matrix: R

%Moisture: 14.1

Analysis Date: 07/07/2009 12:31

Dilution: 1

Prep Batch ID: 882563

Batch ID: 882565

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	1940	0.00	U	1580	82	48-99	2	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	1940	0.00	U	1590	82	42-111	2	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	1940	0.00	U	1410	73	19-118	8	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	1940	0.00	U	2500	129	35-139	7	0-30
122-39-4	MSD	Diphenylamine	1940	0.00	U	1750	90	41-112	5	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	1940	0.00	U	1630	84	37-118	6	0-30
101-55-3	MSD	4-Bromophenylphenylether	1940	0.00	U	1580	82	39-112	3	0-30
118-74-1	MSD	Hexachlorobenzene	1940	0.00	U	1600	83	38-113	7	0-30
85-01-8	MSD	Phenanthrene	1940	14.1	J	1620	83	38-110	0	0-30
120-12-7	MSD	Anthracene	1940	0.00	U	1690	87	38-112	4	0-30
84-74-2	MSD	Di-n-butylphthalate	1940	0.00	U	1880	97	42-119	3	0-30
206-44-0	MSD	Fluoranthene	1940	25.6	J	1720	87	38-119	1	0-30
85-68-7	MSD	Butylbenzylphthalate	1940	0.00	U	1860	96	39-126	5	0-30
56-55-3	MSD	Benzo(a)anthracene	1940	0.00	U	1610	83	39-110	3	0-30
91-94-1	MSD	3,3'-Dichlorobenzidine	1940	0.00	U	1190	61	35-106	4	0-30
218-01-9	MSD	Chrysene	1940	0.00	U	1660	85	39-109	3	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	1940	0.00	U	1910	99	40-125	7	0-30
117-84-0	MSD	Di-n-octylphthalate	1940	0.00	U	2060	106	30-147	8	0-30
205-99-2	MSD	Benzo(b)fluoranthene	1940	13.2	J	1690	87	38-117	3	0-30
207-08-9	MSD	Benzo(k)fluoranthene	1940	0.00	U	1790	92	39-120	7	0-30
50-32-8	MSD	Benzo(a)pyrene	1940	0.00	U	1710	88	40-115	4	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	1940	0.00	U	1420	73	32-120	2	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: CAMO-09-9956MSD
Lab Sample ID: 1201874485
Instrument: MSD5.I
Analyst: RMB
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 14.1
Analysis Date: 07/07/2009 12:31
Prep Batch ID: 882563
Batch ID: 882565
Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD Dibenzo(a,h)anthracene	1940	0.00	U	1520	78	32-124	6	0-30
191-24-2	MSD Benzo(ghi)perylene	1940	0.00	U	1310	68	28-119	3	0-30
120-82-1	MSD 1,2,4-Trichlorobenzene	1940	0.00	U	1340	69	31-105	11	0-30

Method Blank Summary

SDG Number:	09-2515	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882563	Instrument ID:	MSD5.I	Data File:	s5g0704.d
Lab Sample ID:	1201874482	Prep Date:	07/06/2009 20:30	Analyzed:	07/07/09 08:17
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 882563	1201874483	s5g0705-2.d	07/07/09	0845
02	CAMO-09-9942	232661002	s5g0706.d	07/07/09	0913
03	CAMO-09-9941	232661003	s5g0707.d	07/07/09	0941
04	CAMO-09-9943	232661004	s5g0708.d	07/07/09	1010
05	CAMO-09-10030	232661005	s5g0709.d	07/07/09	1038
06	CAMO-09-9989	232661006	s5g0710.d	07/07/09	1107

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2515

Instrument ID: MSD5.I **Injection Date/Time:** 07-JUL-09 07:12

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s070709.b/s5g0701.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	35.7
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	41.2
197	0 - 1% of mass 198	0.6
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	28.4
365	Greater than 1% of mass 198	3.9
441	Present, but less than mass 443	76.2
442	Greater than 40% of mass 198	94.2
443	17 - 23% of mass 442	19.8

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090617-02.4	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 07:25
AP12CVS	WBN090619-01.4	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 07:53
SBLK01	1201874482	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 08:17
SBLK01LCS	1201874483	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 08:45
CAMO-09-9942	232661002	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 09:13
CAMO-09-9941	232661003	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 09:41
CAMO-09-9943	232661004	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 10:10
CAMO-09-10030	232661005	/chem/MSD5.i/s070709.b/s5g070	07-JUL-09 10:38
CAMO-09-9989	232661006	/chem/MSD5.i/s070709.b/s5g071	07-JUL-09 11:07

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2515

Instrument ID: MSD5.I **Injection Date/Time:** 25-JUN-09 14:07

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s062509.b/s5f2510.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40.6
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	37.2
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	42.2
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.7
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	72.4
442	Greater than 40% of mass 198	88.9
443	17 - 23% of mass 442	20

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGAICAL001	WBN090602-08	/chem/MSD5.i/s062509.b/s5f2512	25-JUN-09 14:42
MEGAICAL010	WBN090602-07	/chem/MSD5.i/s062509.b/s5f2513	25-JUN-09 15:10
MEGAICAL020	WBN090602-06	/chem/MSD5.i/s062509.b/s5f2514	25-JUN-09 15:38
MEGAICAL040	WBN090602-05.1	/chem/MSD5.i/s062509.b/s5f2515	25-JUN-09 16:05
MEGAICAL050	WBN090602-04	/chem/MSD5.i/s062509.b/s5f2516	25-JUN-09 16:33
MEGAICAL080	WBN090602-03	/chem/MSD5.i/s062509.b/s5f2517	25-JUN-09 17:02
MEGAICAL100	WBN090602-02	/chem/MSD5.i/s062509.b/s5f2518	25-JUN-09 17:29
MEGAICAL120	WBN090602-01	/chem/MSD5.i/s062509.b/s5f2519	25-JUN-09 17:57
MEGAICV	WBN090602-09.1	/chem/MSD5.i/s062509.b/s5f2521	25-JUN-09 18:48
AP12ICAL010	WBN090528-07	/chem/MSD5.i/s062509.b/s5f2522	25-JUN-09 19:10
AP12ICAL020	WBN090528-06	/chem/MSD5.i/s062509.b/s5f2523	25-JUN-09 19:32
AP12ICAL040	WBN090528-05.1	/chem/MSD5.i/s062509.b/s5f2524	25-JUN-09 19:55
AP12ICAL050	WBN090528-04	/chem/MSD5.i/s062509.b/s5f2525	25-JUN-09 20:18
AP12ICAL080	WBN090528-03	/chem/MSD5.i/s062509.b/s5f2526	25-JUN-09 20:41
AP12ICAL100	WBN090528-02	/chem/MSD5.i/s062509.b/s5f2527	25-JUN-09 21:03
AP12ICAL120	WBN090528-01	/chem/MSD5.i/s062509.b/s5f2528	25-JUN-09 21:25

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2515

Instrument ID: MSD5.I **Injection Date/Time:** 25-JUN-09 14:07

Column Description: Phenomenex ZB-5MS **Lab File ID** /chem/MSD5.i/s062509.b/s5f2510.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40.6
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	37.2
70	Less than 2% of mass 69	0.6
127	40 - 60% of mass 198	42.2
197	0 - 1% of mass 198	0.2
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	27.7
365	Greater than 1% of mass 198	3.4
441	Present, but less than mass 443	72.4
442	Greater than 40% of mass 198	88.9
443	17 - 23% of mass 442	20

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
AP12ICV	WBN090528-08.5	/chem/MSD5.i/s062509.b/s5f253(	25-JUN-09 22:11

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 09-2515

Instrument: MSD5.I

STD Analysis Time: 07-JUL-09 07:25

GC Column: J&W DB-5MS

Data File: s5g0702.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	373014		4	1411459		4.87	827906		6.13	1543223		7.31	1495571		9.72	1337006		11.5
Upper Limit	746028		4.5	2822918		5.37	1655812		6.63	3086446		7.81	2991142		10.2	2674012		12.0
Lower Limit	186507		3.5	705730		4.37	413953		5.63	771612		6.81	747786		9.22	668503		11.0
Sample ID																		
BLK01	326193		4	1170112		4.87	763333		6.13	1443136		7.31	1435830		9.72	1272438		11.5
BLK01LCS	334582		4	1297644		4.87	769594		6.13	1455353		7.31	1401485		9.72	1233101		11.5
CAMO-09-9942	324753		4	1192573		4.87	775915		6.13	1504353		7.31	1543313		9.72	1312161		11.5
CAMO-09-9941	365047		4	1294170		4.87	812415		6.13	1520331		7.31	1545288		9.72	1397428		11.5
CAMO-09-9943	406124		4	1430006		4.87	911391		6.13	1702105		7.31	1566387		9.72	1229796		11.5
CAMO-09-10030	355312		4	1301001		4.87	819555		6.13	1564333		7.31	1580454		9.72	1359225		11.5
CAMO-09-9989	366590		4	1299353		4.87	803606		6.13	1513205		7.31	1483673		9.72	1095258		11.5

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661005	Date Received:	07/01/2009 09:00	%Moisture:	10
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-10030	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 10:38	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.01 g	Final Volume:	1 mL
Data File:	s5g0709.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	370	ug/kg	74.1	370
108-95-2	Phenol	U	370	ug/kg	74.1	370
95-57-8	2-Chlorophenol	U	370	ug/kg	74.1	370
106-46-7	1,4-Dichlorobenzene	U	370	ug/kg	74.1	370
621-64-7	N-Nitrosodipropylamine	U	370	ug/kg	74.1	370
59-50-7	4-Chloro-3-methylphenol	U	370	ug/kg	74.1	370
83-32-9	Acenaphthene	U	37.0	ug/kg	12.2	37.0
121-14-2	2,4-Dinitrotoluene	U	370	ug/kg	37.0	370
100-02-7	4-Nitrophenol	U	370	ug/kg	122	370
87-86-5	Pentachlorophenol	U	370	ug/kg	92.6	370
129-00-0	Pyrene	U	37.0	ug/kg	11.1	37.0
110-86-1	Pyridine	U	370	ug/kg	74.1	370
62-53-3	Aniline	U	370	ug/kg	111	370
111-44-4	bis(2-Chloroethyl) ether	U	370	ug/kg	74.1	370
541-73-1	1,3-Dichlorobenzene	U	370	ug/kg	74.1	370
100-51-6	Benzyl alcohol	U	370	ug/kg	111	370
95-50-1	1,2-Dichlorobenzene	U	370	ug/kg	74.1	370
108-60-1	bis(2-Chloroisopropyl)ether	U	370	ug/kg	74.1	370
95-48-7	o-Cresol	U	370	ug/kg	74.1	370
65794-96-9	m,p-Cresols	U	370	ug/kg	111	370
67-72-1	Hexachloroethane	U	370	ug/kg	74.1	370
98-95-3	Nitrobenzene	U	370	ug/kg	74.1	370
78-59-1	Isophorone	U	370	ug/kg	74.1	370
88-75-5	2-Nitrophenol	U	370	ug/kg	74.1	370
105-67-9	2,4-Dimethylphenol	U	370	ug/kg	130	370
111-91-1	bis(2-Chloroethoxy)methane	U	370	ug/kg	74.1	370
120-83-2	2,4-Dichlorophenol	U	370	ug/kg	74.1	370
65-85-0	Benzoic acid	U	741	ug/kg	185	741
91-20-3	Naphthalene	U	37.0	ug/kg	11.1	37.0
106-47-8	4-Chloroaniline	U	370	ug/kg	74.1	370
87-68-3	Hexachlorobutadiene	U	370	ug/kg	74.1	370
91-57-6	2-Methylnaphthalene	U	37.0	ug/kg	7.41	37.0
77-47-4	Hexachlorocyclopentadiene	U	370	ug/kg	74.1	370
88-06-2	2,4,6-Trichlorophenol	U	370	ug/kg	74.1	370
95-95-4	2,4,5-Trichlorophenol	U	370	ug/kg	74.1	370
91-58-7	2-Chloronaphthalene	U	37.0	ug/kg	12.2	37.0
88-74-4	2-Nitroaniline	U	370	ug/kg	74.1	370
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	370	ug/kg	74.1	370

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**	**Date Collected:**	**06/26/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232661005**	**Date Received:**	**07/01/2009 09:00**	**%Moisture:**	**10**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10030**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 10:38**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30.01 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0709.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	370	ug/kg	74.1	370
606-20-2	2,6-Dinitrotoluene	U	370	ug/kg	37.0	370
208-96-8	Acenaphthylene	U	37.0	ug/kg	11.1	37.0
51-28-5	2,4-Dinitrophenol	U	741	ug/kg	141	741
132-64-9	Dibenzofuran	U	370	ug/kg	74.1	370
84-66-2	Diethylphthalate	U	370	ug/kg	74.1	370
86-73-7	Fluorene	U	37.0	ug/kg	11.1	37.0
7005-72-3	4-Chlorophenylphenylether	U	370	ug/kg	74.1	370
534-52-1	2-Methyl-4,6-dinitrophenol	U	370	ug/kg	74.1	370
100-01-6	4-Nitroaniline	U	370	ug/kg	111	370
	p-Nitroaniline					
122-39-4	Diphenylamine	U	370	ug/kg	74.1	370
122-66-7	Azobenzene	U	370	ug/kg	74.1	370
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	370	ug/kg	74.1	370
118-74-1	Hexachlorobenzene	U	370	ug/kg	74.1	370
85-01-8	Phenanthrene	U	37.0	ug/kg	11.1	37.0
120-12-7	Anthracene	U	37.0	ug/kg	7.41	37.0
84-74-2	Di-n-butylphthalate	U	370	ug/kg	74.1	370
206-44-0	Fluoranthene	U	37.0	ug/kg	11.1	37.0
85-68-7	Butylbenzylphthalate	U	370	ug/kg	74.1	370
56-55-3	Benzo(a)anthracene	U	37.0	ug/kg	11.1	37.0
91-94-1	3,3'-Dichlorobenzidine	U	370	ug/kg	111	370
218-01-9	Chrysene	U	37.0	ug/kg	11.1	37.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	370	ug/kg	74.1	370
117-84-0	Di-n-octylphthalate	U	370	ug/kg	74.1	370
205-99-2	Benzo(b)fluoranthene	U	37.0	ug/kg	11.1	37.0
207-08-9	Benzo(k)fluoranthene	U	37.0	ug/kg	11.1	37.0
50-32-8	Benzo(a)pyrene	U	37.0	ug/kg	11.1	37.0
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.0	ug/kg	11.1	37.0
53-70-3	Dibenzo(a,h)anthracene	U	37.0	ug/kg	11.1	37.0
191-24-2	Benzo(ghi)perylene	U	37.0	ug/kg	11.1	37.0
120-82-1	1,2,4-Trichlorobenzene	U	370	ug/kg	74.1	370

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.21	169	ug/kg		J
	Unknown Aldol Condensate	3.02	429	ug/kg		JA

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661005	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10030	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 10:38	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.01 g	**Final Volume:**	1 mL
Data File:	s5g0709.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.15	305	ug/kg	92	NJ

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0709.d
Lab Smp Id: 232661005 Client Smp ID: CAMO-09-10030
Inj Date : 07-JUL-2009 10:38
Operator : RMB Inst ID: MSD5.i
Smp Info : |232661005|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	10.00810	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	355312	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1301001	40.0000	
* 46 Acenaphthene-d10	164	6.126	6.131	(1.000)	819555	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1564333	40.0000	
* 91 Chrysene-d12	240	9.718	9.723	(1.000)	1580454	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1359225	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.798)	558946	71.6459	2650
$ 5 Phenol-d5	99	3.714	3.714	(0.929)	749096	72.8239	2700
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	335880	34.8406	1290
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.916)	814807	38.4424	1420
$ 60 2,4,6-Tribromophenol	329	6.728	6.733	(1.098)	276195	82.5958	3060
$ 81 p-Terphenyl-d14	244	8.683	8.688	(0.893)	1134018	46.8851	1740

ION RATIO REPORT

SV REPORT

Data file: s5g0709.d
Report Date: 07/07/2009 10:57
Lab. ID: 232661005 SampleType: SAMPLE
Injection Date: 07-JUL-2009 10:38
Operator: RMB Instrument: MSD5.i
Sample Info: |232661005|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2515
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	46784	3.71	3.79	80-120	100	(T)
93	1051	3.77	3.79	154-214	2	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	47249	4.36	4.24	80-120	100	(T)
42	33596	4.36	4.24	56-116	71	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	778	4.68	4.64	80-120	100	( )
122	316	4.69	4.64	52-112	41	(Q)
77	1898	4.68	4.64	53-113	244	(Q)
31 4-Chloroaniline			CAS#: 106-47-8			
127	110	4.90	4.90	80-120	100	( )
65	198	4.90	4.90	8- 68	180	(Q)
41 m-Nitroaniline			CAS#: 99-09-2			
138	196	6.13	6.08	80-120	100	( )
92	4734	6.13	6.08	79-139	2405	(Q)
108	16290	6.13	6.08	0- 42	8277	(Q)
43 Dimethylphthalate			CAS#: 131-11-3			
163	179189	6.13	5.89	80-120	100	(T)
164	819555	6.13	5.89	0- 40	457	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	109089	6.13	5.94	80-120	100	(T)
63	1641	6.13	5.94	55-115	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	109089	6.13	6.25	80-120	100	(T)
89	1774	6.13	6.24	39- 99	2	(QT)
63	1641	6.13	6.24	20- 80	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	11450	6.73	6.55	80-120	100	(T)
165	11749	6.73	6.55	61-121	103	(T)
167	4694	6.72	6.55	0- 44	41	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	972	6.73	6.56	80-120	100	(T)
105	1898	6.73	6.56	4- 64	195	(QT)
51	1749	6.73	6.56	31- 91	180	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	19463	6.73	6.91	80-120	100	(T)
141	99256	6.73	6.91	33- 93	510	(QT)
250	39245	6.73	6.91	68-128	202	(QT)
79 Pyrene			CAS#: 129-00-0			
202	16055	8.82	8.59	80-120	100	(T)
200	1668	8.82	8.59	0- 51	10	(T)
101	4980	8.82	8.59	0- 40	31	(T)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0709.d
Lab Smp Id: 232661005 Client Smp ID: CAMO-09-10030
Inj Date : 07-JUL-2009 10:38
Operator : RMB Inst ID: MSD5.i
Smp Info : |232661005|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.01000	weight of sample
M	10.00810	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2290311	40.000
* 91 Chrysene-d12	9.718	3984577	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown					CAS #:		
2.206	261609	4.56897030	169	0		0	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.015	663277	11.5840433	429	0		0	10
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1235-74-1			
9.150	820399	8.23574627	305	92	NIST05.L	133621	91

Data File: /chem/MSD5.i/s070709.b/s5g0709.d
Date : 07-JUL-2009 10:38
Client ID: CAMO-09-10030
Sample Info: |2326610051882565|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

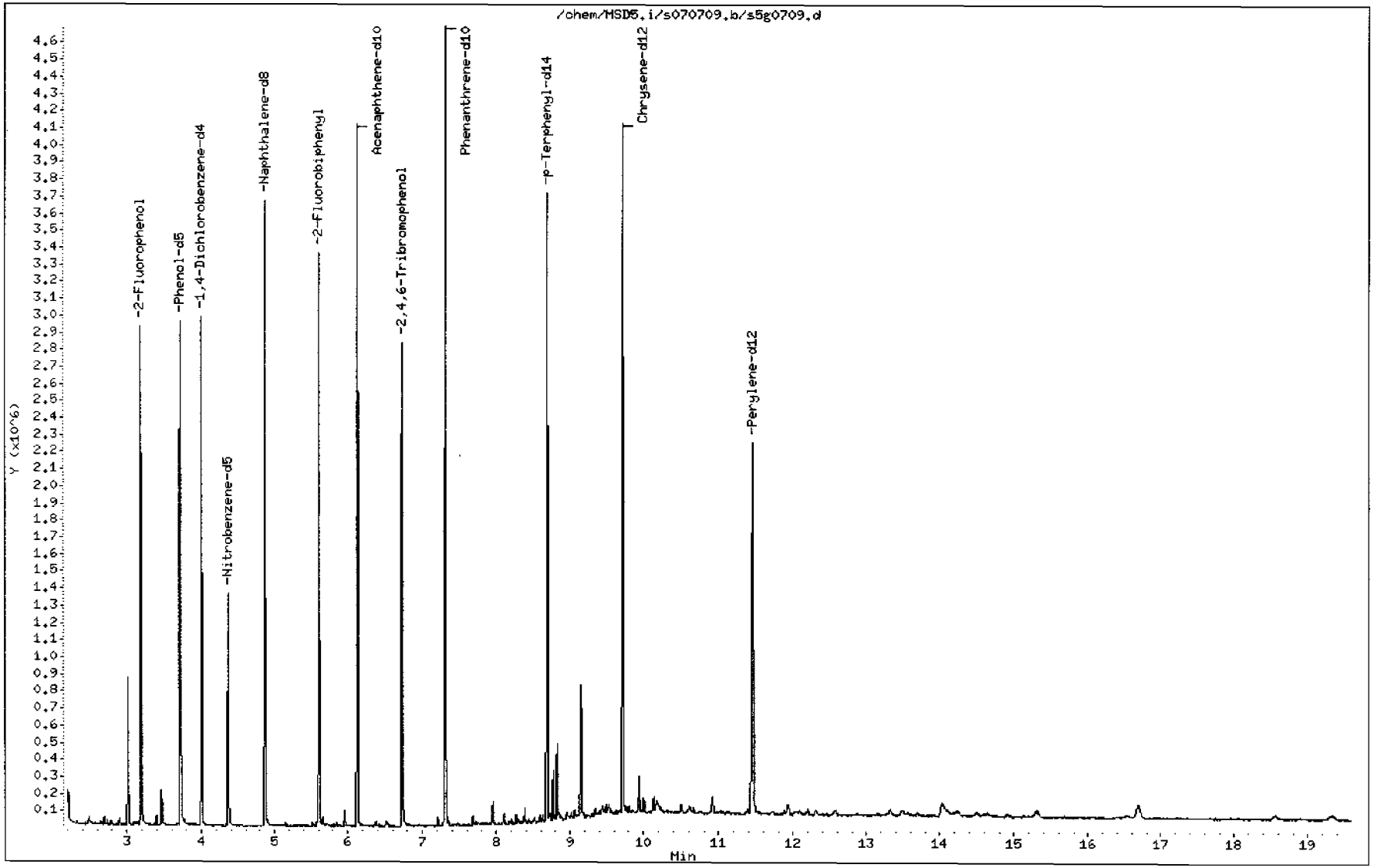

Data File: /chem/MSD5.i/s070709.b/s5g0709.d

Date : 07-JUL-2009 10:38

Client ID: CAMO-09-10030

Instrument: MSD5.i

Sample Info: |232661005|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propanoic acid	79-09-4	NIST05.L	794	27	C3H6O2	74
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2355	10	C3H5Cl0	92
2-Hexanone, 4-methyl-	105-42-0	NIST05.L	7315	10	C7H14O	114

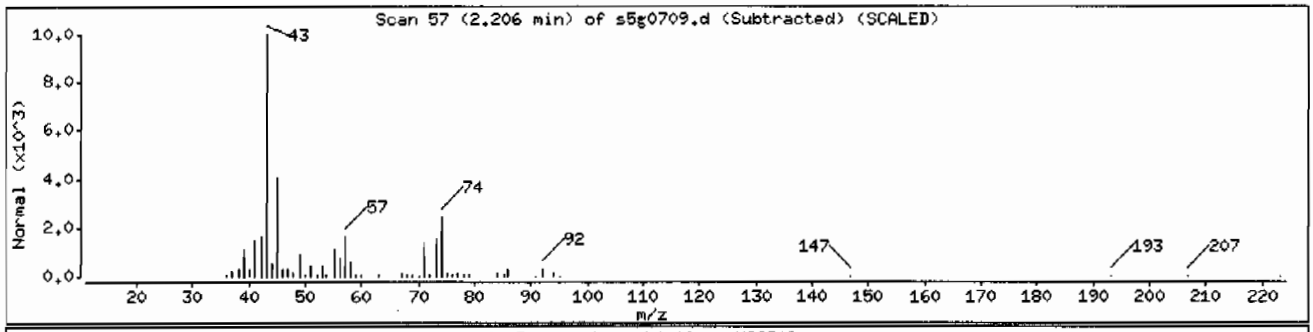

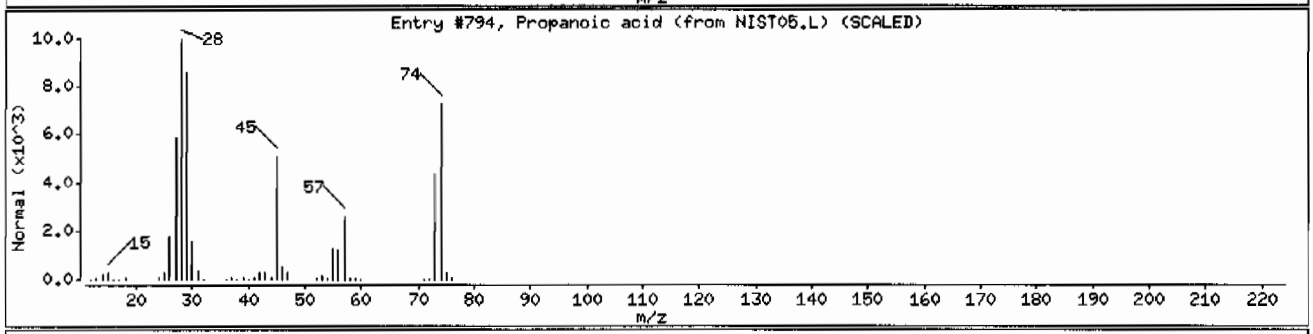

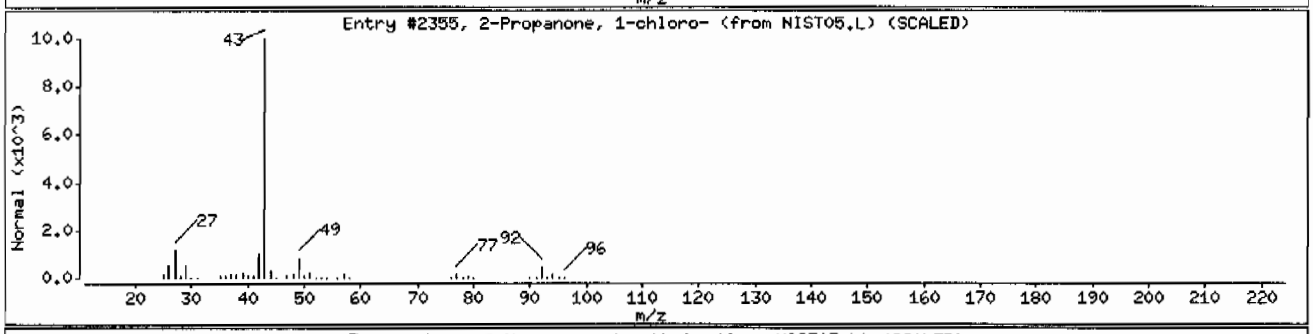

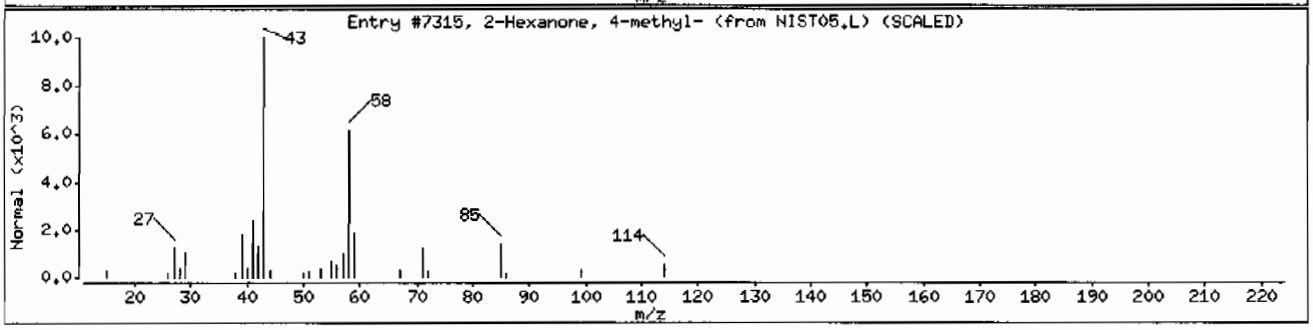

Data File: /chem/MSD5.i/s070709.b/s5g0709.d

Date : 07-JUL-2009 10:38

Client ID: CAMO-09-10030

Instrument: MSD5.i

Sample Info: 1232661005188256511|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	16	C4H7NO2	101

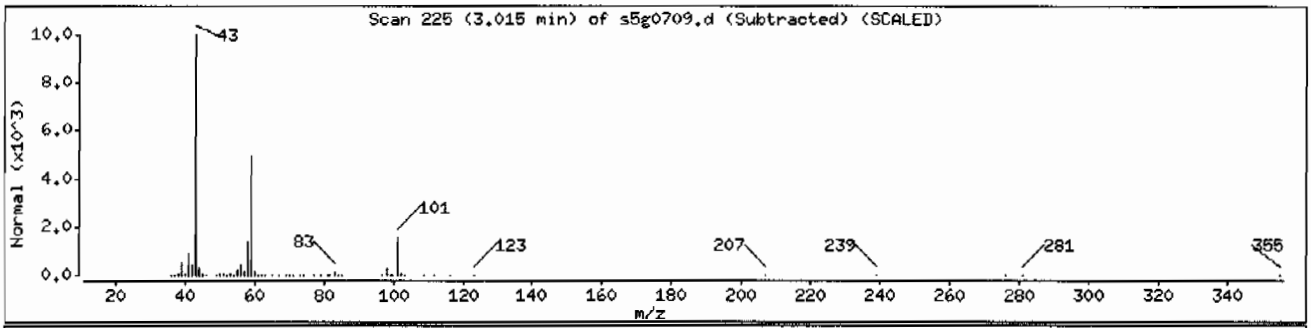

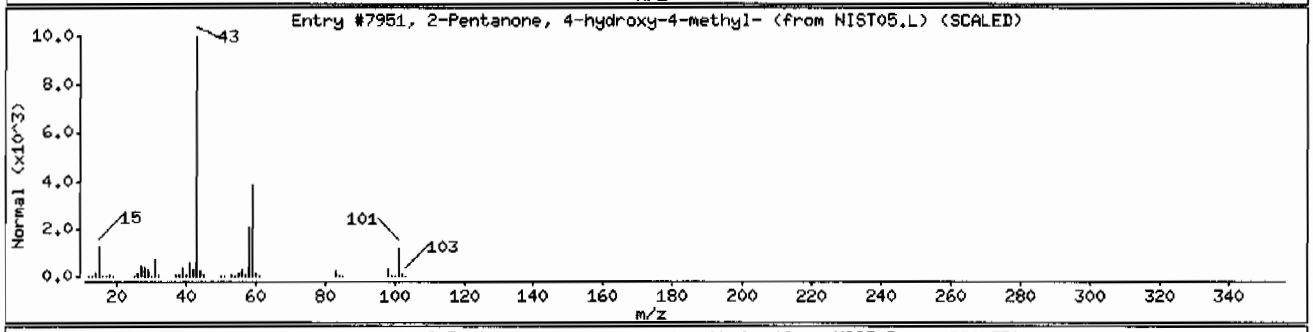

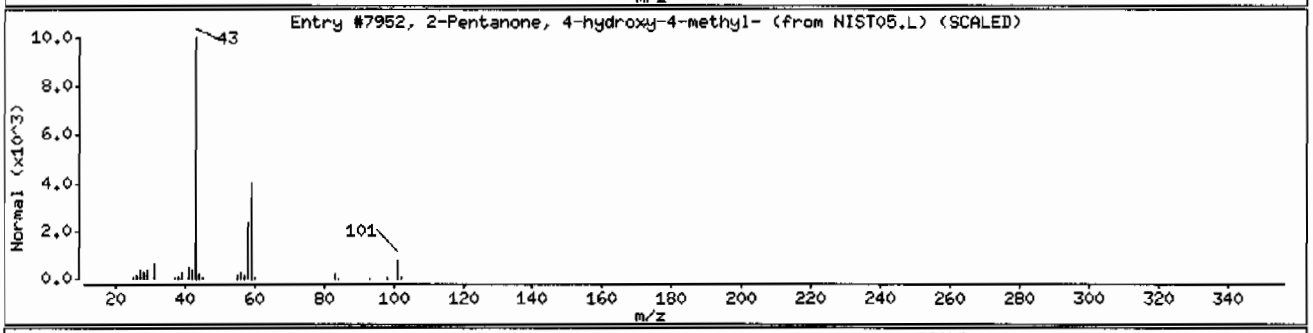

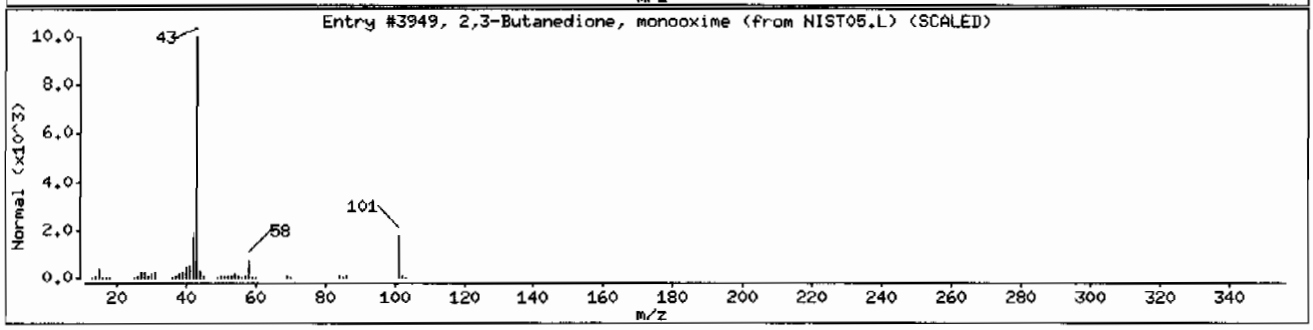

Data File: /chem/MSD5.i/s070709.b/s5g0709.d

Date : 07-JUL-2009 10:38

Client ID: CAMO-09-10030

Instrument: MSD5.i

Sample Info: |2326610051882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133621	92	C21H3OO2	314
trans-1,2-Bis(methyldichlorosilyl)ethyle	65899-10-7	NIST05.L	93595	91	C4H8Cl4Si2	252
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133620	70	C21H3OO2	314

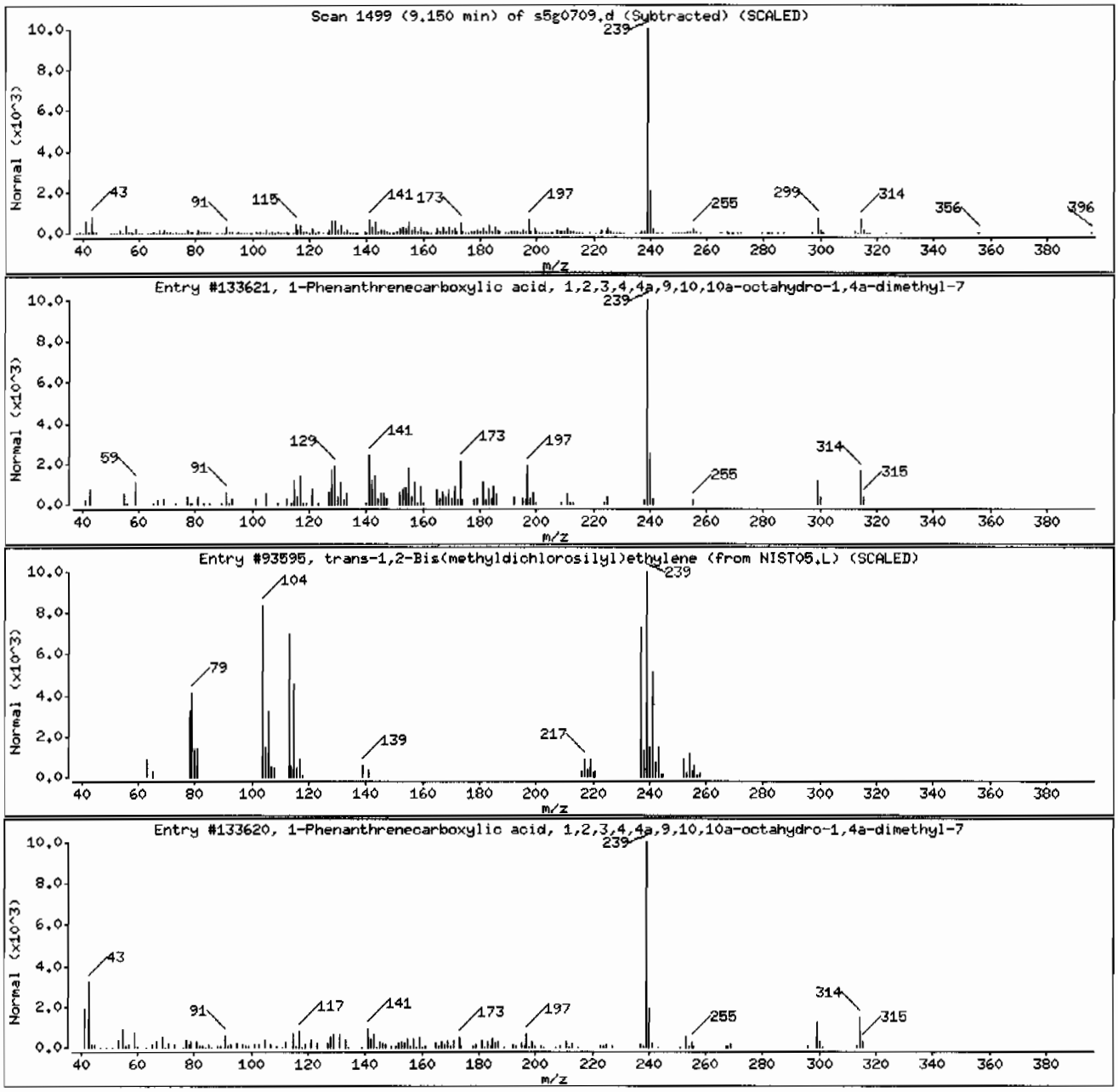

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661003	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9941	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 09:41	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0707.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	374	ug/kg	74.7	374
108-95-2	Phenol	U	374	ug/kg	74.7	374
95-57-8	2-Chlorophenol	U	374	ug/kg	74.7	374
106-46-7	1,4-Dichlorobenzene	U	374	ug/kg	74.7	374
621-64-7	N-Nitrosodipropylamine	U	374	ug/kg	74.7	374
59-50-7	4-Chloro-3-methylphenol	U	374	ug/kg	74.7	374
83-32-9	Acenaphthene	U	37.4	ug/kg	12.3	37.4
121-14-2	2,4-Dinitrotoluene	U	374	ug/kg	37.4	374
100-02-7	4-Nitrophenol	U	374	ug/kg	123	374
87-86-5	Pentachlorophenol	U	374	ug/kg	93.4	374
129-00-0	Pyrene	U	37.4	ug/kg	11.2	37.4
110-86-1	Pyridine	U	374	ug/kg	74.7	374
62-53-3	Aniline	U	374	ug/kg	112	374
111-44-4	bis(2-Chloroethyl) ether	U	374	ug/kg	74.7	374
541-73-1	1,3-Dichlorobenzene	U	374	ug/kg	74.7	374
100-51-6	Benzyl alcohol	U	374	ug/kg	112	374
95-50-1	1,2-Dichlorobenzene	U	374	ug/kg	74.7	374
108-60-1	bis(2-Chloroisopropyl)ether	U	374	ug/kg	74.7	374
95-48-7	o-Cresol	U	374	ug/kg	74.7	374
65794-96-9	m,p-Cresols	U	374	ug/kg	112	374
67-72-1	Hexachloroethane	U	374	ug/kg	74.7	374
98-95-3	Nitrobenzene	U	374	ug/kg	74.7	374
78-59-1	Isophorone	U	374	ug/kg	74.7	374
88-75-5	2-Nitrophenol	U	374	ug/kg	74.7	374
105-67-9	2,4-Dimethylphenol	U	374	ug/kg	131	374
111-91-1	bis(2-Chloroethoxy)methane	U	374	ug/kg	74.7	374
120-83-2	2,4-Dichlorophenol	U	374	ug/kg	74.7	374
65-85-0	Benzoic acid	U	747	ug/kg	187	747
91-20-3	Naphthalene	U	37.4	ug/kg	11.2	37.4
106-47-8	4-Chloroaniline	U	374	ug/kg	74.7	374
87-68-3	Hexachlorobutadiene	U	374	ug/kg	74.7	374
91-57-6	2-Methylnaphthalene	U	37.4	ug/kg	7.47	37.4
77-47-4	Hexachlorocyclopentadiene	U	374	ug/kg	74.7	374
88-06-2	2,4,6-Trichlorophenol	U	374	ug/kg	74.7	374
95-95-4	2,4,5-Trichlorophenol	U	374	ug/kg	74.7	374
91-58-7	2-Chloronaphthalene	U	37.4	ug/kg	12.3	37.4
88-74-4	2-Nitroaniline	U	374	ug/kg	74.7	374
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	374	ug/kg	74.7	374

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661003	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9941	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 09:41	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0707.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	374	ug/kg	74.7	374
606-20-2	2.6-Dinitrotoluene	U	374	ug/kg	37.4	374
208-96-8	Acenaphthylene	U	37.4	ug/kg	11.2	37.4
51-28-5	2.4-Dinitrophenol	U	747	ug/kg	142	747
132-64-9	Dibenzofuran	U	374	ug/kg	74.7	374
84-66-2	Diethylphthalate	U	374	ug/kg	74.7	374
86-73-7	Fluorene	U	37.4	ug/kg	11.2	37.4
7005-72-3	4-Chlorophenylphenylether	U	374	ug/kg	74.7	374
534-52-1	2-Methyl-4,6-dinitrophenol	U	374	ug/kg	74.7	374
100-01-6	4-Nitroaniline	U	374	ug/kg	112	374
	p-Nitroaniline					
122-39-4	Diphenylamine	U	374	ug/kg	74.7	374
122-66-7	Azobenzene	U	374	ug/kg	74.7	374
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	374	ug/kg	74.7	374
118-74-1	Hexachlorobenzene	U	374	ug/kg	74.7	374
85-01-8	Phenanthrene	U	37.4	ug/kg	11.2	37.4
120-12-7	Anthracene	U	37.4	ug/kg	7.47	37.4
84-74-2	Di-n-butylphthalate	U	374	ug/kg	74.7	374
206-44-0	Fluoranthene	U	37.4	ug/kg	11.2	37.4
85-68-7	Butylbenzylphthalate	U	374	ug/kg	74.7	374
56-55-3	Benzo(a)anthracene	U	37.4	ug/kg	11.2	37.4
91-94-1	3,3'-Dichlorobenzidine	U	374	ug/kg	112	374
218-01-9	Chrysene	U	37.4	ug/kg	11.2	37.4
117-81-7	bis(2-Ethylhexyl)phthalate	U	374	ug/kg	74.7	374
117-84-0	Di-n-octylphthalate	U	374	ug/kg	74.7	374
205-99-2	Benzo(b)fluoranthene	U	37.4	ug/kg	11.2	37.4
207-08-9	Benzo(k)fluoranthene	U	37.4	ug/kg	11.2	37.4
50-32-8	Benzo(a)pyrene	U	37.4	ug/kg	11.2	37.4
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.4	ug/kg	11.2	37.4
53-70-3	Dibenzo(a,h)anthracene	U	37.4	ug/kg	11.2	37.4
191-24-2	Benzo(ghi)perylene	U	37.4	ug/kg	11.2	37.4
120-82-1	1,2,4-Trichlorobenzene	U	374	ug/kg	74.7	374

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	401	ug/kg		JA
1235-74-1	1-Phenanthrenecarboxylic acid, 1,2,3,4,4	9.15	226	ug/kg	97	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661003	Date Received:	07/01/2009 09:00	%Moisture:	10.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9941	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 09:41	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0707.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	16.69	203	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0707.d
Lab Smp Id: 232661003 Client Smp ID: CAMO-09-9941
Inj Date : 07-JUL-2009 09:41
Operator : RMB Inst ID: MSD5.i
Smp Info : |232661003|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	10.81180	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	365047	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1294170	40.0000	
* 46 Acenaphthene-d10	164	6.126	6.131	(1.000)	812415	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1520331	40.0000	
* 91 Chrysene-d12	240	9.718	9.723	(1.000)	1545288	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1397428	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.798)	576554	71.9321	2690
$ 5 Phenol-d5	99	3.714	3.714	(0.929)	769073	72.7721	2720
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	343081	35.7753	1340
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.916)	823704	39.2037	1460
$ 60 2,4,6-Tribromophenol	329	6.728	6.733	(1.098)	261294	78.8264	2950
$ 81 p-Terphenyl-d14	244	8.683	8.688	(0.893)	1073008	45.3722	1700

ION RATIO REPORT

SV REPORT

Data file: s5g0707.d
Report Date: 07/07/2009 09:59
Lab. ID: 232661003 SampleType: SAMPLE
Injection Date: 07-JUL-2009 09:41
Operator: RMB Instrument: MSD5.i
Sample Info: |232661003|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2515
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	47969	3.71	3.79	80-120	100	(T)
93	122	3.67	3.79	154-214	0	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	50999	4.36	4.24	80-120	100	(T)
42	34969	4.36	4.24	56-116	69	(T)
27 Benzoic acid		CAS#: 65-85-0				
105	1090	4.68	4.64	80-120	100	( )
122	274	4.69	4.64	52-112	25	(Q)
77	670	4.69	4.64	53-113	62	( )
31 4-Chloroaniline		CAS#: 106-47-8				
127	375	4.90	4.90	80-120	100	( )
65	407	4.90	4.90	8- 68	109	(Q)
41 m-Nitroaniline		CAS#: 99-09-2				
138	133	6.13	6.08	80-120	100	( )
92	4366	6.13	6.08	79-139	3274	(Q)
108	17433	6.13	6.08	0- 42	13072	(Q)
43 Dimethylphthalate		CAS#: 131-11-3				
163	176414	6.13	5.89	80-120	100	(T)
164	812415	6.13	5.89	0- 40	461	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	106242	6.13	5.94	80-120	100	(T)
63	1545	6.13	5.94	55-115	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	106242	6.13	6.25	80-120	100	(T)
89	1804	6.13	6.24	39- 99	2	(QT)
63	1545	6.13	6.24	20- 80	1	(QT)
53 Fluorene				CAS#: 86-73-7		
166	10993	6.73	6.55	80-120	100	(T)
165	10894	6.73	6.55	61-121	99	(T)
167	3528	6.73	6.55	0- 44	32	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	855	6.73	6.56	80-120	100	(T)
105	1473	6.73	6.56	4- 64	172	(QT)
51	2140	6.73	6.56	31- 91	250	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	17871	6.73	6.91	80-120	100	(T)
141	93738	6.73	6.91	33- 93	525	(QT)
250	37199	6.73	6.91	68-128	208	(QT)
69 Anthracene				CAS#: 120-12-7		
178	5829	7.33	7.37	80-120	100	( )
179	671	7.33	7.37	0- 46	12	( )
176	1009	7.33	7.37	0- 48	17	( )
79 Pyrene				CAS#: 129-00-0		
202	10436	8.82	8.59	80-120	100	(T)
200	1131	8.82	8.59	0- 51	11	(T)
101	3444	8.82	8.59	0- 40	33	(T)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0707.d
Lab Smp Id: 232661003 Client Smp ID: CAMO-09-9941
Inj Date : 07-JUL-2009 09:41
Operator : RMB Inst ID: MSD5.i
Smp Info : |232661003|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	10.81180	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2362786	40.000
* 91 Chrysene-d12	9.718	3880372	40.000
* 98 Perylene-d12	11.457	3444318	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.015	634096	10.7347202	401	0		0	10
1-Phenanthrenecarboxylic acid, 1,2,3,4,4				CAS #: 1235-74-1			
9.150	586653	6.04739360	226	97	NIST05.L	133618	91
Unknown				CAS #:			
16.691	467741	5.43203531	203	0		0	98

Data File: /chem/MSD5.i/s070709.b/s5g0707.d
Date : 07-JUL-2009 09:41
Client ID: CAMO-09-9941
Sample Info: 1232661003|882565|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

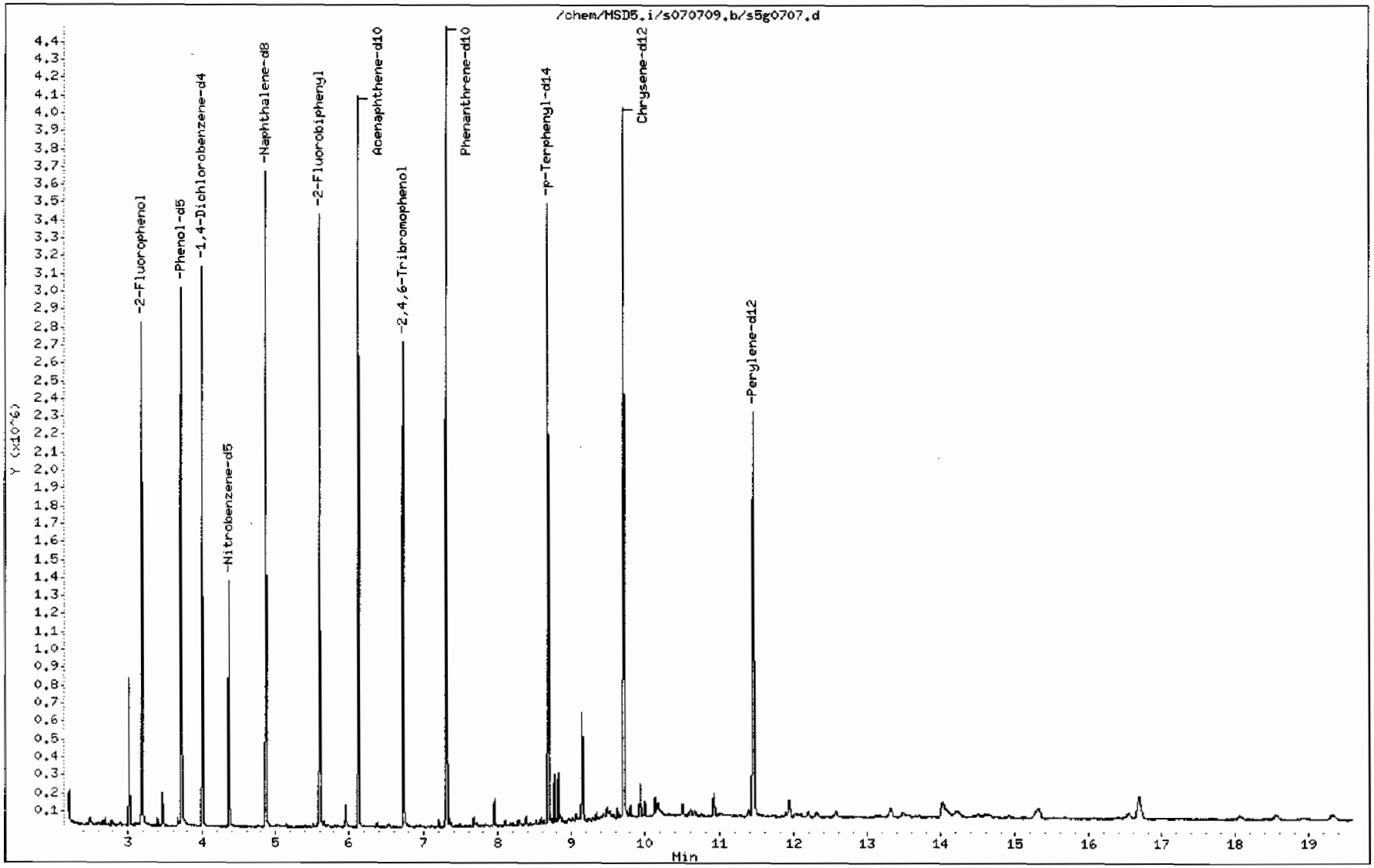

Data File: /chem/MSD5.i/s070709.b/s5g0707.d

Date : 07-JUL-2009 09:41

Client ID: CAMO-09-9941

Instrument: MSD5.i

Sample Info: |2326610031882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	40	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7977	38	C6H12O2	116

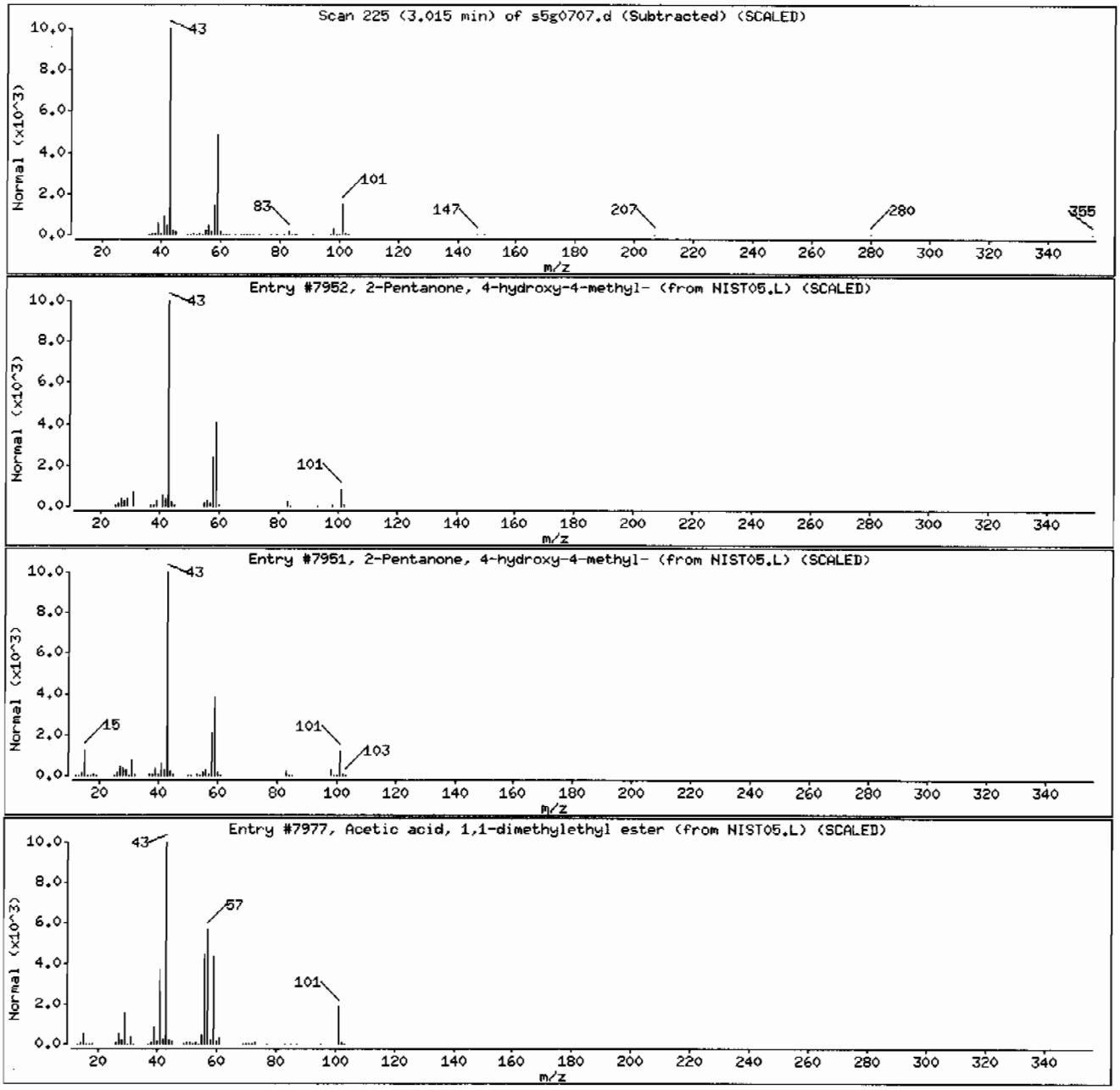

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Date : 07-JUL-2009 09:41

Client ID: CAMO-09-9941

Instrument: MSD5.i

Sample Info: 1232661003|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	97	C21H30O2	314
trans-1,2-Bis(methyldichlorosilyl)ethyle	65899-10-7	NIST05.L	93595	96	C4H8Cl4Si2	252
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133620	94	C21H30O2	314

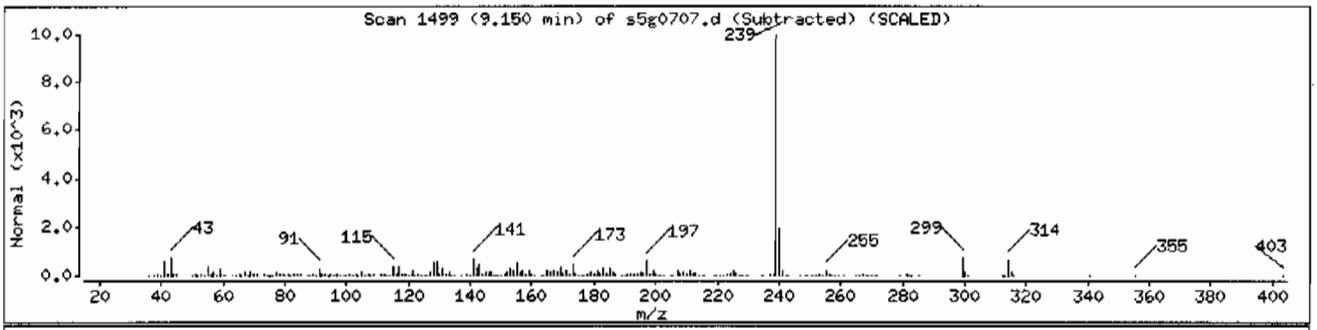

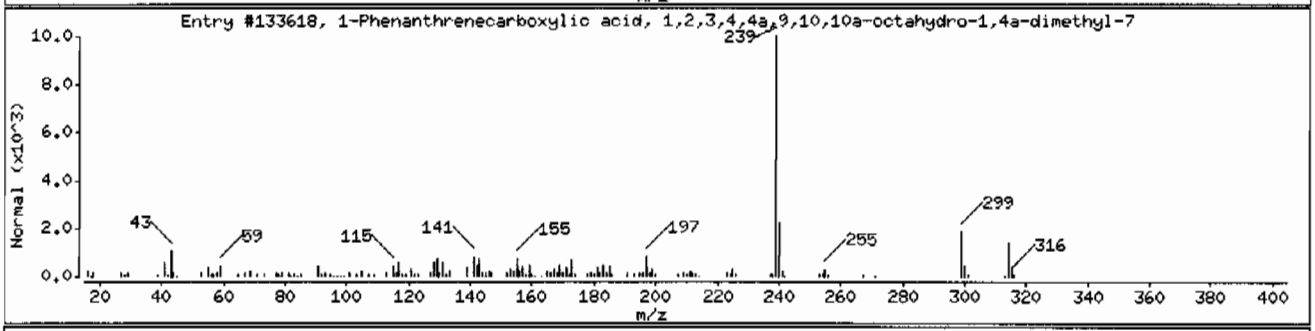

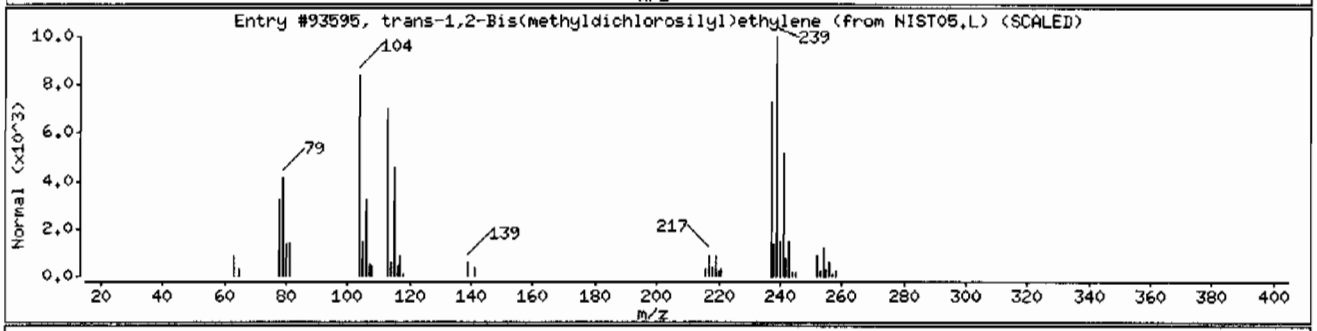

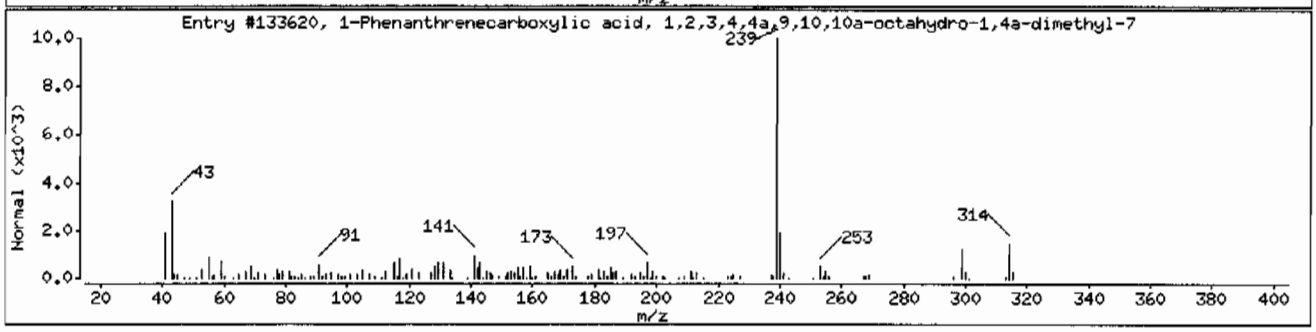

Data File: /chem/MSD5.i/s070709.b/s5g0707.d

Date : 07-JUL-2009 09:41

Client ID: CAMO-09-9941

Instrument: MSD5.i

Sample Info: |2326610031882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Ethylacridine	55751-83-2	NIST05.L	62222	46	C15H13N	207
9H-Fluorene-2-carboxylic acid, 9-oxo-, (	1000316-02-1	NIST05.L	112598	43	C17H15NO3	281
5-Methyl-2-trimethylsilyloxy-acetophenon	97389-69-0	NIST05.L	72509	38	C12H18O2Si	222

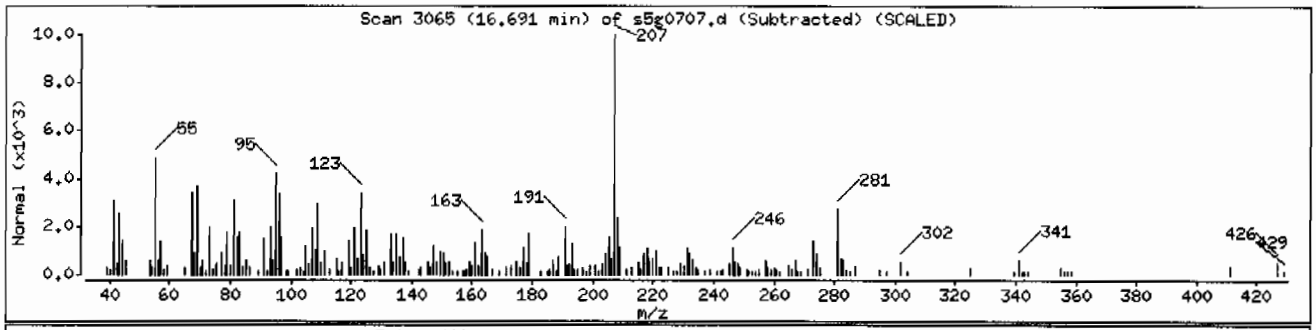

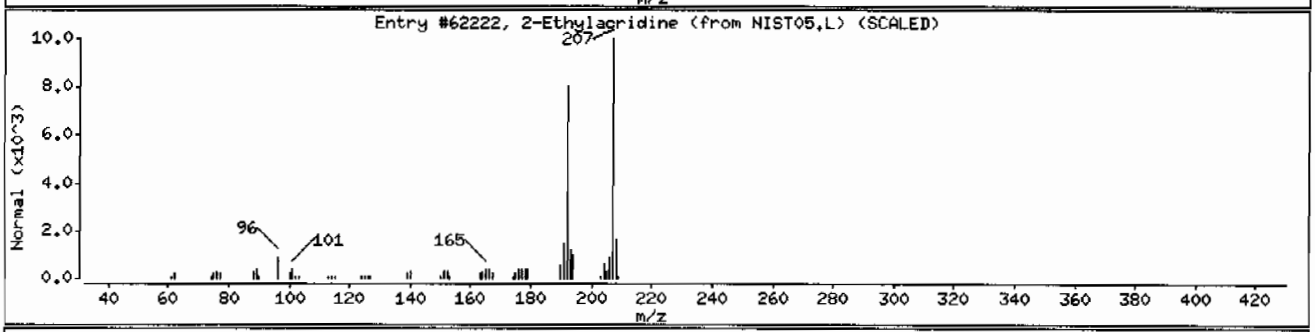

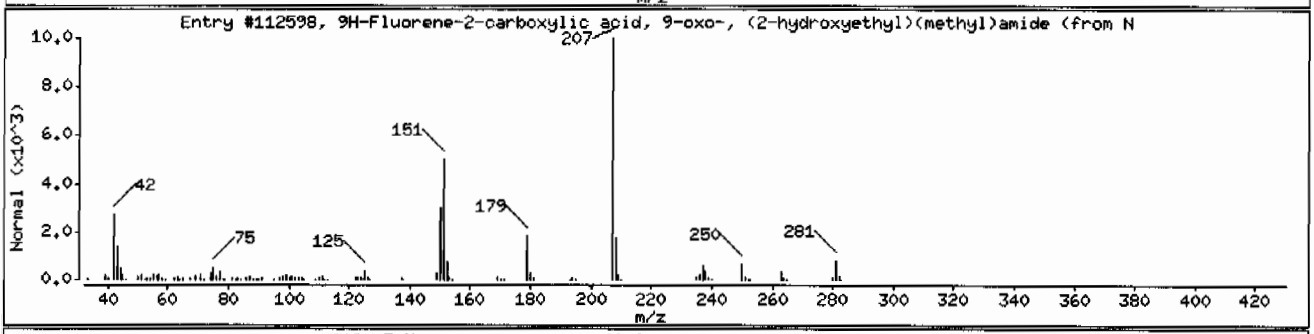

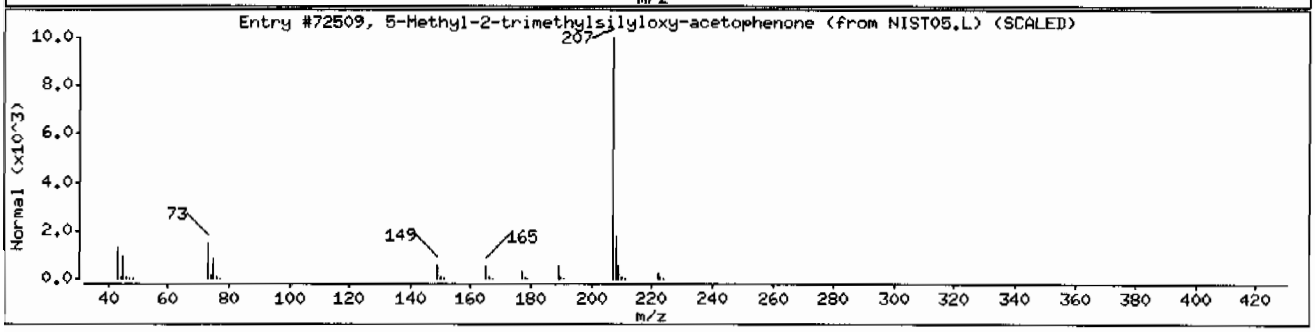

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661002	Date Received:	07/01/2009 09:00	%Moisture:	11.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9942	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 09:13	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s5g0706.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	378	ug/kg	75.6	378
108-95-2	Phenol	U	378	ug/kg	75.6	378
95-57-8	2-Chlorophenol	U	378	ug/kg	75.6	378
106-46-7	1,4-Dichlorobenzene	U	378	ug/kg	75.6	378
621-64-7	N-Nitrosodipropylamine	U	378	ug/kg	75.6	378
59-50-7	4-Chloro-3-methylphenol	U	378	ug/kg	75.6	378
83-32-9	Acenaphthene	U	37.8	ug/kg	12.5	37.8
121-14-2	2,4-Dinitrotoluene	U	378	ug/kg	37.8	378
100-02-7	4-Nitrophenol	U	378	ug/kg	125	378
87-86-5	Pentachlorophenol	U	378	ug/kg	94.5	378
129-00-0	Pyrene	U	37.8	ug/kg	11.3	37.8
110-86-1	Pyridine	U	378	ug/kg	75.6	378
62-53-3	Aniline	U	378	ug/kg	113	378
111-44-4	bis(2-Chloroethyl) ether	U	378	ug/kg	75.6	378
541-73-1	1,3-Dichlorobenzene	U	378	ug/kg	75.6	378
100-51-6	Benzyl alcohol	U	378	ug/kg	113	378
95-50-1	1,2-Dichlorobenzene	U	378	ug/kg	75.6	378
108-60-1	bis(2-Chloroisopropyl)ether	U	378	ug/kg	75.6	378
95-48-7	o-Cresol	U	378	ug/kg	75.6	378
65794-96-9	m,p-Cresols	U	378	ug/kg	113	378
67-72-1	Hexachloroethane	U	378	ug/kg	75.6	378
98-95-3	Nitrobenzene	U	378	ug/kg	75.6	378
78-59-1	Isophorone	U	378	ug/kg	75.6	378
88-75-5	2-Nitrophenol	U	378	ug/kg	75.6	378
105-67-9	2,4-Dimethylphenol	U	378	ug/kg	132	378
111-91-1	bis(2-Chloroethoxy)methane	U	378	ug/kg	75.6	378
120-83-2	2,4-Dichlorophenol	U	378	ug/kg	75.6	378
65-85-0	Benzoic acid	U	756	ug/kg	189	756
91-20-3	Naphthalene	U	37.8	ug/kg	11.3	37.8
106-47-8	4-Chloroaniline	U	378	ug/kg	75.6	378
87-68-3	Hexachlorobutadiene	U	378	ug/kg	75.6	378
91-57-6	2-Methylnaphthalene	U	37.8	ug/kg	7.56	37.8
77-47-4	Hexachlorocyclopentadiene	U	378	ug/kg	75.6	378
88-06-2	2,4,6-Trichlorophenol	U	378	ug/kg	75.6	378
95-95-4	2,4,5-Trichlorophenol	U	378	ug/kg	75.6	378
91-58-7	2-Chloronaphthalene	U	37.8	ug/kg	12.5	37.8
88-74-4	2-Nitroaniline	U	378	ug/kg	75.6	378
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	378	ug/kg	75.6	378

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661002	**Date Received:**	07/01/2009 09:00	**%Moisture:**	11.9
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9942	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 09:13	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s5g0706.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	378	ug/kg	75.6	378
606-20-2	2,6-Dinitrotoluene	U	378	ug/kg	37.8	378
208-96-8	Acenaphthylene	U	37.8	ug/kg	11.3	37.8
51-28-5	2,4-Dinitrophenol	U	756	ug/kg	144	756
132-64-9	Dibenzofuran	U	378	ug/kg	75.6	378
84-66-2	Diethylphthalate	U	378	ug/kg	75.6	378
86-73-7	Fluorene	U	37.8	ug/kg	11.3	37.8
7005-72-3	4-Chlorophenylphenylether	U	378	ug/kg	75.6	378
534-52-1	2-Methyl-4,6-dinitrophenol	U	378	ug/kg	75.6	378
100-01-6	4-Nitroaniline	U	378	ug/kg	113	378
	p-Nitroaniline					
122-39-4	Diphenylamine	U	378	ug/kg	75.6	378
122-66-7	Azobenzene	U	378	ug/kg	75.6	378
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	378	ug/kg	75.6	378
118-74-1	Hexachlorobenzene	U	378	ug/kg	75.6	378
85-01-8	Phenanthrene	U	37.8	ug/kg	11.3	37.8
120-12-7	Anthracene	U	37.8	ug/kg	7.56	37.8
84-74-2	Di-n-butylphthalate	U	378	ug/kg	75.6	378
206-44-0	Fluoranthene	U	37.8	ug/kg	11.3	37.8
85-68-7	Butylbenzylphthalate	U	378	ug/kg	75.6	378
56-55-3	Benzo(a)anthracene	U	37.8	ug/kg	11.3	37.8
91-94-1	3,3'-Dichlorobenzidine	U	378	ug/kg	113	378
218-01-9	Chrysene	U	37.8	ug/kg	11.3	37.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	378	ug/kg	75.6	378
117-84-0	Di-n-octylphthalate	U	378	ug/kg	75.6	378
205-99-2	Benzo(b)fluoranthene	U	37.8	ug/kg	11.3	37.8
207-08-9	Benzo(k)fluoranthene	U	37.8	ug/kg	11.3	37.8
50-32-8	Benzo(a)pyrene	U	37.8	ug/kg	11.3	37.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	37.8	ug/kg	11.3	37.8
53-70-3	Dibenzo(a,h)anthracene	U	37.8	ug/kg	11.3	37.8
191-24-2	Benzo(ghi)perylene	U	37.8	ug/kg	11.3	37.8
120-82-1	1,2,4-Trichlorobenzene	U	378	ug/kg	75.6	378

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	388	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0706.d
Lab Smp Id: 232661002 Client Smp ID: CAMO-09-9942
Inj Date : 07-JUL-2009 09:13
Operator : RMB Inst ID: MSD5.i
Smp Info : |232661002|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	11.86210	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	324753	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1192573	40.0000	
* 46 Acenaphthene-d10	164	6.126	6.131	(1.000)	775915	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1504353	40.0000	
* 91 Chrysene-d12	240	9.718	9.723	(1.000)	1543313	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1312161	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.798)	481064	67.4654	2550
$ 5 Phenol-d5	99	3.714	3.714	(0.929)	618709	65.8081	2490
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	269661	30.5149	1150
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.916)	671004	33.4383	1260
$ 60 2,4,6-Tribromophenol	329	6.728	6.733	(1.098)	247243	78.0963	2950
$ 81 p-Terphenyl-d14	244	8.683	8.688	(0.893)	1047198	44.3375	1680

ION RATIO REPORT

SV REPORT

Data file: s5g0706.d
Report Date: 07/07/2009 09:31
Lab. ID: 232661002 SampleType: SAMPLE
Injection Date: 07-JUL-2009 09:13
Operator: RMB Instrument: MSD5.i
Sample Info: |232661002|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2515
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	39361	3.71	3.79	80-120	100	(T)
93	925	3.79	3.79	154-214	2	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	39693	4.36	4.24	80-120	100	(T)
42	25302	4.36	4.24	56-116	64	(T)
27 Benzoic acid		CAS#: 65-85-0				
105	439	4.75	4.64	80-120	100	(T)
122	114	4.79	4.64	52-112	26	(QT)
77	901	4.75	4.64	53-113	205	(QT)
31 4-Chloroaniline		CAS#: 106-47-8				
127	616	4.91	4.90	80-120	100	( )
65	478	4.90	4.90	8- 68	78	(Q)
43 Dimethylphthalate		CAS#: 131-11-3				
163	168275	6.13	5.89	80-120	100	(T)
164	775915	6.13	5.89	0- 40	461	(QT)
44 2,6-Dinitrotoluene		CAS#: 606-20-2				
165	102553	6.13	5.94	80-120	100	(T)
63	1341	6.13	5.94	55-115	1	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
48 2,4-Dinitrophenol			CAS#: 51-28-5			
184	123	6.32	6.16	80-120	100	(T)
154	3690	6.13	6.16	830-890	2997	(Q)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	102553	6.13	6.25	80-120	100	(T)
89	1729	6.13	6.24	39- 99	2	(QT)
63	1341	6.13	6.24	20- 80	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	10632	6.73	6.55	80-120	100	(T)
165	10983	6.73	6.55	61-121	103	(T)
167	3518	6.73	6.55	0- 44	33	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1171	6.73	6.56	80-120	100	(T)
105	1370	6.73	6.56	4- 64	117	(QT)
51	1727	6.73	6.56	31- 91	147	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	17937	6.73	6.91	80-120	100	(T)
141	90495	6.73	6.91	33- 93	505	(QT)
250	34619	6.73	6.91	68-128	193	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0706.d
Lab Smp Id: 232661002 Client Smp ID: CAMO-09-9942
Inj Date : 07-JUL-2009 09:13
Operator : RMB Inst ID: MSD5.i
Smp Info : |232661002|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariabl

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	11.86210	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2099705	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.015	539183	10.2715917	388	0		0	10

Data File: /chem/MSD5.i/s070709.b/s5g0706.d
Date : 07-JUL-2009 09:13
Client ID: CAMO-09-9942
Sample Info: |2326610021882565|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Page 1

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

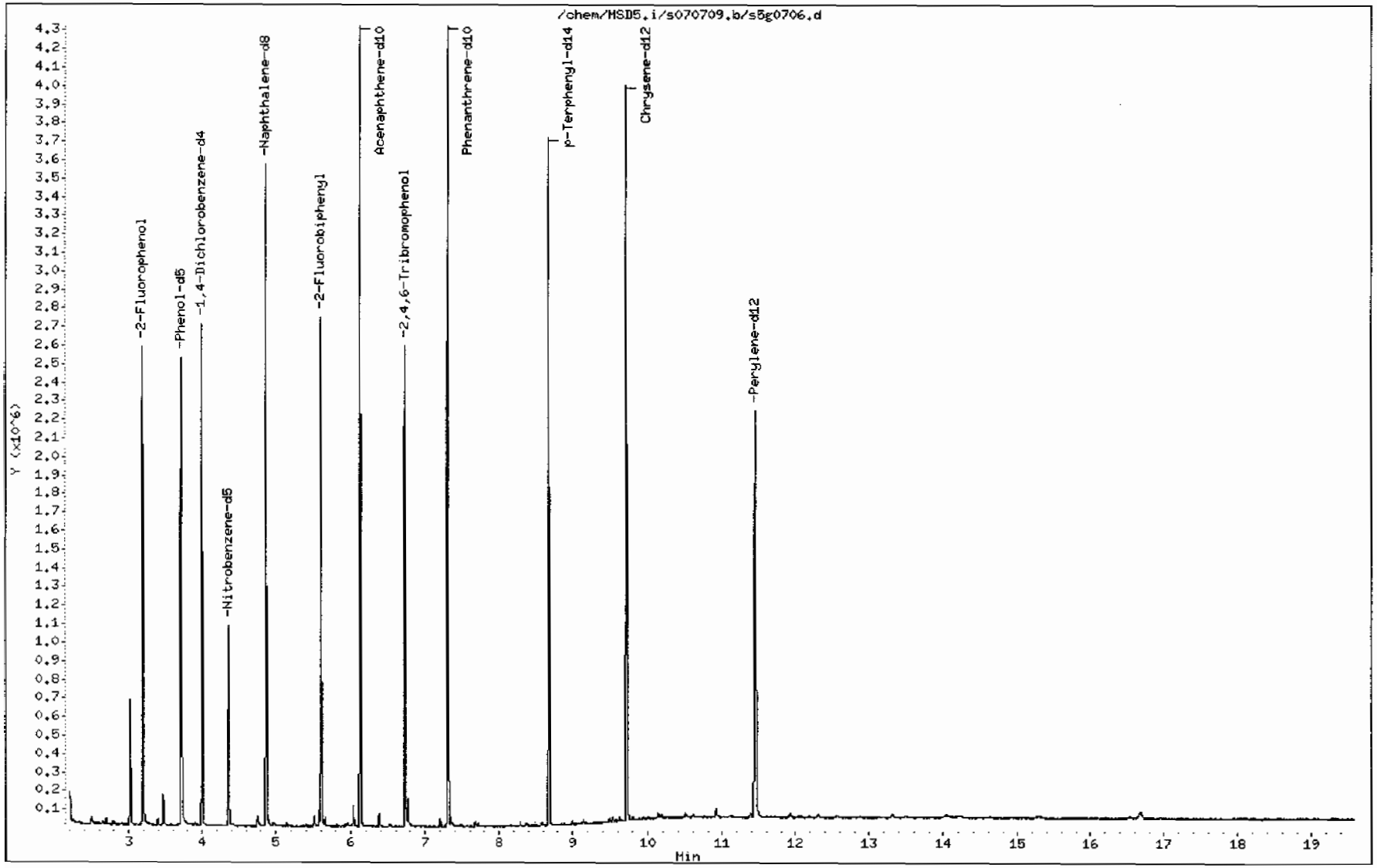

Data File: /chem/MSD5.i/s070709.b/s5g0706.d

Date : 07-JUL-2009 09:13

Client ID: CAMO-09-9942

Instrument: MSD5.i

Sample Info: |2326610021882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	64	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	64	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116

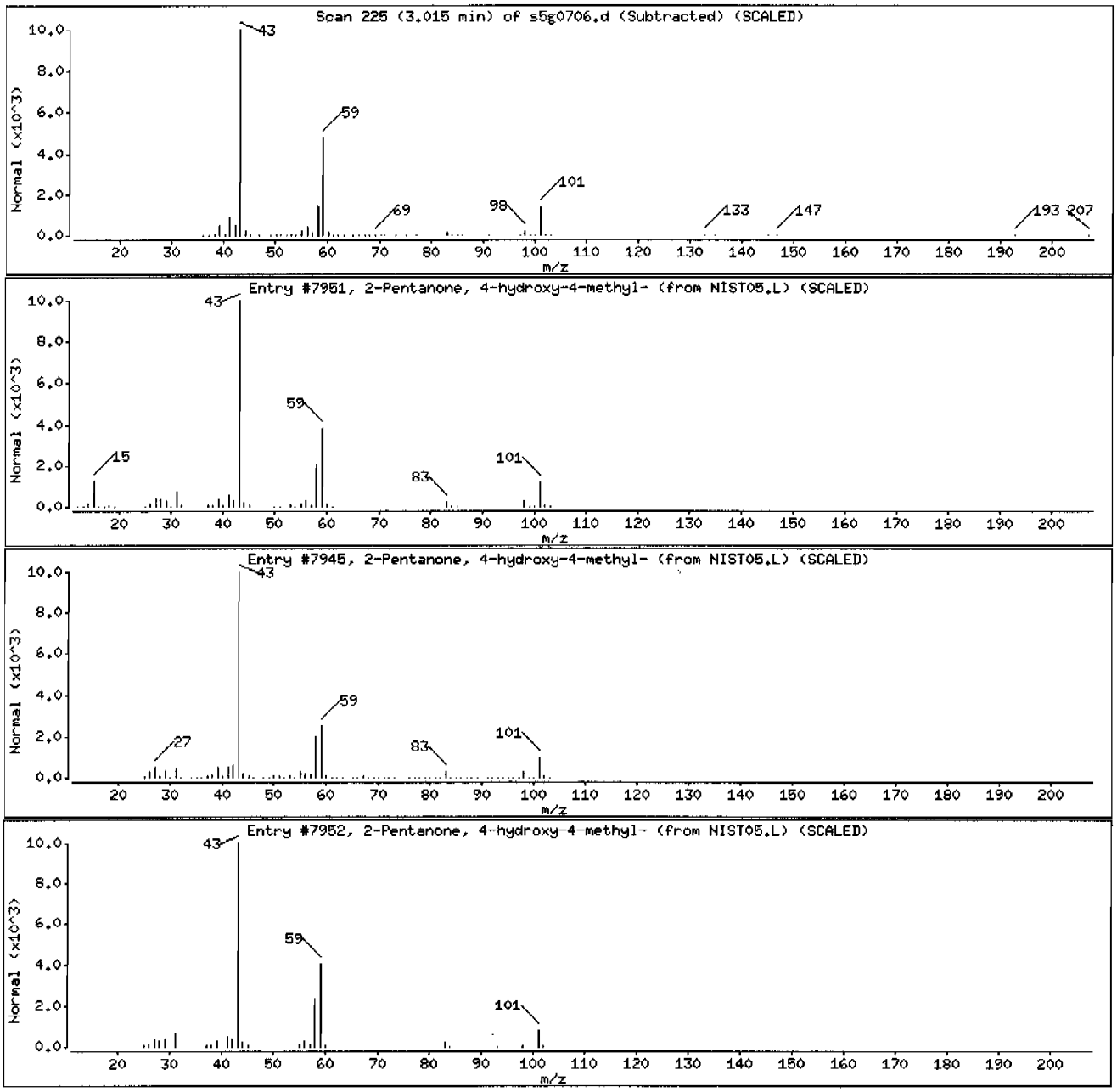

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661004	Date Received:	07/01/2009 09:00	%Moisture:	13.9
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9943	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 10:10	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s5g0708.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	387	ug/kg	77.3	387
108-95-2	Phenol	U	387	ug/kg	77.3	387
95-57-8	2-Chlorophenol	U	387	ug/kg	77.3	387
106-46-7	1,4-Dichlorobenzene	U	387	ug/kg	77.3	387
621-64-7	N-Nitrosodipropylamine	U	387	ug/kg	77.3	387
59-50-7	4-Chloro-3-methylphenol	U	387	ug/kg	77.3	387
83-32-9	Acenaphthene	U	38.7	ug/kg	12.8	38.7
121-14-2	2,4-Dinitrotoluene	U	387	ug/kg	38.7	387
100-02-7	4-Nitrophenol	U	387	ug/kg	128	387
87-86-5	Pentachlorophenol	U	387	ug/kg	96.7	387
129-00-0	Pyrene	J	17.6	ug/kg	11.6	38.7
110-86-1	Pyridine	U	387	ug/kg	77.3	387
62-53-3	Aniline	U	387	ug/kg	116	387
111-44-4	bis(2-Chloroethyl) ether	U	387	ug/kg	77.3	387
541-73-1	1,3-Dichlorobenzene	U	387	ug/kg	77.3	387
100-51-6	Benzyl alcohol	U	387	ug/kg	116	387
95-50-1	1,2-Dichlorobenzene	U	387	ug/kg	77.3	387
108-60-1	bis(2-Chloroisopropyl)ether	U	387	ug/kg	77.3	387
95-48-7	o-Cresol	U	387	ug/kg	77.3	387
65794-96-9	m,p-Cresols	U	387	ug/kg	116	387
67-72-1	Hexachloroethane	U	387	ug/kg	77.3	387
98-95-3	Nitrobenzene	U	387	ug/kg	77.3	387
78-59-1	Isophorone	U	387	ug/kg	77.3	387
88-75-5	2-Nitrophenol	U	387	ug/kg	77.3	387
105-67-9	2,4-Dimethylphenol	U	387	ug/kg	135	387
111-91-1	bis(2-Chloroethoxy)methane	U	387	ug/kg	77.3	387
120-83-2	2,4-Dichlorophenol	U	387	ug/kg	77.3	387
65-85-0	Benzoic acid	U	773	ug/kg	193	773
91-20-3	Naphthalene	U	38.7	ug/kg	11.6	38.7
106-47-8	4-Chloroaniline	U	387	ug/kg	77.3	387
87-68-3	Hexachlorobutadiene	U	387	ug/kg	77.3	387
91-57-6	2-Methylnaphthalene	U	38.7	ug/kg	7.73	38.7
77-47-4	Hexachlorocyclopentadiene	U	387	ug/kg	77.3	387
88-06-2	2,4,6-Trichlorophenol	U	387	ug/kg	77.3	387
95-95-4	2,4,5-Trichlorophenol	U	387	ug/kg	77.3	387
91-58-7	2-Chloronaphthalene	U	38.7	ug/kg	12.8	38.7
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	387	ug/kg	77.3	387
99-09-2	3-Nitroaniline	U	387	ug/kg	77.3	387

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**	**Date Collected:**	**06/26/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232661004**	**Date Received:**	**07/01/2009 09:00**	**%Moisture:**	**13.9**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9943**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 10:10**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30.03 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0708.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	387	ug/kg	77.3	387
606-20-2	2,6-Dinitrotoluene	U	387	ug/kg	38.7	387
208-96-8	Acenaphthylene	U	38.7	ug/kg	11.6	38.7
51-28-5	2,4-Dinitrophenol	U	773	ug/kg	147	773
132-64-9	Dibenzofuran	U	387	ug/kg	77.3	387
84-66-2	Diethylphthalate	U	387	ug/kg	77.3	387
86-73-7	Fluorene	U	38.7	ug/kg	11.6	38.7
7005-72-3	4-Chlorophenylphenylether	U	387	ug/kg	77.3	387
534-52-1	2-Methyl-4,6-dinitrophenol	U	387	ug/kg	77.3	387
100-01-6	4-Nitroaniline	U	387	ug/kg	116	387
	p-Nitroaniline					
122-39-4	Diphenylamine	U	387	ug/kg	77.3	387
122-66-7	Azobenzene	U	387	ug/kg	77.3	387
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	387	ug/kg	77.3	387
118-74-1	Hexachlorobenzene	U	387	ug/kg	77.3	387
85-01-8	Phenanthrene	U	38.7	ug/kg	11.6	38.7
120-12-7	Anthracene	U	38.7	ug/kg	7.73	38.7
84-74-2	Di-n-butylphthalate	U	387	ug/kg	77.3	387
206-44-0	Fluoranthene	J	17.5	ug/kg	11.6	38.7
85-68-7	Butylbenzylphthalate	U	387	ug/kg	77.3	387
56-55-3	Benzo(a)anthracene	J	12.5	ug/kg	11.6	38.7
91-94-1	3,3'-Dichlorobenzidine	U	387	ug/kg	116	387
218-01-9	Chrysene	U	38.7	ug/kg	11.6	38.7
117-81-7	bis(2-Ethylhexyl)phthalate	U	387	ug/kg	77.3	387
117-84-0	Di-n-octylphthalate	U	387	ug/kg	77.3	387
205-99-2	Benzo(b)fluoranthene	U	38.7	ug/kg	11.6	38.7
207-08-9	Benzo(k)fluoranthene	U	38.7	ug/kg	11.6	38.7
50-32-8	Benzo(a)pyrene	U	38.7	ug/kg	11.6	38.7
193-39-5	Indeno(1,2,3-cd)pyrene	U	38.7	ug/kg	11.6	38.7
53-70-3	Dibenzo(a,h)anthracene	U	38.7	ug/kg	11.6	38.7
191-24-2	Benzo(ghi)perylene	U	38.7	ug/kg	11.6	38.7
120-82-1	1,2,4-Trichlorobenzene	U	387	ug/kg	77.3	387

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.21	164	ug/kg		J
	Unknown Aldol Condensate	3.02	430	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0708.d
Lab Smp Id: 232661004 Client Smp ID: CAMO-09-9943
Inj Date : 07-JUL-2009 10:10
Operator : RMB Inst ID: MSD5.i
Smp Info : |232661004|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	13.89590	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	406124	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1430006	40.0000	
* 46 Acenaphthene-d10	164	6.126	6.131	(1.000)	911391	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1702105	40.0000	
* 91 Chrysene-d12	240	9.718	9.723	(1.000)	1566387	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1229796	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.798)	510751	57.2772	2220
$ 5 Phenol-d5	99	3.714	3.714	(0.929)	689541	58.6472	2270
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	285278	26.9221	1040
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.916)	720172	30.5538	1180
$ 60 2,4,6-Tribromophenol	329	6.728	6.733	(1.098)	278005	74.7598	2890
$ 81 p-Terphenyl-d14	244	8.683	8.688	(0.893)	1068389	44.5684	1720

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.587	8.592	(0.884)	15507	0.45380	17.6(a)
76 Fluoranthene	202	8.370	8.375	(1.146)	16466	0.45332	17.5(a)
89 Benzo(a)anthracene	228	9.709	9.714	(0.999)	10820	0.32193	12.4(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0708.d
Report Date: 07/07/2009 10:40
Lab. ID: 232661004 SampleType: SAMPLE
Injection Date: 07-JUL-2009 10:10
Operator: RMB Instrument: MSD5.i
Sample Info: |232661004|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2515
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	42482	3.71	3.79	80-120	100	(T)
93	129	3.71	3.79	154-214	0	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	41180	4.36	4.24	80-120	100	(T)
42	28805	4.36	4.24	56-116	70	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	417	4.69	4.64	80-120	100	( )
122	576	4.86	4.64	52-112	138	(QT)
77	768	4.70	4.64	53-113	184	(QT)
31 4-Chloroaniline			CAS#: 106-47-8			
127	200	4.91	4.90	80-120	100	( )
65	121	4.90	4.90	8- 68	61	( )
43 Dimethylphthalate			CAS#: 131-11-3			
163	199429	6.13	5.89	80-120	100	(T)
164	911391	6.13	5.89	0- 40	457	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	122528	6.13	5.94	80-120	100	(T)
63	1861	6.13	5.94	55-115	2	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	122528	6.13	6.25	80-120	100	(T)
89	2440	6.13	6.24	39- 99	2	(QT)
63	1861	6.13	6.24	20- 80	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	10657	6.73	6.55	80-120	100	(T)
165	12586	6.73	6.55	61-121	118	(T)
167	4299	6.73	6.55	0- 44	40	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	843	6.73	6.56	80-120	100	(T)
105	1763	6.73	6.56	4- 64	209	(QT)
51	1758	6.73	6.56	31- 91	208	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	19448	6.73	6.91	80-120	100	(T)
141	98216	6.73	6.91	33- 93	505	(QT)
250	39790	6.73	6.91	68-128	205	(QT)
69 Anthracene			CAS#: 120-12-7			
178	7856	7.33	7.37	80-120	100	( )
179	1251	7.32	7.37	0- 46	16	( )
176	1577	7.33	7.37	0- 48	20	( )
76 Fluoranthene			CAS#: 206-44-0			
202	16466	8.37	8.38	80-120	100	( )
203	2986	8.37	8.38	0- 48	18	( )
101	1539	8.37	8.37	0- 39	9	( )
79 Pyrene			CAS#: 129-00-0			
202	15507	8.59	8.59	80-120	100	( )
200	3324	8.59	8.59	0- 51	21	( )
101	1777	8.58	8.59	0- 40	11	( )
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	10820	9.71	9.71	80-120	100	( )
226	1610	9.70	9.71	0- 56	15	( )
229	2359	9.72	9.71	0- 50	22	( )
92 Chrysene			CAS#: 218-01-9			
228	10820	9.71	9.75	80-120	100	( )
229	2359	9.72	9.75	0- 50	22	( )
226	1610	9.70	9.75	0- 59	15	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0708.d
Lab Smp Id: 232661004 Client Smp ID: CAMO-09-9943
Inj Date : 07-JUL-2009 10:10
Operator : RMB Inst ID: MSD5.i
Smp Info : |232661004|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	13.89590	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2588853	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.211	274037	4.23411242	164	0		0	10
Unknown Aldol Condensate				CAS #:			
3.016	720424	11.1311651	430	0		0	10

Data File: /chem/MSD5.i/s070709.b/s5g0708.d
Date : 07-JUL-2009 10:10
Client ID: CAMO-09-9943
Sample Info: |2326610041882565|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RHB
Column diameter: 0.20

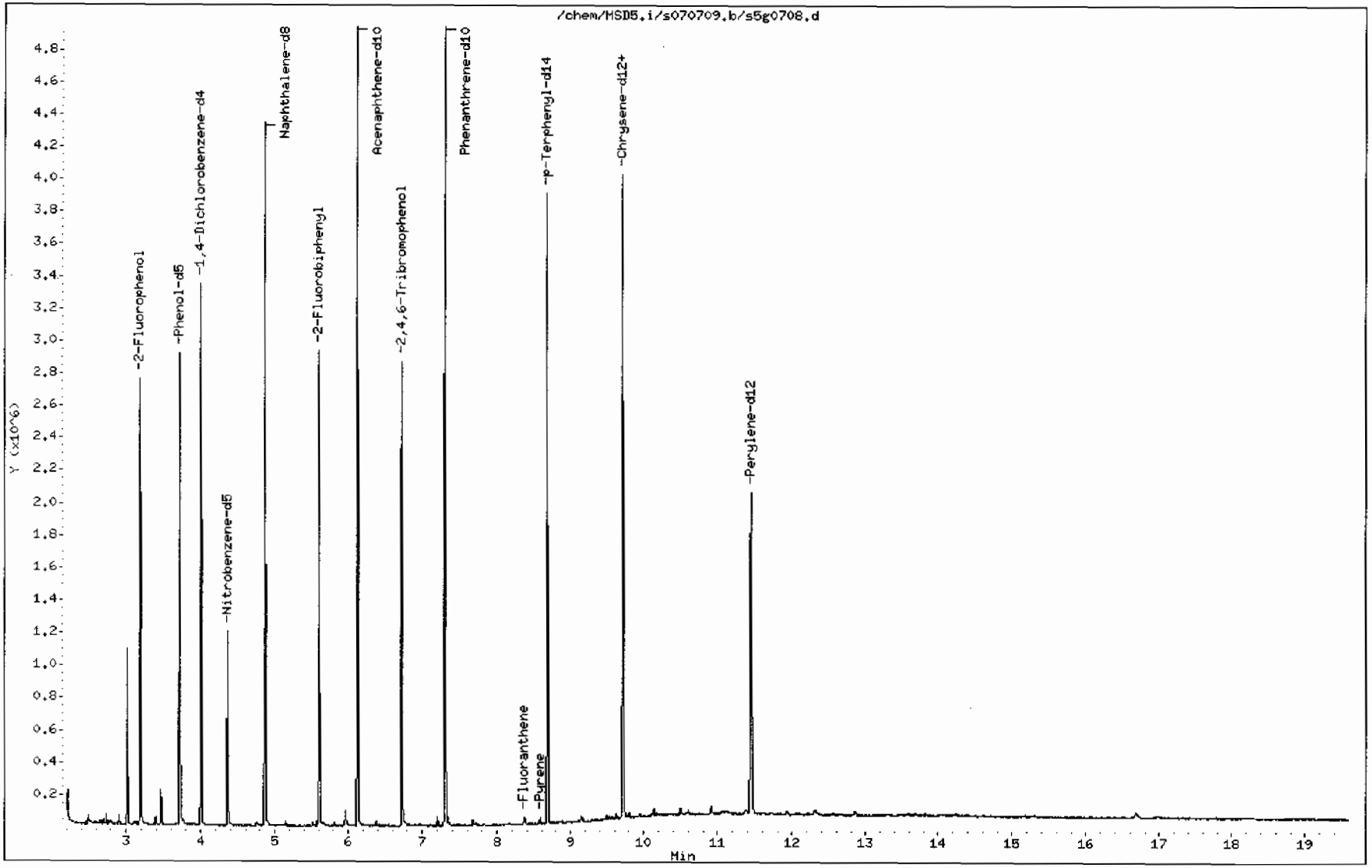

Data File: /chem/MSD5.i/s070709.b/s5g0708.d

Date : 07-JUL-2009 10:10

Client ID: CAHO-09-9943

Instrument: MSD5.i

Sample Info: 1232661004|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 17.6 ug/Kg

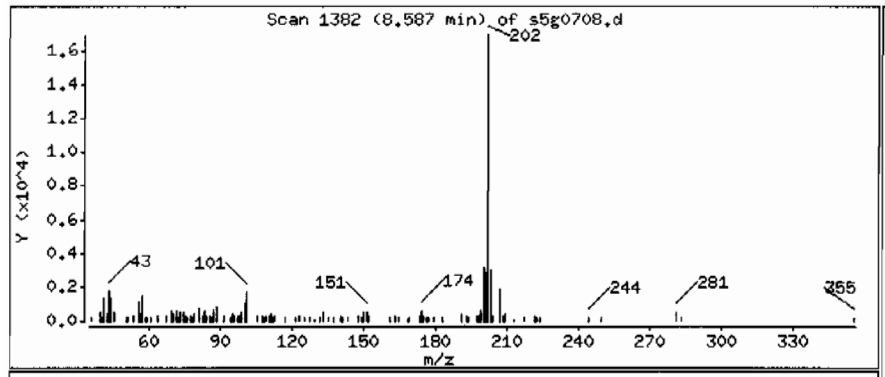

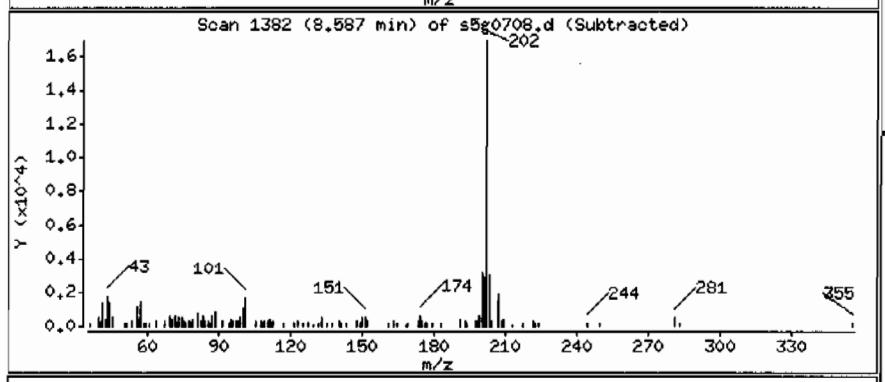

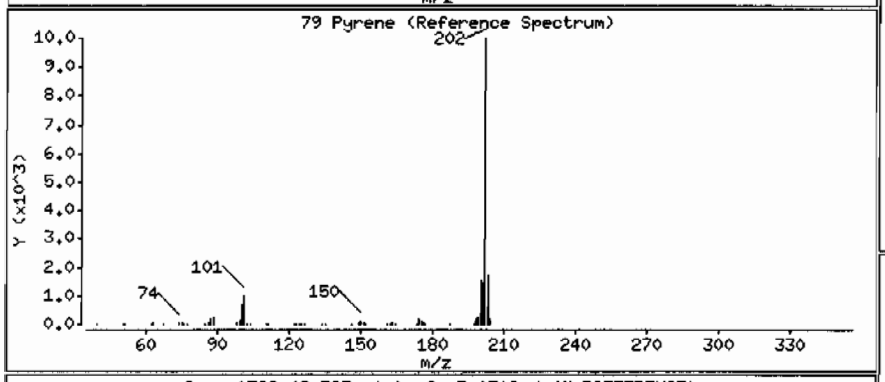

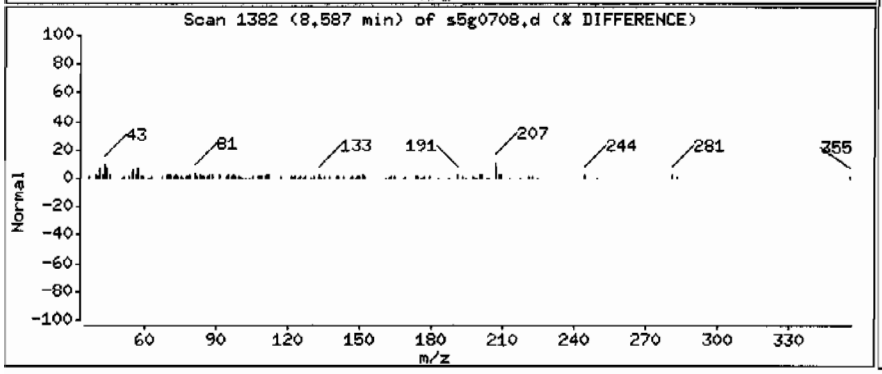

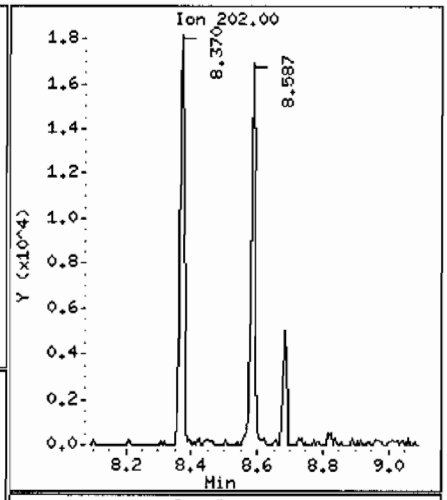

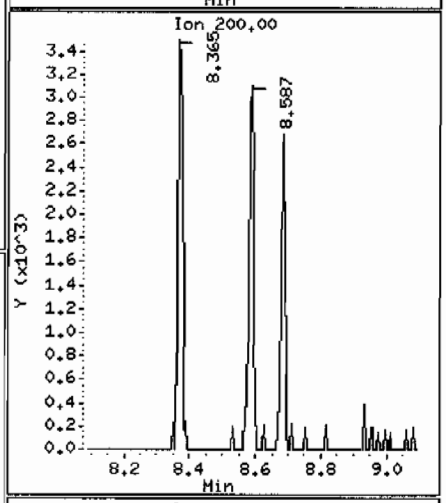

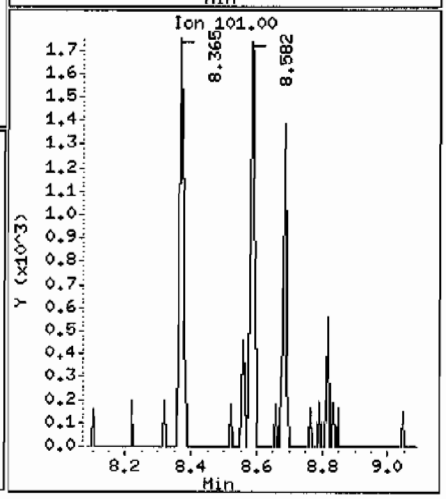

Data File: /chem/MSD5.i/s070709.b/s5g0708.d

Date : 07-JUL-2009 10:10

Client ID: CAMO-09-9943

Instrument: MSD5.i

Sample Info: 1232661004|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 17.5 ug/Kg

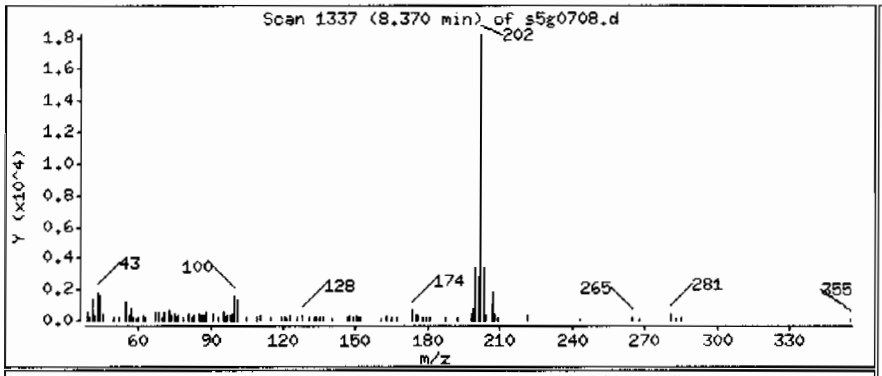

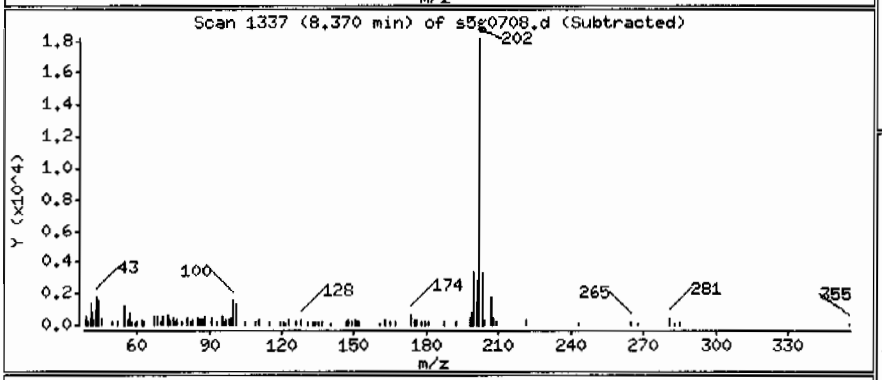

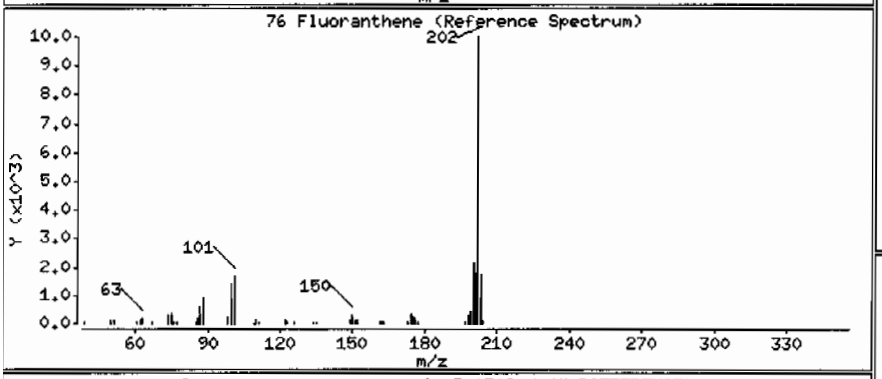

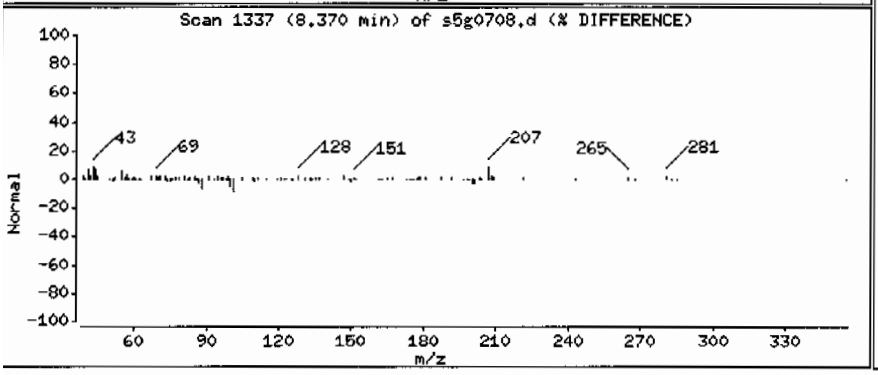

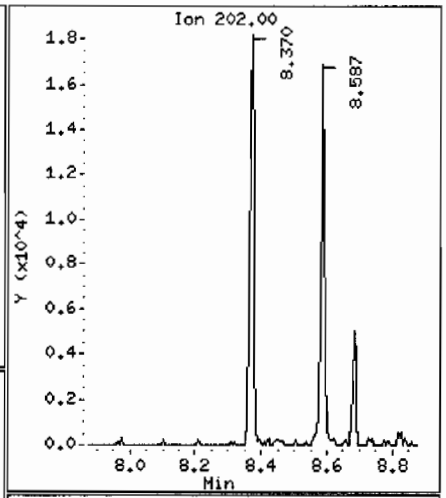

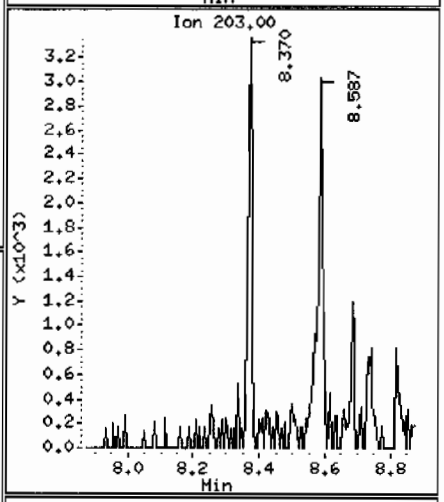

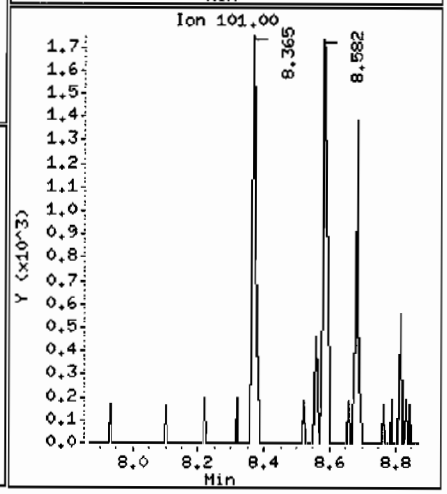

Data File: /chem/MSD5.i/s070709.b/s5g0708.d

Date : 07-JUL-2009 10:10

Client ID: CAMO-09-9943

Instrument: MSD5.i

Sample Info: |2326610041882565|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 12.4 ug/Kg

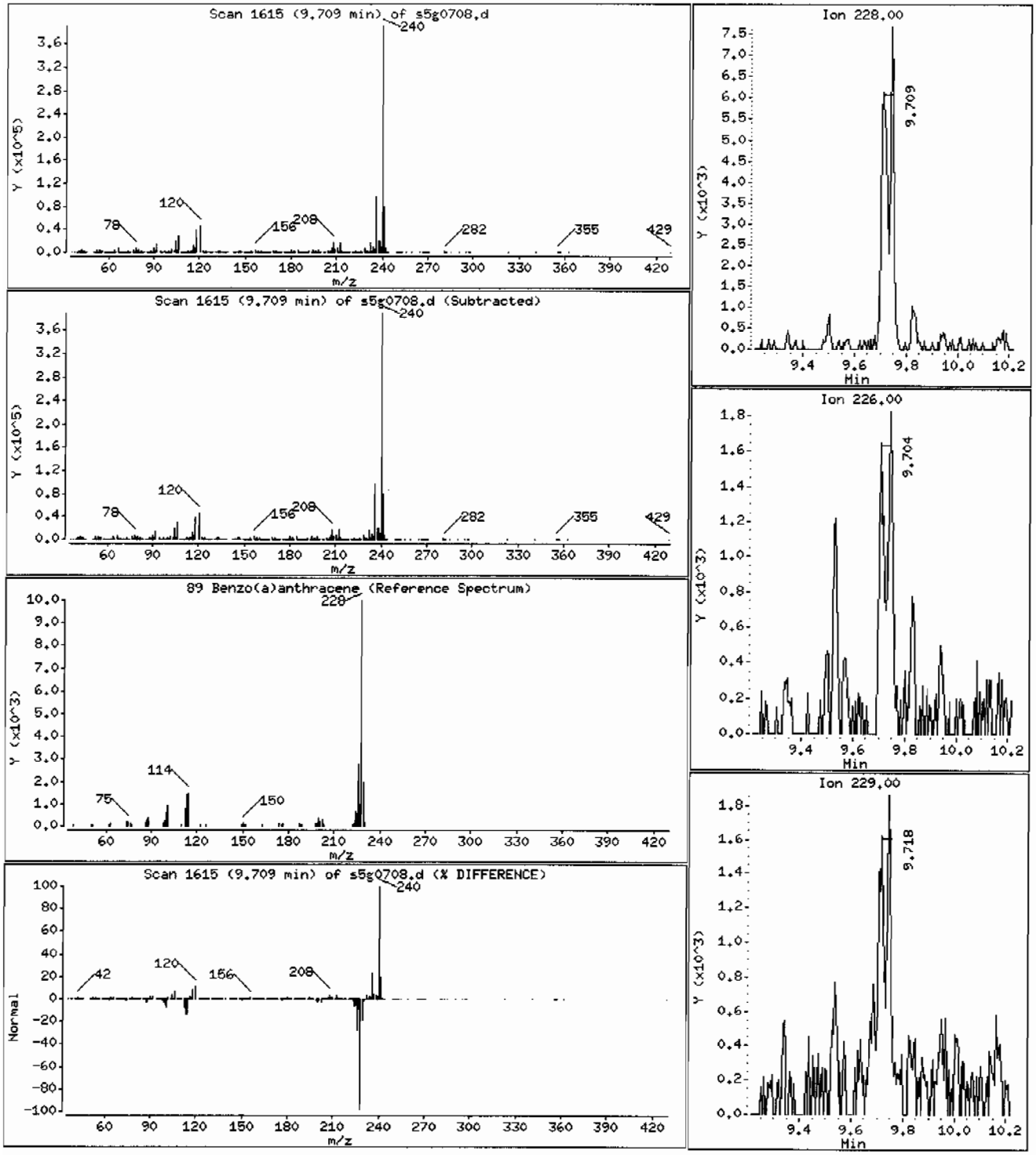

Data File: /chem/MSD5.i/s070709.b/s5g0708.d

Date : 07-JUL-2009 10:10

Client ID: CAMO-09-9943

Instrument: MSD5.i

Sample Info: |232661004|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propanoic acid	79-09-4	NIST05.L	794	50	C3H6O2	74
Sulfurous acid, butyl 2-propyl ester	1000309-11-4	NIST05.L	43432	17	C7H16O3S	180
Pentane, 2-bromo-	107-81-3	NIST05.L	23093	14	C5H11Br	150

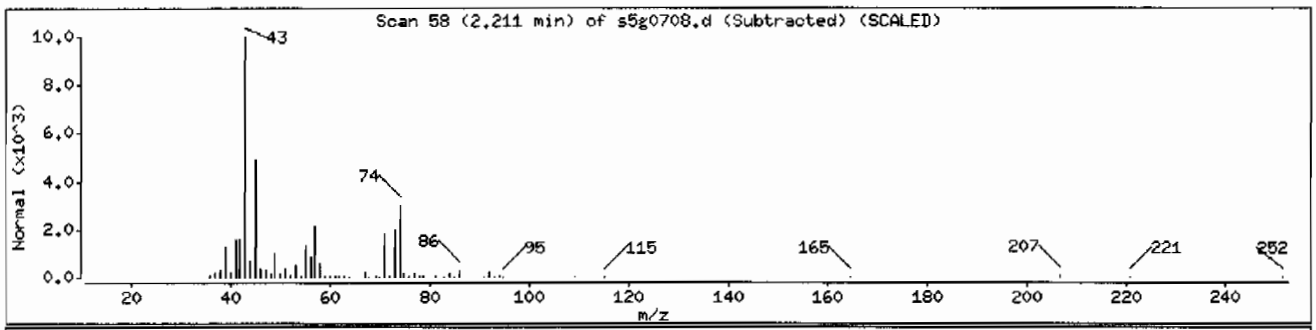

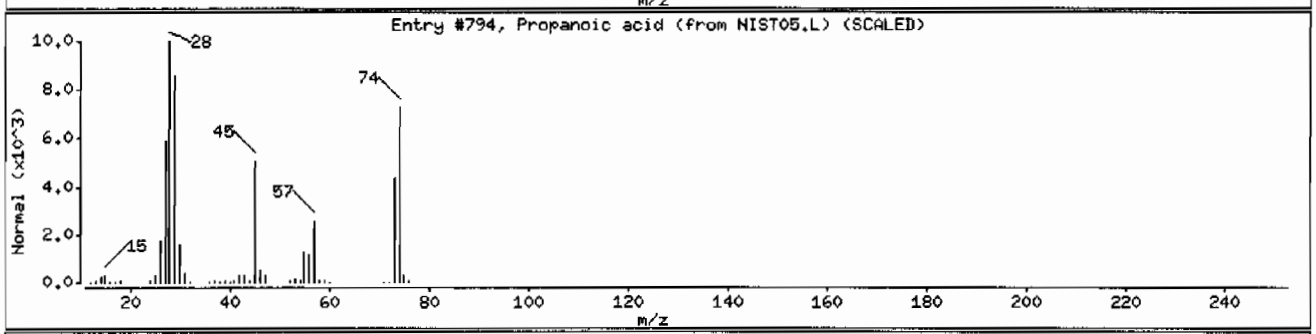

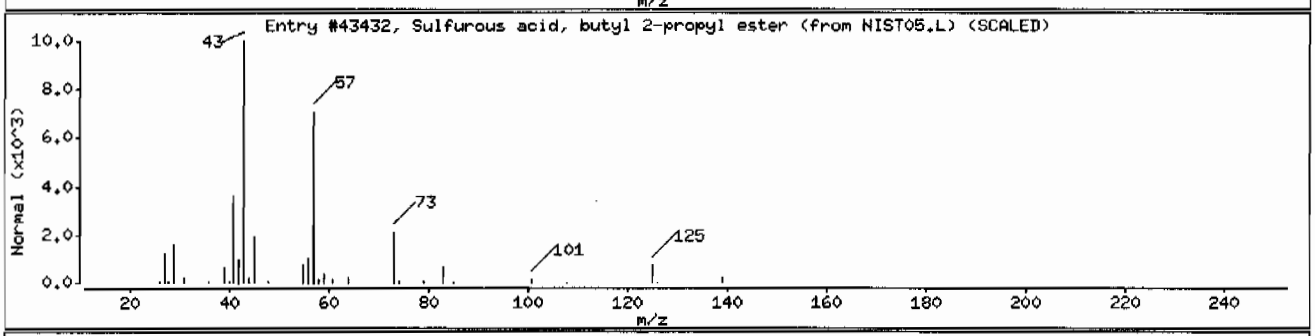

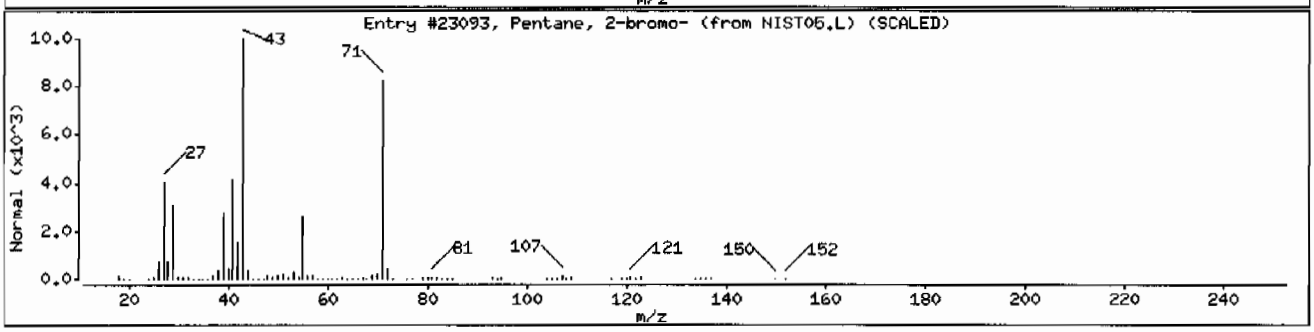

Data File: /chem/MSD5.i/s070709.b/s5g0708.d

Date : 07-JUL-2009 10:10

Client ID: CAMO-09-9943

Instrument: MSD5.i

Sample Info: |2326610041882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
1-Propen-2-ol, acetate	108-22-5	NIST05.L	3595	10	C5H8O2	100

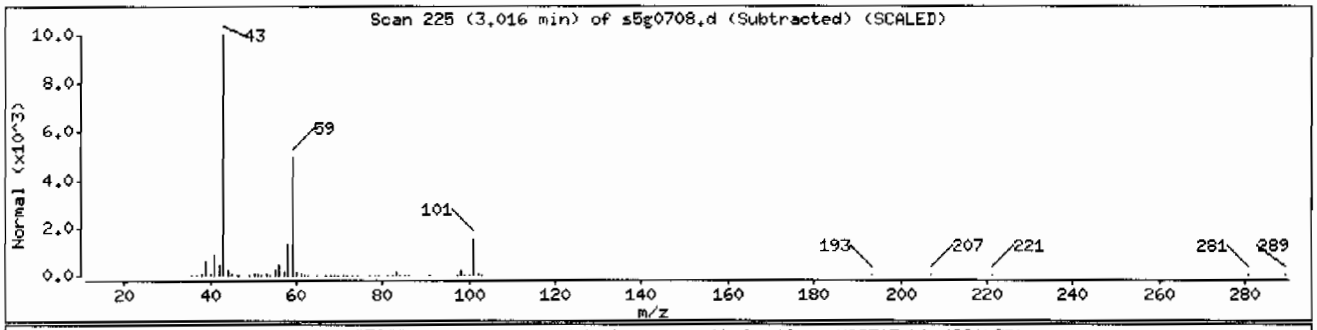

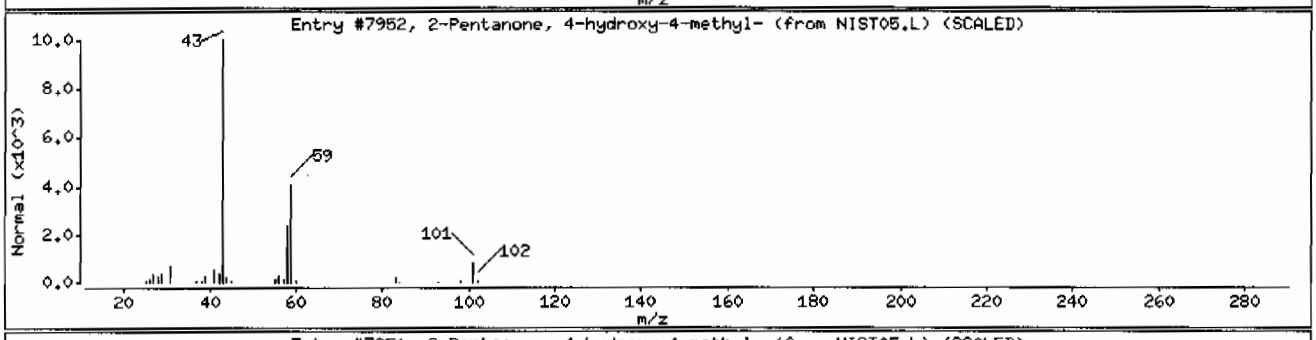

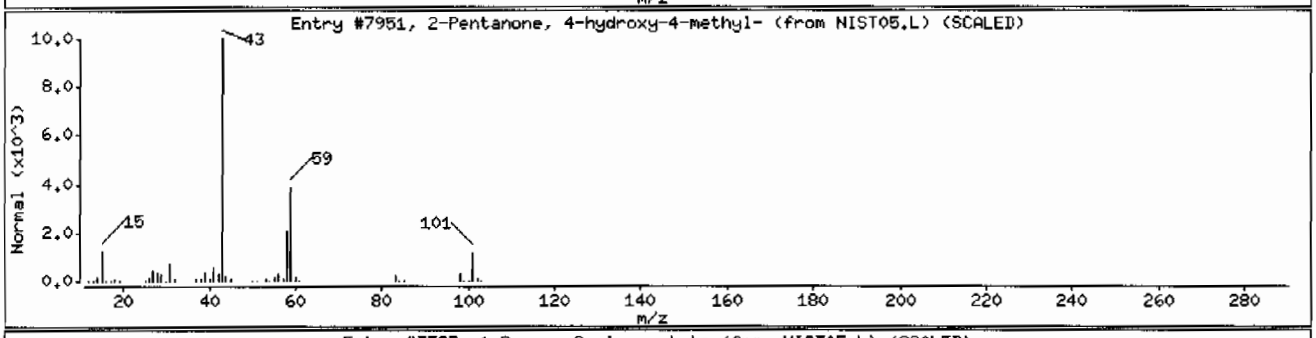

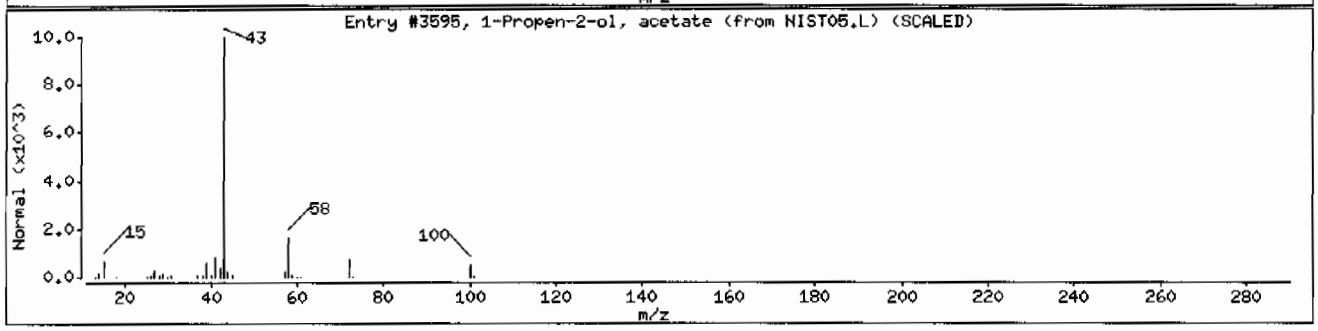

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 11:07	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0710.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	400	ug/kg	80.0	400
108-95-2	Phenol	U	400	ug/kg	80.0	400
95-57-8	2-Chlorophenol	U	400	ug/kg	80.0	400
106-46-7	1,4-Dichlorobenzene	U	400	ug/kg	80.0	400
621-64-7	N-Nitrosodipropylamine	U	400	ug/kg	80.0	400
59-50-7	4-Chloro-3-methylphenol	U	400	ug/kg	80.0	400
83-32-9	Acenaphthene	U	40.0	ug/kg	13.2	40.0
121-14-2	2,4-Dinitrotoluene	U	400	ug/kg	40.0	400
100-02-7	4-Nitrophenol	U	400	ug/kg	132	400
87-86-5	Pentachlorophenol	U	400	ug/kg	100	400
129-00-0	Pyrene		70.1	ug/kg	12.0	40.0
110-86-1	Pyridine	U	400	ug/kg	80.0	400
62-53-3	Aniline	U	400	ug/kg	120	400
111-44-4	bis(2-Chloroethyl) ether	U	400	ug/kg	80.0	400
541-73-1	1,3-Dichlorobenzene	U	400	ug/kg	80.0	400
100-51-6	Benzyl alcohol	U	400	ug/kg	120	400
95-50-1	1,2-Dichlorobenzene	U	400	ug/kg	80.0	400
108-60-1	bis(2-Chloroisopropyl)ether	U	400	ug/kg	80.0	400
95-48-7	o-Cresol	U	400	ug/kg	80.0	400
65794-96-9	m,p-Cresols	U	400	ug/kg	120	400
67-72-1	Hexachloroethane	U	400	ug/kg	80.0	400
98-95-3	Nitrobenzene	U	400	ug/kg	80.0	400
78-59-1	Isophorone	U	400	ug/kg	80.0	400
88-75-5	2-Nitrophenol	U	400	ug/kg	80.0	400
105-67-9	2,4-Dimethylphenol	U	400	ug/kg	140	400
111-91-1	bis(2-Chloroethoxy)methane	U	400	ug/kg	80.0	400
120-83-2	2,4-Dichlorophenol	U	400	ug/kg	80.0	400
65-85-0	Benzoic acid	U	800	ug/kg	200	800
91-20-3	Naphthalene	U	40.0	ug/kg	12.0	40.0
106-47-8	4-Chloroaniline	U	400	ug/kg	80.0	400
87-68-3	Hexachlorobutadiene	U	400	ug/kg	80.0	400
91-57-6	2-Methylnaphthalene	U	40.0	ug/kg	8.00	40.0
77-47-4	Hexachlorocyclopentadiene	U	400	ug/kg	80.0	400
88-06-2	2,4,6-Trichlorophenol	U	400	ug/kg	80.0	400
95-95-4	2,4,5-Trichlorophenol	U	400	ug/kg	80.0	400
91-58-7	2-Chloronaphthalene	U	40.0	ug/kg	13.2	40.0
88-74-4	2-Nitroaniline	U	400	ug/kg	80.0	400
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	400	ug/kg	80.0	400

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**	**Date Collected:**	**06/26/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232661006**	**Date Received:**	**07/01/2009 09:00**	**%Moisture:**	**16.7**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-9989**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 11:07**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0710.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	400	ug/kg	80.0	400
606-20-2	2,6-Dinitrotoluene	U	400	ug/kg	40.0	400
208-96-8	Acenaphthylene	U	40.0	ug/kg	12.0	40.0
51-28-5	2,4-Dinitrophenol	U	800	ug/kg	152	800
132-64-9	Dibenzofuran	U	400	ug/kg	80.0	400
84-66-2	Diethylphthalate	U	400	ug/kg	80.0	400
86-73-7	Fluorene	U	40.0	ug/kg	12.0	40.0
7005-72-3	4-Chlorophenylphenylether	U	400	ug/kg	80.0	400
534-52-1	2-Methyl-4,6-dinitrophenol	U	400	ug/kg	80.0	400
100-01-6	4-Nitroaniline	U	400	ug/kg	120	400
	p-Nitroaniline					
122-39-4	Diphenylamine	U	400	ug/kg	80.0	400
122-66-7	Azobenzene	U	400	ug/kg	80.0	400
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	400	ug/kg	80.0	400
118-74-1	Hexachlorobenzene	U	400	ug/kg	80.0	400
85-01-8	Phenanthrene	J	23.4	ug/kg	12.0	40.0
120-12-7	Anthracene	U	40.0	ug/kg	8.00	40.0
84-74-2	Di-n-butylphthalate	U	400	ug/kg	80.0	400
206-44-0	Fluoranthene		80.0	ug/kg	12.0	40.0
85-68-7	Butylbenzylphthalate	U	400	ug/kg	80.0	400
56-55-3	Benzo(a)anthracene	J	34.8	ug/kg	12.0	40.0
91-94-1	3,3'-Dichlorobenzidine	U	400	ug/kg	120	400
218-01-9	Chrysene		49.1	ug/kg	12.0	40.0
117-81-7	bis(2-Ethylhexyl)phthalate	U	400	ug/kg	80.0	400
117-84-0	Di-n-octylphthalate	U	400	ug/kg	80.0	400
205-99-2	Benzo(b)fluoranthene		65.8	ug/kg	12.0	40.0
207-08-9	Benzo(k)fluoranthene	J	23.1	ug/kg	12.0	40.0
50-32-8	Benzo(a)pyrene		40.8	ug/kg	12.0	40.0
193-39-5	Indeno(1,2,3-cd)pyrene	J	25.1	ug/kg	12.0	40.0
53-70-3	Dibenzo(a,h)anthracene	U	40.0	ug/kg	12.0	40.0
191-24-2	Benzo(ghi)perylene	J	31.0	ug/kg	12.0	40.0
120-82-1	1,2,4-Trichlorobenzene	U	400	ug/kg	80.0	400

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.02	363	ug/kg		JA
65899-10-7	trans-1,2-Bis(methyldichlorosilyl)ethyle	9.15	163	ug/kg	96	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661006	Date Received:	07/01/2009 09:00	%Moisture:	16.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9989	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882565	Inst:	MSD5.I	Dilution:	1
Run Date:	07/07/2009 11:07	Analyst:	RMB	Inj. Vol:	.5 uL
Prep Date:	07/06/2009 20:30	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s5g0710.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
1000214-20-7	Stigmasterol, 22,23-dihydro-	14.02	516	ug/kg	93	NJ
	Unknown	15.32	209	ug/kg		J
	Unknown	18.56	345	ug/kg		J
	Unknown	19.33	191	ug/kg		J
	Unknown	19.34	160	ug/kg		J

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0710.d
Lab Smp Id: 232661006 Client Smp ID: CAMO-09-9989
Inj Date : 07-JUL-2009 11:07
Operator : RMB Inst ID: MSD5.i
Smp Info : |232661006|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	16.68180	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	366590	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1299353	40.0000	
* 46 Acenaphthene-d10	164	6.126	6.131	(1.000)	803606	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1513205	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1483673	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1095258	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.798)	478850	59.4909	2380
$ 5 Phenol-d5	99	3.714	3.714	(0.929)	652583	61.4895	2460
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	278417	28.9166	1160
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.916)	689871	33.1939	1330
$ 60 2,4,6-Tribromophenol	329	6.728	6.733	(1.098)	223869	68.2765	2730
$ 81 p-Terphenyl-d14	244	8.683	8.688	(0.893)	882322	38.8585	1550

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.587	8.592	(0.883)	56683	1.75127	70.1
68 Phenanthrene	178	7.325	7.330	(1.003)	16551	0.58386	23.4(a)
76 Fluoranthene	202	8.370	8.375	(1.146)	64555	1.99910	80.0
89 Benzo(a)anthracene	228	9.709	9.714	(0.998)	27658	0.86879	34.8(a)
92 Chrysene	228	9.747	9.752	(1.002)	35825	1.22847	49.1
95 Benzo(b)fluoranthene	252	10.917	10.922	(0.953)	39763	1.64386	65.8
96 Benzo(k)fluoranthene	252	10.951	10.956	(0.956)	13737	0.57815	23.1(a)
97 Benzo(a)pyrene	252	11.375	11.380	(0.993)	21828	1.01940	40.8
99 Indeno(1,2,3-cd)pyrene	276	13.296	13.306	(1.161)	13525	0.62857	25.1(a)
101 Benzo(ghi)perylene	276	13.845	13.869	(1.208)	14207	0.77448	31.0(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

ION RATIO REPORT

SV REPORT

Data file: s5g0710.d
Report Date: 07/07/2009 11:29
Lab. ID: 232661006 SampleType: SAMPLE
Injection Date: 07-JUL-2009 11:07
Operator: RMB Instrument: MSD5.i
Sample Info: |232661006|882565|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01
Comment:
Method used: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2515
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	39260	3.71	3.79	80-120	100	(T)
93	8153	3.77	3.79	154-214	21	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	41619	4.36	4.24	80-120	100	(T)
42	30443	4.36	4.24	56-116	73	(T)
27 Benzoic acid			CAS#: 65-85-0			
105	1746	4.65	4.64	80-120	100	( )
122	1298	4.64	4.64	52-112	74	( )
77	2760	4.65	4.64	53-113	158	(Q)
31 4-Chloroaniline			CAS#: 106-47-8			
127	110	4.91	4.90	80-120	100	( )
65	3231	4.87	4.90	8- 68	2927	(Q)
40 2-Chloronaphthalene			CAS#: 91-58-7			
162	6405	5.86	5.72	80-120	100	(T)
164	434	5.86	5.72	3- 63	7	(T)
127	697	5.86	5.72	7- 67	11	(T)
41 m-Nitroaniline			CAS#: 99-09-2			
138	105	6.09	6.08	80-120	100	( )
92	595	6.06	6.08	79-139	566	(Q)
108	16911	6.13	6.08	0- 42	16076	(Q)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
43 Dimethylphthalate			CAS#: 131-11-3			
163	171809	6.13	5.89	80-120	100	(T)
164	803606	6.13	5.89	0- 40	468	(QT)
44 2,6-Dinitrotoluene			CAS#: 606-20-2			
165	104405	6.13	5.94	80-120	100	(T)
63	1743	6.13	5.94	55-115	2	(QT)
50 2,4-Dinitrotoluene			CAS#: 121-14-2			
165	104261	6.13	6.25	80-120	100	(T)
89	2223	6.13	6.24	39- 99	2	(QT)
63	1743	6.13	6.24	20- 80	2	(QT)
53 Fluorene			CAS#: 86-73-7			
166	9657	6.73	6.55	80-120	100	(T)
165	10287	6.73	6.55	61-121	107	(T)
167	3178	6.73	6.55	0- 44	33	(T)
55 2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1			
198	1206	6.73	6.56	80-120	100	(T)
105	1626	6.73	6.56	4- 64	135	(QT)
51	1186	6.73	6.56	31- 91	98	(QT)
61 4-Bromophenylphenylether			CAS#: 101-55-3			
248	15929	6.73	6.91	80-120	100	(T)
141	80658	6.73	6.91	33- 93	506	(QT)
250	30993	6.73	6.91	68-128	195	(QT)
68 Phenanthrene			CAS#: 85-01-8			
178	16551	7.33	7.33	80-120	100	( )
179	2543	7.33	7.33	0- 46	15	( )
176	3441	7.33	7.33	0- 49	21	( )
69 Anthracene			CAS#: 120-12-7			
178	16551	7.33	7.37	80-120	100	( )
179	2543	7.33	7.37	0- 46	15	( )
176	3441	7.33	7.37	0- 48	21	( )
76 Fluoranthene			CAS#: 206-44-0			
202	64555	8.37	8.38	80-120	100	( )
203	11227	8.37	8.38	0- 48	17	( )
101	6276	8.37	8.37	0- 39	10	( )
79 Pyrene			CAS#: 129-00-0			
202	56683	8.59	8.59	80-120	100	( )
200	12560	8.59	8.59	0- 51	22	( )
101	6263	8.59	8.59	0- 40	11	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
89 Benzo(a)anthracene			CAS#: 56-55-3			
228	27658	9.71	9.71	80-120	100	( )
226	7265	9.71	9.71	0- 56	26	( )
229	6485	9.71	9.71	0- 50	23	( )
92 Chrysene			CAS#: 218-01-9			
228	35825	9.75	9.75	80-120	100	( )
229	8002	9.75	9.75	0- 50	22	( )
226	10106	9.75	9.75	0- 59	28	( )
95 Benzo(b)fluoranthene			CAS#: 205-99-2			
252	39763	10.92	10.92	80-120	100	( )
253	10375	10.92	10.92	0- 51	26	( )
125	4148	10.92	10.92	0- 37	10	( )
96 Benzo(k)fluoranthene			CAS#: 207-08-9			
252	13737	10.95	10.96	80-120	100	( )
253	2586	10.96	10.96	0- 54	19	( )
125	1004	10.95	10.96	0- 38	7	( )
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	21828	11.37	11.38	80-120	100	( )
253	5555	11.37	11.38	0- 52	25	( )
125	2319	11.37	11.38	0- 30	11	( )
99 Indeno(1,2,3-cd)pyrene			CAS#: 193-39-5			
276	13525	13.30	13.31	80-120	100	( )
138	3190	13.29	13.31	0- 51	24	( )
101 Benzo(ghi)perylene			CAS#: 191-24-2			
276	14207	13.85	13.87	80-120	100	( )
138	4216	13.85	13.87	0- 30	30	( )

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0710.d
Lab Smp Id: 232661006 Client Smp ID: CAMO-09-9989
Inj Date : 07-JUL-2009 11:07
Operator : RMB Inst ID: MSD5.i
Smp Info : |232661006|882565|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	16.68180	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	3.998	2354812	40.000
* 91 Chrysene-d12	9.723	3967988	40.000
* 98 Perylene-d12	11.457	2670024	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate					CAS #:		
3.016	534486	9.07904748	363	0		0	10
trans-1,2-Bis(methyldichlorosilyl)ethyle					CAS #: 65899-10-7		
9.150	405229	4.08497917	163	96	NIST05.L	93595	91
Stigmasterol, 22,23-dihydro-					CAS #: 1000214-20-7		
14.023	861412	12.9049289	516	93	NIST05.L	174408	98
Unknown					CAS #:		
15.319	348832	5.22589465	209	0		0	98
Unknown					CAS #:		
18.564	575703	8.62468680	345	0		0	98
Unknown					CAS #:		
19.330	318224	4.76735482	191	0		0	98
Unknown					CAS #:		
19.339	267511	4.00762182	160	0		0	98

Data File: /chem/MSD5.i/s070709.b/s5g0710.d
Date : 07-JUL-2009 11:07
Client ID: CAMO-09-9989
Sample Info: 1232661006188256511|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

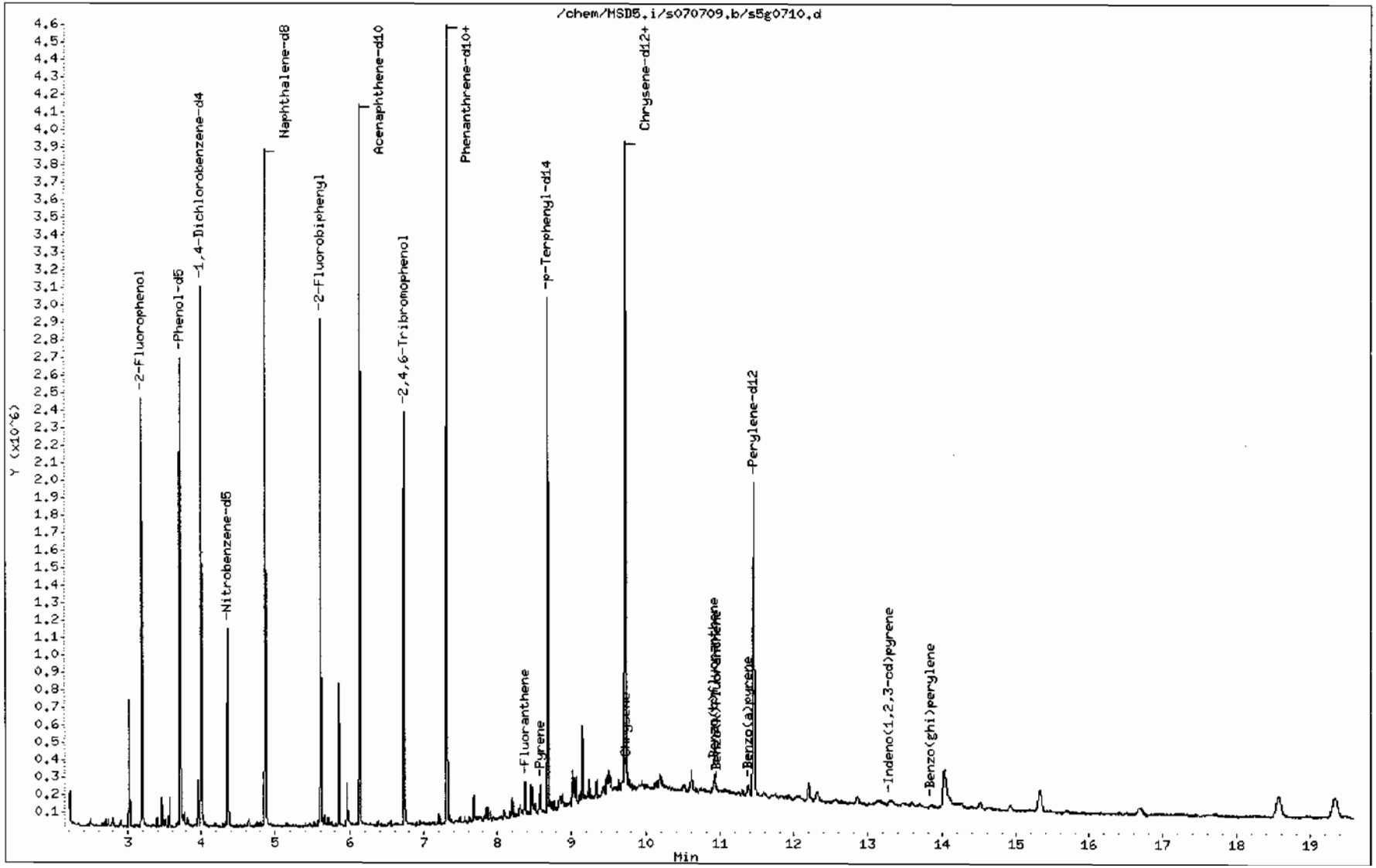

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: |2326610061882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 70.1 ug/Kg

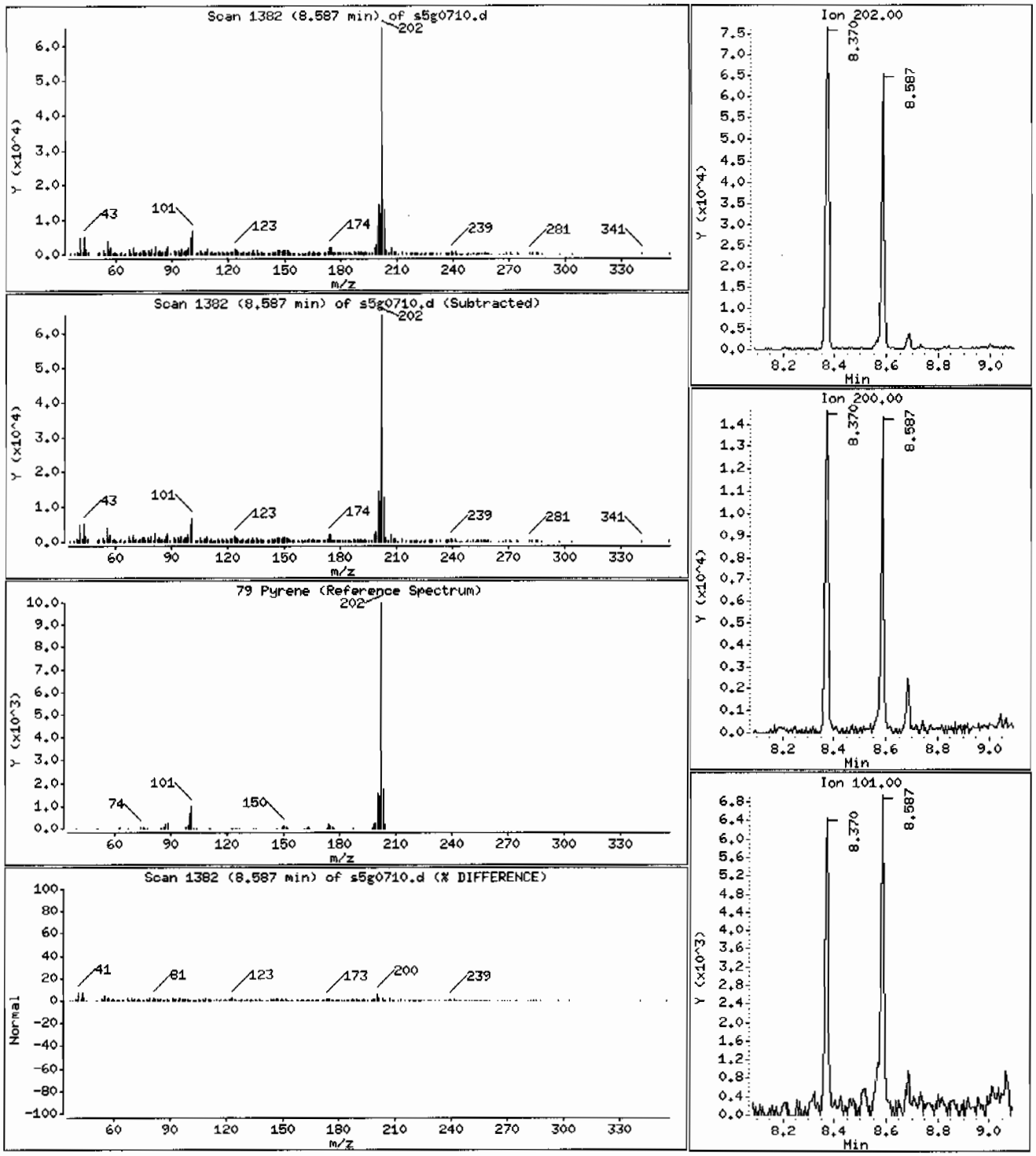

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: 1232661006188256511SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 23.4 ug/Kg

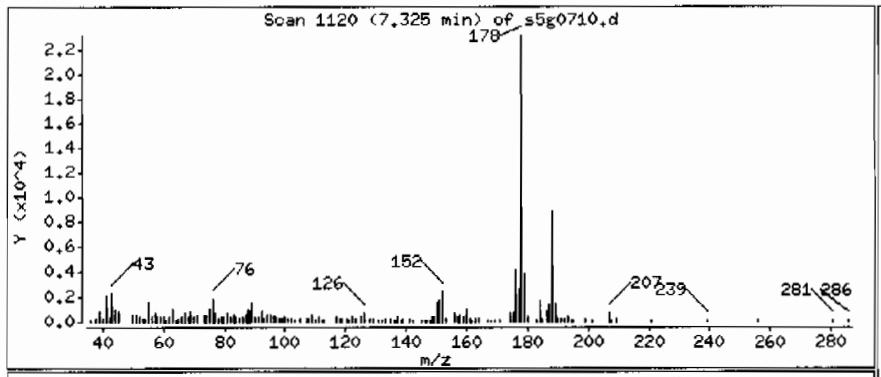

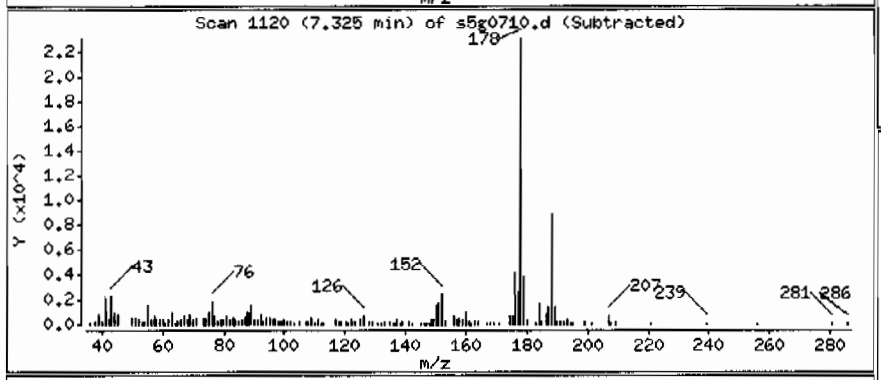

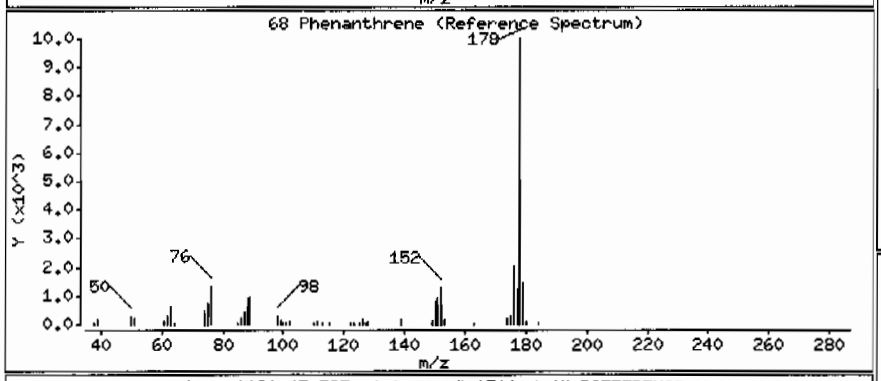

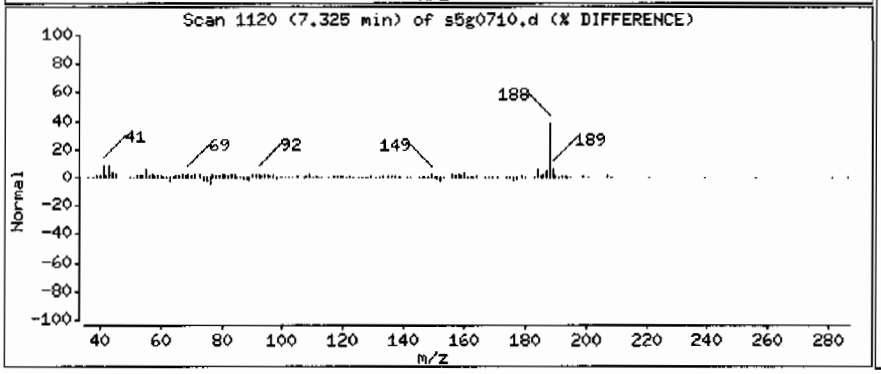

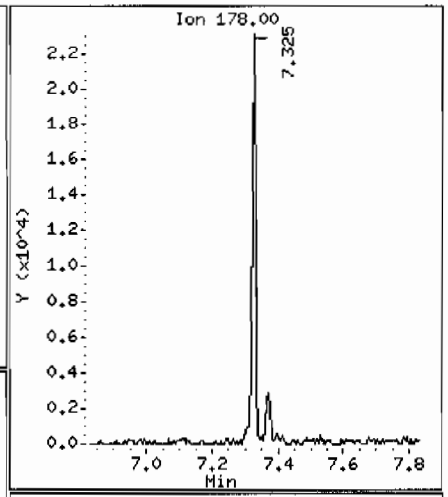

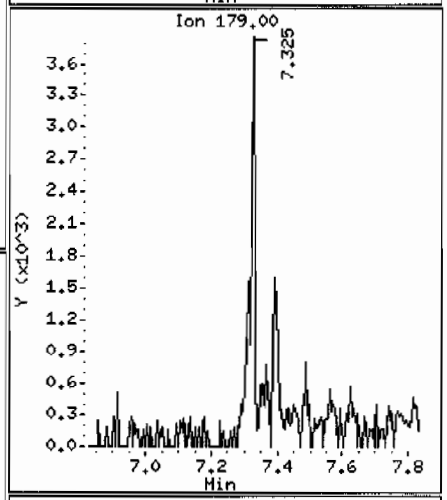

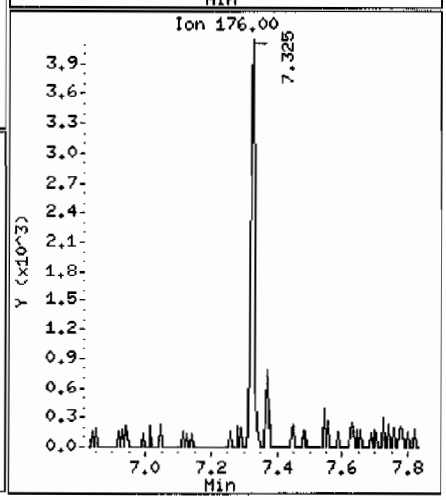

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: |2326610061882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 80.0 ug/Kg

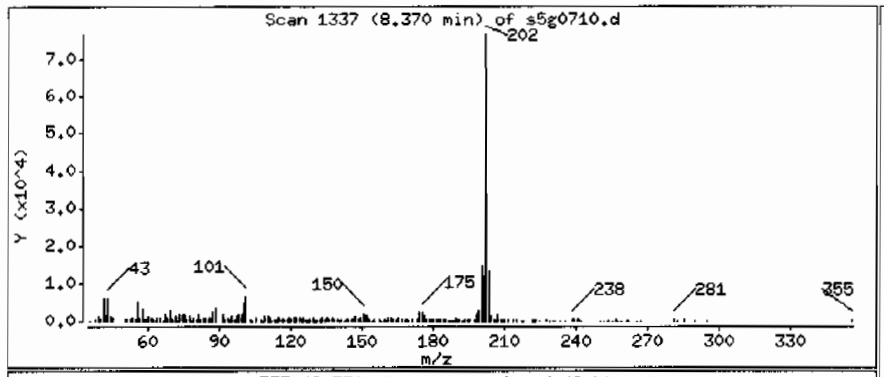

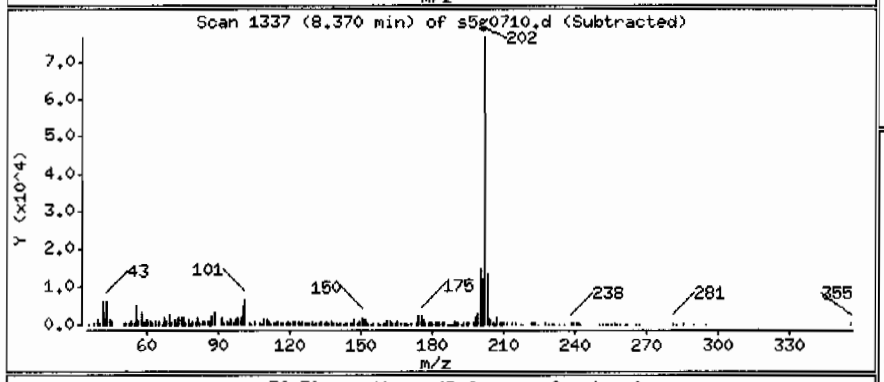

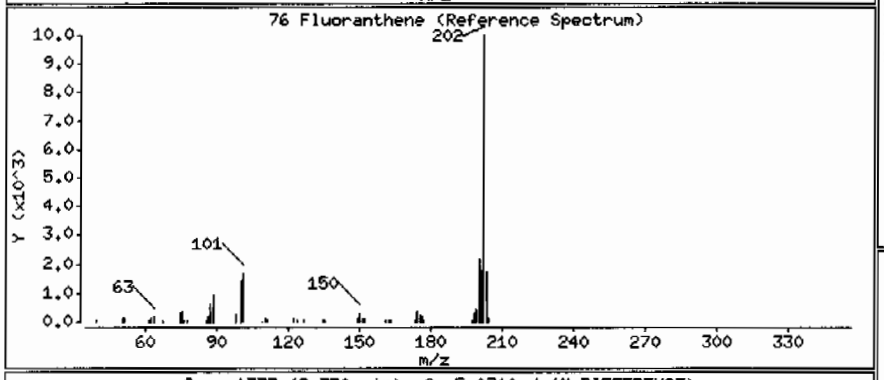

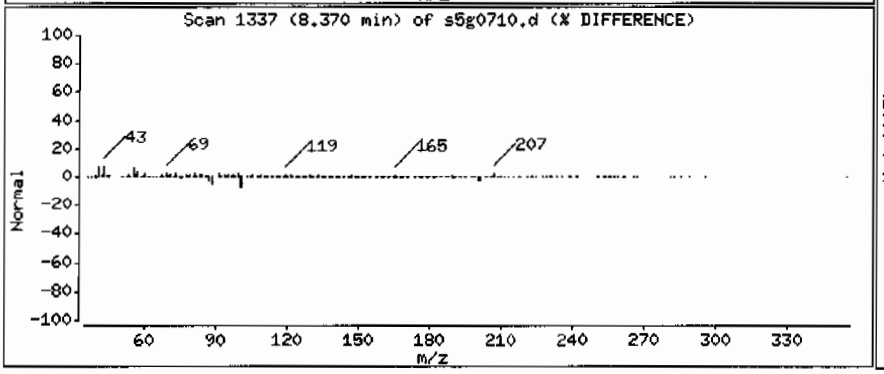

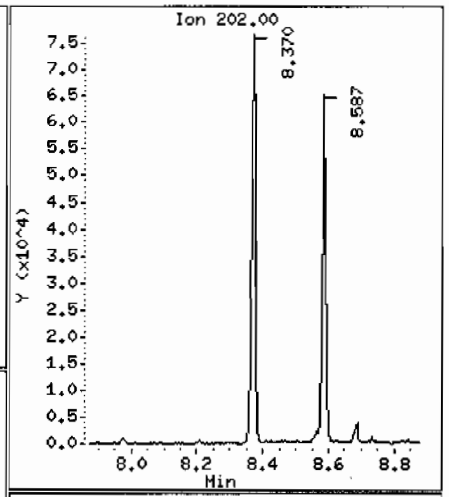

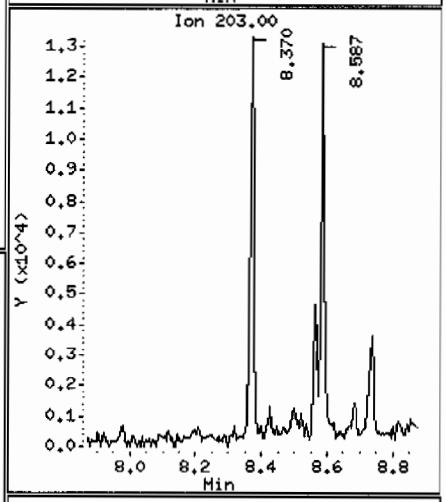

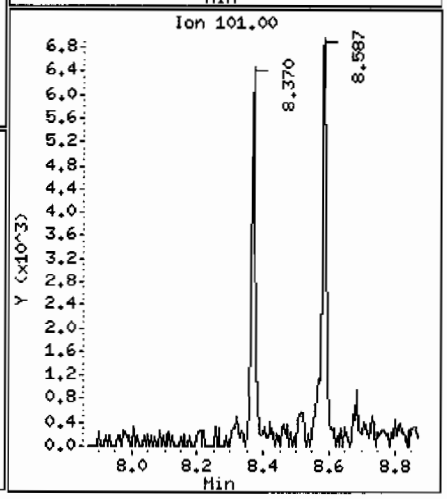

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: 1232661006188256511SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

89 Benzo(a)anthracene

Concentration: 34.8 ug/Kg

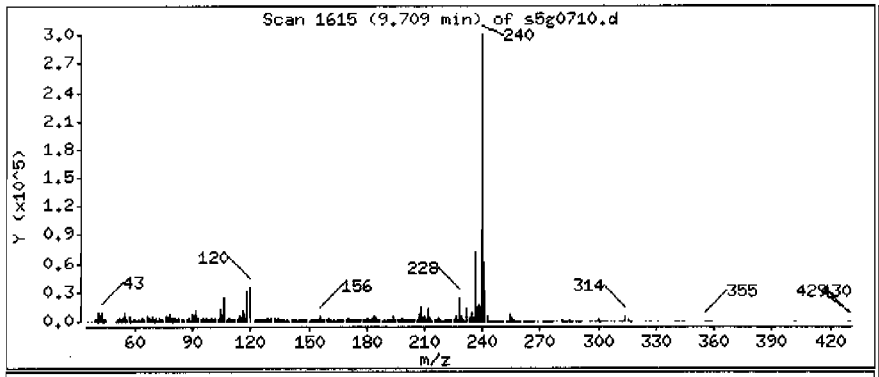

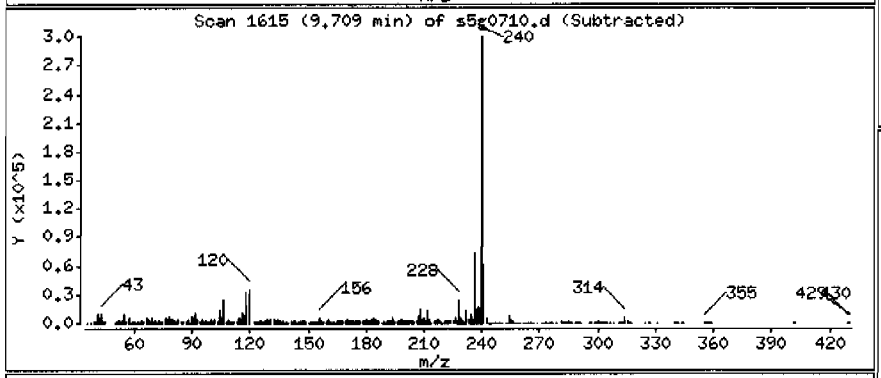

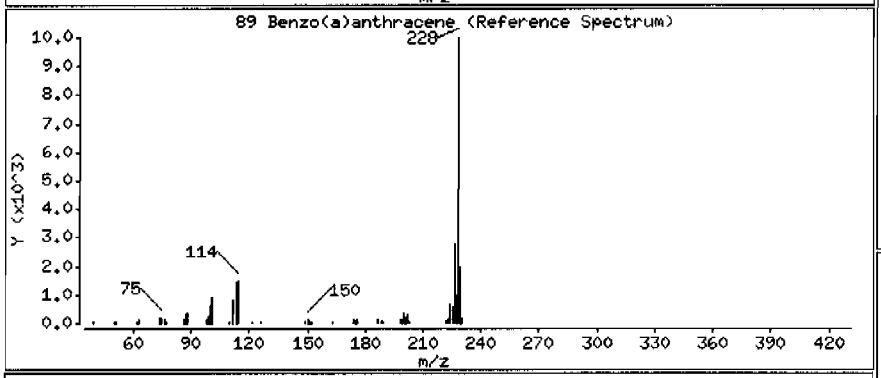

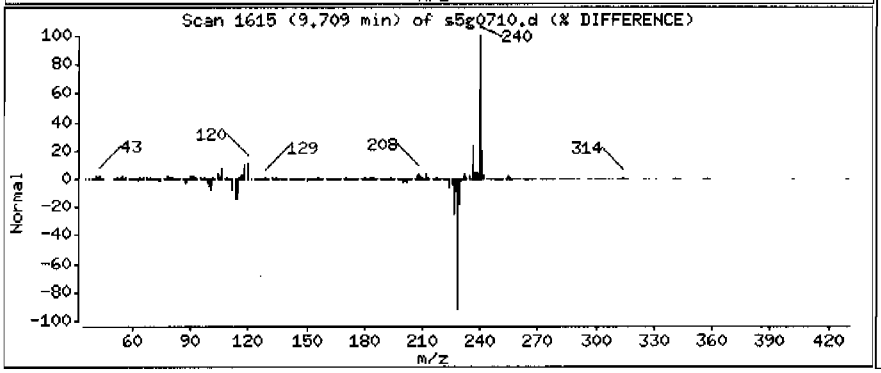

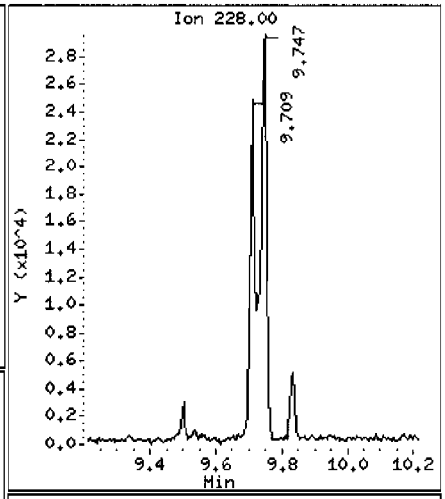

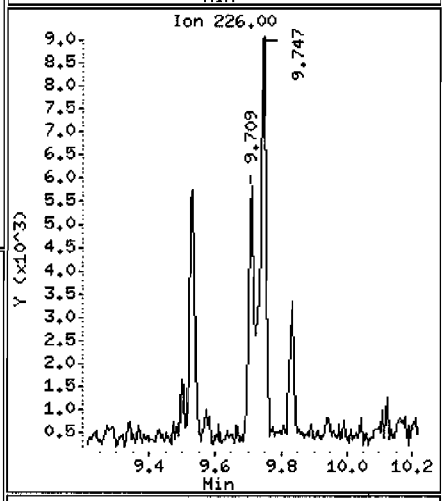

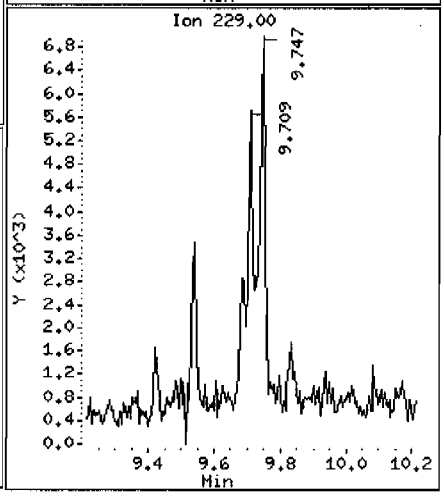

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAHO-09-9989

Instrument: MSD5.i

Sample Info: |232661006|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

92 Chrysene

Concentration: 49.1 ug/Kg

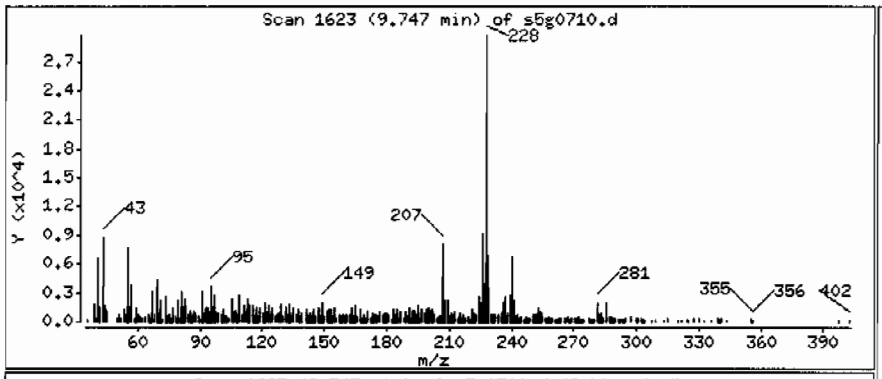

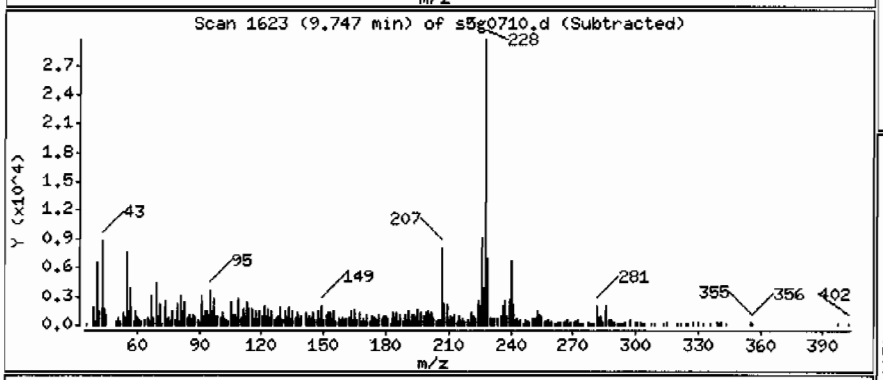

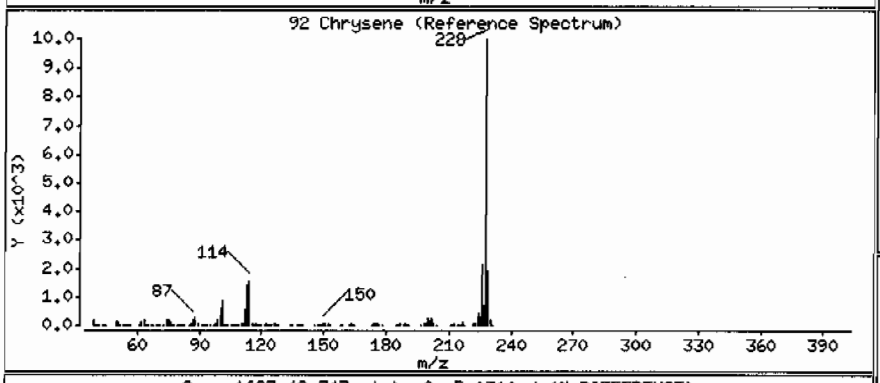

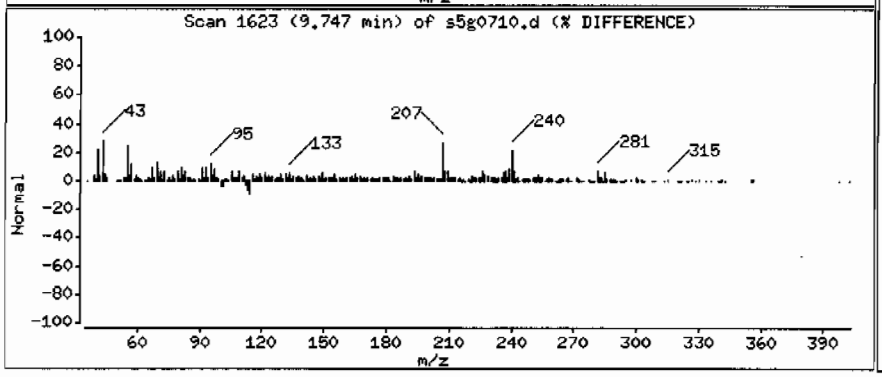

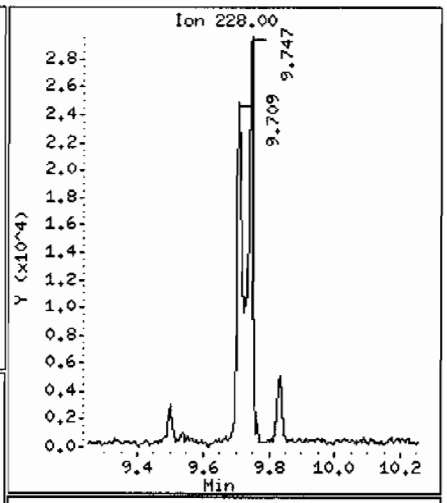

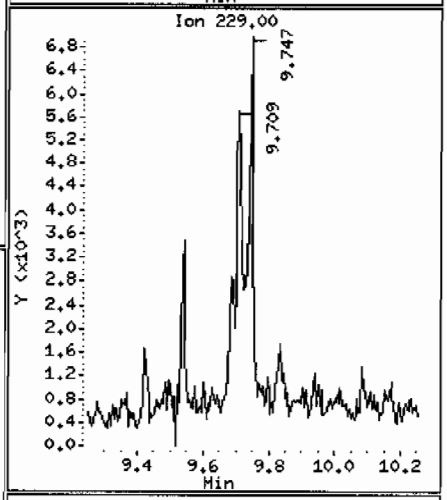

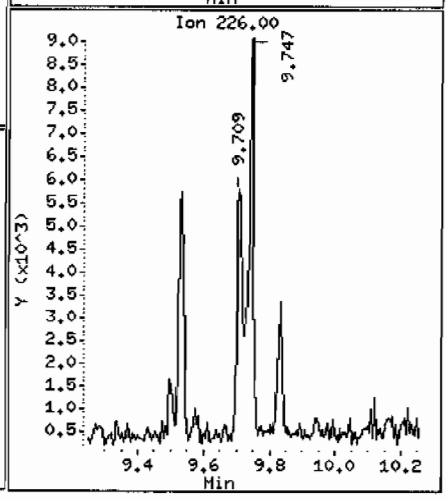

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: 1232661006|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 65.8 ug/Kg

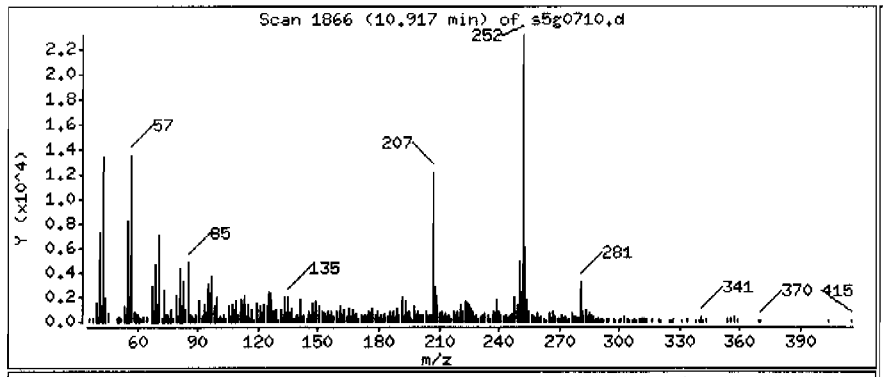

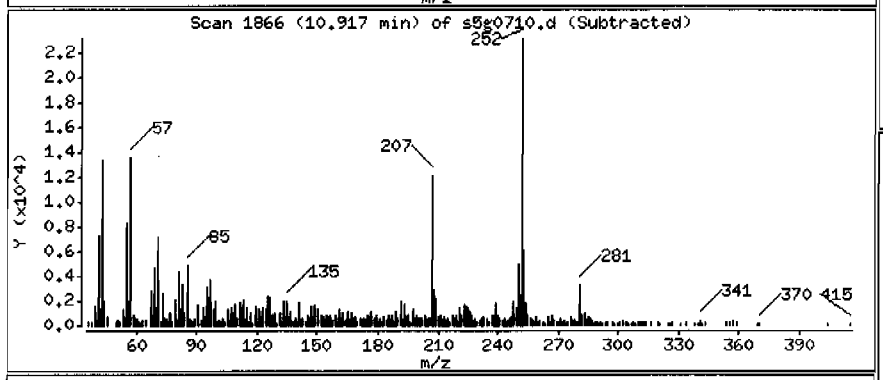

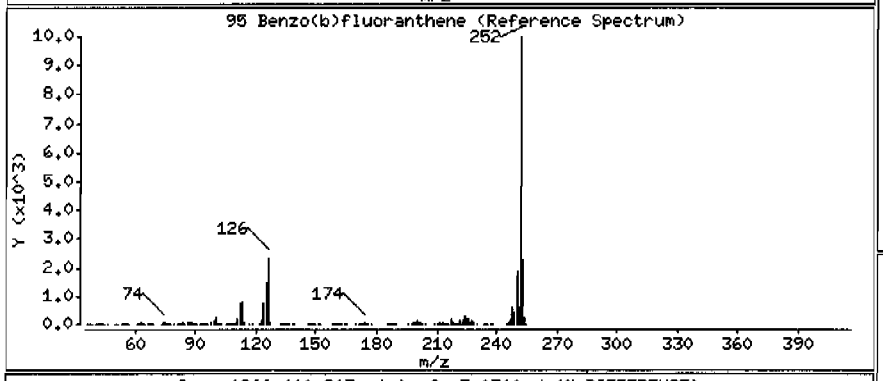

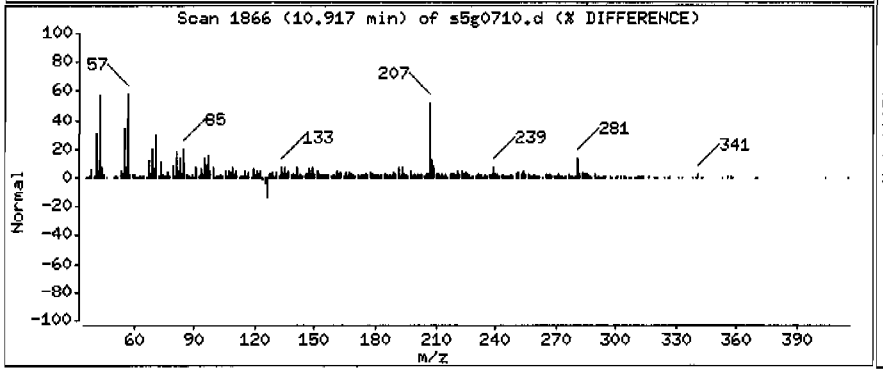

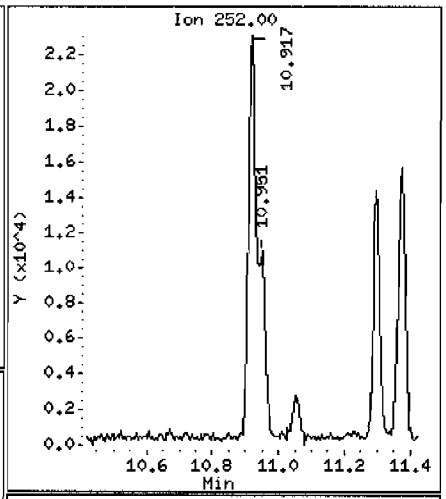

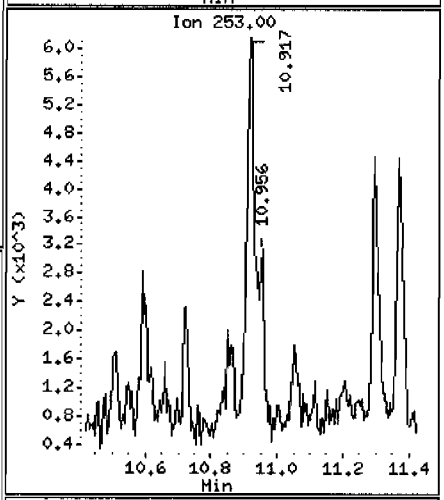

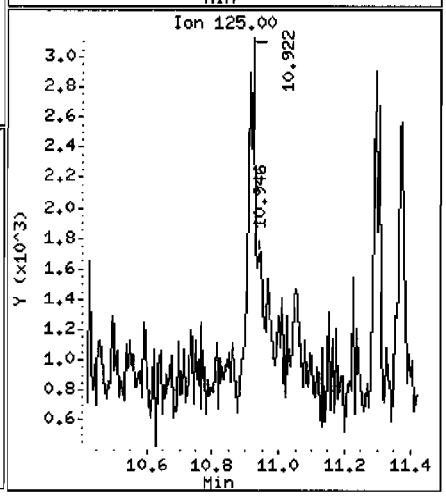

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: |2326610061882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

96 Benzo(k)fluoranthene

Concentration: 23.1 ug/Kg

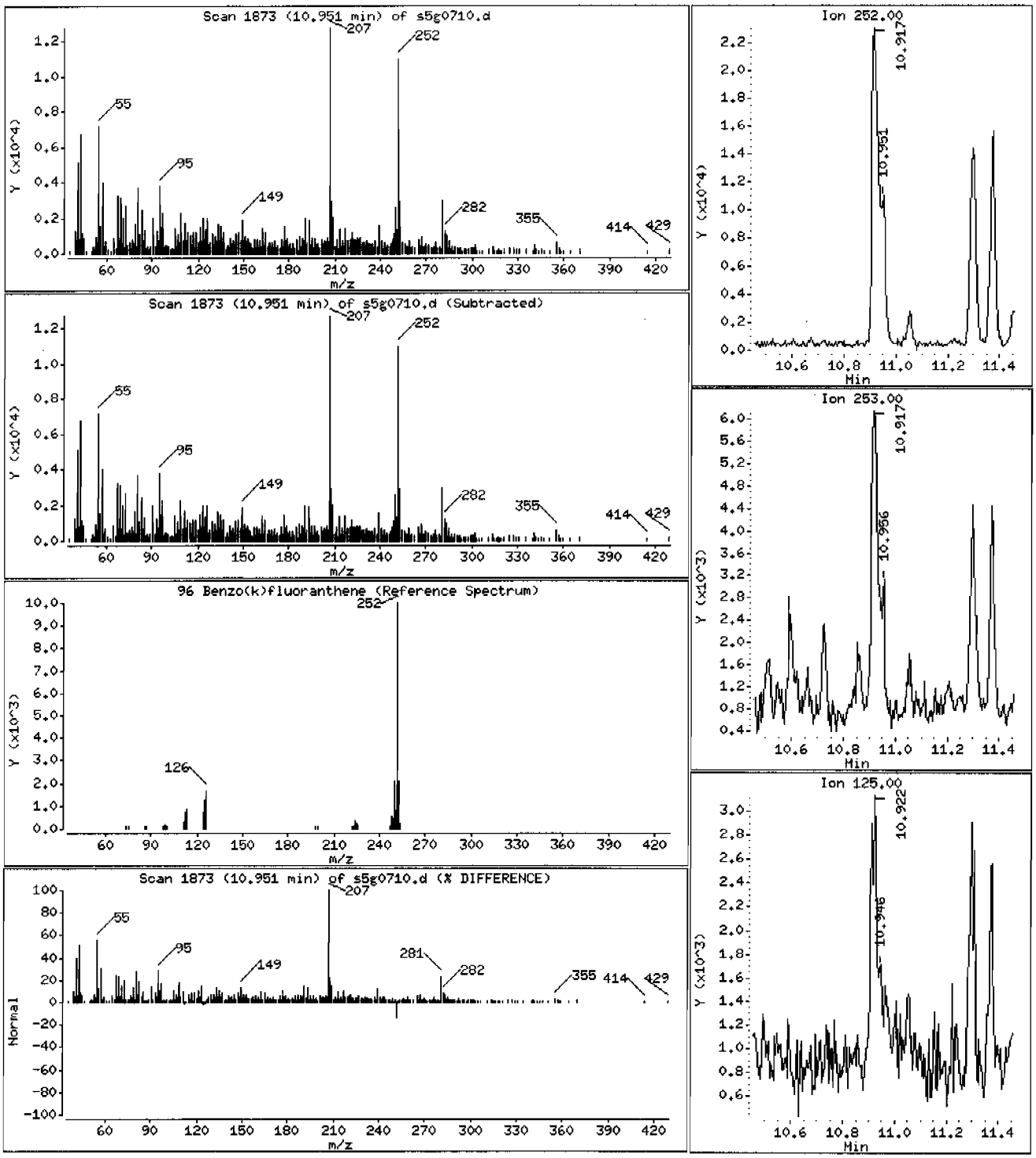

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: 1232661006188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 40.8 ug/Kg

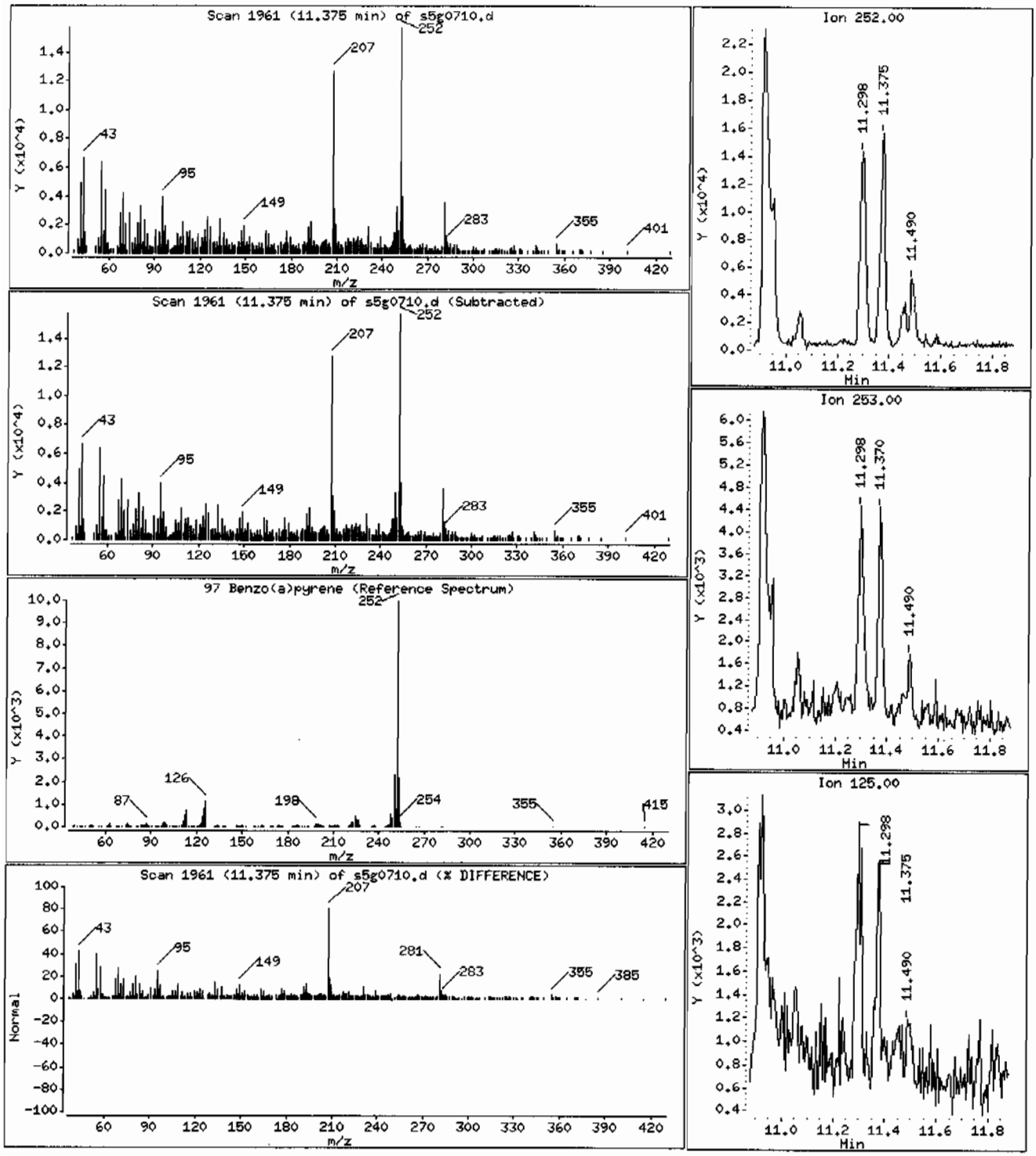

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: 1232661006188256511SVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

99 Indeno(1,2,3-cd)pyrene

Concentration: 25.1 ug/Kg

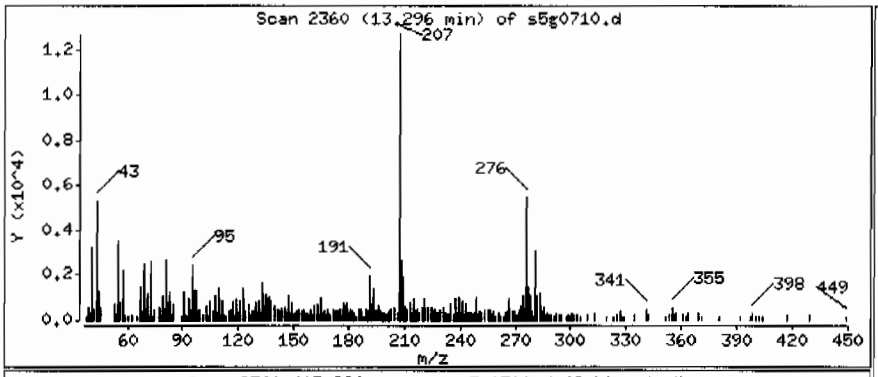

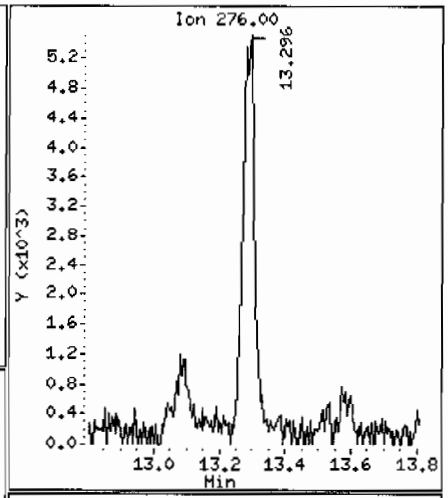

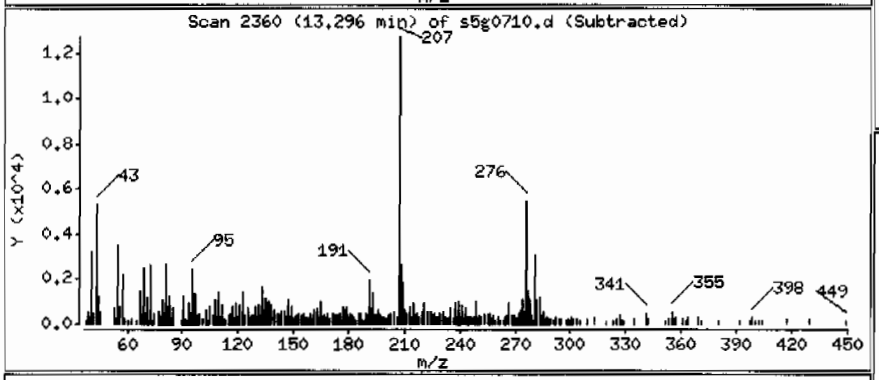

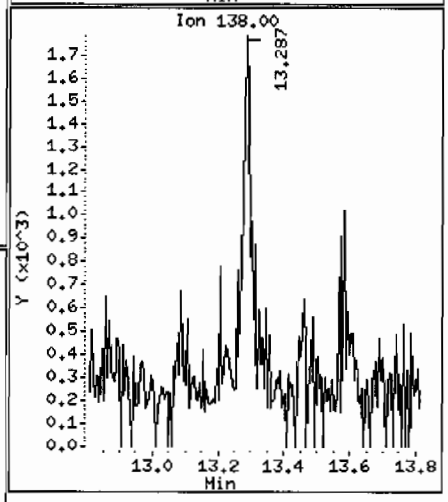

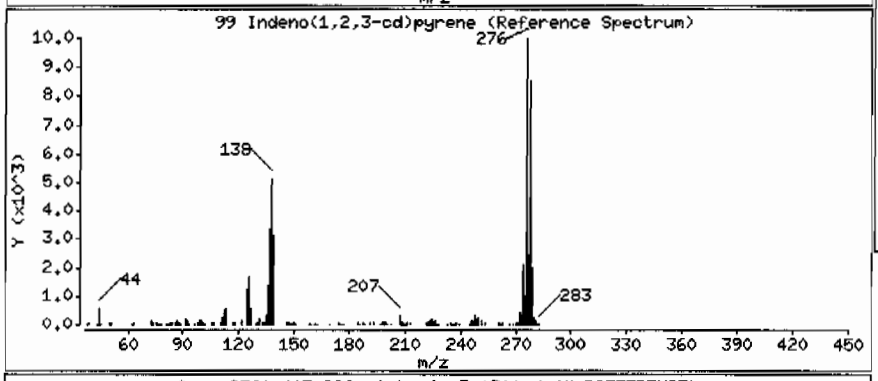

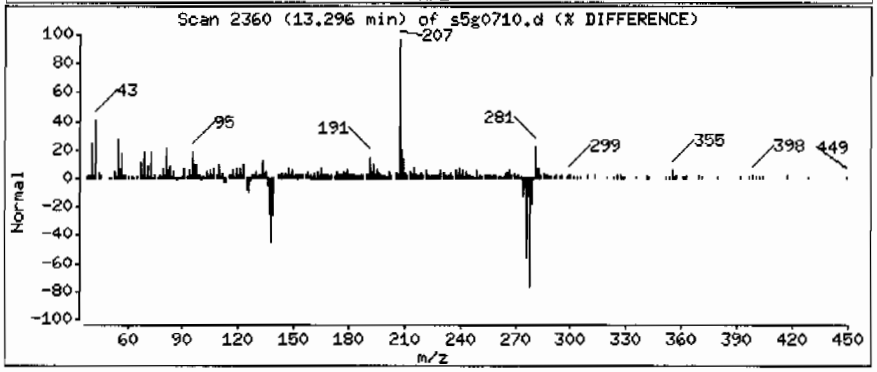

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: 1232661006188256511ISVMF11ILANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

101 Benzo(ghi)perylene

Concentration: 31.0 ug/Kg

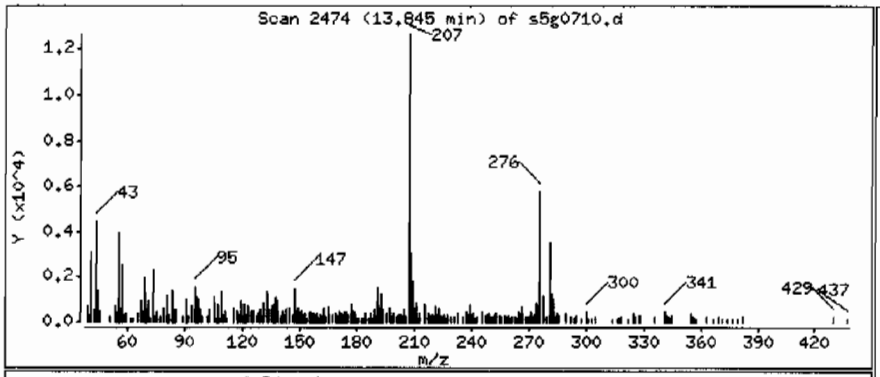

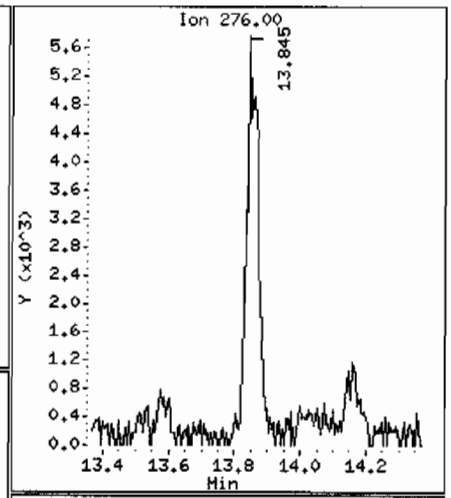

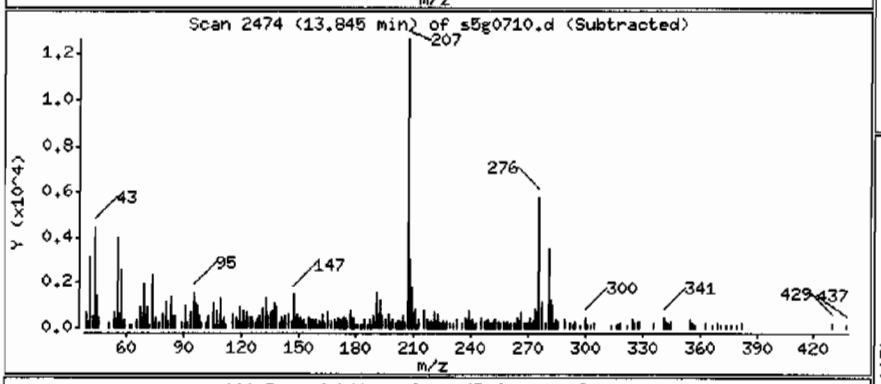

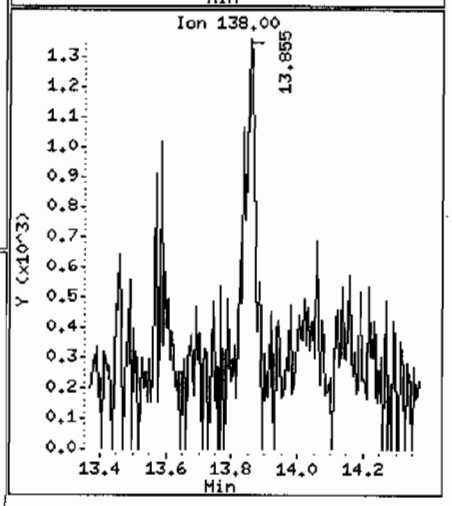

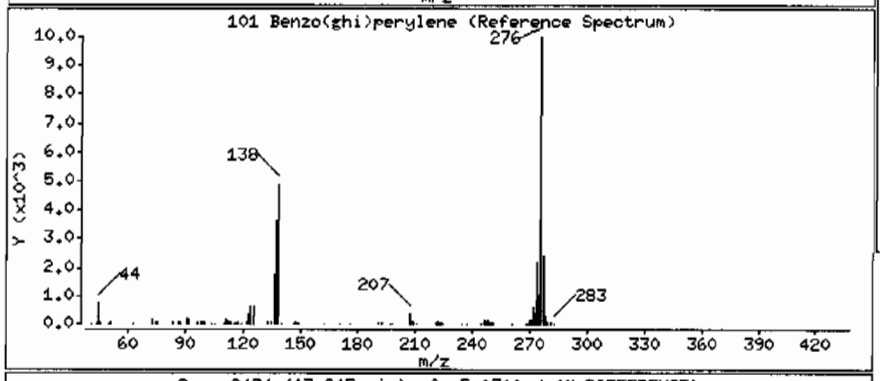

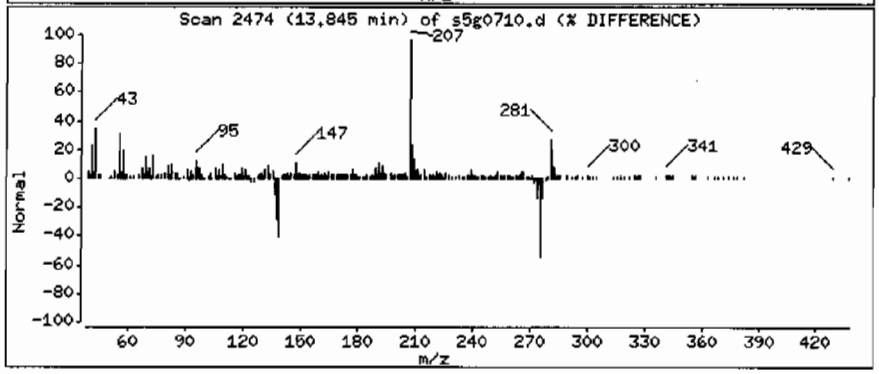

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: 1232661006188256511ISVMF11LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	45	C6H12O2	116

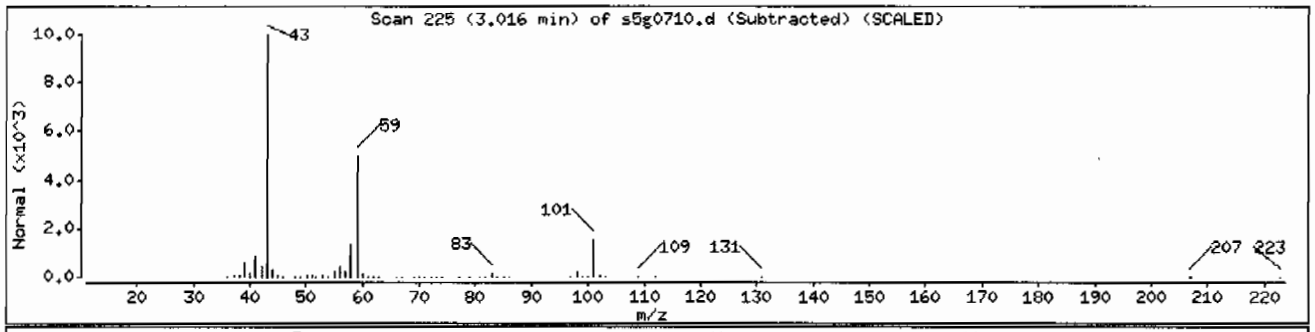

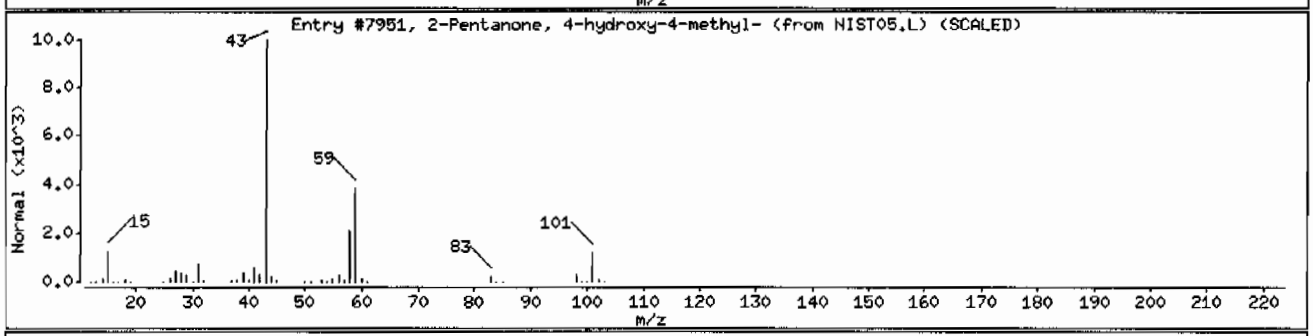

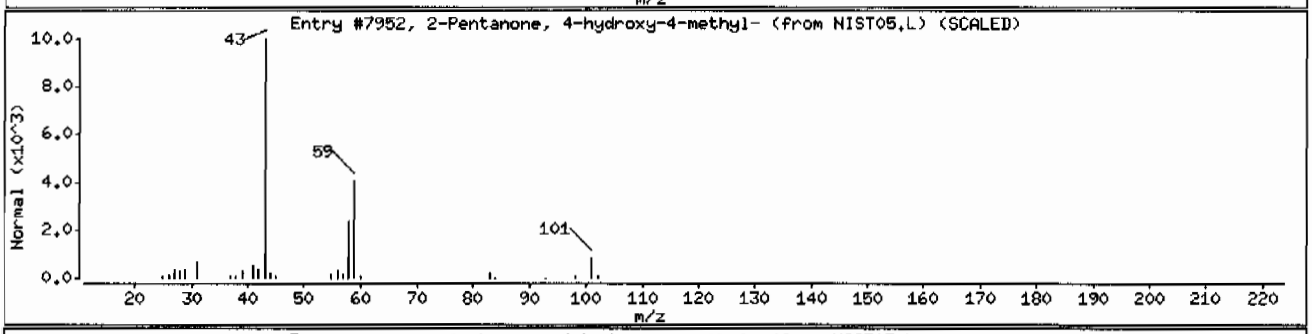

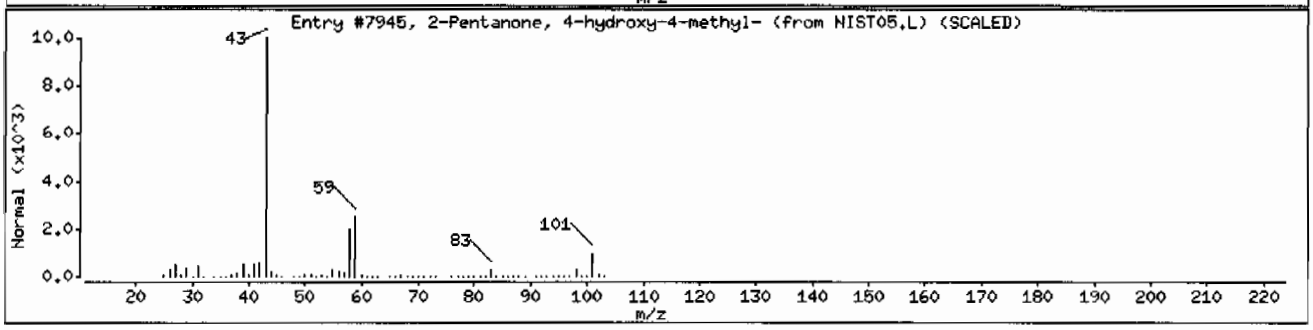

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: |2326610061882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RHB

Column phase: J&W DB-5HS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
trans-1,2-Bis(methyldichlorosilyl)ethyle	65899-10-7	NIST05.L	93595	96	C4H8Cl4Si2	252
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133618	95	C21H30O2	314
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	1235-74-1	NIST05.L	133621	91	C21H30O2	314

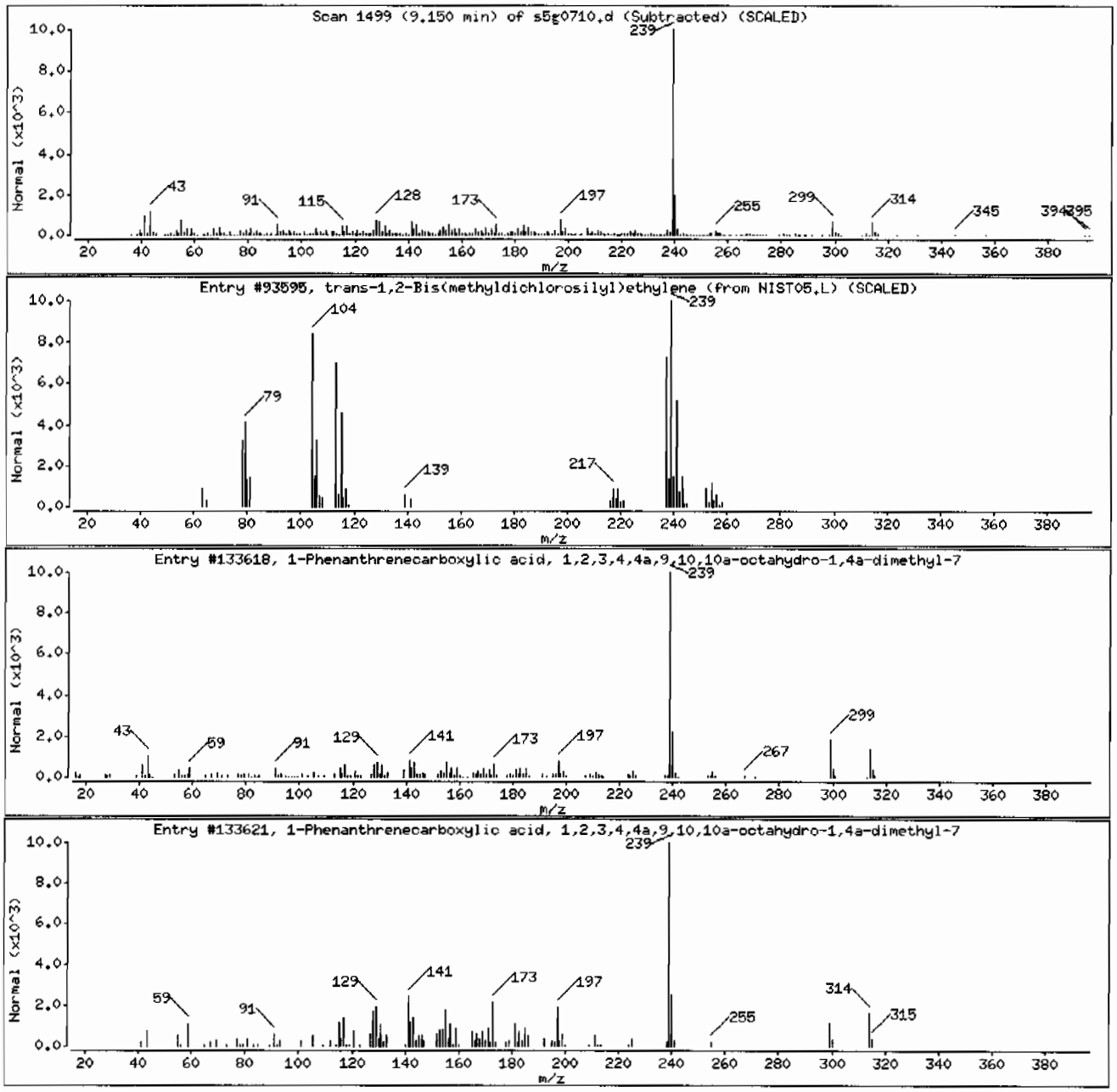

Data File: /chem/MSD5.i/s070709.b/s5g0710.d

Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: 1232661006188256511|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Stigmasterol, 22,23-dihydro-	1000214-20-7	NIST05.L	174408	93	C29H50O	414
.gamma.-Sitosterol	83-47-6	NIST05.L	174402	93	C29H50O	414
.beta.-Sitosterol	83-46-5	NIST05.L	174400	93	C29H50O	414

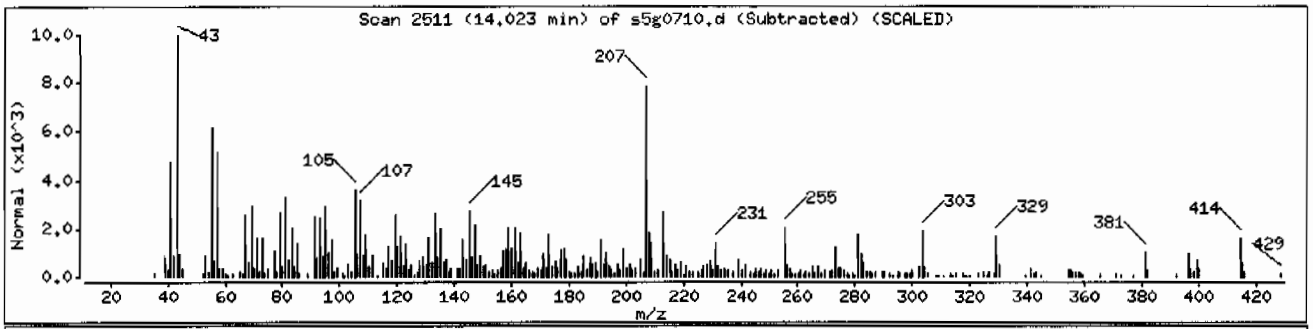

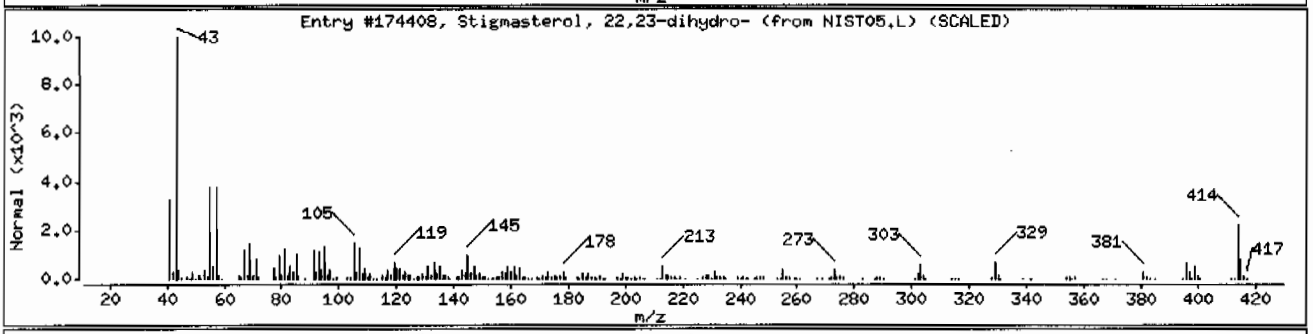

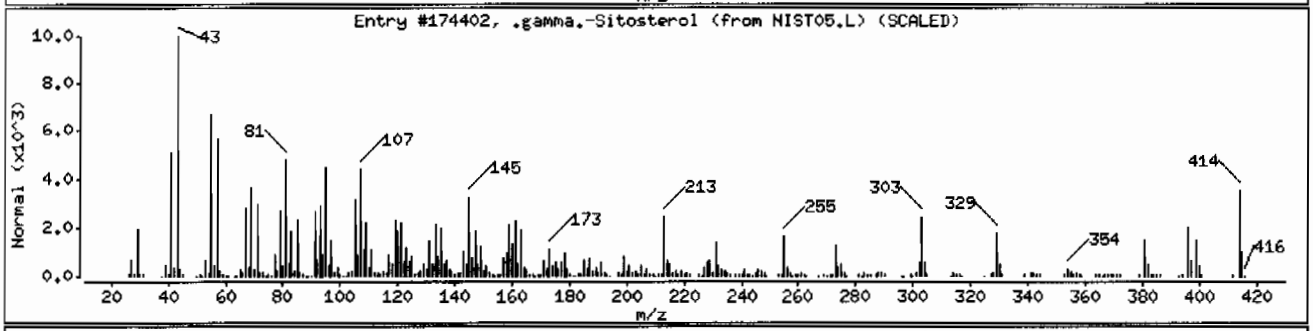

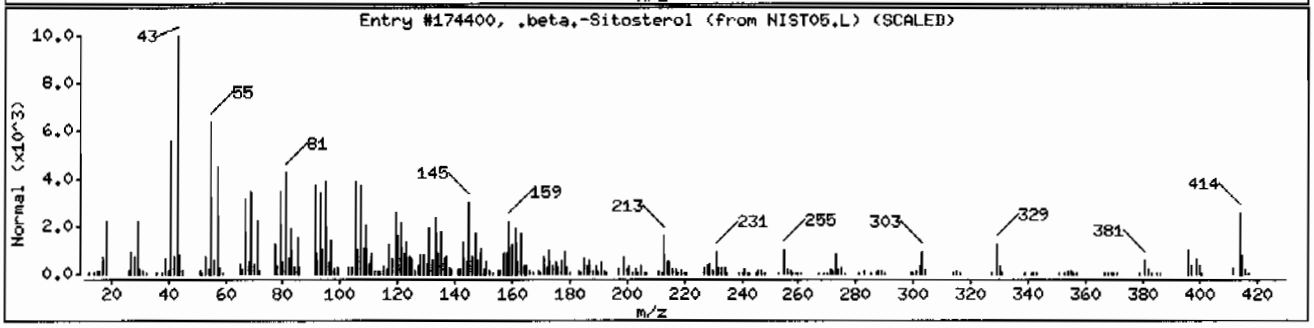

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Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: |2326610061882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Stigmasterol, 22,23-dihydro-	1000214-20-7	NIST05.L	174408	93	C29H500	414
.gamma.-Sitosterol	83-47-6	NIST05.L	174402	93	C29H500	414
.beta.-Sitosterol	83-46-5	NIST05.L	174400	93	C29H500	414

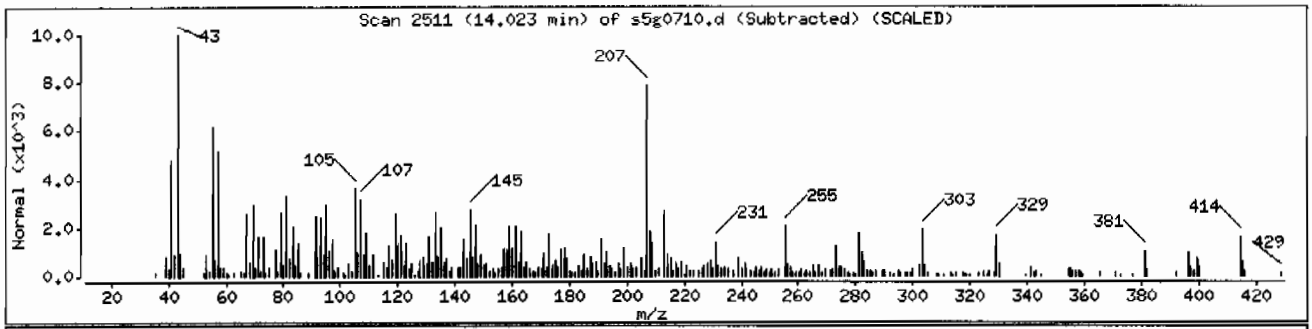

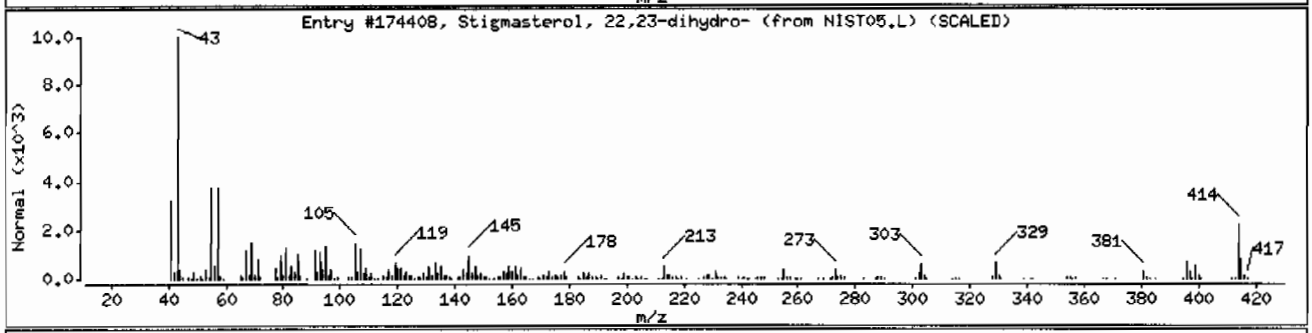

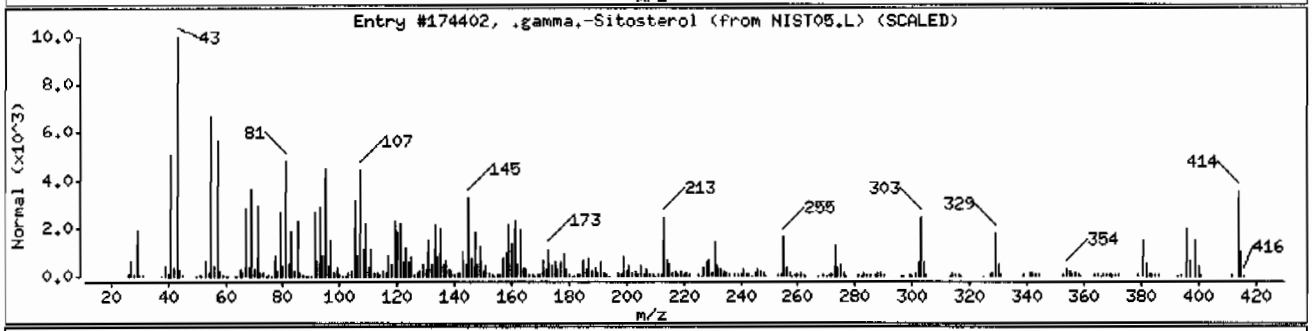

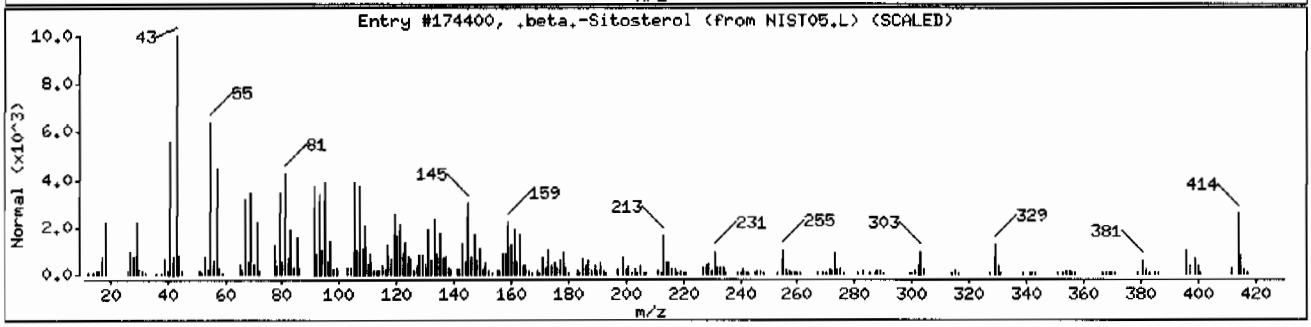

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Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: 1232661006188256511|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Stigmast-4-en-3-one	1058-61-3	NIST05.L	173936	64	C29H480	412
Androst-4-en-3-one, 17-hydroxy-, (17.bet	58-22-0	NIST05.L	117324	40	C19H2802	288
Androst-4-en-3-one, 17-(3-cyclopentyl-1-	58-20-8	NIST05.L	173908	40	C27H4003	412

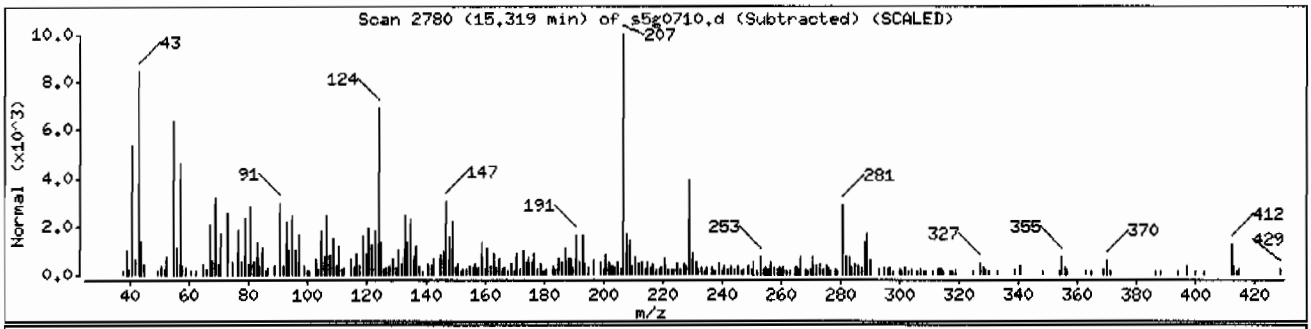

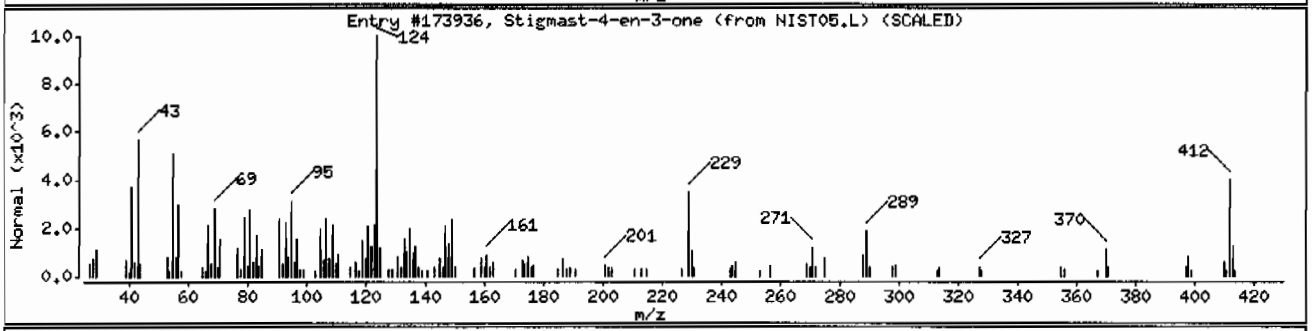

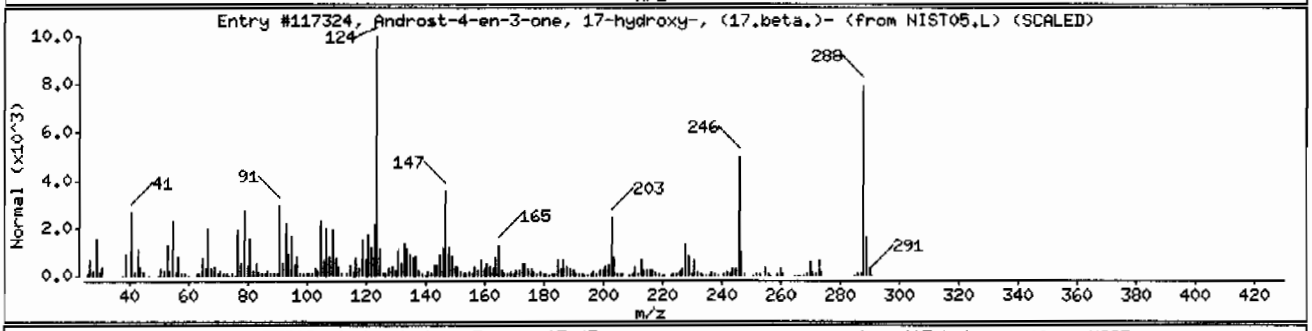

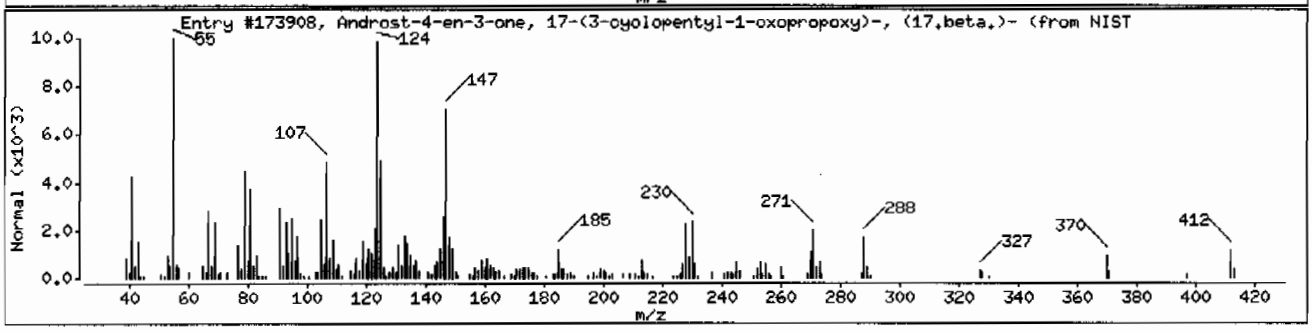

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Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: |2326610061882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72521	38	C12H22Si2	222
N,N-Dimethyl-4-nitroso-3-(trimethylsilyl	17993-84-9	NIST05.L	72386	30	C11H18N2OSi	222
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72520	30	C12H22Si2	222

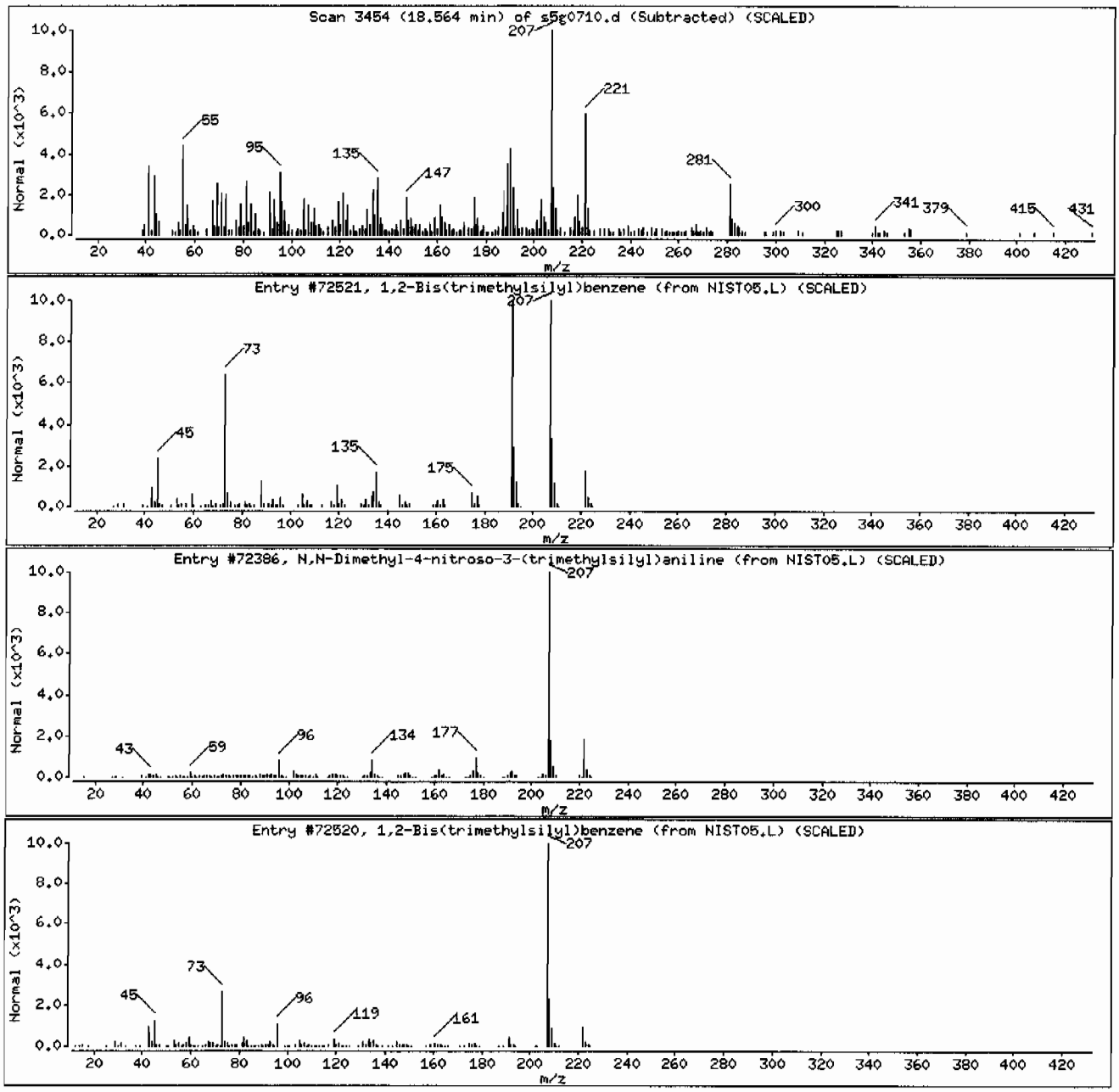

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Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: 1232661006|882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72520	30	C12H22Si2	222
Benzo[h]quinoline, 2,4-dimethyl-	605-67-4	NIST05.L	62243	30	C15H13N	207
Trimethyl(4-tert.-butylphenoxy)silane	25237-79-0	NIST05.L	72670	25	C13H22OSi	222

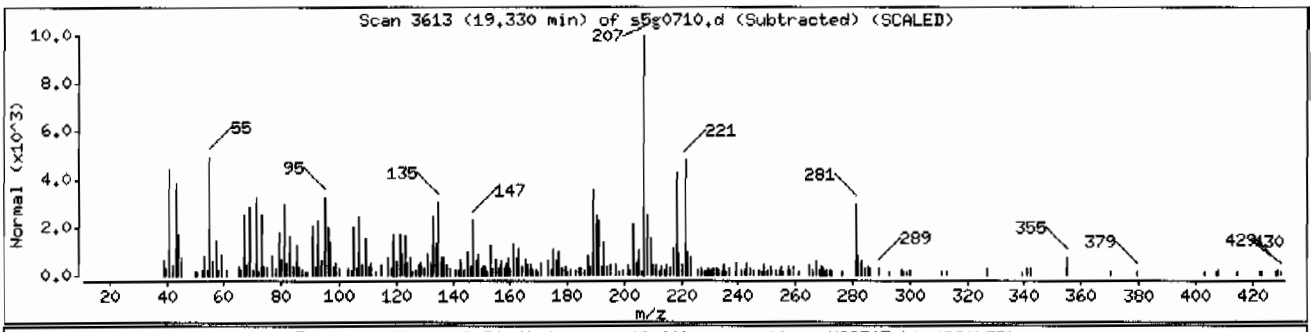

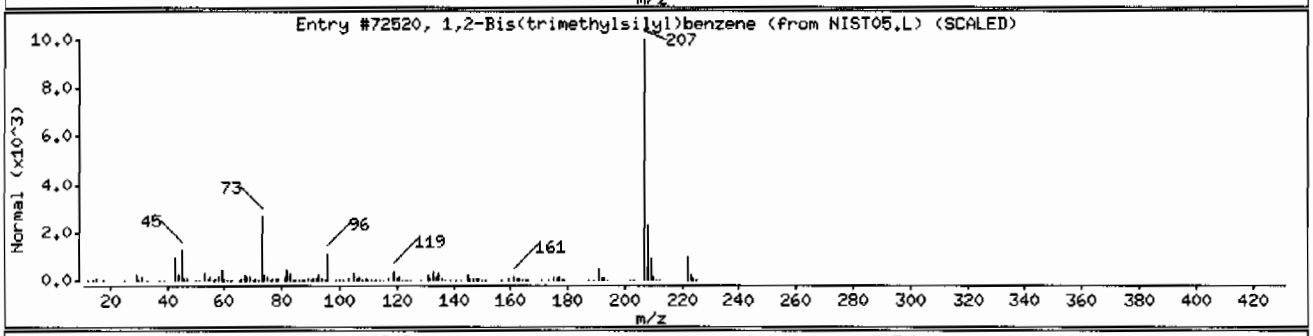

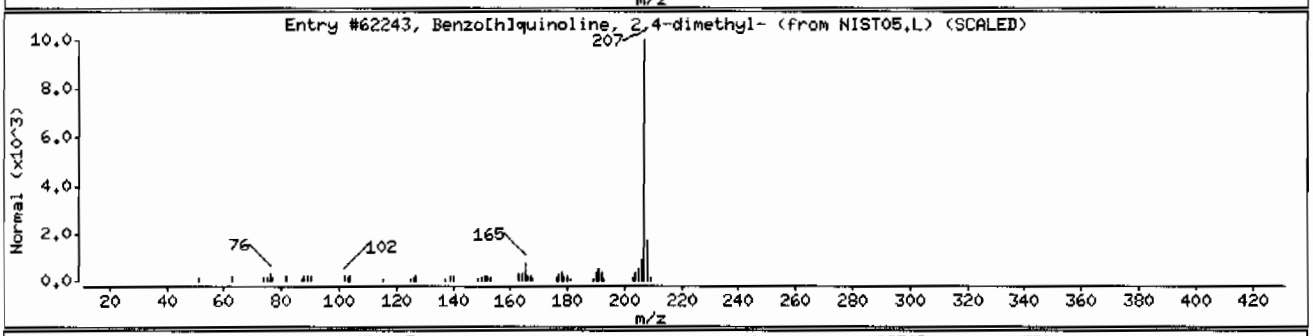

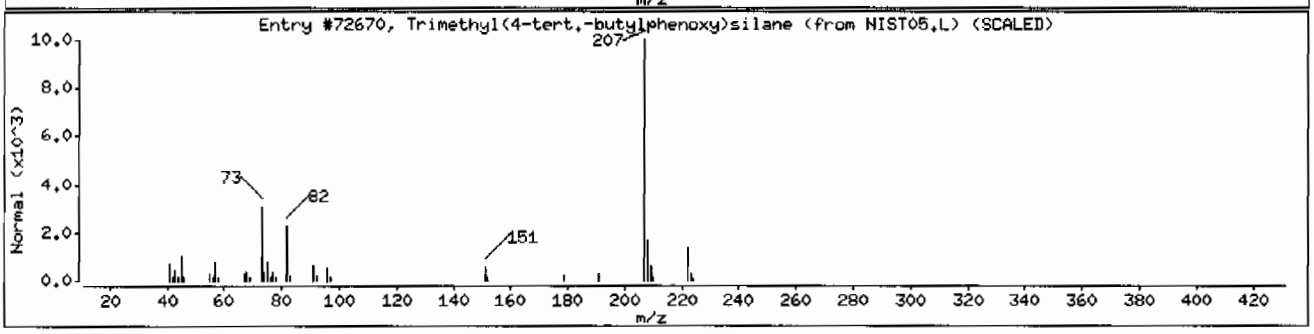

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Date : 07-JUL-2009 11:07

Client ID: CAMO-09-9989

Instrument: MSD5.i

Sample Info: |2326610061882565|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72521	46	C12H22Si2	222
Acetic acid, [4-(1,1-dimethylethyl)pheno	88530-52-3	NIST05.L	72620	41	C13H18O3	222
1,2-Bis(trimethylsilyl)benzene	17151-09-6	NIST05.L	72520	38	C12H22Si2	222

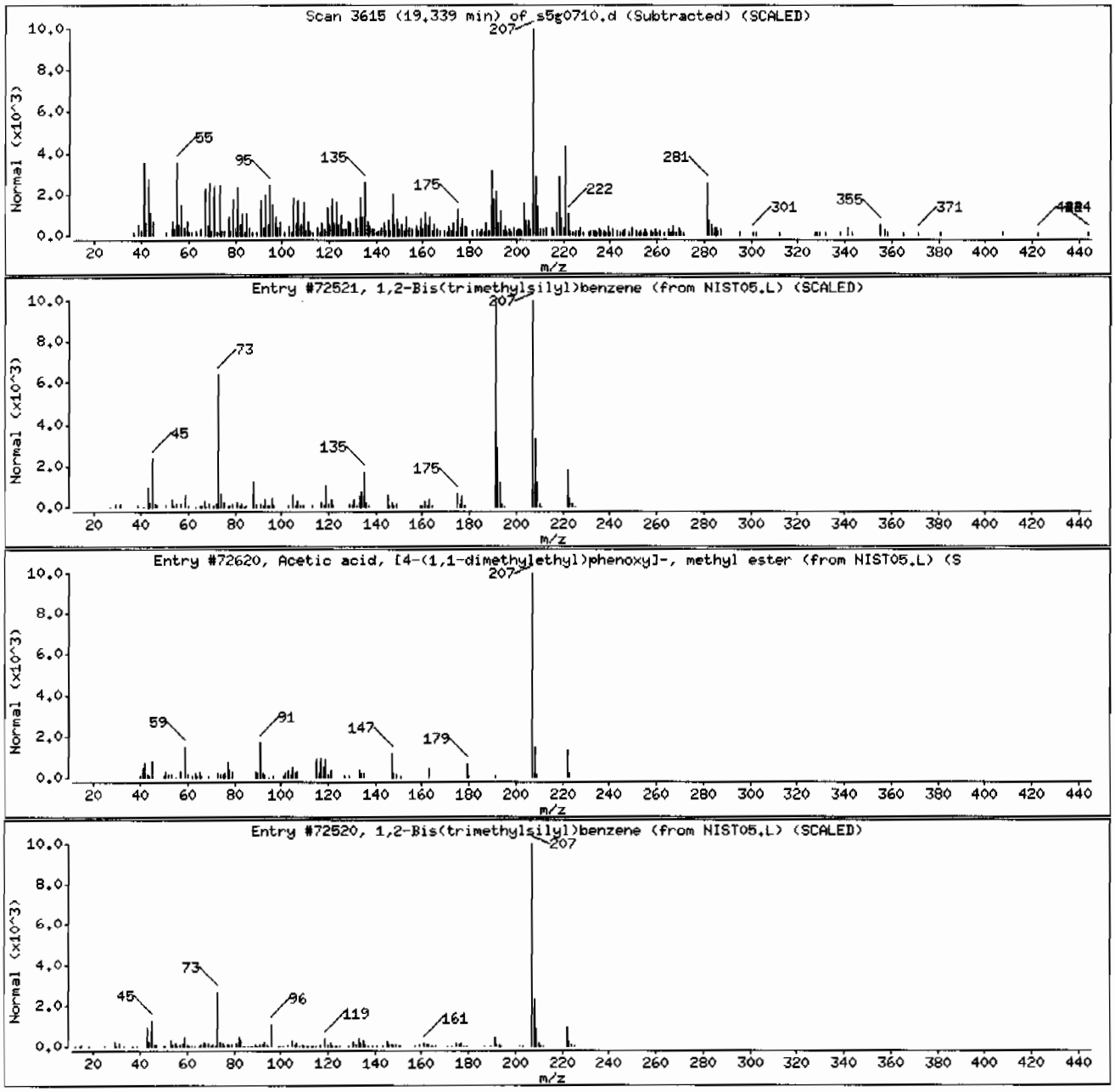

Standard Data

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
alpha-Terpineol		10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(ghi)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethhylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Dinoseb		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Methapyrilene		10	20	40	50	80	100	120
Isodrin		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorothio anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
Diphenyl sulfide		10	20	40	50	80	100	120
Diphenyl disulfide		10	20	40	50	80	100	120
Phenyl sulfone		10	20	40	50	80	100	120
Octachlorostyrene		10	20	40	50	80	100	120
2,2'-Dichlorobenzil		10	20	40	50	80	100	120
bis(p-Chlorophenyl)disulfide		10	20	40	50	80	100	120
bis(p-Chlorophenyl)sulfone		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 07-Jul-2009 07:47

Calibration History

Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Start Cal Date: 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
25-JUN-2009 14:42	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2512.d
Cal Level: 2 , Cal Amount: 10.00000		
26-JUN-2009 15:54	nev	/chem/MSD5.i/s062509.b/s5f2551.d
26-JUN-2009 12:32	hex	/chem/MSD5.i/s062509.b/s5f2542.d
26-JUN-2009 09:31	pest	/chem/MSD5.i/s062509.b/s5f2534.d
25-JUN-2009 19:10	ap12	/chem/MSD5.i/s062509.b/s5f2522.d
25-JUN-2009 15:10	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2513.d
Cal Level: 3 , Cal Amount: 20.00000		
26-JUN-2009 16:17	nev	/chem/MSD5.i/s062509.b/s5f2552.d
26-JUN-2009 12:55	hex	/chem/MSD5.i/s062509.b/s5f2543.d
26-JUN-2009 09:53	pest	/chem/MSD5.i/s062509.b/s5f2535.d
25-JUN-2009 19:32	ap12	/chem/MSD5.i/s062509.b/s5f2523.d
25-JUN-2009 15:38	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2514.d
Cal Level: 4 , Cal Amount: 40.00000		
26-JUN-2009 16:39	nev	/chem/MSD5.i/s062509.b/s5f2553.d
26-JUN-2009 13:17	hex	/chem/MSD5.i/s062509.b/s5f2544.d
26-JUN-2009 10:16	pest	/chem/MSD5.i/s062509.b/s5f2536.d
25-JUN-2009 19:55	ap12	/chem/MSD5.i/s062509.b/s5f2524.d
25-JUN-2009 16:05	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2515.d
Cal Level: 5 , Cal Amount: 50.00000		
26-JUN-2009 17:01	nev	/chem/MSD5.i/s062509.b/s5f2554.d
26-JUN-2009 13:40	hex	/chem/MSD5.i/s062509.b/s5f2545.d
26-JUN-2009 10:39	pest	/chem/MSD5.i/s062509.b/s5f2537.d
25-JUN-2009 20:18	ap12	/chem/MSD5.i/s062509.b/s5f2525.d
25-JUN-2009 16:33	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2516.d
Cal Level: 6 , Cal Amount: 80.00000		
26-JUN-2009 17:24	nev	/chem/MSD5.i/s062509.b/s5f2555.d
26-JUN-2009 14:02	hex	/chem/MSD5.i/s062509.b/s5f2546.d
26-JUN-2009 11:02	pest	/chem/MSD5.i/s062509.b/s5f2538.d
25-JUN-2009 20:41	ap12	/chem/MSD5.i/s062509.b/s5f2526.d
25-JUN-2009 17:02	MEGAIICARE	/chem/MSD5.i/s062509.b/s5f2517.d
Cal Level: 7 , Cal Amount: 100.00000		

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|26-JUN-2009 17:47 |nev              |/chem/MSD5.i/s062509.b/s5f2556.d        |
|26-JUN-2009 14:25 |hex              |/chem/MSD5.i/s062509.b/s5f2547.d        |
|26-JUN-2009 11:25 |pest             |/chem/MSD5.i/s062509.b/s5f2539.d        |
|25-JUN-2009 21:03 |ap12             |/chem/MSD5.i/s062509.b/s5f2527.d        |
|25-JUN-2009 17:29 |MEGAIICARE       |/chem/MSD5.i/s062509.b/s5f2518.d        |
+------------------+-----------------+----------------------------------------+

+------------------+-----------------+----------------------------------------+
| Cal Level: 8 , Cal Amount: 120.00000                                        |
+=============================================================================+
|26-JUN-2009 18:09 |nev              |/chem/MSD5.i/s062509.b/s5f2557.d        |
|26-JUN-2009 11:47 |pest             |/chem/MSD5.i/s062509.b/s5f2540.d        |
|25-JUN-2009 21:25 |ap12             |/chem/MSD5.i/s062509.b/s5f2528.d        |
|25-JUN-2009 17:57 |MEGAIICARE       |/chem/MSD5.i/s062509.b/s5f2519.d        |
+------------------+-----------------+----------------------------------------+


Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4
+------------------+-----------------+----------------------------------------+
| Ccal Level: 4 , Ccal Amount: 40.0                                           |
+=============================================================================+
|07-JUL-2009 07:25 |MEGAIICARE       |/chem/MSD5.i/s070709.b/s5g0702.d        |
+------------------+-----------------+----------------------------------------+
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GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Calibration File Names:
Level 1: /chem/MSD5.i/s062509.b/s5f2512.d
Level 2: /chem/MSD5.i/s062509.b/s5f2551.d
Level 3: /chem/MSD5.i/s062509.b/s5f2552.d
Level 4: /chem/MSD5.i/s062509.b/s5f2553.d
Level 5: /chem/MSD5.i/s062509.b/s5f2554.d
Level 6: /chem/MSD5.i/s062509.b/s5f2555.d
Level 7: /chem/MSD5.i/s062509.b/s5f2556.d
Level 8: /chem/MSD5.i/s062509.b/s5f2557.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.44023	0.49064	0.47716	0.46210	0.46052					
	0.47841	0.46192					AVRG		0.46728		3.49500
2 Pyridine	+++++	0.69279	0.75514	0.74169	0.59556	0.56835					
	0.76016	0.72634					AVRG		0.69143		11.33716
4 Aniline	+++++	0.44415	0.52170	0.51663	0.49970	0.50458					
	0.52141	0.50721					AVRG		0.50220		5.37034
209 Benzaldehyde	+++++	0.85159	0.89015	0.81871	0.79990	0.75839					
	0.74985	0.70918					AVRG		0.79683		7.86449
6 Phenol	+++++	1.14962	1.24888	1.18550	1.14101	1.11147					
	1.12731	1.08172					AVRG		1.14936		4.73589

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Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
7 bis(2-Chloroethyl) ether	0.90051	0.90959	0.96460	0.91224	0.88038	0.84926					
	0.85216	0.81790					AVRG		0.88583		5.19026
8 2-Chlorophenol	+++++	0.95967	1.04338	0.98839	0.94752	0.92897					
	0.94964	0.90735					AVRG		0.96070		4.60720
203 n-Decane	+++++	1.76533	1.83008	1.65405	1.57800	1.43467					
	1.36362	1.28290					AVRG		1.55838		13.23692
9 1,3-Dichlorobenzene	+++++	1.19264	1.28772	1.18603	1.14421	1.08989					
	1.09658	1.05091					AVRG		1.14971		6.95854
11 1,4-Dichlorobenzene	+++++	1.20398	1.26798	1.17125	1.13840	1.08879					
	1.09132	1.04491					AVRG		1.14381		6.71389
12 Benzyl alcohol	+++++	0.56979	0.63670	0.62573	0.60396	0.60465					
	0.61546	0.58777					AVRG		0.60629		3.73063
13 1,2-Dichlorobenzene	+++++	1.15580	1.17968	1.08323	1.05201	0.99640					
	1.00595	0.96590					AVRG		1.06271		7.67104
14 bis(2-Chloroisopropyl)ether	+++++	2.22903	2.36787	2.18504	2.06888	1.93644					
	1.87607	1.76841					AVRG		2.06168		10.34954
15 o-Cresol	+++++	0.73909	0.77770	0.73149	0.71184	0.68497					
	0.69315	0.66420					AVRG		0.71463		5.34449

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
16 Acetophenone	+++++	1.11152	1.14047	1.10567	1.07838	1.07242					
	1.04402	1.04190					AVRG		1.08491		3.35447
17 N-Nitrosodipropylamine	0.53750	0.60668	0.67952	0.64418	0.62140	0.62312					
	0.64069	0.59864					AVRG		0.61897		6.68884
18 m,p-Cresols	+++++	0.95993	1.03790	0.98085	0.94779	0.92236					
	0.94191	0.89906					AVRG		0.95569		4.67544
19 Hexachloroethane	+++++	0.41401	0.45409	0.43628	0.42388	0.41362					
	0.42132	0.40627					AVRG		0.42421		3.83148
21 Nitrobenzene	+++++	0.30294	0.32276	0.28522	0.28127	0.25509					
	0.25224	0.23551					AVRG		0.27643		11.11561
22 Isophorone	+++++	0.54758	0.58414	0.54133	0.51835	0.48143					
	0.47395	0.43472					AVRG		0.51164		10.00571
23 2-Nitrophenol	+++++	0.14529	0.15968	0.13060	0.12565	0.11851					
	0.11804	0.11062					AVRG		0.12977		13.28936
24 2,4-Dimethylphenol	+++++	0.24006	0.26073	0.23521	0.22763	0.20780					
	0.20628	0.19018					AVRG		0.22398		10.73144
25 bis(2-Chloroethoxy)methane	+++++	0.32945	0.33889	0.30691	0.29506	0.26818					
	0.26319	0.24472					AVRG		0.29234		12.06634

GEL Laboratories LLC

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Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
26 2,4-Dichlorophenol	++++	0.23679	0.25509	0.23664	0.22756	0.21060					
	0.20430	0.18739					AVRG		0.22262		10.36895
27 Benzoic acid	-++-+	+-+++	51071	179236	222805	415300					
	636355	696809					LINR	0.30650	0.14372		0.99499
28 1,2,4-Trichlorobenzene	+++++	0.31579	0.32696	0.29301	0.27810	0.25284					
	0.24524	0.22654					AVRG		0.27693		13.50910
30 Naphthalene	0.92630	0.81441	0.84437	0.74175	0.71375	0.63501					
	+++++	+++++					AVRG		0.77927		13.28698
204 alpha-Terpineol	+++++	0.27539	0.29587	0.27412	0.26160	0.23729					
	0.22709	0.21031					AVRG		0.25452		11.98565
31 4-Chloroaniline	+++++	49594	132620	425679	656127	1107368					
	1404474	+++++					LINR	0.18534	0.32589		0.99103
189 Caprolactam	+++++	0.07040	0.08077	0.07795	0.07939	0.08243					
	0.08208	0.08270					AVRG		0.07939		5.44768
32 Hexachlorobutadiene	+++++	0.22957	0.23375	0.21257	0.20237	0.18593					
	0.18127	0.16955					AVRG		0.20215		12.15251
33 4-Chloro-3-methylphenol	+-+++	0.22052	0.23942	0.22592	0.22085	0.20102					
	0.19961	0.18500					AVRG		0.21319		8.75387

GEL Laboratories LLC

INITIAL CALIBRATION DATA

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Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.54547	0.51742	0.53737	0.48509	0.46571	0.42309					
	0.40601	0.37515					AVRG		0.46942		13.47765
35 1-Methylnaphthalene	0.61675	0.54291	0.56151	0.50018	0.48099	0.43377					
	0.41494	+++++					AVRG		0.50729		14.13879
36 Hexachlorocyclopentadiene	+++++	27986	82848	201022	230899	383354					
	546120	529744					LINR	0.06768	0.19504		0.99133
208 1,1'-Biphenyl	+++++	1.15705	1.15621	1.07607	1.06999	0.99440					
	0.93860	0.92132					AVRG		1.04481		9.22094
205 2,3-Dichloroaniline	+++++	0.43038	0.47856	0.47126	0.45828	0.43340					
	0.43590	0.41815					AVRG		0.44656		5.11263
37 2,4,6-Trichlorophenol	+++++	0.28676	0.32859	0.32419	0.31870	0.30788					
	0.30664	0.29394					AVRG		0.30953		4.99573
38 2,4,5-Trichlorophenol	+++++	0.31119	0.35383	0.35359	0.34899	0.32750					
	0.32118	0.30897					AVRG		0.33218		5.93452
40 2-Chloronaphthalene	0.90782	0.88976	0.95381	0.88628	0.86190	0.79283					
	0.77800	0.73919					AVRG		0.85120		8.64193
42 o-Nitroaniline	+++++	0.22990	0.27677	0.28660	0.28311	0.27222					
	0.27973	0.26622					AVRG		0.27065		7.09467

GEL Laboratories LLC

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
41 m-Nitroaniline	+++++	13390	28329	139268	173437	345778					
	493724	513131					LINR	0.29884	0.19829		0.99453
43 Dimethylphthalate	+++++	1.04940	1.13308	1.04947	1.03679	0.97403					
	0.95746	0.91235					AVRG		1.01609		7.22171
44 2,6-Dinitrotoluene	+++++	0.23053	0.26215	0.25119	0.24633	0.23672					
	0.23773	0.22882					AVRG		0.24192		4.95083
45 Acenaphthylene	1.32250	1.32839	1.43067	1.30894	1.28012	1.15975					
	1.12592	1.07678					AVRG		1.25413		9.61726
47 Acenaphthene	0.86434	0.82293	0.89161	0.84103	0.82730	0.77871					
	0.77201	0.74002					AVRG		0.81724		6.19484
48 2,4-Dinitrophenol	+++++	+++++	27401	92512	114873	206533					
	316209	327495					LINR	0.31618	0.12695		0.99276
49 Dibenzofuran	+++++	1.22775	1.32738	1.22440	1.19116	1.08140					
	1.04556	1.00480					AVRG		1.15749		10.04078
50 2,4-Dinitrotoluene	+++++	0.28811	0.33236	0.33277	0.32207	0.31602					
	0.32001	0.30435					AVRG		0.31653		5.01775
51 Diethylphthalate	+++++	1.02375	1.11667	1.04486	1.01847	0.95382					
	0.93049	0.87854					AVRG		0.99523		8.00568

GEL Laboratories LLC

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Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
52 4-Nitrophenol	+++++	0.10237	0.13339	0.15027	0.14627	0.15044					
	0.15471	0.15539					AVRG		0.14183		13.32361
53 Fluorene	1.08263	1.02003	1.09222	1.03146	1.00049	0.93401					
	0.91950	0.87726					AVRG		0.99470		7.82414
54 4-Chlorophenylphenylether	+++++	0.58767	0.63875	0.60550	0.58889	0.55750					
	0.55283	0.52876					AVRG		0.57998		6.33880
55 2-Methyl-4,6-dinitrophenol	+++++	21239	62983	165240	200894	364502					
	508544	531313					LINR	0.16218	0.10002		0.99855
56 p-Nitroaniline	+++++	0.10363	0.09786	0.10787	0.10361	0.11040					
	+++++	+++++					AVRG		0.10468		4.57223
133 Diphenylamine	+++++	0.42588	0.42331	0.39385	0.39040	0.38179					
	0.39613	0.37595					AVRG		0.39819		4.85853
58 1,2-Diphenylhydrazine	+++++	0.52955	0.56955	0.53115	0.51761	0.47792					
	0.46451	0.44849					AVRG		0.50554		8.53737
59 Tributylphosphate	+++++	1.00806	1.18622	1.23669	1.16465	1.10392					
	1.07665	0.99822					AVRG		1.11063		8.12668
61 4-Bromophenylphenylether	+++++	0.19446	0.21087	0.19593	0.19164	0.18443					
	0.18455	0.17645					AVRG		0.19119		5.76073

GEL Laboratories LLC

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
63 Hexachlorobenzene	+++++	0.20663	0.22068	0.20559	0.20389	0.19450					
	0.19301	0.18516					AVRG		0.20135		5.75118
207 Atrazine	+++++	0.03899	0.03935	0.03659	0.03414	0.02579					
	0.02506	0.01147					AVRG		0.03020		33.49708 <-
65 Pentachlorophenol	+++++	29080	74972	189390	229767	418008					
	576136	593432					LINR	0.13477	0.11155		0.99815
206 n-Octadecane	+++++	0.47475	0.50082	0.45712	0.43884	0.39852					
	0.38292	0.36185					AVRG		0.43069		11.86963
68 Phenanthrene	0.88355	0.80072	0.83106	0.77370	0.74248	0.67864					
	0.65899	0.62552					AVRG		0.74933		11.98568
69 Anthracene	0.80079	0.78389	0.83647	0.77814	0.74916	0.68231					
	0.65679	0.62923					AVRG		0.73960		10.09070
72 Di-n-butylphthalate	+++++	0.92678	1.00428	0.92303	0.88168	0.79411					
	0.73607	0.69755					AVRG		0.85193		13.15447
76 Fluoranthene	0.87967	0.89588	0.95145	0.91545	0.88662	0.80387					
	0.76584	0.73008					AVRG		0.85361		9.11643
77 Benzidine	+++++	0.19760	0.17186	0.13560	0.15750	0.17176					
	+++++	++++					AVRG		0.16686		13.59632

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INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
79 Pyrene	0.91265	0.94419	1.00845	0.90726	0.87106	0.79690					
	0.79234	0.74808					AVRG		0.87262		10.07157
85 Butylbenzylphthalate	+++++	0.35330	0.41644	0.38432	0.37612	0.36818					
	0.36866	0.35103					AVRG		0.37401		5.90957
89 Benzo(a)anthracene	0.93687	0.86506	0.93282	0.88495	0.85327	0.81322					
	0.79963	0.78038					AVRG		0.85828		6.82989
90 3,3'-Dichlorobenzidine	+++++	0.27335	0.29372	0.28527	0.28392	0.28609					
	0.29172	0.29334					AVRG		0.28677		2.49370
92 Chrysene	0.89108	0.82456	0.87830	0.80396	0.77658	0.72635					
	0.71171	0.67721					AVRG		0.78622		9.89559
93 bis(2-Ethylhexyl)phthalate	0.36763	0.54183	0.61773	0.55490	0.53303	0.51324					
	0.50377	0.47385					AVRG		0.51325		14.10892
94 Di-n-octylphthalate	+++++	0.87264	1.03338	0.94180	0.92021	0.86905					
	0.90617	0.85721					AVRG		0.91435		6.63445
95 Benzo(b)fluoranthene	0.83575	0.83776	0.94486	0.89597	0.89706	0.88345					
	0.87605	0.89631					AVRG		0.88340		3.99003
96 Benzo(k)fluoranthene	0.83667	0.88573	0.95144	0.92402	0.88042	0.80919					
	0.87047	0.78400					AVRG		0.86774		6.47091

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	0.68279	0.75497	0.84574	0.83044	0.81295	0.78346					
	0.78610	0.75963					AVRG		0.78201		6.56659
99 Indeno(1,2,3-cd)pyrene	0.68768	0.76122	0.82731	0.85825	0.80224	0.83562					
	0.77091	0.74337					AVRG		0.78583		7.13057
100 Dibenzo(a,h)anthracene	0.55928	0.62675	0.66243	0.69649	0.65909	0.67837					
	0.63358	0.60851					AVRG		0.64056		6.79267
101 Benzo(ghi)perylene	0.62928	0.66607	0.71083	0.72801	0.67267	0.69867					
	0.63897	0.61503					AVRG		0.66994		6.05494
102 1,4-Dioxane	+++++	0.27310	0.33649	0.31633	0.31586	0.30752					
	0.30760	0.30009					AVRG		0.30814		6.24756
103 Methyl methacrylate	+++++	0.16571	0.14464	0.16919	0.16853	0.13461					
	0.14912	0.14745					AVRG		0.15418		8.81834
104 Ethyl methacrylate	+++++	0.71311	0.75791	0.73095	0.72426	0.71167					
	0.71385	0.70503					AVRG		0.72240		2.47238
105 2-Picoline	+++++	1.11548	1.17142	1.11300	1.10983	1.09598					
	1.08845	1.07485					AVRG		1.10986		2.77913
106 N-Nitrosomethylethylamine	+++++	0.39956	0.41468	0.41346	0.41221	0.41623					
	0.42662	0.42599					AVRG		0.41554		2.20553

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	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.47558	0.50132	0.48450	0.48273	0.46970					
	0.48198	0.46348					AVRG		0.47990		2.52987
108 N-Nitrosodiethylamine	+++++	0.39546	0.40809	0.41357	0.41074	0.41897					
	0.41660	0.42103					AVRG		0.41207		2.08747
109 Ethyl Methanesulfonate	+++++	0.55498	0.59813	0.57386	0.57552	0.57488					
	0.58581	0.57709					AVRG		0.57718		2.26529
110 Pentachloroethane	+++++	0.32980	0.34246	0.32767	0.32795	0.32606					
	0.31926	0.32166					AVRG		0.32784		2.27134
111 N-Nitrosopyrrolidine	+++++	0.36971	0.39411	0.42033	0.41585	0.42732					
	0.42989	0.42616					AVRG		0.41191		5.38141
113 N-Nitrosomorpholine	+++++	0.64474	0.66018	0.67778	0.67210	0.67246					
	0.66541	0.65964					AVRG		0.66462		1.66103
114 o-Toluidine	+++++	1.61381	1.49415	1.47472	1.43016	1.39203					
	1.34155	1.32892					AVRG		1.43933		6.87634
115 N-Nitrosopiperidine	+++++	0.12839	0.13413	0.13516	0.13244	0.13401					
	0.13430	0.13333					AVRG		0.13311		1.68824
116 a,a-Dimethylphenethylamine	+++++	0.63521	0.68983	0.83773	0.84651	0.86822					
	0.88737	0.88928					AVRG		0.80774		12.65773

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	100 Level 7	120 Level 8									
117 Triethylphosphorothioate	+++++	0.19064	0.20260	0.20099	0.19502	0.19185					
	0.18753	0.18646					AVRG		0.19358		3.24858
118 2,6-Dichlorophenol	+++++	0.22516	0.23849	0.23337	0.23367	0.23208					
	0.23139	0.22767					AVRG		0.23169		1.86464
119 Hexachloropropene	+++++	0.11814	0.13192	0.13900	0.13353	0.14270					
	0.15051	0.15068					AVRG		0.13807		8.32008
120 p-Phenylenediamine	+++++	43977	99414	308611	373494	696188					
	963689	995859					LINR	0.12820	0.20874		0.99126
121 N-Nitrosodi-n-butylamine	+++++	0.17823	0.17723	0.18484	0.17833	0.17974					
	0.18115	0.17847					AVRG		0.17971		1.43983
122 Safrole	+++++	0.21837	0.22703	0.21735	0.21549	0.21160					
	0.20575	0.20421					AVRG		0.21426		3.67215
123 1,2,4,5-Tetrachlorobenzene	+++++	0.54138	0.55353	0.51470	0.51225	0.49714					
	0.48155	0.47070					AVRG		0.51018		5.89454
124 Isosafrole	+++++	0.32966	0.34665	0.33144	0.33467	0.32864					
	0.32331	0.32007					AVRG		0.33063		2.60072
125 1,4-Naphthoquinone	+++++	0.31987	0.36331	0.33039	0.32211	0.26630					
	+++++	+++++					AVRG		0.32039		10.89181

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
126 m-Dinitrobenzene	+++++	0.14698	0.17243	0.17441	0.16744	0.16475					
	0.17068	0.16207					AVRG		0.16554		5.58667
127 Pentachlorobenzene	+++++	0.50210	0.51268	0.47854	0.47885	0.46376					
	0.45302	0.44508					AVRG		0.47629		5.19583
128 1-Naphthylamine	+++++	0.71576	0.74676	0.71478	0.73564	0.70096					
	0.70170	0.66704					AVRG		0.71181		3.64479
129 2-Naphthylamine	+++++	0.65048	0.67212	0.63289	0.62367	0.60738					
	0.67547	0.62734					AVRG		0.64134		3.98982
130 2,3,4,6-Tetrachlorophenol	+++++	0.26896	0.31335	0.32826	0.31414	0.31017					
	0.32221	0.30193					AVRG		0.30843		6.26838
131 5-Nitro-o-toluidine	+++++	0.22244	0.25484	0.25927	0.26491	0.26382					
	0.26232	0.26458					AVRG		0.25602		5.95016
132 Thionazin	+++++	0.13992	0.16083	0.16656	0.16351	0.16350					
	0.15944	0.15655					AVRG		0.15862		5.58077
134 Sulfotepp	+++++	0.11001	0.12298	0.12668	0.11604	0.11569					
	0.11568	0.11405					AVRG		0.11730		4.80512
135 Phorate	+++++	0.29230	0.33975	0.34982	0.32693	0.31677					
	0.31242	0.30198					AVRG		0.32000		6.36308

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
136 1,3,5-Trinitrobenzene	+++++	0.07807	0.09604	0.10968	0.11316	0.11642					
	0.12063	0.11865					AVRG		0.10752		14.26247
137 Phenacetin	+++++	0.20290	0.22171	0.22556	0.22545	0.22049					
	0.22407	0.22896					AVRG		0.22131		3.87405
138 Diallate	+++++	0.21704	0.21096	0.20865	0.20571	0.20547					
	0.19847	0.19919					AVRG		0.20650		3.15687
139 Dimethoate	+++++	0.14997	0.18004	0.19018	0.19006	0.19876					
	0.19392	0.19159					AVRG		0.18493		8.87531
140 4-Aminobiphenyl	+++++	0.39954	0.37157	0.34033	0.38960	0.38731					
	0.37146	0.32708					AVRG		0.36955		7.22857
141 Pentachloronitrobenzene	+++++	0.09293	0.09496	0.09184	0.09009	0.08786					
	0.08371	0.08367					AVRG		0.08929		4.95202
142 Pronamide	+++++	0.27271	0.27709	0.26759	0.26568	0.25326					
	0.24278	0.24492					AVRG		0.26058		5.22110
143 Dinoseb	+++++	31988	96506	256390	323328	575312					
	818250	840863					LINR	0.17281	0.15992		0.99762
144 Disulfoton	+++++	0.24425	0.29551	0.29849	0.27680	0.27235					
	0.26633	0.25788					AVRG		0.27309		7.12374

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	100 Level 7	120 Level 8									
145 Methyl parathion	+++++	0.10770	0.14875	0.15826	0.16106	0.16736					
	0.16426	0.16189					AVRG		0.15275		13.56103
146 4-Nitroquinoline-1-oxide	++++	0.01141	0.01322	0.01133	0.01062	0.00818					
	0.00868	0.00809					AVRG		0.01022		19.09653 <-
147 Methapyrilene	+++++	0.42026	0.44488	0.43856	0.43377	0.40715					
	0.40099	0.37457					AVRG		0.41717		5.94225
148 Isodrin	+++++	0.10571	0.10794	0.10433	0.10601	0.10397					
	0.10008	0.10248					AVRG		0.10436		2.45344
149 Aramite	+++++	0.04905	0.05045	0.05167	0.05357	0.05214					
	0.04972	0.04968					AVRG		0.05090		3.18460
150 Kepone	+++++	0.04990	0.06374	0.06858	0.06953	0.07010					
	0.07444	0.07444					AVRG		0.06725		12.61524
151 p-(Dimethylamino)azobenzene	+++++	0.20254	0.21029	0.20667	0.20747	0.19714					
	0.19688	0.19360					AVRG		0.20208		3.13600
152 Chlorobenzilate	+++++	0.29145	0.30146	0.29895	0.30236	0.30552					
	0.29673	0.30007					AVRG		0.29951		1.50134
153 3,3'-Dimethylbenzidine	+++++	0.46677	0.47630	0.42302	0.43278	0.41562					
	0.43046	0.43922					AVRG		0.44059		5.12372

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154 Famphur	+++++	0.28070	0.34471	0.37738	0.35216	0.35407						
	0.35151	0.34312					AVRG		0.34338		8.69120	
155 2-Acetylaminofluorene	+++++	0.21740	0.26283	0.27987	0.28264	0.28876						
	0.29539	0.30354					AVRG		0.27578		10.43001	
157 7,12Dimethylbenz(a)anthracene	+++++	0.45233	0.47142	0.46173	0.47665	0.44445						
	0.44076	0.43541					AVRG		0.45468		3.46334	
158 3-Methylcholanthrene	+++++	0.38164	0.42107	0.41321	0.41394	0.40883						
	0.41065	0.41489					AVRG		0.40918		3.11363	
26 Phthalic anhydride	+++++	34490	64897	175190	219706	434516						
	592574	638483					LINR	0.15802	0.12664		0.99629	
173 Carbazole	30520	150845	307142	743993	923267	1782076						
	2604833	2666301					LINR	0.13905	0.49388		0.99084	
174 Hexachlorophene	+++++	480806	2278613	3488755	6057217	7167289						
	+++++	+++++					LINR	10.43537	0.08980		0.99073	
179 Dibenzo(a,e)pyrene	+++++	0.38443	0.37707	0.43058	0.39017	0.45492						
	0.38756	0.34953					AVRG		0.39632		8.87511	
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

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	100 Level 7	120 Level 8									
184 p-Benzoquinone	+++++	6354	22229	56493	80248	134257					
	176805	204907					LINR	0.21207	0.17065		0.99849
191 Parathion	+++++	0.06241	0.08380	0.09228	0.08665	0.09019					
	0.08792	0.08819					AVRG		0.08449		11.94545
192 Methoxychlor	+++++	0.47987	0.56846	0.54978	0.51458	0.52157					
	0.47918	0.44390					AVRG		0.50819		8.56166
210 m-Toluidine	+++++	82014	176998	423487	569165	1017485					
	1470841	1569700					LINR	0.22355	1.33578		0.99386
211 p-Toluidine	+++++	48655	120805	272230	351988	651296					
	846340	873954					LINR	0.14365	0.74877		0.99481
212 Cis Diallate	+++++	0.19980	0.20241	0.21284	0.20964	0.21416					
	0.21304	0.21632					AVRG		0.20975		2.98917
213 Trans Diallate	+++++	0.25534	0.24819	0.24547	0.24201	0.24173					
	0.23350	0.23435					AVRG		0.24294		3.15687
214 1,4-Dinitrobenzene	+++++	0.17121	0.20381	0.18645	0.17549	0.17568					
	0.18326	0.17442					AVRG		0.18147		6.16594
215 2-Ethoxyethanol	+++++	0.42738	0.64231	0.63531	0.62447	0.60898					
	0.63642	0.61711					AVRG		0.59885		12.77596

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	100 Level 7	120 Level 8									
216 Methylenebis(2-chloroaniline)	+++++	0.08449	0.09509	0.10697	0.10796	0.12155					
	0.12865	0.12373					AVRG		0.10978		14.66692
229 2,2'-Dichlorobenzil	+++++	0.43514	0.47184	0.44898	0.45185	0.43856					
	0.44140	0.43749					AVRG		0.44646		2.85679
230 4-Chlorothioanisole	+++++	0.26856	0.27242	0.26616	0.27394	0.26615					
	0.26741	0.26488					AVRG		0.26850		1.27497
231 4-Chlorothiophenol	+++++	41768	132011	275353	382851	635600					
	848320	930133					LINR	0.16594	0.21026		0.99850
232 bis(p-Chlorophenyl)sulfone	+++++	0.31542	0.31724	0.29112	0.29450	0.28313					
	0.28387	0.28770					AVRG		0.29614		4.84670
233 bis(p-Chlorophenyl)disulfide	+++++	0.08882	0.09796	0.10629	0.09493	0.09841					
	0.10107	0.10018					AVRG		0.09824		5.52014
234 Diphenyl disulfide	+++++	0.17514	0.18495	0.17946	0.18101	0.17947					
	0.17997	0.17866					AVRG		0.17981		1.62468
235 Diphenyl sulfide	+++++	0.85058	0.85814	0.81105	0.81875	0.77524					
	0.75190	0.74816					AVRG		0.80197		5.57629
236 Phenyl sulfone	+++++	0.36602	0.35985	0.34325	0.35342	0.33956					
	0.33842	0.33797					AVRG		0.34836		3.27307

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
237 Hydroxymethyl phthalimide	+++++	0.13574	0.15119	0.15892	0.13998	0.12536						
	0.12935	0.12316					AVRG		0.13767		9.72353	
238 Phthalic acid	+++++	0.06939	0.07287	0.08292	0.11566	0.12455						
	0.14463	0.15090					AVRG		0.10870		31.11787	<-
239 Thiophenol	+++++	0.60742	0.77250	0.81805	0.90219	0.94227						
	0.93729	0.94386					AVRG		0.84623		14.74711	
240 bis(Chloromethyl)ether	+++++	0.85590	0.85616	0.81409	0.81889	0.83526						
	0.80381	0.79901					AVRG		0.82616		2.83945	
241 Octachlorostyrene	+++++	0.10243	0.10326	0.09498	0.09677	0.09556						
	0.09562	0.09577					AVRG		0.09777		3.59684	
M 225 Trichlorophenols	+++++	0.29897	0.34121	0.33889	0.33385	0.31769						
	0.31391	0.30146					AVRG		0.32085		5.43035	
M 226 Tetrachlorophenols	+++++	0.26896	0.31335	0.32826	0.31414	0.31017						
	0.32221	0.30193					AVRG		0.30843		6.26838	
M 227 Benzo(b,k)fluoranthene	0.83621	0.86175	0.94815	0.91000	0.88874	0.84632						
	0.87326	0.84016					AVRG		0.87557		4.41963	
M 228 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

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Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 3 2-Fluorophenol	+++++	0.84209	0.92035	0.89559	0.87122	0.86709					
	0.89027	0.86129					AVRG		0.87827		2.93514
$ 5 Phenol-d5	+++++	1.12824	1.23711	1.20172	1.15464	1.13363					
	1.14808	1.10269					AVRG		1.15801		3.99148
$ 187 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-
$ 20 Nitrobenzene-d5	+++++	0.32326	0.35849	0.32302	0.30818	0.26119					
	0.25859	0.24209					AVRG		0.29640		14.47409
$ 39 2-Fluorobiphenyl	+++++	1.12044	1.19637	1.09339	1.05081	0.95786					
	0.92784	0.89472					AVRG		1.03449		10.74330
$ 60 2,4,6-Tribromophenol	+++++	0.13461	0.16754	0.16952	0.16904	0.16702					
	0.17089	0.16383					AVRG		0.16321		7.84797
$ 81 p-Terphenyl-d14	+++++	0.64272	0.69513	0.63531	0.60706	0.57674					
	0.57751	0.55064					AVRG		0.61216		8.06339

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUN-2009 14:42
End Cal Date : 26-JUN-2009 18:09
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Cal Date : 07-Jul-2009 07:44 rmb

Curve	Formula	Units
Averaged	Amt = Rsp/mi	Response
Linear	Amt = b + Rsp/ml	Response

Data File: /chem/MSD5.i/s062509.b/s5f2530.d
Report Date: 26-Jun-2009 10:43

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2530.d
Analysis Type: WATER
Lab Sample ID: WBN090528-08.5
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 25-JUN-2009 22:11
Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Init. Cal. Times: 14:42 10:16
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.79683	0.68969	0.68969	0.000	-13.44538	60.00000	Averaged
16 Acetophenone	1.08491	1.09337	1.09337	0.000	0.78008	60.00000	Averaged
189 Caprolactam	0.07939	0.08623	0.08623	0.000	8.62020	60.00000	Averaged
208 1,1'-Biphenyl	1.04481	1.10113	1.10113	0.000	5.39117	60.00000	Averaged
207 Atrazine	0.03020	0.02623	0.02623	0.000	-13.14245	60.00000	Averaged
77 Benzidine	0.16686	0.16548	0.16548	0.000	-0.82680	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28677	0.30900	0.30900	0.000	7.75178	60.00000	Averaged
102 1,4-Dioxane	0.30814	0.37821	0.37821	0.000	22.74029	60.00000	Averaged
103 Methyl methacrylate	0.15418	0.20577	0.20577	0.000	33.46578	60.00000	Averaged
104 Ethyl methacrylate	0.72240	0.86947	0.86947	0.000	20.35908	60.00000	Averaged
105 2-Picoline	1.10986	1.11145	1.11145	0.000	0.14364	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.41554	0.43916	0.43916	0.000	5.68448	60.00000	Averaged
107 Methyl methanesulfonate	0.47990	0.53510	0.53510	0.000	11.50234	60.00000	Averaged
108 N-Nitrosodiethylamine	0.41207	0.42418	0.42418	0.000	2.93858	60.00000	Averaged
109 Ethyl Methanesulfonate	0.57718	0.71921	0.71921	0.000	24.60806	60.00000	Averaged
110 Pentachloroethane	0.32784	0.45184	0.45184	0.000	37.82372	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.41191	0.43254	0.43254	0.000	5.00958	60.00000	Averaged
113 N-Nitrosomorpholine	0.66462	0.70098	0.70098	0.000	5.47224	60.00000	Averaged
114 o-Toluidine	1.43933	1.46147	1.46147	0.000	1.53771	60.00000	Averaged
115 N-Nitrosopiperidine	0.13311	0.13919	0.13919	0.000	4.57041	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.80774	0.88284	0.88284	0.000	9.29822	60.00000	Averaged
118 2,6-Dichlorophenol	0.23169	0.24346	0.24346	0.000	5.07768	60.00000	Averaged
119 Hexachloropropene	0.13807	0.22200	0.22200	0.000	60.78426	60.00000	Averaged <-
120 p-Phenylenediamine	41.67913	40.00000	0.19074	0.000	4.19784	60.00000	Linear
121 N-Nitrosodi-n-butylamine	0.17971	0.18978	0.18978	0.000	5.59950	60.00000	Averaged
122 Safrole	0.21426	0.25431	0.25431	0.000	18.69392	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.51018	0.55414	0.55414	0.000	8.61659	60.00000	Averaged
124 Isosafrole	0.33063	0.45825	0.45825	0.000	38.59723	60.00000	Averaged
125 1,4-Naphthoquinone	0.32039	0.31743	0.31743	0.000	-0.92461	60.00000	Averaged
127 Pentachlorobenzene	0.47629	0.49731	0.49731	0.000	4.41334	60.00000	Averaged
128 1-Naphthylamine	0.71181	0.74533	0.74533	0.000	4.70975	60.00000	Averaged
129 2-Naphthylamine	0.64134	0.57650	0.57650	0.000	-10.10953	60.00000	Averaged
131 5-Nitro-o-toluidine	0.25602	0.27374	0.27374	0.000	6.92121	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.10752	0.13454	0.13454	0.000	25.12508	60.00000	Averaged
137 Phenacetin	0.22131	0.23937	0.23937	0.000	8.16340	60.00000	Averaged
138 Diallate	0.20650	0.20770	0.20770	0.000	0.58296	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 25-JUN-2009 22:11
Lab File ID: s5f2530.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 10:16
Lab Sample ID: WBN090528-08.5 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20975	0.22776	0.22776	0.000	8.58954	60.00000	Averaged
213 Trans Diallate	0.24294	0.24436	0.24436	0.000	0.58296	60.00000	Averaged
140 4-Aminobiphenyl	0.36955	0.40991	0.40991	0.000	10.91902	60.00000	Averaged
141 Pentachloronitrobenzene	0.08929	0.09331	0.09331	0.000	4.50272	60.00000	Averaged
142 Pronamide	0.26058	0.26773	0.26773	0.000	2.74451	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01022	0.01223	0.01223	0.000	19.62918	60.00000	Averaged
147 Methapyrilene	0.41717	0.44149	0.44149	0.000	5.82947	60.00000	Averaged
148 Isodrin	0.10436	0.10072	0.10072	0.000	-3.48541	60.00000	Averaged
149 Aramite	0.05090	0.04734	0.04734	0.000	-6.97764	60.00000	Averaged
150 Kepone	0.06725	0.06505	0.06505	0.000	-3.27279	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.20208	0.21351	0.21351	0.000	5.65511	60.00000	Averaged
152 Chlorobenzilate	0.29951	0.30883	0.30883	0.000	3.11302	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.44059	0.46027	0.46027	0.000	4.46551	60.00000	Averaged
155 2-Acetylaminofluorene	0.27578	0.31027	0.31027	0.000	12.50985	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.45468	0.42550	0.42550	0.000	-6.41815	60.00000	Averaged
158 3-Methylcholanthrene	0.40918	0.41886	0.41886	0.000	2.36719	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD5.i/s062509.b/s5f2530.d
Lab Smp Id: WBN090528-08.5 Client Smp ID: AP12ICV
Inj Date : 25-JUN-2009 22:11
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090528-08.5|40 PPM|1|SVM|1|AP12ICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m
Meth Date : 26-Jun-2009 10:43 hnm Quant Type: ISTD
Cal Date : 25-JUN-2009 21:25 Cal File: s5f2528.d
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.031	4.031	(1.000)	513917	40.0000	
* 29 Naphthalene-d8	136	4.901	4.901	(1.000)	1759940	40.0000	
* 46 Acenaphthene-d10	164	6.160	6.160	(1.000)	1124731	40.0000	
* 67 Phenanthrene-d10	188	7.342	7.342	(1.000)	2155121	40.0000	
* 91 Chrysene-d12	240	9.766	9.766	(1.000)	2326057	40.0000	
* 98 Perylene-d12	264	11.524	11.524	(1.000)	2206835	40.0000	
209 Benzaldehyde	77	3.754	3.754	(0.931)	354443	40.0000	34.6
16 Acetophenone	105	4.278	4.278	(1.061)	561903	40.0000	40.3
189 Caprolactam	113	5.172	5.172	(1.055)	151764	40.0000	43.4
208 1,1'-Biphenyl	154	5.719	5.719	(0.928)	1238478	40.0000	42.2
207 Atrazine	173	7.031	7.031	(0.958)	56529	40.0000	34.7
77 Benzidine	184	8.495	8.495	(0.870)	384927	40.0000	39.7
90 3,3'-Dichlorobenzidine	252	9.689	9.689	(0.992)	718760	40.0000	43.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
102 1,4-Dioxane	88	2.337	2.337	(0.580)	194371	40.0000	49.1
103 Methyl methacrylate	100	2.331	2.331	(0.578)	105751	40.0000	53.4
104 Ethyl methacrylate	69	2.713	2.713	(0.673)	446835	40.0000	48.1
105 2-Picoline	93	2.913	2.913	(0.723)	571194	40.0000	40.0
106 N-Nitrosomethylethylamine	88	2.960	2.960	(0.734)	225690	40.0000	42.3
107 Methyl methanesulfonate	80	3.119	3.119	(0.774)	274996	40.0000	44.6
108 N-Nitrosodiethylamine	102	3.354	3.354	(0.832)	217991	40.0000	41.2
109 Ethyl Methanesulfonate	79	3.507	3.507	(0.870)	369616	40.0000	49.8
110 Pentachloroethane	167	3.854	3.854	(0.956)	232206	40.0000	55.1
111 N-Nitrosopyrrolidine	100	4.266	4.266	(1.058)	222292	40.0000	42.0(Q)
113 N-Nitrosomorpholine	56	4.290	4.290	(1.064)	360248	40.0000	42.2
114 o-Toluidine	106	4.307	4.307	(1.069)	751073	40.0000	40.6
115 N-Nitrosopiperidine	114	4.507	4.507	(0.920)	244971	40.0000	41.8
116 a,a-Dimethylphenethylamine	58	4.772	4.772	(0.974)	1553746	40.0000	43.7
118 2,6-Dichlorophenol	162	4.943	4.943	(1.008)	428468	40.0000	42.0
119 Hexachloropropene	213	4.972	4.972	(1.014)	390700	40.0000	64.3
120 p-Phenylenediamine	108	5.178	5.178	(1.056)	335699	40.0000	41.7
121 N-Nitrosodi-n-butylamine	84	5.137	5.137	(1.048)	333995	40.0000	42.2(T)
122 Safrole	162	5.307	5.307	(1.083)	447572	40.0000	47.5
123 1,2,4,5-Tetrachlorobenzene	216	5.513	5.513	(0.895)	623256	40.0000	43.4
124 Isosafrole	162	5.678	5.678	(0.922)	515408	40.0000	55.4
125 1,4-Naphthoquinone	158	5.872	5.872	(0.953)	357026	40.0000	39.6
127 Pentachlorobenzene	250	6.278	6.278	(1.019)	559342	40.0000	41.8
128 1-Naphthylamine	143	6.366	6.366	(1.033)	838296	40.0000	41.9
129 2-Naphthylamine	143	6.425	6.425	(1.043)	648408	40.0000	36.0
131 5-Nitro-o-toluidine	152	6.566	6.566	(1.066)	307889	40.0000	42.8
136 1,3,5-Trinitrobenzene	75	6.819	6.819	(0.929)	289941	40.0000	50.0
137 Phenacetin	108	6.860	6.860	(0.934)	515877	40.0000	43.3(Q)
138 Diallate	86	6.842	6.842	(0.932)	447626	40.0000	40.2
212 Cis Diallate	86	6.925	6.925	(0.943)	73628	6.00000	6.5(a)
213 Trans Diallate	86	6.842	6.842	(0.932)	447626	34.0000	34.2
140 4-Aminobiphenyl	169	7.154	7.154	(0.974)	883396	40.0000	44.4
141 Pentachloronitrobenzene	237	7.178	7.178	(0.978)	201104	40.0000	41.8(Q)
142 Pronamide	173	7.166	7.166	(0.976)	576989	40.0000	41.1
146 4-Nitroquinoline-1-oxide	101	8.013	8.013	(1.091)	26348	40.0000	47.8
147 Methapyrilene	58	8.042	8.042	(1.095)	951461	40.0000	42.3
148 Isodrin	193	8.272	8.272	(1.127)	217072	40.0000	38.6
149 Aramite	185	8.666	8.666	(1.180)	102033	40.0000	37.2
150 Kepone	272	9.260	9.260	(1.261)	140182	40.0000	38.7
151 p-(Dimethylamino)azobenzene	120	8.848	8.848	(0.906)	496641	40.0000	42.3
152 Chlorobenzilate	251	8.878	8.878	(0.909)	718358	40.0000	41.2
153 3,3'-Dimethylbenzidine	212	9.166	9.166	(0.939)	1070613	40.0000	41.8
155 2-Acetylaminofluorene	181	9.413	9.413	(0.964)	721716	40.0000	45.0
157 7,12Dimethylbenz(a)anthracene	256	10.948	10.948	(0.950)	938999	40.0000	37.4
158 3-Methylcholanthrene	268	11.954	11.954	(1.037)	924361	40.0000	40.9(Q)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s062509.b/s5f2530.d
Date : 25-JUN-2009 22:11
Client ID: AP12ICV
Sample Info: IWBN090528-08.5|40 PPM|1|SVM|1|AP12ICV
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

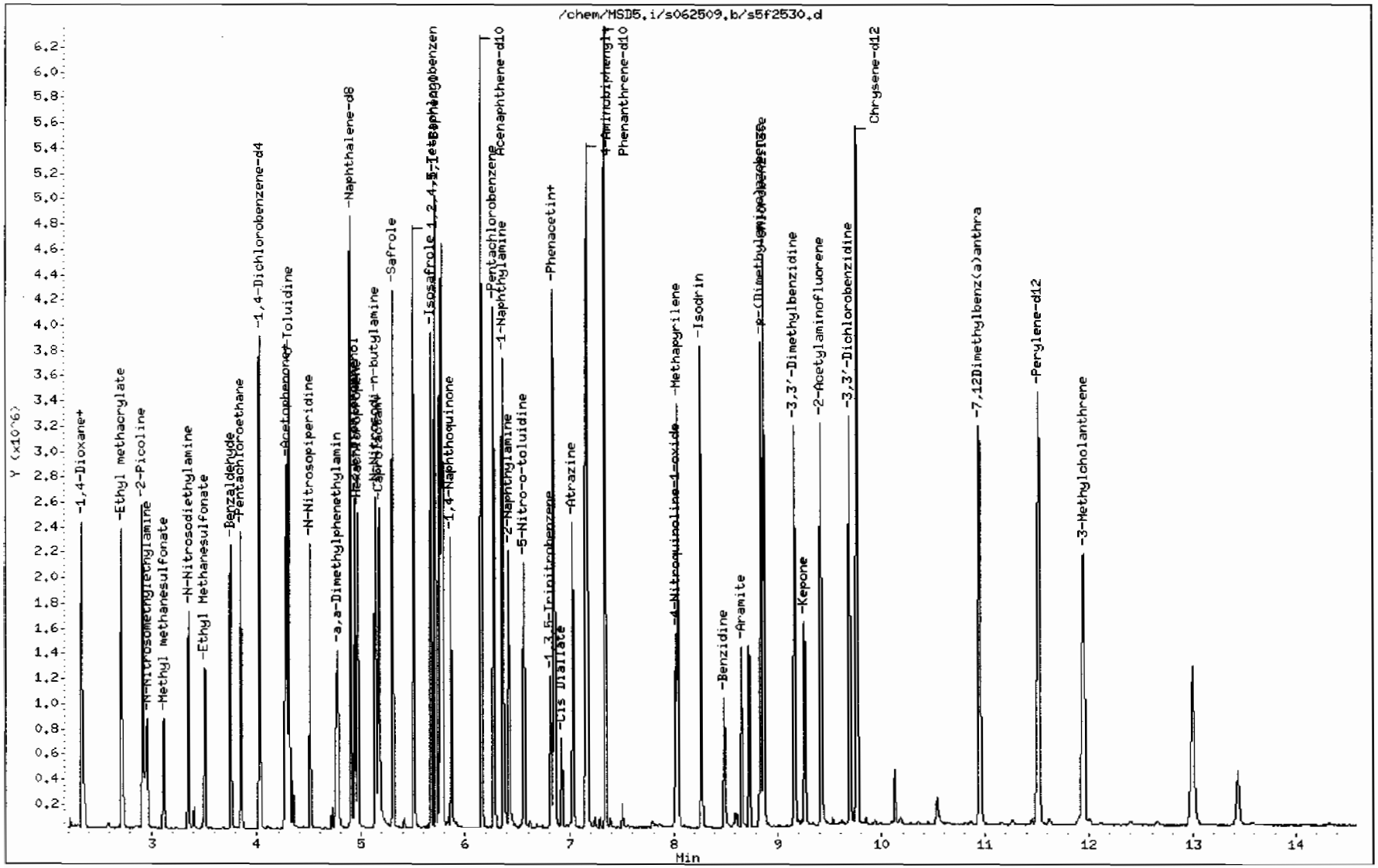

Data File: /chem/MSD5.i/s062509.b/s5f2533.d
Report Date: 26-Jun-2009 09:26

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i
Lab File ID: s5f2533.d
Analysis Type: WATER
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

Injection Date: 26-JUN-2009 09:03
Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Init. Cal. Times: 14:42 21:25

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$	3 2-Fluorophenol	0.87827	0.92425	0.92425	0.000	5.23547	60.00000	Averaged	
$	5 Phenol-d5	1.15801	1.18114	1.18114	0.000	1.99696	60.00000	Averaged	
$	20 Nitrobenzene-d5	0.29640	0.32886	0.32886	0.000	10.95026	60.00000	Averaged	
$	39 2-Fluorobiphenyl	1.03449	1.12238	1.12238	0.000	8.49584	60.00000	Averaged	
$	60 2,4,6-Tribromophenol	0.16321	0.16963	0.16963	0.000	3.93360	60.00000	Averaged	
$	81 p-Terphenyl-d14	0.61216	0.71476	0.71476	0.000	16.76084	60.00000	Averaged	
	1 N-Methyl-N-nitrosomethylami	0.46728	0.54505	0.54505	0.000	16.64238	60.00000	Averaged	
	2 Pyridine	0.69143	0.70995	0.70995	0.000	2.67819	60.00000	Averaged	
	4 Aniline	0.50220	0.53118	0.53118	0.000	5.77120	60.00000	Averaged	
	6 Phenol	1.14936	1.18675	1.18675	0.001	3.25298	20.00000	Averaged	ccc
	7 bis(2-Chloroethyl) ether	0.88583	0.90830	0.90830	0.000	2.53655	60.00000	Averaged	
	8 2-Chlorophenol	0.96070	1.02584	1.02584	0.000	6.78060	60.00000	Averaged	
	203 n-Decane	1.55838	1.69824	1.69824	0.000	8.97494	60.00000	Averaged	
	9 1,3-Dichlorobenzene	1.14971	1.22756	1.22756	0.000	6.77092	60.00000	Averaged	
	11 1,4-Dichlorobenzene	1.14381	1.19501	1.19501	0.001	4.47626	20.00000	Averaged	ccc
	13 1,2-Dichlorobenzene	1.06271	1.08794	1.08794	0.000	2.37401	60.00000	Averaged	
	14 bis(2-Chloroisopropyl)ether	2.06168	2.20216	2.20216	0.000	6.81386	60.00000	Averaged	
	12 Benzyl alcohol	0.60629	0.63280	0.63280	0.000	4.37103	60.00000	Averaged	
	15 o-Cresol	0.71463	0.71377	0.71377	0.000	-0.12043	60.00000	Averaged	
	18 m,p-Cresols	0.95569	0.97996	0.97996	0.000	2.54026	60.00000	Averaged	
	17 N-Nitrosodipropylamine	0.61897	0.66847	0.66847	0.050	7.99822	60.00000	Averaged	spcc
	19 Hexachloroethane	0.42421	0.45290	0.45290	0.000	6.76415	60.00000	Averaged	
	21 Nitrobenzene	0.27643	0.32316	0.32316	0.000	16.90510	60.00000	Averaged	
	22 Isophorone	0.51164	0.58577	0.58577	0.000	14.48914	60.00000	Averaged	
	23 2-Nitrophenol	0.12977	0.13565	0.13565	0.001	4.53272	20.00000	Averaged	ccc
	24 2,4-Dimethylphenol	0.22398	0.23682	0.23682	0.000	5.73150	60.00000	Averaged	
	25 bis(2-Chloroethoxy)methane	0.29234	0.30563	0.30563	0.000	4.54679	60.00000	Averaged	
	26 2,4-Dichlorophenol	0.22262	0.23707	0.23707	0.001	6.49090	20.00000	Averaged	ccc
	27 Benzoic acid	49.71978	40.00000	0.13459	0.000	24.29945	60.00000	Linear	
	28 1,2,4-Trichlorobenzene	0.27693	0.28464	0.28464	0.000	2.78700	60.00000	Averaged	
	30 Naphthalene	0.77927	0.75380	0.75380	0.000	-3.26722	60.00000	Averaged	
	204 alpha-Terpineol	0.25452	0.26630	0.26630	0.000	4.62601	60.00000	Averaged	
	31 4-Chloroaniline	47.43792	40.00000	0.32609	0.000	18.59479	60.00000	Linear	
	32 Hexachlorobutadiene	0.20215	0.20705	0.20705	0.001	2.42592	20.00000	Averaged	ccc
	33 4-Chloro-3-methylphenol	0.21319	0.22983	0.22983	0.001	7.80207	20.00000	Averaged	ccc
	34 2-Methylnaphthalene	0.46942	0.52808	0.52808	0.000	12.49823	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 26-JUN-2009 09:03
Lab File ID: s5f2533.d Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 21:25
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35	1-Methylnaphthalene	0.50729	0.49555	0.49555	0.000	-2.31520	60.00000	Averaged	
36	Hexachlorocyclopentadiene	39.64221	40.00000	0.18009	0.050	-0.89448	60.00000	Linear	spcc
205	2,3-Dichloroaniline	0.44656	0.49099	0.49099	0.000	9.94845	60.00000	Averaged	
37	2,4,6-Trichlorophenol	0.30953	0.32810	0.32810	0.001	6.00118	20.00000	Averaged	ccc
38	2,4,5-Trichlorophenol	0.33218	0.36608	0.36608	0.000	10.20698	60.00000	Averaged	
40	2-Chloronaphthalene	0.85120	0.90066	0.90066	0.000	5.81012	60.00000	Averaged	
42	o-Nitroaniline	0.27065	0.28553	0.28553	0.000	5.49930	60.00000	Averaged	
41	m-Nitroaniline	38.41712	40.00000	0.13119	0.000	-3.95720	60.00000	Linear	
43	Dimethylphthalate	1.01609	1.07110	1.07110	0.000	5.41428	60.00000	Averaged	
44	2,6-Dinitrotoluene	0.24192	0.27930	0.27930	0.000	15.44876	60.00000	Averaged	
50	2,4-Dinitrotoluene	0.31653	0.36215	0.36215	0.000	14.41426	60.00000	Averaged	
45	Acenaphthylene	1.25413	1.36304	1.36304	0.000	8.68388	60.00000	Averaged	
47	Acenaphthene	0.81724	0.84415	0.84415	0.001	3.29259	20.00000	Averaged	ccc
48	2,4-Dinitrophenol	41.95216	40.00000	0.09301	0.050	4.88039	60.00000	Linear	spcc
49	Dibenzofuran	1.15749	1.23802	1.23802	0.000	6.95699	60.00000	Averaged	
51	Diethylphthalate	0.99523	1.06353	1.06353	0.000	6.86293	60.00000	Averaged	
52	4-Nitrophenol	0.14183	0.13849	0.13849	0.050	-2.35609	60.00000	Averaged	spcc
53	Fluorene	0.99470	1.03686	1.03686	0.000	4.23858	60.00000	Averaged	
54	4-Chlorophenylphenylether	0.57998	0.61529	0.61529	0.000	6.08785	60.00000	Averaged	
55	2-Methyl-4,6-dinitrophenol	55.17976	40.00000	0.12176	0.000	37.94939	60.00000	Linear	
56	p-Nitroaniline	0.10468	0.10711	0.10711	0.000	2.32364	60.00000	Averaged	
133	Diphenylamine	0.39819	0.42143	0.42143	0.001	5.83632	20.00000	Averaged	ccc
58	1,2-Diphenylhydrazine	0.50554	0.55423	0.55423	0.000	9.63098	60.00000	Averaged	
61	4-Bromophenylphenylether	0.19119	0.20218	0.20218	0.000	5.74963	60.00000	Averaged	
63	Hexachlorobenzene	0.20135	0.21304	0.21304	0.000	5.80172	60.00000	Averaged	
65	Pentachlorophenol	42.93985	40.00000	0.10471	0.001	7.34962	20.00000	Linear	ccc
206	n-Octadecane	0.43069	0.46656	0.46656	0.000	8.32965	60.00000	Averaged	
68	Phenanthrene	0.74933	0.76655	0.76655	0.000	2.29763	60.00000	Averaged	
69	Anthracene	0.73960	0.78221	0.78221	0.000	5.76128	60.00000	Averaged	
72	Di-n-butylphthalate	0.85193	0.94952	0.94952	0.000	11.45527	60.00000	Averaged	
76	Fluoranthene	0.85361	0.92888	0.92888	0.001	8.81843	20.00000	Averaged	ccc
79	Pyrene	0.87262	0.93192	0.93192	0.000	6.79628	60.00000	Averaged	
85	Butylbenzylphthalate	0.37401	0.41884	0.41884	0.000	11.98745	60.00000	Averaged	
89	Benzo(a)anthracene	0.85828	0.89070	0.89070	0.000	3.77758	60.00000	Averaged	
92	Chrysene	0.78622	0.81917	0.81917	0.000	4.19176	60.00000	Averaged	
93	bis(2-Ethylhexyl)phthalate	0.51325	0.58454	0.58454	0.000	13.89072	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 26-JUN-2009 09:03
Lab File ID: s5f2533.d Init. Cal. Date(s): 25-JUN-2009 25-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 21:25
Lab Sample ID: WBN090602-09.1 Quant Type: ISTD
Method: /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	94 Di-n-octylphthalate	0.91435	1.00400	1.00400	0.001	9.80457	20.00000	Averaged	ccc
	95 Benzo(b)fluoranthene	0.88340	0.92115	0.92115	0.000	4.27302	60.00000	Averaged	
	96 Benzo(k)fluoranthene	0.86774	0.92327	0.92327	0.000	6.39833	60.00000	Averaged	
	97 Benzo(a)pyrene	0.78201	0.83388	0.83388	0.001	6.63286	20.00000	Averaged	ccc
	99 Indeno(1,2,3-cd)pyrene	0.78583	0.79439	0.79439	0.000	1.09020	60.00000	Averaged	
	100 Dibenzo(a,h)anthracene	0.64056	0.66834	0.66834	0.000	4.33609	60.00000	Averaged	
	101 Benzo(ghi)perylene	0.66994	0.67440	0.67440	0.000	0.66555	60.00000	Averaged	
	126 m-Dinitrobenzene	0.16554	0.17075	0.17075	0.000	3.14663	60.00000	Averaged	
	130 2,3,4,6-Tetrachlorophenol	0.30843	0.31127	0.31127	0.000	0.91990	60.00000	Averaged	
	143 Dinoseb	44.22962	40.00000	0.14919	0.000	10.57406	60.00000	Linear	
	173 Carbazole	41.25747	40.00000	0.44073	0.000	3.14368	60.00000	Linear	
	184 p-Benzoquinone	23.92059	40.00000	0.06563	0.000	-40.19852	60.00000	Linear	
	192 Methoxychlor	0.50819	0.59122	0.59122	0.000	16.33706	60.00000	Averaged	
	211 p-Toluidine	43.31403	40.00000	0.70324	0.000	8.28508	60.00000	Linear	
	210 m-Toluidine	41.09601	40.00000	1.07377	0.000	2.74002	60.00000	Linear	
	26 Phthalic anhydride	43.89917	40.00000	0.11898	0.000	9.74792	60.00000	Linear	
	179 Dibenzo(a,e)pyrene	0.39632	0.23471	0.23471	0.000	-40.77708	60.00000	Averaged	
	214 1,4-Dinitrobenzene	0.18147	0.18811	0.18811	0.000	3.65351	60.00000	Averaged	
	215 2-Ethoxyethanol	0.59885	0.70005	0.70005	0.000	16.89800	60.00000	Averaged	
	216 Methylenebis(2-chloroanilin	0.10978	0.11539	0.11539	0.000	5.11341	60.00000	Averaged	
M	225 Trichlorophenols	0.32085	0.34709	0.34709	0.000	8.17820	60.00000	Averaged	
M	226 Tetrachlorophenols	0.30843	0.31127	0.31127	0.000	0.91990	60.00000	Averaged	
M	227 Benzo(b,k)fluoranthene	0.87557	0.92221	0.92221	0.000	5.32615	60.00000	Averaged	

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Data file : /chem/MSD5.i/s062509.b/s5f2533.d
Lab Smp Id: WBN090602-09.1 Client Smp ID: MEGAICV
Inj Date : 26-JUN-2009 09:03
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090602-09.1|40 PPM|1|SVM|1|MEGAICV
Misc Info : |MSD8270|WBN090607-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s062509.b/MSD5-M8270C-062509.m
Meth Date : 26-Jun-2009 09:26 rmb Quant Type: ISTD
Cal Date : 25-JUN-2009 19:55 Cal File: s5f2524.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.032	4.032	(1.000)	451724	40.0000	
* 29 Naphthalene-d8	136	4.903	4.903	(1.000)	1704563	40.0000	
* 46 Acenaphthene-d10	164	6.165	6.165	(1.000)	1006448	40.0000	
* 67 Phenanthrene-d10	188	7.345	7.345	(1.000)	1867078	40.0000	
* 91 Chrysene-d12	240	9.767	9.767	(1.000)	1916495	40.0000	
* 98 Perylene-d12	264	11.529	11.529	(1.000)	1772024	40.0000	
$ 3 2-Fluorophenol	112	3.208	3.208	(0.796)	417507	40.0000	42.1
$ 5 Phenol-d5	99	3.743	3.743	(0.928)	533549	40.0000	40.8
$ 20 Nitrobenzene-d5	82	4.398	4.398	(0.897)	560561	40.0000	44.4
$ 39 2-Fluorobiphenyl	172	5.645	5.645	(0.916)	1129616	40.0000	43.4
$ 60 2,4,6-Tribromophenol	329	6.767	6.767	(1.098)	170721	40.0000	41.6
$ 81 p-Terphenyl-d14	244	8.727	8.727	(0.894)	1369835	40.0000	46.7
1 N-Methyl-N-nitrosomethylamine	74	2.505	2.505	(0.621)	246213	40.0000	46.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
2 Pyridine	79	2.539	2.539	(0.630)	320702	40.0000	41.1
4 Aniline	66	3.815	3.815	(0.946)	239947	40.0000	42.3
6 Phenol	94	3.752	3.752	(0.931)	536083	40.0000	41.3(Q)
7 bis(2-Chloroethyl) ether	63	3.829	3.829	(0.950)	410301	40.0000	41.0
8 2-Chlorophenol	128	3.897	3.897	(0.967)	463398	40.0000	42.7
203 n-Decane	43	3.878	3.878	(0.962)	767136	40.0000	43.6
9 1,3-Dichlorobenzene	146	3.998	3.998	(0.992)	554517	40.0000	42.7
11 1,4-Dichlorobenzene	146	4.046	4.046	(1.004)	539813	40.0000	41.8
13 1,2-Dichlorobenzene	146	4.147	4.147	(1.029)	491448	40.0000	40.9
14 bis(2-Chloroisopropyl)ether	45	4.176	4.176	(1.036)	994767	40.0000	42.7
12 Benzyl alcohol	108	4.099	4.099	(1.017)	285849	40.0000	41.7
15 o-Cresol	107	4.147	4.147	(1.029)	322429	40.0000	40.0
18 m,p-Cresols	107	4.248	4.248	(1.054)	442673	40.0000	41.0
17 N-Nitrosodipropylamine	70	4.268	4.268	(1.059)	301966	40.0000	43.2
19 Hexachloroethane	117	4.378	4.378	(1.086)	204587	40.0000	42.7
21 Nitrobenzene	77	4.412	4.412	(0.900)	550854	40.0000	46.8
22 Isophorone	82	4.561	4.561	(0.930)	998489	40.0000	45.8
23 2-Nitrophenol	139	4.624	4.624	(0.943)	231229	40.0000	41.8
24 2,4-Dimethylphenol	122	4.614	4.614	(0.941)	403677	40.0000	42.3
25 bis(2-Chloroethoxy)methane	93	4.682	4.682	(0.955)	520973	40.0000	41.8
26 2,4-Dichlorophenol	162	4.788	4.788	(0.976)	404106	40.0000	42.6
27 Benzoic acid	105	4.677	4.677	(0.954)	229416	40.0000	49.7
28 1,2,4-Trichlorobenzene	180	4.850	4.850	(0.989)	485193	40.0000	41.1
30 Naphthalene	128	4.918	4.918	(1.003)	1284908	40.0000	38.7(Q)
204 alpha-Terpineol	59	4.889	4.889	(0.997)	453924	40.0000	41.8
31 4-Chloroaniline	127	4.932	4.932	(1.006)	555837	40.0000	47.4
32 Hexachlorobutadiene	225	4.980	4.980	(1.016)	352928	40.0000	41.0
33 4-Chloro-3-methylphenol	107	5.245	5.245	(1.070)	391753	40.0000	43.1
34 2-Methylnaphthalene	142	5.399	5.399	(1.101)	900153	40.0000	45.0
35 1-Methylnaphthalene	142	5.471	5.471	(1.116)	844693	40.0000	39.1
36 Hexachlorocyclopentadiene	237	5.505	5.505	(0.893)	181254	40.0000	39.6
205 2,3-Dichloroaniline	161	5.597	5.597	(0.908)	494154	40.0000	44.0
37 2,4,6-Trichlorophenol	196	5.587	5.587	(0.906)	330218	40.0000	42.4
38 2,4,5-Trichlorophenol	196	5.616	5.616	(0.911)	368445	40.0000	44.1
40 2-Chloronaphthalene	162	5.755	5.755	(0.934)	906463	40.0000	42.3
42 o-Nitroaniline	65	5.808	5.808	(0.942)	287375	40.0000	42.2
41 m-Nitroaniline	138	6.112	6.112	(0.991)	132031	40.0000	38.4
43 Dimethylphthalate	163	5.919	5.919	(0.960)	1078006	40.0000	42.2
44 2,6-Dinitrotoluene	165	5.977	5.977	(0.970)	281098	40.0000	46.2
50 2,4-Dinitrotoluene	165	6.276	6.276	(1.018)	364487	40.0000	45.8
45 Acenaphthylene	152	6.064	6.064	(0.984)	1371830	40.0000	43.5
47 Acenaphthene	154	6.189	6.189	(1.004)	849596	40.0000	41.3
48 2,4-Dinitrophenol	184	6.184	6.184	(1.003)	93607	40.0000	42.0
49 Dibenzofuran	168	6.314	6.314	(1.024)	1246000	40.0000	42.8
51 Diethylphthalate	149	6.430	6.430	(1.043)	1070389	40.0000	42.7
52 4-Nitrophenol	139	6.203	6.203	(1.006)	139386	40.0000	39.0
53 Fluorene	166	6.579	6.579	(1.067)	1043548	40.0000	41.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
54 4-Chlorophenylphenylether	204	6.550	6.550	(1.062)	619261	40.0000	42.4
55 2-Methyl-4,6-dinitrophenol	198	6.593	6.593	(0.898)	227338	40.0000	55.2
56 p-Nitroaniline	138	6.574	6.574	(1.066)	107798	40.0000	40.9
133 Diphenylamine	169	6.641	6.641	(0.904)	786838	40.0000	42.3
58 1,2-Diphenylhydrazine	77	6.675	6.675	(0.909)	1034789	40.0000	43.8
61 4-Bromophenylphenylether	248	6.945	6.945	(0.946)	377491	40.0000	42.3
63 Hexachlorobenzene	284	7.017	7.017	(0.955)	397753	40.0000	42.3
65 Pentachlorophenol	266	7.166	7.166	(0.976)	195510	40.0000	42.9
206 n-Octadecane	57	7.147	7.147	(0.973)	871112	40.0000	43.3
68 Phenanthrene	178	7.364	7.364	(1.003)	1431207	40.0000	40.9
69 Anthracene	178	7.407	7.407	(1.009)	1460442	40.0000	42.3
72 Di-n-butylphthalate	149	7.759	7.759	(1.056)	1772829	40.0000	44.6
76 Fluoranthene	202	8.414	8.414	(1.146)	1734295	40.0000	43.5
79 Pyrene	202	8.630	8.630	(0.884)	1786021	40.0000	42.7
85 Butylbenzylphthalate	149	9.150	9.150	(0.937)	802710	40.0000	44.8
89 Benzo(a)anthracene	228	9.752	9.752	(0.999)	1707017	40.0000	41.5
92 Chrysene	228	9.796	9.796	(1.003)	1569944	40.0000	41.7
93 bis(2-Ethylhexyl)phthalate	149	9.675	9.675	(0.991)	1120270	40.0000	45.6
94 Di-n-octylphthalate	149	10.354	10.354	(0.898)	1779108	40.0000	43.9
95 Benzo(b)fluoranthene	252	10.985	10.985	(0.953)	1632300	40.0000	41.7
96 Benzo(k)fluoranthene	252	11.019	11.019	(0.956)	1636049	40.0000	42.6
97 Benzo(a)pyrene	252	11.447	11.447	(0.993)	1477653	40.0000	42.6
99 Indeno(1,2,3-cd)pyrene	276	13.402	13.402	(1.162)	1407684	40.0000	40.4
100 Dibenzo(a,h)anthracene	278	13.412	13.412	(1.163)	1184313	40.0000	41.7
101 Benzo(ghi)perylene	276	13.975	13.975	(1.212)	1195053	40.0000	40.3
126 m-Dinitrobenzene	168	5.963	5.963	(0.967)	171847	40.0000	41.2
130 2,3,4,6-Tetrachlorophenol	232	6.396	6.396	(1.037)	313275	40.0000	40.4
143 Dinoseb	211	7.287	7.287	(0.992)	278552	40.0000	44.2
173 Carbazole	167	7.523	7.523	(1.024)	822880	40.0000	41.2
184 p-Benzoquinone	54	3.516	3.516	(0.872)	29647	40.0000	23.9
192 Methoxychlor	227	9.627	9.627	(0.986)	1133064	40.0000	46.5
211 p-Toluidine	106	4.306	4.306	(1.068)	317671	40.0000	43.3
210 m-Toluidine	106	4.330	4.330	(1.074)	485048	40.0000	41.1
26 Phthalic anhydride	104	5.433	5.433	(1.108)	202802	40.0000	43.9
179 Dibenzo(a,e)pyrene	302	18.343	18.343	(1.591)	415918	40.0000	23.7
214 1,4-Dinitrobenzene	75	5.900	5.900	(0.957)	189318	40.0000	41.5
215 2-Ethoxyethanol	59	2.341	2.341	(0.581)	316229	40.0000	46.8
216 Methylenebis(2-chloroaniline)	231	9.690	9.690	(0.992)	221148	40.0000	42.0(Q)
M 225 Trichlorophenols	196				698663	80.0000	86.5
M 226 Tetrachlorophenols	232				313275	40.0000	40.4
M 227 Benzo(b,k)fluoranthene	252				3268349	80.0000	84.3

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s062509.b/s5f2533.d
Date : 26-JUN-2009 09:03
Client ID: MEGAICV
Sample Info: IWBN090602-09,1:40 PPM11ISVM11MEGAICV
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RHB
Column diameter: 0.20

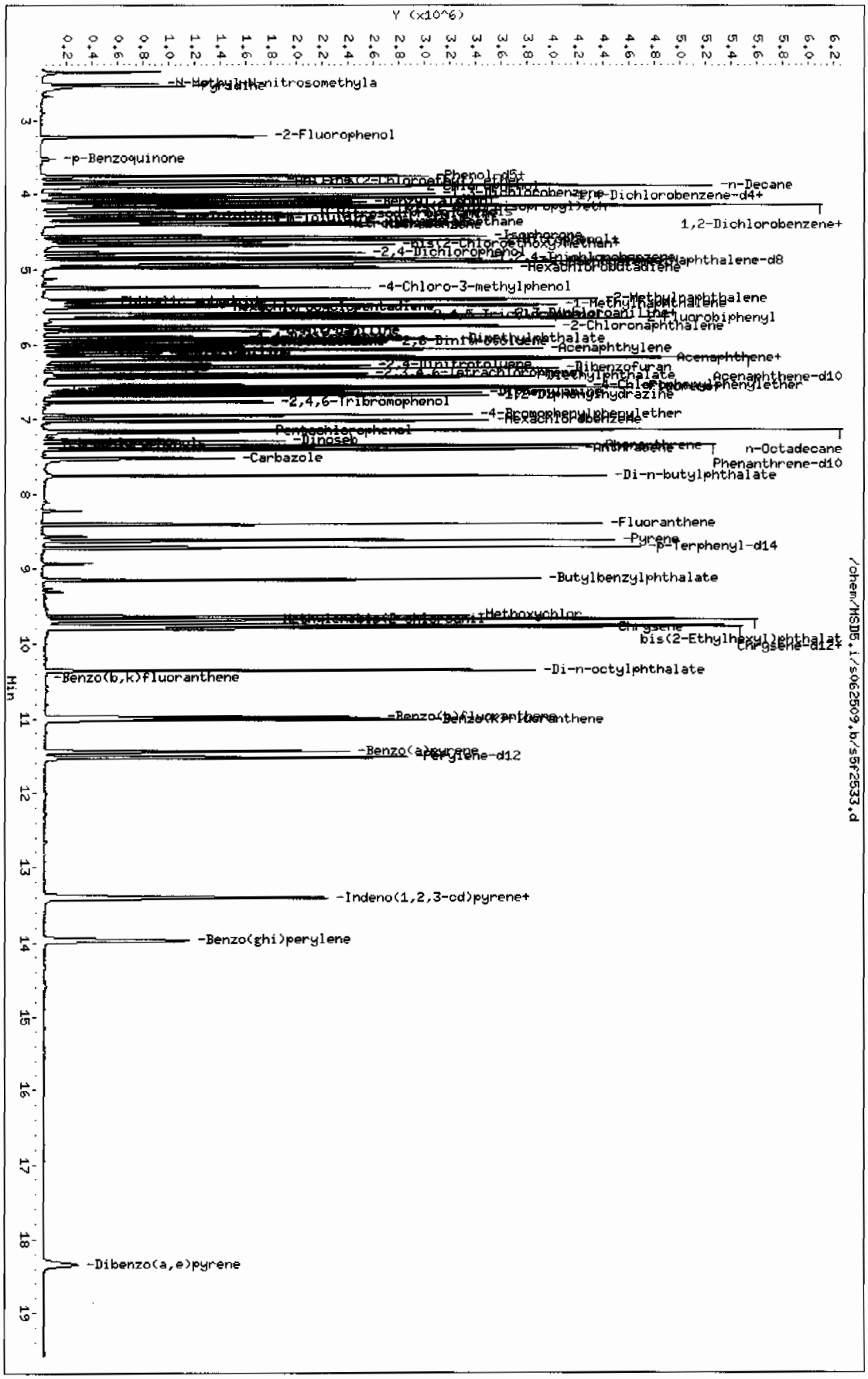

Page 1

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 07-JUL-2009 07:25
Lab File ID: s5g0702.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090617-02.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 3 2-Fluorophenol	0.87827	0.88158	0.88158	0.000	0.37688	60.00000	Averaged	
$ 5 Phenol-d5	1.15801	1.14342	1.14342	0.000	-1.26067	60.00000	Averaged	
$ 20 Nitrobenzene-d5	0.29640	0.28570	0.28570	0.000	-3.61068	60.00000	Averaged	
$ 39 2-Fluorobiphenyl	1.03449	1.09948	1.09948	0.000	6.28228	60.00000	Averaged	
$ 60 2,4,6-Tribromophenol	0.16321	0.17300	0.17300	0.000	5.99738	60.00000	Averaged	
$ 81 p-Terphenyl-d14	0.61216	0.66589	0.66589	0.000	8.77798	60.00000	Averaged	
1 N-Methyl-N-nitrosomethylami	0.46728	0.46480	0.46480	0.000	-0.53108	60.00000	Averaged	
2 Pyridine	0.69143	0.57887	0.57887	0.000	-16.27956	60.00000	Averaged	
4 Aniline	0.50220	0.49210	0.49210	0.000	-2.01027	60.00000	Averaged	
6 Phenol	1.14936	1.13030	1.13030	0.001	-1.65807	20.00000	Averaged	ccc
7 bis(2-Chloroethyl) ether	0.88583	0.87356	0.87356	0.000	-1.38555	60.00000	Averaged	
8 2-Chlorophenol	0.96070	0.97423	0.97423	0.000	1.40859	60.00000	Averaged	
203 n-Decane	1.55838	1.64075	1.64075	0.000	5.28569	60.00000	Averaged	
9 1,3-Dichlorobenzene	1.14971	1.18576	1.18576	0.000	3.13569	60.00000	Averaged	
11 1,4-Dichlorobenzene	1.14381	1.16873	1.16873	0.001	2.17931	20.00000	Averaged	ccc
13 1,2-Dichlorobenzene	1.06271	1.11573	1.11573	0.000	4.98917	60.00000	Averaged	
14 bis(2-Chloroisopropyl)ether	2.06168	2.09684	2.09684	0.000	1.70535	60.00000	Averaged	
12 Benzyl alcohol	0.60629	0.59144	0.59144	0.000	-2.44932	60.00000	Averaged	
15 o-Cresol	0.71463	0.70373	0.70373	0.000	-1.52525	60.00000	Averaged	
18 m,p-Cresols	0.95569	0.93288	0.93288	0.000	-2.38677	60.00000	Averaged	
17 N-Nitrosodipropylamine	0.61897	0.65100	0.65100	0.050	5.17456	60.00000	Averaged	spcc
19 Hexachloroethane	0.42421	0.44006	0.44006	0.000	3.73764	60.00000	Averaged	
21 Nitrobenzene	0.27643	0.27481	0.27481	0.000	-0.58639	60.00000	Averaged	
22 Isophorone	0.51164	0.52327	0.52327	0.000	2.27369	60.00000	Averaged	
23 2-Nitrophenol	0.12977	0.13161	0.13161	0.001	1.41666	20.00000	Averaged	ccc
24 2,4-Dimethylphenol	0.22398	0.23027	0.23027	0.000	2.80793	60.00000	Averaged	
25 bis(2-Chloroethoxy)methane	0.29234	0.28952	0.28952	0.000	-0.96575	60.00000	Averaged	
26 2,4-Dichlorophenol	0.22262	0.23063	0.23063	0.001	3.59552	20.00000	Averaged	ccc
27 Benzoic acid	46.59661	40.00000	0.12337	0.000	16.49151	60.00000	Linear	
28 1,2,4-Trichlorobenzene	0.27693	0.28915	0.28915	0.000	4.41317	60.00000	Averaged	
30 Naphthalene	0.77927	0.73291	0.73291	0.000	-5.94853	60.00000	Averaged	
204 alpha-Terpineol	0.25452	0.26950	0.26950	0.000	5.88179	60.00000	Averaged	
31 4-Chloroaniline	25.53918	40.00000	0.14767	0.000	-36.15205	60.00000	Linear	
32 Hexachlorobutadiene	0.20215	0.21693	0.21693	0.001	7.31478	20.00000	Averaged	ccc
33 4-Chloro-3-methylphenol	0.21319	0.22504	0.22504	0.001	5.55688	20.00000	Averaged	ccc
34 2-Methylnaphthalene	0.46942	0.47745	0.47745	0.000	1.71109	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 07-JUL-2009 07:25
Lab File ID: s5g0702.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090617-02.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35	1-Methylnaphthalene	0.50729	0.50010	0.50010	0.000	-1.41856	60.00000	Averaged	
36	Hexachlorocyclopentadiene	41.18652	40.00000	0.18762	0.050	2.96630	60.00000	Linear	spcc
205	2,3-Dichloroaniline	0.44656	0.46730	0.46730	0.000	4.64296	60.00000	Averaged	
37	2,4,6-Trichlorophenol	0.30953	0.34408	0.34408	0.001	11.16199	20.00000	Averaged	ccc
38	2,4,5-Trichlorophenol	0.33218	0.35333	0.35333	0.000	6.36696	60.00000	Averaged	
40	2-Chloronaphthalene	0.85120	0.88745	0.88745	0.000	4.25854	60.00000	Averaged	
42	o-Nitroaniline	0.27065	0.27326	0.27326	0.000	0.96496	60.00000	Averaged	
41	m-Nitroaniline	22.12452	40.00000	0.05042	0.000	-44.68869	60.00000	Linear	
43	Dimethylphthalate	1.01609	1.06421	1.06421	0.000	4.73590	60.00000	Averaged	
44	2,6-Dinitrotoluene	0.24192	0.24648	0.24648	0.000	1.88303	60.00000	Averaged	
50	2,4-Dinitrotoluene	0.31653	0.31903	0.31903	0.000	0.79164	60.00000	Averaged	
45	Acenaphthylene	1.25413	1.34370	1.34370	0.000	7.14195	60.00000	Averaged	
47	Acenaphthene	0.81724	0.85043	0.85043	0.001	4.06080	20.00000	Averaged	ccc
48	2,4-Dinitrophenol	43.97556	40.00000	0.09943	0.050	9.93891	60.00000	Linear	spcc
49	Dibenzofuran	1.15749	1.20416	1.20416	0.000	4.03222	60.00000	Averaged	
51	Diethylphthalate	0.99523	1.04961	1.04961	0.000	5.46419	60.00000	Averaged	
52	4-Nitrophenol	0.14183	0.14586	0.14586	0.050	2.83937	60.00000	Averaged	spcc
53	Fluorene	0.99470	1.02395	1.02395	0.000	2.94055	60.00000	Averaged	
54	4-Chlorophenylphenylether	0.57998	0.58722	0.58722	0.000	1.24725	60.00000	Averaged	
55	2-Methyl-4,6-dinitrophenol	41.64473	40.00000	0.08792	0.000	4.11182	60.00000	Linear	
56	p-Nitroaniline	0.10468	0.10067	0.10067	0.000	-3.82425	60.00000	Averaged	
133	Diphenylamine	0.39819	0.39999	0.39999	0.001	0.45179	20.00000	Averaged	ccc
58	1,2-Diphenylhydrazine	0.50554	0.51876	0.51876	0.000	2.61511	60.00000	Averaged	
61	4-Bromophenylphenylether	0.19119	0.19637	0.19637	0.000	2.71146	60.00000	Averaged	
63	Hexachlorobenzene	0.20135	0.20988	0.20988	0.000	4.23556	60.00000	Averaged	
65	Pentachlorophenol	44.51998	40.00000	0.10912	0.001	11.29994	20.00000	Linear	ccc
206	n-Octadecane	0.43069	0.44923	0.44923	0.000	4.30395	60.00000	Averaged	
68	Phenanthrene	0.74933	0.78293	0.78293	0.000	4.48425	60.00000	Averaged	
69	Anthracene	0.73960	0.78135	0.78135	0.000	5.64490	60.00000	Averaged	
72	Di-n-butylphthalate	0.85193	0.93100	0.93100	0.000	9.28165	60.00000	Averaged	
76	Fluoranthene	0.85361	0.89235	0.89235	0.001	4.53857	20.00000	Averaged	ccc
79	Pyrene	0.87262	0.96080	0.96080	0.000	10.10554	60.00000	Averaged	
85	Butylbenzylphthalate	0.37401	0.40133	0.40133	0.000	7.30402	60.00000	Averaged	
89	Benzo(a)anthracene	0.85828	0.88162	0.88162	0.000	2.71978	60.00000	Averaged	
92	Chrysene	0.78622	0.80883	0.80883	0.000	2.87639	60.00000	Averaged	
93	bis(2-Ethylhexyl)phthalate	0.51325	0.56889	0.56889	0.000	10.84217	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 07-JUL-2009 07:25
Lab File ID: s5g0702.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090617-02.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
94	Di-n-octylphthalate	0.91435	1.01946	1.01946	0.001	11.49547	20.00000	Averaged	ccc
95	Benzo(b)fluoranthene	0.88340	0.94418	0.94418	0.000	6.88046	60.00000	Averaged	
96	Benzo(k)fluoranthene	0.86774	0.89077	0.89077	0.000	2.65401	60.00000	Averaged	
97	Benzo(a)pyrene	0.78201	0.83730	0.83730	0.001	7.06988	20.00000	Averaged	ccc
99	Indeno(1,2,3-cd)pyrene	0.78583	0.86969	0.86969	0.000	10.67207	60.00000	Averaged	
100	Dibenzo(a,h)anthracene	0.64056	0.71532	0.71532	0.000	11.67025	60.00000	Averaged	
101	Benzo(ghi)perylene	0.66994	0.72441	0.72441	0.000	8.13032	60.00000	Averaged	
126	m-Dinitrobenzene	0.16554	0.16154	0.16154	0.000	-2.41463	60.00000	Averaged	
130	2,3,4,6-Tetrachlorophenol	0.30843	0.33536	0.33536	0.000	8.73203	60.00000	Averaged	
143	Dinoseb	42.81665	40.00000	0.14354	0.000	7.04162	60.00000	Linear	
173	Carbazole	30.88098	40.00000	0.31261	0.000	-22.79756	60.00000	Linear	
184	p-Benzoquinone	15.43196	40.00000	0.02954	0.000	-61.42010	60.00000	Linear	<-
192	Methoxychlor	0.50819	0.59529	0.59529	0.000	17.13785	60.00000	Averaged	
211	p-Toluidine	34.95845	40.00000	0.54683	0.000	-12.60388	60.00000	Linear	
210	m-Toluidine	35.58430	40.00000	0.88971	0.000	-11.03926	60.00000	Linear	
26	Phthalic anhydride	25.51155	40.00000	0.06076	0.000	-36.22114	60.00000	Linear	
179	Dibenzo(a,e)pyrene	0.39632	0.47583	0.47583	0.000	20.06207	60.00000	Averaged	
214	1,4-Dinitrobenzene	0.18147	0.18879	0.18879	0.000	4.02934	60.00000	Averaged	
215	2-Ethoxyethanol	0.59885	0.59356	0.59356	0.000	-0.88467	60.00000	Averaged	
216	Methylenebis(2-chloroaniline	0.10978	0.10185	0.10185	0.000	-7.22098	60.00000	Averaged	
M 225	Trichlorophenols	0.32085	0.34870	0.34870	0.000	8.67973	60.00000	Averaged	
M 226	Tetrachlorophenols	0.30843	0.33536	0.33536	0.000	8.73203	60.00000	Averaged	
M 227	Benzo(b,k)fluoranthene	0.87557	0.91748	0.91748	0.000	4.78611	60.00000	Averaged	

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Data file : /chem/MSD5.i/s070709.b/s5g0702.d
Lab Smp Id: WBN090617-02.4 Client Smp ID: MEGACVS
Inj Date : 07-JUL-2009 07:25
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090617-02.4|40 PPM|1|SVM|1|MEGACVS
Misc Info : |MSD8270|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAIICARE.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.003	4.003	(1.000)	373014	40.0000	
* 29 Naphthalene-d8	136	4.874	4.874	(1.000)	1411459	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	827906	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1543223	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1495571	40.0000	
* 98 Perylene-d12	264	11.462	11.462	(1.000)	1337006	40.0000	
$ 3 2-Fluorophenol	112	3.184	3.184	(0.795)	328842	40.0000	40.2
$ 5 Phenol-d5	99	3.714	3.714	(0.928)	426510	40.0000	39.5
$ 20 Nitrobenzene-d5	82	4.369	4.369	(0.896)	403254	40.0000	38.6
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	910266	40.0000	42.5
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	143224	40.0000	42.4
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.894)	995890	40.0000	43.5
1 N-Methyl-N-nitrosomethylamine	74	2.476	2.476	(0.619)	173378	40.0000	39.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
2 Pyridine	79	2.510	2.510	(0.627)	215927	40.0000	33.5
4 Aniline	66	3.786	3.786	(0.946)	183561	40.0000	39.2
6 Phenol	94	3.723	3.723	(0.930)	421619	40.0000	39.3(Q)
7 bis(2-Chloroethyl) ether	63	3.800	3.800	(0.949)	325849	40.0000	39.4
8 2-Chlorophenol	128	3.868	3.868	(0.966)	363403	40.0000	40.6
203 n-Decane	43	3.849	3.849	(0.962)	612022	40.0000	42.1
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.992)	442306	40.0000	41.2
11 1,4-Dichlorobenzene	146	4.012	4.012	(1.002)	435954	40.0000	40.9
13 1,2-Dichlorobenzene	146	4.118	4.118	(1.029)	416183	40.0000	42.0
14 bis(2-Chloroisopropyl)ether	45	4.147	4.147	(1.036)	782149	40.0000	40.7
12 Benzyl alcohol	108	4.070	4.070	(1.017)	220617	40.0000	39.0
15 o-Cresol	107	4.118	4.118	(1.029)	262503	40.0000	39.4
18 m,p-Cresols	107	4.219	4.219	(1.054)	347976	40.0000	39.0
17 N-Nitrosodipropylamine	70	4.239	4.239	(1.059)	242831	40.0000	42.1
19 Hexachloroethane	117	4.349	4.349	(1.087)	164150	40.0000	41.5
21 Nitrobenzene	77	4.378	4.378	(0.898)	387886	40.0000	39.8
22 Isophorone	82	4.532	4.532	(0.930)	738581	40.0000	40.9
23 2-Nitrophenol	139	4.595	4.595	(0.943)	185761	40.0000	40.6
24 2,4-Dimethylphenol	122	4.585	4.585	(0.941)	325021	40.0000	41.1
25 bis(2-Chloroethoxy)methane	93	4.653	4.653	(0.955)	408644	40.0000	39.6
26 2,4-Dichlorophenol	162	4.759	4.759	(0.976)	325521	40.0000	41.4
27 Benzoic acid	105	4.638	4.638	(0.952)	174129	40.0000	46.6
28 1,2,4-Trichlorobenzene	180	4.821	4.821	(0.989)	408119	40.0000	41.8
30 Naphthalene	128	4.889	4.889	(1.003)	1034473	40.0000	37.6
204 alpha-Terpineol	59	4.860	4.860	(0.997)	380382	40.0000	42.4
31 4-Chloroaniline	127	4.903	4.903	(1.006)	208434	40.0000	25.5
32 Hexachlorobutadiene	225	4.951	4.951	(1.016)	306190	40.0000	42.9
33 4-Chloro-3-methylphenol	107	5.216	5.216	(1.070)	317634	40.0000	42.2
34 2-Methylnaphthalene	142	5.370	5.370	(1.102)	673898	40.0000	40.7
35 1-Methylnaphthalene	142	5.442	5.442	(1.117)	705866	40.0000	39.4
36 Hexachlorocyclopentadiene	237	5.471	5.471	(0.892)	155334	40.0000	41.2
205 2,3-Dichloroaniline	161	5.568	5.568	(0.908)	386877	40.0000	41.8
37 2,4,6-Trichlorophenol	196	5.558	5.558	(0.907)	284863	40.0000	44.5
38 2,4,5-Trichlorophenol	196	5.587	5.587	(0.911)	292523	40.0000	42.5
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	734724	40.0000	41.7
42 o-Nitroaniline	65	5.780	5.780	(0.943)	226235	40.0000	40.4
41 m-Nitroaniline	138	6.078	6.078	(0.991)	41743	40.0000	22.1
43 Dimethylphthalate	163	5.885	5.885	(0.960)	881063	40.0000	41.9
44 2,6-Dinitrotoluene	165	5.943	5.943	(0.969)	204061	40.0000	40.8
50 2,4-Dinitrotoluene	165	6.247	6.247	(1.019)	264129	40.0000	40.3
45 Acenaphthylene	152	6.030	6.030	(0.984)	1112460	40.0000	42.8
47 Acenaphthene	154	6.155	6.155	(1.004)	704077	40.0000	41.6
48 2,4-Dinitrophenol	184	6.155	6.155	(1.004)	82318	40.0000	44.0
49 Dibenzofuran	168	6.280	6.280	(1.024)	996934	40.0000	41.6
51 Diethylphthalate	149	6.396	6.396	(1.043)	868979	40.0000	42.2
52 4-Nitrophenol	139	6.174	6.174	(1.007)	120760	40.0000	41.1
53 Fluorene	166	6.545	6.545	(1.068)	847735	40.0000	41.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
54 4-Chlorophenylphenylether	204	6.516	6.516	(1.063)	486162	40.0000	40.5
55 2-Methyl-4,6-dinitrophenol	198	6.560	6.560	(0.898)	135673	40.0000	41.6
56 p-Nitroaniline	138	6.545	6.545	(1.068)	83347	40.0000	38.5
133 Diphenylamine	169	6.603	6.603	(0.904)	617269	40.0000	40.2
58 1,2-Diphenylhydrazine	77	6.641	6.641	(0.909)	800564	40.0000	41.0
61 4-Bromophenylphenylether	248	6.906	6.906	(0.945)	303049	40.0000	41.1
63 Hexachlorobenzene	284	6.983	6.983	(0.956)	323894	40.0000	41.7
65 Pentachlorophenol	266	7.133	7.133	(0.976)	168398	40.0000	44.5
206 n-Octadecane	57	7.109	7.109	(0.973)	693256	40.0000	41.7
68 Phenanthrene	178	7.330	7.330	(1.003)	1208242	40.0000	41.8
69 Anthracene	178	7.373	7.373	(1.009)	1205792	40.0000	42.2
72 Di-n-butylphthalate	149	7.720	7.720	(1.057)	1436745	40.0000	43.7
76 Fluoranthene	202	8.375	8.375	(1.146)	1377093	40.0000	41.8
79 Pyrene	202	8.592	8.592	(0.884)	1436941	40.0000	44.0
85 Butylbenzylphthalate	149	9.112	9.112	(0.937)	600212	40.0000	42.9
89 Benzo(a)anthracene	228	9.714	9.714	(0.999)	1318523	40.0000	41.1
92 Chrysene	228	9.752	9.752	(1.003)	1209667	40.0000	41.2
93 bis(2-Ethylhexyl)phthalate	149	9.632	9.632	(0.991)	850822	40.0000	44.3
94 Di-n-octylphthalate	149	10.301	10.301	(0.899)	1363022	40.0000	44.6
95 Benzo(b)fluoranthene	252	10.922	10.922	(0.953)	1262380	40.0000	42.8
96 Benzo(k)fluoranthene	252	10.956	10.956	(0.956)	1190971	40.0000	41.1
97 Benzo(a)pyrene	252	11.380	11.380	(0.993)	1119470	40.0000	42.8
99 Indeno(1,2,3-cd)pyrene	276	13.306	13.306	(1.161)	1162781	40.0000	44.3
100 Dibenzo(a,h)anthracene	278	13.316	13.316	(1.162)	956386	40.0000	44.7
101 Benzo(ghi)perylene	276	13.869	13.869	(1.210)	968540	40.0000	43.2
126 m-Dinitrobenzene	168	5.929	5.929	(0.967)	133740	40.0000	39.0
130 2,3,4,6-Tetrachlorophenol	232	6.362	6.362	(1.038)	277649	40.0000	43.5
143 Dinoseb	211	7.248	7.248	(0.992)	221518	40.0000	42.8
173 Carbazole	167	7.489	7.489	(1.025)	482432	40.0000	30.9
184 p-Benzoquinone	54	3.487	3.487	(0.871)	11020	40.0000	15.4
192 Methoxychlor	227	9.584	9.584	(0.986)	890293	40.0000	46.8
211 p-Toluidine	106	4.277	4.277	(1.069)	203976	40.0000	35.0
210 m-Toluidine	106	4.301	4.301	(1.075)	331874	40.0000	35.6
26 Phthalic anhydride	104	5.399	5.399	(1.108)	85759	40.0000	25.5
179 Dibenzo(a,e)pyrene	302	18.184	18.184	(1.586)	636191	40.0000	48.0
214 1,4-Dinitrobenzene	75	5.871	5.871	(0.958)	156298	40.0000	41.6
215 2-Ethoxyethanol	59	2.313	2.313	(0.578)	221405	40.0000	39.6
216 Methylenebis(2-chloroaniline)	231	9.646	9.646	(0.992)	152326	40.0000	37.1(Q)
M 225 Trichlorophenols	196				577386	80.0000	86.9
M 226 Tetrachlorophenols	232				277649	40.0000	43.5
M 227 Benzo(b,k)fluoranthene	252				2453351	80.0000	83.8

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070709.b/s5g0702.d
Date : 07-JUL-2009 07:25
Client ID: MEGACVS
Sample Info: IWBN090617-02,4140 PPM1|SVM1|MEGACVS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

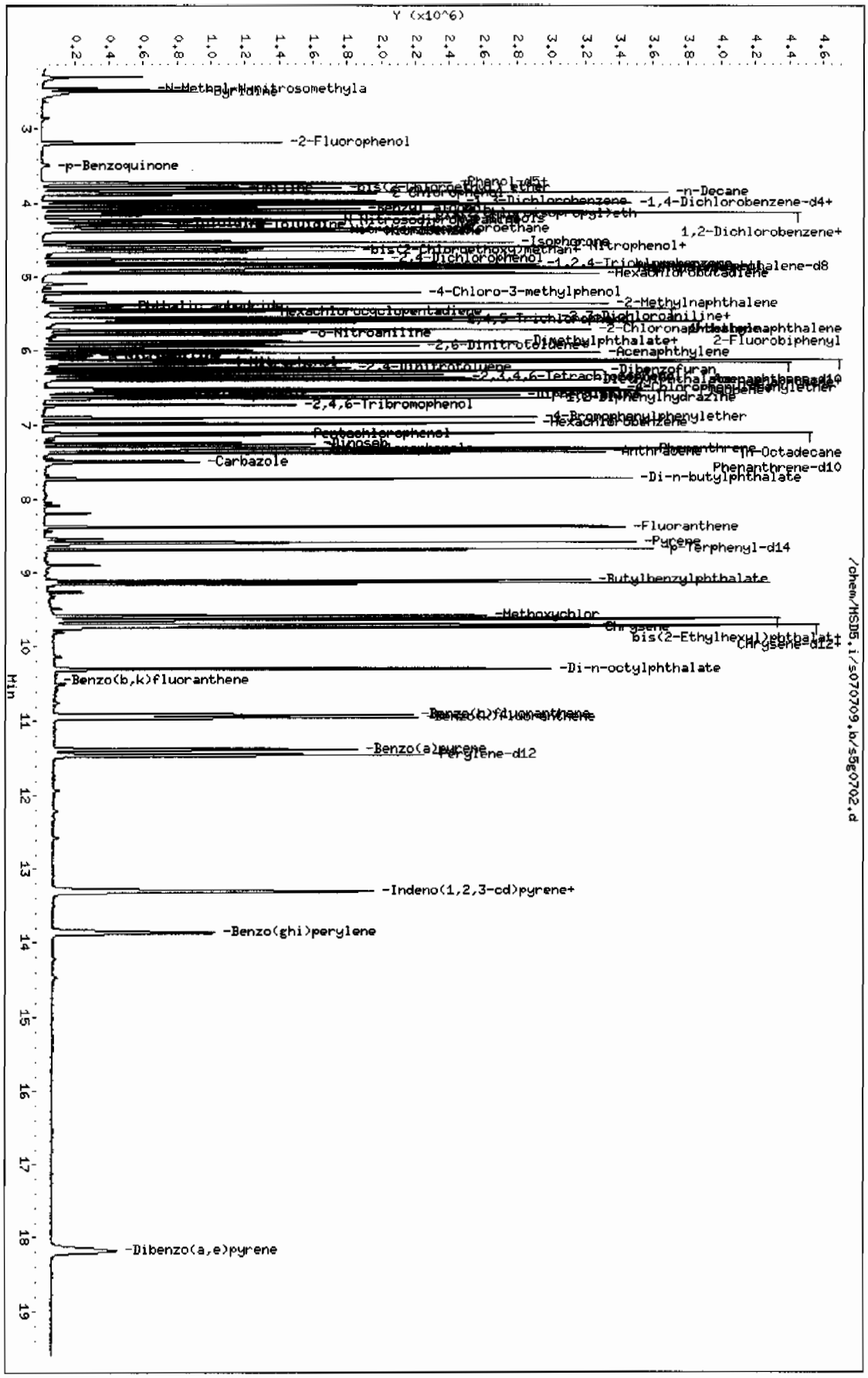

Page 1

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 07-JUL-2009 07:53
Lab File ID: s5g0703.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090619-01.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.79683	0.83997	0.83997	0.000	5.41456	60.00000	Averaged
16 Acetophenone	1.08491	1.12455	1.12455	0.000	3.65383	60.00000	Averaged
189 Caprolactam	0.07939	0.08209	0.08209	0.000	3.40710	60.00000	Averaged
208 1,1'-Biphenyl	1.04481	1.12908	1.12908	0.000	8.06628	60.00000	Averaged
207 Atrazine	0.03020	0.04003	0.04003	0.000	32.56565	60.00000	Averaged
77 Benzidine	0.16686	0.16060	0.16060	0.000	-3.75422	60.00000	Averaged
90 3,3'-Dichlorobenzidine	0.28677	0.30107	0.30107	0.000	4.98623	60.00000	Averaged
102 1,4-Dioxane	0.30814	0.27287	0.27287	0.000	-11.44604	60.00000	Averaged
103 Methyl methacrylate	0.15418	0.17110	0.17110	0.000	10.97550	60.00000	Averaged
104 Ethyl methacrylate	0.72240	0.75335	0.75335	0.000	4.28493	60.00000	Averaged
105 2-Picoline	1.10986	1.13094	1.13094	0.000	1.89977	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.41554	0.42113	0.42113	0.000	1.34517	60.00000	Averaged
107 Methyl methanesulfonate	0.47990	0.51536	0.51536	0.000	7.38882	60.00000	Averaged
108 N-Nitrosodiethylamine	0.41207	0.42110	0.42110	0.000	2.19123	60.00000	Averaged
109 Ethyl Methanesulfonate	0.57718	0.59829	0.59829	0.000	3.65654	60.00000	Averaged
110 Pentachloroethane	0.32784	0.35491	0.35491	0.000	8.25853	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.41191	0.41790	0.41790	0.000	1.45486	60.00000	Averaged
113 N-Nitrosomorpholine	0.66462	0.69923	0.69923	0.000	5.20828	60.00000	Averaged
114 o-Toluidine	1.43933	1.50464	1.50464	0.000	4.53745	60.00000	Averaged
115 N-Nitrosopiperidine	0.13311	0.13697	0.13697	0.000	2.89768	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.80774	0.67477	0.67477	0.000	-16.46208	60.00000	Averaged
118 2,6-Dichlorophenol	0.23169	0.24385	0.24385	0.000	5.24611	60.00000	Averaged
119 Hexachloropropene	0.13807	0.15121	0.15121	0.000	9.51702	60.00000	Averaged
120 p-Phenylenediamine	26.71480	40.00000	0.11265	0.000	-33.21300	60.00000	Linear
121 N-Nitrosodi-n-butylamine	0.17971	0.18347	0.18347	0.000	2.09242	60.00000	Averaged
122 Safrole	0.21426	0.22079	0.22079	0.000	3.04929	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.51018	0.54845	0.54845	0.000	7.50086	60.00000	Averaged
124 Isosafrole	0.33063	0.33782	0.33782	0.000	2.17244	60.00000	Averaged
125 1,4-Naphthoquinone	0.32039	0.35636	0.35636	0.000	11.22429	60.00000	Averaged
127 Pentachlorobenzene	0.47629	0.50923	0.50923	0.000	6.91551	60.00000	Averaged
128 1-Naphthylamine	0.71181	0.69651	0.69651	0.000	-2.14956	60.00000	Averaged
129 2-Naphthylamine	0.64134	0.63364	0.63364	0.000	-1.19986	60.00000	Averaged
131 5-Nitro-o-toluidine	0.25602	0.25291	0.25291	0.000	-1.21544	60.00000	Averaged
136 1,3,5-Trinitrobenzene	0.10752	0.09823	0.09823	0.000	-8.64303	60.00000	Averaged
137 Phenacetin	0.22131	0.22604	0.22604	0.000	2.13991	60.00000	Averaged
138 Diallate	0.20650	0.21356	0.21356	0.000	3.42118	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD5.i Injection Date: 07-JUL-2009 07:53
Lab File ID: s5g0703.d Init. Cal. Date(s): 25-JUN-2009 26-JUN-2009
Analysis Type: WATER Init. Cal. Times: 14:42 18:09
Lab Sample ID: WBN090619-01.4 Quant Type: ISTD
Method: /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.20975	0.22229	0.22229	0.000	5.97921	60.00000	Averaged
213 Trans Diallate	0.24294	0.25125	0.25125	0.000	3.42118	60.00000	Averaged
140 4-Aminobiphenyl	0.36955	0.29147	0.29147	0.000	-21.12985	60.00000	Averaged
141 Pentachloronitrobenzene	0.08929	0.09420	0.09420	0.000	5.49949	60.00000	Averaged
142 Pronamide	0.26058	0.28472	0.28472	0.000	9.26378	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	0.01022	0.00714	0.00714	0.000	-30.15459	60.00000	Averaged
147 Methapyrilene	0.41717	0.44613	0.44613	0.000	6.94283	60.00000	Averaged
148 Isodrin	0.10436	0.10773	0.10773	0.000	3.22384	60.00000	Averaged
149 Aramite	0.05090	0.05245	0.05245	0.000	3.04399	60.00000	Averaged
150 Kepone	0.06725	0.07661	0.07661	0.000	13.91957	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.20208	0.23022	0.23022	0.000	13.92192	60.00000	Averaged
152 Chlorobenzilate	0.29951	0.34714	0.34714	0.000	15.90325	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.44059	0.47981	0.47981	0.000	8.89949	60.00000	Averaged
155 2-Acetylaminofluorene	0.27578	0.31067	0.31067	0.000	12.65245	60.00000	Averaged
157 7,12Dimethylbenz(a)anthrace	0.45468	0.49983	0.49983	0.000	9.93040	60.00000	Averaged
158 3-Methylcholanthrene	0.40918	0.43181	0.43181	0.000	5.53060	60.00000	Averaged

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0703.d
Lab Smp Id: WBN090619-01.4 Client Smp ID: AP12CVS
Inj Date : 07-JUL-2009 07:53
Operator : RMB Inst ID: MSD5.i
Smp Info : |WBN090619-01.4|40 PPM|1|SVM|1|AP12CVS
Misc Info : |MSD8270|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:11 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ap12.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf * Vt/(Vo *Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vo	1000.00000	volume of sample ext
Vi	0.50000	volume injected

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	3.996	3.996	(1.000)	354149	40.0000	
* 29 Naphthalene-d8	136	4.866	4.866	(1.000)	1242819	40.0000	
* 46 Acenaphthene-d10	164	6.125	6.125	(1.000)	784305	40.0000	
* 67 Phenanthrene-d10	188	7.301	7.301	(1.000)	1455292	40.0000	
* 91 Chrysene-d12	240	9.713	9.713	(1.000)	1323010	40.0000	
* 98 Perylene-d12	264	11.448	11.448	(1.000)	1108993	40.0000	
209 Benzaldehyde	77	3.725	3.725	(0.932)	297474	40.0000	42.2
16 Acetophenone	105	4.248	4.248	(1.063)	398258	40.0000	41.5
189 Caprolactam	113	5.137	5.137	(1.056)	102027	40.0000	41.4
208 1,1'-Biphenyl	154	5.690	5.690	(0.929)	885545	40.0000	43.2
207 Atrazine	173	6.995	6.995	(0.958)	58260	40.0000	53.0
77 Benzidine	184	8.454	8.454	(0.870)	212475	40.0000	38.5
90 3,3'-Dichlorobenzidine	252	9.648	9.648	(0.993)	398322	40.0000	42.0

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
102 1,4-Dioxane	88	2.307	2.307	(0.578)	96637	40.0000	35.4
103 Methyl methacrylate	100	2.302	2.302	(0.576)	60594	40.0000	44.4
104 Ethyl methacrylate	69	2.684	2.684	(0.672)	266798	40.0000	41.7
105 2-Picoline	93	2.884	2.884	(0.722)	400522	40.0000	40.8
106 N-Nitrosomethylethylamine	88	2.931	2.931	(0.734)	149141	40.0000	40.5
107 Methyl methanesulfonate	80	3.084	3.084	(0.772)	182513	40.0000	43.0
108 N-Nitrosodiethylamine	102	3.325	3.325	(0.832)	149130	40.0000	40.9
109 Ethyl Methanesulfonate	79	3.478	3.478	(0.870)	211882	40.0000	41.5
110 Pentachloroethane	167	3.825	3.825	(0.957)	125691	40.0000	43.3
111 N-Nitrosopyrrolidine	100	4.237	4.237	(1.060)	147999	40.0000	40.6(Q)
113 N-Nitrosomorpholine	56	4.254	4.254	(1.065)	247632	40.0000	42.1
114 o-Toluidine	106	4.278	4.278	(1.071)	532868	40.0000	41.8
115 N-Nitrosopiperidine	114	4.478	4.478	(0.920)	170224	40.0000	41.2
116 a,a-Dimethylphenethylamine	58	4.725	4.725	(0.971)	838611	40.0000	33.4
118 2,6-Dichlorophenol	162	4.907	4.907	(1.008)	303056	40.0000	42.1
119 Hexachloropropene	213	4.937	4.937	(1.014)	187928	40.0000	43.8
120 p-Phenylenediamine	108	5.148	5.148	(1.058)	140006	40.0000	26.7
121 N-Nitrosodi-n-butylamine	84	5.107	5.107	(1.050)	228024	40.0000	40.8(T)
122 Safrole	162	5.278	5.278	(1.085)	274403	40.0000	41.2
123 1,2,4,5-Tetrachlorobenzene	216	5.484	5.484	(0.895)	430149	40.0000	43.0
124 Isosafrole	162	5.648	5.648	(0.922)	264951	40.0000	40.9
125 1,4-Naphthoquinone	158	5.837	5.837	(0.953)	279492	40.0000	44.5
127 Pentachlorobenzene	250	6.242	6.242	(1.019)	399391	40.0000	42.8
128 1-Naphthylamine	143	6.331	6.331	(1.034)	546273	40.0000	39.1
129 2-Naphthylamine	143	6.390	6.390	(1.043)	496968	40.0000	39.5
131 5-Nitro-o-toluidine	152	6.525	6.525	(1.065)	198360	40.0000	39.5
136 1,3,5-Trinitrobenzene	75	6.795	6.795	(0.931)	142950	40.0000	36.5
137 Phenacetin	108	6.819	6.819	(0.934)	328957	40.0000	40.8(Q)
138 Diallate	86	6.807	6.807	(0.932)	310798	40.0000	41.4
212 Cis Diallate	86	6.884	6.884	(0.943)	48523	6.00000	6.4(a)
213 Trans Diallate	86	6.807	6.807	(0.932)	310798	34.0000	35.2
140 4-Aminobiphenyl	169	7.113	7.113	(0.974)	424170	40.0000	31.5
141 Pentachloronitrobenzene	237	7.137	7.137	(0.977)	137095	40.0000	42.2(Q)
142 Pronamide	173	7.125	7.125	(0.976)	414346	40.0000	43.7
146 4-Nitroquinoline-1-oxide	101	7.978	7.978	(1.093)	10387	40.0000	27.9
147 Methapyrilene	58	8.001	8.001	(1.096)	649253	40.0000	42.8
148 Isodrin	193	8.231	8.231	(1.127)	156772	40.0000	41.3
149 Aramite	185	8.625	8.625	(1.181)	76322	40.0000	41.2
150 Kepone	272	9.213	9.213	(1.262)	111486	40.0000	45.6
151 p-(Dimethylamino)azobenzene	120	8.807	8.807	(0.907)	304580	40.0000	45.6
152 Chlorobenzilate	251	8.836	8.836	(0.910)	459267	40.0000	46.4
153 3,3'-Dimethylbenzidine	212	9.119	9.119	(0.939)	634787	40.0000	43.6
155 2-Acetylaminofluorene	181	9.372	9.372	(0.965)	411016	40.0000	45.1
157 7,12Dimethylbenz(a)anthracene	256	10.883	10.883	(0.951)	554307	40.0000	44.0
158 3-Methylcholanthrene	268	11.866	11.866	(1.036)	478870	40.0000	42.2(Q)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070709.b/s5g0703.d
Date : 07-JUL-2009 07:53
Client ID: AP12CVS
Sample Info: IWBN090619-01.4140 PPM||SWM||AP12CVS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

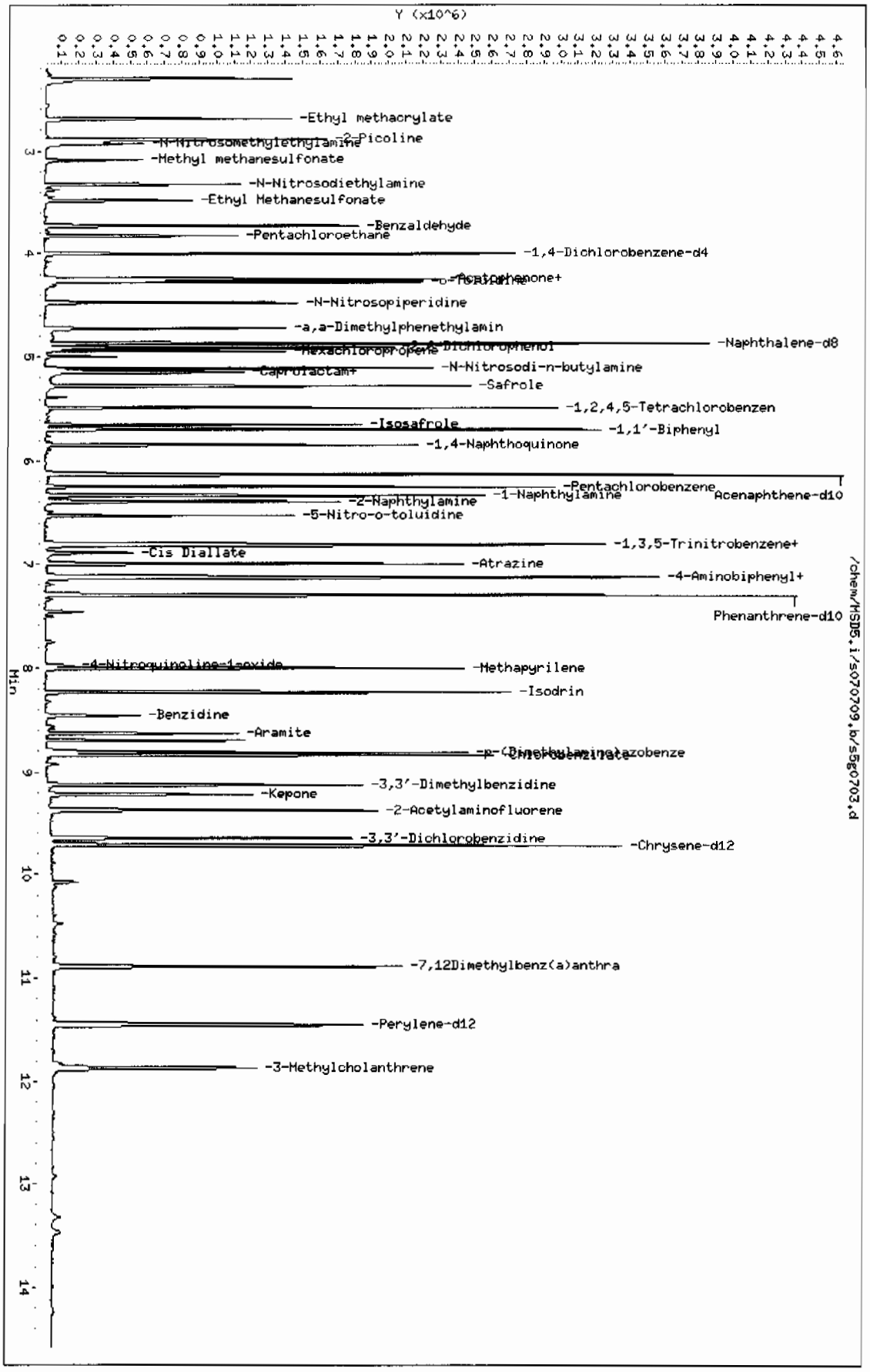

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QC Data

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

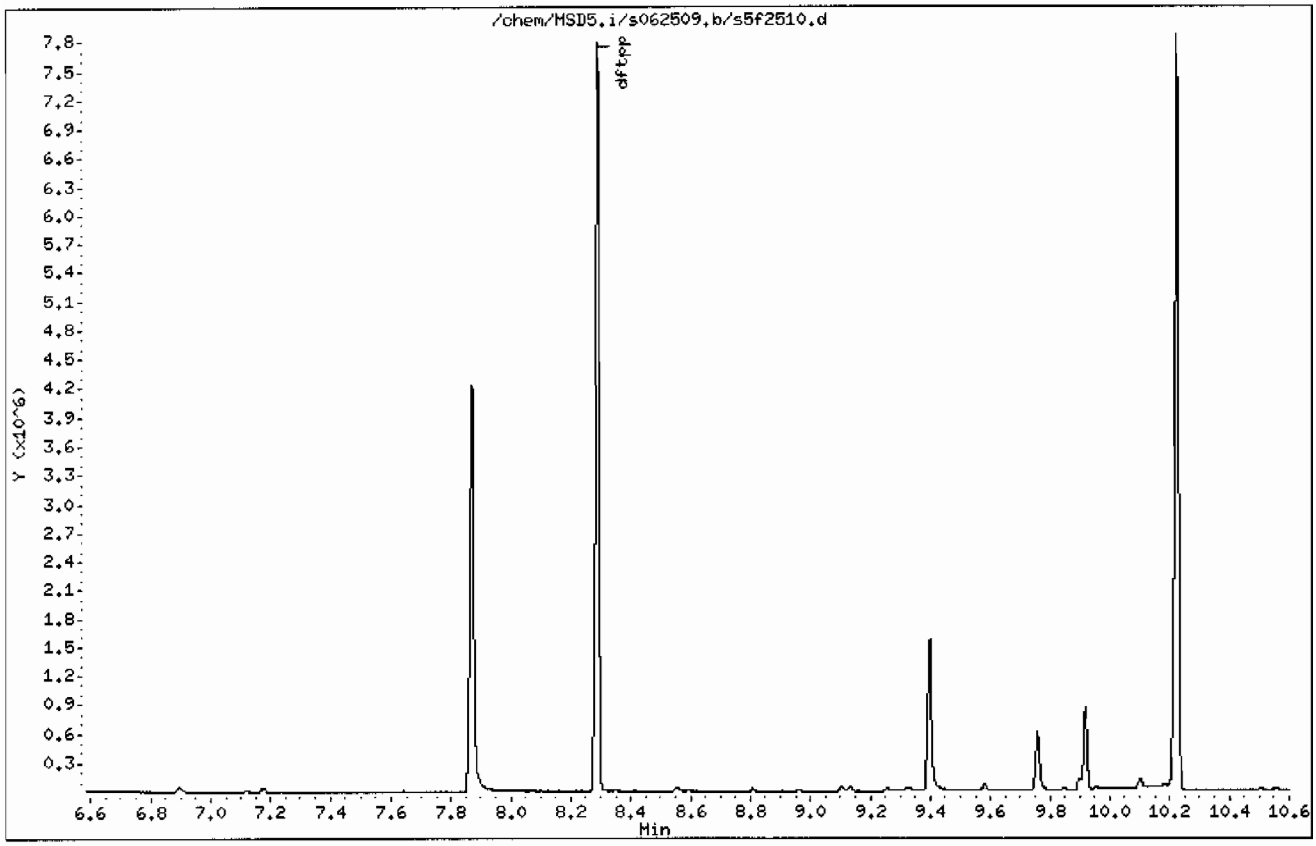

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

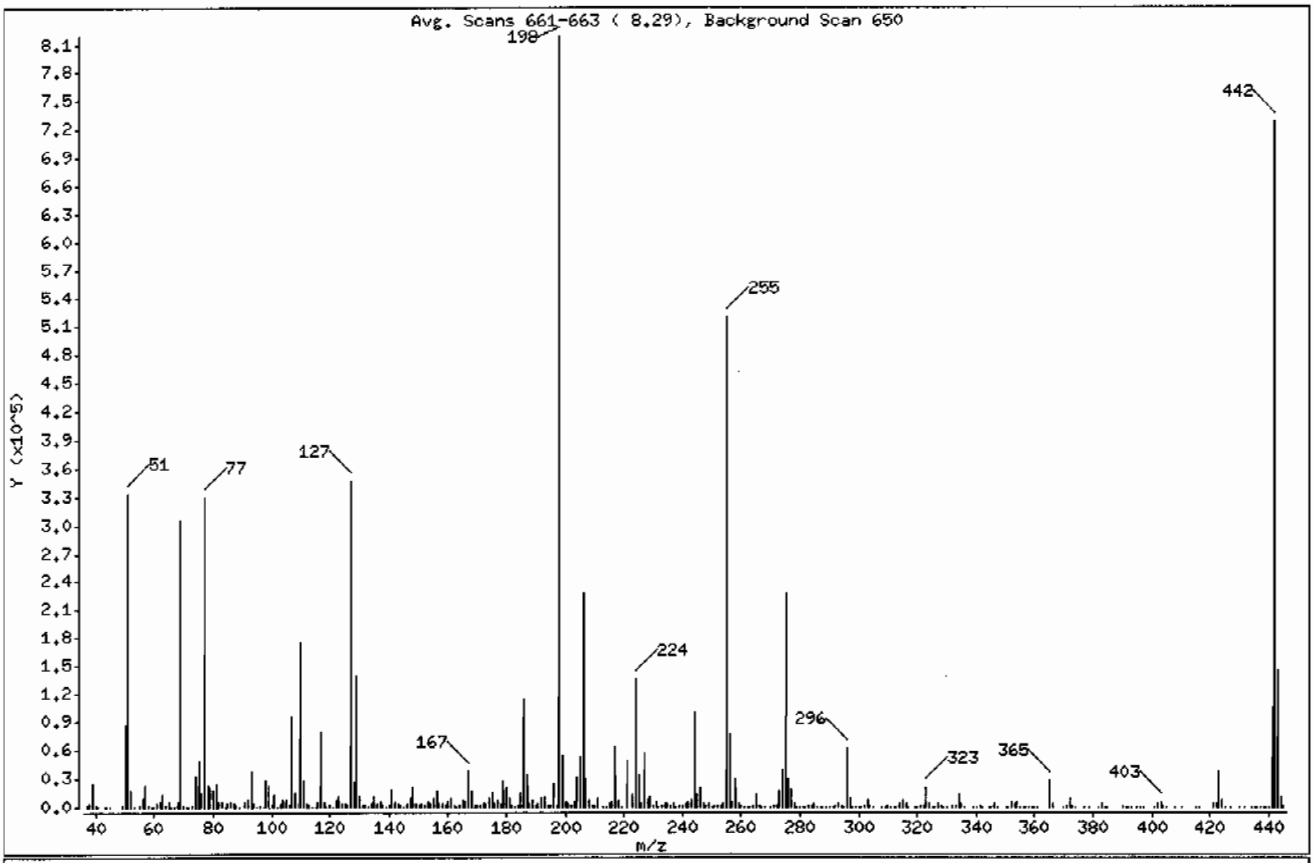

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.61
68	Less than 2.00% of mass 69	0.65 (1.74)
69	Mass 69 relative abundance	37.21
70	Less than 2.00% of mass 69	0.22 (0.59)
127	40.00 - 60.00% of mass 198	42.23
197	Less than 1.00% of mass 198	0.20
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 30.00% of mass 198	27.74
365	Greater than 1.00% of mass 198	3.39
441	Present, but less than mass 443	12.90
442	Greater than 40.00% of mass 198	88.92
443	17.00 - 23.00% of mass 442	17.81 (20.03)

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP | Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0 | Operator: rmb

Column phase: Phenomenex ZB-5MS | Column diameter: 0.20

Data File: s5f2510.d

Spectrum: Avg. Scans 661-663 (8,29), Background Scan 650

Location of Maximum: 198.00

Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1138	132.00	1206	224.00	135680	316.00	4346
38.00	4283	133.00	226	225.00	33672	317.00	724
39.00	24376	134.00	3902	226.00	3982	319.00	199
40.00	1095	135.00	10990	227.00	56520	320.00	278
41.00	377	136.00	4516	228.00	8381	321.00	1904
43.00	83	137.00	5167	229.00	11198	322.00	1049
44.00	53	138.00	1139	230.00	1508	323.00	20544
45.00	651	139.00	686	231.00	4747	324.00	3833
49.00	1842	140.00	2033	232.00	906	325.00	443
50.00	85864	141.00	18056	233.00	1144	326.00	441
51.00	332416	142.00	5920	234.00	3535	327.00	3582
52.00	16009	143.00	3898	235.00	4352	328.00	1881
53.00	680	144.00	1153	236.00	2596	329.00	411
55.00	1744	145.00	796	237.00	4493	330.00	67
56.00	10124	146.00	3833	238.00	149	332.00	1501
57.00	22896	147.00	8537	239.00	2028	333.00	2044
58.00	1220	148.00	20240	240.00	1558	334.00	12375
59.00	387	149.00	3724	241.00	3207	335.00	3249
60.00	170	150.00	975	242.00	6476	336.00	306
61.00	4094	151.00	2947	243.00	7666	339.00	390
62.00	4868	152.00	1120	244.00	100592	340.00	156
63.00	13455	153.00	5976	245.00	12760	341.00	2032
64.00	2223	154.00	4578	246.00	19808	342.00	558
65.00	6554	155.00	9784	247.00	4078	344.00	42
66.00	399	156.00	16170	248.00	1014	345.00	49
67.00	136	157.00	3266	249.00	3682	346.00	3814
68.00	5300	158.00	3502	250.00	900	347.00	894
69.00	304576	159.00	2575	251.00	988	350.00	113
70.00	1791	160.00	6522	252.00	1107	351.00	234
71.00	141	161.00	8738	253.00	2216	352.00	6066
72.00	193	162.00	2332	254.00	3272	353.00	3622
73.00	2630	163.00	733	255.00	519616	354.00	5630
74.00	32008	164.00	965	256.00	76312	355.00	936
75.00	49176	165.00	7434	257.00	5701	356.00	159
76.00	15003	166.00	5583	258.00	30480	357.00	134

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2510.d
Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	329536	167.00	37360	259.00	4688	358.00	50
78.00	21848	168.00	16760	260.00	1050	359.00	514
79.00	21520	169.00	2806	261.00	818	360.00	90
80.00	17208	170.00	1585	262.00	281	361.00	66
81.00	24696	171.00	1950	263.00	357	365.00	27752
82.00	5995	172.00	3353	264.00	1198	366.00	3838
83.00	5784	173.00	4618	265.00	12254	370.00	420
84.00	731	174.00	9069	266.00	2093	371.00	1264
85.00	4077	175.00	15586	267.00	419	372.00	10324
86.00	6050	176.00	4443	268.00	101	373.00	2774
87.00	2825	177.00	6975	270.00	767	374.00	88
88.00	1193	178.00	2852	271.00	964	377.00	347
89.00	527	179.00	28744	272.00	1488	379.00	53
91.00	5217	180.00	20024	273.00	16303	382.00	46
92.00	6689	181.00	9747	274.00	39584	383.00	2936
93.00	36944	182.00	1277	275.00	227072	384.00	811
94.00	3121	183.00	633	276.00	30592	385.00	279
95.00	410	184.00	2511	277.00	19040	390.00	1527
96.00	1703	185.00	14675	278.00	3536	391.00	836
97.00	405	186.00	114752	279.00	847	392.00	606
98.00	27784	187.00	33024	280.00	137	393.00	78
99.00	23016	188.00	3270	281.00	305	395.00	178
100.00	1807	189.00	7565	282.00	573	396.00	60
101.00	12467	190.00	1456	283.00	2171	397.00	44
102.00	633	191.00	3531	284.00	1562	401.00	502
103.00	3694	192.00	9327	285.00	3393	402.00	3711
104.00	8033	193.00	10576	286.00	586	403.00	5371
105.00	8061	194.00	2381	287.00	70	404.00	2149
106.00	2335	195.00	1583	288.00	178	405.00	328
107.00	96840	196.00	24512	289.00	728	408.00	44
108.00	15060	197.00	1668	290.00	735	410.00	195
109.00	3168	198.00	818496	291.00	471	415.00	117
110.00	175616	199.00	55264	292.00	1011	416.00	64
111.00	27672	200.00	4870	293.00	4463	421.00	4380
112.00	3394	201.00	4357	294.00	950	422.00	4373

Data File: /chem/MSD5.i/s062509.b/s5f2510.d

Date : 25-JUN-2009 14:07

Client ID: DFTPP | Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0 | Operator: rmb

Column phase: Phenomenex ZB-5MS | Column diameter: 0.20

Data File: s5f2510.d
Spectrum: Avg. Scans 661-663 (8.29), Background Scan 650
Location of Maximum: 198.00
Number of points: 355

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	1009	202.00	2129	295.00	722	423.00	37104
114.00	389	203.00	6231	296.00	62712	424.00	6752
115.00	427	204.00	31184	297.00	9287	425.00	610
116.00	5229	205.00	52096	298.00	618	427.00	44
117.00	79808	206.00	227136	299.00	244	430.00	41
118.00	5242	207.00	30208	300.00	51	432.00	68
119.00	641	208.00	7259	301.00	781	434.00	57
120.00	1537	209.00	2346	302.00	1183	435.00	42
121.00	459	210.00	2765	303.00	7108	436.00	46
122.00	6606	211.00	9606	304.00	2260	437.00	88
123.00	11016	213.00	938	305.00	253	438.00	260
124.00	4477	214.00	263	308.00	883	439.00	169
125.00	4654	215.00	2833	309.00	636	440.00	115
126.00	1781	216.00	5142	310.00	1042	441.00	105616
127.00	345664	217.00	63232	311.00	221	442.00	727808
128.00	25848	218.00	7687	312.00	209	443.00	145792
129.00	139648	219.00	590	313.00	595	444.00	12170
130.00	11462	221.00	48472	314.00	3436	445.00	968
131.00	2254	223.00	13920	315.00	7722		

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: !WBN090624-01!50PPM!1!SVMF!1!DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

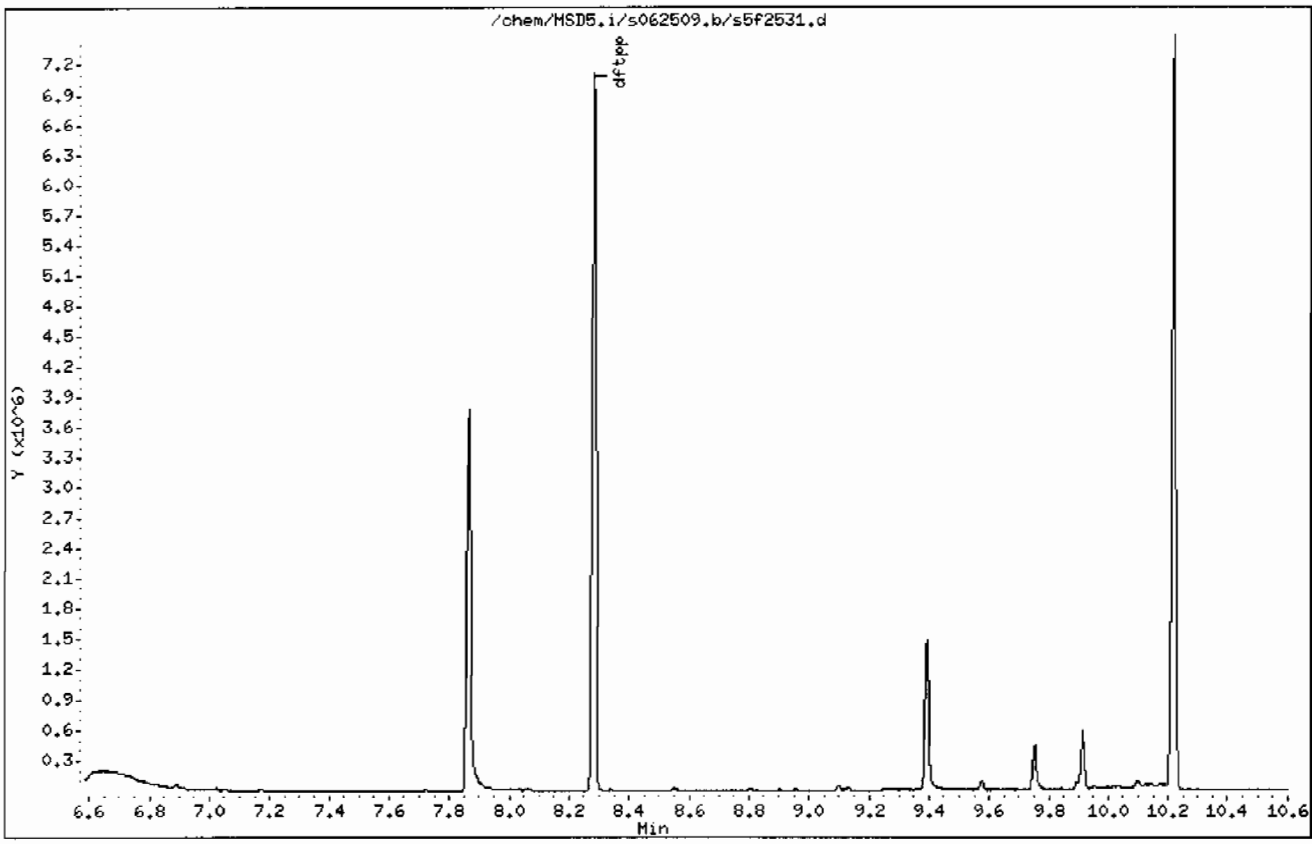

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

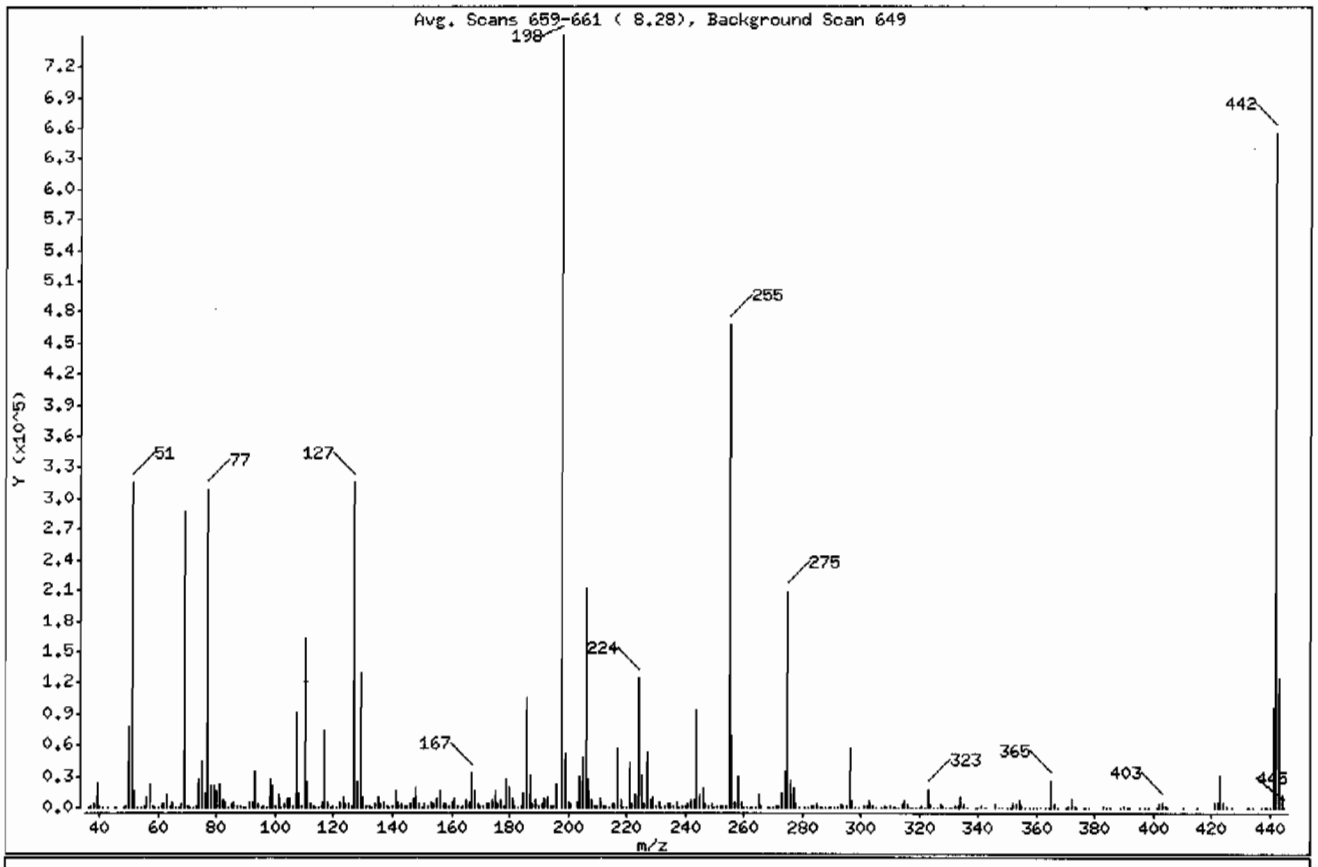

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.16
68	Less than 2.00% of mass 69	0.57 (1.48)
69	Mass 69 relative abundance	38.30
70	Less than 2.00% of mass 69	0.14 (0.37)
127	40.00 - 60.00% of mass 198	42.18
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.81
275	10.00 - 30.00% of mass 198	27.72
365	Greater than 1.00% of mass 198	3.36
441	Present, but less than mass 443	12.82
442	Greater than 40.00% of mass 198	87.41
443	17.00 - 23.00% of mass 442	16.50 (18.88)

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	130	129.00	129144	221.00	43352	315.00	6757
37.00	963	130.00	10379	222.00	3421	316.00	3304
38.00	4111	131.00	2243	223.00	12803	317.00	505
39.00	23600	132.00	1255	224.00	124544	318.00	89
40.00	1272	133.00	555	225.00	30704	319.00	68
41.00	492	134.00	3635	226.00	3391	320.00	212
43.00	105	135.00	10704	227.00	52696	321.00	2199
45.00	749	136.00	4146	228.00	7219	322.00	768
46.00	78	137.00	5330	229.00	10175	323.00	17872
48.00	68	138.00	1404	230.00	1430	324.00	3180
49.00	2390	139.00	748	231.00	4406	325.00	325
50.00	77896	140.00	1839	232.00	746	326.00	448
51.00	316032	141.00	15758	233.00	1331	327.00	3348
52.00	15853	142.00	5118	234.00	3163	328.00	1586
53.00	697	143.00	3702	235.00	3412	329.00	430
54.00	44	144.00	1161	236.00	2372	330.00	62
55.00	1475	145.00	866	237.00	4445	331.00	102
56.00	9953	146.00	3158	238.00	456	332.00	1465
57.00	23072	147.00	8024	239.00	2101	333.00	1384
58.00	898	148.00	18984	240.00	1609	334.00	11134
59.00	336	149.00	3739	241.00	3164	335.00	3143
60.00	225	150.00	774	242.00	6733	336.00	405
61.00	3752	151.00	3382	243.00	6226	339.00	142
62.00	4243	152.00	1243	244.00	92688	340.00	159
63.00	11328	153.00	5283	245.00	12475	341.00	2110
64.00	1836	154.00	3943	246.00	19736	342.00	653
65.00	5514	155.00	9153	247.00	3761	343.00	43
66.00	395	156.00	15309	248.00	881	346.00	4090
67.00	365	157.00	3021	249.00	3370	347.00	606
68.00	4238	158.00	3692	250.00	704	348.00	61
69.00	287104	159.00	2450	251.00	990	350.00	163
70.00	1055	160.00	5815	252.00	1128	351.00	312
71.00	62	161.00	8439	253.00	2364	352.00	5888
72.00	71	162.00	2487	254.00	2478	353.00	3580
73.00	2346	163.00	529	255.00	467136	354.00	6153

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	27560	164.00	872	256.00	68464	355.00	1155
75.00	45608	165.00	7480	257.00	5362	356.00	47
76.00	14580	166.00	4923	258.00	28784	358.00	84
77.00	307648	167.00	33168	259.00	4672	359.00	471
78.00	20952	168.00	15532	260.00	577	360.00	108
79.00	20168	169.00	3430	261.00	840	361.00	199
80.00	15037	170.00	1365	262.00	192	363.00	41
81.00	22200	171.00	1541	263.00	518	364.00	46
82.00	6183	172.00	3329	264.00	441	365.00	25200
83.00	5317	173.00	3966	265.00	11328	366.00	3575
84.00	652	174.00	7529	266.00	1690	367.00	168
85.00	3481	175.00	14827	268.00	443	370.00	679
86.00	5823	176.00	3632	269.00	245	371.00	1446
87.00	2522	177.00	6522	270.00	550	372.00	8793
88.00	1077	178.00	2348	271.00	1149	373.00	1961
89.00	639	179.00	27592	272.00	1211	374.00	221
90.00	270	180.00	18360	273.00	14446	376.00	42
91.00	5249	181.00	8854	274.00	34480	377.00	208
92.00	5425	182.00	1836	275.00	207744	378.00	45
93.00	34864	183.00	697	276.00	26632	383.00	2261
94.00	2727	184.00	2248	277.00	18216	384.00	695
95.00	519	185.00	13594	278.00	2938	385.00	153
96.00	1793	186.00	105608	279.00	721	389.00	48
97.00	255	187.00	30760	281.00	239	390.00	895
98.00	27192	188.00	3410	282.00	488	391.00	683
99.00	20512	189.00	6590	283.00	2542	392.00	588
100.00	1368	190.00	891	284.00	1204	395.00	63
101.00	11329	191.00	3357	285.00	3197	397.00	89
102.00	651	192.00	9407	286.00	509	398.00	57
103.00	4207	193.00	9901	287.00	81	401.00	639
104.00	8219	194.00	2267	288.00	186	402.00	3069
105.00	7766	195.00	1341	289.00	847	403.00	4596
106.00	2422	196.00	23040	290.00	595	404.00	1548
107.00	90816	198.00	749568	291.00	454	405.00	250
108.00	14415	199.00	51080	292.00	743	410.00	207

Data File: /chem/MSD5.i/s062509.b/s5f2531.d

Date : 26-JUN-2009 08:28

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5f2531.d
Spectrum: Avg. Scans 659-661 (8.28), Background Scan 649
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
109.00	2528	200.00	4574	293.00	4058	415.00	154
110.00	161600	201.00	3697	294.00	966	421.00	4311
111.00	23872	203.00	5056	295.00	1275	422.00	4609
112.00	3017	204.00	29384	296.00	57624	423.00	31232
113.00	1030	205.00	48440	297.00	7723	424.00	5999
114.00	259	206.00	211840	298.00	524	425.00	887
115.00	204	207.00	27712	299.00	72	427.00	53
116.00	5076	208.00	7647	301.00	883	432.00	79
117.00	74856	209.00	2440	302.00	1121	433.00	51
118.00	5416	210.00	2546	303.00	6834	434.00	102
119.00	663	211.00	8250	304.00	2045	437.00	63
120.00	1188	212.00	1226	305.00	210	438.00	98
121.00	285	213.00	887	307.00	150	439.00	269
122.00	5954	214.00	230	308.00	912	440.00	46
123.00	9965	215.00	2724	309.00	557	441.00	96112
124.00	4154	216.00	3200	310.00	896	442.00	655168
125.00	3951	217.00	57056	311.00	325	443.00	123696
126.00	1734	218.00	6740	312.00	245	444.00	11497
127.00	316160	219.00	408	313.00	389	445.00	757
128.00	23760	220.00	754	314.00	2901		

Data File: /chem/MSD5.i/s070709.b/s5g0701.d

Date : 07-JUL-2009 07:12

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

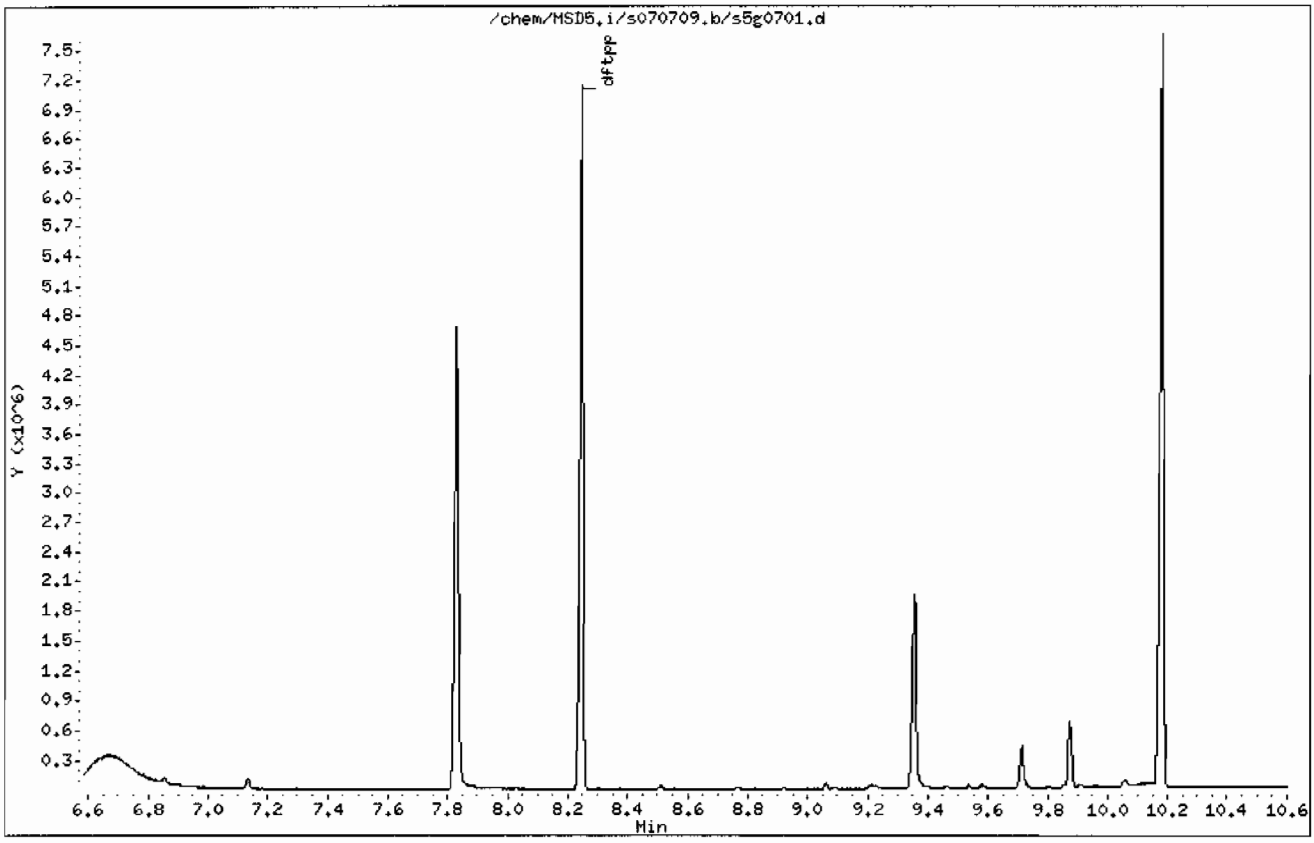

Data File: /chem/MSD5.i/s070709.b/s5g0701.d

Date : 07-JUL-2009 07:12

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: IWBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

1 dftpp

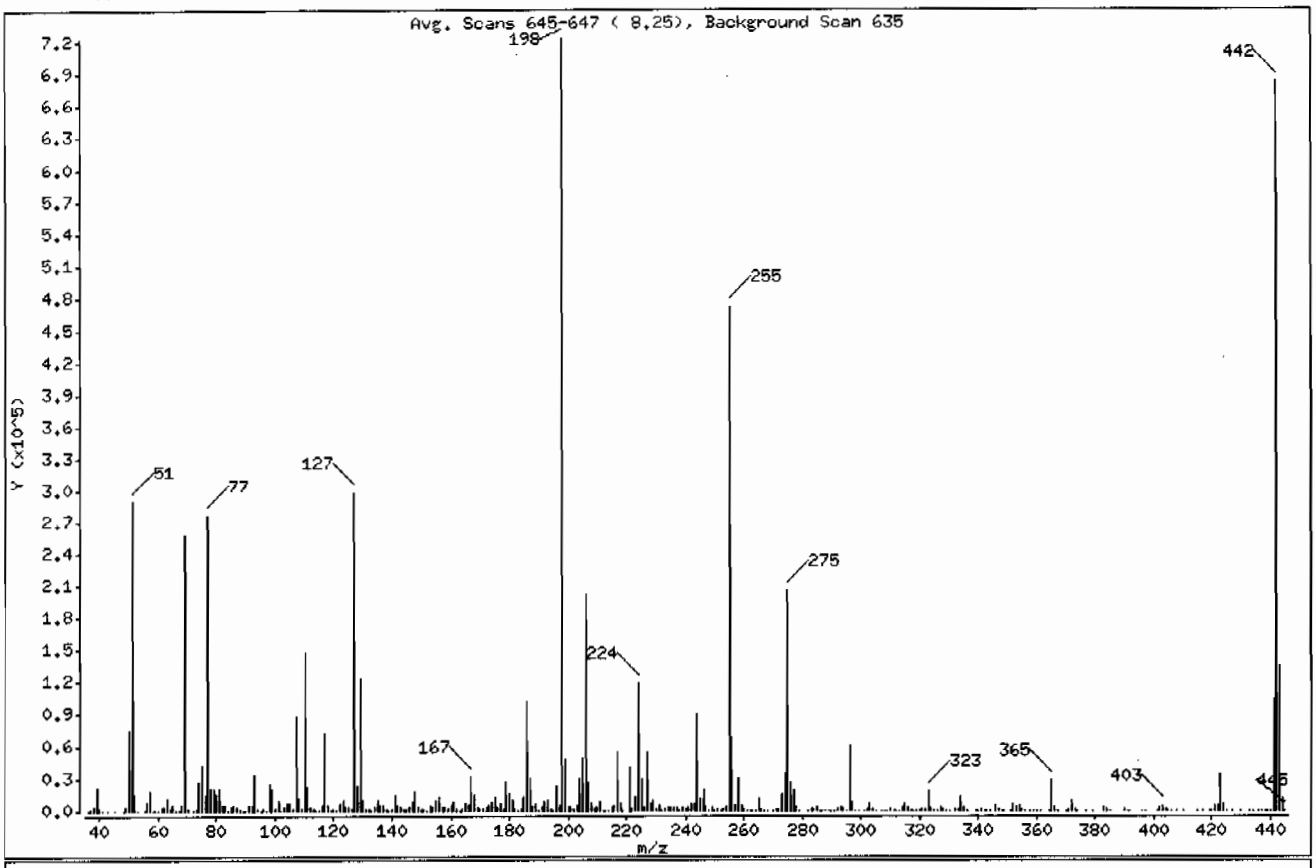

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	39.99
68	Less than 2.00% of mass 69	0.62 (1.75)
69	Mass 69 relative abundance	35.68
70	Less than 2.00% of mass 69	0.17 (0.48)
127	40.00 - 60.00% of mass 198	41.19
197	Less than 1.00% of mass 198	0.59
199	5.00 - 9.00% of mass 198	6.73
275	10.00 - 30.00% of mass 198	28.38
365	Greater than 1.00% of mass 198	3.87
441	Present, but less than mass 443	14.19
442	Greater than 40.00% of mass 198	94.17
443	17.00 - 23.00% of mass 442	18.62 (19.77)

Data File: /chem/MSD5.i/s070709.b/s5g0701.d

Date : 07-JUL-2009 07:12

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0701.d

Spectrum: Avg. Scans 645-647 (8.25), Background Scan 635

Location of Maximum: 198.00

Number of points: 358

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	152	132.00	1039	223.00	13027	318.00	54
37.00	1000	133.00	726	224.00	118424	319.00	91
38.00	3844	134.00	2946	225.00	30144	320.00	358
39.00	22080	135.00	9942	226.00	3013	321.00	1988
40.00	1104	136.00	4498	227.00	54656	322.00	1024
41.00	769	137.00	4980	228.00	6803	323.00	18576
43.00	161	138.00	1172	229.00	10098	324.00	3889
45.00	485	139.00	715	230.00	1450	325.00	401
48.00	144	140.00	1798	231.00	4303	326.00	445
49.00	2724	141.00	15410	232.00	809	327.00	3670
50.00	75488	142.00	4887	233.00	1223	328.00	2196
51.00	289536	143.00	3118	234.00	4029	329.00	284
52.00	14247	144.00	1126	235.00	4067	330.00	162
53.00	515	145.00	977	236.00	2948	332.00	1222
55.00	828	146.00	2766	237.00	4064	333.00	1986
56.00	8219	147.00	7770	238.00	742	334.00	13082
57.00	18448	148.00	18376	239.00	2804	335.00	3067
58.00	831	149.00	3826	240.00	1473	336.00	313
59.00	299	150.00	1006	241.00	3100	339.00	324
60.00	171	151.00	2323	242.00	7124	340.00	234
61.00	3667	152.00	707	243.00	6621	341.00	2001
62.00	3902	153.00	5292	244.00	90560	342.00	783
63.00	11545	154.00	3823	245.00	12180	343.00	62
64.00	1602	155.00	9217	246.00	19416	344.00	76
65.00	5475	156.00	13727	247.00	3310	346.00	4553
66.00	310	157.00	3116	248.00	634	347.00	844
67.00	508	158.00	3761	249.00	3656	348.00	163
68.00	4524	159.00	2231	250.00	358	349.00	49
69.00	258368	160.00	5530	251.00	908	351.00	362
70.00	1246	161.00	7778	252.00	826	352.00	6042
72.00	237	162.00	2238	253.00	2018	353.00	3973
73.00	2132	163.00	638	254.00	2601	354.00	5711
74.00	26072	164.00	921	255.00	470528	355.00	1014
75.00	41336	165.00	7020	256.00	67848	356.00	52
76.00	14155	166.00	5088	257.00	5312	358.00	112

Data File: /chem/MSD5.i/s070709.b/s5g0701.d

Date : 07-JUL-2009 07:12

Client ID: DFTPP | Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0 | Operator: rmb

Column phase: Phenomenex ZB-5MS | Column diameter: 0.20

Data File: s5g0701.d

Spectrum: Avg. Scans 645-647 (8.25), Background Scan 635

Location of Maximum: 198.00

Number of points: 358

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	276032	167.00	31920	258.00	30168	359.00	518
78.00	19424	168.00	14854	259.00	4669	360.00	122
79.00	19472	169.00	2720	260.00	1023	361.00	44
80.00	14185	170.00	1459	261.00	774	364.00	171
81.00	20776	171.00	1666	262.00	111	365.00	28048
82.00	5055	172.00	2993	263.00	340	366.00	3349
83.00	4437	173.00	4561	264.00	624	367.00	358
84.00	450	174.00	7618	265.00	11865	370.00	409
85.00	3339	175.00	13697	266.00	1396	371.00	1459
86.00	5747	176.00	3861	267.00	263	372.00	9795
87.00	3103	177.00	6485	268.00	433	373.00	2380
88.00	947	178.00	2186	270.00	567	374.00	211
89.00	385	179.00	26400	271.00	1092	377.00	300
90.00	61	180.00	17256	272.00	1717	379.00	79
91.00	4620	181.00	9231	273.00	14414	383.00	2836
92.00	4886	182.00	1205	274.00	35704	384.00	902
93.00	32792	183.00	565	275.00	205504	385.00	119
94.00	2325	184.00	2343	276.00	26208	390.00	1249
95.00	474	185.00	13464	277.00	18200	391.00	774
96.00	1545	186.00	101136	278.00	3036	392.00	624
97.00	476	187.00	29840	279.00	665	396.00	74
98.00	25224	188.00	2755	282.00	471	397.00	95
99.00	19744	189.00	6487	283.00	2075	401.00	723
100.00	1672	190.00	814	284.00	1646	402.00	3562
101.00	9781	191.00	2937	285.00	3229	403.00	5283
102.00	480	192.00	7739	286.00	628	404.00	1993
103.00	3630	193.00	9895	287.00	158	405.00	263
104.00	7133	194.00	2091	288.00	216	406.00	46
105.00	7357	195.00	813	289.00	702	408.00	42
106.00	2083	196.00	23176	290.00	700	410.00	182
107.00	88192	197.00	4273	291.00	536	415.00	251
108.00	12294	198.00	724032	292.00	925	417.00	92
109.00	2415	199.00	48744	293.00	3845	419.00	103
110.00	147136	200.00	3799	294.00	978	420.00	82
111.00	22136	201.00	3510	295.00	666	421.00	4482

Data File: /chem/MSD5.i/s070709.b/s5g0701.d

Date : 07-JUL-2009 07:12

Client ID: DFTPP

Instrument: MSD5.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP

Volume Injected (uL): 1.0

Operator: rmb

Column phase: Phenomenex ZB-5MS

Column diameter: 0.20

Data File: s5g0701.d
Spectrum: Avg. Scans 645-647 (8.25), Background Scan 635
Location of Maximum: 198.00
Number of points: 358

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	2731	202.00	1076	296.00	60088	422.00	4172
113.00	941	203.00	5404	297.00	8012	423.00	33608
114.00	116	204.00	30320	298.00	694	424.00	6993
115.00	253	205.00	47864	299.00	131	425.00	795
116.00	5266	206.00	201920	301.00	679	427.00	49
117.00	71584	207.00	26984	302.00	1180	430.00	51
118.00	4766	208.00	7330	303.00	7085	433.00	47
119.00	648	209.00	2128	304.00	1905	434.00	53
120.00	1260	210.00	2722	305.00	321	436.00	63
121.00	628	211.00	8323	307.00	178	437.00	130
122.00	5894	212.00	796	308.00	830	438.00	51
123.00	9320	213.00	816	309.00	668	439.00	214
124.00	3751	214.00	381	310.00	993	440.00	147
125.00	3538	215.00	2533	311.00	254	441.00	102744
126.00	1470	216.00	4529	312.00	261	442.00	681856
127.00	298240	217.00	55200	313.00	486	443.00	134784
128.00	22872	218.00	7450	314.00	3168	444.00	11949
129.00	122848	219.00	693	315.00	7035	445.00	732
130.00	9991	221.00	39672	316.00	3391		
131.00	1640	222.00	2468	317.00	587		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874482**				
Client Sample:	**QC for batch 882563**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 882563**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 08:17**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0704.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	66.7	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	110	333
87-86-5	Pentachlorophenol	U	333	ug/kg	83.3	333
129-00-0	Pyrene	U	33.3	ug/kg	10.0	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	100	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline	U	333	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515			**Matrix:**	SOIL
Lab Sample ID:	1201874482				
Client Sample:	QC for batch 882563	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882563	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 08:17	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0704.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	66.7	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	66.7	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.05	1000	ug/kg		J
71-43-2	Benzene	2.12	144	ug/kg	95	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515			**Matrix:**	SOIL
Lab Sample ID:	1201874482				
Client Sample:	QC for batch 882563	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882563	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 08:17	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0704.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.2	184	ug/kg		J
	Unknown Aldol Condensate	3.01	374	ug/kg		JA

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0704.d
Lab Smp Id: 1201874482 Client Smp ID: SBLK01
Inj Date : 07-JUL-2009 08:17
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201874482|882565|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.003	4.003	(1.000)	326193	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1170112	40.0000	
* 46 Acenaphthene-d10	164	6.126	6.131	(1.000)	763333	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1443136	40.0000	
* 91 Chrysene-d12	240	9.718	9.723	(1.000)	1435830	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1272438	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.797)	561042	78.3344	2610
$ 5 Phenol-d5	99	3.714	3.714	(0.928)	736510	77.9920	2600
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	331972	38.2871	1280
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.916)	821599	41.6178	1390
$ 60 2,4,6-Tribromophenol	329	6.728	6.733	(1.098)	231933	74.4679	2480
$ 81 p-Terphenyl-d14	244	8.683	8.688	(0.893)	1122505	51.0836	1700

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0704.d
Lab Smp Id: 1201874482 Client Smp ID: SBLK01
Inj Date : 07-JUL-2009 08:17
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201874482|882565|1|SVMF|1|SBLK01
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.003	2109434	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.052	1586096	30.0762381	1000	0		0	10
Benzene				CAS #: 71-43-2			
2.120	227439	4.31279718	144	95	NIST05.L	998	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.202	290995	5.51798092	184	0		0	10
Unknown Aldol Condensate				CAS #:			
3.011	592003	11.2258116	374	0		0	10

Data File: /chem/MSD5.i/s070709.b/s5g0704.d
Date : 07-JUL-2009 08:17
Client ID: SBLK01
Sample Info: !120187448218825651!1!SVMF!1!SBLK01
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB
Column diameter: 0.20

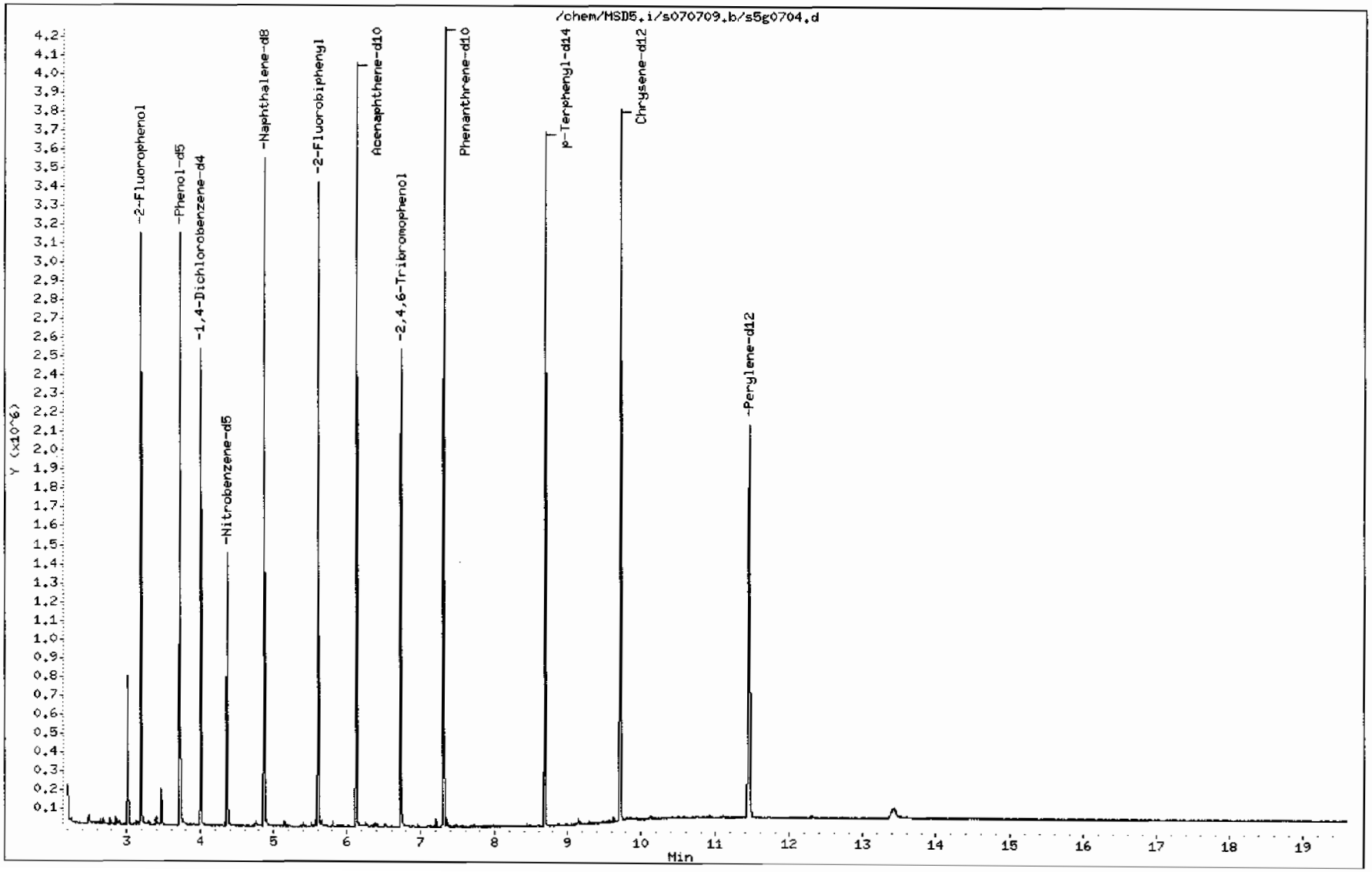

Data File: /chem/MSD5.i/s070709.b/s5g0704.d

Date : 07-JUL-2009 08:17

Client ID: SBLK01

Instrument: MSD5.i

Sample Info: 1120187448218825651|1|SVMF|1|SBLK01

Volume Injected (uL): 0.5

Operator: RMB

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	50	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	33	C5H12O2	104
Propanoic acid, 2-methyl-, propyl ester	644-49-5	NIST05.L	13119	25	C7H14O2	130

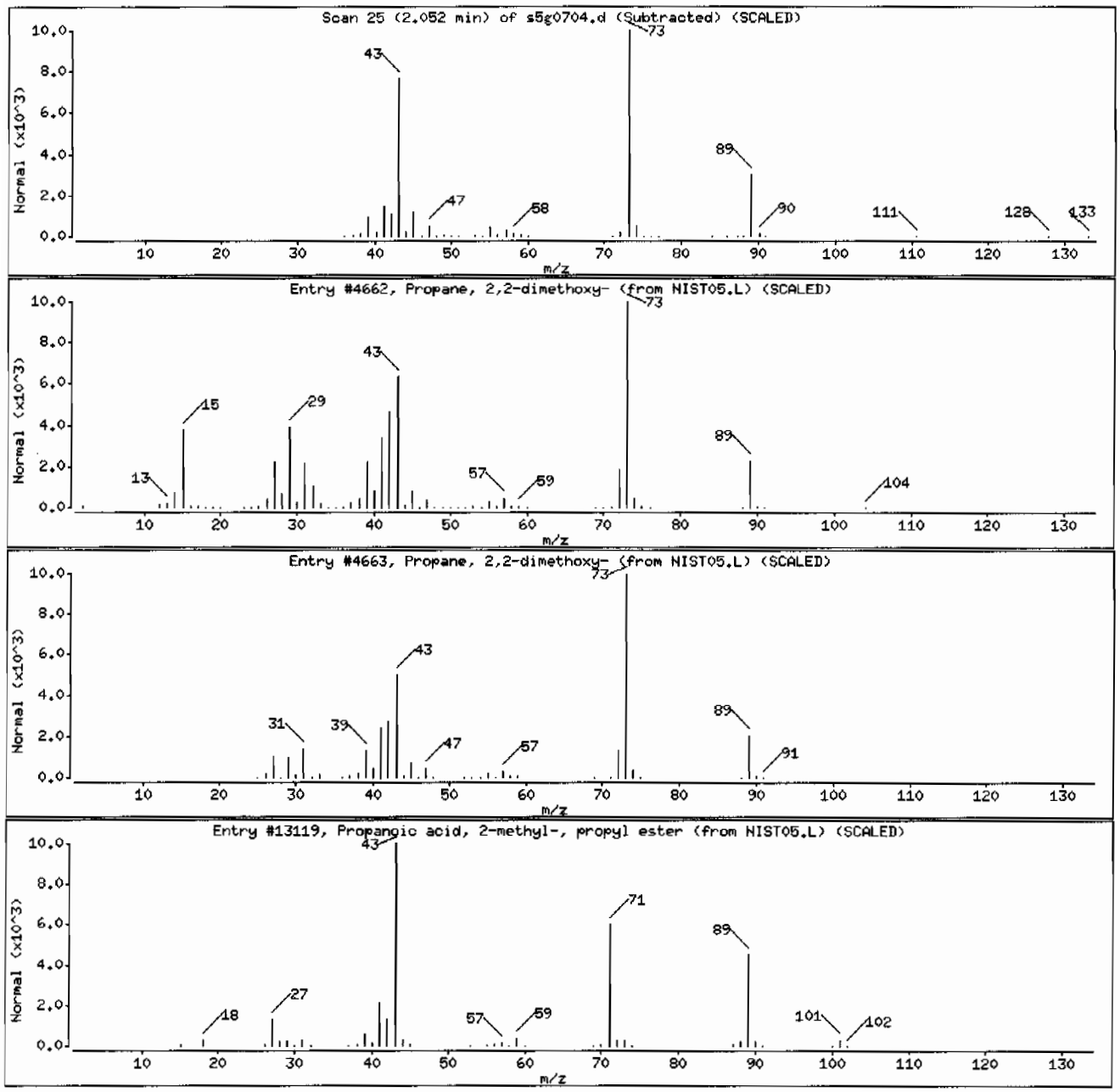

Data File: /chem/MSD5.i/s070709.b/s5g0704.d

Date : 07-JUL-2009 08:17

Client ID: SBLK01 Instrument: MSD5.i

Sample Info: 1120187448218825651 1 1SVMF1 1SBLK01

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene	71-43-2	NIST05.L	998	95	C6H6	78
Benzene	71-43-2	NIST05.L	1001	91	C6H6	78
Benzene	71-43-2	NIST05.L	1000	91	C6H6	78

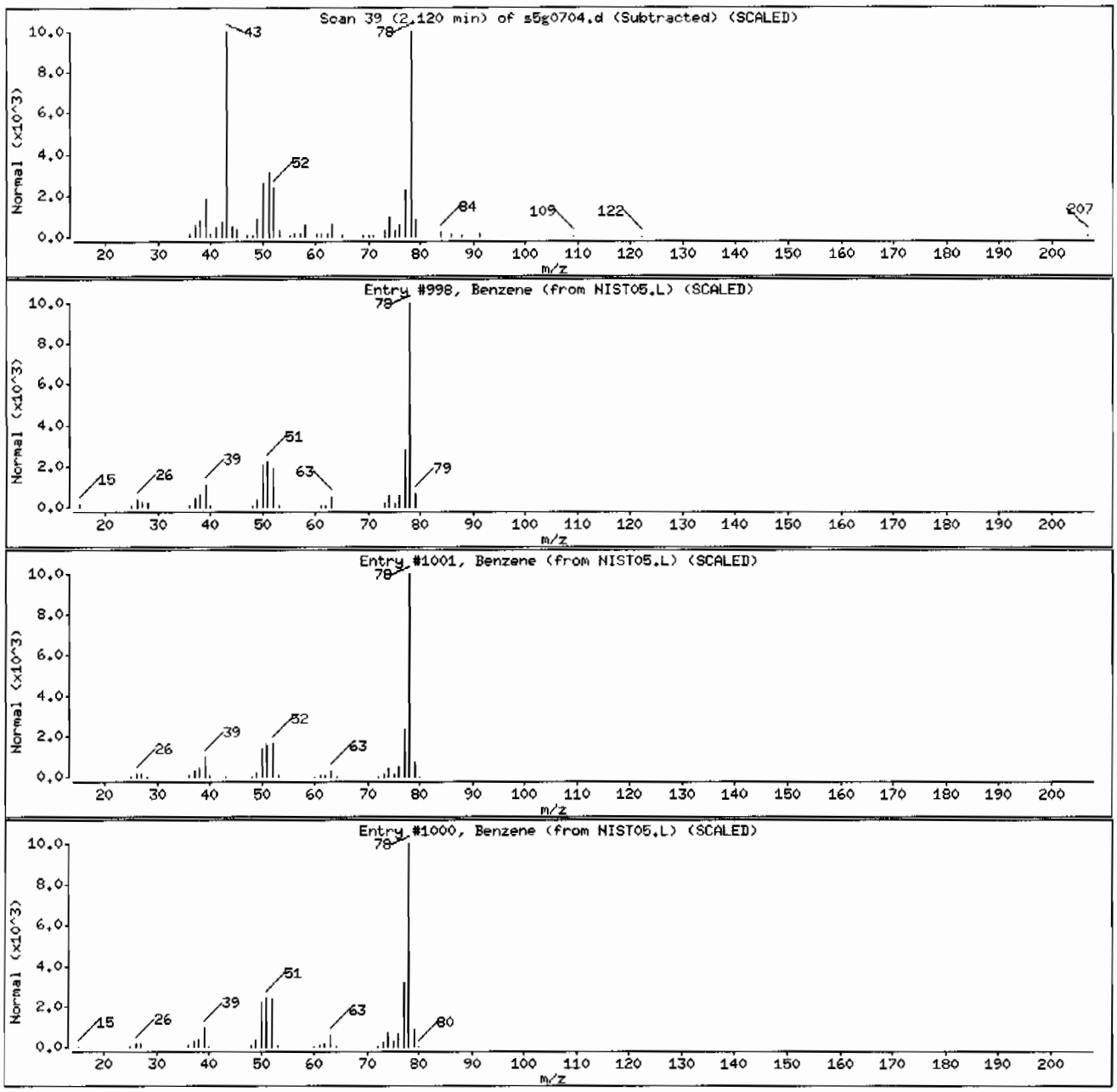

Data File: /chem/MSD5.i/s070709.b/s5g0704.d

Date : 07-JUL-2009 08:17

Client ID: SBLK01 Instrument: MSD5.i

Sample Info: |1201874482|882565|1|SVMF|1|SBLK01

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2355	30	C3H5Cl0	92
Ethanol, 2-nitro-, propionate (ester)	5390-28-3	NIST05.L	21507	25	C5H9N04	147
Acetic acid, methyl ester	79-20-9	NIST05.L	806	16	C3H6O2	74

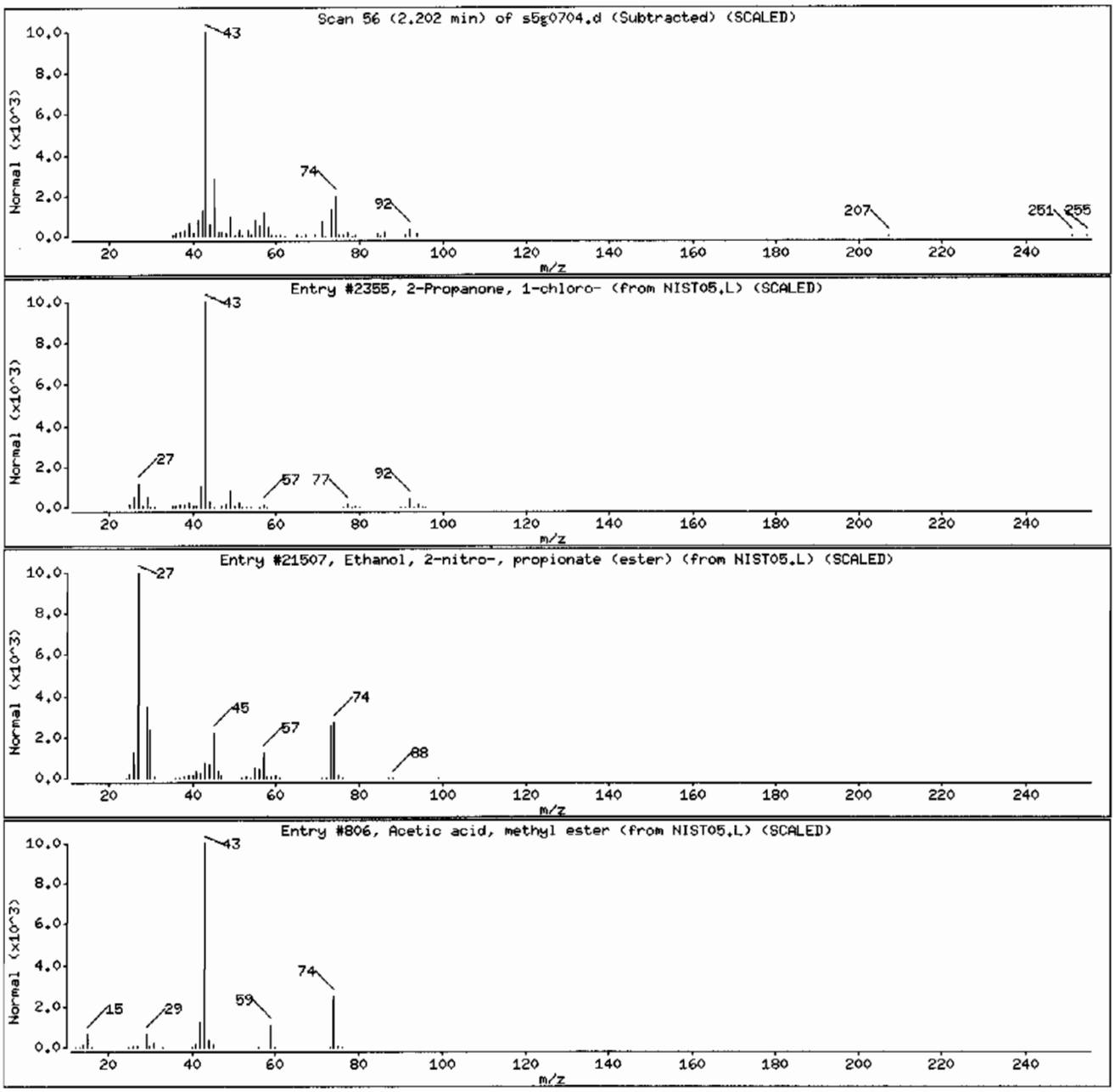

Data File: /chem/MSD5.i/s070709.b/s5g0704.d

Date : 07-JUL-2009 08:17

Client ID: SBLK01 Instrument: MSD5.i

Sample Info: |1201874482|882565|1|SVMF|1|SBLK01

Volume Injected (uL): 0.5 Operator: RMB

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	9	C4H7NO2	101

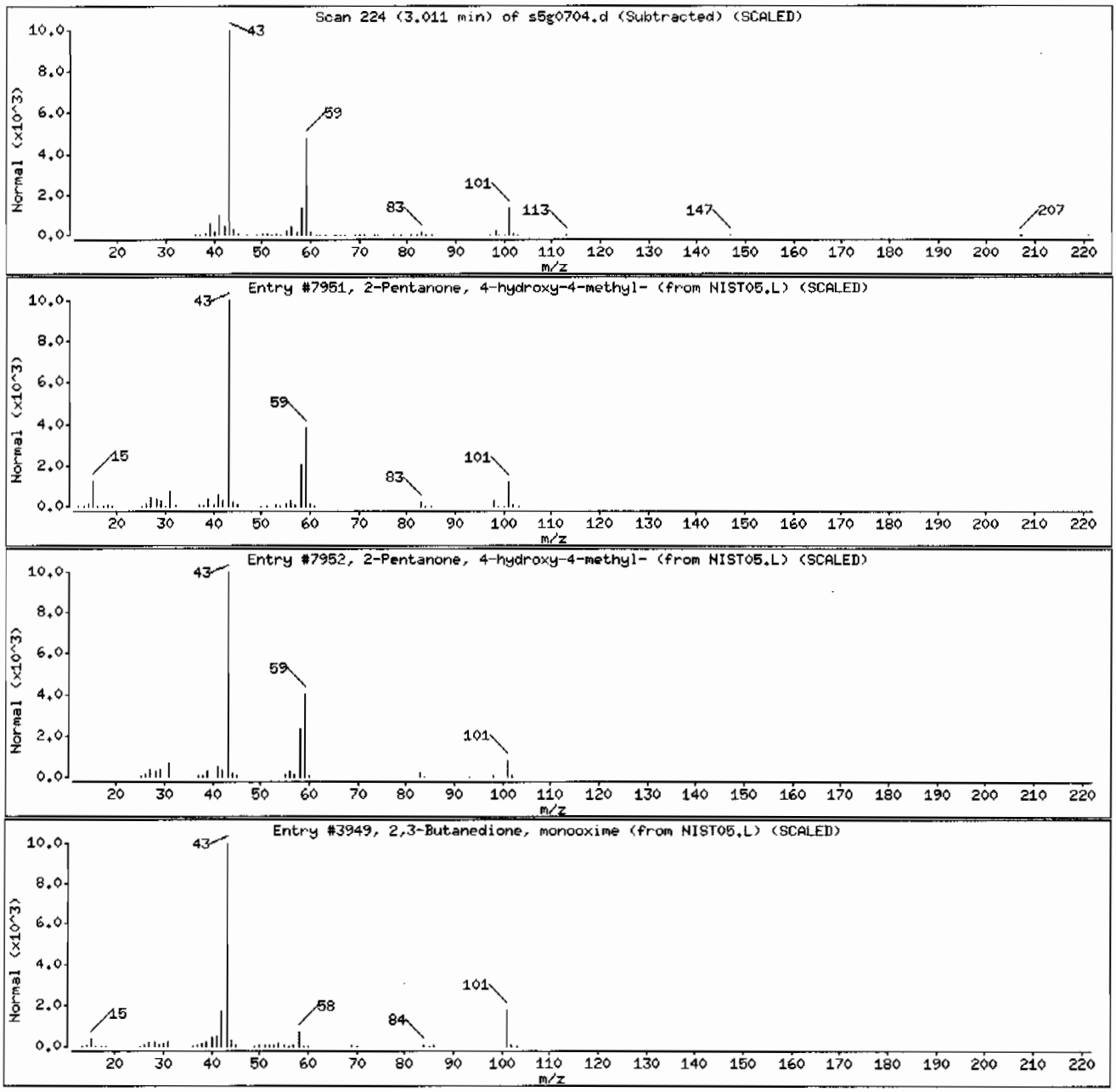

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2515			**Matrix:**	SOIL
Lab Sample ID:	1201874483				
Client Sample:	QC for batch 882563	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882563	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882565	**Inst:**	MSD5.I	**Dilution:**	1
Run Date:	07/07/2009 08:45	**Analyst:**	RMB	**Inj. Vol:**	.5 uL
Prep Date:	07/06/2009 20:30	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s5g0705-2.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1280	ug/kg	66.7	333
108-95-2	Phenol		1300	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1370	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1230	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1370	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1400	ug/kg	66.7	333
83-32-9	Acenaphthene		1370	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene		1340	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1380	ug/kg	110	333
87-86-5	Pentachlorophenol		1370	ug/kg	83.3	333
129-00-0	Pyrene		1510	ug/kg	10.0	33.3
110-86-1	Pyridine		1280	ug/kg	66.7	333
62-53-3	Aniline		1390	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether		1230	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1260	ug/kg	66.7	333
100-51-6	Benzyl alcohol		1320	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1320	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1330	ug/kg	66.7	333
95-48-7	o-Cresol		1300	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1460	ug/kg	100	333
67-72-1	Hexachloroethane		1270	ug/kg	66.7	333
98-95-3	Nitrobenzene		1280	ug/kg	66.7	333
78-59-1	Isophorone		1360	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1310	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol		1280	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane		1290	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1370	ug/kg	66.7	333
65-85-0	Benzoic acid		779	ug/kg	167	667
91-20-3	Naphthalene		1210	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1210	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1350	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1460	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1330	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1460	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1480	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1370	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline *o-Nitroaniline*		1380	ug/kg	66.7	333
99-09-2	3-Nitroaniline		1700	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874483**				
Client Sample:	**QC for batch 882563**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882563**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882565**	**Inst:**	**MSD5.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 08:45**	**Analyst:**	**RMB**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/06/2009 20:30**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s5g0705-2.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1560	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1360	ug/kg	33.3	333
208-96-8	Acenaphthylene		1460	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		1350	ug/kg	127	667
132-64-9	Dibenzofuran		1430	ug/kg	66.7	333
84-66-2	Diethylphthalate		1590	ug/kg	66.7	333
86-73-7	Fluorene		1360	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1390	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol		1320	ug/kg	66.7	333
100-01-6	4-Nitroaniline		2160	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1580	ug/kg	66.7	333
122-66-7	Azobenzene		1420	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1360	ug/kg	66.7	333
118-74-1	Hexachlorobenzene		1430	ug/kg	66.7	333
85-01-8	Phenanthrene		1390	ug/kg	10.0	33.3
120-12-7	Anthracene		1430	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1630	ug/kg	66.7	333
206-44-0	Fluoranthene		1450	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1660	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1390	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1410	ug/kg	100	333
218-01-9	Chrysene		1450	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1700	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1700	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1430	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1490	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1480	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1530	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1570	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1530	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1300	ug/kg	66.7	333

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0705.d
Lab Smp Id: 1201874483 Client Smp ID: SBLK01LCS
Inj Date : 07-JUL-2009 08:45
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201874483|882565|1|SVMF|1|SBLK01LCS
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 08:12 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2515.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.003	4.003	(1.000)	334582	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1297644	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	769594	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1455353	40.0000	
* 91 Chrysene-d12	240	9.723	9.723	(1.000)	1401485	40.0000	
* 98 Perylene-d12	264	11.457	11.462	(1.000)	1233101	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.797)	573699	78.0932	2600
$ 5 Phenol-d5	99	3.718	3.714	(0.929)	715089	73.8250	2460
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	341469	35.5120	1180
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	808666	40.6295	1350
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	266353	84.8236	2830
$ 81 p-Terphenyl-d14	244	8.683	8.688	(0.893)	1017085	47.4204	1580

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.728	3.723	(0.931)	375163	39.0230	1300(Q)
8 2-Chlorophenol	128	3.868	3.868	(0.966)	329221	40.9692	1360
11 1,4-Dichlorobenzene	146	4.012	4.012	(1.002)	352402	36.8335	1230
17 N-Nitrosodipropylamine	70	4.234	4.239	(1.058)	212602	41.0636	1370(Q)
28 1,2,4-Trichlorobenzene	180	4.821	4.821	(0.990)	351288	39.1025	1300
33 4-Chloro-3-methylphenol	107	5.221	5.216	(1.072)	290719	42.0345	1400
47 Acenaphthene	154	6.155	6.155	(1.004)	647014	41.1490	1370
50 2,4-Dinitrotoluene	165	6.242	6.247	(1.018)	245126	40.2511	1340
52 4-Nitrophenol	139	6.174	6.174	(1.007)	112717	41.3053	1380
65 Pentachlorophenol	266	7.133	7.133	(0.976)	145087	41.1391	1370
79 Pyrene	202	8.587	8.592	(0.883)	1380519	45.1535	1500
2 Pyridine	79	2.519	2.510	(0.629)	221690	38.3313	1280
4 Aniline	66	3.781	3.786	(0.945)	175327	41.7381	1390
7 bis(2-Chloroethyl) ether	63	3.796	3.800	(0.948)	273276	36.8815	1230
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.992)	362155	37.6585	1260
12 Benzyl alcohol	108	4.065	4.070	(1.016)	200092	39.4553	1320
13 1,2-Dichlorobenzene	146	4.118	4.118	(1.029)	352397	39.6438	1320
14 bis(2-Chloroisopropyl)ether	45	4.142	4.147	(1.035)	688958	39.9512	1330
15 o-Cresol	107	4.123	4.118	(1.030)	233768	39.1075	1300
18 m,p-Cresols	107	4.219	4.219	(1.054)	349032	43.6623	1460
19 Hexachloroethane	117	4.344	4.349	(1.085)	134799	37.9897	1270
21 Nitrobenzene	77	4.378	4.378	(0.899)	343657	38.3213	1280
22 Isophorone	82	4.527	4.532	(0.930)	678306	40.8662	1360
23 2-Nitrophenol	139	4.595	4.595	(0.944)	165534	39.3202	1310
24 2,4-Dimethylphenol	122	4.585	4.585	(0.942)	279565	38.4743	1280
25 bis(2-Chloroethoxy)methane	93	4.648	4.653	(0.954)	367248	38.7233	1290
26 2,4-Dichlorophenol	162	4.754	4.759	(0.976)	296328	41.0307	1370
27 Benzoic acid	105	4.629	4.638	(0.951)	51783	23.3668	779
30 Naphthalene	128	4.889	4.889	(1.004)	918457	36.3311	1210
31 4-Chloroaniline	127	4.903	4.903	(1.007)	306442	36.3993	1210
32 Hexachlorobutadiene	225	4.951	4.951	(1.017)	266145	40.5845	1350
34 2-Methylnaphthalene	142	5.370	5.370	(1.103)	665298	43.6881	1460
36 Hexachlorocyclopentadiene	237	5.471	5.471	(0.892)	139386	39.8522	1330
37 2,4,6-Trichlorophenol	196	5.558	5.558	(0.907)	260145	43.6833	1460
38 2,4,5-Trichlorophenol	196	5.592	5.587	(0.912)	283050	44.2883	1480
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	671029	40.9740	1360
42 o-Nitroaniline	65	5.779	5.780	(0.943)	215139	41.3153	1380
41 m-Nitroaniline	138	6.073	6.078	(0.991)	149098	51.0355	1700
43 Dimethylphthalate	163	5.881	5.885	(0.959)	915318	46.8209	1560
44 2,6-Dinitrotoluene	165	5.943	5.943	(0.969)	189923	40.8037	1360
45 Acenaphthylene	152	6.030	6.030	(0.984)	1057647	43.8324	1460
48 2,4-Dinitrophenol	184	6.150	6.155	(1.003)	67755	40.3871	1350(Q)
49 Dibenzofuran	168	6.280	6.280	(1.024)	953001	42.7931	1430
51 Diethylphthalate	149	6.396	6.396	(1.043)	911536	47.6046	1590
53 Fluorene	166	6.540	6.545	(1.067)	782185	40.8710	1360
54 4-Chlorophenylphenylether	204	6.516	6.516	(1.063)	463985	41.5801	1390
55 2-Methyl-4,6-dinitrophenol	198	6.559	6.560	(0.898)	120748	39.6666	1320

Compounds	QUANT STC MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.067)	130253	64.6759	2160
133 Diphenylamine	169	6.603	6.603	(0.904)	686299	47.3715	1580
58 1,2-Diphenylhydrazine	77	6.641	6.641	(0.909)	784520	42.6520	1420
61 4-Bromophenylphenylether	248	6.906	6.906	(0.945)	283308	40.7273	1360
63 Hexachlorobenzene	284	6.983	6.983	(0.956)	314254	42.8957	1430
68 Phenanthrene	178	7.325	7.330	(1.003)	1137250	41.7132	1390
69 Anthracene	178	7.368	7.373	(1.009)	1157362	43.0096	1430
72 Di-n-butylphthalate	149	7.720	7.720	(1.057)	1516265	48.9173	1630
76 Fluoranthene	202	8.370	8.375	(1.146)	1354490	43.6123	1450
85 Butylbenzylphthalate	149	9.112	9.112	(0.937)	651358	49.7061	1660
89 Benzo(a)anthracene	228	9.709	9.714	(0.998)	1254966	41.7328	1390
90 3,3'-Dichlorobenzidine	252	9.651	9.648	(0.993)	424664	42.2647	1410
92 Chrysene	228	9.747	9.752	(1.002)	1195529	43.3999	1450
93 bis(2-Ethylhexyl)phthalate	149	9.632	9.632	(0.991)	915136	50.8898	1700
94 Di-n-octylphthalate	149	10.301	10.301	(0.899)	1435824	50.9389	1700
95 Benzo(b)fluoranthene	252	10.922	10.922	(0.953)	1169410	42.9407	1430
96 Benzo(k)fluoranthene	252	10.956	10.956	(0.956)	1197322	44.7590	1490
97 Benzo(a)pyrene	252	11.375	11.380	(0.993)	1073049	44.5112	1480
99 Indeno(1,2,3-cd)pyrene	276	13.301	13.306	(1.161)	1111706	45.8907	1530
100 Dibenzo(a,h)anthracene	278	13.311	13.316	(1.162)	928137	47.0014	1570
101 Benzo(ghi)perylene	276	13.864	13.869	(1.210)	945122	45.7628	1520
1 N-Methyl-N-nitrosomethylamine	74	2.481	2.476	(0.620)	150389	38.4764	1280

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070709.b/s5g0705.d
Date : 07-JUL-2009 08:45
Client ID: SBLK01LCS
Sample Info: 1120187448318825651|1|SVHF1|SBLK01LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

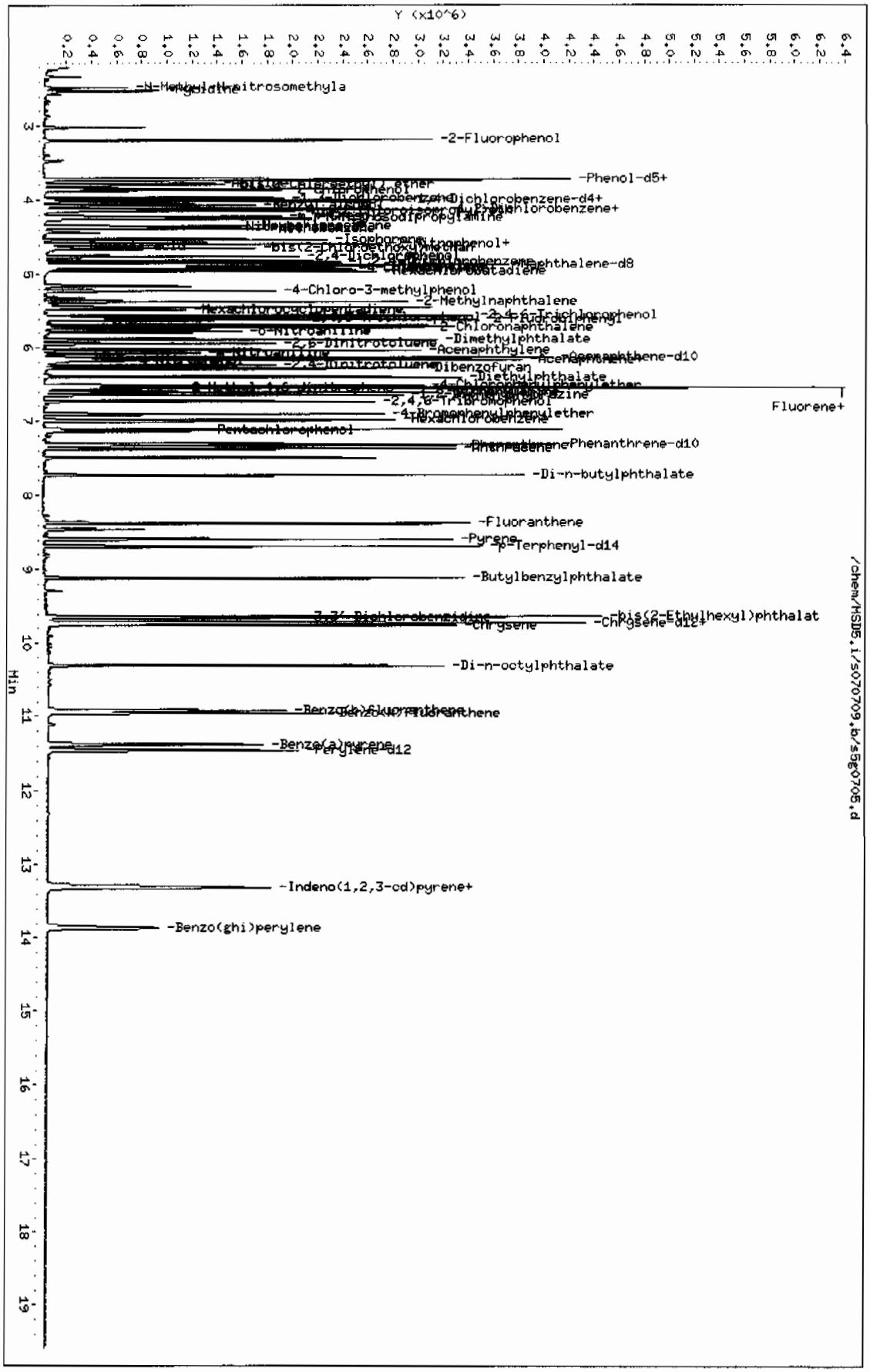

Page 1

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 882563 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201874482 MB	06-JUL-2009 20:30:06	30	1	0.03333
1201874483 LCS	06-JUL-2009 20:30:06	30	1	0.03333
232661002	06-JUL-2009 20:30:06	30.02	1	0.03331
232661003	06-JUL-2009 20:30:06	30	1	0.03333
232661004	06-JUL-2009 20:30:06	30.03	1	0.0333
232661005	06-JUL-2009 20:30:06	30.01	1	0.03332
232661006	06-JUL-2009 20:30:06	30	1	0.03333
232741002	06-JUL-2009 20:30:06	30.01	1	0.03332
1201874484 MS (232741002)	06-JUL-2009 20:30:06	30	1	0.03333
1201874485 MSD (232741002)	06-JUL-2009 20:30:06	30	1	0.03333
232741003	06-JUL-2009 20:30:06	30.02	1	0.03331
232741004	06-JUL-2009 20:30:06	30.03	1	0.0333
232741005	06-JUL-2009 20:30:06	30	1	0.03333
232741006	06-JUL-2009 20:30:06	30.03	1	0.0333
232741007	06-JUL-2009 20:30:06	30	1	0.03333
232741008	06-JUL-2009 20:30:06	30.02	1	0.03331
232741009	06-JUL-2009 20:30:06	30.05	1	0.03328

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201874483	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
LCS	1201874483	BENZIDINE LCS	UE090702-18	1	mL
MS	1201874484	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MS	1201874484	BENZIDINE LCS	UE090702-18	1	mL
MSD	1201874485	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MSD	1201874485	BENZIDINE LCS	UE090702-18	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1143854-D	150	mL
SOURC	All	SODIUM SULFATE	1149626	30	g

Comments:

Verified By: AAW

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD5

DATE: 07/07/2009 METHOD:8270C MSD5-DFTPPx.m OPERATOR:rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1424 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD5.i/s070709.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s5g0701.d	WBN090624-01	rmb	07-JUL-2009 07:12	50PPM	s070709	1.0	DFTPP	
s5g0702-625.d	WBN090617-02.4	RMB	07-JUL-2009 07:25	40 PPM	s070709	1.0	MEGACVS	
s5g0702.d	WBN090617-02.4	RMB	07-JUL-2009 07:25	40 PPM	s070709	1.0	MEGACVS	pass 373014
s5g0703-625.d	WBN090619-01.4	RMB	07-JUL-2009 07:53	40 PPM	s070709	1.0	AP12CVS	
s5g0703.d	WBN090619-01.4	RMB	07-JUL-2009 07:53	40 PPM	s070709	1.0	AP12CVS	
s5g0704-2.d	1201874482	RMB	07-JUL-2009 08:17	882565	09-2524	1.0	SBLK01	
s5g0704.d	1201874482	RMB	07-JUL-2009 08:17	882565	09-2515	1.0	SBLK01	
s5g0705-2.d	1201874483	RMB	07-JUL-2009 08:45	882565	09-2524	1.0	SBLK01LCS	
s5g0705.d	1201874483	RMB	07-JUL-2009 08:45	882565	09-2515	1.0	SBLK01LCS	
s5g0706.d	232661002	RMB	07-JUL-2009 09:13	882565	09-2515	1.0	LANL	
s5g0707.d	232661003	RMB	07-JUL-2009 09:41	882565	09-2515	1.0	LANL	
s5g0708.d	232661004	RMB	07-JUL-2009 10:10	882565	09-2515	1.0	LANL	
s5g0709.d	232661005	RMB	07-JUL-2009 10:38	882565	09-2515	1.0	LANL	
s5g0710.d	232661006	RMB	07-JUL-2009 11:07	882565	09-2515	1.0	LANL	
s5g0711.d	232741002	RMB	07-JUL-2009 11:35	882565	09-2524	1.0	LANL	
s5g0712.d	1201874484	RMB	07-JUL-2009 12:03	882565	09-2524	1.0	LANL41002MS	
s5g0713.d	1201874485	RMB	07-JUL-2009 12:31	882565	09-2524	1.0	LANL41002MSD	
s5g0714.d	232741003	RMB	07-JUL-2009 13:00	882565	09-2524	1.0	LANL	
s5g0715.d	232741004	RMB	07-JUL-2009 13:28	882565	09-2524	1.0	LANL	

s5g0716.d	232741005	RMB	07-JUL-2009 13:56	882565	09-2524	1.0	LANL	
s5g0717.d	232741006	RMB	07-JUL-2009 14:24	882565	09-2524	1.0	LANL	
s5g0718.d	232741007	RMB	07-JUL-2009 14:53	882565	09-2524	1.0	LANL	DUSE - fail istd - s5g0721 pass
s5g0719.d	232741008	RMB	07-JUL-2009 15:21	882565	09-2524	1.0	LANL	
s5g0720.d	232741009	RMB	07-JUL-2009 15:50	882565	09-2524	1.0	LANL	
s5g0721.d	232741007	RMB	07-JUL-2009 16:18	882565	09-2524	1.0	LANL	rr of s5g0718-pass istd
s5g0722.d	instrument blank	RMB	07-JUL-2009 17:31		s070709	1.0		
s5g0723.d	1201874473	RMB	07-JUL-2009 17:59	882561	09-2544	1.0	SBLK01	
s5g0724.d	1201874474	RMB	07-JUL-2009 18:27	882561	09-2544	1.0	SBLK01LCS	DUSE - overrange hits see s5g0726
s5g0725.d	instrument blank	RMB	07-JUL-2009 18:55		s070709	1.0		
s5g0726.d	1201874474	RMB	07-JUL-2009 19:18	882561	09-2544	2.0	SBLK01LCS	
s5g0727.d	232762001	RMB	07-JUL-2009 19:41	882561	09-2544	1.0	LANL	
s5g0728.d	1201874475	RMB	07-JUL-2009 20:03	882561	09-2544	1.0	LANL6200MS	
s5g0729.d	1201874476	RMB	07-JUL-2009 20:26	882561	09-2544	1.0	LANL6200MSD	

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD5

DATE: 06/25/2009 METHOD:8270C MSD5-DFTPPx.m OPERATOR:rmb REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:1139539-D
Multiplier Voltage: 1424 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
CALIBRATION & QC INFORMATION:
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.

SOP: GL-OA-E-009 Rev. 22 Sequence Number: /chem/MSD5.i/s062509.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s5f2501.d	WBN090624-01	rmb	25-JUN-2009 07:16	50PPM	s062509	1.0	DFTPP	DUSE
s5f2502.d	WBN090617-02.4	RMB	25-JUN-2009 07:29	40 PPM	s062509	1.0	MEGACVS	DUSE - fail
s5f2503.d	WBN090617-02.4	RMB	25-JUN-2009 08:12	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - cut column
s5f2504.d	WBN090624-01	rmb	25-JUN-2009 09:17	50PPM	s062509	1.0	DFTPP	DUSE
s5f2505.d	WBN090617-02.4	RMB	25-JUN-2009 09:30	40 PPM	s062509	1.0	MEGACVS	DUSE - fail
s5f2506.d	WBN090619-01.4	RMB	25-JUN-2009 09:58	40 PPM	s062509	1.0	AP12CVS	DUSE
s5f2507.d	WBN090617-02.4	RMB	25-JUN-2009 10:36	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - clean IP
s5f2508.d	WBN090624-01	rmb	25-JUN-2009 12:55	50PPM	s062509	1.0	DFTPP	DUSE
s5f2509.d	WBN090617-02.4	RMB	25-JUN-2009 13:09	40 PPM	s062509	1.0	MEGACVS	DUSE - fail - run ICAL
s5f2510-D.d	WBN090624-01	rmb	25-JUN-2009 14:07	50PPM	s062509	1.0	DFTPP	
s5f2510.d	WBN090624-01	rmb	25-JUN-2009 14:07	50PPM	s062509	1.0	DFTPP	
s5f2511.d	instrument blank	RMB	25-JUN-2009 14:20		s062509	1.0		
s5f2512.d	WBN090602-08	RMB	25-JUN-2009 14:42	1 PPM	s062509	1.0	MEGAICAL001	
s5f2513.d	WBN090602-07	RMB	25-JUN-2009 15:10	10 PPM	s062509	1.0	MEGAICAL010	
s5f2514.d	WBN090602-06	RMB	25-JUN-2009 15:38	20 PPM	s062509	1.0	MEGAICAL020	
s5f2515.d	WBN090602-05.1	RMB	25-JUN-2009 16:05	40 PPM	s062509	1.0	MEGAICAL040	
s5f2516.d	WBN090602-04	RMB	25-JUN-2009 16:33	50 PPM	s062509	1.0	MEGAICAL050	
s5f2517.d	WBN090602-03	RMB	25-JUN-2009 17:02	80 PPM	s062509	1.0	MEGAICAL080	
s5f2518.d	WBN090602-02	RMB	25-JUN-2009 17:29	100 PPM	s062509	1.0	MEGAICAL100	

s5f2519.d	WBN090602-01	RMB	25-JUN-2009 17:57	120 PPM	s062509	1.0	MEGAICAL120	
s5f2520.d	instrument blank	RMB	25-JUN-2009 18:25		s062509	1.0		
s5f2521.d	WBN090602-09.1	RMB	25-JUN-2009 18:48	40 PPM	s062509	1.0	MEGAICV	DUSE - fail
s5f2522.d	WBN090528-07	RMB	25-JUN-2009 19:10	10 PPM	s062509	1.0	AP12ICAL010	
s5f2523.d	WBN090528-06	RMB	25-JUN-2009 19:32	20 PPM	s062509	1.0	AP12ICAL020	
s5f2524.d	WBN090528-05.1	RMB	25-JUN-2009 19:55	40 PPM	s062509	1.0	AP12ICAL040	
s5f2525.d	WBN090528-04	RMB	25-JUN-2009 20:18	50 PPM	s062509	1.0	AP12ICAL050	
s5f2526.d	WBN090528-03	RMB	25-JUN-2009 20:41	80 PPM	s062509	1.0	AP12ICAL080	
s5f2527.d	WBN090528-02	RMB	25-JUN-2009 21:03	100 PPM	s062509	1.0	AP12ICAL100	
s5f2528.d	WBN090528-01	RMB	25-JUN-2009 21:25	120 PPM	s062509	1.0	AP12ICAL120	
s5f2529.d	instrument blank	RMB	25-JUN-2009 21:48		s062509	1.0		
s5f2530-625.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 625 - 062509
s5f2530-D.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 8270D - 062509
s5f2530.d	WBN090528-08.5	RMB	25-JUN-2009 22:11	40 PPM	s062509	1.0	AP12ICV	AP12ICV - 8270C - 062509
s5f2531-D.d	WBN090624-01	rmb	26-JUN-2009 08:28	50PPM	s062509	1.0	DFTPP	
s5f2531.d	WBN090624-01	rmb	26-JUN-2009 08:28	50PPM	s062509	1.0	DFTPP	
s5f2532.d	instrument blank	RMB	26-JUN-2009 08:41		s062509	1.0		
s5f2533-625.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 625 - 062509
s5f2533-BOE.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - BOE - 062509
s5f2533-D.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 8270D - 062509
s5f2533.d	WBN090602-09.1	RMB	26-JUN-2009 09:03	40 PPM	s062509	1.0	MEGAICV	MEGAICV - 8270C - 062509
s5f2534.d	WBN090609-24	RMB	26-JUN-2009 09:31	10 PPM	s062509	1.0	PESTICAL010	
s5f2535.d	WBN090609-23	RMB	26-JUN-2009 09:53	20 PPM	s062509	1.0	PESTICAL020	
s5f2536.d	WBN090609-22.1	RMB	26-JUN-2009 10:16	40 PPM	s062509	1.0	PESTICAL040	
s5f2537.d	WBN090609-21	RMB	26-JUN-2009 10:39	50 PPM	s062509	1.0	PESTICAL050	
s5f2538.d	WBN090609-20	RMB	26-JUN-2009 11:02	80 PPM	s062509	1.0	PESTICAL080	
s5f2539.d	WBN090609-19	RMB	26-JUN-2009 11:25	100 PPM	s062509	1.0	PESTICAL100	

s5f2540.d	WBN090609-18	RMB	26-JUN-2009 11:47	120 PPM	s062509		1.0	PESTICAL120
s5f2541.d	instrument blank	RMB	26-JUN-2009 12:10		s062509		1.0	
s5f2542.d	WBN090624-16	RMB	26-JUN-2009 12:32	500 PPM	s062509		1.0	HEXICAL500
s5f2543.d	WBN090624-15	RMB	26-JUN-2009 12:55	1000 PPM	s062509		1.0	HEXICAL1000
s5f2544.d	WBN090624-14	RMB	26-JUN-2009 13:17	1250 PPM	s062509		1.0	HEXICAL1250
s5f2545.d	WBN090624-13	RMB	26-JUN-2009 13:40	1500 PPM	s062509		1.0	HEXICAL1500
s5f2546.d	WBN090624-12	RMB	26-JUN-2009 14:02	1750 PPM	s062509		1.0	HEXICAL1750
s5f2547.d	UBN090317-02.6	RMB	26-JUN-2009 14:25	2000 PPM	s062509		1.0	HEXICAL2000
s5f2548.d	instrument blank	RMB	26-JUN-2009 14:47		s062509		1.0	
s5f2549-D.d	WBN090609-25.1	RMB	26-JUN-2009 15:10	40 PPM	s062509		1.0	PESTICV PESTICV - 8270D - 062509
s5f2549.d	WBN090609-25.1	RMB	26-JUN-2009 15:10	40 PPM	s062509		1.0	PESTICV PESTICV - 8270C - 062509
s5f2550-D.d	WBN090624-10.1	RMB	26-JUN-2009 15:32	1250 PPM	s062509		1.0	HEXICV HEXICV - 8270D - 062509
s5f2550.d	WBN090624-10.1	RMB	26-JUN-2009 15:32	1250 PPM	s062509		1.0	HEXICV HEXICV - 8270C - 062509
s5f2551.d	UBN090428-01	RMB	26-JUN-2009 15:54	10 PPM	s062509		1.0	NEVADAICAL010
s5f2552.d	UBN090428-02	RMB	26-JUN-2009 16:17	20 PPM	s062509		1.0	NEVADAICAL020
s5f2553.d	UBN090428-03	RMB	26-JUN-2009 16:39	40 PPM	s062509		1.0	NEVADAICAL040
s5f2554.d	UBN090428-04	RMB	26-JUN-2009 17:01	50 PPM	s062509		1.0	NEVADAICAL050
s5f2555.d	UBN090428-05	RMB	26-JUN-2009 17:24	80 PPM	s062509		1.0	NEVADAICAL080
s5f2556.d	UBN090428-06	RMB	26-JUN-2009 17:47	100 PPM	s062509		1.0	NEVADAICAL100
s5f2557.d	UBN090428-07	RMB	26-JUN-2009 18:09	120 PPM	s062509		1.0	NEVADAICAL120

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0712.d
Lab Smp Id: 1201874484 Client Smp ID: CAMO-09-9956MS
Inj Date : 07-JUL-2009 12:03
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201874484|882565|1|SVMF|1|LANL41002MS
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	14.06760	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.002	4.003	(1.000)	342222	40.0000	
* 29 Naphthalene-d8	136	4.874	4.874	(1.000)	1335244	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	814167	40.0000	
* 67 Phenanthrene-d10	188	7.306	7.306	(1.000)	1626254	40.0000	
* 91 Chrysene-d12	240	9.728	9.723	(1.000)	1670460	40.0000	
* 98 Perylene-d12	264	11.461	11.462	(1.000)	1412005	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.797)	454090	60.4318	2340
$ 5 Phenol-d5	99	3.718	3.714	(0.929)	619786	62.5576	2430
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.895)	302929	30.6167	1190
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	722523	34.3140	1330
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	269772	81.2089	3150
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.893)	1078870	42.2017	1640

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.728	3.723	(0.931)	331019	33.6627	1300(Q)
8 2-Chlorophenol	128	3.868	3.868	(0.966)	278939	33.9369	1320
11 1,4-Dichlorobenzene	146	4.012	4.012	(1.002)	268860	27.4742	1060
17 N-Nitrosodipropylamine	70	4.234	4.239	(1.058)	185011	34.9367	1360(Q)
28 1,2,4-Trichlorobenzene	180	4.821	4.821	(0.989)	286738	31.0185	1200
33 4-Chloro-3-methylphenol	107	5.221	5.216	(1.071)	297748	41.8385	1620
47 Acenaphthene	154	6.155	6.155	(1.004)	615515	37.0027	1440
50 2,4-Dinitrotoluene	165	6.242	6.247	(1.018)	257593	39.9825	1550
52 4-Nitrophenol	139	6.174	6.174	(1.007)	128391	44.4732	1720
65 Pentachlorophenol	266	7.137	7.133	(0.977)	165368	41.8541	1620
79 Pyrene	202	8.591	8.592	(0.883)	1591253	43.6657	1690
2 Pyridine	79	2.519	2.510	(0.629)	179066	30.2702	1170
4 Aniline	66	3.781	3.786	(0.945)	146397	34.0729	1320(Q)
7 bis(2-Chloroethyl) ether	63	3.795	3.800	(0.948)	228625	30.1665	1170
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.992)	268559	27.3025	1060
12 Benzyl alcohol	108	4.070	4.070	(1.017)	168611	32.5053	1260
13 1,2-Dichlorobenzene	146	4.118	4.118	(1.029)	266839	29.3486	1140
14 bis(2-Chloroisopropyl)ether	45	4.142	4.147	(1.035)	561437	31.8297	1230
15 o-Cresol	107	4.123	4.118	(1.030)	207700	33.9707	1320
18 m,p-Cresols	107	4.219	4.219	(1.054)	318279	38.9264	1510
19 Hexachloroethane	117	4.344	4.349	(1.085)	94780	26.1150	1010
21 Nitrobenzene	77	4.378	4.378	(0.898)	294503	31.9153	1240
22 Isophorone	82	4.527	4.532	(0.929)	593153	34.7296	1350
23 2-Nitrophenol	139	4.595	4.595	(0.943)	147806	34.1204	1320
24 2,4-Dimethylphenol	122	4.585	4.585	(0.941)	253179	33.8618	1310
25 bis(2-Chloroethoxy)methane	93	4.648	4.653	(0.954)	323464	33.1462	1280
26 2,4-Dichlorophenol	162	4.758	4.759	(0.976)	279359	37.5917	1460
27 Benzoic acid	105	4.628	4.638	(0.950)	44290	21.4920	834
30 Naphthalene	128	4.888	4.889	(1.003)	780197	29.9929	1160
31 4-Chloroaniline	127	4.903	4.903	(1.006)	310068	35.9163	1390
32 Hexachlorobutadiene	225	4.951	4.951	(1.016)	207336	30.7263	1190
34 2-Methylnaphthalene	142	5.370	5.370	(1.102)	591298	37.7353	1460
36 Hexachlorocyclopentadiene	237	5.471	5.471	(0.892)	78714	22.5353	874
37 2,4,6-Trichlorophenol	196	5.558	5.558	(0.907)	254230	40.3529	1560
38 2,4,5-Trichlorophenol	196	5.592	5.587	(0.912)	295098	43.6456	1690
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	638367	36.8456	1430
42 o-Nitroaniline	65	5.779	5.780	(0.943)	226353	41.0889	1590
41 m-Nitroaniline	138	6.078	6.078	(0.991)	169497	53.9501	2090
43 Dimethylphthalate	163	5.880	5.885	(0.959)	923489	44.6527	1730
44 2,6-Dinitrotoluene	165	5.943	5.943	(0.969)	193379	39.2716	1520
45 Acenaphthylene	152	6.030	6.030	(0.984)	1034941	40.5432	1570
48 2,4-Dinitrophenol	184	6.155	6.155	(1.004)	46151	30.5077	1180(Q)
49 Dibenzofuran	168	6.280	6.280	(1.024)	977471	41.4890	1610
51 Diethylphthalate	149	6.396	6.396	(1.043)	937128	46.2618	1790
53 Fluorene	166	6.545	6.545	(1.068)	813640	40.1871	1560
54 4-Chlorophenylphenylether	204	6.516	6.516	(1.063)	472289	40.0071	1550
55 2-Methyl-4,6-dinitrophenol	198	6.559	6.560	(0.898)	110768	33.7255	1310

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.067)	147989	69.4596	2690
133 Diphenylamine	169	6.608	6.603	(0.904)	691326	42.7038	1660
58 1,2-Diphenylhydrazine	77	6.641	6.641	(0.909)	813602	39.5847	1540
61 4-Bromophenylphenylether	248	6.906	6.906	(0.945)	307050	39.5017	1530
63 Hexachlorobenzene	284	6.983	6.983	(0.956)	315397	38.5275	1490
68 Phenanthrene	178	7.330	7.330	(1.003)	1274579	41.8373	1620
69 Anthracene	178	7.373	7.373	(1.009)	1254101	41.7070	1620
72 Di-n-butylphthalate	149	7.725	7.720	(1.057)	1629823	47.0553	1820
76 Fluoranthene	202	8.375	8.375	(1.146)	1557883	44.8899	1740
85 Butylbenzylphthalate	149	9.112	9.112	(0.937)	715262	45.7939	1780
89 Benzo(a)anthracene	228	9.713	9.714	(0.998)	1448726	40.4188	1570
90 3,3'-Dichlorobenzidine	252	9.656	9.648	(0.993)	350040	29.2282	1130
92 Chrysene	228	9.752	9.752	(1.002)	1359569	41.4078	1610
93 bis(2-Ethylhexyl)phthalate	149	9.636	9.632	(0.991)	987263	46.0607	1790
94 Di-n-octylphthalate	149	10.306	10.301	(0.899)	1585281	49.1154	1900
95 Benzo(b)fluoranthene	252	10.927	10.922	(0.953)	1322867	42.4211	1640
96 Benzo(k)fluoranthene	252	10.961	10.956	(0.956)	1319828	43.0873	1670
97 Benzo(a)pyrene	252	11.380	11.380	(0.993)	1170707	42.4092	1640
99 Indeno(1,2,3-cd)pyrene	276	13.301	13.306	(1.160)	997093	35.9445	1390
100 Dibenzo(a,h)anthracene	278	13.320	13.316	(1.162)	834529	36.9065	1430
101 Benzo(ghi)perylene	276	13.864	13.869	(1.210)	777599	32.8808	1280
1 N-Methyl-N-nitrosomethylamine	74	2.481	2.476	(0.620)	120217	30.0702	1170

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070709.b/s5g0712.d
Date : 07-JUL-2009 12:03
Client ID: CAMD-09-9956MS
Sample Info: 1120187448418825651 1:SVMF11:LANL41002MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD5.i
Operator: RMB
Column diameter: 0.20

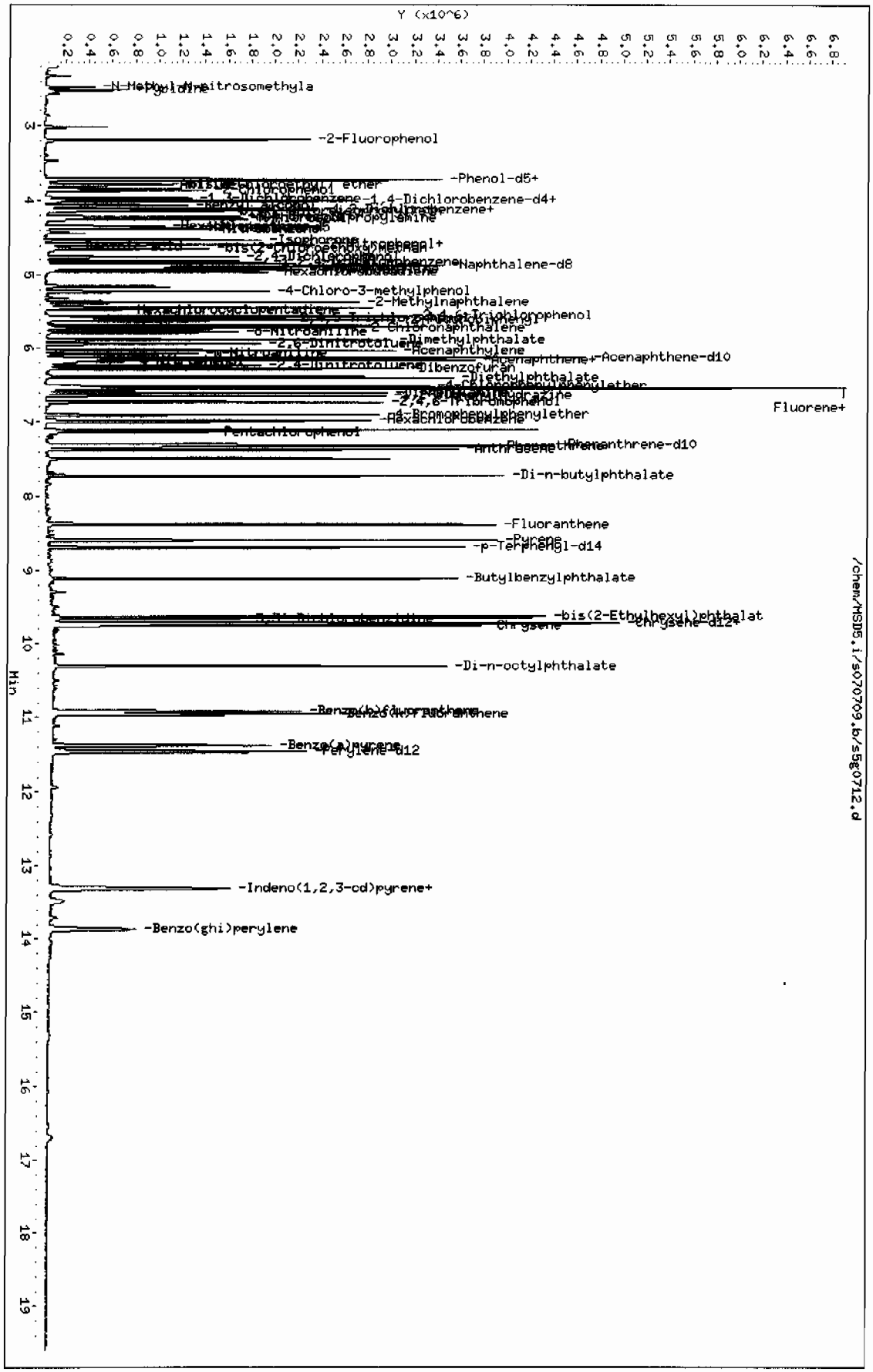

GEL Laboratories LLC

Data file : /chem/MSD5.i/s070709.b/s5g0713.d
Lab Smp Id: 1201874485 Client Smp ID: CAMO-09-9956MSD
Inj Date : 07-JUL-2009 12:31
Operator : RMB Inst ID: MSD5.i
Smp Info : |1201874485|882565|1|SVMF|1|LANL41002MSD
Misc Info : |MSD8270_SF|WBN090628-01
Comment : Column: J&W DB-5MS, 25 m x 0.20 mm x 0.33 micron film
Method : /chem/MSD5.i/s070709.b/MSD5-M8270C-062509.m
Meth Date : 07-Jul-2009 16:55 rmb Quant Type: ISTD
Cal Date : 26-JUN-2009 18:09 Cal File: s5f2557.d
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2524.sub
Target Version: 3.50
Processing Host: kilroy

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	14.06760	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	3.998	4.003	(1.000)	373336	40.0000	
* 29 Naphthalene-d8	136	4.869	4.874	(1.000)	1422068	40.0000	
* 46 Acenaphthene-d10	164	6.131	6.131	(1.000)	847627	40.0000	
* 67 Phenanthrene-d10	188	7.311	7.306	(1.000)	1637138	40.0000	
* 91 Chrysene-d12	240	9.728	9.723	(1.000)	1670559	40.0000	
* 98 Perylene-d12	264	11.466	11.462	(1.000)	1400844	40.0000	
$ 3 2-Fluorophenol	112	3.189	3.184	(0.798)	546348	66.6501	2580
$ 5 Phenol-d5	99	3.719	3.714	(0.930)	731934	67.7202	2630
$ 20 Nitrobenzene-d5	82	4.364	4.369	(0.896)	365877	34.7211	1350
$ 39 2-Fluorobiphenyl	172	5.611	5.611	(0.915)	808708	36.8910	1430
$ 60 2,4,6-Tribromophenol	329	6.733	6.733	(1.098)	294921	85.2749	3310
$ 81 p-Terphenyl-d14	244	8.688	8.688	(0.893)	1146567	44.8471	1740

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.728	3.723	(0.933)	393247	36.6580	1420(Q)
8 2-Chlorophenol	128	3.868	3.868	(0.967)	329273	36.7221	1420
11 1,4-Dichlorobenzene	146	4.012	4.012	(1.004)	326997	30.6303	1190
17 N-Nitrosodipropylamine	70	4.234	4.239	(1.059)	225325	39.0033	1510(Q)
28 1,2,4-Trichlorobenzene	180	4.821	4.821	(0.990)	341089	34.6453	1340
33 4-Chloro-3-methylphenol	107	5.221	5.216	(1.072)	326257	43.0455	1670
47 Acenaphthene	154	6.155	6.155	(1.004)	678952	39.2051	1520
50 2,4-Dinitrotoluene	165	6.242	6.247	(1.018)	272369	40.6071	1580
52 4-Nitrophenol	139	6.179	6.174	(1.008)	120105	39.9608	1550
65 Pentachlorophenol	266	7.137	7.133	(0.976)	170087	42.6453	1650
79 Pyrene	202	8.592	8.592	(0.883)	1576268	43.2519	1680
2 Pyridine	79	2.524	2.510	(0.631)	199622	30.9327	1200
4 Aniline	66	3.786	3.786	(0.947)	153405	32.7284	1270(Q)
7 bis(2-Chloroethyl) ether	63	3.796	3.800	(0.949)	275237	33.2902	1290(Q)
9 1,3-Dichlorobenzene	146	3.969	3.969	(0.993)	332056	30.9444	1200
12 Benzyl alcohol	108	4.070	4.070	(1.018)	201070	35.5323	1380
13 1,2-Dichlorobenzene	146	4.118	4.118	(1.030)	326196	32.8870	1280
14 bis(2-Chloroisopropyl)ether	45	4.142	4.147	(1.036)	669024	34.7681	1350
15 o-Cresol	107	4.123	4.118	(1.031)	248187	37.2096	1440
18 m,p-Cresols	107	4.219	4.219	(1.055)	366178	41.0522	1590
19 Hexachloroethane	117	4.345	4.349	(1.087)	117425	29.6580	1150
21 Nitrobenzene	77	4.378	4.378	(0.899)	355189	36.1417	1400
22 Isophorone	82	4.532	4.532	(0.931)	682106	37.4995	1450
23 2-Nitrophenol	139	4.595	4.595	(0.944)	180414	39.1051	1520
24 2,4-Dimethylphenol	122	4.585	4.585	(0.942)	279135	35.0540	1360
25 bis(2-Chloroethoxy)methane	93	4.648	4.653	(0.954)	384119	36.9585	1430
26 2,4-Dichlorophenol	162	4.759	4.759	(0.977)	314581	39.7468	1540
27 Benzoic acid	105	4.633	4.638	(0.952)	64188	24.8228	963(Q)
30 Naphthalene	128	4.889	4.889	(1.004)	915576	33.0483	1280
31 4-Chloroaniline	127	4.903	4.903	(1.007)	312195	34.3597	1330
32 Hexachlorobutadiene	225	4.951	4.951	(1.017)	247542	34.4449	1340
34 2-Methylnaphthalene	142	5.370	5.370	(1.103)	667960	40.0251	1550
36 Hexachlorocyclopentadiene	237	5.471	5.471	(0.892)	110014	29.3258	1140
37 2,4,6-Trichlorophenol	196	5.558	5.558	(0.907)	273915	41.7611	1620
38 2,4,5-Trichlorophenol	196	5.592	5.587	(0.912)	315898	44.8776	1740
40 2-Chloronaphthalene	162	5.722	5.722	(0.933)	707242	39.2095	1520
42 o-Nitroaniline	65	5.779	5.780	(0.943)	243286	42.4194	1640
41 m-Nitroaniline	138	6.078	6.078	(0.991)	168139	51.9691	2020
43 Dimethylphthalate	163	5.881	5.885	(0.959)	977121	45.3809	1760
44 2,6-Dinitrotoluene	165	5.943	5.943	(0.969)	207988	40.5711	1570
45 Acenaphthylene	152	6.030	6.030	(0.984)	1112841	41.8740	1620
48 2,4-Dinitrophenol	184	6.155	6.155	(1.004)	53601	32.5720	1260(Q)
49 Dibenzofuran	168	6.280	6.280	(1.024)	1038053	42.3211	1640
51 Diethylphthalate	149	6.396	6.396	(1.043)	987220	46.8108	1820
53 Fluorene	166	6.545	6.545	(1.068)	860210	40.8100	1580
54 4-Chlorophenylphenylether	204	6.516	6.516	(1.063)	502858	40.9151	1590
55 2-Methyl-4,6-dinitrophenol	198	6.560	6.560	(0.897)	122741	36.4690	1410

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.540	6.545	(1.067)	143012	64.4740	2500
133 Diphenylamine	169	6.608	6.603	(0.904)	734387	45.0621	1750
58 1,2-Diphenylhydrazine	77	6.641	6.641	(0.908)	871905	42.1394	1630
61 4-Bromophenylphenylether	248	6.906	6.906	(0.945)	319709	40.8568	1580
63 Hexachlorobenzene	284	6.983	6.983	(0.955)	340475	41.3144	1600
68 Phenanthrene	178	7.330	7.330	(1.003)	1279269	41.7121	1620
69 Anthracene	178	7.373	7.373	(1.009)	1319712	43.5972	1690
72 Di-n-butylphthalate	149	7.725	7.720	(1.057)	1687700	48.4023	1880
76 Fluoranthene	202	8.375	8.375	(1.146)	1545151	44.2270	1720
85 Butylbenzylphthalate	149	9.112	9.112	(0.937)	750180	48.0266	1860
89 Benzo(a)anthracene	228	9.714	9.714	(0.998)	1488970	41.5391	1610
90 3,3'-Dichlorobenzidine	252	9.656	9.648	(0.993)	366127	30.5697	1180
92 Chrysene	228	9.752	9.752	(1.002)	1402836	42.7230	1660
93 bis(2-Ethylhexyl)phthalate	149	9.637	9.632	(0.991)	1056145	49.2714	1910
94 Di-n-octylphthalate	149	10.306	10.301	(0.899)	1696728	52.9871	2060
95 Benzo(b)fluoranthene	252	10.927	10.922	(0.953)	1349939	43.6341	1690
96 Benzo(k)fluoranthene	252	10.961	10.956	(0.956)	1404393	46.2133	1790
97 Benzo(a)pyrene	252	11.384	11.380	(0.993)	1204771	43.9909	1710
99 Indeno(1,2,3-cd)pyrene	276	13.306	13.306	(1.160)	1008329	36.6392	1420
100 Dibenzo(a,h)anthracene	278	13.320	13.316	(1.162)	876720	39.0813	1520
101 Benzo(ghi)perylene	276	13.869	13.869	(1.210)	793672	33.8279	1310
1 N-Methyl-N-nitrosomethylamine	74	2.486	2.476	(0.622)	153052	35.0928	1360

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD5.i/s070709.b/s5g0713.d

Date : 07-JUL-2009 12:31

Client ID: CAMO-09-9956MSD

Sample Info: 1120187448518825651 1SVMF1 1LANL41002MSD

Volume Injected (uL): 0.5

Column phase: J&W DB-5MS

Instrument: MSD5.i

Operator: RMB

Column diameter: 0.20

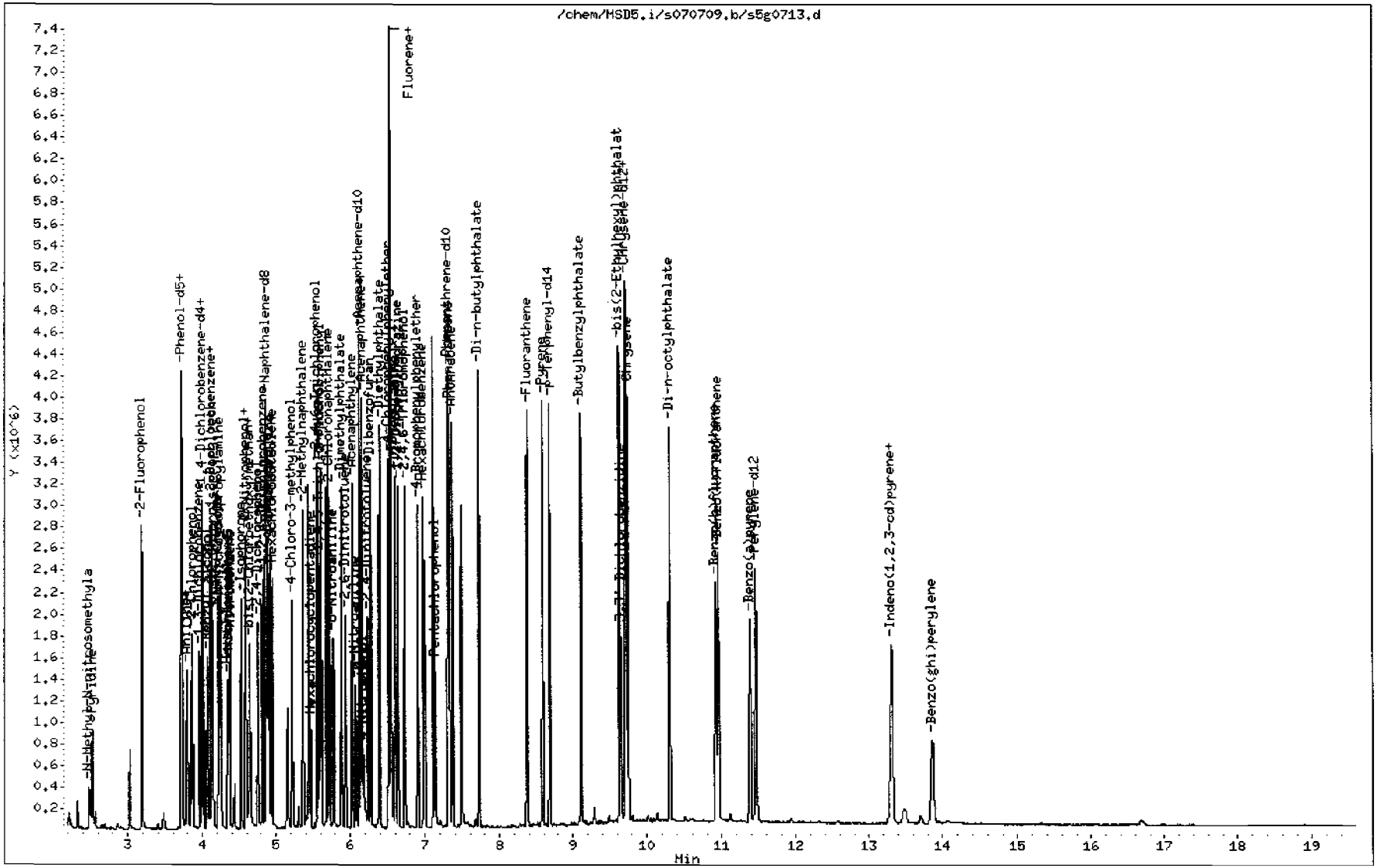

GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2515

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3550B
Analytical Batch Number:	884634
Prep Batch Number:	884632

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
232661005	CAMO-09-10030
232661006	CAMO-09-9989
1201879447	Method Blank (MB)
1201879448	Laboratory Control Sample (LCS)
1201879449	232661005(CAMO-09-10030) Matrix Spike (MS)
1201879450	232661005(CAMO-09-10030) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-040 REV# 13.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

One of the five quantified peaks did not meet the acceptance criteria in Aroclor-1016 standard analyzed for this SDG; however, the average concentration of the five peaks met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232661005 (CAMO-09-10030) was selected for the matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS recoveries for this SDG were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this SDG were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina.

Sample Dilutions
Sample 232661006 (CAMO-09-9989) was diluted at 1:5 due to the oily matrix of the extract.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual

packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
Nonconformance report (NCR) is for documentation of any procedural anomalies that may deviate from referenced SOP or contractual document. A NCR was not required for this SDG.

Manual Integration
Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS. The data reported for the MS and MSD are from the same analytical column as the parent sample.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD1A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide)
ECD1A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticideII)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Jimmi Cao Date: 7/20/09

Roadmap for LANL 09-2515 PCB

This roadmap was analyzed by yip00818 on 07-14-2009, 13:42.
This roadmap was reviewed by rob01090 on 07-14-2009, 15:39.
This roadmap was packaged by yml on 07-17-2009, 14:27.
This roadmap was validated by jim01140 on 07-20-2009, 08:59.

From Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/027f2701.d	232661005	sample	14-JUL-2009	11:22	09-2515.sub	CAMO-09-10030	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/071409.b/030f3001.d	232661006	sample	14-JUL-2009	11:58	09-2515.sub	CAMO-09-9989	5.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/027b2701.d	232661005	sample	14-JUL-2009	11:22	09-2515.sub	CAMO-09-10030	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/071409.b/030b3001.d	232661006	sample	14-JUL-2009	11:58	09-2515.sub	CAMO-09-9989	5.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER

From QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/021f2101-2.d	1201879447	mb	14-JUL-2009	10:21	09-2515.sub	PBLK01	1.00000	884634	
☐	N	/chem/ecd1a.i/071409.b/022f2201-2.d	1201879448	lcs	14-JUL-2009	10:31	09-2515.sub	PBLK01LCS	1.00000	884634	
☐	N	/chem/ecd1a.i/071409.b/028f2801.d	1201879449	ms	14-JUL-2009	11:32	09-2515.sub	CAMO-09-10030MS	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/071409.b/029f2901.d	1201879450	msd	14-JUL-2009	11:43	09-2515.sub	CAMO-09-10030MSD	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd1a.i/071409.b/021b2101-2.d	1201879447	mb	14-JUL-2009	10:21	09-2515.sub	PBLK01	1.00000	884634	
☐	N	/chem/ecd1a.i/071409.b/022b2201-2.d	1201879448	lcs	14-JUL-2009	10:31	09-2515.sub	PBLK01LCS	1.00000	884634	
☐	N	/chem/ecd1a.i/071409.b/028b2801.d	1201879449	ms	14-JUL-2009	11:32	09-2515.sub	CAMO-09-10030MS	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER
☐	N	/chem/ecd1a.i/071409.b/029b2901.d	1201879450	msd	14-JUL-2009	11:43	09-2515.sub	CAMO-09-10030MSD	1.00000	884634	UPLOAD BOTH COLUMNS, USE HIGHER

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**09-2515**	**Date Collected:**	**06/26/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232661005**	**Date Received:**	**07/01/2009 09:00**	**%Moisture:**	**10**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-10030**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**884634**	**Inst:**	**ECD1A.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 11:22**	**Analyst:**	**YS1**	**Inj. Vol:**	**1 uL**
Prep Date:	**07/13/2009 20:17**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**027f2701.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	027b2701.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.70	ug/kg	1.23	3.70	1
11104-28-2	Aroclor-1221	U	3.70	ug/kg	1.23	3.70	1
11141-16-5	Aroclor-1232	U	3.70	ug/kg	1.23	3.70	1
53469-21-9	Aroclor-1242	U	3.70	ug/kg	1.23	3.70	1
12672-29-6	Aroclor-1248	U	3.70	ug/kg	1.23	3.70	1
11097-69-1	Aroclor-1254		7.10	ug/kg	1.23	3.70	1
11096-82-5	Aroclor-1260		8.90	ug/kg	1.23	3.70	2

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661006	**Date Received:**	07/01/2009 09:00	**%Moisture:**	16.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-9989	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	5
Run Date:	07/14/2009 11:58	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.08 g	**Final Volume:**	1 mL
Data File:	030f3001.d	**Column:**	1 CLP1	**Level:**	LOW
	030b3001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	20.0	ug/kg	6.64	20.0	1
11104-28-2	Aroclor-1221	U	20.0	ug/kg	6.64	20.0	1
11141-16-5	Aroclor-1232	U	20.0	ug/kg	6.64	20.0	1
53469-21-9	Aroclor-1242	U	20.0	ug/kg	6.64	20.0	1
12672-29-6	Aroclor-1248	U	20.0	ug/kg	6.64	20.0	1
11097-69-1	Aroclor-1254	U	20.0	ug/kg	6.64	20.0	1
11096-82-5	Aroclor-1260		64.4	ug/kg	6.64	20.0	2

QUALITY CONTROL SUMMARY

PCB

Surrogate Recovery Report

SDG Number: 09-2515

Matrix Type: SOLID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1201879447	MB for batch 884632	90	90	86	84
1201879448	LCS for batch 884632	89	89	88	85
232661005	CAMO-09-10030	57	59	59	59
1201879449	CAMO-09-10030MS	60	61	65	64
1201879450	CAMO-09-10030MSD	68	69	72	71
232661006	CAMO-09-9989	57 D	62 D	58 D	67 D

Surrogate		Acceptance Limits
4CMX	= 4cmx	(34%-105%)
DCB	= Decachlorobiphenyl	(33%-115%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2515
Client ID: LCS for batch 884632
Lab Sample ID: 1201879448
Instrument: ECD1A.I
Analyst: YS1
Inj. Vol: 1 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/14/2009 10:31
Dilution: 1
Prep Batch ID: 884632
Batch ID: 884634

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	LCS	Aroclor-1016	33.3	0.0	27.0	81	41-110
11096-82-5	LCS	Aroclor-1260	33.3	0.0	30.8	92	48-110

PCB

Quality Control Summary

Spike Recovery Report

SDG Number:	**09-2515**	**Sample Type:**	**Matrix Spike**	
Client ID:	**CAMO-09-10030MS**	**Matrix:**	**R**	
Lab Sample ID:	**1201879449**	**%Moisture:**	**10**	
Instrument:	**ECD1A.I**	**Analysis Date:**	**07/14/2009 11:32**	**Dilution: 1**
Analyst:	**YS1**	**Prep Batch ID:**	**884632**	
Inj. Vol:	**1 uL**	**Batch ID:**	**884634**	

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	MS	Aroclor-1016	37.0	0.00	U	20.6	56	23-117
11096-82-5	MS	Aroclor-1260	37.0	8.90		32.9	65	27-116

PCB

Quality Control Summary
Spike Recovery Report

SDG Number:	**09-2515**	**Sample Type:**	**Matrix Spike Duplicate**
Client ID:	**CAMO-09-10030MSD**	**Matrix:**	**R**
Lab Sample ID:	**1201879450**	**%Moisture:**	**10**
Instrument:	**ECD1A.I**	**Analysis Date:**	**07/14/2009 11:43**
Analyst:	**YS1**	**Prep Batch ID:**	**884632**
Inj. Vol:	**1 uL**	**Batch ID:**	**884634**

Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674-11-2	MSD Aroclor-1016	37.0	0.00	U	22.9	62	23-117	11	0-30
11096-82-5	MSD Aroclor-1260	37.0	8.90		37.1	76	27-116	12	0-30

Method Blank Summary

SDG Number:	09–2515	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 884632	Instrument ID:	ECD1A.I_2 ECD1A.I_1	Data File:	021b2101–1.d 021f2101–1.d
Lab Sample ID:	1201879447				
Column:	CLP2 CLP1	Prep Date:	07/13/2009 20:17	Analyzed:	07/14/09 10:21
		Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 884632	1201879448	022f2201–1.d 022b2201–1.d	07/14/09	1031
02 CAMO–09–10030	232661005	027f2701.d 027b2701.d	07/14/09	1122
03 CAMO–09–10030MS	1201879449	028f2801.d 028b2801.d	07/14/09	1132
04 CAMO–09–10030MSD	1201879450	029f2901.d 029b2901.d	07/14/09	1143
05 CAMO–09–9989	232661006	030f3001.d 030b3001.d	07/14/09	1158

SAMPLE DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	232661005	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-10030	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 11:22	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	027f2701.d	**Column:**	1 CLP1	**Level:**	LOW
	027b2701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.70	ug/kg	1.23	3.70	1
11104-28-2	Aroclor-1221	U	3.70	ug/kg	1.23	3.70	1
11141-16-5	Aroclor-1232	U	3.70	ug/kg	1.23	3.70	1
53469-21-9	Aroclor-1242	U	3.70	ug/kg	1.23	3.70	1
12672-29-6	Aroclor-1248	U	3.70	ug/kg	1.23	3.70	1
11097-69-1	Aroclor-1254		7.10	ug/kg	1.23	3.70	1
11096-82-5	Aroclor-1260		8.90	ug/kg	1.23	3.70	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/027f2701.d
Lab Smp Id: 232661005 Client Smp ID: CAMO-09-10030
Inj Date : 14-JUL-2009 11:22
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232661005|1|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-10030|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	38102855	114.637	4.2	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	27384808	118.246	4.4	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.434	3.434	0.000	558150	54.1419	2.0	80.00- 120.00	100.00
3.589	3.589	0.000	944788	68.7229	2.5	113.23- 153.23	169.27
3.824	3.826	-0.002	1311119	76.9066	2.8	148.35- 188.35	234.90
4.095	4.098	-0.003	4739054	376.894	14.0	102.75- 142.75	849.06

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
6 Aroclor-1254 (continued)							
4.260	4.261	-0.001	6491685	378.165	14.0	148.15- 188.15	1163.07
Average of Peak Concentrations =					7.1		
7 Aroclor-1260					CAS #: 11096-82-5		
3.933	3.933	0.000	2746686	179.690	6.6	80.00- 120.00	100.00
4.095	4.096	-0.001	4739054	205.219	7.6	135.17- 175.17	172.54
4.326	4.326	0.000	2820357	242.316	9.0	56.89- 96.89	102.68
4.470	4.470	0.000	2747615	216.910	8.0	64.08- 104.08	100.03
4.834	4.835	-0.001	1743574	296.865	11.0	18.06- 58.06	63.48
Average of Peak Concentrations =					8.4		

Data File: /chem/ecd1a.i/071409.b/027f2701.d
Date : 14-JUL-2009 11:22
Client ID: CAMO-09-10030
Sample Info: 1232661005|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

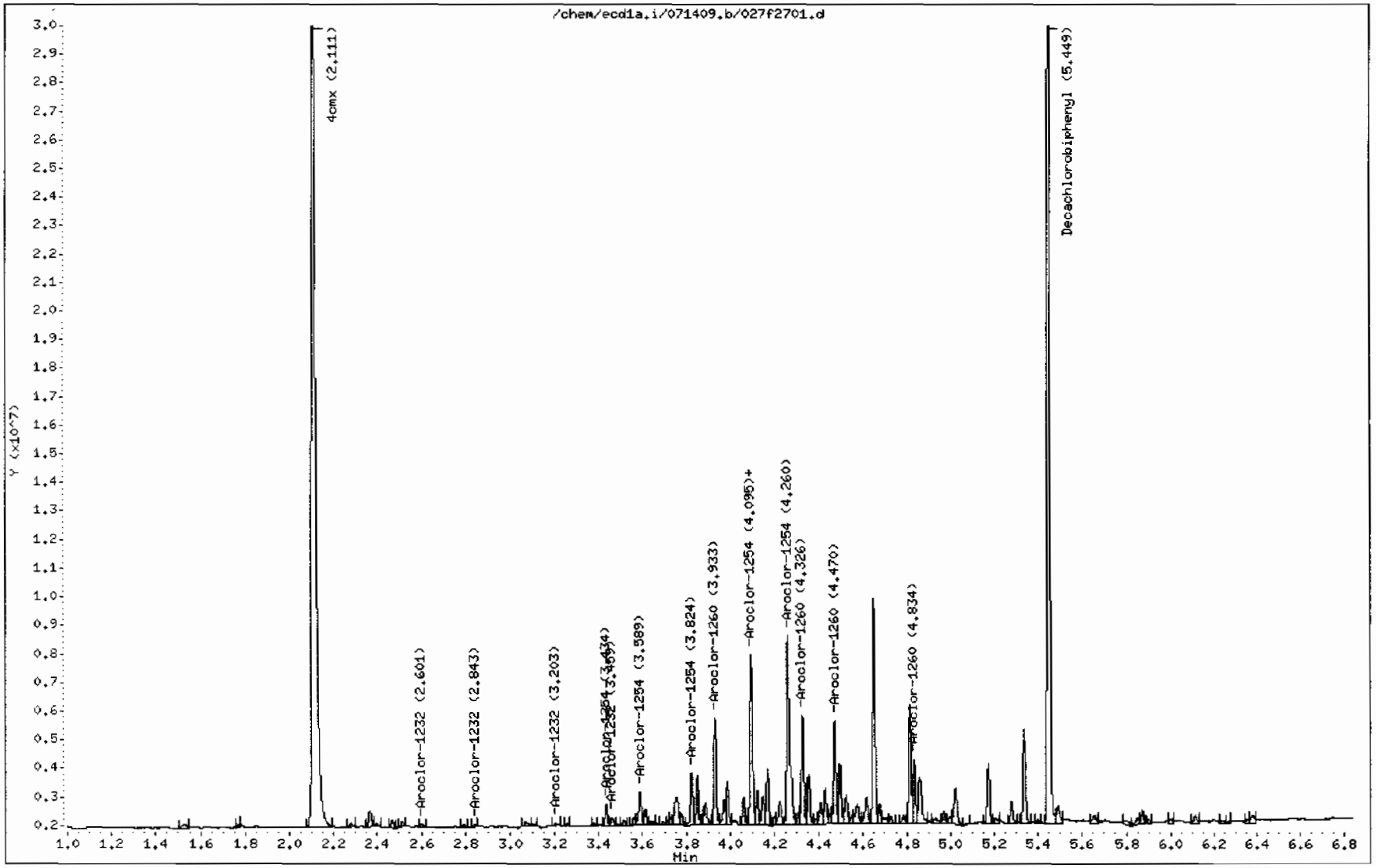

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/027b2701.d
Lab Smp Id: 232661005 Client Smp ID: CAMO-09-10030
Inj Date : 14-JUL-2009 11:22
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232661005|1|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-10030|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	31782839	118.696	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	15347472	117.312	4.3	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.154	4.154	0.000	723631	77.9861	2.9	80.00- 120.00	100.00(M)
4.365	4.365	0.000	396569	57.2438	2.1	55.64- 95.64	54.80
4.435	4.435	0.000	1117992	91.8618	3.4	114.01- 154.01	154.50
4.551	4.553	-0.002	2352604	447.167	16.6	36.82- 76.82	325.11

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
6 Aroclor-1254 (continued)							
4.783	4.782	0.001	890368	141.351	5.2	48.47- 88.47	123.04
Average of Peak Concentrations =					6.0		
7 Aroclor-1260					CAS #: 11096-82-5		
4.551	4.551	0.000	2352604	207.628	7.7	80.00- 120.00	100.00
4.674	4.675	-0.001	2970646	238.551	8.8	93.67- 133.67	126.27
4.944	4.944	0.000	2370315	279.958	10.4	54.30- 94.30	100.75
5.122	5.121	0.001	2035404	231.935	8.6	58.15- 98.15	86.52
5.267	5.267	0.000	4181684	244.783	9.1	140.04- 180.04	177.75
Average of Peak Concentrations =					8.9		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd1a.i/071409.b/027b2701.d
Date : 14-JUL-2009 11:22
Client ID: CAMO-09-10030
Sample Info: |2326610005|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

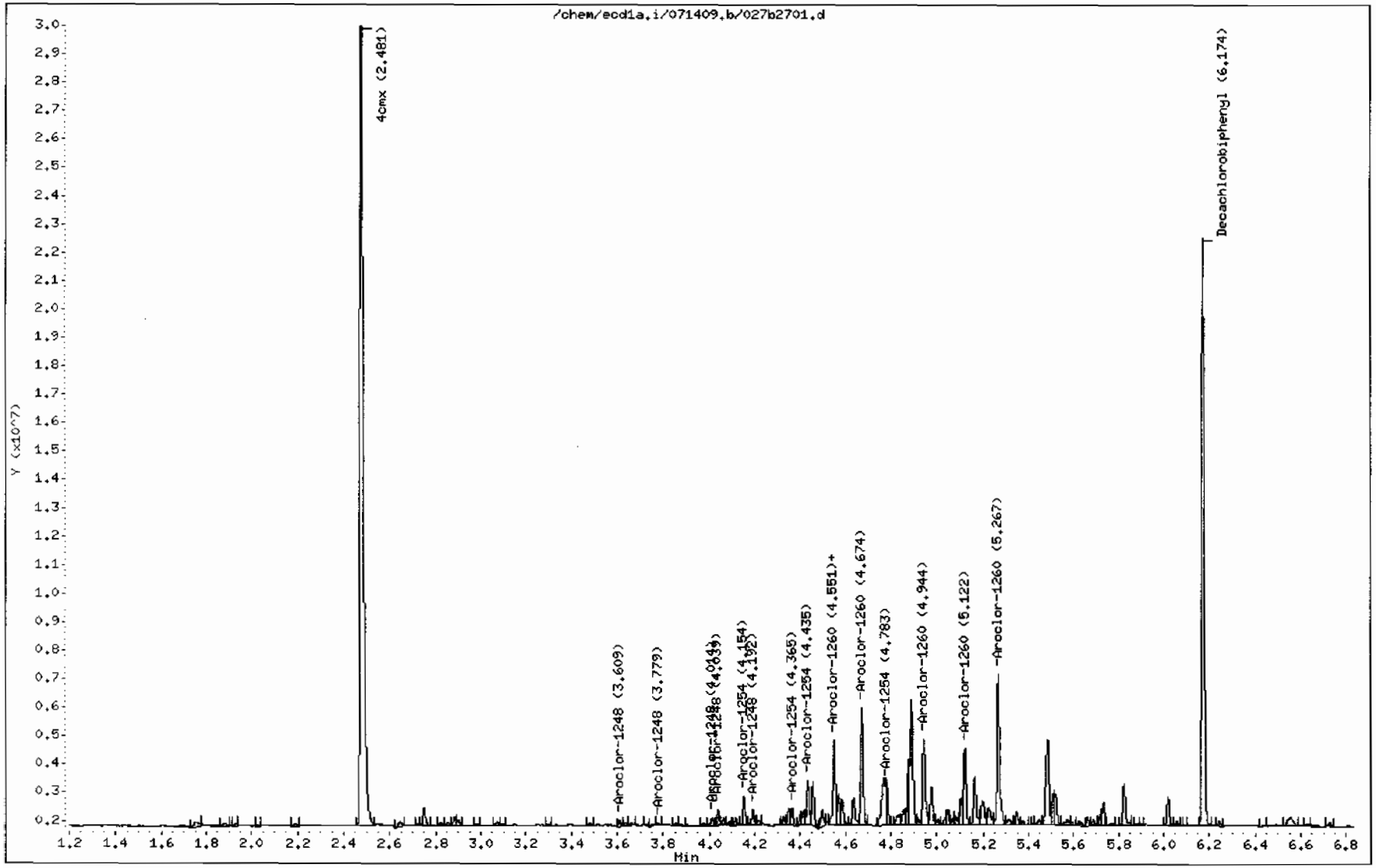

Comment: Manually Integrated
Data File: /chem/ecd1a.i/071409.b/027b2701.d
Operator: YS1
Injection Date: 14-JUL-2009 11:22
Instrument: ecd1a.i
Client Sample ID: CAMO-09-10030

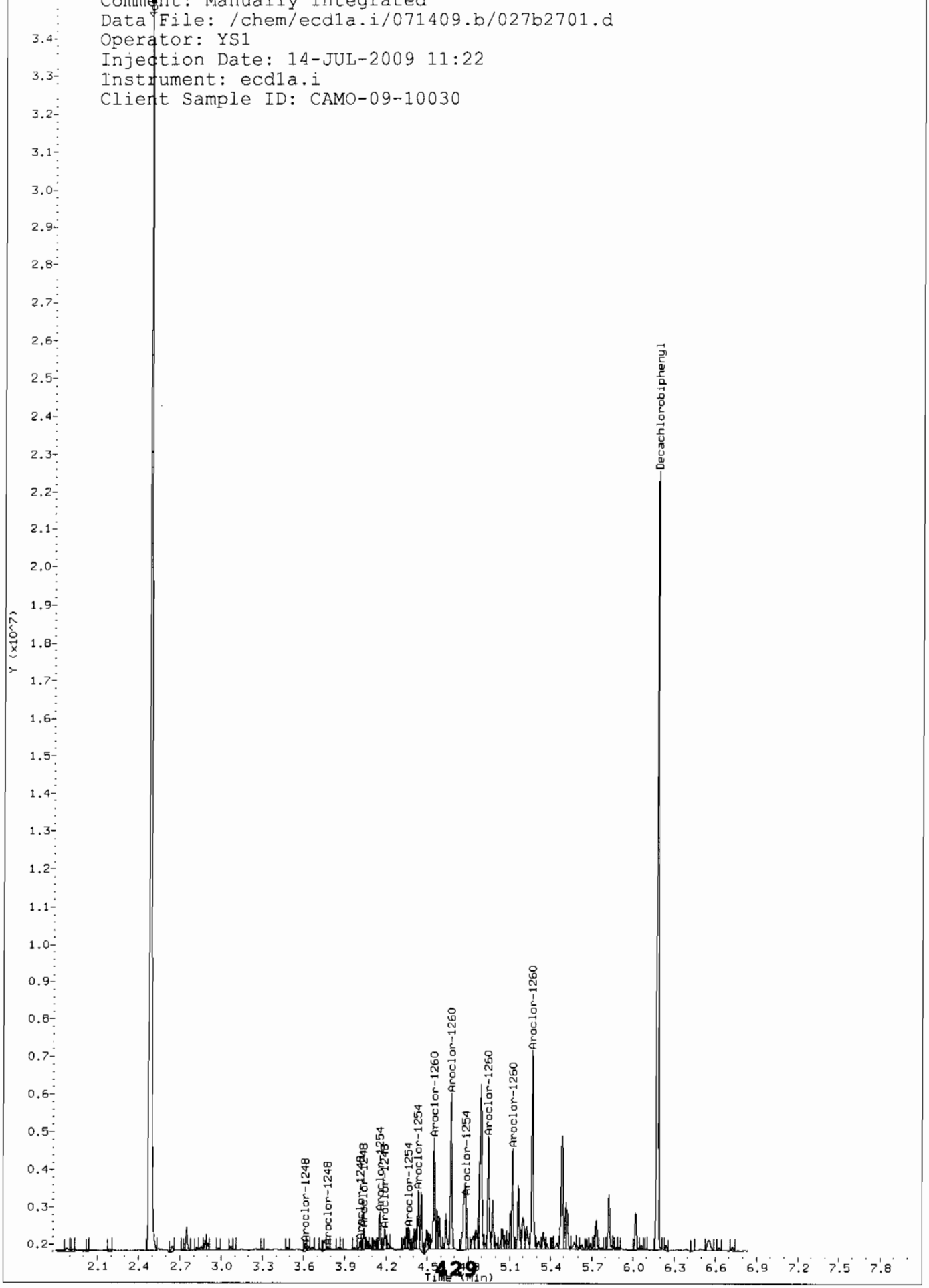

Comment: Before manual integration
Data File: /chem/ecd1a.i/071409.b/orig-027b2701.d
Operator: YS1
Injection Date: 14-JUL-2009 11:22
Instrument: ecd1a.i
Client Sample ID: CAMO-09-10030

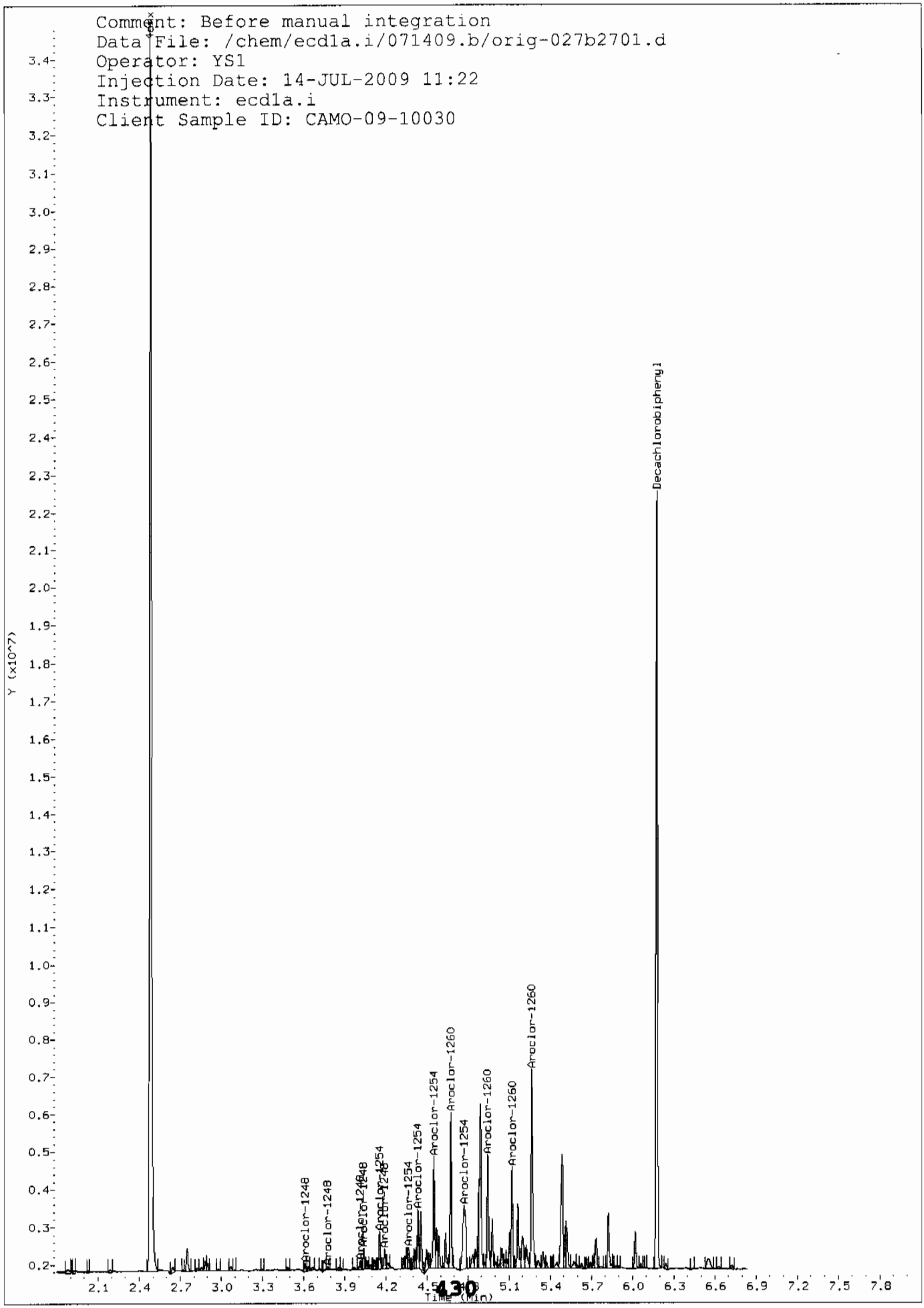

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	Date Collected:	06/26/2009 12:00	Matrix:	R
Lab Sample ID:	232661006	Date Received:	07/01/2009 09:00	%Moisture:	16.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-9989	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	884634	Inst:	ECD1A.I	Dilution:	5
Run Date:	07/14/2009 11:58	Analyst:	YS1	Inj. Vol:	1 uL
Prep Date:	07/13/2009 20:17	Aliquot:	30.08 g	Final Volume:	1 mL
Data File:	030f3001.d	Column:	1 CLP1	Level:	LOW
	030b3001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	20.0	ug/kg	6.64	20.0	1
11104-28-2	Aroclor-1221	U	20.0	ug/kg	6.64	20.0	1
11141-16-5	Aroclor-1232	U	20.0	ug/kg	6.64	20.0	1
53469-21-9	Aroclor-1242	U	20.0	ug/kg	6.64	20.0	1
12672-29-6	Aroclor-1248	U	20.0	ug/kg	6.64	20.0	1
11097-69-1	Aroclor-1254	U	20.0	ug/kg	6.64	20.0	1
11096-82-5	Aroclor-1260		64.4	ug/kg	6.64	20.0	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/030f3001.d
Lab Smp Id: 232661006 Client Smp ID: CAMO-09-9989
Inj Date : 14-JUL-2009 11:58
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232661006|5|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-9989|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 30
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.08000	Weight of sample extracted (g)
M	16.68180	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.110	2.112	-0.002	7556570	22.7348	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.447	5.450	-0.003	5357904	23.1352	4.6	80.00- 120.00	100.00
7 Aroclor-1260					CAS #: 11096-82-5		
3.930	3.933	-0.003	4060158	265.618	53.0	80.00- 120.00	100.00
4.092	4.096	-0.004	5860458	253.780	50.6	135.17- 175.17	144.34
4.323	4.326	-0.003	3455638	296.898	59.2	56.89- 96.89	85.11
4.467	4.470	-0.003	3783633	298.699	59.6	64.08- 104.08	93.19

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	CONCENTRATIONS FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260 (continued)							
4.832	4.835	-0.003	2333053	397.231	79.2	18.06- 58.06	57.46
			Average of Peak Concentrations =		60.3		

Data File: /chem/ecd1a.i/071409.b/030f3001.d
Date : 14-JUL-2009 11:58
Client ID: CAMO-09-9989
Sample Info: |232661006|5|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

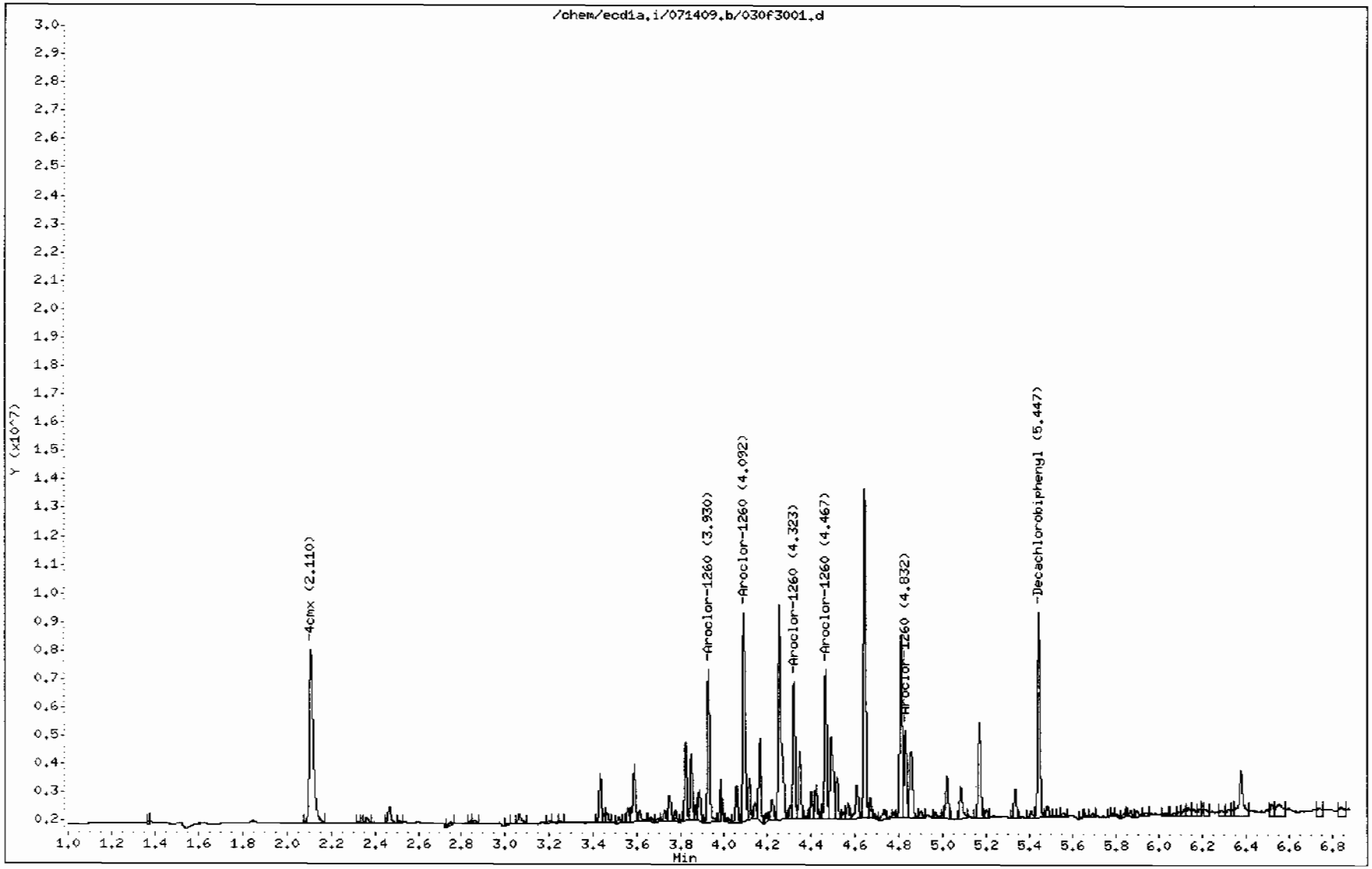

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/030b3001.d
Lab Smp Id: 232661006 Client Smp ID: CAMO-09-9989
Inj Date : 14-JUL-2009 11:58
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |232661006|5|
Misc Info : |ECD82P_1SF|884634|SVAF|LANL|SOIL|CAMO-09-9989|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 30
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	5.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.08000	Weight of sample extracted (g)
M	16.68180	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.478	2.481	-0.003	6677882	24.9391	5.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.172	6.175	-0.003	3486456	26.6495	5.3	80.00- 120.00	100.00
7 Aroclor-1260					CAS #: 11096-82-5		
4.549	4.551	-0.002	3202800	282.661	56.4	80.00- 120.00	100.00
4.672	4.675	-0.003	3608453	289.768	57.8	93.67- 133.67	112.67
4.942	4.944	-0.002	2950075	348.433	69.5	54.30- 94.30	92.11
5.118	5.121	-0.003	2969665	338.394	67.5	58.15- 98.15	92.72

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
==	******	********	********	*******	*******	**********	*****
7 Aroclor-1260 (continued)							
5.264	5.267	-0.003	6047044	353.976	70.6	140.04- 180.04	188.80

Average of Peak Concentrations = 64.4

Data File: /chem/ecd1a.i/071409.b/030b3001.d

Date : 14-JUL-2009 11:58

Client ID: CAMO-09-9989

Sample Info: 12326610061511

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

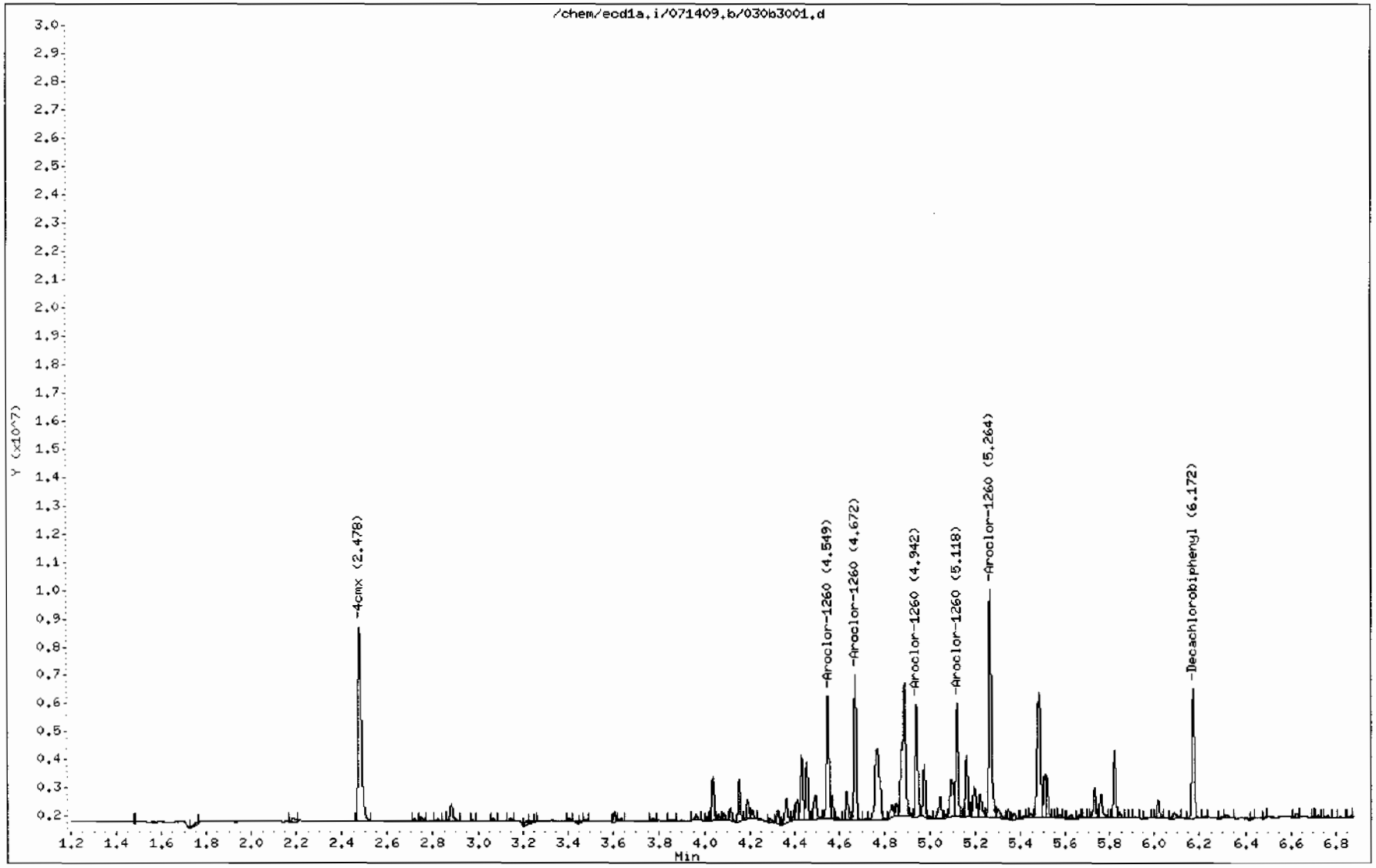

STANDARDS DATA

Report Date: 14-Jul-2009 13:21

Calibration History

Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Start Cal Date: 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
12-JUL-2009 20:14	AR1248	/chem/ecd1a.i/071109.b/020f2001.d
13-JUL-2009 10:14	AR1242	/chem/ecd1a.i/071309.b/004f0401.d
13-JUL-2009 12:28	AR1254	/chem/ecd1a.i/071309.b/017f1701.d
13-JUL-2009 11:27	AR1660	/chem/ecd1a.i/071309.b/011f1101.d
Cal Level: 2 , Cal Amount: 250.00000		
12-JUL-2009 20:24	AR1248	/chem/ecd1a.i/071109.b/021f2101.d
13-JUL-2009 10:25	AR1242	/chem/ecd1a.i/071309.b/005f0501.d
13-JUL-2009 12:39	AR1254	/chem/ecd1a.i/071309.b/018f1801.d
13-JUL-2009 11:37	AR1660	/chem/ecd1a.i/071309.b/012f1201.d
Cal Level: 3 , Cal Amount: 500.00000		
12-JUL-2009 20:34	AR1248	/chem/ecd1a.i/071109.b/022f2201.d
13-JUL-2009 10:35	AR1242	/chem/ecd1a.i/071309.b/006f0601.d
13-JUL-2009 12:49	AR1254	/chem/ecd1a.i/071309.b/019f1901.d
13-JUL-2009 11:47	AR1660	/chem/ecd1a.i/071309.b/013f1301.d
Cal Level: 4 , Cal Amount: 1000.00000		
13-JUL-2009 11:58	AR1660	/chem/ecd1a.i/071309.b/014f1401.d
13-JUL-2009 14:11	DDTANALOGSTD	/chem/ecd1a.i/071309.b/027f2701.d
13-JUL-2009 14:01	AR1268	/chem/ecd1a.i/071309.b/026f2601.d
13-JUL-2009 13:51	AR1262	/chem/ecd1a.i/071309.b/025f2501.d
13-JUL-2009 13:40	AR1221	/chem/ecd1a.i/071309.b/024f2401.d
13-JUL-2009 13:30	AR1232	/chem/ecd1a.i/071309.b/023f2301.d
12-JUL-2009 20:45	AR1248	/chem/ecd1a.i/071109.b/023f2301.d
13-JUL-2009 10:45	AR1242	/chem/ecd1a.i/071309.b/007f0701.d
13-JUL-2009 12:59	AR1254	/chem/ecd1a.i/071309.b/020f2001.d
Cal Level: 5 , Cal Amount: 4000.00000		
12-JUL-2009 20:55	AR1248	/chem/ecd1a.i/071109.b/024f2401.d
13-JUL-2009 10:56	AR1242	/chem/ecd1a.i/071309.b/008f0801.d
13-JUL-2009 13:10	AR1254	/chem/ecd1a.i/071309.b/021f2101.d
13-JUL-2009 12:08	AR1660	/chem/ecd1a.i/071309.b/015f1501.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 12:14	AR1660	/chem/ecd1a.i/071409.b/031f3101.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 10:00	AR1660	/chem/ecd1a.i/071409.b/019f1901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 08:06	AR1268	/chem/ecd1a.i/071409.b/009f0901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:56	AR1262	/chem/ecd1a.i/071409.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:46	AR1221	/chem/ecd1a.i/071409.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:36	AR1232	/chem/ecd1a.i/071409.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:25	AR1248	/chem/ecd1a.i/071409.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:15	AR1242	/chem/ecd1a.i/071409.b/004f0401.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:05	AR1254	/chem/ecd1a.i/071409.b/003f0301.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 06:54	AR1660	/chem/ecd1a.i/071409.b/002f0201.d

Report Date: 14-Jul-2009 13:21

Calibration History

Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Start Cal Date: 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
12-JUL-2009 20:14	AR1248	/chem/ecd1a.i/071109.b/020b2001.d
13-JUL-2009 10:14	AR1242	/chem/ecd1a.i/071309.b/004b0401.d
13-JUL-2009 12:28	AR1254	/chem/ecd1a.i/071309.b/017b1701.d
13-JUL-2009 11:27	AR1660	/chem/ecd1a.i/071309.b/011b1101.d
Cal Level: 2 , Cal Amount: 250.00000		
12-JUL-2009 20:24	AR1248	/chem/ecd1a.i/071109.b/021b2101.d
13-JUL-2009 10:25	AR1242	/chem/ecd1a.i/071309.b/005b0501.d
13-JUL-2009 12:39	AR1254	/chem/ecd1a.i/071309.b/018b1801.d
13-JUL-2009 11:37	AR1660	/chem/ecd1a.i/071309.b/012b1201.d
Cal Level: 3 , Cal Amount: 500.00000		
12-JUL-2009 20:34	AR1248	/chem/ecd1a.i/071109.b/022b2201.d
13-JUL-2009 10:35	AR1242	/chem/ecd1a.i/071309.b/006b0601.d
13-JUL-2009 12:49	AR1254	/chem/ecd1a.i/071309.b/019b1901.d
13-JUL-2009 11:47	AR1660	/chem/ecd1a.i/071309.b/013b1301.d
Cal Level: 4 , Cal Amount: 1000.00000		
13-JUL-2009 14:11	DDTANALOGSTD	/chem/ecd1a.i/071309.b/027b2701.d
13-JUL-2009 14:01	AR1268	/chem/ecd1a.i/071309.b/026b2601.d
13-JUL-2009 13:51	AR1262	/chem/ecd1a.i/071309.b/025b2501.d
13-JUL-2009 13:40	AR1221	/chem/ecd1a.i/071309.b/024b2401.d
13-JUL-2009 13:30	AR1232	/chem/ecd1a.i/071309.b/023b2301.d
12-JUL-2009 20:45	AR1248	/chem/ecd1a.i/071109.b/023b2301.d
13-JUL-2009 10:45	AR1242	/chem/ecd1a.i/071309.b/007b0701.d
13-JUL-2009 12:59	AR1254	/chem/ecd1a.i/071309.b/020b2001.d
13-JUL-2009 11:58	AR1660	/chem/ecd1a.i/071309.b/014b1401.d
Cal Level: 5 , Cal Amount: 4000.00000		
12-JUL-2009 20:55	AR1248	/chem/ecd1a.i/071109.b/024b2401.d
13-JUL-2009 10:56	AR1242	/chem/ecd1a.i/071309.b/008b0801.d
13-JUL-2009 13:10	AR1254	/chem/ecd1a.i/071309.b/021b2101.d
13-JUL-2009 12:08	AR1660	/chem/ecd1a.i/071309.b/015b1501.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 12:14	AR1660	/chem/ecd1a.i/071409.b/031b3101.d

| Ccal Level: 4 , Ccal Amount: 1000 |

14-JUL-2009 10:00	AR1660	/chem/ecd1a.i/071409.b/019b1901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 08:06	AR1268	/chem/ecd1a.i/071409.b/009b0901.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:56	AR1262	/chem/ecd1a.i/071409.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:46	AR1221	/chem/ecd1a.i/071409.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:36	AR1232	/chem/ecd1a.i/071409.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:25	AR1248	/chem/ecd1a.i/071409.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:15	AR1242	/chem/ecd1a.i/071409.b/004b0401.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 07:05	AR1254	/chem/ecd1a.i/071409.b/003b0301.d
Ccal Level: 4 , Ccal Amount: 1000		
14-JUL-2009 06:54	AR1660	/chem/ecd1a.i/071409.b/002b0201.d

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COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 14-Jul-2009 11:21 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	12031.000000
Initial:End Threshold	6015.500000
Initial:Area Threshold	15489.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	2.100000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.577	2.547-2.607	1.420e+04
	2.871	2.841-2.901	1.658e+04
	2.953	2.923-2.983	1.176e+04
	3.067	3.037-3.097	6.386e+03
	3.204	3.174-3.234	8.786e+03
63 4,4-DDD	4.113	4.093-4.133	1.737e+05
64 4,4-DDE	3.760	3.740-3.780	2.824e+05
62 4,4-DDT	4.277	4.257-4.297	1.087e+05
2 Aroclor-1221	2.226	2.196-2.256	3.603e+03
	2.323	2.293-2.353	2.093e+03
	2.350	2.320-2.380	8.763e+03
3 Aroclor-1232	2.578	2.548-2.608	5.881e+03
	2.871	2.841-2.901	6.649e+03
	2.953	2.923-2.983	4.841e+03
	3.204	3.174-3.234	3.329e+03
	3.475	3.445-3.505	3.163e+03
4 Aroclor-1242	2.871	2.841-2.901	1.180e+04
	2.953	2.923-2.983	8.492e+03
	3.083	3.053-3.113	4.671e+03
	3.204	3.174-3.234	6.573e+03
	3.476	3.446-3.506	6.305e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m

Compound	RT	RT Window	RF
5 Aroclor-1248	2.871	2.841-2.901	6.859e+03
	3.083	3.053-3.113	7.086e+03
	3.476	3.446-3.506	1.081e+04
	3.592	3.562-3.622	9.929e+03
	3.826	3.796-3.856	6.674e+03
6 Aroclor-1254	3.434	3.404-3.464	1.031e+04
	3.589	3.559-3.619	1.375e+04
	3.826	3.796-3.856	1.705e+04
	4.098	4.068-4.128	1.257e+04
	4.261	4.231-4.291	1.717e+04
7 Aroclor-1260	3.933	3.903-3.963	1.529e+04
	4.096	4.066-4.126	2.309e+04
	4.326	4.296-4.356	1.164e+04
	4.470	4.440-4.500	1.267e+04
	4.835	4.805-4.865	5.873e+03
8 Aroclor-1262	4.096	4.066-4.126	1.362e+04
	4.327	4.297-4.357	1.673e+04
	4.471	4.441-4.501	1.541e+04
	4.651	4.621-4.681	3.022e+04
	4.836	4.806-4.866	1.174e+04
9 Aroclor-1268	4.836	4.806-4.866	3.793e+04
	4.858	4.828-4.888	3.567e+04
	4.972	4.942-5.002	2.851e+04
	5.020	4.990-5.050	1.026e+04
	5.340	5.310-5.370	8.118e+04
M 10 Aroclor-Total	1.000	0.980-1.020	
$ 11 4cmx	2.112	2.082-2.142	3.324e+05
$ 12 Decachlorobiphenyl	5.450	5.420-5.480	2.316e+05

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Quant Method : ESTD Target Version : 3.50
Last Update : 14-Jul-2009 11:20 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	7222.000000
Initial:End Threshold	3611.000000
Initial:Area Threshold	6833.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	1.500000

Compound	RT	RT Window	RF
1 Aroclor-1016	3.399	3.369-3.429	1.056e+04
	3.484	3.454-3.514	8.404e+03
	3.549	3.519-3.579	4.949e+03
	3.779	3.749-3.809	6.810e+03
	3.855	3.825-3.885	5.449e+03
62 4,4-DDT	4.889	4.869-4.909	1.398e+04
63 4,4-DDE	4.351	4.331-4.371	1.578e+05
64 4,4-DDD	4.699	4.680-4.720	1.020e+05
2 Aroclor-1221	2.684	2.654-2.714	2.867e+03
	2.781	2.751-2.811	1.893e+03
	2.823	2.793-2.853	6.284e+03
3 Aroclor-1232	3.387	3.357-3.417	3.439e+03
	3.484	3.454-3.514	3.620e+03
	3.550	3.520-3.580	2.104e+03
	3.779	3.749-3.809	2.601e+03
	4.042	4.012-4.072	2.590e+03
4 Aroclor-1242	3.399	3.369-3.429	7.855e+03
	3.484	3.454-3.514	6.237e+03
	3.549	3.519-3.579	3.663e+03
	3.779	3.749-3.809	5.090e+03
	4.184	4.154-4.214	5.348e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m

Compound	RT	RT Window	RF
5 Aroclor-1248	3.610	3.580-3.640	6.881e+03
	3.779	3.749-3.809	8.383e+03
	4.014	3.984-4.044	8.254e+03
	4.042	4.012-4.072	9.027e+03
	4.182	4.152-4.212	9.382e+03
6 Aroclor-1254	4.154	4.124-4.184	9.279e+03
	4.365	4.335-4.395	6.928e+03
	4.435	4.405-4.465	1.217e+04
	4.553	4.523-4.583	5.261e+03
	4.782	4.752-4.812	6.299e+03
7 Aroclor-1260	4.551	4.521-4.581	1.133e+04
	4.675	4.645-4.705	1.245e+04
	4.944	4.914-4.974	8.467e+03
	5.121	5.091-5.151	8.776e+03
	5.267	5.237-5.297	1.708e+04
8 Aroclor-1262	4.676	4.646-4.706	8.226e+03
	4.945	4.915-4.975	1.144e+04
	5.122	5.092-5.152	1.058e+04
	5.267	5.237-5.297	1.817e+04
	5.483	5.453-5.513	1.296e+04
9 Aroclor-1268	5.481	5.451-5.511	2.315e+04
	5.510	5.480-5.540	2.066e+04
	5.661	5.631-5.691	1.659e+04
	5.825	5.795-5.855	7.750e+03
	6.019	5.989-6.049	4.217e+04
M 10 Aroclor-Total	1.000	0.980-1.020	
$ 11 4cmx	2.481	2.451-2.511	2.678e+05
$ 12 Decachlorobiphenyl	6.175	6.145-6.205	1.308e+05

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : None
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Cal Date : 14-Jul-2009 11:21 yip00818
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd1a.i/071109.b/020f2001.d
Level 2: /chem/ecd1a.i/071109.b/021f2101.d
Level 3: /chem/ecd1a.i/071109.b/022f2201.d
Level 4: /chem/ecd1a.i/071309.b/014f1401.d
Level 5: /chem/ecd1a.i/071109.b/024f2401.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	16924	14564	13967	13438	12123	14203	12.449
(2)	18513	16515	16449	15988	15411	16575	7.058
(3)	13921	11878	11559	11159	10300	11763	11.420
(4)	7402	6602	6331	5895	5698	6386	10.494
(5)	10087	9011	8652	8280	7902	8786	9.518
63 4,4-DDD	+++++	+++++	+++++	173744	+++++	173744	0.000
64 4,4-DDE	+++++	+++++	+++++	282407	+++++	282407	0.000
62 4,4-DDT	+++++	+++++	+++++	108721	+++++	108721	0.000
2 Aroclor-1221(1)	+++++	+++++	+++++	3603	+++++	3603	0.000
(2)	+++++	+++++	+++++	2093	+++++	2093	0.000
(3)	+++++	+++++	+++++	8763	+++++	8763	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	5881	+++++	5881	0.000
(2)	+++++	+++++	+++++	6649	+++++	6649	0.000
(3)	+++++	+++++	+++++	4841	+++++	4841	0.000
(4)	+++++	+++++	+++++	3329	+++++	3329	0.000
(5)	+++++	+++++	+++++	3163	+++++	3163	0.000
4 Aroclor-1242(1)	12953	12079	12027	11524	10436	11804	7.804
(2)	9555	8853	8571	8115	7366	8492	9.631
(3)	5342	4870	4817	4469	3858	4671	11.791
(4)	7471	6850	6670	6304	5573	6573	10.662
(5)	7057	6557	6463	6010	5437	6305	9.694
5 Aroclor-1248(1)	6834	7144	7199	6590	6528	6859	4.489
(2)	7502	7359	7611	6506	6453	7086	7.920
(3)	10800	11014	11526	10636	10059	10807	4.960
(4)	10197	10234	10465	9642	9106	9929	5.543
(5)	6905	6860	7077	6483	6045	6674	6.187

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : None
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Cal Date : 14-Jul-2009 11:21 yip00818
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
6 Aroclor-1254(1)	11907	10934	10030	9520	9154	10309	10.821
(2)	15730	14504	13344	12844	12317	13748	9.981
(3)	18697	18035	16757	16177	15575	17048	7.595
(4)	14120	13596	12332	11789	11033	12574	10.125
(5)	18902	18436	16710	16149	15635	17166	8.346
7 Aroclor-1260(1)	17216	15216	15153	14709	14135	15286	7.607
(2)	25598	23029	23141	22211	21485	23093	6.724
(3)	13137	11670	11572	10959	10858	11639	7.830
(4)	14210	12690	12564	12011	11860	12667	7.357
(5)	6811	5968	5843	5315	5430	5873	10.062
8 Aroclor-1262(1)	+++++	+++++	+++++	13625	+++++	13625	0.000
(2)	+++++	+++++	+++++	16733	+++++	16733	0.000
(3)	+++++	+++++	+++++	15410	+++++	15410	0.000
(4)	+++++	+++++	+++++	30218	+++++	30218	0.000
(5)	+++++	+++++	+++++	11738	+++++	11738	0.000
9 Aroclor-1268(1)	+++++	+++++	+++++	37931	+++++	37931	0.000
(2)	+++++	+++++	+++++	35669	+++++	35669	0.000
(3)	+++++	+++++	+++++	28512	+++++	28512	0.000
(4)	+++++	+++++	+++++	10258	+++++	10258	0.000
(5)	+++++	+++++	+++++	81177	+++++	81177	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 11 4cmx	362221	322647	328629	330870	317524	332379	5.259
$ 12 Decachlorobiphenyl	254649	231990	231979	217250	222089	231591	6.212

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Cal Date : 14-Jul-2009 11:20 yip00818
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd1a.i/071109.b/020b2001.d
Level 2: /chem/ecd1a.i/071109.b/021b2101.d
Level 3: /chem/ecd1a.i/071109.b/022b2201.d
Level 4: /chem/ecd1a.i/071309.b/027b2701.d
Level 5: /chem/ecd1a.i/071109.b/024b2401.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	12372	10905	10724	9871	8926	10560	12.143
(2)	10554	8794	8237	7723	6710	8404	16.972
(3)	6020	5202	4919	4479	4124	4949	14.691
(4)	8364	7127	6732	6230	5598	6810	15.271
(5)	6766	5701	5407	4890	4481	5449	16.027
62 4,4-DDT	+++++	+++++	+++++	13984	+++++	13984	0.000
63 4,4-DDE	+++++	+++++	+++++	157795	+++++	157795	0.000
64 4,4-DDD	+++++	+++++	+++++	101978	+++++	101978	0.000
2 Aroclor-1221(1)	+++++	+++++	+++++	2867	+++++	2867	0.000
(2)	+++++	+++++	+++++	1893	+++++	1893	0.000
(3)	+++++	+++++	+++++	6284	+++++	6284	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	3439	+++++	3439	0.000
(2)	+++++	+++++	+++++	3620	+++++	3620	0.000
(3)	+++++	+++++	+++++	2104	+++++	2104	0.000
(4)	+++++	+++++	+++++	2601	+++++	2601	0.000
(5)	+++++	+++++	+++++	2590	+++++	2590	0.000
4 Aroclor-1242(1)	9217	8405	7931	7533	6192	7855	14.276
(2)	7778	6628	6169	5698	4912	6237	17.151
(3)	4478	3953	3677	3364	2843	3663	16.776
(4)	6197	5476	5107	4726	3943	5090	16.507
(5)	6587	5781	5394	4896	4082	5348	17.568
5 Aroclor-1248(1)	7568	7947	7100	6300	5491	6881	14.397
(2)	9176	9490	8664	7756	6830	8383	12.983
(3)	9183	9455	8421	7099	7113	8254	13.503
(4)	10315	10032	9379	7417	7989	9027	14.083
(5)	10004	10641	9758	8795	7712	9382	12.207

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUL-2009 17:09
End Cal Date : 13-JUL-2009 14:11
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Cal Date : 14-Jul-2009 11:20 yip00818
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
6 Aroclor-1254(1)	11228	10287	9085	8338	7457	9279	16.219
(2)	8282	7597	6851	6194	5715	6928	14.962
(3)	14447	13279	11987	11068	10071	12170	14.271
(4)	6500	5749	5240	4606	4211	5261	17.285
(5)	7341	7064	6143	5754	5193	6299	14.239
7 Aroclor-1260(1)	13958	11743	11149	10501	9303	11331	15.228
(2)	15079	12881	12435	11458	10411	12453	14.048
(3)	10349	8880	8366	7731	7008	8467	14.933
(4)	10513	9207	8743	8019	7396	8776	13.583
(5)	19838	17735	17267	15755	14821	17083	11.309
8 Aroclor-1262(1)	+++++	+++++	+++++	8226	+++++	8226	0.000
(2)	+++++	+++++	+++++	11437	+++++	11437	0.000
(3)	+++++	+++++	+++++	10579	+++++	10579	0.000
(4)	+++++	+++++	+++++	18172	+++++	18172	0.000
(5)	+++++	+++++	+++++	12963	+++++	12963	0.000
9 Aroclor-1268(1)	+++++	+++++	+++++	23151	+++++	23151	0.000
(2)	+++++	+++++	+++++	20662	+++++	20662	0.000
(3)	+++++	+++++	+++++	16588	+++++	16588	0.000
(4)	+++++	+++++	+++++	7750	+++++	7750	0.000
(5)	+++++	+++++	+++++	42173	+++++	42173	0.000
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 11 4cmx	309513	269887	264377	259792	235267	267767	10.018
$ 12 Decachlorobiphenyl	157032	136728	130596	117157	112618	130826	13.458

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 0654

Lab File ID: 002F0201 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	14203.241	13076.108	0.01	-7.9	15.0
(2)	16575.200	15186.652	0.01	-8.4	15.0
(3)	11763.386	10734.692	0.01	-8.7	15.0
(4)	6385.917	5640.692	0.01	-11.7	15.0
(5)	8786.443	7951.909	0.01	-9.5	15.0
Aroclor-1260	15285.677	14227.461	0.01	-6.9	15.0
(2)	23092.700	21553.043	0.01	-6.7	15.0
(3)	11639.153	10600.269	0.01	-8.9	15.0
(4)	12667.045	11656.883	0.01	-8.0	15.0
(5)	5873.295	5352.330	0.01	-8.9	15.0
4cmx	332378.50	321590.67	0.01	-3.2	15.0
Decachlorobiphenyl	231591.28	215001.14	0.01	-7.2	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 0654

Lab File ID: 002B0201 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	10559.500	9947.304	0.01	-5.8	15.0
(2)	8403.626	7716.737	0.01	-8.2	15.0
(3)	4948.505	4496.304	0.01	-9.1	15.0
(4)	6810.219	6210.739	0.01	-8.8	15.0
(5)	5449.030	4946.016	0.01	-9.2	15.0
Aroclor-1260	11330.884	10390.957	0.01	-8.3	15.0
(2)	12452.888	11322.174	0.01	-9.1	15.0
(3)	8466.689	7671.382	0.01	-9.4	15.0
(4)	8775.756	7929.019	0.01	-9.6	15.0
(5)	17083.207	15729.544	0.01	-7.9	15.0
4cmx	267767.10	261384.60	0.01	-2.4	15.0
Decachlorobiphenyl	130826.14	116586.63	0.01	-10.9	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 0705

Lab File ID: 003F0301 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1228 1310

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1254	10309.021	9565.161	0.01	-7.2	15.0
(2)	13747.797	12743.688	0.01	-7.3	15.0
(3)	17048.195	16103.412	0.01	-5.5	15.0
(4)	12573.977	11741.256	0.01	-6.6	15.0
(5)	17166.257	16083.550	0.01	-6.3	15.0
4cmx	332378.50	316754.54	0.01	-4.7	15.0
Decachlorobiphenyl	231591.28	211008.92	0.01	-8.9	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 0705

Lab File ID: 003B0301 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1228 1310

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1254	9278.972	8393.889	0.01	-9.5	15.0
(2)	6927.720	6349.023	0.01	-8.4	15.0
(3)	12170.362	11248.393	0.01	-7.6	15.0
(4)	5261.133	4769.142	0.01	-9.4	15.0
(5)	6298.981	5747.266	0.01	-8.8	15.0
4cmx	267767.10	259057.97	0.01	-3.2	15.0
Decachlorobiphenyl	130826.14	114887.12	0.01	-12.2	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1000

Lab File ID: 019F1901 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	14203.241	13623.921	0.01	-4.1	15.0
(2)	16575.200	17122.131	0.01	3.3	15.0
(3)	11763.386	11364.367	0.01	-3.4	15.0
(4)	6385.917	6093.521	0.01	-4.6	15.0
(5)	8786.443	8685.457	0.01	-1.1	15.0
Aroclor-1260	15285.677	15114.016	0.01	-1.1	15.0
(2)	23092.700	23255.466	0.01	0.7	15.0
(3)	11639.153	11537.482	0.01	-0.9	15.0
(4)	12667.045	12563.517	0.01	-0.8	15.0
(5)	5873.295	5688.421	0.01	-3.1	15.0
4cmx	332378.50	334439.59	0.01	0.6	15.0
Decachlorobiphenyl	231591.28	234979.91	0.01	1.5	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1000

Lab File ID: 019B1901 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	10559.500	11323.881	0.01	7.2	15.0
(2)	8403.626	8421.726	0.01	0.2	15.0
(3)	4948.505	5075.640	0.01	2.6	15.0
(4)	6810.219	6842.460	0.01	0.5	15.0
(5)	5449.030	5491.288	0.01	0.8	15.0
Aroclor-1260	11330.884	11292.830	0.01	-0.3	15.0
(2)	12452.888	12734.567	0.01	2.3	15.0
(3)	8466.689	8366.958	0.01	-1.2	15.0
(4)	8775.756	8773.824	0.01	-0.0	15.0
(5)	17083.207	17736.968	0.01	3.8	15.0
4cmx	267767.10	273990.38	0.01	2.3	15.0
Decachlorobiphenyl	130826.14	130995.57	0.01	0.1	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1214

Lab File ID: 031F3101 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	14203.241	13704.784	0.01	-3.5	15.0
(2)	16575.200	17150.581	0.01	3.5	15.0
(3)	11763.386	11437.580	0.01	-2.8	15.0
(4)	6385.917	6119.922	0.01	-4.2	15.0
(5)	8786.443	8707.678	0.01	-0.9	15.0
Aroclor-1260	15285.677	15218.428	0.01	-0.4	15.0
(2)	23092.700	23615.122	0.01	2.3	15.0
(3)	11639.153	11700.924	0.01	0.5	15.0
(4)	12667.045	12795.401	0.01	1.0	15.0
(5)	5873.295	5792.099	0.01	-1.4	15.0
4cmx	332378.50	333214.10	0.01	0.2	15.0
Decachlorobiphenyl	231591.28	240180.81	0.01	3.7	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

Instrument ID: ECD1A Calibration Date: 07/14/09 Time: 1214

Lab File ID: 031B3101 Init. Calib. Date(s): 07/13/09 07/13/09

Heated Purge: (Y/N) N Init. Calib. Times: 1127 1208

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D	
Aroclor-1016	10559.500	12210.940	0.01	15.6	15.0	<-
(2)	8403.626	8750.467	0.01	4.1	15.0	
(3)	4948.505	5288.968	0.01	6.9	15.0	
(4)	6810.219	7094.884	0.01	4.2	15.0	
(5)	5449.030	5697.831	0.01	4.6	15.0	
Aroclor-1260	11330.884	11691.029	0.01	3.2	15.0	
(2)	12452.888	13289.261	0.01	6.7	15.0	
(3)	8466.689	8686.954	0.01	2.6	15.0	
(4)	8775.756	9136.766	0.01	4.1	15.0	
(5)	17083.207	18710.100	0.01	9.5	15.0	
4cmx	267767.10	276548.86	0.01	3.3	15.0	
Decachlorobiphenyl	130826.14	137306.68	0.01	5.0	15.0	

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/002f0201.d
Lab Smp Id: WAR090623-60 01 Client Smp ID: AR166001
Inj Date : 14-JUL-2009 06:54
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 01
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	32159067	100.000	96.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	21500114	100.000	92.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	13076108	1000.00	921	80.00- 120.00	100.00
2.871	2.871	0.000	15186652	1000.00	916	96.14- 136.14	116.14
2.953	2.953	0.000	10734692	1000.00	912	62.09- 102.09	82.09
3.067	3.067	0.000	5640692	1000.00	883	23.14- 63.14	43.14
3.204	3.204	0.000	7951909	1000.00	905	40.81- 80.81	60.81
Average of Peak Amounts =					908		
7 Aroclor-1260					CAS #: 11096-82-5		
3.933	3.933	0.000	14227461	1000.00	931	80.00- 120.00	100.00
4.096	4.096	0.000	21553043	1000.00	933	131.49- 171.49	151.49
4.326	4.326	0.000	10600269	1000.00	911	54.51- 94.51	74.51
4.470	4.470	0.000	11656883	1000.00	920	61.93- 101.93	81.93
4.835	4.835	0.000	5352330	1000.00	911	17.62- 57.62	37.62
Average of Peak Amounts =					921		

Data File: /chem/ecd1a.i/071409.b/002f0201.d
Date : 14-JUL-2009 06:54
Client ID: AR166001
Sample Info: IWAR090623-60 01

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

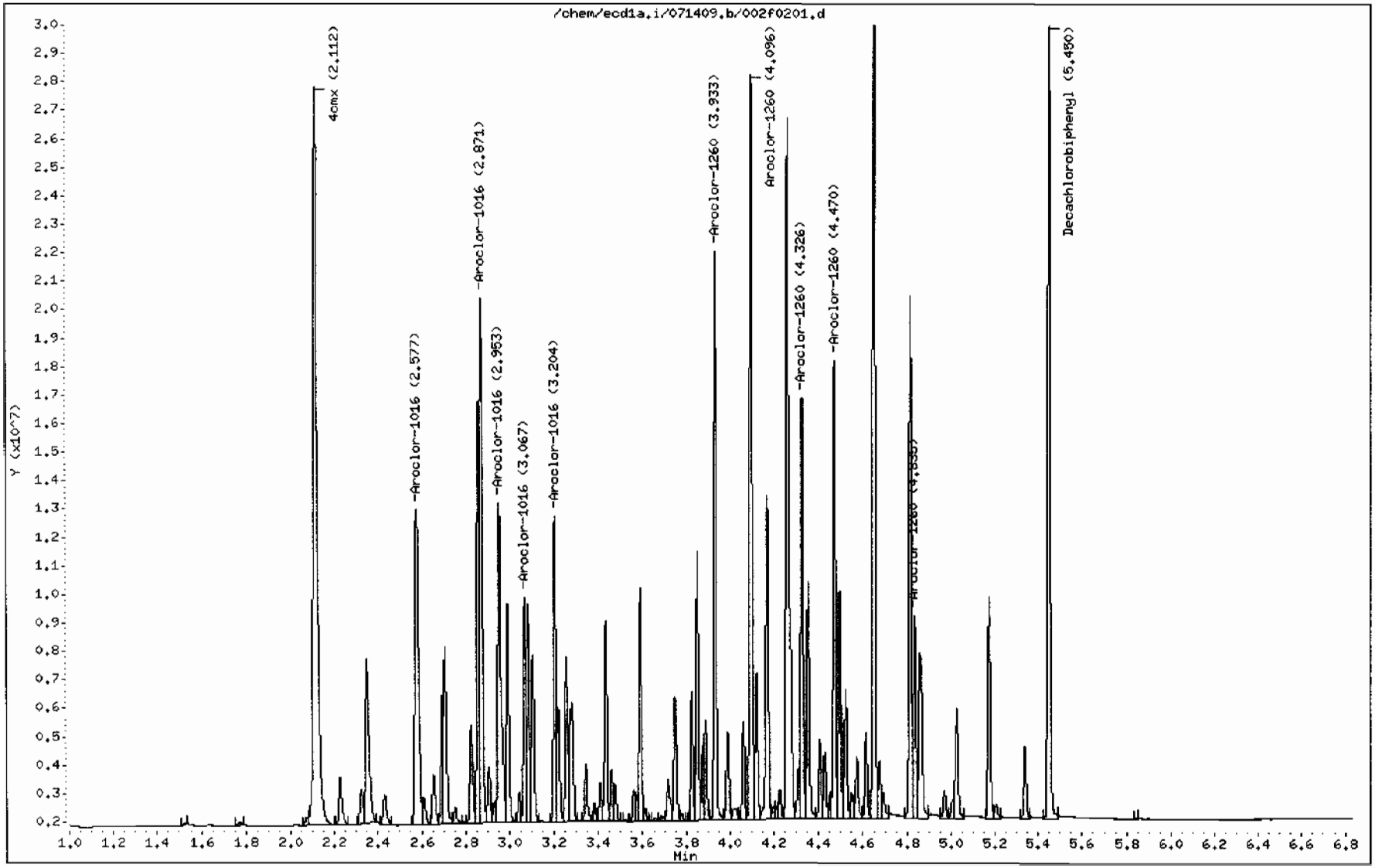

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/002b0201.d
Lab Smp Id: WAR090623-60 01 Client Smp ID: AR166001
Inj Date : 14-JUL-2009 06:54
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 01
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	26138460	100.000	97.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	11658663	100.000	89.1	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.399	3.399	0.000	9947304	1000.00	942	80.00- 120.00	100.00
3.484	3.484	0.000	7716737	1000.00	918	57.58- 97.58	77.58
3.549	3.549	0.000	4496304	1000.00	909	25.20- 65.20	45.20
3.779	3.779	0.000	6210739	1000.00	912	42.44- 82.44	62.44
3.855	3.855	0.000	4946016	1000.00	908	29.72- 69.72	49.72
Average of Peak Amounts =					918		
7 Aroclor-1260					CAS #: 11096-82-5		
4.551	4.551	0.000	10390957	1000.00	917	80.00- 120.00	100.00
4.675	4.675	0.000	11322174	1000.00	909	88.96- 128.96	108.96
4.944	4.944	0.000	7671382	1000.00	906	53.83- 93.83	73.83
5.121	5.121	0.000	7929019	1000.00	904	56.31- 96.31	76.31
5.267	5.267	0.000	15729544	1000.00	921	131.38- 171.38	151.38
Average of Peak Amounts =					911		

Data File: /chem/ecd1a.i/071409.b/002b0201.d

Date : 14-JUL-2009 06:54

Client ID: AR166001

Sample Info: IWAR090623-60 01

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

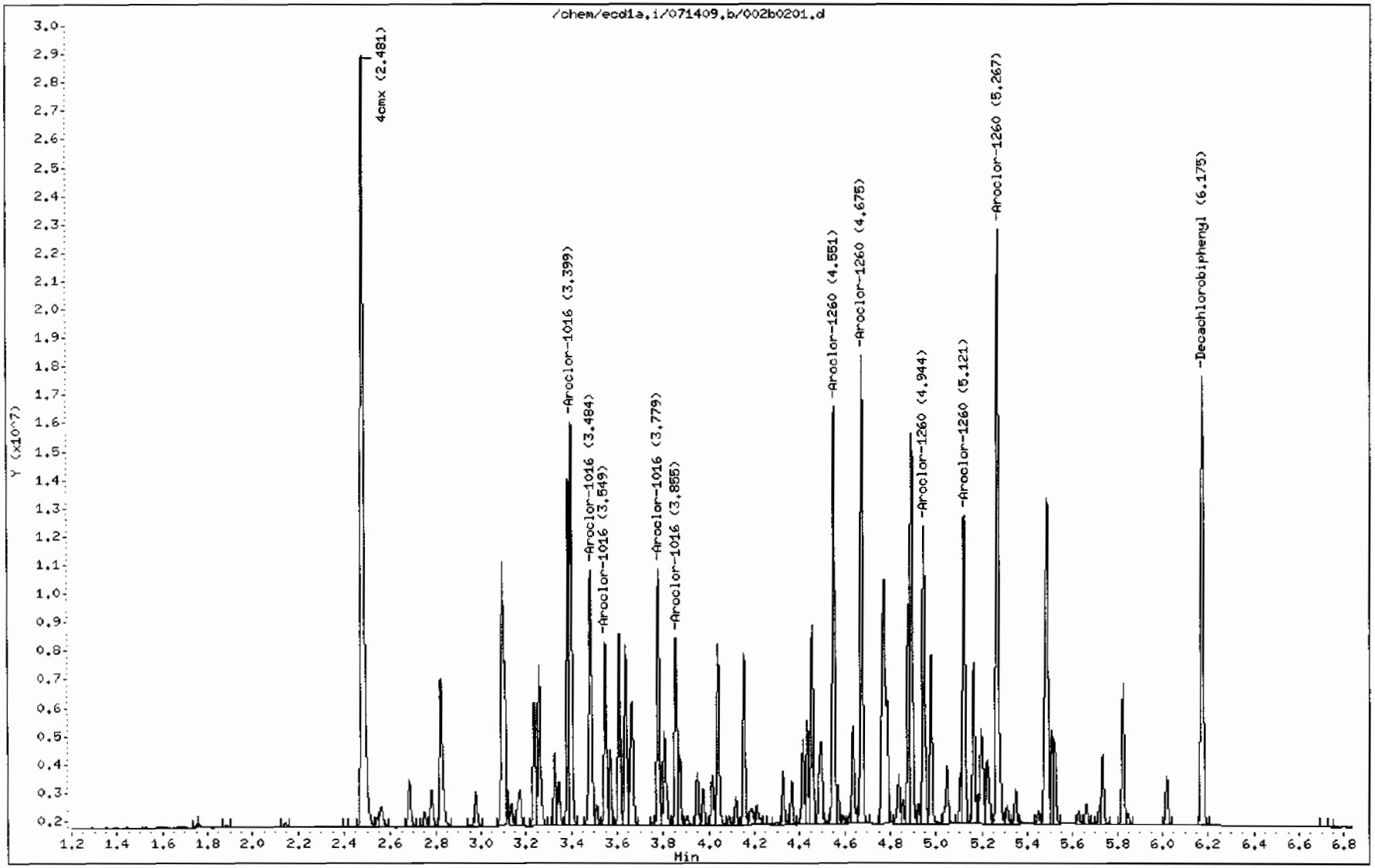

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/003f0301.d
Lab Smp Id: WAR090630-54 54 Client Smp ID: AR125401
Inj Date : 14-JUL-2009 07:05
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090630-54 54
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	31675454	100.000	95.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	21100892	100.000	91.1	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
3.434	3.434	0.000	9565161	1000.00	928	80.00- 120.00	100.00
3.589	3.589	0.000	12743688	1000.00	927	113.23- 153.23	133.23
3.826	3.826	0.000	16103412	1000.00	944	148.35- 188.35	168.35
4.098	4.098	0.000	11741256	1000.00	934	102.75- 142.75	122.75
4.261	4.261	0.000	16083550	1000.00	937	148.15- 188.15	168.15

Average of Peak Amounts = 934

Data File: /chem/ecd1a.i/071409.b/003f0301.d
Date : 14-JUL-2009 07:05
Client ID: AR125401
Sample Info: IWAR090630-54 54

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

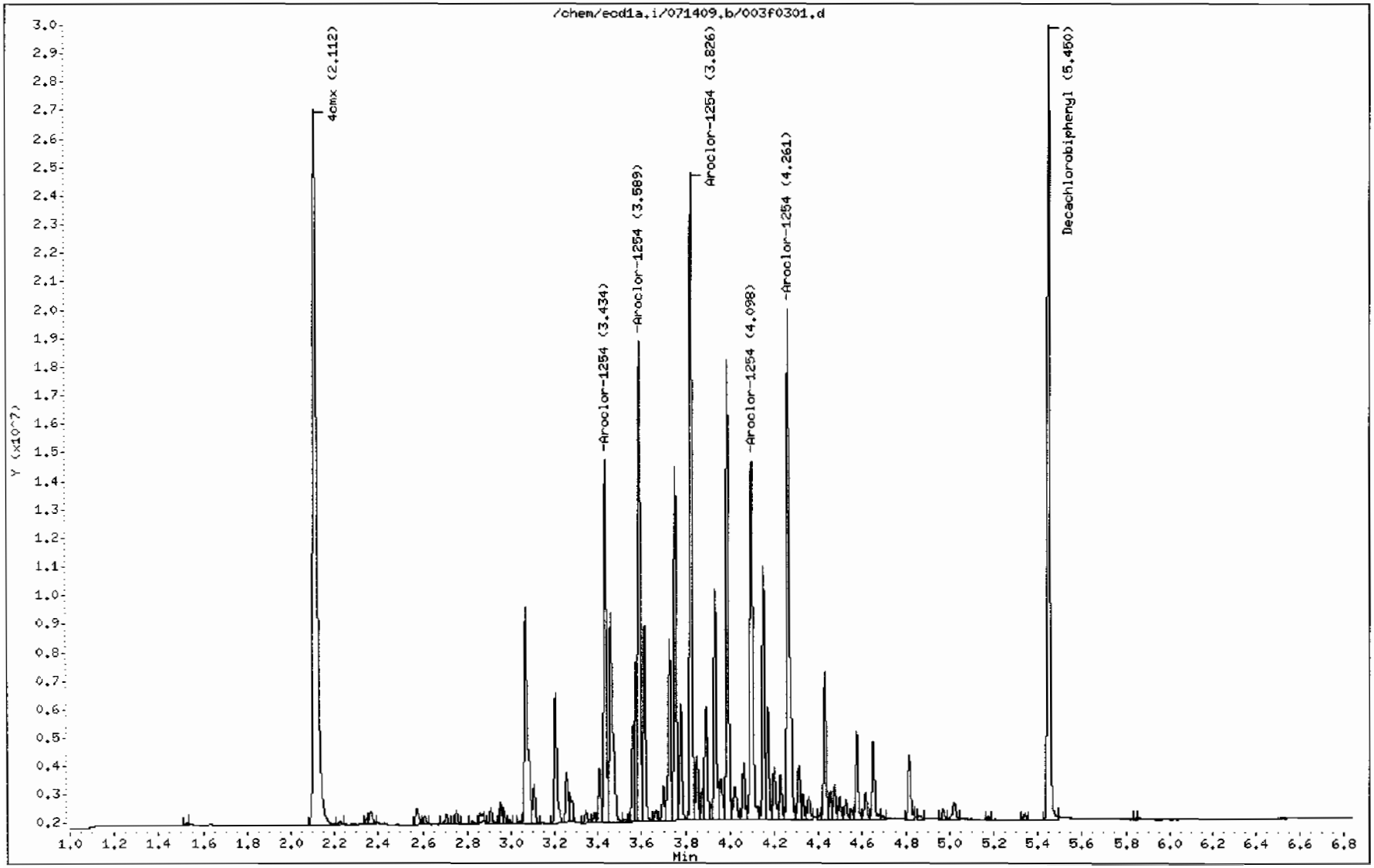

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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/003b0301.d
Lab Smp Id: WAR090630-54 54 Client Smp ID: AR125401
Inj Date : 14-JUL-2009 07:05
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090630-54 54
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:45 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	25905797	100.000	96.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	11488712	100.000	87.8	80.00- 120.00	100.00
6 Aroclor-1254					CAS #: 11097-69-1		
4.154	4.154	0.000	8393889	1000.00	905	80.00- 120.00	100.00
4.365	4.365	0.000	6349023	1000.00	916	55.64- 95.64	75.64
4.435	4.435	0.000	11248393	1000.00	924	114.01- 154.01	134.01
4.553	4.553	0.000	4769142	1000.00	906	36.82- 76.82	56.82
4.782	4.782	0.000	5747266	1000.00	912	48.47- 88.47	68.47
Average of Peak Amounts =					913		

Data File: /chem/ecd1a.i/071409.b/003b0301.d

Date : 14-JUL-2009 07:05

Client ID: AR125401

Sample Info: IWAR090630-54 54

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

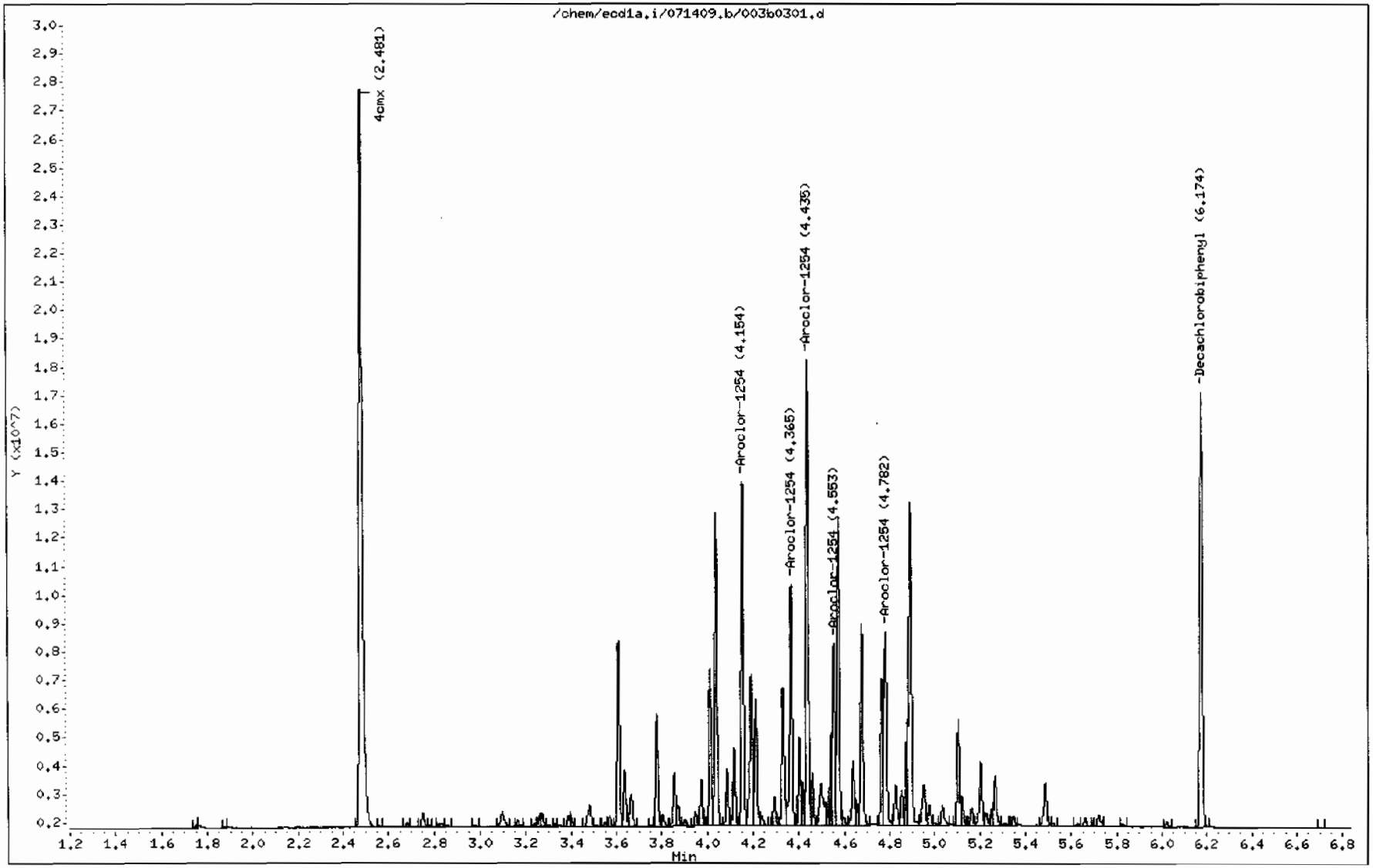

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/004f0401.d
Lab Smp Id: WAR090519-42 42 Client Smp ID: AR124201
Inj Date : 14-JUL-2009 07:15
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090519-42 42
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	38183470	100.000	115	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.452	5.450	0.002	23487290	100.000	101	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
2.871	2.871	0.000	11039219	1000.00	935	80.00- 120.00	100.00
2.953	2.953	0.000	8204654	1000.00	966	54.32- 94.32	74.32
3.083	3.083	0.000	4130118	1000.00	884	17.41- 57.41	37.41
3.204	3.204	0.000	6014120	1000.00	915	34.48- 74.48	54.48
3.476	3.476	0.000	5681233	1000.00	901	31.46- 71.46	51.46
Average of Peak Amounts =					920		

Data File: /chem/ecd1a.i/071409.b/004f0401.d

Date : 14-JUL-2009 07:15

Client ID: AR124201

Sample Info: IWAR090519-42 42

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

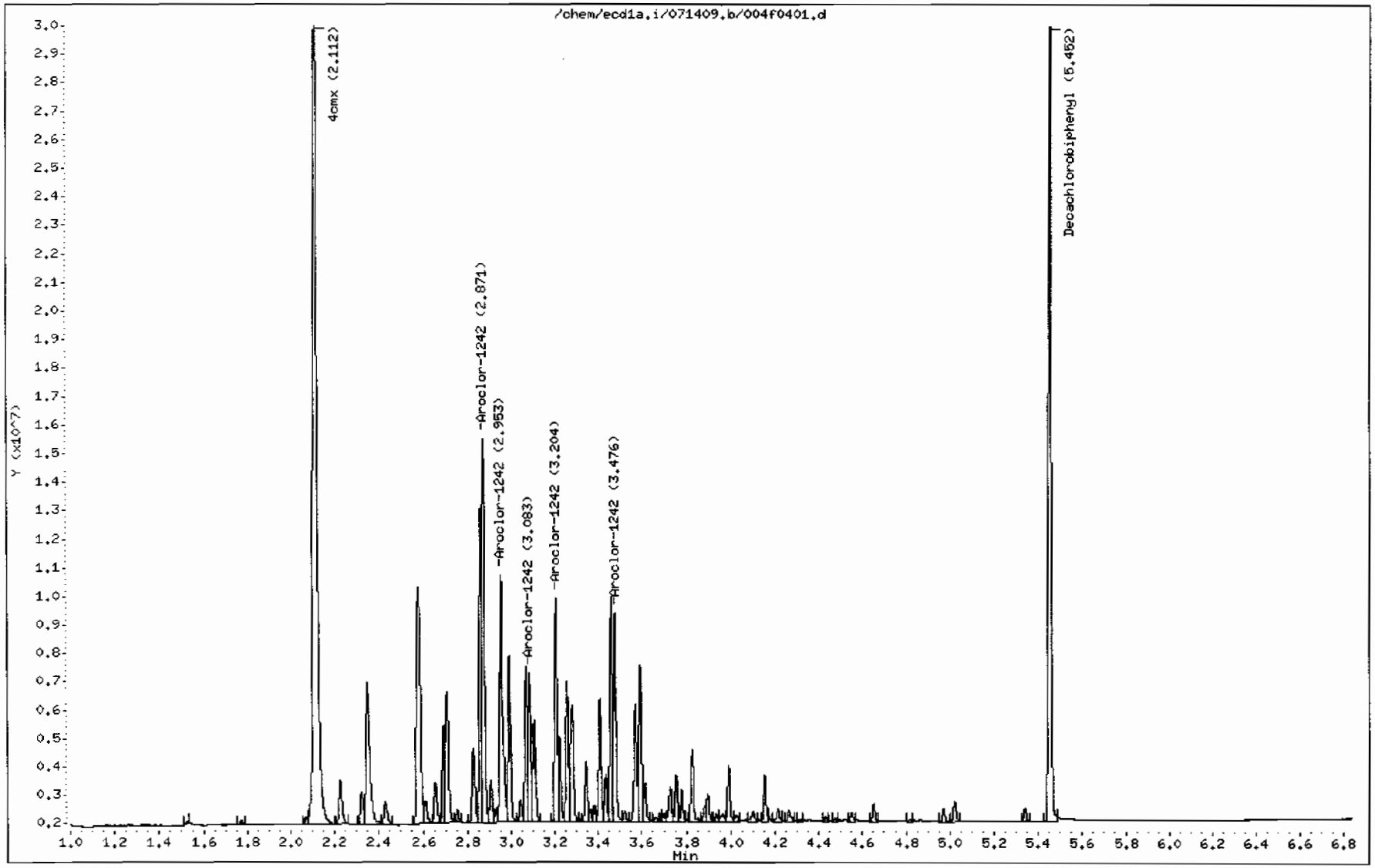

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/004b0401.d
Lab Smp Id: WAR090519-42 42 Client Smp ID: AR124201
Inj Date : 14-JUL-2009 07:15
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090519-42 42
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	30509789	100.000	114	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	12722039	100.000	97.2	80.00- 120.00	100.00
4 Aroclor-1242					CAS #: 53469-21-9		
3.399	3.399	0.000	7268225	1000.00	925	80.00- 120.00	100.00
3.484	3.484	0.000	6012073	1000.00	964	62.72- 102.72	82.72
3.549	3.549	0.000	3422273	1000.00	934	27.09- 67.09	47.09
3.779	3.779	0.000	4597945	1000.00	903	43.26- 83.26	63.26
4.184	4.184	0.000	4630615	1000.00	866	43.71- 83.71	63.71
Average of Peak Amounts =					919		

Data File: /chem/ecd1a.i/071409.b/004b0401.d
Date : 14-JUL-2009 07:15
Client ID: AR124201
Sample Info: IWAR090519-42 42

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

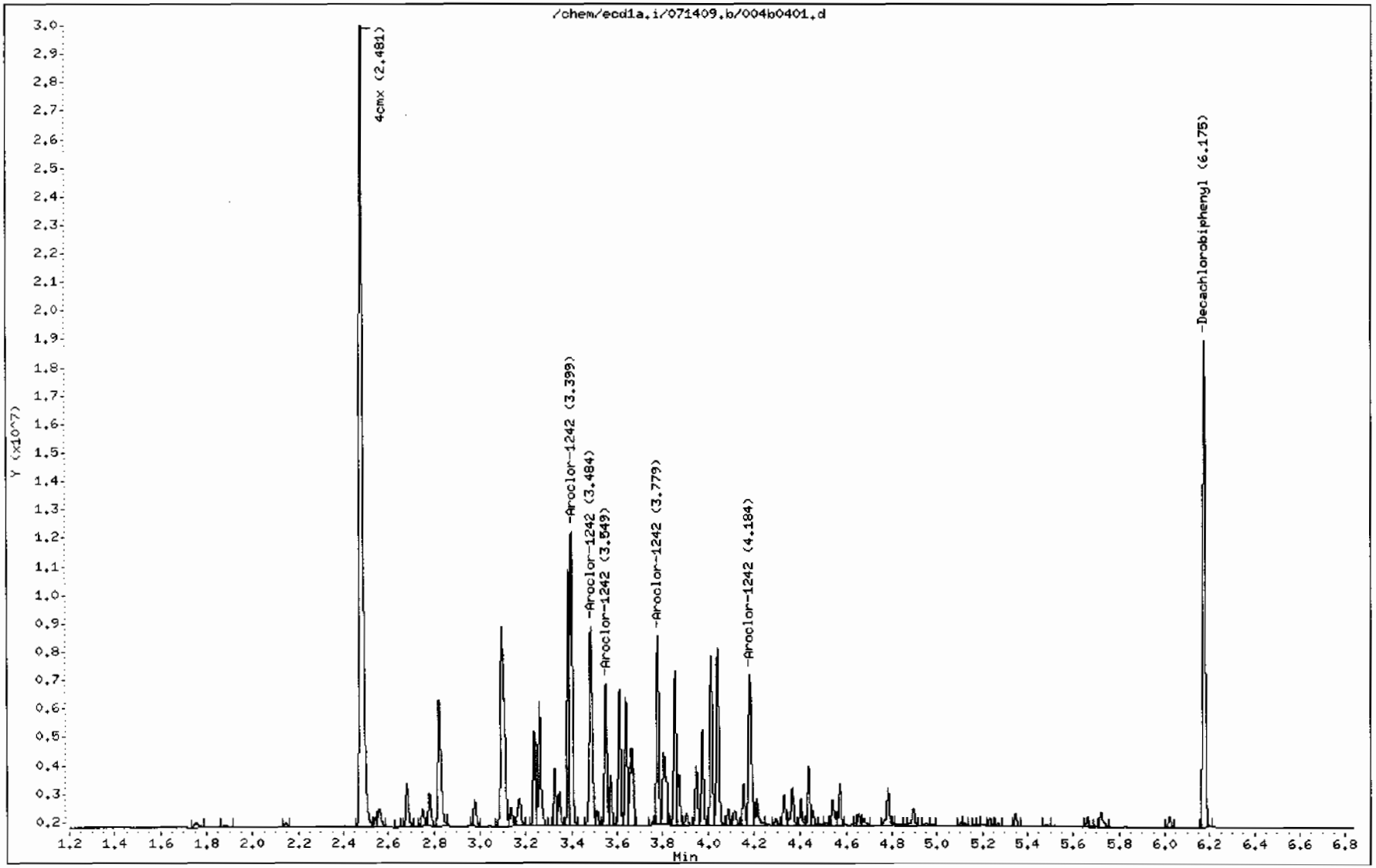

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/005f0501.d
Lab Smp Id: WAR090521-48 48 Client Smp ID: AR124801
Inj Date : 14-JUL-2009 07:25
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090521-48 48
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	35658363	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	23053211	100.000	99.5	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
2.871	2.871	0.000	6035408	1000.00	880	80.00- 120.00	100.00
3.083	3.083	0.000	6584538	1000.00	929	89.10- 129.10	109.10
3.476	3.476	0.000	9551014	1000.00	884	138.25- 178.25	158.25
3.592	3.592	0.000	8879871	1000.00	894	127.13- 167.13	147.13
3.826	3.826	0.000	5780985	1000.00	866	75.78- 115.78	95.78
Average of Peak Amounts =					891		

Data File: /chem/ecd1a.i/071409.b/005f0501.d
Date : 14-JUL-2009 07:25
Client ID: AR124801
Sample Info: IWAR090521-48 48

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

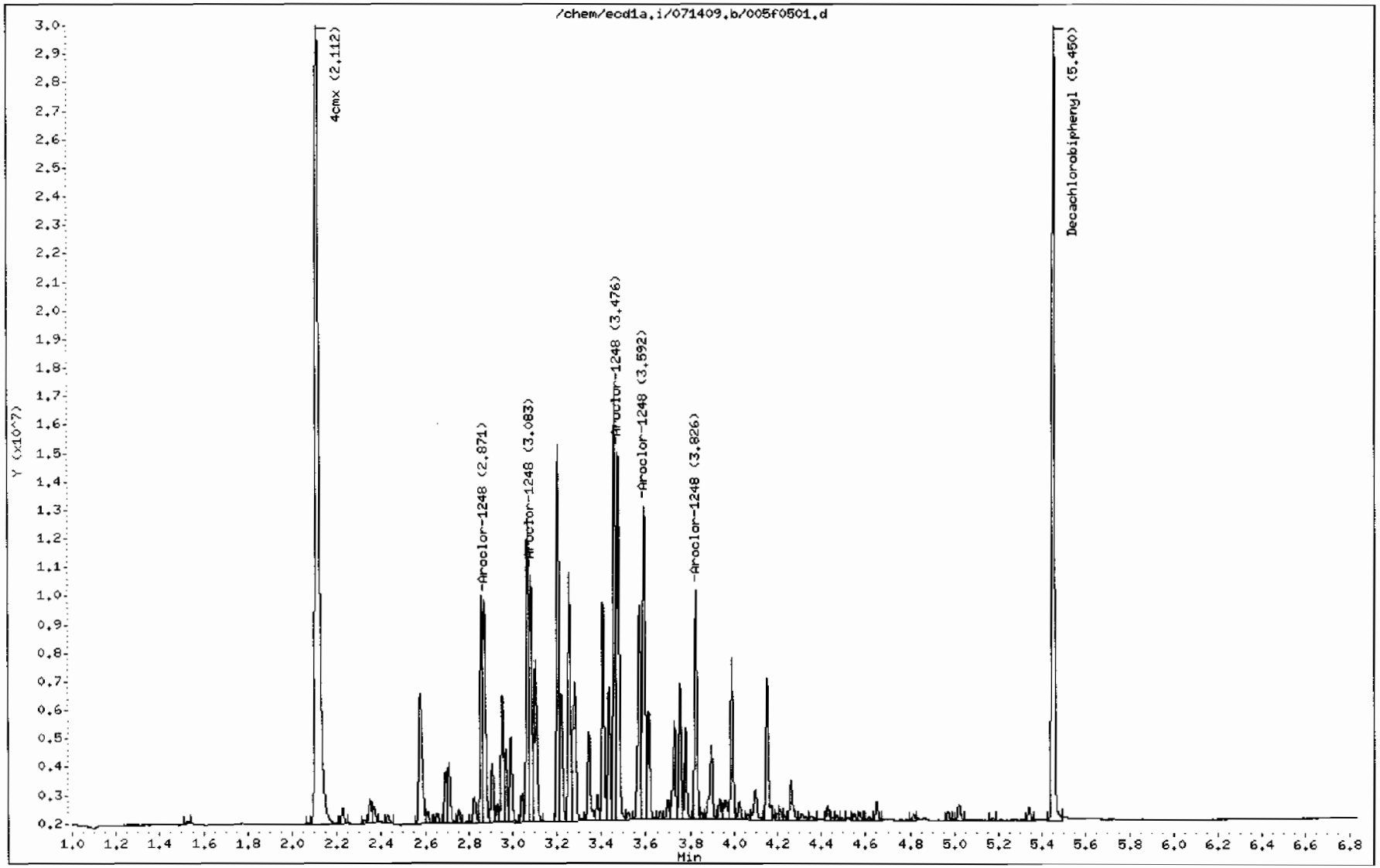

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/005b0501.d
Lab Smp Id: WAR090521-48 48 Client Smp ID: AR124801
Inj Date : 14-JUL-2009 07:25
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090521-48 48
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	28597785	100.000	107	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	12419027	100.000	94.9	80.00- 120.00	100.00
5 Aroclor-1248					CAS #: 12672-29-6		
3.610	3.610	0.000	6105006	1000.00	887	80.00- 120.00	100.00
3.779	3.779	0.000	7526110	1000.00	898	103.28- 143.28	123.28
4.014	4.014	0.000	7668276	1000.00	929	105.61- 145.61	125.61
4.042	4.042	0.000	8625235	1000.00	956	121.28- 161.28	141.28
4.182	4.182	0.000	8191750	1000.00	873	114.18- 154.18	134.18
Average of Peak Amounts =					909		

Data File: /chem/ecd1a.i/071409.b/005b0501.d

Date : 14-JUL-2009 07:25

Client ID: AR124801

Sample Info: IWAR090521-48 48

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

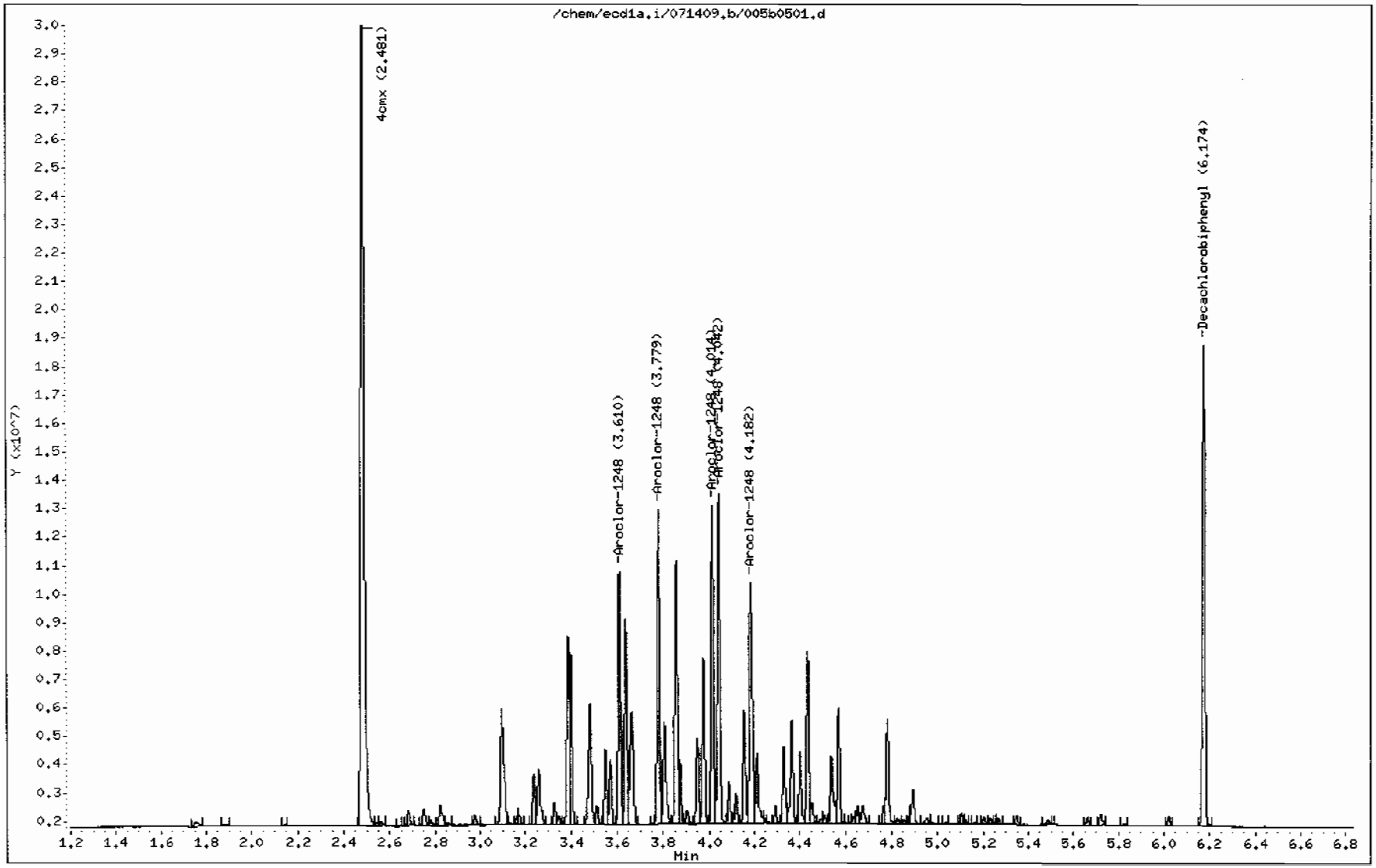

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/006f0601.d
Lab Smp Id: WAR090618-32 32 Client Smp ID: AR123201
Inj Date : 14-JUL-2009 07:36
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-32 32
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.112	2.112	0.000	35017783	100.000	105	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	23259425	100.000	100	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
2.578	2.578	0.000	5839184	1000.00	993	80.00- 120.00	100.00
2.871	2.871	0.000	6685163	1000.00	1000	94.49- 134.49	114.49
2.953	2.953	0.000	4781577	1000.00	988	61.89- 101.89	81.89
3.204	3.204	0.000	3277549	1000.00	985	36.13- 76.13	56.13
3.475	3.475	0.000	3068968	1000.00	970	32.56- 72.56	52.56
Average of Peak Amounts =					988		

Data File: /chem/ecd1a.i/071409.b/006f0601.d
Date : 14-JUL-2009 07:36
Client ID: AR123201
Sample Info: 1WAR090618-32 32

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

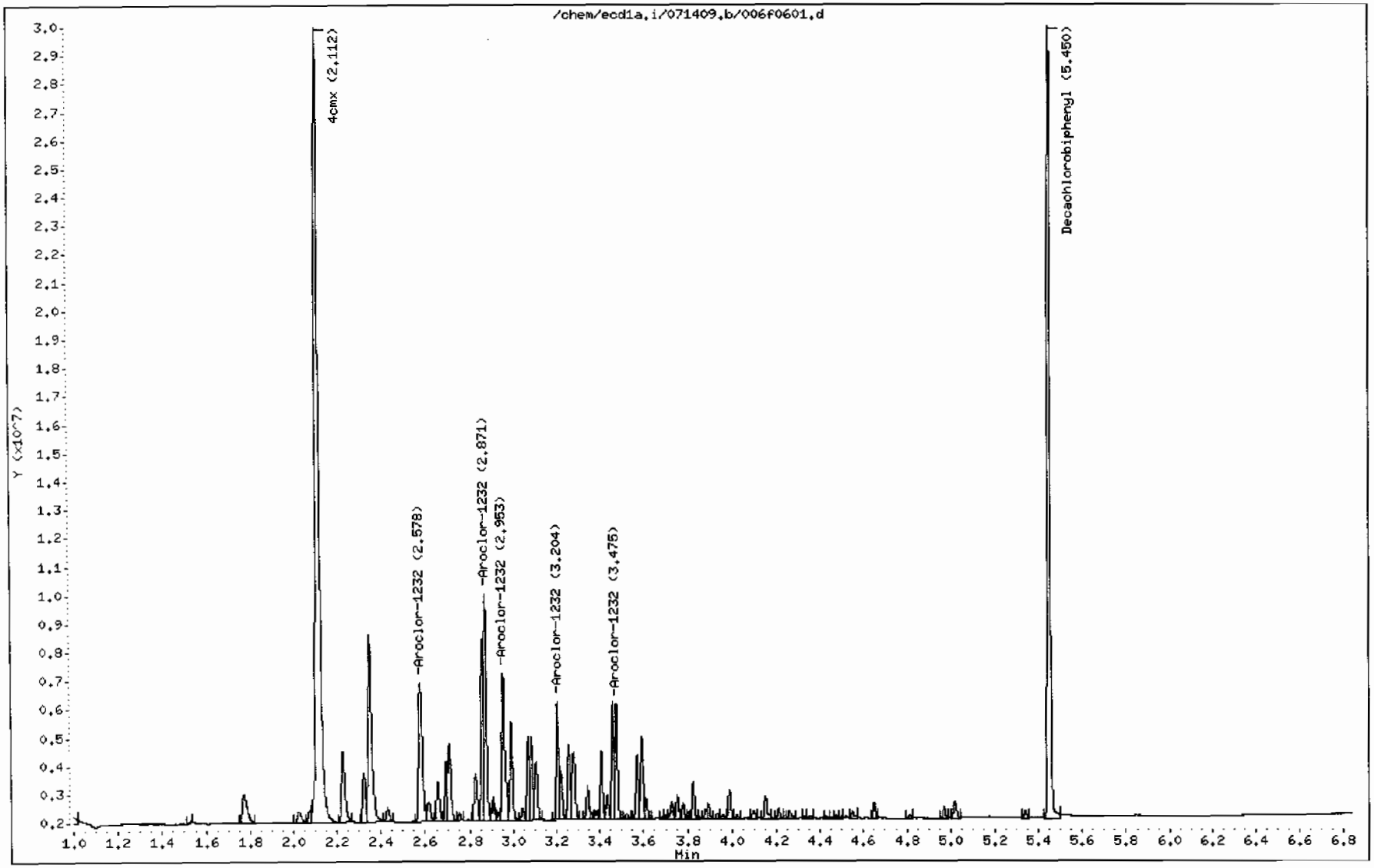

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/006b0601.d
Lab Smp Id: WAR090618-32 32 Client Smp ID: AR123201
Inj Date : 14-JUL-2009 07:36
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-32 32
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.481	2.481	0.000	27702633	100.000	103	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	12462199	100.000	95.2	80.00- 120.00	100.00
3 Aroclor-1232					CAS #: 11141-16-5		
3.387	3.387	0.000	3356033	1000.00	976	80.00- 120.00	100.00
3.484	3.484	0.000	3582746	1000.00	990	86.76- 126.76	106.76
3.550	3.550	0.000	2070080	1000.00	984	41.68- 81.68	61.68
3.779	3.779	0.000	2546736	1000.00	979	55.89- 95.89	75.89
4.042	4.042	0.000	2593997	1000.00	1000	57.29- 97.29	77.29
Average of Peak Amounts =					986		

Data File: /chem/ecd1a.i/071409.b/006b0601.d

Date : 14-JUL-2009 07:36

Client ID: AR123201

Sample Info: IWAR090618-32 32

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

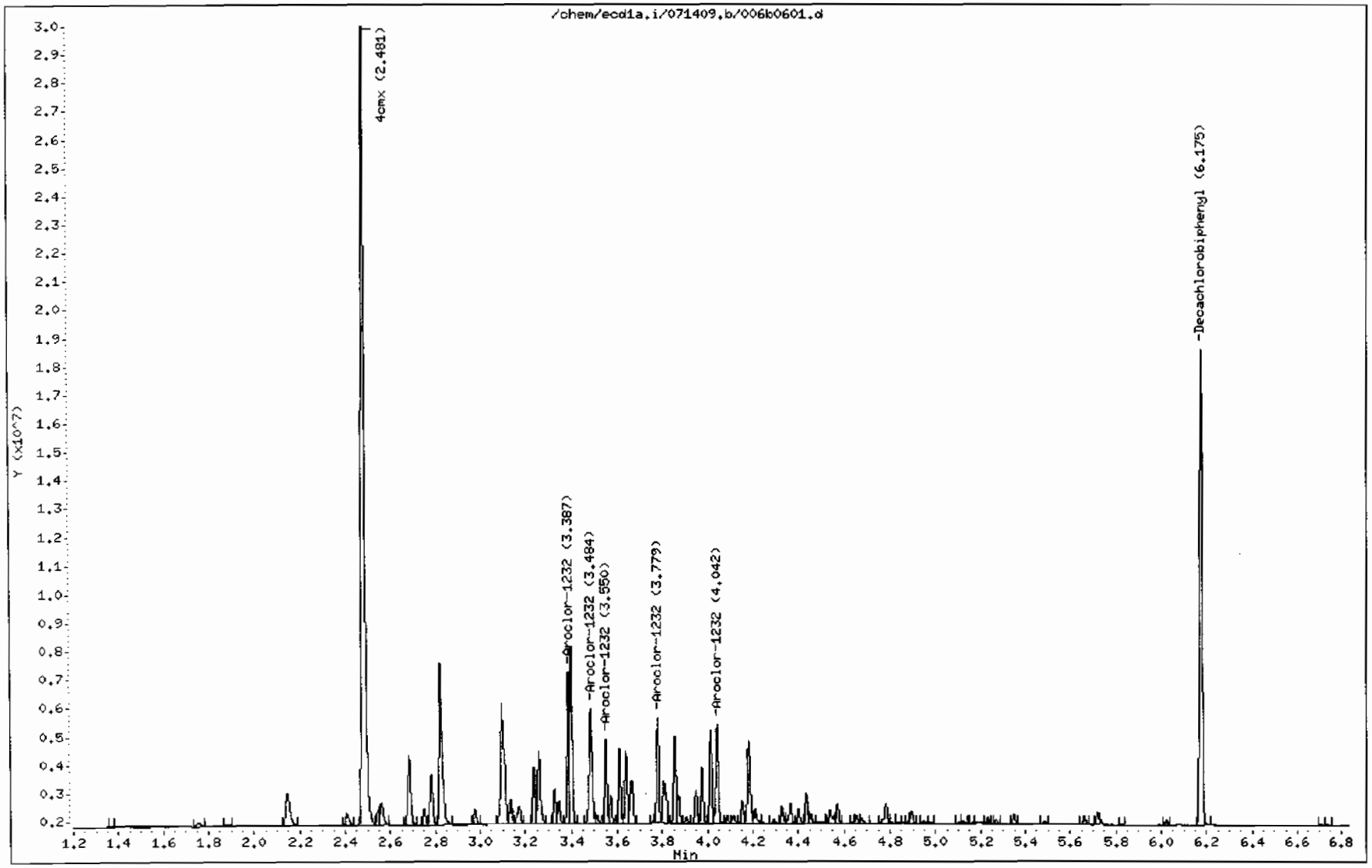

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/007f0701.d
Lab Smp Id: WAR090618-21 21 Client Smp ID: AR122101
Inj Date : 14-JUL-2009 07:46
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-21 21
Misc Info : |CVS|1221|
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 10:47 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	36179109	100.000	109	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.450	5.450	0.000	23485598	100.000	101	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.226	2.226	0.000	3701247	1000.00	1030	80.00- 120.00	100.00
2.323	2.323	0.000	2073773	1000.00	991	36.03- 76.03	56.03
2.350	2.350	0.000	8757350	1000.00	999	216.61- 256.61	236.61

Average of Peak Amounts = 1.01e+03

Data File: /chem/ecd1a.i/071409.b/007f0701.d

Date : 14-JUL-2009 07:46

Client ID: AR122101

Sample Info: IWAR090618-21 21

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

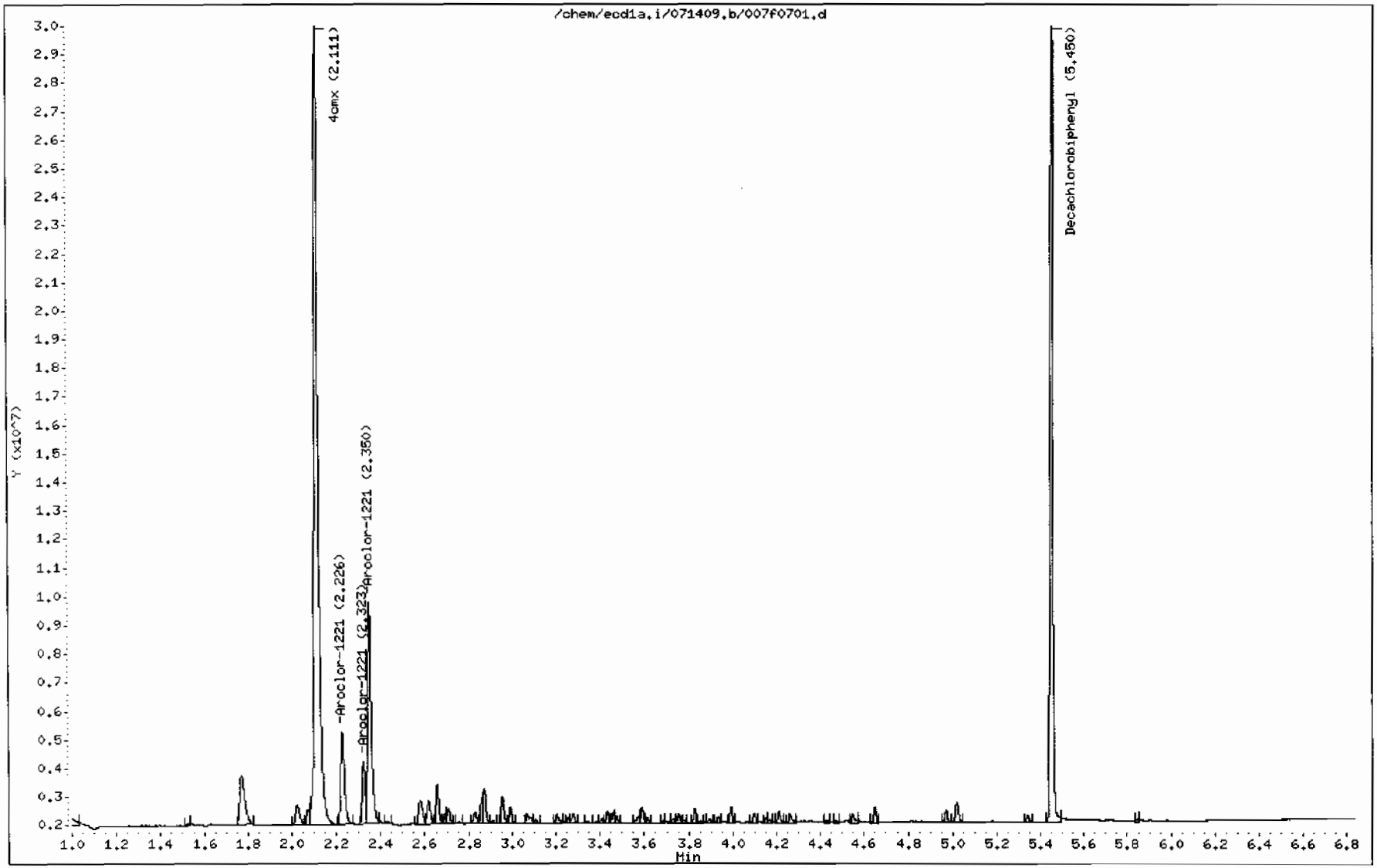

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/007b0701.d
Lab Smp Id: WAR090618-21 21 Client Smp ID: AR122101
Inj Date : 14-JUL-2009 07:46
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090618-21 21
Misc Info : |CVS|1221|
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 10:46 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	28526825	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	12651006	100.000	96.7	80.00- 120.00	100.00
2 Aroclor-1221					CAS #: 11104-28-2		
2.684	2.684	0.000	3181154	1000.00	1110	80.00- 120.00	100.00
2.781	2.781	0.000	1969114	1000.00	1040	41.90- 81.90	61.90
2.823	2.823	0.000	6360540	1000.00	1010	179.94- 219.94	199.94

Average of Peak Amounts = 1.05e+03

Data File: /chem/ecd1a.i/071409.b/007b0701.d

Date : 14-JUL-2009 07:46

Client ID: AR122101

Sample Info: IWAR090618-21 21

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

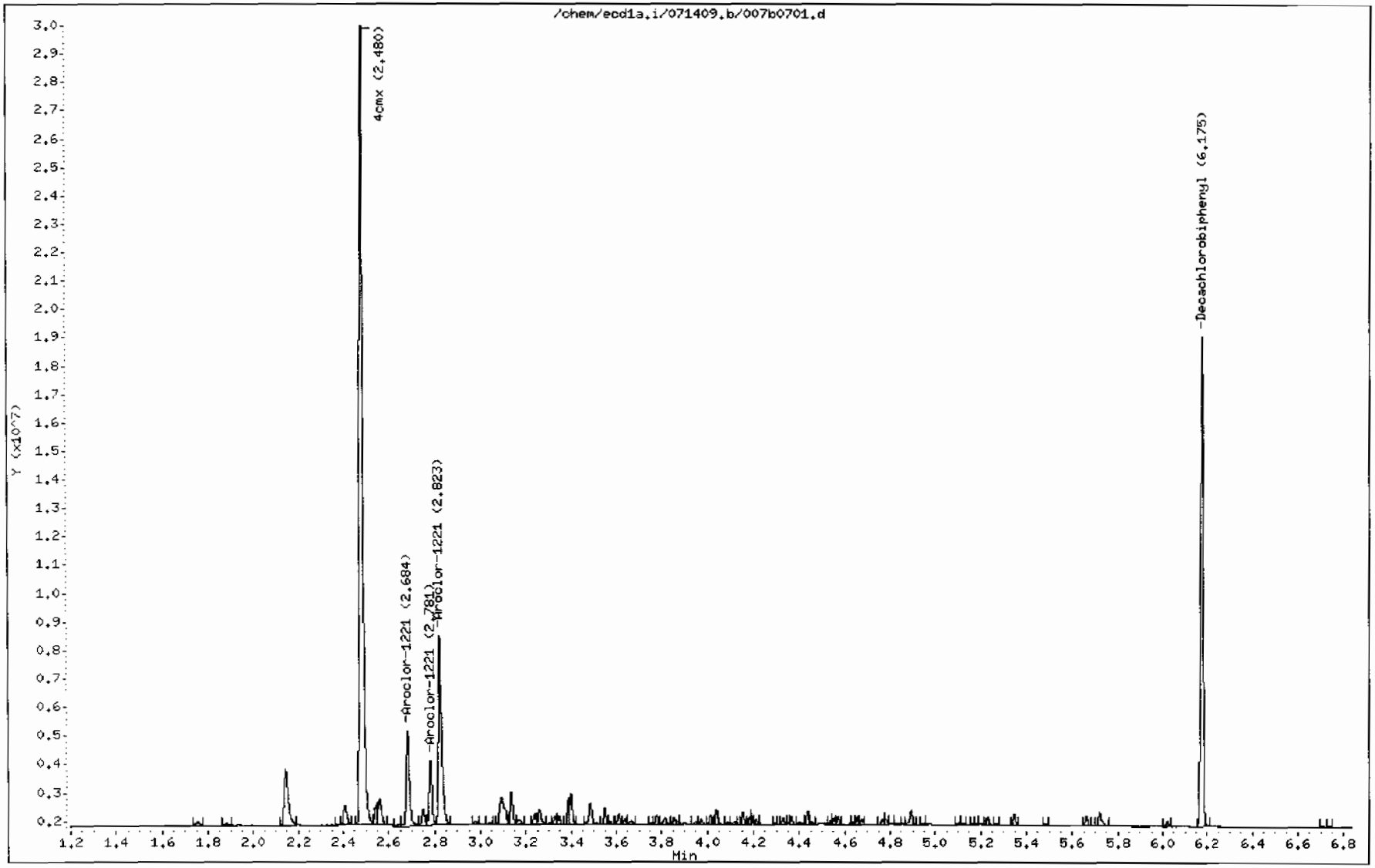

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/019f1901.d
Lab Smp Id: WAR090623-60 02 Client Smp ID: AR166002
Inj Date : 14-JUL-2009 10:00
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 02
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 11:21 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.109	2.112	-0.003	33443959	100.000	101	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.446	5.450	-0.004	23497991	100.000	101	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.573	2.577	-0.004	13623921	1000.00	959	80.00- 120.00	100.00
2.867	2.871	-0.004	17122131	1000.00	1030	105.68- 145.68	125.68
2.950	2.953	-0.003	11364367	1000.00	966	63.41- 103.41	83.41
3.064	3.067	-0.003	6093521	1000.00	954	24.73- 64.73	44.73
3.201	3.204	-0.003	8685457	1000.00	988	43.75- 83.75	63.75
Average of Peak Amounts =					980		
7 Aroclor-1260					CAS #: 11096-82-5		
3.930	3.933	-0.003	15114016	1000.00	989	80.00- 120.00	100.00
4.092	4.096	-0.004	23255466	1000.00	1010	133.87- 173.87	153.87
4.324	4.326	-0.002	11537482	1000.00	991	56.34- 96.34	76.34
4.468	4.470	-0.002	12563517	1000.00	992	63.12- 103.12	83.12
4.832	4.835	-0.003	5688421	1000.00	968	17.64- 57.64	37.64
Average of Peak Amounts =					989		

Data File: /chem/ecd1a.i/071409.b/019f1901.d
Date : 14-JUL-2009 10:00
Client ID: AR166002
Sample Info: IWAR090623-60 02

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

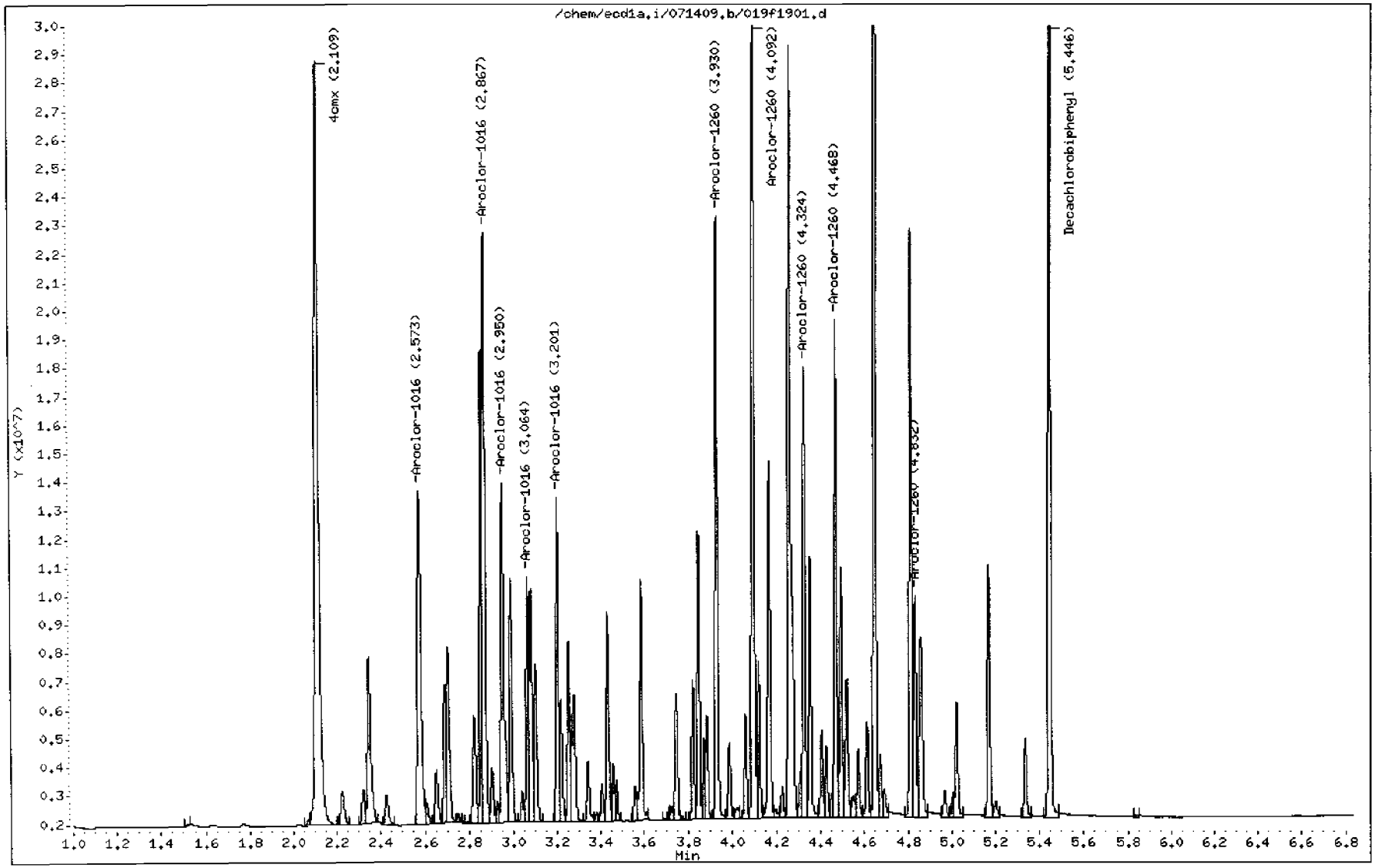

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/019b1901.d
Lab Smp Id: WAR090623-60 02 Client Smp ID: AR166002
Inj Date : 14-JUL-2009 10:00
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 02
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 11:20 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.478	2.481	-0.003	27399038	100.000	102	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.171	6.175	-0.004	13099557	100.000	100	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.396	3.399	-0.003	11323881	1000.00	1070	80.00- 120.00	100.00
3.480	3.484	-0.004	8421726	1000.00	1000	54.37- 94.37	74.37
3.546	3.549	-0.003	5075640	1000.00	1020	24.82- 64.82	44.82
3.775	3.779	-0.004	6842460	1000.00	1000	40.43- 80.43	60.43
3.852	3.855	-0.003	5491288	1000.00	1010	28.49- 68.49	48.49
Average of Peak Amounts =					1.02e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.549	4.551	-0.002	11292830	1000.00	997	80.00- 120.00	100.00
4.672	4.675	-0.003	12734567	1000.00	1020	92.77- 132.77	112.77
4.942	4.944	-0.002	8366958	1000.00	988	54.09- 94.09	74.09
5.118	5.121	-0.003	8773824	1000.00	1000	57.69- 97.69	77.69
5.263	5.267	-0.004	17736968	1000.00	1040	137.06- 177.06	157.06
Average of Peak Amounts =					1.01e+03		

Data File: /chem/ecd1a.i/071409.b/019b1901.d
Date : 14-JUL-2009 10:00
Client ID: AR166002
Sample Info: IWAR090623-60 02

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

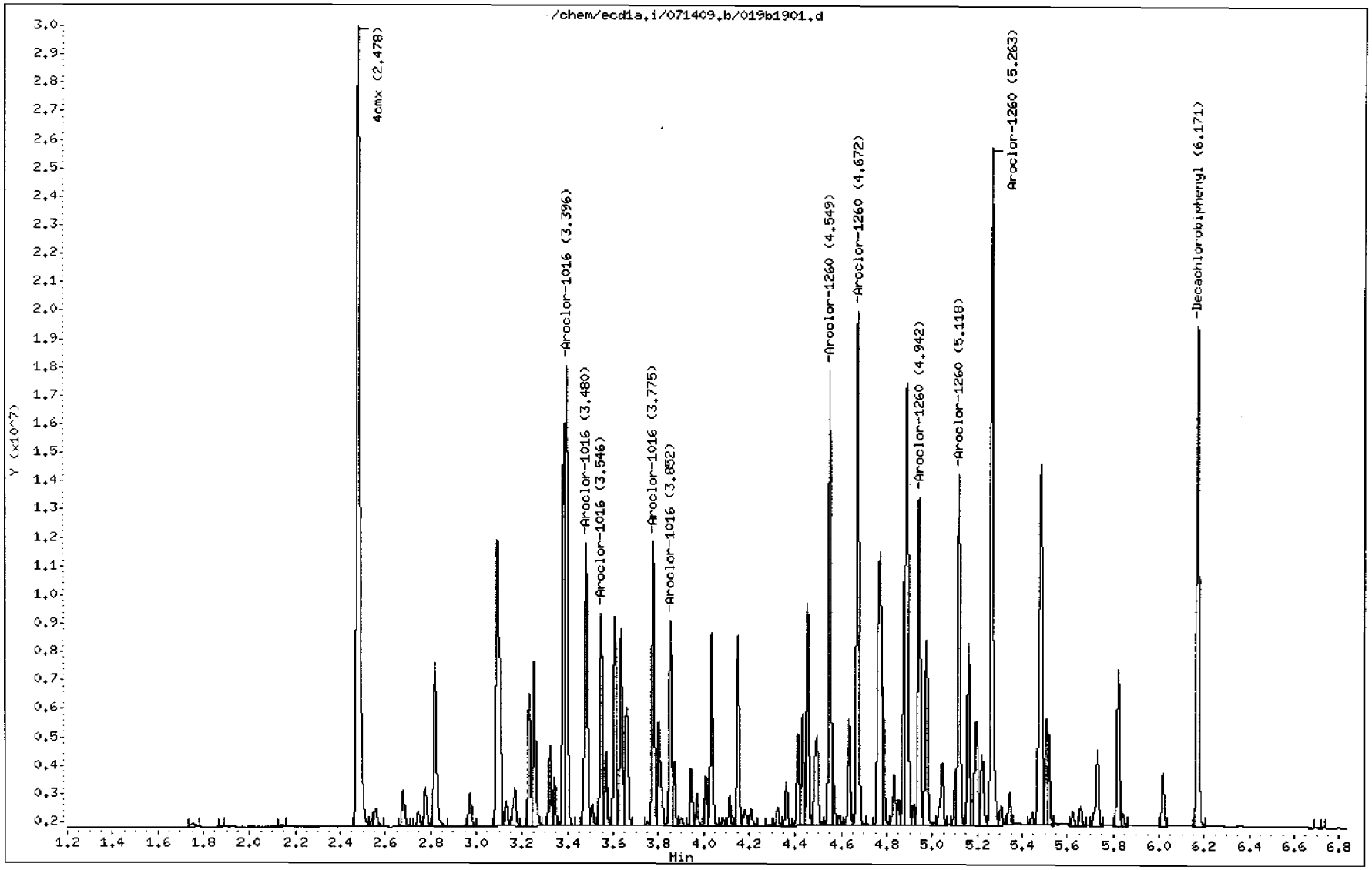

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/031f3101.d
Lab Smp Id: WAR090623-60 03 Client Smp ID: AR166003
Inj Date : 14-JUL-2009 12:14
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 03
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.110	2.112	-0.002	33321410	100.000	100	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.448	5.450	-0.002	24018081	100.000	104	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.575	2.577	-0.002	13704784	1000.00	965	80.00- 120.00	100.00
2.868	2.871	-0.003	17150580	1000.00	1030	105.14- 145.14	125.14
2.950	2.953	-0.003	11437579	1000.00	972	63.46- 103.46	83.46
3.064	3.067	-0.003	6119921	1000.00	958	24.66- 64.66	44.66
3.201	3.204	-0.003	8707677	1000.00	991	43.54- 83.54	63.54
Average of Peak Amounts =					984		
7 Aroclor-1260					CAS #: 11096-82-5		
3.930	3.933	-0.003	15218428	1000.00	996	80.00- 120.00	100.00
4.093	4.096	-0.003	23615122	1000.00	1020	135.17- 175.17	155.17
4.324	4.326	-0.002	11700924	1000.00	1000	56.89- 96.89	76.89
4.468	4.470	-0.002	12795401	1000.00	1010	64.08- 104.08	84.08
4.833	4.835	-0.002	5792099	1000.00	986	18.06- 58.06	38.06
Average of Peak Amounts =					1e+03		

Data File: /chem/ecd1a.i/071409.b/031f3101.d
Date : 14-JUL-2009 12:14
Client ID: AR166003
Sample Info: IWAR090623-60 03

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1
Column diameter: 0.25

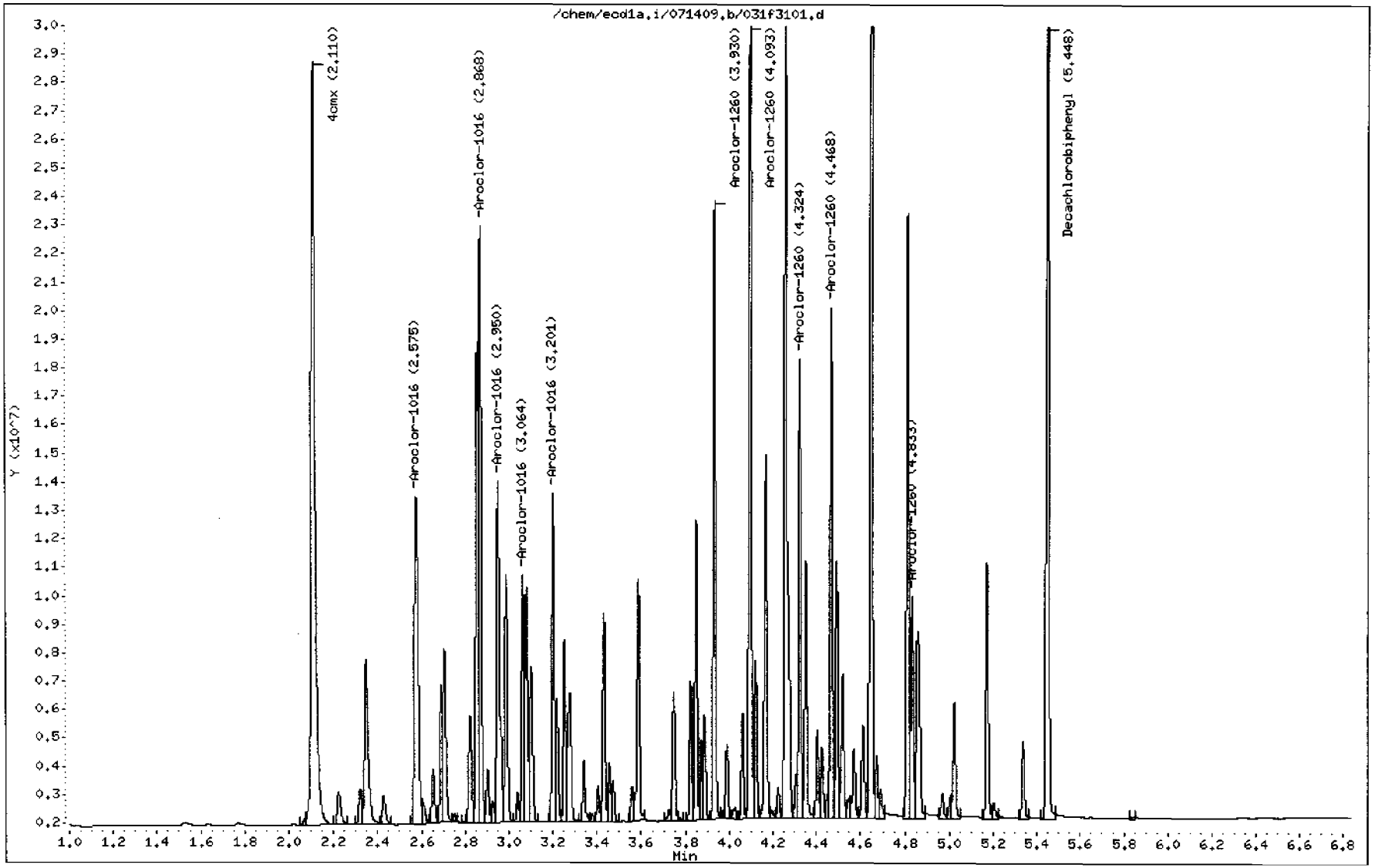

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/031b3101.d
Lab Smp Id: WAR090623-60 03 Client Smp ID: AR166003
Inj Date : 14-JUL-2009 12:14
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |WAR090623-60 03
Misc Info :
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None
Processing Host: hpclp1

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.479	2.481	-0.002	27654886	100.000	103	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.172	6.175	-0.003	13730668	100.000	105	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.396	3.399	-0.003	12210940	1000.00	1160	80.00- 120.00	100.00
3.481	3.484	-0.003	8750467	1000.00	1040	51.66- 91.66	71.66
3.546	3.549	-0.003	5288968	1000.00	1070	23.31- 63.31	43.31
3.776	3.779	-0.003	7094884	1000.00	1040	38.10- 78.10	58.10
3.853	3.855	-0.002	5697830	1000.00	1040	26.66- 66.66	46.66
Average of Peak Amounts =					1.07e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.549	4.551	-0.002	11691028	1000.00	1030	80.00- 120.00	100.00
4.673	4.675	-0.002	13289261	1000.00	1070	93.67- 133.67	113.67
4.943	4.944	-0.001	8686953	1000.00	1030	54.30- 94.30	74.30
5.119	5.121	-0.002	9136766	1000.00	1040	58.15- 98.15	78.15
5.265	5.267	-0.002	18710100	1000.00	1100	140.04- 180.04	160.04
Average of Peak Amounts =					1.05e+03		

Data File: /chem/ecd1a.i/071409.b/031b3101.d

Date : 14-JUL-2009 12:14

Client ID: AR166003

Sample Info: IWAR090623-60 03

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

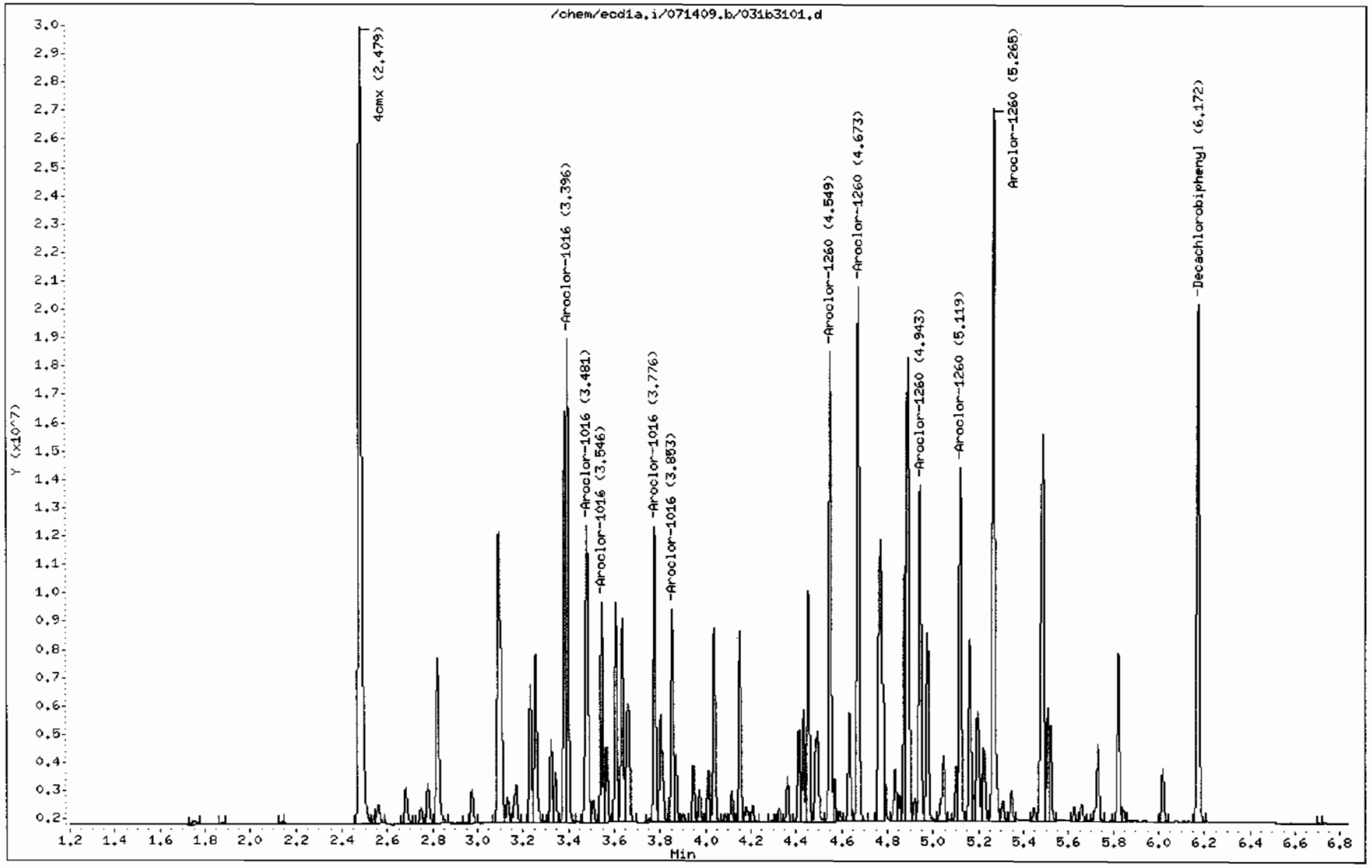

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.11 DCB: 5.45

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/13/09	0944	2.11	5.45
02	ZZZZZ	ZZZZZ	07/13/09	0954	2.11	5.45
03	ZZZZZ	ZZZZZ	07/13/09	1004	2.11	5.45
04	AR124201	WAR090713-09	07/13/09	1014	2.11	5.45
05	AR124202	WAR090713-10	07/13/09	1025	2.11	5.45
06	AR124203	WAR090713-11	07/13/09	1035	2.11	5.45
07	AR124204	WAR090713-12	07/13/09	1045	2.11	5.45
08	AR124205	IAR090711-01	07/13/09	1056	2.11	5.45
09	AR124201	WAR090519-42	07/13/09	1106	2.11	5.45
10	AR124801	WAR090521-48	07/13/09	1116	2.11	5.45
11	AR166001	WAR090713-01	07/13/09	1127	2.11	5.45
12	AR166002	WAR090713-02	07/13/09	1137	2.11	5.45
13	AR166003	WAR090713-03	07/13/09	1147	2.11	5.45
14	AR166004	WAR090713-04	07/13/09	1158	2.11	5.45
15	AR166005	IAR090623-01	07/13/09	1208	2.11	5.45
16	AR166001	WAR090623-60	07/13/09	1218	2.11	5.45
17	AR125401	WAR090713-05	07/13/09	1228	2.11	5.45
18	AR125402	WAR090713-06	07/13/09	1239	2.11	5.45
19	AR125403	WAR090713-07	07/13/09	1249	2.11	5.45
20	AR125404	WAR090713-08	07/13/09	1259	2.11	5.45
21	AR125405	IAR0900505-0	07/13/09	1310	2.11	5.45
22	AR125401	WAR090630-54	07/13/09	1320	2.11	5.45
23	AR123201	WAR090618-32	07/13/09	1330	2.11	5.45
24	AR122101	WAR090618-21	07/13/09	1340	2.11	5.45
25	AR126201	WAR090608-62	07/13/09	1351	2.11	5.45
26	AR126801	WAR090424-68	07/13/09	1401	2.11	5.45
27	DDTANALOGSTD	WAR090623-DD	07/13/09	1411		
28	PIBLK02	WAR090703-99	07/13/09	1514	2.11	5.46
29	ZZZZZ	ZZZZZ	07/13/09	1524	2.11	5.45
30	ZZZZZ	ZZZZZ	07/13/09	1534	2.11	5.45
31	ZZZZZ	ZZZZZ	07/13/09	1544	2.11	5.45
32	ZZZZZ	ZZZZZ	07/13/09	1555	2.11	5.45

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.48 DCB: 6.18

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/13/09	0944	2.48	6.17
02	ZZZZZ	ZZZZZ	07/13/09	0954	2.48	6.17
03	ZZZZZ	ZZZZZ	07/13/09	1004	2.48	6.17
04	AR124201	WAR090713-09	07/13/09	1014	2.48	6.17
05	AR124202	WAR090713-10	07/13/09	1025	2.48	6.17
06	AR124203	WAR090713-11	07/13/09	1035	2.48	6.18
07	AR124204	WAR090713-12	07/13/09	1045	2.48	6.18
08	AR124205	IAR090711-01	07/13/09	1056	2.48	6.18
09	AR124201	WAR090519-42	07/13/09	1106	2.48	6.17
10	AR124801	WAR090521-48	07/13/09	1116	2.48	6.18
11	AR166001	WAR090713-01	07/13/09	1127	2.48	6.18
12	AR166002	WAR090713-02	07/13/09	1137	2.48	6.17
13	AR166003	WAR090713-03	07/13/09	1147	2.48	6.18
14	AR166004	WAR090713-04	07/13/09	1158	2.48	6.18
15	AR166005	IAR090623-01	07/13/09	1208	2.48	6.18
16	AR166005	WAR090623-60	07/13/09	1218	2.48	6.18
17	AR125401	WAR090713-05	07/13/09	1228	2.48	6.17
18	AR125402	WAR090713-06	07/13/09	1239	2.48	6.17
19	AR125403	WAR090713-07	07/13/09	1249	2.48	6.18
20	AR125404	WAR090713-08	07/13/09	1259	2.48	6.17
21	AR125405	IAR0900505-0	07/13/09	1310	2.48	6.18
22	AR125401	WAR090630-54	07/13/09	1320	2.48	6.17
23	AR123201	WAR090618-32	07/13/09	1330	2.48	6.17
24	AR122101	WAR090618-21	07/13/09	1340	2.48	6.18
25	AR126201	WAR090608-62	07/13/09	1351	2.48	6.18
26	AR126801	WAR090424-68	07/13/09	1401	2.48	6.17
27	DDTANALOGSTD	WAR090623-DD	07/13/09	1411		
28	PIBLK02	WAR090703-99	07/13/09	1514	2.49	6.18
29	ZZZZZ	ZZZZZ	07/13/09	1524	2.48	6.18
30	ZZZZZ	ZZZZZ	07/13/09	1534	2.48	6.18
31	ZZZZZ	ZZZZZ	07/13/09	1544	2.48	6.18
32	ZZZZZ	ZZZZZ	07/13/09	1555	2.48	6.18

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.11 DCB: 5.45

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/14/09	0644	2.11	5.45
02	AR166001	WAR090623-60	07/14/09	0654	2.11	5.45
03	AR125401	WAR090630-54	07/14/09	0705	2.11	5.45
04	AR124201	WAR090519-42	07/14/09	0715	2.11	5.45
05	AR124801	WAR090521-48	07/14/09	0725	2.11	5.45
06	AR123201	WAR090618-32	07/14/09	0736	2.11	5.45
07	AR122101	WAR090618-21	07/14/09	0746	2.11	5.45
08	AR126201	WAR090608-62	07/14/09	0756	2.11	5.45
09	AR126801	WAR090424-68	07/14/09	0806	2.11	5.45
10	ZZZZZ	ZZZZZ	07/14/09	0817		
11	PIBLK02	WAR090703-99	07/14/09	0827	2.11	5.45
12	ZZZZZ	ZZZZZ	07/14/09	0837	2.11	5.45
13	ZZZZZ	ZZZZZ	07/14/09	0848	2.11	5.45
14	ZZZZZ	ZZZZZ	07/14/09	0858	2.11	5.45
15	ZZZZZ	ZZZZZ	07/14/09	0908	2.11	5.45
16	ZZZZZ	ZZZZZ	07/14/09	0919	2.11	5.45
17	ZZZZZ	ZZZZZ	07/14/09	0929	2.11	5.45
18	ZZZZZ	ZZZZZ	07/14/09	0944	2.11	5.45
19	AR166002	WAR090623-60	07/14/09	1000	2.11	5.45
20	PIBLK03	WAR090730-99	07/14/09	1010	2.11	5.45
21	PBLK01	1201879447	07/14/09	1021	2.11	5.45
22	PBLK01LCS	1201879448	07/14/09	1031	2.11	5.45
23	ZZZZZ	ZZZZZ	07/14/09	1041	2.11	5.45
24	ZZZZZ	ZZZZZ	07/14/09	1051	2.11	5.45
25	ZZZZZ	ZZZZZ	07/14/09	1102	2.11	5.45
26	ZZZZZ	ZZZZZ	07/14/09	1112	2.11	5.45
27	CAMO-09-10030	232661005	07/14/09	1122	2.11	5.45
28	CAMO-09-10030MS	1201879449	07/14/09	1132	2.11	5.45
29	CAMO-09-10030MSD	1201879450	07/14/09	1143	2.11	5.45
30	CAMO-09-9989	232661006	07/14/09	1158	2.11	5.45
31	AR166003	WAR090623-60	07/14/09	1214	2.11	5.45
32	PIBLK04	WAR090730-99	07/14/09	1224	2.11	5.45

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 09-2515

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 07/13/09 07/13/09

Instrument ID: ECD1A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.48 DCB: 6.17

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR090730-99	07/14/09	0644	2.48	6.17
02	AR166001	WAR090623-60	07/14/09	0654	2.48	6.17
03	AR125401	WAR090630-54	07/14/09	0705	2.48	6.17
04	AR124201	WAR090519-42	07/14/09	0715	2.48	6.18
05	AR124801	WAR090521-48	07/14/09	0725	2.48	6.17
06	AR123201	WAR090618-32	07/14/09	0736	2.48	6.17
07	AR122101	WAR090618-21	07/14/09	0746	2.48	6.17
08	AR126201	WAR090608-62	07/14/09	0756	2.48	6.17
09	AR126801	WAR090424-68	07/14/09	0806	2.48	6.17
10	DDTANALOGSTD	WAR090623-DD	07/14/09	0817		
11	PIBLK02	WAR090703-99	07/14/09	0827	2.48	6.18
12	ZZZZZ	ZZZZZ	07/14/09	0837	2.48	6.17
13	ZZZZZ	ZZZZZ	07/14/09	0848	2.48	6.17
14	ZZZZZ	ZZZZZ	07/14/09	0858	2.48	6.17
15	ZZZZZ	ZZZZZ	07/14/09	0908	2.48	6.18
16	ZZZZZ	ZZZZZ	07/14/09	0919	2.48	6.18
17	ZZZZZ	ZZZZZ	07/14/09	0929	2.48	6.17
18	ZZZZZ	ZZZZZ	07/14/09	0944	2.48	6.17
19	AR166002	WAR090623-60	07/14/09	1000	2.48	6.17
20	PIBLK03	WAR090730-99	07/14/09	1010	2.48	6.17
21	PBLK01	1201879447	07/14/09	1021	2.48	6.17
22	PBLK01LCS	1201879448	07/14/09	1031	2.48	6.18
23	ZZZZZ	ZZZZZ	07/14/09	1041	2.48	6.17
24	ZZZZZ	ZZZZZ	07/14/09	1051	2.48	6.17
25	ZZZZZ	ZZZZZ	07/14/09	1102	2.48	6.18
26	ZZZZZ	ZZZZZ	07/14/09	1112	2.48	6.17
27	CAMO-09-10030	232661005	07/14/09	1122	2.48	6.17
28	CAMO-09-10030MS	1201879449	07/14/09	1132	2.48	6.17
29	CAMO-09-10030MSD	1201879450	07/14/09	1143	2.48	6.17
30	CAMO-09-9989	232661006	07/14/09	1158	2.48	6.17
31	AR166003	WAR090623-60	07/14/09	1214	2.48	6.17
32	PIBLK04	WAR090730-99	07/14/09	1224	2.48	6.17

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

Identification Summary

SDG Number: 09-2515 **Client ID:** CAMO-09-10030MS

Lab Sample ID: 1201879449

Data File:	028f2801.d	**Data File:**	028b2801.d
Inst:	ECD1A.I_1	**Inst:**	ECD1A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	14-JUL-09 11:32	**Analyzed:**	14-JUL-09 11:32

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							9.13
Column 1	1	2.58	2.55 – 2.61	20.1		ug/kg	
	2	2.87	2.84 – 2.9	21		ug/kg	
	3	2.95	2.92 – 2.98	20		ug/kg	
	4	3.07	3.04 – 3.1	21.1		ug/kg	
	5	3.2	3.17 – 3.23	20.7		ug/kg	
					20.6		
Column 2	1	3.4	3.37 – 3.43	23.8		ug/kg	
	2	3.48	3.45 – 3.51	22		ug/kg	
	3	3.55	3.52 – 3.58	22.3		ug/kg	
	4	3.78	3.75 – 3.81	22.2		ug/kg	
	5	3.86	3.83 – 3.89	22.5		ug/kg	
					22.6		
Aroclor-1254							22.6
Column 1	1	3.43	3.4 – 3.46	12		ug/kg	
	2	3.59	3.56 – 3.62	11.8		ug/kg	
	3	3.83	3.8 – 3.86	6.03		ug/kg	
	4	4.1	4.07 – 4.13	53.1		ug/kg	
	5	4.26	4.23 – 4.29	43.9		ug/kg	
					25.4		
Column 2	1	4.15	4.12 – 4.18	12.5		ug/kg	
	2	4.37	4.34 – 4.4	4.69		ug/kg	
	3	4.44	4.41 – 4.47	7.05		ug/kg	
	4	4.55	4.52 – 4.58	62.4		ug/kg	
	5	4.78	4.75 – 4.81	14.4		ug/kg	
					20.2		

Identification Summary

SDG Number: 09-2515

Lab Sample ID: 1201879449

Client ID: CAMO-09-10030MS

Data File: 028f2801.d
Inst: ECD1A.I_1
Column: CLP1
Analyzed: 14-JUL-09 11:32

Data File: 028b2801.d
Inst: ECD1A.I_2
Column: CLP2
Analyzed: 14-JUL-09 11:32

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1260							3.46
Column 1	1	3.93	3.9 - 3.96	27.7		ug/kg	
	2	4.1	4.07 - 4.13	28.9		ug/kg	
	3	4.33	4.3 - 4.36	34.3		ug/kg	
	4	4.47	4.44 - 4.5	31		ug/kg	
	5	4.83	4.81 - 4.87	37.2		ug/kg	
					31.8		
Column 2	1	4.55	4.52 - 4.58	29		ug/kg	
	2	4.68	4.64 - 4.7	31.6		ug/kg	
	3	4.94	4.91 - 4.97	35.6		ug/kg	
	4	5.12	5.09 - 5.15	33.1		ug/kg	
	5	5.27	5.24 - 5.3	35.4		ug/kg	
					32.9		

Identification Summary

SDG Number: 09-2515 **Client ID:** CAMO-09-10030MSD

Lab Sample ID: 1201879450

Data File: 029f2901.d **Data File:** 029b2901.d

Inst: ECD1A.I_1 **Inst:** ECD1A.I_2

Column: CLP1 **Column:** CLP2

Analyzed: 14-JUL-09 11:43 **Analyzed:** 14-JUL-09 11:43

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							8.82
Column 1	1	2.58	2.55 – 2.61	22.7		ug/kg	
	2	2.87	2.84 – 2.9	23.7		ug/kg	
	3	2.95	2.92 – 2.98	22		ug/kg	
	4	3.07	3.04 – 3.1	23.4		ug/kg	
	5	3.2	3.17 – 3.23	22.9		ug/kg	
					22.9		
Column 2	1	3.4	3.37 – 3.43	26.3		ug/kg	
	2	3.48	3.45 – 3.51	24.2		ug/kg	
	3	3.55	3.52 – 3.58	24.6		ug/kg	
	4	3.78	3.75 – 3.81	25		ug/kg	
	5	3.85	3.83 – 3.89	25.1		ug/kg	
					25.1		
Aroclor-1254							24.2
Column 1	1	3.43	3.4 – 3.46	13.3		ug/kg	
	2	3.59	3.56 – 3.62	13.2		ug/kg	
	3	3.82	3.8 – 3.86	7.1		ug/kg	
	4	4.09	4.07 – 4.13	60.4		ug/kg	
	5	4.26	4.23 – 4.29	50.4		ug/kg	
					28.9		
Column 2	1	4.15	4.12 – 4.18	13.8		ug/kg	
	2	4.36	4.34 – 4.4	5.49		ug/kg	
	3	4.43	4.41 – 4.47	8.13		ug/kg	
	4	4.55	4.52 – 4.58	69.6		ug/kg	
	5	4.78	4.75 – 4.81	16.2		ug/kg	
					22.6		

Identification Summary

SDG Number: 09-2515

Lab Sample ID: 1201879450

Client ID: CAMO-09-10030MSD

Data File:	029f2901.d	**Data File:**	029b2901.d
Inst:	ECD1A.I_1	**Inst:**	ECD1A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	14-JUL-09 11:43	**Analyzed:**	14-JUL-09 11:43

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1260							.879
Column 1	1	3.93	3.9 – 3.96	31.6		ug/kg	
	2	4.09	4.07 – 4.13	32.9		ug/kg	
	3	4.32	4.3 – 4.36	39.6		ug/kg	
	4	4.47	4.44 – 4.5	36.3		ug/kg	
	5	4.83	4.81 – 4.87	43.7		ug/kg	
					36.8		
Column 2	1	4.55	4.52 – 4.58	32.3		ug/kg	
	2	4.67	4.64 – 4.7	35.6		ug/kg	
	3	4.94	4.91 – 4.97	40.2		ug/kg	
	4	5.12	5.09 – 5.15	37.5		ug/kg	
	5	5.27	5.24 – 5.3	40.1		ug/kg	
					37.1		

Identification Summary

SDG Number: 09-2515 Client ID: CAMO-09-10030

Lab Sample ID: 232661005

Data File:	027f2701.d	Data File:	027b2701.d
Inst:	ECD1A.I_1	Inst:	ECD1A.I_2
Column:	CLP1	Column:	CLP2
Analyzed:	14-JUL-09 11:22	Analyzed:	14-JUL-09 11:22

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1254							15.7
Column 1	1	3.43	3.4 – 3.46	2.01		ug/kg	
	2	3.59	3.56 – 3.62	2.55		ug/kg	
	3	3.82	3.8 – 3.86	2.85		ug/kg	
	4	4.1	4.07 – 4.13	14		ug/kg	
	5	4.26	4.23 – 4.29	14		ug/kg	
					7.07		
Column 2	1	4.15	4.12 – 4.18	2.89		ug/kg	
	2	4.37	4.34 – 4.4	2.12		ug/kg	
	3	4.44	4.41 – 4.47	3.4		ug/kg	
	4	4.55	4.52 – 4.58	16.6		ug/kg	
	5	4.78	4.75 – 4.81	5.24		ug/kg	
					6.04		
Aroclor-1260							5.28
Column 1	1	3.93	3.9 – 3.96	6.66		ug/kg	
	2	4.1	4.07 – 4.13	7.6		ug/kg	
	3	4.33	4.3 – 4.36	8.97		ug/kg	
	4	4.47	4.44 – 4.5	8.03		ug/kg	
	5	4.83	4.81 – 4.87	11		ug/kg	
					8.45		
Column 2	1	4.55	4.52 – 4.58	7.69		ug/kg	
	2	4.67	4.64 – 4.7	8.84		ug/kg	
	3	4.94	4.91 – 4.97	10.4		ug/kg	
	4	5.12	5.09 – 5.15	8.59		ug/kg	
	5	5.27	5.24 – 5.3	9.07		ug/kg	
					8.91		

Identification Summary

SDG Number: 09-2515 **Client ID:** CAMO-09-9989

Lab Sample ID: 232661006

Data File:	030f3001.d	**Data File:**	030b3001.d
Inst:	ECD1A.I_1	**Inst:**	ECD1A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	14-JUL-09 11:58	**Analyzed:**	14-JUL-09 11:58

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1260							6.46
Column 1	1	3.93	3.9 – 3.96	53		ug/kg	
	2	4.09	4.07 – 4.13	50.6		ug/kg	
	3	4.32	4.3 – 4.36	59.2		ug/kg	
	4	4.47	4.44 – 4.5	59.6		ug/kg	
	5	4.83	4.81 – 4.87	79.2		ug/kg	
					60.3		
Column 2	1	4.55	4.52 – 4.58	56.4		ug/kg	
	2	4.67	4.64 – 4.7	57.8		ug/kg	
	3	4.94	4.91 – 4.97	69.5		ug/kg	
	4	5.12	5.09 – 5.15	67.5		ug/kg	
	5	5.26	5.24 – 5.3	70.6		ug/kg	
					64.4		

Identification Summary

SDG Number: 09-2515 **Client ID:** LCS for batch 884632

Lab Sample ID: 1201879448

Data File:	022f2201.d	**Data File:**	022b2201.d
Inst:	ECD1A.I_1	**Inst:**	ECD1A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	14-JUL-09 10:31	**Analyzed:**	14-JUL-09 10:31

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							5.55
Column 1	1	2.58	2.55 - 2.61	24.8		ug/kg	
	2	2.87	2.84 - 2.9	26.8		ug/kg	
	3	2.95	2.92 - 2.98	25.1		ug/kg	
	4	3.07	3.04 - 3.1	25.4		ug/kg	
	5	3.2	3.17 - 3.23	25.5		ug/kg	
					25.5		
Column 2	1	3.4	3.37 - 3.43	28.6		ug/kg	
	2	3.48	3.45 - 3.51	26.4		ug/kg	
	3	3.55	3.52 - 3.58	26.8		ug/kg	
	4	3.78	3.75 - 3.81	26.6		ug/kg	
	5	3.86	3.83 - 3.89	26.5		ug/kg	
					27		
Aroclor-1260							1.91
Column 1	1	3.93	3.9 - 3.96	26.8		ug/kg	
	2	4.1	4.07 - 4.13	27.1		ug/kg	
	3	4.33	4.3 - 4.36	32.5		ug/kg	
	4	4.47	4.44 - 4.5	30.4		ug/kg	
	5	4.84	4.81 - 4.87	33.9		ug/kg	
					30.2		
Column 2	1	4.55	4.52 - 4.58	27.6		ug/kg	
	2	4.68	4.64 - 4.7	29		ug/kg	
	3	4.94	4.91 - 4.97	32.7		ug/kg	
	4	5.12	5.09 - 5.15	31.6		ug/kg	
	5	5.27	5.24 - 5.3	32.9		ug/kg	
					30.7		

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2515			**Matrix:**	SOIL
Lab Sample ID:	1201879447				
Client Sample:	QC for batch 884632	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 884632	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 10:21	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	021f2101-1.d	**Column:**	1 CLP1	**Level:**	LOW
	021b2101-1.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.33	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/021f2101-2.d
Lab Smp Id: 1201879447 Client Smp ID: PBLK01
Inj Date : 14-JUL-2009 10:21
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879447|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.110	2.112	-0.002	59713402	179.655	6.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.448	5.450	-0.002	39856330	172.098	5.7	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/021f2101-2.d

Date : 14-JUL-2009 10:21

Client ID: PBLK01

Sample Info: |120187944711|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

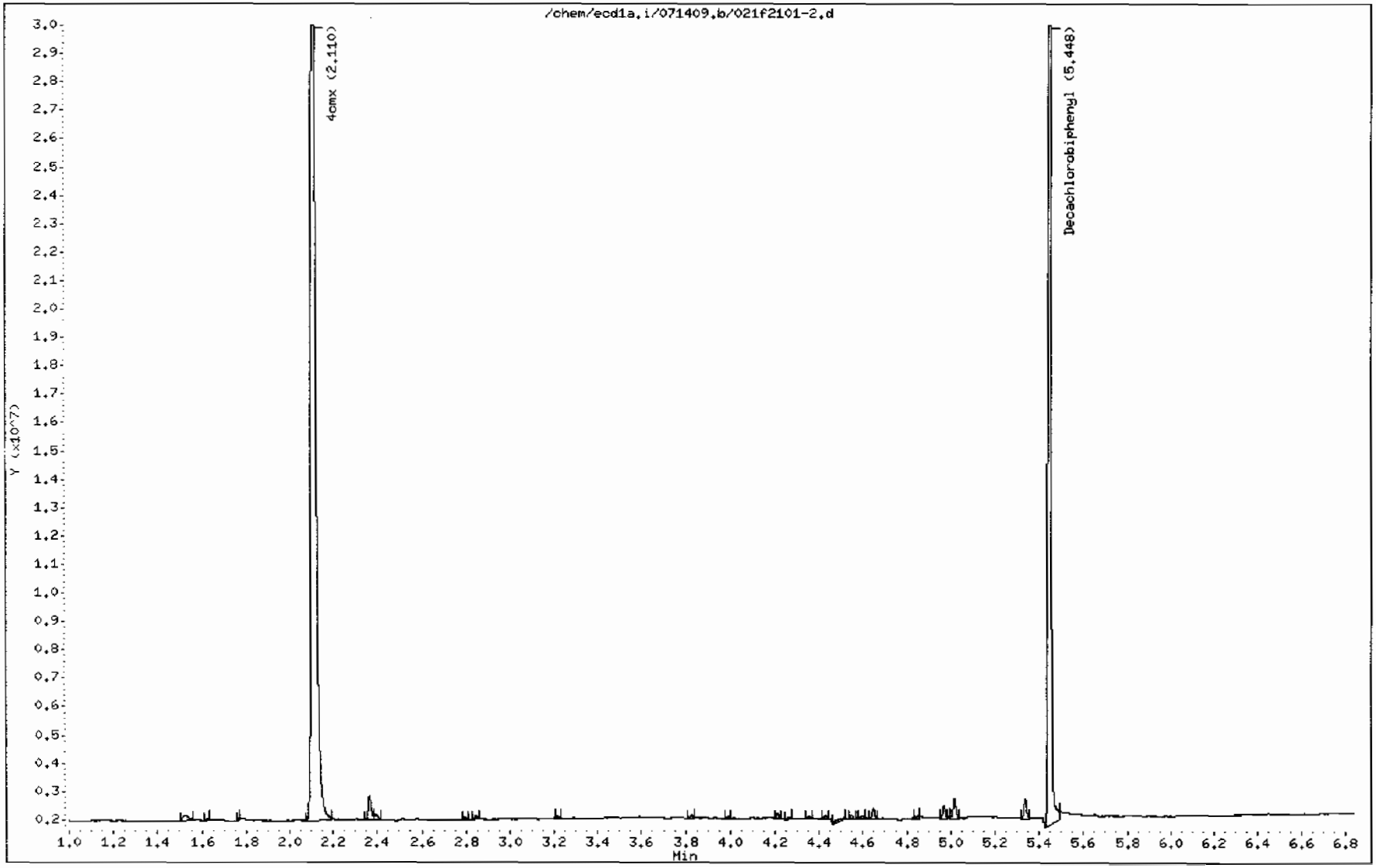

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/021b2101-2.d
Lab Smp Id: 1201879447 Client Smp ID: PBLK01
Inj Date : 14-JUL-2009 10:21
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879447|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	48222483	180.091	6.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.174	6.175	-0.001	22089276	168.845	5.6	80.00- 120.00	100.00

Data File: /chem/ecd1a.i/071409.b/021b2101-2.d
Date : 14-JUL-2009 10:21
Client ID: PBLK01
Sample Info: |120187944711|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

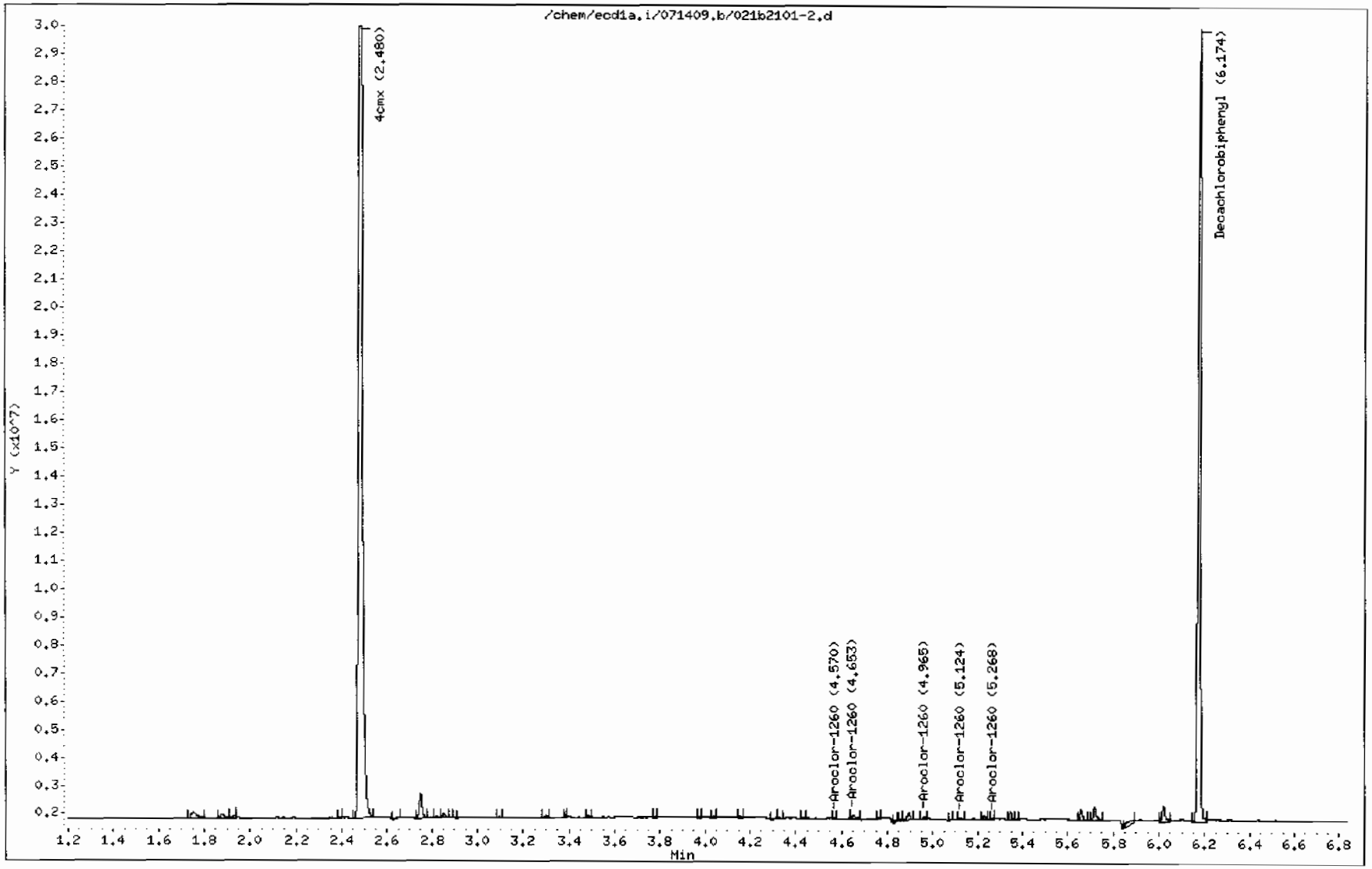

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2515			**Matrix:**	SOIL
Lab Sample ID:	1201879448				
Client Sample:	QC for batch 884632	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 884632	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 10:31	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	022f2201-1.d	**Column:**	1 CLP1	**Level:**	LOW
	022b2201-1.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		27.0	ug/kg	1.11	3.33	2
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260		30.8	ug/kg	1.11	3.33	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/022f2201-2.d
Lab Smp Id: 1201879448 Client Smp ID: PBLK01LCS
Inj Date : 14-JUL-2009 10:31
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879448|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	59003244	177.518	5.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	40963678	176.879	5.9	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	10574381	744.505	24.8	80.00- 120.00	100.00
2.871	2.871	0.000	13309920	803.002	26.8	105.14- 145.14	125.87
2.953	2.953	0.000	8844267	751.847	25.1	63.46- 103.46	83.64
3.068	3.067	0.001	4868383	762.362	25.4	24.66- 64.66	46.04

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.204	3.204	0.000	6728937	765.832	25.5	43.54- 83.54	63.63
Average of Peak Concentrations =					25.5		
7 Aroclor-1260					CAS #: 11096-82-5		
3.934	3.933	0.001	12303572	804.909	26.8	80.00- 120.00	100.00
4.096	4.096	0.000	18767782	812.715	27.1	135.17- 175.17	152.54
4.327	4.326	0.001	11351598	975.294	32.5	56.89- 96.89	92.26
4.471	4.470	0.001	11569480	913.353	30.4	64.08- 104.08	94.03
4.835	4.835	0.000	5979829	1018.14	33.9	18.06- 58.06	48.60
Average of Peak Concentrations =					30.1		

Data File: /chem/ecd1a.i/071409.b/022f2201-2.d
Date : 14-JUL-2009 10:31
Client ID: PBLK01LCS
Sample Info: |120187944811|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

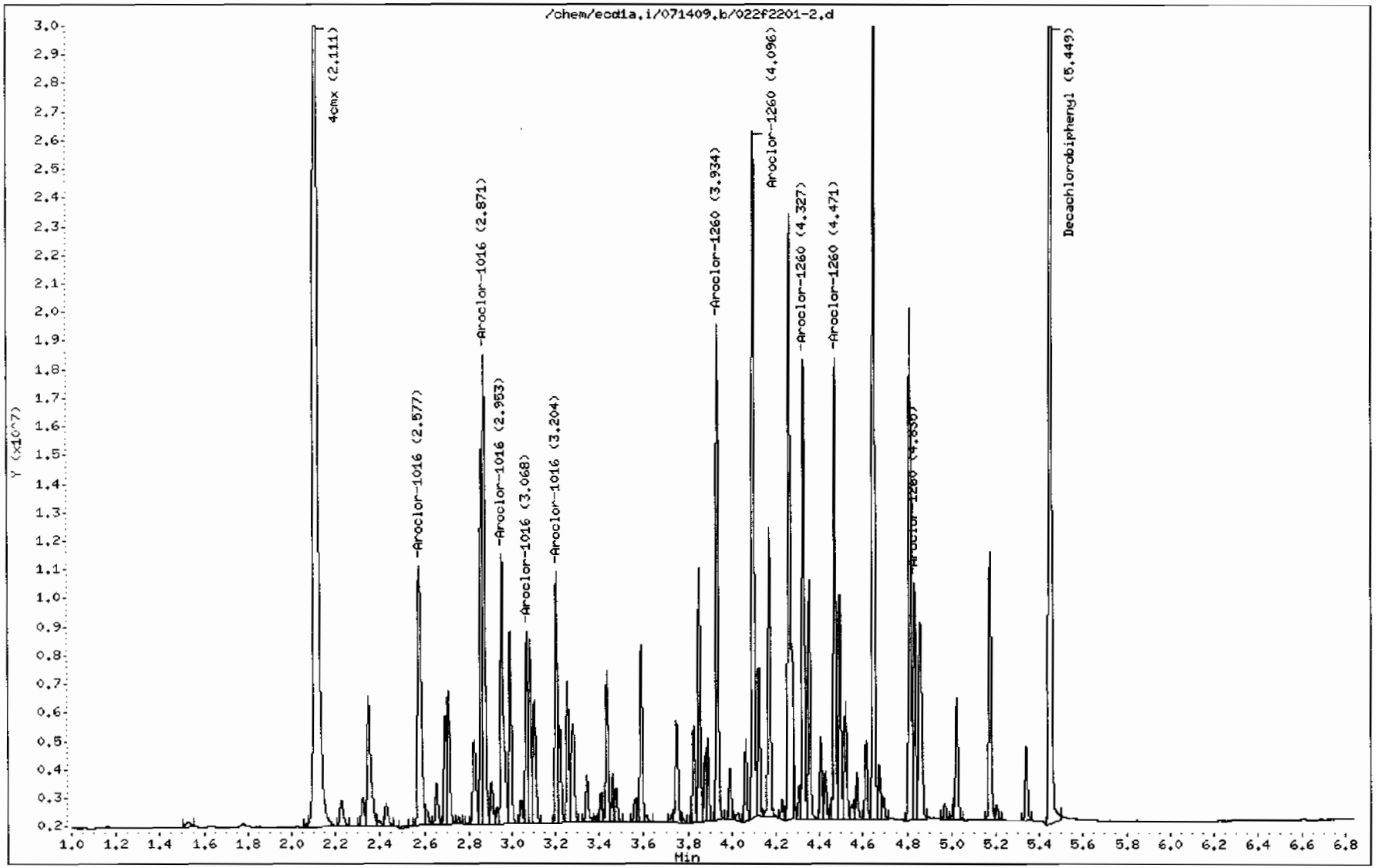

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GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/022b2201-2.d
Lab Smp Id: 1201879448 Client Smp ID: PBLK01LCS
Inj Date : 14-JUL-2009 10:31
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879448|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	47474534	177.298	5.9	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	22187769	169.597	5.6	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.399	3.399	0.000	9048836	856.938	28.6	80.00- 120.00	100.00
3.484	3.484	0.000	6663643	792.949	26.4	51.66- 91.66	73.64
3.549	3.549	0.000	3974316	803.135	26.8	23.31- 63.31	43.92
3.779	3.779	0.000	5441015	798.949	26.6	38.10- 78.10	60.13

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.856	3.855	0.001	4326487	793.992	26.5	26.66- 66.66	47.81
Average of Peak Concentrations =					27.0		
7 Aroclor-1260					CAS #: 11096-82-5		
4.553	4.551	0.002	9388284	828.557	27.6	80.00- 120.00	100.00
4.676	4.675	0.001	10833907	869.991	29.0	93.67- 133.67	115.40
4.944	4.944	0.000	8298200	980.100	32.7	54.30- 94.30	88.39
5.122	5.121	0.001	8313829	947.363	31.6	58.15- 98.15	88.56
5.268	5.267	0.001	16841603	985.857	32.9	140.04- 180.04	179.39
Average of Peak Concentrations =					30.8		

Data File: /chem/ecd1a.i/071409.b/022b2201-2.d
Date : 14-JUL-2009 10:31
Client ID: PBLK01LCS
Sample Info: |120187944811|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

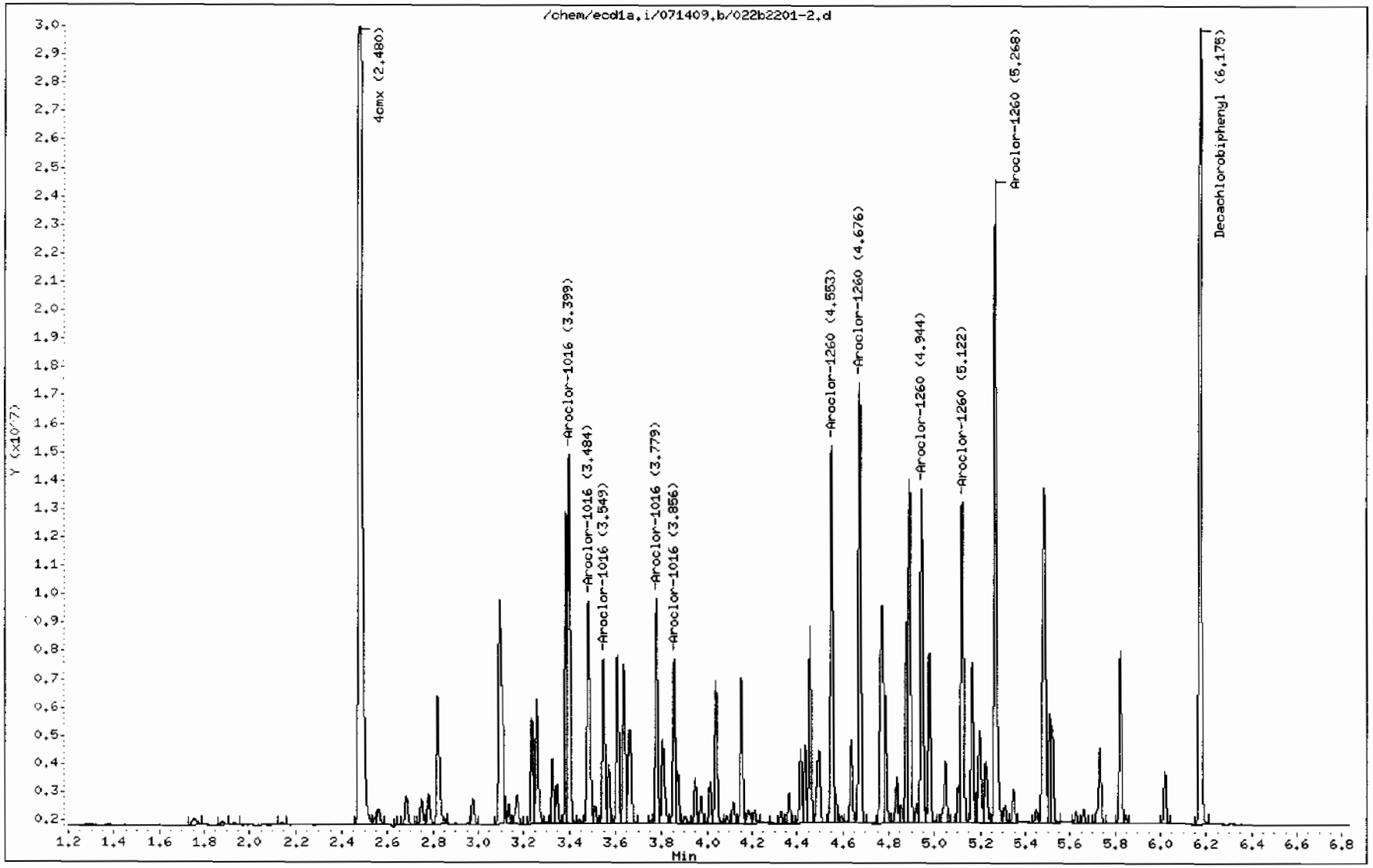

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PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201879449	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
Client Sample:	QC for batch 884632	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10030MS	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 11:32	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.07 g	**Final Volume:**	1 mL
Data File:	028f2801.d	**Column:**	1 CLP1	**Level:**	LOW
	028b2801.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		20.6	ug/kg	1.23	3.70	1
11104-28-2	Aroclor-1221	U	3.70	ug/kg	1.23	3.70	1
11141-16-5	Aroclor-1232	U	3.70	ug/kg	1.23	3.70	1
53469-21-9	Aroclor-1242	U	3.70	ug/kg	1.23	3.70	1
12672-29-6	Aroclor-1248	U	3.70	ug/kg	1.23	3.70	1
11097-69-1	Aroclor-1254		25.4	ug/kg	1.23	3.70	1
11096-82-5	Aroclor-1260		32.9	ug/kg	1.23	3.70	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/028f2801.d
Lab Smp Id: 1201879449 Client Smp ID: CAMO-09-10030MS
Inj Date : 14-JUL-2009 11:32
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879449|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 28 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.07000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	39557345	119.013	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.449	5.450	-0.001	29987390	129.484	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	7742922	545.152	20.1	80.00- 120.00	100.00
2.870	2.871	-0.001	9420535	568.351	21.0	105.14- 145.14	121.67
2.952	2.953	-0.001	6374075	541.857	20.0	63.46- 103.46	82.32
3.067	3.067	0.000	3646296	570.990	21.1	24.66- 64.66	47.09

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.203	3.204	-0.001	4930431	561.141	20.7	43.54- 83.54	63.68
Average of Peak Concentrations =					20.6		
6 Aroclor-1254					CAS #: 11097-69-1		
3.434	3.434	0.000	3350299	324.987	12.0	80.00- 120.00	100.00
3.589	3.589	0.000	4389133	319.261	11.8	113.23- 153.23	131.01
3.825	3.826	-0.001	2780125	163.074	6.0	148.35- 188.35	82.98
4.095	4.098	-0.003	18056462	1436.02	53.1	102.75- 142.75	538.95
4.260	4.261	-0.001	20412016	1189.08	43.9	148.15- 188.15	609.26
Average of Peak Concentrations =					25.4		
7 Aroclor-1260					CAS #: 11096-82-5		
3.933	3.933	0.000	11437635	748.258	27.6	80.00- 120.00	100.00
4.095	4.096	-0.001	18056462	781.912	28.9	135.17- 175.17	157.87
4.326	4.326	0.000	10794042	927.391	34.3	56.89- 96.89	94.37
4.470	4.470	0.000	10628685	839.082	31.0	64.08- 104.08	92.93
4.835	4.835	0.000	5916293	1007.32	37.2	18.06- 58.06	51.73
Average of Peak Concentrations =					31.8		

Data File: /chem/ecd1a.i/071409.b/028f2801.d
Date : 14-JUL-2009 11:32
Client ID: CAMO-09-10030MS
Sample Info: |120187944911|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

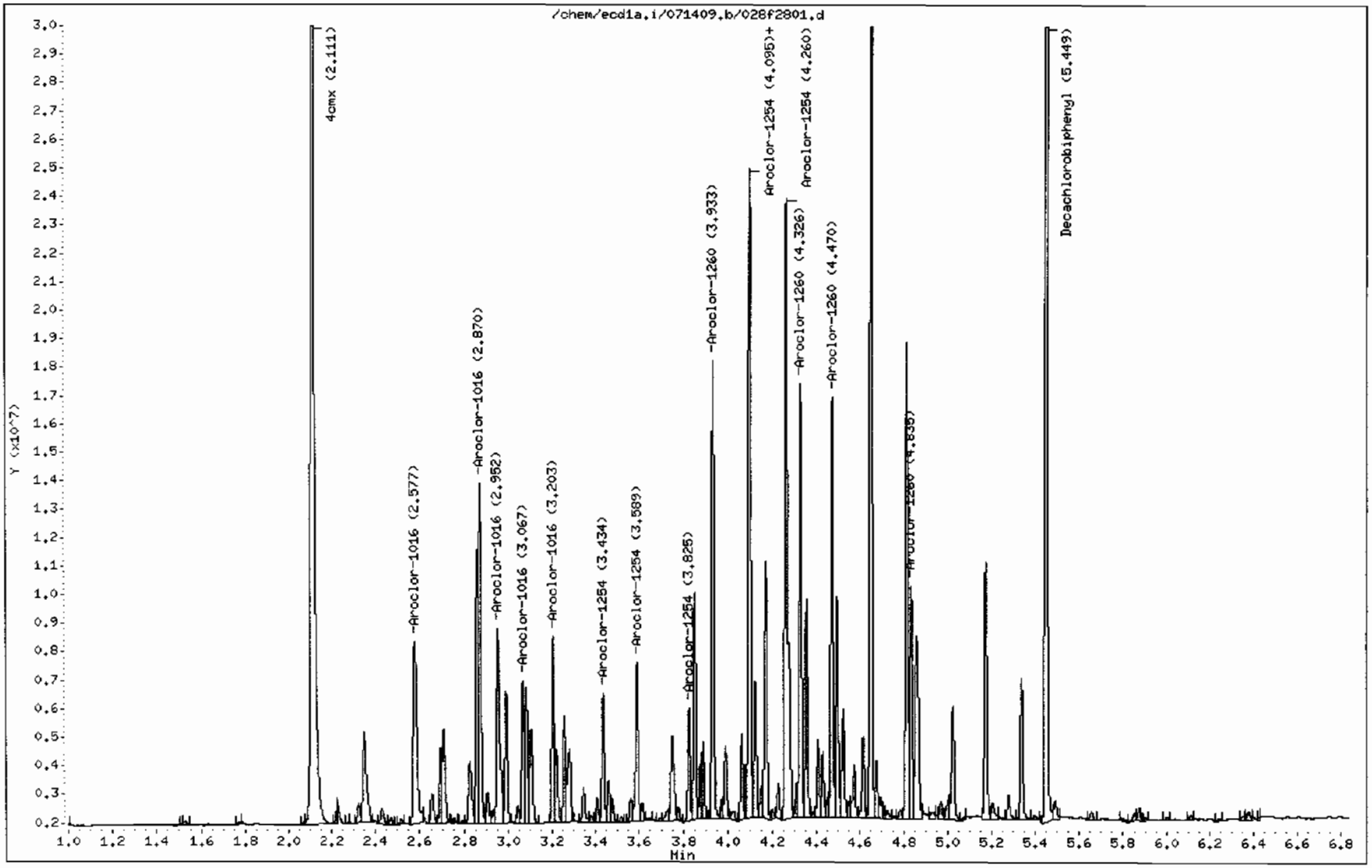

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecdla.i/071409.b/028b2801.d
Lab Smp Id: 1201879449 Client Smp ID: CAMO-09-10030MS
Inj Date : 14-JUL-2009 11:32
Operator : YS1 Inst ID: ecdla.i
Smp Info : |1201879449|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MS|||
Comment :
Method : /chem/ecdla.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 28 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.07000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	32715100	122.177	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.175	6.175	0.000	16847133	128.775	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.399	3.399	0.000	6803138	644.267	23.8	80.00- 120.00	100.00
3.484	3.484	0.000	5005912	595.685	22.0	51.66- 91.66	73.58
3.549	3.549	0.000	2987182	603.653	22.3	23.31- 63.31	43.91
3.779	3.779	0.000	4094035	601.161	22.2	38.10- 78.10	60.18

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.855	3.855	0.000	3320623	609.397	22.5	26.66- 66.66	48.81
Average of Peak Concentrations =					22.6		
6 Aroclor-1254					CAS #: 11097-69-1		
4.154	4.154	0.000	3144645	338.900	12.5	80.00- 120.00	100.00(M)
4.365	4.365	0.000	879777	126.994	4.7	55.64- 95.64	27.98
4.435	4.435	0.000	2323069	190.879	7.0	114.01- 154.01	73.87
4.552	4.553	-0.001	8888424	1689.45	62.4	36.82- 76.82	282.65
4.785	4.782	0.003	2448862	388.771	14.4	48.47- 88.47	77.87
Average of Peak Concentrations =					20.2		
7 Aroclor-1260					CAS #: 11096-82-5		
4.552	4.551	0.001	8888424	784.442	29.0	80.00- 120.00	100.00
4.675	4.675	0.000	10661150	856.119	31.6	93.67- 133.67	119.94
4.945	4.944	0.001	8147484	962.299	35.6	54.30- 94.30	91.66
5.121	5.121	0.000	7863655	896.066	33.1	58.15- 98.15	88.47
5.267	5.267	0.000	16344473	956.757	35.4	140.04- 180.04	183.88
Average of Peak Concentrations =					32.9		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd1a.i/071409.b/028b2801.d

Date : 14-JUL-2009 11:32

Client ID: CAMO-09-10030MS

Sample Info: |1201879449|1|

Volume Injected (uL): 1.0

Column phase: CLP2

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

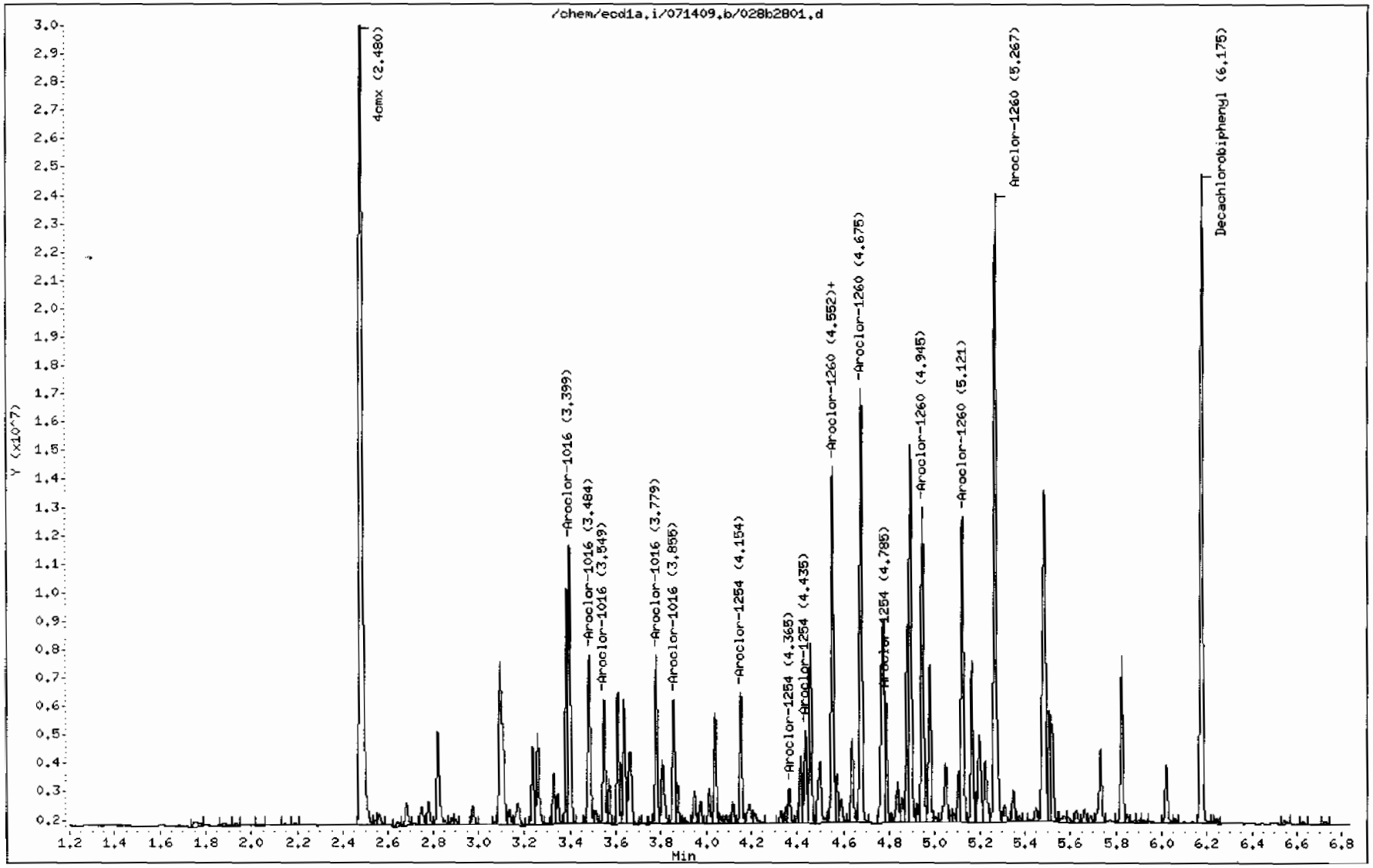

Comment: Manually Integrated
Data File: /chem/ecd1a.i/071409.b/028b2801.d
Operator: YS1
Injection Date: 14-JUL-2009 11:32
Instrument: ecd1a.i
Client Sample ID: CAMO-09-10030MS

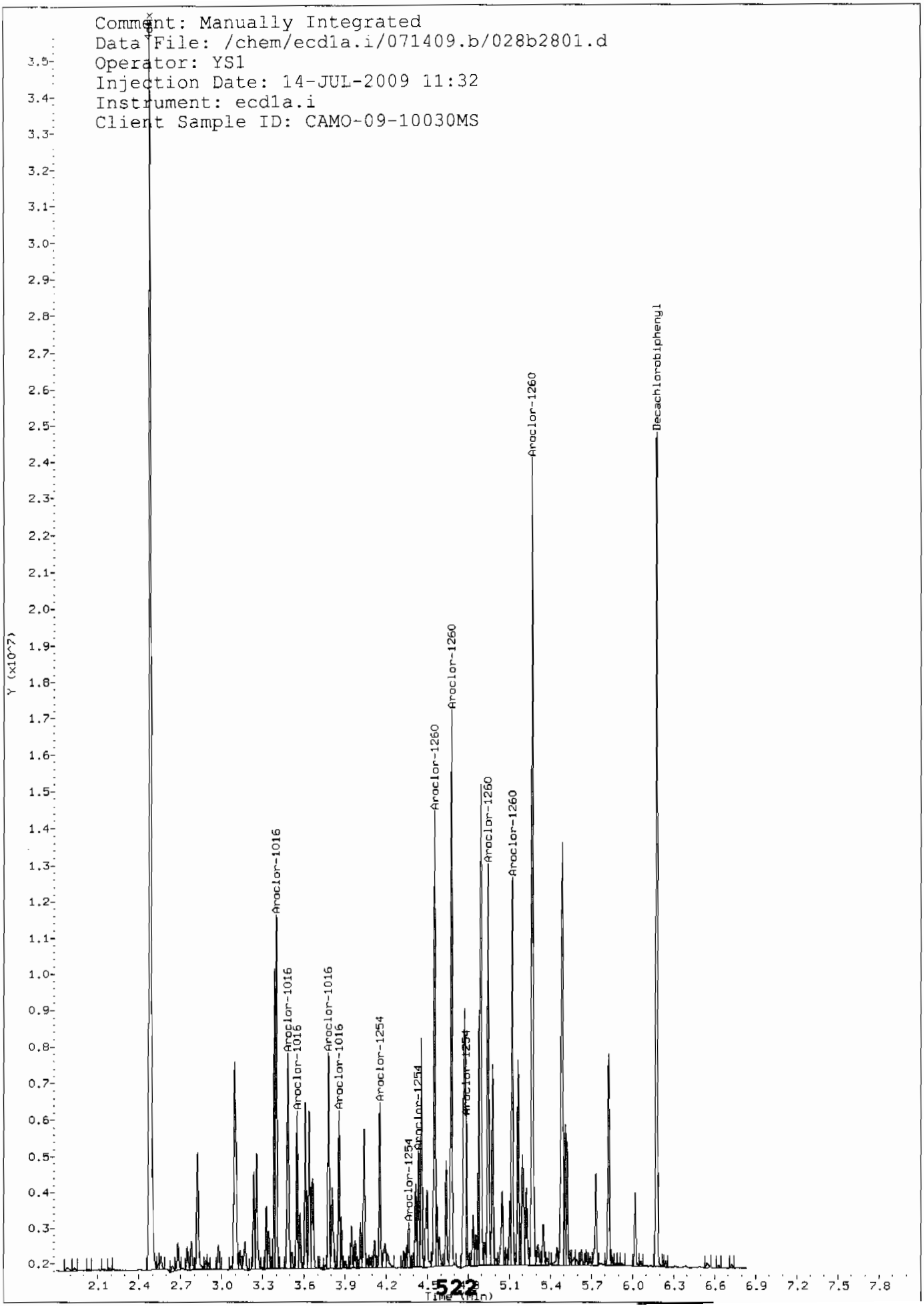

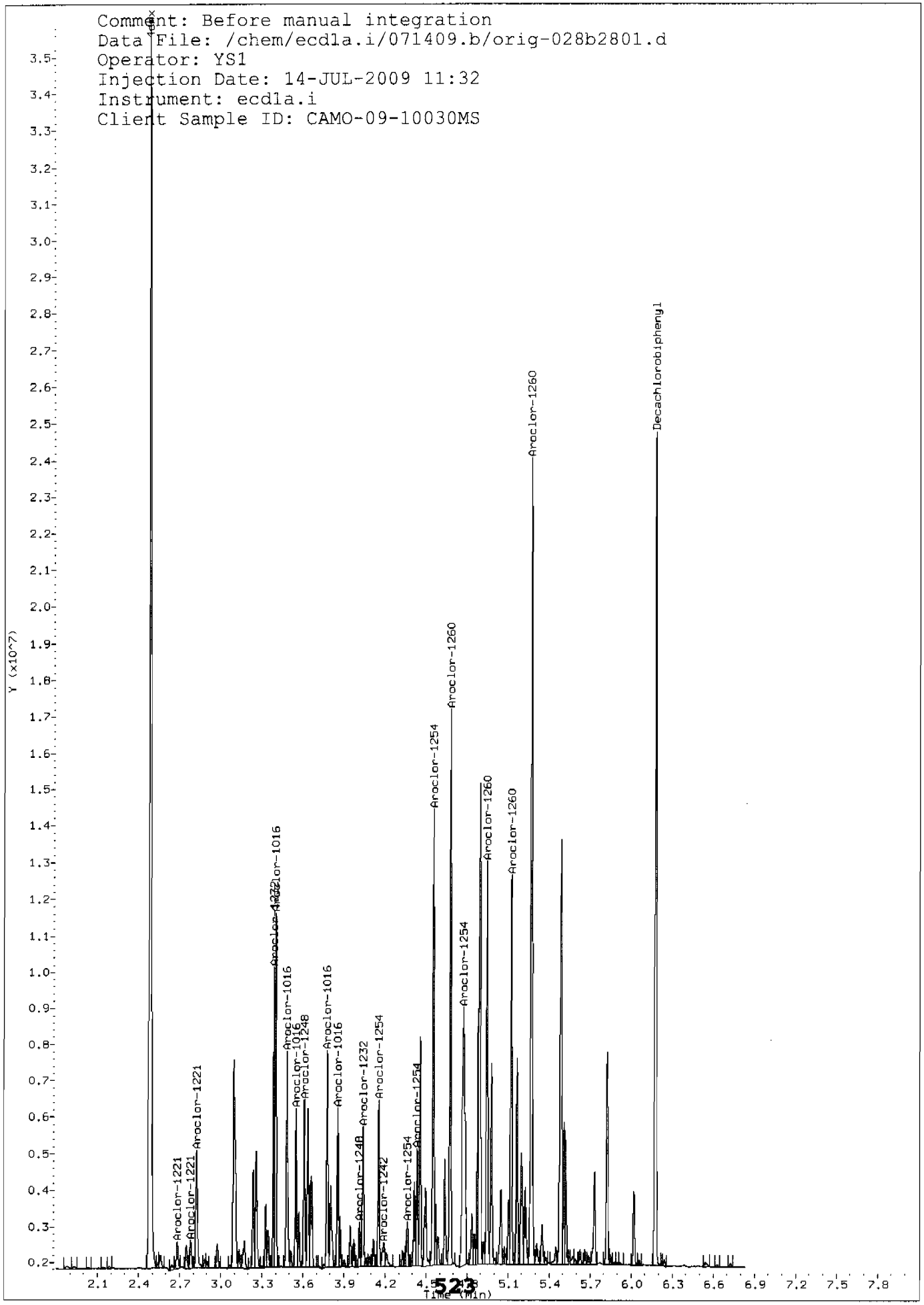
Comment: Before manual integration
Data File: /chem/ecd1a.i/071409.b/orig-028b2801.d
Operator: YS1
Injection Date: 14-JUL-2009 11:32
Instrument: ecd1a.i
Client Sample ID: CAMO-09-10030MS
Y (x10^7)
Time (min)
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1016
Aroclor-1016
Aroclor-1248
Aroclor-1016
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1242
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl

PCB
Certificate of Analysis
Sample Summary

SDG Number:	09-2515	**Date Collected:**	06/26/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201879450	**Date Received:**	07/01/2009 09:00	**%Moisture:**	10
Client Sample:	QC for batch 884632	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-10030MSD	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	884634	**Inst:**	ECD1A.I	**Dilution:**	1
Run Date:	07/14/2009 11:43	**Analyst:**	YS1	**Inj. Vol:**	1 uL
Prep Date:	07/13/2009 20:17	**Aliquot:**	30.05 g	**Final Volume:**	1 mL
Data File:	029f2901.d	**Column:**	1 CLP1	**Level:**	LOW
	029b2901.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		22.9	ug/kg	1.23	3.70	1
11104-28-2	Aroclor-1221	U	3.70	ug/kg	1.23	3.70	1
11141-16-5	Aroclor-1232	U	3.70	ug/kg	1.23	3.70	1
53469-21-9	Aroclor-1242	U	3.70	ug/kg	1.23	3.70	1
12672-29-6	Aroclor-1248	U	3.70	ug/kg	1.23	3.70	1
11097-69-1	Aroclor-1254		28.9	ug/kg	1.23	3.70	1
11096-82-5	Aroclor-1260		37.1	ug/kg	1.23	3.70	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/029f2901.d
Lab Smp Id: 1201879450 Client Smp ID: CAMO-09-10030MSD
Inj Date : 14-JUL-2009 11:43
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879450|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-F-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024f2401.d
Als bottle: 29 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.111	2.112	-0.001	44915075	135.132	5.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.447	5.450	-0.003	33179032	143.265	5.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.577	2.577	0.000	8706818	613.016	22.7	80.00- 120.00	100.00
2.870	2.871	-0.001	10626981	641.137	23.7	105.14- 145.14	122.05
2.952	2.953	-0.001	7011753	596.066	22.0	63.46- 103.46	80.53
3.067	3.067	0.000	4036913	632.159	23.4	24.66- 64.66	46.36

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.203	3.204	-0.001	5437028	618.797	22.9	43.54- 83.54	62.45
Average of Peak Concentrations =					22.9		
6 Aroclor-1254					CAS #: 11097-69-1		
3.433	3.434	-0.001	3694281	358.354	13.2	80.00- 120.00	100.00
3.588	3.589	-0.001	4899776	356.404	13.2	113.23- 153.23	132.63
3.824	3.826	-0.002	3272216	191.939	7.1	148.35- 188.35	88.58
4.094	4.098	-0.004	20533826	1633.04	60.4	102.75- 142.75	555.83
4.258	4.261	-0.003	23405843	1363.48	50.4	148.15- 188.15	633.57
Average of Peak Concentrations =					28.9		
7 Aroclor-1260					CAS #: 11096-82-5		
3.932	3.933	-0.001	13061538	854.495	31.6	80.00- 120.00	100.00
4.094	4.096	-0.002	20533826	889.191	32.9	135.17- 175.17	157.21
4.325	4.326	-0.001	12459657	1070.50	39.6	56.89- 96.89	95.39
4.469	4.470	-0.001	12448104	982.716	36.3	64.08- 104.08	95.30
4.833	4.835	-0.002	6937164	1181.14	43.7	18.06- 58.06	53.11
Average of Peak Concentrations =					36.8		

Data File: /chem/ecd1a.i/071409.b/029f2901.d

Date : 14-JUL-2009 11:43

Client ID: CAMO-09-10030MSD

Sample Info: |120187945011|

Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd1a.i

Operator: YS1

Column diameter: 0.25

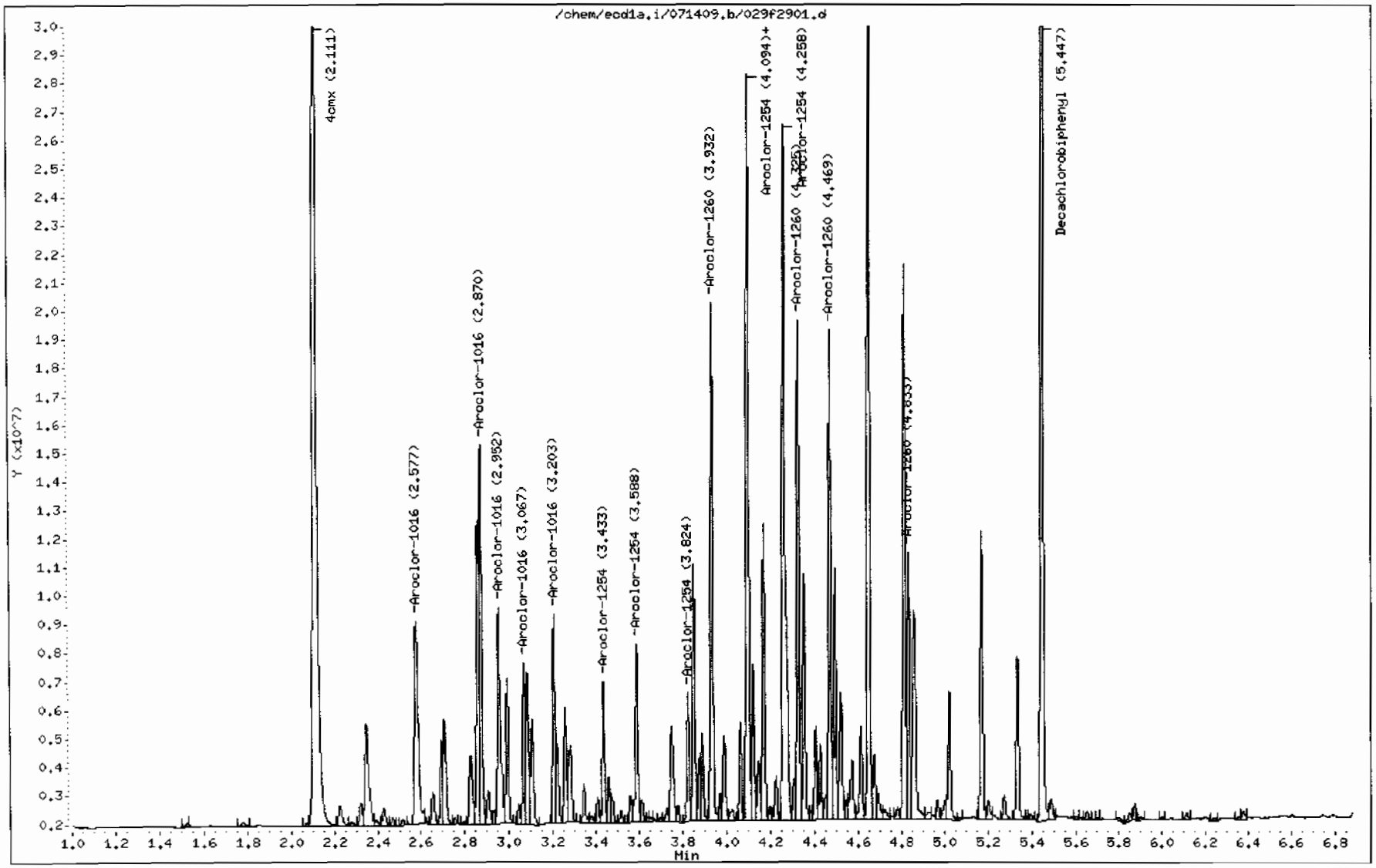

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd1a.i/071409.b/029b2901.d
Lab Smp Id: 1201879450 Client Smp ID: CAMO-09-10030MSD
Inj Date : 14-JUL-2009 11:43
Operator : YS1 Inst ID: ecd1a.i
Smp Info : |1201879450|1|
Misc Info : |ECD82P_1SF|884634|SVAF|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd1a.i/071409.b/ECD1-B-8082-071109.m
Meth Date : 14-Jul-2009 12:49 yip00818 Quant Type: ESTD
Cal Date : 12-JUL-2009 20:55 Cal File: 024b2401.d
Als bottle: 29 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 09-2515.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.05000	Weight of sample extracted (g)
M	10.00810	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.480	2.481	-0.001	36974162	138.083	5.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.173	6.175	-0.002	18637318	142.459	5.3	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
3.398	3.399	-0.001	7504153	710.654	26.3	80.00- 120.00	100.00
3.483	3.484	-0.001	5507162	655.332	24.2	51.66- 91.66	73.39
3.548	3.549	-0.001	3289940	664.835	24.6	23.31- 63.31	43.84
3.777	3.779	-0.002	4611261	677.109	25.0	38.10- 78.10	61.45

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.855	3.855	0.000	3701939	679.376	25.1	26.66- 66.66	49.33
Average of Peak Concentrations =					25.0		
6 Aroclor-1254					CAS #: 11097-69-1		
4.153	4.154	-0.001	3459280	372.809	13.8	80.00- 120.00	100.00(M)
4.364	4.365	-0.001	1029329	148.581	5.5	55.64- 95.64	29.76
4.434	4.435	-0.001	2675742	219.857	8.1	114.01- 154.01	77.35
4.551	4.553	-0.002	9898016	1881.35	69.6	36.82- 76.82	286.13
4.783	4.782	0.001	2758934	437.997	16.2	48.47- 88.47	79.75
Average of Peak Concentrations =					22.6		
7 Aroclor-1260					CAS #: 11096-82-5		
4.551	4.551	0.000	9898016	873.543	32.3	80.00- 120.00	100.00
4.674	4.675	-0.001	11981383	962.137	35.6	93.67- 133.67	121.05
4.943	4.944	-0.001	9198584	1086.44	40.2	54.30- 94.30	92.93
5.121	5.121	0.000	8903458	1014.55	37.5	58.15- 98.15	89.95
5.266	5.267	-0.001	18540621	1085.31	40.1	140.04- 180.04	187.32
Average of Peak Concentrations =					37.1		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd1a.i/071409.b/029b2901.d
Date : 14-JUL-2009 11:43
Client ID: CAMD-09-10030MSD
Sample Info: |120187945011|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd1a.i
Operator: YS1
Column diameter: 0.25

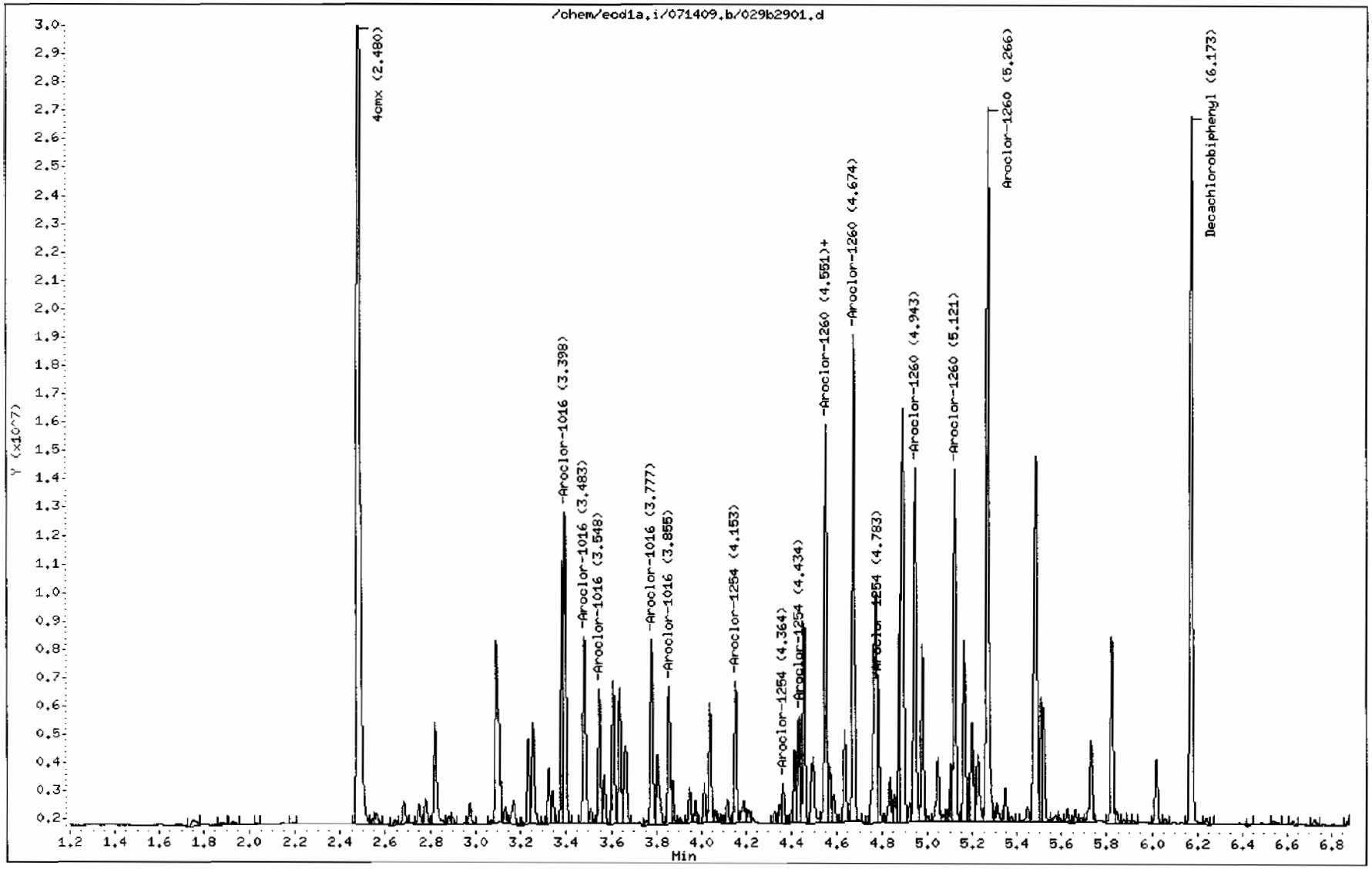

530

Comment: Manually Integrated
Data File: /chem/ecd1a.i/071409.b/029b2901.d
Operator: YS1
Injection Date: 14-JUL-2009 11:43
Instrument: ecd1a.i
Client Sample ID: CAMO-09-10030MSD

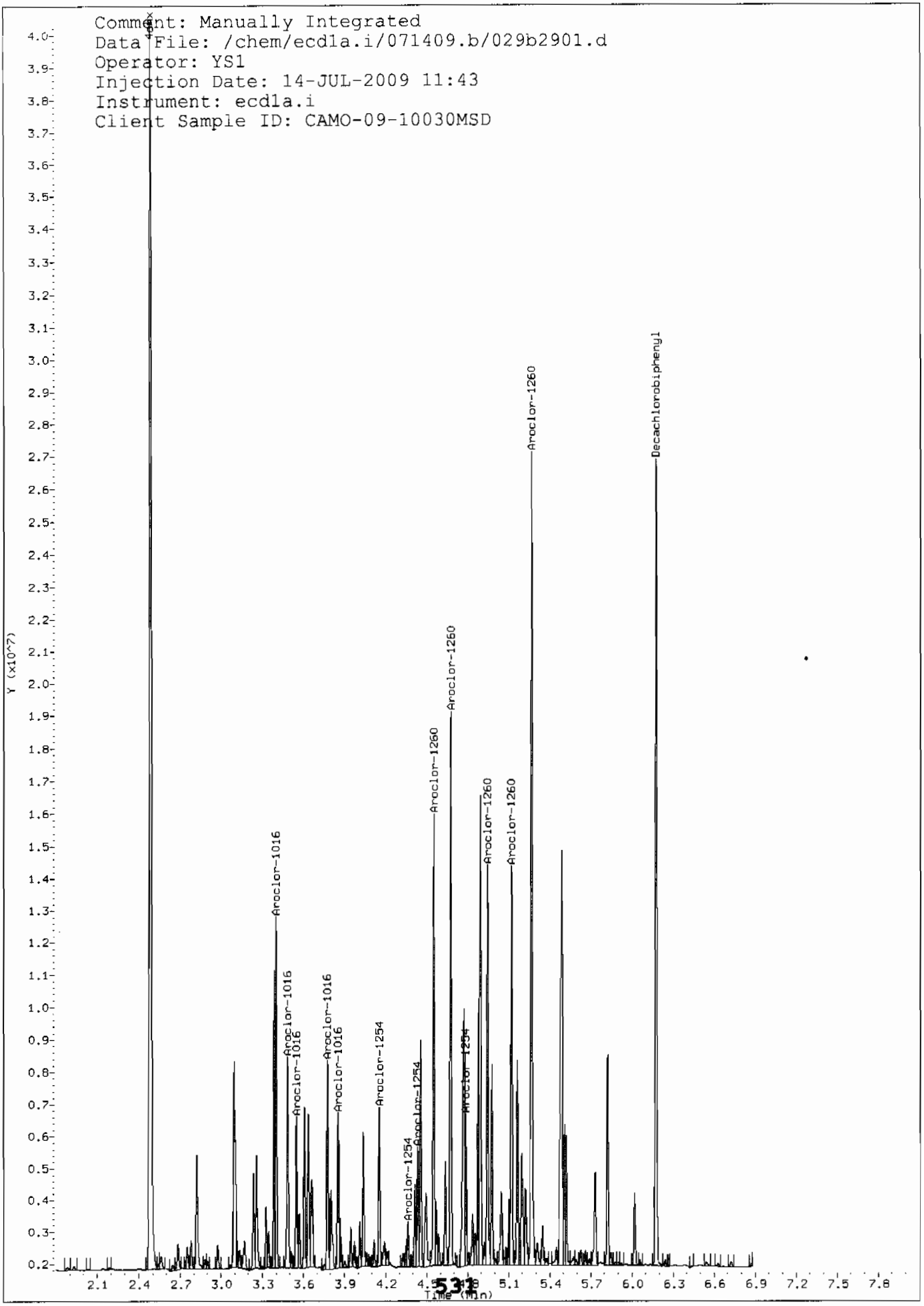

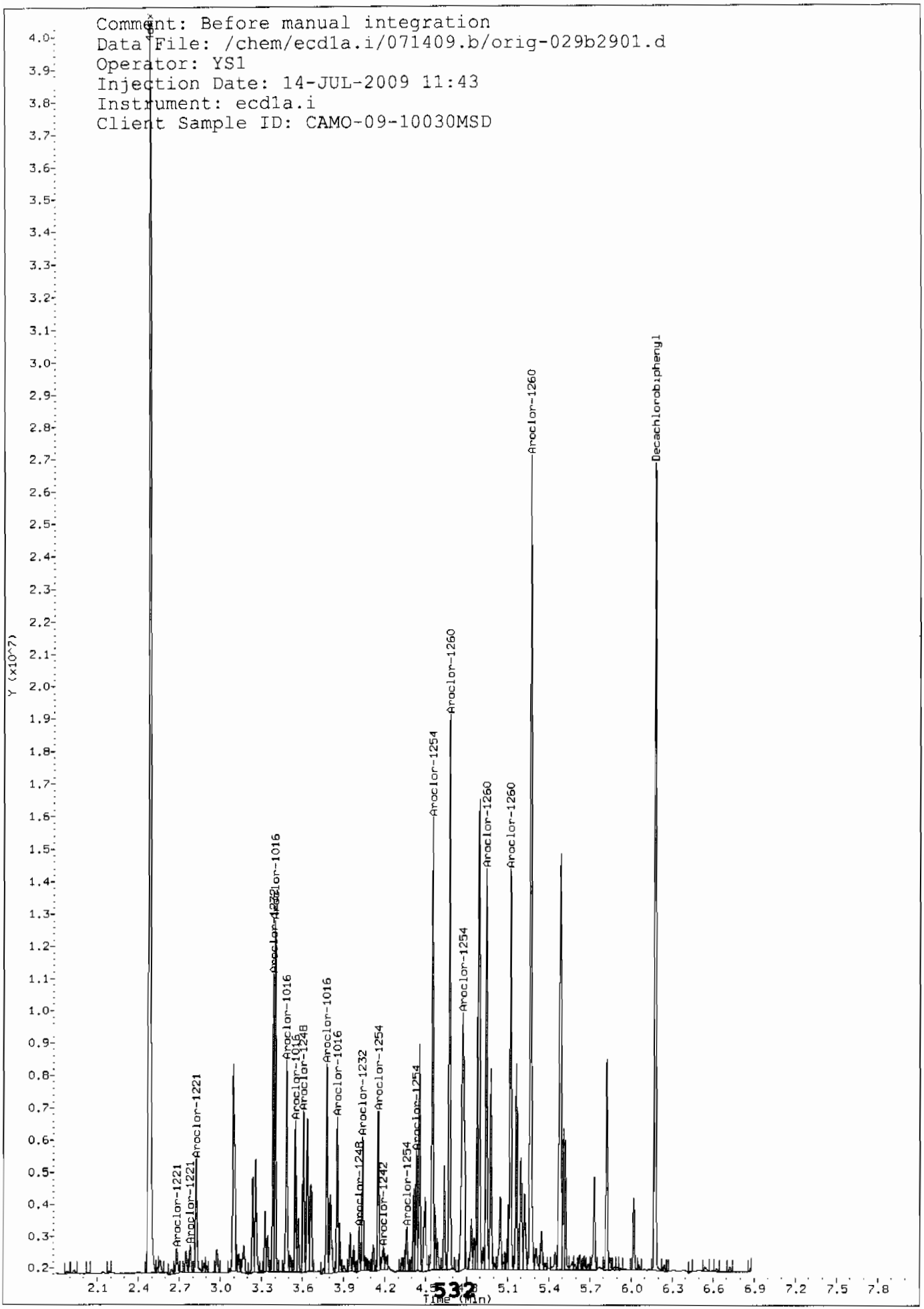
Comment: Before manual integration
Data File: /chem/ecd1a.i/071409.b/orig-029b2901.d
Operator: YS1
Injection Date: 14-JUL-2009 11:43
Instrument: ecd1a.i
Client Sample ID: CAMO-09-10030MSD
Y (x10^7)
Time (min)
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1248
Aroclor-1016
Aroclor-1016
Aroclor-1248
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Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl

MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD1

DATE: 07/13/2009 METHOD: ECD1-F-8082-071109.m OPERATOR:YS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1

SOLVENT LOT CY613
ALUMINA LOT 1143678-A
COPPER LOT 090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
GEL SOP GL-OA-E-040 Polychlorinated Biphenyl: EPA 8082
Chromatogram Abbreviation Legend: AB-Assign Baseline, AP-Assign Peak, DNC-Do Not Call, DMP-Doesn't Match Pattern, NC-Not Confirmed, RT-Retention Time, BF-Before, AF-After.

Sequence Number: /chem/ecd1a.i/071309.b Injection Volume: 0.5 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090730-99 01	YS1	13-JUL-2009 09:44	071309		1.0		CLEAN
002f0201.d	WAR090623-60 01	YS1	13-JUL-2009 09:54	071309		1.0		DUSE RE-ICAL
003f0301.d	WAR090630-54 54	YS1	13-JUL-2009 10:04	071309		1.0		DUSE RE-ICAL
004f0401.d	WAR090713-09	YS1	13-JUL-2009 10:14	071309		1.0		AR1242 I-CAL LEVEL 1
005f0501.d	WAR090713-10	YS1	13-JUL-2009 10:25	071309		1.0		AR1242 I-CAL LEVEL 2
006f0601.d	WAR090713-11	YS1	13-JUL-2009 10:35	071309		1.0		AR1242 I-CAL LEVEL 3
007f0701.d	WAR090713-12	YS1	13-JUL-2009 10:45	071309		1.0		AR1242 I-CAL LEVEL 4
008f0801.d	IAR090711-01	YS1	13-JUL-2009 10:56	071309		1.0		AR1242 I-CAL LEVEL 5
009f0901.d	WAR090519-42 42	YS1	13-JUL-2009 11:06	071309		1.0		PASSED ON BOTH COLUMNS
010f1001.d	WAR090521-48 48	YS1	13-JUL-2009 11:16	071309		1.0		PASSED ON BOTH COLUMNS
011f1101.d	WAR090713-01	YS1	13-JUL-2009 11:27	071309		1.0		AR1660 I-CAL LEVEL 1
012f1201.d	WAR090713-02	YS1	13-JUL-2009 11:37	071309		1.0		AR1660 I-CAL LEVEL 2
013f1301.d	WAR090713-03	YS1	13-JUL-2009 11:47	071309		1.0		AR1660 I-CAL LEVEL 3
014f1401.d	WAR090713-04	YS1	13-JUL-2009 11:58	071309		1.0		AR1660 I-CAL LEVEL 4
015f1501.d	IAR090623-01	YS1	13-JUL-2009 12:08	071309		1.0		AR1660 I-CAL LEVEL 5

Instrument Batch: /chem/ecd1a.i/071309.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments

016f1601.d	WAR090623-60 01	YS1	13-JUL-2009 12:18		071309		1.0	PASSED ON BOTH COLUMNS
017f1701.d	WAR090713-05	YS1	13-JUL-2009 12:28		071309		1.0	AR1254 I-CAL LEVEL 1
018f1801.d	WAR090713-06	YS1	13-JUL-2009 12:39		071309		1.0	AR1254 I-CAL LEVEL 2
019f1901.d	WAR090713-07	YS1	13-JUL-2009 12:49		071309		1.0	AR1254 I-CAL LEVEL 3
020f2001.d	WAR090713-08	YS1	13-JUL-2009 12:59		071309		1.0	AR1254 I-CAL LEVEL 4
021f2101.d	IAR0900505-01	YS1	13-JUL-2009 13:10		071309		1.0	AR1254 I-CAL LEVEL 5
022f2201.d	WAR090630-54 54	YS1	13-JUL-2009 13:20		071309		1.0	PASSED ON BOTH COLUMNS
023f2301.d	WAR090618-32 32	YS1	13-JUL-2009 13:30		071309		1.0	PATTERN ONLY
024f2401.d	WAR090618-21 21	YS1	13-JUL-2009 13:40		071309		1.0	PATTERN ONLY
025f2501.d	WAR090608-62 62	YS1	13-JUL-2009 13:51		071309		1.0	PATTERN ONLY
026f2601.d	WAR090424-68 68	YS1	13-JUL-2009 14:01		071309		1.0	PATTERN ONLY
027f2701.d	WAR090623-DDT	YS1	13-JUL-2009 14:11		071309		1.0	DDT ANALOG STANDARD
028f2801.d	WAR090703-99 02	YS1	13-JUL-2009 15:14		071309		1.0	CLEAN
029f2901.d	1201878528	YS1	13-JUL-2009 15:24	884242	233214		1.0	MB UPLOAD BOTH COLUMNS, USE HIGHER
030f3001.d	1201878529	YS1	13-JUL-2009 15:34	884242	233214		1.0	LCS UPLOAD BOTH COLUMNS, USE HIGHER
031f3101.d	233214001	YS1	13-JUL-2009 15:44	884242	233214		5.0	WSRB UPLOAD BOTH COLUMNS, USE HIGHER
032f3201.d	1201878530	YS1	13-JUL-2009 15:55	884242	233214		5.0	MS UPLOAD BOTH COLUMNS, USE HIGHER
033f3301.d	1201878531	YS1	13-JUL-2009 16:05	884242	233214		5.0	MSD UPLOAD BOTH COLUMNS, USE HIGHER
034f3401.d	233214002	YS1	13-JUL-2009 16:15	884242	233214		100.0	WSRB UPLOAD BOTH COLUMNS, USE HIGHER
035f3501.d	233214003	YS1	13-JUL-2009 16:31	884242	233214		5.0	WSRB UPLOAD BOTH COLUMNS, USE HIGHER

Instrument Batch: /chem/ecd1a.i/071309.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	WAR090623-60 02	YS1	13-JUL-2009 16:46		071309		1.0	PASSED ON BOTH COLUMNS

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD1

DATE: 07/15/2009 METHOD: ECD1-F-8082-071109.m OPERATOR:YS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1

SOLVENT LOT CY613
ALUMINA LOT 1143678-A
COPPER LOT 090610-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
GEL SOP GL-OA-E-040 Polychlorinated Biphenyl: EPA 8082
Chromatogram Abbreviation Legend: AB-Assign Baseline, AP-Assign Peak,
DNC-Do Not Call, DMP-Doesn't Match Pattern, NC-Not Confirmed, RT-Retention Time,
BF-Before, AF-After.

Sequence Number: /chem/ecd1a.i/071409.b Injection Volume: 0.5 ul

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR090730-99 01	YS1	14-JUL-2009 06:44		071409	1.0		CLEAN
002f0201.d	WAR090623-60 01	YS1	14-JUL-2009 06:54		071409	1.0		PASSED ON BOTH COLUMNS
003f0301.d	WAR090630-54 54	YS1	14-JUL-2009 07:05		071409	1.0		PASSED ON BOTH COLUMNS
004f0401.d	WAR090519-42 42	YS1	14-JUL-2009 07:15		071409	1.0		PASSED ON BOTH COLUMNS
005f0501.d	WAR090521-48 48	YS1	14-JUL-2009 07:25		071409	1.0		PASSED ON BOTH COLUMNS
006f0601.d	WAR090618-32 32	YS1	14-JUL-2009 07:36		071409	1.0		PATTREN ONLY
007f0701.d	WAR090618-21 21	YS1	14-JUL-2009 07:46		071409	1.0		PATTREN ONLY
008f0801.d	WAR090608-62 62	YS1	14-JUL-2009 07:56		071409	1.0		PATTREN ONLY
009f0901.d	WAR090424-68 68	YS1	14-JUL-2009 08:06		071409	1.0		PATTREN ONLY
010f1001.d	WAR090623-DDT	YS1	14-JUL-2009 08:17		071409	1.0		DDT ANALOG STANDARD
011f1101.d	WAR090703-99 02	YS1	14-JUL-2009 08:27		071409	1.0		CLEAN
012f1201.d	1201878519	YS1	14-JUL-2009 08:37	884237	233254	1.0	MB	UPLOAD BOTH COLUMNS, USE FRONT
013f1301.d	1201878520	YS1	14-JUL-2009 08:48	884237	233254	1.0	LCS	UPLOAD BOTH COLUMNS, USE FRONT
014f1401.d	233254002	YS1	14-JUL-2009 08:58	884237	233254	5.0	BRKL	UPLOAD BOTH COLUMNS, USE FRONT
015f1501.d	1201878521	YS1	14-JUL-2009 09:08	884237	233254	5.0	MS	UPLOAD BOTH COLUMNS, USE FRONT

10H
Instrument Batch: /chem/ecd1a.i/071409.b Page: 1
10H16.6H

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments

016f1601.d	1201878522	YS1	14-JUL-2009 09:19	884237	233254		5.0	MSD	UPLOAD BOTH COLUMNS, USE FRONT
017f1701.d	233254004	YS1	14-JUL-2009 09:29	884237	233254		5.0	BRKL	UPLOAD BOTH COLUMNS, USE FRONT
018f1801.d	233254006	YS1	14-JUL-2009 09:44	884237	233254		5.0	BRKL	UPLOAD BOTH COLUMNS, USE FRONT
019f1901.d	WAR090623-60 02	YS1	14-JUL-2009 10:00		071409		1.0		PASSED ON BOTH COLUMNS
020f2001.d	WAR090730-99 03	YS1	14-JUL-2009 10:10		071409		1.0		CLEAN
021f2101.d	1201879447	YS1	14-JUL-2009 10:21	884634	071409		1.0	MB	UPLOAD BOTH COLUMNS, USE HIGHER
022f2201.d	1201879448	YS1	14-JUL-2009 10:31	884634	09-2506		1.0	LCS	UPLOAD BOTH COLUMNS, USE HIGHER
023f2301.d	232582002	YS1	14-JUL-2009 10:41	884634	09-2508		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
024f2401.d	232585001	YS1	14-JUL-2009 10:51	884634	09-2506		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
025f2501.d	232585002	YS1	14-JUL-2009 11:02	884634	09-2506		5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
026f2601.d	232585003	YS1	14-JUL-2009 11:12	884634	09-2506		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
027f2701.d	232661005	YS1	14-JUL-2009 11:22	884634	09-2515		1.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
028f2801.d	1201879449	YS1	14-JUL-2009 11:32	884634	09-2515		1.0	MS	UPLOAD BOTH COLUMNS, USE HIGHER
029f2901.d	1201879450	YS1	14-JUL-2009 11:43	884634	09-2515		1.0	MSD	UPLOAD BOTH COLUMNS, USE HIGHER
030f3001.d	232661006	YS1	14-JUL-2009 11:58	884634	09-2515		5.0	LANL	UPLOAD BOTH COLUMNS, USE HIGHER
031f3101.d	WAR090623-60 03	YS1	14-JUL-2009 12:14		071409		1.0		PASSED ON BOTH COLUMNS
032f3201.d	WAR090730-99 04	YS1	14-JUL-2009 12:24		071409		1.0		CLEAN
033f3301.d	WAR090623-60 04	YS1	14-JUL-2009 14:56		071409		1.0		PASSED ON BOTH COLUMNS
034f3401.d	WAR090730-99 05	YS1	14-JUL-2009 15:17		071409		1.0		CLEAN
035f3501.d	1201880244	YS1	14-JUL-2009 15:27	884939	233110		1.0	QC A	HAS 1242, 1254 AND 1260 HITS

Instrument Batch: /chem/ecd1a.i/071409.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	1201880245	YS1	14-JUL-2009 15:38	884939	233110	1.0	QC A	UPLOAD BOTH, USE HIGHER
037f3701.d	233110001	YS1	14-JUL-2009 15:48	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION
038f3801.d	233110002	YS1	14-JUL-2009 16:04	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION
039f3901.d	233110003	YS1	14-JUL-2009 16:19	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION
040f4001.d	233110004	YS1	14-JUL-2009 16:35	884939	233110	10.0	EMSC	DUSE, MB CONTAMINATION

041f4101.d	233317001	YS1	14-JUL-2009 16:50	884939	233317		1.0	PCGE	UPLOAD BOTH, USE HIGHER NO HITS
042f4201.d	1201880246	YS1	14-JUL-2009 17:06	884939	233317		1.0	QC A	UPLOAD BOTH, USE HIGHER
043f4301.d	1201880247	YS1	14-JUL-2009 17:21	884939	233317		1.0	QC A	UPLOAD BOTH, USE HIGHER
044f4401.d	WAR090730-99 06	YS1	14-JUL-2009 17:37		071409		1.0		CLEAN
045f4501.d	WAR090623-60 05	YS1	14-JUL-2009 17:47		071409		1.0		BACK FAILS HIGH, FRONT PASSING
046f4601.d	WAR090730-99 07	YS1	14-JUL-2009 17:57		071409		1.0		CLEAN
047f4701.d	GPC LCS SCR	YS1	14-JUL-2009 18:52		071409		1.0		DUSE

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 884632 **Verified by:** _____

Analyst: Noah Postell

Method: SW846 3550B

Lab SOP: GL–OA–E–010 REV# 18

Instrument: Semi–Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201879447 MB	13–JUL–2009 20:17:12	30	H2SO4/KMn2		2	9	1	0.03333
1201879448 LCS	13–JUL–2009 20:17:12	30	H2SO4/KMn2		2	9	1	0.03333
232582002 – 2	13–JUL–2009 20:17:12	30.03	H2SO4/KMn2		2	9	1	0.0333
232585001 – 2	13–JUL–2009 20:17:12	30.02	H2SO4/KMn2		2	9	1	0.03331
232585002 – 2	13–JUL–2009 20:17:12	30.01	H2SO4/KMn2		2	9	1	0.03332
232585003 – 2	13–JUL–2009 20:17:12	30.08	H2SO4/KMn2		2	9	1	0.03324
232661005 – 2	13–JUL–2009 20:17:12	30	H2SO4/KMn2		2	9	1	0.03333
1201879449 – 2 MS (232661005)	13–JUL–2009 20:17:12	30.07	H2SO4/KMn2		2	9	1	0.03326
1201879450 – 2 MSD (232661005)	13–JUL–2009 20:17:12	30.05	H2SO4/KMn2		2	9	1	0.03328
232661006 – 2	13–JUL–2009 20:17:12	30.08	H2SO4/KMn2		2	9	1	0.03324

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201879448	PCB Laboratory Control	WE090624–07	1	mL
MS	1201879449	PCB Laboratory Control	WE090624–07	1	mL
MSD	1201879450	PCB Laboratory Control	WE090624–07	1	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE090702–14	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	1:1 sulfuric acid	1133264a	5	mL
REGNT	All	Hexane	1149624–B2	150	mL
REGNT	All	5% Potassium Permanganate	B1133159–F	5	mL
SOURC	All	SODIUM SULFATE	1149626	30	g

Comments:

Clean up Date: 7/13/09

Clean up Initials: NBP

Verified By: AV

Final Solvent: Hexane

Clean Up SOP: GL–OA–E–037

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2525

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2525

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	EPA:353.2	1	CAMO-09-10025	W	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2525

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10025	W	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:6020	1	CAMO-09-10025	W	6/29/2009	
	SW-846:6850	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10025	W	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:9012A	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10025	W	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2525

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9045C	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2525

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2525C

REQUEST NUMBER: 09-2525

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10025	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10025	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-10025	1	POLY	SW-846:6850	Ice	W
CAMO-09-10025	1	POLY	TCN	Sodium Hydroxide	W
CAMO-09-9956	1	POLY	METALS-GEL	Ice	R
CAMO-09-9956	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9950	1	POLY	METALS-GEL	Ice	R
CAMO-09-9950	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9952	1	POLY	METALS-GEL	Ice	R
CAMO-09-9952	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9958	1	POLY	METALS-GEL	Ice	R
CAMO-09-9958	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9957	1	POLY	METALS-GEL	Ice	R
CAMO-09-9957	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9951	1	POLY	METALS-GEL	Ice	R
CAMO-09-9951	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10031	1	POLY	METALS-GEL	Ice	R
CAMO-09-10031	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9990	1	POLY	METALS-GEL	Ice	R
CAMO-09-9990	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00			
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time**

Printed Name Signature

Remarks:

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9950

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		12:18	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	4.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown fill with cobbles & concrete

FD: CAMO-09-10031

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) 14, (5) of 50 building 001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 5 dpm

β/γ 674 dpm

PID Ambient Reading = 0.0 / 0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.29.09 1617	(Printed Name) Sheri Sherwood (Signature) Sheri Sherwood	6/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9951

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBt3
TIME COLLECTED (HH:MM)		1243	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	4.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	5.5	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Dry indurated Purple/brown tuff w/ lithics

SAMPLE COMMENTS: Interface @ 4.5' bgs

LOCATION DESC: 50-004(a) - 14 (S) of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 10$ dpm

$\beta/\gamma \leq 879$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6.29.09 1617	(Printed Name) Sherri Sherwood	4/29/09 4:30
(Signature) A. Gowmas		(Signature) Sherri Sherwood	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9952

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	OBT4	obt3
TIME COLLECTED (HH:MM)		1202	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	9.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	10.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: ND

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+ N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Gray/brown indurated tuff w/ lithics

FTB: CAMO-09-10014

SAMPLE COMMENTS: Advance w/ power auger sample w/ hand auger @ 9.5' bgs

LOCATION DESC: 50-004(a)-14 (S) of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

<< 33 dpm

β/γ < 742 dpm

PID Ambient / Reading = 0.0 / 0.6 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) A. Goumas	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9956

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Geotic	FIELD PREP:	NA	↓
TOP DEPTH:	0	9.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	AG 6.29.09 ~~10~~ 10.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	~~0'~~ S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown crushed tuff fill w/ cobbles

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) 16 (5) of bldg 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 22 dpm

β/γ ≤ 722 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gourmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gourmas	6.29.09 1617	(Printed Name) Sherri Sherwood	4/29/09 4:30
(Signature) [signature]		(Signature) Sherri Sherwood	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9957

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Qbt3
TIME COLLECTED (HH:MM)		1510	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	10.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	11.0	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Purple/gray indurated tuff

FR: CAMO-09-10025

SAMPLE COMMENTS: Interface @ 10.0' bgs

LOCATION DESC: 50-004(a)-16, South of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 28 dpm

β/γ ≤ 1022 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gowmas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowmas	6-29-09	(Printed Name) Sherri Sherwood	6/29/09
(Signature) [signature]	1617	(Signature) Sherri Sherwood	4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9958

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		1541	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	H.A.
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	15.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	16.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Grey / Purple, indurated, slightly moist tuff.

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 50-004(a)-00-16 (5) of bldg. 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 39$ dpm

$\beta/\gamma \leq 606$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/29/09	(Printed Name) Sherri Sherwood	6/29/09
(Signature) [signature]	1617	(Signature) [signature]	4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9990

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		~~1000~~ 0930	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	H.A.
LOCATION ID:	MO-605473	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	✓
TOP DEPTH:	0	3.0	SAMPLE USAGE:	INV	✓
BOTTOM DEPTH:	0	4.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Regular~~ 15-Day J.B 6/29/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	✓	✓

SAMPLE DESC: Brown/ Purple, indurated, wet tuff

SAMPLE COMMENTS: S/T interface @ 3.0' bgs. Saturation zone encountered @ ~~4.0'~~ 3.0' bgs. Final depth not collected to avoid contamination from saturation zone. J.B 6/29/09

LOCATION DESC: 50-004(a)-00-11

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 16$ dpm

$\beta/\gamma \leq 1049$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch (Signature) [signature]	6/29/09 1617	(Printed Name) Sheri Sherwood (Signature) Sherwood, Sheri	4/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10014

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1302	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-005460	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA AG 6.29.09 BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package

SAMPLE DESC: QC Sample of CAMO-09-9952

SAMPLE COMMENTS: none

LOCATION DESC: 50-004(a)-14

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gaumer

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gaumer (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 1730
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10025

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1518	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	mo-05462	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	Full Data Package
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-9958

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) - 16

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 4:30
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10031

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		12:18	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	UNK	MO-605460	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	4.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	16-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C+~~8082~~ 8310	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: QC Sample of CAMO-09-9950

Brown Fill with cobbles & concrete

SAMPLE COMMENTS: None

LOCATION DESC: 50-004-14, (5) of building 01 @ 50

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 5 dpm

β/γ ≤ 674 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) A. Goumas	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 4:30

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-9990
-9950 → 9952
-9956 → 9958
-10031

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10014
-10025

Reason: QC of Samples.

Print Last Name Branch Signature [signature] Date 6/29/09

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544
505-672-2770 FAX 505-672-9834

ARS Sample Delivery Group:	ARS2-09-00078	Request or PO Number:	
Client Sample ID:	CAMO-09-9990	ARS Sample ID:	ARS2-09-00078-001
Sample Collection Date:	06/29/09 09:30	Date Received:	06/30/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/30/09 14:55

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	63.53	79.39	121.29	79.77	U	pCi/g	EPA 900.0M	6/30/2009	ME	N/A
GROSS BETA	51.79	17.38	19.29	18.50		pCi/g	EPA 900.0M	6/30/2009	ME	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
K-40	-0.87	-11.06	2.22	-11.06	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CO-60	0.00	0.16	0.09	0.16	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CS-134	0.16	0.13	0.07	0.13	SI	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CS-137	-0.01	11.97	0.06	11.97	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
EU-152	0.00	9.51	0.11	9.51	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
PB-212	1.11	0.40	0.11	0.40		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
RA 228	1.24	0.61	0.24	0.61		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
U-235	1.10	0.54	0.14	0.54		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
U-238	2.81	3.60	1.50	3.65		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
AM-241	0.36	0.28	0.09	0.28		pCi/g	EPA 901.1M	6/30/2009	ME	N/A

NOTES: % Moisture: 2.31

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2525 VALIDATION DATE: 7/27/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that the raw data for the ICAL standards were not provided in the data package. No sample data were qualified as a result.
2. It should be noted that the MS and MSD parent samples were from other LANL RNs and the raw data for the parent samples were not included in the package. No sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: DATE: 7/27/09

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☒	☐	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☐	☒	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☐	☒	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☒	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10025

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525

GEL Sample ID: 232742001

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:41	per0708025a
	Perchlorate Isotope Ratio						1	08-JUL-09 15:41	per0708025a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:41	per0708025a
	Perchlorate-O(18)			0.483	ug/L		1	08-JUL-09 15:41	per0708025a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

LMF
7/27/09

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9956

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744001

Date Filtered: 07-JUL-09

Injection Volume (nL): 20

%Solids: 86

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.582	2.33	0.582	ug/kg	U	1	09-JUL-09 19:22	per0709041a
	Perchlorate-O(18)			5.18	ug/kg		1	09-JUL-09 19:22	per0709041a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9950

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744002

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.559	2.24	0.559	ug/kg	U	1	09-JUL-09 19:33	per0709042a
	Perchlorate-O(18)			5.70	ug/kg		1	09-JUL-09 19:33	per0709042a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9952

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744003

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.558	2.23	0.558	ug/kg	U	1	09-JUL-09 20:20	per0709046a
	Perchlorate-O(18)			5.37	ug/kg		1	09-JUL-09 20:20	per0709046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9958

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744004

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.557	2.23	0.557	ug/kg	U	1	09-JUL-09 20:32	per0709047a
	Perchlorate-O(18)			5.63	ug/kg		1	09-JUL-09 20:32	per0709047a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9957

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744005

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.556	2.23	0.556	ug/kg	U	1	09-JUL-09 20:44	per0709048a
	Perchlorate-O(18)			5.51	ug/kg		1	09-JUL-09 20:44	per0709048a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9951

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744006

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.557	2.23	0.557	ug/kg	U	1	09-JUL-09 20:56	per0709049a
	Perchlorate-O(18)			5.76	ug/kg		1	09-JUL-09 20:56	per0709049a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10031

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744007

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.564	2.25	0.564	ug/kg	U	1	09-JUL-09 21:08	per0709050a
	Perchlorate-O(18)			5.75	ug/kg		1	09-JUL-09 21:08	per0709050a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9990

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744008

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 80

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.622	2.49	0.622	ug/kg	U	1	09-JUL-09 21:19	per0709051a
	Perchlorate-O(18)			5.96	ug/kg		1	09-JUL-09 21:19	per0709051a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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7/27/09

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DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2525 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☒ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the aqueous ICB and CCBs, Sb and Tl were detected. The associated sample result for Tl was a detect ≤5X the greatest blank concentration and, thus, was qualified U,I4b. The associated sample result for Sb was an ND and, thus, was not qualified.
2. In the FR blank (CAMO-09-10025) associated with all of the soil samples, K, Mn, and Na were detected. The associated sample results were detects >5X the FR blank concentrations and, thus, were not qualified.
3. The solid MS %Rs were > the laboratory's UAL for Ca, K, and Mg. The associated sample results were detects and, thus, were qualified J+,I6b. The solid MS %Rs were also > the laboratory's UAL for Al and Fe. However, the associated parent sample results were >4X the spike concentrations and, thus, no sample results were qualified, based on professional judgment. The aqueous MS %R was < the laboratory's LAL but ≥10% for Tl. The associated sample result was qualified ND and, thus, was qualified UJ,I6a.

DATA VALIDATION COVER SHEET

5118-1

Records Use only

Data Validation Cover Sheet

4. Results > the MDLs but < the PQLs were "J" flagged by the laboratory and, thus, were not further qualified J,I1.
5. It should be noted that the matrix QC for CVAA in the solid samples were performed on a parent sample from another LANL RN. No sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: DATE: 7/28/09

Form 5118-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☐	☒	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☐	☒	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☒	☐	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☐	☒	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST

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Metals Analytical Data Validation Checklist

Records Use only

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232742001 **BASIS:** As Received **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-10025 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7440-70-2	Calcium	200	ug/L	U	50	200	200	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	07/08/09 21:14	070809A-1	882337
7439-89-6	Iron	100	ug/L	U	30	100	100	1	P	HSC	07/08/09 21:14	070809A-1	882337
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	07/08/09 21:14	070809A-1	882337
7439-96-5	Manganese	1.18	ug/L	J	1	5	5	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	07/15/09 11:16	071509W2-3	884316
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-09-7	Potassium	162	ug/L		50	150	150	1	P	HSC	07/08/09 21:14	070809A-1	882337
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-23-5	Sodium	114	ug/L	J	100	300	300	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-28-0	Thallium U,I4b	0.345	ug/L	JN	0.3	1	1	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	07/08/09 21:14	070809A-1	882337

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882337	882336	SW846 3005A	50	mL	50	mL	07/07/09	CXS3
882355	882354	SW846 3005A	50	mL	50	mL	07/07/09	CXS3
884316	884315	SW846 7470A Prep	20	mL	20	mL	07/14/09	TXB3

LMF
7/28/09

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744001 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9956 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 86

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7800000	ug/Kg		7790	22900	22900	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-36-0	Antimony	1150	ug/Kg	U	378	1150	1150	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-38-2	Arsenic	1830	ug/kg		233	1160	1160	2	MS	PRB	07/14/09 12:12	090714-3	882360
7440-39-3	Barium	126000	ug/Kg		115	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-41-7	Beryllium	848	ug/kg		23.3	116	116	2	MS	PRB	07/14/09 03:25	090713-2	882360
7440-43-9	Cadmium	573	ug/Kg	U	115	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-70-2	Calcium J+,I6b	1820000	ug/Kg	N	9160	28600	28600	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-47-3	Chromium	8870	ug/Kg		172	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-48-4	Cobalt	4370	ug/Kg		172	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-50-8	Copper	5700	ug/Kg		344	1150	1150	1	P	HSC	07/08/09 17:53	070809A-1	882342
7439-89-6	Iron	11800000	ug/Kg		9160	28600	28600	1	P	HSC	07/08/09 17:53	070809A-1	882342
7439-92-1	Lead	12600	ug/Kg		286	1150	1150	1	P	HSC	07/08/09 17:53	070809A-1	882342
7439-95-4	Magnesium J+,I6b	1600000	ug/Kg	N	9740	34400	34400	1	P	HSC	07/08/09 17:53	070809A-1	882342
7439-96-5	Manganese	317000	ug/Kg		229	1150	1150	1	P	HSC	07/08/09 17:53	070809A-1	882342
7439-97-6	Mercury	13.5	ug/kg		4.45	13.1	13.1	1	AV	JXL1	07/16/09 10:18	071609S1-4	882932
7440-02-0	Nickel	7160	ug/kg		116	465	465	2	MS	PRB	07/14/09 12:12	090714-3	882360
7440-09-7	Potassium J+,I6b	1320000	ug/Kg	N	7330	28600	28600	1	P	HSC	07/08/09 17:53	070809A-1	882342
7782-49-2	Selenium	1160	ug/kg	UN	582	1160	1160	2	MS	PRB	07/14/09 12:12	090714-3	882360
7440-22-4	Silver	633	ug/Kg		115	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-23-5	Sodium	104000	ug/Kg		8020	28600	28600	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-28-0	Thallium	216	ug/kg	J	69.8	233	233	2	MS	PRB	07/14/09 12:12	090714-3	882360
7440-62-2	Vanadium	21300	ug/Kg		115	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-66-6	Zinc	31100	ug/Kg		378	1150	1150	1	P	HSC	07/08/09 17:53	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.508	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.5	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.534	g	30	mL	07/15/09	TXB3

LMF
7/28/09

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744002 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9950 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4050000	ug/Kg		7280	21400	21400	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-36-0	Antimony	1070	ug/Kg	U	353	1070	1070	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-38-2	Arsenic	1270	ug/kg		215	1080	1080	2	MS	PRB	07/14/09 12:38	090714-3	882360
7440-39-3	Barium	69500	ug/Kg		107	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-41-7	Beryllium	627	ug/kg		21.5	108	108	2	MS	PRB	07/14/09 12:38	090714-3	882360
7440-43-9	Cadmium	535	ug/Kg	U	107	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-70-2	Calcium J+,I6b	4790000	ug/Kg	N	8570	26800	26800	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-47-3	Chromium	20000	ug/Kg		161	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-48-4	Cobalt	2110	ug/Kg		161	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-50-8	Copper	4380	ug/Kg		321	1070	1070	1	P	HSC	07/08/09 18:40	070809A-1	882342
7439-89-6	Iron	9320000	ug/Kg		8570	26800	26800	1	P	HSC	07/08/09 18:40	070809A-1	882342
7439-92-1	Lead	8550	ug/Kg		268	1070	1070	1	P	HSC	07/08/09 18:40	070809A-1	882342
7439-95-4	Magnesium J+,I6b	924000	ug/Kg	N	9100	32100	32100	1	P	HSC	07/08/09 18:40	070809A-1	882342
7439-96-5	Manganese	253000	ug/Kg		214	1070	1070	1	P	HSC	07/08/09 18:40	070809A-1	882342
7439-97-6	Mercury	87.2	ug/kg		4.24	12.5	12.5	1	AV	JXL1	07/16/09 10:24	071609S1-4	882932
7440-02-0	Nickel	4970	ug/kg		108	431	431	2	MS	PRB	07/14/09 12:38	090714-3	882360
7440-09-7	Potassium J+,I6b	697000	ug/Kg	N	6850	26800	26800	1	P	HSC	07/08/09 18:40	070809A-1	882342
7782-49-2	Selenium	1080	ug/kg	UN	539	1080	1080	2	MS	PRB	07/14/09 12:38	090714-3	882360
7440-22-4	Silver	529	ug/Kg	J	107	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-23-5	Sodium	90500	ug/Kg		7500	26800	26800	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-28-0	Thallium	127	ug/kg	J	64.6	215	215	2	MS	PRB	07/14/09 12:38	090714-3	882360
7440-62-2	Vanadium	12200	ug/Kg		107	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-66-6	Zinc	36700	ug/Kg		353	1070	1070	1	P	HSC	07/08/09 18:40	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.522	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.519	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.538	g	30	mL	07/15/09	TXB3

LMF
7/28/09

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744003 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9952 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1740000	ug/Kg		7500	22100	22100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-36-0	Antimony	1100	ug/Kg	U	364	1100	1100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-38-2	Arsenic	597	ug/kg	J	220	1100	1100	2	MS	PRB	07/14/09 12:41	090714-3	882360
7440-39-3	Barium	36500	ug/Kg		110	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-41-7	Beryllium	609	ug/kg		22	110	110	2	MS	PRB	07/14/09 12:41	090714-3	882360
7440-43-9	Cadmium	552	ug/Kg	U	110	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-70-2	Calcium J+,I6b	1160000	ug/Kg	N	8830	27600	27600	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-47-3	Chromium	103000	ug/Kg		165	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-48-4	Cobalt	1410	ug/Kg		165	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-50-8	Copper	3230	ug/Kg		331	1100	1100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7439-89-6	Iron	8240000	ug/Kg		8830	27600	27600	1	P	HSC	07/08/09 18:47	070809A-1	882342
7439-92-1	Lead	7470	ug/Kg		276	1100	1100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7439-95-4	Magnesium J+,I6b	432000	ug/Kg	N	9380	33100	33100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7439-96-5	Manganese	341000	ug/Kg		221	1100	1100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7439-97-6	Mercury	12.5	ug/kg	U	4.27	12.5	12.5	1	AV	JXL1	07/16/09 10:26	071609S1-4	882932
7440-02-0	Nickel	4010	ug/kg		110	440	440	2	MS	PRB	07/14/09 12:41	090714-3	882360
7440-09-7	Potassium J+,I6b	407000	ug/Kg	N	7060	27600	27600	1	P	HSC	07/08/09 18:47	070809A-1	882342
7782-49-2	Selenium	1100	ug/kg	UN	549	1100	1100	2	MS	PRB	07/14/09 12:41	090714-3	882360
7440-22-4	Silver	388	ug/Kg	J	110	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-23-5	Sodium	107000	ug/Kg		7720	27600	27600	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-28-0	Thallium	220	ug/kg	U	65.9	220	220	2	MS	PRB	07/14/09 12:41	090714-3	882360
7440-62-2	Vanadium	4710	ug/Kg		110	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-66-6	Zinc	36100	ug/Kg		364	1100	1100	1	P	HSC	07/08/09 18:47	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.506	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.508	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.534	g	30	mL	07/15/09	TXB3

LMF
7/28/09

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744004 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9958 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2460000	ug/Kg		7580	22300	22300	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-36-0	Antimony	1110	ug/Kg	U	368	1110	1110	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-38-2	Arsenic	1620	ug/kg		217	1080	1080	2	MS	PRB	07/14/09 12:45	090714-3	882360
7440-39-3	Barium	39500	ug/Kg		111	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-41-7	Beryllium	932	ug/kg		21.7	108	108	2	MS	PRB	07/14/09 12:45	090714-3	882360
7440-43-9	Cadmium	557	ug/Kg	U	111	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-70-2	Calcium J+,I6b	1030000	ug/Kg	N	8920	27900	27900	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-47-3	Chromium	30800	ug/Kg		167	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-48-4	Cobalt	1330	ug/Kg		167	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-50-8	Copper	3370	ug/Kg		334	1110	1110	1	P	HSC	07/08/09 18:54	070809A-1	882342
7439-89-6	Iron	9180000	ug/Kg		8920	27900	27900	1	P	HSC	07/08/09 18:54	070809A-1	882342
7439-92-1	Lead	6760	ug/Kg		279	1110	1110	1	P	HSC	07/08/09 18:54	070809A-1	882342
7439-95-4	Magnesium J+,I6b	548000	ug/Kg	N	9470	33400	33400	1	P	HSC	07/08/09 18:54	070809A-1	882342
7439-96-5	Manganese	267000	ug/Kg		223	1110	1110	1	P	HSC	07/08/09 18:54	070809A-1	882342
7439-97-6	Mercury	13.3	ug/kg	U	4.52	13.3	13.3	1	AV	JXL1	07/16/09 10:28	071609S1-4	882932
7440-02-0	Nickel	4400	ug/kg		108	434	434	2	MS	PRB	07/14/09 12:45	090714-3	882360
7440-09-7	Potassium J+,I6b	466000	ug/Kg	N	7130	27900	27900	1	P	HSC	07/08/09 18:54	070809A-1	882342
7782-49-2	Selenium	1080	ug/kg	UN	542	1080	1080	2	MS	PRB	07/14/09 12:45	090714-3	882360
7440-22-4	Silver	416	ug/Kg	J	111	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-23-5	Sodium	72600	ug/Kg		7800	27900	27900	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-28-0	Thallium	71.8	ug/kg	J	65	217	217	2	MS	PRB	07/14/09 12:45	090714-3	882360
7440-62-2	Vanadium	8110	ug/Kg		111	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-66-6	Zinc	49100	ug/Kg		368	1110	1110	1	P	HSC	07/08/09 18:54	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.5	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.514	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.503	g	30	mL	07/15/09	TXB3

LMF
7/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744005 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9957 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1700000	ug/Kg		7400	21800	21800	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-36-0	Antimony	1090	ug/Kg	U	359	1090	1090	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-38-2	Arsenic	1040	ug/kg	J	219	1100	1100	2	MS	PRB	07/14/09 12:49	090714-3	882360
7440-39-3	Barium	30100	ug/Kg		109	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-41-7	Beryllium	639	ug/kg		21.9	110	110	2	MS	PRB	07/14/09 12:49	090714-3	882360
7440-43-9	Cadmium	544	ug/Kg	U	109	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-70-2	Calcium J+,I6b	602000	ug/Kg	N	8710	27200	27200	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-47-3	Chromium	25000	ug/Kg		163	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-48-4	Cobalt	1100	ug/Kg		163	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-50-8	Copper	2370	ug/Kg		327	1090	1090	1	P	HSC	07/08/09 19:01	070809A-1	882342
7439-89-6	Iron	7950000	ug/Kg		8710	27200	27200	1	P	HSC	07/08/09 19:01	070809A-1	882342
7439-92-1	Lead	6200	ug/Kg		272	1090	1090	1	P	HSC	07/08/09 19:01	070809A-1	882342
7439-95-4	Magnesium J+,I6b	358000	ug/Kg	N	9250	32700	32700	1	P	HSC	07/08/09 19:01	070809A-1	882342
7439-96-5	Manganese	278000	ug/Kg		218	1090	1090	1	P	HSC	07/08/09 19:01	070809A-1	882342
7439-97-6	Mercury	13	ug/kg	U	4.41	13	13	1	AV	JXL1	07/16/09 10:30	071609S1-4	882932
7440-02-0	Nickel	2180	ug/kg		110	438	438	2	MS	PRB	07/14/09 12:49	090714-3	882360
7440-09-7	Potassium J+,I6b	317000	ug/Kg	N	6970	27200	27200	1	P	HSC	07/08/09 19:01	070809A-1	882342
7782-49-2	Selenium	1100	ug/kg	UN	548	1100	1100	2	MS	PRB	07/14/09 12:49	090714-3	882360
7440-22-4	Silver	374	ug/Kg	J	109	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-23-5	Sodium	63100	ug/Kg		7620	27200	27200	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-28-0	Thallium	219	ug/kg	U	65.7	219	219	2	MS	PRB	07/14/09 12:49	090714-3	882360
7440-62-2	Vanadium	6590	ug/Kg		109	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-66-6	Zinc	37700	ug/Kg		359	1090	1090	1	P	HSC	07/08/09 19:01	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.511	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.508	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.515	g	30	mL	07/15/09	TXB3

LMF
7/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744006 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9951 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2120000	ug/Kg		7570	22300	22300	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-36-0	Antimony	1110	ug/Kg	U	367	1110	1110	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-38-2	Arsenic	920	ug/kg	J	220	1100	1100	2	MS	PRB	07/14/09 12:52	090714-3	882360
7440-39-3	Barium	31700	ug/Kg		111	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-41-7	Beryllium	797	ug/kg		22	110	110	2	MS	PRB	07/14/09 12:52	090714-3	882360
7440-43-9	Cadmium	557	ug/Kg	U	111	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-70-2	Calcium J+,I6b	1660000	ug/Kg	N	8910	27800	27800	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-47-3	Chromium	27000	ug/Kg		167	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-48-4	Cobalt	960	ug/Kg		167	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-50-8	Copper	3190	ug/Kg		334	1110	1110	1	P	HSC	07/08/09 19:08	070809A-1	882342
7439-89-6	Iron	7580000	ug/Kg		8910	27800	27800	1	P	HSC	07/08/09 19:08	070809A-1	882342
7439-92-1	Lead	6890	ug/Kg		278	1110	1110	1	P	HSC	07/08/09 19:08	070809A-1	882342
7439-95-4	Magnesium J+,I6b	499000	ug/Kg	N	9460	33400	33400	1	P	HSC	07/08/09 19:08	070809A-1	882342
7439-96-5	Manganese	261000	ug/Kg		223	1110	1110	1	P	HSC	07/08/09 19:08	070809A-1	882342
7439-97-6	Mercury	9.34	ug/kg	J	4.17	12.3	12.3	1	AV	JXL1	07/16/09 10:32	071609S1-4	882932
7440-02-0	Nickel	3410	ug/kg		110	440	440	2	MS	PRB	07/14/09 12:52	090714-3	882360
7440-09-7	Potassium J+,I6b	460000	ug/Kg	N	7120	27800	27800	1	P	HSC	07/08/09 19:08	070809A-1	882342
7782-49-2	Selenium	1100	ug/kg	UN	550	1100	1100	2	MS	PRB	07/14/09 12:52	090714-3	882360
7440-22-4	Silver	420	ug/Kg	J	111	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-23-5	Sodium	90400	ug/Kg		7790	27800	27800	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-28-0	Thallium	220	ug/kg	U	66	220	220	2	MS	PRB	07/14/09 12:52	090714-3	882360
7440-62-2	Vanadium	5270	ug/Kg		111	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-66-6	Zinc	34100	ug/Kg		367	1110	1110	1	P	HSC	07/08/09 19:08	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.5	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.506	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.545	g	30	mL	07/15/09	TXB3

LMF
7/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744007 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-10031 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3800000	ug/Kg		7410	21800	21800	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-36-0	Antimony	1090	ug/Kg	U	360	1090	1090	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-38-2	Arsenic	1190	ug/kg		218	1090	1090	2	MS	PRB	07/14/09 12:56	090714-3	882360
7440-39-3	Barium	69400	ug/Kg		109	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-41-7	Beryllium	566	ug/kg		21.8	109	109	2	MS	PRB	07/14/09 12:56	090714-3	882360
7440-43-9	Cadmium	545	ug/Kg	U	109	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-70-2	Calcium J+,I6b	5310000	ug/Kg	N	8720	27300	27300	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-47-3	Chromium	9840	ug/Kg		164	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-48-4	Cobalt	2490	ug/Kg		164	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-50-8	Copper	3940	ug/Kg		327	1090	1090	1	P	HSC	07/08/09 19:16	070809A-1	882342
7439-89-6	Iron	8780000	ug/Kg		8720	27300	27300	1	P	HSC	07/08/09 19:16	070809A-1	882342
7439-92-1	Lead	17500	ug/Kg		273	1090	1090	1	P	HSC	07/08/09 19:16	070809A-1	882342
7439-95-4	Magnesium J+,I6b	905000	ug/Kg	N	9270	32700	32700	1	P	HSC	07/08/09 19:16	070809A-1	882342
7439-96-5	Manganese	266000	ug/Kg		218	1090	1090	1	P	HSC	07/08/09 19:16	070809A-1	882342
7439-97-6	Mercury	73.3	ug/kg		3.84	11.3	11.3	1	AV	JXL1	07/16/09 10:34	071609S1-4	882932
7440-02-0	Nickel	4620	ug/kg		109	437	437	2	MS	PRB	07/14/09 12:56	090714-3	882360
7440-09-7	Potassium J+,I6b	671000	ug/Kg	N	6980	27300	27300	1	P	HSC	07/08/09 19:16	070809A-1	882342
7782-49-2	Selenium	1090	ug/kg	UN	546	1090	1090	2	MS	PRB	07/14/09 12:56	090714-3	882360
7440-22-4	Silver	430	ug/Kg	J	109	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-23-5	Sodium	79700	ug/Kg		7630	27300	27300	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-28-0	Thallium	105	ug/kg	J	65.5	218	218	2	MS	PRB	07/14/09 12:56	090714-3	882360
7440-62-2	Vanadium	11600	ug/Kg		109	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-66-6	Zinc	34600	ug/Kg		360	1090	1090	1	P	HSC	07/08/09 19:16	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.517	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.516	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.599	g	30	mL	07/15/09	TXB3

LMF
7/28/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744008 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9990 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 80

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9610000	ug/Kg		8410	24700	24700	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-36-0	Antimony	1240	ug/Kg	U	408	1240	1240	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-38-2	Arsenic	1790	ug/kg		241	1210	1210	2	MS	PRB	07/14/09 13:00	090714-3	882360
7440-39-3	Barium	114000	ug/Kg		124	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-41-7	Beryllium	1000	ug/kg		24.1	121	121	2	MS	PRB	07/14/09 13:00	090714-3	882360
7440-43-9	Cadmium	618	ug/Kg	U	124	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-70-2	Calcium J+,I6b	1990000	ug/Kg	N	9890	30900	30900	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-47-3	Chromium	10600	ug/Kg		186	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-48-4	Cobalt	4170	ug/Kg		186	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-50-8	Copper	7820	ug/Kg		371	1240	1240	1	P	HSC	07/08/09 19:22	070809A-1	882342
7439-89-6	Iron	12500000	ug/Kg		9890	30900	30900	1	P	HSC	07/08/09 19:22	070809A-1	882342
7439-92-1	Lead	15100	ug/Kg		309	1240	1240	1	P	HSC	07/08/09 19:22	070809A-1	882342
7439-95-4	Magnesium J+,I6b	1280000	ug/Kg	N	10500	37100	37100	1	P	HSC	07/08/09 19:22	070809A-1	882342
7439-96-5	Manganese	374000	ug/Kg		247	1240	1240	1	P	HSC	07/08/09 19:22	070809A-1	882342
7439-97-6	Mercury	18.4	ug/kg		4.51	13.3	13.3	1	AV	JXL1	07/16/09 10:36	071609S1-4	882932
7440-02-0	Nickel	6340	ug/kg		121	482	482	2	MS	PRB	07/14/09 13:00	090714-3	882360
7440-09-7	Potassium J+,I6b	1290000	ug/Kg	N	7920	30900	30900	1	P	HSC	07/08/09 19:22	070809A-1	882342
7782-49-2	Selenium	1210	ug/kg	UN	603	1210	1210	2	MS	PRB	07/14/09 13:00	090714-3	882360
7440-22-4	Silver	659	ug/Kg		124	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-23-5	Sodium	248000	ug/Kg		8660	30900	30900	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-28-0	Thallium	143	ug/kg	J	72.3	241	241	2	MS	PRB	07/14/09 13:00	090714-3	882360
7440-62-2	Vanadium	17200	ug/Kg		124	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-66-6	Zinc	33300	ug/Kg		408	1240	1240	1	P	HSC	07/08/09 19:22	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.503	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.516	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.563	g	30	mL	07/15/09	TXB3

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7/28/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2525 VALIDATION DATE: 7/28/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☒ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the aqueous MB, NO_3/NO_2-N was detected. The associated sample result was an ND and, thus, was not qualified.
2. In an aqueous CCB, total CN was detected. The associated sample result was an ND and, thus, was not qualified.
3. It should be noted that the aqueous matrix QC parent sample for total CN was from another LANL RN. No sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 7/29/09

VALIDATOR'S SIGNATURE: DATE: 7/28/09

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☒	☐	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☐	☒	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 9, 2009

Client SDG: 09-2525

Client Sample ID:	CAMO-09-10025	Project:	LANL01004
Sample ID:	232742001	Client ID:	LANL010
Matrix:	W		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal										
SW9012A Cyanide, Total "As Received"										
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2 07/07/09	1237	882142	1
Nutrient Analysis										
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"										
Nitrogen, Nitrate/Nitrite	U	ND	0.050	0.250	mg/L	5	AXH3 07/07/09	0858	882466	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0854	882141

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9956	Project:	LANL01004
Sample ID:	232744001	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	14.1%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.4C	H	8.03	0.010	0.100	SU	1	RXG2	07/06/09	1207	882616	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	110	77.6	285	ug/kg	1	AXC2	07/08/09	1235	882479	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	12.8	0.349	1.16	mg/kg	1	VH1	07/15/09	0815	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9950	Project:	LANL01004
Sample ID:	232744002	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.6%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.1C	H	9.77	0.010	0.100	SU	1	RXG2	07/06/09	1212	882616	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	98.3	67.9	250	ug/kg	1	AXC2	07/08/09	1239	882479	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	3.17	0.335	1.12	mg/kg	1	VH1	07/15/09	0936	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9952	Project:	LANL01004
Sample ID:	232744003	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.4%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.2C	H	9.11	0.010	0.100	SU	1	RXG2 07/06/09	1213	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	73.0	268	ug/kg	1	AXC2 07/08/09	1246	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.98	0.335	1.12	mg/kg	1	VH1 07/15/09	0956	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9958	Project:	LANL01004
Sample ID:	232744004	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.3%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.3C	H	8.60	0.010	0.100	SU	1	RXG2	07/06/09	1217	882616	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	95.8	75.8	279	ug/kg	1	AXC2	07/08/09	1247	882479	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	6.38	0.334	1.11	mg/kg	1	VH1	07/15/09	1016	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9957	Project:	LANL01004
Sample ID:	232744005	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.1%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.2C	H	8.57	0.010	0.100	SU	1	RXG2 07/06/09	1217	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.4	262	ug/kg	1	AXC2 07/08/09	1248	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	6.76	0.334	1.11	mg/kg	1	VH1 07/15/09	1036	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9951	Project:	LANL01004
Sample ID:	232744006	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.2%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.3C	H	9.44	0.010	0.100	SU	1	RXG2 07/06/09	1219	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	70.1	258	ug/kg	1	AXC2 07/08/09	1249	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	2.04	0.334	1.11	mg/kg	1	VH1 07/15/09	1136	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-10031	Project:	LANL01004
Sample ID:	232744007	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	11.3%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.3C	H	9.89	0.010	0.100	SU	1	RXG2	07/06/09	1220	882616	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND	67.2	247	ug/kg	1	AXC2	07/08/09	1249	882479	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	1.72	0.338	1.13	mg/kg	1	VH1	07/15/09	1156	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9990	Project:	LANL01004
Sample ID:	232744008	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	19.6%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.1C	H	6.62	0.010	0.100	SU	1	RXG2 07/06/09	1221	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	236	81.4	299	ug/kg	1	AXC2 07/08/09	1250	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.373	1.24	mg/kg	1	VH1 07/15/09	1217	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2525C

REQUEST NUMBER: 09-2525

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

LAB REQUEST COMMENTS: 232742, 232744 */.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10025	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10025	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-10025	1	POLY	SW-846:6850	Ice	W
CAMO-09-10025	1	POLY	TCN	Sodium Hydroxide	W
CAMO-09-9956	1	POLY	METALS-GEL	Ice	R
CAMO-09-9956	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9950	1	POLY	METALS-GEL	Ice	R
CAMO-09-9950	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9952	1	POLY	METALS-GEL	Ice	R
CAMO-09-9952	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9958	1	POLY	METALS-GEL	Ice	R
CAMO-09-9958	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9957	1	POLY	METALS-GEL	Ice	R
CAMO-09-9957	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9951	1	POLY	METALS-GEL	Ice	R
CAMO-09-9951	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10031	1	POLY	METALS-GEL	Ice	R
CAMO-09-10031	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9990	1	POLY	METALS-GEL	Ice	R
CAMO-09-9990	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00	Patricia Dent P. Dent	7/2/09	08:40
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name / Signature

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2525

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2525
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	EPA:353.2	1	CAMO-09-10025	W	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2525

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10025	W	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:6020	1	CAMO-09-10025	W	6/29/2009	
	SW-846:6850	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10025	W	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:9012A	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10025	W	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2525

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9045C	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2525

GEL Laboratories LLC

a member of The GEL Group Inc

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 06, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Orders: 232742 232744
SDG: 09-2525

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on July 02, 2009, and analyzed for General Chemistry, Metals and Perchlorates by LCMSMS. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2525
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232742 and 232744
SDG: 09-2525

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Standards 549
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Sample Data Summary 963

Quality Control Summary 966
Instrument QC Data Summary 969
Cyanide, Total 972
Nitrate Nitrite by Cadmium Reduction 985

General Chemistry Analysis 993
Case Narrative 994
Sample Data Summary 1004
Quality Control Summary 1014
Instrument QC Data Summary 1018
Cyanide, Total 1021
Ion Chromatography 1029
pH 1074

Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232742 and 232744
SDG # : 09-2525

July 06, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on July 02, 2009 for analysis. The sample was prepared/analyzed within the required holding time. Shipping container temperature was checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The sample was delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232742001	CAMO-09-10025
232744001	CAMO-09-9956
232744002	CAMO-09-9950
232744003	CAMO-09-9952
232744004	CAMO-09-9958
232744005	CAMO-09-9957
232744006	CAMO-09-9951
232744007	CAMO-09-10031
232744008	CAMO-09-9990

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry, Metals and Perchlorates by LCMSMS.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for
Valerie Davis
Project Manager

List of current GEL Certifications as of 06 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88–0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH–0169
Dept. of Navy	NFESC 413
EPA Region 5	WG–15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C–SC–01
Kansas – NELAP	E–10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M–SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68–00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235–07B–TX
U.S. Dept. of Agriculture	S–52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2525C

REQUEST NUMBER: 09-2525

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

LAB REQUEST COMMENTS: 232742, 232744 */.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-10025	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-10025	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-10025	1	POLY	SW-846:6850	Ice	W
CAMO-09-10025	1	POLY	TCN	Sodium Hydroxide	W
CAMO-09-9956	1	POLY	METALS-GEL	Ice	R
CAMO-09-9956	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9950	1	POLY	METALS-GEL	Ice	R
CAMO-09-9950	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9952	1	POLY	METALS-GEL	Ice	R
CAMO-09-9952	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9958	1	POLY	METALS-GEL	Ice	R
CAMO-09-9958	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9957	1	POLY	METALS-GEL	Ice	R
CAMO-09-9957	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9951	1	POLY	METALS-GEL	Ice	R
CAMO-09-9951	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-10031	1	POLY	METALS-GEL	Ice	R
CAMO-09-10031	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-9990	1	POLY	METALS-GEL	Ice	R
CAMO-09-9990	1	POLY	Perchlorate+CN+N03+pH	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		7/1/09	3:00	Patricia Dent	P. Dent	7/2/09	08:40
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2525

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2525

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	EPA:353.2	1	CAMO-09-10025	W	6/29/2009	

6

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2525

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6010B	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10025	W	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:6020	1	CAMO-09-10025	W	6/29/2009	
	SW-846:6850	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10025	W	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	SW-846:9012A	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10025	W	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2525

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9045C	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2525

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2525**
Received By: Patricia Dent	**Date Received: JULY 2, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: 40-C.P.M.
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags **BLUE ICE** dry ice none other (describe) 2,3,4,6 C 24°C
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5930 6C
7209 7847 5860 24C
7209 7847 5881 3C
7209 7847 5892 2C
7209 7847 5940 6C
7209 7847 5951 4C
7209 7847 5918 4C
7209 7847 5929 2C
7209 7847 5870 4C

PM (or PMA) review: Initials DOC Date 7-3-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 56.0 LB MAN
SystemV: 9814178/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 8b818amr2a8512bgde

[redacted]

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5882 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

[redacted]

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 56.0 LB MAN
SystemV: 9814178/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2840 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

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Delivery Address Barcode

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BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5881 Form 0201

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Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

Part # 1361408-434 NRRT V3.04-09

ORIGIN ID: SRFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 57.0 LB MAN
System#: 8814176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: Sb018aar1a0130djbo

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Delivery Address Barcode

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TRK# 7209 7847 5920 Form 0201

THU
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02JUL09

29407 -SC-US XX CHSA CHS A1

Part # 156148-434 NRT V3 04-09

ORIGIN ID: SRFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA09 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 35.0 LB MAN
System#: 8814176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: Sb018aur6111550000

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PRIORITY OVERNIGHT

TRK# 7209 7847 5951 Form 0201

THU
Deliver By:
02JUL09

29407 -SC-US XX CHSA CHS A1

Part # 156148-434 NRT V3 04-09

ORIGIN ID: SAFA (505) 665-5900
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 20.0 LB MAN
SystemA: 9814176/CAFE2361
Account: S ********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171
FedEx Express

Ref: Sb010aur511550000

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5940 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

Part # 1361485-436 NRT1 V3.04-06

ORIGIN ID: SAFA (505) 665-9988
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 55.0 LB MAN
SystemA: 9814176/CAFE2361
Account: S ********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171
FedEx Express

Ref: Sb010aur1a0138djbo

Delivery Address Barcode

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PRIORITY OVERNIGHT

TRK# 7209 7847 5818 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

Part # 1951409-434 NRT1 V3.04-06

RIGIN ID: SAFA (505) 665-9960
OYLENE VALDEZ
OS ALAMOS NATL LAB.
A99 BLDG 1237 DPU 03

.OS ALAMOS, NM 87545
NITED STATES US

Ship Date: 01JUL09
ctWgt: 82.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

VALERIE DAVIS
GENERAL ENGINEERING LAB
2940 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx
Express

Ref: Sb010aur8111550000

[redacted]

Delivery Address
Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7289 7847 5938 Form 0201

CHS A1

.29407 -SC-US XX CHSA

Part # 158148-434 NRTI V3.04-03

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA99 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ctWgt: 78.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2940 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx
Express

Ref: Sb010aur2a0512bgdo

[redacted]

Delivery Address
Barcode

24°C

BILL SENDER

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7289 7847 5868 Form 0201

CHS A1

.29407 -SC-US XX CHSA

Part # 158148-434 NRTI V3.04-03

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA60 BLDG 1237 DPU 83

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 55.0 LB MAN
System#: 8014176/CAFE2361
Account: S **********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 8b818amr2a8512bgdc

Delivery Address Barcode

4C

BILL SENDER

RAD II

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7208 7847 5870 Form 0201

CHS A1

29407 -SC-US XX CHSA

-6-434 NRRT V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2525

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	882496
Prep Batch Number:	882495

Sample Analysis

Sample ID	Client ID
232742001	CAMO-09-10025
1201874307	Interference Check Sample (ICS)
1201874299	Method Blank (MB)
1201874300	Laboratory Control Sample (LCS)
1201874303	232662001(CAMO-09-10024) Matrix Spike (MS)
1201874305	232662001(CAMO-09-10024) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

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CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232662001 (CAMO-09-10024) from SDG 09-2516 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

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Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The sample in this SDG was not originally analyzed using EPA Method 314.0.

Additional Comments
The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

Perchlorate Isotope Ratio
The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

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Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Heather M Mace **Date:** 07/13/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10025

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525

GEL Sample ID: 232742001

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:41	per0708025a
	Perchlorate Isotope Ratio						1	08-JUL-09 15:41	per0708025a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:41	per0708025a
	Perchlorate-O(18)			0.483	ug/L		1	08-JUL-09 15:41	per0708025a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2525

Extract Batch Code: 882495

Date Filtered: 06–JUL–09

Matrix: WASTE WATER

Sample ID: 1201874300

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.185	ug/L	92.3		85 – 115
Perchlorate Isotope Ratio		2.96				–
Perchlorate–101	0.200	.193	ug/L	96.7		85 – 115
Perchlorate–O(18)		.466	ug/L			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2525

Extract Batch Code: 882495

Date Filtered: 06–JUL–09

Matrix: WATER

Sample ID: 1201874307

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.216	ug/L	108		70 – 130
Perchlorate Isotope Ratio		2.88				
Perchlorate–101	0.200	.232	ug/L	116		70 – 130
Perchlorate–O(18)		.526	ug/L			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708014a
Date: 08-Jul-2009
Time: 14:16:31
ID: 1201874307
Vial: 1:3,C

|LANL| 832496 |LCQ| ICS |1|

CWW 07-09-09

Perchlorate

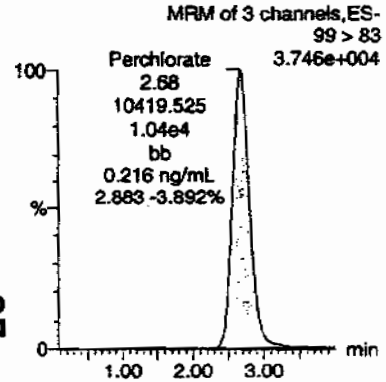

Perchlorate

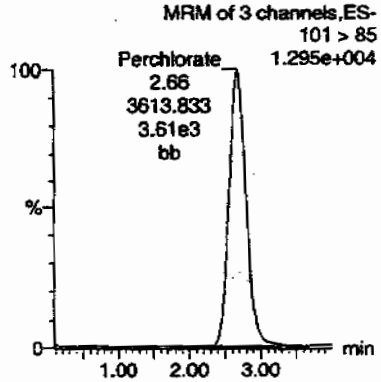

Perchlorate-101

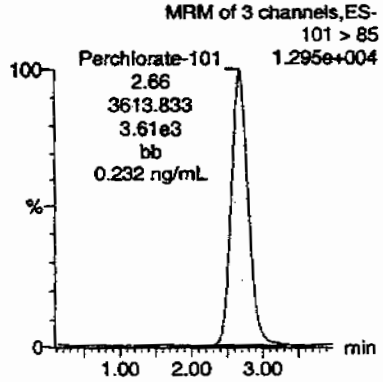

Perchlorate-O(18)

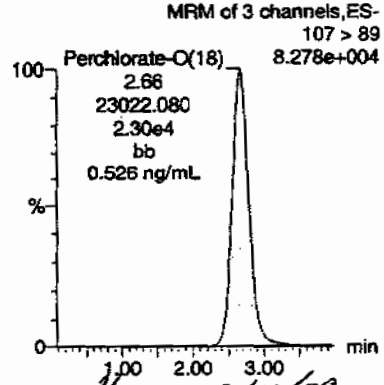

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874307	Perchlorate	99 > 83	2.68	10419.525	10419.525	bb			0.2156	107.79	7.79	1619.5...	2.88
1201874307	Perchlorate-101	101 > 85	2.66	3613.833	3613.833	bb			0.2321	116.05	16.05	2232.0...	
1201874307	Perchlorate-O(18)	107 > 89	2.66	23022.080	23022.080	bb			0.5259	105.19	5.19	10284....	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2525

Extract Batch Code: 882495

Date Extracted: 06–JUL–09

GEL MS/PS ID: 1201874303

Client ID: CAMO–09–10024

GEL MSD/PSD ID: 1201874305

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	0.200	0.00358	ug/L	0.200	98.4	.184	90.4	8.3	30	75 – 125
Perchlorate Isotope Ratio	0	0.00		3.15		3.02		0		–
Perchlorate–101	0.200	0.00558	ug/L	0.198	96.1	.19	92.2	4.08	30	75 – 125
Perchlorate–O(18)	0	0.477	ug/L	0.482		.47		2.48		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2525

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08-JUL-09	per0708001a	IPB001
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708001a	IPB001
Perchlorate	0.00	0	NA	08-JUL-09	per0708002a	IPB001
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708002a	IPB001

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Name: per0708001a
Date: 08-Jul-2009
Time: 12:35:59
ID: IPB001
Vial: 1:1,A

cwW
07-09-09

Perchlorate

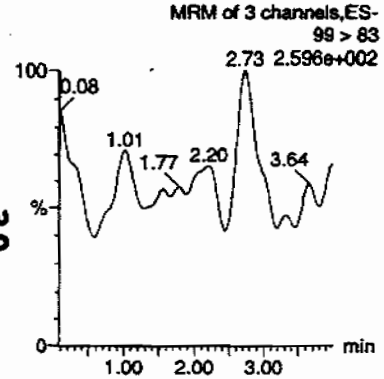

Perchlorate

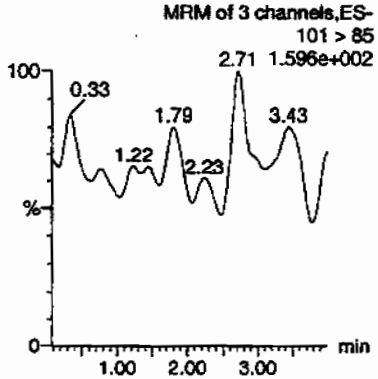

Perchlorate-101

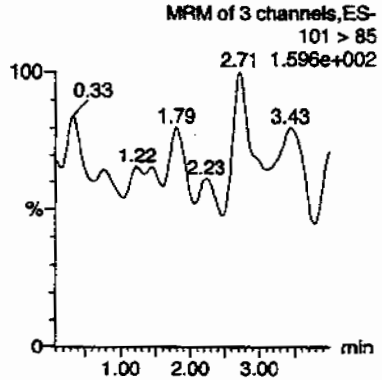

Perchlorate-O(18)

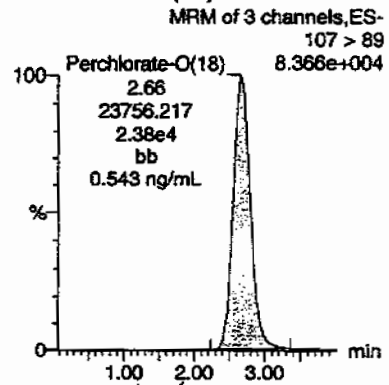

thaw 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.66	23756.217	23756.217	bb			0.5427	108.54	8.54	2563.6...	

30

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Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708002a
Date: 08-Jul-2009
Time: 12:43:43
ID: IPB001
Vial: 1:1,A

AWJ
07-01-09

Perchlorate

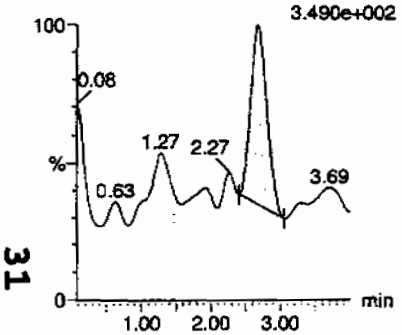

Perchlorate

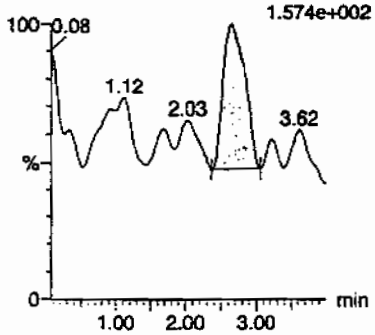

Perchlorate-101

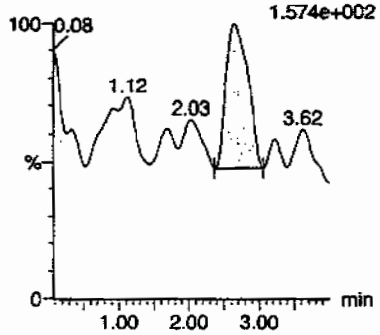

Perchlorate-O(18)

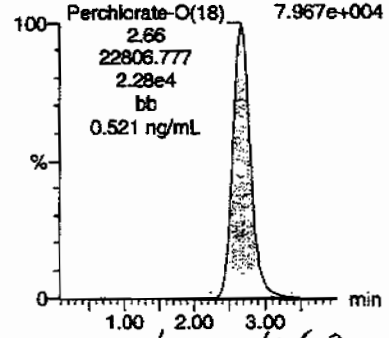

JMW 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.68	62.756	62.756	bb			0.0013			9.964	2.10
IPB001	Perchlorate-101	101 > 85	2.64	29.952	29.952	bb			0.0019			7.781	
IPB001	Perchlorate-O(18)	107 > 89	2.66	22806.777	22806.777	bb			0.5210	104.21	4.21	7277.3...	

AWJ
07-01-09

31

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2525

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08–JUL–09	per0708008a	IPB002
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708008a	IPB002
Perchlorate	0.00	0	NA	08–JUL–09	per0708010a	IPB003
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708010a	IPB003
Perchlorate	0.00	0	NA	08–JUL–09	per0708023a	IPB004
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708023a	IPB004
Perchlorate	0.00	0	NA	08–JUL–09	per0708034a	IPB005
Perchlorate–101	0.00	0	NA	08–JUL–09	per0708034a	IPB005

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708008a
Date: 08-Jul-2009
Time: 13:30:03
ID: IPB002
Vial: 1:1,A

CWD 07-07-09

Perchlorate

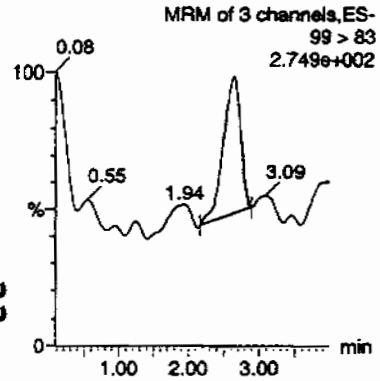

Perchlorate

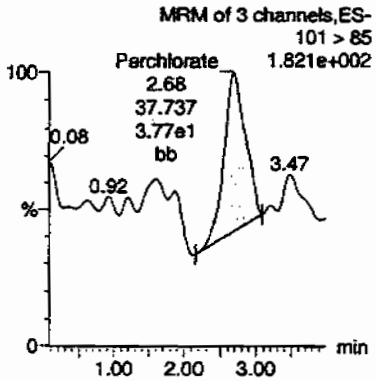

Perchlorate-101

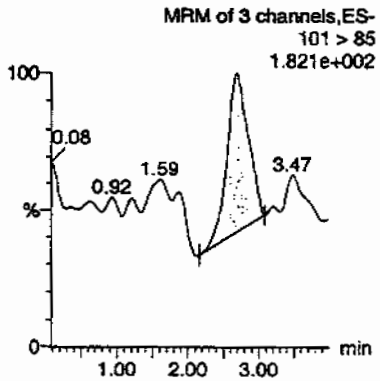

Perchlorate-O(18)

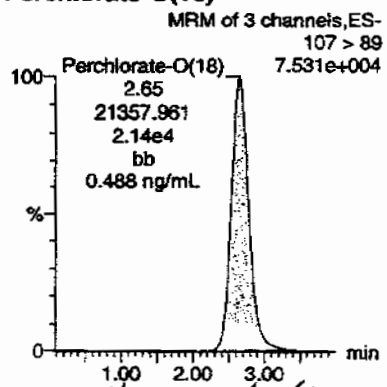

HMK 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.64	40.789	40.789	bb			0.0008			16.642	1.08
IPB002	Perchlorate-101	101 > 85	2.68	37.737	37.737	bb			0.0024			9.640	
IPB002	Perchlorate-O(18)	107 > 89	2.65	21357.961	21357.961	bb			0.4879	97.59	-2.41	8484.7...	

OK 84
LO.0500

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708010a
Date: 08-Jul-2009
Time: 13:45:31
ID: IPB003
Vial: 1:1,A

CWW
07-09-09

Perchlorate

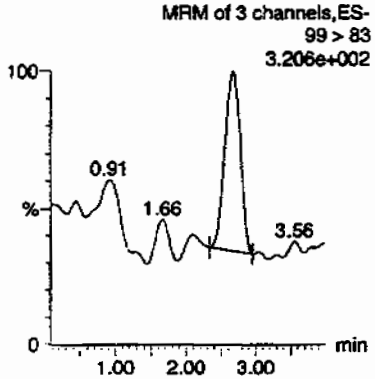

Perchlorate

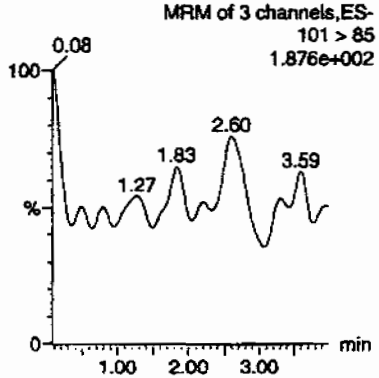

Perchlorate-101

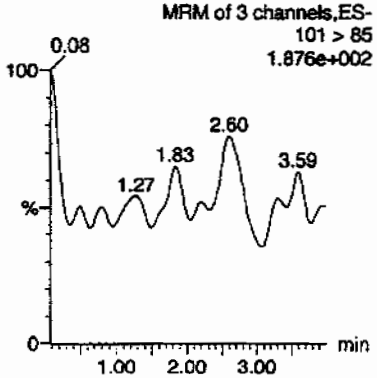

Perchlorate-O(18)

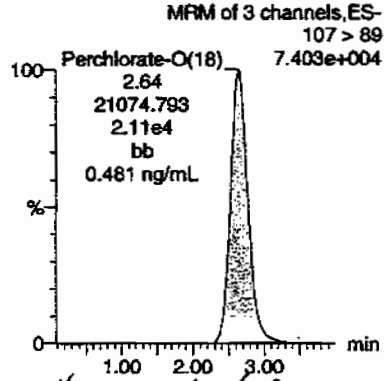

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.66	56.577	56.577	bb			0.0012			14.377	0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	2.64	21074.793	21074.793	bb			0.4815	96.29	-3.71	1018.8...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708023a
Date: 08-Jul-2009
Time: 15:26:24
ID: IPB004
Vial: 1:1,A

CWW 07-09-09

Perchlorate

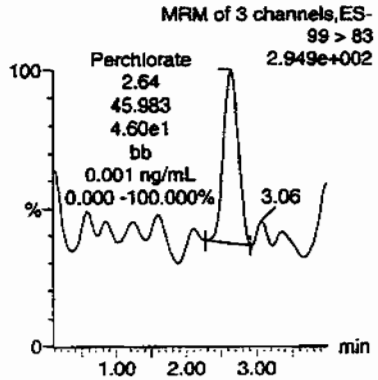

Perchlorate

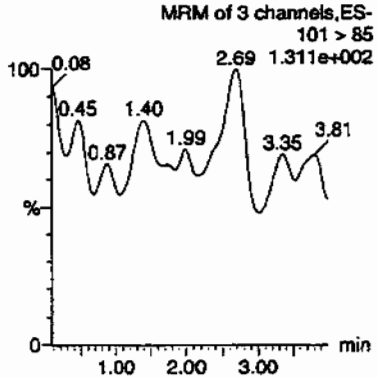

Perchlorate-101

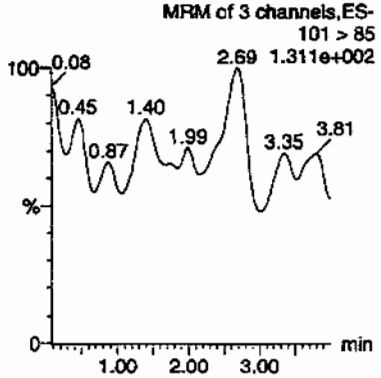

Perchlorate-O(18)

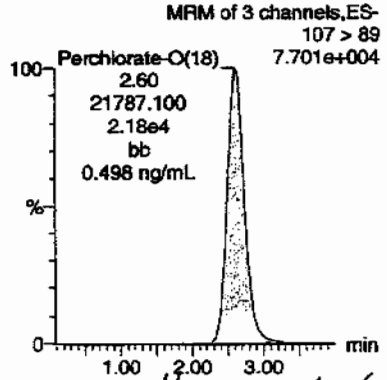

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.64	45.983	45.983	bb			0.0010			14.762	0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	2.60	21787.100	21787.100	bb			0.4977	99.55	-0.45	5673.5...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708034a
Date: 08-Jul-2009
Time: 16:51:46
ID: IPB005
Vial: 1:1,A

CWW 07-09-09

Perchlorate

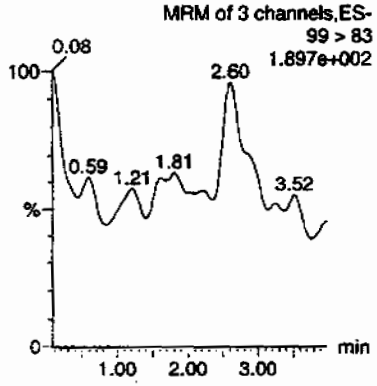

Perchlorate

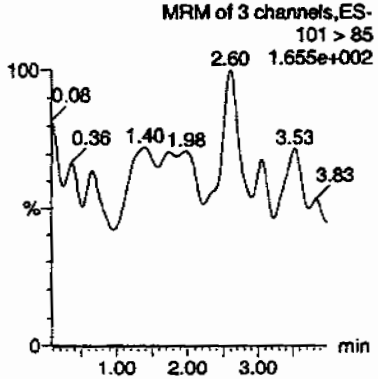

Perchlorate-101

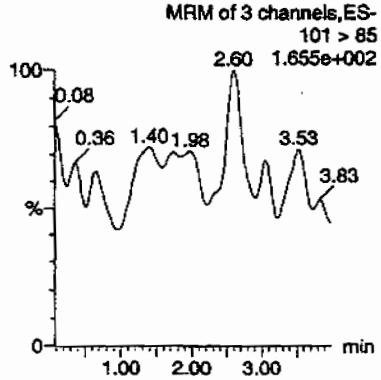

Perchlorate-O(18)

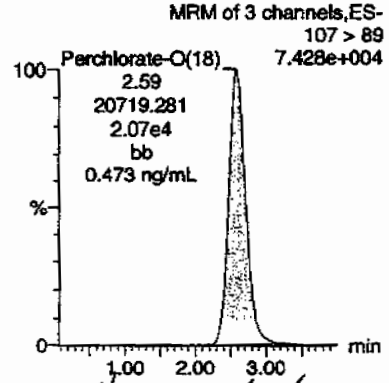

HMK 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.59	20719.281	20719.281	bb			0.4733	94.67	-5.33	6050.7...	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/RbI (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWJ 01-09-08

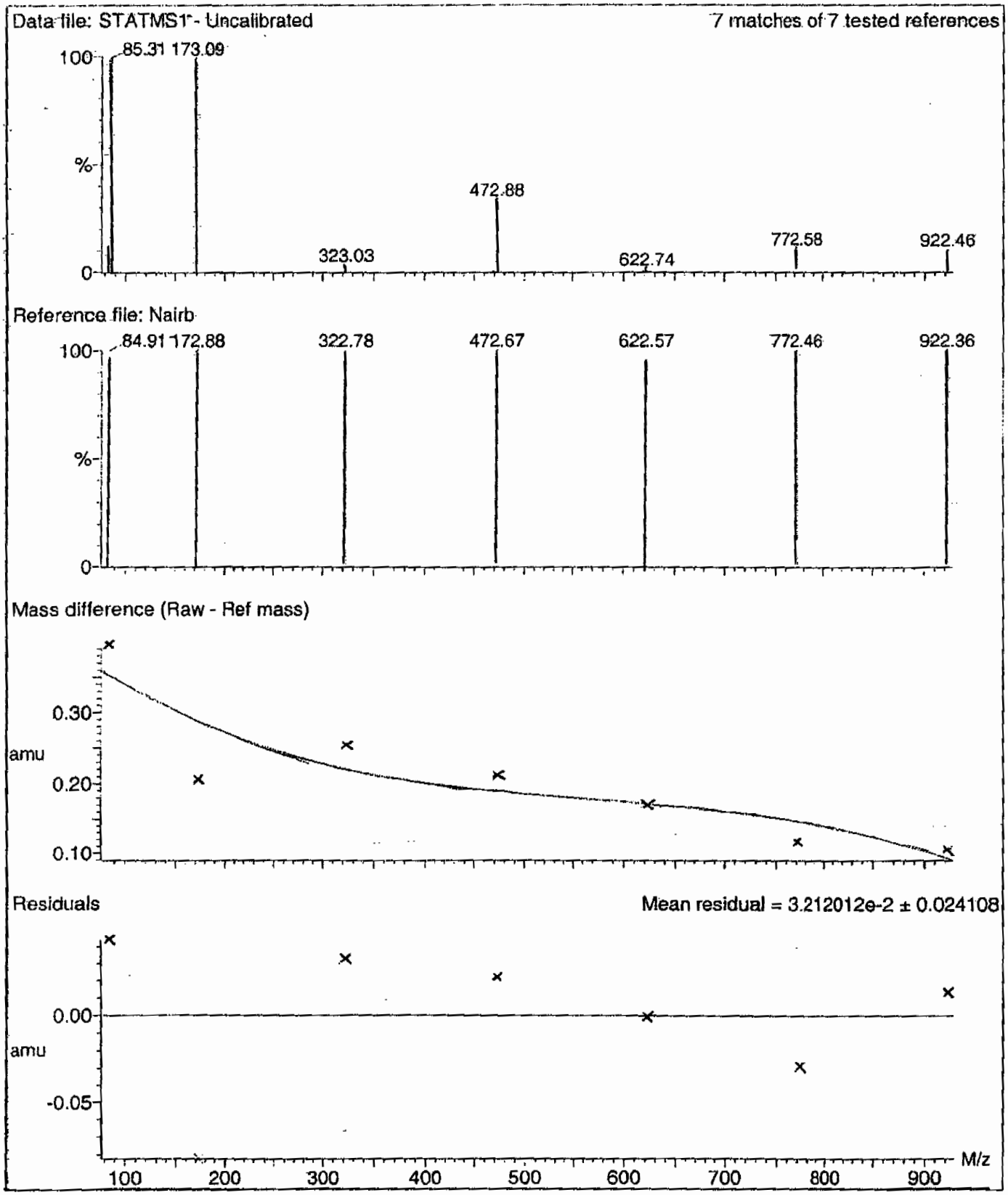

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

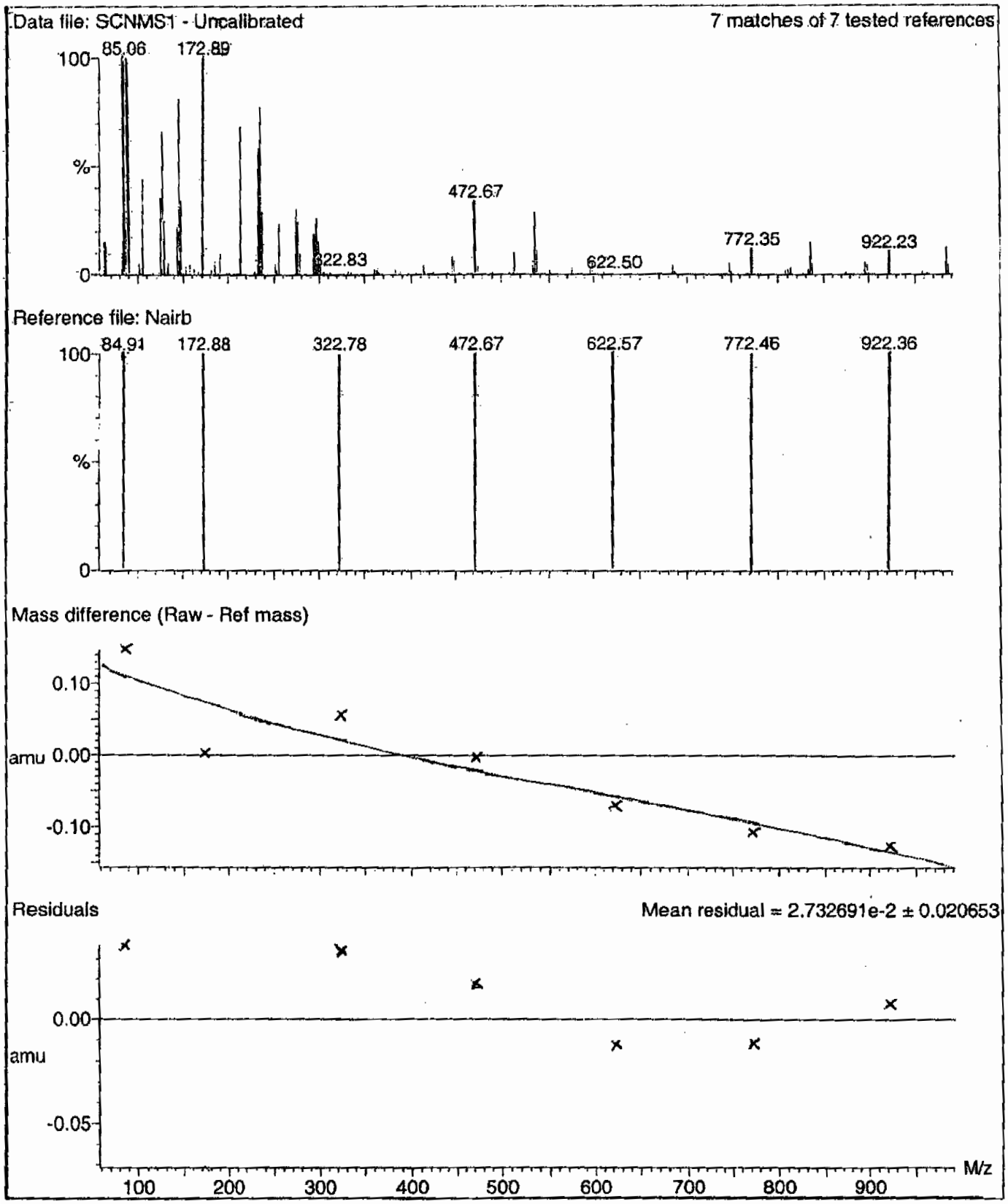

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Calibration Report - MS1 Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

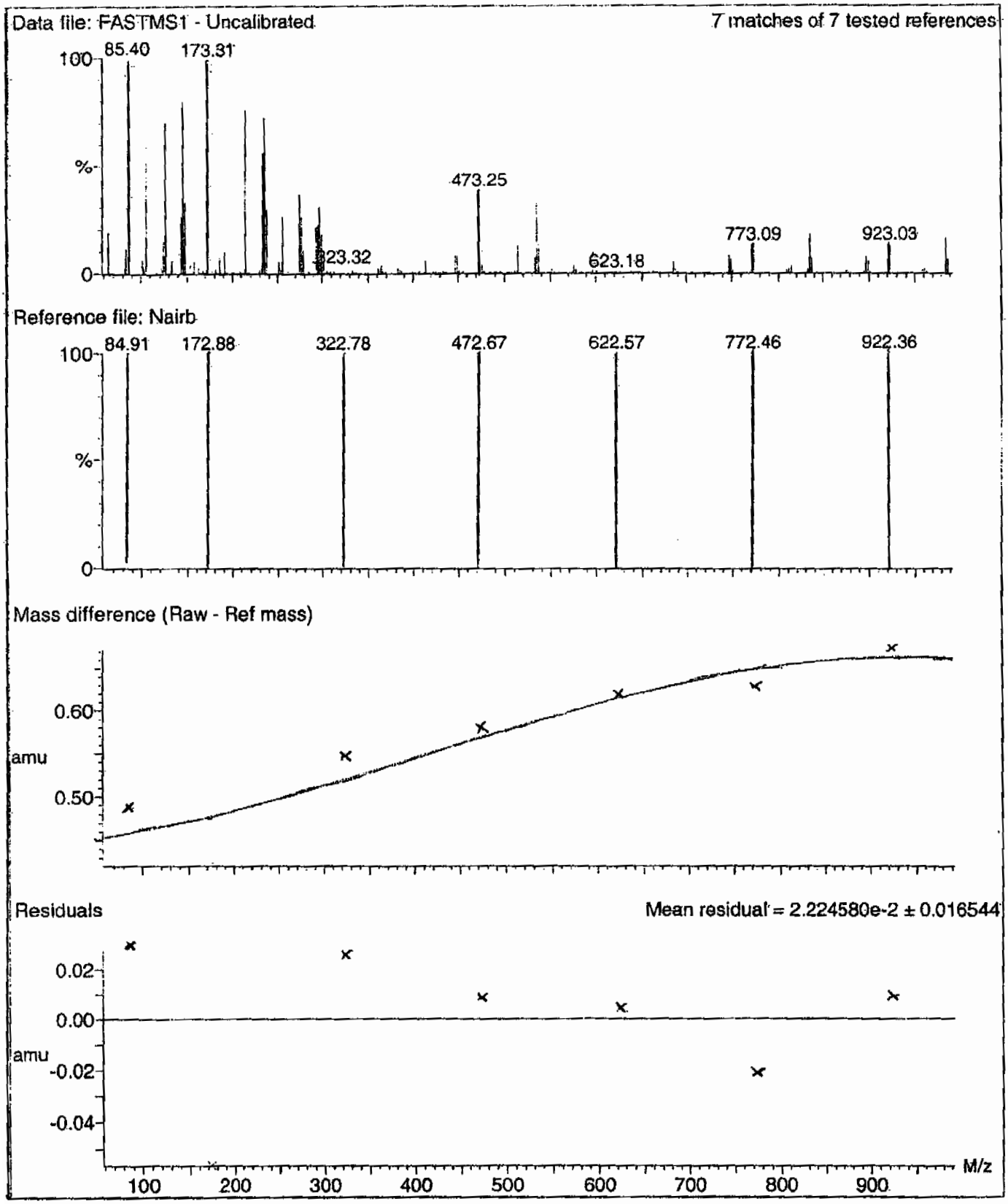

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Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

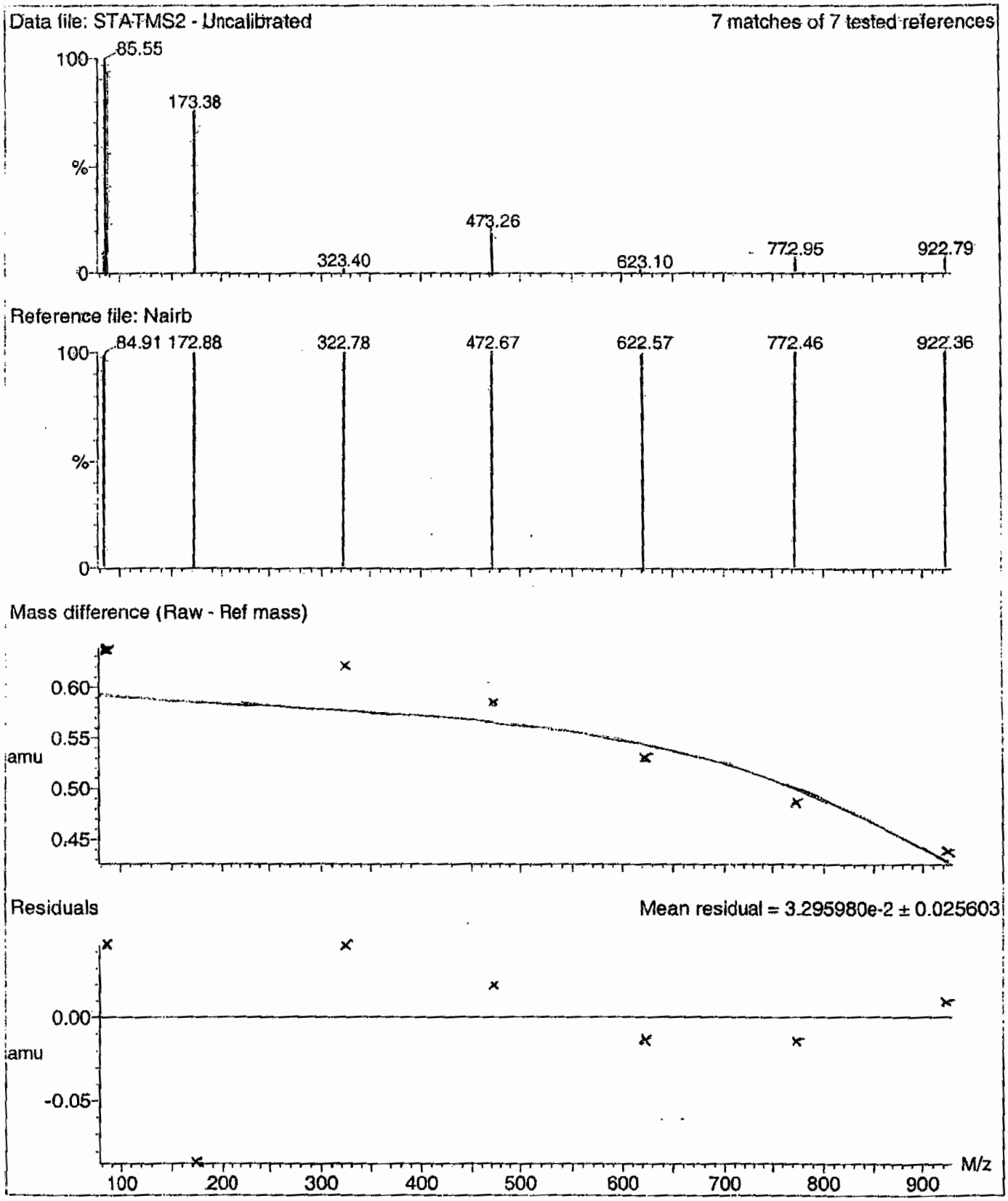

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

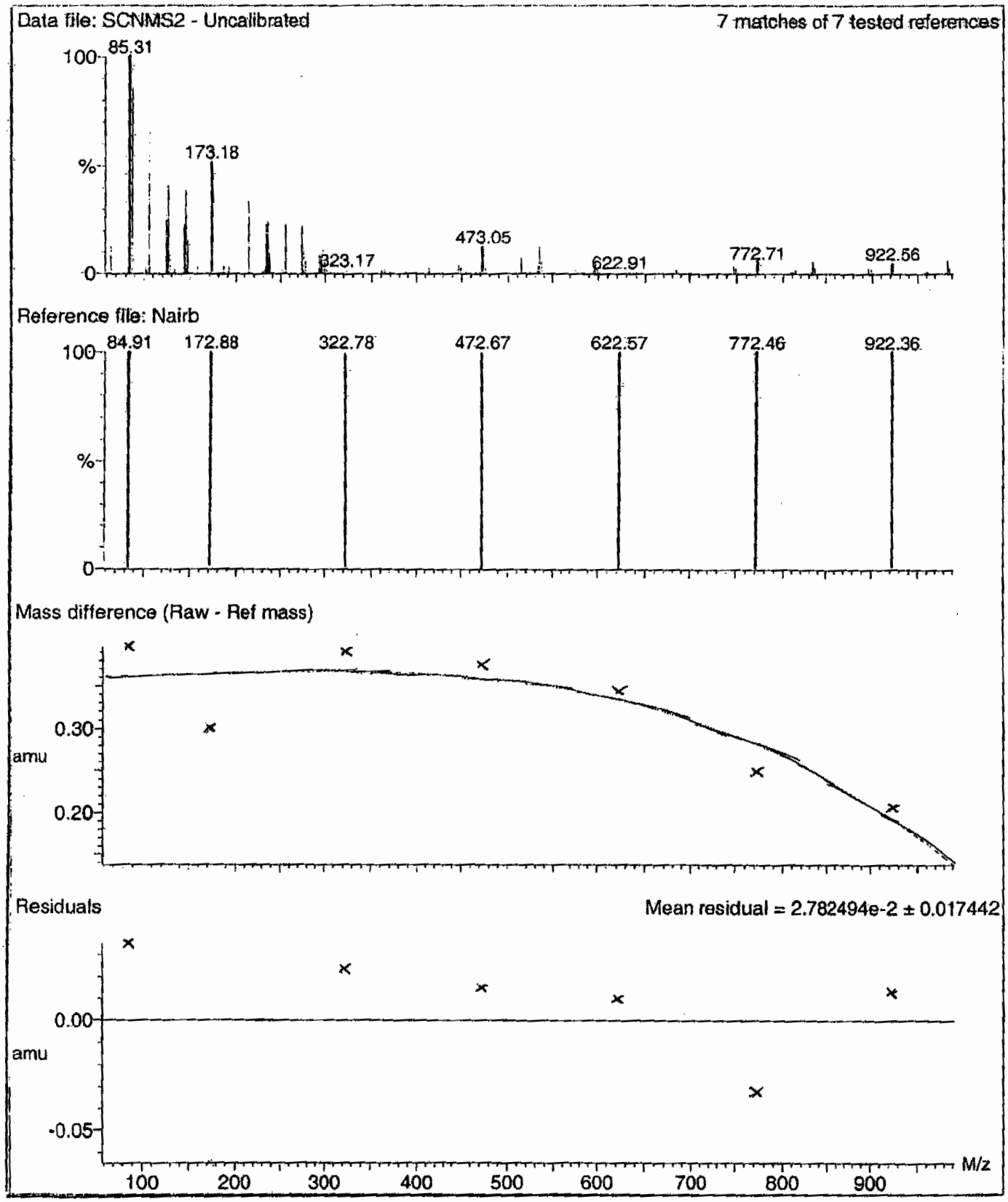

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Printed: Tue Jan 08 12:23:51 2008

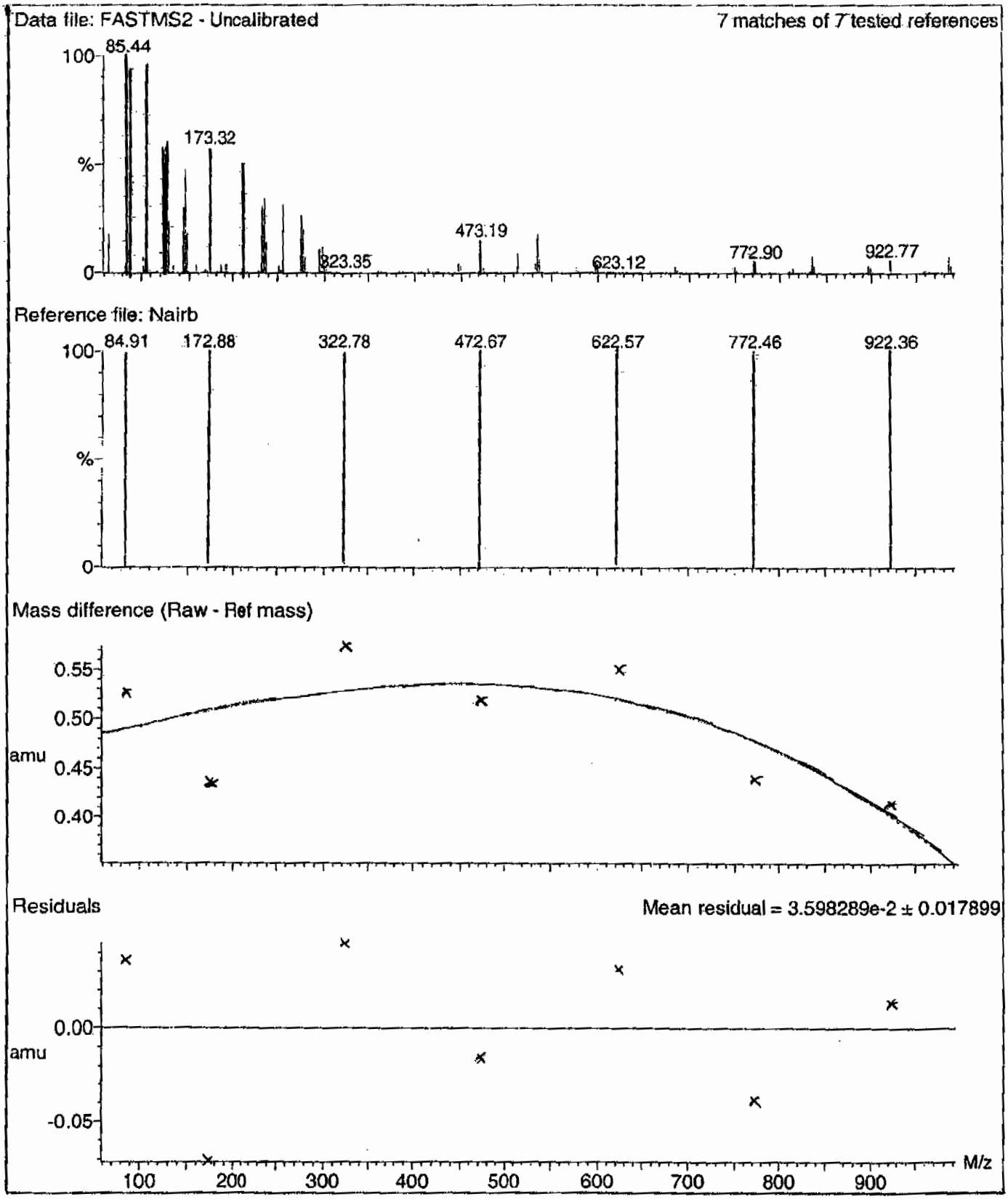

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Wednesday, July 08, 2009 11:04:53 Eastern Daylight Time

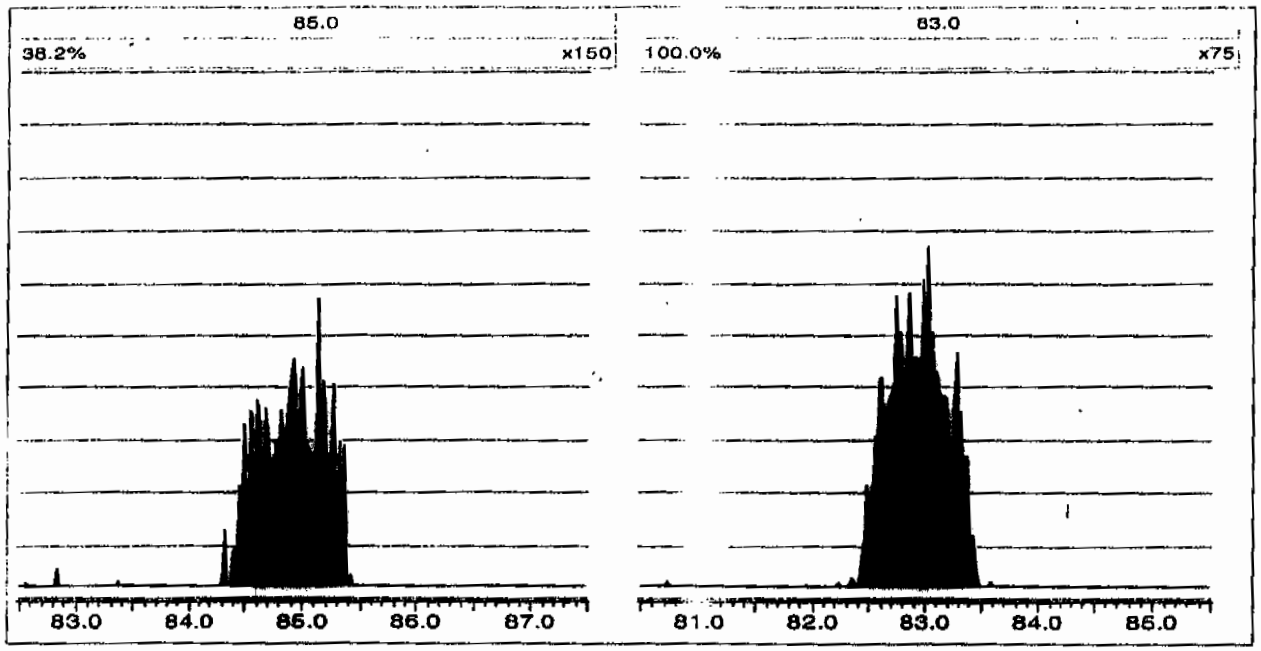

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2525

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0708006a**	**08–JUL–09**	**20767.2**				
Lower Area Limit			**10383.6**				
Upper Area Limit			**41534.4**				
1201874299	per0708012a	08–JUL–09 14:01	20440.2	2.64	2.66292	1.009	
1201874300	per0708013a	08–JUL–09 14:08	20419.3	2.64	2.65063	1.004	
1201874307	per0708014a	08–JUL–09 14:16	23022.1	2.66	2.67547	1.006	
232742001	per0708025a	08–JUL–09 15:41	21145	2.6	2.62565	1.01	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-10025

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525

GEL Sample ID: 232742001

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:41	per0708025a
	Perchlorate Isotope Ratio						1	08-JUL-09 15:41	per0708025a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:41	per0708025a
	Perchlorate-O(18)			0.483	ug/L		1	08-JUL-09 15:41	per0708025a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708025a
Date: 08-Jul-2009
Time: 15:41:55
ID: 232742001
Vial: 1:4,E

ILAL | 882496 | LTQ | 11

CWW 07-09-09

Perchlorate

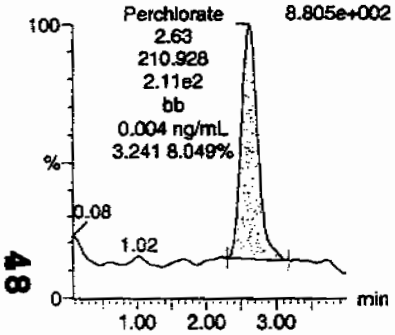

Perchlorate

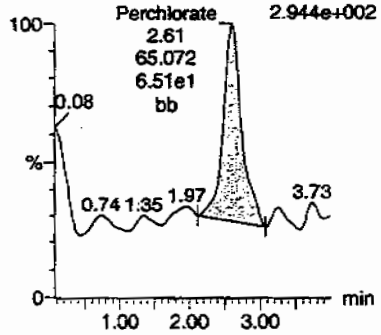

Perchlorate-101

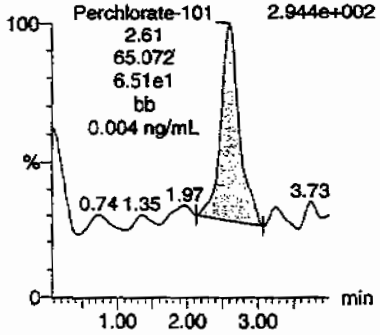

Perchlorate-O(18)

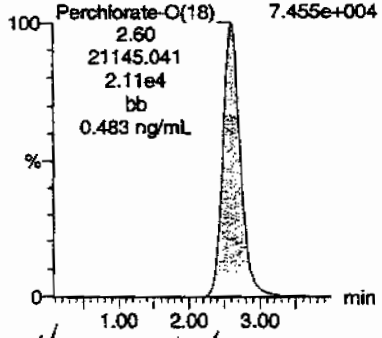

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232742001	Perchlorate	99 > 83	2.63	210.928	210.928	bb			0.0044			39.966	3.24
232742001	Perchlorate-101	101 > 85	2.61	65.072	65.072	bb			0.0042			33.265	
232742001	Perchlorate-O(18)	107 > 89	2.60	21145.041	21145.041	bb			0.4831	96.61	-3.39	2968.5...	

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2525

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08-JUL-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 48333.4

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2525

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 15570.4

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Compound name: Perchlorate
Response Factor: 48333.4
RRF SD: 3128.21, % Relative SD: 6.47216
Response type: External Std, Area
Curve type: RF

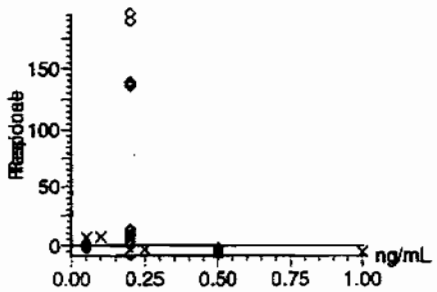

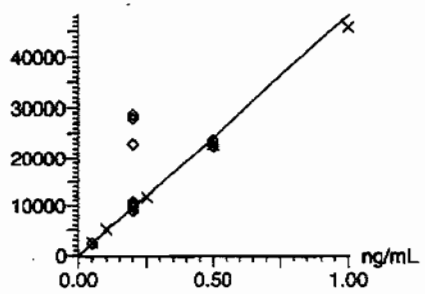

AW
07-09-09

Compound name: Perchlorate-101
Response Factor: 15570.4
RRF SD: 1259.19, % Relative SD: 8.08705
Response type: External Std, Area
Curve type: RF

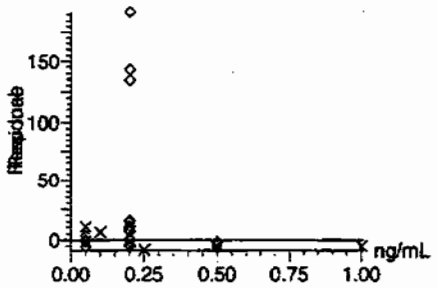

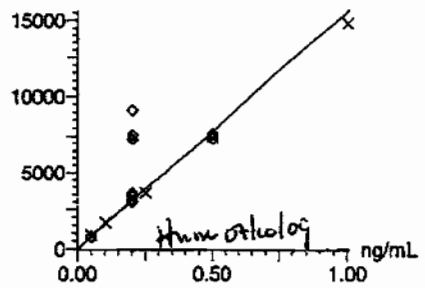

Hum 07/09/09

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 43772.6
RRF SD: 1463.7, % Relative SD: 3.34387
Response type: External Std, Area
Curve type: RF

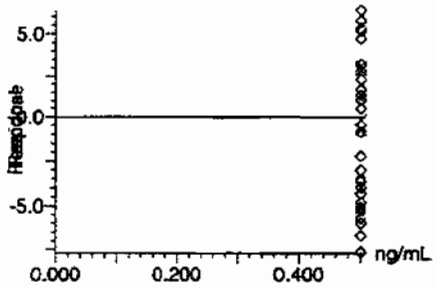

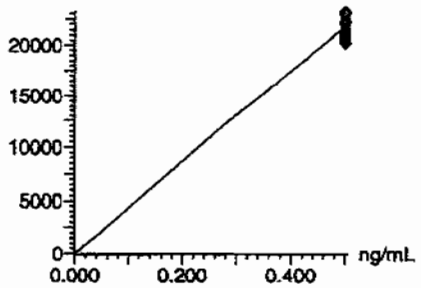

53

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2525

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	93.91	08-JUL-09 13:37	per0708009a
Perchlorate Isotope Ratio		2.99		08-JUL-09 13:37	per0708009a
Perchlorate-101	.5	.49	97.64	08-JUL-09 13:37	per0708009a

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708009a
Date: 08-Jul-2009
Time: 13:37:46
ID: WCL090706-06ICV
Vial: 1:2,A

Pass
CWW
07-09-09

Perchlorate

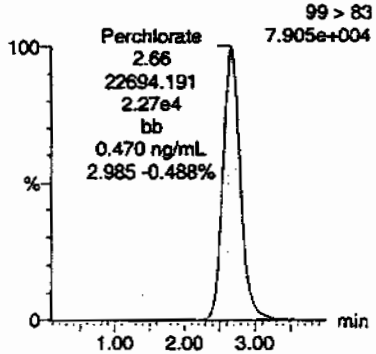

Perchlorate

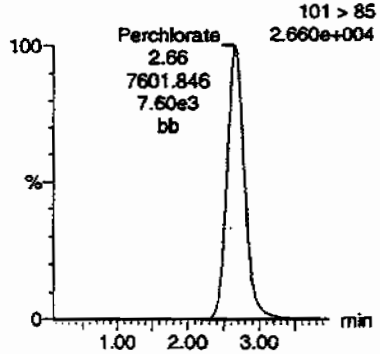

Perchlorate-101

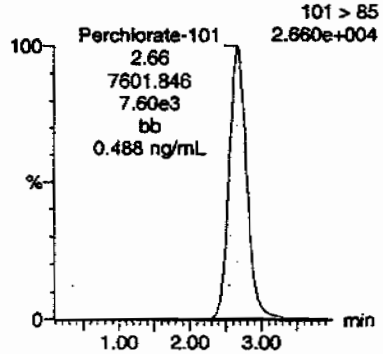

Perchlorate-O(18)

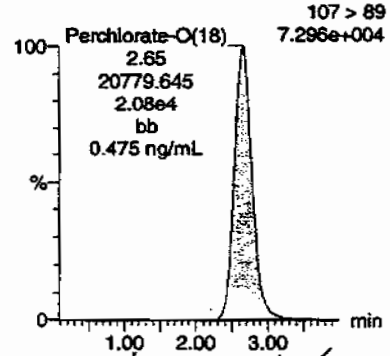

55

Hsm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06ICV	Perchlorate	99 > 83	2.66	22694.191	22694.191	bb			0.4695	93.91	-6.09	2453.8...	2.99
WCL090706-06ICV	Perchlorate-101	101 > 85	2.66	7601.846	7601.846	bb			0.4882	97.64	-2.36	2701.9...	
WCL090706-06ICV	Perchlorate-O(18)	107 > 89	2.65	20779.645	20779.645	bb			0.4747	94.94	-5.06	3233.6...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2525

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.46	92.96	08–JUL–09 15:18	per0708022a
Perchlorate Isotope Ratio		3.07		08–JUL–09 15:18	per0708022a
Perchlorate–101	.5	.47	94.1	08–JUL–09 15:18	per0708022a
Perchlorate	.5	.49	97.48	08–JUL–09 16:44	per0708033a
Perchlorate Isotope Ratio		3.09		08–JUL–09 16:44	per0708033a
Perchlorate–101	.5	.49	97.78	08–JUL–09 16:44	per0708033a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708022a
Date: 08-Jul-2009
Time: 15:18:39
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
ans
07-08-09

Perchlorate

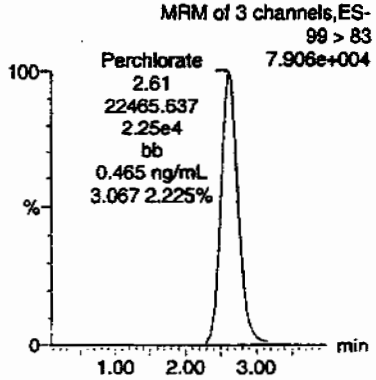

Perchlorate

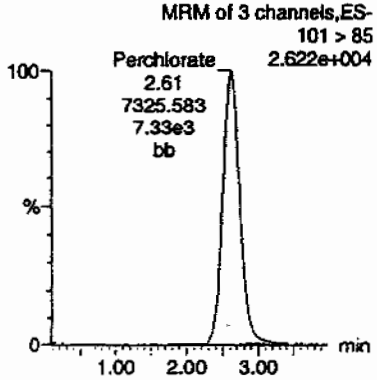

Perchlorate-101

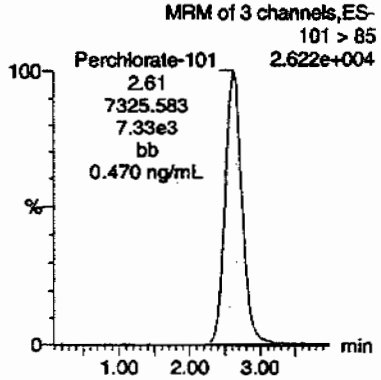

Perchlorate-O(18)

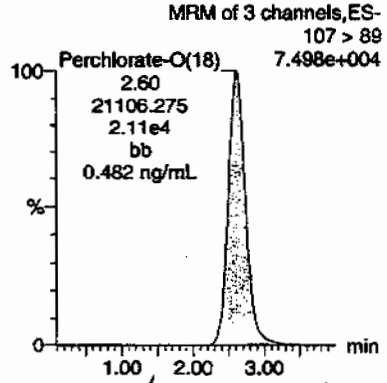

HMW 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.61	22465.637	22465.637	bb			0.4648	92.96	-7.04	5659.4...	3.07
WCL090706-06CCV	Perchlorate-101	101 > 85	2.61	7325.583	7325.583	bb			0.4705	94.10	-5.90	675.146	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.60	21106.275	21106.275	bb			0.4822	96.44	-3.56	2111.2...	

57

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708033a
Date: 08-Jul-2009
Time: 16:44:02
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
and
07-09-09

Perchlorate

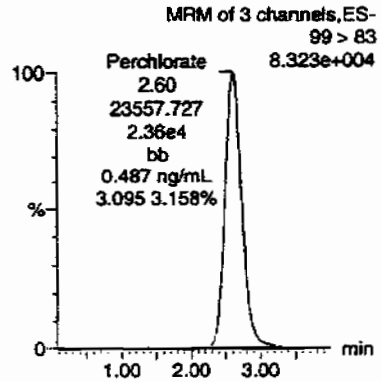

Perchlorate

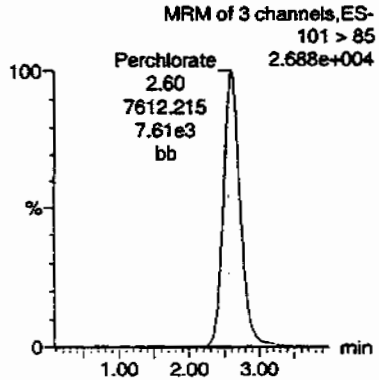

Perchlorate-101

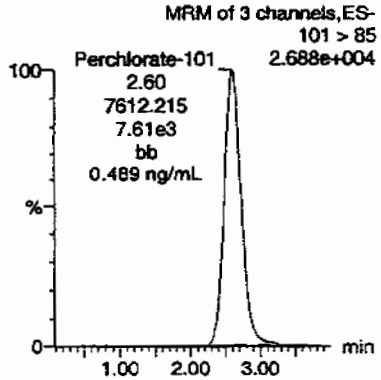

Perchlorate-O(18)

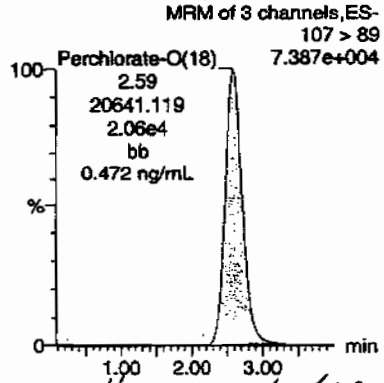

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.60	23557.727	23557.727	bb			0.4874	97.48	-2.52	5212.1...	3.09
WCL090706-06CCV	Perchlorate-101	101 > 85	2.60	7612.215	7612.215	bb			0.4889	97.78	-2.22	3842.9...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.59	20641.119	20641.119	bb			0.4716	94.31	-5.69	4254.1...	

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2525

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	102.31	08-JUL-09 13:53	per0708011a
Perchlorate Isotope Ratio		3.35		08-JUL-09 13:53	per0708011a
Perchlorate-101	.05	.05	94.69	08-JUL-09 13:53	per0708011a
Perchlorate	.05	.05	97.69	08-JUL-09 15:34	per0708024a
Perchlorate Isotope Ratio		3.08		08-JUL-09 15:34	per0708024a
Perchlorate-101	.05	.05	98.51	08-JUL-09 15:34	per0708024a
Perchlorate	.05	.05	99.89	08-JUL-09 16:59	per0708035a
Perchlorate Isotope Ratio		3.25		08-JUL-09 16:59	per0708035a
Perchlorate-101	.05	.05	95.4	08-JUL-09 16:59	per0708035a

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708011a
Date: 08-Jul-2009
Time: 13:53:16
ID: WCL090706-07CRI
Vial: 1:2,B

CWW 07-09-09

Perchlorate

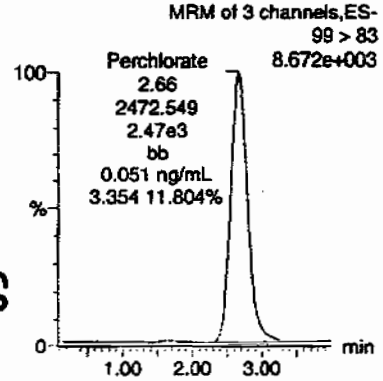

Perchlorate

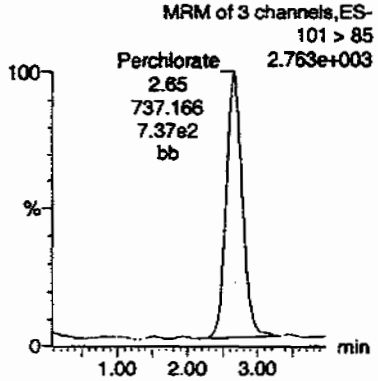

Perchlorate-101

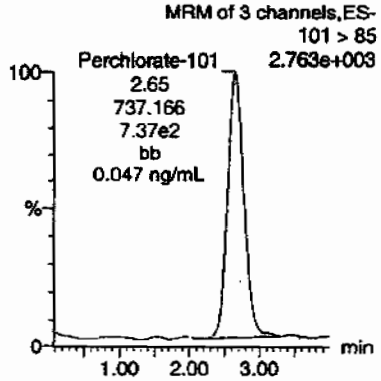

Perchlorate-O(18)

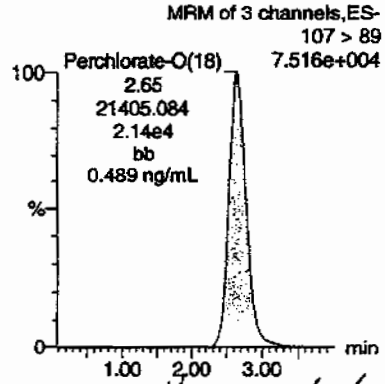

Amm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.66	2472.549	2472.549	bb			0.0512	102.31	2.31	911.588	3.35
WCL090706-07CRI	Perchlorate-101	101 > 85	2.65	737.166	737.166	bb			0.0473	94.69	-5.31	141.523	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.65	21405.084	21405.084	bb			0.4890	97.80	-2.20	1236.3...	

60

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708024a
Date: 08-Jul-2009
Time: 15:34:09
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
aw
07-09-09

Perchlorate

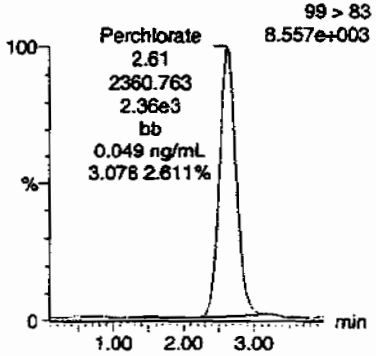

Perchlorate

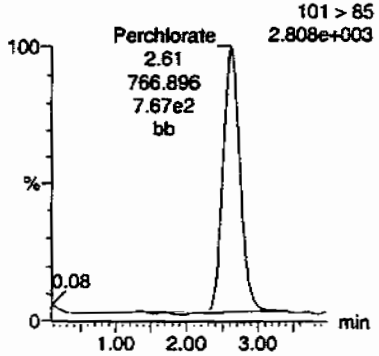

Perchlorate-101

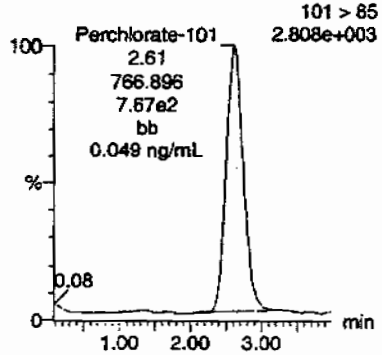

Perchlorate-O(18)

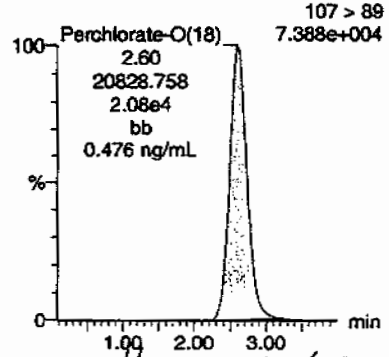

AMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.61	2360.763	2360.763	bb			0.0488	97.69	-2.31	448.651	3.08
WCL090706-07CRI	Perchlorate-101	101 > 85	2.61	766.896	766.896	bb			0.0493	98.51	-1.49	215.016	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.60	20828.758	20828.758	bb			0.4758	95.17	-4.83	12080....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708035a
Date: 08-Jul-2009
Time: 16:59:31
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
aw
07-09-09

Perchlorate

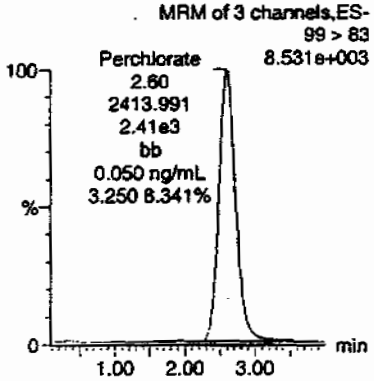

Perchlorate

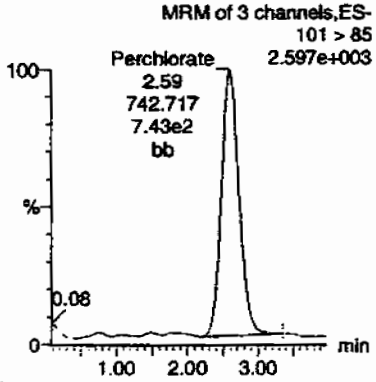

Perchlorate-101

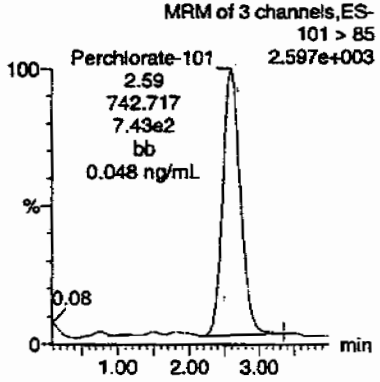

Perchlorate-O(18)

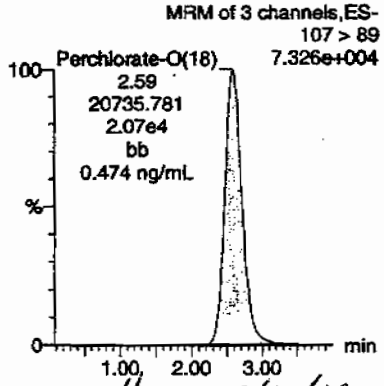

Hank 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.60	2413.991	2413.991	bb			0.0499	99.89	-0.11	1123.0...	3.25
WCL090706-07CRI	Perchlorate-101	101 > 85	2.59	742.717	742.717	bb			0.0477	95.40	-4.60	195.036	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.59	20735.781	20735.781	bb			0.4737	94.74	-5.26	10141....	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WASTE WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
MB

Date Received: 06–JUL–09

GEL Job No (SDG): 09–2525

GEL Sample ID: 1201874299

Date Filtered: 06–JUL–09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.050	ug/L	U	1	08–JUL–09 14:01	per0708012a
	Perchlorate Isotope Ratio						1	08–JUL–09 14:01	per0708012a
14797–73–0	Perchlorate–101	.05	.2	0.050	ug/L	U	1	08–JUL–09 14:01	per0708012a
	Perchlorate–O(18)			0.467	ug/L		1	08–JUL–09 14:01	per0708012a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708012a
Date: 08-Jul-2009
Time: 14:01:01
ID: 1201874299
Vial: 1:3,A

ILANL | 882496 | LZQ | MB | 1 |

CWW 07-09-09

Perchlorate

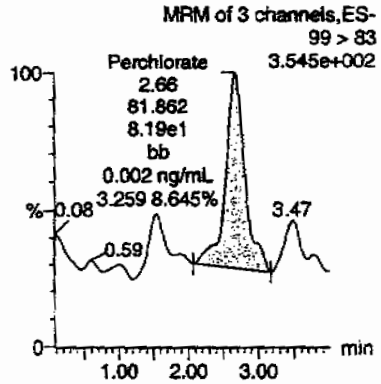

Perchlorate

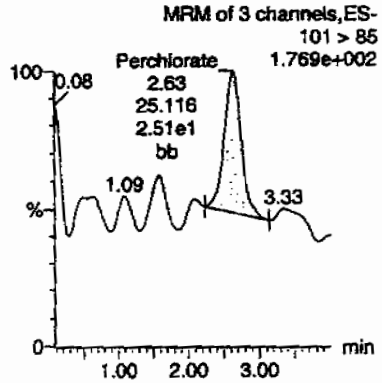

Perchlorate-101

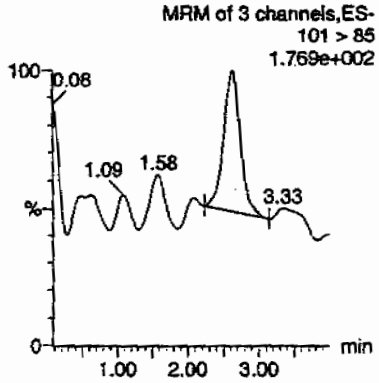

Perchlorate-O(18)

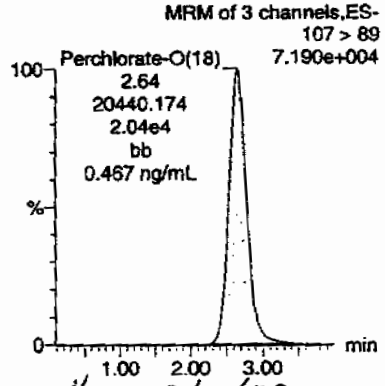

HMC 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874299	Perchlorate	99 > 83	2.66	81.862	81.862	bb			0.0017			13.523	3.26
1201874299	Perchlorate-101	101 > 85	2.63	25.116	25.116	bb			0.0016			21.942	
1201874299	Perchlorate-O(18)	107 > 89	2.64	20440.174	20440.174	bb			0.4670	93.39	-6.61	5747.7...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WASTE WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
LCS

Date Received: 06-JUL-09

GEL Job No (SDG): 09-2525

GEL Sample ID: 1201874300

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.185	ug/L	J	1	08-JUL-09 14:08	per0708013a
	Perchlorate Isotope Ratio			2.96			1	08-JUL-09 14:08	per0708013a
14797-73-0	Perchlorate-101	.05	.2	0.193	ug/L	J	1	08-JUL-09 14:08	per0708013a
	Perchlorate-O(18)			0.466	ug/L		1	08-JUL-09 14:08	per0708013a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708013a
Date: 08-Jul-2009
Time: 14:08:46
ID: 1201874300
Vial: 1:3,B

|LANL|882496|LCQ|LCS|1|

CWW 07-09-09

Perchlorate

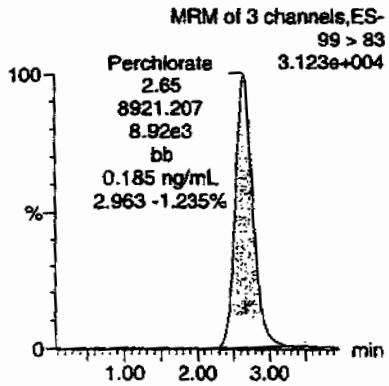

Perchlorate

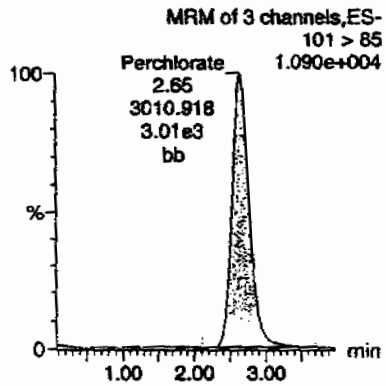

Perchlorate-101

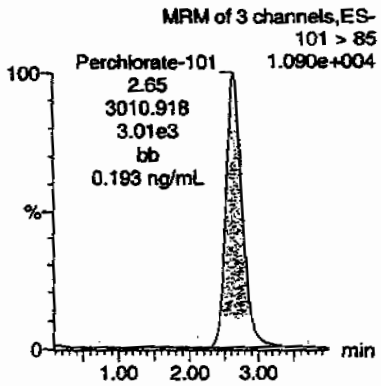

Perchlorate-O(18)

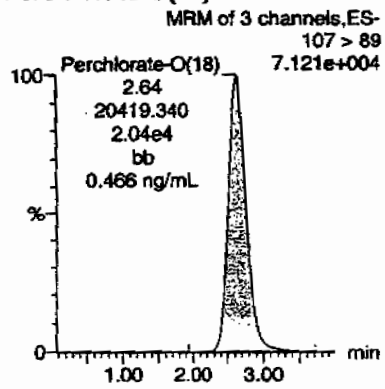

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874300	Perchlorate	99 > 83	2.65	8921.207	8921.207	bb			0.1846	92.29	-7.71	2813.9...	2.96
1201874300	Perchlorate-101	101 > 85	2.65	3010.918	3010.918	bb			0.1934	96.69	-3.31	536.716	
1201874300	Perchlorate-O(18)	107 > 89	2.64	20419.340	20419.340	bb			0.4665	93.30	-6.70	2153.2...	

$\frac{8921.207}{48333.4} = 0.1846$

Hume 07/10/09

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 882495 Verified by:
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1201874299 MB	06-JUL-2009 10:36:36	10	10	1
1201874300 LCS	06-JUL-2009 10:36:36	10	10	1
232662001	06-JUL-2009 10:36:36	10	10	1
1201874303 MS (232662001)	06-JUL-2009 10:36:36	10	10	1
1201874305 MSD (232662001)	06-JUL-2009 10:36:36	10	10	1
232674001	06-JUL-2009 10:36:36	10	10	1
232675001	06-JUL-2009 10:36:36	10	10	1
1201874304 MS (232675001)	06-JUL-2009 10:36:36	10	10	1
1201874306 MSD (232675001)	06-JUL-2009 10:36:36	10	10	1
232742001	06-JUL-2009 10:36:36	10	10	1
232750001	06-JUL-2009 10:36:36	10	10	1
232755001	06-JUL-2009 10:36:36	10	10	1
232757001	06-JUL-2009 10:36:36	10	10	1
232759001	06-JUL-2009 10:36:36	10	10	1
232761001	06-JUL-2009 10:36:36	10	10	1
1201874301 MS (232761001)	06-JUL-2009 10:36:36	10	10	1
1201874302 MSD (232761001)	06-JUL-2009 10:36:36	10	10	1
1201874307 ICS	06-JUL-2009 10:36:36	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201874307	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
LCS	1201874300	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MS	1201874301	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MS	1201874303	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MS	1201874304	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MSD	1201874302	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MSD	1201874305	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MSD	1201874306	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
RGNT	All	500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1133543	10	mL
RGNT	All	O2SI HPLC Grade Water	1141273	10	mL

Comments:
Desalting cartridges used: 090408-1-Ba & 090608-1-H

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 07/08/09
Extr. Injection Volume: 20uL
Sequence Number: per070809a
Initial Calibration Date: 07/08/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: Hmc
Date: 07/10/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0708001a	IPB001	CWW	7/8/2009 12:35			1		USE	B
per0708002a	IPB001	CWW	7/8/2009 12:43			1		USE	B
per0708003a	WCLICAL-01	CWW	7/8/2009 12:51			1		USE	I
per0708004a	WCLICAL-02	CWW	7/8/2009 12:59			1		USE	I
per0708005a	WCLICAL-03	CWW	7/8/2009 13:06			1		USE	I
per0708006a	WCLICAL-04	CWW	7/8/2009 13:14			1		USE	I
per0708007a	WCLICAL-05	CWW	7/8/2009 13:22			1		USE	I
per0708008a	IPB002	CWW	7/8/2009 13:30			1		USE	B
per0708009a	WCLICV	CWW	7/8/2009 13:37			1		USE	C
per0708010a	IPB003	CWW	7/8/2009 13:45			1		USE	B
per0708011a	WCLCRI	CWW	7/8/2009 13:53			1		USE	C
per0708012a	1201874299	CWW	7/8/2009 14:01	882496	VARIOUS	1	LANL	USE	S
per0708013a	1201874300	CWW	7/8/2009 14:08	882496	VARIOUS	1	LANL	USE	S
per0708014a	1201874307	CWW	7/8/2009 14:16	882496	VARIOUS	1	LANL	USE	S
per0708015a	232662001	CWW	7/8/2009 14:24	882496	09-2516	1	LANL	USE	S
per0708016a	1201874303	CWW	7/8/2009 14:32	882496	09-2516	1	LANL	USE	S
per0708017a	1201874305	CWW	7/8/2009 14:39	882496	09-2516	1	LANL	USE	S
per0708018a	232674001	CWW	7/8/2009 14:47	882496	09-2519	1	LANL	USE	S
per0708019a	232675001	CWW	7/8/2009 14:55	882496	09-2522	1	LANL	USE	S
per0708020a	1201874304	CWW	7/8/2009 15:03	882496	09-2522	1	LANL	USE	S
per0708021a	1201874306	CWW	7/8/2009 15:10	882496	09-2522	1	LANL	USE	S
per0708022a	WCLCCV	CWW	7/8/2009 15:18			1		USE	C
per0708023a	IPB004	CWW	7/8/2009 15:26			1		USE	B
per0708024a	WCLCRI	CWW	7/8/2009 15:34			1		USE	C
per0708025a	232742001	CWW	7/8/2009 15:41	882496	09-2525	1	LANL	USE	S
per0708026a	232750001	CWW	7/8/2009 15:49	882496	09-2528	1	LANL	USE	S
per0708027a	232755001	CWW	7/8/2009 15:57	882496	09-2536-1	1	LANL	USE	S
per0708028a	232757001	CWW	7/8/2009 16:05	882496	09-2539	1	LANL	USE	S
per0708029a	232759001	CWW	7/8/2009 16:13	882496	09-2542	1	LANL	USE	S

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per0708030a	232761001	CWW	7/8/2009 16:20	882496	09-2543	1	LANL	USE	S
per0708031a	1201874301	CWW	7/8/2009 16:28	882496	09-2543	1	LANL	USE	S
per0708032a	1201874302	CWW	7/8/2009 16:36	882496	09-2543	1	LANL	USE	S
per0708033a	WCLCCV	CWW	7/8/2009 16:44			1		USE	C
per0708034a	IPB005	CWW	7/8/2009 16:51			1		USE	B
per0708035a	WCLCRI	CWW	7/8/2009 16:59			1		USE	C
per0708036a	1201876313	CWW	7/8/2009 17:07	883299	09-2549	1	LANL	USE	S
per0708037a	1201876314	CWW	7/8/2009 17:15	883299	09-2549	1	LANL	USE	S
per0708038a	1201876317	CWW	7/8/2009 17:22	883299	09-2549	1	LANL	USE	S
per0708039a	232855001	CWW	7/8/2009 17:30	883299	09-2549	1	LANL	USE	S
per0708040a	1201876315	CWW	7/8/2009 17:38	883299	09-2549	1	LANL	USE	S
per0708041a	1201876316	CWW	7/8/2009 17:46	883299	09-2549	1	LANL	USE	S
per0708042a	WCLCCV	CWW	7/8/2009 17:53			1		USE	C
per0708043a	IPB006	CWW	7/8/2009 18:01			1		USE	B
per0708044a	WCLCRI	CWW	7/8/2009 18:09			1		USE	C
per0708045a	1201872342	CWW	7/8/2009 18:17	881646	VARIOUS	1	LANL	USE	S
per0708046a	1201872343	CWW	7/8/2009 18:25	881646	VARIOUS	1	LANL	USE	S
per0708047a	1201872346	CWW	7/8/2009 18:32	881646	VARIOUS	1	LANL	USE	S
per0708048a	232509001	CWW	7/8/2009 18:40	881646	09-2500	1	LANL	DUSE-DL	S
per0708049a	232509002	CWW	7/8/2009 18:48	881646	09-2500	1	LANL	DUSE-RA	S
per0708050a	232509003	CWW	7/8/2009 18:55	881646	09-2500	1	LANL	USE	S
per0708051a	232509004	CWW	7/8/2009 19:03	881646	09-2500	1	LANL	DUSE-DL	S
per0708052a	232509005	CWW	7/8/2009 19:11	881646	09-2500	1	LANL	DUSE-DL	S
per0708053a	232509006	CWW	7/8/2009 19:19	881646	09-2500	1	LANL	DUSE-RA	S
per0708054a	WCLCCV	CWW	7/8/2009 19:26			1		USE	C
per0708055a	IPB007	CWW	7/8/2009 19:34			1		USE	B
per0708056a	WCLCRI	CWW	7/8/2009 19:42			1		USE	C
per0708057a	232582001	CWW	7/8/2009 19:50	881646	09-2508	1	LANL	USE	S
per0708058a	232582002	CWW	7/8/2009 19:58	881646	09-2508	1	LANL	USE	S
per0708059a	232585001	CWW	7/8/2009 20:05	881646	09-2506	1	LANL	USE	S
per0708060a	232585002	CWW	7/8/2009 20:13	881646	09-2506	1	LANL	USE	S
per0708061a	232585003	CWW	7/8/2009 20:21	881646	09-2506	1	LANL	USE	S
per0708062a	232591001	CWW	7/8/2009 20:29	881646	09-2510	1	LANL	USE	S
per0708063a	1201872344	CWW	7/8/2009 20:36	881646	09-2510	1	LANL	USE	S
per0708064a	1201872345	CWW	7/8/2009 20:44	881646	09-2510	1	LANL	USE	S
per0708065a	WCLCCV	CWW	7/8/2009 20:52			1		USE	C
per0708066a	IPB008	CWW	7/8/2009 21:00			1		USE	B

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per0708067a WCLCRI CWW 7/8/2009 21:08 1 USE C

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708016a
Date: 08-Jul-2009
Time: 14:32:00
ID: 1201874303
Vial: 1:3,E

|LANL|882496|LCQ|MS|1|

CWW 07-09-09

Perchlorate

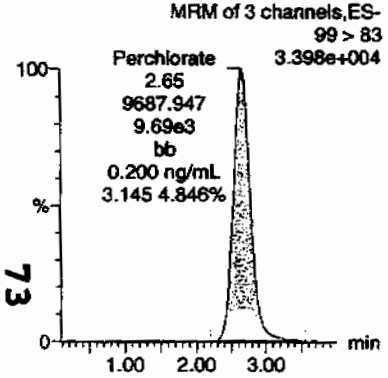

Perchlorate

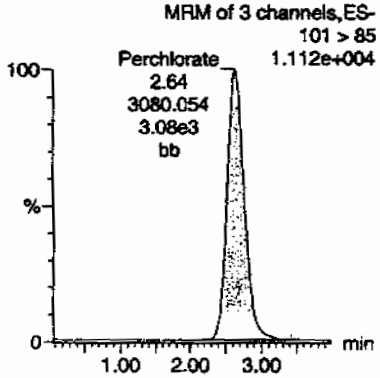

Perchlorate-101

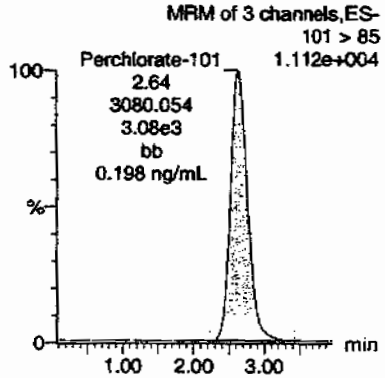

Perchlorate-O(18)

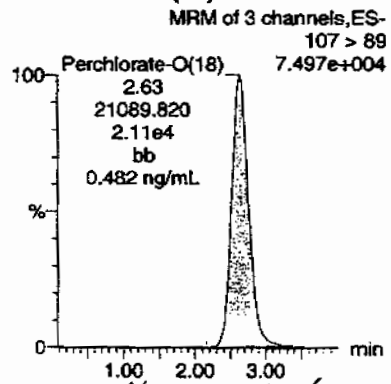

Hmm 08/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874303	Perchlorate	99 > 83	2.65	9687.947	9687.947	bb			0.2004	100.22	0.22	5837.9...	3.15
1201874303	Perchlorate-101	101 > 85	2.64	3080.054	3080.054	bb			0.1978	98.91	-1.09	564.807	
1201874303	Perchlorate-O(18)	107 > 89	2.63	21089.820	21089.820	bb			0.4818	96.36	-3.64	2493.2...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708017a
Date: 08-Jul-2009
Time: 14:39:43
ID: 1201874305
Vial: 1:3,F

|LANL| 882496 |LZQ| MSD |1|

Perchlorate

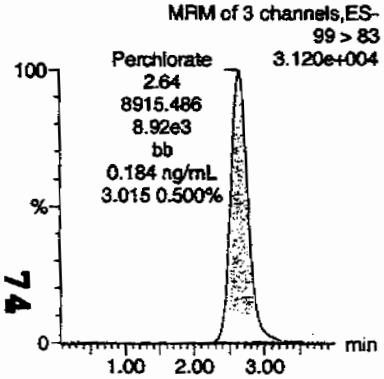

Perchlorate

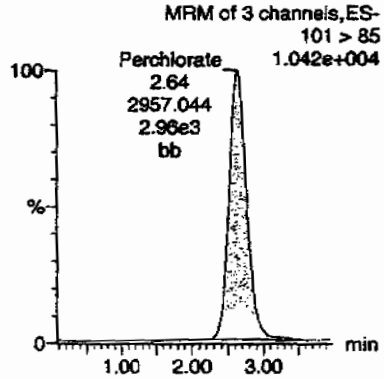

Perchlorate-101

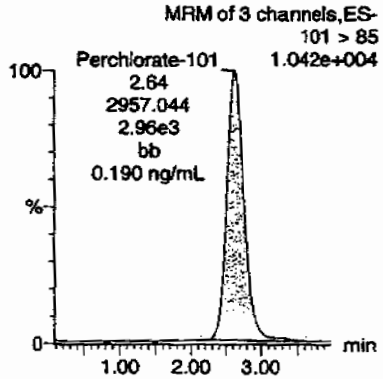

Perchlorate-O(18)

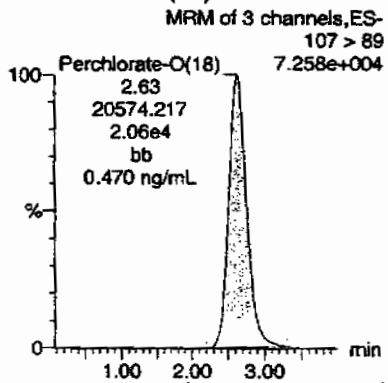

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Hmc 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874305	Perchlorate	99 > 83	2.64	8915.486	8915.486	bb			0.1845	92.23	-7.77	1312.3...	3.01
1201874305	Perchlorate-101	101 > 85	2.64	2957.044	2957.044	bb			0.1899	94.96	-5.04	1041.4...	
1201874305	Perchlorate-O(18)	107 > 89	2.63	20574.217	20574.217	bb			0.4700	94.00	-6.00	4647.0...	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2525-1

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	882499
Prep Batch Number:	882498

Sample Analysis

Sample ID	Client ID
232744001	CAMO-09-9956
232744002	CAMO-09-9950
232744003	CAMO-09-9952
232744004	CAMO-09-9958
232744005	CAMO-09-9957
232744006	CAMO-09-9951
232744007	CAMO-09-10031
232744008	CAMO-09-9990
1201874312	Interference Check Sample (ICS)
1201874308	Method Blank (MB)
1201874309	Laboratory Control Sample (LCS)
1201874310	232760001(CAMO-09-9962) Matrix Spike (MS)
1201874311	232760001(CAMO-09-9962) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

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Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232760001 (CAMO-09-9962) from SDG 09-2542-1 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

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Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Heather M. Maul **Date:** 07/13/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9956

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744001

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 86

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.582	2.33	0.582	ug/kg	U	1	09-JUL-09 19:22	per0709041a
	Perchlorate-O(18)			5.18	ug/kg		1	09-JUL-09 19:22	per0709041a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9950

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744002

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.559	2.24	0.559	ug/kg	U	1	09-JUL-09 19:33	per0709042a
	Perchlorate-O(18)			5.70	ug/kg		1	09-JUL-09 19:33	per0709042a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9952

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744003

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.558	2.23	0.558	ug/kg	U	1	09-JUL-09 20:20	per0709046a
	Perchlorate-O(18)			5.37	ug/kg		1	09-JUL-09 20:20	per0709046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9958

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744004

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.557	2.23	0.557	ug/kg	U	1	09-JUL-09 20:32	per0709047a
	Perchlorate-O(18)			5.63	ug/kg		1	09-JUL-09 20:32	per0709047a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9957

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744005

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.556	2.23	0.556	ug/kg	U	1	09-JUL-09 20:44	per0709048a
	Perchlorate-O(18)			5.51	ug/kg		1	09-JUL-09 20:44	per0709048a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9951

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744006

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.557	2.23	0.557	ug/kg	U	1	09-JUL-09 20:56	per0709049a
	Perchlorate-O(18)			5.76	ug/kg		1	09-JUL-09 20:56	per0709049a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10031

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744007

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.564	2.25	0.564	ug/kg	U	1	09-JUL-09 21:08	per0709050a
	Perchlorate-O(18)			5.75	ug/kg		1	09-JUL-09 21:08	per0709050a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9990

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744008

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 80

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.622	2.49	0.622	ug/kg	U	1	09-JUL-09 21:19	per0709051a
	Perchlorate-O(18)			5.96	ug/kg		1	09-JUL-09 21:19	per0709051a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09-2525-1

Extract Batch Code: 882498

Date Filtered: 07-JUL-09

Matrix: SOIL

Sample ID: 1201874309

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.01	ug/kg	101		70 – 130
Perchlorate–O(18)		3.86	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2525–1

Extract Batch Code: 882498

Date Filtered: 07–JUL–09

Matrix: SOIL

Sample ID: 1201874312

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.2	ug/kg	110		70 – 130
Perchlorate–O(18)		3.8	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709035a
Date: 09-Jul-2009
Time: 18:11:41
ID: 1201874312
Vial: 2:1,C

|LANL|882499|50020|ZLS|1|

CWW 07-10-09

Perchlorate

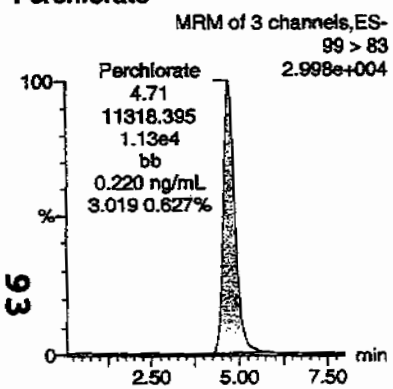

Perchlorate

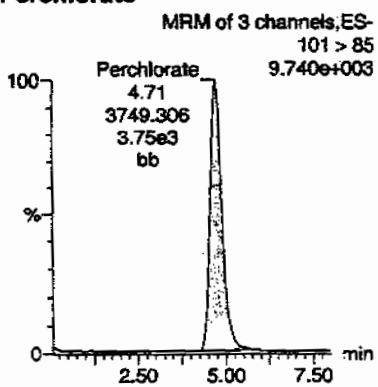

Perchlorate-101

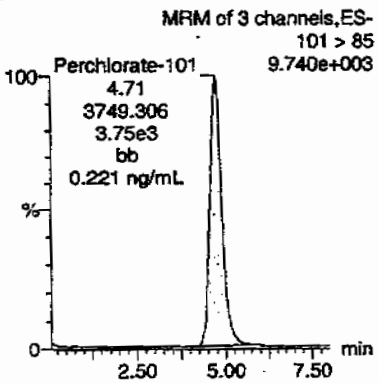

Perchlorate-O(18)

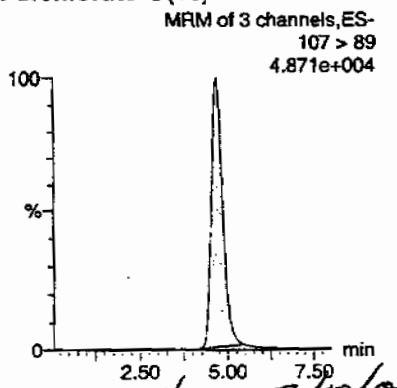

Hmc 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874312	Perchlorate	99 > 83	4.71	11318.395	11318.395	bb			0.2204	110.19	10.19	1076.4...	3.02
1201874312	Perchlorate-101	101 > 85	4.71	3749.306	3749.306	bb			0.2210	110.49	10.49	1207.6...	
1201874312	Perchlorate-O(18)	107 > 89	4.69	18192.236	18192.236	bb			0.3797	75.94	-24.06	3335.3...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09-2525-1

Extract Batch Code: 882498

Date Extracted: 07-JUL-09

GEL MS/PS ID: 1201874310

Client ID: CAMO-09-9962

GEL MSD/PSD ID: 1201874311

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.36	0.174	ug/kg	2.53	99.6	2.49	97.8	1.71	30	75 – 125
Perchlorate-O(18)	0	5.79	ug/kg	5.75		5.88		2.15		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2525–1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	09–JUL–09	per0709001a	IPB001
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709001a	IPB001
Perchlorate	0.00	0	NA	09–JUL–09	per0709002a	IPB001
Perchlorate–101	0.00	0	NA	09–JUL–09	per0709002a	IPB001

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070909a.mdb 09 Jul 2009 12:57:10
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070909a.cdb 10 Jul 2009 12:34:11

Name: per0709001a
Date: 09-Jul-2009
Time: 11:30:36
ID: IPB001
Vial: 1:1,A

CWW 07-10-09

Perchlorate

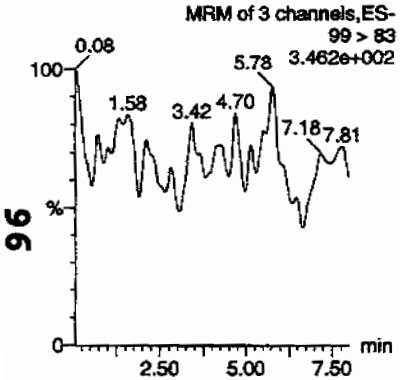

Perchlorate

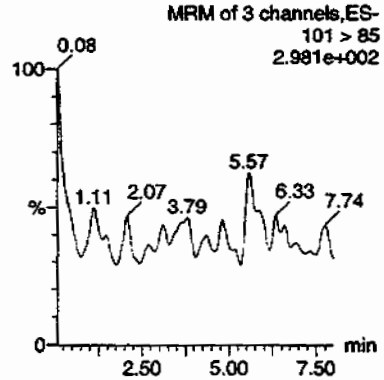

Perchlorate-101

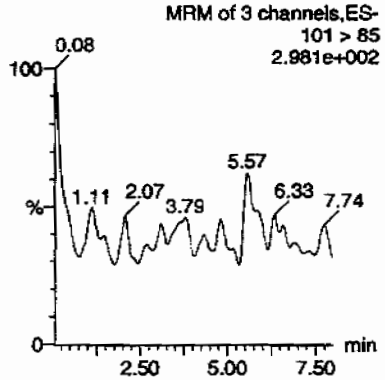

Perchlorate-O(18)

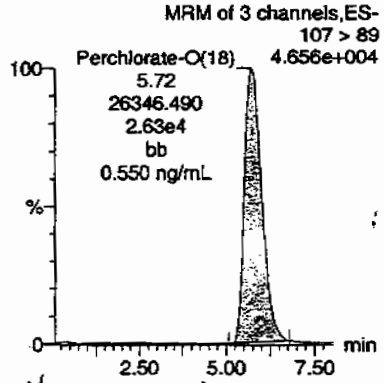

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	5.72	26346.490	26346.490	bb			0.5499	109.97	9.97	2381.6...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709002a
Date: 09-Jul-2009
Time: 11:42:20
ID: IPB001
Vial: 1:1,A

CWW
07-10-09

Perchlorate

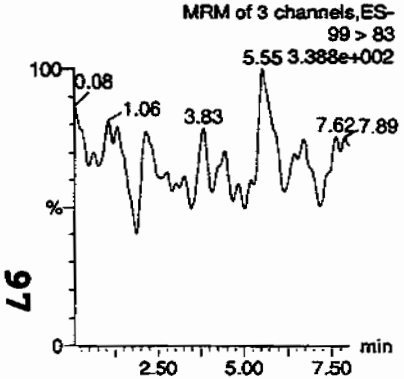

Perchlorate

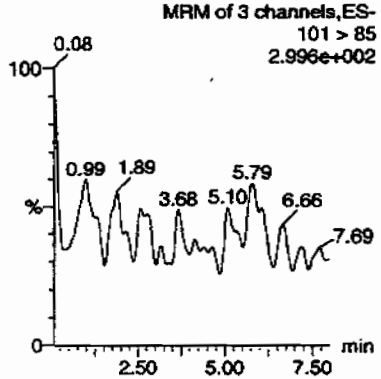

Perchlorate-101

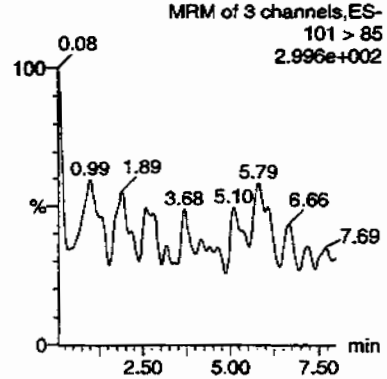

Perchlorate-O(18)

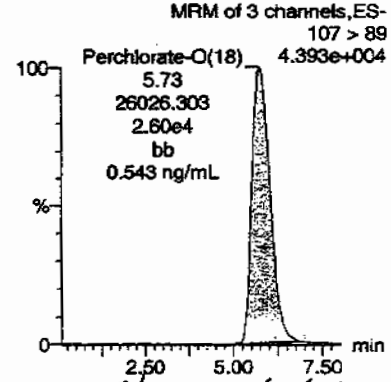

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	5.73	26026.303	26026.303	bb			0.5432	108.64	8.64	1104.9...	

97

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2525-1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	09-JUL-09	per0709008a	IPB002
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709008a	IPB002
Perchlorate	0.00	0	NA	09-JUL-09	per0709010a	IPB003
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709010a	IPB003
Perchlorate	0.00	0	NA	09-JUL-09	per0709018a	IPB004
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709018a	IPB004
Perchlorate	0.00	0	NA	09-JUL-09	per0709031a	IPB005
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709031a	IPB005
Perchlorate	0.00	0	NA	09-JUL-09	per0709044a	IPB006
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709044a	IPB006
Perchlorate	0.00	0	NA	09-JUL-09	per0709056a	IPB007
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709056a	IPB007

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709008a
Date: 09-Jul-2009
Time: 12:52:54
ID: IPB002
Vial: 1:1,A

07-10-09

Perchlorate

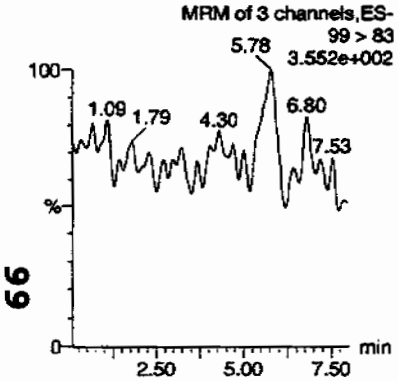

Perchlorate

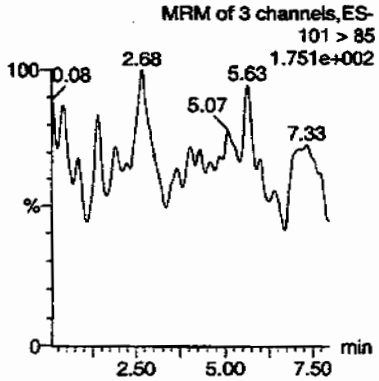

Perchlorate-101

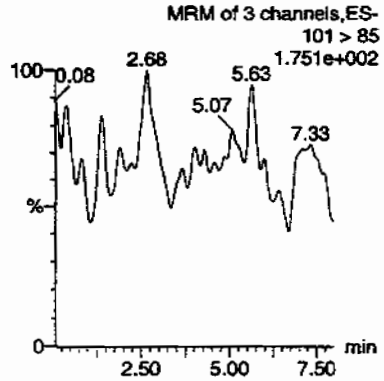

Perchlorate-O(18)

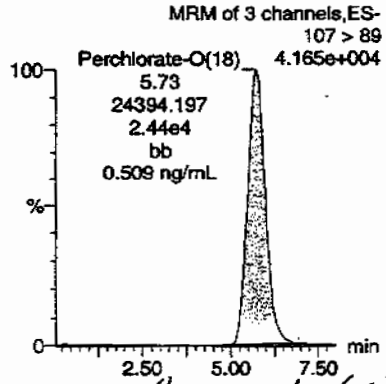

Anne 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83											0.00
IPB002	Perchlorate-101	101 > 85											
IPB002	Perchlorate-O(18)	107 > 89	5.73	24394.197	24394.197	bb			0.5091	101.83	1.83	268.656	

99

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709010a
Date: 09-Jul-2009
Time: 13:16:22
ID: IPB003
Vial: 1:1,A

CWW 07-10-09

Perchlorate

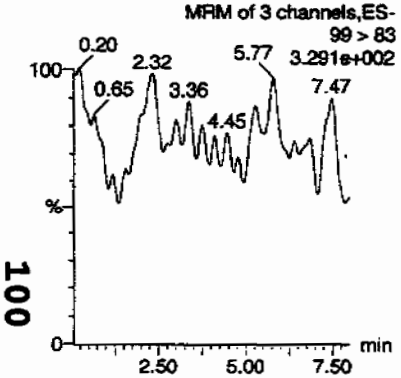

Perchlorate

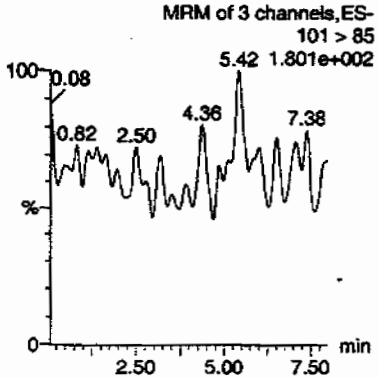

Perchlorate-101

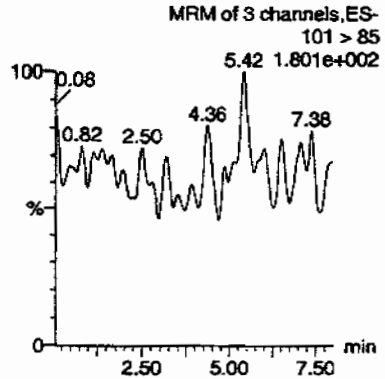

Perchlorate-O(18)

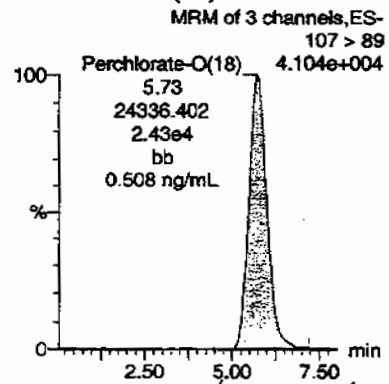

HMC 07-10-09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83											0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	5.73	24336.402	24336.402	bb			0.5079	101.58	1.58	1846.7...	

100

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709018a
Date: 09-Jul-2009
Time: 14:51:37
ID: IPB004
Vial: 1:1,A

CWW 07-10-09

Perchlorate

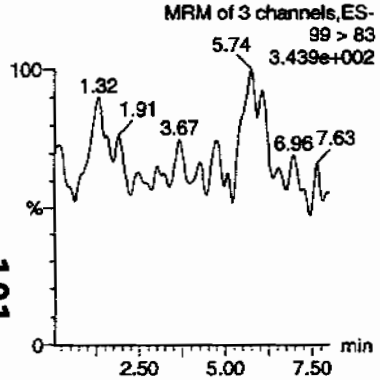

Perchlorate

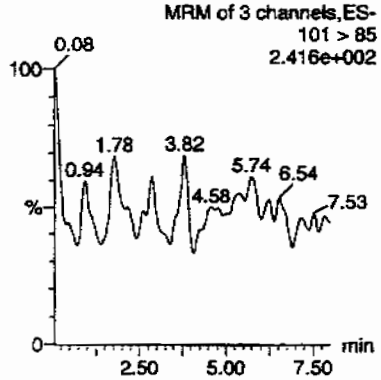

Perchlorate-101

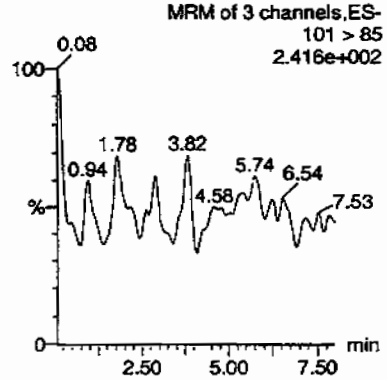

Perchlorate-O(18)

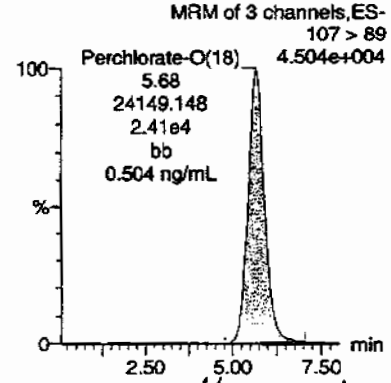

Hmc 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83											0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	5.68	24149.148	24149.148	bb			0.5040	100.80	0.80	2223.6...	

101

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709031a
Date: 09-Jul-2009
Time: 17:24:30
ID: IPB005
Vial: 1:1,A

07-10-09

Perchlorate

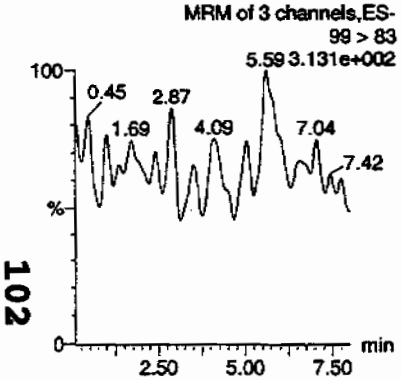

Perchlorate

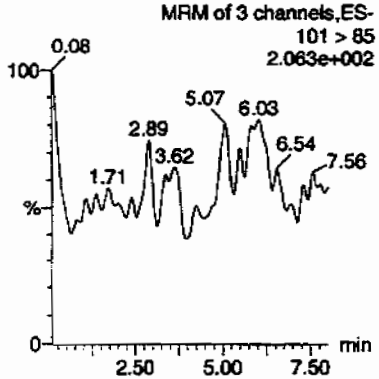

Perchlorate-101

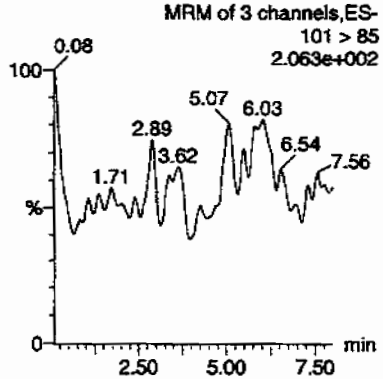

Perchlorate-O(18)

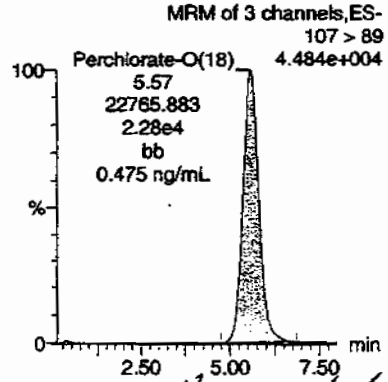

Hnm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	5.57	22765.883	22765.883	bb			0.4751	95.03	-4.97	2248.5...	

102

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709044a
Date: 09-Jul-2009
Time: 19:57:31
ID: IPB006
Vial: 1:1,A

CWW
07-10-09

Perchlorate

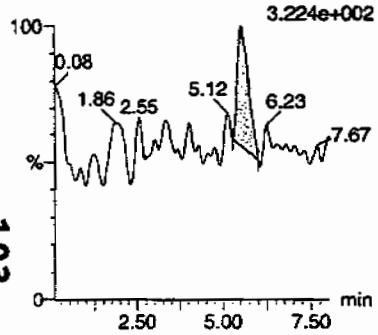

Perchlorate

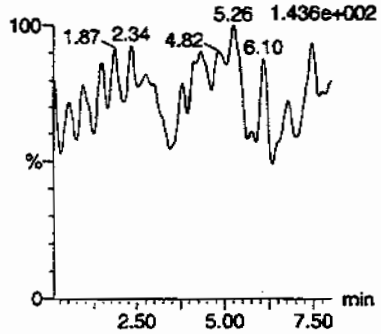

Perchlorate-101

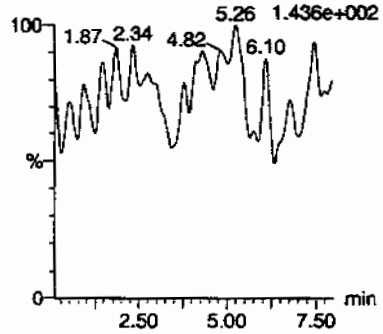

Perchlorate-O(18)

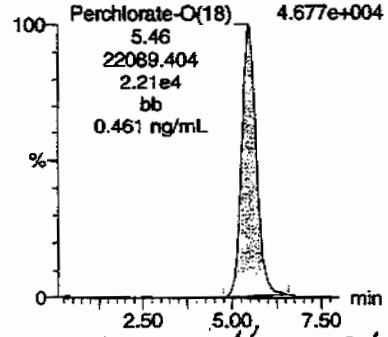

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB006	Perchlorate	99 > 83	5.52	53.416	53.416	bb			0.0010			9.009	0.00
IPB006	Perchlorate-101	101 > 85											
IPB006	Perchlorate-O(18)	107 > 89	5.46	22089.404	22089.404	bb			0.4610	92.20	-7.80	1789.0...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709056a
Date: 09-Jul-2009
Time: 22:18:46
ID: IPB007
Vial: 1:1,A

CWW 07-10-09

Perchlorate

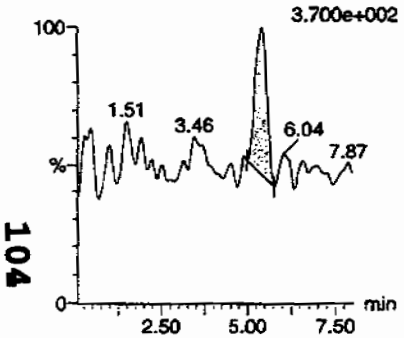

Perchlorate

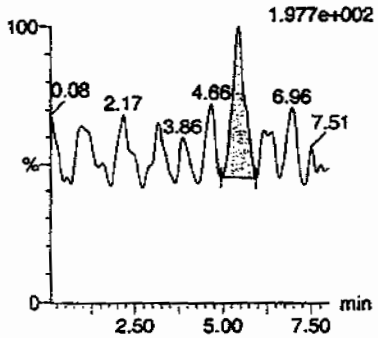

Perchlorate-101

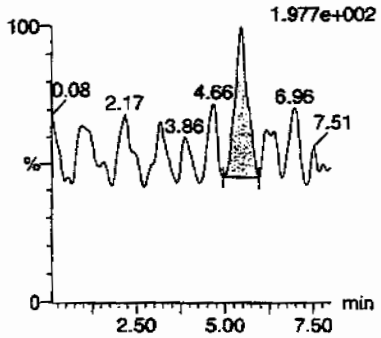

Perchlorate-O(18)

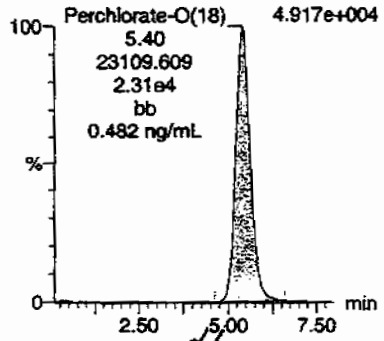

HM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83	5.43	78.972	78.972	bb			0.0015			7.111	1.73
IPB007	Perchlorate-101	101 > 85	5.45	45.758	45.758	bb			0.0027			12.789	
IPB007	Perchlorate-O(18)	107 > 89	5.40	23109.609	23109.609	bb			0.4823	96.46	-3.54	2984.5...	

ONLY LOOSD

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWJ 01-09-08

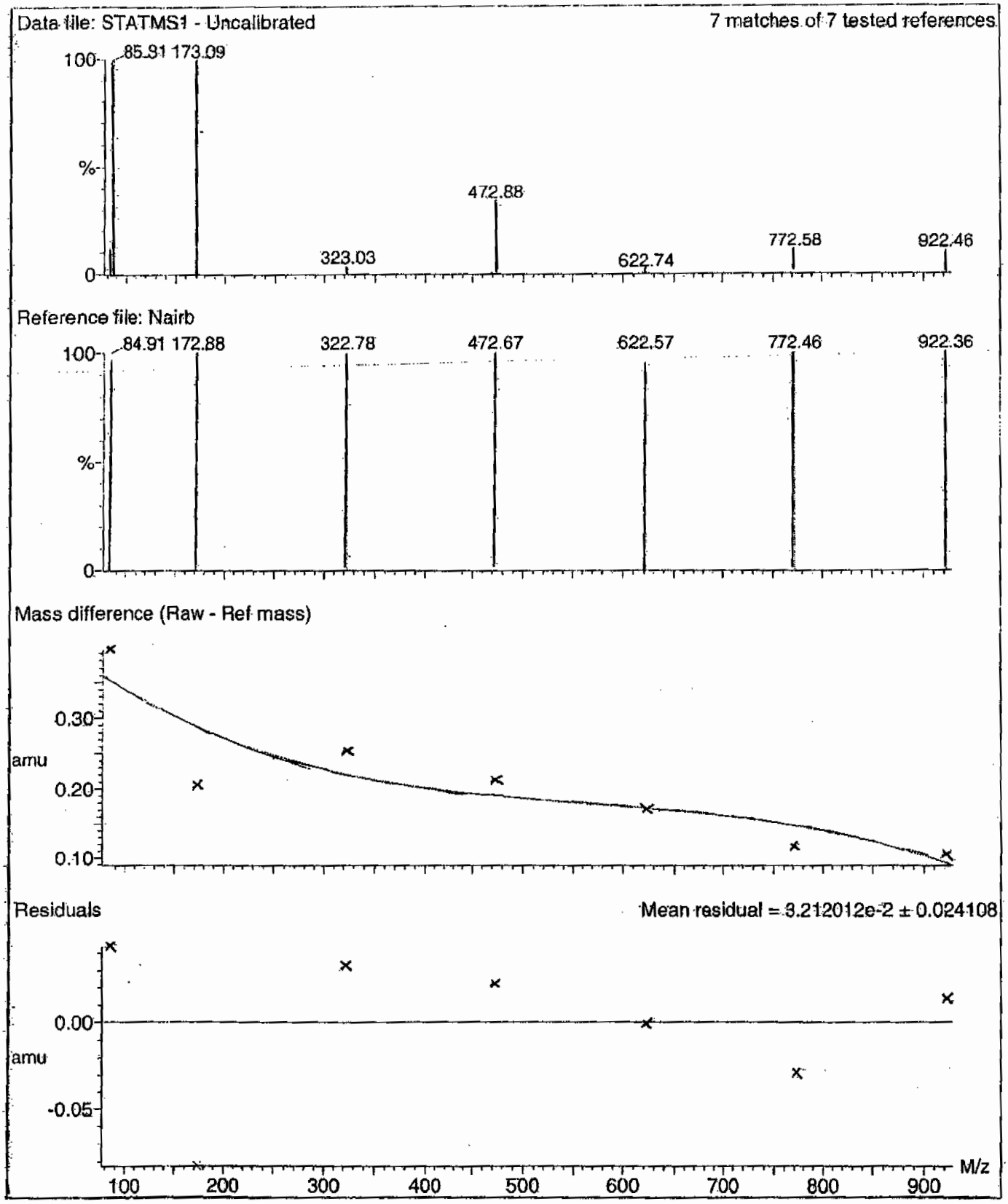

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

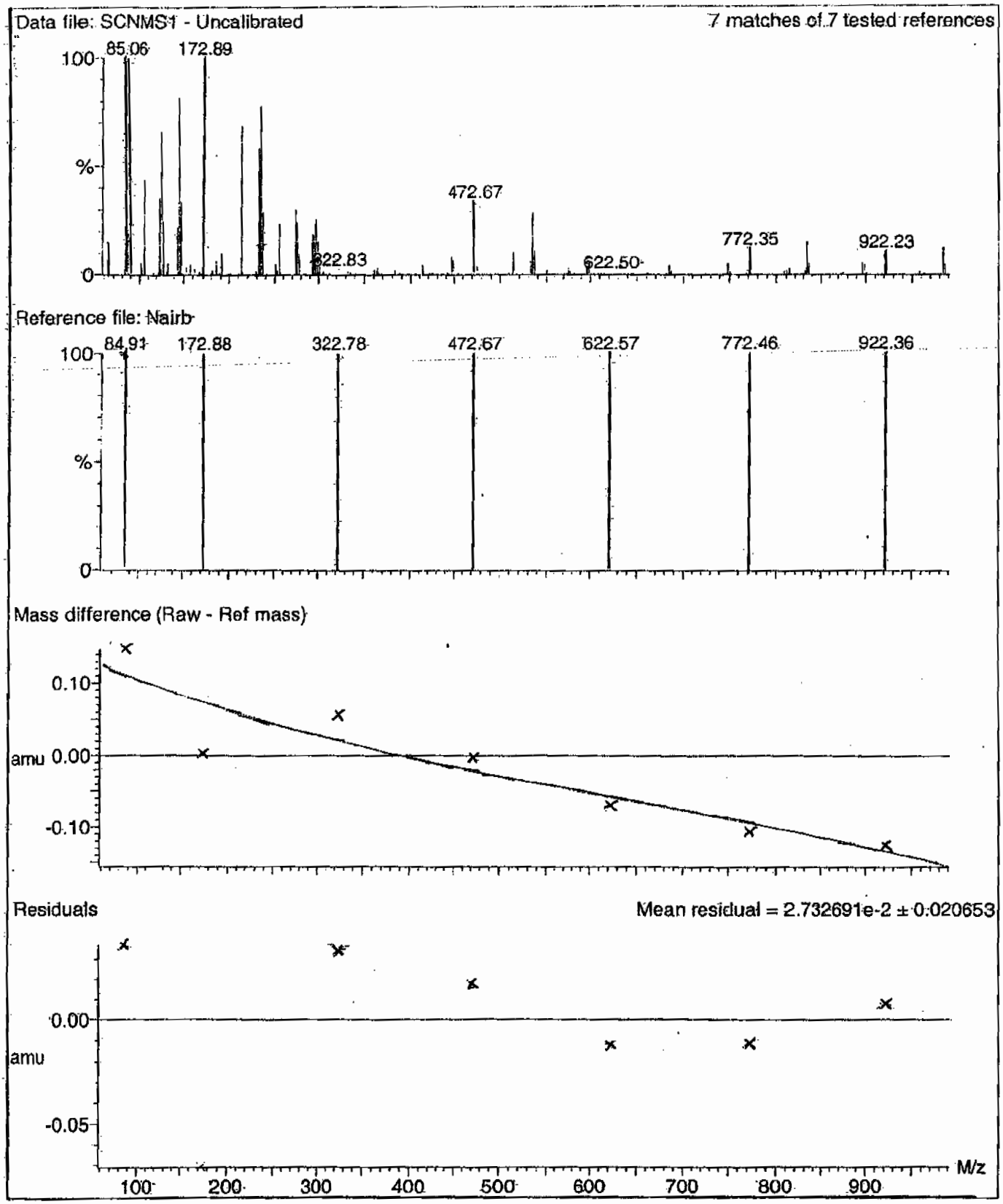

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MSI Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

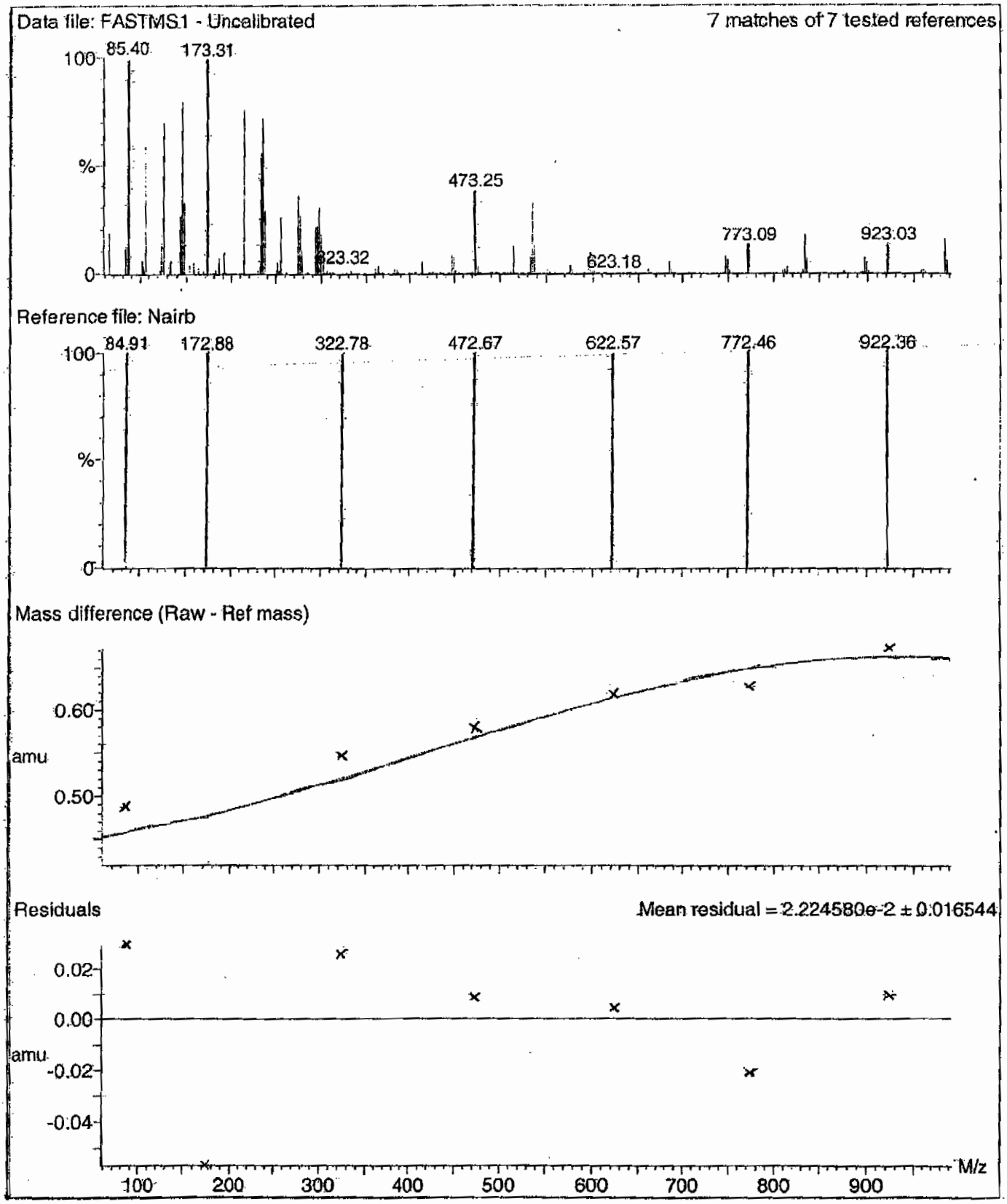

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Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

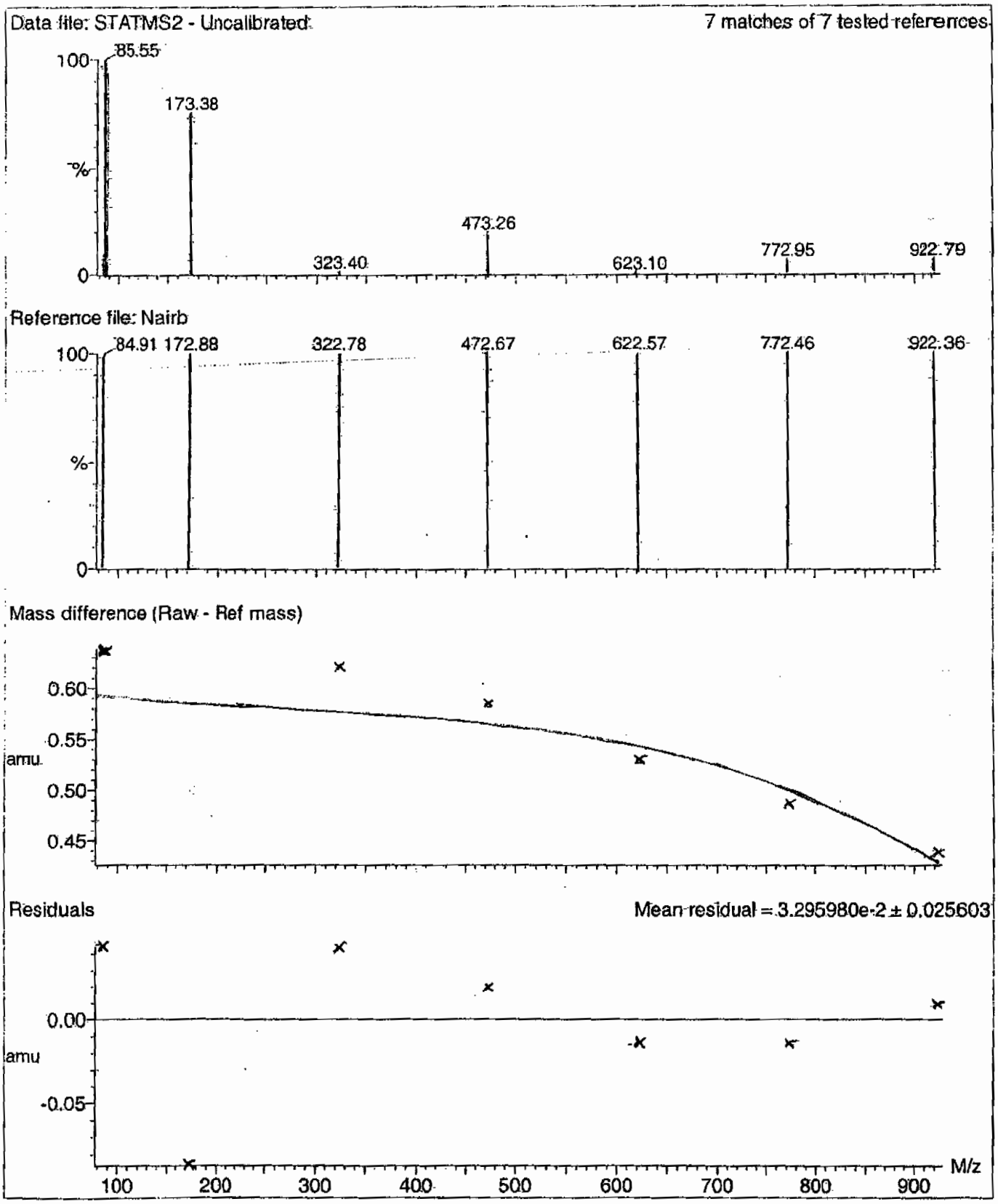

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

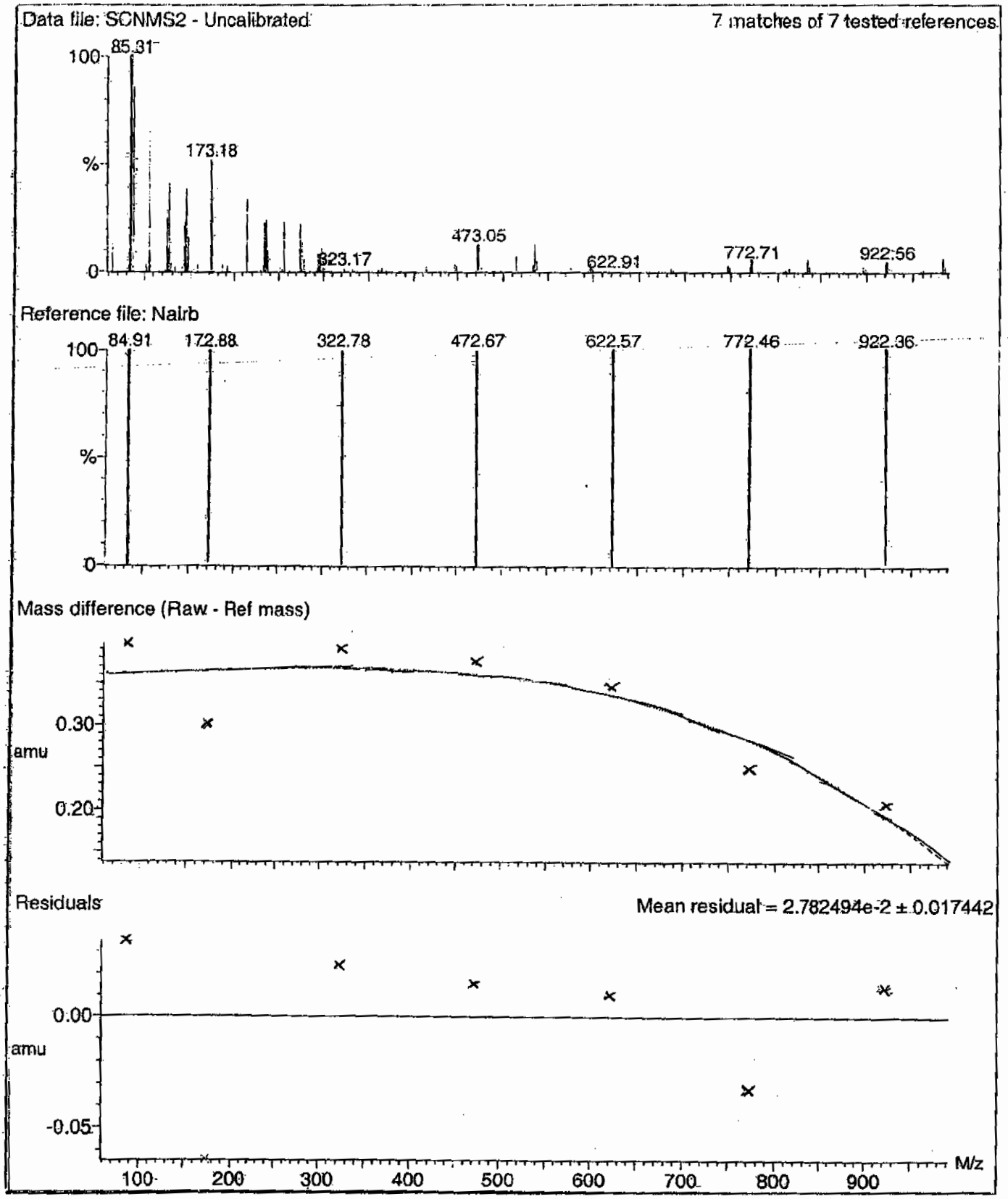

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

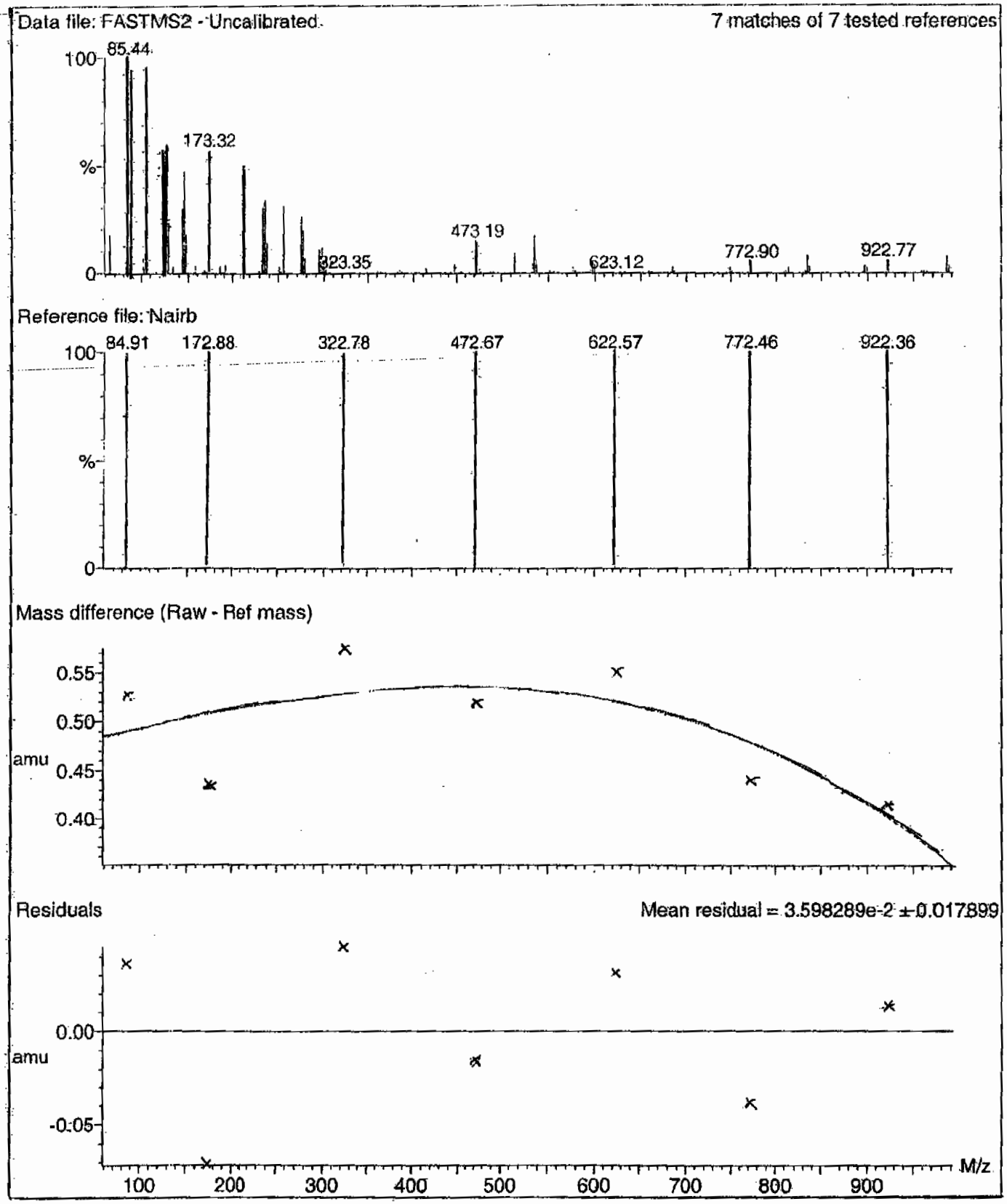

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Thursday, July 09, 2009 10:52:59 Eastern Daylight Time

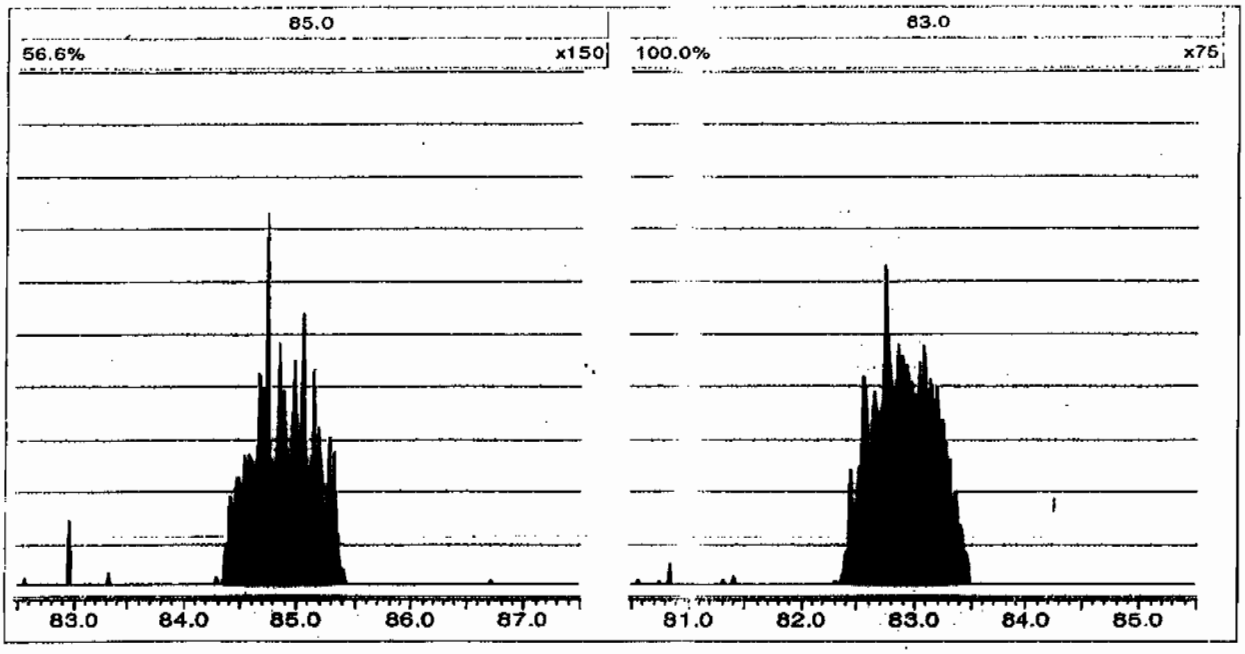

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2525-1

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	**per0709006a**	**09-JUL-09**	**23518.3**				
Lower Area Limit			**11759.15**				
Upper Area Limit			**47036.6**				
1201874308	per0709033a	09-JUL-09 17:48	22060.5	5.56			
1201874309	per0709034a	09-JUL-09 17:59	18493.9	5.56	5.58243	1.004	
1201874312	per0709035a	09-JUL-09 18:11	18192.2	4.69	4.7127	1.005	
232744001	per0709041a	09-JUL-09 19:22	21326.8	5.45	5.48298	1.006	
232744002	per0709042a	09-JUL-09 19:33	24438.9	5.41	5.4333	1.004	
232744003	per0709046a	09-JUL-09 20:20	23063.7	5.45	5.48303	1.006	
232744004	per0709047a	09-JUL-09 20:32	24194.2	5.45	5.4581	1.001	
232744005	per0709048a	09-JUL-09 20:44	23748.6	5.46	5.48302	1.004	

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Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2525-1

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	**per0709006a**	**09-JUL-09**	**23518.3**				
Lower Area Limit			**11759.15**				
Upper Area Limit			**47036.6**				
232744006	per0709049a	09-JUL-09 20:56	24783.9	5.41	5.42072	1.002	
232744007	per0709050a	09-JUL-09 21:08	24455.3	5.4	5.38353	.997	
232744008	per0709051a	09-JUL-09 21:19	22958.8	5.41			

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9956

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744001

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 86

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.582	2.33	0.582	ug/kg	U	1	09-JUL-09 19:22	per0709041a
	Perchlorate-O(18)			5.18	ug/kg		1	09-JUL-09 19:22	per0709041a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709041a
Date: 09-Jul-2009
Time: 19:22:03
ID: 232744001
Vial: 2:2,C

|LANL|882499|5020|1|

CMW 07-10-09

Perchlorate

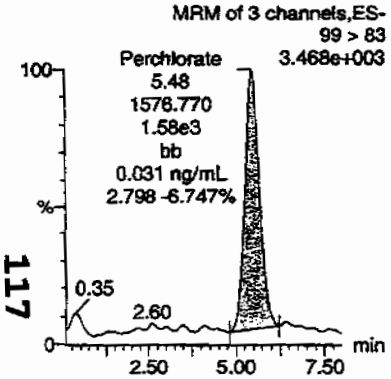

Perchlorate

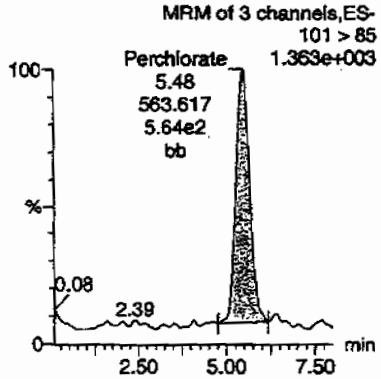

Perchlorate-101

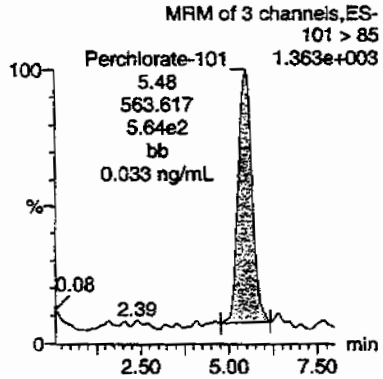

Perchlorate-O(18)

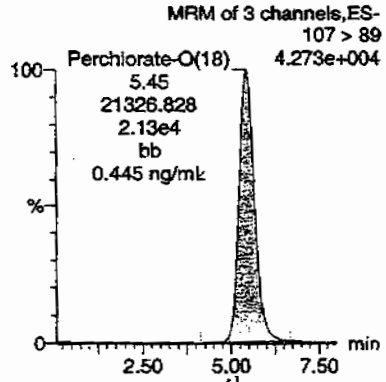

Anne 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232744001	Perchlorate	99 > 83	5.48	1576.770	1576.770	bb			0.0307			138.584	2.80
232744001	Perchlorate-101	101 > 85	5.48	563.617	563.617	bb			0.0332			50.694	
232744001	Perchlorate-O(18)	107 > 89	5.45	21326.828	21326.828	bb			0.4451	89.02	-10.98	850.766	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9950

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744002

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.559	2.24	0.559	ug/kg	U	1	09-JUL-09 19:33	per0709042a
	Perchlorate-O(18)			5.70	ug/kg		1	09-JUL-09 19:33	per0709042a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709042a
Date: 09-Jul-2009
Time: 19:33:48
ID: 232744002
Vial: 2:2,D

|LANL|882499|SD20|1|

CWW 07-10-09

Perchlorate

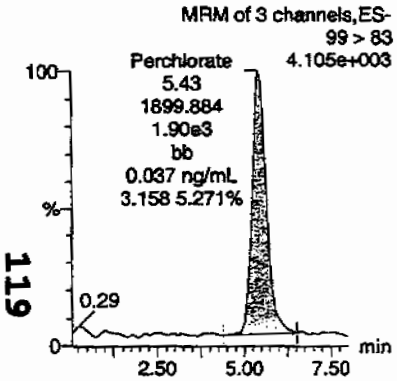

Perchlorate

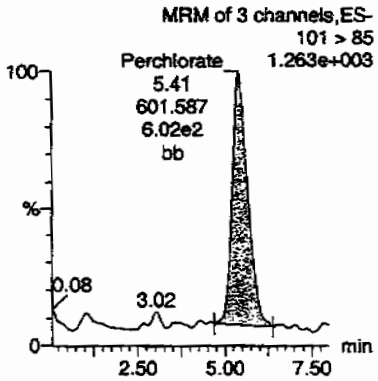

Perchlorate-101

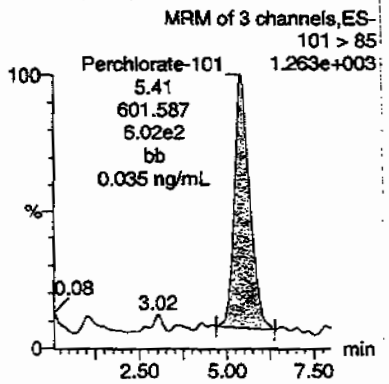

Perchlorate-O(18)

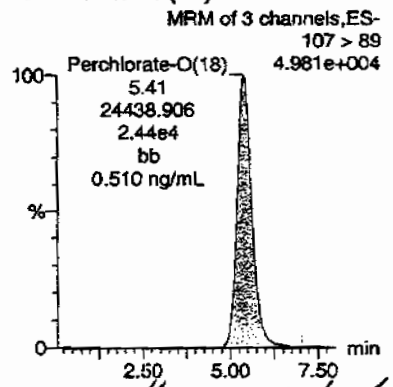

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232744002	Perchlorate	99 > 83	5.43	1899.884	1899.884	bb			0.0370			220.131	3.16
232744002	Perchlorate-101	101 > 85	5.41	601.587	601.587	bb			0.0355			66.900	
232744002	Perchlorate-O(18)	107 > 89	5.41	24438.906	24438.906	bb			0.5101	102.0	2.01	2329.1...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9952

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744003

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.558	2.23	0.558	ug/kg	U	1	09-JUL-09 20:20	per0709046a
	Perchlorate-O(18)			5.37	ug/kg		1	09-JUL-09 20:20	per0709046a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709046a
Date: 09-Jul-2009
Time: 20:20:59
ID: 232744003
Vial: 2:2,E

[LANL | 8824994 | 5020 | 1]

CWO 07-10-09

Perchlorate

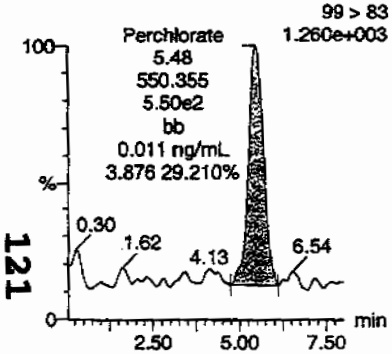

Perchlorate

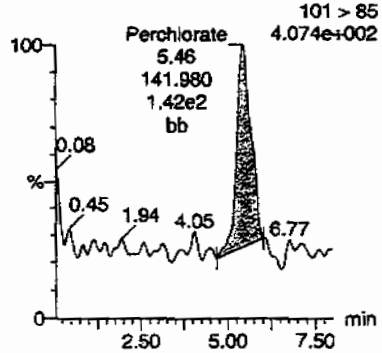

Perchlorate-101

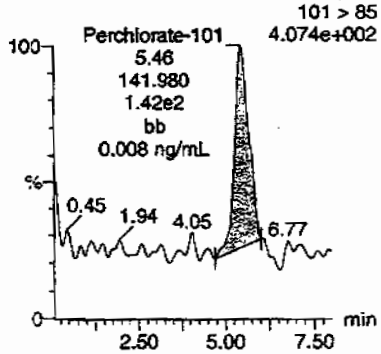

Perchlorate-O(18)

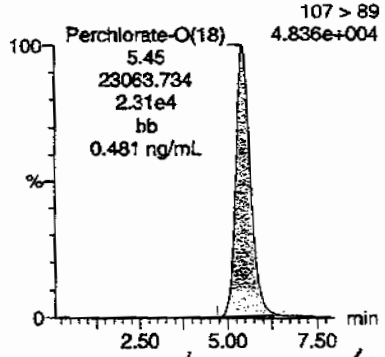

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232744003	Perchlorate	99 > 83	5.48	550.355	550.355	bb			0.0107			49.674	3.88
232744003	Perchlorate-101	101 > 85	5.46	141.980	141.980	bb			0.0084			20.329	
232744003	Perchlorate-O(18)	107 > 89	5.45	23063.734	23063.734	bb			0.4814	96.27	-3.73	1307.9...	

OK4
LQ0500

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9958

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744004

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.557	2.23	0.557	ug/kg	U	1	09-JUL-09 20:32	per0709047a
	Perchlorate-O(18)			5.63	ug/kg		1	09-JUL-09 20:32	per0709047a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709047a
Date: 09-Jul-2009
Time: 20:32:54
ID: 232744004
Vial: 2:2,F

|LANL|882499|SOTLO|1|

CWW 07-10-09

Perchlorate

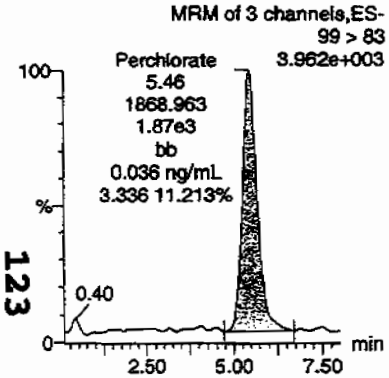

Perchlorate

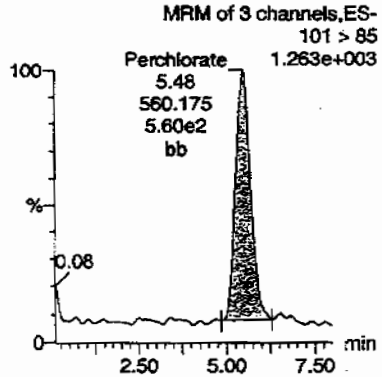

Perchlorate-101

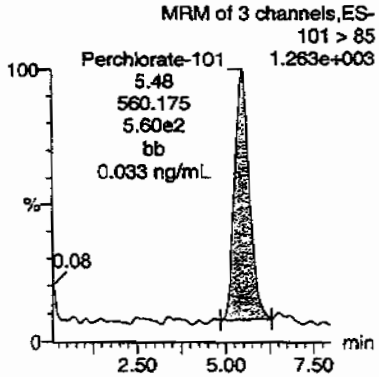

Perchlorate-O(18)

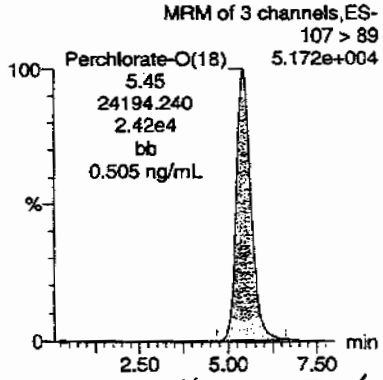

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232744004	Perchlorate	99 > 83	5.46	1868.963	1868.963	bb			0.0364			90.128	3.34
232744004	Perchlorate-101	101 > 85	5.48	560.175	560.175	bb			0.0330			113.858	
232744004	Perchlorate-O(18)	107 > 89	5.45	24194.240	24194.240	bb			0.5050	100.99	0.99	1398.1...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9957

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744005

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.556	2.23	0.556	ug/kg	U	1	09-JUL-09 20:44	per0709048a
	Perchlorate-O(18)			5.51	ug/kg		1	09-JUL-09 20:44	per0709048a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709048a
Date: 09-Jul-2009
Time: 20:44:37
ID: 232744005
Vial: 2:3,A

|LANL|882499|SO30|1|

07-10-09

Perchlorate

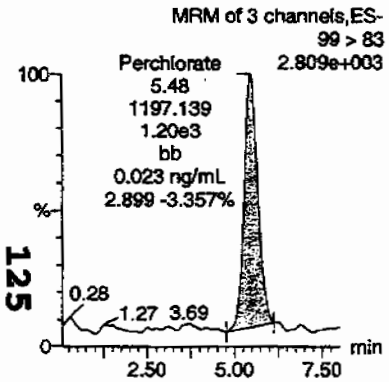

Perchlorate

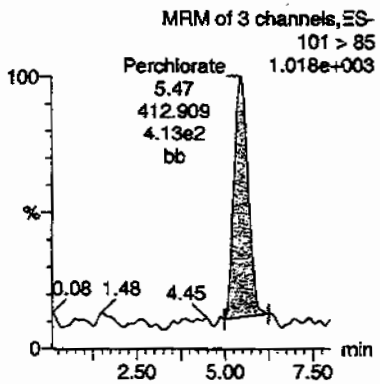

Perchlorate-101

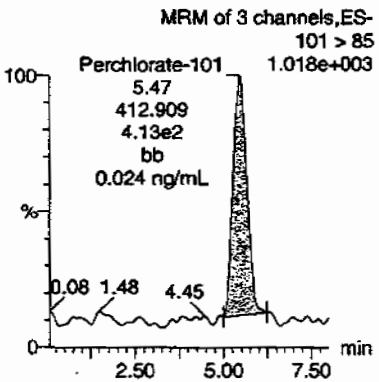

Perchlorate-O(18)

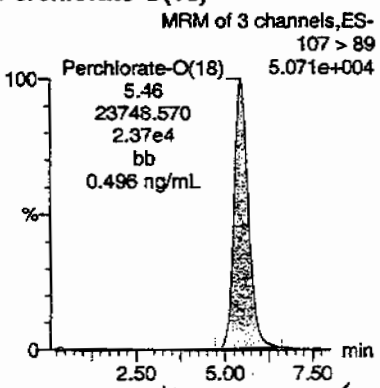

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232744005	Perchlorate	99 > 83	5.48	1197.139	1197.139	bb			0.0233			34.852	2.90
232744005	Perchlorate-101	101 > 85	5.47	412.909	412.909	bb			0.0243			92.926	
232744005	Perchlorate-O(18)	107 > 89	5.46	23748.570	23748.570	bb			0.4957	99.13	-0.87	3231.6...	

125

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9951

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744006

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.557	2.23	0.557	ug/kg	U	1	09-JUL-09 20:56	per0709049a
	Perchlorate-O(18)			5.76	ug/kg		1	09-JUL-09 20:56	per0709049a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709049a
Date: 09-Jul-2009
Time: 20:56:22
ID: 232744006
Vial: 2:3,B

1LANL|882499|SOLID|1|

CWJ 07-10-09

Perchlorate

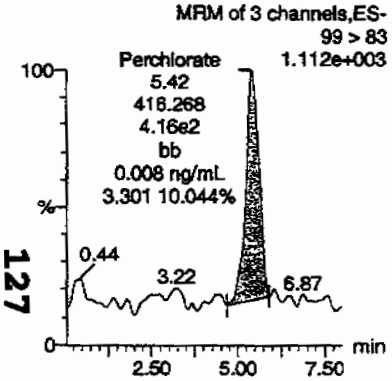

Perchlorate

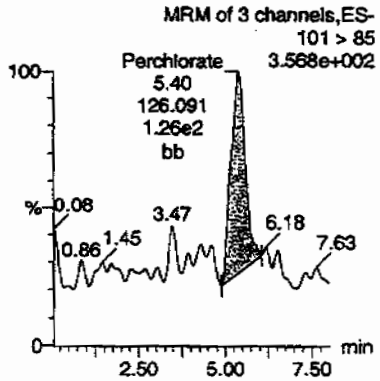

Perchlorate-101

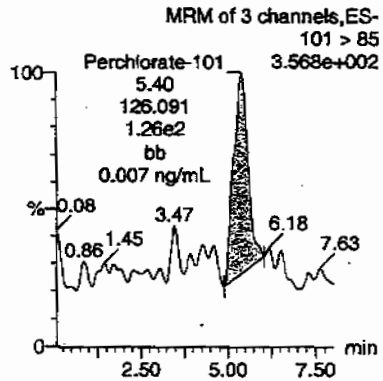

Perchlorate-O(18)

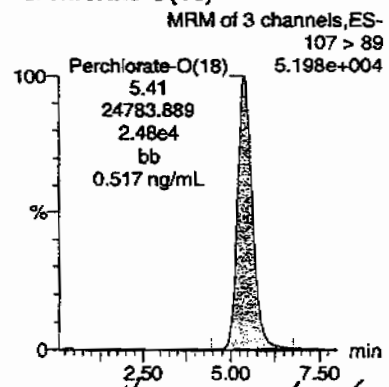

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	IonRatio
232744006	Perchlorate	99 > 83	5.42	416.268	416.268	bb			0.0081			38.967	3.30
232744006	Perchlorate-101	101 > 85	5.40	126.091	126.091	bb			0.0074			20.349	
232744006	Perchlorate-O(18)	107 > 89	5.41	24783.889	24783.889	bb			0.5173	103.45	3.45	603.660	

127

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-10031

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744007

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 89

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.564	2.25	0.564	ug/kg	U	1	09-JUL-09 21:08	per0709050a
	Perchlorate-O(18)			5.75	ug/kg		1	09-JUL-09 21:08	per0709050a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709050a
Date: 09-Jul-2009
Time: 21:08:06
ID: 232744007
Vial: 2:3,C

|LANL|882499|5060|11

AWJ 07-10-09

Perchlorate

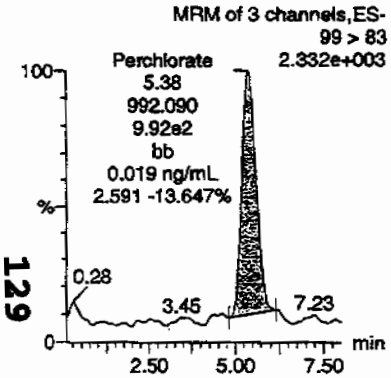

Perchlorate

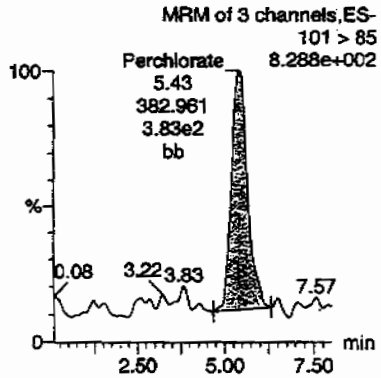

Perchlorate-101

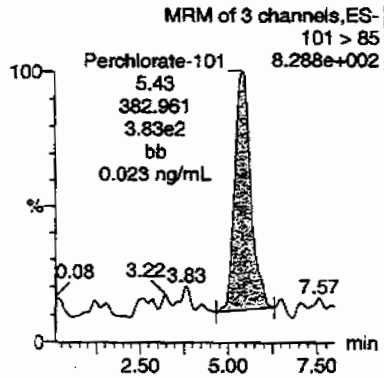

Perchlorate-O(18)

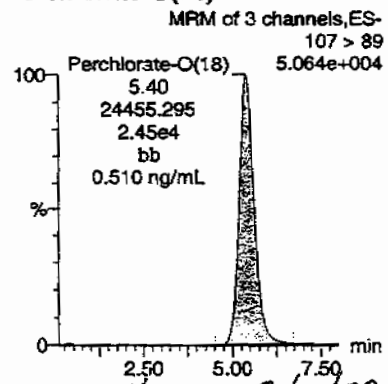

HWM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232744007	Perchlorate	99 > 83	5.38	992.090	992.090	bb			0.0193			36.645	2.59
232744007	Perchlorate-101	101 > 85	5.43	382.961	382.961	bb			0.0226			93.313	
232744007	Perchlorate-O(18)	107 > 89	5.40	24455.295	24455.295	bb			0.5104	102.08	2.08	1340.1...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-9990

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 232744008

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 80

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.622	2.49	0.622	ug/kg	U	1	09-JUL-09 21:19	per0709051a
	Perchlorate-O(18)			5.96	ug/kg		1	09-JUL-09 21:19	per0709051a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709051a
Date: 09-Jul-2009
Time: 21:19:51
ID: 232744008
Vial: 2:3,D

1LANL | 882499 | 5020 | 11

CWW 07-10-09

Perchlorate

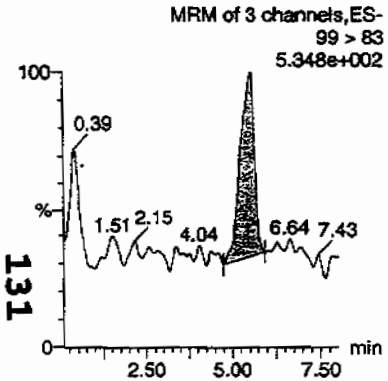

Perchlorate

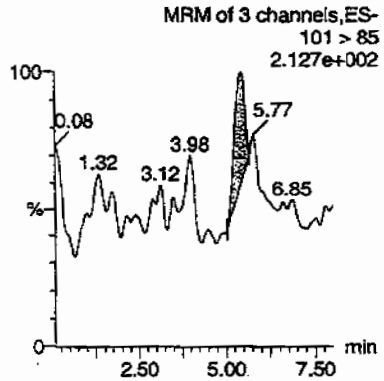

Perchlorate-101

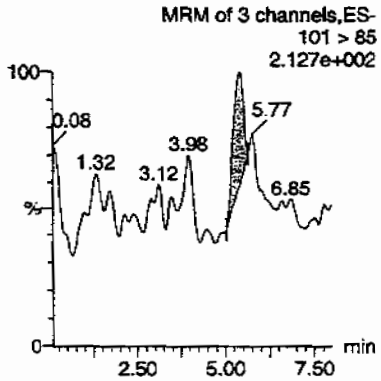

Perchlorate-O(18)

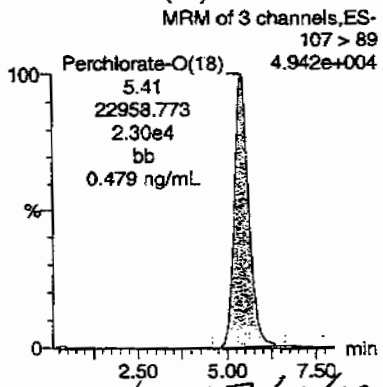

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232744008	Perchlorate	99 > 83	5.53	170.737	170.737	bb			0.0033			18.542	5.81
232744008	Perchlorate-101	101 > 85	5.43	29.399	29.399	bb			0.0017			8.183	
232744008	Perchlorate-O(18)	107 > 89	5.41	22958.773	22958.773	bb			0.4792	95.83	-4.17	3799.5...	

OKAY LA 0500

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2525–1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 09–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 51358.26

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2525-1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 09-JUL-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 16966.94

Response Type: External Standard

Curve Type: RF

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070909a.mdb 09 Jul 2009 12:57:10
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070909a.cdb 10 Jul 2009 12:34:11

Compound name: Perchlorate
Response Factor: 51358.3
RRF SD: 1527.39, % Relative SD: 2.97399
Response type: External Std, Area
Curve type: RF

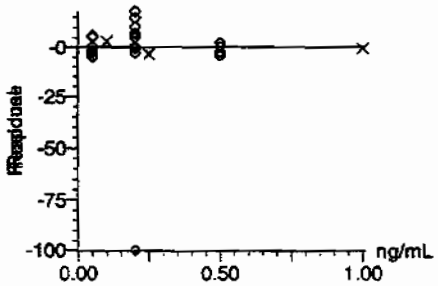

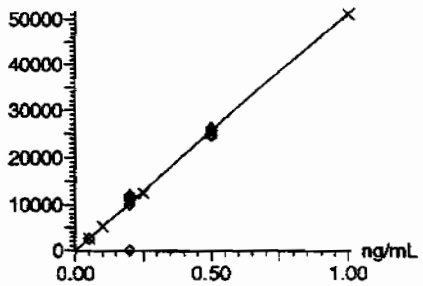

CWW
07-10-09

Compound name: Perchlorate-101
Response Factor: 16966.9
RRF SD: 317.037, % Relative SD: 1.86856
Response type: External Std, Area
Curve type: RF

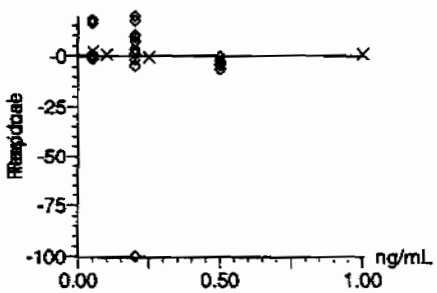

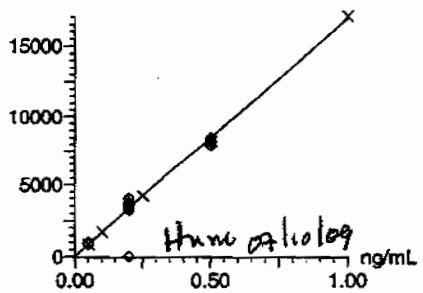

Hmw 07/10/09

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 47913.7
RRF SD: 906.151, % Relative SD: 1.89121
Response type: External Std, Area
Curve type: RF

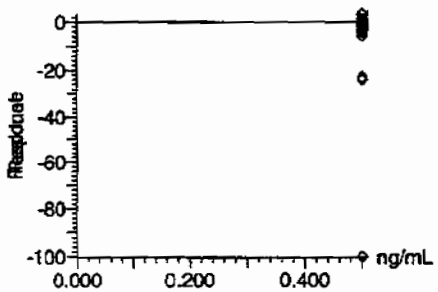

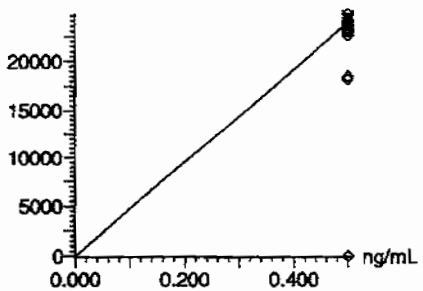

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2525–1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	97.75	09–JUL–09 13:04	per0709009a
Perchlorate Isotope Ratio		2.96		09–JUL–09 13:04	per0709009a
Perchlorate–101	.5	.5	99.96	09–JUL–09 13:04	per0709009a

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709009a
Date: 09-Jul-2009
Time: 13:04:38
ID: WCL090706-06ICV
Vial: 1:2,A

Pass
amw
07-10-09

Perchlorate

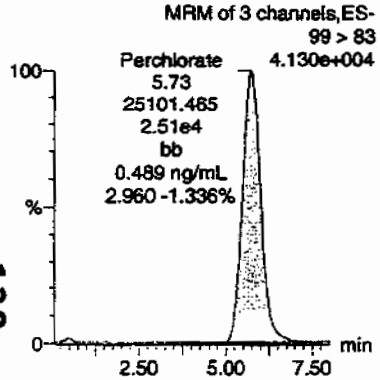

Perchlorate

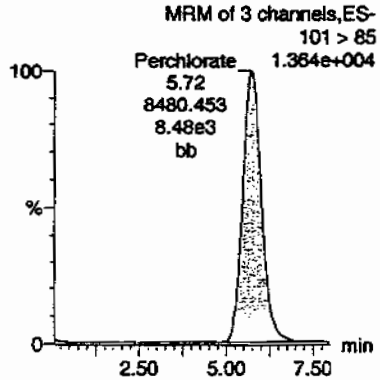

Perchlorate-101

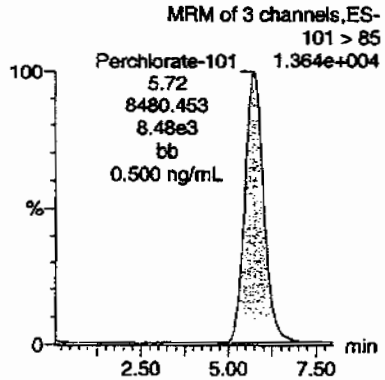

Perchlorate-O(18)

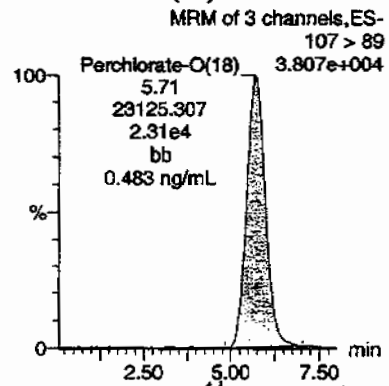

AMW 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06ICV	Perchlorate	99 > 83	5.73	25101.465	25101.465	bb			0.4888	97.75	-2.25	1414.1...	2.96
WCL090706-06ICV	Perchlorate-101	101 > 85	5.72	8480.453	8480.453	bb			0.4998	99.96	-0.04	260.261	
WCL090706-06ICV	Perchlorate-O(18)	107 > 89	5.71	23125.307	23125.307	bb			0.4826	96.53	-3.47	1799.4...	

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2525-1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	100.03	09-JUL-09 14:39	per0709017a
Perchlorate Isotope Ratio		3.13		09-JUL-09 14:39	per0709017a
Perchlorate-101	.5	.48	96.77	09-JUL-09 14:39	per0709017a
Perchlorate	.5	.51	102.19	09-JUL-09 17:12	per0709030a
Perchlorate Isotope Ratio		3.16		09-JUL-09 17:12	per0709030a
Perchlorate-101	.5	.49	97.8	09-JUL-09 17:12	per0709030a
Perchlorate	.5	.48	95.64	09-JUL-09 19:45	per0709043a
Perchlorate Isotope Ratio		3.09		09-JUL-09 19:45	per0709043a
Perchlorate-101	.5	.47	93.69	09-JUL-09 19:45	per0709043a
Perchlorate	.5	.49	97.28	09-JUL-09 22:06	per0709055a
Perchlorate Isotope Ratio		3.05		09-JUL-09 22:06	per0709055a
Perchlorate-101	.5	.48	96.52	09-JUL-09 22:06	per0709055a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709017a
Date: 09-Jul-2009
Time: 14:39:53
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
and
07-10-09

Perchlorate

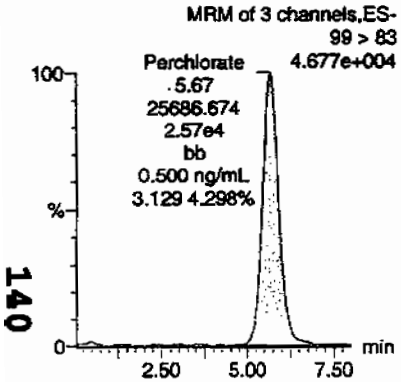

Perchlorate

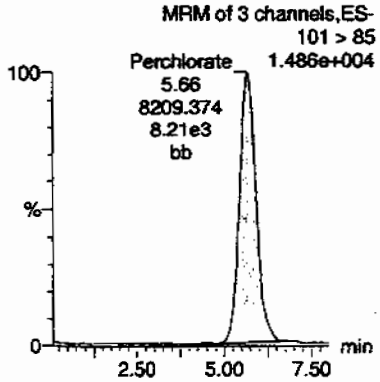

Perchlorate-101

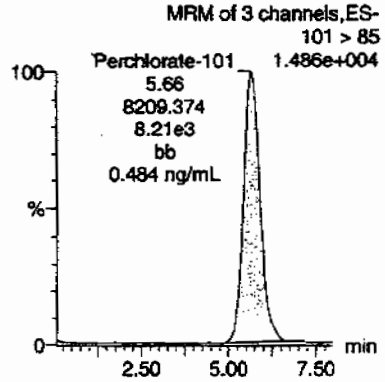

Perchlorate-O(18)

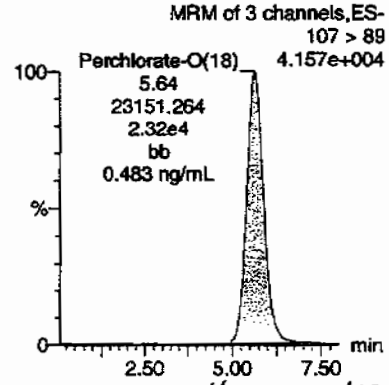

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	5.67	25686.674	25686.674	bb			0.5001	100.03	0.03	1875.1...	3.13
WCL090706-06CCV	Perchlorate-101	101 > 85	5.66	8209.374	8209.374	bb			0.4838	96.77	-3.23	1077.0...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	5.64	23151.264	23151.264	bb			0.4832	96.64	-3.36	1990.8...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709030a
Date: 09-Jul-2009
Time: 17:12:35
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
aw
07 10-5

Perchlorate

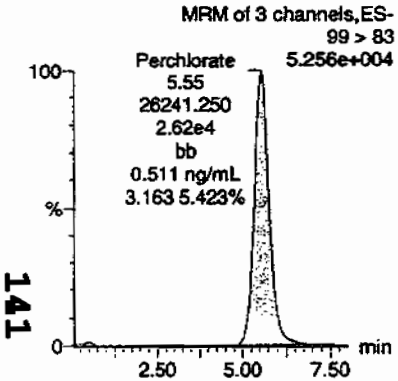

Perchlorate

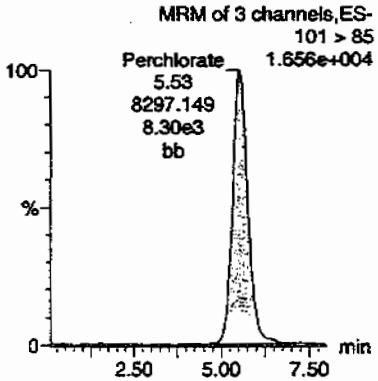

Perchlorate-101

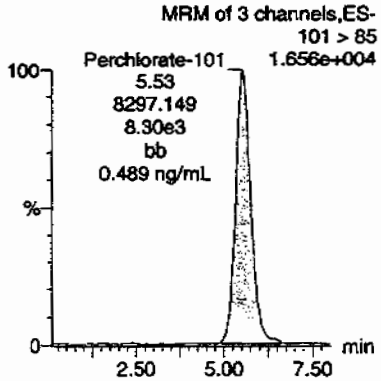

Perchlorate-O(18)

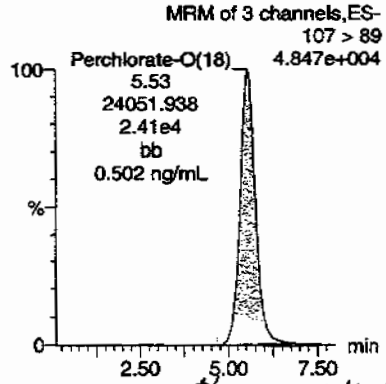

Hrm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	5.55	26241.250	26241.250	bb			0.5109	102.19	2.19	1631.9...	3.16
WCL090706-06CCV	Perchlorate-101	101 > 85	5.53	8297.149	8297.149	bb			0.4890	97.80	-2.20	1241.6...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	5.53	24051.938	24051.938	bb			0.5020	100.40	0.40	2903.7...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709043a
Date: 09-Jul-2009
Time: 19:45:31
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
amo
07-10-09

Perchlorate

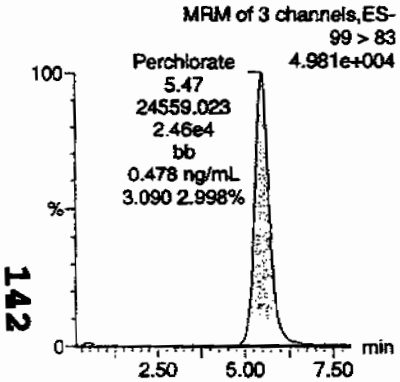

Perchlorate

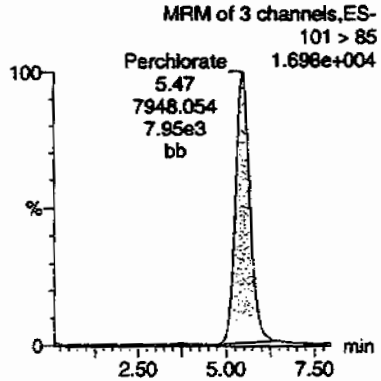

Perchlorate-101

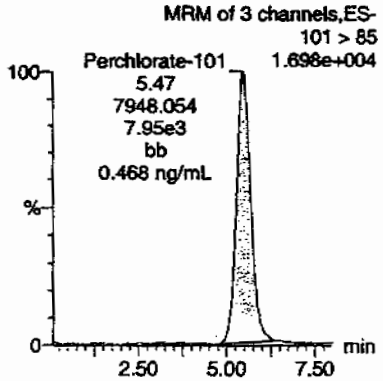

Perchlorate-O(18)

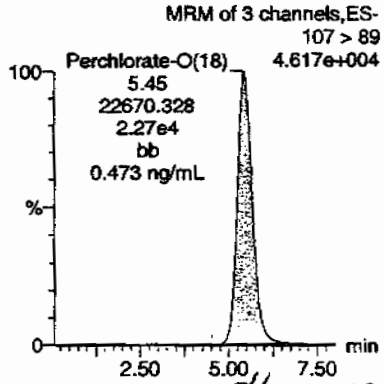

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	5.47	24559.023	24559.023	bb			0.4782	95.64	-4.36	2112.9...	3.09
WCL090706-06CCV	Perchlorate-101	101 > 85	5.47	7948.054	7948.054	bb			0.4684	93.69	-6.31	549.712	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	5.45	22670.328	22670.328	bb			0.4731	94.63	-5.37	2273.7...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709055a
Date: 09-Jul-2009
Time: 22:06:46
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
aw
07-10-09

Perchlorate

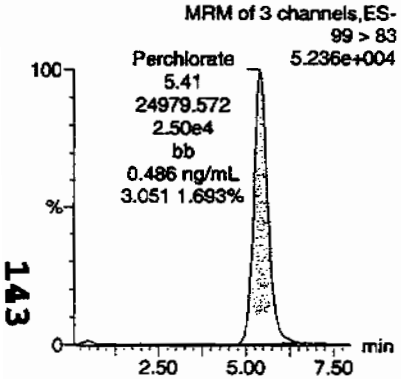

Perchlorate

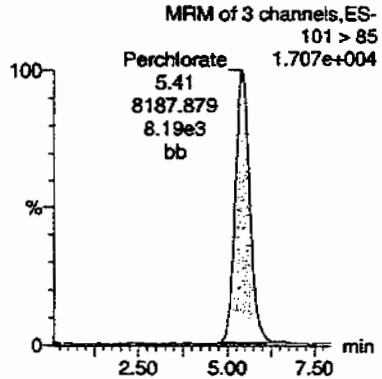

Perchlorate-101

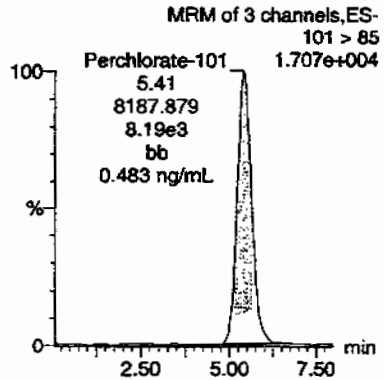

Perchlorate-O(18)

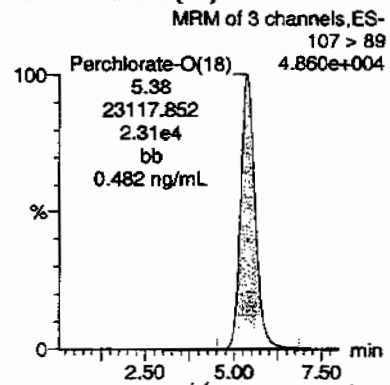

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	5.41	24979.572	24979.572	bb			0.4864	97.28	-2.72	1967.2...	3.05
WCL090706-06CCV	Perchlorate-101	101 > 85	5.41	8187.879	8187.879	bb			0.4826	96.52	-3.48	1191.5...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	5.38	23117.852	23117.852	bb			0.4825	96.50	-3.50	775.965	

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2525–1

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	95.54	09–JUL–09 13:28	per0709011a
Perchlorate Isotope Ratio		2.45		09–JUL–09 13:28	per0709011a
Perchlorate–101	.05	.06	117.82	09–JUL–09 13:28	per0709011a
Perchlorate	.05	.05	97.29	09–JUL–09 15:03	per0709019a
Perchlorate Isotope Ratio		2.99		09–JUL–09 15:03	per0709019a
Perchlorate–101	.05	.05	98.62	09–JUL–09 15:03	per0709019a
Perchlorate	.05	.05	105.04	09–JUL–09 17:36	per0709032a
Perchlorate Isotope Ratio		3.15		09–JUL–09 17:36	per0709032a
Perchlorate–101	.05	.05	100.81	09–JUL–09 17:36	per0709032a
Perchlorate	.05	.05	100.48	09–JUL–09 20:09	per0709045a
Perchlorate Isotope Ratio		3.03		09–JUL–09 20:09	per0709045a

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2525-1

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate-101	.05	.05	100.26	09-JUL-09 20:09	per0709045a
Perchlorate	.05	.05	105.95	09-JUL-09 22:30	per0709057a
Perchlorate Isotope Ratio		2.76		09-JUL-09 22:30	per0709057a
Perchlorate-101	.05	.06	116.22	09-JUL-09 22:30	per0709057a

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709011a
Date: 09-Jul-2009
Time: 13:28:07
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
07-10-09

Perchlorate

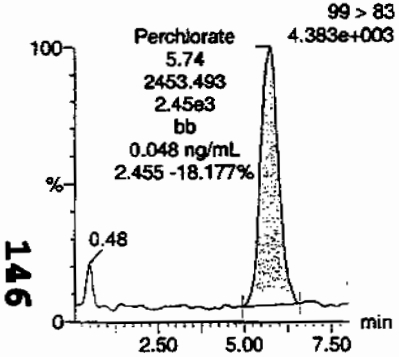

Perchlorate

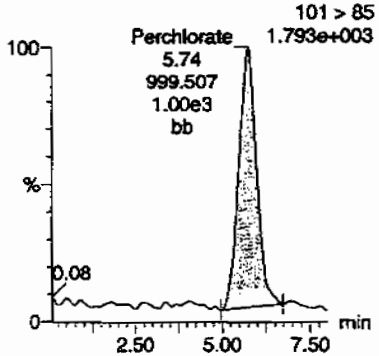

Perchlorate-101

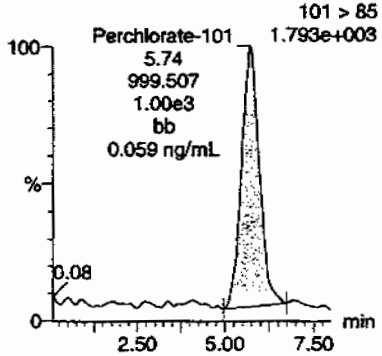

Perchlorate-O(18)

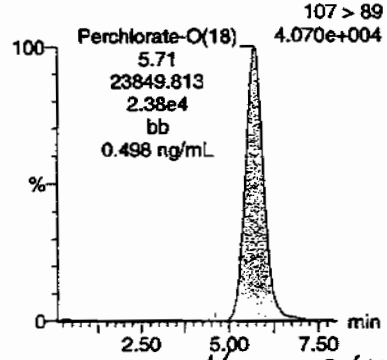

HMW 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	5.74	2453.493	2453.493	bb			0.0478	95.54	-4.46	80.551	2.45
WCL090706-07CRI	Perchlorate-101	101 > 85	5.74	999.507	999.507	bb			0.0589	117.82	17.82	103.947	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	5.71	23849.813	23849.813	bb			0.4978	99.55	-0.45	504.934	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709019a
Date: 09-Jul-2009
Time: 15:03:21
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
amo
07-10-09

Perchlorate

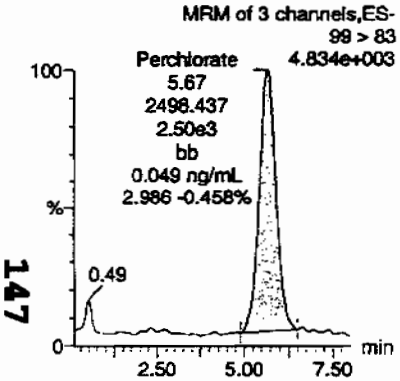

Perchlorate

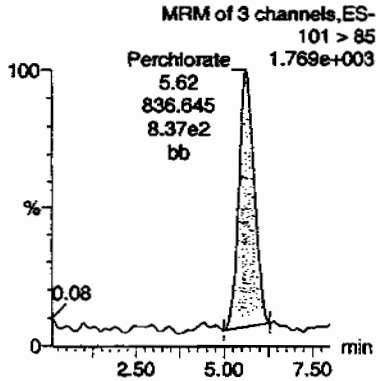

Perchlorate-101

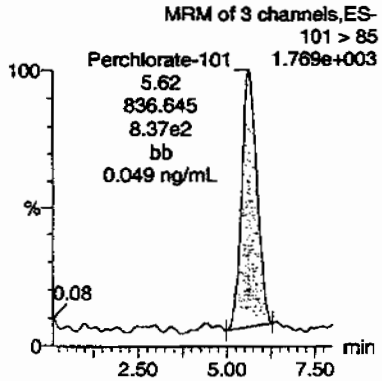

Perchlorate-O(18)

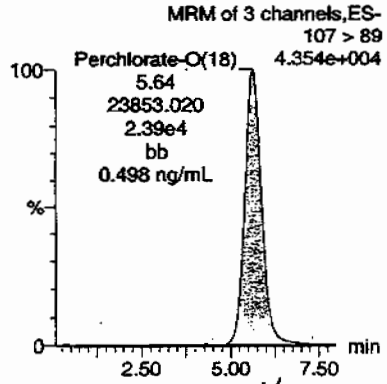

Hmc 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	5.67	2498.437	2498.437	bb			0.0486	97.29	-2.71	7.903	2.99
WCL090706-07CRI	Perchlorate-101	101 > 85	5.62	836.645	836.645	bb			0.0493	98.62	-1.38	72.784	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	5.64	23853.020	23853.020	bb			0.4978	99.57	-0.43	928.339	

147

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709032a
Date: 09-Jul-2009
Time: 17:36:15
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
ano
07-10-09

Perchlorate

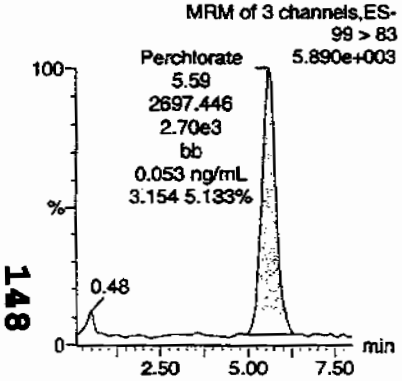

Perchlorate

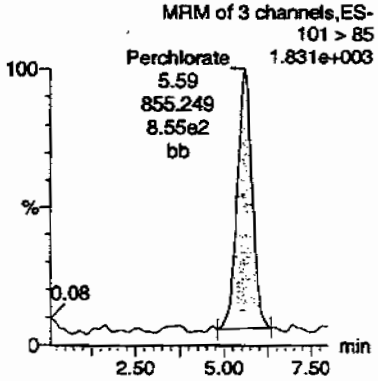

Perchlorate-101

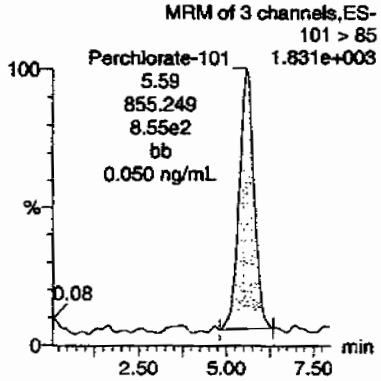

Perchlorate-O(18)

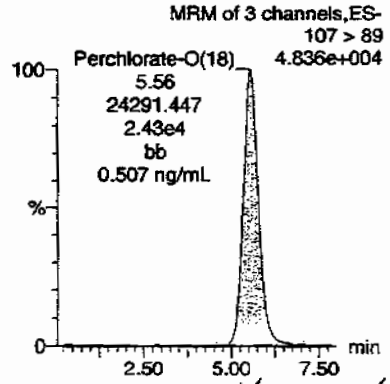

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	5.59	2697.446	2697.446	bb			0.0525	105.04	5.04	312.338	3.15
WCL090706-07CRI	Perchlorate-101	101 > 85	5.59	855.249	855.249	bb			0.0504	100.81	0.81	86.922	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	5.56	24291.447	24291.447	bb			0.5070	101.40	1.40	2640.5...	

148

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709045a
Date: 09-Jul-2009
Time: 20:09:15
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
ana
07-10-09

Perchlorate

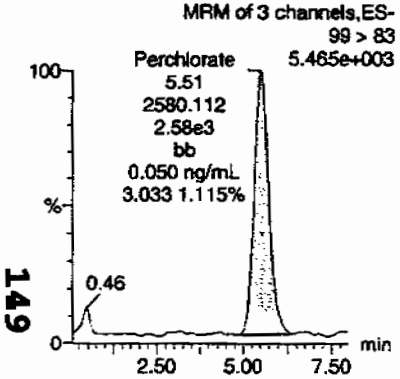

Perchlorate

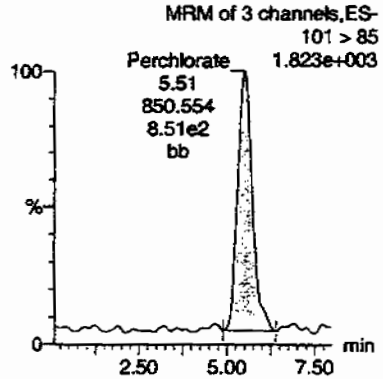

Perchlorate-101

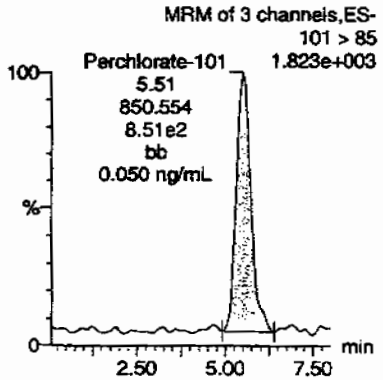

Perchlorate-O(18)

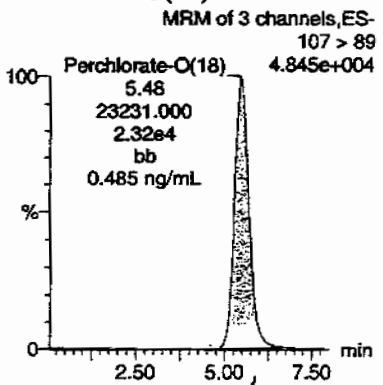

ANW 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	5.51	2580.112	2580.112	bb			0.0502	100.48	0.48	131.501	3.03
WCL090706-07CRI	Perchlorate-101	101 > 85	5.51	850.554	850.554	bb			0.0501	100.26	0.26	75.482	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	5.48	23231.000	23231.000	bb			0.4849	96.97	-3.03	2084.5...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709057a
Date: 09-Jul-2009
Time: 22:30:30
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
and
07-10-5

Perchlorate

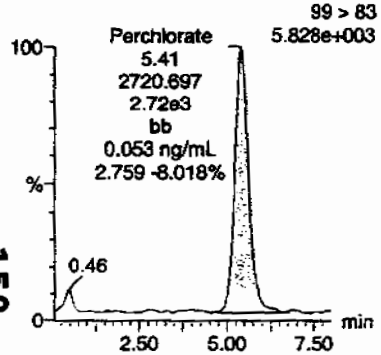

Perchlorate

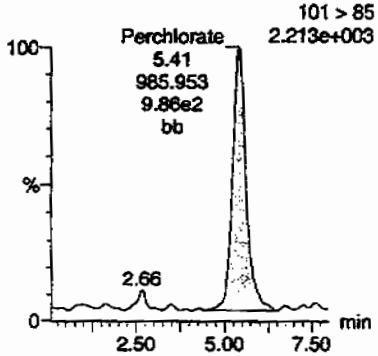

Perchlorate-101

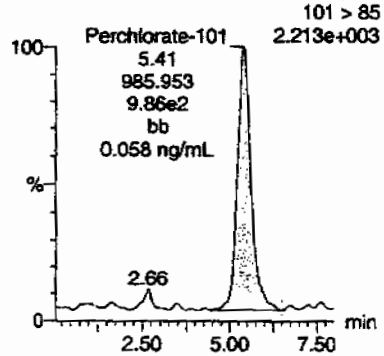

Perchlorate-O(18)

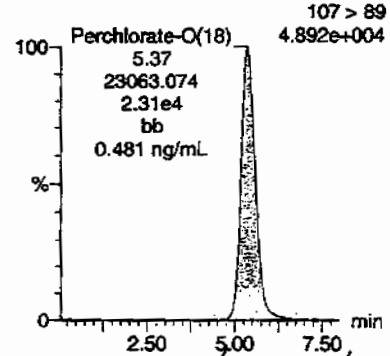

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	IonRatio
WCL090706-07CRI	Perchlorate	99 > 83	5.41	2720.697	2720.697	bb			0.0530	105.95	5.95	194.612	2.76
WCL090706-07CRI	Perchlorate-101	101 > 85	5.41	985.953	985.953	bb			0.0581	116.22	16.22	92.416	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	5.37	23063.074	23063.074	bb			0.4813	96.27	-3.73	2755.2...	

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 07-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 1201874308

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	09-JUL-09 17:48	per0709033a
	Perchlorate-O(18)			4.60	ug/kg		1	09-JUL-09 17:48	per0709033a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709033a
Date: 09-Jul-2009
Time: 17:48:02
ID: 1201874308
Vial: 2:1,A

|LANL|882499|SOLID|MB|1|

CWW 07-10-09

Perchlorate

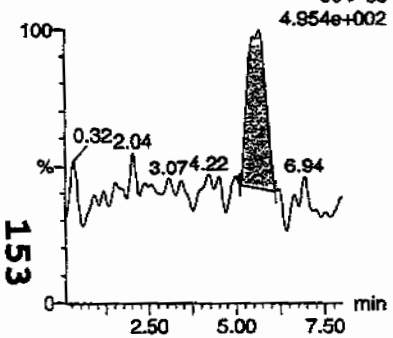

Perchlorate

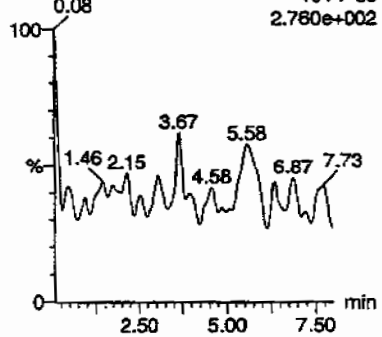

Perchlorate-101

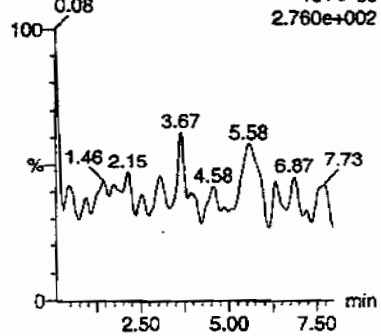

Perchlorate-O(18)

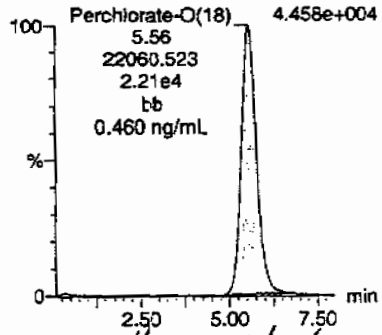

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874308	Perchlorate	99 > 83	5.68	171.936	171.936	bb			0.0033			15.977	0.00
1201874308	Perchlorate-101	101 > 85											
1201874308	Perchlorate-O(18)	107 > 89	5.56	22060.523	22060.523	bb			0.4604	92.08	-7.92	495.394	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 07-JUL-09

GEL Job No (SDG): 09-2525-1

GEL Sample ID: 1201874309

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.01	ug/kg		1	09-JUL-09 17:59	per0709034a
	Perchlorate-O(18)			3.86	ug/kg		1	09-JUL-09 17:59	per0709034a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709034a
Date: 09-Jul-2009
Time: 17:59:57
ID: 1201874309
Vial: 2:1,B

|LANL|882499|SDZ0|LCS|1|

CWW 07-10-09

Perchlorate

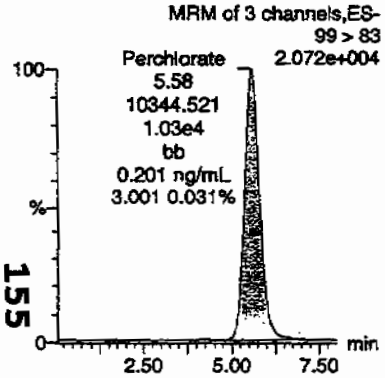

Perchlorate

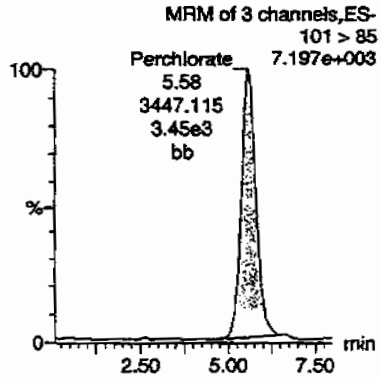

Perchlorate-101

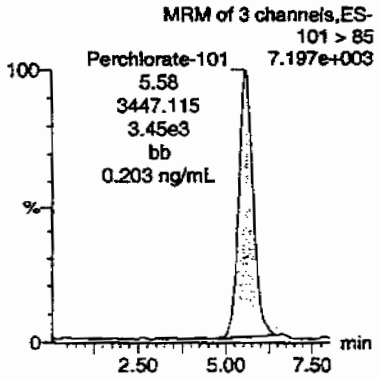

Perchlorate-O(18)

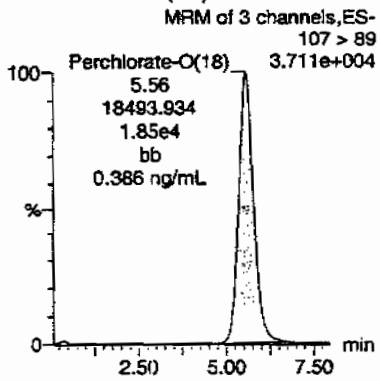

155

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874309	Perchlorate	99 > 83	5.58	10344.521	10344.521	bb			0.2014	100.71	0.71	401.471	3.00
1201874309	Perchlorate-101	101 > 85	5.58	3447.115	3447.115	bb			0.2032	101.58	1.58	386.302	
1201874309	Perchlorate-O(18)	107 > 89	5.56	18493.934	18493.934	bb			0.3860	77.20	-22.80	1449.8...	

$$\frac{10344.521}{51358.3} = 0.2014$$

HMW 7/10/09

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 882498 **Verified by:** _____

Analyst: Jareth Shirley

Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6

Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201874308 MB	07-JUL-2009 09:53:45	2	20	10
1201874309 LCS	07-JUL-2009 09:53:45	2	20	10
232663001	07-JUL-2009 09:53:45	2	20	10
232663002	07-JUL-2009 09:53:45	2	20	10
232663003	07-JUL-2009 09:53:45	2	20	10
232663004	07-JUL-2009 09:53:45	2	20	10
232663005	07-JUL-2009 09:53:45	2	20	10
232744001	07-JUL-2009 09:53:45	2	20	10
232744002	07-JUL-2009 09:53:45	2	20	10
232744003	07-JUL-2009 09:53:45	2	20	10
232744004	07-JUL-2009 09:53:45	2	20	10
232744005	07-JUL-2009 09:53:45	2	20	10
232744006	07-JUL-2009 09:53:45	2	20	10
232744007	07-JUL-2009 09:53:45	2	20	10
232744008	07-JUL-2009 09:53:45	2	20	10
232754001	07-JUL-2009 09:53:45	2	20	10
232754002	07-JUL-2009 09:53:45	2	20	10
232754003	07-JUL-2009 09:53:45	2	20	10
232760001	07-JUL-2009 09:53:45	2	20	10
1201874310 MS (232760001)	07-JUL-2009 09:53:45	2	20	10
1201874311 MSD (232760001)	07-JUL-2009 09:53:45	2	20	10
232760002	07-JUL-2009 09:53:45	2	20	10
232760003	07-JUL-2009 09:53:45	2	20	10
232760004	07-JUL-2009 09:53:45	2	20	10
1201874312 ICS	07-JUL-2009 09:53:45	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201874312	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL
LCS	1201874309	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL
MS	1201874310	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL
MSD	1201874311	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL

Comments:

Desalting cartridges used: 090408-1-Ba & 090608-1-H

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 07/09/09
Extr. Injection Volume: 20uL
Sequence Number: per070909a
Initial Calibration Date: 07/09/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1152119, 1141273
Standard-Samp Reagent Lot#:: 1141273

Reviewed BY: Hmc
Date: 04/10/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0709001a	IPB001	CWW	7/9/2009 11:30			1		USE	B
per0709002a	IPB001	CWW	7/9/2009 11:42			1		USE	B
per0709003a	WCLICAL-01	CWW	7/9/2009 11:54			1		USE	I
per0709004a	WCLICAL-02	CWW	7/9/2009 12:05			1		USE	I
per0709005a	WCLICAL-03	CWW	7/9/2009 12:17			1		USE	I
per0709006a	WCLICAL-04	CWW	7/9/2009 12:29			1		USE	I
per0709007a	WCLICAL-05	CWW	7/9/2009 12:41			1		USE	I
per0709008a	IPB002	CWW	7/9/2009 12:52			1		USE	B
per0709009a	WCLICV	CWW	7/9/2009 13:04			1		USE	C
per0709010a	IPB003	CWW	7/9/2009 13:16			1		USE	B
per0709011a	WCLCRI	CWW	7/9/2009 13:28			1		USE	C
per0709012a	232509001	CWW	7/9/2009 13:41	881646	09-2500	100	LANL	USE	S
per0709013a	232509002	CWW	7/9/2009 13:52	881646	09-2500	1	LANL	USE	S
per0709014a	232509004	CWW	7/9/2009 14:04	881646	09-2500	100	LANL	USE	S
per0709015a	232509005	CWW	7/9/2009 14:16	881646	09-2500	100	LANL	USE	S
per0709016a	232509006	CWW	7/9/2009 14:28	881646	09-2500	1	LANL	USE	S
per0709017a	WCLCCV	CWW	7/9/2009 14:39			1		USE	C
per0709018a	IPB004	CWW	7/9/2009 14:51			1		USE	B
per0709019a	WCLCRI	CWW	7/9/2009 15:03			1		USE	C
per0709020a	1201872358	CWW	7/9/2009 15:15	881654	09-2512	1	LANL	USE	S
per0709021a	1201872359	CWW	7/9/2009 15:26	881654	09-2512	1	LANL	USE	S
per0709022a	1201872362	CWW	7/9/2009 15:38	881654	09-2512	1	LANL	DUSE-RA	S
per0709023a	232594001	CWW	7/9/2009 15:50	881654	09-2512	1	LANL	USE	S
per0709024a	1201872360	CWW	7/9/2009 16:02	881654	09-2512	1	LANL	USE	S
per0709025a	1201872361	CWW	7/9/2009 16:13	881654	09-2512	1	LANL	USE	S
per0709026a	232594002	CWW	7/9/2009 16:25	881654	09-2512	1	LANL	USE	S
per0709027a	232594003	CWW	7/9/2009 16:37	881654	09-2512	1	LANL	USE	S
per0709028a	232594004	CWW	7/9/2009 16:49	881654	09-2512	1	LANL	USE	S
per0709029a	232594005	CWW	7/9/2009 17:00	881654	09-2512	1	LANL	USE	S

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per0709030a	WCLCCV	CWW	7/9/2009 17:12			1		USE	C
per0709031a	IPB005	CWW	7/9/2009 17:24			1		USE	B
per0709032a	WCLCRI	CWW	7/9/2009 17:36			1		USE	C
per0709033a	1201874308	CWW	7/9/2009 17:48	882499	VARIOUS	1	LANL	USE	S
per0709034a	1201874309	CWW	7/9/2009 17:59	882499	VARIOUS	1	LANL	USE	S
per0709035a	1201874312	CWW	7/9/2009 18:11	882499	VARIOUS	1	LANL	USE	S
per0709036a	232663001	CWW	7/9/2009 18:23	882499	09-2516-1	1	LANL	USE	S
per0709037a	232663002	CWW	7/9/2009 18:35	882499	09-2516-1	1	LANL	USE	S
per0709038a	232663003	CWW	7/9/2009 18:46	882499	09-2516-1	1	LANL	USE	S
per0709039a	232663004	CWW	7/9/2009 18:58	882499	09-2516-1	1	LANL	USE	S
per0709040a	232663005	CWW	7/9/2009 19:10	882499	09-2516-1	1	LANL	USE	S
per0709041a	232744001	CWW	7/9/2009 19:22	882499	09-2525-1	1	LANL	USE	S
per0709042a	232744002	CWW	7/9/2009 19:33	882499	09-2525-1	1	LANL	USE	S
per0709043a	WCLCCV	CWW	7/9/2009 19:45			1		USE	C
per0709044a	IPB006	CWW	7/9/2009 19:57			1		USE	B
per0709045a	WCLCRI	CWW	7/9/2009 20:09			1		USE	C
per0709046a	232744003	CWW	7/9/2009 20:20	882499	09-2525-1	1	LANL	USE	S
per0709047a	232744004	CWW	7/9/2009 20:32	882499	09-2525-1	1	LANL	USE	S
per0709048a	232744005	CWW	7/9/2009 20:44	882499	09-2525-1	1	LANL	USE	S
per0709049a	232744006	CWW	7/9/2009 20:56	882499	09-2525-1	1	LANL	USE	S
per0709050a	232744007	CWW	7/9/2009 21:08	882499	09-2525-1	1	LANL	USE	S
per0709051a	232744008	CWW	7/9/2009 21:19	882499	09-2525-1	1	LANL	USE	S
per0709052a	232754001	CWW	7/9/2009 21:31	882499	09-2536	1	LANL	USE	S
per0709053a	232754002	CWW	7/9/2009 21:43	882499	09-2536	1	LANL	USE	S
per0709054a	232754003	CWW	7/9/2009 21:55	882499	09-2536	1	LANL	USE	S
per0709055a	WCLCCV	CWW	7/9/2009 22:06			1		USE	C
per0709056a	IPB007	CWW	7/9/2009 22:18			1		USE	B
per0709057a	WCLCRI	CWW	7/9/2009 22:30			1		USE	C
per0709058a	232760001	CWW	7/9/2009 22:42	882499	09-2542-1	1	LANL	USE	S
per0709059a	1201874310	CWW	7/9/2009 22:54	882499	09-2542-1	1	LANL	USE	S
per0709060a	1201874311	CWW	7/9/2009 23:05	882499	09-2542-1	1	LANL	USE	S
per0709061a	232760002	CWW	7/9/2009 23:17	882499	09-2542-1	1	LANL	USE	S
per0709062a	232760003	CWW	7/9/2009 23:29	882499	09-2542-1	1	LANL	USE	S
per0709063a	232760004	CWW	7/9/2009 23:41	882499	09-2542-1	1	LANL	USE	S
per0709064a	WCLCCV	CWW	7/9/2009 23:52			1		USE	C
per0709065a	IPB008	CWW	7/10/2009 0:04			1		USE	B
per0709066a	WCLCRI	CWW	7/10/2009 0:16			1		USE	C

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per0709067a	1201877137	CWW	7/10/2009 0:28	883633	09-2547	1	LANL	USE	S
per0709068a	1201877138	CWW	7/10/2009 0:40	883633	09-2547	1	LANL	USE	S
per0709069a	1201877142	CWW	7/10/2009 0:52	883633	09-2547	1	LANL	USE	S
per0709070a	232851001	CWW	7/10/2009 1:03	883633	09-2547	1	LANL	USE	S
per0709071a	1201877139	CWW	7/10/2009 1:15	883633	09-2547	1	LANL	USE	S
per0709072a	1201877140	CWW	7/10/2009 1:27	883633	09-2547	1	LANL	USE	S
per0709073a	232851002	CWW	7/10/2009 1:39	883633	09-2547	1	LANL	USE	S
per0709074a	IPB009	CWW	7/10/2009 1:50			1		USE	B
per0709075a	1201872362	CWW	7/10/2009 2:02	881654	09-2512	1	LANL	USE	S
per0709076a	WCLCCV	CWW	7/10/2009 2:14			1		USE	C
per0709077a	IPB010	CWW	7/10/2009 2:26			1		USE	B
per0709078a	WCLCRI	CWW	7/10/2009 2:38			1		USE	C

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709059a
Date: 09-Jul-2009
Time: 22:54:11
ID: 1201874310
Vial: 2:4,C

|LANL|882499|5020|MS|1|

Cmm 07-10-09

Perchlorate

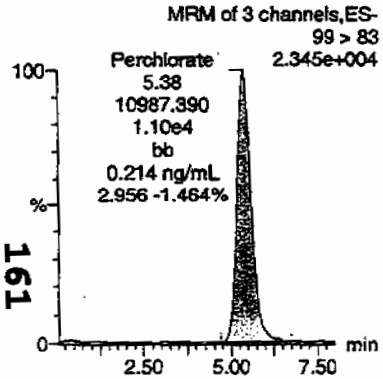

Perchlorate

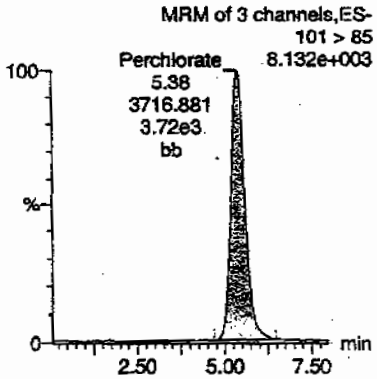

Perchlorate-101

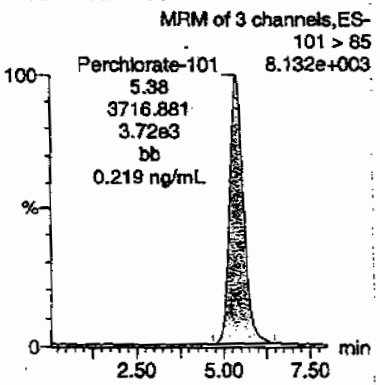

Perchlorate-O(18)

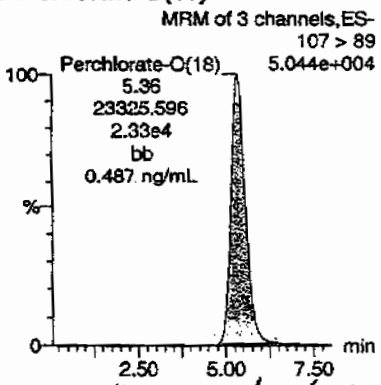

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874310	Perchlorate	99 > 83	5.38	10987.390	10987.390	bb			0.2139	106.97	6.97	710.014	2.96
1201874310	Perchlorate-101	101 > 85	5.38	3716.881	3716.881	bb			0.2191	109.53	9.53	185.266	
1201874310	Perchlorate-O(18)	107 > 89	5.36	23325.596	23325.596	bb			0.4868	97.37	-2.63	3244.9...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709060a
Date: 09-Jul-2009
Time: 23:05:57
ID: 1201874311
Vial: 2:4,D

|LANL|882499|SOLID|MSD|11|

CWW 07-10-09

Perchlorate

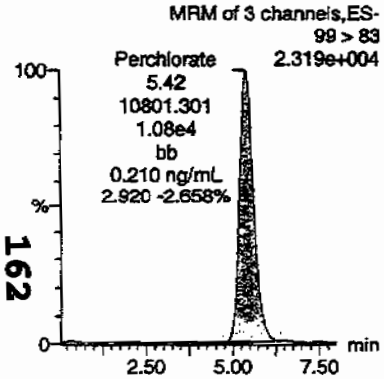

Perchlorate

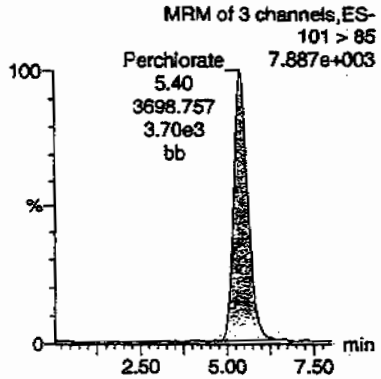

Perchlorate-101

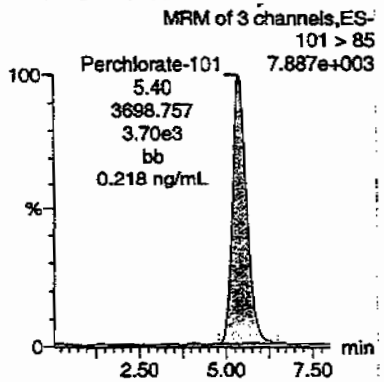

Perchlorate-O(18)

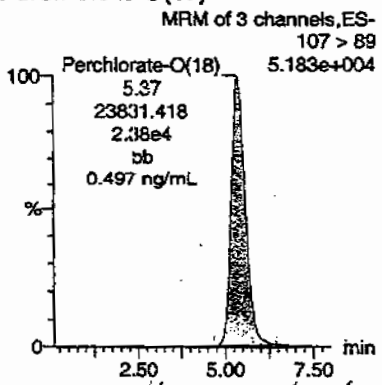

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874311	Perchlorate	99 > 83	5.42	10801.301	10801.301	bb			0.2103	105.16	5.16	777.858	2.92
1201874311	Perchlorate-101	101 > 85	5.40	3698.757	3698.757	bb			0.2180	109.00	9.00	330.142	
1201874311	Perchlorate-O(18)	107 > 89	5.37	23831.418	23831.418	bb			0.4974	99.48	-0.52	2318.5...	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2525

Sample Analysis

Sample ID	**Client ID**
232742001	CAMO-09-10025
1201873929	Method Blank (MB) **ICP**
1201873930	Laboratory Control Sample (LCS)
1201873933	232742001(CAMO-09-10025L) Serial Dilution (SD)
1201873931	232742001(CAMO-09-10025D) Sample Duplicate (DUP)
1201873932	232742001(CAMO-09-10025S) Matrix Spike (MS)
1201873967	Method Blank (MB) **ICP-MS**
1201873968	Laboratory Control Sample (LCS)
1201873971	232742001(CAMO-09-10025L) Serial Dilution (SD)
1201873969	232742001(CAMO-09-10025D) Sample Duplicate (DUP)
1201873970	232742001(CAMO-09-10025S) Matrix Spike (MS)
1201878686	Method Blank (MB) **CVAA**
1201878687	Laboratory Control Sample (LCS)
1201878690	232742001(CAMO-09-10025L) Serial Dilution (SD)
1201878688	232742001(CAMO-09-10025D) Sample Duplicate (DUP)
1201878689	232742001(CAMO-09-10025S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Method/Analysis Information

Analytical Batch:	882337, 882355 and 884316
Prep Batch :	882336, 882354 and 884315
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3005/6010B, SW846 3005/6020 and SW846 7470A
Prep Method :	SW846 3005A and SW846 7470A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria for all applicable analytes with the exception of thallium. The closing CCB failed high for thallium; however, the sample results were less than the RDL limit.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following sample was selected as the quality control (QC) sample for this SDG: 232742001 (CAMO-09-10025)-ICP, ICP-MS and CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. All applicable elements met the acceptance criteria with the exception of thallium, as indicated by the "N" qualifier.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 712370. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Parson **Date:** 7/21/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232742001 **BASIS:** As Received **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-10025 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7440-70-2	Calcium	200	ug/L	U	50	200	200	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	07/08/09 21:14	070809A-1	882337
7439-89-6	Iron	100	ug/L	U	30	100	100	1	P	HSC	07/08/09 21:14	070809A-1	882337
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	07/08/09 21:14	070809A-1	882337
7439-96-5	Manganese	1.18	ug/L	J	1	5	5	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	07/15/09 11:16	071509W2-3	884316
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-09-7	Potassium	162	ug/L		50	150	150	1	P	HSC	07/08/09 21:14	070809A-1	882337
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-23-5	Sodium	114	ug/L	J	100	300	300	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-28-0	Thallium	0.345	ug/L	JN	0.3	1	1	1	MS	SKJ	07/15/09 18:36	090715-2	882355
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 21:14	070809A-1	882337
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	07/08/09 21:14	070809A-1	882337

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882337	882336	SW846 3005A	50	mL	50	mL	07/07/09	CXS3
882355	882354	SW846 3005A	50	mL	50	mL	07/07/09	CXS3
884316	884315	SW846 7470A Prep	20	mL	20	mL	07/14/09	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Arsenic	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Barium	539	ug/L	500	ug/L	107.8	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Chromium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Cobalt	476	ug/L	500	ug/L	95.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Copper	527	ug/L	500	ug/L	105.3	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Iron	5150	ug/L	5000	ug/L	103	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Magnesium	5270	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Nickel	537	ug/L	500	ug/L	107.4	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Potassium	2510	ug/L	2500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Selenium	2620	ug/L	2500	ug/L	104.9	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Silver	256	ug/L	250	ug/L	102.4	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Sodium	2550	ug/L	2500	ug/L	101.9	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Mercury	5.02	ug/L	5	ug/L	100.4	90.0 - 110.0	AV	15-JUL-09 10:18	071509W2-3
	Antimony	48	ug/L	50	ug/L	95.9	90.0 - 110.0	MS	15-JUL-09 17:22	090715-2
	Beryllium	52.8	ug/L	50	ug/L	105.5	90.0 - 110.0	MS	15-JUL-09 17:22	090715-2
	Cadmium	52.8	ug/L	50	ug/L	105.6	90.0 - 110.0	MS	15-JUL-09 17:22	090715-2
	Lead	51.7	ug/L	50	ug/L	103.5	90.0 - 110.0	MS	15-JUL-09 17:22	090715-2
	Manganese	50	ug/L	50	ug/L	100.1	90.0 - 110.0	MS	15-JUL-09 17:22	090715-2
	Thallium	49.2	ug/L	50	ug/L	98.3	90.0 - 110.0	MS	15-JUL-09 17:22	090715-2
CCV01										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Arsenic	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Barium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Nickel	490	ug/L	500	ug/L	98	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Potassium	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Selenium	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Sodium	9980	ug/L	10000	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Mercury	4.87	ug/L	5	ug/L	97.3	80.0 – 120.0	AV	15-JUL-09 10:24	071509W2-3
	Antimony	47.4	ug/L	50	ug/L	94.7	90.0 – 110.0	MS	15-JUL-09 17:53	090715-2
	Beryllium	53.1	ug/L	50	ug/L	106.1	90.0 – 110.0	MS	15-JUL-09 17:53	090715-2
	Cadmium	51.7	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	15-JUL-09 17:53	090715-2
	Lead	51.8	ug/L	50	ug/L	103.7	90.0 – 110.0	MS	15-JUL-09 17:53	090715-2
	Manganese	50.6	ug/L	50	ug/L	101.2	90.0 – 110.0	MS	15-JUL-09 17:53	090715-2
	Thallium	49.9	ug/L	50	ug/L	99.7	90.0 – 110.0	MS	15-JUL-09 17:53	090715-2
CCV02										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Arsenic	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Chromium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Cobalt	485	ug/L	500	ug/L	97	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Copper	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Magnesium	5200	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Nickel	488	ug/L	500	ug/L	97.7	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Selenium	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	499	ug/L	500	ug/L	99.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Sodium	9940	ug/L	10000	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Mercury	4.64	ug/L	5	ug/L	92.8	80.0 - 120.0	AV	15-JUL-09 10:47	071509W2-3
	Antimony	49.8	ug/L	50	ug/L	99.6	90.0 - 110.0	MS	15-JUL-09 18:11	090715-2
	Beryllium	52	ug/L	50	ug/L	104.1	90.0 - 110.0	MS	15-JUL-09 18:11	090715-2
	Cadmium	52.9	ug/L	50	ug/L	105.8	90.0 - 110.0	MS	15-JUL-09 18:11	090715-2
	Lead	52.8	ug/L	50	ug/L	105.5	90.0 - 110.0	MS	15-JUL-09 18:11	090715-2
	Manganese	51.2	ug/L	50	ug/L	102.5	90.0 - 110.0	MS	15-JUL-09 18:11	090715-2
	Thallium	50.6	ug/L	50	ug/L	101.3	90.0 - 110.0	MS	15-JUL-09 18:11	090715-2
CCV03										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Arsenic	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Cobalt	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Iron	5000	ug/L	5000	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Nickel	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Potassium	5150	ug/L	5000	ug/L	103.1	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Selenium	515	ug/L	500	ug/L	103	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Sodium	10300	ug/L	10000	ug/L	102.9	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 - 120.0	AV	15-JUL-09 11:06	071509W2-3
	Antimony	47.2	ug/L	50	ug/L	94.4	90.0 - 110.0	MS	15-JUL-09 19:01	090715-2

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2525

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	52.6	ug/L	50	ug/L	105.2	90.0 – 110.0	MS	15–JUL–09 19:01	090715–2
	Cadmium	52.9	ug/L	50	ug/L	105.7	90.0 – 110.0	MS	15–JUL–09 19:01	090715–2
	Lead	52	ug/L	50	ug/L	104.1	90.0 – 110.0	MS	15–JUL–09 19:01	090715–2
	Manganese	49.5	ug/L	50	ug/L	99	90.0 – 110.0	MS	15–JUL–09 19:01	090715–2
	Thallium	45.9	ug/L	50	ug/L	91.8	90.0 – 110.0	MS	15–JUL–09 19:01	090715–2
CCV04										
	Aluminum	4910	ug/L	5000	ug/L	98.2	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Arsenic	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Copper	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Iron	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Magnesium	5130	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Nickel	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Potassium	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Selenium	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Sodium	10700	ug/L	10000	ug/L	106.5	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08–JUL–09 13:30	070809A–1
	Mercury	4.92	ug/L	5	ug/L	98.4	80.0 – 120.0	AV	15–JUL–09 11:29	071509W2–3
CCV05										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Arsenic	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Calcium	4900	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2525

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Copper	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Iron	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Nickel	488	ug/L	500	ug/L	97.7	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Selenium	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08–JUL–09 13:50	070809A–1
CCV06										
	Aluminum	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Arsenic	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Barium	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Copper	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Nickel	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Selenium	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Silver	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08–JUL–09 14:46	070809A–1
CCV07										
	Aluminum	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08–JUL–09 15:41	070809A–1
	Arsenic	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08–JUL–09 15:41	070809A–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09--2525

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.3	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Nickel	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Potassium	5110	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Selenium	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
CCV08										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Arsenic	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Iron	4940	ug/L	5000	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Nickel	490	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Selenium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Silver	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Sodium	9800	ug/L	10000	ug/L	98	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2525

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Zinc	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08–JUL–09 16:43	070809A–1
CCV09										
	Aluminum	4880	ug/L	5000	ug/L	97.5	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Arsenic	500	ug/L	500	ug/L	100	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Cobalt	488	ug/L	500	ug/L	97.7	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Copper	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Iron	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Magnesium	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Nickel	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Selenium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Silver	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Sodium	9570	ug/L	10000	ug/L	95.8	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
	Zinc	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08–JUL–09 17:25	070809A–1
CCV10										
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Arsenic	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Barium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Calcium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Chromium	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Cobalt	482	ug/L	500	ug/L	96.4	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Copper	492	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Iron	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Magnesium	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Nickel	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Potassium	5090	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2525

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Selenium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Sodium	10000	ug/L	10000	ug/L	100	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Vanadium	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08–JUL–09 18:26	070809A–1
CCV11										
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Arsenic	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Barium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Calcium	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Copper	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Iron	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Magnesium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Nickel	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Potassium	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Selenium	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Silver	503	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Sodium	9640	ug/L	10000	ug/L	96.5	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
	Zinc	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08–JUL–09 19:29	070809A–1
CCV12										
	Aluminum	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Arsenic	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Barium	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Calcium	5000	ug/L	5000	ug/L	99.9	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Chromium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Copper	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Iron	5100	ug/L	5000	ug/L	101.9	90.0 - 110.0	P	08-JUL-09 20:46	070809A-1
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 - 110.0	P	08-JUL-09 20:46	070809A-1
	Nickel	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	08-JUL-09 20:46	070809A-1
	Potassium	5230	ug/L	5000	ug/L	104.5	90.0 - 110.0	P	08-JUL-09 20:46	070809A-1
	Selenium	514	ug/L	500	ug/L	102.7	90.0 - 110.0	P	08-JUL-09 20:46	070809A-1
	Silver	510	ug/L	500	ug/L	101.9	90.0 - 110.0	P	08-JUL-09 20:46	070809A-1
	Sodium	10300	ug/L	10000	ug/L	102.6	90.0 - 110.0	P	08-JUL-09 20:46	070809A-1
	Vanadium	505	ug/L	500	ug/L	101.1	90.0 - 110.0	P	08-JUL-09 20:46	070809A-1
	Zinc	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 20:46	070809A-1
CCV13										
	Aluminum	5030	ug/L	5000	ug/L	100.6	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Arsenic	499	ug/L	500	ug/L	99.9	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Barium	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Calcium	5060	ug/L	5000	ug/L	101.3	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Chromium	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Copper	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Iron	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Magnesium	5130	ug/L	5000	ug/L	102.6	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Nickel	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Potassium	5220	ug/L	5000	ug/L	104.4	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Selenium	514	ug/L	500	ug/L	102.8	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Silver	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Sodium	10500	ug/L	10000	ug/L	105.3	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Vanadium	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1
	Zinc	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 21:42	070809A-1

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 09–2525

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS4,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.191	ug/L	.2	ug/L	95.5	70.0 – 130.0	AV	15–JUL–09 10:22	071509W2–3
	Antimony	2.79	ug/L	3	ug/L	92.9	70.0 – 130.0	MS	15–JUL–09 17:34	090715–2
	Beryllium	.424	ug/L	.5	ug/L	84.8	70.0 – 130.0	MS	15–JUL–09 17:34	090715–2
	Cadmium	1.05	ug/L	1	ug/L	104.5	70.0 – 130.0	MS	15–JUL–09 17:34	090715–2
	Thallium	1.05	ug/L	1	ug/L	104.9	70.0 – 130.0	MS	15–JUL–09 17:34	090715–2
	Manganese	5.51	ug/L	5	ug/L	110.2	70.0 – 130.0	MS	15–JUL–09 17:34	090715–2
	Lead	2.08	ug/L	2	ug/L	103.8	70.0 – 130.0	MS	15–JUL–09 17:34	090715–2
PQL01										
	Aluminum	200	ug/L	200	ug/L	99.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Arsenic	26.6	ug/L	30	ug/L	88.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Barium	5.03	ug/L	5	ug/L	100.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Calcium	198	ug/L	200	ug/L	99	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Chromium	4.84	ug/L	5	ug/L	96.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Cobalt	5	ug/L	5	ug/L	100	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Copper	9.77	ug/L	10	ug/L	97.7	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Iron	102	ug/L	100	ug/L	102.1	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Magnesium	326	ug/L	300	ug/L	108.5	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Nickel	5.22	ug/L	5	ug/L	104.3	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Potassium	172	ug/L	150	ug/L	114.5	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Selenium	33.3	ug/L	30	ug/L	111.1	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Silver	5.23	ug/L	5	ug/L	104.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Sodium	281	ug/L	300	ug/L	93.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Vanadium	5.27	ug/L	5	ug/L	105.3	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Zinc	9.6	ug/L	10	ug/L	96	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 10:08	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 10:08	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 10:08	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 10:08	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 10:08	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 10:08	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	15-JUL-09 10:20	071509W2-3
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	15-JUL-09 17:28	090715-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	15-JUL-09 17:28	090715-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	15-JUL-09 17:28	090715-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	15-JUL-09 17:28	090715-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	15-JUL-09 17:28	090715-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	15-JUL-09 17:28	090715-2
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 11:10	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 11:10	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 11:10	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 11:10	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 11:10	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Potassium	146.16	+/-150	J	50.0	150	LIQ	P	08-JUL-09 11:10	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 11:10	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	15-JUL-09 10:26	071509W2-3
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	15-JUL-09 17:59	090715-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	15-JUL-09 17:59	090715-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	15-JUL-09 17:59	090715-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	15-JUL-09 17:59	090715-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	15-JUL-09 17:59	090715-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	15-JUL-09 17:59	090715-2
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 11:31	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 11:31	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 11:31	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 11:31	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 11:31	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 11:31	070809A-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2525

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 11:31	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 11:31	070809A–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	15–JUL–09 10:49	071509W2–3
	Antimony	1.05	+/–3	J	1.0	3.0	LIQ	MS	15–JUL–09 18:17	090715–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	15–JUL–09 18:17	090715–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	15–JUL–09 18:17	090715–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	15–JUL–09 18:17	090715–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	15–JUL–09 18:17	090715–2
	Thallium	0.378	+/–1	J	0.3	1.0	LIQ	MS	15–JUL–09 18:17	090715–2
CCB03										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 12:44	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Calcium	62.56	+/–200	J	50.0	200	LIQ	P	08–JUL–09 12:44	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 12:44	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 12:44	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Potassium	65.21	+/–150	J	50.0	150	LIQ	P	08–JUL–09 12:44	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 12:44	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	15–JUL–09 11:08	071509W2–3
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	15–JUL–09 19:07	090715–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	15–JUL–09 19:07	090715–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	15–JUL–09 19:07	090715–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	15–JUL–09 19:07	090715–2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	15-JUL-09 19:07	090715-2
	Thallium	2.1	+/-1		0.3	1.0	LIQ	MS	15-JUL-09 19:07	090715-2
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 13:37	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 13:37	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 13:37	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 13:37	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 13:37	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 13:37	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 13:37	070809A-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 13:37	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 13:37	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 13:37	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 13:37	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 13:37	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 13:37	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 13:37	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 13:37	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 13:37	070809A-1
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	15-JUL-09 11:31	071509W2-3
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 13:57	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 13:57	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 13:57	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 13:57	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 13:57	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 13:57	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 13:57	070809A-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 13:57	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 13:57	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 13:57	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 13:57	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 13:57	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 13:57	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 13:57	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 13:57	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 13:57	070809A-1
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 14:53	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 14:53	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 14:53	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 14:53	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 14:53	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 14:53	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 14:53	070809A-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 14:53	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 14:53	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 14:53	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 14:53	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 14:53	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 14:53	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 14:53	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 14:53	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 14:53	070809A-1
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 15:48	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 15:48	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 15:48	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 15:48	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 15:48	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 15:48	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 15:48	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2525

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 15:48	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 15:48	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 15:48	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 15:48	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 15:48	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 15:48	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 15:48	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 15:48	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 15:48	070809A–1
CCB08										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 16:50	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 16:50	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 16:50	070809A–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 16:50	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 16:50	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 16:50	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 16:50	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 16:50	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 16:50	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 16:50	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 16:50	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 16:50	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 16:50	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 16:50	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 16:50	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 16:50	070809A–1
CCB09										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 17:32	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 17:32	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 17:32	070809A–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 17:32	070809A–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 17:32	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 17:32	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 17:32	070809A-1
	Iron	-34.79	+/-100	J	30.0	100	LIQ	P	08-JUL-09 17:32	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 17:32	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 17:32	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 17:32	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 17:32	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 17:32	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 17:32	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 17:32	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 17:32	070809A-1
CCB10										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 18:33	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 18:33	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 18:33	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 18:33	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 18:33	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 18:33	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 18:33	070809A-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 18:33	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 18:33	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 18:33	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 18:33	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 18:33	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 18:33	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 18:33	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 18:33	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 18:33	070809A-1
CCB11										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 19:36	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2525

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 19:36	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 19:36	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 19:36	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 19:36	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 19:36	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 19:36	070809A–1
CCB12										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 20:53	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 20:53	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 20:53	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 20:53	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 20:53	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 20:53	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 20:53	070809A–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 20:53	070809A-1
CCB13										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 21:49	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 21:49	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 21:49	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 21:49	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 21:49	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 21:49	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 21:49	070809A-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 21:49	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 21:49	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 21:49	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 21:49	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 21:49	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 21:49	070809A-1
	Sodium	-137.0	+/-300	J	100	300	LIQ	P	08-JUL-09 21:49	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 21:49	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 21:49	070809A-1

METALS
–3b–
PREPARATION BLANK SUMMARY

SDG NO. 09–2525
Contract: LANL01004
Matrix: WATER

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201873929								
	Aluminum	68	ug/L	+/–200	U	P	68	200
	Arsenic	5	ug/L	+/–30.0	U	P	5	30
	Barium	1	ug/L	+/–5.0	U	P	1	5
	Calcium	50	ug/L	+/–200	U	P	50	200
	Chromium	1	ug/L	+/–5.0	U	P	1	5
	Cobalt	1	ug/L	+/–5.0	U	P	1	5
	Copper	3	ug/L	+/–10.0	U	P	3	10
	Iron	30	ug/L	+/–100	U	P	30	100
	Magnesium	85	ug/L	+/–300	U	P	85	300
	Nickel	1.5	ug/L	+/–5.0	U	P	1.5	5
	Potassium	50	ug/L	+/–150	U	P	50	150
	Selenium	5	ug/L	+/–30.0	U	P	5	30
	Silver	1	ug/L	+/–5.0	U	P	1	5
	Sodium	100	ug/L	+/–300	U	P	100	300
	Vanadium	1	ug/L	+/–5.0	U	P	1	5
	Zinc	3.3	ug/L	+/–10.0	U	P	3.3	10
1201873967								
	Antimony	1	ug/L	+/–3.0	U	MS	1	3
	Beryllium	0.1	ug/L	+/–0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/–1.0	U	MS	0.11	1
	Lead	0.5	ug/L	+/–2.0	U	MS	0.5	2
	Manganese	1	ug/L	+/–5.0	U	MS	1	5
	Thallium	0.3	ug/L	+/–1.0	U	MS	0.3	1
1201878686								
	Mercury	0.066	ug/L	+/–0.2	U	AV	0.066	0.2

METALS
-4-
Interference Check Sample

SDG No: 09-2525

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Arsenic	7.68	ug/L					08-JUL-09 10:22	070809A-1
	Barium	1.28	ug/L					08-JUL-09 10:22	070809A-1
	Calcium	470000	ug/L	500000	ug/L	93.9	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Chromium	0.679	ug/L					08-JUL-09 10:22	070809A-1
	Cobalt	-1.77	ug/L					08-JUL-09 10:22	070809A-1
	Copper	4.61	ug/L					08-JUL-09 10:22	070809A-1
	Iron	185000	ug/L	200000	ug/L	92.3	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Magnesium	493000	ug/L	500000	ug/L	98.6	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Nickel	3.99	ug/L					08-JUL-09 10:22	070809A-1
	Potassium	0.032	ug/L					08-JUL-09 10:22	070809A-1
	Selenium	-15.4	ug/L					08-JUL-09 10:22	070809A-1
	Silver	1.27	ug/L					08-JUL-09 10:22	070809A-1
	Sodium	-23.6	ug/L					08-JUL-09 10:22	070809A-1
	Vanadium	-2.21	ug/L					08-JUL-09 10:22	070809A-1
	Zinc	-8.84	ug/L					08-JUL-09 10:22	070809A-1
ICSAB01									
	Aluminum	513000	ug/L	500000	ug/L	103	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Arsenic	526	ug/L	500	ug/L	105	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Barium	500	ug/L	500	ug/L	100	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Calcium	471000	ug/L	500000	ug/L	94.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Chromium	483	ug/L	500	ug/L	96.5	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cobalt	456	ug/L	500	ug/L	91.3	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Copper	571	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Iron	184000	ug/L	200000	ug/L	91.9	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Magnesium	494000	ug/L	500000	ug/L	98.8	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Nickel	456	ug/L	500	ug/L	91.3	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Potassium	5890	ug/L	5000	ug/L	118	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Selenium	2560	ug/L	2500	ug/L	102	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
-4-
Interference Check Sample

SDG No: 09-2525

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silver	284	ug/L	250	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Sodium	5600	ug/L	5000	ug/L	112	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Vanadium	523	ug/L	500	ug/L	105	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
-4-
Interference Check Sample

SDG No: 09-2525

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.255	ug/L					15-JUL-09 17:40	090715-2
	Beryllium	0.064	ug/L					15-JUL-09 17:40	090715-2
	Cadmium	0.315	ug/L					15-JUL-09 17:40	090715-2
	Lead	0.175	ug/L					15-JUL-09 17:40	090715-2
	Manganese	5.71	ug/L					15-JUL-09 17:40	090715-2
	Thallium	0.026	ug/L					15-JUL-09 17:40	090715-2
ICSAB01									
	Antimony	20.8	ug/L	20.1	ug/L	103	80.0 - 120.0	15-JUL-09 17:46	090715-2
	Beryllium	20.7	ug/L	20	ug/L	104	80.0 - 120.0	15-JUL-09 17:46	090715-2
	Cadmium	20.0	ug/L	20.4	ug/L	98	80.0 - 120.0	15-JUL-09 17:46	090715-2
	Lead	19.6	ug/L	20.5	ug/L	95.7	80.0 - 120.0	15-JUL-09 17:46	090715-2
	Manganese	26.1	ug/L	25.8	ug/L	101	80.0 - 120.0	15-JUL-09 17:46	090715-2
	Thallium	18.5	ug/L	20	ug/L	92.6	80.0 - 120.0	15-JUL-09 17:46	090715-2

METALS
–5a–

Matrix Spike Summary

SDG NO. 09–2525 **Client ID** CAMO–09–10025S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232742001 **Spike ID:** 1201873932

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75–125	485		5	U	500	97.1		P
Barium	ug/L	75–125	496		1	U	500	99.2		P
Calcium	ug/L	75–125	4880		50	U	5000	97		P
Chromium	ug/L	75–125	492		1	U	500	98.3		P
Cobalt	ug/L	75–125	472		1	U	500	94.3		P
Copper	ug/L	75–125	500		3	U	500	99.9		P
Iron	ug/L	75–125	5010		30	U	5000	100		P
Magnesium	ug/L	75–125	4960		85	U	5000	97.4		P
Nickel	ug/L	75–125	489		1.5	U	500	97.7		P
Potassium	ug/L	75–125	5230		162		5000	101		P
Selenium	ug/L	75–125	490		5	U	500	97.3		P
Silver	ug/L	75–125	489		1	U	500	97.8		P
Sodium	ug/L	75–125	5290		114	J	5000	104		P
Vanadium	ug/L	75–125	500		1	U	500	100		P
Zinc	ug/L	75–125	492		3.3	U	500	98		P
Aluminum	ug/L	75–125	4920		68	U	5000	97.5		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2525 **Client ID** CAMO-09-10025S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232742001 **Spike ID:** 1201873932

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75-125	485		5	U	500	97.1		P
Barium	ug/L	75-125	496		1	U	500	99.2		P
Calcium	ug/L	75-125	4880		50	U	5000	97		P
Chromium	ug/L	75-125	492		1	U	500	98.3		P
Cobalt	ug/L	75-125	472		1	U	500	94.3		P
Copper	ug/L	75-125	500		3	U	500	99.9		P
Iron	ug/L	75-125	5010		30	U	5000	100		P
Magnesium	ug/L	75-125	4960		85	U	5000	97.4		P
Nickel	ug/L	75-125	489		1.5	U	500	97.7		P
Potassium	ug/L	75-125	5230		162		5000	101		P
Selenium	ug/L	75-125	490		5	U	500	97.3		P
Silver	ug/L	75-125	489		1	U	500	97.8		P
Sodium	ug/L	75-125	5290		114	J	5000	104		P
Vanadium	ug/L	75-125	500		1	U	500	100		P
Zinc	ug/L	75-125	492		3.3	U	500	98		P
Aluminum	ug/L	75-125	4920		68	U	5000	97.5		P

METALS
-5a-

Matrix Spike Summary

SDG NO. 09-2525 **Client ID** CAMO-09-10025S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232742001 **Spike ID:** 1201873970

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	75-125	101		1	U	100	100		MS
Beryllium	ug/L	75-125	53.3		0.1	U	50	107		MS
Cadmium	ug/L	75-125	5.43		0.11	U	5	108		MS
Lead	ug/L	75-125	20.6		0.5	U	20	102		MS
Manganese	ug/L	75-125	51.3		1.18	J	50	100		MS
Thallium	ug/L	75-125	19.4		0.345	J	50	38.2	N	MS

METALS
-5a-

Matrix Spike Summary

SDG NO. 09-2525 **Client ID** CAMO-09-10025S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232742001 **Spike ID:** 1201878689

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75-125	1.98		0.066	U	2	98.8		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2525

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-10025D

Sample ID: 232742001 **Duplicate ID:** 1201873931 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68	U	68	U			P
Arsenic	ug/L		5	U	5	U			P
Barium	ug/L		1	U	1	U			P
Calcium	ug/L		50	U	50	U			P
Chromium	ug/L		1	U	1	U			P
Cobalt	ug/L		1	U	1	U			P
Copper	ug/L		3	U	3	U			P
Iron	ug/L		30	U	30	U			P
Magnesium	ug/L		85	U	85	U			P
Nickel	ug/L		1.5	U	1.5	U			P
Potassium	ug/L	+/-150	162		165		2.29		P
Selenium	ug/L		5	U	5	U			P
Silver	ug/L		1	U	1	U			P
Sodium	ug/L	+/-300	114	J	117	J	2.92		P
Vanadium	ug/L		1	U	1	U			P
Zinc	ug/L		3.3	U	3.3	U			P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2525

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO–09–10025D

Sample ID: 232742001 **Duplicate ID:** 1201873969 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		1	U	1	U			MS
Beryllium	ug/L		0.1	U	0.1	U			MS
Cadmium	ug/L		0.11	U	0.11	U			MS
Lead	ug/L		0.5	U	0.5	U			MS
Manganese	ug/L	+/–5	1.18	J	1.19	J	.845		MS
Thallium	ug/L		0.345	J	0.3	U	200		MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2525

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-10025D

Sample ID: 232742001 **Duplicate ID:** 1201878688 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066	U	0.066	U			AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2525

Contract: LANL01004

Aqueous LCS Source: OS2I **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873930								
	Arsenic	ug/L	500	471		94.3	80-120	P
	Barium	ug/L	500	479		95.9	80-120	P
	Calcium	ug/L	5000	4700		94	80-120	P
	Chromium	ug/L	500	478		95.6	80-120	P
	Cobalt	ug/L	500	456		91.1	80-120	P
	Copper	ug/L	500	482		96.4	80-120	P
	Iron	ug/L	5000	4800		96	80-120	P
	Magnesium	ug/L	5000	4900		97.9	80-120	P
	Nickel	ug/L	500	476		95.3	80-120	P
	Potassium	ug/L	5000	4930		98.5	80-120	P
	Selenium	ug/L	500	484		96.9	80-120	P
	Silver	ug/L	500	473		94.5	80-120	P
	Sodium	ug/L	5000	4880		97.6	80-120	P
	Vanadium	ug/L	500	485		97.1	80-120	P
	Zinc	ug/L	500	472		94.5	80-120	P
	Aluminum	ug/L	5000	4720		94.4	80-120	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2525

Contract: LANL01004

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873968								
	Antimony	ug/L	50	52.3		105	80-120	MS
	Beryllium	ug/L	50	50.3		101	80-120	MS
	Cadmium	ug/L	50	48		96	80-120	MS
	Lead	ug/L	50	48.3		96.7	80-120	MS
	Manganese	ug/L	50	48.3		96.6	80-120	MS
	Thallium	ug/L	50	45.5		90.9	80-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2525

Contract: LANL01004

Aqueous LCS Source: GEL **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201878687								
	Mercury	ug/L	2	2.03		101	80-120	AV

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 09–2525 **Client ID** CAMO–09–10025L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232742001 **Serial Dilution ID:** 1201873933

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Arsenic	5	U	25	U				P
Barium	1	U	5	U				P
Calcium	50	U	250	U				P
Chromium	1	U	5	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	30	U	150	U				P
Magnesium	85	U	425	U				P
Nickel	1.5	U	7.5	U				P
Potassium	162		361	J	123			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	114	J	500	U	100			P
Vanadium	1	U	5	U				P
Zinc	3.3	U	16.5	U				P

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 09–2525 **Client ID** CAMO–09–10025L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232742001 **Serial Dilution ID:** 1201873971

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	1	U	5	U				MS
Beryllium	.1	U	.5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	.5	U	2.5	U				MS
Manganese	1.18	J	5	U	100			MS
Thallium	.345	J	16.5		4670			MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2525 **Client ID** CAMO-09-10025L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232742001 **Serial Dilution ID:** 1201878690

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2525 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882336						
1201873929	MB for batch 882336	MB	W	07-JUL-09	50mL	50mL	
1201873930	LCS for batch 882336	LCS	W	07-JUL-09	50mL	50mL	
1201873932	CAMO-09-10025S	MS	W	07-JUL-09	50mL	50mL	
1201873931	CAMO-09-10025D	DUP	W	07-JUL-09	50mL	50mL	
232742001	CAMO-09-10025	SAMPLE	W	07-JUL-09	50mL	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2525 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882354						
1201873967	MB for batch 882354	MB	W	07-JUL-09	50mL	50mL	
1201873968	LCS for batch 882354	LCS	W	07-JUL-09	50mL	50mL	
1201873970	CAMO-09-10025S	MS	W	07-JUL-09	50mL	50mL	
1201873969	CAMO-09-10025D	DUP	W	07-JUL-09	50mL	50mL	
232742001	CAMO-09-10025	SAMPLE	W	07-JUL-09	50mL	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 09-2525 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	884315						
1201878686	MB for batch 884315	MB	W	14-JUL-09	20mL	20mL	
1201878687	LCS for batch 884315	LCS	W	14-JUL-09	20mL	20mL	
1201878689	CAMO-09-10025S	MS	W	14-JUL-09	20mL	20mL	
1201878688	CAMO-09-10025D	DUP	W	14-JUL-09	20mL	20mL	
232742001	CAMO-09-10025	SAMPLE	W	14-JUL-09	20mL	20mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 08-JUL-09 **End Date:** 08-JUL-09

Client Sdg: 09-2525
Method P
Data File: 070809A-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:28	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S0.1	1	09:35			X	X				X	X	X						X	X	X	X			X	X
S0.5	1	09:41	X		X	X			X	X	X	X			X			X	X	X	X			X	X
SCAL	1	09:48	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S10	1	09:55	X						X				X		X							X			
ICV01	1	10:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICB01	1	10:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
PQL01	1	10:15	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSA01	1	10:22	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSAB01	1	10:29	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR01	1	10:34	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR02	1	10:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	10:47																							
ZZZZZZ	1	10:54																							
CCV01	1	11:03	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB01	1	11:10	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR03	1	11:17	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV02	1	11:24	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB02	1	11:31	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	11:42																							
ZZZZZZ	2	11:49																							
ZZZZZZ	1	11:56																							
ZZZZZZ	1	12:03																							
ZZZZZZ	1	12:10																							
ZZZZZZ	1	12:17																							
ZZZZZZ	5	12:23																							
ZZZZZZ	1	12:30																							
CCV03	1	12:37	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB03	1	12:44	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	5	12:49																							
ZZZZZZ	5	12:56																							
ZZZZZZ	5	13:03																							
ZZZZZZ	5	13:10																							
ZZZZZZ	25	13:16																							
ZZZZZZ	5	13:23																							
CCV04	1	13:30	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB04	1	13:37	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV05	1	13:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB05	1	13:57	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	14:04																							

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	2	14:11																						
ZZZZZZ	1	14:18																						
ZZZZZZ	1	14:25																						
ZZZZZZ	1	14:32																						
ZZZZZZ	1	14:39																						
CCV06	1	14:46	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB06	1	14:53	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	15:00																						
ZZZZZZ	1	15:07																						
ZZZZZZ	1	15:14																						
ZZZZZZ	1	15:22																						
ZZZZZZ	1	15:28																						
ZZZZZZ	5	15:34																						
CCV07	1	15:41	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB07	1	15:48	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	15:55																						
ZZZZZZ	2	16:02																						
ZZZZZZ	1	16:09																						
ZZZZZZ	1	16:16																						
ZZZZZZ	1	16:23																						
ZZZZZZ	1	16:29																						
ZZZZZZ	5	16:36																						
CCV08	1	16:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB08	1	16:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	16:57																						
ZZZZZZ	1	17:04																						
ZZZZZZ	1	17:11																						
ZZZZZZ	1	17:18																						
CCV09	1	17:25	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB09	1	17:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	17:39																						
ZZZZZZ	2	17:46																						
ZZZZZZ	1	17:53																						
ZZZZZZ	1	18:00																						
ZZZZZZ	1	18:07																						
ZZZZZZ	1	18:13																						
ZZZZZZ	5	18:20																						
CCV10	1	18:26	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB10	1	18:33	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	18:40																						

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	18:47																							
ZZZZZZ	1	18:54																							
ZZZZZZ	1	19:01																							
ZZZZZZ	1	19:08																							
ZZZZZZ	1	19:16																							
ZZZZZZ	1	19:22																							
CCV11	1	19:29	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB11	1	19:36	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	19:43																							
ZZZZZZ	1	19:50																							
ZZZZZZ	1	19:57																							
ZZZZZZ	1	20:04																							
ZZZZZZ	1	20:11																							
ZZZZZZ	1	20:18																							
ZZZZZZ	1	20:25																							
ZZZZZZ	5	20:32																							
ZZZZZZ	5	20:39																							
CCV12	1	20:46	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB12	1	20:53	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873929	1	21:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873930	1	21:07	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
232742001	1	21:14	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873931	1	21:21	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873932	1	21:28	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873937	5	21:35	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV13	1	21:42	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB13	1	21:49	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: HG3
Start Date: 15-JUL-09 **End Date:** 15-JUL-09

Client Sdg: 09-2525
Method AV
Data File: 071509W2-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	10:06															X								
S0.2	1	10:08															X								
S0.5	1	10:10															X								
S2.0	1	10:12															X								
S5.0	1	10:14															X								
S10.0	1	10:16															X								
ICV01	1	10:18															X								
ICB01	1	10:20															X								
CRDL01	1	10:22															X								
CCV01	1	10:24															X								
CCB01	1	10:26															X								
ZZZZZZ	1	10:27																							
ZZZZZZ	1	10:29																							
ZZZZZZ	1	10:31																							
ZZZZZZ	1	10:33																							
ZZZZZZ	1	10:35																							
ZZZZZZ	5	10:37																							
ZZZZZZ	1	10:39																							
ZZZZZZ	1	10:41																							
ZZZZZZ	1	10:43																							
ZZZZZZ	1	10:45																							
CCV02	1	10:47															X								
CCB02	1	10:49															X								
ZZZZZZ	1	10:50																							
ZZZZZZ	1	10:52																							
ZZZZZZ	1	10:54																							
ZZZZZZ	5	10:56																							
CCV03	1	11:06															X								
CCB03	1	11:08															X								
ZZZZZZ	1	11:10																							
1201878686	1	11:12															X								
1201878687	1	11:14															X								
232742001	1	11:16															X								
1201878688	1	11:18															X								
1201878689	1	11:20															X								
1201878690	5	11:22															X								
ZZZZZZ	1	11:23																							
ZZZZZZ	1	11:25																							
ZZZZZZ	1	11:27																							
CCV04	1	11:29															X								

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
CCB04	1	11:31															X								

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS4
Start Date: 15–JUL–09 **End Date:** 15–JUL–09

Client Sdg: 09–2525
Method MS
Data File: 090715–2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	17:03		X			X	X						X		X							X		
S10	1	17:09		X			X	X						X		X							X		
S100	1	17:15		X			X	X						X		X							X		
ICV01	1	17:22		X			X	X						X		X							X		
ICB01	1	17:28		X			X	X						X		X							X		
CRDL01	1	17:34		X			X	X						X		X							X		
ICSA01	1	17:40		X			X	X						X		X							X		
ICSAB01	1	17:46		X			X	X						X		X							X		
CCV01	1	17:53		X			X	X						X		X							X		
CCB01	1	17:59		X			X	X						X		X							X		
LR01	1	18:05		X			X	X						X		X							X		
CCV02	1	18:11		X			X	X						X		X							X		
CCB02	1	18:17		X			X	X						X		X							X		
1201873967	1	18:24		X			X	X						X		X							X		
1201873968	1	18:30		X			X	X						X		X							X		
232742001	1	18:36		X			X	X						X		X							X		
1201873969	1	18:42		X			X	X						X		X							X		
1201873970	1	18:48		X			X	X						X		X							X		
1201873971	5	18:55		X			X	X						X		X							X		
CCV03	1	19:01		X			X	X						X		X							X		
CCB03	1	19:07		X			X	X						X		X							X		

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2525

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		3.0	10
	Zinc		3.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2525

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Mercury		0.066	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2525

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	50.0	200
	Chromium	267.716	1.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	30.0	100
	Lead	220.353	3.3	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	100	300
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 09-2525
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-MAY-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2525

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

METALS
–12–
Linear Ranges

SDG NO. 09–2525

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS4

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01–MAY–09
Antimony	1000	250	ug/L	01–MAY–09
Arsenic	1000	1000	ug/L	01–MAY–09
Barium	1000	2500	ug/L	01–MAY–09
Beryllium	1000	1000	ug/L	01–MAY–09
Cadmium	1000	1000	ug/L	01–MAY–09
Calcium	500	50000	ug/L	01–MAY–09
Chromium	1000	1000	ug/L	01–MAY–09
Cobalt	1000	1000	ug/L	01–MAY–09
Copper	1000	1000	ug/L	01–MAY–09
Iron	500	50000	ug/L	01–MAY–09
Lead	1000	5000	ug/L	01–MAY–09
Magnesium	1	50000	ug/L	01–MAY–09
Manganese	1000	1000	ug/L	01–MAY–09
Nickel	1000	1000	ug/L	01–MAY–09
Potassium	1	50000	ug/L	01–MAY–09
Selenium	1000	500	ug/L	01–MAY–09
Silver	1000	250	ug/L	01–MAY–09
Sodium	1	50000	ug/L	01–MAY–09
Thallium	1000	500	ug/L	01–MAY–09
Vanadium	1000	100	ug/L	01–MAY–09
Zinc	1000	2500	ug/L	01–MAY–09

Raw Data

Method: Hg_ReAlign
Result: 072009

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

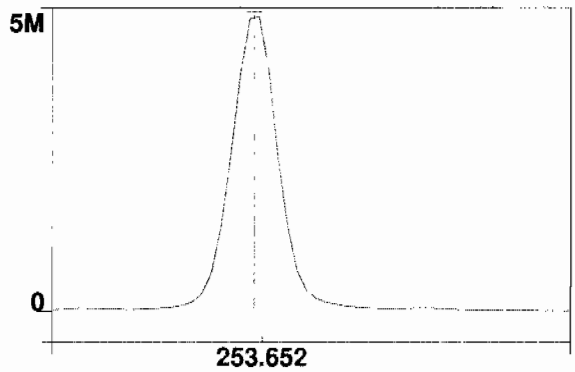

Intensity: 4936217.0 cps
Conc:

1

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Reprocessing Begun
Logged In Analyst: Optima3 **Technique: ICP Continuous**

Results Data Set (original): 070809
Results Library (original): C:\pe\Optima3\Results\Results.mdb
Results Data Set (reprocessed): 070809A
Results Library (reprocessed): C:\pe\Optima3\Results\Results.mdb

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Method Loaded
Method Name: General Eng.2AX **Method Last Saved: 7/8/2009 11:38:58**
IEC File: 070309.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

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Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 7/8/2009 09:28:56**
Analyst: **Data Type: Reprocessed on 7/8/2009 11:40:03**
Logged In Analyst (Original) : Optima3
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1059810.6	1059810.6	99.899	%	09:32:05
1	Sc Radial	5668.6	5668.6	102	%	09:30:49
1	Y 371.029	851543.7	851543.7	99.804	%	09:32:05
1	Y RADIAL	4889.8	4889.8	101.5	%	09:30:49
1	Ag 328.068†	593.9	594.5	[0.00]	ug/L	09:32:10

1	Al 396.153Radial†	-88.0	-86.4	[0.00]	ug/L	09:30:49
1	As 188.979†	-33.0	-33.0	[0.00]	ug/L	09:32:31
1	B 249.677†	-395.5	-395.9	[0.00]	ug/L	09:32:31
1	Ba 233.527†	22.7	22.7	[0.00]	ug/L	09:32:31
1	Be 313.107†	-7253.6	-7260.9	[0.00]	ug/L	09:32:10
1	Ca 317.933Radial†	19.9	19.6	[0.00]	ug/L	09:31:09
1	Cd 226.502†	-262.6	-262.9	[0.00]	ug/L	09:32:31
1	Co 228.616†	-86.2	-86.3	[0.00]	ug/L	09:32:31
1	Cr 267.716†	-35.2	-35.2	[0.00]	ug/L	09:32:31
1	Cu 324.752†	10171.2	10181.5	[0.00]	ug/L	09:32:10
1	Fe 238.204 Radial†	0.0	0.0	[0.00]	ug/L	09:31:09
1	K 766.490 Radial†	1428.1	1402.0	[0.00]	ug/L	09:30:49
1	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:09
1	Mn 257.610†	823.1	823.9	[0.00]	ug/L	09:32:31
1	Mo 202.031†	40.3	40.4	[0.00]	ug/L	09:32:31
1	Na 589.592 Radial†	-169.9	-166.8	[0.00]	ug/L	09:31:09
1	Ni 231.604†	160.5	160.7	[0.00]	ug/L	09:32:31
1	P 214.914†	340.8	341.2	[0.00]	ug/L	09:32:31
1	Pb 220.353†	-23.8	-23.8	[0.00]	ug/L	09:32:31
1	S 181.975 Axial†	74.8	74.8	[0.00]	ug/L	09:32:31
1	Sb 206.836†	39.3	39.4	[0.00]	ug/L	09:32:31
1	Se 196.026†	-21.9	-21.9	[0.00]	ug/L	09:32:31
1	Si 251.611†	569.0	569.6	[0.00]	ug/L	09:32:31
1	Sn 189.927†	4.8	4.8	[0.00]	ug/L	09:32:31
1	Sr 421.552†	-1.3	-1.3	[0.00]	ug/L	09:31:09
1	Ti 334.940†	-1079.9	-1081.0	[0.00]	ug/L	09:32:10
1	Tl 190.801†	-58.7	-58.8	[0.00]	ug/L	09:32:31
1	U 409.014†	-3815.0	-3818.9	[0.00]	ug/L	09:32:05
1	V 292.402†	-1684.3	-1686.1	[0.00]	ug/L	09:32:10
1	Zn 213.857†	1110.4	1111.5	[0.00]	ug/L	09:32:31
1	SiO2†	589.5	590.1	[0.00]	ug/L	09:33:36
2	Sc 361.383	1062041.1	1062041.1	100.11	%	09:32:36
2	Sc Radial	5550.5	5550.5	99.7	%	09:31:14
2	Y 371.029	854666.6	854666.6	100.17	%	09:32:36
2	Y RADIAL	4806.6	4806.6	99.81	%	09:31:14
2	Ag 328.068†	684.5	683.8	[0.00]	ug/L	09:32:41
2	Al 396.153Radial†	-103.1	-103.4	[0.00]	ug/L	09:31:14
2	As 188.979†	-37.3	-37.3	[0.00]	ug/L	09:33:01
2	B 249.677†	-376.8	-376.4	[0.00]	ug/L	09:33:01
2	Ba 233.527†	27.0	27.0	[0.00]	ug/L	09:33:01
2	Be 313.107†	-7342.2	-7334.2	[0.00]	ug/L	09:32:41
2	Ca 317.933Radial†	15.3	15.3	[0.00]	ug/L	09:31:34
2	Cd 226.502†	-297.3	-297.0	[0.00]	ug/L	09:33:01
2	Co 228.616†	-91.0	-90.9	[0.00]	ug/L	09:33:01
2	Cr 267.716†	-33.4	-33.4	[0.00]	ug/L	09:33:01
2	Cu 324.752†	10260.8	10249.6	[0.00]	ug/L	09:32:41
2	Fe 238.204 Radial†	0.2	0.2	[0.00]	ug/L	09:31:34
2	K 766.490 Radial†	1490.1	1493.9	[0.00]	ug/L	09:31:14
2	Mg 279.077 IEC†	-0.2	-0.2	[0.00]	ug/L	09:31:34
2	Mn 257.610†	833.3	832.3	[0.00]	ug/L	09:33:01
2	Mo 202.031†	24.6	24.6	[0.00]	ug/L	09:33:01
2	Na 589.592 Radial†	-169.2	-169.6	[0.00]	ug/L	09:31:34
2	Ni 231.604†	145.4	145.2	[0.00]	ug/L	09:33:01
2	P 214.914†	336.1	335.8	[0.00]	ug/L	09:33:01
2	Pb 220.353†	-39.7	-39.7	[0.00]	ug/L	09:33:01
2	S 181.975 Axial†	63.8	63.7	[0.00]	ug/L	09:33:01
2	Sb 206.836†	49.0	48.9	[0.00]	ug/L	09:33:01
2	Se 196.026†	-25.3	-25.3	[0.00]	ug/L	09:33:01
2	Si 251.611†	569.7	569.1	[0.00]	ug/L	09:33:01
2	Sn 189.927†	5.1	5.0	[0.00]	ug/L	09:33:01
2	Sr 421.552†	11.5	11.5	[0.00]	ug/L	09:31:34
2	Ti 334.940†	-1116.4	-1115.1	[0.00]	ug/L	09:32:41
2	Tl 190.801†	-57.5	-57.4	[0.00]	ug/L	09:33:01
2	U 409.014†	-3873.4	-3869.2	[0.00]	ug/L	09:32:36
2	V 292.402†	-1699.0	-1697.1	[0.00]	ug/L	09:32:41
2	Zn 213.857†	1115.6	1114.3	[0.00]	ug/L	09:33:01
2	SiO2†	600.0	599.4	[0.00]	ug/L	09:33:42
3	Sc 361.383	1060796.0	1060796.0	99.992	%	09:33:06
3	Sc Radial	5475.5	5475.5	98.4	%	09:31:39
3	Y 371.029	853433.0	853433.0	100.03	%	09:33:06
3	Y RADIAL	4750.8	4750.8	98.65	%	09:31:39

3	Ag 328.068†	637.4	637.5	[0.00]	ug/L	09:33:11
3	Al 396.153Radial†	-85.4	-86.8	[0.00]	ug/L	09:31:39
3	As 188.979†	-40.4	-40.4	[0.00]	ug/L	09:33:31
3	B 249.677†	-372.3	-372.3	[0.00]	ug/L	09:33:31
3	Ba 233.527†	23.1	23.1	[0.00]	ug/L	09:33:31
3	Be 313.107†	-7353.0	-7353.6	[0.00]	ug/L	09:33:11
3	Ca 317.933Radial†	15.7	15.9	[0.00]	ug/L	09:31:59
3	Cd 226.502†	-273.1	-273.1	[0.00]	ug/L	09:33:31
3	Co 228.616†	-94.1	-94.1	[0.00]	ug/L	09:33:31
3	Cr 267.716†	-17.2	-17.2	[0.00]	ug/L	09:33:31
3	Cu 324.752†	10141.9	10142.7	[0.00]	ug/L	09:33:11
3	Fe 238.204 Radial†	0.8	0.8	[0.00]	ug/L	09:31:59
3	K 766.490 Radial†	1498.9	1523.4	[0.00]	ug/L	09:31:39
3	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:59
3	Mn 257.610†	824.8	824.9	[0.00]	ug/L	09:33:31
3	Mo 202.031†	30.4	30.4	[0.00]	ug/L	09:33:31
3	Na 589.592 Radial†	-172.0	-174.9	[0.00]	ug/L	09:31:59
3	Ni 231.604†	138.9	138.9	[0.00]	ug/L	09:33:31
3	P 214.914†	333.9	333.9	[0.00]	ug/L	09:33:31
3	Pb 220.353†	-23.7	-23.8	[0.00]	ug/L	09:33:31
3	S 181.975 Axial†	64.9	64.9	[0.00]	ug/L	09:33:31
3	Sb 206.836†	48.0	48.0	[0.00]	ug/L	09:33:31
3	Se 196.026†	-17.7	-17.7	[0.00]	ug/L	09:33:31
3	Si 251.611†	541.6	541.6	[0.00]	ug/L	09:33:31
3	Sn 189.927†	6.6	6.6	[0.00]	ug/L	09:33:31
3	Sr 421.552†	6.1	6.2	[0.00]	ug/L	09:31:59
3	Ti 334.940†	-1131.5	-1131.6	[0.00]	ug/L	09:33:11
3	Tl 190.801†	-67.9	-67.9	[0.00]	ug/L	09:33:31
3	U 409.014†	-3815.9	-3816.2	[0.00]	ug/L	09:33:06
3	V 292.402†	-1575.1	-1575.2	[0.00]	ug/L	09:33:11
3	Zn 213.857†	1141.3	1141.4	[0.00]	ug/L	09:33:31
3	SiO2†	617.5	617.6	[0.00]	ug/L	09:33:47

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1060882.6	1117.80	0.11%	100.00	%
Sc Radial	5564.8	97.34	1.75%	100	%
Y 371.029	853214.5	1572.88	0.18%	100.000	%
Y RADIAL	4815.7	69.94	1.45%	100.0	%
Ag 328.068†	638.6	44.64	6.99%	[0.00]	ug/L
Al 396.153Radial†	-92.2	9.68	10.50%	[0.00]	ug/L
As 188.979†	-36.9	3.70	10.03%	[0.00]	ug/L
B 249.677†	-381.5	12.62	3.31%	[0.00]	ug/L
Ba 233.527†	24.3	2.36	9.74%	[0.00]	ug/L
Be 313.107†	-7316.2	48.87	0.67%	[0.00]	ug/L
Ca 317.933Radial†	16.9	2.30	13.61%	[0.00]	ug/L
Cd 226.502†	-277.6	17.49	6.30%	[0.00]	ug/L
Co 228.616†	-90.4	3.95	4.37%	[0.00]	ug/L
Cr 267.716†	-28.6	9.91	34.66%	[0.00]	ug/L
Cu 324.752†	10191.3	54.11	0.53%	[0.00]	ug/L
Fe 238.204 Radial†	0.3	0.40	120.31%	[0.00]	ug/L
K 766.490 Radial†	1473.1	63.31	4.30%	[0.00]	ug/L
Mg 279.077 IEC†	0.2	0.34	192.62%	[0.00]	ug/L
Mn 257.610†	827.0	4.63	0.56%	[0.00]	ug/L
Mo 202.031†	31.8	8.00	25.18%	[0.00]	ug/L
Na 589.592 Radial†	-170.4	4.09	2.40%	[0.00]	ug/L
Ni 231.604†	148.3	11.22	7.57%	[0.00]	ug/L
P 214.914†	336.9	3.77	1.12%	[0.00]	ug/L
Pb 220.353†	-29.1	9.17	31.52%	[0.00]	ug/L
S 181.975 Axial†	67.8	6.10	8.99%	[0.00]	ug/L
Sb 206.836†	45.4	5.28	11.62%	[0.00]	ug/L
Se 196.026†	-21.6	3.82	17.66%	[0.00]	ug/L
Si 251.611†	560.1	16.01	2.86%	[0.00]	ug/L
Sn 189.927†	5.5	0.95	17.40%	[0.00]	ug/L
Sr 421.552†	5.5	6.43	117.38%	[0.00]	ug/L
Ti 334.940†	-1109.3	25.82	2.33%	[0.00]	ug/L
Tl 190.801†	-61.4	5.70	9.29%	[0.00]	ug/L
U 409.014†	-3834.7	29.86	0.78%	[0.00]	ug/L
V 292.402†	-1652.8	67.41	4.08%	[0.00]	ug/L

Zn 213.857†	1122.4	16.48	1.47%	[0.00] ug/L
SiO2†	602.4	13.95	2.32%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/8/2009 09:35:57
Data Type: Reprocessed on 7/8/2009 11:40:04

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1043904.5	1043904.5	98.400	%	09:38:07
1	Sc Radial	5586.9	5586.9	100	%	09:37:49
1	Y 371.029	838768.8	838768.8	98.307	%	09:38:07
1	Y RADIAL	4867.7	4867.7	101.1	%	09:37:49
1	Ag 328.068†	25884.2	25666.6	[100]	ug/L	09:38:07
1	As 188.979†	393.4	436.7	[100]	ug/L	09:38:27
1	B 249.677†	5686.4	6160.4	[100]	ug/L	09:38:07
1	Ba 233.527†	20371.1	20678.1	[100]	ug/L	09:38:07
1	Be 313.107†	314654.5	327088.3	[100]	ug/L	09:38:07
1	Cd 226.502†	13132.5	13623.8	[100]	ug/L	09:38:27
1	Co 228.616†	8083.3	8305.1	[100]	ug/L	09:38:27
1	Cr 267.716†	11753.9	11973.6	[100]	ug/L	09:38:07
1	Cu 324.752†	50132.0	40756.1	[100]	ug/L	09:38:07
1	K 766.490 Radial†	3887.5	2399.0	[1000]	ug/L	09:37:49
1	Mn 257.610†	129366.8	130643.8	[100]	ug/L	09:38:07
1	Mo 202.031†	2580.5	2590.7	[100]	ug/L	09:38:27
1	Ni 231.604†	6525.4	6483.3	[100]	ug/L	09:38:27
1	P 214.914†	1779.1	1471.1	[500]	ug/L	09:38:27
1	Pb 220.353†	1342.2	1393.1	[100]	ug/L	09:38:27
1	S 181.975 Axial†	300.2	237.3	[200]	ug/L	09:38:27
1	Sb 206.836†	547.4	510.9	[100]	ug/L	09:38:27
1	Se 196.026†	295.6	322.0	[100]	ug/L	09:38:27
1	Si 251.611†	24511.6	24350.2	[500]	ug/L	09:38:07
1	Sn 189.927†	971.4	981.7	[100]	ug/L	09:38:27
1	Sr 421.552†	6665.1	6633.3	[100]	ug/L	09:37:49
1	Ti 334.940†	74671.4	76995.2	[100]	ug/L	09:38:07
1	Tl 190.801†	543.4	613.6	[100]	ug/L	09:38:27
1	U 409.014†	237.6	4076.2	[100]	ug/L	09:38:07
1	V 292.402†	15937.1	17849.1	[100]	ug/L	09:38:07
1	Zn 213.857†	19207.8	18397.8	[100]	ug/L	09:38:07
1	SiO2†	24699.0	24498.4	[1069.5]	ug/L	09:39:24
2	Sc 361.383	1055210.6	1055210.6	99.465	%	09:38:33
2	Sc Radial	5609.2	5609.2	101	%	09:37:55
2	Y 371.029	845639.6	845639.6	99.112	%	09:38:33
2	Y RADIAL	4877.8	4877.8	101.3	%	09:37:55
2	Ag 328.068†	26093.0	25594.7	[100]	ug/L	09:38:33
2	As 188.979†	391.5	430.5	[100]	ug/L	09:38:53
2	B 249.677†	5785.4	6198.0	[100]	ug/L	09:38:33
2	Ba 233.527†	20469.8	20555.5	[100]	ug/L	09:38:33
2	Be 313.107†	317338.9	326360.9	[100]	ug/L	09:38:33
2	Cd 226.502†	13157.8	13506.1	[100]	ug/L	09:38:53
2	Co 228.616†	8095.3	8229.3	[100]	ug/L	09:38:53
2	Cr 267.716†	11903.1	11995.7	[100]	ug/L	09:38:33
2	Cu 324.752†	50854.5	40936.6	[100]	ug/L	09:38:33
2	K 766.490 Radial†	3819.2	2315.9	[1000]	ug/L	09:37:55
2	Mn 257.610†	130782.0	130658.0	[100]	ug/L	09:38:33
2	Mo 202.031†	2603.2	2585.4	[100]	ug/L	09:38:53
2	Ni 231.604†	6538.1	6425.0	[100]	ug/L	09:38:53
2	P 214.914†	1796.1	1468.9	[500]	ug/L	09:38:53
2	Pb 220.353†	1350.1	1386.4	[100]	ug/L	09:38:53
2	S 181.975 Axial†	299.5	233.3	[200]	ug/L	09:38:53
2	Sb 206.836†	557.9	515.5	[100]	ug/L	09:38:53
2	Se 196.026†	303.1	326.3	[100]	ug/L	09:38:53
2	Si 251.611†	24790.1	24363.3	[500]	ug/L	09:38:33
2	Sn 189.927†	961.1	960.8	[100]	ug/L	09:38:53
2	Sr 421.552†	6653.8	6595.7	[100]	ug/L	09:37:55
2	Ti 334.940†	75608.5	77124.2	[100]	ug/L	09:38:33
2	Tl 190.801†	543.4	607.7	[100]	ug/L	09:38:53

2	U 409.014†	413.3	4250.3	[100]	ug/L	09:38:33
2	V 292.402†	16008.2	17747.0	[100]	ug/L	09:38:33
2	Zn 213.857†	19396.4	18378.2	[100]	ug/L	09:38:33
2	SiO2†	24456.8	23985.9	[1069.5]	ug/L	09:39:29
3	Sc 361.383	1055128.5	1055128.5	99.458	%	09:38:59
3	Sc Radial	5546.9	5546.9	99.7	%	09:38:00
3	Y 371.029	846188.4	846188.4	99.177	%	09:38:59
3	Y RADIAL	4841.3	4841.3	100.5	%	09:38:00
3	Ag 328.068†	26072.8	25576.4	[100]	ug/L	09:38:59
3	As 188.979†	395.1	434.2	[100]	ug/L	09:39:19
3	B 249.677†	5816.4	6229.6	[100]	ug/L	09:38:59
3	Ba 233.527†	20495.9	20583.4	[100]	ug/L	09:38:59
3	Be 313.107†	317444.7	326492.1	[100]	ug/L	09:38:59
3	Cd 226.502†	13125.5	13474.7	[100]	ug/L	09:39:19
3	Co 228.616†	8079.1	8213.6	[100]	ug/L	09:39:19
3	Cr 267.716†	11888.0	11981.4	[100]	ug/L	09:38:59
3	Cu 324.752†	50658.9	40743.9	[100]	ug/L	09:38:59
3	K 766.490 Radial†	3845.0	2384.3	[1000]	ug/L	09:38:00
3	Mn 257.610†	131078.2	130966.0	[100]	ug/L	09:38:59
3	Mo 202.031†	2603.9	2586.4	[100]	ug/L	09:39:19
3	Ni 231.604†	6537.8	6425.2	[100]	ug/L	09:39:19
3	P 214.914†	1782.9	1455.7	[500]	ug/L	09:39:19
3	Pb 220.353†	1365.6	1402.1	[100]	ug/L	09:39:19
3	S 181.975 Axial†	309.0	242.8	[200]	ug/L	09:39:19
3	Sb 206.836†	556.1	513.7	[100]	ug/L	09:39:19
3	Se 196.026†	279.5	302.7	[100]	ug/L	09:39:19
3	Si 251.611†	24805.8	24381.0	[500]	ug/L	09:38:59
3	Sn 189.927†	963.2	962.9	[100]	ug/L	09:39:19
3	Sr 421.552†	6580.5	6596.3	[100]	ug/L	09:38:00
3	Ti 334.940†	75559.4	77080.7	[100]	ug/L	09:38:59
3	Tl 190.801†	539.9	604.2	[100]	ug/L	09:39:19
3	U 409.014†	236.8	4072.8	[100]	ug/L	09:38:59
3	V 292.402†	16050.8	17791.1	[100]	ug/L	09:38:59
3	Zn 213.857†	19356.9	18340.1	[100]	ug/L	09:38:59
3	SiO2†	24872.7	24406.0	[1069.5]	ug/L	09:39:34

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051414.5	6504.03	0.62%	99.108	%
Sc Radial	5581.0	31.57	0.57%	100	%
Y 371.029	843532.3	4134.44	0.49%	98.865	%
Y RADIAL	4862.3	18.86	0.39%	101.0	%
Ag 328.068†	25612.5	47.66	0.19%	[100]	ug/L
As 188.979†	433.8	3.14	0.72%	[100]	ug/L
B 249.677†	6196.0	34.67	0.56%	[100]	ug/L
Ba 233.527†	20605.7	64.24	0.31%	[100]	ug/L
Be 313.107†	326647.1	387.66	0.12%	[100]	ug/L
Cd 226.502†	13534.9	78.59	0.58%	[100]	ug/L
Co 228.616†	8249.3	48.95	0.59%	[100]	ug/L
Cr 267.716†	11983.6	11.20	0.09%	[100]	ug/L
Cu 324.752†	40812.2	107.89	0.26%	[100]	ug/L
K 766.490 Radial†	2366.4	44.37	1.88%	[1000]	ug/L
Mn 257.610†	130755.9	182.06	0.14%	[100]	ug/L
Mo 202.031†	2587.5	2.81	0.11%	[100]	ug/L
Ni 231.604†	6444.5	33.62	0.52%	[100]	ug/L
P 214.914†	1465.2	8.32	0.57%	[500]	ug/L
Pb 220.353†	1393.9	7.86	0.56%	[100]	ug/L
S 181.975 Axial†	237.8	4.79	2.02%	[200]	ug/L
Sb 206.836†	513.3	2.30	0.45%	[100]	ug/L
Se 196.026†	317.0	12.62	3.98%	[100]	ug/L
Si 251.611†	24364.8	15.45	0.06%	[500]	ug/L
Sn 189.927†	968.5	11.51	1.19%	[100]	ug/L
Sr 421.552†	6608.4	21.50	0.33%	[100]	ug/L
Ti 334.940†	77066.7	65.66	0.09%	[100]	ug/L
Tl 190.801†	608.5	4.73	0.78%	[100]	ug/L
U 409.014†	4133.1	101.47	2.46%	[100]	ug/L
V 292.402†	17795.7	51.23	0.29%	[100]	ug/L
Zn 213.857†	18372.0	29.33	0.16%	[100]	ug/L
SiO2†	24296.8	273.12	1.12%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/8/2009 09:41:45
Data Type: Reprocessed on 7/8/2009 11:40:06

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1064607.4	1064607.4	100.35	%	09:44:57
1	Sc Radial	5461.3	5461.3	98.1	%	09:43:38
1	Y 371.029	846628.0	846628.0	99.228	%	09:44:57
1	Y RADIAL	4696.9	4696.9	97.53	%	09:43:38
1	Ag 328.068†	126803.5	125721.3	[500]	ug/L	09:44:57
1	Al 396.153Radial†	5174.4	5364.7	[5000]	ug/L	09:43:38
1	As 188.979†	2072.9	2102.5	[500]	ug/L	09:45:17
1	B 249.677†	31257.3	31529.4	[500]	ug/L	09:44:57
1	Ba 233.527†	98225.0	97857.1	[500]	ug/L	09:44:57
1	Be 313.107†	1595363.0	1597097.3	[500]	ug/L	09:44:57
1	Ca 317.933Radial†	1956.1	1976.3	[5000]	ug/L	09:43:58
1	Cd 226.502†	66327.4	66373.0	[500]	ug/L	09:44:57
1	Co 228.616†	39082.0	39035.6	[500]	ug/L	09:45:17
1	Cr 267.716†	58209.2	58034.2	[500]	ug/L	09:44:57
1	Cu 324.752†	212770.9	201835.2	[500]	ug/L	09:44:57
1	K 766.490 Radial†	12752.1	11520.9	[5000]	ug/L	09:43:38
1	Mg 279.077 IEC†	62.9	63.9	[5000]	ug/L	09:43:58
1	Mn 257.610†	630898.9	627864.5	[500]	ug/L	09:44:57
1	Mo 202.031†	12608.3	12532.4	[500]	ug/L	09:45:17
1	Ni 231.604†	30724.5	30468.8	[500]	ug/L	09:45:17
1	P 214.914†	7382.5	7019.8	[2500]	ug/L	09:45:17
1	Pb 220.353†	6649.1	6654.9	[500]	ug/L	09:45:17
1	S 181.975 Axial†	1242.8	1170.6	[1000]	ug/L	09:45:17
1	Sb 206.836†	2606.1	2551.6	[500]	ug/L	09:45:17
1	Se 196.026†	1514.2	1530.5	[500]	ug/L	09:45:17
1	Si 251.611†	122499.0	121510.3	[2500]	ug/L	09:44:57
1	Sn 189.927†	4778.2	4756.0	[500]	ug/L	09:45:17
1	Sr 421.552†	28452.4	28986.5	[500]	ug/L	09:43:38
1	Ti 334.940†	380085.1	379864.5	[500]	ug/L	09:44:57
1	Tl 190.801†	2870.2	2921.5	[500]	ug/L	09:45:17
1	U 409.014†	15794.5	19574.0	[500]	ug/L	09:44:57
1	V 292.402†	85607.5	86960.7	[500]	ug/L	09:44:57
1	Zn 213.857†	90358.1	88919.6	[500]	ug/L	09:44:57
1	SiO2†	122852.3	121820.1	[5347.5]	ug/L	09:46:17
2	Sc 361.383	1044221.1	1044221.1	98.429	%	09:45:24
2	Sc Radial	5389.0	5389.0	96.8	%	09:44:03
2	Y 371.029	829032.4	829032.4	97.166	%	09:45:24
2	Y RADIAL	4652.3	4652.3	96.61	%	09:44:03
2	Ag 328.068†	124967.2	126322.6	[500]	ug/L	09:45:24
2	Al 396.153Radial†	5096.7	5355.2	[5000]	ug/L	09:44:03
2	As 188.979†	2073.2	2143.2	[500]	ug/L	09:45:44
2	B 249.677†	30724.1	31595.8	[500]	ug/L	09:45:24
2	Ba 233.527†	97214.1	98740.9	[500]	ug/L	09:45:24
2	Be 313.107†	1569041.1	1601392.7	[500]	ug/L	09:45:24
2	Ca 317.933Radial†	1923.3	1969.1	[5000]	ug/L	09:44:23
2	Cd 226.502†	65506.0	66828.8	[500]	ug/L	09:45:24
2	Co 228.616†	39155.7	39870.9	[500]	ug/L	09:45:44
2	Cr 267.716†	57418.9	58363.7	[500]	ug/L	09:45:24
2	Cu 324.752†	208685.4	201823.9	[500]	ug/L	09:45:24
2	K 766.490 Radial†	12541.0	11477.1	[5000]	ug/L	09:44:03
2	Mg 279.077 IEC†	61.0	62.8	[5000]	ug/L	09:44:23
2	Mn 257.610†	623183.7	632300.1	[500]	ug/L	09:45:24
2	Mo 202.031†	12645.3	12815.3	[500]	ug/L	09:45:44
2	Ni 231.604†	30816.1	31159.5	[500]	ug/L	09:45:44
2	P 214.914†	7382.7	7163.6	[2500]	ug/L	09:45:44
2	Pb 220.353†	6652.5	6787.7	[500]	ug/L	09:45:44
2	S 181.975 Axial†	1248.0	1200.1	[1000]	ug/L	09:45:44
2	Sb 206.836†	2600.7	2596.7	[500]	ug/L	09:45:44

2	Se 196.026†	1507.7	1553.3	[500]	ug/L	09:45:44
2	Si 251.611†	120777.2	122144.2	[2500]	ug/L	09:45:24
2	Sn 189.927†	4796.7	4867.8	[500]	ug/L	09:45:44
2	Sr 421.552†	27876.2	28780.3	[500]	ug/L	09:44:03
2	Ti 334.940†	374439.3	381523.0	[500]	ug/L	09:45:24
2	Tl 190.801†	2885.2	2992.7	[500]	ug/L	09:45:44
2	U 409.014†	15437.6	19518.7	[500]	ug/L	09:45:24
2	V 292.402†	84337.2	87335.7	[500]	ug/L	09:45:24
2	Zn 213.857†	89070.9	89369.7	[500]	ug/L	09:45:24
2	SiO2†	121800.6	123141.7	[5347.5]	ug/L	09:46:22
3	Sc 361.383	1046590.0	1046590.0	98.653	%	09:45:52
3	Sc Radial	5352.8	5352.8	96.2	%	09:44:28
3	Y 371.029	832934.3	832934.3	97.623	%	09:45:52
3	Y RADIAL	4634.7	4634.7	96.24	%	09:44:28
3	Ag 328.068†	125631.5	126708.6	[500]	ug/L	09:45:52
3	Al 396.153Radial†	5102.6	5396.9	[5000]	ug/L	09:44:28
3	As 188.979†	2098.8	2164.3	[500]	ug/L	09:46:12
3	B 249.677†	30976.6	31781.2	[500]	ug/L	09:45:52
3	Ba 233.527†	97581.9	98890.3	[500]	ug/L	09:45:52
3	Be 313.107†	1579797.0	1608687.5	[500]	ug/L	09:45:52
3	Ca 317.933Radial†	1928.2	1987.6	[5000]	ug/L	09:44:48
3	Cd 226.502†	65857.4	67034.4	[500]	ug/L	09:45:52
3	Co 228.616†	39345.8	39973.6	[500]	ug/L	09:46:12
3	Cr 267.716†	57872.1	58691.1	[500]	ug/L	09:45:52
3	Cu 324.752†	210164.3	202843.1	[500]	ug/L	09:45:52
3	K 766.490 Radial†	12562.3	11586.7	[5000]	ug/L	09:44:28
3	Mg 279.077 IEC†	60.6	62.8	[5000]	ug/L	09:44:48
3	Mn 257.610†	626191.1	633915.6	[500]	ug/L	09:45:52
3	Mo 202.031†	12686.5	12828.0	[500]	ug/L	09:46:12
3	Ni 231.604†	31017.8	31293.1	[500]	ug/L	09:46:12
3	P 214.914†	7417.6	7182.0	[2500]	ug/L	09:46:12
3	Pb 220.353†	6707.4	6828.1	[500]	ug/L	09:46:12
3	S 181.975 Axial†	1249.2	1198.4	[1000]	ug/L	09:46:12
3	Sb 206.836†	2624.9	2615.3	[500]	ug/L	09:46:12
3	Se 196.026†	1511.8	1554.0	[500]	ug/L	09:46:12
3	Si 251.611†	121349.2	122446.3	[2500]	ug/L	09:45:52
3	Sn 189.927†	4809.3	4869.5	[500]	ug/L	09:46:12
3	Sr 421.552†	27833.2	28930.1	[500]	ug/L	09:44:28
3	Ti 334.940†	376623.4	382875.9	[500]	ug/L	09:45:52
3	Tl 190.801†	2901.3	3002.3	[500]	ug/L	09:46:12
3	U 409.014†	15617.2	19665.2	[500]	ug/L	09:45:52
3	V 292.402†	84908.9	87721.2	[500]	ug/L	09:45:52
3	Zn 213.857†	89582.5	89683.5	[500]	ug/L	09:45:52
3	SiO2†	122195.3	123261.7	[5347.5]	ug/L	09:46:27

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051806.2	11149.30	1.06%	99.144	%
Sc Radial	5401.0	55.21	1.02%	97.1	%
Y 371.029	836198.2	9240.74	1.11%	98.006	%
Y RADIAL	4661.3	32.06	0.69%	96.79	%
Ag 328.068†	126250.8	497.54	0.39%	[500]	ug/L
Al 396.153Radial†	5372.3	21.86	0.41%	[5000]	ug/L
As 188.979†	2136.7	31.42	1.47%	[500]	ug/L
B 249.677†	31635.5	130.46	0.41%	[500]	ug/L
Ba 233.527†	98496.1	558.43	0.57%	[500]	ug/L
Be 313.107†	1602392.5	5859.39	0.37%	[500]	ug/L
Ca 317.933Radial†	1977.7	9.33	0.47%	[5000]	ug/L
Cd 226.502†	66745.4	338.47	0.51%	[500]	ug/L
Co 228.616†	39626.7	514.43	1.30%	[500]	ug/L
Cr 267.716†	58363.0	328.45	0.56%	[500]	ug/L
Cu 324.752†	202167.4	585.22	0.29%	[500]	ug/L
K 766.490 Radial†	11528.2	55.20	0.48%	[5000]	ug/L
Mg 279.077 IEC†	63.2	0.61	0.97%	[5000]	ug/L
Mn 257.610†	631360.0	3133.16	0.50%	[500]	ug/L
Mo 202.031†	12725.2	167.14	1.31%	[500]	ug/L
Ni 231.604†	30973.8	442.43	1.43%	[500]	ug/L
P 214.914†	7121.8	88.83	1.25%	[2500]	ug/L
Pb 220.353†	6756.9	90.64	1.34%	[500]	ug/L

S 181.975 Axial†	1189.7	16.55	1.39%	[1000]	ug/L
Sb 206.836†	2587.9	32.79	1.27%	[500]	ug/L
Se 196.026†	1546.0	13.38	0.87%	[500]	ug/L
Si 251.611†	122033.6	477.69	0.39%	[2500]	ug/L
Sn 189.927†	4831.1	65.06	1.35%	[500]	ug/L
Sr 421.552†	28899.0	106.56	0.37%	[500]	ug/L
Ti 334.940†	381421.2	1508.28	0.40%	[500]	ug/L
Tl 190.801†	2972.2	44.12	1.48%	[500]	ug/L
U 409.014†	19586.0	73.99	0.38%	[500]	ug/L
V 292.402†	87339.2	380.24	0.44%	[500]	ug/L
Zn 213.857†	89324.3	383.98	0.43%	[500]	ug/L
SiO2†	122741.2	799.91	0.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/8/2009 09:48:38
Data Type: Reprocessed on 7/8/2009 11:40:07

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1052663.5	1052663.5	99.225	%	09:51:50
1	Sc Radial	5805.9	5805.9	104	%	09:50:31
1	Y 371.029	835045.6	835045.6	97.871	%	09:51:50
1	Y RADIAL	5007.7	5007.7	104.0	%	09:50:31
1	Ag 328.068†	252879.2	254215.1	[1000]	ug/L	09:51:55
1	Al 396.153Radial†	10753.9	10399.5	[10000]	ug/L	09:50:31
1	As 188.979†	4213.7	4283.5	[1000]	ug/L	09:52:15
1	B 249.677†	63888.7	64769.0	[1000]	ug/L	09:51:55
1	Ba 233.527†	197687.1	199206.4	[1000]	ug/L	09:51:55
1	Be 313.107†	3194923.7	3227185.7	[1000]	ug/L	09:51:50
1	Ca 317.933Radial†	4055.7	3870.4	[10000]	ug/L	09:50:31
1	Cd 226.502†	133744.7	135066.6	[1000]	ug/L	09:51:55
1	Co 228.616†	80516.0	81235.0	[1000]	ug/L	09:51:55
1	Cr 267.716†	117606.8	118553.7	[1000]	ug/L	09:51:55
1	Cu 324.752†	414400.4	407444.8	[1000]	ug/L	09:51:55
1	Fe 238.204 Radial†	287.2	275.0	[10000]	ug/L	09:50:51
1	K 766.490 Radial†	24918.9	22410.9	[10000]	ug/L	09:50:31
1	Mg 279.077 IEC†	131.8	126.2	[10000]	ug/L	09:50:51
1	Mn 257.610†	1260730.8	1269747.4	[1000]	ug/L	09:51:50
1	Mo 202.031†	24798.5	24960.4	[1000]	ug/L	09:52:15
1	Na 589.592 Radial†	3522.0	3546.2	[10000]	ug/L	09:50:31
1	Ni 231.604†	62750.5	63092.2	[1000]	ug/L	09:51:55
1	P 214.914†	14401.2	14176.7	[5000]	ug/L	09:52:15
1	Pb 220.353†	13201.7	13333.9	[1000]	ug/L	09:52:15
1	S 181.975 Axial†	2419.1	2370.2	[2000]	ug/L	09:52:15
1	Sb 206.836†	5119.1	5113.6	[1000]	ug/L	09:52:15
1	Se 196.026†	3047.7	3093.1	[1000]	ug/L	09:52:15
1	Si 251.611†	242154.4	243485.1	[5000]	ug/L	09:51:55
1	Sn 189.927†	9581.3	9650.6	[1000]	ug/L	09:52:15
1	Sr 421.552†	68083.4	65250.5	[1000]	ug/L	09:50:31
1	Ti 334.940†	758941.9	765976.9	[1000]	ug/L	09:51:50
1	Tl 190.801†	5824.9	5931.8	[1000]	ug/L	09:52:15
1	U 409.014†	36638.9	40759.8	[1000]	ug/L	09:51:55
1	V 292.402†	175178.4	178199.0	[1000]	ug/L	09:51:55
1	Zn 213.857†	180211.9	180496.5	[1000]	ug/L	09:51:55
1	SiO2†	241738.8	243023.9	[10695]	ug/L	09:53:25
2	Sc 361.383	1058804.9	1058804.9	99.804	%	09:52:22
2	Sc Radial	5593.3	5593.3	101	%	09:50:56
2	Y 371.029	839441.5	839441.5	98.386	%	09:52:22
2	Y RADIAL	4835.2	4835.2	100.4	%	09:50:56
2	Ag 328.068†	252282.7	252139.2	[1000]	ug/L	09:52:27
2	Al 396.153Radial†	10627.1	10665.3	[10000]	ug/L	09:50:56
2	As 188.979†	4198.8	4244.0	[1000]	ug/L	09:52:48
2	B 249.677†	63795.4	64302.1	[1000]	ug/L	09:52:27
2	Ba 233.527†	196404.5	196765.7	[1000]	ug/L	09:52:27
2	Be 313.107†	3201165.9	3214763.8	[1000]	ug/L	09:52:22
2	Ca 317.933Radial†	4012.0	3974.7	[10000]	ug/L	09:50:56
2	Cd 226.502†	132496.4	133034.0	[1000]	ug/L	09:52:27
2	Co 228.616†	79902.6	80149.8	[1000]	ug/L	09:52:27
2	Cr 267.716†	116813.2	117071.0	[1000]	ug/L	09:52:27
2	Cu 324.752†	414708.3	405330.8	[1000]	ug/L	09:52:27
2	Fe 238.204 Radial†	289.6	287.8	[10000]	ug/L	09:51:16
2	K 766.490 Radial†	24624.2	23025.9	[10000]	ug/L	09:50:56
2	Mg 279.077 IEC†	127.7	126.9	[10000]	ug/L	09:51:16
2	Mn 257.610†	1263110.3	1264761.9	[1000]	ug/L	09:52:22
2	Mo 202.031†	24699.2	24715.9	[1000]	ug/L	09:52:48
2	Na 589.592 Radial†	3465.5	3618.3	[10000]	ug/L	09:50:56
2	Ni 231.604†	62172.3	62146.1	[1000]	ug/L	09:52:27

2	P 214.914†	14342.8	14034.0	[5000]	ug/L	09:52:48
2	Pb 220.353†	13188.3	13243.2	[1000]	ug/L	09:52:48
2	S 181.975 Axial†	2410.9	2347.8	[2000]	ug/L	09:52:48
2	Sb 206.836†	5080.8	5045.3	[1000]	ug/L	09:52:48
2	Se 196.026†	3016.0	3043.5	[1000]	ug/L	09:52:48
2	Si 251.611†	241232.5	241145.8	[5000]	ug/L	09:52:27
2	Sn 189.927†	9534.0	9547.2	[1000]	ug/L	09:52:48
2	Sr 421.552†	66922.4	66576.7	[1000]	ug/L	09:50:56
2	Ti 334.940†	761509.7	764113.3	[1000]	ug/L	09:52:22
2	Tl 190.801†	5811.7	5884.5	[1000]	ug/L	09:52:48
2	U 409.014†	36579.5	40486.0	[1000]	ug/L	09:52:27
2	V 292.402†	173954.8	175949.0	[1000]	ug/L	09:52:27
2	Zn 213.857†	179274.3	178503.7	[1000]	ug/L	09:52:27
2	SiO2†	237359.4	237222.8	[10695]	ug/L	09:53:31
3	Sc 361.383	1057400.6	1057400.6	99.672	%	09:52:54
3	Sc Radial	5464.1	5464.1	98.2	%	09:51:21
3	Y 371.029	838883.9	838883.9	98.320	%	09:52:54
3	Y RADIAL	4771.4	4771.4	99.08	%	09:51:21
3	Ag 328.068†	251287.3	251476.2	[1000]	ug/L	09:53:00
3	Al 396.153Radial†	10656.6	10945.2	[10000]	ug/L	09:51:21
3	As 188.979†	4194.8	4245.6	[1000]	ug/L	09:53:20
3	B 249.677†	63568.3	64159.1	[1000]	ug/L	09:53:00
3	Ba 233.527†	196293.8	196915.9	[1000]	ug/L	09:53:00
3	Be 313.107†	3195458.9	3213297.7	[1000]	ug/L	09:52:54
3	Ca 317.933Radial†	4035.9	4093.3	[10000]	ug/L	09:51:21
3	Cd 226.502†	132396.2	133109.8	[1000]	ug/L	09:53:00
3	Co 228.616†	79823.3	80176.5	[1000]	ug/L	09:53:00
3	Cr 267.716†	116636.7	117049.4	[1000]	ug/L	09:53:00
3	Cu 324.752†	412621.4	403788.9	[1000]	ug/L	09:53:00
3	Fe 238.204 Radial†	285.3	290.2	[10000]	ug/L	09:51:41
3	K 766.490 Radial†	24699.5	23681.6	[10000]	ug/L	09:51:21
3	Mg 279.077 IEC†	125.8	127.9	[10000]	ug/L	09:51:41
3	Mn 257.610†	1259027.5	1262346.4	[1000]	ug/L	09:52:54
3	Mo 202.031†	24845.2	24895.3	[1000]	ug/L	09:53:20
3	Na 589.592 Radial†	3441.7	3675.5	[10000]	ug/L	09:51:21
3	Ni 231.604†	62152.7	62209.1	[1000]	ug/L	09:53:00
3	P 214.914†	14439.3	14149.9	[5000]	ug/L	09:53:20
3	Pb 220.353†	13219.9	13292.5	[1000]	ug/L	09:53:20
3	S 181.975 Axial†	2417.3	2357.4	[2000]	ug/L	09:53:20
3	Sb 206.836†	5111.4	5082.8	[1000]	ug/L	09:53:20
3	Se 196.026†	3040.7	3072.3	[1000]	ug/L	09:53:20
3	Si 251.611†	240711.3	240943.9	[5000]	ug/L	09:53:00
3	Sn 189.927†	9583.2	9609.3	[1000]	ug/L	09:53:20
3	Sr 421.552†	66963.1	68191.7	[1000]	ug/L	09:51:21
3	Ti 334.940†	758629.2	762236.6	[1000]	ug/L	09:52:54
3	Tl 190.801†	5861.7	5942.4	[1000]	ug/L	09:53:20
3	U 409.014†	36527.5	40482.6	[1000]	ug/L	09:53:00
3	V 292.402†	173694.3	175919.0	[1000]	ug/L	09:53:00
3	Zn 213.857†	178849.9	178316.4	[1000]	ug/L	09:53:00
3	SiO2†	243076.9	243275.0	[10695]	ug/L	09:53:36

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1056289.6	3217.89	0.30%	99.567	%
Sc Radial	5621.1	172.60	3.07%	101	%
Y 371.029	837790.3	2393.27	0.29%	98.192	%
Y RADIAL	4871.4	122.27	2.51%	101.2	%
Ag 328.068†	252610.2	1428.92	0.57%	[1000]	ug/L
Al 396.153Radial†	10670.0	272.89	2.56%	[10000]	ug/L
As 188.979†	4257.7	22.40	0.53%	[1000]	ug/L
B 249.677†	64410.1	318.97	0.50%	[1000]	ug/L
Ba 233.527†	197629.3	1367.84	0.69%	[1000]	ug/L
Be 313.107†	3218415.7	7630.29	0.24%	[1000]	ug/L
Ca 317.933Radial†	3979.5	111.54	2.80%	[10000]	ug/L
Cd 226.502†	133736.8	1152.25	0.86%	[1000]	ug/L
Co 228.616†	80520.5	618.97	0.77%	[1000]	ug/L
Cr 267.716†	117558.0	862.30	0.73%	[1000]	ug/L
Cu 324.752†	405521.5	1835.38	0.45%	[1000]	ug/L
Fe 238.204 Radial†	284.3	8.19	2.88%	[10000]	ug/L

K 766.490 Radial†	23039.5	635.42	2.76%	[10000]	ug/L
Mg 279.077 IEC†	127.0	0.88	0.69%	[10000]	ug/L
Mn 257.610†	1265618.6	3774.16	0.30%	[1000]	ug/L
Mo 202.031†	24857.2	126.63	0.51%	[1000]	ug/L
Na 589.592 Radial†	3613.3	64.84	1.79%	[10000]	ug/L
Ni 231.604†	62482.4	529.00	0.85%	[1000]	ug/L
P 214.914†	14120.2	75.84	0.54%	[5000]	ug/L
Pb 220.353†	13289.9	45.38	0.34%	[1000]	ug/L
S 181.975 Axial†	2358.5	11.23	0.48%	[2000]	ug/L
Sb 206.836†	5080.6	34.22	0.67%	[1000]	ug/L
Se 196.026†	3069.7	24.93	0.81%	[1000]	ug/L
Si 251.611†	241858.2	1412.48	0.58%	[5000]	ug/L
Sn 189.927†	9602.4	52.05	0.54%	[1000]	ug/L
Sr 421.552†	66673.0	1472.96	2.21%	[1000]	ug/L
Ti 334.940†	764108.9	1870.18	0.24%	[1000]	ug/L
Tl 190.801†	5919.6	30.81	0.52%	[1000]	ug/L
U 409.014†	40576.1	159.04	0.39%	[1000]	ug/L
V 292.402†	176689.0	1307.77	0.74%	[1000]	ug/L
Zn 213.857†	179105.5	1208.27	0.67%	[1000]	ug/L
SiO2†	241173.9	3424.04	1.42%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/8/2009 09:55:46
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1045205.1	1045205.1	98.522	%	09:58:57
1	Sc Radial	5445.4	5445.4	97.9	%	09:58:00
1	Y 371.029	824719.2	824719.2	96.660	%	09:58:57
1	Y RADIAL	4697.0	4697.0	97.54	%	09:58:00
1	Al 396.153Radial†	53617.0	54885.6	[50000]	ug/L	09:57:40
1	Ca 317.933Radial†	19630.1	20043.9	[50000]	ug/L	09:57:40
1	Fe 238.204 Radial†	559.3	571.2	[20000]	ug/L	09:58:00
1	Mg 279.077 IEC†	611.6	624.9	[50000]	ug/L	09:58:00
1	Na 589.592 Radial†	7093.1	7419.2	[20000]	ug/L	09:57:40
2	Sc 361.383	1039938.4	1039938.4	98.026	%	09:59:03
2	Sc Radial	5322.6	5322.6	95.6	%	09:58:25
2	Y 371.029	821364.5	821364.5	96.267	%	09:59:03
2	Y RADIAL	4573.5	4573.5	94.97	%	09:58:25
2	Al 396.153Radial†	52922.6	55423.3	[50000]	ug/L	09:58:05
2	Ca 317.933Radial†	19349.8	20213.5	[50000]	ug/L	09:58:05
2	Fe 238.204 Radial†	548.4	573.0	[20000]	ug/L	09:58:25
2	Mg 279.077 IEC†	611.0	638.7	[50000]	ug/L	09:58:25
2	Na 589.592 Radial†	6990.6	7479.1	[20000]	ug/L	09:58:05
3	Sc 361.383	1037774.1	1037774.1	97.822	%	09:59:09
3	Sc Radial	5437.5	5437.5	97.7	%	09:58:50
3	Y 371.029	819757.6	819757.6	96.079	%	09:59:09
3	Y RADIAL	4679.6	4679.6	97.17	%	09:58:50
3	Al 396.153Radial†	53368.0	54709.6	[50000]	ug/L	09:58:30
3	Ca 317.933Radial†	19552.5	19993.3	[50000]	ug/L	09:58:30
3	Fe 238.204 Radial†	554.5	567.2	[20000]	ug/L	09:58:50
3	Mg 279.077 IEC†	615.8	630.0	[50000]	ug/L	09:58:50
3	Na 589.592 Radial†	7083.3	7419.6	[20000]	ug/L	09:58:30

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1040972.5	3821.89	0.37%	98.123	%
Sc Radial	5401.8	68.73	1.27%	97.1	%
Y 371.029	821947.1	2531.58	0.31%	96.335	%
Y RADIAL	4650.1	66.85	1.44%	96.56	%
Al 396.153Radial†	55006.2	371.83	0.68%	[50000]	ug/L
Ca 317.933Radial†	20083.6	115.30	0.57%	[50000]	ug/L
Fe 238.204 Radial†	570.5	2.97	0.52%	[20000]	ug/L
Mg 279.077 IEC†	631.2	6.96	1.10%	[50000]	ug/L
Na 589.592 Radial†	7439.3	34.51	0.46%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	252.6	0.00000	0.999999	
Al 396.153Radial	3	Lin Thru 0	0.0	1.099	0.00000	0.999981	
As 188.979	3	Lin Thru 0	0.0	4.261	0.00000	0.999998	
B 249.677	3	Lin Thru 0	0.0	64.16	0.00000	0.999970	
Ba 233.527	3	Lin Thru 0	0.0	197.6	0.00000	0.999992	
Be 313.107	3	Lin Thru 0	0.0	3216	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.4015	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	133.7	0.00000	0.999999	
Co 228.616	3	Lin Thru 0	0.0	80.28	0.00000	0.999977	
Cr 267.716	3	Lin Thru 0	0.0	117.4	0.00000	0.999994	
Cu 324.752	3	Lin Thru 0	0.0	405.3	0.00000	0.999999	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0285	0.00000	0.999999	

K 766.490 Radial	3	Lin Thru 0	0.0	2.305	0.00000	0.999997
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0126	0.00000	0.999999
Mn 257.610	3	Lin Thru 0	0.0	1265	0.00000	0.999995
Mo 202.031	3	Lin Thru 0	0.0	24.98	0.00000	0.999950
Na 589.592 Radia	2	Lin Thru 0	0.0	0.3698	0.00000	0.999934
Ni 231.604	3	Lin Thru 0	0.0	62.39	0.00000	0.999990
P 214.914	3	Lin Thru 0	0.0	2.830	0.00000	0.999989
Pb 220.353	3	Lin Thru 0	0.0	13.34	0.00000	0.999970
S 181.975 Axial	3	Lin Thru 0	0.0	1.181	0.00000	0.999994
Sb 206.836	3	Lin Thru 0	0.0	5.100	0.00000	0.999972
Se 196.026	3	Lin Thru 0	0.0	3.075	0.00000	0.999992
Si 251.611	3	Lin Thru 0	0.0	48.46	0.00000	0.999993
Sn 189.927	3	Lin Thru 0	0.0	9.615	0.00000	0.999997
Sr 421.552	3	Lin Thru 0	0.0	64.91	0.00000	0.998518
Ti 334.940	3	Lin Thru 0	0.0	763.9	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	5.926	0.00000	0.999996
U 409.014	3	Lin Thru 0	0.0	40.30	0.00000	0.999901
V 292.402	3	Lin Thru 0	0.0	176.3	0.00000	0.999989
Zn 213.857	3	Lin Thru 0	0.0	179.1	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	22.63	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/8/2009 10:01:20
Data Type: Reprocessed on 7/8/2009 11:40:08
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1055963.1	1055963.1	99.536	%			10:04:31
1	Sc Radial	5613.9	5613.9	101	%			10:03:13
1	Y 371.029	843980.3	843980.3	98.918	%			10:04:31
1	Y RADIAL	4850.5	4850.5	100.7	%			10:03:13
1	Ag 328.068†	64392.7	64054.1	256.65	ug/L	256.65	ppb	10:04:31
1	Al 396.153Radial†	5477.4	5521.7	5003.5	ug/L	5003.5	ppb	10:03:13
1	As 188.979†	2018.5	2064.8	487.93	ug/L	487.93	ppb	10:04:51
1	B 249.677†	32013.9	32544.6	505.32	ug/L	505.32	ppb	10:04:31
1	Ba 233.527†	105864.5	106333.4	539.45	ug/L	539.45	ppb	10:04:31
1	Be 313.107†	824616.8	835774.7	261.06	ug/L	261.06	ppb	10:04:31
1	Ca 317.933Radial†	1980.0	1945.8	4846.6	ug/L	4846.6	ppb	10:03:33
1	Cd 226.502†	67172.4	67763.0	506.57	ug/L	506.57	ppb	10:04:31
1	Co 228.616†	37965.2	38232.5	476.49	ug/L	476.49	ppb	10:04:51
1	Cr 267.716†	59214.9	59519.4	507.63	ug/L	507.63	ppb	10:04:31
1	Cu 324.752†	223133.1	213981.3	528.24	ug/L	528.24	ppb	10:04:31
1	Fe 238.204 Radial†	145.6	144.0	5067.1	ug/L	5067.1	ppb	10:03:33
1	K 766.490 Radial†	7308.0	5771.0	2501.1	ug/L	2501.1	ppb	10:03:13
1	Mg 279.077 IEC†	65.6	64.8	5140.2	ug/L	5140.2	ppb	10:03:33
1	Mn 257.610†	657421.5	659657.3	521.87	ug/L	521.87	ppb	10:04:31
1	Mo 202.031†	13087.3	13116.5	525.36	ug/L	525.36	ppb	10:04:51
1	Na 589.592 Radial†	775.6	939.2	2539.6	ug/L	2539.6	ppb	10:03:33
1	Ni 231.604†	33519.4	33527.3	537.06	ug/L	537.06	ppb	10:04:31
1	P 214.914†	7515.0	7213.0	2469.3	ug/L	2469.3	ppb	10:04:51
1	Pb 220.353†	6757.4	6817.9	512.49	ug/L	512.49	ppb	10:04:51
1	S 181.975 Axial†	3135.7	3082.5	2608.2	ug/L	2608.2	ppb	10:04:51
1	Sb 206.836†	2711.8	2679.0	533.63	ug/L	533.63	ppb	10:04:51
1	Se 196.026†	7950.7	8009.4	2624.5	ug/L	2624.5	ppb	10:04:51
1	Si 251.611†	241856.0	242422.6	4990.7	ug/L	4990.7	ppb	10:04:31
1	Sn 189.927†	5102.2	5120.5	533.02	ug/L	533.02	ppb	10:04:51
1	Sr 421.552†	33892.8	33591.0	517.48	ug/L	517.48	ppb	10:03:13
1	Ti 334.940†	386933.6	389845.5	510.25	ug/L	510.25	ppb	10:04:31
1	Tl 190.801†	2870.1	2944.9	498.92	ug/L	498.92	ppb	10:04:51
1	U 409.014†	16738.6	20651.3	510.79	ug/L	510.79	ppb	10:04:31
1	V 292.402†	86386.8	88442.0	507.92	ug/L	507.92	ppb	10:04:31
1	Zn 213.857†	92798.7	92108.6	509.43	ug/L	509.43	ppb	10:04:31
1	SiO2†	240647.4	241166.2	10631	ug/L	10631	ppb	10:05:48
2	Sc 361.383	1061154.8	1061154.8	100.03	%			10:04:57
2	Sc Radial	5574.6	5574.6	100	%			10:03:38
2	Y 371.029	847082.8	847082.8	99.281	%			10:04:57
2	Y RADIAL	4828.4	4828.4	100.3	%			10:03:38
2	Ag 328.068†	64498.9	63843.8	255.81	ug/L	255.81	ppb	10:04:57
2	Al 396.153Radial†	5433.4	5516.1	4998.6	ug/L	4998.6	ppb	10:03:38
2	As 188.979†	2002.8	2039.2	481.91	ug/L	481.91	ppb	10:05:17
2	B 249.677†	32167.6	32540.8	505.28	ug/L	505.28	ppb	10:04:57
2	Ba 233.527†	106144.9	106093.4	538.23	ug/L	538.23	ppb	10:04:57
2	Be 313.107†	824477.0	831581.7	259.75	ug/L	259.75	ppb	10:04:57
2	Ca 317.933Radial†	1968.2	1947.8	4851.6	ug/L	4851.6	ppb	10:03:58
2	Cd 226.502†	67276.9	67537.3	504.89	ug/L	504.89	ppb	10:04:57
2	Co 228.616†	37893.6	37974.3	473.26	ug/L	473.26	ppb	10:05:17
2	Cr 267.716†	59208.0	59221.4	505.09	ug/L	505.09	ppb	10:04:57
2	Cu 324.752†	224086.8	213838.1	527.89	ug/L	527.89	ppb	10:04:57
2	Fe 238.204 Radial†	144.3	143.7	5055.6	ug/L	5055.6	ppb	10:03:58
2	K 766.490 Radial†	7330.2	5844.2	2532.9	ug/L	2532.9	ppb	10:03:38
2	Mg 279.077 IEC†	68.0	67.7	5365.3	ug/L	5365.3	ppb	10:03:58
2	Mn 257.610†	658788.7	657792.7	520.39	ug/L	520.39	ppb	10:04:57
2	Mo 202.031†	13056.1	13020.9	521.54	ug/L	521.54	ppb	10:05:17
2	Na 589.592 Radial†	764.6	933.7	2524.5	ug/L	2524.5	ppb	10:03:58
2	Ni 231.604†	33627.1	33470.2	536.15	ug/L	536.15	ppb	10:04:57

2	P 214.914†	7509.3	7170.5	2454.3 ug/L	2454.3 ppb	10:05:17
2	Pb 220.353†	6755.8	6783.1	509.87 ug/L	509.87 ppb	10:05:17
2	S 181.975 Axial†	3111.7	3043.1	2574.9 ug/L	2574.9 ppb	10:05:17
2	Sb 206.836†	2721.3	2675.2	532.82 ug/L	532.82 ppb	10:05:17
2	Se 196.026†	7952.2	7971.8	2612.2 ug/L	2612.2 ppb	10:05:17
2	Si 251.611†	242445.6	241823.3	4978.4 ug/L	4978.4 ppb	10:04:57
2	Sn 189.927†	5103.9	5097.1	530.59 ug/L	530.59 ppb	10:05:17
2	Sr 421.552†	33672.4	33607.8	517.74 ug/L	517.74 ppb	10:03:38
2	Ti 334.940†	387671.3	388681.1	508.73 ug/L	508.73 ppb	10:04:57
2	Tl 190.801†	2874.3	2934.9	497.25 ug/L	497.25 ppb	10:05:17
2	U 409.014†	16726.6	20557.1	508.46 ug/L	508.46 ppb	10:04:57
2	V 292.402†	86445.6	88076.2	505.80 ug/L	505.80 ppb	10:04:57
2	Zn 213.857†	92897.2	91751.0	507.43 ug/L	507.43 ppb	10:04:57
2	SiO2†	237580.2	236916.9	10443 ug/L	10443 ppb	10:05:54
3	Sc 361.383	1046189.2	1046189.2	98.615 %		10:05:23
3	Sc Radial	5513.6	5513.6	99.1 %		10:04:03
3	Y 371.029	834847.1	834847.1	97.847 %		10:05:23
3	Y RADIAL	4760.8	4760.8	98.86 %		10:04:03
3	Ag 328.068†	63545.9	63799.7	255.72 ug/L	255.72 ppb	10:05:23
3	Al 396.153Radial†	5377.5	5519.7	5001.6 ug/L	5001.6 ppb	10:04:03
3	As 188.979†	2001.8	2066.8	488.43 ug/L	488.43 ppb	10:05:43
3	B 249.677†	31566.1	32390.9	502.89 ug/L	502.89 ppb	10:05:23
3	Ba 233.527†	104823.4	106271.3	539.14 ug/L	539.14 ppb	10:05:23
3	Be 313.107†	812519.1	831246.8	259.64 ug/L	259.64 ppb	10:05:23
3	Ca 317.933Radial†	1993.1	1994.7	4968.4 ug/L	4968.4 ppb	10:04:23
3	Cd 226.502†	66540.9	67753.1	506.47 ug/L	506.47 ppb	10:05:23
3	Co 228.616†	37778.7	38399.7	478.58 ug/L	478.58 ppb	10:05:43
3	Cr 267.716†	58457.7	59307.3	505.83 ug/L	505.83 ppb	10:05:23
3	Cu 324.752†	219384.3	212274.2	524.04 ug/L	524.04 ppb	10:05:23
3	Fe 238.204 Radial†	150.5	151.5	5330.8 ug/L	5330.8 ppb	10:04:23
3	K 766.490 Radial†	7160.3	5753.8	2493.9 ug/L	2493.9 ppb	10:04:03
3	Mg 279.077 IEC†	66.6	67.1	5318.0 ug/L	5318.0 ppb	10:04:23
3	Mn 257.610†	650091.5	658394.7	520.91 ug/L	520.91 ppb	10:05:23
3	Mo 202.031†	13030.1	13181.3	527.98 ug/L	527.98 ppb	10:05:43
3	Na 589.592 Radial†	777.1	954.8	2581.6 ug/L	2581.6 ppb	10:04:23
3	Ni 231.604†	33207.7	33525.8	537.04 ug/L	537.04 ppb	10:05:23
3	P 214.914†	7486.1	7254.4	2484.4 ug/L	2484.4 ppb	10:05:43
3	Pb 220.353†	6694.0	6817.1	512.41 ug/L	512.41 ppb	10:05:43
3	S 181.975 Axial†	3113.7	3089.6	2614.2 ug/L	2614.2 ppb	10:05:43
3	Sb 206.836†	2715.5	2708.2	539.48 ug/L	539.48 ppb	10:05:43
3	Se 196.026†	7890.8	8023.3	2629.9 ug/L	2629.9 ppb	10:05:43
3	Si 251.611†	238657.3	241449.0	4970.5 ug/L	4970.5 ppb	10:05:23
3	Sn 189.927†	5067.2	5132.9	534.33 ug/L	534.33 ppb	10:05:43
3	Sr 421.552†	33182.0	33485.1	515.84 ug/L	515.84 ppb	10:04:03
3	Ti 334.940†	381414.1	387880.2	507.69 ug/L	507.69 ppb	10:05:23
3	Tl 190.801†	2873.4	2975.2	504.01 ug/L	504.01 ppb	10:05:43
3	U 409.014†	16428.1	20493.6	506.85 ug/L	506.85 ppb	10:05:23
3	V 292.402†	84994.3	87840.8	504.50 ug/L	504.50 ppb	10:05:23
3	Zn 213.857†	91642.8	91807.5	507.72 ug/L	507.72 ppb	10:05:23
3	SiO2†	239859.9	242626.3	10695 ug/L	10695 ppb	10:05:59

Mean Data: ICV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054435.7	99.392	%	0.7163				0.72%
Sc Radial	5567.4	100	%	0.9				0.91%
Y 371.029	841970.1	98.682	%	0.7455				0.76%
Y RADIAL	4813.2	99.95	%	0.971				0.97%
Ag 328.068†	63899.2	256.06	ug/L	0.515	256.06	ppb	0.515	0.20%
QC value within limits for Ag 328.068 Recovery = 102.42%								
Al 396.153Radial†	5519.1	5001.2	ug/L	2.50	5001.2	ppb	2.50	0.05%
QC value within limits for Al 396.153Radial Recovery = 100.02%								
As 188.979†	2056.9	486.09	ug/L	3.628	486.09	ppb	3.628	0.75%
QC value within limits for As 188.979 Recovery = 97.22%								
B 249.677†	32492.1	504.50	ug/L	1.392	504.50	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.90%								
Ba 233.527†	106232.7	538.94	ug/L	0.633	538.94	ppb	0.633	0.12%
QC value within limits for Ba 233.527 Recovery = 107.79%								
Be 313.107†	832867.8	260.15	ug/L	0.787	260.15	ppb	0.787	0.30%
QC value within limits for Be 313.107 Recovery = 104.06%								

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Ca 317.933Radial†       1962.7      4888.9 ug/L        68.91      4888.9 ppb        68.91   1.41%
   QC value within limits for Ca 317.933Radial  Recovery = 97.78%
Cd 226.502†            67684.5      505.98 ug/L        0.945      505.98 ppb        0.945   0.19%
   QC value within limits for Cd 226.502  Recovery = 101.20%
Co 228.616†            38202.2      476.11 ug/L        2.677      476.11 ppb        2.677   0.56%
   QC value within limits for Co 228.616  Recovery = 95.22%
Cr 267.716†            59349.4      506.19 ug/L        1.307      506.19 ppb        1.307   0.26%
   QC value within limits for Cr 267.716  Recovery = 101.24%
Cu 324.752†           213364.5      526.72 ug/L        2.327      526.72 ppb        2.327   0.44%
   QC value within limits for Cu 324.752  Recovery = 105.34%
Fe 238.204 Radial†       146.4      5151.2 ug/L       155.66      5151.2 ppb       155.66   3.02%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.02%
K 766.490 Radial†       5789.7      2509.3 ug/L        20.76      2509.3 ppb        20.76   0.83%
   QC value within limits for K 766.490 Radial  Recovery = 100.37%
Mg 279.077 IEC†           66.5      5274.5 ug/L       118.66      5274.5 ppb       118.66   2.25%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.49%
Mn 257.610†           658614.9      521.06 ug/L        0.751      521.06 ppb        0.751   0.14%
   QC value within limits for Mn 257.610  Recovery = 104.21%
Mo 202.031†            13106.2      524.96 ug/L        3.238      524.96 ppb        3.238   0.62%
   QC value within limits for Mo 202.031  Recovery = 104.99%
Na 589.592 Radial†       942.6      2548.6 ug/L        29.60      2548.6 ppb        29.60   1.16%
   QC value within limits for Na 589.592 Radial  Recovery = 101.94%
Ni 231.604†            33507.8      536.75 ug/L        0.520      536.75 ppb        0.520   0.10%
   QC value within limits for Ni 231.604  Recovery = 107.35%
P 214.914†              7212.6      2469.3 ug/L        15.04      2469.3 ppb        15.04   0.61%
   QC value within limits for P 214.914  Recovery = 98.77%
Pb 220.353†             6806.1      511.59 ug/L        1.490      511.59 ppb        1.490   0.29%
   QC value within limits for Pb 220.353  Recovery = 102.32%
S 181.975 Axial†        3071.7      2599.1 ug/L        21.20      2599.1 ppb        21.20   0.82%
   QC value within limits for S 181.975 Axial  Recovery = 103.96%
Sb 206.836†             2687.5      535.31 ug/L        3.632      535.31 ppb        3.632   0.68%
   QC value within limits for Sb 206.836  Recovery = 107.06%
Se 196.026†             8001.5      2622.2 ug/L         9.08      2622.2 ppb         9.08   0.35%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†           241898.3      4979.9 ug/L        10.15      4979.9 ppb        10.15   0.20%
   QC value within limits for Si 251.611  Recovery = 99.60%
Sn 189.927†             5116.8      532.64 ug/L        1.897      532.64 ppb        1.897   0.36%
   QC value within limits for Sn 189.927  Recovery = 106.53%
Sr 421.552†            33561.3      517.02 ug/L        1.026      517.02 ppb        1.026   0.20%
   QC value within limits for Sr 421.552  Recovery = 103.40%
Ti 334.940†           388802.3      508.89 ug/L        1.289      508.89 ppb        1.289   0.25%
   QC value within limits for Ti 334.940  Recovery = 101.78%
Tl 190.801†             2951.7      500.06 ug/L        3.524      500.06 ppb        3.524   0.70%
   QC value within limits for Tl 190.801  Recovery = 100.01%
U 409.014†             20567.3      508.70 ug/L        1.982      508.70 ppb        1.982   0.39%
   QC value within limits for U 409.014  Recovery = 101.74%
V 292.402†             88119.7      506.07 ug/L        1.724      506.07 ppb        1.724   0.34%
   QC value within limits for V 292.402  Recovery = 101.21%
Zn 213.857†            91889.0      508.19 ug/L        1.080      508.19 ppb        1.080   0.21%
   QC value within limits for Zn 213.857  Recovery = 101.64%
SiO2†                 240236.5       10590 ug/L        130.9       10590 ppb        130.9   1.24%
   QC value within limits for SiO2  Recovery = 99.02%
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/8/2009 10:08:09
Data Type: Reprocessed on 7/8/2009 11:40:09

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1062518.9	1062518.9	100.15	%			10:11:19
1	Sc Radial	5619.2	5619.2	101	%			10:10:02
1	Y 371.029	855063.0	855063.0	100.22	%			10:11:19
1	Y RADIAL	4891.2	4891.2	101.6	%			10:10:02
1	Ag 328.068†	686.9	47.3	0.1796	ug/L	0.1796	ppb	10:11:24
1	Al 396.153Radial†	-95.5	-2.4	-2.1842	ug/L	-2.1842	ppb	10:10:02
1	As 188.979†	-51.6	-14.6	-3.4416	ug/L	-3.4416	ppb	10:11:44
1	B 249.677†	-113.0	268.7	4.1899	ug/L	4.1899	ppb	10:11:24
1	Ba 233.527†	27.7	3.4	0.0163	ug/L	0.0163	ppb	10:11:44
1	Be 313.107†	-7419.2	-91.5	-0.0284	ug/L	-0.0284	ppb	10:11:24
1	Ca 317.933Radial†	20.0	2.8	7.0382	ug/L	7.0382	ppb	10:10:22
1	Cd 226.502†	-268.6	9.5	0.0735	ug/L	0.0735	ppb	10:11:44
1	Co 228.616†	-84.2	6.3	0.0795	ug/L	0.0795	ppb	10:11:44
1	Cr 267.716†	-63.7	-35.0	-0.2989	ug/L	-0.2989	ppb	10:11:24
1	Cu 324.752†	10404.8	197.5	0.4861	ug/L	0.4861	ppb	10:11:24
1	Fe 238.204 Radial†	-0.3	-0.6	-22.095	ug/L	-22.095	ppb	10:10:22
1	K 766.490 Radial†	1537.8	49.9	21.622	ug/L	21.622	ppb	10:10:02
1	Mg 279.077 IEC†	-0.3	-0.5	-40.804	ug/L	-40.804	ppb	10:10:22
1	Mn 257.610†	863.6	35.2	0.0257	ug/L	0.0257	ppb	10:11:44
1	Mo 202.031†	34.2	2.4	0.0952	ug/L	0.0952	ppb	10:11:44
1	Na 589.592 Radial†	-172.2	-0.1	-0.2094	ug/L	-0.2094	ppb	10:10:22
1	Ni 231.604†	165.5	17.0	0.2724	ug/L	0.2724	ppb	10:11:44
1	P 214.914†	359.3	21.8	7.6434	ug/L	7.6434	ppb	10:11:44
1	Pb 220.353†	-14.3	14.8	1.1103	ug/L	1.1103	ppb	10:11:44
1	S 181.975 Axial†	61.3	-6.6	-5.6162	ug/L	-5.6162	ppb	10:11:44
1	Sb 206.836†	50.7	5.2	1.0374	ug/L	1.0374	ppb	10:11:44
1	Se 196.026†	-15.1	6.5	2.0343	ug/L	2.0343	ppb	10:11:44
1	Si 251.611†	605.7	44.7	0.9121	ug/L	0.9121	ppb	10:11:44
1	Sn 189.927†	10.2	4.7	0.4889	ug/L	0.4889	ppb	10:11:44
1	Sr 421.552†	8.2	2.6	0.0401	ug/L	0.0401	ppb	10:10:22
1	Ti 334.940†	-1098.3	12.6	0.0172	ug/L	0.0172	ppb	10:11:24
1	Tl 190.801†	-61.2	0.3	0.0480	ug/L	0.0480	ppb	10:11:44
1	U 409.014†	-3850.0	-9.3	-0.2275	ug/L	-0.2275	ppb	10:11:19
1	V 292.402†	-1677.0	-21.6	-0.1194	ug/L	-0.1194	ppb	10:11:24
1	Zn 213.857†	1258.4	134.0	0.7499	ug/L	0.7499	ppb	10:11:44
1	SiO2†	620.8	17.5	0.7492	ug/L	0.7492	ppb	10:12:50
2	Sc 361.383	1069316.7	1069316.7	100.80	%			10:11:49
2	Sc Radial	5629.3	5629.3	101	%			10:10:27
2	Y 371.029	858517.5	858517.5	100.62	%			10:11:49
2	Y RADIAL	4855.9	4855.9	100.8	%			10:10:27
2	Ag 328.068†	676.2	32.3	0.1208	ug/L	0.1208	ppb	10:11:54
2	Al 396.153Radial†	-91.2	2.0	1.8521	ug/L	1.8521	ppb	10:10:27
2	As 188.979†	-44.8	-7.5	-1.7654	ug/L	-1.7654	ppb	10:12:14
2	B 249.677†	-123.3	259.2	4.0408	ug/L	4.0408	ppb	10:11:54
2	Ba 233.527†	23.9	-0.6	-0.0030	ug/L	-0.0030	ppb	10:12:14
2	Be 313.107†	-7510.8	-135.4	-0.0419	ug/L	-0.0419	ppb	10:11:54
2	Ca 317.933Radial†	16.0	-1.1	-2.7930	ug/L	-2.7930	ppb	10:10:47
2	Cd 226.502†	-288.6	-8.6	-0.0630	ug/L	-0.0630	ppb	10:12:14
2	Co 228.616†	-88.3	2.8	0.0352	ug/L	0.0352	ppb	10:12:14
2	Cr 267.716†	-28.7	0.1	0.0000	ug/L	0.0000	ppb	10:11:54
2	Cu 324.752†	10297.6	25.1	0.0611	ug/L	0.0611	ppb	10:11:54
2	Fe 238.204 Radial†	-0.0	-0.4	-13.229	ug/L	-13.229	ppb	10:10:47
2	K 766.490 Radial†	1552.5	61.7	26.759	ug/L	26.759	ppb	10:10:27
2	Mg 279.077 IEC†	2.2	2.0	160.02	ug/L	160.02	ppb	10:10:47
2	Mn 257.610†	868.0	34.2	0.0222	ug/L	0.0222	ppb	10:12:14
2	Mo 202.031†	38.9	6.8	0.2725	ug/L	0.2725	ppb	10:12:14
2	Na 589.592 Radial†	-186.1	-13.6	-36.706	ug/L	-36.706	ppb	10:10:47
2	Ni 231.604†	162.3	12.7	0.2043	ug/L	0.2043	ppb	10:12:14

2	P 214.914†	334.4	-5.1	-1.8065 ug/L	-1.8065 ppb	10:12:14
2	Pb 220.353†	-20.2	9.0	0.6783 ug/L	0.6783 ppb	10:12:14
2	S 181.975 Axial†	69.9	1.5	1.2588 ug/L	1.2588 ppb	10:12:14
2	Sb 206.836†	55.1	9.2	1.8205 ug/L	1.8205 ppb	10:12:14
2	Se 196.026†	-16.1	5.6	1.7877 ug/L	1.7877 ppb	10:12:14
2	Si 251.611†	597.5	32.7	0.6587 ug/L	0.6587 ppb	10:12:14
2	Sn 189.927†	12.0	6.5	0.6728 ug/L	0.6728 ppb	10:12:14
2	Sr 421.552†	-0.3	-5.8	-0.0892 ug/L	-0.0892 ppb	10:10:47
2	Ti 334.940†	-1058.2	59.4	0.0757 ug/L	0.0757 ppb	10:11:54
2	Tl 190.801†	-64.4	-2.5	-0.4195 ug/L	-0.4195 ppb	10:12:14
2	U 409.014†	-3694.3	169.6	4.2087 ug/L	4.2087 ppb	10:11:49
2	V 292.402†	-1628.9	36.7	0.2243 ug/L	0.2243 ppb	10:11:54
2	Zn 213.857†	1236.8	104.6	0.5788 ug/L	0.5788 ppb	10:12:14
2	SiO2†	605.7	-1.5	-0.0994 ug/L	-0.0994 ppb	10:12:55
3	Sc 361.383	1062135.4	1062135.4	100.12 %		10:12:20
3	Sc Radial	5726.3	5726.3	103 %		10:10:52
3	Y 371.029	854170.1	854170.1	100.11 %		10:12:20
3	Y RADIAL	4978.7	4978.7	103.4 %		10:10:52
3	Ag 328.068†	596.6	-42.7	-0.1739 ug/L	-0.1739 ppb	10:12:25
3	Al 396.153Radial†	-64.8	29.2	26.595 ug/L	26.595 ppb	10:10:52
3	As 188.979†	-48.3	-11.4	-2.6739 ug/L	-2.6739 ppb	10:12:45
3	B 249.677†	-137.5	244.2	3.8077 ug/L	3.8077 ppb	10:12:25
3	Ba 233.527†	32.8	8.5	0.0434 ug/L	0.0434 ppb	10:12:45
3	Be 313.107†	-7462.3	-137.3	-0.0426 ug/L	-0.0426 ppb	10:12:25
3	Ca 317.933Radial†	21.3	3.8	9.4766 ug/L	9.4766 ppb	10:11:12
3	Cd 226.502†	-293.9	-15.9	-0.1159 ug/L	-0.1159 ppb	10:12:45
3	Co 228.616†	-77.2	13.3	0.1659 ug/L	0.1659 ppb	10:12:45
3	Cr 267.716†	9.4	38.0	0.3245 ug/L	0.3245 ppb	10:12:25
3	Cu 324.752†	10285.9	82.5	0.2022 ug/L	0.2022 ppb	10:12:25
3	Fe 238.204 Radial†	-0.3	-0.6	-22.364 ug/L	-22.364 ppb	10:11:12
3	K 766.490 Radial†	1501.0	-14.5	-6.2704 ug/L	-6.2704 ppb	10:10:52
3	Mg 279.077 IEC†	-1.8	-1.9	-151.32 ug/L	-151.32 ppb	10:11:12
3	Mn 257.610†	857.0	29.0	0.0229 ug/L	0.0229 ppb	10:12:45
3	Mo 202.031†	36.6	4.8	0.1888 ug/L	0.1888 ppb	10:12:45
3	Na 589.592 Radial†	-183.0	-7.4	-20.091 ug/L	-20.091 ppb	10:11:12
3	Ni 231.604†	155.8	7.4	0.1180 ug/L	0.1180 ppb	10:12:45
3	P 214.914†	337.7	0.4	0.1410 ug/L	0.1410 ppb	10:12:45
3	Pb 220.353†	-5.3	23.7	1.7877 ug/L	1.7877 ppb	10:12:45
3	S 181.975 Axial†	71.0	3.0	2.5743 ug/L	2.5743 ppb	10:12:45
3	Sb 206.836†	52.0	6.6	1.2846 ug/L	1.2846 ppb	10:12:45
3	Se 196.026†	-12.9	8.7	2.7668 ug/L	2.7668 ppb	10:12:45
3	Si 251.611†	618.9	58.0	1.1952 ug/L	1.1952 ppb	10:12:45
3	Sn 189.927†	7.7	2.3	0.2347 ug/L	0.2347 ppb	10:12:45
3	Sr 421.552†	-1.2	-6.6	-0.1023 ug/L	-0.1023 ppb	10:11:12
3	Ti 334.940†	-1088.2	22.3	0.0301 ug/L	0.0301 ppb	10:12:25
3	Tl 190.801†	-57.0	4.4	0.7456 ug/L	0.7456 ppb	10:12:45
3	U 409.014†	-3872.6	-33.3	-0.8247 ug/L	-0.8247 ppb	10:12:20
3	V 292.402†	-1572.8	81.8	0.4653 ug/L	0.4653 ppb	10:12:25
3	Zn 213.857†	1256.5	132.6	0.7473 ug/L	0.7473 ppb	10:12:45
3	SiO2†	684.3	81.2	3.5825 ug/L	3.5825 ppb	10:13:00

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1064657.0	100.36	%	0.381				0.38%
Sc Radial	5658.3	102	%	1.1				1.05%
Y 371.029	855916.8	100.32	%	0.269				0.27%
Y RADIAL	4908.6	101.9	%	1.31				1.29%
Ag 328.068†	12.3	0.0422	ug/L	0.18942	0.0422	ppb	0.18942	448.85%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.6	8.7543	ug/L	15.58188	8.7543	ppb	15.58188	177.99%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.2	-2.6270	ug/L	0.83913	-2.6270	ppb	0.83913	31.94%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	257.3	4.0128	ug/L	0.19262	4.0128	ppb	0.19262	4.80%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.7	0.0189	ug/L	0.02328	0.0189	ppb	0.02328	123.18%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.4	-0.0376	ug/L	0.00800	-0.0376	ppb	0.00800	21.25%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          1.8      4.5739 ug/L       6.49541      4.5739 ppb        6.49541 142.01%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -5.0     -0.0351 ug/L       0.09773     -0.0351 ppb        0.09773 278.26%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                7.5      0.0936 ug/L       0.06649      0.0936 ppb        0.06649  71.07%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                1.1      0.0085 ug/L       0.31178      0.0085 ppb        0.31178 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              101.7      0.2498 ug/L       0.21648      0.2498 ppb        0.21648  86.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5     -19.229 ug/L        5.1983     -19.229 ppb         5.1983  27.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         32.4      14.037 ug/L       17.7734      14.037 ppb        17.7734 126.62%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.1     -10.703 ug/L      157.8385     -10.703 ppb       157.8385 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               32.8      0.0236 ug/L       0.00188      0.0236 ppb        0.00188   7.96%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.7      0.1855 ug/L       0.08870      0.1855 ppb        0.08870  47.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -7.0     -19.002 ug/L       18.2728     -19.002 ppb        18.2728  96.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               12.4      0.1983 ug/L       0.07739      0.1983 ppb        0.07739  39.03%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 5.7      1.9926 ug/L       4.98968      1.9926 ppb        4.98968 250.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               15.9      1.1921 ug/L       0.55921      1.1921 ppb        0.55921  46.91%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.7     -0.5944 ug/L       4.39850     -0.5944 ppb        4.39850 740.05%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.0      1.3808 ug/L       0.40029      1.3808 ppb        0.40029  28.99%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                7.0      2.1962 ug/L       0.50925      2.1962 ppb        0.50925  23.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               45.1      0.9220 ug/L       0.26841      0.9220 ppb        0.26841  29.11%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.5      0.4655 ug/L       0.22000      0.4655 ppb        0.22000  47.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -3.3     -0.0505 ug/L       0.07870     -0.0505 ppb        0.07870 155.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               31.5      0.0410 ug/L       0.03074      0.0410 ppb        0.03074  74.91%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.7      0.1247 ug/L       0.58632      0.1247 ppb        0.58632 470.17%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                42.3      1.0522 ug/L       2.74987      1.0522 ppb        2.74987 261.36%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                32.3      0.1900 ug/L       0.29386      0.1900 ppb        0.29386 154.62%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              123.8      0.6920 ug/L       0.09801      0.6920 ppb        0.09801  14.16%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     32.4      1.4108 ug/L       1.92802      1.4108 ppb        1.92802 136.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/8/2009 10:15:11
Data Type: Reprocessed on 7/8/2009 11:40:11

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1047868.8	1047868.8	98.773	%			10:18:21
1	Sc Radial	5489.2	5489.2	98.6	%			10:17:05
1	Y 371.029	843324.4	843324.4	98.841	%			10:18:21
1	Y RADIAL	4749.6	4749.6	98.63	%			10:17:05
1	Ag 328.068†	1908.9	1294.0	5.1281	ug/L	5.1281	ppb	10:18:26
1	Al 396.153Radial†	137.4	231.5	210.24	ug/L	210.24	ppb	10:17:05
1	As 188.979†	70.2	108.0	25.354	ug/L	25.354	ppb	10:18:47
1	B 249.677†	2924.9	3342.8	52.070	ug/L	52.070	ppb	10:18:26
1	Ba 233.527†	1019.6	1008.0	5.1161	ug/L	5.1161	ppb	10:18:47
1	Be 313.107†	8654.4	16078.1	5.0107	ug/L	5.0107	ppb	10:18:26
1	Ca 317.933Radial†	95.1	79.5	197.91	ug/L	197.91	ppb	10:17:25
1	Cd 226.502†	377.6	659.9	4.9265	ug/L	4.9265	ppb	10:18:47
1	Co 228.616†	298.6	392.8	4.9073	ug/L	4.9073	ppb	10:18:47
1	Cr 267.716†	559.7	595.3	5.0626	ug/L	5.0626	ppb	10:18:47
1	Cu 324.752†	13982.0	3964.4	9.7874	ug/L	9.7874	ppb	10:18:26
1	Fe 238.204 Radial†	3.4	3.1	108.63	ug/L	108.63	ppb	10:17:25
1	K 766.490 Radial†	1881.1	433.9	188.09	ug/L	188.09	ppb	10:17:05
1	Mg 279.077 IEC†	3.4	3.3	260.55	ug/L	260.55	ppb	10:17:25
1	Mn 257.610†	13937.0	13283.1	10.506	ug/L	10.506	ppb	10:18:26
1	Mo 202.031†	283.1	254.8	10.207	ug/L	10.207	ppb	10:18:47
1	Na 589.592 Radial†	-73.9	95.5	258.17	ug/L	258.17	ppb	10:17:25
1	Ni 231.604†	470.7	328.3	5.2585	ug/L	5.2585	ppb	10:18:47
1	P 214.914†	747.0	419.3	146.74	ug/L	146.74	ppb	10:18:47
1	Pb 220.353†	129.9	160.5	12.084	ug/L	12.084	ppb	10:18:47
1	S 181.975 Axial†	177.5	111.8	94.633	ug/L	94.633	ppb	10:18:47
1	Sb 206.836†	107.1	63.0	12.627	ug/L	12.627	ppb	10:18:47
1	Se 196.026†	79.0	101.6	33.458	ug/L	33.458	ppb	10:18:47
1	Si 251.611†	5379.4	4886.1	100.55	ug/L	100.55	ppb	10:18:26
1	Sn 189.927†	102.0	97.8	10.192	ug/L	10.192	ppb	10:18:47
1	Sr 421.552†	343.2	342.5	5.2744	ug/L	5.2744	ppb	10:17:25
1	Ti 334.940†	2629.6	3771.5	4.9245	ug/L	4.9245	ppb	10:18:26
1	Tl 190.801†	45.6	107.5	18.194	ug/L	18.194	ppb	10:18:47
1	U 409.014†	-1614.8	2199.9	54.559	ug/L	54.559	ppb	10:18:21
1	V 292.402†	-733.6	910.1	5.3790	ug/L	5.3790	ppb	10:18:26
1	Zn 213.857†	2833.5	1746.3	9.6832	ug/L	9.6832	ppb	10:18:47
1	SiO2†	5363.4	4827.7	212.72	ug/L	212.72	ppb	10:19:53
2	Sc 361.383	1047486.5	1047486.5	98.737	%			10:18:52
2	Sc Radial	5556.3	5556.3	99.8	%			10:17:30
2	Y 371.029	843422.2	843422.2	98.852	%			10:18:52
2	Y RADIAL	4839.9	4839.9	100.5	%			10:17:30
2	Ag 328.068†	1979.1	1365.8	5.4057	ug/L	5.4057	ppb	10:18:57
2	Al 396.153Radial†	131.7	224.1	203.50	ug/L	203.50	ppb	10:17:30
2	As 188.979†	79.1	117.0	27.460	ug/L	27.460	ppb	10:19:17
2	B 249.677†	2837.5	3255.3	50.709	ug/L	50.709	ppb	10:18:57
2	Ba 233.527†	999.5	988.0	5.0149	ug/L	5.0149	ppb	10:19:17
2	Be 313.107†	8590.8	16016.9	4.9918	ug/L	4.9918	ppb	10:18:57
2	Ca 317.933Radial†	97.2	80.4	200.20	ug/L	200.20	ppb	10:17:50
2	Cd 226.502†	375.2	657.6	4.9119	ug/L	4.9119	ppb	10:19:17
2	Co 228.616†	313.3	407.7	5.0943	ug/L	5.0943	ppb	10:19:17
2	Cr 267.716†	522.4	557.7	4.7420	ug/L	4.7420	ppb	10:19:17
2	Cu 324.752†	14012.6	4000.6	9.8754	ug/L	9.8754	ppb	10:18:57
2	Fe 238.204 Radial†	2.8	2.4	85.690	ug/L	85.690	ppb	10:17:50
2	K 766.490 Radial†	1891.7	421.5	182.69	ug/L	182.69	ppb	10:17:30
2	Mg 279.077 IEC†	3.4	3.3	259.03	ug/L	259.03	ppb	10:17:50
2	Mn 257.610†	13825.0	13174.8	10.418	ug/L	10.418	ppb	10:18:57
2	Mo 202.031†	288.8	260.7	10.442	ug/L	10.442	ppb	10:19:17
2	Na 589.592 Radial†	-60.0	110.3	298.35	ug/L	298.35	ppb	10:17:50
2	Ni 231.604†	467.6	325.3	5.2109	ug/L	5.2109	ppb	10:19:17

2	P 214.914†	747.1	419.7	146.89 ug/L	146.89 ppb	10:19:17
2	Pb 220.353†	109.3	139.8	10.531 ug/L	10.531 ppb	10:19:17
2	S 181.975 Axial†	174.7	109.1	92.292 ug/L	92.292 ppb	10:19:17
2	Sb 206.836†	103.9	59.8	12.037 ug/L	12.037 ppb	10:19:17
2	Se 196.026†	78.5	101.1	33.226 ug/L	33.226 ppb	10:19:17
2	Si 251.611†	5425.5	4934.8	101.55 ug/L	101.55 ppb	10:18:57
2	Sn 189.927†	110.5	106.5	11.091 ug/L	11.091 ppb	10:19:17
2	Sr 421.552†	350.2	345.2	5.3169 ug/L	5.3169 ppb	10:17:50
2	Ti 334.940†	2664.9	3808.2	4.9728 ug/L	4.9728 ppb	10:18:57
2	Tl 190.801†	64.2	126.4	21.375 ug/L	21.375 ppb	10:19:17
2	U 409.014†	-1616.1	2197.9	54.515 ug/L	54.515 ppb	10:18:52
2	V 292.402†	-696.6	947.3	5.5964 ug/L	5.5964 ppb	10:18:57
2	Zn 213.857†	2826.6	1740.4	9.6528 ug/L	9.6528 ppb	10:19:17
2	SiO2†	5326.0	4791.8	211.13 ug/L	211.13 ppb	10:19:58
3	Sc 361.383	1064715.9	1064715.9	100.36 %		10:19:22
3	Sc Radial	5636.0	5636.0	101 %		10:17:55
3	Y 371.029	857151.8	857151.8	100.46 %		10:19:22
3	Y RADIAL	4900.5	4900.5	101.8 %		10:17:55
3	Ag 328.068†	1947.8	1302.2	5.1615 ug/L	5.1615 ppb	10:19:27
3	Al 396.153Radial†	113.0	203.8	185.06 ug/L	185.06 ppb	10:17:55
3	As 188.979†	78.8	115.4	27.092 ug/L	27.092 ppb	10:19:47
3	B 249.677†	2917.2	3288.2	51.219 ug/L	51.219 ppb	10:19:27
3	Ba 233.527†	1004.9	977.0	4.9582 ug/L	4.9582 ppb	10:19:47
3	Be 313.107†	8767.1	16051.7	5.0025 ug/L	5.0025 ppb	10:19:27
3	Ca 317.933Radial†	96.9	78.7	196.13 ug/L	196.13 ppb	10:18:15
3	Cd 226.502†	363.6	640.0	4.7768 ug/L	4.7768 ppb	10:19:47
3	Co 228.616†	310.3	399.6	4.9919 ug/L	4.9919 ppb	10:19:47
3	Cr 267.716†	528.2	554.9	4.7188 ug/L	4.7188 ppb	10:19:47
3	Cu 324.752†	14146.2	3904.0	9.6387 ug/L	9.6387 ppb	10:19:27
3	Fe 238.204 Radial†	3.6	3.2	111.85 ug/L	111.85 ppb	10:18:15
3	K 766.490 Radial†	1829.8	333.6	144.57 ug/L	144.57 ppb	10:17:55
3	Mg 279.077 IEC†	6.0	5.8	456.93 ug/L	456.93 ppb	10:18:15
3	Mn 257.610†	14031.0	13153.4	10.401 ug/L	10.401 ppb	10:19:27
3	Mo 202.031†	277.9	245.2	9.8210 ug/L	9.8210 ppb	10:19:47
3	Na 589.592 Radial†	-65.4	105.8	286.15 ug/L	286.15 ppb	10:18:15
3	Ni 231.604†	473.1	323.1	5.1761 ug/L	5.1761 ppb	10:19:47
3	P 214.914†	766.3	426.6	149.31 ug/L	149.31 ppb	10:19:47
3	Pb 220.353†	121.9	150.5	11.326 ug/L	11.326 ppb	10:19:47
3	S 181.975 Axial†	173.4	104.9	88.788 ug/L	88.788 ppb	10:19:47
3	Sb 206.836†	88.6	42.9	8.6819 ug/L	8.6819 ppb	10:19:47
3	Se 196.026†	79.8	101.1	33.313 ug/L	33.313 ppb	10:19:47
3	Si 251.611†	5402.9	4823.3	99.277 ug/L	99.277 ppb	10:19:27
3	Sn 189.927†	103.1	97.3	10.137 ug/L	10.137 ppb	10:19:47
3	Sr 421.552†	361.1	351.1	5.4073 ug/L	5.4073 ppb	10:18:15
3	Ti 334.940†	2655.9	3755.6	4.9047 ug/L	4.9047 ppb	10:19:27
3	Tl 190.801†	61.2	122.4	20.700 ug/L	20.700 ppb	10:19:47
3	U 409.014†	-1729.9	2111.1	52.358 ug/L	52.358 ppb	10:19:22
3	V 292.402†	-842.5	813.3	4.8240 ug/L	4.8240 ppb	10:19:27
3	Zn 213.857†	2842.9	1710.3	9.4754 ug/L	9.4754 ppb	10:19:47
3	SiO2†	5379.4	4757.6	209.68 ug/L	209.68 ppb	10:20:03

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1053357.1	99.291	%	0.9274				0.93%
Sc Radial	5560.5	99.9	%	1.32				1.32%
Y 371.029	847966.2	99.385	%	0.9324				0.94%
Y RADIAL	4830.0	100.3	%	1.58				1.57%
Ag 328.068†	1320.7	5.2318	ug/L	0.15157	5.2318	ppb	0.15157	2.90%
QC value within limits for Ag 328.068 Recovery = 104.64%								
Al 396.153Radial†	219.8	199.60	ug/L	13.038	199.60	ppb	13.038	6.53%
QC value within limits for Al 396.153Radial Recovery = 99.80%								
As 188.979†	113.5	26.635	ug/L	1.1249	26.635	ppb	1.1249	4.22%
QC value within limits for As 188.979 Recovery = 88.78%								
B 249.677†	3295.4	51.333	ug/L	0.6874	51.333	ppb	0.6874	1.34%
QC value within limits for B 249.677 Recovery = 102.67%								
Ba 233.527†	991.0	5.0297	ug/L	0.08000	5.0297	ppb	0.08000	1.59%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	16048.9	5.0017	ug/L	0.00949	5.0017	ppb	0.00949	0.19%
QC value within limits for Be 313.107 Recovery = 100.03%								

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Ca 317.933Radial†          79.5      198.08 ug/L        2.042      198.08 ppb        2.042   1.03%
   QC value within limits for Ca 317.933Radial  Recovery = 99.04%
Cd 226.502†               652.5      4.8717 ug/L      0.08254      4.8717 ppb      0.08254   1.69%
   QC value within limits for Cd 226.502  Recovery = 97.43%
Co 228.616†               400.0      4.9978 ug/L      0.09363      4.9978 ppb      0.09363   1.87%
   QC value within limits for Co 228.616  Recovery = 99.96%
Cr 267.716†               569.3      4.8411 ug/L      0.19215      4.8411 ppb      0.19215   3.97%
   QC value within limits for Cr 267.716  Recovery = 96.82%
Cu 324.752†              3956.3      9.7672 ug/L      0.11961      9.7672 ppb      0.11961   1.22%
   QC value within limits for Cu 324.752  Recovery = 97.67%
Fe 238.204 Radial†          2.9      102.06 ug/L       14.266      102.06 ppb       14.266  13.98%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.06%
K 766.490 Radial†         396.3      171.78 ug/L       23.724      171.78 ppb       23.724  13.81%
   QC value within limits for K 766.490 Radial  Recovery = 114.52%
Mg 279.077 IEC†             4.1      325.50 ug/L      113.822      325.50 ppb      113.822  34.97%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.50%
Mn 257.610†             13203.8      10.442 ug/L       0.0568      10.442 ppb       0.0568   0.54%
   QC value within limits for Mn 257.610  Recovery = 104.42%
Mo 202.031†               253.6      10.157 ug/L       0.3133      10.157 ppb       0.3133   3.09%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†        103.9      280.89 ug/L       20.599      280.89 ppb       20.599   7.33%
   QC value within limits for Na 589.592 Radial  Recovery = 93.63%
Ni 231.604†               325.6      5.2152 ug/L      0.04137      5.2152 ppb      0.04137   0.79%
   QC value within limits for Ni 231.604  Recovery = 104.30%
P 214.914†                421.9      147.65 ug/L        1.445      147.65 ppb        1.445   0.98%
   QC value within limits for P 214.914  Recovery = 98.43%
Pb 220.353†               150.3      11.314 ug/L       0.7766      11.314 ppb       0.7766   6.86%
   QC value within limits for Pb 220.353  Recovery = 113.14%
S 181.975 Axial†          108.6      91.904 ug/L       2.9414      91.904 ppb       2.9414   3.20%
   QC value within limits for S 181.975 Axial  Recovery = 91.90%
Sb 206.836†                55.2      11.115 ug/L       2.1279      11.115 ppb       2.1279  19.14%
   QC value within limits for Sb 206.836  Recovery = 111.15%
Se 196.026†               101.3      33.332 ug/L       0.1173      33.332 ppb       0.1173   0.35%
   QC value within limits for Se 196.026  Recovery = 111.11%
Si 251.611†              4881.4      100.46 ug/L        1.140      100.46 ppb        1.140   1.13%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†               100.5      10.473 ug/L       0.5359      10.473 ppb       0.5359   5.12%
   QC value within limits for Sn 189.927  Recovery = 104.73%
Sr 421.552†               346.3      5.3328 ug/L      0.06788      5.3328 ppb      0.06788   1.27%
   QC value within limits for Sr 421.552  Recovery = 106.66%
Ti 334.940†              3778.5      4.9340 ug/L      0.03506      4.9340 ppb      0.03506   0.71%
   QC value within limits for Ti 334.940  Recovery = 98.68%
Tl 190.801†               118.8      20.090 ug/L       1.6764      20.090 ppb       1.6764   8.34%
   QC value within limits for Tl 190.801  Recovery = 100.45%
U 409.014†               2169.6      53.811 ug/L       1.2585      53.811 ppb       1.2585   2.34%
   QC value within limits for U 409.014  Recovery = 107.62%
V 292.402†                890.2      5.2665 ug/L      0.39826      5.2665 ppb      0.39826   7.56%
   QC value within limits for V 292.402  Recovery = 105.33%
Zn 213.857†              1732.3      9.6038 ug/L      0.11224      9.6038 ppb      0.11224   1.17%
   QC value within limits for Zn 213.857  Recovery = 96.04%
SiO2†                    4792.4      211.18 ug/L        1.524      211.18 ppb        1.524   0.72%
   QC value within limits for SiO2  Recovery = 99.14%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: ICSA
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/8/2009 10:22:14
Data Type: Reprocessed on 7/8/2009 11:40:12

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	895501.5	895501.5	84.411	%			10:25:25
1	Sc Radial	5081.7	5081.7	91.3	%			10:24:27
1	Y 371.029	714523.0	714523.0	83.745	%			10:25:25
1	Y RADIAL	4391.8	4391.8	91.20	%			10:24:27
1	Ag 328.068†	-10393.0	-12951.0	1.0699	ug/L	1.0699	ppb	10:25:25
1	Al 396.153Radial†	511366.0	560078.8	509800	ug/L	509800	ppb	10:24:07
1	As 188.979†	-139.2	-128.0	6.5707	ug/L	6.5707	ppb	10:25:45
1	B 249.677†	908.6	1457.9	-1.6992	ug/L	-1.6992	ppb	10:25:25
1	Ba 233.527†	-495.8	-611.7	1.2025	ug/L	1.2025	ppb	10:25:45
1	Be 313.107†	-7530.9	-1605.5	-0.5734	ug/L	-0.5734	ppb	10:25:25
1	Ca 317.933Radial†	172461.7	188842.4	470380	ug/L	470380	ppb	10:24:07
1	Cd 226.502†	2108.2	2775.1	-0.9878	ug/L	-0.9878	ppb	10:25:45
1	Co 228.616†	-24.7	61.1	-1.8391	ug/L	-1.8391	ppb	10:25:45
1	Cr 267.716†	-320.2	-350.7	0.5961	ug/L	0.5961	ppb	10:25:45
1	Cu 324.752†	6421.7	-2583.6	4.2681	ug/L	4.2681	ppb	10:25:25
1	Fe 238.204 Radial†	4791.8	5247.1	184080	ug/L	184080	ppb	10:24:27
1	K 766.490 Radial†	1268.1	-84.4	17.211	ug/L	17.211	ppb	10:24:07
1	Mg 279.077 IEC†	5667.1	6205.7	491320	ug/L	491320	ppb	10:24:27
1	Mn 257.610†	-1965.4	-3155.4	12.011	ug/L	12.011	ppb	10:25:25
1	Mo 202.031†	-328.7	-421.2	-4.2268	ug/L	-4.2268	ppb	10:25:45
1	Na 589.592 Radial†	-173.4	-19.4	-52.528	ug/L	-52.528	ppb	10:24:27
1	Ni 231.604†	337.4	251.5	4.0300	ug/L	4.0300	ppb	10:25:45
1	P 214.914†	293.5	10.8	28.559	ug/L	28.559	ppb	10:25:45
1	Pb 220.353†	-942.6	-1087.6	0.6717	ug/L	0.6717	ppb	10:25:45
1	S 181.975 Axial†	128.7	84.6	-28.638	ug/L	-28.638	ppb	10:25:45
1	Sb 206.836†	101.4	74.7	-0.8382	ug/L	-0.8382	ppb	10:25:45
1	Se 196.026†	-1802.9	-2114.3	-13.357	ug/L	-13.357	ppb	10:25:45
1	Si 251.611†	614.8	168.2	3.9128	ug/L	3.9128	ppb	10:25:45
1	Sn 189.927†	-348.4	-418.3	-4.5225	ug/L	-4.5225	ppb	10:25:45
1	Sr 421.552†	258.7	277.9	-0.0791	ug/L	-0.0791	ppb	10:24:27
1	Ti 334.940†	-21523.1	-24388.8	-0.4475	ug/L	-0.4475	ppb	10:25:25
1	Tl 190.801†	-123.2	-84.6	-11.647	ug/L	-11.647	ppb	10:25:45
1	U 409.014†	-2645.4	700.7	-5.2282	ug/L	-5.2282	ppb	10:25:25
1	V 292.402†	867.3	2680.3	-1.8957	ug/L	-1.8957	ppb	10:25:45
1	Zn 213.857†	5199.0	5036.8	-8.7856	ug/L	-8.7856	ppb	10:25:45
1	SiO2†	554.5	54.6	3.3717	ug/L	3.3717	ppb	10:26:41
2	Sc 361.383	894719.3	894719.3	84.337	%			10:25:50
2	Sc Radial	5092.9	5092.9	91.5	%			10:24:53
2	Y 371.029	715579.1	715579.1	83.869	%			10:25:50
2	Y RADIAL	4406.9	4406.9	91.51	%			10:24:53
2	Ag 328.068†	-10345.8	-12905.8	1.4483	ug/L	1.4483	ppb	10:25:50
2	Al 396.153Radial†	515497.0	563358.3	512790	ug/L	512790	ppb	10:24:33
2	As 188.979†	-138.6	-127.5	6.8312	ug/L	6.8312	ppb	10:26:10
2	B 249.677†	761.2	1284.1	-4.5082	ug/L	-4.5082	ppb	10:25:50
2	Ba 233.527†	-460.6	-570.4	1.4270	ug/L	1.4270	ppb	10:26:10
2	Be 313.107†	-7458.7	-1527.7	-0.5517	ug/L	-0.5517	ppb	10:25:50
2	Ca 317.933Radial†	173876.6	189972.1	473190	ug/L	473190	ppb	10:24:33
2	Cd 226.502†	2120.9	2792.4	-0.9470	ug/L	-0.9470	ppb	10:26:10
2	Co 228.616†	-11.2	77.1	-1.6492	ug/L	-1.6492	ppb	10:26:10
2	Cr 267.716†	-331.2	-364.1	0.4968	ug/L	0.4968	ppb	10:26:10
2	Cu 324.752†	6524.1	-2455.6	4.6269	ug/L	4.6269	ppb	10:25:50
2	Fe 238.204 Radial†	4821.9	5268.4	184820	ug/L	184820	ppb	10:24:53
2	K 766.490 Radial†	1216.4	-143.9	-8.5744	ug/L	-8.5744	ppb	10:24:33
2	Mg 279.077 IEC†	5711.8	6240.9	494110	ug/L	494110	ppb	10:24:53
2	Mn 257.610†	-2242.7	-3486.2	11.793	ug/L	11.793	ppb	10:25:50
2	Mo 202.031†	-331.9	-425.4	-4.3417	ug/L	-4.3417	ppb	10:26:10
2	Na 589.592 Radial†	-158.9	-3.3	-8.8064	ug/L	-8.8064	ppb	10:24:53
2	Ni 231.604†	322.8	234.5	3.7578	ug/L	3.7578	ppb	10:26:10

2	P 214.914†	282.3	-2.2	24.298 ug/L	24.298 ppb	10:26:10
2	Pb 220.353†	-980.2	-1133.2	-2.2283 ug/L	-2.2283 ppb	10:26:10
2	S 181.975 Axial†	133.9	90.9	-23.927 ug/L	-23.927 ppb	10:26:10
2	Sb 206.836†	107.1	81.5	0.3983 ug/L	0.3983 ppb	10:26:10
2	Se 196.026†	-1828.8	-2146.8	-21.144 ug/L	-21.144 ppb	10:26:10
2	Si 251.611†	621.0	176.2	4.0917 ug/L	4.0917 ppb	10:26:10
2	Sn 189.927†	-354.8	-426.2	-5.1179 ug/L	-5.1179 ppb	10:26:10
2	Sr 421.552†	253.4	271.4	-0.2039 ug/L	-0.2039 ppb	10:24:53
2	Ti 334.940†	-22184.0	-25194.7	-1.3121 ug/L	-1.3121 ppb	10:25:50
2	Tl 190.801†	-105.2	-63.3	-8.0480 ug/L	-8.0480 ppb	10:26:10
2	U 409.014†	-2792.9	523.2	-9.7248 ug/L	-9.7248 ppb	10:25:50
2	V 292.402†	765.0	2559.9	-2.6434 ug/L	-2.6434 ppb	10:26:10
2	Zn 213.857†	5183.7	5024.0	-9.0326 ug/L	-9.0326 ppb	10:26:10
2	SiO2†	499.4	-10.2	0.5414 ug/L	0.5414 ppb	10:26:46
3	Sc 361.383	893780.1	893780.1	84.249 %		10:26:15
3	Sc Radial	5118.7	5118.7	92.0 %		10:25:18
3	Y 371.029	713970.1	713970.1	83.680 %		10:26:15
3	Y RADIAL	4426.1	4426.1	91.91 %		10:25:18
3	Ag 328.068†	-10409.3	-12994.0	1.2796 ug/L	1.2796 ppb	10:26:15
3	Al 396.153Radial†	508361.4	552762.3	503140 ug/L	503140 ppb	10:24:58
3	As 188.979†	-128.5	-115.7	9.6416 ug/L	9.6416 ppb	10:26:36
3	B 249.677†	835.5	1373.2	-3.1464 ug/L	-3.1464 ppb	10:26:15
3	Ba 233.527†	-496.7	-613.9	1.2131 ug/L	1.2131 ppb	10:26:36
3	Be 313.107†	-7571.9	-1671.3	-0.5963 ug/L	-0.5963 ppb	10:26:15
3	Ca 317.933Radial†	171828.3	186787.9	465260 ug/L	465260 ppb	10:24:58
3	Cd 226.502†	2103.7	2774.7	-1.1037 ug/L	-1.1037 ppb	10:26:36
3	Co 228.616†	-21.9	64.4	-1.8116 ug/L	-1.8116 ppb	10:26:36
3	Cr 267.716†	-287.1	-312.1	0.9428 ug/L	0.9428 ppb	10:26:36
3	Cu 324.752†	6618.2	-2335.7	4.9347 ug/L	4.9347 ppb	10:26:15
3	Fe 238.204 Radial†	4851.7	5274.3	185030 ug/L	185030 ppb	10:25:18
3	K 766.490 Radial†	1220.8	-145.9	-8.5400 ug/L	-8.5400 ppb	10:24:58
3	Mg 279.077 IEC†	5734.1	6233.7	493540 ug/L	493540 ppb	10:25:18
3	Mn 257.610†	-2195.1	-3432.5	11.873 ug/L	11.873 ppb	10:26:15
3	Mo 202.031†	-345.3	-441.6	-4.9774 ug/L	-4.9774 ppb	10:26:36
3	Na 589.592 Radial†	-160.0	-3.5	-9.5568 ug/L	-9.5568 ppb	10:25:18
3	Ni 231.604†	344.5	260.6	4.1763 ug/L	4.1763 ppb	10:26:36
3	P 214.914†	258.2	-30.4	10.851 ug/L	10.851 ppb	10:26:36
3	Pb 220.353†	-979.4	-1133.4	-4.1545 ug/L	-4.1545 ppb	10:26:36
3	S 181.975 Axial†	130.4	86.9	-25.395 ug/L	-25.395 ppb	10:26:36
3	Sb 206.836†	118.6	95.4	3.4218 ug/L	3.4218 ppb	10:26:36
3	Se 196.026†	-1802.6	-2118.0	-11.599 ug/L	-11.599 ppb	10:26:36
3	Si 251.611†	555.6	99.4	2.5199 ug/L	2.5199 ppb	10:26:36
3	Sn 189.927†	-358.0	-430.4	-6.1399 ug/L	-6.1399 ppb	10:26:36
3	Sr 421.552†	264.5	282.1	0.0330 ug/L	0.0330 ppb	10:25:18
3	Ti 334.940†	-22156.0	-25189.1	-1.8382 ug/L	-1.8382 ppb	10:26:15
3	Tl 190.801†	-115.0	-75.1	-10.083 ug/L	-10.083 ppb	10:26:36
3	U 409.014†	-2610.1	736.7	-4.4537 ug/L	-4.4537 ppb	10:26:15
3	V 292.402†	851.7	2663.7	-2.0904 ug/L	-2.0904 ppb	10:26:36
3	Zn 213.857†	5227.2	5082.1	-8.7142 ug/L	-8.7142 ppb	10:26:36
3	SiO2†	573.2	78.0	4.4641 ug/L	4.4641 ppb	10:26:51

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	894667.0	84.332	%	0.0812				0.10%
Sc Radial	5097.8	91.6	%	0.34				0.37%
Y 371.029	714690.7	83.764	%	0.0958				0.11%
Y RADIAL	4408.3	91.54	%	0.357				0.39%
Ag 328.068†	-12950.3	1.2659	ug/L	0.18957	1.2659	ppb	0.18957	14.97%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	558733.1	508580	ug/L	4937.7	508580	ppb	4937.7	0.97%
QC value within limits for Al 396.153Radial Recovery = 101.72%								
As 188.979†	-123.7	7.6812	ug/L	1.70280	7.6812	ppb	1.70280	22.17%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1371.7	-3.1179	ug/L	1.40468	-3.1179	ppb	1.40468	45.05%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-598.7	1.2809	ug/L	0.12664	1.2809	ppb	0.12664	9.89%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1601.5	-0.5738	ug/L	0.02233	-0.5738	ppb	0.02233	3.89%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†     188534.1      469610 ug/L        4021.0      469610 ppb        4021.0   0.86%
   QC value within limits for Ca 317.933Radial  Recovery = 93.92%
Cd 226.502†             2780.7     -1.0128 ug/L       0.08129     -1.0128 ppb       0.08129   8.03%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               67.6     -1.7666 ug/L       0.10262     -1.7666 ppb       0.10262   5.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -342.3      0.6786 ug/L       0.23414      0.6786 ppb       0.23414  34.51%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -2458.3      4.6099 ug/L       0.33361      4.6099 ppb       0.33361   7.24%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†      5263.2      184640 ug/L         500.8      184640 ppb         500.8   0.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 92.32%
K 766.490 Radial†       -124.8      0.0323 ug/L      14.87743      0.0323 ppb      14.87743 >999.9%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†         6226.8      492990 ug/L        1472.2      492990 ppb        1472.2   0.30%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.60%
Mn 257.610†            -3358.1      11.893 ug/L        0.1103      11.893 ppb        0.1103   0.93%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -429.4     -4.5153 ug/L       0.40430     -4.5153 ppb       0.40430   8.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.630 ug/L       25.0287     -23.630 ppb       25.0287 105.92%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              248.9      3.9880 ug/L       0.21242      3.9880 ppb       0.21242   5.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -7.3      21.236 ug/L        9.2429      21.236 ppb        9.2429  43.52%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -1118.1     -1.9037 ug/L       2.42937     -1.9037 ppb       2.42937 127.61%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          87.5     -25.987 ug/L        2.4107     -25.987 ppb        2.4107   9.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               83.9      0.9940 ug/L       2.19156      0.9940 ppb       2.19156 220.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†            -2126.4     -15.367 ug/L        5.0800     -15.367 ppb        5.0800  33.06%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              148.0      3.5081 ug/L       0.86048      3.5081 ppb       0.86048  24.53%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -424.9     -5.2601 ug/L       0.81802     -5.2601 ppb       0.81802  15.55%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              277.1     -0.0833 ug/L       0.11853     -0.0833 ppb       0.11853 142.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†           -24924.2     -1.1993 ug/L       0.70220     -1.1993 ppb       0.70220  58.55%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -74.3     -9.9258 ug/L       1.80446     -9.9258 ppb       1.80446  18.18%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               653.6     -6.4689 ug/L       2.84611     -6.4689 ppb       2.84611  44.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              2634.7     -2.2098 ug/L       0.38789     -2.2098 ppb       0.38789  17.55%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             5047.6     -8.8442 ug/L       0.16704     -8.8442 ppb       0.16704   1.89%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    40.8      2.7924 ug/L       2.02453      2.7924 ppb       2.02453  72.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/8/2009 10:29:02
Data Type: Reprocessed on 7/8/2009 11:40:13

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	922949.8	922949.8	86.998	%			10:31:27
1	Sc Radial	5088.8	5088.8	91.4	%			10:30:59
1	Y 371.029	724486.5	724486.5	84.913	%			10:31:27
1	Y RADIAL	4396.5	4396.5	91.29	%			10:30:59
1	Ag 328.068†	51134.8	58138.2	284.08	ug/L	284.08	ppb	10:31:27
1	Al 396.153Radial†	511214.8	559124.8	508910	ug/L	508910	ppb	10:30:54
1	As 188.979†	1778.1	2080.7	527.29	ug/L	527.29	ppb	10:31:32
1	B 249.677†	30305.4	35216.0	523.28	ug/L	523.28	ppb	10:31:27
1	Ba 233.527†	84926.5	97594.3	499.43	ug/L	499.43	ppb	10:31:27
1	Be 313.107†	685114.1	794819.0	248.28	ug/L	248.28	ppb	10:31:27
1	Ca 317.933Radial†	171487.2	187510.8	467060	ug/L	467060	ppb	10:30:54
1	Cd 226.502†	56191.8	64867.2	463.74	ug/L	463.74	ppb	10:31:32
1	Co 228.616†	32068.4	36951.4	457.93	ug/L	457.93	ppb	10:31:32
1	Cr 267.716†	48976.1	56324.0	483.93	ug/L	483.93	ppb	10:31:32
1	Cu 324.752†	206474.7	227140.6	571.05	ug/L	571.05	ppb	10:31:27
1	Fe 238.204 Radial†	4792.9	5240.9	183870	ug/L	183870	ppb	10:30:59
1	K 766.490 Radial†	13633.7	13435.9	5876.8	ug/L	5876.8	ppb	10:30:59
1	Mg 279.077 IEC†	5720.0	6254.8	495220	ug/L	495220	ppb	10:30:59
1	Mn 257.610†	527932.1	606003.4	493.31	ug/L	493.31	ppb	10:31:27
1	Mo 202.031†	10741.5	12315.0	505.56	ug/L	505.56	ppb	10:31:32
1	Na 589.592 Radial†	1742.5	2075.9	5612.9	ug/L	5612.9	ppb	10:30:59
1	Ni 231.604†	24947.6	28527.7	456.94	ug/L	456.94	ppb	10:31:32
1	P 214.914†	6681.5	7343.1	2535.6	ug/L	2535.6	ppb	10:31:32
1	Pb 220.353†	4555.0	5264.8	477.54	ug/L	477.54	ppb	10:31:32
1	S 181.975 Axial†	2933.7	3304.3	2696.9	ug/L	2696.9	ppb	10:31:32
1	Sb 206.836†	2595.0	2937.4	568.65	ug/L	568.65	ppb	10:31:32
1	Se 196.026†	4971.6	5736.2	2540.6	ug/L	2540.6	ppb	10:31:32
1	Si 251.611†	227538.2	260983.1	5373.3	ug/L	5373.3	ppb	10:31:27
1	Sn 189.927†	3829.4	4396.2	495.92	ug/L	495.92	ppb	10:31:32
1	Sr 421.552†	32732.9	35789.2	547.06	ug/L	547.06	ppb	10:30:59
1	Ti 334.940†	325076.1	374767.2	521.46	ug/L	521.46	ppb	10:31:27
1	Tl 190.801†	2320.9	2729.1	464.98	ug/L	464.98	ppb	10:31:32
1	U 409.014†	14389.0	20374.2	482.00	ug/L	482.00	ppb	10:31:27
1	V 292.402†	80410.6	94080.6	523.26	ug/L	523.26	ppb	10:31:27
1	Zn 213.857†	83783.0	95181.8	490.76	ug/L	490.76	ppb	10:31:27
1	SiO2†	225071.9	258106.1	11379	ug/L	11379	ppb	10:31:59
2	Sc 361.383	922512.9	922512.9	86.957	%			10:31:38
2	Sc Radial	5114.2	5114.2	91.9	%			10:31:09
2	Y 371.029	723615.1	723615.1	84.810	%			10:31:38
2	Y RADIAL	4434.0	4434.0	92.07	%			10:31:09
2	Ag 328.068†	51203.8	58245.4	284.11	ug/L	284.11	ppb	10:31:38
2	Al 396.153Radial†	516287.7	561868.9	511410	ug/L	511410	ppb	10:31:04
2	As 188.979†	1781.2	2085.2	528.14	ug/L	528.14	ppb	10:31:43
2	B 249.677†	30212.2	35125.3	522.01	ug/L	522.01	ppb	10:31:38
2	Ba 233.527†	84896.2	97605.7	499.46	ug/L	499.46	ppb	10:31:38
2	Be 313.107†	684415.6	794388.8	248.15	ug/L	248.15	ppb	10:31:38
2	Ca 317.933Radial†	173685.3	188971.4	470700	ug/L	470700	ppb	10:31:04
2	Cd 226.502†	56169.1	64871.7	463.90	ug/L	463.90	ppb	10:31:43
2	Co 228.616†	32009.7	36901.3	457.33	ug/L	457.33	ppb	10:31:43
2	Cr 267.716†	48984.7	56360.6	484.22	ug/L	484.22	ppb	10:31:43
2	Cu 324.752†	206739.8	227557.9	572.02	ug/L	572.02	ppb	10:31:38
2	Fe 238.204 Radial†	4789.5	5211.1	182830	ug/L	182830	ppb	10:31:09
2	K 766.490 Radial†	13696.8	13430.5	5873.6	ug/L	5873.6	ppb	10:31:09
2	Mg 279.077 IEC†	5700.6	6202.7	491090	ug/L	491090	ppb	10:31:09
2	Mn 257.610†	527491.9	605784.5	493.08	ug/L	493.08	ppb	10:31:38
2	Mo 202.031†	10795.6	12383.1	508.21	ug/L	508.21	ppb	10:31:43
2	Na 589.592 Radial†	1739.5	2063.2	5578.5	ug/L	5578.5	ppb	10:31:09
2	Ni 231.604†	25007.5	28610.2	458.26	ug/L	458.26	ppb	10:31:43

2	P 214.914†	6657.3	7318.9	2528.5	ug/L	2528.5 ppb	10:31:43
2	Pb 220.353†	4521.9	5229.2	475.47	ug/L	475.47 ppb	10:31:43
2	S 181.975 Axial†	2966.6	3343.8	2729.8	ug/L	2729.8 ppb	10:31:43
2	Sb 206.836†	2571.5	2911.7	563.53	ug/L	563.53 ppb	10:31:43
2	Se 196.026†	5128.9	5919.8	2596.7	ug/L	2596.7 ppb	10:31:43
2	Si 251.611†	227663.7	261251.4	5378.8	ug/L	5378.8 ppb	10:31:38
2	Sn 189.927†	3812.8	4379.2	494.42	ug/L	494.42 ppb	10:31:43
2	Sr 421.552†	32971.9	35871.6	548.29	ug/L	548.29 ppb	10:31:09
2	Ti 334.940†	325093.7	374964.5	521.96	ug/L	521.96 ppb	10:31:38
2	Tl 190.801†	2278.3	2681.4	456.94	ug/L	456.94 ppb	10:31:43
2	U 409.014†	14518.6	20531.0	486.02	ug/L	486.02 ppb	10:31:38
2	V 292.402†	80202.9	93885.5	522.26	ug/L	522.26 ppb	10:31:38
2	Zn 213.857†	83836.4	95288.9	491.61	ug/L	491.61 ppb	10:31:38
2	SiO2†	226952.2	260390.9	11480	ug/L	11480 ppb	10:32:04
3	Sc 361.383	916394.6	916394.6	86.380	%		10:31:49
3	Sc Radial	5092.1	5092.1	91.5	%		10:31:20
3	Y 371.029	718336.1	718336.1	84.192	%		10:31:49
3	Y RADIAL	4424.4	4424.4	91.87	%		10:31:20
3	Ag 328.068†	50974.6	58373.2	285.14	ug/L	285.14 ppb	10:31:49
3	Al 396.153Radial†	519866.9	568222.7	517200	ug/L	517200 ppb	10:31:15
3	As 188.979†	1750.1	2062.9	523.28	ug/L	523.28 ppb	10:31:54
3	B 249.677†	30095.4	35222.0	523.28	ug/L	523.28 ppb	10:31:49
3	Ba 233.527†	84510.6	97811.1	500.55	ug/L	500.55 ppb	10:31:49
3	Be 313.107†	680536.4	795152.9	248.38	ug/L	248.38 ppb	10:31:49
3	Ca 317.933Radial†	174798.8	191009.9	475780	ug/L	475780 ppb	10:31:15
3	Cd 226.502†	55239.4	64226.6	458.85	ug/L	458.85 ppb	10:31:54
3	Co 228.616†	31559.8	36626.3	453.86	ug/L	453.86 ppb	10:31:54
3	Cr 267.716†	48208.5	55838.2	479.81	ug/L	479.81 ppb	10:31:54
3	Cu 324.752†	204835.2	226940.4	570.60	ug/L	570.60 ppb	10:31:49
3	Fe 238.204 Radial†	4816.3	5263.1	184650	ug/L	184650 ppb	10:31:20
3	K 766.490 Radial†	13730.6	13532.3	5918.2	ug/L	5918.2 ppb	10:31:20
3	Mg 279.077 IEC†	5726.3	6257.7	495450	ug/L	495450 ppb	10:31:20
3	Mn 257.610†	525190.6	607170.3	494.33	ug/L	494.33 ppb	10:31:49
3	Mo 202.031†	10571.3	12206.3	501.26	ug/L	501.26 ppb	10:31:54
3	Na 589.592 Radial†	1746.4	2079.0	5621.3	ug/L	5621.3 ppb	10:31:20
3	Ni 231.604†	24590.8	28319.8	453.61	ug/L	453.61 ppb	10:31:54
3	P 214.914†	6490.6	7177.1	2479.1	ug/L	2479.1 ppb	10:31:54
3	Pb 220.353†	4444.7	5174.6	472.31	ug/L	472.31 ppb	10:31:54
3	S 181.975 Axial†	2922.3	3315.2	2704.5	ug/L	2704.5 ppb	10:31:54
3	Sb 206.836†	2597.2	2961.2	572.95	ug/L	572.95 ppb	10:31:54
3	Se 196.026†	4938.2	5738.4	2544.4	ug/L	2544.4 ppb	10:31:54
3	Si 251.611†	226292.7	261412.2	5382.3	ug/L	5382.3 ppb	10:31:49
3	Sn 189.927†	3753.4	4339.7	490.73	ug/L	490.73 ppb	10:31:54
3	Sr 421.552†	32971.1	36026.6	550.64	ug/L	550.64 ppb	10:31:20
3	Ti 334.940†	322933.2	374959.4	522.30	ug/L	522.30 ppb	10:31:49
3	Tl 190.801†	2336.1	2765.8	471.25	ug/L	471.25 ppb	10:31:54
3	U 409.014†	14229.3	20307.5	480.26	ug/L	480.26 ppb	10:31:49
3	V 292.402†	79923.8	94178.2	523.65	ug/L	523.65 ppb	10:31:49
3	Zn 213.857†	83231.3	95232.0	490.97	ug/L	490.97 ppb	10:31:49
3	SiO2†	228890.9	264377.8	11656	ug/L	11656 ppb	10:32:10

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	920619.1	86.779	%	0.3455				0.40%
Sc Radial	5098.4	91.6	%	0.25				0.27%
Y 371.029	722145.9	84.638	%	0.3901				0.46%
Y RADIAL	4418.3	91.75	%	0.405				0.44%
Ag 328.068†	58252.3	284.44	ug/L	0.602	284.44	ppb	0.602	0.21%
QC value within limits for Ag 328.068 Recovery = 113.78%								
Al 396.153Radial†	563072.2	512510	ug/L	4248.0	512510	ppb	4248.0	0.83%
QC value within limits for Al 396.153Radial Recovery = 102.50%								
As 188.979†	2076.3	526.24	ug/L	2.594	526.24	ppb	2.594	0.49%
QC value within limits for As 188.979 Recovery = 105.25%								
B 249.677†	35187.8	522.85	ug/L	0.735	522.85	ppb	0.735	0.14%
QC value within limits for B 249.677 Recovery = 104.57%								
Ba 233.527†	97670.4	499.82	ug/L	0.636	499.82	ppb	0.636	0.13%
QC value within limits for Ba 233.527 Recovery = 99.96%								
Be 313.107†	794786.9	248.27	ug/L	0.119	248.27	ppb	0.119	0.05%
QC value within limits for Be 313.107 Recovery = 99.31%								

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Ca 317.933Radial†     189164.0      471180 ug/L        4377.5      471180 ppb        4377.5   0.93%
   QC value within limits for Ca 317.933Radial  Recovery = 94.24%
Cd 226.502†            64655.2      462.16 ug/L         2.867      462.16 ppb         2.867   0.62%
   QC value within limits for Cd 226.502  Recovery = 92.43%
Co 228.616†            36826.3      456.37 ug/L         2.197      456.37 ppb         2.197   0.48%
   QC value within limits for Co 228.616  Recovery = 91.27%
Cr 267.716†            56174.3      482.66 ug/L         2.467      482.66 ppb         2.467   0.51%
   QC value within limits for Cr 267.716  Recovery = 96.53%
Cu 324.752†           227213.0      571.22 ug/L         0.725      571.22 ppb         0.725   0.13%
   QC value within limits for Cu 324.752  Recovery = 114.24%
Fe 238.204 Radial†      5238.4      183780 ug/L         913.9      183780 ppb         913.9   0.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.89%
K 766.490 Radial†      13466.2      5889.5 ug/L         24.91      5889.5 ppb         24.91   0.42%
   QC value within limits for K 766.490 Radial  Recovery = 117.79%
Mg 279.077 IEC†         6238.4      493920 ug/L        2453.5      493920 ppb        2453.5   0.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.78%
Mn 257.610†           606319.4      493.58 ug/L         0.664      493.58 ppb         0.664   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.72%
Mo 202.031†            12301.5      505.01 ug/L         3.509      505.01 ppb         3.509   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.00%
Na 589.592 Radial†      2072.7      5604.3 ug/L         22.66      5604.3 ppb         22.66   0.40%
   QC value within limits for Na 589.592 Radial  Recovery = 112.09%
Ni 231.604†            28485.9      456.27 ug/L         2.398      456.27 ppb         2.398   0.53%
   QC value within limits for Ni 231.604  Recovery = 91.25%
P 214.914†              7279.7      2514.4 ug/L         30.79      2514.4 ppb         30.79   1.22%
   QC value within limits for P 214.914  Recovery = 100.58%
Pb 220.353†             5222.9      475.11 ug/L         2.633      475.11 ppb         2.633   0.55%
   QC value within limits for Pb 220.353  Recovery = 95.02%
S 181.975 Axial†        3321.1      2710.4 ug/L         17.23      2710.4 ppb         17.23   0.64%
   QC value within limits for S 181.975 Axial  Recovery = 108.42%
Sb 206.836†             2936.8      568.38 ug/L         4.717      568.38 ppb         4.717   0.83%
   QC value within limits for Sb 206.836  Recovery = 113.68%
Se 196.026†             5798.1      2560.6 ug/L         31.38      2560.6 ppb         31.38   1.23%
   QC value within limits for Se 196.026  Recovery = 102.42%
Si 251.611†           261215.6      5378.2 ug/L          4.51      5378.2 ppb          4.51   0.08%
   QC value within limits for Si 251.611  Recovery = 107.56%
Sn 189.927†             4371.7      493.69 ug/L         2.669      493.69 ppb         2.669   0.54%
   QC value within limits for Sn 189.927  Recovery = 98.74%
Sr 421.552†            35895.8      548.66 ug/L         1.817      548.66 ppb         1.817   0.33%
   QC value within limits for Sr 421.552  Recovery = 109.73%
Ti 334.940†           374897.0      521.91 ug/L         0.421      521.91 ppb         0.421   0.08%
   QC value within limits for Ti 334.940  Recovery = 104.38%
Tl 190.801†             2725.5      464.39 ug/L         7.171      464.39 ppb         7.171   1.54%
   QC value within limits for Tl 190.801  Recovery = 92.88%
U 409.014†             20404.2      482.76 ug/L         2.954      482.76 ppb         2.954   0.61%
   QC value within limits for U 409.014  Recovery = 96.55%
V 292.402†             94048.1      523.06 ug/L         0.714      523.06 ppb         0.714   0.14%
   QC value within limits for V 292.402  Recovery = 104.61%
Zn 213.857†            95234.2      491.11 ug/L         0.439      491.11 ppb         0.439   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.22%
SiO2†                 260958.2       11505 ug/L         140.4       11505 ppb         140.4   1.22%
   QC value within limits for SiO2  Recovery = 107.57%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: LR1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/8/2009 10:34:19
Data Type: Reprocessed on 7/8/2009 11:40:14

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	903068.1	903068.1	85.124	%			10:37:30
1	Sc Radial	4907.1	4907.1	88.2	%			10:36:32
1	Y 371.029	711048.9	711048.9	83.338	%			10:37:30
1	Y RADIAL	4267.0	4267.0	88.60	%			10:36:32
1	Ag 328.068†	-24652.6	-29599.4	5.2180	ug/L	5.2180	ppb	10:37:30
1	Al 396.153Radial†	501001.0	568251.7	517240	ug/L	517240	ppb	10:36:12
1	As 188.979†	-286.0	-299.1	17.474	ug/L	17.474	ppb	10:37:35
1	B 249.677†	2112.7	2863.4	-13.637	ug/L	-13.637	ppb	10:37:30
1	Ba 233.527†	-1436.5	-1711.8	1.5622	ug/L	1.5622	ppb	10:37:35
1	Be 313.107†	-14446.8	-9655.2	-3.0542	ug/L	-3.0542	ppb	10:37:35
1	Ca 317.933Radial†	166917.5	189275.7	471460	ug/L	471460	ppb	10:36:12
1	Cd 226.502†	5594.5	6849.8	-0.6386	ug/L	-0.6386	ppb	10:37:35
1	Co 228.616†	294.3	436.1	-0.8830	ug/L	-0.8830	ppb	10:37:35
1	Cr 267.716†	-12.1	14.4	4.1493	ug/L	4.1493	ppb	10:37:35
1	Cu 324.752†	3503.0	-6076.1	10.395	ug/L	10.395	ppb	10:37:30
1	Fe 238.204 Radial†	11037.4	12516.6	439100	ug/L	439100	ppb	10:36:32
1	K 766.490 Radial†	1318.5	22.1	26.226	ug/L	26.226	ppb	10:36:12
1	Mg 279.077 IEC†	5521.4	6261.4	495510	ug/L	495510	ppb	10:36:32
1	Mn 257.610†	-38315.8	-45838.6	11.430	ug/L	11.430	ppb	10:37:30
1	Mo 202.031†	-778.9	-946.7	-7.7594	ug/L	-7.7594	ppb	10:37:35
1	Na 589.592 Radial†	171624.9	194801.4	526720	ug/L	526720	ppb	10:36:12
1	Ni 231.604†	465.6	398.7	6.3863	ug/L	6.3863	ppb	10:37:35
1	P 214.914†	838.8	648.5	52.119	ug/L	52.119	ppb	10:37:35
1	Pb 220.353†	-640.5	-723.3	5.3786	ug/L	5.3786	ppb	10:37:35
1	S 181.975 Axial†	149.8	108.1	-10.229	ug/L	-10.229	ppb	10:37:35
1	Sb 206.836†	146.8	127.0	13.157	ug/L	13.157	ppb	10:37:35
1	Se 196.026†	-4401.3	-5148.9	-103.95	ug/L	-103.95	ppb	10:37:35
1	Si 251.611†	-979.0	-1710.1	-34.481	ug/L	-34.481	ppb	10:37:35
1	Sn 189.927†	-388.8	-462.3	-4.5333	ug/L	-4.5333	ppb	10:37:35
1	Sr 421.552†	319.3	356.6	1.1243	ug/L	1.1243	ppb	10:36:32
1	Ti 334.940†	-15490.5	-17088.2	2.9945	ug/L	2.9945	ppb	10:37:35
1	Tl 190.801†	-133.6	-95.5	-13.648	ug/L	-13.648	ppb	10:37:35
1	U 409.014†	478080.9	565462.0	13976	ug/L	13976	ppb	10:37:30
1	V 292.402†	2200.9	4238.3	-0.8487	ug/L	-0.8487	ppb	10:37:35
1	Zn 213.857†	10091.7	10732.9	-4.6503	ug/L	-4.6503	ppb	10:37:35
1	SiO2†	-858.7	-1611.1	-69.439	ug/L	-69.439	ppb	10:38:03
2	Sc 361.383	901598.6	901598.6	84.986	%			10:37:41
2	Sc Radial	4913.8	4913.8	88.3	%			10:36:57
2	Y 371.029	709120.5	709120.5	83.112	%			10:37:41
2	Y RADIAL	4292.7	4292.7	89.14	%			10:36:57
2	Ag 328.068†	-24814.9	-29837.5	4.1617	ug/L	4.1617	ppb	10:37:41
2	Al 396.153Radial†	499453.7	565720.2	514940	ug/L	514940	ppb	10:36:37
2	As 188.979†	-323.1	-343.3	7.0255	ug/L	7.0255	ppb	10:37:46
2	B 249.677†	2057.8	2802.9	-14.529	ug/L	-14.529	ppb	10:37:41
2	Ba 233.527†	-1538.0	-1834.0	0.9343	ug/L	0.9343	ppb	10:37:46
2	Be 313.107†	-14278.5	-9484.8	-2.9994	ug/L	-2.9994	ppb	10:37:46
2	Ca 317.933Radial†	166575.3	188628.5	469840	ug/L	469840	ppb	10:36:37
2	Cd 226.502†	5560.2	6820.2	-0.8124	ug/L	-0.8124	ppb	10:37:46
2	Co 228.616†	329.8	478.5	-0.3494	ug/L	-0.3494	ppb	10:37:46
2	Cr 267.716†	64.5	104.5	4.9068	ug/L	4.9068	ppb	10:37:46
2	Cu 324.752†	3384.0	-6209.4	10.043	ug/L	10.043	ppb	10:37:41
2	Fe 238.204 Radial†	11042.3	12505.0	438690	ug/L	438690	ppb	10:36:57
2	K 766.490 Radial†	1363.1	70.6	47.960	ug/L	47.960	ppb	10:36:37
2	Mg 279.077 IEC†	5523.4	6255.1	495010	ug/L	495010	ppb	10:36:57
2	Mn 257.610†	-38665.9	-46324.0	11.003	ug/L	11.003	ppb	10:37:41
2	Mo 202.031†	-762.0	-928.4	-7.0553	ug/L	-7.0553	ppb	10:37:46
2	Na 589.592 Radial†	171230.3	194087.6	524790	ug/L	524790	ppb	10:36:37
2	Ni 231.604†	460.5	393.6	6.3048	ug/L	6.3048	ppb	10:37:46

2	P 214.914†	942.4	772.0	95.294	ug/L	95.294 ppb	10:37:46
2	Pb 220.353†	-620.4	-700.9	6.6499	ug/L	6.6499 ppb	10:37:46
2	S 181.975 Axial†	185.9	150.9	26.429	ug/L	26.429 ppb	10:37:46
2	Sb 206.836†	108.8	82.6	4.4435	ug/L	4.4435 ppb	10:37:46
2	Se 196.026†	-4291.9	-5028.5	-66.360	ug/L	-66.360 ppb	10:37:46
2	Si 251.611†	-923.9	-1647.3	-33.191	ug/L	-33.191 ppb	10:37:46
2	Sn 189.927†	-421.4	-501.3	-8.7146	ug/L	-8.7146 ppb	10:37:46
2	Sr 421.552†	322.3	359.5	1.1835	ug/L	1.1835 ppb	10:36:57
2	Ti 334.940†	-14961.4	-16495.3	3.6589	ug/L	3.6589 ppb	10:37:46
2	Tl 190.801†	-157.6	-124.0	-18.471	ug/L	-18.471 ppb	10:37:46
2	U 409.014†	477587.6	565796.9	13984	ug/L	13984 ppb	10:37:41
2	V 292.402†	2214.6	4258.6	-0.6621	ug/L	-0.6621 ppb	10:37:46
2	Zn 213.857†	9931.6	10563.8	-5.5320	ug/L	-5.5320 ppb	10:37:46
2	SiO2†	-947.4	-1717.2	-74.141	ug/L	-74.141 ppb	10:38:08
3	Sc 361.383	901333.6	901333.6	84.961	%		10:37:52
3	Sc Radial	4898.6	4898.6	88.0	%		10:37:23
3	Y 371.029	709314.8	709314.8	83.134	%		10:37:52
3	Y RADIAL	4273.7	4273.7	88.74	%		10:37:23
3	Ag 328.068†	-24785.9	-29811.9	3.2059	ug/L	3.2059 ppb	10:37:52
3	Al 396.153Radial†	500210.2	568328.0	517310	ug/L	517310 ppb	10:37:02
3	As 188.979†	-299.6	-315.7	12.839	ug/L	12.839 ppb	10:37:57
3	B 249.677†	2166.2	2931.2	-12.096	ug/L	-12.096 ppb	10:37:52
3	Ba 233.527†	-1531.2	-1826.5	0.8994	ug/L	0.8994 ppb	10:37:57
3	Be 313.107†	-14414.9	-9650.3	-3.0517	ug/L	-3.0517 ppb	10:37:57
3	Ca 317.933Radial†	166348.8	188954.3	470650	ug/L	470650 ppb	10:37:02
3	Cd 226.502†	5540.8	6799.3	-0.5842	ug/L	-0.5842 ppb	10:37:57
3	Co 228.616†	326.0	474.1	-0.3588	ug/L	-0.3588 ppb	10:37:57
3	Cr 267.716†	-19.8	5.3	3.9998	ug/L	3.9998 ppb	10:37:57
3	Cu 324.752†	3399.1	-6190.5	9.9012	ug/L	9.9012 ppb	10:37:52
3	Fe 238.204 Radial†	10926.4	12412.0	435430	ug/L	435430 ppb	10:37:23
3	K 766.490 Radial†	1311.1	16.4	22.386	ug/L	22.386 ppb	10:37:02
3	Mg 279.077 IEC†	5483.5	6229.0	492950	ug/L	492950 ppb	10:37:23
3	Mn 257.610†	-38504.0	-46146.8	10.758	ug/L	10.758 ppb	10:37:52
3	Mo 202.031†	-779.9	-949.7	-8.1288	ug/L	-8.1288 ppb	10:37:57
3	Na 589.592 Radial†	170529.0	193890.3	524260	ug/L	524260 ppb	10:37:02
3	Ni 231.604†	397.1	319.1	5.1105	ug/L	5.1105 ppb	10:37:57
3	P 214.914†	880.7	699.7	73.222	ug/L	73.222 ppb	10:37:57
3	Pb 220.353†	-643.4	-728.2	5.3697	ug/L	5.3697 ppb	10:37:57
3	S 181.975 Axial†	158.0	118.1	-1.7772	ug/L	-1.7772 ppb	10:37:57
3	Sb 206.836†	116.9	92.2	6.2449	ug/L	6.2449 ppb	10:37:57
3	Se 196.026†	-4293.9	-5032.4	-78.955	ug/L	-78.955 ppb	10:37:57
3	Si 251.611†	-893.4	-1611.7	-32.442	ug/L	-32.442 ppb	10:37:57
3	Sn 189.927†	-398.8	-474.9	-5.9803	ug/L	-5.9803 ppb	10:37:57
3	Sr 421.552†	302.5	338.2	0.8478	ug/L	0.8478 ppb	10:37:23
3	Ti 334.940†	-15207.4	-16790.1	3.3272	ug/L	3.3272 ppb	10:37:57
3	Tl 190.801†	-172.7	-141.9	-21.477	ug/L	-21.477 ppb	10:37:57
3	U 409.014†	477482.3	565838.3	13986	ug/L	13986 ppb	10:37:52
3	V 292.402†	2380.5	4454.7	0.8529	ug/L	0.8529 ppb	10:37:57
3	Zn 213.857†	9939.8	10576.9	-5.0280	ug/L	-5.0280 ppb	10:37:57
3	SiO2†	-939.4	-1708.1	-73.708	ug/L	-73.708 ppb	10:38:13

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	902000.1	85.024	%	0.0881				0.10%
Sc Radial	4906.5	88.2	%	0.14				0.15%
Y 371.029	709828.1	83.195	%	0.1244				0.15%
Y RADIAL	4277.8	88.83	%	0.277				0.31%
Ag 328.068†	-29749.6	4.1952	ug/L	1.00645	4.1952	ppb	1.00645	23.99%
Al 396.153Radial†	567433.3	516500	ug/L	1350.9	516500	ppb	1350.9	0.26%
QC value within limits for Al 396.153Radial Recovery = 103.30%								
As 188.979†	-319.4	12.446	ug/L	5.2351	12.446	ppb	5.2351	42.06%
B 249.677†	2865.8	-13.421	ug/L	1.2309	-13.421	ppb	1.2309	9.17%
Ba 233.527†	-1790.8	1.1320	ug/L	0.37301	1.1320	ppb	0.37301	32.95%
Be 313.107†	-9596.8	-3.0351	ug/L	0.03096	-3.0351	ppb	0.03096	1.02%
Ca 317.933Radial†	188952.8	470650	ug/L	805.9	470650	ppb	805.9	0.17%
QC value within limits for Ca 317.933Radial Recovery = 94.13%								
Cd 226.502†	6823.1	-0.6784	ug/L	0.11915	-0.6784	ppb	0.11915	17.56%
Co 228.616†	462.9	-0.5304	ug/L	0.30543	-0.5304	ppb	0.30543	57.59%
Cr 267.716†	41.4	4.3520	ug/L	0.48630	4.3520	ppb	0.48630	11.17%

Cu 324.752†	-6158.7	10.113 ug/L	0.2544	10.113 ppb	0.2544	2.52%
Fe 238.204 Radial†	12477.9	437740 ug/L	2010.7	437740 ppb	2010.7	0.46%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.55%						
K 766.490 Radial†	36.3	32.190 ug/L	13.7909	32.190 ppb	13.7909	42.84%
Mg 279.077 IEC†	6248.5	494490 ug/L	1357.9	494490 ppb	1357.9	0.27%
QC value within limits for Mg 279.077 IEC Recovery = 98.90%						
Mn 257.610†	-46103.1	11.063 ug/L	0.3401	11.063 ppb	0.3401	3.07%
Mo 202.031†	-941.6	-7.6478 ug/L	0.54541	-7.6478 ppb	0.54541	7.13%
Na 589.592 Radial†	194259.8	525260 ug/L	1296.0	525260 ppb	1296.0	0.25%
QC value within limits for Na 589.592 Radial Recovery = 105.05%						
Ni 231.604†	370.5	5.9339 ug/L	0.71420	5.9339 ppb	0.71420	12.04%
P 214.914†	706.7	73.545 ug/L	21.5891	73.545 ppb	21.5891	29.35%
Pb 220.353†	-717.5	5.7994 ug/L	0.73655	5.7994 ppb	0.73655	12.70%
S 181.975 Axial†	125.7	4.8073 ug/L	19.19563	4.8073 ppb	19.19563	399.30%
Sb 206.836†	100.6	7.9483 ug/L	4.59954	7.9483 ppb	4.59954	57.87%
Se 196.026†	-5069.9	-83.089 ug/L	19.1336	-83.089 ppb	19.1336	23.03%
Si 251.611†	-1656.4	-33.371 ug/L	1.0313	-33.371 ppb	1.0313	3.09%
Sn 189.927†	-479.5	-6.4094 ug/L	2.12342	-6.4094 ppb	2.12342	33.13%
Sr 421.552†	351.4	1.0519 ug/L	0.17919	1.0519 ppb	0.17919	17.04%
Ti 334.940†	-16791.2	3.3269 ug/L	0.33215	3.3269 ppb	0.33215	9.98%
Tl 190.801†	-120.5	-17.865 ug/L	3.9499	-17.865 ppb	3.9499	22.11%
U 409.014†	565699.1	13982 ug/L	5.3	13982 ppb	5.3	0.04%
QC value within limits for U 409.014 Recovery = 93.21%						
V 292.402†	4317.2	-0.2193 ug/L	0.93321	-0.2193 ppb	0.93321	425.48%
Zn 213.857†	10624.5	-5.0701 ug/L	0.44239	-5.0701 ppb	0.44239	8.73%
SiO2†	-1678.8	-72.429 ug/L	2.5989	-72.429 ppb	2.5989	3.59%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/8/2009 10:40:22
Data Type: Reprocessed on 7/8/2009 11:40:15

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1014953.4	1014953.4	95.671	%			10:43:57
1	Sc Radial	5417.4	5417.4	97.3	%			10:42:20
1	Y 371.029	800941.5	800941.5	93.873	%			10:43:57
1	Y RADIAL	4706.4	4706.4	97.73	%			10:42:20
1	Ag 328.068†	-7110.5	-8070.8	7.1415	ug/L	7.1415	ppb	10:44:02
1	Al 396.153Radial†	449.0	553.4	87.615	ug/L	87.615	ppb	10:42:20
1	As 188.979†	40482.4	42351.3	9989.0	ug/L	9989.0	ppb	10:44:02
1	B 249.677†	309866.7	324270.4	5029.0	ug/L	5029.0	ppb	10:43:57
1	Ba 233.527†	2664318.6	2784861.5	14118	ug/L	14118	ppb	10:43:57
1	Be 313.107†	8856992.8	9265110.5	2903.5	ug/L	2903.5	ppb	10:43:50
1	Ca 317.933Radial†	25.7	9.5	23.698	ug/L	23.698	ppb	10:42:40
1	Cd 226.502†	1280128.2	1338334.9	10016	ug/L	10016	ppb	10:43:57
1	Co 228.616†	749635.6	783648.9	9762.7	ug/L	9762.7	ppb	10:43:57
1	Cr 267.716†	2711737.5	2834479.1	24157	ug/L	24157	ppb	10:43:57
1	Cu 324.752†	7865610.7	8211358.3	20260	ug/L	20260	ppb	10:43:50
1	Fe 238.204 Radial†	-7.6	-8.1	23.148	ug/L	23.148	ppb	10:42:40
1	K 766.490 Radial†	684372.6	701529.4	304300	ug/L	304300	ppb	10:42:15
1	Mg 279.077 IEC†	-2.9	-3.1	-51.980	ug/L	-51.980	ppb	10:42:40
1	Mn 257.610†	11427294.3	11943581.3	9438.7	ug/L	9438.7	ppb	10:43:50
1	Mo 202.031†	232338.7	242820.8	9719.4	ug/L	9719.4	ppb	10:44:02
1	Na 589.592 Radial†	-122.5	44.6	120.62	ug/L	120.62	ppb	10:42:40
1	Ni 231.604†	591314.2	617924.4	9897.7	ug/L	9897.7	ppb	10:43:57
1	P 214.914†	48706.9	50574.1	14767	ug/L	14767	ppb	10:44:02
1	Pb 220.353†	309384.9	323414.5	24253	ug/L	24253	ppb	10:44:02
1	S 181.975 Axial†	58295.0	60865.2	51520	ug/L	51520	ppb	10:44:02
1	Sb 206.836†	53440.0	55812.8	10745	ug/L	10745	ppb	10:44:02
1	Se 196.026†	29668.4	31032.6	10122	ug/L	10122	ppb	10:44:02
1	Si 251.611†	2155853.2	2252850.9	46184	ug/L	46184	ppb	10:43:57
1	Sn 189.927†	95946.9	100283.2	10430	ug/L	10430	ppb	10:44:02
1	Sr 421.552†	646073.6	663655.5	10225	ug/L	10225	ppb	10:42:15
1	Ti 334.940†	7127693.7	7451349.2	9745.7	ug/L	9745.7	ppb	10:43:50
1	Tl 190.801†	55066.4	57619.7	9753.1	ug/L	9753.1	ppb	10:44:02
1	U 409.014†	-2611.3	1105.2	-19.174	ug/L	-19.174	ppb	10:44:02
1	V 292.402†	1681684.2	1759437.4	10082	ug/L	10082	ppb	10:43:57
1	Zn 213.857†	2418310.9	2526623.2	14016	ug/L	14016	ppb	10:43:57
1	SiO2†	2181096.5	2279194.3	100050	ug/L	100050	ppb	10:44:49
2	Sc 361.383	1029870.2	1029870.2	97.077	%			10:44:17
2	Sc Radial	5497.9	5497.9	98.8	%			10:42:50
2	Y 371.029	811966.1	811966.1	95.166	%			10:44:17
2	Y RADIAL	4740.4	4740.4	98.44	%			10:42:50
2	Ag 328.068†	-7088.1	-7940.1	6.7301	ug/L	6.7301	ppb	10:44:22
2	Al 396.153Radial†	473.1	571.1	109.77	ug/L	109.77	ppb	10:42:50
2	As 188.979†	40474.1	41729.8	9842.3	ug/L	9842.3	ppb	10:44:22
2	B 249.677†	307090.3	316719.2	4911.8	ug/L	4911.8	ppb	10:44:17
2	Ba 233.527†	2644634.7	2724248.1	13811	ug/L	13811	ppb	10:44:17
2	Be 313.107†	8832006.5	9105280.2	2853.4	ug/L	2853.4	ppb	10:44:10
2	Ca 317.933Radial†	28.1	11.5	28.754	ug/L	28.754	ppb	10:43:10
2	Cd 226.502†	1271277.6	1309837.1	9803.0	ug/L	9803.0	ppb	10:44:17
2	Co 228.616†	743954.7	766447.7	9548.5	ug/L	9548.5	ppb	10:44:17
2	Cr 267.716†	2688484.5	2769471.3	23603	ug/L	23603	ppb	10:44:17
2	Cu 324.752†	7842993.7	8068977.9	19908	ug/L	19908	ppb	10:44:10
2	Fe 238.204 Radial†	-5.8	-6.2	84.443	ug/L	84.443	ppb	10:43:10
2	K 766.490 Radial†	684716.9	691584.4	299980	ug/L	299980	ppb	10:42:45
2	Mg 279.077 IEC†	-2.0	-2.2	19.126	ug/L	19.126	ppb	10:43:10
2	Mn 257.610†	11404692.0	11747293.6	9283.6	ug/L	9283.6	ppb	10:44:10
2	Mo 202.031†	232311.4	239275.2	9577.5	ug/L	9577.5	ppb	10:44:22
2	Na 589.592 Radial†	-129.4	39.4	106.58	ug/L	106.58	ppb	10:43:10
2	Ni 231.604†	586038.5	603537.6	9667.2	ug/L	9667.2	ppb	10:44:17

2	P 214.914†	48755.1	49886.4	14579	ug/L	14579	ppb	10:44:22
2	Pb 220.353†	309441.3	318788.5	23906	ug/L	23906	ppb	10:44:22
2	S 181.975 Axial†	58411.2	60102.3	50874	ug/L	50874	ppb	10:44:22
2	Sb 206.836†	53362.1	54923.6	10578	ug/L	10578	ppb	10:44:22
2	Se 196.026†	29761.5	30679.3	10007	ug/L	10007	ppb	10:44:22
2	Si 251.611†	2138710.2	2202552.9	45150	ug/L	45150	ppb	10:44:17
2	Sn 189.927†	95957.5	98841.5	10280	ug/L	10280	ppb	10:44:22
2	Sr 421.552†	646581.7	654452.3	10083	ug/L	10083	ppb	10:42:45
2	Ti 334.940†	7109976.4	7325187.8	9580.8	ug/L	9580.8	ppb	10:44:10
2	Tl 190.801†	55268.7	56994.4	9647.5	ug/L	9647.5	ppb	10:44:22
2	U 409.014†	-2581.0	1176.0	-16.357	ug/L	-16.357	ppb	10:44:22
2	V 292.402†	1665056.2	1716848.7	9839.4	ug/L	9839.4	ppb	10:44:17
2	Zn 213.857†	2400720.5	2471890.8	13712	ug/L	13712	ppb	10:44:17
2	SiO2†	2194108.9	2259577.6	99188	ug/L	99188	ppb	10:44:57
3	Sc 361.383	1027984.8	1027984.8	96.899	%			10:44:37
3	Sc Radial	5311.1	5311.1	95.4	%			10:43:20
3	Y 371.029	810508.3	810508.3	94.995	%			10:44:37
3	Y RADIAL	4586.5	4586.5	95.24	%			10:43:20
3	Ag 328.068†	-7268.9	-8140.1	6.0153	ug/L	6.0153	ppb	10:44:42
3	Al 396.153Radial†	472.0	586.8	121.54	ug/L	121.54	ppb	10:43:20
3	As 188.979†	40697.9	42037.3	9914.2	ug/L	9914.2	ppb	10:44:42
3	B 249.677†	308195.5	318440.0	4938.5	ug/L	4938.5	ppb	10:44:37
3	Ba 233.527†	2647831.5	2732543.7	13853	ug/L	13853	ppb	10:44:37
3	Be 313.107†	8792922.6	9081631.8	2846.1	ug/L	2846.1	ppb	10:44:30
3	Ca 317.933Radial†	29.0	13.4	33.386	ug/L	33.386	ppb	10:43:40
3	Cd 226.502†	1272287.1	1313280.7	9828.8	ug/L	9828.8	ppb	10:44:37
3	Co 228.616†	745426.9	769372.6	9585.2	ug/L	9585.2	ppb	10:44:37
3	Cr 267.716†	2688412.8	2774476.6	23645	ug/L	23645	ppb	10:44:37
3	Cu 324.752†	7782720.1	8021593.1	19791	ug/L	19791	ppb	10:44:30
3	Fe 238.204 Radial†	-6.7	-7.3	44.771	ug/L	44.771	ppb	10:43:40
3	K 766.490 Radial†	683971.3	715172.9	310220	ug/L	310220	ppb	10:43:15
3	Mg 279.077 IEC†	-3.7	-4.1	-128.19	ug/L	-128.19	ppb	10:43:40
3	Mn 257.610†	11381446.6	11744851.0	9281.7	ug/L	9281.7	ppb	10:44:30
3	Mo 202.031†	233312.1	240746.8	9636.4	ug/L	9636.4	ppb	10:44:42
3	Na 589.592 Radial†	-122.9	41.6	112.55	ug/L	112.55	ppb	10:43:40
3	Ni 231.604†	587015.1	605652.6	9701.1	ug/L	9701.1	ppb	10:44:37
3	P 214.914†	49152.9	50388.9	14776	ug/L	14776	ppb	10:44:42
3	Pb 220.353†	310539.8	320506.8	24035	ug/L	24035	ppb	10:44:42
3	S 181.975 Axial†	58718.6	60529.9	51236	ug/L	51236	ppb	10:44:42
3	Sb 206.836†	53615.8	55286.2	10651	ug/L	10651	ppb	10:44:42
3	Se 196.026†	29842.3	30818.9	10053	ug/L	10053	ppb	10:44:42
3	Si 251.611†	2145121.2	2213209.7	45366	ug/L	45366	ppb	10:44:37
3	Sn 189.927†	96345.6	99423.4	10341	ug/L	10341	ppb	10:44:42
3	Sr 421.552†	646025.5	676882.0	10428	ug/L	10428	ppb	10:43:15
3	Ti 334.940†	7084549.3	7312379.8	9564.0	ug/L	9564.0	ppb	10:44:30
3	Tl 190.801†	55398.8	57233.1	9687.5	ug/L	9687.5	ppb	10:44:42
3	U 409.014†	-2499.7	1255.0	-14.474	ug/L	-14.474	ppb	10:44:42
3	V 292.402†	1665986.8	1720954.9	9863.5	ug/L	9863.5	ppb	10:44:37
3	Zn 213.857†	2405918.3	2481790.6	13767	ug/L	13767	ppb	10:44:37
3	SiO2†	2167381.8	2236140.5	98142	ug/L	98142	ppb	10:45:04

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1024269.4	96.549	%	0.7657				0.79%
Sc Radial	5408.8	97.2	%	1.68				1.73%
Y 371.029	807805.3	94.678	%	0.7019				0.74%
Y RADIAL	4677.8	97.14	%	1.679				1.73%
Ag 328.068†	-8050.3	6.6290	ug/L	0.56988	6.6290	ppb	0.56988	8.60%
Al 396.153Radial†	570.4	106.31	ug/L	17.224	106.31	ppb	17.224	16.20%
As 188.979†	42039.5	9915.2	ug/L	73.36	9915.2	ppb	73.36	0.74%
QC value within limits for As 188.979 Recovery = 99.15%								
B 249.677†	319809.9	4959.8	ug/L	61.39	4959.8	ppb	61.39	1.24%
QC value within limits for B 249.677 Recovery = 99.20%								
Ba 233.527†	2747217.8	13927	ug/L	166.6	13927	ppb	166.6	1.20%
QC value within limits for Ba 233.527 Recovery = 92.85%								
Be 313.107†	9150674.2	2867.7	ug/L	31.27	2867.7	ppb	31.27	1.09%
QC value within limits for Be 313.107 Recovery = 95.59%								
Ca 317.933Radial†	11.5	28.613	ug/L	4.8452	28.613	ppb	4.8452	16.93%
Cd 226.502†	1320484.3	9882.7	ug/L	116.42	9882.7	ppb	116.42	1.18%

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   QC value within limits for Cd 226.502  Recovery = 98.83%
Co 228.616†          773156.4      9632.2 ug/L        114.57      9632.2 ppb        114.57   1.19%
   QC value within limits for Co 228.616  Recovery = 96.32%
Cr 267.716†         2792809.0       23802 ug/L         308.3       23802 ppb         308.3   1.30%
   QC value within limits for Cr 267.716  Recovery = 95.21%
Cu 324.752†         8100643.1       19986 ug/L         243.7       19986 ppb         243.7   1.22%
   QC value within limits for Cu 324.752  Recovery = 99.93%
Fe 238.204 Radial†        -7.2      50.787 ug/L       31.0875      50.787 ppb       31.0875  61.21%
K 766.490 Radial†     702762.2      304830 ug/L        5138.4      304830 ppb        5138.4   1.69%
   QC value within limits for K 766.490 Radial  Recovery = 101.61%
Mg 279.077 IEC†           -3.1     -53.681 ug/L       73.6715     -53.681 ppb       73.6715 137.24%
Mn 257.610†         11811908.6      9334.7 ug/L         90.12      9334.7 ppb         90.12   0.97%
   QC value within limits for Mn 257.610  Recovery = 93.35%
Mo 202.031†          240947.6      9644.5 ug/L         71.30      9644.5 ppb         71.30   0.74%
   QC value within limits for Mo 202.031  Recovery = 96.44%
Na 589.592 Radial†        41.9      113.25 ug/L         7.046      113.25 ppb         7.046   6.22%
Ni 231.604†          609038.2      9755.3 ug/L        124.43      9755.3 ppb        124.43   1.28%
   QC value within limits for Ni 231.604  Recovery = 97.55%
P 214.914†            50283.1       14707 ug/L         111.5       14707 ppb         111.5   0.76%
   QC value within limits for P 214.914  Recovery = 98.05%
Pb 220.353†          320903.3       24065 ug/L         175.3       24065 ppb         175.3   0.73%
   QC value within limits for Pb 220.353  Recovery = 96.26%
S 181.975 Axial†      60499.1       51210 ug/L         323.6       51210 ppb         323.6   0.63%
   QC value within limits for S 181.975 Axial  Recovery = 102.42%
Sb 206.836†           55340.9       10658 ug/L          83.6       10658 ppb          83.6   0.78%
   QC value within limits for Sb 206.836  Recovery = 106.58%
Se 196.026†           30843.6       10061 ug/L          58.0       10061 ppb          58.0   0.58%
   QC value within limits for Se 196.026  Recovery = 100.61%
Si 251.611†         2222871.2       45567 ug/L         545.3       45567 ppb         545.3   1.20%
   QC value within limits for Si 251.611  Recovery = 91.13%
Sn 189.927†           99516.1       10350 ug/L          75.4       10350 ppb          75.4   0.73%
   QC value within limits for Sn 189.927  Recovery = 103.50%
Sr 421.552†          664996.6       10245 ug/L         173.7       10245 ppb         173.7   1.70%
   QC value within limits for Sr 421.552  Recovery = 102.45%
Ti 334.940†         7362972.3      9630.2 ug/L        100.43      9630.2 ppb        100.43   1.04%
   QC value within limits for Ti 334.940  Recovery = 96.30%
Tl 190.801†           57282.4      9696.0 ug/L         53.30      9696.0 ppb         53.30   0.55%
   QC value within limits for Tl 190.801  Recovery = 96.96%
U 409.014†             1178.7     -16.669 ug/L        2.3653     -16.669 ppb        2.3653  14.19%
V 292.402†          1732413.7      9928.4 ug/L        133.88      9928.4 ppb        133.88   1.35%
   QC value within limits for V 292.402  Recovery = 99.28%
Zn 213.857†         2493434.9       13832 ug/L         161.7       13832 ppb         161.7   1.17%
   QC value within limits for Zn 213.857  Recovery = 92.21%
SiO2†               2258304.1       99125 ug/L         953.1       99125 ppb         953.1   0.96%
   QC value within limits for SiO2  Recovery = 92.64%
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:03:37
Data Type: Reprocessed on 7/8/2009 11:40:18

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1067409.9	1067409.9	100.62	%			11:06:48
1	Sc Radial	5545.0	5545.0	99.6	%			11:05:29
1	Y 371.029	849738.5	849738.5	99.593	%			11:06:48
1	Y RADIAL	4788.0	4788.0	99.42	%			11:05:29
1	Ag 328.068†	127524.3	126105.9	502.25	ug/L	502.25	ppb	11:06:48
1	Al 396.153Radial†	5299.4	5410.6	4903.4	ug/L	4903.4	ppb	11:05:29
1	As 188.979†	2078.4	2102.6	496.72	ug/L	496.72	ppb	11:07:08
1	B 249.677†	31751.6	31939.0	495.88	ug/L	495.88	ppb	11:06:48
1	Ba 233.527†	98259.2	97634.0	495.40	ug/L	495.40	ppb	11:06:48
1	Be 313.107†	1589957.2	1587550.7	494.78	ug/L	494.78	ppb	11:06:48
1	Ca 317.933Radial†	2000.8	1991.0	4959.2	ug/L	4959.2	ppb	11:05:49
1	Cd 226.502†	66514.3	66385.2	496.24	ug/L	496.24	ppb	11:06:48
1	Co 228.616†	38913.1	38765.6	483.08	ug/L	483.08	ppb	11:07:08
1	Cr 267.716†	58344.9	58016.7	494.83	ug/L	494.83	ppb	11:06:48
1	Cu 324.752†	211137.7	199655.3	492.89	ug/L	492.89	ppb	11:06:48
1	Fe 238.204 Radial†	142.3	142.5	5015.0	ug/L	5015.0	ppb	11:05:49
1	K 766.490 Radial†	13511.2	12086.4	5238.2	ug/L	5238.2	ppb	11:05:29
1	Mg 279.077 IEC†	62.2	62.2	4932.1	ug/L	4932.1	ppb	11:05:49
1	Mn 257.610†	629929.2	625250.1	494.68	ug/L	494.68	ppb	11:06:48
1	Mo 202.031†	12643.5	12534.4	502.06	ug/L	502.06	ppb	11:07:08
1	Na 589.592 Radial†	3490.6	3673.5	9932.6	ug/L	9932.6	ppb	11:05:29
1	Ni 231.604†	30743.5	30407.2	487.05	ug/L	487.05	ppb	11:07:08
1	P 214.914†	7354.4	6972.5	2389.5	ug/L	2389.5	ppb	11:07:08
1	Pb 220.353†	6693.1	6681.2	502.20	ug/L	502.20	ppb	11:07:08
1	S 181.975 Axial†	1258.3	1182.8	1000.2	ug/L	1000.2	ppb	11:07:08
1	Sb 206.836†	2588.5	2527.3	503.10	ug/L	503.10	ppb	11:07:08
1	Se 196.026†	1499.7	1512.2	511.22	ug/L	511.22	ppb	11:07:08
1	Si 251.611†	122687.2	121376.8	2492.5	ug/L	2492.5	ppb	11:06:48
1	Sn 189.927†	4831.3	4796.3	499.31	ug/L	499.31	ppb	11:07:08
1	Sr 421.552†	33822.5	33937.9	522.82	ug/L	522.82	ppb	11:05:29
1	Ti 334.940†	380487.1	379269.6	496.43	ug/L	496.43	ppb	11:06:48
1	Tl 190.801†	2880.1	2923.9	495.14	ug/L	495.14	ppb	11:07:08
1	U 409.014†	15659.6	19398.6	479.74	ug/L	479.74	ppb	11:06:48
1	V 292.402†	85512.2	86642.1	497.38	ug/L	497.38	ppb	11:06:48
1	Zn 213.857†	90296.7	88622.2	490.34	ug/L	490.34	ppb	11:06:48
1	SiO2†	123097.1	121742.0	5353.1	ug/L	5353.1	ppb	11:08:09
2	Sc 361.383	1057828.3	1057828.3	99.712	%			11:07:16
2	Sc Radial	5453.0	5453.0	98.0	%			11:05:54
2	Y 371.029	842848.9	842848.9	98.785	%			11:07:16
2	Y RADIAL	4734.2	4734.2	98.31	%			11:05:54
2	Ag 328.068†	126253.5	125979.4	501.76	ug/L	501.76	ppb	11:07:16
2	Al 396.153Radial†	5204.3	5403.2	4896.6	ug/L	4896.6	ppb	11:05:54
2	As 188.979†	2077.1	2120.0	500.82	ug/L	500.82	ppb	11:07:36
2	B 249.677†	31594.9	32067.6	497.87	ug/L	497.87	ppb	11:07:16
2	Ba 233.527†	97420.0	97677.0	495.62	ug/L	495.62	ppb	11:07:16
2	Be 313.107†	1578761.2	1590635.7	495.74	ug/L	495.74	ppb	11:07:16
2	Ca 317.933Radial†	1973.0	1996.5	4973.1	ug/L	4973.1	ppb	11:06:14
2	Cd 226.502†	65741.0	66208.5	494.92	ug/L	494.92	ppb	11:07:16
2	Co 228.616†	38917.3	39120.1	487.50	ug/L	487.50	ppb	11:07:36
2	Cr 267.716†	57810.8	58006.3	494.74	ug/L	494.74	ppb	11:07:16
2	Cu 324.752†	209446.8	199860.3	493.40	ug/L	493.40	ppb	11:07:16
2	Fe 238.204 Radial†	140.5	143.1	5035.0	ug/L	5035.0	ppb	11:06:14
2	K 766.490 Radial†	13401.9	12203.6	5289.1	ug/L	5289.1	ppb	11:05:54
2	Mg 279.077 IEC†	61.6	62.7	4968.4	ug/L	4968.4	ppb	11:06:14
2	Mn 257.610†	623982.1	624956.7	494.45	ug/L	494.45	ppb	11:07:16
2	Mo 202.031†	12615.6	12620.3	505.50	ug/L	505.50	ppb	11:07:36
2	Na 589.592 Radial†	3446.1	3687.2	9969.7	ug/L	9969.7	ppb	11:05:54
2	Ni 231.604†	30735.8	30676.3	491.36	ug/L	491.36	ppb	11:07:36

2	P 214.914†	7337.1	7021.4	2406.8 ug/L	2406.8 ppb		11:07:36
2	Pb 220.353†	6673.6	6722.0	505.26 ug/L	505.26 ppb		11:07:36
2	S 181.975 Axial†	1264.2	1200.1	1014.8 ug/L	1014.8 ppb		11:07:36
2	Sb 206.836†	2593.9	2556.0	508.91 ug/L	508.91 ppb		11:07:36
2	Se 196.026†	1503.2	1529.2	516.82 ug/L	516.82 ppb		11:07:36
2	Si 251.611†	121455.1	121245.6	2489.7 ug/L	2489.7 ppb		11:07:16
2	Sn 189.927†	4839.5	4848.0	504.69 ug/L	504.69 ppb		11:07:36
2	Sr 421.552†	33228.1	33904.0	522.30 ug/L	522.30 ppb		11:05:54
2	Ti 334.940†	377267.8	379466.3	496.69 ug/L	496.69 ppb		11:07:16
2	Tl 190.801†	2881.9	2951.6	499.79 ug/L	499.79 ppb		11:07:36
2	U 409.014†	15609.8	19489.6	482.00 ug/L	482.00 ppb		11:07:16
2	V 292.402†	84902.2	86800.1	498.32 ug/L	498.32 ppb		11:07:16
2	Zn 213.857†	89406.2	88541.9	489.86 ug/L	489.86 ppb		11:07:16
2	SiO2†	122640.5	122392.2	5381.6 ug/L	5381.6 ppb		11:08:14
3	Sc 361.383	1055071.7	1055071.7	99.452 %			11:07:43
3	Sc Radial	5432.7	5432.7	97.6 %			11:06:19
3	Y 371.029	840276.0	840276.0	98.484 %			11:07:43
3	Y RADIAL	4696.8	4696.8	97.53 %			11:06:19
3	Ag 328.068†	126120.7	126176.7	502.55 ug/L	502.55 ppb		11:07:43
3	Al 396.153Radial†	5181.8	5400.1	4893.7 ug/L	4893.7 ppb		11:06:19
3	As 188.979†	2085.4	2133.8	504.06 ug/L	504.06 ppb		11:08:03
3	B 249.677†	31427.7	31982.3	496.53 ug/L	496.53 ppb		11:07:43
3	Ba 233.527†	97457.1	97969.6	497.10 ug/L	497.10 ppb		11:07:43
3	Be 313.107†	1576182.4	1592179.6	496.22 ug/L	496.22 ppb		11:07:43
3	Ca 317.933Radial†	1975.0	2006.1	4996.9 ug/L	4996.9 ppb		11:06:39
3	Cd 226.502†	65930.8	66571.6	497.63 ug/L	497.63 ppb		11:07:43
3	Co 228.616†	38836.3	39140.6	487.76 ug/L	487.76 ppb		11:08:03
3	Cr 267.716†	57863.2	58210.5	496.48 ug/L	496.48 ppb		11:07:43
3	Cu 324.752†	208532.5	199489.8	492.49 ug/L	492.49 ppb		11:07:43
3	Fe 238.204 Radial†	141.4	144.5	5084.1 ug/L	5084.1 ppb		11:06:39
3	K 766.490 Radial†	13356.4	12208.3	5291.1 ug/L	5291.1 ppb		11:06:19
3	Mg 279.077 IEC†	60.3	61.6	4883.3 ug/L	4883.3 ppb		11:06:39
3	Mn 257.610†	623827.7	626436.5	495.63 ug/L	495.63 ppb		11:07:43
3	Mo 202.031†	12607.0	12644.6	506.48 ug/L	506.48 ppb		11:08:03
3	Na 589.592 Radial†	3459.6	3714.2	10043 ug/L	10043 ppb		11:06:19
3	Ni 231.604†	30656.7	30677.3	491.38 ug/L	491.38 ppb		11:08:03
3	P 214.914†	7338.8	7042.2	2414.3 ug/L	2414.3 ppb		11:08:03
3	Pb 220.353†	6655.9	6721.6	505.23 ug/L	505.23 ppb		11:08:03
3	S 181.975 Axial†	1273.7	1212.9	1025.7 ug/L	1025.7 ppb		11:08:03
3	Sb 206.836†	2578.9	2547.6	507.27 ug/L	507.27 ppb		11:08:03
3	Se 196.026†	1491.2	1521.0	514.35 ug/L	514.35 ppb		11:08:03
3	Si 251.611†	121268.2	121376.0	2492.4 ug/L	2492.4 ppb		11:07:43
3	Sn 189.927†	4839.7	4860.9	506.04 ug/L	506.04 ppb		11:08:03
3	Sr 421.552†	33109.5	33909.5	522.38 ug/L	522.38 ppb		11:06:19
3	Ti 334.940†	376709.4	379893.4	497.25 ug/L	497.25 ppb		11:07:43
3	Tl 190.801†	2882.8	2960.1	501.23 ug/L	501.23 ppb		11:08:03
3	U 409.014†	15694.8	19616.0	485.13 ug/L	485.13 ppb		11:07:43
3	V 292.402†	84699.0	86818.3	498.43 ug/L	498.43 ppb		11:07:43
3	Zn 213.857†	89588.7	88959.8	492.20 ug/L	492.20 ppb		11:07:43
3	SiO2†	121565.4	121632.6	5348.0 ug/L	5348.0 ppb		11:08:19

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060103.3	99.927	%	0.6104				0.61%
Sc Radial	5476.9	98.4	%	1.08				1.09%
Y 371.029	844287.8	98.954	%	0.5734				0.58%
Y RADIAL	4739.7	98.42	%	0.952				0.97%
Ag 328.068†	126087.3	502.19	ug/L	0.401	502.19	ppb	0.401	0.08%
QC value within limits for Ag 328.068 Recovery = 100.44%								
Al 396.153Radial†	5404.6	4897.9	ug/L	5.00	4897.9	ppb	5.00	0.10%
QC value within limits for Al 396.153Radial Recovery = 97.96%								
As 188.979†	2118.8	500.53	ug/L	3.674	500.53	ppb	3.674	0.73%
QC value within limits for As 188.979 Recovery = 100.11%								
B 249.677†	31996.3	496.76	ug/L	1.015	496.76	ppb	1.015	0.20%
QC value within limits for B 249.677 Recovery = 99.35%								
Ba 233.527†	97760.2	496.04	ug/L	0.926	496.04	ppb	0.926	0.19%
QC value within limits for Ba 233.527 Recovery = 99.21%								
Be 313.107†	1590122.0	495.58	ug/L	0.734	495.58	ppb	0.734	0.15%
QC value within limits for Be 313.107 Recovery = 99.12%								

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Ca 317.933Radial†        1997.9      4976.4 ug/L        19.05      4976.4 ppb        19.05   0.38%
   QC value within limits for Ca 317.933Radial  Recovery = 99.53%
Cd 226.502†             66388.4      496.27 ug/L         1.355      496.27 ppb         1.355   0.27%
   QC value within limits for Cd 226.502  Recovery = 99.25%
Co 228.616†             39008.8      486.11 ug/L         2.631      486.11 ppb         2.631   0.54%
   QC value within limits for Co 228.616  Recovery = 97.22%
Cr 267.716†             58077.8      495.35 ug/L         0.980      495.35 ppb         0.980   0.20%
   QC value within limits for Cr 267.716  Recovery = 99.07%
Cu 324.752†            199668.4      492.93 ug/L         0.457      492.93 ppb         0.457   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†        143.4      5044.7 ug/L        35.56      5044.7 ppb        35.56   0.70%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.89%
K 766.490 Radial†       12166.1      5272.8 ug/L        29.98      5272.8 ppb        29.98   0.57%
   QC value within limits for K 766.490 Radial  Recovery = 105.46%
Mg 279.077 IEC†            62.1      4927.9 ug/L        42.66      4927.9 ppb        42.66   0.87%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.56%
Mn 257.610†            625547.8      494.92 ug/L         0.624      494.92 ppb         0.624   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.98%
Mo 202.031†             12599.8      504.68 ug/L         2.320      504.68 ppb         2.320   0.46%
   QC value within limits for Mo 202.031  Recovery = 100.94%
Na 589.592 Radial†       3691.6      9981.7 ug/L        56.08      9981.7 ppb        56.08   0.56%
   QC value within limits for Na 589.592 Radial  Recovery = 99.82%
Ni 231.604†             30586.9      489.93 ug/L         2.493      489.93 ppb         2.493   0.51%
   QC value within limits for Ni 231.604  Recovery = 97.99%
P 214.914†               7012.0      2403.5 ug/L        12.69      2403.5 ppb        12.69   0.53%
   QC value within limits for P 214.914  Recovery = 96.14%
Pb 220.353†              6708.3      504.23 ug/L         1.758      504.23 ppb         1.758   0.35%
   QC value within limits for Pb 220.353  Recovery = 100.85%
S 181.975 Axial†         1198.6      1013.6 ug/L        12.78      1013.6 ppb        12.78   1.26%
   QC value within limits for S 181.975 Axial  Recovery = 101.36%
Sb 206.836†              2543.6      506.43 ug/L         2.994      506.43 ppb         2.994   0.59%
   QC value within limits for Sb 206.836  Recovery = 101.29%
Se 196.026†              1520.8      514.13 ug/L         2.806      514.13 ppb         2.806   0.55%
   QC value within limits for Se 196.026  Recovery = 102.83%
Si 251.611†            121332.8      2491.6 ug/L         1.58      2491.6 ppb         1.58   0.06%
   QC value within limits for Si 251.611  Recovery = 99.66%
Sn 189.927†              4835.1      503.35 ug/L         3.557      503.35 ppb         3.557   0.71%
   QC value within limits for Sn 189.927  Recovery = 100.67%
Sr 421.552†             33917.1      522.50 ug/L         0.280      522.50 ppb         0.280   0.05%
   QC value within limits for Sr 421.552  Recovery = 104.50%
Ti 334.940†            379543.1      496.79 ug/L         0.417      496.79 ppb         0.417   0.08%
   QC value within limits for Ti 334.940  Recovery = 99.36%
Tl 190.801†              2945.2      498.72 ug/L         3.184      498.72 ppb         3.184   0.64%
   QC value within limits for Tl 190.801  Recovery = 99.74%
U 409.014†              19501.4      482.29 ug/L         2.703      482.29 ppb         2.703   0.56%
   QC value within limits for U 409.014  Recovery = 96.46%
V 292.402†              86753.5      498.04 ug/L         0.579      498.04 ppb         0.579   0.12%
   QC value within limits for V 292.402  Recovery = 99.61%
Zn 213.857†             88708.0      490.80 ug/L         1.232      490.80 ppb         1.232   0.25%
   QC value within limits for Zn 213.857  Recovery = 98.16%
SiO2†                  121922.3      5360.9 ug/L        18.12      5360.9 ppb        18.12   0.34%
   QC value within limits for SiO2  Recovery = 100.25%
All analyte(s) passed QC.
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Sequence No.: 16
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:10:29
Data Type: Reprocessed on 7/8/2009 11:40:19

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1056286.1	1056286.1	99.567	%			11:13:38
1	Sc Radial	5577.8	5577.8	100	%			11:12:21
1	Y 371.029	851747.2	851747.2	99.828	%			11:13:38
1	Y RADIAL	4867.5	4867.5	101.1	%			11:12:21
1	Ag 328.068†	792.7	157.6	0.6291	ug/L	0.6291	ppb	11:13:43
1	Al 396.153Radial†	-60.0	32.4	29.446	ug/L	29.446	ppb	11:12:21
1	As 188.979†	-47.8	-11.1	-2.5990	ug/L	-2.5990	ppb	11:14:03
1	B 249.677†	436.8	820.2	12.780	ug/L	12.780	ppb	11:13:43
1	Ba 233.527†	31.5	7.4	0.0373	ug/L	0.0373	ppb	11:14:03
1	Be 313.107†	-7422.8	-138.9	-0.0432	ug/L	-0.0432	ppb	11:13:43
1	Ca 317.933Radial†	33.6	16.5	41.209	ug/L	41.209	ppb	11:12:41
1	Cd 226.502†	-287.1	-10.7	-0.0827	ug/L	-0.0827	ppb	11:14:03
1	Co 228.616†	-82.2	7.8	0.0972	ug/L	0.0972	ppb	11:14:03
1	Cr 267.716†	-32.4	-4.0	-0.0341	ug/L	-0.0341	ppb	11:14:03
1	Cu 324.752†	10356.0	209.8	0.5189	ug/L	0.5189	ppb	11:13:43
1	Fe 238.204 Radial†	1.0	0.7	23.570	ug/L	23.570	ppb	11:12:41
1	K 766.490 Radial†	1855.2	377.8	163.93	ug/L	163.93	ppb	11:12:21
1	Mg 279.077 IEC†	1.4	1.2	93.519	ug/L	93.519	ppb	11:12:41
1	Mn 257.610†	821.4	-2.0	-0.0003	ug/L	-0.0003	ppb	11:14:03
1	Mo 202.031†	33.3	1.7	0.0702	ug/L	0.0702	ppb	11:14:03
1	Na 589.592 Radial†	-185.2	-14.4	-38.901	ug/L	-38.901	ppb	11:12:41
1	Ni 231.604†	168.8	21.3	0.3412	ug/L	0.3412	ppb	11:14:03
1	P 214.914†	333.0	-2.5	-0.9562	ug/L	-0.9562	ppb	11:14:03
1	Pb 220.353†	11.5	40.6	3.0505	ug/L	3.0505	ppb	11:14:03
1	S 181.975 Axial†	72.5	5.0	4.2399	ug/L	4.2399	ppb	11:14:03
1	Sb 206.836†	55.9	10.7	2.1229	ug/L	2.1229	ppb	11:14:03
1	Se 196.026†	-17.3	4.3	1.4749	ug/L	1.4749	ppb	11:14:03
1	Si 251.611†	665.9	108.7	2.1852	ug/L	2.1852	ppb	11:14:03
1	Sn 189.927†	14.7	9.3	0.9689	ug/L	0.9689	ppb	11:14:03
1	Sr 421.552†	24.7	19.1	0.2942	ug/L	0.2942	ppb	11:12:41
1	Ti 334.940†	-1110.3	-5.8	-0.0052	ug/L	-0.0052	ppb	11:13:43
1	Tl 190.801†	-57.1	4.0	0.6835	ug/L	0.6835	ppb	11:14:03
1	U 409.014†	-3785.0	33.2	0.8217	ug/L	0.8217	ppb	11:13:38
1	V 292.402†	-1685.0	-39.6	-0.2237	ug/L	-0.2237	ppb	11:13:43
1	Zn 213.857†	1105.7	-11.9	-0.0751	ug/L	-0.0751	ppb	11:14:03
1	SiO2†	681.4	82.0	3.4918	ug/L	3.4918	ppb	11:15:09
2	Sc 361.383	1055939.4	1055939.4	99.534	%			11:14:08
2	Sc Radial	5379.7	5379.7	96.7	%			11:12:46
2	Y 371.029	851096.0	851096.0	99.752	%			11:14:08
2	Y RADIAL	4702.4	4702.4	97.65	%			11:12:46
2	Ag 328.068†	776.8	141.8	0.5427	ug/L	0.5427	ppb	11:14:13
2	Al 396.153Radial†	-76.7	12.9	11.716	ug/L	11.716	ppb	11:12:46
2	As 188.979†	-40.2	-3.5	-0.8491	ug/L	-0.8491	ppb	11:14:33
2	B 249.677†	486.5	870.3	13.572	ug/L	13.572	ppb	11:14:13
2	Ba 233.527†	62.3	38.3	0.1924	ug/L	0.1924	ppb	11:14:33
2	Be 313.107†	-7290.4	-8.3	-0.0025	ug/L	-0.0025	ppb	11:14:13
2	Ca 317.933Radial†	28.6	12.6	31.463	ug/L	31.463	ppb	11:13:06
2	Cd 226.502†	-289.0	-12.7	-0.0867	ug/L	-0.0867	ppb	11:14:33
2	Co 228.616†	-77.8	12.3	0.1535	ug/L	0.1535	ppb	11:14:33
2	Cr 267.716†	-16.8	11.7	0.0997	ug/L	0.0997	ppb	11:14:33
2	Cu 324.752†	10238.9	95.6	0.2319	ug/L	0.2319	ppb	11:14:13
2	Fe 238.204 Radial†	-1.5	-1.9	-67.871	ug/L	-67.871	ppb	11:13:06
2	K 766.490 Radial†	1812.4	401.6	174.21	ug/L	174.21	ppb	11:12:46
2	Mg 279.077 IEC†	1.0	0.8	66.268	ug/L	66.268	ppb	11:13:06
2	Mn 257.610†	855.6	32.6	0.0157	ug/L	0.0157	ppb	11:14:33
2	Mo 202.031†	30.0	-1.6	-0.0706	ug/L	-0.0706	ppb	11:14:33
2	Na 589.592 Radial†	-174.9	-10.5	-28.379	ug/L	-28.379	ppb	11:13:06
2	Ni 231.604†	168.3	20.8	0.3332	ug/L	0.3332	ppb	11:14:33

2	P 214.914†	337.1	1.8	0.6504	ug/L	0.6504 ppb	11:14:33
2	Pb 220.353†	-5.9	23.2	1.7452	ug/L	1.7452 ppb	11:14:33
2	S 181.975 Axial†	79.7	12.3	10.368	ug/L	10.368 ppb	11:14:33
2	Sb 206.836†	62.7	17.5	3.4466	ug/L	3.4466 ppb	11:14:33
2	Se 196.026†	-10.1	11.5	3.4915	ug/L	3.4915 ppb	11:14:33
2	Si 251.611†	654.2	97.1	1.9448	ug/L	1.9448 ppb	11:14:33
2	Sn 189.927†	12.6	7.2	0.7527	ug/L	0.7527 ppb	11:14:33
2	Sr 421.552†	34.7	30.4	0.4675	ug/L	0.4675 ppb	11:13:06
2	Ti 334.940†	-1082.3	21.9	0.0326	ug/L	0.0326 ppb	11:14:13
2	Tl 190.801†	-39.2	22.0	3.7138	ug/L	3.7138 ppb	11:14:33
2	U 409.014†	-3991.4	-175.3	-4.3425	ug/L	-4.3425 ppb	11:14:08
2	V 292.402†	-1651.7	-6.6	-0.0367	ug/L	-0.0367 ppb	11:14:13
2	Zn 213.857†	1118.7	1.5	0.0109	ug/L	0.0109 ppb	11:14:33
2	SiO2†	678.0	78.8	3.3488	ug/L	3.3488 ppb	11:15:14
3	Sc 361.383	1066175.5	1066175.5	100.50	%		11:14:39
3	Sc Radial	5571.9	5571.9	100	%		11:13:11
3	Y 371.029	858182.7	858182.7	100.58	%		11:14:39
3	Y RADIAL	4847.5	4847.5	100.7	%		11:13:11
3	Ag 328.068†	733.0	90.7	0.3451	ug/L	0.3451 ppb	11:14:44
3	Al 396.153Radial†	-63.8	28.4	25.885	ug/L	25.885 ppb	11:13:11
3	As 188.979†	-36.2	0.9	0.1978	ug/L	0.1978 ppb	11:15:04
3	B 249.677†	438.0	817.4	12.743	ug/L	12.743 ppb	11:14:44
3	Ba 233.527†	45.2	20.7	0.1045	ug/L	0.1045 ppb	11:15:04
3	Be 313.107†	-7375.6	-22.8	-0.0070	ug/L	-0.0070 ppb	11:14:44
3	Ca 317.933Radial†	31.4	14.4	35.975	ug/L	35.975 ppb	11:13:31
3	Cd 226.502†	-275.1	4.0	0.0342	ug/L	0.0342 ppb	11:15:04
3	Co 228.616†	-85.2	5.6	0.0709	ug/L	0.0709 ppb	11:15:04
3	Cr 267.716†	-11.4	17.3	0.1457	ug/L	0.1457 ppb	11:15:04
3	Cu 324.752†	10202.8	-39.1	-0.0986	ug/L	-0.0986 ppb	11:14:44
3	Fe 238.204 Radial†	-0.7	-1.1	-36.971	ug/L	-36.971 ppb	11:13:31
3	K 766.490 Radial†	1706.6	231.3	100.35	ug/L	100.35 ppb	11:13:11
3	Mg 279.077 IEC†	0.4	0.2	14.946	ug/L	14.946 ppb	11:13:31
3	Mn 257.610†	832.1	0.9	-0.0044	ug/L	-0.0044 ppb	11:15:04
3	Mo 202.031†	38.5	6.5	0.2593	ug/L	0.2593 ppb	11:15:04
3	Na 589.592 Radial†	-180.8	-10.1	-27.397	ug/L	-27.397 ppb	11:13:31
3	Ni 231.604†	170.2	21.1	0.3376	ug/L	0.3376 ppb	11:15:04
3	P 214.914†	362.2	23.5	8.3827	ug/L	8.3827 ppb	11:15:04
3	Pb 220.353†	-20.1	9.1	0.6925	ug/L	0.6925 ppb	11:15:04
3	S 181.975 Axial†	80.7	12.5	10.586	ug/L	10.586 ppb	11:15:04
3	Sb 206.836†	62.0	16.3	3.2114	ug/L	3.2114 ppb	11:15:04
3	Se 196.026†	-17.5	4.2	1.2231	ug/L	1.2231 ppb	11:15:04
3	Si 251.611†	661.8	98.4	1.9887	ug/L	1.9887 ppb	11:15:04
3	Sn 189.927†	17.9	12.4	1.2868	ug/L	1.2868 ppb	11:15:04
3	Sr 421.552†	29.8	24.3	0.3745	ug/L	0.3745 ppb	11:13:31
3	Ti 334.940†	-1085.5	29.2	0.0391	ug/L	0.0391 ppb	11:14:44
3	Tl 190.801†	-66.9	-5.2	-0.8818	ug/L	-0.8818 ppb	11:15:04
3	U 409.014†	-3721.1	132.1	3.2823	ug/L	3.2823 ppb	11:14:39
3	V 292.402†	-1611.3	49.5	0.2955	ug/L	0.2955 ppb	11:14:44
3	Zn 213.857†	1113.1	-14.8	-0.0813	ug/L	-0.0813 ppb	11:15:04
3	SiO2†	689.8	84.0	3.6182	ug/L	3.6182 ppb	11:15:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1059467.0	99.867	%	0.5479				0.55%
Sc Radial	5509.8	99.0	%	2.03				2.05%
Y 371.029	853675.3	100.05	%	0.459				0.46%
Y RADIAL	4805.8	99.79	%	1.872				1.88%
Ag 328.068†	130.0	0.5056	ug/L	0.14559	0.5056	ppb	0.14559	28.79%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	24.6	22.349	ug/L	9.3789	22.349	ppb	9.3789	41.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.6	-1.0834	ug/L	1.41306	-1.0834	ppb	1.41306	130.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	836.0	13.032	ug/L	0.4684	13.032	ppb	0.4684	3.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.1	0.1114	ug/L	0.07778	0.1114	ppb	0.07778	69.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-56.7	-0.0176	ug/L	0.02232	-0.0176	ppb	0.02232	127.00%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          14.5      36.216 ug/L        4.8774      36.216 ppb        4.8774  13.47%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -6.5      -0.0451 ug/L       0.06867     -0.0451 ppb       0.06867 152.40%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                8.6       0.1072 ug/L       0.04222      0.1072 ppb       0.04222  39.39%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                8.3       0.0704 ug/L       0.09343      0.0704 ppb       0.09343 132.64%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               88.8       0.2174 ug/L       0.30899      0.2174 ppb       0.30899 142.11%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.8      -27.091 ug/L       46.5144     -27.091 ppb       46.5144 171.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        336.9       146.16 ug/L        40.010      146.16 ppb        40.010  27.37%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.7       58.244 ug/L       39.8965      58.244 ppb       39.8965  68.50%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               10.5       0.0036 ug/L       0.01059      0.0036 ppb       0.01059 290.42%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                2.2       0.0863 ug/L       0.16552      0.0863 ppb       0.16552 191.79%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -11.7      -31.559 ug/L        6.3772     -31.559 ppb        6.3772  20.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.1       0.3373 ug/L       0.00401      0.3373 ppb       0.00401   1.19%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 7.6       2.6923 ug/L       4.99307      2.6923 ppb       4.99307 185.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               24.3       1.8294 ug/L       1.18127      1.8294 ppb       1.18127  64.57%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           9.9       8.3978 ug/L       3.60254      8.3978 ppb       3.60254  42.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               14.8       2.9269 ug/L       0.70621      2.9269 ppb       0.70621  24.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                6.6       2.0632 ug/L       1.24335      2.0632 ppb       1.24335  60.26%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              101.4       2.0396 ug/L       0.12804      2.0396 ppb       0.12804   6.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                9.6       1.0028 ug/L       0.26867      1.0028 ppb       0.26867  26.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               24.6       0.3787 ug/L       0.08674      0.3787 ppb       0.08674  22.90%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               15.1       0.0222 ug/L       0.02395      0.0222 ppb       0.02395 107.99%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                6.9       1.1719 ug/L       2.33641      1.1719 ppb       2.33641 199.38%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -3.3      -0.0795 ug/L       3.89151     -0.0795 ppb       3.89151 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 1.1       0.0117 ug/L       0.26296      0.0117 ppb       0.26296 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -8.4      -0.0485 ug/L       0.05156     -0.0485 ppb       0.05156 106.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     81.6       3.4863 ug/L       0.13480      3.4863 ppb       0.13480   3.87%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: LR1
Analyst: HSC
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/8/2009 11:17:30
Data Type: Reprocessed on 7/8/2009 11:40:20

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1046705.1	1046705.1	98.664	%			11:20:42
1	Sc Radial	5285.9	5285.9	95.0	%			11:19:24
1	Y 371.029	838520.8	838520.8	98.278	%			11:20:42
1	Y RADIAL	4594.7	4594.7	95.41	%			11:19:24
1	Ag 328.068†	-28259.2	-29280.5	9.7367	ug/L	9.7367	ppb	11:20:42
1	Al 396.153Radial†	-104.1	-17.4	-14.625	ug/L	-14.625	ppb	11:19:24
1	As 188.979†	-375.6	-343.8	-2.6523	ug/L	-2.6523	ppb	11:21:02
1	B 249.677†	2868.7	3289.1	-0.5237	ug/L	-0.5237	ppb	11:20:42
1	Ba 233.527†	-1751.7	-1799.7	0.0492	ug/L	0.0492	ppb	11:21:02
1	Be 313.107†	-7239.6	-21.4	-0.0064	ug/L	-0.0064	ppb	11:20:42
1	Ca 317.933Radial†	22.3	6.5	16.305	ug/L	16.305	ppb	11:19:44
1	Cd 226.502†	5204.4	5552.6	-4.5755	ug/L	-4.5755	ppb	11:21:02
1	Co 228.616†	250.1	343.9	-1.3538	ug/L	-1.3538	ppb	11:21:02
1	Cr 267.716†	-824.6	-807.2	0.7505	ug/L	0.7505	ppb	11:21:02
1	Cu 324.752†	802.5	-9377.9	-0.5740	ug/L	-0.5740	ppb	11:20:42
1	Fe 238.204 Radial†	10567.5	11124.8	390270	ug/L	390270	ppb	11:19:24
1	K 766.490 Radial†	1599.4	210.8	389.48	ug/L	389.48	ppb	11:19:24
1	Mg 279.077 IEC†	6.2	6.3	166.70	ug/L	166.70	ppb	11:19:44
1	Mn 257.610†	-57355.3	-58959.2	4.2573	ug/L	4.2573	ppb	11:20:42
1	Mo 202.031†	-642.9	-683.4	-0.5684	ug/L	-0.5684	ppb	11:20:42
1	Na 589.592 Radial†	-176.8	-15.7	-42.375	ug/L	-42.375	ppb	11:19:44
1	Ni 231.604†	294.0	149.8	2.3977	ug/L	2.3977	ppb	11:21:02
1	P 214.914†	1226.8	906.5	9.2980	ug/L	9.2980	ppb	11:21:02
1	Pb 220.353†	427.8	462.7	-2.1099	ug/L	-2.1099	ppb	11:21:02
1	S 181.975 Axial†	88.8	22.2	18.788	ug/L	18.788	ppb	11:21:02
1	Sb 206.836†	15.9	-29.3	0.9649	ug/L	0.9649	ppb	11:21:02
1	Se 196.026†	-3818.0	-3848.1	119.57	ug/L	119.57	ppb	11:21:02
1	Si 251.611†	-912.5	-1484.9	-30.180	ug/L	-30.180	ppb	11:21:02
1	Sn 189.927†	-36.6	-42.6	2.5556	ug/L	2.5556	ppb	11:21:02
1	Sr 421.552†	22.5	18.2	0.2804	ug/L	0.2804	ppb	11:19:44
1	Ti 334.940†	-991.5	104.3	0.1206	ug/L	0.1206	ppb	11:21:02
1	Tl 190.801†	-76.4	-16.1	-3.1221	ug/L	-3.1221	ppb	11:21:02
1	U 409.014†	-2034.4	1772.8	-3.9602	ug/L	-3.9602	ppb	11:20:42
1	V 292.402†	7424.0	9177.3	-1.4441	ug/L	-1.4441	ppb	11:21:02
1	Zn 213.857†	8001.3	6987.3	-3.0916	ug/L	-3.0916	ppb	11:21:02
1	SiO2†	-992.8	-1608.6	-70.084	ug/L	-70.084	ppb	11:22:00
2	Sc 361.383	1052226.2	1052226.2	99.184	%			11:21:08
2	Sc Radial	5401.8	5401.8	97.1	%			11:19:49
2	Y 371.029	842665.3	842665.3	98.764	%			11:21:08
2	Y RADIAL	4714.0	4714.0	97.89	%			11:19:49
2	Ag 328.068†	-28377.9	-29249.9	9.3733	ug/L	9.3733	ppb	11:21:08
2	Al 396.153Radial†	-122.8	-34.3	-30.134	ug/L	-30.134	ppb	11:19:49
2	As 188.979†	-364.1	-330.2	0.2438	ug/L	0.2438	ppb	11:21:28
2	B 249.677†	3058.2	3464.9	2.4165	ug/L	2.4165	ppb	11:21:08
2	Ba 233.527†	-1739.0	-1777.6	0.1263	ug/L	0.1263	ppb	11:21:28
2	Be 313.107†	-7287.8	-31.5	-0.0094	ug/L	-0.0094	ppb	11:21:08
2	Ca 317.933Radial†	23.0	6.7	16.789	ug/L	16.789	ppb	11:20:09
2	Cd 226.502†	5255.4	5576.3	-4.2206	ug/L	-4.2206	ppb	11:21:28
2	Co 228.616†	235.9	328.3	-1.5227	ug/L	-1.5227	ppb	11:21:28
2	Cr 267.716†	-795.1	-773.0	1.0118	ug/L	1.0118	ppb	11:21:28
2	Cu 324.752†	938.3	-9245.3	-0.3338	ug/L	-0.3338	ppb	11:21:08
2	Fe 238.204 Radial†	10757.5	11081.9	388770	ug/L	388770	ppb	11:19:49
2	K 766.490 Radial†	1494.6	66.6	325.81	ug/L	325.81	ppb	11:19:49
2	Mg 279.077 IEC†	5.9	5.9	130.42	ug/L	130.42	ppb	11:20:09
2	Mn 257.610†	-57434.3	-58733.8	4.2400	ug/L	4.2400	ppb	11:21:08
2	Mo 202.031†	-612.5	-649.3	0.6913	ug/L	0.6913	ppb	11:21:08
2	Na 589.592 Radial†	-180.6	-15.6	-42.212	ug/L	-42.212	ppb	11:20:09
2	Ni 231.604†	278.0	132.1	2.1139	ug/L	2.1139	ppb	11:21:28

2	P 214.914†	1227.8	901.0	8.4921	ug/L	8.4921 ppb	11:21:28
2	Pb 220.353†	449.1	481.9	-0.5307	ug/L	-0.5307 ppb	11:21:28
2	S 181.975 Axial†	80.8	13.6	11.530	ug/L	11.530 ppb	11:21:28
2	Sb 206.836†	33.2	-12.0	4.3505	ug/L	4.3505 ppb	11:21:28
2	Se 196.026†	-3813.6	-3823.4	122.34	ug/L	122.34 ppb	11:21:28
2	Si 251.611†	-923.6	-1491.3	-30.313	ug/L	-30.313 ppb	11:21:28
2	Sn 189.927†	-40.9	-46.7	2.1032	ug/L	2.1032 ppb	11:21:28
2	Sr 421.552†	35.7	31.3	0.4814	ug/L	0.4814 ppb	11:20:09
2	Ti 334.940†	-974.5	126.7	0.1495	ug/L	0.1495 ppb	11:21:28
2	Tl 190.801†	-70.5	-9.6	-2.0337	ug/L	-2.0337 ppb	11:21:28
2	U 409.014†	-2005.9	1812.3	-2.7948	ug/L	-2.7948 ppb	11:21:08
2	V 292.402†	7472.6	9186.8	-1.1665	ug/L	-1.1665 ppb	11:21:28
2	Zn 213.857†	8017.0	6960.5	-3.0760	ug/L	-3.0760 ppb	11:21:28
2	SiO2†	-1024.5	-1635.3	-71.266	ug/L	-71.266 ppb	11:22:05
3	Sc 361.383	1038864.2	1038864.2	97.925	%		11:21:35
3	Sc Radial	5569.7	5569.7	100	%		11:20:14
3	Y 371.029	832242.4	832242.4	97.542	%		11:21:35
3	Y RADIAL	4850.2	4850.2	100.7	%		11:20:14
3	Ag 328.068†	-28102.1	-29336.3	7.7693	ug/L	7.7693 ppb	11:21:35
3	Al 396.153Radial†	-102.4	-10.1	-8.1423	ug/L	-8.1423 ppb	11:20:14
3	As 188.979†	-361.3	-332.1	-0.9980	ug/L	-0.9980 ppb	11:21:55
3	B 249.677†	2847.5	3289.3	0.2032	ug/L	0.2032 ppb	11:21:35
3	Ba 233.527†	-1784.8	-1846.9	-0.3157	ug/L	-0.3157 ppb	11:21:55
3	Be 313.107†	-7215.4	-52.1	-0.0159	ug/L	-0.0159 ppb	11:21:35
3	Ca 317.933Radial†	20.5	3.5	8.8182	ug/L	8.8182 ppb	11:20:34
3	Cd 226.502†	5264.7	5654.0	-3.1736	ug/L	-3.1736 ppb	11:21:55
3	Co 228.616†	244.1	339.7	-1.3213	ug/L	-1.3213 ppb	11:21:55
3	Cr 267.716†	-801.4	-789.8	0.7943	ug/L	0.7943 ppb	11:21:55
3	Cu 324.752†	902.1	-9270.0	-0.6227	ug/L	-0.6227 ppb	11:21:35
3	Fe 238.204 Radial†	10979.5	10969.5	384830	ug/L	384830 ppb	11:20:14
3	K 766.490 Radial†	1427.0	-47.3	273.35	ug/L	273.35 ppb	11:20:14
3	Mg 279.077 IEC†	6.1	5.9	137.86	ug/L	137.86 ppb	11:20:34
3	Mn 257.610†	-56773.9	-58804.2	3.6706	ug/L	3.6706 ppb	11:21:35
3	Mo 202.031†	-575.4	-619.4	1.6175	ug/L	1.6175 ppb	11:21:35
3	Na 589.592 Radial†	-177.6	-7.0	-19.058	ug/L	-19.058 ppb	11:20:34
3	Ni 231.604†	287.7	145.5	2.3298	ug/L	2.3298 ppb	11:21:55
3	P 214.914†	1224.2	913.2	16.013	ug/L	16.013 ppb	11:21:55
3	Pb 220.353†	422.9	460.9	-1.7263	ug/L	-1.7263 ppb	11:21:55
3	S 181.975 Axial†	81.7	15.6	13.165	ug/L	13.165 ppb	11:21:55
3	Sb 206.836†	38.2	-6.4	5.3941	ug/L	5.3941 ppb	11:21:55
3	Se 196.026†	-3850.1	-3910.1	80.299	ug/L	80.299 ppb	11:21:55
3	Si 251.611†	-924.9	-1504.6	-30.592	ug/L	-30.592 ppb	11:21:55
3	Sn 189.927†	-42.3	-48.7	1.8220	ug/L	1.8220 ppb	11:21:55
3	Sr 421.552†	28.6	23.1	0.3559	ug/L	0.3559 ppb	11:20:34
3	Ti 334.940†	-986.5	101.9	0.1187	ug/L	0.1187 ppb	11:21:55
3	Tl 190.801†	-94.3	-34.9	-6.3034	ug/L	-6.3034 ppb	11:21:55
3	U 409.014†	-2185.9	1602.5	-7.5175	ug/L	-7.5175 ppb	11:21:35
3	V 292.402†	7401.4	9211.1	-0.4859	ug/L	-0.4859 ppb	11:21:55
3	Zn 213.857†	8037.4	7085.4	-1.9547	ug/L	-1.9547 ppb	11:21:55
3	SiO2†	-936.7	-1558.9	-67.898	ug/L	-67.898 ppb	11:22:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1045931.8	98.591	%	0.6329				0.64%
Sc Radial	5419.1	97.4	%	2.56				2.63%
Y 371.029	837809.5	98.194	%	0.6151				0.63%
Y RADIAL	4719.6	98.00	%	2.655				2.71%
Ag 328.068†	-29288.9	8.9598	ug/L	1.04683	8.9598	ppb	1.04683	11.68%
Al 396.153Radial†	-20.6	-17.634	ug/L	11.3004	-17.634	ppb	11.3004	64.08%
As 188.979†	-335.4	-1.1355	ug/L	1.45294	-1.1355	ppb	1.45294	127.95%
B 249.677†	3347.8	0.6987	ug/L	1.53142	0.6987	ppb	1.53142	219.19%
Ba 233.527†	-1808.0	-0.0467	ug/L	0.23610	-0.0467	ppb	0.23610	505.55%
Be 313.107†	-35.0	-0.0105	ug/L	0.00487	-0.0105	ppb	0.00487	46.13%
Ca 317.933Radial†	5.6	13.971	ug/L	4.4688	13.971	ppb	4.4688	31.99%
Cd 226.502†	5594.3	-3.9899	ug/L	0.72889	-3.9899	ppb	0.72889	18.27%
Co 228.616†	337.3	-1.3993	ug/L	0.10812	-1.3993	ppb	0.10812	7.73%
Cr 267.716†	-790.0	0.8522	ug/L	0.13996	0.8522	ppb	0.13996	16.42%
Cu 324.752†	-9297.7	-0.5102	ug/L	0.15464	-0.5102	ppb	0.15464	30.31%
Fe 238.204 Radial†	11058.7	387960	ug/L	2812.7	387960	ppb	2812.7	0.72%

K 766.490 Radial†	76.7	329.55	ug/L	58.152	329.55	ppb	58.152	17.65%
Mg 279.077 IEC†	6.0	144.99	ug/L	19.161	144.99	ppb	19.161	13.21%
Mn 257.610†	-58832.4	4.0559	ug/L	0.33383	4.0559	ppb	0.33383	8.23%
Mo 202.031†	-650.7	0.5801	ug/L	1.09717	0.5801	ppb	1.09717	189.12%
Na 589.592 Radial†	-12.8	-34.548	ug/L	13.4155	-34.548	ppb	13.4155	38.83%
Ni 231.604†	142.4	2.2805	ug/L	0.14816	2.2805	ppb	0.14816	6.50%
P 214.914†	906.9	11.268	ug/L	4.1293	11.268	ppb	4.1293	36.65%
Pb 220.353†	468.5	-1.4556	ug/L	0.82364	-1.4556	ppb	0.82364	56.58%
S 181.975 Axial†	17.1	14.494	ug/L	3.8072	14.494	ppb	3.8072	26.27%
Sb 206.836†	-15.9	3.5699	ug/L	2.31548	3.5699	ppb	2.31548	64.86%
Se 196.026†	-3860.5	107.40	ug/L	23.512	107.40	ppb	23.512	21.89%
Si 251.611†	-1493.6	-30.362	ug/L	0.2100	-30.362	ppb	0.2100	0.69%
Sn 189.927†	-46.0	2.1603	ug/L	0.37012	2.1603	ppb	0.37012	17.13%
Sr 421.552†	24.2	0.3726	ug/L	0.10154	0.3726	ppb	0.10154	27.25%
Ti 334.940†	111.0	0.1296	ug/L	0.01724	0.1296	ppb	0.01724	13.30%
Tl 190.801†	-20.2	-3.8197	ug/L	2.21870	-3.8197	ppb	2.21870	58.09%
U 409.014†	1729.2	-4.7575	ug/L	2.46022	-4.7575	ppb	2.46022	51.71%
V 292.402†	9191.8	-1.0321	ug/L	0.49303	-1.0321	ppb	0.49303	47.77%
Zn 213.857†	7011.0	-2.7074	ug/L	0.65195	-2.7074	ppb	0.65195	24.08%
SiO2†	-1600.9	-69.749	ug/L	1.7089	-69.749	ppb	1.7089	2.45%

Sequence No.: 18
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:24:21
Data Type: Reprocessed on 7/8/2009 11:40:21

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1059944.6	1059944.6	99.912	%			11:27:33
1	Sc Radial	5479.4	5479.4	98.5	%			11:26:14
1	Y 371.029	844640.7	844640.7	98.995	%			11:27:33
1	Y RADIAL	4754.7	4754.7	98.73	%			11:26:14
1	Ag 328.068†	125630.8	125103.4	498.29	ug/L	498.29	ppb	11:27:33
1	Al 396.153Radial†	5189.1	5362.2	4859.2	ug/L	4859.2	ppb	11:26:14
1	As 188.979†	2086.1	2124.9	501.95	ug/L	501.95	ppb	11:27:53
1	B 249.677†	31012.2	31421.1	487.79	ug/L	487.79	ppb	11:27:33
1	Ba 233.527†	97648.8	97711.0	495.79	ug/L	495.79	ppb	11:27:33
1	Be 313.107†	1580190.1	1588904.8	495.20	ug/L	495.20	ppb	11:27:33
1	Ca 317.933Radial†	1996.6	2010.8	5008.6	ug/L	5008.6	ppb	11:26:34
1	Cd 226.502†	66244.6	66580.8	497.71	ug/L	497.71	ppb	11:27:33
1	Co 228.616†	39192.8	39317.9	489.98	ug/L	489.98	ppb	11:27:53
1	Cr 267.716†	57869.2	57949.0	494.25	ug/L	494.25	ppb	11:27:33
1	Cu 324.752†	208005.6	197998.5	488.80	ug/L	488.80	ppb	11:27:33
1	Fe 238.204 Radial†	141.0	142.8	5026.5	ug/L	5026.5	ppb	11:26:34
1	K 766.490 Radial†	13180.0	11912.5	5162.7	ug/L	5162.7	ppb	11:26:14
1	Mg 279.077 IEC†	65.0	65.8	5216.9	ug/L	5216.9	ppb	11:26:34
1	Mn 257.610†	624970.8	624696.8	494.24	ug/L	494.24	ppb	11:27:33
1	Mo 202.031†	12690.5	12670.0	507.49	ug/L	507.49	ppb	11:27:53
1	Na 589.592 Radial†	3480.4	3705.1	10018	ug/L	10018	ppb	11:26:14
1	Ni 231.604†	30935.7	30814.9	493.58	ug/L	493.58	ppb	11:27:53
1	P 214.914†	7423.2	7092.8	2432.7	ug/L	2432.7	ppb	11:27:53
1	Pb 220.353†	6700.4	6735.4	506.26	ug/L	506.26	ppb	11:27:53
1	S 181.975 Axial†	1257.4	1190.7	1006.9	ug/L	1006.9	ppb	11:27:53
1	Sb 206.836†	2570.6	2527.4	503.36	ug/L	503.36	ppb	11:27:53
1	Se 196.026†	1498.7	1521.6	514.33	ug/L	514.33	ppb	11:27:53
1	Si 251.611†	121332.8	120880.1	2482.2	ug/L	2482.2	ppb	11:27:33
1	Sn 189.927†	4849.4	4848.2	504.72	ug/L	504.72	ppb	11:27:53
1	Sr 421.552†	33394.2	33909.5	522.38	ug/L	522.38	ppb	11:26:14
1	Ti 334.940†	376930.4	378373.2	495.26	ug/L	495.26	ppb	11:27:33
1	Tl 190.801†	2903.5	2967.5	502.45	ug/L	502.45	ppb	11:27:53
1	U 409.014†	15423.9	19272.3	476.61	ug/L	476.61	ppb	11:27:33
1	V 292.402†	84907.4	86635.3	497.41	ug/L	497.41	ppb	11:27:33
1	Zn 213.857†	89673.2	88630.1	490.34	ug/L	490.34	ppb	11:27:33
1	SiO2†	121738.4	121243.8	5330.9	ug/L	5330.9	ppb	11:28:53
2	Sc 361.383	1066729.6	1066729.6	100.55	%			11:28:00
2	Sc Radial	5456.8	5456.8	98.1	%			11:26:39
2	Y 371.029	848088.2	848088.2	99.399	%			11:28:00
2	Y RADIAL	4734.1	4734.1	98.31	%			11:26:39
2	Ag 328.068†	126873.6	125539.5	500.03	ug/L	500.03	ppb	11:28:00
2	Al 396.153Radial†	5194.2	5389.3	4884.0	ug/L	4884.0	ppb	11:26:39
2	As 188.979†	2073.2	2098.8	495.85	ug/L	495.85	ppb	11:28:20
2	B 249.677†	31532.7	31741.4	492.78	ug/L	492.78	ppb	11:28:00
2	Ba 233.527†	98315.7	97752.5	496.00	ug/L	496.00	ppb	11:28:00
2	Be 313.107†	1590346.7	1588945.7	495.21	ug/L	495.21	ppb	11:28:00
2	Ca 317.933Radial†	1979.2	2001.5	4985.4	ug/L	4985.4	ppb	11:26:59
2	Cd 226.502†	66641.4	66553.8	497.50	ug/L	497.50	ppb	11:28:00
2	Co 228.616†	39043.6	38920.0	485.00	ug/L	485.00	ppb	11:28:20
2	Cr 267.716†	58361.0	58069.7	495.28	ug/L	495.28	ppb	11:28:00
2	Cu 324.752†	210274.7	198930.9	491.11	ug/L	491.11	ppb	11:28:00
2	Fe 238.204 Radial†	141.8	144.2	5075.0	ug/L	5075.0	ppb	11:26:59
2	K 766.490 Radial†	13045.1	11830.3	5127.1	ug/L	5127.1	ppb	11:26:39
2	Mg 279.077 IEC†	64.4	65.5	5190.8	ug/L	5190.8	ppb	11:26:59
2	Mn 257.610†	630407.8	626125.3	495.37	ug/L	495.37	ppb	11:28:00
2	Mo 202.031†	12642.8	12541.7	502.36	ug/L	502.36	ppb	11:28:20
2	Na 589.592 Radial†	3436.0	3674.5	9935.3	ug/L	9935.3	ppb	11:26:39
2	Ni 231.604†	30760.2	30443.3	487.63	ug/L	487.63	ppb	11:28:20

2	P 214.914†	7393.8	7016.4	2405.2 ug/L	2405.2 ppb	11:28:20
2	Pb 220.353†	6660.2	6652.8	500.06 ug/L	500.06 ppb	11:28:20
2	S 181.975 Axial†	1241.1	1166.5	986.41 ug/L	986.41 ppb	11:28:20
2	Sb 206.836†	2563.0	2503.6	498.42 ug/L	498.42 ppb	11:28:20
2	Se 196.026†	1509.3	1522.7	514.83 ug/L	514.83 ppb	11:28:20
2	Si 251.611†	122522.7	121291.0	2490.8 ug/L	2490.8 ppb	11:28:00
2	Sn 189.927†	4810.7	4778.9	497.51 ug/L	497.51 ppb	11:28:20
2	Sr 421.552†	33200.1	33852.0	521.50 ug/L	521.50 ppb	11:26:39
2	Ti 334.940†	380050.3	379076.4	496.18 ug/L	496.18 ppb	11:28:00
2	Tl 190.801†	2886.0	2931.6	496.43 ug/L	496.43 ppb	11:28:20
2	U 409.014†	15484.1	19233.9	475.65 ug/L	475.65 ppb	11:28:00
2	V 292.402†	85441.7	86626.2	497.28 ug/L	497.28 ppb	11:28:00
2	Zn 213.857†	90424.6	88806.6	491.36 ug/L	491.36 ppb	11:28:00
2	SiO2†	122259.9	120987.4	5319.9 ug/L	5319.9 ppb	11:28:58
3	Sc 361.383	1082048.6	1082048.6	102.00 %		11:28:28
3	Sc Radial	5526.8	5526.8	99.3 %		11:27:04
3	Y 371.029	860676.7	860676.7	100.87 %		11:28:28
3	Y RADIAL	4799.7	4799.7	99.67 %		11:27:04
3	Ag 328.068†	128584.5	125430.6	499.55 ug/L	499.55 ppb	11:28:28
3	Al 396.153Radial†	5214.3	5342.4	4841.4 ug/L	4841.4 ppb	11:27:04
3	As 188.979†	2101.0	2096.8	495.36 ug/L	495.36 ppb	11:28:48
3	B 249.677†	31978.4	31734.4	492.71 ug/L	492.71 ppb	11:28:28
3	Ba 233.527†	99589.5	97617.2	495.31 ug/L	495.31 ppb	11:28:28
3	Be 313.107†	1612564.5	1588337.3	495.03 ug/L	495.03 ppb	11:28:28
3	Ca 317.933Radial†	1986.9	1983.6	4940.9 ug/L	4940.9 ppb	11:27:24
3	Cd 226.502†	67416.7	66375.6	496.18 ug/L	496.18 ppb	11:28:28
3	Co 228.616†	39220.9	38544.1	480.32 ug/L	480.32 ppb	11:28:48
3	Cr 267.716†	58998.1	57872.6	493.60 ug/L	493.60 ppb	11:28:28
3	Cu 324.752†	213337.9	198973.6	491.20 ug/L	491.20 ppb	11:28:28
3	Fe 238.204 Radial†	139.2	139.9	4921.4 ug/L	4921.4 ppb	11:27:24
3	K 766.490 Radial†	13032.9	11649.4	5048.6 ug/L	5048.6 ppb	11:27:04
3	Mg 279.077 IEC†	65.0	65.3	5178.3 ug/L	5178.3 ppb	11:27:24
3	Mn 257.610†	638129.7	624820.2	494.32 ug/L	494.32 ppb	11:28:28
3	Mo 202.031†	12745.8	12464.7	499.27 ug/L	499.27 ppb	11:28:48
3	Na 589.592 Radial†	3456.2	3650.4	9870.2 ug/L	9870.2 ppb	11:27:04
3	Ni 231.604†	30951.5	30197.8	483.70 ug/L	483.70 ppb	11:28:48
3	P 214.914†	7425.2	6943.1	2379.4 ug/L	2379.4 ppb	11:28:48
3	Pb 220.353†	6701.0	6599.0	496.02 ug/L	496.02 ppb	11:28:48
3	S 181.975 Axial†	1257.6	1165.2	985.32 ug/L	985.32 ppb	11:28:48
3	Sb 206.836†	2594.2	2498.0	497.25 ug/L	497.25 ppb	11:28:48
3	Se 196.026†	1502.3	1494.6	505.14 ug/L	505.14 ppb	11:28:48
3	Si 251.611†	124261.8	121271.0	2490.5 ug/L	2490.5 ppb	11:28:28
3	Sn 189.927†	4852.5	4752.1	494.71 ug/L	494.71 ppb	11:28:48
3	Sr 421.552†	33364.0	33587.9	517.43 ug/L	517.43 ppb	11:27:04
3	Ti 334.940†	385685.4	379250.3	496.41 ug/L	496.41 ppb	11:28:28
3	Tl 190.801†	2899.8	2904.5	491.88 ug/L	491.88 ppb	11:28:48
3	U 409.014†	15696.4	19224.1	475.43 ug/L	475.43 ppb	11:28:28
3	V 292.402†	86520.6	86480.9	496.44 ug/L	496.44 ppb	11:28:28
3	Zn 213.857†	91402.4	88492.1	489.64 ug/L	489.64 ppb	11:28:28
3	SiO2†	123096.2	120085.9	5280.2 ug/L	5280.2 ppb	11:29:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1069574.3	100.82	%	1.067				1.06%
Sc Radial	5487.7	98.6	%	0.64				0.65%
Y 371.029	851135.2	99.756	%	0.9893				0.99%
Y RADIAL	4762.9	98.90	%	0.696				0.70%
Ag 328.068†	125357.9	499.29	ug/L	0.900	499.29	ppb	0.900	0.18%
QC value within limits for Ag 328.068 Recovery = 99.86%								
Al 396.153Radial†	5364.6	4861.5	ug/L	21.38	4861.5	ppb	21.38	0.44%
QC value within limits for Al 396.153Radial Recovery = 97.23%								
As 188.979†	2106.8	497.72	ug/L	3.671	497.72	ppb	3.671	0.74%
QC value within limits for As 188.979 Recovery = 99.54%								
B 249.677†	31632.3	491.09	ug/L	2.863	491.09	ppb	2.863	0.58%
QC value within limits for B 249.677 Recovery = 98.22%								
Ba 233.527†	97693.6	495.70	ug/L	0.354	495.70	ppb	0.354	0.07%
QC value within limits for Ba 233.527 Recovery = 99.14%								
Be 313.107†	1588729.2	495.15	ug/L	0.105	495.15	ppb	0.105	0.02%
QC value within limits for Be 313.107 Recovery = 99.03%								

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Ca 317.933Radial†        1998.7      4978.3 ug/L        34.43      4978.3 ppb        34.43   0.69%
   QC value within limits for Ca 317.933Radial  Recovery = 99.57%
Cd 226.502†             66503.4      497.13 ug/L         0.828      497.13 ppb         0.828  0.17%
   QC value within limits for Cd 226.502  Recovery = 99.43%
Co 228.616†             38927.4      485.10 ug/L         4.831      485.10 ppb         4.831  1.00%
   QC value within limits for Co 228.616  Recovery = 97.02%
Cr 267.716†             57963.8      494.38 ug/L         0.848      494.38 ppb         0.848  0.17%
   QC value within limits for Cr 267.716  Recovery = 98.88%
Cu 324.752†            198634.3      490.37 ug/L         1.359      490.37 ppb         1.359  0.28%
   QC value within limits for Cu 324.752  Recovery = 98.07%
Fe 238.204 Radial†        142.3      5007.6 ug/L        78.49      5007.6 ppb        78.49   1.57%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.15%
K 766.490 Radial†       11797.4      5112.8 ug/L        58.43      5112.8 ppb        58.43   1.14%
   QC value within limits for K 766.490 Radial  Recovery = 102.26%
Mg 279.077 IEC†            65.5      5195.3 ug/L        19.71      5195.3 ppb        19.71   0.38%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.91%
Mn 257.610†            625214.1      494.64 ug/L         0.633      494.64 ppb         0.633  0.13%
   QC value within limits for Mn 257.610  Recovery = 98.93%
Mo 202.031†             12558.8      503.04 ug/L         4.154      503.04 ppb         4.154  0.83%
   QC value within limits for Mo 202.031  Recovery = 100.61%
Na 589.592 Radial†       3676.6      9941.2 ug/L        74.10      9941.2 ppb        74.10   0.75%
   QC value within limits for Na 589.592 Radial  Recovery = 99.41%
Ni 231.604†             30485.3      488.30 ug/L         4.976      488.30 ppb         4.976  1.02%
   QC value within limits for Ni 231.604  Recovery = 97.66%
P 214.914†               7017.4      2405.8 ug/L        26.68      2405.8 ppb        26.68   1.11%
   QC value within limits for P 214.914  Recovery = 96.23%
Pb 220.353†              6662.4      500.78 ug/L         5.161      500.78 ppb         5.161  1.03%
   QC value within limits for Pb 220.353  Recovery = 100.16%
S 181.975 Axial†         1174.1      992.89 ug/L        12.183      992.89 ppb        12.183  1.23%
   QC value within limits for S 181.975 Axial  Recovery = 99.29%
Sb 206.836†              2509.7      499.68 ug/L         3.243      499.68 ppb         3.243  0.65%
   QC value within limits for Sb 206.836  Recovery = 99.94%
Se 196.026†              1512.9      511.43 ug/L         5.455      511.43 ppb         5.455  1.07%
   QC value within limits for Se 196.026  Recovery = 102.29%
Si 251.611†            121147.3      2487.8 ug/L         4.88      2487.8 ppb         4.88   0.20%
   QC value within limits for Si 251.611  Recovery = 99.51%
Sn 189.927†              4793.1      498.98 ug/L         5.163      498.98 ppb         5.163  1.03%
   QC value within limits for Sn 189.927  Recovery = 99.80%
Sr 421.552†             33783.1      520.44 ug/L         2.642      520.44 ppb         2.642  0.51%
   QC value within limits for Sr 421.552  Recovery = 104.09%
Ti 334.940†            378899.9      495.95 ug/L         0.606      495.95 ppb         0.606  0.12%
   QC value within limits for Ti 334.940  Recovery = 99.19%
Tl 190.801†              2934.5      496.92 ug/L         5.303      496.92 ppb         5.303  1.07%
   QC value within limits for Tl 190.801  Recovery = 99.38%
U 409.014†              19243.5      475.90 ug/L         0.628      475.90 ppb         0.628  0.13%
   QC value within limits for U 409.014  Recovery = 95.18%
V 292.402†              86580.8      497.04 ug/L         0.527      497.04 ppb         0.527  0.11%
   QC value within limits for V 292.402  Recovery = 99.41%
Zn 213.857†             88642.9      490.45 ug/L         0.862      490.45 ppb         0.862  0.18%
   QC value within limits for Zn 213.857  Recovery = 98.09%
SiO2†                  120772.4      5310.3 ug/L        26.66      5310.3 ppb        26.66   0.50%
   QC value within limits for SiO2  Recovery = 99.30%
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:31:14
Data Type: Reprocessed on 7/8/2009 11:40:22

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1063802.9	1063802.9	100.28	%			11:34:23
1	Sc Radial	5561.9	5561.9	99.9	%			11:33:06
1	Y 371.029	855860.4	855860.4	100.31	%			11:34:23
1	Y RADIAL	4822.6	4822.6	100.1	%			11:33:06
1	Ag 328.068†	690.4	49.9	0.1978	ug/L	0.1978	ppb	11:34:28
1	Al 396.153Radial†	-87.8	4.4	3.9546	ug/L	3.9546	ppb	11:33:06
1	As 188.979†	-50.4	-13.3	-3.1357	ug/L	-3.1357	ppb	11:34:48
1	B 249.677†	268.9	649.6	10.124	ug/L	10.124	ppb	11:34:28
1	Ba 233.527†	37.8	13.4	0.0677	ug/L	0.0677	ppb	11:34:48
1	Be 313.107†	-7293.5	42.7	0.0128	ug/L	0.0128	ppb	11:34:28
1	Ca 317.933Radial†	28.8	11.8	29.483	ug/L	29.483	ppb	11:33:26
1	Cd 226.502†	-277.0	1.4	0.0100	ug/L	0.0100	ppb	11:34:48
1	Co 228.616†	-86.2	4.5	0.0585	ug/L	0.0585	ppb	11:34:48
1	Cr 267.716†	-5.4	23.2	0.1973	ug/L	0.1973	ppb	11:34:48
1	Cu 324.752†	10006.5	-212.2	-0.5235	ug/L	-0.5235	ppb	11:34:28
1	Fe 238.204 Radial†	0.4	0.1	3.2855	ug/L	3.2855	ppb	11:33:26
1	K 766.490 Radial†	1523.7	51.4	22.290	ug/L	22.290	ppb	11:33:06
1	Mg 279.077 IEC†	-1.0	-1.1	-89.992	ug/L	-89.992	ppb	11:33:26
1	Mn 257.610†	795.0	-34.2	-0.0249	ug/L	-0.0249	ppb	11:34:48
1	Mo 202.031†	53.0	21.1	0.8462	ug/L	0.8462	ppb	11:34:48
1	Na 589.592 Radial†	-162.4	7.9	21.478	ug/L	21.478	ppb	11:33:26
1	Ni 231.604†	144.6	-4.1	-0.0650	ug/L	-0.0650	ppb	11:34:48
1	P 214.914†	355.6	17.7	6.3689	ug/L	6.3689	ppb	11:34:48
1	Pb 220.353†	-11.4	17.7	1.3309	ug/L	1.3309	ppb	11:34:48
1	S 181.975 Axial†	60.0	-8.0	-6.7972	ug/L	-6.7972	ppb	11:34:48
1	Sb 206.836†	53.2	7.6	1.5394	ug/L	1.5394	ppb	11:34:48
1	Se 196.026†	-14.3	7.3	2.4023	ug/L	2.4023	ppb	11:34:48
1	Si 251.611†	618.5	56.7	1.1410	ug/L	1.1410	ppb	11:34:48
1	Sn 189.927†	25.8	20.2	2.1070	ug/L	2.1070	ppb	11:34:48
1	Sr 421.552†	21.5	16.0	0.2468	ug/L	0.2468	ppb	11:33:26
1	Ti 334.940†	-1262.3	-149.6	-0.1941	ug/L	-0.1941	ppb	11:34:28
1	Tl 190.801†	-62.7	-1.1	-0.1937	ug/L	-0.1937	ppb	11:34:48
1	U 409.014†	-3836.3	9.0	0.2216	ug/L	0.2216	ppb	11:34:23
1	V 292.402†	-1663.5	-6.2	-0.0256	ug/L	-0.0256	ppb	11:34:28
1	Zn 213.857†	1135.7	10.2	0.0608	ug/L	0.0608	ppb	11:34:48
1	SiO2†	634.2	30.1	1.2681	ug/L	1.2681	ppb	11:35:54
2	Sc 361.383	1062791.4	1062791.4	100.18	%			11:34:53
2	Sc Radial	5538.6	5538.6	99.5	%			11:33:31
2	Y 371.029	855845.5	855845.5	100.31	%			11:34:53
2	Y RADIAL	4808.4	4808.4	99.85	%			11:33:31
2	Ag 328.068†	769.1	129.1	0.5079	ug/L	0.5079	ppb	11:34:58
2	Al 396.153Radial†	-67.1	24.8	22.522	ug/L	22.522	ppb	11:33:31
2	As 188.979†	-45.9	-8.9	-2.0961	ug/L	-2.0961	ppb	11:35:18
2	B 249.677†	275.1	656.1	10.227	ug/L	10.227	ppb	11:34:58
2	Ba 233.527†	41.5	17.1	0.0865	ug/L	0.0865	ppb	11:35:18
2	Be 313.107†	-7364.6	-35.1	-0.0111	ug/L	-0.0111	ppb	11:34:58
2	Ca 317.933Radial†	27.0	10.2	25.462	ug/L	25.462	ppb	11:33:51
2	Cd 226.502†	-277.0	1.1	0.0093	ug/L	0.0093	ppb	11:35:18
2	Co 228.616†	-96.9	-6.3	-0.0770	ug/L	-0.0770	ppb	11:35:18
2	Cr 267.716†	3.5	32.1	0.2730	ug/L	0.2730	ppb	11:35:18
2	Cu 324.752†	10207.0	-2.6	-0.0068	ug/L	-0.0068	ppb	11:34:58
2	Fe 238.204 Radial†	0.1	-0.2	-6.6396	ug/L	-6.6396	ppb	11:33:51
2	K 766.490 Radial†	1591.7	126.2	54.709	ug/L	54.709	ppb	11:33:31
2	Mg 279.077 IEC†	3.9	3.7	294.15	ug/L	294.15	ppb	11:33:51
2	Mn 257.610†	810.3	-18.2	-0.0209	ug/L	-0.0209	ppb	11:35:18
2	Mo 202.031†	40.3	8.4	0.3367	ug/L	0.3367	ppb	11:35:18
2	Na 589.592 Radial†	-165.4	4.2	11.404	ug/L	11.404	ppb	11:33:51
2	Ni 231.604†	155.5	7.0	0.1119	ug/L	0.1119	ppb	11:35:18

2	P 214.914†	350.7	13.1	4.6724 ug/L	4.6724 ppb	11:35:18
2	Pb 220.353†	1.3	30.4	2.2862 ug/L	2.2862 ppb	11:35:18
2	S 181.975 Axial†	62.4	-5.5	-4.6975 ug/L	-4.6975 ppb	11:35:18
2	Sb 206.836†	46.9	1.4	0.3030 ug/L	0.3030 ppb	11:35:18
2	Se 196.026†	-24.0	-2.3	-0.7802 ug/L	-0.7802 ppb	11:35:18
2	Si 251.611†	641.1	79.9	1.6204 ug/L	1.6204 ppb	11:35:18
2	Sn 189.927†	17.4	11.9	1.2429 ug/L	1.2429 ppb	11:35:18
2	Sr 421.552†	27.5	22.2	0.3413 ug/L	0.3413 ppb	11:33:51
2	Ti 334.940†	-1173.5	-62.1	-0.0801 ug/L	-0.0801 ppb	11:34:58
2	Tl 190.801†	-57.3	4.2	0.7097 ug/L	0.7097 ppb	11:35:18
2	U 409.014†	-3809.4	32.2	0.7987 ug/L	0.7987 ppb	11:34:53
2	V 292.402†	-1655.4	0.3	0.0135 ug/L	0.0135 ppb	11:34:58
2	Zn 213.857†	1139.0	14.5	0.0708 ug/L	0.0708 ppb	11:35:18
2	SiO2†	668.5	65.0	2.8084 ug/L	2.8084 ppb	11:35:59
3	Sc 361.383	1063088.1	1063088.1	100.21 %		11:35:23
3	Sc Radial	5440.7	5440.7	97.8 %		11:33:56
3	Y 371.029	856947.0	856947.0	100.44 %		11:35:23
3	Y RADIAL	4756.3	4756.3	98.77 %		11:33:56
3	Ag 328.068†	752.9	112.7	0.4282 ug/L	0.4282 ppb	11:35:29
3	Al 396.153Radial†	-61.7	29.0	26.426 ug/L	26.426 ppb	11:33:56
3	As 188.979†	-51.0	-14.0	-3.3000 ug/L	-3.3000 ppb	11:35:49
3	B 249.677†	248.8	629.8	9.8225 ug/L	9.8225 ppb	11:35:29
3	Ba 233.527†	49.3	24.9	0.1240 ug/L	0.1240 ppb	11:35:49
3	Be 313.107†	-7424.6	-93.0	-0.0288 ug/L	-0.0288 ppb	11:35:29
3	Ca 317.933Radial†	29.0	12.8	31.771 ug/L	31.771 ppb	11:34:16
3	Cd 226.502†	-284.9	-6.6	-0.0439 ug/L	-0.0439 ppb	11:35:49
3	Co 228.616†	-101.2	-10.6	-0.1306 ug/L	-0.1306 ppb	11:35:49
3	Cr 267.716†	-30.9	-2.2	-0.0206 ug/L	-0.0206 ppb	11:35:49
3	Cu 324.752†	10236.2	23.7	0.0558 ug/L	0.0558 ppb	11:35:29
3	Fe 238.204 Radial†	-1.0	-1.4	-48.298 ug/L	-48.298 ppb	11:34:16
3	K 766.490 Radial†	1505.5	66.8	28.927 ug/L	28.927 ppb	11:33:56
3	Mg 279.077 IEC†	0.6	0.4	33.239 ug/L	33.239 ppb	11:34:16
3	Mn 257.610†	805.7	-23.0	-0.0251 ug/L	-0.0251 ppb	11:35:49
3	Mo 202.031†	36.0	4.1	0.1614 ug/L	0.1614 ppb	11:35:49
3	Na 589.592 Radial†	-166.0	0.6	1.7302 ug/L	1.7302 ppb	11:34:16
3	Ni 231.604†	154.3	5.8	0.0925 ug/L	0.0925 ppb	11:35:49
3	P 214.914†	333.2	-4.4	-1.5177 ug/L	-1.5177 ppb	11:35:49
3	Pb 220.353†	8.6	37.6	2.8325 ug/L	2.8325 ppb	11:35:49
3	S 181.975 Axial†	65.9	-2.0	-1.7280 ug/L	-1.7280 ppb	11:35:49
3	Sb 206.836†	54.2	8.7	1.7131 ug/L	1.7131 ppb	11:35:49
3	Se 196.026†	-34.5	-12.8	-4.3231 ug/L	-4.3231 ppb	11:35:49
3	Si 251.611†	617.8	56.4	1.1483 ug/L	1.1483 ppb	11:35:49
3	Sn 189.927†	12.9	7.4	0.7752 ug/L	0.7752 ppb	11:35:49
3	Sr 421.552†	24.1	19.1	0.2946 ug/L	0.2946 ppb	11:34:16
3	Ti 334.940†	-1056.8	54.6	0.0735 ug/L	0.0735 ppb	11:35:29
3	Tl 190.801†	-54.8	6.7	1.1352 ug/L	1.1352 ppb	11:35:49
3	U 409.014†	-3836.0	6.7	0.1717 ug/L	0.1717 ppb	11:35:23
3	V 292.402†	-1740.9	-84.5	-0.4699 ug/L	-0.4699 ppb	11:35:29
3	Zn 213.857†	1112.0	-12.7	-0.0677 ug/L	-0.0677 ppb	11:35:49
3	SiO2†	666.7	63.0	2.7492 ug/L	2.7492 ppb	11:36:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1063227.5	100.22	%	0.049				0.05%
Sc Radial	5513.8	99.1	%	1.16				1.17%
Y 371.029	856217.6	100.35	%	0.074				0.07%
Y RADIAL	4795.8	99.59	%	0.725				0.73%
Ag 328.068†	97.2	0.3779	ug/L	0.16103	0.3779	ppb	0.16103	42.61%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.4	17.634	ug/L	12.0065	17.634	ppb	12.0065	68.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.1	-2.8439	ug/L	0.65284	-2.8439	ppb	0.65284	22.96%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	645.2	10.058	ug/L	0.2102	10.058	ppb	0.2102	2.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	18.5	0.0927	ug/L	0.02864	0.0927	ppb	0.02864	30.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-28.5	-0.0090	ug/L	0.02087	-0.0090	ppb	0.02087	231.41%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          11.6      28.906 ug/L        3.1943      28.906 ppb        3.1943  11.05%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -1.4     -0.0082 ug/L       0.03088     -0.0082 ppb       0.03088 375.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -4.1     -0.0497 ug/L       0.09746     -0.0497 ppb       0.09746 196.02%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               17.7      0.1499 ug/L       0.15243      0.1499 ppb       0.15243 101.68%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -63.7     -0.1582 ug/L       0.31790     -0.1582 ppb       0.31790 200.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5     -17.217 ug/L       27.3704     -17.217 ppb       27.3704 158.97%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         81.4      35.309 ug/L       17.1254      35.309 ppb       17.1254  48.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            1.0      79.132 ug/L      196.1394      79.132 ppb      196.1394 247.86%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -25.1     -0.0236 ug/L       0.00236     -0.0236 ppb       0.00236   9.98%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               11.2      0.4481 ug/L       0.35572      0.4481 ppb       0.35572  79.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         4.3      11.538 ug/L        9.8746      11.538 ppb        9.8746  85.59%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                2.9      0.0465 ug/L       0.09700      0.0465 ppb       0.09700 208.67%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 8.8      3.1745 ug/L       4.15119      3.1745 ppb       4.15119 130.77%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               28.6      2.1499 ug/L       0.76002      2.1499 ppb       0.76002  35.35%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -5.2     -4.4076 ug/L       2.54698     -4.4076 ppb       2.54698  57.79%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                5.9      1.1852 ug/L       0.76889      1.1852 ppb       0.76889  64.88%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -2.6     -0.9003 ug/L       3.36431     -0.9003 ppb       3.36431 373.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               64.3      1.3033 ug/L       0.27467      1.3033 ppb       0.27467  21.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               13.2      1.3751 ug/L       0.67567      1.3751 ppb       0.67567  49.14%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               19.1      0.2942 ug/L       0.04727      0.2942 ppb       0.04727  16.07%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -52.4     -0.0669 ug/L       0.13429     -0.0669 ppb       0.13429 200.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                3.3      0.5504 ug/L       0.67863      0.5504 ppb       0.67863 123.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                15.9      0.3973 ug/L       0.34848      0.3973 ppb       0.34848  87.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -30.1     -0.1607 ug/L       0.26848     -0.1607 ppb       0.26848 167.11%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                4.0      0.0213 ug/L       0.07726      0.0213 ppb       0.07726 362.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     52.7      2.2752 ug/L       0.87275      2.2752 ppb       0.87275  38.36%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 12:37:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5606.1	5606.1	101	%			12:39:25
1	Y RADIAL	4851.1	4851.1	100.7	%			12:39:25
1	Al 396.153Radial†	5378.2	5430.8	4921.6	ug/L	4921.6	ppb	12:39:25
1	Ca 317.933Radial†	2021.2	1989.4	4955.2	ug/L	4955.2	ppb	12:39:45
1	Fe 238.204 Radial†	140.8	139.5	4908.3	ug/L	4908.3	ppb	12:39:45
1	K 766.490 Radial†	13453.7	11881.6	5149.1	ug/L	5149.1	ppb	12:39:25
1	Mg 279.077 IEC†	63.3	62.7	4971.3	ug/L	4971.3	ppb	12:39:45
1	Na 589.592 Radial†	3647.9	3791.5	10252	ug/L	10252	ppb	12:39:25
1	Sr 421.552†	35108.7	34844.6	536.79	ug/L	536.79	ppb	12:39:25
1	Sc 361.383	1058412.2	1058412.2	99.767	%			12:40:44
1	Y 371.029	842280.3	842280.3	98.718	%			12:40:44
1	Ag 328.068†	126383.3	126039.7	501.96	ug/L	501.96	ppb	12:40:44
1	As 188.979†	2067.2	2108.9	498.21	ug/L	498.21	ppb	12:41:04
1	B 249.677†	31249.4	31703.9	492.21	ug/L	492.21	ppb	12:40:44
1	Ba 233.527†	97896.4	98100.6	497.76	ug/L	497.76	ppb	12:40:44
1	Be 313.107†	1582299.5	1593308.9	496.58	ug/L	496.58	ppb	12:40:44
1	Cd 226.502†	66319.2	66751.6	499.00	ug/L	499.00	ppb	12:40:44
1	Co 228.616†	39106.2	39287.9	489.60	ug/L	489.60	ppb	12:41:04
1	Cr 267.716†	58017.2	58181.2	496.23	ug/L	496.23	ppb	12:40:44
1	Cu 324.752†	209452.1	199749.8	493.12	ug/L	493.12	ppb	12:40:44
1	Mn 257.610†	627242.3	627879.2	496.74	ug/L	496.74	ppb	12:40:44
1	Mo 202.031†	12652.8	12650.6	506.70	ug/L	506.70	ppb	12:41:04
1	Ni 231.604†	30863.4	30787.2	493.14	ug/L	493.14	ppb	12:41:04
1	P 214.914†	7409.4	7089.8	2431.0	ug/L	2431.0	ppb	12:41:04
1	Pb 220.353†	6655.3	6699.9	503.62	ug/L	503.62	ppb	12:41:04
1	S 181.975 Axial†	1267.1	1202.2	1016.6	ug/L	1016.6	ppb	12:41:04
1	Sb 206.836†	2567.2	2527.8	503.31	ug/L	503.31	ppb	12:41:04
1	Se 196.026†	1499.0	1524.1	514.74	ug/L	514.74	ppb	12:41:04
1	Si 251.611†	123740.7	123469.4	2535.6	ug/L	2535.6	ppb	12:40:44
1	Sn 189.927†	4813.6	4819.3	501.70	ug/L	501.70	ppb	12:41:04
1	Ti 334.940†	379065.1	381059.1	498.77	ug/L	498.77	ppb	12:40:44
1	Tl 190.801†	2892.3	2960.4	501.29	ug/L	501.29	ppb	12:41:04
1	U 409.014†	15455.7	19326.6	477.97	ug/L	477.97	ppb	12:40:44
1	V 292.402†	85007.9	86859.1	498.67	ug/L	498.67	ppb	12:40:44
1	Zn 213.857†	90043.3	89131.1	493.16	ug/L	493.16	ppb	12:40:44
1	SiO2†	124276.3	123964.1	5451.2	ug/L	5451.2	ppb	12:42:04
2	Sc Radial	5585.7	5585.7	100	%			12:39:50
2	Y RADIAL	4837.6	4837.6	100.5	%			12:39:50
2	Al 396.153Radial†	5301.2	5373.6	4869.5	ug/L	4869.5	ppb	12:39:50
2	Ca 317.933Radial†	2018.6	1994.2	4967.2	ug/L	4967.2	ppb	12:40:10
2	Fe 238.204 Radial†	146.6	145.8	5129.1	ug/L	5129.1	ppb	12:40:10
2	K 766.490 Radial†	13445.7	11922.5	5167.1	ug/L	5167.1	ppb	12:39:50
2	Mg 279.077 IEC†	62.9	62.5	4955.1	ug/L	4955.1	ppb	12:40:10
2	Na 589.592 Radial†	3631.8	3788.6	10244	ug/L	10244	ppb	12:39:50
2	Sr 421.552†	34927.0	34791.2	535.97	ug/L	535.97	ppb	12:39:50
2	Sc 361.383	1052564.2	1052564.2	99.216	%			12:41:12
2	Y 371.029	837846.1	837846.1	98.199	%			12:41:12
2	Ag 328.068†	125844.2	126200.1	502.67	ug/L	502.67	ppb	12:41:12
2	As 188.979†	2073.2	2126.5	502.37	ug/L	502.37	ppb	12:41:32
2	B 249.677†	31117.5	31744.9	492.82	ug/L	492.82	ppb	12:41:12
2	Ba 233.527†	97205.3	97949.3	496.99	ug/L	496.99	ppb	12:41:12
2	Be 313.107†	1572088.7	1591829.1	496.11	ug/L	496.11	ppb	12:41:12
2	Cd 226.502†	65885.5	66683.9	498.47	ug/L	498.47	ppb	12:41:12
2	Co 228.616†	38903.8	39301.7	489.77	ug/L	489.77	ppb	12:41:32
2	Cr 267.716†	57670.9	58155.3	496.01	ug/L	496.01	ppb	12:41:12
2	Cu 324.752†	208260.2	199714.8	493.05	ug/L	493.05	ppb	12:41:12
2	Mn 257.610†	622713.6	626807.8	495.92	ug/L	495.92	ppb	12:41:12
2	Mo 202.031†	12649.0	12717.2	509.38	ug/L	509.38	ppb	12:41:32
2	Ni 231.604†	30707.2	30801.6	493.37	ug/L	493.37	ppb	12:41:32

2	P 214.914†	7360.8	7082.0	2428.1 ug/L	2428.1 ppb	12:41:32
2	Pb 220.353†	6668.7	6750.4	507.38 ug/L	507.38 ppb	12:41:32
2	S 181.975 Axial†	1268.3	1210.5	1023.7 ug/L	1023.7 ppb	12:41:32
2	Sb 206.836†	2554.2	2529.0	503.61 ug/L	503.61 ppb	12:41:32
2	Se 196.026†	1489.9	1523.3	515.24 ug/L	515.24 ppb	12:41:32
2	Si 251.611†	122736.1	123146.0	2528.9 ug/L	2528.9 ppb	12:41:12
2	Sn 189.927†	4784.8	4817.1	501.48 ug/L	501.48 ppb	12:41:32
2	Ti 334.940†	376326.4	380409.8	497.92 ug/L	497.92 ppb	12:41:12
2	Tl 190.801†	2869.4	2953.4	500.11 ug/L	500.11 ppb	12:41:32
2	U 409.014†	15348.9	19304.9	477.40 ug/L	477.40 ppb	12:41:12
2	V 292.402†	84354.4	86673.8	497.63 ug/L	497.63 ppb	12:41:12
2	Zn 213.857†	89243.2	88826.1	491.43 ug/L	491.43 ppb	12:41:12
2	SiO2†	123446.6	123819.8	5444.7 ug/L	5444.7 ppb	12:42:10
3	Sc Radial	5622.4	5622.4	101 %		12:40:15
3	Y RADIAL	4895.1	4895.1	101.6 %		12:40:15
3	Al 396.153Radial†	5385.6	5422.7	4914.2 ug/L	4914.2 ppb	12:40:15
3	Ca 317.933Radial†	2021.8	1984.1	4942.2 ug/L	4942.2 ppb	12:40:35
3	Fe 238.204 Radial†	143.1	141.3	4973.4 ug/L	4973.4 ppb	12:40:35
3	K 766.490 Radial†	13475.9	11864.8	5141.9 ug/L	5141.9 ppb	12:40:15
3	Mg 279.077 IEC†	64.9	64.0	5076.8 ug/L	5076.8 ppb	12:40:35
3	Na 589.592 Radial†	3704.4	3836.9	10375 ug/L	10375 ppb	12:40:15
3	Sr 421.552†	35367.4	34999.8	539.18 ug/L	539.18 ppb	12:40:15
3	Sc 361.383	1055266.8	1055266.8	99.471 %		12:41:39
3	Y 371.029	840466.9	840466.9	98.506 %		12:41:39
3	Ag 328.068†	125875.6	125906.9	501.45 ug/L	501.45 ppb	12:41:39
3	As 188.979†	2070.2	2118.1	500.36 ug/L	500.36 ppb	12:41:59
3	B 249.677†	31096.7	31643.7	491.26 ug/L	491.26 ppb	12:41:39
3	Ba 233.527†	97326.4	97820.1	496.34 ug/L	496.34 ppb	12:41:39
3	Be 313.107†	1575608.3	1591309.3	495.95 ug/L	495.95 ppb	12:41:39
3	Cd 226.502†	65831.5	66459.5	496.81 ug/L	496.81 ppb	12:41:39
3	Co 228.616†	38937.8	39235.4	488.94 ug/L	488.94 ppb	12:41:59
3	Cr 267.716†	57725.3	58061.1	495.21 ug/L	495.21 ppb	12:41:39
3	Cu 324.752†	208650.8	199569.9	492.68 ug/L	492.68 ppb	12:41:39
3	Mn 257.610†	623476.5	625967.4	495.24 ug/L	495.24 ppb	12:41:39
3	Mo 202.031†	12620.8	12656.2	506.93 ug/L	506.93 ppb	12:41:59
3	Ni 231.604†	30715.0	30730.2	492.22 ug/L	492.22 ppb	12:41:59
3	P 214.914†	7373.4	7075.7	2426.1 ug/L	2426.1 ppb	12:41:59
3	Pb 220.353†	6643.3	6707.8	504.20 ug/L	504.20 ppb	12:41:59
3	S 181.975 Axial†	1267.5	1206.4	1020.2 ug/L	1020.2 ppb	12:41:59
3	Sb 206.836†	2557.1	2525.3	502.87 ug/L	502.87 ppb	12:41:59
3	Se 196.026†	1494.6	1524.2	514.98 ug/L	514.98 ppb	12:41:59
3	Si 251.611†	122713.6	122806.5	2522.0 ug/L	2522.0 ppb	12:41:39
3	Sn 189.927†	4806.5	4826.6	502.46 ug/L	502.46 ppb	12:41:59
3	Ti 334.940†	376677.4	379791.2	497.11 ug/L	497.11 ppb	12:41:39
3	Tl 190.801†	2887.1	2963.8	501.86 ug/L	501.86 ppb	12:41:59
3	U 409.014†	15446.1	19363.0	478.87 ug/L	478.87 ppb	12:41:39
3	V 292.402†	84553.0	86655.7	497.52 ug/L	497.52 ppb	12:41:39
3	Zn 213.857†	89401.2	88754.6	491.05 ug/L	491.05 ppb	12:41:39
3	SiO2†	122933.1	122984.9	5407.9 ug/L	5407.9 ppb	12:42:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055414.4	99.485	%	0.2759				0.28%
Sc Radial	5604.7	101	%	0.3				0.33%
Y 371.029	840197.8	98.474	%	0.2613				0.27%
Y RADIAL	4861.2	100.9	%	0.62				0.62%
Ag 328.068†	126048.9	502.03	ug/L	0.609	502.03	ppb	0.609	0.12%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5409.0	4901.8	ug/L	28.21	4901.8	ppb	28.21	0.58%
QC value within limits for Al 396.153Radial Recovery = 98.04%								
As 188.979†	2117.9	500.31	ug/L	2.082	500.31	ppb	2.082	0.42%
QC value within limits for As 188.979 Recovery = 100.06%								
B 249.677†	31697.5	492.10	ug/L	0.784	492.10	ppb	0.784	0.16%
QC value within limits for B 249.677 Recovery = 98.42%								
Ba 233.527†	97956.7	497.03	ug/L	0.711	497.03	ppb	0.711	0.14%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1592149.1	496.21	ug/L	0.324	496.21	ppb	0.324	0.07%
QC value within limits for Be 313.107 Recovery = 99.24%								
Ca 317.933Radial†	1989.2	4954.9	ug/L	12.52	4954.9	ppb	12.52	0.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.10%
Cd 226.502†            66631.7      498.09 ug/L         1.144      498.09 ppb          1.144   0.23%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39275.0      489.44 ug/L         0.436      489.44 ppb          0.436   0.09%
   QC value within limits for Co 228.616  Recovery = 97.89%
Cr 267.716†            58132.5      495.82 ug/L         0.539      495.82 ppb          0.539   0.11%
   QC value within limits for Cr 267.716  Recovery = 99.16%
Cu 324.752†           199678.2      492.95 ug/L         0.236      492.95 ppb          0.236   0.05%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†       142.2      5003.6 ug/L        113.48      5003.6 ppb         113.48   2.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.07%
K 766.490 Radial†      11889.6      5152.7 ug/L         12.97      5152.7 ppb          12.97   0.25%
   QC value within limits for K 766.490 Radial  Recovery = 103.05%
Mg 279.077 IEC†           63.1      5001.1 ug/L         66.09      5001.1 ppb          66.09   1.32%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.02%
Mn 257.610†           626884.8      495.97 ug/L         0.753      495.97 ppb          0.753   0.15%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†            12674.6      507.67 ug/L         1.485      507.67 ppb          1.485   0.29%
   QC value within limits for Mo 202.031  Recovery = 101.53%
Na 589.592 Radial†      3805.7       10290 ug/L          73.3       10290 ppb           73.3   0.71%
   QC value within limits for Na 589.592 Radial  Recovery = 102.90%
Ni 231.604†            30773.0      492.91 ug/L         0.605      492.91 ppb          0.605   0.12%
   QC value within limits for Ni 231.604  Recovery = 98.58%
P 214.914†              7082.5      2428.4 ug/L          2.49      2428.4 ppb           2.49   0.10%
   QC value within limits for P 214.914  Recovery = 97.14%
Pb 220.353†             6719.4      505.07 ug/L         2.026      505.07 ppb          2.026   0.40%
   QC value within limits for Pb 220.353  Recovery = 101.01%
S 181.975 Axial†        1206.4      1020.2 ug/L          3.51      1020.2 ppb           3.51   0.34%
   QC value within limits for S 181.975 Axial  Recovery = 102.02%
Sb 206.836†             2527.4      503.26 ug/L         0.369      503.26 ppb          0.369   0.07%
   QC value within limits for Sb 206.836  Recovery = 100.65%
Se 196.026†             1523.9      514.99 ug/L         0.251      514.99 ppb          0.251   0.05%
   QC value within limits for Se 196.026  Recovery = 103.00%
Si 251.611†           123140.6      2528.8 ug/L          6.84      2528.8 ppb           6.84   0.27%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†             4821.0      501.88 ug/L         0.511      501.88 ppb          0.511   0.10%
   QC value within limits for Sn 189.927  Recovery = 100.38%
Sr 421.552†            34878.5      537.31 ug/L         1.669      537.31 ppb          1.669   0.31%
   QC value within limits for Sr 421.552  Recovery = 107.46%
Ti 334.940†           380420.0      497.94 ug/L         0.830      497.94 ppb          0.830   0.17%
   QC value within limits for Ti 334.940  Recovery = 99.59%
Tl 190.801†             2959.2      501.08 ug/L         0.893      501.08 ppb          0.893   0.18%
   QC value within limits for Tl 190.801  Recovery = 100.22%
U 409.014†             19331.5      478.08 ug/L         0.738      478.08 ppb          0.738   0.15%
   QC value within limits for U 409.014  Recovery = 95.62%
V 292.402†             86729.6      497.94 ug/L         0.638      497.94 ppb          0.638   0.13%
   QC value within limits for V 292.402  Recovery = 99.59%
Zn 213.857†            88903.9      491.88 ug/L         1.123      491.88 ppb          1.123   0.23%
   QC value within limits for Zn 213.857  Recovery = 98.38%
SiO2†                 123589.6      5434.6 ug/L         23.34      5434.6 ppb          23.34   0.43%
   QC value within limits for SiO2  Recovery = 101.63%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 12:44:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5518.3	5518.3	99.2	%			12:46:17
1	Y RADIAL	4806.7	4806.7	99.81	%			12:46:17
1	Al 396.153Radial†	-80.6	10.9	9.9589	ug/L	9.9589	ppb	12:46:17
1	Ca 317.933Radial†	44.1	27.5	68.573	ug/L	68.573	ppb	12:46:37
1	Fe 238.204 Radial†	0.0	-0.3	-9.9293	ug/L	-9.9293	ppb	12:46:37
1	K 766.490 Radial†	1698.7	239.9	104.08	ug/L	104.08	ppb	12:46:17
1	Mg 279.077 IEC†	-1.8	-2.0	-155.04	ug/L	-155.04	ppb	12:46:37
1	Na 589.592 Radial†	-174.1	-5.2	-13.943	ug/L	-13.943	ppb	12:46:37
1	Sr 421.552†	32.4	27.2	0.4180	ug/L	0.4180	ppb	12:46:37
1	Sc 361.383	1052130.1	1052130.1	99.175	%			12:47:34
1	Y 371.029	846654.6	846654.6	99.231	%			12:47:34
1	Ag 328.068†	745.4	113.0	0.4445	ug/L	0.4445	ppb	12:47:39
1	As 188.979†	-50.6	-14.1	-3.3222	ug/L	-3.3222	ppb	12:47:59
1	B 249.677†	375.6	760.3	11.850	ug/L	11.850	ppb	12:47:39
1	Ba 233.527†	45.5	21.6	0.1076	ug/L	0.1076	ppb	12:47:59
1	Be 313.107†	-7407.1	-152.6	-0.0474	ug/L	-0.0474	ppb	12:47:39
1	Cd 226.502†	-302.4	-27.3	-0.2026	ug/L	-0.2026	ppb	12:47:59
1	Co 228.616†	-78.2	11.6	0.1438	ug/L	0.1438	ppb	12:47:59
1	Cr 267.716†	-24.3	4.1	0.0351	ug/L	0.0351	ppb	12:47:59
1	Cu 324.752†	10111.8	4.6	0.0108	ug/L	0.0108	ppb	12:47:39
1	Mn 257.610†	869.1	49.3	0.0406	ug/L	0.0406	ppb	12:47:59
1	Mo 202.031†	26.7	-4.8	-0.1934	ug/L	-0.1934	ppb	12:47:59
1	Ni 231.604†	157.5	10.6	0.1698	ug/L	0.1698	ppb	12:47:59
1	P 214.914†	363.5	29.6	10.483	ug/L	10.483	ppb	12:47:59
1	Pb 220.353†	-2.2	26.8	2.0130	ug/L	2.0130	ppb	12:47:59
1	S 181.975 Axial†	74.3	7.1	5.9751	ug/L	5.9751	ppb	12:47:59
1	Sb 206.836†	39.2	-5.9	-1.1554	ug/L	-1.1554	ppb	12:47:59
1	Se 196.026†	-23.4	-2.0	-0.6703	ug/L	-0.6703	ppb	12:47:59
1	Si 251.611†	1253.7	704.0	14.495	ug/L	14.495	ppb	12:47:59
1	Sn 189.927†	8.5	3.1	0.3237	ug/L	0.3237	ppb	12:47:59
1	Ti 334.940†	-1083.2	17.0	0.0287	ug/L	0.0287	ppb	12:47:39
1	Tl 190.801†	-53.7	7.3	1.2282	ug/L	1.2282	ppb	12:47:59
1	U 409.014†	-3965.4	-163.6	-4.0586	ug/L	-4.0586	ppb	12:47:34
1	V 292.402†	-1733.9	-95.6	-0.5536	ug/L	-0.5536	ppb	12:47:39
1	Zn 213.857†	1100.4	-12.8	-0.0663	ug/L	-0.0663	ppb	12:47:59
1	SiO2†	1196.6	604.2	26.624	ug/L	26.624	ppb	12:49:05
2	Sc Radial	5530.0	5530.0	99.4	%			12:46:42
2	Y RADIAL	4804.0	4804.0	99.76	%			12:46:42
2	Al 396.153Radial†	-46.8	45.1	41.028	ug/L	41.028	ppb	12:46:42
2	Ca 317.933Radial†	43.2	26.6	66.161	ug/L	66.161	ppb	12:47:02
2	Fe 238.204 Radial†	0.2	-0.1	-3.2086	ug/L	-3.2086	ppb	12:47:02
2	K 766.490 Radial†	1500.2	36.5	15.864	ug/L	15.864	ppb	12:46:42
2	Mg 279.077 IEC†	0.1	-0.0	-2.9802	ug/L	-2.9802	ppb	12:47:02
2	Na 589.592 Radial†	-185.3	-16.0	-43.367	ug/L	-43.367	ppb	12:47:02
2	Sr 421.552†	24.3	19.0	0.2916	ug/L	0.2916	ppb	12:47:02
2	Sc 361.383	1055228.2	1055228.2	99.467	%			12:48:04
2	Y 371.029	850024.5	850024.5	99.626	%			12:48:04
2	Ag 328.068†	646.4	11.3	0.0443	ug/L	0.0443	ppb	12:48:09
2	As 188.979†	-42.6	-5.9	-1.4010	ug/L	-1.4010	ppb	12:48:29
2	B 249.677†	320.9	704.1	10.974	ug/L	10.974	ppb	12:48:09
2	Ba 233.527†	61.0	37.0	0.1867	ug/L	0.1867	ppb	12:48:29
2	Be 313.107†	-7402.9	-126.4	-0.0393	ug/L	-0.0393	ppb	12:48:09
2	Cd 226.502†	-287.6	-11.5	-0.0851	ug/L	-0.0851	ppb	12:48:29
2	Co 228.616†	-95.0	-5.1	-0.0621	ug/L	-0.0621	ppb	12:48:29
2	Cr 267.716†	-27.2	1.3	0.0113	ug/L	0.0113	ppb	12:48:29
2	Cu 324.752†	10074.9	-62.4	-0.1541	ug/L	-0.1541	ppb	12:48:09
2	Mn 257.610†	873.6	51.3	0.0402	ug/L	0.0402	ppb	12:48:29
2	Mo 202.031†	40.5	8.9	0.3563	ug/L	0.3563	ppb	12:48:29
2	Ni 231.604†	174.4	27.0	0.4336	ug/L	0.4336	ppb	12:48:29

2	P 214.914†	361.0	26.0	9.2291 ug/L	9.2291 ppb	12:48:29
2	Pb 220.353†	-10.0	19.1	1.4379 ug/L	1.4379 ppb	12:48:29
2	S 181.975 Axial†	81.6	14.2	11.973 ug/L	11.973 ppb	12:48:29
2	Sb 206.836†	42.3	-2.9	-0.5447 ug/L	-0.5447 ppb	12:48:29
2	Se 196.026†	-24.2	-2.7	-0.8785 ug/L	-0.8785 ppb	12:48:29
2	Si 251.611†	1175.1	621.2	12.805 ug/L	12.805 ppb	12:48:29
2	Sn 189.927†	14.8	9.4	0.9833 ug/L	0.9833 ppb	12:48:29
2	Ti 334.940†	-1119.7	-16.5	-0.0158 ug/L	-0.0158 ppb	12:48:09
2	Tl 190.801†	-65.4	-4.3	-0.7287 ug/L	-0.7287 ppb	12:48:29
2	U 409.014†	-3934.1	-120.4	-2.9874 ug/L	-2.9874 ppb	12:48:04
2	V 292.402†	-1688.4	-44.7	-0.2542 ug/L	-0.2542 ppb	12:48:09
2	Zn 213.857†	1094.3	-22.2	-0.1261 ug/L	-0.1261 ppb	12:48:29
2	SiO2†	1154.6	558.4	24.643 ug/L	24.643 ppb	12:49:10
3	Sc Radial	5536.9	5536.9	99.5 %		12:47:07
3	Y RADIAL	4795.3	4795.3	99.58 %		12:47:07
3	Al 396.153Radial†	-88.7	3.1	2.7784 ug/L	2.7784 ppb	12:47:07
3	Ca 317.933Radial†	38.0	21.3	52.934 ug/L	52.934 ppb	12:47:27
3	Fe 238.204 Radial†	0.3	-0.0	-1.5937 ug/L	-1.5937 ppb	12:47:27
3	K 766.490 Radial†	1639.2	174.4	75.680 ug/L	75.680 ppb	12:47:07
3	Mg 279.077 IEC†	-0.9	-1.1	-89.124 ug/L	-89.124 ppb	12:47:27
3	Na 589.592 Radial†	-174.5	-4.9	-13.365 ug/L	-13.365 ppb	12:47:27
3	Sr 421.552†	25.1	19.8	0.3045 ug/L	0.3045 ppb	12:47:27
3	Sc 361.383	1057181.0	1057181.0	99.651 %		12:48:34
3	Y 371.029	851270.4	851270.4	99.772 %		12:48:34
3	Ag 328.068†	674.9	38.7	0.1554 ug/L	0.1554 ppb	12:48:39
3	As 188.979†	-44.5	-7.8	-1.8396 ug/L	-1.8396 ppb	12:48:59
3	B 249.677†	378.7	761.6	11.869 ug/L	11.869 ppb	12:48:39
3	Ba 233.527†	63.9	39.8	0.2017 ug/L	0.2017 ppb	12:48:59
3	Be 313.107†	-7375.2	-84.8	-0.0266 ug/L	-0.0266 ppb	12:48:39
3	Cd 226.502†	-299.1	-22.5	-0.1676 ug/L	-0.1676 ppb	12:48:59
3	Co 228.616†	-94.7	-4.6	-0.0558 ug/L	-0.0558 ppb	12:48:59
3	Cr 267.716†	-31.6	-3.1	-0.0251 ug/L	-0.0251 ppb	12:48:59
3	Cu 324.752†	10184.5	28.9	0.0711 ug/L	0.0711 ppb	12:48:39
3	Mn 257.610†	910.4	86.5	0.0699 ug/L	0.0699 ppb	12:48:59
3	Mo 202.031†	44.9	13.3	0.5325 ug/L	0.5325 ppb	12:48:59
3	Ni 231.604†	167.2	19.5	0.3133 ug/L	0.3133 ppb	12:48:59
3	P 214.914†	336.4	0.6	0.2154 ug/L	0.2154 ppb	12:48:59
3	Pb 220.353†	-22.4	6.6	0.4997 ug/L	0.4997 ppb	12:48:59
3	S 181.975 Axial†	69.3	1.8	1.4809 ug/L	1.4809 ppb	12:48:59
3	Sb 206.836†	57.9	12.6	2.5004 ug/L	2.5004 ppb	12:48:59
3	Se 196.026†	-30.6	-9.1	-2.9626 ug/L	-2.9626 ppb	12:48:59
3	Si 251.611†	1139.2	583.1	11.995 ug/L	11.995 ppb	12:48:59
3	Sn 189.927†	11.6	6.1	0.6428 ug/L	0.6428 ppb	12:48:59
3	Ti 334.940†	-1167.7	-62.5	-0.0766 ug/L	-0.0766 ppb	12:48:39
3	Tl 190.801†	-61.2	0.0	0.0020 ug/L	0.0020 ppb	12:48:59
3	U 409.014†	-3975.3	-154.5	-3.8330 ug/L	-3.8330 ppb	12:48:34
3	V 292.402†	-1637.3	9.7	0.0534 ug/L	0.0534 ppb	12:48:39
3	Zn 213.857†	1125.6	7.1	0.0408 ug/L	0.0408 ppb	12:48:59
3	SiO2†	1173.0	574.8	25.317 ug/L	25.317 ppb	12:49:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054846.5	99.431	%	0.2401				0.24%
Sc Radial	5528.4	99.3	%	0.17				0.17%
Y 371.029	849316.5	99.543	%	0.2799				0.28%
Y RADIAL	4802.0	99.72	%	0.125				0.12%
Ag 328.068†	54.3	0.2147	ug/L	0.20658	0.2147	ppb	0.20658	96.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.7	17.922	ug/L	20.3303	17.922	ppb	20.3303	113.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-9.3	-2.1876	ug/L	1.00674	-2.1876	ppb	1.00674	46.02%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	742.0	11.565	ug/L	0.5111	11.565	ppb	0.5111	4.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.8	0.1653	ug/L	0.05052	0.1653	ppb	0.05052	30.56%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.3	-0.0378	ug/L	0.01050	-0.0378	ppb	0.01050	27.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	25.1	62.556	ug/L	8.4198	62.556	ppb	8.4198	13.46%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -20.4     -0.1518 ug/L       0.06032     -0.1518 ppb        0.06032  39.74%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                0.6      0.0086 ug/L       0.11710      0.0086 ppb        0.11710 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                0.8      0.0071 ug/L       0.03031      0.0071 ppb        0.03031 424.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -9.6     -0.0240 ug/L       0.11658     -0.0240 ppb        0.11658 485.05%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.1     -4.9105 ug/L       4.42071     -4.9105 ppb        4.42071  90.02%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        150.3      65.208 ug/L       45.0299      65.208 ppb        45.0299  69.06%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.0     -82.381 ug/L       76.2536     -82.381 ppb        76.2536  92.56%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               62.3      0.0502 ug/L       0.01702      0.0502 ppb        0.01702  33.90%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                5.8      0.2318 ug/L       0.37863      0.2318 ppb        0.37863 163.36%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.558 ug/L       17.1571     -23.558 ppb        17.1571  72.83%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               19.1      0.3055 ug/L       0.13208      0.3055 ppb        0.13208  43.23%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                18.7      6.6426 ug/L       5.60129      6.6426 ppb        5.60129  84.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               17.5      1.3169 ug/L       0.76385      1.3169 ppb        0.76385  58.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           7.7      6.4762 ug/L       5.26375      6.4762 ppb        5.26375  81.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                1.3      0.2668 ug/L       1.95832      0.2668 ppb        1.95832 734.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.6     -1.5038 ug/L       1.26762     -1.5038 ppb        1.26762  84.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              636.1      13.098 ug/L        1.2757      13.098 ppb         1.2757   9.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.2      0.6499 ug/L       0.32985      0.6499 ppb        0.32985  50.75%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               22.0      0.3380 ug/L       0.06959      0.3380 ppb        0.06959  20.59%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -20.6     -0.0212 ug/L       0.05284     -0.0212 ppb        0.05284 248.77%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.0      0.1672 ug/L       0.98883      0.1672 ppb        0.98883 591.54%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -146.2     -3.6263 ug/L       0.56469     -3.6263 ppb        0.56469  15.57%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -43.5     -0.2515 ug/L       0.30350     -0.2515 ppb        0.30350 120.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -9.3     -0.0505 ug/L       0.08455     -0.0505 ppb        0.08455 167.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    579.1      25.528 ug/L        1.0068      25.528 ppb         1.0068   3.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 13:30:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5593.8	5593.8	101	%			13:32:15
1	Y RADIAL	4842.5	4842.5	100.6	%			13:32:15
1	Al 396.153Radial†	5375.4	5439.8	4930.0	ug/L	4930.0	ppb	13:32:15
1	Ca 317.933Radial†	2030.0	2002.6	4988.1	ug/L	4988.1	ppb	13:32:35
1	Fe 238.204 Radial†	143.1	142.0	4997.8	ug/L	4997.8	ppb	13:32:35
1	K 766.490 Radial†	13576.3	12032.8	5214.6	ug/L	5214.6	ppb	13:32:15
1	Mg 279.077 IEC†	64.5	64.0	5074.9	ug/L	5074.9	ppb	13:32:35
1	Na 589.592 Radial†	3820.6	3971.3	10738	ug/L	10738	ppb	13:32:15
1	Sr 421.552†	36184.6	35991.7	554.46	ug/L	554.46	ppb	13:32:15
1	Sc 361.383	1067935.1	1067935.1	100.66	%			13:33:34
1	Y 371.029	850350.6	850350.6	99.664	%			13:33:34
1	Ag 328.068†	127384.2	125904.4	501.45	ug/L	501.45	ppb	13:33:34
1	As 188.979†	2071.9	2095.1	494.98	ug/L	494.98	ppb	13:33:49
1	B 249.677†	31471.2	31644.9	491.29	ug/L	491.29	ppb	13:33:34
1	Ba 233.527†	98516.8	97841.9	496.45	ug/L	496.45	ppb	13:33:34
1	Be 313.107†	1595916.3	1592693.3	496.38	ug/L	496.38	ppb	13:33:34
1	Cd 226.502†	66618.5	66456.2	496.78	ug/L	496.78	ppb	13:33:34
1	Co 228.616†	39113.3	38945.4	485.32	ug/L	485.32	ppb	13:33:49
1	Cr 267.716†	58357.9	58001.1	494.70	ug/L	494.70	ppb	13:33:34
1	Cu 324.752†	211740.1	200150.5	494.11	ug/L	494.11	ppb	13:33:34
1	Mn 257.610†	631157.2	626162.1	495.39	ug/L	495.39	ppb	13:33:34
1	Mo 202.031†	12651.2	12535.9	502.12	ug/L	502.12	ppb	13:33:49
1	Ni 231.604†	30868.2	30516.1	488.79	ug/L	488.79	ppb	13:33:49
1	P 214.914†	7390.5	7004.7	2400.7	ug/L	2400.7	ppb	13:33:49
1	Pb 220.353†	6658.3	6643.4	499.37	ug/L	499.37	ppb	13:33:49
1	S 181.975 Axial†	1261.6	1185.4	1002.5	ug/L	1002.5	ppb	13:33:49
1	Sb 206.836†	2570.5	2508.1	499.32	ug/L	499.32	ppb	13:33:49
1	Se 196.026†	1503.6	1515.3	512.16	ug/L	512.16	ppb	13:33:49
1	Si 251.611†	123414.2	122039.0	2506.2	ug/L	2506.2	ppb	13:33:34
1	Sn 189.927†	4826.6	4789.2	498.58	ug/L	498.58	ppb	13:33:49
1	Ti 334.940†	381885.1	380472.4	498.01	ug/L	498.01	ppb	13:33:34
1	Tl 190.801†	2890.2	2932.5	496.60	ug/L	496.60	ppb	13:33:49
1	U 409.014†	15716.9	19447.9	480.97	ug/L	480.97	ppb	13:33:34
1	V 292.402†	85492.2	86580.4	497.03	ug/L	497.03	ppb	13:33:34
1	Zn 213.857†	90459.6	88739.9	490.98	ug/L	490.98	ppb	13:33:34
1	SiO2†	121080.0	119678.0	5261.9	ug/L	5261.9	ppb	13:34:50
2	Sc Radial	5672.4	5672.4	102	%			13:32:40
2	Y RADIAL	4945.5	4945.5	102.7	%			13:32:40
2	Al 396.153Radial†	5436.6	5425.7	4917.2	ug/L	4917.2	ppb	13:32:40
2	Ca 317.933Radial†	2037.9	1982.3	4937.6	ug/L	4937.6	ppb	13:33:00
2	Fe 238.204 Radial†	144.7	141.6	4983.6	ug/L	4983.6	ppb	13:33:00
2	K 766.490 Radial†	13656.0	11923.8	5167.3	ug/L	5167.3	ppb	13:32:40
2	Mg 279.077 IEC†	65.5	64.0	5077.9	ug/L	5077.9	ppb	13:33:00
2	Na 589.592 Radial†	3830.1	3927.9	10620	ug/L	10620	ppb	13:32:40
2	Sr 421.552†	36620.5	35920.3	553.36	ug/L	553.36	ppb	13:32:40
2	Sc 361.383	1070653.1	1070653.1	100.92	%			13:33:57
2	Y 371.029	851300.7	851300.7	99.776	%			13:33:57
2	Ag 328.068†	127724.7	125920.6	501.52	ug/L	501.52	ppb	13:33:57
2	As 188.979†	2076.5	2094.5	494.83	ug/L	494.83	ppb	13:34:17
2	B 249.677†	31609.9	31703.0	492.20	ug/L	492.20	ppb	13:33:57
2	Ba 233.527†	98878.2	97951.6	497.00	ug/L	497.00	ppb	13:33:57
2	Be 313.107†	1599999.7	1592714.8	496.39	ug/L	496.39	ppb	13:33:57
2	Cd 226.502†	67082.9	66748.4	498.96	ug/L	498.96	ppb	13:33:57
2	Co 228.616†	39157.1	38890.2	484.63	ug/L	484.63	ppb	13:34:17
2	Cr 267.716†	58566.4	58060.5	495.20	ug/L	495.20	ppb	13:33:57
2	Cu 324.752†	211700.3	199577.1	492.70	ug/L	492.70	ppb	13:33:57
2	Mn 257.610†	634065.3	627452.0	496.41	ug/L	496.41	ppb	13:33:57
2	Mo 202.031†	12650.3	12503.1	500.81	ug/L	500.81	ppb	13:34:17
2	Ni 231.604†	30868.0	30438.0	487.54	ug/L	487.54	ppb	13:34:17

2	P 214.914†	7401.9	6997.4	2398.4 ug/L	2398.4 ppb	13:34:17
2	Pb 220.353†	6676.9	6645.0	499.48 ug/L	499.48 ppb	13:34:17
2	S 181.975 Axial†	1250.3	1171.1	990.32 ug/L	990.32 ppb	13:34:17
2	Sb 206.836†	2582.9	2513.9	500.41 ug/L	500.41 ppb	13:34:17
2	Se 196.026†	1510.6	1518.4	513.14 ug/L	513.14 ppb	13:34:17
2	Si 251.611†	123797.7	122107.8	2507.7 ug/L	2507.7 ppb	13:33:57
2	Sn 189.927†	4829.4	4779.9	497.60 ug/L	497.60 ppb	13:34:17
2	Ti 334.940†	383068.5	380682.0	498.28 ug/L	498.28 ppb	13:33:57
2	Tl 190.801†	2883.4	2918.5	494.24 ug/L	494.24 ppb	13:34:17
2	U 409.014†	15572.6	19265.3	476.44 ug/L	476.44 ppb	13:33:57
2	V 292.402†	85872.5	86741.7	497.92 ug/L	497.92 ppb	13:33:57
2	Zn 213.857†	90799.4	88848.4	491.60 ug/L	491.60 ppb	13:33:57
2	SiO2†	123201.1	121474.4	5341.4 ug/L	5341.4 ppb	13:34:55
3	Sc Radial	5530.2	5530.2	99.4 %		13:33:05
3	Y RADIAL	4824.8	4824.8	100.2 %		13:33:05
3	Al 396.153Radial†	5269.6	5394.8	4888.9 ug/L	4888.9 ppb	13:33:05
3	Ca 317.933Radial†	2016.5	2012.2	5012.0 ug/L	5012.0 ppb	13:33:25
3	Fe 238.204 Radial†	142.0	142.6	5017.8 ug/L	5017.8 ppb	13:33:25
3	K 766.490 Radial†	13240.5	11850.4	5135.5 ug/L	5135.5 ppb	13:33:05
3	Mg 279.077 IEC†	66.0	66.2	5249.4 ug/L	5249.4 ppb	13:33:25
3	Na 589.592 Radial†	3727.2	3921.0	10602 ug/L	10602 ppb	13:33:05
3	Sr 421.552†	35503.6	35720.6	550.29 ug/L	550.29 ppb	13:33:05
3	Sc 361.383	1058446.8	1058446.8	99.770 %		13:34:24
3	Y 371.029	840681.7	840681.7	98.531 %		13:34:24
3	Ag 328.068†	126248.3	125900.3	501.44 ug/L	501.44 ppb	13:34:24
3	As 188.979†	2075.8	2117.5	500.23 ug/L	500.23 ppb	13:34:44
3	B 249.677†	31241.6	31695.0	492.06 ug/L	492.06 ppb	13:34:24
3	Ba 233.527†	97802.6	98003.4	497.27 ug/L	497.27 ppb	13:34:24
3	Be 313.107†	1580830.6	1591784.7	496.10 ug/L	496.10 ppb	13:34:24
3	Cd 226.502†	66147.2	66577.1	497.68 ug/L	497.68 ppb	13:34:24
3	Co 228.616†	38965.8	39145.9	487.83 ug/L	487.83 ppb	13:34:44
3	Cr 267.716†	57808.5	57970.1	494.43 ug/L	494.43 ppb	13:34:24
3	Cu 324.752†	209941.6	200233.4	494.32 ug/L	494.32 ppb	13:34:24
3	Mn 257.610†	627495.4	628112.4	496.93 ug/L	496.93 ppb	13:34:24
3	Mo 202.031†	12657.7	12655.1	506.89 ug/L	506.89 ppb	13:34:44
3	Ni 231.604†	30736.2	30658.7	491.08 ug/L	491.08 ppb	13:34:44
3	P 214.914†	7364.3	7044.3	2414.7 ug/L	2414.7 ppb	13:34:44
3	Pb 220.353†	6650.9	6695.3	503.26 ug/L	503.26 ppb	13:34:44
3	S 181.975 Axial†	1250.1	1185.1	1002.2 ug/L	1002.2 ppb	13:34:44
3	Sb 206.836†	2580.3	2540.8	505.92 ug/L	505.92 ppb	13:34:44
3	Se 196.026†	1500.2	1525.3	515.51 ug/L	515.51 ppb	13:34:44
3	Si 251.611†	122421.6	122143.2	2508.3 ug/L	2508.3 ppb	13:34:24
3	Sn 189.927†	4816.0	4821.6	501.94 ug/L	501.94 ppb	13:34:44
3	Ti 334.940†	378995.5	380976.9	498.67 ug/L	498.67 ppb	13:34:24
3	Tl 190.801†	2891.6	2959.6	501.16 ug/L	501.16 ppb	13:34:44
3	U 409.014†	15388.1	19258.2	476.26 ug/L	476.26 ppb	13:34:24
3	V 292.402†	84860.2	86708.3	497.81 ug/L	497.81 ppb	13:34:24
3	Zn 213.857†	89990.4	89075.1	492.83 ug/L	492.83 ppb	13:34:24
3	SiO2†	121574.6	121252.0	5331.3 ug/L	5331.3 ppb	13:35:00

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065678.3	100.45	%	0.604				0.60%
Sc Radial	5598.8	101	%	1.3				1.27%
Y 371.029	847444.4	99.324	%	0.6887				0.69%
Y RADIAL	4870.9	101.1	%	1.35				1.34%
Ag 328.068†	125908.4	501.47	ug/L	0.040	501.47	ppb	0.040	0.01%
QC value within limits for Ag 328.068 Recovery = 100.29%								
Al 396.153Radial†	5420.1	4912.0	ug/L	21.04	4912.0	ppb	21.04	0.43%
QC value within limits for Al 396.153Radial Recovery = 98.24%								
As 188.979†	2102.3	496.68	ug/L	3.073	496.68	ppb	3.073	0.62%
QC value within limits for As 188.979 Recovery = 99.34%								
B 249.677†	31681.0	491.85	ug/L	0.490	491.85	ppb	0.490	0.10%
QC value within limits for B 249.677 Recovery = 98.37%								
Ba 233.527†	97932.3	496.91	ug/L	0.418	496.91	ppb	0.418	0.08%
QC value within limits for Ba 233.527 Recovery = 99.38%								
Be 313.107†	1592397.6	496.29	ug/L	0.164	496.29	ppb	0.164	0.03%
QC value within limits for Be 313.107 Recovery = 99.26%								
Ca 317.933Radial†	1999.0	4979.2	ug/L	37.99	4979.2	ppb	37.99	0.76%

```
   QC value within limits for Ca 317.933Radial  Recovery = 99.58%
Cd 226.502†            66593.9      497.81 ug/L         1.099      497.81 ppb          1.099   0.22%
   QC value within limits for Cd 226.502  Recovery = 99.56%
Co 228.616†            38993.8      485.92 ug/L         1.684      485.92 ppb          1.684   0.35%
   QC value within limits for Co 228.616  Recovery = 97.18%
Cr 267.716†            58010.6      494.78 ug/L         0.391      494.78 ppb          0.391   0.08%
   QC value within limits for Cr 267.716  Recovery = 98.96%
Cu 324.752†           199987.0      493.71 ug/L         0.883      493.71 ppb          0.883   0.18%
   QC value within limits for Cu 324.752  Recovery = 98.74%
Fe 238.204 Radial†       142.1      4999.7 ug/L         17.21      4999.7 ppb          17.21   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.99%
K 766.490 Radial†      11935.7      5172.5 ug/L         39.80      5172.5 ppb          39.80   0.77%
   QC value within limits for K 766.490 Radial  Recovery = 103.45%
Mg 279.077 IEC†           64.8      5134.0 ug/L         99.90      5134.0 ppb          99.90   1.95%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.68%
Mn 257.610†           627242.2      496.25 ug/L         0.783      496.25 ppb          0.783   0.16%
   QC value within limits for Mn 257.610  Recovery = 99.25%
Mo 202.031†            12564.7      503.27 ug/L         3.202      503.27 ppb          3.202   0.64%
   QC value within limits for Mo 202.031  Recovery = 100.65%
Na 589.592 Radial†      3940.0       10653 ug/L          73.7       10653 ppb           73.7   0.69%
   QC value within limits for Na 589.592 Radial  Recovery = 106.53%
Ni 231.604†            30537.6      489.14 ug/L         1.792      489.14 ppb          1.792   0.37%
   QC value within limits for Ni 231.604  Recovery = 97.83%
P 214.914†              7015.5      2404.6 ug/L          8.82      2404.6 ppb           8.82   0.37%
   QC value within limits for P 214.914  Recovery = 96.18%
Pb 220.353†             6661.2      500.70 ug/L         2.213      500.70 ppb          2.213   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.14%
S 181.975 Axial†        1180.6      998.33 ug/L         6.940      998.33 ppb          6.940   0.70%
   QC value within limits for S 181.975 Axial  Recovery = 99.83%
Sb 206.836†             2520.9      501.88 ug/L         3.538      501.88 ppb          3.538   0.70%
   QC value within limits for Sb 206.836  Recovery = 100.38%
Se 196.026†             1519.7      513.60 ug/L         1.722      513.60 ppb          1.722   0.34%
   QC value within limits for Se 196.026  Recovery = 102.72%
Si 251.611†           122096.7      2507.4 ug/L          1.07      2507.4 ppb           1.07   0.04%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4796.9      499.37 ug/L         2.279      499.37 ppb          2.279   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.87%
Sr 421.552†            35877.5      552.70 ug/L         2.165      552.70 ppb          2.165   0.39%
   QC value greater than the upper limit for Sr 421.552  Recovery = 110.54%
Ti 334.940†           380710.4      498.32 ug/L         0.334      498.32 ppb          0.334   0.07%
   QC value within limits for Ti 334.940  Recovery = 99.66%
Tl 190.801†             2936.9      497.33 ug/L         3.520      497.33 ppb          3.520   0.71%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19323.8      477.89 ug/L         2.668      477.89 ppb          2.668   0.56%
   QC value within limits for U 409.014  Recovery = 95.58%
V 292.402†             86676.8      497.59 ug/L         0.485      497.59 ppb          0.485   0.10%
   QC value within limits for V 292.402  Recovery = 99.52%
Zn 213.857†            88887.8      491.81 ug/L         0.941      491.81 ppb          0.941   0.19%
   QC value within limits for Zn 213.857  Recovery = 98.36%
SiO2†                 120801.5      5311.6 ug/L         43.27      5311.6 ppb          43.27   0.81%
   QC value within limits for SiO2  Recovery = 99.33%
QC Failed.  Continue with analysis.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:37:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5413.7	5413.7	97.3	%			13:39:02
1	Y RADIAL	4722.7	4722.7	98.07	%			13:39:02
1	Al 396.153Radial†	-76.0	14.1	12.785	ug/L	12.785	ppb	13:39:02
1	Ca 317.933Radial†	35.2	19.2	47.934	ug/L	47.934	ppb	13:39:22
1	Fe 238.204 Radial†	1.2	0.9	31.911	ug/L	31.911	ppb	13:39:22
1	K 766.490 Radial†	1580.2	151.2	65.626	ug/L	65.626	ppb	13:39:02
1	Mg 279.077 IEC†	-0.2	-0.4	-31.882	ug/L	-31.882	ppb	13:39:22
1	Na 589.592 Radial†	-172.1	-6.5	-17.590	ug/L	-17.590	ppb	13:39:22
1	Sr 421.552†	25.9	21.2	0.3255	ug/L	0.3255	ppb	13:39:22
1	Sc 361.383	1053963.2	1053963.2	99.348	%			13:40:19
1	Y 371.029	848397.9	848397.9	99.435	%			13:40:19
1	Ag 328.068†	697.3	63.3	0.2597	ug/L	0.2597	ppb	13:40:24
1	As 188.979†	-43.2	-6.6	-1.5430	ug/L	-1.5430	ppb	13:40:44
1	B 249.677†	186.7	569.4	8.8696	ug/L	8.8696	ppb	13:40:24
1	Ba 233.527†	25.2	1.1	0.0062	ug/L	0.0062	ppb	13:40:44
1	Be 313.107†	-7423.5	-156.0	-0.0488	ug/L	-0.0488	ppb	13:40:24
1	Cd 226.502†	-280.8	-5.0	-0.0412	ug/L	-0.0412	ppb	13:40:44
1	Co 228.616†	-84.6	5.2	0.0655	ug/L	0.0655	ppb	13:40:44
1	Cr 267.716†	-15.0	13.5	0.1154	ug/L	0.1154	ppb	13:40:44
1	Cu 324.752†	10214.2	90.0	0.2240	ug/L	0.2240	ppb	13:40:24
1	Mn 257.610†	861.8	40.4	0.0367	ug/L	0.0367	ppb	13:40:44
1	Mo 202.031†	34.4	2.9	0.1183	ug/L	0.1183	ppb	13:40:44
1	Ni 231.604†	156.3	9.1	0.1453	ug/L	0.1453	ppb	13:40:44
1	P 214.914†	354.0	19.4	6.7924	ug/L	6.7924	ppb	13:40:44
1	Pb 220.353†	-16.7	12.3	0.9181	ug/L	0.9181	ppb	13:40:44
1	S 181.975 Axial†	70.6	3.2	2.7071	ug/L	2.7071	ppb	13:40:44
1	Sb 206.836†	39.9	-5.3	-1.0467	ug/L	-1.0467	ppb	13:40:44
1	Se 196.026†	-22.9	-1.5	-0.3668	ug/L	-0.3668	ppb	13:40:44
1	Si 251.611†	869.2	314.8	6.4745	ug/L	6.4745	ppb	13:40:44
1	Sn 189.927†	0.9	-4.6	-0.4731	ug/L	-0.4731	ppb	13:40:44
1	Ti 334.940†	-1211.1	-109.8	-0.1404	ug/L	-0.1404	ppb	13:40:24
1	Tl 190.801†	-59.9	1.1	0.1786	ug/L	0.1786	ppb	13:40:44
1	U 409.014†	-3817.1	-7.5	-0.1890	ug/L	-0.1890	ppb	13:40:19
1	V 292.402†	-1664.4	-22.5	-0.1316	ug/L	-0.1316	ppb	13:40:24
1	Zn 213.857†	1133.9	18.9	0.1021	ug/L	0.1021	ppb	13:40:44
1	SiO2†	854.9	258.2	11.358	ug/L	11.358	ppb	13:41:50
2	Sc Radial	5529.6	5529.6	99.4	%			13:39:27
2	Y RADIAL	4800.3	4800.3	99.68	%			13:39:27
2	Al 396.153Radial†	-66.9	24.8	22.617	ug/L	22.617	ppb	13:39:27
2	Ca 317.933Radial†	32.0	15.3	38.110	ug/L	38.110	ppb	13:39:47
2	Fe 238.204 Radial†	-0.4	-0.7	-24.391	ug/L	-24.391	ppb	13:39:47
2	K 766.490 Radial†	1456.8	-7.0	-3.0184	ug/L	-3.0184	ppb	13:39:27
2	Mg 279.077 IEC†	-1.1	-1.3	-105.28	ug/L	-105.28	ppb	13:39:47
2	Na 589.592 Radial†	-182.7	-13.4	-36.229	ug/L	-36.229	ppb	13:39:47
2	Sr 421.552†	13.5	8.1	0.1251	ug/L	0.1251	ppb	13:39:47
2	Sc 361.383	1050298.1	1050298.1	99.002	%			13:40:49
2	Y 371.029	845092.6	845092.6	99.048	%			13:40:49
2	Ag 328.068†	722.6	91.3	0.3522	ug/L	0.3522	ppb	13:40:54
2	As 188.979†	-47.8	-11.4	-2.6790	ug/L	-2.6790	ppb	13:41:14
2	B 249.677†	113.4	496.1	7.7347	ug/L	7.7347	ppb	13:40:54
2	Ba 233.527†	39.8	15.9	0.0791	ug/L	0.0791	ppb	13:41:14
2	Be 313.107†	-7481.4	-240.6	-0.0748	ug/L	-0.0748	ppb	13:40:54
2	Cd 226.502†	-281.1	-6.3	-0.0443	ug/L	-0.0443	ppb	13:41:14
2	Co 228.616†	-106.2	-16.8	-0.2105	ug/L	-0.2105	ppb	13:41:14
2	Cr 267.716†	-17.2	11.3	0.0951	ug/L	0.0951	ppb	13:41:14
2	Cu 324.752†	10211.9	123.5	0.3033	ug/L	0.3033	ppb	13:40:54
2	Mn 257.610†	849.4	30.9	0.0233	ug/L	0.0233	ppb	13:41:14
2	Mo 202.031†	18.3	-13.3	-0.5352	ug/L	-0.5352	ppb	13:41:14
2	Ni 231.604†	164.4	17.8	0.2854	ug/L	0.2854	ppb	13:41:14

2	P 214.914†	350.8	17.5	6.1379	ug/L	6.1379	ppb	13:41:14
2	Pb 220.353†	-10.6	18.4	1.3861	ug/L	1.3861	ppb	13:41:14
2	S 181.975 Axial†	62.6	-4.6	-3.8702	ug/L	-3.8702	ppb	13:41:14
2	Sb 206.836†	45.8	0.8	0.1341	ug/L	0.1341	ppb	13:41:14
2	Se 196.026†	-24.4	-3.1	-1.0828	ug/L	-1.0828	ppb	13:41:14
2	Si 251.611†	863.1	311.7	6.4431	ug/L	6.4431	ppb	13:41:14
2	Sn 189.927†	0.2	-5.3	-0.5453	ug/L	-0.5453	ppb	13:41:14
2	Ti 334.940†	-1096.8	1.4	0.0048	ug/L	0.0048	ppb	13:40:54
2	Tl 190.801†	-63.6	-2.9	-0.4817	ug/L	-0.4817	ppb	13:41:14
2	U 409.014†	-3840.4	-44.4	-1.0988	ug/L	-1.0988	ppb	13:40:49
2	V 292.402†	-1708.7	-73.1	-0.4221	ug/L	-0.4221	ppb	13:40:54
2	Zn 213.857†	1132.6	21.6	0.1245	ug/L	0.1245	ppb	13:41:14
2	SiO2†	832.1	238.2	10.549	ug/L	10.549	ppb	13:41:55
3	Sc Radial	5577.9	5577.9	100	%			13:39:52
3	Y RADIAL	4835.1	4835.1	100.4	%			13:39:52
3	Al 396.153Radial†	-70.3	22.1	20.104	ug/L	20.104	ppb	13:39:52
3	Ca 317.933Radial†	35.5	18.5	45.957	ug/L	45.957	ppb	13:40:12
3	Fe 238.204 Radial†	0.8	0.4	15.248	ug/L	15.248	ppb	13:40:12
3	K 766.490 Radial†	1595.4	118.6	51.472	ug/L	51.472	ppb	13:39:52
3	Mg 279.077 IEC†	1.1	0.9	72.486	ug/L	72.486	ppb	13:40:12
3	Na 589.592 Radial†	-180.7	-9.9	-26.682	ug/L	-26.682	ppb	13:40:12
3	Sr 421.552†	20.5	15.0	0.2301	ug/L	0.2301	ppb	13:40:12
3	Sc 361.383	1059808.1	1059808.1	99.899	%			13:41:19
3	Y 371.029	852835.7	852835.7	99.956	%			13:41:19
3	Ag 328.068†	652.2	14.3	0.0614	ug/L	0.0614	ppb	13:41:24
3	As 188.979†	-45.4	-8.6	-2.0185	ug/L	-2.0185	ppb	13:41:44
3	B 249.677†	65.4	446.9	6.9635	ug/L	6.9635	ppb	13:41:24
3	Ba 233.527†	22.1	-2.1	-0.0105	ug/L	-0.0105	ppb	13:41:44
3	Be 313.107†	-7445.6	-136.9	-0.0427	ug/L	-0.0427	ppb	13:41:24
3	Cd 226.502†	-289.9	-12.6	-0.0960	ug/L	-0.0960	ppb	13:41:44
3	Co 228.616†	-93.1	-2.8	-0.0344	ug/L	-0.0344	ppb	13:41:44
3	Cr 267.716†	-11.2	17.4	0.1485	ug/L	0.1485	ppb	13:41:44
3	Cu 324.752†	10243.7	62.8	0.1558	ug/L	0.1558	ppb	13:41:24
3	Mn 257.610†	848.9	22.8	0.0186	ug/L	0.0186	ppb	13:41:44
3	Mo 202.031†	37.0	5.3	0.2126	ug/L	0.2126	ppb	13:41:44
3	Ni 231.604†	140.9	-7.2	-0.1159	ug/L	-0.1159	ppb	13:41:44
3	P 214.914†	339.1	2.5	0.8606	ug/L	0.8606	ppb	13:41:44
3	Pb 220.353†	-19.1	9.9	0.7469	ug/L	0.7469	ppb	13:41:44
3	S 181.975 Axial†	72.1	4.4	3.7018	ug/L	3.7018	ppb	13:41:44
3	Sb 206.836†	45.8	0.4	0.0909	ug/L	0.0909	ppb	13:41:44
3	Se 196.026†	-18.5	3.1	1.0727	ug/L	1.0727	ppb	13:41:44
3	Si 251.611†	817.6	258.4	5.3084	ug/L	5.3084	ppb	13:41:44
3	Sn 189.927†	11.2	5.7	0.5975	ug/L	0.5975	ppb	13:41:44
3	Ti 334.940†	-1138.5	-30.4	-0.0364	ug/L	-0.0364	ppb	13:41:24
3	Tl 190.801†	-59.9	1.4	0.2410	ug/L	0.2410	ppb	13:41:44
3	U 409.014†	-3866.5	-35.7	-0.8885	ug/L	-0.8885	ppb	13:41:19
3	V 292.402†	-1658.7	-7.6	-0.0432	ug/L	-0.0432	ppb	13:41:24
3	Zn 213.857†	1144.7	23.5	0.1274	ug/L	0.1274	ppb	13:41:44
3	SiO2†	856.3	254.8	11.208	ug/L	11.208	ppb	13:42:00

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054689.8	99.416	%	0.4521				0.45%
Sc Radial	5507.0	99.0	%	1.52				1.53%
Y 371.029	848775.4	99.480	%	0.4554				0.46%
Y RADIAL	4786.0	99.38	%	1.195				1.20%
Ag 328.068†	56.3	0.2244	ug/L	0.14858	0.2244	ppb	0.14858	66.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.3	18.502	ug/L	5.1080	18.502	ppb	5.1080	27.61%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-8.9	-2.0802	ug/L	0.57051	-2.0802	ppb	0.57051	27.43%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	504.1	7.8559	ug/L	0.95880	7.8559	ppb	0.95880	12.20%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.0	0.0249	ug/L	0.04766	0.0249	ppb	0.04766	191.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-177.8	-0.0554	ug/L	0.01705	-0.0554	ppb	0.01705	30.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	17.7	44.000	ug/L	5.1960	44.000	ppb	5.1960	11.81%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -8.0     -0.0605 ug/L       0.03078     -0.0605 ppb        0.03078  50.88%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -4.8     -0.0598 ug/L       0.13974     -0.0598 ppb        0.13974 233.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.0      0.1197 ug/L       0.02695      0.1197 ppb        0.02695  22.52%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                92.1      0.2277 ug/L       0.07381      0.2277 ppb        0.07381  32.42%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.2      7.5897 ug/L      28.92162      7.5897 ppb       28.92162 381.07%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          87.6      38.027 ug/L       36.2437      38.027 ppb        36.2437  95.31%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -21.559 ug/L       89.3317     -21.559 ppb        89.3317 414.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                31.4      0.0262 ug/L       0.00940      0.0262 ppb        0.00940  35.89%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -1.7     -0.0681 ug/L       0.40727     -0.0681 ppb        0.40727 597.93%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -9.9     -26.834 ug/L        9.3203     -26.834 ppb         9.3203  34.73%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 6.5      0.1049 ug/L       0.20368      0.1049 ppb        0.20368 194.15%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 13.1      4.5970 ug/L       3.25230      4.5970 ppb        3.25230  70.75%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                13.5      1.0170 ug/L       0.33087      1.0170 ppb        0.33087  32.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            1.0      0.8462 ug/L       4.11469      0.8462 ppb        4.11469 486.24%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -1.4     -0.2739 ug/L       0.66961     -0.2739 ppb        0.66961 244.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -0.5     -0.1256 ug/L       1.09782     -0.1256 ppb        1.09782 873.95%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               295.0      6.0753 ug/L       0.66436      6.0753 ppb        0.66436  10.94%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.4     -0.1403 ug/L       0.63995     -0.1403 ppb        0.63995 456.09%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                14.8      0.2269 ug/L       0.10024      0.2269 ppb        0.10024  44.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -46.3     -0.0574 ug/L       0.07484     -0.0574 ppb        0.07484 130.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -0.1     -0.0207 ug/L       0.40044     -0.0207 ppb        0.40044 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -29.2     -0.7254 ug/L       0.47631     -0.7254 ppb        0.47631  65.66%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -34.4     -0.1990 ug/L       0.19822     -0.1990 ppb        0.19822  99.63%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                21.3      0.1180 ug/L       0.01386      0.1180 ppb        0.01386  11.75%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     250.4      11.038 ug/L        0.4304      11.038 ppb         0.4304   3.90%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/8/2009 13:50:46 Plasma On Time: 00:00:00
Logged In Analyst: Optima3 Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070809A.sif
Batch ID:
Results Data Set: 070809A
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1 Autosampler Location: 7
Sample ID: CCV Date Collected: 7/8/2009 13:50:47
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5532.4	5532.4	99.4	%			13:52:39
1	Y RADIAL	4797.0	4797.0	99.61	%			13:52:39
1	Al 396.153Radial†	5229.0	5351.8	4849.9	ug/L	4849.9	ppb	13:52:39
1	Ca 317.933Radial†	1958.2	1952.7	4863.9	ug/L	4863.9	ppb	13:52:59
1	Fe 238.204 Radial†	138.6	139.1	4894.2	ug/L	4894.2	ppb	13:52:59
1	K 766.490 Radial†	13095.3	11698.9	5070.2	ug/L	5070.2	ppb	13:52:39
1	Mg 279.077 IEC†	62.6	62.8	4978.5	ug/L	4978.5	ppb	13:52:59
1	Na 589.592 Radial†	3365.0	3555.1	9612.7	ug/L	9612.7	ppb	13:52:39
1	Sr 421.552†	32629.9	32815.6	505.53	ug/L	505.53	ppb	13:52:39
1	Sc 361.383	1065706.7	1065706.7	100.45	%			13:53:58
1	Y 371.029	846819.9	846819.9	99.251	%			13:53:58
1	Ag 328.068†	126960.9	125747.6	500.80	ug/L	500.80	ppb	13:53:58
1	As 188.979†	2061.4	2089.0	493.53	ug/L	493.53	ppb	13:54:18
1	B 249.677†	31314.7	31554.4	489.90	ug/L	489.90	ppb	13:53:58
1	Ba 233.527†	98387.1	97917.5	496.83	ug/L	496.83	ppb	13:53:58
1	Be 313.107†	1590293.1	1590410.5	495.67	ug/L	495.67	ppb	13:53:58
1	Cd 226.502†	66680.2	66656.0	498.28	ug/L	498.28	ppb	13:53:58
1	Co 228.616†	38914.5	38828.7	483.86	ug/L	483.86	ppb	13:54:18
1	Cr 267.716†	58123.4	57888.9	493.74	ug/L	493.74	ppb	13:53:58
1	Cu 324.752†	211262.3	200114.7	494.02	ug/L	494.02	ppb	13:53:58
1	Mn 257.610†	631066.9	627383.2	496.35	ug/L	496.35	ppb	13:53:58
1	Mo 202.031†	12608.8	12520.0	501.47	ug/L	501.47	ppb	13:54:18
1	Ni 231.604†	30720.7	30433.4	487.47	ug/L	487.47	ppb	13:54:18
1	P 214.914†	7349.3	6979.1	2391.7	ug/L	2391.7	ppb	13:54:18
1	Pb 220.353†	6619.8	6619.0	497.53	ug/L	497.53	ppb	13:54:18
1	S 181.975 Axial†	1249.9	1176.4	994.81	ug/L	994.81	ppb	13:54:18
1	Sb 206.836†	2566.6	2509.6	499.57	ug/L	499.57	ppb	13:54:18
1	Se 196.026†	1498.0	1512.8	511.00	ug/L	511.00	ppb	13:54:18
1	Si 251.611†	122865.0	121748.7	2500.3	ug/L	2500.3	ppb	13:53:58
1	Sn 189.927†	4783.6	4756.4	495.16	ug/L	495.16	ppb	13:54:18
1	Ti 334.940†	381207.0	380590.6	498.15	ug/L	498.15	ppb	13:53:58
1	Tl 190.801†	2869.1	2917.5	494.08	ug/L	494.08	ppb	13:54:18
1	U 409.014†	15602.1	19366.2	478.96	ug/L	478.96	ppb	13:53:58
1	V 292.402†	85431.5	86697.6	497.70	ug/L	497.70	ppb	13:53:58
1	Zn 213.857†	90487.4	88955.4	492.21	ug/L	492.21	ppb	13:53:58
1	SiO2†	122908.9	121750.2	5353.7	ug/L	5353.7	ppb	13:55:18
2	Sc Radial	5478.6	5478.6	98.5	%			13:53:04
2	Y RADIAL	4737.8	4737.8	98.38	%			13:53:04
2	Al 396.153Radial†	5218.1	5392.4	4886.9	ug/L	4886.9	ppb	13:53:04
2	Ca 317.933Radial†	1985.5	1999.9	4981.3	ug/L	4981.3	ppb	13:53:24
2	Fe 238.204 Radial†	138.0	139.8	4919.3	ug/L	4919.3	ppb	13:53:24
2	K 766.490 Radial†	13047.9	11780.2	5105.5	ug/L	5105.5	ppb	13:53:04
2	Mg 279.077 IEC†	63.8	64.6	5122.0	ug/L	5122.0	ppb	13:53:24
2	Na 589.592 Radial†	3309.4	3531.9	9549.8	ug/L	9549.8	ppb	13:53:04
2	Sr 421.552†	32384.5	32888.7	506.66	ug/L	506.66	ppb	13:53:04
2	Sc 361.383	1063461.6	1063461.6	100.24	%			13:54:25
2	Y 371.029	846126.2	846126.2	99.169	%			13:54:25

2	Ag 328.068†	126811.5	125865.3	501.27 ug/L	501.27 ppb	13:54:25
2	As 188.979†	2058.4	2090.4	493.85 ug/L	493.85 ppb	13:54:45
2	B 249.677†	31323.3	31628.9	491.05 ug/L	491.05 ppb	13:54:25
2	Ba 233.527†	98085.9	97823.8	496.36 ug/L	496.36 ppb	13:54:25
2	Be 313.107†	1587952.8	1591418.1	495.99 ug/L	495.99 ppb	13:54:25
2	Cd 226.502†	66376.1	66492.8	497.06 ug/L	497.06 ppb	13:54:25
2	Co 228.616†	38816.9	38813.2	483.67 ug/L	483.67 ppb	13:54:45
2	Cr 267.716†	58135.0	58022.7	494.88 ug/L	494.88 ppb	13:54:25
2	Cu 324.752†	210177.7	199476.8	492.45 ug/L	492.45 ppb	13:54:25
2	Mn 257.610†	628370.5	626019.6	495.27 ug/L	495.27 ppb	13:54:25
2	Mo 202.031†	12579.9	12517.6	501.38 ug/L	501.38 ppb	13:54:45
2	Ni 231.604†	30677.7	30455.1	487.82 ug/L	487.82 ppb	13:54:45
2	P 214.914†	7338.8	6984.1	2393.7 ug/L	2393.7 ppb	13:54:45
2	Pb 220.353†	6619.2	6632.2	498.52 ug/L	498.52 ppb	13:54:45
2	S 181.975 Axial†	1248.9	1178.1	996.23 ug/L	996.23 ppb	13:54:45
2	Sb 206.836†	2544.9	2493.3	496.34 ug/L	496.34 ppb	13:54:45
2	Se 196.026†	1498.5	1516.5	512.27 ug/L	512.27 ppb	13:54:45
2	Si 251.611†	122326.0	121469.2	2494.5 ug/L	2494.5 ppb	13:54:25
2	Sn 189.927†	4769.0	4752.0	494.70 ug/L	494.70 ppb	13:54:45
2	Ti 334.940†	380132.8	380320.2	497.81 ug/L	497.81 ppb	13:54:25
2	Tl 190.801†	2870.3	2924.7	495.28 ug/L	495.28 ppb	13:54:45
2	U 409.014†	15658.2	19455.0	481.15 ug/L	481.15 ppb	13:54:25
2	V 292.402†	85307.7	86753.6	498.02 ug/L	498.02 ppb	13:54:25
2	Zn 213.857†	90245.0	88903.8	491.92 ug/L	491.92 ppb	13:54:25
2	SiO2†	123285.6	122384.3	5381.7 ug/L	5381.7 ppb	13:55:23
3	Sc Radial	5573.7	5573.7	100 %		13:53:29
3	Y RADIAL	4812.9	4812.9	99.94 %		13:53:29
3	Al 396.153Radial†	5255.8	5339.6	4838.8 ug/L	4838.8 ppb	13:53:29
3	Ca 317.933Radial†	1973.1	1953.0	4864.6 ug/L	4864.6 ppb	13:53:49
3	Fe 238.204 Radial†	139.2	138.6	4878.6 ug/L	4878.6 ppb	13:53:49
3	K 766.490 Radial†	13120.0	11626.0	5038.5 ug/L	5038.5 ppb	13:53:29
3	Mg 279.077 IEC†	64.1	63.8	5056.8 ug/L	5056.8 ppb	13:53:49
3	Na 589.592 Radial†	3353.7	3518.8	9514.4 ug/L	9514.4 ppb	13:53:29
3	Sr 421.552†	32719.5	32661.7	503.16 ug/L	503.16 ppb	13:53:29
3	Sc 361.383	1058179.3	1058179.3	99.745 %		13:54:53
3	Y 371.029	842497.6	842497.6	98.744 %		13:54:53
3	Ag 328.068†	126330.4	126014.5	501.86 ug/L	501.86 ppb	13:54:53
3	As 188.979†	2057.5	2099.7	496.03 ug/L	496.03 ppb	13:55:13
3	B 249.677†	31210.0	31671.2	491.71 ug/L	491.71 ppb	13:54:53
3	Ba 233.527†	97758.5	97984.0	497.17 ug/L	497.17 ppb	13:54:53
3	Be 313.107†	1583127.1	1594487.7	496.94 ug/L	496.94 ppb	13:54:53
3	Cd 226.502†	66127.5	66574.1	497.67 ug/L	497.67 ppb	13:54:53
3	Co 228.616†	38831.5	39021.1	486.27 ug/L	486.27 ppb	13:55:13
3	Cr 267.716†	57986.8	58163.5	496.08 ug/L	496.08 ppb	13:54:53
3	Cu 324.752†	209484.3	199828.2	493.31 ug/L	493.31 ppb	13:54:53
3	Mn 257.610†	626333.1	627106.1	496.12 ug/L	496.12 ppb	13:54:53
3	Mo 202.031†	12578.2	12578.6	503.82 ug/L	503.82 ppb	13:55:13
3	Ni 231.604†	30631.5	30561.5	489.52 ug/L	489.52 ppb	13:55:13
3	P 214.914†	7330.3	7012.1	2403.5 ug/L	2403.5 ppb	13:55:13
3	Pb 220.353†	6608.7	6654.6	500.21 ug/L	500.21 ppb	13:55:13
3	S 181.975 Axial†	1242.9	1178.2	996.34 ug/L	996.34 ppb	13:55:13
3	Sb 206.836†	2548.0	2509.1	499.55 ug/L	499.55 ppb	13:55:13
3	Se 196.026†	1496.7	1522.2	513.99 ug/L	513.99 ppb	13:55:13
3	Si 251.611†	122075.1	121826.8	2501.8 ug/L	2501.8 ppb	13:54:53
3	Sn 189.927†	4792.6	4799.3	499.62 ug/L	499.62 ppb	13:55:13
3	Ti 334.940†	378543.4	380619.7	498.19 ug/L	498.19 ppb	13:54:53
3	Tl 190.801†	2875.5	2944.2	498.57 ug/L	498.57 ppb	13:55:13
3	U 409.014†	15463.5	19337.7	478.25 ug/L	478.25 ppb	13:54:53
3	V 292.402†	84999.2	86869.1	498.70 ug/L	498.70 ppb	13:54:53
3	Zn 213.857†	89816.3	88923.4	492.02 ug/L	492.02 ppb	13:54:53
3	SiO2†	121842.0	121550.9	5344.7 ug/L	5344.7 ppb	13:55:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1062449.2	100.15	%	0.364				0.36%
Sc Radial	5528.3	99.3	%	0.86				0.86%
Y 371.029	845147.9	99.055	%	0.2721				0.27%
Y RADIAL	4782.6	99.31	%	0.822				0.83%
Ag 328.068†	125875.8	501.31	ug/L	0.529	501.31	ppb	0.529	0.11%

```
   QC value within limits for Ag 328.068  Recovery = 100.26%
Al 396.153Radial†       5361.3      4858.5 ug/L         25.19      4858.5 ppb          25.19   0.52%
   QC value within limits for Al 396.153Radial  Recovery = 97.17%
As 188.979†             2093.0      494.47 ug/L         1.360      494.47 ppb          1.360   0.27%
   QC value within limits for As 188.979  Recovery = 98.89%
B 249.677†             31618.2      490.89 ug/L         0.920      490.89 ppb          0.920   0.19%
   QC value within limits for B 249.677  Recovery = 98.18%
Ba 233.527†            97908.4      496.78 ug/L         0.408      496.78 ppb          0.408   0.08%
   QC value within limits for Ba 233.527  Recovery = 99.36%
Be 313.107†          1592105.4      496.20 ug/L         0.661      496.20 ppb          0.661   0.13%
   QC value within limits for Be 313.107  Recovery = 99.24%
Ca 317.933Radial†       1968.5      4903.3 ug/L         67.61      4903.3 ppb          67.61   1.38%
   QC value within limits for Ca 317.933Radial  Recovery = 98.07%
Cd 226.502†            66574.3      497.67 ug/L         0.612      497.67 ppb          0.612   0.12%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            38887.7      484.60 ug/L         1.446      484.60 ppb          1.446   0.30%
   QC value within limits for Co 228.616  Recovery = 96.92%
Cr 267.716†            58025.0      494.90 ug/L         1.170      494.90 ppb          1.170   0.24%
   QC value within limits for Cr 267.716  Recovery = 98.98%
Cu 324.752†           199806.6      493.26 ug/L         0.788      493.26 ppb          0.788   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.65%
Fe 238.204 Radial†       139.2      4897.4 ug/L         20.54      4897.4 ppb          20.54   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.95%
K 766.490 Radial†      11701.7      5071.4 ug/L         33.47      5071.4 ppb          33.47   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 101.43%
Mg 279.077 IEC†           63.7      5052.4 ug/L         71.88      5052.4 ppb          71.88   1.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.05%
Mn 257.610†           626836.3      495.91 ug/L         0.569      495.91 ppb          0.569   0.11%
   QC value within limits for Mn 257.610  Recovery = 99.18%
Mo 202.031†            12538.7      502.23 ug/L         1.381      502.23 ppb          1.381   0.27%
   QC value within limits for Mo 202.031  Recovery = 100.45%
Na 589.592 Radial†      3535.3      9559.0 ug/L         49.77      9559.0 ppb          49.77   0.52%
   QC value within limits for Na 589.592 Radial  Recovery = 95.59%
Ni 231.604†            30483.3      488.27 ug/L         1.098      488.27 ppb          1.098   0.22%
   QC value within limits for Ni 231.604  Recovery = 97.65%
P 214.914†              6991.7      2396.3 ug/L          6.34      2396.3 ppb           6.34   0.26%
   QC value within limits for P 214.914  Recovery = 95.85%
Pb 220.353†             6635.3      498.75 ug/L         1.354      498.75 ppb          1.354   0.27%
   QC value within limits for Pb 220.353  Recovery = 99.75%
S 181.975 Axial†        1177.6      995.80 ug/L         0.853      995.80 ppb          0.853   0.09%
   QC value within limits for S 181.975 Axial  Recovery = 99.58%
Sb 206.836†             2504.0      498.48 ug/L         1.857      498.48 ppb          1.857   0.37%
   QC value within limits for Sb 206.836  Recovery = 99.70%
Se 196.026†             1517.2      512.42 ug/L         1.501      512.42 ppb          1.501   0.29%
   QC value within limits for Se 196.026  Recovery = 102.48%
Si 251.611†           121681.6      2498.9 ug/L          3.87      2498.9 ppb           3.87   0.15%
   QC value within limits for Si 251.611  Recovery = 99.96%
Sn 189.927†             4769.3      496.49 ug/L         2.717      496.49 ppb          2.717   0.55%
   QC value within limits for Sn 189.927  Recovery = 99.30%
Sr 421.552†            32788.7      505.12 ug/L         1.785      505.12 ppb          1.785   0.35%
   QC value within limits for Sr 421.552  Recovery = 101.02%
Ti 334.940†           380510.2      498.05 ug/L         0.212      498.05 ppb          0.212   0.04%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2928.8      495.98 ug/L         2.322      495.98 ppb          2.322   0.47%
   QC value within limits for Tl 190.801  Recovery = 99.20%
U 409.014†             19386.3      479.45 ug/L         1.515      479.45 ppb          1.515   0.32%
   QC value within limits for U 409.014  Recovery = 95.89%
V 292.402†             86773.4      498.14 ug/L         0.513      498.14 ppb          0.513   0.10%
   QC value within limits for V 292.402  Recovery = 99.63%
Zn 213.857†            88927.5      492.05 ug/L         0.150      492.05 ppb          0.150   0.03%
   QC value within limits for Zn 213.857  Recovery = 98.41%
SiO2†                 121895.1      5360.0 ug/L         19.26      5360.0 ppb          19.26   0.36%
   QC value within limits for SiO2  Recovery = 100.23%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:57:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5512.4	5512.4	99.1	%			13:59:32
1	Y RADIAL	4836.2	4836.2	100.4	%			13:59:32
1	Al 396.153Radial†	-55.4	36.2	32.965	ug/L	32.965	ppb	13:59:32
1	Ca 317.933Radial†	28.9	12.2	30.392	ug/L	30.392	ppb	13:59:52
1	Fe 238.204 Radial†	1.4	1.1	39.203	ug/L	39.203	ppb	13:59:52
1	K 766.490 Radial†	1556.0	97.7	42.443	ug/L	42.443	ppb	13:59:32
1	Mg 279.077 IEC†	-0.5	-0.7	-54.448	ug/L	-54.448	ppb	13:59:52
1	Na 589.592 Radial†	-170.4	-1.6	-4.3331	ug/L	-4.3331	ppb	13:59:52
1	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431	ppb	13:59:52
1	Sc 361.383	1045095.6	1045095.6	98.512	%			14:00:48
1	Y 371.029	840297.9	840297.9	98.486	%			14:00:48
1	Ag 328.068†	669.1	40.6	0.1714	ug/L	0.1714	ppb	14:00:53
1	As 188.979†	-47.0	-10.8	-2.5308	ug/L	-2.5308	ppb	14:01:14
1	B 249.677†	41.0	423.1	6.5884	ug/L	6.5884	ppb	14:00:53
1	Ba 233.527†	26.8	2.9	0.0152	ug/L	0.0152	ppb	14:01:14
1	Be 313.107†	-7456.8	-253.3	-0.0788	ug/L	-0.0788	ppb	14:00:53
1	Cd 226.502†	-287.1	-13.8	-0.1077	ug/L	-0.1077	ppb	14:01:14
1	Co 228.616†	-82.7	6.5	0.0810	ug/L	0.0810	ppb	14:01:14
1	Cr 267.716†	-22.8	5.4	0.0463	ug/L	0.0463	ppb	14:01:14
1	Cu 324.752†	10117.6	79.2	0.1976	ug/L	0.1976	ppb	14:00:53
1	Mn 257.610†	832.3	17.8	0.0203	ug/L	0.0203	ppb	14:01:14
1	Mo 202.031†	36.8	5.6	0.2251	ug/L	0.2251	ppb	14:01:14
1	Ni 231.604†	175.4	29.8	0.4780	ug/L	0.4780	ppb	14:01:14
1	P 214.914†	347.7	16.0	5.6120	ug/L	5.6120	ppb	14:01:14
1	Pb 220.353†	-10.0	18.9	1.4202	ug/L	1.4202	ppb	14:01:14
1	S 181.975 Axial†	68.0	1.2	0.9994	ug/L	0.9994	ppb	14:01:14
1	Sb 206.836†	66.3	21.9	4.3017	ug/L	4.3017	ppb	14:01:14
1	Se 196.026†	-16.7	4.6	1.6497	ug/L	1.6497	ppb	14:01:14
1	Si 251.611†	727.7	178.6	3.6667	ug/L	3.6667	ppb	14:01:14
1	Sn 189.927†	7.0	1.6	0.1723	ug/L	0.1723	ppb	14:01:14
1	Ti 334.940†	-1108.8	-16.3	-0.0199	ug/L	-0.0199	ppb	14:00:53
1	Tl 190.801†	-63.4	-2.9	-0.4929	ug/L	-0.4929	ppb	14:01:14
1	U 409.014†	-3726.3	52.2	1.2899	ug/L	1.2899	ppb	14:00:48
1	V 292.402†	-1652.5	-24.6	-0.1406	ug/L	-0.1406	ppb	14:00:53
1	Zn 213.857†	1130.3	25.0	0.1340	ug/L	0.1340	ppb	14:01:14
1	SiO2†	726.7	135.3	5.9362	ug/L	5.9362	ppb	14:02:19
2	Sc Radial	5511.5	5511.5	99.0	%			13:59:57
2	Y RADIAL	4786.2	4786.2	99.39	%			13:59:57
2	Al 396.153Radial†	-72.0	19.5	17.796	ug/L	17.796	ppb	13:59:57
2	Ca 317.933Radial†	29.7	13.1	32.554	ug/L	32.554	ppb	14:00:17
2	Fe 238.204 Radial†	-0.3	-0.7	-23.581	ug/L	-23.581	ppb	14:00:17
2	K 766.490 Radial†	1595.9	138.3	59.989	ug/L	59.989	ppb	13:59:57
2	Mg 279.077 IEC†	-0.0	-0.2	-16.582	ug/L	-16.582	ppb	14:00:17
2	Na 589.592 Radial†	-181.5	-12.8	-34.604	ug/L	-34.604	ppb	14:00:17
2	Sr 421.552†	12.3	7.0	0.1070	ug/L	0.1070	ppb	14:00:17
2	Sc 361.383	1050518.5	1050518.5	99.023	%			14:01:19
2	Y 371.029	845673.2	845673.2	99.116	%			14:01:19
2	Ag 328.068†	645.1	12.9	0.0438	ug/L	0.0438	ppb	14:01:24
2	As 188.979†	-49.5	-13.1	-3.0770	ug/L	-3.0770	ppb	14:01:44
2	B 249.677†	118.8	501.5	7.8188	ug/L	7.8188	ppb	14:01:24
2	Ba 233.527†	40.4	16.5	0.0832	ug/L	0.0832	ppb	14:01:44
2	Be 313.107†	-7364.0	-120.4	-0.0373	ug/L	-0.0373	ppb	14:01:24
2	Cd 226.502†	-300.7	-26.0	-0.1917	ug/L	-0.1917	ppb	14:01:44
2	Co 228.616†	-75.1	14.6	0.1807	ug/L	0.1807	ppb	14:01:44
2	Cr 267.716†	-8.5	20.0	0.1703	ug/L	0.1703	ppb	14:01:44
2	Cu 324.752†	10243.6	153.4	0.3772	ug/L	0.3772	ppb	14:01:24
2	Mn 257.610†	843.7	25.0	0.0170	ug/L	0.0170	ppb	14:01:44
2	Mo 202.031†	21.8	-9.8	-0.3926	ug/L	-0.3926	ppb	14:01:44
2	Ni 231.604†	171.6	25.1	0.4014	ug/L	0.4014	ppb	14:01:44

2	P 214.914†	348.3	14.8	5.2050	ug/L	5.2050 ppb	14:01:44
2	Pb 220.353†	-12.7	16.3	1.2244	ug/L	1.2244 ppb	14:01:44
2	S 181.975 Axial†	60.3	-6.9	-5.8538	ug/L	-5.8538 ppb	14:01:44
2	Sb 206.836†	37.3	-7.8	-1.5329	ug/L	-1.5329 ppb	14:01:44
2	Se 196.026†	-18.7	2.7	0.8056	ug/L	0.8056 ppb	14:01:44
2	Si 251.611†	723.3	170.4	3.5003	ug/L	3.5003 ppb	14:01:44
2	Sn 189.927†	11.3	6.0	0.6230	ug/L	0.6230 ppb	14:01:44
2	Ti 334.940†	-1056.9	41.9	0.0571	ug/L	0.0571 ppb	14:01:24
2	Tl 190.801†	-56.2	4.7	0.7874	ug/L	0.7874 ppb	14:01:44
2	U 409.014†	-3810.6	-13.5	-0.3320	ug/L	-0.3320 ppb	14:01:19
2	V 292.402†	-1611.2	25.7	0.1429	ug/L	0.1429 ppb	14:01:24
2	Zn 213.857†	1136.7	25.5	0.1424	ug/L	0.1424 ppb	14:01:44
2	SiO2†	739.3	144.2	6.3394	ug/L	6.3394 ppb	14:02:24
3	Sc Radial	5518.7	5518.7	99.2	%		14:00:22
3	Y RADIAL	4792.7	4792.7	99.52	%		14:00:22
3	Al 396.153Radial†	-86.9	4.6	4.1447	ug/L	4.1447 ppb	14:00:22
3	Ca 317.933Radial†	25.9	9.2	22.974	ug/L	22.974 ppb	14:00:42
3	Fe 238.204 Radial†	-0.1	-0.4	-15.497	ug/L	-15.497 ppb	14:00:42
3	K 766.490 Radial†	1555.4	95.3	41.343	ug/L	41.343 ppb	14:00:22
3	Mg 279.077 IEC†	-0.0	-0.2	-17.227	ug/L	-17.227 ppb	14:00:42
3	Na 589.592 Radial†	-174.6	-5.6	-15.194	ug/L	-15.194 ppb	14:00:42
3	Sr 421.552†	23.6	18.4	0.2827	ug/L	0.2827 ppb	14:00:42
3	Sc 361.383	1057245.8	1057245.8	99.657	%		14:01:49
3	Y 371.029	850037.2	850037.2	99.628	%		14:01:49
3	Ag 328.068†	694.9	58.7	0.2256	ug/L	0.2256 ppb	14:01:54
3	As 188.979†	-47.5	-10.8	-2.5338	ug/L	-2.5338 ppb	14:02:14
3	B 249.677†	68.0	449.8	7.0124	ug/L	7.0124 ppb	14:01:54
3	Ba 233.527†	35.7	11.5	0.0574	ug/L	0.0574 ppb	14:02:14
3	Be 313.107†	-7483.5	-193.0	-0.0600	ug/L	-0.0600 ppb	14:01:54
3	Cd 226.502†	-289.4	-12.7	-0.0931	ug/L	-0.0931 ppb	14:02:14
3	Co 228.616†	-98.9	-8.8	-0.1094	ug/L	-0.1094 ppb	14:02:14
3	Cr 267.716†	5.9	34.5	0.2927	ug/L	0.2927 ppb	14:02:14
3	Cu 324.752†	10251.7	95.7	0.2352	ug/L	0.2352 ppb	14:01:54
3	Mn 257.610†	869.3	45.2	0.0341	ug/L	0.0341 ppb	14:02:14
3	Mo 202.031†	34.7	3.0	0.1197	ug/L	0.1197 ppb	14:02:14
3	Ni 231.604†	157.2	9.4	0.1515	ug/L	0.1515 ppb	14:02:14
3	P 214.914†	335.6	-0.2	-0.0906	ug/L	-0.0906 ppb	14:02:14
3	Pb 220.353†	2.8	31.9	2.3909	ug/L	2.3909 ppb	14:02:14
3	S 181.975 Axial†	65.8	-1.8	-1.5179	ug/L	-1.5179 ppb	14:02:14
3	Sb 206.836†	43.4	-1.9	-0.3829	ug/L	-0.3829 ppb	14:02:14
3	Se 196.026†	-16.8	4.8	1.5002	ug/L	1.5002 ppb	14:02:14
3	Si 251.611†	726.0	168.4	3.4599	ug/L	3.4599 ppb	14:02:14
3	Sn 189.927†	2.6	-2.9	-0.3010	ug/L	-0.3010 ppb	14:02:14
3	Ti 334.940†	-1099.9	5.6	0.0087	ug/L	0.0087 ppb	14:01:54
3	Tl 190.801†	-56.6	4.6	0.7834	ug/L	0.7834 ppb	14:02:14
3	U 409.014†	-3812.4	9.3	0.2316	ug/L	0.2316 ppb	14:01:49
3	V 292.402†	-1702.0	-55.1	-0.3086	ug/L	-0.3086 ppb	14:01:54
3	Zn 213.857†	1134.7	16.2	0.0914	ug/L	0.0914 ppb	14:02:14
3	SiO2†	754.5	154.7	6.8042	ug/L	6.8042 ppb	14:02:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1050953.3	99.064	%	0.5737				0.58%
Sc Radial	5514.2	99.1	%	0.07				0.07%
Y 371.029	845336.1	99.077	%	0.5718				0.58%
Y RADIAL	4805.0	99.78	%	0.565				0.57%
Ag 328.068†	37.4	0.1469	ug/L	0.09332	0.1469	ppb	0.09332	63.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.1	18.302	ug/L	14.4166	18.302	ppb	14.4166	78.77%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.5	-2.7138	ug/L	0.31447	-2.7138	ppb	0.31447	11.59%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	458.1	7.1399	ug/L	0.62502	7.1399	ppb	0.62502	8.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.3	0.0519	ug/L	0.03434	0.0519	ppb	0.03434	66.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-188.9	-0.0587	ug/L	0.02078	-0.0587	ppb	0.02078	35.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.5	28.640	ug/L	5.0242	28.640	ppb	5.0242	17.54%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -17.5     -0.1308 ug/L       0.05322     -0.1308 ppb        0.05322  40.67%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.1      0.0508 ug/L       0.14740      0.0508 ppb        0.14740 290.21%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               20.0      0.1698 ug/L       0.12323      0.1698 ppb        0.12323  72.58%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              109.4      0.2700 ug/L       0.09473      0.2700 ppb        0.09473  35.09%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.0      0.0417 ug/L      34.15450      0.0417 ppb       34.15450 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.4     47.925 ug/L       10.4622     47.925 ppb        10.4622  21.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4    -29.419 ug/L       21.6782    -29.419 ppb        21.6782  73.69%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               29.4      0.0238 ug/L       0.00904      0.0238 ppb        0.00904  38.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.4     -0.0160 ug/L       0.33043     -0.0160 ppb        0.33043 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -6.7    -18.043 ug/L       15.3353    -18.043 ppb        15.3353  84.99%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.4      0.3436 ug/L       0.17075      0.3436 ppb        0.17075  49.69%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                10.2      3.5755 ug/L       3.18145      3.5755 ppb        3.18145  88.98%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               22.3      1.6785 ug/L       0.62466      1.6785 ppb        0.62466  37.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -2.5     -2.1241 ug/L       3.46659     -2.1241 ppb        3.46659 163.20%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.1      0.7953 ug/L       3.09058      0.7953 ppb        3.09058 388.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.1      1.3185 ug/L       0.45042      1.3185 ppb        0.45042  34.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              172.4      3.5423 ug/L       0.10965      3.5423 ppb        0.10965   3.10%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.6      0.1647 ug/L       0.46206      0.1647 ppb        0.46206 280.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               15.9      0.2443 ug/L       0.12268      0.2443 ppb        0.12268  50.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               10.4      0.0153 ug/L       0.03894      0.0153 ppb        0.03894 254.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                2.1      0.3593 ug/L       0.73803      0.3593 ppb        0.73803 205.41%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                16.0      0.3965 ug/L       0.82342      0.3965 ppb        0.82342 207.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -18.0     -0.1021 ug/L       0.22820     -0.1021 ppb        0.22820 223.47%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               22.2      0.1226 ug/L       0.02735      0.1226 ppb        0.02735  22.32%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    144.8      6.3599 ug/L       0.43437      6.3599 ppb        0.43437   6.83%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 14:46:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5663.2	5663.2	102	%			14:48:38
1	Y RADIAL	4921.9	4921.9	102.2	%			14:48:38
1	Al 396.153Radial†	5410.9	5409.1	4902.2	ug/L	4902.2	ppb	14:48:38
1	Ca 317.933Radial†	1995.4	1943.8	4841.7	ug/L	4841.7	ppb	14:48:58
1	Fe 238.204 Radial†	141.6	138.8	4883.9	ug/L	4883.9	ppb	14:48:58
1	K 766.490 Radial†	13474.7	11767.5	5099.6	ug/L	5099.6	ppb	14:48:38
1	Mg 279.077 IEC†	63.7	62.4	4947.6	ug/L	4947.6	ppb	14:48:58
1	Na 589.592 Radial†	3686.9	3793.3	10257	ug/L	10257	ppb	14:48:38
1	Sr 421.552†	35305.4	34686.6	534.36	ug/L	534.36	ppb	14:48:38
1	Sc 361.383	1067499.7	1067499.7	100.62	%			14:49:57
1	Y 371.029	849118.5	849118.5	99.520	%			14:49:57
1	Ag 328.068†	127285.3	125857.7	501.23	ug/L	501.23	ppb	14:49:57
1	As 188.979†	2071.6	2095.7	495.11	ug/L	495.11	ppb	14:50:17
1	B 249.677†	31156.7	31345.1	486.64	ug/L	486.64	ppb	14:49:57
1	Ba 233.527†	98393.7	97759.6	496.03	ug/L	496.03	ppb	14:49:57
1	Be 313.107†	1596893.7	1594311.3	496.89	ug/L	496.89	ppb	14:49:57
1	Cd 226.502†	66558.7	66423.8	496.55	ug/L	496.55	ppb	14:49:57
1	Co 228.616†	38907.9	38757.1	482.97	ug/L	482.97	ppb	14:50:17
1	Cr 267.716†	58242.4	57910.0	493.92	ug/L	493.92	ppb	14:49:57
1	Cu 324.752†	211606.8	200103.9	493.99	ug/L	493.99	ppb	14:49:57
1	Mn 257.610†	631676.1	626933.6	495.99	ug/L	495.99	ppb	14:49:57
1	Mo 202.031†	12587.0	12477.2	499.76	ug/L	499.76	ppb	14:50:17
1	Ni 231.604†	30647.6	30309.4	485.48	ug/L	485.48	ppb	14:50:17
1	P 214.914†	7375.2	6992.6	2396.5	ug/L	2396.5	ppb	14:50:17
1	Pb 220.353†	6646.8	6634.7	498.71	ug/L	498.71	ppb	14:50:17
1	S 181.975 Axial†	1245.2	1169.7	989.10	ug/L	989.10	ppb	14:50:17
1	Sb 206.836†	2573.9	2512.6	500.11	ug/L	500.11	ppb	14:50:17
1	Se 196.026†	1503.7	1516.0	511.99	ug/L	511.99	ppb	14:50:17
1	Si 251.611†	123652.9	122326.3	2512.2	ug/L	2512.2	ppb	14:49:57
1	Sn 189.927†	4790.4	4755.2	495.03	ug/L	495.03	ppb	14:50:17
1	Ti 334.940†	382199.7	380939.8	498.61	ug/L	498.61	ppb	14:49:57
1	Tl 190.801†	2862.4	2906.0	492.14	ug/L	492.14	ppb	14:50:17
1	U 409.014†	15590.1	19328.2	478.01	ug/L	478.01	ppb	14:49:57
1	V 292.402†	85513.5	86636.2	497.33	ug/L	497.33	ppb	14:49:57
1	Zn 213.857†	90612.3	88928.3	492.08	ug/L	492.08	ppb	14:49:57
1	SiO2†	124200.5	122828.2	5401.3	ug/L	5401.3	ppb	14:51:17
2	Sc Radial	5446.9	5446.9	97.9	%			14:49:03
2	Y RADIAL	4712.8	4712.8	97.86	%			14:49:03
2	Al 396.153Radial†	5213.9	5419.0	4910.9	ug/L	4910.9	ppb	14:49:03
2	Ca 317.933Radial†	1989.6	2015.7	5020.8	ug/L	5020.8	ppb	14:49:23
2	Fe 238.204 Radial†	140.2	142.9	5030.3	ug/L	5030.3	ppb	14:49:23
2	K 766.490 Radial†	13037.0	11846.3	5133.9	ug/L	5133.9	ppb	14:49:03
2	Mg 279.077 IEC†	62.1	63.2	5014.8	ug/L	5014.8	ppb	14:49:23
2	Na 589.592 Radial†	3542.3	3789.5	10246	ug/L	10246	ppb	14:49:03
2	Sr 421.552†	33787.9	34514.2	531.70	ug/L	531.70	ppb	14:49:03
2	Sc 361.383	1055183.8	1055183.8	99.463	%			14:50:24
2	Y 371.029	838651.5	838651.5	98.293	%			14:50:24
2	Ag 328.068†	126214.7	126257.7	502.87	ug/L	502.87	ppb	14:50:24
2	As 188.979†	2075.2	2123.3	501.61	ug/L	501.61	ppb	14:50:44
2	B 249.677†	30917.9	31466.4	488.49	ug/L	488.49	ppb	14:50:24
2	Ba 233.527†	97565.5	98068.1	497.60	ug/L	497.60	ppb	14:50:24
2	Be 313.107†	1577953.1	1593791.5	496.73	ug/L	496.73	ppb	14:50:24
2	Cd 226.502†	66051.4	66685.8	498.49	ug/L	498.49	ppb	14:50:24
2	Co 228.616†	39043.3	39344.5	490.30	ug/L	490.30	ppb	14:50:44
2	Cr 267.716†	57589.2	57928.8	494.08	ug/L	494.08	ppb	14:50:24
2	Cu 324.752†	209513.9	200454.2	494.86	ug/L	494.86	ppb	14:50:24
2	Mn 257.610†	625453.1	628004.0	496.86	ug/L	496.86	ppb	14:50:24
2	Mo 202.031†	12625.4	12661.8	507.16	ug/L	507.16	ppb	14:50:44
2	Ni 231.604†	30744.2	30762.0	492.73	ug/L	492.73	ppb	14:50:44

2	P 214.914†	7400.3	7103.3	2435.4 ug/L	2435.4 ppb	14:50:44
2	Pb 220.353†	6622.3	6687.2	502.65 ug/L	502.65 ppb	14:50:44
2	S 181.975 Axial†	1258.3	1197.3	1012.5 ug/L	1012.5 ppb	14:50:44
2	Sb 206.836†	2580.0	2548.5	507.42 ug/L	507.42 ppb	14:50:44
2	Se 196.026†	1502.6	1532.3	517.83 ug/L	517.83 ppb	14:50:44
2	Si 251.611†	122528.7	122630.3	2518.3 ug/L	2518.3 ppb	14:50:24
2	Sn 189.927†	4790.5	4810.9	500.83 ug/L	500.83 ppb	14:50:44
2	Ti 334.940†	378341.9	381494.5	499.35 ug/L	499.35 ppb	14:50:24
2	Tl 190.801†	2870.9	2947.8	499.17 ug/L	499.17 ppb	14:50:44
2	U 409.014†	15257.4	19174.6	474.18 ug/L	474.18 ppb	14:50:24
2	V 292.402†	84668.4	86778.5	498.20 ug/L	498.20 ppb	14:50:24
2	Zn 213.857†	89929.9	89293.2	494.05 ug/L	494.05 ppb	14:50:24
2	SiO2†	124500.2	124570.2	5478.0 ug/L	5478.0 ppb	14:51:22
3	Sc Radial	5449.0	5449.0	97.9 %		14:49:28
3	Y RADIAL	4751.1	4751.1	98.66 %		14:49:28
3	Al 396.153Radial†	5174.8	5377.0	4872.7 ug/L	4872.7 ppb	14:49:28
3	Ca 317.933Radial†	2014.0	2039.9	5081.0 ug/L	5081.0 ppb	14:49:48
3	Fe 238.204 Radial†	143.3	146.0	5137.0 ug/L	5137.0 ppb	14:49:48
3	K 766.490 Radial†	13008.8	11812.4	5119.3 ug/L	5119.3 ppb	14:49:28
3	Mg 279.077 IEC†	65.2	66.4	5266.1 ug/L	5266.1 ppb	14:49:48
3	Na 589.592 Radial†	3500.5	3745.4	10127 ug/L	10127 ppb	14:49:28
3	Sr 421.552†	33740.1	34452.0	530.74 ug/L	530.74 ppb	14:49:28
3	Sc 361.383	1058649.0	1058649.0	99.789 %		14:50:52
3	Y 371.029	841526.8	841526.8	98.630 %		14:50:52
3	Ag 328.068†	126556.5	126184.9	502.61 ug/L	502.61 ppb	14:50:52
3	As 188.979†	2067.1	2108.3	498.11 ug/L	498.11 ppb	14:51:12
3	B 249.677†	31071.1	31518.1	489.29 ug/L	489.29 ppb	14:50:52
3	Ba 233.527†	97563.9	97745.5	495.96 ug/L	495.96 ppb	14:50:52
3	Be 313.107†	1581052.4	1591704.4	496.08 ug/L	496.08 ppb	14:50:52
3	Cd 226.502†	66155.8	66573.0	497.64 ug/L	497.64 ppb	14:50:52
3	Co 228.616†	38962.9	39135.5	487.69 ug/L	487.69 ppb	14:51:12
3	Cr 267.716†	57794.8	57945.3	494.22 ug/L	494.22 ppb	14:50:52
3	Cu 324.752†	210072.8	200324.8	494.55 ug/L	494.55 ppb	14:50:52
3	Mn 257.610†	626128.3	626622.3	495.77 ug/L	495.77 ppb	14:50:52
3	Mo 202.031†	12621.3	12616.2	505.34 ug/L	505.34 ppb	14:51:12
3	Ni 231.604†	30683.7	30600.2	490.14 ug/L	490.14 ppb	14:51:12
3	P 214.914†	7387.7	7066.4	2422.3 ug/L	2422.3 ppb	14:51:12
3	Pb 220.353†	6644.7	6687.8	502.68 ug/L	502.68 ppb	14:51:12
3	S 181.975 Axial†	1254.7	1189.5	1005.9 ug/L	1005.9 ppb	14:51:12
3	Sb 206.836†	2576.1	2536.1	504.89 ug/L	504.89 ppb	14:51:12
3	Se 196.026†	1509.7	1534.5	518.90 ug/L	518.90 ppb	14:51:12
3	Si 251.611†	122635.6	122334.2	2512.3 ug/L	2512.3 ppb	14:50:52
3	Sn 189.927†	4780.2	4784.8	498.13 ug/L	498.13 ppb	14:51:12
3	Ti 334.940†	379019.7	380928.6	498.61 ug/L	498.61 ppb	14:50:52
3	Tl 190.801†	2889.3	2956.8	500.68 ug/L	500.68 ppb	14:51:12
3	U 409.014†	15553.0	19420.5	480.27 ug/L	480.27 ppb	14:50:52
3	V 292.402†	84924.5	86756.4	498.05 ug/L	498.05 ppb	14:50:52
3	Zn 213.857†	89838.3	88905.4	491.88 ug/L	491.88 ppb	14:50:52
3	SiO2†	123331.7	122989.5	5408.2 ug/L	5408.2 ppb	14:51:27

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060444.2	99.959	%	0.5987				0.60%
Sc Radial	5519.7	99.2	%	2.23				2.25%
Y 371.029	843098.9	98.814	%	0.6338				0.64%
Y RADIAL	4795.3	99.58	%	2.312				2.32%
Ag 328.068†	126100.1	502.23	ug/L	0.878	502.23	ppb	0.878	0.17%
QC value within limits for Ag 328.068 Recovery = 100.45%								
Al 396.153Radial†	5401.7	4895.3	ug/L	19.99	4895.3	ppb	19.99	0.41%
QC value within limits for Al 396.153Radial Recovery = 97.91%								
As 188.979†	2109.1	498.28	ug/L	3.254	498.28	ppb	3.254	0.65%
QC value within limits for As 188.979 Recovery = 99.66%								
B 249.677†	31443.2	488.14	ug/L	1.360	488.14	ppb	1.360	0.28%
QC value within limits for B 249.677 Recovery = 97.63%								
Ba 233.527†	97857.7	496.53	ug/L	0.924	496.53	ppb	0.924	0.19%
QC value within limits for Ba 233.527 Recovery = 99.31%								
Be 313.107†	1593269.0	496.56	ug/L	0.429	496.56	ppb	0.429	0.09%
QC value within limits for Be 313.107 Recovery = 99.31%								
Ca 317.933Radial†	1999.8	4981.2	ug/L	124.51	4981.2	ppb	124.51	2.50%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.62%
Cd 226.502†            66560.8      497.56 ug/L         0.976      497.56 ppb          0.976   0.20%
   QC value within limits for Cd 226.502  Recovery = 99.51%
Co 228.616†            39079.1      486.99 ug/L         3.717      486.99 ppb          3.717   0.76%
   QC value within limits for Co 228.616  Recovery = 97.40%
Cr 267.716†            57928.0      494.08 ug/L         0.153      494.08 ppb          0.153   0.03%
   QC value within limits for Cr 267.716  Recovery = 98.82%
Cu 324.752†           200294.3      494.47 ug/L         0.442      494.47 ppb          0.442   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.89%
Fe 238.204 Radial†       142.6      5017.1 ug/L        127.10      5017.1 ppb         127.10   2.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.34%
K 766.490 Radial†      11808.7      5117.6 ug/L         17.20      5117.6 ppb          17.20   0.34%
   QC value within limits for K 766.490 Radial  Recovery = 102.35%
Mg 279.077 IEC†           64.0      5076.2 ug/L        167.87      5076.2 ppb         167.87   3.31%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.52%
Mn 257.610†           627186.6      496.21 ug/L         0.573      496.21 ppb          0.573   0.12%
   QC value within limits for Mn 257.610  Recovery = 99.24%
Mo 202.031†            12585.1      504.09 ug/L         3.856      504.09 ppb          3.856   0.76%
   QC value within limits for Mo 202.031  Recovery = 100.82%
Na 589.592 Radial†      3776.0       10210 ug/L          71.9       10210 ppb           71.9   0.70%
   QC value within limits for Na 589.592 Radial  Recovery = 102.10%
Ni 231.604†            30557.2      489.45 ug/L         3.673      489.45 ppb          3.673   0.75%
   QC value within limits for Ni 231.604  Recovery = 97.89%
P 214.914†              7054.1      2418.1 ug/L         19.82      2418.1 ppb          19.82   0.82%
   QC value within limits for P 214.914  Recovery = 96.72%
Pb 220.353†             6669.9      501.35 ug/L         2.283      501.35 ppb          2.283   0.46%
   QC value within limits for Pb 220.353  Recovery = 100.27%
S 181.975 Axial†        1185.5      1002.5 ug/L         12.05      1002.5 ppb          12.05   1.20%
   QC value within limits for S 181.975 Axial  Recovery = 100.25%
Sb 206.836†             2532.4      504.14 ug/L         3.715      504.14 ppb          3.715   0.74%
   QC value within limits for Sb 206.836  Recovery = 100.83%
Se 196.026†             1527.6      516.24 ug/L         3.717      516.24 ppb          3.717   0.72%
   QC value within limits for Se 196.026  Recovery = 103.25%
Si 251.611†           122430.3      2514.3 ug/L          3.52      2514.3 ppb           3.52   0.14%
   QC value within limits for Si 251.611  Recovery = 100.57%
Sn 189.927†             4783.6      498.00 ug/L         2.905      498.00 ppb          2.905   0.58%
   QC value within limits for Sn 189.927  Recovery = 99.60%
Sr 421.552†            34550.9      532.27 ug/L         1.873      532.27 ppb          1.873   0.35%
   QC value within limits for Sr 421.552  Recovery = 106.45%
Ti 334.940†           381121.0      498.86 ug/L         0.427      498.86 ppb          0.427   0.09%
   QC value within limits for Ti 334.940  Recovery = 99.77%
Tl 190.801†             2936.9      497.33 ug/L         4.557      497.33 ppb          4.557   0.92%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19307.8      477.49 ug/L         3.078      477.49 ppb          3.078   0.64%
   QC value within limits for U 409.014  Recovery = 95.50%
V 292.402†             86723.7      497.86 ug/L         0.468      497.86 ppb          0.468   0.09%
   QC value within limits for V 292.402  Recovery = 99.57%
Zn 213.857†            89042.3      492.67 ug/L         1.200      492.67 ppb          1.200   0.24%
   QC value within limits for Zn 213.857  Recovery = 98.53%
SiO2†                 123462.7      5429.2 ug/L         42.40      5429.2 ppb          42.40   0.78%
   QC value within limits for SiO2  Recovery = 101.53%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 14:53:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5472.3	5472.3	98.3	%			14:55:30
1	Y RADIAL	4760.3	4760.3	98.85	%			14:55:30
1	Al 396.153Radial†	-81.1	9.7	8.8083	ug/L	8.8083	ppb	14:55:30
1	Ca 317.933Radial†	30.8	14.4	35.761	ug/L	35.761	ppb	14:55:50
1	Fe 238.204 Radial†	0.5	0.2	5.6899	ug/L	5.6899	ppb	14:55:50
1	K 766.490 Radial†	1569.9	123.4	53.550	ug/L	53.550	ppb	14:55:30
1	Mg 279.077 IEC†	-0.7	-0.9	-68.768	ug/L	-68.768	ppb	14:55:50
1	Na 589.592 Radial†	-177.5	-10.1	-27.266	ug/L	-27.266	ppb	14:55:50
1	Sr 421.552†	35.3	30.4	0.4686	ug/L	0.4686	ppb	14:55:50
1	Sc 361.383	1053868.2	1053868.2	99.339	%			14:56:47
1	Y 371.029	847547.6	847547.6	99.336	%			14:56:47
1	Ag 328.068†	611.0	-23.5	-0.0912	ug/L	-0.0912	ppb	14:56:52
1	As 188.979†	-59.7	-23.1	-5.4331	ug/L	-5.4331	ppb	14:57:12
1	B 249.677†	-115.7	265.0	4.1295	ug/L	4.1295	ppb	14:56:52
1	Ba 233.527†	39.3	15.3	0.0772	ug/L	0.0772	ppb	14:57:12
1	Be 313.107†	-7467.3	-200.8	-0.0623	ug/L	-0.0623	ppb	14:56:52
1	Cd 226.502†	-282.8	-7.0	-0.0528	ug/L	-0.0528	ppb	14:57:12
1	Co 228.616†	-98.5	-8.7	-0.1082	ug/L	-0.1082	ppb	14:57:12
1	Cr 267.716†	-17.9	10.6	0.0901	ug/L	0.0901	ppb	14:57:12
1	Cu 324.752†	10191.0	67.6	0.1671	ug/L	0.1671	ppb	14:56:52
1	Mn 257.610†	957.5	136.8	0.1102	ug/L	0.1102	ppb	14:57:12
1	Mo 202.031†	35.6	4.1	0.1634	ug/L	0.1634	ppb	14:57:12
1	Ni 231.604†	164.1	16.9	0.2714	ug/L	0.2714	ppb	14:57:12
1	P 214.914†	332.8	-1.9	-0.6902	ug/L	-0.6902	ppb	14:57:12
1	Pb 220.353†	-0.7	28.4	2.1276	ug/L	2.1276	ppb	14:57:12
1	S 181.975 Axial†	64.3	-3.1	-2.6380	ug/L	-2.6380	ppb	14:57:12
1	Sb 206.836†	50.1	5.0	0.9831	ug/L	0.9831	ppb	14:57:12
1	Se 196.026†	-20.4	1.0	0.3567	ug/L	0.3567	ppb	14:57:12
1	Si 251.611†	771.9	216.9	4.4555	ug/L	4.4555	ppb	14:57:12
1	Sn 189.927†	3.4	-2.0	-0.2090	ug/L	-0.2090	ppb	14:57:12
1	Ti 334.940†	-1048.8	53.5	0.0729	ug/L	0.0729	ppb	14:56:52
1	Tl 190.801†	-48.9	12.2	2.0617	ug/L	2.0617	ppb	14:57:12
1	U 409.014†	-3860.6	-51.6	-1.2803	ug/L	-1.2803	ppb	14:56:47
1	V 292.402†	-1672.4	-30.8	-0.1770	ug/L	-0.1770	ppb	14:56:52
1	Zn 213.857†	1170.2	55.5	0.3100	ug/L	0.3100	ppb	14:57:12
1	SiO2†	796.6	199.5	8.7725	ug/L	8.7725	ppb	14:58:18
2	Sc Radial	5640.5	5640.5	101	%			14:55:55
2	Y RADIAL	4909.7	4909.7	102.0	%			14:55:55
2	Al 396.153Radial†	-62.3	30.8	28.013	ug/L	28.013	ppb	14:55:55
2	Ca 317.933Radial†	30.3	12.9	32.245	ug/L	32.245	ppb	14:56:15
2	Fe 238.204 Radial†	-0.5	-0.8	-29.760	ug/L	-29.760	ppb	14:56:15
2	K 766.490 Radial†	1516.6	23.1	10.017	ug/L	10.017	ppb	14:55:55
2	Mg 279.077 IEC†	0.3	0.1	8.2285	ug/L	8.2285	ppb	14:56:15
2	Na 589.592 Radial†	-177.1	-4.3	-11.518	ug/L	-11.518	ppb	14:56:15
2	Sr 421.552†	6.1	0.6	0.0086	ug/L	0.0086	ppb	14:56:15
2	Sc 361.383	1063342.1	1063342.1	100.23	%			14:57:17
2	Y 371.029	854778.4	854778.4	100.18	%			14:57:17
2	Ag 328.068†	643.4	3.4	0.0032	ug/L	0.0032	ppb	14:57:22
2	As 188.979†	-51.2	-14.2	-3.3303	ug/L	-3.3303	ppb	14:57:42
2	B 249.677†	-29.0	352.6	5.4981	ug/L	5.4981	ppb	14:57:22
2	Ba 233.527†	26.1	1.8	0.0085	ug/L	0.0085	ppb	14:57:42
2	Be 313.107†	-7456.4	-123.0	-0.0382	ug/L	-0.0382	ppb	14:57:22
2	Cd 226.502†	-288.4	-10.1	-0.0717	ug/L	-0.0717	ppb	14:57:42
2	Co 228.616†	-70.3	20.3	0.2517	ug/L	0.2517	ppb	14:57:42
2	Cr 267.716†	-12.6	16.0	0.1359	ug/L	0.1359	ppb	14:57:42
2	Cu 324.752†	10255.5	40.5	0.0983	ug/L	0.0983	ppb	14:57:22
2	Mn 257.610†	981.3	152.0	0.1161	ug/L	0.1161	ppb	14:57:42
2	Mo 202.031†	22.2	-9.6	-0.3874	ug/L	-0.3874	ppb	14:57:42
2	Ni 231.604†	156.9	8.2	0.1321	ug/L	0.1321	ppb	14:57:42

2	P 214.914†	349.2	11.4	4.0629	ug/L	4.0629 ppb	14:57:42
2	Pb 220.353†	-26.9	2.3	0.1761	ug/L	0.1761 ppb	14:57:42
2	S 181.975 Axial†	69.4	1.4	1.1802	ug/L	1.1802 ppb	14:57:42
2	Sb 206.836†	51.9	6.4	1.2457	ug/L	1.2457 ppb	14:57:42
2	Se 196.026†	-27.8	-6.2	-2.1074	ug/L	-2.1074 ppb	14:57:42
2	Si 251.611†	798.7	236.8	4.8879	ug/L	4.8879 ppb	14:57:42
2	Sn 189.927†	9.7	4.2	0.4366	ug/L	0.4366 ppb	14:57:42
2	Ti 334.940†	-1103.0	8.8	0.0133	ug/L	0.0133 ppb	14:57:22
2	Tl 190.801†	-47.5	14.0	2.3645	ug/L	2.3645 ppb	14:57:42
2	U 409.014†	-3819.8	23.8	0.5932	ug/L	0.5932 ppb	14:57:17
2	V 292.402†	-1637.6	19.0	0.1084	ug/L	0.1084 ppb	14:57:22
2	Zn 213.857†	1144.2	19.2	0.1089	ug/L	0.1089 ppb	14:57:42
2	SiO2†	764.0	159.9	7.0706	ug/L	7.0706 ppb	14:58:23
3	Sc Radial	5502.0	5502.0	98.9	%		14:56:20
3	Y RADIAL	4784.6	4784.6	99.35	%		14:56:20
3	Al 396.153Radial†	-79.0	12.3	11.188	ug/L	11.188 ppb	14:56:20
3	Ca 317.933Radial†	25.1	8.5	21.069	ug/L	21.069 ppb	14:56:40
3	Fe 238.204 Radial†	1.2	0.9	30.106	ug/L	30.106 ppb	14:56:40
3	K 766.490 Radial†	1574.7	119.6	51.922	ug/L	51.922 ppb	14:56:20
3	Mg 279.077 IEC†	2.6	2.5	197.62	ug/L	197.62 ppb	14:56:40
3	Na 589.592 Radial†	-180.3	-11.9	-32.235	ug/L	-32.235 ppb	14:56:40
3	Sr 421.552†	15.5	10.2	0.1562	ug/L	0.1562 ppb	14:56:40
3	Sc 361.383	1051449.5	1051449.5	99.111	%		14:57:47
3	Y 371.029	846638.2	846638.2	99.229	%		14:57:47
3	Ag 328.068†	588.3	-45.1	-0.1673	ug/L	-0.1673 ppb	14:57:52
3	As 188.979†	-54.8	-18.3	-4.3026	ug/L	-4.3026 ppb	14:58:13
3	B 249.677†	-85.6	295.2	4.5964	ug/L	4.5964 ppb	14:57:52
3	Ba 233.527†	31.6	7.6	0.0395	ug/L	0.0395 ppb	14:58:13
3	Be 313.107†	-7461.5	-212.2	-0.0661	ug/L	-0.0661 ppb	14:57:52
3	Cd 226.502†	-273.8	1.4	0.0072	ug/L	0.0072 ppb	14:58:13
3	Co 228.616†	-94.2	-4.7	-0.0576	ug/L	-0.0576 ppb	14:58:13
3	Cr 267.716†	-11.6	16.9	0.1449	ug/L	0.1449 ppb	14:58:13
3	Cu 324.752†	10178.7	78.7	0.1959	ug/L	0.1959 ppb	14:57:52
3	Mn 257.610†	987.9	169.8	0.1343	ug/L	0.1343 ppb	14:58:13
3	Mo 202.031†	39.6	8.2	0.3293	ug/L	0.3293 ppb	14:58:13
3	Ni 231.604†	164.9	18.1	0.2903	ug/L	0.2903 ppb	14:58:13
3	P 214.914†	362.0	28.3	9.9383	ug/L	9.9383 ppb	14:58:13
3	Pb 220.353†	-9.5	19.5	1.4654	ug/L	1.4654 ppb	14:58:13
3	S 181.975 Axial†	64.0	-3.2	-2.7432	ug/L	-2.7432 ppb	14:58:13
3	Sb 206.836†	52.1	7.2	1.4070	ug/L	1.4070 ppb	14:58:13
3	Se 196.026†	-24.8	-3.4	-0.9905	ug/L	-0.9905 ppb	14:58:13
3	Si 251.611†	779.4	226.3	4.6478	ug/L	4.6478 ppb	14:58:13
3	Sn 189.927†	2.2	-3.2	-0.3355	ug/L	-0.3355 ppb	14:58:13
3	Ti 334.940†	-1145.5	-46.5	-0.0588	ug/L	-0.0588 ppb	14:57:52
3	Tl 190.801†	-50.5	10.5	1.7647	ug/L	1.7647 ppb	14:58:13
3	U 409.014†	-3862.5	-62.4	-1.5531	ug/L	-1.5531 ppb	14:57:47
3	V 292.402†	-1624.6	13.6	0.0773	ug/L	0.0773 ppb	14:57:52
3	Zn 213.857†	1159.9	47.9	0.2551	ug/L	0.2551 ppb	14:58:13
3	SiO2†	806.9	211.8	9.3098	ug/L	9.3098 ppb	14:58:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056219.9	99.560	%	0.5925				0.60%
Sc Radial	5538.3	99.5	%	1.61				1.62%
Y 371.029	849654.7	99.583	%	0.5228				0.52%
Y RADIAL	4818.2	100.1	%	1.66				1.66%
Ag 328.068†	-21.7	-0.0851	ug/L	0.08542	-0.0851	ppb	0.08542	100.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.6	16.003	ug/L	10.4684	16.003	ppb	10.4684	65.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-18.6	-4.3553	ug/L	1.05239	-4.3553	ppb	1.05239	24.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	304.2	4.7413	ug/L	0.69569	4.7413	ppb	0.69569	14.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.2	0.0417	ug/L	0.03442	0.0417	ppb	0.03442	82.50%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-178.7	-0.0555	ug/L	0.01513	-0.0555	ppb	0.01513	27.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.9	29.692	ug/L	7.6715	29.692	ppb	7.6715	25.84%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -5.2     -0.0391 ug/L       0.04120     -0.0391 ppb        0.04120 105.48%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               2.3      0.0286 ug/L       0.19481      0.0286 ppb        0.19481 680.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              14.5      0.1236 ug/L       0.02938      0.1236 ppb        0.02938  23.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              62.3      0.1538 ug/L       0.05016      0.1538 ppb        0.05016  32.62%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.1      2.0121 ug/L      30.10210      2.0121 ppb       30.10210 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        88.7     38.496 ug/L       24.6777     38.496 ppb        24.6777  64.10%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.6     45.694 ug/L      137.0902     45.694 ppb       137.0902 300.02%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             152.9      0.1202 ug/L       0.01255      0.1202 ppb        0.01255  10.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               0.9      0.0351 ug/L       0.37516      0.0351 ppb        0.37516 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -8.8    -23.673 ug/L       10.8153    -23.673 ppb        10.8153  45.69%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              14.4      0.2313 ug/L       0.08644      0.2313 ppb        0.08644  37.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               12.6      4.4370 ug/L       5.32411      4.4370 ppb        5.32411 119.99%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              16.7      1.2563 ug/L       0.99239      1.2563 ppb        0.99239  78.99%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -1.7     -1.4003 ug/L       2.23542     -1.4003 ppb        2.23542 159.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               6.2      1.2119 ug/L       0.21396      1.2119 ppb        0.21396  17.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -2.8     -0.9137 ug/L       1.23385     -0.9137 ppb        1.23385 135.04%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             226.7      4.6637 ug/L       0.21666      4.6637 ppb        0.21666   4.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -0.4     -0.0360 ug/L       0.41410     -0.0360 ppb        0.41410 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              13.7      0.2112 ug/L       0.23488      0.2112 ppb        0.23488 111.23%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               5.2      0.0091 ug/L       0.06596      0.0091 ppb        0.06596 721.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              12.2      2.0636 ug/L       0.29992      2.0636 ppb        0.29992  14.53%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -30.1     -0.7468 ug/L       1.16839     -0.7468 ppb        1.16839 156.46%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                0.6      0.0029 ug/L       0.15653      0.0029 ppb        0.15653 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              40.9      0.2247 ug/L       0.10391      0.2247 ppb        0.10391  46.25%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   190.4      8.3843 ug/L       1.16902      8.3843 ppb        1.16902  13.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 15:41:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5550.0	5550.0	99.7	%			15:43:35
1	Y RADIAL	4798.2	4798.2	99.64	%			15:43:35
1	Al 396.153Radial†	5250.4	5356.7	4854.3	ug/L	4854.3	ppb	15:43:35
1	Ca 317.933Radial†	1970.4	1958.7	4878.8	ug/L	4878.8	ppb	15:43:55
1	Fe 238.204 Radial†	137.3	137.4	4834.0	ug/L	4834.0	ppb	15:43:55
1	K 766.490 Radial†	13208.1	11770.2	5101.0	ug/L	5101.0	ppb	15:43:35
1	Mg 279.077 IEC†	62.7	62.7	4968.1	ug/L	4968.1	ppb	15:43:55
1	Na 589.592 Radial†	3392.0	3571.5	9656.9	ug/L	9656.9	ppb	15:43:35
1	Sr 421.552†	32852.9	32935.1	507.37	ug/L	507.37	ppb	15:43:35
1	Sc 361.383	1064992.1	1064992.1	100.39	%			15:44:54
1	Y 371.029	848241.6	848241.6	99.417	%			15:44:54
1	Ag 328.068†	127421.5	126291.3	502.94	ug/L	502.94	ppb	15:44:54
1	As 188.979†	2061.8	2090.8	493.94	ug/L	493.94	ppb	15:45:14
1	B 249.677†	31095.4	31357.0	486.83	ug/L	486.83	ppb	15:44:54
1	Ba 233.527†	98115.4	97712.5	495.79	ug/L	495.79	ppb	15:44:54
1	Be 313.107†	1594280.0	1595444.2	497.24	ug/L	497.24	ppb	15:44:54
1	Cd 226.502†	66508.1	66529.1	497.34	ug/L	497.34	ppb	15:44:54
1	Co 228.616†	38950.3	38890.4	484.63	ug/L	484.63	ppb	15:45:14
1	Cr 267.716†	58229.3	58033.2	494.97	ug/L	494.97	ppb	15:44:54
1	Cu 324.752†	211193.1	200186.9	494.19	ug/L	494.19	ppb	15:44:54
1	Mn 257.610†	629952.0	626694.1	495.80	ug/L	495.80	ppb	15:44:54
1	Mo 202.031†	12627.7	12547.2	502.56	ug/L	502.56	ppb	15:45:14
1	Ni 231.604†	30770.4	30503.4	488.59	ug/L	488.59	ppb	15:45:14
1	P 214.914†	7365.6	7000.2	2399.2	ug/L	2399.2	ppb	15:45:14
1	Pb 220.353†	6628.4	6631.9	498.51	ug/L	498.51	ppb	15:45:14
1	S 181.975 Axial†	1254.4	1181.7	999.29	ug/L	999.29	ppb	15:45:14
1	Sb 206.836†	2567.0	2511.7	499.99	ug/L	499.99	ppb	15:45:14
1	Se 196.026†	1506.6	1522.4	513.89	ug/L	513.89	ppb	15:45:14
1	Si 251.611†	123069.6	122034.6	2506.1	ug/L	2506.1	ppb	15:44:54
1	Sn 189.927†	4784.8	4760.9	495.62	ug/L	495.62	ppb	15:45:14
1	Ti 334.940†	381087.6	380726.3	498.33	ug/L	498.33	ppb	15:44:54
1	Tl 190.801†	2886.0	2936.3	497.24	ug/L	497.24	ppb	15:45:14
1	U 409.014†	15577.1	19351.8	478.60	ug/L	478.60	ppb	15:44:54
1	V 292.402†	85505.0	86827.9	498.46	ug/L	498.46	ppb	15:44:54
1	Zn 213.857†	90597.9	89125.9	493.16	ug/L	493.16	ppb	15:44:54
1	SiO2†	122068.2	120994.8	5320.2	ug/L	5320.2	ppb	15:46:14
2	Sc Radial	5447.3	5447.3	97.9	%			15:44:00
2	Y RADIAL	4711.7	4711.7	97.84	%			15:44:00
2	Al 396.153Radial†	5172.6	5376.3	4872.0	ug/L	4872.0	ppb	15:44:00
2	Ca 317.933Radial†	1978.6	2004.4	4992.5	ug/L	4992.5	ppb	15:44:20
2	Fe 238.204 Radial†	139.0	141.6	4983.9	ug/L	4983.9	ppb	15:44:20
2	K 766.490 Radial†	12957.8	11764.2	5098.5	ug/L	5098.5	ppb	15:44:00
2	Mg 279.077 IEC†	62.4	63.6	5042.1	ug/L	5042.1	ppb	15:44:20
2	Na 589.592 Radial†	3337.3	3579.7	9679.1	ug/L	9679.1	ppb	15:44:00
2	Sr 421.552†	32178.4	32867.1	506.32	ug/L	506.32	ppb	15:44:00
2	Sc 361.383	1051068.9	1051068.9	99.075	%			15:45:22
2	Y 371.029	835857.7	835857.7	97.966	%			15:45:22
2	Ag 328.068†	126172.9	126712.4	504.65	ug/L	504.65	ppb	15:45:22
2	As 188.979†	2053.8	2109.9	498.46	ug/L	498.46	ppb	15:45:42
2	B 249.677†	30728.4	31396.9	487.41	ug/L	487.41	ppb	15:45:22
2	Ba 233.527†	97233.2	98116.8	497.84	ug/L	497.84	ppb	15:45:22
2	Be 313.107†	1574216.1	1596230.6	497.49	ug/L	497.49	ppb	15:45:22
2	Cd 226.502†	65742.7	66634.2	498.11	ug/L	498.11	ppb	15:45:22
2	Co 228.616†	38877.4	39330.9	490.13	ug/L	490.13	ppb	15:45:42
2	Cr 267.716†	57664.8	58231.8	496.66	ug/L	496.66	ppb	15:45:22
2	Cu 324.752†	208926.4	200685.8	495.43	ug/L	495.43	ppb	15:45:22
2	Mn 257.610†	623851.7	628849.5	497.52	ug/L	497.52	ppb	15:45:22
2	Mo 202.031†	12603.0	12688.9	508.24	ug/L	508.24	ppb	15:45:42
2	Ni 231.604†	30731.8	30870.5	494.47	ug/L	494.47	ppb	15:45:42

2	P 214.914†	7351.1	7082.8	2428.1 ug/L	2428.1 ppb	15:45:42
2	Pb 220.353†	6620.8	6711.7	504.49 ug/L	504.49 ppb	15:45:42
2	S 181.975 Axial†	1262.4	1206.4	1020.2 ug/L	1020.2 ppb	15:45:42
2	Sb 206.836†	2541.1	2519.4	501.67 ug/L	501.67 ppb	15:45:42
2	Se 196.026†	1500.7	1536.3	518.98 ug/L	518.98 ppb	15:45:42
2	Si 251.611†	121951.6	122530.2	2516.3 ug/L	2516.3 ppb	15:45:22
2	Sn 189.927†	4769.9	4808.9	500.63 ug/L	500.63 ppb	15:45:42
2	Ti 334.940†	377304.3	381936.4	499.92 ug/L	499.92 ppb	15:45:22
2	Tl 190.801†	2878.0	2966.2	502.28 ug/L	502.28 ppb	15:45:42
2	U 409.014†	15599.1	19579.5	484.23 ug/L	484.23 ppb	15:45:22
2	V 292.402†	84556.2	86998.4	499.49 ug/L	499.49 ppb	15:45:22
2	Zn 213.857†	89634.5	89349.0	494.35 ug/L	494.35 ppb	15:45:22
2	SiO2†	124157.3	124714.2	5484.3 ug/L	5484.3 ppb	15:46:20
3	Sc Radial	5536.4	5536.4	99.5 %		15:44:25
3	Y RADIAL	4822.5	4822.5	100.1 %		15:44:25
3	Al 396.153Radial†	5265.5	5384.7	4879.5 ug/L	4879.5 ppb	15:44:25
3	Ca 317.933Radial†	1962.2	1955.4	4870.5 ug/L	4870.5 ppb	15:44:45
3	Fe 238.204 Radial†	137.2	137.6	4842.9 ug/L	4842.9 ppb	15:44:45
3	K 766.490 Radial†	13216.2	11810.9	5118.7 ug/L	5118.7 ppb	15:44:25
3	Mg 279.077 IEC†	62.7	62.8	4983.0 ug/L	4983.0 ppb	15:44:45
3	Na 589.592 Radial†	3349.3	3536.8	9563.2 ug/L	9563.2 ppb	15:44:25
3	Sr 421.552†	32669.2	32831.2	505.77 ug/L	505.77 ppb	15:44:25
3	Sc 361.383	1057782.7	1057782.7	99.708 %		15:45:49
3	Y 371.029	842128.4	842128.4	98.701 %		15:45:49
3	Ag 328.068†	126824.6	126557.6	504.00 ug/L	504.00 ppb	15:45:49
3	As 188.979†	2088.9	2131.9	503.59 ug/L	503.59 ppb	15:46:09
3	B 249.677†	31037.4	31509.9	489.19 ug/L	489.19 ppb	15:45:49
3	Ba 233.527†	97777.3	98039.6	497.45 ug/L	497.45 ppb	15:45:49
3	Be 313.107†	1585103.6	1597065.1	497.75 ug/L	497.75 ppb	15:45:49
3	Cd 226.502†	66249.3	66721.1	498.78 ug/L	498.78 ppb	15:45:49
3	Co 228.616†	39095.7	39300.7	489.76 ug/L	489.76 ppb	15:46:09
3	Cr 267.716†	57940.4	58138.8	495.87 ug/L	495.87 ppb	15:45:49
3	Cu 324.752†	210463.9	200889.4	495.93 ug/L	495.93 ppb	15:45:49
3	Mn 257.610†	627057.2	628067.8	496.88 ug/L	496.88 ppb	15:45:49
3	Mo 202.031†	12692.2	12697.7	508.58 ug/L	508.58 ppb	15:46:09
3	Ni 231.604†	30844.9	30787.0	493.13 ug/L	493.13 ppb	15:46:09
3	P 214.914†	7405.1	7089.9	2430.6 ug/L	2430.6 ppb	15:46:09
3	Pb 220.353†	6652.2	6700.8	503.69 ug/L	503.69 ppb	15:46:09
3	S 181.975 Axial†	1250.4	1186.2	1003.1 ug/L	1003.1 ppb	15:46:09
3	Sb 206.836†	2566.7	2528.8	503.51 ug/L	503.51 ppb	15:46:09
3	Se 196.026†	1528.1	1554.1	524.28 ug/L	524.28 ppb	15:46:09
3	Si 251.611†	122522.5	122321.5	2511.9 ug/L	2511.9 ppb	15:45:49
3	Sn 189.927†	4781.4	4789.9	498.63 ug/L	498.63 ppb	15:46:09
3	Ti 334.940†	379146.9	381367.2	499.17 ug/L	499.17 ppb	15:45:49
3	Tl 190.801†	2882.7	2952.6	499.96 ug/L	499.96 ppb	15:46:09
3	U 409.014†	15482.2	19362.3	478.86 ug/L	478.86 ppb	15:45:49
3	V 292.402†	85105.0	87007.2	499.55 ug/L	499.55 ppb	15:45:49
3	Zn 213.857†	90130.2	89272.0	493.95 ug/L	493.95 ppb	15:45:49
3	SiO2†	121770.0	121524.5	5343.3 ug/L	5343.3 ppb	15:46:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1057947.9	99.723	%	0.6563				0.66%
Sc Radial	5511.3	99.0	%	1.00				1.01%
Y 371.029	842075.9	98.695	%	0.7257				0.74%
Y RADIAL	4777.5	99.21	%	1.210				1.22%
Ag 328.068†	126520.4	503.86	ug/L	0.864	503.86	ppb	0.864	0.17%
QC value within limits for Ag 328.068 Recovery = 100.77%								
Al 396.153Radial†	5372.6	4868.6	ug/L	12.94	4868.6	ppb	12.94	0.27%
QC value within limits for Al 396.153Radial Recovery = 97.37%								
As 188.979†	2110.9	498.66	ug/L	4.828	498.66	ppb	4.828	0.97%
QC value within limits for As 188.979 Recovery = 99.73%								
B 249.677†	31421.2	487.81	ug/L	1.234	487.81	ppb	1.234	0.25%
QC value within limits for B 249.677 Recovery = 97.56%								
Ba 233.527†	97956.3	497.03	ug/L	1.089	497.03	ppb	1.089	0.22%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1596246.7	497.49	ug/L	0.253	497.49	ppb	0.253	0.05%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	1972.8	4913.9	ug/L	68.18	4913.9	ppb	68.18	1.39%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.28%
Cd 226.502†            66628.1      498.08 ug/L         0.720      498.08 ppb          0.720   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39174.0      488.17 ug/L         3.072      488.17 ppb          3.072   0.63%
   QC value within limits for Co 228.616  Recovery = 97.63%
Cr 267.716†            58134.6      495.83 ug/L         0.848      495.83 ppb          0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 99.17%
Cu 324.752†           200587.4      495.18 ug/L         0.893      495.18 ppb          0.893   0.18%
   QC value within limits for Cu 324.752  Recovery = 99.04%
Fe 238.204 Radial†       138.9      4886.9 ug/L         84.13      4886.9 ppb          84.13   1.72%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.74%
K 766.490 Radial†      11781.8      5106.1 ug/L         11.02      5106.1 ppb          11.02   0.22%
   QC value within limits for K 766.490 Radial  Recovery = 102.12%
Mg 279.077 IEC†           63.0      4997.8 ug/L         39.10      4997.8 ppb          39.10   0.78%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.96%
Mn 257.610†           627870.5      496.73 ug/L         0.871      496.73 ppb          0.871   0.18%
   QC value within limits for Mn 257.610  Recovery = 99.35%
Mo 202.031†            12644.6      506.46 ug/L         3.383      506.46 ppb          3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.29%
Na 589.592 Radial†      3562.7      9633.1 ug/L         61.49      9633.1 ppb          61.49   0.64%
   QC value within limits for Na 589.592 Radial  Recovery = 96.33%
Ni 231.604†            30720.3      492.07 ug/L         3.082      492.07 ppb          3.082   0.63%
   QC value within limits for Ni 231.604  Recovery = 98.41%
P 214.914†              7057.6      2419.3 ug/L         17.48      2419.3 ppb          17.48   0.72%
   QC value within limits for P 214.914  Recovery = 96.77%
Pb 220.353†             6681.5      502.23 ug/L         3.248      502.23 ppb          3.248   0.65%
   QC value within limits for Pb 220.353  Recovery = 100.45%
S 181.975 Axial†        1191.4      1007.5 ug/L         11.14      1007.5 ppb          11.14   1.11%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             2520.0      501.72 ug/L         1.761      501.72 ppb          1.761   0.35%
   QC value within limits for Sb 206.836  Recovery = 100.34%
Se 196.026†             1537.6      519.05 ug/L         5.195      519.05 ppb          5.195   1.00%
   QC value within limits for Se 196.026  Recovery = 103.81%
Si 251.611†           122295.4      2511.5 ug/L          5.07      2511.5 ppb           5.07   0.20%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†             4786.6      498.30 ug/L         2.522      498.30 ppb          2.522   0.51%
   QC value within limits for Sn 189.927  Recovery = 99.66%
Sr 421.552†            32877.8      506.49 ug/L         0.813      506.49 ppb          0.813   0.16%
   QC value within limits for Sr 421.552  Recovery = 101.30%
Ti 334.940†           381343.3      499.14 ug/L         0.795      499.14 ppb          0.795   0.16%
   QC value within limits for Ti 334.940  Recovery = 99.83%
Tl 190.801†             2951.7      499.83 ug/L         2.522      499.83 ppb          2.522   0.50%
   QC value within limits for Tl 190.801  Recovery = 99.97%
U 409.014†             19431.2      480.57 ug/L         3.177      480.57 ppb          3.177   0.66%
   QC value within limits for U 409.014  Recovery = 96.11%
V 292.402†             86944.5      499.16 ug/L         0.613      499.16 ppb          0.613   0.12%
   QC value within limits for V 292.402  Recovery = 99.83%
Zn 213.857†            89249.0      493.82 ug/L         0.604      493.82 ppb          0.604   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.76%
SiO2†                 122411.2      5382.6 ug/L         88.82      5382.6 ppb          88.82   1.65%
   QC value within limits for SiO2  Recovery = 100.66%
All analyte(s) passed QC.
```

Sequence No.: 18
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 15:48:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5444.7	5444.7	97.8	%			15:50:26
1	Y RADIAL	4754.6	4754.6	98.73	%			15:50:26
1	Al 396.153Radial†	-89.0	1.3	1.1300	ug/L	1.1300	ppb	15:50:26
1	Ca 317.933Radial†	24.6	8.2	20.486	ug/L	20.486	ppb	15:50:46
1	Fe 238.204 Radial†	1.6	1.3	45.016	ug/L	45.016	ppb	15:50:46
1	K 766.490 Radial†	1541.6	102.5	44.484	ug/L	44.484	ppb	15:50:26
1	Mg 279.077 IEC†	0.2	0.0	0.5452	ug/L	0.5452	ppb	15:50:46
1	Na 589.592 Radial†	-165.9	0.9	2.3237	ug/L	2.3237	ppb	15:50:46
1	Sr 421.552†	27.6	22.8	0.3506	ug/L	0.3506	ppb	15:50:46
1	Sc 361.383	1056924.6	1056924.6	99.627	%			15:51:43
1	Y 371.029	852084.4	852084.4	99.868	%			15:51:43
1	Ag 328.068†	677.5	41.4	0.1786	ug/L	0.1786	ppb	15:51:48
1	As 188.979†	-48.7	-12.0	-2.7987	ug/L	-2.7987	ppb	15:52:08
1	B 249.677†	-15.3	366.2	5.7014	ug/L	5.7014	ppb	15:51:48
1	Ba 233.527†	58.9	34.8	0.1773	ug/L	0.1773	ppb	15:52:08
1	Be 313.107†	-7518.0	-229.9	-0.0713	ug/L	-0.0713	ppb	15:51:48
1	Cd 226.502†	-272.1	4.5	0.0287	ug/L	0.0287	ppb	15:52:08
1	Co 228.616†	-101.3	-11.3	-0.1398	ug/L	-0.1398	ppb	15:52:08
1	Cr 267.716†	-33.1	-4.6	-0.0380	ug/L	-0.0380	ppb	15:51:48
1	Cu 324.752†	10167.5	14.3	0.0379	ug/L	0.0379	ppb	15:51:48
1	Mn 257.610†	919.8	96.2	0.0819	ug/L	0.0819	ppb	15:52:08
1	Mo 202.031†	42.0	10.4	0.4188	ug/L	0.4188	ppb	15:52:08
1	Ni 231.604†	169.3	21.7	0.3482	ug/L	0.3482	ppb	15:52:08
1	P 214.914†	354.3	18.7	6.5814	ug/L	6.5814	ppb	15:52:08
1	Pb 220.353†	-16.7	12.4	0.9234	ug/L	0.9234	ppb	15:52:08
1	S 181.975 Axial†	61.6	-6.0	-5.0843	ug/L	-5.0843	ppb	15:52:08
1	Sb 206.836†	53.3	8.1	1.6077	ug/L	1.6077	ppb	15:52:08
1	Se 196.026†	-12.1	9.5	3.2413	ug/L	3.2413	ppb	15:52:08
1	Si 251.611†	756.7	199.4	4.0905	ug/L	4.0905	ppb	15:52:08
1	Sn 189.927†	12.1	6.6	0.6931	ug/L	0.6931	ppb	15:52:08
1	Ti 334.940†	-1028.7	76.7	0.1021	ug/L	0.1021	ppb	15:51:48
1	Tl 190.801†	-51.6	9.6	1.6197	ug/L	1.6197	ppb	15:52:08
1	U 409.014†	-3848.7	-28.4	-0.7103	ug/L	-0.7103	ppb	15:51:43
1	V 292.402†	-1650.6	-3.9	-0.0247	ug/L	-0.0247	ppb	15:51:48
1	Zn 213.857†	1092.3	-26.1	-0.1527	ug/L	-0.1527	ppb	15:52:08
1	SiO2†	812.7	213.4	9.3760	ug/L	9.3760	ppb	15:53:14
2	Sc Radial	5363.3	5363.3	96.4	%			15:50:52
2	Y RADIAL	4689.7	4689.7	97.38	%			15:50:52
2	Al 396.153Radial†	-93.9	-5.3	-4.8063	ug/L	-4.8063	ppb	15:50:52
2	Ca 317.933Radial†	33.6	17.9	44.640	ug/L	44.640	ppb	15:51:12
2	Fe 238.204 Radial†	-0.5	-0.8	-29.258	ug/L	-29.258	ppb	15:51:12
2	K 766.490 Radial†	1469.5	51.7	22.381	ug/L	22.381	ppb	15:50:52
2	Mg 279.077 IEC†	0.5	0.4	29.965	ug/L	29.965	ppb	15:51:12
2	Na 589.592 Radial†	-167.6	-3.4	-9.2756	ug/L	-9.2756	ppb	15:51:12
2	Sr 421.552†	18.3	13.5	0.2083	ug/L	0.2083	ppb	15:51:12
2	Sc 361.383	1064727.6	1064727.6	100.36	%			15:52:14
2	Y 371.029	856448.2	856448.2	100.38	%			15:52:14
2	Ag 328.068†	654.6	13.6	0.0456	ug/L	0.0456	ppb	15:52:19
2	As 188.979†	-55.1	-18.0	-4.2429	ug/L	-4.2429	ppb	15:52:39
2	B 249.677†	-27.0	354.6	5.5302	ug/L	5.5302	ppb	15:52:19
2	Ba 233.527†	26.3	1.9	0.0090	ug/L	0.0090	ppb	15:52:39
2	Be 313.107†	-7608.1	-264.4	-0.0820	ug/L	-0.0820	ppb	15:52:19
2	Cd 226.502†	-292.9	-14.2	-0.1025	ug/L	-0.1025	ppb	15:52:39
2	Co 228.616†	-105.7	-14.9	-0.1859	ug/L	-0.1859	ppb	15:52:39
2	Cr 267.716†	-9.5	19.1	0.1627	ug/L	0.1627	ppb	15:52:19
2	Cu 324.752†	10209.3	-18.8	-0.0481	ug/L	-0.0481	ppb	15:52:19
2	Mn 257.610†	890.8	60.5	0.0435	ug/L	0.0435	ppb	15:52:39
2	Mo 202.031†	30.8	-1.1	-0.0470	ug/L	-0.0470	ppb	15:52:39
2	Ni 231.604†	166.7	17.8	0.2862	ug/L	0.2862	ppb	15:52:39

2	P 214.914†	351.3	13.1	4.6814	ug/L	4.6814 ppb	15:52:39
2	Pb 220.353†	0.4	29.5	2.2147	ug/L	2.2147 ppb	15:52:39
2	S 181.975 Axial†	58.3	-9.7	-8.2376	ug/L	-8.2376 ppb	15:52:39
2	Sb 206.836†	44.7	-0.9	-0.1791	ug/L	-0.1791 ppb	15:52:39
2	Se 196.026†	-22.7	-1.0	-0.4269	ug/L	-0.4269 ppb	15:52:39
2	Si 251.611†	732.9	170.1	3.5028	ug/L	3.5028 ppb	15:52:39
2	Sn 189.927†	9.3	3.8	0.3997	ug/L	0.3997 ppb	15:52:39
2	Ti 334.940†	-1052.4	60.6	0.0833	ug/L	0.0833 ppb	15:52:19
2	Tl 190.801†	-73.7	-12.1	-2.0323	ug/L	-2.0323 ppb	15:52:39
2	U 409.014†	-3937.4	-88.5	-2.1916	ug/L	-2.1916 ppb	15:52:14
2	V 292.402†	-1664.6	-5.8	-0.0333	ug/L	-0.0333 ppb	15:52:19
2	Zn 213.857†	1086.7	-39.7	-0.2212	ug/L	-0.2212 ppb	15:52:39
2	SiO2†	810.0	204.8	9.0296	ug/L	9.0296 ppb	15:53:19
3	Sc Radial	5503.9	5503.9	98.9	%		15:51:17
3	Y RADIAL	4786.1	4786.1	99.38	%		15:51:17
3	Al 396.153Radial†	-55.5	36.1	32.846	ug/L	32.846 ppb	15:51:17
3	Ca 317.933Radial†	29.6	13.0	32.437	ug/L	32.437 ppb	15:51:37
3	Fe 238.204 Radial†	1.1	0.8	28.650	ug/L	28.650 ppb	15:51:37
3	K 766.490 Radial†	1444.0	-13.2	-5.6858	ug/L	-5.6858 ppb	15:51:17
3	Mg 279.077 IEC†	-0.3	-0.5	-38.345	ug/L	-38.345 ppb	15:51:37
3	Na 589.592 Radial†	-167.4	1.1	3.0210	ug/L	3.0210 ppb	15:51:37
3	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431 ppb	15:51:37
3	Sc 361.383	1059763.4	1059763.4	99.895	%		15:52:44
3	Y 371.029	853150.8	853150.8	99.993	%		15:52:44
3	Ag 328.068†	638.8	0.9	0.0116	ug/L	0.0116 ppb	15:52:49
3	As 188.979†	-47.8	-11.0	-2.5746	ug/L	-2.5746 ppb	15:53:09
3	B 249.677†	-68.1	313.4	4.8798	ug/L	4.8798 ppb	15:52:49
3	Ba 233.527†	39.3	15.1	0.0771	ug/L	0.0771 ppb	15:53:09
3	Be 313.107†	-7522.3	-214.0	-0.0666	ug/L	-0.0666 ppb	15:52:49
3	Cd 226.502†	-285.9	-8.6	-0.0673	ug/L	-0.0673 ppb	15:53:09
3	Co 228.616†	-84.6	5.7	0.0719	ug/L	0.0719 ppb	15:53:09
3	Cr 267.716†	-51.0	-22.5	-0.1911	ug/L	-0.1911 ppb	15:52:49
3	Cu 324.752†	9963.6	-217.1	-0.5340	ug/L	-0.5340 ppb	15:52:49
3	Mn 257.610†	951.3	125.3	0.1035	ug/L	0.1035 ppb	15:53:09
3	Mo 202.031†	38.3	6.6	0.2645	ug/L	0.2645 ppb	15:53:09
3	Ni 231.604†	159.8	11.7	0.1876	ug/L	0.1876 ppb	15:53:09
3	P 214.914†	347.1	10.6	3.7978	ug/L	3.7978 ppb	15:53:09
3	Pb 220.353†	-25.4	3.7	0.2791	ug/L	0.2791 ppb	15:53:09
3	S 181.975 Axial†	64.7	-3.1	-2.6014	ug/L	-2.6014 ppb	15:53:09
3	Sb 206.836†	43.5	-1.9	-0.3719	ug/L	-0.3719 ppb	15:53:09
3	Se 196.026†	-24.2	-2.6	-0.7417	ug/L	-0.7417 ppb	15:53:09
3	Si 251.611†	723.7	164.4	3.3914	ug/L	3.3914 ppb	15:53:09
3	Sn 189.927†	-1.8	-7.3	-0.7591	ug/L	-0.7591 ppb	15:53:09
3	Ti 334.940†	-1125.7	-17.7	-0.0213	ug/L	-0.0213 ppb	15:52:49
3	Tl 190.801†	-47.4	13.9	2.3508	ug/L	2.3508 ppb	15:53:09
3	U 409.014†	-3791.5	39.2	0.9702	ug/L	0.9702 ppb	15:52:44
3	V 292.402†	-1640.9	10.2	0.0584	ug/L	0.0584 ppb	15:52:49
3	Zn 213.857†	1086.8	-34.5	-0.1947	ug/L	-0.1947 ppb	15:53:09
3	SiO2†	778.6	177.1	7.8246	ug/L	7.8246 ppb	15:53:24

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060471.9	99.961	%	0.3723				0.37%
Sc Radial	5437.3	97.7	%	1.27				1.30%
Y 371.029	853894.4	100.08	%	0.267				0.27%
Y RADIAL	4743.4	98.50	%	1.020				1.04%
Ag 328.068†	18.6	0.0786	ug/L	0.08825	0.0786	ppb	0.08825	112.24%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	10.7	9.7234	ug/L	20.24395	9.7234	ppb	20.24395	208.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-13.7	-3.2054	ug/L	0.90543	-3.2054	ppb	0.90543	28.25%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	344.7	5.3705	ug/L	0.43345	5.3705	ppb	0.43345	8.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	17.3	0.0878	ug/L	0.08464	0.0878	ppb	0.08464	96.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-236.1	-0.0733	ug/L	0.00791	-0.0733	ppb	0.00791	10.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.1	32.521	ug/L	12.0776	32.521	ppb	12.0776	37.14%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -6.1     -0.0470 ug/L       0.06789     -0.0470 ppb        0.06789 144.30%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -6.8     -0.0846 ug/L       0.13746     -0.0846 ppb        0.13746 162.45%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -2.7     -0.0221 ug/L       0.17746     -0.0221 ppb        0.17746 801.61%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -73.9     -0.1814 ug/L       0.30837     -0.1814 ppb        0.30837 170.01%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.4      14.803 ug/L       39.0249      14.803 ppb        39.0249 263.64%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        47.0      20.393 ug/L       25.1438      20.393 ppb        25.1438 123.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.0      -2.6115 ug/L      34.26394     -2.6115 ppb       34.26394 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              94.0       0.0763 ug/L       0.03041      0.0763 ppb        0.03041  39.87%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.3       0.2121 ug/L       0.23732      0.2121 ppb        0.23732 111.89%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -0.5      -1.3103 ug/L       6.90696     -1.3103 ppb        6.90696 527.13%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              17.1       0.2740 ug/L       0.08098      0.2740 ppb        0.08098  29.55%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               14.1       5.0202 ug/L       1.42236      5.0202 ppb        1.42236  28.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              15.2       1.1391 ug/L       0.98566      1.1391 ppb        0.98566  86.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -6.3      -5.3078 ug/L       2.82471     -5.3078 ppb        2.82471  53.22%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               1.8       0.3522 ug/L       1.09156      0.3522 ppb        1.09156 309.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               2.0       0.6909 ug/L       2.21432      0.6909 ppb        2.21432 320.50%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             178.0       3.6616 ug/L       0.37560      3.6616 ppb        0.37560  10.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.0       0.1112 ug/L       0.76790      0.1112 ppb        0.76790 690.45%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              19.5       0.3006 ug/L       0.08009      0.3006 ppb        0.08009  26.64%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              39.9       0.0547 ug/L       0.06651      0.0547 ppb        0.06651 121.59%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               3.8       0.6461 ug/L       2.34820      0.6461 ppb        2.34820 363.46%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -25.9      -0.6439 ug/L       1.58194     -0.6439 ppb        1.58194 245.69%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                0.1       0.0001 ug/L       0.05062      0.0001 ppb        0.05062 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -33.4      -0.1895 ug/L       0.03453     -0.1895 ppb        0.03453  18.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   198.4       8.7434 ug/L       0.81433      8.7434 ppb        0.81433   9.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 26
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 16:43:44
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5597.1	5597.1	101	%			16:45:36
1	Y RADIAL	4814.6	4814.6	99.98	%			16:45:36
1	Al 396.153Radial†	5291.4	5353.1	4850.9	ug/L	4850.9	ppb	16:45:36
1	Ca 317.933Radial†	1969.7	1941.4	4835.8	ug/L	4835.8	ppb	16:45:56
1	Fe 238.204 Radial†	141.1	139.9	4923.6	ug/L	4923.6	ppb	16:45:56
1	K 766.490 Radial†	13282.0	11732.5	5084.7	ug/L	5084.7	ppb	16:45:36
1	Mg 279.077 IEC†	64.2	63.7	5049.0	ug/L	5049.0	ppb	16:45:56
1	Na 589.592 Radial†	3478.7	3629.0	9812.5	ug/L	9812.5	ppb	16:45:36
1	Sr 421.552†	33699.4	33499.9	516.07	ug/L	516.07	ppb	16:45:36
1	Sc 361.383	1055693.0	1055693.0	99.511	%			16:46:55
1	Y 371.029	841824.0	841824.0	98.665	%			16:46:55
1	Ag 328.068†	126236.5	126218.5	502.68	ug/L	502.68	ppb	16:46:55
1	As 188.979†	2073.2	2120.3	500.88	ug/L	500.88	ppb	16:47:15
1	B 249.677†	30744.7	31277.4	485.56	ug/L	485.56	ppb	16:46:55
1	Ba 233.527†	97307.6	97761.7	496.04	ug/L	496.04	ppb	16:46:55
1	Be 313.107†	1578588.0	1593664.1	496.68	ug/L	496.68	ppb	16:46:55
1	Cd 226.502†	65945.7	66547.5	497.47	ug/L	497.47	ppb	16:46:55
1	Co 228.616†	38927.4	39209.2	488.62	ug/L	488.62	ppb	16:47:15
1	Cr 267.716†	57770.3	58082.9	495.39	ug/L	495.39	ppb	16:46:55
1	Cu 324.752†	208599.2	199433.4	492.34	ug/L	492.34	ppb	16:46:55
1	Mn 257.610†	623792.7	626032.1	495.28	ug/L	495.28	ppb	16:46:55
1	Mo 202.031†	12621.7	12652.0	506.76	ug/L	506.76	ppb	16:47:15
1	Ni 231.604†	30738.4	30741.2	492.40	ug/L	492.40	ppb	16:47:15
1	P 214.914†	7365.8	7065.1	2422.4	ug/L	2422.4	ppb	16:47:15
1	Pb 220.353†	6645.4	6707.2	504.15	ug/L	504.15	ppb	16:47:15
1	S 181.975 Axial†	1239.8	1178.0	996.19	ug/L	996.19	ppb	16:47:15
1	Sb 206.836†	2557.9	2525.1	502.76	ug/L	502.76	ppb	16:47:15
1	Se 196.026†	1503.3	1532.3	517.44	ug/L	517.44	ppb	16:47:15
1	Si 251.611†	121982.3	122021.8	2505.8	ug/L	2505.8	ppb	16:46:55
1	Sn 189.927†	4773.2	4791.1	498.76	ug/L	498.76	ppb	16:47:15
1	Ti 334.940†	377055.7	380018.4	497.40	ug/L	497.40	ppb	16:46:55
1	Tl 190.801†	2878.5	2954.1	500.21	ug/L	500.21	ppb	16:47:15
1	U 409.014†	15585.6	19497.0	482.20	ug/L	482.20	ppb	16:46:55
1	V 292.402†	84900.3	86970.4	499.32	ug/L	499.32	ppb	16:46:55
1	Zn 213.857†	89663.2	88981.5	492.32	ug/L	492.32	ppb	16:46:55
1	SiO2†	122414.8	122414.2	5382.8	ug/L	5382.8	ppb	16:48:15
2	Sc Radial	5519.9	5519.9	99.2	%			16:46:01
2	Y RADIAL	4754.7	4754.7	98.73	%			16:46:01
2	Al 396.153Radial†	5239.1	5374.0	4870.0	ug/L	4870.0	ppb	16:46:01
2	Ca 317.933Radial†	1981.4	1980.6	4933.4	ug/L	4933.4	ppb	16:46:21
2	Fe 238.204 Radial†	139.0	139.8	4918.1	ug/L	4918.1	ppb	16:46:21
2	K 766.490 Radial†	13106.1	11739.7	5087.8	ug/L	5087.8	ppb	16:46:01
2	Mg 279.077 IEC†	59.9	60.2	4773.1	ug/L	4773.1	ppb	16:46:21
2	Na 589.592 Radial†	3431.2	3629.6	9813.9	ug/L	9813.9	ppb	16:46:01
2	Sr 421.552†	33035.5	33298.9	512.98	ug/L	512.98	ppb	16:46:01
2	Sc 361.383	1059556.7	1059556.7	99.875	%			16:47:22
2	Y 371.029	842609.2	842609.2	98.757	%			16:47:22
2	Ag 328.068†	126889.4	126409.6	503.43	ug/L	503.43	ppb	16:47:22
2	As 188.979†	2080.2	2119.7	500.75	ug/L	500.75	ppb	16:47:42
2	B 249.677†	30878.4	31298.5	485.90	ug/L	485.90	ppb	16:47:22
2	Ba 233.527†	97940.4	98038.7	497.45	ug/L	497.45	ppb	16:47:22
2	Be 313.107†	1583527.7	1592825.4	496.43	ug/L	496.43	ppb	16:47:22
2	Cd 226.502†	66320.9	66681.6	498.47	ug/L	498.47	ppb	16:47:22
2	Co 228.616†	38932.4	39071.6	486.89	ug/L	486.89	ppb	16:47:42
2	Cr 267.716†	58077.3	58178.5	496.21	ug/L	496.21	ppb	16:47:22
2	Cu 324.752†	209952.3	200023.8	493.80	ug/L	493.80	ppb	16:47:22
2	Mn 257.610†	627659.1	627617.4	496.54	ug/L	496.54	ppb	16:47:22
2	Mo 202.031†	12605.9	12589.9	504.27	ug/L	504.27	ppb	16:47:42
2	Ni 231.604†	30761.6	30651.8	490.97	ug/L	490.97	ppb	16:47:42

2	P 214.914†	7365.8	7038.1	2412.6 ug/L	2412.6 ppb	16:47:42
2	Pb 220.353†	6639.4	6676.8	501.87 ug/L	501.87 ppb	16:47:42
2	S 181.975 Axial†	1247.6	1181.3	998.95 ug/L	998.95 ppb	16:47:42
2	Sb 206.836†	2570.2	2528.0	503.22 ug/L	503.22 ppb	16:47:42
2	Se 196.026†	1493.9	1517.4	512.58 ug/L	512.58 ppb	16:47:42
2	Si 251.611†	122683.6	122277.0	2511.1 ug/L	2511.1 ppb	16:47:22
2	Sn 189.927†	4775.2	4775.7	497.17 ug/L	497.17 ppb	16:47:42
2	Ti 334.940†	379382.3	380966.3	498.65 ug/L	498.65 ppb	16:47:22
2	Tl 190.801†	2885.6	2950.6	499.65 ug/L	499.65 ppb	16:47:42
2	U 409.014†	15590.0	19444.3	480.89 ug/L	480.89 ppb	16:47:22
2	V 292.402†	85139.3	86898.7	498.87 ug/L	498.87 ppb	16:47:22
2	Zn 213.857†	90179.2	89169.6	493.39 ug/L	493.39 ppb	16:47:22
2	SiO2†	123659.1	123211.5	5418.1 ug/L	5418.1 ppb	16:48:20
3	Sc Radial	5473.4	5473.4	98.4 %		16:46:26
3	Y RADIAL	4752.6	4752.6	98.69 %		16:46:26
3	Al 396.153Radial†	5183.0	5361.8	4859.1 ug/L	4859.1 ppb	16:46:26
3	Ca 317.933Radial†	1970.6	1986.6	4948.3 ug/L	4948.3 ppb	16:46:46
3	Fe 238.204 Radial†	139.1	141.1	4963.8 ug/L	4963.8 ppb	16:46:46
3	K 766.490 Radial†	12871.7	11613.8	5033.2 ug/L	5033.2 ppb	16:46:26
3	Mg 279.077 IEC†	64.4	65.3	5176.9 ug/L	5176.9 ppb	16:46:46
3	Na 589.592 Radial†	3390.1	3617.1	9780.3 ug/L	9780.3 ppb	16:46:26
3	Sr 421.552†	32728.5	33270.0	512.53 ug/L	512.53 ppb	16:46:26
3	Sc 361.383	1060641.0	1060641.0	99.977 %		16:47:50
3	Y 371.029	844977.1	844977.1	99.035 %		16:47:50
3	Ag 328.068†	126897.6	126287.9	502.96 ug/L	502.96 ppb	16:47:50
3	As 188.979†	2059.7	2097.1	495.44 ug/L	495.44 ppb	16:48:10
3	B 249.677†	31014.3	31402.9	487.53 ug/L	487.53 ppb	16:47:50
3	Ba 233.527†	97758.4	97756.4	496.02 ug/L	496.02 ppb	16:47:50
3	Be 313.107†	1584935.6	1592612.9	496.36 ug/L	496.36 ppb	16:47:50
3	Cd 226.502†	66218.9	66511.6	497.19 ug/L	497.19 ppb	16:47:50
3	Co 228.616†	38515.7	38614.9	481.20 ug/L	481.20 ppb	16:48:10
3	Cr 267.716†	57895.8	57937.6	494.15 ug/L	494.15 ppb	16:47:50
3	Cu 324.752†	210307.1	200163.8	494.14 ug/L	494.14 ppb	16:47:50
3	Mn 257.610†	626815.7	626131.5	495.36 ug/L	495.36 ppb	16:47:50
3	Mo 202.031†	12523.0	12494.1	500.44 ug/L	500.44 ppb	16:48:10
3	Ni 231.604†	30451.6	30310.3	485.50 ug/L	485.50 ppb	16:48:10
3	P 214.914†	7303.3	6968.0	2387.6 ug/L	2387.6 ppb	16:48:10
3	Pb 220.353†	6596.2	6626.8	498.11 ug/L	498.11 ppb	16:48:10
3	S 181.975 Axial†	1228.8	1161.2	981.95 ug/L	981.95 ppb	16:48:10
3	Sb 206.836†	2537.6	2492.7	496.19 ug/L	496.19 ppb	16:48:10
3	Se 196.026†	1501.2	1523.2	514.61 ug/L	514.61 ppb	16:48:10
3	Si 251.611†	122882.0	122349.9	2512.7 ug/L	2512.7 ppb	16:47:50
3	Sn 189.927†	4732.3	4727.9	492.20 ug/L	492.20 ppb	16:48:10
3	Ti 334.940†	379321.6	380517.2	498.06 ug/L	498.06 ppb	16:47:50
3	Tl 190.801†	2851.7	2913.7	493.44 ug/L	493.44 ppb	16:48:10
3	U 409.014†	15623.2	19461.5	481.31 ug/L	481.31 ppb	16:47:50
3	V 292.402†	85069.4	86741.5	497.93 ug/L	497.93 ppb	16:47:50
3	Zn 213.857†	90087.4	88985.6	492.38 ug/L	492.38 ppb	16:47:50
3	SiO2†	121377.6	120802.9	5311.9 ug/L	5311.9 ppb	16:48:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1058630.2	99.788	%	0.2452				0.25%
Sc Radial	5530.1	99.4	%	1.12				1.13%
Y 371.029	843136.8	98.819	%	0.1924				0.19%
Y RADIAL	4774.0	99.13	%	0.731				0.74%
Ag 328.068†	126305.3	503.02	ug/L	0.380	503.02	ppb	0.380	0.08%
QC value within limits for Ag 328.068 Recovery = 100.60%								
Al 396.153Radial†	5363.0	4860.0	ug/L	9.59	4860.0	ppb	9.59	0.20%
QC value within limits for Al 396.153Radial Recovery = 97.20%								
As 188.979†	2112.4	499.02	ug/L	3.104	499.02	ppb	3.104	0.62%
QC value within limits for As 188.979 Recovery = 99.80%								
B 249.677†	31326.3	486.33	ug/L	1.054	486.33	ppb	1.054	0.22%
QC value within limits for B 249.677 Recovery = 97.27%								
Ba 233.527†	97852.3	496.50	ug/L	0.817	496.50	ppb	0.817	0.16%
QC value within limits for Ba 233.527 Recovery = 99.30%								
Be 313.107†	1593034.2	496.49	ug/L	0.172	496.49	ppb	0.172	0.03%
QC value within limits for Be 313.107 Recovery = 99.30%								
Ca 317.933Radial†	1969.5	4905.8	ug/L	61.11	4905.8	ppb	61.11	1.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.12%
Cd 226.502†            66580.2      497.71 ug/L         0.673      497.71 ppb          0.673   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.54%
Co 228.616†            38965.2      485.57 ug/L         3.884      485.57 ppb          3.884   0.80%
   QC value within limits for Co 228.616  Recovery = 97.11%
Cr 267.716†            58066.3      495.25 ug/L         1.034      495.25 ppb          1.034   0.21%
   QC value within limits for Cr 267.716  Recovery = 99.05%
Cu 324.752†           199873.6      493.43 ug/L         0.957      493.43 ppb          0.957   0.19%
   QC value within limits for Cu 324.752  Recovery = 98.69%
Fe 238.204 Radial†       140.2      4935.2 ug/L        24.97      4935.2 ppb         24.97   0.51%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.70%
K 766.490 Radial†       11695.3      5068.6 ug/L        30.68      5068.6 ppb         30.68   0.61%
   QC value within limits for K 766.490 Radial  Recovery = 101.37%
Mg 279.077 IEC†           63.1      4999.6 ug/L       206.36      4999.6 ppb        206.36   4.13%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.99%
Mn 257.610†           626593.7      495.73 ug/L         0.704      495.73 ppb          0.704   0.14%
   QC value within limits for Mn 257.610  Recovery = 99.15%
Mo 202.031†            12578.6      503.83 ug/L         3.182      503.83 ppb          3.182   0.63%
   QC value within limits for Mo 202.031  Recovery = 100.77%
Na 589.592 Radial†      3625.2      9802.2 ug/L        19.00      9802.2 ppb         19.00   0.19%
   QC value within limits for Na 589.592 Radial  Recovery = 98.02%
Ni 231.604†            30567.8      489.62 ug/L         3.643      489.62 ppb          3.643   0.74%
   QC value within limits for Ni 231.604  Recovery = 97.92%
P 214.914†              7023.7      2407.5 ug/L        17.90      2407.5 ppb         17.90   0.74%
   QC value within limits for P 214.914  Recovery = 96.30%
Pb 220.353†             6670.3      501.38 ug/L         3.053      501.38 ppb          3.053   0.61%
   QC value within limits for Pb 220.353  Recovery = 100.28%
S 181.975 Axial†        1173.5      992.36 ug/L         9.120      992.36 ppb          9.120   0.92%
   QC value within limits for S 181.975 Axial  Recovery = 99.24%
Sb 206.836†             2515.3      500.72 ug/L         3.933      500.72 ppb          3.933   0.79%
   QC value within limits for Sb 206.836  Recovery = 100.14%
Se 196.026†             1524.3      514.87 ug/L         2.440      514.87 ppb          2.440   0.47%
   QC value within limits for Se 196.026  Recovery = 102.97%
Si 251.611†           122216.2      2509.9 ug/L          3.62      2509.9 ppb           3.62   0.14%
   QC value within limits for Si 251.611  Recovery = 100.40%
Sn 189.927†             4764.9      496.04 ug/L         3.424      496.04 ppb          3.424   0.69%
   QC value within limits for Sn 189.927  Recovery = 99.21%
Sr 421.552†            33356.3      513.86 ug/L         1.930      513.86 ppb          1.930   0.38%
   QC value within limits for Sr 421.552  Recovery = 102.77%
Ti 334.940†           380500.7      498.04 ug/L         0.624      498.04 ppb          0.624   0.13%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2939.5      497.77 ug/L         3.754      497.77 ppb          3.754   0.75%
   QC value within limits for Tl 190.801  Recovery = 99.55%
U 409.014†             19467.6      481.46 ug/L         0.668      481.46 ppb          0.668   0.14%
   QC value within limits for U 409.014  Recovery = 96.29%
V 292.402†             86870.2      498.71 ug/L         0.706      498.71 ppb          0.706   0.14%
   QC value within limits for V 292.402  Recovery = 99.74%
Zn 213.857†            89045.6      492.70 ug/L         0.601      492.70 ppb          0.601   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.54%
SiO2†                 122142.9      5370.9 ug/L        54.09      5370.9 ppb         54.09   1.01%
   QC value within limits for SiO2  Recovery = 100.44%
All analyte(s) passed QC.
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Sequence No.: 27
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 16:50:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5637.8	5637.8	101	%			16:52:27
1	Y RADIAL	4889.3	4889.3	101.5	%			16:52:27
1	Al 396.153Radial†	-89.7	3.7	3.3326	ug/L	3.3326	ppb	16:52:27
1	Ca 317.933Radial†	30.9	13.6	33.800	ug/L	33.800	ppb	16:52:47
1	Fe 238.204 Radial†	-0.2	-0.5	-18.635	ug/L	-18.635	ppb	16:52:47
1	K 766.490 Radial†	1458.1	-33.9	-14.718	ug/L	-14.718	ppb	16:52:27
1	Mg 279.077 IEC†	0.7	0.5	40.762	ug/L	40.762	ppb	16:52:47
1	Na 589.592 Radial†	-176.3	-3.6	-9.6025	ug/L	-9.6025	ppb	16:52:47
1	Sr 421.552†	22.0	16.3	0.2505	ug/L	0.2505	ppb	16:52:47
1	Sc 361.383	1052646.6	1052646.6	99.224	%			16:53:44
1	Y 371.029	847796.7	847796.7	99.365	%			16:53:44
1	Ag 328.068†	563.6	-70.6	-0.2853	ug/L	-0.2853	ppb	16:53:49
1	As 188.979†	-58.2	-21.7	-5.1093	ug/L	-5.1093	ppb	16:54:09
1	B 249.677†	-76.7	304.2	4.7431	ug/L	4.7431	ppb	16:53:49
1	Ba 233.527†	31.3	7.3	0.0361	ug/L	0.0361	ppb	16:54:09
1	Be 313.107†	-7536.0	-278.7	-0.0865	ug/L	-0.0865	ppb	16:53:49
1	Cd 226.502†	-287.5	-12.1	-0.0884	ug/L	-0.0884	ppb	16:54:09
1	Co 228.616†	-75.7	14.1	0.1761	ug/L	0.1761	ppb	16:54:09
1	Cr 267.716†	-16.5	12.0	0.1017	ug/L	0.1017	ppb	16:54:09
1	Cu 324.752†	10011.6	-101.3	-0.2511	ug/L	-0.2511	ppb	16:53:49
1	Mn 257.610†	915.0	95.2	0.0720	ug/L	0.0720	ppb	16:54:09
1	Mo 202.031†	37.5	6.0	0.2405	ug/L	0.2405	ppb	16:54:09
1	Ni 231.604†	163.3	16.3	0.2617	ug/L	0.2617	ppb	16:54:09
1	P 214.914†	335.5	1.2	0.4897	ug/L	0.4897	ppb	16:54:09
1	Pb 220.353†	-27.9	1.0	0.0777	ug/L	0.0777	ppb	16:54:09
1	S 181.975 Axial†	66.8	-0.5	-0.4272	ug/L	-0.4272	ppb	16:54:09
1	Sb 206.836†	51.9	6.9	1.3833	ug/L	1.3833	ppb	16:54:09
1	Se 196.026†	-20.7	0.8	0.1817	ug/L	0.1817	ppb	16:54:09
1	Si 251.611†	822.0	268.4	5.5329	ug/L	5.5329	ppb	16:54:09
1	Sn 189.927†	21.2	15.9	1.6590	ug/L	1.6590	ppb	16:54:09
1	Ti 334.940†	-1030.0	71.2	0.0958	ug/L	0.0958	ppb	16:53:49
1	Tl 190.801†	-46.8	14.3	2.4065	ug/L	2.4065	ppb	16:54:09
1	U 409.014†	-3844.2	-39.5	-0.9782	ug/L	-0.9782	ppb	16:53:44
1	V 292.402†	-1655.2	-15.3	-0.0826	ug/L	-0.0826	ppb	16:53:49
1	Zn 213.857†	1103.5	-10.2	-0.0578	ug/L	-0.0578	ppb	16:54:09
1	SiO2†	826.3	230.4	10.170	ug/L	10.170	ppb	16:55:15
2	Sc Radial	5525.3	5525.3	99.3	%			16:52:52
2	Y RADIAL	4806.4	4806.4	99.81	%			16:52:52
2	Al 396.153Radial†	-79.8	11.8	10.725	ug/L	10.725	ppb	16:52:52
2	Ca 317.933Radial†	28.6	11.9	29.523	ug/L	29.523	ppb	16:53:12
2	Fe 238.204 Radial†	0.5	0.2	7.1114	ug/L	7.1114	ppb	16:53:12
2	K 766.490 Radial†	1519.6	57.3	24.898	ug/L	24.898	ppb	16:52:52
2	Mg 279.077 IEC†	0.1	-0.1	-7.6474	ug/L	-7.6474	ppb	16:53:12
2	Na 589.592 Radial†	-180.6	-11.5	-30.978	ug/L	-30.978	ppb	16:53:12
2	Sr 421.552†	28.8	23.5	0.3617	ug/L	0.3617	ppb	16:53:12
2	Sc 361.383	1065998.9	1065998.9	100.48	%			16:54:14
2	Y 371.029	857217.7	857217.7	100.47	%			16:54:14
2	Ag 328.068†	636.1	-5.5	-0.0199	ug/L	-0.0199	ppb	16:54:19
2	As 188.979†	-46.4	-9.3	-2.1871	ug/L	-2.1871	ppb	16:54:39
2	B 249.677†	-25.5	356.1	5.5488	ug/L	5.5488	ppb	16:54:19
2	Ba 233.527†	44.3	19.8	0.1010	ug/L	0.1010	ppb	16:54:39
2	Be 313.107†	-7582.2	-229.6	-0.0713	ug/L	-0.0713	ppb	16:54:19
2	Cd 226.502†	-281.0	-2.0	-0.0154	ug/L	-0.0154	ppb	16:54:39
2	Co 228.616†	-87.2	3.6	0.0458	ug/L	0.0458	ppb	16:54:39
2	Cr 267.716†	-4.9	23.8	0.2025	ug/L	0.2025	ppb	16:54:39
2	Cu 324.752†	10193.3	-46.9	-0.1154	ug/L	-0.1154	ppb	16:54:19
2	Mn 257.610†	912.6	81.2	0.0653	ug/L	0.0653	ppb	16:54:39
2	Mo 202.031†	39.5	7.5	0.3018	ug/L	0.3018	ppb	16:54:39
2	Ni 231.604†	159.8	10.8	0.1729	ug/L	0.1729	ppb	16:54:39

2	P 214.914†	333.9	-4.6	-1.6265 ug/L	-1.6265 ppb	16:54:39
2	Pb 220.353†	-17.2	11.9	0.8971 ug/L	0.8971 ppb	16:54:39
2	S 181.975 Axial†	56.6	-11.5	-9.7195 ug/L	-9.7195 ppb	16:54:39
2	Sb 206.836†	42.2	-3.4	-0.6744 ug/L	-0.6744 ppb	16:54:39
2	Se 196.026†	-21.2	0.5	0.1913 ug/L	0.1913 ppb	16:54:39
2	Si 251.611†	796.3	232.3	4.7815 ug/L	4.7815 ppb	16:54:39
2	Sn 189.927†	2.5	-3.0	-0.3049 ug/L	-0.3049 ppb	16:54:39
2	Ti 334.940†	-1074.6	39.8	0.0534 ug/L	0.0534 ppb	16:54:19
2	Tl 190.801†	-64.5	-2.8	-0.4750 ug/L	-0.4750 ppb	16:54:39
2	U 409.014†	-3795.8	57.2	1.4168 ug/L	1.4168 ppb	16:54:14
2	V 292.402†	-1607.8	52.7	0.3041 ug/L	0.3041 ppb	16:54:19
2	Zn 213.857†	1078.2	-49.4	-0.2772 ug/L	-0.2772 ppb	16:54:39
2	SiO2†	798.6	192.4	8.4742 ug/L	8.4742 ppb	16:55:20
3	Sc Radial	5418.8	5418.8	97.4 %		16:53:17
3	Y RADIAL	4718.6	4718.6	97.98 %		16:53:17
3	Al 396.153Radial†	-92.6	-2.9	-2.6166 ug/L	-2.6166 ppb	16:53:17
3	Ca 317.933Radial†	27.6	11.4	28.350 ug/L	28.350 ppb	16:53:37
3	Fe 238.204 Radial†	-1.0	-1.3	-45.979 ug/L	-45.979 ppb	16:53:37
3	K 766.490 Radial†	1489.0	56.1	24.297 ug/L	24.297 ppb	16:53:17
3	Mg 279.077 IEC†	-1.0	-1.2	-94.823 ug/L	-94.823 ppb	16:53:37
3	Na 589.592 Radial†	-169.9	-4.0	-10.940 ug/L	-10.940 ppb	16:53:37
3	Sr 421.552†	29.6	24.9	0.3833 ug/L	0.3833 ppb	16:53:37
3	Sc 361.383	1048913.1	1048913.1	98.872 %		16:54:44
3	Y 371.029	844446.0	844446.0	98.972 %		16:54:44
3	Ag 328.068†	724.6	94.3	0.3605 ug/L	0.3605 ppb	16:54:49
3	As 188.979†	-43.9	-7.5	-1.7627 ug/L	-1.7627 ppb	16:55:09
3	B 249.677†	-81.0	299.6	4.6757 ug/L	4.6757 ppb	16:54:49
3	Ba 233.527†	22.9	-1.1	-0.0069 ug/L	-0.0069 ppb	16:55:09
3	Be 313.107†	-7424.8	-193.3	-0.0604 ug/L	-0.0604 ppb	16:54:49
3	Cd 226.502†	-281.1	-6.7	-0.0443 ug/L	-0.0443 ppb	16:55:09
3	Co 228.616†	-89.7	-0.3	-0.0020 ug/L	-0.0020 ppb	16:55:09
3	Cr 267.716†	-10.7	17.8	0.1514 ug/L	0.1514 ppb	16:55:09
3	Cu 324.752†	10087.7	11.6	0.0258 ug/L	0.0258 ppb	16:54:49
3	Mn 257.610†	912.8	96.2	0.0718 ug/L	0.0718 ppb	16:55:09
3	Mo 202.031†	35.1	3.7	0.1462 ug/L	0.1462 ppb	16:55:09
3	Ni 231.604†	166.7	20.4	0.3263 ug/L	0.3263 ppb	16:55:09
3	P 214.914†	344.7	11.7	4.1662 ug/L	4.1662 ppb	16:55:09
3	Pb 220.353†	-8.6	20.3	1.5296 ug/L	1.5296 ppb	16:55:09
3	S 181.975 Axial†	63.9	-3.2	-2.6879 ug/L	-2.6879 ppb	16:55:09
3	Sb 206.836†	50.5	5.6	1.1035 ug/L	1.1035 ppb	16:55:09
3	Se 196.026†	-25.9	-4.6	-1.6417 ug/L	-1.6417 ppb	16:55:09
3	Si 251.611†	799.8	248.9	5.1246 ug/L	5.1246 ppb	16:55:09
3	Sn 189.927†	4.6	-0.8	-0.0793 ug/L	-0.0793 ppb	16:55:09
3	Ti 334.940†	-1198.8	-103.2	-0.1319 ug/L	-0.1319 ppb	16:54:49
3	Tl 190.801†	-54.4	6.4	1.0751 ug/L	1.0751 ppb	16:55:09
3	U 409.014†	-3918.3	-128.2	-3.1763 ug/L	-3.1763 ppb	16:54:44
3	V 292.402†	-1643.2	-9.2	-0.0517 ug/L	-0.0517 ppb	16:54:49
3	Zn 213.857†	1094.4	-15.5	-0.0806 ug/L	-0.0806 ppb	16:55:09
3	SiO2†	790.9	197.6	8.7080 ug/L	8.7080 ppb	16:55:25

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055852.9	99.526	%	0.8467				0.85%
Sc Radial	5527.3	99.3	%	1.97				1.98%
Y 371.029	849820.2	99.602	%	0.7761				0.78%
Y RADIAL	4804.8	99.77	%	1.772				1.78%
Ag 328.068†	6.1	0.0184	ug/L	0.32461	0.0184	ppb	0.32461	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	4.2	3.8136	ug/L	6.68379	3.8136	ppb	6.68379	175.26%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.8	-3.0197	ug/L	1.82201	-3.0197	ppb	1.82201	60.34%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	320.0	4.9892	ug/L	0.48577	4.9892	ppb	0.48577	9.74%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.6	0.0434	ug/L	0.05433	0.0434	ppb	0.05433	125.26%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-233.9	-0.0727	ug/L	0.01307	-0.0727	ppb	0.01307	17.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	12.3	30.557	ug/L	2.8686	30.557	ppb	2.8686	9.39%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -6.9     -0.0494 ug/L       0.03675     -0.0494 ppb        0.03675  74.46%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               5.8      0.0733 ug/L       0.09218      0.0733 ppb        0.09218 125.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              17.8      0.1519 ug/L       0.05038      0.1519 ppb        0.05038  33.17%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -45.6     -0.1135 ug/L       0.13847     -0.1135 ppb        0.13847 121.95%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       -0.5     -19.167 ug/L       26.5490     -19.167 ppb        26.5490 138.51%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        26.5      11.492 ug/L       22.7011      11.492 ppb        22.7011 197.53%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.3     -20.569 ug/L       68.7102     -20.569 ppb        68.7102 334.04%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              90.9      0.0697 ug/L       0.00384      0.0697 ppb        0.00384   5.51%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.8      0.2295 ug/L       0.07837      0.2295 ppb        0.07837  34.15%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -6.4     -17.174 ug/L       11.9739     -17.174 ppb        11.9739  69.72%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              15.8      0.2536 ug/L       0.07702      0.2536 ppb        0.07702  30.37%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                2.7      1.0098 ug/L       2.93118      1.0098 ppb        2.93118 290.27%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              11.1      0.8348 ug/L       0.72795      0.8348 ppb        0.72795  87.20%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -5.1     -4.2782 ug/L       4.84597     -4.2782 ppb        4.84597 113.27%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               3.0      0.6042 ug/L       1.11604      0.6042 ppb        1.11604 184.72%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -1.1     -0.4229 ug/L       1.05551     -0.4229 ppb        1.05551 249.59%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             249.8      5.1463 ug/L       0.37613      5.1463 ppb        0.37613   7.31%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               4.1      0.4249 ug/L       1.07467      0.4249 ppb        1.07467 252.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              21.6      0.3318 ug/L       0.07124      0.3318 ppb        0.07124  21.47%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               2.6      0.0058 ug/L       0.12109      0.0058 ppb        0.12109 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               5.9      1.0022 ug/L       1.44215      1.0022 ppb        1.44215 143.90%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -36.9     -0.9126 ug/L       2.29725     -0.9126 ppb        2.29725 251.73%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                9.4      0.0566 ug/L       0.21490      0.0566 ppb        0.21490 379.82%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -25.0     -0.1385 ug/L       0.12064     -0.1385 ppb        0.12064  87.09%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   206.8      9.1173 ug/L       0.91882      9.1173 ppb        0.91882  10.08%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 32
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 17:25:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5539.4	5539.4	99.5	%			17:27:39
1	Y RADIAL	4807.5	4807.5	99.83	%			17:27:39
1	Al 396.153Radial†	5253.1	5369.4	4865.4	ug/L	4865.4	ppb	17:27:39
1	Ca 317.933Radial†	1951.8	1943.8	4841.6	ug/L	4841.6	ppb	17:27:59
1	Fe 238.204 Radial†	137.8	138.1	4860.6	ug/L	4860.6	ppb	17:27:59
1	K 766.490 Radial†	13071.3	11658.2	5052.5	ug/L	5052.5	ppb	17:27:39
1	Mg 279.077 IEC†	64.6	64.7	5131.4	ug/L	5131.4	ppb	17:27:59
1	Na 589.592 Radial†	3360.6	3546.4	9589.2	ug/L	9589.2	ppb	17:27:39
1	Sr 421.552†	32599.6	32743.8	504.42	ug/L	504.42	ppb	17:27:39
1	Sc 361.383	1049901.1	1049901.1	98.965	%			17:28:58
1	Y 371.029	835003.9	835003.9	97.866	%			17:28:58
1	Ag 328.068†	125920.8	126599.3	504.17	ug/L	504.17	ppb	17:28:58
1	As 188.979†	2090.3	2149.0	507.62	ug/L	507.62	ppb	17:29:18
1	B 249.677†	30513.8	31214.5	484.57	ug/L	484.57	ppb	17:28:58
1	Ba 233.527†	97512.1	98507.8	499.82	ug/L	499.82	ppb	17:28:58
1	Be 313.107†	1576169.0	1599971.3	498.65	ug/L	498.65	ppb	17:28:58
1	Cd 226.502†	66064.4	67033.1	501.11	ug/L	501.11	ppb	17:28:58
1	Co 228.616†	39231.6	39732.4	495.15	ug/L	495.15	ppb	17:29:18
1	Cr 267.716†	57815.1	58448.4	498.51	ug/L	498.51	ppb	17:28:58
1	Cu 324.752†	208555.4	200545.5	495.08	ug/L	495.08	ppb	17:28:58
1	Mn 257.610†	625103.5	630814.8	499.05	ug/L	499.05	ppb	17:28:58
1	Mo 202.031†	12722.0	12823.3	513.61	ug/L	513.61	ppb	17:29:18
1	Ni 231.604†	30913.5	31088.6	497.96	ug/L	497.96	ppb	17:29:18
1	P 214.914†	7419.6	7160.2	2455.7	ug/L	2455.7	ppb	17:29:18
1	Pb 220.353†	6688.7	6787.7	510.21	ug/L	510.21	ppb	17:29:18
1	S 181.975 Axial†	1250.0	1195.2	1010.7	ug/L	1010.7	ppb	17:29:18
1	Sb 206.836†	2601.6	2583.4	514.35	ug/L	514.35	ppb	17:29:18
1	Se 196.026†	1504.4	1541.7	520.31	ug/L	520.31	ppb	17:29:18
1	Si 251.611†	121912.3	122627.4	2518.2	ug/L	2518.2	ppb	17:28:58
1	Sn 189.927†	4798.2	4842.9	504.15	ug/L	504.15	ppb	17:29:18
1	Ti 334.940†	377727.5	382787.6	501.03	ug/L	501.03	ppb	17:28:58
1	Tl 190.801†	2906.4	2998.2	507.65	ug/L	507.65	ppb	17:29:18
1	U 409.014†	15367.9	19363.4	478.88	ug/L	478.88	ppb	17:28:58
1	V 292.402†	84597.3	87135.0	500.33	ug/L	500.33	ppb	17:28:58
1	Zn 213.857†	89790.9	89607.7	495.78	ug/L	495.78	ppb	17:28:58
1	SiO2†	122218.8	122894.8	5403.7	ug/L	5403.7	ppb	17:30:18
2	Sc Radial	5629.9	5629.9	101	%			17:28:04
2	Y RADIAL	4857.3	4857.3	100.9	%			17:28:04
2	Al 396.153Radial†	5366.1	5396.3	4890.4	ug/L	4890.4	ppb	17:28:04
2	Ca 317.933Radial†	1971.8	1932.1	4812.5	ug/L	4812.5	ppb	17:28:24
2	Fe 238.204 Radial†	137.6	135.7	4776.2	ug/L	4776.2	ppb	17:28:24
2	K 766.490 Radial†	13341.0	11713.7	5076.5	ug/L	5076.5	ppb	17:28:04
2	Mg 279.077 IEC†	61.6	60.7	4814.0	ug/L	4814.0	ppb	17:28:24
2	Na 589.592 Radial†	3421.8	3552.7	9606.1	ug/L	9606.1	ppb	17:28:04
2	Sr 421.552†	33077.1	32689.3	503.59	ug/L	503.59	ppb	17:28:04
2	Sc 361.383	1063568.3	1063568.3	100.25	%			17:29:25
2	Y 371.029	845239.1	845239.1	99.065	%			17:29:25
2	Ag 328.068†	127204.2	126244.4	502.73	ug/L	502.73	ppb	17:29:25
2	As 188.979†	2061.8	2093.4	494.56	ug/L	494.56	ppb	17:29:45
2	B 249.677†	30965.4	31268.8	485.46	ug/L	485.46	ppb	17:29:25
2	Ba 233.527†	97922.6	97651.1	495.48	ug/L	495.48	ppb	17:29:25
2	Be 313.107†	1583977.6	1587293.9	494.71	ug/L	494.71	ppb	17:29:25
2	Cd 226.502†	66312.1	66422.3	496.55	ug/L	496.55	ppb	17:29:25
2	Co 228.616†	38852.8	38845.1	484.07	ug/L	484.07	ppb	17:29:45
2	Cr 267.716†	58017.2	57899.3	493.82	ug/L	493.82	ppb	17:29:25
2	Cu 324.752†	211181.4	200456.9	494.86	ug/L	494.86	ppb	17:29:25
2	Mn 257.610†	628518.3	626104.1	495.32	ug/L	495.32	ppb	17:29:25
2	Mo 202.031†	12594.6	12531.1	501.91	ug/L	501.91	ppb	17:29:45
2	Ni 231.604†	30580.0	30354.6	486.21	ug/L	486.21	ppb	17:29:45

2	P 214.914†	7357.2	7001.7	2399.6 ug/L	2399.6 ppb	17:29:45
2	Pb 220.353†	6615.9	6628.3	498.24 ug/L	498.24 ppb	17:29:45
2	S 181.975 Axial†	1245.1	1174.1	992.88 ug/L	992.88 ppb	17:29:45
2	Sb 206.836†	2576.2	2524.3	502.40 ug/L	502.40 ppb	17:29:45
2	Se 196.026†	1488.5	1506.3	508.47 ug/L	508.47 ppb	17:29:45
2	Si 251.611†	122813.3	121943.1	2504.3 ug/L	2504.3 ppb	17:29:25
2	Sn 189.927†	4739.9	4722.4	491.61 ug/L	491.61 ppb	17:29:45
2	Ti 334.940†	380922.6	381070.0	498.78 ug/L	498.78 ppb	17:29:25
2	Tl 190.801†	2872.9	2927.1	495.68 ug/L	495.68 ppb	17:29:45
2	U 409.014†	15705.5	19500.6	482.31 ug/L	482.31 ppb	17:29:25
2	V 292.402†	85226.8	86664.4	497.53 ug/L	497.53 ppb	17:29:25
2	Zn 213.857†	90283.4	88933.0	492.11 ug/L	492.11 ppb	17:29:25
2	SiO2†	121642.5	120733.0	5308.7 ug/L	5308.7 ppb	17:30:23
3	Sc Radial	5511.7	5511.7	99.0 %		17:28:29
3	Y RADIAL	4751.0	4751.0	98.66 %		17:28:29
3	Al 396.153Radial†	5237.8	5380.5	4875.9 ug/L	4875.9 ppb	17:28:29
3	Ca 317.933Radial†	2008.0	2010.5	5007.8 ug/L	5007.8 ppb	17:28:49
3	Fe 238.204 Radial†	140.3	141.3	4973.5 ug/L	4973.5 ppb	17:28:49
3	K 766.490 Radial†	13077.8	11730.9	5084.1 ug/L	5084.1 ppb	17:28:29
3	Mg 279.077 IEC†	63.6	64.1	5080.5 ug/L	5080.5 ppb	17:28:49
3	Na 589.592 Radial†	3321.6	3524.0	9528.6 ug/L	9528.6 ppb	17:28:29
3	Sr 421.552†	32347.5	32654.1	503.04 ug/L	503.04 ppb	17:28:29
3	Sc 361.383	1061197.1	1061197.1	100.03 %		17:29:52
3	Y 371.029	845321.1	845321.1	99.075 %		17:29:52
3	Ag 328.068†	126943.7	126267.5	502.89 ug/L	502.89 ppb	17:29:52
3	As 188.979†	2071.6	2107.9	497.99 ug/L	497.99 ppb	17:30:12
3	B 249.677†	30895.5	31267.8	485.42 ug/L	485.42 ppb	17:29:52
3	Ba 233.527†	97861.2	97807.9	496.28 ug/L	496.28 ppb	17:29:52
3	Be 313.107†	1587603.5	1594449.2	496.93 ug/L	496.93 ppb	17:29:52
3	Cd 226.502†	66310.3	66568.3	497.62 ug/L	497.62 ppb	17:29:52
3	Co 228.616†	38901.6	38980.5	485.76 ug/L	485.76 ppb	17:30:12
3	Cr 267.716†	58079.5	58090.9	495.46 ug/L	495.46 ppb	17:29:52
3	Cu 324.752†	210546.0	200292.3	494.46 ug/L	494.46 ppb	17:29:52
3	Mn 257.610†	627659.6	626646.5	495.77 ug/L	495.77 ppb	17:29:52
3	Mo 202.031†	12635.4	12599.9	504.68 ug/L	504.68 ppb	17:30:12
3	Ni 231.604†	30693.6	30536.2	489.12 ug/L	489.12 ppb	17:30:12
3	P 214.914†	7347.5	7008.4	2401.9 ug/L	2401.9 ppb	17:30:12
3	Pb 220.353†	6654.8	6681.9	502.25 ug/L	502.25 ppb	17:30:12
3	S 181.975 Axial†	1249.6	1181.4	999.01 ug/L	999.01 ppb	17:30:12
3	Sb 206.836†	2580.4	2534.2	504.45 ug/L	504.45 ppb	17:30:12
3	Se 196.026†	1488.1	1509.3	510.13 ug/L	510.13 ppb	17:30:12
3	Si 251.611†	122353.4	121757.1	2500.4 ug/L	2500.4 ppb	17:29:52
3	Sn 189.927†	4767.3	4760.4	495.58 ug/L	495.58 ppb	17:30:12
3	Ti 334.940†	380073.7	381070.3	498.79 ug/L	498.79 ppb	17:29:52
3	Tl 190.801†	2879.5	2940.1	497.87 ug/L	497.87 ppb	17:30:12
3	U 409.014†	15472.5	19302.7	477.37 ug/L	477.37 ppb	17:29:52
3	V 292.402†	85270.4	86897.9	498.86 ug/L	498.86 ppb	17:29:52
3	Zn 213.857†	90239.3	89090.2	492.94 ug/L	492.94 ppb	17:29:52
3	SiO2†	123260.9	122622.0	5392.0 ug/L	5392.0 ppb	17:30:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1058222.2	99.749	%	0.6884				0.69%
Sc Radial	5560.3	99.9	%	1.11				1.11%
Y 371.029	841854.7	98.669	%	0.6954				0.70%
Y RADIAL	4805.3	99.78	%	1.105				1.11%
Ag 328.068†	126370.4	503.26	ug/L	0.792	503.26	ppb	0.792	0.16%
QC value within limits for Ag 328.068 Recovery = 100.65%								
Al 396.153Radial†	5382.0	4877.2	ug/L	12.53	4877.2	ppb	12.53	0.26%
QC value within limits for Al 396.153Radial Recovery = 97.54%								
As 188.979†	2116.8	500.06	ug/L	6.771	500.06	ppb	6.771	1.35%
QC value within limits for As 188.979 Recovery = 100.01%								
B 249.677†	31250.3	485.15	ug/L	0.499	485.15	ppb	0.499	0.10%
QC value within limits for B 249.677 Recovery = 97.03%								
Ba 233.527†	97988.9	497.19	ug/L	2.312	497.19	ppb	2.312	0.46%
QC value within limits for Ba 233.527 Recovery = 99.44%								
Be 313.107†	1593904.8	496.76	ug/L	1.979	496.76	ppb	1.979	0.40%
QC value within limits for Be 313.107 Recovery = 99.35%								
Ca 317.933Radial†	1962.1	4887.3	ug/L	105.33	4887.3	ppb	105.33	2.16%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.75%
Cd 226.502†            66674.6      498.43 ug/L         2.388      498.43 ppb          2.388   0.48%
   QC value within limits for Cd 226.502  Recovery = 99.69%
Co 228.616†            39186.0      488.32 ug/L         5.967      488.32 ppb          5.967   1.22%
   QC value within limits for Co 228.616  Recovery = 97.66%
Cr 267.716†            58146.2      495.93 ug/L         2.377      495.93 ppb          2.377   0.48%
   QC value within limits for Cr 267.716  Recovery = 99.19%
Cu 324.752†           200431.6      494.80 ug/L         0.313      494.80 ppb          0.313   0.06%
   QC value within limits for Cu 324.752  Recovery = 98.96%
Fe 238.204 Radial†       138.4      4870.1 ug/L        98.98      4870.1 ppb         98.98   2.03%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.40%
K 766.490 Radial†      11700.9      5071.0 ug/L        16.50      5071.0 ppb         16.50   0.33%
   QC value within limits for K 766.490 Radial  Recovery = 101.42%
Mg 279.077 IEC†           63.2      5008.6 ug/L       170.47      5008.6 ppb        170.47   3.40%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.17%
Mn 257.610†           627855.1      496.72 ug/L         2.035      496.72 ppb          2.035   0.41%
   QC value within limits for Mn 257.610  Recovery = 99.34%
Mo 202.031†            12651.4      506.73 ug/L         6.117      506.73 ppb          6.117   1.21%
   QC value within limits for Mo 202.031  Recovery = 101.35%
Na 589.592 Radial†      3541.1      9574.6 ug/L        40.77      9574.6 ppb         40.77   0.43%
   QC value within limits for Na 589.592 Radial  Recovery = 95.75%
Ni 231.604†            30659.8      491.10 ug/L         6.124      491.10 ppb          6.124   1.25%
   QC value within limits for Ni 231.604  Recovery = 98.22%
P 214.914†              7056.8      2419.1 ug/L        31.74      2419.1 ppb         31.74   1.31%
   QC value within limits for P 214.914  Recovery = 96.76%
Pb 220.353†             6699.3      503.57 ug/L         6.094      503.57 ppb          6.094   1.21%
   QC value within limits for Pb 220.353  Recovery = 100.71%
S 181.975 Axial†        1183.6      1000.9 ug/L         9.08      1000.9 ppb          9.08   0.91%
   QC value within limits for S 181.975 Axial  Recovery = 100.09%
Sb 206.836†             2547.3      507.06 ug/L         6.391      507.06 ppb          6.391   1.26%
   QC value within limits for Sb 206.836  Recovery = 101.41%
Se 196.026†             1519.1      512.97 ug/L         6.409      512.97 ppb          6.409   1.25%
   QC value within limits for Se 196.026  Recovery = 102.59%
Si 251.611†           122109.2      2507.6 ug/L         9.35      2507.6 ppb          9.35   0.37%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4775.2      497.11 ug/L         6.406      497.11 ppb          6.406   1.29%
   QC value within limits for Sn 189.927  Recovery = 99.42%
Sr 421.552†            32695.7      503.68 ug/L         0.697      503.68 ppb          0.697   0.14%
   QC value within limits for Sr 421.552  Recovery = 100.74%
Ti 334.940†           381642.6      499.53 ug/L         1.295      499.53 ppb          1.295   0.26%
   QC value within limits for Ti 334.940  Recovery = 99.91%
Tl 190.801†             2955.1      500.40 ug/L         6.373      500.40 ppb          6.373   1.27%
   QC value within limits for Tl 190.801  Recovery = 100.08%
U 409.014†             19388.9      479.52 ug/L         2.530      479.52 ppb          2.530   0.53%
   QC value within limits for U 409.014  Recovery = 95.90%
V 292.402†             86899.1      498.91 ug/L         1.401      498.91 ppb          1.401   0.28%
   QC value within limits for V 292.402  Recovery = 99.78%
Zn 213.857†            89210.3      493.61 ug/L         1.926      493.61 ppb          1.926   0.39%
   QC value within limits for Zn 213.857  Recovery = 98.72%
SiO2†                 122083.2      5368.2 ug/L        51.81      5368.2 ppb         51.81   0.97%
   QC value within limits for SiO2  Recovery = 100.39%
All analyte(s) passed QC.
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Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 17:32:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5490.0	5490.0	98.7	%			17:34:30
1	Y RADIAL	4741.3	4741.3	98.46	%			17:34:30
1	Al 396.153Radial†	-82.2	8.9	8.0672	ug/L	8.0672	ppb	17:34:30
1	Ca 317.933Radial†	29.1	12.5	31.210	ug/L	31.210	ppb	17:34:50
1	Fe 238.204 Radial†	0.2	-0.1	-3.5649	ug/L	-3.5649	ppb	17:34:50
1	K 766.490 Radial†	1409.6	-44.3	-19.236	ug/L	-19.236	ppb	17:34:30
1	Mg 279.077 IEC†	-0.1	-0.3	-22.440	ug/L	-22.440	ppb	17:34:50
1	Na 589.592 Radial†	-171.9	-3.9	-10.476	ug/L	-10.476	ppb	17:34:50
1	Sr 421.552†	14.4	9.1	0.1405	ug/L	0.1405	ppb	17:34:50
1	Sc 361.383	1052333.1	1052333.1	99.194	%			17:35:46
1	Y 371.029	846567.3	846567.3	99.221	%			17:35:46
1	Ag 328.068†	700.7	67.8	0.2703	ug/L	0.2703	ppb	17:35:52
1	As 188.979†	-56.9	-20.4	-4.8012	ug/L	-4.8012	ppb	17:36:12
1	B 249.677†	-83.7	297.1	4.6311	ug/L	4.6311	ppb	17:35:52
1	Ba 233.527†	37.5	13.5	0.0689	ug/L	0.0689	ppb	17:36:12
1	Be 313.107†	-7492.9	-237.6	-0.0739	ug/L	-0.0739	ppb	17:35:52
1	Cd 226.502†	-287.7	-12.4	-0.0922	ug/L	-0.0922	ppb	17:36:12
1	Co 228.616†	-83.5	6.3	0.0779	ug/L	0.0779	ppb	17:36:12
1	Cr 267.716†	-16.0	12.5	0.1079	ug/L	0.1079	ppb	17:36:12
1	Cu 324.752†	10095.6	-13.7	-0.0339	ug/L	-0.0339	ppb	17:35:52
1	Mn 257.610†	935.4	116.0	0.0917	ug/L	0.0917	ppb	17:36:12
1	Mo 202.031†	29.0	-2.5	-0.1006	ug/L	-0.1006	ppb	17:36:12
1	Ni 231.604†	147.3	0.2	0.0037	ug/L	0.0037	ppb	17:36:12
1	P 214.914†	352.0	17.9	6.3333	ug/L	6.3333	ppb	17:36:12
1	Pb 220.353†	-24.4	4.4	0.3349	ug/L	0.3349	ppb	17:36:12
1	S 181.975 Axial†	63.1	-4.2	-3.5764	ug/L	-3.5764	ppb	17:36:12
1	Sb 206.836†	58.3	13.3	2.6045	ug/L	2.6045	ppb	17:36:12
1	Se 196.026†	-13.4	8.1	2.6090	ug/L	2.6090	ppb	17:36:12
1	Si 251.611†	709.7	155.4	3.2163	ug/L	3.2163	ppb	17:36:12
1	Sn 189.927†	1.0	-4.4	-0.4598	ug/L	-0.4598	ppb	17:36:12
1	Ti 334.940†	-1111.3	-11.0	-0.0110	ug/L	-0.0110	ppb	17:35:52
1	Tl 190.801†	-55.2	5.7	0.9641	ug/L	0.9641	ppb	17:36:12
1	U 409.014†	-3930.0	-127.2	-3.1558	ug/L	-3.1558	ppb	17:35:46
1	V 292.402†	-1594.3	45.5	0.2510	ug/L	0.2510	ppb	17:35:52
1	Zn 213.857†	1093.9	-19.7	-0.1086	ug/L	-0.1086	ppb	17:36:12
1	SiO2†	708.1	111.5	4.9498	ug/L	4.9498	ppb	17:37:18
2	Sc Radial	5463.6	5463.6	98.2	%			17:34:55
2	Y RADIAL	4760.8	4760.8	98.86	%			17:34:55
2	Al 396.153Radial†	-66.9	24.1	21.917	ug/L	21.917	ppb	17:34:55
2	Ca 317.933Radial†	30.2	13.8	34.350	ug/L	34.350	ppb	17:35:15
2	Fe 238.204 Radial†	-0.5	-0.9	-30.858	ug/L	-30.858	ppb	17:35:15
2	K 766.490 Radial†	1480.7	35.0	15.177	ug/L	15.177	ppb	17:34:55
2	Mg 279.077 IEC†	-0.3	-0.5	-37.640	ug/L	-37.640	ppb	17:35:15
2	Na 589.592 Radial†	-174.4	-7.2	-19.603	ug/L	-19.603	ppb	17:35:15
2	Sr 421.552†	22.0	17.0	0.2613	ug/L	0.2613	ppb	17:35:15
2	Sc 361.383	1054664.8	1054664.8	99.414	%			17:36:17
2	Y 371.029	849471.0	849471.0	99.561	%			17:36:17
2	Ag 328.068†	636.0	1.2	-0.0053	ug/L	-0.0053	ppb	17:36:22
2	As 188.979†	-41.2	-4.6	-1.0850	ug/L	-1.0850	ppb	17:36:42
2	B 249.677†	-129.1	251.7	3.9268	ug/L	3.9268	ppb	17:36:22
2	Ba 233.527†	58.7	34.8	0.1755	ug/L	0.1755	ppb	17:36:42
2	Be 313.107†	-7492.3	-220.2	-0.0683	ug/L	-0.0683	ppb	17:36:22
2	Cd 226.502†	-289.0	-13.1	-0.0941	ug/L	-0.0941	ppb	17:36:42
2	Co 228.616†	-101.5	-11.7	-0.1447	ug/L	-0.1447	ppb	17:36:42
2	Cr 267.716†	7.6	36.2	0.3079	ug/L	0.3079	ppb	17:36:42
2	Cu 324.752†	10005.9	-126.4	-0.3136	ug/L	-0.3136	ppb	17:36:22
2	Mn 257.610†	926.3	104.7	0.0794	ug/L	0.0794	ppb	17:36:42
2	Mo 202.031†	39.4	7.9	0.3125	ug/L	0.3125	ppb	17:36:42
2	Ni 231.604†	160.5	13.2	0.2113	ug/L	0.2113	ppb	17:36:42

2	P 214.914†	348.7	13.8	4.9695	ug/L	4.9695 ppb	17:36:42
2	Pb 220.353†	-13.8	15.2	1.1514	ug/L	1.1514 ppb	17:36:42
2	S 181.975 Axial†	69.8	2.4	2.0331	ug/L	2.0331 ppb	17:36:42
2	Sb 206.836†	39.5	-5.7	-1.1067	ug/L	-1.1067 ppb	17:36:42
2	Se 196.026†	-4.7	16.9	5.3908	ug/L	5.3908 ppb	17:36:42
2	Si 251.611†	691.5	135.5	2.7848	ug/L	2.7848 ppb	17:36:42
2	Sn 189.927†	8.2	2.8	0.2919	ug/L	0.2919 ppb	17:36:42
2	Ti 334.940†	-1031.6	71.6	0.0960	ug/L	0.0960 ppb	17:36:22
2	Tl 190.801†	-63.5	-2.5	-0.4257	ug/L	-0.4257 ppb	17:36:42
2	U 409.014†	-3824.1	-11.9	-0.2911	ug/L	-0.2911 ppb	17:36:17
2	V 292.402†	-1634.2	9.0	0.0575	ug/L	0.0575 ppb	17:36:22
2	Zn 213.857†	1102.1	-13.8	-0.0730	ug/L	-0.0730 ppb	17:36:42
2	SiO2†	713.1	114.9	5.0540	ug/L	5.0540 ppb	17:37:23
3	Sc Radial	5371.8	5371.8	96.5	%		17:35:20
3	Y RADIAL	4656.4	4656.4	96.69	%		17:35:20
3	Al 396.153Radial†	-47.5	43.0	39.121	ug/L	39.121 ppb	17:35:20
3	Ca 317.933Radial†	28.5	12.6	31.325	ug/L	31.325 ppb	17:35:40
3	Fe 238.204 Radial†	-1.6	-2.0	-69.949	ug/L	-69.949 ppb	17:35:40
3	K 766.490 Radial†	1509.0	90.1	39.047	ug/L	39.047 ppb	17:35:20
3	Mg 279.077 IEC†	1.1	0.9	73.109	ug/L	73.109 ppb	17:35:40
3	Na 589.592 Radial†	-173.4	-9.2	-24.998	ug/L	-24.998 ppb	17:35:40
3	Sr 421.552†	26.4	21.9	0.3366	ug/L	0.3366 ppb	17:35:40
3	Sc 361.383	1050946.8	1050946.8	99.063	%		17:36:47
3	Y 371.029	846133.3	846133.3	99.170	%		17:36:47
3	Ag 328.068†	637.6	5.0	-0.0063	ug/L	-0.0063 ppb	17:36:52
3	As 188.979†	-45.7	-9.2	-2.1868	ug/L	-2.1868 ppb	17:37:12
3	B 249.677†	-129.1	251.2	3.9248	ug/L	3.9248 ppb	17:36:52
3	Ba 233.527†	54.3	30.5	0.1524	ug/L	0.1524 ppb	17:37:12
3	Be 313.107†	-7441.9	-196.1	-0.0612	ug/L	-0.0612 ppb	17:36:52
3	Cd 226.502†	-273.5	1.6	0.0201	ug/L	0.0201 ppb	17:37:12
3	Co 228.616†	-94.7	-5.1	-0.0633	ug/L	-0.0633 ppb	17:37:12
3	Cr 267.716†	-24.7	3.7	0.0290	ug/L	0.0290 ppb	17:37:12
3	Cu 324.752†	10095.2	-0.6	-0.0056	ug/L	-0.0056 ppb	17:36:52
3	Mn 257.610†	958.1	140.2	0.1002	ug/L	0.1002 ppb	17:37:12
3	Mo 202.031†	26.9	-4.6	-0.1879	ug/L	-0.1879 ppb	17:37:12
3	Ni 231.604†	162.9	16.2	0.2601	ug/L	0.2601 ppb	17:37:12
3	P 214.914†	329.6	-4.2	-1.3934	ug/L	-1.3934 ppb	17:37:12
3	Pb 220.353†	-4.5	24.6	1.8558	ug/L	1.8558 ppb	17:37:12
3	S 181.975 Axial†	59.5	-7.8	-6.6180	ug/L	-6.6180 ppb	17:37:12
3	Sb 206.836†	58.7	13.8	2.7186	ug/L	2.7186 ppb	17:37:12
3	Se 196.026†	-29.2	-7.9	-2.8017	ug/L	-2.8017 ppb	17:37:12
3	Si 251.611†	692.2	138.6	2.8475	ug/L	2.8475 ppb	17:37:12
3	Sn 189.927†	16.1	10.7	1.1174	ug/L	1.1174 ppb	17:37:12
3	Ti 334.940†	-1170.3	-72.1	-0.0937	ug/L	-0.0937 ppb	17:36:52
3	Tl 190.801†	-56.9	4.0	0.6686	ug/L	0.6686 ppb	17:37:12
3	U 409.014†	-3679.4	120.5	2.9987	ug/L	2.9987 ppb	17:36:47
3	V 292.402†	-1672.2	-35.2	-0.1855	ug/L	-0.1855 ppb	17:36:52
3	Zn 213.857†	1090.3	-21.8	-0.1184	ug/L	-0.1184 ppb	17:37:12
3	SiO2†	671.7	75.7	3.3133	ug/L	3.3133 ppb	17:37:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1052648.3	99.224	%	0.1771				0.18%
Sc Radial	5441.8	97.8	%	1.11				1.14%
Y 371.029	847390.6	99.317	%	0.2127				0.21%
Y RADIAL	4719.5	98.00	%	1.153				1.18%
Ag 328.068†	24.7	0.0862	ug/L	0.15943	0.0862	ppb	0.15943	184.88%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	25.3	23.035	ug/L	15.5573	23.035	ppb	15.5573	67.54%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.4	-2.6910	ug/L	1.90870	-2.6910	ppb	1.90870	70.93%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	266.7	4.1609	ug/L	0.40719	4.1609	ppb	0.40719	9.79%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.3	0.1323	ug/L	0.05607	0.1323	ppb	0.05607	42.39%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-217.9	-0.0678	ug/L	0.00637	-0.0678	ppb	0.00637	9.40%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.0	32.295	ug/L	1.7810	32.295	ppb	1.7810	5.51%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -8.0     -0.0554 ug/L       0.06535     -0.0554 ppb        0.06535 117.98%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -3.5     -0.0434 ug/L       0.11262     -0.0434 ppb        0.11262 259.50%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.5      0.1483 ug/L       0.14376      0.1483 ppb        0.14376  96.96%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -46.9     -0.1177 ug/L       0.17025     -0.1177 ppb        0.17025 144.65%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -1.0     -34.790 ug/L       33.3662     -34.790 ppb        33.3662  95.91%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          26.9      11.663 ug/L       29.3000      11.663 ppb        29.3000 251.23%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.1      4.3431 ug/L      60.03582      4.3431 ppb       60.03582 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               120.3      0.0904 ug/L       0.01045      0.0904 ppb        0.01045  11.56%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 0.3      0.0080 ug/L       0.26733      0.0080 ppb        0.26733 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -6.8     -18.359 ug/L        7.3401     -18.359 ppb         7.3401  39.98%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 9.9      0.1584 ug/L       0.13612      0.1584 ppb        0.13612  85.96%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  9.2      3.3031 ug/L       4.12410      3.3031 ppb        4.12410 124.85%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                14.8      1.1140 ug/L       0.76116      1.1140 ppb        0.76116  68.33%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -3.2     -2.7204 ug/L       4.38863     -2.7204 ppb        4.38863 161.32%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 7.2      1.4055 ug/L       2.17635      1.4055 ppb        2.17635 154.85%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 5.7      1.7327 ug/L       4.16593      1.7327 ppb        4.16593 240.43%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               143.2      2.9495 ug/L       0.23314      2.9495 ppb        0.23314   7.90%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 3.0      0.3165 ug/L       0.78890      0.3165 ppb        0.78890 249.25%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                16.0      0.2461 ug/L       0.09894      0.2461 ppb        0.09894  40.20%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                -3.9     -0.0029 ug/L       0.09509     -0.0029 ppb        0.09509 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 2.4      0.4023 ug/L       0.73219      0.4023 ppb        0.73219 181.98%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 -6.2     -0.1494 ug/L       3.07967     -0.1494 ppb        3.07967 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  6.4      0.0410 ug/L       0.21872      0.0410 ppb        0.21872 533.08%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -18.4     -0.1000 ug/L       0.02387     -0.1000 ppb        0.02387  23.86%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     100.7      4.4390 ug/L       0.97632      4.4390 ppb        0.97632  21.99%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 41
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 18:26:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5588.9	5588.9	100	%			18:28:46
1	Y RADIAL	4827.1	4827.1	100.2	%			18:28:46
1	Al 396.153Radial†	5257.9	5327.5	4828.0	ug/L	4828.0	ppb	18:28:46
1	Ca 317.933Radial†	1950.6	1925.2	4795.5	ug/L	4795.5	ppb	18:29:06
1	Fe 238.204 Radial†	138.4	137.5	4837.6	ug/L	4837.6	ppb	18:29:06
1	K 766.490 Radial†	13215.6	11685.6	5064.2	ug/L	5064.2	ppb	18:28:46
1	Mg 279.077 IEC†	63.1	62.7	4968.3	ug/L	4968.3	ppb	18:29:06
1	Na 589.592 Radial†	3554.9	3710.1	10032	ug/L	10032	ppb	18:28:46
1	Sr 421.552†	33983.5	33831.9	521.19	ug/L	521.19	ppb	18:28:46
1	Sc 361.383	1068303.1	1068303.1	100.70	%			18:30:05
1	Y 371.029	852058.0	852058.0	99.864	%			18:30:05
1	Ag 328.068†	127441.9	125918.1	501.45	ug/L	501.45	ppb	18:30:05
1	As 188.979†	2040.3	2063.0	487.43	ug/L	487.43	ppb	18:30:25
1	B 249.677†	31022.1	31188.1	484.21	ug/L	484.21	ppb	18:30:05
1	Ba 233.527†	98059.6	97354.2	493.97	ug/L	493.97	ppb	18:30:05
1	Be 313.107†	1587928.2	1584214.5	493.74	ug/L	493.74	ppb	18:30:05
1	Cd 226.502†	66395.2	66211.6	494.96	ug/L	494.96	ppb	18:30:05
1	Co 228.616†	38552.9	38375.5	478.21	ug/L	478.21	ppb	18:30:25
1	Cr 267.716†	58170.9	57795.4	492.94	ug/L	492.94	ppb	18:30:05
1	Cu 324.752†	211050.8	199393.6	492.24	ug/L	492.24	ppb	18:30:05
1	Mn 257.610†	628414.5	623222.5	493.05	ug/L	493.05	ppb	18:30:05
1	Mo 202.031†	12515.0	12396.3	496.52	ug/L	496.52	ppb	18:30:25
1	Ni 231.604†	30426.7	30067.1	481.60	ug/L	481.60	ppb	18:30:25
1	P 214.914†	7311.2	6923.4	2372.2	ug/L	2372.2	ppb	18:30:25
1	Pb 220.353†	6579.0	6562.4	493.27	ug/L	493.27	ppb	18:30:25
1	S 181.975 Axial†	1239.0	1162.6	983.12	ug/L	983.12	ppb	18:30:25
1	Sb 206.836†	2522.4	2459.5	489.52	ug/L	489.52	ppb	18:30:25
1	Se 196.026†	1503.5	1514.7	511.38	ug/L	511.38	ppb	18:30:25
1	Si 251.611†	122852.3	121438.8	2494.0	ug/L	2494.0	ppb	18:30:05
1	Sn 189.927†	4717.2	4679.0	487.10	ug/L	487.10	ppb	18:30:25
1	Ti 334.940†	380813.1	379277.2	496.43	ug/L	496.43	ppb	18:30:05
1	Tl 190.801†	2851.3	2892.9	489.92	ug/L	489.92	ppb	18:30:25
1	U 409.014†	15937.4	19661.4	486.29	ug/L	486.29	ppb	18:30:05
1	V 292.402†	85502.0	86560.8	496.88	ug/L	496.88	ppb	18:30:05
1	Zn 213.857†	90262.5	88513.1	489.79	ug/L	489.79	ppb	18:30:05
1	SiO2†	122486.8	121033.6	5322.2	ug/L	5322.2	ppb	18:31:25
2	Sc Radial	5417.1	5417.1	97.3	%			18:29:11
2	Y RADIAL	4690.9	4690.9	97.41	%			18:29:11
2	Al 396.153Radial†	5158.4	5391.3	4885.9	ug/L	4885.9	ppb	18:29:11
2	Ca 317.933Radial†	1945.7	1981.8	4936.5	ug/L	4936.5	ppb	18:29:31
2	Fe 238.204 Radial†	138.5	142.0	4996.1	ug/L	4996.1	ppb	18:29:31
2	K 766.490 Radial†	13023.9	11906.1	5159.9	ug/L	5159.9	ppb	18:29:11
2	Mg 279.077 IEC†	63.2	64.7	5131.2	ug/L	5131.2	ppb	18:29:31
2	Na 589.592 Radial†	3451.7	3716.2	10048	ug/L	10048	ppb	18:29:11
2	Sr 421.552†	33010.3	33905.2	522.32	ug/L	522.32	ppb	18:29:11
2	Sc 361.383	1062936.5	1062936.5	100.19	%			18:30:33
2	Y 371.029	847024.2	847024.2	99.274	%			18:30:33
2	Ag 328.068†	127152.6	126268.3	502.89	ug/L	502.89	ppb	18:30:33
2	As 188.979†	2046.3	2079.2	491.25	ug/L	491.25	ppb	18:30:53
2	B 249.677†	30951.3	31273.0	485.50	ug/L	485.50	ppb	18:30:33
2	Ba 233.527†	97627.6	97414.7	494.29	ug/L	494.29	ppb	18:30:33
2	Be 313.107†	1578732.8	1582998.5	493.37	ug/L	493.37	ppb	18:30:33
2	Cd 226.502†	66044.5	66194.5	494.82	ug/L	494.82	ppb	18:30:33
2	Co 228.616†	38671.0	38686.7	482.09	ug/L	482.09	ppb	18:30:53
2	Cr 267.716†	57957.9	57874.6	493.62	ug/L	493.62	ppb	18:30:33
2	Cu 324.752†	210487.3	199889.3	493.47	ug/L	493.47	ppb	18:30:33
2	Mn 257.610†	625861.3	623824.9	493.55	ug/L	493.55	ppb	18:30:33
2	Mo 202.031†	12553.9	12497.9	500.60	ug/L	500.60	ppb	18:30:53
2	Ni 231.604†	30528.4	30321.1	485.67	ug/L	485.67	ppb	18:30:53

2	P 214.914†	7329.1	6978.0	2391.3	ug/L	2391.3 ppb	18:30:53
2	Pb 220.353†	6568.6	6585.0	494.98	ug/L	494.98 ppb	18:30:53
2	S 181.975 Axial†	1245.6	1175.3	993.91	ug/L	993.91 ppb	18:30:53
2	Sb 206.836†	2546.9	2496.6	496.94	ug/L	496.94 ppb	18:30:53
2	Se 196.026†	1492.9	1511.7	510.97	ug/L	510.97 ppb	18:30:53
2	Si 251.611†	122554.7	121757.8	2500.5	ug/L	2500.5 ppb	18:30:33
2	Sn 189.927†	4730.7	4716.1	490.97	ug/L	490.97 ppb	18:30:53
2	Ti 334.940†	379257.3	379633.7	496.91	ug/L	496.91 ppb	18:30:33
2	Tl 190.801†	2867.7	2923.6	495.08	ug/L	495.08 ppb	18:30:53
2	U 409.014†	15634.2	19438.8	480.75	ug/L	480.75 ppb	18:30:33
2	V 292.402†	85223.8	86711.9	497.76	ug/L	497.76 ppb	18:30:33
2	Zn 213.857†	89962.6	88666.4	490.59	ug/L	490.59 ppb	18:30:33
2	SiO2†	122549.6	121710.4	5351.9	ug/L	5351.9 ppb	18:31:31
3	Sc Radial	5484.7	5484.7	98.6	%		18:29:36
3	Y RADIAL	4730.2	4730.2	98.22	%		18:29:36
3	Al 396.153Radial†	5169.3	5337.0	4836.3	ug/L	4836.3 ppb	18:29:36
3	Ca 317.933Radial†	1938.5	1949.8	4856.8	ug/L	4856.8 ppb	18:29:56
3	Fe 238.204 Radial†	136.0	137.6	4843.0	ug/L	4843.0 ppb	18:29:56
3	K 766.490 Radial†	12946.2	11662.2	5054.1	ug/L	5054.1 ppb	18:29:36
3	Mg 279.077 IEC†	60.7	61.4	4870.0	ug/L	4870.0 ppb	18:29:56
3	Na 589.592 Radial†	3449.0	3669.8	9922.7	ug/L	9922.7 ppb	18:29:36
3	Sr 421.552†	33301.1	33781.9	520.42	ug/L	520.42 ppb	18:29:36
3	Sc 361.383	1054506.0	1054506.0	99.399	%		18:31:00
3	Y 371.029	840120.6	840120.6	98.465	%		18:31:00
3	Ag 328.068†	125880.9	126003.5	501.80	ug/L	501.80 ppb	18:31:00
3	As 188.979†	2037.3	2086.5	492.92	ug/L	492.92 ppb	18:31:20
3	B 249.677†	30577.2	31143.6	483.50	ug/L	483.50 ppb	18:31:00
3	Ba 233.527†	96914.0	97475.7	494.59	ug/L	494.59 ppb	18:31:00
3	Be 313.107†	1568704.5	1585506.7	494.15	ug/L	494.15 ppb	18:31:00
3	Cd 226.502†	65630.3	66304.8	495.66	ug/L	495.66 ppb	18:31:00
3	Co 228.616†	38602.1	38926.0	485.09	ug/L	485.09 ppb	18:31:20
3	Cr 267.716†	57510.6	57887.0	493.72	ug/L	493.72 ppb	18:31:00
3	Cu 324.752†	207975.8	199042.2	491.37	ug/L	491.37 ppb	18:31:00
3	Mn 257.610†	621419.5	624350.2	493.95	ug/L	493.95 ppb	18:31:00
3	Mo 202.031†	12556.7	12600.8	504.71	ug/L	504.71 ppb	18:31:20
3	Ni 231.604†	30510.1	30546.3	489.28	ug/L	489.28 ppb	18:31:20
3	P 214.914†	7318.1	7025.4	2408.5	ug/L	2408.5 ppb	18:31:20
3	Pb 220.353†	6612.4	6681.5	502.23	ug/L	502.23 ppb	18:31:20
3	S 181.975 Axial†	1242.2	1181.9	999.50	ug/L	999.50 ppb	18:31:20
3	Sb 206.836†	2533.3	2503.2	498.38	ug/L	498.38 ppb	18:31:20
3	Se 196.026†	1473.8	1504.3	508.05	ug/L	508.05 ppb	18:31:20
3	Si 251.611†	121258.9	121432.1	2493.7	ug/L	2493.7 ppb	18:31:00
3	Sn 189.927†	4728.0	4751.1	494.60	ug/L	494.60 ppb	18:31:20
3	Ti 334.940†	376088.3	379471.8	496.69	ug/L	496.69 ppb	18:31:00
3	Tl 190.801†	2855.1	2933.7	496.79	ug/L	496.79 ppb	18:31:20
3	U 409.014†	15414.6	19342.5	478.38	ug/L	478.38 ppb	18:31:00
3	V 292.402†	84460.7	86624.2	497.33	ug/L	497.33 ppb	18:31:00
3	Zn 213.857†	89241.2	88658.5	490.56	ug/L	490.56 ppb	18:31:00
3	SiO2†	122201.2	122337.8	5379.5	ug/L	5379.5 ppb	18:31:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1061915.2	100.10	%	0.656				0.65%
Sc Radial	5496.9	98.8	%	1.56				1.57%
Y 371.029	846400.9	99.201	%	0.7024				0.71%
Y RADIAL	4749.4	98.62	%	1.455				1.48%
Ag 328.068†	126063.3	502.04	ug/L	0.753	502.04	ppb	0.753	0.15%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5351.9	4850.1	ug/L	31.28	4850.1	ppb	31.28	0.64%
QC value within limits for Al 396.153Radial Recovery = 97.00%								
As 188.979†	2076.3	490.53	ug/L	2.816	490.53	ppb	2.816	0.57%
QC value within limits for As 188.979 Recovery = 98.11%								
B 249.677†	31201.6	484.40	ug/L	1.016	484.40	ppb	1.016	0.21%
QC value within limits for B 249.677 Recovery = 96.88%								
Ba 233.527†	97414.9	494.28	ug/L	0.308	494.28	ppb	0.308	0.06%
QC value within limits for Ba 233.527 Recovery = 98.86%								
Be 313.107†	1584239.9	493.75	ug/L	0.390	493.75	ppb	0.390	0.08%
QC value within limits for Be 313.107 Recovery = 98.75%								
Ca 317.933Radial†	1952.3	4862.9	ug/L	70.70	4862.9	ppb	70.70	1.45%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.26%
Cd 226.502†            66237.0      495.15 ug/L         0.452      495.15 ppb          0.452   0.09%
   QC value within limits for Cd 226.502  Recovery = 99.03%
Co 228.616†            38662.7      481.80 ug/L         3.448      481.80 ppb          3.448   0.72%
   QC value within limits for Co 228.616  Recovery = 96.36%
Cr 267.716†            57852.3      493.43 ug/L         0.426      493.43 ppb          0.426   0.09%
   QC value within limits for Cr 267.716  Recovery = 98.69%
Cu 324.752†           199441.7      492.36 ug/L         1.055      492.36 ppb          1.055   0.21%
   QC value within limits for Cu 324.752  Recovery = 98.47%
Fe 238.204 Radial†       139.0      4892.2 ug/L         89.98      4892.2 ppb          89.98   1.84%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.84%
K 766.490 Radial†      11751.3      5092.7 ug/L         58.41      5092.7 ppb          58.41   1.15%
   QC value within limits for K 766.490 Radial  Recovery = 101.85%
Mg 279.077 IEC†           62.9      4989.9 ug/L        131.93      4989.9 ppb         131.93   2.64%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.80%
Mn 257.610†           623799.2      493.51 ug/L         0.448      493.51 ppb          0.448   0.09%
   QC value within limits for Mn 257.610  Recovery = 98.70%
Mo 202.031†            12498.3      500.61 ug/L         4.094      500.61 ppb          4.094   0.82%
   QC value within limits for Mo 202.031  Recovery = 100.12%
Na 589.592 Radial†      3698.7       10001 ug/L          68.2       10001 ppb           68.2   0.68%
   QC value within limits for Na 589.592 Radial  Recovery = 100.01%
Ni 231.604†            30311.5      485.52 ug/L         3.841      485.52 ppb          3.841   0.79%
   QC value within limits for Ni 231.604  Recovery = 97.10%
P 214.914†              6975.6      2390.7 ug/L         18.15      2390.7 ppb          18.15   0.76%
   QC value within limits for P 214.914  Recovery = 95.63%
Pb 220.353†             6609.6      496.83 ug/L         4.755      496.83 ppb          4.755   0.96%
   QC value within limits for Pb 220.353  Recovery = 99.37%
S 181.975 Axial†        1173.3      992.18 ug/L         8.322      992.18 ppb          8.322   0.84%
   QC value within limits for S 181.975 Axial  Recovery = 99.22%
Sb 206.836†             2486.4      494.95 ug/L         4.754      494.95 ppb          4.754   0.96%
   QC value within limits for Sb 206.836  Recovery = 98.99%
Se 196.026†             1510.2      510.13 ug/L         1.814      510.13 ppb          1.814   0.36%
   QC value within limits for Se 196.026  Recovery = 102.03%
Si 251.611†           121542.9      2496.1 ug/L          3.82      2496.1 ppb           3.82   0.15%
   QC value within limits for Si 251.611  Recovery = 99.84%
Sn 189.927†             4715.4      490.89 ug/L         3.754      490.89 ppb          3.754   0.76%
   QC value within limits for Sn 189.927  Recovery = 98.18%
Sr 421.552†            33839.7      521.31 ug/L         0.955      521.31 ppb          0.955   0.18%
   QC value within limits for Sr 421.552  Recovery = 104.26%
Ti 334.940†           379460.9      496.67 ug/L         0.240      496.67 ppb          0.240   0.05%
   QC value within limits for Ti 334.940  Recovery = 99.33%
Tl 190.801†             2916.7      493.93 ug/L         3.574      493.93 ppb          3.574   0.72%
   QC value within limits for Tl 190.801  Recovery = 98.79%
U 409.014†             19480.9      481.80 ug/L         4.062      481.80 ppb          4.062   0.84%
   QC value within limits for U 409.014  Recovery = 96.36%
V 292.402†             86632.3      497.32 ug/L         0.439      497.32 ppb          0.439   0.09%
   QC value within limits for V 292.402  Recovery = 99.46%
Zn 213.857†            88612.7      490.31 ug/L         0.454      490.31 ppb          0.454   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.06%
SiO2†                 121694.0      5351.2 ug/L         28.64      5351.2 ppb          28.64   0.54%
   QC value within limits for SiO2  Recovery = 100.07%
All analyte(s) passed QC.
```

Sequence No.: 42
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 18:33:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5570.5	5570.5	100	%			18:35:37
1	Y RADIAL	4845.4	4845.4	100.6	%			18:35:37
1	Al 396.153Radial†	-90.2	2.1	1.9202	ug/L	1.9202	ppb	18:35:37
1	Ca 317.933Radial†	28.8	11.8	29.428	ug/L	29.428	ppb	18:35:57
1	Fe 238.204 Radial†	0.0	-0.3	-11.611	ug/L	-11.611	ppb	18:35:57
1	K 766.490 Radial†	1494.6	20.0	8.6702	ug/L	8.6702	ppb	18:35:37
1	Mg 279.077 IEC†	1.5	1.3	105.73	ug/L	105.73	ppb	18:35:57
1	Na 589.592 Radial†	-191.2	-20.5	-55.558	ug/L	-55.558	ppb	18:35:57
1	Sr 421.552†	31.9	26.3	0.4057	ug/L	0.4057	ppb	18:35:57
1	Sc 361.383	1057788.8	1057788.8	99.708	%			18:36:54
1	Y 371.029	852989.6	852989.6	99.974	%			18:36:54
1	Ag 328.068†	633.6	-3.1	-0.0162	ug/L	-0.0162	ppb	18:36:59
1	As 188.979†	-50.9	-14.1	-3.3143	ug/L	-3.3143	ppb	18:37:19
1	B 249.677†	-3.1	378.4	5.8995	ug/L	5.8995	ppb	18:36:59
1	Ba 233.527†	39.1	14.9	0.0761	ug/L	0.0761	ppb	18:37:19
1	Be 313.107†	-7409.3	-114.8	-0.0356	ug/L	-0.0356	ppb	18:36:59
1	Cd 226.502†	-282.3	-5.5	-0.0396	ug/L	-0.0396	ppb	18:37:19
1	Co 228.616†	-88.1	2.1	0.0260	ug/L	0.0260	ppb	18:37:19
1	Cr 267.716†	-19.8	8.8	0.0745	ug/L	0.0745	ppb	18:37:19
1	Cu 324.752†	10081.3	-80.5	-0.1992	ug/L	-0.1992	ppb	18:36:59
1	Mn 257.610†	942.5	118.3	0.0899	ug/L	0.0899	ppb	18:37:19
1	Mo 202.031†	34.1	2.4	0.0971	ug/L	0.0971	ppb	18:37:19
1	Ni 231.604†	157.1	9.3	0.1495	ug/L	0.1495	ppb	18:37:19
1	P 214.914†	334.7	-1.2	-0.3908	ug/L	-0.3908	ppb	18:37:19
1	Pb 220.353†	-21.1	7.9	0.5954	ug/L	0.5954	ppb	18:37:19
1	S 181.975 Axial†	62.2	-5.4	-4.6035	ug/L	-4.6035	ppb	18:37:19
1	Sb 206.836†	45.1	-0.2	-0.0397	ug/L	-0.0397	ppb	18:37:19
1	Se 196.026†	-25.1	-3.5	-1.1824	ug/L	-1.1824	ppb	18:37:19
1	Si 251.611†	729.4	171.4	3.5345	ug/L	3.5345	ppb	18:37:19
1	Sn 189.927†	-0.2	-5.7	-0.5853	ug/L	-0.5853	ppb	18:37:19
1	Ti 334.940†	-1072.0	34.1	0.0461	ug/L	0.0461	ppb	18:36:59
1	Tl 190.801†	-44.0	17.2	2.9062	ug/L	2.9062	ppb	18:37:19
1	U 409.014†	-3773.0	50.8	1.2605	ug/L	1.2605	ppb	18:36:54
1	V 292.402†	-1587.4	60.7	0.3514	ug/L	0.3514	ppb	18:36:59
1	Zn 213.857†	1108.9	-10.2	-0.0601	ug/L	-0.0601	ppb	18:37:19
1	SiO2†	763.8	163.7	7.2275	ug/L	7.2275	ppb	18:38:25
2	Sc Radial	5380.9	5380.9	96.7	%			18:36:02
2	Y RADIAL	4671.6	4671.6	97.01	%			18:36:02
2	Al 396.153Radial†	-54.2	36.1	32.856	ug/L	32.856	ppb	18:36:02
2	Ca 317.933Radial†	33.1	17.3	43.141	ug/L	43.141	ppb	18:36:22
2	Fe 238.204 Radial†	0.2	-0.1	-4.2925	ug/L	-4.2925	ppb	18:36:22
2	K 766.490 Radial†	1508.4	86.9	37.731	ug/L	37.731	ppb	18:36:02
2	Mg 279.077 IEC†	-0.2	-0.4	-28.964	ug/L	-28.964	ppb	18:36:22
2	Na 589.592 Radial†	-195.5	-31.7	-85.785	ug/L	-85.785	ppb	18:36:22
2	Sr 421.552†	19.6	14.8	0.2281	ug/L	0.2281	ppb	18:36:22
2	Sc 361.383	1057995.8	1057995.8	99.728	%			18:37:24
2	Y 371.029	851628.4	851628.4	99.814	%			18:37:24
2	Ag 328.068†	708.9	72.2	0.2877	ug/L	0.2877	ppb	18:37:30
2	As 188.979†	-43.6	-6.8	-1.6049	ug/L	-1.6049	ppb	18:37:50
2	B 249.677†	-45.1	336.3	5.2404	ug/L	5.2404	ppb	18:37:30
2	Ba 233.527†	28.3	4.1	0.0213	ug/L	0.0213	ppb	18:37:50
2	Be 313.107†	-7323.1	-26.8	-0.0085	ug/L	-0.0085	ppb	18:37:30
2	Cd 226.502†	-289.4	-12.5	-0.0930	ug/L	-0.0930	ppb	18:37:50
2	Co 228.616†	-71.2	19.1	0.2376	ug/L	0.2376	ppb	18:37:50
2	Cr 267.716†	-45.1	-16.6	-0.1401	ug/L	-0.1401	ppb	18:37:50
2	Cu 324.752†	10091.4	-72.3	-0.1787	ug/L	-0.1787	ppb	18:37:30
2	Mn 257.610†	950.0	125.6	0.0993	ug/L	0.0993	ppb	18:37:50
2	Mo 202.031†	31.6	-0.1	-0.0040	ug/L	-0.0040	ppb	18:37:50
2	Ni 231.604†	150.8	3.0	0.0474	ug/L	0.0474	ppb	18:37:50

2	P 214.914†	336.3	0.3	0.1546	ug/L	0.1546 ppb	18:37:50
2	Pb 220.353†	-18.5	10.5	0.7931	ug/L	0.7931 ppb	18:37:50
2	S 181.975 Axial†	61.9	-5.8	-4.9273	ug/L	-4.9273 ppb	18:37:50
2	Sb 206.836†	55.1	9.8	1.9219	ug/L	1.9219 ppb	18:37:50
2	Se 196.026†	-31.6	-10.1	-3.2895	ug/L	-3.2895 ppb	18:37:50
2	Si 251.611†	1046.2	489.0	10.078	ug/L	10.078 ppb	18:37:50
2	Sn 189.927†	4.7	-0.7	-0.0741	ug/L	-0.0741 ppb	18:37:50
2	Ti 334.940†	-1151.0	-44.9	-0.0545	ug/L	-0.0545 ppb	18:37:30
2	Tl 190.801†	-54.3	7.0	1.1759	ug/L	1.1759 ppb	18:37:50
2	U 409.014†	-3948.4	-124.5	-3.0876	ug/L	-3.0876 ppb	18:37:24
2	V 292.402†	-1593.8	54.7	0.3042	ug/L	0.3042 ppb	18:37:30
2	Zn 213.857†	1096.4	-23.0	-0.1272	ug/L	-0.1272 ppb	18:37:50
2	SiO2†	1314.7	716.0	31.608	ug/L	31.608 ppb	18:38:30
3	Sc Radial	5576.5	5576.5	100	%		18:36:28
3	Y RADIAL	4832.1	4832.1	100.3	%		18:36:28
3	Al 396.153Radial†	-65.7	26.6	24.197	ug/L	24.197 ppb	18:36:28
3	Ca 317.933Radial†	27.5	10.5	26.260	ug/L	26.260 ppb	18:36:48
3	Fe 238.204 Radial†	-0.3	-0.6	-21.053	ug/L	-21.053 ppb	18:36:48
3	K 766.490 Radial†	1529.4	53.1	23.067	ug/L	23.067 ppb	18:36:28
3	Mg 279.077 IEC†	0.2	0.0	2.2903	ug/L	2.2903 ppb	18:36:48
3	Na 589.592 Radial†	-203.6	-32.7	-88.486	ug/L	-88.486 ppb	18:36:48
3	Sr 421.552†	22.8	17.3	0.2660	ug/L	0.2660 ppb	18:36:48
3	Sc 361.383	1061241.3	1061241.3	100.03	%		18:37:55
3	Y 371.029	855632.2	855632.2	100.28	%		18:37:55
3	Ag 328.068†	663.9	25.1	0.0953	ug/L	0.0953 ppb	18:38:00
3	As 188.979†	-38.9	-2.0	-0.4789	ug/L	-0.4789 ppb	18:38:20
3	B 249.677†	-82.5	299.0	4.6630	ug/L	4.6630 ppb	18:38:00
3	Ba 233.527†	44.2	19.9	0.1007	ug/L	0.1007 ppb	18:38:20
3	Be 313.107†	-7409.1	-90.4	-0.0282	ug/L	-0.0282 ppb	18:38:00
3	Cd 226.502†	-286.4	-8.6	-0.0619	ug/L	-0.0619 ppb	18:38:20
3	Co 228.616†	-83.6	6.8	0.0856	ug/L	0.0856 ppb	18:38:20
3	Cr 267.716†	-29.6	-1.0	-0.0079	ug/L	-0.0079 ppb	18:38:20
3	Cu 324.752†	10175.1	-19.6	-0.0495	ug/L	-0.0495 ppb	18:38:00
3	Mn 257.610†	934.9	107.5	0.0822	ug/L	0.0822 ppb	18:38:20
3	Mo 202.031†	33.3	1.5	0.0593	ug/L	0.0593 ppb	18:38:20
3	Ni 231.604†	159.3	11.0	0.1761	ug/L	0.1761 ppb	18:38:20
3	P 214.914†	339.4	2.4	0.8687	ug/L	0.8687 ppb	18:38:20
3	Pb 220.353†	-25.3	3.8	0.2912	ug/L	0.2912 ppb	18:38:20
3	S 181.975 Axial†	65.0	-2.8	-2.4133	ug/L	-2.4133 ppb	18:38:20
3	Sb 206.836†	58.1	12.6	2.4795	ug/L	2.4795 ppb	18:38:20
3	Se 196.026†	-19.4	2.2	0.6547	ug/L	0.6547 ppb	18:38:20
3	Si 251.611†	711.7	151.3	3.1134	ug/L	3.1134 ppb	18:38:20
3	Sn 189.927†	7.2	1.8	0.1856	ug/L	0.1856 ppb	18:38:20
3	Ti 334.940†	-1125.2	-15.6	-0.0177	ug/L	-0.0177 ppb	18:38:00
3	Tl 190.801†	-56.0	5.4	0.9103	ug/L	0.9103 ppb	18:38:20
3	U 409.014†	-3924.0	-87.9	-2.1781	ug/L	-2.1781 ppb	18:37:55
3	V 292.402†	-1605.8	47.6	0.2693	ug/L	0.2693 ppb	18:38:00
3	Zn 213.857†	1097.5	-25.3	-0.1400	ug/L	-0.1400 ppb	18:38:20
3	SiO2†	776.7	174.1	7.6706	ug/L	7.6706 ppb	18:38:35

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1059008.7	99.823	%	0.1825				0.18%
Sc Radial	5509.3	99.0	%	2.00				2.02%
Y 371.029	853416.8	100.02	%	0.239				0.24%
Y RADIAL	4783.0	99.32	%	2.009				2.02%
Ag 328.068†	31.4	0.1223	ug/L	0.15374	0.1223	ppb	0.15374	125.74%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	21.6	19.658	ug/L	15.9596	19.658	ppb	15.9596	81.19%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-7.6	-1.7994	ug/L	1.42769	-1.7994	ppb	1.42769	79.34%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	337.9	5.2677	ug/L	0.61871	5.2677	ppb	0.61871	11.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	13.0	0.0660	ug/L	0.04066	0.0660	ppb	0.04066	61.59%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-77.3	-0.0241	ug/L	0.01400	-0.0241	ppb	0.01400	58.17%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.2	32.943	ug/L	8.9724	32.943	ppb	8.9724	27.24%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -8.9     -0.0648 ug/L       0.02679     -0.0648 ppb        0.02679  41.33%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               9.3      0.1164 ug/L       0.10914      0.1164 ppb        0.10914  93.77%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -3.0     -0.0245 ug/L       0.10825     -0.0245 ppb        0.10825 441.83%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -57.5     -0.1425 ug/L       0.08116     -0.1425 ppb        0.08116  56.96%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       -0.4     -12.319 ug/L        8.4025     -12.319 ppb         8.4025  68.21%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        53.3      23.156 ug/L       14.5306      23.156 ppb        14.5306  62.75%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.3      26.353 ug/L       70.4982      26.353 ppb        70.4982 267.51%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             117.1       0.0904 ug/L       0.00855      0.0904 ppb        0.00855   9.45%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               1.3       0.0508 ug/L       0.05107      0.0508 ppb        0.05107 100.51%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      -28.3     -76.610 ug/L       18.2813     -76.610 ppb        18.2813  23.86%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               7.8       0.1243 ug/L       0.06794      0.1243 ppb        0.06794  54.65%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                0.5       0.2108 ug/L       0.63163      0.2108 ppb        0.63163 299.59%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               7.4       0.5599 ug/L       0.25287      0.5599 ppb        0.25287  45.16%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -4.7      -3.9814 ug/L       1.36763     -3.9814 ppb        1.36763  34.35%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               7.4       1.4539 ug/L       1.32321      1.4539 ppb        1.32321  91.01%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -3.8      -1.2724 ug/L       1.97364     -1.2724 ppb        1.97364 155.11%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             270.6       5.5752 ug/L       3.90485      5.5752 ppb        3.90485  70.04%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -1.5      -0.1580 ug/L       0.39223     -0.1580 ppb        0.39223 248.32%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              19.5       0.2999 ug/L       0.09352      0.2999 ppb        0.09352  31.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -8.8      -0.0087 ug/L       0.05087     -0.0087 ppb        0.05087 584.35%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               9.9       1.6641 ug/L       1.08383      1.6641 ppb        1.08383  65.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -53.9      -1.3351 ug/L       2.29339     -1.3351 ppb        2.29339 171.78%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               54.3       0.3083 ug/L       0.04121      0.3083 ppb        0.04121  13.37%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -19.5      -0.1091 ug/L       0.04293     -0.1091 ppb        0.04293  39.36%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   351.2      15.502 ug/L       13.9501      15.502 ppb        13.9501  89.99%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 50
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 19:29:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5579.6	5579.6	100	%			19:31:38
1	Y RADIAL	4874.6	4874.6	101.2	%			19:31:38
1	Al 396.153Radial†	5236.9	5315.2	4816.5	ug/L	4816.5	ppb	19:31:38
1	Ca 317.933Radial†	1954.9	1932.8	4814.2	ug/L	4814.2	ppb	19:31:58
1	Fe 238.204 Radial†	136.8	136.1	4788.5	ug/L	4788.5	ppb	19:31:58
1	K 766.490 Radial†	13099.3	11591.4	5023.5	ug/L	5023.5	ppb	19:31:38
1	Mg 279.077 IEC†	62.3	62.0	4913.8	ug/L	4913.8	ppb	19:31:58
1	Na 589.592 Radial†	3359.6	3521.1	9520.6	ug/L	9520.6	ppb	19:31:38
1	Sr 421.552†	32770.4	32677.9	503.41	ug/L	503.41	ppb	19:31:38
1	Sc 361.383	1070146.9	1070146.9	100.87	%			19:32:57
1	Y 371.029	852484.1	852484.1	99.914	%			19:32:57
1	Ag 328.068†	127666.5	125922.7	501.45	ug/L	501.45	ppb	19:32:57
1	As 188.979†	2076.4	2095.4	495.00	ug/L	495.00	ppb	19:33:17
1	B 249.677†	31028.7	31141.6	483.48	ug/L	483.48	ppb	19:32:57
1	Ba 233.527†	98321.4	97446.0	494.44	ug/L	494.44	ppb	19:32:57
1	Be 313.107†	1595760.9	1589262.6	495.32	ug/L	495.32	ppb	19:32:57
1	Cd 226.502†	66557.9	66259.4	495.33	ug/L	495.33	ppb	19:32:57
1	Co 228.616†	39092.0	38843.9	484.06	ug/L	484.06	ppb	19:33:17
1	Cr 267.716†	58269.9	57794.0	492.93	ug/L	492.93	ppb	19:32:57
1	Cu 324.752†	212056.8	200029.7	493.80	ug/L	493.80	ppb	19:32:57
1	Mn 257.610†	630775.5	624487.8	494.05	ug/L	494.05	ppb	19:32:57
1	Mo 202.031†	12701.7	12559.9	503.07	ug/L	503.07	ppb	19:33:17
1	Ni 231.604†	30808.3	30393.3	486.83	ug/L	486.83	ppb	19:33:17
1	P 214.914†	7433.8	7032.5	2410.6	ug/L	2410.6	ppb	19:33:17
1	Pb 220.353†	6663.5	6634.9	498.73	ug/L	498.73	ppb	19:33:17
1	S 181.975 Axial†	1255.5	1176.8	995.15	ug/L	995.15	ppb	19:33:17
1	Sb 206.836†	2574.6	2506.9	499.06	ug/L	499.06	ppb	19:33:17
1	Se 196.026†	1512.4	1521.0	513.27	ug/L	513.27	ppb	19:33:17
1	Si 251.611†	123290.6	121663.1	2498.5	ug/L	2498.5	ppb	19:32:57
1	Sn 189.927†	4787.8	4740.9	493.53	ug/L	493.53	ppb	19:33:17
1	Ti 334.940†	382228.6	380028.9	497.41	ug/L	497.41	ppb	19:32:57
1	Tl 190.801†	2883.4	2919.8	494.45	ug/L	494.45	ppb	19:33:17
1	U 409.014†	16048.9	19744.7	488.36	ug/L	488.36	ppb	19:32:57
1	V 292.402†	85739.2	86649.8	497.48	ug/L	497.48	ppb	19:32:57
1	Zn 213.857†	90657.7	88750.4	491.09	ug/L	491.09	ppb	19:32:57
1	SiO2†	121360.9	119707.9	5263.4	ug/L	5263.4	ppb	19:34:18
2	Sc Radial	5526.7	5526.7	99.3	%			19:32:03
2	Y RADIAL	4806.2	4806.2	99.80	%			19:32:03
2	Al 396.153Radial†	5220.4	5348.7	4846.9	ug/L	4846.9	ppb	19:32:03
2	Ca 317.933Radial†	1960.2	1956.8	4874.2	ug/L	4874.2	ppb	19:32:23
2	Fe 238.204 Radial†	138.1	138.7	4882.5	ug/L	4882.5	ppb	19:32:23
2	K 766.490 Radial†	13206.6	11824.7	5124.6	ug/L	5124.6	ppb	19:32:03
2	Mg 279.077 IEC†	63.5	63.8	5057.3	ug/L	5057.3	ppb	19:32:23
2	Na 589.592 Radial†	3425.4	3619.5	9786.7	ug/L	9786.7	ppb	19:32:03
2	Sr 421.552†	32787.4	33008.3	508.50	ug/L	508.50	ppb	19:32:03
2	Sc 361.383	1069421.6	1069421.6	100.80	%			19:33:25
2	Y 371.029	850767.2	850767.2	99.713	%			19:33:25
2	Ag 328.068†	127828.6	126169.4	502.47	ug/L	502.47	ppb	19:33:25
2	As 188.979†	2100.4	2120.5	500.93	ug/L	500.93	ppb	19:33:45
2	B 249.677†	31177.1	31309.7	486.08	ug/L	486.08	ppb	19:33:25
2	Ba 233.527†	98701.0	97888.6	496.69	ug/L	496.69	ppb	19:33:25
2	Be 313.107†	1601692.5	1596219.7	497.48	ug/L	497.48	ppb	19:33:25
2	Cd 226.502†	67042.3	66784.7	499.25	ug/L	499.25	ppb	19:33:25
2	Co 228.616†	39304.2	39080.8	487.01	ug/L	487.01	ppb	19:33:45
2	Cr 267.716†	58492.3	58053.8	495.14	ug/L	495.14	ppb	19:33:25
2	Cu 324.752†	212098.8	200214.0	494.26	ug/L	494.26	ppb	19:33:25
2	Mn 257.610†	634292.6	628401.0	497.15	ug/L	497.15	ppb	19:33:25
2	Mo 202.031†	12730.1	12596.7	504.55	ug/L	504.55	ppb	19:33:45
2	Ni 231.604†	30997.1	30601.3	490.16	ug/L	490.16	ppb	19:33:45

2	P 214.914†	7458.6	7062.1	2421.0 ug/L	2421.0 ppb	19:33:45
2	Pb 220.353†	6713.3	6688.8	502.77 ug/L	502.77 ppb	19:33:45
2	S 181.975 Axial†	1263.2	1185.3	1002.4 ug/L	1002.4 ppb	19:33:45
2	Sb 206.836†	2588.4	2522.4	502.15 ug/L	502.15 ppb	19:33:45
2	Se 196.026†	1517.5	1527.0	515.57 ug/L	515.57 ppb	19:33:45
2	Si 251.611†	123622.5	122075.3	2506.9 ug/L	2506.9 ppb	19:33:25
2	Sn 189.927†	4824.8	4780.8	497.69 ug/L	497.69 ppb	19:33:45
2	Ti 334.940†	383706.0	381751.4	499.67 ug/L	499.67 ppb	19:33:25
2	Tl 190.801†	2906.9	2945.1	498.72 ug/L	498.72 ppb	19:33:45
2	U 409.014†	15864.7	19572.8	484.08 ug/L	484.08 ppb	19:33:25
2	V 292.402†	86026.6	86992.5	499.42 ug/L	499.42 ppb	19:33:25
2	Zn 213.857†	91066.7	89217.1	493.65 ug/L	493.65 ppb	19:33:25
2	SiO2†	122592.3	121011.1	5320.8 ug/L	5320.8 ppb	19:34:23
3	Sc Radial	5491.9	5491.9	98.7 %		19:32:28
3	Y RADIAL	4742.0	4742.0	98.47 %		19:32:28
3	Al 396.153Radial†	5225.2	5386.7	4881.6 ug/L	4881.6 ppb	19:32:28
3	Ca 317.933Radial†	1954.3	1963.3	4890.2 ug/L	4890.2 ppb	19:32:48
3	Fe 238.204 Radial†	139.0	140.5	4943.8 ug/L	4943.8 ppb	19:32:48
3	K 766.490 Radial†	13129.4	11830.6	5127.3 ug/L	5127.3 ppb	19:32:28
3	Mg 279.077 IEC†	64.2	64.8	5141.9 ug/L	5141.9 ppb	19:32:48
3	Na 589.592 Radial†	3345.3	3560.1	9626.2 ug/L	9626.2 ppb	19:32:28
3	Sr 421.552†	32544.5	32971.0	507.93 ug/L	507.93 ppb	19:32:28
3	Sc 361.383	1067389.8	1067389.8	100.61 %		19:33:52
3	Y 371.029	849890.2	849890.2	99.610 %		19:33:52
3	Ag 328.068†	127915.7	126497.3	503.79 ug/L	503.79 ppb	19:33:52
3	As 188.979†	2089.0	2113.1	499.21 ug/L	499.21 ppb	19:34:12
3	B 249.677†	31139.2	31330.8	486.40 ug/L	486.40 ppb	19:33:52
3	Ba 233.527†	98481.1	97856.4	496.53 ug/L	496.53 ppb	19:33:52
3	Be 313.107†	1597578.3	1595155.0	497.15 ug/L	497.15 ppb	19:33:52
3	Cd 226.502†	66805.2	66675.6	498.43 ug/L	498.43 ppb	19:33:52
3	Co 228.616†	39252.6	39103.7	487.29 ug/L	487.29 ppb	19:34:12
3	Cr 267.716†	58510.6	58182.5	496.24 ug/L	496.24 ppb	19:33:52
3	Cu 324.752†	212145.6	200661.0	495.37 ug/L	495.37 ppb	19:33:52
3	Mn 257.610†	632379.1	627696.8	496.60 ug/L	496.60 ppb	19:33:52
3	Mo 202.031†	12734.3	12624.9	505.68 ug/L	505.68 ppb	19:34:12
3	Ni 231.604†	30995.1	30657.9	491.06 ug/L	491.06 ppb	19:34:12
3	P 214.914†	7454.6	7072.2	2424.4 ug/L	2424.4 ppb	19:34:12
3	Pb 220.353†	6705.0	6693.2	503.10 ug/L	503.10 ppb	19:34:12
3	S 181.975 Axial†	1263.4	1187.9	1004.6 ug/L	1004.6 ppb	19:34:12
3	Sb 206.836†	2589.4	2528.2	503.29 ug/L	503.29 ppb	19:34:12
3	Se 196.026†	1521.2	1533.6	517.94 ug/L	517.94 ppb	19:34:12
3	Si 251.611†	123412.2	122099.7	2507.4 ug/L	2507.4 ppb	19:33:52
3	Sn 189.927†	4810.8	4776.0	497.19 ug/L	497.19 ppb	19:34:12
3	Ti 334.940†	383009.9	381784.1	499.72 ug/L	499.72 ppb	19:33:52
3	Tl 190.801†	2888.0	2931.8	496.47 ug/L	496.47 ppb	19:34:12
3	U 409.014†	15804.6	19543.0	483.33 ug/L	483.33 ppb	19:33:52
3	V 292.402†	85924.5	87053.4	499.77 ug/L	499.77 ppb	19:33:52
3	Zn 213.857†	90916.1	89239.5	493.76 ug/L	493.76 ppb	19:33:52
3	SiO2†	123444.6	122089.7	5368.4 ug/L	5368.4 ppb	19:34:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1068986.1	100.76	%	0.135				0.13%
Sc Radial	5532.8	99.4	%	0.79				0.80%
Y 371.029	851047.2	99.746	%	0.1546				0.16%
Y RADIAL	4807.6	99.83	%	1.377				1.38%
Ag 328.068†	126196.4	502.57	ug/L	1.172	502.57	ppb	1.172	0.23%
QC value within limits for Ag 328.068 Recovery = 100.51%								
Al 396.153Radial†	5350.2	4848.3	ug/L	32.53	4848.3	ppb	32.53	0.67%
QC value within limits for Al 396.153Radial Recovery = 96.97%								
As 188.979†	2109.7	498.38	ug/L	3.053	498.38	ppb	3.053	0.61%
QC value within limits for As 188.979 Recovery = 99.68%								
B 249.677†	31260.7	485.32	ug/L	1.601	485.32	ppb	1.601	0.33%
QC value within limits for B 249.677 Recovery = 97.06%								
Ba 233.527†	97730.3	495.88	ug/L	1.254	495.88	ppb	1.254	0.25%
QC value within limits for Ba 233.527 Recovery = 99.18%								
Be 313.107†	1593545.8	496.65	ug/L	1.168	496.65	ppb	1.168	0.24%
QC value within limits for Be 313.107 Recovery = 99.33%								
Ca 317.933Radial†	1951.0	4859.5	ug/L	40.06	4859.5	ppb	40.06	0.82%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.19%
Cd 226.502†            66573.2      497.67 ug/L         2.067      497.67 ppb          2.067   0.42%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            39009.5      486.12 ug/L         1.790      486.12 ppb          1.790   0.37%
   QC value within limits for Co 228.616  Recovery = 97.22%
Cr 267.716†            58010.1      494.77 ug/L         1.690      494.77 ppb          1.690   0.34%
   QC value within limits for Cr 267.716  Recovery = 98.95%
Cu 324.752†           200301.6      494.48 ug/L         0.805      494.48 ppb          0.805   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.90%
Fe 238.204 Radial†       138.4      4871.6 ug/L         78.24      4871.6 ppb          78.24   1.61%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.43%
K 766.490 Radial†      11748.9      5091.8 ug/L         59.16      5091.8 ppb          59.16   1.16%
   QC value within limits for K 766.490 Radial  Recovery = 101.84%
Mg 279.077 IEC†           63.5      5037.7 ug/L        115.33      5037.7 ppb         115.33   2.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.75%
Mn 257.610†           626861.9      495.93 ug/L         1.655      495.93 ppb          1.655   0.33%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†            12593.9      504.43 ug/L         1.310      504.43 ppb          1.310   0.26%
   QC value within limits for Mo 202.031  Recovery = 100.89%
Na 589.592 Radial†      3566.9      9644.5 ug/L        133.99      9644.5 ppb         133.99   1.39%
   QC value within limits for Na 589.592 Radial  Recovery = 96.45%
Ni 231.604†            30550.8      489.35 ug/L         2.232      489.35 ppb          2.232   0.46%
   QC value within limits for Ni 231.604  Recovery = 97.87%
P 214.914†              7055.6      2418.7 ug/L          7.17      2418.7 ppb           7.17   0.30%
   QC value within limits for P 214.914  Recovery = 96.75%
Pb 220.353†             6672.3      501.53 ug/L         2.434      501.53 ppb          2.434   0.49%
   QC value within limits for Pb 220.353  Recovery = 100.31%
S 181.975 Axial†        1183.3      1000.7 ug/L          4.92      1000.7 ppb           4.92   0.49%
   QC value within limits for S 181.975 Axial  Recovery = 100.07%
Sb 206.836†             2519.1      501.50 ug/L         2.187      501.50 ppb          2.187   0.44%
   QC value within limits for Sb 206.836  Recovery = 100.30%
Se 196.026†             1527.2      515.59 ug/L         2.333      515.59 ppb          2.333   0.45%
   QC value within limits for Se 196.026  Recovery = 103.12%
Si 251.611†           121946.1      2504.3 ug/L          5.01      2504.3 ppb           5.01   0.20%
   QC value within limits for Si 251.611  Recovery = 100.17%
Sn 189.927†             4765.9      496.14 ug/L         2.269      496.14 ppb          2.269   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.23%
Sr 421.552†            32885.7      506.61 ug/L         2.787      506.61 ppb          2.787   0.55%
   QC value within limits for Sr 421.552  Recovery = 101.32%
Ti 334.940†           381188.1      498.93 ug/L         1.318      498.93 ppb          1.318   0.26%
   QC value within limits for Ti 334.940  Recovery = 99.79%
Tl 190.801†             2932.2      496.55 ug/L         2.133      496.55 ppb          2.133   0.43%
   QC value within limits for Tl 190.801  Recovery = 99.31%
U 409.014†             19620.1      485.26 ug/L         2.714      485.26 ppb          2.714   0.56%
   QC value within limits for U 409.014  Recovery = 97.05%
V 292.402†             86898.6      498.89 ug/L         1.234      498.89 ppb          1.234   0.25%
   QC value within limits for V 292.402  Recovery = 99.78%
Zn 213.857†            89069.0      492.83 ug/L         1.515      492.83 ppb          1.515   0.31%
   QC value within limits for Zn 213.857  Recovery = 98.57%
SiO2†                 120936.2      5317.6 ug/L        52.60      5317.6 ppb          52.60   0.99%
   QC value within limits for SiO2  Recovery = 99.44%
All analyte(s) passed QC.
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Sequence No.: 51
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 19:36:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5374.1	5374.1	96.6	%			19:38:29
1	Y RADIAL	4696.5	4696.5	97.52	%			19:38:29
1	Al 396.153Radial†	-58.5	31.7	28.784	ug/L	28.784	ppb	19:38:29
1	Ca 317.933Radial†	28.1	12.1	30.235	ug/L	30.235	ppb	19:38:49
1	Fe 238.204 Radial†	1.4	1.1	37.794	ug/L	37.794	ppb	19:38:49
1	K 766.490 Radial†	1525.7	106.7	46.357	ug/L	46.357	ppb	19:38:29
1	Mg 279.077 IEC†	1.1	0.9	73.550	ug/L	73.550	ppb	19:38:49
1	Na 589.592 Radial†	-181.6	-17.6	-47.695	ug/L	-47.695	ppb	19:38:49
1	Sr 421.552†	39.3	35.2	0.5419	ug/L	0.5419	ppb	19:38:49
1	Sc 361.383	1070703.4	1070703.4	100.93	%			19:39:46
1	Y 371.029	863600.0	863600.0	101.22	%			19:39:46
1	Ag 328.068†	615.9	-28.3	-0.0998	ug/L	-0.0998	ppb	19:39:51
1	As 188.979†	-59.5	-22.0	-5.1613	ug/L	-5.1613	ppb	19:40:11
1	B 249.677†	-175.6	207.6	3.2294	ug/L	3.2294	ppb	19:39:51
1	Ba 233.527†	31.3	6.7	0.0356	ug/L	0.0356	ppb	19:40:11
1	Be 313.107†	-7397.7	-13.6	-0.0039	ug/L	-0.0039	ppb	19:39:51
1	Cd 226.502†	-271.4	8.7	0.0606	ug/L	0.0606	ppb	19:40:11
1	Co 228.616†	-76.0	15.1	0.1890	ug/L	0.1890	ppb	19:40:11
1	Cr 267.716†	-20.4	8.4	0.0722	ug/L	0.0722	ppb	19:40:11
1	Cu 324.752†	10058.8	-224.8	-0.5524	ug/L	-0.5524	ppb	19:39:51
1	Mn 257.610†	974.5	138.5	0.1130	ug/L	0.1130	ppb	19:40:11
1	Mo 202.031†	47.7	15.5	0.6235	ug/L	0.6235	ppb	19:40:11
1	Ni 231.604†	138.4	-11.1	-0.1785	ug/L	-0.1785	ppb	19:40:11
1	P 214.914†	356.6	16.4	5.8768	ug/L	5.8768	ppb	19:40:11
1	Pb 220.353†	-19.3	10.0	0.7539	ug/L	0.7539	ppb	19:40:11
1	S 181.975 Axial†	61.8	-6.6	-5.6015	ug/L	-5.6015	ppb	19:40:11
1	Sb 206.836†	49.2	3.3	0.6754	ug/L	0.6754	ppb	19:40:11
1	Se 196.026†	-22.7	-0.8	-0.1363	ug/L	-0.1363	ppb	19:40:11
1	Si 251.611†	743.2	176.3	3.6097	ug/L	3.6097	ppb	19:40:11
1	Sn 189.927†	11.1	5.5	0.5729	ug/L	0.5729	ppb	19:40:11
1	Ti 334.940†	-1014.5	104.0	0.1377	ug/L	0.1377	ppb	19:39:51
1	Tl 190.801†	-49.9	11.9	2.0115	ug/L	2.0115	ppb	19:40:11
1	U 409.014†	-3829.8	40.1	0.9907	ug/L	0.9907	ppb	19:39:46
1	V 292.402†	-1605.8	61.7	0.3556	ug/L	0.3556	ppb	19:39:51
1	Zn 213.857†	1100.7	-31.8	-0.1819	ug/L	-0.1819	ppb	19:40:11
1	SiO2†	681.3	72.7	3.1504	ug/L	3.1504	ppb	19:41:17
2	Sc Radial	5423.6	5423.6	97.5	%			19:38:54
2	Y RADIAL	4709.7	4709.7	97.80	%			19:38:54
2	Al 396.153Radial†	-79.7	10.4	9.4611	ug/L	9.4611	ppb	19:38:54
2	Ca 317.933Radial†	30.9	14.8	36.864	ug/L	36.864	ppb	19:39:14
2	Fe 238.204 Radial†	1.1	0.8	29.567	ug/L	29.567	ppb	19:39:14
2	K 766.490 Radial†	1541.0	108.0	46.903	ug/L	46.903	ppb	19:38:54
2	Mg 279.077 IEC†	0.8	0.6	46.926	ug/L	46.926	ppb	19:39:14
2	Na 589.592 Radial†	-185.5	-19.9	-53.728	ug/L	-53.728	ppb	19:39:14
2	Sr 421.552†	24.1	19.3	0.2965	ug/L	0.2965	ppb	19:39:14
2	Sc 361.383	1074631.2	1074631.2	101.30	%			19:40:16
2	Y 371.029	865252.1	865252.1	101.41	%			19:40:16
2	Ag 328.068†	551.5	-94.1	-0.3683	ug/L	-0.3683	ppb	19:40:21
2	As 188.979†	-48.7	-11.2	-2.6132	ug/L	-2.6132	ppb	19:40:41
2	B 249.677†	-122.2	260.9	4.0624	ug/L	4.0624	ppb	19:40:21
2	Ba 233.527†	52.1	27.2	0.1381	ug/L	0.1381	ppb	19:40:41
2	Be 313.107†	-7362.3	48.1	0.0150	ug/L	0.0150	ppb	19:40:21
2	Cd 226.502†	-288.2	-6.8	-0.0544	ug/L	-0.0544	ppb	19:40:41
2	Co 228.616†	-94.2	-2.6	-0.0316	ug/L	-0.0316	ppb	19:40:41
2	Cr 267.716†	-13.7	15.1	0.1275	ug/L	0.1275	ppb	19:40:41
2	Cu 324.752†	10086.9	-233.4	-0.5741	ug/L	-0.5741	ppb	19:40:21
2	Mn 257.610†	988.6	148.9	0.1206	ug/L	0.1206	ppb	19:40:41
2	Mo 202.031†	41.7	9.4	0.3771	ug/L	0.3771	ppb	19:40:41
2	Ni 231.604†	169.3	18.9	0.3029	ug/L	0.3029	ppb	19:40:41

2	P 214.914†	338.5	-2.8	-0.9079 ug/L	-0.9079 ppb	19:40:41
2	Pb 220.353†	-33.2	-3.7	-0.2794 ug/L	-0.2794 ppb	19:40:41
2	S 181.975 Axial†	63.4	-5.3	-4.4472 ug/L	-4.4472 ppb	19:40:41
2	Sb 206.836†	33.8	-12.0	-2.3537 ug/L	-2.3537 ppb	19:40:41
2	Se 196.026†	-15.5	6.3	2.1636 ug/L	2.1636 ppb	19:40:41
2	Si 251.611†	674.3	105.6	2.1573 ug/L	2.1573 ppb	19:40:41
2	Sn 189.927†	4.1	-1.4	-0.1410 ug/L	-0.1410 ppb	19:40:41
2	Ti 334.940†	-1094.9	28.3	0.0371 ug/L	0.0371 ppb	19:40:21
2	Tl 190.801†	-63.2	-1.0	-0.1596 ug/L	-0.1596 ppb	19:40:41
2	U 409.014†	-3665.5	216.1	5.3590 ug/L	5.3590 ppb	19:40:16
2	V 292.402†	-1684.0	-9.7	-0.0432 ug/L	-0.0432 ppb	19:40:21
2	Zn 213.857†	1112.4	-24.2	-0.1411 ug/L	-0.1411 ppb	19:40:41
2	SiO2†	685.1	74.0	3.2229 ug/L	3.2229 ppb	19:41:22
3	Sc Radial	5472.8	5472.8	98.3 %		19:39:19
3	Y RADIAL	4805.3	4805.3	99.78 %		19:39:19
3	Al 396.153Radial†	-82.7	8.1	7.3936 ug/L	7.3936 ppb	19:39:19
3	Ca 317.933Radial†	29.5	13.1	32.614 ug/L	32.614 ppb	19:39:39
3	Fe 238.204 Radial†	-0.6	-1.0	-34.431 ug/L	-34.431 ppb	19:39:39
3	K 766.490 Radial†	1517.6	70.0	30.359 ug/L	30.359 ppb	19:39:19
3	Mg 279.077 IEC†	-0.5	-0.7	-53.396 ug/L	-53.396 ppb	19:39:39
3	Na 589.592 Radial†	-188.0	-20.8	-56.149 ug/L	-56.149 ppb	19:39:39
3	Sr 421.552†	24.7	19.7	0.3029 ug/L	0.3029 ppb	19:39:39
3	Sc 361.383	1050032.4	1050032.4	98.977 %		19:40:46
3	Y 371.029	846356.4	846356.4	99.196 %		19:40:46
3	Ag 328.068†	648.8	17.0	0.0573 ug/L	0.0573 ppb	19:40:51
3	As 188.979†	-45.5	-9.1	-2.1476 ug/L	-2.1476 ppb	19:41:11
3	B 249.677†	-163.9	216.0	3.3702 ug/L	3.3702 ppb	19:40:51
3	Ba 233.527†	33.2	9.3	0.0462 ug/L	0.0462 ppb	19:41:11
3	Be 313.107†	-7496.7	-258.0	-0.0799 ug/L	-0.0799 ppb	19:40:51
3	Cd 226.502†	-285.6	-10.9	-0.0773 ug/L	-0.0773 ppb	19:41:11
3	Co 228.616†	-89.6	-0.1	-0.0005 ug/L	-0.0005 ppb	19:41:11
3	Cr 267.716†	-31.3	-3.1	-0.0260 ug/L	-0.0260 ppb	19:41:11
3	Cu 324.752†	10126.5	39.9	0.0964 ug/L	0.0964 ppb	19:40:51
3	Mn 257.610†	978.4	161.5	0.1242 ug/L	0.1242 ppb	19:41:11
3	Mo 202.031†	32.0	0.6	0.0197 ug/L	0.0197 ppb	19:41:11
3	Ni 231.604†	150.5	3.8	0.0609 ug/L	0.0609 ppb	19:41:11
3	P 214.914†	349.5	16.2	5.7279 ug/L	5.7279 ppb	19:41:11
3	Pb 220.353†	-26.3	2.5	0.1954 ug/L	0.1954 ppb	19:41:11
3	S 181.975 Axial†	63.6	-3.6	-3.0286 ug/L	-3.0286 ppb	19:41:11
3	Sb 206.836†	47.3	2.4	0.4608 ug/L	0.4608 ppb	19:41:11
3	Se 196.026†	-17.3	4.1	1.2209 ug/L	1.2209 ppb	19:41:11
3	Si 251.611†	660.3	107.0	2.1991 ug/L	2.1991 ppb	19:41:11
3	Sn 189.927†	0.7	-4.8	-0.4980 ug/L	-0.4980 ppb	19:41:11
3	Ti 334.940†	-979.6	119.5	0.1597 ug/L	0.1597 ppb	19:40:51
3	Tl 190.801†	-61.0	-0.2	-0.0316 ug/L	-0.0316 ppb	19:41:11
3	U 409.014†	-3884.6	-90.0	-2.2277 ug/L	-2.2277 ppb	19:40:46
3	V 292.402†	-1644.0	-8.2	-0.0469 ug/L	-0.0469 ppb	19:40:51
3	Zn 213.857†	1096.8	-14.3	-0.0748 ug/L	-0.0748 ppb	19:41:11
3	SiO2†	729.4	134.6	5.9274 ug/L	5.9274 ppb	19:41:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065122.3	100.40	%	1.246				1.24%
Sc Radial	5423.5	97.5	%	0.89				0.91%
Y 371.029	858402.8	100.61	%	1.227				1.22%
Y RADIAL	4737.2	98.37	%	1.233				1.25%
Ag 328.068†	-35.1	-0.1369	ug/L	0.21524	-0.1369	ppb	0.21524	157.17%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	16.7	15.213	ug/L	11.7984	15.213	ppb	11.7984	77.55%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-14.1	-3.3074	ug/L	1.62235	-3.3074	ppb	1.62235	49.05%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	228.1	3.5540	ug/L	0.44587	3.5540	ppb	0.44587	12.55%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	14.4	0.0733	ug/L	0.05633	0.0733	ppb	0.05633	76.84%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-74.5	-0.0229	ug/L	0.05021	-0.0229	ppb	0.05021	219.13%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.3	33.238	ug/L	3.3585	33.238	ppb	3.3585	10.10%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -3.0     -0.0237 ug/L       0.07387     -0.0237 ppb        0.07387 311.98%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               4.2      0.0523 ug/L       0.11944      0.0523 ppb        0.11944 228.36%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               6.8      0.0579 ug/L       0.07775      0.0579 ppb        0.07775 134.32%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -139.4     -0.3434 ug/L       0.38102     -0.3434 ppb        0.38102 110.97%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.3      10.977 ug/L       39.5386      10.977 ppb        39.5386 360.20%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        94.9      41.206 ug/L        9.3984      41.206 ppb         9.3984  22.81%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.3      22.360 ug/L       66.9431      22.360 ppb        66.9431 299.39%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             149.6      0.1193 ug/L       0.00572      0.1193 ppb        0.00572   4.80%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               8.5      0.3401 ug/L       0.30361      0.3401 ppb        0.30361  89.27%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -19.4     -52.524 ug/L        4.3540     -52.524 ppb         4.3540   8.29%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               3.9      0.0617 ug/L       0.24068      0.0617 ppb        0.24068 389.81%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                9.9      3.5656 ug/L       3.87493      3.5656 ppb        3.87493 108.68%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               2.9      0.2233 ug/L       0.51724      0.2233 ppb        0.51724 231.64%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -5.1     -4.3591 ug/L       1.28871     -4.3591 ppb        1.28871  29.56%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              -2.1     -0.4058 ug/L       1.69035     -0.4058 ppb        1.69035 416.51%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               3.2      1.0827 ug/L       1.15619      1.0827 ppb        1.15619 106.78%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             129.6      2.6554 ug/L       0.82677      2.6554 ppb        0.82677  31.14%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -0.2     -0.0220 ug/L       0.54526     -0.0220 ppb        0.54526 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              24.7      0.3804 ug/L       0.13988      0.3804 ppb        0.13988  36.77%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              84.0      0.1115 ug/L       0.06534      0.1115 ppb        0.06534  58.60%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               3.6      0.6068 ug/L       1.21821      0.6068 ppb        1.21821 200.76%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               55.4      1.3740 ug/L       3.80781      1.3740 ppb        3.80781 277.13%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               14.6      0.0885 ug/L       0.23133      0.0885 ppb        0.23133 261.26%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -23.4     -0.1326 ug/L       0.05408     -0.1326 ppb        0.05408  40.79%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    93.8      4.1002 ug/L       1.58276      4.1002 ppb        1.58276  38.60%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 61
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 20:46:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5535.3	5535.3	99.5	%			20:48:12
1	Y RADIAL	4794.6	4794.6	99.56	%			20:48:12
1	Al 396.153Radial†	5347.8	5468.6	4955.5	ug/L	4955.5	ppb	20:48:12
1	Ca 317.933Radial†	2001.8	1995.5	4970.5	ug/L	4970.5	ppb	20:48:32
1	Fe 238.204 Radial†	143.4	143.9	5063.0	ug/L	5063.0	ppb	20:48:32
1	K 766.490 Radial†	13314.6	11912.6	5162.6	ug/L	5162.6	ppb	20:48:12
1	Mg 279.077 IEC†	62.9	63.0	4997.2	ug/L	4997.2	ppb	20:48:32
1	Na 589.592 Radial†	3561.3	3750.8	10142	ug/L	10142	ppb	20:48:12
1	Sr 421.552†	34423.4	34601.8	533.05	ug/L	533.05	ppb	20:48:12
1	Sc 361.383	1025665.0	1025665.0	96.680	%			20:49:31
1	Y 371.029	818784.4	818784.4	95.965	%			20:49:31
1	Ag 328.068†	128065.9	131824.6	524.98	ug/L	524.98	ppb	20:49:31
1	As 188.979†	2049.0	2156.3	509.47	ug/L	509.47	ppb	20:49:51
1	B 249.677†	30933.1	32376.7	502.65	ug/L	502.65	ppb	20:49:31
1	Ba 233.527†	98662.4	102025.9	517.68	ug/L	517.68	ppb	20:49:31
1	Be 313.107†	1604891.7	1667314.0	519.64	ug/L	519.64	ppb	20:49:31
1	Cd 226.502†	66828.4	69400.7	518.80	ug/L	518.80	ppb	20:49:31
1	Co 228.616†	38635.5	40052.5	499.10	ug/L	499.10	ppb	20:49:51
1	Cr 267.716†	58852.4	60901.8	519.43	ug/L	519.43	ppb	20:49:31
1	Cu 324.752†	211988.3	209075.9	516.14	ug/L	516.14	ppb	20:49:31
1	Mn 257.610†	632456.2	653345.3	516.89	ug/L	516.89	ppb	20:49:31
1	Mo 202.031†	12533.7	12932.3	517.99	ug/L	517.99	ppb	20:49:51
1	Ni 231.604†	30500.1	31399.2	502.94	ug/L	502.94	ppb	20:49:51
1	P 214.914†	7326.2	7240.8	2480.8	ug/L	2480.8	ppb	20:49:51
1	Pb 220.353†	6598.6	6854.2	515.19	ug/L	515.19	ppb	20:49:51
1	S 181.975 Axial†	1249.8	1224.9	1035.8	ug/L	1035.8	ppb	20:49:51
1	Sb 206.836†	2568.6	2611.4	519.59	ug/L	519.59	ppb	20:49:51
1	Se 196.026†	1481.3	1553.7	524.95	ug/L	524.95	ppb	20:49:51
1	Si 251.611†	123269.0	126941.5	2607.1	ug/L	2607.1	ppb	20:49:31
1	Sn 189.927†	4773.6	4932.1	513.43	ug/L	513.43	ppb	20:49:51
1	Ti 334.940†	382960.8	397219.5	519.91	ug/L	519.91	ppb	20:49:31
1	Tl 190.801†	2829.7	2988.3	506.11	ug/L	506.11	ppb	20:49:51
1	U 409.014†	15896.4	20277.0	501.49	ug/L	501.49	ppb	20:49:31
1	V 292.402†	86236.6	90850.4	521.45	ug/L	521.45	ppb	20:49:31
1	Zn 213.857†	90948.7	92949.1	514.36	ug/L	514.36	ppb	20:49:31
1	SiO2†	124240.6	127904.2	5624.8	ug/L	5624.8	ppb	20:50:51
2	Sc Radial	5426.5	5426.5	97.5	%			20:48:37
2	Y RADIAL	4700.3	4700.3	97.60	%			20:48:37
2	Al 396.153Radial†	5383.1	5612.5	5087.1	ug/L	5087.1	ppb	20:48:37
2	Ca 317.933Radial†	1980.7	2014.2	5017.1	ug/L	5017.1	ppb	20:48:57
2	Fe 238.204 Radial†	141.2	144.5	5083.5	ug/L	5083.5	ppb	20:48:57
2	K 766.490 Radial†	13353.8	12221.2	5296.6	ug/L	5296.6	ppb	20:48:37
2	Mg 279.077 IEC†	64.6	66.1	5237.7	ug/L	5237.7	ppb	20:48:57
2	Na 589.592 Radial†	3577.3	3838.9	10380	ug/L	10380	ppb	20:48:37
2	Sr 421.552†	34585.0	35461.4	546.29	ug/L	546.29	ppb	20:48:37
2	Sc 361.383	1064775.9	1064775.9	100.37	%			20:49:58
2	Y 371.029	848878.6	848878.6	99.492	%			20:49:58
2	Ag 328.068†	127193.0	126089.4	502.22	ug/L	502.22	ppb	20:49:58
2	As 188.979†	2081.6	2110.9	498.70	ug/L	498.70	ppb	20:50:18
2	B 249.677†	30809.2	31078.1	482.44	ug/L	482.44	ppb	20:49:58
2	Ba 233.527†	97940.4	97558.0	495.02	ug/L	495.02	ppb	20:49:58
2	Be 313.107†	1590583.6	1592083.9	496.19	ug/L	496.19	ppb	20:49:58
2	Cd 226.502†	66381.1	66416.0	496.47	ug/L	496.47	ppb	20:49:58
2	Co 228.616†	39030.2	38977.9	485.73	ug/L	485.73	ppb	20:50:18
2	Cr 267.716†	58269.3	58084.8	495.41	ug/L	495.41	ppb	20:49:58
2	Cu 324.752†	210779.8	199817.8	493.30	ug/L	493.30	ppb	20:49:58
2	Mn 257.610†	628062.6	624939.1	494.44	ug/L	494.44	ppb	20:49:58
2	Mo 202.031†	12704.1	12625.8	505.73	ug/L	505.73	ppb	20:50:18
2	Ni 231.604†	30841.4	30580.4	489.82	ug/L	489.82	ppb	20:50:18

2	P 214.914†	7382.8	7018.9	2405.9	ug/L	2405.9 ppb	20:50:18
2	Pb 220.353†	6678.1	6682.8	502.35	ug/L	502.35 ppb	20:50:18
2	S 181.975 Axial†	1258.1	1185.7	1002.7	ug/L	1002.7 ppb	20:50:18
2	Sb 206.836†	2585.0	2530.2	503.77	ug/L	503.77 ppb	20:50:18
2	Se 196.026†	1496.9	1513.0	511.76	ug/L	511.76 ppb	20:50:18
2	Si 251.611†	122563.5	121555.2	2496.1	ug/L	2496.1 ppb	20:49:58
2	Sn 189.927†	4837.3	4814.1	501.17	ug/L	501.17 ppb	20:50:18
2	Ti 334.940†	379976.3	379696.2	496.99	ug/L	496.99 ppb	20:49:58
2	Tl 190.801†	2860.6	2911.6	493.05	ug/L	493.05 ppb	20:50:18
2	U 409.014†	15503.9	19281.9	476.84	ug/L	476.84 ppb	20:49:58
2	V 292.402†	85495.4	86835.6	498.51	ug/L	498.51 ppb	20:49:58
2	Zn 213.857†	90415.3	88962.3	492.21	ug/L	492.21 ppb	20:49:58
2	SiO2†	122909.9	121858.2	5358.1	ug/L	5358.1 ppb	20:50:56
3	Sc Radial	5486.7	5486.7	98.6	%		20:49:02
3	Y RADIAL	4746.1	4746.1	98.55	%		20:49:02
3	Al 396.153Radial†	5315.6	5483.5	4970.0	ug/L	4970.0 ppb	20:49:02
3	Ca 317.933Radial†	1995.9	2007.4	5000.2	ug/L	5000.2 ppb	20:49:22
3	Fe 238.204 Radial†	144.5	146.2	5144.8	ug/L	5144.8 ppb	20:49:22
3	K 766.490 Radial†	13332.5	12049.3	5222.1	ug/L	5222.1 ppb	20:49:02
3	Mg 279.077 IEC†	65.8	66.5	5275.5	ug/L	5275.5 ppb	20:49:22
3	Na 589.592 Radial†	3572.4	3793.7	10258	ug/L	10258 ppb	20:49:02
3	Sr 421.552†	34482.5	34968.3	538.69	ug/L	538.69 ppb	20:49:02
3	Sc 361.383	1080518.2	1080518.2	101.85	%		20:50:25
3	Y 371.029	860737.1	860737.1	100.88	%		20:50:25
3	Ag 328.068†	128854.2	125874.0	501.37	ug/L	501.37 ppb	20:50:25
3	As 188.979†	2072.7	2072.0	489.58	ug/L	489.58 ppb	20:50:46
3	B 249.677†	31363.4	31175.0	483.97	ug/L	483.97 ppb	20:50:25
3	Ba 233.527†	99234.2	97406.6	494.25	ug/L	494.25 ppb	20:50:25
3	Be 313.107†	1608315.1	1586404.4	494.42	ug/L	494.42 ppb	20:50:25
3	Cd 226.502†	67140.8	66198.4	494.83	ug/L	494.83 ppb	20:50:25
3	Co 228.616†	38868.2	38252.2	476.67	ug/L	476.67 ppb	20:50:46
3	Cr 267.716†	58896.1	57854.5	493.45	ug/L	493.45 ppb	20:50:25
3	Cu 324.752†	213796.3	199719.8	493.06	ug/L	493.06 ppb	20:50:25
3	Mn 257.610†	636221.4	623832.7	493.57	ug/L	493.57 ppb	20:50:25
3	Mo 202.031†	12642.9	12381.4	495.94	ug/L	495.94 ppb	20:50:46
3	Ni 231.604†	30697.1	29991.0	480.38	ug/L	480.38 ppb	20:50:46
3	P 214.914†	7346.2	6875.8	2355.1	ug/L	2355.1 ppb	20:50:46
3	Pb 220.353†	6648.4	6556.7	492.84	ug/L	492.84 ppb	20:50:46
3	S 181.975 Axial†	1251.2	1160.7	981.48	ug/L	981.48 ppb	20:50:46
3	Sb 206.836†	2582.7	2490.4	495.64	ug/L	495.64 ppb	20:50:46
3	Se 196.026†	1493.6	1488.1	503.83	ug/L	503.83 ppb	20:50:46
3	Si 251.611†	124196.9	121379.9	2492.7	ug/L	2492.7 ppb	20:50:25
3	Sn 189.927†	4820.6	4727.5	492.16	ug/L	492.16 ppb	20:50:46
3	Ti 334.940†	385244.9	379353.3	496.54	ug/L	496.54 ppb	20:50:25
3	Tl 190.801†	2845.2	2854.9	483.53	ug/L	483.53 ppb	20:50:46
3	U 409.014†	15833.0	19380.0	479.27	ug/L	479.27 ppb	20:50:25
3	V 292.402†	86424.6	86506.8	496.52	ug/L	496.52 ppb	20:50:25
3	Zn 213.857†	91421.4	88637.6	490.45	ug/L	490.45 ppb	20:50:25
3	SiO2†	122152.7	119330.5	5246.9	ug/L	5246.9 ppb	20:51:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1056986.4	99.633	%	2.6623				2.67%
Sc Radial	5482.8	98.5	%	0.98				0.99%
Y 371.029	842800.0	98.779	%	2.5347				2.57%
Y RADIAL	4747.0	98.57	%	0.980				0.99%
Ag 328.068†	127929.3	509.52	ug/L	13.393	509.52	ppb	13.393	2.63%
QC value within limits for Ag 328.068 Recovery = 101.90%								
Al 396.153Radial†	5521.5	5004.2	ug/L	72.15	5004.2	ppb	72.15	1.44%
QC value within limits for Al 396.153Radial Recovery = 100.08%								
As 188.979†	2113.1	499.25	ug/L	9.953	499.25	ppb	9.953	1.99%
QC value within limits for As 188.979 Recovery = 99.85%								
B 249.677†	31543.2	489.69	ug/L	11.253	489.69	ppb	11.253	2.30%
QC value within limits for B 249.677 Recovery = 97.94%								
Ba 233.527†	98996.8	502.31	ug/L	13.313	502.31	ppb	13.313	2.65%
QC value within limits for Ba 233.527 Recovery = 100.46%								
Be 313.107†	1615267.4	503.42	ug/L	14.074	503.42	ppb	14.074	2.80%
QC value within limits for Be 313.107 Recovery = 100.68%								
Ca 317.933Radial†	2005.7	4995.9	ug/L	23.61	4995.9	ppb	23.61	0.47%

```
   QC value within limits for Ca 317.933Radial  Recovery = 99.92%
Cd 226.502†            67338.4      503.37 ug/L        13.394      503.37 ppb        13.394   2.66%
   QC value within limits for Cd 226.502  Recovery = 100.67%
Co 228.616†            39094.2      487.17 ug/L        11.285      487.17 ppb        11.285   2.32%
   QC value within limits for Co 228.616  Recovery = 97.43%
Cr 267.716†            58947.0      502.76 ug/L        14.468      502.76 ppb        14.468   2.88%
   QC value within limits for Cr 267.716  Recovery = 100.55%
Cu 324.752†           202871.2      500.83 ug/L        13.257      500.83 ppb        13.257   2.65%
   QC value within limits for Cu 324.752  Recovery = 100.17%
Fe 238.204 Radial†       144.9      5097.1 ug/L         42.57      5097.1 ppb         42.57   0.84%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.94%
K 766.490 Radial†      12061.0      5227.1 ug/L         67.14      5227.1 ppb         67.14   1.28%
   QC value within limits for K 766.490 Radial  Recovery = 104.54%
Mg 279.077 IEC†           65.2      5170.1 ug/L        150.96      5170.1 ppb        150.96   2.92%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.40%
Mn 257.610†           634039.0      501.63 ug/L        13.219      501.63 ppb        13.219   2.64%
   QC value within limits for Mn 257.610  Recovery = 100.33%
Mo 202.031†            12646.5      506.55 ug/L        11.047      506.55 ppb        11.047   2.18%
   QC value within limits for Mo 202.031  Recovery = 101.31%
Na 589.592 Radial†      3794.4       10260 ug/L         119.2       10260 ppb         119.2   1.16%
   QC value within limits for Na 589.592 Radial  Recovery = 102.60%
Ni 231.604†            30656.8      491.05 ug/L        11.327      491.05 ppb        11.327   2.31%
   QC value within limits for Ni 231.604  Recovery = 98.21%
P 214.914†              7045.2      2413.9 ug/L         63.20      2413.9 ppb         63.20   2.62%
   QC value within limits for P 214.914  Recovery = 96.56%
Pb 220.353†             6697.9      503.46 ug/L        11.216      503.46 ppb        11.216   2.23%
   QC value within limits for Pb 220.353  Recovery = 100.69%
S 181.975 Axial†        1190.4      1006.7 ug/L         27.39      1006.7 ppb         27.39   2.72%
   QC value within limits for S 181.975 Axial  Recovery = 100.67%
Sb 206.836†             2544.0      506.33 ug/L        12.179      506.33 ppb        12.179   2.41%
   QC value within limits for Sb 206.836  Recovery = 101.27%
Se 196.026†             1518.3      513.51 ug/L        10.671      513.51 ppb        10.671   2.08%
   QC value within limits for Se 196.026  Recovery = 102.70%
Si 251.611†           123292.2      2532.0 ug/L         65.05      2532.0 ppb         65.05   2.57%
   QC value within limits for Si 251.611  Recovery = 101.28%
Sn 189.927†             4824.6      502.26 ug/L        10.677      502.26 ppb        10.677   2.13%
   QC value within limits for Sn 189.927  Recovery = 100.45%
Sr 421.552†            35010.5      539.35 ug/L         6.645      539.35 ppb         6.645   1.23%
   QC value within limits for Sr 421.552  Recovery = 107.87%
Ti 334.940†           385423.0      504.48 ug/L        13.363      504.48 ppb        13.363   2.65%
   QC value within limits for Ti 334.940  Recovery = 100.90%
Tl 190.801†             2918.3      494.23 ug/L        11.335      494.23 ppb        11.335   2.29%
   QC value within limits for Tl 190.801  Recovery = 98.85%
U 409.014†             19646.3      485.87 ug/L        13.582      485.87 ppb        13.582   2.80%
   QC value within limits for U 409.014  Recovery = 97.17%
V 292.402†             88064.3      505.49 ug/L        13.854      505.49 ppb        13.854   2.74%
   QC value within limits for V 292.402  Recovery = 101.10%
Zn 213.857†            90183.0      499.01 ug/L        13.329      499.01 ppb        13.329   2.67%
   QC value within limits for Zn 213.857  Recovery = 99.80%
SiO2†                 123031.0      5409.9 ug/L        194.21      5409.9 ppb        194.21   3.59%
   QC value within limits for SiO2  Recovery = 101.17%
All analyte(s) passed QC.
```

Sequence No.: 62
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 20:53:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5461.6	5461.6	98.1	%			20:55:03
1	Y RADIAL	4759.2	4759.2	98.83	%			20:55:03
1	Al 396.153Radial†	-79.6	11.0	10.043	ug/L	10.043	ppb	20:55:03
1	Ca 317.933Radial†	35.0	18.7	46.643	ug/L	46.643	ppb	20:55:23
1	Fe 238.204 Radial†	0.0	-0.3	-10.794	ug/L	-10.794	ppb	20:55:23
1	K 766.490 Radial†	1576.9	133.6	57.982	ug/L	57.982	ppb	20:55:03
1	Mg 279.077 IEC†	0.1	-0.0	-2.9190	ug/L	-2.9190	ppb	20:55:23
1	Na 589.592 Radial†	-197.7	-31.0	-83.824	ug/L	-83.824	ppb	20:55:23
1	Sr 421.552†	18.1	12.9	0.1990	ug/L	0.1990	ppb	20:55:23
1	Sc 361.383	1065964.9	1065964.9	100.48	%			20:56:20
1	Y 371.029	859534.3	859534.3	100.74	%			20:56:20
1	Ag 328.068†	779.9	137.6	0.5411	ug/L	0.5411	ppb	20:56:25
1	As 188.979†	-52.6	-15.5	-3.6393	ug/L	-3.6393	ppb	20:56:45
1	B 249.677†	-154.8	227.4	3.5459	ug/L	3.5459	ppb	20:56:25
1	Ba 233.527†	34.5	10.1	0.0511	ug/L	0.0511	ppb	20:56:45
1	Be 313.107†	-7301.5	49.6	0.0155	ug/L	0.0155	ppb	20:56:25
1	Cd 226.502†	-300.5	-21.4	-0.1588	ug/L	-0.1588	ppb	20:56:45
1	Co 228.616†	-83.1	7.7	0.0966	ug/L	0.0966	ppb	20:56:45
1	Cr 267.716†	0.5	29.1	0.2477	ug/L	0.2477	ppb	20:56:25
1	Cu 324.752†	9976.1	-262.7	-0.6487	ug/L	-0.6487	ppb	20:56:25
1	Mn 257.610†	906.6	75.2	0.0581	ug/L	0.0581	ppb	20:56:45
1	Mo 202.031†	37.5	5.6	0.2231	ug/L	0.2231	ppb	20:56:45
1	Ni 231.604†	167.6	18.5	0.2970	ug/L	0.2970	ppb	20:56:45
1	P 214.914†	327.0	-11.5	-3.9329	ug/L	-3.9329	ppb	20:56:45
1	Pb 220.353†	-4.7	24.4	1.8301	ug/L	1.8301	ppb	20:56:45
1	S 181.975 Axial†	62.0	-6.2	-5.2228	ug/L	-5.2228	ppb	20:56:45
1	Sb 206.836†	59.3	13.6	2.6834	ug/L	2.6834	ppb	20:56:45
1	Se 196.026†	-26.2	-4.4	-1.4775	ug/L	-1.4775	ppb	20:56:45
1	Si 251.611†	690.4	127.0	2.5933	ug/L	2.5933	ppb	20:56:45
1	Sn 189.927†	15.8	10.2	1.0667	ug/L	1.0667	ppb	20:56:45
1	Ti 334.940†	-1097.5	17.0	0.0253	ug/L	0.0253	ppb	20:56:25
1	Tl 190.801†	-39.8	21.8	3.6732	ug/L	3.6732	ppb	20:56:45
1	U 409.014†	-3860.4	-7.3	-0.1798	ug/L	-0.1798	ppb	20:56:20
1	V 292.402†	-1635.7	24.9	0.1448	ug/L	0.1448	ppb	20:56:25
1	Zn 213.857†	1105.7	-22.0	-0.1224	ug/L	-0.1224	ppb	20:56:45
1	SiO2†	696.0	90.3	3.9306	ug/L	3.9306	ppb	20:57:51
2	Sc Radial	5132.0	5132.0	92.2	%			20:55:28
2	Y RADIAL	4482.5	4482.5	93.08	%			20:55:28
2	Al 396.153Radial†	-72.9	13.2	11.973	ug/L	11.973	ppb	20:55:28
2	Ca 317.933Radial†	37.0	23.2	57.689	ug/L	57.689	ppb	20:55:48
2	Fe 238.204 Radial†	0.0	-0.3	-11.376	ug/L	-11.376	ppb	20:55:48
2	K 766.490 Radial†	1538.2	194.9	84.591	ug/L	84.591	ppb	20:55:28
2	Mg 279.077 IEC†	0.7	0.6	44.487	ug/L	44.487	ppb	20:55:48
2	Na 589.592 Radial†	-205.6	-52.5	-141.98	ug/L	-141.98	ppb	20:55:48
2	Sr 421.552†	30.1	27.1	0.4174	ug/L	0.4174	ppb	20:55:48
2	Sc 361.383	1057874.4	1057874.4	99.716	%			20:56:50
2	Y 371.029	852924.8	852924.8	99.966	%			20:56:50
2	Ag 328.068†	706.6	70.0	0.2753	ug/L	0.2753	ppb	20:56:55
2	As 188.979†	-41.6	-4.8	-1.1246	ug/L	-1.1246	ppb	20:57:15
2	B 249.677†	-176.0	205.0	3.1970	ug/L	3.1970	ppb	20:56:55
2	Ba 233.527†	56.6	32.5	0.1646	ug/L	0.1646	ppb	20:57:15
2	Be 313.107†	-7265.9	29.7	0.0093	ug/L	0.0093	ppb	20:56:55
2	Cd 226.502†	-283.6	-6.7	-0.0488	ug/L	-0.0488	ppb	20:57:15
2	Co 228.616†	-91.8	-1.7	-0.0205	ug/L	-0.0205	ppb	20:57:15
2	Cr 267.716†	-31.4	-2.9	-0.0240	ug/L	-0.0240	ppb	20:56:55
2	Cu 324.752†	9998.9	-163.9	-0.4050	ug/L	-0.4050	ppb	20:56:55
2	Mn 257.610†	927.6	103.2	0.0792	ug/L	0.0792	ppb	20:57:15
2	Mo 202.031†	34.3	2.6	0.1047	ug/L	0.1047	ppb	20:57:15
2	Ni 231.604†	164.3	16.5	0.2643	ug/L	0.2643	ppb	20:57:15

2	P 214.914†	339.3	3.4	1.2737	ug/L	1.2737 ppb	20:57:15
2	Pb 220.353†	-14.7	14.4	1.0810	ug/L	1.0810 ppb	20:57:15
2	S 181.975 Axial†	64.5	-3.2	-2.6922	ug/L	-2.6922 ppb	20:57:15
2	Sb 206.836†	53.9	8.7	1.7075	ug/L	1.7075 ppb	20:57:15
2	Se 196.026†	-13.7	7.9	2.5363	ug/L	2.5363 ppb	20:57:15
2	Si 251.611†	669.5	111.3	2.2656	ug/L	2.2656 ppb	20:57:15
2	Sn 189.927†	7.5	2.1	0.2194	ug/L	0.2194 ppb	20:57:15
2	Ti 334.940†	-1099.1	7.1	0.0141	ug/L	0.0141 ppb	20:56:55
2	Tl 190.801†	-47.9	13.4	2.2544	ug/L	2.2544 ppb	20:57:15
2	U 409.014†	-3908.6	-85.0	-2.1078	ug/L	-2.1078 ppb	20:56:50
2	V 292.402†	-1613.6	34.6	0.1957	ug/L	0.1957 ppb	20:56:55
2	Zn 213.857†	1103.5	-15.8	-0.0896	ug/L	-0.0896 ppb	20:57:15
2	SiO2†	699.8	99.4	4.3258	ug/L	4.3258 ppb	20:57:56
3	Sc Radial	5546.4	5546.4	99.7	%		20:55:53
3	Y RADIAL	4848.5	4848.5	100.7	%		20:55:53
3	Al 396.153Radial†	-53.9	38.1	34.658	ug/L	34.658 ppb	20:55:53
3	Ca 317.933Radial†	33.4	16.6	41.320	ug/L	41.320 ppb	20:56:13
3	Fe 238.204 Radial†	-1.5	-1.8	-64.565	ug/L	-64.565 ppb	20:56:13
3	K 766.490 Radial†	1470.4	2.2	0.9378	ug/L	0.9378 ppb	20:55:53
3	Mg 279.077 IEC†	-0.6	-0.8	-65.218	ug/L	-65.218 ppb	20:56:13
3	Na 589.592 Radial†	-193.1	-23.3	-62.943	ug/L	-62.943 ppb	20:56:13
3	Sr 421.552†	31.4	26.0	0.4005	ug/L	0.4005 ppb	20:56:13
3	Sc 361.383	1051046.9	1051046.9	99.073	%		20:57:20
3	Y 371.029	847930.3	847930.3	99.381	%		20:57:20
3	Ag 328.068†	703.3	71.3	0.2629	ug/L	0.2629 ppb	20:57:25
3	As 188.979†	-53.8	-17.5	-4.1088	ug/L	-4.1088 ppb	20:57:46
3	B 249.677†	-219.2	160.2	2.5054	ug/L	2.5054 ppb	20:57:25
3	Ba 233.527†	59.4	35.7	0.1796	ug/L	0.1796 ppb	20:57:46
3	Be 313.107†	-7257.8	-9.5	-0.0027	ug/L	-0.0027 ppb	20:57:25
3	Cd 226.502†	-285.1	-10.2	-0.0681	ug/L	-0.0681 ppb	20:57:46
3	Co 228.616†	-87.0	2.6	0.0341	ug/L	0.0341 ppb	20:57:46
3	Cr 267.716†	-40.8	-12.6	-0.1079	ug/L	-0.1079 ppb	20:57:25
3	Cu 324.752†	9996.9	-100.8	-0.2525	ug/L	-0.2525 ppb	20:57:25
3	Mn 257.610†	918.6	100.2	0.0720	ug/L	0.0720 ppb	20:57:46
3	Mo 202.031†	37.1	5.7	0.2240	ug/L	0.2240 ppb	20:57:46
3	Ni 231.604†	171.8	25.2	0.4033	ug/L	0.4033 ppb	20:57:46
3	P 214.914†	347.5	13.9	4.9970	ug/L	4.9970 ppb	20:57:46
3	Pb 220.353†	-7.9	21.1	1.5935	ug/L	1.5935 ppb	20:57:46
3	S 181.975 Axial†	58.6	-8.7	-7.3461	ug/L	-7.3461 ppb	20:57:46
3	Sb 206.836†	45.7	0.7	0.1374	ug/L	0.1374 ppb	20:57:46
3	Se 196.026†	-24.5	-3.1	-1.2347	ug/L	-1.2347 ppb	20:57:46
3	Si 251.611†	659.8	105.9	2.1819	ug/L	2.1819 ppb	20:57:46
3	Sn 189.927†	2.6	-2.8	-0.2924	ug/L	-0.2924 ppb	20:57:46
3	Ti 334.940†	-1019.6	80.1	0.1084	ug/L	0.1084 ppb	20:57:25
3	Tl 190.801†	-35.2	25.9	4.3658	ug/L	4.3658 ppb	20:57:46
3	U 409.014†	-3870.2	-71.7	-1.7699	ug/L	-1.7699 ppb	20:57:20
3	V 292.402†	-1607.9	29.9	0.1766	ug/L	0.1766 ppb	20:57:25
3	Zn 213.857†	1120.5	8.6	0.0549	ug/L	0.0549 ppb	20:57:46
3	SiO2†	704.8	109.1	4.8114	ug/L	4.8114 ppb	20:58:01

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1058295.4	99.756	%	0.7039				0.71%
Sc Radial	5380.0	96.7	%	3.93				4.07%
Y 371.029	853463.1	100.03	%	0.682				0.68%
Y RADIAL	4696.8	97.53	%	3.962				4.06%
Ag 328.068†	93.0	0.3598	ug/L	0.15715	0.3598	ppb	0.15715	43.68%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.8	18.891	ug/L	13.6884	18.891	ppb	13.6884	72.46%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.6	-2.9576	ug/L	1.60469	-2.9576	ppb	1.60469	54.26%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	197.6	3.0828	ug/L	0.52955	3.0828	ppb	0.52955	17.18%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.1	0.1318	ug/L	0.07025	0.1318	ppb	0.07025	53.31%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	23.3	0.0073	ug/L	0.00924	0.0073	ppb	0.00924	125.93%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	19.5	48.551	ug/L	8.3497	48.551	ppb	8.3497	17.20%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -12.8     -0.0919 ug/L       0.05875     -0.0919 ppb        0.05875  63.93%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                2.9      0.0367 ug/L       0.05855      0.0367 ppb        0.05855 159.38%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                4.5      0.0386 ug/L       0.18591      0.0386 ppb        0.18591 481.71%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -175.8     -0.4354 ug/L       0.19988     -0.4354 ppb        0.19988  45.91%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.8     -28.911 ug/L       30.8782     -28.911 ppb        30.8782 106.80%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.2      47.837 ug/L       42.7393      47.837 ppb        42.7393  89.34%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.1     -7.8834 ug/L      55.02102     -7.8834 ppb       55.02102 697.94%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               92.9      0.0698 ug/L       0.01074      0.0698 ppb        0.01074  15.39%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.6      0.1839 ug/L       0.06862      0.1839 ppb        0.06862  37.31%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -35.6     -96.248 ug/L       40.9553     -96.248 ppb        40.9553  42.55%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               20.1      0.3215 ug/L       0.07267      0.3215 ppb        0.07267  22.60%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 1.9      0.7793 ug/L       4.48544      0.7793 ppb        4.48544 575.59%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               19.9      1.5015 ug/L       0.38291      1.5015 ppb        0.38291  25.50%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -6.0     -5.0870 ug/L       2.32993     -5.0870 ppb        2.32993  45.80%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.7      1.5094 ug/L       1.28450      1.5094 ppb        1.28450  85.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                0.1     -0.0586 ug/L       2.25056     -0.0586 ppb        2.25056 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              114.7      2.3469 ug/L       0.21742      2.3469 ppb        0.21742   9.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                3.2      0.3312 ug/L       0.68641      0.3312 ppb        0.68641 207.22%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               22.0      0.3390 ug/L       0.12150      0.3390 ppb        0.12150  35.84%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               34.7      0.0493 ug/L       0.05154      0.0493 ppb        0.05154 104.61%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               20.3      3.4312 ug/L       1.07631      3.4312 ppb        1.07631  31.37%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -54.7     -1.3525 ug/L       1.02950     -1.3525 ppb        1.02950  76.12%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                29.8      0.1724 ug/L       0.02570      0.1724 ppb        0.02570  14.91%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -9.7     -0.0524 ug/L       0.09434     -0.0524 ppb        0.09434 180.18%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     99.6      4.3560 ug/L       0.44114      4.3560 ppb        0.44114  10.13%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 63
Sample ID: 1201873929|882337|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 84
Date Collected: 7/8/2009 21:00:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873929|882337|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5587.9	5587.9	100	%			21:02:03
1	Y RADIAL	4833.0	4833.0	100.4	%			21:02:03
1	Al 396.153Radial†	-88.2	4.4	3.9798	ug/L	3.9798	ppb	21:02:03
1	Ca 317.933Radial†	14.0	-3.0	-7.4626	ug/L	-7.4626	ppb	21:02:23
1	Fe 238.204 Radial†	0.8	0.5	16.735	ug/L	16.735	ppb	21:02:23
1	K 766.490 Radial†	1457.8	-21.3	-9.1837	ug/L	-9.1837	ppb	21:02:03
1	Mg 279.077 IEC†	-0.4	-0.6	-45.701	ug/L	-45.701	ppb	21:02:23
1	Na 589.592 Radial†	-196.5	-25.3	-68.421	ug/L	-68.421	ppb	21:02:23
1	Sr 421.552†	-2.9	-8.3	-0.1283	ug/L	-0.1283	ppb	21:02:23
1	Sc 361.383	1075425.0	1075425.0	101.37	%			21:03:20
1	Y 371.029	866423.3	866423.3	101.55	%			21:03:20
1	Ag 328.068†	619.7	-27.3	-0.1079	ug/L	-0.1079	ppb	21:03:25
1	As 188.979†	-60.6	-22.9	-5.3674	ug/L	-5.3674	ppb	21:03:45
1	B 249.677†	-342.8	43.3	0.6731	ug/L	0.6731	ppb	21:03:45
1	Ba 233.527†	33.2	8.5	0.0433	ug/L	0.0433	ppb	21:03:45
1	Be 313.107†	-7360.3	55.5	0.0176	ug/L	0.0176	ppb	21:03:25
1	Cd 226.502†	-298.3	-16.6	-0.1255	ug/L	-0.1255	ppb	21:03:45
1	Co 228.616†	-88.7	2.9	0.0347	ug/L	0.0347	ppb	21:03:45
1	Cr 267.716†	-35.5	-6.4	-0.0566	ug/L	-0.0566	ppb	21:03:45
1	Cu 324.752†	10044.9	-282.2	-0.6954	ug/L	-0.6954	ppb	21:03:25
1	Mn 257.610†	1040.9	199.8	0.1609	ug/L	0.1609	ppb	21:03:45
1	Mo 202.031†	25.6	-6.5	-0.2589	ug/L	-0.2589	ppb	21:03:45
1	Ni 231.604†	194.6	43.7	0.7011	ug/L	0.7011	ppb	21:03:45
1	P 214.914†	343.1	1.5	0.6502	ug/L	0.6502	ppb	21:03:45
1	Pb 220.353†	-16.8	12.5	0.9347	ug/L	0.9347	ppb	21:03:45
1	S 181.975 Axial†	68.8	0.0	0.0212	ug/L	0.0212	ppb	21:03:45
1	Sb 206.836†	57.9	11.7	2.3066	ug/L	2.3066	ppb	21:03:45
1	Se 196.026†	-12.0	9.7	3.2256	ug/L	3.2256	ppb	21:03:45
1	Si 251.611†	1050.0	475.7	9.8209	ug/L	9.8209	ppb	21:03:45
1	Sn 189.927†	10.7	5.1	0.5298	ug/L	0.5298	ppb	21:03:45
1	Ti 334.940†	-1021.1	102.0	0.1302	ug/L	0.1302	ppb	21:03:25
1	Tl 190.801†	-47.0	15.1	2.5430	ug/L	2.5430	ppb	21:03:45
1	U 409.014†	-3632.6	251.3	6.2333	ug/L	6.2333	ppb	21:03:20
1	V 292.402†	-1675.6	-0.2	0.0046	ug/L	0.0046	ppb	21:03:25
1	Zn 213.857†	1270.2	130.6	0.7257	ug/L	0.7257	ppb	21:03:45
1	SiO2†	1166.4	548.2	24.238	ug/L	24.238	ppb	21:04:51
2	Sc Radial	5570.4	5570.4	100	%			21:02:28
2	Y RADIAL	4868.5	4868.5	101.1	%			21:02:28
2	Al 396.153Radial†	-77.4	14.8	13.499	ug/L	13.499	ppb	21:02:28
2	Ca 317.933Radial†	14.2	-2.7	-6.7910	ug/L	-6.7910	ppb	21:02:49
2	Fe 238.204 Radial†	-0.4	-0.7	-24.740	ug/L	-24.740	ppb	21:02:49
2	K 766.490 Radial†	1549.9	75.3	32.692	ug/L	32.692	ppb	21:02:28
2	Mg 279.077 IEC†	-1.4	-1.6	-123.23	ug/L	-123.23	ppb	21:02:49
2	Na 589.592 Radial†	-203.2	-32.5	-87.951	ug/L	-87.951	ppb	21:02:49
2	Sr 421.552†	-5.9	-11.4	-0.1751	ug/L	-0.1751	ppb	21:02:49
2	Sc 361.383	1074044.9	1074044.9	101.24	%			21:03:50
2	Y 371.029	864860.3	864860.3	101.36	%			21:03:50
2	Ag 328.068†	611.5	-34.6	-0.1460	ug/L	-0.1460	ppb	21:03:56
2	As 188.979†	-46.7	-9.3	-2.1785	ug/L	-2.1785	ppb	21:04:16
2	B 249.677†	-366.7	19.3	0.3043	ug/L	0.3043	ppb	21:04:16
2	Ba 233.527†	7.4	-17.0	-0.0872	ug/L	-0.0872	ppb	21:04:16
2	Be 313.107†	-7472.7	-64.9	-0.0199	ug/L	-0.0199	ppb	21:03:56
2	Cd 226.502†	-304.0	-22.6	-0.1661	ug/L	-0.1661	ppb	21:04:16
2	Co 228.616†	-91.1	0.5	0.0056	ug/L	0.0056	ppb	21:04:16
2	Cr 267.716†	-28.1	0.9	0.0064	ug/L	0.0064	ppb	21:04:16
2	Cu 324.752†	10053.7	-260.8	-0.6449	ug/L	-0.6449	ppb	21:03:56
2	Mn 257.610†	1062.0	221.9	0.1745	ug/L	0.1745	ppb	21:04:16
2	Mo 202.031†	30.7	-1.4	-0.0579	ug/L	-0.0579	ppb	21:04:16
2	Ni 231.604†	165.9	15.6	0.2495	ug/L	0.2495	ppb	21:04:16

2	P 214.914†	357.5	16.2	5.8575	ug/L	5.8575 ppb	21:04:16
2	Pb 220.353†	-30.7	-1.2	-0.0863	ug/L	-0.0863 ppb	21:04:16
2	S 181.975 Axial†	60.9	-7.7	-6.5131	ug/L	-6.5131 ppb	21:04:16
2	Sb 206.836†	49.2	3.1	0.6181	ug/L	0.6181 ppb	21:04:16
2	Se 196.026†	-16.6	5.2	1.6091	ug/L	1.6091 ppb	21:04:16
2	Si 251.611†	1069.3	496.0	10.225	ug/L	10.225 ppb	21:04:16
2	Sn 189.927†	7.8	2.2	0.2298	ug/L	0.2298 ppb	21:04:16
2	Ti 334.940†	-1030.1	91.8	0.1194	ug/L	0.1194 ppb	21:03:56
2	Tl 190.801†	-52.2	9.9	1.6691	ug/L	1.6691 ppb	21:04:16
2	U 409.014†	-3856.1	25.9	0.6446	ug/L	0.6446 ppb	21:03:50
2	V 292.402†	-1710.4	-36.7	-0.2062	ug/L	-0.2062 ppb	21:03:56
2	Zn 213.857†	1243.0	105.3	0.5947	ug/L	0.5947 ppb	21:04:16
2	SiO2†	1097.2	481.4	21.249	ug/L	21.249 ppb	21:04:56
3	Sc Radial	5723.2	5723.2	103	%		21:02:54
3	Y RADIAL	4965.8	4965.8	103.1	%		21:02:54
3	Al 396.153Radial†	-71.9	22.3	20.250	ug/L	20.250 ppb	21:02:54
3	Ca 317.933Radial†	15.5	-1.9	-4.6115	ug/L	-4.6115 ppb	21:03:14
3	Fe 238.204 Radial†	2.3	1.9	67.781	ug/L	67.781 ppb	21:03:14
3	K 766.490 Radial†	1456.8	-56.6	-24.458	ug/L	-24.458 ppb	21:02:54
3	Mg 279.077 IEC†	-0.4	-0.6	-48.316	ug/L	-48.316 ppb	21:03:14
3	Na 589.592 Radial†	-194.4	-18.6	-50.227	ug/L	-50.227 ppb	21:03:14
3	Sr 421.552†	-2.9	-8.3	-0.1281	ug/L	-0.1281 ppb	21:03:14
3	Sc 361.383	1050271.9	1050271.9	99.000	%		21:04:21
3	Y 371.029	847024.6	847024.6	99.275	%		21:04:21
3	Ag 328.068†	618.0	-14.3	-0.0373	ug/L	-0.0373 ppb	21:04:26
3	As 188.979†	-46.3	-9.8	-2.2945	ug/L	-2.2945 ppb	21:04:46
3	B 249.677†	-361.4	16.4	0.2475	ug/L	0.2475 ppb	21:04:46
3	Ba 233.527†	18.0	-6.1	-0.0294	ug/L	-0.0294 ppb	21:04:46
3	Be 313.107†	-7419.8	-178.5	-0.0551	ug/L	-0.0551 ppb	21:04:26
3	Cd 226.502†	-293.3	-18.6	-0.1464	ug/L	-0.1464 ppb	21:04:46
3	Co 228.616†	-98.5	-9.1	-0.1136	ug/L	-0.1136 ppb	21:04:46
3	Cr 267.716†	-28.0	0.3	0.0030	ug/L	0.0030 ppb	21:04:46
3	Cu 324.752†	10073.8	-15.7	-0.0348	ug/L	-0.0348 ppb	21:04:26
3	Mn 257.610†	1040.8	224.3	0.1870	ug/L	0.1870 ppb	21:04:46
3	Mo 202.031†	38.5	7.2	0.2912	ug/L	0.2912 ppb	21:04:46
3	Ni 231.604†	190.8	44.4	0.7121	ug/L	0.7121 ppb	21:04:46
3	P 214.914†	348.2	14.8	5.2028	ug/L	5.2028 ppb	21:04:46
3	Pb 220.353†	-14.5	14.4	1.0815	ug/L	1.0815 ppb	21:04:46
3	S 181.975 Axial†	56.6	-10.7	-9.0647	ug/L	-9.0647 ppb	21:04:46
3	Sb 206.836†	63.2	18.4	3.6213	ug/L	3.6213 ppb	21:04:46
3	Se 196.026†	-21.6	-0.2	0.1712	ug/L	0.1712 ppb	21:04:46
3	Si 251.611†	1059.3	509.8	10.523	ug/L	10.523 ppb	21:04:46
3	Sn 189.927†	6.2	0.8	0.0844	ug/L	0.0844 ppb	21:04:46
3	Ti 334.940†	-951.3	148.3	0.1929	ug/L	0.1929 ppb	21:04:26
3	Tl 190.801†	-56.8	4.1	0.6878	ug/L	0.6878 ppb	21:04:46
3	U 409.014†	-3706.0	91.3	2.2564	ug/L	2.2564 ppb	21:04:21
3	V 292.402†	-1656.9	-20.9	-0.1206	ug/L	-0.1206 ppb	21:04:26
3	Zn 213.857†	1241.6	131.8	0.7258	ug/L	0.7258 ppb	21:04:46
3	SiO2†	1131.7	540.8	23.901	ug/L	23.901 ppb	21:05:01

Mean Data: 1201873929|882337|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1066580.6	100.54	%	1.333				1.33%
Sc Radial	5627.2	101	%	1.5				1.49%
Y 371.029	859436.1	100.73	%	1.263				1.25%
Y RADIAL	4889.1	101.5	%	1.43				1.41%
Ag 328.068†	-25.4	-0.0971	ug/L	0.05515	-0.0971	ppb	0.05515	56.81%
Al 396.153Radial†	13.8	12.576	ug/L	8.1741	12.576	ppb	8.1741	65.00%
As 188.979†	-14.0	-3.2801	ug/L	1.80856	-3.2801	ppb	1.80856	55.14%
B 249.677†	26.4	0.4083	ug/L	0.23105	0.4083	ppb	0.23105	56.59%
Ba 233.527†	-4.9	-0.0244	ug/L	0.06536	-0.0244	ppb	0.06536	267.36%
Be 313.107†	-62.6	-0.0191	ug/L	0.03632	-0.0191	ppb	0.03632	189.81%
Ca 317.933Radial†	-2.5	-6.2884	ug/L	1.49052	-6.2884	ppb	1.49052	23.70%
Cd 226.502†	-19.3	-0.1460	ug/L	0.02032	-0.1460	ppb	0.02032	13.92%
Co 228.616†	-1.9	-0.0244	ug/L	0.07862	-0.0244	ppb	0.07862	321.71%
Cr 267.716†	-1.8	-0.0158	ug/L	0.03541	-0.0158	ppb	0.03541	224.78%
Cu 324.752†	-186.2	-0.4583	ug/L	0.36770	-0.4583	ppb	0.36770	80.22%
Fe 238.204 Radial†	0.6	19.925	ug/L	46.3431	19.925	ppb	46.3431	232.58%
K 766.490 Radial†	-0.8	-0.3168	ug/L	29.58895	-0.3168	ppb	29.58895	>999.9%

Mg 279.077 IEC†	-0.9	-72.416	ug/L	44.0267	-72.416	ppb	44.0267	60.80%
Mn 257.610†	215.3	0.1742	ug/L	0.01304	0.1742	ppb	0.01304	7.49%
Mo 202.031†	-0.2	-0.0085	ug/L	0.27833	-0.0085	ppb	0.27833	>999.9%
Na 589.592 Radial†	-25.5	-68.866	ug/L	18.8662	-68.866	ppb	18.8662	27.40%
Ni 231.604†	34.6	0.5543	ug/L	0.26398	0.5543	ppb	0.26398	47.63%
P 214.914†	10.9	3.9035	ug/L	2.83641	3.9035	ppb	2.83641	72.66%
Pb 220.353†	8.6	0.6433	ug/L	0.63614	0.6433	ppb	0.63614	98.88%
S 181.975 Axial†	-6.1	-5.1855	ug/L	4.68616	-5.1855	ppb	4.68616	90.37%
Sb 206.836†	11.1	2.1820	ug/L	1.50548	2.1820	ppb	1.50548	69.00%
Se 196.026†	4.9	1.6686	ug/L	1.52806	1.6686	ppb	1.52806	91.58%
Si 251.611†	493.8	10.190	ug/L	0.3526	10.190	ppb	0.3526	3.46%
Sn 189.927†	2.7	0.2813	ug/L	0.22716	0.2813	ppb	0.22716	80.74%
Sr 421.552†	-9.3	-0.1438	ug/L	0.02709	-0.1438	ppb	0.02709	18.83%
Ti 334.940†	114.0	0.1475	ug/L	0.03967	0.1475	ppb	0.03967	26.90%
Tl 190.801†	9.7	1.6333	ug/L	0.92809	1.6333	ppb	0.92809	56.82%
U 409.014†	122.8	3.0448	ug/L	2.87651	3.0448	ppb	2.87651	94.47%
V 292.402†	-19.2	-0.1074	ug/L	0.10602	-0.1074	ppb	0.10602	98.69%
Zn 213.857†	122.6	0.6820	ug/L	0.07567	0.6820	ppb	0.07567	11.09%
SiO2†	523.5	23.129	ug/L	1.6368	23.129	ppb	1.6368	7.08%

Sequence No.: 64
Sample ID: 1201873930|882337|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 85
Date Collected: 7/8/2009 21:07:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873930|882337|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5554.7	5554.7	99.8	%			21:09:06
1	Y RADIAL	4807.0	4807.0	99.82	%			21:09:06
1	Al 396.153Radial†	5091.6	5193.1	4706.6	ug/L	4706.6	ppb	21:09:06
1	Ca 317.933Radial†	1924.9	1911.4	4761.1	ug/L	4761.1	ppb	21:09:26
1	Fe 238.204 Radial†	140.7	140.6	4948.5	ug/L	4948.5	ppb	21:09:26
1	K 766.490 Radial†	12887.2	11437.6	4959.0	ug/L	4959.0	ppb	21:09:06
1	Mg 279.077 IEC†	63.2	63.2	5008.0	ug/L	5008.0	ppb	21:09:26
1	Na 589.592 Radial†	1625.8	1799.2	4864.8	ug/L	4864.8	ppb	21:09:06
1	Sr 421.552†	33091.4	33146.3	510.63	ug/L	510.63	ppb	21:09:06
1	Sc 361.383	1070412.7	1070412.7	100.90	%			21:10:25
1	Y 371.029	853599.2	853599.2	100.05	%			21:10:25
1	Ag 328.068†	120273.1	118563.7	472.33	ug/L	472.33	ppb	21:10:25
1	As 188.979†	1969.0	1988.4	469.84	ug/L	469.84	ppb	21:10:45
1	B 249.677†	29512.7	29631.4	459.99	ug/L	459.99	ppb	21:10:25
1	Ba 233.527†	95266.4	94394.0	478.97	ug/L	478.97	ppb	21:10:25
1	Be 313.107†	1511340.9	1505201.4	469.13	ug/L	469.13	ppb	21:10:25
1	Cd 226.502†	64031.9	63739.4	476.46	ug/L	476.46	ppb	21:10:25
1	Co 228.616†	36861.1	36623.3	456.37	ug/L	456.37	ppb	21:10:45
1	Cr 267.716†	56499.6	56025.2	477.85	ug/L	477.85	ppb	21:10:25
1	Cu 324.752†	207022.7	194988.3	481.37	ug/L	481.37	ppb	21:10:25
1	Mn 257.610†	612450.7	606170.9	479.59	ug/L	479.59	ppb	21:10:25
1	Mo 202.031†	12028.7	11889.8	476.25	ug/L	476.25	ppb	21:10:45
1	Ni 231.604†	30209.2	29792.0	477.21	ug/L	477.21	ppb	21:10:45
1	P 214.914†	1852.1	1498.6	456.91	ug/L	456.91	ppb	21:10:45
1	Pb 220.353†	6369.1	6341.4	476.64	ug/L	476.64	ppb	21:10:45
1	S 181.975 Axial†	5820.3	5700.6	4824.4	ug/L	4824.4	ppb	21:10:45
1	Sb 206.836†	2649.6	2580.6	513.36	ug/L	513.36	ppb	21:10:45
1	Se 196.026†	1421.4	1430.4	484.30	ug/L	484.30	ppb	21:10:45
1	Si 251.611†	231620.4	228998.1	4713.8	ug/L	4713.8	ppb	21:10:25
1	Sn 189.927†	4803.4	4755.1	495.01	ug/L	495.01	ppb	21:10:45
1	Ti 334.940†	366282.1	364130.3	476.60	ug/L	476.60	ppb	21:10:25
1	Tl 190.801†	2753.9	2790.7	472.65	ug/L	472.65	ppb	21:10:45
1	U 409.014†	15839.1	19532.8	483.12	ug/L	483.12	ppb	21:10:25
1	V 292.402†	83620.4	84528.7	485.11	ug/L	485.11	ppb	21:10:25
1	Zn 213.857†	87318.7	85418.8	472.54	ug/L	472.54	ppb	21:10:25
1	SiO2†	232606.5	229933.2	10135	ug/L	10135	ppb	21:11:46
2	Sc Radial	5650.8	5650.8	102	%			21:09:31
2	Y RADIAL	4925.1	4925.1	102.3	%			21:09:31
2	Al 396.153Radial†	5194.5	5207.7	4719.8	ug/L	4719.8	ppb	21:09:31
2	Ca 317.933Radial†	1902.8	1856.9	4625.3	ug/L	4625.3	ppb	21:09:51
2	Fe 238.204 Radial†	136.7	134.2	4723.9	ug/L	4723.9	ppb	21:09:51
2	K 766.490 Radial†	12989.1	11318.4	4907.2	ug/L	4907.2	ppb	21:09:31
2	Mg 279.077 IEC†	63.2	62.0	4918.0	ug/L	4918.0	ppb	21:09:51
2	Na 589.592 Radial†	1650.1	1795.4	4854.5	ug/L	4854.5	ppb	21:09:31
2	Sr 421.552†	33599.8	33083.2	509.66	ug/L	509.66	ppb	21:09:31
2	Sc 361.383	1071002.8	1071002.8	100.95	%			21:10:53
2	Y 371.029	854280.8	854280.8	100.12	%			21:10:53
2	Ag 328.068†	120470.9	118694.0	472.78	ug/L	472.78	ppb	21:10:53
2	As 188.979†	1983.3	2001.5	472.87	ug/L	472.87	ppb	21:11:13
2	B 249.677†	29543.0	29645.4	460.23	ug/L	460.23	ppb	21:10:53
2	Ba 233.527†	95340.6	94415.5	479.07	ug/L	479.07	ppb	21:10:53
2	Be 313.107†	1512239.4	1505266.0	469.15	ug/L	469.15	ppb	21:10:53
2	Cd 226.502†	63993.0	63665.9	475.93	ug/L	475.93	ppb	21:10:53
2	Co 228.616†	36938.7	36680.1	457.08	ug/L	457.08	ppb	21:11:13
2	Cr 267.716†	56547.7	56042.0	477.99	ug/L	477.99	ppb	21:10:53
2	Cu 324.752†	207558.4	195405.8	482.39	ug/L	482.39	ppb	21:10:53
2	Mn 257.610†	612910.5	606291.9	479.66	ug/L	479.66	ppb	21:10:53
2	Mo 202.031†	12047.0	11901.4	476.71	ug/L	476.71	ppb	21:11:13
2	Ni 231.604†	30275.2	29840.9	477.99	ug/L	477.99	ppb	21:11:13

2	P 214.914†	1849.0	1494.6	455.50 ug/L	455.50 ppb	21:11:13
2	Pb 220.353†	6397.4	6366.0	478.50 ug/L	478.50 ppb	21:11:13
2	S 181.975 Axial†	5844.6	5721.6	4842.2 ug/L	4842.2 ppb	21:11:13
2	Sb 206.836†	2661.4	2590.9	515.37 ug/L	515.37 ppb	21:11:13
2	Se 196.026†	1428.8	1436.9	485.63 ug/L	485.63 ppb	21:11:13
2	Si 251.611†	231854.1	229103.1	4716.0 ug/L	4716.0 ppb	21:10:53
2	Sn 189.927†	4805.7	4754.8	494.97 ug/L	494.97 ppb	21:11:13
2	Ti 334.940†	366778.1	364421.6	476.98 ug/L	476.98 ppb	21:10:53
2	Tl 190.801†	2778.2	2813.3	476.46 ug/L	476.46 ppb	21:11:13
2	U 409.014†	15792.3	19477.9	481.78 ug/L	481.78 ppb	21:10:53
2	V 292.402†	83642.1	84504.5	485.00 ug/L	485.00 ppb	21:10:53
2	Zn 213.857†	87210.0	85263.5	471.69 ug/L	471.69 ppb	21:10:53
2	SiO2†	233672.1	230861.7	10176 ug/L	10176 ppb	21:11:51
3	Sc Radial	5611.3	5611.3	101 %		21:09:56
3	Y RADIAL	4862.5	4862.5	101.0 %		21:09:56
3	Al 396.153Radial†	5165.4	5214.8	4726.5 ug/L	4726.5 ppb	21:09:56
3	Ca 317.933Radial†	1923.5	1890.6	4709.3 ug/L	4709.3 ppb	21:10:16
3	Fe 238.204 Radial†	135.8	134.4	4727.8 ug/L	4727.8 ppb	21:10:16
3	K 766.490 Radial†	12914.4	11334.3	4914.0 ug/L	4914.0 ppb	21:09:56
3	Mg 279.077 IEC†	60.7	60.1	4762.1 ug/L	4762.1 ppb	21:10:16
3	Na 589.592 Radial†	1660.7	1817.4	4914.0 ug/L	4914.0 ppb	21:09:56
3	Sr 421.552†	33367.4	33085.5	509.69 ug/L	509.69 ppb	21:09:56
3	Sc 361.383	1084870.7	1084870.7	102.26 %		21:11:20
3	Y 371.029	866057.7	866057.7	101.51 %		21:11:20
3	Ag 328.068†	121988.8	118652.9	472.62 ug/L	472.62 ppb	21:11:20
3	As 188.979†	2001.9	1994.5	471.25 ug/L	471.25 ppb	21:11:40
3	B 249.677†	30101.5	29817.5	462.93 ug/L	462.93 ppb	21:11:20
3	Ba 233.527†	96798.5	94633.8	480.18 ug/L	480.18 ppb	21:11:20
3	Be 313.107†	1538515.8	1511813.2	471.19 ug/L	471.19 ppb	21:11:20
3	Cd 226.502†	64938.4	63780.2	476.78 ug/L	476.78 ppb	21:11:20
3	Co 228.616†	37107.7	36377.6	453.30 ug/L	453.30 ppb	21:11:40
3	Cr 267.716†	57335.3	56096.1	478.45 ug/L	478.45 ppb	21:11:20
3	Cu 324.752†	210329.4	195487.4	482.59 ug/L	482.59 ppb	21:11:20
3	Mn 257.610†	622195.9	607611.2	480.70 ug/L	480.70 ppb	21:11:20
3	Mo 202.031†	12119.9	11820.1	473.45 ug/L	473.45 ppb	21:11:40
3	Ni 231.604†	30394.3	29574.0	473.71 ug/L	473.71 ppb	21:11:40
3	P 214.914†	1867.6	1489.3	453.55 ug/L	453.55 ppb	21:11:40
3	Pb 220.353†	6467.4	6353.5	477.55 ug/L	477.55 ppb	21:11:40
3	S 181.975 Axial†	5865.9	5668.4	4797.2 ug/L	4797.2 ppb	21:11:40
3	Sb 206.836†	2663.9	2559.5	509.08 ug/L	509.08 ppb	21:11:40
3	Se 196.026†	1440.8	1430.5	483.55 ug/L	483.55 ppb	21:11:40
3	Si 251.611†	235208.0	229447.1	4723.2 ug/L	4723.2 ppb	21:11:20
3	Sn 189.927†	4829.8	4717.5	491.09 ug/L	491.09 ppb	21:11:40
3	Ti 334.940†	372205.0	365084.3	477.85 ug/L	477.85 ppb	21:11:20
3	Tl 190.801†	2796.5	2796.0	473.57 ug/L	473.57 ppb	21:11:40
3	U 409.014†	16021.9	19502.4	482.39 ug/L	482.39 ppb	21:11:20
3	V 292.402†	84946.6	84721.1	486.19 ug/L	486.19 ppb	21:11:20
3	Zn 213.857†	88568.6	85487.8	472.98 ug/L	472.98 ppb	21:11:20
3	SiO2†	234108.1	228329.3	10064 ug/L	10064 ppb	21:11:56

Mean Data: 1201873930|882337|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1075428.7	101.37	%	0.771				0.76%
Sc Radial	5605.6	101	%	0.9				0.86%
Y 371.029	857979.2	100.56	%	0.821				0.82%
Y RADIAL	4864.9	101.0	%	1.23				1.21%
Ag 328.068†	118636.8	472.57	ug/L	0.226	472.57	ppb	0.226	0.05%
Al 396.153Radial†	5205.2	4717.6	ug/L	10.12	4717.6	ppb	10.12	0.21%
As 188.979†	1994.8	471.32	ug/L	1.514	471.32	ppb	1.514	0.32%
B 249.677†	29698.1	461.05	ug/L	1.629	461.05	ppb	1.629	0.35%
Ba 233.527†	94481.1	479.41	ug/L	0.672	479.41	ppb	0.672	0.14%
Be 313.107†	1507426.9	469.82	ug/L	1.183	469.82	ppb	1.183	0.25%
Ca 317.933Radial†	1886.3	4698.5	ug/L	68.53	4698.5	ppb	68.53	1.46%
Cd 226.502†	63728.5	476.39	ug/L	0.429	476.39	ppb	0.429	0.09%
Co 228.616†	36560.3	455.58	ug/L	2.008	455.58	ppb	2.008	0.44%
Cr 267.716†	56054.4	478.09	ug/L	0.315	478.09	ppb	0.315	0.07%
Cu 324.752†	195293.8	482.12	ug/L	0.653	482.12	ppb	0.653	0.14%
Fe 238.204 Radial†	136.4	4800.1	ug/L	128.56	4800.1	ppb	128.56	2.68%
K 766.490 Radial†	11363.4	4926.7	ug/L	28.17	4926.7	ppb	28.17	0.57%

Mg 279.077 IEC†	61.8	4896.0 ug/L	124.43	4896.0 ppb	124.43	2.54%
Mn 257.610†	606691.3	479.98 ug/L	0.625	479.98 ppb	0.625	0.13%
Mo 202.031†	11870.5	475.47 ug/L	1.764	475.47 ppb	1.764	0.37%
Na 589.592 Radial†	1804.0	4877.8 ug/L	31.77	4877.8 ppb	31.77	0.65%
Ni 231.604†	29735.6	476.30 ug/L	2.276	476.30 ppb	2.276	0.48%
P 214.914†	1494.2	455.32 ug/L	1.685	455.32 ppb	1.685	0.37%
Pb 220.353†	6353.6	477.56 ug/L	0.932	477.56 ppb	0.932	0.20%
S 181.975 Axial†	5696.9	4821.3 ug/L	22.68	4821.3 ppb	22.68	0.47%
Sb 206.836†	2577.0	512.60 ug/L	3.212	512.60 ppb	3.212	0.63%
Se 196.026†	1432.6	484.49 ug/L	1.053	484.49 ppb	1.053	0.22%
Si 251.611†	229182.8	4717.7 ug/L	4.89	4717.7 ppb	4.89	0.10%
Sn 189.927†	4742.5	493.69 ug/L	2.252	493.69 ppb	2.252	0.46%
Sr 421.552†	33105.0	509.99 ug/L	0.551	509.99 ppb	0.551	0.11%
Ti 334.940†	364545.4	477.14 ug/L	0.639	477.14 ppb	0.639	0.13%
Tl 190.801†	2800.0	474.23 ug/L	1.986	474.23 ppb	1.986	0.42%
U 409.014†	19504.4	482.43 ug/L	0.669	482.43 ppb	0.669	0.14%
V 292.402†	84584.8	485.43 ug/L	0.655	485.43 ppb	0.655	0.14%
Zn 213.857†	85390.1	472.40 ug/L	0.653	472.40 ppb	0.653	0.14%
SiO2†	229708.1	10125 ug/L	56.5	10125 ppb	56.5	0.56%

Sequence No.: 65
Sample ID: 232742001|882337|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 86
Date Collected: 7/8/2009 21:14:08
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232742001|882337|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5704.3	5704.3	103	%			21:16:01
1	Y RADIAL	4965.4	4965.4	103.1	%			21:16:01
1	Al 396.153Radial†	-34.9	58.2	52.919	ug/L	52.919	ppb	21:16:01
1	Ca 317.933Radial†	29.6	11.9	29.658	ug/L	29.658	ppb	21:16:21
1	Fe 238.204 Radial†	0.0	-0.3	-10.546	ug/L	-10.546	ppb	21:16:21
1	K 766.490 Radial†	1878.3	359.3	155.80	ug/L	155.80	ppb	21:16:01
1	Mg 279.077 IEC†	1.1	0.9	67.635	ug/L	67.635	ppb	21:16:21
1	Na 589.592 Radial†	-134.2	39.5	106.92	ug/L	106.92	ppb	21:16:21
1	Sr 421.552†	5.7	0.1	0.0006	ug/L	0.0006	ppb	21:16:21
1	Sc 361.383	1082881.0	1082881.0	102.07	%			21:17:18
1	Y 371.029	871838.5	871838.5	102.18	%			21:17:18
1	Ag 328.068†	662.4	10.4	0.0424	ug/L	0.0424	ppb	21:17:23
1	As 188.979†	-50.3	-12.4	-2.9197	ug/L	-2.9197	ppb	21:17:43
1	B 249.677†	1207.6	1564.5	24.384	ug/L	24.384	ppb	21:17:23
1	Ba 233.527†	93.9	67.7	0.3425	ug/L	0.3425	ppb	21:17:43
1	Be 313.107†	-7384.3	81.9	0.0274	ug/L	0.0274	ppb	21:17:23
1	Cd 226.502†	-301.4	-17.6	-0.1300	ug/L	-0.1300	ppb	21:17:43
1	Co 228.616†	-79.2	12.8	0.1583	ug/L	0.1583	ppb	21:17:43
1	Cr 267.716†	54.1	81.6	0.6971	ug/L	0.6971	ppb	21:17:43
1	Cu 324.752†	10248.5	-151.0	-0.3731	ug/L	-0.3731	ppb	21:17:23
1	Mn 257.610†	2327.1	1452.8	1.1454	ug/L	1.1454	ppb	21:17:23
1	Mo 202.031†	40.4	7.9	0.3136	ug/L	0.3136	ppb	21:17:43
1	Ni 231.604†	190.5	38.4	0.6152	ug/L	0.6152	ppb	21:17:43
1	P 214.914†	349.6	5.6	2.0553	ug/L	2.0553	ppb	21:17:43
1	Pb 220.353†	-6.4	22.8	1.7249	ug/L	1.7249	ppb	21:17:43
1	S 181.975 Axial†	113.0	42.8	36.254	ug/L	36.254	ppb	21:17:43
1	Sb 206.836†	62.5	15.8	3.0805	ug/L	3.0805	ppb	21:17:43
1	Se 196.026†	-10.7	11.1	3.5718	ug/L	3.5718	ppb	21:17:43
1	Si 251.611†	77985.4	75841.0	1564.9	ug/L	1564.9	ppb	21:17:23
1	Sn 189.927†	5.8	0.2	0.0190	ug/L	0.0190	ppb	21:17:43
1	Ti 334.940†	-474.7	644.2	0.8476	ug/L	0.8476	ppb	21:17:23
1	Tl 190.801†	-49.9	12.5	2.1271	ug/L	2.1271	ppb	21:17:43
1	U 409.014†	-4159.0	-239.8	-5.9493	ug/L	-5.9493	ppb	21:17:23
1	V 292.402†	-1690.2	-3.1	-0.0236	ug/L	-0.0236	ppb	21:17:23
1	Zn 213.857†	1421.2	269.9	1.5028	ug/L	1.5028	ppb	21:17:43
1	SiO2†	78816.9	76613.4	3385.1	ug/L	3385.1	ppb	21:18:49
2	Sc Radial	5729.6	5729.6	103	%			21:16:26
2	Y RADIAL	4981.1	4981.1	103.4	%			21:16:26
2	Al 396.153Radial†	-60.8	33.2	30.175	ug/L	30.175	ppb	21:16:26
2	Ca 317.933Radial†	31.7	13.9	34.612	ug/L	34.612	ppb	21:16:46
2	Fe 238.204 Radial†	1.0	0.6	22.612	ug/L	22.612	ppb	21:16:46
2	K 766.490 Radial†	1853.4	327.0	141.82	ug/L	141.82	ppb	21:16:26
2	Mg 279.077 IEC†	0.7	0.5	41.813	ug/L	41.813	ppb	21:16:46
2	Na 589.592 Radial†	-125.4	48.6	131.36	ug/L	131.36	ppb	21:16:46
2	Sr 421.552†	2.0	-3.6	-0.0552	ug/L	-0.0552	ppb	21:16:46
2	Sc 361.383	1093653.4	1093653.4	103.09	%			21:17:48
2	Y 371.029	881928.3	881928.3	103.37	%			21:17:48
2	Ag 328.068†	652.4	-5.7	-0.0135	ug/L	-0.0135	ppb	21:17:53
2	As 188.979†	-47.9	-9.6	-2.2455	ug/L	-2.2455	ppb	21:18:13
2	B 249.677†	1210.3	1555.5	24.240	ug/L	24.240	ppb	21:17:53
2	Ba 233.527†	101.3	74.0	0.3757	ug/L	0.3757	ppb	21:18:13
2	Be 313.107†	-7381.4	156.0	0.0505	ug/L	0.0505	ppb	21:17:53
2	Cd 226.502†	-277.0	8.9	0.0643	ug/L	0.0643	ppb	21:18:13
2	Co 228.616†	-81.3	11.5	0.1417	ug/L	0.1417	ppb	21:18:13
2	Cr 267.716†	-10.7	18.2	0.1566	ug/L	0.1566	ppb	21:18:13
2	Cu 324.752†	10351.0	-150.5	-0.3699	ug/L	-0.3699	ppb	21:17:53
2	Mn 257.610†	2253.1	1358.5	1.0758	ug/L	1.0758	ppb	21:17:53
2	Mo 202.031†	37.6	4.7	0.1891	ug/L	0.1891	ppb	21:18:13
2	Ni 231.604†	193.2	39.1	0.6271	ug/L	0.6271	ppb	21:18:13

2	P 214.914†	364.4	16.6	5.9010 ug/L	5.9010 ppb	21:18:13
2	Pb 220.353†	-22.5	7.3	0.5506 ug/L	0.5506 ppb	21:18:13
2	S 181.975 Axial†	104.1	33.1	28.042 ug/L	28.042 ppb	21:18:13
2	Sb 206.836†	45.8	-1.0	-0.1935 ug/L	-0.1935 ppb	21:18:13
2	Se 196.026†	-14.6	7.5	2.5140 ug/L	2.5140 ppb	21:18:13
2	Si 251.611†	77671.5	74784.0	1543.1 ug/L	1543.1 ppb	21:17:53
2	Sn 189.927†	4.8	-0.8	-0.0785 ug/L	-0.0785 ppb	21:18:13
2	Ti 334.940†	-453.8	669.0	0.8788 ug/L	0.8788 ppb	21:17:53
2	Tl 190.801†	-56.6	6.5	1.1102 ug/L	1.1102 ppb	21:18:13
2	U 409.014†	-4021.5	-66.2	-1.6463 ug/L	-1.6463 ppb	21:17:53
2	V 292.402†	-1651.3	51.0	0.2851 ug/L	0.2851 ppb	21:17:53
2	Zn 213.857†	1410.9	246.2	1.3678 ug/L	1.3678 ppb	21:18:13
2	SiO2†	78304.7	75356.0	3329.6 ug/L	3329.6 ppb	21:18:54
3	Sc Radial	5612.9	5612.9	101 %		21:16:51
3	Y RADIAL	4904.5	4904.5	101.8 %		21:16:51
3	Al 396.153Radial†	-46.8	45.8	41.706 ug/L	41.706 ppb	21:16:51
3	Ca 317.933Radial†	24.9	7.8	19.340 ug/L	19.340 ppb	21:17:11
3	Fe 238.204 Radial†	-0.0	-0.3	-11.979 ug/L	-11.979 ppb	21:17:11
3	K 766.490 Radial†	1922.0	432.4	187.54 ug/L	187.54 ppb	21:16:51
3	Mg 279.077 IEC†	2.0	1.8	142.54 ug/L	142.54 ppb	21:17:11
3	Na 589.592 Radial†	-133.7	37.9	102.39 ug/L	102.39 ppb	21:17:11
3	Sr 421.552†	8.1	2.6	0.0398 ug/L	0.0398 ppb	21:17:11
3	Sc 361.383	1081791.4	1081791.4	101.97 %		21:18:18
3	Y 371.029	871592.0	871592.0	102.15 %		21:18:18
3	Ag 328.068†	612.8	-37.7	-0.1467 ug/L	-0.1467 ppb	21:18:24
3	As 188.979†	-50.0	-12.1	-2.8489 ug/L	-2.8489 ppb	21:18:44
3	B 249.677†	1188.5	1547.1	24.112 ug/L	24.112 ppb	21:18:24
3	Ba 233.527†	105.0	78.7	0.3976 ug/L	0.3976 ppb	21:18:44
3	Be 313.107†	-7318.2	139.5	0.0452 ug/L	0.0452 ppb	21:18:24
3	Cd 226.502†	-299.7	-16.2	-0.1197 ug/L	-0.1197 ppb	21:18:44
3	Co 228.616†	-81.2	10.8	0.1330 ug/L	0.1330 ppb	21:18:44
3	Cr 267.716†	47.9	75.6	0.6461 ug/L	0.6461 ppb	21:18:44
3	Cu 324.752†	10369.1	-22.6	-0.0564 ug/L	-0.0564 ppb	21:18:24
3	Mn 257.610†	2285.8	1414.5	1.1136 ug/L	1.1136 ppb	21:18:24
3	Mo 202.031†	38.0	5.5	0.2191 ug/L	0.2191 ppb	21:18:44
3	Ni 231.604†	170.6	19.1	0.3054 ug/L	0.3054 ppb	21:18:44
3	P 214.914†	358.8	14.9	5.2992 ug/L	5.2992 ppb	21:18:44
3	Pb 220.353†	-1.7	27.5	2.0686 ug/L	2.0686 ppb	21:18:44
3	S 181.975 Axial†	103.4	33.5	28.368 ug/L	28.368 ppb	21:18:44
3	Sb 206.836†	48.6	2.2	0.4160 ug/L	0.4160 ppb	21:18:44
3	Se 196.026†	-8.4	13.3	4.2998 ug/L	4.2998 ppb	21:18:44
3	Si 251.611†	78051.9	75983.2	1567.8 ug/L	1567.8 ppb	21:18:24
3	Sn 189.927†	3.2	-2.4	-0.2434 ug/L	-0.2434 ppb	21:18:44
3	Ti 334.940†	-510.1	609.0	0.8018 ug/L	0.8018 ppb	21:18:24
3	Tl 190.801†	-50.7	11.7	1.9820 ug/L	1.9820 ppb	21:18:44
3	U 409.014†	-4241.6	-324.9	-8.0613 ug/L	-8.0613 ppb	21:18:24
3	V 292.402†	-1703.8	-18.0	-0.1124 ug/L	-0.1124 ppb	21:18:24
3	Zn 213.857†	1389.5	240.2	1.3362 ug/L	1.3362 ppb	21:18:44
3	SiO2†	78621.6	76499.6	3380.1 ug/L	3380.1 ppb	21:18:59

Mean Data: 232742001|882337|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1086108.6	102.38	%	0.618				0.60%
Sc Radial	5682.3	102	%	1.1				1.08%
Y 371.029	875119.6	102.57	%	0.691				0.67%
Y RADIAL	4950.3	102.8	%	0.84				0.82%
Ag 328.068†	-11.0	-0.0393	ug/L	0.09716	-0.0393	ppb	0.09716	247.37%
Al 396.153Radial†	45.7	41.600	ug/L	11.3722	41.600	ppb	11.3722	27.34%
As 188.979†	-11.4	-2.6714	ug/L	0.37051	-2.6714	ppb	0.37051	13.87%
B 249.677†	1555.7	24.245	ug/L	0.1362	24.245	ppb	0.1362	0.56%
Ba 233.527†	73.5	0.3719	ug/L	0.02773	0.3719	ppb	0.02773	7.46%
Be 313.107†	125.8	0.0411	ug/L	0.01210	0.0411	ppb	0.01210	29.46%
Ca 317.933Radial†	11.2	27.870	ug/L	7.7916	27.870	ppb	7.7916	27.96%
Cd 226.502†	-8.3	-0.0618	ug/L	0.10934	-0.0618	ppb	0.10934	176.97%
Co 228.616†	11.7	0.1443	ug/L	0.01286	0.1443	ppb	0.01286	8.91%
Cr 267.716†	58.5	0.4999	ug/L	0.29840	0.4999	ppb	0.29840	59.69%
Cu 324.752†	-108.0	-0.2665	ug/L	0.18197	-0.2665	ppb	0.18197	68.29%
Fe 238.204 Radial†	0.0	0.0292	ug/L	19.57070	0.0292	ppb	19.57070	>999.9%
K 766.490 Radial†	372.9	161.72	ug/L	23.430	161.72	ppb	23.430	14.49%

Mg 279.077 IEC†	1.1	83.994	ug/L	52.3161	83.994	ppb	52.3161	62.29%
Mn 257.610†	1408.6	1.1116	ug/L	0.03488	1.1116	ppb	0.03488	3.14%
Mo 202.031†	6.0	0.2406	ug/L	0.06495	0.2406	ppb	0.06495	27.00%
Na 589.592 Radial†	42.0	113.55	ug/L	15.584	113.55	ppb	15.584	13.72%
Ni 231.604†	32.2	0.5159	ug/L	0.18240	0.5159	ppb	0.18240	35.36%
P 214.914†	12.3	4.4185	ug/L	2.06859	4.4185	ppb	2.06859	46.82%
Pb 220.353†	19.2	1.4480	ug/L	0.79600	1.4480	ppb	0.79600	54.97%
S 181.975 Axial†	36.5	30.888	ug/L	4.6502	30.888	ppb	4.6502	15.05%
Sb 206.836†	5.7	1.1010	ug/L	1.74120	1.1010	ppb	1.74120	158.14%
Se 196.026†	10.6	3.4619	ug/L	0.89795	3.4619	ppb	0.89795	25.94%
Si 251.611†	75536.1	1558.6	ug/L	13.51	1558.6	ppb	13.51	0.87%
Sn 189.927†	-1.0	-0.1010	ug/L	0.13266	-0.1010	ppb	0.13266	131.39%
Sr 421.552†	-0.3	-0.0049	ug/L	0.04773	-0.0049	ppb	0.04773	968.37%
Ti 334.940†	640.7	0.8427	ug/L	0.03871	0.8427	ppb	0.03871	4.59%
Tl 190.801†	10.3	1.7398	ug/L	0.54998	1.7398	ppb	0.54998	31.61%
U 409.014†	-210.3	-5.2189	ug/L	3.26929	-5.2189	ppb	3.26929	62.64%
V 292.402†	10.0	0.0497	ug/L	0.20864	0.0497	ppb	0.20864	419.65%
Zn 213.857†	252.1	1.4023	ug/L	0.08852	1.4023	ppb	0.08852	6.31%
SiO2†	76156.3	3364.9	ug/L	30.72	3364.9	ppb	30.72	0.91%

Sequence No.: 66
Sample ID: 1201873931|882337|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 87
Date Collected: 7/8/2009 21:21:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873931|882337|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5622.9	5622.9	101	%			21:23:04
1	Y RADIAL	4895.3	4895.3	101.7	%			21:23:04
1	Al 396.153Radial†	-50.8	42.0	38.178	ug/L	38.178	ppb	21:23:04
1	Ca 317.933Radial†	28.0	10.8	26.880	ug/L	26.880	ppb	21:23:24
1	Fe 238.204 Radial†	1.3	0.9	33.148	ug/L	33.148	ppb	21:23:24
1	K 766.490 Radial†	1876.9	384.4	166.76	ug/L	166.76	ppb	21:23:04
1	Mg 279.077 IEC†	-0.5	-0.7	-53.069	ug/L	-53.069	ppb	21:23:24
1	Na 589.592 Radial†	-126.5	45.2	122.29	ug/L	122.29	ppb	21:23:24
1	Sr 421.552†	12.6	7.0	0.1080	ug/L	0.1080	ppb	21:23:24
1	Sc 361.383	1086871.2	1086871.2	102.45	%			21:24:20
1	Y 371.029	875562.3	875562.3	102.62	%			21:24:20
1	Ag 328.068†	644.6	-9.4	-0.0303	ug/L	-0.0303	ppb	21:24:26
1	As 188.979†	-53.9	-15.7	-3.6900	ug/L	-3.6900	ppb	21:24:46
1	B 249.677†	1208.4	1561.0	24.323	ug/L	24.323	ppb	21:24:26
1	Ba 233.527†	108.3	81.4	0.4132	ug/L	0.4132	ppb	21:24:46
1	Be 313.107†	-7409.0	84.4	0.0282	ug/L	0.0282	ppb	21:24:26
1	Cd 226.502†	-293.4	-8.7	-0.0687	ug/L	-0.0687	ppb	21:24:46
1	Co 228.616†	-73.4	18.8	0.2319	ug/L	0.2319	ppb	21:24:46
1	Cr 267.716†	15.6	43.8	0.3728	ug/L	0.3728	ppb	21:24:46
1	Cu 324.752†	10337.7	-100.7	-0.2467	ug/L	-0.2467	ppb	21:24:26
1	Mn 257.610†	2257.3	1376.3	1.0930	ug/L	1.0930	ppb	21:24:26
1	Mo 202.031†	37.9	5.2	0.2119	ug/L	0.2119	ppb	21:24:46
1	Ni 231.604†	184.6	31.9	0.5117	ug/L	0.5117	ppb	21:24:46
1	P 214.914†	365.8	20.1	7.1625	ug/L	7.1625	ppb	21:24:46
1	Pb 220.353†	-3.1	26.1	1.9582	ug/L	1.9582	ppb	21:24:46
1	S 181.975 Axial†	112.4	41.9	35.436	ug/L	35.436	ppb	21:24:46
1	Sb 206.836†	42.5	-4.0	-0.7665	ug/L	-0.7665	ppb	21:24:46
1	Se 196.026†	-17.2	4.8	1.6885	ug/L	1.6885	ppb	21:24:46
1	Si 251.611†	80476.8	77992.4	1609.3	ug/L	1609.3	ppb	21:24:26
1	Sn 189.927†	17.5	11.6	1.2058	ug/L	1.2058	ppb	21:24:46
1	Ti 334.940†	-480.7	640.0	0.8376	ug/L	0.8376	ppb	21:24:26
1	Tl 190.801†	-63.2	-0.3	-0.0420	ug/L	-0.0420	ppb	21:24:46
1	U 409.014†	-3749.0	175.4	4.3481	ug/L	4.3481	ppb	21:24:20
1	V 292.402†	-1674.5	18.4	0.1087	ug/L	0.1087	ppb	21:24:26
1	Zn 213.857†	1268.9	116.1	0.6439	ug/L	0.6439	ppb	21:24:46
1	SiO2†	79763.3	77253.7	3413.4	ug/L	3413.4	ppb	21:25:52
2	Sc Radial	5617.7	5617.7	101	%			21:23:29
2	Y RADIAL	4874.4	4874.4	101.2	%			21:23:29
2	Al 396.153Radial†	-42.6	50.0	45.526	ug/L	45.526	ppb	21:23:29
2	Ca 317.933Radial†	24.4	7.2	17.961	ug/L	17.961	ppb	21:23:49
2	Fe 238.204 Radial†	0.0	-0.3	-11.448	ug/L	-11.448	ppb	21:23:49
2	K 766.490 Radial†	1866.7	376.0	163.07	ug/L	163.07	ppb	21:23:29
2	Mg 279.077 IEC†	0.2	0.0	0.9446	ug/L	0.9446	ppb	21:23:49
2	Na 589.592 Radial†	-131.6	40.1	108.39	ug/L	108.39	ppb	21:23:49
2	Sr 421.552†	14.3	8.7	0.1336	ug/L	0.1336	ppb	21:23:49
2	Sc 361.383	1078722.3	1078722.3	101.68	%			21:24:51
2	Y 371.029	868713.4	868713.4	101.82	%			21:24:51
2	Ag 328.068†	629.9	-19.1	-0.0778	ug/L	-0.0778	ppb	21:24:56
2	As 188.979†	-49.1	-11.4	-2.6774	ug/L	-2.6774	ppb	21:25:16
2	B 249.677†	1130.8	1493.7	23.280	ug/L	23.280	ppb	21:24:56
2	Ba 233.527†	101.3	75.4	0.3818	ug/L	0.3818	ppb	21:25:16
2	Be 313.107†	-7379.1	59.2	0.0202	ug/L	0.0202	ppb	21:24:56
2	Cd 226.502†	-294.3	-11.8	-0.0866	ug/L	-0.0866	ppb	21:25:16
2	Co 228.616†	-77.3	14.4	0.1790	ug/L	0.1790	ppb	21:25:16
2	Cr 267.716†	16.9	45.2	0.3857	ug/L	0.3857	ppb	21:25:16
2	Cu 324.752†	10290.4	-71.0	-0.1758	ug/L	-0.1758	ppb	21:24:56
2	Mn 257.610†	2276.7	1412.0	1.1144	ug/L	1.1144	ppb	21:24:56
2	Mo 202.031†	41.5	9.1	0.3621	ug/L	0.3621	ppb	21:25:16
2	Ni 231.604†	178.9	27.7	0.4432	ug/L	0.4432	ppb	21:25:16

2	P 214.914†	359.5	16.6	5.9298 ug/L	5.9298 ppb	21:25:16
2	Pb 220.353†	-20.4	9.0	0.6841 ug/L	0.6841 ppb	21:25:16
2	S 181.975 Axial†	113.2	43.4	36.766 ug/L	36.766 ppb	21:25:16
2	Sb 206.836†	55.3	8.9	1.7563 ug/L	1.7563 ppb	21:25:16
2	Se 196.026†	-17.3	4.6	1.4600 ug/L	1.4600 ppb	21:25:16
2	Si 251.611†	80284.0	78396.1	1617.6 ug/L	1617.6 ppb	21:24:56
2	Sn 189.927†	9.5	3.9	0.4048 ug/L	0.4048 ppb	21:25:16
2	Ti 334.940†	-541.8	576.4	0.7561 ug/L	0.7561 ppb	21:24:56
2	Tl 190.801†	-53.6	8.7	1.4737 ug/L	1.4737 ppb	21:25:16
2	U 409.014†	-3943.8	-43.9	-1.0874 ug/L	-1.0874 ppb	21:24:51
2	V 292.402†	-1633.6	46.2	0.2653 ug/L	0.2653 ppb	21:24:56
2	Zn 213.857†	1252.5	109.3	0.6093 ug/L	0.6093 ppb	21:25:16
2	SiO2†	80191.6	78263.0	3458.0 ug/L	3458.0 ppb	21:25:57
3	Sc Radial	5718.2	5718.2	103 %		21:23:54
3	Y RADIAL	4968.2	4968.2	103.2 %		21:23:54
3	Al 396.153Radial†	-56.4	37.3	33.976 ug/L	33.976 ppb	21:23:54
3	Ca 317.933Radial†	26.1	8.4	20.975 ug/L	20.975 ppb	21:24:14
3	Fe 238.204 Radial†	1.0	0.7	22.969 ug/L	22.969 ppb	21:24:14
3	K 766.490 Radial†	1908.3	384.1	166.59 ug/L	166.59 ppb	21:23:54
3	Mg 279.077 IEC†	0.7	0.5	41.545 ug/L	41.545 ppb	21:24:14
3	Na 589.592 Radial†	-129.5	44.4	120.05 ug/L	120.05 ppb	21:24:14
3	Sr 421.552†	12.3	6.5	0.1000 ug/L	0.1000 ppb	21:24:14
3	Sc 361.383	1091313.0	1091313.0	102.87 %		21:25:21
3	Y 371.029	877430.2	877430.2	102.84 %		21:25:21
3	Ag 328.068†	611.6	-44.0	-0.1708 ug/L	-0.1708 ppb	21:25:26
3	As 188.979†	-49.4	-11.2	-2.6248 ug/L	-2.6248 ppb	21:25:46
3	B 249.677†	1183.2	1531.7	23.869 ug/L	23.869 ppb	21:25:26
3	Ba 233.527†	113.1	85.6	0.4348 ug/L	0.4348 ppb	21:25:46
3	Be 313.107†	-7339.0	181.9	0.0583 ug/L	0.0583 ppb	21:25:26
3	Cd 226.502†	-284.0	1.5	0.0090 ug/L	0.0090 ppb	21:25:46
3	Co 228.616†	-91.3	1.7	0.0198 ug/L	0.0198 ppb	21:25:46
3	Cr 267.716†	34.2	61.9	0.5262 ug/L	0.5262 ppb	21:25:46
3	Cu 324.752†	10256.5	-220.7	-0.5433 ug/L	-0.5433 ppb	21:25:26
3	Mn 257.610†	2284.8	1394.0	1.1039 ug/L	1.1039 ppb	21:25:26
3	Mo 202.031†	41.7	8.7	0.3508 ug/L	0.3508 ppb	21:25:46
3	Ni 231.604†	169.5	16.5	0.2644 ug/L	0.2644 ppb	21:25:46
3	P 214.914†	375.1	27.7	9.8866 ug/L	9.8866 ppb	21:25:46
3	Pb 220.353†	-13.6	15.9	1.1940 ug/L	1.1940 ppb	21:25:46
3	S 181.975 Axial†	114.5	43.5	36.801 ug/L	36.801 ppb	21:25:46
3	Sb 206.836†	54.0	7.1	1.3844 ug/L	1.3844 ppb	21:25:46
3	Se 196.026†	-24.0	-1.7	-0.4726 ug/L	-0.4726 ppb	21:25:46
3	Si 251.611†	80072.1	77279.3	1594.6 ug/L	1594.6 ppb	21:25:26
3	Sn 189.927†	6.1	0.4	0.0438 ug/L	0.0438 ppb	21:25:46
3	Ti 334.940†	-548.2	576.3	0.7530 ug/L	0.7530 ppb	21:25:26
3	Tl 190.801†	-62.3	0.8	0.1444 ug/L	0.1444 ppb	21:25:46
3	U 409.014†	-3692.6	245.2	6.0788 ug/L	6.0788 ppb	21:25:21
3	V 292.402†	-1631.0	67.3	0.3943 ug/L	0.3943 ppb	21:25:26
3	Zn 213.857†	1258.8	101.3	0.5608 ug/L	0.5608 ppb	21:25:46
3	SiO2†	79110.8	76302.5	3371.4 ug/L	3371.4 ppb	21:26:02

Mean Data: 1201873931|882337|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1085635.5	102.33	%	0.602				0.59%
Sc Radial	5652.9	102	%	1.0				1.00%
Y 371.029	873901.9	102.42	%	0.538				0.53%
Y RADIAL	4912.6	102.0	%	1.02				1.00%
Ag 328.068†	-24.2	-0.0930	ug/L	0.07146	-0.0930	ppb	0.07146	76.86%
Al 396.153Radial†	43.1	39.227	ug/L	5.8459	39.227	ppb	5.8459	14.90%
As 188.979†	-12.8	-2.9974	ug/L	0.60033	-2.9974	ppb	0.60033	20.03%
B 249.677†	1528.8	23.824	ug/L	0.5232	23.824	ppb	0.5232	2.20%
Ba 233.527†	80.8	0.4099	ug/L	0.02665	0.4099	ppb	0.02665	6.50%
Be 313.107†	108.5	0.0355	ug/L	0.02012	0.0355	ppb	0.02012	56.59%
Ca 317.933Radial†	8.8	21.939	ug/L	4.5370	21.939	ppb	4.5370	20.68%
Cd 226.502†	-6.3	-0.0488	ug/L	0.05083	-0.0488	ppb	0.05083	104.20%
Co 228.616†	11.6	0.1436	ug/L	0.11039	0.1436	ppb	0.11039	76.89%
Cr 267.716†	50.3	0.4283	ug/L	0.08507	0.4283	ppb	0.08507	19.86%
Cu 324.752†	-130.8	-0.3219	ug/L	0.19494	-0.3219	ppb	0.19494	60.55%
Fe 238.204 Radial†	0.4	14.889	ug/L	23.3699	14.889	ppb	23.3699	156.96%
K 766.490 Radial†	381.5	165.47	ug/L	2.084	165.47	ppb	2.084	1.26%

Mg 279.077 IEC†	-0.0	-3.5267	ug/L	47.46527	-3.5267	ppb	47.46527 >999.9%
Mn 257.610†	1394.1	1.1038	ug/L	0.01068	1.1038	ppb	0.01068 0.97%
Mo 202.031†	7.7	0.3082	ug/L	0.08366	0.3082	ppb	0.08366 27.14%
Na 589.592 Radial†	43.2	116.91	ug/L	7.465	116.91	ppb	7.465 6.39%
Ni 231.604†	25.4	0.4064	ug/L	0.12768	0.4064	ppb	0.12768 31.42%
P 214.914†	21.5	7.6596	ug/L	2.02468	7.6596	ppb	2.02468 26.43%
Pb 220.353†	17.0	1.2787	ug/L	0.64127	1.2787	ppb	0.64127 50.15%
S 181.975 Axial†	42.9	36.334	ug/L	0.7785	36.334	ppb	0.7785 2.14%
Sb 206.836†	4.0	0.7914	ug/L	1.36191	0.7914	ppb	1.36191 172.09%
Se 196.026†	2.6	0.8920	ug/L	1.18727	0.8920	ppb	1.18727 133.11%
Si 251.611†	77889.3	1607.2	ug/L	11.67	1607.2	ppb	11.67 0.73%
Sn 189.927†	5.3	0.5515	ug/L	0.59469	0.5515	ppb	0.59469 107.84%
Sr 421.552†	7.4	0.1139	ug/L	0.01751	0.1139	ppb	0.01751 15.38%
Ti 334.940†	597.6	0.7822	ug/L	0.04795	0.7822	ppb	0.04795 6.13%
Tl 190.801†	3.1	0.5254	ug/L	0.82650	0.5254	ppb	0.82650 157.32%
U 409.014†	125.6	3.1132	ug/L	3.73931	3.1132	ppb	3.73931 120.11%
V 292.402†	43.9	0.2561	ug/L	0.14299	0.2561	ppb	0.14299 55.83%
Zn 213.857†	108.9	0.6047	ug/L	0.04173	0.6047	ppb	0.04173 6.90%
SiO2†	77273.1	3414.3	ug/L	43.32	3414.3	ppb	43.32 1.27%

Sequence No.: 67
Sample ID: 1201873932|882337|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 88
Date Collected: 7/8/2009 21:28:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873932|882337|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5558.6	5558.6	99.9	%			21:30:06
1	Y RADIAL	4829.5	4829.5	100.3	%			21:30:06
1	Al 396.153Radial†	5313.6	5411.7	4905.0	ug/L	4905.0	ppb	21:30:06
1	Ca 317.933Radial†	1990.8	1976.1	4922.2	ug/L	4922.2	ppb	21:30:26
1	Fe 238.204 Radial†	144.7	144.5	5085.5	ug/L	5085.5	ppb	21:30:26
1	K 766.490 Radial†	13528.3	12070.2	5233.3	ug/L	5233.3	ppb	21:30:06
1	Mg 279.077 IEC†	64.1	64.0	5077.6	ug/L	5077.6	ppb	21:30:26
1	Na 589.592 Radial†	1779.9	1952.3	5278.8	ug/L	5278.8	ppb	21:30:06
1	Sr 421.552†	34264.6	34297.3	528.36	ug/L	528.36	ppb	21:30:06
1	Sc 361.383	1080296.8	1080296.8	101.83	%			21:31:25
1	Y 371.029	863403.7	863403.7	101.19	%			21:31:25
1	Ag 328.068†	125673.9	122776.8	489.09	ug/L	489.09	ppb	21:31:25
1	As 188.979†	2059.8	2059.7	486.66	ug/L	486.66	ppb	21:31:45
1	B 249.677†	32213.6	32016.2	497.10	ug/L	497.10	ppb	21:31:25
1	Ba 233.527†	99417.0	97606.1	495.26	ug/L	495.26	ppb	21:31:25
1	Be 313.107†	1574858.2	1553872.3	484.30	ug/L	484.30	ppb	21:31:25
1	Cd 226.502†	66362.4	65447.5	489.22	ug/L	489.22	ppb	21:31:25
1	Co 228.616†	38497.5	37896.0	472.23	ug/L	472.23	ppb	21:31:45
1	Cr 267.716†	58580.3	57556.1	490.90	ug/L	490.90	ppb	21:31:25
1	Cu 324.752†	216644.2	202559.6	500.06	ug/L	500.06	ppb	21:31:25
1	Mn 257.610†	636682.1	624413.1	494.02	ug/L	494.02	ppb	21:31:25
1	Mo 202.031†	12474.2	12218.3	489.41	ug/L	489.41	ppb	21:31:45
1	Ni 231.604†	31260.3	30550.3	489.35	ug/L	489.35	ppb	21:31:45
1	P 214.914†	1928.1	1556.5	474.52	ug/L	474.52	ppb	21:31:45
1	Pb 220.353†	6670.5	6579.7	494.54	ug/L	494.54	ppb	21:31:45
1	S 181.975 Axial†	6065.3	5888.5	4983.4	ug/L	4983.4	ppb	21:31:45
1	Sb 206.836†	2743.5	2648.8	526.95	ug/L	526.95	ppb	21:31:45
1	Se 196.026†	1448.4	1444.0	489.25	ug/L	489.25	ppb	21:31:45
1	Si 251.611†	319951.7	313641.7	6460.0	ug/L	6460.0	ppb	21:31:25
1	Sn 189.927†	4992.3	4897.1	509.79	ug/L	509.79	ppb	21:31:45
1	Ti 334.940†	381617.2	375868.4	491.97	ug/L	491.97	ppb	21:31:25
1	Tl 190.801†	2609.1	2623.6	444.49	ug/L	444.49	ppb	21:31:45
1	U 409.014†	16761.8	20295.4	501.99	ug/L	501.99	ppb	21:31:25
1	V 292.402†	87001.4	87090.6	499.80	ug/L	499.80	ppb	21:31:25
1	Zn 213.857†	91473.4	88707.1	490.78	ug/L	490.78	ppb	21:31:25
1	SiO2†	320475.4	314113.7	13854	ug/L	13854	ppb	21:32:45
2	Sc Radial	5621.6	5621.6	101	%			21:30:31
2	Y RADIAL	4874.3	4874.3	101.2	%			21:30:31
2	Al 396.153Radial†	5410.3	5447.9	4937.9	ug/L	4937.9	ppb	21:30:31
2	Ca 317.933Radial†	2003.6	1966.4	4898.0	ug/L	4898.0	ppb	21:30:51
2	Fe 238.204 Radial†	143.7	142.0	4994.9	ug/L	4994.9	ppb	21:30:51
2	K 766.490 Radial†	13643.9	12033.0	5217.1	ug/L	5217.1	ppb	21:30:31
2	Mg 279.077 IEC†	64.9	64.1	5083.4	ug/L	5083.4	ppb	21:30:51
2	Na 589.592 Radial†	1807.8	1960.0	5299.5	ug/L	5299.5	ppb	21:30:31
2	Sr 421.552†	34963.4	34604.8	533.10	ug/L	533.10	ppb	21:30:31
2	Sc 361.383	1074443.6	1074443.6	101.28	%			21:31:52
2	Y 371.029	857303.6	857303.6	100.48	%			21:31:52
2	Ag 328.068†	125050.3	122833.4	489.28	ug/L	489.28	ppb	21:31:52
2	As 188.979†	2046.5	2057.5	486.14	ug/L	486.14	ppb	21:32:12
2	B 249.677†	32190.2	32165.4	499.44	ug/L	499.44	ppb	21:31:52
2	Ba 233.527†	99200.4	97924.1	496.87	ug/L	496.87	ppb	21:31:52
2	Be 313.107†	1567381.8	1554915.3	484.62	ug/L	484.62	ppb	21:31:52
2	Cd 226.502†	66188.9	65631.2	490.61	ug/L	490.61	ppb	21:31:52
2	Co 228.616†	38308.3	37915.2	472.47	ug/L	472.47	ppb	21:32:12
2	Cr 267.716†	58378.9	57670.7	491.88	ug/L	491.88	ppb	21:31:52
2	Cu 324.752†	215218.7	202311.0	499.44	ug/L	499.44	ppb	21:31:52
2	Mn 257.610†	634520.2	625684.6	495.02	ug/L	495.02	ppb	21:31:52
2	Mo 202.031†	12428.6	12240.0	490.27	ug/L	490.27	ppb	21:32:12
2	Ni 231.604†	31138.4	30597.2	490.10	ug/L	490.10	ppb	21:32:12

2	P 214.914†	1923.4	1562.2	476.73 ug/L	476.73 ppb	21:32:12
2	Pb 220.353†	6613.2	6558.8	492.99 ug/L	492.99 ppb	21:32:12
2	S 181.975 Axial†	6034.2	5890.2	4984.9 ug/L	4984.9 ppb	21:32:12
2	Sb 206.836†	2724.5	2644.7	526.18 ug/L	526.18 ppb	21:32:12
2	Se 196.026†	1441.7	1445.1	489.30 ug/L	489.30 ppb	21:32:12
2	Si 251.611†	318520.5	313940.2	6466.2 ug/L	6466.2 ppb	21:31:52
2	Sn 189.927†	4984.6	4916.2	511.78 ug/L	511.78 ppb	21:32:12
2	Ti 334.940†	379699.2	376016.1	492.16 ug/L	492.16 ppb	21:31:52
2	Tl 190.801†	2590.1	2618.8	443.69 ug/L	443.69 ppb	21:32:12
2	U 409.014†	16619.2	20244.2	500.73 ug/L	500.73 ppb	21:31:52
2	V 292.402†	86469.6	87031.0	499.49 ug/L	499.49 ppb	21:31:52
2	Zn 213.857†	91238.1	88964.1	492.22 ug/L	492.22 ppb	21:31:52
2	SiO2†	322435.2	317763.3	14015 ug/L	14015 ppb	21:32:50
3	Sc Radial	5679.8	5679.8	102 %		21:30:56
3	Y RADIAL	4906.9	4906.9	101.9 %		21:30:56
3	Al 396.153Radial†	5432.7	5414.9	4907.9 ug/L	4907.9 ppb	21:30:56
3	Ca 317.933Radial†	1986.6	1929.5	4806.0 ug/L	4806.0 ppb	21:31:16
3	Fe 238.204 Radial†	143.5	140.2	4934.9 ug/L	4934.9 ppb	21:31:16
3	K 766.490 Radial†	13863.1	12109.4	5250.2 ug/L	5250.2 ppb	21:30:56
3	Mg 279.077 IEC†	60.7	59.3	4704.2 ug/L	4704.2 ppb	21:31:16
3	Na 589.592 Radial†	1825.3	1958.7	5296.2 ug/L	5296.2 ppb	21:30:56
3	Sr 421.552†	35166.0	34448.6	530.69 ug/L	530.69 ppb	21:30:56
3	Sc 361.383	1080759.5	1080759.5	101.87 %		21:32:20
3	Y 371.029	862347.1	862347.1	101.07 %		21:32:20
3	Ag 328.068†	125725.5	122774.6	489.03 ug/L	489.03 ppb	21:32:20
3	As 188.979†	2046.8	2046.1	483.44 ug/L	483.44 ppb	21:32:40
3	B 249.677†	32395.1	32180.8	499.69 ug/L	499.69 ppb	21:32:20
3	Ba 233.527†	99838.5	97978.0	497.14 ug/L	497.14 ppb	21:32:20
3	Be 313.107†	1577747.6	1556046.4	484.98 ug/L	484.98 ppb	21:32:20
3	Cd 226.502†	66638.0	65690.0	491.05 ug/L	491.05 ppb	21:32:20
3	Co 228.616†	38351.1	37736.2	470.23 ug/L	470.23 ppb	21:32:40
3	Cr 267.716†	58938.9	57883.6	493.69 ug/L	493.69 ppb	21:32:20
3	Cu 324.752†	216336.4	202166.3	499.08 ug/L	499.08 ppb	21:32:20
3	Mn 257.610†	638521.7	625951.2	495.23 ug/L	495.23 ppb	21:32:20
3	Mo 202.031†	12459.9	12199.0	488.63 ug/L	488.63 ppb	21:32:40
3	Ni 231.604†	31201.3	30479.2	488.21 ug/L	488.21 ppb	21:32:40
3	P 214.914†	1919.9	1547.6	471.65 ug/L	471.65 ppb	21:32:40
3	Pb 220.353†	6638.8	6545.8	492.01 ug/L	492.01 ppb	21:32:40
3	S 181.975 Axial†	6036.2	5857.4	4957.1 ug/L	4957.1 ppb	21:32:40
3	Sb 206.836†	2715.9	2620.6	521.32 ug/L	521.32 ppb	21:32:40
3	Se 196.026†	1457.7	1452.5	491.49 ug/L	491.49 ppb	21:32:40
3	Si 251.611†	320516.9	314061.9	6468.7 ug/L	6468.7 ppb	21:32:20
3	Sn 189.927†	4986.9	4889.7	509.01 ug/L	509.01 ppb	21:32:40
3	Ti 334.940†	382017.7	376101.0	492.26 ug/L	492.26 ppb	21:32:20
3	Tl 190.801†	2635.3	2648.2	448.66 ug/L	448.66 ppb	21:32:40
3	U 409.014†	16939.0	20462.2	506.15 ug/L	506.15 ppb	21:32:20
3	V 292.402†	87218.2	87267.0	500.81 ug/L	500.81 ppb	21:32:20
3	Zn 213.857†	91638.2	88830.4	491.51 ug/L	491.51 ppb	21:32:20
3	SiO2†	321154.5	314645.6	13877 ug/L	13877 ppb	21:32:56

Mean Data: 1201873932|882337|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1078500.0	101.66	%	0.332				0.33%
Sc Radial	5620.0	101	%	1.1				1.08%
Y 371.029	861018.1	100.91	%	0.382				0.38%
Y RADIAL	4870.2	101.1	%	0.81				0.80%
Ag 328.068†	122795.0	489.14	ug/L	0.131	489.14	ppb	0.131	0.03%
Al 396.153Radial†	5424.8	4916.9	ug/L	18.18	4916.9	ppb	18.18	0.37%
As 188.979†	2054.4	485.41	ug/L	1.730	485.41	ppb	1.730	0.36%
B 249.677†	32120.8	498.74	ug/L	1.429	498.74	ppb	1.429	0.29%
Ba 233.527†	97836.1	496.42	ug/L	1.016	496.42	ppb	1.016	0.20%
Be 313.107†	1554944.7	484.63	ug/L	0.338	484.63	ppb	0.338	0.07%
Ca 317.933Radial†	1957.3	4875.4	ug/L	61.32	4875.4	ppb	61.32	1.26%
Cd 226.502†	65589.5	490.29	ug/L	0.955	490.29	ppb	0.955	0.19%
Co 228.616†	37849.2	471.64	ug/L	1.226	471.64	ppb	1.226	0.26%
Cr 267.716†	57703.4	492.16	ug/L	1.414	492.16	ppb	1.414	0.29%
Cu 324.752†	202345.7	499.53	ug/L	0.495	499.53	ppb	0.495	0.10%
Fe 238.204 Radial†	142.2	5005.1	ug/L	75.82	5005.1	ppb	75.82	1.51%
K 766.490 Radial†	12070.9	5233.5	ug/L	16.56	5233.5	ppb	16.56	0.32%

Mg 279.077 IEC†	62.5	4955.0	ug/L	217.30	4955.0	ppb	217.30	4.39%
Mn 257.610†	625349.6	494.76	ug/L	0.643	494.76	ppb	0.643	0.13%
Mo 202.031†	12219.1	489.44	ug/L	0.823	489.44	ppb	0.823	0.17%
Na 589.592 Radial†	1957.0	5291.5	ug/L	11.16	5291.5	ppb	11.16	0.21%
Ni 231.604†	30542.2	489.22	ug/L	0.951	489.22	ppb	0.951	0.19%
P 214.914†	1555.4	474.30	ug/L	2.547	474.30	ppb	2.547	0.54%
Pb 220.353†	6561.4	493.18	ug/L	1.274	493.18	ppb	1.274	0.26%
S 181.975 Axial†	5878.7	4975.1	ug/L	15.64	4975.1	ppb	15.64	0.31%
Sb 206.836†	2638.0	524.82	ug/L	3.055	524.82	ppb	3.055	0.58%
Se 196.026†	1447.2	490.01	ug/L	1.280	490.01	ppb	1.280	0.26%
Si 251.611†	313881.3	6465.0	ug/L	4.46	6465.0	ppb	4.46	0.07%
Sn 189.927†	4901.0	510.19	ug/L	1.429	510.19	ppb	1.429	0.28%
Sr 421.552†	34450.2	530.71	ug/L	2.369	530.71	ppb	2.369	0.45%
Ti 334.940†	375995.2	492.13	ug/L	0.149	492.13	ppb	0.149	0.03%
Tl 190.801†	2630.2	445.62	ug/L	2.670	445.62	ppb	2.670	0.60%
U 409.014†	20333.9	502.96	ug/L	2.833	502.96	ppb	2.833	0.56%
V 292.402†	87129.5	500.03	ug/L	0.694	500.03	ppb	0.694	0.14%
Zn 213.857†	88833.9	491.50	ug/L	0.721	491.50	ppb	0.721	0.15%
SiO2†	315507.5	13915	ug/L	87.1	13915	ppb	87.1	0.63%

Sequence No.: 68
Sample ID: 1201873937|882337|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 89
Date Collected: 7/8/2009 21:35:07
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873937|882337|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5561.7	5561.7	99.9	%			21:37:00
1	Y RADIAL	4841.1	4841.1	100.5	%			21:37:00
1	Al 396.153Radial†	-86.3	5.9	5.3611	ug/L	5.3611	ppb	21:37:00
1	Ca 317.933Radial†	23.0	6.1	15.181	ug/L	15.181	ppb	21:37:20
1	Fe 238.204 Radial†	0.2	-0.1	-3.1262	ug/L	-3.1262	ppb	21:37:20
1	K 766.490 Radial†	1658.0	185.8	80.651	ug/L	80.651	ppb	21:37:00
1	Mg 279.077 IEC†	0.3	0.1	6.9850	ug/L	6.9850	ppb	21:37:20
1	Na 589.592 Radial†	-197.5	-27.2	-73.543	ug/L	-73.543	ppb	21:37:20
1	Sr 421.552†	26.7	21.2	0.3266	ug/L	0.3266	ppb	21:37:20
1	Sc 361.383	1083366.6	1083366.6	102.12	%			21:38:16
1	Y 371.029	872587.7	872587.7	102.27	%			21:38:16
1	Ag 328.068†	747.6	93.5	0.3701	ug/L	0.3701	ppb	21:38:22
1	As 188.979†	-52.7	-14.7	-3.4606	ug/L	-3.4606	ppb	21:38:42
1	B 249.677†	17.4	398.6	6.2121	ug/L	6.2121	ppb	21:38:22
1	Ba 233.527†	51.5	26.2	0.1330	ug/L	0.1330	ppb	21:38:42
1	Be 313.107†	-7274.5	192.7	0.0602	ug/L	0.0602	ppb	21:38:22
1	Cd 226.502†	-267.3	15.9	0.1199	ug/L	0.1199	ppb	21:38:42
1	Co 228.616†	-86.8	5.4	0.0673	ug/L	0.0673	ppb	21:38:42
1	Cr 267.716†	5.5	34.0	0.2900	ug/L	0.2900	ppb	21:38:42
1	Cu 324.752†	10121.1	-280.2	-0.6915	ug/L	-0.6915	ppb	21:38:22
1	Mn 257.610†	1188.1	336.4	0.2653	ug/L	0.2653	ppb	21:38:42
1	Mo 202.031†	32.7	0.3	0.0101	ug/L	0.0101	ppb	21:38:42
1	Ni 231.604†	187.3	35.1	0.5629	ug/L	0.5629	ppb	21:38:42
1	P 214.914†	353.7	9.5	3.4683	ug/L	3.4683	ppb	21:38:42
1	Pb 220.353†	0.8	29.8	2.2396	ug/L	2.2396	ppb	21:38:42
1	S 181.975 Axial†	79.7	10.2	8.6505	ug/L	8.6505	ppb	21:38:42
1	Sb 206.836†	32.0	-14.1	-2.7594	ug/L	-2.7594	ppb	21:38:42
1	Se 196.026†	-21.7	0.4	0.1163	ug/L	0.1163	ppb	21:38:42
1	Si 251.611†	16560.3	15656.5	323.04	ug/L	323.04	ppb	21:38:22
1	Sn 189.927†	9.8	4.1	0.4298	ug/L	0.4298	ppb	21:38:42
1	Ti 334.940†	-1030.1	100.5	0.1327	ug/L	0.1327	ppb	21:38:22
1	Tl 190.801†	-24.3	37.6	6.3392	ug/L	6.3392	ppb	21:38:42
1	U 409.014†	-3926.7	-10.5	-0.2597	ug/L	-0.2597	ppb	21:38:16
1	V 292.402†	-1646.4	40.6	0.2301	ug/L	0.2301	ppb	21:38:22
1	Zn 213.857†	1215.8	68.2	0.3785	ug/L	0.3785	ppb	21:38:42
1	SiO2†	16454.7	15510.8	685.30	ug/L	685.30	ppb	21:39:48
2	Sc Radial	5654.5	5654.5	102	%			21:37:25
2	Y RADIAL	4927.8	4927.8	102.3	%			21:37:25
2	Al 396.153Radial†	-76.5	16.9	15.400	ug/L	15.400	ppb	21:37:25
2	Ca 317.933Radial†	26.7	9.4	23.335	ug/L	23.335	ppb	21:37:45
2	Fe 238.204 Radial†	-0.5	-0.8	-27.370	ug/L	-27.370	ppb	21:37:45
2	K 766.490 Radial†	1693.3	193.3	83.889	ug/L	83.889	ppb	21:37:25
2	Mg 279.077 IEC†	1.8	1.6	124.84	ug/L	124.84	ppb	21:37:45
2	Na 589.592 Radial†	-205.7	-32.1	-86.686	ug/L	-86.686	ppb	21:37:45
2	Sr 421.552†	9.9	4.3	0.0657	ug/L	0.0657	ppb	21:37:45
2	Sc 361.383	1070857.1	1070857.1	100.94	%			21:38:47
2	Y 371.029	862417.1	862417.1	101.08	%			21:38:47
2	Ag 328.068†	705.3	60.1	0.2303	ug/L	0.2303	ppb	21:38:52
2	As 188.979†	-48.0	-10.6	-2.5004	ug/L	-2.5004	ppb	21:39:12
2	B 249.677†	54.9	435.9	6.7963	ug/L	6.7963	ppb	21:38:52
2	Ba 233.527†	50.2	25.5	0.1287	ug/L	0.1287	ppb	21:39:12
2	Be 313.107†	-7346.6	38.1	0.0120	ug/L	0.0120	ppb	21:38:52
2	Cd 226.502†	-300.5	-20.1	-0.1463	ug/L	-0.1463	ppb	21:39:12
2	Co 228.616†	-86.2	5.0	0.0629	ug/L	0.0629	ppb	21:39:12
2	Cr 267.716†	4.9	33.5	0.2851	ug/L	0.2851	ppb	21:39:12
2	Cu 324.752†	10108.4	-177.0	-0.4384	ug/L	-0.4384	ppb	21:38:52
2	Mn 257.610†	1171.4	333.4	0.2575	ug/L	0.2575	ppb	21:39:12
2	Mo 202.031†	38.6	6.5	0.2580	ug/L	0.2580	ppb	21:39:12
2	Ni 231.604†	198.4	48.3	0.7741	ug/L	0.7741	ppb	21:39:12

2	P 214.914†	356.1	15.8	5.7071	ug/L	5.7071 ppb	21:39:12
2	Pb 220.353†	-22.2	7.1	0.5403	ug/L	0.5403 ppb	21:39:12
2	S 181.975 Axial†	77.1	8.5	7.2178	ug/L	7.2178 ppb	21:39:12
2	Sb 206.836†	55.6	9.7	1.9215	ug/L	1.9215 ppb	21:39:12
2	Se 196.026†	-21.7	0.1	-0.0517	ug/L	-0.0517 ppb	21:39:12
2	Si 251.611†	16541.7	15827.6	326.56	ug/L	326.56 ppb	21:38:52
2	Sn 189.927†	18.7	13.1	1.3624	ug/L	1.3624 ppb	21:39:12
2	Ti 334.940†	-1058.6	60.5	0.0810	ug/L	0.0810 ppb	21:38:52
2	Tl 190.801†	-10.7	50.8	8.5684	ug/L	8.5684 ppb	21:39:12
2	U 409.014†	-3903.1	-32.0	-0.7906	ug/L	-0.7906 ppb	21:38:47
2	V 292.402†	-1631.7	36.3	0.2133	ug/L	0.2133 ppb	21:38:52
2	Zn 213.857†	1205.8	72.2	0.3974	ug/L	0.3974 ppb	21:39:12
2	SiO2†	16398.5	15643.4	691.14	ug/L	691.14 ppb	21:39:53
3	Sc Radial	5598.4	5598.4	101	%		21:37:50
3	Y RADIAL	4867.2	4867.2	101.1	%		21:37:50
3	Al 396.153Radial†	-83.6	9.1	8.2297	ug/L	8.2297 ppb	21:37:50
3	Ca 317.933Radial†	27.0	9.9	24.560	ug/L	24.560 ppb	21:38:10
3	Fe 238.204 Radial†	-0.8	-1.1	-39.586	ug/L	-39.586 ppb	21:38:10
3	K 766.490 Radial†	1602.9	120.2	52.142	ug/L	52.142 ppb	21:37:50
3	Mg 279.077 IEC†	0.7	0.6	44.599	ug/L	44.599 ppb	21:38:10
3	Na 589.592 Radial†	-193.0	-21.5	-58.030	ug/L	-58.030 ppb	21:38:10
3	Sr 421.552†	20.6	15.0	0.2304	ug/L	0.2304 ppb	21:38:10
3	Sc 361.383	1067795.4	1067795.4	100.65	%		21:39:17
3	Y 371.029	861157.3	861157.3	100.83	%		21:39:17
3	Ag 328.068†	610.0	-32.5	-0.1418	ug/L	-0.1418 ppb	21:39:22
3	As 188.979†	-48.1	-10.9	-2.5710	ug/L	-2.5710 ppb	21:39:42
3	B 249.677†	-23.7	357.9	5.5834	ug/L	5.5834 ppb	21:39:22
3	Ba 233.527†	42.9	18.3	0.0914	ug/L	0.0914 ppb	21:39:42
3	Be 313.107†	-7171.2	192.5	0.0599	ug/L	0.0599 ppb	21:39:22
3	Cd 226.502†	-289.2	-9.6	-0.0673	ug/L	-0.0673 ppb	21:39:42
3	Co 228.616†	-76.3	14.6	0.1828	ug/L	0.1828 ppb	21:39:42
3	Cr 267.716†	-16.2	12.5	0.1056	ug/L	0.1056 ppb	21:39:42
3	Cu 324.752†	10071.6	-184.8	-0.4583	ug/L	-0.4583 ppb	21:39:22
3	Mn 257.610†	1197.5	362.7	0.2806	ug/L	0.2806 ppb	21:39:42
3	Mo 202.031†	37.0	5.0	0.1976	ug/L	0.1976 ppb	21:39:42
3	Ni 231.604†	165.0	15.7	0.2511	ug/L	0.2511 ppb	21:39:42
3	P 214.914†	349.1	9.9	3.6022	ug/L	3.6022 ppb	21:39:42
3	Pb 220.353†	-31.4	-2.1	-0.1506	ug/L	-0.1506 ppb	21:39:42
3	S 181.975 Axial†	74.3	6.0	5.0516	ug/L	5.0516 ppb	21:39:42
3	Sb 206.836†	57.8	12.0	2.3460	ug/L	2.3460 ppb	21:39:42
3	Se 196.026†	-30.2	-8.4	-2.8677	ug/L	-2.8677 ppb	21:39:42
3	Si 251.611†	16497.0	15830.1	326.63	ug/L	326.63 ppb	21:39:22
3	Sn 189.927†	-0.0	-5.5	-0.5734	ug/L	-0.5734 ppb	21:39:42
3	Ti 334.940†	-992.6	123.1	0.1632	ug/L	0.1632 ppb	21:39:22
3	Tl 190.801†	-14.1	47.3	7.9913	ug/L	7.9913 ppb	21:39:42
3	U 409.014†	-3900.0	-40.0	-0.9884	ug/L	-0.9884 ppb	21:39:17
3	V 292.402†	-1701.6	-37.8	-0.2079	ug/L	-0.2079 ppb	21:39:22
3	Zn 213.857†	1199.4	69.2	0.3883	ug/L	0.3883 ppb	21:39:42
3	SiO2†	16357.9	15649.7	691.46	ug/L	691.46 ppb	21:39:58

7/9/09 PR

Mean Data: 120187393?|882337|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1074006.4	101.24	%	0.778				0.77%
Sc Radial	5604.9	101	%	0.8				0.83%
Y 371.029	865387.4	101.43	%	0.735				0.72%
Y RADIAL	4878.7	101.3	%	0.92				0.91%
Ag 328.068†	40.4	0.1529	ug/L	0.26460	0.1529	ppb	0.26460	173.08%
Al 396.153Radial†	10.6	9.6635	ug/L	5.17068	9.6635	ppb	5.17068	53.51%
As 188.979†	-12.1	-2.8440	ug/L	0.53515	-2.8440	ppb	0.53515	18.82%
B 249.677†	397.5	6.1973	ug/L	0.60658	6.1973	ppb	0.60658	9.79%
Ba 233.527†	23.3	0.1177	ug/L	0.02289	0.1177	ppb	0.02289	19.45%
Be 313.107†	140.8	0.0441	ug/L	0.02775	0.0441	ppb	0.02775	62.98%
Ca 317.933Radial†	8.4	21.025	ug/L	5.0980	21.025	ppb	5.0980	24.25%
Cd 226.502†	-4.6	-0.0312	ug/L	0.13672	-0.0312	ppb	0.13672	438.08%
Co 228.616†	8.3	0.1043	ug/L	0.06802	0.1043	ppb	0.06802	65.19%
Cr 267.716†	26.7	0.2269	ug/L	0.10504	0.2269	ppb	0.10504	46.30%
Cu 324.752†	-214.0	-0.5294	ug/L	0.14072	-0.5294	ppb	0.14072	26.58%
Fe 238.204 Radial†	-0.7	-23.361	ug/L	18.5579	-23.361	ppb	18.5579	79.44%
K 766.490 Radial†	166.5	72.227	ug/L	17.4693	72.227	ppb	17.4693	24.19%

Mg 279.077 IEC†	0.7	58.807 ug/L	60.1973	58.807 ppb	60.1973	102.36%
Mn 257.610†	344.2	0.2678 ug/L	0.01176	0.2678 ppb	0.01176	4.39%
Mo 202.031†	3.9	0.1552 ug/L	0.12928	0.1552 ppb	0.12928	83.29%
Na 589.592 Radial†	-26.9	-72.753 ug/L	14.3447	-72.753 ppb	14.3447	19.72%
Ni 231.604†	33.0	0.5294 ug/L	0.26312	0.5294 ppb	0.26312	49.71%
P 214.914†	11.7	4.2592 ug/L	1.25569	4.2592 ppb	1.25569	29.48%
Pb 220.353†	11.6	0.8764 ug/L	1.23005	0.8764 ppb	1.23005	140.35%
S 181.975 Axial†	8.2	6.9733 ug/L	1.81186	6.9733 ppb	1.81186	25.98%
Sb 206.836†	2.5	0.5027 ug/L	2.83302	0.5027 ppb	2.83302	563.54%
Se 196.026†	-2.6	-0.9344 ug/L	1.67644	-0.9344 ppb	1.67644	179.42%
Si 251.611†	15771.4	325.41 ug/L	2.053	325.41 ppb	2.053	0.63%
Sn 189.927†	3.9	0.4063 ug/L	0.96814	0.4063 ppb	0.96814	238.31%
Sr 421.552†	13.5	0.2076 ug/L	0.13192	0.2076 ppb	0.13192	63.55%
Ti 334.940†	94.7	0.1256 ug/L	0.04152	0.1256 ppb	0.04152	33.05%
Tl 190.801†	45.2	7.6329 ug/L	1.15700	7.6329 ppb	1.15700	15.16%
U 409.014†	-27.5	-0.6796 ug/L	0.37683	-0.6796 ppb	0.37683	55.45%
V 292.402†	13.0	0.0785 ug/L	0.24818	0.0785 ppb	0.24818	316.15%
Zn 213.857†	69.9	0.3881 ug/L	0.00949	0.3881 ppb	0.00949	2.45%
SiO2†	15601.3	689.30 ug/L	3.467	689.30 ppb	3.467	0.50%

Sequence No.: 69
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 21:42:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5441.7	5441.7	97.8	%			21:44:01
1	Y RADIAL	4737.4	4737.4	98.37	%			21:44:01
1	Al 396.153Radial†	5324.6	5537.2	5018.6	ug/L	5018.6	ppb	21:44:01
1	Ca 317.933Radial†	2027.7	2056.6	5122.7	ug/L	5122.7	ppb	21:44:21
1	Fe 238.204 Radial†	146.3	149.3	5252.4	ug/L	5252.4	ppb	21:44:21
1	K 766.490 Radial†	13213.4	12039.3	5217.6	ug/L	5217.6	ppb	21:44:01
1	Mg 279.077 IEC†	64.7	66.0	5229.7	ug/L	5229.7	ppb	21:44:21
1	Na 589.592 Radial†	3621.0	3873.4	10473	ug/L	10473	ppb	21:44:01
1	Sr 421.552†	35105.4	35894.3	552.96	ug/L	552.96	ppb	21:44:01
1	Sc 361.383	1086886.8	1086886.8	102.45	%			21:45:20
1	Y 371.029	865959.1	865959.1	101.49	%			21:45:20
1	Ag 328.068†	131150.2	127373.7	507.37	ug/L	507.37	ppb	21:45:20
1	As 188.979†	2128.8	2114.8	499.68	ug/L	499.68	ppb	21:45:40
1	B 249.677†	31844.0	31463.6	488.44	ug/L	488.44	ppb	21:45:20
1	Ba 233.527†	101019.6	98578.4	500.20	ug/L	500.20	ppb	21:45:20
1	Be 313.107†	1638651.2	1606762.0	500.77	ug/L	500.77	ppb	21:45:20
1	Cd 226.502†	68327.0	66969.9	500.59	ug/L	500.59	ppb	21:45:20
1	Co 228.616†	39628.6	38770.8	483.13	ug/L	483.13	ppb	21:45:40
1	Cr 267.716†	60048.1	58640.0	500.15	ug/L	500.15	ppb	21:45:20
1	Cu 324.752†	217621.8	202223.8	499.24	ug/L	499.24	ppb	21:45:20
1	Mn 257.610†	647478.9	631160.7	499.37	ug/L	499.37	ppb	21:45:20
1	Mo 202.031†	12915.3	12574.6	503.68	ug/L	503.68	ppb	21:45:40
1	Ni 231.604†	31406.5	30506.8	488.65	ug/L	488.65	ppb	21:45:40
1	P 214.914†	7520.1	7003.2	2399.2	ug/L	2399.2	ppb	21:45:40
1	Pb 220.353†	6823.5	6689.3	502.80	ug/L	502.80	ppb	21:45:40
1	S 181.975 Axial†	1277.5	1179.1	997.06	ug/L	997.06	ppb	21:45:40
1	Sb 206.836†	2627.1	2518.8	501.35	ug/L	501.35	ppb	21:45:40
1	Se 196.026†	1542.1	1526.8	516.82	ug/L	516.82	ppb	21:45:40
1	Si 251.611†	126314.7	122732.4	2520.5	ug/L	2520.5	ppb	21:45:20
1	Sn 189.927†	4921.0	4797.8	499.48	ug/L	499.48	ppb	21:45:40
1	Ti 334.940†	392293.3	384016.8	502.65	ug/L	502.65	ppb	21:45:20
1	Tl 190.801†	2907.9	2899.8	491.11	ug/L	491.11	ppb	21:45:40
1	U 409.014†	16224.8	19671.3	486.47	ug/L	486.47	ppb	21:45:20
1	V 292.402†	88311.9	87851.8	504.24	ug/L	504.24	ppb	21:45:20
1	Zn 213.857†	92868.0	89523.7	495.32	ug/L	495.32	ppb	21:45:20
1	SiO2†	124385.4	120807.1	5311.8	ug/L	5311.8	ppb	21:46:40
2	Sc Radial	5554.5	5554.5	99.8	%			21:44:26
2	Y RADIAL	4826.3	4826.3	100.2	%			21:44:26
2	Al 396.153Radial†	5433.7	5536.0	5017.5	ug/L	5017.5	ppb	21:44:26
2	Ca 317.933Radial†	2041.5	2028.3	5052.3	ug/L	5052.3	ppb	21:44:46
2	Fe 238.204 Radial†	146.8	146.7	5161.4	ug/L	5161.4	ppb	21:44:46
2	K 766.490 Radial†	13463.0	12015.0	5207.0	ug/L	5207.0	ppb	21:44:26
2	Mg 279.077 IEC†	64.2	64.1	5082.0	ug/L	5082.0	ppb	21:44:46
2	Na 589.592 Radial†	3718.6	3895.9	10534	ug/L	10534	ppb	21:44:26
2	Sr 421.552†	36147.9	36210.0	557.82	ug/L	557.82	ppb	21:44:26
2	Sc 361.383	1081234.6	1081234.6	101.92	%			21:45:47
2	Y 371.029	862925.3	862925.3	101.14	%			21:45:47
2	Ag 328.068†	130257.4	127167.0	506.52	ug/L	506.52	ppb	21:45:47
2	As 188.979†	2112.5	2109.6	498.45	ug/L	498.45	ppb	21:46:07
2	B 249.677†	31697.4	31482.3	488.74	ug/L	488.74	ppb	21:45:47
2	Ba 233.527†	100580.1	98662.6	500.62	ug/L	500.62	ppb	21:45:47
2	Be 313.107†	1633346.9	1609918.7	501.75	ug/L	501.75	ppb	21:45:47
2	Cd 226.502†	67946.0	66944.7	500.41	ug/L	500.41	ppb	21:45:47
2	Co 228.616†	39480.5	38827.8	483.85	ug/L	483.85	ppb	21:46:07
2	Cr 267.716†	59922.7	58823.4	501.71	ug/L	501.71	ppb	21:45:47
2	Cu 324.752†	215186.2	200944.5	496.08	ug/L	496.08	ppb	21:45:47
2	Mn 257.610†	644242.0	631288.4	499.47	ug/L	499.47	ppb	21:45:47
2	Mo 202.031†	12870.5	12596.5	504.55	ug/L	504.55	ppb	21:46:07
2	Ni 231.604†	31301.0	30563.6	489.56	ug/L	489.56	ppb	21:46:07

2	P 214.914†	7489.0	7011.1	2402.6 ug/L	2402.6 ppb	21:46:07
2	Pb 220.353†	6755.3	6657.3	500.41 ug/L	500.41 ppb	21:46:07
2	S 181.975 Axial†	1273.2	1181.4	999.04 ug/L	999.04 ppb	21:46:07
2	Sb 206.836†	2608.4	2513.9	500.37 ug/L	500.37 ppb	21:46:07
2	Se 196.026†	1510.7	1503.9	509.05 ug/L	509.05 ppb	21:46:07
2	Si 251.611†	125489.7	122567.5	2517.1 ug/L	2517.1 ppb	21:45:47
2	Sn 189.927†	4895.5	4797.9	499.49 ug/L	499.49 ppb	21:46:07
2	Ti 334.940†	389490.4	383268.3	501.67 ug/L	501.67 ppb	21:45:47
2	Tl 190.801†	2898.3	2905.1	492.00 ug/L	492.00 ppb	21:46:07
2	U 409.014†	16022.0	19555.1	483.60 ug/L	483.60 ppb	21:45:47
2	V 292.402†	87839.0	87838.4	504.18 ug/L	504.18 ppb	21:45:47
2	Zn 213.857†	92265.3	89406.2	494.68 ug/L	494.68 ppb	21:45:47
2	SiO2†	125075.8	122119.2	5369.7 ug/L	5369.7 ppb	21:46:45
3	Sc Radial	5520.9	5520.9	99.2 %		21:44:51
3	Y RADIAL	4797.6	4797.6	99.62 %		21:44:51
3	Al 396.153Radial†	5436.8	5572.2	5050.3 ug/L	5050.3 ppb	21:44:51
3	Ca 317.933Radial†	2014.6	2013.7	5015.8 ug/L	5015.8 ppb	21:45:11
3	Fe 238.204 Radial†	144.7	145.6	5121.9 ug/L	5121.9 ppb	21:45:11
3	K 766.490 Radial†	13443.2	12077.0	5233.9 ug/L	5233.9 ppb	21:44:51
3	Mg 279.077 IEC†	63.7	64.1	5079.5 ug/L	5079.5 ppb	21:45:11
3	Na 589.592 Radial†	3713.4	3913.3	10581 ug/L	10581 ppb	21:44:51
3	Sr 421.552†	35974.1	36254.7	558.51 ug/L	558.51 ppb	21:44:51
3	Sc 361.383	1075662.4	1075662.4	101.39 %		21:46:14
3	Y 371.029	858785.4	858785.4	100.65 %		21:46:14
3	Ag 328.068†	130254.8	127826.5	509.11 ug/L	509.11 ppb	21:46:14
3	As 188.979†	2108.4	2116.3	499.99 ug/L	499.99 ppb	21:46:35
3	B 249.677†	31631.1	31578.0	490.23 ug/L	490.23 ppb	21:46:14
3	Ba 233.527†	99982.8	98584.8	500.22 ug/L	500.22 ppb	21:46:14
3	Be 313.107†	1625667.7	1610646.9	501.97 ug/L	501.97 ppb	21:46:14
3	Cd 226.502†	67552.5	66902.0	500.10 ug/L	500.10 ppb	21:46:14
3	Co 228.616†	39548.4	39095.4	487.19 ug/L	487.19 ppb	21:46:35
3	Cr 267.716†	59382.8	58595.5	499.77 ug/L	499.77 ppb	21:46:14
3	Cu 324.752†	215586.0	202432.5	499.75 ug/L	499.75 ppb	21:46:14
3	Mn 257.610†	640406.8	630780.5	499.06 ug/L	499.06 ppb	21:46:14
3	Mo 202.031†	12891.4	12682.5	508.00 ug/L	508.00 ppb	21:46:35
3	Ni 231.604†	31325.5	30746.9	492.49 ug/L	492.49 ppb	21:46:35
3	P 214.914†	7502.5	7062.5	2420.2 ug/L	2420.2 ppb	21:46:35
3	Pb 220.353†	6804.3	6739.8	506.62 ug/L	506.62 ppb	21:46:35
3	S 181.975 Axial†	1285.4	1199.9	1014.7 ug/L	1014.7 ppb	21:46:35
3	Sb 206.836†	2611.3	2530.0	503.71 ug/L	503.71 ppb	21:46:35
3	Se 196.026†	1525.1	1525.7	516.03 ug/L	516.03 ppb	21:46:35
3	Si 251.611†	125284.4	123002.9	2526.0 ug/L	2526.0 ppb	21:46:14
3	Sn 189.927†	4909.0	4836.1	503.46 ug/L	503.46 ppb	21:46:35
3	Ti 334.940†	387519.8	383304.4	501.71 ug/L	501.71 ppb	21:46:14
3	Tl 190.801†	2910.0	2931.4	496.42 ug/L	496.42 ppb	21:46:35
3	U 409.014†	16155.8	19768.5	488.90 ug/L	488.90 ppb	21:46:14
3	V 292.402†	87225.2	87679.5	503.33 ug/L	503.33 ppb	21:46:14
3	Zn 213.857†	91968.6	89582.6	495.65 ug/L	495.65 ppb	21:46:14
3	SiO2†	125602.0	123273.9	5420.6 ug/L	5420.6 ppb	21:46:50

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1081261.3	101.92	%	0.529				0.52%
Sc Radial	5505.7	98.9	%	1.04				1.05%
Y 371.029	862556.6	101.09	%	0.422				0.42%
Y RADIAL	4787.1	99.41	%	0.943				0.95%
Ag 328.068†	127455.8	507.67	ug/L	1.321	507.67	ppb	1.321	0.26%
QC value within limits for Ag 328.068 Recovery = 101.53%								
Al 396.153Radial†	5548.5	5028.8	ug/L	18.61	5028.8	ppb	18.61	0.37%
QC value within limits for Al 396.153Radial Recovery = 100.58%								
As 188.979†	2113.6	499.37	ug/L	0.817	499.37	ppb	0.817	0.16%
QC value within limits for As 188.979 Recovery = 99.87%								
B 249.677†	31507.9	489.13	ug/L	0.958	489.13	ppb	0.958	0.20%
QC value within limits for B 249.677 Recovery = 97.83%								
Ba 233.527†	98608.6	500.35	ug/L	0.237	500.35	ppb	0.237	0.05%
QC value within limits for Ba 233.527 Recovery = 100.07%								
Be 313.107†	1609109.2	501.50	ug/L	0.641	501.50	ppb	0.641	0.13%
QC value within limits for Be 313.107 Recovery = 100.30%								
Ca 317.933Radial†	2032.9	5063.6	ug/L	54.34	5063.6	ppb	54.34	1.07%

```
   QC value within limits for Ca 317.933Radial  Recovery = 101.27%
Cd 226.502†            66938.9      500.37 ug/L         0.248      500.37 ppb          0.248   0.05%
   QC value within limits for Cd 226.502  Recovery = 100.07%
Co 228.616†            38898.0      484.72 ug/L         2.166      484.72 ppb          2.166   0.45%
   QC value within limits for Co 228.616  Recovery = 96.94%
Cr 267.716†            58686.3      500.54 ug/L         1.030      500.54 ppb          1.030   0.21%
   QC value within limits for Cr 267.716  Recovery = 100.11%
Cu 324.752†           201866.9      498.36 ug/L         1.988      498.36 ppb          1.988   0.40%
   QC value within limits for Cu 324.752  Recovery = 99.67%
Fe 238.204 Radial†       147.2      5178.6 ug/L         66.90      5178.6 ppb          66.90   1.29%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.57%
K 766.490 Radial†      12043.8      5219.5 ug/L         13.53      5219.5 ppb          13.53   0.26%
   QC value within limits for K 766.490 Radial  Recovery = 104.39%
Mg 279.077 IEC†           64.7      5130.4 ug/L         86.03      5130.4 ppb          86.03   1.68%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.61%
Mn 257.610†           631076.5      499.30 ug/L         0.213      499.30 ppb          0.213   0.04%
   QC value within limits for Mn 257.610  Recovery = 99.86%
Mo 202.031†            12617.9      505.41 ug/L         2.281      505.41 ppb          2.281   0.45%
   QC value within limits for Mo 202.031  Recovery = 101.08%
Na 589.592 Radial†      3894.2       10530 ug/L          54.2       10530 ppb           54.2   0.51%
   QC value within limits for Na 589.592 Radial  Recovery = 105.30%
Ni 231.604†            30605.7      490.23 ug/L         2.010      490.23 ppb          2.010   0.41%
   QC value within limits for Ni 231.604  Recovery = 98.05%
P 214.914†              7025.6      2407.3 ug/L         11.29      2407.3 ppb          11.29   0.47%
   QC value within limits for P 214.914  Recovery = 96.29%
Pb 220.353†             6695.5      503.28 ug/L         3.131      503.28 ppb          3.131   0.62%
   QC value within limits for Pb 220.353  Recovery = 100.66%
S 181.975 Axial†        1186.8      1003.6 ug/L          9.65      1003.6 ppb           9.65   0.96%
   QC value within limits for S 181.975 Axial  Recovery = 100.36%
Sb 206.836†             2520.9      501.81 ug/L         1.720      501.81 ppb          1.720   0.34%
   QC value within limits for Sb 206.836  Recovery = 100.36%
Se 196.026†             1518.8      513.96 ug/L         4.274      513.96 ppb          4.274   0.83%
   QC value within limits for Se 196.026  Recovery = 102.79%
Si 251.611†           122767.6      2521.2 ug/L          4.49      2521.2 ppb           4.49   0.18%
   QC value within limits for Si 251.611  Recovery = 100.85%
Sn 189.927†             4810.6      500.81 ug/L         2.293      500.81 ppb          2.293   0.46%
   QC value within limits for Sn 189.927  Recovery = 100.16%
Sr 421.552†            36119.7      556.43 ug/L         3.027      556.43 ppb          3.027   0.54%
   QC value greater than the upper limit for Sr 421.552  Recovery = 111.29%
Ti 334.940†           383529.8      502.01 ug/L         0.556      502.01 ppb          0.556   0.11%
   QC value within limits for Ti 334.940  Recovery = 100.40%
Tl 190.801†             2912.1      493.18 ug/L         2.842      493.18 ppb          2.842   0.58%
   QC value within limits for Tl 190.801  Recovery = 98.64%
U 409.014†             19665.0      486.32 ug/L         2.655      486.32 ppb          2.655   0.55%
   QC value within limits for U 409.014  Recovery = 97.26%
V 292.402†             87789.9      503.91 ug/L         0.504      503.91 ppb          0.504   0.10%
   QC value within limits for V 292.402  Recovery = 100.78%
Zn 213.857†            89504.1      495.22 ug/L         0.491      495.22 ppb          0.491   0.10%
   QC value within limits for Zn 213.857  Recovery = 99.04%
SiO2†                 122066.7      5367.3 ug/L         54.44      5367.3 ppb          54.44   1.01%
   QC value within limits for SiO2  Recovery = 100.37%
QC Failed.  Continue with analysis.
```

Sequence No.: 70
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 21:49:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5467.5	5467.5	98.3	%			21:50:53
1	Y RADIAL	4768.1	4768.1	99.01	%			21:50:53
1	Al 396.153Radial†	-75.3	15.6	14.157	ug/L	14.157	ppb	21:50:53
1	Ca 317.933Radial†	23.0	6.5	16.235	ug/L	16.235	ppb	21:51:13
1	Fe 238.204 Radial†	1.3	1.0	35.999	ug/L	35.999	ppb	21:51:13
1	K 766.490 Radial†	1537.8	92.1	40.039	ug/L	40.039	ppb	21:50:53
1	Mg 279.077 IEC†	1.0	0.8	62.522	ug/L	62.522	ppb	21:51:13
1	Na 589.592 Radial†	-215.4	-48.8	-131.87	ug/L	-131.87	ppb	21:51:13
1	Sr 421.552†	4.8	-0.6	-0.0090	ug/L	-0.0090	ppb	21:51:13
1	Sc 361.383	1069317.4	1069317.4	100.80	%			21:52:10
1	Y 371.029	862266.3	862266.3	101.06	%			21:52:10
1	Ag 328.068†	626.3	-17.3	-0.0571	ug/L	-0.0571	ppb	21:52:15
1	As 188.979†	-48.5	-11.2	-2.6303	ug/L	-2.6303	ppb	21:52:35
1	B 249.677†	-234.3	149.1	2.3185	ug/L	2.3185	ppb	21:52:15
1	Ba 233.527†	44.9	20.3	0.1041	ug/L	0.1041	ppb	21:52:35
1	Be 313.107†	-7211.0	162.1	0.0504	ug/L	0.0504	ppb	21:52:15
1	Cd 226.502†	-291.5	-11.6	-0.0906	ug/L	-0.0906	ppb	21:52:35
1	Co 228.616†	-101.2	-10.0	-0.1245	ug/L	-0.1245	ppb	21:52:35
1	Cr 267.716†	-16.8	12.0	0.1026	ug/L	0.1026	ppb	21:52:35
1	Cu 324.752†	10237.6	-34.4	-0.0828	ug/L	-0.0828	ppb	21:52:15
1	Mn 257.610†	946.9	112.4	0.0923	ug/L	0.0923	ppb	21:52:35
1	Mo 202.031†	34.5	2.4	0.0998	ug/L	0.0998	ppb	21:52:35
1	Ni 231.604†	170.6	21.0	0.3362	ug/L	0.3362	ppb	21:52:35
1	P 214.914†	345.0	5.3	1.8939	ug/L	1.8939	ppb	21:52:35
1	Pb 220.353†	-24.6	4.7	0.3485	ug/L	0.3485	ppb	21:52:35
1	S 181.975 Axial†	62.1	-6.2	-5.2877	ug/L	-5.2877	ppb	21:52:35
1	Sb 206.836†	55.5	9.6	1.9108	ug/L	1.9108	ppb	21:52:35
1	Se 196.026†	-30.0	-8.2	-2.5329	ug/L	-2.5329	ppb	21:52:35
1	Si 251.611†	660.7	95.3	1.9490	ug/L	1.9490	ppb	21:52:35
1	Sn 189.927†	15.9	10.3	1.0734	ug/L	1.0734	ppb	21:52:35
1	Ti 334.940†	-1127.0	-8.8	-0.0111	ug/L	-0.0111	ppb	21:52:15
1	Tl 190.801†	-24.7	36.9	6.2301	ug/L	6.2301	ppb	21:52:35
1	U 409.014†	-3815.7	49.2	1.2152	ug/L	1.2152	ppb	21:52:10
1	V 292.402†	-1623.7	41.9	0.2372	ug/L	0.2372	ppb	21:52:15
1	Zn 213.857†	1207.2	75.3	0.4126	ug/L	0.4126	ppb	21:52:35
1	SiO2†	661.4	53.8	2.3366	ug/L	2.3366	ppb	21:53:41
2	Sc Radial	5534.1	5534.1	99.4	%			21:51:18
2	Y RADIAL	4810.6	4810.6	99.89	%			21:51:18
2	Al 396.153Radial†	-92.0	-0.4	-0.3457	ug/L	-0.3457	ppb	21:51:18
2	Ca 317.933Radial†	24.8	8.0	19.815	ug/L	19.815	ppb	21:51:38
2	Fe 238.204 Radial†	-0.3	-0.6	-22.613	ug/L	-22.613	ppb	21:51:38
2	K 766.490 Radial†	1609.0	144.9	62.895	ug/L	62.895	ppb	21:51:18
2	Mg 279.077 IEC†	0.6	0.4	34.964	ug/L	34.964	ppb	21:51:38
2	Na 589.592 Radial†	-225.9	-56.8	-153.46	ug/L	-153.46	ppb	21:51:38
2	Sr 421.552†	-0.9	-6.3	-0.0978	ug/L	-0.0978	ppb	21:51:38
2	Sc 361.383	1073624.9	1073624.9	101.20	%			21:52:40
2	Y 371.029	866346.3	866346.3	101.54	%			21:52:40
2	Ag 328.068†	629.9	-16.2	-0.0696	ug/L	-0.0696	ppb	21:52:45
2	As 188.979†	-49.6	-12.1	-2.8439	ug/L	-2.8439	ppb	21:53:05
2	B 249.677†	-257.4	127.2	1.9847	ug/L	1.9847	ppb	21:52:45
2	Ba 233.527†	42.1	17.3	0.0874	ug/L	0.0874	ppb	21:53:05
2	Be 313.107†	-7087.6	312.7	0.0975	ug/L	0.0975	ppb	21:52:45
2	Cd 226.502†	-303.1	-21.9	-0.1608	ug/L	-0.1608	ppb	21:53:05
2	Co 228.616†	-81.9	9.4	0.1187	ug/L	0.1187	ppb	21:53:05
2	Cr 267.716†	-34.4	-5.4	-0.0455	ug/L	-0.0455	ppb	21:53:05
2	Cu 324.752†	10046.3	-264.2	-0.6532	ug/L	-0.6532	ppb	21:52:45
2	Mn 257.610†	929.6	91.5	0.0687	ug/L	0.0687	ppb	21:53:05
2	Mo 202.031†	40.3	8.1	0.3219	ug/L	0.3219	ppb	21:53:05
2	Ni 231.604†	171.6	21.3	0.3418	ug/L	0.3418	ppb	21:53:05

2	P 214.914†	343.2	2.2	0.9218	ug/L	0.9218 ppb	21:53:05
2	Pb 220.353†	-55.8	-26.1	-1.9532	ug/L	-1.9532 ppb	21:53:05
2	S 181.975 Axial†	71.7	3.1	2.5845	ug/L	2.5845 ppb	21:53:05
2	Sb 206.836†	58.5	12.3	2.4499	ug/L	2.4499 ppb	21:53:05
2	Se 196.026†	-30.4	-8.5	-2.8278	ug/L	-2.8278 ppb	21:53:05
2	Si 251.611†	674.3	106.2	2.1599	ug/L	2.1599 ppb	21:53:05
2	Sn 189.927†	18.5	12.8	1.3360	ug/L	1.3360 ppb	21:53:05
2	Ti 334.940†	-1041.7	79.9	0.1068	ug/L	0.1068 ppb	21:52:45
2	Tl 190.801†	-32.4	29.4	4.9557	ug/L	4.9557 ppb	21:53:05
2	U 409.014†	-3965.0	-83.2	-2.0616	ug/L	-2.0616 ppb	21:52:40
2	V 292.402†	-1656.7	15.7	0.0928	ug/L	0.0928 ppb	21:52:45
2	Zn 213.857†	1222.3	85.4	0.4773	ug/L	0.4773 ppb	21:53:05
2	SiO2†	692.9	82.3	3.5687	ug/L	3.5687 ppb	21:53:46
3	Sc Radial	5471.3	5471.3	98.3	%		21:51:43
3	Y RADIAL	4767.4	4767.4	99.00	%		21:51:43
3	Al 396.153Radial†	-77.7	13.2	11.967	ug/L	11.967 ppb	21:51:43
3	Ca 317.933Radial†	24.1	7.6	18.952	ug/L	18.952 ppb	21:52:03
3	Fe 238.204 Radial†	0.6	0.3	11.539	ug/L	11.539 ppb	21:52:03
3	K 766.490 Radial†	1543.1	96.4	41.888	ug/L	41.888 ppb	21:51:43
3	Mg 279.077 IEC†	1.2	1.1	86.378	ug/L	86.378 ppb	21:52:03
3	Na 589.592 Radial†	-213.2	-46.5	-125.66	ug/L	-125.66 ppb	21:52:03
3	Sr 421.552†	12.4	7.1	0.1096	ug/L	0.1096 ppb	21:52:03
3	Sc 361.383	1061357.3	1061357.3	100.04	%		21:53:10
3	Y 371.029	855792.0	855792.0	100.30	%		21:53:10
3	Ag 328.068†	685.7	46.8	0.1918	ug/L	0.1918 ppb	21:53:15
3	As 188.979†	-46.2	-9.3	-2.1873	ug/L	-2.1873 ppb	21:53:35
3	B 249.677†	-297.1	84.5	1.3160	ug/L	1.3160 ppb	21:53:15
3	Ba 233.527†	45.8	21.5	0.1095	ug/L	0.1095 ppb	21:53:35
3	Be 313.107†	-7219.9	99.5	0.0311	ug/L	0.0311 ppb	21:53:15
3	Cd 226.502†	-289.6	-11.8	-0.0897	ug/L	-0.0897 ppb	21:53:35
3	Co 228.616†	-88.0	2.4	0.0313	ug/L	0.0313 ppb	21:53:35
3	Cr 267.716†	-45.5	-16.9	-0.1424	ug/L	-0.1424 ppb	21:53:35
3	Cu 324.752†	10258.6	62.7	0.1554	ug/L	0.1554 ppb	21:53:15
3	Mn 257.610†	941.6	114.1	0.0900	ug/L	0.0900 ppb	21:53:35
3	Mo 202.031†	44.2	12.4	0.4988	ug/L	0.4988 ppb	21:53:35
3	Ni 231.604†	162.9	14.6	0.2337	ug/L	0.2337 ppb	21:53:35
3	P 214.914†	353.6	16.5	5.7895	ug/L	5.7895 ppb	21:53:35
3	Pb 220.353†	-14.7	14.4	1.0817	ug/L	1.0817 ppb	21:53:35
3	S 181.975 Axial†	65.3	-2.6	-2.1627	ug/L	-2.1627 ppb	21:53:35
3	Sb 206.836†	48.1	2.7	0.5346	ug/L	0.5346 ppb	21:53:35
3	Se 196.026†	-7.5	14.1	4.6308	ug/L	4.6308 ppb	21:53:35
3	Si 251.611†	640.3	79.9	1.6279	ug/L	1.6279 ppb	21:53:35
3	Sn 189.927†	1.8	-3.7	-0.3819	ug/L	-0.3819 ppb	21:53:35
3	Ti 334.940†	-1056.6	53.1	0.0720	ug/L	0.0720 ppb	21:53:15
3	Tl 190.801†	-38.1	23.3	3.9339	ug/L	3.9339 ppb	21:53:35
3	U 409.014†	-3946.2	-109.7	-2.7228	ug/L	-2.7228 ppb	21:53:10
3	V 292.402†	-1620.7	32.8	0.1871	ug/L	0.1871 ppb	21:53:15
3	Zn 213.857†	1195.3	72.4	0.3984	ug/L	0.3984 ppb	21:53:35
3	SiO2†	675.8	73.1	3.1835	ug/L	3.1835 ppb	21:53:51

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1068099.9	100.68	%	0.587				0.58%
Sc Radial	5491.0	98.7	%	0.67				0.68%
Y 371.029	861468.2	100.97	%	0.624				0.62%
Y RADIAL	4782.0	99.30	%	0.514				0.52%
Ag 328.068†	4.4	0.0217	ug/L	0.14746	0.0217	ppb	0.14746	679.78%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.5	8.5927	ug/L	7.81795	8.5927	ppb	7.81795	90.98%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-10.9	-2.5538	ug/L	0.33494	-2.5538	ppb	0.33494	13.12%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	120.3	1.8730	ug/L	0.51051	1.8730	ppb	0.51051	27.26%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	19.7	0.1004	ug/L	0.01152	0.1004	ppb	0.01152	11.48%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	191.4	0.0597	ug/L	0.03415	0.0597	ppb	0.03415	57.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	7.4	18.334	ug/L	1.8684	18.334	ppb	1.8684	10.19%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -15.1     -0.1137 ug/L       0.04081     -0.1137 ppb        0.04081  35.90%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                0.6      0.0085 ug/L       0.12315      0.0085 ppb        0.12315 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -3.4     -0.0284 ug/L       0.12339     -0.0284 ppb        0.12339 433.88%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -78.6     -0.1935 ug/L       0.41553     -0.1935 ppb        0.41553 214.74%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.2      8.3084 ug/L      29.43910      8.3084 ppb       29.43910 354.33%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        111.1      48.274 ug/L       12.6960      48.274 ppb        12.6960  26.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.8      61.288 ug/L       25.7291      61.288 ppb        25.7291  41.98%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              106.0      0.0837 ug/L       0.01301      0.0837 ppb        0.01301  15.55%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                7.7      0.3068 ug/L       0.19992      0.3068 ppb        0.19992  65.16%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -50.7     -137.00 ug/L        14.590     -137.00 ppb         14.590  10.65%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               19.0      0.3039 ug/L       0.06085      0.3039 ppb        0.06085  20.02%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 8.0      2.8684 ug/L       2.57602      2.8684 ppb        2.57602  89.81%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -2.3     -0.1743 ug/L       1.58357     -0.1743 ppb        1.58357 908.48%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -1.9     -1.6220 ug/L       3.96387     -1.6220 ppb        3.96387 244.39%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                8.2      1.6318 ug/L       0.98767      1.6318 ppb        0.98767  60.53%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -0.8     -0.2433 ug/L       4.22364     -0.2433 ppb        4.22364 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               93.8      1.9123 ug/L       0.26789      1.9123 ppb        0.26789  14.01%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.5      0.6758 ug/L       0.92537      0.6758 ppb        0.92537 136.92%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                0.1      0.0009 ug/L       0.10403      0.0009 ppb        0.10403 >999.9%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               41.4      0.0559 ug/L       0.06058      0.0559 ppb        0.06058 108.32%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               29.9      5.0399 ug/L       1.15041      5.0399 ppb        1.15041  22.83%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -47.9     -1.1897 ug/L       2.10877     -1.1897 ppb        2.10877 177.25%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                30.1      0.1724 ug/L       0.07334      0.1724 ppb        0.07334  42.55%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               77.7      0.4294 ug/L       0.04204      0.4294 ppb        0.04204   9.79%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     69.7      3.0296 ug/L       0.63033      3.0296 ppb        0.63033  20.81%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Daily Performance Report

Sample ID: Sample
Sample Date/Time: Wednesday, July 15, 2009 14:19:53
Sample Description:
Method File: C:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\090708\Sample.086
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1120.8	1120.844	25.861	2.3
	Mg	24.0	21754.4	21754.353	244.615	1.1
	Co	58.9	55434.6	55434.556	590.537	1.1
	Rh	102.9	95550.7	95550.698	740.915	0.8
	In	114.9	116433.4	116433.383	919.737	0.8
	Pb	208.0	65803.6	65803.625	839.278	1.3
⌈>	Ba	137.9	99257.4	99257.441	698.589	0.7
⌊	Ba++	69.0	1896.6	0.019	0.000	1.9
⌈>	Ce	139.9	118963.3	118963.313	1165.465	1.0
⌊	CeO	155.9	2647.3	0.022	0.000	1.6
	Bkgd	220.0	5.0	5.000	0.935	18.7

Current Optimization File Data

Current Value	Description
0.90	Nebulizer Gas Flow
6.00	Lens Voltage
1000.00	ICP RF Power
-1781.25	Analog Stage Voltage
900.00	Pulse Stage Voltage
50.00	Discriminator Threshold
-2.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	6.0	1714.1
Co	59	21	7.0	55359.7
In	115	21	8.0	115733.9

ICPMS #4 TUNING REPORT

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	602	2100	0.650
Be	9.0	9.1	2060	2100	0.609
Mg	24.0	23.9	5665	2120	0.625
Mg	25.0	25.0	5929	2135	0.615
Mg	26.0	26.0	6149	2120	0.629
Co	58.9	58.9	14166	2175	0.617
Rh	102.9	102.9	24854	2265	0.603
In	114.9	114.9	27766	2295	0.622
Ce	139.9	139.9	33840	2330	0.651
Pb	206.0	206.0	49941	2485	0.708
Pb	207.0	207.0	50077	2400	0.640
Pb	208.0	208.0	50448	2480	0.725
U	238.1	238.0	57682	2480	0.757

ICPMS#4 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, July 15, 2009 17:03:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\Blank.024

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		28	
	Be	9		ug/L		5	
	B	11		ug/L		87	
	Na	23		ug/L		37384	
	Mg	24		ug/L		667	
	Al	27		ug/L		2667	
	P	31		ug/L		2333	
	K	39		ug/L		438636	
	Ca	43		ug/L		355	
>	Sc	45		ug/L		342189	
	Ti	47		ug/L		109	
	V	51		ug/L		1130	
	Cr	52		ug/L		739	
	Cr	53		ug/L		146772	
	Mn	55		ug/L		772	
	Fe	57		ug/L		3662	
	Co	59		ug/L		101	
	Ni	60		ug/L		42	
	Cu	63		ug/L		129	
	Cu	65		ug/L		73	
	Zn	66		ug/L		281	
	Zn	67		ug/L		6916	
	Zn	68		ug/L		785	
>	Ge	74		ug/L		174909	
	As	75		ug/L		287	
	Se	77		ug/L		7610	
	Se	82		ug/L		11	
	Kr	83		ug/L		46	
	Sr	88		ug/L		138	
	Y	89		ug/L		16	
	Zr	90		ug/L		429	
	Mo	98		ug/L		57	
	Ag	107		ug/L		41	
	Cd	111		ug/L		12	
	Cd	114		ug/L		23	
>	In	115		ug/L		92995	
	Sn	120		ug/L		322	
	Sb	121		ug/L		314	
	Sb	123		ug/L		245	
	Ba	135		ug/L		20	
	Ba	137		ug/L		27	
	Ho	165		ug/L		16	
>	Lu	175		ug/L		94215	
	Tl	205		ug/L		85	
	Pb	208		ug/L		720	
	Bi	209		ug/L		81	
	Th	232		ug/L		2092	
	U	238		ug/L		208	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, July 15, 2009 17:09:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\Standard 1.025

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	1.623	3666	0.011
	Be	9	**10.000**	**ug/L**	2.433	967	0.003
	B	11	**20.000**	**ug/L**	1.527	1717	0.005
	Na	23	**1000.000**	**ug/L**	2.402	1557944	4.465
	Mg	24	**1000.000**	**ug/L**	5.492	1093053	3.206
	Al	27	**1000.000**	**ug/L**	2.312	1510152	4.427
	P	31	**1000.000**	**ug/L**	2.186	80967	0.231
	K	39	**1000.000**	**ug/L**	2.505	3063935	7.715
	Ca	43	**1000.000**	**ug/L**	1.265	5773	0.016
>	Sc	45		**ug/L**		340559	340558.565
	Ti	47	**10.000**	**ug/L**	4.376	2701	0.008
	V	51	**10.000**	**ug/L**	13.991	26941	0.076
	Cr	52	**10.000**	**ug/L**	0.527	26126	0.075
	Cr	53		**ug/L**		150726	0.014
	Mn	55	**10.000**	**ug/L**	2.319	43704	0.126
	Fe	57	**1000.000**	**ug/L**	1.907	86919	0.245
	Co	59	**10.000**	**ug/L**	1.064	30348	0.089
	Ni	60	**10.000**	**ug/L**	0.904	6281	0.018
	Cu	63		**ug/L**		14596	0.042
	Cu	65	**10.000**	**ug/L**	2.570	6977	0.020
	Zn	66	**10.000**	**ug/L**	2.126	4069	0.022
	Zn	67		**ug/L**		7702	0.005
	Zn	68		**ug/L**		3550	0.016
>	Ge	74		**ug/L**		172789	172789.067
	As	75	**10.000**	**ug/L**	9.457	4870	0.027
	Se	77		**ug/L**		7694	0.001
	Se	82	**10.000**	**ug/L**	3.043	383	0.002
	Kr	83		**ug/L**		56	0.000
	Sr	88	**10.000**	**ug/L**	0.934	62127	0.673
	Y	89		**ug/L**		19	0.000
	Zr	90	**10.000**	**ug/L**	3.402	30431	0.326
	Mo	98	**10.000**	**ug/L**	1.966	13950	0.151
	Ag	107	**10.000**	**ug/L**	1.943	20724	0.224
	Cd	111	**10.000**	**ug/L**	2.233	4878	0.053
	Cd	114		**ug/L**		11044	0.120
>	In	115		**ug/L**		92164	92163.931
	Sn	120	**10.000**	**ug/L**	1.771	22189	0.237
	Sb	121	**10.000**	**ug/L**	4.864	17495	0.186
	Sb	123		**ug/L**		13495	0.144
	Ba	135		**ug/L**		5080	0.053
	Ba	137	**10.000**	**ug/L**	3.497	8806	0.093
	Ho	165		**ug/L**		18	0.000
>	Lu	175		**ug/L**		94658	94657.609
	Tl	205	**10.000**	**ug/L**	2.563	12723	0.134
	Pb	208	**10.000**	**ug/L**	1.541	72026	0.753
	Bi	209		**ug/L**		112	0.000
	Th	232	**10.000**	**ug/L**	5.677	79463	0.817
	U	238	**10.000**	**ug/L**	2.499	97538	1.029

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, July 15, 2009 17:15:57
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\Standard 2.026

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**99.998**	ug/L	2.668	36068	0.107
	Be	9	**99.980**	ug/L	4.169	9370	0.028
	B	11	**199.979**	ug/L	5.665	16087	0.047
	Na	23	**10007.661**	ug/L	4.823	16389880	48.390
	Mg	24	**9999.992**	ug/L	8.006	10824513	32.060
	Al	27	**9992.948**	ug/L	10.388	13954550	41.328
	P	31	**9997.307**	ug/L	3.663	762107	2.248
	K	39	**9998.295**	ug/L	5.692	26092330	75.844
	Ca	43	**9998.958**	ug/L	2.863	53572	0.157
>	Sc	45		ug/L		338160	338160.254
	Ti	47	**99.970**	ug/L	3.155	25086	0.074
	V	51	**100.036**	ug/L	5.078	267015	0.787
	Cr	52	**99.961**	ug/L	3.959	243205	0.718
	Cr	53		ug/L		157390	0.037
	Mn	55	**99.961**	ug/L	3.570	410865	1.214
	Fe	57	**9996.484**	ug/L	3.785	801635	2.362
	Co	59	**99.957**	ug/L	3.791	287764	0.851
	Ni	60	**99.968**	ug/L	3.907	60043	0.178
	Cu	63		ug/L		136913	0.405
	Cu	65	**99.950**	ug/L	4.465	65295	0.193
	Zn	66	**99.977**	ug/L	0.914	36533	0.214
	Zn	67		ug/L		12528	0.035
	Zn	68		ug/L		26628	0.153
>	Ge	74		ug/L		169089	169088.847
	As	75	**99.952**	ug/L	0.808	43062	0.253
	Se	77		ug/L		8952	0.009
	Se	82	**100.049**	ug/L	2.563	3842	0.023
	Kr	83		ug/L		51	0.000
	Sr	88	**99.993**	ug/L	1.649	592379	6.681
	Y	89		ug/L		57	0.000
	Zr	90	**100.120**	ug/L	1.791	328873	3.705
	Mo	98	**100.021**	ug/L	0.363	136618	1.540
	Ag	107	**99.992**	ug/L	0.514	197463	2.227
	Cd	111	**99.987**	ug/L	2.283	46237	0.521
	Cd	114		ug/L		105724	1.192
>	In	115		ug/L		88656	88656.480
	Sn	120	**100.003**	ug/L	0.344	211446	2.382
	Sb	121	**100.064**	ug/L	1.657	176998	1.993
	Sb	123		ug/L		135632	1.527
	Ba	135		ug/L		49211	0.522
	Ba	137	**99.983**	ug/L	0.893	85984	0.912
	Ho	165		ug/L		16	0.000
>	Lu	175		ug/L		94210	94210.266
	Tl	205	**100.006**	ug/L	1.929	126674	1.344
	Pb	208	**99.975**	ug/L	0.791	693192	7.351
	Bi	209		ug/L		379	0.003
	Th	232	**100.132**	ug/L	5.549	890576	9.432
	U	238	**99.967**	ug/L	1.936	938162	9.957

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, July 15, 2009 17:22:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 1.027

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.766**	ug/L	0.421	18860	0.056
	Be	9	**52.759**	ug/L	1.791	4899	0.015
	B	11	**107.742**	ug/L	4.285	8623	0.026
	Na	23	**5219.371**	ug/L	4.401	8480092	25.237
	Mg	24	**4958.812**	ug/L	4.619	5319764	15.898
	Al	27	**5552.635**	ug/L	4.742	7685529	22.964
	P	31	**5149.197**	ug/L	3.147	389798	1.158
	K	39	**4829.551**	ug/L	4.334	12686314	36.636
	Ca	43	**5062.994**	ug/L	2.375	27029	0.080
>	Sc	45		ug/L		334714	334713.614
	Ti	47	**51.792**	ug/L	4.724	12917	0.038
	V	51	**51.508**	ug/L	7.321	136672	0.405
	Cr	52	**53.588**	ug/L	2.087	129461	0.385
	Cr	53		ug/L		143408	-0.000
	Mn	55	**50.040**	ug/L	1.525	204076	0.608
	Fe	57	**5174.224**	ug/L	1.666	412677	1.222
	Co	59	**52.626**	ug/L	2.992	150076	0.448
	Ni	60	**53.598**	ug/L	2.281	31900	0.095
	Cu	63		ug/L		68803	0.205
	Cu	65	**51.262**	ug/L	1.096	33207	0.099
	Zn	66	**51.269**	ug/L	2.932	19263	0.110
	Zn	67		ug/L		9584	0.016
	Zn	68		ug/L		14485	0.079
>	Ge	74		ug/L		172684	172684.242
	As	75	**48.354**	ug/L	1.653	21418	0.122
	Se	77		ug/L		7422	-0.001
	Se	82	**50.090**	ug/L	2.826	1970	0.011
	Kr	83		ug/L		45	-0.000
	Sr	88	**50.983**	ug/L	0.128	312039	3.406
	Y	89		ug/L		27	0.000
	Zr	90	**46.416**	ug/L	2.381	157721	1.718
	Mo	98	**48.065**	ug/L	1.059	67831	0.740
	Ag	107	**50.557**	ug/L	0.934	103140	1.126
	Cd	111	**52.797**	ug/L	0.873	25223	0.275
	Cd	114		ug/L		58692	0.641
>	In	115		ug/L		91567	91566.902
	Sn	120	**49.091**	ug/L	0.596	107367	1.169
	Sb	121	**47.952**	ug/L	2.445	87759	0.955
	Sb	123		ug/L		67243	0.732
	Ba	135		ug/L		25428	0.267
	Ba	137	**50.863**	ug/L	2.646	44276	0.464
	Ho	165		ug/L		24	0.000
>	Lu	175		ug/L		95347	95347.447
	Tl	205	**49.149**	ug/L	3.153	63050	0.660
	Pb	208	**51.724**	ug/L	1.343	363303	3.803
	Bi	209		ug/L		166	0.001
	Th	232	**51.036**	ug/L	3.667	460410	4.807
	U	238	**53.750**	ug/L	2.908	510551	5.354

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	105.531				
	Be	9	105.519				
	B	11	107.742				
	Na	23	104.387				
	Mg	24	99.176				
	Al	27	109.953				
	P	31	102.984				
	K	39	96.591				
	Ca	43	101.260				
>	Sc	45			97.8		
	Ti	47	103.585				
	V	51	103.017				
	Cr	52	107.176				
	Cr	53					
	Mn	55	100.081				
	Fe	57	103.484				
	Co	59	105.253				
	Ni	60	107.196				
	Cu	63					
	Cu	65	102.524				
	Zn	66	102.538				
	Zn	67					
	Zn	68					
>	Ge	74			98.7		
	As	75	96.708				
	Se	77					
	Se	82	100.180				
	Kr	83					
	Sr	88	101.966				
	Y	89					
	Zr	90	92.831				
	Mo	98	96.130				
	Ag	107	101.113				
	Cd	111	105.595				
	Cd	114					
>	In	115			98.5		
	Sn	120	98.182				
	Sb	121	95.905				
	Sb	123					
	Ba	135					
	Ba	137	101.725				
	Ho	165					
>	Lu	175			101.2		
	Tl	205	98.299				
	Pb	208	103.447				
	Bi	209					
	Th	232	102.073				
	U	238	107.501				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, July 15, 2009 17:28:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 2.028

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.006**	ug/L	180.106	30	0.000
	Be	9	**-0.003**	ug/L	1166.656	4	-0.000
	B	11	**2.571**	ug/L	19.191	290	0.001
	Na	23	**-4.496**	ug/L	40.534	29364	-0.022
	Mg	24	**0.633**	ug/L	84.780	1333	0.002
	Al	27	**0.290**	ug/L	500.397	3000	0.001
	P	31	**2.156**	ug/L	97.365	2446	0.000
	K	39	**-1.332**	ug/L	351.488	426273	-0.010
	Ca	43	**10.354**	ug/L	9.289	403	0.000
>	Sc	45		ug/L		335120	335120.376
	Ti	47	**0.077**	ug/L	35.044	126	0.000
	V	51	**-0.365**	ug/L	531.462	85	-0.003
	Cr	52	**-0.059**	ug/L	112.267	580	-0.000
	Cr	53		ug/L		140719	-0.009
	Mn	55	**0.006**	ug/L	126.548	779	0.000
	Fe	57	**1.861**	ug/L	88.831	3732	0.000
	Co	59	**0.003**	ug/L	184.772	108	0.000
	Ni	60	**-0.001**	ug/L	905.943	40	-0.000
	Cu	63		ug/L		142	0.000
	Cu	65	**0.005**	ug/L	337.970	75	0.000
	Zn	66	**-0.084**	ug/L	56.629	247	-0.000
	Zn	67		ug/L		6692	-0.001
	Zn	68		ug/L		748	-0.000
>	Ge	74		ug/L		173180	173179.876
	As	75	**-0.799**	ug/L	34.827	-65	-0.002
	Se	77		ug/L		7091	-0.003
	Se	82	**-0.227**	ug/L	45.304	2	-0.000
	Kr	83		ug/L		51	0.000
	Sr	88	**0.004**	ug/L	107.403	163	0.000
	Y	89		ug/L		16	-0.000
	Zr	90	**0.327**	ug/L	23.122	1531	0.012
	Mo	98	**0.089**	ug/L	28.066	182	0.001
	Ag	107	**0.025**	ug/L	17.945	91	0.001
	Cd	111	**-0.003**	ug/L	211.384	10	-0.000
	Cd	114		ug/L		26	0.000
>	In	115		ug/L		91750	91749.518
	Sn	120	**0.096**	ug/L	21.123	527	0.002
	Sb	121	**0.706**	ug/L	23.100	1596	0.014
	Sb	123		ug/L		1246	0.011
	Ba	135		ug/L		25	0.000
	Ba	137	**0.004**	ug/L	249.119	30	0.000
	Ho	165		ug/L		17	0.000
>	Lu	175		ug/L		93606	93606.042
	Tl	205	**0.192**	ug/L	18.821	325	0.003
	Pb	208	**0.009**	ug/L	5.558	779	0.001
	Bi	209		ug/L		81	0.000
	Th	232	**0.954**	ug/L	21.471	10461	0.090
	U	238	**0.018**	ug/L	5.912	371	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.9		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			99.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.7		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.4		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, July 15, 2009 17:34:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 3.029

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.677**	ug/L	1.623	3874	0.011
	Be	9	**0.424**	ug/L	8.202	44	0.000
	B	11	**16.048**	ug/L	2.609	1370	0.004
	Na	23	**250.866**	ug/L	5.681	446547	1.213
	Mg	24	**18.206**	ug/L	21.682	20348	0.058
	Al	27	**28.712**	ug/L	15.385	42731	0.119
	P	31	**55.514**	ug/L	4.852	6520	0.012
	K	39	**309.063**	ug/L	16.129	1224645	2.344
	Ca	43	**211.598**	ug/L	2.834	1477	0.003
>	Sc	45		ug/L		337827	337827.422
	Ti	47	**9.146**	ug/L	1.741	2392	0.007
	V	51	**9.190**	ug/L	9.708	25545	0.072
	Cr	52	**10.685**	ug/L	2.406	26642	0.077
	Cr	53		ug/L		149217	0.013
	Mn	55	**5.512**	ug/L	1.347	23366	0.067
	Fe	57	**109.207**	ug/L	2.036	12331	0.026
	Co	59	**1.071**	ug/L	1.445	3182	0.009
	Ni	60	**2.139**	ug/L	2.594	1325	0.004
	Cu	63		ug/L		1673	0.005
	Cu	65	**1.140**	ug/L	6.821	816	0.002
	Zn	66	**10.427**	ug/L	4.097	4152	0.022
	Zn	67		ug/L		7686	0.005
	Zn	68		ug/L		3596	0.016
>	Ge	74		ug/L		173203	173203.050
	As	75	**5.291**	ug/L	12.416	2605	0.013
	Se	77		ug/L		7390	-0.001
	Se	82	**5.431**	ug/L	8.069	224	0.001
	Kr	83		ug/L		48	0.000
	Sr	88	**10.350**	ug/L	1.585	64166	0.692
	Y	89		ug/L		15	-0.000
	Zr	90	**1.777**	ug/L	2.322	6518	0.066
	Mo	98	**0.514**	ug/L	2.900	790	0.008
	Ag	107	**1.035**	ug/L	1.028	2174	0.023
	Cd	111	**1.045**	ug/L	3.296	516	0.005
	Cd	114		ug/L		1156	0.012
>	In	115		ug/L		92596	92595.807
	Sn	120	**4.929**	ug/L	1.268	11189	0.117
	Sb	121	**2.786**	ug/L	6.350	5450	0.055
	Sb	123		ug/L		4134	0.042
	Ba	135		ug/L		1030	0.011
	Ba	137	**2.017**	ug/L	1.344	1778	0.018
	Ho	165		ug/L		16	0.000
>	Lu	175		ug/L		95138	95138.063
	Tl	205	**1.049**	ug/L	5.605	1428	0.014
	Pb	208	**2.076**	ug/L	1.339	15248	0.153
	Bi	209		ug/L		80	-0.000
	Th	232	**1.277**	ug/L	1.620	13558	0.120
	U	238	**0.204**	ug/L	4.146	2147	0.020

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	106.773				
	Be	9	84.847				
	B	11	106.985				
	Na	23	100.346				
	Mg	24	121.374				
	Al	27	95.707				
	P	31	111.028				
	K	39	103.021				
	Ca	43	105.799				
>	Sc	45			98.7		
	Ti	47	91.462				
	V	51	91.902				
	Cr	52	106.855				
	Cr	53					
	Mn	55	110.234				
	Fe	57	109.207				
	Co	59	107.116				
	Ni	60	106.972				
	Cu	63					
	Cu	65	113.985				
	Zn	66	104.272				
	Zn	67					
	Zn	68					
>	Ge	74			99.0		
	As	75	105.822				
	Se	77					
	Se	82	108.622				
	Kr	83					
	Sr	88	103.502				
	Y	89					
	Zr	90	88.870				
	Mo	98	102.869				
	Ag	107	103.461				
	Cd	111	104.517				
	Cd	114					
>	In	115			99.6		
	Sn	120	98.579				
	Sb	121	92.880				
	Sb	123					
	Ba	135					
	Ba	137	100.859				
	Ho	165					
>	Lu	175			101.0		
	Tl	205	104.935				
	Pb	208	103.807				
	Bi	209					
	Th	232	127.741				
	U	238	102.201				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, July 15, 2009 17:40:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 4.030

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.096**	ug/L	18.455	61	0.000
	Be	9	**0.064**	ug/L	59.114	10	0.000
	B	11	**1.277**	ug/L	15.322	185	0.000
	Na	23	**94685.132**	ug/L	6.178	151344846	457.827
	Mg	24	**96066.327**	ug/L	4.597	101815461	307.990
	Al	27	**107117.011**	ug/L	6.972	146384807	443.006
	P	31	**95142.741**	ug/L	3.666	7076123	21.398
	K	39	**97218.327**	ug/L	3.680	244282787	737.469
	Ca	43	**95104.661**	ug/L	3.037	495517	1.498
>	Sc	45		ug/L		330740	330739.817
	Ti	47	**1691.539**	ug/L	2.789	413595	1.251
	V	51	**0.206**	ug/L	807.056	1670	0.002
	Cr	52	**4.784**	ug/L	4.144	12067	0.034
	Cr	53		ug/L		120323	-0.065
	Mn	55	**5.713**	ug/L	2.501	23678	0.069
	Fe	57	**100634.916**	ug/L	1.466	7865339	23.775
	Co	59	**0.243**	ug/L	4.666	783	0.002
	Ni	60	**2.844**	ug/L	4.399	1710	0.005
	Cu	63		ug/L		3043	0.009
	Cu	65	**2.640**	ug/L	2.184	1756	0.005
	Zn	66	**3.816**	ug/L	3.095	1580	0.008
	Zn	67		ug/L		6735	0.002
	Zn	68		ug/L		931	0.001
>	Ge	74		ug/L		161385	161385.093
	As	75	**-0.763**	ug/L	87.365	-46	-0.002
	Se	77		ug/L		6345	-0.004
	Se	82	**-0.348**	ug/L	32.034	-2	-0.000
	Kr	83		ug/L		79	0.000
	Sr	88	**1.156**	ug/L	0.332	6685	0.077
	Y	89		ug/L		157	0.002
	Zr	90	**2.305**	ug/L	53.584	7624	0.085
	Mo	98	**2089.113**	ug/L	1.395	2732407	32.172
	Ag	107	**0.062**	ug/L	9.112	154	0.001
	Cd	111	**0.315**	ug/L	31.295	150	0.002
	Cd	114		ug/L		2581	0.030
>	In	115		ug/L		84925	84924.933
	Sn	120	**0.280**	ug/L	16.691	860	0.007
	Sb	121	**0.255**	ug/L	30.960	718	0.005
	Sb	123		ug/L		584	0.004
	Ba	135		ug/L		355	0.004
	Ba	137	**0.641**	ug/L	2.657	572	0.006
	Ho	165		ug/L		260	0.003
>	Lu	175		ug/L		93246	93245.608
	Tl	205	**0.026**	ug/L	38.990	116	0.000
	Pb	208	**0.175**	ug/L	1.467	1909	0.013
	Bi	209		ug/L		294	0.002
	Th	232	**1.774**	ug/L	36.518	17636	0.167
	U	238	**-0.009**	ug/L	22.272	122	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23	94.685				
	Mg	24	96.066				
	Al	27	107.117				
	P	31	95.143				
	K	39	97.218				
	Ca	43	95.105				
>	Sc	45		96.7			
	Ti	47	84.577				
	V	51					
	Cr	52	129.300				
	Cr	53					
	Mn	55	98.494				
	Fe	57	100.635				
	Co	59	97.386				
	Ni	60	105.332				
	Cu	63					
	Cu	65	91.033				
	Zn	66	106.003				
	Zn	67					
	Zn	68					
>	Ge	74		92.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	96.324				
	Y	89					
	Zr	90					
	Mo	98	104.456				
	Ag	107					
	Cd	111	78.717				
	Cd	114					
>	In	115		91.3			
	Sn	120					
	Sb	121	255.427				
	Sb	123					
	Ba	135					
	Ba	137	95.650				
	Ho	165					
>	Lu	175		99.0			
	Tl	205					
	Pb	208	87.299				
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, July 15, 2009 17:46:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 5.031

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**20.066**	ug/L	1.575	6930	0.021
	Be	9	**20.727**	ug/L	1.289	1858	0.006
	B	11	**21.643**	ug/L	3.448	1736	0.005
	Na	23	**103692.269**	ug/L	3.357	161806471	501.379
	Mg	24	**98759.949**	ug/L	5.645	102189324	316.625
	Al	27	**112916.729**	ug/L	7.860	150701786	466.992
	P	31	**98030.933**	ug/L	1.501	7116735	22.048
	K	39	**102649.372**	ug/L	9.764	251737739	778.667
	Ca	43	**96957.203**	ug/L	1.167	493024	1.527
>	Sc	45		ug/L		322662	322662.179
	Ti	47	**1746.578**	ug/L	1.442	416771	1.291
	V	51	**21.237**	ug/L	4.617	54989	0.167
	Cr	52	**25.264**	ug/L	1.866	59220	0.181
	Cr	53		ug/L		117647	-0.064
	Mn	55	**26.104**	ug/L	1.389	102990	0.317
	Fe	57	**103409.362**	ug/L	0.996	7886653	24.431
	Co	59	**20.328**	ug/L	0.697	55958	0.173
	Ni	60	**21.746**	ug/L	2.841	12505	0.039
	Cu	63		ug/L		28387	0.088
	Cu	65	**22.138**	ug/L	0.928	13865	0.043
	Zn	66	**23.370**	ug/L	1.023	8437	0.050
	Zn	67		ug/L		7471	0.006
	Zn	68		ug/L		5828	0.031
>	Ge	74		ug/L		163088	163087.607
	As	75	**22.302**	ug/L	5.069	9470	0.056
	Se	77		ug/L		6711	-0.002
	Se	82	**22.777**	ug/L	6.050	851	0.005
	Kr	83		ug/L		90	0.000
	Sr	88	**21.557**	ug/L	0.788	123465	1.440
	Y	89		ug/L		179	0.002
	Zr	90	**20.987**	ug/L	2.036	66888	0.777
	Mo	98	**2077.158**	ug/L	3.157	2738136	31.988
	Ag	107	**19.286**	ug/L	1.235	36816	0.430
	Cd	111	**20.000**	ug/L	3.753	8939	0.104
	Cd	114		ug/L		22598	0.264
>	In	115		ug/L		85633	85633.482
	Sn	120	**19.612**	ug/L	3.229	40279	0.467
	Sb	121	**20.797**	ug/L	3.589	35746	0.414
	Sb	123		ug/L		27315	0.316
	Ba	135		ug/L		9717	0.105
	Ba	137	**19.951**	ug/L	1.890	16856	0.182
	Ho	165		ug/L		277	0.003
>	Lu	175		ug/L		92433	92433.385
	Tl	205	**18.512**	ug/L	1.366	23080	0.249
	Pb	208	**19.613**	ug/L	1.053	133985	1.442
	Bi	209		ug/L		345	0.003
	Th	232	**20.432**	ug/L	0.558	179949	1.924
	U	238	**20.698**	ug/L	1.716	190724	2.062

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	100.331				
	Be	9	103.633				
	B	11	108.214				
	Na	23	103.692				
	Mg	24	98.760				
	Al	27	112.917				
	P	31	98.031				
	K	39	102.649				
	Ca	43	96.957				
>	Sc	45			94.3		
	Ti	47	87.329				
	V	51	106.185				
	Cr	52	106.599				
	Cr	53					
	Mn	55	101.178				
	Fe	57	103.409				
	Co	59	100.383				
	Ni	60	95.799				
	Cu	63					
	Cu	65	96.672				
	Zn	66	99.027				
	Zn	67					
	Zn	68					
>	Ge	74			93.2		
	As	75	111.511				
	Se	77					
	Se	82	113.885				
	Kr	83					
	Sr	88	101.683				
	Y	89					
	Zr	90	104.936				
	Mo	98	103.858				
	Ag	107	96.431				
	Cd	111	98.041				
	Cd	114					
>	In	115			92.1		
	Sn	120	98.059				
	Sb	121	103.469				
	Sb	123					
	Ba	135					
	Ba	137	96.521				
	Ho	165					
>	Lu	175			98.1		
	Tl	205	92.560				
	Pb	208	97.093				
	Bi	209					
	Th	232	102.159				
	U	238	103.488				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 15, 2009 17:53:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 6.032

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.266**	**ug/L**	3.398	18277	0.057
	Be	9	**53.064**	**ug/L**	2.920	4731	0.015
	B	11	**104.846**	**ug/L**	4.718	8059	0.025
	Na	23	**5354.415**	**ug/L**	3.554	8354770	25.890
	Mg	24	**5441.594**	**ug/L**	4.534	5606004	17.446
	Al	27	**6033.777**	**ug/L**	2.471	8024837	24.954
	P	31	**5358.708**	**ug/L**	3.179	389456	1.205
	K	39	**4854.044**	**ug/L**	9.344	12249500	36.821
	Ca	43	**5132.138**	**ug/L**	2.891	26306	0.081
>	Sc	45		**ug/L**		321437	321437.299
	Ti	47	**56.445**	**ug/L**	2.502	13514	0.042
	V	51	**51.733**	**ug/L**	4.894	131844	0.407
	Cr	52	**54.244**	**ug/L**	2.864	125821	0.389
	Cr	53		**ug/L**		136690	-0.004
	Mn	55	**50.609**	**ug/L**	1.201	198204	0.614
	Fe	57	**5302.894**	**ug/L**	3.599	405970	1.253
	Co	59	**53.643**	**ug/L**	3.206	146895	0.457
	Ni	60	**55.088**	**ug/L**	3.876	31482	0.098
	Cu	63		**ug/L**		67588	0.210
	Cu	65	**52.491**	**ug/L**	2.346	32647	0.101
	Zn	66	**51.502**	**ug/L**	0.449	18995	0.110
	Zn	67		**ug/L**		9206	0.015
	Zn	68		**ug/L**		13828	0.077
>	Ge	74		**ug/L**		169496	169496.377
	As	75	**49.321**	**ug/L**	3.362	21434	0.125
	Se	77		**ug/L**		7401	0.000
	Se	82	**50.714**	**ug/L**	3.306	1957	0.011
	Kr	83		**ug/L**		58	0.000
	Sr	88	**50.415**	**ug/L**	1.139	301865	3.368
	Y	89		**ug/L**		33	0.000
	Zr	90	**45.977**	**ug/L**	4.304	152823	1.701
	Mo	98	**48.565**	**ug/L**	1.830	67050	0.748
	Ag	107	**50.037**	**ug/L**	1.022	99861	1.114
	Cd	111	**51.728**	**ug/L**	1.543	24177	0.270
	Cd	114		**ug/L**		56818	0.634
>	In	115		**ug/L**		89587	89586.843
	Sn	120	**48.839**	**ug/L**	2.982	104482	1.163
	Sb	121	**47.351**	**ug/L**	4.432	84759	0.943
	Sb	123		**ug/L**		65380	0.727
	Ba	135		**ug/L**		24972	0.266
	Ba	137	**50.605**	**ug/L**	1.423	43343	0.462
	Ho	165		**ug/L**		30	0.000
>	Lu	175		**ug/L**		93796	93796.193
	Tl	205	**49.859**	**ug/L**	1.696	62926	0.670
	Pb	208	**51.839**	**ug/L**	1.574	358194	3.812
	Bi	209		**ug/L**		162	0.001
	Th	232	**49.831**	**ug/L**	5.432	442237	4.694
	U	238	**53.312**	**ug/L**	2.135	498222	5.310

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	106.533				
	Be	9	106.128				
	B	11	104.846				
	Na	23	107.088				
	Mg	24	108.832				
	Al	27	119.481				
	P	31	107.174				
	K	39	97.081				
	Ca	43	102.643				
>	Sc	45		93.9			
	Ti	47	112.889				
	V	51	103.467				
	Cr	52	108.487				
	Cr	53					
	Mn	55	101.219				
	Fe	57	106.058				
	Co	59	107.286				
	Ni	60	110.175				
	Cu	63					
	Cu	65	104.983				
	Zn	66	103.003				
	Zn	67					
	Zn	68					
>	Ge	74		96.9			
	As	75	98.641				
	Se	77					
	Se	82	101.429				
	Kr	83					
	Sr	88	100.829				
	Y	89					
	Zr	90	91.955				
	Mo	98	97.130				
	Ag	107	100.074				
	Cd	111	103.457				
	Cd	114					
>	In	115		96.3			
	Sn	120	97.678				
	Sb	121	94.701				
	Sb	123					
	Ba	135					
	Ba	137	101.210				
	Ho	165					
>	Lu	175		99.6			
	Tl	205	99.717				
	Pb	208	103.679				
	Bi	209					
	Th	232	99.661				
	U	238	106.625				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Al	27	CCV is out of limits (+/- 10%)
QC Std 6	Ti	47	CCV is out of limits (+/- 10%)
QC Std 6	Ni	60	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 15, 2009 17:59:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 7.033

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.052**	ug/L	43.238	44	0.000
	Be	9	**0.030**	ug/L	163.575	7	0.000
	B	11	**1.928**	ug/L	15.684	226	0.000
	Na	23	**6.074**	ug/L	129.897	44071	0.029
	Mg	24	**8.564**	ug/L	106.653	9338	0.027
	Al	27	**9.034**	ug/L	92.989	14343	0.037
	P	31	**10.982**	ug/L	70.160	2951	0.002
	K	39	**6.428**	ug/L	150.469	422843	0.049
	Ca	43	**20.889**	ug/L	32.587	435	0.000
>	Sc	45		ug/L		317844	317844.194
	Ti	47	**1.548**	ug/L	3.835	465	0.001
	V	51	**-0.174**	ug/L	374.584	618	-0.001
	Cr	52	**-0.192**	ug/L	31.105	247	-0.001
	Cr	53		ug/L		134248	-0.007
	Mn	55	**0.019**	ug/L	30.974	791	0.000
	Fe	57	**15.921**	ug/L	34.324	4597	0.004
	Co	59	**0.012**	ug/L	118.754	125	0.000
	Ni	60	**0.009**	ug/L	167.290	44	0.000
	Cu	63		ug/L		132	0.000
	Cu	65	**0.036**	ug/L	104.577	90	0.000
	Zn	66	**-0.034**	ug/L	113.279	258	-0.000
	Zn	67		ug/L		6679	0.000
	Zn	68		ug/L		686	-0.000
>	Ge	74		ug/L		168307	168306.653
	As	75	**0.009**	ug/L	5078.282	280	0.000
	Se	77		ug/L		6651	-0.004
	Se	82	**-0.166**	ug/L	151.093	5	-0.000
	Kr	83		ug/L		54	0.000
	Sr	88	**0.009**	ug/L	104.576	188	0.001
	Y	89		ug/L		13	-0.000
	Zr	90	**0.222**	ug/L	19.888	1149	0.008
	Mo	98	**0.287**	ug/L	30.549	450	0.004
	Ag	107	**0.022**	ug/L	67.691	82	0.000
	Cd	111	**0.019**	ug/L	63.336	20	0.000
	Cd	114		ug/L		37	0.000
>	In	115		ug/L		89551	89550.760
	Sn	120	**0.053**	ug/L	24.192	422	0.001
	Sb	121	**0.476**	ug/L	23.097	1152	0.009
	Sb	123		ug/L		891	0.007
	Ba	135		ug/L		18	-0.000
	Ba	137	**0.008**	ug/L	140.067	33	0.000
	Ho	165		ug/L		12	-0.000
>	Lu	175		ug/L		92896	92896.339
	Tl	205	**0.189**	ug/L	14.983	319	0.003
	Pb	208	**0.015**	ug/L	88.809	812	0.001
	Bi	209		ug/L		75	-0.000
	Th	232	**0.573**	ug/L	22.885	7078	0.054
	U	238	**0.019**	ug/L	36.895	377	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		92.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		96.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Wednesday, July 15, 2009 18:05:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 10.034

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**961.544**	ug/L	0.977	337917	1.025
	Be	9	**988.709**	ug/L	2.596	90313	0.274
	B	11	**1.258**	ug/L	3.425	182	0.000
	Na	23	**51433.115**	ug/L	6.023	81949398	248.693
	Mg	24	**50617.690**	ug/L	4.871	53462464	162.281
	Al	27	**54144.317**	ug/L	3.530	73781083	223.926
	P	31	**24311.221**	ug/L	4.251	1803461	5.468
	K	39	**49266.400**	ug/L	4.220	123539197	373.720
	Ca	43	**49029.251**	ug/L	3.884	254712	0.772
>	Sc	45		ug/L		329578	329578.006
	Ti	47	**32.889**	ug/L	2.314	8117	0.024
	V	51	**1015.276**	ug/L	4.778	2632539	7.988
	Cr	52	**1026.825**	ug/L	4.941	2428845	7.371
	Cr	53		ug/L		396239	0.774
	Mn	55	**1005.601**	ug/L	3.770	4022890	12.209
	Fe	57	**51812.062**	ug/L	4.902	4035621	12.241
	Co	59	**987.306**	ug/L	4.899	2769929	8.409
	Ni	60	**946.844**	ug/L	3.435	554133	1.682
	Cu	63		ug/L		1241107	3.766
	Cu	65	**957.553**	ug/L	2.282	609455	1.849
	Zn	66	**2366.813**	ug/L	0.753	850039	5.077
	Zn	67		ug/L		144425	0.823
	Zn	68		ug/L		613468	3.660
>	Ge	74		ug/L		167380	167379.957
	As	75	**966.232**	ug/L	0.987	409684	2.446
	Se	77		ug/L		19856	0.075
	Se	82	**494.216**	ug/L	1.079	18746	0.112
	Kr	83		ug/L		67	0.000
	Sr	88	**1018.073**	ug/L	0.851	5925784	68.020
	Y	89		ug/L		289	0.003
	Zr	90	**476.586**	ug/L	3.928	1536640	17.637
	Mo	98	**954.109**	ug/L	2.204	1279908	14.693
	Ag	107	**242.277**	ug/L	1.484	470046	5.396
	Cd	111	**977.535**	ug/L	2.903	443998	5.098
	Cd	114		ug/L		1013733	11.636
>	In	115		ug/L		87128	87128.289
	Sn	120	**933.793**	ug/L	3.029	1937015	22.239
	Sb	121	**249.250**	ug/L	2.486	432701	4.964
	Sb	123		ug/L		330310	3.789
	Ba	135		ug/L		1150924	12.087
	Ba	137	**2218.415**	ug/L	2.674	1927703	20.246
	Ho	165		ug/L		111	0.001
>	Lu	175		ug/L		95231	95231.341
	Tl	205	**471.758**	ug/L	0.565	603798	6.340
	Pb	208	**4972.648**	ug/L	2.104	34813721	365.618
	Bi	209		ug/L		5574	0.058
	Th	232	**2584.047**	ug/L	2.033	23177458	243.393
	U	238	**5173.725**	ug/L	2.131	49066704	515.316

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	96.154				
	Be	9	98.871				
	B	11					
	Na	23	102.866				
	Mg	24	101.235				
	Al	27	108.289				
	P	31	97.245				
	K	39	98.533				
	Ca	43	98.059				
>	Sc	45			96.3		
	Ti	47					
	V	51	101.528				
	Cr	52	102.683				
	Cr	53					
	Mn	55	100.560				
	Fe	57	103.624				
	Co	59	98.731				
	Ni	60	94.684				
	Cu	63					
	Cu	65	95.755				
	Zn	66	94.673				
	Zn	67					
	Zn	68					
>	Ge	74			95.7		
	As	75	96.623				
	Se	77					
	Se	82	98.843				
	Kr	83					
	Sr	88	101.807				
	Y	89					
	Zr	90	95.317				
	Mo	98	95.411				
	Ag	107	96.911				
	Cd	111	97.753				
	Cd	114					
>	In	115			93.7		
	Sn	120	93.379				
	Sb	121	99.700				
	Sb	123					
	Ba	135					
	Ba	137	88.737				
	Ho	165					
>	Lu	175			101.1		
	Tl	205	94.352				
	Pb	208	99.453				
	Bi	209					
	Th	232	103.362				
	U	238	103.474				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 10	Ba	137LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Wednesday, July 15, 2009 18:11:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 11.035

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.009**	ug/L	0.466	18151	0.054
	Be	9	**52.028**	ug/L	0.912	4810	0.014
	B	11	**103.822**	ug/L	2.719	8278	0.025
	Na	23	**5280.244**	ug/L	4.669	8541844	25.531
	Mg	24	**5504.580**	ug/L	1.898	5880559	17.648
	Al	27	**5611.256**	ug/L	3.889	7734586	23.207
	P	31	**5271.693**	ug/L	0.970	397338	1.186
	K	39	**5035.376**	ug/L	3.640	13156409	38.197
	Ca	43	**5163.294**	ug/L	2.809	27442	0.081
>	Sc	45		ug/L		333191	333191.243
	Ti	47	**52.272**	ug/L	0.440	12982	0.039
	V	51	**53.221**	ug/L	2.059	140643	0.419
	Cr	52	**54.892**	ug/L	0.635	132014	0.394
	Cr	53		ug/L		140912	-0.006
	Mn	55	**51.236**	ug/L	0.074	208012	0.622
	Fe	57	**5238.246**	ug/L	1.071	415894	1.238
	Co	59	**54.193**	ug/L	1.044	153882	0.462
	Ni	60	**55.409**	ug/L	1.847	32832	0.098
	Cu	63		ug/L		70157	0.210
	Cu	65	**52.491**	ug/L	1.360	33848	0.101
	Zn	66	**52.106**	ug/L	1.727	19980	0.112
	Zn	67		ug/L		9689	0.015
	Zn	68		ug/L		14804	0.080
>	Ge	74		ug/L		176267	176267.006
	As	75	**51.038**	ug/L	1.364	23060	0.129
	Se	77		ug/L		7076	-0.003
	Se	82	**51.415**	ug/L	3.068	2063	0.012
	Kr	83		ug/L		57	0.000
	Sr	88	**50.856**	ug/L	1.147	314699	3.398
	Y	89		ug/L		29	0.000
	Zr	90	**50.892**	ug/L	1.323	174784	1.883
	Mo	98	**49.152**	ug/L	0.797	70132	0.757
	Ag	107	**50.967**	ug/L	0.751	105120	1.135
	Cd	111	**52.877**	ug/L	0.448	25541	0.276
	Cd	114		ug/L		59610	0.644
>	In	115		ug/L		92577	92577.122
	Sn	120	**50.715**	ug/L	1.136	112131	1.208
	Sb	121	**49.800**	ug/L	2.792	92126	0.992
	Sb	123		ug/L		70512	0.759
	Ba	135		ug/L		25952	0.272
	Ba	137	**52.018**	ug/L	1.185	45303	0.475
	Ho	165		ug/L		28	0.000
>	Lu	175		ug/L		95379	95379.322
	Tl	205	**50.629**	ug/L	1.748	64971	0.680
	Pb	208	**52.768**	ug/L	1.995	370725	3.880
	Bi	209		ug/L		171	0.001
	Th	232	**59.513**	ug/L	1.748	536783	5.606
	U	238	**54.231**	ug/L	2.623	515327	5.402

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	102.019				
	Be	9	104.056				
	B	11	103.822				
	Na	23	105.605				
	Mg	24	110.092				
	Al	27	111.114				
	P	31	105.434				
	K	39	100.708				
	Ca	43	103.266				
>	Sc	45		97.4			
	Ti	47	104.544				
	V	51	106.443				
	Cr	52	109.783				
	Cr	53					
	Mn	55	102.471				
	Fe	57	104.765				
	Co	59	108.387				
	Ni	60	110.819				
	Cu	63					
	Cu	65	104.982				
	Zn	66	104.212				
	Zn	67					
	Zn	68					
>	Ge	74		100.8			
	As	75	102.075				
	Se	77					
	Se	82	102.829				
	Kr	83					
	Sr	88	101.712				
	Y	89					
	Zr	90	101.784				
	Mo	98	98.305				
	Ag	107	101.934				
	Cd	111	105.754				
	Cd	114					
>	In	115		99.6			
	Sn	120	101.429				
	Sb	121	99.599				
	Sb	123					
	Ba	135					
	Ba	137	104.037				
	Ho	165					
>	Lu	175		101.2			
	Tl	205	101.259				
	Pb	208	105.536				
	Bi	209					
	Th	232	119.025				
	U	238	108.461				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 11	Mg	24CCV is out of limits (+/- 10%)
QC Std 11	Al	27CCV is out of limits (+/- 10%)
QC Std 11	Ni	60CCV is out of limits (+/- 10%)
QC Std 11	Th	232CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Wednesday, July 15, 2009 18:17:51
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 12.036

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.132**	ug/L	23.709	74	0.000
	Be	9	**0.030**	ug/L	117.140	7	0.000
	B	11	**2.066**	ug/L	11.837	248	0.000
	Na	23	**3.917**	ug/L	68.507	42731	0.019
	Mg	24	**3.468**	ug/L	134.505	4335	0.011
	Al	27	**1.996**	ug/L	118.761	5335	0.008
	P	31	**5.108**	ug/L	5.631	2657	0.001
	K	39	**4.513**	ug/L	175.485	438988	0.034
	Ca	43	**7.431**	ug/L	97.793	385	0.000
>	Sc	45		ug/L		333475	333475.416
	Ti	47	**0.341**	ug/L	10.062	190	0.000
	V	51	**-1.329**	ug/L	82.176	-2377	-0.010
	Cr	52	**0.110**	ug/L	132.752	981	0.001
	Cr	53		ug/L		137528	-0.017
	Mn	55	**0.045**	ug/L	74.085	932	0.001
	Fe	57	**8.362**	ug/L	25.040	4227	0.002
	Co	59	**0.041**	ug/L	85.864	215	0.000
	Ni	60	**0.045**	ug/L	72.364	67	0.000
	Cu	63		ug/L		237	0.000
	Cu	65	**0.079**	ug/L	73.249	122	0.000
	Zn	66	**0.232**	ug/L	59.580	368	0.000
	Zn	67		ug/L		6878	-0.000
	Zn	68		ug/L		809	0.000
>	Ge	74		ug/L		175255	175254.692
	As	75	**0.539**	ug/L	195.049	530	0.001
	Se	77		ug/L		6560	-0.006
	Se	82	**-0.358**	ug/L	104.559	-3	-0.000
	Kr	83		ug/L		56	0.000
	Sr	88	**0.039**	ug/L	94.320	381	0.003
	Y	89		ug/L		13	-0.000
	Zr	90	**0.513**	ug/L	9.643	2194	0.019
	Mo	98	**0.277**	ug/L	4.644	454	0.004
	Ag	107	**0.050**	ug/L	26.079	144	0.001
	Cd	111	**0.056**	ug/L	39.832	39	0.000
	Cd	114		ug/L		82	0.001
>	In	115		ug/L		93005	93004.684
	Sn	120	**0.519**	ug/L	10.685	1470	0.012
	Sb	121	**1.051**	ug/L	15.912	2259	0.021
	Sb	123		ug/L		1757	0.016
	Ba	135		ug/L		68	0.001
	Ba	137	**0.085**	ug/L	103.305	100	0.001
	Ho	165		ug/L		16	-0.000
>	Lu	175		ug/L		94967	94966.931
	Tl	205	**0.378**	ug/L	11.565	569	0.005
	Pb	208	**0.405**	ug/L	36.216	3557	0.030
	Bi	209		ug/L		84	0.000
	Th	232	**1.708**	ug/L	10.957	17390	0.161
	U	238	**0.219**	ug/L	62.501	2285	0.022

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		97.5			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.8			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 12	Th	232CCB is out of limits (+/- PQL)
QC Std 12	U	238CCB is out of limits (+/- PQL)

QC Action

ICPMS#4 - Summary Report

Sample ID: 1201873967
Sample Date/Time: Wednesday, July 15, 2009 18:24:03
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 882355|1|skj
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\1201873967.037

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.209**	ug/L	14.972	102	0.000
	Be	9	**0.023**	ug/L	76.405	7	0.000
	B	11	**1.269**	ug/L	15.998	186	0.000
	Na	23	**-0.655**	ug/L	421.474	35377	-0.003
	Mg	24	**1.588**	ug/L	92.278	2334	0.005
	Al	27	**2.230**	ug/L	101.775	5668	0.009
	P	31	**-0.409**	ug/L	296.879	2246	-0.000
	K	39	**10.101**	ug/L	12.698	453761	0.077
	Ca	43	**58.175**	ug/L	26.213	652	0.001
>	Sc	45		ug/L		334054	334053.898
	Ti	47	**0.656**	ug/L	13.835	268	0.000
	V	51	**-2.526**	ug/L	129.965	-5645	-0.020
	Cr	52	**0.601**	ug/L	14.792	2165	0.004
	Cr	53		ug/L		245582	0.307
	Mn	55	**0.148**	ug/L	2.535	1354	0.002
	Fe	57	**10.348**	ug/L	6.937	4391	0.002
	Co	59	**0.003**	ug/L	222.362	107	0.000
	Ni	60	**0.034**	ug/L	47.154	61	0.000
	Cu	63		ug/L		259	0.000
	Cu	65	**0.117**	ug/L	5.395	147	0.000
	Zn	66	**0.747**	ug/L	9.781	555	0.002
	Zn	67		ug/L		13756	0.040
	Zn	68		ug/L		1276	0.003
>	Ge	74		ug/L		172988	172987.800
	As	75	**2.644**	ug/L	14.384	1441	0.007
	Se	77		ug/L		14356	0.039
	Se	82	**-0.423**	ug/L	39.510	-5	-0.000
	Kr	83		ug/L		52	0.000
	Sr	88	**0.037**	ug/L	9.006	359	0.002
	Y	89		ug/L		21	0.000
	Zr	90	**0.439**	ug/L	14.883	1902	0.016
	Mo	98	**0.132**	ug/L	12.191	242	0.002
	Ag	107	**0.027**	ug/L	9.410	94	0.001
	Cd	111	**-0.001**	ug/L	1027.909	11	-0.000
	Cd	114		ug/L		34	0.000
>	In	115		ug/L		91223	91223.092
	Sn	120	**0.732**	ug/L	7.240	1907	0.017
	Sb	121	**0.794**	ug/L	11.092	1750	0.016
	Sb	123		ug/L		1363	0.012
	Ba	135		ug/L		32	0.000
	Ba	137	**0.042**	ug/L	34.701	62	0.000
	Ho	165		ug/L		18	0.000
>	Lu	175		ug/L		93483	93483.490
	Tl	205	**0.186**	ug/L	2.654	318	0.002
	Pb	208	**0.150**	ug/L	8.209	1747	0.011
	Bi	209		ug/L		80	-0.000
	Th	232	**0.983**	ug/L	9.629	10732	0.093
	U	238	**0.056**	ug/L	16.341	732	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.6		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			98.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.1		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.2		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1201873968
Sample Date/Time: Wednesday, July 15, 2009 18:30:13
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 882355|1|skj
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\1201873968.038

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**47.901**	**ug/L**	1.571	17139	0.051
	Be	9	**50.324**	**ug/L**	2.801	4678	0.014
	B	11	**99.571**	**ug/L**	4.922	7984	0.024
	Na	23	**1847.157**	**ug/L**	2.534	3029512	8.931
	Mg	24	**1927.064**	**ug/L**	20.548	2068673	6.178
	Al	27	**2031.058**	**ug/L**	1.253	2816665	8.400
	P	31	**1934.872**	**ug/L**	0.698	148078	0.435
	K	39	**1998.147**	**ug/L**	10.569	5503851	15.157
	Ca	43	**1932.314**	**ug/L**	3.485	10541	0.030
>	Sc	45		**ug/L**		335044	335044.389
	Ti	47	**47.417**	**ug/L**	2.386	11850	0.035
	V	51	**43.221**	**ug/L**	5.593	115092	0.340
	Cr	52	**48.297**	**ug/L**	1.426	116881	0.347
	Cr	53		**ug/L**		258838	0.344
	Mn	55	**48.324**	**ug/L**	1.975	197295	0.587
	Fe	57	**1951.471**	**ug/L**	1.097	158043	0.461
	Co	59	**47.863**	**ug/L**	0.633	136673	0.408
	Ni	60	**48.506**	**ug/L**	1.279	28910	0.086
	Cu	63		**ug/L**		66847	0.199
	Cu	65	**49.248**	**ug/L**	1.563	31936	0.095
	Zn	66	**48.585**	**ug/L**	1.166	18128	0.104
	Zn	67		**ug/L**		16972	0.060
	Zn	68		**ug/L**		14022	0.077
>	Ge	74		**ug/L**		171306	171306.363
	As	75	**48.842**	**ug/L**	2.604	21463	0.124
	Se	77		**ug/L**		15449	0.047
	Se	82	**47.704**	**ug/L**	3.894	1862	0.011
	Kr	83		**ug/L**		52	0.000
	Sr	88	**47.477**	**ug/L**	1.340	279479	3.172
	Y	89		**ug/L**		31	0.000
	Zr	90	**46.850**	**ug/L**	1.163	153101	1.734
	Mo	98	**48.934**	**ug/L**	1.690	66417	0.754
	Ag	107	**51.532**	**ug/L**	0.437	101107	1.148
	Cd	111	**47.975**	**ug/L**	1.816	22043	0.250
	Cd	114		**ug/L**		50849	0.577
>	In	115		**ug/L**		88069	88069.421
	Sn	120	**50.122**	**ug/L**	1.681	105418	1.194
	Sb	121	**52.318**	**ug/L**	1.910	92047	1.042
	Sb	123		**ug/L**		70065	0.793
	Ba	135		**ug/L**		22695	0.242
	Ba	137	**46.134**	**ug/L**	0.975	39475	0.421
	Ho	165		**ug/L**		18	0.000
>	Lu	175		**ug/L**		93706	93705.638
	Tl	205	**45.452**	**ug/L**	1.306	57324	0.611
	Pb	208	**48.326**	**ug/L**	1.639	333620	3.553
	Bi	209		**ug/L**		282894	3.018
	Th	232	**45.301**	**ug/L**	3.688	402051	4.267
	U	238	**49.408**	**ug/L**	2.191	461242	4.921

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.9		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			97.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.7		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.5		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 232742001
Sample Date/Time: Wednesday, July 15, 2009 18:36:24
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882355|1|skj
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\232742001.039

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.268**	ug/L	4.449	124	0.000
	Be	9	**-0.003**	ug/L	486.984	4	-0.000
	B	11	**29.930**	ug/L	1.835	2463	0.007
	Na	23	**199.101**	ug/L	5.725	359472	0.963
	Mg	24	**9.643**	ug/L	20.967	11004	0.031
	Al	27	**22.120**	ug/L	19.310	33373	0.091
	P	31	**1.910**	ug/L	164.868	2428	0.000
	K	39	**141.904**	ug/L	6.289	791357	1.076
	Ca	43	**72.486**	ug/L	10.970	731	0.001
>	Sc	45		ug/L		335478	335477.684
	Ti	47	**1.140**	ug/L	10.885	389	0.001
	V	51	**-3.089**	ug/L	80.307	-7047	-0.024
	Cr	52	**1.935**	ug/L	31.707	5404	0.014
	Cr	53		ug/L		255024	0.331
	Mn	55	**1.179**	ug/L	0.449	5558	0.014
	Fe	57	**23.503**	ug/L	6.063	5452	0.006
	Co	59	**0.009**	ug/L	26.481	126	0.000
	Ni	60	**0.122**	ug/L	11.647	114	0.000
	Cu	63		ug/L		1407	0.004
	Cu	65	**0.949**	ug/L	4.283	686	0.002
	Zn	66	**1.205**	ug/L	1.104	705	0.003
	Zn	67		ug/L		14341	0.046
	Zn	68		ug/L		1432	0.004
>	Ge	74		ug/L		168310	168309.837
	As	75	**2.229**	ug/L	28.000	1218	0.006
	Se	77		ug/L		15027	0.046
	Se	82	**-0.318**	ug/L	48.438	-1	-0.000
	Kr	83		ug/L		53	0.000
	Sr	88	**0.152**	ug/L	4.284	1045	0.010
	Y	89		ug/L		294	0.003
	Zr	90	**0.789**	ug/L	22.861	3023	0.029
	Mo	98	**0.130**	ug/L	25.196	234	0.002
	Ag	107	**0.025**	ug/L	9.066	90	0.001
	Cd	111	**0.015**	ug/L	168.560	18	0.000
	Cd	114		ug/L		28	0.000
>	In	115		ug/L		89577	89577.359
	Sn	120	**0.336**	ug/L	14.603	1025	0.008
	Sb	121	**0.238**	ug/L	17.338	726	0.005
	Sb	123		ug/L		599	0.004
	Ba	135		ug/L		176	0.002
	Ba	137	**0.312**	ug/L	15.744	293	0.003
	Ho	165		ug/L		29	0.000
>	Lu	175		ug/L		93447	93447.351
	Tl	205	**0.345**	ug/L	28.057	516	0.005
	Pb	208	**0.106**	ug/L	8.747	1440	0.008
	Bi	209		ug/L		162	0.001
	Th	232	**1.472**	ug/L	31.232	14968	0.139
	U	238	**0.023**	ug/L	7.198	422	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.0		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			96.2		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			96.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.2		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1201873969
Sample Date/Time: Wednesday, July 15, 2009 18:42:35
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 882355|1|skj
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\1201873969.040

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.265**	ug/L	5.172	125	0.000
	Be	9	**-0.010**	ug/L	319.131	4	-0.000
	B	11	**28.715**	ug/L	2.749	2410	0.007
	Na	23	**204.817**	ug/L	13.218	375586	0.990
	Mg	24	**15.251**	ug/L	20.350	17344	0.049
	Al	27	**25.503**	ug/L	25.213	38721	0.105
	P	31	**-0.888**	ug/L	171.936	2260	-0.000
	K	39	**152.982**	ug/L	6.824	833996	1.160
	Ca	43	**69.750**	ug/L	16.364	730	0.001
>	Sc	45		ug/L		341535	341534.662
	Ti	47	**1.061**	ug/L	6.704	377	0.001
	V	51	**-3.667**	ug/L	15.430	-8730	-0.029
	Cr	52	**3.971**	ug/L	9.736	10468	0.029
	Cr	53		ug/L		284804	0.405
	Mn	55	**1.189**	ug/L	3.115	5700	0.014
	Fe	57	**20.468**	ug/L	9.214	5306	0.005
	Co	59	**0.004**	ug/L	166.015	111	0.000
	Ni	60	**0.096**	ug/L	13.255	100	0.000
	Cu	63		ug/L		951	0.002
	Cu	65	**0.596**	ug/L	1.520	466	0.001
	Zn	66	**0.913**	ug/L	12.341	617	0.002
	Zn	67		ug/L		14881	0.046
	Zn	68		ug/L		1440	0.004
>	Ge	74		ug/L		173002	173001.965
	As	75	**0.416**	ug/L	145.446	466	0.001
	Se	77		ug/L		18356	0.063
	Se	82	**-0.596**	ug/L	25.292	-12	-0.000
	Kr	83		ug/L		59	0.000
	Sr	88	**0.156**	ug/L	4.377	1052	0.010
	Y	89		ug/L		288	0.003
	Zr	90	**0.369**	ug/L	17.577	1613	0.014
	Mo	98	**0.047**	ug/L	6.529	118	0.001
	Ag	107	**0.014**	ug/L	37.019	66	0.000
	Cd	111	**0.002**	ug/L	481.299	12	0.000
	Cd	114		ug/L		19	-0.000
>	In	115		ug/L		88458	88457.868
	Sn	120	**0.210**	ug/L	5.543	748	0.005
	Sb	121	**0.106**	ug/L	7.099	486	0.002
	Sb	123		ug/L		367	0.002
	Ba	135		ug/L		165	0.002
	Ba	137	**0.330**	ug/L	2.272	309	0.003
	Ho	165		ug/L		23	0.000
>	Lu	175		ug/L		93895	93895.258
	Tl	205	**0.099**	ug/L	12.432	209	0.001
	Pb	208	**0.063**	ug/L	4.534	1155	0.005
	Bi	209		ug/L		113	0.000
	Th	232	**0.486**	ug/L	25.471	6364	0.046
	U	238	**0.005**	ug/L	37.786	255	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			99.8		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			98.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			95.1		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.7		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1201873970
Sample Date/Time: Wednesday, July 15, 2009 18:48:47
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 882355|1|skj
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\1201873970.041

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.838**	ug/L	3.129	18809	0.056
	Be	9	**53.306**	ug/L	5.199	4930	0.015
	B	11	**133.570**	ug/L	2.959	10630	0.032
	Na	23	**2224.996**	ug/L	6.993	3623428	10.758
	Mg	24	**1755.844**	ug/L	6.457	1876506	5.629
	Al	27	**2159.965**	ug/L	2.903	2980187	8.933
	P	31	**2000.987**	ug/L	1.780	152295	0.450
	K	39	**2308.774**	ug/L	10.907	6271395	17.514
	Ca	43	**2055.144**	ug/L	2.173	11135	0.032
>	Sc	45		ug/L		333399	333399.214
	Ti	47	**46.572**	ug/L	3.087	11583	0.034
	V	51	**43.727**	ug/L	10.095	115735	0.344
	Cr	52	**54.856**	ug/L	1.101	132019	0.394
	Cr	53		ug/L		272172	0.388
	Mn	55	**51.277**	ug/L	1.564	208281	0.623
	Fe	57	**2080.997**	ug/L	1.354	167463	0.492
	Co	59	**50.794**	ug/L	1.028	144320	0.433
	Ni	60	**50.298**	ug/L	1.442	29825	0.089
	Cu	63		ug/L		69452	0.208
	Cu	65	**51.430**	ug/L	2.437	33182	0.099
	Zn	66	**51.240**	ug/L	2.457	18916	0.110
	Zn	67		ug/L		17008	0.061
	Zn	68		ug/L		14390	0.080
>	Ge	74		ug/L		169636	169635.596
	As	75	**38.839**	ug/L	1.035	16957	0.098
	Se	77		ug/L		16242	0.052
	Se	82	**9.014**	ug/L	2.802	357	0.002
	Kr	83		ug/L		48	0.000
	Sr	88	**48.992**	ug/L	1.998	286993	3.273
	Y	89		ug/L		287	0.003
	Zr	90	**49.368**	ug/L	3.501	160505	1.827
	Mo	98	**47.159**	ug/L	2.505	63695	0.726
	Ag	107	**49.783**	ug/L	1.671	97202	1.109
	Cd	111	**5.433**	ug/L	1.249	2494	0.028
	Cd	114		ug/L		5443	0.062
>	In	115		ug/L		87657	87657.207
	Sn	120	**48.878**	ug/L	4.280	102287	1.164
	Sb	121	**100.549**	ug/L	2.154	175783	2.002
	Sb	123		ug/L		133436	1.520
	Ba	135		ug/L		24173	0.253
	Ba	137	**48.358**	ug/L	1.994	42131	0.441
	Ho	165		ug/L		32	0.000
>	Lu	175		ug/L		95426	95426.003
	Tl	205	**19.439**	ug/L	5.995	25026	0.261
	Pb	208	**20.603**	ug/L	1.805	145252	1.515
	Bi	209		ug/L		134	0.001
	Th	232	**48.776**	ug/L	3.170	440628	4.594
	U	238	**52.355**	ug/L	1.480	497760	5.215

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.4		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			97.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			101.3		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1201873971
Sample Date/Time: Wednesday, July 15, 2009 18:55:00
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 882355|5|skj
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\1201873971.042

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.093**	ug/L	16.713	59	0.000
	Be	9	**0.003**	ug/L	512.703	5	0.000
	B	11	**7.275**	ug/L	3.710	644	0.002
	Na	23	**34.735**	ug/L	7.911	90285	0.168
	Mg	24	**2.281**	ug/L	74.784	3000	0.007
	Al	27	**7.780**	ug/L	72.973	13007	0.032
	P	31	**4.579**	ug/L	16.539	2554	0.001
	K	39	**26.924**	ug/L	11.082	483723	0.204
	Ca	43	**21.395**	ug/L	23.383	447	0.000
>	Sc	45		ug/L		325503	325502.715
	Ti	47	**0.285**	ug/L	13.319	172	0.000
	V	51	**-0.849**	ug/L	171.606	-1088	-0.007
	Cr	52	**1.864**	ug/L	3.580	5056	0.013
	Cr	53		ug/L		167745	0.087
	Mn	55	**0.276**	ug/L	2.787	1825	0.003
	Fe	57	**6.635**	ug/L	15.173	3994	0.002
	Co	59	**0.009**	ug/L	47.087	121	0.000
	Ni	60	**0.051**	ug/L	14.094	69	0.000
	Cu	63		ug/L		397	0.001
	Cu	65	**0.208**	ug/L	17.436	201	0.000
	Zn	66	**0.258**	ug/L	12.338	364	0.001
	Zn	67		ug/L		7676	0.006
	Zn	68		ug/L		881	0.001
>	Ge	74		ug/L		168302	168302.300
	As	75	**-0.014**	ug/L	19847.399	268	-0.000
	Se	77		ug/L		9764	0.015
	Se	82	**-0.395**	ug/L	124.145	-4	-0.000
	Kr	83		ug/L		58	0.000
	Sr	88	**0.081**	ug/L	1.668	613	0.005
	Y	89		ug/L		61	0.001
	Zr	90	**0.050**	ug/L	47.355	574	0.002
	Mo	98	**0.081**	ug/L	16.072	165	0.001
	Ag	107	**0.023**	ug/L	31.388	85	0.001
	Cd	111	**-0.010**	ug/L	96.183	7	-0.000
	Cd	114		ug/L		18	-0.000
>	In	115		ug/L		88867	88866.774
	Sn	120	**0.064**	ug/L	27.791	443	0.002
	Sb	121	**0.029**	ug/L	57.177	351	0.001
	Sb	123		ug/L		297	0.001
	Ba	135		ug/L		55	0.000
	Ba	137	**0.069**	ug/L	3.297	86	0.001
	Ho	165		ug/L		17	0.000
>	Lu	175		ug/L		93803	93803.240
	Tl	205	**3.285**	ug/L	13.010	4226	0.044
	Pb	208	**0.029**	ug/L	12.014	917	0.002
	Bi	209		ug/L		104	0.000
	Th	232	**0.702**	ug/L	26.488	8278	0.066
	U	238	**0.016**	ug/L	29.143	361	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			95.1		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			96.2		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			95.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.6		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 15, 2009 19:01:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 6.043

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.046**	ug/L	2.237	18682	0.055
	Be	9	**52.591**	ug/L	5.099	4904	0.015
	B	11	**103.617**	ug/L	2.951	8335	0.025
	Na	23	**5137.141**	ug/L	5.926	8382014	24.839
	Mg	24	**5157.649**	ug/L	4.940	5557323	16.535
	Al	27	**5661.051**	ug/L	2.699	7875624	23.413
	P	31	**5047.547**	ug/L	2.607	383831	1.135
	K	39	**5020.403**	ug/L	5.089	13237531	38.083
	Ca	43	**4996.569**	ug/L	2.282	26796	0.079
>	Sc	45		ug/L		336203	336202.765
	Ti	47	**50.460**	ug/L	2.758	12645	0.037
	V	51	**51.523**	ug/L	3.523	137372	0.405
	Cr	52	**53.269**	ug/L	3.224	129242	0.382
	Cr	53		ug/L		150221	0.018
	Mn	55	**49.518**	ug/L	3.428	202795	0.601
	Fe	57	**5118.483**	ug/L	3.530	409964	1.209
	Co	59	**52.290**	ug/L	4.357	149740	0.445
	Ni	60	**53.218**	ug/L	3.231	31809	0.095
	Cu	63		ug/L		68167	0.202
	Cu	65	**49.742**	ug/L	2.063	32365	0.096
	Zn	66	**51.603**	ug/L	1.589	19136	0.111
	Zn	67		ug/L		9563	0.017
	Zn	68		ug/L		14277	0.079
>	Ge	74		ug/L		170421	170421.316
	As	75	**48.658**	ug/L	1.303	21273	0.123
	Se	77		ug/L		8539	0.007
	Se	82	**50.754**	ug/L	0.669	1970	0.011
	Kr	83		ug/L		46	0.000
	Sr	88	**50.880**	ug/L	0.586	304845	3.399
	Y	89		ug/L		28	0.000
	Zr	90	**45.510**	ug/L	3.608	151386	1.684
	Mo	98	**48.455**	ug/L	1.569	66938	0.746
	Ag	107	**50.803**	ug/L	2.150	101437	1.131
	Cd	111	**52.852**	ug/L	2.324	24713	0.276
	Cd	114		ug/L		57084	0.637
>	In	115		ug/L		89643	89643.150
	Sn	120	**49.435**	ug/L	1.799	105828	1.177
	Sb	121	**47.173**	ug/L	4.920	84526	0.939
	Sb	123		ug/L		65306	0.726
	Ba	135		ug/L		24959	0.265
	Ba	137	**50.395**	ug/L	2.304	43279	0.460
	Ho	165		ug/L		29	0.000
>	Lu	175		ug/L		94052	94052.220
	Tl	205	**45.920**	ug/L	1.492	58127	0.617
	Pb	208	**52.031**	ug/L	0.685	360508	3.826
	Bi	209		ug/L		161	0.001
	Th	232	**49.179**	ug/L	4.340	437857	4.632
	U	238	**53.970**	ug/L	2.775	505690	5.376

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	104.092				
	Be	9	105.183				
	B	11	103.617				
	Na	23	102.743				
	Mg	24	103.153				
	Al	27	112.100				
	P	31	100.951				
	K	39	100.408				
	Ca	43	99.931				
>	Sc	45		98.3			
	Ti	47	100.921				
	V	51	103.046				
	Cr	52	106.539				
	Cr	53					
	Mn	55	99.036				
	Fe	57	102.370				
	Co	59	104.580				
	Ni	60	106.436				
	Cu	63					
	Cu	65	99.484				
	Zn	66	103.207				
	Zn	67					
	Zn	68					
>	Ge	74		97.4			
	As	75	97.315				
	Se	77					
	Se	82	101.509				
	Kr	83					
	Sr	88	101.759				
	Y	89					
	Zr	90	91.019				
	Mo	98	96.909				
	Ag	107	101.606				
	Cd	111	105.704				
	Cd	114					
>	In	115		96.4			
	Sn	120	98.869				
	Sb	121	94.346				
	Sb	123					
	Ba	135					
	Ba	137	100.790				
	Ho	165					
>	Lu	175		99.8			
	Tl	205	91.841				
	Pb	208	104.062				
	Bi	209					
	Th	232	98.358				
	U	238	107.941				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Al	27CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 15, 2009 19:07:25
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\090715\QC Std 7.044

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.029**	ug/L	35.310	37	0.000
	Be	9	**0.028**	ug/L	36.312	7	0.000
	B	11	**2.091**	ug/L	25.246	246	0.000
	Na	23	**-1.121**	ug/L	312.151	34041	-0.005
	Mg	24	**0.989**	ug/L	113.783	1667	0.003
	Al	27	**3.542**	ug/L	33.193	7335	0.015
	P	31	**4.668**	ug/L	50.634	2575	0.001
	K	39	**1.142**	ug/L	230.296	422494	0.009
	Ca	43	**7.188**	ug/L	74.982	377	0.000
>	Sc	45		ug/L		327331	327330.793
	Ti	47	**0.078**	ug/L	60.549	123	0.000
	V	51	**-1.046**	ug/L	182.209	-1626	-0.008
	Cr	52	**0.435**	ug/L	24.314	1727	0.003
	Cr	53		ug/L		147234	0.021
	Mn	55	**0.028**	ug/L	59.904	848	0.000
	Fe	57	**4.400**	ug/L	34.571	3843	0.001
	Co	59	**0.011**	ug/L	80.002	127	0.000
	Ni	60	**0.019**	ug/L	149.411	51	0.000
	Cu	63		ug/L		152	0.000
	Cu	65	**0.009**	ug/L	184.241	75	0.000
	Zn	66	**-0.000**	ug/L	30330.886	279	-0.000
	Zn	67		ug/L		6962	0.001
	Zn	68		ug/L		783	0.000
>	Ge	74		ug/L		173461	173460.832
	As	75	**0.303**	ug/L	213.977	416	0.001
	Se	77		ug/L		7656	0.001
	Se	82	**-0.016**	ug/L	157.496	11	-0.000
	Kr	83		ug/L		53	0.000
	Sr	88	**0.017**	ug/L	57.201	238	0.001
	Y	89		ug/L		15	-0.000
	Zr	90	**0.327**	ug/L	21.575	1505	0.012
	Mo	98	**0.095**	ug/L	18.924	186	0.001
	Ag	107	**0.027**	ug/L	34.259	95	0.001
	Cd	111	**0.026**	ug/L	75.698	23	0.000
	Cd	114		ug/L		35	0.000
>	In	115		ug/L		90118	90118.467
	Sn	120	**0.083**	ug/L	12.883	489	0.002
	Sb	121	**0.500**	ug/L	31.407	1199	0.010
	Sb	123		ug/L		930	0.008
	Ba	135		ug/L		30	0.000
	Ba	137	**0.014**	ug/L	61.949	39	0.000
	Ho	165		ug/L		18	0.000
>	Lu	175		ug/L		93218	93218.425
	Tl	205	**2.104**	ug/L	5.578	2719	0.028
	Pb	208	**0.043**	ug/L	21.341	1008	0.003
	Bi	209		ug/L		83	0.000
	Th	232	**1.019**	ug/L	23.363	11010	0.096
	U	238	**0.040**	ug/L	19.833	575	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	0.9999
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			95.7		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			99.2		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			96.9		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			98.9		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limits (+-/ PQL)
QC Std 7	Th	232CCB is out of limits (+-/ PQL)

QC Action

Analysis Begun

Logged In Analyst: Administrator
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: S10

Sample Information File: C:\data-AA\Administrator\Sample Information\071509W1.SIF
Batch ID:
Results Data Set: 071509W2
Results Library: C:\data-AA\Administrator\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib Blank
Date Collected: 7/15/2009 10:05:14
Analyst:
Data Type: Original

Replicate Data: Calib Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0000	-0.0001	0.0000	10:06:15	Yes
2		[0.00]	0.0001	-0.0009	0.0001	10:06:50	Yes
Mean:		[0.00]	0.0001				
SD:		0.00	0.0000				
%RSD:		0.00	20.36				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: S0.2
Date Collected: 7/15/2009 10:07:08
Analyst:
Data Type: Original

Replicate Data: S0.2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0026	0.0137	0.0026	10:08:09	Yes
2		[0.2]	0.0027	0.0149	0.0027	10:08:44	Yes
Mean:		[0.2]	0.0026				
SD:		0.0	0.0001				
%RSD:		0.0	2.61				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.01305 Intercept: 0.00000

Sequence No.: 3
Autosampler Location: 3
Sample ID: S0.5
Date Collected: 7/15/2009 10:09:03
Analyst:
Data Type: Original

Replicate Data: S0.5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0066	0.0363	0.0066	10:10:04	Yes
2		[0.5]	0.0064	0.0352	0.0064	10:10:38	Yes
Mean:		[0.5]	0.0065				
SD:		0.0	0.0001				
%RSD:		0.0	2.04				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999994 Slope: 0.01295 Intercept: 0.00001

Sequence No.: 4
Autosampler Location: 4
Sample ID: S2.0
Date Collected: 7/15/2009 10:10:58
Analyst:
Data Type: Original

Replicate Data: S2.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	[2.0]	0.0260	0.1430	0.0261	10:11:59	Yes
2	[2.0]	0.0261	0.1415	0.0261	10:12:34	Yes
Mean:	[2.0]	0.0260				
SD:	0.0	0.0000				
%RSD:	0.0	0.13				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999999 Slope: 0.01302 Intercept: -0.00001

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S5.0 **Date Collected: 7/15/2009 10:12:54**
Analyst: **Data Type: Original**

Replicate Data: S5.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0626	0.3377	0.0626	10:13:56	Yes
2		[5.0]	0.0612	0.3279	0.0613	10:14:31	Yes
Mean:		[5.0]	0.0619				
SD:		0.0	0.0010				
%RSD:		0.0	1.55				

Standard number 4 applied. [5.0]
Correlation Coef.: 0.999785 Slope: 0.01239 Intercept: 0.00033

Sequence No.: 6 **Autosampler Location: 6**
Sample ID: S10.0 **Date Collected: 7/15/2009 10:14:51**
Analyst: **Data Type: Original**

Replicate Data: S10.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1242	0.6749	0.1243	10:15:51	Yes
2		[10.0]	0.1229	0.6665	0.1230	10:16:26	Yes
Mean:		[10.0]	0.1236				
SD:		0.0	0.0009				
%RSD:		0.0	0.74				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999948 Slope: 0.01233 Intercept: 0.00040

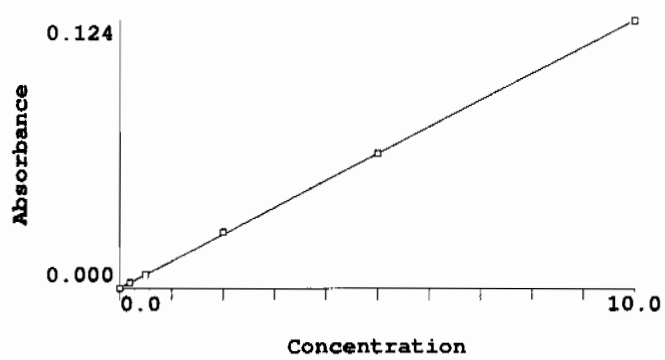

Calibration data for Hg 253.7 **Equation: Linear, Calculated Intercept**

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	-0.032	0.00	20.4
S0.2	0.0026	0.2	0.180	0.00	2.6
S0.5	0.0065	0.5	0.493	0.00	2.0
S2.0	0.0260	2.0	2.080	0.00	0.1
S5.0	0.0619	5.0	4.989	0.00	1.6
S10.0	0.1236	10.0	9.990	0.00	0.7

Correlation Coef.: 0.999948 Slope: 0.01233 Intercept: 0.00040

Sequence No.: 7
Sample ID: ICV
Analyst:

Autosampler Location: 9
Date Collected: 7/15/2009 10:16:45
Data Type: Original

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.079	5.079	0.0630	0.3426	0.0631	10:17:46	Yes
2	4.960	4.960	0.0616	0.3279	0.0616	10:18:21	Yes
Mean:	5.020	5.020	0.0623				
SD:	0.084	0.084	0.0010				
%RSD:	1.676	1.676	1.66				

QC value within limits for Hg 253.7 Recovery = 100.39%
All analyte(s) passed QC.

Sequence No.: 8
Sample ID: ICB
Analyst:

Autosampler Location: 10
Date Collected: 7/15/2009 10:18:41
Data Type: Original

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.021	-0.021	0.0001	0.0006	0.0002	10:19:42	Yes
2	-0.009	-0.009	0.0003	0.0024	0.0003	10:20:17	Yes
Mean:	-0.015	-0.015	0.0002				
SD:	0.008	0.008	0.0001				
%RSD:	56.64	56.64	48.57				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 9
Sample ID: CRDL
Analyst:

Autosampler Location: 11
Date Collected: 7/15/2009 10:20:36
Data Type: Original

Replicate Data: CRDL

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.192	0.192	0.0028	0.0151	0.0028	10:21:38	Yes
2	0.189	0.189	0.0027	0.0151	0.0028	10:22:13	Yes
Mean:	0.191	0.191	0.0027				
SD:	0.002	0.002	0.0000				
%RSD:	1.267	1.267	1.08				

QC value within limits for Hg 253.7 Recovery = 95.31%
All analyte(s) passed QC.

Sequence No.: 10
Sample ID: CCV
Analyst:

Autosampler Location: 7
Date Collected: 7/15/2009 10:22:33
Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.951	4.951	0.0614	0.3377	0.0615	10:23:33	Yes
2	4.782	4.782	0.0594	0.3236	0.0594	10:24:08	Yes
Mean:	4.867	4.867	0.0604				
SD:	0.120	0.120	0.0015				
%RSD:	2.468	2.468	2.45				

QC value within limits for Hg 253.7 Recovery = 97.33%
All analyte(s) passed QC.

Sequence No.: 11
Sample ID: CCB
Analyst:

Autosampler Location: 8
Date Collected: 7/15/2009 10:24:27
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.032	-0.032	-0.0000	-0.0000	0.0000	10:25:28	Yes
2	-0.029	-0.029	0.0000	0.0004	0.0001	10:26:02	Yes
Mean:	-0.031	-0.031	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	7.748	7.748	152.62				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12 **Autosampler Location: 12**
Sample ID: 1201873049|881922|1 **Date Collected: 7/15/2009 10:26:22**
Analyst: JXL **Data Type: Original**

Replicate Data: 1201873049|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.027	-0.027	0.0001	0.0005	0.0001	10:27:23	Yes
2	-0.023	-0.023	0.0001	0.0011	0.0002	10:27:59	Yes
Mean:	-0.025	-0.025	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	11.07	11.07	41.85				

Sequence No.: 13 **Autosampler Location: 13**
Sample ID: 1201873050|881922|1 **Date Collected: 7/15/2009 10:28:19**
Analyst: JXL **Data Type: Original**

Replicate Data: 1201873050|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.028	2.028	0.0254	0.1426	0.0254	10:29:21	Yes
2	1.964	1.964	0.0246	0.1342	0.0247	10:29:56	Yes
Mean:	1.996	1.996	0.0250				
SD:	0.045	0.045	0.0006				
%RSD:	2.270	2.270	2.23				

Sequence No.: 14 **Autosampler Location: 14**
Sample ID: 232435001|881922|1 **Date Collected: 7/15/2009 10:30:16**
Analyst: JXL **Data Type: Original**

Replicate Data: 232435001|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.030	-0.030	0.0000	0.0002	0.0001	10:31:17	Yes
2	-0.028	-0.028	0.0000	0.0005	0.0001	10:31:51	Yes
Mean:	-0.029	-0.029	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	3.264	3.264	31.25				

Sequence No.: 15 **Autosampler Location: 15**
Sample ID: 1201873051|881922|1 **Date Collected: 7/15/2009 10:32:10**
Analyst: JXL **Data Type: Original**

Replicate Data: 1201873051|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	-0.0010	0.0001	10:33:11	Yes
2	-0.032	-0.032	0.0000	0.0002	0.0001	10:33:46	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.002	0.002	0.0000				

1	1.880	1.880	0.0236	0.1288	0.0236	10:42:43	Yes
2	1.850	1.850	0.0232	0.1273	0.0233	10:43:18	Yes
Mean:	1.865	1.865	0.0234				
SD:	0.021	0.021	0.0003				
%RSD:	1.143	1.143	1.12				

Sequence No.: 21 **Autosampler Location: 21**
Sample ID: 232755001|884332|1 **Date Collected: 7/15/2009 10:43:38**
Analyst: JXL **Data Type: Original**

Replicate Data: 232755001|884332|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.030	-0.030	0.0000	0.0002	0.0001	10:44:39	Yes
2	0.004	0.004	0.0004	-0.0037	0.0005	10:45:14	Yes
Mean:	-0.013	-0.013	0.0002				
SD:	0.024	0.024	0.0003				
%RSD:	181.7	181.7	127.93				

Sequence No.: 22 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/15/2009 10:45:33**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.553	4.553	0.0565	0.3129	0.0566	10:46:34	Yes
2	4.722	4.722	0.0586	0.3211	0.0587	10:47:08	Yes
Mean:	4.638	4.638	0.0576				
SD:	0.119	0.119	0.0015				
%RSD:	2.576	2.576	2.56				

QC value within limits for Hg 253.7 Recovery = 92.75%
All analyte(s) passed QC.

Sequence No.: 23 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/15/2009 10:47:27**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.038	-0.038	-0.0001	-0.0011	-0.0000	10:48:28	Yes
2	-0.025	-0.025	0.0001	-0.0000	0.0001	10:49:03	Yes
Mean:	-0.031	-0.031	0.0000				
SD:	0.009	0.009	0.0001				
%RSD:	29.64	29.64	985.28				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 24 **Autosampler Location: 22**
Sample ID: 232759001|884332|1 **Date Collected: 7/15/2009 10:49:22**
Analyst: JXL **Data Type: Original**

Replicate Data: 232759001|884332|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.031	-0.031	0.0000	0.0002	0.0001	10:50:24	Yes
2	-0.030	-0.030	0.0000	0.0001	0.0001	10:50:59	Yes
Mean:	-0.031	-0.031	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	1.624	1.624	38.65				

Analysis Begun

Logged In Analyst: Administrator
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: S10

Sample Information File: C:\data-AA\Administrator\Sample Information\071509W1.SIF
Batch ID:
Results Data Set: 071509W2
Results Library: C:\data-AA\Administrator\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 7
Sample ID: CCV
Date Collected: 7/15/2009 11:05:10
Analyst:
Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.051	5.051	0.0627	0.3254	0.0627	11:06:10	Yes
2	5.026	5.026	0.0624	0.3226	0.0624	11:06:45	Yes
Mean:	5.038	5.038	0.0625				
SD:	0.018	0.018	0.0002				
%RSD:	0.353	0.353	0.35				

QC value within limits for Hg 253.7 Recovery = 100.77%
All analyte(s) passed QC.

Sequence No.: 2
Autosampler Location: 8
Sample ID: CCB
Date Collected: 7/15/2009 11:07:04
Analyst:
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0003	0.0001	11:08:05	Yes
2	-0.027	-0.027	0.0001	0.0006	0.0001	11:08:40	Yes
Mean:	-0.028	-0.028	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	4.570	4.570	30.86				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 3
Autosampler Location: 16
Sample ID: 1201873052|881922|1
Date Collected: 7/15/2009 11:08:59
Analyst: JXL
Data Type: Original

Replicate Data: 1201873052|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.024	2.024	0.0253	0.1320	0.0254	11:09:59	Yes
2	2.029	2.029	0.0254	0.1320	0.0255	11:10:34	Yes
Mean:	2.026	2.026	0.0254				
SD:	0.003	0.003	0.0000				
%RSD:	0.170	0.170	0.17				

Sequence No.: 4
Autosampler Location: 26
Sample ID: 1201878686|884316|1
Date Collected: 7/15/2009 11:10:53
Analyst: JXL
Data Type: Original

Replicate Data: 1201878686|884316|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0005	0.0001	11:11:54	Yes

2	-0.028	-0.028	0.0000	0.0006	0.0001	11:12:29	Yes
Mean:	-0.029	-0.029	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.403	0.403	3.25				

Sequence No.: 5 **Autosampler Location: 27**
Sample ID: 1201878687|884316|1 **Date Collected: 7/15/2009 11:12:48**
Analyst: JXL **Data Type: Original**

Replicate Data: 1201878687|884316|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.023	2.023	0.0253	0.1317	0.0254	11:13:49	Yes
2	2.031	2.031	0.0254	0.1335	0.0255	11:14:24	Yes
Mean:	2.027	2.027	0.0254				
SD:	0.006	0.006	0.0001				
%RSD:	0.279	0.279	0.27				

Sequence No.: 6 **Autosampler Location: 28**
Sample ID: 232742001|884316|1 **Date Collected: 7/15/2009 11:14:43**
Analyst: JXL **Data Type: Original**

Replicate Data: 232742001|884316|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0004	0.0001	11:15:44	Yes
2	-0.030	-0.030	0.0000	0.0003	0.0001	11:16:19	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	2.793	2.793	35.81				

Sequence No.: 7 **Autosampler Location: 29**
Sample ID: 1201878688|884316|1 **Date Collected: 7/15/2009 11:16:38**
Analyst: JXL **Data Type: Original**

Replicate Data: 1201878688|884316|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.028	-0.028	0.0000	0.0006	0.0001	11:17:38	Yes
2	-0.031	-0.031	0.0000	0.0002	0.0001	11:18:13	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	5.421	5.421	64.60				

Sequence No.: 8 **Autosampler Location: 30**
Sample ID: 1201878689|884316|1 **Date Collected: 7/15/2009 11:18:32**
Analyst: JXL **Data Type: Original**

Replicate Data: 1201878689|884316|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.015	2.015	0.0252	0.1330	0.0253	11:19:33	Yes
2	1.935	1.935	0.0243	0.1269	0.0243	11:20:08	Yes
Mean:	1.975	1.975	0.0247				
SD:	0.057	0.057	0.0007				
%RSD:	2.875	2.875	2.83				

Sequence No.: 9 **Autosampler Location: 31**
Sample ID: 1201878690|884316|5 **Date Collected: 7/15/2009 11:20:27**
Analyst: JXL **Data Type: Original**

Replicate Data: 1201878690|884316|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.027	-0.027	0.0001	0.0006	0.0001	11:21:28	Yes
2	-0.027	-0.027	0.0001	0.0004	0.0001	11:22:03	Yes
Mean:	-0.027	-0.027	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	2.275	2.275	12.05				

==========

Sequence No.: 10 Autosampler Location: 32
Sample ID: 1201878691|884319|1 Date Collected: 7/15/2009 11:22:22
Analyst: JXL Data Type: Original

Replicate Data: 1201878691|884319|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.031	-0.031	0.0000	0.0002	0.0001	11:23:23	Yes
2	-0.030	-0.030	0.0000	0.0004	0.0001	11:23:57	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	2.467	2.467	47.22				

==========

Sequence No.: 11 Autosampler Location: 33
Sample ID: 1201878692|884319|1 Date Collected: 7/15/2009 11:24:17
Analyst: JXL Data Type: Original

Replicate Data: 1201878692|884319|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.081	2.081	0.0260	0.1355	0.0261	11:25:18	Yes
2	2.046	2.046	0.0256	0.1339	0.0257	11:25:53	Yes
Mean:	2.063	2.063	0.0258				
SD:	0.025	0.025	0.0003				
%RSD:	1.188	1.188	1.17				

==========

Sequence No.: 12 Autosampler Location: 34
Sample ID: 233077002|884319|1 Date Collected: 7/15/2009 11:26:12
Analyst: JXL Data Type: Original

Replicate Data: 233077002|884319|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.031	-0.031	0.0000	0.0003	0.0001	11:27:13	Yes
2	-0.030	-0.030	0.0000	0.0004	0.0001	11:27:48	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	1.251	1.251	23.83				

==========

Sequence No.: 13 Autosampler Location: 7
Sample ID: CCV Date Collected: 7/15/2009 11:28:08
Analyst: Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.896	4.896	0.0608	0.3198	0.0608	11:29:09	Yes
2	4.943	4.943	0.0613	0.3209	0.0614	11:29:43	Yes
Mean:	4.920	4.920	0.0611				
SD:	0.034	0.034	0.0004				
%RSD:	0.682	0.682	0.68				

QC value within limits for Hg 253.7 Recovery = 98.39%
All analyte(s) passed QC.

Sequence No.: 14
Sample ID: CCB
Analyst:

Autosampler Location: 8
Date Collected: 7/15/2009 11:30:02
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.033	-0.033	-0.0000	-0.0002	0.0000	11:31:03	Yes
2	-0.028	-0.028	0.0000	0.0006	0.0001	11:31:38	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	9.597	9.597	184.59				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 15
Sample ID: 1201878693|884319|1
Analyst: JXL

Autosampler Location: 35
Date Collected: 7/15/2009 11:31:57
Data Type: Original

Replicate Data: 1201878693|884319|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.013	-0.013	0.0002	0.0009	0.0003	11:32:59	Yes
2	-0.036	-0.036	-0.0001	-0.0010	-0.0000	11:33:34	Yes
Mean:	-0.025	-0.025	0.0001				
SD:	0.016	0.016	0.0002				
%RSD:	65.16	65.16	227.58				

Sequence No.: 16
Sample ID: 1201878694|884319|1
Analyst: JXL

Autosampler Location: 36
Date Collected: 7/15/2009 11:33:54
Data Type: Original

Replicate Data: 1201878694|884319|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.884	1.884	0.0236	0.1261	0.0237	11:34:56	Yes
2	1.889	1.889	0.0237	0.1263	0.0237	11:35:30	Yes
Mean:	1.887	1.887	0.0237				
SD:	0.004	0.004	0.0000				
%RSD:	0.199	0.199	0.20				

Sequence No.: 17
Sample ID: 1201878695|884319|5
Analyst: JXL

Autosampler Location: 37
Date Collected: 7/15/2009 11:35:50
Data Type: Original

Replicate Data: 1201878695|884319|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.006	-0.006	0.0003	-0.0048	0.0004	11:36:52	Yes
2	-0.032	-0.032	0.0000	-0.0000	0.0001	11:37:27	Yes
Mean:	-0.019	-0.019	0.0002				
SD:	0.018	0.018	0.0002				
%RSD:	98.52	98.52	138.27				

Sequence No.: 18
Sample ID: 1201878828|884400|1
Analyst: JXL

Autosampler Location: 38
Date Collected: 7/15/2009 11:37:47
Data Type: Original

Replicate Data: 1201878828|884400|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

Miscellaneous

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 882336

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873930	UI090622-01	.25	mL
LCS	1201873930	UI090622-06	.25	mL
MS	1201873932	UI090622-01	.25	mL
MS	1201873932	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873929		SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER
LCS	1201873930		SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER
SAMPLE	232742001		SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER
DUP	1201873931	232742001	SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER
MS	1201873932	232742001	SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER
SDILT	1201873933	232742001	SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 882354

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873968	UI090622-A	.5	mL
LCS	1201873968	UI090622-B	.5	mL
MS	1201873970	UI090612-A	.5	mL
MS	1201873970	UI090612-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873967		SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER
LCS	1201873968		SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER
SAMPLE	232742001		SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER
DUP	1201873969	232742001	SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER
MS	1201873970	232742001	SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER
SDILT	1201873971	232742001	SW846 3005A	07-JUL-2009 07:35	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst:	TXB3	Verified by:_____	Type	Sample Id	Lot. Id	Spike Amount	Spike Units
Batch:	884315		LCS	1201878687	WHG090714-13	.2	mL
Lab SOP:	GL-MA-E-010 REV# 22		MS	1201878689	WHG090714-13	.2	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201878686		SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
LCS	1201878687		SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
SAMPLE	232742001		SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
DUP	1201878688	232742001	SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
MS	1201878689	232742001	SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
SDILT	1201878690	232742001	SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143839	1 mL	Sulfuric Acid, Concentrated
1136798-1	.5 mL	NITRIC ACID
1125381-C	1.5 mL	5% Potassium Persulfate
1144332-C	3 mL	5% KMnO4 solution
1144356-C	1 mL	Hg reducing agent
WHG090714-06	500 uL	Mercury Working 2nd Source 5.0/ICV
WHG090714-01	20 uL	Mercury Working 1st Source CAL 0.2/CRA
WHG090714-02	50 uL	Mercury Working 1st Source CAL 0.5
WHG090714-05	1 mL	Mercury Working 1st Source CAL 10.0
WHG090714-03	200 uL	Mercury Working 1st Source CAL 2.0
WHG090714-04	500 uL	Mercury Working 1st Source CAL 5.0/CCV

Comments Digestion Start Date: 14-JUL-09 12:10
Digestion End Date: 14-JUL-09 14:10

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 712370
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
16-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3005/6020	Liquid	LANL
Batch ID:	**Sample Numbers:**		
882355	See Below		

Potentially affected work order(s)(SDG): 232742(09-2525)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201873970MS	The matrix spike recovery failed outside of the control limits for Tl due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Samantha Jacobs 16-JUL-09

Data Validator/Group Leader:

Rose Jenkins 21-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Standard Logbook

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Standard Logbook

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A

Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si

Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.18 **Opened:** 08-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 09-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090612-A **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE liquid Spike Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	4 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	.5 mg/L
Calcium	200 mg/L	Chromium	5 mg/L

Analyte	Concentration	Analyte	Concentration
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	2 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	1 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	5 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090612-B **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE Liquid Spike Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L

Analyte	Concentration	Analyte	Concentration
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL

Analyte	Concentration	Analyte	Concentration
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090622-A **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090622-B **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Standard Logbook

Serial ID:	UI090701-09	**Opened:**	01-JUL-09	**Amount :**	250 mL
Name:	ICP-MS CRDL Master #1	**Received:**	01-JUL-09	**Catalog Number :**	160044-09-02
Type:	Source Material	**Expires:**	01-JUL-10	**Lot Number :**	1016477
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% IN 2% HNO3
Supplier:	02SI				
Description:	ICPMS CRDL Master Soln #1				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID:	UI090701-10	**Opened:**	01-JUL-09	**Amount :**	250 mL
Name:	ICP-MS CRDL Master #2	**Received:**	01-JUL-09	**Catalog Number :**	160044-08-02
Type:	Source Material	**Expires:**	01-JUL-10	**Lot Number :**	1016476
Employee:	Paul Boyd			**Solvent :**	+/- 0.5% IN 2% HNO3
Supplier:	02SI				
Description:	ICPMS CRDL Soln #2				
Comments:	None				

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID:	UI090701-40	**Opened:**	01-JUL-09	**Amount :**	500 mL
Name:	TRACE ICP Stock PQL Sta	**Received:**	30-JUN-09	**Catalog Number :**	160543-01-03
Type:	Source Material	**Expires:**	01-JUL-10	**Lot Number :**	1016475
Employee:	Helen Camello			**Solvent :**	+/-0.5%in2%HNO3+TrHF
Supplier:	02si				
Description:	TRACE ICP Stock PQL Standard				
Comments:	None				

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090714-01 **Opened:** 14-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 14-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 15-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: IHG090714-02 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 14-JUL-09
Type: Intermediate **Expires:** 15-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090714-01 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.2CRA **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

Serial ID: WHG090714-02 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.5 **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG090714-03 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL2.0 **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Standard Logbook

Serial ID: WHG090714-04 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL5.0CCV **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090714-05 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL10.0 **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG090714-06 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORK5.0ICV **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090714-13 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGLIQLCSMSSPIKE **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury working intermediate standard for LCS/MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: WI090708-42 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090708-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090708-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090708-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Serial ID: WI090708-43 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Standard Logbook

Serial ID: WI090708-44 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1150990
Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Serial ID: WI090708-45 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1150990
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090708-46 **Opened:** 08-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1150990
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090708-47 **Opened:** 08-JUL-09 **Solvent :** 3%HCL &1%HNO3-1150990
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090715-04 **Opened:** 15-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 15-JUL-09 **Solvent :** 2%HNO3/1%HCl-1153776
Type: Working **Expires:** 16-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090715-04A **Opened:** 15-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS Cal Standard 10 **Received:** 15-JUL-09
Type: Working **Expires:** 16-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090715-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090715-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090715-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090715-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090715-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090715-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090715-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090715-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090715-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090715-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090715-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090715-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090715-05 **Opened:** 15-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICV **Received:** 15-JUL-09
Type: Working **Expires:** 16-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS090715-06 **Opened:** 15-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS CRDL **Received:** 15-JUL-09
Type: Working **Expires:** 16-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS090715-07 **Opened:** 15-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 15-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Type: Working **Expires:** 16-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090715-08 **Opened:** 15-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICSAB **Received:** 15-JUL-09
Type: Working **Expires:** 16-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090715-70 **Opened:** 15-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS LINEAR RANGE ST **Received:** 15-JUL-09
Type: Working **Expires:** 16-JUL-09
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1116812 **Opened:** 29-APR-09 **Lot Number :** E45475
Name: B-K2S2O8S-MER **Received:** 29-APR-09
Type: Reagent/Solvent **Expires:** 29-APR-10
Employee: Tara Griffin
Supplier: J.T BAKER
Description: Potassium Persulfate Concentrate.
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Standard Logbook

Serial ID: 1125381-C **Opened:** 21-MAY-09
Name: B-K2S2O8-MER **Received:** 21-MAY-09
Type: Reagent/Solvent **Expires:** 21-NOV-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% Potassium Persulfate
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1116812	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1143839 **Opened:** 29-JUN-09 **Lot Number :** G45010
Name: B-H2SO4-MER **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 29-JUN-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Sulfuric Acid, Concentrated
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1150990 **Opened:** 06-JUL-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 06-JUL-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 13-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Louise Smith
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1153776 **Opened:** 13-JUL-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 13-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2525-1

Sample Analysis

Sample ID	**Client ID**
232744001	CAMO-09-9956
232744002	CAMO-09-9950
232744003	CAMO-09-9952
232744004	CAMO-09-9958
232744005	CAMO-09-9957
232744006	CAMO-09-9951
232744007	CAMO-09-10031
232744008	CAMO-09-9990
1201873939	Method Blank (MB) **ICP**
1201873940	Laboratory Control Sample (LCS)
1201873943	232744001(CAMO-09-9956L) Serial Dilution (SD)
1201873941	232744001(CAMO-09-9956D) Sample Duplicate (DUP)
1201873942	232744001(CAMO-09-9956S) Matrix Spike (MS)
1201874078	232744001(CAMO-09-9956SD) Matrix Spike Duplicate (MSD)
1201873979	Method Blank (MB) **ICP-MS**
1201873980	Laboratory Control Sample (LCS)
1201873983	232744001(CAMO-09-9956L) Serial Dilution (SD)
1201873981	232744001(CAMO-09-9956D) Sample Duplicate (DUP)
1201873982	232744001(CAMO-09-9956S) Matrix Spike (MS)
1201873984	232744001(CAMO-09-9956SD) Matrix Spike Duplicate (MSD)

1201875311	Method Blank (MB) **CVAA**
1201875312	Laboratory Control Sample (LCS)
1201875322	232851001(CAMO-09-7145L) Serial Dilution (SD)
1201875313	232851001(CAMO-09-7145D) Sample Duplicate (DUP)
1201875314	232851001(CAMO-09-7145S) Matrix Spike (MS)
1201875323	232851001(CAMO-09-7145SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	882342, 882360 and 882932
Prep Batch :	882341, 882359 and 882926
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial

lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232744001 (CAMO-09-9956)-ICP and ICP-MS and 232851001 (CAMO-09-7145)-CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of calcium, magnesium and potassium, as indicated by the "N" qualifiers.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of calcium, magnesium, potassium and selenium, as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCRs were generated for this SDG: 711777 and 711791. A copy of each NCR is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: KristenParson **Date:** 7/20/09

Sample Data Summary

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744001 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9956 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 86

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7800000	ug/Kg		7790	22900	22900	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-36-0	Antimony	1150	ug/Kg	U	378	1150	1150	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-38-2	Arsenic	1830	ug/kg		233	1160	1160	2	MS	PRB	07/14/09 12:12	090714-3	882360
7440-39-3	Barium	126000	ug/Kg		115	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-41-7	Beryllium	848	ug/kg		23.3	116	116	2	MS	PRB	07/14/09 03:25	090713-2	882360
7440-43-9	Cadmium	573	ug/Kg	U	115	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-70-2	Calcium	1820000	ug/Kg	N	9160	28600	28600	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-47-3	Chromium	8870	ug/Kg		172	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-48-4	Cobalt	4370	ug/Kg		172	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-50-8	Copper	5700	ug/Kg		344	1150	1150	1	P	HSC	07/08/09 17:53	070809A-1	882342
7439-89-6	Iron	11800000	ug/Kg		9160	28600	28600	1	P	HSC	07/08/09 17:53	070809A-1	882342
7439-92-1	Lead	12600	ug/Kg		286	1150	1150	1	P	HSC	07/08/09 17:53	070809A-1	882342
7439-95-4	Magnesium	1600000	ug/Kg	N	9740	34400	34400	1	P	HSC	07/08/09 17:53	070809A-1	882342
7439-96-5	Manganese	317000	ug/Kg		229	1150	1150	1	P	HSC	07/08/09 17:53	070809A-1	882342
7439-97-6	Mercury	13.5	ug/kg		4.45	13.1	13.1	1	AV	JXL1	07/16/09 10:18	071609S1-4	882932
7440-02-0	Nickel	7160	ug/kg		116	465	465	2	MS	PRB	07/14/09 12:12	090714-3	882360
7440-09-7	Potassium	1320000	ug/Kg	N	7330	28600	28600	1	P	HSC	07/08/09 17:53	070809A-1	882342
7782-49-2	Selenium	1160	ug/kg	UN	582	1160	1160	2	MS	PRB	07/14/09 12:12	090714-3	882360
7440-22-4	Silver	633	ug/Kg		115	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-23-5	Sodium	104000	ug/Kg		8020	28600	28600	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-28-0	Thallium	216	ug/kg	J	69.8	233	233	2	MS	PRB	07/14/09 12:12	090714-3	882360
7440-62-2	Vanadium	21300	ug/Kg		115	573	573	1	P	HSC	07/08/09 17:53	070809A-1	882342
7440-66-6	Zinc	31100	ug/Kg		378	1150	1150	1	P	HSC	07/08/09 17:53	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.508	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.5	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.534	g	30	mL	07/15/09	TXB3

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744002 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9950 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	4050000	ug/Kg		7280	21400	21400	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-36-0	Antimony	1070	ug/Kg	U	353	1070	1070	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-38-2	Arsenic	1270	ug/kg		215	1080	1080	2	MS	PRB	07/14/09 12:38	090714-3	882360
7440-39-3	Barium	69500	ug/Kg		107	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-41-7	Beryllium	627	ug/kg		21.5	108	108	2	MS	PRB	07/14/09 12:38	090714-3	882360
7440-43-9	Cadmium	535	ug/Kg	U	107	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-70-2	Calcium	4790000	ug/Kg	N	8570	26800	26800	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-47-3	Chromium	20000	ug/Kg		161	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-48-4	Cobalt	2110	ug/Kg		161	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-50-8	Copper	4380	ug/Kg		321	1070	1070	1	P	HSC	07/08/09 18:40	070809A-1	882342
7439-89-6	Iron	9320000	ug/Kg		8570	26800	26800	1	P	HSC	07/08/09 18:40	070809A-1	882342
7439-92-1	Lead	8550	ug/Kg		268	1070	1070	1	P	HSC	07/08/09 18:40	070809A-1	882342
7439-95-4	Magnesium	924000	ug/Kg	N	9100	32100	32100	1	P	HSC	07/08/09 18:40	070809A-1	882342
7439-96-5	Manganese	253000	ug/Kg		214	1070	1070	1	P	HSC	07/08/09 18:40	070809A-1	882342
7439-97-6	Mercury	87.2	ug/kg		4.24	12.5	12.5	1	AV	JXL1	07/16/09 10:24	071609S1-4	882932
7440-02-0	Nickel	4970	ug/kg		108	431	431	2	MS	PRB	07/14/09 12:38	090714-3	882360
7440-09-7	Potassium	697000	ug/Kg	N	6850	26800	26800	1	P	HSC	07/08/09 18:40	070809A-1	882342
7782-49-2	Selenium	1080	ug/kg	UN	539	1080	1080	2	MS	PRB	07/14/09 12:38	090714-3	882360
7440-22-4	Silver	529	ug/Kg	J	107	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-23-5	Sodium	90500	ug/Kg		7500	26800	26800	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-28-0	Thallium	127	ug/kg	J	64.6	215	215	2	MS	PRB	07/14/09 12:38	090714-3	882360
7440-62-2	Vanadium	12200	ug/Kg		107	535	535	1	P	HSC	07/08/09 18:40	070809A-1	882342
7440-66-6	Zinc	36700	ug/Kg		353	1070	1070	1	P	HSC	07/08/09 18:40	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.522	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.519	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.538	g	30	mL	07/15/09	TXB3

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744003 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9952 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1740000	ug/Kg		7500	22100	22100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-36-0	Antimony	1100	ug/Kg	U	364	1100	1100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-38-2	Arsenic	597	ug/kg	J	220	1100	1100	2	MS	PRB	07/14/09 12:41	090714-3	882360
7440-39-3	Barium	36500	ug/Kg		110	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-41-7	Beryllium	609	ug/kg		22	110	110	2	MS	PRB	07/14/09 12:41	090714-3	882360
7440-43-9	Cadmium	552	ug/Kg	U	110	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-70-2	Calcium	1160000	ug/Kg	N	8830	27600	27600	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-47-3	Chromium	103000	ug/Kg		165	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-48-4	Cobalt	1410	ug/Kg		165	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-50-8	Copper	3230	ug/Kg		331	1100	1100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7439-89-6	Iron	8240000	ug/Kg		8830	27600	27600	1	P	HSC	07/08/09 18:47	070809A-1	882342
7439-92-1	Lead	7470	ug/Kg		276	1100	1100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7439-95-4	Magnesium	432000	ug/Kg	N	9380	33100	33100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7439-96-5	Manganese	341000	ug/Kg		221	1100	1100	1	P	HSC	07/08/09 18:47	070809A-1	882342
7439-97-6	Mercury	12.5	ug/kg	U	4.27	12.5	12.5	1	AV	JXL1	07/16/09 10:26	071609S1-4	882932
7440-02-0	Nickel	4010	ug/kg		110	440	440	2	MS	PRB	07/14/09 12:41	090714-3	882360
7440-09-7	Potassium	407000	ug/Kg	N	7060	27600	27600	1	P	HSC	07/08/09 18:47	070809A-1	882342
7782-49-2	Selenium	1100	ug/kg	UN	549	1100	1100	2	MS	PRB	07/14/09 12:41	090714-3	882360
7440-22-4	Silver	388	ug/Kg	J	110	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-23-5	Sodium	107000	ug/Kg		7720	27600	27600	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-28-0	Thallium	220	ug/kg	U	65.9	220	220	2	MS	PRB	07/14/09 12:41	090714-3	882360
7440-62-2	Vanadium	4710	ug/Kg		110	552	552	1	P	HSC	07/08/09 18:47	070809A-1	882342
7440-66-6	Zinc	36100	ug/Kg		364	1100	1100	1	P	HSC	07/08/09 18:47	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.506	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.508	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.534	g	30	mL	07/15/09	TXB3

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744004 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9958 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2460000	ug/Kg		7580	22300	22300	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-36-0	Antimony	1110	ug/Kg	U	368	1110	1110	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-38-2	Arsenic	1620	ug/kg		217	1080	1080	2	MS	PRB	07/14/09 12:45	090714-3	882360
7440-39-3	Barium	39500	ug/Kg		111	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-41-7	Beryllium	932	ug/kg		21.7	108	108	2	MS	PRB	07/14/09 12:45	090714-3	882360
7440-43-9	Cadmium	557	ug/Kg	U	111	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-70-2	Calcium	1030000	ug/Kg	N	8920	27900	27900	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-47-3	Chromium	30800	ug/Kg		167	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-48-4	Cobalt	1330	ug/Kg		167	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-50-8	Copper	3370	ug/Kg		334	1110	1110	1	P	HSC	07/08/09 18:54	070809A-1	882342
7439-89-6	Iron	9180000	ug/Kg		8920	27900	27900	1	P	HSC	07/08/09 18:54	070809A-1	882342
7439-92-1	Lead	6760	ug/Kg		279	1110	1110	1	P	HSC	07/08/09 18:54	070809A-1	882342
7439-95-4	Magnesium	548000	ug/Kg	N	9470	33400	33400	1	P	HSC	07/08/09 18:54	070809A-1	882342
7439-96-5	Manganese	267000	ug/Kg		223	1110	1110	1	P	HSC	07/08/09 18:54	070809A-1	882342
7439-97-6	Mercury	13.3	ug/kg	U	4.52	13.3	13.3	1	AV	JXL1	07/16/09 10:28	071609S1-4	882932
7440-02-0	Nickel	4400	ug/kg		108	434	434	2	MS	PRB	07/14/09 12:45	090714-3	882360
7440-09-7	Potassium	466000	ug/Kg	N	7130	27900	27900	1	P	HSC	07/08/09 18:54	070809A-1	882342
7782-49-2	Selenium	1080	ug/kg	UN	542	1080	1080	2	MS	PRB	07/14/09 12:45	090714-3	882360
7440-22-4	Silver	416	ug/Kg	J	111	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-23-5	Sodium	72600	ug/Kg		7800	27900	27900	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-28-0	Thallium	71.8	ug/kg	J	65	217	217	2	MS	PRB	07/14/09 12:45	090714-3	882360
7440-62-2	Vanadium	8110	ug/Kg		111	557	557	1	P	HSC	07/08/09 18:54	070809A-1	882342
7440-66-6	Zinc	49100	ug/Kg		368	1110	1110	1	P	HSC	07/08/09 18:54	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.5	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.514	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.503	g	30	mL	07/15/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744005 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9957 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1700000	ug/Kg		7400	21800	21800	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-36-0	Antimony	1090	ug/Kg	U	359	1090	1090	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-38-2	Arsenic	1040	ug/kg	J	219	1100	1100	2	MS	PRB	07/14/09 12:49	090714-3	882360
7440-39-3	Barium	30100	ug/Kg		109	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-41-7	Beryllium	639	ug/kg		21.9	110	110	2	MS	PRB	07/14/09 12:49	090714-3	882360
7440-43-9	Cadmium	544	ug/Kg	U	109	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-70-2	Calcium	602000	ug/Kg	N	8710	27200	27200	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-47-3	Chromium	25000	ug/Kg		163	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-48-4	Cobalt	1100	ug/Kg		163	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-50-8	Copper	2370	ug/Kg		327	1090	1090	1	P	HSC	07/08/09 19:01	070809A-1	882342
7439-89-6	Iron	7950000	ug/Kg		8710	27200	27200	1	P	HSC	07/08/09 19:01	070809A-1	882342
7439-92-1	Lead	6200	ug/Kg		272	1090	1090	1	P	HSC	07/08/09 19:01	070809A-1	882342
7439-95-4	Magnesium	358000	ug/Kg	N	9250	32700	32700	1	P	HSC	07/08/09 19:01	070809A-1	882342
7439-96-5	Manganese	278000	ug/Kg		218	1090	1090	1	P	HSC	07/08/09 19:01	070809A-1	882342
7439-97-6	Mercury	13	ug/kg	U	4.41	13	13	1	AV	JXL1	07/16/09 10:30	071609S1-4	882932
7440-02-0	Nickel	2180	ug/kg		110	438	438	2	MS	PRB	07/14/09 12:49	090714-3	882360
7440-09-7	Potassium	317000	ug/Kg	N	6970	27200	27200	1	P	HSC	07/08/09 19:01	070809A-1	882342
7782-49-2	Selenium	1100	ug/kg	UN	548	1100	1100	2	MS	PRB	07/14/09 12:49	090714-3	882360
7440-22-4	Silver	374	ug/Kg	J	109	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-23-5	Sodium	63100	ug/Kg		7620	27200	27200	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-28-0	Thallium	219	ug/kg	U	65.7	219	219	2	MS	PRB	07/14/09 12:49	090714-3	882360
7440-62-2	Vanadium	6590	ug/Kg		109	544	544	1	P	HSC	07/08/09 19:01	070809A-1	882342
7440-66-6	Zinc	37700	ug/Kg		359	1090	1090	1	P	HSC	07/08/09 19:01	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.511	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.508	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.515	g	30	mL	07/15/09	TXB3

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744006 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9951 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2120000	ug/Kg		7570	22300	22300	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-36-0	Antimony	1110	ug/Kg	U	367	1110	1110	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-38-2	Arsenic	920	ug/kg	J	220	1100	1100	2	MS	PRB	07/14/09 12:52	090714-3	882360
7440-39-3	Barium	31700	ug/Kg		111	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-41-7	Beryllium	797	ug/kg		22	110	110	2	MS	PRB	07/14/09 12:52	090714-3	882360
7440-43-9	Cadmium	557	ug/Kg	U	111	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-70-2	Calcium	1660000	ug/Kg	N	8910	27800	27800	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-47-3	Chromium	27000	ug/Kg		167	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-48-4	Cobalt	960	ug/Kg		167	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-50-8	Copper	3190	ug/Kg		334	1110	1110	1	P	HSC	07/08/09 19:08	070809A-1	882342
7439-89-6	Iron	7580000	ug/Kg		8910	27800	27800	1	P	HSC	07/08/09 19:08	070809A-1	882342
7439-92-1	Lead	6890	ug/Kg		278	1110	1110	1	P	HSC	07/08/09 19:08	070809A-1	882342
7439-95-4	Magnesium	499000	ug/Kg	N	9460	33400	33400	1	P	HSC	07/08/09 19:08	070809A-1	882342
7439-96-5	Manganese	261000	ug/Kg		223	1110	1110	1	P	HSC	07/08/09 19:08	070809A-1	882342
7439-97-6	Mercury	9.34	ug/kg	J	4.17	12.3	12.3	1	AV	JXL1	07/16/09 10:32	071609S1-4	882932
7440-02-0	Nickel	3410	ug/kg		110	440	440	2	MS	PRB	07/14/09 12:52	090714-3	882360
7440-09-7	Potassium	460000	ug/Kg	N	7120	27800	27800	1	P	HSC	07/08/09 19:08	070809A-1	882342
7782-49-2	Selenium	1100	ug/kg	UN	550	1100	1100	2	MS	PRB	07/14/09 12:52	090714-3	882360
7440-22-4	Silver	420	ug/Kg	J	111	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-23-5	Sodium	90400	ug/Kg		7790	27800	27800	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-28-0	Thallium	220	ug/kg	U	66	220	220	2	MS	PRB	07/14/09 12:52	090714-3	882360
7440-62-2	Vanadium	5270	ug/Kg		111	557	557	1	P	HSC	07/08/09 19:08	070809A-1	882342
7440-66-6	Zinc	34100	ug/Kg		367	1110	1110	1	P	HSC	07/08/09 19:08	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.5	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.506	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.545	g	30	mL	07/15/09	TXB3

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744007 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-10031 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3800000	ug/Kg		7410	21800	21800	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-36-0	Antimony	1090	ug/Kg	U	360	1090	1090	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-38-2	Arsenic	1190	ug/kg		218	1090	1090	2	MS	PRB	07/14/09 12:56	090714-3	882360
7440-39-3	Barium	69400	ug/Kg		109	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-41-7	Beryllium	566	ug/kg		21.8	109	109	2	MS	PRB	07/14/09 12:56	090714-3	882360
7440-43-9	Cadmium	545	ug/Kg	U	109	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-70-2	Calcium	5310000	ug/Kg	N	8720	27300	27300	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-47-3	Chromium	9840	ug/Kg		164	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-48-4	Cobalt	2490	ug/Kg		164	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-50-8	Copper	3940	ug/Kg		327	1090	1090	1	P	HSC	07/08/09 19:16	070809A-1	882342
7439-89-6	Iron	8780000	ug/Kg		8720	27300	27300	1	P	HSC	07/08/09 19:16	070809A-1	882342
7439-92-1	Lead	17500	ug/Kg		273	1090	1090	1	P	HSC	07/08/09 19:16	070809A-1	882342
7439-95-4	Magnesium	905000	ug/Kg	N	9270	32700	32700	1	P	HSC	07/08/09 19:16	070809A-1	882342
7439-96-5	Manganese	266000	ug/Kg		218	1090	1090	1	P	HSC	07/08/09 19:16	070809A-1	882342
7439-97-6	Mercury	73.3	ug/kg		3.84	11.3	11.3	1	AV	JXL1	07/16/09 10:34	071609S1-4	882932
7440-02-0	Nickel	4620	ug/kg		109	437	437	2	MS	PRB	07/14/09 12:56	090714-3	882360
7440-09-7	Potassium	671000	ug/Kg	N	6980	27300	27300	1	P	HSC	07/08/09 19:16	070809A-1	882342
7782-49-2	Selenium	1090	ug/kg	UN	546	1090	1090	2	MS	PRB	07/14/09 12:56	090714-3	882360
7440-22-4	Silver	430	ug/Kg	J	109	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-23-5	Sodium	79700	ug/Kg		7630	27300	27300	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-28-0	Thallium	105	ug/kg	J	65.5	218	218	2	MS	PRB	07/14/09 12:56	090714-3	882360
7440-62-2	Vanadium	11600	ug/Kg		109	545	545	1	P	HSC	07/08/09 19:16	070809A-1	882342
7440-66-6	Zinc	34600	ug/Kg		360	1090	1090	1	P	HSC	07/08/09 19:16	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.517	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.516	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.599	g	30	mL	07/15/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2525-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232744008 **BASIS:** Dry Weight **DATE COLLECTED** 29-JUN-09

CLIENT ID: CAMO-09-9990 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 80

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9610000	ug/Kg		8410	24700	24700	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-36-0	Antimony	1240	ug/Kg	U	408	1240	1240	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-38-2	Arsenic	1790	ug/kg		241	1210	1210	2	MS	PRB	07/14/09 13:00	090714-3	882360
7440-39-3	Barium	114000	ug/Kg		124	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-41-7	Beryllium	1000	ug/kg		24.1	121	121	2	MS	PRB	07/14/09 13:00	090714-3	882360
7440-43-9	Cadmium	618	ug/Kg	U	124	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-70-2	Calcium	1990000	ug/Kg	N	9890	30900	30900	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-47-3	Chromium	10600	ug/Kg		186	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-48-4	Cobalt	4170	ug/Kg		186	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-50-8	Copper	7820	ug/Kg		371	1240	1240	1	P	HSC	07/08/09 19:22	070809A-1	882342
7439-89-6	Iron	12500000	ug/Kg		9890	30900	30900	1	P	HSC	07/08/09 19:22	070809A-1	882342
7439-92-1	Lead	15100	ug/Kg		309	1240	1240	1	P	HSC	07/08/09 19:22	070809A-1	882342
7439-95-4	Magnesium	1280000	ug/Kg	N	10500	37100	37100	1	P	HSC	07/08/09 19:22	070809A-1	882342
7439-96-5	Manganese	374000	ug/Kg		247	1240	1240	1	P	HSC	07/08/09 19:22	070809A-1	882342
7439-97-6	Mercury	18.4	ug/kg		4.51	13.3	13.3	1	AV	JXL1	07/16/09 10:36	071609S1-4	882932
7440-02-0	Nickel	6340	ug/kg		121	482	482	2	MS	PRB	07/14/09 13:00	090714-3	882360
7440-09-7	Potassium	1290000	ug/Kg	N	7920	30900	30900	1	P	HSC	07/08/09 19:22	070809A-1	882342
7782-49-2	Selenium	1210	ug/kg	UN	603	1210	1210	2	MS	PRB	07/14/09 13:00	090714-3	882360
7440-22-4	Silver	659	ug/Kg		124	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-23-5	Sodium	248000	ug/Kg		8660	30900	30900	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-28-0	Thallium	143	ug/kg	J	72.3	241	241	2	MS	PRB	07/14/09 13:00	090714-3	882360
7440-62-2	Vanadium	17200	ug/Kg		124	618	618	1	P	HSC	07/08/09 19:22	070809A-1	882342
7440-66-6	Zinc	33300	ug/Kg		408	1240	1240	1	P	HSC	07/08/09 19:22	070809A-1	882342

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882342	882341	SW846 3050B	0.503	g	50	mL	07/07/09	CXS3
882360	882359	SW846 3050B	0.516	g	50	mL	07/07/09	CXS3
882932	882926	SW846 7471A Prep	0.563	g	30	mL	07/15/09	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Antimony	535	ug/L	500	ug/L	107.1	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Barium	539	ug/L	500	ug/L	107.8	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Cadmium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Chromium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Cobalt	476	ug/L	500	ug/L	95.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Copper	527	ug/L	500	ug/L	105.3	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Iron	5150	ug/L	5000	ug/L	103	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Lead	512	ug/L	500	ug/L	102.3	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Magnesium	5270	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Manganese	521	ug/L	500	ug/L	104.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Potassium	2510	ug/L	2500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Silver	256	ug/L	250	ug/L	102.4	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Sodium	2550	ug/L	2500	ug/L	101.9	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Beryllium	51	ug/L	50	ug/L	102	90.0 - 110.0	MS	13-JUL-09 23:46	090713-2
	Arsenic	49.4	ug/L	50	ug/L	98.9	90.0 - 110.0	MS	14-JUL-09 10:43	090714-3
	Beryllium	50.8	ug/L	50	ug/L	101.6	90.0 - 110.0	MS	14-JUL-09 10:43	090714-3
	Nickel	53.1	ug/L	50	ug/L	106.1	90.0 - 110.0	MS	14-JUL-09 10:43	090714-3
	Selenium	49.4	ug/L	50	ug/L	98.8	90.0 - 110.0	MS	14-JUL-09 10:43	090714-3
	Thallium	50.2	ug/L	50	ug/L	100.4	90.0 - 110.0	MS	14-JUL-09 10:43	090714-3
	Mercury	5.1	ug/L	5	ug/L	102.1	90.0 - 110.0	AV	16-JUL-09 09:50	071609S1-4
CCV01										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Antimony	506	ug/L	500	ug/L	101.3	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Barium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Cadmium	496	ug/L	500	ug/L	99.3	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Chromium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Lead	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Manganese	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Potassium	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Sodium	9980	ug/L	10000	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Beryllium	49.5	ug/L	50	ug/L	98.9	90.0 – 110.0	MS	14-JUL-09 00:15	090713-2
	Arsenic	49.8	ug/L	50	ug/L	99.7	90.0 – 110.0	MS	14-JUL-09 11:01	090714-3
	Beryllium	50.3	ug/L	50	ug/L	100.5	90.0 – 110.0	MS	14-JUL-09 11:01	090714-3
	Nickel	51.8	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	14-JUL-09 11:01	090714-3
	Selenium	50.2	ug/L	50	ug/L	100.5	90.0 – 110.0	MS	14-JUL-09 11:01	090714-3
	Thallium	51	ug/L	50	ug/L	102.1	90.0 – 110.0	MS	14-JUL-09 11:01	090714-3
	Mercury	5.23	ug/L	5	ug/L	104.7	80.0 – 120.0	AV	16-JUL-09 09:56	071609S1-4
CCV02										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Antimony	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Cadmium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Chromium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Cobalt	485	ug/L	500	ug/L	97	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Copper	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Lead	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Magnesium	5200	ug/L	5000	ug/L	103.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Manganese	495	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Silver	499	ug/L	500	ug/L	99.9	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Sodium	9940	ug/L	10000	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 11:24	070809A-1
	Beryllium	49.6	ug/L	50	ug/L	99.1	90.0 - 110.0	MS	14-JUL-09 00:32	090713-2
	Arsenic	50.3	ug/L	50	ug/L	100.5	90.0 - 110.0	MS	14-JUL-09 11:35	090714-3
	Beryllium	48.1	ug/L	50	ug/L	96.2	90.0 - 110.0	MS	14-JUL-09 11:35	090714-3
	Nickel	52.9	ug/L	50	ug/L	105.7	90.0 - 110.0	MS	14-JUL-09 11:35	090714-3
	Selenium	49.9	ug/L	50	ug/L	99.8	90.0 - 110.0	MS	14-JUL-09 11:35	090714-3
	Thallium	50.8	ug/L	50	ug/L	101.5	90.0 - 110.0	MS	14-JUL-09 11:35	090714-3
	Mercury	5.25	ug/L	5	ug/L	105.1	80.0 - 120.0	AV	16-JUL-09 10:20	071609S1-4
CCV03										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Antimony	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Cobalt	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Iron	5000	ug/L	5000	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Lead	505	ug/L	500	ug/L	101	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Potassium	5150	ug/L	5000	ug/L	103.1	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Sodium	10300	ug/L	10000	ug/L	102.9	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	08-JUL-09 12:37	070809A-1
	Beryllium	51.1	ug/L	50	ug/L	102.2	90.0 - 110.0	MS	14-JUL-09 01:35	090713-2
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 - 110.0	MS	14-JUL-09 11:57	090714-3
	Beryllium	44.5	ug/L	50	ug/L	89	90.0 - 110.0	MS	14-JUL-09 11:57	090714-3
	Nickel	48.9	ug/L	50	ug/L	97.8	90.0 - 110.0	MS	14-JUL-09 11:57	090714-3
	Selenium	49.8	ug/L	50	ug/L	99.7	90.0 - 110.0	MS	14-JUL-09 11:57	090714-3
	Thallium	50.5	ug/L	50	ug/L	101.1	90.0 - 110.0	MS	14-JUL-09 11:57	090714-3
	Mercury	5.09	ug/L	5	ug/L	101.8	80.0 - 120.0	AV	16-JUL-09 10:44	071609S1-4
CCV04										
	Aluminum	4910	ug/L	5000	ug/L	98.2	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Antimony	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Iron	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Lead	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Magnesium	5130	ug/L	5000	ug/L	102.7	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Manganese	496	ug/L	500	ug/L	99.3	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Potassium	5170	ug/L	5000	ug/L	103.5	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Sodium	10700	ug/L	10000	ug/L	106.5	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	08-JUL-09 13:30	070809A-1
	Beryllium	48	ug/L	50	ug/L	96.1	90.0 - 110.0	MS	14-JUL-09 02:27	090713-2
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 - 110.0	MS	14-JUL-09 12:30	090714-3
	Beryllium	47.9	ug/L	50	ug/L	95.9	90.0 - 110.0	MS	14-JUL-09 12:30	090714-3

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Nickel	51.7	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	14-JUL-09 12:30	090714-3
	Selenium	48.2	ug/L	50	ug/L	96.4	90.0 – 110.0	MS	14-JUL-09 12:30	090714-3
	Thallium	51.2	ug/L	50	ug/L	102.4	90.0 – 110.0	MS	14-JUL-09 12:30	090714-3
	Mercury	5.11	ug/L	5	ug/L	102.2	80.0 – 120.0	AV	16-JUL-09 11:08	071609S1-4
CCV05										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Antimony	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Calcium	4900	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Iron	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Lead	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Beryllium	49.5	ug/L	50	ug/L	98.9	90.0 – 110.0	MS	14-JUL-09 03:02	090713-2
	Arsenic	49.3	ug/L	50	ug/L	98.5	90.0 – 110.0	MS	14-JUL-09 13:03	090714-3
	Beryllium	47.9	ug/L	50	ug/L	95.8	90.0 – 110.0	MS	14-JUL-09 13:03	090714-3
	Nickel	51.8	ug/L	50	ug/L	103.7	90.0 – 110.0	MS	14-JUL-09 13:03	090714-3
	Selenium	48.4	ug/L	50	ug/L	96.8	90.0 – 110.0	MS	14-JUL-09 13:03	090714-3
	Thallium	49.9	ug/L	50	ug/L	99.8	90.0 – 110.0	MS	14-JUL-09 13:03	090714-3
CCV06										
	Aluminum	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Antimony	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Silver	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Beryllium	49.4	ug/L	50	ug/L	98.7	90.0 - 110.0	MS	14-JUL-09 03:54	090713-2
CCV07										
	Aluminum	4870	ug/L	5000	ug/L	97.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Antimony	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.6	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.7	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Lead	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Manganese	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5110	ug/L	5000	ug/L	102.1	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	08-JUL-09 15:41	070809A-1
CCV08										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Antimony	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.1	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Iron	4940	ug/L	5000	ug/L	98.7	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Silver	503	ug/L	500	ug/L	100.6	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Sodium	9800	ug/L	10000	ug/L	98	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.7	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	08-JUL-09 16:43	070809A-1
CCV09										
	Aluminum	4880	ug/L	5000	ug/L	97.5	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Antimony	507	ug/L	500	ug/L	101.4	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 17:25	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	488	ug/L	500	ug/L	97.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Iron	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Lead	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Magnesium	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Manganese	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Silver	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Sodium	9570	ug/L	10000	ug/L	95.8	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Zinc	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
CCV10										
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Antimony	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Barium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Cadmium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Calcium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Chromium	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Cobalt	482	ug/L	500	ug/L	96.4	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Copper	492	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Lead	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Magnesium	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Manganese	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Potassium	5090	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Sodium	10000	ug/L	10000	ug/L	100	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Vanadium	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV11										
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Antimony	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Barium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Calcium	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Iron	4870	ug/L	5000	ug/L	97.4	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Lead	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Magnesium	5040	ug/L	5000	ug/L	100.8	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Potassium	5090	ug/L	5000	ug/L	101.8	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Silver	503	ug/L	500	ug/L	100.5	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Sodium	9640	ug/L	10000	ug/L	96.5	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1
	Zinc	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	08-JUL-09 19:29	070809A-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS3,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Beryllium	.566	ug/L	.5	ug/L	113.2	70.0 - 130.0	MS	13-JUL-09 23:58	090713-2
	Arsenic	5.46	ug/L	5	ug/L	109.1	70.0 - 130.0	MS	14-JUL-09 10:50	090714-3
	Beryllium	.509	ug/L	.5	ug/L	101.8	70.0 - 130.0	MS	14-JUL-09 10:50	090714-3
	Nickel	2.08	ug/L	2	ug/L	104.2	70.0 - 130.0	MS	14-JUL-09 10:50	090714-3
	Thallium	1.04	ug/L	1	ug/L	103.7	70.0 - 130.0	MS	14-JUL-09 10:50	090714-3
	Selenium	5.23	ug/L	5	ug/L	104.6	70.0 - 130.0	MS	14-JUL-09 10:50	090714-3
	Mercury	.16	ug/L	.2	ug/L	80.2	70.0 - 130.0	AV	16-JUL-09 09:54	071609S1-4
PQL01										
	Aluminum	200	ug/L	200	ug/L	99.8	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Antimony	11.1	ug/L	10	ug/L	111.2	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Barium	5.03	ug/L	5	ug/L	100.6	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Cadmium	4.87	ug/L	5	ug/L	97.4	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Calcium	198	ug/L	200	ug/L	99	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Chromium	4.84	ug/L	5	ug/L	96.8	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Cobalt	5	ug/L	5	ug/L	100	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Copper	9.77	ug/L	10	ug/L	97.7	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Iron	102	ug/L	100	ug/L	102.1	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Lead	11.3	ug/L	10	ug/L	113.1	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Magnesium	326	ug/L	300	ug/L	108.5	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Manganese	10.4	ug/L	10	ug/L	104.4	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Potassium	172	ug/L	150	ug/L	114.5	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Silver	5.23	ug/L	5	ug/L	104.6	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Sodium	281	ug/L	300	ug/L	93.6	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Vanadium	5.27	ug/L	5	ug/L	105.3	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1
	Zinc	9.6	ug/L	10	ug/L	96	70.0 - 130.0	P	08-JUL-09 10:15	070809A-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2525–1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 10:08	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 10:08	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 10:08	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 10:08	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 10:08	070809A–1
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	13–JUL–09 23:52	090713–2
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	14–JUL–09 10:47	090714–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	14–JUL–09 10:47	090714–3
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	14–JUL–09 10:47	090714–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	14–JUL–09 10:47	090714–3
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	14–JUL–09 10:47	090714–3
	Mercury	–0.094	+/–.2	J	0.068	0.2	SOL	AV	16–JUL–09 09:52	071609S1–4
CCB01										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 11:10	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 11:10	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 11:10	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 11:10	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 11:10	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 11:10	070809A–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:10	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Potassium	146.16	+/-250	J	64.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 00:21	090713-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 11:05	090714-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 11:05	090714-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 11:05	090714-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 11:05	090714-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 11:05	090714-3
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	16-JUL-09 09:58	071609S1-4
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 11:31	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:31	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525-1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 00:38	090713-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 11:38	090714-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 11:38	090714-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 11:38	090714-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 11:38	090714-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 11:38	090714-3
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	16-JUL-09 10:22	071609S1-4
CCB03										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 12:44	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 12:44	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Potassium	65.21	+/-250	J	64.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 12:44	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 12:44	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 12:44	070809A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 01:41	090713-2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525-1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 12:01	090714-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 12:01	090714-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 12:01	090714-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 12:01	090714-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 12:01	090714-3
	Mercury	-0.076	+/-.2	J	0.068	0.2	SOL	AV	16-JUL-09 10:46	071609S1-4
CCB04										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 13:37	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 13:37	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 13:37	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 13:37	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 13:37	070809A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 02:33	090713-2
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 12:34	090714-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 12:34	090714-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 12:34	090714-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 12:34	090714-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 12:34	090714-3
	Mercury	-0.101	+/-.2	J	0.068	0.2	SOL	AV	16-JUL-09 11:10	071609S1-4

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2525–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB05										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 13:57	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 13:57	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	14–JUL–09 03:08	090713–2
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	14–JUL–09 13:07	090714–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	14–JUL–09 13:07	090714–3
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	14–JUL–09 13:07	090714–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	14–JUL–09 13:07	090714–3
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	14–JUL–09 13:07	090714–3
CCB06										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 14:53	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 14:53	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 14:53	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 14:53	070809A–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 14:53	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 14:53	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 14:53	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 14:53	070809A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 04:00	090713-2
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 15:48	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 15:48	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 15:48	070809A-1
CCB08										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 16:50	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2525–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 16:50	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 16:50	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 16:50	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 16:50	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 16:50	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 16:50	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 16:50	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 16:50	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 16:50	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 16:50	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 16:50	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 16:50	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 16:50	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 16:50	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 16:50	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 16:50	070809A–1
CCB09										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 17:32	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 17:32	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 17:32	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 17:32	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 17:32	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 17:32	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 17:32	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 17:32	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 17:32	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 17:32	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 17:32	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 17:32	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 17:32	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 17:32	070809A–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525-1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 17:32	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 17:32	070809A-1
CCB10										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 18:33	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 18:33	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 18:33	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 18:33	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 18:33	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 18:33	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 18:33	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 18:33	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 18:33	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Sodium	-76.61	+/-250	J	70.0	250	SOL	P	08-JUL-09 18:33	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 18:33	070809A-1
CCB11										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 19:36	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 19:36	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 19:36	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 19:36	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 19:36	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2525-1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 19:36	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 19:36	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 19:36	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 19:36	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 19:36	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 19:36	070809A-1

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 09-2525-1

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201873939								
	Aluminum	6760	ug/Kg	+/-19880.716	U	P	6760	19900
	Antimony	328	ug/Kg	+/-994.036	U	P	328	994
	Barium	99.4	ug/Kg	+/-497.018	U	P	99.4	497
	Cadmium	99.4	ug/Kg	+/-497.018	U	P	99.4	497
	Calcium	7950	ug/Kg	+/-24850.895	U	P	7950	24900
	Chromium	149	ug/Kg	+/-497.018	U	P	149	497
	Cobalt	149	ug/Kg	+/-497.018	U	P	149	497
	Copper	298	ug/Kg	+/-994.036	U	P	298	994
	Iron	7950	ug/Kg	+/-24850.895	U	P	7950	24900
	Lead	249	ug/Kg	+/-994.036	U	P	249	994
	Magnesium	8450	ug/Kg	+/-29821.074	U	P	8450	29800
	Manganese	199	ug/Kg	+/-994.036	U	P	199	994
	Potassium	6360	ug/Kg	+/-24850.895	U	P	6360	24900
	Silver	99.4	ug/Kg	+/-497.018	U	P	99.4	497
	Sodium	6960	ug/Kg	+/-24850.895	U	P	6960	24900
	Vanadium	99.4	ug/Kg	+/-497.018	U	P	99.4	497
	Zinc	328	ug/Kg	+/-994.036	U	P	328	994
1201873979								
	Arsenic	195	ug/kg	+/-976.563	U	MS	195	977
	Beryllium	19.5	ug/kg	+/-97.656	U	MS	19.5	97.7
	Nickel	97.7	ug/kg	+/-390.625	U	MS	97.7	391
	Selenium	488	ug/kg	+/-976.563	U	MS	488	977
	Thallium	58.6	ug/kg	+/-195.313	U	MS	58.6	195
1201875311								
	Mercury	-5.8	ug/kg	+/-11.45	J	AV	3.89	11.5

METALS
-4-
Interference Check Sample

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Antimony	0.994	ug/L					08-JUL-09 10:22	070809A-1
	Barium	1.28	ug/L					08-JUL-09 10:22	070809A-1
	Cadmium	-1.01	ug/L					08-JUL-09 10:22	070809A-1
	Calcium	470000	ug/L	500000	ug/L	93.9	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Chromium	0.679	ug/L					08-JUL-09 10:22	070809A-1
	Cobalt	-1.77	ug/L					08-JUL-09 10:22	070809A-1
	Copper	4.61	ug/L					08-JUL-09 10:22	070809A-1
	Iron	185000	ug/L	200000	ug/L	92.3	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Lead	-1.9	ug/L					08-JUL-09 10:22	070809A-1
	Magnesium	493000	ug/L	500000	ug/L	98.6	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Manganese	11.9	ug/L					08-JUL-09 10:22	070809A-1
	Potassium	0.032	ug/L					08-JUL-09 10:22	070809A-1
	Silver	1.27	ug/L					08-JUL-09 10:22	070809A-1
	Sodium	-23.6	ug/L					08-JUL-09 10:22	070809A-1
	Vanadium	-2.21	ug/L					08-JUL-09 10:22	070809A-1
	Zinc	-8.84	ug/L					08-JUL-09 10:22	070809A-1
ICSAB01									
	Aluminum	513000	ug/L	500000	ug/L	103	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Antimony	568	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Barium	500	ug/L	500	ug/L	100	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cadmium	462	ug/L	500	ug/L	92.4	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Calcium	471000	ug/L	500000	ug/L	94.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Chromium	483	ug/L	500	ug/L	96.5	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cobalt	456	ug/L	500	ug/L	91.3	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Copper	571	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Iron	184000	ug/L	200000	ug/L	91.9	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Lead	475	ug/L	500	ug/L	95	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Magnesium	494000	ug/L	500000	ug/L	98.8	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
-4-
Interference Check Sample

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	494	ug/L	500	ug/L	98.7	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Potassium	5890	ug/L	5000	ug/L	118	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Silver	284	ug/L	250	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Sodium	5600	ug/L	5000	ug/L	112	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Vanadium	523	ug/L	500	ug/L	105	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
-4-
Interference Check Sample

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.037	ug/L					14-JUL-09 00:03	090713-2
ICSAB01									
	Beryllium	20.5	ug/L	20	ug/L	102	80.0 - 120.0	14-JUL-09 00:09	090713-2

METALS
-4-
Interference Check Sample

SDG No: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	0.033	ug/L					14-JUL-09 10:54	090714-3
	Beryllium	0.093	ug/L					14-JUL-09 10:54	090714-3
	Nickel	2.52	ug/L					14-JUL-09 10:54	090714-3
	Selenium	-0.627	ug/L					14-JUL-09 10:54	090714-3
	Thallium	0.056	ug/L					14-JUL-09 10:54	090714-3
ICSAB01									
	Arsenic	21.3	ug/L	20	ug/L	107	80.0 - 120.0	14-JUL-09 10:58	090714-3
	Beryllium	20.4	ug/L	20	ug/L	102	80.0 - 120.0	14-JUL-09 10:58	090714-3
	Nickel	21.8	ug/L	22.7	ug/L	95.8	80.0 - 120.0	14-JUL-09 10:58	090714-3
	Selenium	21.1	ug/L	20	ug/L	106	80.0 - 120.0	14-JUL-09 10:58	090714-3
	Thallium	19.4	ug/L	20	ug/L	97.2	80.0 - 120.0	14-JUL-09 10:58	090714-3

METALS
–5a–

Matrix Spike Summary

SDG NO. 09–2525–1 **Client ID** CAMO–09–9956S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 86

Sample ID: 232744001 **Spike ID:** 1201873942

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		15000000		7800000		574000	1250	N/A	P
Antimony	ug/Kg	75–125	52900		378	U	57400	91.9		P
Barium	ug/Kg	75–125	190000		126000		57400	113		P
Cadmium	ug/Kg	75–125	54100		115	U	57400	94.4		P
Calcium	ug/Kg	75–125	2590000		1820000		574000	135	N	P
Chromium	ug/Kg	75–125	69300		8870		57400	105		P
Cobalt	ug/Kg	75–125	57800		4370		57400	93.2		P
Copper	ug/Kg	75–125	66000		5700		57400	105		P
Iron	ug/Kg		13900000		11800000		574000	372	N/A	P
Lead	ug/Kg	75–125	67900		12600		57400	96.5		P
Magnesium	ug/Kg	75–125	2560000		1600000		574000	168	N	P
Manganese	ug/Kg		385000		317000		57400	118	N/A	P
Potassium	ug/Kg	75–125	2220000		1320000		574000	157	N	P
Silver	ug/Kg	75–125	57000		633		57400	98.3		P
Sodium	ug/Kg	75–125	693000		104000		574000	103		P
Vanadium	ug/Kg	75–125	78600		21300		57400	99.8		P
Zinc	ug/Kg	75–125	91700		31100		57400	106		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2525-1 **Client ID:** CAMO-09-9956S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 86

Sample ID: 232744001 **Spike ID:** 1201873982

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	10300		1830		8920	95.1		MS
Beryllium	ug/kg	75-125	6270		848		5570	97.2		MS
Nickel	ug/kg	75-125	12700		7160		5570	100		MS
Selenium	ug/kg	75-125	1890		582	U	2230	82.4		MS
Thallium	ug/kg	75-125	10600		216	J	11100	93.2		MS

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2525-1 **Client ID** CAMO-09-9956SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 86

Sample ID: 232744001 **Spike ID:** 1201873984

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75-125	10100		1830		9060	90.8		MS
Beryllium	ug/kg	75-125	6250		848		5660	95.5		MS
Nickel	ug/kg	75-125	12200		7160		5660	89.6		MS
Selenium	ug/kg	75-125	1620		582	U	2260	69.3	N	MS
Thallium	ug/kg	75-125	10600		216	J	11300	91.6		MS

METALS
–5a–
Matrix Spike Duplicate Summary

SDG NO. 09–2525–1 **Client ID** CAMO–09–9956SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 86

Sample ID: 232744001 **Spike ID:** 1201874078

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		14600000		7800000		561000	1220	N/A	P
Antimony	ug/Kg	75–125	51800		378	U	56100	92.1		P
Barium	ug/Kg	75–125	192000		126000		56100	118		P
Cadmium	ug/Kg	75–125	53500		115	U	56100	95.5		P
Calcium	ug/Kg	75–125	2890000		1820000		561000	192	N	P
Chromium	ug/Kg	75–125	66100		8870		56100	102		P
Cobalt	ug/Kg	75–125	56700		4370		56100	93.4		P
Copper	ug/Kg	75–125	65900		5700		56100	107		P
Iron	ug/Kg		13500000		11800000		561000	310	N/A	P
Lead	ug/Kg	75–125	67500		12600		56100	98		P
Magnesium	ug/Kg	75–125	2450000		1600000		561000	153	N	P
Manganese	ug/Kg		422000		317000		56100	187	N/A	P
Potassium	ug/Kg	75–125	2150000		1320000		561000	148	N	P
Silver	ug/Kg	75–125	56500		633		56100	99.6		P
Sodium	ug/Kg	75–125	654000		104000		561000	98		P
Vanadium	ug/Kg	75–125	76700		21300		56100	98.9		P
Zinc	ug/Kg	75–125	92100		31100		56100	109		P

METALS
-5a-

Matrix Spike Summary

SDG NO.	09-2525-1	**Client ID**	CAMO-09-7145S
Contract:	LANL01004	**Level:**	Low
Matrix:	SOIL	**% Solids:**	86
Sample ID:	232851001	**Spike ID:**	1201875314

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	155		4.16	U	128	118		AV

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2525-1 **Client ID** CAMO-09-7145SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 86

Sample ID: 232851001 **Spike ID:** 1201875323

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	139		4.16	U	119	113		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2525–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–9956D

Sample ID: 232744001 **Duplicate ID:** 1201873941 **Percent Solids for Dup:** 86

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	7800000		8640000		10.2		P
Antimony	ug/Kg		378	U	366	U			P
Barium	ug/Kg	+/–20%	126000		137000		8.23		P
Cadmium	ug/Kg		115	U	111	U			P
Calcium	ug/Kg	+/–20%	1820000		2050000		11.9		P
Chromium	ug/Kg	+/–20%	8870		9530		7.15		P
Cobalt	ug/Kg	+/–20%	4370		5110		15.5		P
Copper	ug/Kg	+/–20%	5700		6280		9.68		P
Iron	ug/Kg	+/–20%	11800000		12000000		1.82		P
Lead	ug/Kg	+/–20%	12600		14400		14		P
Magnesium	ug/Kg	+/–20%	1600000		1650000		3.16		P
Manganese	ug/Kg	+/–20%	317000		387000		20		P
Potassium	ug/Kg	+/–20%	1320000		1380000		4.66		P
Silver	ug/Kg	+/–554	633		430	J	38.1		P
Sodium	ug/Kg	+/–27700	104000		110000		5.3		P
Vanadium	ug/Kg	+/–20%	21300		22000		3.04		P
Zinc	ug/Kg	+/–20%	31100		31700		1.93		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-9956D

Sample ID: 232744001 **Duplicate ID:** 1201873981 **Percent Solids for Dup:** 86

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/-1150	1830		1650		10.4		MS
Beryllium	ug/kg	+/-20%	848		867		2.26		MS
Nickel	ug/kg	+/-20%	7160		6980		2.53		MS
Selenium	ug/kg		582	U	575	U			MS
Thallium	ug/kg	+/-230	216	J	171	J	23.2		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2525–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–9956SD

Sample ID: 1201873982 **Duplicate ID:** 1201873984 **Percent Solids for Dup:** 86

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/–20	10300		10100		2.57		MS
Beryllium	ug/kg	+/–20	6270		6250		.214		MS
Nickel	ug/kg	+/–20	12700		12200		4.16		MS
Selenium	ug/kg	+/–20	1890		1620		15.4		MS
Thallium	ug/kg	+/–20	10600		10600		.23		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2525–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–9956SD

Sample ID: 1201873942 **Duplicate ID:** 1201874078 **Percent Solids for Dup:** 86

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	15000000		14600000		2.44		P
Antimony	ug/Kg	+/–20	52900		51800		2.09		P
Barium	ug/Kg	+/–20	190000		192000		.742		P
Cadmium	ug/Kg	+/–20	54100		53500		1.11		P
Calcium	ug/Kg	+/–20	2590000		2890000		11		P
Chromium	ug/Kg	+/–20	69300		66100		4.76		P
Cobalt	ug/Kg	+/–20	57800		56700		1.97		P
Copper	ug/Kg	+/–20	66000		65900		.179		P
Iron	ug/Kg	+/–20	13900000		13500000		2.9		P
Lead	ug/Kg	+/–20	67900		67500		.689		P
Magnesium	ug/Kg	+/–20	2560000		2450000		4.29		P
Manganese	ug/Kg	+/–20	385000		422000		9.2		P
Potassium	ug/Kg	+/–20	2220000		2150000		3.11		P
Silver	ug/Kg	+/–20	57000		56500		.968		P
Sodium	ug/Kg	+/–20	693000		654000		5.76		P
Vanadium	ug/Kg	+/–20	78600		76700		2.36		P
Zinc	ug/Kg	+/–20	91700		92100		.426		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-7145D

Sample ID: 232851001 **Duplicate ID:** 1201875313 **Percent Solids for Dup:** 86

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg		4.16	U	4.9	J	200		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2525-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO-09-7145SD

Sample ID: 1201875314 **Duplicate ID:** 1201875323 **Percent Solids for Dup:** 86

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	155		139		10.9		AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2525-1

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873940								
	Vanadium	ug/Kg	166000	145000		87.2	65-118.6	P
	Zinc	ug/Kg	195000	194000		99.5	82.8-111.9	P
	Aluminum	ug/Kg	7290000	5990000		82.1	63.5-118	P
	Antimony	ug/Kg	121000	115000		94.8	39.1-132.1	P
	Barium	ug/Kg	475000	461000		97.1	82-110.6	P
	Cadmium	ug/Kg	116000	117000		101	77.9-115.2	P
	Calcium	ug/Kg	3720000	3440000		92.4	77.4-111.7	P
	Chromium	ug/Kg	84000	74000		88.1	66.6-116.5	P
	Cobalt	ug/Kg	83000	79300		95.5	79-113.9	P
	Copper	ug/Kg	105000	101000		96	77.6-112	P
	Iron	ug/Kg	20000000	16600000		83.2	51.5-145.5	P
	Lead	ug/Kg	161000	166000		103	83.1-114.7	P
	Magnesium	ug/Kg	2980000	2750000		92.1	81-114.3	P
	Manganese	ug/Kg	398000	357000		89.6	76.6-106.6	P
	Potassium	ug/Kg	2390000	2180000		91.2	72.2-111.1	P
	Silver	ug/Kg	133000	133000		100	81.7-115.7	P
	Sodium	ug/Kg	614000	569000		92.7	71.5-109.3	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2525-1

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873980								
	Arsenic	ug/kg	255000	256000		100	83-120	MS
	Beryllium	ug/kg	86400	87200		101	81.2-126.8	MS
	Nickel	ug/kg	101000	110000		109	83.3-121.4	MS
	Selenium	ug/kg	171000	187000		109	80.2-125.9	MS
	Thallium	ug/kg	203000	205000		101	78-123.2	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2525-1

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201875312								
	Mercury	ug/kg	5150	5460		106	71.6-128.3	AV

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 09–2525–1 **Client ID** CAMO–09–9956L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232744001 **Serial Dilution ID:** 1201873943

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68100		70000		2.79		10	P
Antimony	3.3	U	16.5	U				P
Barium	1100		1160		5.45		10	P
Cadmium	1	U	5	U				P
Calcium	15900		16500		3.46		10	P
Chromium	77.4		82.5		6.59		10	P
Cobalt	38.2		39.6		3.66			P
Copper	49.8		48.3	J	3.01			P
Iron	103000		110000		6.8		10	P
Lead	110		123		11.4			P
Magnesium	13900		14500		4.32		10	P
Manganese	2770		3000		8.3		10	P
Potassium	11500		12100		4.78		10	P
Silver	5.52		5	U	100			P
Sodium	912		700	J	23.2			P
Vanadium	186		196		5.38		10	P
Zinc	271		275		1.48		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2525-1 **Client ID:** CAMO-09-9956L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232744001 **Serial Dilution ID:** 1201873983

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	7.86		5		36.4			MS
Beryllium	3.64		4.1		12.6			MS
Nickel	30.7		31.8		3.58			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.927	J	2.12	J	129			MS

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 09–2525–1 **Client ID** CAMO–09–7145L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232851001 **Serial Dilution ID:** 1201875322

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.068	U	.34	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09--2525-1 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882341						
1201873939	MB for batch 882341	MB	S	07-JUL-09	.503g	50mL	
1201873940	LCS for batch 882341	LCS	S	07-JUL-09	.524g	50mL	
1201873942	CAMO-09-9956S	MS	S	07-JUL-09	.507g	50mL	
1201874078	CAMO-09-9956SD	MSD	S	07-JUL-09	.519g	50mL	
1201873941	CAMO-09-9956D	DUP	S	07-JUL-09	.525g	50mL	
232744001	CAMO-09-9956	SAMPLE	S	07-JUL-09	.508g	50mL	
232744002	CAMO-09-9950	SAMPLE	S	07-JUL-09	.522g	50mL	
232744003	CAMO-09-9952	SAMPLE	S	07-JUL-09	.506g	50mL	
232744004	CAMO-09-9958	SAMPLE	S	07-JUL-09	.5g	50mL	
232744005	CAMO-09-9957	SAMPLE	S	07-JUL-09	.511g	50mL	
232744006	CAMO-09-9951	SAMPLE	S	07-JUL-09	.5g	50mL	
232744007	CAMO-09-10031	SAMPLE	S	07-JUL-09	.517g	50mL	
232744008	CAMO-09-9990	SAMPLE	S	07-JUL-09	.503g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2525-1 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882359						
1201873979	MB for batch 882359	MB	S	07-JUL-09	.512g	50mL	
1201873980	LCS for batch 882359	LCS	S	07-JUL-09	.513g	50mL	
1201873982	CAMO-09-9956S	MS	S	07-JUL-09	.522g	50mL	
1201873984	CAMO-09-9956SD	MSD	S	07-JUL-09	.514g	50mL	
1201873981	CAMO-09-9956D	DUP	S	07-JUL-09	.506g	50mL	
232744001	CAMO-09-9956	SAMPLE	S	07-JUL-09	.5g	50mL	
232744002	CAMO-09-9950	SAMPLE	S	07-JUL-09	.519g	50mL	
232744003	CAMO-09-9952	SAMPLE	S	07-JUL-09	.508g	50mL	
232744004	CAMO-09-9958	SAMPLE	S	07-JUL-09	.514g	50mL	
232744005	CAMO-09-9957	SAMPLE	S	07-JUL-09	.508g	50mL	
232744006	CAMO-09-9951	SAMPLE	S	07-JUL-09	.506g	50mL	
232744007	CAMO-09-10031	SAMPLE	S	07-JUL-09	.516g	50mL	
232744008	CAMO-09-9990	SAMPLE	S	07-JUL-09	.516g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2525-1 **Method Type**: AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882926						
1201875311	MB for batch 882926	MB	S	15-JUL-09	.524g	30mL	
1201875312	LCS for batch 882926	LCS	S	15-JUL-09	.206g	30mL	
1201875314	CAMO-09-7145S	MS	S	15-JUL-09	.545g	30mL	
1201875323	CAMO-09-7145SD	MSD	S	15-JUL-09	.586g	30mL	
1201875313	CAMO-09-7145D	DUP	S	15-JUL-09	.536g	30mL	
232744001	CAMO-09-9956	SAMPLE	S	15-JUL-09	.534g	30mL	
232744002	CAMO-09-9950	SAMPLE	S	15-JUL-09	.538g	30mL	
232744003	CAMO-09-9952	SAMPLE	S	15-JUL-09	.534g	30mL	
232744004	CAMO-09-9958	SAMPLE	S	15-JUL-09	.503g	30mL	
232744005	CAMO-09-9957	SAMPLE	S	15-JUL-09	.515g	30mL	
232744006	CAMO-09-9951	SAMPLE	S	15-JUL-09	.545g	30mL	
232744007	CAMO-09-10031	SAMPLE	S	15-JUL-09	.599g	30mL	
232744008	CAMO-09-9990	SAMPLE	S	15-JUL-09	.563g	30mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 08-JUL-09 **End Date:** 08-JUL-09

Client Sdg: 09-2525-1
Method P
Data File: 070809A-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	09:35		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	09:41	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	09:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	09:55	X						X				X		X							X			
ICV01	1	10:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	10:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	10:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	10:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	10:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	10:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	10:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	10:47																							
ZZZZZZ	1	10:54																							
CCV01	1	11:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	11:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR03	1	11:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV02	1	11:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	11:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	11:42																							
ZZZZZZ	2	11:49																							
ZZZZZZ	1	11:56																							
ZZZZZZ	1	12:03																							
ZZZZZZ	1	12:10																							
ZZZZZZ	1	12:17																							
ZZZZZZ	5	12:23																							
ZZZZZZ	1	12:30																							
CCV03	1	12:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	12:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	5	12:49																							
ZZZZZZ	5	12:56																							
ZZZZZZ	5	13:03																							
ZZZZZZ	5	13:10																							
ZZZZZZ	25	13:16																							
ZZZZZZ	5	13:23																							
CCV04	1	13:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	13:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV05	1	13:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	13:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	14:04																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	2	14:11																							
ZZZZZZ	1	14:18																							
ZZZZZZ	1	14:25																							
ZZZZZZ	1	14:32																							
ZZZZZZ	1	14:39																							
CCV06	1	14:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	14:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	15:00																							
ZZZZZZ	1	15:07																							
ZZZZZZ	1	15:14																							
ZZZZZZ	1	15:22																							
ZZZZZZ	1	15:28																							
ZZZZZZ	5	15:34																							
CCV07	1	15:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	15:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	15:55																							
ZZZZZZ	2	16:02																							
ZZZZZZ	1	16:09																							
ZZZZZZ	1	16:16																							
ZZZZZZ	1	16:23																							
ZZZZZZ	1	16:29																							
ZZZZZZ	5	16:36																							
CCV08	1	16:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB08	1	16:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	16:57																							
ZZZZZZ	1	17:04																							
ZZZZZZ	1	17:11																							
ZZZZZZ	1	17:18																							
CCV09	1	17:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB09	1	17:32	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873939	1	17:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873940	2	17:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232744001	1	17:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873941	1	18:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873942	1	18:07	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201874078	1	18:13	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873943	5	18:20	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV10	1	18:26	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB10	1	18:33	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232744002	1	18:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
232744003	1	18:47	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232744004	1	18:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232744005	1	19:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232744006	1	19:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232744007	1	19:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232744008	1	19:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV11	1	19:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB11	1	19:36	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 16-JUL-09 **End Date:** 16-JUL-09

Client Sdg: 09-2525-1
Method AV
Data File: 071609S1-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:38															X								
S0.2	1	09:40															X								
S0.5	1	09:42															X								
S2.0	1	09:44															X								
S5.0	1	09:46															X								
S10	1	09:48															X								
ICV01	1	09:50															X								
ICB01	1	09:52															X								
CRDL01	1	09:54															X								
CCV01	1	09:56															X								
CCB01	1	09:58															X								
ZZZZZZ	1	10:00																							
ZZZZZZ	10	10:02																							
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
ZZZZZZ	1	10:09																							
ZZZZZZ	1	10:11																							
ZZZZZZ	5	10:12																							
1201875311	1	10:14															X								
1201875312	10	10:16															X								
232744001	1	10:18															X								
CCV02	1	10:20															X								
CCB02	1	10:22															X								
232744002	1	10:24															X								
232744003	1	10:26															X								
232744004	1	10:28															X								
232744005	1	10:30															X								
232744006	1	10:32															X								
232744007	1	10:34															X								
232744008	1	10:36															X								
ZZZZZZ	1	10:38																							
ZZZZZZ	1	10:40																							
ZZZZZZ	1	10:42																							
CCV03	1	10:44															X								
CCB03	1	10:46															X								
ZZZZZZ	1	10:48																							
ZZZZZZ	1	10:50																							
ZZZZZZ	1	10:52																							
ZZZZZZ	1	10:54																							
ZZZZZZ	1	10:56																							

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																						
ZZZZZZ	1	10:58																						
1201875313	1	11:00													X									
1201875314	1	11:02													X									
1201875323	1	11:04													X									
1201875322	5	11:06													X									
CCV04	1	11:08													X									
CCB04	1	11:10													X									

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 13-JUL-09 **End Date:** 14-JUL-09

Client Sdg: 09-2525-1
Method MS
Data File: 090713-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	23:29					X																		
S10	1	23:35					X																		
S100	1	23:41					X																		
ICV01	1	23:46					X																		
ICB01	1	23:52					X																		
CRDL01	1	23:58					X																		
ICSA01	1	00:03					X																		
ICSAB01	1	00:09					X																		
CCV01	1	00:15					X																		
CCB01	1	00:21					X																		
LR01	1	00:26					X																		
CCV02	1	00:32					X																		
CCB02	1	00:38					X																		
ZZZZZZ	2	00:44																							
ZZZZZZ	2	00:49																							
ZZZZZZ	2	00:55																							
ZZZZZZ	2	01:01																							
ZZZZZZ	2	01:06																							
ZZZZZZ	2	01:12																							
ZZZZZZ	10	01:18																							
ZZZZZZ	2	01:24																							
ZZZZZZ	2	01:29																							
CCV03	1	01:35					X																		
CCB03	1	01:41					X																		
ZZZZZZ	2	01:47																							
ZZZZZZ	40	01:52																							
ZZZZZZ	2	01:58																							
ZZZZZZ	2	02:04																							
ZZZZZZ	2	02:10																							
ZZZZZZ	2	02:16																							
ZZZZZZ	10	02:21																							
CCV04	1	02:27					X																		
CCB04	1	02:33					X																		
ZZZZZZ	2	02:39																							
ZZZZZZ	2	02:45																							
ZZZZZZ	2	02:50																							
ZZZZZZ	2	02:56																							
CCV05	1	03:02					X																		
CCB05	1	03:08					X																		
1201873979	2	03:14					X																		

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
1201873980	40	03:19					X																		
232744001	2	03:25					X																		
1201873981	2	03:31					X																		
1201873982	2	03:37					X																		
1201873984	2	03:43					X																		
1201873983	10	03:48					X																		
CCV06	1	03:54					X																		
CCB06	1	04:00					X																		

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 14-JUL-09 **End Date:** 14-JUL-09

Client Sdg: 09-2525-1
Method MS
Data File: 090714-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	10:32			X		X											X		X			X		
S10	1	10:36			X		X											X		X			X		
S100	1	10:39			X		X											X		X			X		
ICV01	1	10:43			X		X											X		X			X		
ICB01	1	10:47			X		X											X		X			X		
CRDL01	1	10:50			X		X											X		X			X		
ICSA01	1	10:54			X		X											X		X			X		
ICSAB01	1	10:58			X		X											X		X			X		
CCV01	1	11:01			X		X											X		X			X		
CCB01	1	11:05			X		X											X		X			X		
ZZZZZZ	2	11:09																							
ZZZZZZ	40	11:12																							
ZZZZZZ	2	11:16																							
ZZZZZZ	2	11:20																							
ZZZZZZ	2	11:23																							
ZZZZZZ	2	11:27																							
ZZZZZZ	10	11:31																							
CCV02	1	11:35			X		X											X		X			X		
CCB02	1	11:38			X		X											X		X			X		
ZZZZZZ	2	11:42																							
ZZZZZZ	2	11:46																							
ZZZZZZ	2	11:49																							
ZZZZZZ	2	11:53																							
CCV03	1	11:57			X		X											X		X			X		
CCB03	1	12:01			X		X											X		X			X		
1201873979	2	12:04			X													X		X			X		
1201873980	40	12:08			X													X		X			X		
232744001	2	12:12			X													X		X			X		
1201873981	2	12:15			X													X		X			X		
1201873982	2	12:19			X													X		X			X		
1201873984	2	12:23			X													X		X			X		
1201873983	10	12:27			X													X		X			X		
CCV04	1	12:30			X		X											X		X			X		
CCB04	1	12:34			X		X											X		X			X		
232744002	2	12:38			X		X											X		X			X		
232744003	2	12:41			X		X											X		X			X		
232744004	2	12:45			X		X											X		X			X		
232744005	2	12:49			X		X											X		X			X		
232744006	2	12:52			X		X											X		X			X		
232744007	2	12:56			X		X											X		X			X		

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																						
232744008	2	13:00			X		X											X		X			X		
CCV05	1	13:03			X		X											X		X			X		
CCB05	1	13:07			X		X											X		X			X		

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2525-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2525-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2525-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2525-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2525-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

METALS
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Linear Ranges

SDG NO. 09-2525-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

Raw Data

Method: Hg_ReAlign
Result: 071709

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

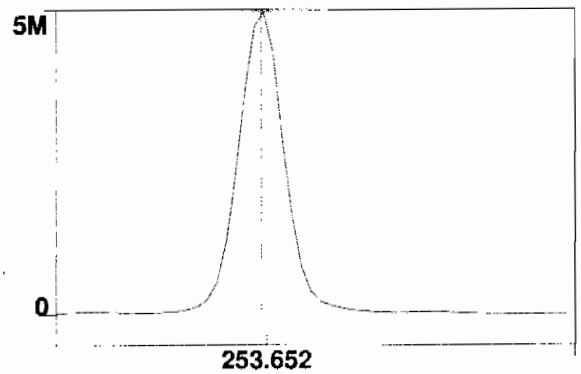

Intensity: 5068618.5 cps
Conc:

1

Reprocessing Begun
Logged In Analyst: Optima3 Technique: ICP Continuous

Results Data Set (original): 070809
Results Library (original): C:\pe\Optima3\Results\Results.mdb
Results Data Set (reprocessed): 070809A
Results Library (reprocessed): C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX Method Last Saved: 7/8/2009 11:38:58
IEC File: 070309.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 8
Sample ID: S0 Date Collected: 7/8/2009 09:28:56
Analyst: Data Type: Reprocessed on 7/8/2009 11:40:03
Logged In Analyst (Original) : Optima3
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1059810.6	1059810.6	99.899	%	09:32:05
1	Sc Radial	5668.6	5668.6	102	%	09:30:49
1	Y 371.029	851543.7	851543.7	99.804	%	09:32:05
1	Y RADIAL	4889.8	4889.8	101.5	%	09:30:49
1	Ag 328.068†	593.9	594.5	[0.00]	ug/L	09:32:10

1	Al 396.153Radial†	-88.0	-86.4	[0.00]	ug/L	09:30:49
1	As 188.979†	-33.0	-33.0	[0.00]	ug/L	09:32:31
1	B 249.677†	-395.5	-395.9	[0.00]	ug/L	09:32:31
1	Ba 233.527†	22.7	22.7	[0.00]	ug/L	09:32:31
1	Be 313.107†	-7253.6	-7260.9	[0.00]	ug/L	09:32:10
1	Ca 317.933Radial†	19.9	19.6	[0.00]	ug/L	09:31:09
1	Cd 226.502†	-262.6	-262.9	[0.00]	ug/L	09:32:31
1	Co 228.616†	-86.2	-86.3	[0.00]	ug/L	09:32:31
1	Cr 267.716†	-35.2	-35.2	[0.00]	ug/L	09:32:31
1	Cu 324.752†	10171.2	10181.5	[0.00]	ug/L	09:32:10
1	Fe 238.204 Radial†	0.0	0.0	[0.00]	ug/L	09:31:09
1	K 766.490 Radial†	1428.1	1402.0	[0.00]	ug/L	09:30:49
1	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:09
1	Mn 257.610†	823.1	823.9	[0.00]	ug/L	09:32:31
1	Mo 202.031†	40.3	40.4	[0.00]	ug/L	09:32:31
1	Na 589.592 Radial†	-169.9	-166.8	[0.00]	ug/L	09:31:09
1	Ni 231.604†	160.5	160.7	[0.00]	ug/L	09:32:31
1	P 214.914†	340.8	341.2	[0.00]	ug/L	09:32:31
1	Pb 220.353†	-23.8	-23.8	[0.00]	ug/L	09:32:31
1	S 181.975 Axial†	74.8	74.8	[0.00]	ug/L	09:32:31
1	Sb 206.836†	39.3	39.4	[0.00]	ug/L	09:32:31
1	Se 196.026†	-21.9	-21.9	[0.00]	ug/L	09:32:31
1	Si 251.611†	569.0	569.6	[0.00]	ug/L	09:32:31
1	Sn 189.927†	4.8	4.8	[0.00]	ug/L	09:32:31
1	Sr 421.552†	-1.3	-1.3	[0.00]	ug/L	09:31:09
1	Ti 334.940†	-1079.9	-1081.0	[0.00]	ug/L	09:32:10
1	Tl 190.801†	-58.7	-58.8	[0.00]	ug/L	09:32:31
1	U 409.014†	-3815.0	-3818.9	[0.00]	ug/L	09:32:05
1	V 292.402†	-1684.3	-1686.1	[0.00]	ug/L	09:32:10
1	Zn 213.857†	1110.4	1111.5	[0.00]	ug/L	09:32:31
1	SiO2†	589.5	590.1	[0.00]	ug/L	09:33:36
2	Sc 361.383	1062041.1	1062041.1	100.11	%	09:32:36
2	Sc Radial	5550.5	5550.5	99.7	%	09:31:14
2	Y 371.029	854666.6	854666.6	100.17	%	09:32:36
2	Y RADIAL	4806.6	4806.6	99.81	%	09:31:14
2	Ag 328.068†	684.5	683.8	[0.00]	ug/L	09:32:41
2	Al 396.153Radial†	-103.1	-103.4	[0.00]	ug/L	09:31:14
2	As 188.979†	-37.3	-37.3	[0.00]	ug/L	09:33:01
2	B 249.677†	-376.8	-376.4	[0.00]	ug/L	09:33:01
2	Ba 233.527†	27.0	27.0	[0.00]	ug/L	09:33:01
2	Be 313.107†	-7342.2	-7334.2	[0.00]	ug/L	09:32:41
2	Ca 317.933Radial†	15.3	15.3	[0.00]	ug/L	09:31:34
2	Cd 226.502†	-297.3	-297.0	[0.00]	ug/L	09:33:01
2	Co 228.616†	-91.0	-90.9	[0.00]	ug/L	09:33:01
2	Cr 267.716†	-33.4	-33.4	[0.00]	ug/L	09:33:01
2	Cu 324.752†	10260.8	10249.6	[0.00]	ug/L	09:32:41
2	Fe 238.204 Radial†	0.2	0.2	[0.00]	ug/L	09:31:34
2	K 766.490 Radial†	1490.1	1493.9	[0.00]	ug/L	09:31:14
2	Mg 279.077 IEC†	-0.2	-0.2	[0.00]	ug/L	09:31:34
2	Mn 257.610†	833.3	832.3	[0.00]	ug/L	09:33:01
2	Mo 202.031†	24.6	24.6	[0.00]	ug/L	09:33:01
2	Na 589.592 Radial†	-169.2	-169.6	[0.00]	ug/L	09:31:34
2	Ni 231.604†	145.4	145.2	[0.00]	ug/L	09:33:01
2	P 214.914†	336.1	335.8	[0.00]	ug/L	09:33:01
2	Pb 220.353†	-39.7	-39.7	[0.00]	ug/L	09:33:01
2	S 181.975 Axial†	63.8	63.7	[0.00]	ug/L	09:33:01
2	Sb 206.836†	49.0	48.9	[0.00]	ug/L	09:33:01
2	Se 196.026†	-25.3	-25.3	[0.00]	ug/L	09:33:01
2	Si 251.611†	569.7	569.1	[0.00]	ug/L	09:33:01
2	Sn 189.927†	5.1	5.0	[0.00]	ug/L	09:33:01
2	Sr 421.552†	11.5	11.5	[0.00]	ug/L	09:31:34
2	Ti 334.940†	-1116.4	-1115.1	[0.00]	ug/L	09:32:41
2	Tl 190.801†	-57.5	-57.4	[0.00]	ug/L	09:33:01
2	U 409.014†	-3873.4	-3869.2	[0.00]	ug/L	09:32:36
2	V 292.402†	-1699.0	-1697.1	[0.00]	ug/L	09:32:41
2	Zn 213.857†	1115.6	1114.3	[0.00]	ug/L	09:33:01
2	SiO2†	600.0	599.4	[0.00]	ug/L	09:33:42
3	Sc 361.383	1060796.0	1060796.0	99.992	%	09:33:06
3	Sc Radial	5475.5	5475.5	98.4	%	09:31:39
3	Y 371.029	853433.0	853433.0	100.03	%	09:33:06
3	Y RADIAL	4750.8	4750.8	98.65	%	09:31:39

3	Ag 328.068†	637.4	637.5	[0.00]	ug/L	09:33:11
3	Al 396.153Radial†	-85.4	-86.8	[0.00]	ug/L	09:31:39
3	As 188.979†	-40.4	-40.4	[0.00]	ug/L	09:33:31
3	B 249.677†	-372.3	-372.3	[0.00]	ug/L	09:33:31
3	Ba 233.527†	23.1	23.1	[0.00]	ug/L	09:33:31
3	Be 313.107†	-7353.0	-7353.6	[0.00]	ug/L	09:33:11
3	Ca 317.933Radial†	15.7	15.9	[0.00]	ug/L	09:31:59
3	Cd 226.502†	-273.1	-273.1	[0.00]	ug/L	09:33:31
3	Co 228.616†	-94.1	-94.1	[0.00]	ug/L	09:33:31
3	Cr 267.716†	-17.2	-17.2	[0.00]	ug/L	09:33:31
3	Cu 324.752†	10141.9	10142.7	[0.00]	ug/L	09:33:11
3	Fe 238.204 Radial†	0.8	0.8	[0.00]	ug/L	09:31:59
3	K 766.490 Radial†	1498.9	1523.4	[0.00]	ug/L	09:31:39
3	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:59
3	Mn 257.610†	824.8	824.9	[0.00]	ug/L	09:33:31
3	Mo 202.031†	30.4	30.4	[0.00]	ug/L	09:33:31
3	Na 589.592 Radial†	-172.0	-174.9	[0.00]	ug/L	09:31:59
3	Ni 231.604†	138.9	138.9	[0.00]	ug/L	09:33:31
3	P 214.914†	333.9	333.9	[0.00]	ug/L	09:33:31
3	Pb 220.353†	-23.7	-23.8	[0.00]	ug/L	09:33:31
3	S 181.975 Axial†	64.9	64.9	[0.00]	ug/L	09:33:31
3	Sb 206.836†	48.0	48.0	[0.00]	ug/L	09:33:31
3	Se 196.026†	-17.7	-17.7	[0.00]	ug/L	09:33:31
3	Si 251.611†	541.6	541.6	[0.00]	ug/L	09:33:31
3	Sn 189.927†	6.6	6.6	[0.00]	ug/L	09:33:31
3	Sr 421.552†	6.1	6.2	[0.00]	ug/L	09:31:59
3	Ti 334.940†	-1131.5	-1131.6	[0.00]	ug/L	09:33:11
3	Tl 190.801†	-67.9	-67.9	[0.00]	ug/L	09:33:31
3	U 409.014†	-3815.9	-3816.2	[0.00]	ug/L	09:33:06
3	V 292.402†	-1575.1	-1575.2	[0.00]	ug/L	09:33:11
3	Zn 213.857†	1141.3	1141.4	[0.00]	ug/L	09:33:31
3	SiO2†	617.5	617.6	[0.00]	ug/L	09:33:47

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1060882.6	1117.80	0.11%	100.00	%
Sc Radial	5564.8	97.34	1.75%	100	%
Y 371.029	853214.5	1572.88	0.18%	100.000	%
Y RADIAL	4815.7	69.94	1.45%	100.0	%
Ag 328.068†	638.6	44.64	6.99%	[0.00]	ug/L
Al 396.153Radial†	-92.2	9.68	10.50%	[0.00]	ug/L
As 188.979†	-36.9	3.70	10.03%	[0.00]	ug/L
B 249.677†	-381.5	12.62	3.31%	[0.00]	ug/L
Ba 233.527†	24.3	2.36	9.74%	[0.00]	ug/L
Be 313.107†	-7316.2	48.87	0.67%	[0.00]	ug/L
Ca 317.933Radial†	16.9	2.30	13.61%	[0.00]	ug/L
Cd 226.502†	-277.6	17.49	6.30%	[0.00]	ug/L
Co 228.616†	-90.4	3.95	4.37%	[0.00]	ug/L
Cr 267.716†	-28.6	9.91	34.66%	[0.00]	ug/L
Cu 324.752†	10191.3	54.11	0.53%	[0.00]	ug/L
Fe 238.204 Radial†	0.3	0.40	120.31%	[0.00]	ug/L
K 766.490 Radial†	1473.1	63.31	4.30%	[0.00]	ug/L
Mg 279.077 IEC†	0.2	0.34	192.62%	[0.00]	ug/L
Mn 257.610†	827.0	4.63	0.56%	[0.00]	ug/L
Mo 202.031†	31.8	8.00	25.18%	[0.00]	ug/L
Na 589.592 Radial†	-170.4	4.09	2.40%	[0.00]	ug/L
Ni 231.604†	148.3	11.22	7.57%	[0.00]	ug/L
P 214.914†	336.9	3.77	1.12%	[0.00]	ug/L
Pb 220.353†	-29.1	9.17	31.52%	[0.00]	ug/L
S 181.975 Axial†	67.8	6.10	8.99%	[0.00]	ug/L
Sb 206.836†	45.4	5.28	11.62%	[0.00]	ug/L
Se 196.026†	-21.6	3.82	17.66%	[0.00]	ug/L
Si 251.611†	560.1	16.01	2.86%	[0.00]	ug/L
Sn 189.927†	5.5	0.95	17.40%	[0.00]	ug/L
Sr 421.552†	5.5	6.43	117.38%	[0.00]	ug/L
Ti 334.940†	-1109.3	25.82	2.33%	[0.00]	ug/L
Tl 190.801†	-61.4	5.70	9.29%	[0.00]	ug/L
U 409.014†	-3834.7	29.86	0.78%	[0.00]	ug/L
V 292.402†	-1652.8	67.41	4.08%	[0.00]	ug/L

Zn 213.857†	1122.4	16.48	1.47%	[0.00] ug/L
SiO2†	602.4	13.95	2.32%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/8/2009 09:35:57
Data Type: Reprocessed on 7/8/2009 11:40:04

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1043904.5	1043904.5	98.400	%	09:38:07
1	Sc Radial	5586.9	5586.9	100	%	09:37:49
1	Y 371.029	838768.8	838768.8	98.307	%	09:38:07
1	Y RADIAL	4867.7	4867.7	101.1	%	09:37:49
1	Ag 328.068†	25884.2	25666.6	[100]	ug/L	09:38:07
1	As 188.979†	393.4	436.7	[100]	ug/L	09:38:27
1	B 249.677†	5686.4	6160.4	[100]	ug/L	09:38:07
1	Ba 233.527†	20371.1	20678.1	[100]	ug/L	09:38:07
1	Be 313.107†	314654.5	327088.3	[100]	ug/L	09:38:07
1	Cd 226.502†	13132.5	13623.8	[100]	ug/L	09:38:27
1	Co 228.616†	8083.3	8305.1	[100]	ug/L	09:38:27
1	Cr 267.716†	11753.9	11973.6	[100]	ug/L	09:38:07
1	Cu 324.752†	50132.0	40756.1	[100]	ug/L	09:38:07
1	K 766.490 Radial†	3887.5	2399.0	[1000]	ug/L	09:37:49
1	Mn 257.610†	129366.8	130643.8	[100]	ug/L	09:38:07
1	Mo 202.031†	2580.5	2590.7	[100]	ug/L	09:38:27
1	Ni 231.604†	6525.4	6483.3	[100]	ug/L	09:38:27
1	P 214.914†	1779.1	1471.1	[500]	ug/L	09:38:27
1	Pb 220.353†	1342.2	1393.1	[100]	ug/L	09:38:27
1	S 181.975 Axial†	300.2	237.3	[200]	ug/L	09:38:27
1	Sb 206.836†	547.4	510.9	[100]	ug/L	09:38:27
1	Se 196.026†	295.6	322.0	[100]	ug/L	09:38:27
1	Si 251.611†	24511.6	24350.2	[500]	ug/L	09:38:07
1	Sn 189.927†	971.4	981.7	[100]	ug/L	09:38:27
1	Sr 421.552†	6665.1	6633.3	[100]	ug/L	09:37:49
1	Ti 334.940†	74671.4	76995.2	[100]	ug/L	09:38:07
1	Tl 190.801†	543.4	613.6	[100]	ug/L	09:38:27
1	U 409.014†	237.6	4076.2	[100]	ug/L	09:38:07
1	V 292.402†	15937.1	17849.1	[100]	ug/L	09:38:07
1	Zn 213.857†	19207.8	18397.8	[100]	ug/L	09:38:07
1	SiO2†	24699.0	24498.4	[1069.5]	ug/L	09:39:24
2	Sc 361.383	1055210.6	1055210.6	99.465	%	09:38:33
2	Sc Radial	5609.2	5609.2	101	%	09:37:55
2	Y 371.029	845639.6	845639.6	99.112	%	09:38:33
2	Y RADIAL	4877.8	4877.8	101.3	%	09:37:55
2	Ag 328.068†	26093.0	25594.7	[100]	ug/L	09:38:33
2	As 188.979†	391.5	430.5	[100]	ug/L	09:38:53
2	B 249.677†	5785.4	6198.0	[100]	ug/L	09:38:33
2	Ba 233.527†	20469.8	20555.5	[100]	ug/L	09:38:33
2	Be 313.107†	317338.9	326360.9	[100]	ug/L	09:38:33
2	Cd 226.502†	13157.8	13506.1	[100]	ug/L	09:38:53
2	Co 228.616†	8095.3	8229.3	[100]	ug/L	09:38:53
2	Cr 267.716†	11903.1	11995.7	[100]	ug/L	09:38:33
2	Cu 324.752†	50854.5	40936.6	[100]	ug/L	09:38:33
2	K 766.490 Radial†	3819.2	2315.9	[1000]	ug/L	09:37:55
2	Mn 257.610†	130782.0	130658.0	[100]	ug/L	09:38:33
2	Mo 202.031†	2603.2	2585.4	[100]	ug/L	09:38:53
2	Ni 231.604†	6538.1	6425.0	[100]	ug/L	09:38:53
2	P 214.914†	1796.1	1468.9	[500]	ug/L	09:38:53
2	Pb 220.353†	1350.1	1386.4	[100]	ug/L	09:38:53
2	S 181.975 Axial†	299.5	233.3	[200]	ug/L	09:38:53
2	Sb 206.836†	557.9	515.5	[100]	ug/L	09:38:53
2	Se 196.026†	303.1	326.3	[100]	ug/L	09:38:53
2	Si 251.611†	24790.1	24363.3	[500]	ug/L	09:38:33
2	Sn 189.927†	961.1	960.8	[100]	ug/L	09:38:53
2	Sr 421.552†	6653.8	6595.7	[100]	ug/L	09:37:55
2	Ti 334.940†	75608.5	77124.2	[100]	ug/L	09:38:33
2	Tl 190.801†	543.4	607.7	[100]	ug/L	09:38:53

2	U 409.014†	413.3	4250.3	[100]	ug/L	09:38:33
2	V 292.402†	16008.2	17747.0	[100]	ug/L	09:38:33
2	Zn 213.857†	19396.4	18378.2	[100]	ug/L	09:38:33
2	SiO2†	24456.8	23985.9	[1069.5]	ug/L	09:39:29
3	Sc 361.383	1055128.5	1055128.5	99.458	%	09:38:59
3	Sc Radial	5546.9	5546.9	99.7	%	09:38:00
3	Y 371.029	846188.4	846188.4	99.177	%	09:38:59
3	Y RADIAL	4841.3	4841.3	100.5	%	09:38:00
3	Ag 328.068†	26072.8	25576.4	[100]	ug/L	09:38:59
3	As 188.979†	395.1	434.2	[100]	ug/L	09:39:19
3	B 249.677†	5816.4	6229.6	[100]	ug/L	09:38:59
3	Ba 233.527†	20495.9	20583.4	[100]	ug/L	09:38:59
3	Be 313.107†	317444.7	326492.1	[100]	ug/L	09:38:59
3	Cd 226.502†	13125.5	13474.7	[100]	ug/L	09:39:19
3	Co 228.616†	8079.1	8213.6	[100]	ug/L	09:39:19
3	Cr 267.716†	11888.0	11981.4	[100]	ug/L	09:38:59
3	Cu 324.752†	50658.9	40743.9	[100]	ug/L	09:38:59
3	K 766.490 Radial†	3845.0	2384.3	[1000]	ug/L	09:38:00
3	Mn 257.610†	131078.2	130966.0	[100]	ug/L	09:38:59
3	Mo 202.031†	2603.9	2586.4	[100]	ug/L	09:39:19
3	Ni 231.604†	6537.8	6425.2	[100]	ug/L	09:39:19
3	P 214.914†	1782.9	1455.7	[500]	ug/L	09:39:19
3	Pb 220.353†	1365.6	1402.1	[100]	ug/L	09:39:19
3	S 181.975 Axial†	309.0	242.8	[200]	ug/L	09:39:19
3	Sb 206.836†	556.1	513.7	[100]	ug/L	09:39:19
3	Se 196.026†	279.5	302.7	[100]	ug/L	09:39:19
3	Si 251.611†	24805.8	24381.0	[500]	ug/L	09:38:59
3	Sn 189.927†	963.2	962.9	[100]	ug/L	09:39:19
3	Sr 421.552†	6580.5	6596.3	[100]	ug/L	09:38:00
3	Ti 334.940†	75559.4	77080.7	[100]	ug/L	09:38:59
3	Tl 190.801†	539.9	604.2	[100]	ug/L	09:39:19
3	U 409.014†	236.8	4072.8	[100]	ug/L	09:38:59
3	V 292.402†	16050.8	17791.1	[100]	ug/L	09:38:59
3	Zn 213.857†	19356.9	18340.1	[100]	ug/L	09:38:59
3	SiO2†	24872.7	24406.0	[1069.5]	ug/L	09:39:34

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051414.5	6504.03	0.62%	99.108	%
Sc Radial	5581.0	31.57	0.57%	100	%
Y 371.029	843532.3	4134.44	0.49%	98.865	%
Y RADIAL	4862.3	18.86	0.39%	101.0	%
Ag 328.068†	25612.5	47.66	0.19%	[100]	ug/L
As 188.979†	433.8	3.14	0.72%	[100]	ug/L
B 249.677†	6196.0	34.67	0.56%	[100]	ug/L
Ba 233.527†	20605.7	64.24	0.31%	[100]	ug/L
Be 313.107†	326647.1	387.66	0.12%	[100]	ug/L
Cd 226.502†	13534.9	78.59	0.58%	[100]	ug/L
Co 228.616†	8249.3	48.95	0.59%	[100]	ug/L
Cr 267.716†	11983.6	11.20	0.09%	[100]	ug/L
Cu 324.752†	40812.2	107.89	0.26%	[100]	ug/L
K 766.490 Radial†	2366.4	44.37	1.88%	[1000]	ug/L
Mn 257.610†	130755.9	182.06	0.14%	[100]	ug/L
Mo 202.031†	2587.5	2.81	0.11%	[100]	ug/L
Ni 231.604†	6444.5	33.62	0.52%	[100]	ug/L
P 214.914†	1465.2	8.32	0.57%	[500]	ug/L
Pb 220.353†	1393.9	7.86	0.56%	[100]	ug/L
S 181.975 Axial†	237.8	4.79	2.02%	[200]	ug/L
Sb 206.836†	513.3	2.30	0.45%	[100]	ug/L
Se 196.026†	317.0	12.62	3.98%	[100]	ug/L
Si 251.611†	24364.8	15.45	0.06%	[500]	ug/L
Sn 189.927†	968.5	11.51	1.19%	[100]	ug/L
Sr 421.552†	6608.4	21.50	0.33%	[100]	ug/L
Ti 334.940†	77066.7	65.66	0.09%	[100]	ug/L
Tl 190.801†	608.5	4.73	0.78%	[100]	ug/L
U 409.014†	4133.1	101.47	2.46%	[100]	ug/L
V 292.402†	17795.7	51.23	0.29%	[100]	ug/L
Zn 213.857†	18372.0	29.33	0.16%	[100]	ug/L
SiO2†	24296.8	273.12	1.12%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/8/2009 09:41:45
Data Type: Reprocessed on 7/8/2009 11:40:06

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1064607.4	1064607.4	100.35	%	09:44:57
1	Sc Radial	5461.3	5461.3	98.1	%	09:43:38
1	Y 371.029	846628.0	846628.0	99.228	%	09:44:57
1	Y RADIAL	4696.9	4696.9	97.53	%	09:43:38
1	Ag 328.068†	126803.5	125721.3	[500]	ug/L	09:44:57
1	Al 396.153Radial†	5174.4	5364.7	[5000]	ug/L	09:43:38
1	As 188.979†	2072.9	2102.5	[500]	ug/L	09:45:17
1	B 249.677†	31257.3	31529.4	[500]	ug/L	09:44:57
1	Ba 233.527†	98225.0	97857.1	[500]	ug/L	09:44:57
1	Be 313.107†	1595363.0	1597097.3	[500]	ug/L	09:44:57
1	Ca 317.933Radial†	1956.1	1976.3	[5000]	ug/L	09:43:58
1	Cd 226.502†	66327.4	66373.0	[500]	ug/L	09:44:57
1	Co 228.616†	39082.0	39035.6	[500]	ug/L	09:45:17
1	Cr 267.716†	58209.2	58034.2	[500]	ug/L	09:44:57
1	Cu 324.752†	212770.9	201835.2	[500]	ug/L	09:44:57
1	K 766.490 Radial†	12752.1	11520.9	[5000]	ug/L	09:43:38
1	Mg 279.077 IEC†	62.9	63.9	[5000]	ug/L	09:43:58
1	Mn 257.610†	630898.9	627864.5	[500]	ug/L	09:44:57
1	Mo 202.031†	12608.3	12532.4	[500]	ug/L	09:45:17
1	Ni 231.604†	30724.5	30468.8	[500]	ug/L	09:45:17
1	P 214.914†	7382.5	7019.8	[2500]	ug/L	09:45:17
1	Pb 220.353†	6649.1	6654.9	[500]	ug/L	09:45:17
1	S 181.975 Axial†	1242.8	1170.6	[1000]	ug/L	09:45:17
1	Sb 206.836†	2606.1	2551.6	[500]	ug/L	09:45:17
1	Se 196.026†	1514.2	1530.5	[500]	ug/L	09:45:17
1	Si 251.611†	122499.0	121510.3	[2500]	ug/L	09:44:57
1	Sn 189.927†	4778.2	4756.0	[500]	ug/L	09:45:17
1	Sr 421.552†	28452.4	28986.5	[500]	ug/L	09:43:38
1	Ti 334.940†	380085.1	379864.5	[500]	ug/L	09:44:57
1	Tl 190.801†	2870.2	2921.5	[500]	ug/L	09:45:17
1	U 409.014†	15794.5	19574.0	[500]	ug/L	09:44:57
1	V 292.402†	85607.5	86960.7	[500]	ug/L	09:44:57
1	Zn 213.857†	90358.1	88919.6	[500]	ug/L	09:44:57
1	SiO2†	122852.3	121820.1	[5347.5]	ug/L	09:46:17
2	Sc 361.383	1044221.1	1044221.1	98.429	%	09:45:24
2	Sc Radial	5389.0	5389.0	96.8	%	09:44:03
2	Y 371.029	829032.4	829032.4	97.166	%	09:45:24
2	Y RADIAL	4652.3	4652.3	96.61	%	09:44:03
2	Ag 328.068†	124967.2	126322.6	[500]	ug/L	09:45:24
2	Al 396.153Radial†	5096.7	5355.2	[5000]	ug/L	09:44:03
2	As 188.979†	2073.2	2143.2	[500]	ug/L	09:45:44
2	B 249.677†	30724.1	31595.8	[500]	ug/L	09:45:24
2	Ba 233.527†	97214.1	98740.9	[500]	ug/L	09:45:24
2	Be 313.107†	1569041.1	1601392.7	[500]	ug/L	09:45:24
2	Ca 317.933Radial†	1923.3	1969.1	[5000]	ug/L	09:44:23
2	Cd 226.502†	65506.0	66828.8	[500]	ug/L	09:45:24
2	Co 228.616†	39155.7	39870.9	[500]	ug/L	09:45:44
2	Cr 267.716†	57418.9	58363.7	[500]	ug/L	09:45:24
2	Cu 324.752†	208685.4	201823.9	[500]	ug/L	09:45:24
2	K 766.490 Radial†	12541.0	11477.1	[5000]	ug/L	09:44:03
2	Mg 279.077 IEC†	61.0	62.8	[5000]	ug/L	09:44:23
2	Mn 257.610†	623183.7	632300.1	[500]	ug/L	09:45:24
2	Mo 202.031†	12645.3	12815.3	[500]	ug/L	09:45:44
2	Ni 231.604†	30816.1	31159.5	[500]	ug/L	09:45:44
2	P 214.914†	7382.7	7163.6	[2500]	ug/L	09:45:44
2	Pb 220.353†	6652.5	6787.7	[500]	ug/L	09:45:44
2	S 181.975 Axial†	1248.0	1200.1	[1000]	ug/L	09:45:44
2	Sb 206.836†	2600.7	2596.7	[500]	ug/L	09:45:44

2	Se 196.026†	1507.7	1553.3	[500]	ug/L	09:45:44
2	Si 251.611†	120777.2	122144.2	[2500]	ug/L	09:45:24
2	Sn 189.927†	4796.7	4867.8	[500]	ug/L	09:45:44
2	Sr 421.552†	27876.2	28780.3	[500]	ug/L	09:44:03
2	Ti 334.940†	374439.3	381523.0	[500]	ug/L	09:45:24
2	Tl 190.801†	2885.2	2992.7	[500]	ug/L	09:45:44
2	U 409.014†	15437.6	19518.7	[500]	ug/L	09:45:24
2	V 292.402†	84337.2	87335.7	[500]	ug/L	09:45:24
2	Zn 213.857†	89070.9	89369.7	[500]	ug/L	09:45:24
2	SiO2†	121800.6	123141.7	[5347.5]	ug/L	09:46:22
3	Sc 361.383	1046590.0	1046590.0	98.653	%	09:45:52
3	Sc Radial	5352.8	5352.8	96.2	%	09:44:28
3	Y 371.029	832934.3	832934.3	97.623	%	09:45:52
3	Y RADIAL	4634.7	4634.7	96.24	%	09:44:28
3	Ag 328.068†	125631.5	126708.6	[500]	ug/L	09:45:52
3	Al 396.153Radial†	5102.6	5396.9	[5000]	ug/L	09:44:28
3	As 188.979†	2098.8	2164.3	[500]	ug/L	09:46:12
3	B 249.677†	30976.6	31781.2	[500]	ug/L	09:45:52
3	Ba 233.527†	97581.9	98890.3	[500]	ug/L	09:45:52
3	Be 313.107†	1579797.0	1608687.5	[500]	ug/L	09:45:52
3	Ca 317.933Radial†	1928.2	1987.6	[5000]	ug/L	09:44:48
3	Cd 226.502†	65857.4	67034.4	[500]	ug/L	09:45:52
3	Co 228.616†	39345.8	39973.6	[500]	ug/L	09:46:12
3	Cr 267.716†	57872.1	58691.1	[500]	ug/L	09:45:52
3	Cu 324.752†	210164.3	202843.1	[500]	ug/L	09:45:52
3	K 766.490 Radial†	12562.3	11586.7	[5000]	ug/L	09:44:28
3	Mg 279.077 IEC†	60.6	62.8	[5000]	ug/L	09:44:48
3	Mn 257.610†	626191.1	633915.6	[500]	ug/L	09:45:52
3	Mo 202.031†	12686.5	12828.0	[500]	ug/L	09:46:12
3	Ni 231.604†	31017.8	31293.1	[500]	ug/L	09:46:12
3	P 214.914†	7417.6	7182.0	[2500]	ug/L	09:46:12
3	Pb 220.353†	6707.4	6828.1	[500]	ug/L	09:46:12
3	S 181.975 Axial†	1249.2	1198.4	[1000]	ug/L	09:46:12
3	Sb 206.836†	2624.9	2615.3	[500]	ug/L	09:46:12
3	Se 196.026†	1511.8	1554.0	[500]	ug/L	09:46:12
3	Si 251.611†	121349.2	122446.3	[2500]	ug/L	09:45:52
3	Sn 189.927†	4809.3	4869.5	[500]	ug/L	09:46:12
3	Sr 421.552†	27833.2	28930.1	[500]	ug/L	09:44:28
3	Ti 334.940†	376623.4	382875.9	[500]	ug/L	09:45:52
3	Tl 190.801†	2901.3	3002.3	[500]	ug/L	09:46:12
3	U 409.014†	15617.2	19665.2	[500]	ug/L	09:45:52
3	V 292.402†	84908.9	87721.2	[500]	ug/L	09:45:52
3	Zn 213.857†	89582.5	89683.5	[500]	ug/L	09:45:52
3	SiO2†	122195.3	123261.7	[5347.5]	ug/L	09:46:27

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051806.2	11149.30	1.06%	99.144	%
Sc Radial	5401.0	55.21	1.02%	97.1	%
Y 371.029	836198.2	9240.74	1.11%	98.006	%
Y RADIAL	4661.3	32.06	0.69%	96.79	%
Ag 328.068†	126250.8	497.54	0.39%	[500]	ug/L
Al 396.153Radial†	5372.3	21.86	0.41%	[5000]	ug/L
As 188.979†	2136.7	31.42	1.47%	[500]	ug/L
B 249.677†	31635.5	130.46	0.41%	[500]	ug/L
Ba 233.527†	98496.1	558.43	0.57%	[500]	ug/L
Be 313.107†	1602392.5	5859.39	0.37%	[500]	ug/L
Ca 317.933Radial†	1977.7	9.33	0.47%	[5000]	ug/L
Cd 226.502†	66745.4	338.47	0.51%	[500]	ug/L
Co 228.616†	39626.7	514.43	1.30%	[500]	ug/L
Cr 267.716†	58363.0	328.45	0.56%	[500]	ug/L
Cu 324.752†	202167.4	585.22	0.29%	[500]	ug/L
K 766.490 Radial†	11528.2	55.20	0.48%	[5000]	ug/L
Mg 279.077 IEC†	63.2	0.61	0.97%	[5000]	ug/L
Mn 257.610†	631360.0	3133.16	0.50%	[500]	ug/L
Mo 202.031†	12725.2	167.14	1.31%	[500]	ug/L
Ni 231.604†	30973.8	442.43	1.43%	[500]	ug/L
P 214.914†	7121.8	88.83	1.25%	[2500]	ug/L
Pb 220.353†	6756.9	90.64	1.34%	[500]	ug/L

S 181.975 Axial†	1189.7	16.55	1.39%	[1000]	ug/L
Sb 206.836†	2587.9	32.79	1.27%	[500]	ug/L
Se 196.026†	1546.0	13.38	0.87%	[500]	ug/L
Si 251.611†	122033.6	477.69	0.39%	[2500]	ug/L
Sn 189.927†	4831.1	65.06	1.35%	[500]	ug/L
Sr 421.552†	28899.0	106.56	0.37%	[500]	ug/L
Ti 334.940†	381421.2	1508.28	0.40%	[500]	ug/L
Tl 190.801†	2972.2	44.12	1.48%	[500]	ug/L
U 409.014†	19586.0	73.99	0.38%	[500]	ug/L
V 292.402†	87339.2	380.24	0.44%	[500]	ug/L
Zn 213.857†	89324.3	383.98	0.43%	[500]	ug/L
SiO2†	122741.2	799.91	0.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/8/2009 09:48:38
Data Type: Reprocessed on 7/8/2009 11:40:07

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1052663.5	1052663.5	99.225	%	09:51:50
1	Sc Radial	5805.9	5805.9	104	%	09:50:31
1	Y 371.029	835045.6	835045.6	97.871	%	09:51:50
1	Y RADIAL	5007.7	5007.7	104.0	%	09:50:31
1	Ag 328.068†	252879.2	254215.1	[1000]	ug/L	09:51:55
1	Al 396.153Radial†	10753.9	10399.5	[10000]	ug/L	09:50:31
1	As 188.979†	4213.7	4283.5	[1000]	ug/L	09:52:15
1	B 249.677†	63888.7	64769.0	[1000]	ug/L	09:51:55
1	Ba 233.527†	197687.1	199206.4	[1000]	ug/L	09:51:55
1	Be 313.107†	3194923.7	3227185.7	[1000]	ug/L	09:51:50
1	Ca 317.933Radial†	4055.7	3870.4	[10000]	ug/L	09:50:31
1	Cd 226.502†	133744.7	135066.6	[1000]	ug/L	09:51:55
1	Co 228.616†	80516.0	81235.0	[1000]	ug/L	09:51:55
1	Cr 267.716†	117606.8	118553.7	[1000]	ug/L	09:51:55
1	Cu 324.752†	414400.4	407444.8	[1000]	ug/L	09:51:55
1	Fe 238.204 Radial†	287.2	275.0	[10000]	ug/L	09:50:51
1	K 766.490 Radial†	24918.9	22410.9	[10000]	ug/L	09:50:31
1	Mg 279.077 IEC†	131.8	126.2	[10000]	ug/L	09:50:51
1	Mn 257.610†	1260730.8	1269747.4	[1000]	ug/L	09:51:50
1	Mo 202.031†	24798.5	24960.4	[1000]	ug/L	09:52:15
1	Na 589.592 Radial†	3522.0	3546.2	[10000]	ug/L	09:50:31
1	Ni 231.604†	62750.5	63092.2	[1000]	ug/L	09:51:55
1	P 214.914†	14401.2	14176.7	[5000]	ug/L	09:52:15
1	Pb 220.353†	13201.7	13333.9	[1000]	ug/L	09:52:15
1	S 181.975 Axial†	2419.1	2370.2	[2000]	ug/L	09:52:15
1	Sb 206.836†	5119.1	5113.6	[1000]	ug/L	09:52:15
1	Se 196.026†	3047.7	3093.1	[1000]	ug/L	09:52:15
1	Si 251.611†	242154.4	243485.1	[5000]	ug/L	09:51:55
1	Sn 189.927†	9581.3	9650.6	[1000]	ug/L	09:52:15
1	Sr 421.552†	68083.4	65250.5	[1000]	ug/L	09:50:31
1	Ti 334.940†	758941.9	765976.9	[1000]	ug/L	09:51:50
1	Tl 190.801†	5824.9	5931.8	[1000]	ug/L	09:52:15
1	U 409.014†	36638.9	40759.8	[1000]	ug/L	09:51:55
1	V 292.402†	175178.4	178199.0	[1000]	ug/L	09:51:55
1	Zn 213.857†	180211.9	180496.5	[1000]	ug/L	09:51:55
1	SiO2†	241738.8	243023.9	[10695]	ug/L	09:53:25
2	Sc 361.383	1058804.9	1058804.9	99.804	%	09:52:22
2	Sc Radial	5593.3	5593.3	101	%	09:50:56
2	Y 371.029	839441.5	839441.5	98.386	%	09:52:22
2	Y RADIAL	4835.2	4835.2	100.4	%	09:50:56
2	Ag 328.068†	252282.7	252139.2	[1000]	ug/L	09:52:27
2	Al 396.153Radial†	10627.1	10665.3	[10000]	ug/L	09:50:56
2	As 188.979†	4198.8	4244.0	[1000]	ug/L	09:52:48
2	B 249.677†	63795.4	64302.1	[1000]	ug/L	09:52:27
2	Ba 233.527†	196404.5	196765.7	[1000]	ug/L	09:52:27
2	Be 313.107†	3201165.9	3214763.8	[1000]	ug/L	09:52:22
2	Ca 317.933Radial†	4012.0	3974.7	[10000]	ug/L	09:50:56
2	Cd 226.502†	132496.4	133034.0	[1000]	ug/L	09:52:27
2	Co 228.616†	79902.6	80149.8	[1000]	ug/L	09:52:27
2	Cr 267.716†	116813.2	117071.0	[1000]	ug/L	09:52:27
2	Cu 324.752†	414708.3	405330.8	[1000]	ug/L	09:52:27
2	Fe 238.204 Radial†	289.6	287.8	[10000]	ug/L	09:51:16
2	K 766.490 Radial†	24624.2	23025.9	[10000]	ug/L	09:50:56
2	Mg 279.077 IEC†	127.7	126.9	[10000]	ug/L	09:51:16
2	Mn 257.610†	1263110.3	1264761.9	[1000]	ug/L	09:52:22
2	Mo 202.031†	24699.2	24715.9	[1000]	ug/L	09:52:48
2	Na 589.592 Radial†	3465.5	3618.3	[10000]	ug/L	09:50:56
2	Ni 231.604†	62172.3	62146.1	[1000]	ug/L	09:52:27

2	P 214.914†	14342.8	14034.0	[5000]	ug/L	09:52:48
2	Pb 220.353†	13188.3	13243.2	[1000]	ug/L	09:52:48
2	S 181.975 Axial†	2410.9	2347.8	[2000]	ug/L	09:52:48
2	Sb 206.836†	5080.8	5045.3	[1000]	ug/L	09:52:48
2	Se 196.026†	3016.0	3043.5	[1000]	ug/L	09:52:48
2	Si 251.611†	241232.5	241145.8	[5000]	ug/L	09:52:27
2	Sn 189.927†	9534.0	9547.2	[1000]	ug/L	09:52:48
2	Sr 421.552†	66922.4	66576.7	[1000]	ug/L	09:50:56
2	Ti 334.940†	761509.7	764113.3	[1000]	ug/L	09:52:22
2	Tl 190.801†	5811.7	5884.5	[1000]	ug/L	09:52:48
2	U 409.014†	36579.5	40486.0	[1000]	ug/L	09:52:27
2	V 292.402†	173954.8	175949.0	[1000]	ug/L	09:52:27
2	Zn 213.857†	179274.3	178503.7	[1000]	ug/L	09:52:27
2	SiO2†	237359.4	237222.8	[10695]	ug/L	09:53:31
3	Sc 361.383	1057400.6	1057400.6	99.672	%	09:52:54
3	Sc Radial	5464.1	5464.1	98.2	%	09:51:21
3	Y 371.029	838883.9	838883.9	98.320	%	09:52:54
3	Y RADIAL	4771.4	4771.4	99.08	%	09:51:21
3	Ag 328.068†	251287.3	251476.2	[1000]	ug/L	09:53:00
3	Al 396.153Radial†	10656.6	10945.2	[10000]	ug/L	09:51:21
3	As 188.979†	4194.8	4245.6	[1000]	ug/L	09:53:20
3	B 249.677†	63568.3	64159.1	[1000]	ug/L	09:53:00
3	Ba 233.527†	196293.8	196915.9	[1000]	ug/L	09:53:00
3	Be 313.107†	3195458.9	3213297.7	[1000]	ug/L	09:52:54
3	Ca 317.933Radial†	4035.9	4093.3	[10000]	ug/L	09:51:21
3	Cd 226.502†	132396.2	133109.8	[1000]	ug/L	09:53:00
3	Co 228.616†	79823.3	80176.5	[1000]	ug/L	09:53:00
3	Cr 267.716†	116636.7	117049.4	[1000]	ug/L	09:53:00
3	Cu 324.752†	412621.4	403788.9	[1000]	ug/L	09:53:00
3	Fe 238.204 Radial†	285.3	290.2	[10000]	ug/L	09:51:41
3	K 766.490 Radial†	24699.5	23681.6	[10000]	ug/L	09:51:21
3	Mg 279.077 IEC†	125.8	127.9	[10000]	ug/L	09:51:41
3	Mn 257.610†	1259027.5	1262346.4	[1000]	ug/L	09:52:54
3	Mo 202.031†	24845.2	24895.3	[1000]	ug/L	09:53:20
3	Na 589.592 Radial†	3441.7	3675.5	[10000]	ug/L	09:51:21
3	Ni 231.604†	62152.7	62209.1	[1000]	ug/L	09:53:00
3	P 214.914†	14439.3	14149.9	[5000]	ug/L	09:53:20
3	Pb 220.353†	13219.9	13292.5	[1000]	ug/L	09:53:20
3	S 181.975 Axial†	2417.3	2357.4	[2000]	ug/L	09:53:20
3	Sb 206.836†	5111.4	5082.8	[1000]	ug/L	09:53:20
3	Se 196.026†	3040.7	3072.3	[1000]	ug/L	09:53:20
3	Si 251.611†	240711.3	240943.9	[5000]	ug/L	09:53:00
3	Sn 189.927†	9583.2	9609.3	[1000]	ug/L	09:53:20
3	Sr 421.552†	66963.1	68191.7	[1000]	ug/L	09:51:21
3	Ti 334.940†	758629.2	762236.6	[1000]	ug/L	09:52:54
3	Tl 190.801†	5861.7	5942.4	[1000]	ug/L	09:53:20
3	U 409.014†	36527.5	40482.6	[1000]	ug/L	09:53:00
3	V 292.402†	173694.3	175919.0	[1000]	ug/L	09:53:00
3	Zn 213.857†	178849.9	178316.4	[1000]	ug/L	09:53:00
3	SiO2†	243076.9	243275.0	[10695]	ug/L	09:53:36

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1056289.6	3217.89	0.30%	99.567	%
Sc Radial	5621.1	172.60	3.07%	101	%
Y 371.029	837790.3	2393.27	0.29%	98.192	%
Y RADIAL	4871.4	122.27	2.51%	101.2	%
Ag 328.068†	252610.2	1428.92	0.57%	[1000]	ug/L
Al 396.153Radial†	10670.0	272.89	2.56%	[10000]	ug/L
As 188.979†	4257.7	22.40	0.53%	[1000]	ug/L
B 249.677†	64410.1	318.97	0.50%	[1000]	ug/L
Ba 233.527†	197629.3	1367.84	0.69%	[1000]	ug/L
Be 313.107†	3218415.7	7630.29	0.24%	[1000]	ug/L
Ca 317.933Radial†	3979.5	111.54	2.80%	[10000]	ug/L
Cd 226.502†	133736.8	1152.25	0.86%	[1000]	ug/L
Co 228.616†	80520.5	618.97	0.77%	[1000]	ug/L
Cr 267.716†	117558.0	862.30	0.73%	[1000]	ug/L
Cu 324.752†	405521.5	1835.38	0.45%	[1000]	ug/L
Fe 238.204 Radial†	284.3	8.19	2.88%	[10000]	ug/L

K 766.490 Radial†	23039.5	635.42	2.76%	[10000]	ug/L
Mg 279.077 IEC†	127.0	0.88	0.69%	[10000]	ug/L
Mn 257.610†	1265618.6	3774.16	0.30%	[1000]	ug/L
Mo 202.031†	24857.2	126.63	0.51%	[1000]	ug/L
Na 589.592 Radial†	3613.3	64.84	1.79%	[10000]	ug/L
Ni 231.604†	62482.4	529.00	0.85%	[1000]	ug/L
P 214.914†	14120.2	75.84	0.54%	[5000]	ug/L
Pb 220.353†	13289.9	45.38	0.34%	[1000]	ug/L
S 181.975 Axial†	2358.5	11.23	0.48%	[2000]	ug/L
Sb 206.836†	5080.6	34.22	0.67%	[1000]	ug/L
Se 196.026†	3069.7	24.93	0.81%	[1000]	ug/L
Si 251.611†	241858.2	1412.48	0.58%	[5000]	ug/L
Sn 189.927†	9602.4	52.05	0.54%	[1000]	ug/L
Sr 421.552†	66673.0	1472.96	2.21%	[1000]	ug/L
Ti 334.940†	764108.9	1870.18	0.24%	[1000]	ug/L
Tl 190.801†	5919.6	30.81	0.52%	[1000]	ug/L
U 409.014†	40576.1	159.04	0.39%	[1000]	ug/L
V 292.402†	176689.0	1307.77	0.74%	[1000]	ug/L
Zn 213.857†	179105.5	1208.27	0.67%	[1000]	ug/L
SiO2†	241173.9	3424.04	1.42%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/8/2009 09:55:46
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1045205.1	1045205.1	98.522	%	09:58:57
1	Sc Radial	5445.4	5445.4	97.9	%	09:58:00
1	Y 371.029	824719.2	824719.2	96.660	%	09:58:57
1	Y RADIAL	4697.0	4697.0	97.54	%	09:58:00
1	Al 396.153Radial†	53617.0	54885.6	[50000]	ug/L	09:57:40
1	Ca 317.933Radial†	19630.1	20043.9	[50000]	ug/L	09:57:40
1	Fe 238.204 Radial†	559.3	571.2	[20000]	ug/L	09:58:00
1	Mg 279.077 IEC†	611.6	624.9	[50000]	ug/L	09:58:00
1	Na 589.592 Radial†	7093.1	7419.2	[20000]	ug/L	09:57:40
2	Sc 361.383	1039938.4	1039938.4	98.026	%	09:59:03
2	Sc Radial	5322.6	5322.6	95.6	%	09:58:25
2	Y 371.029	821364.5	821364.5	96.267	%	09:59:03
2	Y RADIAL	4573.5	4573.5	94.97	%	09:58:25
2	Al 396.153Radial†	52922.6	55423.3	[50000]	ug/L	09:58:05
2	Ca 317.933Radial†	19349.8	20213.5	[50000]	ug/L	09:58:05
2	Fe 238.204 Radial†	548.4	573.0	[20000]	ug/L	09:58:25
2	Mg 279.077 IEC†	611.0	638.7	[50000]	ug/L	09:58:25
2	Na 589.592 Radial†	6990.6	7479.1	[20000]	ug/L	09:58:05
3	Sc 361.383	1037774.1	1037774.1	97.822	%	09:59:09
3	Sc Radial	5437.5	5437.5	97.7	%	09:58:50
3	Y 371.029	819757.6	819757.6	96.079	%	09:59:09
3	Y RADIAL	4679.6	4679.6	97.17	%	09:58:50
3	Al 396.153Radial†	53368.0	54709.6	[50000]	ug/L	09:58:30
3	Ca 317.933Radial†	19552.5	19993.3	[50000]	ug/L	09:58:30
3	Fe 238.204 Radial†	554.5	567.2	[20000]	ug/L	09:58:50
3	Mg 279.077 IEC†	615.8	630.0	[50000]	ug/L	09:58:50
3	Na 589.592 Radial†	7083.3	7419.6	[20000]	ug/L	09:58:30

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1040972.5	3821.89	0.37%	98.123	%
Sc Radial	5401.8	68.73	1.27%	97.1	%
Y 371.029	821947.1	2531.58	0.31%	96.335	%
Y RADIAL	4650.1	66.85	1.44%	96.56	%
Al 396.153Radial†	55006.2	371.83	0.68%	[50000]	ug/L
Ca 317.933Radial†	20083.6	115.30	0.57%	[50000]	ug/L
Fe 238.204 Radial†	570.5	2.97	0.52%	[20000]	ug/L
Mg 279.077 IEC†	631.2	6.96	1.10%	[50000]	ug/L
Na 589.592 Radial†	7439.3	34.51	0.46%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	252.6	0.00000	0.999999	
Al 396.153Radial	3	Lin Thru 0	0.0	1.099	0.00000	0.999981	
As 188.979	3	Lin Thru 0	0.0	4.261	0.00000	0.999998	
B 249.677	3	Lin Thru 0	0.0	64.16	0.00000	0.999970	
Ba 233.527	3	Lin Thru 0	0.0	197.6	0.00000	0.999992	
Be 313.107	3	Lin Thru 0	0.0	3216	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.4015	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	133.7	0.00000	0.999999	
Co 228.616	3	Lin Thru 0	0.0	80.28	0.00000	0.999977	
Cr 267.716	3	Lin Thru 0	0.0	117.4	0.00000	0.999994	
Cu 324.752	3	Lin Thru 0	0.0	405.3	0.00000	0.999999	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0285	0.00000	0.999999	

K 766.490 Radial	3	Lin Thru 0	0.0	2.305	0.00000	0.999997
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0126	0.00000	0.999999
Mn 257.610	3	Lin Thru 0	0.0	1265	0.00000	0.999995
Mo 202.031	3	Lin Thru 0	0.0	24.98	0.00000	0.999950
Na 589.592 Radia	2	Lin Thru 0	0.0	0.3698	0.00000	0.999934
Ni 231.604	3	Lin Thru 0	0.0	62.39	0.00000	0.999990
P 214.914	3	Lin Thru 0	0.0	2.830	0.00000	0.999989
Pb 220.353	3	Lin Thru 0	0.0	13.34	0.00000	0.999970
S 181.975 Axial	3	Lin Thru 0	0.0	1.181	0.00000	0.999994
Sb 206.836	3	Lin Thru 0	0.0	5.100	0.00000	0.999972
Se 196.026	3	Lin Thru 0	0.0	3.075	0.00000	0.999992
Si 251.611	3	Lin Thru 0	0.0	48.46	0.00000	0.999993
Sn 189.927	3	Lin Thru 0	0.0	9.615	0.00000	0.999997
Sr 421.552	3	Lin Thru 0	0.0	64.91	0.00000	0.998518
Ti 334.940	3	Lin Thru 0	0.0	763.9	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	5.926	0.00000	0.999996
U 409.014	3	Lin Thru 0	0.0	40.30	0.00000	0.999901
V 292.402	3	Lin Thru 0	0.0	176.3	0.00000	0.999989
Zn 213.857	3	Lin Thru 0	0.0	179.1	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	22.63	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/8/2009 10:01:20
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1055963.1	1055963.1	99.536	%			10:04:31
1	Sc Radial	5613.9	5613.9	101	%			10:03:13
1	Y 371.029	843980.3	843980.3	98.918	%			10:04:31
1	Y RADIAL	4850.5	4850.5	100.7	%			10:03:13
1	Ag 328.068†	64392.7	64054.1	256.65	ug/L	256.65	ppb	10:04:31
1	Al 396.153Radial†	5477.4	5521.7	5003.5	ug/L	5003.5	ppb	10:03:13
1	As 188.979†	2018.5	2064.8	487.93	ug/L	487.93	ppb	10:04:51
1	B 249.677†	32013.9	32544.6	505.32	ug/L	505.32	ppb	10:04:31
1	Ba 233.527†	105864.5	106333.4	539.45	ug/L	539.45	ppb	10:04:31
1	Be 313.107†	824616.8	835774.7	261.06	ug/L	261.06	ppb	10:04:31
1	Ca 317.933Radial†	1980.0	1945.8	4846.6	ug/L	4846.6	ppb	10:03:33
1	Cd 226.502†	67172.4	67763.0	506.57	ug/L	506.57	ppb	10:04:31
1	Co 228.616†	37965.2	38232.5	476.49	ug/L	476.49	ppb	10:04:51
1	Cr 267.716†	59214.9	59519.4	507.63	ug/L	507.63	ppb	10:04:31
1	Cu 324.752†	223133.1	213981.3	528.24	ug/L	528.24	ppb	10:04:31
1	Fe 238.204 Radial†	145.6	144.0	5067.1	ug/L	5067.1	ppb	10:03:33
1	K 766.490 Radial†	7308.0	5771.0	2501.1	ug/L	2501.1	ppb	10:03:13
1	Mg 279.077 IEC†	65.6	64.8	5140.2	ug/L	5140.2	ppb	10:03:33
1	Mn 257.610†	657421.5	659657.3	521.87	ug/L	521.87	ppb	10:04:31
1	Mo 202.031†	13087.3	13116.5	525.36	ug/L	525.36	ppb	10:04:51
1	Na 589.592 Radial†	775.6	939.2	2539.6	ug/L	2539.6	ppb	10:03:33
1	Ni 231.604†	33519.4	33527.3	537.06	ug/L	537.06	ppb	10:04:31
1	P 214.914†	7515.0	7213.0	2469.3	ug/L	2469.3	ppb	10:04:51
1	Pb 220.353†	6757.4	6817.9	512.49	ug/L	512.49	ppb	10:04:51
1	S 181.975 Axial†	3135.7	3082.5	2608.2	ug/L	2608.2	ppb	10:04:51
1	Sb 206.836†	2711.8	2679.0	533.63	ug/L	533.63	ppb	10:04:51
1	Se 196.026†	7950.7	8009.4	2624.5	ug/L	2624.5	ppb	10:04:51
1	Si 251.611†	241856.0	242422.6	4990.7	ug/L	4990.7	ppb	10:04:31
1	Sn 189.927†	5102.2	5120.5	533.02	ug/L	533.02	ppb	10:04:51
1	Sr 421.552†	33892.8	33591.0	517.48	ug/L	517.48	ppb	10:03:13
1	Ti 334.940†	386933.6	389845.5	510.25	ug/L	510.25	ppb	10:04:31
1	Tl 190.801†	2870.1	2944.9	498.92	ug/L	498.92	ppb	10:04:51
1	U 409.014†	16738.6	20651.3	510.79	ug/L	510.79	ppb	10:04:31
1	V 292.402†	86386.8	88442.0	507.92	ug/L	507.92	ppb	10:04:31
1	Zn 213.857†	92798.7	92108.6	509.43	ug/L	509.43	ppb	10:04:31
1	SiO2†	240647.4	241166.2	10631	ug/L	10631	ppb	10:05:48
2	Sc 361.383	1061154.8	1061154.8	100.03	%			10:04:57
2	Sc Radial	5574.6	5574.6	100	%			10:03:38
2	Y 371.029	847082.8	847082.8	99.281	%			10:04:57
2	Y RADIAL	4828.4	4828.4	100.3	%			10:03:38
2	Ag 328.068†	64498.9	63843.8	255.81	ug/L	255.81	ppb	10:04:57
2	Al 396.153Radial†	5433.4	5516.1	4998.6	ug/L	4998.6	ppb	10:03:38
2	As 188.979†	2002.8	2039.2	481.91	ug/L	481.91	ppb	10:05:17
2	B 249.677†	32167.6	32540.8	505.28	ug/L	505.28	ppb	10:04:57
2	Ba 233.527†	106144.9	106093.4	538.23	ug/L	538.23	ppb	10:04:57
2	Be 313.107†	824477.0	831581.7	259.75	ug/L	259.75	ppb	10:04:57
2	Ca 317.933Radial†	1968.2	1947.8	4851.6	ug/L	4851.6	ppb	10:03:58
2	Cd 226.502†	67276.9	67537.3	504.89	ug/L	504.89	ppb	10:04:57
2	Co 228.616†	37893.6	37974.3	473.26	ug/L	473.26	ppb	10:05:17
2	Cr 267.716†	59208.0	59221.4	505.09	ug/L	505.09	ppb	10:04:57
2	Cu 324.752†	224086.8	213838.1	527.89	ug/L	527.89	ppb	10:04:57
2	Fe 238.204 Radial†	144.3	143.7	5055.6	ug/L	5055.6	ppb	10:03:58
2	K 766.490 Radial†	7330.2	5844.2	2532.9	ug/L	2532.9	ppb	10:03:38
2	Mg 279.077 IEC†	68.0	67.7	5365.3	ug/L	5365.3	ppb	10:03:58
2	Mn 257.610†	658788.7	657792.7	520.39	ug/L	520.39	ppb	10:04:57
2	Mo 202.031†	13056.1	13020.9	521.54	ug/L	521.54	ppb	10:05:17
2	Na 589.592 Radial†	764.6	933.7	2524.5	ug/L	2524.5	ppb	10:03:58
2	Ni 231.604†	33627.1	33470.2	536.15	ug/L	536.15	ppb	10:04:57

2	P 214.914†	7509.3	7170.5	2454.3	ug/L	2454.3 ppb	10:05:17
2	Pb 220.353†	6755.8	6783.1	509.87	ug/L	509.87 ppb	10:05:17
2	S 181.975 Axial†	3111.7	3043.1	2574.9	ug/L	2574.9 ppb	10:05:17
2	Sb 206.836†	2721.3	2675.2	532.82	ug/L	532.82 ppb	10:05:17
2	Se 196.026†	7952.2	7971.8	2612.2	ug/L	2612.2 ppb	10:05:17
2	Si 251.611†	242445.6	241823.3	4978.4	ug/L	4978.4 ppb	10:04:57
2	Sn 189.927†	5103.9	5097.1	530.59	ug/L	530.59 ppb	10:05:17
2	Sr 421.552†	33672.4	33607.8	517.74	ug/L	517.74 ppb	10:03:38
2	Ti 334.940†	387671.3	388681.1	508.73	ug/L	508.73 ppb	10:04:57
2	Tl 190.801†	2874.3	2934.9	497.25	ug/L	497.25 ppb	10:05:17
2	U 409.014†	16726.6	20557.1	508.46	ug/L	508.46 ppb	10:04:57
2	V 292.402†	86445.6	88076.2	505.80	ug/L	505.80 ppb	10:04:57
2	Zn 213.857†	92897.2	91751.0	507.43	ug/L	507.43 ppb	10:04:57
2	SiO2†	237580.2	236916.9	10443	ug/L	10443 ppb	10:05:54
3	Sc 361.383	1046189.2	1046189.2	98.615	%		10:05:23
3	Sc Radial	5513.6	5513.6	99.1	%		10:04:03
3	Y 371.029	834847.1	834847.1	97.847	%		10:05:23
3	Y RADIAL	4760.8	4760.8	98.86	%		10:04:03
3	Ag 328.068†	63545.9	63799.7	255.72	ug/L	255.72 ppb	10:05:23
3	Al 396.153Radial†	5377.5	5519.7	5001.6	ug/L	5001.6 ppb	10:04:03
3	As 188.979†	2001.8	2066.8	488.43	ug/L	488.43 ppb	10:05:43
3	B 249.677†	31566.1	32390.9	502.89	ug/L	502.89 ppb	10:05:23
3	Ba 233.527†	104823.4	106271.3	539.14	ug/L	539.14 ppb	10:05:23
3	Be 313.107†	812519.1	831246.8	259.64	ug/L	259.64 ppb	10:05:23
3	Ca 317.933Radial†	1993.1	1994.7	4968.4	ug/L	4968.4 ppb	10:04:23
3	Cd 226.502†	66540.9	67753.1	506.47	ug/L	506.47 ppb	10:05:23
3	Co 228.616†	37778.7	38399.7	478.58	ug/L	478.58 ppb	10:05:43
3	Cr 267.716†	58457.7	59307.3	505.83	ug/L	505.83 ppb	10:05:23
3	Cu 324.752†	219384.3	212274.2	524.04	ug/L	524.04 ppb	10:05:23
3	Fe 238.204 Radial†	150.5	151.5	5330.8	ug/L	5330.8 ppb	10:04:23
3	K 766.490 Radial†	7160.3	5753.8	2493.9	ug/L	2493.9 ppb	10:04:03
3	Mg 279.077 IEC†	66.6	67.1	5318.0	ug/L	5318.0 ppb	10:04:23
3	Mn 257.610†	650091.5	658394.7	520.91	ug/L	520.91 ppb	10:05:23
3	Mo 202.031†	13030.1	13181.3	527.98	ug/L	527.98 ppb	10:05:43
3	Na 589.592 Radial†	777.1	954.8	2581.6	ug/L	2581.6 ppb	10:04:23
3	Ni 231.604†	33207.7	33525.8	537.04	ug/L	537.04 ppb	10:05:23
3	P 214.914†	7486.1	7254.4	2484.4	ug/L	2484.4 ppb	10:05:43
3	Pb 220.353†	6694.0	6817.1	512.41	ug/L	512.41 ppb	10:05:43
3	S 181.975 Axial†	3113.7	3089.6	2614.2	ug/L	2614.2 ppb	10:05:43
3	Sb 206.836†	2715.5	2708.2	539.48	ug/L	539.48 ppb	10:05:43
3	Se 196.026†	7890.8	8023.3	2629.9	ug/L	2629.9 ppb	10:05:43
3	Si 251.611†	238657.3	241449.0	4970.5	ug/L	4970.5 ppb	10:05:23
3	Sn 189.927†	5067.2	5132.9	534.33	ug/L	534.33 ppb	10:05:43
3	Sr 421.552†	33182.0	33485.1	515.84	ug/L	515.84 ppb	10:04:03
3	Ti 334.940†	381414.1	387880.2	507.69	ug/L	507.69 ppb	10:05:23
3	Tl 190.801†	2873.4	2975.2	504.01	ug/L	504.01 ppb	10:05:43
3	U 409.014†	16428.1	20493.6	506.85	ug/L	506.85 ppb	10:05:23
3	V 292.402†	84994.3	87840.8	504.50	ug/L	504.50 ppb	10:05:23
3	Zn 213.857†	91642.8	91807.5	507.72	ug/L	507.72 ppb	10:05:23
3	SiO2†	239859.9	242626.3	10695	ug/L	10695 ppb	10:05:59

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054435.7	99.392	%	0.7163				0.72%
Sc Radial	5567.4	100	%	0.9				0.91%
Y 371.029	841970.1	98.682	%	0.7455				0.76%
Y RADIAL	4813.2	99.95	%	0.971				0.97%
Ag 328.068†	63899.2	256.06	ug/L	0.515	256.06	ppb	0.515	0.20%
QC value within limits for Ag 328.068 Recovery = 102.42%								
Al 396.153Radial†	5519.1	5001.2	ug/L	2.50	5001.2	ppb	2.50	0.05%
QC value within limits for Al 396.153Radial Recovery = 100.02%								
As 188.979†	2056.9	486.09	ug/L	3.628	486.09	ppb	3.628	0.75%
QC value within limits for As 188.979 Recovery = 97.22%								
B 249.677†	32492.1	504.50	ug/L	1.392	504.50	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.90%								
Ba 233.527†	106232.7	538.94	ug/L	0.633	538.94	ppb	0.633	0.12%
QC value within limits for Ba 233.527 Recovery = 107.79%								
Be 313.107†	832867.8	260.15	ug/L	0.787	260.15	ppb	0.787	0.30%
QC value within limits for Be 313.107 Recovery = 104.06%								

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Ca 317.933Radial†        1962.7      4888.9 ug/L         68.91      4888.9 ppb          68.91   1.41%
   QC value within limits for Ca 317.933Radial  Recovery = 97.78%
Cd 226.502†             67684.5       505.98 ug/L         0.945      505.98 ppb          0.945   0.19%
   QC value within limits for Cd 226.502  Recovery = 101.20%
Co 228.616†             38202.2       476.11 ug/L         2.677      476.11 ppb          2.677   0.56%
   QC value within limits for Co 228.616  Recovery = 95.22%
Cr 267.716†             59349.4       506.19 ug/L         1.307      506.19 ppb          1.307   0.26%
   QC value within limits for Cr 267.716  Recovery = 101.24%
Cu 324.752†            213364.5       526.72 ug/L         2.327      526.72 ppb          2.327   0.44%
   QC value within limits for Cu 324.752  Recovery = 105.34%
Fe 238.204 Radial†       146.4       5151.2 ug/L        155.66     5151.2 ppb        155.66   3.02%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.02%
K 766.490 Radial†        5789.7       2509.3 ug/L         20.76     2509.3 ppb         20.76   0.83%
   QC value within limits for K 766.490 Radial  Recovery = 100.37%
Mg 279.077 IEC†            66.5       5274.5 ug/L        118.66     5274.5 ppb        118.66   2.25%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.49%
Mn 257.610†            658614.9       521.06 ug/L         0.751      521.06 ppb          0.751   0.14%
   QC value within limits for Mn 257.610  Recovery = 104.21%
Mo 202.031†             13106.2       524.96 ug/L         3.238      524.96 ppb          3.238   0.62%
   QC value within limits for Mo 202.031  Recovery = 104.99%
Na 589.592 Radial†       942.6       2548.6 ug/L         29.60     2548.6 ppb         29.60   1.16%
   QC value within limits for Na 589.592 Radial  Recovery = 101.94%
Ni 231.604†             33507.8       536.75 ug/L         0.520      536.75 ppb          0.520   0.10%
   QC value within limits for Ni 231.604  Recovery = 107.35%
P 214.914†               7212.6       2469.3 ug/L         15.04     2469.3 ppb         15.04   0.61%
   QC value within limits for P 214.914  Recovery = 98.77%
Pb 220.353†              6806.1       511.59 ug/L         1.490      511.59 ppb          1.490   0.29%
   QC value within limits for Pb 220.353  Recovery = 102.32%
S 181.975 Axial†         3071.7       2599.1 ug/L         21.20     2599.1 ppb         21.20   0.82%
   QC value within limits for S 181.975 Axial  Recovery = 103.96%
Sb 206.836†              2687.5       535.31 ug/L         3.632      535.31 ppb          3.632   0.68%
   QC value within limits for Sb 206.836  Recovery = 107.06%
Se 196.026†              8001.5       2622.2 ug/L          9.08     2622.2 ppb          9.08   0.35%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†            241898.3       4979.9 ug/L         10.15     4979.9 ppb         10.15   0.20%
   QC value within limits for Si 251.611  Recovery = 99.60%
Sn 189.927†              5116.8       532.64 ug/L         1.897      532.64 ppb          1.897   0.36%
   QC value within limits for Sn 189.927  Recovery = 106.53%
Sr 421.552†             33561.3       517.02 ug/L         1.026      517.02 ppb          1.026   0.20%
   QC value within limits for Sr 421.552  Recovery = 103.40%
Ti 334.940†            388802.3       508.89 ug/L         1.289      508.89 ppb          1.289   0.25%
   QC value within limits for Ti 334.940  Recovery = 101.78%
Tl 190.801†              2951.7       500.06 ug/L         3.524      500.06 ppb          3.524   0.70%
   QC value within limits for Tl 190.801  Recovery = 100.01%
U 409.014†              20567.3       508.70 ug/L         1.982      508.70 ppb          1.982   0.39%
   QC value within limits for U 409.014  Recovery = 101.74%
V 292.402†              88119.7       506.07 ug/L         1.724      506.07 ppb          1.724   0.34%
   QC value within limits for V 292.402  Recovery = 101.21%
Zn 213.857†             91889.0       508.19 ug/L         1.080      508.19 ppb          1.080   0.21%
   QC value within limits for Zn 213.857  Recovery = 101.64%
SiO2†                  240236.5        10590 ug/L         130.9       10590 ppb         130.9   1.24%
   QC value within limits for SiO2  Recovery = 99.02%
All analyte(s) passed QC.
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Sequence No.: 7
Sample ID: ICB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/8/2009 10:08:09
Data Type: Reprocessed on 7/8/2009 11:40:09

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1062518.9	1062518.9	100.15	%			10:11:19
1	Sc Radial	5619.2	5619.2	101	%			10:10:02
1	Y 371.029	855063.0	855063.0	100.22	%			10:11:19
1	Y RADIAL	4891.2	4891.2	101.6	%			10:10:02
1	Ag 328.068†	686.9	47.3	0.1796	ug/L	0.1796	ppb	10:11:24
1	Al 396.153Radial†	-95.5	-2.4	-2.1842	ug/L	-2.1842	ppb	10:10:02
1	As 188.979†	-51.6	-14.6	-3.4416	ug/L	-3.4416	ppb	10:11:44
1	B 249.677†	-113.0	268.7	4.1899	ug/L	4.1899	ppb	10:11:24
1	Ba 233.527†	27.7	3.4	0.0163	ug/L	0.0163	ppb	10:11:44
1	Be 313.107†	-7419.2	-91.5	-0.0284	ug/L	-0.0284	ppb	10:11:24
1	Ca 317.933Radial†	20.0	2.8	7.0382	ug/L	7.0382	ppb	10:10:22
1	Cd 226.502†	-268.6	9.5	0.0735	ug/L	0.0735	ppb	10:11:44
1	Co 228.616†	-84.2	6.3	0.0795	ug/L	0.0795	ppb	10:11:44
1	Cr 267.716†	-63.7	-35.0	-0.2989	ug/L	-0.2989	ppb	10:11:24
1	Cu 324.752†	10404.8	197.5	0.4861	ug/L	0.4861	ppb	10:11:24
1	Fe 238.204 Radial†	-0.3	-0.6	-22.095	ug/L	-22.095	ppb	10:10:22
1	K 766.490 Radial†	1537.8	49.9	21.622	ug/L	21.622	ppb	10:10:02
1	Mg 279.077 IEC†	-0.3	-0.5	-40.804	ug/L	-40.804	ppb	10:10:22
1	Mn 257.610†	863.6	35.2	0.0257	ug/L	0.0257	ppb	10:11:44
1	Mo 202.031†	34.2	2.4	0.0952	ug/L	0.0952	ppb	10:11:44
1	Na 589.592 Radial†	-172.2	-0.1	-0.2094	ug/L	-0.2094	ppb	10:10:22
1	Ni 231.604†	165.5	17.0	0.2724	ug/L	0.2724	ppb	10:11:44
1	P 214.914†	359.3	21.8	7.6434	ug/L	7.6434	ppb	10:11:44
1	Pb 220.353†	-14.3	14.8	1.1103	ug/L	1.1103	ppb	10:11:44
1	S 181.975 Axial†	61.3	-6.6	-5.6162	ug/L	-5.6162	ppb	10:11:44
1	Sb 206.836†	50.7	5.2	1.0374	ug/L	1.0374	ppb	10:11:44
1	Se 196.026†	-15.1	6.5	2.0343	ug/L	2.0343	ppb	10:11:44
1	Si 251.611†	605.7	44.7	0.9121	ug/L	0.9121	ppb	10:11:44
1	Sn 189.927†	10.2	4.7	0.4889	ug/L	0.4889	ppb	10:11:44
1	Sr 421.552†	8.2	2.6	0.0401	ug/L	0.0401	ppb	10:10:22
1	Ti 334.940†	-1098.3	12.6	0.0172	ug/L	0.0172	ppb	10:11:24
1	Tl 190.801†	-61.2	0.3	0.0480	ug/L	0.0480	ppb	10:11:44
1	U 409.014†	-3850.0	-9.3	-0.2275	ug/L	-0.2275	ppb	10:11:19
1	V 292.402†	-1677.0	-21.6	-0.1194	ug/L	-0.1194	ppb	10:11:24
1	Zn 213.857†	1258.4	134.0	0.7499	ug/L	0.7499	ppb	10:11:44
1	SiO2†	620.8	17.5	0.7492	ug/L	0.7492	ppb	10:12:50
2	Sc 361.383	1069316.7	1069316.7	100.80	%			10:11:49
2	Sc Radial	5629.3	5629.3	101	%			10:10:27
2	Y 371.029	858517.5	858517.5	100.62	%			10:11:49
2	Y RADIAL	4855.9	4855.9	100.8	%			10:10:27
2	Ag 328.068†	676.2	32.3	0.1208	ug/L	0.1208	ppb	10:11:54
2	Al 396.153Radial†	-91.2	2.0	1.8521	ug/L	1.8521	ppb	10:10:27
2	As 188.979†	-44.8	-7.5	-1.7654	ug/L	-1.7654	ppb	10:12:14
2	B 249.677†	-123.3	259.2	4.0408	ug/L	4.0408	ppb	10:11:54
2	Ba 233.527†	23.9	-0.6	-0.0030	ug/L	-0.0030	ppb	10:12:14
2	Be 313.107†	-7510.8	-135.4	-0.0419	ug/L	-0.0419	ppb	10:11:54
2	Ca 317.933Radial†	16.0	-1.1	-2.7930	ug/L	-2.7930	ppb	10:10:47
2	Cd 226.502†	-288.6	-8.6	-0.0630	ug/L	-0.0630	ppb	10:12:14
2	Co 228.616†	-88.3	2.8	0.0352	ug/L	0.0352	ppb	10:12:14
2	Cr 267.716†	-28.7	0.1	0.0000	ug/L	0.0000	ppb	10:11:54
2	Cu 324.752†	10297.6	25.1	0.0611	ug/L	0.0611	ppb	10:11:54
2	Fe 238.204 Radial†	-0.0	-0.4	-13.229	ug/L	-13.229	ppb	10:10:47
2	K 766.490 Radial†	1552.5	61.7	26.759	ug/L	26.759	ppb	10:10:27
2	Mg 279.077 IEC†	2.2	2.0	160.02	ug/L	160.02	ppb	10:10:47
2	Mn 257.610†	868.0	34.2	0.0222	ug/L	0.0222	ppb	10:12:14
2	Mo 202.031†	38.9	6.8	0.2725	ug/L	0.2725	ppb	10:12:14
2	Na 589.592 Radial†	-186.1	-13.6	-36.706	ug/L	-36.706	ppb	10:10:47
2	Ni 231.604†	162.3	12.7	0.2043	ug/L	0.2043	ppb	10:12:14

2	P 214.914†	334.4	-5.1	-1.8065 ug/L	-1.8065 ppb	10:12:14
2	Pb 220.353†	-20.2	9.0	0.6783 ug/L	0.6783 ppb	10:12:14
2	S 181.975 Axial†	69.9	1.5	1.2588 ug/L	1.2588 ppb	10:12:14
2	Sb 206.836†	55.1	9.2	1.8205 ug/L	1.8205 ppb	10:12:14
2	Se 196.026†	-16.1	5.6	1.7877 ug/L	1.7877 ppb	10:12:14
2	Si 251.611†	597.5	32.7	0.6587 ug/L	0.6587 ppb	10:12:14
2	Sn 189.927†	12.0	6.5	0.6728 ug/L	0.6728 ppb	10:12:14
2	Sr 421.552†	-0.3	-5.8	-0.0892 ug/L	-0.0892 ppb	10:10:47
2	Ti 334.940†	-1058.2	59.4	0.0757 ug/L	0.0757 ppb	10:11:54
2	Tl 190.801†	-64.4	-2.5	-0.4195 ug/L	-0.4195 ppb	10:12:14
2	U 409.014†	-3694.3	169.6	4.2087 ug/L	4.2087 ppb	10:11:49
2	V 292.402†	-1628.9	36.7	0.2243 ug/L	0.2243 ppb	10:11:54
2	Zn 213.857†	1236.8	104.6	0.5788 ug/L	0.5788 ppb	10:12:14
2	SiO2†	605.7	-1.5	-0.0994 ug/L	-0.0994 ppb	10:12:55
3	Sc 361.383	1062135.4	1062135.4	100.12 %		10:12:20
3	Sc Radial	5726.3	5726.3	103 %		10:10:52
3	Y 371.029	854170.1	854170.1	100.11 %		10:12:20
3	Y RADIAL	4978.7	4978.7	103.4 %		10:10:52
3	Ag 328.068†	596.6	-42.7	-0.1739 ug/L	-0.1739 ppb	10:12:25
3	Al 396.153Radial†	-64.8	29.2	26.595 ug/L	26.595 ppb	10:10:52
3	As 188.979†	-48.3	-11.4	-2.6739 ug/L	-2.6739 ppb	10:12:45
3	B 249.677†	-137.5	244.2	3.8077 ug/L	3.8077 ppb	10:12:25
3	Ba 233.527†	32.8	8.5	0.0434 ug/L	0.0434 ppb	10:12:45
3	Be 313.107†	-7462.3	-137.3	-0.0426 ug/L	-0.0426 ppb	10:12:25
3	Ca 317.933Radial†	21.3	3.8	9.4766 ug/L	9.4766 ppb	10:11:12
3	Cd 226.502†	-293.9	-15.9	-0.1159 ug/L	-0.1159 ppb	10:12:45
3	Co 228.616†	-77.2	13.3	0.1659 ug/L	0.1659 ppb	10:12:45
3	Cr 267.716†	9.4	38.0	0.3245 ug/L	0.3245 ppb	10:12:25
3	Cu 324.752†	10285.9	82.5	0.2022 ug/L	0.2022 ppb	10:12:25
3	Fe 238.204 Radial†	-0.3	-0.6	-22.364 ug/L	-22.364 ppb	10:11:12
3	K 766.490 Radial†	1501.0	-14.5	-6.2704 ug/L	-6.2704 ppb	10:10:52
3	Mg 279.077 IEC†	-1.8	-1.9	-151.32 ug/L	-151.32 ppb	10:11:12
3	Mn 257.610†	857.0	29.0	0.0229 ug/L	0.0229 ppb	10:12:45
3	Mo 202.031†	36.6	4.8	0.1888 ug/L	0.1888 ppb	10:12:45
3	Na 589.592 Radial†	-183.0	-7.4	-20.091 ug/L	-20.091 ppb	10:11:12
3	Ni 231.604†	155.8	7.4	0.1180 ug/L	0.1180 ppb	10:12:45
3	P 214.914†	337.7	0.4	0.1410 ug/L	0.1410 ppb	10:12:45
3	Pb 220.353†	-5.3	23.7	1.7877 ug/L	1.7877 ppb	10:12:45
3	S 181.975 Axial†	71.0	3.0	2.5743 ug/L	2.5743 ppb	10:12:45
3	Sb 206.836†	52.0	6.6	1.2846 ug/L	1.2846 ppb	10:12:45
3	Se 196.026†	-12.9	8.7	2.7668 ug/L	2.7668 ppb	10:12:45
3	Si 251.611†	618.9	58.0	1.1952 ug/L	1.1952 ppb	10:12:45
3	Sn 189.927†	7.7	2.3	0.2347 ug/L	0.2347 ppb	10:12:45
3	Sr 421.552†	-1.2	-6.6	-0.1023 ug/L	-0.1023 ppb	10:11:12
3	Ti 334.940†	-1088.2	22.3	0.0301 ug/L	0.0301 ppb	10:12:25
3	Tl 190.801†	-57.0	4.4	0.7456 ug/L	0.7456 ppb	10:12:45
3	U 409.014†	-3872.6	-33.3	-0.8247 ug/L	-0.8247 ppb	10:12:20
3	V 292.402†	-1572.8	81.8	0.4653 ug/L	0.4653 ppb	10:12:25
3	Zn 213.857†	1256.5	132.6	0.7473 ug/L	0.7473 ppb	10:12:45
3	SiO2†	684.3	81.2	3.5825 ug/L	3.5825 ppb	10:13:00

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1064657.0	100.36	%	0.381				0.38%
Sc Radial	5658.3	102	%	1.1				1.05%
Y 371.029	855916.8	100.32	%	0.269				0.27%
Y RADIAL	4908.6	101.9	%	1.31				1.29%
Ag 328.068†	12.3	0.0422	ug/L	0.18942	0.0422	ppb	0.18942	448.85%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.6	8.7543	ug/L	15.58188	8.7543	ppb	15.58188	177.99%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.2	-2.6270	ug/L	0.83913	-2.6270	ppb	0.83913	31.94%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	257.3	4.0128	ug/L	0.19262	4.0128	ppb	0.19262	4.80%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.7	0.0189	ug/L	0.02328	0.0189	ppb	0.02328	123.18%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.4	-0.0376	ug/L	0.00800	-0.0376	ppb	0.00800	21.25%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          1.8      4.5739 ug/L       6.49541      4.5739 ppb        6.49541 142.01%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -5.0     -0.0351 ug/L       0.09773     -0.0351 ppb        0.09773 278.26%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                7.5      0.0936 ug/L       0.06649      0.0936 ppb        0.06649  71.07%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                1.1      0.0085 ug/L       0.31178      0.0085 ppb        0.31178 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              101.7      0.2498 ug/L       0.21648      0.2498 ppb        0.21648  86.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5     -19.229 ug/L        5.1983     -19.229 ppb         5.1983  27.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         32.4      14.037 ug/L       17.7734      14.037 ppb        17.7734 126.62%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.1     -10.703 ug/L      157.8385     -10.703 ppb       157.8385 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               32.8      0.0236 ug/L       0.00188      0.0236 ppb        0.00188   7.96%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.7      0.1855 ug/L       0.08870      0.1855 ppb        0.08870  47.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -7.0     -19.002 ug/L       18.2728     -19.002 ppb        18.2728  96.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               12.4      0.1983 ug/L       0.07739      0.1983 ppb        0.07739  39.03%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 5.7      1.9926 ug/L       4.98968      1.9926 ppb        4.98968 250.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               15.9      1.1921 ug/L       0.55921      1.1921 ppb        0.55921  46.91%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.7     -0.5944 ug/L       4.39850     -0.5944 ppb        4.39850 740.05%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.0      1.3808 ug/L       0.40029      1.3808 ppb        0.40029  28.99%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                7.0      2.1962 ug/L       0.50925      2.1962 ppb        0.50925  23.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               45.1      0.9220 ug/L       0.26841      0.9220 ppb        0.26841  29.11%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.5      0.4655 ug/L       0.22000      0.4655 ppb        0.22000  47.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -3.3     -0.0505 ug/L       0.07870     -0.0505 ppb        0.07870 155.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               31.5      0.0410 ug/L       0.03074      0.0410 ppb        0.03074  74.91%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.7      0.1247 ug/L       0.58632      0.1247 ppb        0.58632 470.17%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                42.3      1.0522 ug/L       2.74987      1.0522 ppb        2.74987 261.36%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                32.3      0.1900 ug/L       0.29386      0.1900 ppb        0.29386 154.62%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              123.8      0.6920 ug/L       0.09801      0.6920 ppb        0.09801  14.16%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     32.4      1.4108 ug/L       1.92802      1.4108 ppb        1.92802 136.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/8/2009 10:15:11
Data Type: Reprocessed on 7/8/2009 11:40:11

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1047868.8	1047868.8	98.773	%			10:18:21
1	Sc Radial	5489.2	5489.2	98.6	%			10:17:05
1	Y 371.029	843324.4	843324.4	98.841	%			10:18:21
1	Y RADIAL	4749.6	4749.6	98.63	%			10:17:05
1	Ag 328.068†	1908.9	1294.0	5.1281	ug/L	5.1281	ppb	10:18:26
1	Al 396.153Radial†	137.4	231.5	210.24	ug/L	210.24	ppb	10:17:05
1	As 188.979†	70.2	108.0	25.354	ug/L	25.354	ppb	10:18:47
1	B 249.677†	2924.9	3342.8	52.070	ug/L	52.070	ppb	10:18:26
1	Ba 233.527†	1019.6	1008.0	5.1161	ug/L	5.1161	ppb	10:18:47
1	Be 313.107†	8654.4	16078.1	5.0107	ug/L	5.0107	ppb	10:18:26
1	Ca 317.933Radial†	95.1	79.5	197.91	ug/L	197.91	ppb	10:17:25
1	Cd 226.502†	377.6	659.9	4.9265	ug/L	4.9265	ppb	10:18:47
1	Co 228.616†	298.6	392.8	4.9073	ug/L	4.9073	ppb	10:18:47
1	Cr 267.716†	559.7	595.3	5.0626	ug/L	5.0626	ppb	10:18:47
1	Cu 324.752†	13982.0	3964.4	9.7874	ug/L	9.7874	ppb	10:18:26
1	Fe 238.204 Radial†	3.4	3.1	108.63	ug/L	108.63	ppb	10:17:25
1	K 766.490 Radial†	1881.1	433.9	188.09	ug/L	188.09	ppb	10:17:05
1	Mg 279.077 IEC†	3.4	3.3	260.55	ug/L	260.55	ppb	10:17:25
1	Mn 257.610†	13937.0	13283.1	10.506	ug/L	10.506	ppb	10:18:26
1	Mo 202.031†	283.1	254.8	10.207	ug/L	10.207	ppb	10:18:47
1	Na 589.592 Radial†	-73.9	95.5	258.17	ug/L	258.17	ppb	10:17:25
1	Ni 231.604†	470.7	328.3	5.2585	ug/L	5.2585	ppb	10:18:47
1	P 214.914†	747.0	419.3	146.74	ug/L	146.74	ppb	10:18:47
1	Pb 220.353†	129.9	160.5	12.084	ug/L	12.084	ppb	10:18:47
1	S 181.975 Axial†	177.5	111.8	94.633	ug/L	94.633	ppb	10:18:47
1	Sb 206.836†	107.1	63.0	12.627	ug/L	12.627	ppb	10:18:47
1	Se 196.026†	79.0	101.6	33.458	ug/L	33.458	ppb	10:18:47
1	Si 251.611†	5379.4	4886.1	100.55	ug/L	100.55	ppb	10:18:26
1	Sn 189.927†	102.0	97.8	10.192	ug/L	10.192	ppb	10:18:47
1	Sr 421.552†	343.2	342.5	5.2744	ug/L	5.2744	ppb	10:17:25
1	Ti 334.940†	2629.6	3771.5	4.9245	ug/L	4.9245	ppb	10:18:26
1	Tl 190.801†	45.6	107.5	18.194	ug/L	18.194	ppb	10:18:47
1	U 409.014†	-1614.8	2199.9	54.559	ug/L	54.559	ppb	10:18:21
1	V 292.402†	-733.6	910.1	5.3790	ug/L	5.3790	ppb	10:18:26
1	Zn 213.857†	2833.5	1746.3	9.6832	ug/L	9.6832	ppb	10:18:47
1	SiO2†	5363.4	4827.7	212.72	ug/L	212.72	ppb	10:19:53
2	Sc 361.383	1047486.5	1047486.5	98.737	%			10:18:52
2	Sc Radial	5556.3	5556.3	99.8	%			10:17:30
2	Y 371.029	843422.2	843422.2	98.852	%			10:18:52
2	Y RADIAL	4839.9	4839.9	100.5	%			10:17:30
2	Ag 328.068†	1979.1	1365.8	5.4057	ug/L	5.4057	ppb	10:18:57
2	Al 396.153Radial†	131.7	224.1	203.50	ug/L	203.50	ppb	10:17:30
2	As 188.979†	79.1	117.0	27.460	ug/L	27.460	ppb	10:19:17
2	B 249.677†	2837.5	3255.3	50.709	ug/L	50.709	ppb	10:18:57
2	Ba 233.527†	999.5	988.0	5.0149	ug/L	5.0149	ppb	10:19:17
2	Be 313.107†	8590.8	16016.9	4.9918	ug/L	4.9918	ppb	10:18:57
2	Ca 317.933Radial†	97.2	80.4	200.20	ug/L	200.20	ppb	10:17:50
2	Cd 226.502†	375.2	657.6	4.9119	ug/L	4.9119	ppb	10:19:17
2	Co 228.616†	313.3	407.7	5.0943	ug/L	5.0943	ppb	10:19:17
2	Cr 267.716†	522.4	557.7	4.7420	ug/L	4.7420	ppb	10:19:17
2	Cu 324.752†	14012.6	4000.6	9.8754	ug/L	9.8754	ppb	10:18:57
2	Fe 238.204 Radial†	2.8	2.4	85.690	ug/L	85.690	ppb	10:17:50
2	K 766.490 Radial†	1891.7	421.5	182.69	ug/L	182.69	ppb	10:17:30
2	Mg 279.077 IEC†	3.4	3.3	259.03	ug/L	259.03	ppb	10:17:50
2	Mn 257.610†	13825.0	13174.8	10.418	ug/L	10.418	ppb	10:18:57
2	Mo 202.031†	288.8	260.7	10.442	ug/L	10.442	ppb	10:19:17
2	Na 589.592 Radial†	-60.0	110.3	298.35	ug/L	298.35	ppb	10:17:50
2	Ni 231.604†	467.6	325.3	5.2109	ug/L	5.2109	ppb	10:19:17

2	P 214.914†	747.1	419.7	146.89	ug/L	146.89 ppb	10:19:17
2	Pb 220.353†	109.3	139.8	10.531	ug/L	10.531 ppb	10:19:17
2	S 181.975 Axial†	174.7	109.1	92.292	ug/L	92.292 ppb	10:19:17
2	Sb 206.836†	103.9	59.8	12.037	ug/L	12.037 ppb	10:19:17
2	Se 196.026†	78.5	101.1	33.226	ug/L	33.226 ppb	10:19:17
2	Si 251.611†	5425.5	4934.8	101.55	ug/L	101.55 ppb	10:18:57
2	Sn 189.927†	110.5	106.5	11.091	ug/L	11.091 ppb	10:19:17
2	Sr 421.552†	350.2	345.2	5.3169	ug/L	5.3169 ppb	10:17:50
2	Ti 334.940†	2664.9	3808.2	4.9728	ug/L	4.9728 ppb	10:18:57
2	Tl 190.801†	64.2	126.4	21.375	ug/L	21.375 ppb	10:19:17
2	U 409.014†	-1616.1	2197.9	54.515	ug/L	54.515 ppb	10:18:52
2	V 292.402†	-696.6	947.3	5.5964	ug/L	5.5964 ppb	10:18:57
2	Zn 213.857†	2826.6	1740.4	9.6528	ug/L	9.6528 ppb	10:19:17
2	SiO2†	5326.0	4791.8	211.13	ug/L	211.13 ppb	10:19:58
3	Sc 361.383	1064715.9	1064715.9	100.36	%		10:19:22
3	Sc Radial	5636.0	5636.0	101	%		10:17:55
3	Y 371.029	857151.8	857151.8	100.46	%		10:19:22
3	Y RADIAL	4900.5	4900.5	101.8	%		10:17:55
3	Ag 328.068†	1947.8	1302.2	5.1615	ug/L	5.1615 ppb	10:19:27
3	Al 396.153Radial†	113.0	203.8	185.06	ug/L	185.06 ppb	10:17:55
3	As 188.979†	78.8	115.4	27.092	ug/L	27.092 ppb	10:19:47
3	B 249.677†	2917.2	3288.2	51.219	ug/L	51.219 ppb	10:19:27
3	Ba 233.527†	1004.9	977.0	4.9582	ug/L	4.9582 ppb	10:19:47
3	Be 313.107†	8767.1	16051.7	5.0025	ug/L	5.0025 ppb	10:19:27
3	Ca 317.933Radial†	96.9	78.7	196.13	ug/L	196.13 ppb	10:18:15
3	Cd 226.502†	363.6	640.0	4.7768	ug/L	4.7768 ppb	10:19:47
3	Co 228.616†	310.3	399.6	4.9919	ug/L	4.9919 ppb	10:19:47
3	Cr 267.716†	528.2	554.9	4.7188	ug/L	4.7188 ppb	10:19:47
3	Cu 324.752†	14146.2	3904.0	9.6387	ug/L	9.6387 ppb	10:19:27
3	Fe 238.204 Radial†	3.6	3.2	111.85	ug/L	111.85 ppb	10:18:15
3	K 766.490 Radial†	1829.8	333.6	144.57	ug/L	144.57 ppb	10:17:55
3	Mg 279.077 IEC†	6.0	5.8	456.93	ug/L	456.93 ppb	10:18:15
3	Mn 257.610†	14031.0	13153.4	10.401	ug/L	10.401 ppb	10:19:27
3	Mo 202.031†	277.9	245.2	9.8210	ug/L	9.8210 ppb	10:19:47
3	Na 589.592 Radial†	-65.4	105.8	286.15	ug/L	286.15 ppb	10:18:15
3	Ni 231.604†	473.1	323.1	5.1761	ug/L	5.1761 ppb	10:19:47
3	P 214.914†	766.3	426.6	149.31	ug/L	149.31 ppb	10:19:47
3	Pb 220.353†	121.9	150.5	11.326	ug/L	11.326 ppb	10:19:47
3	S 181.975 Axial†	173.4	104.9	88.788	ug/L	88.788 ppb	10:19:47
3	Sb 206.836†	88.6	42.9	8.6819	ug/L	8.6819 ppb	10:19:47
3	Se 196.026†	79.8	101.1	33.313	ug/L	33.313 ppb	10:19:47
3	Si 251.611†	5402.9	4823.3	99.277	ug/L	99.277 ppb	10:19:27
3	Sn 189.927†	103.1	97.3	10.137	ug/L	10.137 ppb	10:19:47
3	Sr 421.552†	361.1	351.1	5.4073	ug/L	5.4073 ppb	10:18:15
3	Ti 334.940†	2655.9	3755.6	4.9047	ug/L	4.9047 ppb	10:19:27
3	Tl 190.801†	61.2	122.4	20.700	ug/L	20.700 ppb	10:19:47
3	U 409.014†	-1729.9	2111.1	52.358	ug/L	52.358 ppb	10:19:22
3	V 292.402†	-842.5	813.3	4.8240	ug/L	4.8240 ppb	10:19:27
3	Zn 213.857†	2842.9	1710.3	9.4754	ug/L	9.4754 ppb	10:19:47
3	SiO2†	5379.4	4757.6	209.68	ug/L	209.68 ppb	10:20:03

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1053357.1	99.291	%	0.9274				0.93%
Sc Radial	5560.5	99.9	%	1.32				1.32%
Y 371.029	847966.2	99.385	%	0.9324				0.94%
Y RADIAL	4830.0	100.3	%	1.58				1.57%
Ag 328.068†	1320.7	5.2318	ug/L	0.15157	5.2318	ppb	0.15157	2.90%
QC value within limits for Ag 328.068 Recovery = 104.64%								
Al 396.153Radial†	219.8	199.60	ug/L	13.038	199.60	ppb	13.038	6.53%
QC value within limits for Al 396.153Radial Recovery = 99.80%								
As 188.979†	113.5	26.635	ug/L	1.1249	26.635	ppb	1.1249	4.22%
QC value within limits for As 188.979 Recovery = 88.78%								
B 249.677†	3295.4	51.333	ug/L	0.6874	51.333	ppb	0.6874	1.34%
QC value within limits for B 249.677 Recovery = 102.67%								
Ba 233.527†	991.0	5.0297	ug/L	0.08000	5.0297	ppb	0.08000	1.59%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	16048.9	5.0017	ug/L	0.00949	5.0017	ppb	0.00949	0.19%
QC value within limits for Be 313.107 Recovery = 100.03%								

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Ca 317.933Radial†          79.5      198.08 ug/L        2.042      198.08 ppb        2.042   1.03%
   QC value within limits for Ca 317.933Radial  Recovery = 99.04%
Cd 226.502†               652.5      4.8717 ug/L      0.08254      4.8717 ppb      0.08254   1.69%
   QC value within limits for Cd 226.502  Recovery = 97.43%
Co 228.616†               400.0      4.9978 ug/L      0.09363      4.9978 ppb      0.09363   1.87%
   QC value within limits for Co 228.616  Recovery = 99.96%
Cr 267.716†               569.3      4.8411 ug/L      0.19215      4.8411 ppb      0.19215   3.97%
   QC value within limits for Cr 267.716  Recovery = 96.82%
Cu 324.752†              3956.3      9.7672 ug/L      0.11961      9.7672 ppb      0.11961   1.22%
   QC value within limits for Cu 324.752  Recovery = 97.67%
Fe 238.204 Radial†          2.9      102.06 ug/L       14.266      102.06 ppb       14.266  13.98%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.06%
K 766.490 Radial†         396.3      171.78 ug/L       23.724      171.78 ppb       23.724  13.81%
   QC value within limits for K 766.490 Radial  Recovery = 114.52%
Mg 279.077 IEC†             4.1      325.50 ug/L      113.822      325.50 ppb      113.822  34.97%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.50%
Mn 257.610†             13203.8      10.442 ug/L       0.0568      10.442 ppb       0.0568   0.54%
   QC value within limits for Mn 257.610  Recovery = 104.42%
Mo 202.031†               253.6      10.157 ug/L       0.3133      10.157 ppb       0.3133   3.09%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†        103.9      280.89 ug/L       20.599      280.89 ppb       20.599   7.33%
   QC value within limits for Na 589.592 Radial  Recovery = 93.63%
Ni 231.604†               325.6      5.2152 ug/L      0.04137      5.2152 ppb      0.04137   0.79%
   QC value within limits for Ni 231.604  Recovery = 104.30%
P 214.914†                421.9      147.65 ug/L        1.445      147.65 ppb        1.445   0.98%
   QC value within limits for P 214.914  Recovery = 98.43%
Pb 220.353†               150.3      11.314 ug/L       0.7766      11.314 ppb       0.7766   6.86%
   QC value within limits for Pb 220.353  Recovery = 113.14%
S 181.975 Axial†          108.6      91.904 ug/L       2.9414      91.904 ppb       2.9414   3.20%
   QC value within limits for S 181.975 Axial  Recovery = 91.90%
Sb 206.836†                55.2      11.115 ug/L       2.1279      11.115 ppb       2.1279  19.14%
   QC value within limits for Sb 206.836  Recovery = 111.15%
Se 196.026†               101.3      33.332 ug/L       0.1173      33.332 ppb       0.1173   0.35%
   QC value within limits for Se 196.026  Recovery = 111.11%
Si 251.611†              4881.4      100.46 ug/L        1.140      100.46 ppb        1.140   1.13%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†               100.5      10.473 ug/L       0.5359      10.473 ppb       0.5359   5.12%
   QC value within limits for Sn 189.927  Recovery = 104.73%
Sr 421.552†               346.3      5.3328 ug/L      0.06788      5.3328 ppb      0.06788   1.27%
   QC value within limits for Sr 421.552  Recovery = 106.66%
Ti 334.940†              3778.5      4.9340 ug/L      0.03506      4.9340 ppb      0.03506   0.71%
   QC value within limits for Ti 334.940  Recovery = 98.68%
Tl 190.801†               118.8      20.090 ug/L       1.6764      20.090 ppb       1.6764   8.34%
   QC value within limits for Tl 190.801  Recovery = 100.45%
U 409.014†               2169.6      53.811 ug/L       1.2585      53.811 ppb       1.2585   2.34%
   QC value within limits for U 409.014  Recovery = 107.62%
V 292.402†                890.2      5.2665 ug/L      0.39826      5.2665 ppb      0.39826   7.56%
   QC value within limits for V 292.402  Recovery = 105.33%
Zn 213.857†              1732.3      9.6038 ug/L      0.11224      9.6038 ppb      0.11224   1.17%
   QC value within limits for Zn 213.857  Recovery = 96.04%
SiO2†                    4792.4      211.18 ug/L        1.524      211.18 ppb        1.524   0.72%
   QC value within limits for SiO2  Recovery = 99.14%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/8/2009 10:22:14
Data Type: Reprocessed on 7/8/2009 11:40:12

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	895501.5	895501.5	84.411	%			10:25:25
1	Sc Radial	5081.7	5081.7	91.3	%			10:24:27
1	Y 371.029	714523.0	714523.0	83.745	%			10:25:25
1	Y RADIAL	4391.8	4391.8	91.20	%			10:24:27
1	Ag 328.068†	-10393.0	-12951.0	1.0699	ug/L	1.0699	ppb	10:25:25
1	Al 396.153Radial†	511366.0	560078.8	509800	ug/L	509800	ppb	10:24:07
1	As 188.979†	-139.2	-128.0	6.5707	ug/L	6.5707	ppb	10:25:45
1	B 249.677†	908.6	1457.9	-1.6992	ug/L	-1.6992	ppb	10:25:25
1	Ba 233.527†	-495.8	-611.7	1.2025	ug/L	1.2025	ppb	10:25:45
1	Be 313.107†	-7530.9	-1605.5	-0.5734	ug/L	-0.5734	ppb	10:25:25
1	Ca 317.933Radial†	172461.7	188842.4	470380	ug/L	470380	ppb	10:24:07
1	Cd 226.502†	2108.2	2775.1	-0.9878	ug/L	-0.9878	ppb	10:25:45
1	Co 228.616†	-24.7	61.1	-1.8391	ug/L	-1.8391	ppb	10:25:45
1	Cr 267.716†	-320.2	-350.7	0.5961	ug/L	0.5961	ppb	10:25:45
1	Cu 324.752†	6421.7	-2583.6	4.2681	ug/L	4.2681	ppb	10:25:25
1	Fe 238.204 Radial†	4791.8	5247.1	184080	ug/L	184080	ppb	10:24:27
1	K 766.490 Radial†	1268.1	-84.4	17.211	ug/L	17.211	ppb	10:24:07
1	Mg 279.077 IEC†	5667.1	6205.7	491320	ug/L	491320	ppb	10:24:27
1	Mn 257.610†	-1965.4	-3155.4	12.011	ug/L	12.011	ppb	10:25:25
1	Mo 202.031†	-328.7	-421.2	-4.2268	ug/L	-4.2268	ppb	10:25:45
1	Na 589.592 Radial†	-173.4	-19.4	-52.528	ug/L	-52.528	ppb	10:24:27
1	Ni 231.604†	337.4	251.5	4.0300	ug/L	4.0300	ppb	10:25:45
1	P 214.914†	293.5	10.8	28.559	ug/L	28.559	ppb	10:25:45
1	Pb 220.353†	-942.6	-1087.6	0.6717	ug/L	0.6717	ppb	10:25:45
1	S 181.975 Axial†	128.7	84.6	-28.638	ug/L	-28.638	ppb	10:25:45
1	Sb 206.836†	101.4	74.7	-0.8382	ug/L	-0.8382	ppb	10:25:45
1	Se 196.026†	-1802.9	-2114.3	-13.357	ug/L	-13.357	ppb	10:25:45
1	Si 251.611†	614.8	168.2	3.9128	ug/L	3.9128	ppb	10:25:45
1	Sn 189.927†	-348.4	-418.3	-4.5225	ug/L	-4.5225	ppb	10:25:45
1	Sr 421.552†	258.7	277.9	-0.0791	ug/L	-0.0791	ppb	10:24:27
1	Ti 334.940†	-21523.1	-24388.8	-0.4475	ug/L	-0.4475	ppb	10:25:25
1	Tl 190.801†	-123.2	-84.6	-11.647	ug/L	-11.647	ppb	10:25:45
1	U 409.014†	-2645.4	700.7	-5.2282	ug/L	-5.2282	ppb	10:25:25
1	V 292.402†	867.3	2680.3	-1.8957	ug/L	-1.8957	ppb	10:25:45
1	Zn 213.857†	5199.0	5036.8	-8.7856	ug/L	-8.7856	ppb	10:25:45
1	SiO2†	554.5	54.6	3.3717	ug/L	3.3717	ppb	10:26:41
2	Sc 361.383	894719.3	894719.3	84.337	%			10:25:50
2	Sc Radial	5092.9	5092.9	91.5	%			10:24:53
2	Y 371.029	715579.1	715579.1	83.869	%			10:25:50
2	Y RADIAL	4406.9	4406.9	91.51	%			10:24:53
2	Ag 328.068†	-10345.8	-12905.8	1.4483	ug/L	1.4483	ppb	10:25:50
2	Al 396.153Radial†	515497.0	563358.3	512790	ug/L	512790	ppb	10:24:33
2	As 188.979†	-138.6	-127.5	6.8312	ug/L	6.8312	ppb	10:26:10
2	B 249.677†	761.2	1284.1	-4.5082	ug/L	-4.5082	ppb	10:25:50
2	Ba 233.527†	-460.6	-570.4	1.4270	ug/L	1.4270	ppb	10:26:10
2	Be 313.107†	-7458.7	-1527.7	-0.5517	ug/L	-0.5517	ppb	10:25:50
2	Ca 317.933Radial†	173876.6	189972.1	473190	ug/L	473190	ppb	10:24:33
2	Cd 226.502†	2120.9	2792.4	-0.9470	ug/L	-0.9470	ppb	10:26:10
2	Co 228.616†	-11.2	77.1	-1.6492	ug/L	-1.6492	ppb	10:26:10
2	Cr 267.716†	-331.2	-364.1	0.4968	ug/L	0.4968	ppb	10:26:10
2	Cu 324.752†	6524.1	-2455.6	4.6269	ug/L	4.6269	ppb	10:25:50
2	Fe 238.204 Radial†	4821.9	5268.4	184820	ug/L	184820	ppb	10:24:53
2	K 766.490 Radial†	1216.4	-143.9	-8.5744	ug/L	-8.5744	ppb	10:24:33
2	Mg 279.077 IEC†	5711.8	6240.9	494110	ug/L	494110	ppb	10:24:53
2	Mn 257.610†	-2242.7	-3486.2	11.793	ug/L	11.793	ppb	10:25:50
2	Mo 202.031†	-331.9	-425.4	-4.3417	ug/L	-4.3417	ppb	10:26:10
2	Na 589.592 Radial†	-158.9	-3.3	-8.8064	ug/L	-8.8064	ppb	10:24:53
2	Ni 231.604†	322.8	234.5	3.7578	ug/L	3.7578	ppb	10:26:10

2	P 214.914†	282.3	-2.2	24.298	ug/L	24.298 ppb	10:26:10
2	Pb 220.353†	-980.2	-1133.2	-2.2283	ug/L	-2.2283 ppb	10:26:10
2	S 181.975 Axial†	133.9	90.9	-23.927	ug/L	-23.927 ppb	10:26:10
2	Sb 206.836†	107.1	81.5	0.3983	ug/L	0.3983 ppb	10:26:10
2	Se 196.026†	-1828.8	-2146.8	-21.144	ug/L	-21.144 ppb	10:26:10
2	Si 251.611†	621.0	176.2	4.0917	ug/L	4.0917 ppb	10:26:10
2	Sn 189.927†	-354.8	-426.2	-5.1179	ug/L	-5.1179 ppb	10:26:10
2	Sr 421.552†	253.4	271.4	-0.2039	ug/L	-0.2039 ppb	10:24:53
2	Ti 334.940†	-22184.0	-25194.7	-1.3121	ug/L	-1.3121 ppb	10:25:50
2	Tl 190.801†	-105.2	-63.3	-8.0480	ug/L	-8.0480 ppb	10:26:10
2	U 409.014†	-2792.9	523.2	-9.7248	ug/L	-9.7248 ppb	10:25:50
2	V 292.402†	765.0	2559.9	-2.6434	ug/L	-2.6434 ppb	10:26:10
2	Zn 213.857†	5183.7	5024.0	-9.0326	ug/L	-9.0326 ppb	10:26:10
2	SiO2†	499.4	-10.2	0.5414	ug/L	0.5414 ppb	10:26:46
3	Sc 361.383	893780.1	893780.1	84.249	%		10:26:15
3	Sc Radial	5118.7	5118.7	92.0	%		10:25:18
3	Y 371.029	713970.1	713970.1	83.680	%		10:26:15
3	Y RADIAL	4426.1	4426.1	91.91	%		10:25:18
3	Ag 328.068†	-10409.3	-12994.0	1.2796	ug/L	1.2796 ppb	10:26:15
3	Al 396.153Radial†	508361.4	552762.3	503140	ug/L	503140 ppb	10:24:58
3	As 188.979†	-128.5	-115.7	9.6416	ug/L	9.6416 ppb	10:26:36
3	B 249.677†	835.5	1373.2	-3.1464	ug/L	-3.1464 ppb	10:26:15
3	Ba 233.527†	-496.7	-613.9	1.2131	ug/L	1.2131 ppb	10:26:36
3	Be 313.107†	-7571.9	-1671.3	-0.5963	ug/L	-0.5963 ppb	10:26:15
3	Ca 317.933Radial†	171828.3	186787.9	465260	ug/L	465260 ppb	10:24:58
3	Cd 226.502†	2103.7	2774.7	-1.1037	ug/L	-1.1037 ppb	10:26:36
3	Co 228.616†	-21.9	64.4	-1.8116	ug/L	-1.8116 ppb	10:26:36
3	Cr 267.716†	-287.1	-312.1	0.9428	ug/L	0.9428 ppb	10:26:36
3	Cu 324.752†	6618.2	-2335.7	4.9347	ug/L	4.9347 ppb	10:26:15
3	Fe 238.204 Radial†	4851.7	5274.3	185030	ug/L	185030 ppb	10:25:18
3	K 766.490 Radial†	1220.8	-145.9	-8.5400	ug/L	-8.5400 ppb	10:24:58
3	Mg 279.077 IEC†	5734.1	6233.7	493540	ug/L	493540 ppb	10:25:18
3	Mn 257.610†	-2195.1	-3432.5	11.873	ug/L	11.873 ppb	10:26:15
3	Mo 202.031†	-345.3	-441.6	-4.9774	ug/L	-4.9774 ppb	10:26:36
3	Na 589.592 Radial†	-160.0	-3.5	-9.5568	ug/L	-9.5568 ppb	10:25:18
3	Ni 231.604†	344.5	260.6	4.1763	ug/L	4.1763 ppb	10:26:36
3	P 214.914†	258.2	-30.4	10.851	ug/L	10.851 ppb	10:26:36
3	Pb 220.353†	-979.4	-1133.4	-4.1545	ug/L	-4.1545 ppb	10:26:36
3	S 181.975 Axial†	130.4	86.9	-25.395	ug/L	-25.395 ppb	10:26:36
3	Sb 206.836†	118.6	95.4	3.4218	ug/L	3.4218 ppb	10:26:36
3	Se 196.026†	-1802.6	-2118.0	-11.599	ug/L	-11.599 ppb	10:26:36
3	Si 251.611†	555.6	99.4	2.5199	ug/L	2.5199 ppb	10:26:36
3	Sn 189.927†	-358.0	-430.4	-6.1399	ug/L	-6.1399 ppb	10:26:36
3	Sr 421.552†	264.5	282.1	0.0330	ug/L	0.0330 ppb	10:25:18
3	Ti 334.940†	-22156.0	-25189.1	-1.8382	ug/L	-1.8382 ppb	10:26:15
3	Tl 190.801†	-115.0	-75.1	-10.083	ug/L	-10.083 ppb	10:26:36
3	U 409.014†	-2610.1	736.7	-4.4537	ug/L	-4.4537 ppb	10:26:15
3	V 292.402†	851.7	2663.7	-2.0904	ug/L	-2.0904 ppb	10:26:36
3	Zn 213.857†	5227.2	5082.1	-8.7142	ug/L	-8.7142 ppb	10:26:36
3	SiO2†	573.2	78.0	4.4641	ug/L	4.4641 ppb	10:26:51

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	894667.0	84.332	%	0.0812				0.10%
Sc Radial	5097.8	91.6	%	0.34				0.37%
Y 371.029	714690.7	83.764	%	0.0958				0.11%
Y RADIAL	4408.3	91.54	%	0.357				0.39%
Ag 328.068†	-12950.3	1.2659	ug/L	0.18957	1.2659	ppb	0.18957	14.97%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	558733.1	508580	ug/L	4937.7	508580	ppb	4937.7	0.97%
QC value within limits for Al 396.153Radial Recovery = 101.72%								
As 188.979†	-123.7	7.6812	ug/L	1.70280	7.6812	ppb	1.70280	22.17%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1371.7	-3.1179	ug/L	1.40468	-3.1179	ppb	1.40468	45.05%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-598.7	1.2809	ug/L	0.12664	1.2809	ppb	0.12664	9.89%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1601.5	-0.5738	ug/L	0.02233	-0.5738	ppb	0.02233	3.89%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†     188534.1      469610 ug/L        4021.0      469610 ppb        4021.0   0.86%
   QC value within limits for Ca 317.933Radial  Recovery = 93.92%
Cd 226.502†             2780.7     -1.0128 ug/L       0.08129     -1.0128 ppb       0.08129   8.03%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               67.6     -1.7666 ug/L       0.10262     -1.7666 ppb       0.10262   5.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -342.3      0.6786 ug/L       0.23414      0.6786 ppb       0.23414  34.51%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -2458.3      4.6099 ug/L       0.33361      4.6099 ppb       0.33361   7.24%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†      5263.2      184640 ug/L         500.8      184640 ppb         500.8   0.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 92.32%
K 766.490 Radial†       -124.8      0.0323 ug/L      14.87743      0.0323 ppb      14.87743 >999.9%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†         6226.8      492990 ug/L        1472.2      492990 ppb        1472.2   0.30%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.60%
Mn 257.610†            -3358.1      11.893 ug/L        0.1103      11.893 ppb        0.1103   0.93%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -429.4     -4.5153 ug/L       0.40430     -4.5153 ppb       0.40430   8.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.630 ug/L       25.0287     -23.630 ppb       25.0287 105.92%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              248.9      3.9880 ug/L       0.21242      3.9880 ppb       0.21242   5.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -7.3      21.236 ug/L        9.2429      21.236 ppb        9.2429  43.52%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -1118.1     -1.9037 ug/L       2.42937     -1.9037 ppb       2.42937 127.61%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          87.5     -25.987 ug/L        2.4107     -25.987 ppb        2.4107   9.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               83.9      0.9940 ug/L       2.19156      0.9940 ppb       2.19156 220.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†            -2126.4     -15.367 ug/L        5.0800     -15.367 ppb        5.0800  33.06%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              148.0      3.5081 ug/L       0.86048      3.5081 ppb       0.86048  24.53%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -424.9     -5.2601 ug/L       0.81802     -5.2601 ppb       0.81802  15.55%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              277.1     -0.0833 ug/L       0.11853     -0.0833 ppb       0.11853 142.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†           -24924.2     -1.1993 ug/L       0.70220     -1.1993 ppb       0.70220  58.55%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -74.3     -9.9258 ug/L       1.80446     -9.9258 ppb       1.80446  18.18%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               653.6     -6.4689 ug/L       2.84611     -6.4689 ppb       2.84611  44.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              2634.7     -2.2098 ug/L       0.38789     -2.2098 ppb       0.38789  17.55%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             5047.6     -8.8442 ug/L       0.16704     -8.8442 ppb       0.16704   1.89%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     40.8      2.7924 ug/L       2.02453      2.7924 ppb       2.02453  72.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/8/2009 10:29:02
Data Type: Reprocessed on 7/8/2009 11:40:13

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	922949.8	922949.8	86.998	%			10:31:27
1	Sc Radial	5088.8	5088.8	91.4	%			10:30:59
1	Y 371.029	724486.5	724486.5	84.913	%			10:31:27
1	Y RADIAL	4396.5	4396.5	91.29	%			10:30:59
1	Ag 328.068†	51134.8	58138.2	284.08	ug/L	284.08	ppb	10:31:27
1	Al 396.153Radial†	511214.8	559124.8	508910	ug/L	508910	ppb	10:30:54
1	As 188.979†	1778.1	2080.7	527.29	ug/L	527.29	ppb	10:31:32
1	B 249.677†	30305.4	35216.0	523.28	ug/L	523.28	ppb	10:31:27
1	Ba 233.527†	84926.5	97594.3	499.43	ug/L	499.43	ppb	10:31:27
1	Be 313.107†	685114.1	794819.0	248.28	ug/L	248.28	ppb	10:31:27
1	Ca 317.933Radial†	171487.2	187510.8	467060	ug/L	467060	ppb	10:30:54
1	Cd 226.502†	56191.8	64867.2	463.74	ug/L	463.74	ppb	10:31:32
1	Co 228.616†	32068.4	36951.4	457.93	ug/L	457.93	ppb	10:31:32
1	Cr 267.716†	48976.1	56324.0	483.93	ug/L	483.93	ppb	10:31:32
1	Cu 324.752†	206474.7	227140.6	571.05	ug/L	571.05	ppb	10:31:27
1	Fe 238.204 Radial†	4792.9	5240.9	183870	ug/L	183870	ppb	10:30:59
1	K 766.490 Radial†	13633.7	13435.9	5876.8	ug/L	5876.8	ppb	10:30:59
1	Mg 279.077 IEC†	5720.0	6254.8	495220	ug/L	495220	ppb	10:30:59
1	Mn 257.610†	527932.1	606003.4	493.31	ug/L	493.31	ppb	10:31:27
1	Mo 202.031†	10741.5	12315.0	505.56	ug/L	505.56	ppb	10:31:32
1	Na 589.592 Radial†	1742.5	2075.9	5612.9	ug/L	5612.9	ppb	10:30:59
1	Ni 231.604†	24947.6	28527.7	456.94	ug/L	456.94	ppb	10:31:32
1	P 214.914†	6681.5	7343.1	2535.6	ug/L	2535.6	ppb	10:31:32
1	Pb 220.353†	4555.0	5264.8	477.54	ug/L	477.54	ppb	10:31:32
1	S 181.975 Axial†	2933.7	3304.3	2696.9	ug/L	2696.9	ppb	10:31:32
1	Sb 206.836†	2595.0	2937.4	568.65	ug/L	568.65	ppb	10:31:32
1	Se 196.026†	4971.6	5736.2	2540.6	ug/L	2540.6	ppb	10:31:32
1	Si 251.611†	227538.2	260983.1	5373.3	ug/L	5373.3	ppb	10:31:27
1	Sn 189.927†	3829.4	4396.2	495.92	ug/L	495.92	ppb	10:31:32
1	Sr 421.552†	32732.9	35789.2	547.06	ug/L	547.06	ppb	10:30:59
1	Ti 334.940†	325076.1	374767.2	521.46	ug/L	521.46	ppb	10:31:27
1	Tl 190.801†	2320.9	2729.1	464.98	ug/L	464.98	ppb	10:31:32
1	U 409.014†	14389.0	20374.2	482.00	ug/L	482.00	ppb	10:31:27
1	V 292.402†	80410.6	94080.6	523.26	ug/L	523.26	ppb	10:31:27
1	Zn 213.857†	83783.0	95181.8	490.76	ug/L	490.76	ppb	10:31:27
1	SiO2†	225071.9	258106.1	11379	ug/L	11379	ppb	10:31:59
2	Sc 361.383	922512.9	922512.9	86.957	%			10:31:38
2	Sc Radial	5114.2	5114.2	91.9	%			10:31:09
2	Y 371.029	723615.1	723615.1	84.810	%			10:31:38
2	Y RADIAL	4434.0	4434.0	92.07	%			10:31:09
2	Ag 328.068†	51203.8	58245.4	284.11	ug/L	284.11	ppb	10:31:38
2	Al 396.153Radial†	516287.7	561868.9	511410	ug/L	511410	ppb	10:31:04
2	As 188.979†	1781.2	2085.2	528.14	ug/L	528.14	ppb	10:31:43
2	B 249.677†	30212.2	35125.3	522.01	ug/L	522.01	ppb	10:31:38
2	Ba 233.527†	84896.2	97605.7	499.46	ug/L	499.46	ppb	10:31:38
2	Be 313.107†	684415.6	794388.8	248.15	ug/L	248.15	ppb	10:31:38
2	Ca 317.933Radial†	173685.3	188971.4	470700	ug/L	470700	ppb	10:31:04
2	Cd 226.502†	56169.1	64871.7	463.90	ug/L	463.90	ppb	10:31:43
2	Co 228.616†	32009.7	36901.3	457.33	ug/L	457.33	ppb	10:31:43
2	Cr 267.716†	48984.7	56360.6	484.22	ug/L	484.22	ppb	10:31:43
2	Cu 324.752†	206739.8	227557.9	572.02	ug/L	572.02	ppb	10:31:38
2	Fe 238.204 Radial†	4789.5	5211.1	182830	ug/L	182830	ppb	10:31:09
2	K 766.490 Radial†	13696.8	13430.5	5873.6	ug/L	5873.6	ppb	10:31:09
2	Mg 279.077 IEC†	5700.6	6202.7	491090	ug/L	491090	ppb	10:31:09
2	Mn 257.610†	527491.9	605784.5	493.08	ug/L	493.08	ppb	10:31:38
2	Mo 202.031†	10795.6	12383.1	508.21	ug/L	508.21	ppb	10:31:43
2	Na 589.592 Radial†	1739.5	2063.2	5578.5	ug/L	5578.5	ppb	10:31:09
2	Ni 231.604†	25007.5	28610.2	458.26	ug/L	458.26	ppb	10:31:43

2	P 214.914†	6657.3	7318.9	2528.5	ug/L	2528.5 ppb	10:31:43
2	Pb 220.353†	4521.9	5229.2	475.47	ug/L	475.47 ppb	10:31:43
2	S 181.975 Axial†	2966.6	3343.8	2729.8	ug/L	2729.8 ppb	10:31:43
2	Sb 206.836†	2571.5	2911.7	563.53	ug/L	563.53 ppb	10:31:43
2	Se 196.026†	5128.9	5919.8	2596.7	ug/L	2596.7 ppb	10:31:43
2	Si 251.611†	227663.7	261251.4	5378.8	ug/L	5378.8 ppb	10:31:38
2	Sn 189.927†	3812.8	4379.2	494.42	ug/L	494.42 ppb	10:31:43
2	Sr 421.552†	32971.9	35871.6	548.29	ug/L	548.29 ppb	10:31:09
2	Ti 334.940†	325093.7	374964.5	521.96	ug/L	521.96 ppb	10:31:38
2	Tl 190.801†	2278.3	2681.4	456.94	ug/L	456.94 ppb	10:31:43
2	U 409.014†	14518.6	20531.0	486.02	ug/L	486.02 ppb	10:31:38
2	V 292.402†	80202.9	93885.5	522.26	ug/L	522.26 ppb	10:31:38
2	Zn 213.857†	83836.4	95288.9	491.61	ug/L	491.61 ppb	10:31:38
2	SiO2†	226952.2	260390.9	11480	ug/L	11480 ppb	10:32:04
3	Sc 361.383	916394.6	916394.6	86.380	%		10:31:49
3	Sc Radial	5092.1	5092.1	91.5	%		10:31:20
3	Y 371.029	718336.1	718336.1	84.192	%		10:31:49
3	Y RADIAL	4424.4	4424.4	91.87	%		10:31:20
3	Ag 328.068†	50974.6	58373.2	285.14	ug/L	285.14 ppb	10:31:49
3	Al 396.153Radial†	519866.9	568222.7	517200	ug/L	517200 ppb	10:31:15
3	As 188.979†	1750.1	2062.9	523.28	ug/L	523.28 ppb	10:31:54
3	B 249.677†	30095.4	35222.0	523.28	ug/L	523.28 ppb	10:31:49
3	Ba 233.527†	84510.6	97811.1	500.55	ug/L	500.55 ppb	10:31:49
3	Be 313.107†	680536.4	795152.9	248.38	ug/L	248.38 ppb	10:31:49
3	Ca 317.933Radial†	174798.8	191009.9	475780	ug/L	475780 ppb	10:31:15
3	Cd 226.502†	55239.4	64226.6	458.85	ug/L	458.85 ppb	10:31:54
3	Co 228.616†	31559.8	36626.3	453.86	ug/L	453.86 ppb	10:31:54
3	Cr 267.716†	48208.5	55838.2	479.81	ug/L	479.81 ppb	10:31:54
3	Cu 324.752†	204835.2	226940.4	570.60	ug/L	570.60 ppb	10:31:49
3	Fe 238.204 Radial†	4816.3	5263.1	184650	ug/L	184650 ppb	10:31:20
3	K 766.490 Radial†	13730.6	13532.3	5918.2	ug/L	5918.2 ppb	10:31:20
3	Mg 279.077 IEC†	5726.3	6257.7	495450	ug/L	495450 ppb	10:31:20
3	Mn 257.610†	525190.6	607170.3	494.33	ug/L	494.33 ppb	10:31:49
3	Mo 202.031†	10571.3	12206.3	501.26	ug/L	501.26 ppb	10:31:54
3	Na 589.592 Radial†	1746.4	2079.0	5621.3	ug/L	5621.3 ppb	10:31:20
3	Ni 231.604†	24590.8	28319.8	453.61	ug/L	453.61 ppb	10:31:54
3	P 214.914†	6490.6	7177.1	2479.1	ug/L	2479.1 ppb	10:31:54
3	Pb 220.353†	4444.7	5174.6	472.31	ug/L	472.31 ppb	10:31:54
3	S 181.975 Axial†	2922.3	3315.2	2704.5	ug/L	2704.5 ppb	10:31:54
3	Sb 206.836†	2597.2	2961.2	572.95	ug/L	572.95 ppb	10:31:54
3	Se 196.026†	4938.2	5738.4	2544.4	ug/L	2544.4 ppb	10:31:54
3	Si 251.611†	226292.7	261412.2	5382.3	ug/L	5382.3 ppb	10:31:49
3	Sn 189.927†	3753.4	4339.7	490.73	ug/L	490.73 ppb	10:31:54
3	Sr 421.552†	32971.1	36026.6	550.64	ug/L	550.64 ppb	10:31:20
3	Ti 334.940†	322933.2	374959.4	522.30	ug/L	522.30 ppb	10:31:49
3	Tl 190.801†	2336.1	2765.8	471.25	ug/L	471.25 ppb	10:31:54
3	U 409.014†	14229.3	20307.5	480.26	ug/L	480.26 ppb	10:31:49
3	V 292.402†	79923.8	94178.2	523.65	ug/L	523.65 ppb	10:31:49
3	Zn 213.857†	83231.3	95232.0	490.97	ug/L	490.97 ppb	10:31:49
3	SiO2†	228890.9	264377.8	11656	ug/L	11656 ppb	10:32:10

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	920619.1	86.779	%	0.3455				0.40%
Sc Radial	5098.4	91.6	%	0.25				0.27%
Y 371.029	722145.9	84.638	%	0.3901				0.46%
Y RADIAL	4418.3	91.75	%	0.405				0.44%
Ag 328.068†	58252.3	284.44	ug/L	0.602	284.44	ppb	0.602	0.21%
QC value within limits for Ag 328.068 Recovery = 113.78%								
Al 396.153Radial†	563072.2	512510	ug/L	4248.0	512510	ppb	4248.0	0.83%
QC value within limits for Al 396.153Radial Recovery = 102.50%								
As 188.979†	2076.3	526.24	ug/L	2.594	526.24	ppb	2.594	0.49%
QC value within limits for As 188.979 Recovery = 105.25%								
B 249.677†	35187.8	522.85	ug/L	0.735	522.85	ppb	0.735	0.14%
QC value within limits for B 249.677 Recovery = 104.57%								
Ba 233.527†	97670.4	499.82	ug/L	0.636	499.82	ppb	0.636	0.13%
QC value within limits for Ba 233.527 Recovery = 99.96%								
Be 313.107†	794786.9	248.27	ug/L	0.119	248.27	ppb	0.119	0.05%
QC value within limits for Be 313.107 Recovery = 99.31%								

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Ca 317.933Radial†     189164.0      471180 ug/L        4377.5      471180 ppb         4377.5   0.93%
   QC value within limits for Ca 317.933Radial  Recovery = 94.24%
Cd 226.502†            64655.2      462.16 ug/L         2.867      462.16 ppb          2.867   0.62%
   QC value within limits for Cd 226.502  Recovery = 92.43%
Co 228.616†            36826.3      456.37 ug/L         2.197      456.37 ppb          2.197   0.48%
   QC value within limits for Co 228.616  Recovery = 91.27%
Cr 267.716†            56174.3      482.66 ug/L         2.467      482.66 ppb          2.467   0.51%
   QC value within limits for Cr 267.716  Recovery = 96.53%
Cu 324.752†           227213.0      571.22 ug/L         0.725      571.22 ppb          0.725   0.13%
   QC value within limits for Cu 324.752  Recovery = 114.24%
Fe 238.204 Radial†      5238.4      183780 ug/L         913.9      183780 ppb          913.9   0.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.89%
K 766.490 Radial†      13466.2      5889.5 ug/L         24.91      5889.5 ppb          24.91   0.42%
   QC value within limits for K 766.490 Radial  Recovery = 117.79%
Mg 279.077 IEC†         6238.4      493920 ug/L        2453.5      493920 ppb         2453.5   0.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.78%
Mn 257.610†           606319.4      493.58 ug/L         0.664      493.58 ppb          0.664   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.72%
Mo 202.031†            12301.5      505.01 ug/L         3.509      505.01 ppb          3.509   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.00%
Na 589.592 Radial†      2072.7      5604.3 ug/L         22.66      5604.3 ppb          22.66   0.40%
   QC value within limits for Na 589.592 Radial  Recovery = 112.09%
Ni 231.604†            28485.9      456.27 ug/L         2.398      456.27 ppb          2.398   0.53%
   QC value within limits for Ni 231.604  Recovery = 91.25%
P 214.914†              7279.7      2514.4 ug/L         30.79      2514.4 ppb          30.79   1.22%
   QC value within limits for P 214.914  Recovery = 100.58%
Pb 220.353†             5222.9      475.11 ug/L         2.633      475.11 ppb          2.633   0.55%
   QC value within limits for Pb 220.353  Recovery = 95.02%
S 181.975 Axial†        3321.1      2710.4 ug/L         17.23      2710.4 ppb          17.23   0.64%
   QC value within limits for S 181.975 Axial  Recovery = 108.42%
Sb 206.836†             2936.8      568.38 ug/L         4.717      568.38 ppb          4.717   0.83%
   QC value within limits for Sb 206.836  Recovery = 113.68%
Se 196.026†             5798.1      2560.6 ug/L         31.38      2560.6 ppb          31.38   1.23%
   QC value within limits for Se 196.026  Recovery = 102.42%
Si 251.611†           261215.6      5378.2 ug/L          4.51      5378.2 ppb           4.51   0.08%
   QC value within limits for Si 251.611  Recovery = 107.56%
Sn 189.927†             4371.7      493.69 ug/L         2.669      493.69 ppb          2.669   0.54%
   QC value within limits for Sn 189.927  Recovery = 98.74%
Sr 421.552†            35895.8      548.66 ug/L         1.817      548.66 ppb          1.817   0.33%
   QC value within limits for Sr 421.552  Recovery = 109.73%
Ti 334.940†           374897.0      521.91 ug/L         0.421      521.91 ppb          0.421   0.08%
   QC value within limits for Ti 334.940  Recovery = 104.38%
Tl 190.801†             2725.5      464.39 ug/L         7.171      464.39 ppb          7.171   1.54%
   QC value within limits for Tl 190.801  Recovery = 92.88%
U 409.014†             20404.2      482.76 ug/L         2.954      482.76 ppb          2.954   0.61%
   QC value within limits for U 409.014  Recovery = 96.55%
V 292.402†             94048.1      523.06 ug/L         0.714      523.06 ppb          0.714   0.14%
   QC value within limits for V 292.402  Recovery = 104.61%
Zn 213.857†            95234.2      491.11 ug/L         0.439      491.11 ppb          0.439   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.22%
SiO2†                 260958.2       11505 ug/L         140.4       11505 ppb          140.4   1.22%
   QC value within limits for SiO2  Recovery = 107.57%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/8/2009 10:34:19
Data Type: Reprocessed on 7/8/2009 11:40:14

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc 361.383	903068.1	903068.1	85.124	%			10:37:30
1	Sc Radial	4907.1	4907.1	88.2	%			10:36:32
1	Y 371.029	711048.9	711048.9	83.338	%			10:37:30
1	Y RADIAL	4267.0	4267.0	88.60	%			10:36:32
1	Ag 328.068†	-24652.6	-29599.4	5.2180	ug/L	5.2180	ppb	10:37:30
1	Al 396.153Radial†	501001.0	568251.7	517240	ug/L	517240	ppb	10:36:12
1	As 188.979†	-286.0	-299.1	17.474	ug/L	17.474	ppb	10:37:35
1	B 249.677†	2112.7	2863.4	-13.637	ug/L	-13.637	ppb	10:37:30
1	Ba 233.527†	-1436.5	-1711.8	1.5622	ug/L	1.5622	ppb	10:37:35
1	Be 313.107†	-14446.8	-9655.2	-3.0542	ug/L	-3.0542	ppb	10:37:35
1	Ca 317.933Radial†	166917.5	189275.7	471460	ug/L	471460	ppb	10:36:12
1	Cd 226.502†	5594.5	6849.8	-0.6386	ug/L	-0.6386	ppb	10:37:35
1	Co 228.616†	294.3	436.1	-0.8830	ug/L	-0.8830	ppb	10:37:35
1	Cr 267.716†	-12.1	14.4	4.1493	ug/L	4.1493	ppb	10:37:35
1	Cu 324.752†	3503.0	-6076.1	10.395	ug/L	10.395	ppb	10:37:30
1	Fe 238.204 Radial†	11037.4	12516.6	439100	ug/L	439100	ppb	10:36:32
1	K 766.490 Radial†	1318.5	22.1	26.226	ug/L	26.226	ppb	10:36:12
1	Mg 279.077 IEC†	5521.4	6261.4	495510	ug/L	495510	ppb	10:36:32
1	Mn 257.610†	-38315.8	-45838.6	11.430	ug/L	11.430	ppb	10:37:30
1	Mo 202.031†	-778.9	-946.7	-7.7594	ug/L	-7.7594	ppb	10:37:35
1	Na 589.592 Radial†	171624.9	194801.4	526720	ug/L	526720	ppb	10:36:12
1	Ni 231.604†	465.6	398.7	6.3863	ug/L	6.3863	ppb	10:37:35
1	P 214.914†	838.8	648.5	52.119	ug/L	52.119	ppb	10:37:35
1	Pb 220.353†	-640.5	-723.3	5.3786	ug/L	5.3786	ppb	10:37:35
1	S 181.975 Axial†	149.8	108.1	-10.229	ug/L	-10.229	ppb	10:37:35
1	Sb 206.836†	146.8	127.0	13.157	ug/L	13.157	ppb	10:37:35
1	Se 196.026†	-4401.3	-5148.9	-103.95	ug/L	-103.95	ppb	10:37:35
1	Si 251.611†	-979.0	-1710.1	-34.481	ug/L	-34.481	ppb	10:37:35
1	Sn 189.927†	-388.8	-462.3	-4.5333	ug/L	-4.5333	ppb	10:37:35
1	Sr 421.552†	319.3	356.6	1.1243	ug/L	1.1243	ppb	10:36:32
1	Ti 334.940†	-15490.5	-17088.2	2.9945	ug/L	2.9945	ppb	10:37:35
1	Tl 190.801†	-133.6	-95.5	-13.648	ug/L	-13.648	ppb	10:37:35
1	U 409.014†	478080.9	565462.0	13976	ug/L	13976	ppb	10:37:30
1	V 292.402†	2200.9	4238.3	-0.8487	ug/L	-0.8487	ppb	10:37:35
1	Zn 213.857†	10091.7	10732.9	-4.6503	ug/L	-4.6503	ppb	10:37:35
1	SiO2†	-858.7	-1611.1	-69.439	ug/L	-69.439	ppb	10:38:03
2	Sc 361.383	901598.6	901598.6	84.986	%			10:37:41
2	Sc Radial	4913.8	4913.8	88.3	%			10:36:57
2	Y 371.029	709120.5	709120.5	83.112	%			10:37:41
2	Y RADIAL	4292.7	4292.7	89.14	%			10:36:57
2	Ag 328.068†	-24814.9	-29837.5	4.1617	ug/L	4.1617	ppb	10:37:41
2	Al 396.153Radial†	499453.7	565720.2	514940	ug/L	514940	ppb	10:36:37
2	As 188.979†	-323.1	-343.3	7.0255	ug/L	7.0255	ppb	10:37:46
2	B 249.677†	2057.8	2802.9	-14.529	ug/L	-14.529	ppb	10:37:41
2	Ba 233.527†	-1538.0	-1834.0	0.9343	ug/L	0.9343	ppb	10:37:46
2	Be 313.107†	-14278.5	-9484.8	-2.9994	ug/L	-2.9994	ppb	10:37:46
2	Ca 317.933Radial†	166575.3	188628.5	469840	ug/L	469840	ppb	10:36:37
2	Cd 226.502†	5560.2	6820.2	-0.8124	ug/L	-0.8124	ppb	10:37:46
2	Co 228.616†	329.8	478.5	-0.3494	ug/L	-0.3494	ppb	10:37:46
2	Cr 267.716†	64.5	104.5	4.9068	ug/L	4.9068	ppb	10:37:46
2	Cu 324.752†	3384.0	-6209.4	10.043	ug/L	10.043	ppb	10:37:41
2	Fe 238.204 Radial†	11042.3	12505.0	438690	ug/L	438690	ppb	10:36:57
2	K 766.490 Radial†	1363.1	70.6	47.960	ug/L	47.960	ppb	10:36:37
2	Mg 279.077 IEC†	5523.4	6255.1	495010	ug/L	495010	ppb	10:36:57
2	Mn 257.610†	-38665.9	-46324.0	11.003	ug/L	11.003	ppb	10:37:41
2	Mo 202.031†	-762.0	-928.4	-7.0553	ug/L	-7.0553	ppb	10:37:46
2	Na 589.592 Radial†	171230.3	194087.6	524790	ug/L	524790	ppb	10:36:37
2	Ni 231.604†	460.5	393.6	6.3048	ug/L	6.3048	ppb	10:37:46

2	P 214.914†	942.4	772.0	95.294 ug/L	95.294 ppb	10:37:46
2	Pb 220.353†	-620.4	-700.9	6.6499 ug/L	6.6499 ppb	10:37:46
2	S 181.975 Axial†	185.9	150.9	26.429 ug/L	26.429 ppb	10:37:46
2	Sb 206.836†	108.8	82.6	4.4435 ug/L	4.4435 ppb	10:37:46
2	Se 196.026†	-4291.9	-5028.5	-66.360 ug/L	-66.360 ppb	10:37:46
2	Si 251.611†	-923.9	-1647.3	-33.191 ug/L	-33.191 ppb	10:37:46
2	Sn 189.927†	-421.4	-501.3	-8.7146 ug/L	-8.7146 ppb	10:37:46
2	Sr 421.552†	322.3	359.5	1.1835 ug/L	1.1835 ppb	10:36:57
2	Ti 334.940†	-14961.4	-16495.3	3.6589 ug/L	3.6589 ppb	10:37:46
2	Tl 190.801†	-157.6	-124.0	-18.471 ug/L	-18.471 ppb	10:37:46
2	U 409.014†	477587.6	565796.9	13984 ug/L	13984 ppb	10:37:41
2	V 292.402†	2214.6	4258.6	-0.6621 ug/L	-0.6621 ppb	10:37:46
2	Zn 213.857†	9931.6	10563.8	-5.5320 ug/L	-5.5320 ppb	10:37:46
2	SiO2†	-947.4	-1717.2	-74.141 ug/L	-74.141 ppb	10:38:08
3	Sc 361.383	901333.6	901333.6	84.961 %		10:37:52
3	Sc Radial	4898.6	4898.6	88.0 %		10:37:23
3	Y 371.029	709314.8	709314.8	83.134 %		10:37:52
3	Y RADIAL	4273.7	4273.7	88.74 %		10:37:23
3	Ag 328.068†	-24785.9	-29811.9	3.2059 ug/L	3.2059 ppb	10:37:52
3	Al 396.153Radial†	500210.2	568328.0	517310 ug/L	517310 ppb	10:37:02
3	As 188.979†	-299.6	-315.7	12.839 ug/L	12.839 ppb	10:37:57
3	B 249.677†	2166.2	2931.2	-12.096 ug/L	-12.096 ppb	10:37:52
3	Ba 233.527†	-1531.2	-1826.5	0.8994 ug/L	0.8994 ppb	10:37:57
3	Be 313.107†	-14414.9	-9650.3	-3.0517 ug/L	-3.0517 ppb	10:37:57
3	Ca 317.933Radial†	166348.8	188954.3	470650 ug/L	470650 ppb	10:37:02
3	Cd 226.502†	5540.8	6799.3	-0.5842 ug/L	-0.5842 ppb	10:37:57
3	Co 228.616†	326.0	474.1	-0.3588 ug/L	-0.3588 ppb	10:37:57
3	Cr 267.716†	-19.8	5.3	3.9998 ug/L	3.9998 ppb	10:37:57
3	Cu 324.752†	3399.1	-6190.5	9.9012 ug/L	9.9012 ppb	10:37:52
3	Fe 238.204 Radial†	10926.4	12412.0	435430 ug/L	435430 ppb	10:37:23
3	K 766.490 Radial†	1311.1	16.4	22.386 ug/L	22.386 ppb	10:37:02
3	Mg 279.077 IEC†	5483.5	6229.0	492950 ug/L	492950 ppb	10:37:23
3	Mn 257.610†	-38504.0	-46146.8	10.758 ug/L	10.758 ppb	10:37:52
3	Mo 202.031†	-779.9	-949.7	-8.1288 ug/L	-8.1288 ppb	10:37:57
3	Na 589.592 Radial†	170529.0	193890.3	524260 ug/L	524260 ppb	10:37:02
3	Ni 231.604†	397.1	319.1	5.1105 ug/L	5.1105 ppb	10:37:57
3	P 214.914†	880.7	699.7	73.222 ug/L	73.222 ppb	10:37:57
3	Pb 220.353†	-643.4	-728.2	5.3697 ug/L	5.3697 ppb	10:37:57
3	S 181.975 Axial†	158.0	118.1	-1.7772 ug/L	-1.7772 ppb	10:37:57
3	Sb 206.836†	116.9	92.2	6.2449 ug/L	6.2449 ppb	10:37:57
3	Se 196.026†	-4293.9	-5032.4	-78.955 ug/L	-78.955 ppb	10:37:57
3	Si 251.611†	-893.4	-1611.7	-32.442 ug/L	-32.442 ppb	10:37:57
3	Sn 189.927†	-398.8	-474.9	-5.9803 ug/L	-5.9803 ppb	10:37:57
3	Sr 421.552†	302.5	338.2	0.8478 ug/L	0.8478 ppb	10:37:23
3	Ti 334.940†	-15207.4	-16790.1	3.3272 ug/L	3.3272 ppb	10:37:57
3	Tl 190.801†	-172.7	-141.9	-21.477 ug/L	-21.477 ppb	10:37:57
3	U 409.014†	477482.3	565838.3	13986 ug/L	13986 ppb	10:37:52
3	V 292.402†	2380.5	4454.7	0.8529 ug/L	0.8529 ppb	10:37:57
3	Zn 213.857†	9939.8	10576.9	-5.0280 ug/L	-5.0280 ppb	10:37:57
3	SiO2†	-939.4	-1708.1	-73.708 ug/L	-73.708 ppb	10:38:13

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	902000.1	85.024	%	0.0881				0.10%
Sc Radial	4906.5	88.2	%	0.14				0.15%
Y 371.029	709828.1	83.195	%	0.1244				0.15%
Y RADIAL	4277.8	88.83	%	0.277				0.31%
Ag 328.068†	-29749.6	4.1952	ug/L	1.00645	4.1952	ppb	1.00645	23.99%
Al 396.153Radial†	567433.3	516500	ug/L	1350.9	516500	ppb	1350.9	0.26%
QC value within limits for Al 396.153Radial Recovery = 103.30%								
As 188.979†	-319.4	12.446	ug/L	5.2351	12.446	ppb	5.2351	42.06%
B 249.677†	2865.8	-13.421	ug/L	1.2309	-13.421	ppb	1.2309	9.17%
Ba 233.527†	-1790.8	1.1320	ug/L	0.37301	1.1320	ppb	0.37301	32.95%
Be 313.107†	-9596.8	-3.0351	ug/L	0.03096	-3.0351	ppb	0.03096	1.02%
Ca 317.933Radial†	188952.8	470650	ug/L	805.9	470650	ppb	805.9	0.17%
QC value within limits for Ca 317.933Radial Recovery = 94.13%								
Cd 226.502†	6823.1	-0.6784	ug/L	0.11915	-0.6784	ppb	0.11915	17.56%
Co 228.616†	462.9	-0.5304	ug/L	0.30543	-0.5304	ppb	0.30543	57.59%
Cr 267.716†	41.4	4.3520	ug/L	0.48630	4.3520	ppb	0.48630	11.17%

Cu 324.752†	-6158.7	10.113 ug/L	0.2544	10.113 ppb	0.2544	2.52%
Fe 238.204 Radial†	12477.9	437740 ug/L	2010.7	437740 ppb	2010.7	0.46%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.55%						
K 766.490 Radial†	36.3	32.190 ug/L	13.7909	32.190 ppb	13.7909	42.84%
Mg 279.077 IEC†	6248.5	494490 ug/L	1357.9	494490 ppb	1357.9	0.27%
QC value within limits for Mg 279.077 IEC Recovery = 98.90%						
Mn 257.610†	-46103.1	11.063 ug/L	0.3401	11.063 ppb	0.3401	3.07%
Mo 202.031†	-941.6	-7.6478 ug/L	0.54541	-7.6478 ppb	0.54541	7.13%
Na 589.592 Radial†	194259.8	525260 ug/L	1296.0	525260 ppb	1296.0	0.25%
QC value within limits for Na 589.592 Radial Recovery = 105.05%						
Ni 231.604†	370.5	5.9339 ug/L	0.71420	5.9339 ppb	0.71420	12.04%
P 214.914†	706.7	73.545 ug/L	21.5891	73.545 ppb	21.5891	29.35%
Pb 220.353†	-717.5	5.7994 ug/L	0.73655	5.7994 ppb	0.73655	12.70%
S 181.975 Axial†	125.7	4.8073 ug/L	19.19563	4.8073 ppb	19.19563	399.30%
Sb 206.836†	100.6	7.9483 ug/L	4.59954	7.9483 ppb	4.59954	57.87%
Se 196.026†	-5069.9	-83.089 ug/L	19.1336	-83.089 ppb	19.1336	23.03%
Si 251.611†	-1656.4	-33.371 ug/L	1.0313	-33.371 ppb	1.0313	3.09%
Sn 189.927†	-479.5	-6.4094 ug/L	2.12342	-6.4094 ppb	2.12342	33.13%
Sr 421.552†	351.4	1.0519 ug/L	0.17919	1.0519 ppb	0.17919	17.04%
Ti 334.940†	-16791.2	3.3269 ug/L	0.33215	3.3269 ppb	0.33215	9.98%
Tl 190.801†	-120.5	-17.865 ug/L	3.9499	-17.865 ppb	3.9499	22.11%
U 409.014†	565699.1	13982 ug/L	5.3	13982 ppb	5.3	0.04%
QC value within limits for U 409.014 Recovery = 93.21%						
V 292.402†	4317.2	-0.2193 ug/L	0.93321	-0.2193 ppb	0.93321	425.48%
Zn 213.857†	10624.5	-5.0701 ug/L	0.44239	-5.0701 ppb	0.44239	8.73%
SiO2†	-1678.8	-72.429 ug/L	2.5989	-72.429 ppb	2.5989	3.59%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/8/2009 10:40:22
Data Type: Reprocessed on 7/8/2009 11:40:15

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1014953.4	1014953.4	95.671	%			10:43:57
1	Sc Radial	5417.4	5417.4	97.3	%			10:42:20
1	Y 371.029	800941.5	800941.5	93.873	%			10:43:57
1	Y RADIAL	4706.4	4706.4	97.73	%			10:42:20
1	Ag 328.068†	-7110.5	-8070.8	7.1415	ug/L	7.1415	ppb	10:44:02
1	Al 396.153Radial†	449.0	553.4	87.615	ug/L	87.615	ppb	10:42:20
1	As 188.979†	40482.4	42351.3	9989.0	ug/L	9989.0	ppb	10:44:02
1	B 249.677†	309866.7	324270.4	5029.0	ug/L	5029.0	ppb	10:43:57
1	Ba 233.527†	2664318.6	2784861.5	14118	ug/L	14118	ppb	10:43:57
1	Be 313.107†	8856992.8	9265110.5	2903.5	ug/L	2903.5	ppb	10:43:50
1	Ca 317.933Radial†	25.7	9.5	23.698	ug/L	23.698	ppb	10:42:40
1	Cd 226.502†	1280128.2	1338334.9	10016	ug/L	10016	ppb	10:43:57
1	Co 228.616†	749635.6	783648.9	9762.7	ug/L	9762.7	ppb	10:43:57
1	Cr 267.716†	2711737.5	2834479.1	24157	ug/L	24157	ppb	10:43:57
1	Cu 324.752†	7865610.7	8211358.3	20260	ug/L	20260	ppb	10:43:50
1	Fe 238.204 Radial†	-7.6	-8.1	23.148	ug/L	23.148	ppb	10:42:40
1	K 766.490 Radial†	684372.6	701529.4	304300	ug/L	304300	ppb	10:42:15
1	Mg 279.077 IEC†	-2.9	-3.1	-51.980	ug/L	-51.980	ppb	10:42:40
1	Mn 257.610†	11427294.3	11943581.3	9438.7	ug/L	9438.7	ppb	10:43:50
1	Mo 202.031†	232338.7	242820.8	9719.4	ug/L	9719.4	ppb	10:44:02
1	Na 589.592 Radial†	-122.5	44.6	120.62	ug/L	120.62	ppb	10:42:40
1	Ni 231.604†	591314.2	617924.4	9897.7	ug/L	9897.7	ppb	10:43:57
1	P 214.914†	48706.9	50574.1	14767	ug/L	14767	ppb	10:44:02
1	Pb 220.353†	309384.9	323414.5	24253	ug/L	24253	ppb	10:44:02
1	S 181.975 Axial†	58295.0	60865.2	51520	ug/L	51520	ppb	10:44:02
1	Sb 206.836†	53440.0	55812.8	10745	ug/L	10745	ppb	10:44:02
1	Se 196.026†	29668.4	31032.6	10122	ug/L	10122	ppb	10:44:02
1	Si 251.611†	2155853.2	2252850.9	46184	ug/L	46184	ppb	10:43:57
1	Sn 189.927†	95946.9	100283.2	10430	ug/L	10430	ppb	10:44:02
1	Sr 421.552†	646073.6	663655.5	10225	ug/L	10225	ppb	10:42:15
1	Ti 334.940†	7127693.7	7451349.2	9745.7	ug/L	9745.7	ppb	10:43:50
1	Tl 190.801†	55066.4	57619.7	9753.1	ug/L	9753.1	ppb	10:44:02
1	U 409.014†	-2611.3	1105.2	-19.174	ug/L	-19.174	ppb	10:44:02
1	V 292.402†	1681684.2	1759437.4	10082	ug/L	10082	ppb	10:43:57
1	Zn 213.857†	2418310.9	2526623.2	14016	ug/L	14016	ppb	10:43:57
1	SiO2†	2181096.5	2279194.3	100050	ug/L	100050	ppb	10:44:49
2	Sc 361.383	1029870.2	1029870.2	97.077	%			10:44:17
2	Sc Radial	5497.9	5497.9	98.8	%			10:42:50
2	Y 371.029	811966.1	811966.1	95.166	%			10:44:17
2	Y RADIAL	4740.4	4740.4	98.44	%			10:42:50
2	Ag 328.068†	-7088.1	-7940.1	6.7301	ug/L	6.7301	ppb	10:44:22
2	Al 396.153Radial†	473.1	571.1	109.77	ug/L	109.77	ppb	10:42:50
2	As 188.979†	40474.1	41729.8	9842.3	ug/L	9842.3	ppb	10:44:22
2	B 249.677†	307090.3	316719.2	4911.8	ug/L	4911.8	ppb	10:44:17
2	Ba 233.527†	2644634.7	2724248.1	13811	ug/L	13811	ppb	10:44:17
2	Be 313.107†	8832006.5	9105280.2	2853.4	ug/L	2853.4	ppb	10:44:10
2	Ca 317.933Radial†	28.1	11.5	28.754	ug/L	28.754	ppb	10:43:10
2	Cd 226.502†	1271277.6	1309837.1	9803.0	ug/L	9803.0	ppb	10:44:17
2	Co 228.616†	743954.7	766447.7	9548.5	ug/L	9548.5	ppb	10:44:17
2	Cr 267.716†	2688484.5	2769471.3	23603	ug/L	23603	ppb	10:44:17
2	Cu 324.752†	7842993.7	8068977.9	19908	ug/L	19908	ppb	10:44:10
2	Fe 238.204 Radial†	-5.8	-6.2	84.443	ug/L	84.443	ppb	10:43:10
2	K 766.490 Radial†	684716.9	691584.4	299980	ug/L	299980	ppb	10:42:45
2	Mg 279.077 IEC†	-2.0	-2.2	19.126	ug/L	19.126	ppb	10:43:10
2	Mn 257.610†	11404692.0	11747293.6	9283.6	ug/L	9283.6	ppb	10:44:10
2	Mo 202.031†	232311.4	239275.2	9577.5	ug/L	9577.5	ppb	10:44:22
2	Na 589.592 Radial†	-129.4	39.4	106.58	ug/L	106.58	ppb	10:43:10
2	Ni 231.604†	586038.5	603537.6	9667.2	ug/L	9667.2	ppb	10:44:17

2	P 214.914†	48755.1	49886.4	14579	ug/L	14579 ppb	10:44:22
2	Pb 220.353†	309441.3	318788.5	23906	ug/L	23906 ppb	10:44:22
2	S 181.975 Axial†	58411.2	60102.3	50874	ug/L	50874 ppb	10:44:22
2	Sb 206.836†	53362.1	54923.6	10578	ug/L	10578 ppb	10:44:22
2	Se 196.026†	29761.5	30679.3	10007	ug/L	10007 ppb	10:44:22
2	Si 251.611†	2138710.2	2202552.9	45150	ug/L	45150 ppb	10:44:17
2	Sn 189.927†	95957.5	98841.5	10280	ug/L	10280 ppb	10:44:22
2	Sr 421.552†	646581.7	654452.3	10083	ug/L	10083 ppb	10:42:45
2	Ti 334.940†	7109976.4	7325187.8	9580.8	ug/L	9580.8 ppb	10:44:10
2	Tl 190.801†	55268.7	56994.4	9647.5	ug/L	9647.5 ppb	10:44:22
2	U 409.014†	-2581.0	1176.0	-16.357	ug/L	-16.357 ppb	10:44:22
2	V 292.402†	1665056.2	1716848.7	9839.4	ug/L	9839.4 ppb	10:44:17
2	Zn 213.857†	2400720.5	2471890.8	13712	ug/L	13712 ppb	10:44:17
2	SiO2†	2194108.9	2259577.6	99188	ug/L	99188 ppb	10:44:57
3	Sc 361.383	1027984.8	1027984.8	96.899	%		10:44:37
3	Sc Radial	5311.1	5311.1	95.4	%		10:43:20
3	Y 371.029	810508.3	810508.3	94.995	%		10:44:37
3	Y RADIAL	4586.5	4586.5	95.24	%		10:43:20
3	Ag 328.068†	-7268.9	-8140.1	6.0153	ug/L	6.0153 ppb	10:44:42
3	Al 396.153Radial†	472.0	586.8	121.54	ug/L	121.54 ppb	10:43:20
3	As 188.979†	40697.9	42037.3	9914.2	ug/L	9914.2 ppb	10:44:42
3	B 249.677†	308195.5	318440.0	4938.5	ug/L	4938.5 ppb	10:44:37
3	Ba 233.527†	2647831.5	2732543.7	13853	ug/L	13853 ppb	10:44:37
3	Be 313.107†	8792922.6	9081631.8	2846.1	ug/L	2846.1 ppb	10:44:30
3	Ca 317.933Radial†	29.0	13.4	33.386	ug/L	33.386 ppb	10:43:40
3	Cd 226.502†	1272287.1	1313280.7	9828.8	ug/L	9828.8 ppb	10:44:37
3	Co 228.616†	745426.9	769372.6	9585.2	ug/L	9585.2 ppb	10:44:37
3	Cr 267.716†	2688412.8	2774476.6	23645	ug/L	23645 ppb	10:44:37
3	Cu 324.752†	7782720.1	8021593.1	19791	ug/L	19791 ppb	10:44:30
3	Fe 238.204 Radial†	-6.7	-7.3	44.771	ug/L	44.771 ppb	10:43:40
3	K 766.490 Radial†	683971.3	715172.9	310220	ug/L	310220 ppb	10:43:15
3	Mg 279.077 IEC†	-3.7	-4.1	-128.19	ug/L	-128.19 ppb	10:43:40
3	Mn 257.610†	11381446.6	11744851.0	9281.7	ug/L	9281.7 ppb	10:44:30
3	Mo 202.031†	233312.1	240746.8	9636.4	ug/L	9636.4 ppb	10:44:42
3	Na 589.592 Radial†	-122.9	41.6	112.55	ug/L	112.55 ppb	10:43:40
3	Ni 231.604†	587015.1	605652.6	9701.1	ug/L	9701.1 ppb	10:44:37
3	P 214.914†	49152.9	50388.9	14776	ug/L	14776 ppb	10:44:42
3	Pb 220.353†	310539.8	320506.8	24035	ug/L	24035 ppb	10:44:42
3	S 181.975 Axial†	58718.6	60529.9	51236	ug/L	51236 ppb	10:44:42
3	Sb 206.836†	53615.8	55286.2	10651	ug/L	10651 ppb	10:44:42
3	Se 196.026†	29842.3	30818.9	10053	ug/L	10053 ppb	10:44:42
3	Si 251.611†	2145121.2	2213209.7	45366	ug/L	45366 ppb	10:44:37
3	Sn 189.927†	96345.6	99423.4	10341	ug/L	10341 ppb	10:44:42
3	Sr 421.552†	646025.5	676882.0	10428	ug/L	10428 ppb	10:43:15
3	Ti 334.940†	7084549.3	7312379.8	9564.0	ug/L	9564.0 ppb	10:44:30
3	Tl 190.801†	55398.8	57233.1	9687.5	ug/L	9687.5 ppb	10:44:42
3	U 409.014†	-2499.7	1255.0	-14.474	ug/L	-14.474 ppb	10:44:42
3	V 292.402†	1665986.8	1720954.9	9863.5	ug/L	9863.5 ppb	10:44:37
3	Zn 213.857†	2405918.3	2481790.6	13767	ug/L	13767 ppb	10:44:37
3	SiO2†	2167381.8	2236140.5	98142	ug/L	98142 ppb	10:45:04

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1024269.4	96.549	%	0.7657				0.79%
Sc Radial	5408.8	97.2	%	1.68				1.73%
Y 371.029	807805.3	94.678	%	0.7019				0.74%
Y RADIAL	4677.8	97.14	%	1.679				1.73%
Ag 328.068†	-8050.3	6.6290	ug/L	0.56988	6.6290	ppb	0.56988	8.60%
Al 396.153Radial†	570.4	106.31	ug/L	17.224	106.31	ppb	17.224	16.20%
As 188.979†	42039.5	9915.2	ug/L	73.36	9915.2	ppb	73.36	0.74%
QC value within limits for As 188.979 Recovery = 99.15%								
B 249.677†	319809.9	4959.8	ug/L	61.39	4959.8	ppb	61.39	1.24%
QC value within limits for B 249.677 Recovery = 99.20%								
Ba 233.527†	2747217.8	13927	ug/L	166.6	13927	ppb	166.6	1.20%
QC value within limits for Ba 233.527 Recovery = 92.85%								
Be 313.107†	9150674.2	2867.7	ug/L	31.27	2867.7	ppb	31.27	1.09%
QC value within limits for Be 313.107 Recovery = 95.59%								
Ca 317.933Radial†	11.5	28.613	ug/L	4.8452	28.613	ppb	4.8452	16.93%
Cd 226.502†	1320484.3	9882.7	ug/L	116.42	9882.7	ppb	116.42	1.18%

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   QC value within limits for Cd 226.502  Recovery = 98.83%
Co 228.616†          773156.4      9632.2 ug/L        114.57      9632.2 ppb        114.57   1.19%
   QC value within limits for Co 228.616  Recovery = 96.32%
Cr 267.716†         2792809.0       23802 ug/L         308.3       23802 ppb         308.3   1:30%
   QC value within limits for Cr 267.716  Recovery = 95.21%
Cu 324.752†         8100643.1       19986 ug/L         243.7       19986 ppb         243.7   1.22%
   QC value within limits for Cu 324.752  Recovery = 99.93%
Fe 238.204 Radial†        -7.2      50.787 ug/L       31.0875      50.787 ppb       31.0875  61.21%
K 766.490 Radial†     702762.2      304830 ug/L        5138.4      304830 ppb        5138.4   1.69%
   QC value within limits for K 766.490 Radial  Recovery = 101.61%
Mg 279.077 IEC†           -3.1     -53.681 ug/L       73.6715     -53.681 ppb       73.6715 137.24%
Mn 257.610†         11811908.6      9334.7 ug/L         90.12      9334.7 ppb         90.12   0.97%
   QC value within limits for Mn 257.610  Recovery = 93.35%
Mo 202.031†          240947.6      9644.5 ug/L         71.30      9644.5 ppb         71.30   0.74%
   QC value within limits for Mo 202.031  Recovery = 96.44%
Na 589.592 Radial†        41.9      113.25 ug/L        7.046      113.25 ppb        7.046   6.22%
Ni 231.604†          609038.2      9755.3 ug/L        124.43      9755.3 ppb        124.43   1.28%
   QC value within limits for Ni 231.604  Recovery = 97.55%
P 214.914†            50283.1       14707 ug/L         111.5       14707 ppb         111.5   0.76%
   QC value within limits for P 214.914  Recovery = 98.05%
Pb 220.353†          320903.3       24065 ug/L         175.3       24065 ppb         175.3   0.73%
   QC value within limits for Pb 220.353  Recovery = 96.26%
S 181.975 Axial†      60499.1       51210 ug/L         323.6       51210 ppb         323.6   0.63%
   QC value within limits for S 181.975 Axial  Recovery = 102.42%
Sb 206.836†           55340.9       10658 ug/L          83.6       10658 ppb          83.6   0.78%
   QC value within limits for Sb 206.836  Recovery = 106.58%
Se 196.026†           30843.6       10061 ug/L          58.0       10061 ppb          58.0   0.58%
   QC value within limits for Se 196.026  Recovery = 100.61%
Si 251.611†         2222871.2       45567 ug/L         545.3       45567 ppb         545.3   1.20%
   QC value within limits for Si 251.611  Recovery = 91.13%
Sn 189.927†           99516.1       10350 ug/L          75.4       10350 ppb          75.4   0.73%
   QC value within limits for Sn 189.927  Recovery = 103.50%
Sr 421.552†          664996.6       10245 ug/L         173.7       10245 ppb         173.7   1.70%
   QC value within limits for Sr 421.552  Recovery = 102.45%
Ti 334.940†         7362972.3      9630.2 ug/L        100.43      9630.2 ppb        100.43   1.04%
   QC value within limits for Ti 334.940  Recovery = 96.30%
Tl 190.801†           57282.4      9696.0 ug/L         53.30      9696.0 ppb         53.30   0.55%
   QC value within limits for Tl 190.801  Recovery = 96.96%
U 409.014†             1178.7     -16.669 ug/L        2.3653     -16.669 ppb        2.3653  14.19%
V 292.402†          1732413.7      9928.4 ug/L        133.88      9928.4 ppb        133.88   1.35%
   QC value within limits for V 292.402  Recovery = 99.28%
Zn 213.857†         2493434.9       13832 ug/L         161.7       13832 ppb         161.7   1.17%
   QC value within limits for Zn 213.857  Recovery = 92.21%
SiO2†               2258304.1       99125 ug/L         953.1       99125 ppb         953.1   0.96%
   QC value within limits for SiO2  Recovery = 92.64%
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:03:37
Data Type: Reprocessed on 7/8/2009 11:40:18

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1067409.9	1067409.9	100.62	%			11:06:48
1	Sc Radial	5545.0	5545.0	99.6	%			11:05:29
1	Y 371.029	849738.5	849738.5	99.593	%			11:06:48
1	Y RADIAL	4788.0	4788.0	99.42	%			11:05:29
1	Ag 328.068†	127524.3	126105.9	502.25	ug/L	502.25	ppb	11:06:48
1	Al 396.153Radial†	5299.4	5410.6	4903.4	ug/L	4903.4	ppb	11:05:29
1	As 188.979†	2078.4	2102.6	496.72	ug/L	496.72	ppb	11:07:08
1	B 249.677†	31751.6	31939.0	495.88	ug/L	495.88	ppb	11:06:48
1	Ba 233.527†	98259.2	97634.0	495.40	ug/L	495.40	ppb	11:06:48
1	Be 313.107†	1589957.2	1587550.7	494.78	ug/L	494.78	ppb	11:06:48
1	Ca 317.933Radial†	2000.8	1991.0	4959.2	ug/L	4959.2	ppb	11:05:49
1	Cd 226.502†	66514.3	66385.2	496.24	ug/L	496.24	ppb	11:06:48
1	Co 228.616†	38913.1	38765.6	483.08	ug/L	483.08	ppb	11:07:08
1	Cr 267.716†	58344.9	58016.7	494.83	ug/L	494.83	ppb	11:06:48
1	Cu 324.752†	211137.7	199655.3	492.89	ug/L	492.89	ppb	11:06:48
1	Fe 238.204 Radial†	142.3	142.5	5015.0	ug/L	5015.0	ppb	11:05:49
1	K 766.490 Radial†	13511.2	12086.4	5238.2	ug/L	5238.2	ppb	11:05:29
1	Mg 279.077 IEC†	62.2	62.2	4932.1	ug/L	4932.1	ppb	11:05:49
1	Mn 257.610†	629929.2	625250.1	494.68	ug/L	494.68	ppb	11:06:48
1	Mo 202.031†	12643.5	12534.4	502.06	ug/L	502.06	ppb	11:07:08
1	Na 589.592 Radial†	3490.6	3673.5	9932.6	ug/L	9932.6	ppb	11:05:29
1	Ni 231.604†	30743.5	30407.2	487.05	ug/L	487.05	ppb	11:07:08
1	P 214.914†	7354.4	6972.5	2389.5	ug/L	2389.5	ppb	11:07:08
1	Pb 220.353†	6693.1	6681.2	502.20	ug/L	502.20	ppb	11:07:08
1	S 181.975 Axial†	1258.3	1182.8	1000.2	ug/L	1000.2	ppb	11:07:08
1	Sb 206.836†	2588.5	2527.3	503.10	ug/L	503.10	ppb	11:07:08
1	Se 196.026†	1499.7	1512.2	511.22	ug/L	511.22	ppb	11:07:08
1	Si 251.611†	122687.2	121376.8	2492.5	ug/L	2492.5	ppb	11:06:48
1	Sn 189.927†	4831.3	4796.3	499.31	ug/L	499.31	ppb	11:07:08
1	Sr 421.552†	33822.5	33937.9	522.82	ug/L	522.82	ppb	11:05:29
1	Ti 334.940†	380487.1	379269.6	496.43	ug/L	496.43	ppb	11:06:48
1	Tl 190.801†	2880.1	2923.9	495.14	ug/L	495.14	ppb	11:07:08
1	U 409.014†	15659.6	19398.6	479.74	ug/L	479.74	ppb	11:06:48
1	V 292.402†	85512.2	86642.1	497.38	ug/L	497.38	ppb	11:06:48
1	Zn 213.857†	90296.7	88622.2	490.34	ug/L	490.34	ppb	11:06:48
1	SiO2†	123097.1	121742.0	5353.1	ug/L	5353.1	ppb	11:08:09
2	Sc 361.383	1057828.3	1057828.3	99.712	%			11:07:16
2	Sc Radial	5453.0	5453.0	98.0	%			11:05:54
2	Y 371.029	842848.9	842848.9	98.785	%			11:07:16
2	Y RADIAL	4734.2	4734.2	98.31	%			11:05:54
2	Ag 328.068†	126253.5	125979.4	501.76	ug/L	501.76	ppb	11:07:16
2	Al 396.153Radial†	5204.3	5403.2	4896.6	ug/L	4896.6	ppb	11:05:54
2	As 188.979†	2077.1	2120.0	500.82	ug/L	500.82	ppb	11:07:36
2	B 249.677†	31594.9	32067.6	497.87	ug/L	497.87	ppb	11:07:16
2	Ba 233.527†	97420.0	97677.0	495.62	ug/L	495.62	ppb	11:07:16
2	Be 313.107†	1578761.2	1590635.7	495.74	ug/L	495.74	ppb	11:07:16
2	Ca 317.933Radial†	1973.0	1996.5	4973.1	ug/L	4973.1	ppb	11:06:14
2	Cd 226.502†	65741.0	66208.5	494.92	ug/L	494.92	ppb	11:07:16
2	Co 228.616†	38917.3	39120.1	487.50	ug/L	487.50	ppb	11:07:36
2	Cr 267.716†	57810.8	58006.3	494.74	ug/L	494.74	ppb	11:07:16
2	Cu 324.752†	209446.8	199860.3	493.40	ug/L	493.40	ppb	11:07:16
2	Fe 238.204 Radial†	140.5	143.1	5035.0	ug/L	5035.0	ppb	11:06:14
2	K 766.490 Radial†	13401.9	12203.6	5289.1	ug/L	5289.1	ppb	11:05:54
2	Mg 279.077 IEC†	61.6	62.7	4968.4	ug/L	4968.4	ppb	11:06:14
2	Mn 257.610†	623982.1	624956.7	494.45	ug/L	494.45	ppb	11:07:16
2	Mo 202.031†	12615.6	12620.3	505.50	ug/L	505.50	ppb	11:07:36
2	Na 589.592 Radial†	3446.1	3687.2	9969.7	ug/L	9969.7	ppb	11:05:54
2	Ni 231.604†	30735.8	30676.3	491.36	ug/L	491.36	ppb	11:07:36

2	P 214.914†	7337.1	7021.4	2406.8 ug/L	2406.8 ppb	11:07:36
2	Pb 220.353†	6673.6	6722.0	505.26 ug/L	505.26 ppb	11:07:36
2	S 181.975 Axial†	1264.2	1200.1	1014.8 ug/L	1014.8 ppb	11:07:36
2	Sb 206.836†	2593.9	2556.0	508.91 ug/L	508.91 ppb	11:07:36
2	Se 196.026†	1503.2	1529.2	516.82 ug/L	516.82 ppb	11:07:36
2	Si 251.611†	121455.1	121245.6	2489.7 ug/L	2489.7 ppb	11:07:16
2	Sn 189.927†	4839.5	4848.0	504.69 ug/L	504.69 ppb	11:07:36
2	Sr 421.552†	33228.1	33904.0	522.30 ug/L	522.30 ppb	11:05:54
2	Ti 334.940†	377267.8	379466.3	496.69 ug/L	496.69 ppb	11:07:16
2	Tl 190.801†	2881.9	2951.6	499.79 ug/L	499.79 ppb	11:07:36
2	U 409.014†	15609.8	19489.6	482.00 ug/L	482.00 ppb	11:07:16
2	V 292.402†	84902.2	86800.1	498.32 ug/L	498.32 ppb	11:07:16
2	Zn 213.857†	89406.2	88541.9	489.86 ug/L	489.86 ppb	11:07:16
2	SiO2†	122640.5	122392.2	5381.6 ug/L	5381.6 ppb	11:08:14
3	Sc 361.383	1055071.7	1055071.7	99.452 %		11:07:43
3	Sc Radial	5432.7	5432.7	97.6 %		11:06:19
3	Y 371.029	840276.0	840276.0	98.484 %		11:07:43
3	Y RADIAL	4696.8	4696.8	97.53 %		11:06:19
3	Ag 328.068†	126120.7	126176.7	502.55 ug/L	502.55 ppb	11:07:43
3	Al 396.153Radial†	5181.8	5400.1	4893.7 ug/L	4893.7 ppb	11:06:19
3	As 188.979†	2085.4	2133.8	504.06 ug/L	504.06 ppb	11:08:03
3	B 249.677†	31427.7	31982.3	496.53 ug/L	496.53 ppb	11:07:43
3	Ba 233.527†	97457.1	97969.6	497.10 ug/L	497.10 ppb	11:07:43
3	Be 313.107†	1576182.4	1592179.6	496.22 ug/L	496.22 ppb	11:07:43
3	Ca 317.933Radial†	1975.0	2006.1	4996.9 ug/L	4996.9 ppb	11:06:39
3	Cd 226.502†	65930.8	66571.6	497.63 ug/L	497.63 ppb	11:07:43
3	Co 228.616†	38836.3	39140.6	487.76 ug/L	487.76 ppb	11:08:03
3	Cr 267.716†	57863.2	58210.5	496.48 ug/L	496.48 ppb	11:07:43
3	Cu 324.752†	208532.5	199489.8	492.49 ug/L	492.49 ppb	11:07:43
3	Fe 238.204 Radial†	141.4	144.5	5084.1 ug/L	5084.1 ppb	11:06:39
3	K 766.490 Radial†	13356.4	12208.3	5291.1 ug/L	5291.1 ppb	11:06:19
3	Mg 279.077 IEC†	60.3	61.6	4883.3 ug/L	4883.3 ppb	11:06:39
3	Mn 257.610†	623827.7	626436.5	495.63 ug/L	495.63 ppb	11:07:43
3	Mo 202.031†	12607.0	12644.6	506.48 ug/L	506.48 ppb	11:08:03
3	Na 589.592 Radial†	3459.6	3714.2	10043 ug/L	10043 ppb	11:06:19
3	Ni 231.604†	30656.7	30677.3	491.38 ug/L	491.38 ppb	11:08:03
3	P 214.914†	7338.8	7042.2	2414.3 ug/L	2414.3 ppb	11:08:03
3	Pb 220.353†	6655.9	6721.6	505.23 ug/L	505.23 ppb	11:08:03
3	S 181.975 Axial†	1273.7	1212.9	1025.7 ug/L	1025.7 ppb	11:08:03
3	Sb 206.836†	2578.9	2547.6	507.27 ug/L	507.27 ppb	11:08:03
3	Se 196.026†	1491.2	1521.0	514.35 ug/L	514.35 ppb	11:08:03
3	Si 251.611†	121268.2	121376.0	2492.4 ug/L	2492.4 ppb	11:07:43
3	Sn 189.927†	4839.7	4860.9	506.04 ug/L	506.04 ppb	11:08:03
3	Sr 421.552†	33109.5	33909.5	522.38 ug/L	522.38 ppb	11:06:19
3	Ti 334.940†	376709.4	379893.4	497.25 ug/L	497.25 ppb	11:07:43
3	Tl 190.801†	2882.8	2960.1	501.23 ug/L	501.23 ppb	11:08:03
3	U 409.014†	15694.8	19616.0	485.13 ug/L	485.13 ppb	11:07:43
3	V 292.402†	84699.0	86818.3	498.43 ug/L	498.43 ppb	11:07:43
3	Zn 213.857†	89588.7	88959.8	492.20 ug/L	492.20 ppb	11:07:43
3	SiO2†	121565.4	121632.6	5348.0 ug/L	5348.0 ppb	11:08:19

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060103.3	99.927	%	0.6104				0.61%
Sc Radial	5476.9	98.4	%	1.08				1.09%
Y 371.029	844287.8	98.954	%	0.5734				0.58%
Y RADIAL	4739.7	98.42	%	0.952				0.97%
Ag 328.068†	126087.3	502.19	ug/L	0.401	502.19	ppb	0.401	0.08%
QC value within limits for Ag 328.068 Recovery = 100.44%								
Al 396.153Radial†	5404.6	4897.9	ug/L	5.00	4897.9	ppb	5.00	0.10%
QC value within limits for Al 396.153Radial Recovery = 97.96%								
As 188.979†	2118.8	500.53	ug/L	3.674	500.53	ppb	3.674	0.73%
QC value within limits for As 188.979 Recovery = 100.11%								
B 249.677†	31996.3	496.76	ug/L	1.015	496.76	ppb	1.015	0.20%
QC value within limits for B 249.677 Recovery = 99.35%								
Ba 233.527†	97760.2	496.04	ug/L	0.926	496.04	ppb	0.926	0.19%
QC value within limits for Ba 233.527 Recovery = 99.21%								
Be 313.107†	1590122.0	495.58	ug/L	0.734	495.58	ppb	0.734	0.15%
QC value within limits for Be 313.107 Recovery = 99.12%								

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Ca 317.933Radial†        1997.9      4976.4 ug/L          19.05      4976.4 ppb          19.05   0.38%
   QC value within limits for Ca 317.933Radial  Recovery = 99.53%
Cd 226.502†             66388.4      496.27 ug/L          1.355      496.27 ppb          1.355   0.27%
   QC value within limits for Cd 226.502  Recovery = 99.25%
Co 228.616†             39008.8      486.11 ug/L          2.631      486.11 ppb          2.631   0.54%
   QC value within limits for Co 228.616  Recovery = 97.22%
Cr 267.716†             58077.8      495.35 ug/L          0.980      495.35 ppb          0.980   0.20%
   QC value within limits for Cr 267.716  Recovery = 99.07%
Cu 324.752†            199668.4      492.93 ug/L          0.457      492.93 ppb          0.457   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†        143.4      5044.7 ug/L          35.56      5044.7 ppb          35.56   0.70%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.89%
K 766.490 Radial†       12166.1      5272.8 ug/L          29.98      5272.8 ppb          29.98   0.57%
   QC value within limits for K 766.490 Radial  Recovery = 105.46%
Mg 279.077 IEC†            62.1      4927.9 ug/L          42.66      4927.9 ppb          42.66   0.87%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.56%
Mn 257.610†            625547.8      494.92 ug/L          0.624      494.92 ppb          0.624   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.98%
Mo 202.031†             12599.8      504.68 ug/L          2.320      504.68 ppb          2.320   0.46%
   QC value within limits for Mo 202.031  Recovery = 100.94%
Na 589.592 Radial†       3691.6      9981.7 ug/L          56.08      9981.7 ppb          56.08   0.56%
   QC value within limits for Na 589.592 Radial  Recovery = 99.82%
Ni 231.604†             30586.9      489.93 ug/L          2.493      489.93 ppb          2.493   0.51%
   QC value within limits for Ni 231.604  Recovery = 97.99%
P 214.914†               7012.0      2403.5 ug/L          12.69      2403.5 ppb          12.69   0.53%
   QC value within limits for P 214.914  Recovery = 96.14%
Pb 220.353†              6708.3      504.23 ug/L          1.758      504.23 ppb          1.758   0.35%
   QC value within limits for Pb 220.353  Recovery = 100.85%
S 181.975 Axial†         1198.6      1013.6 ug/L          12.78      1013.6 ppb          12.78   1.26%
   QC value within limits for S 181.975 Axial  Recovery = 101.36%
Sb 206.836†              2543.6      506.43 ug/L          2.994      506.43 ppb          2.994   0.59%
   QC value within limits for Sb 206.836  Recovery = 101.29%
Se 196.026†              1520.8      514.13 ug/L          2.806      514.13 ppb          2.806   0.55%
   QC value within limits for Se 196.026  Recovery = 102.83%
Si 251.611†            121332.8      2491.6 ug/L           1.58      2491.6 ppb           1.58   0.06%
   QC value within limits for Si 251.611  Recovery = 99.66%
Sn 189.927†              4835.1      503.35 ug/L          3.557      503.35 ppb          3.557   0.71%
   QC value within limits for Sn 189.927  Recovery = 100.67%
Sr 421.552†             33917.1      522.50 ug/L          0.280      522.50 ppb          0.280   0.05%
   QC value within limits for Sr 421.552  Recovery = 104.50%
Ti 334.940†            379543.1      496.79 ug/L          0.417      496.79 ppb          0.417   0.08%
   QC value within limits for Ti 334.940  Recovery = 99.36%
Tl 190.801†              2945.2      498.72 ug/L          3.184      498.72 ppb          3.184   0.64%
   QC value within limits for Tl 190.801  Recovery = 99.74%
U 409.014†              19501.4      482.29 ug/L          2.703      482.29 ppb          2.703   0.56%
   QC value within limits for U 409.014  Recovery = 96.46%
V 292.402†              86753.5      498.04 ug/L          0.579      498.04 ppb          0.579   0.12%
   QC value within limits for V 292.402  Recovery = 99.61%
Zn 213.857†             88708.0      490.80 ug/L          1.232      490.80 ppb          1.232   0.25%
   QC value within limits for Zn 213.857  Recovery = 98.16%
SiO2†                  121922.3      5360.9 ug/L          18.12      5360.9 ppb          18.12   0.34%
   QC value within limits for SiO2  Recovery = 100.25%
All analyte(s) passed QC.
```

Sequence No.: 16
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:10:29
Data Type: Reprocessed on 7/8/2009 11:40:19

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1056286.1	1056286.1	99.567	%			11:13:38
1	Sc Radial	5577.8	5577.8	100	%			11:12:21
1	Y 371.029	851747.2	851747.2	99.828	%			11:13:38
1	Y RADIAL	4867.5	4867.5	101.1	%			11:12:21
1	Ag 328.068†	792.7	157.6	0.6291	ug/L	0.6291	ppb	11:13:43
1	Al 396.153Radial†	-60.0	32.4	29.446	ug/L	29.446	ppb	11:12:21
1	As 188.979†	-47.8	-11.1	-2.5990	ug/L	-2.5990	ppb	11:14:03
1	B 249.677†	436.8	820.2	12.780	ug/L	12.780	ppb	11:13:43
1	Ba 233.527†	31.5	7.4	0.0373	ug/L	0.0373	ppb	11:14:03
1	Be 313.107†	-7422.8	-138.9	-0.0432	ug/L	-0.0432	ppb	11:13:43
1	Ca 317.933Radial†	33.6	16.5	41.209	ug/L	41.209	ppb	11:12:41
1	Cd 226.502†	-287.1	-10.7	-0.0827	ug/L	-0.0827	ppb	11:14:03
1	Co 228.616†	-82.2	7.8	0.0972	ug/L	0.0972	ppb	11:14:03
1	Cr 267.716†	-32.4	-4.0	-0.0341	ug/L	-0.0341	ppb	11:14:03
1	Cu 324.752†	10356.0	209.8	0.5189	ug/L	0.5189	ppb	11:13:43
1	Fe 238.204 Radial†	1.0	0.7	23.570	ug/L	23.570	ppb	11:12:41
1	K 766.490 Radial†	1855.2	377.8	163.93	ug/L	163.93	ppb	11:12:21
1	Mg 279.077 IEC†	1.4	1.2	93.519	ug/L	93.519	ppb	11:12:41
1	Mn 257.610†	821.4	-2.0	-0.0003	ug/L	-0.0003	ppb	11:14:03
1	Mo 202.031†	33.3	1.7	0.0702	ug/L	0.0702	ppb	11:14:03
1	Na 589.592 Radial†	-185.2	-14.4	-38.901	ug/L	-38.901	ppb	11:12:41
1	Ni 231.604†	168.8	21.3	0.3412	ug/L	0.3412	ppb	11:14:03
1	P 214.914†	333.0	-2.5	-0.9562	ug/L	-0.9562	ppb	11:14:03
1	Pb 220.353†	11.5	40.6	3.0505	ug/L	3.0505	ppb	11:14:03
1	S 181.975 Axial†	72.5	5.0	4.2399	ug/L	4.2399	ppb	11:14:03
1	Sb 206.836†	55.9	10.7	2.1229	ug/L	2.1229	ppb	11:14:03
1	Se 196.026†	-17.3	4.3	1.4749	ug/L	1.4749	ppb	11:14:03
1	Si 251.611†	665.9	108.7	2.1852	ug/L	2.1852	ppb	11:14:03
1	Sn 189.927†	14.7	9.3	0.9689	ug/L	0.9689	ppb	11:14:03
1	Sr 421.552†	24.7	19.1	0.2942	ug/L	0.2942	ppb	11:12:41
1	Ti 334.940†	-1110.3	-5.8	-0.0052	ug/L	-0.0052	ppb	11:13:43
1	Tl 190.801†	-57.1	4.0	0.6835	ug/L	0.6835	ppb	11:14:03
1	U 409.014†	-3785.0	33.2	0.8217	ug/L	0.8217	ppb	11:13:38
1	V 292.402†	-1685.0	-39.6	-0.2237	ug/L	-0.2237	ppb	11:13:43
1	Zn 213.857†	1105.7	-11.9	-0.0751	ug/L	-0.0751	ppb	11:14:03
1	SiO2†	681.4	82.0	3.4918	ug/L	3.4918	ppb	11:15:09
2	Sc 361.383	1055939.4	1055939.4	99.534	%			11:14:08
2	Sc Radial	5379.7	5379.7	96.7	%			11:12:46
2	Y 371.029	851096.0	851096.0	99.752	%			11:14:08
2	Y RADIAL	4702.4	4702.4	97.65	%			11:12:46
2	Ag 328.068†	776.8	141.8	0.5427	ug/L	0.5427	ppb	11:14:13
2	Al 396.153Radial†	-76.7	12.9	11.716	ug/L	11.716	ppb	11:12:46
2	As 188.979†	-40.2	-3.5	-0.8491	ug/L	-0.8491	ppb	11:14:33
2	B 249.677†	486.5	870.3	13.572	ug/L	13.572	ppb	11:14:13
2	Ba 233.527†	62.3	38.3	0.1924	ug/L	0.1924	ppb	11:14:33
2	Be 313.107†	-7290.4	-8.3	-0.0025	ug/L	-0.0025	ppb	11:14:13
2	Ca 317.933Radial†	28.6	12.6	31.463	ug/L	31.463	ppb	11:13:06
2	Cd 226.502†	-289.0	-12.7	-0.0867	ug/L	-0.0867	ppb	11:14:33
2	Co 228.616†	-77.8	12.3	0.1535	ug/L	0.1535	ppb	11:14:33
2	Cr 267.716†	-16.8	11.7	0.0997	ug/L	0.0997	ppb	11:14:33
2	Cu 324.752†	10238.9	95.6	0.2319	ug/L	0.2319	ppb	11:14:13
2	Fe 238.204 Radial†	-1.5	-1.9	-67.871	ug/L	-67.871	ppb	11:13:06
2	K 766.490 Radial†	1812.4	401.6	174.21	ug/L	174.21	ppb	11:12:46
2	Mg 279.077 IEC†	1.0	0.8	66.268	ug/L	66.268	ppb	11:13:06
2	Mn 257.610†	855.6	32.6	0.0157	ug/L	0.0157	ppb	11:14:33
2	Mo 202.031†	30.0	-1.6	-0.0706	ug/L	-0.0706	ppb	11:14:33
2	Na 589.592 Radial†	-174.9	-10.5	-28.379	ug/L	-28.379	ppb	11:13:06
2	Ni 231.604†	168.3	20.8	0.3332	ug/L	0.3332	ppb	11:14:33

2	P 214.914†	337.1	1.8	0.6504	ug/L	0.6504 ppb	11:14:33
2	Pb 220.353†	-5.9	23.2	1.7452	ug/L	1.7452 ppb	11:14:33
2	S 181.975 Axial†	79.7	12.3	10.368	ug/L	10.368 ppb	11:14:33
2	Sb 206.836†	62.7	17.5	3.4466	ug/L	3.4466 ppb	11:14:33
2	Se 196.026†	-10.1	11.5	3.4915	ug/L	3.4915 ppb	11:14:33
2	Si 251.611†	654.2	97.1	1.9448	ug/L	1.9448 ppb	11:14:33
2	Sn 189.927†	12.6	7.2	0.7527	ug/L	0.7527 ppb	11:14:33
2	Sr 421.552†	34.7	30.4	0.4675	ug/L	0.4675 ppb	11:13:06
2	Ti 334.940†	-1082.3	21.9	0.0326	ug/L	0.0326 ppb	11:14:13
2	Tl 190.801†	-39.2	22.0	3.7138	ug/L	3.7138 ppb	11:14:33
2	U 409.014†	-3991.4	-175.3	-4.3425	ug/L	-4.3425 ppb	11:14:08
2	V 292.402†	-1651.7	-6.6	-0.0367	ug/L	-0.0367 ppb	11:14:13
2	Zn 213.857†	1118.7	1.5	0.0109	ug/L	0.0109 ppb	11:14:33
2	SiO2†	678.0	78.8	3.3488	ug/L	3.3488 ppb	11:15:14
3	Sc 361.383	1066175.5	1066175.5	100.50	%		11:14:39
3	Sc Radial	5571.9	5571.9	100	%		11:13:11
3	Y 371.029	858182.7	858182.7	100.58	%		11:14:39
3	Y RADIAL	4847.5	4847.5	100.7	%		11:13:11
3	Ag 328.068†	733.0	90.7	0.3451	ug/L	0.3451 ppb	11:14:44
3	Al 396.153Radial†	-63.8	28.4	25.885	ug/L	25.885 ppb	11:13:11
3	As 188.979†	-36.2	0.9	0.1978	ug/L	0.1978 ppb	11:15:04
3	B 249.677†	438.0	817.4	12.743	ug/L	12.743 ppb	11:14:44
3	Ba 233.527†	45.2	20.7	0.1045	ug/L	0.1045 ppb	11:15:04
3	Be 313.107†	-7375.6	-22.8	-0.0070	ug/L	-0.0070 ppb	11:14:44
3	Ca 317.933Radial†	31.4	14.4	35.975	ug/L	35.975 ppb	11:13:31
3	Cd 226.502†	-275.1	4.0	0.0342	ug/L	0.0342 ppb	11:15:04
3	Co 228.616†	-85.2	5.6	0.0709	ug/L	0.0709 ppb	11:15:04
3	Cr 267.716†	-11.4	17.3	0.1457	ug/L	0.1457 ppb	11:15:04
3	Cu 324.752†	10202.8	-39.1	-0.0986	ug/L	-0.0986 ppb	11:14:44
3	Fe 238.204 Radial†	-0.7	-1.1	-36.971	ug/L	-36.971 ppb	11:13:31
3	K 766.490 Radial†	1706.6	231.3	100.35	ug/L	100.35 ppb	11:13:11
3	Mg 279.077 IEC†	0.4	0.2	14.946	ug/L	14.946 ppb	11:13:31
3	Mn 257.610†	832.1	0.9	-0.0044	ug/L	-0.0044 ppb	11:15:04
3	Mo 202.031†	38.5	6.5	0.2593	ug/L	0.2593 ppb	11:15:04
3	Na 589.592 Radial†	-180.8	-10.1	-27.397	ug/L	-27.397 ppb	11:13:31
3	Ni 231.604†	170.2	21.1	0.3376	ug/L	0.3376 ppb	11:15:04
3	P 214.914†	362.2	23.5	8.3827	ug/L	8.3827 ppb	11:15:04
3	Pb 220.353†	-20.1	9.1	0.6925	ug/L	0.6925 ppb	11:15:04
3	S 181.975 Axial†	80.7	12.5	10.586	ug/L	10.586 ppb	11:15:04
3	Sb 206.836†	62.0	16.3	3.2114	ug/L	3.2114 ppb	11:15:04
3	Se 196.026†	-17.5	4.2	1.2231	ug/L	1.2231 ppb	11:15:04
3	Si 251.611†	661.8	98.4	1.9887	ug/L	1.9887 ppb	11:15:04
3	Sn 189.927†	17.9	12.4	1.2868	ug/L	1.2868 ppb	11:15:04
3	Sr 421.552†	29.8	24.3	0.3745	ug/L	0.3745 ppb	11:13:31
3	Ti 334.940†	-1085.5	29.2	0.0391	ug/L	0.0391 ppb	11:14:44
3	Tl 190.801†	-66.9	-5.2	-0.8818	ug/L	-0.8818 ppb	11:15:04
3	U 409.014†	-3721.1	132.1	3.2823	ug/L	3.2823 ppb	11:14:39
3	V 292.402†	-1611.3	49.5	0.2955	ug/L	0.2955 ppb	11:14:44
3	Zn 213.857†	1113.1	-14.8	-0.0813	ug/L	-0.0813 ppb	11:15:04
3	SiO2†	689.8	84.0	3.6182	ug/L	3.6182 ppb	11:15:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1059467.0	99.867	%	0.5479				0.55%
Sc Radial	5509.8	99.0	%	2.03				2.05%
Y 371.029	853675.3	100.05	%	0.459				0.46%
Y RADIAL	4805.8	99.79	%	1.872				1.88%
Ag 328.068†	130.0	0.5056	ug/L	0.14559	0.5056	ppb	0.14559	28.79%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	24.6	22.349	ug/L	9.3789	22.349	ppb	9.3789	41.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.6	-1.0834	ug/L	1.41306	-1.0834	ppb	1.41306	130.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	836.0	13.032	ug/L	0.4684	13.032	ppb	0.4684	3.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.1	0.1114	ug/L	0.07778	0.1114	ppb	0.07778	69.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-56.7	-0.0176	ug/L	0.02232	-0.0176	ppb	0.02232	127.00%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          14.5      36.216 ug/L        4.8774      36.216 ppb        4.8774  13.47%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.5     -0.0451 ug/L       0.06867     -0.0451 ppb       0.06867 152.40%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 8.6      0.1072 ug/L       0.04222      0.1072 ppb       0.04222  39.39%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 8.3      0.0704 ug/L       0.09343      0.0704 ppb       0.09343 132.64%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                88.8      0.2174 ug/L       0.30899      0.2174 ppb       0.30899 142.11%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.8     -27.091 ug/L       46.5144     -27.091 ppb       46.5144 171.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         336.9      146.16 ug/L        40.010      146.16 ppb        40.010  27.37%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.7      58.244 ug/L       39.8965      58.244 ppb       39.8965  68.50%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                10.5      0.0036 ug/L       0.01059      0.0036 ppb       0.01059 290.42%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.2      0.0863 ug/L       0.16552      0.0863 ppb       0.16552 191.79%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -11.7     -31.559 ug/L        6.3772     -31.559 ppb        6.3772  20.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.1      0.3373 ug/L       0.00401      0.3373 ppb       0.00401   1.19%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  7.6      2.6923 ug/L       4.99307      2.6923 ppb       4.99307 185.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                24.3      1.8294 ug/L       1.18127      1.8294 ppb       1.18127  64.57%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            9.9      8.3978 ug/L       3.60254      8.3978 ppb       3.60254  42.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                14.8      2.9269 ug/L       0.70621      2.9269 ppb       0.70621  24.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 6.6      2.0632 ug/L       1.24335      2.0632 ppb       1.24335  60.26%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               101.4      2.0396 ug/L       0.12804      2.0396 ppb       0.12804   6.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.6      1.0028 ug/L       0.26867      1.0028 ppb       0.26867  26.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                24.6      0.3787 ug/L       0.08674      0.3787 ppb       0.08674  22.90%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                15.1      0.0222 ug/L       0.02395      0.0222 ppb       0.02395 107.99%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.1719 ug/L       2.33641      1.1719 ppb       2.33641 199.38%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 -3.3     -0.0795 ug/L       3.89151     -0.0795 ppb       3.89151 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  1.1      0.0117 ug/L       0.26296      0.0117 ppb       0.26296 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                -8.4     -0.0485 ug/L       0.05156     -0.0485 ppb       0.05156 106.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      81.6      3.4863 ug/L       0.13480      3.4863 ppb       0.13480   3.87%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: LR1
Analyst: HSC
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/8/2009 11:17:30
Data Type: Reprocessed on 7/8/2009 11:40:20

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1046705.1	1046705.1	98.664	%			11:20:42
1	Sc Radial	5285.9	5285.9	95.0	%			11:19:24
1	Y 371.029	838520.8	838520.8	98.278	%			11:20:42
1	Y RADIAL	4594.7	4594.7	95.41	%			11:19:24
1	Ag 328.068†	-28259.2	-29280.5	9.7367	ug/L	9.7367	ppb	11:20:42
1	Al 396.153Radial†	-104.1	-17.4	-14.625	ug/L	-14.625	ppb	11:19:24
1	As 188.979†	-375.6	-343.8	-2.6523	ug/L	-2.6523	ppb	11:21:02
1	B 249.677†	2868.7	3289.1	-0.5237	ug/L	-0.5237	ppb	11:20:42
1	Ba 233.527†	-1751.7	-1799.7	0.0492	ug/L	0.0492	ppb	11:21:02
1	Be 313.107†	-7239.6	-21.4	-0.0064	ug/L	-0.0064	ppb	11:20:42
1	Ca 317.933Radial†	22.3	6.5	16.305	ug/L	16.305	ppb	11:19:44
1	Cd 226.502†	5204.4	5552.6	-4.5755	ug/L	-4.5755	ppb	11:21:02
1	Co 228.616†	250.1	343.9	-1.3538	ug/L	-1.3538	ppb	11:21:02
1	Cr 267.716†	-824.6	-807.2	0.7505	ug/L	0.7505	ppb	11:21:02
1	Cu 324.752†	802.5	-9377.9	-0.5740	ug/L	-0.5740	ppb	11:20:42
1	Fe 238.204 Radial†	10567.5	11124.8	390270	ug/L	390270	ppb	11:19:24
1	K 766.490 Radial†	1599.4	210.8	389.48	ug/L	389.48	ppb	11:19:24
1	Mg 279.077 IEC†	6.2	6.3	166.70	ug/L	166.70	ppb	11:19:44
1	Mn 257.610†	-57355.3	-58959.2	4.2573	ug/L	4.2573	ppb	11:20:42
1	Mo 202.031†	-642.9	-683.4	-0.5684	ug/L	-0.5684	ppb	11:20:42
1	Na 589.592 Radial†	-176.8	-15.7	-42.375	ug/L	-42.375	ppb	11:19:44
1	Ni 231.604†	294.0	149.8	2.3977	ug/L	2.3977	ppb	11:21:02
1	P 214.914†	1226.8	906.5	9.2980	ug/L	9.2980	ppb	11:21:02
1	Pb 220.353†	427.8	462.7	-2.1099	ug/L	-2.1099	ppb	11:21:02
1	S 181.975 Axial†	88.8	22.2	18.788	ug/L	18.788	ppb	11:21:02
1	Sb 206.836†	15.9	-29.3	0.9649	ug/L	0.9649	ppb	11:21:02
1	Se 196.026†	-3818.0	-3848.1	119.57	ug/L	119.57	ppb	11:21:02
1	Si 251.611†	-912.5	-1484.9	-30.180	ug/L	-30.180	ppb	11:21:02
1	Sn 189.927†	-36.6	-42.6	2.5556	ug/L	2.5556	ppb	11:21:02
1	Sr 421.552†	22.5	18.2	0.2804	ug/L	0.2804	ppb	11:19:44
1	Ti 334.940†	-991.5	104.3	0.1206	ug/L	0.1206	ppb	11:21:02
1	Tl 190.801†	-76.4	-16.1	-3.1221	ug/L	-3.1221	ppb	11:21:02
1	U 409.014†	-2034.4	1772.8	-3.9602	ug/L	-3.9602	ppb	11:20:42
1	V 292.402†	7424.0	9177.3	-1.4441	ug/L	-1.4441	ppb	11:21:02
1	Zn 213.857†	8001.3	6987.3	-3.0916	ug/L	-3.0916	ppb	11:21:02
1	SiO2†	-992.8	-1608.6	-70.084	ug/L	-70.084	ppb	11:22:00
2	Sc 361.383	1052226.2	1052226.2	99.184	%			11:21:08
2	Sc Radial	5401.8	5401.8	97.1	%			11:19:49
2	Y 371.029	842665.3	842665.3	98.764	%			11:21:08
2	Y RADIAL	4714.0	4714.0	97.89	%			11:19:49
2	Ag 328.068†	-28377.9	-29249.9	9.3733	ug/L	9.3733	ppb	11:21:08
2	Al 396.153Radial†	-122.8	-34.3	-30.134	ug/L	-30.134	ppb	11:19:49
2	As 188.979†	-364.1	-330.2	0.2438	ug/L	0.2438	ppb	11:21:28
2	B 249.677†	3058.2	3464.9	2.4165	ug/L	2.4165	ppb	11:21:08
2	Ba 233.527†	-1739.0	-1777.6	0.1263	ug/L	0.1263	ppb	11:21:28
2	Be 313.107†	-7287.8	-31.5	-0.0094	ug/L	-0.0094	ppb	11:21:08
2	Ca 317.933Radial†	23.0	6.7	16.789	ug/L	16.789	ppb	11:20:09
2	Cd 226.502†	5255.4	5576.3	-4.2206	ug/L	-4.2206	ppb	11:21:28
2	Co 228.616†	235.9	328.3	-1.5227	ug/L	-1.5227	ppb	11:21:28
2	Cr 267.716†	-795.1	-773.0	1.0118	ug/L	1.0118	ppb	11:21:28
2	Cu 324.752†	938.3	-9245.3	-0.3338	ug/L	-0.3338	ppb	11:21:08
2	Fe 238.204 Radial†	10757.5	11081.9	388770	ug/L	388770	ppb	11:19:49
2	K 766.490 Radial†	1494.6	66.6	325.81	ug/L	325.81	ppb	11:19:49
2	Mg 279.077 IEC†	5.9	5.9	130.42	ug/L	130.42	ppb	11:20:09
2	Mn 257.610†	-57434.3	-58733.8	4.2400	ug/L	4.2400	ppb	11:21:08
2	Mo 202.031†	-612.5	-649.3	0.6913	ug/L	0.6913	ppb	11:21:08
2	Na 589.592 Radial†	-180.6	-15.6	-42.212	ug/L	-42.212	ppb	11:20:09
2	Ni 231.604†	278.0	132.1	2.1139	ug/L	2.1139	ppb	11:21:28

2	P 214.914†	1227.8	901.0	8.4921	ug/L	8.4921 ppb	11:21:28
2	Pb 220.353†	449.1	481.9	-0.5307	ug/L	-0.5307 ppb	11:21:28
2	S 181.975 Axial†	80.8	13.6	11.530	ug/L	11.530 ppb	11:21:28
2	Sb 206.836†	33.2	-12.0	4.3505	ug/L	4.3505 ppb	11:21:28
2	Se 196.026†	-3813.6	-3823.4	122.34	ug/L	122.34 ppb	11:21:28
2	Si 251.611†	-923.6	-1491.3	-30.313	ug/L	-30.313 ppb	11:21:28
2	Sn 189.927†	-40.9	-46.7	2.1032	ug/L	2.1032 ppb	11:21:28
2	Sr 421.552†	35.7	31.3	0.4814	ug/L	0.4814 ppb	11:20:09
2	Ti 334.940†	-974.5	126.7	0.1495	ug/L	0.1495 ppb	11:21:28
2	Tl 190.801†	-70.5	-9.6	-2.0337	ug/L	-2.0337 ppb	11:21:28
2	U 409.014†	-2005.9	1812.3	-2.7948	ug/L	-2.7948 ppb	11:21:08
2	V 292.402†	7472.6	9186.8	-1.1665	ug/L	-1.1665 ppb	11:21:28
2	Zn 213.857†	8017.0	6960.5	-3.0760	ug/L	-3.0760 ppb	11:21:28
2	SiO2†	-1024.5	-1635.3	-71.266	ug/L	-71.266 ppb	11:22:05
3	Sc 361.383	1038864.2	1038864.2	97.925	%		11:21:35
3	Sc Radial	5569.7	5569.7	100	%		11:20:14
3	Y 371.029	832242.4	832242.4	97.542	%		11:21:35
3	Y RADIAL	4850.2	4850.2	100.7	%		11:20:14
3	Ag 328.068†	-28102.1	-29336.3	7.7693	ug/L	7.7693 ppb	11:21:35
3	Al 396.153Radial†	-102.4	-10.1	-8.1423	ug/L	-8.1423 ppb	11:20:14
3	As 188.979†	-361.3	-332.1	-0.9980	ug/L	-0.9980 ppb	11:21:55
3	B 249.677†	2847.5	3289.3	0.2032	ug/L	0.2032 ppb	11:21:35
3	Ba 233.527†	-1784.8	-1846.9	-0.3157	ug/L	-0.3157 ppb	11:21:55
3	Be 313.107†	-7215.4	-52.1	-0.0159	ug/L	-0.0159 ppb	11:21:35
3	Ca 317.933Radial†	20.5	3.5	8.8182	ug/L	8.8182 ppb	11:20:34
3	Cd 226.502†	5264.7	5654.0	-3.1736	ug/L	-3.1736 ppb	11:21:55
3	Co 228.616†	244.1	339.7	-1.3213	ug/L	-1.3213 ppb	11:21:55
3	Cr 267.716†	-801.4	-789.8	0.7943	ug/L	0.7943 ppb	11:21:55
3	Cu 324.752†	902.1	-9270.0	-0.6227	ug/L	-0.6227 ppb	11:21:35
3	Fe 238.204 Radial†	10979.5	10969.5	384830	ug/L	384830 ppb	11:20:14
3	K 766.490 Radial†	1427.0	-47.3	273.35	ug/L	273.35 ppb	11:20:14
3	Mg 279.077 IEC†	6.1	5.9	137.86	ug/L	137.86 ppb	11:20:34
3	Mn 257.610†	-56773.9	-58804.2	3.6706	ug/L	3.6706 ppb	11:21:35
3	Mo 202.031†	-575.4	-619.4	1.6175	ug/L	1.6175 ppb	11:21:35
3	Na 589.592 Radial†	-177.6	-7.0	-19.058	ug/L	-19.058 ppb	11:20:34
3	Ni 231.604†	287.7	145.5	2.3298	ug/L	2.3298 ppb	11:21:55
3	P 214.914†	1224.2	913.2	16.013	ug/L	16.013 ppb	11:21:55
3	Pb 220.353†	422.9	460.9	-1.7263	ug/L	-1.7263 ppb	11:21:55
3	S 181.975 Axial†	81.7	15.6	13.165	ug/L	13.165 ppb	11:21:55
3	Sb 206.836†	38.2	-6.4	5.3941	ug/L	5.3941 ppb	11:21:55
3	Se 196.026†	-3850.1	-3910.1	80.299	ug/L	80.299 ppb	11:21:55
3	Si 251.611†	-924.9	-1504.6	-30.592	ug/L	-30.592 ppb	11:21:55
3	Sn 189.927†	-42.3	-48.7	1.8220	ug/L	1.8220 ppb	11:21:55
3	Sr 421.552†	28.6	23.1	0.3559	ug/L	0.3559 ppb	11:20:34
3	Ti 334.940†	-986.5	101.9	0.1187	ug/L	0.1187 ppb	11:21:55
3	Tl 190.801†	-94.3	-34.9	-6.3034	ug/L	-6.3034 ppb	11:21:55
3	U 409.014†	-2185.9	1602.5	-7.5175	ug/L	-7.5175 ppb	11:21:35
3	V 292.402†	7401.4	9211.1	-0.4859	ug/L	-0.4859 ppb	11:21:55
3	Zn 213.857†	8037.4	7085.4	-1.9547	ug/L	-1.9547 ppb	11:21:55
3	SiO2†	-936.7	-1558.9	-67.898	ug/L	-67.898 ppb	11:22:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1045931.8	98.591	%	0.6329				0.64%
Sc Radial	5419.1	97.4	%	2.56				2.63%
Y 371.029	837809.5	98.194	%	0.6151				0.63%
Y RADIAL	4719.6	98.00	%	2.655				2.71%
Ag 328.068†	-29288.9	8.9598	ug/L	1.04683	8.9598	ppb	1.04683	11.68%
Al 396.153Radial†	-20.6	-17.634	ug/L	11.3004	-17.634	ppb	11.3004	64.08%
As 188.979†	-335.4	-1.1355	ug/L	1.45294	-1.1355	ppb	1.45294	127.95%
B 249.677†	3347.8	0.6987	ug/L	1.53142	0.6987	ppb	1.53142	219.19%
Ba 233.527†	-1808.0	-0.0467	ug/L	0.23610	-0.0467	ppb	0.23610	505.55%
Be 313.107†	-35.0	-0.0105	ug/L	0.00487	-0.0105	ppb	0.00487	46.13%
Ca 317.933Radial†	5.6	13.971	ug/L	4.4688	13.971	ppb	4.4688	31.99%
Cd 226.502†	5594.3	-3.9899	ug/L	0.72889	-3.9899	ppb	0.72889	18.27%
Co 228.616†	337.3	-1.3993	ug/L	0.10812	-1.3993	ppb	0.10812	7.73%
Cr 267.716†	-790.0	0.8522	ug/L	0.13996	0.8522	ppb	0.13996	16.42%
Cu 324.752†	-9297.7	-0.5102	ug/L	0.15464	-0.5102	ppb	0.15464	30.31%
Fe 238.204 Radial†	11058.7	387960	ug/L	2812.7	387960	ppb	2812.7	0.72%

K 766.490 Radial†	76.7	329.55	ug/L	58.152	329.55	ppb	58.152	17.65%
Mg 279.077 IEC†	6.0	144.99	ug/L	19.161	144.99	ppb	19.161	13.21%
Mn 257.610†	-58832.4	4.0559	ug/L	0.33383	4.0559	ppb	0.33383	8.23%
Mo 202.031†	-650.7	0.5801	ug/L	1.09717	0.5801	ppb	1.09717	189.12%
Na 589.592 Radial†	-12.8	-34.548	ug/L	13.4155	-34.548	ppb	13.4155	38.83%
Ni 231.604†	142.4	2.2805	ug/L	0.14816	2.2805	ppb	0.14816	6.50%
P 214.914†	906.9	11.268	ug/L	4.1293	11.268	ppb	4.1293	36.65%
Pb 220.353†	468.5	-1.4556	ug/L	0.82364	-1.4556	ppb	0.82364	56.58%
S 181.975 Axial†	17.1	14.494	ug/L	3.8072	14.494	ppb	3.8072	26.27%
Sb 206.836†	-15.9	3.5699	ug/L	2.31548	3.5699	ppb	2.31548	64.86%
Se 196.026†	-3860.5	107.40	ug/L	23.512	107.40	ppb	23.512	21.89%
Si 251.611†	-1493.6	-30.362	ug/L	0.2100	-30.362	ppb	0.2100	0.69%
Sn 189.927†	-46.0	2.1603	ug/L	0.37012	2.1603	ppb	0.37012	17.13%
Sr 421.552†	24.2	0.3726	ug/L	0.10154	0.3726	ppb	0.10154	27.25%
Ti 334.940†	111.0	0.1296	ug/L	0.01724	0.1296	ppb	0.01724	13.30%
Tl 190.801†	-20.2	-3.8197	ug/L	2.21870	-3.8197	ppb	2.21870	58.09%
U 409.014†	1729.2	-4.7575	ug/L	2.46022	-4.7575	ppb	2.46022	51.71%
V 292.402†	9191.8	-1.0321	ug/L	0.49303	-1.0321	ppb	0.49303	47.77%
Zn 213.857†	7011.0	-2.7074	ug/L	0.65195	-2.7074	ppb	0.65195	24.08%
SiO2†	-1600.9	-69.749	ug/L	1.7089	-69.749	ppb	1.7089	2.45%

Sequence No.: 18
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:24:21
Data Type: Reprocessed on 7/8/2009 11:40:21

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1059944.6	1059944.6	99.912	%			11:27:33
1	Sc Radial	5479.4	5479.4	98.5	%			11:26:14
1	Y 371.029	844640.7	844640.7	98.995	%			11:27:33
1	Y RADIAL	4754.7	4754.7	98.73	%			11:26:14
1	Ag 328.068†	125630.8	125103.4	498.29	ug/L	498.29	ppb	11:27:33
1	Al 396.153Radial†	5189.1	5362.2	4859.2	ug/L	4859.2	ppb	11:26:14
1	As 188.979†	2086.1	2124.9	501.95	ug/L	501.95	ppb	11:27:53
1	B 249.677†	31012.2	31421.1	487.79	ug/L	487.79	ppb	11:27:33
1	Ba 233.527†	97648.8	97711.0	495.79	ug/L	495.79	ppb	11:27:33
1	Be 313.107†	1580190.1	1588904.8	495.20	ug/L	495.20	ppb	11:27:33
1	Ca 317.933Radial†	1996.6	2010.8	5008.6	ug/L	5008.6	ppb	11:26:34
1	Cd 226.502†	66244.6	66580.8	497.71	ug/L	497.71	ppb	11:27:33
1	Co 228.616†	39192.8	39317.9	489.98	ug/L	489.98	ppb	11:27:53
1	Cr 267.716†	57869.2	57949.0	494.25	ug/L	494.25	ppb	11:27:33
1	Cu 324.752†	208005.6	197998.5	488.80	ug/L	488.80	ppb	11:27:33
1	Fe 238.204 Radial†	141.0	142.8	5026.5	ug/L	5026.5	ppb	11:26:34
1	K 766.490 Radial†	13180.0	11912.5	5162.7	ug/L	5162.7	ppb	11:26:14
1	Mg 279.077 IEC†	65.0	65.8	5216.9	ug/L	5216.9	ppb	11:26:34
1	Mn 257.610†	624970.8	624696.8	494.24	ug/L	494.24	ppb	11:27:33
1	Mo 202.031†	12690.5	12670.0	507.49	ug/L	507.49	ppb	11:27:53
1	Na 589.592 Radial†	3480.4	3705.1	10018	ug/L	10018	ppb	11:26:14
1	Ni 231.604†	30935.7	30814.9	493.58	ug/L	493.58	ppb	11:27:53
1	P 214.914†	7423.2	7092.8	2432.7	ug/L	2432.7	ppb	11:27:53
1	Pb 220.353†	6700.4	6735.4	506.26	ug/L	506.26	ppb	11:27:53
1	S 181.975 Axial†	1257.4	1190.7	1006.9	ug/L	1006.9	ppb	11:27:53
1	Sb 206.836†	2570.6	2527.4	503.36	ug/L	503.36	ppb	11:27:53
1	Se 196.026†	1498.7	1521.6	514.33	ug/L	514.33	ppb	11:27:53
1	Si 251.611†	121332.8	120880.1	2482.2	ug/L	2482.2	ppb	11:27:33
1	Sn 189.927†	4849.4	4848.2	504.72	ug/L	504.72	ppb	11:27:53
1	Sr 421.552†	33394.2	33909.5	522.38	ug/L	522.38	ppb	11:26:14
1	Ti 334.940†	376930.4	378373.2	495.26	ug/L	495.26	ppb	11:27:33
1	Tl 190.801†	2903.5	2967.5	502.45	ug/L	502.45	ppb	11:27:53
1	U 409.014†	15423.9	19272.3	476.61	ug/L	476.61	ppb	11:27:33
1	V 292.402†	84907.4	86635.3	497.41	ug/L	497.41	ppb	11:27:33
1	Zn 213.857†	89673.2	88630.1	490.34	ug/L	490.34	ppb	11:27:33
1	SiO2†	121738.4	121243.8	5330.9	ug/L	5330.9	ppb	11:28:53
2	Sc 361.383	1066729.6	1066729.6	100.55	%			11:28:00
2	Sc Radial	5456.8	5456.8	98.1	%			11:26:39
2	Y 371.029	848088.2	848088.2	99.399	%			11:28:00
2	Y RADIAL	4734.1	4734.1	98.31	%			11:26:39
2	Ag 328.068†	126873.6	125539.5	500.03	ug/L	500.03	ppb	11:28:00
2	Al 396.153Radial†	5194.2	5389.3	4884.0	ug/L	4884.0	ppb	11:26:39
2	As 188.979†	2073.2	2098.8	495.85	ug/L	495.85	ppb	11:28:20
2	B 249.677†	31532.7	31741.4	492.78	ug/L	492.78	ppb	11:28:00
2	Ba 233.527†	98315.7	97752.5	496.00	ug/L	496.00	ppb	11:28:00
2	Be 313.107†	1590346.7	1588945.7	495.21	ug/L	495.21	ppb	11:28:00
2	Ca 317.933Radial†	1979.2	2001.5	4985.4	ug/L	4985.4	ppb	11:26:59
2	Cd 226.502†	66641.4	66553.8	497.50	ug/L	497.50	ppb	11:28:00
2	Co 228.616†	39043.6	38920.0	485.00	ug/L	485.00	ppb	11:28:20
2	Cr 267.716†	58361.0	58069.7	495.28	ug/L	495.28	ppb	11:28:00
2	Cu 324.752†	210274.7	198930.9	491.11	ug/L	491.11	ppb	11:28:00
2	Fe 238.204 Radial†	141.8	144.2	5075.0	ug/L	5075.0	ppb	11:26:59
2	K 766.490 Radial†	13045.1	11830.3	5127.1	ug/L	5127.1	ppb	11:26:39
2	Mg 279.077 IEC†	64.4	65.5	5190.8	ug/L	5190.8	ppb	11:26:59
2	Mn 257.610†	630407.8	626125.3	495.37	ug/L	495.37	ppb	11:28:00
2	Mo 202.031†	12642.8	12541.7	502.36	ug/L	502.36	ppb	11:28:20
2	Na 589.592 Radial†	3436.0	3674.5	9935.3	ug/L	9935.3	ppb	11:26:39
2	Ni 231.604†	30760.2	30443.3	487.63	ug/L	487.63	ppb	11:28:20

2	P 214.914†	7393.8	7016.4	2405.2 ug/L	2405.2 ppb	11:28:20
2	Pb 220.353†	6660.2	6652.8	500.06 ug/L	500.06 ppb	11:28:20
2	S 181.975 Axial†	1241.1	1166.5	986.41 ug/L	986.41 ppb	11:28:20
2	Sb 206.836†	2563.0	2503.6	498.42 ug/L	498.42 ppb	11:28:20
2	Se 196.026†	1509.3	1522.7	514.83 ug/L	514.83 ppb	11:28:20
2	Si 251.611†	122522.7	121291.0	2490.8 ug/L	2490.8 ppb	11:28:00
2	Sn 189.927†	4810.7	4778.9	497.51 ug/L	497.51 ppb	11:28:20
2	Sr 421.552†	33200.1	33852.0	521.50 ug/L	521.50 ppb	11:26:39
2	Ti 334.940†	380050.3	379076.4	496.18 ug/L	496.18 ppb	11:28:00
2	Tl 190.801†	2886.0	2931.6	496.43 ug/L	496.43 ppb	11:28:20
2	U 409.014†	15484.1	19233.9	475.65 ug/L	475.65 ppb	11:28:00
2	V 292.402†	85441.7	86626.2	497.28 ug/L	497.28 ppb	11:28:00
2	Zn 213.857†	90424.6	88806.6	491.36 ug/L	491.36 ppb	11:28:00
2	SiO2†	122259.9	120987.4	5319.9 ug/L	5319.9 ppb	11:28:58
3	Sc 361.383	1082048.6	1082048.6	102.00 %		11:28:28
3	Sc Radial	5526.8	5526.8	99.3 %		11:27:04
3	Y 371.029	860676.7	860676.7	100.87 %		11:28:28
3	Y RADIAL	4799.7	4799.7	99.67 %		11:27:04
3	Ag 328.068†	128584.5	125430.6	499.55 ug/L	499.55 ppb	11:28:28
3	Al 396.153Radial†	5214.3	5342.4	4841.4 ug/L	4841.4 ppb	11:27:04
3	As 188.979†	2101.0	2096.8	495.36 ug/L	495.36 ppb	11:28:48
3	B 249.677†	31978.4	31734.4	492.71 ug/L	492.71 ppb	11:28:28
3	Ba 233.527†	99589.5	97617.2	495.31 ug/L	495.31 ppb	11:28:28
3	Be 313.107†	1612564.5	1588337.3	495.03 ug/L	495.03 ppb	11:28:28
3	Ca 317.933Radial†	1986.9	1983.6	4940.9 ug/L	4940.9 ppb	11:27:24
3	Cd 226.502†	67416.7	66375.6	496.18 ug/L	496.18 ppb	11:28:28
3	Co 228.616†	39220.9	38544.1	480.32 ug/L	480.32 ppb	11:28:48
3	Cr 267.716†	58998.1	57872.6	493.60 ug/L	493.60 ppb	11:28:28
3	Cu 324.752†	213337.9	198973.6	491.20 ug/L	491.20 ppb	11:28:28
3	Fe 238.204 Radial†	139.2	139.9	4921.4 ug/L	4921.4 ppb	11:27:24
3	K 766.490 Radial†	13032.9	11649.4	5048.6 ug/L	5048.6 ppb	11:27:04
3	Mg 279.077 IEC†	65.0	65.3	5178.3 ug/L	5178.3 ppb	11:27:24
3	Mn 257.610†	638129.7	624820.2	494.32 ug/L	494.32 ppb	11:28:28
3	Mo 202.031†	12745.8	12464.7	499.27 ug/L	499.27 ppb	11:28:48
3	Na 589.592 Radial†	3456.2	3650.4	9870.2 ug/L	9870.2 ppb	11:27:04
3	Ni 231.604†	30951.5	30197.8	483.70 ug/L	483.70 ppb	11:28:48
3	P 214.914†	7425.2	6943.1	2379.4 ug/L	2379.4 ppb	11:28:48
3	Pb 220.353†	6701.0	6599.0	496.02 ug/L	496.02 ppb	11:28:48
3	S 181.975 Axial†	1257.6	1165.2	985.32 ug/L	985.32 ppb	11:28:48
3	Sb 206.836†	2594.2	2498.0	497.25 ug/L	497.25 ppb	11:28:48
3	Se 196.026†	1502.3	1494.6	505.14 ug/L	505.14 ppb	11:28:48
3	Si 251.611†	124261.8	121271.0	2490.5 ug/L	2490.5 ppb	11:28:28
3	Sn 189.927†	4852.5	4752.1	494.71 ug/L	494.71 ppb	11:28:48
3	Sr 421.552†	33364.0	33587.9	517.43 ug/L	517.43 ppb	11:27:04
3	Ti 334.940†	385685.4	379250.3	496.41 ug/L	496.41 ppb	11:28:28
3	Tl 190.801†	2899.8	2904.5	491.88 ug/L	491.88 ppb	11:28:48
3	U 409.014†	15696.4	19224.1	475.43 ug/L	475.43 ppb	11:28:28
3	V 292.402†	86520.6	86480.9	496.44 ug/L	496.44 ppb	11:28:28
3	Zn 213.857†	91402.4	88492.1	489.64 ug/L	489.64 ppb	11:28:28
3	SiO2†	123096.2	120085.9	5280.2 ug/L	5280.2 ppb	11:29:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1069574.3	100.82	%	1.067				1.06%
Sc Radial	5487.7	98.6	%	0.64				0.65%
Y 371.029	851135.2	99.756	%	0.9893				0.99%
Y RADIAL	4762.9	98.90	%	0.696				0.70%
Ag 328.068†	125357.9	499.29	ug/L	0.900	499.29	ppb	0.900	0.18%
QC value within limits for Ag 328.068 Recovery = 99.86%								
Al 396.153Radial†	5364.6	4861.5	ug/L	21.38	4861.5	ppb	21.38	0.44%
QC value within limits for Al 396.153Radial Recovery = 97.23%								
As 188.979†	2106.8	497.72	ug/L	3.671	497.72	ppb	3.671	0.74%
QC value within limits for As 188.979 Recovery = 99.54%								
B 249.677†	31632.3	491.09	ug/L	2.863	491.09	ppb	2.863	0.58%
QC value within limits for B 249.677 Recovery = 98.22%								
Ba 233.527†	97693.6	495.70	ug/L	0.354	495.70	ppb	0.354	0.07%
QC value within limits for Ba 233.527 Recovery = 99.14%								
Be 313.107†	1588729.2	495.15	ug/L	0.105	495.15	ppb	0.105	0.02%
QC value within limits for Be 313.107 Recovery = 99.03%								

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Ca 317.933Radial†        1998.7      4978.3 ug/L        34.43      4978.3 ppb        34.43   0.69%
   QC value within limits for Ca 317.933Radial  Recovery = 99.57%
Cd 226.502†             66503.4      497.13 ug/L        0.828      497.13 ppb        0.828   0.17%
   QC value within limits for Cd 226.502  Recovery = 99.43%
Co 228.616†             38927.4      485.10 ug/L        4.831      485.10 ppb        4.831   1.00%
   QC value within limits for Co 228.616  Recovery = 97.02%
Cr 267.716†             57963.8      494.38 ug/L        0.848      494.38 ppb        0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 98.88%
Cu 324.752†            198634.3      490.37 ug/L        1.359      490.37 ppb        1.359   0.28%
   QC value within limits for Cu 324.752  Recovery = 98.07%
Fe 238.204 Radial†        142.3      5007.6 ug/L        78.49      5007.6 ppb        78.49   1.57%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.15%
K 766.490 Radial†       11797.4      5112.8 ug/L        58.43      5112.8 ppb        58.43   1.14%
   QC value within limits for K 766.490 Radial  Recovery = 102.26%
Mg 279.077 IEC†            65.5      5195.3 ug/L        19.71      5195.3 ppb        19.71   0.38%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.91%
Mn 257.610†            625214.1      494.64 ug/L        0.633      494.64 ppb        0.633   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.93%
Mo 202.031†             12558.8      503.04 ug/L        4.154      503.04 ppb        4.154   0.83%
   QC value within limits for Mo 202.031  Recovery = 100.61%
Na 589.592 Radial†       3676.6      9941.2 ug/L        74.10      9941.2 ppb        74.10   0.75%
   QC value within limits for Na 589.592 Radial  Recovery = 99.41%
Ni 231.604†             30485.3      488.30 ug/L        4.976      488.30 ppb        4.976   1.02%
   QC value within limits for Ni 231.604  Recovery = 97.66%
P 214.914†               7017.4      2405.8 ug/L        26.68      2405.8 ppb        26.68   1.11%
   QC value within limits for P 214.914  Recovery = 96.23%
Pb 220.353†              6662.4      500.78 ug/L        5.161      500.78 ppb        5.161   1.03%
   QC value within limits for Pb 220.353  Recovery = 100.16%
S 181.975 Axial†         1174.1      992.89 ug/L       12.183      992.89 ppb       12.183   1.23%
   QC value within limits for S 181.975 Axial  Recovery = 99.29%
Sb 206.836†              2509.7      499.68 ug/L        3.243      499.68 ppb        3.243   0.65%
   QC value within limits for Sb 206.836  Recovery = 99.94%
Se 196.026†              1512.9      511.43 ug/L        5.455      511.43 ppb        5.455   1.07%
   QC value within limits for Se 196.026  Recovery = 102.29%
Si 251.611†            121147.3      2487.8 ug/L         4.88      2487.8 ppb         4.88   0.20%
   QC value within limits for Si 251.611  Recovery = 99.51%
Sn 189.927†              4793.1      498.98 ug/L        5.163      498.98 ppb        5.163   1.03%
   QC value within limits for Sn 189.927  Recovery = 99.80%
Sr 421.552†             33783.1      520.44 ug/L        2.642      520.44 ppb        2.642   0.51%
   QC value within limits for Sr 421.552  Recovery = 104.09%
Ti 334.940†            378899.9      495.95 ug/L        0.606      495.95 ppb        0.606   0.12%
   QC value within limits for Ti 334.940  Recovery = 99.19%
Tl 190.801†              2934.5      496.92 ug/L        5.303      496.92 ppb        5.303   1.07%
   QC value within limits for Tl 190.801  Recovery = 99.38%
U 409.014†              19243.5      475.90 ug/L        0.628      475.90 ppb        0.628   0.13%
   QC value within limits for U 409.014  Recovery = 95.18%
V 292.402†              86580.8      497.04 ug/L        0.527      497.04 ppb        0.527   0.11%
   QC value within limits for V 292.402  Recovery = 99.41%
Zn 213.857†             88642.9      490.45 ug/L        0.862      490.45 ppb        0.862   0.18%
   QC value within limits for Zn 213.857  Recovery = 98.09%
SiO2†                  120772.4      5310.3 ug/L        26.66      5310.3 ppb        26.66   0.50%
   QC value within limits for SiO2  Recovery = 99.30%
All analyte(s) passed QC.
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Sequence No.: 19
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:31:14
Data Type: Reprocessed on 7/8/2009 11:40:22

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1063802.9	1063802.9	100.28	%			11:34:23
1	Sc Radial	5561.9	5561.9	99.9	%			11:33:06
1	Y 371.029	855860.4	855860.4	100.31	%			11:34:23
1	Y RADIAL	4822.6	4822.6	100.1	%			11:33:06
1	Ag 328.068†	690.4	49.9	0.1978	ug/L	0.1978	ppb	11:34:28
1	Al 396.153Radial†	-87.8	4.4	3.9546	ug/L	3.9546	ppb	11:33:06
1	As 188.979†	-50.4	-13.3	-3.1357	ug/L	-3.1357	ppb	11:34:48
1	B 249.677†	268.9	649.6	10.124	ug/L	10.124	ppb	11:34:28
1	Ba 233.527†	37.8	13.4	0.0677	ug/L	0.0677	ppb	11:34:48
1	Be 313.107†	-7293.5	42.7	0.0128	ug/L	0.0128	ppb	11:34:28
1	Ca 317.933Radial†	28.8	11.8	29.483	ug/L	29.483	ppb	11:33:26
1	Cd 226.502†	-277.0	1.4	0.0100	ug/L	0.0100	ppb	11:34:48
1	Co 228.616†	-86.2	4.5	0.0585	ug/L	0.0585	ppb	11:34:48
1	Cr 267.716†	-5.4	23.2	0.1973	ug/L	0.1973	ppb	11:34:48
1	Cu 324.752†	10006.5	-212.2	-0.5235	ug/L	-0.5235	ppb	11:34:28
1	Fe 238.204 Radial†	0.4	0.1	3.2855	ug/L	3.2855	ppb	11:33:26
1	K 766.490 Radial†	1523.7	51.4	22.290	ug/L	22.290	ppb	11:33:06
1	Mg 279.077 IEC†	-1.0	-1.1	-89.992	ug/L	-89.992	ppb	11:33:26
1	Mn 257.610†	795.0	-34.2	-0.0249	ug/L	-0.0249	ppb	11:34:48
1	Mo 202.031†	53.0	21.1	0.8462	ug/L	0.8462	ppb	11:34:48
1	Na 589.592 Radial†	-162.4	7.9	21.478	ug/L	21.478	ppb	11:33:26
1	Ni 231.604†	144.6	-4.1	-0.0650	ug/L	-0.0650	ppb	11:34:48
1	P 214.914†	355.6	17.7	6.3689	ug/L	6.3689	ppb	11:34:48
1	Pb 220.353†	-11.4	17.7	1.3309	ug/L	1.3309	ppb	11:34:48
1	S 181.975 Axial†	60.0	-8.0	-6.7972	ug/L	-6.7972	ppb	11:34:48
1	Sb 206.836†	53.2	7.6	1.5394	ug/L	1.5394	ppb	11:34:48
1	Se 196.026†	-14.3	7.3	2.4023	ug/L	2.4023	ppb	11:34:48
1	Si 251.611†	618.5	56.7	1.1410	ug/L	1.1410	ppb	11:34:48
1	Sn 189.927†	25.8	20.2	2.1070	ug/L	2.1070	ppb	11:34:48
1	Sr 421.552†	21.5	16.0	0.2468	ug/L	0.2468	ppb	11:33:26
1	Ti 334.940†	-1262.3	-149.6	-0.1941	ug/L	-0.1941	ppb	11:34:28
1	Tl 190.801†	-62.7	-1.1	-0.1937	ug/L	-0.1937	ppb	11:34:48
1	U 409.014†	-3836.3	9.0	0.2216	ug/L	0.2216	ppb	11:34:23
1	V 292.402†	-1663.5	-6.2	-0.0256	ug/L	-0.0256	ppb	11:34:28
1	Zn 213.857†	1135.7	10.2	0.0608	ug/L	0.0608	ppb	11:34:48
1	SiO2†	634.2	30.1	1.2681	ug/L	1.2681	ppb	11:35:54
2	Sc 361.383	1062791.4	1062791.4	100.18	%			11:34:53
2	Sc Radial	5538.6	5538.6	99.5	%			11:33:31
2	Y 371.029	855845.5	855845.5	100.31	%			11:34:53
2	Y RADIAL	4808.4	4808.4	99.85	%			11:33:31
2	Ag 328.068†	769.1	129.1	0.5079	ug/L	0.5079	ppb	11:34:58
2	Al 396.153Radial†	-67.1	24.8	22.522	ug/L	22.522	ppb	11:33:31
2	As 188.979†	-45.9	-8.9	-2.0961	ug/L	-2.0961	ppb	11:35:18
2	B 249.677†	275.1	656.1	10.227	ug/L	10.227	ppb	11:34:58
2	Ba 233.527†	41.5	17.1	0.0865	ug/L	0.0865	ppb	11:35:18
2	Be 313.107†	-7364.6	-35.1	-0.0111	ug/L	-0.0111	ppb	11:34:58
2	Ca 317.933Radial†	27.0	10.2	25.462	ug/L	25.462	ppb	11:33:51
2	Cd 226.502†	-277.0	1.1	0.0093	ug/L	0.0093	ppb	11:35:18
2	Co 228.616†	-96.9	-6.3	-0.0770	ug/L	-0.0770	ppb	11:35:18
2	Cr 267.716†	3.5	32.1	0.2730	ug/L	0.2730	ppb	11:35:18
2	Cu 324.752†	10207.0	-2.6	-0.0068	ug/L	-0.0068	ppb	11:34:58
2	Fe 238.204 Radial†	0.1	-0.2	-6.6396	ug/L	-6.6396	ppb	11:33:51
2	K 766.490 Radial†	1591.7	126.2	54.709	ug/L	54.709	ppb	11:33:31
2	Mg 279.077 IEC†	3.9	3.7	294.15	ug/L	294.15	ppb	11:33:51
2	Mn 257.610†	810.3	-18.2	-0.0209	ug/L	-0.0209	ppb	11:35:18
2	Mo 202.031†	40.3	8.4	0.3367	ug/L	0.3367	ppb	11:35:18
2	Na 589.592 Radial†	-165.4	4.2	11.404	ug/L	11.404	ppb	11:33:51
2	Ni 231.604†	155.5	7.0	0.1119	ug/L	0.1119	ppb	11:35:18

2	P 214.914†	350.7	13.1	4.6724	ug/L	4.6724 ppb	11:35:18
2	Pb 220.353†	1.3	30.4	2.2862	ug/L	2.2862 ppb	11:35:18
2	S 181.975 Axial†	62.4	-5.5	-4.6975	ug/L	-4.6975 ppb	11:35:18
2	Sb 206.836†	46.9	1.4	0.3030	ug/L	0.3030 ppb	11:35:18
2	Se 196.026†	-24.0	-2.3	-0.7802	ug/L	-0.7802 ppb	11:35:18
2	Si 251.611†	641.1	79.9	1.6204	ug/L	1.6204 ppb	11:35:18
2	Sn 189.927†	17.4	11.9	1.2429	ug/L	1.2429 ppb	11:35:18
2	Sr 421.552†	27.5	22.2	0.3413	ug/L	0.3413 ppb	11:33:51
2	Ti 334.940†	-1173.5	-62.1	-0.0801	ug/L	-0.0801 ppb	11:34:58
2	Tl 190.801†	-57.3	4.2	0.7097	ug/L	0.7097 ppb	11:35:18
2	U 409.014†	-3809.4	32.2	0.7987	ug/L	0.7987 ppb	11:34:53
2	V 292.402†	-1655.4	0.3	0.0135	ug/L	0.0135 ppb	11:34:58
2	Zn 213.857†	1139.0	14.5	0.0708	ug/L	0.0708 ppb	11:35:18
2	SiO2†	668.5	65.0	2.8084	ug/L	2.8084 ppb	11:35:59
3	Sc 361.383	1063088.1	1063088.1	100.21	%		11:35:23
3	Sc Radial	5440.7	5440.7	97.8	%		11:33:56
3	Y 371.029	856947.0	856947.0	100.44	%		11:35:23
3	Y RADIAL	4756.3	4756.3	98.77	%		11:33:56
3	Ag 328.068†	752.9	112.7	0.4282	ug/L	0.4282 ppb	11:35:29
3	Al 396.153Radial†	-61.7	29.0	26.426	ug/L	26.426 ppb	11:33:56
3	As 188.979†	-51.0	-14.0	-3.3000	ug/L	-3.3000 ppb	11:35:49
3	B 249.677†	248.8	629.8	9.8225	ug/L	9.8225 ppb	11:35:29
3	Ba 233.527†	49.3	24.9	0.1240	ug/L	0.1240 ppb	11:35:49
3	Be 313.107†	-7424.6	-93.0	-0.0288	ug/L	-0.0288 ppb	11:35:29
3	Ca 317.933Radial†	29.0	12.8	31.771	ug/L	31.771 ppb	11:34:16
3	Cd 226.502†	-284.9	-6.6	-0.0439	ug/L	-0.0439 ppb	11:35:49
3	Co 228.616†	-101.2	-10.6	-0.1306	ug/L	-0.1306 ppb	11:35:49
3	Cr 267.716†	-30.9	-2.2	-0.0206	ug/L	-0.0206 ppb	11:35:49
3	Cu 324.752†	10236.2	23.7	0.0558	ug/L	0.0558 ppb	11:35:29
3	Fe 238.204 Radial†	-1.0	-1.4	-48.298	ug/L	-48.298 ppb	11:34:16
3	K 766.490 Radial†	1505.5	66.8	28.927	ug/L	28.927 ppb	11:33:56
3	Mg 279.077 IEC†	0.6	0.4	33.239	ug/L	33.239 ppb	11:34:16
3	Mn 257.610†	805.7	-23.0	-0.0251	ug/L	-0.0251 ppb	11:35:49
3	Mo 202.031†	36.0	4.1	0.1614	ug/L	0.1614 ppb	11:35:49
3	Na 589.592 Radial†	-166.0	0.6	1.7302	ug/L	1.7302 ppb	11:34:16
3	Ni 231.604†	154.3	5.8	0.0925	ug/L	0.0925 ppb	11:35:49
3	P 214.914†	333.2	-4.4	-1.5177	ug/L	-1.5177 ppb	11:35:49
3	Pb 220.353†	8.6	37.6	2.8325	ug/L	2.8325 ppb	11:35:49
3	S 181.975 Axial†	65.9	-2.0	-1.7280	ug/L	-1.7280 ppb	11:35:49
3	Sb 206.836†	54.2	8.7	1.7131	ug/L	1.7131 ppb	11:35:49
3	Se 196.026†	-34.5	-12.8	-4.3231	ug/L	-4.3231 ppb	11:35:49
3	Si 251.611†	617.8	56.4	1.1483	ug/L	1.1483 ppb	11:35:49
3	Sn 189.927†	12.9	7.4	0.7752	ug/L	0.7752 ppb	11:35:49
3	Sr 421.552†	24.1	19.1	0.2946	ug/L	0.2946 ppb	11:34:16
3	Ti 334.940†	-1056.8	54.6	0.0735	ug/L	0.0735 ppb	11:35:29
3	Tl 190.801†	-54.8	6.7	1.1352	ug/L	1.1352 ppb	11:35:49
3	U 409.014†	-3836.0	6.7	0.1717	ug/L	0.1717 ppb	11:35:23
3	V 292.402†	-1740.9	-84.5	-0.4699	ug/L	-0.4699 ppb	11:35:29
3	Zn 213.857†	1112.0	-12.7	-0.0677	ug/L	-0.0677 ppb	11:35:49
3	SiO2†	666.7	63.0	2.7492	ug/L	2.7492 ppb	11:36:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1063227.5	100.22	%	0.049				0.05%
Sc Radial	5513.8	99.1	%	1.16				1.17%
Y 371.029	856217.6	100.35	%	0.074				0.07%
Y RADIAL	4795.8	99.59	%	0.725				0.73%
Ag 328.068†	97.2	0.3779	ug/L	0.16103	0.3779	ppb	0.16103	42.61%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.4	17.634	ug/L	12.0065	17.634	ppb	12.0065	68.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.1	-2.8439	ug/L	0.65284	-2.8439	ppb	0.65284	22.96%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	645.2	10.058	ug/L	0.2102	10.058	ppb	0.2102	2.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	18.5	0.0927	ug/L	0.02864	0.0927	ppb	0.02864	30.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-28.5	-0.0090	ug/L	0.02087	-0.0090	ppb	0.02087	231.41%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          11.6      28.906 ug/L        3.1943      28.906 ppb        3.1943  11.05%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -1.4      -0.0082 ug/L       0.03088     -0.0082 ppb       0.03088 375.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -4.1      -0.0497 ug/L       0.09746     -0.0497 ppb       0.09746 196.02%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.7       0.1499 ug/L       0.15243      0.1499 ppb       0.15243 101.68%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -63.7      -0.1582 ug/L       0.31790     -0.1582 ppb       0.31790 200.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.5      -17.217 ug/L       27.3704     -17.217 ppb       27.3704 158.97%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          81.4       35.309 ug/L       17.1254      35.309 ppb       17.1254  48.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.0       79.132 ug/L      196.1394      79.132 ppb      196.1394 247.86%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -25.1      -0.0236 ug/L       0.00236     -0.0236 ppb       0.00236   9.98%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                11.2       0.4481 ug/L       0.35572      0.4481 ppb       0.35572  79.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†          4.3       11.538 ug/L        9.8746      11.538 ppb        9.8746  85.59%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 2.9       0.0465 ug/L       0.09700      0.0465 ppb       0.09700 208.67%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  8.8       3.1745 ug/L       4.15119      3.1745 ppb       4.15119 130.77%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                28.6       2.1499 ug/L       0.76002      2.1499 ppb       0.76002  35.35%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.2      -4.4076 ug/L       2.54698     -4.4076 ppb       2.54698  57.79%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 5.9       1.1852 ug/L       0.76889      1.1852 ppb       0.76889  64.88%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.6      -0.9003 ug/L       3.36431     -0.9003 ppb       3.36431 373.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                64.3       1.3033 ug/L       0.27467      1.3033 ppb       0.27467  21.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                13.2       1.3751 ug/L       0.67567      1.3751 ppb       0.67567  49.14%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                19.1       0.2942 ug/L       0.04727      0.2942 ppb       0.04727  16.07%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -52.4      -0.0669 ug/L       0.13429     -0.0669 ppb       0.13429 200.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.3       0.5504 ug/L       0.67863      0.5504 ppb       0.67863 123.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 15.9       0.3973 ug/L       0.34848      0.3973 ppb       0.34848  87.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -30.1      -0.1607 ug/L       0.26848     -0.1607 ppb       0.26848 167.11%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 4.0       0.0213 ug/L       0.07726      0.0213 ppb       0.07726 362.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      52.7       2.2752 ug/L       0.87275      2.2752 ppb       0.87275  38.36%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 12:37:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5606.1	5606.1	101	%			12:39:25
1	Y RADIAL	4851.1	4851.1	100.7	%			12:39:25
1	Al 396.153Radial†	5378.2	5430.8	4921.6	ug/L	4921.6	ppb	12:39:25
1	Ca 317.933Radial†	2021.2	1989.4	4955.2	ug/L	4955.2	ppb	12:39:45
1	Fe 238.204 Radial†	140.8	139.5	4908.3	ug/L	4908.3	ppb	12:39:45
1	K 766.490 Radial†	13453.7	11881.6	5149.1	ug/L	5149.1	ppb	12:39:25
1	Mg 279.077 IEC†	63.3	62.7	4971.3	ug/L	4971.3	ppb	12:39:45
1	Na 589.592 Radial†	3647.9	3791.5	10252	ug/L	10252	ppb	12:39:25
1	Sr 421.552†	35108.7	34844.6	536.79	ug/L	536.79	ppb	12:39:25
1	Sc 361.383	1058412.2	1058412.2	99.767	%			12:40:44
1	Y 371.029	842280.3	842280.3	98.718	%			12:40:44
1	Ag 328.068†	126383.3	126039.7	501.96	ug/L	501.96	ppb	12:40:44
1	As 188.979†	2067.2	2108.9	498.21	ug/L	498.21	ppb	12:41:04
1	B 249.677†	31249.4	31703.9	492.21	ug/L	492.21	ppb	12:40:44
1	Ba 233.527†	97896.4	98100.6	497.76	ug/L	497.76	ppb	12:40:44
1	Be 313.107†	1582299.5	1593308.9	496.58	ug/L	496.58	ppb	12:40:44
1	Cd 226.502†	66319.2	66751.6	499.00	ug/L	499.00	ppb	12:40:44
1	Co 228.616†	39106.2	39287.9	489.60	ug/L	489.60	ppb	12:41:04
1	Cr 267.716†	58017.2	58181.2	496.23	ug/L	496.23	ppb	12:40:44
1	Cu 324.752†	209452.1	199749.8	493.12	ug/L	493.12	ppb	12:40:44
1	Mn 257.610†	627242.3	627879.2	496.74	ug/L	496.74	ppb	12:40:44
1	Mo 202.031†	12652.8	12650.6	506.70	ug/L	506.70	ppb	12:41:04
1	Ni 231.604†	30863.4	30787.2	493.14	ug/L	493.14	ppb	12:41:04
1	P 214.914†	7409.4	7089.8	2431.0	ug/L	2431.0	ppb	12:41:04
1	Pb 220.353†	6655.3	6699.9	503.62	ug/L	503.62	ppb	12:41:04
1	S 181.975 Axial†	1267.1	1202.2	1016.6	ug/L	1016.6	ppb	12:41:04
1	Sb 206.836†	2567.2	2527.8	503.31	ug/L	503.31	ppb	12:41:04
1	Se 196.026†	1499.0	1524.1	514.74	ug/L	514.74	ppb	12:41:04
1	Si 251.611†	123740.7	123469.4	2535.6	ug/L	2535.6	ppb	12:40:44
1	Sn 189.927†	4813.6	4819.3	501.70	ug/L	501.70	ppb	12:41:04
1	Ti 334.940†	379065.1	381059.1	498.77	ug/L	498.77	ppb	12:40:44
1	Tl 190.801†	2892.3	2960.4	501.29	ug/L	501.29	ppb	12:41:04
1	U 409.014†	15455.7	19326.6	477.97	ug/L	477.97	ppb	12:40:44
1	V 292.402†	85007.9	86859.1	498.67	ug/L	498.67	ppb	12:40:44
1	Zn 213.857†	90043.3	89131.1	493.16	ug/L	493.16	ppb	12:40:44
1	SiO2†	124276.3	123964.1	5451.2	ug/L	5451.2	ppb	12:42:04
2	Sc Radial	5585.7	5585.7	100	%			12:39:50
2	Y RADIAL	4837.6	4837.6	100.5	%			12:39:50
2	Al 396.153Radial†	5301.2	5373.6	4869.5	ug/L	4869.5	ppb	12:39:50
2	Ca 317.933Radial†	2018.6	1994.2	4967.2	ug/L	4967.2	ppb	12:40:10
2	Fe 238.204 Radial†	146.6	145.8	5129.1	ug/L	5129.1	ppb	12:40:10
2	K 766.490 Radial†	13445.7	11922.5	5167.1	ug/L	5167.1	ppb	12:39:50
2	Mg 279.077 IEC†	62.9	62.5	4955.1	ug/L	4955.1	ppb	12:40:10
2	Na 589.592 Radial†	3631.8	3788.6	10244	ug/L	10244	ppb	12:39:50
2	Sr 421.552†	34927.0	34791.2	535.97	ug/L	535.97	ppb	12:39:50
2	Sc 361.383	1052564.2	1052564.2	99.216	%			12:41:12
2	Y 371.029	837846.1	837846.1	98.199	%			12:41:12
2	Ag 328.068†	125844.2	126200.1	502.67	ug/L	502.67	ppb	12:41:12
2	As 188.979†	2073.2	2126.5	502.37	ug/L	502.37	ppb	12:41:32
2	B 249.677†	31117.5	31744.9	492.82	ug/L	492.82	ppb	12:41:12
2	Ba 233.527†	97205.3	97949.3	496.99	ug/L	496.99	ppb	12:41:12
2	Be 313.107†	1572088.7	1591829.1	496.11	ug/L	496.11	ppb	12:41:12
2	Cd 226.502†	65885.5	66683.9	498.47	ug/L	498.47	ppb	12:41:12
2	Co 228.616†	38903.8	39301.7	489.77	ug/L	489.77	ppb	12:41:32
2	Cr 267.716†	57670.9	58155.3	496.01	ug/L	496.01	ppb	12:41:12
2	Cu 324.752†	208260.2	199714.8	493.05	ug/L	493.05	ppb	12:41:12
2	Mn 257.610†	622713.6	626807.8	495.92	ug/L	495.92	ppb	12:41:12
2	Mo 202.031†	12649.0	12717.2	509.38	ug/L	509.38	ppb	12:41:32
2	Ni 231.604†	30707.2	30801.6	493.37	ug/L	493.37	ppb	12:41:32

2	P 214.914†	7360.8	7082.0	2428.1 ug/L	2428.1 ppb	12:41:32
2	Pb 220.353†	6668.7	6750.4	507.38 ug/L	507.38 ppb	12:41:32
2	S 181.975 Axial†	1268.3	1210.5	1023.7 ug/L	1023.7 ppb	12:41:32
2	Sb 206.836†	2554.2	2529.0	503.61 ug/L	503.61 ppb	12:41:32
2	Se 196.026†	1489.9	1523.3	515.24 ug/L	515.24 ppb	12:41:32
2	Si 251.611†	122736.1	123146.0	2528.9 ug/L	2528.9 ppb	12:41:12
2	Sn 189.927†	4784.8	4817.1	501.48 ug/L	501.48 ppb	12:41:32
2	Ti 334.940†	376326.4	380409.8	497.92 ug/L	497.92 ppb	12:41:12
2	Tl 190.801†	2869.4	2953.4	500.11 ug/L	500.11 ppb	12:41:32
2	U 409.014†	15348.9	19304.9	477.40 ug/L	477.40 ppb	12:41:12
2	V 292.402†	84354.4	86673.8	497.63 ug/L	497.63 ppb	12:41:12
2	Zn 213.857†	89243.2	88826.1	491.43 ug/L	491.43 ppb	12:41:12
2	SiO2†	123446.6	123819.8	5444.7 ug/L	5444.7 ppb	12:42:10
3	Sc Radial	5622.4	5622.4	101 %		12:40:15
3	Y RADIAL	4895.1	4895.1	101.6 %		12:40:15
3	Al 396.153Radial†	5385.6	5422.7	4914.2 ug/L	4914.2 ppb	12:40:15
3	Ca 317.933Radial†	2021.8	1984.1	4942.2 ug/L	4942.2 ppb	12:40:35
3	Fe 238.204 Radial†	143.1	141.3	4973.4 ug/L	4973.4 ppb	12:40:35
3	K 766.490 Radial†	13475.9	11864.8	5141.9 ug/L	5141.9 ppb	12:40:15
3	Mg 279.077 IEC†	64.9	64.0	5076.8 ug/L	5076.8 ppb	12:40:35
3	Na 589.592 Radial†	3704.4	3836.9	10375 ug/L	10375 ppb	12:40:15
3	Sr 421.552†	35367.4	34999.8	539.18 ug/L	539.18 ppb	12:40:15
3	Sc 361.383	1055266.8	1055266.8	99.471 %		12:41:39
3	Y 371.029	840466.9	840466.9	98.506 %		12:41:39
3	Ag 328.068†	125875.6	125906.9	501.45 ug/L	501.45 ppb	12:41:39
3	As 188.979†	2070.2	2118.1	500.36 ug/L	500.36 ppb	12:41:59
3	B 249.677†	31096.7	31643.7	491.26 ug/L	491.26 ppb	12:41:39
3	Ba 233.527†	97326.4	97820.1	496.34 ug/L	496.34 ppb	12:41:39
3	Be 313.107†	1575608.3	1591309.3	495.95 ug/L	495.95 ppb	12:41:39
3	Cd 226.502†	65831.5	66459.5	496.81 ug/L	496.81 ppb	12:41:39
3	Co 228.616†	38937.8	39235.4	488.94 ug/L	488.94 ppb	12:41:59
3	Cr 267.716†	57725.3	58061.1	495.21 ug/L	495.21 ppb	12:41:39
3	Cu 324.752†	208650.8	199569.9	492.68 ug/L	492.68 ppb	12:41:39
3	Mn 257.610†	623476.5	625967.4	495.24 ug/L	495.24 ppb	12:41:39
3	Mo 202.031†	12620.8	12656.2	506.93 ug/L	506.93 ppb	12:41:59
3	Ni 231.604†	30715.0	30730.2	492.22 ug/L	492.22 ppb	12:41:59
3	P 214.914†	7373.4	7075.7	2426.1 ug/L	2426.1 ppb	12:41:59
3	Pb 220.353†	6643.3	6707.8	504.20 ug/L	504.20 ppb	12:41:59
3	S 181.975 Axial†	1267.5	1206.4	1020.2 ug/L	1020.2 ppb	12:41:59
3	Sb 206.836†	2557.1	2525.3	502.87 ug/L	502.87 ppb	12:41:59
3	Se 196.026†	1494.6	1524.2	514.98 ug/L	514.98 ppb	12:41:59
3	Si 251.611†	122713.6	122806.5	2522.0 ug/L	2522.0 ppb	12:41:39
3	Sn 189.927†	4806.5	4826.6	502.46 ug/L	502.46 ppb	12:41:59
3	Ti 334.940†	376677.4	379791.2	497.11 ug/L	497.11 ppb	12:41:39
3	Tl 190.801†	2887.1	2963.8	501.86 ug/L	501.86 ppb	12:41:59
3	U 409.014†	15446.1	19363.0	478.87 ug/L	478.87 ppb	12:41:39
3	V 292.402†	84553.0	86655.7	497.52 ug/L	497.52 ppb	12:41:39
3	Zn 213.857†	89401.2	88754.6	491.05 ug/L	491.05 ppb	12:41:39
3	SiO2†	122933.1	122984.9	5407.9 ug/L	5407.9 ppb	12:42:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055414.4	99.485	%	0.2759				0.28%
Sc Radial	5604.7	101	%	0.3				0.33%
Y 371.029	840197.8	98.474	%	0.2613				0.27%
Y RADIAL	4861.2	100.9	%	0.62				0.62%
Ag 328.068†	126048.9	502.03	ug/L	0.609	502.03	ppb	0.609	0.12%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5409.0	4901.8	ug/L	28.21	4901.8	ppb	28.21	0.58%
QC value within limits for Al 396.153Radial Recovery = 98.04%								
As 188.979†	2117.9	500.31	ug/L	2.082	500.31	ppb	2.082	0.42%
QC value within limits for As 188.979 Recovery = 100.06%								
B 249.677†	31697.5	492.10	ug/L	0.784	492.10	ppb	0.784	0.16%
QC value within limits for B 249.677 Recovery = 98.42%								
Ba 233.527†	97956.7	497.03	ug/L	0.711	497.03	ppb	0.711	0.14%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1592149.1	496.21	ug/L	0.324	496.21	ppb	0.324	0.07%
QC value within limits for Be 313.107 Recovery = 99.24%								
Ca 317.933Radial†	1989.2	4954.9	ug/L	12.52	4954.9	ppb	12.52	0.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.10%
Cd 226.502†            66631.7      498.09 ug/L         1.144      498.09 ppb          1.144   0.23%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39275.0      489.44 ug/L         0.436      489.44 ppb          0.436   0.09%
   QC value within limits for Co 228.616  Recovery = 97.89%
Cr 267.716†            58132.5      495.82 ug/L         0.539      495.82 ppb          0.539   0.11%
   QC value within limits for Cr 267.716  Recovery = 99.16%
Cu 324.752†           199678.2      492.95 ug/L         0.236      492.95 ppb          0.236   0.05%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†       142.2      5003.6 ug/L        113.48      5003.6 ppb        113.48   2.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.07%
K 766.490 Radial†      11889.6      5152.7 ug/L         12.97      5152.7 ppb          12.97   0.25%
   QC value within limits for K 766.490 Radial  Recovery = 103.05%
Mg 279.077 IEC†           63.1      5001.1 ug/L         66.09      5001.1 ppb          66.09   1.32%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.02%
Mn 257.610†           626884.8      495.97 ug/L         0.753      495.97 ppb          0.753   0.15%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†            12674.6      507.67 ug/L         1.485      507.67 ppb          1.485   0.29%
   QC value within limits for Mo 202.031  Recovery = 101.53%
Na 589.592 Radial†      3805.7       10290 ug/L          73.3       10290 ppb           73.3   0.71%
   QC value within limits for Na 589.592 Radial  Recovery = 102.90%
Ni 231.604†            30773.0      492.91 ug/L         0.605      492.91 ppb          0.605   0.12%
   QC value within limits for Ni 231.604  Recovery = 98.58%
P 214.914†              7082.5      2428.4 ug/L          2.49      2428.4 ppb           2.49   0.10%
   QC value within limits for P 214.914  Recovery = 97.14%
Pb 220.353†             6719.4      505.07 ug/L         2.026      505.07 ppb          2.026   0.40%
   QC value within limits for Pb 220.353  Recovery = 101.01%
S 181.975 Axial†        1206.4      1020.2 ug/L          3.51      1020.2 ppb           3.51   0.34%
   QC value within limits for S 181.975 Axial  Recovery = 102.02%
Sb 206.836†             2527.4      503.26 ug/L         0.369      503.26 ppb          0.369   0.07%
   QC value within limits for Sb 206.836  Recovery = 100.65%
Se 196.026†             1523.9      514.99 ug/L         0.251      514.99 ppb          0.251   0.05%
   QC value within limits for Se 196.026  Recovery = 103.00%
Si 251.611†           123140.6      2528.8 ug/L          6.84      2528.8 ppb           6.84   0.27%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†             4821.0      501.88 ug/L         0.511      501.88 ppb          0.511   0.10%
   QC value within limits for Sn 189.927  Recovery = 100.38%
Sr 421.552†            34878.5      537.31 ug/L         1.669      537.31 ppb          1.669   0.31%
   QC value within limits for Sr 421.552  Recovery = 107.46%
Ti 334.940†           380420.0      497.94 ug/L         0.830      497.94 ppb          0.830   0.17%
   QC value within limits for Ti 334.940  Recovery = 99.59%
Tl 190.801†             2959.2      501.08 ug/L         0.893      501.08 ppb          0.893   0.18%
   QC value within limits for Tl 190.801  Recovery = 100.22%
U 409.014†             19331.5      478.08 ug/L         0.738      478.08 ppb          0.738   0.15%
   QC value within limits for U 409.014  Recovery = 95.62%
V 292.402†             86729.6      497.94 ug/L         0.638      497.94 ppb          0.638   0.13%
   QC value within limits for V 292.402  Recovery = 99.59%
Zn 213.857†            88903.9      491.88 ug/L         1.123      491.88 ppb          1.123   0.23%
   QC value within limits for Zn 213.857  Recovery = 98.38%
SiO2†                 123589.6      5434.6 ug/L         23.34      5434.6 ppb          23.34   0.43%
   QC value within limits for SiO2  Recovery = 101.63%
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 12:44:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5518.3	5518.3	99.2	%			12:46:17
1	Y RADIAL	4806.7	4806.7	99.81	%			12:46:17
1	Al 396.153Radial†	-80.6	10.9	9.9589	ug/L	9.9589	ppb	12:46:17
1	Ca 317.933Radial†	44.1	27.5	68.573	ug/L	68.573	ppb	12:46:37
1	Fe 238.204 Radial†	0.0	-0.3	-9.9293	ug/L	-9.9293	ppb	12:46:37
1	K 766.490 Radial†	1698.7	239.9	104.08	ug/L	104.08	ppb	12:46:17
1	Mg 279.077 IEC†	-1.8	-2.0	-155.04	ug/L	-155.04	ppb	12:46:37
1	Na 589.592 Radial†	-174.1	-5.2	-13.943	ug/L	-13.943	ppb	12:46:37
1	Sr 421.552†	32.4	27.2	0.4180	ug/L	0.4180	ppb	12:46:37
1	Sc 361.383	1052130.1	1052130.1	99.175	%			12:47:34
1	Y 371.029	846654.6	846654.6	99.231	%			12:47:34
1	Ag 328.068†	745.4	113.0	0.4445	ug/L	0.4445	ppb	12:47:39
1	As 188.979†	-50.6	-14.1	-3.3222	ug/L	-3.3222	ppb	12:47:59
1	B 249.677†	375.6	760.3	11.850	ug/L	11.850	ppb	12:47:39
1	Ba 233.527†	45.5	21.6	0.1076	ug/L	0.1076	ppb	12:47:59
1	Be 313.107†	-7407.1	-152.6	-0.0474	ug/L	-0.0474	ppb	12:47:39
1	Cd 226.502†	-302.4	-27.3	-0.2026	ug/L	-0.2026	ppb	12:47:59
1	Co 228.616†	-78.2	11.6	0.1438	ug/L	0.1438	ppb	12:47:59
1	Cr 267.716†	-24.3	4.1	0.0351	ug/L	0.0351	ppb	12:47:59
1	Cu 324.752†	10111.8	4.6	0.0108	ug/L	0.0108	ppb	12:47:39
1	Mn 257.610†	869.1	49.3	0.0406	ug/L	0.0406	ppb	12:47:59
1	Mo 202.031†	26.7	-4.8	-0.1934	ug/L	-0.1934	ppb	12:47:59
1	Ni 231.604†	157.5	10.6	0.1698	ug/L	0.1698	ppb	12:47:59
1	P 214.914†	363.5	29.6	10.483	ug/L	10.483	ppb	12:47:59
1	Pb 220.353†	-2.2	26.8	2.0130	ug/L	2.0130	ppb	12:47:59
1	S 181.975 Axial†	74.3	7.1	5.9751	ug/L	5.9751	ppb	12:47:59
1	Sb 206.836†	39.2	-5.9	-1.1554	ug/L	-1.1554	ppb	12:47:59
1	Se 196.026†	-23.4	-2.0	-0.6703	ug/L	-0.6703	ppb	12:47:59
1	Si 251.611†	1253.7	704.0	14.495	ug/L	14.495	ppb	12:47:59
1	Sn 189.927†	8.5	3.1	0.3237	ug/L	0.3237	ppb	12:47:59
1	Ti 334.940†	-1083.2	17.0	0.0287	ug/L	0.0287	ppb	12:47:39
1	Tl 190.801†	-53.7	7.3	1.2282	ug/L	1.2282	ppb	12:47:59
1	U 409.014†	-3965.4	-163.6	-4.0586	ug/L	-4.0586	ppb	12:47:34
1	V 292.402†	-1733.9	-95.6	-0.5536	ug/L	-0.5536	ppb	12:47:39
1	Zn 213.857†	1100.4	-12.8	-0.0663	ug/L	-0.0663	ppb	12:47:59
1	SiO2†	1196.6	604.2	26.624	ug/L	26.624	ppb	12:49:05
2	Sc Radial	5530.0	5530.0	99.4	%			12:46:42
2	Y RADIAL	4804.0	4804.0	99.76	%			12:46:42
2	Al 396.153Radial†	-46.8	45.1	41.028	ug/L	41.028	ppb	12:46:42
2	Ca 317.933Radial†	43.2	26.6	66.161	ug/L	66.161	ppb	12:47:02
2	Fe 238.204 Radial†	0.2	-0.1	-3.2086	ug/L	-3.2086	ppb	12:47:02
2	K 766.490 Radial†	1500.2	36.5	15.864	ug/L	15.864	ppb	12:46:42
2	Mg 279.077 IEC†	0.1	-0.0	-2.9802	ug/L	-2.9802	ppb	12:47:02
2	Na 589.592 Radial†	-185.3	-16.0	-43.367	ug/L	-43.367	ppb	12:47:02
2	Sr 421.552†	24.3	19.0	0.2916	ug/L	0.2916	ppb	12:47:02
2	Sc 361.383	1055228.2	1055228.2	99.467	%			12:48:04
2	Y 371.029	850024.5	850024.5	99.626	%			12:48:04
2	Ag 328.068†	646.4	11.3	0.0443	ug/L	0.0443	ppb	12:48:09
2	As 188.979†	-42.6	-5.9	-1.4010	ug/L	-1.4010	ppb	12:48:29
2	B 249.677†	320.9	704.1	10.974	ug/L	10.974	ppb	12:48:09
2	Ba 233.527†	61.0	37.0	0.1867	ug/L	0.1867	ppb	12:48:29
2	Be 313.107†	-7402.9	-126.4	-0.0393	ug/L	-0.0393	ppb	12:48:09
2	Cd 226.502†	-287.6	-11.5	-0.0851	ug/L	-0.0851	ppb	12:48:29
2	Co 228.616†	-95.0	-5.1	-0.0621	ug/L	-0.0621	ppb	12:48:29
2	Cr 267.716†	-27.2	1.3	0.0113	ug/L	0.0113	ppb	12:48:29
2	Cu 324.752†	10074.9	-62.4	-0.1541	ug/L	-0.1541	ppb	12:48:09
2	Mn 257.610†	873.6	51.3	0.0402	ug/L	0.0402	ppb	12:48:29
2	Mo 202.031†	40.5	8.9	0.3563	ug/L	0.3563	ppb	12:48:29
2	Ni 231.604†	174.4	27.0	0.4336	ug/L	0.4336	ppb	12:48:29

2	P 214.914†	361.0	26.0	9.2291 ug/L	9.2291 ppb	12:48:29
2	Pb 220.353†	-10.0	19.1	1.4379 ug/L	1.4379 ppb	12:48:29
2	S 181.975 Axial†	81.6	14.2	11.973 ug/L	11.973 ppb	12:48:29
2	Sb 206.836†	42.3	-2.9	-0.5447 ug/L	-0.5447 ppb	12:48:29
2	Se 196.026†	-24.2	-2.7	-0.8785 ug/L	-0.8785 ppb	12:48:29
2	Si 251.611†	1175.1	621.2	12.805 ug/L	12.805 ppb	12:48:29
2	Sn 189.927†	14.8	9.4	0.9833 ug/L	0.9833 ppb	12:48:29
2	Ti 334.940†	-1119.7	-16.5	-0.0158 ug/L	-0.0158 ppb	12:48:09
2	Tl 190.801†	-65.4	-4.3	-0.7287 ug/L	-0.7287 ppb	12:48:29
2	U 409.014†	-3934.1	-120.4	-2.9874 ug/L	-2.9874 ppb	12:48:04
2	V 292.402†	-1688.4	-44.7	-0.2542 ug/L	-0.2542 ppb	12:48:09
2	Zn 213.857†	1094.3	-22.2	-0.1261 ug/L	-0.1261 ppb	12:48:29
2	SiO2†	1154.6	558.4	24.643 ug/L	24.643 ppb	12:49:10
3	Sc Radial	5536.9	5536.9	99.5 %		12:47:07
3	Y RADIAL	4795.3	4795.3	99.58 %		12:47:07
3	Al 396.153Radial†	-88.7	3.1	2.7784 ug/L	2.7784 ppb	12:47:07
3	Ca 317.933Radial†	38.0	21.3	52.934 ug/L	52.934 ppb	12:47:27
3	Fe 238.204 Radial†	0.3	-0.0	-1.5937 ug/L	-1.5937 ppb	12:47:27
3	K 766.490 Radial†	1639.2	174.4	75.680 ug/L	75.680 ppb	12:47:07
3	Mg 279.077 IEC†	-0.9	-1.1	-89.124 ug/L	-89.124 ppb	12:47:27
3	Na 589.592 Radial†	-174.5	-4.9	-13.365 ug/L	-13.365 ppb	12:47:27
3	Sr 421.552†	25.1	19.8	0.3045 ug/L	0.3045 ppb	12:47:27
3	Sc 361.383	1057181.0	1057181.0	99.651 %		12:48:34
3	Y 371.029	851270.4	851270.4	99.772 %		12:48:34
3	Ag 328.068†	674.9	38.7	0.1554 ug/L	0.1554 ppb	12:48:39
3	As 188.979†	-44.5	-7.8	-1.8396 ug/L	-1.8396 ppb	12:48:59
3	B 249.677†	378.7	761.6	11.869 ug/L	11.869 ppb	12:48:39
3	Ba 233.527†	63.9	39.8	0.2017 ug/L	0.2017 ppb	12:48:59
3	Be 313.107†	-7375.2	-84.8	-0.0266 ug/L	-0.0266 ppb	12:48:39
3	Cd 226.502†	-299.1	-22.5	-0.1676 ug/L	-0.1676 ppb	12:48:59
3	Co 228.616†	-94.7	-4.6	-0.0558 ug/L	-0.0558 ppb	12:48:59
3	Cr 267.716†	-31.6	-3.1	-0.0251 ug/L	-0.0251 ppb	12:48:59
3	Cu 324.752†	10184.5	28.9	0.0711 ug/L	0.0711 ppb	12:48:39
3	Mn 257.610†	910.4	86.5	0.0699 ug/L	0.0699 ppb	12:48:59
3	Mo 202.031†	44.9	13.3	0.5325 ug/L	0.5325 ppb	12:48:59
3	Ni 231.604†	167.2	19.5	0.3133 ug/L	0.3133 ppb	12:48:59
3	P 214.914†	336.4	0.6	0.2154 ug/L	0.2154 ppb	12:48:59
3	Pb 220.353†	-22.4	6.6	0.4997 ug/L	0.4997 ppb	12:48:59
3	S 181.975 Axial†	69.3	1.8	1.4809 ug/L	1.4809 ppb	12:48:59
3	Sb 206.836†	57.9	12.6	2.5004 ug/L	2.5004 ppb	12:48:59
3	Se 196.026†	-30.6	-9.1	-2.9626 ug/L	-2.9626 ppb	12:48:59
3	Si 251.611†	1139.2	583.1	11.995 ug/L	11.995 ppb	12:48:59
3	Sn 189.927†	11.6	6.1	0.6428 ug/L	0.6428 ppb	12:48:59
3	Ti 334.940†	-1167.7	-62.5	-0.0766 ug/L	-0.0766 ppb	12:48:39
3	Tl 190.801†	-61.2	0.0	0.0020 ug/L	0.0020 ppb	12:48:59
3	U 409.014†	-3975.3	-154.5	-3.8330 ug/L	-3.8330 ppb	12:48:34
3	V 292.402†	-1637.3	9.7	0.0534 ug/L	0.0534 ppb	12:48:39
3	Zn 213.857†	1125.6	7.1	0.0408 ug/L	0.0408 ppb	12:48:59
3	SiO2†	1173.0	574.8	25.317 ug/L	25.317 ppb	12:49:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054846.5	99.431	%	0.2401				0.24%
Sc Radial	5528.4	99.3	%	0.17				0.17%
Y 371.029	849316.5	99.543	%	0.2799				0.28%
Y RADIAL	4802.0	99.72	%	0.125				0.12%
Ag 328.068†	54.3	0.2147	ug/L	0.20658	0.2147	ppb	0.20658	96.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.7	17.922	ug/L	20.3303	17.922	ppb	20.3303	113.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-9.3	-2.1876	ug/L	1.00674	-2.1876	ppb	1.00674	46.02%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	742.0	11.565	ug/L	0.5111	11.565	ppb	0.5111	4.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.8	0.1653	ug/L	0.05052	0.1653	ppb	0.05052	30.56%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.3	-0.0378	ug/L	0.01050	-0.0378	ppb	0.01050	27.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	25.1	62.556	ug/L	8.4198	62.556	ppb	8.4198	13.46%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -20.4     -0.1518 ug/L       0.06032     -0.1518 ppb        0.06032  39.74%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                0.6      0.0086 ug/L       0.11710      0.0086 ppb        0.11710 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                0.8      0.0071 ug/L       0.03031      0.0071 ppb        0.03031 424.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -9.6     -0.0240 ug/L       0.11658     -0.0240 ppb        0.11658 485.05%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.1     -4.9105 ug/L       4.42071     -4.9105 ppb        4.42071  90.02%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        150.3      65.208 ug/L       45.0299      65.208 ppb        45.0299  69.06%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.0     -82.381 ug/L       76.2536     -82.381 ppb        76.2536  92.56%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               62.3      0.0502 ug/L       0.01702      0.0502 ppb        0.01702  33.90%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                5.8      0.2318 ug/L       0.37863      0.2318 ppb        0.37863 163.36%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.558 ug/L       17.1571     -23.558 ppb        17.1571  72.83%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               19.1      0.3055 ug/L       0.13208      0.3055 ppb        0.13208  43.23%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                18.7      6.6426 ug/L       5.60129      6.6426 ppb        5.60129  84.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               17.5      1.3169 ug/L       0.76385      1.3169 ppb        0.76385  58.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           7.7      6.4762 ug/L       5.26375      6.4762 ppb        5.26375  81.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                1.3      0.2668 ug/L       1.95832      0.2668 ppb        1.95832 734.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.6     -1.5038 ug/L       1.26762     -1.5038 ppb        1.26762  84.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              636.1      13.098 ug/L        1.2757      13.098 ppb         1.2757   9.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.2      0.6499 ug/L       0.32985      0.6499 ppb        0.32985  50.75%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               22.0      0.3380 ug/L       0.06959      0.3380 ppb        0.06959  20.59%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -20.6     -0.0212 ug/L       0.05284     -0.0212 ppb        0.05284 248.77%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.0      0.1672 ug/L       0.98883      0.1672 ppb        0.98883 591.54%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -146.2     -3.6263 ug/L       0.56469     -3.6263 ppb        0.56469  15.57%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -43.5     -0.2515 ug/L       0.30350     -0.2515 ppb        0.30350 120.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -9.3     -0.0505 ug/L       0.08455     -0.0505 ppb        0.08455 167.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    579.1      25.528 ug/L        1.0068      25.528 ppb         1.0068   3.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 13:30:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5593.8	5593.8	101	%			13:32:15
1	Y RADIAL	4842.5	4842.5	100.6	%			13:32:15
1	Al 396.153Radial†	5375.4	5439.8	4930.0	ug/L	4930.0	ppb	13:32:15
1	Ca 317.933Radial†	2030.0	2002.6	4988.1	ug/L	4988.1	ppb	13:32:35
1	Fe 238.204 Radial†	143.1	142.0	4997.8	ug/L	4997.8	ppb	13:32:35
1	K 766.490 Radial†	13576.3	12032.8	5214.6	ug/L	5214.6	ppb	13:32:15
1	Mg 279.077 IEC†	64.5	64.0	5074.9	ug/L	5074.9	ppb	13:32:35
1	Na 589.592 Radial†	3820.6	3971.3	10738	ug/L	10738	ppb	13:32:15
1	Sr 421.552†	36184.6	35991.7	554.46	ug/L	554.46	ppb	13:32:15
1	Sc 361.383	1067935.1	1067935.1	100.66	%			13:33:34
1	Y 371.029	850350.6	850350.6	99.664	%			13:33:34
1	Ag 328.068†	127384.2	125904.4	501.45	ug/L	501.45	ppb	13:33:34
1	As 188.979†	2071.9	2095.1	494.98	ug/L	494.98	ppb	13:33:49
1	B 249.677†	31471.2	31644.9	491.29	ug/L	491.29	ppb	13:33:34
1	Ba 233.527†	98516.8	97841.9	496.45	ug/L	496.45	ppb	13:33:34
1	Be 313.107†	1595916.3	1592693.3	496.38	ug/L	496.38	ppb	13:33:34
1	Cd 226.502†	66618.5	66456.2	496.78	ug/L	496.78	ppb	13:33:34
1	Co 228.616†	39113.3	38945.4	485.32	ug/L	485.32	ppb	13:33:49
1	Cr 267.716†	58357.9	58001.1	494.70	ug/L	494.70	ppb	13:33:34
1	Cu 324.752†	211740.1	200150.5	494.11	ug/L	494.11	ppb	13:33:34
1	Mn 257.610†	631157.2	626162.1	495.39	ug/L	495.39	ppb	13:33:34
1	Mo 202.031†	12651.2	12535.9	502.12	ug/L	502.12	ppb	13:33:49
1	Ni 231.604†	30868.2	30516.1	488.79	ug/L	488.79	ppb	13:33:49
1	P 214.914†	7390.5	7004.7	2400.7	ug/L	2400.7	ppb	13:33:49
1	Pb 220.353†	6658.3	6643.4	499.37	ug/L	499.37	ppb	13:33:49
1	S 181.975 Axial†	1261.6	1185.4	1002.5	ug/L	1002.5	ppb	13:33:49
1	Sb 206.836†	2570.5	2508.1	499.32	ug/L	499.32	ppb	13:33:49
1	Se 196.026†	1503.6	1515.3	512.16	ug/L	512.16	ppb	13:33:49
1	Si 251.611†	123414.2	122039.0	2506.2	ug/L	2506.2	ppb	13:33:34
1	Sn 189.927†	4826.6	4789.2	498.58	ug/L	498.58	ppb	13:33:49
1	Ti 334.940†	381885.1	380472.4	498.01	ug/L	498.01	ppb	13:33:34
1	Tl 190.801†	2890.2	2932.5	496.60	ug/L	496.60	ppb	13:33:49
1	U 409.014†	15716.9	19447.9	480.97	ug/L	480.97	ppb	13:33:34
1	V 292.402†	85492.2	86580.4	497.03	ug/L	497.03	ppb	13:33:34
1	Zn 213.857†	90459.6	88739.9	490.98	ug/L	490.98	ppb	13:33:34
1	SiO2†	121080.0	119678.0	5261.9	ug/L	5261.9	ppb	13:34:50
2	Sc Radial	5672.4	5672.4	102	%			13:32:40
2	Y RADIAL	4945.5	4945.5	102.7	%			13:32:40
2	Al 396.153Radial†	5436.6	5425.7	4917.2	ug/L	4917.2	ppb	13:32:40
2	Ca 317.933Radial†	2037.9	1982.3	4937.6	ug/L	4937.6	ppb	13:33:00
2	Fe 238.204 Radial†	144.7	141.6	4983.6	ug/L	4983.6	ppb	13:33:00
2	K 766.490 Radial†	13656.0	11923.8	5167.3	ug/L	5167.3	ppb	13:32:40
2	Mg 279.077 IEC†	65.5	64.0	5077.9	ug/L	5077.9	ppb	13:33:00
2	Na 589.592 Radial†	3830.1	3927.9	10620	ug/L	10620	ppb	13:32:40
2	Sr 421.552†	36620.5	35920.3	553.36	ug/L	553.36	ppb	13:32:40
2	Sc 361.383	1070653.1	1070653.1	100.92	%			13:33:57
2	Y 371.029	851300.7	851300.7	99.776	%			13:33:57
2	Ag 328.068†	127724.7	125920.6	501.52	ug/L	501.52	ppb	13:33:57
2	As 188.979†	2076.5	2094.5	494.83	ug/L	494.83	ppb	13:34:17
2	B 249.677†	31609.9	31703.0	492.20	ug/L	492.20	ppb	13:33:57
2	Ba 233.527†	98878.2	97951.6	497.00	ug/L	497.00	ppb	13:33:57
2	Be 313.107†	1599999.7	1592714.8	496.39	ug/L	496.39	ppb	13:33:57
2	Cd 226.502†	67082.9	66748.4	498.96	ug/L	498.96	ppb	13:33:57
2	Co 228.616†	39157.1	38890.2	484.63	ug/L	484.63	ppb	13:34:17
2	Cr 267.716†	58566.4	58060.5	495.20	ug/L	495.20	ppb	13:33:57
2	Cu 324.752†	211700.3	199577.1	492.70	ug/L	492.70	ppb	13:33:57
2	Mn 257.610†	634065.3	627452.0	496.41	ug/L	496.41	ppb	13:33:57
2	Mo 202.031†	12650.3	12503.1	500.81	ug/L	500.81	ppb	13:34:17
2	Ni 231.604†	30868.0	30438.0	487.54	ug/L	487.54	ppb	13:34:17

2	P 214.914†	7401.9	6997.4	2398.4	ug/L	2398.4 ppb	13:34:17
2	Pb 220.353†	6676.9	6645.0	499.48	ug/L	499.48 ppb	13:34:17
2	S 181.975 Axial†	1250.3	1171.1	990.32	ug/L	990.32 ppb	13:34:17
2	Sb 206.836†	2582.9	2513.9	500.41	ug/L	500.41 ppb	13:34:17
2	Se 196.026†	1510.6	1518.4	513.14	ug/L	513.14 ppb	13:34:17
2	Si 251.611†	123797.7	122107.8	2507.7	ug/L	2507.7 ppb	13:33:57
2	Sn 189.927†	4829.4	4779.9	497.60	ug/L	497.60 ppb	13:34:17
2	Ti 334.940†	383068.5	380682.0	498.28	ug/L	498.28 ppb	13:33:57
2	Tl 190.801†	2883.4	2918.5	494.24	ug/L	494.24 ppb	13:34:17
2	U 409.014†	15572.6	19265.3	476.44	ug/L	476.44 ppb	13:33:57
2	V 292.402†	85872.5	86741.7	497.92	ug/L	497.92 ppb	13:33:57
2	Zn 213.857†	90799.4	88848.4	491.60	ug/L	491.60 ppb	13:33:57
2	SiO2†	123201.1	121474.4	5341.4	ug/L	5341.4 ppb	13:34:55
3	Sc Radial	5530.2	5530.2	99.4	%		13:33:05
3	Y RADIAL	4824.8	4824.8	100.2	%		13:33:05
3	Al 396.153Radial†	5269.6	5394.8	4888.9	ug/L	4888.9 ppb	13:33:05
3	Ca 317.933Radial†	2016.5	2012.2	5012.0	ug/L	5012.0 ppb	13:33:25
3	Fe 238.204 Radial†	142.0	142.6	5017.8	ug/L	5017.8 ppb	13:33:25
3	K 766.490 Radial†	13240.5	11850.4	5135.5	ug/L	5135.5 ppb	13:33:05
3	Mg 279.077 IEC†	66.0	66.2	5249.4	ug/L	5249.4 ppb	13:33:25
3	Na 589.592 Radial†	3727.2	3921.0	10602	ug/L	10602 ppb	13:33:05
3	Sr 421.552†	35503.6	35720.6	550.29	ug/L	550.29 ppb	13:33:05
3	Sc 361.383	1058446.8	1058446.8	99.770	%		13:34:24
3	Y 371.029	840681.7	840681.7	98.531	%		13:34:24
3	Ag 328.068†	126248.3	125900.3	501.44	ug/L	501.44 ppb	13:34:24
3	As 188.979†	2075.8	2117.5	500.23	ug/L	500.23 ppb	13:34:44
3	B 249.677†	31241.6	31695.0	492.06	ug/L	492.06 ppb	13:34:24
3	Ba 233.527†	97802.6	98003.4	497.27	ug/L	497.27 ppb	13:34:24
3	Be 313.107†	1580830.6	1591784.7	496.10	ug/L	496.10 ppb	13:34:24
3	Cd 226.502†	66147.2	66577.1	497.68	ug/L	497.68 ppb	13:34:24
3	Co 228.616†	38965.8	39145.9	487.83	ug/L	487.83 ppb	13:34:44
3	Cr 267.716†	57808.5	57970.1	494.43	ug/L	494.43 ppb	13:34:24
3	Cu 324.752†	209941.6	200233.4	494.32	ug/L	494.32 ppb	13:34:24
3	Mn 257.610†	627495.4	628112.4	496.93	ug/L	496.93 ppb	13:34:24
3	Mo 202.031†	12657.7	12655.1	506.89	ug/L	506.89 ppb	13:34:44
3	Ni 231.604†	30736.2	30658.7	491.08	ug/L	491.08 ppb	13:34:44
3	P 214.914†	7364.3	7044.3	2414.7	ug/L	2414.7 ppb	13:34:44
3	Pb 220.353†	6650.9	6695.3	503.26	ug/L	503.26 ppb	13:34:44
3	S 181.975 Axial†	1250.1	1185.1	1002.2	ug/L	1002.2 ppb	13:34:44
3	Sb 206.836†	2580.3	2540.8	505.92	ug/L	505.92 ppb	13:34:44
3	Se 196.026†	1500.2	1525.3	515.51	ug/L	515.51 ppb	13:34:44
3	Si 251.611†	122421.6	122143.2	2508.3	ug/L	2508.3 ppb	13:34:24
3	Sn 189.927†	4816.0	4821.6	501.94	ug/L	501.94 ppb	13:34:44
3	Ti 334.940†	378995.5	380976.9	498.67	ug/L	498.67 ppb	13:34:24
3	Tl 190.801†	2891.6	2959.6	501.16	ug/L	501.16 ppb	13:34:44
3	U 409.014†	15388.1	19258.2	476.26	ug/L	476.26 ppb	13:34:24
3	V 292.402†	84860.2	86708.3	497.81	ug/L	497.81 ppb	13:34:24
3	Zn 213.857†	89990.4	89075.1	492.83	ug/L	492.83 ppb	13:34:24
3	SiO2†	121574.6	121252.0	5331.3	ug/L	5331.3 ppb	13:35:00

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065678.3	100.45	%	0.604				0.60%
Sc Radial	5598.8	101	%	1.3				1.27%
Y 371.029	847444.4	99.324	%	0.6887				0.69%
Y RADIAL	4870.9	101.1	%	1.35				1.34%
Ag 328.068†	125908.4	501.47	ug/L	0.040	501.47	ppb	0.040	0.01%
QC value within limits for Ag 328.068 Recovery = 100.29%								
Al 396.153Radial†	5420.1	4912.0	ug/L	21.04	4912.0	ppb	21.04	0.43%
QC value within limits for Al 396.153Radial Recovery = 98.24%								
As 188.979†	2102.3	496.68	ug/L	3.073	496.68	ppb	3.073	0.62%
QC value within limits for As 188.979 Recovery = 99.34%								
B 249.677†	31681.0	491.85	ug/L	0.490	491.85	ppb	0.490	0.10%
QC value within limits for B 249.677 Recovery = 98.37%								
Ba 233.527†	97932.3	496.91	ug/L	0.418	496.91	ppb	0.418	0.08%
QC value within limits for Ba 233.527 Recovery = 99.38%								
Be 313.107†	1592397.6	496.29	ug/L	0.164	496.29	ppb	0.164	0.03%
QC value within limits for Be 313.107 Recovery = 99.26%								
Ca 317.933Radial†	1999.0	4979.2	ug/L	37.99	4979.2	ppb	37.99	0.76%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.58%
Cd 226.502†            66593.9      497.81 ug/L         1.099      497.81 ppb          1.099   0.22%
   QC value within limits for Cd 226.502  Recovery = 99.56%
Co 228.616†            38993.8      485.92 ug/L         1.684      485.92 ppb          1.684   0.35%
   QC value within limits for Co 228.616  Recovery = 97.18%
Cr 267.716†            58010.6      494.78 ug/L         0.391      494.78 ppb          0.391   0.08%
   QC value within limits for Cr 267.716  Recovery = 98.96%
Cu 324.752†           199987.0      493.71 ug/L         0.883      493.71 ppb          0.883   0.18%
   QC value within limits for Cu 324.752  Recovery = 98.74%
Fe 238.204 Radial†       142.1      4999.7 ug/L         17.21      4999.7 ppb          17.21   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.99%
K 766.490 Radial†      11935.7      5172.5 ug/L         39.80      5172.5 ppb          39.80   0.77%
   QC value within limits for K 766.490 Radial  Recovery = 103.45%
Mg 279.077 IEC†           64.8      5134.0 ug/L         99.90      5134.0 ppb          99.90   1.95%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.68%
Mn 257.610†           627242.2      496.25 ug/L         0.783      496.25 ppb          0.783   0.16%
   QC value within limits for Mn 257.610  Recovery = 99.25%
Mo 202.031†            12564.7      503.27 ug/L         3.202      503.27 ppb          3.202   0.64%
   QC value within limits for Mo 202.031  Recovery = 100.65%
Na 589.592 Radial†      3940.0       10653 ug/L          73.7       10653 ppb           73.7   0.69%
   QC value within limits for Na 589.592 Radial  Recovery = 106.53%
Ni 231.604†            30537.6      489.14 ug/L         1.792      489.14 ppb          1.792   0.37%
   QC value within limits for Ni 231.604  Recovery = 97.83%
P 214.914†              7015.5      2404.6 ug/L          8.82      2404.6 ppb           8.82   0.37%
   QC value within limits for P 214.914  Recovery = 96.18%
Pb 220.353†             6661.2      500.70 ug/L         2.213      500.70 ppb          2.213   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.14%
S 181.975 Axial†        1180.6      998.33 ug/L         6.940      998.33 ppb          6.940   0.70%
   QC value within limits for S 181.975 Axial  Recovery = 99.83%
Sb 206.836†             2520.9      501.88 ug/L         3.538      501.88 ppb          3.538   0.70%
   QC value within limits for Sb 206.836  Recovery = 100.38%
Se 196.026†             1519.7      513.60 ug/L         1.722      513.60 ppb          1.722   0.34%
   QC value within limits for Se 196.026  Recovery = 102.72%
Si 251.611†           122096.7      2507.4 ug/L          1.07      2507.4 ppb           1.07   0.04%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4796.9      499.37 ug/L         2.279      499.37 ppb          2.279   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.87%
Sr 421.552†            35877.5      552.70 ug/L         2.165      552.70 ppb          2.165   0.39%
   QC value greater than the upper limit for Sr 421.552  Recovery = 110.54%
Ti 334.940†           380710.4      498.32 ug/L         0.334      498.32 ppb          0.334   0.07%
   QC value within limits for Ti 334.940  Recovery = 99.66%
Tl 190.801†             2936.9      497.33 ug/L         3.520      497.33 ppb          3.520   0.71%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19323.8      477.89 ug/L         2.668      477.89 ppb          2.668   0.56%
   QC value within limits for U 409.014  Recovery = 95.58%
V 292.402†             86676.8      497.59 ug/L         0.485      497.59 ppb          0.485   0.10%
   QC value within limits for V 292.402  Recovery = 99.52%
Zn 213.857†            88887.8      491.81 ug/L         0.941      491.81 ppb          0.941   0.19%
   QC value within limits for Zn 213.857  Recovery = 98.36%
SiO2†                 120801.5      5311.6 ug/L         43.27      5311.6 ppb          43.27   0.81%
   QC value within limits for SiO2  Recovery = 99.33%
QC Failed.  Continue with analysis.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:37:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5413.7	5413.7	97.3	%			13:39:02
1	Y RADIAL	4722.7	4722.7	98.07	%			13:39:02
1	Al 396.153Radial†	-76.0	14.1	12.785	ug/L	12.785	ppb	13:39:02
1	Ca 317.933Radial†	35.2	19.2	47.934	ug/L	47.934	ppb	13:39:22
1	Fe 238.204 Radial†	1.2	0.9	31.911	ug/L	31.911	ppb	13:39:22
1	K 766.490 Radial†	1580.2	151.2	65.626	ug/L	65.626	ppb	13:39:02
1	Mg 279.077 IEC†	-0.2	-0.4	-31.882	ug/L	-31.882	ppb	13:39:22
1	Na 589.592 Radial†	-172.1	-6.5	-17.590	ug/L	-17.590	ppb	13:39:22
1	Sr 421.552†	25.9	21.2	0.3255	ug/L	0.3255	ppb	13:39:22
1	Sc 361.383	1053963.2	1053963.2	99.348	%			13:40:19
1	Y 371.029	848397.9	848397.9	99.435	%			13:40:19
1	Ag 328.068†	697.3	63.3	0.2597	ug/L	0.2597	ppb	13:40:24
1	As 188.979†	-43.2	-6.6	-1.5430	ug/L	-1.5430	ppb	13:40:44
1	B 249.677†	186.7	569.4	8.8696	ug/L	8.8696	ppb	13:40:24
1	Ba 233.527†	25.2	1.1	0.0062	ug/L	0.0062	ppb	13:40:44
1	Be 313.107†	-7423.5	-156.0	-0.0488	ug/L	-0.0488	ppb	13:40:24
1	Cd 226.502†	-280.8	-5.0	-0.0412	ug/L	-0.0412	ppb	13:40:44
1	Co 228.616†	-84.6	5.2	0.0655	ug/L	0.0655	ppb	13:40:44
1	Cr 267.716†	-15.0	13.5	0.1154	ug/L	0.1154	ppb	13:40:44
1	Cu 324.752†	10214.2	90.0	0.2240	ug/L	0.2240	ppb	13:40:24
1	Mn 257.610†	861.8	40.4	0.0367	ug/L	0.0367	ppb	13:40:44
1	Mo 202.031†	34.4	2.9	0.1183	ug/L	0.1183	ppb	13:40:44
1	Ni 231.604†	156.3	9.1	0.1453	ug/L	0.1453	ppb	13:40:44
1	P 214.914†	354.0	19.4	6.7924	ug/L	6.7924	ppb	13:40:44
1	Pb 220.353†	-16.7	12.3	0.9181	ug/L	0.9181	ppb	13:40:44
1	S 181.975 Axial†	70.6	3.2	2.7071	ug/L	2.7071	ppb	13:40:44
1	Sb 206.836†	39.9	-5.3	-1.0467	ug/L	-1.0467	ppb	13:40:44
1	Se 196.026†	-22.9	-1.5	-0.3668	ug/L	-0.3668	ppb	13:40:44
1	Si 251.611†	869.2	314.8	6.4745	ug/L	6.4745	ppb	13:40:44
1	Sn 189.927†	0.9	-4.6	-0.4731	ug/L	-0.4731	ppb	13:40:44
1	Ti 334.940†	-1211.1	-109.8	-0.1404	ug/L	-0.1404	ppb	13:40:24
1	Tl 190.801†	-59.9	1.1	0.1786	ug/L	0.1786	ppb	13:40:44
1	U 409.014†	-3817.1	-7.5	-0.1890	ug/L	-0.1890	ppb	13:40:19
1	V 292.402†	-1664.4	-22.5	-0.1316	ug/L	-0.1316	ppb	13:40:24
1	Zn 213.857†	1133.9	18.9	0.1021	ug/L	0.1021	ppb	13:40:44
1	SiO2†	854.9	258.2	11.358	ug/L	11.358	ppb	13:41:50
2	Sc Radial	5529.6	5529.6	99.4	%			13:39:27
2	Y RADIAL	4800.3	4800.3	99.68	%			13:39:27
2	Al 396.153Radial†	-66.9	24.8	22.617	ug/L	22.617	ppb	13:39:27
2	Ca 317.933Radial†	32.0	15.3	38.110	ug/L	38.110	ppb	13:39:47
2	Fe 238.204 Radial†	-0.4	-0.7	-24.391	ug/L	-24.391	ppb	13:39:47
2	K 766.490 Radial†	1456.8	-7.0	-3.0184	ug/L	-3.0184	ppb	13:39:27
2	Mg 279.077 IEC†	-1.1	-1.3	-105.28	ug/L	-105.28	ppb	13:39:47
2	Na 589.592 Radial†	-182.7	-13.4	-36.229	ug/L	-36.229	ppb	13:39:47
2	Sr 421.552†	13.5	8.1	0.1251	ug/L	0.1251	ppb	13:39:47
2	Sc 361.383	1050298.1	1050298.1	99.002	%			13:40:49
2	Y 371.029	845092.6	845092.6	99.048	%			13:40:49
2	Ag 328.068†	722.6	91.3	0.3522	ug/L	0.3522	ppb	13:40:54
2	As 188.979†	-47.8	-11.4	-2.6790	ug/L	-2.6790	ppb	13:41:14
2	B 249.677†	113.4	496.1	7.7347	ug/L	7.7347	ppb	13:40:54
2	Ba 233.527†	39.8	15.9	0.0791	ug/L	0.0791	ppb	13:41:14
2	Be 313.107†	-7481.4	-240.6	-0.0748	ug/L	-0.0748	ppb	13:40:54
2	Cd 226.502†	-281.1	-6.3	-0.0443	ug/L	-0.0443	ppb	13:41:14
2	Co 228.616†	-106.2	-16.8	-0.2105	ug/L	-0.2105	ppb	13:41:14
2	Cr 267.716†	-17.2	11.3	0.0951	ug/L	0.0951	ppb	13:41:14
2	Cu 324.752†	10211.9	123.5	0.3033	ug/L	0.3033	ppb	13:40:54
2	Mn 257.610†	849.4	30.9	0.0233	ug/L	0.0233	ppb	13:41:14
2	Mo 202.031†	18.3	-13.3	-0.5352	ug/L	-0.5352	ppb	13:41:14
2	Ni 231.604†	164.4	17.8	0.2854	ug/L	0.2854	ppb	13:41:14

2	P 214.914†	350.8	17.5	6.1379	ug/L	6.1379 ppb	13:41:14
2	Pb 220.353†	-10.6	18.4	1.3861	ug/L	1.3861 ppb	13:41:14
2	S 181.975 Axial†	62.6	-4.6	-3.8702	ug/L	-3.8702 ppb	13:41:14
2	Sb 206.836†	45.8	0.8	0.1341	ug/L	0.1341 ppb	13:41:14
2	Se 196.026†	-24.4	-3.1	-1.0828	ug/L	-1.0828 ppb	13:41:14
2	Si 251.611†	863.1	311.7	6.4431	ug/L	6.4431 ppb	13:41:14
2	Sn 189.927†	0.2	-5.3	-0.5453	ug/L	-0.5453 ppb	13:41:14
2	Ti 334.940†	-1096.8	1.4	0.0048	ug/L	0.0048 ppb	13:40:54
2	Tl 190.801†	-63.6	-2.9	-0.4817	ug/L	-0.4817 ppb	13:41:14
2	U 409.014†	-3840.4	-44.4	-1.0988	ug/L	-1.0988 ppb	13:40:49
2	V 292.402†	-1708.7	-73.1	-0.4221	ug/L	-0.4221 ppb	13:40:54
2	Zn 213.857†	1132.6	21.6	0.1245	ug/L	0.1245 ppb	13:41:14
2	SiO2†	832.1	238.2	10.549	ug/L	10.549 ppb	13:41:55
3	Sc Radial	5577.9	5577.9	100	%		13:39:52
3	Y RADIAL	4835.1	4835.1	100.4	%		13:39:52
3	Al 396.153Radial†	-70.3	22.1	20.104	ug/L	20.104 ppb	13:39:52
3	Ca 317.933Radial†	35.5	18.5	45.957	ug/L	45.957 ppb	13:40:12
3	Fe 238.204 Radial†	0.8	0.4	15.248	ug/L	15.248 ppb	13:40:12
3	K 766.490 Radial†	1595.4	118.6	51.472	ug/L	51.472 ppb	13:39:52
3	Mg 279.077 IEC†	1.1	0.9	72.486	ug/L	72.486 ppb	13:40:12
3	Na 589.592 Radial†	-180.7	-9.9	-26.682	ug/L	-26.682 ppb	13:40:12
3	Sr 421.552†	20.5	15.0	0.2301	ug/L	0.2301 ppb	13:40:12
3	Sc 361.383	1059808.1	1059808.1	99.899	%		13:41:19
3	Y 371.029	852835.7	852835.7	99.956	%		13:41:19
3	Ag 328.068†	652.2	14.3	0.0614	ug/L	0.0614 ppb	13:41:24
3	As 188.979†	-45.4	-8.6	-2.0185	ug/L	-2.0185 ppb	13:41:44
3	B 249.677†	65.4	446.9	6.9635	ug/L	6.9635 ppb	13:41:24
3	Ba 233.527†	22.1	-2.1	-0.0105	ug/L	-0.0105 ppb	13:41:44
3	Be 313.107†	-7445.6	-136.9	-0.0427	ug/L	-0.0427 ppb	13:41:24
3	Cd 226.502†	-289.9	-12.6	-0.0960	ug/L	-0.0960 ppb	13:41:44
3	Co 228.616†	-93.1	-2.8	-0.0344	ug/L	-0.0344 ppb	13:41:44
3	Cr 267.716†	-11.2	17.4	0.1485	ug/L	0.1485 ppb	13:41:44
3	Cu 324.752†	10243.7	62.8	0.1558	ug/L	0.1558 ppb	13:41:24
3	Mn 257.610†	848.9	22.8	0.0186	ug/L	0.0186 ppb	13:41:44
3	Mo 202.031†	37.0	5.3	0.2126	ug/L	0.2126 ppb	13:41:44
3	Ni 231.604†	140.9	-7.2	-0.1159	ug/L	-0.1159 ppb	13:41:44
3	P 214.914†	339.1	2.5	0.8606	ug/L	0.8606 ppb	13:41:44
3	Pb 220.353†	-19.1	9.9	0.7469	ug/L	0.7469 ppb	13:41:44
3	S 181.975 Axial†	72.1	4.4	3.7018	ug/L	3.7018 ppb	13:41:44
3	Sb 206.836†	45.8	0.4	0.0909	ug/L	0.0909 ppb	13:41:44
3	Se 196.026†	-18.5	3.1	1.0727	ug/L	1.0727 ppb	13:41:44
3	Si 251.611†	817.6	258.4	5.3084	ug/L	5.3084 ppb	13:41:44
3	Sn 189.927†	11.2	5.7	0.5975	ug/L	0.5975 ppb	13:41:44
3	Ti 334.940†	-1138.5	-30.4	-0.0364	ug/L	-0.0364 ppb	13:41:24
3	Tl 190.801†	-59.9	1.4	0.2410	ug/L	0.2410 ppb	13:41:44
3	U 409.014†	-3866.5	-35.7	-0.8885	ug/L	-0.8885 ppb	13:41:19
3	V 292.402†	-1658.7	-7.6	-0.0432	ug/L	-0.0432 ppb	13:41:24
3	Zn 213.857†	1144.7	23.5	0.1274	ug/L	0.1274 ppb	13:41:44
3	SiO2†	856.3	254.8	11.208	ug/L	11.208 ppb	13:42:00

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054689.8	99.416	%	0.4521				0.45%
Sc Radial	5507.0	99.0	%	1.52				1.53%
Y 371.029	848775.4	99.480	%	0.4554				0.46%
Y RADIAL	4786.0	99.38	%	1.195				1.20%
Ag 328.068†	56.3	0.2244	ug/L	0.14858	0.2244	ppb	0.14858	66.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.3	18.502	ug/L	5.1080	18.502	ppb	5.1080	27.61%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-8.9	-2.0802	ug/L	0.57051	-2.0802	ppb	0.57051	27.43%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	504.1	7.8559	ug/L	0.95880	7.8559	ppb	0.95880	12.20%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.0	0.0249	ug/L	0.04766	0.0249	ppb	0.04766	191.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-177.8	-0.0554	ug/L	0.01705	-0.0554	ppb	0.01705	30.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	17.7	44.000	ug/L	5.1960	44.000	ppb	5.1960	11.81%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -8.0     -0.0605 ug/L       0.03078     -0.0605 ppb        0.03078  50.88%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -4.8     -0.0598 ug/L       0.13974     -0.0598 ppb        0.13974 233.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              14.0      0.1197 ug/L       0.02695      0.1197 ppb        0.02695  22.52%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              92.1      0.2277 ug/L       0.07381      0.2277 ppb        0.07381  32.42%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.2      7.5897 ug/L      28.92162      7.5897 ppb       28.92162 381.07%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        87.6       38.027 ug/L      36.2437       38.027 ppb        36.2437  95.31%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.3      -21.559 ug/L      89.3317      -21.559 ppb        89.3317 414.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              31.4      0.0262 ug/L       0.00940      0.0262 ppb        0.00940  35.89%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -1.7     -0.0681 ug/L       0.40727     -0.0681 ppb        0.40727 597.93%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -9.9      -26.834 ug/L       9.3203      -26.834 ppb         9.3203  34.73%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               6.5      0.1049 ug/L       0.20368      0.1049 ppb        0.20368 194.15%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               13.1       4.5970 ug/L      3.25230       4.5970 ppb        3.25230  70.75%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              13.5       1.0170 ug/L      0.33087       1.0170 ppb        0.33087  32.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          1.0      0.8462 ug/L       4.11469      0.8462 ppb        4.11469 486.24%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              -1.4     -0.2739 ug/L       0.66961     -0.2739 ppb        0.66961 244.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.5     -0.1256 ug/L       1.09782     -0.1256 ppb        1.09782 873.95%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             295.0      6.0753 ug/L       0.66436      6.0753 ppb        0.66436  10.94%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -1.4     -0.1403 ug/L       0.63995     -0.1403 ppb        0.63995 456.09%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              14.8      0.2269 ug/L       0.10024      0.2269 ppb        0.10024  44.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -46.3     -0.0574 ug/L       0.07484     -0.0574 ppb        0.07484 130.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -0.1     -0.0207 ug/L       0.40044     -0.0207 ppb        0.40044 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -29.2     -0.7254 ug/L       0.47631     -0.7254 ppb        0.47631  65.66%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -34.4     -0.1990 ug/L       0.19822     -0.1990 ppb        0.19822  99.63%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              21.3      0.1180 ug/L       0.01386      0.1180 ppb        0.01386  11.75%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   250.4       11.038 ug/L        0.4304      11.038 ppb         0.4304   3.90%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/8/2009 13:50:46
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601
Plasma On Time: 00:00:00
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070809A.sif
Batch ID:
Results Data Set: 070809A
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 7
Date Collected: 7/8/2009 13:50:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5532.4	5532.4	99.4	%			13:52:39
1	Y RADIAL	4797.0	4797.0	99.61	%			13:52:39
1	Al 396.153Radial†	5229.0	5351.8	4849.9	ug/L	4849.9	ppb	13:52:39
1	Ca 317.933Radial†	1958.2	1952.7	4863.9	ug/L	4863.9	ppb	13:52:59
1	Fe 238.204 Radial†	138.6	139.1	4894.2	ug/L	4894.2	ppb	13:52:59
1	K 766.490 Radial†	13095.3	11698.9	5070.2	ug/L	5070.2	ppb	13:52:39
1	Mg 279.077 IEC†	62.6	62.8	4978.5	ug/L	4978.5	ppb	13:52:59
1	Na 589.592 Radial†	3365.0	3555.1	9612.7	ug/L	9612.7	ppb	13:52:39
1	Sr 421.552†	32629.9	32815.6	505.53	ug/L	505.53	ppb	13:52:39
1	Sc 361.383	1065706.7	1065706.7	100.45	%			13:53:58
1	Y 371.029	846819.9	846819.9	99.251	%			13:53:58
1	Ag 328.068†	126960.9	125747.6	500.80	ug/L	500.80	ppb	13:53:58
1	As 188.979†	2061.4	2089.0	493.53	ug/L	493.53	ppb	13:54:18
1	B 249.677†	31314.7	31554.4	489.90	ug/L	489.90	ppb	13:53:58
1	Ba 233.527†	98387.1	97917.5	496.83	ug/L	496.83	ppb	13:53:58
1	Be 313.107†	1590293.1	1590410.5	495.67	ug/L	495.67	ppb	13:53:58
1	Cd 226.502†	66680.2	66656.0	498.28	ug/L	498.28	ppb	13:53:58
1	Co 228.616†	38914.5	38828.7	483.86	ug/L	483.86	ppb	13:54:18
1	Cr 267.716†	58123.4	57888.9	493.74	ug/L	493.74	ppb	13:53:58
1	Cu 324.752†	211262.3	200114.7	494.02	ug/L	494.02	ppb	13:53:58
1	Mn 257.610†	631066.9	627383.2	496.35	ug/L	496.35	ppb	13:53:58
1	Mo 202.031†	12608.8	12520.0	501.47	ug/L	501.47	ppb	13:54:18
1	Ni 231.604†	30720.7	30433.4	487.47	ug/L	487.47	ppb	13:54:18
1	P 214.914†	7349.3	6979.1	2391.7	ug/L	2391.7	ppb	13:54:18
1	Pb 220.353†	6619.8	6619.0	497.53	ug/L	497.53	ppb	13:54:18
1	S 181.975 Axial†	1249.9	1176.4	994.81	ug/L	994.81	ppb	13:54:18
1	Sb 206.836†	2566.6	2509.6	499.57	ug/L	499.57	ppb	13:54:18
1	Se 196.026†	1498.0	1512.8	511.00	ug/L	511.00	ppb	13:54:18
1	Si 251.611†	122865.0	121748.7	2500.3	ug/L	2500.3	ppb	13:53:58
1	Sn 189.927†	4783.6	4756.4	495.16	ug/L	495.16	ppb	13:54:18
1	Ti 334.940†	381207.0	380590.6	498.15	ug/L	498.15	ppb	13:53:58
1	Tl 190.801†	2869.1	2917.5	494.08	ug/L	494.08	ppb	13:54:18
1	U 409.014†	15602.1	19366.2	478.96	ug/L	478.96	ppb	13:53:58
1	V 292.402†	85431.5	86697.6	497.70	ug/L	497.70	ppb	13:53:58
1	Zn 213.857†	90487.4	88955.4	492.21	ug/L	492.21	ppb	13:53:58
1	SiO2†	122908.9	121750.2	5353.7	ug/L	5353.7	ppb	13:55:18
2	Sc Radial	5478.6	5478.6	98.5	%			13:53:04
2	Y RADIAL	4737.8	4737.8	98.38	%			13:53:04
2	Al 396.153Radial†	5218.1	5392.4	4886.9	ug/L	4886.9	ppb	13:53:04
2	Ca 317.933Radial†	1985.5	1999.9	4981.3	ug/L	4981.3	ppb	13:53:24
2	Fe 238.204 Radial†	138.0	139.8	4919.3	ug/L	4919.3	ppb	13:53:24
2	K 766.490 Radial†	13047.9	11780.2	5105.5	ug/L	5105.5	ppb	13:53:04
2	Mg 279.077 IEC†	63.8	64.6	5122.0	ug/L	5122.0	ppb	13:53:24
2	Na 589.592 Radial†	3309.4	3531.9	9549.8	ug/L	9549.8	ppb	13:53:04
2	Sr 421.552†	32384.5	32888.7	506.66	ug/L	506.66	ppb	13:53:04
2	Sc 361.383	1063461.6	1063461.6	100.24	%			13:54:25
2	Y 371.029	846126.2	846126.2	99.169	%			13:54:25

2	Ag 328.068†	126811.5	125865.3	501.27 ug/L	501.27 ppb	13:54:25
2	As 188.979†	2058.4	2090.4	493.85 ug/L	493.85 ppb	13:54:45
2	B 249.677†	31323.3	31628.9	491.05 ug/L	491.05 ppb	13:54:25
2	Ba 233.527†	98085.9	97823.8	496.36 ug/L	496.36 ppb	13:54:25
2	Be 313.107†	1587952.8	1591418.1	495.99 ug/L	495.99 ppb	13:54:25
2	Cd 226.502†	66376.1	66492.8	497.06 ug/L	497.06 ppb	13:54:25
2	Co 228.616†	38816.9	38813.2	483.67 ug/L	483.67 ppb	13:54:45
2	Cr 267.716†	58135.0	58022.7	494.88 ug/L	494.88 ppb	13:54:25
2	Cu 324.752†	210177.7	199476.8	492.45 ug/L	492.45 ppb	13:54:25
2	Mn 257.610†	628370.5	626019.6	495.27 ug/L	495.27 ppb	13:54:25
2	Mo 202.031†	12579.9	12517.6	501.38 ug/L	501.38 ppb	13:54:45
2	Ni 231.604†	30677.7	30455.1	487.82 ug/L	487.82 ppb	13:54:45
2	P 214.914†	7338.8	6984.1	2393.7 ug/L	2393.7 ppb	13:54:45
2	Pb 220.353†	6619.2	6632.2	498.52 ug/L	498.52 ppb	13:54:45
2	S 181.975 Axial†	1248.9	1178.1	996.23 ug/L	996.23 ppb	13:54:45
2	Sb 206.836†	2544.9	2493.3	496.34 ug/L	496.34 ppb	13:54:45
2	Se 196.026†	1498.5	1516.5	512.27 ug/L	512.27 ppb	13:54:45
2	Si 251.611†	122326.0	121469.2	2494.5 ug/L	2494.5 ppb	13:54:25
2	Sn 189.927†	4769.0	4752.0	494.70 ug/L	494.70 ppb	13:54:45
2	Ti 334.940†	380132.8	380320.2	497.81 ug/L	497.81 ppb	13:54:25
2	Tl 190.801†	2870.3	2924.7	495.28 ug/L	495.28 ppb	13:54:45
2	U 409.014†	15658.2	19455.0	481.15 ug/L	481.15 ppb	13:54:25
2	V 292.402†	85307.7	86753.6	498.02 ug/L	498.02 ppb	13:54:25
2	Zn 213.857†	90245.0	88903.8	491.92 ug/L	491.92 ppb	13:54:25
2	SiO2†	123285.6	122384.3	5381.7 ug/L	5381.7 ppb	13:55:23
3	Sc Radial	5573.7	5573.7	100 %		13:53:29
3	Y RADIAL	4812.9	4812.9	99.94 %		13:53:29
3	Al 396.153Radial†	5255.8	5339.6	4838.8 ug/L	4838.8 ppb	13:53:29
3	Ca 317.933Radial†	1973.1	1953.0	4864.6 ug/L	4864.6 ppb	13:53:49
3	Fe 238.204 Radial†	139.2	138.6	4878.6 ug/L	4878.6 ppb	13:53:49
3	K 766.490 Radial†	13120.0	11626.0	5038.5 ug/L	5038.5 ppb	13:53:29
3	Mg 279.077 IEC†	64.1	63.8	5056.8 ug/L	5056.8 ppb	13:53:49
3	Na 589.592 Radial†	3353.7	3518.8	9514.4 ug/L	9514.4 ppb	13:53:29
3	Sr 421.552†	32719.5	32661.7	503.16 ug/L	503.16 ppb	13:53:29
3	Sc 361.383	1058179.3	1058179.3	99.745 %		13:54:53
3	Y 371.029	842497.6	842497.6	98.744 %		13:54:53
3	Ag 328.068†	126330.4	126014.5	501.86 ug/L	501.86 ppb	13:54:53
3	As 188.979†	2057.5	2099.7	496.03 ug/L	496.03 ppb	13:55:13
3	B 249.677†	31210.0	31671.2	491.71 ug/L	491.71 ppb	13:54:53
3	Ba 233.527†	97758.5	97984.0	497.17 ug/L	497.17 ppb	13:54:53
3	Be 313.107†	1583127.1	1594487.7	496.94 ug/L	496.94 ppb	13:54:53
3	Cd 226.502†	66127.5	66574.1	497.67 ug/L	497.67 ppb	13:54:53
3	Co 228.616†	38831.5	39021.1	486.27 ug/L	486.27 ppb	13:55:13
3	Cr 267.716†	57986.8	58163.5	496.08 ug/L	496.08 ppb	13:54:53
3	Cu 324.752†	209484.3	199828.2	493.31 ug/L	493.31 ppb	13:54:53
3	Mn 257.610†	626333.1	627106.1	496.12 ug/L	496.12 ppb	13:54:53
3	Mo 202.031†	12578.2	12578.6	503.82 ug/L	503.82 ppb	13:55:13
3	Ni 231.604†	30631.5	30561.5	489.52 ug/L	489.52 ppb	13:55:13
3	P 214.914†	7330.3	7012.1	2403.5 ug/L	2403.5 ppb	13:55:13
3	Pb 220.353†	6608.7	6654.6	500.21 ug/L	500.21 ppb	13:55:13
3	S 181.975 Axial†	1242.9	1178.2	996.34 ug/L	996.34 ppb	13:55:13
3	Sb 206.836†	2548.0	2509.1	499.55 ug/L	499.55 ppb	13:55:13
3	Se 196.026†	1496.7	1522.2	513.99 ug/L	513.99 ppb	13:55:13
3	Si 251.611†	122075.1	121826.8	2501.8 ug/L	2501.8 ppb	13:54:53
3	Sn 189.927†	4792.6	4799.3	499.62 ug/L	499.62 ppb	13:55:13
3	Ti 334.940†	378543.4	380619.7	498.19 ug/L	498.19 ppb	13:54:53
3	Tl 190.801†	2875.5	2944.2	498.57 ug/L	498.57 ppb	13:55:13
3	U 409.014†	15463.5	19337.7	478.25 ug/L	478.25 ppb	13:54:53
3	V 292.402†	84999.2	86869.1	498.70 ug/L	498.70 ppb	13:54:53
3	Zn 213.857†	89816.3	88923.4	492.02 ug/L	492.02 ppb	13:54:53
3	SiO2†	121842.0	121550.9	5344.7 ug/L	5344.7 ppb	13:55:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1062449.2	100.15	%	0.364				0.36%
Sc Radial	5528.3	99.3	%	0.86				0.86%
Y 371.029	845147.9	99.055	%	0.2721				0.27%
Y RADIAL	4782.6	99.31	%	0.822				0.83%
Ag 328.068†	125875.8	501.31	ug/L	0.529	501.31	ppb	0.529	0.11%

```
   QC value within limits for Ag 328.068  Recovery = 100.26%
Al 396.153Radial†       5361.3      4858.5 ug/L         25.19      4858.5 ppb          25.19   0.52%
   QC value within limits for Al 396.153Radial  Recovery = 97.17%
As 188.979†             2093.0      494.47 ug/L         1.360      494.47 ppb          1.360   0.27%
   QC value within limits for As 188.979  Recovery = 98.89%
B 249.677†             31618.2      490.89 ug/L         0.920      490.89 ppb          0.920   0.19%
   QC value within limits for B 249.677  Recovery = 98.18%
Ba 233.527†            97908.4      496.78 ug/L         0.408      496.78 ppb          0.408   0.08%
   QC value within limits for Ba 233.527  Recovery = 99.36%
Be 313.107†          1592105.4      496.20 ug/L         0.661      496.20 ppb          0.661   0.13%
   QC value within limits for Be 313.107  Recovery = 99.24%
Ca 317.933Radial†       1968.5      4903.3 ug/L         67.61      4903.3 ppb          67.61   1.38%
   QC value within limits for Ca 317.933Radial  Recovery = 98.07%
Cd 226.502†            66574.3      497.67 ug/L         0.612      497.67 ppb          0.612   0.12%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            38887.7      484.60 ug/L         1.446      484.60 ppb          1.446   0.30%
   QC value within limits for Co 228.616  Recovery = 96.92%
Cr 267.716†            58025.0      494.90 ug/L         1.170      494.90 ppb          1.170   0.24%
   QC value within limits for Cr 267.716  Recovery = 98.98%
Cu 324.752†           199806.6      493.26 ug/L         0.788      493.26 ppb          0.788   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.65%
Fe 238.204 Radial†       139.2      4897.4 ug/L         20.54      4897.4 ppb          20.54   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.95%
K 766.490 Radial†      11701.7      5071.4 ug/L         33.47      5071.4 ppb          33.47   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 101.43%
Mg 279.077 IEC†           63.7      5052.4 ug/L         71.88      5052.4 ppb          71.88   1.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.05%
Mn 257.610†           626836.3      495.91 ug/L         0.569      495.91 ppb          0.569   0.11%
   QC value within limits for Mn 257.610  Recovery = 99.18%
Mo 202.031†            12538.7      502.23 ug/L         1.381      502.23 ppb          1.381   0.27%
   QC value within limits for Mo 202.031  Recovery = 100.45%
Na 589.592 Radial†      3535.3      9559.0 ug/L         49.77      9559.0 ppb          49.77   0.52%
   QC value within limits for Na 589.592 Radial  Recovery = 95.59%
Ni 231.604†            30483.3      488.27 ug/L         1.098      488.27 ppb          1.098   0.22%
   QC value within limits for Ni 231.604  Recovery = 97.65%
P 214.914†              6991.7      2396.3 ug/L          6.34      2396.3 ppb           6.34   0.26%
   QC value within limits for P 214.914  Recovery = 95.85%
Pb 220.353†             6635.3      498.75 ug/L         1.354      498.75 ppb          1.354   0.27%
   QC value within limits for Pb 220.353  Recovery = 99.75%
S 181.975 Axial†        1177.6      995.80 ug/L         0.853      995.80 ppb          0.853   0.09%
   QC value within limits for S 181.975 Axial  Recovery = 99.58%
Sb 206.836†             2504.0      498.48 ug/L         1.857      498.48 ppb          1.857   0.37%
   QC value within limits for Sb 206.836  Recovery = 99.70%
Se 196.026†             1517.2      512.42 ug/L         1.501      512.42 ppb          1.501   0.29%
   QC value within limits for Se 196.026  Recovery = 102.48%
Si 251.611†           121681.6      2498.9 ug/L          3.87      2498.9 ppb           3.87   0.15%
   QC value within limits for Si 251.611  Recovery = 99.96%
Sn 189.927†             4769.3      496.49 ug/L         2.717      496.49 ppb          2.717   0.55%
   QC value within limits for Sn 189.927  Recovery = 99.30%
Sr 421.552†            32788.7      505.12 ug/L         1.785      505.12 ppb          1.785   0.35%
   QC value within limits for Sr 421.552  Recovery = 101.02%
Ti 334.940†           380510.2      498.05 ug/L         0.212      498.05 ppb          0.212   0.04%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2928.8      495.98 ug/L         2.322      495.98 ppb          2.322   0.47%
   QC value within limits for Tl 190.801  Recovery = 99.20%
U 409.014†             19386.3      479.45 ug/L         1.515      479.45 ppb          1.515   0.32%
   QC value within limits for U 409.014  Recovery = 95.89%
V 292.402†             86773.4      498.14 ug/L         0.513      498.14 ppb          0.513   0.10%
   QC value within limits for V 292.402  Recovery = 99.63%
Zn 213.857†            88927.5      492.05 ug/L         0.150      492.05 ppb          0.150   0.03%
   QC value within limits for Zn 213.857  Recovery = 98.41%
SiO2†                 121895.1      5360.0 ug/L         19.26      5360.0 ppb          19.26   0.36%
   QC value within limits for SiO2  Recovery = 100.23%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:57:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5512.4	5512.4	99.1	%			13:59:32
1	Y RADIAL	4836.2	4836.2	100.4	%			13:59:32
1	Al 396.153Radial†	-55.4	36.2	32.965	ug/L	32.965	ppb	13:59:32
1	Ca 317.933Radial†	28.9	12.2	30.392	ug/L	30.392	ppb	13:59:52
1	Fe 238.204 Radial†	1.4	1.1	39.203	ug/L	39.203	ppb	13:59:52
1	K 766.490 Radial†	1556.0	97.7	42.443	ug/L	42.443	ppb	13:59:32
1	Mg 279.077 IEC†	-0.5	-0.7	-54.448	ug/L	-54.448	ppb	13:59:52
1	Na 589.592 Radial†	-170.4	-1.6	-4.3331	ug/L	-4.3331	ppb	13:59:52
1	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431	ppb	13:59:52
1	Sc 361.383	1045095.6	1045095.6	98.512	%			14:00:48
1	Y 371.029	840297.9	840297.9	98.486	%			14:00:48
1	Ag 328.068†	669.1	40.6	0.1714	ug/L	0.1714	ppb	14:00:53
1	As 188.979†	-47.0	-10.8	-2.5308	ug/L	-2.5308	ppb	14:01:14
1	B 249.677†	41.0	423.1	6.5884	ug/L	6.5884	ppb	14:00:53
1	Ba 233.527†	26.8	2.9	0.0152	ug/L	0.0152	ppb	14:01:14
1	Be 313.107†	-7456.8	-253.3	-0.0788	ug/L	-0.0788	ppb	14:00:53
1	Cd 226.502†	-287.1	-13.8	-0.1077	ug/L	-0.1077	ppb	14:01:14
1	Co 228.616†	-82.7	6.5	0.0810	ug/L	0.0810	ppb	14:01:14
1	Cr 267.716†	-22.8	5.4	0.0463	ug/L	0.0463	ppb	14:01:14
1	Cu 324.752†	10117.6	79.2	0.1976	ug/L	0.1976	ppb	14:00:53
1	Mn 257.610†	832.3	17.8	0.0203	ug/L	0.0203	ppb	14:01:14
1	Mo 202.031†	36.8	5.6	0.2251	ug/L	0.2251	ppb	14:01:14
1	Ni 231.604†	175.4	29.8	0.4780	ug/L	0.4780	ppb	14:01:14
1	P 214.914†	347.7	16.0	5.6120	ug/L	5.6120	ppb	14:01:14
1	Pb 220.353†	-10.0	18.9	1.4202	ug/L	1.4202	ppb	14:01:14
1	S 181.975 Axial†	68.0	1.2	0.9994	ug/L	0.9994	ppb	14:01:14
1	Sb 206.836†	66.3	21.9	4.3017	ug/L	4.3017	ppb	14:01:14
1	Se 196.026†	-16.7	4.6	1.6497	ug/L	1.6497	ppb	14:01:14
1	Si 251.611†	727.7	178.6	3.6667	ug/L	3.6667	ppb	14:01:14
1	Sn 189.927†	7.0	1.6	0.1723	ug/L	0.1723	ppb	14:01:14
1	Ti 334.940†	-1108.8	-16.3	-0.0199	ug/L	-0.0199	ppb	14:00:53
1	Tl 190.801†	-63.4	-2.9	-0.4929	ug/L	-0.4929	ppb	14:01:14
1	U 409.014†	-3726.3	52.2	1.2899	ug/L	1.2899	ppb	14:00:48
1	V 292.402†	-1652.5	-24.6	-0.1406	ug/L	-0.1406	ppb	14:00:53
1	Zn 213.857†	1130.3	25.0	0.1340	ug/L	0.1340	ppb	14:01:14
1	SiO2†	726.7	135.3	5.9362	ug/L	5.9362	ppb	14:02:19
2	Sc Radial	5511.5	5511.5	99.0	%			13:59:57
2	Y RADIAL	4786.2	4786.2	99.39	%			13:59:57
2	Al 396.153Radial†	-72.0	19.5	17.796	ug/L	17.796	ppb	13:59:57
2	Ca 317.933Radial†	29.7	13.1	32.554	ug/L	32.554	ppb	14:00:17
2	Fe 238.204 Radial†	-0.3	-0.7	-23.581	ug/L	-23.581	ppb	14:00:17
2	K 766.490 Radial†	1595.9	138.3	59.989	ug/L	59.989	ppb	13:59:57
2	Mg 279.077 IEC†	-0.0	-0.2	-16.582	ug/L	-16.582	ppb	14:00:17
2	Na 589.592 Radial†	-181.5	-12.8	-34.604	ug/L	-34.604	ppb	14:00:17
2	Sr 421.552†	12.3	7.0	0.1070	ug/L	0.1070	ppb	14:00:17
2	Sc 361.383	1050518.5	1050518.5	99.023	%			14:01:19
2	Y 371.029	845673.2	845673.2	99.116	%			14:01:19
2	Ag 328.068†	645.1	12.9	0.0438	ug/L	0.0438	ppb	14:01:24
2	As 188.979†	-49.5	-13.1	-3.0770	ug/L	-3.0770	ppb	14:01:44
2	B 249.677†	118.8	501.5	7.8188	ug/L	7.8188	ppb	14:01:24
2	Ba 233.527†	40.4	16.5	0.0832	ug/L	0.0832	ppb	14:01:44
2	Be 313.107†	-7364.0	-120.4	-0.0373	ug/L	-0.0373	ppb	14:01:24
2	Cd 226.502†	-300.7	-26.0	-0.1917	ug/L	-0.1917	ppb	14:01:44
2	Co 228.616†	-75.1	14.6	0.1807	ug/L	0.1807	ppb	14:01:44
2	Cr 267.716†	-8.5	20.0	0.1703	ug/L	0.1703	ppb	14:01:44
2	Cu 324.752†	10243.6	153.4	0.3772	ug/L	0.3772	ppb	14:01:24
2	Mn 257.610†	843.7	25.0	0.0170	ug/L	0.0170	ppb	14:01:44
2	Mo 202.031†	21.8	-9.8	-0.3926	ug/L	-0.3926	ppb	14:01:44
2	Ni 231.604†	171.6	25.1	0.4014	ug/L	0.4014	ppb	14:01:44

2	P 214.914†	348.3	14.8	5.2050 ug/L	5.2050 ppb	14:01:44
2	Pb 220.353†	-12.7	16.3	1.2244 ug/L	1.2244 ppb	14:01:44
2	S 181.975 Axial†	60.3	-6.9	-5.8538 ug/L	-5.8538 ppb	14:01:44
2	Sb 206.836†	37.3	-7.8	-1.5329 ug/L	-1.5329 ppb	14:01:44
2	Se 196.026†	-18.7	2.7	0.8056 ug/L	0.8056 ppb	14:01:44
2	Si 251.611†	723.3	170.4	3.5003 ug/L	3.5003 ppb	14:01:44
2	Sn 189.927†	11.3	6.0	0.6230 ug/L	0.6230 ppb	14:01:44
2	Ti 334.940†	-1056.9	41.9	0.0571 ug/L	0.0571 ppb	14:01:24
2	Tl 190.801†	-56.2	4.7	0.7874 ug/L	0.7874 ppb	14:01:44
2	U 409.014†	-3810.6	-13.5	-0.3320 ug/L	-0.3320 ppb	14:01:19
2	V 292.402†	-1611.2	25.7	0.1429 ug/L	0.1429 ppb	14:01:24
2	Zn 213.857†	1136.7	25.5	0.1424 ug/L	0.1424 ppb	14:01:44
2	SiO2†	739.3	144.2	6.3394 ug/L	6.3394 ppb	14:02:24
3	Sc Radial	5518.7	5518.7	99.2 %		14:00:22
3	Y RADIAL	4792.7	4792.7	99.52 %		14:00:22
3	Al 396.153Radial†	-86.9	4.6	4.1447 ug/L	4.1447 ppb	14:00:22
3	Ca 317.933Radial†	25.9	9.2	22.974 ug/L	22.974 ppb	14:00:42
3	Fe 238.204 Radial†	-0.1	-0.4	-15.497 ug/L	-15.497 ppb	14:00:42
3	K 766.490 Radial†	1555.4	95.3	41.343 ug/L	41.343 ppb	14:00:22
3	Mg 279.077 IEC†	-0.0	-0.2	-17.227 ug/L	-17.227 ppb	14:00:42
3	Na 589.592 Radial†	-174.6	-5.6	-15.194 ug/L	-15.194 ppb	14:00:42
3	Sr 421.552†	23.6	18.4	0.2827 ug/L	0.2827 ppb	14:00:42
3	Sc 361.383	1057245.8	1057245.8	99.657 %		14:01:49
3	Y 371.029	850037.2	850037.2	99.628 %		14:01:49
3	Ag 328.068†	694.9	58.7	0.2256 ug/L	0.2256 ppb	14:01:54
3	As 188.979†	-47.5	-10.8	-2.5338 ug/L	-2.5338 ppb	14:02:14
3	B 249.677†	68.0	449.8	7.0124 ug/L	7.0124 ppb	14:01:54
3	Ba 233.527†	35.7	11.5	0.0574 ug/L	0.0574 ppb	14:02:14
3	Be 313.107†	-7483.5	-193.0	-0.0600 ug/L	-0.0600 ppb	14:01:54
3	Cd 226.502†	-289.4	-12.7	-0.0931 ug/L	-0.0931 ppb	14:02:14
3	Co 228.616†	-98.9	-8.8	-0.1094 ug/L	-0.1094 ppb	14:02:14
3	Cr 267.716†	5.9	34.5	0.2927 ug/L	0.2927 ppb	14:02:14
3	Cu 324.752†	10251.7	95.7	0.2352 ug/L	0.2352 ppb	14:01:54
3	Mn 257.610†	869.3	45.2	0.0341 ug/L	0.0341 ppb	14:02:14
3	Mo 202.031†	34.7	3.0	0.1197 ug/L	0.1197 ppb	14:02:14
3	Ni 231.604†	157.2	9.4	0.1515 ug/L	0.1515 ppb	14:02:14
3	P 214.914†	335.6	-0.2	-0.0906 ug/L	-0.0906 ppb	14:02:14
3	Pb 220.353†	2.8	31.9	2.3909 ug/L	2.3909 ppb	14:02:14
3	S 181.975 Axial†	65.8	-1.8	-1.5179 ug/L	-1.5179 ppb	14:02:14
3	Sb 206.836†	43.4	-1.9	-0.3829 ug/L	-0.3829 ppb	14:02:14
3	Se 196.026†	-16.8	4.8	1.5002 ug/L	1.5002 ppb	14:02:14
3	Si 251.611†	726.0	168.4	3.4599 ug/L	3.4599 ppb	14:02:14
3	Sn 189.927†	2.6	-2.9	-0.3010 ug/L	-0.3010 ppb	14:02:14
3	Ti 334.940†	-1099.9	5.6	0.0087 ug/L	0.0087 ppb	14:01:54
3	Tl 190.801†	-56.6	4.6	0.7834 ug/L	0.7834 ppb	14:02:14
3	U 409.014†	-3812.4	9.3	0.2316 ug/L	0.2316 ppb	14:01:49
3	V 292.402†	-1702.0	-55.1	-0.3086 ug/L	-0.3086 ppb	14:01:54
3	Zn 213.857†	1134.7	16.2	0.0914 ug/L	0.0914 ppb	14:02:14
3	SiO2†	754.5	154.7	6.8042 ug/L	6.8042 ppb	14:02:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1050953.3	99.064	%	0.5737				0.58%
Sc Radial	5514.2	99.1	%	0.07				0.07%
Y 371.029	845336.1	99.077	%	0.5718				0.58%
Y RADIAL	4805.0	99.78	%	0.565				0.57%
Ag 328.068†	37.4	0.1469	ug/L	0.09332	0.1469	ppb	0.09332	63.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.1	18.302	ug/L	14.4166	18.302	ppb	14.4166	78.77%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.5	-2.7138	ug/L	0.31447	-2.7138	ppb	0.31447	11.59%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	458.1	7.1399	ug/L	0.62502	7.1399	ppb	0.62502	8.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.3	0.0519	ug/L	0.03434	0.0519	ppb	0.03434	66.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-188.9	-0.0587	ug/L	0.02078	-0.0587	ppb	0.02078	35.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.5	28.640	ug/L	5.0242	28.640	ppb	5.0242	17.54%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -17.5     -0.1308 ug/L       0.05322     -0.1308 ppb        0.05322  40.67%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.1      0.0508 ug/L       0.14740      0.0508 ppb        0.14740 290.21%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               20.0      0.1698 ug/L       0.12323      0.1698 ppb        0.12323  72.58%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              109.4      0.2700 ug/L       0.09473      0.2700 ppb        0.09473  35.09%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.0      0.0417 ug/L      34.15450      0.0417 ppb       34.15450 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.4     47.925 ug/L       10.4622     47.925 ppb        10.4622  21.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4    -29.419 ug/L       21.6782    -29.419 ppb        21.6782  73.69%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               29.4      0.0238 ug/L       0.00904      0.0238 ppb        0.00904  38.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.4     -0.0160 ug/L       0.33043     -0.0160 ppb        0.33043 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -6.7    -18.043 ug/L       15.3353    -18.043 ppb        15.3353  84.99%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.4      0.3436 ug/L       0.17075      0.3436 ppb        0.17075  49.69%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                10.2      3.5755 ug/L       3.18145      3.5755 ppb        3.18145  88.98%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               22.3      1.6785 ug/L       0.62466      1.6785 ppb        0.62466  37.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -2.5     -2.1241 ug/L       3.46659     -2.1241 ppb        3.46659 163.20%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.1      0.7953 ug/L       3.09058      0.7953 ppb        3.09058 388.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.1      1.3185 ug/L       0.45042      1.3185 ppb        0.45042  34.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              172.4      3.5423 ug/L       0.10965      3.5423 ppb        0.10965   3.10%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.6      0.1647 ug/L       0.46206      0.1647 ppb        0.46206 280.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               15.9      0.2443 ug/L       0.12268      0.2443 ppb        0.12268  50.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               10.4      0.0153 ug/L       0.03894      0.0153 ppb        0.03894 254.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                2.1      0.3593 ug/L       0.73803      0.3593 ppb        0.73803 205.41%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                16.0      0.3965 ug/L       0.82342      0.3965 ppb        0.82342 207.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -18.0     -0.1021 ug/L       0.22820     -0.1021 ppb        0.22820 223.47%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               22.2      0.1226 ug/L       0.02735      0.1226 ppb        0.02735  22.32%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    144.8      6.3599 ug/L       0.43437      6.3599 ppb        0.43437   6.83%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 14:46:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5663.2	5663.2	102	%			14:48:38
1	Y RADIAL	4921.9	4921.9	102.2	%			14:48:38
1	Al 396.153Radial†	5410.9	5409.1	4902.2	ug/L	4902.2	ppb	14:48:38
1	Ca 317.933Radial†	1995.4	1943.8	4841.7	ug/L	4841.7	ppb	14:48:58
1	Fe 238.204 Radial†	141.6	138.8	4883.9	ug/L	4883.9	ppb	14:48:58
1	K 766.490 Radial†	13474.7	11767.5	5099.6	ug/L	5099.6	ppb	14:48:38
1	Mg 279.077 IEC†	63.7	62.4	4947.6	ug/L	4947.6	ppb	14:48:58
1	Na 589.592 Radial†	3686.9	3793.3	10257	ug/L	10257	ppb	14:48:38
1	Sr 421.552†	35305.4	34686.6	534.36	ug/L	534.36	ppb	14:48:38
1	Sc 361.383	1067499.7	1067499.7	100.62	%			14:49:57
1	Y 371.029	849118.5	849118.5	99.520	%			14:49:57
1	Ag 328.068†	127285.3	125857.7	501.23	ug/L	501.23	ppb	14:49:57
1	As 188.979†	2071.6	2095.7	495.11	ug/L	495.11	ppb	14:50:17
1	B 249.677†	31156.7	31345.1	486.64	ug/L	486.64	ppb	14:49:57
1	Ba 233.527†	98393.7	97759.6	496.03	ug/L	496.03	ppb	14:49:57
1	Be 313.107†	1596893.7	1594311.3	496.89	ug/L	496.89	ppb	14:49:57
1	Cd 226.502†	66558.7	66423.8	496.55	ug/L	496.55	ppb	14:49:57
1	Co 228.616†	38907.9	38757.1	482.97	ug/L	482.97	ppb	14:50:17
1	Cr 267.716†	58242.4	57910.0	493.92	ug/L	493.92	ppb	14:49:57
1	Cu 324.752†	211606.8	200103.9	493.99	ug/L	493.99	ppb	14:49:57
1	Mn 257.610†	631676.1	626933.6	495.99	ug/L	495.99	ppb	14:49:57
1	Mo 202.031†	12587.0	12477.2	499.76	ug/L	499.76	ppb	14:50:17
1	Ni 231.604†	30647.6	30309.4	485.48	ug/L	485.48	ppb	14:50:17
1	P 214.914†	7375.2	6992.6	2396.5	ug/L	2396.5	ppb	14:50:17
1	Pb 220.353†	6646.8	6634.7	498.71	ug/L	498.71	ppb	14:50:17
1	S 181.975 Axial†	1245.2	1169.7	989.10	ug/L	989.10	ppb	14:50:17
1	Sb 206.836†	2573.9	2512.6	500.11	ug/L	500.11	ppb	14:50:17
1	Se 196.026†	1503.7	1516.0	511.99	ug/L	511.99	ppb	14:50:17
1	Si 251.611†	123652.9	122326.3	2512.2	ug/L	2512.2	ppb	14:49:57
1	Sn 189.927†	4790.4	4755.2	495.03	ug/L	495.03	ppb	14:50:17
1	Ti 334.940†	382199.7	380939.8	498.61	ug/L	498.61	ppb	14:49:57
1	Tl 190.801†	2862.4	2906.0	492.14	ug/L	492.14	ppb	14:50:17
1	U 409.014†	15590.1	19328.2	478.01	ug/L	478.01	ppb	14:49:57
1	V 292.402†	85513.5	86636.2	497.33	ug/L	497.33	ppb	14:49:57
1	Zn 213.857†	90612.3	88928.3	492.08	ug/L	492.08	ppb	14:49:57
1	SiO2†	124200.5	122828.2	5401.3	ug/L	5401.3	ppb	14:51:17
2	Sc Radial	5446.9	5446.9	97.9	%			14:49:03
2	Y RADIAL	4712.8	4712.8	97.86	%			14:49:03
2	Al 396.153Radial†	5213.9	5419.0	4910.9	ug/L	4910.9	ppb	14:49:03
2	Ca 317.933Radial†	1989.6	2015.7	5020.8	ug/L	5020.8	ppb	14:49:23
2	Fe 238.204 Radial†	140.2	142.9	5030.3	ug/L	5030.3	ppb	14:49:23
2	K 766.490 Radial†	13037.0	11846.3	5133.9	ug/L	5133.9	ppb	14:49:03
2	Mg 279.077 IEC†	62.1	63.2	5014.8	ug/L	5014.8	ppb	14:49:23
2	Na 589.592 Radial†	3542.3	3789.5	10246	ug/L	10246	ppb	14:49:03
2	Sr 421.552†	33787.9	34514.2	531.70	ug/L	531.70	ppb	14:49:03
2	Sc 361.383	1055183.8	1055183.8	99.463	%			14:50:24
2	Y 371.029	838651.5	838651.5	98.293	%			14:50:24
2	Ag 328.068†	126214.7	126257.7	502.87	ug/L	502.87	ppb	14:50:24
2	As 188.979†	2075.2	2123.3	501.61	ug/L	501.61	ppb	14:50:44
2	B 249.677†	30917.9	31466.4	488.49	ug/L	488.49	ppb	14:50:24
2	Ba 233.527†	97565.5	98068.1	497.60	ug/L	497.60	ppb	14:50:24
2	Be 313.107†	1577953.1	1593791.5	496.73	ug/L	496.73	ppb	14:50:24
2	Cd 226.502†	66051.4	66685.8	498.49	ug/L	498.49	ppb	14:50:24
2	Co 228.616†	39043.3	39344.5	490.30	ug/L	490.30	ppb	14:50:44
2	Cr 267.716†	57589.2	57928.8	494.08	ug/L	494.08	ppb	14:50:24
2	Cu 324.752†	209513.9	200454.2	494.86	ug/L	494.86	ppb	14:50:24
2	Mn 257.610†	625453.1	628004.0	496.86	ug/L	496.86	ppb	14:50:24
2	Mo 202.031†	12625.4	12661.8	507.16	ug/L	507.16	ppb	14:50:44
2	Ni 231.604†	30744.2	30762.0	492.73	ug/L	492.73	ppb	14:50:44

2	P 214.914†	7400.3	7103.3	2435.4 ug/L	2435.4 ppb	14:50:44
2	Pb 220.353†	6622.3	6687.2	502.65 ug/L	502.65 ppb	14:50:44
2	S 181.975 Axial†	1258.3	1197.3	1012.5 ug/L	1012.5 ppb	14:50:44
2	Sb 206.836†	2580.0	2548.5	507.42 ug/L	507.42 ppb	14:50:44
2	Se 196.026†	1502.6	1532.3	517.83 ug/L	517.83 ppb	14:50:44
2	Si 251.611†	122528.7	122630.3	2518.3 ug/L	2518.3 ppb	14:50:24
2	Sn 189.927†	4790.5	4810.9	500.83 ug/L	500.83 ppb	14:50:44
2	Ti 334.940†	378341.9	381494.5	499.35 ug/L	499.35 ppb	14:50:24
2	Tl 190.801†	2870.9	2947.8	499.17 ug/L	499.17 ppb	14:50:44
2	U 409.014†	15257.4	19174.6	474.18 ug/L	474.18 ppb	14:50:24
2	V 292.402†	84668.4	86778.5	498.20 ug/L	498.20 ppb	14:50:24
2	Zn 213.857†	89929.9	89293.2	494.05 ug/L	494.05 ppb	14:50:24
2	SiO2†	124500.2	124570.2	5478.0 ug/L	5478.0 ppb	14:51:22
3	Sc Radial	5449.0	5449.0	97.9 %		14:49:28
3	Y RADIAL	4751.1	4751.1	98.66 %		14:49:28
3	Al 396.153Radial†	5174.8	5377.0	4872.7 ug/L	4872.7 ppb	14:49:28
3	Ca 317.933Radial†	2014.0	2039.9	5081.0 ug/L	5081.0 ppb	14:49:48
3	Fe 238.204 Radial†	143.3	146.0	5137.0 ug/L	5137.0 ppb	14:49:48
3	K 766.490 Radial†	13008.8	11812.4	5119.3 ug/L	5119.3 ppb	14:49:28
3	Mg 279.077 IEC†	65.2	66.4	5266.1 ug/L	5266.1 ppb	14:49:48
3	Na 589.592 Radial†	3500.5	3745.4	10127 ug/L	10127 ppb	14:49:28
3	Sr 421.552†	33740.1	34452.0	530.74 ug/L	530.74 ppb	14:49:28
3	Sc 361.383	1058649.0	1058649.0	99.789 %		14:50:52
3	Y 371.029	841526.8	841526.8	98.630 %		14:50:52
3	Ag 328.068†	126556.5	126184.9	502.61 ug/L	502.61 ppb	14:50:52
3	As 188.979†	2067.1	2108.3	498.11 ug/L	498.11 ppb	14:51:12
3	B 249.677†	31071.1	31518.1	489.29 ug/L	489.29 ppb	14:50:52
3	Ba 233.527†	97563.9	97745.5	495.96 ug/L	495.96 ppb	14:50:52
3	Be 313.107†	1581052.4	1591704.4	496.08 ug/L	496.08 ppb	14:50:52
3	Cd 226.502†	66155.8	66573.0	497.64 ug/L	497.64 ppb	14:50:52
3	Co 228.616†	38962.9	39135.5	487.69 ug/L	487.69 ppb	14:51:12
3	Cr 267.716†	57794.8	57945.3	494.22 ug/L	494.22 ppb	14:50:52
3	Cu 324.752†	210072.8	200324.8	494.55 ug/L	494.55 ppb	14:50:52
3	Mn 257.610†	626128.3	626622.3	495.77 ug/L	495.77 ppb	14:50:52
3	Mo 202.031†	12621.3	12616.2	505.34 ug/L	505.34 ppb	14:51:12
3	Ni 231.604†	30683.7	30600.2	490.14 ug/L	490.14 ppb	14:51:12
3	P 214.914†	7387.7	7066.4	2422.3 ug/L	2422.3 ppb	14:51:12
3	Pb 220.353†	6644.7	6687.8	502.68 ug/L	502.68 ppb	14:51:12
3	S 181.975 Axial†	1254.7	1189.5	1005.9 ug/L	1005.9 ppb	14:51:12
3	Sb 206.836†	2576.1	2536.1	504.89 ug/L	504.89 ppb	14:51:12
3	Se 196.026†	1509.7	1534.5	518.90 ug/L	518.90 ppb	14:51:12
3	Si 251.611†	122635.6	122334.2	2512.3 ug/L	2512.3 ppb	14:50:52
3	Sn 189.927†	4780.2	4784.8	498.13 ug/L	498.13 ppb	14:51:12
3	Ti 334.940†	379019.7	380928.6	498.61 ug/L	498.61 ppb	14:50:52
3	Tl 190.801†	2889.3	2956.8	500.68 ug/L	500.68 ppb	14:51:12
3	U 409.014†	15553.0	19420.5	480.27 ug/L	480.27 ppb	14:50:52
3	V 292.402†	84924.5	86756.4	498.05 ug/L	498.05 ppb	14:50:52
3	Zn 213.857†	89838.3	88905.4	491.88 ug/L	491.88 ppb	14:50:52
3	SiO2†	123331.7	122989.5	5408.2 ug/L	5408.2 ppb	14:51:27

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060444.2	99.959	%	0.5987				0.60%
Sc Radial	5519.7	99.2	%	2.23				2.25%
Y 371.029	843098.9	98.814	%	0.6338				0.64%
Y RADIAL	4795.3	99.58	%	2.312				2.32%
Ag 328.068†	126100.1	502.23	ug/L	0.878	502.23	ppb	0.878	0.17%
QC value within limits for Ag 328.068 Recovery = 100.45%								
Al 396.153Radial†	5401.7	4895.3	ug/L	19.99	4895.3	ppb	19.99	0.41%
QC value within limits for Al 396.153Radial Recovery = 97.91%								
As 188.979†	2109.1	498.28	ug/L	3.254	498.28	ppb	3.254	0.65%
QC value within limits for As 188.979 Recovery = 99.66%								
B 249.677†	31443.2	488.14	ug/L	1.360	488.14	ppb	1.360	0.28%
QC value within limits for B 249.677 Recovery = 97.63%								
Ba 233.527†	97857.7	496.53	ug/L	0.924	496.53	ppb	0.924	0.19%
QC value within limits for Ba 233.527 Recovery = 99.31%								
Be 313.107†	1593269.0	496.56	ug/L	0.429	496.56	ppb	0.429	0.09%
QC value within limits for Be 313.107 Recovery = 99.31%								
Ca 317.933Radial†	1999.8	4981.2	ug/L	124.51	4981.2	ppb	124.51	2.50%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.62%
Cd 226.502†            66560.8      497.56 ug/L         0.976      497.56 ppb          0.976   0.20%
   QC value within limits for Cd 226.502  Recovery = 99.51%
Co 228.616†            39079.1      486.99 ug/L         3.717      486.99 ppb          3.717   0.76%
   QC value within limits for Co 228.616  Recovery = 97.40%
Cr 267.716†            57928.0      494.08 ug/L         0.153      494.08 ppb          0.153   0.03%
   QC value within limits for Cr 267.716  Recovery = 98.82%
Cu 324.752†           200294.3      494.47 ug/L         0.442      494.47 ppb          0.442   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.89%
Fe 238.204 Radial†       142.6      5017.1 ug/L       127.10      5017.1 ppb        127.10   2.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.34%
K 766.490 Radial†      11808.7      5117.6 ug/L        17.20      5117.6 ppb         17.20   0.34%
   QC value within limits for K 766.490 Radial  Recovery = 102.35%
Mg 279.077 IEC†           64.0      5076.2 ug/L       167.87      5076.2 ppb        167.87   3.31%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.52%
Mn 257.610†           627186.6      496.21 ug/L         0.573      496.21 ppb          0.573   0.12%
   QC value within limits for Mn 257.610  Recovery = 99.24%
Mo 202.031†            12585.1      504.09 ug/L         3.856      504.09 ppb          3.856   0.76%
   QC value within limits for Mo 202.031  Recovery = 100.82%
Na 589.592 Radial†      3776.0       10210 ug/L          71.9       10210 ppb           71.9   0.70%
   QC value within limits for Na 589.592 Radial  Recovery = 102.10%
Ni 231.604†            30557.2      489.45 ug/L         3.673      489.45 ppb          3.673   0.75%
   QC value within limits for Ni 231.604  Recovery = 97.89%
P 214.914†              7054.1      2418.1 ug/L        19.82      2418.1 ppb         19.82   0.82%
   QC value within limits for P 214.914  Recovery = 96.72%
Pb 220.353†             6669.9      501.35 ug/L         2.283      501.35 ppb          2.283   0.46%
   QC value within limits for Pb 220.353  Recovery = 100.27%
S 181.975 Axial†        1185.5      1002.5 ug/L        12.05      1002.5 ppb         12.05   1.20%
   QC value within limits for S 181.975 Axial  Recovery = 100.25%
Sb 206.836†             2532.4      504.14 ug/L         3.715      504.14 ppb          3.715   0.74%
   QC value within limits for Sb 206.836  Recovery = 100.83%
Se 196.026†             1527.6      516.24 ug/L         3.717      516.24 ppb          3.717   0.72%
   QC value within limits for Se 196.026  Recovery = 103.25%
Si 251.611†           122430.3      2514.3 ug/L          3.52      2514.3 ppb          3.52   0.14%
   QC value within limits for Si 251.611  Recovery = 100.57%
Sn 189.927†             4783.6      498.00 ug/L         2.905      498.00 ppb          2.905   0.58%
   QC value within limits for Sn 189.927  Recovery = 99.60%
Sr 421.552†            34550.9      532.27 ug/L         1.873      532.27 ppb          1.873   0.35%
   QC value within limits for Sr 421.552  Recovery = 106.45%
Ti 334.940†           381121.0      498.86 ug/L         0.427      498.86 ppb          0.427   0.09%
   QC value within limits for Ti 334.940  Recovery = 99.77%
Tl 190.801†             2936.9      497.33 ug/L         4.557      497.33 ppb          4.557   0.92%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19307.8      477.49 ug/L         3.078      477.49 ppb          3.078   0.64%
   QC value within limits for U 409.014  Recovery = 95.50%
V 292.402†             86723.7      497.86 ug/L         0.468      497.86 ppb          0.468   0.09%
   QC value within limits for V 292.402  Recovery = 99.57%
Zn 213.857†            89042.3      492.67 ug/L         1.200      492.67 ppb          1.200   0.24%
   QC value within limits for Zn 213.857  Recovery = 98.53%
SiO2†                 123462.7      5429.2 ug/L        42.40      5429.2 ppb         42.40   0.78%
   QC value within limits for SiO2  Recovery = 101.53%
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 14:53:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5472.3	5472.3	98.3	%			14:55:30
1	Y RADIAL	4760.3	4760.3	98.85	%			14:55:30
1	Al 396.153Radial†	-81.1	9.7	8.8083	ug/L	8.8083	ppb	14:55:30
1	Ca 317.933Radial†	30.8	14.4	35.761	ug/L	35.761	ppb	14:55:50
1	Fe 238.204 Radial†	0.5	0.2	5.6899	ug/L	5.6899	ppb	14:55:50
1	K 766.490 Radial†	1569.9	123.4	53.550	ug/L	53.550	ppb	14:55:30
1	Mg 279.077 IEC†	-0.7	-0.9	-68.768	ug/L	-68.768	ppb	14:55:50
1	Na 589.592 Radial†	-177.5	-10.1	-27.266	ug/L	-27.266	ppb	14:55:50
1	Sr 421.552†	35.3	30.4	0.4686	ug/L	0.4686	ppb	14:55:50
1	Sc 361.383	1053868.2	1053868.2	99.339	%			14:56:47
1	Y 371.029	847547.6	847547.6	99.336	%			14:56:47
1	Ag 328.068†	611.0	-23.5	-0.0912	ug/L	-0.0912	ppb	14:56:52
1	As 188.979†	-59.7	-23.1	-5.4331	ug/L	-5.4331	ppb	14:57:12
1	B 249.677†	-115.7	265.0	4.1295	ug/L	4.1295	ppb	14:56:52
1	Ba 233.527†	39.3	15.3	0.0772	ug/L	0.0772	ppb	14:57:12
1	Be 313.107†	-7467.3	-200.8	-0.0623	ug/L	-0.0623	ppb	14:56:52
1	Cd 226.502†	-282.8	-7.0	-0.0528	ug/L	-0.0528	ppb	14:57:12
1	Co 228.616†	-98.5	-8.7	-0.1082	ug/L	-0.1082	ppb	14:57:12
1	Cr 267.716†	-17.9	10.6	0.0901	ug/L	0.0901	ppb	14:57:12
1	Cu 324.752†	10191.0	67.6	0.1671	ug/L	0.1671	ppb	14:56:52
1	Mn 257.610†	957.5	136.8	0.1102	ug/L	0.1102	ppb	14:57:12
1	Mo 202.031†	35.6	4.1	0.1634	ug/L	0.1634	ppb	14:57:12
1	Ni 231.604†	164.1	16.9	0.2714	ug/L	0.2714	ppb	14:57:12
1	P 214.914†	332.8	-1.9	-0.6902	ug/L	-0.6902	ppb	14:57:12
1	Pb 220.353†	-0.7	28.4	2.1276	ug/L	2.1276	ppb	14:57:12
1	S 181.975 Axial†	64.3	-3.1	-2.6380	ug/L	-2.6380	ppb	14:57:12
1	Sb 206.836†	50.1	5.0	0.9831	ug/L	0.9831	ppb	14:57:12
1	Se 196.026†	-20.4	1.0	0.3567	ug/L	0.3567	ppb	14:57:12
1	Si 251.611†	771.9	216.9	4.4555	ug/L	4.4555	ppb	14:57:12
1	Sn 189.927†	3.4	-2.0	-0.2090	ug/L	-0.2090	ppb	14:57:12
1	Ti 334.940†	-1048.8	53.5	0.0729	ug/L	0.0729	ppb	14:56:52
1	Tl 190.801†	-48.9	12.2	2.0617	ug/L	2.0617	ppb	14:57:12
1	U 409.014†	-3860.6	-51.6	-1.2803	ug/L	-1.2803	ppb	14:56:47
1	V 292.402†	-1672.4	-30.8	-0.1770	ug/L	-0.1770	ppb	14:56:52
1	Zn 213.857†	1170.2	55.5	0.3100	ug/L	0.3100	ppb	14:57:12
1	SiO2†	796.6	199.5	8.7725	ug/L	8.7725	ppb	14:58:18
2	Sc Radial	5640.5	5640.5	101	%			14:55:55
2	Y RADIAL	4909.7	4909.7	102.0	%			14:55:55
2	Al 396.153Radial†	-62.3	30.8	28.013	ug/L	28.013	ppb	14:55:55
2	Ca 317.933Radial†	30.3	12.9	32.245	ug/L	32.245	ppb	14:56:15
2	Fe 238.204 Radial†	-0.5	-0.8	-29.760	ug/L	-29.760	ppb	14:56:15
2	K 766.490 Radial†	1516.6	23.1	10.017	ug/L	10.017	ppb	14:55:55
2	Mg 279.077 IEC†	0.3	0.1	8.2285	ug/L	8.2285	ppb	14:56:15
2	Na 589.592 Radial†	-177.1	-4.3	-11.518	ug/L	-11.518	ppb	14:56:15
2	Sr 421.552†	6.1	0.6	0.0086	ug/L	0.0086	ppb	14:56:15
2	Sc 361.383	1063342.1	1063342.1	100.23	%			14:57:17
2	Y 371.029	854778.4	854778.4	100.18	%			14:57:17
2	Ag 328.068†	643.4	3.4	0.0032	ug/L	0.0032	ppb	14:57:22
2	As 188.979†	-51.2	-14.2	-3.3303	ug/L	-3.3303	ppb	14:57:42
2	B 249.677†	-29.0	352.6	5.4981	ug/L	5.4981	ppb	14:57:22
2	Ba 233.527†	26.1	1.8	0.0085	ug/L	0.0085	ppb	14:57:42
2	Be 313.107†	-7456.4	-123.0	-0.0382	ug/L	-0.0382	ppb	14:57:22
2	Cd 226.502†	-288.4	-10.1	-0.0717	ug/L	-0.0717	ppb	14:57:42
2	Co 228.616†	-70.3	20.3	0.2517	ug/L	0.2517	ppb	14:57:42
2	Cr 267.716†	-12.6	16.0	0.1359	ug/L	0.1359	ppb	14:57:42
2	Cu 324.752†	10255.5	40.5	0.0983	ug/L	0.0983	ppb	14:57:22
2	Mn 257.610†	981.3	152.0	0.1161	ug/L	0.1161	ppb	14:57:42
2	Mo 202.031†	22.2	-9.6	-0.3874	ug/L	-0.3874	ppb	14:57:42
2	Ni 231.604†	156.9	8.2	0.1321	ug/L	0.1321	ppb	14:57:42

2	P 214.914†	349.2	11.4	4.0629	ug/L	4.0629 ppb	14:57:42
2	Pb 220.353†	-26.9	2.3	0.1761	ug/L	0.1761 ppb	14:57:42
2	S 181.975 Axial†	69.4	1.4	1.1802	ug/L	1.1802 ppb	14:57:42
2	Sb 206.836†	51.9	6.4	1.2457	ug/L	1.2457 ppb	14:57:42
2	Se 196.026†	-27.8	-6.2	-2.1074	ug/L	-2.1074 ppb	14:57:42
2	Si 251.611†	798.7	236.8	4.8879	ug/L	4.8879 ppb	14:57:42
2	Sn 189.927†	9.7	4.2	0.4366	ug/L	0.4366 ppb	14:57:42
2	Ti 334.940†	-1103.0	8.8	0.0133	ug/L	0.0133 ppb	14:57:22
2	Tl 190.801†	-47.5	14.0	2.3645	ug/L	2.3645 ppb	14:57:42
2	U 409.014†	-3819.8	23.8	0.5932	ug/L	0.5932 ppb	14:57:17
2	V 292.402†	-1637.6	19.0	0.1084	ug/L	0.1084 ppb	14:57:22
2	Zn 213.857†	1144.2	19.2	0.1089	ug/L	0.1089 ppb	14:57:42
2	SiO2†	764.0	159.9	7.0706	ug/L	7.0706 ppb	14:58:23
3	Sc Radial	5502.0	5502.0	98.9	%		14:56:20
3	Y RADIAL	4784.6	4784.6	99.35	%		14:56:20
3	Al 396.153Radial†	-79.0	12.3	11.188	ug/L	11.188 ppb	14:56:20
3	Ca 317.933Radial†	25.1	8.5	21.069	ug/L	21.069 ppb	14:56:40
3	Fe 238.204 Radial†	1.2	0.9	30.106	ug/L	30.106 ppb	14:56:40
3	K 766.490 Radial†	1574.7	119.6	51.922	ug/L	51.922 ppb	14:56:20
3	Mg 279.077 IEC†	2.6	2.5	197.62	ug/L	197.62 ppb	14:56:40
3	Na 589.592 Radial†	-180.3	-11.9	-32.235	ug/L	-32.235 ppb	14:56:40
3	Sr 421.552†	15.5	10.2	0.1562	ug/L	0.1562 ppb	14:56:40
3	Sc 361.383	1051449.5	1051449.5	99.111	%		14:57:47
3	Y 371.029	846638.2	846638.2	99.229	%		14:57:47
3	Ag 328.068†	588.3	-45.1	-0.1673	ug/L	-0.1673 ppb	14:57:52
3	As 188.979†	-54.8	-18.3	-4.3026	ug/L	-4.3026 ppb	14:58:13
3	B 249.677†	-85.6	295.2	4.5964	ug/L	4.5964 ppb	14:57:52
3	Ba 233.527†	31.6	7.6	0.0395	ug/L	0.0395 ppb	14:58:13
3	Be 313.107†	-7461.5	-212.2	-0.0661	ug/L	-0.0661 ppb	14:57:52
3	Cd 226.502†	-273.8	1.4	0.0072	ug/L	0.0072 ppb	14:58:13
3	Co 228.616†	-94.2	-4.7	-0.0576	ug/L	-0.0576 ppb	14:58:13
3	Cr 267.716†	-11.6	16.9	0.1449	ug/L	0.1449 ppb	14:58:13
3	Cu 324.752†	10178.7	78.7	0.1959	ug/L	0.1959 ppb	14:57:52
3	Mn 257.610†	987.9	169.8	0.1343	ug/L	0.1343 ppb	14:58:13
3	Mo 202.031†	39.6	8.2	0.3293	ug/L	0.3293 ppb	14:58:13
3	Ni 231.604†	164.9	18.1	0.2903	ug/L	0.2903 ppb	14:58:13
3	P 214.914†	362.0	28.3	9.9383	ug/L	9.9383 ppb	14:58:13
3	Pb 220.353†	-9.5	19.5	1.4654	ug/L	1.4654 ppb	14:58:13
3	S 181.975 Axial†	64.0	-3.2	-2.7432	ug/L	-2.7432 ppb	14:58:13
3	Sb 206.836†	52.1	7.2	1.4070	ug/L	1.4070 ppb	14:58:13
3	Se 196.026†	-24.8	-3.4	-0.9905	ug/L	-0.9905 ppb	14:58:13
3	Si 251.611†	779.4	226.3	4.6478	ug/L	4.6478 ppb	14:58:13
3	Sn 189.927†	2.2	-3.2	-0.3355	ug/L	-0.3355 ppb	14:58:13
3	Ti 334.940†	-1145.5	-46.5	-0.0588	ug/L	-0.0588 ppb	14:57:52
3	Tl 190.801†	-50.5	10.5	1.7647	ug/L	1.7647 ppb	14:58:13
3	U 409.014†	-3862.5	-62.4	-1.5531	ug/L	-1.5531 ppb	14:57:47
3	V 292.402†	-1624.6	13.6	0.0773	ug/L	0.0773 ppb	14:57:52
3	Zn 213.857†	1159.9	47.9	0.2551	ug/L	0.2551 ppb	14:58:13
3	SiO2†	806.9	211.8	9.3098	ug/L	9.3098 ppb	14:58:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056219.9	99.560	%	0.5925				0.60%
Sc Radial	5538.3	99.5	%	1.61				1.62%
Y 371.029	849654.7	99.583	%	0.5228				0.52%
Y RADIAL	4818.2	100.1	%	1.66				1.66%
Ag 328.068†	-21.7	-0.0851	ug/L	0.08542	-0.0851	ppb	0.08542	100.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.6	16.003	ug/L	10.4684	16.003	ppb	10.4684	65.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-18.6	-4.3553	ug/L	1.05239	-4.3553	ppb	1.05239	24.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	304.2	4.7413	ug/L	0.69569	4.7413	ppb	0.69569	14.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.2	0.0417	ug/L	0.03442	0.0417	ppb	0.03442	82.50%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-178.7	-0.0555	ug/L	0.01513	-0.0555	ppb	0.01513	27.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.9	29.692	ug/L	7.6715	29.692	ppb	7.6715	25.84%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -5.2     -0.0391 ug/L       0.04120     -0.0391 ppb        0.04120 105.48%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 2.3      0.0286 ug/L       0.19481      0.0286 ppb        0.19481 680.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.5      0.1236 ug/L       0.02938      0.1236 ppb        0.02938  23.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                62.3      0.1538 ug/L       0.05016      0.1538 ppb        0.05016  32.62%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.1      2.0121 ug/L      30.10210      2.0121 ppb       30.10210 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          88.7     38.496 ug/L       24.6777     38.496 ppb        24.6777  64.10%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.6     45.694 ug/L      137.0902     45.694 ppb       137.0902 300.02%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               152.9      0.1202 ug/L       0.01255      0.1202 ppb        0.01255  10.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 0.9      0.0351 ug/L       0.37516      0.0351 ppb        0.37516 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -8.8    -23.673 ug/L       10.8153    -23.673 ppb        10.8153  45.69%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.4      0.2313 ug/L       0.08644      0.2313 ppb        0.08644  37.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 12.6      4.4370 ug/L       5.32411      4.4370 ppb        5.32411 119.99%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                16.7      1.2563 ug/L       0.99239      1.2563 ppb        0.99239  78.99%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -1.7    -1.4003 ug/L       2.23542     -1.4003 ppb        2.23542 159.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.2      1.2119 ug/L       0.21396      1.2119 ppb        0.21396  17.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.8    -0.9137 ug/L       1.23385     -0.9137 ppb        1.23385 135.04%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               226.7      4.6637 ug/L       0.21666      4.6637 ppb        0.21666   4.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -0.4    -0.0360 ug/L       0.41410     -0.0360 ppb        0.41410 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                13.7      0.2112 ug/L       0.23488      0.2112 ppb        0.23488 111.23%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 5.2      0.0091 ug/L       0.06596      0.0091 ppb        0.06596 721.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                12.2      2.0636 ug/L       0.29992      2.0636 ppb        0.29992  14.53%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -30.1    -0.7468 ug/L       1.16839     -0.7468 ppb        1.16839 156.46%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  0.6      0.0029 ug/L       0.15653      0.0029 ppb        0.15653 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                40.9      0.2247 ug/L       0.10391      0.2247 ppb        0.10391  46.25%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     190.4      8.3843 ug/L       1.16902      8.3843 ppb        1.16902  13.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 15:41:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5550.0	5550.0	99.7	%			15:43:35
1	Y RADIAL	4798.2	4798.2	99.64	%			15:43:35
1	Al 396.153Radial†	5250.4	5356.7	4854.3	ug/L	4854.3	ppb	15:43:35
1	Ca 317.933Radial†	1970.4	1958.7	4878.8	ug/L	4878.8	ppb	15:43:55
1	Fe 238.204 Radial†	137.3	137.4	4834.0	ug/L	4834.0	ppb	15:43:55
1	K 766.490 Radial†	13208.1	11770.2	5101.0	ug/L	5101.0	ppb	15:43:35
1	Mg 279.077 IEC†	62.7	62.7	4968.1	ug/L	4968.1	ppb	15:43:55
1	Na 589.592 Radial†	3392.0	3571.5	9656.9	ug/L	9656.9	ppb	15:43:35
1	Sr 421.552†	32852.9	32935.1	507.37	ug/L	507.37	ppb	15:43:35
1	Sc 361.383	1064992.1	1064992.1	100.39	%			15:44:54
1	Y 371.029	848241.6	848241.6	99.417	%			15:44:54
1	Ag 328.068†	127421.5	126291.3	502.94	ug/L	502.94	ppb	15:44:54
1	As 188.979†	2061.8	2090.8	493.94	ug/L	493.94	ppb	15:45:14
1	B 249.677†	31095.4	31357.0	486.83	ug/L	486.83	ppb	15:44:54
1	Ba 233.527†	98115.4	97712.5	495.79	ug/L	495.79	ppb	15:44:54
1	Be 313.107†	1594280.0	1595444.2	497.24	ug/L	497.24	ppb	15:44:54
1	Cd 226.502†	66508.1	66529.1	497.34	ug/L	497.34	ppb	15:44:54
1	Co 228.616†	38950.3	38890.4	484.63	ug/L	484.63	ppb	15:45:14
1	Cr 267.716†	58229.3	58033.2	494.97	ug/L	494.97	ppb	15:44:54
1	Cu 324.752†	211193.1	200186.9	494.19	ug/L	494.19	ppb	15:44:54
1	Mn 257.610†	629952.0	626694.1	495.80	ug/L	495.80	ppb	15:44:54
1	Mo 202.031†	12627.7	12547.2	502.56	ug/L	502.56	ppb	15:45:14
1	Ni 231.604†	30770.4	30503.4	488.59	ug/L	488.59	ppb	15:45:14
1	P 214.914†	7365.6	7000.2	2399.2	ug/L	2399.2	ppb	15:45:14
1	Pb 220.353†	6628.4	6631.9	498.51	ug/L	498.51	ppb	15:45:14
1	S 181.975 Axial†	1254.4	1181.7	999.29	ug/L	999.29	ppb	15:45:14
1	Sb 206.836†	2567.0	2511.7	499.99	ug/L	499.99	ppb	15:45:14
1	Se 196.026†	1506.6	1522.4	513.89	ug/L	513.89	ppb	15:45:14
1	Si 251.611†	123069.6	122034.6	2506.1	ug/L	2506.1	ppb	15:44:54
1	Sn 189.927†	4784.8	4760.9	495.62	ug/L	495.62	ppb	15:45:14
1	Ti 334.940†	381087.6	380726.3	498.33	ug/L	498.33	ppb	15:44:54
1	Tl 190.801†	2886.0	2936.3	497.24	ug/L	497.24	ppb	15:45:14
1	U 409.014†	15577.1	19351.8	478.60	ug/L	478.60	ppb	15:44:54
1	V 292.402†	85505.0	86827.9	498.46	ug/L	498.46	ppb	15:44:54
1	Zn 213.857†	90597.9	89125.9	493.16	ug/L	493.16	ppb	15:44:54
1	SiO2†	122068.2	120994.8	5320.2	ug/L	5320.2	ppb	15:46:14
2	Sc Radial	5447.3	5447.3	97.9	%			15:44:00
2	Y RADIAL	4711.7	4711.7	97.84	%			15:44:00
2	Al 396.153Radial†	5172.6	5376.3	4872.0	ug/L	4872.0	ppb	15:44:00
2	Ca 317.933Radial†	1978.6	2004.4	4992.5	ug/L	4992.5	ppb	15:44:20
2	Fe 238.204 Radial†	139.0	141.6	4983.9	ug/L	4983.9	ppb	15:44:20
2	K 766.490 Radial†	12957.8	11764.2	5098.5	ug/L	5098.5	ppb	15:44:00
2	Mg 279.077 IEC†	62.4	63.6	5042.1	ug/L	5042.1	ppb	15:44:20
2	Na 589.592 Radial†	3337.3	3579.7	9679.1	ug/L	9679.1	ppb	15:44:00
2	Sr 421.552†	32178.4	32867.1	506.32	ug/L	506.32	ppb	15:44:00
2	Sc 361.383	1051068.9	1051068.9	99.075	%			15:45:22
2	Y 371.029	835857.7	835857.7	97.966	%			15:45:22
2	Ag 328.068†	126172.9	126712.4	504.65	ug/L	504.65	ppb	15:45:22
2	As 188.979†	2053.8	2109.9	498.46	ug/L	498.46	ppb	15:45:42
2	B 249.677†	30728.4	31396.9	487.41	ug/L	487.41	ppb	15:45:22
2	Ba 233.527†	97233.2	98116.8	497.84	ug/L	497.84	ppb	15:45:22
2	Be 313.107†	1574216.1	1596230.6	497.49	ug/L	497.49	ppb	15:45:22
2	Cd 226.502†	65742.7	66634.2	498.11	ug/L	498.11	ppb	15:45:22
2	Co 228.616†	38877.4	39330.9	490.13	ug/L	490.13	ppb	15:45:42
2	Cr 267.716†	57664.8	58231.8	496.66	ug/L	496.66	ppb	15:45:22
2	Cu 324.752†	208926.4	200685.8	495.43	ug/L	495.43	ppb	15:45:22
2	Mn 257.610†	623851.7	628849.5	497.52	ug/L	497.52	ppb	15:45:22
2	Mo 202.031†	12603.0	12688.9	508.24	ug/L	508.24	ppb	15:45:42
2	Ni 231.604†	30731.8	30870.5	494.47	ug/L	494.47	ppb	15:45:42

2	P 214.914†	7351.1	7082.8	2428.1 ug/L	2428.1 ppb	15:45:42
2	Pb 220.353†	6620.8	6711.7	504.49 ug/L	504.49 ppb	15:45:42
2	S 181.975 Axial†	1262.4	1206.4	1020.2 ug/L	1020.2 ppb	15:45:42
2	Sb 206.836†	2541.1	2519.4	501.67 ug/L	501.67 ppb	15:45:42
2	Se 196.026†	1500.7	1536.3	518.98 ug/L	518.98 ppb	15:45:42
2	Si 251.611†	121951.6	122530.2	2516.3 ug/L	2516.3 ppb	15:45:22
2	Sn 189.927†	4769.9	4808.9	500.63 ug/L	500.63 ppb	15:45:42
2	Ti 334.940†	377304.3	381936.4	499.92 ug/L	499.92 ppb	15:45:22
2	Tl 190.801†	2878.0	2966.2	502.28 ug/L	502.28 ppb	15:45:42
2	U 409.014†	15599.1	19579.5	484.23 ug/L	484.23 ppb	15:45:22
2	V 292.402†	84556.2	86998.4	499.49 ug/L	499.49 ppb	15:45:22
2	Zn 213.857†	89634.5	89349.0	494.35 ug/L	494.35 ppb	15:45:22
2	SiO2†	124157.3	124714.2	5484.3 ug/L	5484.3 ppb	15:46:20
3	Sc Radial	5536.4	5536.4	99.5 %		15:44:25
3	Y RADIAL	4822.5	4822.5	100.1 %		15:44:25
3	Al 396.153Radial†	5265.5	5384.7	4879.5 ug/L	4879.5 ppb	15:44:25
3	Ca 317.933Radial†	1962.2	1955.4	4870.5 ug/L	4870.5 ppb	15:44:45
3	Fe 238.204 Radial†	137.2	137.6	4842.9 ug/L	4842.9 ppb	15:44:45
3	K 766.490 Radial†	13216.2	11810.9	5118.7 ug/L	5118.7 ppb	15:44:25
3	Mg 279.077 IEC†	62.7	62.8	4983.0 ug/L	4983.0 ppb	15:44:45
3	Na 589.592 Radial†	3349.3	3536.8	9563.2 ug/L	9563.2 ppb	15:44:25
3	Sr 421.552†	32669.2	32831.2	505.77 ug/L	505.77 ppb	15:44:25
3	Sc 361.383	1057782.7	1057782.7	99.708 %		15:45:49
3	Y 371.029	842128.4	842128.4	98.701 %		15:45:49
3	Ag 328.068†	126824.6	126557.6	504.00 ug/L	504.00 ppb	15:45:49
3	As 188.979†	2088.9	2131.9	503.59 ug/L	503.59 ppb	15:46:09
3	B 249.677†	31037.4	31509.9	489.19 ug/L	489.19 ppb	15:45:49
3	Ba 233.527†	97777.3	98039.6	497.45 ug/L	497.45 ppb	15:45:49
3	Be 313.107†	1585103.6	1597065.1	497.75 ug/L	497.75 ppb	15:45:49
3	Cd 226.502†	66249.3	66721.1	498.78 ug/L	498.78 ppb	15:45:49
3	Co 228.616†	39095.7	39300.7	489.76 ug/L	489.76 ppb	15:46:09
3	Cr 267.716†	57940.4	58138.8	495.87 ug/L	495.87 ppb	15:45:49
3	Cu 324.752†	210463.9	200889.4	495.93 ug/L	495.93 ppb	15:45:49
3	Mn 257.610†	627057.2	628067.8	496.88 ug/L	496.88 ppb	15:45:49
3	Mo 202.031†	12692.2	12697.7	508.58 ug/L	508.58 ppb	15:46:09
3	Ni 231.604†	30844.9	30787.0	493.13 ug/L	493.13 ppb	15:46:09
3	P 214.914†	7405.1	7089.9	2430.6 ug/L	2430.6 ppb	15:46:09
3	Pb 220.353†	6652.2	6700.8	503.69 ug/L	503.69 ppb	15:46:09
3	S 181.975 Axial†	1250.4	1186.2	1003.1 ug/L	1003.1 ppb	15:46:09
3	Sb 206.836†	2566.7	2528.8	503.51 ug/L	503.51 ppb	15:46:09
3	Se 196.026†	1528.1	1554.1	524.28 ug/L	524.28 ppb	15:46:09
3	Si 251.611†	122522.5	122321.5	2511.9 ug/L	2511.9 ppb	15:45:49
3	Sn 189.927†	4781.4	4789.9	498.63 ug/L	498.63 ppb	15:46:09
3	Ti 334.940†	379146.9	381367.2	499.17 ug/L	499.17 ppb	15:45:49
3	Tl 190.801†	2882.7	2952.6	499.96 ug/L	499.96 ppb	15:46:09
3	U 409.014†	15482.2	19362.3	478.86 ug/L	478.86 ppb	15:45:49
3	V 292.402†	85105.0	87007.2	499.55 ug/L	499.55 ppb	15:45:49
3	Zn 213.857†	90130.2	89272.0	493.95 ug/L	493.95 ppb	15:45:49
3	SiO2†	121770.0	121524.5	5343.3 ug/L	5343.3 ppb	15:46:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1057947.9	99.723	%	0.6563				0.66%
Sc Radial	5511.3	99.0	%	1.00				1.01%
Y 371.029	842075.9	98.695	%	0.7257				0.74%
Y RADIAL	4777.5	99.21	%	1.210				1.22%
Ag 328.068†	126520.4	503.86	ug/L	0.864	503.86	ppb	0.864	0.17%
QC value within limits for Ag 328.068 Recovery = 100.77%								
Al 396.153Radial†	5372.6	4868.6	ug/L	12.94	4868.6	ppb	12.94	0.27%
QC value within limits for Al 396.153Radial Recovery = 97.37%								
As 188.979†	2110.9	498.66	ug/L	4.828	498.66	ppb	4.828	0.97%
QC value within limits for As 188.979 Recovery = 99.73%								
B 249.677†	31421.2	487.81	ug/L	1.234	487.81	ppb	1.234	0.25%
QC value within limits for B 249.677 Recovery = 97.56%								
Ba 233.527†	97956.3	497.03	ug/L	1.089	497.03	ppb	1.089	0.22%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1596246.7	497.49	ug/L	0.253	497.49	ppb	0.253	0.05%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	1972.8	4913.9	ug/L	68.18	4913.9	ppb	68.18	1.39%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.28%
Cd 226.502†            66628.1      498.08 ug/L         0.720      498.08 ppb          0.720   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39174.0      488.17 ug/L         3.072      488.17 ppb          3.072   0.63%
   QC value within limits for Co 228.616  Recovery = 97.63%
Cr 267.716†            58134.6      495.83 ug/L         0.848      495.83 ppb          0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 99.17%
Cu 324.752†           200587.4      495.18 ug/L         0.893      495.18 ppb          0.893   0.18%
   QC value within limits for Cu 324.752  Recovery = 99.04%
Fe 238.204 Radial†       138.9      4886.9 ug/L         84.13      4886.9 ppb          84.13   1.72%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.74%
K 766.490 Radial†      11781.8      5106.1 ug/L         11.02      5106.1 ppb          11.02   0.22%
   QC value within limits for K 766.490 Radial  Recovery = 102.12%
Mg 279.077 IEC†           63.0      4997.8 ug/L         39.10      4997.8 ppb          39.10   0.78%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.96%
Mn 257.610†           627870.5      496.73 ug/L         0.871      496.73 ppb          0.871   0.18%
   QC value within limits for Mn 257.610  Recovery = 99.35%
Mo 202.031†            12644.6      506.46 ug/L         3.383      506.46 ppb          3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.29%
Na 589.592 Radial†      3562.7      9633.1 ug/L         61.49      9633.1 ppb          61.49   0.64%
   QC value within limits for Na 589.592 Radial  Recovery = 96.33%
Ni 231.604†            30720.3      492.07 ug/L         3.082      492.07 ppb          3.082   0.63%
   QC value within limits for Ni 231.604  Recovery = 98.41%
P 214.914†              7057.6      2419.3 ug/L         17.48      2419.3 ppb          17.48   0.72%
   QC value within limits for P 214.914  Recovery = 96.77%
Pb 220.353†             6681.5      502.23 ug/L         3.248      502.23 ppb          3.248   0.65%
   QC value within limits for Pb 220.353  Recovery = 100.45%
S 181.975 Axial†        1191.4      1007.5 ug/L         11.14      1007.5 ppb          11.14   1.11%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             2520.0      501.72 ug/L         1.761      501.72 ppb          1.761   0.35%
   QC value within limits for Sb 206.836  Recovery = 100.34%
Se 196.026†             1537.6      519.05 ug/L         5.195      519.05 ppb          5.195   1.00%
   QC value within limits for Se 196.026  Recovery = 103.81%
Si 251.611†           122295.4      2511.5 ug/L          5.07      2511.5 ppb           5.07   0.20%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†             4786.6      498.30 ug/L         2.522      498.30 ppb          2.522   0.51%
   QC value within limits for Sn 189.927  Recovery = 99.66%
Sr 421.552†            32877.8      506.49 ug/L         0.813      506.49 ppb          0.813   0.16%
   QC value within limits for Sr 421.552  Recovery = 101.30%
Ti 334.940†           381343.3      499.14 ug/L         0.795      499.14 ppb          0.795   0.16%
   QC value within limits for Ti 334.940  Recovery = 99.83%
Tl 190.801†             2951.7      499.83 ug/L         2.522      499.83 ppb          2.522   0.50%
   QC value within limits for Tl 190.801  Recovery = 99.97%
U 409.014†             19431.2      480.57 ug/L         3.177      480.57 ppb          3.177   0.66%
   QC value within limits for U 409.014  Recovery = 96.11%
V 292.402†             86944.5      499.16 ug/L         0.613      499.16 ppb          0.613   0.12%
   QC value within limits for V 292.402  Recovery = 99.83%
Zn 213.857†            89249.0      493.82 ug/L         0.604      493.82 ppb          0.604   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.76%
SiO2†                 122411.2      5382.6 ug/L         88.82      5382.6 ppb          88.82   1.65%
   QC value within limits for SiO2  Recovery = 100.66%
All analyte(s) passed QC.
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Sequence No.: 18
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 15:48:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5444.7	5444.7	97.8	%			15:50:26
1	Y RADIAL	4754.6	4754.6	98.73	%			15:50:26
1	Al 396.153Radial†	-89.0	1.3	1.1300	ug/L	1.1300	ppb	15:50:26
1	Ca 317.933Radial†	24.6	8.2	20.486	ug/L	20.486	ppb	15:50:46
1	Fe 238.204 Radial†	1.6	1.3	45.016	ug/L	45.016	ppb	15:50:46
1	K 766.490 Radial†	1541.6	102.5	44.484	ug/L	44.484	ppb	15:50:26
1	Mg 279.077 IEC†	0.2	0.0	0.5452	ug/L	0.5452	ppb	15:50:46
1	Na 589.592 Radial†	-165.9	0.9	2.3237	ug/L	2.3237	ppb	15:50:46
1	Sr 421.552†	27.6	22.8	0.3506	ug/L	0.3506	ppb	15:50:46
1	Sc 361.383	1056924.6	1056924.6	99.627	%			15:51:43
1	Y 371.029	852084.4	852084.4	99.868	%			15:51:43
1	Ag 328.068†	677.5	41.4	0.1786	ug/L	0.1786	ppb	15:51:48
1	As 188.979†	-48.7	-12.0	-2.7987	ug/L	-2.7987	ppb	15:52:08
1	B 249.677†	-15.3	366.2	5.7014	ug/L	5.7014	ppb	15:51:48
1	Ba 233.527†	58.9	34.8	0.1773	ug/L	0.1773	ppb	15:52:08
1	Be 313.107†	-7518.0	-229.9	-0.0713	ug/L	-0.0713	ppb	15:51:48
1	Cd 226.502†	-272.1	4.5	0.0287	ug/L	0.0287	ppb	15:52:08
1	Co 228.616†	-101.3	-11.3	-0.1398	ug/L	-0.1398	ppb	15:52:08
1	Cr 267.716†	-33.1	-4.6	-0.0380	ug/L	-0.0380	ppb	15:51:48
1	Cu 324.752†	10167.5	14.3	0.0379	ug/L	0.0379	ppb	15:51:48
1	Mn 257.610†	919.8	96.2	0.0819	ug/L	0.0819	ppb	15:52:08
1	Mo 202.031†	42.0	10.4	0.4188	ug/L	0.4188	ppb	15:52:08
1	Ni 231.604†	169.3	21.7	0.3482	ug/L	0.3482	ppb	15:52:08
1	P 214.914†	354.3	18.7	6.5814	ug/L	6.5814	ppb	15:52:08
1	Pb 220.353†	-16.7	12.4	0.9234	ug/L	0.9234	ppb	15:52:08
1	S 181.975 Axial†	61.6	-6.0	-5.0843	ug/L	-5.0843	ppb	15:52:08
1	Sb 206.836†	53.3	8.1	1.6077	ug/L	1.6077	ppb	15:52:08
1	Se 196.026†	-12.1	9.5	3.2413	ug/L	3.2413	ppb	15:52:08
1	Si 251.611†	756.7	199.4	4.0905	ug/L	4.0905	ppb	15:52:08
1	Sn 189.927†	12.1	6.6	0.6931	ug/L	0.6931	ppb	15:52:08
1	Ti 334.940†	-1028.7	76.7	0.1021	ug/L	0.1021	ppb	15:51:48
1	Tl 190.801†	-51.6	9.6	1.6197	ug/L	1.6197	ppb	15:52:08
1	U 409.014†	-3848.7	-28.4	-0.7103	ug/L	-0.7103	ppb	15:51:43
1	V 292.402†	-1650.6	-3.9	-0.0247	ug/L	-0.0247	ppb	15:51:48
1	Zn 213.857†	1092.3	-26.1	-0.1527	ug/L	-0.1527	ppb	15:52:08
1	SiO2†	812.7	213.4	9.3760	ug/L	9.3760	ppb	15:53:14
2	Sc Radial	5363.3	5363.3	96.4	%			15:50:52
2	Y RADIAL	4689.7	4689.7	97.38	%			15:50:52
2	Al 396.153Radial†	-93.9	-5.3	-4.8063	ug/L	-4.8063	ppb	15:50:52
2	Ca 317.933Radial†	33.6	17.9	44.640	ug/L	44.640	ppb	15:51:12
2	Fe 238.204 Radial†	-0.5	-0.8	-29.258	ug/L	-29.258	ppb	15:51:12
2	K 766.490 Radial†	1469.5	51.7	22.381	ug/L	22.381	ppb	15:50:52
2	Mg 279.077 IEC†	0.5	0.4	29.965	ug/L	29.965	ppb	15:51:12
2	Na 589.592 Radial†	-167.6	-3.4	-9.2756	ug/L	-9.2756	ppb	15:51:12
2	Sr 421.552†	18.3	13.5	0.2083	ug/L	0.2083	ppb	15:51:12
2	Sc 361.383	1064727.6	1064727.6	100.36	%			15:52:14
2	Y 371.029	856448.2	856448.2	100.38	%			15:52:14
2	Ag 328.068†	654.6	13.6	0.0456	ug/L	0.0456	ppb	15:52:19
2	As 188.979†	-55.1	-18.0	-4.2429	ug/L	-4.2429	ppb	15:52:39
2	B 249.677†	-27.0	354.6	5.5302	ug/L	5.5302	ppb	15:52:19
2	Ba 233.527†	26.3	1.9	0.0090	ug/L	0.0090	ppb	15:52:39
2	Be 313.107†	-7608.1	-264.4	-0.0820	ug/L	-0.0820	ppb	15:52:19
2	Cd 226.502†	-292.9	-14.2	-0.1025	ug/L	-0.1025	ppb	15:52:39
2	Co 228.616†	-105.7	-14.9	-0.1859	ug/L	-0.1859	ppb	15:52:39
2	Cr 267.716†	-9.5	19.1	0.1627	ug/L	0.1627	ppb	15:52:19
2	Cu 324.752†	10209.3	-18.8	-0.0481	ug/L	-0.0481	ppb	15:52:19
2	Mn 257.610†	890.8	60.5	0.0435	ug/L	0.0435	ppb	15:52:39
2	Mo 202.031†	30.8	-1.1	-0.0470	ug/L	-0.0470	ppb	15:52:39
2	Ni 231.604†	166.7	17.8	0.2862	ug/L	0.2862	ppb	15:52:39

2	P 214.914†	351.3	13.1	4.6814	ug/L	4.6814 ppb	15:52:39
2	Pb 220.353†	0.4	29.5	2.2147	ug/L	2.2147 ppb	15:52:39
2	S 181.975 Axial†	58.3	-9.7	-8.2376	ug/L	-8.2376 ppb	15:52:39
2	Sb 206.836†	44.7	-0.9	-0.1791	ug/L	-0.1791 ppb	15:52:39
2	Se 196.026†	-22.7	-1.0	-0.4269	ug/L	-0.4269 ppb	15:52:39
2	Si 251.611†	732.9	170.1	3.5028	ug/L	3.5028 ppb	15:52:39
2	Sn 189.927†	9.3	3.8	0.3997	ug/L	0.3997 ppb	15:52:39
2	Ti 334.940†	-1052.4	60.6	0.0833	ug/L	0.0833 ppb	15:52:19
2	Tl 190.801†	-73.7	-12.1	-2.0323	ug/L	-2.0323 ppb	15:52:39
2	U 409.014†	-3937.4	-88.5	-2.1916	ug/L	-2.1916 ppb	15:52:14
2	V 292.402†	-1664.6	-5.8	-0.0333	ug/L	-0.0333 ppb	15:52:19
2	Zn 213.857†	1086.7	-39.7	-0.2212	ug/L	-0.2212 ppb	15:52:39
2	SiO2†	810.0	204.8	9.0296	ug/L	9.0296 ppb	15:53:19
3	Sc Radial	5503.9	5503.9	98.9	%		15:51:17
3	Y RADIAL	4786.1	4786.1	99.38	%		15:51:17
3	Al 396.153Radial†	-55.5	36.1	32.846	ug/L	32.846 ppb	15:51:17
3	Ca 317.933Radial†	29.6	13.0	32.437	ug/L	32.437 ppb	15:51:37
3	Fe 238.204 Radial†	1.1	0.8	28.650	ug/L	28.650 ppb	15:51:37
3	K 766.490 Radial†	1444.0	-13.2	-5.6858	ug/L	-5.6858 ppb	15:51:17
3	Mg 279.077 IEC†	-0.3	-0.5	-38.345	ug/L	-38.345 ppb	15:51:37
3	Na 589.592 Radial†	-167.4	1.1	3.0210	ug/L	3.0210 ppb	15:51:37
3	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431 ppb	15:51:37
3	Sc 361.383	1059763.4	1059763.4	99.895	%		15:52:44
3	Y 371.029	853150.8	853150.8	99.993	%		15:52:44
3	Ag 328.068†	638.8	0.9	0.0116	ug/L	0.0116 ppb	15:52:49
3	As 188.979†	-47.8	-11.0	-2.5746	ug/L	-2.5746 ppb	15:53:09
3	B 249.677†	-68.1	313.4	4.8798	ug/L	4.8798 ppb	15:52:49
3	Ba 233.527†	39.3	15.1	0.0771	ug/L	0.0771 ppb	15:53:09
3	Be 313.107†	-7522.3	-214.0	-0.0666	ug/L	-0.0666 ppb	15:52:49
3	Cd 226.502†	-285.9	-8.6	-0.0673	ug/L	-0.0673 ppb	15:53:09
3	Co 228.616†	-84.6	5.7	0.0719	ug/L	0.0719 ppb	15:53:09
3	Cr 267.716†	-51.0	-22.5	-0.1911	ug/L	-0.1911 ppb	15:52:49
3	Cu 324.752†	9963.6	-217.1	-0.5340	ug/L	-0.5340 ppb	15:52:49
3	Mn 257.610†	951.3	125.3	0.1035	ug/L	0.1035 ppb	15:53:09
3	Mo 202.031†	38.3	6.6	0.2645	ug/L	0.2645 ppb	15:53:09
3	Ni 231.604†	159.8	11.7	0.1876	ug/L	0.1876 ppb	15:53:09
3	P 214.914†	347.1	10.6	3.7978	ug/L	3.7978 ppb	15:53:09
3	Pb 220.353†	-25.4	3.7	0.2791	ug/L	0.2791 ppb	15:53:09
3	S 181.975 Axial†	64.7	-3.1	-2.6014	ug/L	-2.6014 ppb	15:53:09
3	Sb 206.836†	43.5	-1.9	-0.3719	ug/L	-0.3719 ppb	15:53:09
3	Se 196.026†	-24.2	-2.6	-0.7417	ug/L	-0.7417 ppb	15:53:09
3	Si 251.611†	723.7	164.4	3.3914	ug/L	3.3914 ppb	15:53:09
3	Sn 189.927†	-1.8	-7.3	-0.7591	ug/L	-0.7591 ppb	15:53:09
3	Ti 334.940†	-1125.7	-17.7	-0.0213	ug/L	-0.0213 ppb	15:52:49
3	Tl 190.801†	-47.4	13.9	2.3508	ug/L	2.3508 ppb	15:53:09
3	U 409.014†	-3791.5	39.2	0.9702	ug/L	0.9702 ppb	15:52:44
3	V 292.402†	-1640.9	10.2	0.0584	ug/L	0.0584 ppb	15:52:49
3	Zn 213.857†	1086.8	-34.5	-0.1947	ug/L	-0.1947 ppb	15:53:09
3	SiO2†	778.6	177.1	7.8246	ug/L	7.8246 ppb	15:53:24

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060471.9	99.961	%	0.3723				0.37%
Sc Radial	5437.3	97.7	%	1.27				1.30%
Y 371.029	853894.4	100.08	%	0.267				0.27%
Y RADIAL	4743.4	98.50	%	1.020				1.04%
Ag 328.068†	18.6	0.0786	ug/L	0.08825	0.0786	ppb	0.08825	112.24%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	10.7	9.7234	ug/L	20.24395	9.7234	ppb	20.24395	208.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-13.7	-3.2054	ug/L	0.90543	-3.2054	ppb	0.90543	28.25%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	344.7	5.3705	ug/L	0.43345	5.3705	ppb	0.43345	8.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	17.3	0.0878	ug/L	0.08464	0.0878	ppb	0.08464	96.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-236.1	-0.0733	ug/L	0.00791	-0.0733	ppb	0.00791	10.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.1	32.521	ug/L	12.0776	32.521	ppb	12.0776	37.14%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -6.1     -0.0470 ug/L       0.06789     -0.0470 ppb        0.06789 144.30%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -6.8     -0.0846 ug/L       0.13746     -0.0846 ppb        0.13746 162.45%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -2.7     -0.0221 ug/L       0.17746     -0.0221 ppb        0.17746 801.61%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -73.9     -0.1814 ug/L       0.30837     -0.1814 ppb        0.30837 170.01%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.4      14.803 ug/L      39.0249      14.803 ppb       39.0249 263.64%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        47.0      20.393 ug/L      25.1438      20.393 ppb       25.1438 123.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.0      -2.6115 ug/L     34.26394     -2.6115 ppb      34.26394 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              94.0       0.0763 ug/L      0.03041      0.0763 ppb       0.03041  39.87%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.3       0.2121 ug/L      0.23732      0.2121 ppb       0.23732 111.89%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -0.5      -1.3103 ug/L      6.90696     -1.3103 ppb       6.90696 527.13%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              17.1       0.2740 ug/L      0.08098      0.2740 ppb       0.08098  29.55%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               14.1       5.0202 ug/L      1.42236      5.0202 ppb       1.42236  28.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              15.2       1.1391 ug/L      0.98566      1.1391 ppb       0.98566  86.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -6.3      -5.3078 ug/L      2.82471     -5.3078 ppb       2.82471  53.22%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               1.8       0.3522 ug/L      1.09156      0.3522 ppb       1.09156 309.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               2.0       0.6909 ug/L      2.21432      0.6909 ppb       2.21432 320.50%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             178.0       3.6616 ug/L      0.37560      3.6616 ppb       0.37560  10.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.0       0.1112 ug/L      0.76790      0.1112 ppb       0.76790 690.45%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              19.5       0.3006 ug/L      0.08009      0.3006 ppb       0.08009  26.64%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              39.9       0.0547 ug/L      0.06651      0.0547 ppb       0.06651 121.59%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               3.8       0.6461 ug/L      2.34820      0.6461 ppb       2.34820 363.46%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -25.9      -0.6439 ug/L      1.58194     -0.6439 ppb       1.58194 245.69%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                0.1       0.0001 ug/L      0.05062      0.0001 ppb       0.05062 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -33.4      -0.1895 ug/L      0.03453     -0.1895 ppb       0.03453  18.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   198.4       8.7434 ug/L      0.81433      8.7434 ppb       0.81433   9.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 26
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 16:43:44
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5597.1	5597.1	101	%			16:45:36
1	Y RADIAL	4814.6	4814.6	99.98	%			16:45:36
1	Al 396.153Radial†	5291.4	5353.1	4850.9	ug/L	4850.9	ppb	16:45:36
1	Ca 317.933Radial†	1969.7	1941.4	4835.8	ug/L	4835.8	ppb	16:45:56
1	Fe 238.204 Radial†	141.1	139.9	4923.6	ug/L	4923.6	ppb	16:45:56
1	K 766.490 Radial†	13282.0	11732.5	5084.7	ug/L	5084.7	ppb	16:45:36
1	Mg 279.077 IEC†	64.2	63.7	5049.0	ug/L	5049.0	ppb	16:45:56
1	Na 589.592 Radial†	3478.7	3629.0	9812.5	ug/L	9812.5	ppb	16:45:36
1	Sr 421.552†	33699.4	33499.9	516.07	ug/L	516.07	ppb	16:45:36
1	Sc 361.383	1055693.0	1055693.0	99.511	%			16:46:55
1	Y 371.029	841824.0	841824.0	98.665	%			16:46:55
1	Ag 328.068†	126236.5	126218.5	502.68	ug/L	502.68	ppb	16:46:55
1	As 188.979†	2073.2	2120.3	500.88	ug/L	500.88	ppb	16:47:15
1	B 249.677†	30744.7	31277.4	485.56	ug/L	485.56	ppb	16:46:55
1	Ba 233.527†	97307.6	97761.7	496.04	ug/L	496.04	ppb	16:46:55
1	Be 313.107†	1578588.0	1593664.1	496.68	ug/L	496.68	ppb	16:46:55
1	Cd 226.502†	65945.7	66547.5	497.47	ug/L	497.47	ppb	16:46:55
1	Co 228.616†	38927.4	39209.2	488.62	ug/L	488.62	ppb	16:47:15
1	Cr 267.716†	57770.3	58082.9	495.39	ug/L	495.39	ppb	16:46:55
1	Cu 324.752†	208599.2	199433.4	492.34	ug/L	492.34	ppb	16:46:55
1	Mn 257.610†	623792.7	626032.1	495.28	ug/L	495.28	ppb	16:46:55
1	Mo 202.031†	12621.7	12652.0	506.76	ug/L	506.76	ppb	16:47:15
1	Ni 231.604†	30738.4	30741.2	492.40	ug/L	492.40	ppb	16:47:15
1	P 214.914†	7365.8	7065.1	2422.4	ug/L	2422.4	ppb	16:47:15
1	Pb 220.353†	6645.4	6707.2	504.15	ug/L	504.15	ppb	16:47:15
1	S 181.975 Axial†	1239.8	1178.0	996.19	ug/L	996.19	ppb	16:47:15
1	Sb 206.836†	2557.9	2525.1	502.76	ug/L	502.76	ppb	16:47:15
1	Se 196.026†	1503.3	1532.3	517.44	ug/L	517.44	ppb	16:47:15
1	Si 251.611†	121982.3	122021.8	2505.8	ug/L	2505.8	ppb	16:46:55
1	Sn 189.927†	4773.2	4791.1	498.76	ug/L	498.76	ppb	16:47:15
1	Ti 334.940†	377055.7	380018.4	497.40	ug/L	497.40	ppb	16:46:55
1	Tl 190.801†	2878.5	2954.1	500.21	ug/L	500.21	ppb	16:47:15
1	U 409.014†	15585.6	19497.0	482.20	ug/L	482.20	ppb	16:46:55
1	V 292.402†	84900.3	86970.4	499.32	ug/L	499.32	ppb	16:46:55
1	Zn 213.857†	89663.2	88981.5	492.32	ug/L	492.32	ppb	16:46:55
1	SiO2†	122414.8	122414.2	5382.8	ug/L	5382.8	ppb	16:48:15
2	Sc Radial	5519.9	5519.9	99.2	%			16:46:01
2	Y RADIAL	4754.7	4754.7	98.73	%			16:46:01
2	Al 396.153Radial†	5239.1	5374.0	4870.0	ug/L	4870.0	ppb	16:46:01
2	Ca 317.933Radial†	1981.4	1980.6	4933.4	ug/L	4933.4	ppb	16:46:21
2	Fe 238.204 Radial†	139.0	139.8	4918.1	ug/L	4918.1	ppb	16:46:21
2	K 766.490 Radial†	13106.1	11739.7	5087.8	ug/L	5087.8	ppb	16:46:01
2	Mg 279.077 IEC†	59.9	60.2	4773.1	ug/L	4773.1	ppb	16:46:21
2	Na 589.592 Radial†	3431.2	3629.6	9813.9	ug/L	9813.9	ppb	16:46:01
2	Sr 421.552†	33035.5	33298.9	512.98	ug/L	512.98	ppb	16:46:01
2	Sc 361.383	1059556.7	1059556.7	99.875	%			16:47:22
2	Y 371.029	842609.2	842609.2	98.757	%			16:47:22
2	Ag 328.068†	126889.4	126409.6	503.43	ug/L	503.43	ppb	16:47:22
2	As 188.979†	2080.2	2119.7	500.75	ug/L	500.75	ppb	16:47:42
2	B 249.677†	30878.4	31298.5	485.90	ug/L	485.90	ppb	16:47:22
2	Ba 233.527†	97940.4	98038.7	497.45	ug/L	497.45	ppb	16:47:22
2	Be 313.107†	1583527.7	1592825.4	496.43	ug/L	496.43	ppb	16:47:22
2	Cd 226.502†	66320.9	66681.6	498.47	ug/L	498.47	ppb	16:47:22
2	Co 228.616†	38932.4	39071.6	486.89	ug/L	486.89	ppb	16:47:42
2	Cr 267.716†	58077.3	58178.5	496.21	ug/L	496.21	ppb	16:47:22
2	Cu 324.752†	209952.3	200023.8	493.80	ug/L	493.80	ppb	16:47:22
2	Mn 257.610†	627659.1	627617.4	496.54	ug/L	496.54	ppb	16:47:22
2	Mo 202.031†	12605.9	12589.9	504.27	ug/L	504.27	ppb	16:47:42
2	Ni 231.604†	30761.6	30651.8	490.97	ug/L	490.97	ppb	16:47:42

2	P 214.914†	7365.8	7038.1	2412.6 ug/L	2412.6 ppb	16:47:42
2	Pb 220.353†	6639.4	6676.8	501.87 ug/L	501.87 ppb	16:47:42
2	S 181.975 Axial†	1247.6	1181.3	998.95 ug/L	998.95 ppb	16:47:42
2	Sb 206.836†	2570.2	2528.0	503.22 ug/L	503.22 ppb	16:47:42
2	Se 196.026†	1493.9	1517.4	512.58 ug/L	512.58 ppb	16:47:42
2	Si 251.611†	122683.6	122277.0	2511.1 ug/L	2511.1 ppb	16:47:22
2	Sn 189.927†	4775.2	4775.7	497.17 ug/L	497.17 ppb	16:47:42
2	Ti 334.940†	379382.3	380966.3	498.65 ug/L	498.65 ppb	16:47:22
2	Tl 190.801†	2885.6	2950.6	499.65 ug/L	499.65 ppb	16:47:42
2	U 409.014†	15590.0	19444.3	480.89 ug/L	480.89 ppb	16:47:22
2	V 292.402†	85139.3	86898.7	498.87 ug/L	498.87 ppb	16:47:22
2	Zn 213.857†	90179.2	89169.6	493.39 ug/L	493.39 ppb	16:47:22
2	SiO2†	123659.1	123211.5	5418.1 ug/L	5418.1 ppb	16:48:20
3	Sc Radial	5473.4	5473.4	98.4 %		16:46:26
3	Y RADIAL	4752.6	4752.6	98.69 %		16:46:26
3	Al 396.153Radial†	5183.0	5361.8	4859.1 ug/L	4859.1 ppb	16:46:26
3	Ca 317.933Radial†	1970.6	1986.6	4948.3 ug/L	4948.3 ppb	16:46:46
3	Fe 238.204 Radial†	139.1	141.1	4963.8 ug/L	4963.8 ppb	16:46:46
3	K 766.490 Radial†	12871.7	11613.8	5033.2 ug/L	5033.2 ppb	16:46:26
3	Mg 279.077 IEC†	64.4	65.3	5176.9 ug/L	5176.9 ppb	16:46:46
3	Na 589.592 Radial†	3390.1	3617.1	9780.3 ug/L	9780.3 ppb	16:46:26
3	Sr 421.552†	32728.5	33270.0	512.53 ug/L	512.53 ppb	16:46:26
3	Sc 361.383	1060641.0	1060641.0	99.977 %		16:47:50
3	Y 371.029	844977.1	844977.1	99.035 %		16:47:50
3	Ag 328.068†	126897.6	126287.9	502.96 ug/L	502.96 ppb	16:47:50
3	As 188.979†	2059.7	2097.1	495.44 ug/L	495.44 ppb	16:48:10
3	B 249.677†	31014.3	31402.9	487.53 ug/L	487.53 ppb	16:47:50
3	Ba 233.527†	97758.4	97756.4	496.02 ug/L	496.02 ppb	16:47:50
3	Be 313.107†	1584935.6	1592612.9	496.36 ug/L	496.36 ppb	16:47:50
3	Cd 226.502†	66218.9	66511.6	497.19 ug/L	497.19 ppb	16:47:50
3	Co 228.616†	38515.7	38614.9	481.20 ug/L	481.20 ppb	16:48:10
3	Cr 267.716†	57895.8	57937.6	494.15 ug/L	494.15 ppb	16:47:50
3	Cu 324.752†	210307.1	200163.8	494.14 ug/L	494.14 ppb	16:47:50
3	Mn 257.610†	626815.7	626131.5	495.36 ug/L	495.36 ppb	16:47:50
3	Mo 202.031†	12523.0	12494.1	500.44 ug/L	500.44 ppb	16:48:10
3	Ni 231.604†	30451.6	30310.3	485.50 ug/L	485.50 ppb	16:48:10
3	P 214.914†	7303.3	6968.0	2387.6 ug/L	2387.6 ppb	16:48:10
3	Pb 220.353†	6596.2	6626.8	498.11 ug/L	498.11 ppb	16:48:10
3	S 181.975 Axial†	1228.8	1161.2	981.95 ug/L	981.95 ppb	16:48:10
3	Sb 206.836†	2537.6	2492.7	496.19 ug/L	496.19 ppb	16:48:10
3	Se 196.026†	1501.2	1523.2	514.61 ug/L	514.61 ppb	16:48:10
3	Si 251.611†	122882.0	122349.9	2512.7 ug/L	2512.7 ppb	16:47:50
3	Sn 189.927†	4732.3	4727.9	492.20 ug/L	492.20 ppb	16:48:10
3	Ti 334.940†	379321.6	380517.2	498.06 ug/L	498.06 ppb	16:47:50
3	Tl 190.801†	2851.7	2913.7	493.44 ug/L	493.44 ppb	16:48:10
3	U 409.014†	15623.2	19461.5	481.31 ug/L	481.31 ppb	16:47:50
3	V 292.402†	85069.4	86741.5	497.93 ug/L	497.93 ppb	16:47:50
3	Zn 213.857†	90087.4	88985.6	492.38 ug/L	492.38 ppb	16:47:50
3	SiO2†	121377.6	120802.9	5311.9 ug/L	5311.9 ppb	16:48:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1058630.2	99.788	%	0.2452				0.25%
Sc Radial	5530.1	99.4	%	1.12				1.13%
Y 371.029	843136.8	98.819	%	0.1924				0.19%
Y RADIAL	4774.0	99.13	%	0.731				0.74%
Ag 328.068†	126305.3	503.02	ug/L	0.380	503.02	ppb	0.380	0.08%
QC value within limits for Ag 328.068 Recovery = 100.60%								
Al 396.153Radial†	5363.0	4860.0	ug/L	9.59	4860.0	ppb	9.59	0.20%
QC value within limits for Al 396.153Radial Recovery = 97.20%								
As 188.979†	2112.4	499.02	ug/L	3.104	499.02	ppb	3.104	0.62%
QC value within limits for As 188.979 Recovery = 99.80%								
B 249.677†	31326.3	486.33	ug/L	1.054	486.33	ppb	1.054	0.22%
QC value within limits for B 249.677 Recovery = 97.27%								
Ba 233.527†	97852.3	496.50	ug/L	0.817	496.50	ppb	0.817	0.16%
QC value within limits for Ba 233.527 Recovery = 99.30%								
Be 313.107†	1593034.2	496.49	ug/L	0.172	496.49	ppb	0.172	0.03%
QC value within limits for Be 313.107 Recovery = 99.30%								
Ca 317.933Radial†	1969.5	4905.8	ug/L	61.11	4905.8	ppb	61.11	1.25%

```
   QC value within limits for Ca 317.933Radial  Recovery = 98.12%
Cd 226.502†            66580.2      497.71 ug/L        0.673      497.71 ppb        0.673   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.54%
Co 228.616†            38965.2      485.57 ug/L        3.884      485.57 ppb        3.884   0.80%
   QC value within limits for Co 228.616  Recovery = 97.11%
Cr 267.716†            58066.3      495.25 ug/L        1.034      495.25 ppb        1.034   0.21%
   QC value within limits for Cr 267.716  Recovery = 99.05%
Cu 324.752†           199873.6      493.43 ug/L        0.957      493.43 ppb        0.957   0.19%
   QC value within limits for Cu 324.752  Recovery = 98.69%
Fe 238.204 Radial†       140.2      4935.2 ug/L       24.97      4935.2 ppb       24.97   0.51%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.70%
K 766.490 Radial†      11695.3      5068.6 ug/L       30.68      5068.6 ppb       30.68   0.61%
   QC value within limits for K 766.490 Radial  Recovery = 101.37%
Mg 279.077 IEC†           63.1      4999.6 ug/L      206.36      4999.6 ppb      206.36   4.13%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.99%
Mn 257.610†           626593.7      495.73 ug/L        0.704      495.73 ppb        0.704   0.14%
   QC value within limits for Mn 257.610  Recovery = 99.15%
Mo 202.031†            12578.6      503.83 ug/L        3.182      503.83 ppb        3.182   0.63%
   QC value within limits for Mo 202.031  Recovery = 100.77%
Na 589.592 Radial†      3625.2      9802.2 ug/L       19.00      9802.2 ppb       19.00   0.19%
   QC value within limits for Na 589.592 Radial  Recovery = 98.02%
Ni 231.604†            30567.8      489.62 ug/L        3.643      489.62 ppb        3.643   0.74%
   QC value within limits for Ni 231.604  Recovery = 97.92%
P 214.914†              7023.7      2407.5 ug/L       17.90      2407.5 ppb       17.90   0.74%
   QC value within limits for P 214.914  Recovery = 96.30%
Pb 220.353†             6670.3      501.38 ug/L        3.053      501.38 ppb        3.053   0.61%
   QC value within limits for Pb 220.353  Recovery = 100.28%
S 181.975 Axial†        1173.5      992.36 ug/L        9.120      992.36 ppb        9.120   0.92%
   QC value within limits for S 181.975 Axial  Recovery = 99.24%
Sb 206.836†             2515.3      500.72 ug/L        3.933      500.72 ppb        3.933   0.79%
   QC value within limits for Sb 206.836  Recovery = 100.14%
Se 196.026†             1524.3      514.87 ug/L        2.440      514.87 ppb        2.440   0.47%
   QC value within limits for Se 196.026  Recovery = 102.97%
Si 251.611†           122216.2      2509.9 ug/L         3.62      2509.9 ppb         3.62   0.14%
   QC value within limits for Si 251.611  Recovery = 100.40%
Sn 189.927†             4764.9      496.04 ug/L        3.424      496.04 ppb        3.424   0.69%
   QC value within limits for Sn 189.927  Recovery = 99.21%
Sr 421.552†            33356.3      513.86 ug/L        1.930      513.86 ppb        1.930   0.38%
   QC value within limits for Sr 421.552  Recovery = 102.77%
Ti 334.940†           380500.7      498.04 ug/L        0.624      498.04 ppb        0.624   0.13%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2939.5      497.77 ug/L        3.754      497.77 ppb        3.754   0.75%
   QC value within limits for Tl 190.801  Recovery = 99.55%
U 409.014†             19467.6      481.46 ug/L        0.668      481.46 ppb        0.668   0.14%
   QC value within limits for U 409.014  Recovery = 96.29%
V 292.402†             86870.2      498.71 ug/L        0.706      498.71 ppb        0.706   0.14%
   QC value within limits for V 292.402  Recovery = 99.74%
Zn 213.857†            89045.6      492.70 ug/L        0.601      492.70 ppb        0.601   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.54%
SiO2†                 122142.9      5370.9 ug/L       54.09      5370.9 ppb       54.09   1.01%
   QC value within limits for SiO2  Recovery = 100.44%
All analyte(s) passed QC.
```

Sequence No.: 27
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 16:50:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5637.8	5637.8	101	%			16:52:27
1	Y RADIAL	4889.3	4889.3	101.5	%			16:52:27
1	Al 396.153Radial†	-89.7	3.7	3.3326	ug/L	3.3326	ppb	16:52:27
1	Ca 317.933Radial†	30.9	13.6	33.800	ug/L	33.800	ppb	16:52:47
1	Fe 238.204 Radial†	-0.2	-0.5	-18.635	ug/L	-18.635	ppb	16:52:47
1	K 766.490 Radial†	1458.1	-33.9	-14.718	ug/L	-14.718	ppb	16:52:27
1	Mg 279.077 IEC†	0.7	0.5	40.762	ug/L	40.762	ppb	16:52:47
1	Na 589.592 Radial†	-176.3	-3.6	-9.6025	ug/L	-9.6025	ppb	16:52:47
1	Sr 421.552†	22.0	16.3	0.2505	ug/L	0.2505	ppb	16:52:47
1	Sc 361.383	1052646.6	1052646.6	99.224	%			16:53:44
1	Y 371.029	847796.7	847796.7	99.365	%			16:53:44
1	Ag 328.068†	563.6	-70.6	-0.2853	ug/L	-0.2853	ppb	16:53:49
1	As 188.979†	-58.2	-21.7	-5.1093	ug/L	-5.1093	ppb	16:54:09
1	B 249.677†	-76.7	304.2	4.7431	ug/L	4.7431	ppb	16:53:49
1	Ba 233.527†	31.3	7.3	0.0361	ug/L	0.0361	ppb	16:54:09
1	Be 313.107†	-7536.0	-278.7	-0.0865	ug/L	-0.0865	ppb	16:53:49
1	Cd 226.502†	-287.5	-12.1	-0.0884	ug/L	-0.0884	ppb	16:54:09
1	Co 228.616†	-75.7	14.1	0.1761	ug/L	0.1761	ppb	16:54:09
1	Cr 267.716†	-16.5	12.0	0.1017	ug/L	0.1017	ppb	16:54:09
1	Cu 324.752†	10011.6	-101.3	-0.2511	ug/L	-0.2511	ppb	16:53:49
1	Mn 257.610†	915.0	95.2	0.0720	ug/L	0.0720	ppb	16:54:09
1	Mo 202.031†	37.5	6.0	0.2405	ug/L	0.2405	ppb	16:54:09
1	Ni 231.604†	163.3	16.3	0.2617	ug/L	0.2617	ppb	16:54:09
1	P 214.914†	335.5	1.2	0.4897	ug/L	0.4897	ppb	16:54:09
1	Pb 220.353†	-27.9	1.0	0.0777	ug/L	0.0777	ppb	16:54:09
1	S 181.975 Axial†	66.8	-0.5	-0.4272	ug/L	-0.4272	ppb	16:54:09
1	Sb 206.836†	51.9	6.9	1.3833	ug/L	1.3833	ppb	16:54:09
1	Se 196.026†	-20.7	0.8	0.1817	ug/L	0.1817	ppb	16:54:09
1	Si 251.611†	822.0	268.4	5.5329	ug/L	5.5329	ppb	16:54:09
1	Sn 189.927†	21.2	15.9	1.6590	ug/L	1.6590	ppb	16:54:09
1	Ti 334.940†	-1030.0	71.2	0.0958	ug/L	0.0958	ppb	16:53:49
1	Tl 190.801†	-46.8	14.3	2.4065	ug/L	2.4065	ppb	16:54:09
1	U 409.014†	-3844.2	-39.5	-0.9782	ug/L	-0.9782	ppb	16:53:44
1	V 292.402†	-1655.2	-15.3	-0.0826	ug/L	-0.0826	ppb	16:53:49
1	Zn 213.857†	1103.5	-10.2	-0.0578	ug/L	-0.0578	ppb	16:54:09
1	SiO2†	826.3	230.4	10.170	ug/L	10.170	ppb	16:55:15
2	Sc Radial	5525.3	5525.3	99.3	%			16:52:52
2	Y RADIAL	4806.4	4806.4	99.81	%			16:52:52
2	Al 396.153Radial†	-79.8	11.8	10.725	ug/L	10.725	ppb	16:52:52
2	Ca 317.933Radial†	28.6	11.9	29.523	ug/L	29.523	ppb	16:53:12
2	Fe 238.204 Radial†	0.5	0.2	7.1114	ug/L	7.1114	ppb	16:53:12
2	K 766.490 Radial†	1519.6	57.3	24.898	ug/L	24.898	ppb	16:52:52
2	Mg 279.077 IEC†	0.1	-0.1	-7.6474	ug/L	-7.6474	ppb	16:53:12
2	Na 589.592 Radial†	-180.6	-11.5	-30.978	ug/L	-30.978	ppb	16:53:12
2	Sr 421.552†	28.8	23.5	0.3617	ug/L	0.3617	ppb	16:53:12
2	Sc 361.383	1065998.9	1065998.9	100.48	%			16:54:14
2	Y 371.029	857217.7	857217.7	100.47	%			16:54:14
2	Ag 328.068†	636.1	-5.5	-0.0199	ug/L	-0.0199	ppb	16:54:19
2	As 188.979†	-46.4	-9.3	-2.1871	ug/L	-2.1871	ppb	16:54:39
2	B 249.677†	-25.5	356.1	5.5488	ug/L	5.5488	ppb	16:54:19
2	Ba 233.527†	44.3	19.8	0.1010	ug/L	0.1010	ppb	16:54:39
2	Be 313.107†	-7582.2	-229.6	-0.0713	ug/L	-0.0713	ppb	16:54:19
2	Cd 226.502†	-281.0	-2.0	-0.0154	ug/L	-0.0154	ppb	16:54:39
2	Co 228.616†	-87.2	3.6	0.0458	ug/L	0.0458	ppb	16:54:39
2	Cr 267.716†	-4.9	23.8	0.2025	ug/L	0.2025	ppb	16:54:39
2	Cu 324.752†	10193.3	-46.9	-0.1154	ug/L	-0.1154	ppb	16:54:19
2	Mn 257.610†	912.6	81.2	0.0653	ug/L	0.0653	ppb	16:54:39
2	Mo 202.031†	39.5	7.5	0.3018	ug/L	0.3018	ppb	16:54:39
2	Ni 231.604†	159.8	10.8	0.1729	ug/L	0.1729	ppb	16:54:39

2	P 214.914†	333.9	-4.6	-1.6265 ug/L	-1.6265 ppb	16:54:39
2	Pb 220.353†	-17.2	11.9	0.8971 ug/L	0.8971 ppb	16:54:39
2	S 181.975 Axial†	56.6	-11.5	-9.7195 ug/L	-9.7195 ppb	16:54:39
2	Sb 206.836†	42.2	-3.4	-0.6744 ug/L	-0.6744 ppb	16:54:39
2	Se 196.026†	-21.2	0.5	0.1913 ug/L	0.1913 ppb	16:54:39
2	Si 251.611†	796.3	232.3	4.7815 ug/L	4.7815 ppb	16:54:39
2	Sn 189.927†	2.5	-3.0	-0.3049 ug/L	-0.3049 ppb	16:54:39
2	Ti 334.940†	-1074.6	39.8	0.0534 ug/L	0.0534 ppb	16:54:19
2	Tl 190.801†	-64.5	-2.8	-0.4750 ug/L	-0.4750 ppb	16:54:39
2	U 409.014†	-3795.8	57.2	1.4168 ug/L	1.4168 ppb	16:54:14
2	V 292.402†	-1607.8	52.7	0.3041 ug/L	0.3041 ppb	16:54:19
2	Zn 213.857†	1078.2	-49.4	-0.2772 ug/L	-0.2772 ppb	16:54:39
2	SiO2†	798.6	192.4	8.4742 ug/L	8.4742 ppb	16:55:20
3	Sc Radial	5418.8	5418.8	97.4 %		16:53:17
3	Y RADIAL	4718.6	4718.6	97.98 %		16:53:17
3	Al 396.153Radial†	-92.6	-2.9	-2.6166 ug/L	-2.6166 ppb	16:53:17
3	Ca 317.933Radial†	27.6	11.4	28.350 ug/L	28.350 ppb	16:53:37
3	Fe 238.204 Radial†	-1.0	-1.3	-45.979 ug/L	-45.979 ppb	16:53:37
3	K 766.490 Radial†	1489.0	56.1	24.297 ug/L	24.297 ppb	16:53:17
3	Mg 279.077 IEC†	-1.0	-1.2	-94.823 ug/L	-94.823 ppb	16:53:37
3	Na 589.592 Radial†	-169.9	-4.0	-10.940 ug/L	-10.940 ppb	16:53:37
3	Sr 421.552†	29.6	24.9	0.3833 ug/L	0.3833 ppb	16:53:37
3	Sc 361.383	1048913.1	1048913.1	98.872 %		16:54:44
3	Y 371.029	844446.0	844446.0	98.972 %		16:54:44
3	Ag 328.068†	724.6	94.3	0.3605 ug/L	0.3605 ppb	16:54:49
3	As 188.979†	-43.9	-7.5	-1.7627 ug/L	-1.7627 ppb	16:55:09
3	B 249.677†	-81.0	299.6	4.6757 ug/L	4.6757 ppb	16:54:49
3	Ba 233.527†	22.9	-1.1	-0.0069 ug/L	-0.0069 ppb	16:55:09
3	Be 313.107†	-7424.8	-193.3	-0.0604 ug/L	-0.0604 ppb	16:54:49
3	Cd 226.502†	-281.1	-6.7	-0.0443 ug/L	-0.0443 ppb	16:55:09
3	Co 228.616†	-89.7	-0.3	-0.0020 ug/L	-0.0020 ppb	16:55:09
3	Cr 267.716†	-10.7	17.8	0.1514 ug/L	0.1514 ppb	16:55:09
3	Cu 324.752†	10087.7	11.6	0.0258 ug/L	0.0258 ppb	16:54:49
3	Mn 257.610†	912.8	96.2	0.0718 ug/L	0.0718 ppb	16:55:09
3	Mo 202.031†	35.1	3.7	0.1462 ug/L	0.1462 ppb	16:55:09
3	Ni 231.604†	166.7	20.4	0.3263 ug/L	0.3263 ppb	16:55:09
3	P 214.914†	344.7	11.7	4.1662 ug/L	4.1662 ppb	16:55:09
3	Pb 220.353†	-8.6	20.3	1.5296 ug/L	1.5296 ppb	16:55:09
3	S 181.975 Axial†	63.9	-3.2	-2.6879 ug/L	-2.6879 ppb	16:55:09
3	Sb 206.836†	50.5	5.6	1.1035 ug/L	1.1035 ppb	16:55:09
3	Se 196.026†	-25.9	-4.6	-1.6417 ug/L	-1.6417 ppb	16:55:09
3	Si 251.611†	799.8	248.9	5.1246 ug/L	5.1246 ppb	16:55:09
3	Sn 189.927†	4.6	-0.8	-0.0793 ug/L	-0.0793 ppb	16:55:09
3	Ti 334.940†	-1198.8	-103.2	-0.1319 ug/L	-0.1319 ppb	16:54:49
3	Tl 190.801†	-54.4	6.4	1.0751 ug/L	1.0751 ppb	16:55:09
3	U 409.014†	-3918.3	-128.2	-3.1763 ug/L	-3.1763 ppb	16:54:44
3	V 292.402†	-1643.2	-9.2	-0.0517 ug/L	-0.0517 ppb	16:54:49
3	Zn 213.857†	1094.4	-15.5	-0.0806 ug/L	-0.0806 ppb	16:55:09
3	SiO2†	790.9	197.6	8.7080 ug/L	8.7080 ppb	16:55:25

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055852.9	99.526	%	0.8467				0.85%
Sc Radial	5527.3	99.3	%	1.97				1.98%
Y 371.029	849820.2	99.602	%	0.7761				0.78%
Y RADIAL	4804.8	99.77	%	1.772				1.78%
Ag 328.068†	6.1	0.0184	ug/L	0.32461	0.0184	ppb	0.32461	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	4.2	3.8136	ug/L	6.68379	3.8136	ppb	6.68379	175.26%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.8	-3.0197	ug/L	1.82201	-3.0197	ppb	1.82201	60.34%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	320.0	4.9892	ug/L	0.48577	4.9892	ppb	0.48577	9.74%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.6	0.0434	ug/L	0.05433	0.0434	ppb	0.05433	125.26%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-233.9	-0.0727	ug/L	0.01307	-0.0727	ppb	0.01307	17.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	12.3	30.557	ug/L	2.8686	30.557	ppb	2.8686	9.39%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.9     -0.0494 ug/L       0.03675     -0.0494 ppb        0.03675  74.46%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 5.8      0.0733 ug/L       0.09218      0.0733 ppb        0.09218 125.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.8      0.1519 ug/L       0.05038      0.1519 ppb        0.05038  33.17%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -45.6     -0.1135 ug/L       0.13847     -0.1135 ppb        0.13847 121.95%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.5     -19.167 ug/L       26.5490     -19.167 ppb        26.5490 138.51%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          26.5      11.492 ug/L       22.7011      11.492 ppb        22.7011 197.53%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -20.569 ug/L       68.7102     -20.569 ppb        68.7102 334.04%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                90.9      0.0697 ug/L       0.00384      0.0697 ppb        0.00384   5.51%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 5.8      0.2295 ug/L       0.07837      0.2295 ppb        0.07837  34.15%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -6.4     -17.174 ug/L       11.9739     -17.174 ppb        11.9739  69.72%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                15.8      0.2536 ug/L       0.07702      0.2536 ppb        0.07702  30.37%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  2.7      1.0098 ug/L       2.93118      1.0098 ppb        2.93118 290.27%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                11.1      0.8348 ug/L       0.72795      0.8348 ppb        0.72795  87.20%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.1     -4.2782 ug/L       4.84597     -4.2782 ppb        4.84597 113.27%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 3.0      0.6042 ug/L       1.11604      0.6042 ppb        1.11604 184.72%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -1.1     -0.4229 ug/L       1.05551     -0.4229 ppb        1.05551 249.59%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               249.8      5.1463 ug/L       0.37613      5.1463 ppb        0.37613   7.31%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 4.1      0.4249 ug/L       1.07467      0.4249 ppb        1.07467 252.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                21.6      0.3318 ug/L       0.07124      0.3318 ppb        0.07124  21.47%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 2.6      0.0058 ug/L       0.12109      0.0058 ppb        0.12109 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.9      1.0022 ug/L       1.44215      1.0022 ppb        1.44215 143.90%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -36.9     -0.9126 ug/L       2.29725     -0.9126 ppb        2.29725 251.73%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  9.4      0.0566 ug/L       0.21490      0.0566 ppb        0.21490 379.82%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -25.0     -0.1385 ug/L       0.12064     -0.1385 ppb        0.12064  87.09%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     206.8      9.1173 ug/L       0.91882      9.1173 ppb        0.91882  10.08%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 32
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 17:25:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5539.4	5539.4	99.5	%			17:27:39
1	Y RADIAL	4807.5	4807.5	99.83	%			17:27:39
1	Al 396.153Radial†	5253.1	5369.4	4865.4	ug/L	4865.4	ppb	17:27:39
1	Ca 317.933Radial†	1951.8	1943.8	4841.6	ug/L	4841.6	ppb	17:27:59
1	Fe 238.204 Radial†	137.8	138.1	4860.6	ug/L	4860.6	ppb	17:27:59
1	K 766.490 Radial†	13071.3	11658.2	5052.5	ug/L	5052.5	ppb	17:27:39
1	Mg 279.077 IEC†	64.6	64.7	5131.4	ug/L	5131.4	ppb	17:27:59
1	Na 589.592 Radial†	3360.6	3546.4	9589.2	ug/L	9589.2	ppb	17:27:39
1	Sr 421.552†	32599.6	32743.8	504.42	ug/L	504.42	ppb	17:27:39
1	Sc 361.383	1049901.1	1049901.1	98.965	%			17:28:58
1	Y 371.029	835003.9	835003.9	97.866	%			17:28:58
1	Ag 328.068†	125920.8	126599.3	504.17	ug/L	504.17	ppb	17:28:58
1	As 188.979†	2090.3	2149.0	507.62	ug/L	507.62	ppb	17:29:18
1	B 249.677†	30513.8	31214.5	484.57	ug/L	484.57	ppb	17:28:58
1	Ba 233.527†	97512.1	98507.8	499.82	ug/L	499.82	ppb	17:28:58
1	Be 313.107†	1576169.0	1599971.3	498.65	ug/L	498.65	ppb	17:28:58
1	Cd 226.502†	66064.4	67033.1	501.11	ug/L	501.11	ppb	17:28:58
1	Co 228.616†	39231.6	39732.4	495.15	ug/L	495.15	ppb	17:29:18
1	Cr 267.716†	57815.1	58448.4	498.51	ug/L	498.51	ppb	17:28:58
1	Cu 324.752†	208555.4	200545.5	495.08	ug/L	495.08	ppb	17:28:58
1	Mn 257.610†	625103.5	630814.8	499.05	ug/L	499.05	ppb	17:28:58
1	Mo 202.031†	12722.0	12823.3	513.61	ug/L	513.61	ppb	17:29:18
1	Ni 231.604†	30913.5	31088.6	497.96	ug/L	497.96	ppb	17:29:18
1	P 214.914†	7419.6	7160.2	2455.7	ug/L	2455.7	ppb	17:29:18
1	Pb 220.353†	6688.7	6787.7	510.21	ug/L	510.21	ppb	17:29:18
1	S 181.975 Axial†	1250.0	1195.2	1010.7	ug/L	1010.7	ppb	17:29:18
1	Sb 206.836†	2601.6	2583.4	514.35	ug/L	514.35	ppb	17:29:18
1	Se 196.026†	1504.4	1541.7	520.31	ug/L	520.31	ppb	17:29:18
1	Si 251.611†	121912.3	122627.4	2518.2	ug/L	2518.2	ppb	17:28:58
1	Sn 189.927†	4798.2	4842.9	504.15	ug/L	504.15	ppb	17:29:18
1	Ti 334.940†	377727.5	382787.6	501.03	ug/L	501.03	ppb	17:28:58
1	Tl 190.801†	2906.4	2998.2	507.65	ug/L	507.65	ppb	17:29:18
1	U 409.014†	15367.9	19363.4	478.88	ug/L	478.88	ppb	17:28:58
1	V 292.402†	84597.3	87135.0	500.33	ug/L	500.33	ppb	17:28:58
1	Zn 213.857†	89790.9	89607.7	495.78	ug/L	495.78	ppb	17:28:58
1	SiO2†	122218.8	122894.8	5403.7	ug/L	5403.7	ppb	17:30:18
2	Sc Radial	5629.9	5629.9	101	%			17:28:04
2	Y RADIAL	4857.3	4857.3	100.9	%			17:28:04
2	Al 396.153Radial†	5366.1	5396.3	4890.4	ug/L	4890.4	ppb	17:28:04
2	Ca 317.933Radial†	1971.8	1932.1	4812.5	ug/L	4812.5	ppb	17:28:24
2	Fe 238.204 Radial†	137.6	135.7	4776.2	ug/L	4776.2	ppb	17:28:24
2	K 766.490 Radial†	13341.0	11713.7	5076.5	ug/L	5076.5	ppb	17:28:04
2	Mg 279.077 IEC†	61.6	60.7	4814.0	ug/L	4814.0	ppb	17:28:24
2	Na 589.592 Radial†	3421.8	3552.7	9606.1	ug/L	9606.1	ppb	17:28:04
2	Sr 421.552†	33077.1	32689.3	503.59	ug/L	503.59	ppb	17:28:04
2	Sc 361.383	1063568.3	1063568.3	100.25	%			17:29:25
2	Y 371.029	845239.1	845239.1	99.065	%			17:29:25
2	Ag 328.068†	127204.2	126244.4	502.73	ug/L	502.73	ppb	17:29:25
2	As 188.979†	2061.8	2093.4	494.56	ug/L	494.56	ppb	17:29:45
2	B 249.677†	30965.4	31268.8	485.46	ug/L	485.46	ppb	17:29:25
2	Ba 233.527†	97922.6	97651.1	495.48	ug/L	495.48	ppb	17:29:25
2	Be 313.107†	1583977.6	1587293.9	494.71	ug/L	494.71	ppb	17:29:25
2	Cd 226.502†	66312.1	66422.3	496.55	ug/L	496.55	ppb	17:29:25
2	Co 228.616†	38852.8	38845.1	484.07	ug/L	484.07	ppb	17:29:45
2	Cr 267.716†	58017.2	57899.3	493.82	ug/L	493.82	ppb	17:29:25
2	Cu 324.752†	211181.4	200456.9	494.86	ug/L	494.86	ppb	17:29:25
2	Mn 257.610†	628518.3	626104.1	495.32	ug/L	495.32	ppb	17:29:25
2	Mo 202.031†	12594.6	12531.1	501.91	ug/L	501.91	ppb	17:29:45
2	Ni 231.604†	30580.0	30354.6	486.21	ug/L	486.21	ppb	17:29:45

2	P 214.914†	7357.2	7001.7	2399.6	ug/L	2399.6 ppb	17:29:45
2	Pb 220.353†	6615.9	6628.3	498.24	ug/L	498.24 ppb	17:29:45
2	S 181.975 Axial†	1245.1	1174.1	992.88	ug/L	992.88 ppb	17:29:45
2	Sb 206.836†	2576.2	2524.3	502.40	ug/L	502.40 ppb	17:29:45
2	Se 196.026†	1488.5	1506.3	508.47	ug/L	508.47 ppb	17:29:45
2	Si 251.611†	122813.3	121943.1	2504.3	ug/L	2504.3 ppb	17:29:25
2	Sn 189.927†	4739.9	4722.4	491.61	ug/L	491.61 ppb	17:29:45
2	Ti 334.940†	380922.6	381070.0	498.78	ug/L	498.78 ppb	17:29:25
2	Tl 190.801†	2872.9	2927.1	495.68	ug/L	495.68 ppb	17:29:45
2	U 409.014†	15705.5	19500.6	482.31	ug/L	482.31 ppb	17:29:25
2	V 292.402†	85226.8	86664.4	497.53	ug/L	497.53 ppb	17:29:25
2	Zn 213.857†	90283.4	88933.0	492.11	ug/L	492.11 ppb	17:29:25
2	SiO2†	121642.5	120733.0	5308.7	ug/L	5308.7 ppb	17:30:23
3	Sc Radial	5511.7	5511.7	99.0	%		17:28:29
3	Y RADIAL	4751.0	4751.0	98.66	%		17:28:29
3	Al 396.153Radial†	5237.8	5380.5	4875.9	ug/L	4875.9 ppb	17:28:29
3	Ca 317.933Radial†	2008.0	2010.5	5007.8	ug/L	5007.8 ppb	17:28:49
3	Fe 238.204 Radial†	140.3	141.3	4973.5	ug/L	4973.5 ppb	17:28:49
3	K 766.490 Radial†	13077.8	11730.9	5084.1	ug/L	5084.1 ppb	17:28:29
3	Mg 279.077 IEC†	63.6	64.1	5080.5	ug/L	5080.5 ppb	17:28:49
3	Na 589.592 Radial†	3321.6	3524.0	9528.6	ug/L	9528.6 ppb	17:28:29
3	Sr 421.552†	32347.5	32654.1	503.04	ug/L	503.04 ppb	17:28:29
3	Sc 361.383	1061197.1	1061197.1	100.03	%		17:29:52
3	Y 371.029	845321.1	845321.1	99.075	%		17:29:52
3	Ag 328.068†	126943.7	126267.5	502.89	ug/L	502.89 ppb	17:29:52
3	As 188.979†	2071.6	2107.9	497.99	ug/L	497.99 ppb	17:30:12
3	B 249.677†	30895.5	31267.8	485.42	ug/L	485.42 ppb	17:29:52
3	Ba 233.527†	97861.2	97807.9	496.28	ug/L	496.28 ppb	17:29:52
3	Be 313.107†	1587603.5	1594449.2	496.93	ug/L	496.93 ppb	17:29:52
3	Cd 226.502†	66310.3	66568.3	497.62	ug/L	497.62 ppb	17:29:52
3	Co 228.616†	38901.6	38980.5	485.76	ug/L	485.76 ppb	17:30:12
3	Cr 267.716†	58079.5	58090.9	495.46	ug/L	495.46 ppb	17:29:52
3	Cu 324.752†	210546.0	200292.3	494.46	ug/L	494.46 ppb	17:29:52
3	Mn 257.610†	627659.6	626646.5	495.77	ug/L	495.77 ppb	17:29:52
3	Mo 202.031†	12635.4	12599.9	504.68	ug/L	504.68 ppb	17:30:12
3	Ni 231.604†	30693.6	30536.2	489.12	ug/L	489.12 ppb	17:30:12
3	P 214.914†	7347.5	7008.4	2401.9	ug/L	2401.9 ppb	17:30:12
3	Pb 220.353†	6654.8	6681.9	502.25	ug/L	502.25 ppb	17:30:12
3	S 181.975 Axial†	1249.6	1181.4	999.01	ug/L	999.01 ppb	17:30:12
3	Sb 206.836†	2580.4	2534.2	504.45	ug/L	504.45 ppb	17:30:12
3	Se 196.026†	1488.1	1509.3	510.13	ug/L	510.13 ppb	17:30:12
3	Si 251.611†	122353.4	121757.1	2500.4	ug/L	2500.4 ppb	17:29:52
3	Sn 189.927†	4767.3	4760.4	495.58	ug/L	495.58 ppb	17:30:12
3	Ti 334.940†	380073.7	381070.3	498.79	ug/L	498.79 ppb	17:29:52
3	Tl 190.801†	2879.5	2940.1	497.87	ug/L	497.87 ppb	17:30:12
3	U 409.014†	15472.5	19302.7	477.37	ug/L	477.37 ppb	17:29:52
3	V 292.402†	85270.4	86897.9	498.86	ug/L	498.86 ppb	17:29:52
3	Zn 213.857†	90239.3	89090.2	492.94	ug/L	492.94 ppb	17:29:52
3	SiO2†	123260.9	122622.0	5392.0	ug/L	5392.0 ppb	17:30:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1058222.2	99.749	%	0.6884				0.69%
Sc Radial	5560.3	99.9	%	1.11				1.11%
Y 371.029	841854.7	98.669	%	0.6954				0.70%
Y RADIAL	4805.3	99.78	%	1.105				1.11%
Ag 328.068†	126370.4	503.26	ug/L	0.792	503.26	ppb	0.792	0.16%
QC value within limits for Ag 328.068 Recovery = 100.65%								
Al 396.153Radial†	5382.0	4877.2	ug/L	12.53	4877.2	ppb	12.53	0.26%
QC value within limits for Al 396.153Radial Recovery = 97.54%								
As 188.979†	2116.8	500.06	ug/L	6.771	500.06	ppb	6.771	1.35%
QC value within limits for As 188.979 Recovery = 100.01%								
B 249.677†	31250.3	485.15	ug/L	0.499	485.15	ppb	0.499	0.10%
QC value within limits for B 249.677 Recovery = 97.03%								
Ba 233.527†	97988.9	497.19	ug/L	2.312	497.19	ppb	2.312	0.46%
QC value within limits for Ba 233.527 Recovery = 99.44%								
Be 313.107†	1593904.8	496.76	ug/L	1.979	496.76	ppb	1.979	0.40%
QC value within limits for Be 313.107 Recovery = 99.35%								
Ca 317.933Radial†	1962.1	4887.3	ug/L	105.33	4887.3	ppb	105.33	2.16%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.75%
Cd 226.502†            66674.6      498.43 ug/L         2.388      498.43 ppb          2.388   0.48%
   QC value within limits for Cd 226.502  Recovery = 99.69%
Co 228.616†            39186.0      488.32 ug/L         5.967      488.32 ppb          5.967   1.22%
   QC value within limits for Co 228.616  Recovery = 97.66%
Cr 267.716†            58146.2      495.93 ug/L         2.377      495.93 ppb          2.377   0.48%
   QC value within limits for Cr 267.716  Recovery = 99.19%
Cu 324.752†           200431.6      494.80 ug/L         0.313      494.80 ppb          0.313   0.06%
   QC value within limits for Cu 324.752  Recovery = 98.96%
Fe 238.204 Radial†       138.4      4870.1 ug/L        98.98      4870.1 ppb         98.98   2.03%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.40%
K 766.490 Radial†      11700.9      5071.0 ug/L        16.50      5071.0 ppb         16.50   0.33%
   QC value within limits for K 766.490 Radial  Recovery = 101.42%
Mg 279.077 IEC†           63.2      5008.6 ug/L       170.47      5008.6 ppb        170.47   3.40%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.17%
Mn 257.610†           627855.1      496.72 ug/L         2.035      496.72 ppb          2.035   0.41%
   QC value within limits for Mn 257.610  Recovery = 99.34%
Mo 202.031†            12651.4      506.73 ug/L         6.117      506.73 ppb          6.117   1.21%
   QC value within limits for Mo 202.031  Recovery = 101.35%
Na 589.592 Radial†      3541.1      9574.6 ug/L        40.77      9574.6 ppb         40.77   0.43%
   QC value within limits for Na 589.592 Radial  Recovery = 95.75%
Ni 231.604†            30659.8      491.10 ug/L         6.124      491.10 ppb          6.124   1.25%
   QC value within limits for Ni 231.604  Recovery = 98.22%
P 214.914†              7056.8      2419.1 ug/L        31.74      2419.1 ppb         31.74   1.31%
   QC value within limits for P 214.914  Recovery = 96.76%
Pb 220.353†             6699.3      503.57 ug/L         6.094      503.57 ppb          6.094   1.21%
   QC value within limits for Pb 220.353  Recovery = 100.71%
S 181.975 Axial†        1183.6      1000.9 ug/L         9.08      1000.9 ppb          9.08   0.91%
   QC value within limits for S 181.975 Axial  Recovery = 100.09%
Sb 206.836†             2547.3      507.06 ug/L         6.391      507.06 ppb          6.391   1.26%
   QC value within limits for Sb 206.836  Recovery = 101.41%
Se 196.026†             1519.1      512.97 ug/L         6.409      512.97 ppb          6.409   1.25%
   QC value within limits for Se 196.026  Recovery = 102.59%
Si 251.611†           122109.2      2507.6 ug/L         9.35      2507.6 ppb          9.35   0.37%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4775.2      497.11 ug/L         6.406      497.11 ppb          6.406   1.29%
   QC value within limits for Sn 189.927  Recovery = 99.42%
Sr 421.552†            32695.7      503.68 ug/L         0.697      503.68 ppb          0.697   0.14%
   QC value within limits for Sr 421.552  Recovery = 100.74%
Ti 334.940†           381642.6      499.53 ug/L         1.295      499.53 ppb          1.295   0.26%
   QC value within limits for Ti 334.940  Recovery = 99.91%
Tl 190.801†             2955.1      500.40 ug/L         6.373      500.40 ppb          6.373   1.27%
   QC value within limits for Tl 190.801  Recovery = 100.08%
U 409.014†             19388.9      479.52 ug/L         2.530      479.52 ppb          2.530   0.53%
   QC value within limits for U 409.014  Recovery = 95.90%
V 292.402†             86899.1      498.91 ug/L         1.401      498.91 ppb          1.401   0.28%
   QC value within limits for V 292.402  Recovery = 99.78%
Zn 213.857†            89210.3      493.61 ug/L         1.926      493.61 ppb          1.926   0.39%
   QC value within limits for Zn 213.857  Recovery = 98.72%
SiO2†                 122083.2      5368.2 ug/L        51.81      5368.2 ppb         51.81   0.97%
   QC value within limits for SiO2  Recovery = 100.39%
All analyte(s) passed QC.
```

Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 17:32:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5490.0	5490.0	98.7	%			17:34:30
1	Y RADIAL	4741.3	4741.3	98.46	%			17:34:30
1	Al 396.153Radial†	-82.2	8.9	8.0672	ug/L	8.0672	ppb	17:34:30
1	Ca 317.933Radial†	29.1	12.5	31.210	ug/L	31.210	ppb	17:34:50
1	Fe 238.204 Radial†	0.2	-0.1	-3.5649	ug/L	-3.5649	ppb	17:34:50
1	K 766.490 Radial†	1409.6	-44.3	-19.236	ug/L	-19.236	ppb	17:34:30
1	Mg 279.077 IEC†	-0.1	-0.3	-22.440	ug/L	-22.440	ppb	17:34:50
1	Na 589.592 Radial†	-171.9	-3.9	-10.476	ug/L	-10.476	ppb	17:34:50
1	Sr 421.552†	14.4	9.1	0.1405	ug/L	0.1405	ppb	17:34:50
1	Sc 361.383	1052333.1	1052333.1	99.194	%			17:35:46
1	Y 371.029	846567.3	846567.3	99.221	%			17:35:46
1	Ag 328.068†	700.7	67.8	0.2703	ug/L	0.2703	ppb	17:35:52
1	As 188.979†	-56.9	-20.4	-4.8012	ug/L	-4.8012	ppb	17:36:12
1	B 249.677†	-83.7	297.1	4.6311	ug/L	4.6311	ppb	17:35:52
1	Ba 233.527†	37.5	13.5	0.0689	ug/L	0.0689	ppb	17:36:12
1	Be 313.107†	-7492.9	-237.6	-0.0739	ug/L	-0.0739	ppb	17:35:52
1	Cd 226.502†	-287.7	-12.4	-0.0922	ug/L	-0.0922	ppb	17:36:12
1	Co 228.616†	-83.5	6.3	0.0779	ug/L	0.0779	ppb	17:36:12
1	Cr 267.716†	-16.0	12.5	0.1079	ug/L	0.1079	ppb	17:36:12
1	Cu 324.752†	10095.6	-13.7	-0.0339	ug/L	-0.0339	ppb	17:35:52
1	Mn 257.610†	935.4	116.0	0.0917	ug/L	0.0917	ppb	17:36:12
1	Mo 202.031†	29.0	-2.5	-0.1006	ug/L	-0.1006	ppb	17:36:12
1	Ni 231.604†	147.3	0.2	0.0037	ug/L	0.0037	ppb	17:36:12
1	P 214.914†	352.0	17.9	6.3333	ug/L	6.3333	ppb	17:36:12
1	Pb 220.353†	-24.4	4.4	0.3349	ug/L	0.3349	ppb	17:36:12
1	S 181.975 Axial†	63.1	-4.2	-3.5764	ug/L	-3.5764	ppb	17:36:12
1	Sb 206.836†	58.3	13.3	2.6045	ug/L	2.6045	ppb	17:36:12
1	Se 196.026†	-13.4	8.1	2.6090	ug/L	2.6090	ppb	17:36:12
1	Si 251.611†	709.7	155.4	3.2163	ug/L	3.2163	ppb	17:36:12
1	Sn 189.927†	1.0	-4.4	-0.4598	ug/L	-0.4598	ppb	17:36:12
1	Ti 334.940†	-1111.3	-11.0	-0.0110	ug/L	-0.0110	ppb	17:35:52
1	Tl 190.801†	-55.2	5.7	0.9641	ug/L	0.9641	ppb	17:36:12
1	U 409.014†	-3930.0	-127.2	-3.1558	ug/L	-3.1558	ppb	17:35:46
1	V 292.402†	-1594.3	45.5	0.2510	ug/L	0.2510	ppb	17:35:52
1	Zn 213.857†	1093.9	-19.7	-0.1086	ug/L	-0.1086	ppb	17:36:12
1	SiO2†	708.1	111.5	4.9498	ug/L	4.9498	ppb	17:37:18
2	Sc Radial	5463.6	5463.6	98.2	%			17:34:55
2	Y RADIAL	4760.8	4760.8	98.86	%			17:34:55
2	Al 396.153Radial†	-66.9	24.1	21.917	ug/L	21.917	ppb	17:34:55
2	Ca 317.933Radial†	30.2	13.8	34.350	ug/L	34.350	ppb	17:35:15
2	Fe 238.204 Radial†	-0.5	-0.9	-30.858	ug/L	-30.858	ppb	17:35:15
2	K 766.490 Radial†	1480.7	35.0	15.177	ug/L	15.177	ppb	17:34:55
2	Mg 279.077 IEC†	-0.3	-0.5	-37.640	ug/L	-37.640	ppb	17:35:15
2	Na 589.592 Radial†	-174.4	-7.2	-19.603	ug/L	-19.603	ppb	17:35:15
2	Sr 421.552†	22.0	17.0	0.2613	ug/L	0.2613	ppb	17:35:15
2	Sc 361.383	1054664.8	1054664.8	99.414	%			17:36:17
2	Y 371.029	849471.0	849471.0	99.561	%			17:36:17
2	Ag 328.068†	636.0	1.2	-0.0053	ug/L	-0.0053	ppb	17:36:22
2	As 188.979†	-41.2	-4.6	-1.0850	ug/L	-1.0850	ppb	17:36:42
2	B 249.677†	-129.1	251.7	3.9268	ug/L	3.9268	ppb	17:36:22
2	Ba 233.527†	58.7	34.8	0.1755	ug/L	0.1755	ppb	17:36:42
2	Be 313.107†	-7492.3	-220.2	-0.0683	ug/L	-0.0683	ppb	17:36:22
2	Cd 226.502†	-289.0	-13.1	-0.0941	ug/L	-0.0941	ppb	17:36:42
2	Co 228.616†	-101.5	-11.7	-0.1447	ug/L	-0.1447	ppb	17:36:42
2	Cr 267.716†	7.6	36.2	0.3079	ug/L	0.3079	ppb	17:36:42
2	Cu 324.752†	10005.9	-126.4	-0.3136	ug/L	-0.3136	ppb	17:36:22
2	Mn 257.610†	926.3	104.7	0.0794	ug/L	0.0794	ppb	17:36:42
2	Mo 202.031†	39.4	7.9	0.3125	ug/L	0.3125	ppb	17:36:42
2	Ni 231.604†	160.5	13.2	0.2113	ug/L	0.2113	ppb	17:36:42

2	P 214.914†	348.7	13.8	4.9695	ug/L	4.9695 ppb	17:36:42
2	Pb 220.353†	-13.8	15.2	1.1514	ug/L	1.1514 ppb	17:36:42
2	S 181.975 Axial†	69.8	2.4	2.0331	ug/L	2.0331 ppb	17:36:42
2	Sb 206.836†	39.5	-5.7	-1.1067	ug/L	-1.1067 ppb	17:36:42
2	Se 196.026†	-4.7	16.9	5.3908	ug/L	5.3908 ppb	17:36:42
2	Si 251.611†	691.5	135.5	2.7848	ug/L	2.7848 ppb	17:36:42
2	Sn 189.927†	8.2	2.8	0.2919	ug/L	0.2919 ppb	17:36:42
2	Ti 334.940†	-1031.6	71.6	0.0960	ug/L	0.0960 ppb	17:36:22
2	Tl 190.801†	-63.5	-2.5	-0.4257	ug/L	-0.4257 ppb	17:36:42
2	U 409.014†	-3824.1	-11.9	-0.2911	ug/L	-0.2911 ppb	17:36:17
2	V 292.402†	-1634.2	9.0	0.0575	ug/L	0.0575 ppb	17:36:22
2	Zn 213.857†	1102.1	-13.8	-0.0730	ug/L	-0.0730 ppb	17:36:42
2	SiO2†	713.1	114.9	5.0540	ug/L	5.0540 ppb	17:37:23
3	Sc Radial	5371.8	5371.8	96.5	%		17:35:20
3	Y RADIAL	4656.4	4656.4	96.69	%		17:35:20
3	Al 396.153Radial†	-47.5	43.0	39.121	ug/L	39.121 ppb	17:35:20
3	Ca 317.933Radial†	28.5	12.6	31.325	ug/L	31.325 ppb	17:35:40
3	Fe 238.204 Radial†	-1.6	-2.0	-69.949	ug/L	-69.949 ppb	17:35:40
3	K 766.490 Radial†	1509.0	90.1	39.047	ug/L	39.047 ppb	17:35:20
3	Mg 279.077 IEC†	1.1	0.9	73.109	ug/L	73.109 ppb	17:35:40
3	Na 589.592 Radial†	-173.4	-9.2	-24.998	ug/L	-24.998 ppb	17:35:40
3	Sr 421.552†	26.4	21.9	0.3366	ug/L	0.3366 ppb	17:35:40
3	Sc 361.383	1050946.8	1050946.8	99.063	%		17:36:47
3	Y 371.029	846133.3	846133.3	99.170	%		17:36:47
3	Ag 328.068†	637.6	5.0	-0.0063	ug/L	-0.0063 ppb	17:36:52
3	As 188.979†	-45.7	-9.2	-2.1868	ug/L	-2.1868 ppb	17:37:12
3	B 249.677†	-129.1	251.2	3.9248	ug/L	3.9248 ppb	17:36:52
3	Ba 233.527†	54.3	30.5	0.1524	ug/L	0.1524 ppb	17:37:12
3	Be 313.107†	-7441.9	-196.1	-0.0612	ug/L	-0.0612 ppb	17:36:52
3	Cd 226.502†	-273.5	1.6	0.0201	ug/L	0.0201 ppb	17:37:12
3	Co 228.616†	-94.7	-5.1	-0.0633	ug/L	-0.0633 ppb	17:37:12
3	Cr 267.716†	-24.7	3.7	0.0290	ug/L	0.0290 ppb	17:37:12
3	Cu 324.752†	10095.2	-0.6	-0.0056	ug/L	-0.0056 ppb	17:36:52
3	Mn 257.610†	958.1	140.2	0.1002	ug/L	0.1002 ppb	17:37:12
3	Mo 202.031†	26.9	-4.6	-0.1879	ug/L	-0.1879 ppb	17:37:12
3	Ni 231.604†	162.9	16.2	0.2601	ug/L	0.2601 ppb	17:37:12
3	P 214.914†	329.6	-4.2	-1.3934	ug/L	-1.3934 ppb	17:37:12
3	Pb 220.353†	-4.5	24.6	1.8558	ug/L	1.8558 ppb	17:37:12
3	S 181.975 Axial†	59.5	-7.8	-6.6180	ug/L	-6.6180 ppb	17:37:12
3	Sb 206.836†	58.7	13.8	2.7186	ug/L	2.7186 ppb	17:37:12
3	Se 196.026†	-29.2	-7.9	-2.8017	ug/L	-2.8017 ppb	17:37:12
3	Si 251.611†	692.2	138.6	2.8475	ug/L	2.8475 ppb	17:37:12
3	Sn 189.927†	16.1	10.7	1.1174	ug/L	1.1174 ppb	17:37:12
3	Ti 334.940†	-1170.3	-72.1	-0.0937	ug/L	-0.0937 ppb	17:36:52
3	Tl 190.801†	-56.9	4.0	0.6686	ug/L	0.6686 ppb	17:37:12
3	U 409.014†	-3679.4	120.5	2.9987	ug/L	2.9987 ppb	17:36:47
3	V 292.402†	-1672.2	-35.2	-0.1855	ug/L	-0.1855 ppb	17:36:52
3	Zn 213.857†	1090.3	-21.8	-0.1184	ug/L	-0.1184 ppb	17:37:12
3	SiO2†	671.7	75.7	3.3133	ug/L	3.3133 ppb	17:37:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1052648.3	99.224	%	0.1771				0.18%
Sc Radial	5441.8	97.8	%	1.11				1.14%
Y 371.029	847390.6	99.317	%	0.2127				0.21%
Y RADIAL	4719.5	98.00	%	1.153				1.18%
Ag 328.068†	24.7	0.0862	ug/L	0.15943	0.0862	ppb	0.15943	184.88%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	25.3	23.035	ug/L	15.5573	23.035	ppb	15.5573	67.54%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.4	-2.6910	ug/L	1.90870	-2.6910	ppb	1.90870	70.93%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	266.7	4.1609	ug/L	0.40719	4.1609	ppb	0.40719	9.79%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.3	0.1323	ug/L	0.05607	0.1323	ppb	0.05607	42.39%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-217.9	-0.0678	ug/L	0.00637	-0.0678	ppb	0.00637	9.40%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.0	32.295	ug/L	1.7810	32.295	ppb	1.7810	5.51%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -8.0     -0.0554 ug/L       0.06535     -0.0554 ppb        0.06535 117.98%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -3.5     -0.0434 ug/L       0.11262     -0.0434 ppb        0.11262 259.50%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              17.5      0.1483 ug/L       0.14376      0.1483 ppb        0.14376  96.96%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -46.9     -0.1177 ug/L       0.17025     -0.1177 ppb        0.17025 144.65%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       -1.0     -34.790 ug/L       33.3662     -34.790 ppb        33.3662  95.91%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        26.9      11.663 ug/L       29.3000      11.663 ppb        29.3000 251.23%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.1      4.3431 ug/L      60.03582      4.3431 ppb       60.03582 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             120.3      0.0904 ug/L       0.01045      0.0904 ppb        0.01045  11.56%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               0.3      0.0080 ug/L       0.26733      0.0080 ppb        0.26733 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -6.8     -18.359 ug/L        7.3401     -18.359 ppb         7.3401  39.98%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               9.9      0.1584 ug/L       0.13612      0.1584 ppb        0.13612  85.96%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                9.2      3.3031 ug/L       4.12410      3.3031 ppb        4.12410 124.85%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              14.8      1.1140 ug/L       0.76116      1.1140 ppb        0.76116  68.33%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -3.2     -2.7204 ug/L       4.38863     -2.7204 ppb        4.38863 161.32%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               7.2      1.4055 ug/L       2.17635      1.4055 ppb        2.17635 154.85%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               5.7      1.7327 ug/L       4.16593      1.7327 ppb        4.16593 240.43%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             143.2      2.9495 ug/L       0.23314      2.9495 ppb        0.23314   7.90%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               3.0      0.3165 ug/L       0.78890      0.3165 ppb        0.78890 249.25%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              16.0      0.2461 ug/L       0.09894      0.2461 ppb        0.09894  40.20%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -3.9     -0.0029 ug/L       0.09509     -0.0029 ppb        0.09509 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               2.4      0.4023 ug/L       0.73219      0.4023 ppb        0.73219 181.98%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -6.2     -0.1494 ug/L       3.07967     -0.1494 ppb        3.07967 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                6.4      0.0410 ug/L       0.21872      0.0410 ppb        0.21872 533.08%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -18.4     -0.1000 ug/L       0.02387     -0.1000 ppb        0.02387  23.86%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   100.7      4.4390 ug/L       0.97632      4.4390 ppb        0.97632  21.99%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 34
Sample ID: 1201873939|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 61
Date Collected: 7/8/2009 17:39:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873939|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5468.4	5468.4	98.3	%			17:41:31
1	Y RADIAL	4754.9	4754.9	98.74	%			17:41:31
1	Al 396.153Radial†	-76.1	14.8	13.455	ug/L	13.455	ppb	17:41:31
1	Ca 317.933Radial†	27.2	10.7	26.659	ug/L	26.659	ppb	17:41:51
1	Fe 238.204 Radial†	1.2	0.9	30.800	ug/L	30.800	ppb	17:41:51
1	K 766.490 Radial†	1473.6	26.5	11.518	ug/L	11.518	ppb	17:41:31
1	Mg 279.077 IEC†	-0.8	-1.0	-80.753	ug/L	-80.753	ppb	17:41:51
1	Na 589.592 Radial†	-179.0	-11.8	-31.813	ug/L	-31.813	ppb	17:41:51
1	Sr 421.552†	-4.0	-9.6	-0.1478	ug/L	-0.1478	ppb	17:41:51
1	Sc 361.383	1038002.9	1038002.9	97.843	%			17:42:48
1	Y 371.029	834788.6	834788.6	97.840	%			17:42:48
1	Ag 328.068†	679.3	55.6	0.2294	ug/L	0.2294	ppb	17:42:53
1	As 188.979†	-51.3	-15.5	-3.6389	ug/L	-3.6389	ppb	17:43:13
1	B 249.677†	-315.0	59.6	0.9251	ug/L	0.9251	ppb	17:42:53
1	Ba 233.527†	38.1	14.7	0.0741	ug/L	0.0741	ppb	17:43:13
1	Be 313.107†	-7398.1	-244.9	-0.0757	ug/L	-0.0757	ppb	17:42:53
1	Cd 226.502†	-268.4	3.4	0.0218	ug/L	0.0218	ppb	17:43:13
1	Co 228.616†	-93.8	-5.4	-0.0685	ug/L	-0.0685	ppb	17:43:13
1	Cr 267.716†	-10.1	18.3	0.1561	ug/L	0.1561	ppb	17:43:13
1	Cu 324.752†	9932.4	-39.9	-0.0968	ug/L	-0.0968	ppb	17:42:53
1	Mn 257.610†	2111.0	1330.5	1.0571	ug/L	1.0571	ppb	17:42:53
1	Mo 202.031†	30.0	-1.1	-0.0417	ug/L	-0.0417	ppb	17:43:13
1	Ni 231.604†	179.0	34.7	0.5560	ug/L	0.5560	ppb	17:43:13
1	P 214.914†	344.0	14.6	5.1975	ug/L	5.1975	ppb	17:43:13
1	Pb 220.353†	-8.3	20.6	1.5418	ug/L	1.5418	ppb	17:43:13
1	S 181.975 Axial†	68.4	2.1	1.7549	ug/L	1.7549	ppb	17:43:13
1	Sb 206.836†	46.2	1.8	0.3873	ug/L	0.3873	ppb	17:43:13
1	Se 196.026†	-11.3	10.0	3.3716	ug/L	3.3716	ppb	17:43:13
1	Si 251.611†	1344.3	813.9	16.785	ug/L	16.785	ppb	17:43:13
1	Sn 189.927†	24.1	19.1	1.9901	ug/L	1.9901	ppb	17:43:13
1	Ti 334.940†	-950.6	137.7	0.1828	ug/L	0.1828	ppb	17:42:53
1	Tl 190.801†	-52.7	7.6	1.2854	ug/L	1.2854	ppb	17:43:13
1	U 409.014†	-3818.4	-67.8	-1.6868	ug/L	-1.6868	ppb	17:42:48
1	V 292.402†	-1697.1	-81.8	-0.4734	ug/L	-0.4734	ppb	17:42:53
1	Zn 213.857†	1255.9	161.2	0.8964	ug/L	0.8964	ppb	17:43:13
1	SiO2†	1320.8	747.6	33.013	ug/L	33.013	ppb	17:44:19
2	Sc Radial	5575.8	5575.8	100	%			17:41:56
2	Y RADIAL	4844.2	4844.2	100.6	%			17:41:56
2	Al 396.153Radial†	-92.3	0.1	0.1174	ug/L	0.1174	ppb	17:41:56
2	Ca 317.933Radial†	23.0	6.0	15.053	ug/L	15.053	ppb	17:42:16
2	Fe 238.204 Radial†	-0.2	-0.5	-18.248	ug/L	-18.248	ppb	17:42:16
2	K 766.490 Radial†	1451.8	-24.1	-10.508	ug/L	-10.508	ppb	17:41:56
2	Mg 279.077 IEC†	1.3	1.2	92.102	ug/L	92.102	ppb	17:42:16
2	Na 589.592 Radial†	-173.6	-2.8	-7.5571	ug/L	-7.5571	ppb	17:42:16
2	Sr 421.552†	15.2	9.7	0.1491	ug/L	0.1491	ppb	17:42:16
2	Sc 361.383	1038595.0	1038595.0	97.899	%			17:43:18
2	Y 371.029	836729.7	836729.7	98.068	%			17:43:18
2	Ag 328.068†	651.1	26.4	0.1016	ug/L	0.1016	ppb	17:43:23
2	As 188.979†	-34.2	1.9	0.4510	ug/L	0.4510	ppb	17:43:43
2	B 249.677†	-345.7	28.4	0.4445	ug/L	0.4445	ppb	17:43:23
2	Ba 233.527†	50.6	27.4	0.1385	ug/L	0.1385	ppb	17:43:43
2	Be 313.107†	-7289.0	-129.2	-0.0400	ug/L	-0.0400	ppb	17:43:23
2	Cd 226.502†	-296.7	-25.4	-0.1881	ug/L	-0.1881	ppb	17:43:43
2	Co 228.616†	-76.2	12.6	0.1559	ug/L	0.1559	ppb	17:43:43
2	Cr 267.716†	-5.8	22.7	0.1940	ug/L	0.1940	ppb	17:43:43
2	Cu 324.752†	9992.3	15.5	0.0371	ug/L	0.0371	ppb	17:43:23
2	Mn 257.610†	2194.8	1414.8	1.1140	ug/L	1.1140	ppb	17:43:23
2	Mo 202.031†	23.0	-8.3	-0.3344	ug/L	-0.3344	ppb	17:43:43
2	Ni 231.604†	149.4	4.4	0.0705	ug/L	0.0705	ppb	17:43:43

2	P 214.914†	345.9	16.3	5.8169	ug/L	5.8169	ppb	17:43:43
2	Pb 220.353†	10.9	40.3	3.0183	ug/L	3.0183	ppb	17:43:43
2	S 181.975 Axial†	66.6	0.2	0.1768	ug/L	0.1768	ppb	17:43:43
2	Sb 206.836†	55.0	10.7	2.1284	ug/L	2.1284	ppb	17:43:43
2	Se 196.026†	-22.5	-1.4	-0.5146	ug/L	-0.5146	ppb	17:43:43
2	Si 251.611†	1271.4	738.6	15.243	ug/L	15.243	ppb	17:43:43
2	Sn 189.927†	26.2	21.3	2.2193	ug/L	2.2193	ppb	17:43:43
2	Ti 334.940†	-1025.6	61.7	0.0829	ug/L	0.0829	ppb	17:43:23
2	Tl 190.801†	-58.8	1.3	0.2307	ug/L	0.2307	ppb	17:43:43
2	U 409.014†	-3861.3	-109.4	-2.7125	ug/L	-2.7125	ppb	17:43:18
2	V 292.402†	-1586.6	32.2	0.1768	ug/L	0.1768	ppb	17:43:23
2	Zn 213.857†	1251.4	155.9	0.8689	ug/L	0.8689	ppb	17:43:43
2	SiO2†	1280.2	705.3	31.170	ug/L	31.170	ppb	17:44:24
3	Sc Radial	5443.7	5443.7	97.8	%			17:42:21
3	Y RADIAL	4718.9	4718.9	97.99	%			17:42:21
3	Al 396.153Radial†	-89.2	1.0	0.9454	ug/L	0.9454	ppb	17:42:21
3	Ca 317.933Radial†	26.4	10.1	25.057	ug/L	25.057	ppb	17:42:41
3	Fe 238.204 Radial†	0.3	-0.0	-0.8909	ug/L	-0.8909	ppb	17:42:41
3	K 766.490 Radial†	1543.5	104.8	45.451	ug/L	45.451	ppb	17:42:21
3	Mg 279.077 IEC†	1.0	0.9	68.000	ug/L	68.000	ppb	17:42:41
3	Na 589.592 Radial†	-172.5	-6.0	-16.126	ug/L	-16.126	ppb	17:42:41
3	Sr 421.552†	3.8	-1.6	-0.0244	ug/L	-0.0244	ppb	17:42:41
3	Sc 361.383	1046023.0	1046023.0	98.599	%			17:43:49
3	Y 371.029	841440.7	841440.7	98.620	%			17:43:49
3	Ag 328.068†	670.1	41.1	0.1598	ug/L	0.1598	ppb	17:43:54
3	As 188.979†	-41.6	-5.3	-1.2440	ug/L	-1.2440	ppb	17:44:14
3	B 249.677†	-330.2	46.6	0.7266	ug/L	0.7266	ppb	17:43:54
3	Ba 233.527†	26.9	3.0	0.0150	ug/L	0.0150	ppb	17:44:14
3	Be 313.107†	-7387.7	-176.5	-0.0547	ug/L	-0.0547	ppb	17:43:54
3	Cd 226.502†	-265.3	8.6	0.0651	ug/L	0.0651	ppb	17:44:14
3	Co 228.616†	-92.0	-2.9	-0.0355	ug/L	-0.0355	ppb	17:44:14
3	Cr 267.716†	-7.8	20.7	0.1756	ug/L	0.1756	ppb	17:44:14
3	Cu 324.752†	10024.4	-24.5	-0.0604	ug/L	-0.0604	ppb	17:43:54
3	Mn 257.610†	2165.5	1369.2	1.0806	ug/L	1.0806	ppb	17:43:54
3	Mo 202.031†	34.8	3.5	0.1400	ug/L	0.1400	ppb	17:44:14
3	Ni 231.604†	197.1	51.7	0.8286	ug/L	0.8286	ppb	17:44:14
3	P 214.914†	363.8	32.0	11.354	ug/L	11.354	ppb	17:44:14
3	Pb 220.353†	-20.7	8.1	0.6105	ug/L	0.6105	ppb	17:44:14
3	S 181.975 Axial†	73.5	6.7	5.6721	ug/L	5.6721	ppb	17:44:14
3	Sb 206.836†	44.8	0.1	0.0577	ug/L	0.0577	ppb	17:44:14
3	Se 196.026†	-23.3	-2.1	-0.6740	ug/L	-0.6740	ppb	17:44:14
3	Si 251.611†	1270.2	728.1	14.999	ug/L	14.999	ppb	17:44:14
3	Sn 189.927†	31.3	26.3	2.7355	ug/L	2.7355	ppb	17:44:14
3	Ti 334.940†	-1027.0	67.7	0.0894	ug/L	0.0894	ppb	17:43:54
3	Tl 190.801†	-72.1	-11.7	-1.9698	ug/L	-1.9698	ppb	17:44:14
3	U 409.014†	-3706.2	75.9	1.8825	ug/L	1.8825	ppb	17:43:49
3	V 292.402†	-1653.4	-24.1	-0.1302	ug/L	-0.1302	ppb	17:43:54
3	Zn 213.857†	1240.8	136.0	0.7523	ug/L	0.7523	ppb	17:44:14
3	SiO2†	1359.3	776.2	34.241	ug/L	34.241	ppb	17:44:29

Mean Data: 1201873939|882342|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1040873.6	98.114	%	0.4213				0.43%
Sc Radial	5496.0	98.8	%	1.26				1.28%
Y 371.029	837653.0	98.176	%	0.4009				0.41%
Y RADIAL	4772.7	99.11	%	1.339				1.35%
Ag 328.068†	41.1	0.1636	ug/L	0.06398	0.1636	ppb	0.06398	39.11%
Al 396.153Radial†	5.3	4.8392	ug/L	7.47289	4.8392	ppb	7.47289	154.42%
As 188.979†	-6.3	-1.4773	ug/L	2.05490	-1.4773	ppb	2.05490	139.10%
B 249.677†	44.9	0.6988	ug/L	0.24150	0.6988	ppb	0.24150	34.56%
Ba 233.527†	15.0	0.0759	ug/L	0.06178	0.0759	ppb	0.06178	81.44%
Be 313.107†	-183.5	-0.0568	ug/L	0.01797	-0.0568	ppb	0.01797	31.64%
Ca 317.933Radial†	8.9	22.256	ug/L	6.2893	22.256	ppb	6.2893	28.26%
Cd 226.502†	-4.5	-0.0337	ug/L	0.13542	-0.0337	ppb	0.13542	401.72%
Co 228.616†	1.4	0.0173	ug/L	0.12116	0.0173	ppb	0.12116	699.55%
Cr 267.716†	20.6	0.1752	ug/L	0.01898	0.1752	ppb	0.01898	10.83%
Cu 324.752†	-16.3	-0.0400	ug/L	0.06924	-0.0400	ppb	0.06924	173.00%
Fe 238.204 Radial†	0.1	3.8873	ug/L	24.87065	3.8873	ppb	24.87065	639.80%
K 766.490 Radial†	35.7	15.487	ug/L	28.1899	15.487	ppb	28.1899	182.02%

Mg 279.077 IEC†	0.3	26.450	ug/L	93.6191	26.450	ppb	93.6191 353.95%
Mn 257.610†	1371.5	1.0839	ug/L	0.02859	1.0839	ppb	0.02859 2.64%
Mo 202.031†	-2.0	-0.0787	ug/L	0.23935	-0.0787	ppb	0.23935 304.11%
Na 589.592 Radial†	-6.8	-18.499	ug/L	12.3006	-18.499	ppb	12.3006 66.49%
Ni 231.604†	30.3	0.4850	ug/L	0.38401	0.4850	ppb	0.38401 79.17%
P 214.914†	21.0	7.4561	ug/L	3.38984	7.4561	ppb	3.38984 45.46%
Pb 220.353†	23.0	1.7235	ug/L	1.21415	1.7235	ppb	1.21415 70.45%
S 181.975 Axial†	3.0	2.5346	ug/L	2.82939	2.5346	ppb	2.82939 111.63%
Sb 206.836†	4.2	0.8578	ug/L	1.11266	0.8578	ppb	1.11266 129.71%
Se 196.026†	2.2	0.7277	ug/L	2.29113	0.7277	ppb	2.29113 314.86%
Si 251.611†	760.2	15.676	ug/L	0.9681	15.676	ppb	0.9681 6.18%
Sn 189.927†	22.2	2.3149	ug/L	0.38180	2.3149	ppb	0.38180 16.49%
Sr 421.552†	-0.5	-0.0077	ug/L	0.14918	-0.0077	ppb	0.14918 >999.9%
Ti 334.940†	89.0	0.1184	ug/L	0.05589	0.1184	ppb	0.05589 47.22%
Tl 190.801†	-0.9	-0.1512	ug/L	1.66088	-0.1512	ppb	1.66088 >999.9%
U 409.014†	-33.8	-0.8389	ug/L	2.41199	-0.8389	ppb	2.41199 287.51%
V 292.402†	-24.6	-0.1423	ug/L	0.32526	-0.1423	ppb	0.32526 228.65%
Zn 213.857†	151.0	0.8392	ug/L	0.07647	0.8392	ppb	0.07647 9.11%
SiO2†	743.0	32.808	ug/L	1.5461	32.808	ppb	1.5461 4.71%

Sequence No.: 35
Sample ID: 1201873940|882342|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 62
Date Collected: 7/8/2009 17:46:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873940|882342|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5695.6	5695.6	102	%			17:48:34
1	Y RADIAL	5273.6	5273.6	109.5	%			17:48:34
1	Al 396.153Radial†	35134.4	34419.9	31312	ug/L	31312	ppb	17:48:34
1	Ca 317.933Radial†	7372.7	7186.5	17900	ug/L	17900	ppb	17:48:34
1	Fe 238.204 Radial†	2505.0	2447.2	85864	ug/L	85864	ppb	17:48:54
1	K 766.490 Radial†	28212.1	26091.2	11361	ug/L	11361	ppb	17:48:34
1	Mg 279.077 IEC†	186.1	181.6	14321	ug/L	14321	ppb	17:48:54
1	Na 589.592 Radial†	932.7	1081.7	2924.8	ug/L	2924.8	ppb	17:48:54
1	Sr 421.552†	58112.1	56772.4	874.50	ug/L	874.50	ppb	17:48:34
1	Sc 361.383	1065747.1	1065747.1	100.46	%			17:49:53
1	Y 371.029	904469.3	904469.3	106.01	%			17:49:53
1	Ag 328.068†	169895.6	168481.5	697.41	ug/L	697.41	ppb	17:49:53
1	As 188.979†	5693.8	5704.7	1365.2	ug/L	1365.2	ppb	17:50:13
1	B 249.677†	44562.5	44740.6	684.82	ug/L	684.82	ppb	17:49:53
1	Ba 233.527†	478401.3	476193.4	2414.0	ug/L	2414.0	ppb	17:49:53
1	Be 313.107†	1485327.4	1485863.9	465.74	ug/L	465.74	ppb	17:49:53
1	Cd 226.502†	83334.2	83231.5	612.72	ug/L	612.72	ppb	17:49:53
1	Co 228.616†	33807.3	33743.4	417.73	ug/L	417.73	ppb	17:50:13
1	Cr 267.716†	45377.8	45199.3	387.85	ug/L	387.85	ppb	17:49:53
1	Cu 324.752†	222873.4	211664.9	527.20	ug/L	527.20	ppb	17:49:53
1	Mn 257.610†	2360236.6	2348636.4	1867.0	ug/L	1867.0	ppb	17:49:53
1	Mo 202.031†	10817.3	10736.2	435.63	ug/L	435.63	ppb	17:50:13
1	Ni 231.604†	33147.2	32847.7	526.21	ug/L	526.21	ppb	17:49:53
1	P 214.914†	11522.9	11133.4	3799.9	ug/L	3799.9	ppb	17:50:13
1	Pb 220.353†	11764.5	11739.8	878.76	ug/L	878.76	ppb	17:50:13
1	S 181.975 Axial†	1351.1	1277.1	1074.8	ug/L	1074.8	ppb	17:50:13
1	Sb 206.836†	3088.5	3029.0	602.06	ug/L	602.06	ppb	17:50:13
1	Se 196.026†	2154.5	2166.3	1009.2	ug/L	1009.2	ppb	17:50:13
1	Si 251.611†	263396.8	261634.5	5385.7	ug/L	5385.7	ppb	17:49:53
1	Sn 189.927†	5523.6	5492.9	574.03	ug/L	574.03	ppb	17:50:13
1	Ti 334.940†	1229339.5	1224837.5	1604.5	ug/L	1604.5	ppb	17:49:53
1	Tl 190.801†	6141.4	6174.7	1056.9	ug/L	1056.9	ppb	17:50:13
1	U 409.014†	-9075.5	-5199.3	-140.30	ug/L	-140.30	ppb	17:49:53
1	V 292.402†	134189.3	135229.6	758.83	ug/L	758.83	ppb	17:49:53
1	Zn 213.857†	186229.9	184257.4	1015.1	ug/L	1015.1	ppb	17:49:53
1	SiO2†	265472.8	263658.7	11622	ug/L	11622	ppb	17:51:14
2	Sc Radial	5588.3	5588.3	100	%			17:48:59
2	Y RADIAL	5166.6	5166.6	107.3	%			17:48:59
2	Al 396.153Radial†	34612.3	34559.4	31439	ug/L	31439	ppb	17:48:59
2	Ca 317.933Radial†	7308.7	7261.2	18086	ug/L	18086	ppb	17:48:59
2	Fe 238.204 Radial†	2524.1	2513.1	88178	ug/L	88178	ppb	17:49:19
2	K 766.490 Radial†	27833.8	26244.0	11429	ug/L	11429	ppb	17:48:59
2	Mg 279.077 IEC†	183.5	182.6	14394	ug/L	14394	ppb	17:49:19
2	Na 589.592 Radial†	964.5	1130.9	3057.8	ug/L	3057.8	ppb	17:49:19
2	Sr 421.552†	56989.1	56744.7	874.07	ug/L	874.07	ppb	17:48:59
2	Sc 361.383	1078252.5	1078252.5	101.64	%			17:50:21
2	Y 371.029	913659.1	913659.1	107.08	%			17:50:21
2	Ag 328.068†	171852.1	168445.1	698.01	ug/L	698.01	ppb	17:50:21
2	As 188.979†	5722.1	5666.8	1356.8	ug/L	1356.8	ppb	17:50:41
2	B 249.677†	45315.7	44967.2	688.05	ug/L	688.05	ppb	17:50:21
2	Ba 233.527†	484246.2	476421.1	2415.2	ug/L	2415.2	ppb	17:50:21
2	Be 313.107†	1500271.8	1483419.7	464.98	ug/L	464.98	ppb	17:50:21
2	Cd 226.502†	84321.0	83240.3	612.51	ug/L	612.51	ppb	17:50:21
2	Co 228.616†	33966.2	33509.5	414.77	ug/L	414.77	ppb	17:50:41
2	Cr 267.716†	45785.1	45076.2	386.84	ug/L	386.84	ppb	17:50:21
2	Cu 324.752†	226398.4	212560.0	529.54	ug/L	529.54	ppb	17:50:21
2	Mn 257.610†	2388800.1	2349491.2	1868.0	ug/L	1868.0	ppb	17:50:21
2	Mo 202.031†	10873.2	10666.3	432.99	ug/L	432.99	ppb	17:50:41
2	Ni 231.604†	33562.4	32873.5	526.62	ug/L	526.62	ppb	17:50:21

2	P 214.914†	11576.3	11052.9	3769.2	ug/L	3769.2	ppb	17:50:41
2	Pb 220.353†	11770.9	11610.4	868.86	ug/L	868.86	ppb	17:50:41
2	S 181.975 Axial†	1351.9	1262.3	1062.3	ug/L	1062.3	ppb	17:50:41
2	Sb 206.836†	3130.6	3034.7	603.08	ug/L	603.08	ppb	17:50:41
2	Se 196.026†	2150.7	2137.7	1008.0	ug/L	1008.0	ppb	17:50:41
2	Si 251.611†	268017.1	263139.5	5416.8	ug/L	5416.8	ppb	17:50:21
2	Sn 189.927†	5530.3	5435.8	568.15	ug/L	568.15	ppb	17:50:41
2	Ti 334.940†	1245998.7	1227035.8	1607.4	ug/L	1607.4	ppb	17:50:21
2	Tl 190.801†	6186.1	6147.8	1052.4	ug/L	1052.4	ppb	17:50:41
2	U 409.014†	-9221.2	-5237.9	-141.54	ug/L	-141.54	ppb	17:50:21
2	V 292.402†	135763.5	135229.3	758.47	ug/L	758.47	ppb	17:50:21
2	Zn 213.857†	188577.7	184417.4	1015.7	ug/L	1015.7	ppb	17:50:21
2	SiO2†	264858.5	259989.4	11460	ug/L	11460	ppb	17:51:19
3	Sc Radial	5632.2	5632.2	101	%			17:49:24
3	Y RADIAL	5206.7	5206.7	108.1	%			17:49:24
3	Al 396.153Radial†	34875.4	34550.2	31431	ug/L	31431	ppb	17:49:24
3	Ca 317.933Radial†	7345.9	7241.0	18036	ug/L	18036	ppb	17:49:24
3	Fe 238.204 Radial†	2510.7	2480.3	87025	ug/L	87025	ppb	17:49:44
3	K 766.490 Radial†	28067.7	26258.7	11435	ug/L	11435	ppb	17:49:24
3	Mg 279.077 IEC†	185.7	183.3	14447	ug/L	14447	ppb	17:49:44
3	Na 589.592 Radial†	936.0	1095.2	2961.3	ug/L	2961.3	ppb	17:49:44
3	Sr 421.552†	57443.1	56750.2	874.16	ug/L	874.16	ppb	17:49:24
3	Sc 361.383	1076115.0	1076115.0	101.44	%			17:50:48
3	Y 371.029	911569.6	911569.6	106.84	%			17:50:48
3	Ag 328.068†	171655.1	168586.7	698.20	ug/L	698.20	ppb	17:50:48
3	As 188.979†	5691.7	5648.1	1352.2	ug/L	1352.2	ppb	17:51:08
3	B 249.677†	45349.3	45088.9	690.10	ug/L	690.10	ppb	17:50:48
3	Ba 233.527†	484845.1	477957.9	2422.9	ug/L	2422.9	ppb	17:50:48
3	Be 313.107†	1500129.3	1486211.3	465.85	ug/L	465.85	ppb	17:50:48
3	Cd 226.502†	84492.9	83574.5	615.15	ug/L	615.15	ppb	17:50:48
3	Co 228.616†	33849.2	33460.5	414.18	ug/L	414.18	ppb	17:51:08
3	Cr 267.716†	45874.2	45253.4	388.33	ug/L	388.33	ppb	17:50:48
3	Cu 324.752†	225265.9	211886.0	527.81	ug/L	527.81	ppb	17:50:48
3	Mn 257.610†	2389287.0	2354639.6	1871.9	ug/L	1871.9	ppb	17:50:48
3	Mo 202.031†	10832.2	10647.1	432.15	ug/L	432.15	ppb	17:51:08
3	Ni 231.604†	33635.4	33011.1	528.83	ug/L	528.83	ppb	17:50:48
3	P 214.914†	11533.7	11033.5	3763.6	ug/L	3763.6	ppb	17:51:08
3	Pb 220.353†	11745.0	11607.8	868.77	ug/L	868.77	ppb	17:51:08
3	S 181.975 Axial†	1358.2	1271.1	1069.8	ug/L	1069.8	ppb	17:51:08
3	Sb 206.836†	3098.9	3009.6	598.10	ug/L	598.10	ppb	17:51:08
3	Se 196.026†	2123.8	2115.4	996.71	ug/L	996.71	ppb	17:51:08
3	Si 251.611†	267350.8	263006.3	5414.1	ug/L	5414.1	ppb	17:50:48
3	Sn 189.927†	5529.6	5445.9	569.18	ug/L	569.18	ppb	17:51:08
3	Ti 334.940†	1243253.3	1226764.3	1607.0	ug/L	1607.0	ppb	17:50:48
3	Tl 190.801†	6184.2	6158.0	1054.2	ug/L	1054.2	ppb	17:51:08
3	U 409.014†	-9276.4	-5310.3	-143.20	ug/L	-143.20	ppb	17:50:48
3	V 292.402†	135651.6	135384.2	759.49	ug/L	759.49	ppb	17:50:48
3	Zn 213.857†	188726.2	184932.4	1018.7	ug/L	1018.7	ppb	17:50:48
3	SiO2†	268131.7	263733.9	11625	ug/L	11625	ppb	17:51:24

Mean Data: 1201873940|882342|2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1073371.5	101.18	%	0.630				0.62%
Sc Radial	5638.7	101	%	1.0				0.96%
Y 371.029	909899.3	106.64	%	0.565				0.53%
Y RADIAL	5215.7	108.3	%	1.12				1.04%
Ag 328.068†	168504.4	697.87	ug/L	0.413	697.87	ppb	0.413	0.06%
Al 396.153Radial†	34509.8	31394	ug/L	71.1	31394	ppb	71.1	0.23%
As 188.979†	5673.2	1358.1	ug/L	6.61	1358.1	ppb	6.61	0.49%
B 249.677†	44932.2	687.66	ug/L	2.663	687.66	ppb	2.663	0.39%
Ba 233.527†	476857.5	2417.4	ug/L	4.86	2417.4	ppb	4.86	0.20%
Be 313.107†	1485164.9	465.52	ug/L	0.471	465.52	ppb	0.471	0.10%
Ca 317.933Radial†	7229.5	18008	ug/L	96.3	18008	ppb	96.3	0.53%
Cd 226.502†	83348.8	613.46	ug/L	1.467	613.46	ppb	1.467	0.24%
Co 228.616†	33571.1	415.56	ug/L	1.903	415.56	ppb	1.903	0.46%
Cr 267.716†	45176.3	387.67	ug/L	0.759	387.67	ppb	0.759	0.20%
Cu 324.752†	212037.0	528.18	ug/L	1.215	528.18	ppb	1.215	0.23%
Fe 238.204 Radial†	2480.2	87022	ug/L	1157.0	87022	ppb	1157.0	1.33%
K 766.490 Radial†	26198.0	11408	ug/L	40.9	11408	ppb	40.9	0.36%

Mg 279.077 IEC†	182.5	14387	ug/L	63.5	14387	ppb	63.5	0.44%
Mn 257.610†	2350922.4	1868.9	ug/L	2.59	1868.9	ppb	2.59	0.14%
Mo 202.031†	10683.2	433.59	ug/L	1.818	433.59	ppb	1.818	0.42%
Na 589.592 Radial†	1102.6	2981.3	ug/L	68.72	2981.3	ppb	68.72	2.31%
Ni 231.604†	32910.8	527.22	ug/L	1.409	527.22	ppb	1.409	0.27%
P 214.914†	11073.3	3777.6	ug/L	19.55	3777.6	ppb	19.55	0.52%
Pb 220.353†	11652.7	872.13	ug/L	5.744	872.13	ppb	5.744	0.66%
S 181.975 Axial†	1270.2	1069.0	ug/L	6.31	1069.0	ppb	6.31	0.59%
Sb 206.836†	3024.4	601.08	ug/L	2.631	601.08	ppb	2.631	0.44%
Se 196.026†	2139.8	1004.6	ug/L	6.89	1004.6	ppb	6.89	0.69%
Si 251.611†	262593.4	5405.5	ug/L	17.22	5405.5	ppb	17.22	0.32%
Sn 189.927†	5458.2	570.45	ug/L	3.142	570.45	ppb	3.142	0.55%
Sr 421.552†	56755.8	874.24	ug/L	0.227	874.24	ppb	0.227	0.03%
Ti 334.940†	1226212.5	1606.3	ug/L	1.58	1606.3	ppb	1.58	0.10%
Tl 190.801†	6160.2	1054.5	ug/L	2.27	1054.5	ppb	2.27	0.22%
U 409.014†	-5249.2	-141.68	ug/L	1.453	-141.68	ppb	1.453	1.03%
V 292.402†	135281.1	758.93	ug/L	0.520	758.93	ppb	0.520	0.07%
Zn 213.857†	184535.7	1016.5	ug/L	1.93	1016.5	ppb	1.93	0.19%
SiO2†	262460.7	11569	ug/L	94.6	11569	ppb	94.6	0.82%

Sequence No.: 36
Sample ID: 232744001|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 63
Date Collected: 7/8/2009 17:53:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232744001|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5601.9	5601.9	101	%			17:55:28
1	Y RADIAL	5477.9	5477.9	113.7	%			17:55:28
1	Al 396.153Radial†	75611.4	75202.8	68452	ug/L	68452	ppb	17:55:28
1	Ca 317.933Radial†	6470.2	6410.4	15967	ug/L	15967	ppb	17:55:28
1	Fe 238.204 Radial†	2982.2	2962.1	103920	ug/L	103920	ppb	17:55:48
1	K 766.490 Radial†	28187.1	26527.3	11555	ug/L	11555	ppb	17:55:28
1	Mg 279.077 IEC†	181.5	180.2	14179	ug/L	14179	ppb	17:55:48
1	Na 589.592 Radial†	172.3	341.6	923.65	ug/L	923.65	ppb	17:55:48
1	Sr 421.552†	13133.3	13040.9	200.77	ug/L	200.77	ppb	17:55:28
1	Sc 361.383	1080883.4	1080883.4	101.89	%			17:56:47
1	Y 371.029	963482.3	963482.3	112.92	%			17:56:47
1	Ag 328.068†	-6562.2	-7079.3	6.1040	ug/L	6.1040	ppb	17:57:07
1	As 188.979†	-71.8	-33.6	39.229	ug/L	39.229	ppb	17:57:07
1	B 249.677†	1545.0	1898.0	15.673	ug/L	15.673	ppb	17:56:47
1	Ba 233.527†	219978.8	215884.0	1095.6	ug/L	1095.6	ppb	17:56:47
1	Be 313.107†	-17941.1	-10292.9	6.3376	ug/L	6.3376	ppb	17:56:47
1	Cd 226.502†	1345.1	1597.9	-0.2877	ug/L	-0.2877	ppb	17:57:07
1	Co 228.616†	3824.4	3844.0	38.138	ug/L	38.138	ppb	17:57:07
1	Cr 267.716†	8934.6	8797.9	77.315	ug/L	77.315	ppb	17:57:07
1	Cu 324.752†	28523.2	17804.2	49.935	ug/L	49.935	ppb	17:56:47
1	Mn 257.610†	3546164.3	3479718.6	2763.2	ug/L	2763.2	ppb	17:56:47
1	Mo 202.031†	58.0	25.2	8.1403	ug/L	8.1403	ppb	17:57:07
1	Ni 231.604†	3870.8	3650.9	58.485	ug/L	58.485	ppb	17:57:07
1	P 214.914†	2716.4	2329.2	755.39	ug/L	755.39	ppb	17:57:07
1	Pb 220.353†	1405.4	1408.5	109.15	ug/L	109.15	ppb	17:57:07
1	S 181.975 Axial†	723.0	641.8	529.77	ug/L	529.77	ppb	17:57:07
1	Sb 206.836†	125.0	77.3	1.6586	ug/L	1.6586	ppb	17:57:07
1	Se 196.026†	-1020.9	-980.4	49.954	ug/L	49.954	ppb	17:57:07
1	Si 251.611†	507333.4	497385.5	10260	ug/L	10260	ppb	17:56:47
1	Sn 189.927†	-51.2	-55.7	-3.3751	ug/L	-3.3751	ppb	17:57:07
1	Ti 334.940†	3192865.8	3134893.8	4104.9	ug/L	4104.9	ppb	17:56:47
1	Tl 190.801†	-314.8	-247.6	-6.1662	ug/L	-6.1662	ppb	17:57:07
1	U 409.014†	-11111.2	-7070.9	-188.36	ug/L	-188.36	ppb	17:56:47
1	V 292.402†	34997.2	36002.4	185.39	ug/L	185.39	ppb	17:56:47
1	Zn 213.857†	52770.8	50671.9	270.85	ug/L	270.85	ppb	17:56:47
1	SiO2†	503263.6	493348.8	21791	ug/L	21791	ppb	17:58:06
2	Sc Radial	5680.4	5680.4	102	%			17:55:53
2	Y RADIAL	5550.4	5550.4	115.3	%			17:55:53
2	Al 396.153Radial†	76126.0	74669.4	67967	ug/L	67967	ppb	17:55:53
2	Ca 317.933Radial†	6510.0	6360.7	15843	ug/L	15843	ppb	17:55:53
2	Fe 238.204 Radial†	2975.5	2914.6	102250	ug/L	102250	ppb	17:56:13
2	K 766.490 Radial†	28392.3	26341.5	11473	ug/L	11473	ppb	17:55:53
2	Mg 279.077 IEC†	180.2	176.3	13879	ug/L	13879	ppb	17:56:13
2	Na 589.592 Radial†	167.7	334.7	905.04	ug/L	905.04	ppb	17:56:13
2	Sr 421.552†	13329.7	13053.1	200.96	ug/L	200.96	ppb	17:55:53
2	Sc 361.383	1089077.7	1089077.7	102.66	%			17:57:14
2	Y 371.029	969940.9	969940.9	113.68	%			17:57:14
2	Ag 328.068†	-6647.4	-7113.9	5.4305	ug/L	5.4305	ppb	17:57:34
2	As 188.979†	-86.2	-47.0	35.770	ug/L	35.770	ppb	17:57:34
2	B 249.677†	1542.2	1883.8	15.674	ug/L	15.674	ppb	17:57:14
2	Ba 233.527†	222255.5	216477.3	1098.5	ug/L	1098.5	ppb	17:57:14
2	Be 313.107†	-18092.0	-10307.4	6.3424	ug/L	6.3424	ppb	17:57:14
2	Cd 226.502†	1334.6	1577.7	-0.2423	ug/L	-0.2423	ppb	17:57:34
2	Co 228.616†	3820.8	3812.3	37.759	ug/L	37.759	ppb	17:57:34
2	Cr 267.716†	8966.0	8762.5	76.980	ug/L	76.980	ppb	17:57:34
2	Cu 324.752†	28704.8	17770.4	49.756	ug/L	49.756	ppb	17:57:14
2	Mn 257.610†	3578972.7	3485489.7	2767.6	ug/L	2767.6	ppb	17:57:14
2	Mo 202.031†	46.8	13.8	7.5704	ug/L	7.5704	ppb	17:57:34
2	Ni 231.604†	3873.6	3625.0	58.071	ug/L	58.071	ppb	17:57:34

2	P 214.914†	2697.0	2290.3	742.84	ug/L	742.84 ppb	17:57:34
2	Pb 220.353†	1422.0	1414.3	109.64	ug/L	109.64 ppb	17:57:34
2	S 181.975 Axial†	723.6	637.0	525.86	ug/L	525.86 ppb	17:57:34
2	Sb 206.836†	123.9	75.3	1.2695	ug/L	1.2695 ppb	17:57:34
2	Se 196.026†	-1025.8	-977.6	44.966	ug/L	44.966 ppb	17:57:34
2	Si 251.611†	512515.5	498686.9	10286	ug/L	10286 ppb	17:57:14
2	Sn 189.927†	-41.5	-45.9	-2.3896	ug/L	-2.3896 ppb	17:57:34
2	Ti 334.940†	3220216.3	3137957.5	4108.9	ug/L	4108.9 ppb	17:57:14
2	Tl 190.801†	-324.1	-254.3	-7.2550	ug/L	-7.2550 ppb	17:57:34
2	U 409.014†	-10928.4	-6810.7	-181.70	ug/L	-181.70 ppb	17:57:14
2	V 292.402†	35379.9	36116.7	186.27	ug/L	186.27 ppb	17:57:14
2	Zn 213.857†	53247.1	50746.2	271.46	ug/L	271.46 ppb	17:57:14
2	SiO2†	502745.1	489127.2	21604	ug/L	21604 ppb	17:58:12
3	Sc Radial	5706.4	5706.4	103	%		17:56:18
3	Y RADIAL	5571.2	5571.2	115.7	%		17:56:18
3	Al 396.153Radial†	76419.2	74615.5	67918	ug/L	67918 ppb	17:56:18
3	Ca 317.933Radial†	6513.2	6334.7	15779	ug/L	15779 ppb	17:56:18
3	Fe 238.204 Radial†	2982.9	2908.6	102040	ug/L	102040 ppb	17:56:38
3	K 766.490 Radial†	28497.2	26317.1	11463	ug/L	11463 ppb	17:56:18
3	Mg 279.077 IEC†	179.2	174.6	13742	ug/L	13742 ppb	17:56:38
3	Na 589.592 Radial†	169.4	335.6	907.44	ug/L	907.44 ppb	17:56:38
3	Sr 421.552†	13299.7	12964.2	199.59	ug/L	199.59 ppb	17:56:18
3	Sc 361.383	1076305.0	1076305.0	101.45	%		17:57:41
3	Y 371.029	958937.3	958937.3	112.39	%		17:57:41
3	Ag 328.068†	-6653.5	-7196.8	5.0393	ug/L	5.0393 ppb	17:58:01
3	As 188.979†	-84.3	-46.2	35.955	ug/L	35.955 ppb	17:58:01
3	B 249.677†	1479.3	1839.6	15.011	ug/L	15.011 ppb	17:57:41
3	Ba 233.527†	219823.6	216649.5	1099.4	ug/L	1099.4 ppb	17:57:41
3	Be 313.107†	-17605.3	-10036.8	6.4343	ug/L	6.4343 ppb	17:57:41
3	Cd 226.502†	1350.3	1608.6	0.0146	ug/L	0.0146 ppb	17:58:01
3	Co 228.616†	3841.7	3877.1	38.562	ug/L	38.562 ppb	17:58:01
3	Cr 267.716†	8981.9	8881.8	77.993	ug/L	77.993 ppb	17:58:01
3	Cu 324.752†	28317.4	17720.4	49.620	ug/L	49.620 ppb	17:57:41
3	Mn 257.610†	3539295.8	3487754.1	2769.3	ug/L	2769.3 ppb	17:57:41
3	Mo 202.031†	58.7	26.1	8.0469	ug/L	8.0469 ppb	17:58:01
3	Ni 231.604†	3883.4	3679.5	58.943	ug/L	58.943 ppb	17:58:01
3	P 214.914†	2712.0	2336.2	759.22	ug/L	759.22 ppb	17:58:01
3	Pb 220.353†	1409.4	1418.3	109.95	ug/L	109.95 ppb	17:58:01
3	S 181.975 Axial†	719.2	641.0	529.25	ug/L	529.25 ppb	17:58:01
3	Sb 206.836†	128.3	81.0	2.3301	ug/L	2.3301 ppb	17:58:01
3	Se 196.026†	-1031.9	-995.5	38.412	ug/L	38.412 ppb	17:58:01
3	Si 251.611†	505669.9	497864.0	10269	ug/L	10269 ppb	17:57:41
3	Sn 189.927†	-56.6	-61.3	-4.0037	ug/L	-4.0037 ppb	17:58:01
3	Ti 334.940†	3185038.3	3140509.1	4112.2	ug/L	4112.2 ppb	17:57:41
3	Tl 190.801†	-330.7	-264.5	-8.9550	ug/L	-8.9550 ppb	17:58:01
3	U 409.014†	-11034.9	-7042.1	-187.41	ug/L	-187.41 ppb	17:57:41
3	V 292.402†	34928.0	36080.3	186.08	ug/L	186.08 ppb	17:57:41
3	Zn 213.857†	52655.6	50778.7	271.66	ug/L	271.66 ppb	17:57:41
3	SiO2†	504524.3	496692.6	21939	ug/L	21939 ppb	17:58:17

Mean Data: 232744001|882342|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1082088.7	102.00	%	0.610				0.60%
Sc Radial	5662.9	102	%	1.0				0.96%
Y 371.029	964120.2	113.00	%	0.648				0.57%
Y RADIAL	5533.1	114.9	%	1.02				0.89%
Ag 328.068†	-7130.0	5.5246	ug/L	0.53855	5.5246	ppb	0.53855	9.75%
Al 396.153Radial†	74829.2	68112	ug/L	295.5	68112	ppb	295.5	0.43%
As 188.979†	-42.3	36.984	ug/L	1.9459	36.984	ppb	1.9459	5.26%
B 249.677†	1873.8	15.453	ug/L	0.3823	15.453	ppb	0.3823	2.47%
Ba 233.527†	216336.9	1097.8	ug/L	2.01	1097.8	ppb	2.01	0.18%
Be 313.107†	-10212.4	6.3715	ug/L	0.05451	6.3715	ppb	0.05451	0.86%
Ca 317.933Radial†	6368.6	15863	ug/L	95.8	15863	ppb	95.8	0.60%
Cd 226.502†	1594.7	-0.1718	ug/L	0.16305	-0.1718	ppb	0.16305	94.91%
Co 228.616†	3844.5	38.153	ug/L	0.4020	38.153	ppb	0.4020	1.05%
Cr 267.716†	8814.0	77.429	ug/L	0.5164	77.429	ppb	0.5164	0.67%
Cu 324.752†	17765.0	49.771	ug/L	0.1582	49.771	ppb	0.1582	0.32%
Fe 238.204 Radial†	2928.4	102730	ug/L	1028.2	102730	ppb	1028.2	1.00%
K 766.490 Radial†	26395.3	11497	ug/L	50.7	11497	ppb	50.7	0.44%

Mg 279.077 IEC†	177.0	13933	ug/L	223.8	13933	ppb	223.8	1.61%
Mn 257.610†	3484320.8	2766.7	ug/L	3.15	2766.7	ppb	3.15	0.11%
Mo 202.031†	21.7	7.9192	ug/L	0.30561	7.9192	ppb	0.30561	3.86%
Na 589.592 Radial†	337.3	912.05	ug/L	10.122	912.05	ppb	10.122	1.11%
Ni 231.604†	3651.8	58.500	ug/L	0.4363	58.500	ppb	0.4363	0.75%
P 214.914†	2318.6	752.48	ug/L	8.570	752.48	ppb	8.570	1.14%
Pb 220.353†	1413.7	109.58	ug/L	0.406	109.58	ppb	0.406	0.37%
S 181.975 Axial†	639.9	528.29	ug/L	2.118	528.29	ppb	2.118	0.40%
Sb 206.836†	77.9	1.7527	ug/L	0.53652	1.7527	ppb	0.53652	30.61%
Se 196.026†	-984.5	44.444	ug/L	5.7887	44.444	ppb	5.7887	13.02%
Si 251.611†	497978.8	10272	ug/L	13.6	10272	ppb	13.6	0.13%
Sn 189.927†	-54.3	-3.2561	ug/L	0.81356	-3.2561	ppb	0.81356	24.99%
Sr 421.552†	13019.4	200.44	ug/L	0.741	200.44	ppb	0.741	0.37%
Ti 334.940†	3137786.8	4108.6	ug/L	3.67	4108.6	ppb	3.67	0.09%
Tl 190.801†	-255.5	-7.4587	ug/L	1.40555	-7.4587	ppb	1.40555	18.84%
U 409.014†	-6974.6	-185.82	ug/L	3.604	-185.82	ppb	3.604	1.94%
V 292.402†	36066.5	185.91	ug/L	0.459	185.91	ppb	0.459	0.25%
Zn 213.857†	50732.2	271.32	ug/L	0.422	271.32	ppb	0.422	0.16%
SiO2†	493056.2	21778	ug/L	167.5	21778	ppb	167.5	0.77%

Sequence No.: 37
Sample ID: 1201873941|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 7/8/2009 18:00:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873941|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5672.4	5672.4	102	%			18:02:21
1	Y RADIAL	5610.9	5610.9	116.5	%			18:02:21
1	Al 396.153Radial†	87375.0	85810.9	78108	ug/L	78108	ppb	18:02:21
1	Ca 317.933Radial†	7587.4	7426.7	18499	ug/L	18499	ppb	18:02:21
1	Fe 238.204 Radial†	3128.1	3068.5	107650	ug/L	107650	ppb	18:02:41
1	K 766.490 Radial†	30671.7	28617.2	12456	ug/L	12456	ppb	18:02:21
1	Mg 279.077 IEC†	191.2	187.4	14746	ug/L	14746	ppb	18:02:41
1	Na 589.592 Radial†	206.0	372.5	1007.2	ug/L	1007.2	ppb	18:02:41
1	Sr 421.552†	14294.7	14018.2	215.80	ug/L	215.80	ppb	18:02:21
1	Sc 361.383	1088820.2	1088820.2	102.63	%			18:03:39
1	Y 371.029	983414.1	983414.1	115.26	%			18:03:39
1	Ag 328.068†	-7540.8	-7985.9	3.7402	ug/L	3.7402	ppb	18:03:45
1	As 188.979†	-82.8	-43.8	36.402	ug/L	36.402	ppb	18:04:05
1	B 249.677†	1700.8	2038.7	17.353	ug/L	17.353	ppb	18:03:45
1	Ba 233.527†	248252.2	241858.1	1227.1	ug/L	1227.1	ppb	18:03:45
1	Be 313.107†	-13768.6	-6099.1	7.2154	ug/L	7.2154	ppb	18:03:45
1	Cd 226.502†	1451.3	1691.7	-0.0236	ug/L	-0.0236	ppb	18:04:05
1	Co 228.616†	4420.9	4397.9	45.426	ug/L	45.426	ppb	18:04:05
1	Cr 267.716†	9889.1	9664.0	84.788	ug/L	84.788	ppb	18:04:05
1	Cu 324.752†	31356.5	20360.7	56.459	ug/L	56.459	ppb	18:03:45
1	Mn 257.610†	4528977.1	4411942.9	3500.4	ug/L	3500.4	ppb	18:03:39
1	Mo 202.031†	27.7	-4.8	7.1948	ug/L	7.1948	ppb	18:04:05
1	Ni 231.604†	4220.9	3964.4	63.505	ug/L	63.505	ppb	18:04:05
1	P 214.914†	3123.0	2706.0	887.77	ug/L	887.77	ppb	18:04:05
1	Pb 220.353†	1667.6	1653.9	129.07	ug/L	129.07	ppb	18:04:05
1	S 181.975 Axial†	811.9	723.2	596.82	ug/L	596.82	ppb	18:04:05
1	Sb 206.836†	119.8	71.3	0.5523	ug/L	0.5523	ppb	18:04:05
1	Se 196.026†	-1099.5	-1049.7	41.035	ug/L	41.035	ppb	18:04:05
1	Si 251.611†	508485.2	494878.1	10208	ug/L	10208	ppb	18:03:45
1	Sn 189.927†	-57.8	-61.8	-3.8422	ug/L	-3.8422	ppb	18:04:05
1	Ti 334.940†	3072516.5	2994789.3	3921.6	ug/L	3921.6	ppb	18:03:39
1	Tl 190.801†	-342.0	-271.9	-6.8365	ug/L	-6.8365	ppb	18:04:05
1	U 409.014†	-11864.8	-7725.6	-205.07	ug/L	-205.07	ppb	18:03:45
1	V 292.402†	37466.1	38157.6	197.27	ug/L	197.27	ppb	18:03:45
1	Zn 213.857†	55781.7	53228.0	284.66	ug/L	284.66	ppb	18:03:45
1	SiO2†	509995.2	496307.1	21921	ug/L	21921	ppb	18:05:14
2	Sc Radial	5631.9	5631.9	101	%			18:02:46
2	Y RADIAL	5578.1	5578.1	115.8	%			18:02:46
2	Al 396.153Radial†	86650.6	85710.7	78017	ug/L	78017	ppb	18:02:46
2	Ca 317.933Radial†	7530.6	7423.9	18492	ug/L	18492	ppb	18:02:46
2	Fe 238.204 Radial†	3160.8	3122.9	109560	ug/L	109560	ppb	18:03:06
2	K 766.490 Radial†	30405.6	28570.4	12437	ug/L	12437	ppb	18:02:46
2	Mg 279.077 IEC†	193.1	190.7	15006	ug/L	15006	ppb	18:03:06
2	Na 589.592 Radial†	204.9	372.9	1008.3	ug/L	1008.3	ppb	18:03:06
2	Sr 421.552†	14147.8	13973.8	215.12	ug/L	215.12	ppb	18:02:46
2	Sc 361.383	1065794.3	1065794.3	100.46	%			18:04:11
2	Y 371.029	964111.0	964111.0	113.00	%			18:04:11
2	Ag 328.068†	-7500.4	-8104.5	3.9021	ug/L	3.9021	ppb	18:04:17
2	As 188.979†	-66.0	-28.8	40.278	ug/L	40.278	ppb	18:04:37
2	B 249.677†	1565.5	1939.8	15.556	ug/L	15.556	ppb	18:04:17
2	Ba 233.527†	246990.9	245828.4	1247.3	ug/L	1247.3	ppb	18:04:17
2	Be 313.107†	-13746.0	-6366.4	7.1201	ug/L	7.1201	ppb	18:04:17
2	Cd 226.502†	1453.9	1724.8	0.0005	ug/L	0.0005	ppb	18:04:37
2	Co 228.616†	4441.7	4511.6	46.838	ug/L	46.838	ppb	18:04:37
2	Cr 267.716†	9967.5	9950.2	87.269	ug/L	87.269	ppb	18:04:37
2	Cu 324.752†	31157.2	20822.3	57.708	ug/L	57.708	ppb	18:04:17
2	Mn 257.610†	4435677.8	4414409.1	3502.6	ug/L	3502.6	ppb	18:04:11
2	Mo 202.031†	50.2	18.2	8.2477	ug/L	8.2477	ppb	18:04:37
2	Ni 231.604†	4297.8	4129.8	66.155	ug/L	66.155	ppb	18:04:37

2	P 214.914†	3107.4	2756.1	903.71	ug/L	903.71 ppb	18:04:37
2	Pb 220.353†	1678.1	1699.4	132.28	ug/L	132.28 ppb	18:04:37
2	S 181.975 Axial†	821.9	750.3	619.75	ug/L	619.75 ppb	18:04:37
2	Sb 206.836†	107.0	61.1	-1.4679	ug/L	-1.4679 ppb	18:04:37
2	Se 196.026†	-1109.4	-1082.6	37.024	ug/L	37.024 ppb	18:04:37
2	Si 251.611†	506066.6	503174.3	10379	ug/L	10379 ppb	18:04:17
2	Sn 189.927†	-79.5	-84.6	-6.1815	ug/L	-6.1815 ppb	18:04:37
2	Ti 334.940†	3003538.1	2990805.7	3916.4	ug/L	3916.4 ppb	18:04:11
2	Tl 190.801†	-336.8	-273.8	-7.1988	ug/L	-7.1988 ppb	18:04:37
2	U 409.014†	-11782.7	-7893.6	-209.48	ug/L	-209.48 ppb	18:04:17
2	V 292.402†	37317.3	38798.1	200.65	ug/L	200.65 ppb	18:04:17
2	Zn 213.857†	55622.7	54243.9	290.10	ug/L	290.10 ppb	18:04:17
2	SiO2†	514684.0	511709.8	22601	ug/L	22601 ppb	18:05:20
3	Sc Radial	5669.4	5669.4	102	%		18:03:11
3	Y RADIAL	5606.2	5606.2	116.4	%		18:03:11
3	Al 396.153Radial†	86977.9	85465.2	77793	ug/L	77793 ppb	18:03:11
3	Ca 317.933Radial†	7552.2	7395.9	18422	ug/L	18422 ppb	18:03:11
3	Fe 238.204 Radial†	3112.5	3054.8	107170	ug/L	107170 ppb	18:03:31
3	K 766.490 Radial†	30650.1	28611.4	12453	ug/L	12453 ppb	18:03:11
3	Mg 279.077 IEC†	192.2	188.5	14834	ug/L	14834 ppb	18:03:31
3	Na 589.592 Radial†	190.4	357.3	966.11	ug/L	966.11 ppb	18:03:31
3	Sr 421.552†	14189.4	13922.1	214.32	ug/L	214.32 ppb	18:03:11
3	Sc 361.383	1083980.6	1083980.6	102.18	%		18:04:43
3	Y 371.029	981379.4	981379.4	115.02	%		18:04:43
3	Ag 328.068†	-7399.1	-7880.0	4.0022	ug/L	4.0022 ppb	18:04:48
3	As 188.979†	-70.3	-31.9	39.029	ug/L	39.029 ppb	18:05:09
3	B 249.677†	1522.8	1871.9	14.817	ug/L	14.817 ppb	18:04:48
3	Ba 233.527†	245978.8	240713.1	1221.3	ug/L	1221.3 ppb	18:04:48
3	Be 313.107†	-13888.3	-6276.2	7.1339	ug/L	7.1339 ppb	18:04:48
3	Cd 226.502†	1443.9	1690.8	0.0274	ug/L	0.0274 ppb	18:05:09
3	Co 228.616†	4439.7	4435.5	45.924	ug/L	45.924 ppb	18:05:09
3	Cr 267.716†	9967.2	9783.5	85.794	ug/L	85.794 ppb	18:05:09
3	Cu 324.752†	30969.9	20118.7	55.834	ug/L	55.834 ppb	18:04:48
3	Mn 257.610†	4490158.1	4393652.4	3485.9	ug/L	3485.9 ppb	18:04:43
3	Mo 202.031†	42.0	9.3	7.7276	ug/L	7.7276 ppb	18:05:09
3	Ni 231.604†	4298.4	4058.5	65.014	ug/L	65.014 ppb	18:05:09
3	P 214.914†	3107.2	2704.0	887.44	ug/L	887.44 ppb	18:05:09
3	Pb 220.353†	1664.0	1657.6	129.33	ug/L	129.33 ppb	18:05:09
3	S 181.975 Axial†	824.9	739.4	610.61	ug/L	610.61 ppb	18:05:09
3	Sb 206.836†	119.7	71.7	0.6358	ug/L	0.6358 ppb	18:05:09
3	Se 196.026†	-1103.4	-1058.2	36.555	ug/L	36.555 ppb	18:05:09
3	Si 251.611†	503203.5	491920.9	10147	ug/L	10147 ppb	18:04:48
3	Sn 189.927†	-70.0	-74.0	-5.1223	ug/L	-5.1223 ppb	18:05:09
3	Ti 334.940†	3049997.9	2986116.2	3910.3	ug/L	3910.3 ppb	18:04:43
3	Tl 190.801†	-345.7	-277.0	-7.8398	ug/L	-7.8398 ppb	18:05:09
3	U 409.014†	-11833.8	-7746.9	-205.55	ug/L	-205.55 ppb	18:04:48
3	V 292.402†	37109.4	37971.5	196.30	ug/L	196.30 ppb	18:04:48
3	Zn 213.857†	55194.4	52895.9	282.85	ug/L	282.85 ppb	18:04:48
3	SiO2†	510377.6	498899.9	22035	ug/L	22035 ppb	18:05:25

Mean Data: 1201873941|882342|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1079531.7	101.76	%	1.144				1.12%
Sc Radial	5657.9	102	%	0.4				0.40%
Y 371.029	976301.5	114.43	%	1.243				1.09%
Y RADIAL	5598.4	116.3	%	0.37				0.32%
Ag 328.068†	-7990.1	3.8815	ug/L	0.13223	3.8815	ppb	0.13223	3.41%
Al 396.153Radial†	85662.3	77973	ug/L	161.9	77973	ppb	161.9	0.21%
As 188.979†	-34.8	38.570	ug/L	1.9780	38.570	ppb	1.9780	5.13%
B 249.677†	1950.1	15.909	ug/L	1.3044	15.909	ppb	1.3044	8.20%
Ba 233.527†	242799.8	1231.9	ug/L	13.62	1231.9	ppb	13.62	1.11%
Be 313.107†	-6247.2	7.1565	ug/L	0.05147	7.1565	ppb	0.05147	0.72%
Ca 317.933Radial†	7415.5	18471	ug/L	42.4	18471	ppb	42.4	0.23%
Cd 226.502†	1702.4	0.0014	ug/L	0.02555	0.0014	ppb	0.02555	>999.9%
Co 228.616†	4448.3	46.063	ug/L	0.7159	46.063	ppb	0.7159	1.55%
Cr 267.716†	9799.2	85.950	ug/L	1.2481	85.950	ppb	1.2481	1.45%
Cu 324.752†	20433.9	56.667	ug/L	0.9542	56.667	ppb	0.9542	1.68%
Fe 238.204 Radial†	3082.0	108120	ug/L	1263.4	108120	ppb	1263.4	1.17%
K 766.490 Radial†	28599.6	12449	ug/L	10.2	12449	ppb	10.2	0.08%

Mg 279.077 IEC†	188.8	14862	ug/L	132.2	14862	ppb	132.2	0.89%
Mn 257.610†	4406668.1	3496.3	ug/L	9.08	3496.3	ppb	9.08	0.26%
Mo 202.031†	7.6	7.7234	ug/L	0.52644	7.7234	ppb	0.52644	6.82%
Na 589.592 Radial†	367.6	993.89	ug/L	24.063	993.89	ppb	24.063	2.42%
Ni 231.604†	4050.9	64.891	ug/L	1.3292	64.891	ppb	1.3292	2.05%
P 214.914†	2722.1	892.97	ug/L	9.295	892.97	ppb	9.295	1.04%
Pb 220.353†	1670.3	130.23	ug/L	1.785	130.23	ppb	1.785	1.37%
S 181.975 Axial†	737.7	609.06	ug/L	11.541	609.06	ppb	11.541	1.89%
Sb 206.836†	68.0	-0.0932	ug/L	1.19122	-0.0932	ppb	1.19122	>999.9%
Se 196.026†	-1063.5	38.205	ug/L	2.4621	38.205	ppb	2.4621	6.44%
Si 251.611†	496657.7	10244	ug/L	120.4	10244	ppb	120.4	1.18%
Sn 189.927†	-73.5	-5.0487	ug/L	1.17138	-5.0487	ppb	1.17138	23.20%
Sr 421.552†	13971.4	215.08	ug/L	0.741	215.08	ppb	0.741	0.34%
Ti 334.940†	2990570.4	3916.1	ug/L	5.69	3916.1	ppb	5.69	0.15%
Tl 190.801†	-274.2	-7.2917	ug/L	0.50806	-7.2917	ppb	0.50806	6.97%
U 409.014†	-7788.7	-206.70	ug/L	2.420	-206.70	ppb	2.420	1.17%
V 292.402†	38309.1	198.07	ug/L	2.287	198.07	ppb	2.287	1.15%
Zn 213.857†	53455.9	285.87	ug/L	3.775	285.87	ppb	3.775	1.32%
SiO2†	502305.6	22186	ug/L	364.4	22186	ppb	364.4	1.64%

Sequence No.: 38
Sample ID: 1201873942|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 65
Date Collected: 7/8/2009 18:07:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873942|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5694.3	5694.3	102	%			18:09:30
1	Y RADIAL	5611.1	5611.1	116.5	%			18:09:30
1	Al 396.153Radial†	146278.1	143044.0	130180	ug/L	130180	ppb	18:09:30
1	Ca 317.933Radial†	9253.4	9026.1	22482	ug/L	22482	ppb	18:09:30
1	Fe 238.204 Radial†	3514.3	3434.0	120490	ug/L	120490	ppb	18:09:50
1	K 766.490 Radial†	46699.9	44164.9	19215	ug/L	19215	ppb	18:09:30
1	Mg 279.077 IEC†	287.5	280.8	22146	ug/L	22146	ppb	18:09:50
1	Na 589.592 Radial†	2102.3	2224.9	6015.9	ug/L	6015.9	ppb	18:09:30
1	Sr 421.552†	48939.2	47820.8	736.55	ug/L	736.55	ppb	18:09:30
1	Sc 361.383	1064892.2	1064892.2	100.38	%			18:10:51
1	Y 371.029	950378.9	950378.9	111.39	%			18:10:51
1	Ag 328.068†	116212.9	115136.7	496.69	ug/L	496.69	ppb	18:10:51
1	As 188.979†	1908.8	1938.5	511.17	ug/L	511.17	ppb	18:10:56
1	B 249.677†	31053.1	31317.7	470.79	ug/L	470.79	ppb	18:10:51
1	Ba 233.527†	328993.3	327730.3	1663.2	ug/L	1663.2	ppb	18:10:51
1	Be 313.107†	1563177.4	1564607.7	498.43	ug/L	498.43	ppb	18:10:51
1	Cd 226.502†	64933.4	64966.5	472.03	ug/L	472.03	ppb	18:10:56
1	Co 228.616†	41524.4	41458.4	505.47	ug/L	505.47	ppb	18:10:56
1	Cr 267.716†	70888.1	70649.8	605.05	ug/L	605.05	ppb	18:10:51
1	Cu 324.752†	241020.2	229921.5	574.24	ug/L	574.24	ppb	18:10:51
1	Mn 257.610†	4249800.0	4232971.2	3360.5	ug/L	3360.5	ppb	18:10:51
1	Mo 202.031†	11479.4	11404.4	464.75	ug/L	464.75	ppb	18:10:56
1	Ni 231.604†	34793.1	34513.8	552.85	ug/L	552.85	ppb	18:10:56
1	P 214.914†	4474.9	4121.1	1318.9	ug/L	1318.9	ppb	18:10:56
1	Pb 220.353†	7683.2	7683.3	590.75	ug/L	590.75	ppb	18:10:56
1	S 181.975 Axial†	6666.4	6573.5	5538.6	ug/L	5538.6	ppb	18:10:56
1	Sb 206.836†	2487.2	2432.4	465.59	ug/L	465.59	ppb	18:10:56
1	Se 196.026†	311.0	331.5	539.54	ug/L	539.54	ppb	18:10:56
1	Si 251.611†	675308.3	672205.5	13855	ug/L	13855	ppb	18:10:51
1	Sn 189.927†	4600.0	4577.2	478.56	ug/L	478.56	ppb	18:10:56
1	Ti 334.940†	3937107.0	3923391.9	5137.1	ug/L	5137.1	ppb	18:10:51
1	Tl 190.801†	2439.7	2491.9	461.43	ug/L	461.43	ppb	18:10:56
1	U 409.014†	7858.0	11663.2	273.42	ug/L	273.42	ppb	18:10:51
1	V 292.402†	122444.8	123636.6	685.65	ug/L	685.65	ppb	18:10:51
1	Zn 213.857†	148441.7	146760.3	801.44	ug/L	801.44	ppb	18:10:51
1	SiO2†	679120.0	675960.6	29834	ug/L	29834	ppb	18:11:30
2	Sc Radial	5639.1	5639.1	101	%			18:09:55
2	Y RADIAL	5563.4	5563.4	115.5	%			18:09:55
2	Al 396.153Radial†	145212.4	143393.4	130500	ug/L	130500	ppb	18:09:55
2	Ca 317.933Radial†	9207.0	9068.9	22589	ug/L	22589	ppb	18:09:55
2	Fe 238.204 Radial†	3481.2	3435.1	120520	ug/L	120520	ppb	18:10:15
2	K 766.490 Radial†	46449.2	44364.8	19302	ug/L	19302	ppb	18:09:55
2	Mg 279.077 IEC†	283.9	280.0	22083	ug/L	22083	ppb	18:10:15
2	Na 589.592 Radial†	2075.7	2218.8	5999.4	ug/L	5999.4	ppb	18:09:55
2	Sr 421.552†	48564.9	47920.3	738.08	ug/L	738.08	ppb	18:09:55
2	Sc 361.383	1067882.6	1067882.6	100.66	%			18:11:05
2	Y 371.029	953975.8	953975.8	111.81	%			18:11:05
2	Ag 328.068†	116727.1	115323.3	497.43	ug/L	497.43	ppb	18:11:05
2	As 188.979†	1952.0	1976.1	519.97	ug/L	519.97	ppb	18:11:10
2	B 249.677†	31276.3	31452.8	472.90	ug/L	472.90	ppb	18:11:05
2	Ba 233.527†	328604.8	326426.5	1656.6	ug/L	1656.6	ppb	18:11:05
2	Be 313.107†	1565596.8	1562650.5	497.81	ug/L	497.81	ppb	18:11:05
2	Cd 226.502†	64909.1	64761.2	470.49	ug/L	470.49	ppb	18:11:10
2	Co 228.616†	41332.8	41152.3	501.67	ug/L	501.67	ppb	18:11:10
2	Cr 267.716†	70884.8	70448.8	603.33	ug/L	603.33	ppb	18:11:05
2	Cu 324.752†	242459.3	230678.7	576.11	ug/L	576.11	ppb	18:11:05
2	Mn 257.610†	4247192.2	4218524.8	3349.1	ug/L	3349.1	ppb	18:11:05
2	Mo 202.031†	11473.4	11366.5	463.24	ug/L	463.24	ppb	18:11:10
2	Ni 231.604†	34808.5	34432.1	551.54	ug/L	551.54	ppb	18:11:10

2	P 214.914†	4439.5	4073.4	1301.8 ug/L	1301.8 ppb	18:11:10
2	Pb 220.353†	7709.8	7688.4	591.18 ug/L	591.18 ppb	18:11:10
2	S 181.975 Axial†	6628.7	6517.4	5491.1 ug/L	5491.1 ppb	18:11:10
2	Sb 206.836†	2457.7	2396.2	458.44 ug/L	458.44 ppb	18:11:10
2	Se 196.026†	293.5	313.2	533.75 ug/L	533.75 ppb	18:11:10
2	Si 251.611†	676163.9	671171.5	13834 ug/L	13834 ppb	18:11:05
2	Sn 189.927†	4581.9	4546.4	475.37 ug/L	475.37 ppb	18:11:10
2	Ti 334.940†	3943546.9	3918806.1	5131.1 ug/L	5131.1 ppb	18:11:05
2	Tl 190.801†	2487.7	2532.8	468.25 ug/L	468.25 ppb	18:11:10
2	U 409.014†	7890.1	11673.2	273.66 ug/L	273.66 ppb	18:11:05
2	V 292.402†	122506.6	123356.4	684.04 ug/L	684.04 ppb	18:11:05
2	Zn 213.857†	148544.4	146448.3	799.70 ug/L	799.70 ppb	18:11:05
2	SiO2†	678544.1	673493.9	29725 ug/L	29725 ppb	18:11:35
3	Sc Radial	5606.4	5606.4	101 %		18:10:20
3	Y RADIAL	5520.2	5520.2	114.6 %		18:10:20
3	Al 396.153Radial†	145170.7	144185.4	131220 ug/L	131220 ppb	18:10:20
3	Ca 317.933Radial†	9171.2	9086.2	22632 ug/L	22632 ppb	18:10:20
3	Fe 238.204 Radial†	3514.6	3488.2	122390 ug/L	122390 ppb	18:10:40
3	K 766.490 Radial†	46428.5	44610.8	19410 ug/L	19410 ppb	18:10:20
3	Mg 279.077 IEC†	289.5	287.2	22650 ug/L	22650 ppb	18:10:40
3	Na 589.592 Radial†	2097.8	2252.7	6090.9 ug/L	6090.9 ppb	18:10:20
3	Sr 421.552†	48607.2	48241.0	743.02 ug/L	743.02 ppb	18:10:20
3	Sc 361.383	1068652.1	1068652.1	100.73 %		18:11:19
3	Y 371.029	955664.5	955664.5	112.01 %		18:11:19
3	Ag 328.068†	116515.5	115029.8	496.87 ug/L	496.87 ppb	18:11:19
3	As 188.979†	1929.9	1952.8	514.81 ug/L	514.81 ppb	18:11:24
3	B 249.677†	31140.9	31296.0	470.20 ug/L	470.20 ppb	18:11:19
3	Ba 233.527†	328676.9	326263.0	1655.8 ug/L	1655.8 ppb	18:11:19
3	Be 313.107†	1566837.8	1562762.4	497.82 ug/L	497.82 ppb	18:11:19
3	Cd 226.502†	65310.1	65113.0	472.91 ug/L	472.91 ppb	18:11:24
3	Co 228.616†	41597.4	41385.4	504.56 ug/L	504.56 ppb	18:11:24
3	Cr 267.716†	70916.2	70429.2	603.20 ug/L	603.20 ppb	18:11:19
3	Cu 324.752†	241766.6	229817.6	574.10 ug/L	574.10 ppb	18:11:19
3	Mn 257.610†	4245042.1	4213351.9	3345.2 ug/L	3345.2 ppb	18:11:19
3	Mo 202.031†	11527.3	11411.7	465.18 ug/L	465.18 ppb	18:11:24
3	Ni 231.604†	35036.2	34633.2	554.76 ug/L	554.76 ppb	18:11:24
3	P 214.914†	4519.3	4149.5	1327.8 ug/L	1327.8 ppb	18:11:24
3	Pb 220.353†	7752.7	7725.5	593.93 ug/L	593.93 ppb	18:11:24
3	S 181.975 Axial†	6698.1	6581.5	5545.2 ug/L	5545.2 ppb	18:11:24
3	Sb 206.836†	2465.7	2402.3	459.82 ug/L	459.82 ppb	18:11:24
3	Se 196.026†	322.0	341.3	549.48 ug/L	549.48 ppb	18:11:24
3	Si 251.611†	677411.8	671926.6	13849 ug/L	13849 ppb	18:11:19
3	Sn 189.927†	4634.5	4595.3	480.48 ug/L	480.48 ppb	18:11:24
3	Ti 334.940†	3939702.7	3912168.7	5122.4 ug/L	5122.4 ppb	18:11:19
3	Tl 190.801†	2485.0	2528.3	467.42 ug/L	467.42 ppb	18:11:24
3	U 409.014†	7904.7	11682.0	273.65 ug/L	273.65 ppb	18:11:19
3	V 292.402†	122694.3	123455.1	684.39 ug/L	684.39 ppb	18:11:19
3	Zn 213.857†	148176.6	145976.9	796.83 ug/L	796.83 ppb	18:11:19
3	SiO2†	686034.4	680444.3	30031 ug/L	30031 ppb	18:11:41

Mean Data: 1201873942|882342|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1067142.3	100.59	%	0.187				0.19%
Sc Radial	5646.6	101	%	0.8				0.79%
Y 371.029	953339.8	111.74	%	0.316				0.28%
Y RADIAL	5564.9	115.6	%	0.94				0.82%
Ag 328.068†	115163.3	497.00	ug/L	0.387	497.00	ppb	0.387	0.08%
Al 396.153Radial†	143540.9	130640	ug/L	532.4	130640	ppb	532.4	0.41%
As 188.979†	1955.8	515.32	ug/L	4.421	515.32	ppb	4.421	0.86%
B 249.677†	31355.5	471.30	ug/L	1.419	471.30	ppb	1.419	0.30%
Ba 233.527†	326806.6	1658.5	ug/L	4.06	1658.5	ppb	4.06	0.24%
Be 313.107†	1563340.2	498.02	ug/L	0.355	498.02	ppb	0.355	0.07%
Ca 317.933Radial†	9060.4	22568	ug/L	77.1	22568	ppb	77.1	0.34%
Cd 226.502†	64946.9	471.81	ug/L	1.222	471.81	ppb	1.222	0.26%
Co 228.616†	41332.0	503.90	ug/L	1.988	503.90	ppb	1.988	0.39%
Cr 267.716†	70509.3	603.86	ug/L	1.029	603.86	ppb	1.029	0.17%
Cu 324.752†	230139.2	574.82	ug/L	1.125	574.82	ppb	1.125	0.20%
Fe 238.204 Radial†	3452.4	121130	ug/L	1086.8	121130	ppb	1086.8	0.90%
K 766.490 Radial†	44380.2	19309	ug/L	97.7	19309	ppb	97.7	0.51%

Mg 279.077 IEC†	282.7	22293	ug/L	310.6	22293	ppb	310.6	1.39%
Mn 257.610†	4221616.0	3351.6	ug/L	7.94	3351.6	ppb	7.94	0.24%
Mo 202.031†	11394.2	464.39	ug/L	1.020	464.39	ppb	1.020	0.22%
Na 589.592 Radial†	2232.1	6035.4	ug/L	48.79	6035.4	ppb	48.79	0.81%
Ni 231.604†	34526.4	553.05	ug/L	1.620	553.05	ppb	1.620	0.29%
P 214.914†	4114.7	1316.2	ug/L	13.23	1316.2	ppb	13.23	1.01%
Pb 220.353†	7699.1	591.95	ug/L	1.727	591.95	ppb	1.727	0.29%
S 181.975 Axial†	6557.5	5525.0	ug/L	29.55	5525.0	ppb	29.55	0.53%
Sb 206.836†	2410.3	461.28	ug/L	3.794	461.28	ppb	3.794	0.82%
Se 196.026†	328.7	540.92	ug/L	7.954	540.92	ppb	7.954	1.47%
Si 251.611†	671767.9	13846	ug/L	11.0	13846	ppb	11.0	0.08%
Sn 189.927†	4573.0	478.14	ug/L	2.582	478.14	ppb	2.582	0.54%
Sr 421.552†	47994.0	739.21	ug/L	3.382	739.21	ppb	3.382	0.46%
Ti 334.940†	3918122.2	5130.2	ug/L	7.38	5130.2	ppb	7.38	0.14%
Tl 190.801†	2517.7	465.70	ug/L	3.721	465.70	ppb	3.721	0.80%
U 409.014†	11672.8	273.58	ug/L	0.139	273.58	ppb	0.139	0.05%
V 292.402†	123482.7	684.70	ug/L	0.845	684.70	ppb	0.845	0.12%
Zn 213.857†	146395.2	799.33	ug/L	2.328	799.33	ppb	2.328	0.29%
SiO2†	676632.9	29863	ug/L	155.6	29863	ppb	155.6	0.52%

Sequence No.: 39
Sample ID: 1201874078|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 66
Date Collected: 7/8/2009 18:13:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201874078|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5538.3	5538.3	99.5	%			18:15:45
1	Y RADIAL	5514.9	5514.9	114.5	%			18:15:45
1	Al 396.153Radial†	142843.2	143620.2	130710	ug/L	130710	ppb	18:15:45
1	Ca 317.933Radial†	10349.9	10382.6	25861	ug/L	25861	ppb	18:15:45
1	Fe 238.204 Radial†	3432.1	3448.2	120980	ug/L	120980	ppb	18:16:05
1	K 766.490 Radial†	45431.9	44176.6	19215	ug/L	19215	ppb	18:15:45
1	Mg 279.077 IEC†	278.6	279.7	22059	ug/L	22059	ppb	18:16:05
1	Na 589.592 Radial†	1993.0	2173.0	5875.6	ug/L	5875.6	ppb	18:15:45
1	Sr 421.552†	46110.3	46325.9	713.48	ug/L	713.48	ppb	18:15:45
1	Sc 361.383	1071437.2	1071437.2	100.99	%			18:17:06
1	Y 371.029	967878.4	967878.4	113.44	%			18:17:06
1	Ag 328.068†	118691.7	116883.9	503.72	ug/L	503.72	ppb	18:17:06
1	As 188.979†	1974.7	1992.2	522.43	ug/L	522.43	ppb	18:17:11
1	B 249.677†	31602.0	31672.2	476.26	ug/L	476.26	ppb	18:17:06
1	Ba 233.527†	340678.6	337298.3	1711.6	ug/L	1711.6	ppb	18:17:06
1	Be 313.107†	1588850.4	1580515.0	502.86	ug/L	502.86	ppb	18:17:06
1	Cd 226.502†	65877.9	65506.6	476.01	ug/L	476.01	ppb	18:17:11
1	Co 228.616†	41567.7	41248.6	503.35	ug/L	503.35	ppb	18:17:11
1	Cr 267.716†	69577.5	68920.7	590.33	ug/L	590.33	ppb	18:17:06
1	Cu 324.752†	247570.5	234940.4	586.65	ug/L	586.65	ppb	18:17:06
1	Mn 257.610†	4790368.4	4742351.7	3763.1	ug/L	3763.1	ppb	18:17:06
1	Mo 202.031†	11546.6	11401.1	464.66	ug/L	464.66	ppb	18:17:11
1	Ni 231.604†	34901.0	34408.9	551.17	ug/L	551.17	ppb	18:17:11
1	P 214.914†	4790.4	4406.2	1417.6	ug/L	1417.6	ppb	18:17:11
1	Pb 220.353†	7827.3	7779.3	597.99	ug/L	597.99	ppb	18:17:11
1	S 181.975 Axial†	6777.8	6643.2	5597.5	ug/L	5597.5	ppb	18:17:11
1	Sb 206.836†	2449.5	2380.0	456.39	ug/L	456.39	ppb	18:17:11
1	Se 196.026†	335.6	353.9	548.61	ug/L	548.61	ppb	18:17:11
1	Si 251.611†	699090.5	691643.7	14256	ug/L	14256	ppb	18:17:06
1	Sn 189.927†	4686.0	4634.3	484.81	ug/L	484.81	ppb	18:17:11
1	Ti 334.940†	3789529.4	3753308.2	4914.7	ug/L	4914.7	ppb	18:17:06
1	Tl 190.801†	2493.5	2530.3	469.21	ug/L	469.21	ppb	18:17:11
1	U 409.014†	7269.4	11032.6	257.74	ug/L	257.74	ppb	18:17:06
1	V 292.402†	122944.5	123386.2	684.38	ug/L	684.38	ppb	18:17:06
1	Zn 213.857†	153015.3	150385.5	821.63	ug/L	821.63	ppb	18:17:06
1	SiO2†	694594.1	687149.4	30328	ug/L	30328	ppb	18:17:45
2	Sc Radial	5619.8	5619.8	101	%			18:16:10
2	Y RADIAL	5585.6	5585.6	116.0	%			18:16:10
2	Al 396.153Radial†	144607.9	143286.4	130400	ug/L	130400	ppb	18:16:10
2	Ca 317.933Radial†	10461.2	10341.9	25760	ug/L	25760	ppb	18:16:10
2	Fe 238.204 Radial†	3442.1	3408.1	119580	ug/L	119580	ppb	18:16:30
2	K 766.490 Radial†	46010.3	44087.4	19176	ug/L	19176	ppb	18:16:10
2	Mg 279.077 IEC†	275.7	272.9	21516	ug/L	21516	ppb	18:16:30
2	Na 589.592 Radial†	2009.7	2160.5	5841.7	ug/L	5841.7	ppb	18:16:10
2	Sr 421.552†	46758.8	46296.2	713.03	ug/L	713.03	ppb	18:16:10
2	Sc 361.383	1065707.9	1065707.9	100.45	%			18:17:20
2	Y 371.029	961112.5	961112.5	112.65	%			18:17:20
2	Ag 328.068†	118250.9	117076.9	504.03	ug/L	504.03	ppb	18:17:20
2	As 188.979†	1974.8	2002.8	524.64	ug/L	524.64	ppb	18:17:25
2	B 249.677†	31473.9	31712.9	477.06	ug/L	477.06	ppb	18:17:20
2	Ba 233.527†	338987.8	337428.6	1712.2	ug/L	1712.2	ppb	18:17:20
2	Be 313.107†	1577976.5	1578147.9	502.13	ug/L	502.13	ppb	18:17:20
2	Cd 226.502†	66031.4	66010.1	479.95	ug/L	479.95	ppb	18:17:25
2	Co 228.616†	41751.7	41653.1	508.43	ug/L	508.43	ppb	18:17:25
2	Cr 267.716†	69164.0	68879.5	589.95	ug/L	589.95	ppb	18:17:20
2	Cu 324.752†	246722.9	235414.6	587.74	ug/L	587.74	ppb	18:17:20
2	Mn 257.610†	4768066.8	4745650.9	3765.6	ug/L	3765.6	ppb	18:17:20
2	Mo 202.031†	11736.1	11651.2	474.57	ug/L	474.57	ppb	18:17:25
2	Ni 231.604†	35018.8	34712.0	556.02	ug/L	556.02	ppb	18:17:25

2	P 214.914†	4880.2	4521.2	1459.1 ug/L	1459.1 ppb	18:17:25
2	Pb 220.353†	7856.5	7850.0	603.38 ug/L	603.38 ppb	18:17:25
2	S 181.975 Axial†	6851.6	6752.7	5690.3 ug/L	5690.3 ppb	18:17:25
2	Sb 206.836†	2482.5	2425.8	465.67 ug/L	465.67 ppb	18:17:25
2	Se 196.026†	329.3	349.4	542.24 ug/L	542.24 ppb	18:17:25
2	Si 251.611†	696343.8	692630.8	14276 ug/L	14276 ppb	18:17:20
2	Sn 189.927†	4704.5	4677.8	489.30 ug/L	489.30 ppb	18:17:25
2	Ti 334.940†	3771187.0	3755221.1	4917.2 ug/L	4917.2 ppb	18:17:20
2	Tl 190.801†	2533.9	2583.8	478.23 ug/L	478.23 ppb	18:17:25
2	U 409.014†	7346.0	11147.5	260.76 ug/L	260.76 ppb	18:17:20
2	V 292.402†	122300.7	123399.7	684.77 ug/L	684.77 ppb	18:17:20
2	Zn 213.857†	152436.0	150623.4	823.10 ug/L	823.10 ppb	18:17:20
2	SiO2†	700133.2	696360.8	30735 ug/L	30735 ppb	18:17:51
3	Sc Radial	5549.8	5549.8	99.7 %		18:16:35
3	Y RADIAL	5514.3	5514.3	114.5 %		18:16:35
3	Al 396.153Radial†	142811.1	143289.7	130410 ug/L	130410 ppb	18:16:35
3	Ca 317.933Radial†	10325.6	10336.6	25747 ug/L	25747 ppb	18:16:35
3	Fe 238.204 Radial†	3433.5	3442.5	120780 ug/L	120780 ppb	18:16:55
3	K 766.490 Radial†	45241.5	43890.9	19091 ug/L	19091 ppb	18:16:35
3	Mg 279.077 IEC†	278.6	279.1	22013 ug/L	22013 ppb	18:16:55
3	Na 589.592 Radial†	1961.5	2137.3	5778.9 ug/L	5778.9 ppb	18:16:35
3	Sr 421.552†	45842.5	45961.0	707.86 ug/L	707.86 ppb	18:16:35
3	Sc 361.383	1073599.2	1073599.2	101.20 %		18:17:34
3	Y 371.029	968341.8	968341.8	113.49 %		18:17:34
3	Ag 328.068†	118969.7	116921.9	503.81 ug/L	503.81 ppb	18:17:34
3	As 188.979†	2010.0	2023.0	529.60 ug/L	529.60 ppb	18:17:39
3	B 249.677†	31710.8	31716.7	476.97 ug/L	476.97 ppb	18:17:34
3	Ba 233.527†	340533.5	336475.7	1707.4 ug/L	1707.4 ppb	18:17:34
3	Be 313.107†	1586934.3	1575453.5	501.28 ug/L	501.28 ppb	18:17:34
3	Cd 226.502†	66140.3	65634.5	476.99 ug/L	476.99 ppb	18:17:39
3	Co 228.616†	41827.8	41422.8	505.55 ug/L	505.55 ppb	18:17:39
3	Cr 267.716†	69429.1	68635.4	587.90 ug/L	587.90 ppb	18:17:34
3	Cu 324.752†	248509.2	235374.4	587.71 ug/L	587.71 ppb	18:17:34
3	Mn 257.610†	4792117.5	4734528.7	3756.9 ug/L	3756.9 ppb	18:17:34
3	Mo 202.031†	11713.5	11543.0	470.32 ug/L	470.32 ppb	18:17:39
3	Ni 231.604†	35120.4	34556.2	553.53 ug/L	553.53 ppb	18:17:39
3	P 214.914†	4845.3	4451.0	1433.3 ug/L	1433.3 ppb	18:17:39
3	Pb 220.353†	7924.9	7860.1	604.02 ug/L	604.02 ppb	18:17:39
3	S 181.975 Axial†	6857.6	6708.6	5652.9 ug/L	5652.9 ppb	18:17:39
3	Sb 206.836†	2498.6	2423.5	465.21 ug/L	465.21 ppb	18:17:39
3	Se 196.026†	338.0	355.6	548.45 ug/L	548.45 ppb	18:17:39
3	Si 251.611†	698453.5	689620.4	14214 ug/L	14214 ppb	18:17:34
3	Sn 189.927†	4738.0	4676.4	489.17 ug/L	489.17 ppb	18:17:39
3	Ti 334.940†	3793953.8	3750124.4	4910.5 ug/L	4910.5 ppb	18:17:34
3	Tl 190.801†	2490.6	2522.5	467.82 ug/L	467.82 ppb	18:17:39
3	U 409.014†	7354.1	11101.8	259.48 ug/L	259.48 ppb	18:17:34
3	V 292.402†	123213.9	123407.2	684.61 ug/L	684.61 ppb	18:17:34
3	Zn 213.857†	153119.3	150183.3	820.51 ug/L	820.51 ppb	18:17:34
3	SiO2†	693255.5	684441.7	30208 ug/L	30208 ppb	18:17:56

Mean Data: 1201874078|882342|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1070248.1	100.88	%	0.384				0.38%
Sc Radial	5569.3	100	%	0.8				0.79%
Y 371.029	965777.5	113.19	%	0.474				0.42%
Y RADIAL	5538.3	115.0	%	0.85				0.74%
Ag 328.068†	116960.9	503.86	ug/L	0.161	503.86	ppb	0.161	0.03%
Al 396.153Radial†	143398.8	130510	ug/L	174.8	130510	ppb	174.8	0.13%
As 188.979†	2006.0	525.56	ug/L	3.672	525.56	ppb	3.672	0.70%
B 249.677†	31700.6	476.76	ug/L	0.442	476.76	ppb	0.442	0.09%
Ba 233.527†	337067.5	1710.4	ug/L	2.61	1710.4	ppb	2.61	0.15%
Be 313.107†	1578038.8	502.09	ug/L	0.793	502.09	ppb	0.793	0.16%
Ca 317.933Radial†	10353.7	25789	ug/L	62.7	25789	ppb	62.7	0.24%
Cd 226.502†	65717.1	477.65	ug/L	2.048	477.65	ppb	2.048	0.43%
Co 228.616†	41441.5	505.78	ug/L	2.548	505.78	ppb	2.548	0.50%
Cr 267.716†	68811.8	589.39	ug/L	1.310	589.39	ppb	1.310	0.22%
Cu 324.752†	235243.1	587.37	ug/L	0.620	587.37	ppb	0.620	0.11%
Fe 238.204 Radial†	3432.9	120450	ug/L	760.3	120450	ppb	760.3	0.63%
K 766.490 Radial†	44051.6	19161	ug/L	63.3	19161	ppb	63.3	0.33%

Mg 279.077 IEC†	277.2	21863	ug/L	300.8	21863	ppb	300.8	1.38%
Mn 257.610†	4740843.8	3761.9	ug/L	4.46	3761.9	ppb	4.46	0.12%
Mo 202.031†	11531.8	469.85	ug/L	4.974	469.85	ppb	4.974	1.06%
Na 589.592 Radial†	2156.9	5832.1	ug/L	49.07	5832.1	ppb	49.07	0.84%
Ni 231.604†	34559.0	553.57	ug/L	2.427	553.57	ppb	2.427	0.44%
P 214.914†	4459.5	1436.7	ug/L	20.96	1436.7	ppb	20.96	1.46%
Pb 220.353†	7829.8	601.80	ug/L	3.315	601.80	ppb	3.315	0.55%
S 181.975 Axial†	6701.5	5646.9	ug/L	46.69	5646.9	ppb	46.69	0.83%
Sb 206.836†	2409.8	462.43	ug/L	5.230	462.43	ppb	5.230	1.13%
Se 196.026†	353.0	546.43	ug/L	3.635	546.43	ppb	3.635	0.67%
Si 251.611†	691298.3	14249	ug/L	31.6	14249	ppb	31.6	0.22%
Sn 189.927†	4662.8	487.76	ug/L	2.556	487.76	ppb	2.556	0.52%
Sr 421.552†	46194.4	711.46	ug/L	3.121	711.46	ppb	3.121	0.44%
Ti 334.940†	3752884.5	4914.1	ug/L	3.37	4914.1	ppb	3.37	0.07%
Tl 190.801†	2545.5	471.75	ug/L	5.650	471.75	ppb	5.650	1.20%
U 409.014†	11093.9	259.33	ug/L	1.519	259.33	ppb	1.519	0.59%
V 292.402†	123397.7	684.59	ug/L	0.195	684.59	ppb	0.195	0.03%
Zn 213.857†	150397.4	821.74	ug/L	1.299	821.74	ppb	1.299	0.16%
SiO2†	689317.3	30424	ug/L	275.9	30424	ppb	275.9	0.91%

Sequence No.: 40
Sample ID: 1201873943|882342|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 67
Date Collected: 7/8/2009 18:20:06
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873943|882342|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5665.2	5665.2	102	%			18:21:59
1	Y RADIAL	5021.6	5021.6	104.3	%			18:21:59
1	Al 396.153Radial†	15509.9	15327.3	13951	ug/L	13951	ppb	18:21:59
1	Ca 317.933Radial†	1353.3	1312.3	3268.8	ug/L	3268.8	ppb	18:22:19
1	Fe 238.204 Radial†	631.9	620.3	21763	ug/L	21763	ppb	18:22:19
1	K 766.490 Radial†	7115.5	5516.3	2402.7	ug/L	2402.7	ppb	18:21:59
1	Mg 279.077 IEC†	37.3	36.5	2870.4	ug/L	2870.4	ppb	18:22:19
1	Na 589.592 Radial†	-108.6	63.7	172.26	ug/L	172.26	ppb	18:22:19
1	Sr 421.552†	2726.0	2672.2	41.139	ug/L	41.139	ppb	18:21:59
1	Sc 361.383	1056548.3	1056548.3	99.591	%			18:23:16
1	Y 371.029	866955.8	866955.8	101.61	%			18:23:16
1	Ag 328.068†	-943.6	-1586.1	0.8707	ug/L	0.8707	ppb	18:23:16
1	As 188.979†	-54.2	-17.6	5.8200	ug/L	5.8200	ppb	18:23:37
1	B 249.677†	235.0	617.5	6.7119	ug/L	6.7119	ppb	18:23:16
1	Ba 233.527†	45458.1	45620.3	231.51	ug/L	231.51	ppb	18:23:16
1	Be 313.107†	-9609.6	-2332.8	1.2994	ug/L	1.2994	ppb	18:23:16
1	Cd 226.502†	48.4	326.3	-0.1227	ug/L	-0.1227	ppb	18:23:37
1	Co 228.616†	692.7	785.9	7.7253	ug/L	7.7253	ppb	18:23:37
1	Cr 267.716†	1846.5	1882.7	16.534	ug/L	16.534	ppb	18:23:37
1	Cu 324.752†	13559.8	3424.2	9.7066	ug/L	9.7066	ppb	18:23:16
1	Mn 257.610†	754130.0	756396.6	600.54	ug/L	600.54	ppb	18:23:16
1	Mo 202.031†	38.1	6.5	1.7551	ug/L	1.7551	ppb	18:23:37
1	Ni 231.604†	909.2	764.7	12.250	ug/L	12.250	ppb	18:23:37
1	P 214.914†	842.5	509.0	165.68	ug/L	165.68	ppb	18:23:37
1	Pb 220.353†	306.4	336.7	25.913	ug/L	25.913	ppb	18:23:37
1	S 181.975 Axial†	203.9	136.9	113.17	ug/L	113.17	ppb	18:23:37
1	Sb 206.836†	62.9	17.8	0.6175	ug/L	0.6175	ppb	18:23:37
1	Se 196.026†	-229.8	-209.1	9.2107	ug/L	9.2107	ppb	18:23:37
1	Si 251.611†	103324.2	103187.9	2128.5	ug/L	2128.5	ppb	18:23:16
1	Sn 189.927†	-15.0	-20.5	-1.6312	ug/L	-1.6312	ppb	18:23:37
1	Ti 334.940†	661649.7	665473.3	871.37	ug/L	871.37	ppb	18:23:16
1	Tl 190.801†	-116.8	-55.9	-1.7952	ug/L	-1.7952	ppb	18:23:37
1	U 409.014†	-5245.4	-1432.2	-38.240	ug/L	-38.240	ppb	18:23:16
1	V 292.402†	5943.8	7620.9	39.274	ug/L	39.274	ppb	18:23:16
1	Zn 213.857†	11416.4	10340.8	55.213	ug/L	55.213	ppb	18:23:37
1	SiO2†	103466.6	103288.7	4562.2	ug/L	4562.2	ppb	18:24:34
2	Sc Radial	5583.1	5583.1	100	%			18:22:24
2	Y RADIAL	4973.1	4973.1	103.3	%			18:22:24
2	Al 396.153Radial†	15440.0	15481.8	14092	ug/L	14092	ppb	18:22:24
2	Ca 317.933Radial†	1348.9	1327.5	3306.7	ug/L	3306.7	ppb	18:22:44
2	Fe 238.204 Radial†	633.1	630.7	22125	ug/L	22125	ppb	18:22:44
2	K 766.490 Radial†	7070.5	5574.3	2428.2	ug/L	2428.2	ppb	18:22:24
2	Mg 279.077 IEC†	36.7	36.4	2861.2	ug/L	2861.2	ppb	18:22:44
2	Na 589.592 Radial†	-119.7	51.1	138.26	ug/L	138.26	ppb	18:22:44
2	Sr 421.552†	2701.1	2686.8	41.363	ug/L	41.363	ppb	18:22:24
2	Sc 361.383	1062755.9	1062755.9	100.18	%			18:23:42
2	Y 371.029	871625.7	871625.7	102.16	%			18:23:42
2	Ag 328.068†	-1000.7	-1637.5	0.7824	ug/L	0.7824	ppb	18:23:42
2	As 188.979†	-55.6	-18.6	5.6569	ug/L	5.6569	ppb	18:24:02
2	B 249.677†	176.6	557.8	5.7333	ug/L	5.7333	ppb	18:23:42
2	Ba 233.527†	45852.6	45747.5	232.16	ug/L	232.16	ppb	18:23:42
2	Be 313.107†	-9621.8	-2288.7	1.3130	ug/L	1.3130	ppb	18:23:42
2	Cd 226.502†	47.0	324.6	-0.1783	ug/L	-0.1783	ppb	18:24:02
2	Co 228.616†	723.0	812.2	8.0473	ug/L	8.0473	ppb	18:24:02
2	Cr 267.716†	1841.8	1867.1	16.409	ug/L	16.409	ppb	18:24:02
2	Cu 324.752†	13623.5	3408.2	9.6882	ug/L	9.6882	ppb	18:23:42
2	Mn 257.610†	759545.3	757379.4	601.37	ug/L	601.37	ppb	18:23:42
2	Mo 202.031†	41.1	9.3	1.8890	ug/L	1.8890	ppb	18:24:02
2	Ni 231.604†	929.8	779.9	12.494	ug/L	12.494	ppb	18:24:02

2	P 214.914†	837.8	499.4	162.04	ug/L	162.04 ppb	18:24:02
2	Pb 220.353†	270.8	299.4	23.107	ug/L	23.107 ppb	18:24:02
2	S 181.975 Axial†	208.5	140.3	116.02	ug/L	116.02 ppb	18:24:02
2	Sb 206.836†	59.9	14.3	-0.0466	ug/L	-0.0466 ppb	18:24:02
2	Se 196.026†	-225.4	-203.4	12.343	ug/L	12.343 ppb	18:24:02
2	Si 251.611†	104197.5	103453.7	2133.9	ug/L	2133.9 ppb	18:23:42
2	Sn 189.927†	-14.2	-19.6	-1.5308	ug/L	-1.5308 ppb	18:24:02
2	Ti 334.940†	665517.6	665453.7	871.35	ug/L	871.35 ppb	18:23:42
2	Tl 190.801†	-113.7	-52.2	-1.1558	ug/L	-1.1558 ppb	18:24:02
2	U 409.014†	-5213.8	-1369.8	-36.738	ug/L	-36.738 ppb	18:23:42
2	V 292.402†	6019.4	7661.5	39.459	ug/L	39.459 ppb	18:23:42
2	Zn 213.857†	11440.9	10298.4	54.935	ug/L	54.935 ppb	18:24:02
2	SiO2†	103826.4	103041.0	4551.2	ug/L	4551.2 ppb	18:24:39
3	Sc Radial	5560.3	5560.3	99.9	%		18:22:49
3	Y RADIAL	4950.8	4950.8	102.8	%		18:22:49
3	Al 396.153Radial†	15350.1	15454.7	14067	ug/L	14067 ppb	18:22:49
3	Ca 317.933Radial†	1343.4	1327.6	3306.8	ug/L	3306.8 ppb	18:23:09
3	Fe 238.204 Radial†	628.6	628.8	22060	ug/L	22060 ppb	18:23:09
3	K 766.490 Radial†	7008.3	5540.9	2413.7	ug/L	2413.7 ppb	18:22:49
3	Mg 279.077 IEC†	37.9	37.7	2969.0	ug/L	2969.0 ppb	18:23:09
3	Na 589.592 Radial†	-129.5	40.8	110.38	ug/L	110.38 ppb	18:23:09
3	Sr 421.552†	2712.8	2709.5	41.714	ug/L	41.714 ppb	18:22:49
3	Sc 361.383	1057435.2	1057435.2	99.675	%		18:24:08
3	Y 371.029	867349.4	867349.4	101.66	%		18:24:08
3	Ag 328.068†	-937.1	-1578.7	0.9934	ug/L	0.9934 ppb	18:24:08
3	As 188.979†	-69.6	-32.9	2.2640	ug/L	2.2640 ppb	18:24:28
3	B 249.677†	236.5	618.8	6.6922	ug/L	6.6922 ppb	18:24:08
3	Ba 233.527†	45432.2	45556.0	231.19	ug/L	231.19 ppb	18:24:08
3	Be 313.107†	-9703.5	-2418.9	1.2659	ug/L	1.2659 ppb	18:24:08
3	Cd 226.502†	41.1	318.9	-0.2132	ug/L	-0.2132 ppb	18:24:28
3	Co 228.616†	713.9	806.7	7.9849	ug/L	7.9849 ppb	18:24:28
3	Cr 267.716†	1850.6	1885.2	16.561	ug/L	16.561 ppb	18:24:28
3	Cu 324.752†	13519.1	3371.9	9.5947	ug/L	9.5947 ppb	18:24:08
3	Mn 257.610†	752594.9	754221.4	598.86	ug/L	598.86 ppb	18:24:08
3	Mo 202.031†	37.6	5.9	1.7504	ug/L	1.7504 ppb	18:24:28
3	Ni 231.604†	935.3	790.1	12.657	ug/L	12.657 ppb	18:24:28
3	P 214.914†	826.2	491.9	159.47	ug/L	159.47 ppb	18:24:28
3	Pb 220.353†	286.9	317.0	24.426	ug/L	24.426 ppb	18:24:28
3	S 181.975 Axial†	200.2	133.1	109.87	ug/L	109.87 ppb	18:24:28
3	Sb 206.836†	67.7	22.5	1.5697	ug/L	1.5697 ppb	18:24:28
3	Se 196.026†	-229.7	-208.8	10.360	ug/L	10.360 ppb	18:24:28
3	Si 251.611†	102885.6	102660.9	2117.6	ug/L	2117.6 ppb	18:24:08
3	Sn 189.927†	-7.7	-13.2	-0.8593	ug/L	-0.8593 ppb	18:24:28
3	Ti 334.940†	659996.7	663257.6	868.47	ug/L	868.47 ppb	18:24:08
3	Tl 190.801†	-116.8	-55.8	-1.7907	ug/L	-1.7907 ppb	18:24:28
3	U 409.014†	-5272.9	-1455.3	-38.852	ug/L	-38.852 ppb	18:24:08
3	V 292.402†	5867.2	7539.2	38.773	ug/L	38.773 ppb	18:24:08
3	Zn 213.857†	11382.7	10297.5	54.933	ug/L	54.933 ppb	18:24:28
3	SiO2†	101546.9	101275.6	4473.2	ug/L	4473.2 ppb	18:24:44

Mean Data: 1201873943|882342|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1058913.1	99.814	%	0.3165				0.32%
Sc Radial	5602.9	101	%	1.0				0.98%
Y 371.029	868643.6	101.81	%	0.304				0.30%
Y RADIAL	4981.8	103.4	%	0.75				0.73%
Ag 328.068†	-1600.8	0.8821	ug/L	0.10599	0.8821	ppb	0.10599	12.01%
Al 396.153Radial†	15421.3	14037	ug/L	75.1	14037	ppb	75.1	0.53%
As 188.979†	-23.0	4.5803	ug/L	2.00763	4.5803	ppb	2.00763	43.83%
B 249.677†	598.1	6.3792	ug/L	0.55940	6.3792	ppb	0.55940	8.77%
Ba 233.527†	45641.3	231.62	ug/L	0.495	231.62	ppb	0.495	0.21%
Be 313.107†	-2346.8	1.2928	ug/L	0.02427	1.2928	ppb	0.02427	1.88%
Ca 317.933Radial†	1322.5	3294.1	ug/L	21.89	3294.1	ppb	21.89	0.66%
Cd 226.502†	323.2	-0.1714	ug/L	0.04564	-0.1714	ppb	0.04564	26.63%
Co 228.616†	801.6	7.9192	ug/L	0.17079	7.9192	ppb	0.17079	2.16%
Cr 267.716†	1878.4	16.501	ug/L	0.0815	16.501	ppb	0.0815	0.49%
Cu 324.752†	3401.4	9.6632	ug/L	0.05999	9.6632	ppb	0.05999	0.62%
Fe 238.204 Radial†	626.6	21983	ug/L	193.0	21983	ppb	193.0	0.88%
K 766.490 Radial†	5543.8	2414.9	ug/L	12.77	2414.9	ppb	12.77	0.53%

Mg 279.077 IEC†	36.9	2900.2	ug/L	59.79	2900.2	ppb	59.79	2.06%
Mn 257.610†	755999.1	600.26	ug/L	1.277	600.26	ppb	1.277	0.21%
Mo 202.031†	7.2	1.7982	ug/L	0.07870	1.7982	ppb	0.07870	4.38%
Na 589.592 Radial†	51.9	140.30	ug/L	30.988	140.30	ppb	30.988	22.09%
Ni 231.604†	778.2	12.467	ug/L	0.2052	12.467	ppb	0.2052	1.65%
P 214.914†	500.1	162.40	ug/L	3.121	162.40	ppb	3.121	1.92%
Pb 220.353†	317.7	24.482	ug/L	1.4040	24.482	ppb	1.4040	5.73%
S 181.975 Axial†	136.8	113.02	ug/L	3.080	113.02	ppb	3.080	2.72%
Sb 206.836†	18.2	0.7135	ug/L	0.81246	0.7135	ppb	0.81246	113.87%
Se 196.026†	-207.1	10.638	ug/L	1.5843	10.638	ppb	1.5843	14.89%
Si 251.611†	103100.9	2126.7	ug/L	8.32	2126.7	ppb	8.32	0.39%
Sn 189.927†	-17.8	-1.3404	ug/L	0.41970	-1.3404	ppb	0.41970	31.31%
Sr 421.552†	2689.5	41.405	ug/L	0.2896	41.405	ppb	0.2896	0.70%
Ti 334.940†	664728.2	870.40	ug/L	1.666	870.40	ppb	1.666	0.19%
Tl 190.801†	-54.6	-1.5806	ug/L	0.36789	-1.5806	ppb	0.36789	23.28%
U 409.014†	-1419.1	-37.943	ug/L	1.0877	-37.943	ppb	1.0877	2.87%
V 292.402†	7607.2	39.169	ug/L	0.3550	39.169	ppb	0.3550	0.91%
Zn 213.857†	10312.2	55.027	ug/L	0.1609	55.027	ppb	0.1609	0.29%
SiO2†	102535.1	4528.9	ug/L	48.51	4528.9	ppb	48.51	1.07%

Sequence No.: 41
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 18:26:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5588.9	5588.9	100	%			18:28:46
1	Y RADIAL	4827.1	4827.1	100.2	%			18:28:46
1	Al 396.153Radial†	5257.9	5327.5	4828.0	ug/L	4828.0	ppb	18:28:46
1	Ca 317.933Radial†	1950.6	1925.2	4795.5	ug/L	4795.5	ppb	18:29:06
1	Fe 238.204 Radial†	138.4	137.5	4837.6	ug/L	4837.6	ppb	18:29:06
1	K 766.490 Radial†	13215.6	11685.6	5064.2	ug/L	5064.2	ppb	18:28:46
1	Mg 279.077 IEC†	63.1	62.7	4968.3	ug/L	4968.3	ppb	18:29:06
1	Na 589.592 Radial†	3554.9	3710.1	10032	ug/L	10032	ppb	18:28:46
1	Sr 421.552†	33983.5	33831.9	521.19	ug/L	521.19	ppb	18:28:46
1	Sc 361.383	1068303.1	1068303.1	100.70	%			18:30:05
1	Y 371.029	852058.0	852058.0	99.864	%			18:30:05
1	Ag 328.068†	127441.9	125918.1	501.45	ug/L	501.45	ppb	18:30:05
1	As 188.979†	2040.3	2063.0	487.43	ug/L	487.43	ppb	18:30:25
1	B 249.677†	31022.1	31188.1	484.21	ug/L	484.21	ppb	18:30:05
1	Ba 233.527†	98059.6	97354.2	493.97	ug/L	493.97	ppb	18:30:05
1	Be 313.107†	1587928.2	1584214.5	493.74	ug/L	493.74	ppb	18:30:05
1	Cd 226.502†	66395.2	66211.6	494.96	ug/L	494.96	ppb	18:30:05
1	Co 228.616†	38552.9	38375.5	478.21	ug/L	478.21	ppb	18:30:25
1	Cr 267.716†	58170.9	57795.4	492.94	ug/L	492.94	ppb	18:30:05
1	Cu 324.752†	211050.8	199393.6	492.24	ug/L	492.24	ppb	18:30:05
1	Mn 257.610†	628414.5	623222.5	493.05	ug/L	493.05	ppb	18:30:05
1	Mo 202.031†	12515.0	12396.3	496.52	ug/L	496.52	ppb	18:30:25
1	Ni 231.604†	30426.7	30067.1	481.60	ug/L	481.60	ppb	18:30:25
1	P 214.914†	7311.2	6923.4	2372.2	ug/L	2372.2	ppb	18:30:25
1	Pb 220.353†	6579.0	6562.4	493.27	ug/L	493.27	ppb	18:30:25
1	S 181.975 Axial†	1239.0	1162.6	983.12	ug/L	983.12	ppb	18:30:25
1	Sb 206.836†	2522.4	2459.5	489.52	ug/L	489.52	ppb	18:30:25
1	Se 196.026†	1503.5	1514.7	511.38	ug/L	511.38	ppb	18:30:25
1	Si 251.611†	122852.3	121438.8	2494.0	ug/L	2494.0	ppb	18:30:05
1	Sn 189.927†	4717.2	4679.0	487.10	ug/L	487.10	ppb	18:30:25
1	Ti 334.940†	380813.1	379277.2	496.43	ug/L	496.43	ppb	18:30:05
1	Tl 190.801†	2851.3	2892.9	489.92	ug/L	489.92	ppb	18:30:25
1	U 409.014†	15937.4	19661.4	486.29	ug/L	486.29	ppb	18:30:05
1	V 292.402†	85502.0	86560.8	496.88	ug/L	496.88	ppb	18:30:05
1	Zn 213.857†	90262.5	88513.1	489.79	ug/L	489.79	ppb	18:30:05
1	SiO2†	122486.8	121033.6	5322.2	ug/L	5322.2	ppb	18:31:25
2	Sc Radial	5417.1	5417.1	97.3	%			18:29:11
2	Y RADIAL	4690.9	4690.9	97.41	%			18:29:11
2	Al 396.153Radial†	5158.4	5391.3	4885.9	ug/L	4885.9	ppb	18:29:11
2	Ca 317.933Radial†	1945.7	1981.8	4936.5	ug/L	4936.5	ppb	18:29:31
2	Fe 238.204 Radial†	138.5	142.0	4996.1	ug/L	4996.1	ppb	18:29:31
2	K 766.490 Radial†	13023.9	11906.1	5159.9	ug/L	5159.9	ppb	18:29:11
2	Mg 279.077 IEC†	63.2	64.7	5131.2	ug/L	5131.2	ppb	18:29:31
2	Na 589.592 Radial†	3451.7	3716.2	10048	ug/L	10048	ppb	18:29:11
2	Sr 421.552†	33010.3	33905.2	522.32	ug/L	522.32	ppb	18:29:11
2	Sc 361.383	1062936.5	1062936.5	100.19	%			18:30:33
2	Y 371.029	847024.2	847024.2	99.274	%			18:30:33
2	Ag 328.068†	127152.6	126268.3	502.89	ug/L	502.89	ppb	18:30:33
2	As 188.979†	2046.3	2079.2	491.25	ug/L	491.25	ppb	18:30:53
2	B 249.677†	30951.3	31273.0	485.50	ug/L	485.50	ppb	18:30:33
2	Ba 233.527†	97627.6	97414.7	494.29	ug/L	494.29	ppb	18:30:33
2	Be 313.107†	1578732.8	1582998.5	493.37	ug/L	493.37	ppb	18:30:33
2	Cd 226.502†	66044.5	66194.5	494.82	ug/L	494.82	ppb	18:30:33
2	Co 228.616†	38671.0	38686.7	482.09	ug/L	482.09	ppb	18:30:53
2	Cr 267.716†	57957.9	57874.6	493.62	ug/L	493.62	ppb	18:30:33
2	Cu 324.752†	210487.3	199889.3	493.47	ug/L	493.47	ppb	18:30:33
2	Mn 257.610†	625861.3	623824.9	493.55	ug/L	493.55	ppb	18:30:33
2	Mo 202.031†	12553.9	12497.9	500.60	ug/L	500.60	ppb	18:30:53
2	Ni 231.604†	30528.4	30321.1	485.67	ug/L	485.67	ppb	18:30:53

2	P 214.914†	7329.1	6978.0	2391.3 ug/L	2391.3 ppb	18:30:53
2	Pb 220.353†	6568.6	6585.0	494.98 ug/L	494.98 ppb	18:30:53
2	S 181.975 Axial†	1245.6	1175.3	993.91 ug/L	993.91 ppb	18:30:53
2	Sb 206.836†	2546.9	2496.6	496.94 ug/L	496.94 ppb	18:30:53
2	Se 196.026†	1492.9	1511.7	510.97 ug/L	510.97 ppb	18:30:53
2	Si 251.611†	122554.7	121757.8	2500.5 ug/L	2500.5 ppb	18:30:33
2	Sn 189.927†	4730.7	4716.1	490.97 ug/L	490.97 ppb	18:30:53
2	Ti 334.940†	379257.3	379633.7	496.91 ug/L	496.91 ppb	18:30:33
2	Tl 190.801†	2867.7	2923.6	495.08 ug/L	495.08 ppb	18:30:53
2	U 409.014†	15634.2	19438.8	480.75 ug/L	480.75 ppb	18:30:33
2	V 292.402†	85223.8	86711.9	497.76 ug/L	497.76 ppb	18:30:33
2	Zn 213.857†	89962.6	88666.4	490.59 ug/L	490.59 ppb	18:30:33
2	SiO2†	122549.6	121710.4	5351.9 ug/L	5351.9 ppb	18:31:31
3	Sc Radial	5484.7	5484.7	98.6 %		18:29:36
3	Y RADIAL	4730.2	4730.2	98.22 %		18:29:36
3	Al 396.153Radial†	5169.3	5337.0	4836.3 ug/L	4836.3 ppb	18:29:36
3	Ca 317.933Radial†	1938.5	1949.8	4856.8 ug/L	4856.8 ppb	18:29:56
3	Fe 238.204 Radial†	136.0	137.6	4843.0 ug/L	4843.0 ppb	18:29:56
3	K 766.490 Radial†	12946.2	11662.2	5054.1 ug/L	5054.1 ppb	18:29:36
3	Mg 279.077 IEC†	60.7	61.4	4870.0 ug/L	4870.0 ppb	18:29:56
3	Na 589.592 Radial†	3449.0	3669.8	9922.7 ug/L	9922.7 ppb	18:29:36
3	Sr 421.552†	33301.1	33781.9	520.42 ug/L	520.42 ppb	18:29:36
3	Sc 361.383	1054506.0	1054506.0	99.399 %		18:31:00
3	Y 371.029	840120.6	840120.6	98.465 %		18:31:00
3	Ag 328.068†	125880.9	126003.5	501.80 ug/L	501.80 ppb	18:31:00
3	As 188.979†	2037.3	2086.5	492.92 ug/L	492.92 ppb	18:31:20
3	B 249.677†	30577.2	31143.6	483.50 ug/L	483.50 ppb	18:31:00
3	Ba 233.527†	96914.0	97475.7	494.59 ug/L	494.59 ppb	18:31:00
3	Be 313.107†	1568704.5	1585506.7	494.15 ug/L	494.15 ppb	18:31:00
3	Cd 226.502†	65630.3	66304.8	495.66 ug/L	495.66 ppb	18:31:00
3	Co 228.616†	38602.1	38926.0	485.09 ug/L	485.09 ppb	18:31:20
3	Cr 267.716†	57510.6	57887.0	493.72 ug/L	493.72 ppb	18:31:00
3	Cu 324.752†	207975.8	199042.2	491.37 ug/L	491.37 ppb	18:31:00
3	Mn 257.610†	621419.5	624350.2	493.95 ug/L	493.95 ppb	18:31:00
3	Mo 202.031†	12556.7	12600.8	504.71 ug/L	504.71 ppb	18:31:20
3	Ni 231.604†	30510.1	30546.3	489.28 ug/L	489.28 ppb	18:31:20
3	P 214.914†	7318.1	7025.4	2408.5 ug/L	2408.5 ppb	18:31:20
3	Pb 220.353†	6612.4	6681.5	502.23 ug/L	502.23 ppb	18:31:20
3	S 181.975 Axial†	1242.2	1181.9	999.50 ug/L	999.50 ppb	18:31:20
3	Sb 206.836†	2533.3	2503.2	498.38 ug/L	498.38 ppb	18:31:20
3	Se 196.026†	1473.8	1504.3	508.05 ug/L	508.05 ppb	18:31:20
3	Si 251.611†	121258.9	121432.1	2493.7 ug/L	2493.7 ppb	18:31:00
3	Sn 189.927†	4728.0	4751.1	494.60 ug/L	494.60 ppb	18:31:20
3	Ti 334.940†	376088.3	379471.8	496.69 ug/L	496.69 ppb	18:31:00
3	Tl 190.801†	2855.1	2933.7	496.79 ug/L	496.79 ppb	18:31:20
3	U 409.014†	15414.6	19342.5	478.38 ug/L	478.38 ppb	18:31:00
3	V 292.402†	84460.7	86624.2	497.33 ug/L	497.33 ppb	18:31:00
3	Zn 213.857†	89241.2	88658.5	490.56 ug/L	490.56 ppb	18:31:00
3	SiO2†	122201.2	122337.8	5379.5 ug/L	5379.5 ppb	18:31:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1061915.2	100.10	%	0.656				0.65%
Sc Radial	5496.9	98.8	%	1.56				1.57%
Y 371.029	846400.9	99.201	%	0.7024				0.71%
Y RADIAL	4749.4	98.62	%	1.455				1.48%
Ag 328.068†	126063.3	502.04	ug/L	0.753	502.04	ppb	0.753	0.15%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5351.9	4850.1	ug/L	31.28	4850.1	ppb	31.28	0.64%
QC value within limits for Al 396.153Radial Recovery = 97.00%								
As 188.979†	2076.3	490.53	ug/L	2.816	490.53	ppb	2.816	0.57%
QC value within limits for As 188.979 Recovery = 98.11%								
B 249.677†	31201.6	484.40	ug/L	1.016	484.40	ppb	1.016	0.21%
QC value within limits for B 249.677 Recovery = 96.88%								
Ba 233.527†	97414.9	494.28	ug/L	0.308	494.28	ppb	0.308	0.06%
QC value within limits for Ba 233.527 Recovery = 98.86%								
Be 313.107†	1584239.9	493.75	ug/L	0.390	493.75	ppb	0.390	0.08%
QC value within limits for Be 313.107 Recovery = 98.75%								
Ca 317.933Radial†	1952.3	4862.9	ug/L	70.70	4862.9	ppb	70.70	1.45%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.26%
Cd 226.502†            66237.0      495.15 ug/L         0.452      495.15 ppb          0.452   0.09%
   QC value within limits for Cd 226.502  Recovery = 99.03%
Co 228.616†            38662.7      481.80 ug/L         3.448      481.80 ppb          3.448   0.72%
   QC value within limits for Co 228.616  Recovery = 96.36%
Cr 267.716†            57852.3      493.43 ug/L         0.426      493.43 ppb          0.426   0.09%
   QC value within limits for Cr 267.716  Recovery = 98.69%
Cu 324.752†           199441.7      492.36 ug/L         1.055      492.36 ppb          1.055   0.21%
   QC value within limits for Cu 324.752  Recovery = 98.47%
Fe 238.204 Radial†       139.0      4892.2 ug/L        89.98      4892.2 ppb         89.98   1.84%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.84%
K 766.490 Radial†      11751.3      5092.7 ug/L        58.41      5092.7 ppb         58.41   1.15%
   QC value within limits for K 766.490 Radial  Recovery = 101.85%
Mg 279.077 IEC†           62.9      4989.9 ug/L       131.93      4989.9 ppb        131.93   2.64%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.80%
Mn 257.610†           623799.2      493.51 ug/L         0.448      493.51 ppb          0.448   0.09%
   QC value within limits for Mn 257.610  Recovery = 98.70%
Mo 202.031†            12498.3      500.61 ug/L         4.094      500.61 ppb          4.094   0.82%
   QC value within limits for Mo 202.031  Recovery = 100.12%
Na 589.592 Radial†      3698.7       10001 ug/L          68.2       10001 ppb           68.2   0.68%
   QC value within limits for Na 589.592 Radial  Recovery = 100.01%
Ni 231.604†            30311.5      485.52 ug/L         3.841      485.52 ppb          3.841   0.79%
   QC value within limits for Ni 231.604  Recovery = 97.10%
P 214.914†              6975.6      2390.7 ug/L        18.15      2390.7 ppb         18.15   0.76%
   QC value within limits for P 214.914  Recovery = 95.63%
Pb 220.353†             6609.6      496.83 ug/L         4.755      496.83 ppb          4.755   0.96%
   QC value within limits for Pb 220.353  Recovery = 99.37%
S 181.975 Axial†        1173.3      992.18 ug/L         8.322      992.18 ppb          8.322   0.84%
   QC value within limits for S 181.975 Axial  Recovery = 99.22%
Sb 206.836†             2486.4      494.95 ug/L         4.754      494.95 ppb          4.754   0.96%
   QC value within limits for Sb 206.836  Recovery = 98.99%
Se 196.026†             1510.2      510.13 ug/L         1.814      510.13 ppb          1.814   0.36%
   QC value within limits for Se 196.026  Recovery = 102.03%
Si 251.611†           121542.9      2496.1 ug/L          3.82      2496.1 ppb           3.82   0.15%
   QC value within limits for Si 251.611  Recovery = 99.84%
Sn 189.927†             4715.4      490.89 ug/L         3.754      490.89 ppb          3.754   0.76%
   QC value within limits for Sn 189.927  Recovery = 98.18%
Sr 421.552†            33839.7      521.31 ug/L         0.955      521.31 ppb          0.955   0.18%
   QC value within limits for Sr 421.552  Recovery = 104.26%
Ti 334.940†           379460.9      496.67 ug/L         0.240      496.67 ppb          0.240   0.05%
   QC value within limits for Ti 334.940  Recovery = 99.33%
Tl 190.801†             2916.7      493.93 ug/L         3.574      493.93 ppb          3.574   0.72%
   QC value within limits for Tl 190.801  Recovery = 98.79%
U 409.014†             19480.9      481.80 ug/L         4.062      481.80 ppb          4.062   0.84%
   QC value within limits for U 409.014  Recovery = 96.36%
V 292.402†             86632.3      497.32 ug/L         0.439      497.32 ppb          0.439   0.09%
   QC value within limits for V 292.402  Recovery = 99.46%
Zn 213.857†            88612.7      490.31 ug/L         0.454      490.31 ppb          0.454   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.06%
SiO2†                 121694.0      5351.2 ug/L        28.64      5351.2 ppb         28.64   0.54%
   QC value within limits for SiO2  Recovery = 100.07%
All analyte(s) passed QC.
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Sequence No.: 42
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 18:33:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5570.5	5570.5	100	%			18:35:37
1	Y RADIAL	4845.4	4845.4	100.6	%			18:35:37
1	Al 396.153Radial†	-90.2	2.1	1.9202	ug/L	1.9202	ppb	18:35:37
1	Ca 317.933Radial†	28.8	11.8	29.428	ug/L	29.428	ppb	18:35:57
1	Fe 238.204 Radial†	0.0	-0.3	-11.611	ug/L	-11.611	ppb	18:35:57
1	K 766.490 Radial†	1494.6	20.0	8.6702	ug/L	8.6702	ppb	18:35:37
1	Mg 279.077 IEC†	1.5	1.3	105.73	ug/L	105.73	ppb	18:35:57
1	Na 589.592 Radial†	-191.2	-20.5	-55.558	ug/L	-55.558	ppb	18:35:57
1	Sr 421.552†	31.9	26.3	0.4057	ug/L	0.4057	ppb	18:35:57
1	Sc 361.383	1057788.8	1057788.8	99.708	%			18:36:54
1	Y 371.029	852989.6	852989.6	99.974	%			18:36:54
1	Ag 328.068†	633.6	-3.1	-0.0162	ug/L	-0.0162	ppb	18:36:59
1	As 188.979†	-50.9	-14.1	-3.3143	ug/L	-3.3143	ppb	18:37:19
1	B 249.677†	-3.1	378.4	5.8995	ug/L	5.8995	ppb	18:36:59
1	Ba 233.527†	39.1	14.9	0.0761	ug/L	0.0761	ppb	18:37:19
1	Be 313.107†	-7409.3	-114.8	-0.0356	ug/L	-0.0356	ppb	18:36:59
1	Cd 226.502†	-282.3	-5.5	-0.0396	ug/L	-0.0396	ppb	18:37:19
1	Co 228.616†	-88.1	2.1	0.0260	ug/L	0.0260	ppb	18:37:19
1	Cr 267.716†	-19.8	8.8	0.0745	ug/L	0.0745	ppb	18:37:19
1	Cu 324.752†	10081.3	-80.5	-0.1992	ug/L	-0.1992	ppb	18:36:59
1	Mn 257.610†	942.5	118.3	0.0899	ug/L	0.0899	ppb	18:37:19
1	Mo 202.031†	34.1	2.4	0.0971	ug/L	0.0971	ppb	18:37:19
1	Ni 231.604†	157.1	9.3	0.1495	ug/L	0.1495	ppb	18:37:19
1	P 214.914†	334.7	-1.2	-0.3908	ug/L	-0.3908	ppb	18:37:19
1	Pb 220.353†	-21.1	7.9	0.5954	ug/L	0.5954	ppb	18:37:19
1	S 181.975 Axial†	62.2	-5.4	-4.6035	ug/L	-4.6035	ppb	18:37:19
1	Sb 206.836†	45.1	-0.2	-0.0397	ug/L	-0.0397	ppb	18:37:19
1	Se 196.026†	-25.1	-3.5	-1.1824	ug/L	-1.1824	ppb	18:37:19
1	Si 251.611†	729.4	171.4	3.5345	ug/L	3.5345	ppb	18:37:19
1	Sn 189.927†	-0.2	-5.7	-0.5853	ug/L	-0.5853	ppb	18:37:19
1	Ti 334.940†	-1072.0	34.1	0.0461	ug/L	0.0461	ppb	18:36:59
1	Tl 190.801†	-44.0	17.2	2.9062	ug/L	2.9062	ppb	18:37:19
1	U 409.014†	-3773.0	50.8	1.2605	ug/L	1.2605	ppb	18:36:54
1	V 292.402†	-1587.4	60.7	0.3514	ug/L	0.3514	ppb	18:36:59
1	Zn 213.857†	1108.9	-10.2	-0.0601	ug/L	-0.0601	ppb	18:37:19
1	SiO2†	763.8	163.7	7.2275	ug/L	7.2275	ppb	18:38:25
2	Sc Radial	5380.9	5380.9	96.7	%			18:36:02
2	Y RADIAL	4671.6	4671.6	97.01	%			18:36:02
2	Al 396.153Radial†	-54.2	36.1	32.856	ug/L	32.856	ppb	18:36:02
2	Ca 317.933Radial†	33.1	17.3	43.141	ug/L	43.141	ppb	18:36:22
2	Fe 238.204 Radial†	0.2	-0.1	-4.2925	ug/L	-4.2925	ppb	18:36:22
2	K 766.490 Radial†	1508.4	86.9	37.731	ug/L	37.731	ppb	18:36:02
2	Mg 279.077 IEC†	-0.2	-0.4	-28.964	ug/L	-28.964	ppb	18:36:22
2	Na 589.592 Radial†	-195.5	-31.7	-85.785	ug/L	-85.785	ppb	18:36:22
2	Sr 421.552†	19.6	14.8	0.2281	ug/L	0.2281	ppb	18:36:22
2	Sc 361.383	1057995.8	1057995.8	99.728	%			18:37:24
2	Y 371.029	851628.4	851628.4	99.814	%			18:37:24
2	Ag 328.068†	708.9	72.2	0.2877	ug/L	0.2877	ppb	18:37:30
2	As 188.979†	-43.6	-6.8	-1.6049	ug/L	-1.6049	ppb	18:37:50
2	B 249.677†	-45.1	336.3	5.2404	ug/L	5.2404	ppb	18:37:30
2	Ba 233.527†	28.3	4.1	0.0213	ug/L	0.0213	ppb	18:37:50
2	Be 313.107†	-7323.1	-26.8	-0.0085	ug/L	-0.0085	ppb	18:37:30
2	Cd 226.502†	-289.4	-12.5	-0.0930	ug/L	-0.0930	ppb	18:37:50
2	Co 228.616†	-71.2	19.1	0.2376	ug/L	0.2376	ppb	18:37:50
2	Cr 267.716†	-45.1	-16.6	-0.1401	ug/L	-0.1401	ppb	18:37:50
2	Cu 324.752†	10091.4	-72.3	-0.1787	ug/L	-0.1787	ppb	18:37:30
2	Mn 257.610†	950.0	125.6	0.0993	ug/L	0.0993	ppb	18:37:50
2	Mo 202.031†	31.6	-0.1	-0.0040	ug/L	-0.0040	ppb	18:37:50
2	Ni 231.604†	150.8	3.0	0.0474	ug/L	0.0474	ppb	18:37:50

2	P 214.914†	336.3	0.3	0.1546 ug/L	0.1546 ppb	18:37:50
2	Pb 220.353†	-18.5	10.5	0.7931 ug/L	0.7931 ppb	18:37:50
2	S 181.975 Axial†	61.9	-5.8	-4.9273 ug/L	-4.9273 ppb	18:37:50
2	Sb 206.836†	55.1	9.8	1.9219 ug/L	1.9219 ppb	18:37:50
2	Se 196.026†	-31.6	-10.1	-3.2895 ug/L	-3.2895 ppb	18:37:50
2	Si 251.611†	1046.2	489.0	10.078 ug/L	10.078 ppb	18:37:50
2	Sn 189.927†	4.7	-0.7	-0.0741 ug/L	-0.0741 ppb	18:37:50
2	Ti 334.940†	-1151.0	-44.9	-0.0545 ug/L	-0.0545 ppb	18:37:30
2	Tl 190.801†	-54.3	7.0	1.1759 ug/L	1.1759 ppb	18:37:50
2	U 409.014†	-3948.4	-124.5	-3.0876 ug/L	-3.0876 ppb	18:37:24
2	V 292.402†	-1593.8	54.7	0.3042 ug/L	0.3042 ppb	18:37:30
2	Zn 213.857†	1096.4	-23.0	-0.1272 ug/L	-0.1272 ppb	18:37:50
2	SiO2†	1314.7	716.0	31.608 ug/L	31.608 ppb	18:38:30
3	Sc Radial	5576.5	5576.5	100 %		18:36:28
3	Y RADIAL	4832.1	4832.1	100.3 %		18:36:28
3	Al 396.153Radial†	-65.7	26.6	24.197 ug/L	24.197 ppb	18:36:28
3	Ca 317.933Radial†	27.5	10.5	26.260 ug/L	26.260 ppb	18:36:48
3	Fe 238.204 Radial†	-0.3	-0.6	-21.053 ug/L	-21.053 ppb	18:36:48
3	K 766.490 Radial†	1529.4	53.1	23.067 ug/L	23.067 ppb	18:36:28
3	Mg 279.077 IEC†	0.2	0.0	2.2903 ug/L	2.2903 ppb	18:36:48
3	Na 589.592 Radial†	-203.6	-32.7	-88.486 ug/L	-88.486 ppb	18:36:48
3	Sr 421.552†	22.8	17.3	0.2660 ug/L	0.2660 ppb	18:36:48
3	Sc 361.383	1061241.3	1061241.3	100.03 %		18:37:55
3	Y 371.029	855632.2	855632.2	100.28 %		18:37:55
3	Ag 328.068†	663.9	25.1	0.0953 ug/L	0.0953 ppb	18:38:00
3	As 188.979†	-38.9	-2.0	-0.4789 ug/L	-0.4789 ppb	18:38:20
3	B 249.677†	-82.5	299.0	4.6630 ug/L	4.6630 ppb	18:38:00
3	Ba 233.527†	44.2	19.9	0.1007 ug/L	0.1007 ppb	18:38:20
3	Be 313.107†	-7409.1	-90.4	-0.0282 ug/L	-0.0282 ppb	18:38:00
3	Cd 226.502†	-286.4	-8.6	-0.0619 ug/L	-0.0619 ppb	18:38:20
3	Co 228.616†	-83.6	6.8	0.0856 ug/L	0.0856 ppb	18:38:20
3	Cr 267.716†	-29.6	-1.0	-0.0079 ug/L	-0.0079 ppb	18:38:20
3	Cu 324.752†	10175.1	-19.6	-0.0495 ug/L	-0.0495 ppb	18:38:00
3	Mn 257.610†	934.9	107.5	0.0822 ug/L	0.0822 ppb	18:38:20
3	Mo 202.031†	33.3	1.5	0.0593 ug/L	0.0593 ppb	18:38:20
3	Ni 231.604†	159.3	11.0	0.1761 ug/L	0.1761 ppb	18:38:20
3	P 214.914†	339.4	2.4	0.8687 ug/L	0.8687 ppb	18:38:20
3	Pb 220.353†	-25.3	3.8	0.2912 ug/L	0.2912 ppb	18:38:20
3	S 181.975 Axial†	65.0	-2.8	-2.4133 ug/L	-2.4133 ppb	18:38:20
3	Sb 206.836†	58.1	12.6	2.4795 ug/L	2.4795 ppb	18:38:20
3	Se 196.026†	-19.4	2.2	0.6547 ug/L	0.6547 ppb	18:38:20
3	Si 251.611†	711.7	151.3	3.1134 ug/L	3.1134 ppb	18:38:20
3	Sn 189.927†	7.2	1.8	0.1856 ug/L	0.1856 ppb	18:38:20
3	Ti 334.940†	-1125.2	-15.6	-0.0177 ug/L	-0.0177 ppb	18:38:00
3	Tl 190.801†	-56.0	5.4	0.9103 ug/L	0.9103 ppb	18:38:20
3	U 409.014†	-3924.0	-87.9	-2.1781 ug/L	-2.1781 ppb	18:37:55
3	V 292.402†	-1605.8	47.6	0.2693 ug/L	0.2693 ppb	18:38:00
3	Zn 213.857†	1097.5	-25.3	-0.1400 ug/L	-0.1400 ppb	18:38:20
3	SiO2†	776.7	174.1	7.6706 ug/L	7.6706 ppb	18:38:35

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1059008.7	99.823	%	0.1825				0.18%
Sc Radial	5509.3	99.0	%	2.00				2.02%
Y 371.029	853416.8	100.02	%	0.239				0.24%
Y RADIAL	4783.0	99.32	%	2.009				2.02%
Ag 328.068†	31.4	0.1223	ug/L	0.15374	0.1223	ppb	0.15374	125.74%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	21.6	19.658	ug/L	15.9596	19.658	ppb	15.9596	81.19%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-7.6	-1.7994	ug/L	1.42769	-1.7994	ppb	1.42769	79.34%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	337.9	5.2677	ug/L	0.61871	5.2677	ppb	0.61871	11.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	13.0	0.0660	ug/L	0.04066	0.0660	ppb	0.04066	61.59%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-77.3	-0.0241	ug/L	0.01400	-0.0241	ppb	0.01400	58.17%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.2	32.943	ug/L	8.9724	32.943	ppb	8.9724	27.24%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -8.9     -0.0648 ug/L       0.02679     -0.0648 ppb        0.02679  41.33%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 9.3      0.1164 ug/L       0.10914      0.1164 ppb        0.10914  93.77%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                -3.0     -0.0245 ug/L       0.10825     -0.0245 ppb        0.10825 441.83%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -57.5     -0.1425 ug/L       0.08116     -0.1425 ppb        0.08116  56.96%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.4     -12.319 ug/L        8.4025     -12.319 ppb         8.4025  68.21%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          53.3      23.156 ug/L       14.5306      23.156 ppb        14.5306  62.75%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.3      26.353 ug/L       70.4982      26.353 ppb        70.4982 267.51%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               117.1      0.0904 ug/L       0.00855      0.0904 ppb        0.00855   9.45%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 1.3      0.0508 ug/L       0.05107      0.0508 ppb        0.05107 100.51%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -28.3     -76.610 ug/L       18.2813     -76.610 ppb        18.2813  23.86%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 7.8      0.1243 ug/L       0.06794      0.1243 ppb        0.06794  54.65%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  0.5      0.2108 ug/L       0.63163      0.2108 ppb        0.63163 299.59%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 7.4      0.5599 ug/L       0.25287      0.5599 ppb        0.25287  45.16%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -4.7     -3.9814 ug/L       1.36763     -3.9814 ppb        1.36763  34.35%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 7.4      1.4539 ug/L       1.32321      1.4539 ppb        1.32321  91.01%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -3.8     -1.2724 ug/L       1.97364     -1.2724 ppb        1.97364 155.11%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               270.6      5.5752 ug/L       3.90485      5.5752 ppb        3.90485  70.04%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.5     -0.1580 ug/L       0.39223     -0.1580 ppb        0.39223 248.32%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                19.5      0.2999 ug/L       0.09352      0.2999 ppb        0.09352  31.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                -8.8     -0.0087 ug/L       0.05087     -0.0087 ppb        0.05087 584.35%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 9.9      1.6641 ug/L       1.08383      1.6641 ppb        1.08383  65.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -53.9     -1.3351 ug/L       2.29339     -1.3351 ppb        2.29339 171.78%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 54.3      0.3083 ug/L       0.04121      0.3083 ppb        0.04121  13.37%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -19.5     -0.1091 ug/L       0.04293     -0.1091 ppb        0.04293  39.36%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     351.2      15.502 ug/L       13.9501      15.502 ppb        13.9501  89.99%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 43
Sample ID: 232744002|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 68
Date Collected: 7/8/2009 18:40:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232744002|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5715.1	5715.1	103	%			18:42:38
1	Y RADIAL	5925.2	5925.2	123.0	%			18:42:38
1	Al 396.153Radial†	42292.6	41272.5	37567	ug/L	37567	ppb	18:42:38
1	Ca 317.933Radial†	18322.8	17824.0	44397	ug/L	44397	ppb	18:42:38
1	Fe 238.204 Radial†	2491.6	2425.8	85100	ug/L	85100	ppb	18:42:58
1	K 766.490 Radial†	16762.4	14848.4	6471.9	ug/L	6471.9	ppb	18:42:38
1	Mg 279.077 IEC†	110.0	106.9	8392.5	ug/L	8392.5	ppb	18:42:58
1	Na 589.592 Radial†	143.4	310.0	838.28	ug/L	838.28	ppb	18:42:58
1	Sr 421.552†	13997.6	13624.0	209.49	ug/L	209.49	ppb	18:42:38
1	Sc 361.383	1066463.8	1066463.8	100.53	%			18:43:56
1	Y 371.029	1010074.5	1010074.5	118.38	%			18:43:56
1	Ag 328.068†	-5265.8	-5876.8	4.1501	ug/L	4.1501	ppb	18:44:17
1	As 188.979†	-57.4	-20.2	29.099	ug/L	29.099	ppb	18:44:17
1	B 249.677†	952.3	1328.8	9.3534	ug/L	9.3534	ppb	18:43:56
1	Ba 233.527†	128781.7	128083.4	650.56	ug/L	650.56	ppb	18:43:56
1	Be 313.107†	-12056.6	-4677.3	4.6306	ug/L	4.6306	ppb	18:43:56
1	Cd 226.502†	1034.0	1306.2	-0.2196	ug/L	-0.2196	ppb	18:44:17
1	Co 228.616†	2037.9	2117.7	19.829	ug/L	19.829	ppb	18:44:17
1	Cr 267.716†	21929.3	21843.1	187.96	ug/L	187.96	ppb	18:44:17
1	Cu 324.752†	24966.5	14644.6	41.052	ug/L	41.052	ppb	18:43:56
1	Mn 257.610†	3000284.1	2983755.4	2368.9	ug/L	2368.9	ppb	18:43:56
1	Mo 202.031†	153.7	121.1	10.687	ug/L	10.687	ppb	18:44:17
1	Ni 231.604†	6437.0	6255.0	100.24	ug/L	100.24	ppb	18:44:17
1	P 214.914†	4833.0	4470.8	1518.0	ug/L	1518.0	ppb	18:44:17
1	Pb 220.353†	1048.7	1072.3	79.697	ug/L	79.697	ppb	18:44:17
1	S 181.975 Axial†	625.2	554.1	461.64	ug/L	461.64	ppb	18:44:17
1	Sb 206.836†	121.5	75.4	3.2056	ug/L	3.2056	ppb	18:44:17
1	Se 196.026†	-857.2	-831.1	30.746	ug/L	30.746	ppb	18:44:17
1	Si 251.611†	483379.8	480290.0	9908.4	ug/L	9908.4	ppb	18:43:56
1	Sn 189.927†	-137.1	-141.8	-9.7271	ug/L	-9.7271	ppb	18:44:17
1	Ti 334.940†	2009343.4	1999937.0	2621.0	ug/L	2621.0	ppb	18:43:56
1	Tl 190.801†	-278.5	-215.7	-10.149	ug/L	-10.149	ppb	18:44:17
1	U 409.014†	-12977.2	-9074.6	-235.97	ug/L	-235.97	ppb	18:43:56
1	V 292.402†	21405.0	22945.8	115.35	ug/L	115.35	ppb	18:44:17
1	Zn 213.857†	64808.9	63347.3	343.62	ug/L	343.62	ppb	18:43:56
1	SiO2†	477732.9	474630.3	20967	ug/L	20967	ppb	18:45:16
2	Sc Radial	5651.1	5651.1	102	%			18:43:03
2	Y RADIAL	5909.4	5909.4	122.7	%			18:43:03
2	Al 396.153Radial†	42317.8	41763.9	38015	ug/L	38015	ppb	18:43:03
2	Ca 317.933Radial†	18324.5	18027.8	44904	ug/L	44904	ppb	18:43:03
2	Fe 238.204 Radial†	2532.6	2493.6	87480	ug/L	87480	ppb	18:43:23
2	K 766.490 Radial†	16745.8	15017.0	6546.9	ug/L	6546.9	ppb	18:43:03
2	Mg 279.077 IEC†	113.8	111.9	8784.2	ug/L	8784.2	ppb	18:43:23
2	Na 589.592 Radial†	143.1	311.3	841.71	ug/L	841.71	ppb	18:43:23
2	Sr 421.552†	13943.4	13725.0	211.04	ug/L	211.04	ppb	18:43:03
2	Sc 361.383	1070304.3	1070304.3	100.89	%			18:44:23
2	Y 371.029	1013787.7	1013787.7	118.82	%			18:44:23
2	Ag 328.068†	-5192.0	-5784.9	5.2616	ug/L	5.2616	ppb	18:44:43
2	As 188.979†	-58.8	-21.4	29.253	ug/L	29.253	ppb	18:44:43
2	B 249.677†	947.9	1321.1	8.9174	ug/L	8.9174	ppb	18:44:23
2	Ba 233.527†	128678.0	127521.0	647.76	ug/L	647.76	ppb	18:44:23
2	Be 313.107†	-12024.6	-4602.5	4.6398	ug/L	4.6398	ppb	18:44:23
2	Cd 226.502†	1051.4	1319.8	-0.4003	ug/L	-0.4003	ppb	18:44:43
2	Co 228.616†	2030.9	2103.4	19.629	ug/L	19.629	ppb	18:44:43
2	Cr 267.716†	21716.4	21553.8	185.54	ug/L	185.54	ppb	18:44:43
2	Cu 324.752†	24947.7	14536.8	40.924	ug/L	40.924	ppb	18:44:23
2	Mn 257.610†	3000385.6	2973146.7	2360.8	ug/L	2360.8	ppb	18:44:23
2	Mo 202.031†	142.2	109.1	10.372	ug/L	10.372	ppb	18:44:43
2	Ni 231.604†	6339.6	6135.6	98.322	ug/L	98.322	ppb	18:44:43

2	P 214.914†	4751.7	4373.0	1481.7	ug/L	1481.7 ppb	18:44:43
2	Pb 220.353†	1064.5	1084.2	80.452	ug/L	80.452 ppb	18:44:43
2	S 181.975 Axial†	619.8	546.5	455.13	ug/L	455.13 ppb	18:44:43
2	Sb 206.836†	108.4	62.0	0.6561	ug/L	0.6561 ppb	18:44:43
2	Se 196.026†	-843.5	-814.4	44.541	ug/L	44.541 ppb	18:44:43
2	Si 251.611†	483366.7	478551.6	9872.6	ug/L	9872.6 ppb	18:44:23
2	Sn 189.927†	-142.7	-146.9	-10.171	ug/L	-10.171 ppb	18:44:43
2	Ti 334.940†	2011934.0	1995332.5	2615.0	ug/L	2615.0 ppb	18:44:23
2	Tl 190.801†	-248.3	-184.8	-5.0004	ug/L	-5.0004 ppb	18:44:43
2	U 409.014†	-12908.3	-8959.9	-233.42	ug/L	-233.42 ppb	18:44:23
2	V 292.402†	21129.4	22596.2	113.05	ug/L	113.05 ppb	18:44:43
2	Zn 213.857†	64686.0	62994.2	341.39	ug/L	341.39 ppb	18:44:23
2	SiO2†	485488.6	480612.6	21232	ug/L	21232 ppb	18:45:21
3	Sc Radial	5524.3	5524.3	99.3	%		18:43:28
3	Y RADIAL	5737.3	5737.3	119.1	%		18:43:28
3	Al 396.153Radial†	41133.8	41528.2	37800	ug/L	37800 ppb	18:43:28
3	Ca 317.933Radial†	17856.8	17971.0	44763	ug/L	44763 ppb	18:43:28
3	Fe 238.204 Radial†	2506.9	2524.9	88579	ug/L	88579 ppb	18:43:48
3	K 766.490 Radial†	16301.3	14948.0	6517.8	ug/L	6517.8 ppb	18:43:28
3	Mg 279.077 IEC†	110.1	110.7	8694.8	ug/L	8694.8 ppb	18:43:48
3	Na 589.592 Radial†	144.6	316.0	854.52	ug/L	854.52 ppb	18:43:48
3	Sr 421.552†	13475.0	13568.5	208.63	ug/L	208.63 ppb	18:43:28
3	Sc 361.383	1066481.9	1066481.9	100.53	%		18:44:50
3	Y 371.029	1011048.9	1011048.9	118.50	%		18:44:50
3	Ag 328.068†	-5227.2	-5838.3	5.4130	ug/L	5.4130 ppb	18:45:10
3	As 188.979†	-55.6	-18.4	30.177	ug/L	30.177 ppb	18:45:10
3	B 249.677†	923.7	1300.3	8.4481	ug/L	8.4481 ppb	18:44:50
3	Ba 233.527†	128480.2	127781.4	649.11	ug/L	649.11 ppb	18:44:50
3	Be 313.107†	-12175.6	-4795.5	4.5790	ug/L	4.5790 ppb	18:44:50
3	Cd 226.502†	1035.5	1307.7	-0.6198	ug/L	-0.6198 ppb	18:45:10
3	Co 228.616†	2036.9	2116.6	19.780	ug/L	19.780 ppb	18:45:10
3	Cr 267.716†	21831.0	21745.0	187.19	ug/L	187.19 ppb	18:45:10
3	Cu 324.752†	24791.3	14469.9	40.822	ug/L	40.822 ppb	18:44:50
3	Mn 257.610†	2991046.9	2974516.0	2362.1	ug/L	2362.1 ppb	18:44:50
3	Mo 202.031†	151.6	119.1	10.846	ug/L	10.846 ppb	18:45:10
3	Ni 231.604†	6403.4	6221.5	99.700	ug/L	99.700 ppb	18:45:10
3	P 214.914†	4806.5	4444.3	1506.0	ug/L	1506.0 ppb	18:45:10
3	Pb 220.353†	1050.0	1073.6	79.508	ug/L	79.508 ppb	18:45:10
3	S 181.975 Axial†	626.7	555.6	462.87	ug/L	462.87 ppb	18:45:10
3	Sb 206.836†	115.8	69.8	2.1888	ug/L	2.1888 ppb	18:45:10
3	Se 196.026†	-854.6	-828.5	43.817	ug/L	43.817 ppb	18:45:10
3	Si 251.611†	481922.8	478832.5	9878.4	ug/L	9878.4 ppb	18:44:50
3	Sn 189.927†	-138.2	-143.0	-9.7545	ug/L	-9.7545 ppb	18:45:10
3	Ti 334.940†	2004486.5	1995071.7	2614.7	ug/L	2614.7 ppb	18:44:50
3	Tl 190.801†	-271.0	-208.2	-8.9490	ug/L	-8.9490 ppb	18:45:10
3	U 409.014†	-12948.0	-9045.3	-235.67	ug/L	-235.67 ppb	18:44:50
3	V 292.402†	21311.6	22852.5	114.36	ug/L	114.36 ppb	18:45:10
3	Zn 213.857†	64672.9	63211.0	342.47	ug/L	342.47 ppb	18:44:50
3	SiO2†	482160.9	479027.1	21162	ug/L	21162 ppb	18:45:27

Mean Data: 232744002|882342|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1067750.0	100.65	%	0.209				0.21%
Sc Radial	5630.2	101	%	1.7				1.73%
Y 371.029	1011637.1	118.57	%	0.226				0.19%
Y RADIAL	5857.3	121.6	%	2.16				1.78%
Ag 328.068†	-5833.3	4.9416	ug/L	0.68960	4.9416	ppb	0.68960	13.96%
Al 396.153Radial†	41521.5	37794	ug/L	223.7	37794	ppb	223.7	0.59%
As 188.979†	-20.0	29.510	ug/L	0.5831	29.510	ppb	0.5831	1.98%
B 249.677†	1316.7	8.9063	ug/L	0.45276	8.9063	ppb	0.45276	5.08%
Ba 233.527†	127795.3	649.14	ug/L	1.398	649.14	ppb	1.398	0.22%
Be 313.107†	-4691.8	4.6165	ug/L	0.03275	4.6165	ppb	0.03275	0.71%
Ca 317.933Radial†	17940.9	44688	ug/L	262.0	44688	ppb	262.0	0.59%
Cd 226.502†	1311.2	-0.4133	ug/L	0.20042	-0.4133	ppb	0.20042	48.50%
Co 228.616†	2112.6	19.746	ug/L	0.1040	19.746	ppb	0.1040	0.53%
Cr 267.716†	21714.0	186.90	ug/L	1.238	186.90	ppb	1.238	0.66%
Cu 324.752†	14550.4	40.933	ug/L	0.1151	40.933	ppb	0.1151	0.28%
Fe 238.204 Radial†	2481.4	87053	ug/L	1778.6	87053	ppb	1778.6	2.04%
K 766.490 Radial†	14937.8	6512.2	ug/L	37.80	6512.2	ppb	37.80	0.58%

Mg 279.077 IEC†	109.8	8623.8	ug/L	205.27	8623.8	ppb	205.27	2.38%
Mn 257.610†	2977139.4	2363.9	ug/L	4.35	2363.9	ppb	4.35	0.18%
Mo 202.031†	116.4	10.635	ug/L	0.2410	10.635	ppb	0.2410	2.27%
Na 589.592 Radial†	312.5	844.84	ug/L	8.559	844.84	ppb	8.559	1.01%
Ni 231.604†	6204.0	99.420	ug/L	0.9877	99.420	ppb	0.9877	0.99%
P 214.914†	4429.4	1501.9	ug/L	18.50	1501.9	ppb	18.50	1.23%
Pb 220.353†	1076.7	79.886	ug/L	0.4996	79.886	ppb	0.4996	0.63%
S 181.975 Axial†	552.1	459.88	ug/L	4.160	459.88	ppb	4.160	0.90%
Sb 206.836†	69.1	2.0168	ug/L	1.28337	2.0168	ppb	1.28337	63.63%
Se 196.026†	-824.7	39.701	ug/L	7.7641	39.701	ppb	7.7641	19.56%
Si 251.611†	479224.7	9886.5	ug/L	19.26	9886.5	ppb	19.26	0.19%
Sn 189.927†	-143.9	-9.8843	ug/L	0.24889	-9.8843	ppb	0.24889	2.52%
Sr 421.552†	13639.2	209.72	ug/L	1.222	209.72	ppb	1.222	0.58%
Ti 334.940†	1996780.4	2616.9	ug/L	3.57	2616.9	ppb	3.57	0.14%
Tl 190.801†	-202.9	-8.0329	ug/L	2.69395	-8.0329	ppb	2.69395	33.54%
U 409.014†	-9026.6	-235.02	ug/L	1.397	-235.02	ppb	1.397	0.59%
V 292.402†	22798.2	114.25	ug/L	1.151	114.25	ppb	1.151	1.01%
Zn 213.857†	63184.2	342.49	ug/L	1.115	342.49	ppb	1.115	0.33%
SiO2†	478090.0	21120	ug/L	136.9	21120	ppb	136.9	0.65%

Sequence No.: 44
Sample ID: 232744003|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 69
Date Collected: 7/8/2009 18:47:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232744003|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5671.8	5671.8	102	%			18:49:30
1	Y RADIAL	6539.9	6539.9	135.8	%			18:49:30
1	Al 396.153Radial†	17596.8	17357.1	15798	ug/L	15798	ppb	18:49:30
1	Ca 317.933Radial†	4303.1	4205.0	10474	ug/L	10474	ppb	18:49:30
1	Fe 238.204 Radial†	2141.3	2100.6	73693	ug/L	73693	ppb	18:49:50
1	K 766.490 Radial†	10102.1	8438.4	3677.8	ug/L	3677.8	ppb	18:49:30
1	Mg 279.077 IEC†	51.8	50.6	3946.1	ug/L	3946.1	ppb	18:49:50
1	Na 589.592 Radial†	182.8	349.8	945.86	ug/L	945.86	ppb	18:49:50
1	Sr 421.552†	3901.9	3822.8	58.800	ug/L	58.800	ppb	18:49:30
1	Sc 361.383	1085414.3	1085414.3	102.31	%			18:50:49
1	Y 371.029	1146975.0	1146975.0	134.43	%			18:50:49
1	Ag 328.068†	-4762.5	-5293.4	3.0425	ug/L	3.0425	ppb	18:50:54
1	As 188.979†	-50.1	-12.1	22.635	ug/L	22.635	ppb	18:51:14
1	B 249.677†	621.6	989.0	5.5944	ug/L	5.5944	ppb	18:50:54
1	Ba 233.527†	66767.1	65233.8	332.01	ug/L	332.01	ppb	18:50:54
1	Be 313.107†	-2751.6	4626.8	5.2816	ug/L	5.2816	ppb	18:50:54
1	Cd 226.502†	786.3	1046.1	-0.6043	ug/L	-0.6043	ppb	18:51:14
1	Co 228.616†	1328.3	1388.7	12.545	ug/L	12.545	ppb	18:51:14
1	Cr 267.716†	112682.6	110164.5	939.88	ug/L	939.88	ppb	18:50:54
1	Cu 324.752†	20871.3	10208.3	29.447	ug/L	29.447	ppb	18:50:54
1	Mn 257.610†	3987219.0	3896275.9	3088.7	ug/L	3088.7	ppb	18:50:49
1	Mo 202.031†	335.7	296.4	16.921	ug/L	16.921	ppb	18:51:14
1	Ni 231.604†	27692.8	26918.6	431.43	ug/L	431.43	ppb	18:50:54
1	P 214.914†	1939.5	1558.8	492.75	ug/L	492.75	ppb	18:51:14
1	Pb 220.353†	952.1	959.6	68.095	ug/L	68.095	ppb	18:51:14
1	S 181.975 Axial†	165.3	93.7	76.223	ug/L	76.223	ppb	18:51:14
1	Sb 206.836†	170.5	121.3	-2.9571	ug/L	-2.9571	ppb	18:51:14
1	Se 196.026†	-749.7	-711.1	28.529	ug/L	28.529	ppb	18:51:14
1	Si 251.611†	431812.1	421492.5	8695.9	ug/L	8695.9	ppb	18:50:49
1	Sn 189.927†	11.9	6.2	2.7006	ug/L	2.7006	ppb	18:51:14
1	Ti 334.940†	1291154.6	1263082.2	1653.9	ug/L	1653.9	ppb	18:50:49
1	Tl 190.801†	-244.9	-178.0	-4.1353	ug/L	-4.1353	ppb	18:51:14
1	U 409.014†	-15480.1	-11295.4	-291.13	ug/L	-291.13	ppb	18:50:49
1	V 292.402†	8310.3	9775.3	42.875	ug/L	42.875	ppb	18:50:54
1	Zn 213.857†	63310.4	60757.1	328.44	ug/L	328.44	ppb	18:50:54
1	SiO2†	428046.7	417769.9	18457	ug/L	18457	ppb	18:52:24
2	Sc Radial	5531.6	5531.6	99.4	%			18:49:55
2	Y RADIAL	6379.0	6379.0	132.5	%			18:49:55
2	Al 396.153Radial†	17194.6	17390.1	15829	ug/L	15829	ppb	18:49:55
2	Ca 317.933Radial†	4220.7	4229.1	10534	ug/L	10534	ppb	18:49:55
2	Fe 238.204 Radial†	2175.8	2188.6	76779	ug/L	76779	ppb	18:50:15
2	K 766.490 Radial†	9911.2	8497.6	3705.9	ug/L	3705.9	ppb	18:49:55
2	Mg 279.077 IEC†	50.5	50.6	3943.4	ug/L	3943.4	ppb	18:50:15
2	Na 589.592 Radial†	195.4	367.0	992.30	ug/L	992.30	ppb	18:50:15
2	Sr 421.552†	3780.9	3798.1	58.418	ug/L	58.418	ppb	18:49:55
2	Sc 361.383	1077968.8	1077968.8	101.61	%			18:51:21
2	Y 371.029	1142046.8	1142046.8	133.85	%			18:51:21
2	Ag 328.068†	-4697.3	-5261.4	4.1584	ug/L	4.1584	ppb	18:51:26
2	As 188.979†	-46.2	-8.6	24.051	ug/L	24.051	ppb	18:51:46
2	B 249.677†	524.5	897.7	3.7610	ug/L	3.7610	ppb	18:51:26
2	Ba 233.527†	66054.8	64983.6	330.82	ug/L	330.82	ppb	18:51:26
2	Be 313.107†	-2951.1	4411.9	5.2079	ug/L	5.2079	ppb	18:51:26
2	Cd 226.502†	799.2	1064.2	-0.8352	ug/L	-0.8352	ppb	18:51:46
2	Co 228.616†	1346.5	1415.6	12.844	ug/L	12.844	ppb	18:51:46
2	Cr 267.716†	111874.0	110129.3	939.64	ug/L	939.64	ppb	18:51:26
2	Cu 324.752†	20687.1	10168.0	29.526	ug/L	29.526	ppb	18:51:26
2	Mn 257.610†	3952894.7	3889412.8	3083.6	ug/L	3083.6	ppb	18:51:21
2	Mo 202.031†	347.6	310.3	17.689	ug/L	17.689	ppb	18:51:46
2	Ni 231.604†	27393.8	26811.4	429.71	ug/L	429.71	ppb	18:51:26

2	P 214.914†	1936.6	1569.0	493.88	ug/L	493.88 ppb	18:51:46
2	Pb 220.353†	938.3	952.5	67.277	ug/L	67.277 ppb	18:51:46
2	S 181.975 Axial†	172.0	101.4	82.758	ug/L	82.758 ppb	18:51:46
2	Sb 206.836†	171.9	123.8	-2.3905	ug/L	-2.3905 ppb	18:51:46
2	Se 196.026†	-742.2	-708.8	40.120	ug/L	40.120 ppb	18:51:46
2	Si 251.611†	426496.7	419176.5	8648.1	ug/L	8648.1 ppb	18:51:21
2	Sn 189.927†	8.4	2.8	2.4083	ug/L	2.4083 ppb	18:51:46
2	Ti 334.940†	1279972.8	1260794.1	1650.9	ug/L	1650.9 ppb	18:51:21
2	Tl 190.801†	-240.8	-175.6	-3.7735	ug/L	-3.7735 ppb	18:51:46
2	U 409.014†	-15253.7	-11177.1	-288.57	ug/L	-288.57 ppb	18:51:21
2	V 292.402†	8266.5	9788.2	42.543	ug/L	42.543 ppb	18:51:26
2	Zn 213.857†	62741.1	60624.2	327.38	ug/L	327.38 ppb	18:51:26
2	SiO2†	434608.6	427117.5	18870	ug/L	18870 ppb	18:52:29
3	Sc Radial	5670.7	5670.7	102	%		18:50:20
3	Y RADIAL	6540.9	6540.9	135.8	%		18:50:20
3	Al 396.153Radial†	17610.3	17373.6	15814	ug/L	15814 ppb	18:50:20
3	Ca 317.933Radial†	4317.6	4220.1	10512	ug/L	10512 ppb	18:50:20
3	Fe 238.204 Radial†	2138.7	2098.4	73617	ug/L	73617 ppb	18:50:40
3	K 766.490 Radial†	10138.7	8476.3	3694.2	ug/L	3694.2 ppb	18:50:20
3	Mg 279.077 IEC†	50.6	49.5	3855.3	ug/L	3855.3 ppb	18:50:40
3	Na 589.592 Radial†	187.8	354.7	958.99	ug/L	958.99 ppb	18:50:40
3	Sr 421.552†	3880.0	3802.0	58.479	ug/L	58.479 ppb	18:50:20
3	Sc 361.383	1080217.5	1080217.5	101.82	%		18:51:53
3	Y 371.029	1143569.2	1143569.2	134.03	%		18:51:53
3	Ag 328.068†	-4656.7	-5211.9	3.3386	ug/L	3.3386 ppb	18:51:58
3	As 188.979†	-44.8	-7.1	23.779	ug/L	23.779 ppb	18:52:18
3	B 249.677†	556.3	927.9	4.6504	ug/L	4.6504 ppb	18:51:58
3	Ba 233.527†	65708.3	64507.9	328.34	ug/L	328.34 ppb	18:51:58
3	Be 313.107†	-2817.6	4549.1	5.2546	ug/L	5.2546 ppb	18:51:58
3	Cd 226.502†	787.1	1050.6	-0.5640	ug/L	-0.5640 ppb	18:52:18
3	Co 228.616†	1344.8	1411.1	12.834	ug/L	12.834 ppb	18:52:18
3	Cr 267.716†	111086.6	109126.8	931.04	ug/L	931.04 ppb	18:51:58
3	Cu 324.752†	20498.4	9940.2	28.781	ug/L	28.781 ppb	18:51:58
3	Mn 257.610†	3966951.7	3895119.8	3087.7	ug/L	3087.7 ppb	18:51:53
3	Mo 202.031†	365.1	326.8	18.133	ug/L	18.133 ppb	18:52:18
3	Ni 231.604†	27336.6	26699.1	427.91	ug/L	427.91 ppb	18:51:58
3	P 214.914†	1942.2	1570.5	497.05	ug/L	497.05 ppb	18:52:18
3	Pb 220.353†	941.8	954.1	67.692	ug/L	67.692 ppb	18:52:18
3	S 181.975 Axial†	165.3	94.5	76.877	ug/L	76.877 ppb	18:52:18
3	Sb 206.836†	174.1	125.6	-1.8642	ug/L	-1.8642 ppb	18:52:18
3	Se 196.026†	-742.7	-707.8	29.353	ug/L	29.353 ppb	18:52:18
3	Si 251.611†	429747.1	421494.9	8696.0	ug/L	8696.0 ppb	18:51:53
3	Sn 189.927†	9.0	3.3	2.4040	ug/L	2.4040 ppb	18:52:18
3	Ti 334.940†	1284021.3	1262147.7	1652.7	ug/L	1652.7 ppb	18:51:53
3	Tl 190.801†	-236.4	-170.7	-2.9197	ug/L	-2.9197 ppb	18:52:18
3	U 409.014†	-15353.7	-11244.1	-289.83	ug/L	-289.83 ppb	18:51:53
3	V 292.402†	8248.6	9753.7	42.784	ug/L	42.784 ppb	18:51:58
3	Zn 213.857†	62435.4	60195.4	325.34	ug/L	325.34 ppb	18:51:58
3	SiO2†	427414.2	419161.5	18518	ug/L	18518 ppb	18:52:35

Mean Data: 232744003|882342|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1081200.2	101.92	%	0.360				0.35%
Sc Radial	5624.7	101	%	1.4				1.43%
Y 371.029	1144197.0	134.10	%	0.296				0.22%
Y RADIAL	6486.6	134.7	%	1.93				1.44%
Ag 328.068†	-5255.6	3.5132	ug/L	0.57805	3.5132	ppb	0.57805	16.45%
Al 396.153Radial†	17373.6	15814	ug/L	15.0	15814	ppb	15.0	0.09%
As 188.979†	-9.3	23.488	ug/L	0.7514	23.488	ppb	0.7514	3.20%
B 249.677†	938.2	4.6686	ug/L	0.91687	4.6686	ppb	0.91687	19.64%
Ba 233.527†	64908.4	330.39	ug/L	1.875	330.39	ppb	1.875	0.57%
Be 313.107†	4529.3	5.2480	ug/L	0.03733	5.2480	ppb	0.03733	0.71%
Ca 317.933Radial†	4218.1	10507	ug/L	30.3	10507	ppb	30.3	0.29%
Cd 226.502†	1053.6	-0.6678	ug/L	0.14635	-0.6678	ppb	0.14635	21.91%
Co 228.616†	1405.1	12.741	ug/L	0.1698	12.741	ppb	0.1698	1.33%
Cr 267.716†	109806.9	936.86	ug/L	5.036	936.86	ppb	5.036	0.54%
Cu 324.752†	10105.5	29.252	ug/L	0.4092	29.252	ppb	0.4092	1.40%
Fe 238.204 Radial†	2129.2	74696	ug/L	1804.3	74696	ppb	1804.3	2.42%
K 766.490 Radial†	8470.8	3692.6	ug/L	14.10	3692.6	ppb	14.10	0.38%

Mg 279.077 IEC†	50.2	3914.9	ug/L	51.62	3914.9	ppb	51.62	1.32%
Mn 257.610†	3893602.8	3086.7	ug/L	2.67	3086.7	ppb	2.67	0.09%
Mo 202.031†	311.2	17.581	ug/L	0.6132	17.581	ppb	0.6132	3.49%
Na 589.592 Radial†	357.2	965.72	ug/L	23.939	965.72	ppb	23.939	2.48%
Ni 231.604†	26809.7	429.69	ug/L	1.760	429.69	ppb	1.760	0.41%
P 214.914†	1566.1	494.56	ug/L	2.230	494.56	ppb	2.230	0.45%
Pb 220.353†	955.4	67.688	ug/L	0.4091	67.688	ppb	0.4091	0.60%
S 181.975 Axial†	96.6	78.619	ug/L	3.5990	78.619	ppb	3.5990	4.58%
Sb 206.836†	123.5	-2.4040	ug/L	0.54654	-2.4040	ppb	0.54654	22.74%
Se 196.026†	-709.2	32.667	ug/L	6.4672	32.667	ppb	6.4672	19.80%
Si 251.611†	420721.3	8680.0	ug/L	27.61	8680.0	ppb	27.61	0.32%
Sn 189.927†	4.1	2.5043	ug/L	0.17005	2.5043	ppb	0.17005	6.79%
Sr 421.552†	3807.7	58.566	ug/L	0.2051	58.566	ppb	0.2051	0.35%
Ti 334.940†	1262008.0	1652.5	ug/L	1.50	1652.5	ppb	1.50	0.09%
Tl 190.801†	-174.8	-3.6095	ug/L	0.62421	-3.6095	ppb	0.62421	17.29%
U 409.014†	-11238.9	-289.84	ug/L	1.278	-289.84	ppb	1.278	0.44%
V 292.402†	9772.4	42.734	ug/L	0.1713	42.734	ppb	0.1713	0.40%
Zn 213.857†	60525.6	327.05	ug/L	1.576	327.05	ppb	1.576	0.48%
SiO2†	421349.6	18615	ug/L	222.8	18615	ppb	222.8	1.20%

Sequence No.: 45
Sample ID: 232744004|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 70
Date Collected: 7/8/2009 18:54:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232744004|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5577.7	5577.7	100	%			18:56:38
1	Y RADIAL	6257.6	6257.6	129.9	%			18:56:38
1	Al 396.153Radial†	24273.6	24310.1	22127	ug/L	22127	ppb	18:56:38
1	Ca 317.933Radial†	3743.8	3718.2	9261.5	ug/L	9261.5	ppb	18:56:38
1	Fe 238.204 Radial†	2344.8	2339.1	82059	ug/L	82059	ppb	18:56:58
1	K 766.490 Radial†	11052.5	9554.0	4177.7	ug/L	4177.7	ppb	18:56:38
1	Mg 279.077 IEC†	62.5	62.2	4856.0	ug/L	4856.0	ppb	18:56:58
1	Na 589.592 Radial†	61.8	232.0	627.42	ug/L	627.42	ppb	18:56:58
1	Sr 421.552†	4678.9	4662.7	71.750	ug/L	71.750	ppb	18:56:38
1	Sc 361.383	1085875.5	1085875.5	102.36	%			18:57:56
1	Y 371.029	1115567.5	1115567.5	130.75	%			18:57:56
1	Ag 328.068†	-5347.8	-5863.3	3.6020	ug/L	3.6020	ppb	18:58:01
1	As 188.979†	-43.8	-5.9	30.459	ug/L	30.459	ppb	18:58:21
1	B 249.677†	802.8	1165.8	7.2376	ug/L	7.2376	ppb	18:58:01
1	Ba 233.527†	70928.9	69272.1	352.72	ug/L	352.72	ppb	18:58:01
1	Be 313.107†	-6812.5	660.5	5.7953	ug/L	5.7953	ppb	18:58:01
1	Cd 226.502†	965.1	1220.5	-0.4771	ug/L	-0.4771	ppb	18:58:21
1	Co 228.616†	1386.7	1445.2	11.835	ug/L	11.835	ppb	18:58:21
1	Cr 267.716†	32835.6	32108.5	275.28	ug/L	275.28	ppb	18:58:01
1	Cu 324.752†	20935.6	10262.5	30.065	ug/L	30.065	ppb	18:58:01
1	Mn 257.610†	3083301.4	3011508.1	2390.5	ug/L	2390.5	ppb	18:57:56
1	Mo 202.031†	670.3	623.1	30.574	ug/L	30.574	ppb	18:58:21
1	Ni 231.604†	8981.7	8626.7	138.26	ug/L	138.26	ppb	18:58:01
1	P 214.914†	3138.0	2728.9	901.61	ug/L	901.61	ppb	18:58:21
1	Pb 220.353†	834.8	844.6	59.957	ug/L	59.957	ppb	18:58:21
1	S 181.975 Axial†	291.9	217.3	179.61	ug/L	179.61	ppb	18:58:21
1	Sb 206.836†	105.2	57.4	-0.8416	ug/L	-0.8416	ppb	18:58:21
1	Se 196.026†	-830.7	-790.0	32.656	ug/L	32.656	ppb	18:58:21
1	Si 251.611†	350532.4	341904.3	7053.3	ug/L	7053.3	ppb	18:58:01
1	Sn 189.927†	1.5	-4.0	1.6017	ug/L	1.6017	ppb	18:58:21
1	Ti 334.940†	1879387.6	1837240.2	2405.7	ug/L	2405.7	ppb	18:57:56
1	Tl 190.801†	-250.0	-182.8	-5.4520	ug/L	-5.4520	ppb	18:58:21
1	U 409.014†	-14829.5	-10653.4	-274.94	ug/L	-274.94	ppb	18:57:56
1	V 292.402†	13888.6	15221.8	72.271	ug/L	72.271	ppb	18:58:01
1	Zn 213.857†	83351.7	80310.8	438.58	ug/L	438.58	ppb	18:58:01
1	SiO2†	358590.3	349734.5	15449	ug/L	15449	ppb	18:59:29
2	Sc Radial	5456.4	5456.4	98.1	%			18:57:04
2	Y RADIAL	6060.3	6060.3	125.8	%			18:57:04
2	Al 396.153Radial†	23606.1	24167.5	21997	ug/L	21997	ppb	18:57:04
2	Ca 317.933Radial†	3645.9	3701.5	9219.8	ug/L	9219.8	ppb	18:57:04
2	Fe 238.204 Radial†	2316.6	2362.3	82875	ug/L	82875	ppb	18:57:24
2	K 766.490 Radial†	10845.7	9588.2	4193.0	ug/L	4193.0	ppb	18:57:04
2	Mg 279.077 IEC†	60.3	61.3	4783.8	ug/L	4783.8	ppb	18:57:24
2	Na 589.592 Radial†	79.8	251.8	680.76	ug/L	680.76	ppb	18:57:24
2	Sr 421.552†	4493.9	4577.7	70.441	ug/L	70.441	ppb	18:57:04
2	Sc 361.383	1078361.2	1078361.2	101.65	%			18:58:27
2	Y 371.029	1106628.5	1106628.5	129.70	%			18:58:27
2	Ag 328.068†	-5371.7	-5923.3	3.6344	ug/L	3.6344	ppb	18:58:32
2	As 188.979†	-40.1	-2.6	31.434	ug/L	31.434	ppb	18:58:52
2	B 249.677†	743.1	1112.6	6.2987	ug/L	6.2987	ppb	18:58:32
2	Ba 233.527†	71114.9	69937.9	356.11	ug/L	356.11	ppb	18:58:32
2	Be 313.107†	-6767.5	658.4	5.8045	ug/L	5.8045	ppb	18:58:32
2	Cd 226.502†	965.7	1227.7	-0.5195	ug/L	-0.5195	ppb	18:58:52
2	Co 228.616†	1411.5	1479.0	12.234	ug/L	12.234	ppb	18:58:52
2	Cr 267.716†	32943.6	32438.2	278.10	ug/L	278.10	ppb	18:58:32
2	Cu 324.752†	20894.4	10364.5	30.363	ug/L	30.363	ppb	18:58:32
2	Mn 257.610†	3072264.1	3021640.3	2398.6	ug/L	2398.6	ppb	18:58:27
2	Mo 202.031†	657.4	615.0	30.304	ug/L	30.304	ppb	18:58:52
2	Ni 231.604†	8919.7	8626.8	138.26	ug/L	138.26	ppb	18:58:32

2	P 214.914†	3142.6	2754.7	909.99	ug/L	909.99 ppb	18:58:52
2	Pb 220.353†	839.0	854.5	60.591	ug/L	60.591 ppb	18:58:52
2	S 181.975 Axial†	290.5	218.0	180.20	ug/L	180.20 ppb	18:58:52
2	Sb 206.836†	100.8	53.8	-1.6237	ug/L	-1.6237 ppb	18:58:52
2	Se 196.026†	-830.5	-795.4	33.753	ug/L	33.753 ppb	18:58:52
2	Si 251.611†	351143.7	344892.1	7114.9	ug/L	7114.9 ppb	18:58:32
2	Sn 189.927†	-5.9	-11.3	0.8584	ug/L	0.8584 ppb	18:58:52
2	Ti 334.940†	1869686.4	1840490.9	2409.9	ug/L	2409.9 ppb	18:58:27
2	Tl 190.801†	-261.9	-196.3	-7.6597	ug/L	-7.6597 ppb	18:58:52
2	U 409.014†	-14964.7	-10887.4	-280.85	ug/L	-280.85 ppb	18:58:27
2	V 292.402†	13880.5	15308.3	72.628	ug/L	72.628 ppb	18:58:32
2	Zn 213.857†	83450.2	80975.2	442.21	ug/L	442.21 ppb	18:58:32
2	SiO2†	357067.8	350677.9	15491	ug/L	15491 ppb	18:59:34
3	Sc Radial	5531.3	5531.3	99.4	%		18:57:29
3	Y RADIAL	6172.1	6172.1	128.2	%		18:57:29
3	Al 396.153Radial†	24022.8	24260.8	22082	ug/L	22082 ppb	18:57:29
3	Ca 317.933Radial†	3690.8	3696.3	9206.9	ug/L	9206.9 ppb	18:57:29
3	Fe 238.204 Radial†	2324.7	2338.4	82036	ug/L	82036 ppb	18:57:49
3	K 766.490 Radial†	10929.2	9522.5	4163.9	ug/L	4163.9 ppb	18:57:29
3	Mg 279.077 IEC†	65.0	65.3	5098.8	ug/L	5098.8 ppb	18:57:49
3	Na 589.592 Radial†	68.3	239.2	646.64	ug/L	646.64 ppb	18:57:49
3	Sr 421.552†	4591.2	4613.5	70.994	ug/L	70.994 ppb	18:57:29
3	Sc 361.383	1088274.3	1088274.3	102.58	%		18:58:58
3	Y 371.029	1115677.2	1115677.2	130.76	%		18:58:58
3	Ag 328.068†	-5265.2	-5771.3	3.9652	ug/L	3.9652 ppb	18:59:03
3	As 188.979†	-44.6	-6.6	30.316	ug/L	30.316 ppb	18:59:23
3	B 249.677†	795.8	1157.3	7.1076	ug/L	7.1076 ppb	18:59:03
3	Ba 233.527†	71277.5	69459.1	353.66	ug/L	353.66 ppb	18:59:03
3	Be 313.107†	-6828.8	659.3	5.8048	ug/L	5.8048 ppb	18:59:03
3	Cd 226.502†	980.0	1233.0	-0.3804	ug/L	-0.3804 ppb	18:59:23
3	Co 228.616†	1392.7	1448.1	11.862	ug/L	11.862 ppb	18:59:23
3	Cr 267.716†	32875.0	32076.1	275.00	ug/L	275.00 ppb	18:59:03
3	Cu 324.752†	21050.6	10329.5	30.229	ug/L	30.229 ppb	18:59:03
3	Mn 257.610†	3099233.1	3020398.7	2397.5	ug/L	2397.5 ppb	18:58:58
3	Mo 202.031†	666.5	618.0	30.366	ug/L	30.366 ppb	18:59:23
3	Ni 231.604†	9043.2	8667.4	138.91	ug/L	138.91 ppb	18:59:03
3	P 214.914†	3150.2	2733.9	903.38	ug/L	903.38 ppb	18:59:23
3	Pb 220.353†	858.2	865.7	61.530	ug/L	61.530 ppb	18:59:23
3	S 181.975 Axial†	299.2	223.9	185.14	ug/L	185.14 ppb	18:59:23
3	Sb 206.836†	110.2	62.0	0.0655	ug/L	0.0655 ppb	18:59:23
3	Se 196.026†	-818.7	-776.5	36.949	ug/L	36.949 ppb	18:59:23
3	Si 251.611†	353467.2	344010.4	7096.7	ug/L	7096.7 ppb	18:59:03
3	Sn 189.927†	5.9	0.3	2.0429	ug/L	2.0429 ppb	18:59:23
3	Ti 334.940†	1886874.2	1840491.1	2409.9	ug/L	2409.9 ppb	18:58:58
3	Tl 190.801†	-265.5	-197.4	-7.8508	ug/L	-7.8508 ppb	18:59:23
3	U 409.014†	-14934.8	-10724.1	-276.69	ug/L	-276.69 ppb	18:58:58
3	V 292.402†	14106.7	15404.5	73.304	ug/L	73.304 ppb	18:59:03
3	Zn 213.857†	83877.6	80644.0	440.44	ug/L	440.44 ppb	18:59:03
3	SiO2†	357705.3	348099.5	15377	ug/L	15377 ppb	18:59:39

Mean Data: 232744004|882342|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1084170.3	102.20	%	0.488				0.48%
Sc Radial	5521.8	99.2	%	1.10				1.11%
Y 371.029	1112624.4	130.40	%	0.609				0.47%
Y RADIAL	6163.4	128.0	%	2.05				1.61%
Ag 328.068†	-5852.6	3.7338	ug/L	0.20102	3.7338	ppb	0.20102	5.38%
Al 396.153Radial†	24246.1	22069	ug/L	65.9	22069	ppb	65.9	0.30%
As 188.979†	-5.0	30.736	ug/L	0.6087	30.736	ppb	0.6087	1.98%
B 249.677†	1145.2	6.8813	ug/L	0.50876	6.8813	ppb	0.50876	7.39%
Ba 233.527†	69556.4	354.16	ug/L	1.749	354.16	ppb	1.749	0.49%
Be 313.107†	659.4	5.8015	ug/L	0.00541	5.8015	ppb	0.00541	0.09%
Ca 317.933Radial†	3705.3	9229.4	ug/L	28.53	9229.4	ppb	28.53	0.31%
Cd 226.502†	1227.1	-0.4590	ug/L	0.07128	-0.4590	ppb	0.07128	15.53%
Co 228.616†	1457.4	11.977	ug/L	0.2233	11.977	ppb	0.2233	1.86%
Cr 267.716†	32207.6	276.13	ug/L	1.717	276.13	ppb	1.717	0.62%
Cu 324.752†	10318.8	30.219	ug/L	0.1496	30.219	ppb	0.1496	0.50%
Fe 238.204 Radial†	2346.6	82324	ug/L	477.6	82324	ppb	477.6	0.58%
K 766.490 Radial†	9554.9	4178.2	ug/L	14.57	4178.2	ppb	14.57	0.35%

Mg 279.077 IEC†	62.9	4912.9	ug/L	165.01	4912.9	ppb	165.01	3.36%
Mn 257.610†	3017849.0	2395.6	ug/L	4.40	2395.6	ppb	4.40	0.18%
Mo 202.031†	618.7	30.415	ug/L	0.1417	30.415	ppb	0.1417	0.47%
Na 589.592 Radial†	241.0	651.61	ug/L	27.012	651.61	ppb	27.012	4.15%
Ni 231.604†	8640.3	138.47	ug/L	0.376	138.47	ppb	0.376	0.27%
P 214.914†	2739.2	904.99	ug/L	4.420	904.99	ppb	4.420	0.49%
Pb 220.353†	855.0	60.692	ug/L	0.7915	60.692	ppb	0.7915	1.30%
S 181.975 Axial†	219.7	181.65	ug/L	3.036	181.65	ppb	3.036	1.67%
Sb 206.836†	57.7	-0.7999	ug/L	0.84536	-0.7999	ppb	0.84536	105.68%
Se 196.026†	-787.3	34.453	ug/L	2.2301	34.453	ppb	2.2301	6.47%
Si 251.611†	343602.3	7088.3	ug/L	31.68	7088.3	ppb	31.68	0.45%
Sn 189.927†	-5.0	1.5010	ug/L	0.59868	1.5010	ppb	0.59868	39.89%
Sr 421.552†	4618.0	71.062	ug/L	0.6573	71.062	ppb	0.6573	0.92%
Ti 334.940†	1839407.4	2408.5	ug/L	2.46	2408.5	ppb	2.46	0.10%
Tl 190.801†	-192.2	-6.9875	ug/L	1.33320	-6.9875	ppb	1.33320	19.08%
U 409.014†	-10755.0	-277.50	ug/L	3.037	-277.50	ppb	3.037	1.09%
V 292.402†	15311.5	72.734	ug/L	0.5245	72.734	ppb	0.5245	0.72%
Zn 213.857†	80643.4	440.41	ug/L	1.813	440.41	ppb	1.813	0.41%
SiO2†	349504.0	15439	ug/L	57.6	15439	ppb	57.6	0.37%

Sequence No.: 46
Sample ID: 232744005|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 71
Date Collected: 7/8/2009 19:01:49
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232744005|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5672.7	5672.7	102	%			19:03:42
1	Y RADIAL	6165.3	6165.3	128.0	%			19:03:42
1	Al 396.153Radial†	17331.7	17094.3	15559	ug/L	15559	ppb	19:03:42
1	Ca 317.933Radial†	2258.6	2198.8	5476.8	ug/L	5476.8	ppb	19:04:02
1	Fe 238.204 Radial†	2103.2	2062.9	72369	ug/L	72369	ppb	19:04:02
1	K 766.490 Radial†	8262.7	6632.4	2901.0	ug/L	2901.0	ppb	19:03:42
1	Mg 279.077 IEC†	41.7	40.7	3160.5	ug/L	3160.5	ppb	19:04:02
1	Na 589.592 Radial†	48.1	217.6	588.36	ug/L	588.36	ppb	19:04:02
1	Sr 421.552†	3215.3	3148.7	48.460	ug/L	48.460	ppb	19:03:42
1	Sc 361.383	1080649.4	1080649.4	101.86	%			19:05:00
1	Y 371.029	1085674.8	1085674.8	127.25	%			19:05:00
1	Ag 328.068†	-4648.1	-5201.7	3.1120	ug/L	3.1120	ppb	19:05:05
1	As 188.979†	-36.9	0.7	29.401	ug/L	29.401	ppb	19:05:25
1	B 249.677†	575.6	946.6	5.1118	ug/L	5.1118	ppb	19:05:05
1	Ba 233.527†	55484.3	54445.1	277.42	ug/L	277.42	ppb	19:05:05
1	Be 313.107†	-6882.6	559.5	5.5246	ug/L	5.5246	ppb	19:05:05
1	Cd 226.502†	845.7	1107.8	-0.1940	ug/L	-0.1940	ppb	19:05:25
1	Co 228.616†	1214.9	1283.1	10.150	ug/L	10.150	ppb	19:05:25
1	Cr 267.716†	27363.5	26891.6	230.64	ug/L	230.64	ppb	19:05:05
1	Cu 324.752†	17684.2	7169.5	21.873	ug/L	21.873	ppb	19:05:05
1	Mn 257.610†	3279166.1	3218358.0	2552.8	ug/L	2552.8	ppb	19:05:00
1	Mo 202.031†	604.5	561.7	27.450	ug/L	27.450	ppb	19:05:25
1	Ni 231.604†	7037.2	6760.2	108.34	ug/L	108.34	ppb	19:05:25
1	P 214.914†	2377.0	1996.6	649.67	ug/L	649.67	ppb	19:05:25
1	Pb 220.353†	790.8	805.5	56.648	ug/L	56.648	ppb	19:05:25
1	S 181.975 Axial†	212.4	140.7	116.06	ug/L	116.06	ppb	19:05:25
1	Sb 206.836†	99.5	52.3	-0.4535	ug/L	-0.4535	ppb	19:05:25
1	Se 196.026†	-737.0	-701.9	26.906	ug/L	26.906	ppb	19:05:25
1	Si 251.611†	335946.3	329241.2	6792.4	ug/L	6792.4	ppb	19:05:05
1	Sn 189.927†	17.8	12.0	2.8369	ug/L	2.8369	ppb	19:05:25
1	Ti 334.940†	1790253.4	1758616.1	2302.5	ug/L	2302.5	ppb	19:05:00
1	Tl 190.801†	-255.6	-189.5	-6.1132	ug/L	-6.1132	ppb	19:05:25
1	U 409.014†	-14846.7	-10740.4	-275.82	ug/L	-275.82	ppb	19:05:00
1	V 292.402†	11511.3	12953.6	60.795	ug/L	60.795	ppb	19:05:05
1	Zn 213.857†	66117.9	63786.1	347.60	ug/L	347.60	ppb	19:05:05
1	SiO2†	340844.0	334007.1	14756	ug/L	14756	ppb	19:06:33
2	Sc Radial	5581.5	5581.5	100	%			19:04:07
2	Y RADIAL	6086.6	6086.6	126.4	%			19:04:07
2	Al 396.153Radial†	17163.5	17204.4	15659	ug/L	15659	ppb	19:04:07
2	Ca 317.933Radial†	2252.0	2228.3	5550.4	ug/L	5550.4	ppb	19:04:27
2	Fe 238.204 Radial†	2094.7	2088.1	73256	ug/L	73256	ppb	19:04:27
2	K 766.490 Radial†	8106.7	6609.4	2891.6	ug/L	2891.6	ppb	19:04:07
2	Mg 279.077 IEC†	44.2	43.9	3416.1	ug/L	3416.1	ppb	19:04:27
2	Na 589.592 Radial†	41.7	212.0	573.20	ug/L	573.20	ppb	19:04:27
2	Sr 421.552†	3145.3	3130.4	48.177	ug/L	48.177	ppb	19:04:07
2	Sc 361.383	1091497.4	1091497.4	102.89	%			19:05:31
2	Y 371.029	1093139.9	1093139.9	128.12	%			19:05:31
2	Ag 328.068†	-4566.9	-5077.4	3.8842	ug/L	3.8842	ppb	19:05:36
2	As 188.979†	-36.9	1.0	29.682	ug/L	29.682	ppb	19:05:56
2	B 249.677†	616.5	980.8	5.5266	ug/L	5.5266	ppb	19:05:36
2	Ba 233.527†	54974.8	53408.6	272.19	ug/L	272.19	ppb	19:05:36
2	Be 313.107†	-6757.2	748.6	5.5912	ug/L	5.5912	ppb	19:05:36
2	Cd 226.502†	834.9	1089.1	-0.4395	ug/L	-0.4395	ppb	19:05:56
2	Co 228.616†	1224.0	1280.1	10.091	ug/L	10.091	ppb	19:05:56
2	Cr 267.716†	27051.4	26321.2	225.80	ug/L	225.80	ppb	19:05:36
2	Cu 324.752†	17675.8	6988.8	21.478	ug/L	21.478	ppb	19:05:36
2	Mn 257.610†	3315056.2	3221247.0	2555.2	ug/L	2555.2	ppb	19:05:31
2	Mo 202.031†	598.3	549.7	27.031	ug/L	27.031	ppb	19:05:56
2	Ni 231.604†	7030.4	6685.0	107.13	ug/L	107.13	ppb	19:05:56

2	P 214.914†	2350.7	1947.8	631.83 ug/L	631.83 ppb	19:05:56
2	Pb 220.353†	816.6	822.8	57.880 ug/L	57.880 ppb	19:05:56
2	S 181.975 Axial†	217.0	143.1	118.04 ug/L	118.04 ppb	19:05:56
2	Sb 206.836†	98.0	49.8	-0.8136 ug/L	-0.8136 ppb	19:05:56
2	Se 196.026†	-732.0	-689.8	33.940 ug/L	33.940 ppb	19:05:56
2	Si 251.611†	333880.7	323955.8	6683.4 ug/L	6683.4 ppb	19:05:36
2	Sn 189.927†	22.8	16.6	3.3391 ug/L	3.3391 ppb	19:05:56
2	Ti 334.940†	1810854.3	1761172.0	2305.9 ug/L	2305.9 ppb	19:05:31
2	Tl 190.801†	-267.9	-199.0	-7.6882 ug/L	-7.6882 ppb	19:05:56
2	U 409.014†	-15052.5	-10795.6	-277.29 ug/L	-277.29 ppb	19:05:31
2	V 292.402†	11383.2	12716.8	59.324 ug/L	59.324 ppb	19:05:36
2	Zn 213.857†	65744.7	62778.2	341.88 ug/L	341.88 ppb	19:05:36
2	SiO2†	342736.0	332520.4	14690 ug/L	14690 ppb	19:06:38
3	Sc Radial	5622.0	5622.0	101 %		19:04:33
3	Y RADIAL	6147.2	6147.2	127.6 %		19:04:33
3	Al 396.153Radial†	17353.7	17269.5	15718 ug/L	15718 ppb	19:04:33
3	Ca 317.933Radial†	2276.3	2236.3	5570.2 ug/L	5570.2 ppb	19:04:53
3	Fe 238.204 Radial†	2115.2	2093.3	73438 ug/L	73438 ppb	19:04:53
3	K 766.490 Radial†	8286.5	6729.1	2943.7 ug/L	2943.7 ppb	19:04:33
3	Mg 279.077 IEC†	43.0	42.4	3294.8 ug/L	3294.8 ppb	19:04:53
3	Na 589.592 Radial†	43.8	213.8	577.98 ug/L	577.98 ppb	19:04:53
3	Sr 421.552†	3219.6	3181.4	48.963 ug/L	48.963 ppb	19:04:33
3	Sc 361.383	1071465.2	1071465.2	101.00 %		19:06:02
3	Y 371.029	1075337.7	1075337.7	126.03 %		19:06:02
3	Ag 328.068†	-4646.4	-5239.1	3.3130 ug/L	3.3130 ppb	19:06:07
3	As 188.979†	-47.7	-10.3	27.070 ug/L	27.070 ppb	19:06:27
3	B 249.677†	589.1	964.8	5.2542 ug/L	5.2542 ppb	19:06:07
3	Ba 233.527†	55576.0	55002.9	280.27 ug/L	280.27 ppb	19:06:07
3	Be 313.107†	-6941.4	443.4	5.5004 ug/L	5.5004 ppb	19:06:07
3	Cd 226.502†	821.1	1090.7	-0.4487 ug/L	-0.4487 ppb	19:06:27
3	Co 228.616†	1196.2	1274.8	10.022 ug/L	10.022 ppb	19:06:27
3	Cr 267.716†	27378.2	27136.4	232.75 ug/L	232.75 ppb	19:06:07
3	Cu 324.752†	17595.9	7230.9	22.086 ug/L	22.086 ppb	19:06:07
3	Mn 257.610†	3259735.9	3226713.3	2559.5 ug/L	2559.5 ppb	19:06:02
3	Mo 202.031†	611.6	573.8	28.006 ug/L	28.006 ppb	19:06:27
3	Ni 231.604†	6991.7	6774.4	108.57 ug/L	108.57 ppb	19:06:27
3	P 214.914†	2344.5	1984.4	644.52 ug/L	644.52 ppb	19:06:27
3	Pb 220.353†	781.9	803.3	56.414 ug/L	56.414 ppb	19:06:27
3	S 181.975 Axial†	210.6	140.7	116.00 ug/L	116.00 ppb	19:06:27
3	Sb 206.836†	103.6	57.2	0.4732 ug/L	0.4732 ppb	19:06:27
3	Se 196.026†	-721.1	-692.4	33.749 ug/L	33.749 ppb	19:06:27
3	Si 251.611†	335911.1	332033.3	6850.0 ug/L	6850.0 ppb	19:06:07
3	Sn 189.927†	19.3	13.6	3.0274 ug/L	3.0274 ppb	19:06:27
3	Ti 334.940†	1778972.9	1762511.7	2307.6 ug/L	2307.6 ppb	19:06:02
3	Tl 190.801†	-257.5	-193.5	-6.7304 ug/L	-6.7304 ppb	19:06:27
3	U 409.014†	-14875.2	-10893.6	-279.76 ug/L	-279.76 ppb	19:06:02
3	V 292.402†	11554.3	13093.0	61.434 ug/L	61.434 ppb	19:06:07
3	Zn 213.857†	65995.4	64221.2	349.91 ug/L	349.91 ppb	19:06:07
3	SiO2†	338802.9	334854.3	14793 ug/L	14793 ppb	19:06:43

Mean Data: 232744005|882342|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1081204.0	101.92	%	0.945				0.93%
Sc Radial	5625.4	101	%	0.8				0.81%
Y 371.029	1084717.5	127.13	%	1.048				0.82%
Y RADIAL	6133.0	127.4	%	0.86				0.67%
Ag 328.068†	-5172.7	3.4364	ug/L	0.40058	3.4364	ppb	0.40058	11.66%
Al 396.153Radial†	17189.4	15645	ug/L	80.6	15645	ppb	80.6	0.52%
As 188.979†	-2.9	28.718	ug/L	1.4336	28.718	ppb	1.4336	4.99%
B 249.677†	964.1	5.2975	ug/L	0.21075	5.2975	ppb	0.21075	3.98%
Ba 233.527†	54285.5	276.62	ug/L	4.097	276.62	ppb	4.097	1.48%
Be 313.107†	583.8	5.5388	ug/L	0.04702	5.5388	ppb	0.04702	0.85%
Ca 317.933Radial†	2221.1	5532.4	ug/L	49.21	5532.4	ppb	49.21	0.89%
Cd 226.502†	1095.9	-0.3607	ug/L	0.14450	-0.3607	ppb	0.14450	40.06%
Co 228.616†	1279.4	10.088	ug/L	0.0638	10.088	ppb	0.0638	0.63%
Cr 267.716†	26783.1	229.73	ug/L	3.564	229.73	ppb	3.564	1.55%
Cu 324.752†	7129.7	21.813	ug/L	0.3084	21.813	ppb	0.3084	1.41%
Fe 238.204 Radial†	2081.4	73021	ug/L	572.1	73021	ppb	572.1	0.78%
K 766.490 Radial†	6657.0	2912.1	ug/L	27.74	2912.1	ppb	27.74	0.95%

Mg 279.077 IEC†	42.3	3290.5	ug/L	127.86	3290.5	ppb	127.86	3.89%
Mn 257.610†	3222106.1	2555.8	ug/L	3.42	2555.8	ppb	3.42	0.13%
Mo 202.031†	561.7	27.496	ug/L	0.4891	27.496	ppb	0.4891	1.78%
Na 589.592 Radial†	214.5	579.85	ug/L	7.747	579.85	ppb	7.747	1.34%
Ni 231.604†	6739.9	108.01	ug/L	0.771	108.01	ppb	0.771	0.71%
P 214.914†	1976.3	642.01	ug/L	9.186	642.01	ppb	9.186	1.43%
Pb 220.353†	810.5	56.981	ug/L	0.7875	56.981	ppb	0.7875	1.38%
S 181.975 Axial†	141.5	116.70	ug/L	1.161	116.70	ppb	1.161	1.00%
Sb 206.836†	53.1	-0.2646	ug/L	0.66385	-0.2646	ppb	0.66385	250.86%
Se 196.026†	-694.7	31.532	ug/L	4.0072	31.532	ppb	4.0072	12.71%
Si 251.611†	328410.1	6775.3	ug/L	84.64	6775.3	ppb	84.64	1.25%
Sn 189.927†	14.1	3.0678	ug/L	0.25351	3.0678	ppb	0.25351	8.26%
Sr 421.552†	3153.5	48.534	ug/L	0.3983	48.534	ppb	0.3983	0.82%
Ti 334.940†	1760766.6	2305.3	ug/L	2.59	2305.3	ppb	2.59	0.11%
Tl 190.801†	-194.0	-6.8439	ug/L	0.79363	-6.8439	ppb	0.79363	11.60%
U 409.014†	-10809.8	-277.63	ug/L	1.989	-277.63	ppb	1.989	0.72%
V 292.402†	12921.1	60.518	ug/L	1.0819	60.518	ppb	1.0819	1.79%
Zn 213.857†	63595.1	346.46	ug/L	4.136	346.46	ppb	4.136	1.19%
SiO2†	333793.9	14746	ug/L	52.2	14746	ppb	52.2	0.35%

Sequence No.: 47
Sample ID: 232744006|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 72
Date Collected: 7/8/2009 19:08:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232744006|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5614.8	5614.8	101	%			19:10:47
1	Y RADIAL	6224.1	6224.1	129.2	%			19:10:47
1	Al 396.153Radial†	20918.1	20824.2	18955	ug/L	18955	ppb	19:10:47
1	Ca 317.933Radial†	6068.8	5997.8	14940	ug/L	14940	ppb	19:10:47
1	Fe 238.204 Radial†	1953.4	1935.6	67906	ug/L	67906	ppb	19:11:07
1	K 766.490 Radial†	11027.5	9456.3	4123.7	ug/L	4123.7	ppb	19:10:47
1	Mg 279.077 IEC†	57.9	57.2	4476.0	ug/L	4476.0	ppb	19:11:07
1	Na 589.592 Radial†	129.7	299.0	808.39	ug/L	808.39	ppb	19:11:07
1	Sr 421.552†	5721.6	5665.2	87.143	ug/L	87.143	ppb	19:10:47
1	Sc 361.383	1072644.3	1072644.3	101.11	%			19:12:05
1	Y 371.029	1094103.0	1094103.0	128.23	%			19:12:05
1	Ag 328.068†	-4075.8	-4669.7	3.5829	ug/L	3.5829	ppb	19:12:10
1	As 188.979†	-52.8	-15.4	20.208	ug/L	20.208	ppb	19:12:30
1	B 249.677†	440.5	817.2	3.6954	ug/L	3.6954	ppb	19:12:10
1	Ba 233.527†	56856.1	56208.4	286.21	ug/L	286.21	ppb	19:12:10
1	Be 313.107†	-3263.0	4089.0	4.9693	ug/L	4.9693	ppb	19:12:10
1	Cd 226.502†	734.7	1004.3	-0.4342	ug/L	-0.4342	ppb	19:12:30
1	Co 228.616†	951.2	1031.2	8.5466	ug/L	8.5466	ppb	19:12:30
1	Cr 267.716†	28726.2	28439.9	243.71	ug/L	243.71	ppb	19:12:10
1	Cu 324.752†	20606.7	10189.5	29.066	ug/L	29.066	ppb	19:12:10
1	Mn 257.610†	2991394.6	2957766.4	2346.2	ug/L	2346.2	ppb	19:12:05
1	Mo 202.031†	220.4	186.2	12.115	ug/L	12.115	ppb	19:12:30
1	Ni 231.604†	7675.3	7442.9	119.28	ug/L	119.28	ppb	19:12:30
1	P 214.914†	1610.8	1256.2	391.51	ug/L	391.51	ppb	19:12:30
1	Pb 220.353†	839.8	859.6	61.750	ug/L	61.750	ppb	19:12:30
1	S 181.975 Axial†	270.6	199.8	165.38	ug/L	165.38	ppb	19:12:30
1	Sb 206.836†	97.5	51.0	0.3222	ug/L	0.3222	ppb	19:12:30
1	Se 196.026†	-675.8	-646.8	29.263	ug/L	29.263	ppb	19:12:30
1	Si 251.611†	430176.8	424899.7	8766.2	ug/L	8766.2	ppb	19:12:05
1	Sn 189.927†	-29.6	-34.8	-1.3064	ug/L	-1.3064	ppb	19:12:30
1	Ti 334.940†	1227757.6	1215404.3	1592.1	ug/L	1592.1	ppb	19:12:05
1	Tl 190.801†	-231.2	-167.3	-6.9359	ug/L	-6.9359	ppb	19:12:30
1	U 409.014†	-14444.3	-10451.2	-268.13	ug/L	-268.13	ppb	19:12:05
1	V 292.402†	8906.0	10461.1	47.890	ug/L	47.890	ppb	19:12:10
1	Zn 213.857†	58650.8	56885.3	309.42	ug/L	309.42	ppb	19:12:10
1	SiO2†	429180.1	423871.7	18726	ug/L	18726	ppb	19:13:38
2	Sc Radial	5573.9	5573.9	100	%			19:11:12
2	Y RADIAL	6242.7	6242.7	129.6	%			19:11:12
2	Al 396.153Radial†	20886.7	20944.9	19064	ug/L	19064	ppb	19:11:12
2	Ca 317.933Radial†	6018.7	5992.0	14925	ug/L	14925	ppb	19:11:12
2	Fe 238.204 Radial†	1932.9	1929.4	67686	ug/L	67686	ppb	19:11:32
2	K 766.490 Radial†	10982.5	9491.5	4138.8	ug/L	4138.8	ppb	19:11:12
2	Mg 279.077 IEC†	57.5	57.2	4472.6	ug/L	4472.6	ppb	19:11:32
2	Na 589.592 Radial†	126.5	296.7	802.36	ug/L	802.36	ppb	19:11:32
2	Sr 421.552†	5650.3	5635.6	86.687	ug/L	86.687	ppb	19:11:12
2	Sc 361.383	1073562.0	1073562.0	101.20	%			19:12:36
2	Y 371.029	1096552.4	1096552.4	128.52	%			19:12:36
2	Ag 328.068†	-3966.0	-4557.7	3.9567	ug/L	3.9567	ppb	19:12:41
2	As 188.979†	-54.0	-16.5	19.940	ug/L	19.940	ppb	19:13:01
2	B 249.677†	367.3	744.5	2.5900	ug/L	2.5900	ppb	19:12:41
2	Ba 233.527†	55747.4	55064.7	280.41	ug/L	280.41	ppb	19:12:41
2	Be 313.107†	-3244.6	4109.9	4.9923	ug/L	4.9923	ppb	19:12:41
2	Cd 226.502†	732.8	1001.8	-0.4276	ug/L	-0.4276	ppb	19:13:01
2	Co 228.616†	972.2	1051.1	8.7814	ug/L	8.7814	ppb	19:13:01
2	Cr 267.716†	28268.3	27963.1	239.65	ug/L	239.65	ppb	19:12:41
2	Cu 324.752†	20109.3	9680.6	27.798	ug/L	27.798	ppb	19:12:41
2	Mn 257.610†	2999799.8	2963543.2	2350.8	ug/L	2350.8	ppb	19:12:36
2	Mo 202.031†	216.8	182.5	11.950	ug/L	11.950	ppb	19:13:01
2	Ni 231.604†	7632.8	7394.4	118.51	ug/L	118.51	ppb	19:13:01

2	P 214.914†	1644.7	1288.3	403.26	ug/L	403.26 ppb	19:13:01
2	Pb 220.353†	846.7	865.8	62.256	ug/L	62.256 ppb	19:13:01
2	S 181.975 Axial†	281.7	210.6	174.48	ug/L	174.48 ppb	19:13:01
2	Sb 206.836†	99.5	52.9	0.7372	ug/L	0.7372 ppb	19:13:01
2	Se 196.026†	-672.6	-643.1	29.718	ug/L	29.718 ppb	19:13:01
2	Si 251.611†	432166.4	426502.1	8799.2	ug/L	8799.2 ppb	19:12:36
2	Sn 189.927†	-40.2	-45.2	-2.3993	ug/L	-2.3993 ppb	19:13:01
2	Ti 334.940†	1234292.9	1220824.4	1599.2	ug/L	1599.2 ppb	19:12:36
2	Tl 190.801†	-228.0	-163.9	-6.3046	ug/L	-6.3046 ppb	19:13:01
2	U 409.014†	-14690.9	-10682.6	-273.83	ug/L	-273.83 ppb	19:12:36
2	V 292.402†	8728.7	10278.4	46.864	ug/L	46.864 ppb	19:12:41
2	Zn 213.857†	57360.8	55560.9	302.05	ug/L	302.05 ppb	19:12:41
2	SiO2†	429364.8	423691.4	18718	ug/L	18718 ppb	19:13:43
3	Sc Radial	5541.7	5541.7	99.6	%		19:11:37
3	Y RADIAL	6178.0	6178.0	128.3	%		19:11:37
3	Al 396.153Radial†	20681.5	20859.9	18987	ug/L	18987 ppb	19:11:37
3	Ca 317.933Radial†	6004.7	6012.8	14977	ug/L	14977 ppb	19:11:37
3	Fe 238.204 Radial†	1950.4	1958.2	68698	ug/L	68698 ppb	19:11:57
3	K 766.490 Radial†	10895.6	9467.9	4129.4	ug/L	4129.4 ppb	19:11:37
3	Mg 279.077 IEC†	57.5	57.5	4497.9	ug/L	4497.9 ppb	19:11:57
3	Na 589.592 Radial†	134.7	305.6	826.43	ug/L	826.43 ppb	19:11:57
3	Sr 421.552†	5602.9	5620.8	86.459	ug/L	86.459 ppb	19:11:37
3	Sc 361.383	1066454.9	1066454.9	100.53	%		19:13:07
3	Y 371.029	1087105.2	1087105.2	127.41	%		19:13:07
3	Ag 328.068†	-4066.8	-4684.1	3.7826	ug/L	3.7826 ppb	19:13:12
3	As 188.979†	-40.2	-3.1	23.231	ug/L	23.231 ppb	19:13:32
3	B 249.677†	500.9	879.8	4.5652	ug/L	4.5652 ppb	19:13:12
3	Ba 233.527†	56588.7	56268.7	286.53	ug/L	286.53 ppb	19:13:12
3	Be 313.107†	-3328.9	4004.7	4.9382	ug/L	4.9382 ppb	19:13:12
3	Cd 226.502†	726.3	1000.1	-0.5589	ug/L	-0.5589 ppb	19:13:32
3	Co 228.616†	946.6	1032.1	8.5506	ug/L	8.5506 ppb	19:13:32
3	Cr 267.716†	28526.9	28406.5	243.45	ug/L	243.45 ppb	19:13:12
3	Cu 324.752†	20518.3	10219.8	29.187	ug/L	29.187 ppb	19:13:12
3	Mn 257.610†	2971471.0	2955118.0	2344.2	ug/L	2344.2 ppb	19:13:07
3	Mo 202.031†	215.8	182.9	12.037	ug/L	12.037 ppb	19:13:32
3	Ni 231.604†	7635.0	7446.8	119.35	ug/L	119.35 ppb	19:13:32
3	P 214.914†	1630.1	1284.6	400.89	ug/L	400.89 ppb	19:13:32
3	Pb 220.353†	835.6	860.3	61.734	ug/L	61.734 ppb	19:13:32
3	S 181.975 Axial†	270.9	201.7	166.96	ug/L	166.96 ppb	19:13:32
3	Sb 206.836†	83.1	37.2	-2.3847	ug/L	-2.3847 ppb	19:13:32
3	Se 196.026†	-675.6	-650.4	30.877	ug/L	30.877 ppb	19:13:32
3	Si 251.611†	425554.7	422771.1	8722.3	ug/L	8722.3 ppb	19:13:07
3	Sn 189.927†	-46.1	-51.3	-3.0054	ug/L	-3.0054 ppb	19:13:32
3	Ti 334.940†	1219049.6	1213789.3	1590.0	ug/L	1590.0 ppb	19:13:07
3	Tl 190.801†	-227.5	-164.9	-6.5649	ug/L	-6.5649 ppb	19:13:32
3	U 409.014†	-14582.6	-10671.6	-273.69	ug/L	-273.69 ppb	19:13:07
3	V 292.402†	8763.2	10370.2	47.257	ug/L	47.257 ppb	19:13:12
3	Zn 213.857†	58047.4	56621.7	307.86	ug/L	307.86 ppb	19:13:12
3	SiO2†	430852.1	427998.5	18908	ug/L	18908 ppb	19:13:49

Mean Data: 232744006|882342|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1070887.1	100.94	%	0.364				0.36%
Sc Radial	5576.8	100	%	0.7				0.66%
Y 371.029	1092586.9	128.06	%	0.575				0.45%
Y RADIAL	6214.9	129.1	%	0.69				0.54%
Ag 328.068†	-4637.2	3.7741	ug/L	0.18706	3.7741	ppb	0.18706	4.96%
Al 396.153Radial†	20876.4	19002	ug/L	56.4	19002	ppb	56.4	0.30%
As 188.979†	-11.7	21.126	ug/L	1.8278	21.126	ppb	1.8278	8.65%
B 249.677†	813.8	3.6169	ug/L	0.98993	3.6169	ppb	0.98993	27.37%
Ba 233.527†	55847.3	284.38	ug/L	3.444	284.38	ppb	3.444	1.21%
Be 313.107†	4067.9	4.9666	ug/L	0.02716	4.9666	ppb	0.02716	0.55%
Ca 317.933Radial†	6000.9	14947	ug/L	26.7	14947	ppb	26.7	0.18%
Cd 226.502†	1002.1	-0.4736	ug/L	0.07394	-0.4736	ppb	0.07394	15.61%
Co 228.616†	1038.1	8.6262	ug/L	0.13439	8.6262	ppb	0.13439	1.56%
Cr 267.716†	28269.8	242.27	ug/L	2.273	242.27	ppb	2.273	0.94%
Cu 324.752†	10029.9	28.684	ug/L	0.7694	28.684	ppb	0.7694	2.68%
Fe 238.204 Radial†	1941.1	68097	ug/L	532.3	68097	ppb	532.3	0.78%
K 766.490 Radial†	9471.9	4130.6	ug/L	7.61	4130.6	ppb	7.61	0.18%

Mg 279.077 IEC†	57.3	4482.2	ug/L	13.75	4482.2	ppb	13.75	0.31%
Mn 257.610†	2958809.2	2347.1	ug/L	3.35	2347.1	ppb	3.35	0.14%
Mo 202.031†	183.9	12.034	ug/L	0.0827	12.034	ppb	0.0827	0.69%
Na 589.592 Radial†	300.5	812.40	ug/L	12.524	812.40	ppb	12.524	1.54%
Ni 231.604†	7428.0	119.05	ug/L	0.469	119.05	ppb	0.469	0.39%
P 214.914†	1276.4	398.55	ug/L	6.212	398.55	ppb	6.212	1.56%
Pb 220.353†	861.9	61.913	ug/L	0.2973	61.913	ppb	0.2973	0.48%
S 181.975 Axial†	204.0	168.94	ug/L	4.863	168.94	ppb	4.863	2.88%
Sb 206.836†	47.0	-0.4418	ug/L	1.69534	-0.4418	ppb	1.69534	383.75%
Se 196.026†	-646.8	29.953	ug/L	0.8322	29.953	ppb	0.8322	2.78%
Si 251.611†	424724.3	8762.6	ug/L	38.62	8762.6	ppb	38.62	0.44%
Sn 189.927†	-43.8	-2.2370	ug/L	0.86106	-2.2370	ppb	0.86106	38.49%
Sr 421.552†	5640.5	86.763	ug/L	0.3484	86.763	ppb	0.3484	0.40%
Ti 334.940†	1216672.7	1593.7	ug/L	4.82	1593.7	ppb	4.82	0.30%
Tl 190.801†	-165.4	-6.6018	ug/L	0.31724	-6.6018	ppb	0.31724	4.81%
U 409.014†	-10601.8	-271.88	ug/L	3.255	-271.88	ppb	3.255	1.20%
V 292.402†	10369.9	47.337	ug/L	0.5176	47.337	ppb	0.5176	1.09%
Zn 213.857†	56356.0	306.44	ug/L	3.882	306.44	ppb	3.882	1.27%
SiO2†	425187.2	18784	ug/L	107.7	18784	ppb	107.7	0.57%

Sequence No.: 48
Sample ID: 232744007|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 73
Date Collected: 7/8/2009 19:16:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232744007|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5622.5	5622.5	101	%			19:17:53
1	Y RADIAL	5668.1	5668.1	117.7	%			19:17:53
1	Al 396.153Radial†	38597.4	38293.6	34856	ug/L	34856	ppb	19:17:53
1	Ca 317.933Radial†	19721.3	19502.0	48576	ug/L	48576	ppb	19:17:53
1	Fe 238.204 Radial†	2318.2	2294.1	80482	ug/L	80482	ppb	19:18:13
1	K 766.490 Radial†	15740.9	14106.3	6144.7	ug/L	6144.7	ppb	19:17:53
1	Mg 279.077 IEC†	104.1	102.9	8078.4	ug/L	8078.4	ppb	19:18:13
1	Na 589.592 Radial†	93.5	263.0	711.13	ug/L	711.13	ppb	19:18:13
1	Sr 421.552†	11811.2	11684.5	179.57	ug/L	179.57	ppb	19:17:53
1	Sc 361.383	1065767.6	1065767.6	100.46	%			19:19:11
1	Y 371.029	982367.6	982367.6	115.14	%			19:19:11
1	Ag 328.068†	-4886.7	-5502.9	4.0236	ug/L	4.0236	ppb	19:19:32
1	As 188.979†	-69.2	-32.0	24.995	ug/L	24.995	ppb	19:19:32
1	B 249.677†	716.5	1094.8	6.3113	ug/L	6.3113	ppb	19:19:11
1	Ba 233.527†	126127.1	125524.7	637.48	ug/L	637.48	ppb	19:19:11
1	Be 313.107†	-12307.8	-4935.2	4.4118	ug/L	4.4118	ppb	19:19:11
1	Cd 226.502†	969.4	1242.6	-0.1836	ug/L	-0.1836	ppb	19:19:32
1	Co 228.616†	2261.5	2341.5	22.848	ug/L	22.848	ppb	19:19:32
1	Cr 267.716†	10419.6	10400.4	90.389	ug/L	90.389	ppb	19:19:32
1	Cu 324.752†	23113.1	12815.9	36.273	ug/L	36.273	ppb	19:19:11
1	Mn 257.610†	3089925.9	3074936.0	2440.4	ug/L	2440.4	ppb	19:19:11
1	Mo 202.031†	205.0	172.3	12.421	ug/L	12.421	ppb	19:19:32
1	Ni 231.604†	3108.6	2946.1	47.201	ug/L	47.201	ppb	19:19:32
1	P 214.914†	4197.2	3841.0	1299.0	ug/L	1299.0	ppb	19:19:32
1	Pb 220.353†	2153.5	2172.7	162.10	ug/L	162.10	ppb	19:19:32
1	S 181.975 Axial†	988.7	916.4	768.81	ug/L	768.81	ppb	19:19:32
1	Sb 206.836†	98.7	52.8	1.3420	ug/L	1.3420	ppb	19:19:32
1	Se 196.026†	-810.7	-785.4	29.234	ug/L	29.234	ppb	19:19:32
1	Si 251.611†	471247.2	468527.1	9665.8	ug/L	9665.8	ppb	19:19:11
1	Sn 189.927†	-165.7	-170.4	-12.373	ug/L	-12.373	ppb	19:19:32
1	Ti 334.940†	1962259.8	1954374.9	2561.7	ug/L	2561.7	ppb	19:19:11
1	Tl 190.801†	-269.2	-206.5	-8.4769	ug/L	-8.4769	ppb	19:19:32
1	U 409.014†	-11967.8	-8078.2	-210.50	ug/L	-210.50	ppb	19:19:11
1	V 292.402†	19607.3	21170.3	106.08	ug/L	106.08	ppb	19:19:32
1	Zn 213.857†	59920.1	58523.0	317.53	ug/L	317.53	ppb	19:19:11
1	SiO2†	472089.3	469323.1	20733	ug/L	20733	ppb	19:20:31
2	Sc Radial	5559.4	5559.4	99.9	%			19:18:18
2	Y RADIAL	5616.7	5616.7	116.6	%			19:18:18
2	Al 396.153Radial†	38189.2	38318.5	34878	ug/L	34878	ppb	19:18:18
2	Ca 317.933Radial†	19540.4	19542.5	48677	ug/L	48677	ppb	19:18:18
2	Fe 238.204 Radial†	2302.7	2304.6	80849	ug/L	80849	ppb	19:18:38
2	K 766.490 Radial†	15549.3	14091.3	6138.4	ug/L	6138.4	ppb	19:18:18
2	Mg 279.077 IEC†	109.7	109.6	8611.4	ug/L	8611.4	ppb	19:18:38
2	Na 589.592 Radial†	102.3	272.8	737.61	ug/L	737.61	ppb	19:18:38
2	Sr 421.552†	11685.4	11691.2	179.67	ug/L	179.67	ppb	19:18:18
2	Sc 361.383	1068127.5	1068127.5	100.68	%			19:19:38
2	Y 371.029	985685.7	985685.7	115.53	%			19:19:38
2	Ag 328.068†	-4922.4	-5527.6	4.0343	ug/L	4.0343	ppb	19:19:58
2	As 188.979†	-56.3	-19.1	28.107	ug/L	28.107	ppb	19:19:58
2	B 249.677†	706.0	1082.7	6.0744	ug/L	6.0744	ppb	19:19:38
2	Ba 233.527†	126425.8	125544.0	637.58	ug/L	637.58	ppb	19:19:38
2	Be 313.107†	-12300.0	-4900.3	4.4223	ug/L	4.4223	ppb	19:19:38
2	Cd 226.502†	977.9	1248.9	-0.1801	ug/L	-0.1801	ppb	19:19:58
2	Co 228.616†	2259.0	2334.1	22.752	ug/L	22.752	ppb	19:19:58
2	Cr 267.716†	10435.2	10393.0	90.330	ug/L	90.330	ppb	19:19:58
2	Cu 324.752†	23048.2	12700.6	36.010	ug/L	36.010	ppb	19:19:38
2	Mn 257.610†	3092897.6	3071092.0	2437.4	ug/L	2437.4	ppb	19:19:38
2	Mo 202.031†	219.4	186.1	12.999	ug/L	12.999	ppb	19:19:58
2	Ni 231.604†	3108.2	2938.9	47.085	ug/L	47.085	ppb	19:19:58

2	P 214.914†	4204.0	3838.6	1297.8	ug/L	1297.8	ppb	19:19:58
2	Pb 220.353†	2137.1	2151.6	160.49	ug/L	160.49	ppb	19:19:58
2	S 181.975 Axial†	1013.9	939.2	788.12	ug/L	788.12	ppb	19:19:58
2	Sb 206.836†	90.8	44.7	-0.2221	ug/L	-0.2221	ppb	19:19:58
2	Se 196.026†	-812.4	-785.3	30.558	ug/L	30.558	ppb	19:19:58
2	Si 251.611†	472480.7	468715.9	9669.7	ug/L	9669.7	ppb	19:19:38
2	Sn 189.927†	-165.0	-169.3	-12.242	ug/L	-12.242	ppb	19:19:58
2	Ti 334.940†	1966517.0	1954287.8	2561.6	ug/L	2561.6	ppb	19:19:38
2	Tl 190.801†	-262.4	-199.2	-7.2558	ug/L	-7.2558	ppb	19:19:58
2	U 409.014†	-11639.6	-7725.9	-201.80	ug/L	-201.80	ppb	19:19:38
2	V 292.402†	19618.3	21138.1	105.88	ug/L	105.88	ppb	19:19:58
2	Zn 213.857†	59991.8	58462.5	317.14	ug/L	317.14	ppb	19:19:38
2	SiO2†	464568.8	460815.3	20357	ug/L	20357	ppb	19:20:36
3	Sc Radial	5561.7	5561.7	99.9	%			19:18:43
3	Y RADIAL	5601.6	5601.6	116.3	%			19:18:43
3	Al 396.153Radial†	38211.6	38325.5	34885	ug/L	34885	ppb	19:18:43
3	Ca 317.933Radial†	19643.1	19637.3	48913	ug/L	48913	ppb	19:18:43
3	Fe 238.204 Radial†	2286.1	2287.0	80234	ug/L	80234	ppb	19:19:03
3	K 766.490 Radial†	15632.5	14168.2	6171.3	ug/L	6171.3	ppb	19:18:43
3	Mg 279.077 IEC†	104.8	104.7	8222.3	ug/L	8222.3	ppb	19:19:03
3	Na 589.592 Radial†	104.6	275.1	743.80	ug/L	743.80	ppb	19:19:03
3	Sr 421.552†	11735.0	11736.2	180.36	ug/L	180.36	ppb	19:18:43
3	Sc 361.383	1074646.4	1074646.4	101.30	%			19:20:05
3	Y 371.029	991609.3	991609.3	116.22	%			19:20:05
3	Ag 328.068†	-4968.2	-5543.2	3.7739	ug/L	3.7739	ppb	19:20:25
3	As 188.979†	-75.3	-37.4	23.673	ug/L	23.673	ppb	19:20:25
3	B 249.677†	791.1	1162.5	7.3997	ug/L	7.3997	ppb	19:20:05
3	Ba 233.527†	126795.9	125147.6	635.56	ug/L	635.56	ppb	19:20:05
3	Be 313.107†	-12243.6	-4770.6	4.4597	ug/L	4.4597	ppb	19:20:05
3	Cd 226.502†	989.2	1254.2	-0.0680	ug/L	-0.0680	ppb	19:20:25
3	Co 228.616†	2277.3	2338.5	22.816	ug/L	22.816	ppb	19:20:25
3	Cr 267.716†	10471.7	10366.2	90.091	ug/L	90.091	ppb	19:20:25
3	Cu 324.752†	23248.0	12758.9	36.118	ug/L	36.118	ppb	19:20:05
3	Mn 257.610†	3109482.4	3068829.9	2435.5	ug/L	2435.5	ppb	19:20:05
3	Mo 202.031†	207.7	173.3	12.444	ug/L	12.444	ppb	19:20:25
3	Ni 231.604†	3133.0	2944.6	47.177	ug/L	47.177	ppb	19:20:25
3	P 214.914†	4228.7	3837.6	1298.0	ug/L	1298.0	ppb	19:20:25
3	Pb 220.353†	2143.1	2144.8	160.04	ug/L	160.04	ppb	19:20:25
3	S 181.975 Axial†	1009.9	929.2	779.64	ug/L	779.64	ppb	19:20:25
3	Sb 206.836†	89.1	42.5	-0.7024	ug/L	-0.7024	ppb	19:20:25
3	Se 196.026†	-815.4	-783.3	29.034	ug/L	29.034	ppb	19:20:25
3	Si 251.611†	474730.5	468090.2	9656.8	ug/L	9656.8	ppb	19:20:05
3	Sn 189.927†	-181.1	-184.2	-13.781	ug/L	-13.781	ppb	19:20:25
3	Ti 334.940†	1977529.6	1953311.1	2560.3	ug/L	2560.3	ppb	19:20:05
3	Tl 190.801†	-246.0	-181.5	-4.2850	ug/L	-4.2850	ppb	19:20:25
3	U 409.014†	-11848.1	-7861.6	-205.09	ug/L	-205.09	ppb	19:20:05
3	V 292.402†	19732.5	21132.6	105.92	ug/L	105.92	ppb	19:20:25
3	Zn 213.857†	60339.6	58444.4	317.11	ug/L	317.11	ppb	19:20:05
3	SiO2†	471794.1	465149.1	20549	ug/L	20549	ppb	19:20:42

Mean Data: 232744007|882342|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1069513.8	100.81	%	0.433				0.43%
Sc Radial	5581.2	100	%	0.6				0.64%
Y 371.029	986554.2	115.63	%	0.549				0.47%
Y RADIAL	5628.8	116.9	%	0.72				0.62%
Ag 328.068†	-5524.5	3.9439	ug/L	0.14736	3.9439	ppb	0.14736	3.74%
Al 396.153Radial†	38312.5	34873	ug/L	15.2	34873	ppb	15.2	0.04%
As 188.979†	-29.5	25.592	ug/L	2.2762	25.592	ppb	2.2762	8.89%
B 249.677†	1113.3	6.5951	ug/L	0.70676	6.5951	ppb	0.70676	10.72%
Ba 233.527†	125405.4	636.88	ug/L	1.137	636.88	ppb	1.137	0.18%
Be 313.107†	-4868.7	4.4313	ug/L	0.02519	4.4313	ppb	0.02519	0.57%
Ca 317.933Radial†	19560.6	48722	ug/L	173.0	48722	ppb	173.0	0.35%
Cd 226.502†	1248.6	-0.1439	ug/L	0.06574	-0.1439	ppb	0.06574	45.69%
Co 228.616†	2338.1	22.805	ug/L	0.0487	22.805	ppb	0.0487	0.21%
Cr 267.716†	10386.5	90.270	ug/L	0.1578	90.270	ppb	0.1578	0.17%
Cu 324.752†	12758.5	36.134	ug/L	0.1323	36.134	ppb	0.1323	0.37%
Fe 238.204 Radial†	2295.2	80522	ug/L	309.7	80522	ppb	309.7	0.38%
K 766.490 Radial†	14121.9	6151.5	ug/L	17.48	6151.5	ppb	17.48	0.28%

Mg 279.077 IEC†	105.7	8304.0	ug/L	275.70	8304.0	ppb	275.70	3.32%
Mn 257.610†	3071619.3	2437.8	ug/L	2.45	2437.8	ppb	2.45	0.10%
Mo 202.031†	177.3	12.621	ug/L	0.3272	12.621	ppb	0.3272	2.59%
Na 589.592 Radial†	270.3	730.85	ug/L	17.356	730.85	ppb	17.356	2.37%
Ni 231.604†	2943.2	47.155	ug/L	0.0612	47.155	ppb	0.0612	0.13%
P 214.914†	3839.1	1298.3	ug/L	0.61	1298.3	ppb	0.61	0.05%
Pb 220.353†	2156.4	160.88	ug/L	1.085	160.88	ppb	1.085	0.67%
S 181.975 Axial†	928.2	778.86	ug/L	9.678	778.86	ppb	9.678	1.24%
Sb 206.836†	46.7	0.1392	ug/L	1.06898	0.1392	ppb	1.06898	768.09%
Se 196.026†	-784.7	29.609	ug/L	0.8280	29.609	ppb	0.8280	2.80%
Si 251.611†	468444.4	9664.1	ug/L	6.62	9664.1	ppb	6.62	0.07%
Sn 189.927†	-174.7	-12.799	ug/L	0.8537	-12.799	ppb	0.8537	6.67%
Sr 421.552†	11704.0	179.87	ug/L	0.431	179.87	ppb	0.431	0.24%
Ti 334.940†	1953991.3	2561.2	ug/L	0.76	2561.2	ppb	0.76	0.03%
Tl 190.801†	-195.7	-6.6726	ug/L	2.15597	-6.6726	ppb	2.15597	32.31%
U 409.014†	-7888.6	-205.80	ug/L	4.391	-205.80	ppb	4.391	2.13%
V 292.402†	21147.0	105.96	ug/L	0.107	105.96	ppb	0.107	0.10%
Zn 213.857†	58476.6	317.26	ug/L	0.235	317.26	ppb	0.235	0.07%
SiO2†	465095.9	20546	ug/L	188.0	20546	ppb	188.0	0.91%

Sequence No.: 49
Sample ID: 232744008|882342|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 74
Date Collected: 7/8/2009 19:22:53
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232744008|882342|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5588.6	5588.6	100	%			19:24:46
1	Y RADIAL	6167.0	6167.0	128.1	%			19:24:46
1	Al 396.153Radial†	85869.8	85596.4	77913	ug/L	77913	ppb	19:24:46
1	Ca 317.933Radial†	6506.0	6461.4	16094	ug/L	16094	ppb	19:24:46
1	Fe 238.204 Radial†	2937.9	2925.1	102620	ug/L	102620	ppb	19:25:06
1	K 766.490 Radial†	25657.3	24074.9	10488	ug/L	10488	ppb	19:24:46
1	Mg 279.077 IEC†	135.0	134.3	10546	ug/L	10546	ppb	19:25:06
1	Na 589.592 Radial†	577.6	745.6	2016.0	ug/L	2016.0	ppb	19:25:06
1	Sr 421.552†	10169.5	10120.7	155.78	ug/L	155.78	ppb	19:24:46
1	Sc 361.383	1087764.8	1087764.8	102.53	%			19:26:05
1	Y 371.029	1098600.0	1098600.0	128.76	%			19:26:05
1	Ag 328.068†	-6537.7	-7014.7	5.8476	ug/L	5.8476	ppb	19:26:25
1	As 188.979†	-24.5	13.0	41.400	ug/L	41.400	ppb	19:26:25
1	B 249.677†	1312.7	1661.8	12.183	ug/L	12.183	ppb	19:26:05
1	Ba 233.527†	186325.4	181696.4	922.39	ug/L	922.39	ppb	19:26:05
1	Be 313.107†	5358.9	12542.7	10.358	ug/L	10.358	ppb	19:26:05
1	Cd 226.502†	1301.1	1546.6	-0.5161	ug/L	-0.5161	ppb	19:26:25
1	Co 228.616†	3248.0	3258.2	33.604	ug/L	33.604	ppb	19:26:25
1	Cr 267.716†	10058.8	9838.8	86.117	ug/L	86.117	ppb	19:26:25
1	Cu 324.752†	34201.1	23164.6	63.086	ug/L	63.086	ppb	19:26:05
1	Mn 257.610†	3892244.8	3795227.8	3012.5	ug/L	3012.5	ppb	19:26:05
1	Mo 202.031†	132.5	97.4	10.943	ug/L	10.943	ppb	19:26:25
1	Ni 231.604†	4108.2	3858.4	61.816	ug/L	61.816	ppb	19:26:25
1	P 214.914†	3202.2	2786.1	919.02	ug/L	919.02	ppb	19:26:25
1	Pb 220.353†	1583.8	1573.7	123.50	ug/L	123.50	ppb	19:26:25
1	S 181.975 Axial†	1728.6	1618.1	1354.3	ug/L	1354.3	ppb	19:26:25
1	Sb 206.836†	84.1	36.6	-3.1440	ug/L	-3.1440	ppb	19:26:25
1	Se 196.026†	-1040.8	-993.4	41.670	ug/L	41.670	ppb	19:26:25
1	Si 251.611†	638999.2	622647.4	12845	ug/L	12845	ppb	19:26:05
1	Sn 189.927†	-18.5	-23.5	-0.1644	ug/L	-0.1644	ppb	19:26:25
1	Ti 334.940†	2175066.8	2122423.1	2779.5	ug/L	2779.5	ppb	19:26:05
1	Tl 190.801†	-300.3	-231.5	-8.1898	ug/L	-8.1898	ppb	19:26:25
1	U 409.014†	-15735.5	-11511.8	-298.40	ug/L	-298.40	ppb	19:26:05
1	V 292.402†	26592.4	27588.1	139.06	ug/L	139.06	ppb	19:26:05
1	Zn 213.857†	52587.2	50165.2	268.24	ug/L	268.24	ppb	19:26:05
1	SiO2†	634055.7	617783.8	27290	ug/L	27290	ppb	19:27:24
2	Sc Radial	5654.0	5654.0	102	%			19:25:11
2	Y RADIAL	6209.4	6209.4	128.9	%			19:25:11
2	Al 396.153Radial†	86944.0	85665.5	77976	ug/L	77976	ppb	19:25:11
2	Ca 317.933Radial†	6606.9	6485.8	16155	ug/L	16155	ppb	19:25:11
2	Fe 238.204 Radial†	2940.9	2894.2	101530	ug/L	101530	ppb	19:25:31
2	K 766.490 Radial†	25890.6	24009.3	10458	ug/L	10458	ppb	19:25:11
2	Mg 279.077 IEC†	133.7	131.4	10320	ug/L	10320	ppb	19:25:31
2	Na 589.592 Radial†	591.0	752.1	2033.6	ug/L	2033.6	ppb	19:25:31
2	Sr 421.552†	10309.1	10141.1	156.09	ug/L	156.09	ppb	19:25:11
2	Sc 361.383	1086406.3	1086406.3	102.41	%			19:26:32
2	Y 371.029	1095567.6	1095567.6	128.40	%			19:26:32
2	Ag 328.068†	-6536.6	-7021.6	5.4742	ug/L	5.4742	ppb	19:26:52
2	As 188.979†	-33.7	4.0	39.126	ug/L	39.126	ppb	19:26:52
2	B 249.677†	1257.5	1609.5	11.511	ug/L	11.511	ppb	19:26:32
2	Ba 233.527†	187075.0	182655.6	927.22	ug/L	927.22	ppb	19:26:32
2	Be 313.107†	5346.0	12536.6	10.376	ug/L	10.376	ppb	19:26:32
2	Cd 226.502†	1337.4	1583.6	-0.1103	ug/L	-0.1103	ppb	19:26:52
2	Co 228.616†	3239.0	3253.3	33.543	ug/L	33.543	ppb	19:26:52
2	Cr 267.716†	10037.9	9830.7	86.029	ug/L	86.029	ppb	19:26:52
2	Cu 324.752†	34357.3	23358.9	63.503	ug/L	63.503	ppb	19:26:32
2	Mn 257.610†	3906204.8	3813606.6	3026.8	ug/L	3026.8	ppb	19:26:32
2	Mo 202.031†	143.2	108.1	11.295	ug/L	11.295	ppb	19:26:52
2	Ni 231.604†	4136.0	3890.6	62.331	ug/L	62.331	ppb	19:26:52

2	P 214.914†	3230.6	2817.8	931.03	ug/L	931.03 ppb	19:26:52
2	Pb 220.353†	1561.3	1553.7	122.11	ug/L	122.11 ppb	19:26:52
2	S 181.975 Axial†	1749.7	1640.8	1373.5	ug/L	1373.5 ppb	19:26:52
2	Sb 206.836†	93.4	45.7	-1.3976	ug/L	-1.3976 ppb	19:26:52
2	Se 196.026†	-1026.9	-981.2	41.837	ug/L	41.837 ppb	19:26:52
2	Si 251.611†	641861.1	626221.3	12918	ug/L	12918 ppb	19:26:32
2	Sn 189.927†	-21.5	-26.4	-0.4807	ug/L	-0.4807 ppb	19:26:52
2	Ti 334.940†	2179228.3	2129139.5	2788.3	ug/L	2788.3 ppb	19:26:32
2	Tl 190.801†	-294.8	-226.5	-7.2173	ug/L	-7.2173 ppb	19:26:52
2	U 409.014†	-15932.1	-11723.1	-303.51	ug/L	-303.51 ppb	19:26:32
2	V 292.402†	26535.8	27565.2	139.06	ug/L	139.06 ppb	19:26:32
2	Zn 213.857†	52706.8	50346.1	269.37	ug/L	269.37 ppb	19:26:32
2	SiO2†	640802.9	625145.8	27615	ug/L	27615 ppb	19:27:30
3	Sc Radial	5775.5	5775.5	104	%		19:25:36
3	Y RADIAL	6349.7	6349.7	131.9	%		19:25:36
3	Al 396.153Radial†	87934.4	84819.2	77205	ug/L	77205 ppb	19:25:36
3	Ca 317.933Radial†	6662.1	6402.2	15947	ug/L	15947 ppb	19:25:36
3	Fe 238.204 Radial†	2933.8	2826.5	99159	ug/L	99159 ppb	19:25:56
3	K 766.490 Radial†	26203.3	23774.4	10355	ug/L	10355 ppb	19:25:36
3	Mg 279.077 IEC†	133.7	128.7	10106	ug/L	10106 ppb	19:25:56
3	Na 589.592 Radial†	578.8	728.1	1968.6	ug/L	1968.6 ppb	19:25:56
3	Sr 421.552†	10480.1	10092.3	155.34	ug/L	155.34 ppb	19:25:36
3	Sc 361.383	1090147.5	1090147.5	102.76	%		19:26:58
3	Y 371.029	1100091.0	1100091.0	128.93	%		19:26:58
3	Ag 328.068†	-6569.8	-7032.0	4.6709	ug/L	4.6709 ppb	19:27:19
3	As 188.979†	-33.7	4.1	38.647	ug/L	38.647 ppb	19:27:19
3	B 249.677†	1410.1	1753.7	14.073	ug/L	14.073 ppb	19:26:58
3	Ba 233.527†	187511.6	182453.6	926.14	ug/L	926.14 ppb	19:26:58
3	Be 313.107†	5398.8	12570.1	10.376	ug/L	10.376 ppb	19:26:58
3	Cd 226.502†	1312.5	1554.9	-0.0445	ug/L	-0.0445 ppb	19:27:19
3	Co 228.616†	3287.7	3289.9	34.041	ug/L	34.041 ppb	19:27:19
3	Cr 267.716†	10058.8	9817.4	85.869	ug/L	85.869 ppb	19:27:19
3	Cu 324.752†	34389.5	23275.1	63.159	ug/L	63.159 ppb	19:26:58
3	Mn 257.610†	3911229.2	3805405.5	3020.1	ug/L	3020.1 ppb	19:26:58
3	Mo 202.031†	133.2	97.8	10.722	ug/L	10.722 ppb	19:27:19
3	Ni 231.604†	4160.4	3900.5	62.490	ug/L	62.490 ppb	19:27:19
3	P 214.914†	3238.0	2814.1	931.44	ug/L	931.44 ppb	19:27:19
3	Pb 220.353†	1555.6	1542.9	121.37	ug/L	121.37 ppb	19:27:19
3	S 181.975 Axial†	1731.1	1616.8	1353.4	ug/L	1353.4 ppb	19:27:19
3	Sb 206.836†	90.4	42.6	-2.0061	ug/L	-2.0061 ppb	19:27:19
3	Se 196.026†	-1025.5	-976.4	35.016	ug/L	35.016 ppb	19:27:19
3	Si 251.611†	642554.5	624745.1	12888	ug/L	12888 ppb	19:26:58
3	Sn 189.927†	-9.1	-14.3	0.7276	ug/L	0.7276 ppb	19:27:19
3	Ti 334.940†	2183024.7	2125530.8	2783.6	ug/L	2783.6 ppb	19:26:58
3	Tl 190.801†	-311.9	-242.2	-9.9337	ug/L	-9.9337 ppb	19:27:19
3	U 409.014†	-15864.3	-11603.6	-300.25	ug/L	-300.25 ppb	19:26:58
3	V 292.402†	26657.9	27595.1	139.56	ug/L	139.56 ppb	19:26:58
3	Zn 213.857†	52892.1	50349.8	269.66	ug/L	269.66 ppb	19:26:58
3	SiO2†	647638.4	629650.2	27814	ug/L	27814 ppb	19:27:35

Mean Data: 232744008|882342|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1088106.2	102.57	%	0.179				0.17%
Sc Radial	5672.7	102	%	1.7				1.67%
Y 371.029	1098086.2	128.70	%	0.270				0.21%
Y RADIAL	6242.0	129.6	%	1.99				1.53%
Ag 328.068†	-7022.8	5.3309	ug/L	0.60129	5.3309	ppb	0.60129	11.28%
Al 396.153Radial†	85360.4	77698	ug/L	427.8	77698	ppb	427.8	0.55%
As 188.979†	7.1	39.724	ug/L	1.4707	39.724	ppb	1.4707	3.70%
B 249.677†	1675.0	12.589	ug/L	1.3285	12.589	ppb	1.3285	10.55%
Ba 233.527†	182268.6	925.25	ug/L	2.535	925.25	ppb	2.535	0.27%
Be 313.107†	12549.8	10.370	ug/L	0.0105	10.370	ppb	0.0105	0.10%
Ca 317.933Radial†	6449.8	16065	ug/L	107.0	16065	ppb	107.0	0.67%
Cd 226.502†	1561.7	-0.2236	ug/L	0.25539	-0.2236	ppb	0.25539	114.21%
Co 228.616†	3267.1	33.729	ug/L	0.2717	33.729	ppb	0.2717	0.81%
Cr 267.716†	9829.0	86.005	ug/L	0.1260	86.005	ppb	0.1260	0.15%
Cu 324.752†	23266.2	63.249	ug/L	0.2225	63.249	ppb	0.2225	0.35%
Fe 238.204 Radial†	2881.9	101100	ug/L	1769.3	101100	ppb	1769.3	1.75%
K 766.490 Radial†	23952.9	10434	ug/L	69.9	10434	ppb	69.9	0.67%

Mg 279.077 IEC†	131.4	10324	ug/L	220.0	10324	ppb	220.0	2.13%
Mn 257.610†	3804746.7	3019.8	ug/L	7.20	3019.8	ppb	7.20	0.24%
Mo 202.031†	101.1	10.987	ug/L	0.2892	10.987	ppb	0.2892	2.63%
Na 589.592 Radial†	741.9	2006.1	ug/L	33.58	2006.1	ppb	33.58	1.67%
Ni 231.604†	3883.2	62.212	ug/L	0.3524	62.212	ppb	0.3524	0.57%
P 214.914†	2806.0	927.16	ug/L	7.055	927.16	ppb	7.055	0.76%
Pb 220.353†	1556.8	122.33	ug/L	1.079	122.33	ppb	1.079	0.88%
S 181.975 Axial†	1625.2	1360.4	ug/L	11.37	1360.4	ppb	11.37	0.84%
Sb 206.836†	41.6	-2.1826	ug/L	0.88645	-2.1826	ppb	0.88645	40.61%
Se 196.026†	-983.7	39.508	ug/L	3.8908	39.508	ppb	3.8908	9.85%
Si 251.611†	624537.9	12884	ug/L	37.1	12884	ppb	37.1	0.29%
Sn 189.927†	-21.4	0.0275	ug/L	0.62659	0.0275	ppb	0.62659	>999.9%
Sr 421.552†	10118.1	155.74	ug/L	0.377	155.74	ppb	0.377	0.24%
Ti 334.940†	2125697.8	2783.8	ug/L	4.40	2783.8	ppb	4.40	0.16%
Tl 190.801†	-233.4	-8.4469	ug/L	1.37636	-8.4469	ppb	1.37636	16.29%
U 409.014†	-11612.8	-300.72	ug/L	2.586	-300.72	ppb	2.586	0.86%
V 292.402†	27582.8	139.23	ug/L	0.286	139.23	ppb	0.286	0.21%
Zn 213.857†	50287.1	269.09	ug/L	0.749	269.09	ppb	0.749	0.28%
SiO2†	624193.2	27573	ug/L	264.7	27573	ppb	264.7	0.96%

Sequence No.: 50
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 19:29:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5579.6	5579.6	100	%			19:31:38
1	Y RADIAL	4874.6	4874.6	101.2	%			19:31:38
1	Al 396.153Radial†	5236.9	5315.2	4816.5	ug/L	4816.5	ppb	19:31:38
1	Ca 317.933Radial†	1954.9	1932.8	4814.2	ug/L	4814.2	ppb	19:31:58
1	Fe 238.204 Radial†	136.8	136.1	4788.5	ug/L	4788.5	ppb	19:31:58
1	K 766.490 Radial†	13099.3	11591.4	5023.5	ug/L	5023.5	ppb	19:31:38
1	Mg 279.077 IEC†	62.3	62.0	4913.8	ug/L	4913.8	ppb	19:31:58
1	Na 589.592 Radial†	3359.6	3521.1	9520.6	ug/L	9520.6	ppb	19:31:38
1	Sr 421.552†	32770.4	32677.9	503.41	ug/L	503.41	ppb	19:31:38
1	Sc 361.383	1070146.9	1070146.9	100.87	%			19:32:57
1	Y 371.029	852484.1	852484.1	99.914	%			19:32:57
1	Ag 328.068†	127666.5	125922.7	501.45	ug/L	501.45	ppb	19:32:57
1	As 188.979†	2076.4	2095.4	495.00	ug/L	495.00	ppb	19:33:17
1	B 249.677†	31028.7	31141.6	483.48	ug/L	483.48	ppb	19:32:57
1	Ba 233.527†	98321.4	97446.0	494.44	ug/L	494.44	ppb	19:32:57
1	Be 313.107†	1595760.9	1589262.6	495.32	ug/L	495.32	ppb	19:32:57
1	Cd 226.502†	66557.9	66259.4	495.33	ug/L	495.33	ppb	19:32:57
1	Co 228.616†	39092.0	38843.9	484.06	ug/L	484.06	ppb	19:33:17
1	Cr 267.716†	58269.9	57794.0	492.93	ug/L	492.93	ppb	19:32:57
1	Cu 324.752†	212056.8	200029.7	493.80	ug/L	493.80	ppb	19:32:57
1	Mn 257.610†	630775.5	624487.8	494.05	ug/L	494.05	ppb	19:32:57
1	Mo 202.031†	12701.7	12559.9	503.07	ug/L	503.07	ppb	19:33:17
1	Ni 231.604†	30808.3	30393.3	486.83	ug/L	486.83	ppb	19:33:17
1	P 214.914†	7433.8	7032.5	2410.6	ug/L	2410.6	ppb	19:33:17
1	Pb 220.353†	6663.5	6634.9	498.73	ug/L	498.73	ppb	19:33:17
1	S 181.975 Axial†	1255.5	1176.8	995.15	ug/L	995.15	ppb	19:33:17
1	Sb 206.836†	2574.6	2506.9	499.06	ug/L	499.06	ppb	19:33:17
1	Se 196.026†	1512.4	1521.0	513.27	ug/L	513.27	ppb	19:33:17
1	Si 251.611†	123290.6	121663.1	2498.5	ug/L	2498.5	ppb	19:32:57
1	Sn 189.927†	4787.8	4740.9	493.53	ug/L	493.53	ppb	19:33:17
1	Ti 334.940†	382228.6	380028.9	497.41	ug/L	497.41	ppb	19:32:57
1	Tl 190.801†	2883.4	2919.8	494.45	ug/L	494.45	ppb	19:33:17
1	U 409.014†	16048.9	19744.7	488.36	ug/L	488.36	ppb	19:32:57
1	V 292.402†	85739.2	86649.8	497.48	ug/L	497.48	ppb	19:32:57
1	Zn 213.857†	90657.7	88750.4	491.09	ug/L	491.09	ppb	19:32:57
1	SiO2†	121360.9	119707.9	5263.4	ug/L	5263.4	ppb	19:34:18
2	Sc Radial	5526.7	5526.7	99.3	%			19:32:03
2	Y RADIAL	4806.2	4806.2	99.80	%			19:32:03
2	Al 396.153Radial†	5220.4	5348.7	4846.9	ug/L	4846.9	ppb	19:32:03
2	Ca 317.933Radial†	1960.2	1956.8	4874.2	ug/L	4874.2	ppb	19:32:23
2	Fe 238.204 Radial†	138.1	138.7	4882.5	ug/L	4882.5	ppb	19:32:23
2	K 766.490 Radial†	13206.6	11824.7	5124.6	ug/L	5124.6	ppb	19:32:03
2	Mg 279.077 IEC†	63.5	63.8	5057.3	ug/L	5057.3	ppb	19:32:23
2	Na 589.592 Radial†	3425.4	3619.5	9786.7	ug/L	9786.7	ppb	19:32:03
2	Sr 421.552†	32787.4	33008.3	508.50	ug/L	508.50	ppb	19:32:03
2	Sc 361.383	1069421.6	1069421.6	100.80	%			19:33:25
2	Y 371.029	850767.2	850767.2	99.713	%			19:33:25
2	Ag 328.068†	127828.6	126169.4	502.47	ug/L	502.47	ppb	19:33:25
2	As 188.979†	2100.4	2120.5	500.93	ug/L	500.93	ppb	19:33:45
2	B 249.677†	31177.1	31309.7	486.08	ug/L	486.08	ppb	19:33:25
2	Ba 233.527†	98701.0	97888.6	496.69	ug/L	496.69	ppb	19:33:25
2	Be 313.107†	1601692.5	1596219.7	497.48	ug/L	497.48	ppb	19:33:25
2	Cd 226.502†	67042.3	66784.7	499.25	ug/L	499.25	ppb	19:33:25
2	Co 228.616†	39304.2	39080.8	487.01	ug/L	487.01	ppb	19:33:45
2	Cr 267.716†	58492.3	58053.8	495.14	ug/L	495.14	ppb	19:33:25
2	Cu 324.752†	212098.8	200214.0	494.26	ug/L	494.26	ppb	19:33:25
2	Mn 257.610†	634292.6	628401.0	497.15	ug/L	497.15	ppb	19:33:25
2	Mo 202.031†	12730.1	12596.7	504.55	ug/L	504.55	ppb	19:33:45
2	Ni 231.604†	30997.1	30601.3	490.16	ug/L	490.16	ppb	19:33:45

2	P 214.914†	7458.6	7062.1	2421.0 ug/L	2421.0 ppb	19:33:45
2	Pb 220.353†	6713.3	6688.8	502.77 ug/L	502.77 ppb	19:33:45
2	S 181.975 Axial†	1263.2	1185.3	1002.4 ug/L	1002.4 ppb	19:33:45
2	Sb 206.836†	2588.4	2522.4	502.15 ug/L	502.15 ppb	19:33:45
2	Se 196.026†	1517.5	1527.0	515.57 ug/L	515.57 ppb	19:33:45
2	Si 251.611†	123622.5	122075.3	2506.9 ug/L	2506.9 ppb	19:33:25
2	Sn 189.927†	4824.8	4780.8	497.69 ug/L	497.69 ppb	19:33:45
2	Ti 334.940†	383706.0	381751.4	499.67 ug/L	499.67 ppb	19:33:25
2	Tl 190.801†	2906.9	2945.1	498.72 ug/L	498.72 ppb	19:33:45
2	U 409.014†	15864.7	19572.8	484.08 ug/L	484.08 ppb	19:33:25
2	V 292.402†	86026.6	86992.5	499.42 ug/L	499.42 ppb	19:33:25
2	Zn 213.857†	91066.7	89217.1	493.65 ug/L	493.65 ppb	19:33:25
2	SiO2†	122592.3	121011.1	5320.8 ug/L	5320.8 ppb	19:34:23
3	Sc Radial	5491.9	5491.9	98.7 %		19:32:28
3	Y RADIAL	4742.0	4742.0	98.47 %		19:32:28
3	Al 396.153Radial†	5225.2	5386.7	4881.6 ug/L	4881.6 ppb	19:32:28
3	Ca 317.933Radial†	1954.3	1963.3	4890.2 ug/L	4890.2 ppb	19:32:48
3	Fe 238.204 Radial†	139.0	140.5	4943.8 ug/L	4943.8 ppb	19:32:48
3	K 766.490 Radial†	13129.4	11830.6	5127.3 ug/L	5127.3 ppb	19:32:28
3	Mg 279.077 IEC†	64.2	64.8	5141.9 ug/L	5141.9 ppb	19:32:48
3	Na 589.592 Radial†	3345.3	3560.1	9626.2 ug/L	9626.2 ppb	19:32:28
3	Sr 421.552†	32544.5	32971.0	507.93 ug/L	507.93 ppb	19:32:28
3	Sc 361.383	1067389.8	1067389.8	100.61 %		19:33:52
3	Y 371.029	849890.2	849890.2	99.610 %		19:33:52
3	Ag 328.068†	127915.7	126497.3	503.79 ug/L	503.79 ppb	19:33:52
3	As 188.979†	2089.0	2113.1	499.21 ug/L	499.21 ppb	19:34:12
3	B 249.677†	31139.2	31330.8	486.40 ug/L	486.40 ppb	19:33:52
3	Ba 233.527†	98481.1	97856.4	496.53 ug/L	496.53 ppb	19:33:52
3	Be 313.107†	1597578.3	1595155.0	497.15 ug/L	497.15 ppb	19:33:52
3	Cd 226.502†	66805.2	66675.6	498.43 ug/L	498.43 ppb	19:33:52
3	Co 228.616†	39252.6	39103.7	487.29 ug/L	487.29 ppb	19:34:12
3	Cr 267.716†	58510.6	58182.5	496.24 ug/L	496.24 ppb	19:33:52
3	Cu 324.752†	212145.6	200661.0	495.37 ug/L	495.37 ppb	19:33:52
3	Mn 257.610†	632379.1	627696.8	496.60 ug/L	496.60 ppb	19:33:52
3	Mo 202.031†	12734.3	12624.9	505.68 ug/L	505.68 ppb	19:34:12
3	Ni 231.604†	30995.1	30657.9	491.06 ug/L	491.06 ppb	19:34:12
3	P 214.914†	7454.6	7072.2	2424.4 ug/L	2424.4 ppb	19:34:12
3	Pb 220.353†	6705.0	6693.2	503.10 ug/L	503.10 ppb	19:34:12
3	S 181.975 Axial†	1263.4	1187.9	1004.6 ug/L	1004.6 ppb	19:34:12
3	Sb 206.836†	2589.4	2528.2	503.29 ug/L	503.29 ppb	19:34:12
3	Se 196.026†	1521.2	1533.6	517.94 ug/L	517.94 ppb	19:34:12
3	Si 251.611†	123412.2	122099.7	2507.4 ug/L	2507.4 ppb	19:33:52
3	Sn 189.927†	4810.8	4776.0	497.19 ug/L	497.19 ppb	19:34:12
3	Ti 334.940†	383009.9	381784.1	499.72 ug/L	499.72 ppb	19:33:52
3	Tl 190.801†	2888.0	2931.8	496.47 ug/L	496.47 ppb	19:34:12
3	U 409.014†	15804.6	19543.0	483.33 ug/L	483.33 ppb	19:33:52
3	V 292.402†	85924.5	87053.4	499.77 ug/L	499.77 ppb	19:33:52
3	Zn 213.857†	90916.1	89239.5	493.76 ug/L	493.76 ppb	19:33:52
3	SiO2†	123444.6	122089.7	5368.4 ug/L	5368.4 ppb	19:34:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1068986.1	100.76	%	0.135				0.13%
Sc Radial	5532.8	99.4	%	0.79				0.80%
Y 371.029	851047.2	99.746	%	0.1546				0.16%
Y RADIAL	4807.6	99.83	%	1.377				1.38%
Ag 328.068†	126196.4	502.57	ug/L	1.172	502.57	ppb	1.172	0.23%
QC value within limits for Ag 328.068 Recovery = 100.51%								
Al 396.153Radial†	5350.2	4848.3	ug/L	32.53	4848.3	ppb	32.53	0.67%
QC value within limits for Al 396.153Radial Recovery = 96.97%								
As 188.979†	2109.7	498.38	ug/L	3.053	498.38	ppb	3.053	0.61%
QC value within limits for As 188.979 Recovery = 99.68%								
B 249.677†	31260.7	485.32	ug/L	1.601	485.32	ppb	1.601	0.33%
QC value within limits for B 249.677 Recovery = 97.06%								
Ba 233.527†	97730.3	495.88	ug/L	1.254	495.88	ppb	1.254	0.25%
QC value within limits for Ba 233.527 Recovery = 99.18%								
Be 313.107†	1593545.8	496.65	ug/L	1.168	496.65	ppb	1.168	0.24%
QC value within limits for Be 313.107 Recovery = 99.33%								
Ca 317.933Radial†	1951.0	4859.5	ug/L	40.06	4859.5	ppb	40.06	0.82%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.19%
Cd 226.502†            66573.2      497.67 ug/L        2.067      497.67 ppb        2.067   0.42%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            39009.5      486.12 ug/L        1.790      486.12 ppb        1.790   0.37%
   QC value within limits for Co 228.616  Recovery = 97.22%
Cr 267.716†            58010.1      494.77 ug/L        1.690      494.77 ppb        1.690   0.34%
   QC value within limits for Cr 267.716  Recovery = 98.95%
Cu 324.752†           200301.6      494.48 ug/L        0.805      494.48 ppb        0.805   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.90%
Fe 238.204 Radial†       138.4      4871.6 ug/L       78.24      4871.6 ppb       78.24   1.61%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.43%
K 766.490 Radial†      11748.9      5091.8 ug/L       59.16      5091.8 ppb       59.16   1.16%
   QC value within limits for K 766.490 Radial  Recovery = 101.84%
Mg 279.077 IEC†           63.5      5037.7 ug/L      115.33      5037.7 ppb      115.33   2.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.75%
Mn 257.610†           626861.9      495.93 ug/L        1.655      495.93 ppb        1.655   0.33%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†            12593.9      504.43 ug/L        1.310      504.43 ppb        1.310   0.26%
   QC value within limits for Mo 202.031  Recovery = 100.89%
Na 589.592 Radial†      3566.9      9644.5 ug/L      133.99      9644.5 ppb      133.99   1.39%
   QC value within limits for Na 589.592 Radial  Recovery = 96.45%
Ni 231.604†            30550.8      489.35 ug/L        2.232      489.35 ppb        2.232   0.46%
   QC value within limits for Ni 231.604  Recovery = 97.87%
P 214.914†              7055.6      2418.7 ug/L        7.17      2418.7 ppb         7.17   0.30%
   QC value within limits for P 214.914  Recovery = 96.75%
Pb 220.353†             6672.3      501.53 ug/L        2.434      501.53 ppb        2.434   0.49%
   QC value within limits for Pb 220.353  Recovery = 100.31%
S 181.975 Axial†        1183.3      1000.7 ug/L        4.92      1000.7 ppb         4.92   0.49%
   QC value within limits for S 181.975 Axial  Recovery = 100.07%
Sb 206.836†             2519.1      501.50 ug/L        2.187      501.50 ppb        2.187   0.44%
   QC value within limits for Sb 206.836  Recovery = 100.30%
Se 196.026†             1527.2      515.59 ug/L        2.333      515.59 ppb        2.333   0.45%
   QC value within limits for Se 196.026  Recovery = 103.12%
Si 251.611†           121946.1      2504.3 ug/L        5.01      2504.3 ppb         5.01   0.20%
   QC value within limits for Si 251.611  Recovery = 100.17%
Sn 189.927†             4765.9      496.14 ug/L        2.269      496.14 ppb        2.269   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.23%
Sr 421.552†            32885.7      506.61 ug/L        2.787      506.61 ppb        2.787   0.55%
   QC value within limits for Sr 421.552  Recovery = 101.32%
Ti 334.940†           381188.1      498.93 ug/L        1.318      498.93 ppb        1.318   0.26%
   QC value within limits for Ti 334.940  Recovery = 99.79%
Tl 190.801†             2932.2      496.55 ug/L        2.133      496.55 ppb        2.133   0.43%
   QC value within limits for Tl 190.801  Recovery = 99.31%
U 409.014†             19620.1      485.26 ug/L        2.714      485.26 ppb        2.714   0.56%
   QC value within limits for U 409.014  Recovery = 97.05%
V 292.402†             86898.6      498.89 ug/L        1.234      498.89 ppb        1.234   0.25%
   QC value within limits for V 292.402  Recovery = 99.78%
Zn 213.857†            89069.0      492.83 ug/L        1.515      492.83 ppb        1.515   0.31%
   QC value within limits for Zn 213.857  Recovery = 98.57%
SiO2†                 120936.2      5317.6 ug/L       52.60      5317.6 ppb       52.60   0.99%
   QC value within limits for SiO2  Recovery = 99.44%
All analyte(s) passed QC.
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Sequence No.: 51
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 19:36:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5374.1	5374.1	96.6	%			19:38:29
1	Y RADIAL	4696.5	4696.5	97.52	%			19:38:29
1	Al 396.153Radial†	-58.5	31.7	28.784	ug/L	28.784	ppb	19:38:29
1	Ca 317.933Radial†	28.1	12.1	30.235	ug/L	30.235	ppb	19:38:49
1	Fe 238.204 Radial†	1.4	1.1	37.794	ug/L	37.794	ppb	19:38:49
1	K 766.490 Radial†	1525.7	106.7	46.357	ug/L	46.357	ppb	19:38:29
1	Mg 279.077 IEC†	1.1	0.9	73.550	ug/L	73.550	ppb	19:38:49
1	Na 589.592 Radial†	-181.6	-17.6	-47.695	ug/L	-47.695	ppb	19:38:49
1	Sr 421.552†	39.3	35.2	0.5419	ug/L	0.5419	ppb	19:38:49
1	Sc 361.383	1070703.4	1070703.4	100.93	%			19:39:46
1	Y 371.029	863600.0	863600.0	101.22	%			19:39:46
1	Ag 328.068†	615.9	-28.3	-0.0998	ug/L	-0.0998	ppb	19:39:51
1	As 188.979†	-59.5	-22.0	-5.1613	ug/L	-5.1613	ppb	19:40:11
1	B 249.677†	-175.6	207.6	3.2294	ug/L	3.2294	ppb	19:39:51
1	Ba 233.527†	31.3	6.7	0.0356	ug/L	0.0356	ppb	19:40:11
1	Be 313.107†	-7397.7	-13.6	-0.0039	ug/L	-0.0039	ppb	19:39:51
1	Cd 226.502†	-271.4	8.7	0.0606	ug/L	0.0606	ppb	19:40:11
1	Co 228.616†	-76.0	15.1	0.1890	ug/L	0.1890	ppb	19:40:11
1	Cr 267.716†	-20.4	8.4	0.0722	ug/L	0.0722	ppb	19:40:11
1	Cu 324.752†	10058.8	-224.8	-0.5524	ug/L	-0.5524	ppb	19:39:51
1	Mn 257.610†	974.5	138.5	0.1130	ug/L	0.1130	ppb	19:40:11
1	Mo 202.031†	47.7	15.5	0.6235	ug/L	0.6235	ppb	19:40:11
1	Ni 231.604†	138.4	-11.1	-0.1785	ug/L	-0.1785	ppb	19:40:11
1	P 214.914†	356.6	16.4	5.8768	ug/L	5.8768	ppb	19:40:11
1	Pb 220.353†	-19.3	10.0	0.7539	ug/L	0.7539	ppb	19:40:11
1	S 181.975 Axial†	61.8	-6.6	-5.6015	ug/L	-5.6015	ppb	19:40:11
1	Sb 206.836†	49.2	3.3	0.6754	ug/L	0.6754	ppb	19:40:11
1	Se 196.026†	-22.7	-0.8	-0.1363	ug/L	-0.1363	ppb	19:40:11
1	Si 251.611†	743.2	176.3	3.6097	ug/L	3.6097	ppb	19:40:11
1	Sn 189.927†	11.1	5.5	0.5729	ug/L	0.5729	ppb	19:40:11
1	Ti 334.940†	-1014.5	104.0	0.1377	ug/L	0.1377	ppb	19:39:51
1	Tl 190.801†	-49.9	11.9	2.0115	ug/L	2.0115	ppb	19:40:11
1	U 409.014†	-3829.8	40.1	0.9907	ug/L	0.9907	ppb	19:39:46
1	V 292.402†	-1605.8	61.7	0.3556	ug/L	0.3556	ppb	19:39:51
1	Zn 213.857†	1100.7	-31.8	-0.1819	ug/L	-0.1819	ppb	19:40:11
1	SiO2†	681.3	72.7	3.1504	ug/L	3.1504	ppb	19:41:17
2	Sc Radial	5423.6	5423.6	97.5	%			19:38:54
2	Y RADIAL	4709.7	4709.7	97.80	%			19:38:54
2	Al 396.153Radial†	-79.7	10.4	9.4611	ug/L	9.4611	ppb	19:38:54
2	Ca 317.933Radial†	30.9	14.8	36.864	ug/L	36.864	ppb	19:39:14
2	Fe 238.204 Radial†	1.1	0.8	29.567	ug/L	29.567	ppb	19:39:14
2	K 766.490 Radial†	1541.0	108.0	46.903	ug/L	46.903	ppb	19:38:54
2	Mg 279.077 IEC†	0.8	0.6	46.926	ug/L	46.926	ppb	19:39:14
2	Na 589.592 Radial†	-185.5	-19.9	-53.728	ug/L	-53.728	ppb	19:39:14
2	Sr 421.552†	24.1	19.3	0.2965	ug/L	0.2965	ppb	19:39:14
2	Sc 361.383	1074631.2	1074631.2	101.30	%			19:40:16
2	Y 371.029	865252.1	865252.1	101.41	%			19:40:16
2	Ag 328.068†	551.5	-94.1	-0.3683	ug/L	-0.3683	ppb	19:40:21
2	As 188.979†	-48.7	-11.2	-2.6132	ug/L	-2.6132	ppb	19:40:41
2	B 249.677†	-122.2	260.9	4.0624	ug/L	4.0624	ppb	19:40:21
2	Ba 233.527†	52.1	27.2	0.1381	ug/L	0.1381	ppb	19:40:41
2	Be 313.107†	-7362.3	48.1	0.0150	ug/L	0.0150	ppb	19:40:21
2	Cd 226.502†	-288.2	-6.8	-0.0544	ug/L	-0.0544	ppb	19:40:41
2	Co 228.616†	-94.2	-2.6	-0.0316	ug/L	-0.0316	ppb	19:40:41
2	Cr 267.716†	-13.7	15.1	0.1275	ug/L	0.1275	ppb	19:40:41
2	Cu 324.752†	10086.9	-233.4	-0.5741	ug/L	-0.5741	ppb	19:40:21
2	Mn 257.610†	988.6	148.9	0.1206	ug/L	0.1206	ppb	19:40:41
2	Mo 202.031†	41.7	9.4	0.3771	ug/L	0.3771	ppb	19:40:41
2	Ni 231.604†	169.3	18.9	0.3029	ug/L	0.3029	ppb	19:40:41

2	P 214.914†	338.5	-2.8	-0.9079 ug/L	-0.9079 ppb	19:40:41
2	Pb 220.353†	-33.2	-3.7	-0.2794 ug/L	-0.2794 ppb	19:40:41
2	S 181.975 Axial†	63.4	-5.3	-4.4472 ug/L	-4.4472 ppb	19:40:41
2	Sb 206.836†	33.8	-12.0	-2.3537 ug/L	-2.3537 ppb	19:40:41
2	Se 196.026†	-15.5	6.3	2.1636 ug/L	2.1636 ppb	19:40:41
2	Si 251.611†	674.3	105.6	2.1573 ug/L	2.1573 ppb	19:40:41
2	Sn 189.927†	4.1	-1.4	-0.1410 ug/L	-0.1410 ppb	19:40:41
2	Ti 334.940†	-1094.9	28.3	0.0371 ug/L	0.0371 ppb	19:40:21
2	Tl 190.801†	-63.2	-1.0	-0.1596 ug/L	-0.1596 ppb	19:40:41
2	U 409.014†	-3665.5	216.1	5.3590 ug/L	5.3590 ppb	19:40:16
2	V 292.402†	-1684.0	-9.7	-0.0432 ug/L	-0.0432 ppb	19:40:21
2	Zn 213.857†	1112.4	-24.2	-0.1411 ug/L	-0.1411 ppb	19:40:41
2	SiO2†	685.1	74.0	3.2229 ug/L	3.2229 ppb	19:41:22
3	Sc Radial	5472.8	5472.8	98.3 %		19:39:19
3	Y RADIAL	4805.3	4805.3	99.78 %		19:39:19
3	Al 396.153Radial†	-82.7	8.1	7.3936 ug/L	7.3936 ppb	19:39:19
3	Ca 317.933Radial†	29.5	13.1	32.614 ug/L	32.614 ppb	19:39:39
3	Fe 238.204 Radial†	-0.6	-1.0	-34.431 ug/L	-34.431 ppb	19:39:39
3	K 766.490 Radial†	1517.6	70.0	30.359 ug/L	30.359 ppb	19:39:19
3	Mg 279.077 IEC†	-0.5	-0.7	-53.396 ug/L	-53.396 ppb	19:39:39
3	Na 589.592 Radial†	-188.0	-20.8	-56.149 ug/L	-56.149 ppb	19:39:39
3	Sr 421.552†	24.7	19.7	0.3029 ug/L	0.3029 ppb	19:39:39
3	Sc 361.383	1050032.4	1050032.4	98.977 %		19:40:46
3	Y 371.029	846356.4	846356.4	99.196 %		19:40:46
3	Ag 328.068†	648.8	17.0	0.0573 ug/L	0.0573 ppb	19:40:51
3	As 188.979†	-45.5	-9.1	-2.1476 ug/L	-2.1476 ppb	19:41:11
3	B 249.677†	-163.9	216.0	3.3702 ug/L	3.3702 ppb	19:40:51
3	Ba 233.527†	33.2	9.3	0.0462 ug/L	0.0462 ppb	19:41:11
3	Be 313.107†	-7496.7	-258.0	-0.0799 ug/L	-0.0799 ppb	19:40:51
3	Cd 226.502†	-285.6	-10.9	-0.0773 ug/L	-0.0773 ppb	19:41:11
3	Co 228.616†	-89.6	-0.1	-0.0005 ug/L	-0.0005 ppb	19:41:11
3	Cr 267.716†	-31.3	-3.1	-0.0260 ug/L	-0.0260 ppb	19:41:11
3	Cu 324.752†	10126.5	39.9	0.0964 ug/L	0.0964 ppb	19:40:51
3	Mn 257.610†	978.4	161.5	0.1242 ug/L	0.1242 ppb	19:41:11
3	Mo 202.031†	32.0	0.6	0.0197 ug/L	0.0197 ppb	19:41:11
3	Ni 231.604†	150.5	3.8	0.0609 ug/L	0.0609 ppb	19:41:11
3	P 214.914†	349.5	16.2	5.7279 ug/L	5.7279 ppb	19:41:11
3	Pb 220.353†	-26.3	2.5	0.1954 ug/L	0.1954 ppb	19:41:11
3	S 181.975 Axial†	63.6	-3.6	-3.0286 ug/L	-3.0286 ppb	19:41:11
3	Sb 206.836†	47.3	2.4	0.4608 ug/L	0.4608 ppb	19:41:11
3	Se 196.026†	-17.3	4.1	1.2209 ug/L	1.2209 ppb	19:41:11
3	Si 251.611†	660.3	107.0	2.1991 ug/L	2.1991 ppb	19:41:11
3	Sn 189.927†	0.7	-4.8	-0.4980 ug/L	-0.4980 ppb	19:41:11
3	Ti 334.940†	-979.6	119.5	0.1597 ug/L	0.1597 ppb	19:40:51
3	Tl 190.801†	-61.0	-0.2	-0.0316 ug/L	-0.0316 ppb	19:41:11
3	U 409.014†	-3884.6	-90.0	-2.2277 ug/L	-2.2277 ppb	19:40:46
3	V 292.402†	-1644.0	-8.2	-0.0469 ug/L	-0.0469 ppb	19:40:51
3	Zn 213.857†	1096.8	-14.3	-0.0748 ug/L	-0.0748 ppb	19:41:11
3	SiO2†	729.4	134.6	5.9274 ug/L	5.9274 ppb	19:41:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065122.3	100.40	%	1.246				1.24%
Sc Radial	5423.5	97.5	%	0.89				0.91%
Y 371.029	858402.8	100.61	%	1.227				1.22%
Y RADIAL	4737.2	98.37	%	1.233				1.25%
Ag 328.068†	-35.1	-0.1369	ug/L	0.21524	-0.1369	ppb	0.21524	157.17%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	16.7	15.213	ug/L	11.7984	15.213	ppb	11.7984	77.55%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-14.1	-3.3074	ug/L	1.62235	-3.3074	ppb	1.62235	49.05%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	228.1	3.5540	ug/L	0.44587	3.5540	ppb	0.44587	12.55%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	14.4	0.0733	ug/L	0.05633	0.0733	ppb	0.05633	76.84%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-74.5	-0.0229	ug/L	0.05021	-0.0229	ppb	0.05021	219.13%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.3	33.238	ug/L	3.3585	33.238	ppb	3.3585	10.10%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -3.0     -0.0237 ug/L       0.07387     -0.0237 ppb        0.07387 311.98%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 4.2      0.0523 ug/L       0.11944      0.0523 ppb        0.11944 228.36%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 6.8      0.0579 ug/L       0.07775      0.0579 ppb        0.07775 134.32%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -139.4     -0.3434 ug/L       0.38102     -0.3434 ppb        0.38102 110.97%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.3      10.977 ug/L       39.5386      10.977 ppb        39.5386 360.20%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          94.9      41.206 ug/L        9.3984      41.206 ppb         9.3984  22.81%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.3      22.360 ug/L       66.9431      22.360 ppb        66.9431 299.39%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               149.6      0.1193 ug/L       0.00572      0.1193 ppb        0.00572   4.80%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 8.5      0.3401 ug/L       0.30361      0.3401 ppb        0.30361  89.27%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -19.4     -52.524 ug/L        4.3540     -52.524 ppb         4.3540   8.29%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 3.9      0.0617 ug/L       0.24068      0.0617 ppb        0.24068 389.81%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  9.9      3.5656 ug/L       3.87493      3.5656 ppb        3.87493 108.68%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 2.9      0.2233 ug/L       0.51724      0.2233 ppb        0.51724 231.64%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.1     -4.3591 ug/L       1.28871     -4.3591 ppb        1.28871  29.56%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.1     -0.4058 ug/L       1.69035     -0.4058 ppb        1.69035 416.51%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.2      1.0827 ug/L       1.15619      1.0827 ppb        1.15619 106.78%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               129.6      2.6554 ug/L       0.82677      2.6554 ppb        0.82677  31.14%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -0.2     -0.0220 ug/L       0.54526     -0.0220 ppb        0.54526 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                24.7      0.3804 ug/L       0.13988      0.3804 ppb        0.13988  36.77%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                84.0      0.1115 ug/L       0.06534      0.1115 ppb        0.06534  58.60%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.6      0.6068 ug/L       1.21821      0.6068 ppb        1.21821 200.76%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 55.4      1.3740 ug/L       3.80781      1.3740 ppb        3.80781 277.13%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 14.6      0.0885 ug/L       0.23133      0.0885 ppb        0.23133 261.26%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -23.4     -0.1326 ug/L       0.05408     -0.1326 ppb        0.05408  40.79%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      93.8      4.1002 ug/L       1.58276      4.1002 ppb        1.58276  38.60%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Monday, July 13, 2009 13:42:10
Sample Description:
Method File: c:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.1388
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1845.7	1845.719	54.608	3.0
	Mg	24.0	14242.1	14242.097	168.299	1.2
	Co	58.9	43294.7	43294.709	359.450	0.8
	Rh	102.9	89670.2	89670.162	771.269	0.9
	In	114.9	119731.9	119731.911	1403.963	1.2
	Pb	208.0	58708.6	58708.589	238.803	0.4
⌈>	Ba	137.9	118190.8	118190.802	1626.512	1.4
⌊	Ba++	69.0	2541.5	0.022	0.001	3.4
⌈>	Ce	139.9	142018.3	142018.252	887.204	0.6
⌊	CeO	155.9	2081.2	0.015	0.000	2.3
	Bkgd	220.0	25.6	25.600	2.408	9.4

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-1687.50	Analog Stage Voltage
900.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	5.8	1852.1
Co	59	25	6.0	34771.9
In	115	25	6.8	138669.1

ICPMS#3 Instrument Tuning Report

File Name: 090713.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	570	2070	0.666
Be	9.0	9.0	2054	2070	0.640
Mg	24.0	24.0	5698	2120	0.625
Mg	25.0	25.0	5905	2050	0.659
Mg	26.0	25.9	6201	2130	0.686
Co	58.9	58.9	14189	2110	0.713
Rh	102.9	102.9	24889	2170	0.680
In	114.9	114.9	27816	2180	0.690
Ce	139.9	139.9	33902	2200	0.702
Pb	206.0	206.0	49980	2270	0.689
Pb	207.0	207.0	50269	2300	0.692
Pb	208.0	208.0	50474	2320	0.640
U	238.1	238.1	57825	2340	0.677

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Monday, July 13, 2009 23:29:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\Blank.107

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		26	
	Be	9		ug/L		25	
	B	11		ug/L		338	
	Na	23		ug/L		7002	
	Mg	24		ug/L		667	
	Al	27		ug/L		3000	
	P	31		ug/L		2651	
	K	39		ug/L		512362	
	Ca	43		ug/L		545	
>	Sc	45		ug/L		996211	
	Ti	47		ug/L		227	
	V	51		ug/L		5909	
	Cr	52		ug/L		-6019	
	Cr	53		ug/L		254408	
	Mn	55		ug/L		1187	
	Fe	57		ug/L		4693	
	Co	59		ug/L		248	
	Ni	60		ug/L		98	
	Cu	63		ug/L		155	
	Cu	65		ug/L		105	
	Zn	66		ug/L		171	
	Zn	67		ug/L		7733	
	Zn	68		ug/L		749	
>	Ge	74		ug/L		164527	
	As	75		ug/L		1427	
	Se	77		ug/L		8226	
	Se	82		ug/L		8	
	Kr	83		ug/L		89	
	Sr	88		ug/L		136	
	Y	89		ug/L		36	
	Zr	90		ug/L		173	
	Mo	98		ug/L		57	
	Ag	107		ug/L		48	
	Cd	111		ug/L		12	
	Cd	114		ug/L		44	
>	In	115		ug/L		112823	
	Sn	120		ug/L		95	
	Sb	121		ug/L		301	
	Sb	123		ug/L		237	
	Ba	135		ug/L		31	
	Ba	137		ug/L		52	
	Ho	165		ug/L		37	
>	Lu	175		ug/L		167928	
	Tl	205		ug/L		1125	
	Pb	208		ug/L		338	
	Th	232		ug/L		246	
	U	238		ug/L		193	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Monday, July 13, 2009 23:35:23
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\Standard 1.108

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	10.000	ug/L	4.455	1192	0.001
	Be	9	10.000	ug/L	5.557	1224	0.001
	B	11	20.000	ug/L	1.996	1814	0.001
	Na	23	1000.000	ug/L	6.941	984961	0.990
	Mg	24	1000.000	ug/L	6.578	783334	0.792
	Al	27	1000.000	ug/L	11.606	1231075	1.242
	P	31	1000.000	ug/L	2.220	94323	0.093
	K	39	1000.000	ug/L	9.953	2627023	2.149
	Ca	43	1000.000	ug/L	1.368	3936	0.003
>	Sc	45		ug/L		987477	987476.567
	Ti	47	10.000	ug/L	3.227	1966	0.002
	V	51	10.000	ug/L	31.608	20302	0.015
	Cr	52	10.000	ug/L	5.121	14028	0.020
	Cr	53		ug/L		246377	-0.006
	Mn	55	10.000	ug/L	1.992	31673	0.031
	Fe	57	1000.000	ug/L	3.987	67088	0.063
	Co	59	10.000	ug/L	3.307	25006	0.025
	Ni	60	10.000	ug/L	4.491	5354	0.005
	Cu	63		ug/L		11950	0.012
	Cu	65	10.000	ug/L	0.837	5425	0.005
	Zn	66	10.000	ug/L	0.874	3457	0.020
	Zn	67		ug/L		8009	0.001
	Zn	68		ug/L		2933	0.013
>	Ge	74		ug/L		165442	165441.911
	As	75	10.000	ug/L	13.036	5777	0.026
	Se	77		ug/L		8183	-0.001
	Se	82	10.000	ug/L	6.770	296	0.002
	Kr	83		ug/L		90	0.000
	Sr	88	10.000	ug/L	0.533	39524	0.346
	Y	89		ug/L		39	0.000
	Zr	90	10.000	ug/L	3.152	24393	0.213
	Mo	98	10.000	ug/L	2.376	11811	0.103
	Ag	107	10.000	ug/L	3.406	21003	0.184
	Cd	111	10.000	ug/L	2.148	4595	0.040
	Cd	114		ug/L		11254	0.098
>	In	115		ug/L		113946	113946.066
	Sn	120	10.000	ug/L	3.596	21733	0.190
	Sb	121	10.000	ug/L	4.303	21118	0.183
	Sb	123		ug/L		16575	0.143
	Ba	135		ug/L		6427	0.038
	Ba	137	10.000	ug/L	1.499	11161	0.066
	Ho	165		ug/L		40	0.000
>	Lu	175		ug/L		167132	167132.005
	Tl	205	10.000	ug/L	0.981	60228	0.354
	Pb	208	10.000	ug/L	1.308	73678	0.439
	Th	232	10.000	ug/L	1.175	78227	0.467
	U	238	10.000	ug/L	0.692	74641	0.445

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Monday, July 13, 2009 23:41:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\Standard 2.109

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.008**	ug/L	1.618	11688	0.012
	Be	9	**100.000**	ug/L	1.750	11915	0.012
	B	11	**200.045**	ug/L	1.852	15356	0.015
	Na	23	**10010.932**	ug/L	7.336	10913562	11.126
	Mg	24	**10010.639**	ug/L	8.754	8695597	8.871
	Al	27	**10012.249**	ug/L	1.531	13887374	14.172
	P	31	**9998.748**	ug/L	1.357	901121	0.917
	K	39	**10005.573**	ug/L	5.059	22799377	22.766
	Ca	43	**10001.910**	ug/L	0.604	34895	0.035
>	Sc	45		ug/L		979703	979702.894
	Ti	47	**100.034**	ug/L	2.595	18108	0.018
	V	51	**100.238**	ug/L	4.519	194531	0.193
	Cr	52	**99.978**	ug/L	1.831	188245	0.198
	Cr	53		ug/L		257017	0.007
	Mn	55	**100.014**	ug/L	1.883	308067	0.313
	Fe	57	**9999.170**	ug/L	3.182	619064	0.627
	Co	59	**99.989**	ug/L	2.822	243370	0.248
	Ni	60	**100.002**	ug/L	1.004	52392	0.053
	Cu	63		ug/L		117704	0.120
	Cu	65	**100.001**	ug/L	2.138	52959	0.054
	Zn	66	**99.997**	ug/L	3.206	32911	0.198
	Zn	67		ug/L		12297	0.027
	Zn	68		ug/L		22522	0.132
>	Ge	74		ug/L		165448	165448.249
	As	75	**100.028**	ug/L	2.681	46148	0.270
	Se	77		ug/L		9687	0.009
	Se	82	**100.021**	ug/L	3.572	2945	0.018
	Kr	83		ug/L		91	0.000
	Sr	88	**100.013**	ug/L	1.359	393691	3.504
	Y	89		ug/L		82	0.000
	Zr	90	**100.011**	ug/L	1.477	241680	2.150
	Mo	98	**100.026**	ug/L	1.724	119134	1.060
	Ag	107	**99.996**	ug/L	0.335	205951	1.833
	Cd	111	**100.007**	ug/L	3.595	45517	0.405
	Cd	114		ug/L		112841	1.004
>	In	115		ug/L		112335	112335.274
	Sn	120	**100.018**	ug/L	1.816	217460	1.935
	Sb	121	**100.038**	ug/L	3.855	213746	1.901
	Sb	123		ug/L		168469	1.498
	Ba	135		ug/L		63714	0.374
	Ba	137	**99.997**	ug/L	1.418	112794	0.663
	Ho	165		ug/L		40	0.000
>	Lu	175		ug/L		170133	170132.861
	Tl	205	**100.011**	ug/L	2.075	609429	3.576
	Pb	208	**99.984**	ug/L	2.222	734627	4.317
	Th	232	**99.974**	ug/L	1.801	773821	4.547
	U	238	**99.960**	ug/L	1.459	728411	4.281

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Monday, July 13, 2009 23:46:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 1.110

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.960**	**ug/L**	3.226	6028	0.006
	Be	9	**50.988**	**ug/L**	2.891	6149	0.006
	B	11	**104.218**	**ug/L**	5.011	8238	0.008
	Na	23	**5091.215**	**ug/L**	6.166	5613474	5.658
	Mg	24	**4970.563**	**ug/L**	1.991	4361241	4.405
	Al	27	**4943.552**	**ug/L**	0.745	6929370	6.997
	P	31	**5160.975**	**ug/L**	3.585	471048	0.473
	K	39	**4781.996**	**ug/L**	7.164	11285055	10.881
	Ca	43	**5080.837**	**ug/L**	3.180	18168	0.018
>	Sc	45		**ug/L**		989924	989923.667
	Ti	47	**50.027**	**ug/L**	2.089	9262	0.009
	V	51	**51.791**	**ug/L**	7.862	104311	0.100
	Cr	52	**51.287**	**ug/L**	4.268	94602	0.102
	Cr	53		**ug/L**		248393	-0.004
	Mn	55	**48.056**	**ug/L**	2.749	150130	0.151
	Fe	57	**5055.662**	**ug/L**	3.285	318471	0.317
	Co	59	**51.469**	**ug/L**	3.326	126648	0.128
	Ni	60	**52.166**	**ug/L**	2.121	27654	0.028
	Cu	63		**ug/L**		58641	0.059
	Cu	65	**48.985**	**ug/L**	2.400	26261	0.026
	Zn	66	**50.062**	**ug/L**	2.727	16825	0.099
	Zn	67		**ug/L**		9960	0.012
	Zn	68		**ug/L**		11931	0.066
>	Ge	74		**ug/L**		168020	168019.759
	As	75	**49.627**	**ug/L**	2.143	23999	0.134
	Se	77		**ug/L**		8725	0.002
	Se	82	**51.111**	**ug/L**	1.542	1533	0.009
	Kr	83		**ug/L**		81	-0.000
	Sr	88	**50.377**	**ug/L**	1.749	200471	1.765
	Y	89		**ug/L**		53	0.000
	Zr	90	**48.555**	**ug/L**	2.152	118662	1.044
	Mo	98	**48.589**	**ug/L**	1.780	58511	0.515
	Ag	107	**49.855**	**ug/L**	1.885	103783	0.914
	Cd	111	**52.250**	**ug/L**	1.429	24044	0.212
	Cd	114		**ug/L**		59017	0.519
>	In	115		**ug/L**		113528	113527.864
	Sn	120	**49.363**	**ug/L**	2.522	108509	0.955
	Sb	121	**49.447**	**ug/L**	1.092	106957	0.940
	Sb	123		**ug/L**		83729	0.735
	Ba	135		**ug/L**		31835	0.188
	Ba	137	**50.535**	**ug/L**	1.274	56594	0.335
	Ho	165		**ug/L**		53	0.000
>	Lu	175		**ug/L**		168831	168831.207
	Tl	205	**48.872**	**ug/L**	1.888	296115	1.747
	Pb	208	**50.923**	**ug/L**	1.166	371490	2.199
	Th	232	**50.850**	**ug/L**	2.876	390678	2.313
	U	238	**52.785**	**ug/L**	3.103	381743	2.260

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	101.921				
	Be	9	101.976				
	B	11	104.218				
	Na	23	101.824				
	Mg	24	99.411				
	Al	27	97.892				
	P	31	103.219				
	K	39	95.640				
	Ca	43	101.617				
>	Sc	45		99.4			
	Ti	47	100.054				
	V	51	103.582				
	Cr	52	102.574				
	Cr	53					
	Mn	55	96.111				
	Fe	57	101.113				
	Co	59	102.937				
	Ni	60	104.332				
	Cu	63					
	Cu	65	97.971				
	Zn	66	100.124				
	Zn	67					
	Zn	68					
>	Ge	74		102.1			
	As	75	99.254				
	Se	77					
	Se	82	102.222				
	Kr	83					
	Sr	88	100.754				
	Y	89					
	Zr	90	97.110				
	Mo	98	97.179				
	Ag	107	99.710				
	Cd	111	104.501				
	Cd	114					
>	In	115		100.6			
	Sn	120	98.727				
	Sb	121	98.894				
	Sb	123					
	Ba	135					
	Ba	137	101.069				
	Ho	165					
>	Lu	175		100.5			
	Tl	205	97.743				
	Pb	208	101.846				
	Th	232	101.700				
	U	238	105.570				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Monday, July 13, 2009 23:52:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 2.111

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.031**	ug/L	184.969	29	0.000
	Be	9	**-0.008**	ug/L	679.005	24	-0.000
	B	11	**2.237**	ug/L	26.233	509	0.000
	Na	23	**-1.202**	ug/L	50.670	5668	-0.001
	Mg	24	**0.722**	ug/L	354.271	1334	0.001
	Al	27	**1.415**	ug/L	202.375	5001	0.002
	P	31	**0.287**	ug/L	295.769	2679	0.000
	K	39	**-13.145**	ug/L	95.829	482696	-0.030
	Ca	43	**6.039**	ug/L	197.769	566	0.000
>	Sc	45		ug/L		997159	997158.539
	Ti	47	**-0.023**	ug/L	199.066	223	-0.000
	V	51	**-0.560**	ug/L	114.079	4828	-0.001
	Cr	52	**0.042**	ug/L	842.259	-5939	0.000
	Cr	53		ug/L		238459	-0.016
	Mn	55	**-0.022**	ug/L	64.119	1121	-0.000
	Fe	57	**-6.504**	ug/L	34.489	4289	-0.000
	Co	59	**0.002**	ug/L	517.926	253	0.000
	Ni	60	**-0.014**	ug/L	47.088	90	-0.000
	Cu	63		ug/L		160	0.000
	Cu	65	**-0.003**	ug/L	187.616	103	-0.000
	Zn	66	**-0.028**	ug/L	236.733	163	-0.000
	Zn	67		ug/L		7417	-0.002
	Zn	68		ug/L		728	-0.000
>	Ge	74		ug/L		166238	166237.695
	As	75	**0.534**	ug/L	109.113	1683	0.001
	Se	77		ug/L		7492	-0.005
	Se	82	**-0.158**	ug/L	266.418	3	-0.000
	Kr	83		ug/L		83	-0.000
	Sr	88	**0.001**	ug/L	411.999	140	0.000
	Y	89		ug/L		40	0.000
	Zr	90	**0.028**	ug/L	7.218	238	0.001
	Mo	98	**0.043**	ug/L	27.331	107	0.000
	Ag	107	**0.004**	ug/L	79.760	56	0.000
	Cd	111	**0.033**	ug/L	38.366	27	0.000
	Cd	114		ug/L		47	0.000
>	In	115		ug/L		111805	111805.218
	Sn	120	**0.032**	ug/L	8.853	163	0.001
	Sb	121	**0.285**	ug/L	10.476	903	0.005
	Sb	123		ug/L		714	0.004
	Ba	135		ug/L		35	0.000
	Ba	137	**0.002**	ug/L	339.318	54	0.000
	Ho	165		ug/L		42	0.000
>	Lu	175		ug/L		166412	166412.025
	Tl	205	**0.167**	ug/L	26.455	2109	0.006
	Pb	208	**0.006**	ug/L	68.077	376	0.000
	Th	232	**0.054**	ug/L	23.243	654	0.002
	U	238	**0.008**	ug/L	44.922	249	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.1			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.1			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Monday, July 13, 2009 23:58:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 3.112

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	ug/L	0.921	1208	0.001
	Be	9	**0.566**	ug/L	38.347	93	0.000
	B	11	**15.177**	ug/L	5.637	1492	0.001
	Na	23	**209.176**	ug/L	5.449	237970	0.232
	Mg	24	**11.394**	ug/L	48.109	10671	0.010
	Al	27	**30.413**	ug/L	11.912	45740	0.043
	P	31	**50.243**	ug/L	2.293	7221	0.005
	K	39	**259.709**	ug/L	4.248	1097988	0.591
	Ca	43	**211.828**	ug/L	4.031	1281	0.001
>	Sc	45		ug/L		993338	993338.297
	Ti	47	**8.530**	ug/L	2.053	1773	0.002
	V	51	**11.170**	ug/L	11.684	27229	0.021
	Cr	52	**10.077**	ug/L	4.562	13840	0.020
	Cr	53		ug/L		238593	-0.015
	Mn	55	**5.058**	ug/L	2.890	16921	0.016
	Fe	57	**96.524**	ug/L	3.914	10693	0.006
	Co	59	**0.996**	ug/L	2.747	2703	0.002
	Ni	60	**1.951**	ug/L	1.659	1132	0.001
	Cu	63		ug/L		1385	0.001
	Cu	65	**1.044**	ug/L	1.642	664	0.001
	Zn	66	**10.202**	ug/L	2.699	3528	0.020
	Zn	67		ug/L		7940	0.001
	Zn	68		ug/L		2919	0.013
>	Ge	74		ug/L		166172	166171.556
	As	75	**5.451**	ug/L	4.531	3889	0.015
	Se	77		ug/L		7561	-0.004
	Se	82	**5.113**	ug/L	10.509	159	0.001
	Kr	83		ug/L		85	-0.000
	Sr	88	**10.140**	ug/L	0.559	40425	0.355
	Y	89		ug/L		44	0.000
	Zr	90	**1.888**	ug/L	2.788	4777	0.041
	Mo	98	**0.504**	ug/L	2.488	663	0.005
	Ag	107	**1.056**	ug/L	1.173	2245	0.019
	Cd	111	**1.022**	ug/L	7.427	482	0.004
	Cd	114		ug/L		1164	0.010
>	In	115		ug/L		113411	113410.875
	Sn	120	**4.923**	ug/L	3.430	10900	0.095
	Sb	121	**2.991**	ug/L	3.206	6746	0.057
	Sb	123		ug/L		5444	0.046
	Ba	135		ug/L		1253	0.007
	Ba	137	**1.951**	ug/L	1.789	2206	0.013
	Ho	165		ug/L		46	0.000
>	Lu	175		ug/L		166636	166636.290
	Tl	205	**0.935**	ug/L	2.785	6687	0.033
	Pb	208	**2.031**	ug/L	1.601	14949	0.088
	Th	232	**1.026**	ug/L	1.501	8020	0.047
	U	238	**0.201**	ug/L	1.486	1629	0.009

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	99.997				
	Be	9	113.115				
	B	11	101.183				
	Na	23	83.670				
	Mg	24	75.960				
	Al	27	101.376				
	P	31	100.486				
	K	39	86.570				
	Ca	43	105.914				
>	Sc	45			99.7		
	Ti	47	85.299				
	V	51	111.698				
	Cr	52	100.772				
	Cr	53					
	Mn	55	101.157				
	Fe	57	96.524				
	Co	59	99.588				
	Ni	60	97.558				
	Cu	63					
	Cu	65	104.358				
	Zn	66	102.020				
	Zn	67					
	Zn	68					
>	Ge	74			101.0		
	As	75	109.027				
	Se	77					
	Se	82	102.261				
	Kr	83					
	Sr	88	101.398				
	Y	89					
	Zr	90	94.386				
	Mo	98	100.895				
	Ag	107	105.649				
	Cd	111	102.198				
	Cd	114					
>	In	115			100.5		
	Sn	120	98.466				
	Sb	121	99.686				
	Sb	123					
	Ba	135					
	Ba	137	97.531				
	Ho	165					
>	Lu	175			99.2		
	Tl	205	93.492				
	Pb	208	101.563				
	Th	232	102.574				
	U	238	100.723				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 00:03:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 4.113

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.160**	**ug/L**	43.731	44	0.000
	Be	9	**0.037**	**ug/L**	101.134	29	0.000
	B	11	**1.396**	**ug/L**	17.468	438	0.000
	Na	23	**97844.798**	**ug/L**	3.270	106793464	108.745
	Mg	24	**100507.448**	**ug/L**	10.651	87368197	89.070
	Al	27	**94837.561**	**ug/L**	4.737	131740748	134.235
	P	31	**112178.600**	**ug/L**	2.601	10104080	10.291
	K	39	**96953.442**	**ug/L**	6.906	217039878	220.606
	Ca	43	**95611.016**	**ug/L**	1.570	329659	0.335
>	Sc	45		**ug/L**		981854	981854.343
	Ti	47	**1668.455**	**ug/L**	1.576	299201	0.305
	V	51	**-0.654**	**ug/L**	147.504	4578	-0.001
	Cr	52	**4.450**	**ug/L**	8.242	2726	0.009
	Cr	53		**ug/L**		220847	-0.030
	Mn	55	**5.501**	**ug/L**	1.672	18085	0.017
	Fe	57	**105690.499**	**ug/L**	2.706	6513368	6.631
	Co	59	**0.233**	**ug/L**	4.343	812	0.001
	Ni	60	**2.396**	**ug/L**	7.075	1351	0.001
	Cu	63		**ug/L**		2303	0.002
	Cu	65	**2.274**	**ug/L**	4.972	1308	0.001
	Zn	66	**2.837**	**ug/L**	1.989	1076	0.006
	Zn	67		**ug/L**		7309	-0.002
	Zn	68		**ug/L**		806	0.000
>	Ge	74		**ug/L**		161672	161671.984
	As	75	**0.810**	**ug/L**	96.676	1757	0.002
	Se	77		**ug/L**		8191	0.001
	Se	82	**-0.749**	**ug/L**	85.024	-14	-0.000
	Kr	83		**ug/L**		122	0.000
	Sr	88	**1.132**	**ug/L**	1.933	4334	0.040
	Y	89		**ug/L**		154	0.001
	Zr	90	**0.582**	**ug/L**	55.450	1486	0.013
	Mo	98	**2271.992**	**ug/L**	1.922	2553197	24.079
	Ag	107	**0.069**	**ug/L**	2.545	179	0.001
	Cd	111	**0.019**	**ug/L**	952.046	19	0.000
	Cd	114		**ug/L**		2750	0.026
>	In	115		**ug/L**		106044	106043.759
	Sn	120	**0.155**	**ug/L**	4.923	407	0.003
	Sb	121	**0.103**	**ug/L**	44.304	490	0.002
	Sb	123		**ug/L**		398	0.002
	Ba	135		**ug/L**		442	0.003
	Ba	137	**0.639**	**ug/L**	3.393	737	0.004
	Ho	165		**ug/L**		400	0.002
>	Lu	175		**ug/L**		161978	161977.520
	Tl	205	**-0.038**	**ug/L**	10.412	867	-0.001
	Pb	208	**0.174**	**ug/L**	2.151	1546	0.008
	Th	232	**0.068**	**ug/L**	46.743	736	0.003
	U	238	**-0.018**	**ug/L**	6.902	61	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23	97.845				
	Mg	24	100.507				
	Al	27	94.838				
	P	31	112.179				
	K	39	96.953				
	Ca	43	95.611				
>	Sc	45			98.6		
	Ti	47	83.423				
	V	51					
	Cr	52	120.268				
	Cr	53					
	Mn	55	94.839				
	Fe	57	105.690				
	Co	59	93.096				
	Ni	60	88.735				
	Cu	63					
	Cu	65	78.406				
	Zn	66	78.817				
	Zn	67					
	Zn	68					
>	Ge	74			98.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	94.372				
	Y	89					
	Zr	90					
	Mo	98	113.600				
	Ag	107					
	Cd	111	4.727				
	Cd	114					
>	In	115			94.0		
	Sn	120					
	Sb	121	102.918				
	Sb	123					
	Ba	135					
	Ba	137	95.438				
	Ho	165					
>	Lu	175			96.5		
	Tl	205					
	Pb	208	87.192				
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 00:09:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 5.114

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**19.245**	ug/L	2.800	2339	0.002
	Be	9	**20.477**	ug/L	2.633	2535	0.002
	B	11	**19.621**	ug/L	7.917	1861	0.002
	Na	23	**90374.024**	ug/L	4.457	101339432	100.442
	Mg	24	**94351.056**	ug/L	10.631	84309355	83.614
	Al	27	**97844.350**	ug/L	4.461	139885462	138.491
	P	31	**111398.406**	ug/L	2.081	10315570	10.219
	K	39	**95414.768**	ug/L	2.109	219689191	217.105
	Ca	43	**96285.801**	ug/L	1.167	341287	0.338
>	Sc	45		ug/L		1009455	1009454.553
	Ti	47	**1652.289**	ug/L	1.653	304689	0.302
	V	51	**19.638**	ug/L	8.237	44055	0.038
	Cr	52	**23.587**	ug/L	2.300	41098	0.047
	Cr	53		ug/L		223302	-0.034
	Mn	55	**24.859**	ug/L	1.225	79795	0.078
	Fe	57	**107234.885**	ug/L	1.179	6794669	6.727
	Co	59	**19.519**	ug/L	2.868	49140	0.048
	Ni	60	**21.035**	ug/L	2.814	11429	0.011
	Cu	63		ug/L		25605	0.025
	Cu	65	**21.248**	ug/L	0.966	11679	0.011
	Zn	66	**22.230**	ug/L	0.946	7537	0.044
	Zn	67		ug/L		8168	0.002
	Zn	68		ug/L		5207	0.027
>	Ge	74		ug/L		167301	167300.710
	As	75	**19.497**	ug/L	2.077	10268	0.053
	Se	77		ug/L		8569	0.001
	Se	82	**20.959**	ug/L	2.462	631	0.004
	Kr	83		ug/L		117	0.000
	Sr	88	**21.539**	ug/L	1.985	84604	0.755
	Y	89		ug/L		159	0.001
	Zr	90	**20.622**	ug/L	1.127	49796	0.443
	Mo	98	**2239.943**	ug/L	1.202	2657052	23.740
	Ag	107	**19.355**	ug/L	1.035	39755	0.355
	Cd	111	**20.028**	ug/L	2.898	9095	0.081
	Cd	114		ug/L		25106	0.224
>	In	115		ug/L		111932	111932.290
	Sn	120	**19.968**	ug/L	1.478	43347	0.386
	Sb	121	**20.832**	ug/L	2.175	44603	0.396
	Sb	123		ug/L		35329	0.314
	Ba	135		ug/L		12940	0.076
	Ba	137	**20.007**	ug/L	0.453	22620	0.133
	Ho	165		ug/L		409	0.002
>	Lu	175		ug/L		170192	170192.015
	Tl	205	**18.109**	ug/L	2.222	111339	0.647
	Pb	208	**19.177**	ug/L	0.929	141234	0.828
	Th	232	**19.768**	ug/L	0.758	153280	0.899
	U	238	**20.069**	ug/L	0.862	146455	0.859

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	96.226				
	Be	9	102.387				
	B	11	98.105				
	Na	23	90.374				
	Mg	24	94.351				
	Al	27	97.844				
	P	31	111.398				
	K	39	95.415				
	Ca	43	96.286				
>	Sc	45		101.3			
	Ti	47	82.614				
	V	51	98.192				
	Cr	52	99.523				
	Cr	53					
	Mn	55	96.352				
	Fe	57	107.235				
	Co	59	96.388				
	Ni	60	92.663				
	Cu	63					
	Cu	65	92.787				
	Zn	66	94.196				
	Zn	67					
	Zn	68					
>	Ge	74		101.7			
	As	75	97.487				
	Se	77					
	Se	82	104.797				
	Kr	83					
	Sr	88	101.599				
	Y	89					
	Zr	90	103.110				
	Mo	98	111.997				
	Ag	107	96.776				
	Cd	111	98.178				
	Cd	114					
>	In	115		99.2			
	Sn	120	99.842				
	Sb	121	103.639				
	Sb	123					
	Ba	135					
	Ba	137	96.794				
	Ho	165					
>	Lu	175		101.3			
	Tl	205	90.543				
	Pb	208	94.933				
	Th	232	98.842				
	U	238	100.345				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 00:15:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 6.115

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.695**	**ug/L**	1.832	6706	0.006
	Be	9	**49.459**	**ug/L**	1.915	6671	0.006
	B	11	**91.821**	**ug/L**	1.973	8163	0.007
	Na	23	**4507.086**	**ug/L**	0.564	5550247	5.009
	Mg	24	**4569.235**	**ug/L**	6.603	4480727	4.049
	Al	27	**4658.306**	**ug/L**	3.003	7298427	6.593
	P	31	**4780.811**	**ug/L**	0.780	488203	0.439
	K	39	**4599.195**	**ug/L**	5.154	12147992	10.465
	Ca	43	**4992.953**	**ug/L**	1.636	19975	0.018
>	Sc	45		**ug/L**		1106466	1106465.563
	Ti	47	**48.776**	**ug/L**	2.829	10103	0.009
	V	51	**50.400**	**ug/L**	2.382	113769	0.097
	Cr	52	**50.766**	**ug/L**	1.008	104671	0.101
	Cr	53		**ug/L**		237095	-0.041
	Mn	55	**47.665**	**ug/L**	1.554	166521	0.149
	Fe	57	**5026.095**	**ug/L**	1.196	354101	0.315
	Co	59	**50.583**	**ug/L**	0.685	139203	0.126
	Ni	60	**51.252**	**ug/L**	1.248	30380	0.027
	Cu	63		**ug/L**		65660	0.059
	Cu	65	**49.046**	**ug/L**	1.261	29400	0.026
	Zn	66	**52.498**	**ug/L**	0.828	19712	0.104
	Zn	67		**ug/L**		10079	0.007
	Zn	68		**ug/L**		13505	0.067
>	Ge	74		**ug/L**		187778	187777.602
	As	75	**48.194**	**ug/L**	2.441	26090	0.130
	Se	77		**ug/L**		8615	-0.004
	Se	82	**51.927**	**ug/L**	3.752	1741	0.009
	Kr	83		**ug/L**		103	0.000
	Sr	88	**50.786**	**ug/L**	1.264	230927	1.779
	Y	89		**ug/L**		50	0.000
	Zr	90	**48.745**	**ug/L**	1.895	136109	1.048
	Mo	98	**48.649**	**ug/L**	2.514	66929	0.516
	Ag	107	**49.331**	**ug/L**	1.781	117323	0.904
	Cd	111	**52.365**	**ug/L**	2.553	27529	0.212
	Cd	114		**ug/L**		68326	0.526
>	In	115		**ug/L**		129708	129707.984
	Sn	120	**48.820**	**ug/L**	2.847	122612	0.945
	Sb	121	**48.802**	**ug/L**	2.888	120589	0.927
	Sb	123		**ug/L**		94884	0.730
	Ba	135		**ug/L**		34802	0.190
	Ba	137	**50.809**	**ug/L**	1.538	61762	0.337
	Ho	165		**ug/L**		60	0.000
>	Lu	175		**ug/L**		183265	183264.923
	Tl	205	**47.406**	**ug/L**	0.472	311868	1.695
	Pb	208	**49.271**	**ug/L**	1.400	390180	2.127
	Th	232	**48.188**	**ug/L**	1.048	401962	2.192
	U	238	**49.802**	**ug/L**	2.165	391020	2.133

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	101.389				
	Be	9	98.918				
	B	11	91.821				
	Na	23	90.142				
	Mg	24	91.385				
	Al	27	92.244				
	P	31	95.616				
	K	39	91.984				
	Ca	43	99.859				
>	Sc	45		111.1			
	Ti	47	97.552				
	V	51	100.799				
	Cr	52	101.533				
	Cr	53					
	Mn	55	95.330				
	Fe	57	100.522				
	Co	59	101.166				
	Ni	60	102.503				
	Cu	63					
	Cu	65	98.093				
	Zn	66	104.995				
	Zn	67					
	Zn	68					
>	Ge	74		114.1			
	As	75	96.387				
	Se	77					
	Se	82	103.853				
	Kr	83					
	Sr	88	101.572				
	Y	89					
	Zr	90	97.490				
	Mo	98	97.297				
	Ag	107	98.662				
	Cd	111	104.729				
	Cd	114					
>	In	115		115.0			
	Sn	120	97.641				
	Sb	121	97.603				
	Sb	123					
	Ba	135					
	Ba	137	101.617				
	Ho	165					
>	Lu	175		109.1			
	Tl	205	94.813				
	Pb	208	98.542				
	Th	232	96.375				
	U	238	99.603				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 00:21:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 7.116

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.015**	ug/L	266.032	30	0.000
	Be	9	**-0.003**	ug/L	782.996	27	-0.000
	B	11	**0.755**	ug/L	44.851	435	0.000
	Na	23	**0.513**	ug/L	397.402	8336	0.001
	Mg	24	**1.636**	ug/L	32.702	2334	0.001
	Al	27	**0.856**	ug/L	105.207	4667	0.001
	P	31	**-4.245**	ug/L	50.212	2489	-0.000
	K	39	**-14.162**	ug/L	52.124	528949	-0.032
	Ca	43	**-5.538**	ug/L	273.357	578	-0.000
>	Sc	45		ug/L		1098099	1098099.213
	Ti	47	**-0.090**	ug/L	41.488	232	-0.000
	V	51	**1.859**	ug/L	95.591	10511	0.004
	Cr	52	**0.646**	ug/L	38.926	-5231	0.001
	Cr	53		ug/L		219541	-0.055
	Mn	55	**-0.062**	ug/L	39.757	1095	-0.000
	Fe	57	**-7.055**	ug/L	27.036	4683	-0.000
	Co	59	**0.005**	ug/L	131.010	288	0.000
	Ni	60	**0.009**	ug/L	326.402	113	0.000
	Cu	63		ug/L		160	-0.000
	Cu	65	**-0.005**	ug/L	128.874	113	-0.000
	Zn	66	**-0.001**	ug/L	1061.808	196	-0.000
	Zn	67		ug/L		6870	-0.011
	Zn	68		ug/L		637	-0.001
>	Ge	74		ug/L		189066	189066.129
	As	75	**-1.015**	ug/L	58.140	1110	-0.003
	Se	77		ug/L		7322	-0.011
	Se	82	**-0.391**	ug/L	115.507	-5	-0.000
	Kr	83		ug/L		101	-0.000
	Sr	88	**0.002**	ug/L	211.933	170	0.000
	Y	89		ug/L		40	-0.000
	Zr	90	**0.020**	ug/L	47.240	257	0.000
	Mo	98	**0.093**	ug/L	17.043	195	0.001
	Ag	107	**0.004**	ug/L	85.632	65	0.000
	Cd	111	**0.018**	ug/L	88.967	23	0.000
	Cd	114		ug/L		44	-0.000
>	In	115		ug/L		131880	131879.851
	Sn	120	**0.029**	ug/L	25.153	184	0.001
	Sb	121	**0.131**	ug/L	24.167	680	0.002
	Sb	123		ug/L		585	0.002
	Ba	135		ug/L		37	0.000
	Ba	137	**0.002**	ug/L	407.836	61	0.000
	Ho	165		ug/L		36	-0.000
>	Lu	175		ug/L		188846	188845.937
	Tl	205	**0.100**	ug/L	50.153	1937	0.004
	Pb	208	**0.005**	ug/L	52.943	420	0.000
	Th	232	**0.037**	ug/L	16.669	595	0.002
	U	238	**0.005**	ug/L	28.923	254	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		110.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		114.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		116.9			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		112.5			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Tuesday, July 14, 2009 00:26:51
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 10.117

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**965.025**	ug/L	2.521	121430	0.115
	Be	9	**975.248**	ug/L	2.464	125139	0.118
	B	11	**0.021**	ug/L	982.657	360	0.000
	Na	23	**44187.243**	ug/L	7.063	51901272	49.110
	Mg	24	**44699.175**	ug/L	1.744	41867911	39.613
	Al	27	**47647.124**	ug/L	4.766	71266247	67.441
	P	31	**27266.229**	ug/L	1.944	2646071	2.501
	K	39	**46371.240**	ug/L	7.963	112086322	105.512
	Ca	43	**48973.952**	ug/L	0.620	182047	0.172
>	Sc	45		ug/L		1056841	1056841.365
	Ti	47	**27.764**	ug/L	1.040	5597	0.005
	V	51	**1107.254**	ug/L	0.718	2255816	2.129
	Cr	52	**921.565**	ug/L	0.343	1924392	1.827
	Cr	53		ug/L		460774	0.181
	Mn	55	**1072.566**	ug/L	1.044	3551997	3.360
	Fe	57	**55952.832**	ug/L	1.491	3714827	3.510
	Co	59	**1064.306**	ug/L	0.044	2792259	2.642
	Ni	60	**955.485**	ug/L	1.085	539127	0.510
	Cu	63		ug/L		1208369	1.143
	Cu	65	**972.149**	ug/L	0.023	554506	0.525
	Zn	66	**2384.476**	ug/L	0.498	864331	4.721
	Zn	67		ug/L		139794	0.717
	Zn	68		ug/L		585438	3.194
>	Ge	74		ug/L		183040	183039.970
	As	75	**946.328**	ug/L	0.482	469812	2.558
	Se	77		ug/L		19622	0.057
	Se	82	**510.280**	ug/L	1.401	16595	0.091
	Kr	83		ug/L		111	0.000
	Sr	88	**1102.760**	ug/L	0.298	4739194	38.634
	Y	89		ug/L		439	0.003
	Zr	90	**491.412**	ug/L	1.102	1296268	10.565
	Mo	98	**968.726**	ug/L	0.470	1259506	10.267
	Ag	107	**245.371**	ug/L	1.235	551774	4.498
	Cd	111	**988.444**	ug/L	0.488	491278	4.005
	Cd	114		ug/L		1201732	9.796
>	In	115		ug/L		122665	122664.918
	Sn	120	**1089.378**	ug/L	0.647	2585629	21.079
	Sb	121	**253.921**	ug/L	0.542	592108	4.825
	Sb	123		ug/L		463225	3.774
	Ba	135		ug/L		1595847	8.604
	Ba	137	**2704.164**	ug/L	0.936	3323794	17.922
	Ho	165		ug/L		189	0.001
>	Lu	175		ug/L		185477	185476.678
	Tl	205	**492.242**	ug/L	0.301	3265491	17.600
	Pb	208	**5125.803**	ug/L	1.491	41041397	221.300
	Th	232	**2549.842**	ug/L	2.438	21506780	115.983
	U	238	**5290.553**	ug/L	1.685	42021279	226.563

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	96.502				
	Be	9	97.525				
	B	11					
	Na	23	88.374				
	Mg	24	89.398				
	Al	27	95.294				
	P	31	109.065				
	K	39	92.742				
	Ca	43	97.948				
>	Sc	45		106.1			
	Ti	47					
	V	51	110.725				
	Cr	52	92.156				
	Cr	53					
	Mn	55	107.257				
	Fe	57	111.906				
	Co	59	106.431				
	Ni	60	95.548				
	Cu	63					
	Cu	65	97.215				
	Zn	66	95.379				
	Zn	67					
	Zn	68					
>	Ge	74		111.3			
	As	75	94.633				
	Se	77					
	Se	82	102.056				
	Kr	83					
	Sr	88	110.276				
	Y	89					
	Zr	90	98.282				
	Mo	98	96.873				
	Ag	107	98.149				
	Cd	111	98.844				
	Cd	114					
>	In	115		108.7			
	Sn	120	108.938				
	Sb	121	101.569				
	Sb	123					
	Ba	135					
	Ba	137	108.167				
	Ho	165					
>	Lu	175		110.5			
	Tl	205	98.448				
	Pb	208	102.516				
	Th	232	101.994				
	U	238	105.811				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 10	Na	23LRS is out of limits (+/- 10%)
QC Std 10	Mg	24LRS is out of limits (+/- 10%)
QC Std 10	V	51LRS is out of limits (+/- 10%)
QC Std 10	Fe	57LRS is out of limits (+/- 10%)
QC Std 10	Sr	88LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Tuesday, July 14, 2009 00:32:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 11.118

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.498**	ug/L	1.689	6806	0.006
	Be	9	**49.554**	ug/L	1.134	6678	0.006
	B	11	**92.327**	ug/L	3.909	8199	0.007
	Na	23	**5253.063**	ug/L	8.027	6465667	5.838
	Mg	24	**4811.538**	ug/L	12.663	4713725	4.264
	Al	27	**5119.476**	ug/L	9.858	8011090	7.246
	P	31	**4731.227**	ug/L	0.689	482800	0.434
	K	39	**4790.423**	ug/L	5.122	12619264	10.900
	Ca	43	**4891.078**	ug/L	0.214	19565	0.017
>	Sc	45		ug/L		1105644	1105644.414
	Ti	47	**47.734**	ug/L	3.393	9884	0.009
	V	51	**50.669**	ug/L	5.264	114269	0.097
	Cr	52	**50.514**	ug/L	0.899	104041	0.100
	Cr	53		ug/L		236063	-0.042
	Mn	55	**47.751**	ug/L	0.905	166687	0.150
	Fe	57	**4992.390**	ug/L	2.155	351454	0.313
	Co	59	**50.751**	ug/L	0.759	139556	0.126
	Ni	60	**51.917**	ug/L	0.105	30749	0.028
	Cu	63		ug/L		65819	0.059
	Cu	65	**50.275**	ug/L	0.814	30111	0.027
	Zn	66	**52.068**	ug/L	2.684	19691	0.103
	Zn	67		ug/L		10064	0.006
	Zn	68		ug/L		13467	0.067
>	Ge	74		ug/L		189156	189155.999
	As	75	**48.382**	ug/L	0.923	26376	0.131
	Se	77		ug/L		8519	-0.005
	Se	82	**52.522**	ug/L	1.022	1773	0.009
	Kr	83		ug/L		97	-0.000
	Sr	88	**51.093**	ug/L	2.109	233677	1.790
	Y	89		ug/L		54	0.000
	Zr	90	**49.222**	ug/L	2.089	138246	1.058
	Mo	98	**47.823**	ug/L	2.479	66182	0.507
	Ag	107	**48.865**	ug/L	1.054	116906	0.896
	Cd	111	**51.771**	ug/L	1.903	27378	0.210
	Cd	114		ug/L		68809	0.527
>	In	115		ug/L		130467	130467.155
	Sn	120	**49.442**	ug/L	2.055	124910	0.957
	Sb	121	**49.785**	ug/L	3.022	123737	0.946
	Sb	123		ug/L		98625	0.754
	Ba	135		ug/L		35384	0.190
	Ba	137	**50.175**	ug/L	1.277	61791	0.333
	Ho	165		ug/L		67	0.000
>	Lu	175		ug/L		185650	185650.038
	Tl	205	**48.090**	ug/L	1.071	320453	1.719
	Pb	208	**50.219**	ug/L	0.785	402889	2.168
	Th	232	**48.806**	ug/L	1.706	412425	2.220
	U	238	**50.922**	ug/L	1.431	405061	2.181

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	102.997				
	Be	9	99.108				
	B	11	92.327				
	Na	23	105.061				
	Mg	24	96.231				
	Al	27	101.376				
	P	31	94.625				
	K	39	95.808				
	Ca	43	97.822				
>	Sc	45		111.0			
	Ti	47	95.468				
	V	51	101.338				
	Cr	52	101.027				
	Cr	53					
	Mn	55	95.502				
	Fe	57	99.848				
	Co	59	101.503				
	Ni	60	103.834				
	Cu	63					
	Cu	65	100.551				
	Zn	66	104.135				
	Zn	67					
	Zn	68					
>	Ge	74		115.0			
	As	75	96.764				
	Se	77					
	Se	82	105.043				
	Kr	83					
	Sr	88	102.187				
	Y	89					
	Zr	90	98.443				
	Mo	98	95.645				
	Ag	107	97.731				
	Cd	111	103.543				
	Cd	114					
>	In	115		115.6			
	Sn	120	98.884				
	Sb	121	99.569				
	Sb	123					
	Ba	135					
	Ba	137	100.350				
	Ho	165					
>	Lu	175		110.6			
	Tl	205	96.181				
	Pb	208	100.437				
	Th	232	97.611				
	U	238	101.845				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Tuesday, July 14, 2009 00:38:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 12.119

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.005**	ug/L	412.250	28	-0.000
	Be	9	**-0.023**	ug/L	168.430	25	-0.000
	B	11	**0.423**	ug/L	11.033	417	0.000
	Na	23	**-1.229**	ug/L	171.002	6335	-0.001
	Mg	24	**1.239**	ug/L	139.427	2000	0.001
	Al	27	**0.593**	ug/L	52.795	4334	0.001
	P	31	**-5.088**	ug/L	20.053	2464	-0.000
	K	39	**-23.063**	ug/L	64.320	518598	-0.052
	Ca	43	**-18.086**	ug/L	63.616	543	-0.000
>	Sc	45		ug/L		1123784	1123783.999
	Ti	47	**-0.239**	ug/L	14.515	207	-0.000
	V	51	**1.114**	ug/L	84.038	9049	0.002
	Cr	52	**0.695**	ug/L	41.704	-5237	0.001
	Cr	53		ug/L		220303	-0.059
	Mn	55	**-0.050**	ug/L	40.138	1164	-0.000
	Fe	57	**-6.115**	ug/L	40.681	4861	-0.000
	Co	59	**0.017**	ug/L	14.853	329	0.000
	Ni	60	**0.001**	ug/L	1218.623	111	0.000
	Cu	63		ug/L		248	0.000
	Cu	65	**0.025**	ug/L	97.653	133	0.000
	Zn	66	**0.017**	ug/L	171.453	209	0.000
	Zn	67		ug/L		7137	-0.010
	Zn	68		ug/L		673	-0.001
>	Ge	74		ug/L		194807	194806.924
	As	75	**-0.795**	ug/L	60.444	1270	-0.002
	Se	77		ug/L		7238	-0.013
	Se	82	**-0.151**	ug/L	285.004	4	-0.000
	Kr	83		ug/L		95	-0.000
	Sr	88	**0.007**	ug/L	21.045	197	0.000
	Y	89		ug/L		41	-0.000
	Zr	90	**0.051**	ug/L	17.185	355	0.001
	Mo	98	**0.129**	ug/L	1.705	252	0.001
	Ag	107	**0.006**	ug/L	101.246	71	0.000
	Cd	111	**0.015**	ug/L	69.813	23	0.000
	Cd	114		ug/L		59	0.000
>	In	115		ug/L		134878	134877.538
	Sn	120	**0.117**	ug/L	6.986	419	0.002
	Sb	121	**0.434**	ug/L	9.354	1474	0.008
	Sb	123		ug/L		1162	0.007
	Ba	135		ug/L		56	0.000
	Ba	137	**0.021**	ug/L	78.372	86	0.000
	Ho	165		ug/L		41	-0.000
>	Lu	175		ug/L		190708	190707.901
	Tl	205	**0.284**	ug/L	16.835	3212	0.010
	Pb	208	**0.042**	ug/L	38.059	733	0.002
	Th	232	**0.113**	ug/L	7.397	1256	0.005
	U	238	**0.060**	ug/L	14.455	709	0.003

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			112.8		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			118.4		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			119.5		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			113.6		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 01:35:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 6.129

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.246**	ug/L	3.270	6923	0.006
	Be	9	**51.119**	ug/L	5.356	6773	0.006
	B	11	**93.745**	ug/L	7.605	8177	0.007
	Na	23	**4637.821**	ug/L	16.863	5599729	5.155
	Mg	24	**4818.730**	ug/L	3.275	4653982	4.270
	Al	27	**5443.662**	ug/L	10.050	8373784	7.705
	P	31	**5111.087**	ug/L	6.118	512468	0.469
	K	39	**4874.533**	ug/L	5.477	12622448	11.091
	Ca	43	**5093.087**	ug/L	5.503	20008	0.018
>	Sc	45		ug/L		1088713	1088712.683
	Ti	47	**48.909**	ug/L	1.998	9963	0.009
	V	51	**51.088**	ug/L	4.456	113256	0.098
	Cr	52	**51.256**	ug/L	5.593	103871	0.102
	Cr	53		ug/L		227958	-0.046
	Mn	55	**47.477**	ug/L	4.680	162989	0.149
	Fe	57	**4990.245**	ug/L	4.232	345547	0.313
	Co	59	**50.559**	ug/L	5.890	136668	0.125
	Ni	60	**52.063**	ug/L	7.694	30298	0.028
	Cu	63		ug/L		65024	0.060
	Cu	65	**49.860**	ug/L	4.375	29369	0.027
	Zn	66	**52.374**	ug/L	2.930	19279	0.104
	Zn	67		ug/L		9714	0.006
	Zn	68		ug/L		13287	0.068
>	Ge	74		ug/L		184153	184152.909
	As	75	**48.614**	ug/L	2.523	25788	0.131
	Se	77		ug/L		8757	-0.002
	Se	82	**52.070**	ug/L	3.306	1711	0.009
	Kr	83		ug/L		95	-0.000
	Sr	88	**51.581**	ug/L	1.487	226264	1.807
	Y	89		ug/L		68	0.000
	Zr	90	**49.216**	ug/L	3.053	132568	1.058
	Mo	98	**48.234**	ug/L	4.166	64008	0.511
	Ag	107	**49.598**	ug/L	2.201	113800	0.909
	Cd	111	**51.858**	ug/L	2.301	26303	0.210
	Cd	114		ug/L		66272	0.529
>	In	115		ug/L		125150	125150.006
	Sn	120	**48.753**	ug/L	1.401	118145	0.943
	Sb	121	**48.611**	ug/L	3.658	115873	0.924
	Sb	123		ug/L		91183	0.727
	Ba	135		ug/L		33943	0.193
	Ba	137	**51.336**	ug/L	1.515	59911	0.340
	Ho	165		ug/L		61	0.000
>	Lu	175		ug/L		175947	175947.387
	Tl	205	**48.021**	ug/L	1.516	303238	1.717
	Pb	208	**50.233**	ug/L	1.546	381896	2.169
	Th	232	**49.137**	ug/L	2.491	393435	2.235
	U	238	**50.980**	ug/L	0.711	384308	2.183

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	106.493				
	Be	9	102.238				
	B	11	93.745				
	Na	23	92.756				
	Mg	24	96.375				
	Al	27	107.795				
	P	31	102.222				
	K	39	97.491				
	Ca	43	101.862				
>	Sc	45		109.3			
	Ti	47	97.817				
	V	51	102.176				
	Cr	52	102.512				
	Cr	53					
	Mn	55	94.954				
	Fe	57	99.805				
	Co	59	101.117				
	Ni	60	104.125				
	Cu	63					
	Cu	65	99.721				
	Zn	66	104.747				
	Zn	67					
	Zn	68					
>	Ge	74		111.9			
	As	75	97.228				
	Se	77					
	Se	82	104.139				
	Kr	83					
	Sr	88	103.161				
	Y	89					
	Zr	90	98.432				
	Mo	98	96.468				
	Ag	107	99.197				
	Cd	111	103.717				
	Cd	114					
>	In	115		110.9			
	Sn	120	97.506				
	Sb	121	97.223				
	Sb	123					
	Ba	135					
	Ba	137	102.673				
	Ho	165					
>	Lu	175		104.8			
	Tl	205	96.042				
	Pb	208	100.466				
	Th	232	98.273				
	U	238	101.960				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 01:41:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 7.130

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.011**	ug/L	314.926	30	0.000
	Be	9	**-0.037**	ug/L	17.903	23	-0.000
	B	11	**0.451**	ug/L	190.921	417	0.000
	Na	23	**0.105**	ug/L	3056.576	8003	0.000
	Mg	24	**2.261**	ug/L	75.071	3000	0.002
	Al	27	**-0.638**	ug/L	233.919	2334	-0.001
	P	31	**-4.478**	ug/L	49.705	2511	-0.000
	K	39	**-25.854**	ug/L	74.996	508609	-0.059
	Ca	43	**-13.598**	ug/L	33.192	557	-0.000
>	Sc	45		ug/L		1117130	1117130.082
	Ti	47	**-0.312**	ug/L	16.736	191	-0.000
	V	51	**1.948**	ug/L	64.404	10792	0.004
	Cr	52	**0.865**	ug/L	34.423	-4827	0.002
	Cr	53		ug/L		216503	-0.061
	Mn	55	**-0.066**	ug/L	31.811	1101	-0.000
	Fe	57	**-6.095**	ug/L	9.906	4835	-0.000
	Co	59	**0.009**	ug/L	101.889	302	0.000
	Ni	60	**-0.007**	ug/L	143.938	105	-0.000
	Cu	63		ug/L		181	0.000
	Cu	65	**0.000**	ug/L	7674.935	118	0.000
	Zn	66	**0.019**	ug/L	228.597	208	0.000
	Zn	67		ug/L		6872	-0.012
	Zn	68		ug/L		670	-0.001
>	Ge	74		ug/L		193926	193926.345
	As	75	**-0.362**	ug/L	82.353	1492	-0.001
	Se	77		ug/L		7482	-0.011
	Se	82	**-0.207**	ug/L	183.631	2	-0.000
	Kr	83		ug/L		100	-0.000
	Sr	88	**0.003**	ug/L	18.009	169	0.000
	Y	89		ug/L		44	0.000
	Zr	90	**0.022**	ug/L	36.293	263	0.000
	Mo	98	**0.027**	ug/L	67.505	102	0.000
	Ag	107	**0.006**	ug/L	70.131	69	0.000
	Cd	111	**0.015**	ug/L	73.952	22	0.000
	Cd	114		ug/L		51	0.000
>	In	115		ug/L		130284	130283.626
	Sn	120	**0.027**	ug/L	17.076	179	0.001
	Sb	121	**0.155**	ug/L	14.498	730	0.003
	Sb	123		ug/L		568	0.002
	Ba	135		ug/L		42	0.000
	Ba	137	**0.000**	ug/L	979.731	57	0.000
	Ho	165		ug/L		48	0.000
>	Lu	175		ug/L		182796	182796.424
	Tl	205	**0.025**	ug/L	121.424	1386	0.001
	Pb	208	**0.012**	ug/L	27.590	463	0.001
	Th	232	**0.046**	ug/L	16.494	648	0.002
	U	238	**0.010**	ug/L	2.562	289	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		112.1			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		117.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		115.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		108.9			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 02:27:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 6.138

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.881**	ug/L	2.410	7052	0.006
	Be	9	**48.031**	ug/L	2.714	6788	0.006
	B	11	**83.832**	ug/L	3.252	7843	0.006
	Na	23	**4578.957**	ug/L	2.631	5907618	5.089
	Mg	24	**4379.902**	ug/L	7.591	4498650	3.881
	Al	27	**4695.652**	ug/L	3.790	7708844	6.646
	P	31	**4644.021**	ug/L	2.288	496974	0.426
	K	39	**4769.602**	ug/L	0.515	13179696	10.853
	Ca	43	**4911.466**	ug/L	1.354	20600	0.017
>	Sc	45		ug/L		1159457	1159457.476
	Ti	47	**47.156**	ug/L	0.582	10244	0.009
	V	51	**50.157**	ug/L	2.416	118660	0.096
	Cr	52	**51.058**	ug/L	1.823	110338	0.101
	Cr	53		ug/L		219179	-0.066
	Mn	55	**48.352**	ug/L	1.676	176972	0.151
	Fe	57	**5068.878**	ug/L	1.540	374126	0.318
	Co	59	**50.907**	ug/L	2.176	146779	0.126
	Ni	60	**52.316**	ug/L	1.616	32489	0.028
	Cu	63		ug/L		69892	0.060
	Cu	65	**50.669**	ug/L	1.022	31825	0.027
	Zn	66	**52.293**	ug/L	1.727	21623	0.104
	Zn	67		ug/L		9727	0.000
	Zn	68		ug/L		14930	0.068
>	Ge	74		ug/L		206802	206802.368
	As	75	**47.785**	ug/L	1.558	28509	0.129
	Se	77		ug/L		8688	-0.008
	Se	82	**53.433**	ug/L	5.188	1972	0.009
	Kr	83		ug/L		91	-0.000
	Sr	88	**51.310**	ug/L	0.481	258321	1.798
	Y	89		ug/L		75	0.000
	Zr	90	**48.641**	ug/L	1.617	150393	1.046
	Mo	98	**46.862**	ug/L	0.481	71395	0.497
	Ag	107	**48.505**	ug/L	1.223	127735	0.889
	Cd	111	**52.025**	ug/L	2.429	30288	0.211
	Cd	114		ug/L		75881	0.528
>	In	115		ug/L		143606	143606.306
	Sn	120	**48.225**	ug/L	0.369	134124	0.933
	Sb	121	**48.145**	ug/L	0.897	131750	0.915
	Sb	123		ug/L		104038	0.722
	Ba	135		ug/L		37203	0.188
	Ba	137	**49.825**	ug/L	1.220	65514	0.330
	Ho	165		ug/L		56	0.000
>	Lu	175		ug/L		198214	198213.608
	Tl	205	**45.698**	ug/L	0.653	325188	1.634
	Pb	208	**48.150**	ug/L	0.866	412440	2.079
	Th	232	**46.361**	ug/L	0.869	418281	2.109
	U	238	**48.314**	ug/L	1.777	410318	2.069

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	101.761				
	Be	9	96.061				
	B	11	83.832				
	Na	23	91.579				
	Mg	24	87.598				
	Al	27	92.983				
	P	31	92.880				
	K	39	95.392				
	Ca	43	98.229				
>	Sc	45		116.4			
	Ti	47	94.312				
	V	51	100.313				
	Cr	52	102.116				
	Cr	53					
	Mn	55	96.705				
	Fe	57	101.378				
	Co	59	101.815				
	Ni	60	104.631				
	Cu	63					
	Cu	65	101.339				
	Zn	66	104.585				
	Zn	67					
	Zn	68					
>	Ge	74		125.7			
	As	75	95.570				
	Se	77					
	Se	82	106.867				
	Kr	83					
	Sr	88	102.620				
	Y	89					
	Zr	90	97.282				
	Mo	98	93.724				
	Ag	107	97.011				
	Cd	111	104.051				
	Cd	114					
>	In	115		127.3			
	Sn	120	96.450				
	Sb	121	96.289				
	Sb	123					
	Ba	135					
	Ba	137	99.650				
	Ho	165					
>	Lu	175		118.0			
	Tl	205	91.396				
	Pb	208	96.299				
	Th	232	92.723				
	U	238	96.628				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	B	11CCV is out of limits (+/- 10%)
QC Std 6	Mg	24CCV is out of limits (+/- 10%)
Ge 74 Int Std for QCGe		74
In 115 Int Std for QCIn		115

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 02:33:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 7.139

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.021**	ug/L	191.028	26	-0.000
	Be	9	**-0.019**	ug/L	250.773	25	-0.000
	B	11	**-0.082**	ug/L	367.503	370	-0.000
	Na	23	**-2.833**	ug/L	28.225	4334	-0.003
	Mg	24	**-0.094**	ug/L	606.525	667	-0.000
	Al	27	**-0.646**	ug/L	50.788	2334	-0.001
	P	31	**-4.082**	ug/L	15.673	2535	-0.000
	K	39	**-31.413**	ug/L	44.190	490275	-0.071
	Ca	43	**-7.539**	ug/L	172.489	578	-0.000
>	Sc	45		ug/L		1109479	1109478.663
	Ti	47	**-0.201**	ug/L	36.483	212	-0.000
	V	51	**2.350**	ug/L	36.165	11614	0.005
	Cr	52	**1.122**	ug/L	19.394	-4244	0.002
	Cr	53		ug/L		204352	-0.071
	Mn	55	**-0.027**	ug/L	27.446	1227	-0.000
	Fe	57	**-0.452**	ug/L	994.463	5189	-0.000
	Co	59	**0.026**	ug/L	12.624	348	0.000
	Ni	60	**-0.007**	ug/L	309.847	105	-0.000
	Cu	63		ug/L		168	-0.000
	Cu	65	**0.005**	ug/L	445.890	120	0.000
	Zn	66	**-0.034**	ug/L	100.151	199	-0.000
	Zn	67		ug/L		6492	-0.015
	Zn	68		ug/L		709	-0.001
>	Ge	74		ug/L		205457	205457.466
	As	75	**-0.935**	ug/L	42.181	1265	-0.003
	Se	77		ug/L		7328	-0.014
	Se	82	**-0.364**	ug/L	201.126	-3	-0.000
	Kr	83		ug/L		99	-0.000
	Sr	88	**0.002**	ug/L	205.332	182	0.000
	Y	89		ug/L		50	0.000
	Zr	90	**0.041**	ug/L	22.982	343	0.001
	Mo	98	**0.031**	ug/L	31.434	119	0.000
	Ag	107	**0.003**	ug/L	177.538	67	0.000
	Cd	111	**-0.001**	ug/L	336.726	14	-0.000
	Cd	114		ug/L		52	-0.000
>	In	115		ug/L		141726	141726.316
	Sn	120	**0.029**	ug/L	23.938	199	0.001
	Sb	121	**0.152**	ug/L	7.844	788	0.003
	Sb	123		ug/L		632	0.002
	Ba	135		ug/L		50	0.000
	Ba	137	**0.013**	ug/L	30.321	77	0.000
	Ho	165		ug/L		45	0.000
>	Lu	175		ug/L		193535	193535.197
	Tl	205	**0.027**	ug/L	83.775	1483	0.001
	Pb	208	**0.013**	ug/L	22.895	500	0.001
	Th	232	**0.043**	ug/L	14.938	665	0.002
	U	238	**0.011**	ug/L	21.943	311	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			111.4		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			124.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			125.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			115.2		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ge 74 Int Std for QC	Ge	74	
In 115 Int Std for QC	In	115	

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 03:02:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 6.144

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.789**	ug/L	2.073	7109	0.006
	Be	9	**49.458**	ug/L	0.842	6921	0.006
	B	11	**85.831**	ug/L	2.041	7945	0.007
	Na	23	**4660.886**	ug/L	9.020	5957100	5.180
	Mg	24	**4488.780**	ug/L	7.661	4564367	3.978
	Al	27	**4836.405**	ug/L	5.952	7864739	6.846
	P	31	**4758.913**	ug/L	2.848	504140	0.437
	K	39	**4623.723**	ug/L	3.751	12667028	10.521
	Ca	43	**4931.722**	ug/L	0.652	20479	0.017
>	Sc	45		ug/L		1148092	1148091.528
	Ti	47	**47.939**	ug/L	4.442	10303	0.009
	V	51	**52.547**	ug/L	2.931	122739	0.101
	Cr	52	**51.286**	ug/L	3.575	109732	0.102
	Cr	53		ug/L		219078	-0.064
	Mn	55	**48.458**	ug/L	2.980	175564	0.152
	Fe	57	**5100.837**	ug/L	1.686	372722	0.320
	Co	59	**51.059**	ug/L	1.825	145758	0.127
	Ni	60	**52.736**	ug/L	4.707	32411	0.028
	Cu	63		ug/L		70753	0.061
	Cu	65	**51.229**	ug/L	3.265	31846	0.028
	Zn	66	**52.019**	ug/L	3.049	21210	0.103
	Zn	67		ug/L		9618	0.000
	Zn	68		ug/L		14554	0.067
>	Ge	74		ug/L		203942	203942.050
	As	75	**47.322**	ug/L	3.410	27857	0.128
	Se	77		ug/L		8710	-0.007
	Se	82	**51.328**	ug/L	2.263	1869	0.009
	Kr	83		ug/L		102	-0.000
	Sr	88	**52.318**	ug/L	2.890	253279	1.833
	Y	89		ug/L		106	0.000
	Zr	90	**49.183**	ug/L	4.254	146188	1.057
	Mo	98	**47.370**	ug/L	3.959	69383	0.502
	Ag	107	**48.876**	ug/L	4.554	123729	0.896
	Cd	111	**53.439**	ug/L	6.176	29894	0.217
	Cd	114		ug/L		74605	0.540
>	In	115		ug/L		138180	138180.333
	Sn	120	**48.278**	ug/L	5.018	129066	0.934
	Sb	121	**49.552**	ug/L	4.829	130329	0.941
	Sb	123		ug/L		101834	0.735
	Ba	135		ug/L		36460	0.193
	Ba	137	**51.770**	ug/L	4.167	64671	0.343
	Ho	165		ug/L		56	0.000
>	Lu	175		ug/L		188467	188467.269
	Tl	205	**47.162**	ug/L	1.909	318951	1.686
	Pb	208	**49.700**	ug/L	2.991	404556	2.146
	Th	232	**48.481**	ug/L	3.868	415591	2.205
	U	238	**50.248**	ug/L	3.031	405533	2.152

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	103.577				
	Be	9	98.916				
	B	11	85.831				
	Na	23	93.218				
	Mg	24	89.776				
	Al	27	95.770				
	P	31	95.178				
	K	39	92.474				
	Ca	43	98.634				
>	Sc	45		115.2			
	Ti	47	95.878				
	V	51	105.094				
	Cr	52	102.573				
	Cr	53					
	Mn	55	96.916				
	Fe	57	102.017				
	Co	59	102.118				
	Ni	60	105.472				
	Cu	63					
	Cu	65	102.458				
	Zn	66	104.037				
	Zn	67					
	Zn	68					
>	Ge	74		124.0			
	As	75	94.643				
	Se	77					
	Se	82	102.657				
	Kr	83					
	Sr	88	104.636				
	Y	89					
	Zr	90	98.367				
	Mo	98	94.740				
	Ag	107	97.751				
	Cd	111	106.878				
	Cd	114					
>	In	115		122.5			
	Sn	120	96.557				
	Sb	121	99.104				
	Sb	123					
	Ba	135					
	Ba	137	103.540				
	Ho	165					
>	Lu	175		112.2			
	Tl	205	94.323				
	Pb	208	99.401				
	Th	232	96.962				
	U	238	100.497				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	B	11CCV is out of limits (+/- 10%)
QC Std 6	Mg	24CCV is out of limits (+/- 10%)
Ge 74 Int Std for QCGe		74
In 115 Int Std for QCIn		115

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 03:08:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 7.145

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.007**	ug/L	625.148	31	0.000
	Be	9	**0.000**	ug/L	1470.598	29	0.000
	B	11	**-0.388**	ug/L	110.311	361	-0.000
	Na	23	**-0.453**	ug/L	493.165	7669	-0.001
	Mg	24	**0.833**	ug/L	238.428	1667	0.001
	Al	27	**2.287**	ug/L	63.398	7335	0.003
	P	31	**-3.912**	ug/L	48.799	2689	-0.000
	K	39	**-23.602**	ug/L	32.798	539004	-0.054
	Ca	43	**-8.880**	ug/L	179.139	602	-0.000
>	Sc	45		ug/L		1169537	1169537.058
	Ti	47	**-0.104**	ug/L	9.285	244	-0.000
	V	51	**1.066**	ug/L	118.608	9291	0.002
	Cr	52	**1.235**	ug/L	21.022	-4193	0.002
	Cr	53		ug/L		210145	-0.075
	Mn	55	**-0.002**	ug/L	2001.258	1385	-0.000
	Fe	57	**1.777**	ug/L	117.499	5637	0.000
	Co	59	**0.013**	ug/L	71.235	330	0.000
	Ni	60	**-0.015**	ug/L	42.821	105	-0.000
	Cu	63		ug/L		295	0.000
	Cu	65	**-0.027**	ug/L	29.843	106	-0.000
	Zn	66	**0.012**	ug/L	171.844	221	0.000
	Zn	67		ug/L		6608	-0.015
	Zn	68		ug/L		662	-0.001
>	Ge	74		ug/L		208061	208060.998
	As	75	**-1.062**	ug/L	94.424	1199	-0.003
	Se	77		ug/L		7659	-0.013
	Se	82	**-0.492**	ug/L	36.900	-8	-0.000
	Kr	83		ug/L		103	-0.000
	Sr	88	**0.005**	ug/L	42.171	195	0.000
	Y	89		ug/L		47	0.000
	Zr	90	**0.042**	ug/L	17.809	349	0.001
	Mo	98	**0.027**	ug/L	9.724	113	0.000
	Ag	107	**0.002**	ug/L	135.161	66	0.000
	Cd	111	**0.019**	ug/L	42.248	26	0.000
	Cd	114		ug/L		44	-0.000
>	In	115		ug/L		143352	143351.604
	Sn	120	**0.032**	ug/L	23.680	210	0.001
	Sb	121	**0.140**	ug/L	36.418	761	0.003
	Sb	123		ug/L		634	0.002
	Ba	135		ug/L		51	0.000
	Ba	137	**0.014**	ug/L	35.708	79	0.000
	Ho	165		ug/L		38	-0.000
>	Lu	175		ug/L		197055	197055.449
	Tl	205	**-0.001**	ug/L	5315.651	1310	-0.000
	Pb	208	**0.012**	ug/L	28.774	501	0.001
	Th	232	**0.038**	ug/L	16.741	630	0.002
	U	238	**0.010**	ug/L	11.078	312	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		117.4			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		126.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		127.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		117.3			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte	Mass	Out of Limits Message
Ge 74 Int Std for QCGe	74	
In 115 Int Std for QCIn	115	

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873979
Sample Date/Time: Tuesday, July 14, 2009 03:14:03
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\1201873979.146

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.033**	ug/L	140.869	26	-0.000
	Be	9	**-0.075**	ug/L	38.990	18	-0.000
	B	11	**-1.277**	ug/L	16.340	283	-0.000
	Na	23	**-2.733**	ug/L	82.564	4668	-0.003
	Mg	24	**0.528**	ug/L	105.832	1333	0.000
	Al	27	**-0.533**	ug/L	340.342	2667	-0.001
	P	31	**10.332**	ug/L	17.646	4235	0.001
	K	39	**-32.798**	ug/L	15.907	516168	-0.075
	Ca	43	**-17.453**	ug/L	36.509	570	-0.000
>	Sc	45		ug/L		1173738	1173738.083
	Ti	47	**-0.020**	ug/L	402.703	263	-0.000
	V	51	**1.617**	ug/L	50.608	10599	0.003
	Cr	52	**1.897**	ug/L	15.279	-2672	0.004
	Cr	53		ug/L		181000	-0.101
	Mn	55	**0.217**	ug/L	4.088	2197	0.001
	Fe	57	**22.683**	ug/L	6.427	7198	0.001
	Co	59	**0.003**	ug/L	182.795	301	0.000
	Ni	60	**0.017**	ug/L	58.808	126	0.000
	Cu	63		ug/L		288	0.000
	Cu	65	**0.037**	ug/L	29.945	147	0.000
	Zn	66	**0.337**	ug/L	27.472	361	0.001
	Zn	67		ug/L		5747	-0.020
	Zn	68		ug/L		696	-0.001
>	Ge	74		ug/L		211733	211732.728
	As	75	**-1.134**	ug/L	13.168	1186	-0.003
	Se	77		ug/L		6136	-0.021
	Se	82	**-0.193**	ug/L	148.702	3	-0.000
	Kr	83		ug/L		95	-0.000
	Sr	88	**0.009**	ug/L	42.695	223	0.000
	Y	89		ug/L		53	0.000
	Zr	90	**0.109**	ug/L	3.259	570	0.002
	Mo	98	**0.028**	ug/L	17.459	118	0.000
	Ag	107	**-0.006**	ug/L	53.666	47	-0.000
	Cd	111	**0.025**	ug/L	46.689	31	0.000
	Cd	114		ug/L		58	0.000
>	In	115		ug/L		147051	147050.692
	Sn	120	**0.011**	ug/L	26.654	155	0.000
	Sb	121	**-0.021**	ug/L	64.712	334	-0.000
	Sb	123		ug/L		281	-0.000
	Ba	135		ug/L		69	0.000
	Ba	137	**0.030**	ug/L	12.684	102	0.000
	Ho	165		ug/L		46	0.000
>	Lu	175		ug/L		201259	201258.640
	Tl	205	**-0.102**	ug/L	5.966	614	-0.004
	Pb	208	**0.009**	ug/L	38.464	482	0.000
	Th	232	**0.027**	ug/L	53.301	545	0.001
	U	238	**-0.021**	ug/L	4.243	51	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		117.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		128.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		130.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		119.8			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ge 74 Int Std for sar	Ge	74	
In 115 Int Std for sar	In	115	

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873980
Sample Date/Time: Tuesday, July 14, 2009 03:19:52
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 882360|40|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\1201873980.147

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.080**	ug/L	7.207	321	0.000
	Be	9	**22.366**	ug/L	1.393	3217	0.003
	B	11	**28.959**	ug/L	3.501	3004	0.002
	Na	23	**120.174**	ug/L	11.832	164953	0.134
	Mg	24	**686.072**	ug/L	5.191	715550	0.608
	Al	27	**2124.191**	ug/L	9.376	3531497	3.007
	P	31	**175.359**	ug/L	2.035	22014	0.016
	K	39	**550.707**	ug/L	17.105	2074153	1.253
	Ca	43	**956.899**	ug/L	2.294	4582	0.003
>	Sc	45		ug/L		1174570	1174569.834
	Ti	47	**68.238**	ug/L	3.465	14890	0.012
	V	51	**38.660**	ug/L	5.647	94181	0.074
	Cr	52	**19.229**	ug/L	4.575	37647	0.038
	Cr	53		ug/L		207169	-0.079
	Mn	55	**95.877**	ug/L	2.896	353991	0.300
	Fe	57	**2808.728**	ug/L	3.030	212408	0.176
	Co	59	**22.211**	ug/L	3.494	65012	0.055
	Ni	60	**27.504**	ug/L	3.518	17351	0.015
	Cu	63		ug/L		38116	0.032
	Cu	65	**27.054**	ug/L	2.274	17267	0.015
	Zn	66	**54.553**	ug/L	1.770	23072	0.108
	Zn	67		ug/L		10030	0.000
	Zn	68		ug/L		16826	0.075
>	Ge	74		ug/L		211596	211595.767
	As	75	**63.795**	ug/L	2.495	38316	0.172
	Se	77		ug/L		8795	-0.008
	Se	82	**49.319**	ug/L	2.622	1864	0.009
	Kr	83		ug/L		104	-0.000
	Sr	88	**44.207**	ug/L	0.927	228003	1.549
	Y	89		ug/L		18961	0.129
	Zr	90	**1.618**	ug/L	2.041	5344	0.035
	Mo	98	**20.271**	ug/L	2.147	31675	0.215
	Ag	107	**4.396**	ug/L	1.803	11914	0.081
	Cd	111	**31.515**	ug/L	0.511	18801	0.128
	Cd	114		ug/L		47281	0.321
>	In	115		ug/L		147112	147112.320
	Sn	120	**9.574**	ug/L	2.076	27374	0.185
	Sb	121	**7.886**	ug/L	1.579	22432	0.150
	Sb	123		ug/L		17293	0.115
	Ba	135		ug/L		99373	0.492
	Ba	137	**130.676**	ug/L	0.594	175053	0.866
	Ho	165		ug/L		1405	0.007
>	Lu	175		ug/L		202064	202064.161
	Tl	205	**50.215**	ug/L	0.874	364114	1.795
	Pb	208	**41.753**	ug/L	1.479	364608	1.803
	Th	232	**3.243**	ug/L	1.752	30103	0.148
	U	238	**0.384**	ug/L	3.487	3558	0.016

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		117.9			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		128.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		130.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		120.3			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte	Mass	Out of Limits Message
Ge 74 Int Std for sanGe	74	
In 115 Int Std for sanIn	115	
Lu 175 Int Std for saLu	175	

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744001
Sample Date/Time: Tuesday, July 14, 2009 03:25:39
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\232744001.148

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**59.388**	**ug/L**	1.066	8379	0.007
	Be	9	**3.643**	**ug/L**	7.592	551	0.000
	B	11	**11.652**	**ug/L**	0.348	1455	0.001
	Na	23	**476.244**	**ug/L**	3.395	633058	0.529
	Mg	24	**8646.571**	**ug/L**	3.689	9051068	7.663
	Al	27	**58049.506**	**ug/L**	8.313	96922096	82.164
	P	31	**439.451**	**ug/L**	1.152	50739	0.040
	K	39	**8101.238**	**ug/L**	6.562	22372685	18.433
	Ca	43	**9103.443**	**ug/L**	2.354	38329	0.032
>	Sc	45		**ug/L**		1180864	1180864.484
	Ti	47	**1495.825**	**ug/L**	1.860	322654	0.273
	V	51	**87.416**	**ug/L**	1.915	205415	0.168
	Cr	52	**38.601**	**ug/L**	1.379	83227	0.077
	Cr	53		**ug/L**		182248	-0.101
	Mn	55	**1604.086**	**ug/L**	2.159	5933587	5.025
	Fe	57	**54297.681**	**ug/L**	2.516	4026613	3.406
	Co	59	**21.192**	**ug/L**	1.182	62407	0.053
	Ni	60	**31.476**	**ug/L**	3.598	19947	0.017
	Cu	63		**ug/L**		37688	0.032
	Cu	65	**27.104**	**ug/L**	3.312	17389	0.015
	Zn	66	**138.121**	**ug/L**	2.376	56788	0.273
	Zn	67		**ug/L**		15593	0.028
	Zn	68		**ug/L**		43428	0.205
>	Ge	74		**ug/L**		206879	206878.602
	As	75	**6.965**	**ug/L**	10.659	5688	0.019
	Se	77		**ug/L**		5696	-0.022
	Se	82	**-0.726**	**ug/L**	87.513	-17	-0.000
	Kr	83		**ug/L**		172	0.000
	Sr	88	**105.585**	**ug/L**	0.907	533661	3.699
	Y	89		**ug/L**		303846	2.106
	Zr	90	**73.531**	**ug/L**	1.398	228197	1.581
	Mo	98	**1.729**	**ug/L**	2.242	2716	0.018
	Ag	107	**0.262**	**ug/L**	2.081	754	0.005
	Cd	111	**0.585**	**ug/L**	13.727	357	0.002
	Cd	114		**ug/L**		453	0.003
>	In	115		**ug/L**		144224	144224.020
	Sn	120	**0.668**	**ug/L**	3.691	1987	0.013
	Sb	121	**0.113**	**ug/L**	4.727	695	0.002
	Sb	123		**ug/L**		558	0.002
	Ba	135		**ug/L**		432276	2.104
	Ba	137	**553.068**	**ug/L**	2.175	753108	3.665
	Ho	165		**ug/L**		21632	0.105
>	Lu	175		**ug/L**		205463	205462.725
	Tl	205	**0.638**	**ug/L**	4.500	6067	0.023
	Pb	208	**50.345**	**ug/L**	1.349	446978	2.174
	Th	232	**28.790**	**ug/L**	1.149	269366	1.310
	U	238	**3.551**	**ug/L**	1.494	31482	0.152

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		118.5			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		125.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		127.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		122.4			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte	Mass	Out of Limits Message
Ni 60 Upper, S, EEEAl	27	Sample is out of limits (over linear range)
Ag 107 Upper, S, EETi	47	Sample is out of limits (over linear range)_
Sb 123 Upper, S, EEMn	55	Sample is out of limits (over linear range)
Ba 135 Upper, S, EEFe	57	Sample is out of limits (over linear range)
Ge 74 Int Std for sanGe	74	
In 115 Int Std for sarIn	115	
Lu 175 Int Std for saLu	175	

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873981
Sample Date/Time: Tuesday, July 14, 2009 03:31:28
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\1201873981.149

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.878**	ug/L	1.200	7905	0.007
	Be	9	**3.771**	ug/L	3.104	571	0.000
	B	11	**9.651**	ug/L	5.958	1277	0.001
	Na	23	**472.567**	ug/L	8.868	629625	0.525
	Mg	24	**8156.968**	ug/L	1.863	8558188	7.229
	Al	27	**58816.601**	ug/L	2.946	98551039	83.250
	P	31	**410.447**	ug/L	1.162	47722	0.038
	K	39	**7471.534**	ug/L	9.400	20720048	17.001
	Ca	43	**8685.930**	ug/L	1.162	36697	0.030
>	Sc	45		ug/L		1183780	1183780.339
	Ti	47	**1284.902**	ug/L	1.362	277897	0.235
	V	51	**81.711**	ug/L	1.514	192950	0.157
	Cr	52	**36.228**	ug/L	1.286	77875	0.072
	Cr	53		ug/L		179325	-0.104
	Mn	55	**1596.581**	ug/L	0.699	5921350	5.001
	Fe	57	**51195.359**	ug/L	1.518	3807077	3.212
	Co	59	**20.392**	ug/L	1.628	60211	0.051
	Ni	60	**29.963**	ug/L	1.904	19047	0.016
	Cu	63		ug/L		36002	0.030
	Cu	65	**26.112**	ug/L	3.467	16800	0.014
	Zn	66	**128.341**	ug/L	1.356	52057	0.254
	Zn	67		ug/L		14471	0.024
	Zn	68		ug/L		39537	0.189
>	Ge	74		ug/L		204052	204052.472
	As	75	**6.291**	ug/L	4.360	5238	0.017
	Se	77		ug/L		5470	-0.023
	Se	82	**-0.050**	ug/L	228.578	8	-0.000
	Kr	83		ug/L		154	0.000
	Sr	88	**100.591**	ug/L	1.447	501013	3.524
	Y	89		ug/L		295277	2.077
	Zr	90	**59.762**	ug/L	1.604	182813	1.285
	Mo	98	**1.528**	ug/L	2.613	2373	0.016
	Ag	107	**0.228**	ug/L	4.112	655	0.004
	Cd	111	**0.633**	ug/L	15.112	380	0.003
	Cd	114		ug/L		409	0.002
>	In	115		ug/L		142136	142136.163
	Sn	120	**0.456**	ug/L	1.289	1375	0.009
	Sb	121	**0.074**	ug/L	21.719	578	0.001
	Sb	123		ug/L		414	0.001
	Ba	135		ug/L		410370	2.023
	Ba	137	**529.609**	ug/L	1.998	711909	3.510
	Ho	165		ug/L		21107	0.104
>	Lu	175		ug/L		202832	202832.203
	Tl	205	**0.537**	ug/L	2.426	5253	0.019
	Pb	208	**46.729**	ug/L	0.977	409592	2.017
	Th	232	**29.089**	ug/L	0.229	268683	1.323
	U	238	**3.872**	ug/L	1.152	33862	0.166

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			118.8		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			124.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			126.0		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			120.8		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte	Mass	Out of Limits Message
Ni 60 Upper, S, EEEAl	27	Sample is out of limits (over linear range)
Ag 107 Upper, S, EETi	47	Sample is out of limits (over linear range)_
Sb 123 Upper, S, EEMn	55	Sample is out of limits (over linear range)
Ba 135 Upper, S, EEFe	57	Sample is out of limits (over linear range)
Ge 74 Int Std for sanGe	74	
In 115 Int Std for sanIn	115	
Lu 175 Int Std for saLu	175	

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873982
Sample Date/Time: Tuesday, July 14, 2009 03:37:16
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\1201873982.150

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**97.913**	**ug/L**	1.515	13761	0.012
	Be	9	**28.110**	**ug/L**	2.191	4049	0.003
	B	11	**56.468**	**ug/L**	4.917	5498	0.004
	Na	23	**1270.594**	**ug/L**	7.401	1671690	1.412
	Mg	24	**10393.482**	**ug/L**	8.721	10849333	9.211
	Al	27	**80853.049**	**ug/L**	8.945	134795016	114.441
	P	31	**1354.948**	**ug/L**	1.889	149555	0.124
	K	39	**10495.706**	**ug/L**	7.799	28734857	23.882
	Ca	43	**10253.517**	**ug/L**	1.228	42995	0.036
>	Sc	45		**ug/L**		1178016	1178016.224
	Ti	47	**1696.674**	**ug/L**	1.219	365085	0.310
	V	51	**122.055**	**ug/L**	1.268	283394	0.235
	Cr	52	**67.624**	**ug/L**	1.243	150805	0.134
	Cr	53		**ug/L**		190592	-0.094
	Mn	55	**1587.564**	**ug/L**	1.694	5859399	4.973
	Fe	57	**58914.749**	**ug/L**	1.682	4359381	3.696
	Co	59	**44.780**	**ug/L**	0.301	131234	0.111
	Ni	60	**57.521**	**ug/L**	2.476	36288	0.031
	Cu	63		**ug/L**		73854	0.063
	Cu	65	**53.161**	**ug/L**	1.427	33918	0.029
	Zn	66	**171.421**	**ug/L**	1.142	68534	0.339
	Zn	67		**ug/L**		17466	0.040
	Zn	68		**ug/L**		51227	0.250
>	Ge	74		**ug/L**		201306	201305.958
	As	75	**43.732**	**ug/L**	2.554	25537	0.118
	Se	77		**ug/L**		5705	-0.022
	Se	82	**7.479**	**ug/L**	12.920	277	0.001
	Kr	83		**ug/L**		190	0.000
	Sr	88	**141.513**	**ug/L**	1.646	675891	4.958
	Y	89		**ug/L**		305773	2.243
	Zr	90	**117.741**	**ug/L**	1.964	345215	2.531
	Mo	98	**22.125**	**ug/L**	1.727	32030	0.234
	Ag	107	**23.314**	**ug/L**	1.699	58302	0.427
	Cd	111	**5.532**	**ug/L**	3.020	3069	0.022
	Cd	114		**ug/L**		7205	0.052
>	In	115		**ug/L**		136312	136312.417
	Sn	120	**8.833**	**ug/L**	1.463	23412	0.171
	Sb	121	**28.414**	**ug/L**	1.873	73945	0.540
	Sb	123		**ug/L**		58522	0.427
	Ba	135		**ug/L**		468871	2.361
	Ba	137	**618.554**	**ug/L**	1.040	814137	4.099
	Ho	165		**ug/L**		22308	0.112
>	Lu	175		**ug/L**		198574	198573.589
	Tl	205	**44.696**	**ug/L**	0.995	318656	1.598
	Pb	208	**141.733**	**ug/L**	0.545	1215473	6.119
	Th	232	**53.211**	**ug/L**	1.885	480881	2.420
	U	238	**27.721**	**ug/L**	2.040	235952	1.187

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		118.2			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		122.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		120.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		118.2			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte	Mass	Out of Limits Message
Ni 60 Upper, S, EEEAl	27	Sample is out of limits (over linear range)
Ag 107 Upper, S, EETi	47	Sample is out of limits (over linear range)
Cd 111 Upper, S, EEV	51	Sample is out of limits (over linear range)
Sb 123 Upper, S, EEMn	55	Sample is out of limits (over linear range)
Ba 135 Upper, S, EEFe	57	Sample is out of limits (over linear range)
Ge 74 Int Std for sarGe	74	
In 115 Int Std for sarIn	115	

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873984
Sample Date/Time: Tuesday, July 14, 2009 03:43:06
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\1201873984.151

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**96.512**	ug/L	2.910	13307	0.011
	Be	9	**27.620**	ug/L	1.849	3902	0.003
	B	11	**55.602**	ug/L	3.573	5316	0.004
	Na	23	**1328.144**	ug/L	3.335	1714152	1.476
	Mg	24	**10769.829**	ug/L	8.594	11022588	9.544
	Al	27	**76859.770**	ug/L	9.044	125632212	108.789
	P	31	**1380.103**	ug/L	1.427	149334	0.127
	K	39	**9944.686**	ug/L	3.277	26747872	22.628
	Ca	43	**10075.787**	ug/L	0.288	41451	0.035
>	Sc	45		ug/L		1155427	1155427.422
	Ti	47	**1665.011**	ug/L	0.961	351390	0.304
	V	51	**116.843**	ug/L	3.570	266292	0.225
	Cr	52	**63.101**	ug/L	3.320	137505	0.125
	Cr	53		ug/L		191705	-0.089
	Mn	55	**1414.239**	ug/L	3.119	5118131	4.430
	Fe	57	**55667.213**	ug/L	3.432	4038970	3.492
	Co	59	**42.497**	ug/L	3.230	122127	0.105
	Ni	60	**53.771**	ug/L	3.250	33266	0.029
	Cu	63		ug/L		68604	0.059
	Cu	65	**49.569**	ug/L	2.069	31021	0.027
	Zn	66	**159.017**	ug/L	1.527	61741	0.315
	Zn	67		ug/L		16274	0.036
	Zn	68		ug/L		46374	0.233
>	Ge	74		ug/L		195462	195462.399
	As	75	**42.482**	ug/L	0.523	24140	0.115
	Se	77		ug/L		5696	-0.021
	Se	82	**8.051**	ug/L	5.280	289	0.001
	Kr	83		ug/L		173	0.000
	Sr	88	**133.235**	ug/L	2.294	617726	4.668
	Y	89		ug/L		282132	2.132
	Zr	90	**117.358**	ug/L	2.984	333998	2.523
	Mo	98	**21.548**	ug/L	1.995	30283	0.228
	Ag	107	**22.759**	ug/L	1.300	55257	0.417
	Cd	111	**5.547**	ug/L	5.029	2988	0.022
	Cd	114		ug/L		6531	0.049
>	In	115		ug/L		132346	132345.915
	Sn	120	**9.225**	ug/L	1.850	23729	0.178
	Sb	121	**24.837**	ug/L	2.594	62790	0.472
	Sb	123		ug/L		49266	0.370
	Ba	135		ug/L		440247	2.292
	Ba	137	**601.406**	ug/L	2.190	765703	3.986
	Ho	165		ug/L		20553	0.107
>	Lu	175		ug/L		192132	192132.144
	Tl	205	**43.909**	ug/L	0.459	302913	1.570
	Pb	208	**138.516**	ug/L	1.227	1149252	5.980
	Th	232	**52.150**	ug/L	0.110	456041	2.372
	U	238	**27.540**	ug/L	1.881	226773	1.179

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		116.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		118.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		117.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		114.4			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte	Mass	Out of Limits Message
Ni 60 Upper, S, EEEAl	27	Sample is out of limits (over linear range)
Ag 107 Upper, S, EETi	47	Sample is out of limits (over linear range)_
Cd 111 Upper, S, EEV	51	Sample is out of limits (over linear range)
Sb 123 Upper, S, EEMn	55	Sample is out of limits (over linear range)
Ba 135 Upper, S, EEFe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873983
Sample Date/Time: Tuesday, July 14, 2009 03:48:55
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 882360|10|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\1201873983.152

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**12.094**	ug/L	4.348	1702	0.001
	Be	9	**0.820**	ug/L	3.791	144	0.000
	B	11	**1.729**	ug/L	14.027	547	0.000
	Na	23	**92.766**	ug/L	1.699	127904	0.103
	Mg	24	**1469.577**	ug/L	5.212	1512858	1.302
	Al	27	**12373.155**	ug/L	2.817	20336333	17.513
	P	31	**90.702**	ug/L	4.766	12747	0.008
	K	39	**1766.946**	ug/L	12.894	5260415	4.020
	Ca	43	**1770.849**	ug/L	0.806	7845	0.006
>	Sc	45		ug/L		1161227	1161227.162
	Ti	47	**298.116**	ug/L	0.877	63448	0.054
	V	51	**20.130**	ug/L	1.651	51818	0.039
	Cr	52	**8.377**	ug/L	3.173	12274	0.017
	Cr	53		ug/L		200825	-0.082
	Mn	55	**274.441**	ug/L	1.304	999544	0.860
	Fe	57	**9253.961**	ug/L	3.593	679448	0.581
	Co	59	**4.178**	ug/L	2.404	12329	0.010
	Ni	60	**6.100**	ug/L	1.671	3895	0.003
	Cu	63		ug/L		7561	0.006
	Cu	65	**5.297**	ug/L	1.692	3441	0.003
	Zn	66	**27.210**	ug/L	0.570	11079	0.054
	Zn	67		ug/L		8045	-0.007
	Zn	68		ug/L		8568	0.038
>	Ge	74		ug/L		201758	201758.284
	As	75	**0.118**	ug/L	1135.506	1807	0.000
	Se	77		ug/L		6479	-0.018
	Se	82	**-0.539**	ug/L	70.366	-10	-0.000
	Kr	83		ug/L		126	0.000
	Sr	88	**20.376**	ug/L	0.379	98286	0.714
	Y	89		ug/L		56406	0.410
	Zr	90	**14.268**	ug/L	2.192	42377	0.307
	Mo	98	**0.335**	ug/L	5.668	558	0.004
	Ag	107	**0.047**	ug/L	12.469	177	0.001
	Cd	111	**0.131**	ug/L	11.434	88	0.001
	Cd	114		ug/L		101	0.000
>	In	115		ug/L		137459	137458.769
	Sn	120	**0.125**	ug/L	7.527	450	0.002
	Sb	121	**-0.006**	ug/L	123.490	352	-0.000
	Sb	123		ug/L		292	0.000
	Ba	135		ug/L		81539	0.427
	Ba	137	**112.521**	ug/L	2.718	142555	0.746
	Ho	165		ug/L		4104	0.021
>	Lu	175		ug/L		191119	191118.922
	Tl	205	**0.149**	ug/L	11.971	2301	0.005
	Pb	208	**10.347**	ug/L	1.616	85752	0.447
	Th	232	**5.784**	ug/L	0.689	50560	0.263
	U	238	**0.707**	ug/L	2.955	6006	0.030

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		116.6			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		122.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		121.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		113.8			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte	Mass	Out of Limits Message
Ag 107 Upper, S, EETi	47	Sample is out of limits (over linear range)_
Ge 74 Int Std for sanGe	74	
In 115 Int Std for sarIn	115	

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 03:54:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 6.153

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.849**	ug/L	2.372	7249	0.006
	Be	9	**49.372**	ug/L	2.976	6905	0.006
	B	11	**85.270**	ug/L	2.150	7889	0.007
	Na	23	**4269.813**	ug/L	7.967	5451283	4.745
	Mg	24	**4999.169**	ug/L	5.154	5084131	4.430
	Al	27	**4534.657**	ug/L	5.476	7365239	6.418
	P	31	**4805.713**	ug/L	0.739	508836	0.441
	K	39	**4968.749**	ug/L	10.844	13555440	11.306
	Ca	43	**4926.566**	ug/L	0.916	20445	0.017
>	Sc	45		ug/L		1147310	1147310.056
	Ti	47	**46.580**	ug/L	1.790	10015	0.009
	V	51	**51.298**	ug/L	5.383	119926	0.099
	Cr	52	**50.608**	ug/L	0.926	108170	0.100
	Cr	53		ug/L		230415	-0.054
	Mn	55	**46.596**	ug/L	1.900	168825	0.146
	Fe	57	**4896.606**	ug/L	3.127	357797	0.307
	Co	59	**49.264**	ug/L	2.178	140568	0.122
	Ni	60	**50.523**	ug/L	0.946	31053	0.027
	Cu	63		ug/L		67283	0.058
	Cu	65	**48.788**	ug/L	2.088	30324	0.026
	Zn	66	**50.153**	ug/L	1.287	20098	0.099
	Zn	67		ug/L		9716	0.001
	Zn	68		ug/L		14245	0.067
>	Ge	74		ug/L		200326	200325.867
	As	75	**46.945**	ug/L	1.890	27156	0.127
	Se	77		ug/L		8691	-0.007
	Se	82	**49.500**	ug/L	3.728	1770	0.009
	Kr	83		ug/L		112	0.000
	Sr	88	**51.006**	ug/L	2.122	239943	1.787
	Y	89		ug/L		111	0.001
	Zr	90	**48.947**	ug/L	2.136	141413	1.052
	Mo	98	**46.802**	ug/L	3.715	66616	0.496
	Ag	107	**48.010**	ug/L	0.649	118156	0.880
	Cd	111	**51.214**	ug/L	0.791	27862	0.208
	Cd	114		ug/L		69849	0.520
>	In	115		ug/L		134211	134211.398
	Sn	120	**47.863**	ug/L	3.313	124376	0.926
	Sb	121	**47.396**	ug/L	2.771	121185	0.901
	Sb	123		ug/L		95778	0.712
	Ba	135		ug/L		34862	0.186
	Ba	137	**49.581**	ug/L	2.378	61711	0.329
	Ho	165		ug/L		57	0.000
>	Lu	175		ug/L		187665	187664.602
	Tl	205	**45.674**	ug/L	0.589	307732	1.633
	Pb	208	**48.100**	ug/L	2.423	390017	2.077
	Th	232	**47.002**	ug/L	1.619	401446	2.138
	U	238	**48.597**	ug/L	0.702	390749	2.081

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	105.698				
	Be	9	98.744				
	B	11	85.270				
	Na	23	85.396				
	Mg	24	99.983				
	Al	27	89.795				
	P	31	96.114				
	K	39	99.375				
	Ca	43	98.531				
>	Sc	45		115.2			
	Ti	47	93.160				
	V	51	102.596				
	Cr	52	101.215				
	Cr	53					
	Mn	55	93.192				
	Fe	57	97.932				
	Co	59	98.529				
	Ni	60	101.046				
	Cu	63					
	Cu	65	97.577				
	Zn	66	100.305				
	Zn	67					
	Zn	68					
>	Ge	74		121.8			
	As	75	93.889				
	Se	77					
	Se	82	99.000				
	Kr	83					
	Sr	88	102.012				
	Y	89					
	Zr	90	97.893				
	Mo	98	93.605				
	Ag	107	96.020				
	Cd	111	102.429				
	Cd	114					
>	In	115		119.0			
	Sn	120	95.726				
	Sb	121	94.792				
	Sb	123					
	Ba	135					
	Ba	137	99.162				
	Ho	165					
>	Lu	175		111.8			
	Tl	205	91.349				
	Pb	208	96.200				
	Th	232	94.003				
	U	238	97.195				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	B	11CCV is out of limits (+/- 10%)
QC Std 6	Na	23CCV is out of limits (+/- 10%)
QC Std 6	Al	27CCV is out of limits (+/- 10%)
Ge 74 Int Std for QCGe		74

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 04:00:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 7.154

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.005**	**ug/L**	342.721	31	0.000
	Be	9	**-0.084**	**ug/L**	7.469	17	-0.000
	B	11	**-0.167**	**ug/L**	186.746	379	-0.000
	Na	23	**-2.962**	**ug/L**	91.632	4334	-0.003
	Mg	24	**1.510**	**ug/L**	74.424	2334	0.001
	Al	27	**1.127**	**ug/L**	193.642	5335	0.002
	P	31	**-1.915**	**ug/L**	23.022	2890	-0.000
	K	39	**-19.604**	**ug/L**	37.858	546255	-0.045
	Ca	43	**-6.607**	**ug/L**	145.942	609	-0.000
>	Sc	45		**ug/L**		1163134	1163133.880
	Ti	47	**-0.048**	**ug/L**	237.314	255	-0.000
	V	51	**3.090**	**ug/L**	43.848	13790	0.006
	Cr	52	**1.057**	**ug/L**	32.002	-4582	0.002
	Cr	53		**ug/L**		219384	-0.067
	Mn	55	**0.036**	**ug/L**	88.262	1515	0.000
	Fe	57	**5.367**	**ug/L**	22.298	5870	0.000
	Co	59	**0.020**	**ug/L**	32.084	348	0.000
	Ni	60	**-0.015**	**ug/L**	98.028	105	-0.000
	Cu	63		**ug/L**		257	0.000
	Cu	65	**-0.010**	**ug/L**	148.436	116	-0.000
	Zn	66	**0.048**	**ug/L**	83.735	230	0.000
	Zn	67		**ug/L**		6818	-0.013
	Zn	68		**ug/L**		698	-0.001
>	Ge	74		**ug/L**		203430	203430.355
	As	75	**-1.044**	**ug/L**	72.777	1189	-0.003
	Se	77		**ug/L**		7599	-0.013
	Se	82	**-0.776**	**ug/L**	6.690	-18	-0.000
	Kr	83		**ug/L**		107	-0.000
	Sr	88	**0.007**	**ug/L**	59.933	195	0.000
	Y	89		**ug/L**		54	0.000
	Zr	90	**0.055**	**ug/L**	12.716	369	0.001
	Mo	98	**0.032**	**ug/L**	5.723	115	0.000
	Ag	107	**0.005**	**ug/L**	60.930	70	0.000
	Cd	111	**0.011**	**ug/L**	66.007	21	0.000
	Cd	114		**ug/L**		53	0.000
>	In	115		**ug/L**		135866	135866.411
	Sn	120	**0.027**	**ug/L**	33.524	185	0.001
	Sb	121	**0.134**	**ug/L**	20.503	709	0.003
	Sb	123		**ug/L**		586	0.002
	Ba	135		**ug/L**		60	0.000
	Ba	137	**0.013**	**ug/L**	26.094	76	0.000
	Ho	165		**ug/L**		46	0.000
>	Lu	175		**ug/L**		188737	188736.924
	Tl	205	**0.039**	**ug/L**	85.882	1526	0.001
	Pb	208	**0.014**	**ug/L**	2.253	492	0.001
	Th	232	**0.035**	**ug/L**	17.545	579	0.002
	U	238	**0.012**	**ug/L**	15.711	311	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		116.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		123.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		120.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		112.4			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ge 74 Int Std for QC	Ge	74	
In 115 Int Std for QC	In	115	

QC Action

QC Action Line: Continue

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, July 14, 2009 10:01:13
Sample Description:
Method File: c:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.1393
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1230.1	1230.053	41.210	3.4
	Mg	24.0	9359.1	9359.065	124.920	1.3
	Co	58.9	32902.3	32902.250	400.686	1.2
	Rh	102.9	67477.8	67477.793	428.437	0.6
	In	114.9	88913.0	88913.039	375.261	0.4
	Pb	208.0	47408.7	47408.742	476.634	1.0
⌈>	Ba	137.9	90490.6	90490.609	728.117	0.8
⌊	Ba++	69.0	2406.9	0.027	0.000	1.5
⌈>	Ce	139.9	108163.8	108163.769	1107.155	1.0
⌊	CeO	155.9	1870.4	0.017	0.000	2.5
	Bkgd	220.0	20.9	20.900	2.702	12.9

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-1687.50	Analog Stage Voltage
900.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	5.8	1852.1
Co	59	25	6.0	34771.9
In	115	25	6.8	138669.1

ICPMS#3 Instrument Tuning Report

File Name: 090714.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	575	2070	0.637
Be	9.0	9.0	2052	2070	0.632
Mg	24.0	24.0	5704	2120	0.619
Mg	25.0	25.0	5911	2050	0.662
Mg	26.0	26.0	6208	2130	0.666
Co	58.9	58.9	14195	2110	0.697
Rh	102.9	102.9	24904	2170	0.670
In	114.9	114.9	27821	2180	0.670
Ce	139.9	139.9	33905	2200	0.698
Pb	206.0	206.0	49992	2270	0.683
Pb	207.0	207.0	50269	2300	0.687
Pb	208.0	208.0	50486	2320	0.629
U	238.1	238.0	57817	2340	0.667

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 10:32:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Blank.001

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		ug/L		20	
	B	11		ug/L		221	
>	Sc	45		ug/L		415899	
	Cr	52		ug/L		-2876	
	Cr	53		ug/L		195078	
	Mn	55		ug/L		1211	
	Ni	60		ug/L		93	
>	Ge	74		ug/L		287910	
	As	75		ug/L		1924	
	Se	77		ug/L		9769	
	Se	82		ug/L		3	
	Ag	107		ug/L		36	
	Cd	111		ug/L		13	
	Cd	114		ug/L		37	
>	In	115		ug/L		178663	
	Sb	121		ug/L		186	
	Sb	123		ug/L		172	
	Ba	135		ug/L		59	
	Ba	137		ug/L		86	
>	Lu	175		ug/L		246888	
	Tl	205		ug/L		139	
	Pb	208		ug/L		411	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Simple Linear	
B	11	Simple Linear	
Sc	45	Simple Linear	
Cr	52	Simple Linear	
Cr	53	Simple Linear	
Mn	55	Simple Linear	
Ni	60	Simple Linear	
Ge	74	Simple Linear	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	82	Simple Linear	
Ag	107	Simple Linear	
Cd	111	Simple Linear	
Cd	114	Simple Linear	
In	115	Simple Linear	
Sb	121	Simple Linear	
Sb	123	Simple Linear	
Ba	135	Simple Linear	
Ba	137	Simple Linear	
Lu	175	Simple Linear	
Tl	205	Simple Linear	
Pb	208	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 10:36:16
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Standard 1.002

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**10.000**	**ug/L**	2.148	1432	0.004
	B	11	**20.000**	**ug/L**	4.374	1764	0.004
>	Sc	45		**ug/L**		396561	396560.511
	Cr	52	**10.000**	**ug/L**	1.155	24167	0.068
	Cr	53		**ug/L**		203132	0.043
	Mn	55	**10.000**	**ug/L**	0.245	45329	0.111
	Ni	60	**10.000**	**ug/L**	1.798	7723	0.019
>	Ge	74		**ug/L**		278369	278369.020
	As	75	**10.000**	**ug/L**	6.574	9544	0.028
	Se	77		**ug/L**		9950	0.002
	Se	82	**10.000**	**ug/L**	7.104	500	0.002
	Ag	107	**10.000**	**ug/L**	1.568	31970	0.184
	Cd	111	**10.000**	**ug/L**	0.546	7372	0.042
	Cd	114		**ug/L**		17803	0.102
>	In	115		**ug/L**		173855	173855.437
	Sb	121	**10.000**	**ug/L**	3.313	31170	0.178
	Sb	123		**ug/L**		24315	0.139
	Ba	135		**ug/L**		8918	0.037
	Ba	137	**10.000**	**ug/L**	0.765	16054	0.067
>	Lu	175		**ug/L**		236938	236938.420
	Tl	205	**10.000**	**ug/L**	0.792	88906	0.375
	Pb	208	**10.000**	**ug/L**	1.095	100916	0.424

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 10:39:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Standard 2.003

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**99.994**	ug/L	1.059	13719	0.035
	B	11	**200.000**	ug/L	2.311	15374	0.039
>	Sc	45		ug/L		387223	387222.809
	Cr	52	**99.956**	ug/L	0.938	248945	0.650
	Cr	53		ug/L		228458	0.121
	Mn	55	**99.921**	ug/L	3.328	400455	1.032
	Ni	60	**99.954**	ug/L	1.835	71308	0.184
>	Ge	74		ug/L		264902	264902.149
	As	75	**99.952**	ug/L	2.271	71512	0.263
	Se	77		ug/L		12374	0.013
	Se	82	**100.012**	ug/L	1.894	4795	0.018
	Ag	107	**99.972**	ug/L	1.041	287137	1.787
	Cd	111	**99.994**	ug/L	2.016	67580	0.421
	Cd	114		ug/L		161716	1.006
>	In	115		ug/L		160673	160672.643
	Sb	121	**100.046**	ug/L	2.340	300375	1.869
	Sb	123		ug/L		235318	1.464
	Ba	135		ug/L		83883	0.368
	Ba	137	**99.957**	ug/L	0.542	147237	0.646
>	Lu	175		ug/L		227711	227710.841
	Tl	205	**99.964**	ug/L	0.806	822932	3.614
	Pb	208	**99.972**	ug/L	0.882	940063	4.127

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 10:43:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 1.004

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.805**	**ug/L**	1.066	6935	0.018
	B	11	**105.317**	**ug/L**	1.507	8139	0.021
>	Sc	45		**ug/L**		384692	384692.492
	Cr	52	**51.335**	**ug/L**	0.731	125729	0.334
	Cr	53		**ug/L**		214985	0.090
	Mn	55	**48.822**	**ug/L**	0.948	195022	0.504
	Ni	60	**53.061**	**ug/L**	1.141	37652	0.098
>	Ge	74		**ug/L**		263745	263745.016
	As	75	**49.437**	**ug/L**	0.441	36105	0.130
	Se	77		**ug/L**		10519	0.006
	Se	82	**49.415**	**ug/L**	3.575	2360	0.009
	Ag	107	**50.085**	**ug/L**	0.949	145071	0.895
	Cd	111	**52.391**	**ug/L**	1.863	35713	0.220
	Cd	114		**ug/L**		85381	0.527
>	In	115		**ug/L**		162004	162004.486
	Sb	121	**48.073**	**ug/L**	0.990	145652	0.898
	Sb	123		**ug/L**		113715	0.701
	Ba	135		**ug/L**		41959	0.187
	Ba	137	**51.094**	**ug/L**	1.992	73982	0.330
>	Lu	175		**ug/L**		223754	223754.006
	Tl	205	**50.218**	**ug/L**	1.615	406276	1.815
	Pb	208	**51.320**	**ug/L**	1.088	474348	2.118

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.609				
	B	11	105.317				
>	Sc	45		92.5			
	Cr	52	102.670				
	Cr	53					
	Mn	55	97.644				
	Ni	60	106.122				
>	Ge	74		91.6			
	As	75	98.873				
	Se	77					
	Se	82	98.830				
	Ag	107	100.171				
	Cd	111	104.781				
	Cd	114					
>	In	115		90.7			
	Sb	121	96.146				
	Sb	123					
	Ba	135					
	Ba	137	102.188				
>	Lu	175		90.6			
	Tl	205	100.436				
	Pb	208	102.640				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 10:47:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 2.005

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.022**	**ug/L**	164.363	24	0.000
	B	11	**3.178**	**ug/L**	32.360	485	0.001
>	Sc	45		**ug/L**		426009	426008.630
	Cr	52	**-0.294**	**ug/L**	105.001	-3689	-0.002
	Cr	53		**ug/L**		197185	0.001
	Mn	55	**-0.006**	**ug/L**	726.887	1192	-0.000
	Ni	60	**0.005**	**ug/L**	430.166	98	0.000
>	Ge	74		**ug/L**		271130	271129.740
	As	75	**-0.329**	**ug/L**	162.020	1577	-0.001
	Se	77		**ug/L**		8937	-0.001
	Se	82	**-0.391**	**ug/L**	88.021	-17	-0.000
	Ag	107	**0.012**	**ug/L**	39.228	69	0.000
	Cd	111	**-0.002**	**ug/L**	250.645	10	-0.000
	Cd	114		**ug/L**		47	0.000
>	In	115		**ug/L**		164685	164685.044
	Sb	121	**0.738**	**ug/L**	7.419	2442	0.014
	Sb	123		**ug/L**		1926	0.011
	Ba	135		**ug/L**		59	0.000
	Ba	137	**0.001**	**ug/L**	398.291	81	0.000
>	Lu	175		**ug/L**		228511	228510.848
	Tl	205	**0.171**	**ug/L**	13.895	1539	0.006
	Pb	208	**0.013**	**ug/L**	25.851	506	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		102.4			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.2			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.2			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		92.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 10:50:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 3.006

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.509**	ug/L	2.329	87	0.000
	B	11	**16.114**	ug/L	1.447	1406	0.003
>	Sc	45		ug/L		381407	381406.622
	Cr	52	**9.960**	ug/L	1.145	22057	0.065
	Cr	53		ug/L		199727	0.054
	Mn	55	**5.410**	ug/L	3.405	22407	0.056
	Ni	60	**2.083**	ug/L	5.155	1547	0.004
>	Ge	74		ug/L		268733	268733.206
	As	75	**5.455**	ug/L	10.166	5658	0.014
	Se	77		ug/L		9240	0.000
	Se	82	**5.230**	ug/L	1.216	257	0.001
	Ag	107	**1.034**	ug/L	2.475	3159	0.018
	Cd	111	**0.999**	ug/L	3.922	722	0.004
	Cd	114		ug/L		1732	0.010
>	In	115		ug/L		169050	169049.759
	Sb	121	**3.027**	ug/L	2.386	9736	0.057
	Sb	123		ug/L		7470	0.043
	Ba	135		ug/L		1765	0.007
	Ba	137	**1.974**	ug/L	2.131	3030	0.013
>	Lu	175		ug/L		231160	231160.227
	Tl	205	**1.037**	ug/L	2.605	8800	0.038
	Pb	208	**2.025**	ug/L	0.839	19706	0.084

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.768				
	B	11	107.429				
>	Sc	45			91.7		
	Cr	52	99.599				
	Cr	53					
	Mn	55	108.206				
	Ni	60	104.159				
>	Ge	74			93.3		
	As	75	109.092				
	Se	77					
	Se	82	104.590				
	Ag	107	103.432				
	Cd	111	99.856				
	Cd	114					
>	In	115			94.6		
	Sb	121	100.907				
	Sb	123					
	Ba	135					
	Ba	137	98.677				
>	Lu	175			93.6		
	Tl	205	103.746				
	Pb	208	101.245				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 10:54:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 4.007

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.093**	**ug/L**	75.551	29	0.000
	B	11	**2.588**	**ug/L**	19.089	364	0.001
>	Sc	45		**ug/L**		351348	351348.023
	Cr	52	**4.606**	**ug/L**	4.966	8093	0.030
	Cr	53		**ug/L**		185269	0.058
	Mn	55	**5.887**	**ug/L**	0.561	22379	0.061
	Ni	60	**2.515**	**ug/L**	2.491	1705	0.005
>	Ge	74		**ug/L**		243437	243437.056
	As	75	**0.033**	**ug/L**	2592.830	1647	0.000
	Se	77		**ug/L**		8625	0.001
	Se	82	**-0.627**	**ug/L**	44.435	-25	-0.000
	Ag	107	**0.066**	**ug/L**	3.015	199	0.001
	Cd	111	**0.467**	**ug/L**	10.990	292	0.002
	Cd	114		**ug/L**		3493	0.024
>	In	115		**ug/L**		143661	143661.060
	Sb	121	**0.396**	**ug/L**	13.150	1212	0.007
	Sb	123		**ug/L**		947	0.006
	Ba	135		**ug/L**		577	0.002
	Ba	137	**0.632**	**ug/L**	3.792	946	0.004
>	Lu	175		**ug/L**		213459	213459.094
	Tl	205	**0.056**	**ug/L**	7.708	551	0.002
	Pb	208	**0.170**	**ug/L**	1.712	1851	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			84.5		
	Cr	52	124.478				
	Cr	53					
	Mn	55	101.505				
	Ni	60	93.133				
>	Ge	74			84.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111	116.696				
	Cd	114					
>	In	115			80.4		
	Sb	121	395.564				
	Sb	123					
	Ba	135					
	Ba	137	94.288				
>	Lu	175			86.5		
	Tl	205					
	Pb	208	84.898				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 10:58:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 5.008

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**20.399**	**ug/L**	1.663	2585	0.007
	B	11	**21.869**	**ug/L**	2.578	1712	0.004
>	Sc	45		**ug/L**		355787	355786.573
	Cr	52	**24.639**	**ug/L**	1.731	54538	0.160
	Cr	53		**ug/L**		192388	0.072
	Mn	55	**25.815**	**ug/L**	2.052	95842	0.267
	Ni	60	**21.754**	**ug/L**	0.452	14324	0.040
>	Ge	74		**ug/L**		243260	243259.779
	As	75	**21.340**	**ug/L**	2.259	15299	0.056
	Se	77		**ug/L**		9414	0.005
	Se	82	**21.127**	**ug/L**	2.951	932	0.004
	Ag	107	**20.178**	**ug/L**	0.997	52262	0.361
	Cd	111	**20.663**	**ug/L**	0.830	12597	0.087
	Cd	114		**ug/L**		32538	0.224
>	In	115		**ug/L**		144819	144818.886
	Sb	121	**21.198**	**ug/L**	1.971	57493	0.396
	Sb	123		**ug/L**		45120	0.311
	Ba	135		**ug/L**		15804	0.075
	Ba	137	**20.535**	**ug/L**	0.514	28110	0.133
>	Lu	175		**ug/L**		211178	211177.551
	Tl	205	**19.439**	**ug/L**	0.917	148513	0.703
	Pb	208	**20.285**	**ug/L**	0.319	177177	0.837

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.996				
	B	11	109.343				
>	Sc	45		85.5			
	Cr	52	103.962				
	Cr	53					
	Mn	55	100.057				
	Ni	60	95.834				
>	Ge	74		84.5			
	As	75	106.699				
	Se	77					
	Se	82	105.635				
	Ag	107	100.890				
	Cd	111	101.289				
	Cd	114					
>	In	115		81.1			
	Sb	121	105.463				
	Sb	123					
	Ba	135					
	Ba	137	99.349				
>	Lu	175		85.5			
	Tl	205	97.194				
	Pb	208	100.420				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:01:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.009

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.247**	**ug/L**	2.150	6733	0.018
	B	11	**103.252**	**ug/L**	3.469	7836	0.020
>	Sc	45		**ug/L**		377598	377598.236
	Cr	52	**51.459**	**ug/L**	0.825	123726	0.335
	Cr	53		**ug/L**		206048	0.077
	Mn	55	**52.050**	**ug/L**	0.812	204012	0.537
	Ni	60	**51.752**	**ug/L**	1.004	36052	0.095
>	Ge	74		**ug/L**		264018	264017.641
	As	75	**49.827**	**ug/L**	1.501	36413	0.131
	Se	77		**ug/L**		10100	0.004
	Se	82	**50.241**	**ug/L**	4.489	2402	0.009
	Ag	107	**51.110**	**ug/L**	0.445	149008	0.914
	Cd	111	**49.953**	**ug/L**	2.196	34273	0.210
	Cd	114		**ug/L**		82796	0.508
>	In	115		**ug/L**		163063	163062.963
	Sb	121	**49.697**	**ug/L**	2.238	151536	0.928
	Sb	123		**ug/L**		119015	0.729
	Ba	135		**ug/L**		42911	0.190
	Ba	137	**51.537**	**ug/L**	0.707	75303	0.333
>	Lu	175		**ug/L**		225776	225775.817
	Tl	205	**51.034**	**ug/L**	1.367	416661	1.845
	Pb	208	**51.156**	**ug/L**	0.896	477125	2.112

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	100.493				
	B	11	103.252				
>	Sc	45			90.8		
	Cr	52	102.918				
	Cr	53					
	Mn	55	104.101				
	Ni	60	103.505				
>	Ge	74			91.7		
	As	75	99.653				
	Se	77					
	Se	82	100.482				
	Ag	107	102.220				
	Cd	111	99.906				
	Cd	114					
>	In	115			91.3		
	Sb	121	99.394				
	Sb	123					
	Ba	135					
	Ba	137	103.075				
>	Lu	175			91.4		
	Tl	205	102.069				
	Pb	208	102.312				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 11:05:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.010

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.013**	**ug/L**	301.991	20	0.000
	B	11	**2.817**	**ug/L**	22.420	407	0.001
>	Sc	45		**ug/L**		377185	377184.956
	Cr	52	**-0.408**	**ug/L**	58.303	-3590	-0.003
	Cr	53		**ug/L**		185845	0.025
	Mn	55	**0.030**	**ug/L**	103.317	1210	0.000
	Ni	60	**0.022**	**ug/L**	54.529	99	0.000
>	Ge	74		**ug/L**		269129	269128.915
	As	75	**0.387**	**ug/L**	56.071	2071	0.001
	Se	77		**ug/L**		8218	-0.003
	Se	82	**-0.199**	**ug/L**	216.699	-7	-0.000
	Ag	107	**0.012**	**ug/L**	58.396	71	0.000
	Cd	111	**0.016**	**ug/L**	42.543	23	0.000
	Cd	114		**ug/L**		52	0.000
>	In	115		**ug/L**		169437	169437.099
	Sb	121	**0.392**	**ug/L**	12.616	1413	0.007
	Sb	123		**ug/L**		1134	0.006
	Ba	135		**ug/L**		59	0.000
	Ba	137	**0.004**	**ug/L**	249.461	87	0.000
>	Lu	175		**ug/L**		231537	231537.082
	Tl	205	**0.188**	**ug/L**	19.937	1694	0.007
	Pb	208	**0.014**	**ug/L**	14.713	516	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			90.7		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			93.5		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.8		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			93.8		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:35:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.018

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**48.105**	**ug/L**	3.520	6430	0.017
	B	11	**92.218**	**ug/L**	3.573	7002	0.018
>	Sc	45		**ug/L**		376681	376680.729
	Cr	52	**52.885**	**ug/L**	2.086	126901	0.344
	Cr	53		**ug/L**		185048	0.022
	Mn	55	**53.509**	**ug/L**	1.071	209174	0.552
	Ni	60	**52.848**	**ug/L**	1.480	36720	0.097
>	Ge	74		**ug/L**		276538	276537.741
	As	75	**50.257**	**ug/L**	1.850	38452	0.132
	Se	77		**ug/L**		9618	0.001
	Se	82	**49.879**	**ug/L**	2.049	2498	0.009
	Ag	107	**50.237**	**ug/L**	0.735	156776	0.898
	Cd	111	**50.381**	**ug/L**	1.726	37002	0.212
	Cd	114		**ug/L**		89438	0.512
>	In	115		**ug/L**		174547	174546.633
	Sb	121	**49.441**	**ug/L**	0.978	161382	0.924
	Sb	123		**ug/L**		126642	0.725
	Ba	135		**ug/L**		44706	0.189
	Ba	137	**51.172**	**ug/L**	1.244	78425	0.331
>	Lu	175		**ug/L**		236822	236822.296
	Tl	205	**50.760**	**ug/L**	0.913	434672	1.835
	Pb	208	**50.522**	**ug/L**	1.455	494243	2.086

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	96.210				
	B	11	92.218				
>	Sc	45		90.6			
	Cr	52	105.770				
	Cr	53					
	Mn	55	107.017				
	Ni	60	105.697				
>	Ge	74		96.0			
	As	75	100.515				
	Se	77					
	Se	82	99.757				
	Ag	107	100.473				
	Cd	111	100.763				
	Cd	114					
>	In	115		97.7			
	Sb	121	98.882				
	Sb	123					
	Ba	135					
	Ba	137	102.344				
>	Lu	175		95.9			
	Tl	205	101.520				
	Pb	208	101.044				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 11:38:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.019

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.018**	**ug/L**	43.329	21	0.000
	B	11	**2.226**	**ug/L**	4.509	368	0.000
>	Sc	45		**ug/L**		380776	380776.062
	Cr	52	**0.067**	**ug/L**	208.187	-2467	0.000
	Cr	53		**ug/L**		168900	-0.025
	Mn	55	**0.036**	**ug/L**	50.110	1251	0.000
	Ni	60	**0.005**	**ug/L**	138.036	89	0.000
>	Ge	74		**ug/L**		281751	281750.796
	As	75	**0.103**	**ug/L**	338.550	1960	0.000
	Se	77		**ug/L**		7812	-0.006
	Se	82	**0.213**	**ug/L**	183.516	13	0.000
	Ag	107	**0.008**	**ug/L**	36.161	60	0.000
	Cd	111	**-0.001**	**ug/L**	1049.401	12	-0.000
	Cd	114		**ug/L**		48	0.000
>	In	115		**ug/L**		177939	177938.883
	Sb	121	**0.392**	**ug/L**	6.661	1490	0.007
	Sb	123		**ug/L**		1135	0.005
	Ba	135		**ug/L**		52	-0.000
	Ba	137	**-0.001**	**ug/L**	160.755	84	-0.000
>	Lu	175		**ug/L**		244746	244745.658
	Tl	205	**0.175**	**ug/L**	13.302	1685	0.006
	Pb	208	**0.010**	**ug/L**	29.191	506	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		91.6			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		97.9			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.6			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.1			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:57:23
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.024

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**44.477**	**ug/L**	14.322	6329	0.016
	B	11	**86.024**	**ug/L**	13.290	6976	0.017
>	Sc	45		**ug/L**		406367	406367.152
	Cr	52	**49.478**	**ug/L**	13.695	126230	0.322
	Cr	53		**ug/L**		177205	-0.029
	Mn	55	**49.930**	**ug/L**	13.042	208092	0.515
	Ni	60	**48.881**	**ug/L**	11.895	36241	0.090
>	Ge	74		**ug/L**		275360	275359.598
	As	75	**50.199**	**ug/L**	1.074	38248	0.132
	Se	77		**ug/L**		8843	-0.002
	Se	82	**49.834**	**ug/L**	3.165	2484	0.009
	Ag	107	**50.027**	**ug/L**	1.608	155360	0.894
	Cd	111	**49.868**	**ug/L**	1.123	36448	0.210
	Cd	114		**ug/L**		88443	0.509
>	In	115		**ug/L**		173701	173701.110
	Sb	121	**48.997**	**ug/L**	1.322	159168	0.915
	Sb	123		**ug/L**		123879	0.712
	Ba	135		**ug/L**		44241	0.186
	Ba	137	**50.564**	**ug/L**	0.566	77651	0.327
>	Lu	175		**ug/L**		237288	237287.644
	Tl	205	**50.543**	**ug/L**	0.754	433651	1.827
	Pb	208	**50.112**	**ug/L**	1.456	491187	2.069

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	88.954				
	B	11	86.024				
>	Sc	45		97.7			
	Cr	52	98.955				
	Cr	53					
	Mn	55	99.861				
	Ni	60	97.763				
>	Ge	74		95.6			
	As	75	100.397				
	Se	77					
	Se	82	99.667				
	Ag	107	100.053				
	Cd	111	99.736				
	Cd	114					
>	In	115		97.2			
	Sb	121	97.994				
	Sb	123					
	Ba	135					
	Ba	137	101.128				
>	Lu	175		96.1			
	Tl	205	101.086				
	Pb	208	100.224				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Be	9CCV is out of limits (+/- 10%)
QC Std 6	B	11CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 12:01:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.025

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.016**	ug/L	153.468	20	0.000
	B	11	**2.153**	ug/L	15.319	356	0.000
>	Sc	45		ug/L		373781	373781.303
	Cr	52	**0.008**	ug/L	1397.570	-2566	0.000
	Cr	53		ug/L		163124	-0.033
	Mn	55	**0.081**	ug/L	18.413	1400	0.001
	Ni	60	**0.025**	ug/L	85.463	100	0.000
>	Ge	74		ug/L		274030	274029.756
	As	75	**-0.594**	ug/L	29.550	1400	-0.002
	Se	77		ug/L		7048	-0.008
	Se	82	**0.242**	ug/L	108.715	15	0.000
	Ag	107	**0.011**	ug/L	37.033	69	0.000
	Cd	111	**0.010**	ug/L	113.284	20	0.000
	Cd	114		ug/L		40	0.000
>	In	115		ug/L		175346	175346.490
	Sb	121	**0.383**	ug/L	2.734	1438	0.007
	Sb	123		ug/L		1109	0.005
	Ba	135		ug/L		66	0.000
	Ba	137	**0.008**	ug/L	156.791	96	0.000
>	Lu	175		ug/L		240306	240306.382
	Tl	205	**0.139**	ug/L	12.520	1343	0.005
	Pb	208	**0.014**	ug/L	35.656	540	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			89.9		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.2		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			97.3		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873979
Sample Date/Time: Tuesday, July 14, 2009 12:04:47
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873979.026

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.015**	**ug/L**	238.171	20	0.000
	B	11	**0.805**	**ug/L**	44.370	258	0.000
>	Sc	45		**ug/L**		374237	374237.293
	Cr	52	**0.589**	**ug/L**	27.992	-1153	0.004
	Cr	53		**ug/L**		142631	-0.088
	Mn	55	**0.363**	**ug/L**	2.933	2491	0.004
	Ni	60	**0.045**	**ug/L**	23.243	115	0.000
>	Ge	74		**ug/L**		275279	275278.694
	As	75	**-0.556**	**ug/L**	72.727	1436	-0.001
	Se	77		**ug/L**		5710	-0.013
	Se	82	**0.279**	**ug/L**	63.163	16	0.000
	Ag	107	**0.006**	**ug/L**	32.233	55	0.000
	Cd	111	**0.024**	**ug/L**	15.602	30	0.000
	Cd	114		**ug/L**		73	0.000
>	In	115		**ug/L**		177308	177307.934
	Sb	121	**0.148**	**ug/L**	8.994	675	0.003
	Sb	123		**ug/L**		537	0.002
	Ba	135		**ug/L**		78	0.000
	Ba	137	**0.036**	**ug/L**	6.908	142	0.000
>	Lu	175		**ug/L**		243637	243637.140
	Tl	205	**0.051**	**ug/L**	6.447	590	0.002
	Pb	208	**0.020**	**ug/L**	30.915	611	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			90.0		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			99.2		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			98.7		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873980
Sample Date/Time: Tuesday, July 14, 2009 12:08:31
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 882360|40|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873980.027

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**21.811**	ug/L	1.358	2943	0.008
	B	11	**31.568**	ug/L	1.199	2544	0.006
>	Sc	45		ug/L		378930	378929.944
	Cr	52	**18.943**	ug/L	0.813	44051	0.123
	Cr	53		ug/L		162389	-0.040
	Mn	55	**100.932**	ug/L	1.000	395933	1.042
	Ni	60	**28.277**	ug/L	2.688	19802	0.052
>	Ge	74		ug/L		281074	281073.745
	As	75	**65.704**	ug/L	1.172	50519	0.173
	Se	77		ug/L		8892	-0.002
	Se	82	**47.998**	ug/L	2.461	2442	0.009
	Ag	107	**4.679**	ug/L	2.159	15051	0.084
	Cd	111	**32.304**	ug/L	1.472	24407	0.136
	Cd	114		ug/L		59027	0.329
>	In	115		ug/L		179529	179529.142
	Sb	121	**8.151**	ug/L	1.674	27520	0.152
	Sb	123		ug/L		21621	0.119
	Ba	135		ug/L		119401	0.481
	Ba	137	**130.795**	ug/L	0.276	209756	0.846
>	Lu	175		ug/L		247953	247952.773
	Tl	205	**52.706**	ug/L	1.789	472547	1.905
	Pb	208	**43.571**	ug/L	0.360	446374	1.799

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		91.1			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		97.6			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.5			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		100.4			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232744001
Sample Date/Time: Tuesday, July 14, 2009 12:12:13
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744001.028

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.647**	ug/L	3.347	536	0.001
	B	11	**13.838**	ug/L	7.120	1297	0.003
>	Sc	45		ug/L		400303	400303.244
	Cr	52	**37.352**	ug/L	1.587	94453	0.243
	Cr	53		ug/L		149937	-0.094
	Mn	55	**1766.061**	ug/L	0.881	7299510	18.233
	Ni	60	**30.748**	ug/L	0.855	22742	0.057
>	Ge	74		ug/L		268633	268632.643
	As	75	**7.864**	ug/L	3.067	7359	0.021
	Se	77		ug/L		5382	-0.014
	Se	82	**0.220**	ug/L	258.704	13	0.000
	Ag	107	**0.282**	ug/L	3.487	898	0.005
	Cd	111	**0.602**	ug/L	13.822	446	0.003
	Cd	114		ug/L		539	0.003
>	In	115		ug/L		171346	171346.157
	Sb	121	**0.233**	ug/L	7.819	925	0.004
	Sb	123		ug/L		750	0.003
	Ba	135		ug/L		512984	2.077
	Ba	137	**553.867**	ug/L	0.400	884308	3.581
>	Lu	175		ug/L		246933	246932.660
	Tl	205	**0.927**	ug/L	5.299	8417	0.034
	Pb	208	**52.744**	ug/L	0.310	538031	2.177

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		96.3			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		93.3			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.9			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		100.0			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873981
Sample Date/Time: Tuesday, July 14, 2009 12:15:57
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873981.029

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.713**	ug/L	5.371	539	0.001
	B	11	**12.193**	ug/L	4.477	1153	0.002
>	Sc	45		ug/L		395094	395094.239
	Cr	52	**34.932**	ug/L	0.720	86994	0.227
	Cr	53		ug/L		145177	-0.101
	Mn	55	**1773.749**	ug/L	1.566	7235719	18.312
	Ni	60	**30.339**	ug/L	0.589	22149	0.056
>	Ge	74		ug/L		267943	267943.229
	As	75	**7.171**	ug/L	6.746	6849	0.019
	Se	77		ug/L		5091	-0.015
	Se	82	**0.450**	ug/L	119.656	24	0.000
	Ag	107	**0.246**	ug/L	3.388	774	0.004
	Cd	111	**0.542**	ug/L	1.928	395	0.002
	Cd	114		ug/L		534	0.003
>	In	115		ug/L		168118	168117.889
	Sb	121	**0.181**	ug/L	10.391	743	0.003
	Sb	123		ug/L		637	0.003
	Ba	135		ug/L		488027	1.994
	Ba	137	**537.467**	ug/L	0.667	850325	3.475
>	Lu	175		ug/L		244684	244684.454
	Tl	205	**0.743**	ug/L	2.765	6711	0.027
	Pb	208	**49.530**	ug/L	0.175	500677	2.045

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			95.0		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			93.1		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			99.1		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits	Message
Mn 55 Upper, S, EEIMn		55		Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873982
Sample Date/Time: Tuesday, July 14, 2009 12:19:40
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873982.030

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**26.909**	**ug/L**	2.154	3791	0.010
	B	11	**59.160**	**ug/L**	3.667	4798	0.012
>	Sc	45		**ug/L**		396094	396093.864
	Cr	52	**66.385**	**ug/L**	0.502	168222	0.432
	Cr	53		**ug/L**		157903	-0.070
	Mn	55	**1785.728**	**ug/L**	1.668	7302938	18.436
	Ni	60	**57.174**	**ug/L**	2.193	41764	0.105
>	Ge	74		**ug/L**		265106	265105.896
	As	75	**46.267**	**ug/L**	1.068	34077	0.122
	Se	77		**ug/L**		5509	-0.013
	Se	82	**8.473**	**ug/L**	2.160	409	0.002
	Ag	107	**24.238**	**ug/L**	1.550	72117	0.433
	Cd	111	**5.579**	**ug/L**	2.108	3918	0.023
	Cd	114		**ug/L**		9000	0.054
>	In	115		**ug/L**		166400	166399.510
	Sb	121	**29.638**	**ug/L**	2.248	92277	0.554
	Sb	123		**ug/L**		72401	0.434
	Ba	135		**ug/L**		563072	2.353
	Ba	137	**633.554**	**ug/L**	0.559	980300	4.096
>	Lu	175		**ug/L**		239313	239313.287
	Tl	205	**47.585**	**ug/L**	1.681	411750	1.720
	Pb	208	**150.556**	**ug/L**	0.704	1487624	6.215

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			95.2		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			92.1		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			93.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			96.9		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873984
Sample Date/Time: Tuesday, July 14, 2009 12:23:25
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873984.031

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**26.303**	ug/L	2.562	3685	0.009
	B	11	**59.426**	ug/L	1.672	4791	0.012
>	Sc	45		ug/L		393760	393759.821
	Cr	52	**62.692**	ug/L	1.504	157749	0.408
	Cr	53		ug/L		158835	-0.065
	Mn	55	**1609.750**	ug/L	1.073	6544456	16.619
	Ni	60	**54.005**	ug/L	0.199	39226	0.099
>	Ge	74		ug/L		260922	260921.859
	As	75	**44.404**	ug/L	2.742	32258	0.117
	Se	77		ug/L		5562	-0.013
	Se	82	**7.153**	ug/L	3.028	340	0.001
	Ag	107	**23.764**	ug/L	1.263	69411	0.425
	Cd	111	**5.527**	ug/L	2.295	3809	0.023
	Cd	114		ug/L		8431	0.051
>	In	115		ug/L		163344	163343.883
	Sb	121	**25.880**	ug/L	1.351	79127	0.483
	Sb	123		ug/L		61863	0.378
	Ba	135		ug/L		536683	2.298
	Ba	137	**616.125**	ug/L	1.499	930230	3.983
>	Lu	175		ug/L		233532	233531.934
	Tl	205	**46.748**	ug/L	1.075	394754	1.690
	Pb	208	**147.789**	ug/L	1.544	1424861	6.101

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			94.7		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			90.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			91.4		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			94.6		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873983
Sample Date/Time: Tuesday, July 14, 2009 12:27:10
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 882360|10|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873983.032

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.799**	ug/L	7.537	125	0.000
	B	11	**4.158**	ug/L	14.285	507	0.001
>	Sc	45		ug/L		376939	376938.937
	Cr	52	**7.565**	ug/L	2.901	15933	0.049
	Cr	53		ug/L		158168	-0.049
	Mn	55	**294.535**	ug/L	0.744	1147278	3.041
	Ni	60	**6.358**	ug/L	1.173	4495	0.012
>	Ge	74		ug/L		268329	268329.464
	As	75	**1.000**	ug/L	45.857	2500	0.003
	Se	77		ug/L		6231	-0.011
	Se	82	**-0.060**	ug/L	176.958	-0	-0.000
	Ag	107	**0.055**	ug/L	11.873	201	0.001
	Cd	111	**0.071**	ug/L	57.646	62	0.000
	Cd	114		ug/L		133	0.001
>	In	115		ug/L		169905	169904.819
	Sb	121	**0.126**	ug/L	12.603	576	0.002
	Sb	123		ug/L		448	0.002
	Ba	135		ug/L		100601	0.427
	Ba	137	**115.217**	ug/L	1.359	175574	0.745
>	Lu	175		ug/L		235617	235617.350
	Tl	205	**0.424**	ug/L	11.072	3740	0.015
	Pb	208	**10.843**	ug/L	0.800	105844	0.448

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			90.6		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			93.2		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			95.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			95.4		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 12:30:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.033

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**47.943**	**ug/L**	1.932	6281	0.017
	B	11	**93.801**	**ug/L**	2.668	6977	0.018
>	Sc	45		**ug/L**		369172	369171.825
	Cr	52	**51.660**	**ug/L**	0.718	121444	0.336
	Cr	53		**ug/L**		185124	0.032
	Mn	55	**52.380**	**ug/L**	1.354	200697	0.541
	Ni	60	**51.723**	**ug/L**	1.212	35223	0.095
>	Ge	74		**ug/L**		267611	267611.111
	As	75	**50.209**	**ug/L**	0.897	37180	0.132
	Se	77		**ug/L**		8853	-0.001
	Se	82	**48.203**	**ug/L**	1.705	2336	0.009
	Ag	107	**49.543**	**ug/L**	1.226	148048	0.886
	Cd	111	**49.812**	**ug/L**	2.417	35029	0.210
	Cd	114		**ug/L**		85011	0.508
>	In	115		**ug/L**		167145	167144.782
	Sb	121	**49.536**	**ug/L**	0.618	154843	0.925
	Sb	123		**ug/L**		121349	0.725
	Ba	135		**ug/L**		42975	0.189
	Ba	137	**51.291**	**ug/L**	1.891	75471	0.332
>	Lu	175		**ug/L**		227378	227377.593
	Tl	205	**51.199**	**ug/L**	0.521	420960	1.851
	Pb	208	**50.855**	**ug/L**	1.143	477672	2.099

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	95.886				
	B	11	93.801				
>	Sc	45		88.8			
	Cr	52	103.320				
	Cr	53					
	Mn	55	104.759				
	Ni	60	103.445				
>	Ge	74		92.9			
	As	75	100.419				
	Se	77					
	Se	82	96.407				
	Ag	107	99.087				
	Cd	111	99.624				
	Cd	114					
>	In	115		93.6			
	Sb	121	99.072				
	Sb	123					
	Ba	135					
	Ba	137	102.583				
>	Lu	175		92.1			
	Tl	205	102.399				
	Pb	208	101.709				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 12:34:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.034

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.014**	**ug/L**	77.247	16	-0.000
	B	11	**1.741**	**ug/L**	31.705	325	0.000
>	Sc	45		**ug/L**		372927	372927.058
	Cr	52	**-0.048**	**ug/L**	252.076	-2696	-0.000
	Cr	53		**ug/L**		168491	-0.017
	Mn	55	**0.081**	**ug/L**	8.330	1397	0.001
	Ni	60	**0.027**	**ug/L**	76.994	102	0.000
>	Ge	74		**ug/L**		275339	275338.808
	As	75	**-0.615**	**ug/L**	34.337	1394	-0.002
	Se	77		**ug/L**		7060	-0.008
	Se	82	**0.099**	**ug/L**	144.150	8	0.000
	Ag	107	**0.008**	**ug/L**	15.403	58	0.000
	Cd	111	**-0.000**	**ug/L**	5013.281	12	-0.000
	Cd	114		**ug/L**		51	0.000
>	In	115		**ug/L**		172305	172305.231
	Sb	121	**0.357**	**ug/L**	5.437	1328	0.007
	Sb	123		**ug/L**		1077	0.005
	Ba	135		**ug/L**		60	0.000
	Ba	137	**0.002**	**ug/L**	465.255	86	0.000
>	Lu	175		**ug/L**		235172	235172.256
	Tl	205	**0.182**	**ug/L**	13.968	1679	0.007
	Pb	208	**0.011**	**ug/L**	25.911	497	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			89.7		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			96.4		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			95.3		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232744002
Sample Date/Time: Tuesday, July 14, 2009 12:38:17
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744002.035

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.910**	ug/L	1.331	421	0.001
	B	11	**9.687**	ug/L	6.204	947	0.002
>	Sc	45		ug/L		389982	389982.309
	Cr	52	**25.696**	ug/L	0.745	62457	0.167
	Cr	53		ug/L		152633	-0.078
	Mn	55	**1502.488**	ug/L	1.419	6050128	15.512
	Ni	60	**23.058**	ug/L	1.666	16636	0.042
>	Ge	74		ug/L		268104	268103.745
	As	75	**5.900**	ug/L	4.636	5957	0.016
	Se	77		ug/L		6092	-0.011
	Se	82	**0.683**	ug/L	35.202	36	0.000
	Ag	107	**0.221**	ug/L	1.877	703	0.004
	Cd	111	**0.600**	ug/L	6.323	440	0.003
	Cd	114		ug/L		496	0.003
>	In	115		ug/L		169725	169725.324
	Sb	121	**0.339**	ug/L	6.767	1253	0.006
	Sb	123		ug/L		997	0.005
	Ba	135		ug/L		350301	1.431
	Ba	137	**383.881**	ug/L	1.983	607514	2.482
>	Lu	175		ug/L		244806	244805.894
	Tl	205	**0.589**	ug/L	3.519	5346	0.021
	Pb	208	**37.108**	ug/L	2.013	375306	1.532

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		93.8			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		93.1			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.0			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.2			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744003
Sample Date/Time: Tuesday, July 14, 2009 12:41:58
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744003.036

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.771**	**ug/L**	6.401	402	0.001
	B	11	**4.728**	**ug/L**	9.295	568	0.001
>	Sc	45		**ug/L**		390014	390013.707
	Cr	52	**31.235**	**ug/L**	1.795	76506	0.203
	Cr	53		**ug/L**		146089	-0.094
	Mn	55	**1440.702**	**ug/L**	1.032	5801629	14.874
	Ni	60	**18.234**	**ug/L**	0.654	13176	0.034
>	Ge	74		**ug/L**		272594	272594.383
	As	75	**2.718**	**ug/L**	15.537	3772	0.007
	Se	77		**ug/L**		5303	-0.014
	Se	82	**1.157**	**ug/L**	8.109	60	0.000
	Ag	107	**0.185**	**ug/L**	7.454	604	0.003
	Cd	111	**0.519**	**ug/L**	10.331	389	0.002
	Cd	114		**ug/L**		278	0.001
>	In	115		**ug/L**		172664	172664.084
	Sb	121	**0.242**	**ug/L**	0.893	960	0.005
	Sb	123		**ug/L**		766	0.003
	Ba	135		**ug/L**		144212	0.569
	Ba	137	**154.087**	**ug/L**	1.262	252557	0.996
>	Lu	175		**ug/L**		253460	253460.078
	Tl	205	**0.237**	**ug/L**	2.267	2317	0.009
	Pb	208	**28.209**	**ug/L**	2.019	295515	1.164

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		93.8			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.7			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.6			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		102.7			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744004
Sample Date/Time: Tuesday, July 14, 2009 12:45:34
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744004.037

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**4.300**	ug/L	3.158	618	0.002
	B	11	**6.025**	ug/L	7.106	673	0.001
>	Sc	45		ug/L		393379	393379.001
	Cr	52	**26.441**	ug/L	1.331	64907	0.172
	Cr	53		ug/L		138294	-0.117
	Mn	55	**1622.973**	ug/L	1.271	6592254	16.756
	Ni	60	**20.283**	ug/L	1.462	14773	0.037
>	Ge	74		ug/L		270639	270638.562
	As	75	**7.458**	ug/L	5.903	7124	0.020
	Se	77		ug/L		5027	-0.015
	Se	82	**1.326**	ug/L	52.090	67	0.000
	Ag	107	**0.203**	ug/L	5.594	693	0.004
	Cd	111	**0.657**	ug/L	14.410	513	0.003
	Cd	114		ug/L		623	0.003
>	In	115		ug/L		181046	181045.978
	Sb	121	**0.283**	ug/L	6.150	1146	0.005
	Sb	123		ug/L		901	0.004
	Ba	135		ug/L		271698	1.047
	Ba	137	**282.946**	ug/L	1.926	474905	1.829
>	Lu	175		ug/L		259566	259565.833
	Tl	205	**0.331**	ug/L	0.828	3248	0.012
	Pb	208	**28.567**	ug/L	0.748	306512	1.179

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		94.6			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.0			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		101.3			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		105.1			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744005
Sample Date/Time: Tuesday, July 14, 2009 12:49:11
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744005.038

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.917**	**ug/L**	5.837	420	0.001
	B	11	**3.152**	**ug/L**	2.601	446	0.001
>	Sc	45		**ug/L**		388595	388594.806
	Cr	52	**13.037**	**ug/L**	1.193	30251	0.085
	Cr	53		**ug/L**		130624	-0.133
	Mn	55	**1280.296**	**ug/L**	1.010	5137557	13.218
	Ni	60	**9.975**	**ug/L**	1.691	7221	0.018
>	Ge	74		**ug/L**		275563	275563.429
	As	75	**4.764**	**ug/L**	19.483	5299	0.013
	Se	77		**ug/L**		4810	-0.016
	Se	82	**1.358**	**ug/L**	27.691	70	0.000
	Ag	107	**0.146**	**ug/L**	6.090	513	0.003
	Cd	111	**0.391**	**ug/L**	27.964	314	0.002
	Cd	114		**ug/L**		274	0.001
>	In	115		**ug/L**		183116	183115.932
	Sb	121	**0.267**	**ug/L**	5.179	1104	0.005
	Sb	123		**ug/L**		854	0.004
	Ba	135		**ug/L**		112930	0.435
	Ba	137	**118.232**	**ug/L**	0.740	198340	0.764
>	Lu	175		**ug/L**		259363	259363.474
	Tl	205	**0.173**	**ug/L**	3.968	1766	0.006
	Pb	208	**19.853**	**ug/L**	1.293	212954	0.819

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		93.4			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		95.7			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.5			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		105.1			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744006
Sample Date/Time: Tuesday, July 14, 2009 12:52:49
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744006.039

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.622**	**ug/L**	2.386	529	0.001
	B	11	**5.678**	**ug/L**	9.514	653	0.001
>	Sc	45		**ug/L**		397608	397607.717
	Cr	52	**20.227**	**ug/L**	1.456	49538	0.132
	Cr	53		**ug/L**		131889	-0.137
	Mn	55	**1354.131**	**ug/L**	2.862	5558230	13.980
	Ni	60	**15.498**	**ug/L**	1.454	11429	0.029
>	Ge	74		**ug/L**		275143	275143.489
	As	75	**4.183**	**ug/L**	10.350	4871	0.011
	Se	77		**ug/L**		4977	-0.016
	Se	82	**1.502**	**ug/L**	29.151	77	0.000
	Ag	107	**0.514**	**ug/L**	0.264	1670	0.009
	Cd	111	**0.644**	**ug/L**	5.482	495	0.003
	Cd	114		**ug/L**		564	0.003
>	In	115		**ug/L**		177992	177991.864
	Sb	121	**0.199**	**ug/L**	8.142	847	0.004
	Sb	123		**ug/L**		661	0.003
	Ba	135		**ug/L**		277091	1.037
	Ba	137	**283.971**	**ug/L**	0.720	490338	1.836
>	Lu	175		**ug/L**		267036	267035.681
	Tl	205	**0.282**	**ug/L**	3.345	2873	0.010
	Pb	208	**27.609**	**ug/L**	0.343	304777	1.140

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		95.6			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		95.6			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.6			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		108.2			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits	Message
Mn 55 Upper, S, EEIMn		55		Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744007
Sample Date/Time: Tuesday, July 14, 2009 12:56:27
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744007.040

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.591**	ug/L	2.769	379	0.001
	B	11	**8.126**	ug/L	6.193	832	0.002
>	Sc	45		ug/L		392101	392100.751
	Cr	52	**27.422**	ug/L	0.834	67194	0.178
	Cr	53		ug/L		136820	-0.120
	Mn	55	**1225.240**	ug/L	1.181	4960910	12.649
	Ni	60	**21.135**	ug/L	1.262	15339	0.039
>	Ge	74		ug/L		269986	269986.447
	As	75	**5.429**	ug/L	11.433	5662	0.014
	Se	77		ug/L		5080	-0.015
	Se	82	**0.379**	ug/L	171.205	21	0.000
	Ag	107	**0.218**	ug/L	7.715	712	0.004
	Cd	111	**0.492**	ug/L	9.779	372	0.002
	Cd	114		ug/L		425	0.002
>	In	115		ug/L		173952	173952.424
	Sb	121	**0.222**	ug/L	5.585	904	0.004
	Sb	123		ug/L		740	0.003
	Ba	135		ug/L		469500	1.872
	Ba	137	**505.937**	ug/L	0.229	820533	3.271
>	Lu	175		ug/L		250827	250827.135
	Tl	205	**0.482**	ug/L	1.860	4515	0.017
	Pb	208	**39.501**	ug/L	1.043	409377	1.631

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		94.3			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		93.8			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.4			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		101.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744008
Sample Date/Time: Tuesday, July 14, 2009 13:00:06
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744008.041

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**4.154**	ug/L	9.842	599	0.001
	B	11	**10.603**	ug/L	1.182	1027	0.002
>	Sc	45		ug/L		394096	394096.051
	Cr	52	**30.727**	ug/L	0.753	76001	0.200
	Cr	53		ug/L		138485	-0.117
	Mn	55	**1718.430**	ug/L	1.594	6992262	17.741
	Ni	60	**26.293**	ug/L	0.902	19159	0.048
>	Ge	74		ug/L		270099	270098.986
	As	75	**7.410**	ug/L	3.075	7076	0.020
	Se	77		ug/L		4909	-0.016
	Se	82	**0.887**	ug/L	72.356	46	0.000
	Ag	107	**0.364**	ug/L	1.561	1164	0.007
	Cd	111	**0.714**	ug/L	3.081	533	0.003
	Cd	114		ug/L		492	0.003
>	In	115		ug/L		173544	173543.623
	Sb	121	**0.225**	ug/L	2.981	911	0.004
	Sb	123		ug/L		740	0.003
	Ba	135		ug/L		287189	1.145
	Ba	137	**312.990**	ug/L	1.303	507741	2.024
>	Lu	175		ug/L		250886	250885.724
	Tl	205	**0.593**	ug/L	2.899	5522	0.021
	Pb	208	**64.977**	ug/L	0.551	673323	2.682

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		94.8			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		93.8			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.1			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		101.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 03:54:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 6.153

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.849**	ug/L	2.372	7249	0.006
	Be	9	**49.372**	ug/L	2.976	6905	0.006
	B	11	**85.270**	ug/L	2.150	7889	0.007
	Na	23	**4269.813**	ug/L	7.967	5451283	4.745
	Mg	24	**4999.169**	ug/L	5.154	5084131	4.430
	Al	27	**4534.657**	ug/L	5.476	7365239	6.418
	P	31	**4805.713**	ug/L	0.739	508836	0.441
	K	39	**4968.749**	ug/L	10.844	13555440	11.306
	Ca	43	**4926.566**	ug/L	0.916	20445	0.017
>	Sc	45		ug/L		1147310	1147310.056
	Ti	47	**46.580**	ug/L	1.790	10015	0.009
	V	51	**51.298**	ug/L	5.383	119926	0.099
	Cr	52	**50.608**	ug/L	0.926	108170	0.100
	Cr	53		ug/L		230415	-0.054
	Mn	55	**46.596**	ug/L	1.900	168825	0.146
	Fe	57	**4896.606**	ug/L	3.127	357797	0.307
	Co	59	**49.264**	ug/L	2.178	140568	0.122
	Ni	60	**50.523**	ug/L	0.946	31053	0.027
	Cu	63		ug/L		67283	0.058
	Cu	65	**48.788**	ug/L	2.088	30324	0.026
	Zn	66	**50.153**	ug/L	1.287	20098	0.099
	Zn	67		ug/L		9716	0.001
	Zn	68		ug/L		14245	0.067
>	Ge	74		ug/L		200326	200325.867
	As	75	**46.945**	ug/L	1.890	27156	0.127
	Se	77		ug/L		8691	-0.007
	Se	82	**49.500**	ug/L	3.728	1770	0.009
	Kr	83		ug/L		112	0.000
	Sr	88	**51.006**	ug/L	2.122	239943	1.787
	Y	89		ug/L		111	0.001
	Zr	90	**48.947**	ug/L	2.136	141413	1.052
	Mo	98	**46.802**	ug/L	3.715	66616	0.496
	Ag	107	**48.010**	ug/L	0.649	118156	0.880
	Cd	111	**51.214**	ug/L	0.791	27862	0.208
	Cd	114		ug/L		69849	0.520
>	In	115		ug/L		134211	134211.398
	Sn	120	**47.863**	ug/L	3.313	124376	0.926
	Sb	121	**47.396**	ug/L	2.771	121185	0.901
	Sb	123		ug/L		95778	0.712
	Ba	135		ug/L		34862	0.186
	Ba	137	**49.581**	ug/L	2.378	61711	0.329
	Ho	165		ug/L		57	0.000
>	Lu	175		ug/L		187665	187664.602
	Tl	205	**45.674**	ug/L	0.589	307732	1.633
	Pb	208	**48.100**	ug/L	2.423	390017	2.077
	Th	232	**47.002**	ug/L	1.619	401446	2.138
	U	238	**48.597**	ug/L	0.702	390749	2.081

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	105.698				
	Be	9	98.744				
	B	11	85.270				
	Na	23	85.396				
	Mg	24	99.983				
	Al	27	89.795				
	P	31	96.114				
	K	39	99.375				
	Ca	43	98.531				
>	Sc	45			115.2		
	Ti	47	93.160				
	V	51	102.596				
	Cr	52	101.215				
	Cr	53					
	Mn	55	93.192				
	Fe	57	97.932				
	Co	59	98.529				
	Ni	60	101.046				
	Cu	63					
	Cu	65	97.577				
	Zn	66	100.305				
	Zn	67					
	Zn	68					
>	Ge	74			121.8		
	As	75	93.889				
	Se	77					
	Se	82	99.000				
	Kr	83					
	Sr	88	102.012				
	Y	89					
	Zr	90	97.893				
	Mo	98	93.605				
	Ag	107	96.020				
	Cd	111	102.429				
	Cd	114					
>	In	115			119.0		
	Sn	120	95.726				
	Sb	121	94.792				
	Sb	123					
	Ba	135					
	Ba	137	99.162				
	Ho	165					
>	Lu	175			111.8		
	Tl	205	91.349				
	Pb	208	96.200				
	Th	232	94.003				
	U	238	97.195				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	B	11CCV is out of limits (+/- 10%)
QC Std 6	Na	23CCV is out of limits (+/- 10%)
QC Std 6	Al	27CCV is out of limits (+/- 10%)
Ge 74 Int Std for QCGe		74

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 04:00:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\Dataset\090713\QC Std 7.154

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.005**	ug/L	342.721	31	0.000
	Be	9	**-0.084**	ug/L	7.469	17	-0.000
	B	11	**-0.167**	ug/L	186.746	379	-0.000
	Na	23	**-2.962**	ug/L	91.632	4334	-0.003
	Mg	24	**1.510**	ug/L	74.424	2334	0.001
	Al	27	**1.127**	ug/L	193.642	5335	0.002
	P	31	**-1.915**	ug/L	23.022	2890	-0.000
	K	39	**-19.604**	ug/L	37.858	546255	-0.045
	Ca	43	**-6.607**	ug/L	145.942	609	-0.000
>	Sc	45		ug/L		1163134	1163133.880
	Ti	47	**-0.048**	ug/L	237.314	255	-0.000
	V	51	**3.090**	ug/L	43.848	13790	0.006
	Cr	52	**1.057**	ug/L	32.002	-4582	0.002
	Cr	53		ug/L		219384	-0.067
	Mn	55	**0.036**	ug/L	88.262	1515	0.000
	Fe	57	**5.367**	ug/L	22.298	5870	0.000
	Co	59	**0.020**	ug/L	32.084	348	0.000
	Ni	60	**-0.015**	ug/L	98.028	105	-0.000
	Cu	63		ug/L		257	0.000
	Cu	65	**-0.010**	ug/L	148.436	116	-0.000
	Zn	66	**0.048**	ug/L	83.735	230	0.000
	Zn	67		ug/L		6818	-0.013
	Zn	68		ug/L		698	-0.001
>	Ge	74		ug/L		203430	203430.355
	As	75	**-1.044**	ug/L	72.777	1189	-0.003
	Se	77		ug/L		7599	-0.013
	Se	82	**-0.776**	ug/L	6.690	-18	-0.000
	Kr	83		ug/L		107	-0.000
	Sr	88	**0.007**	ug/L	59.933	195	0.000
	Y	89		ug/L		54	0.000
	Zr	90	**0.055**	ug/L	12.716	369	0.001
	Mo	98	**0.032**	ug/L	5.723	115	0.000
	Ag	107	**0.005**	ug/L	60.930	70	0.000
	Cd	111	**0.011**	ug/L	66.007	21	0.000
	Cd	114		ug/L		53	0.000
>	In	115		ug/L		135866	135866.411
	Sn	120	**0.027**	ug/L	33.524	185	0.001
	Sb	121	**0.134**	ug/L	20.503	709	0.003
	Sb	123		ug/L		586	0.002
	Ba	135		ug/L		60	0.000
	Ba	137	**0.013**	ug/L	26.094	76	0.000
	Ho	165		ug/L		46	0.000
>	Lu	175		ug/L		188737	188736.924
	Tl	205	**0.039**	ug/L	85.882	1526	0.001
	Pb	208	**0.014**	ug/L	2.253	492	0.001
	Th	232	**0.035**	ug/L	17.545	579	0.002
	U	238	**0.012**	ug/L	15.711	311	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	0.9999
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		116.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		123.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		120.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		112.4			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte	Mass	Out of Limits Message
Ge 74 Int Std for QCGe	74	
In 115 Int Std for QCIn	115	

QC Action

QC Action Line: Continue

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, July 14, 2009 10:01:13
Sample Description:
Method File: c:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.1393
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1230.1	1230.053	41.210	3.4
	Mg	24.0	9359.1	9359.065	124.920	1.3
	Co	58.9	32902.3	32902.250	400.686	1.2
	Rh	102.9	67477.8	67477.793	428.437	0.6
	In	114.9	88913.0	88913.039	375.261	0.4
	Pb	208.0	47408.7	47408.742	476.634	1.0
⌈>	Ba	137.9	90490.6	90490.609	728.117	0.8
⌊	Ba++	69.0	2406.9	0.027	0.000	1.5
⌈>	Ce	139.9	108163.8	108163.769	1107.155	1.0
⌊	CeO	155.9	1870.4	0.017	0.000	2.5
	Bkgd	220.0	20.9	20.900	2.702	12.9

Current Optimization File Data

Current Value	Description
0.91	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-1687.50	Analog Stage Voltage
900.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	5.8	1852.1
Co	59	25	6.0	34771.9
In	115	25	6.8	138669.1

ICPMS#3 Instrument Tuning Report

File Name: 090714.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	575	2070	0.637
Be	9.0	9.0	2052	2070	0.632
Mg	24.0	24.0	5704	2120	0.619
Mg	25.0	25.0	5911	2050	0.662
Mg	26.0	26.0	6208	2130	0.666
Co	58.9	58.9	14195	2110	0.697
Rh	102.9	102.9	24904	2170	0.670
In	114.9	114.9	27821	2180	0.670
Ce	139.9	139.9	33905	2200	0.698
Pb	206.0	206.0	49992	2270	0.683
Pb	207.0	207.0	50269	2300	0.687
Pb	208.0	208.0	50486	2320	0.629
U	238.1	238.0	57817	2340	0.667

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 10:32:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Blank.001

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		ug/L		20	
	B	11		ug/L		221	
>	Sc	45		ug/L		415899	
	Cr	52		ug/L		-2876	
	Cr	53		ug/L		195078	
	Mn	55		ug/L		1211	
	Ni	60		ug/L		93	
>	Ge	74		ug/L		287910	
	As	75		ug/L		1924	
	Se	77		ug/L		9769	
	Se	82		ug/L		3	
	Ag	107		ug/L		36	
	Cd	111		ug/L		13	
	Cd	114		ug/L		37	
>	In	115		ug/L		178663	
	Sb	121		ug/L		186	
	Sb	123		ug/L		172	
	Ba	135		ug/L		59	
	Ba	137		ug/L		86	
>	Lu	175		ug/L		246888	
	Tl	205		ug/L		139	
	Pb	208		ug/L		411	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Simple Linear	
B	11	Simple Linear	
Sc	45	Simple Linear	
Cr	52	Simple Linear	
Cr	53	Simple Linear	
Mn	55	Simple Linear	
Ni	60	Simple Linear	
Ge	74	Simple Linear	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	82	Simple Linear	
Ag	107	Simple Linear	
Cd	111	Simple Linear	
Cd	114	Simple Linear	
In	115	Simple Linear	
Sb	121	Simple Linear	
Sb	123	Simple Linear	
Ba	135	Simple Linear	
Ba	137	Simple Linear	
Lu	175	Simple Linear	
Tl	205	Simple Linear	
Pb	208	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 10:36:16
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Standard 1.002

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**10.000**	**ug/L**	2.148	1432	0.004
	B	11	**20.000**	**ug/L**	4.374	1764	0.004
>	Sc	45		**ug/L**		396561	396560.511
	Cr	52	**10.000**	**ug/L**	1.155	24167	0.068
	Cr	53		**ug/L**		203132	0.043
	Mn	55	**10.000**	**ug/L**	0.245	45329	0.111
	Ni	60	**10.000**	**ug/L**	1.798	7723	0.019
>	Ge	74		**ug/L**		278369	278369.020
	As	75	**10.000**	**ug/L**	6.574	9544	0.028
	Se	77		**ug/L**		9950	0.002
	Se	82	**10.000**	**ug/L**	7.104	500	0.002
	Ag	107	**10.000**	**ug/L**	1.568	31970	0.184
	Cd	111	**10.000**	**ug/L**	0.546	7372	0.042
	Cd	114		**ug/L**		17803	0.102
>	In	115		**ug/L**		173855	173855.437
	Sb	121	**10.000**	**ug/L**	3.313	31170	0.178
	Sb	123		**ug/L**		24315	0.139
	Ba	135		**ug/L**		8918	0.037
	Ba	137	**10.000**	**ug/L**	0.765	16054	0.067
>	Lu	175		**ug/L**		236938	236938.420
	Tl	205	**10.000**	**ug/L**	0.792	88906	0.375
	Pb	208	**10.000**	**ug/L**	1.095	100916	0.424

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 10:39:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\Standard 2.003

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**99.994**	ug/L	1.059	13719	0.035
	B	11	**200.000**	ug/L	2.311	15374	0.039
>	Sc	45		ug/L		387223	387222.809
	Cr	52	**99.956**	ug/L	0.938	248945	0.650
	Cr	53		ug/L		228458	0.121
	Mn	55	**99.921**	ug/L	3.328	400455	1.032
	Ni	60	**99.954**	ug/L	1.835	71308	0.184
>	Ge	74		ug/L		264902	264902.149
	As	75	**99.952**	ug/L	2.271	71512	0.263
	Se	77		ug/L		12374	0.013
	Se	82	**100.012**	ug/L	1.894	4795	0.018
	Ag	107	**99.972**	ug/L	1.041	287137	1.787
	Cd	111	**99.994**	ug/L	2.016	67580	0.421
	Cd	114		ug/L		161716	1.006
>	In	115		ug/L		160673	160672.643
	Sb	121	**100.046**	ug/L	2.340	300375	1.869
	Sb	123		ug/L		235318	1.464
	Ba	135		ug/L		83883	0.368
	Ba	137	**99.957**	ug/L	0.542	147237	0.646
>	Lu	175		ug/L		227711	227710.841
	Tl	205	**99.964**	ug/L	0.806	822932	3.614
	Pb	208	**99.972**	ug/L	0.882	940063	4.127

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 10:43:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 1.004

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.805**	ug/L	1.066	6935	0.018
	B	11	**105.317**	ug/L	1.507	8139	0.021
>	Sc	45		ug/L		384692	384692.492
	Cr	52	**51.335**	ug/L	0.731	125729	0.334
	Cr	53		ug/L		214985	0.090
	Mn	55	**48.822**	ug/L	0.948	195022	0.504
	Ni	60	**53.061**	ug/L	1.141	37652	0.098
>	Ge	74		ug/L		263745	263745.016
	As	75	**49.437**	ug/L	0.441	36105	0.130
	Se	77		ug/L		10519	0.006
	Se	82	**49.415**	ug/L	3.575	2360	0.009
	Ag	107	**50.085**	ug/L	0.949	145071	0.895
	Cd	111	**52.391**	ug/L	1.863	35713	0.220
	Cd	114		ug/L		85381	0.527
>	In	115		ug/L		162004	162004.486
	Sb	121	**48.073**	ug/L	0.990	145652	0.898
	Sb	123		ug/L		113715	0.701
	Ba	135		ug/L		41959	0.187
	Ba	137	**51.094**	ug/L	1.992	73982	0.330
>	Lu	175		ug/L		223754	223754.006
	Tl	205	**50.218**	ug/L	1.615	406276	1.815
	Pb	208	**51.320**	ug/L	1.088	474348	2.118

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.609				
	B	11	105.317				
>	Sc	45		92.5			
	Cr	52	102.670				
	Cr	53					
	Mn	55	97.644				
	Ni	60	106.122				
>	Ge	74		91.6			
	As	75	98.873				
	Se	77					
	Se	82	98.830				
	Ag	107	100.171				
	Cd	111	104.781				
	Cd	114					
>	In	115		90.7			
	Sb	121	96.146				
	Sb	123					
	Ba	135					
	Ba	137	102.188				
>	Lu	175		90.6			
	Tl	205	100.436				
	Pb	208	102.640				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 10:47:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 2.005

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.022**	ug/L	164.363	24	0.000
	B	11	**3.178**	ug/L	32.360	485	0.001
>	Sc	45		ug/L		426009	426008.630
	Cr	52	**-0.294**	ug/L	105.001	-3689	-0.002
	Cr	53		ug/L		197185	0.001
	Mn	55	**-0.006**	ug/L	726.887	1192	-0.000
	Ni	60	**0.005**	ug/L	430.166	98	0.000
>	Ge	74		ug/L		271130	271129.740
	As	75	**-0.329**	ug/L	162.020	1577	-0.001
	Se	77		ug/L		8937	-0.001
	Se	82	**-0.391**	ug/L	88.021	-17	-0.000
	Ag	107	**0.012**	ug/L	39.228	69	0.000
	Cd	111	**-0.002**	ug/L	250.645	10	-0.000
	Cd	114		ug/L		47	0.000
>	In	115		ug/L		164685	164685.044
	Sb	121	**0.738**	ug/L	7.419	2442	0.014
	Sb	123		ug/L		1926	0.011
	Ba	135		ug/L		59	0.000
	Ba	137	**0.001**	ug/L	398.291	81	0.000
>	Lu	175		ug/L		228511	228510.848
	Tl	205	**0.171**	ug/L	13.895	1539	0.006
	Pb	208	**0.013**	ug/L	25.851	506	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		102.4			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.2			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.2			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		92.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 10:50:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 3.006

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.509**	**ug/L**	2.329	87	0.000
	B	11	**16.114**	**ug/L**	1.447	1406	0.003
>	Sc	45		**ug/L**		381407	381406.622
	Cr	52	**9.960**	**ug/L**	1.145	22057	0.065
	Cr	53		**ug/L**		199727	0.054
	Mn	55	**5.410**	**ug/L**	3.405	22407	0.056
	Ni	60	**2.083**	**ug/L**	5.155	1547	0.004
>	Ge	74		**ug/L**		268733	268733.206
	As	75	**5.455**	**ug/L**	10.166	5658	0.014
	Se	77		**ug/L**		9240	0.000
	Se	82	**5.230**	**ug/L**	1.216	257	0.001
	Ag	107	**1.034**	**ug/L**	2.475	3159	0.018
	Cd	111	**0.999**	**ug/L**	3.922	722	0.004
	Cd	114		**ug/L**		1732	0.010
>	In	115		**ug/L**		169050	169049.759
	Sb	121	**3.027**	**ug/L**	2.386	9736	0.057
	Sb	123		**ug/L**		7470	0.043
	Ba	135		**ug/L**		1765	0.007
	Ba	137	**1.974**	**ug/L**	2.131	3030	0.013
>	Lu	175		**ug/L**		231160	231160.227
	Tl	205	**1.037**	**ug/L**	2.605	8800	0.038
	Pb	208	**2.025**	**ug/L**	0.839	19706	0.084

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.768				
	B	11	107.429				
>	Sc	45			91.7		
	Cr	52	99.599				
	Cr	53					
	Mn	55	108.206				
	Ni	60	104.159				
>	Ge	74			93.3		
	As	75	109.092				
	Se	77					
	Se	82	104.590				
	Ag	107	103.432				
	Cd	111	99.856				
	Cd	114					
>	In	115			94.6		
	Sb	121	100.907				
	Sb	123					
	Ba	135					
	Ba	137	98.677				
>	Lu	175			93.6		
	Tl	205	103.746				
	Pb	208	101.245				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 10:54:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 4.007

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.093**	ug/L	75.551	29	0.000
	B	11	**2.588**	ug/L	19.089	364	0.001
>	Sc	45		ug/L		351348	351348.023
	Cr	52	**4.606**	ug/L	4.966	8093	0.030
	Cr	53		ug/L		185269	0.058
	Mn	55	**5.887**	ug/L	0.561	22379	0.061
	Ni	60	**2.515**	ug/L	2.491	1705	0.005
>	Ge	74		ug/L		243437	243437.056
	As	75	**0.033**	ug/L	2592.830	1647	0.000
	Se	77		ug/L		8625	0.001
	Se	82	**-0.627**	ug/L	44.435	-25	-0.000
	Ag	107	**0.066**	ug/L	3.015	199	0.001
	Cd	111	**0.467**	ug/L	10.990	292	0.002
	Cd	114		ug/L		3493	0.024
>	In	115		ug/L		143661	143661.060
	Sb	121	**0.396**	ug/L	13.150	1212	0.007
	Sb	123		ug/L		947	0.006
	Ba	135		ug/L		577	0.002
	Ba	137	**0.632**	ug/L	3.792	946	0.004
>	Lu	175		ug/L		213459	213459.094
	Tl	205	**0.056**	ug/L	7.708	551	0.002
	Pb	208	**0.170**	ug/L	1.712	1851	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			84.5		
	Cr	52	124.478				
	Cr	53					
	Mn	55	101.505				
	Ni	60	93.133				
>	Ge	74			84.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111	116.696				
	Cd	114					
>	In	115			80.4		
	Sb	121	395.564				
	Sb	123					
	Ba	135					
	Ba	137	94.288				
>	Lu	175			86.5		
	Tl	205					
	Pb	208	84.898				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 10:58:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 5.008

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**20.399**	ug/L	1.663	2585	0.007
	B	11	**21.869**	ug/L	2.578	1712	0.004
>	Sc	45		ug/L		355787	355786.573
	Cr	52	**24.639**	ug/L	1.731	54538	0.160
	Cr	53		ug/L		192388	0.072
	Mn	55	**25.815**	ug/L	2.052	95842	0.267
	Ni	60	**21.754**	ug/L	0.452	14324	0.040
>	Ge	74		ug/L		243260	243259.779
	As	75	**21.340**	ug/L	2.259	15299	0.056
	Se	77		ug/L		9414	0.005
	Se	82	**21.127**	ug/L	2.951	932	0.004
	Ag	107	**20.178**	ug/L	0.997	52262	0.361
	Cd	111	**20.663**	ug/L	0.830	12597	0.087
	Cd	114		ug/L		32538	0.224
>	In	115		ug/L		144819	144818.886
	Sb	121	**21.198**	ug/L	1.971	57493	0.396
	Sb	123		ug/L		45120	0.311
	Ba	135		ug/L		15804	0.075
	Ba	137	**20.535**	ug/L	0.514	28110	0.133
>	Lu	175		ug/L		211178	211177.551
	Tl	205	**19.439**	ug/L	0.917	148513	0.703
	Pb	208	**20.285**	ug/L	0.319	177177	0.837

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.996				
	B	11	109.343				
>	Sc	45		85.5			
	Cr	52	103.962				
	Cr	53					
	Mn	55	100.057				
	Ni	60	95.834				
>	Ge	74		84.5			
	As	75	106.699				
	Se	77					
	Se	82	105.635				
	Ag	107	100.890				
	Cd	111	101.289				
	Cd	114					
>	In	115		81.1			
	Sb	121	105.463				
	Sb	123					
	Ba	135					
	Ba	137	99.349				
>	Lu	175		85.5			
	Tl	205	97.194				
	Pb	208	100.420				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:01:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.009

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.247**	**ug/L**	2.150	6733	0.018
	B	11	**103.252**	**ug/L**	3.469	7836	0.020
>	Sc	45		**ug/L**		377598	377598.236
	Cr	52	**51.459**	**ug/L**	0.825	123726	0.335
	Cr	53		**ug/L**		206048	0.077
	Mn	55	**52.050**	**ug/L**	0.812	204012	0.537
	Ni	60	**51.752**	**ug/L**	1.004	36052	0.095
>	Ge	74		**ug/L**		264018	264017.641
	As	75	**49.827**	**ug/L**	1.501	36413	0.131
	Se	77		**ug/L**		10100	0.004
	Se	82	**50.241**	**ug/L**	4.489	2402	0.009
	Ag	107	**51.110**	**ug/L**	0.445	149008	0.914
	Cd	111	**49.953**	**ug/L**	2.196	34273	0.210
	Cd	114		**ug/L**		82796	0.508
>	In	115		**ug/L**		163063	163062.963
	Sb	121	**49.697**	**ug/L**	2.238	151536	0.928
	Sb	123		**ug/L**		119015	0.729
	Ba	135		**ug/L**		42911	0.190
	Ba	137	**51.537**	**ug/L**	0.707	75303	0.333
>	Lu	175		**ug/L**		225776	225775.817
	Tl	205	**51.034**	**ug/L**	1.367	416661	1.845
	Pb	208	**51.156**	**ug/L**	0.896	477125	2.112

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	100.493				
	B	11	103.252				
>	Sc	45			90.8		
	Cr	52	102.918				
	Cr	53					
	Mn	55	104.101				
	Ni	60	103.505				
>	Ge	74			91.7		
	As	75	99.653				
	Se	77					
	Se	82	100.482				
	Ag	107	102.220				
	Cd	111	99.906				
	Cd	114					
>	In	115			91.3		
	Sb	121	99.394				
	Sb	123					
	Ba	135					
	Ba	137	103.075				
>	Lu	175			91.4		
	Tl	205	102.069				
	Pb	208	102.312				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 11:05:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.010

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.013**	**ug/L**	301.991	20	0.000
	B	11	**2.817**	**ug/L**	22.420	407	0.001
>	Sc	45		**ug/L**		377185	377184.956
	Cr	52	**-0.408**	**ug/L**	58.303	-3590	-0.003
	Cr	53		**ug/L**		185845	0.025
	Mn	55	**0.030**	**ug/L**	103.317	1210	0.000
	Ni	60	**0.022**	**ug/L**	54.529	99	0.000
>	Ge	74		**ug/L**		269129	269128.915
	As	75	**0.387**	**ug/L**	56.071	2071	0.001
	Se	77		**ug/L**		8218	-0.003
	Se	82	**-0.199**	**ug/L**	216.699	-7	-0.000
	Ag	107	**0.012**	**ug/L**	58.396	71	0.000
	Cd	111	**0.016**	**ug/L**	42.543	23	0.000
	Cd	114		**ug/L**		52	0.000
>	In	115		**ug/L**		169437	169437.099
	Sb	121	**0.392**	**ug/L**	12.616	1413	0.007
	Sb	123		**ug/L**		1134	0.006
	Ba	135		**ug/L**		59	0.000
	Ba	137	**0.004**	**ug/L**	249.461	87	0.000
>	Lu	175		**ug/L**		231537	231537.082
	Tl	205	**0.188**	**ug/L**	19.937	1694	0.007
	Pb	208	**0.014**	**ug/L**	14.713	516	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		90.7			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		93.5			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.8			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		93.8			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:35:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.018

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**48.105**	ug/L	3.520	6430	0.017
	B	11	**92.218**	ug/L	3.573	7002	0.018
>	Sc	45		ug/L		376681	376680.729
	Cr	52	**52.885**	ug/L	2.086	126901	0.344
	Cr	53		ug/L		185048	0.022
	Mn	55	**53.509**	ug/L	1.071	209174	0.552
	Ni	60	**52.848**	ug/L	1.480	36720	0.097
>	Ge	74		ug/L		276538	276537.741
	As	75	**50.257**	ug/L	1.850	38452	0.132
	Se	77		ug/L		9618	0.001
	Se	82	**49.879**	ug/L	2.049	2498	0.009
	Ag	107	**50.237**	ug/L	0.735	156776	0.898
	Cd	111	**50.381**	ug/L	1.726	37002	0.212
	Cd	114		ug/L		89438	0.512
>	In	115		ug/L		174547	174546.633
	Sb	121	**49.441**	ug/L	0.978	161382	0.924
	Sb	123		ug/L		126642	0.725
	Ba	135		ug/L		44706	0.189
	Ba	137	**51.172**	ug/L	1.244	78425	0.331
>	Lu	175		ug/L		236822	236822.296
	Tl	205	**50.760**	ug/L	0.913	434672	1.835
	Pb	208	**50.522**	ug/L	1.455	494243	2.086

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	96.210				
	B	11	92.218				
>	Sc	45		90.6			
	Cr	52	105.770				
	Cr	53					
	Mn	55	107.017				
	Ni	60	105.697				
>	Ge	74		96.0			
	As	75	100.515				
	Se	77					
	Se	82	99.757				
	Ag	107	100.473				
	Cd	111	100.763				
	Cd	114					
>	In	115		97.7			
	Sb	121	98.882				
	Sb	123					
	Ba	135					
	Ba	137	102.344				
>	Lu	175		95.9			
	Tl	205	101.520				
	Pb	208	101.044				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 11:38:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.019

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.018**	**ug/L**	43.329	21	0.000
	B	11	**2.226**	**ug/L**	4.509	368	0.000
>	Sc	45		**ug/L**		380776	380776.062
	Cr	52	**0.067**	**ug/L**	208.187	-2467	0.000
	Cr	53		**ug/L**		168900	-0.025
	Mn	55	**0.036**	**ug/L**	50.110	1251	0.000
	Ni	60	**0.005**	**ug/L**	138.036	89	0.000
>	Ge	74		**ug/L**		281751	281750.796
	As	75	**0.103**	**ug/L**	338.550	1960	0.000
	Se	77		**ug/L**		7812	-0.006
	Se	82	**0.213**	**ug/L**	183.516	13	0.000
	Ag	107	**0.008**	**ug/L**	36.161	60	0.000
	Cd	111	**-0.001**	**ug/L**	1049.401	12	-0.000
	Cd	114		**ug/L**		48	0.000
>	In	115		**ug/L**		177939	177938.883
	Sb	121	**0.392**	**ug/L**	6.661	1490	0.007
	Sb	123		**ug/L**		1135	0.005
	Ba	135		**ug/L**		52	-0.000
	Ba	137	**-0.001**	**ug/L**	160.755	84	-0.000
>	Lu	175		**ug/L**		244746	244745.658
	Tl	205	**0.175**	**ug/L**	13.302	1685	0.006
	Pb	208	**0.010**	**ug/L**	29.191	506	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		91.6			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		97.9			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.6			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.1			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:57:23
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.024

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**44.477**	**ug/L**	14.322	6329	0.016
	B	11	**86.024**	**ug/L**	13.290	6976	0.017
>	Sc	45		**ug/L**		406367	406367.152
	Cr	52	**49.478**	**ug/L**	13.695	126230	0.322
	Cr	53		**ug/L**		177205	-0.029
	Mn	55	**49.930**	**ug/L**	13.042	208092	0.515
	Ni	60	**48.881**	**ug/L**	11.895	36241	0.090
>	Ge	74		**ug/L**		275360	275359.598
	As	75	**50.199**	**ug/L**	1.074	38248	0.132
	Se	77		**ug/L**		8843	-0.002
	Se	82	**49.834**	**ug/L**	3.165	2484	0.009
	Ag	107	**50.027**	**ug/L**	1.608	155360	0.894
	Cd	111	**49.868**	**ug/L**	1.123	36448	0.210
	Cd	114		**ug/L**		88443	0.509
>	In	115		**ug/L**		173701	173701.110
	Sb	121	**48.997**	**ug/L**	1.322	159168	0.915
	Sb	123		**ug/L**		123879	0.712
	Ba	135		**ug/L**		44241	0.186
	Ba	137	**50.564**	**ug/L**	0.566	77651	0.327
>	Lu	175		**ug/L**		237288	237287.644
	Tl	205	**50.543**	**ug/L**	0.754	433651	1.827
	Pb	208	**50.112**	**ug/L**	1.456	491187	2.069

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	88.954				
	B	11	86.024				
>	Sc	45		97.7			
	Cr	52	98.955				
	Cr	53					
	Mn	55	99.861				
	Ni	60	97.763				
>	Ge	74		95.6			
	As	75	100.397				
	Se	77					
	Se	82	99.667				
	Ag	107	100.053				
	Cd	111	99.736				
	Cd	114					
>	In	115		97.2			
	Sb	121	97.994				
	Sb	123					
	Ba	135					
	Ba	137	101.128				
>	Lu	175		96.1			
	Tl	205	101.086				
	Pb	208	100.224				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Be	9CCV is out of limits (+/- 10%)
QC Std 6	B	11CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 12:01:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.025

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.016**	ug/L	153.468	20	0.000
	B	11	**2.153**	ug/L	15.319	356	0.000
>	Sc	45		ug/L		373781	373781.303
	Cr	52	**0.008**	ug/L	1397.570	-2566	0.000
	Cr	53		ug/L		163124	-0.033
	Mn	55	**0.081**	ug/L	18.413	1400	0.001
	Ni	60	**0.025**	ug/L	85.463	100	0.000
>	Ge	74		ug/L		274030	274029.756
	As	75	**-0.594**	ug/L	29.550	1400	-0.002
	Se	77		ug/L		7048	-0.008
	Se	82	**0.242**	ug/L	108.715	15	0.000
	Ag	107	**0.011**	ug/L	37.033	69	0.000
	Cd	111	**0.010**	ug/L	113.284	20	0.000
	Cd	114		ug/L		40	0.000
>	In	115		ug/L		175346	175346.490
	Sb	121	**0.383**	ug/L	2.734	1438	0.007
	Sb	123		ug/L		1109	0.005
	Ba	135		ug/L		66	0.000
	Ba	137	**0.008**	ug/L	156.791	96	0.000
>	Lu	175		ug/L		240306	240306.382
	Tl	205	**0.139**	ug/L	12.520	1343	0.005
	Pb	208	**0.014**	ug/L	35.656	540	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			89.9		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.2		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			97.3		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873979
Sample Date/Time: Tuesday, July 14, 2009 12:04:47
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873979.026

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.015**	**ug/L**	238.171	20	0.000
	B	11	**0.805**	**ug/L**	44.370	258	0.000
>	Sc	45		**ug/L**		374237	374237.293
	Cr	52	**0.589**	**ug/L**	27.992	-1153	0.004
	Cr	53		**ug/L**		142631	-0.088
	Mn	55	**0.363**	**ug/L**	2.933	2491	0.004
	Ni	60	**0.045**	**ug/L**	23.243	115	0.000
>	Ge	74		**ug/L**		275279	275278.694
	As	75	**-0.556**	**ug/L**	72.727	1436	-0.001
	Se	77		**ug/L**		5710	-0.013
	Se	82	**0.279**	**ug/L**	63.163	16	0.000
	Ag	107	**0.006**	**ug/L**	32.233	55	0.000
	Cd	111	**0.024**	**ug/L**	15.602	30	0.000
	Cd	114		**ug/L**		73	0.000
>	In	115		**ug/L**		177308	177307.934
	Sb	121	**0.148**	**ug/L**	8.994	675	0.003
	Sb	123		**ug/L**		537	0.002
	Ba	135		**ug/L**		78	0.000
	Ba	137	**0.036**	**ug/L**	6.908	142	0.000
>	Lu	175		**ug/L**		243637	243637.140
	Tl	205	**0.051**	**ug/L**	6.447	590	0.002
	Pb	208	**0.020**	**ug/L**	30.915	611	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		90.0			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		95.6			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.2			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		98.7			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873980
Sample Date/Time: Tuesday, July 14, 2009 12:08:31
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 882360|40|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873980.027

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**21.811**	**ug/L**	1.358	2943	0.008
	B	11	**31.568**	**ug/L**	1.199	2544	0.006
>	Sc	45		**ug/L**		378930	378929.944
	Cr	52	**18.943**	**ug/L**	0.813	44051	0.123
	Cr	53		**ug/L**		162389	-0.040
	Mn	55	**100.932**	**ug/L**	1.000	395933	1.042
	Ni	60	**28.277**	**ug/L**	2.688	19802	0.052
>	Ge	74		**ug/L**		281074	281073.745
	As	75	**65.704**	**ug/L**	1.172	50519	0.173
	Se	77		**ug/L**		8892	-0.002
	Se	82	**47.998**	**ug/L**	2.461	2442	0.009
	Ag	107	**4.679**	**ug/L**	2.159	15051	0.084
	Cd	111	**32.304**	**ug/L**	1.472	24407	0.136
	Cd	114		**ug/L**		59027	0.329
>	In	115		**ug/L**		179529	179529.142
	Sb	121	**8.151**	**ug/L**	1.674	27520	0.152
	Sb	123		**ug/L**		21621	0.119
	Ba	135		**ug/L**		119401	0.481
	Ba	137	**130.795**	**ug/L**	0.276	209756	0.846
>	Lu	175		**ug/L**		247953	247952.773
	Tl	205	**52.706**	**ug/L**	1.789	472547	1.905
	Pb	208	**43.571**	**ug/L**	0.360	446374	1.799

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		91.1			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		97.6			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.5			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		100.4			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232744001
Sample Date/Time: Tuesday, July 14, 2009 12:12:13
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744001.028

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.647**	ug/L	3.347	536	0.001
	B	11	**13.838**	ug/L	7.120	1297	0.003
>	Sc	45		ug/L		400303	400303.244
	Cr	52	**37.352**	ug/L	1.587	94453	0.243
	Cr	53		ug/L		149937	-0.094
	Mn	55	**1766.061**	ug/L	0.881	7299510	18.233
	Ni	60	**30.748**	ug/L	0.855	22742	0.057
>	Ge	74		ug/L		268633	268632.643
	As	75	**7.864**	ug/L	3.067	7359	0.021
	Se	77		ug/L		5382	-0.014
	Se	82	**0.220**	ug/L	258.704	13	0.000
	Ag	107	**0.282**	ug/L	3.487	898	0.005
	Cd	111	**0.602**	ug/L	13.822	446	0.003
	Cd	114		ug/L		539	0.003
>	In	115		ug/L		171346	171346.157
	Sb	121	**0.233**	ug/L	7.819	925	0.004
	Sb	123		ug/L		750	0.003
	Ba	135		ug/L		512984	2.077
	Ba	137	**553.867**	ug/L	0.400	884308	3.581
>	Lu	175		ug/L		246933	246932.660
	Tl	205	**0.927**	ug/L	5.299	8417	0.034
	Pb	208	**52.744**	ug/L	0.310	538031	2.177

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		96.3			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		93.3			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.9			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		100.0			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873981
Sample Date/Time: Tuesday, July 14, 2009 12:15:57
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873981.029

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.713**	ug/L	5.371	539	0.001
	B	11	**12.193**	ug/L	4.477	1153	0.002
>	Sc	45		ug/L		395094	395094.239
	Cr	52	**34.932**	ug/L	0.720	86994	0.227
	Cr	53		ug/L		145177	-0.101
	Mn	55	**1773.749**	ug/L	1.566	7235719	18.312
	Ni	60	**30.339**	ug/L	0.589	22149	0.056
>	Ge	74		ug/L		267943	267943.229
	As	75	**7.171**	ug/L	6.746	6849	0.019
	Se	77		ug/L		5091	-0.015
	Se	82	**0.450**	ug/L	119.656	24	0.000
	Ag	107	**0.246**	ug/L	3.388	774	0.004
	Cd	111	**0.542**	ug/L	1.928	395	0.002
	Cd	114		ug/L		534	0.003
>	In	115		ug/L		168118	168117.889
	Sb	121	**0.181**	ug/L	10.391	743	0.003
	Sb	123		ug/L		637	0.003
	Ba	135		ug/L		488027	1.994
	Ba	137	**537.467**	ug/L	0.667	850325	3.475
>	Lu	175		ug/L		244684	244684.454
	Tl	205	**0.743**	ug/L	2.765	6711	0.027
	Pb	208	**49.530**	ug/L	0.175	500677	2.045

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	[illegible]	9					
	B	11					
>	Sc	45			95.0		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			93.1		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.1		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			99.1		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873982
Sample Date/Time: Tuesday, July 14, 2009 12:19:40
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873982.030

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**26.909**	ug/L	2.154	3791	0.010
	B	11	**59.160**	ug/L	3.667	4798	0.012
>	Sc	45		ug/L		396094	396093.864
	Cr	52	**66.385**	ug/L	0.502	168222	0.432
	Cr	53		ug/L		157903	-0.070
	Mn	55	**1785.728**	ug/L	1.668	7302938	18.436
	Ni	60	**57.174**	ug/L	2.193	41764	0.105
>	Ge	74		ug/L		265106	265105.896
	As	75	**46.267**	ug/L	1.068	34077	0.122
	Se	77		ug/L		5509	-0.013
	Se	82	**8.473**	ug/L	2.160	409	0.002
	Ag	107	**24.238**	ug/L	1.550	72117	0.433
	Cd	111	**5.579**	ug/L	2.108	3918	0.023
	Cd	114		ug/L		9000	0.054
>	In	115		ug/L		166400	166399.510
	Sb	121	**29.638**	ug/L	2.248	92277	0.554
	Sb	123		ug/L		72401	0.434
	Ba	135		ug/L		563072	2.353
	Ba	137	**633.554**	ug/L	0.559	980300	4.096
>	Lu	175		ug/L		239313	239313.287
	Tl	205	**47.585**	ug/L	1.681	411750	1.720
	Pb	208	**150.556**	ug/L	0.704	1487624	6.215

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		95.2			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		92.1			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.1			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		96.9			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873984
Sample Date/Time: Tuesday, July 14, 2009 12:23:25
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873984.031

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**26.303**	ug/L	2.562	3685	0.009
	B	11	**59.426**	ug/L	1.672	4791	0.012
>	Sc	45		ug/L		393760	393759.821
	Cr	52	**62.692**	ug/L	1.504	157749	0.408
	Cr	53		ug/L		158835	-0.065
	Mn	55	**1609.750**	ug/L	1.073	6544456	16.619
	Ni	60	**54.005**	ug/L	0.199	39226	0.099
>	Ge	74		ug/L		260922	260921.859
	As	75	**44.404**	ug/L	2.742	32258	0.117
	Se	77		ug/L		5562	-0.013
	Se	82	**7.153**	ug/L	3.028	340	0.001
	Ag	107	**23.764**	ug/L	1.263	69411	0.425
	Cd	111	**5.527**	ug/L	2.295	3809	0.023
	Cd	114		ug/L		8431	0.051
>	In	115		ug/L		163344	163343.883
	Sb	121	**25.880**	ug/L	1.351	79127	0.483
	Sb	123		ug/L		61863	0.378
	Ba	135		ug/L		536683	2.298
	Ba	137	**616.125**	ug/L	1.499	930230	3.983
>	Lu	175		ug/L		233532	233531.934
	Tl	205	**46.748**	ug/L	1.075	394754	1.690
	Pb	208	**147.789**	ug/L	1.544	1424861	6.101

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			94.7		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			90.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			91.4		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			94.6		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873983
Sample Date/Time: Tuesday, July 14, 2009 12:27:10
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 882360|10|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\1201873983.032

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.799**	ug/L	7.537	125	0.000
	B	11	**4.158**	ug/L	14.285	507	0.001
>	Sc	45		ug/L		376939	376938.937
	Cr	52	**7.565**	ug/L	2.901	15933	0.049
	Cr	53		ug/L		158168	-0.049
	Mn	55	**294.535**	ug/L	0.744	1147278	3.041
	Ni	60	**6.358**	ug/L	1.173	4495	0.012
>	Ge	74		ug/L		268329	268329.464
	As	75	**1.000**	ug/L	45.857	2500	0.003
	Se	77		ug/L		6231	-0.011
	Se	82	**-0.060**	ug/L	176.958	-0	-0.000
	Ag	107	**0.055**	ug/L	11.873	201	0.001
	Cd	111	**0.071**	ug/L	57.646	62	0.000
	Cd	114		ug/L		133	0.001
>	In	115		ug/L		169905	169904.819
	Sb	121	**0.126**	ug/L	12.603	576	0.002
	Sb	123		ug/L		448	0.002
	Ba	135		ug/L		100601	0.427
	Ba	137	**115.217**	ug/L	1.359	175574	0.745
>	Lu	175		ug/L		235617	235617.350
	Tl	205	**0.424**	ug/L	11.072	3740	0.015
	Pb	208	**10.843**	ug/L	0.800	105844	0.448

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		90.6			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		93.2			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.1			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		95.4			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 12:30:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.033

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**47.943**	**ug/L**	1.932	6281	0.017
	B	11	**93.801**	**ug/L**	2.668	6977	0.018
>	Sc	45		**ug/L**		369172	369171.825
	Cr	52	**51.660**	**ug/L**	0.718	121444	0.336
	Cr	53		**ug/L**		185124	0.032
	Mn	55	**52.380**	**ug/L**	1.354	200697	0.541
	Ni	60	**51.723**	**ug/L**	1.212	35223	0.095
>	Ge	74		**ug/L**		267611	267611.111
	As	75	**50.209**	**ug/L**	0.897	37180	0.132
	Se	77		**ug/L**		8853	-0.001
	Se	82	**48.203**	**ug/L**	1.705	2336	0.009
	Ag	107	**49.543**	**ug/L**	1.226	148048	0.886
	Cd	111	**49.812**	**ug/L**	2.417	35029	0.210
	Cd	114		**ug/L**		85011	0.508
>	In	115		**ug/L**		167145	167144.782
	Sb	121	**49.536**	**ug/L**	0.618	154843	0.925
	Sb	123		**ug/L**		121349	0.725
	Ba	135		**ug/L**		42975	0.189
	Ba	137	**51.291**	**ug/L**	1.891	75471	0.332
>	Lu	175		**ug/L**		227378	227377.593
	Tl	205	**51.199**	**ug/L**	0.521	420960	1.851
	Pb	208	**50.855**	**ug/L**	1.143	477672	2.099

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	95.886				
	B	11	93.801				
>	Sc	45		88.8			
	Cr	52	103.320				
	Cr	53					
	Mn	55	104.759				
	Ni	60	103.445				
>	Ge	74		92.9			
	As	75	100.419				
	Se	77					
	Se	82	96.407				
	Ag	107	99.087				
	Cd	111	99.624				
	Cd	114					
>	In	115		93.6			
	Sb	121	99.072				
	Sb	123					
	Ba	135					
	Ba	137	102.583				
>	Lu	175		92.1			
	Tl	205	102.399				
	Pb	208	101.709				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 12:34:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.034

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**-0.014**	**ug/L**	77.247	16	-0.000
	B	11	**1.741**	**ug/L**	31.705	325	0.000
>	Sc	45		**ug/L**		372927	372927.058
	Cr	52	**-0.048**	**ug/L**	252.076	-2696	-0.000
	Cr	53		**ug/L**		168491	-0.017
	Mn	55	**0.081**	**ug/L**	8.330	1397	0.001
	Ni	60	**0.027**	**ug/L**	76.994	102	0.000
>	Ge	74		**ug/L**		275339	275338.808
	As	75	**-0.615**	**ug/L**	34.337	1394	-0.002
	Se	77		**ug/L**		7060	-0.008
	Se	82	**0.099**	**ug/L**	144.150	8	0.000
	Ag	107	**0.008**	**ug/L**	15.403	58	0.000
	Cd	111	**-0.000**	**ug/L**	5013.281	12	-0.000
	Cd	114		**ug/L**		51	0.000
>	In	115		**ug/L**		172305	172305.231
	Sb	121	**0.357**	**ug/L**	5.437	1328	0.007
	Sb	123		**ug/L**		1077	0.005
	Ba	135		**ug/L**		60	0.000
	Ba	137	**0.002**	**ug/L**	465.255	86	0.000
>	Lu	175		**ug/L**		235172	235172.256
	Tl	205	**0.182**	**ug/L**	13.968	1679	0.007
	Pb	208	**0.011**	**ug/L**	25.911	497	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		89.7			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		95.6			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.4			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		95.3			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232744002
Sample Date/Time: Tuesday, July 14, 2009 12:38:17
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744002.035

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.910**	ug/L	1.331	421	0.001
	B	11	**9.687**	ug/L	6.204	947	0.002
>	Sc	45		ug/L		389982	389982.309
	Cr	52	**25.696**	ug/L	0.745	62457	0.167
	Cr	53		ug/L		152633	-0.078
	Mn	55	**1502.488**	ug/L	1.419	6050128	15.512
	Ni	60	**23.058**	ug/L	1.666	16636	0.042
>	Ge	74		ug/L		268104	268103.745
	As	75	**5.900**	ug/L	4.636	5957	0.016
	Se	77		ug/L		6092	-0.011
	Se	82	**0.683**	ug/L	35.202	36	0.000
	Ag	107	**0.221**	ug/L	1.877	703	0.004
	Cd	111	**0.600**	ug/L	6.323	440	0.003
	Cd	114		ug/L		496	0.003
>	In	115		ug/L		169725	169725.324
	Sb	121	**0.339**	ug/L	6.767	1253	0.006
	Sb	123		ug/L		997	0.005
	Ba	135		ug/L		350301	1.431
	Ba	137	**383.881**	ug/L	1.983	607514	2.482
>	Lu	175		ug/L		244806	244805.894
	Tl	205	**0.589**	ug/L	3.519	5346	0.021
	Pb	208	**37.108**	ug/L	2.013	375306	1.532

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			93.8		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			93.1		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			95.0		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			99.2		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744003
Sample Date/Time: Tuesday, July 14, 2009 12:41:58
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744003.036

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.771**	ug/L	6.401	402	0.001
	B	11	**4.728**	ug/L	9.295	568	0.001
>	Sc	45		ug/L		390014	390013.707
	Cr	52	**31.235**	ug/L	1.795	76506	0.203
	Cr	53		ug/L		146089	-0.094
	Mn	55	**1440.702**	ug/L	1.032	5801629	14.874
	Ni	60	**18.234**	ug/L	0.654	13176	0.034
>	Ge	74		ug/L		272594	272594.383
	As	75	**2.718**	ug/L	15.537	3772	0.007
	Se	77		ug/L		5303	-0.014
	Se	82	**1.157**	ug/L	8.109	60	0.000
	Ag	107	**0.185**	ug/L	7.454	604	0.003
	Cd	111	**0.519**	ug/L	10.331	389	0.002
	Cd	114		ug/L		278	0.001
>	In	115		ug/L		172664	172664.084
	Sb	121	**0.242**	ug/L	0.893	960	0.005
	Sb	123		ug/L		766	0.003
	Ba	135		ug/L		144212	0.569
	Ba	137	**154.087**	ug/L	1.262	252557	0.996
>	Lu	175		ug/L		253460	253460.078
	Tl	205	**0.237**	ug/L	2.267	2317	0.009
	Pb	208	**28.209**	ug/L	2.019	295515	1.164

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		93.8			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.7			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.6			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		102.7			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744004
Sample Date/Time: Tuesday, July 14, 2009 12:45:34
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744004.037

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**4.300**	**ug/L**	3.158	618	0.002
	B	11	**6.025**	**ug/L**	7.106	673	0.001
>	Sc	45		**ug/L**		393379	393379.001
	Cr	52	**26.441**	**ug/L**	1.331	64907	0.172
	Cr	53		**ug/L**		138294	-0.117
	Mn	55	**1622.973**	**ug/L**	1.271	6592254	16.756
	Ni	60	**20.283**	**ug/L**	1.462	14773	0.037
>	Ge	74		**ug/L**		270639	270638.562
	As	75	**7.458**	**ug/L**	5.903	7124	0.020
	Se	77		**ug/L**		5027	-0.015
	Se	82	**1.326**	**ug/L**	52.090	67	0.000
	Ag	107	**0.203**	**ug/L**	5.594	693	0.004
	Cd	111	**0.657**	**ug/L**	14.410	513	0.003
	Cd	114		**ug/L**		623	0.003
>	In	115		**ug/L**		181046	181045.978
	Sb	121	**0.283**	**ug/L**	6.150	1146	0.005
	Sb	123		**ug/L**		901	0.004
	Ba	135		**ug/L**		271698	1.047
	Ba	137	**282.946**	**ug/L**	1.926	474905	1.829
>	Lu	175		**ug/L**		259566	259565.833
	Tl	205	**0.331**	**ug/L**	0.828	3248	0.012
	Pb	208	**28.567**	**ug/L**	0.748	306512	1.179

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		94.6			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		94.0			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		101.3			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		105.1			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744005
Sample Date/Time: Tuesday, July 14, 2009 12:49:11
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744005.038

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.917**	ug/L	5.837	420	0.001
	B	11	**3.152**	ug/L	2.601	446	0.001
>	Sc	45		ug/L		388595	388594.806
	Cr	52	**13.037**	ug/L	1.193	30251	0.085
	Cr	53		ug/L		130624	-0.133
	Mn	55	**1280.296**	ug/L	1.010	5137557	13.218
	Ni	60	**9.975**	ug/L	1.691	7221	0.018
>	Ge	74		ug/L		275563	275563.429
	As	75	**4.764**	ug/L	19.483	5299	0.013
	Se	77		ug/L		4810	-0.016
	Se	82	**1.358**	ug/L	27.691	70	0.000
	Ag	107	**0.146**	ug/L	6.090	513	0.003
	Cd	111	**0.391**	ug/L	27.964	314	0.002
	Cd	114		ug/L		274	0.001
>	In	115		ug/L		183116	183115.932
	Sb	121	**0.267**	ug/L	5.179	1104	0.005
	Sb	123		ug/L		854	0.004
	Ba	135		ug/L		112930	0.435
	Ba	137	**118.232**	ug/L	0.740	198340	0.764
>	Lu	175		ug/L		259363	259363.474
	Tl	205	**0.173**	ug/L	3.968	1766	0.006
	Pb	208	**19.853**	ug/L	1.293	212954	0.819

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		93.4			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		95.7			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.5			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		105.1			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744006
Sample Date/Time: Tuesday, July 14, 2009 12:52:49
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744006.039

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**3.622**	ug/L	2.386	529	0.001
	B	11	**5.678**	ug/L	9.514	653	0.001
>	Sc	45		ug/L		397608	397607.717
	Cr	52	**20.227**	ug/L	1.456	49538	0.132
	Cr	53		ug/L		131889	-0.137
	Mn	55	**1354.131**	ug/L	2.862	5558230	13.980
	Ni	60	**15.498**	ug/L	1.454	11429	0.029
>	Ge	74		ug/L		275143	275143.489
	As	75	**4.183**	ug/L	10.350	4871	0.011
	Se	77		ug/L		4977	-0.016
	Se	82	**1.502**	ug/L	29.151	77	0.000
	Ag	107	**0.514**	ug/L	0.264	1670	0.009
	Cd	111	**0.644**	ug/L	5.482	495	0.003
	Cd	114		ug/L		564	0.003
>	In	115		ug/L		177992	177991.864
	Sb	121	**0.199**	ug/L	8.142	847	0.004
	Sb	123		ug/L		661	0.003
	Ba	135		ug/L		277091	1.037
	Ba	137	**283.971**	ug/L	0.720	490338	1.836
>	Lu	175		ug/L		267036	267035.681
	Tl	205	**0.282**	ug/L	3.345	2873	0.010
	Pb	208	**27.609**	ug/L	0.343	304777	1.140

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45			95.6		
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74			95.6		
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			99.6		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			108.2		
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEIMn		55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744007
Sample Date/Time: Tuesday, July 14, 2009 12:56:27
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744007.040

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**2.591**	ug/L	2.769	379	0.001
	B	11	**8.126**	ug/L	6.193	832	0.002
>	Sc	45		ug/L		392101	392100.751
	Cr	52	**27.422**	ug/L	0.834	67194	0.178
	Cr	53		ug/L		136820	-0.120
	Mn	55	**1225.240**	ug/L	1.181	4960910	12.649
	Ni	60	**21.135**	ug/L	1.262	15339	0.039
>	Ge	74		ug/L		269986	269986.447
	As	75	**5.429**	ug/L	11.433	5662	0.014
	Se	77		ug/L		5080	-0.015
	Se	82	**0.379**	ug/L	171.205	21	0.000
	Ag	107	**0.218**	ug/L	7.715	712	0.004
	Cd	111	**0.492**	ug/L	9.779	372	0.002
	Cd	114		ug/L		425	0.002
>	In	115		ug/L		173952	173952.424
	Sb	121	**0.222**	ug/L	5.585	904	0.004
	Sb	123		ug/L		740	0.003
	Ba	135		ug/L		469500	1.872
	Ba	137	**505.937**	ug/L	0.229	820533	3.271
>	Lu	175		ug/L		250827	250827.135
	Tl	205	**0.482**	ug/L	1.860	4515	0.017
	Pb	208	**39.501**	ug/L	1.043	409377	1.631

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		94.3			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		93.8			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.4			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		101.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 232744008
Sample Date/Time: Tuesday, July 14, 2009 13:00:06
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882360|2|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\232744008.041

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**4.154**	**ug/L**	9.842	599	0.001
	B	11	**10.603**	**ug/L**	1.182	1027	0.002
>	Sc	45		**ug/L**		394096	394096.051
	Cr	52	**30.727**	**ug/L**	0.753	76001	0.200
	Cr	53		**ug/L**		138485	-0.117
	Mn	55	**1718.430**	**ug/L**	1.594	6992262	17.741
	Ni	60	**26.293**	**ug/L**	0.902	19159	0.048
>	Ge	74		**ug/L**		270099	270098.986
	As	75	**7.410**	**ug/L**	3.075	7076	0.020
	Se	77		**ug/L**		4909	-0.016
	Se	82	**0.887**	**ug/L**	72.356	46	0.000
	Ag	107	**0.364**	**ug/L**	1.561	1164	0.007
	Cd	111	**0.714**	**ug/L**	3.081	533	0.003
	Cd	114		**ug/L**		492	0.003
>	In	115		**ug/L**		173544	173543.623
	Sb	121	**0.225**	**ug/L**	2.981	911	0.004
	Sb	123		**ug/L**		740	0.003
	Ba	135		**ug/L**		287189	1.145
	Ba	137	**312.990**	**ug/L**	1.303	507741	2.024
>	Lu	175		**ug/L**		250886	250885.724
	Tl	205	**0.593**	**ug/L**	2.899	5522	0.021
	Pb	208	**64.977**	**ug/L**	0.551	673323	2.682

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		94.8			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		93.8			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.1			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		101.6			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EEI	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 13:03:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 6.042

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**47.878**	**ug/L**	3.213	6256	0.017
	B	11	**91.629**	**ug/L**	2.424	6802	0.018
>	Sc	45		**ug/L**		368215	368215.406
	Cr	52	**52.211**	**ug/L**	0.997	122442	0.339
	Cr	53		**ug/L**		173350	0.002
	Mn	55	**53.462**	**ug/L**	0.524	204303	0.552
	Ni	60	**51.825**	**ug/L**	1.158	35205	0.095
>	Ge	74		**ug/L**		270945	270944.703
	As	75	**49.258**	**ug/L**	1.601	36968	0.130
	Se	77		**ug/L**		8430	-0.003
	Se	82	**48.388**	**ug/L**	2.560	2373	0.009
	Ag	107	**50.203**	**ug/L**	0.157	152065	0.897
	Cd	111	**49.361**	**ug/L**	0.574	35187	0.208
	Cd	114		**ug/L**		86214	0.509
>	In	115		**ug/L**		169408	169408.056
	Sb	121	**48.935**	**ug/L**	1.564	155040	0.914
	Sb	123		**ug/L**		121721	0.718
	Ba	135		**ug/L**		43141	0.185
	Ba	137	**50.412**	**ug/L**	1.074	76076	0.326
>	Lu	175		**ug/L**		233175	233174.917
	Tl	205	**49.916**	**ug/L**	1.379	420875	1.804
	Pb	208	**50.066**	**ug/L**	0.392	482277	2.067

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	95.756				
	B	11	91.629				
>	Sc	45			88.5		
	Cr	52	104.422				
	Cr	53					
	Mn	55	106.924				
	Ni	60	103.651				
>	Ge	74			94.1		
	As	75	98.516				
	Se	77					
	Se	82	96.776				
	Ag	107	100.407				
	Cd	111	98.722				
	Cd	114					
>	In	115			94.8		
	Sb	121	97.869				
	Sb	123					
	Ba	135					
	Ba	137	100.824				
>	Lu	175			94.4		
	Tl	205	99.833				
	Pb	208	100.132				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 13:07:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\090714\QC Std 7.043

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.023**	**ug/L**	120.763	21	0.000
	B	11	**1.559**	**ug/L**	17.929	312	0.000
>	Sc	45		**ug/L**		372853	372853.080
	Cr	52	**0.022**	**ug/L**	701.175	-2526	0.000
	Cr	53		**ug/L**		158760	-0.043
	Mn	55	**0.129**	**ug/L**	12.551	1582	0.001
	Ni	60	**0.014**	**ug/L**	145.480	93	0.000
>	Ge	74		**ug/L**		274401	274401.442
	As	75	**-0.438**	**ug/L**	157.772	1519	-0.001
	Se	77		**ug/L**		6595	-0.010
	Se	82	**-0.132**	**ug/L**	188.546	-4	-0.000
	Ag	107	**0.008**	**ug/L**	14.136	60	0.000
	Cd	111	**-0.002**	**ug/L**	662.517	11	-0.000
	Cd	114		**ug/L**		61	0.000
>	In	115		**ug/L**		176528	176528.451
	Sb	121	**0.352**	**ug/L**	4.585	1345	0.007
	Sb	123		**ug/L**		1073	0.005
	Ba	135		**ug/L**		58	0.000
	Ba	137	**0.000**	**ug/L**	6539.808	84	0.000
>	Lu	175		**ug/L**		239566	239566.104
	Tl	205	**0.138**	**ug/L**	18.536	1332	0.005
	Pb	208	**0.011**	**ug/L**	3.944	505	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	B	11					
>	Sc	45		89.6			
	Cr	52					
	Cr	53					
	Mn	55					
	Ni	60					
>	Ge	74		95.3			
	As	75					
	Se	77					
	Se	82					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.8			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		97.0			
	Tl	205					
	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL
Method Description: 7471A, ILM04 ANALYST JXL1
Element: Hg

Date: 07/16/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 071609S1.SIF Results Data Set Name: 071609S1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/16/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0046	0.0046	09:38:24	No
2			0.0045	0.0045	09:38:59	No
Mean:			0.0045			
SD :			0.0000			
%RSD:			0.8966			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/16/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0028	0.0073	09:40:21	No
2			0.0026	0.0072	09:40:56	No
Mean:			0.0027			
SD :			0.0001			
%RSD:			4.5737			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.01350
Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/16/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0067	0.0112	09:42:19	No
2			0.0067	0.0112	09:42:53	No
Mean:			0.0067			
SD :			0.0000			
%RSD:			0.1996			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99999 Slope: 0.01335
Intercept : 0.00001

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/16/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0270	0.0316	09:44:18	No
2			0.0260	0.0306	09:44:52	No
Mean:			0.0265			
SD :			0.0007			
%RSD:			2.5901			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 1.00000 Slope: 0.01325
Intercept : 0.00003

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/16/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0632	0.0678	09:46:17	No
2			0.0632	0.0677	09:46:52	No
Mean:			0.0632			
SD :			0.0001			
%RSD:			0.1093			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99980 Slope: 0.01264
Intercept : 0.00036

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/16/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1255	0.1301	09:48:18	No
2			0.1196	0.1241	09:48:53	No
Mean:			0.1226			
SD :			0.0042			
%RSD:			3.4318			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99981 Slope: 0.01226
Intercept : 0.00079

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0045	---	----	----	----
S0.2	0.0027	0.200	0.156	0.0001	4.6
S0.5	0.0067	0.500	0.480	0.0000	0.2
S2.0	0.0265	2.000	2.100	0.0007	2.6
S5.0	0.0632	5.000	5.092	0.0001	0.1
S10	0.1226	10.000	9.936	0.0042	3.4

Correlation Coefficient: 0.99981 Slope: 0.01226 Intercept: 0.0008

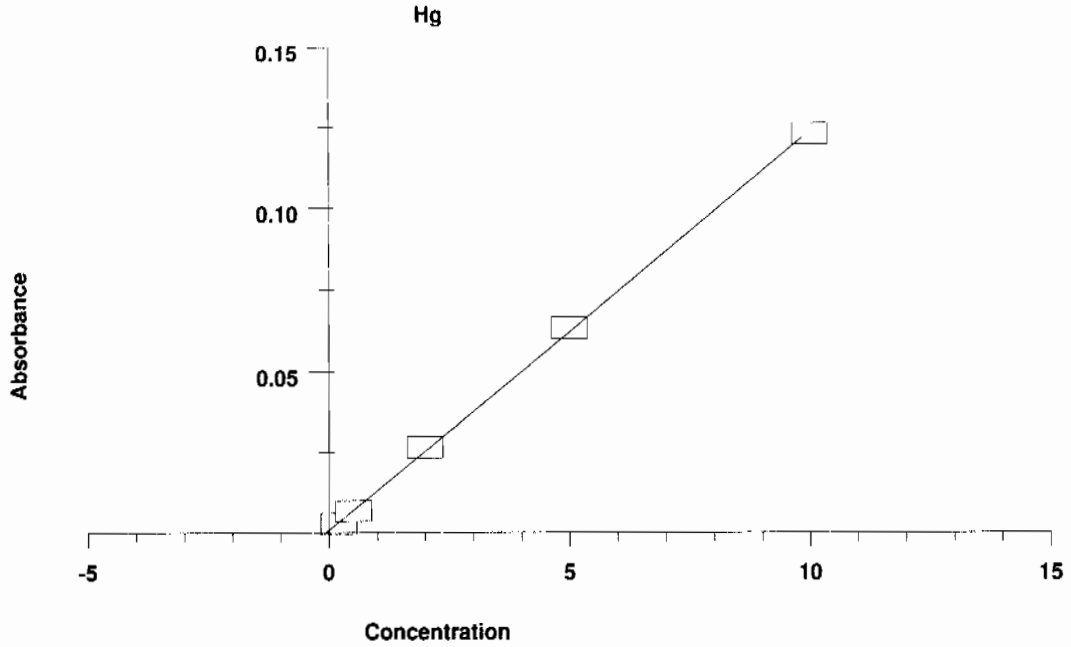

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/16/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.190	5.190	0.0644	0.0689	09:50:21	No
2	5.020	5.020	0.0623	0.0669	09:50:56	No
Mean:	5.105	5.105	0.0634			
SD :	0.1200	0.1200	0.0015			
%RSD:	2.4	2.4	2.3216			

QC value within specified limits.

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/16/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.086	-0.086	-0.0003	0.0043	09:52:18	No
2	-0.101	-0.101	-0.0005	0.0041	09:52:53	No
Mean:	-0.094	-0.094	-0.0004			
SD :	0.0108	0.0108	0.0001			
%RSD:	11.5	11.5	37.0270			

QC value within specified limits.

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/16/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.169	0.169	0.0029	0.0074	09:54:17	No
2	0.151	0.151	0.0026	0.0072	09:54:52	No
Mean:	0.160	0.160	0.0028			
SD :	0.0129	0.0129	0.0002			
%RSD:	8.0	8.0	5.7181			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/16/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.183	5.183	0.0643	0.0688	09:56:17	No
2	5.284	5.284	0.0656	0.0701	09:56:52	No
Mean:	5.234	5.234	0.0649			
SD :	0.0720	0.0720	0.0009			
%RSD:	1.4	1.4	1.3591			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/16/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.051	-0.051	0.0002	0.0047	09:58:20	No
2	-0.049	-0.049	0.0002	0.0047	09:58:55	No
Mean:	-0.050	-0.050	0.0002			
SD :	0.0009	0.0009	0.0000			
%RSD:	1.9	1.9	6.5516			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/16/2009
Sample ID: 1201878822|i||884396|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.089	-0.089	-0.0003	0.0042	10:00:21	No
2	-0.101	-0.101	-0.0004	0.0041	10:00:56	No
Mean:	-0.095	-0.095	-0.0004			
SD :	0.0083	0.0083	0.0001			
%RSD:	8.7	8.7	27.3563			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/16/2009
Sample ID: 1201878823|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.786	3.786	0.0472	0.0517	10:02:20	No
2	3.657	3.657	0.0456	0.0501	10:02:55	No
Mean:	3.722	3.722	0.0464			
SD :	0.0912	0.0912	0.0011			
%RSD:	2.5	2.5	2.4102			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/16/2009
Sample ID: 233255001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.045	0.045	0.0013	0.0059	10:04:21	No
2	0.032	0.032	0.0012	0.0057	10:04:56	No
Mean:	0.039	0.039	0.0013			
SD :	0.0094	0.0094	0.0001			
%RSD:	24.4	24.4	9.1304			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/16/2009
Sample ID: 1201878824|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.034	0.034	0.0012	0.0057	10:06:23	No
2	0.029	0.029	0.0011	0.0057	10:06:58	No
Mean:	0.031	0.031	0.0012			
SD :	0.0034	0.0034	0.0000			
%RSD:	11.0	11.0	3.5997			

Element: Hg Seq. No.: 16 AS Loc.: 16 Date: 07/16/2009
Sample ID: 1201878825|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.208	2.208	0.0278	0.0324	10:08:26	No
2	2.147	2.147	0.0271	0.0316	10:09:01	No
Mean:	2.178	2.178	0.0275			
SD :	0.0428	0.0428	0.0005			
%RSD:	2.0	2.0	1.9079			

Element: Hg Seq. No.: 17 AS Loc.: 17 Date: 07/16/2009
Sample ID: 1201878826|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.150	2.150	0.0271	0.0317	10:10:25	No
2	2.104	2.104	0.0266	0.0311	10:11:00	No
Mean:	2.127	2.127	0.0269			
SD :	0.0323	0.0323	0.0004			
%RSD:	1.5	1.5	1.4749			

Element: Hg Seq. No.: 18 AS Loc.: 18 Date: 07/16/2009
Sample ID: 1201878827|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.100	-0.100	-0.0004	0.0041	10:12:21	No
2	-0.123	-0.123	-0.0007	0.0038	10:12:56	No
Mean:	-0.111	-0.111	-0.0006			
SD :	0.0158	0.0158	0.0002			
%RSD:	14.2	14.2	33.5631			

Element: Hg Seq. No.: 19 AS Loc.: 19 Date: 07/16/2009
Sample ID: 1201875311|i||882932|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.096	-0.096	-0.0004	0.0042	10:14:17	No
2	-0.107	-0.107	-0.0005	0.0040	10:14:52	No
Mean:	-0.101	-0.101	-0.0005			
SD :	0.0077	0.0077	0.0001			
%RSD:	7.6	7.6	20.7939			

Element: Hg Seq. No.: 20 AS Loc.: 20 Date: 07/16/2009
Sample ID: 1201875312|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.769	3.769	0.0470	0.0515	10:16:14	No
2	3.732	3.732	0.0465	0.0511	10:16:48	No
Mean:	3.751	3.751	0.0468			
SD :	0.0260	0.0260	0.0003			

%RSD: 0.7 0.7 0.6803

==========

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/16/2009
Sample ID: 232744001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.210	0.210	0.0034	0.0079	10:18:11	No
2	0.202	0.202	0.0033	0.0078	10:18:45	No
Mean:	0.206	0.206	0.0033			
SD :	0.0063	0.0063	0.0001			
%RSD:	3.1	3.1	2.3452			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/16/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.168	5.168	0.0641	0.0687	10:20:10	No
2	5.339	5.339	0.0662	0.0708	10:20:45	No
Mean:	5.253	5.253	0.0652			
SD :	0.1203	0.1203	0.0015			
%RSD:	2.3	2.3	2.2629			

QC value within specified limits.

==========

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/16/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.060	-0.060	0.0001	0.0046	10:22:12	No
2	-0.067	-0.067	0.0000	0.0045	10:22:47	No
Mean:	-0.063	-0.063	0.0000			
SD :	0.0048	0.0048	0.0001			
%RSD:	7.6	7.6	423.5287			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/16/2009
Sample ID: 232744002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.403	1.403	0.0180	0.0225	10:24:12	No
2	1.394	1.394	0.0179	0.0224	10:24:47	No
Mean:	1.398	1.398	0.0179			
SD :	0.0058	0.0058	0.0001			
%RSD:	0.4	0.4	0.3955			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/16/2009
Sample ID: 232744003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.039	0.039	0.0013	0.0058	10:26:10	No
2	0.029	0.029	0.0011	0.0057	10:26:45	No
Mean:	0.034	0.034	0.0012			
SD :	0.0069	0.0069	0.0001			
%RSD:	20.2	20.2	6.9693			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/16/2009
Sample ID: 232744004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.051	0.051	0.0014	0.0060	10:28:09	No
2	0.052	0.052	0.0014	0.0060	10:28:44	No
Mean:	0.052	0.052	0.0014			
SD :	0.0003	0.0003	0.0000			
%RSD:	0.6	0.6	0.2605			

Element: Hg Seq. No.: 27 AS Loc.: 25 Date: 07/16/2009
Sample ID: 232744005|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.024	-0.024	0.0005	0.0050	10:30:09	No
2	-0.030	-0.030	0.0004	0.0050	10:30:44	No
Mean:	-0.027	-0.027	0.0005			
SD :	0.0041	0.0041	0.0001			
%RSD:	15.4	15.4	11.0432			

Element: Hg Seq. No.: 28 AS Loc.: 26 Date: 07/16/2009
Sample ID: 232744006|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.158	0.158	0.0027	0.0073	10:32:08	No
2	0.146	0.146	0.0026	0.0071	10:32:43	No
Mean:	0.152	0.152	0.0027			
SD :	0.0086	0.0086	0.0001			
%RSD:	5.6	5.6	3.9607			

Element: Hg Seq. No.: 29 AS Loc.: 27 Date: 07/16/2009
Sample ID: 232744007|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.299	1.299	0.0167	0.0212	10:34:08	No
2	1.297	1.297	0.0167	0.0212	10:34:43	No
Mean:	1.298	1.298	0.0167			
SD :	0.0013	0.0013	0.0000			
%RSD:	0.1	0.1				

Element: Hg Seq. No.: 30 AS Loc.: 28 Date: 07/16/2009
Sample ID: 232744008|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.273	0.273	0.0041	0.0087	10:36:09	No
2	0.281	0.281	0.0042	0.0088	10:36:43	No
Mean:	0.277	0.277	0.0042			
SD :	0.0062	0.0062	0.0001			
%RSD:	2.2	2.2	1.8028			

Element: Hg Seq. No.: 31 AS Loc.: 29 Date: 07/16/2009
Sample ID: 232751001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.135	0.135	0.0024	0.0070	10:38:09	No
2	0.125	0.125	0.0023	0.0069	10:38:44	No
Mean:	0.130	0.130	0.0024			
SD :	0.0073	0.0073	0.0001			

%RSD: 5.6 5.6 3.7541

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Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/16/2009
Sample ID: 232754001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	0.0005	0.0051	10:40:10	No
2	-0.025	-0.025	0.0005	0.0050	10:40:45	No
Mean:	-0.023	-0.023	0.0005			
SD :	0.0038	0.0038	0.0000			
%RSD:	16.8	16.8	9.1651			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/16/2009
Sample ID: 232754002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.020	0.020	0.0010	0.0056	10:42:12	No
2	0.006	0.006	0.0009	0.0054	10:42:48	No
Mean:	0.013	0.013	0.0009			
SD :	0.0098	0.0098	0.0001			
%RSD:	75.5	75.5	12.6078			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/16/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.097	5.097	0.0633	0.0678	10:44:15	No
2	5.080	5.080	0.0631	0.0676	10:44:50	No
Mean:	5.089	5.089	0.0632			
SD :	0.0123	0.0123	0.0002			
%RSD:	0.2	0.2	0.2390			

QC value within specified limits.

==========

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/16/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.078	-0.078	-0.0002	0.0044	10:46:18	No
2	-0.075	-0.075	-0.0001	0.0044	10:46:53	No
Mean:	-0.076	-0.076	-0.0001			
SD :	0.0019	0.0019	0.0000			
%RSD:	2.5	2.5	16.2332			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/16/2009
Sample ID: 232754003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.032	-0.032	0.0004	0.0049	10:48:17	No
2	-0.048	-0.048	0.0002	0.0047	10:48:51	No
Mean:	-0.040	-0.040	0.0003			
SD :	0.0115	0.0115	0.0001			
%RSD:	28.8	28.8	46.6114			

==========

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/16/2009
Sample ID: 232760001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.122	0.122	0.0023	0.0068	10:50:11	No
2	0.122	0.122	0.0023	0.0068	10:50:46	No
Mean:	0.122	0.122	0.0023			
SD :	0.0002	0.0002	0.0000			
%RSD:	0.2	0.2	0.1040			

Element: Hg Seq. No.: 38 AS Loc.: 34 Date: 07/16/2009
Sample ID: 232760002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.120	0.120	0.0023	0.0068	10:52:06	No
2	0.111	0.111	0.0021	0.0067	10:52:40	No
Mean:	0.116	0.116	0.0022			
SD :	0.0067	0.0067	0.0001			
%RSD:	5.8	5.8	3.7418			

Element: Hg Seq. No.: 39 AS Loc.: 35 Date: 07/16/2009
Sample ID: 232760003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.016	0.016	0.0010	0.0055	10:54:02	No
2	0.021	0.021	0.0010	0.0056	10:54:37	No
Mean:	0.019	0.019	0.0010			
SD :	0.0033	0.0033	0.0000			
%RSD:	18.0	18.0	4.0271			

Element: Hg Seq. No.: 40 AS Loc.: 36 Date: 07/16/2009
Sample ID: 232760004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.305	0.305	0.0045	0.0091	10:55:59	No
2	0.294	0.294	0.0044	0.0089	10:56:34	No
Mean:	0.300	0.300	0.0045			
SD :	0.0078	0.0078	0.0001			
%RSD:	2.6	2.6	2.1376			

Element: Hg Seq. No.: 41 AS Loc.: 37 Date: 07/16/2009
Sample ID: 232851001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.063	0.063	0.0016	0.0061	10:57:56	No
2	0.051	0.051	0.0014	0.0060	10:58:31	No
Mean:	0.057	0.057	0.0015			
SD :	0.0083	0.0083	0.0001			
%RSD:	14.6	14.6	6.8536			

Element: Hg Seq. No.: 42 AS Loc.: 38 Date: 07/16/2009
Sample ID: 1201875313|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.077	0.077	0.0017	0.0063	10:59:53	No
2	0.073	0.073	0.0017	0.0062	11:00:28	No
Mean:	0.075	0.075	0.0017			
SD :	0.0026	0.0026	0.0000			

%RSD: 3.5 3.5 1.8870

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Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 07/16/2009
Sample ID: 1201875314|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.423	2.423	0.0305	0.0350	11:01:51	No
2	2.405	2.405	0.0303	0.0348	11:02:26	No
Mean:	2.414	2.414	0.0304			
SD :	0.0126	0.0126	0.0002			
%RSD:	0.5	0.5	0.5092			

==========

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 07/16/2009
Sample ID: 1201875323|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.329	2.329	0.0293	0.0339	11:03:50	No
2	2.328	2.328	0.0293	0.0339	11:04:25	No
Mean:	2.328	2.328	0.0293			
SD :	0.0006	0.0006	0.0000			
%RSD:						

==========

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 07/16/2009
Sample ID: 1201875322|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.128	-0.128	-0.0008	0.0038	11:05:49	No
2	-0.135	-0.135	-0.0009	0.0037	11:06:24	No
Mean:	-0.131	-0.131	-0.0008			
SD :	0.0049	0.0049	0.0001			
%RSD:	3.7	3.7	7.3235			

==========

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 07/16/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.138	5.138	0.0638	0.0683	11:07:50	No
2	5.078	5.078	0.0630	0.0676	11:08:24	No
Mean:	5.108	5.108	0.0634			
SD :	0.0431	0.0431	0.0005			
%RSD:	0.8	0.8	0.8325			

QC value within specified limits.

==========

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 07/16/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.100	-0.100	-0.0004	0.0041	11:09:52	No
2	-0.102	-0.102	-0.0005	0.0041	11:10:26	No
Mean:	-0.101	-0.101	-0.0004			
SD :	0.0011	0.0011	0.0000			
%RSD:	1.1	1.1	3.1398			

QC value within specified limits.

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Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 07/16/2009
Sample ID: 232851002|i|||

Miscellaneous

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 882341

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873940	UI652380	.524	g
MS	1201873942	UI090622-01	.25	mL
MS	1201873942	UI090622-06	.25	mL
MSD	1201874078	UI090622-01	.25	mL
MSD	1201874078	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873939		SW846 3050B	07-JUL-2009 07:35	0.503 g	50 mL	99.40358	SOIL
LCS	1201873940		SW846 3050B	07-JUL-2009 07:35	0.524 g	50 mL	95.41985	SOIL
SAMPLE	232744001		SW846 3050B	07-JUL-2009 07:35	0.508 g	50 mL	98.4252	SOIL
DUP	1201873941	232744001	SW846 3050B	07-JUL-2009 07:35	0.525 g	50 mL	95.2381	SOIL
MS	1201873942	232744001	SW846 3050B	07-JUL-2009 07:35	0.507 g	50 mL	98.61933	SOIL
MSD	1201874078	232744001	SW846 3050B	07-JUL-2009 07:35	0.519 g	50 mL	96.33911	SOIL
SDILT	1201873943	232744001	SW846 3050B	07-JUL-2009 07:35	0.508 g	50 mL	98.4252	SOIL
SAMPLE	232744002		SW846 3050B	07-JUL-2009 07:35	0.522 g	50 mL	95.78544	SOIL
SAMPLE	232744003		SW846 3050B	07-JUL-2009 07:35	0.506 g	50 mL	98.81423	SOIL
SAMPLE	232744004		SW846 3050B	07-JUL-2009 07:35	0.5 g	50 mL	100	SOIL
SAMPLE	232744005		SW846 3050B	07-JUL-2009 07:35	0.511 g	50 mL	97.84736	SOIL
SAMPLE	232744006		SW846 3050B	07-JUL-2009 07:35	0.5 g	50 mL	100	SOIL
SAMPLE	232744007		SW846 3050B	07-JUL-2009 07:35	0.517 g	50 mL	96.7118	SOIL
SAMPLE	232744008		SW846 3050B	07-JUL-2009 07:35	0.503 g	50 mL	99.40358	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments QC Sample #232744001 is a dark, brown, clumpy soil.

Prep LogBook

Analyst: CXS3 Verified by:_____

Batch: 882359

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873980	UI647733-01	.513	g
MS	1201873982	UI042709-A	.5	mL
MS	1201873982	UI042709-B	.5	mL
MSD	1201873984	UI042709-A	.5	mL
MSD	1201873984	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873979		SW846 3050B	07-JUL-2009 07:35	0.512 g	50 mL	97.65625	SOIL
LCS	1201873980		SW846 3050B	07-JUL-2009 07:35	0.513 g	50 mL	97.46589	SOIL
SAMPLE	232744001		SW846 3050B	07-JUL-2009 07:35	0.5 g	50 mL	100	SOIL
DUP	1201873981	232744001	SW846 3050B	07-JUL-2009 07:35	0.506 g	50 mL	98.81423	SOIL
MS	1201873982	232744001	SW846 3050B	07-JUL-2009 07:35	0.522 g	50 mL	95.78544	SOIL
MSD	1201873984	232744001	SW846 3050B	07-JUL-2009 07:35	0.514 g	50 mL	97.27626	SOIL
SDILT	1201873983	232744001	SW846 3050B	07-JUL-2009 07:35	0.5 g	50 mL	100	SOIL
SAMPLE	232744002		SW846 3050B	07-JUL-2009 07:35	0.519 g	50 mL	96.33911	SOIL
SAMPLE	232744003		SW846 3050B	07-JUL-2009 07:35	0.508 g	50 mL	98.4252	SOIL
SAMPLE	232744004		SW846 3050B	07-JUL-2009 07:35	0.514 g	50 mL	97.27626	SOIL
SAMPLE	232744005		SW846 3050B	07-JUL-2009 07:35	0.508 g	50 mL	98.4252	SOIL
SAMPLE	232744006		SW846 3050B	07-JUL-2009 07:35	0.506 g	50 mL	98.81423	SOIL
SAMPLE	232744007		SW846 3050B	07-JUL-2009 07:35	0.516 g	50 mL	96.89922	SOIL
SAMPLE	232744008		SW846 3050B	07-JUL-2009 07:35	0.516 g	50 mL	96.89922	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments QC Sample #232744001 is a dark, brown, clumpy soil.

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 882926

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201875312	UI031809A	.206	g
MS	1201875314	WHG090715-14	.3	mL
MSD	1201875323	WHG090715-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201875311		SW846 7471A Prep	15-JUL-2009 14:15	0.524 g	30 mL	57.25191	SOIL
LCS	1201875312		SW846 7471A Prep	15-JUL-2009 14:15	0.206 g	30 mL	145.63107	SOIL
SAMPLE	232744001		SW846 7471A Prep	15-JUL-2009 14:15	0.534 g	30 mL	56.17978	SOIL
SAMPLE	232744002		SW846 7471A Prep	15-JUL-2009 14:15	0.538 g	30 mL	55.76208	SOIL
SAMPLE	232744003		SW846 7471A Prep	15-JUL-2009 14:15	0.534 g	30 mL	56.17978	SOIL
SAMPLE	232744004		SW846 7471A Prep	15-JUL-2009 14:15	0.503 g	30 mL	59.64215	SOIL
SAMPLE	232744005		SW846 7471A Prep	15-JUL-2009 14:15	0.515 g	30 mL	58.25243	SOIL
SAMPLE	232744006		SW846 7471A Prep	15-JUL-2009 14:15	0.545 g	30 mL	55.04587	SOIL
SAMPLE	232744007		SW846 7471A Prep	15-JUL-2009 14:15	0.599 g	30 mL	50.08347	SOIL
SAMPLE	232744008		SW846 7471A Prep	15-JUL-2009 14:15	0.563 g	30 mL	53.28597	SOIL
SAMPLE	232751001		SW846 7471A Prep	15-JUL-2009 14:15	0.529 g	30 mL	56.71078	SOIL
SAMPLE	232754001		SW846 7471A Prep	15-JUL-2009 14:15	0.5 g	30 mL	60	SOIL
SAMPLE	232754002		SW846 7471A Prep	15-JUL-2009 14:15	0.517 g	30 mL	58.02708	SOIL
SAMPLE	232754003		SW846 7471A Prep	15-JUL-2009 14:15	0.515 g	30 mL	58.25243	SOIL
SAMPLE	232760001		SW846 7471A Prep	15-JUL-2009 14:15	0.531 g	30 mL	56.49718	SOIL
SAMPLE	232760002		SW846 7471A Prep	15-JUL-2009 14:15	0.509 g	30 mL	58.9391	SOIL
SAMPLE	232760003		SW846 7471A Prep	15-JUL-2009 14:15	0.539 g	30 mL	55.65863	SOIL
SAMPLE	232760004		SW846 7471A Prep	15-JUL-2009 14:15	0.541 g	30 mL	55.45287	SOIL
SAMPLE	232851001		SW846 7471A Prep	15-JUL-2009 14:15	0.571 g	30 mL	52.5394	SOIL
DUP	1201875313	232851001	SW846 7471A Prep	15-JUL-2009 14:15	0.536 g	30 mL	55.97015	SOIL
MS	1201875314	232851001	SW846 7471A Prep	15-JUL-2009 14:15	0.545 g	30 mL	55.04587	SOIL
MSD	1201875323	232851001	SW846 7471A Prep	15-JUL-2009 14:15	0.586 g	30 mL	51.19454	SOIL
SDILT	1201875322	232851001	SW846 7471A Prep	15-JUL-2009 14:15	0.571 g	30 mL	52.5394	SOIL
SAMPLE	232851002		SW846 7471A Prep	15-JUL-2009 14:15	0.567 g	30 mL	52.91005	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution
1144356-C	2 mL	Hg reducing agent
WHG090715-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090715-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5

Comments Sample 232851001 is a rocky brown soil.
Digestion Start Date: 15-JUL-09 14:15
Digestion End Date: 15-JUL-09 14:45

Prep LogBook

WHG090715-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090715-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090715-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090715-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
15-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3050B/6020	Solid	LANL
Batch ID:	**Sample Numbers:**		
882360	See Below		

Potentially affected work order(s)(SDG): 232744(09-2525-1)

Application Issues:

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MSD/PSD: QC 1201873984MSD	The matrix spike duplicate recovery failed outside of the control limits for Se due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Paul Boyd 15-JUL-09

Data Validator/Group Leader:

Kristen Parson 20-JUL-09

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 711791
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
15-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
882342	See Below		

Potentially affected work order(s)(SDG): 232744(09-2525-1)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201873942MS 2. Failed Recovery for MSD/PSD: QC 1201874078MSD	1./2. The matrix spike and matrix spike duplicate recovery failed outside of the control limits for calcium,magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Helen Camello 16-JUL-09

Data Validator/Group Leader:

Eric Lawson 16-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Standard Logbook

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.18 **Opened:** 08-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 09-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L

Analyte	Concentration	Analyte	Concentration
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I

Standard Logbook

Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI647733-01 **Opened:** 02-APR-07 **Amount :** 80 g
Name: ICPMSSOILSRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis
Supplier: ERA
Description: ICPMS Soil LCS (Reference)
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	8270 mg/kg	Antimony	55.8 mg/kg
Arsenic	255 mg/kg	Barium	469 mg/kg
Beryllium	86.4 mg/kg	Boron	138 mg/kg
Cadmium	119 mg/kg	Calcium	3760 mg/kg
Chromium	71.2 mg/kg	Cobalt	79.6 mg/kg
Copper	96.2 mg/kg	Iron	13200 mg/kg
Lead	169 mg/kg	Lithium	8.01 mg/kg
Magnesium	2990 mg/kg	Manganese	364 mg/kg
Mercury	4.18 mg/kg	Molybdenum	79.6 mg/kg
Nickel	101 mg/kg	Phosphorous	752 mg/kg
Potassium	2420 mg/kg	Selenium	171 mg/kg
Silver	116 mg/kg	Sodium	575 mg/kg
Strontium	144 mg/kg	Thallium	203 mg/kg
Thorium	17.2 mg/kg	Titanium	255 mg/kg
Uranium	2.12 mg/kg	Uranium-235	.0153 mg/kg
Uranium-238	2.105 mg/kg	Vanadium	134 mg/kg
Zinc	202 mg/kg	Zirconium	6.83 mg/kg

Standard Logbook

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Standard Logbook

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090715-01 **Opened:** 15-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 15-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 16-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG090715-02 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 15-JUL-09
Type: Intermediate **Expires:** 16-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090715-07 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090715-08 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090715-09 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG090715-10 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090715-11 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090715-12 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090715-14 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI090708-42 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090708-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090708-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090708-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI090708-43 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990

Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09

Type: Working **Expires:** 09-JUL-09

Employee: Helen Camello

Supplier: GEL

Description: TRACE ICP 0.5/CCV CALIBRATION STD.

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Serial ID: WI090708-44 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1150990
Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI090708-45 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1150990
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Standard Logbook

Serial ID: WI090708-46 **Opened:** 08-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1150990
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Standard Logbook

Serial ID: WI090708-47 **Opened:** 08-JUL-09 **Solvent :** 3%HCL &1%HNO3-1150990
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090713-04 **Opened:** 13-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl-1153776
Type: Working **Expires:** 14-JUL-09
Employee: Paul Boyd
Supplier: GEL

Standard Logbook

Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090713-04A **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS Cal Standard 10 **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090713-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090713-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090713-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090713-05 **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICV **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090713-06 **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS CRDL **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090713-07 **Opened:** 13-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Type: Working **Expires:** 14-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090713-08 **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICSAB **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090713-70 **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS LINEAR RANGE ST **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: WMS090714-04 **Opened:** 14-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl-1153776
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Serial ID: WMS090714-04A **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS Cal Standard 10 **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090714-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090714-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Serial ID: WMS090714-05 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICV **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS090714-06 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS CRDL **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS090714-07 **Opened:** 14-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-08 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICSAB **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Standard Logbook

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1150990 **Opened:** 06-JUL-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 06-JUL-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 13-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Louise Smith
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1153776 **Opened:** 13-JUL-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 13-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2525

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	882142	**Method:**	SW846 9012A
Prep Batch :	882141	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232742001	CAMO-09-10025
1201873558	Method Blank (MB)
1201873559	232662001(CAMO-09-10024) Sample Duplicate (DUP)
1201873560	232677001(NPDES03A130-09-8922) Sample Duplicate (DUP)
1201873561	232662001(CAMO-09-10024) Matrix Spike (MS)
1201873562	232677001(NPDES03A130-09-8922) Matrix Spike (MS)
1201873563	232662001(CAMO-09-10024) Matrix Spike Duplicate (MSD)
1201873564	232677001(NPDES03A130-09-8922) Matrix Spike Duplicate (MSD)
1201873565	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within

acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232662001 (CAMO-09-10024) and 232677001 (NPDES03A130-09-8922).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201873559 (CAMO-09-10024) and 1201873560 (NPDES03A130-09-8922).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Negative Bias
No Chlorinated Cyanide results exceed the Total Cyanide results by more than three times the PQL

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product: **Nitrate Nitrite by Cadmium Reduction**

Analytical Batch: 882466 **Method:** EPA 353.2

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 353.2:

Sample ID	Client ID
232742001	CAMO-09-10025
1201874237	Method Blank (MB)
1201874238	232761001(50FWC-09-2820) Sample Duplicate (DUP)
1201874239	232742001(CAMO-09-10025) Sample Duplicate (DUP)
1201874240	232761001(50FWC-09-2820) Post Spike (PS)
1201874241	232742001(CAMO-09-10025) Post Spike (PS)
1201874242	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-128 REV# 5.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8500 Series.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232742001 (CAMO-09-10025) and 232761001 (50FWC-09-2820).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following samples in this sample group were diluted due to high concentration: 1201874238 (50FWC-09-2820) and 1201874240 (50FWC-09-2820). The following samples in this sample group were diluted due to matrix interference: 1201874239 (CAMO-09-10025), 1201874241 (CAMO-09-10025) and 232742001 (CAMO-09-10025).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 21July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2525 GEL Work Order: 232742

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 9, 2009

Client SDG: 09-2525

Client Sample ID:	CAMO-09-10025	Project:	LANL01004
Sample ID:	232742001	Client ID:	LANL010
Matrix:	W		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal										
SW9012A Cyanide, Total "As Received"										
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2 07/07/09	1237	882142	1
Nutrient Analysis										
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"										
Nitrogen, Nitrate/Nitrite	U	ND	0.050	0.250	mg/L	5	AXH3 07/07/09	0858	882466	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0854	882141

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 9, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232742

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Flow Injection Analysis											
Batch 882142											
QC1201873559 232662001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)	AXC2	07/07/09 12:23
QC1201873560 232677001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)		07/07/09 12:32
QC1201873565 LCS											
Cyanide, Total	50.0				52.4	ug/L		105	(90%-110%)		07/07/09 12:21
QC1201873558 MB											
Cyanide, Total				U	5.00	ug/L					07/07/09 12:20
QC1201873561 232662001 MS											
Cyanide, Total	100	U	ND		106	ug/L		106	(60%-127%)		07/07/09 12:24
QC1201873562 232677001 MS											
Cyanide, Total	100	U	ND		104	ug/L		104	(60%-127%)		07/07/09 12:33
QC1201873563 232662001 MSD											
Cyanide, Total	100	U	ND		107	ug/L	0.939	107	(0%-20%)		07/07/09 12:25
QC1201873564 232677001 MSD											
Cyanide, Total	100	U	ND		105	ug/L	0.957	105	(0%-20%)		07/07/09 12:34
Nutrient Analysis											
Batch 882466											
QC1201874238 232761001 DUP											
Nitrogen, Nitrate/Nitrite			11.8		11.6	mg/L	1.28		(0%-20%)	AXH3	07/07/09 09:07
QC1201874239 232742001 DUP											
Nitrogen, Nitrate/Nitrite		U	ND	U	ND	mg/L	N/A		(+/-0.250)		07/07/09 09:00
QC1201874242 LCS											
Nitrogen, Nitrate/Nitrite	1.00				1.04	mg/L		104	(90%-110%)		07/07/09 08:57
QC1201874237 MB											
Nitrogen, Nitrate/Nitrite				J	0.0112	mg/L					07/07/09 08:51
QC1201874240 232761001 PS											
Nitrogen, Nitrate/Nitrite	1.00		0.471		1.44	mg/L		96.9	(90%-110%)		07/07/09 09:08
QC1201874241 232742001 PS											
Nitrogen, Nitrate/Nitrite	1.00	U	ND		0.994	mg/L		98.5	(90%-110%)		07/07/09 09:01

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

QC Summary

Workorder: 232742

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 09-JUL-2009 11:00

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2525

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**07-JUL-2009 10:47:46**	**OM_7-7-2009_10-38-00**	**151**	**150**	**101**	**(90%-110%)**	**Yes**
CCV	07-JUL-2009 12:16:26	OM_7-7-2009_11-38-18	103	100	103	(90%-110%)	Yes
CCV	07-JUL-2009 12:28:55	OM_7-7-2009_11-38-18	105	100	105	(90%-110%)	Yes
CCV	07-JUL-2009 12:41:21	OM_7-7-2009_11-38-18	101	100	101	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**07-JUL-2009 10:49:36**	**OM_7-7-2009_10-38-00**	**-1.33**	**5**	**Yes**
CCB	07-JUL-2009 12:18:16	OM_7-7-2009_11-38-18	-1.19	5	Yes
CCB	07-JUL-2009 12:30:45	OM_7-7-2009_11-38-18	4.02	5	Yes
CCB	07-JUL-2009 12:43:12	OM_7-7-2009_11-38-18	-0.381	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 09-JUL-2009 11:00

GEL Laboratories LLC

Contract: LANL01004

SDG #: 09-2525

Nutrient Analysis

Method: EPA 353.2 Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8500 Series

Parmname: Nitrogen, Nitrate/Nitrite

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**07-JUL-2009 07:57:54**	**OM_7-7-2009_07-47-40**	**1.02**	**1**	**102**	**(90%-110%)**	**Yes**
CCV	07-JUL-2009 08:36:09	OM_7-7-2009_07-47-40	1.02	1	102	(90%-110%)	Yes
CCV	07-JUL-2009 08:52:54	OM_7-7-2009_07-47-40	1.01	1	101	(90%-110%)	Yes
CCV	07-JUL-2009 09:09:42	OM_7-7-2009_07-47-40	1.02	1	102	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**07-JUL-2009 08:00:16**	**OM_7-7-2009_07-47-40**	**0.00372**	**0.05**	**Yes**
CCB	07-JUL-2009 08:38:31	OM_7-7-2009_07-47-40	0.0026	0.05	Yes
CCB	07-JUL-2009 08:55:16	OM_7-7-2009_07-47-40	0.00293	0.05	Yes
CCB	07-JUL-2009 09:12:04	OM_7-7-2009_07-47-40	0.00372	0.05	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 882141

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873565	URF1091135-02	.0125	mL
MS	1201873561	URF1091135-02	.025	mL
MS	1201873562	URF1091135-02	.025	mL
MSD	1201873563	URF1091135-02	.025	mL
MSD	1201873564	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873558		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
LCS	1201873565		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232662001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
DUP	1201873559	232662001	SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
MS	1201873561	232662001	SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
MSD	1201873563	232662001	SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232674001		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232674002		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232677001		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
DUP	1201873560	232677001	EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
MS	1201873562	232677001	EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
MSD	1201873564	232677001	EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232703001		EPA 335.4	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232728001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232728003		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232742001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232753001		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232755001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232759001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090707-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/7/2009 10:40:37	OM_7-7-2009_10-38-00
150 ppb		1	axc2	7/7/2009 10:41:29	OM_7-7-2009_10-38-00
100 ppb		1	axc2	7/7/2009 10:42:22	OM_7-7-2009_10-38-00
50 ppb		1	axc2	7/7/2009 10:43:14	OM_7-7-2009_10-38-00
10 ppb		1	axc2	7/7/2009 10:44:07	OM_7-7-2009_10-38-00
CRDL 5.0 ppb		1	axc2	7/7/2009 10:45:01	OM_7-7-2009_10-38-00
ICAL-00		1	axc2	7/7/2009 10:45:55	OM_7-7-2009_10-38-00
ICV		1	axc2	7/7/2009 10:47:46	OM_7-7-2009_10-38-00
ICB		1	axc2	7/7/2009 10:49:36	OM_7-7-2009_10-38-00
CRDL		1	axc2	7/7/2009 10:51:26	OM_7-7-2009_10-38-00
1201870890	881039	1	axc2	7/7/2009 10:53:16	OM_7-7-2009_10-38-00
1201870897	881039	50	axc2	7/7/2009 10:54:09	OM_7-7-2009_10-38-00
232429001	881039	1	axc2	7/7/2009 10:55:02	OM_7-7-2009_10-38-00
1201870891	881039	1	axc2	7/7/2009 10:55:55	OM_7-7-2009_10-38-00
1201870893	881039	1	axc2	7/7/2009 10:56:48	OM_7-7-2009_10-38-00
1201870895	881039	1	axc2	7/7/2009 10:57:41	OM_7-7-2009_10-38-00
232429002	881039	1	axc2	7/7/2009 10:58:34	OM_7-7-2009_10-38-00
1201870892	881039	1	axc2	7/7/2009 10:59:26	OM_7-7-2009_10-38-00
1201870894	881039	1	axc2	7/7/2009 11:00:19	OM_7-7-2009_10-38-00
1201870896	881039	1	axc2	7/7/2009 11:01:11	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:02:04	OM_7-7-2009_10-38-00
CCB		1	axc2	7/7/2009 11:03:54	OM_7-7-2009_10-38-00
232429003*	881039	1	axc2	7/7/2009 11:05:42	OM_7-7-2009_10-38-00
232429004*	881039	1	axc2	7/7/2009 11:06:34	OM_7-7-2009_10-38-00
232429005*	881039	1	axc2	7/7/2009 11:07:26	OM_7-7-2009_10-38-00
232429006*	881039	1	axc2	7/7/2009 11:08:18	OM_7-7-2009_10-38-00
232429007*	881039	1	axc2	7/7/2009 11:09:09	OM_7-7-2009_10-38-00
232429008*	881039	1	axc2	7/7/2009 11:10:03	OM_7-7-2009_10-38-00
232429009*	881039	1	axc2	7/7/2009 11:10:57	OM_7-7-2009_10-38-00
232429010*	881039	1	axc2	7/7/2009 11:11:50	OM_7-7-2009_10-38-00
232429011*	881039	1	axc2	7/7/2009 11:12:43	OM_7-7-2009_10-38-00
232429012*	881039	1	axc2	7/7/2009 11:13:36	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:14:28	OM_7-7-2009_10-38-00

Author: axc2 Date : 7/7/2009

Original Run Filename: OM_7-7-2009_10-38-00.OMN created 7/7/2009 10:38:00
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_10-38-00.OMN last modified 7/7/2009 11:15:33
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-01	1	S1	200	8.66	7/7/2009@10:40:37			200 ppb
WCN090707-02	1	S2	150	6.58	7/7/2009@10:41:29			150 ppb
WCN090707-03	1	S3	100	4.25	7/7/2009@10:42:22			100 ppb
WCN090707-04	1	S4	50.0	2.32	7/7/2009@10:43:14			50 ppb
WCN090707-05	1	S5	10.0	0.530	7/7/2009@10:44:07			10 ppb
WCN090707-06	1	S6	5.00	0.393	7/7/2009@10:45:01			CRDL 5.0 ppb
WCN090707-08	1	S7	0.00	-0.00192	7/7/2009@10:45:55			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99969 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090707-07	1	S8	151	6.56	7/7/2009@10:47:46			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090707-08	1	S7	-1.33	0.0378	7/7/2009@10:49:36			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.33 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.33 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090707-06	1	S6	6.83	0.387	7/7/2009@10:51:26			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.83 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.83 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870890|881039|MB	1	1	0.258	0.106	7/7/2009@10:53:16			
1201870897||LCS	1	2	33.3	1.52	7/7/2009@10:54:09		50.00	
232429001	1	3	2.24	0.191	7/7/2009@10:55:02			
1201870891||DUP	1	4	1.10	0.142	7/7/2009@10:55:55			
1201870893||MS	1	5	89.8	3.94	7/7/2009@10:56:48			
1201870895||MSD	1	6	92.5	4.06	7/7/2009@10:57:41			
232429002	1	7	4.27	0.278	7/7/2009@10:58:34			
1201870892||DUP	1	8	2.79	0.214	7/7/2009@10:59:26			
1201870894||MS	1	9	93.8	4.12	7/7/2009@11:00:19			
1201870896||MSD	1	10	90.6	3.98	7/7/2009@11:01:11			
WCN090707-03	1	S3	90.0	3.95	7/7/2009@11:02:04			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-10.0 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-10.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-2.73	-0.0223	7/7/2009@11:03:54			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.73 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.73 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232429003	1	11	1.07	0.141	7/7/2009@11:05:42			
232429004	1	12	-2.99	-0.0332	7/7/2009@11:06:34			
232429005	1	13	2.06	0.183	7/7/2009@11:07:26			
232429006	1	14	-3.41	-0.0512	7/7/2009@11:08:18			
232429007	1	15	-3.40	-0.0507	7/7/2009@11:09:09			
232429008	1	16	1.30	0.151	7/7/2009@11:10:03			
232429009	1	17	3.29	0.236	7/7/2009@11:10:57			
232429010	1	18	2.25	0.191	7/7/2009@11:11:50			
232429011	1	19	-3.42	-0.0518	7/7/2009@11:12:43			
232429012	1	20	-4.64	-0.104	7/7/2009@11:13:36			
WCN090707-03	1	S3	40.7	1.84	7/7/2009@11:14:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-59.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-59.3 < 10.0					
		Message	CCV Failed					
		Action	Stop Run					

Analyte Properties Table for OM_7-7-2009_10-38-00.OMN

Property	Channel 1 TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/7/2009

Channel 1: Current View

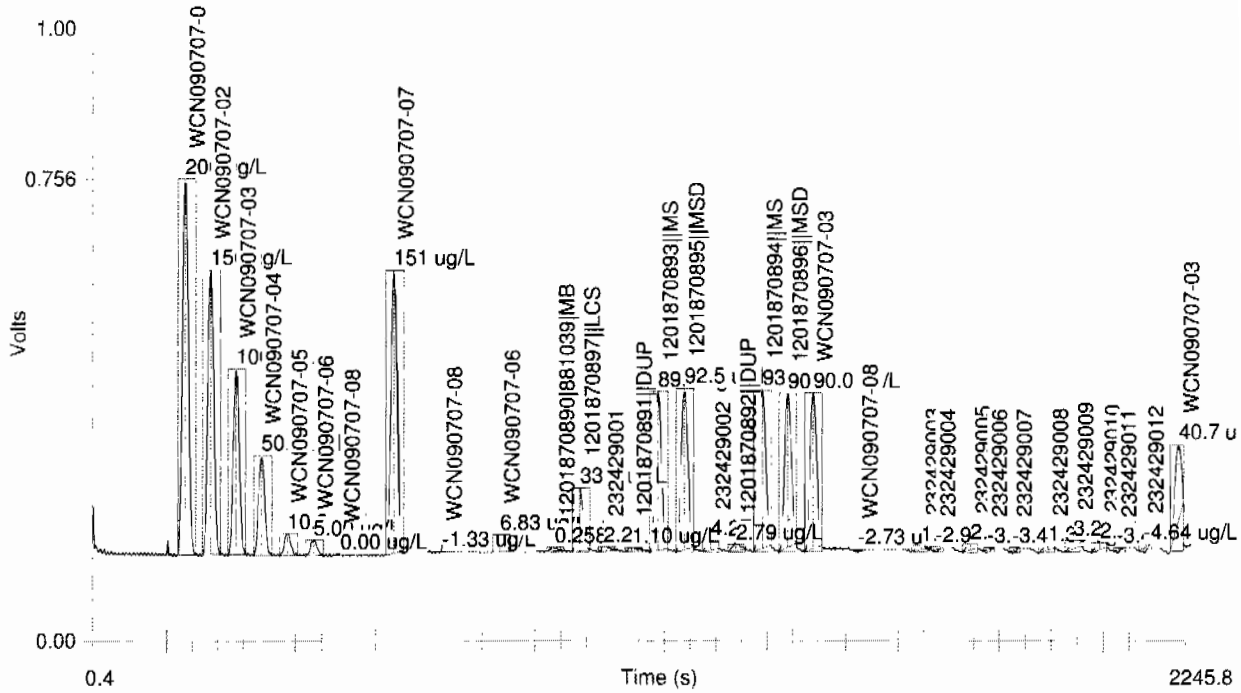

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

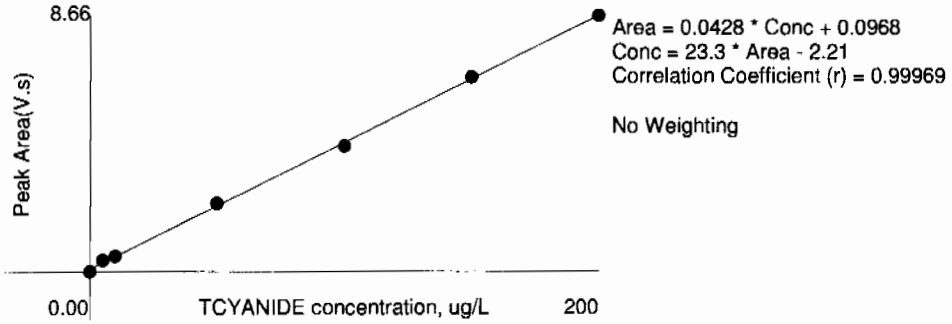

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	7/7/2009 11:39:05	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:40:56	OM_7-7-2009_11-38-18
232429003	881039	1	axc2	7/7/2009 11:42:44	OM_7-7-2009_11-38-18
232429004	881039	1	axc2	7/7/2009 11:43:36	OM_7-7-2009_11-38-18
232429005	881039	1	axc2	7/7/2009 11:44:28	OM_7-7-2009_11-38-18
232429006	881039	1	axc2	7/7/2009 11:45:20	OM_7-7-2009_11-38-18
232429007	881039	1	axc2	7/7/2009 11:46:12	OM_7-7-2009_11-38-18
232429008	881039	1	axc2	7/7/2009 11:47:05	OM_7-7-2009_11-38-18
232429009	881039	1	axc2	7/7/2009 11:47:59	OM_7-7-2009_11-38-18
232429010	881039	1	axc2	7/7/2009 11:48:53	OM_7-7-2009_11-38-18
232429011	881039	1	axc2	7/7/2009 11:49:46	OM_7-7-2009_11-38-18
232429012	881039	1	axc2	7/7/2009 11:50:39	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 11:51:31	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:53:21	OM_7-7-2009_11-38-18
232429013	881039	1	axc2	7/7/2009 11:55:10	OM_7-7-2009_11-38-18
232429014	881039	1	axc2	7/7/2009 11:56:03	OM_7-7-2009_11-38-18
232429015	881039	1	axc2	7/7/2009 11:56:56	OM_7-7-2009_11-38-18
232509001	881039	1	axc2	7/7/2009 11:57:49	OM_7-7-2009_11-38-18
232509002	881039	1	axc2	7/7/2009 11:58:41	OM_7-7-2009_11-38-18
232509003	881039	1	axc2	7/7/2009 11:59:34	OM_7-7-2009_11-38-18
232509004	881039	1	axc2	7/7/2009 12:00:25	OM_7-7-2009_11-38-18
232509005	881039	1	axc2	7/7/2009 12:01:18	OM_7-7-2009_11-38-18
1201873553	882139	1	axc2	7/7/2009 12:02:10	OM_7-7-2009_11-38-18
1201873557	882139	50	axc2	7/7/2009 12:03:01	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:03:53	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:05:44	OM_7-7-2009_11-38-18
232494013	882139	1	axc2	7/7/2009 12:07:35	OM_7-7-2009_11-38-18
232494014	882139	1	axc2	7/7/2009 12:08:28	OM_7-7-2009_11-38-18
232494015	882139	1	axc2	7/7/2009 12:09:22	OM_7-7-2009_11-38-18
232663001	882139	1	axc2	7/7/2009 12:10:15	OM_7-7-2009_11-38-18
1201873554	882139	1	axc2	7/7/2009 12:11:08	OM_7-7-2009_11-38-18
1201873555	882139	1	axc2	7/7/2009 12:12:02	OM_7-7-2009_11-38-18
1201873556	882139	1	axc2	7/7/2009 12:12:55	OM_7-7-2009_11-38-18
232663002	882139	1	axc2	7/7/2009 12:13:47	OM_7-7-2009_11-38-18
232663003	882139	1	axc2	7/7/2009 12:14:40	OM_7-7-2009_11-38-18
232663004	882139	1	axc2	7/7/2009 12:15:33	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:16:26	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:18:16	OM_7-7-2009_11-38-18
232663005	882139	1	axc2	7/7/2009 12:20:04	OM_7-7-2009_11-38-18
1201873558	882142	1	axc2	7/7/2009 12:20:57	OM_7-7-2009_11-38-18
1201873565	882142	1	axc2	7/7/2009 12:21:49	OM_7-7-2009_11-38-18
232662001	882142	1	axc2	7/7/2009 12:22:42	OM_7-7-2009_11-38-18
1201873559	882142	1	axc2	7/7/2009 12:23:33	OM_7-7-2009_11-38-18
1201873561	882142	1	axc2	7/7/2009 12:24:27	OM_7-7-2009_11-38-18
1201873563	882142	1	axc2	7/7/2009 12:25:22	OM_7-7-2009_11-38-18
232674001	882142	1	axc2	7/7/2009 12:26:16	OM_7-7-2009_11-38-18
232674002	882142	1	axc2	7/7/2009 12:27:10	OM_7-7-2009_11-38-18
232677001	882142	1	axc2	7/7/2009 12:28:03	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:28:55	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:30:45	OM_7-7-2009_11-38-18
1201873560	882142	1	axc2	7/7/2009 12:32:35	OM_7-7-2009_11-38-18
1201873562	882142	1	axc2	7/7/2009 12:33:29	OM_7-7-2009_11-38-18
1201873564	882142	1	axc2	7/7/2009 12:34:21	OM_7-7-2009_11-38-18
232703001	882142	1	axc2	7/7/2009 12:35:14	OM_7-7-2009_11-38-18
232728001	882142	1	axc2	7/7/2009 12:36:07	OM_7-7-2009_11-38-18
232728003	882142	1	axc2	7/7/2009 12:36:59	OM_7-7-2009_11-38-18
232742001	882142	1	axc2	7/7/2009 12:37:52	OM_7-7-2009_11-38-18
232753001	882142	1	axc2	7/7/2009 12:38:44	OM_7-7-2009_11-38-18

232755001	882142	1	axc2	7/7/2009	12:39:36	OM_7-7-2009_11-38-18
232759001	882142	1	axc2	7/7/2009	12:40:28	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:41:21	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:43:12	OM_7-7-2009_11-38-18
1201873547	882134	1	axc2	7/7/2009	12:45:02	OM_7-7-2009_11-38-18
1201873548	882134	1	axc2	7/7/2009	12:45:57	OM_7-7-2009_11-38-18
1201873549	882134	1	axc2	7/7/2009	12:46:51	OM_7-7-2009_11-38-18
232494013	882134	1	axc2	7/7/2009	12:47:44	OM_7-7-2009_11-38-18
232494014	882134	1	axc2	7/7/2009	12:48:38	OM_7-7-2009_11-38-18
232494015	882134	1	axc2	7/7/2009	12:49:31	OM_7-7-2009_11-38-18
1201873566	882146	1	axc2	7/7/2009	12:50:26	OM_7-7-2009_11-38-18
1201873568	882146	250	axc2	7/7/2009	12:51:18	OM_7-7-2009_11-38-18
232653001	882146	1	axc2	7/7/2009	12:52:11	OM_7-7-2009_11-38-18
1201873567	882146	1	axc2	7/7/2009	12:53:04	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:53:58	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:55:47	OM_7-7-2009_11-38-18
232657001	882146	1	axc2	7/7/2009	12:57:36	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:58:28	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	13:00:19	OM_7-7-2009_11-38-18

Author: axc2 Date : 7/7/2009

Original Run Filename: OM_7-7-2009_11-38-18.OMN created 7/7/2009 11:38:18
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_11-38-18.OMN last modified 7/7/2009 13:01:23
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-03	1	S3	98.3	4.31	7/7/2009@11:39:05			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
	Result:		-1.7 < 10.0					
	Message		CCV Passed					
	Action		Continue					
DQM Test: < - Percent Relative Difference								
	Result:		-1.7 < 10.0					
	Message		CCV Passed					
	Action		Continue					
WCN090707-08	1	S7	-1.68	0.0229	7/7/2009@11:40:56			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
	Result:		-1.68 < 5.00					
	Message		CCB Passed					
	Action		Continue					
DQM Test: < - Concentration Limit								
	Result:		-1.68 > -5.00					
	Message		CCB Passed					
	Action		Continue					
	Calibration:		Table/Fig. 1					
232429003|881039|	1	11	0.101	0.0991	7/7/2009@11:42:44			
232429004	1	12	-0.0267	0.0937	7/7/2009@11:43:36			
232429005	1	13	3.58	0.248	7/7/2009@11:44:28			
232429006	1	14	-0.107	0.0902	7/7/2009@11:45:20			
232429007	1	15	-0.282	0.0827	7/7/2009@11:46:12			
232429008	1	16	0.519	0.117	7/7/2009@11:47:05			
232429009	1	17	4.44	0.285	7/7/2009@11:47:59			
232429010	1	18	2.86	0.217	7/7/2009@11:48:53			
232429011	1	19	-0.0810	0.0913	7/7/2009@11:49:46			
232429012	1	20	2.81	0.215	7/7/2009@11:50:39			
WCN090707-03	1	S3	99.9	4.38	7/7/2009@11:51:31			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
	Result:		-0.1 < 10.0					
	Message		CCV Passed					
	Action		Continue					
DQM Test: < - Percent Relative Difference								
	Result:		-0.1 < 10.0					
	Message		CCV Passed					
	Action		Continue					
WCN090707-08	1	S7	-2.22	-3.66e-4	7/7/2009@11:53:21			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
	Result:		-2.22 < 5.00					
	Message		CCB Passed					
	Action		Continue					
DQM Test: < - Concentration Limit								
	Result:		-2.22 > -5.00					
	Message		CCB Passed					
	Action		Continue					
232429013	1	21	0.103	0.0992	7/7/2009@11:55:10			
232429014	1	22	2.62	0.207	7/7/2009@11:56:03			
232429015	1	23	1.61	0.164	7/7/2009@11:56:56			
232509001	1	24	2.95	0.221	7/7/2009@11:57:49			
232509002	1	25	2.61	0.207	7/7/2009@11:58:41			

232509003	1	26	2.35	0.195	7/7/2009@11:59:34			
232509004	1	27	0.637	0.122	7/7/2009@12:00:25			
232509005	1	28	1.34	0.152	7/7/2009@12:01:18			
1201873553|882139|MB	1	29	0.978	0.137	7/7/2009@12:02:10			
1201873557||LCS	1	30	34.2	1.56	7/7/2009@12:03:01		50.00	
WCN090707-03	1	S3	102	4.45	7/7/2009@12:03:53			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
	Result:		1.7 < 10.0					
	Message		CCV Passed					
	Action		Continue					
DQM Test: < - Percent Relative Difference								
	Result:		1.7 < 10.0					
	Message		CCV Passed					
	Action		Continue					
WCN090707-08	1	S7	-1.41	0.0343	7/7/2009@12:05:44			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
	Result:		-1.41 < 5.00					
	Message		CCB Passed					
	Action		Continue					
DQM Test: < - Concentration Limit								
	Result:		-1.41 > -5.00					
	Message		CCB Passed					
	Action		Continue					
232494013	1	31	12.4	0.627	7/7/2009@12:07:35			
232494014	1	32	16.5	0.800	7/7/2009@12:08:28			
232494015	1	33	8.15	0.444	7/7/2009@12:09:22			
232663001	1	34	0.469	0.115	7/7/2009@12:10:15			
1201873554||DUP	1	35	0.919	0.134	7/7/2009@12:11:08			
1201873555||MS	1	36	100	4.39	7/7/2009@12:12:02			
1201873556||MSD	1	37	99.9	4.38	7/7/2009@12:12:55			
232663002	1	38	2.87	0.218	7/7/2009@12:13:47			
232663003	1	39	0.612	0.121	7/7/2009@12:14:40			
232663004	1	40	1.78	0.171	7/7/2009@12:15:33			
WCN090707-03	1	S3	103	4.51	7/7/2009@12:16:26			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								
	Result:		3.0 < 10.0					
	Message		CCV Passed					
	Action		Continue					
DQM Test: < - Percent Relative Difference								
	Result:		3.0 < 10.0					
	Message		CCV Passed					
	Action		Continue					
WCN090707-08	1	S7	-1.19	0.0436	7/7/2009@12:18:16			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
	Result:		-1.19 < 5.00					
	Message		CCB Passed					
	Action		Continue					
DQM Test: < - Concentration Limit								
	Result:		-1.19 > -5.00					
	Message		CCB Passed					
	Action		Continue					
232663005	1	41	3.51	0.245	7/7/2009@12:20:04			
1201873558|882142|MB	1	42	0.654	0.123	7/7/2009@12:20:57			
1201873565||LCS	1	43	52.4	2.34	7/7/2009@12:21:49			
232662001	1	44	-0.601	0.0690	7/7/2009@12:22:42			
1201873559||DUP	1	45	-0.744	0.0629	7/7/2009@12:23:33			
1201873561||MS	1	46	106	4.66	7/7/2009@12:24:27			
1201873563||MSD	1	47	107	4.68	7/7/2009@12:25:22			
232674001	1	48	2.16	0.187	7/7/2009@12:26:16			
232674002	1	49	0.310	0.108	7/7/2009@12:27:10			
232677001	1	50	-0.639	0.0674	7/7/2009@12:28:03			
WCN090707-03	1	S3	105	4.58	7/7/2009@12:28:55			CCV
	Known Conc:		100					
DQM Test: > + Percent Relative Difference								

		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	4.02	0.267	7/7/2009@12:30:45			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	4.02 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	4.02 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873560||DUP	1	51	-0.895	0.0565	7/7/2009@12:32:35			
1201873562||MS	1	52	104	4.54	7/7/2009@12:33:29			
1201873564||MSD	1	53	105	4.61	7/7/2009@12:34:21			
232703001	1	54	5.73	0.340	7/7/2009@12:35:14			
232728001	1	55	-1.14	0.0458	7/7/2009@12:36:07			
232728003	1	56	-1.16	0.0449	7/7/2009@12:36:59			
232742001	1	57	-0.968	0.0533	7/7/2009@12:37:52			
232753001	1	58	0.512	0.117	7/7/2009@12:38:44			
232755001	1	59	-1.02	0.0510	7/7/2009@12:39:36			
232759001	1	60	-0.784	0.0612	7/7/2009@12:40:28			
WCN090707-03	1	S3	101	4.40	7/7/2009@12:41:21			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.381	0.0785	7/7/2009@12:43:12			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.381 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.381 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873547|882134|MB	1	61	-0.997	0.0521	7/7/2009@12:45:02			
1201873548||LCS	1	62	-1.28	0.0400	7/7/2009@12:45:57			
1201873549||LCSD	1	63	-0.406	0.0774	7/7/2009@12:46:51			
232494013	1	64	16.1	0.786	7/7/2009@12:47:44			
232494014	1	65	16.8	0.815	7/7/2009@12:48:38			
232494015	1	66	7.54	0.418	7/7/2009@12:49:31			
1201873566|882146|MB	1	67	-0.184	0.0869	7/7/2009@12:50:26			
1201873568||LCS	1	68	52.2	2.33	7/7/2009@12:51:18		250.00	
232653001	1	69	-0.792	0.0609	7/7/2009@12:52:11			
1201873567||DUP	1	70	-0.809	0.0602	7/7/2009@12:53:04			
WCN090707-03	1	S3	108	4.72	7/7/2009@12:53:58			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.41	0.0344	7/7/2009@12:55:47			CCB

		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.41 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.41 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232657001	1	71	2.86	0.217	7/7/2009@12:57:36			
WCN090707-03	1	S3	101	4.43	7/7/2009@12:58:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	1.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	1.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.0967	0.0907	7/7/2009@13:00:19			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.0967 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.0967 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_7-7-2009_11-38-18.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2

Date : 7/7/2009

Channel 1: Current View

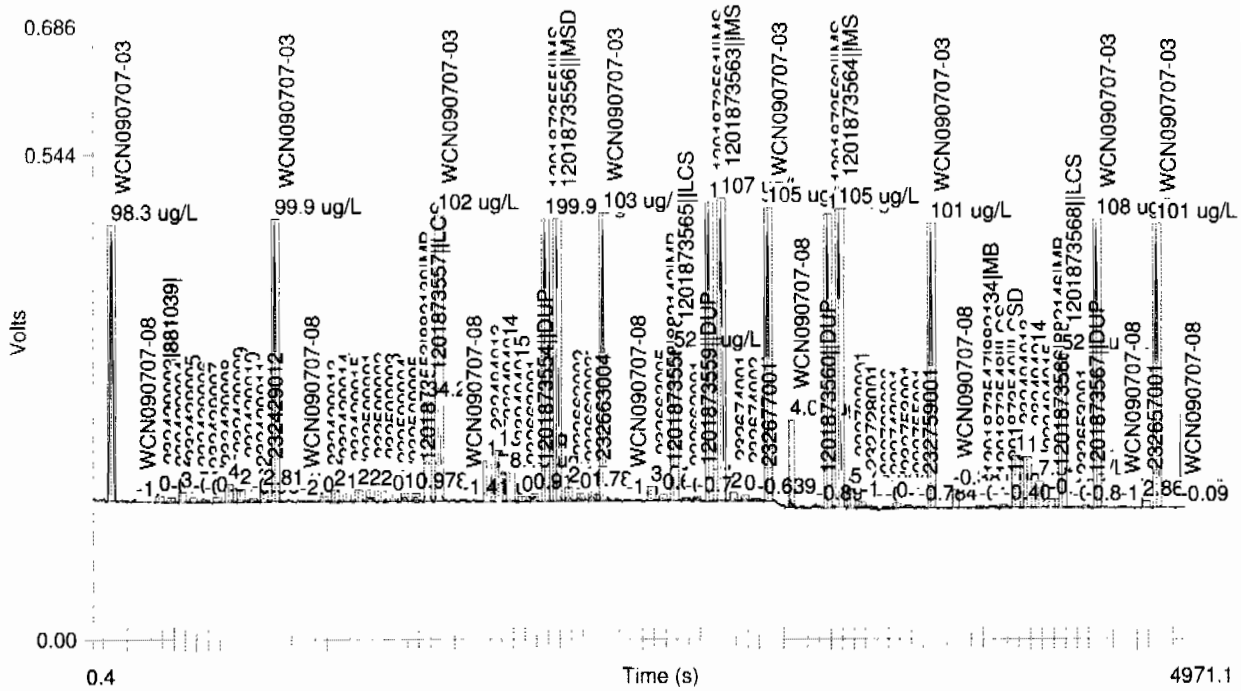

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

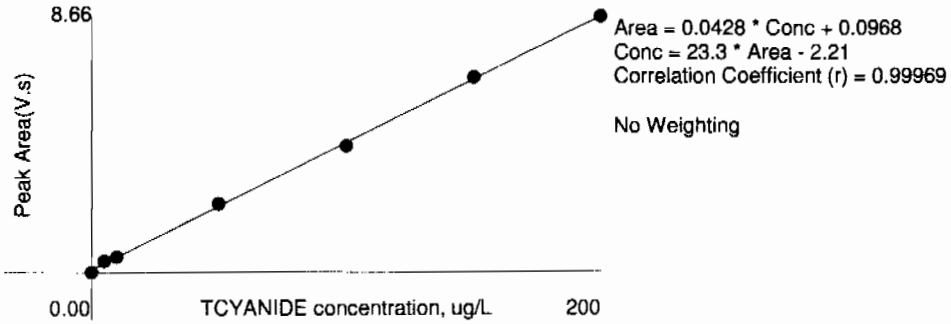

Nitrate Nitrite by Cadmium Reduction

This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
		1	axh3	7/7/2009 7:49:27	OM_7-7-2009_07-47-40
1.0 PPM		1	axh3	7/7/2009 7:50:38	OM_7-7-2009_07-47-40
0.5 ppm		1	axh3	7/7/2009 7:51:51	OM_7-7-2009_07-47-40
0.1 ppm		1	axh3	7/7/2009 7:53:05	OM_7-7-2009_07-47-40
0.05 ppm		1	axh3	7/7/2009 7:54:18	OM_7-7-2009_07-47-40
ICAL-00		1	axh3	7/7/2009 7:55:32	OM_7-7-2009_07-47-40
1.0 ppm ICV		1	axh3	7/7/2009 7:57:54	OM_7-7-2009_07-47-40
ICB		1	axh3	7/7/2009 8:00:16	OM_7-7-2009_07-47-40
Nitrate 1.0 ppm		1	axh3	7/7/2009 8:02:35	OM_7-7-2009_07-47-40
Nitrite 1.0 ppm		1	axh3	7/7/2009 8:04:55	OM_7-7-2009_07-47-40
1201872211	881592	1	axh3	7/7/2009 8:07:16	OM_7-7-2009_07-47-40
1201872214	881592	1	axh3	7/7/2009 8:08:30	OM_7-7-2009_07-47-40
231823002	881592	10	axh3	7/7/2009 8:09:43	OM_7-7-2009_07-47-40
1201873539	881592	10	axh3	7/7/2009 8:10:56	OM_7-7-2009_07-47-40
1201873541	881592	10	axh3	7/7/2009 8:12:09	OM_7-7-2009_07-47-40
231823004	881592	25	axh3	7/7/2009 8:13:21	OM_7-7-2009_07-47-40
231823006	881592	50	axh3	7/7/2009 8:14:34	OM_7-7-2009_07-47-40
231823008*	881592	100	axh3	7/7/2009 8:15:47	OM_7-7-2009_07-47-40
231823010	881592	50	axh3	7/7/2009 8:16:58	OM_7-7-2009_07-47-40
231823012	881592	1	axh3	7/7/2009 8:18:11	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 8:19:23	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 8:21:45	OM_7-7-2009_07-47-40
231823008	881592	100	axh3	7/7/2009 8:24:05	OM_7-7-2009_07-47-40
231823014	881592	100	axh3	7/7/2009 8:25:17	OM_7-7-2009_07-47-40
231823016	881592	50	axh3	7/7/2009 8:26:30	OM_7-7-2009_07-47-40
231917002	881592	100	axh3	7/7/2009 8:27:42	OM_7-7-2009_07-47-40
231917004	881592	100	axh3	7/7/2009 8:28:53	OM_7-7-2009_07-47-40
232015002	881592	50	axh3	7/7/2009 8:30:04	OM_7-7-2009_07-47-40
232609001	881592	100	axh3	7/7/2009 8:31:18	OM_7-7-2009_07-47-40
232609002	881592	5	axh3	7/7/2009 8:32:31	OM_7-7-2009_07-47-40
1201872212	881592	5	axh3	7/7/2009 8:33:44	OM_7-7-2009_07-47-40
1201872213	881592	5	axh3	7/7/2009 8:34:57	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 8:36:09	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 8:38:31	OM_7-7-2009_07-47-40
232674001	881592	1	axh3	7/7/2009 8:40:51	OM_7-7-2009_07-47-40
232609003	881592	5	axh3	7/7/2009 8:42:03	OM_7-7-2009_07-47-40
232609004	881592	5	axh3	7/7/2009 8:43:16	OM_7-7-2009_07-47-40
232609005	881592	5	axh3	7/7/2009 8:44:29	OM_7-7-2009_07-47-40
232609006	881592	10	axh3	7/7/2009 8:45:41	OM_7-7-2009_07-47-40
232609007	881592	5	axh3	7/7/2009 8:46:54	OM_7-7-2009_07-47-40
232662001	881592	5	axh3	7/7/2009 8:48:06	OM_7-7-2009_07-47-40
1201873538	881592	5	axh3	7/7/2009 8:49:17	OM_7-7-2009_07-47-40
1201873540	881592	5	axh3	7/7/2009 8:50:30	OM_7-7-2009_07-47-40
1201874237	882466	1	axh3	7/7/2009 8:51:41	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 8:52:54	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 8:55:16	OM_7-7-2009_07-47-40
1201874242	882466	1	axh3	7/7/2009 8:57:35	OM_7-7-2009_07-47-40
232742001	882466	5	axh3	7/7/2009 8:58:48	OM_7-7-2009_07-47-40
1201874239	882466	5	axh3	7/7/2009 9:00:01	OM_7-7-2009_07-47-40
1201874241	882466	5	axh3	7/7/2009 9:01:14	OM_7-7-2009_07-47-40
232750002	882466	1	axh3	7/7/2009 9:02:27	OM_7-7-2009_07-47-40
232755001	882466	1	axh3	7/7/2009 9:03:40	OM_7-7-2009_07-47-40
232759001	882466	1	axh3	7/7/2009 9:04:52	OM_7-7-2009_07-47-40
232761001	882466	25	axh3	7/7/2009 9:06:05	OM_7-7-2009_07-47-40
1201874238	882466	25	axh3	7/7/2009 9:07:18	OM_7-7-2009_07-47-40
1201874240	882466	25	axh3	7/7/2009 9:08:30	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 9:09:42	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 9:12:04	OM_7-7-2009_07-47-40

232855002	882466	1	axh3	7/7/2009	9:14:24	OM_7-7-2009_07-47-40
232869003	882466	5	axh3	7/7/2009	9:15:36	OM_7-7-2009_07-47-40
232750002	882466	5	axh3	7/7/2009	9:16:49	OM_7-7-2009_07-47-40
232855002	882466	5	axh3	7/7/2009	9:18:01	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009	9:20:21	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009	9:22:43	OM_7-7-2009_07-47-40

Author: lachat

Date : 7/7/2009

Original Run Filename: OM_7-7-2009_07-47-40.OMN created 7/7/2009 07:47:40
Original Run Author's Signature: [lachat]
Current Run Filename: OM_7-7-2009_07-47-40.OMN last modified 7/7/2009 09:24:04
Current Run Author's Signature: [lachat]
Description: EPA 353.2
Cadmium Colum 9056CAJ
LCS nominal 1.0 mg/L

Sample	Rep.	Cup No.	Channel 1 NO3 + NO2 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR090707-26	1	S9	1.50	16.0	7/7/2009@07:49:27			
WTR090707-25	1	S10	1.00	10.9	7/7/2009@07:50:38			1.0 PPM
WTR090707-24	1	S11	0.500	5.44	7/7/2009@07:51:51			0.5 ppm
WTR090707-23	1	S12	0.100	1.07	7/7/2009@07:53:05			0.1 ppm
WTR090707-21	1	S13	0.0500	0.324	7/7/2009@07:54:18			0.05 ppm
0.0ppm	1	S15	0.00	1.22e-4	7/7/2009@07:55:32			0.0 ppm
			DQM Test: Minimum Correlation Coefficient					
		Result:	0.99982 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR090707-27 ICV	1	S16	1.02	11.0	7/7/2009@07:57:54			1.0 ppm ICV
		Known Conc:	1.00					
			DQM Test: > + Concentration Limit					
		Result:	1.02 < 1.10					
		Message	ICV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.02 > 0.894					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
ICB	1	S15	0.00372	-5.58e-5	7/7/2009@08:00:16			ICB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00372 < 0.0500					
		Message	ICB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.00372 > -0.0500					
		Message	ICB Passed					
		Action	Continue					
WTR090707-22	1	S1	1.00	10.7	7/7/2009@08:02:35			Nitrate 1.0 ppm
		Known Conc:	1.00					
			DQM Test: > + Concentration Limit					
		Result:	1.00 < 1.10					
		Message	Nitrate Standard Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.00 > 0.894					
		Message	Nitrate Standard Passed					
		Action	Continue					
WTR090707-28	1	S2	0.980	10.5	7/7/2009@08:04:55			Nitrite 1.0 ppm
		Known Conc:	1.00					
			DQM Test: > + Concentration Limit					
		Result:	0.980 < 1.10					
		Message	Nitrite Standard Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.980 > 0.894					
		Message	Nitrite Standard Passed					
		Action	Continue					
1201872211|881592|MB	1	1	0.0122	0.0918	7/7/2009@08:07:16			
1201872214||LCS	1	2	1.04	11.1	7/7/2009@08:08:30			
231823002	1	3	0.516	5.52	7/7/2009@08:09:43		10.00	
1201873539||DUP	1	4	0.560	6.00	7/7/2009@08:10:56		10.00	
1201873541||PS	1	5	1.50	16.2	7/7/2009@08:12:09		10.00	

231823004	1	6	0.389	4.16	7/7/2009@08:13:21		25.00	
231823006	1	7	0.321	3.42	7/7/2009@08:14:34		50.00	
231823008	1	8	6.33	68.2	7/7/2009@08:15:47		100.00	
231823010	1	9	0.341	3.64	7/7/2009@08:16:58		50.00	
231823012	1	10	-0.0182	-0.237	7/7/2009@08:18:11			
WTR090707-25 CCV	1	S10	1.01	10.8	7/7/2009@08:19:23			1.0 ppm CCV
	Known Conc:		1.00					
DQM Test: > + Concentration Limit								
		Result:	1.01 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.01 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00372	-6.33e-5	7/7/2009@08:21:45			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00372 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00372 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
231823008	1	8	0.270	2.87	7/7/2009@08:24:05		100.00	
231823014	1	11	0.313	3.34	7/7/2009@08:25:17		100.00	
231823016	1	12	0.370	3.95	7/7/2009@08:26:30		50.00	
231917002	1	13	0.291	3.10	7/7/2009@08:27:42		100.00	
231917004	1	14	0.231	2.45	7/7/2009@08:28:53		100.00	
232015002	1	15	0.327	3.49	7/7/2009@08:30:04		50.00	
232609001	1	16	0.458	4.90	7/7/2009@08:31:18		100.00	
232609002	1	17	0.555	5.95	7/7/2009@08:32:31		5.00	
1201872212||DUP	1	18	0.536	5.75	7/7/2009@08:33:44		5.00	
1201872213||PS	1	19	1.51	16.3	7/7/2009@08:34:57		5.00	
WTR090707-25 CCV	1	S10	1.02	10.9	7/7/2009@08:36:09			1.0 ppm CCV
	Known Conc:		1.00					
DQM Test: > + Concentration Limit								
		Result:	1.02 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.02 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00260	-0.0121	7/7/2009@08:38:31			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00260 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00260 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
232674001	1	28	-0.0140	-0.191	7/7/2009@08:40:51			
232609003	1	20	0.344	3.68	7/7/2009@08:42:03		5.00	
232609004	1	21	0.435	4.66	7/7/2009@08:43:16		5.00	
232609005	1	22	0.434	4.64	7/7/2009@08:44:29		5.00	
232609006	1	23	0.892	9.59	7/7/2009@08:45:41		10.00	
232609007	1	24	0.387	4.13	7/7/2009@08:46:54		5.00	
232662001	1	25	0.0127	0.0963	7/7/2009@08:48:06		5.00	
1201873538||DUP	1	26	0.0127	0.0965	7/7/2009@08:49:17		5.00	
1201873540||PS	1	27	1.22	13.2	7/7/2009@08:50:30		5.00	
1201874237|882466|MB	1	29	0.0112	0.0812	7/7/2009@08:51:41			
WTR090707-25 CCV	1	S10	1.01	10.9	7/7/2009@08:52:54			1.0 ppm CCV
	Known Conc:		1.00					
DQM Test: > + Concentration Limit								

		Result:	1.01 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.01 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00293	-0.00858	7/7/2009@08:55:16			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00293 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.00293 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
1201874242||LCS	1	30	1.04	11.2	7/7/2009@08:57:35			
232742001	1	31	0.00934	0.0606	7/7/2009@08:58:48		5.00	
1201874239||DUP	1	32	0.00881	0.0549	7/7/2009@09:00:01		5.00	
1201874241||PS	1	33	0.994	10.7	7/7/2009@09:01:14		5.00	
232750002	1	34	0.102	1.06	7/7/2009@09:02:27			
232755001	1	35	-0.0144	-0.195	7/7/2009@09:03:40			
232759001	1	36	-0.0169	-0.223	7/7/2009@09:04:52			
232761001	1	37	0.471	5.04	7/7/2009@09:06:05		25.00	
1201874238||DUP	1	38	0.465	4.98	7/7/2009@09:07:18		25.00	
1201874240||PS	1	39	1.44	15.5	7/7/2009@09:08:30		25.00	
WTR090707-25 CCV	1	S10	1.02	10.9	7/7/2009@09:09:42			1.0 ppm CCV
		Known Conc:	1.00					
			DQM Test: > + Concentration Limit					
		Result:	1.02 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.02 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00372	-8.31e-5	7/7/2009@09:12:04			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00372 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.00372 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
232855002	1	40	0.134	1.40	7/7/2009@09:14:24			
232869003	1	42	0.774	8.31	7/7/2009@09:15:36		5.00	
232750002	1	34	0.0852	0.879	7/7/2009@09:16:49		5.00	
232855002	1	40	0.123	1.29	7/7/2009@09:18:01		5.00	
WTR090707-25 CCV	1	S10	1.02	10.9	7/7/2009@09:20:21			1.0 ppm CCV
		Known Conc:	1.00					
			DQM Test: > + Concentration Limit					
		Result:	1.02 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.02 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00262	-0.0119	7/7/2009@09:22:43			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00262 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					

Author: lachat

Date : 7/7/2009

Result:	0.00262 > -0.0500
Message	CCB Passed
Action	Continue

Channel 1 (NO3 + NO2) : Current View

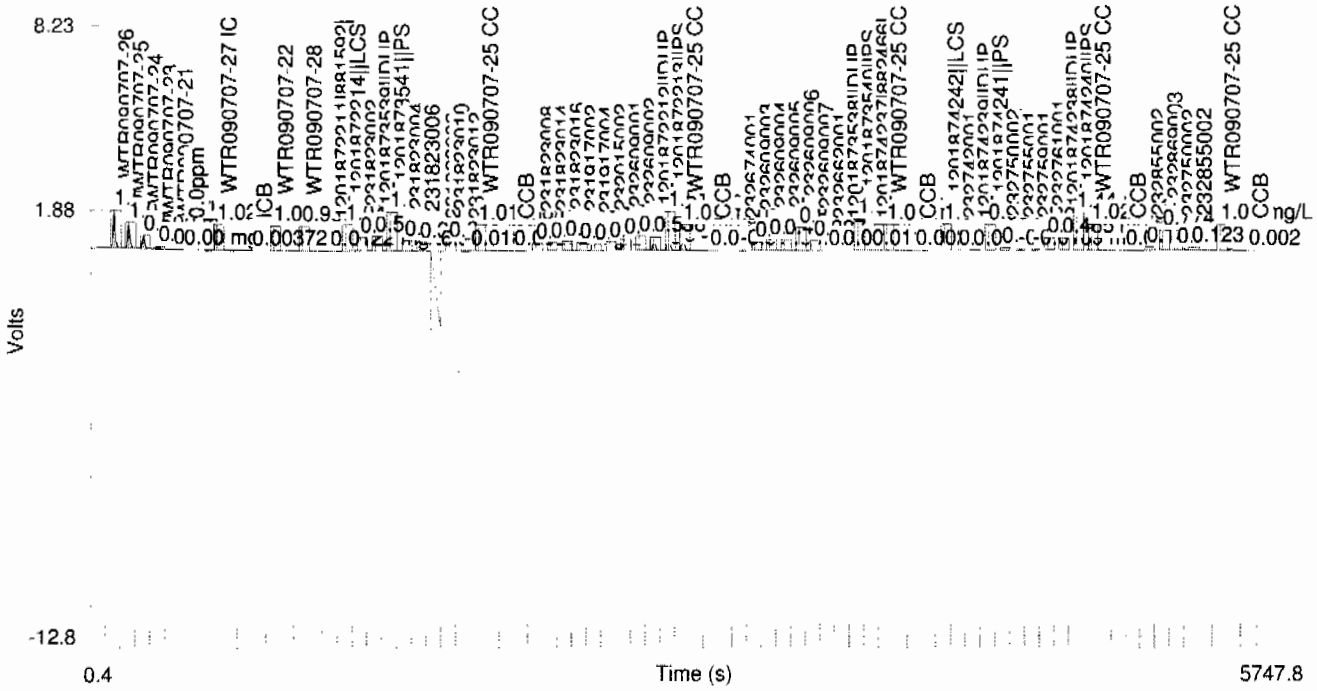

Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	16.0	1.27	0.8	7/7/2009	07:50:46
2	1.00	1	10.9	0.866	-1.4	7/7/2009	07:51:58
3	0.500	1	5.44	0.431	-1.5	7/7/2009	07:53:11
4	0.100	1	1.07	0.0852	-2.9	7/7/2009	07:54:24
5	0.0500	1	0.324	0.0253	35.4	7/7/2009	07:55:38
6	0.00	1	1.22e-4	4.40e-4		7/7/2009	07:56:52

Author: lachat

Date : 7/7/2009

Figure 1: NO3 + NO2

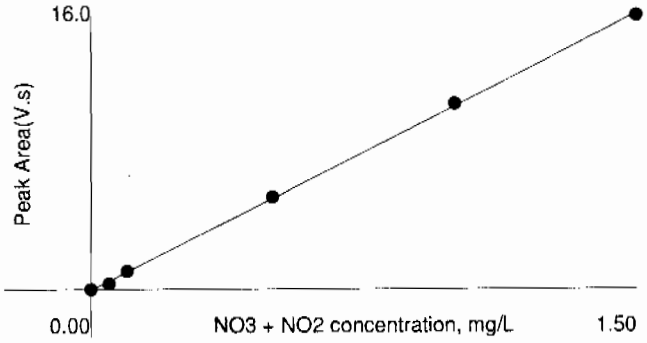

Area = 10.8 * Conc 0.0381
Conc = 0.0927 * Area + 0.00372
Correlation Coefficient (r) = 0.99982

No Weighting

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2525-1

Method/Analysis Information

Product: **pH**

Analytical Batch: 882616 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232744001	CAMO-09-9956
232744002	CAMO-09-9950
232744003	CAMO-09-9952
232744004	CAMO-09-9958
232744005	CAMO-09-9957
232744006	CAMO-09-9951
232744007	CAMO-09-10031
232744008	CAMO-09-9990
1201874570	232744001(CAMO-09-9956) Sample Duplicate (DUP)
1201874571	232760004(CAMO-09-10032) Sample Duplicate (DUP)
1201874572	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHecT LogR pH/ISE.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232744001 (CAMO-09-9956) and 232760004 (CAMO-09-10032).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232744001 (CAMO-09-9956), 232744002 (CAMO-09-9950), 232744003 (CAMO-09-9952), 232744004 (CAMO-09-9958), 232744005 (CAMO-09-9957), 232744006 (CAMO-09-9951), 232744007 (CAMO-09-10031) and 232744008 (CAMO-09-9990).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	882479	**Method:**	SW846 9012A
Prep Batch :	882478	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232744001	CAMO-09-9956
232744002	CAMO-09-9950
232744003	CAMO-09-9952
232744004	CAMO-09-9958
232744005	CAMO-09-9957
232744006	CAMO-09-9951
232744007	CAMO-09-10031
232744008	CAMO-09-9990
1201874274	Method Blank (MB)
1201874275	232744001(CAMO-09-9956) Sample Duplicate (DUP)
1201874276	232744002(CAMO-09-9950) Sample Duplicate (DUP)
1201874277	232744001(CAMO-09-9956) Matrix Spike (MS)
1201874278	232744002(CAMO-09-9950) Matrix Spike (MS)
1201874279	232744001(CAMO-09-9956) Matrix Spike Duplicate (MSD)
1201874280	232744002(CAMO-09-9950) Matrix Spike Duplicate (MSD)
1201874281	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks
All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232744001 (CAMO-09-9956) and 232744002 (CAMO-09-9950).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201874276 (CAMO-09-9950) and 232744002 (CAMO-09-9950).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1201874281 (LCS).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	882333	**Method:**	EPA 300.0
Prep Batch :	882332	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232744001	CAMO-09-9956
232744002	CAMO-09-9950
232744003	CAMO-09-9952
232744004	CAMO-09-9958
232744005	CAMO-09-9957
232744006	CAMO-09-9951
232744007	CAMO-09-10031
232744008	CAMO-09-9990
1201873912	Method Blank (MB)
1201873913	232744001(CAMO-09-9956) Sample Duplicate (DUP)
1201873914	232760004(CAMO-09-10032) Sample Duplicate (DUP)
1201873915	232744001(CAMO-09-9956) Matrix Spike (MS)
1201873916	232760004(CAMO-09-10032) Matrix Spike (MS)
1201873917	232744001(CAMO-09-9956) Matrix Spike Duplicate (MSD)
1201873918	232760004(CAMO-09-10032) Matrix Spike Duplicate (MSD)
1201873919	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks
All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232744001 (CAMO-09-9956) and 232760004 (CAMO-09-10032).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232744001 (CAMO-09-9956), 232744002 (CAMO-09-9950), 232744003 (CAMO-09-9952), 232744004 (CAMO-09-9958), 232744005 (CAMO-09-9957), 232744006 (CAMO-09-9951), 232744007 (CAMO-09-10031) and 232744008 (CAMO-09-9990).

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Manual Integrations
Manual integrations were not required for the samples in this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 21July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2525-1 GEL Work Order: 232744

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9956	Project:	LANL01004
Sample ID:	232744001	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	14.1%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.4C	H	8.03	0.010	0.100	SU	1	RXG2	07/06/09	1207	882616	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	110	77.6	285	ug/kg	1	AXC2	07/08/09	1235	882479	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	12.8	0.349	1.16	mg/kg	1	VH1	07/15/09	0815	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9950	Project:	LANL01004
Sample ID:	232744002	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.6%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.1C	H	9.77	0.010	0.100	SU	1	RXG2 07/06/09	1212	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	98.3	67.9	250	ug/kg	1	AXC2 07/08/09	1239	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	3.17	0.335	1.12	mg/kg	1	VH1 07/15/09	0936	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9952	Project:	LANL01004
Sample ID:	232744003	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.4%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.2C	H	9.11	0.010	0.100	SU	1	RXG2 07/06/09	1213	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	73.0	268	ug/kg	1	AXC2 07/08/09	1246	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	1.98	0.335	1.12	mg/kg	1	VH1 07/15/09	0956	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9958	Project:	LANL01004
Sample ID:	232744004	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.3%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.3C	H	8.60	0.010	0.100	SU	1	RXG2	07/06/09	1217	882616	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	J	95.8	75.8	279	ug/kg	1	AXC2	07/08/09	1247	882479	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	6.38	0.334	1.11	mg/kg	1	VH1	07/15/09	1016	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9957	Project:	LANL01004
Sample ID:	232744005	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.1%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.2C	H	8.57	0.010	0.100	SU	1	RXG2	07/06/09	1217	882616	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND	71.4	262	ug/kg	1	AXC2	07/08/09	1248	882479	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	6.76	0.334	1.11	mg/kg	1	VH1	07/15/09	1036	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9951	Project:	LANL01004
Sample ID:	232744006	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.2%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.3C	H	9.44	0.010	0.100	SU	1	RXG2 07/06/09	1219	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	70.1	258	ug/kg	1	AXC2 07/08/09	1249	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	Hh	2.04	0.334	1.11	mg/kg	1	VH1 07/15/09	1136	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID: CAMO-09-10031
Sample ID: 232744007
Matrix: R
Collect Date: 29-JUN-09 12:00
Receive Date: 02-JUL-09
Collector: Client
Moisture: 11.3%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.3C	H	9.89	0.010	0.100	SU	1	RXG2	07/06/09	1220	882616	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND	67.2	247	ug/kg	1	AXC2	07/08/09	1249	882479	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	Hh	1.72	0.338	1.13	mg/kg	1	VH1	07/15/09	1156	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2525-1

Client Sample ID:	CAMO-09-9990	Project:	LANL01004
Sample ID:	232744008	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	19.6%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.1C	H	6.62	0.010	0.100	SU	1	RXG2 07/06/09	1221	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	J	236	81.4	299	ug/kg	1	AXC2 07/08/09	1250	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.373	1.24	mg/kg	1	VH1 07/15/09	1217	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

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QC Summary

Report Date: July 17, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232744

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis											
Batch 882616											
QC1201874570 232744001 DUP											
pH		H	8.03	H	8.06	SU	0.373		(0%-10%)	RXG2	07/06/09 12:10
QC1201874571 232760004 DUP											
pH		H	8.18	H	8.23	SU	0.609		(0%-10%)		07/06/09 12:40
QC1201874572 LCS											
pH	7.00				7.05	SU		101	(95%-105%)		07/06/09 12:05
Flow Injection Analysis											
Batch 882479											
QC1201874275 232744001 DUP											
Cyanide, Total		J	110	J	110	ug/kg	N/A ^		(+/-285)	AXC2	07/08/09 12:36
QC1201874276 232744002 DUP											
Cyanide, Total		J	98.3	U	ND	ug/kg	N/A ^		(+/-254)		07/08/09 12:40
QC1201874281 LCS											
Cyanide, Total	174000				165000	ug/kg		94.8	(46%-145%)		07/08/09 12:34
QC1201874274 MB											
Cyanide, Total				U	250	ug/kg					07/08/09 12:34
QC1201874277 232744001 MS											
Cyanide, Total	5290	J	110		4940	ug/kg		91.3	(50%-130%)		07/08/09 12:37
QC1201874278 232744002 MS											
Cyanide, Total	5380	J	98.3		5200	ug/kg		95	(50%-130%)		07/08/09 12:41
QC1201874279 232744001 MSD											
Cyanide, Total	5820	J	110		5510	ug/kg	10.9	92.8	(0%-30%)		07/08/09 12:38
QC1201874280 232744002 MSD											
Cyanide, Total	5480	J	98.3		5200	ug/kg	0.0405	93.1	(0%-30%)		07/08/09 12:41
Ion Chromatography											
Batch 882333											
QC1201873913 232744001 DUP											
Nitrate-N		Hh	12.8	Hh	12.5	mg/kg	2.24		(0%-20%)	VH1	07/15/09 08:36
QC1201873914 232760004 DUP											
Nitrate-N		Hh	1.21	Hh	1.33	mg/kg	9.36 ^		(+/-1.18)		07/15/09 15:37
QC1201873919 LCS											
Nitrate-N	50.0				47.7	mg/kg		95.5	(90%-110%)		07/15/09 07:55
QC1201873912 MB											
Nitrate-N				U	1.00	mg/kg					07/15/09 07:35
QC1201873915 232744001 MS											
Nitrate-N	58.2	Hh	12.8	Hh	73.4	mg/kg		104	(90%-110%)		07/15/09 08:56
QC1201873916 232760004 MS											
Nitrate-N	58.8	Hh	1.21	Hh	60.8	mg/kg		101	(90%-110%)		07/15/09 15:58
QC1201873917 232744001 MSD											
Nitrate-N	58.2	Hh	12.8	Hh	73.2	mg/kg	0.246	104	(0%-20%)		07/15/09 09:16
QC1201873918 232760004 MSD											
Nitrate-N	58.8	Hh	1.21	Hh	60.8	mg/kg	0.089	101	(0%-20%)		07/15/09 16:18

QC Summary

Workorder: 232744

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

QC Summary

Workorder: 232744

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 17-JUL-2009 15:57

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2525-1**

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**08-JUL-2009 12:28:31**	**OM_7-8-2009_12-20-35**	**148**	**150**	**99**	**(90%-110%)**	**Yes**
CCV	08-JUL-2009 12:42:48	OM_7-8-2009_12-20-35	105	100	105	(90%-110%)	Yes
CCV	08-JUL-2009 12:55:14	OM_7-8-2009_12-20-35	104	100	104	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**08-JUL-2009 12:30:21**	**OM_7-8-2009_12-20-35**	**-0.666**	**5**	**Yes**
CCB	08-JUL-2009 12:44:38	OM_7-8-2009_12-20-35	-0.647	5	Yes
CCB	08-JUL-2009 12:57:05	OM_7-8-2009_12-20-35	-2.21	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 17-JUL-2009 15:57

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2525-1**

Ion Chromatography

Method: EPA 300.0 Concentration Units:mg/L

Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**14-JUL-2009 18:52:00**	**090714**	**4.7547**	**5**	**95**	**(90%-110%)**	**Yes**
CCV	15-JUL-2009 06:55:00	090714	4.7576	5	95	(90%-110%)	Yes
CCV	15-JUL-2009 10:56:00	090714	7.3682	7.5	98	(90%-110%)	Yes
CCV	15-JUL-2009 14:57:00	090714	4.7521	5	95	(90%-110%)	Yes
CCV	15-JUL-2009 16:38:00	090714	7.4003	7.5	99	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**14-JUL-2009 19:12:00**	**090714**	**0**	**0.1**	**Yes**
CCB	15-JUL-2009 07:15:00	090714	0	0.1	Yes
CCB	15-JUL-2009 11:16:00	090714	0	0.1	Yes
CCB	15-JUL-2009 15:17:00	090714	0	0.1	Yes
CCB	15-JUL-2009 16:58:00	090714	0	0.1	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 882478

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201874281	URF071009-01	.25	g
MS	1201874277	URF1091135-02	.025	mL
MS	1201874278	URF1091135-02	.025	mL
MSD	1201874279	URF1091135-02	.025	mL
MSD	1201874280	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201874274		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.5 g	25 mL	50	SOIL
LCS	1201874281		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.25 g	25 mL	100	SOIL
SAMPLE	232744001		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.51 g	25 mL	49.01961	SOIL
DUP	1201874275	232744001	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.51 g	25 mL	49.01961	SOIL
MS	1201874277	232744001	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.55 g	25 mL	45.45455	SOIL
MSD	1201874279	232744001	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232744002		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.56 g	25 mL	44.64286	SOIL
DUP	1201874276	232744002	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.55 g	25 mL	45.45455	SOIL
MS	1201874278	232744002	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.52 g	25 mL	48.07692	SOIL
MSD	1201874280	232744002	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232744003		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232744004		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232744005		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232744006		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232744007		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232744008		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232754001		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232754002		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232754003		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232760001		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232760002		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232760003		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232760004		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.57 g	25 mL	43.85965	SOIL

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090707-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep

Comments

Prep LogBook

1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/8/2009 12:21:21	OM_7-8-2009_12-20-35
150 ppb		1	axc2	7/8/2009 12:22:13	OM_7-8-2009_12-20-35
100 ppb		1	axc2	7/8/2009 12:23:05	OM_7-8-2009_12-20-35
50 ppb		1	axc2	7/8/2009 12:23:58	OM_7-8-2009_12-20-35
10 ppb		1	axc2	7/8/2009 12:24:52	OM_7-8-2009_12-20-35
CRDL 5.0 ppb		1	axc2	7/8/2009 12:25:45	OM_7-8-2009_12-20-35
ICAL-00		1	axc2	7/8/2009 12:26:40	OM_7-8-2009_12-20-35
ICV		1	axc2	7/8/2009 12:28:31	OM_7-8-2009_12-20-35
ICB		1	axc2	7/8/2009 12:30:21	OM_7-8-2009_12-20-35
CRDL		1	axc2	7/8/2009 12:32:11	OM_7-8-2009_12-20-35
1201874274	882479	1	axc2	7/8/2009 12:34:01	OM_7-8-2009_12-20-35
1201874281	882479	50	axc2	7/8/2009 12:34:54	OM_7-8-2009_12-20-35
232744001	882479	1	axc2	7/8/2009 12:35:47	OM_7-8-2009_12-20-35
1201874275	882479	1	axc2	7/8/2009 12:36:40	OM_7-8-2009_12-20-35
1201874277	882479	1	axc2	7/8/2009 12:37:33	OM_7-8-2009_12-20-35
1201874279	882479	1	axc2	7/8/2009 12:38:25	OM_7-8-2009_12-20-35
232744002	882479	1	axc2	7/8/2009 12:39:19	OM_7-8-2009_12-20-35
1201874276	882479	1	axc2	7/8/2009 12:40:11	OM_7-8-2009_12-20-35
1201874278	882479	1	axc2	7/8/2009 12:41:03	OM_7-8-2009_12-20-35
1201874280	882479	1	axc2	7/8/2009 12:41:56	OM_7-8-2009_12-20-35
CCV		1	axc2	7/8/2009 12:42:48	OM_7-8-2009_12-20-35
CCB		1	axc2	7/8/2009 12:44:38	OM_7-8-2009_12-20-35
232744003	882479	1	axc2	7/8/2009 12:46:27	OM_7-8-2009_12-20-35
232744004	882479	1	axc2	7/8/2009 12:47:19	OM_7-8-2009_12-20-35
232744005	882479	1	axc2	7/8/2009 12:48:11	OM_7-8-2009_12-20-35
232744006	882479	1	axc2	7/8/2009 12:49:02	OM_7-8-2009_12-20-35
232744007	882479	1	axc2	7/8/2009 12:49:54	OM_7-8-2009_12-20-35
232744008	882479	1	axc2	7/8/2009 12:50:48	OM_7-8-2009_12-20-35
232754001	882479	1	axc2	7/8/2009 12:51:41	OM_7-8-2009_12-20-35
232754002	882479	1	axc2	7/8/2009 12:52:35	OM_7-8-2009_12-20-35
232754003	882479	1	axc2	7/8/2009 12:53:28	OM_7-8-2009_12-20-35
232760001	882479	1	axc2	7/8/2009 12:54:21	OM_7-8-2009_12-20-35
CCV		1	axc2	7/8/2009 12:55:14	OM_7-8-2009_12-20-35
CCB		1	axc2	7/8/2009 12:57:05	OM_7-8-2009_12-20-35
232760002	882479	1	axc2	7/8/2009 12:58:54	OM_7-8-2009_12-20-35
232760003	882479	1	axc2	7/8/2009 12:59:46	OM_7-8-2009_12-20-35
232760004	882479	1	axc2	7/8/2009 13:00:39	OM_7-8-2009_12-20-35
CCV		1	axc2	7/8/2009 13:01:32	OM_7-8-2009_12-20-35
CCB		1	axc2	7/8/2009 13:03:22	OM_7-8-2009_12-20-35

Author: axc2 Date : 7/8/2009

Original Run Filename: OM_7-8-2009_12-20-35.OMN created 7/8/2009 12:20:35
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-8-2009_12-20-35.OMN last modified 7/8/2009 13:04:26
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090708-01	1	S1	200	9.02	7/8/2009@12:21:21			200 ppb
WCN090708-02	1	S2	150	6.78	7/8/2009@12:22:13			150 ppb
WCN090708-03	1	S3	100	4.55	7/8/2009@12:23:05			100 ppb
WCN090708-04	1	S4	50.0	2.29	7/8/2009@12:23:58			50 ppb
WCN090708-05	1	S5	10.0	0.523	7/8/2009@12:24:52			10 ppb
WCN090708-06	1	S6	5.00	0.323	7/8/2009@12:25:45			CRDL 5.0 ppb
WCN090708-08	1	S7	0.00	0.0495	7/8/2009@12:26:40			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99999 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090708-07	1	S8	148	6.70	7/8/2009@12:28:31			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-1.2 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-1.2 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090708-08	1	S7	-0.666	0.0411	7/8/2009@12:30:21			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.666 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.666 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090708-06	1	S6	5.68	0.325	7/8/2009@12:32:11			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	5.68 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	5.68 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201874274|882479|MB	1	1	0.115	0.0761	7/8/2009@12:34:01			
1201874281||LCS	1	2	33.0	1.55	7/8/2009@12:34:54		50.00	
232744001	1	3	1.93	0.157	7/8/2009@12:35:47			
1201874275||DUP	1	4	1.92	0.157	7/8/2009@12:36:40			
1201874277||MS	1	5	93.4	4.25	7/8/2009@12:37:33			
1201874279||MSD	1	6	94.7	4.31	7/8/2009@12:38:25			
232744002	1	7	1.97	0.159	7/8/2009@12:39:19			
1201874276||DUP	1	8	0.574	0.0966	7/8/2009@12:40:11			
1201874278||MS	1	9	96.8	4.40	7/8/2009@12:41:03			
1201874280||MSD	1	10	94.9	4.32	7/8/2009@12:41:56			
WCN090708-03	1	S3	105	4.76	7/8/2009@12:42:48			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	4.7 < 10.0					

		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090708-08	1	S7	-0.647	0.0420	7/8/2009@12:44:38			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.647 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.647 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232744003	1	11	0.229	0.0812	7/8/2009@12:46:27			
232744004	1	12	1.72	0.148	7/8/2009@12:47:19			
232744005	1	13	0.877	0.110	7/8/2009@12:48:11			
232744006	1	14	0.365	0.0873	7/8/2009@12:49:02			
232744007	1	15	0.876	0.110	7/8/2009@12:49:54			
232744008	1	16	3.94	0.247	7/8/2009@12:50:48			
232754001	1	17	0.817	0.108	7/8/2009@12:51:41			
232754002	1	18	0.626	0.0990	7/8/2009@12:52:35			
232754003	1	19	-2.27	-0.0305	7/8/2009@12:53:28			
232760001	1	20	71.2	3.26	7/8/2009@12:54:21			
WCN090708-03	1	S3	104	4.74	7/8/2009@12:55:14			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	4.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	4.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090708-08	1	S7	-2.21	-0.0279	7/8/2009@12:57:05			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-2.21 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-2.21 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232760002	1	21	0.499	0.0932	7/8/2009@12:58:54			
232760003	1	22	1.92	0.157	7/8/2009@12:59:46			
232760004	1	23	0.972	0.114	7/8/2009@13:00:39			
WCN090708-03	1	S3	104	4.71	7/8/2009@13:01:32			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	3.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	3.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090708-08	1	S7	-0.810	0.0347	7/8/2009@13:03:22			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.810 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.810 > -5.00					
		Message	CCB Passed					

Author: axc2

Date : 7/8/2009

Action	Continue

Analyte Properties Table for OM_7-8-2009_12-20-35.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

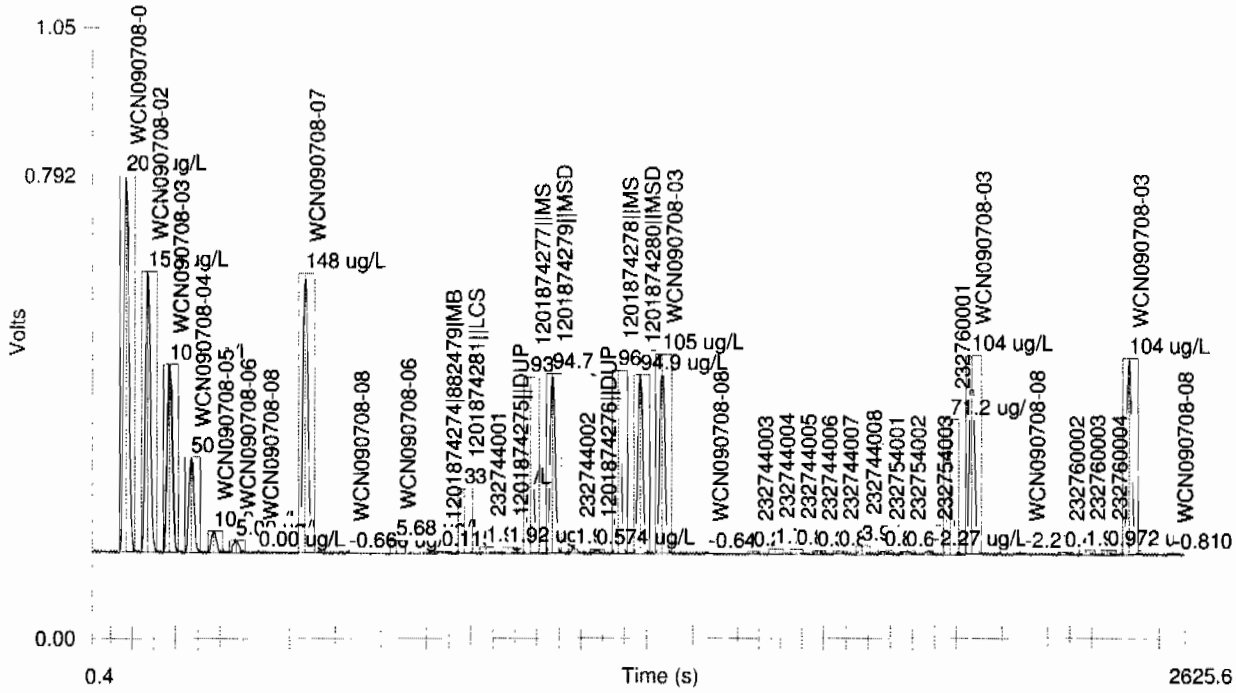

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	9.02	0.644	-0.1	7/8/2009	12:22:23
2	150	1	6.78	0.482	0.1	7/8/2009	12:23:16
3	100	1	4.55	0.324	-0.1	7/8/2009	12:24:08
4	50.0	1	2.29	0.164	0.6	7/8/2009	12:25:01
5	10.0	1	0.523	0.0360	-0.9	7/8/2009	12:25:55
6	5.00	1	0.323	0.0207	-9.6	7/8/2009	12:26:48
7	0.00	1	0.0495	0.00251		7/8/2009	12:27:43

Author: axc2

Date : 7/8/2009

Figure 1: TCYANIDE

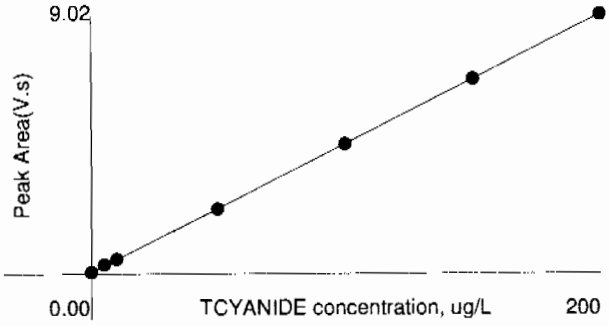

Area = 0.0447 * Conc + 0.0710
Conc = 22.4 * Area - 1.59
Correlation Coefficient (r) = 0.99999

No Weighting

Ion Chromatography

Prep LogBook

Analyst: VH1 Verified by:_____

Batch: 882332

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873919	UIC090627SPK	.8	mL
MS	1201873915	UIC090627SPK	.8	mL
MS	1201873916	UIC090627SPK	.8	mL
MSD	1201873917	UIC090627SPK	.8	mL
MSD	1201873918	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873912		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
LCS	1201873919		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744001		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
DUP	1201873913	232744001	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
MS	1201873915	232744001	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
MSD	1201873917	232744001	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744002		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744003		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744004		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744005		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744006		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744007		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744008		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232754001		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232754002		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232754003		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232760001		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232760002		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232760003		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232760004		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
DUP	1201873914	232760004	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
MS	1201873916	232760004	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
MSD	1201873918	232760004	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL

Comments

This is runlog for Sequence 090715.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	06/30/09 19:42		1	090715	VXP1
ICAL-06	06/30/09 20:02		1	090715	VXP1
ICAL-05	06/30/09 20:22		1	090715	VXP1
ICAL-04	06/30/09 20:42		1	090715	VXP1
ICAL-03	06/30/09 21:02		1	090715	VXP1
ICAL-02	06/30/09 21:22		1	090715	VXP1
ICAL-01	06/30/09 21:42		1	090715	VXP1

1 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 19:42	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

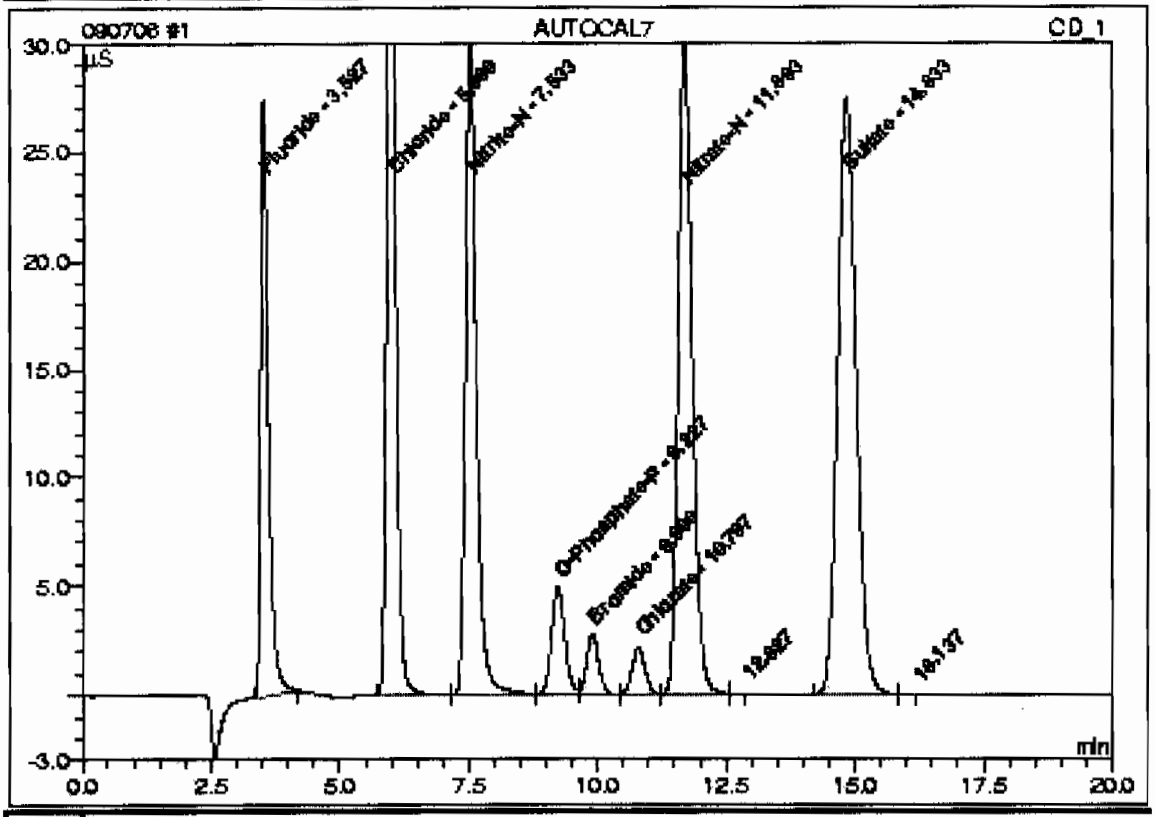

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	10.0000	10.0290		4.70541	10.63
2	5.99	Chloride	20.0000	20.2274		8.18440	18.48
3	7.53	Nitrite-N	10.0000	10.0334		7.46332	16.85
4	9.23	O-Phosphate-P	5.0000	5.0371		1.46230	3.30
5	9.90	Bromide	5.0000	4.9955		0.77503	1.75
6	10.80	Chlorate	5.0000	4.9979		0.66949	1.51
7	11.69	Nitrate-N	10.0000	10.0918		9.57545	21.62
9	14.83	Sulfate	40.0000	40.3084		11.43839	25.83
Total:				105.7205	0.000	44.274	99.99

2 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	063009AN	*Sample Amount:*	1.0000
Recording Time:	6/30/09 20:02	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9058

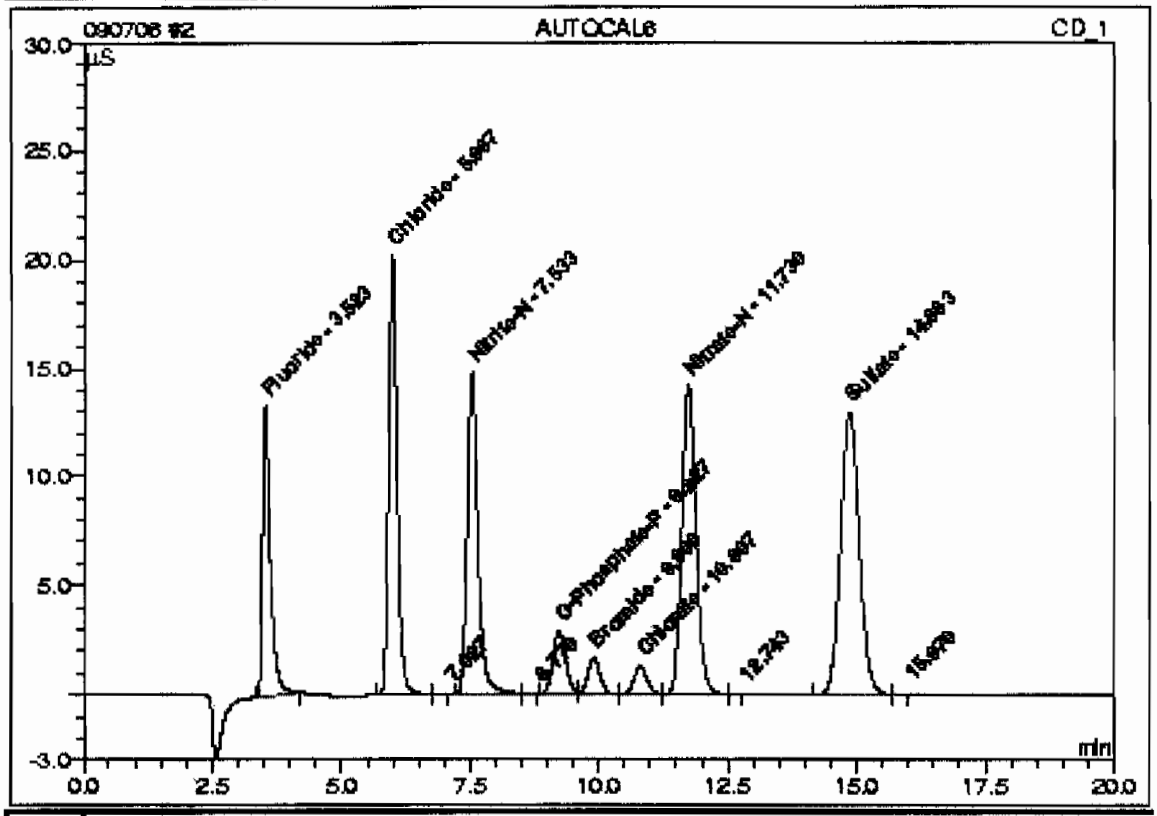

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.52	Fluoride	5.0000	4.9461		2.31918	10.74
2	5.99	Chloride	10.0000	9.5640		3.85172	17.84
4	7.53	Nitrite-N	5.0000	4.9418		3.65982	16.95
6	9.23	O-Phosphate-P	3.0000	2.9818		0.85705	3.97
7	9.90	Bromide	3.0000	3.0006		0.46409	2.15
8	10.81	Chlorate	3.0000	2.9896		0.39862	1.85
9	11.73	Nitrate-N	5.0000	4.8266		4.54600	21.06
11	14.88	Sulfate	20.0000	19.4192		5.47575	25.37
Total:				52.6698	0.000	21.572	99.93

3 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 20:22	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

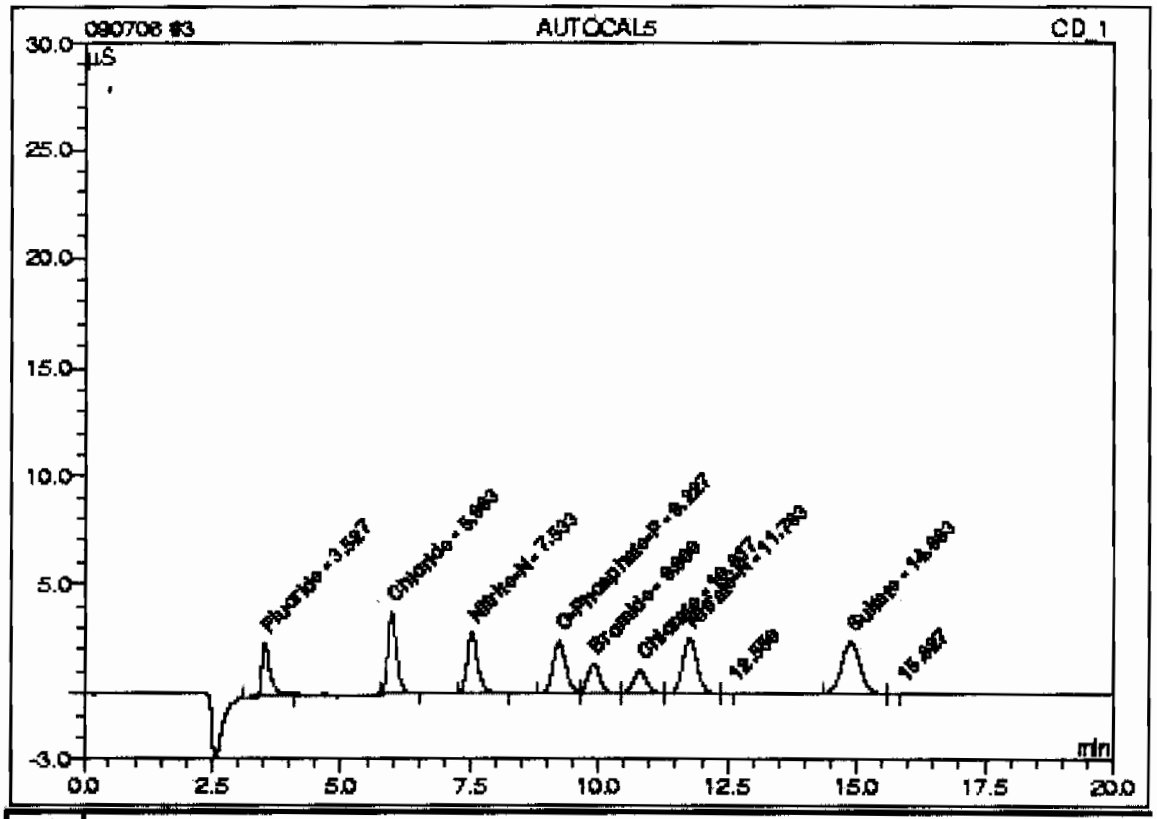

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	1.0000	0.9787		0.45662	8.88
2	5.98	Chloride	2.0000	1.8626		0.72253	14.04
3	7.53	Nitrite-N	1.0000	0.9576		0.68352	13.29
4	9.23	O-Phosphate-P	2.5000	2.4714		0.70675	13.74
5	9.90	Bromide	2.5000	2.5192		0.38906	7.56
6	10.82	Chlorate	2.5000	2.5356		0.33738	6.56
7	11.76	Nitrate-N	1.0000	0.9396		0.83307	16.19
9	14.88	Sulfate	4.0000	3.7893		1.01432	19.72
Total:				16.0539	0.000	5.143	99.97

4 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	063009AN	*Sample Amount:*	1.0000
Recording Time:	6/30/09 20:42	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

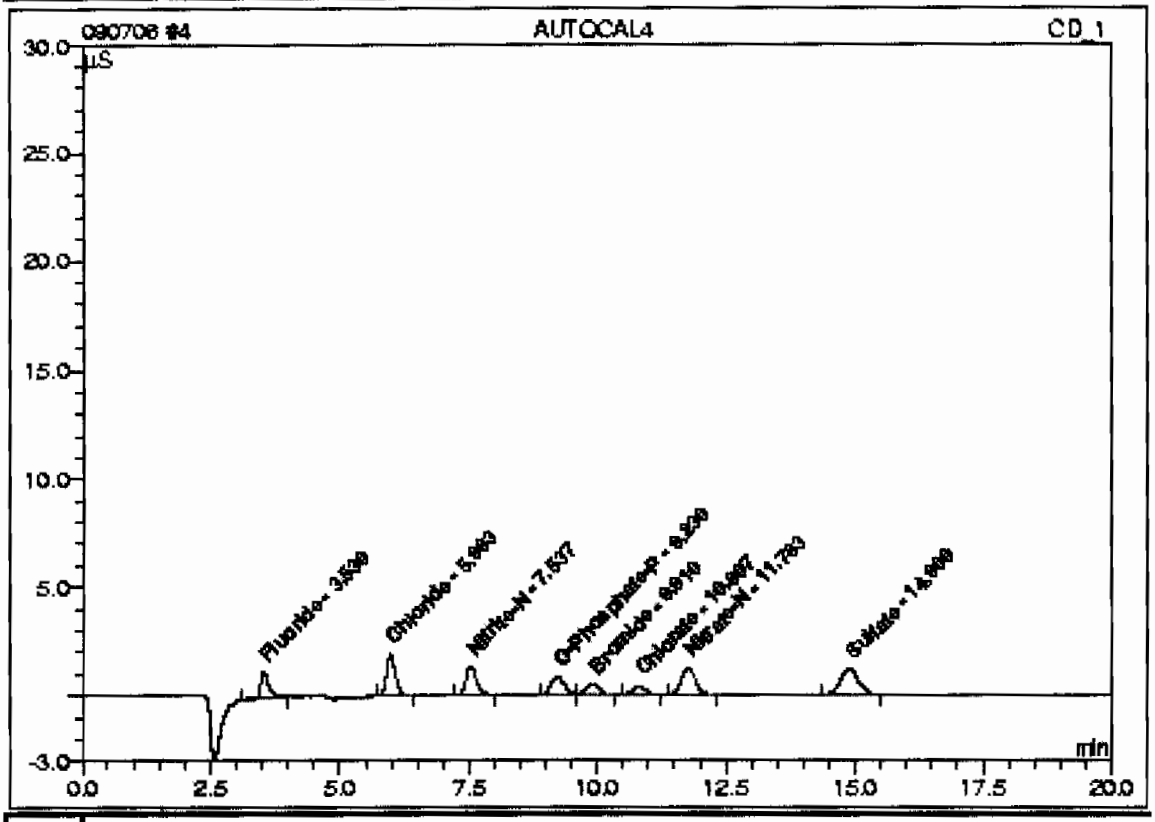

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	0.5000	0.4955		0.22978	9.69
2	5.98	Chloride	1.0000	1.0095		0.37591	15.86
3	7.54	Nitrite-N	0.5000	0.4874		0.33229	14.02
4	9.23	O-Phosphate-P	1.0000	0.9461		0.25757	10.87
5	9.91	Bromide	1.0000	0.9755		0.14843	6.26
6	10.81	Chlorate	1.0000	0.9637		0.12536	5.29
7	11.76	Nitrate-N	0.5000	0.4932		0.40672	17.16
8	14.90	Sulfate	2.0000	1.9684		0.49456	20.86
Total:				7.3992	0.000	2.371	100.00

5 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 21:02	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

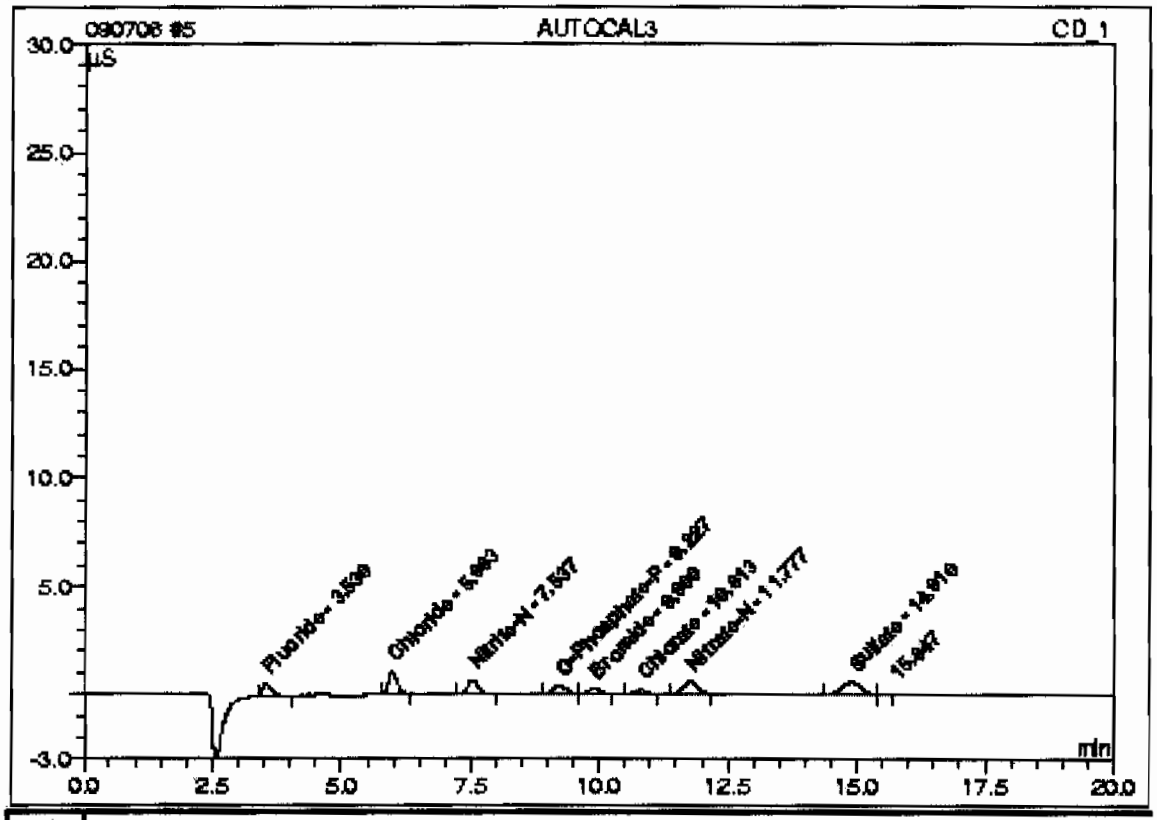

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	0.2500	0.2433		0.11138	9.33
2	5.98	Chloride	0.5000	0.5957		0.20375	17.06
3	7.54	Nitrite-N	0.2500	0.2628		0.16454	13.78
4	9.23	O-Phosphate-P	0.5000	0.4857		0.12199	10.21
5	9.90	Bromide	0.5000	0.5002		0.07435	6.23
6	10.81	Chlorate	0.5000	0.4782		0.05988	5.01
7	11.78	Nitrate-N	0.2500	0.2812		0.20417	17.09
8	14.91	Sulfate	1.0000	1.1205		0.25254	21.14
Total:				3.9576	0.000	1.193	99.85

6 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	14	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 21:22	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

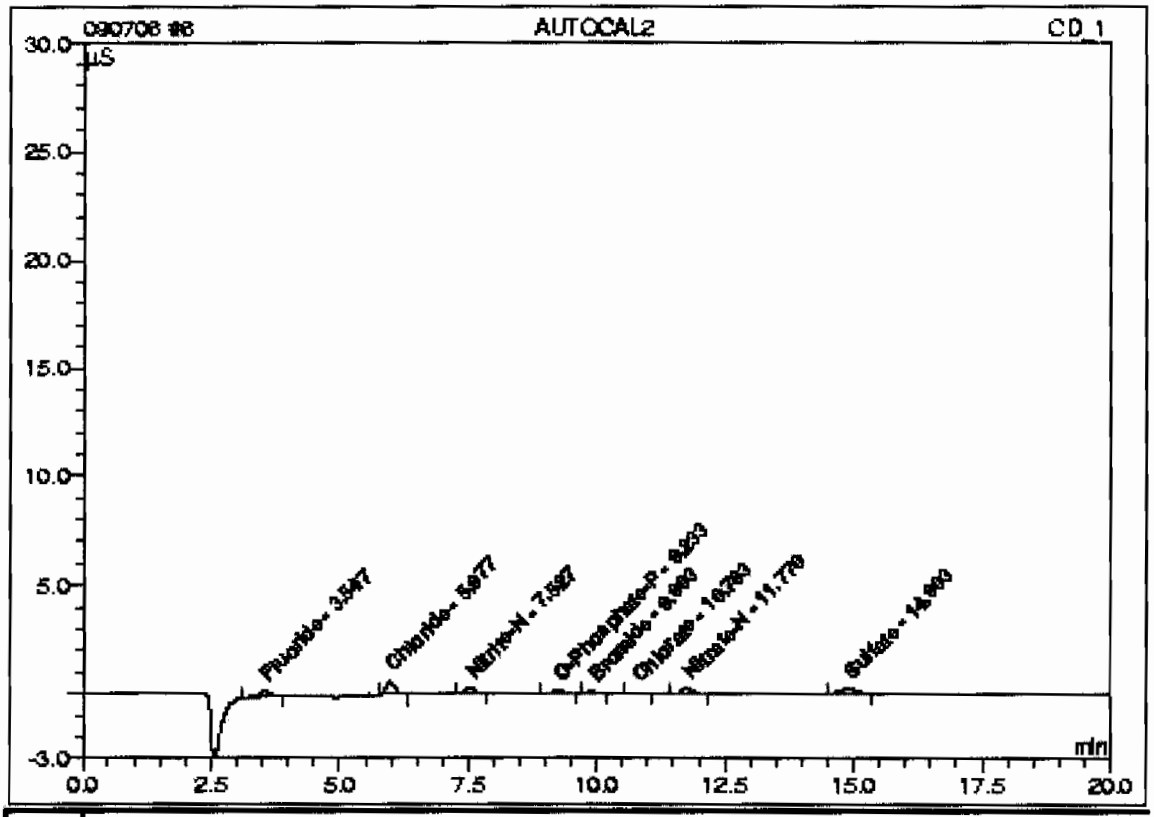

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.55	Fluoride	0.1000	0.1514		0.06822	13.57
2	5.98	Chloride	0.2000	0.3665		0.11464	22.81
3	7.53	Nitrite-N	0.1000	0.1244		0.06109	12.15
4	9.23	O-Phosphate-P	0.2000	0.2064		0.03974	7.91
5	9.90	Bromide	0.2000	0.1857		0.02533	5.04
6	10.78	Chlorate	0.2000	0.2009		0.02249	4.47
7	11.77	Nitrate-N	0.1000	0.1502		0.07904	15.72
8	14.90	Sulfate	0.4000	0.5585		0.09213	18.33
Total:				1.9439	0.000	0.503	100.00

7 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 21:42	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

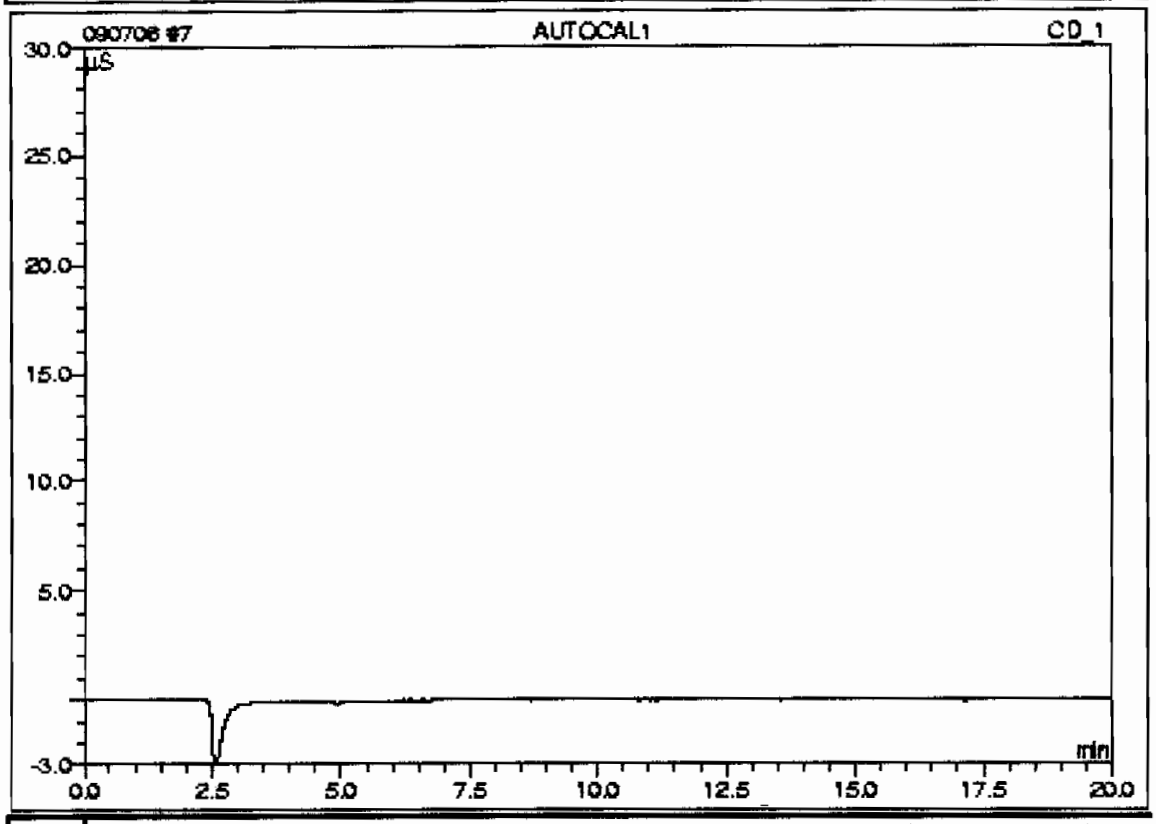

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

7 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/2009 21:42	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

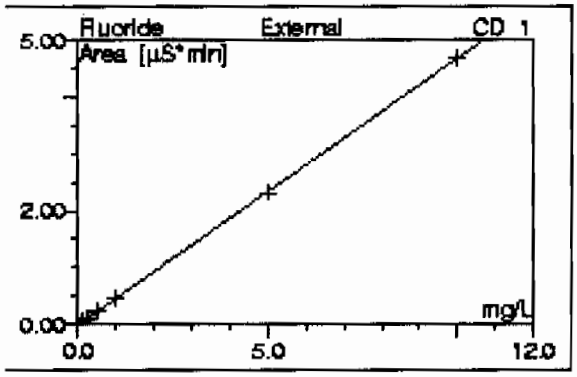

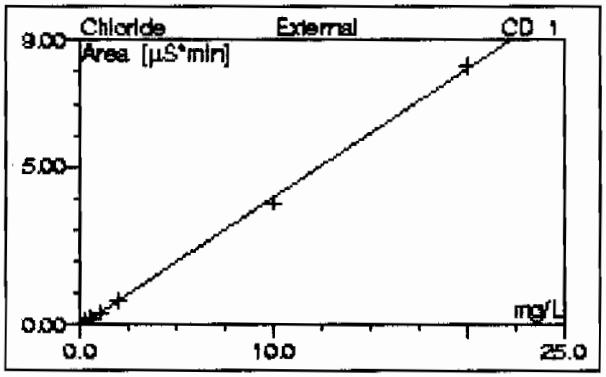

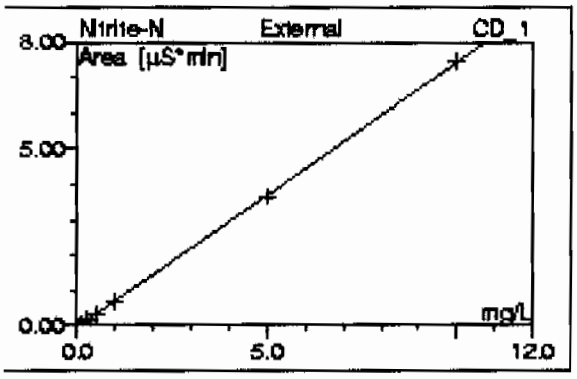

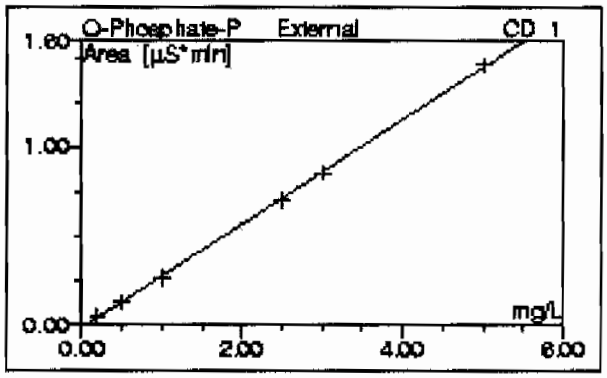

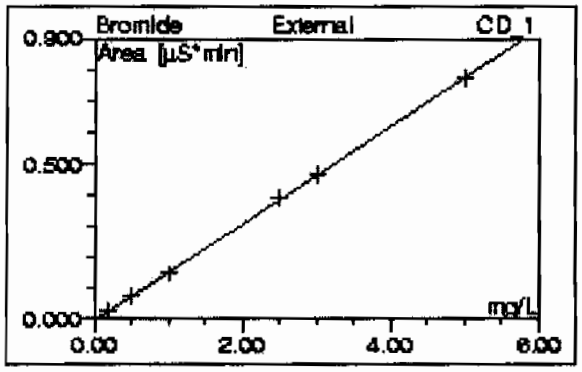

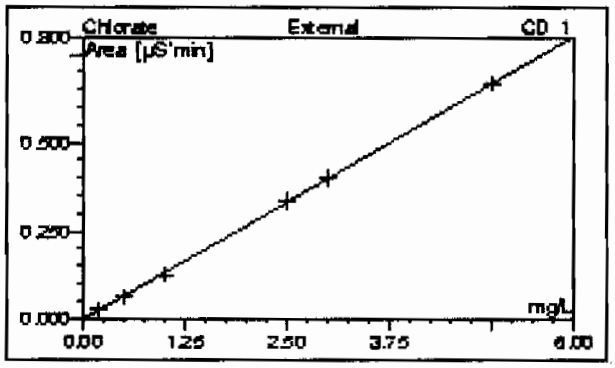

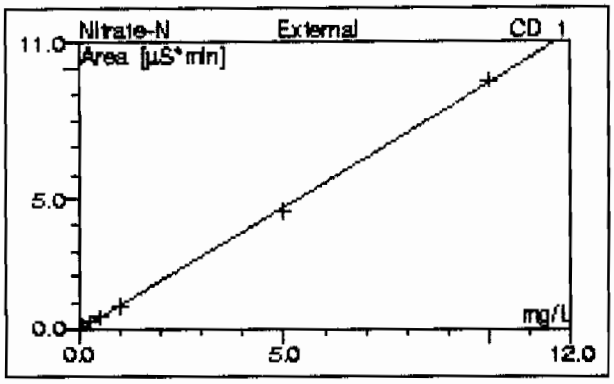

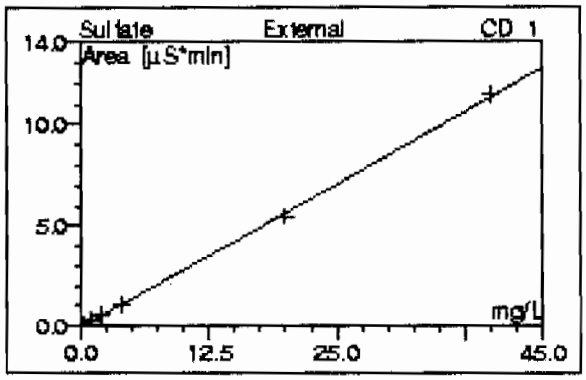

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9913	-0.0028	0.4695	0.0000
n.a.	n.a.	Chloride	0LOff	99.9067	-0.0343	0.4063	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9909	-0.0318	0.7470	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	99.9667	-0.0210	0.2945	0.0000
n.a.	n.a.	Bromide	0LOff	99.9929	-0.0036	0.1559	0.0000
n.a.	n.a.	Chlorate	0LOff	99.9812	-0.0046	0.1349	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.9425	-0.0644	0.9552	0.0000
n.a.	n.a.	Sulfate	0LOff	99.9592	-0.0673	0.2854	0.0000
Average:				99.9664	-0.0287	0.4311	0.0000

This is runlog for Sequence 090630.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	06/30/09 18:41		1	090630	VH1
BLK	06/30/09 19:22		1	090630	VH1
ICAL-07	06/30/09 19:42		1	090630	VXP1
ICAL-06	06/30/09 20:02		1	090630	VXP1
ICAL-05	06/30/09 20:22		1	090630	VXP1
ICAL-04	06/30/09 20:42		1	090630	VXP1
ICAL-03	06/30/09 21:02		1	090630	VXP1
ICAL-02	06/30/09 21:22		1	090630	VXP1
ICAL-01	06/30/09 21:42		1	090630	VXP1
ICV	06/30/09 22:02		1	090630	VH1
ICB	06/30/09 22:22		1	090630	VH1
1201856494	06/30/09 22:42	874844	1	090630	VH1
1201856495	06/30/09 23:03	874844	1	090630	VH1
229136009	06/30/09 23:23	874844	1	090630	VH1
229136010	06/30/09 23:43	874844	1	090630	VH1

11 WIC090630-02ICV

Sample Name:	WIC090630-02ICV	*Injection Volume:*	50.0
Vial Number:	44	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	063009AN	*Sample Amount:*	1.0000
Recording Time:	6/30/09 22:02	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9058	

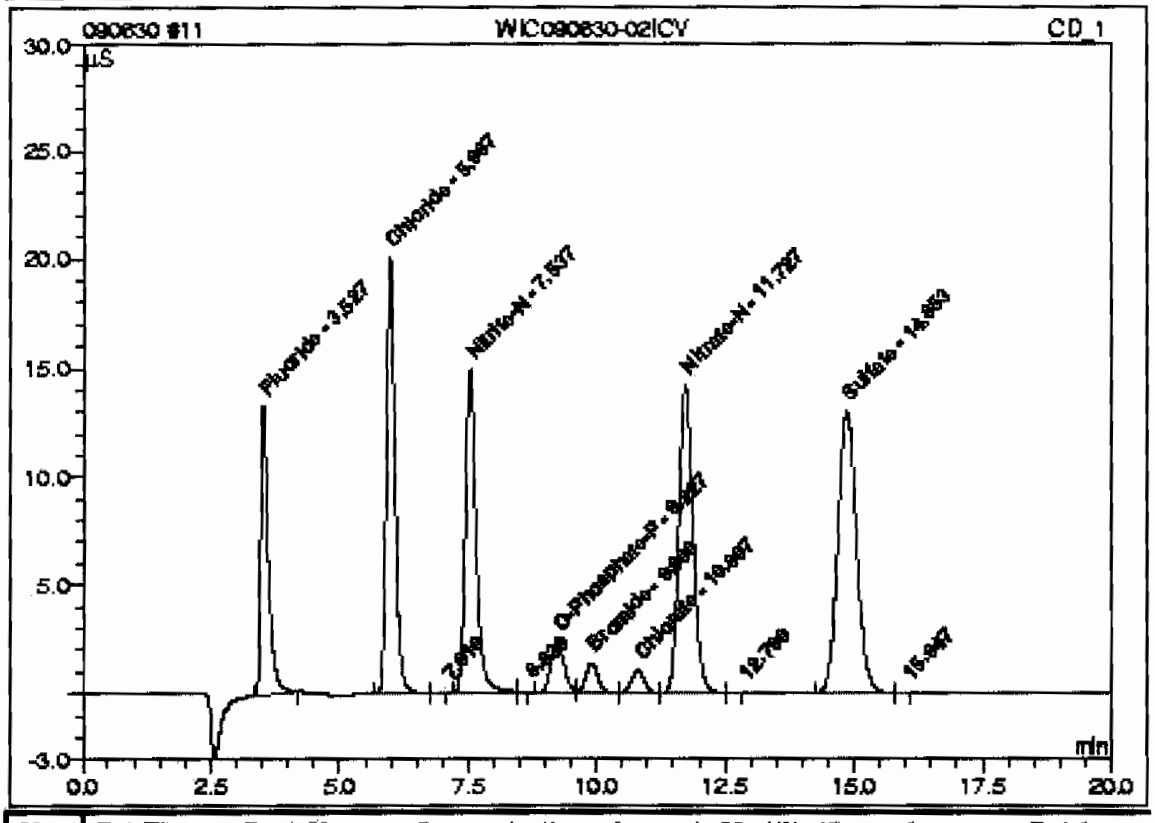

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.9400		2.31634	10.88
2	5.99	Chloride	n.a.	9.4454		3.80353	17.86
4	7.54	Nitrite-N	n.a.	4.9528		3.66803	17.22
6	9.23	O-Phosphate-P	n.a.	2.5036		0.71623	3.36
7	9.90	Bromide	n.a.	2.4864		0.38393	1.80
8	10.81	Chlorate	n.a.	2.4886		0.33105	1.55
9	11.73	Nitrate-N	n.a.	4.8499		4.56825	21.45
11	14.85	Sulfate	n.a.	19.4984		5.49836	25.82
Total:				51.1652	0.000	21.286	99.95

12 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	43	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 22:22	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE086;300;9058

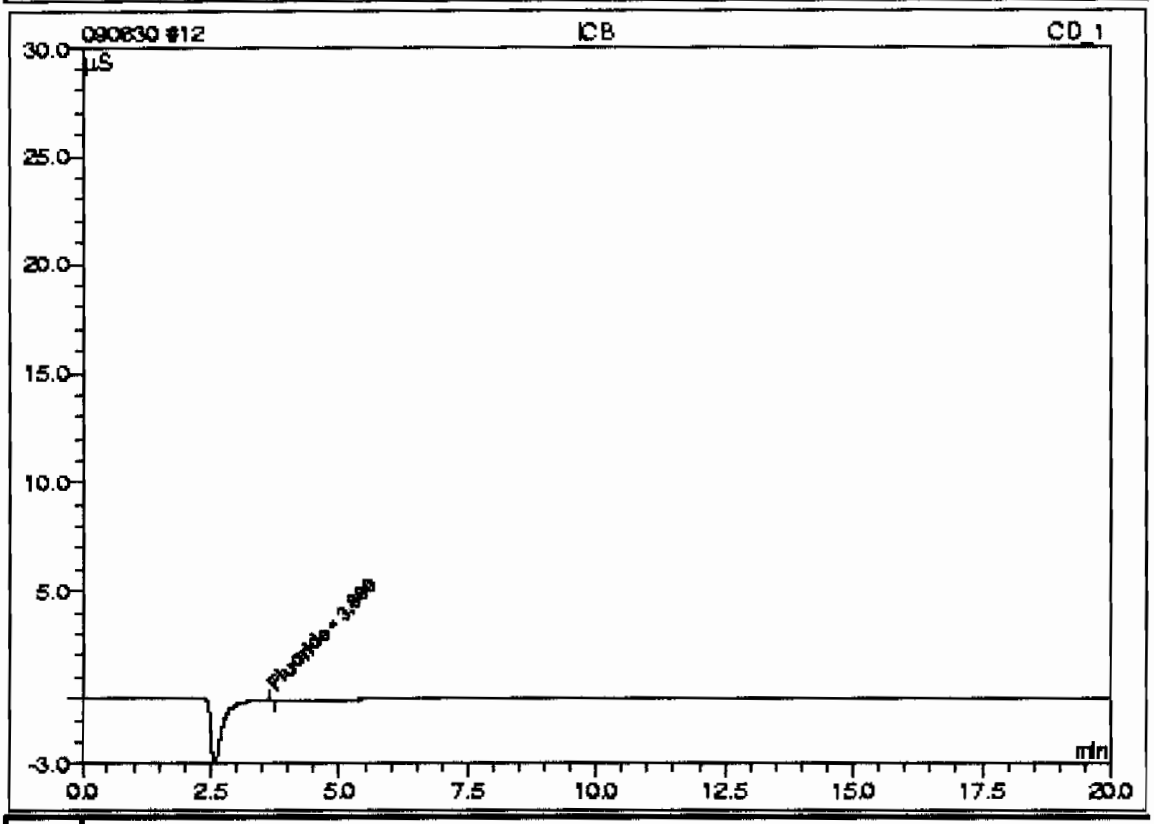

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.68	Fluoride	n.a.	0.0068		0.00036	100.00
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0068	0.000	0.000	100.00

This is runlog for Sequence 090714.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/14/09 17:51		1	090714	VH1
BLK	07/14/09 18:12		1	090714	VH1
BLK	07/14/09 18:32		1	090714	VH1
ICV	07/14/09 18:52		1	090714	VH1
ICB	07/14/09 19:12		1	090714	VH1
233300002	07/14/09 19:32	884471	2	090714	VH1
1201879009	07/14/09 19:52	884471	2	090714	VH1
1201879010	07/14/09 20:12	884471	2	090714	VH1
233300003	07/14/09 20:32	884471	10	090714	VH1
233300004	07/14/09 20:52	884471	10	090714	VH1
CVH	07/14/09 21:12		1	090714	VH1
CCB	07/14/09 21:33		1	090714	VH1
233301001	07/14/09 21:53	884472	5	090714	VH1
1201879013	07/14/09 22:13	884472	5	090714	VH1
1201879014	07/14/09 22:33	884472	5	090714	VH1
233301002	07/14/09 22:53	884472	5	090714	VH1
233301003	07/14/09 23:13	884472	5	090714	VH1
233301004	07/14/09 23:33	884472	5	090714	VH1
233301005	07/14/09 23:53	884472	10	090714	VH1

11 WIC090714-02ICV

Sample Name:	WIC090714-02ICV	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/14/09 18:52	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

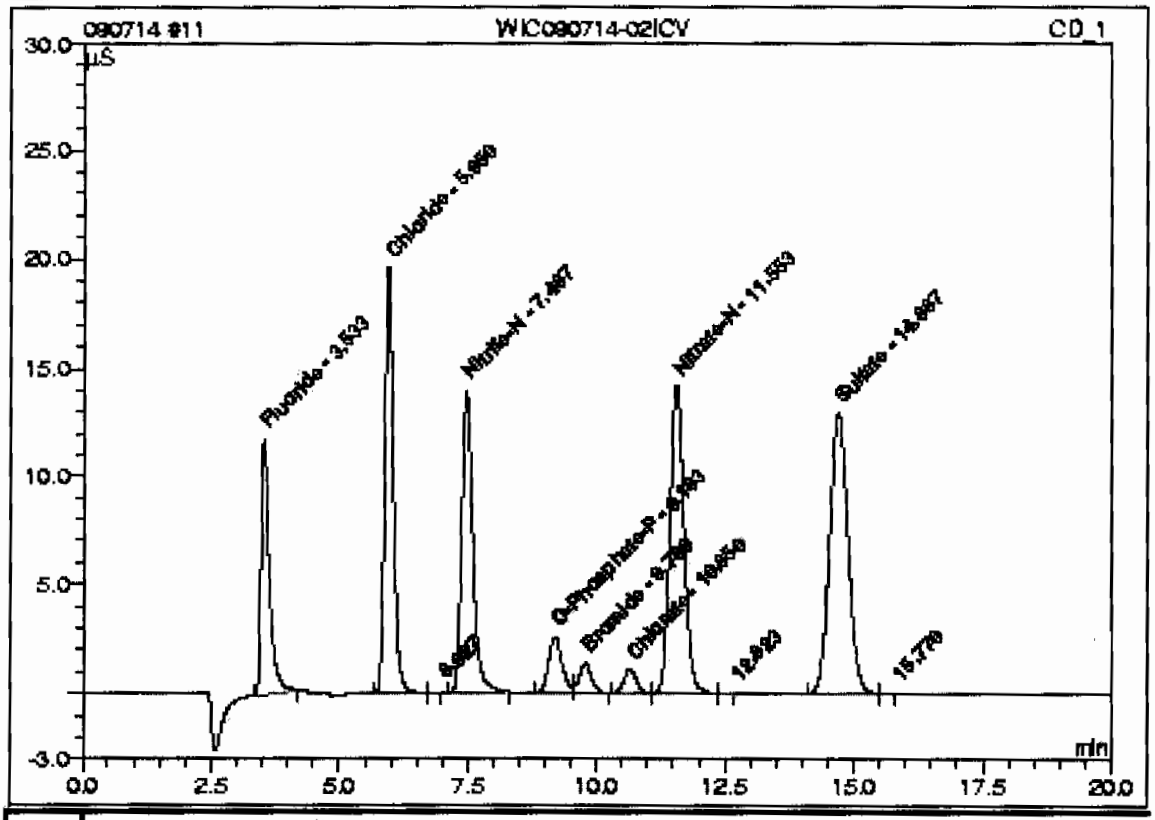

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.6836		2.19593	10.56
2	5.95	Chloride	n.a.	9.2826		3.73738	17.99
4	7.47	Nitrite-N	n.a.	4.7075		3.48480	16.76
5	9.18	O-Phosphate-P	n.a.	2.7259		0.78170	3.76
6	9.78	Bromide	n.a.	2.5763		0.39796	1.91
7	10.65	Chlorate	n.a.	2.4337		0.32364	1.56
8	11.55	Nitrate-N	n.a.	4.7547		4.47737	21.54
10	14.69	Sulfate	n.a.	19.0999		5.38461	25.90
Total:				50.2643	0.000	20.783	99.98

12 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	43	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/14/09 19:12	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

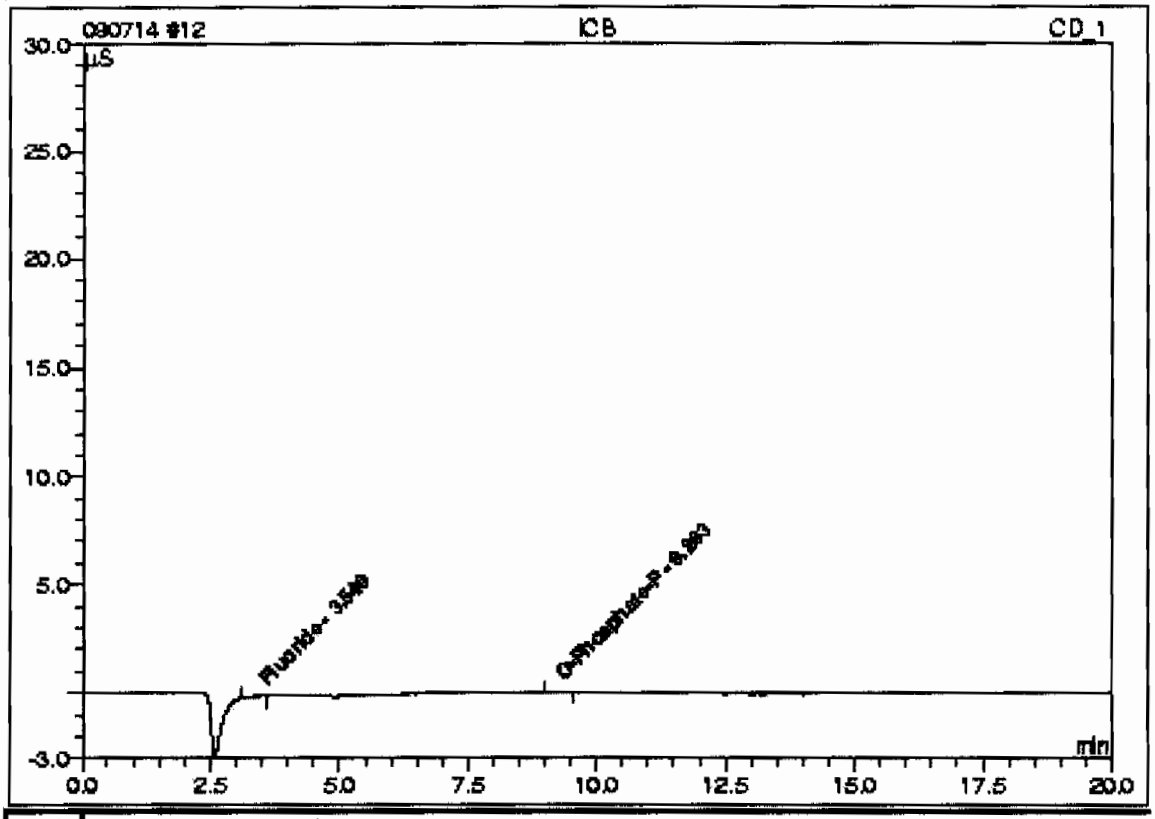

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.0258		0.00925	32.88
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
2	9.26	O-Phosphate-P	n.a.	0.1356		0.01889	67.12
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.1613	0.000	0.028	100.00

This is runlog for Sequence 090714.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
233301006	07/15/09 00:13	884472	10	090714	VH1
CCV	07/15/09 00:33		1	090714	VH1
CCB	07/15/09 00:53		1	090714	VH1
CCB	07/15/09 01:14		1	090714	VH1
CCV	07/15/09 01:34		1	090714	VH1
1201878617	07/15/09 01:54	884282	1	090714	VH1
1201878620	07/15/09 02:14	884282	1	090714	VH1
233293001	07/15/09 02:34	884282	1	090714	VH1
1201878618	07/15/09 02:54	884282	1	090714	VH1
1201878619	07/15/09 03:14	884282	1	090714	VH1
233293002	07/15/09 03:34	884282	1	090714	VH1
233293003	07/15/09 03:54	884282	1	090714	VH1
233293004	07/15/09 04:14	884282	1	090714	VH1
233293005	07/15/09 04:34	884282	1	090714	VH1
233293006	07/15/09 04:55	884282	1	090714	VH1
CVH	07/15/09 05:15		1	090714	VH1
CCB	07/15/09 05:35		1	090714	VH1
233293007	07/15/09 05:55	884282	1	090714	VH1
233293008	07/15/09 06:15	884282	1	090714	VH1
233293009	07/15/09 06:35	884282	1	090714	VH1
CCV	07/15/09 06:55		1	090714	VH1
CCB	07/15/09 07:15		1	090714	VH1
1201873912	07/15/09 07:35	882333	1	090714	VH1
1201873919	07/15/09 07:55	882333	1	090714	VH1
232744001	07/15/09 08:15	882333	1	090714	VH1
1201873913	07/15/09 08:36	882333	1	090714	VH1
1201873915	07/15/09 08:56	882333	1	090714	VH1
1201873917	07/15/09 09:16	882333	1	090714	VH1

232744002	07/15/09	09:36	882333	1	090714	VH1
232744003	07/15/09	09:56	882333	1	090714	VH1
232744004	07/15/09	10:16	882333	1	090714	VH1
232744005	07/15/09	10:36	882333	1	090714	VH1
CVH	07/15/09	10:56		1	090714	VH1
CCB	07/15/09	11:16		1	090714	VH1
232744006	07/15/09	11:36	882333	1	090714	VH1
232744007	07/15/09	11:56	882333	1	090714	VH1
232744008	07/15/09	12:17	882333	1	090714	VH1
232754001	07/15/09	12:37	882333	1	090714	VH1
232754002	07/15/09	12:57	882333	1	090714	VH1
232754003	07/15/09	13:17	882333	1	090714	VH1
232760001	07/15/09	13:37	882333	1	090714	VH1
232760002	07/15/09	13:57	882333	1	090714	VH1
232760003	07/15/09	14:17	882333	1	090714	VH1
232760004	07/15/09	14:37	882333	1	090714	VH1
CCV	07/15/09	14:57		1	090714	VH1
CCB	07/15/09	15:17		1	090714	VH1
1201873914	07/15/09	15:37	882333	1	090714	VH1
1201873916	07/15/09	15:58	882333	1	090714	VH1
1201873918	07/15/09	16:18	882333	1	090714	VH1
WIC090714-02VH	07/15/09	16:38		1	090714	VH1
WIC090714-02VH	07/15/09	16:38		1	090714	VH1
CCB	07/15/09	16:58		1	090714	VH1

47 WIC090714-02CCV

Sample Name:	WIC090714-02CCV	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 5:55	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

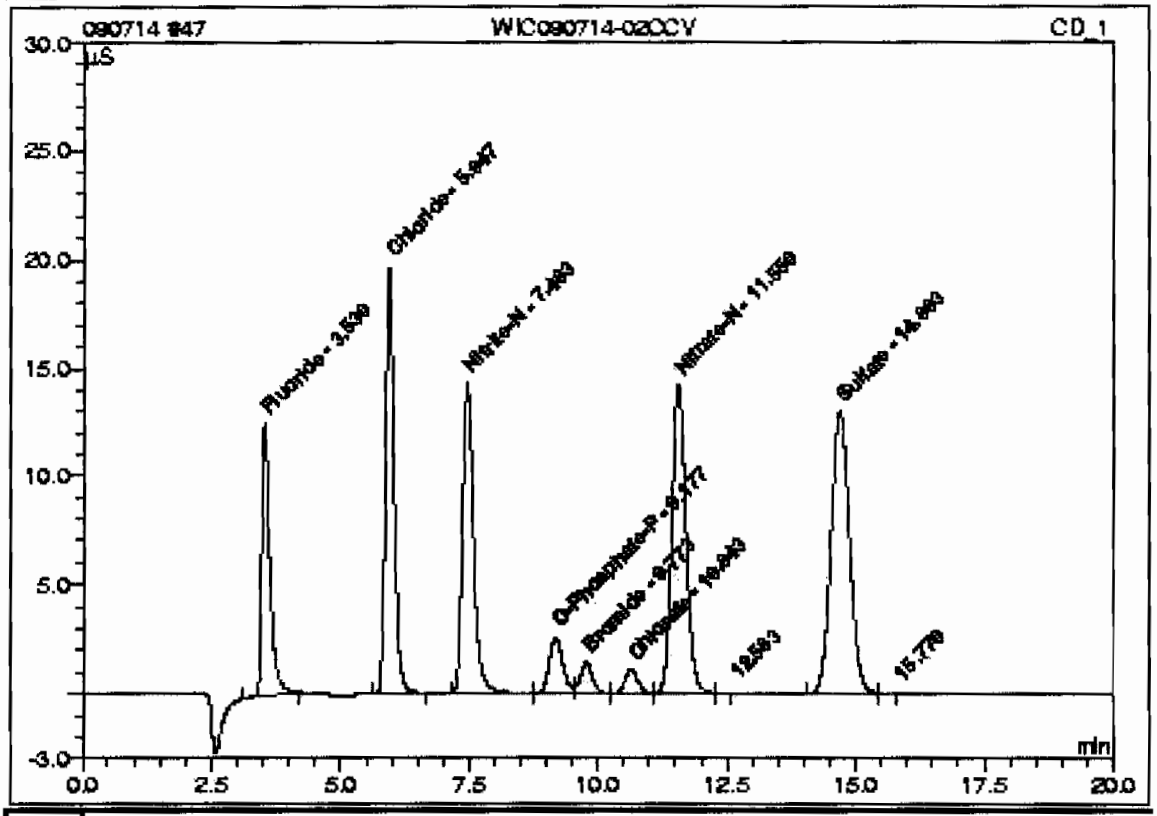

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.63	Fluoride	n.a.	4.8085		2.25457	10.74
2	5.95	Chloride	n.a.	9.2801		3.73636	17.80
3	7.46	Nitrite-N	n.a.	4.8485		3.59008	17.11
4	9.18	O-Phosphate-P	n.a.	2.7520		0.78938	3.76
5	9.77	Bromide	n.a.	2.6239		0.40536	1.93
6	10.64	Chlorate	n.a.	2.4989		0.33244	1.58
7	11.56	Nitrate-N	n.a.	4.7576		4.48010	21.35
9	14.69	Sulfate	n.a.	19.1157		5.38912	25.68
Total:				50.6851	0.000	20.977	99.96

48 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 7:15	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

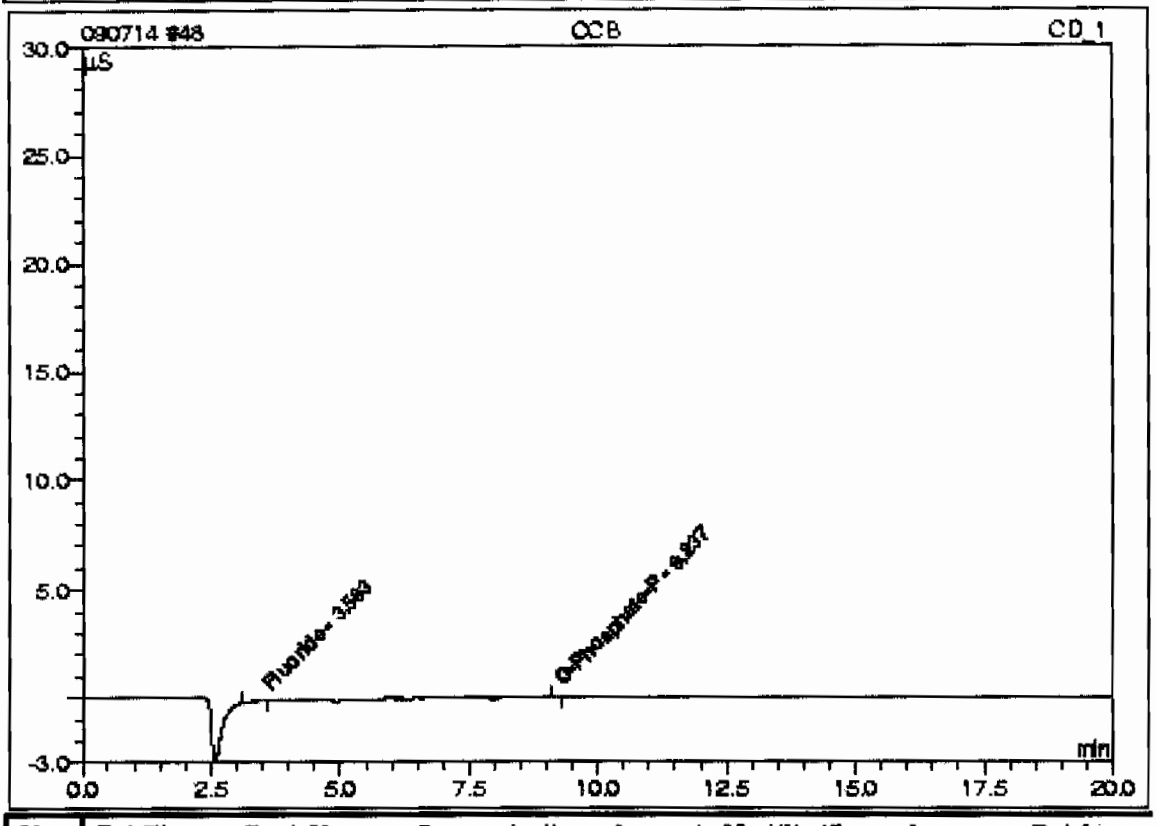

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?		Area µS*min	Rel.Area %
1	3.58	Fluoride	n.a.	0.0906			0.01150	83.79
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.		n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.		n.a.
2	9.24	O-Phosphate-P	n.a.	0.0790			0.00223	16.21
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.		n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.		n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.		n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.		n.a.
Total:				0.1095	0.000		0.014	100.00

49 1201873912/882333/1/1/MB

Sample Name:	1201873912/882333/1/1/MB	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 7:35	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

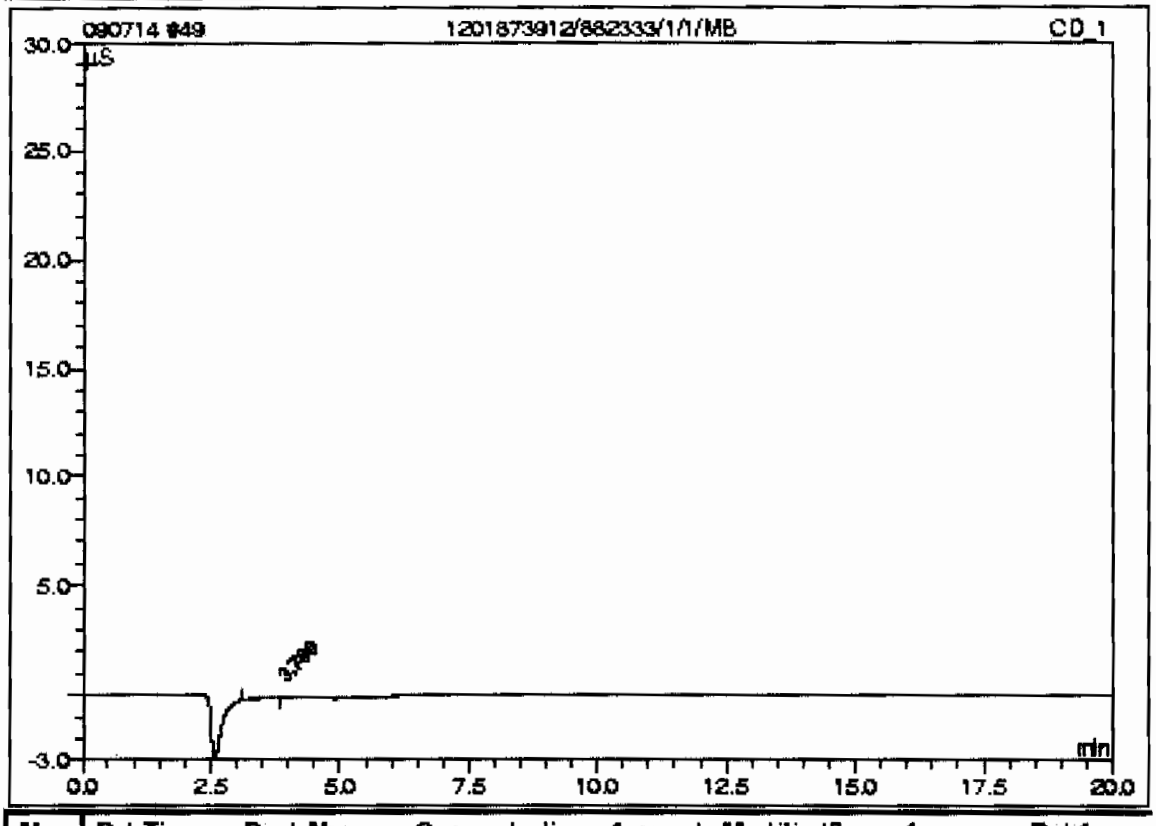

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

50 1201873919/882333/1/1/LCS

Sample Name:	1201873919/882333/1/1/LCS	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 7:55	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

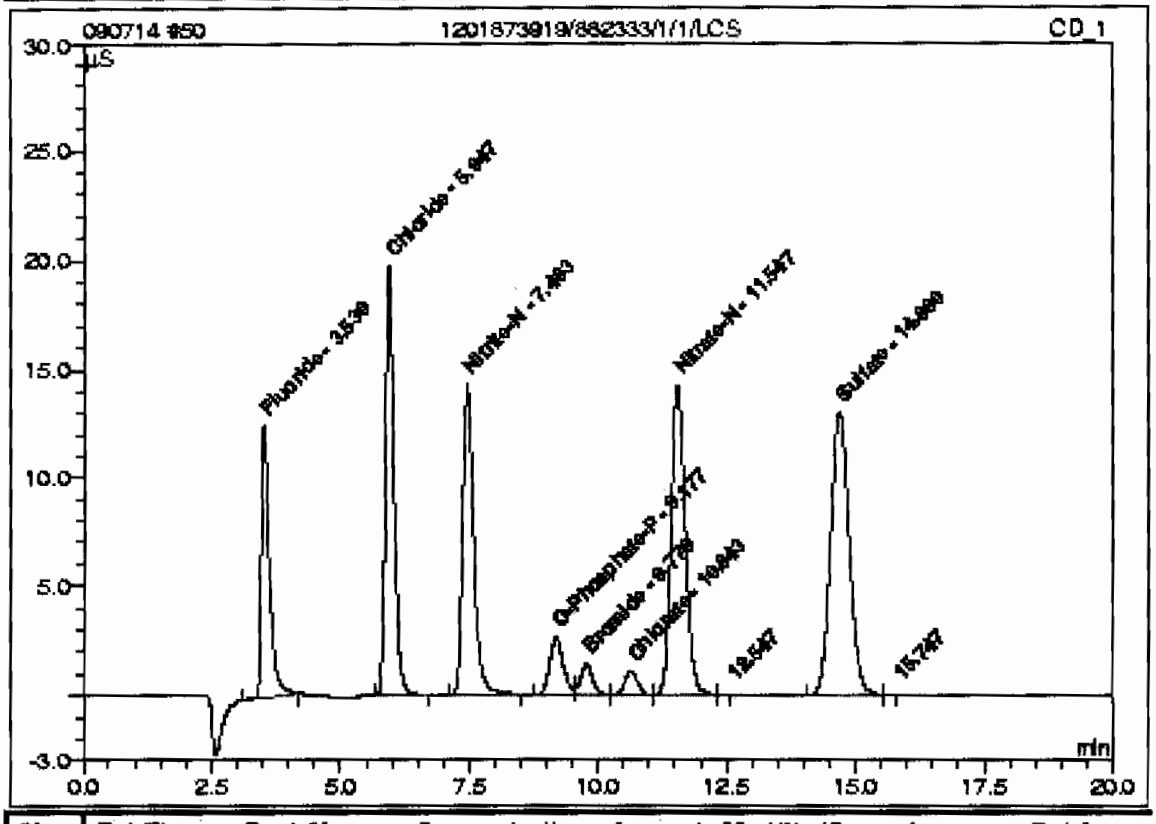

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.8223		2.26105	10.75
2	5.95	Chloride	n.a.	9.3128		3.74986	17.83
3	7.46	Nitrite-N	n.a.	4.8212		3.56969	16.98
4	9.18	O-Phosphate-P	n.a.	2.7782		0.79708	3.79
5	9.77	Bromide	n.a.	2.6199		0.40474	1.92
6	10.64	Chlorate	n.a.	2.4825		0.33022	1.57
7	11.55	Nitrate-N	n.a.	4.7736		4.49545	21.38
9	14.69	Sulfate	n.a.	19.2014		5.41356	25.75
Total:				50.8118	0.000	21.021	99.98

51 232744001/882333/1/1/

Sample Name:	232744001/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 8:15	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE085;300;9058	

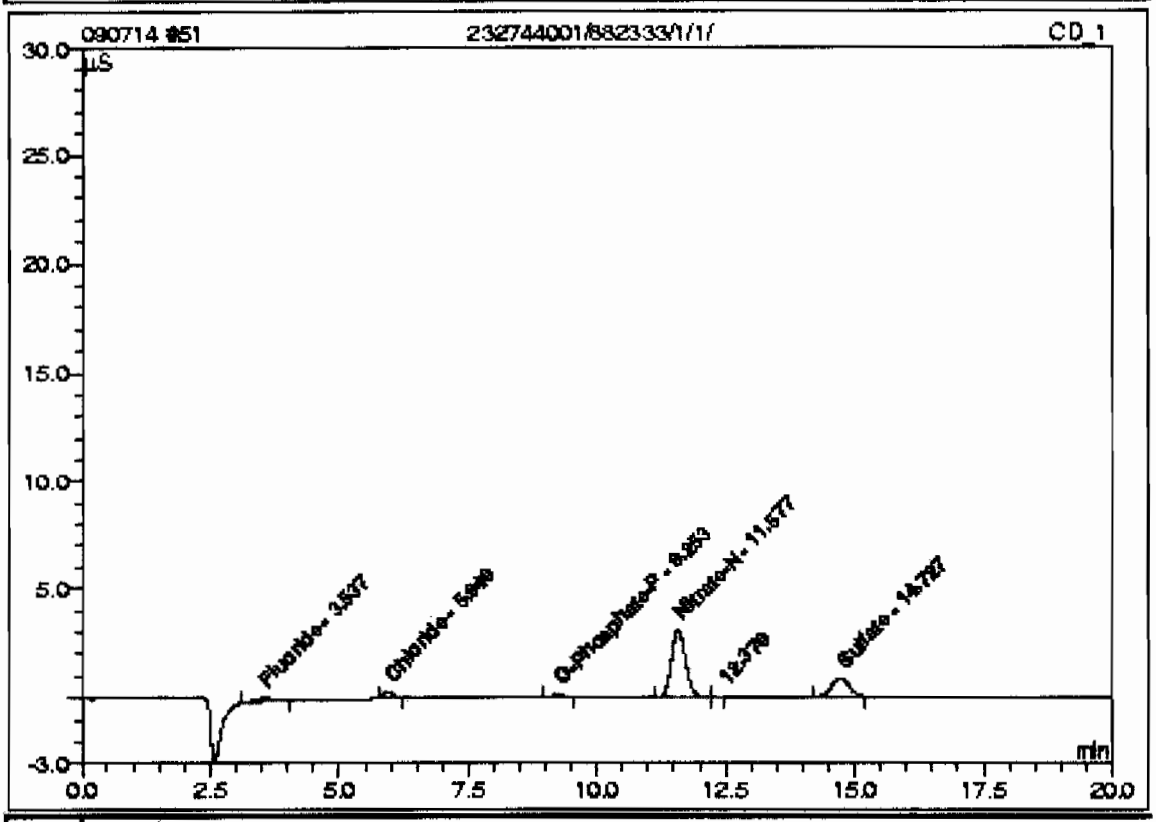

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.1183		0.05269	3.58
2	5.94	Chloride	n.a.	0.2285		0.05860	3.98
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	9.25	O-Phosphate-P	n.a.	0.1552		0.02467	1.68
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	11.58	Nitrate-N	n.a.	1.0967		0.98312	66.81
6	14.73	Sulfate	n.a.	1.4675		0.35159	23.89
Total:				3.0661	0.000	1.471	99.94

52 1201873913/882333/1/1/DUP

Sample Name:	1201873913/882333/1/1/**DUP**	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 8:35	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9058	

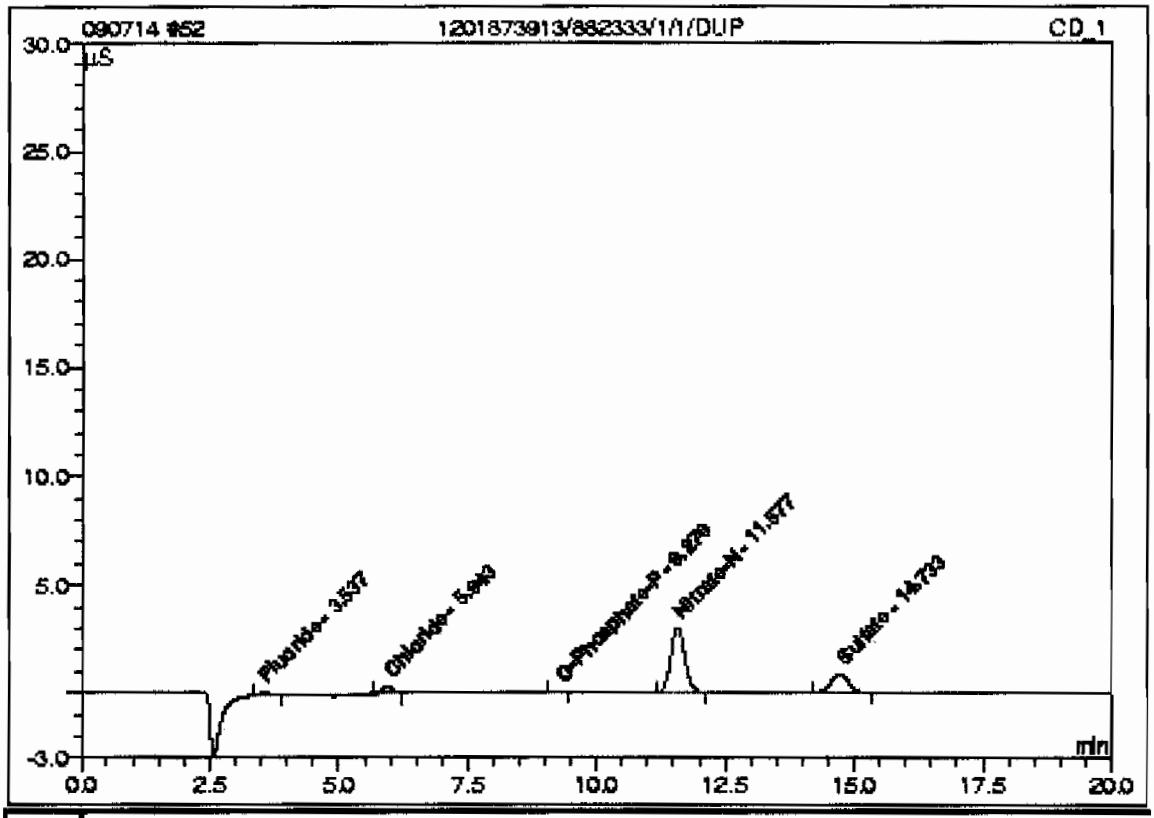

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.0674		0.02879	2.03
2	5.94	Chloride	n.a.	0.2294		0.05897	4.16
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	9.27	O-Phosphate-P	n.a.	0.1022		0.00906	0.64
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	11.58	Nitrate-N	n.a.	1.0724		0.95997	67.68
5	14.73	Sulfate	n.a.	1.5025		0.36160	25.49
Total:				2.9740	0.000	1.418	100.00

53 1201873915/882333/1/1/MS

Sample Name:	1201873915/882333/1/1/MS	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	083009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 8:55	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

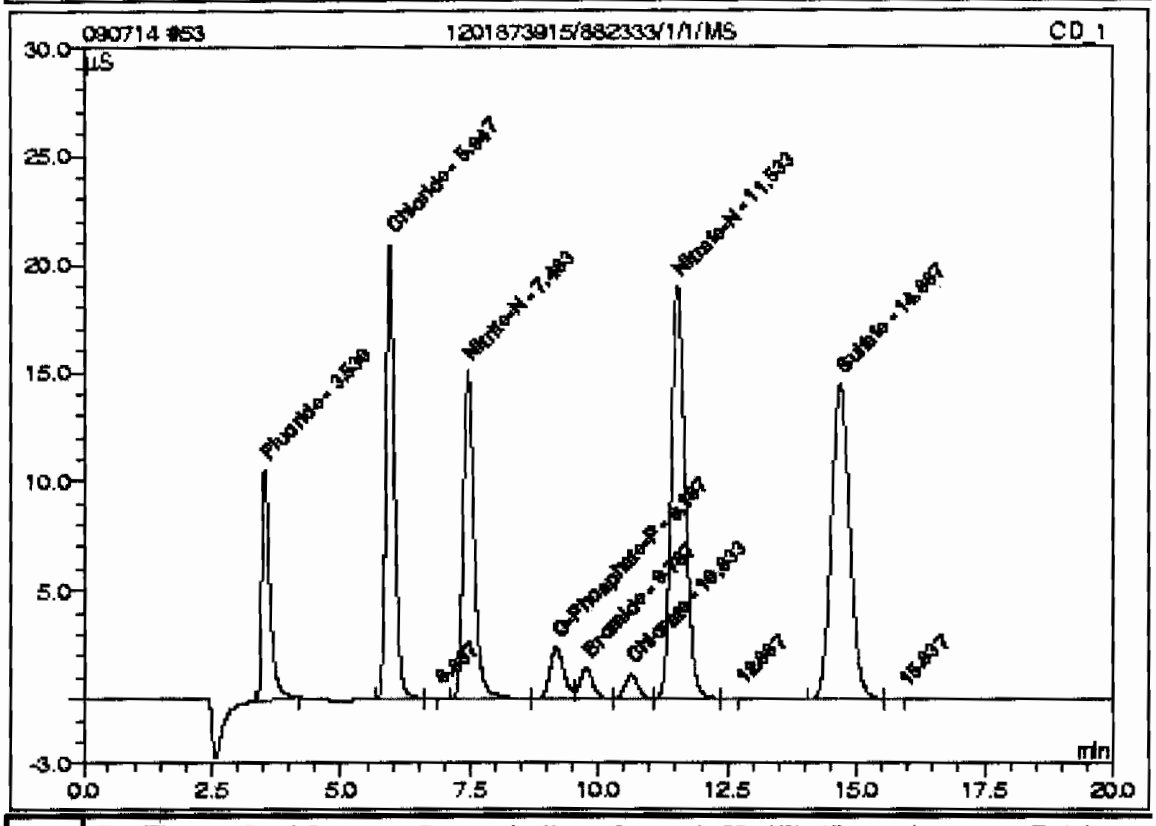

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.0880		1.91633	8.29
2	5.95	Chloride	n.a.	9.8764		3.97866	17.21
4	7.46	Nitrite-N	n.a.	5.0481		3.73925	16.17
5	9.19	O-Phosphate-P	n.a.	2.6465		0.75831	3.28
6	9.77	Bromide	n.a.	2.7792		0.42958	1.86
7	10.63	Chlorate	n.a.	2.5954		0.34545	1.49
8	11.53	Nitrate-N	n.a.	6.3038		5.95706	25.77
10	14.69	Sulfate	n.a.	21.2011		5.98438	25.89
Total:				54.5386	0.000	23.109	99.96

54 1201873917/882333/1/1/MSD

Sample Name:	1201873917/882333/1/1/**MSD**	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	**AS9_HC**	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 9:15	Analyst:	**VH1**
Run Time (min):	20.00 Column:	**AS9HC-014108;GLGCE088;300;9058**	

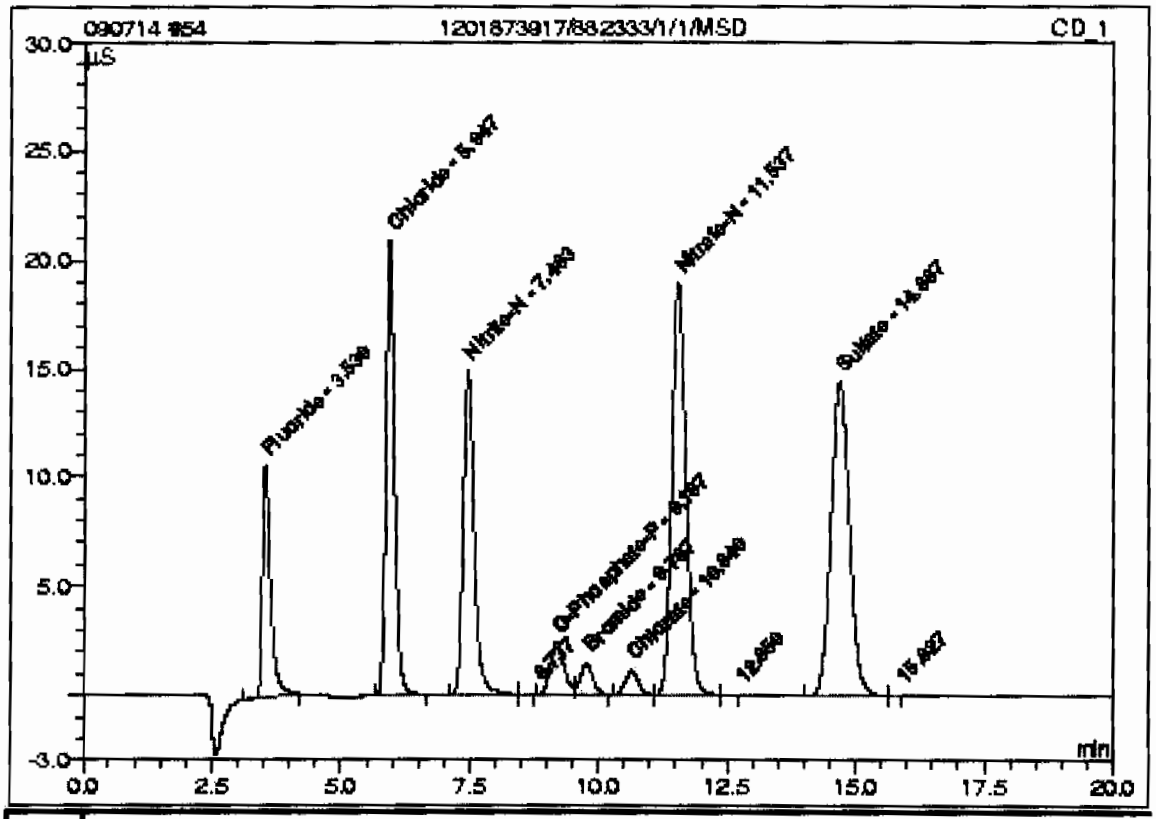

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.1041		1.92391	8.33
2	5.95	Chloride	n.a.	9.8503		3.96805	17.19
3	7.46	Nitrite-N	n.a.	5.0482		3.73779	16.19
5	9.19	O-Phosphate-P	n.a.	2.6595		0.76214	3.30
6	9.77	Bromide	n.a.	2.7216		0.42059	1.82
7	10.64	Chlorate	n.a.	2.5244		0.33587	1.45
8	11.54	Nitrate-N	n.a.	6.2883		5.94230	25.74
10	14.69	Sulfate	n.a.	21.2057		5.98568	25.93
Total:				54.4002	0.000	23.076	99.95

55 232744002/882333/1/1/

Sample Name:	232744002/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 9:35	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

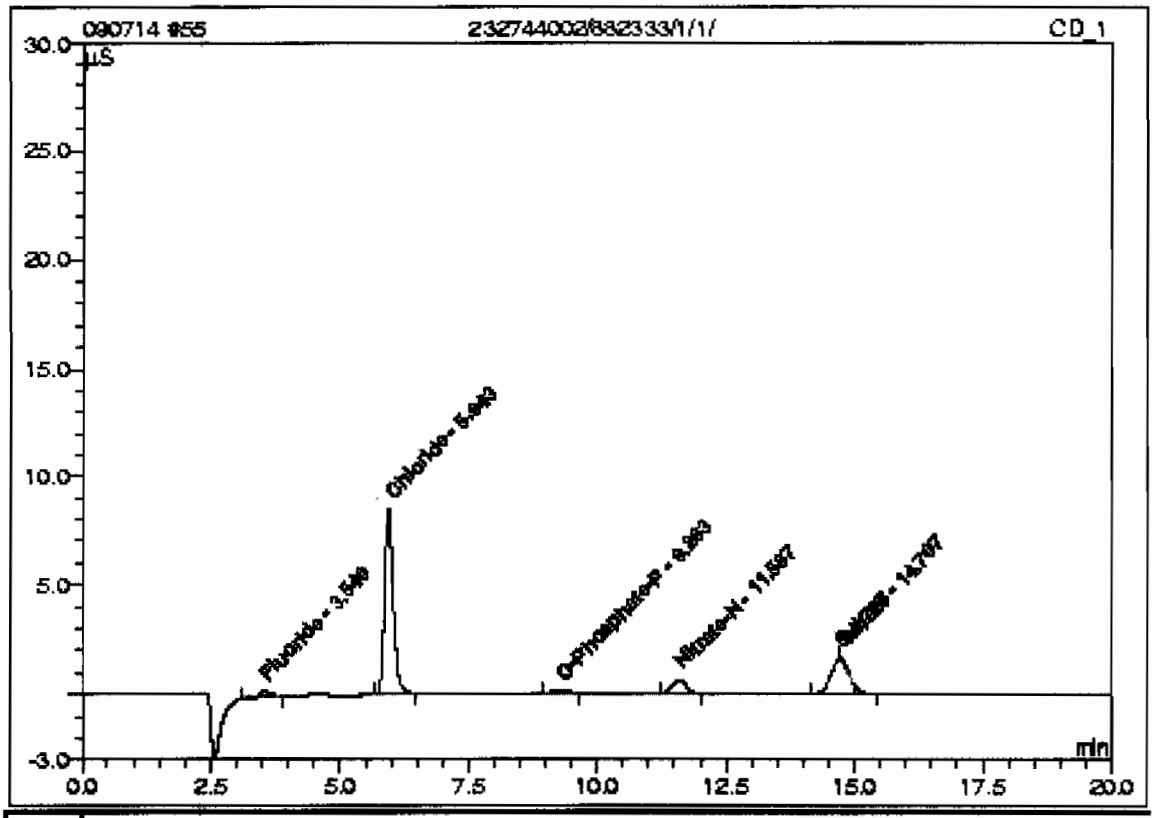

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.1598		0.07220	2.71
2	5.94	Chloride	n.a.	4.1179		1.63890	61.58
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	9.28	O-Phosphate-P	n.a.	0.2515		0.05304	1.99
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	11.59	Nitrate-N	n.a.	0.2833		0.20616	7.75
5	14.71	Sulfate	n.a.	2.5749		0.66767	25.09
Total:				7.3974	0.000	2.638	99.11

56 232744003/882333/1/1/

Sample Name:	232744003/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 9:55	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE055;300;9055

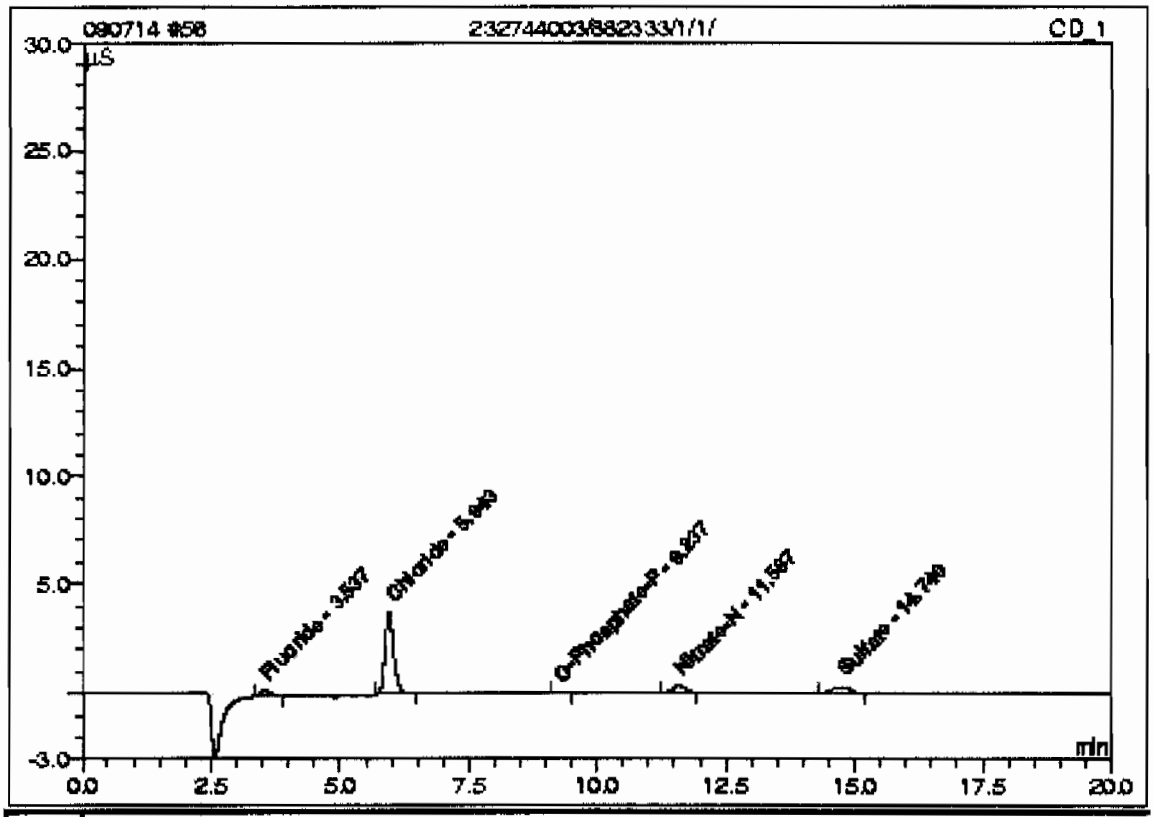

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.0967		0.04253	4.22
2	5.94	Chloride	n.a.	1.8652		0.72362	71.81
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	9.24	O-Phosphate-P	n.a.	0.0986		0.00799	0.79
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	11.59	Nitrate-N	n.a.	0.1771		0.10474	10.39
5	14.74	Sulfate	n.a.	0.6969		0.12876	12.78
Total:				2.9244	0.000	1.008	100.00

57 232744004/882333/1/1/

Sample Name:	232744004/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	063009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 10:18	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9058	

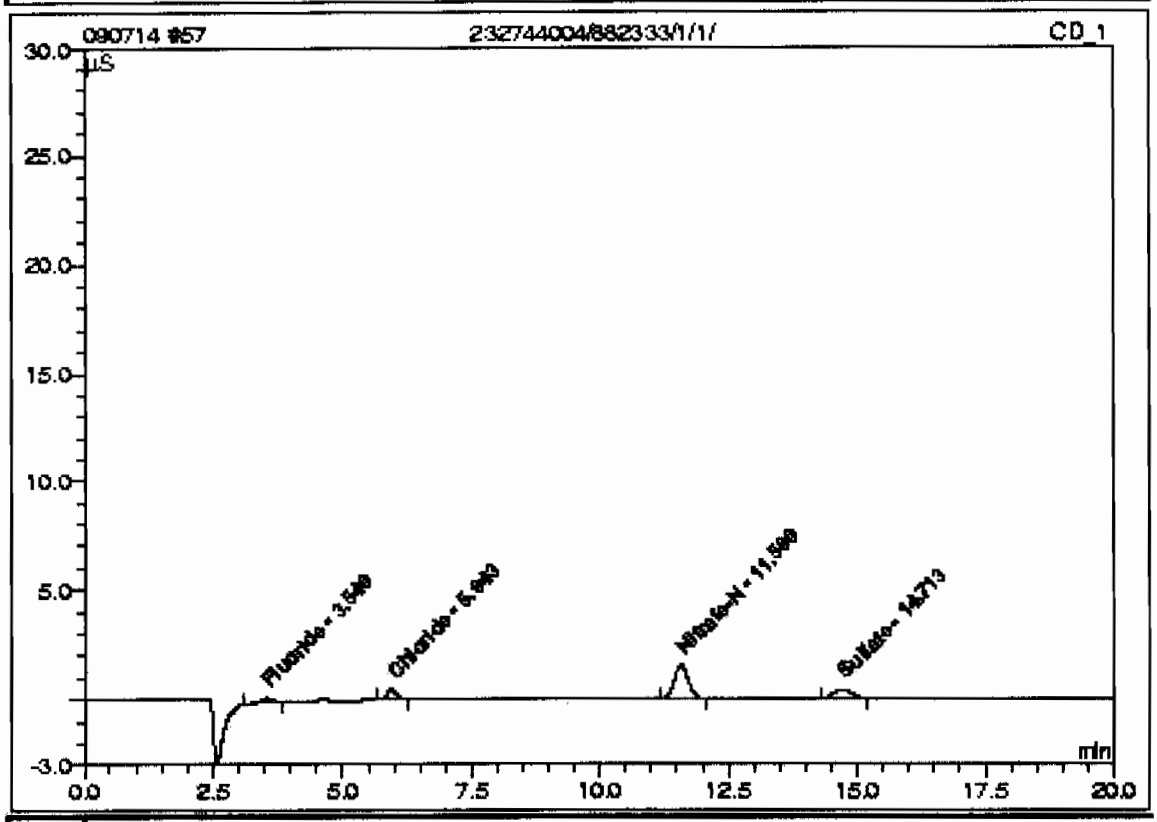

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.1042		0.04607	5.91
2	5.94	Chloride	n.a.	0.3131		0.09298	11.92
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	11.58	Nitrate-N	n.a.	0.5724		0.48238	61.85
4	14.71	Sulfate	n.a.	0.7912		0.15854	20.33
Total:				1.7809	0.000	0.780	100.00

58 232744005/882333/1/1/

Sample Name:	232744005/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 10:38	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9058	

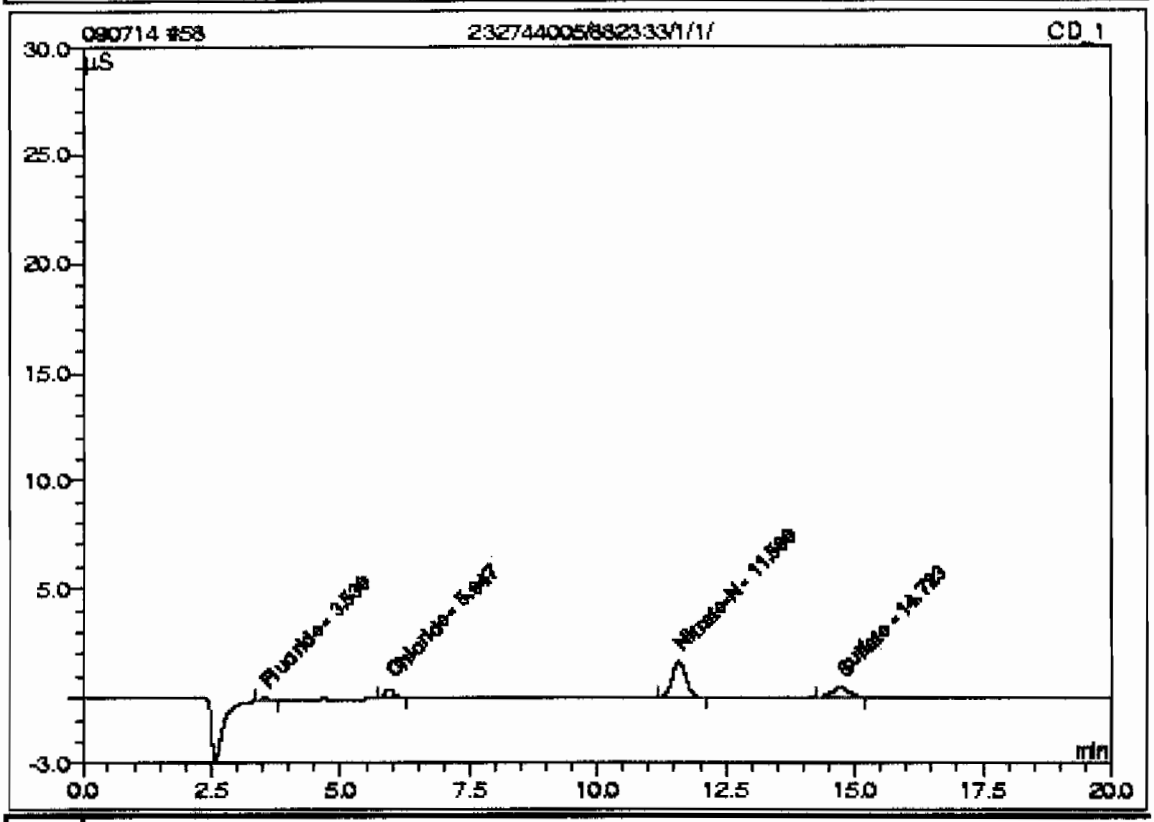

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	0.0526		0.02185	2.68
2	5.95	Chloride	n.a.	0.2995		0.08743	10.71
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	11.58	Nitrate-N	n.a.	0.6072		0.51561	63.17
4	14.72	Sulfate	n.a.	0.9059		0.19129	23.44
Total:				1.8652	0.000	0.816	100.00

59 WIC090714-02CVH

Sample Name:	WIC090714-02CVH	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 10:55	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

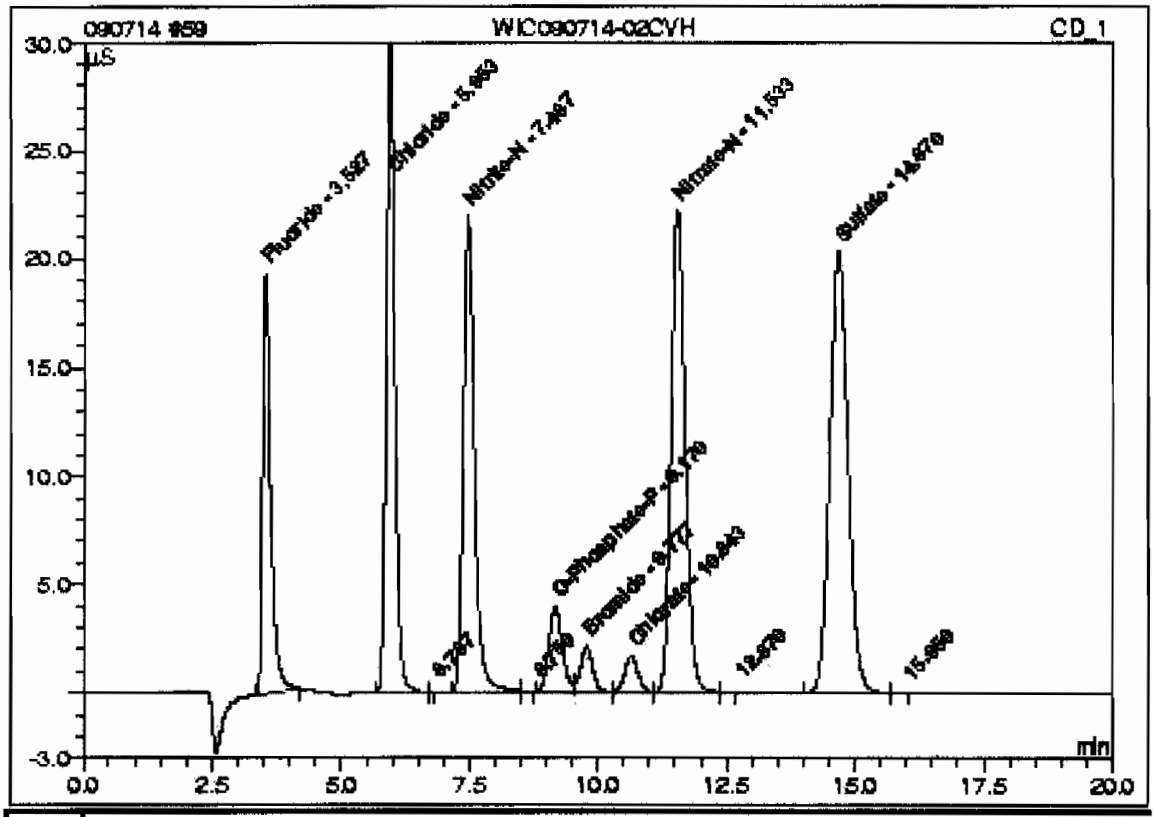

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	7.3356		3.44097	10.64
2	5.95	Chloride	n.a.	14.4300		5.82883	18.03
4	7.47	Nitrite-N	n.a.	7.3551		5.46262	16.89
6	9.17	O-Phosphate-P	n.a.	4.0520		1.17219	3.63
7	9.78	Bromide	n.a.	3.8176		0.59143	1.83
8	10.64	Chlorate	n.a.	3.7356		0.49924	1.54
9	11.53	Nitrate-N	n.a.	7.3682		6.97379	21.57
11	14.67	Sulfate	n.a.	29.5137		8.35711	25.84
Total:				77.6077	0.000	32.326	99.97

60 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	063009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 11:18	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

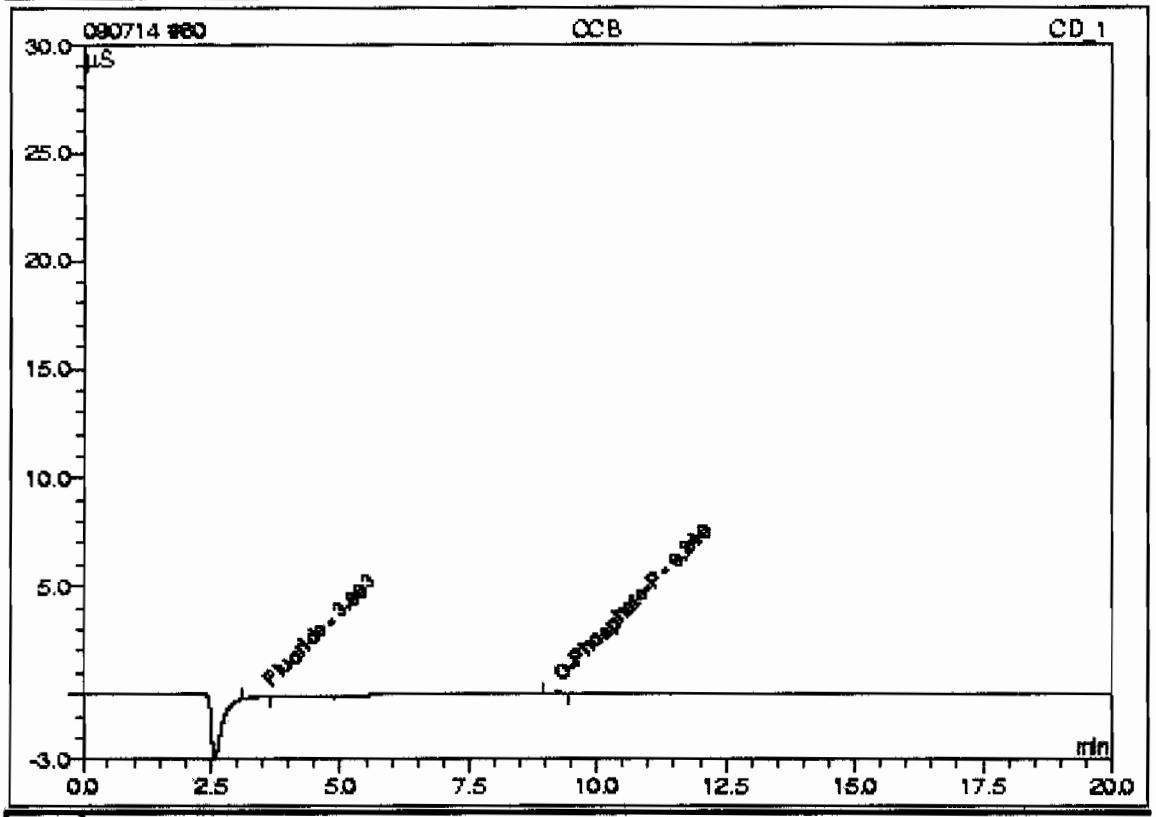

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.60	Fluoride	n.a.	0.0281		0.01035	33.64
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
2	9.24	O-Phosphate-P	n.a.	0.1407		0.02040	66.36
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.1688	0.000	0.031	100.00

61 232744006/882333/1/1/

Sample Name:	232744006/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 11:36	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

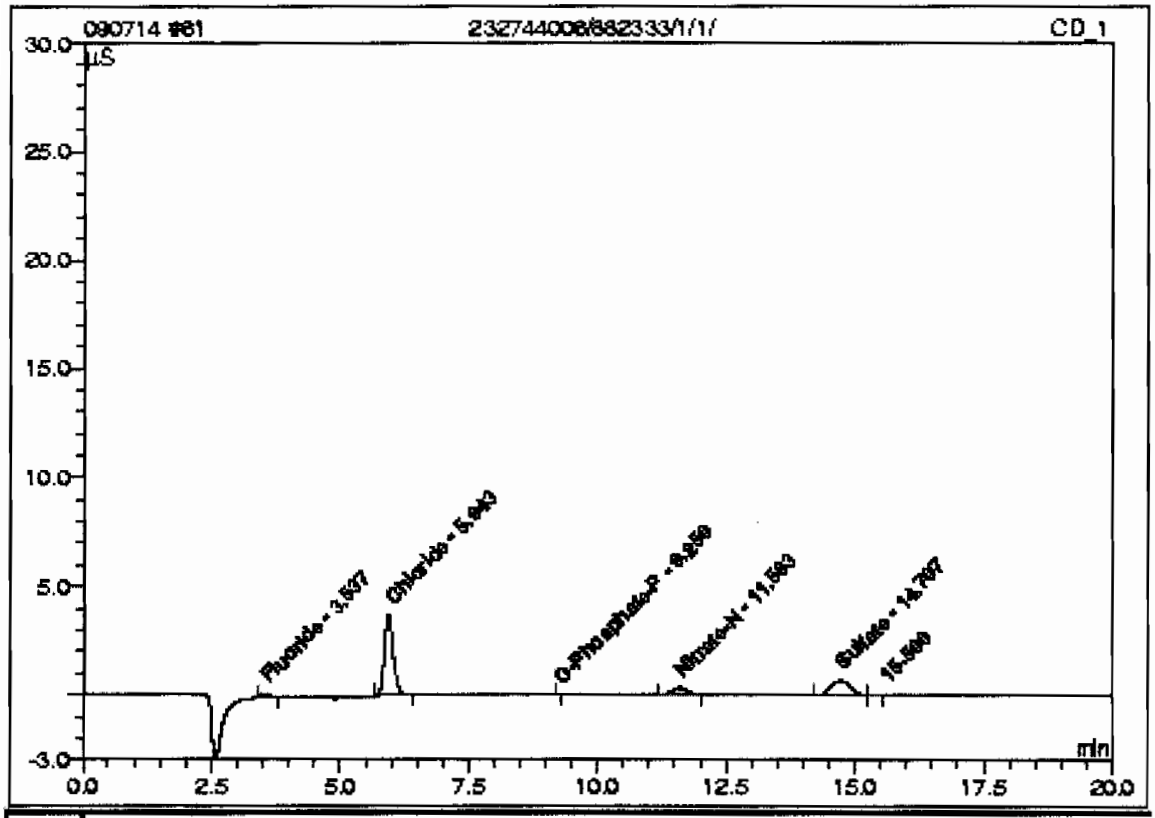

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.0791		0.03429	2.91
2	5.94	Chloride	n.a.	1.8970		0.73653	62.57
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	9.25	O-Phosphate-P	n.a.	0.0721		0.00021	0.02
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	11.58	Nitrate-N	n.a.	0.1835		0.11091	9.42
5	14.71	Sulfate	n.a.	1.2684		0.29477	25.04
Total:				3.5002	0.000	1.177	99.96

62 232744007/882333/1/1/

Sample Name:	232744007/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 11:55	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

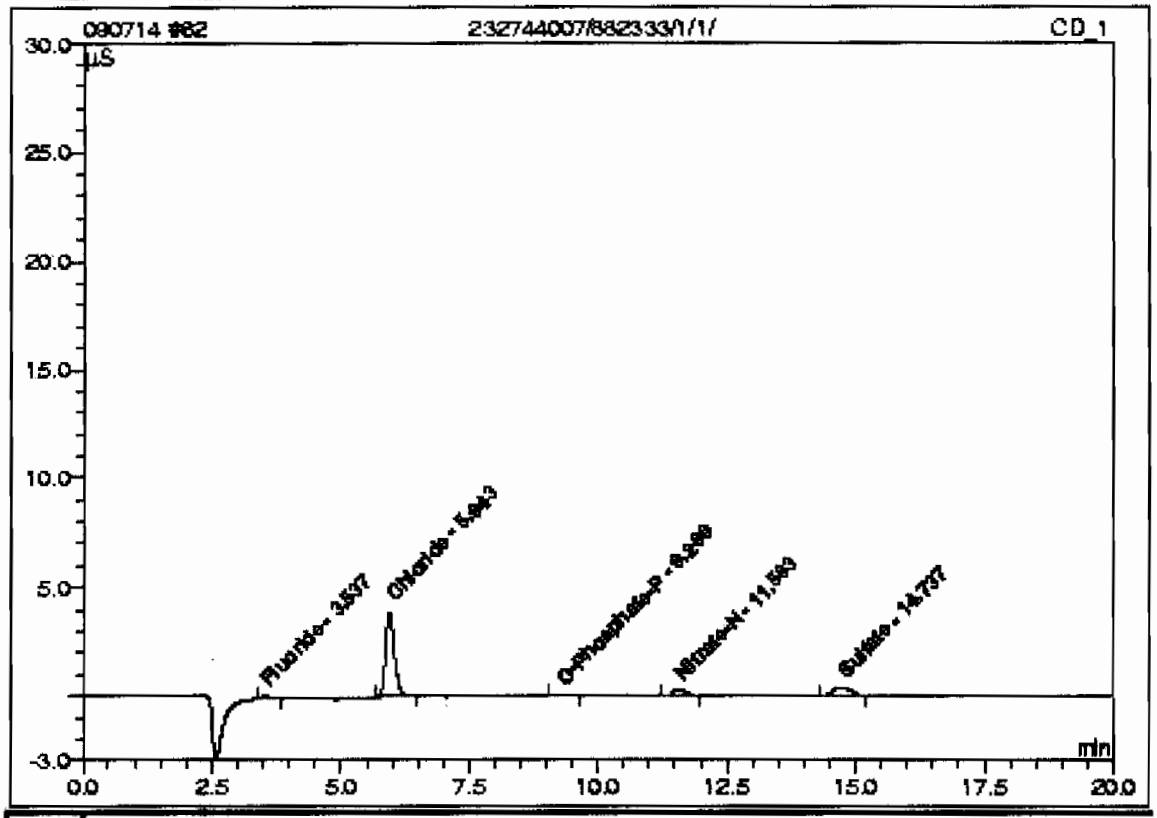

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.0627		0.02661	2.52
2	5.94	Chloride	n.a.	1.9913		0.77076	72.89
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	9.26	O-Phosphate-P	n.a.	0.1143		0.01263	1.19
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	11.58	Nitrate-N	n.a.	0.1524		0.08118	7.68
5	14.74	Sulfate	n.a.	0.8184		0.16631	15.73
Total:				3.1291	0.000	1.057	100.00

63 232744008/882333/1/1/

Sample Name:	232744008/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	49	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 12:17	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

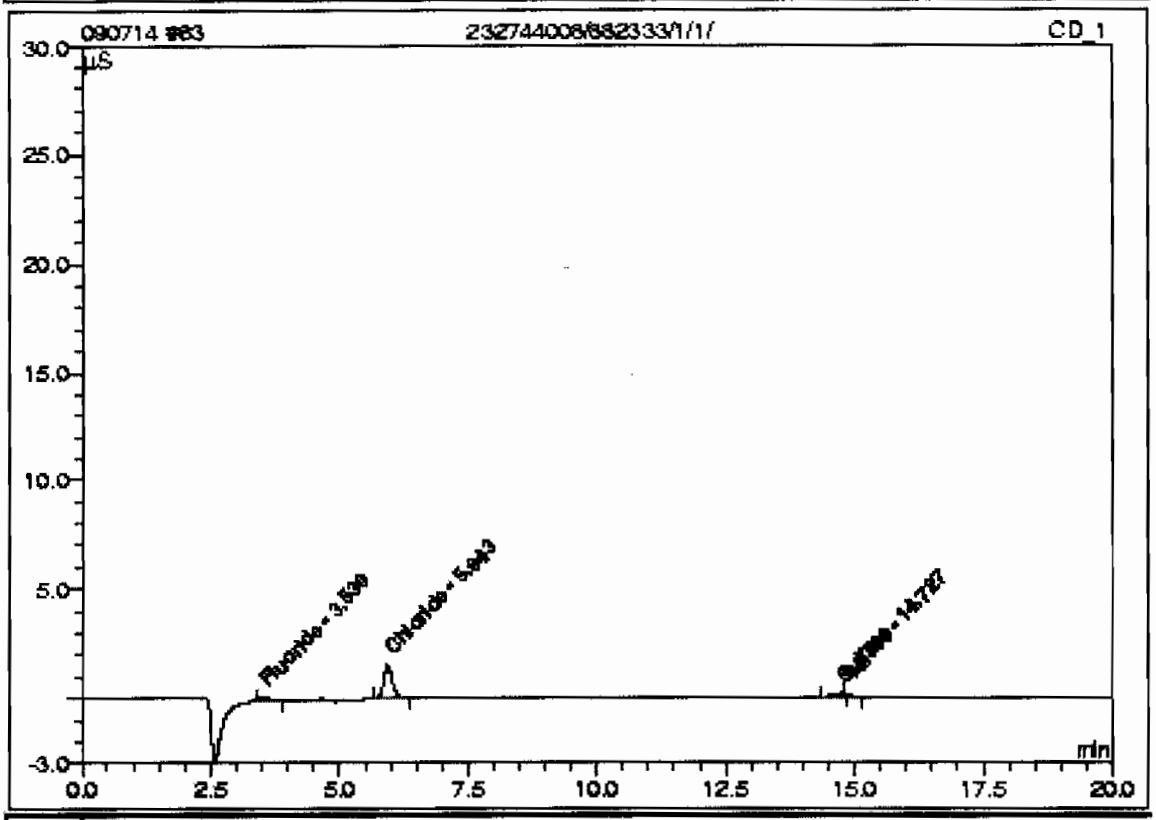

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	0.0764		0.03301	8.32
2	5.94	Chloride	n.a.	0.8203		0.29904	75.37
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.73	Sulfate	n.a.	0.4616		0.06448	16.25
Total:				1.3583	0.000	0.397	99.94

70 232760004/882333/1/1/

Sample Name:	232760004/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	063009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 14:37	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

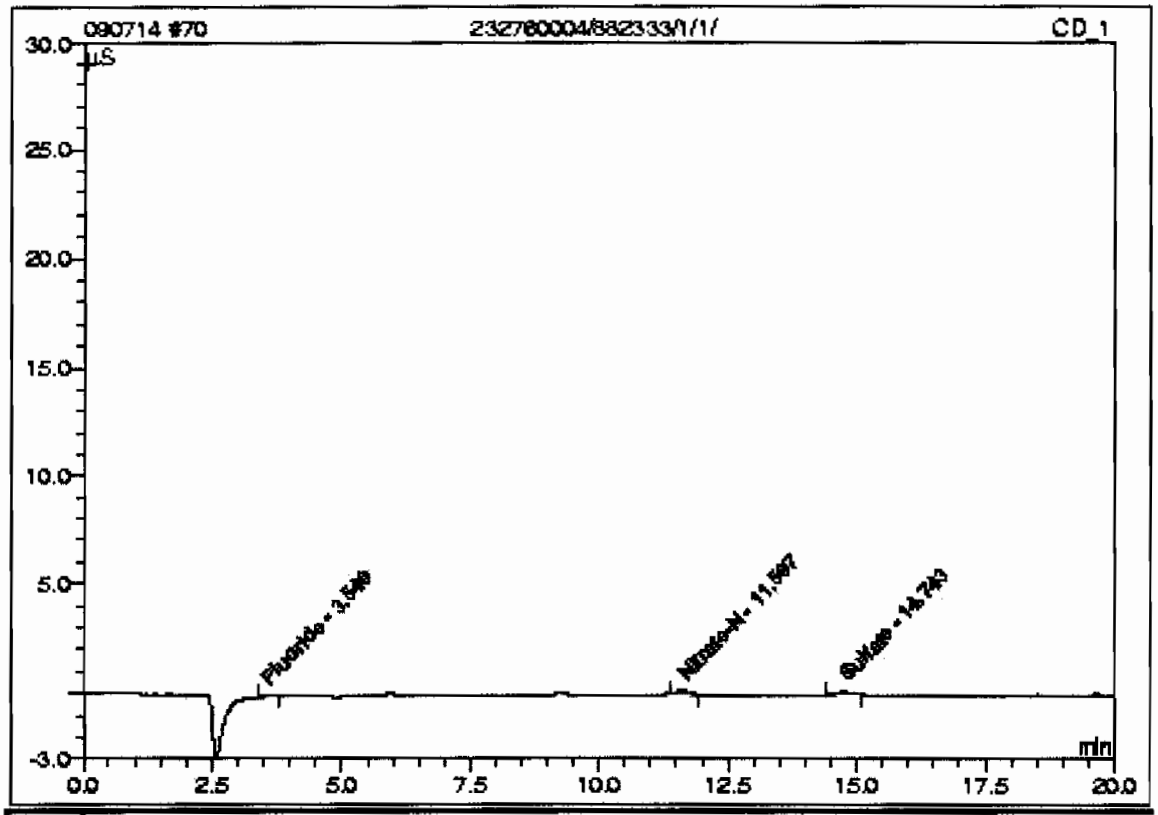

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.0371		0.01456	16.21
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
2	11.60	Nitrate-N	n.a.	0.1028		0.03374	37.57
3	14.74	Sulfate	n.a.	0.3811		0.04150	46.22
Total:				0.5209	0.000	0.090	100.00

71 WIC090714-02CCV

Sample Name:	WIC090714-02CCV	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 14:57	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

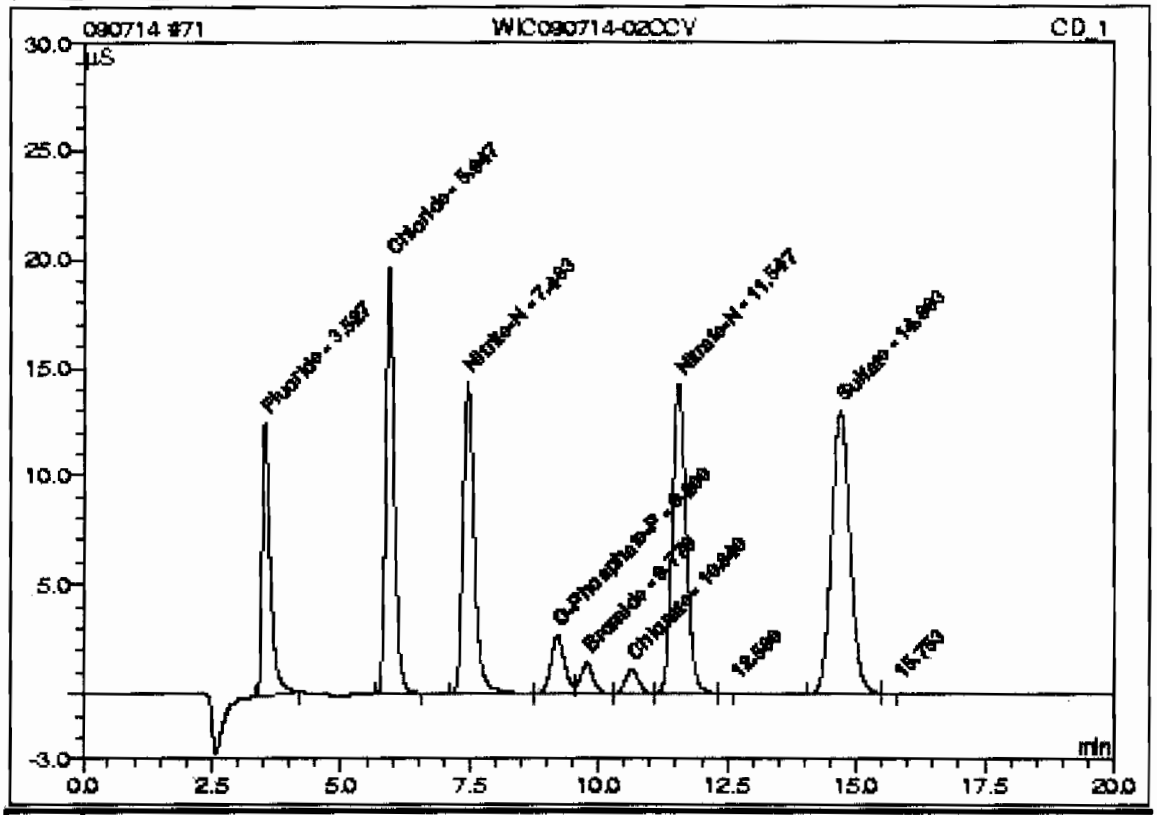

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.7963		2.24887	10.73
2	5.95	Chloride	n.a.	9.2209		3.71231	17.72
3	7.46	Nitrite-N	n.a.	4.8347		3.57981	17.08
4	9.20	O-Phosphate-P	n.a.	2.8144		0.80775	3.85
5	9.77	Bromide	n.a.	2.6397		0.40783	1.95
6	10.64	Chlorate	n.a.	2.4810		0.33002	1.57
7	11.55	Nitrate-N	n.a.	4.7521		4.47487	21.35
9	14.69	Sulfate	n.a.	19.1057		5.38627	25.70
Total:				50.6449	0.000	20.948	99.97

72 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 15:17	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

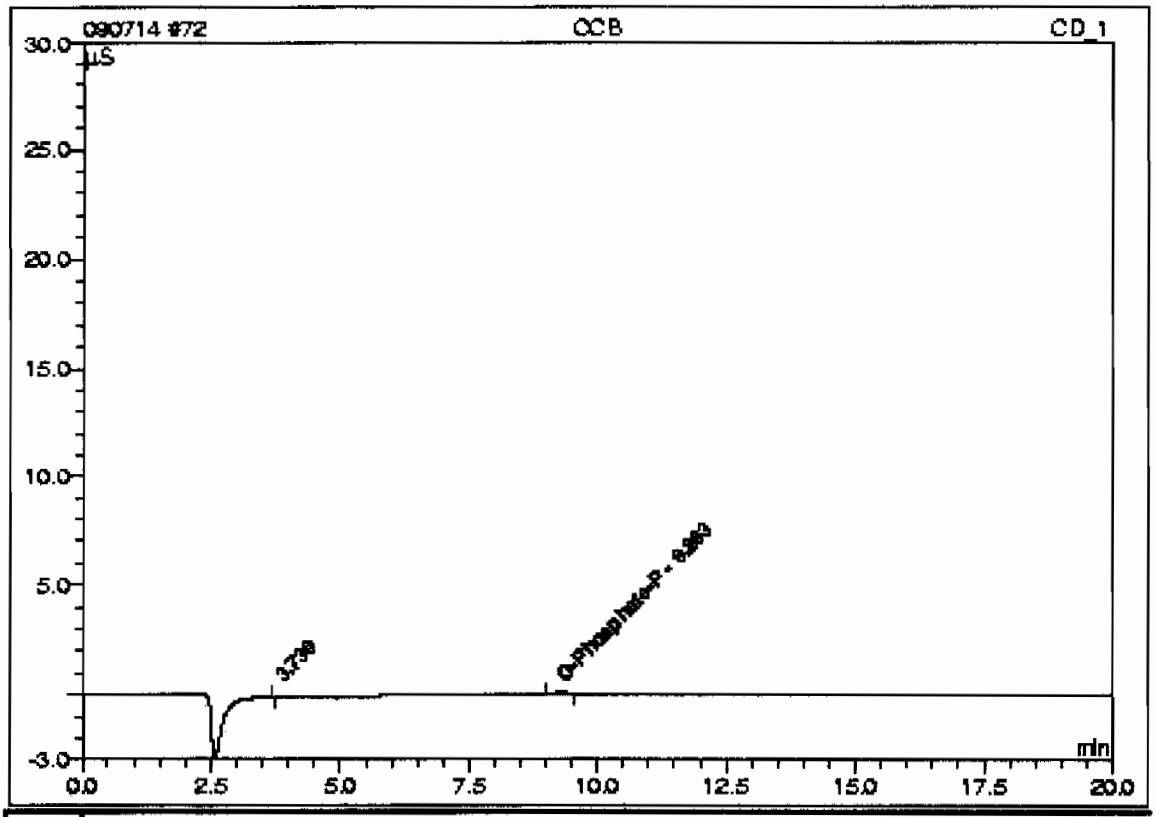

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
2	9.28	O-Phosphate-P	n.a.	0.1588		0.02573	99.14
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.1588	0.000	0.026	99.14

73 1201873914/882333/1/1/DUP

Sample Name:	1201873914/882333/1/1/DUP	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 15:37	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9055	

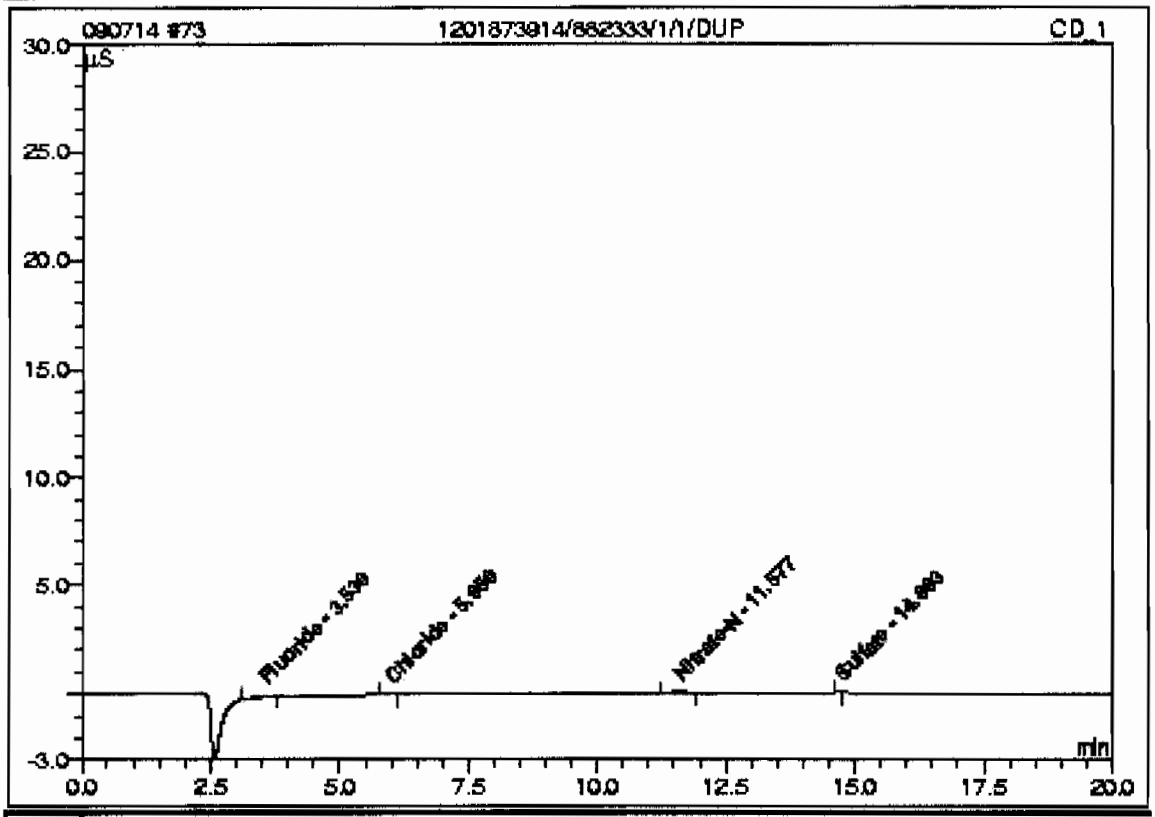

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	0.0664		0.02832	34.36
2	5.95	Chloride	n.a.	0.1087		0.00990	12.01
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	11.58	Nitrate-N	n.a.	0.1129		0.04340	52.66
4	14.69	Sulfate	n.a.	0.2385		0.00080	0.97
Total:				0.5265	0.000	0.082	100.00

74 1201873916/882333/1/1/MS

Sample Name:	1201873916/882333/1/1/MS	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 15:58	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9058	

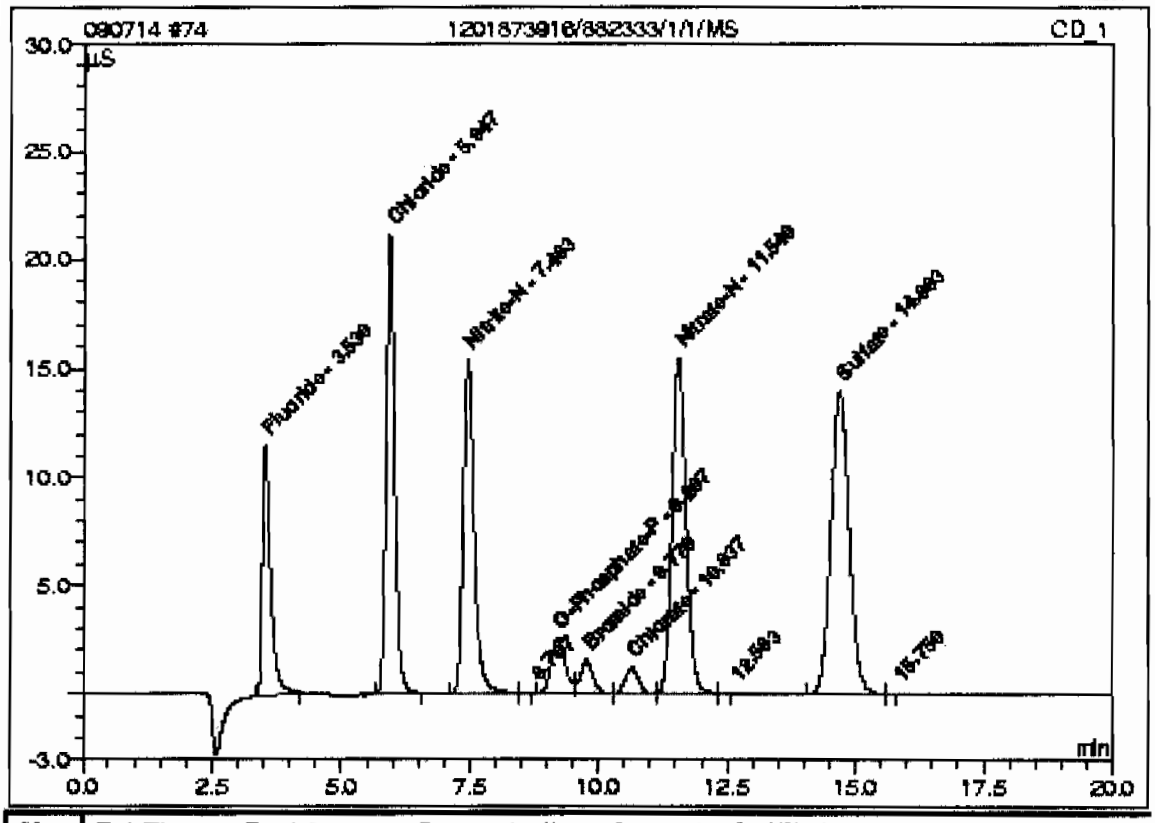

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.4653		2.09346	9.42
2	5.95	Chloride	n.a.	9.9071		3.99112	17.96
3	7.46	Nitrite-N	n.a.	5.1719		3.83166	17.25
5	9.21	O-Phosphate-P	n.a.	2.8202		0.80947	3.64
6	9.77	Bromide	n.a.	2.9265		0.45253	2.04
7	10.64	Chlorate	n.a.	2.7151		0.36159	1.63
8	11.54	Nitrate-N	n.a.	5.1648		4.86905	21.92
10	14.69	Sulfate	n.a.	20.5477		5.79787	26.10
Total:				53.7185	0.000	22.207	99.96

75 1201873918/882333/1/1/MSD

Sample Name:	1201873918/882333/1/1/**MSD**	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	**CD_1**
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	**AS9_HC**	*Sample Weight:*	1.0000
Quantif. Method:	**053009AN**	*Sample Amount:*	1.0000
Recording Time:	7/15/09 16:18	Analyst:	**VH1**
Run Time (min):	20.00	Column:	**AS9HC-014108;GLGCE088;300;9055**

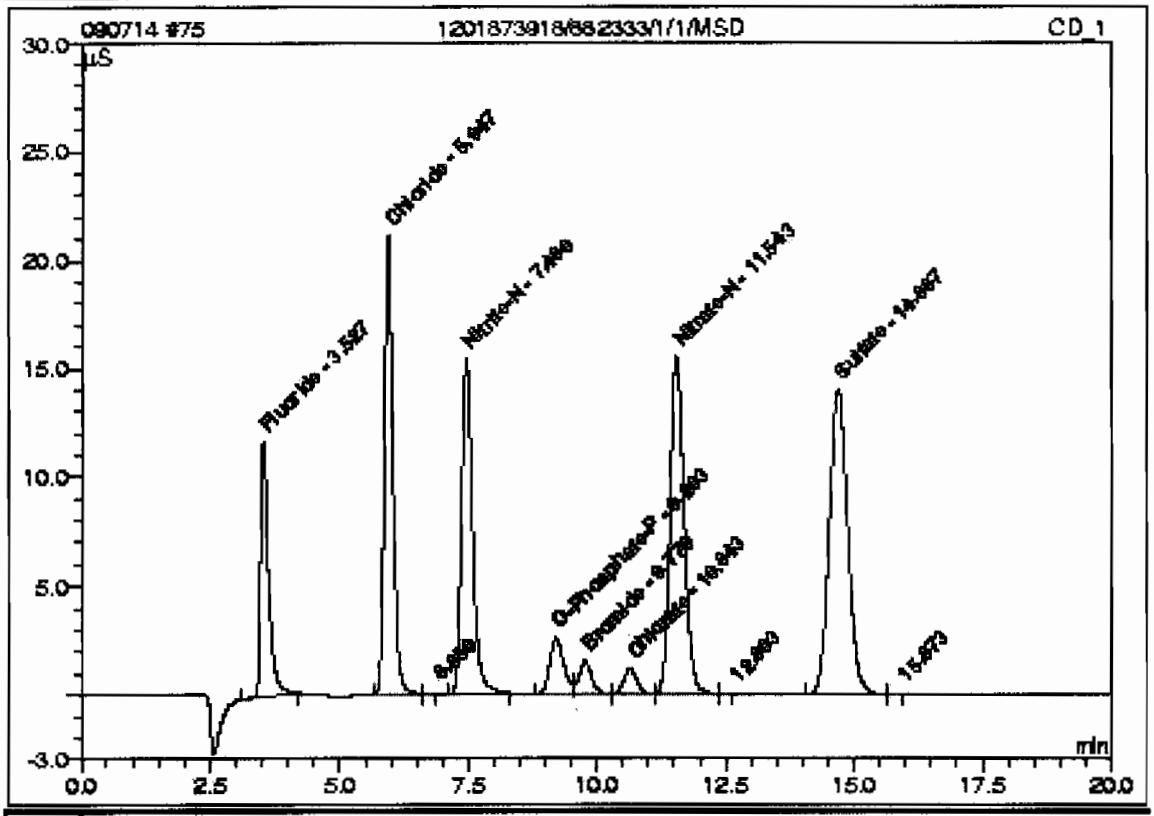

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.4878		2.10403	9.47
2	5.95	Chloride	n.a.	9.9544		4.01033	18.05
4	7.46	Nitrite-N	n.a.	5.1117		3.78670	17.05
5	9.20	O-Phosphate-P	n.a.	2.8317		0.81283	3.66
6	9.77	Bromide	n.a.	2.9092		0.44985	2.02
7	10.64	Chlorate	n.a.	2.6702		0.35553	1.60
8	11.54	Nitrate-N	n.a.	5.1694		4.87344	21.94
10	14.69	Sulfate	n.a.	20.6091		5.81540	26.18
Total:				53.7434	0.000	22.209	99.97

76 WIC090714-02CVH

Sample Name:	WIC090714-02CVH	*Injection Volume:*	50.0
Vial Number:	46	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 15:38	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9056

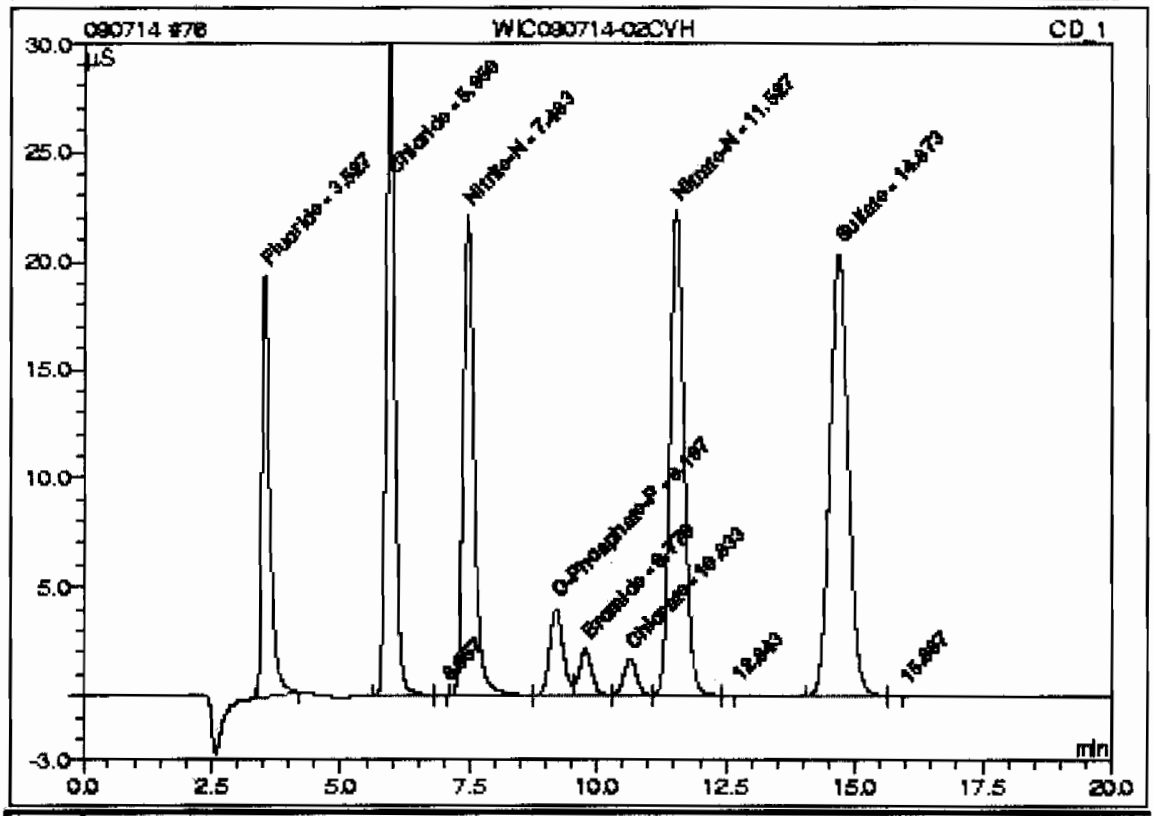

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	7.3572		3.45111	10.60
2	5.95	Chloride	n.a.	14.5334		5.87084	18.03
4	7.46	Nitrite-N	n.a.	7.4170		5.50892	16.92
5	9.20	O-Phosphate-P	n.a.	4.2091		1.21844	3.74
6	9.77	Bromide	n.a.	3.9812		0.61694	1.89
7	10.63	Chlorate	n.a.	3.8014		0.50811	1.56
8	11.53	Nitrate-N	n.a.	7.4003		7.00449	21.51
10	14.67	Sulfate	n.a.	29.5881		8.37836	25.73
Total:				78.2877	0.000	32.557	99.98

77 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 15:58	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

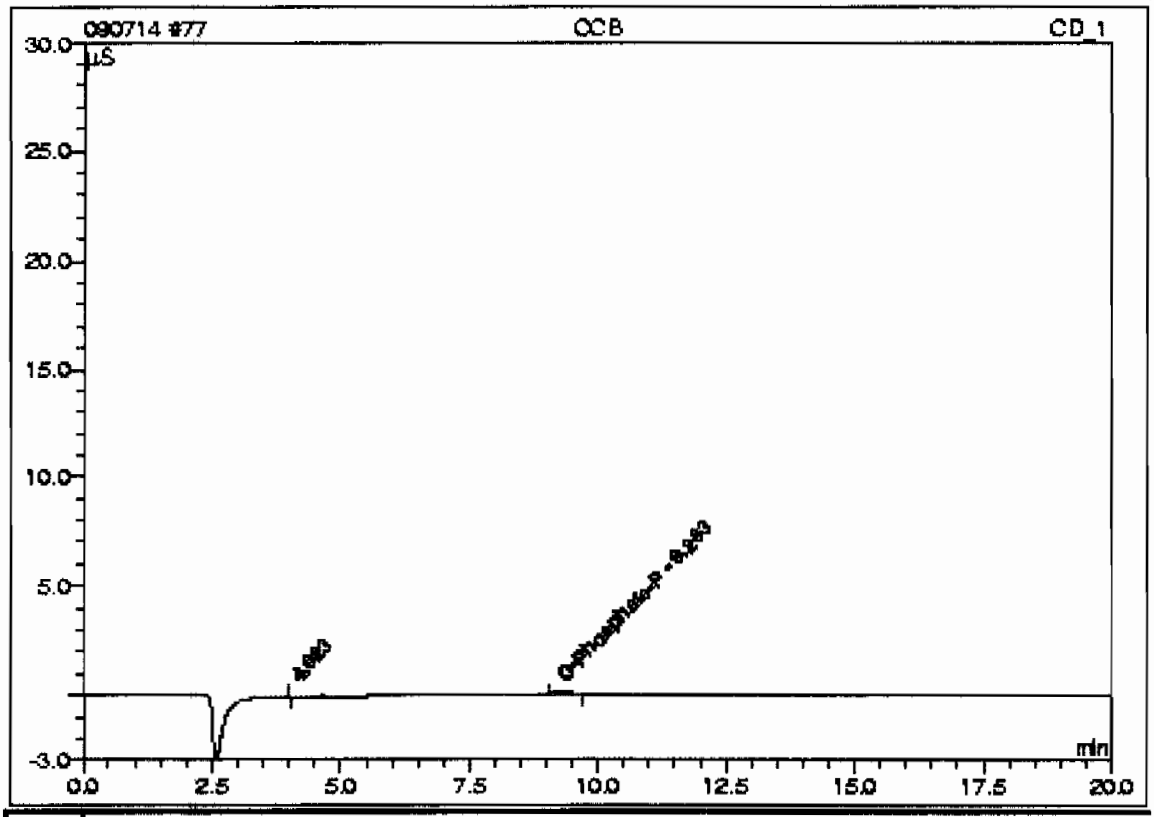

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
2	9.26	O-Phosphate-P	n.a.	0.2188		0.04340	99.68
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.2188	0.000	0.043	99.68

pH

pH / Corrosivity LogBook

Analyst: RXG2
Batch: 882616
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201874572	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201874572 LCS		Soil	11:00	11:05	06-JUL-09 12:05	pH	20	20	7.05	21.2'C	7	100.714	
1201874572 LCS		Soil	11:00	11:05	06-JUL-09 12:05	pH 2	20	20	7.04	21.2'C	7	100.571	
232744001		Soil	11:00	11:05	06-JUL-09 12:07	pH	20	20	8.03	20.4'C			
232744001		Soil	11:00	11:05	06-JUL-09 12:07	pH 2	20	20	8.03	20.4'C			
1201874570 DUP	232744001	Soil	11:00	11:05	06-JUL-09 12:10	pH	20	20	8.06	20.3'C			.373
1201874570 DUP	232744001	Soil	11:00	11:05	06-JUL-09 12:10	pH 2	20	20	8.06	20.3'C			.373
232744002		Soil	11:00	11:05	06-JUL-09 12:12	pH	20	20	9.77	20.1'C			
232744002		Soil	11:00	11:05	06-JUL-09 12:12	pH 2	20	20	9.78	20.1'C			
232744003		Soil	11:00	11:05	06-JUL-09 12:13	pH	20	20	9.11	20.2'C			
232744003		Soil	11:00	11:05	06-JUL-09 12:13	pH 2	20	20	9.11	20.2'C			
CCV			11:00	11:05	06-JUL-09 12:14	pH	20	20	7.04	21.3'C	7	100.571	
CCV			11:00	11:05	06-JUL-09 12:14	pH 2	20	20	7.04	21.3'C	7	100.571	
232744004		Soil	11:00	11:05	06-JUL-09 12:17	pH	20	20	8.6	20.3'C			
232744004		Soil	11:00	11:05	06-JUL-09 12:17	pH 2	20	20	8.6	20.3'C			
232744005		Soil	11:00	11:05	06-JUL-09 12:17	pH	20	20	8.57	20.2'C			
232744005		Soil	11:00	11:05	06-JUL-09 12:17	pH 2	20	20	8.57	20.2'C			
232744006		Soil	11:00	11:05	06-JUL-09 12:19	pH	20	20	9.44	20.3'C			
232744006		Soil	11:00	11:05	06-JUL-09 12:19	pH 2	20	20	9.44	20.3'C			
232744007		Soil	11:00	11:05	06-JUL-09 12:20	pH	20	20	9.89	20.3'C			
232744007		Soil	11:00	11:05	06-JUL-09 12:20	pH 2	20	20	9.89	20.3'C			
232744008		Soil	11:00	11:05	06-JUL-09 12:21	pH	20	20	6.62	20.1'C			
232744008		Soil	11:00	11:05	06-JUL-09 12:21	pH 2	20	20	6.62	20.1'C			
CCV			11:00	11:05	06-JUL-09 12:24	pH	20	20	7.04	21.2'C	7	100.571	
CCV			11:00	11:05	06-JUL-09 12:24	pH 2	20	20	7.04	21.3'C	7	100.571	
232754001		Soil	11:00	11:05	06-JUL-09 12:26	pH	20	20	8.4	20.2'C			
232754001		Soil	11:00	11:05	06-JUL-09 12:26	pH 2	20	20	8.41	20.2'C			
232754002		Soil	11:00	11:05	06-JUL-09 12:26	pH	20	20	7.38	20.3'C			
232754002		Soil	11:00	11:05	06-JUL-09 12:26	pH 2	20	20	7.39	20.3'C			

pH / Corrosivity LogBook

Analyst: RXG2
Batch: 882616
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201874572	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
232754003		Soil	11:00	11:05	06-JUL-09 12:30	pH	20	20	7.45	20.0'C			
232754003		Soil	11:00	11:05	06-JUL-09 12:30	pH 2	20	20	7.45	20.0'C			
232760001		Soil	11:00	11:05	06-JUL-09 12:32	pH	20	20	8.06	20.3'C			
232760001		Soil	11:00	11:05	06-JUL-09 12:32	pH 2	20	20	8.06	20.3'C			
232760002		Soil	11:00	11:05	06-JUL-09 12:34	pH	20	20	8.73	20.1'C			
232760002		Soil	11:00	11:05	06-JUL-09 12:34	pH 2	20	20	8.73	20.1'C			
CCV			11:00	11:05	06-JUL-09 12:36	pH	20	20	7.03	21.3'C	7	100.429	
CCV			11:00	11:05	06-JUL-09 12:36	pH 2	20	20	7.04	21.3'C	7	100.571	
232760003		Soil	11:00	11:05	06-JUL-09 12:38	pH	20	20	8.09	20.4'C			
232760003		Soil	11:00	11:05	06-JUL-09 12:38	pH 2	20	20	8.09	20.4'C			
232760004		Soil	11:00	11:05	06-JUL-09 12:38	pH	20	20	8.18	20.5'C			
232760004		Soil	11:00	11:05	06-JUL-09 12:38	pH 2	20	20	8.16	20.4'C			
1201874571 DUP	232760004	Soil	11:00	11:05	06-JUL-09 12:40	pH	20	20	8.23	20.6'C			.609
1201874571 DUP	232760004	Soil	11:00	11:05	06-JUL-09 12:40	pH 2	20	20	8.23	20.5'C			.854
232847001		Solid	11:00	11:05	06-JUL-09 12:41	pH	20	20	7.78	20.3'C			
232847001		Solid	11:00	11:05	06-JUL-09 12:41	pH 2	20	20	7.79	20.3'C			
CCV			11:00	11:05	06-JUL-09 12:42	pH	20	20	7.05	21.2'C	7	100.714	
CCV			11:00	11:05	06-JUL-09 12:42	pH 2	20	20	7.05	21.2'C	7	100.714	

Calibration Information:
Run Date: 06-JUL-09 12:03
Instrument: PHX742
Analyst: RXG2

Standard	Observed	Theoretical		C	%Recovery
IMM090706-PH1	4.01	4	SU	21.6	100.25
IMM090706-PH-	7.01	7	SU	21.6	100.14
UPH090706b3-1	10.02	10	SU	21.6	100.2
UPH090706-03e-	2.08	2	SU	21.6	104
090706F30-1	11.94	12	SU	21.6	99.5
IMM090706g3-1	7.01	7	SU	21.6	100.14

Comments:

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2526

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:09-2526

Per Agreement Number:126310011

Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	EPA:906.0	1	CAMO-09-9950	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2526

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	HASL-300:ISOPU	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	HASL-300:ISOU	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2526

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2526C

REQUEST NUMBER: 09-2526

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9956	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9956	1	POLY	H3	Ice	R
CAMO-09-9950	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9950	1	POLY	H3	Ice	R
CAMO-09-9952	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9952	1	POLY	H3	Ice	R
CAMO-09-9958	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9958	1	POLY	H3	Ice	R
CAMO-09-9957	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9957	1	POLY	H3	Ice	R
CAMO-09-9951	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9951	1	POLY	H3	Ice	R
CAMO-09-10031	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-10031	1	POLY	H3	Ice	R
CAMO-09-9990	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9990	1	POLY	H3	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00			
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By:	Date	Time	Remarks:
Printed Name / Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9950

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		12:18	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	4.5	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown fill with cobbles & concrete

FD: CAMO-09-10031

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) 14, (5) of 50 building 001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 5 dpm

β/γ 674 dpm

PID Ambient Reading = 0.0 / 0.0

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) [signature]	6/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9951

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		1243	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	NA
LOCATION ID:	MO-605460	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	4.5	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	5.5	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Dry indurated Purple/brown tuff w/ lithics

SAMPLE COMMENTS: Interface @ 4.5' bgs

LOCATION DESC: 50-004(a) - 14 (S) of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 10$ dpm

$\beta/\gamma \leq 879$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales	6.29.09	(Printed Name) Sherri Sherwood	4/29/09
(Signature) A. Gonzales	1617	(Signature) Sherri Sherwood	4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9952

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Qbt3
TIME COLLECTED (HH:MM)		1202	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605460	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	9.5	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	10.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISO U	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+ N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Gray/brown indurated tuff w/ lithics

FTB: CAMO-09-10014

SAMPLE COMMENTS: Advance w/ power auger sample w/ hand auger @ 9.5' bgs

LOCATION DESC: 50-004(a)-14 (S) of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 33 dpm

β/γ ≤ 742 dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) A. Goumas	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9956

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	OBT4	Fill
TIME COLLECTED (HH:MM)		1500	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Geoprobe	FIELD PREP:	NA	↓
TOP DEPTH:	0	9.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	AA 6.29.09 ~~10~~ 10.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	~~0~~ S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: Brown crushed tuff fill w/ cobbles

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) 16 (5) of bldg 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 22$ dpm

$\beta/\gamma \leq 722$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	4/29/09 4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9957

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Qbt3
TIME COLLECTED (HH:MM)		1510	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	↓
TOP DEPTH:	0	10.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	11.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	OK	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C	250 ML AMBER GLASS	Ice	↓	↓
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Purple/gray indurated tuff

FR: CAMO-09-10025

SAMPLE COMMENTS: Interface @ 10.0' bgs

LOCATION DESC: 50-004(a)-16, South of building 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

α≤ 28 dpm

β/γ≤ 1022 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gonzales

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales	6-29-09	(Printed Name) Sherri Sherwood	6/29/09
(Signature) [signature]	1617	(Signature) Sherri Sherwood	4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9958

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		1541	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	H.A.
LOCATION ID:	MO-605462	ok	FIELD QC TYPE:	NA	ok
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	
TOP DEPTH:	0	15.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	16.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Grey / Purple, indurated, slightly moist tuff.

SAMPLE COMMENTS: Sample collected 5.0' below S/T Interface.

LOCATION DESC: 50-004(a)-00-16 (5) of bldg. 50-001

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 39$ dpm

$\beta/\gamma \leq 606$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch **REVIEWED BY (PRINT)** A. Goumas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/29/09	(Printed Name) Sherri Sherwood	6/29/09
(Signature) [signature]	1617	(Signature) [signature]	4:30

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-9990

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	QBT3
TIME COLLECTED (HH:MM)		~~1000~~ 0930	SUB-MEDIA:	UA	OK
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	H.A.
LOCATION ID:	MO-605473	OK	FIELD QC TYPE:	NA	OK
LOCATION TYPE:	BH	Generic	FIELD PREP:	NA	✓
TOP DEPTH:	0	3.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	4.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	OK	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: N/A BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Regulatory~~ 15-Day 8/29/09	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C+8082	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	✓	✓

SAMPLE DESC: Brown/Purple, indurated, wet tuff

SAMPLE COMMENTS: S/T interface @ 3.0' bgs. Saturation zone encountered @ ~~4.0'~~ 3.0' bgs. Final depth not collected to avoid contamination from saturation zone.

LOCATION DESC: 50-004(a)-00-11

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 16$ dpm

$\beta/\gamma \leq 1049$ dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) Esteban Lujan

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) J. Branch	6/29/09 1617	(Printed Name) Sheri Sherwood	4/29/09 4:30
(Signature) [signature]		(Signature) Sherwood, Sheri	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10014

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1302	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-005460	FIELD QC TYPE:	FTB	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA (AG 6.29.09) BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package

SAMPLE DESC: QC Sample of CAMO-09-9952

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a)-14

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gowman

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gowman (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 1730
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10025

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1518	SUB-MEDIA:	OTHER	
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	MO-05462	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	Full Data Package
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-9958

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a) - 16

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas (Signature) [signature]	6.29.09 1617	(Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	6/29/09 4:30
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 873 **EVENT NAME:** Upper Mord. 50-004(a)-00

SAMPLE ID: CAMO-09-10031

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/29/2009	MEDIA:	QBT4	Fill
TIME COLLECTED (HH:MM)		12:18	SUB-MEDIA:	UA	ok
PRS ID:		50-004(a)-00	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	UNK	MO-605460	FIELD QC TYPE:	FD	ok
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	↓
TOP DEPTH:	0	3.5	SAMPLE USAGE:	QC	↓
BOTTOM DEPTH:	0	4.5	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	16-Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full data Package
1	↓	8270C+~~8082~~	250 ML AMBER GLASS	Ice	↓	↓
2	↓	8290	125 ML GLASS	Ice	↓	↓
1	↓	GS+ISOPU+ISOU	250 ML POLY	Ice	↓	↓
1	↓	H3	500 ML POLY	Ice	↓	↓
1	↓	METALS-GEL	125 ML POLY	Ice	↓	↓
1	↓	Perchlorate+CN+N03+pH	500 ML POLY	Ice	↓	↓
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	↓

SAMPLE DESC: QC Sample of CAMO-09-9950

Brown Fill with cobbles & concrete

SAMPLE COMMENTS: None

LOCATION DESC: 50-004-84, (5) of building 01 @ 50

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 5 dpm

β/γ ≤ 674 dpm

PID ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) A. Gouma

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gouma	6.29.09	(Printed Name) Sherri Sherwood	6/29/09
(Signature) A. Gouma	1617	(Signature) Sherri Sherwood	4:30

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-9990
-9950 —> 9952
-9956 —> 9958
-10031

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10014
-10025

Reason: QC of Samples.

Print Last Name Branch Signature [signature] Date 6/29/09

AMERICAN RADIATION SERVICES, INC.

133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group:	ARS2-09-00078	Request or PO Number:	
Client Sample ID:	CAMO-09-9990	ARS Sample ID:	ARS2-09-00078-001
Sample Collection Date:	06/29/09 09:30	Date Received:	06/30/09 00:00
Sample Matrix:	Soil/Solid	Report Date:	06/30/09 14:55

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	63.53	79.39	121.29	79.77	U	pCi/g	EPA 900.0M	6/30/2009	ME	N/A
GROSS BETA	51.75	17.38	19.29	18.50		pCi/g	EPA 900.0M	6/30/2009	ME	N/A
NA-22	0.00	0.00	0.09	0.00	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
K-40	-0.87	-11.06	2.22	-11.06	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CO-60	0.00	0.18	0.09	0.18	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CS-134	0.16	0.13	0.07	0.13	BI	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
CS-137	-0.01	11.97	0.06	11.97	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
EU-152	0.00	9.51	0.11	9.51	U	pCi/g	EPA 901.1M	6/30/2009	ME	N/A
PB-212	1.11	0.40	0.11	0.40		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
RA 226	1.34	0.51	0.24	0.51		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
U-235	1.10	0.54	0.14	0.54		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
U-238	2.81	3.60	1.50	3.65		pCi/g	EPA 901.1M	6/30/2009	ME	N/A
AM-241	0.36	0.28	0.09	0.28		pCi/g	EPA 901.1M	6/30/2009	ME	N/A

NOTES: % Moisture: 2.31

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate# 30658 NELAP Certificate # E87558

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2526 VALIDATION DATE: 07/24/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Kevin A. Lambert ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☒ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. All reported gamma spec results that were rejected by the laboratory due to interference and low abundance were qualified R,R5a. Also, it should be noted that several results in the matrix QC samples were rejected by the laboratory. No sample data were qualified as a result.
2. It should be noted that an MS was not analyzed for tritium. However, an LCS was analyzed and passed acceptance criteria. Thus, no sample data were qualified.
3. All reported sample results that were ≤ the MDCs were qualified U,R5.
4. The gamma spec Th-234 result for sample CAMO-09-9958 was a detect > the MDC but ≤3X the 1-sigma TPU and, thus, was qualified U,R11.
5. It should be noted that the parent samples for all QC analyses were LANL samples from other RNs. No sample

DATA VALIDATION COVER SHEET

5119-1

Records Use only

Los Alamos NATIONAL LABORATORY

Data Validation Cover Sheet

data were qualified as a result.

Reviewed by: Mary Donivan Level: I Date: 07/27/09

VALIDATOR'S SIGNATURE: Kevin A Lambert DATE: 07/24/09

Form 5119-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☒	☐	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9956
Sample ID: 232746001
Matrix: R
Collect Date: 29-JUN-09
Receive Date: 02-JUL-09
Collector: Client
Moisture: 14.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00649	U,R5	0.0232	+/-0.00432	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240	U	0.026	U,R5	0.0284	+/-0.00674	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.944		0.174	+/-0.0899	0.100	pCi/g		CXM2	07/14/09	1433	882704	3
Uranium-235/236	U	0.0521	U,R5	0.0799	+/-0.0161	0.100	pCi/g						
Uranium-238		0.973		0.0678	+/-0.0915	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0732	U,R5	0.308	+/-0.0932	0.200	pCi/g		MXR1	07/14/09	0858	882713	4
Bismuth-211	UI	4.28	R,R5a	0.333	+/-0.293		pCi/g						
Bismuth-214		1.03		0.110	+/-0.0985	0.200	pCi/g						
Cadmium-109	UI	3.64	R,R5a	1.23	+/-0.567		pCi/g						
Cerium-139	U	-0.0142	U,R5	0.0487	+/-0.0149	0.050	pCi/g						
Cesium-134	UI	0.106	R,R5a	0.103	+/-0.0373	0.100	pCi/g						
Cesium-137	U	0.0147	U,R5	0.0747	+/-0.0216	0.100	pCi/g						
Cobalt-60	U	-0.0202		0.0542	+/-0.018	0.100	pCi/g						
Europium-152	U	-0.0177		0.167	+/-0.0538	0.200	pCi/g						
Lanthanum-140	U	-0.0389		0.135	+/-0.0433		pCi/g						
Lead-212		1.65		0.0911	+/-0.0961	0.100	pCi/g						
Lead-214		1.49		0.116	+/-0.109	0.100	pCi/g						
Mercury-203	U	-0.0483	U,R5	0.0715	+/-0.0229	0.100	pCi/g						
Potassium-40		23.6		0.536	+/-1.23	1.00	pCi/g						
Radium-223	U	-0.129	U,R5	1.12	+/-0.380		pCi/g						
Radium-224	UI	4.14	R,R5a	1.04	+/-0.701		pCi/g						
Radium-226		1.03		0.110	+/-0.0985		pCi/g						
Radium-228		1.34		0.236	+/-0.168	0.500	pCi/g						
Ruthenium-106	U	0.0597	U,R5	0.556	+/-0.162	0.800	pCi/g						
Sodium-22	U	-0.0107		0.0738	+/-0.0229	0.080	pCi/g						
Strontium-85	U	0.0456		0.0758	+/-0.0245		pCi/g						
Thallium-208		0.493		0.0688	+/-0.0429	0.080	pCi/g						
Thorium-227	U	-0.0197	U,R5	0.706	+/-0.203		pCi/g						
Thorium-231	U	-0.129		1.12	+/-0.380		pCi/g						
Thorium-234	U	0.801		2.38	+/-1.30	2.00	pCi/g						
Tin-113	U	-0.0223		0.0795	+/-0.0244	0.100	pCi/g						
Uranium-235	U	-0.069		0.368	+/-0.113	0.500	pCi/g						
Yttrium-88	U	-0.0272		0.0465	+/-0.0172	0.100	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9956
Sample ID: 232746001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		224	208	+/-66.7	250	pCi/L		KXK2	07/16/09	0024	883039	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	85.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.0	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9950
Sample ID: 232746002
Matrix: R
Collect Date: 29-JUN-09
Receive Date: 02-JUL-09
Collector: Client
Moisture: 10.6%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.0121	U,R5	0.0216	+/-0.00543	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.134		0.0263	+/-0.0149	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.712		0.167	+/-0.0721	0.100	pCi/g		CXM2	07/14/09	1433	882704	3
Uranium-235/236	U	0.0272	U,R5	0.0764	+/-0.013	0.100	pCi/g						
Uranium-238		0.675		0.0649	+/-0.0686	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.0463	U,R5	0.268	+/-0.0831	0.200	pCi/g		MXR1	07/14/09	0858	882713	4
Bismuth-211	UI	3.40	R,R5a	0.302	+/-0.230		pCi/g						
Bismuth-214		1.29		0.113	+/-0.100	0.200	pCi/g						
Cadmium-109	UI	3.10	R,R5a	1.32	+/-0.426		pCi/g						
Cerium-139	U	-0.0152	U,R5	0.0472	+/-0.0142	0.050	pCi/g						
Cesium-134	U	0.0762		0.0885	+/-0.0234	0.100	pCi/g						
Cesium-137	U	0.00377		0.0642	+/-0.0195	0.100	pCi/g						
Cobalt-60	U	-0.012		0.0617	+/-0.0199	0.100	pCi/g						
Europium-152	U	0.0716		0.149	+/-0.0457	0.200	pCi/g						
Lanthanum-140	U	-0.125		0.0965	+/-0.0405		pCi/g						
Lead-212		1.58		0.0833	+/-0.0795	0.100	pCi/g						
Lead-214		1.18		0.105	+/-0.0858	0.100	pCi/g						
Mercury-203	U	0.0467	U,R5	0.0677	+/-0.0214	0.100	pCi/g						
Potassium-40		29.1		0.432	+/-1.40	1.00	pCi/g						
Radium-223	U	0.00134	U,R5	1.05	+/-0.324		pCi/g						
Radium-224	UI	3.97	R,R5a	0.948	+/-0.566		pCi/g						
Radium-226		1.29		0.113	+/-0.100		pCi/g						
Radium-228		1.67		0.207	+/-0.178	0.500	pCi/g						
Ruthenium-106	U	0.0237	U,R5	0.493	+/-0.149	0.800	pCi/g						
Sodium-22	U	0.0056	U,R5	0.0708	+/-0.0215	0.080	pCi/g						
Strontium-85	UI	0.0676	R,R5a	0.0639	+/-0.0186		pCi/g						
Thallium-208		0.528		0.055	+/-0.0446	0.080	pCi/g						
Thorium-227	U	-0.265	U,R5	0.581	+/-0.185		pCi/g						
Thorium-231	U	0.00134		1.05	+/-0.324		pCi/g						
Thorium-234	U	0.706		2.45	+/-0.734	2.00	pCi/g						
Tin-113	U	0.0328		0.0734	+/-0.0204	0.100	pCi/g						
Uranium-235	U	0.0112		0.335	+/-0.0983	0.500	pCi/g						
Yttrium-88	U	0.0135		0.044	+/-0.0116	0.100	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9950
Sample ID: 232746002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	177	U,R5	206	+/-64.8	250	pCi/L		KXK2	07/16/09	0203	883039	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.2	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	98.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9952
Sample ID: 232746003
Matrix: R
Collect Date: 29-JUN-09
Receive Date: 02-JUL-09
Collector: Client
Moisture: 10.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.0107	U,R5	0.0212	+/-0.00398	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240	U	-0.00713	U,R5	0.026	+/-0.00376	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.622		0.164	+/-0.0654	0.100	pCi/g		CXM2	07/14/09	1433	882704	3
Uranium-235/236	U	0.0313	U,R5	0.0754	+/-0.0186	0.100	pCi/g						
Uranium-238		0.684		0.064	+/-0.0688	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0281	U,R5	0.248	+/-0.0755	0.200	pCi/g		MXR1	07/14/09	0859	882713	4
Bismuth-211	UI	3.78	R,R5a	0.324	+/-0.257		pCi/g						
Bismuth-214		1.10		0.113	+/-0.0938	0.200	pCi/g						
Cadmium-109	UI	2.35	R,R5a	1.50	+/-0.603		pCi/g						
Cerium-139	U	-0.000629	U,R5	0.0484	+/-0.0144	0.050	pCi/g						
Cesium-134	U	0.0761		0.0899	+/-0.035	0.100	pCi/g						
Cesium-137	U	-0.0305		0.0595	+/-0.0189	0.100	pCi/g						
Cobalt-60	U	0.0264		0.0674	+/-0.019	0.100	pCi/g						
Europium-152	U	-0.0287		0.145	+/-0.0499	0.200	pCi/g						
Lanthanum-140	U	-0.0205		0.150	+/-0.046		pCi/g						
Lead-212		1.65		0.0895	+/-0.0791	0.100	pCi/g						
Lead-214		1.32		0.113	+/-0.0957	0.100	pCi/g						
Mercury-203	U	0.0206	U,R5	0.0711	+/-0.0201	0.100	pCi/g						
Potassium-40		35.7		0.458	+/-1.57	1.00	pCi/g						
Radium-223	U	0.306	U,R5	1.09	+/-0.350		pCi/g						
Radium-224	UI	4.50	R,R5a	1.02	+/-0.579		pCi/g						
Radium-226		1.10		0.113	+/-0.0938		pCi/g						
Radium-228		1.82		0.249	+/-0.170	0.500	pCi/g						
Ruthenium-106	U	-0.0163	U,R5	0.536	+/-0.158	0.800	pCi/g						
Sodium-22	U	-0.0089	U,R5	0.0697	+/-0.0216	0.080	pCi/g						
Strontium-85	UI	0.103	R,R5a	0.0753	+/-0.0222		pCi/g						
Thallium-208		0.596		0.0613	+/-0.0433	0.080	pCi/g						
Thorium-227	U	-0.302	U,R5	0.571	+/-0.173		pCi/g						
Thorium-231	U	0.306		1.09	+/-0.350		pCi/g						
Thorium-234	U	0.692		2.01	+/-1.01	2.00	pCi/g						
Tin-113	U	-0.0185		0.0715	+/-0.0219	0.100	pCi/g						
Uranium-235	U	0.177		0.363	+/-0.106	0.500	pCi/g						
Yttrium-88	U	-0.00316		0.0578	+/-0.0178	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9952
Sample ID: 232746003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		264	204	+/-66.7	250	pCi/L		KXK2	07/16/09	0341	883039	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	100	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9958	Project:	LANL01004
Sample ID:	232746004	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.3%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00691	U,R5	0.0206	+/-0.00366	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.0265		0.0251	+/-0.0059	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.751		0.165	+/-0.0745	0.100	pCi/g		CXM2	07/14/09	1519	882704	3
Uranium-235/236	U	0.0269	U,R5	0.0756	+/-0.0128	0.100	pCi/g						
Uranium-238		0.769		0.0642	+/-0.0759	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0807	U,R5	0.113	+/-0.0342	0.200	pCi/g		MXR1	07/14/09	0913	882713	4
Bismuth-211	UI	4.12	R,R5a	0.390	+/-0.283		pCi/g						
Bismuth-214	UI	1.32		0.301	+/-0.0984	0.200	pCi/g						
Cadmium-109	UI	3.77		0.963	+/-0.437		pCi/g						
Cerium-139	U	-0.00508	U,R5	0.0514	+/-0.0152	0.050	pCi/g						
Cesium-134	UI	0.160	R,R5a	0.106	+/-0.0387	0.100	pCi/g						
Cesium-137	U	0.0022	U,R5	0.0765	+/-0.0232	0.100	pCi/g						
Cobalt-60	U	-0.0167		0.0804	+/-0.0257	0.100	pCi/g						
Europium-152	U	-0.132		0.159	+/-0.0624	0.200	pCi/g						
Lanthanum-140	U	0.040		0.155	+/-0.0437		pCi/g						
Lead-212		1.79		0.0934	+/-0.113	0.100	pCi/g						
Lead-214		1.43		0.126	+/-0.105	0.100	pCi/g						
Mercury-203	U	0.0229	U,R5	0.073	+/-0.0232	0.100	pCi/g						
Potassium-40		33.2		0.518	+/-1.44	1.00	pCi/g						
Radium-223	U	0.166	U,R5	1.17	+/-0.383		pCi/g						
Radium-224	UI	4.70	R,R5a	1.06	+/-0.699		pCi/g						
Radium-226	UI	1.32	R,R5a	0.301	+/-0.0984		pCi/g						
Radium-228		1.65		0.264	+/-0.194	0.500	pCi/g						
Ruthenium-106	U	-0.157	U,R5	0.588	+/-0.184	0.800	pCi/g						
Sodium-22	U	-0.0314	U,R5	0.0828	+/-0.0271	0.080	pCi/g						
Strontium-85	UI	0.126	R,R5a	0.0833	+/-0.0239		pCi/g						
Thallium-208		0.571		0.0649	+/-0.0455	0.080	pCi/g						
Thorium-227	U	0.416	U,R5	0.717	+/-0.209		pCi/g						
Thorium-231	U	0.166	U,R5	1.17	+/-0.383		pCi/g						
Thorium-234		1.32	U,R11	1.09	+/-0.462	2.00	pCi/g						
Tin-113	U	-0.0073	U,R5	0.0844	+/-0.0249	0.100	pCi/g						
Uranium-235	U	0.020		0.369	+/-0.108	0.500	pCi/g						
Yttrium-88	U	-0.0269		0.0554	+/-0.0197	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9958
Sample ID: 232746004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		350	244	+/-82.4	250	pCi/L		KXK2	07/16/09	0644	883039	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	96.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9957
Sample ID: 232746005
Matrix: R
Collect Date: 29-JUN-09
Receive Date: 02-JUL-09
Collector: Client
Moisture: 10.1%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00768	U,R5	0.0196	+/-0.00427	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240	U	0.00768	U,R5	0.024	+/-0.00454	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.661		0.168	+/-0.0677	0.100	pCi/g		CXM2	07/14/09	1519	882704	3
Uranium-235/236	U	0.041	U,R5	0.0768	+/-0.014	0.100	pCi/g						
Uranium-238		0.797		0.0653	+/-0.0779	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0941	U,R5	0.123	+/-0.0391	0.200	pCi/g		MXR1	07/14/09	0916	882713	4
Bismuth-211	UI	4.56	R,R5a	0.422	+/-0.300		pCi/g						
Bismuth-214		1.48		0.146	+/-0.131	0.200	pCi/g						
Cadmium-109	UI	3.70	R,R5a	1.30	+/-0.393		pCi/g						
Cerium-139	U	0.00744	U,R5	0.0561	+/-0.0159	0.050	pCi/g						
Cesium-134	UI	0.143	R,R5a	0.131	+/-0.0446	0.100	pCi/g						
Cesium-137	U	-0.0621	U,R5	0.0742	+/-0.0245	0.100	pCi/g						
Cobalt-60	U	0.0471		0.107	+/-0.0301	0.100	pCi/g						
Europium-152	U	0.0153		0.201	+/-0.0678	0.200	pCi/g						
Lanthanum-140	U	0.0159		0.234	+/-0.0691		pCi/g						
Lead-212		1.92		0.106	+/-0.0983	0.100	pCi/g						
Lead-214		1.58		0.148	+/-0.112	0.100	pCi/g						
Mercury-203	U	0.0636	U,R5	0.0883	+/-0.0277	0.100	pCi/g						
Potassium-40		35.8		0.710	+/-1.66	1.00	pCi/g						
Radium-223	U	-0.516	U,R5	1.38	+/-0.490		pCi/g						
Radium-224	UI	5.29	R,R5a	1.21	+/-0.881		pCi/g						
Radium-226		1.48		0.146	+/-0.131		pCi/g						
Radium-228		2.08		0.310	+/-0.210	0.500	pCi/g						
Ruthenium-106	U	0.151	U,R5	0.741	+/-0.220	0.800	pCi/g						
Sodium-22	U	-0.0271	U,R5	0.119	+/-0.0379	0.080	pCi/g						
Strontium-85	UI	0.134	R,R5a	0.0989	+/-0.0289		pCi/g						
Thallium-208		0.594		0.0848	+/-0.0681	0.080	pCi/g						
Thorium-227	U	0.346	U,R5	0.780	+/-0.221		pCi/g						
Thorium-231	U	-0.516		1.38	+/-0.490		pCi/g						
Thorium-234	U	0.805		1.19	+/-0.421	2.00	pCi/g						
Tin-113	U	-0.00499		0.0905	+/-0.0271	0.100	pCi/g						
Uranium-235	U	0.352		0.405	+/-0.119	0.500	pCi/g						
Yttrium-88	U	-0.0213		0.0855	+/-0.028	0.100	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9957
Sample ID: 232746005

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		448	237	+/-84.6	250	pCi/L		KXK2	07/16/09	0811	883039	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	92.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	93.9	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
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- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9951
Sample ID: 232746006
Matrix: R
Collect Date: 29-JUN-09
Receive Date: 02-JUL-09
Collector: Client
Moisture: 10.2%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.0065	U,R5	0.0232	+/-0.00345	0.050	pCi/g		CXM2	07/16/09 1010	882703	1
Plutonium-239/240	U	0.0182	U,R5	0.0284	+/-0.00693	0.050	pCi/g					
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.716		0.159	+/-0.0708	0.100	pCi/g		CXM2	07/14/09 1519	882704	3
Uranium-235/236	U	0.0259	U,R5	0.0728	+/-0.0163	0.100	pCi/g					
Uranium-238		0.768		0.0618	+/-0.0743	0.100	pCi/g					
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.130	U,R5	0.220	+/-0.0688	0.200	pCi/g		MXR1	07/14/09 1020	882713	4
Bismuth-211	UI	3.83	R,R5a	0.317	+/-0.279		pCi/g					
Bismuth-214		1.28		0.106	+/-0.0908	0.200	pCi/g					
Cadmium-109	UI	2.29	R,R5a	1.52	+/-0.609		pCi/g					
Cerium-139	U	0.0169	U,R5	0.0524	+/-0.0153	0.050	pCi/g					
Cesium-134	UI	0.119	R,R5a	0.0909	+/-0.0312	0.100	pCi/g					
Cesium-137	U	-0.00779	U,R5	0.0635	+/-0.0197	0.100	pCi/g					
Cobalt-60	U	0.0284		0.0786	+/-0.0226	0.100	pCi/g					
Europium-152	U	-0.0559		0.159	+/-0.0835	0.200	pCi/g					
Lanthanum-140	U	-0.0161		0.121	+/-0.0458		pCi/g					
Lead-212		1.76		0.0905	+/-0.085	0.100	pCi/g					
Lead-214		1.33		0.110	+/-0.103	0.100	pCi/g					
Mercury-203	U	0.0562	U,R5	0.0738	+/-0.0229	0.100	pCi/g					
Potassium-40		34.9		0.536	+/-1.57	1.00	pCi/g					
Radium-223	U	-0.166	U,R5	1.10	+/-0.373		pCi/g					
Radium-224	UI	4.69	R,R5a	1.03	+/-0.780		pCi/g					
Radium-226		1.28		0.106	+/-0.0908		pCi/g					
Radium-228		1.88		0.231	+/-0.183	0.500	pCi/g					
Ruthenium-106	U	0.0397	U,R5	0.558	+/-0.167	0.800	pCi/g					
Sodium-22	U	-0.0473		0.0792	+/-0.0261	0.080	pCi/g					
Strontium-85	U	0.0571		0.0654	+/-0.0202		pCi/g					
Thallium-208		0.495		0.0608	+/-0.045	0.080	pCi/g					
Thorium-227	U	0.169	U,R5	0.659	+/-0.187		pCi/g					
Thorium-231	U	-0.166		1.10	+/-0.373		pCi/g					
Thorium-234	U	1.41		1.88	+/-0.692	2.00	pCi/g					
Tin-113	U	0.0149		0.0762	+/-0.022	0.100	pCi/g					
Uranium-235	U	0.0105		0.364	+/-0.108	0.500	pCi/g					
Yttrium-88	U	0.025		0.0671	+/-0.0183	0.100	pCi/g					

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9951
Sample ID: 232746006

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	43.7	U,R5	237	+/-70.1	250	pCi/L		KXK2	07/16/09	0908	883039	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	80.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	96.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
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> Result is greater than value reported
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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10031	Project:	LANL01004
Sample ID:	232746007	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	11.3%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.011	U,R5	0.0197	+/-0.00416	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.180		0.0241	+/-0.0168	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.769		0.172	+/-0.0766	0.100	pCi/g		CXM2	07/14/09	2122	882704	3
Uranium-235/236	U	0.0515	U,R5	0.0789	+/-0.0159	0.100	pCi/g						
Uranium-238		0.893		0.067	+/-0.0855	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0866	U,R5	0.133	+/-0.0411	0.200	pCi/g		MXR1	07/14/09	1027	882713	4
Bismuth-211	UI	3.57	R,R5a	0.389	+/-0.254		pCi/g						
Bismuth-214		1.19		0.142	+/-0.107	0.200	pCi/g						
Cadmium-109	UI	3.56	R,R5a	1.18	+/-0.420		pCi/g						
Cerium-139	U	0.0112	U,R5	0.0593	+/-0.0173	0.050	pCi/g						
Cesium-134	U	0.0266		0.112	+/-0.032	0.100	pCi/g						
Cesium-137	U	0.0432		0.0899	+/-0.0256	0.100	pCi/g						
Cobalt-60	U	0.000537		0.0784	+/-0.024	0.100	pCi/g						
Europium-152	U	-0.0761		0.193	+/-0.0649	0.200	pCi/g						
Lanthanum-140	U	-0.0611		0.143	+/-0.0486		pCi/g						
Lead-212		1.66		0.0996	+/-0.0929	0.100	pCi/g						
Lead-214		1.24		0.140	+/-0.0941	0.100	pCi/g						
Mercury-203	U	0.0543	U,R5	0.0813	+/-0.0253	0.100	pCi/g						
Potassium-40		26.2		0.670	+/-1.29	1.00	pCi/g						
Radium-223	U	0.175	U,R5	1.25	+/-0.410		pCi/g						
Radium-224	UI	5.25	R,R5a	1.13	+/-0.740		pCi/g						
Radium-226		1.19		0.142	+/-0.107		pCi/g						
Radium-228		1.72		0.273	+/-0.184	0.500	pCi/g						
Ruthenium-106	U	0.148	U,R5	0.750	+/-0.221	0.800	pCi/g						
Sodium-22	U	-0.00346	U,R5	0.0934	+/-0.0288	0.080	pCi/g						
Strontium-85	UI	0.107	R,R5a	0.0958	+/-0.0285		pCi/g						
Thallium-208		0.475		0.0768	+/-0.0506	0.080	pCi/g						
Thorium-227	U	0.0758	U,R5	0.754	+/-0.227		pCi/g						
Thorium-231	U	0.175		1.25	+/-0.410		pCi/g						
Thorium-234	U	0.969		1.25	+/-0.493	2.00	pCi/g						
Tin-113	U	0.00256		0.0958	+/-0.0281	0.100	pCi/g						
Uranium-235	U	0.194		0.408	+/-0.117	0.500	pCi/g						
Yttrium-88	U	0.00514		0.0596	+/-0.0174	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10031
Sample ID: 232746007

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	132	U,R5	237	+/-72.8	250	pCi/L		KXK2	07/16/09	1006	883039	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	95.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	91.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
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- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9990	Project:	LANL01004
Sample ID:	232746008	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	19.6%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238		1.58		0.0212	+/-0.0885	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.380		0.026	+/-0.0283	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.713		0.154	+/-0.0705	0.100	pCi/g		CXM2	07/14/09	2123	882704	3
Uranium-235/236	U	0.0376	U,R5	0.0705	+/-0.0184	0.100	pCi/g						
Uranium-238		0.856		0.0599	+/-0.0802	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0556	U,R5	0.101	+/-0.0368	0.200	pCi/g		MXR1	07/14/09	1028	882713	4
Bismuth-211	UI	3.75	R,R5a	0.348	+/-0.272		pCi/g						
Bismuth-214		1.15		0.140	+/-0.103	0.200	pCi/g						
Cadmium-109	UI	3.49	R,R5a	1.29	+/-0.458		pCi/g						
Cerium-139	U	-0.0212	U,R5	0.0525	+/-0.016	0.050	pCi/g						
Cesium-134	UI	0.105	R,R5a	0.104	+/-0.0354	0.100	pCi/g						
Cesium-137	U	0.0415	U,R5	0.0834	+/-0.0271	0.100	pCi/g						
Cobalt-60	U	0.0469		0.0893	+/-0.0248	0.100	pCi/g						
Europium-152	U	0.0604		0.180	+/-0.0588	0.200	pCi/g						
Lanthanum-140	U	-0.0298		0.166	+/-0.0528		pCi/g						
Lead-212		1.70		0.0965	+/-0.0961	0.100	pCi/g						
Lead-214		1.31		0.132	+/-0.101	0.100	pCi/g						
Mercury-203	U	0.0271	U,R5	0.0758	+/-0.0214	0.100	pCi/g						
Potassium-40		29.7		0.795	+/-1.29	1.00	pCi/g						
Radium-223	U	-0.283	U,R5	1.21	+/-0.418		pCi/g						
Radium-224	UI	4.19	R,R5a	1.10	+/-0.659		pCi/g						
Radium-226		1.15		0.140	+/-0.103		pCi/g						
Radium-228		1.86		0.271	+/-0.188	0.500	pCi/g						
Ruthenium-106	U	0.0874	U,R5	0.669	+/-0.197	0.800	pCi/g						
Sodium-22	U	0.0158	U,R5	0.0925	+/-0.027	0.080	pCi/g						
Strontium-85	UI	0.148	R,R5a	0.0922	+/-0.0265		pCi/g						
Thallium-208		0.514		0.0725	+/-0.0493	0.080	pCi/g						
Thorium-227	U	-0.436	U,R5	0.665	+/-0.208		pCi/g						
Thorium-231	U	-0.283		1.21	+/-0.418		pCi/g						
Thorium-234	U	0.600		1.06	+/-0.540	2.00	pCi/g						
Tin-113	U	0.0213		0.0871	+/-0.0256	0.100	pCi/g						
Uranium-235	U	0.0148		0.381	+/-0.114	0.500	pCi/g						
Yttrium-88	U	0.0319		0.0703	+/-0.0201	0.100	pCi/g						

KAL
07/24/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9990
Sample ID: 232746008

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	112	U,R5	238	+/-72.4	250	pCi/L		KXK2	07/16/09	1103	883039	5

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Pu-11-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	EML HASL 300, 4.5.2.3
5	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	88.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	103	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

KAL
07/24/09

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2526C

REQUEST NUMBER: 09-2526

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc.,
Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

LAB REQUEST COMMENTS: P.O. 232748 %. 232746 %.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9956	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9956	1	POLY	H3	Ice	R
CAMO-09-9950	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9950	1	POLY	H3	Ice	R
CAMO-09-9952	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9952	1	POLY	H3	Ice	R
CAMO-09-9958	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9958	1	POLY	H3	Ice	R
CAMO-09-9957	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9957	1	POLY	H3	Ice	R
CAMO-09-9951	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9951	1	POLY	H3	Ice	R
CAMO-09-10031	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-10031	1	POLY	H3	Ice	R
CAMO-09-9990	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9990	1	POLY	H3	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00	Catarina Dent [signature]	7/2/09	0840
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name / Signature

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2526

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2526
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	EPA:906.0	1	CAMO-09-9950	R	6/29/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2526

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
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		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	HASL-300:ISOPU	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	HASL-300:ISOU	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
		1	CAMO-09-9952	R	6/29/2009	
		1	CAMO-09-9956	R	6/29/2009	
		1	CAMO-09-9957	R	6/29/2009	
		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2526

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

July 08, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Order: 232746
SDG: 09-2526

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on July 02, 2009, and analyzed for Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2526
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232746
SDG: 09-2526

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- Standards Data.....769
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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232746
SDG # : 09-2526

July 08, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on July 02, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. The containers for radiochemistry were received at 24C temperature. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232746001	CAMO-09-9956
232746002	CAMO-09-9950
232746003	CAMO-09-9952
232746004	CAMO-09-9958
232746005	CAMO-09-9957
232746006	CAMO-09-9951
232746007	CAMO-09-10031
232746008	CAMO-09-9990

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for

Valerie Davis
Project Manager

List of current GEL Certifications as of 08 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C-SC-01
Kansas – NELAP	E-10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2526C

REQUEST NUMBER: 09-2526

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/15/2009

TURNAROUND REQ'D: 14

LAB REQUEST COMMENTS: P.O. ~~232748~~ %. 232746 %.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-9956	1	POLY	GS+ISOPU+ISOU	Ice	R
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CAMO-09-9990	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-9990	1	POLY	H3	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00	Patricia Dent [signature]	7/2/09	0840
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By:	Date	Time	Remarks:
Printed Name / Signature			

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2526

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2526
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/15/2009
TURNAROUND REQ'D: 14 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	CAMO-09-9950	R	6/29/2009	
		1	CAMO-09-9951	R	6/29/2009	
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		1	CAMO-09-9958	R	6/29/2009	
		1	CAMO-09-9990	R	6/29/2009	
		1	CAMO-09-10031	R	6/29/2009	
	EPA:906.0	1	CAMO-09-9950	R	6/29/2009	

y 01, 2009

REQUEST NUMBER: 09-2526

ETHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
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	1	CAMO-09-9952	R	6/29/2009	
	1	CAMO-09-9956	R	6/29/2009	
	1	CAMO-09-9957	R	6/29/2009	
	1	CAMO-09-9958	R	6/29/2009	
	1	CAMO-09-9990	R	6/29/2009	
	1	CAMO-09-10031	R	6/29/2009	

Final Page of REQUEST NUMBER 09-2526

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2526**
Received By: Patricia Dent	**Date Received: JULY 2, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: 40-C.P.M.
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags blue ice dry ice NONE other (describe) 2,3,4,6C 24 C
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5930 6C
7209 7847 5860 24C
7209 7847 5881 3C
7209 7847 5892 2C
7209 7847 5940 6C
7209 7847 5951 4C
7209 7847 5918 4C
7209 7847 5929 2C
7209 7847 5870 4C

PM Review: Initials DOC Date 7-3-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 55.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171
FedEx
Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7209 7847 5892 Form 0201

CHS A1

29407 -SC-US XX CHSA

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 55.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171
FedEx
Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

3°C

BILL SENDER

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7209 7847 5881 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 156140-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 57.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 5b010amr1a0130djbo

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5929 Form 0201

THU
Deliver By:
02JUL09

29407 -SC-US XX CHSA CHS A1

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 36.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 5b010awe6111550000

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5951 Form 0201

THU
Deliver By:
02JUL09

29407 -SC-US XX CHSA CHS A1

Part # 156148-434 NRIT V3 04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 20.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010aue6111550000

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5940 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

Part# 156148-434 NRT V3.04-09

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 55.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr1a0130djbo

Delivery Address Barcode

4°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7209 7847 5918 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHGA

Part# 156148-434 NRT V3.04-09

ORIGIN ID: SAFA (505) 665-9968
OYLENE VALDEZ
OS ALAMOS NATL LAB.
A00 BLDG 1237 DPU 03

OS ALAMOS, NM 87545
NITED STATES US

Ship Date: 01JUL09
ctWgt: 62.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

(843) 556-8171
VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

FedEx Express

Ref: 6b010amu6111550000

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7209 7847 5930 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NMFT V3 04-05

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ctWgt: 70.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171
FedEx Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7209 7847 5860 Form 0201

CHS A1

29407 -SC-US XX CHSA

Part # 156148-434 NMFT V3 04-05

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 55.0 LB MAN
System#: 0014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: 6b010amr2a0512bgdo

Delivery Address Barcode

4C

BILL SENDER

RAD II

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7209 7847 5870 Form 0201

CHS A1

29407 -SC-US XX CHSA

-6-434 NRT V3 04-09

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

RADIOLOGICAL ANALYSIS

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882703
Prep Batch Number:	882656

Sample ID	Client ID
232746001	CAMO-09-9956
232746002	CAMO-09-9950
232746003	CAMO-09-9952
232746004	CAMO-09-9958
232746005	CAMO-09-9957
232746006	CAMO-09-9951
232746007	CAMO-09-10031
232746008	CAMO-09-9990
1201874791	Method Blank (MB)
1201874792	232754002(CAMO-09-6614) Sample Duplicate (DUP)
1201874793	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874791 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232754002 (CAMO-09-6614). The QC was from LANL work order 232754.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples were recounted due to high relative percent difference/relative error ratio.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882704
Prep Batch Number:	882656

Sample ID	Client ID
232746001	CAMO-09-9956
232746002	CAMO-09-9950
232746003	CAMO-09-9952
232746004	CAMO-09-9958
232746005	CAMO-09-9957
232746006	CAMO-09-9951
232746007	CAMO-09-10031
232746008	CAMO-09-9990
1201874794	Method Blank (MB)
1201874795	232851002(CAMO-09-7146) Sample Duplicate (DUP)
1201874796	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874794 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 232851002 (CAMO-09-7146). The QC was from LANL work order 232851.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The U-238 blank result is greater than 1.65 times the CSU but less than the MDC.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882713
Prep Batch Number:	882656

Sample ID	Client ID
232746001	CAMO-09-9956
232746002	CAMO-09-9950
232746003	CAMO-09-9952
232746004	CAMO-09-9958
232746005	CAMO-09-9957
232746006	CAMO-09-9951
232746007	CAMO-09-10031
232746008	CAMO-09-9990
1201874832	Method Blank (MB)
1201874833	232754001(CAMO-09-6615) Sample Duplicate (DUP)
1201874834	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, November 2008, January 2009, February 2009, March 2009 and June 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232754001 (CAMO-09-6615). The QC was from LANL work order 232754.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result for the following is greater than 1.65 times the CSU, but less than the minimum detectable activity: Ra-224.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result for the following is greater than the decision level in the method blank, but less than the minimum detectable activity: Ra-224.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232746001	CAMO-09-9956
			232746002	CAMO-09-9950
			232746003	CAMO-09-9952
			232746004	CAMO-09-9958
			232746005	CAMO-09-9957
			232746006	CAMO-09-9951
			232746007	CAMO-09-10031
			232746008	CAMO-09-9990
			1201874833	CAMO-09-6615(232754001DUP)
		Cadmium-109	232746001	CAMO-09-9956
			232746002	CAMO-09-9950
			232746003	CAMO-09-9952
			232746004	CAMO-09-9958

			232746005	CAMO-09-9957
			232746006	CAMO-09-9951
			232746007	CAMO-09-10031
			232746008	CAMO-09-9990
			1201874833	CAMO-09-6615(232754001DUP)
		Radium-224	232746001	CAMO-09-9956
			232746002	CAMO-09-9950
			232746003	CAMO-09-9952
			232746004	CAMO-09-9958
			232746005	CAMO-09-9957
			232746006	CAMO-09-9951
			232746007	CAMO-09-10031
			232746008	CAMO-09-9990
			1201874833	CAMO-09-6615(232754001DUP)
UI	Data rejected due to low abundance.	Bismuth-214	232746004	CAMO-09-9958
		Cesium-134	232746001	CAMO-09-9956
			232746004	CAMO-09-9958
			232746005	CAMO-09-9957
			232746006	CAMO-09-9951
			232746008	CAMO-09-9990
		Radium-226	232746004	CAMO-09-9958
		Strontium-85	232746002	CAMO-09-9950
			232746003	CAMO-09-9952
			232746004	CAMO-09-9958
			232746005	CAMO-09-9957
			232746007	CAMO-09-10031
			232746008	CAMO-09-9990

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883039

Sample ID	Client ID
232746001	CAMO-09-9956
232746002	CAMO-09-9950
232746003	CAMO-09-9952
232746004	CAMO-09-9958
232746005	CAMO-09-9957
232746006	CAMO-09-9951
232746007	CAMO-09-10031
232746008	CAMO-09-9990
1201875658	Method Blank (MB)
1201875659	232851001(CAMO-09-7145) Sample Duplicate (DUP)
1201875660	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232851001 (CAMO-09-7145). The QC was from LANL work

order 232851.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 7/20/09

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2526 GEL Work Order: 232746

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/20/09

Reviewed by

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9956	Project:	LANL01004
Sample ID:	232746001	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	14.1%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00649	0.0232	+/-0.00432	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240	U	0.026	0.0284	+/-0.00674	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.944	0.174	+/-0.0899	0.100	pCi/g		CXM2	07/14/09	1433	882704	3
Uranium-235/236	U	0.0521	0.0799	+/-0.0161	0.100	pCi/g						
Uranium-238		0.973	0.0678	+/-0.0915	0.100	pCi/g						
d Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0732	0.308	+/-0.0932	0.200	pCi/g		MXR1	07/14/09	0858	882713	4
Bismuth-211	UI	4.28	0.333	+/-0.293		pCi/g						
Bismuth-214		1.03	0.110	+/-0.0985	0.200	pCi/g						
Cadmium-109	UI	3.64	1.23	+/-0.567		pCi/g						
Cerium-139	U	-0.0142	0.0487	+/-0.0149	0.050	pCi/g						
Cesium-134	UI	0.106	0.103	+/-0.0373	0.100	pCi/g						
Cesium-137	U	0.0147	0.0747	+/-0.0216	0.100	pCi/g						
Cobalt-60	U	-0.0202	0.0542	+/-0.018	0.100	pCi/g						
Europium-152	U	-0.0177	0.167	+/-0.0538	0.200	pCi/g						
Lanthanum-140	U	-0.0389	0.135	+/-0.0433		pCi/g						
Lead-212		1.65	0.0911	+/-0.0961	0.100	pCi/g						
Lead-214		1.49	0.116	+/-0.109	0.100	pCi/g						
Mercury-203	U	-0.0483	0.0715	+/-0.0229	0.100	pCi/g						
Potassium-40		23.6	0.536	+/-1.23	1.00	pCi/g						
Radium-223	U	-0.129	1.12	+/-0.380		pCi/g						
Radium-224	UI	4.14	1.04	+/-0.701		pCi/g						
Radium-226		1.03	0.110	+/-0.0985		pCi/g						
Radium-228		1.34	0.236	+/-0.168	0.500	pCi/g						
Ruthenium-106	U	0.0597	0.556	+/-0.162	0.800	pCi/g						
Sodium-22	U	-0.0107	0.0738	+/-0.0229	0.080	pCi/g						
Strontium-85	U	0.0456	0.0758	+/-0.0245		pCi/g						
Thallium-208		0.493	0.0688	+/-0.0429	0.080	pCi/g						
Thorium-227	U	-0.0197	0.706	+/-0.203		pCi/g						
Thorium-231	U	-0.129	1.12	+/-0.380		pCi/g						
Thorium-234	U	0.801	2.38	+/-1.30	2.00	pCi/g						
Tin-113	U	-0.0223	0.0795	+/-0.0244	0.100	pCi/g						
Uranium-235	U	-0.069	0.368	+/-0.113	0.500	pCi/g						
Yttrium-88	U	-0.0272	0.0465	+/-0.0172	0.100	pCi/g						

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9956
Sample ID: 232746001

Project: LANL01004
Client ID: LANL010

ırameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
ıd Liquid Scintillation Analysis												
43 "As Received"												
Tritium		224	208	+/-66.7	250	pCi/L		KXK2	07/16/09	0024	883039	5

he following Analytical Methods were performed

lethod	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	85.6	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	94.0	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9956
Sample ID: 232746001

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9950	Project:	LANL01004
Sample ID:	232746002	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.6%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Alpha Spec Analysis												
SOPU "Dry Weight Corrected"												
Plutonium-238	U	0.0121	0.0216	+/-0.00543	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.134	0.0263	+/-0.0149	0.050	pCi/g						
SOU "Dry Weight Corrected"												
Uranium-233/234		0.712	0.167	+/-0.0721	0.100	pCi/g		CXM2	07/14/09	1433	882704	3
Uranium-235/236	U	0.0272	0.0764	+/-0.013	0.100	pCi/g						
Uranium-238		0.675	0.0649	+/-0.0686	0.100	pCi/g						
d Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0463	0.268	+/-0.0831	0.200	pCi/g		MXR1	07/14/09	0858	882713	4
Bismuth-211	UI	3.40	0.302	+/-0.230		pCi/g						
Bismuth-214		1.29	0.113	+/-0.100	0.200	pCi/g						
Cadmium-109	UI	3.10	1.32	+/-0.426		pCi/g						
Cerium-139	U	-0.0152	0.0472	+/-0.0142	0.050	pCi/g						
Cesium-134	U	0.0762	0.0885	+/-0.0234	0.100	pCi/g						
Cesium-137	U	0.00377	0.0642	+/-0.0195	0.100	pCi/g						
Cobalt-60	U	-0.012	0.0617	+/-0.0199	0.100	pCi/g						
Europium-152	U	0.0716	0.149	+/-0.0457	0.200	pCi/g						
Lanthanum-140	U	-0.125	0.0965	+/-0.0405		pCi/g						
Lead-212		1.58	0.0833	+/-0.0795	0.100	pCi/g						
Lead-214		1.18	0.105	+/-0.0858	0.100	pCi/g						
Mercury-203	U	0.0467	0.0677	+/-0.0214	0.100	pCi/g						
Potassium-40		29.1	0.432	+/-1.40	1.00	pCi/g						
Radium-223	U	0.00134	1.05	+/-0.324		pCi/g						
Radium-224	UI	3.97	0.948	+/-0.566		pCi/g						
Radium-226		1.29	0.113	+/-0.100		pCi/g						
Radium-228		1.67	0.207	+/-0.178	0.500	pCi/g						
Ruthenium-106	U	0.0237	0.493	+/-0.149	0.800	pCi/g						
Sodium-22	U	0.0056	0.0708	+/-0.0215	0.080	pCi/g						
Strontium-85	UI	0.0676	0.0639	+/-0.0186		pCi/g						
Thallium-208		0.528	0.055	+/-0.0446	0.080	pCi/g						
Thorium-227	U	-0.265	0.581	+/-0.185		pCi/g						
Thorium-231	U	0.00134	1.05	+/-0.324		pCi/g						
Thorium-234	U	0.706	2.45	+/-0.734	2.00	pCi/g						
Tin-113	U	0.0328	0.0734	+/-0.0204	0.100	pCi/g						
Uranium-235	U	0.0112	0.335	+/-0.0983	0.500	pCi/g						
Yttrium-88	U	0.0135	0.044	+/-0.0116	0.100	pCi/g						

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9950
Sample ID: 232746002

Project: LANL01004
Client ID: LANL010

ırameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
ıd Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	177	206	+/-64.8	250	pCi/L		KXK2	07/16/09	0203	883039	5

he following Analytical Methods were performed

lethod	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.2	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	98.8	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9950
Sample ID: 232746002

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9952
Sample ID: 232746003
Matrix: R
Collect Date: 29-JUN-09
Receive Date: 02-JUL-09
Collector: Client
Moisture: 10.4%

Project: LANL01004
Client ID: LANL010

rameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.
d Alpha Spec Analysis											
SOPU "Dry Weight Corrected"											
Plutonium-238	U	0.0107	0.0212	+/-0.00398	0.050	pCi/g	CXM2	07/16/09	1010	882703	1
Plutonium-239/240	U	-0.00713	0.026	+/-0.00376	0.050	pCi/g					
SOU "Dry Weight Corrected"											
Uranium-233/234		0.622	0.164	+/-0.0654	0.100	pCi/g	CXM2	07/14/09	1433	882704	3
Uranium-235/236	U	0.0313	0.0754	+/-0.0186	0.100	pCi/g					
Uranium-238		0.684	0.064	+/-0.0688	0.100	pCi/g					
d Gamma Spec Analysis											
GAMMA SPEC "Dry Weight Corrected"											
Americium-241	U	0.0281	0.248	+/-0.0755	0.200	pCi/g	MXR1	07/14/09	0859	882713	4
Bismuth-211	UI	3.78	0.324	+/-0.257		pCi/g					
Bismuth-214		1.10	0.113	+/-0.0938	0.200	pCi/g					
Cadmium-109	UI	2.35	1.50	+/-0.603		pCi/g					
Cerium-139	U	-0.000629	0.0484	+/-0.0144	0.050	pCi/g					
Cesium-134	U	0.0761	0.0899	+/-0.035	0.100	pCi/g					
Cesium-137	U	-0.0305	0.0595	+/-0.0189	0.100	pCi/g					
Cobalt-60	U	0.0264	0.0674	+/-0.019	0.100	pCi/g					
Europium-152	U	-0.0287	0.145	+/-0.0499	0.200	pCi/g					
Lanthanum-140	U	-0.0205	0.150	+/-0.046		pCi/g					
Lead-212		1.65	0.0895	+/-0.0791	0.100	pCi/g					
Lead-214		1.32	0.113	+/-0.0957	0.100	pCi/g					
Mercury-203	U	0.0206	0.0711	+/-0.0201	0.100	pCi/g					
Potassium-40		35.7	0.458	+/-1.57	1.00	pCi/g					
Radium-223	U	0.306	1.09	+/-0.350		pCi/g					
Radium-224	UI	4.50	1.02	+/-0.579		pCi/g					
Radium-226		1.10	0.113	+/-0.0938		pCi/g					
Radium-228		1.82	0.249	+/-0.170	0.500	pCi/g					
Ruthenium-106	U	-0.0163	0.536	+/-0.158	0.800	pCi/g					
Sodium-22	U	-0.0089	0.0697	+/-0.0216	0.080	pCi/g					
Strontium-85	UI	0.103	0.0753	+/-0.0222		pCi/g					
Thallium-208		0.596	0.0613	+/-0.0433	0.080	pCi/g					
Thorium-227	U	-0.302	0.571	+/-0.173		pCi/g					
Thorium-231	U	0.306	1.09	+/-0.350		pCi/g					
Thorium-234	U	0.692	2.01	+/-1.01	2.00	pCi/g					
Tin-113	U	-0.0185	0.0715	+/-0.0219	0.100	pCi/g					
Uranium-235	U	0.177	0.363	+/-0.106	0.500	pCi/g					
Yttrium-88	U	-0.00316	0.0578	+/-0.0178	0.100	pCi/g					

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9952
Sample ID: 232746003

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		264	204	+/-66.7	250	pCi/L		KXK2	07/16/09	0341	883039	5

he following Analytical Methods were performed

lethod	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.6	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	100	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Certificate of Analysis

Company : Los Alamos National Laboratory
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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9952
Sample ID: 232746003

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9958	Project:	LANL01004
Sample ID:	232746004	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.3%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Alpha Spec Analysis												
'SOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00691	0.0206	+/-0.00366	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.0265	0.0251	+/-0.0059	0.050	pCi/g						
'SOU "Dry Weight Corrected"												
Uranium-233/234		0.751	0.165	+/-0.0745	0.100	pCi/g		CXM2	07/14/09	1519	882704	3
Uranium-235/236	U	0.0269	0.0756	+/-0.0128	0.100	pCi/g						
Uranium-238		0.769	0.0642	+/-0.0759	0.100	pCi/g						
d Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0807	0.113	+/-0.0342	0.200	pCi/g		MXR1	07/14/09	0913	882713	4
Bismuth-211	UI	4.12	0.390	+/-0.283		pCi/g						
Bismuth-214	UI	1.32	0.301	+/-0.0984	0.200	pCi/g						
Cadmium-109	UI	3.77	0.963	+/-0.437		pCi/g						
Cerium-139	U	-0.00508	0.0514	+/-0.0152	0.050	pCi/g						
Cesium-134	UI	0.160	0.106	+/-0.0387	0.100	pCi/g						
Cesium-137	U	0.0022	0.0765	+/-0.0232	0.100	pCi/g						
Cobalt-60	U	-0.0167	0.0804	+/-0.0257	0.100	pCi/g						
Europium-152	U	-0.132	0.159	+/-0.0624	0.200	pCi/g						
Lanthanum-140	U	0.040	0.155	+/-0.0437		pCi/g						
Lead-212		1.79	0.0934	+/-0.113	0.100	pCi/g						
Lead-214		1.43	0.126	+/-0.105	0.100	pCi/g						
Mercury-203	U	0.0229	0.073	+/-0.0232	0.100	pCi/g						
Potassium-40		33.2	0.518	+/-1.44	1.00	pCi/g						
Radium-223	U	0.166	1.17	+/-0.383		pCi/g						
Radium-224	UI	4.70	1.06	+/-0.699		pCi/g						
Radium-226	UI	1.32	0.301	+/-0.0984		pCi/g						
Radium-228		1.65	0.264	+/-0.194	0.500	pCi/g						
Ruthenium-106	U	-0.157	0.588	+/-0.184	0.800	pCi/g						
Sodium-22	U	-0.0314	0.0828	+/-0.0271	0.080	pCi/g						
Strontium-85	UI	0.126	0.0833	+/-0.0239		pCi/g						
Thallium-208		0.571	0.0649	+/-0.0455	0.080	pCi/g						
Thorium-227	U	0.416	0.717	+/-0.209		pCi/g						
Thorium-231	U	0.166	1.17	+/-0.383		pCi/g						
Thorium-234		1.32	1.09	+/-0.462	2.00	pCi/g						
Tin-113	U	-0.0073	0.0844	+/-0.0249	0.100	pCi/g						
Uranium-235	U	0.020	0.369	+/-0.108	0.500	pCi/g						
Yttrium-88	U	-0.0269	0.0554	+/-0.0197	0.100	pCi/g						

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9958
Sample ID: 232746004

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date Time	Batch	Mtd.
ıd Liquid Scintillation Analysis											
H3 "As Received"											
Tritium		350	244	+/-82.4	250	pCi/L		KXK2	07/16/09 0644	883039	5

he following Analytical Methods were performed

lethod	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	91.5	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	96.7	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
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> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9958
Sample ID: 232746004

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9957	Project:	LANL01004
Sample ID:	232746005	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.1%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
ıd Alpha Spec Analysis												
'SOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00768	0.0196	+/-0.00427	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240	U	0.00768	0.024	+/-0.00454	0.050	pCi/g						
'SOU "Dry Weight Corrected"												
Uranium-233/234		0.661	0.168	+/-0.0677	0.100	pCi/g		CXM2	07/14/09	1519	882704	3
Uranium-235/236	U	0.041	0.0768	+/-0.014	0.100	pCi/g						
Uranium-238		0.797	0.0653	+/-0.0779	0.100	pCi/g						
ıd Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0941	0.123	+/-0.0391	0.200	pCi/g		MXR1	07/14/09	0916	882713	4
Bismuth-211	UI	4.56	0.422	+/-0.300		pCi/g						
Bismuth-214		1.48	0.146	+/-0.131	0.200	pCi/g						
Cadmium-109	UI	3.70	1.30	+/-0.393		pCi/g						
Cerium-139	U	0.00744	0.0561	+/-0.0159	0.050	pCi/g						
Cesium-134	UI	0.143	0.131	+/-0.0446	0.100	pCi/g						
Cesium-137	U	-0.0621	0.0742	+/-0.0245	0.100	pCi/g						
Cobalt-60	U	0.0471	0.107	+/-0.0301	0.100	pCi/g						
Europium-152	U	0.0153	0.201	+/-0.0678	0.200	pCi/g						
Lanthanum-140	U	0.0159	0.234	+/-0.0691		pCi/g						
Lead-212		1.92	0.106	+/-0.0983	0.100	pCi/g						
Lead-214		1.58	0.148	+/-0.112	0.100	pCi/g						
Mercury-203	U	0.0636	0.0883	+/-0.0277	0.100	pCi/g						
Potassium-40		35.8	0.710	+/-1.66	1.00	pCi/g						
Radium-223	U	-0.516	1.38	+/-0.490		pCi/g						
Radium-224	UI	5.29	1.21	+/-0.881		pCi/g						
Radium-226		1.48	0.146	+/-0.131		pCi/g						
Radium-228		2.08	0.310	+/-0.210	0.500	pCi/g						
Ruthenium-106	U	0.151	0.741	+/-0.220	0.800	pCi/g						
Sodium-22	U	-0.0271	0.119	+/-0.0379	0.080	pCi/g						
Strontium-85	UI	0.134	0.0989	+/-0.0289		pCi/g						
Thallium-208		0.594	0.0848	+/-0.0681	0.080	pCi/g						
Thorium-227	U	0.346	0.780	+/-0.221		pCi/g						
Thorium-231	U	-0.516	1.38	+/-0.490		pCi/g						
Thorium-234	U	0.805	1.19	+/-0.421	2.00	pCi/g						
Tin-113	U	-0.00499	0.0905	+/-0.0271	0.100	pCi/g						
Uranium-235	U	0.352	0.405	+/-0.119	0.500	pCi/g						
Yttrium-88	U	-0.0213	0.0855	+/-0.028	0.100	pCi/g						

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9957
Sample ID: 232746005

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Liquid Scintillation Analysis												
H3 "As Received"												
Tritium		448	237	+/-84.6	250	pCi/L		KXK2	07/16/09	0811	883039	5

he following Analytical Methods were performed

lethod	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	92.7	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	93.9	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9957
Sample ID: 232746005

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9951	Project:	LANL01004
Sample ID:	232746006	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	10.2%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Alpha Spec Analysis												
SOPU "Dry Weight Corrected"												
Plutonium-238	U	0.0065	0.0232	+/-0.00345	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240	U	0.0182	0.0284	+/-0.00693	0.050	pCi/g						
SOU "Dry Weight Corrected"												
Uranium-233/234		0.716	0.159	+/-0.0708	0.100	pCi/g		CXM2	07/14/09	1519	882704	3
Uranium-235/236	U	0.0259	0.0728	+/-0.0163	0.100	pCi/g						
Uranium-238		0.768	0.0618	+/-0.0743	0.100	pCi/g						
d Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.130	0.220	+/-0.0688	0.200	pCi/g		MXR1	07/14/09	1020	882713	4
Bismuth-211	UI	3.83	0.317	+/-0.279		pCi/g						
Bismuth-214		1.28	0.106	+/-0.0908	0.200	pCi/g						
Cadmium-109	UI	2.29	1.52	+/-0.609		pCi/g						
Cerium-139	U	0.0169	0.0524	+/-0.0153	0.050	pCi/g						
Cesium-134	UI	0.119	0.0909	+/-0.0312	0.100	pCi/g						
Cesium-137	U	-0.00779	0.0635	+/-0.0197	0.100	pCi/g						
Cobalt-60	U	0.0284	0.0786	+/-0.0226	0.100	pCi/g						
Europium-152	U	-0.0559	0.159	+/-0.0835	0.200	pCi/g						
Lanthanum-140	U	-0.0161	0.121	+/-0.0458		pCi/g						
Lead-212		1.76	0.0905	+/-0.085	0.100	pCi/g						
Lead-214		1.33	0.110	+/-0.103	0.100	pCi/g						
Mercury-203	U	0.0562	0.0738	+/-0.0229	0.100	pCi/g						
Potassium-40		34.9	0.536	+/-1.57	1.00	pCi/g						
Radium-223	U	-0.166	1.10	+/-0.373		pCi/g						
Radium-224	UI	4.69	1.03	+/-0.780		pCi/g						
Radium-226		1.28	0.106	+/-0.0908		pCi/g						
Radium-228		1.88	0.231	+/-0.183	0.500	pCi/g						
Ruthenium-106	U	0.0397	0.558	+/-0.167	0.800	pCi/g						
Sodium-22	U	-0.0473	0.0792	+/-0.0261	0.080	pCi/g						
Strontium-85	U	0.0571	0.0654	+/-0.0202		pCi/g						
Thallium-208		0.495	0.0608	+/-0.045	0.080	pCi/g						
Thorium-227	U	0.169	0.659	+/-0.187		pCi/g						
Thorium-231	U	-0.166	1.10	+/-0.373		pCi/g						
Thorium-234	U	1.41	1.88	+/-0.692	2.00	pCi/g						
Tin-113	U	0.0149	0.0762	+/-0.022	0.100	pCi/g						
Uranium-235	U	0.0105	0.364	+/-0.108	0.500	pCi/g						
Yttrium-88	U	0.025	0.0671	+/-0.0183	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-9951
Sample ID: 232746006

Project: LANL01004
Client ID: LANL010

ırameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
ıd Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	43.7	237	+/-70.1	250	pCi/L		KXK2	07/16/09	0908	883039	5

he following Analytical Methods were performed

lethod	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	80.5	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	96.5	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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Report Date: July 20, 2009

Client Sample ID: CAMO-09-9951
Sample ID: 232746006

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-10031	Project:	LANL01004
Sample ID:	232746007	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	11.3%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Alpha Spec Analysis												
SOPU "Dry Weight Corrected"												
Plutonium-238	U	0.011	0.0197	+/-0.00416	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.180	0.0241	+/-0.0168	0.050	pCi/g						
SOU "Dry Weight Corrected"												
Uranium-233/234		0.769	0.172	+/-0.0766	0.100	pCi/g		CXM2	07/14/09	2122	882704	3
Uranium-235/236	U	0.0515	0.0789	+/-0.0159	0.100	pCi/g						
Uranium-238		0.893	0.067	+/-0.0855	0.100	pCi/g						
d Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0866	0.133	+/-0.0411	0.200	pCi/g		MXR1	07/14/09	1027	882713	4
Bismuth-211	UI	3.57	0.389	+/-0.254		pCi/g						
Bismuth-214		1.19	0.142	+/-0.107	0.200	pCi/g						
Cadmium-109	UI	3.56	1.18	+/-0.420		pCi/g						
Cerium-139	U	0.0112	0.0593	+/-0.0173	0.050	pCi/g						
Cesium-134	U	0.0266	0.112	+/-0.032	0.100	pCi/g						
Cesium-137	U	0.0432	0.0899	+/-0.0256	0.100	pCi/g						
Cobalt-60	U	0.000537	0.0784	+/-0.024	0.100	pCi/g						
Europium-152	U	-0.0761	0.193	+/-0.0649	0.200	pCi/g						
Lanthanum-140	U	-0.0611	0.143	+/-0.0486		pCi/g						
Lead-212		1.66	0.0996	+/-0.0929	0.100	pCi/g						
Lead-214		1.24	0.140	+/-0.0941	0.100	pCi/g						
Mercury-203	U	0.0543	0.0813	+/-0.0253	0.100	pCi/g						
Potassium-40		26.2	0.670	+/-1.29	1.00	pCi/g						
Radium-223	U	0.175	1.25	+/-0.410		pCi/g						
Radium-224	UI	5.25	1.13	+/-0.740		pCi/g						
Radium-226		1.19	0.142	+/-0.107		pCi/g						
Radium-228		1.72	0.273	+/-0.184	0.500	pCi/g						
Ruthenium-106	U	0.148	0.750	+/-0.221	0.800	pCi/g						
Sodium-22	U	-0.00346	0.0934	+/-0.0288	0.080	pCi/g						
Strontium-85	UI	0.107	0.0958	+/-0.0285		pCi/g						
Thallium-208		0.475	0.0768	+/-0.0506	0.080	pCi/g						
Thorium-227	U	0.0758	0.754	+/-0.227		pCi/g						
Thorium-231	U	0.175	1.25	+/-0.410		pCi/g						
Thorium-234	U	0.969	1.25	+/-0.493	2.00	pCi/g						
Tin-113	U	0.00256	0.0958	+/-0.0281	0.100	pCi/g						
Uranium-235	U	0.194	0.408	+/-0.117	0.500	pCi/g						
Yttrium-88	U	0.00514	0.0596	+/-0.0174	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-10031
Sample ID: 232746007

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	132	237	+/-72.8	250	pCi/L		KXK2	07/16/09	1006	883039	5

he following Analytical Methods were performed

Method	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	95.7	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	91.7	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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< Result is less than value reported
> Result is greater than value reported
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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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Report Date: July 20, 2009

Client Sample ID: CAMO-09-10031
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Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-9990	Project:	LANL01004
Sample ID:	232746008	Client ID:	LANL010
Matrix:	R		
Collect Date:	29-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	19.6%		

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Alpha Spec Analysis												
SOPU "Dry Weight Corrected"												
Plutonium-238		1.58	0.0212	+/-0.0885	0.050	pCi/g		CXM2	07/16/09	1010	882703	1
Plutonium-239/240		0.380	0.026	+/-0.0283	0.050	pCi/g						
SOU "Dry Weight Corrected"												
Uranium-233/234		0.713	0.154	+/-0.0705	0.100	pCi/g		CXM2	07/14/09	2123	882704	3
Uranium-235/236	U	0.0376	0.0705	+/-0.0184	0.100	pCi/g						
Uranium-238		0.856	0.0599	+/-0.0802	0.100	pCi/g						
d Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0556	0.101	+/-0.0368	0.200	pCi/g		MXR1	07/14/09	1028	882713	4
Bismuth-211	UI	3.75	0.348	+/-0.272		pCi/g						
Bismuth-214		1.15	0.140	+/-0.103	0.200	pCi/g						
Cadmium-109	UI	3.49	1.29	+/-0.458		pCi/g						
Cerium-139	U	-0.0212	0.0525	+/-0.016	0.050	pCi/g						
Cesium-134	UI	0.105	0.104	+/-0.0354	0.100	pCi/g						
Cesium-137	U	0.0415	0.0834	+/-0.0271	0.100	pCi/g						
Cobalt-60	U	0.0469	0.0893	+/-0.0248	0.100	pCi/g						
Europium-152	U	0.0604	0.180	+/-0.0588	0.200	pCi/g						
Lanthanum-140	U	-0.0298	0.166	+/-0.0528		pCi/g						
Lead-212		1.70	0.0965	+/-0.0961	0.100	pCi/g						
Lead-214		1.31	0.132	+/-0.101	0.100	pCi/g						
Mercury-203	U	0.0271	0.0758	+/-0.0214	0.100	pCi/g						
Potassium-40		29.7	0.795	+/-1.29	1.00	pCi/g						
Radium-223	U	-0.283	1.21	+/-0.418		pCi/g						
Radium-224	UI	4.19	1.10	+/-0.659		pCi/g						
Radium-226		1.15	0.140	+/-0.103		pCi/g						
Radium-228		1.86	0.271	+/-0.188	0.500	pCi/g						
Ruthenium-106	U	0.0874	0.669	+/-0.197	0.800	pCi/g						
Sodium-22	U	0.0158	0.0925	+/-0.027	0.080	pCi/g						
Strontium-85	UI	0.148	0.0922	+/-0.0265		pCi/g						
Thallium-208		0.514	0.0725	+/-0.0493	0.080	pCi/g						
Thorium-227	U	-0.436	0.665	+/-0.208		pCi/g						
Thorium-231	U	-0.283	1.21	+/-0.418		pCi/g						
Thorium-234	U	0.600	1.06	+/-0.540	2.00	pCi/g						
Tin-113	U	0.0213	0.0871	+/-0.0256	0.100	pCi/g						
Uranium-235	U	0.0148	0.381	+/-0.114	0.500	pCi/g						
Yttrium-88	U	0.0319	0.0703	+/-0.0201	0.100	pCi/g						

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Report Date: July 20, 2009

Client Sample ID: CAMO-09-9990
Sample ID: 232746008

Project: LANL01004
Client ID: LANL010

arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
d Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	112	238	+/-72.4	250	pCi/L		KXK2	07/16/09	1103	883039	5

he following Analytical Methods were performed

Method	Description
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, Pu-11-RC Modified
	DOE EML HASL-300, U-02-RC Modified
	EML HASL 300, 4.5.2.3
	GL-RAD-A-002

urrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
utonium-242 Tracer	ISOPU "Dry Weight Corrected"	88.0	(50%-105%)
anium-232 Tracer	ISOU "Dry Weight Corrected"	103	(50%-105%)

otes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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H Analytical holding time was exceeded
J Value is estimated
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M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.
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arameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

QC Summary

Report Date: July 20, 2009

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232746

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882703										
QC1201874792 232754002 DUP										
Plutonium-238	U	0.0153	U	0.00373	pCi/g	0.551		(0-1)	CXM2	07/16/0910:10
	TPU:	+/-0.00719		+/-0.00329						
	Yield:	96.6		95.9						
Plutonium-239/240		0.0376		0.0671	pCi/g	0.776		(0-1)		
	TPU:	+/-0.00882		+/-0.0102						
	Yield:	96.6		95.9						
QC1201874793 LCS										
Plutonium-238				6.26	pCi/g			(75%-125%)		
	TPU:			+/-0.457						
	Yield:			103						
Plutonium-239/240	41.8			38.3	pCi/g		91.6	(75%-125%)		
	TPU:			+/-2.29						
	Yield:			103						
QC1201874791 MB										
Plutonium-238			U	0.00829	pCi/g					
	TPU:			+/-0.00619						
	Yield:			101						
Plutonium-239/240			U	0.00553	pCi/g					
	TPU:			+/-0.00339						
	Yield:			101						
Batch 882704										
QC1201874795 232851002 DUP										
Uranium-233/234		0.491		0.486	pCi/g	0.0259		(0-1)	CXM2	07/14/0921:23
	TPU:	+/-0.0554		+/-0.0547						
	Yield:	97.4		99.6						
Uranium-235/236	U	0.0319	U	0.00445	pCi/g	0.637		(0-1)		
	TPU:	+/-0.0139		+/-0.00771						
	Yield:	97.4		99.6						
Uranium-238		0.731		0.647	pCi/g	0.297		(0-1)		
	TPU:	+/-0.074		+/-0.0662						
	Yield:	97.4		99.6						
QC1201874796 LCS										
Uranium-233/234				6.34	pCi/g			(75%-125%)		07/14/0921:23
	TPU:			+/-0.577						
	Yield:			104						
Uranium-235/236				0.343	pCi/g			(75%-125%)		
	TPU:			+/-0.093						
	Yield:			104						
Uranium-238	5.75			5.11	pCi/g		88.9	(75%-125%)		
	TPU:			+/-0.480						
	Yield:			104						
QC1201874794 MB										
Uranium-233/234			U	-0.00897	pCi/g					07/14/0921:23

QC Summary

Workorder: 232746

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882704										
	TPU:			+/-0.0047						
	Yield:			102						
Uranium-235/236			U	0.00	pCi/g					
	TPU:			+/-0.00311						
	Yield:			102						
Uranium-238			U	0.0124	pCi/g					
	TPU:			+/-0.00478						
	Yield:			102						
Rad Gamma Spec										
Batch 882713										
QC1201874833 232754001 DUP										
Americium-241	U	0.0982	U	0.0474	pCi/g	0.201		(0-1)	MXR1	07/14/0911:23
	TPU:	+/-0.0904		+/-0.0358						
Bismuth-211	UI	4.13	UI	4.10	pCi/g	0.036		(0-1)		
	TPU:	+/-0.249		+/-0.279						
Bismuth-214		1.15		1.28	pCi/g	0.353		(0-1)		
	TPU:	+/-0.084		+/-0.104						
Cadmium-109	UI	3.36	UI	3.73	pCi/g	0.191		(0-1)		
	TPU:	+/-0.523		+/-0.441						
Cerium-139	U	-0.0138	U	-0.0152	pCi/g	0.0233		(0-1)		
	TPU:	+/-0.0154		+/-0.0163						
Cesium-134	UI	0.132	U	0.0783	pCi/g	0.403		(0-1)		
	TPU:	+/-0.0333		+/-0.0331						
Cesium-137	U	-0.0224	U	-0.051	pCi/g	0.315		(0-1)		
	TPU:	+/-0.0203		+/-0.025						
Cobalt-60	U	-0.00278	U	0.0309	pCi/g	0.385		(0-1)		
	TPU:	+/-0.0208		+/-0.023						
Europium-152	U	0.103	U	0.0576	pCi/g	0.193		(0-1)		
	TPU:	+/-0.0539		+/-0.0641						
Lanthanum-140	U	0.0618	U	-0.0273	pCi/g	0.521		(0-1)		
	TPU:	+/-0.0333		+/-0.0523						
Lead-212		1.82		1.86	pCi/g	0.112		(0-1)		
	TPU:	+/-0.0831		+/-0.117						
Lead-214		1.44		1.43	pCi/g	0.0328		(0-1)		
	TPU:	+/-0.0945		+/-0.104						
Mercury-203	U	0.0321	U	0.0433	pCi/g	0.125		(0-1)		
	TPU:	+/-0.0227		+/-0.0225						
Potassium-40		35.5		33.6	pCi/g	0.297		(0-1)		
	TPU:	+/-1.78		+/-1.48						
Radium-223	U	0.338	U	-0.286	pCi/g	0.417		(0-1)		
	TPU:	+/-0.355		+/-0.392						
Radium-224	UI	5.23	UI	4.72	pCi/g	0.228		(0-1)		
	TPU:	+/-0.541		+/-0.567						
Radium-226		1.15		1.28	pCi/g	0.353		(0-1)		
	TPU:	+/-0.084		+/-0.104						
Radium-228		1.70		1.93	pCi/g	0.286		(0-1)		
	TPU:	+/-0.172		+/-0.227						
Ruthenium-106	U	0.020	U	0.128	pCi/g	0.156		(0-1)		
	TPU:	+/-0.156		+/-0.190						
Sodium-22	U	-0.00479	U	-0.0124	pCi/g	0.0731		(0-1)		

QC Summary

Workorder: 232746

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 882713										
	TPU:	+/-0.0227		+/-0.0296						
Strontium-85	UI	0.122	U	0.0871	pCi/g	0.352		(0-1)		
	TPU:	+/-0.0213		+/-0.0276						
Thallium-208		0.574		0.537	pCi/g	0.204		(0-1)		
	TPU:	+/-0.0414		+/-0.0494						
Thorium-227	U	-0.202	U	-0.26	pCi/g	0.0717		(0-1)		
	TPU:	+/-0.199		+/-0.210						
Thorium-231	U	0.338	U	-0.286	pCi/g	0.417		(0-1)		
	TPU:	+/-0.355		+/-0.392						
Thorium-234	U	1.49		1.70	pCi/g	0.0686		(0-1)		
	TPU:	+/-0.960		+/-0.614						
Tin-113	U	-0.00589	U	-0.0244	pCi/g	0.196		(0-1)		
	TPU:	+/-0.0218		+/-0.0254						
Uranium-235	U	-0.161	U	0.0263	pCi/g	0.418		(0-1)		
	TPU:	+/-0.111		+/-0.114						
Yttrium-88	U	-0.00583	U	-0.00724	pCi/g	0.0208		(0-1)		
	TPU:	+/-0.0146		+/-0.0193						
QC1201874834 LCS										
Americium-241	15.9			13.7	pCi/g		86	(75%-125%)		07/14/0912:33
	TPU:			+/-0.723						
Bismuth-211				2.38	pCi/g					
	TPU:			+/-0.348						
Bismuth-214				0.914	pCi/g					
	TPU:			+/-0.172						
Cadmium-109				47.5	pCi/g					
	TPU:			+/-2.30						
Cerium-139			U	0.0156	pCi/g					
	TPU:			+/-0.0246						
Cesium-134			U	0.0305	pCi/g					
	TPU:			+/-0.0546						
Cesium-137	5.64			6.01	pCi/g		107	(75%-125%)		
	TPU:			+/-0.288						
Cobalt-60	6.91			6.85	pCi/g		99	(75%-125%)		
	TPU:			+/-0.264						
Europium-152			U	0.0303	pCi/g					
	TPU:			+/-0.105						
Lanthanum-140			U	0.028	pCi/g					
	TPU:			+/-0.0495						
Lead-212				0.811	pCi/g					
	TPU:			+/-0.121						
Lead-214				0.827	pCi/g					
	TPU:			+/-0.123						
Mercury-203			U	0.0406	pCi/g					
	TPU:			+/-0.0332						
Potassium-40			U	0.849	pCi/g					
	TPU:			+/-0.362						
Radium-223			U	-0.332	pCi/g					
	TPU:			+/-0.638						
Radium-224			U	0.865	pCi/g					
	TPU:			+/-0.654						
Radium-226				0.914	pCi/g					

QC Summary

Workorder: 232746

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 882713										
	TPU:			+/-0.172						
Radium-228				1.12	pCi/g					
	TPU:			+/-0.332						
Ruthenium-106			U	-0.398	pCi/g					
	TPU:			+/-0.334						
Sodium-22			U	-0.0645	pCi/g					
	TPU:			+/-0.0318						
Strontium-85			U	0.125	pCi/g					
	TPU:			+/-0.0407						
Thallium-208				0.233	pCi/g					
	TPU:			+/-0.0613						
Thorium-227			U	-0.532	pCi/g					
	TPU:			+/-0.354						
Thorium-231			U	-0.332	pCi/g					
	TPU:			+/-0.638						
Thorium-234			U	0.239	pCi/g					
	TPU:			+/-0.615						
Tin-113			U	0.0872	pCi/g					
	TPU:			+/-0.0467						
Uranium-235			U	-0.0991	pCi/g					
	TPU:			+/-0.175						
Yttrium-88			U	0.0654	pCi/g					
	TPU:			+/-0.0267						
QC1201874832 MB										
Americium-241			U	0.00208	pCi/g					07/14/0911:22
	TPU:			+/-0.00896						
Bismuth-211			U	-0.011	pCi/g					
	TPU:			+/-0.068						
Bismuth-214			U	0.0233	pCi/g					
	TPU:			+/-0.0213						
Cadmium-109			U	0.0421	pCi/g					
	TPU:			+/-0.0927						
Cerium-139			U	-0.00105	pCi/g					
	TPU:			+/-0.00585						
Cesium-134			U	0.00345	pCi/g					
	TPU:			+/-0.0144						
Cesium-137			U	-0.0101	pCi/g					
	TPU:			+/-0.0108						
Cobalt-60			U	0.0066	pCi/g					
	TPU:			+/-0.0136						
Europium-152			U	-0.014	pCi/g					
	TPU:			+/-0.0279						
Lanthanum-140			U	-0.0442	pCi/g					
	TPU:			+/-0.025						
Lead-212			U	0.015	pCi/g					
	TPU:			+/-0.0151						
Lead-214			U	0.00197	pCi/g					
	TPU:			+/-0.0238						
Mercury-203			U	-0.00599	pCi/g					
	TPU:			+/-0.00826						
Potassium-40			U	0.140	pCi/g					

QC Summary

Workorder: 232746

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 882713										
	TPU:			+/-0.158						
Radium-223			U	-0.0565	pCi/g					
	TPU:			+/-0.173						
Radium-224			U	0.297	pCi/g					
	TPU:			+/-0.153						
Radium-226			U	0.0233	pCi/g					
	TPU:			+/-0.0213						
Radium-228			U	0.0178	pCi/g					
	TPU:			+/-0.0469						
Ruthenium-106			U	-0.196	pCi/g					
	TPU:			+/-0.109						
Sodium-22			U	-0.00124	pCi/g					
	TPU:			+/-0.0129						
Strontium-85			U	-0.00426	pCi/g					
	TPU:			+/-0.0172						
Thallium-208			U	0.00523	pCi/g					
	TPU:			+/-0.0132						
Thorium-227			U	-0.0396	pCi/g					
	TPU:			+/-0.0949						
Thorium-231			U	-0.0565	pCi/g					
	TPU:			+/-0.173						
Thorium-234			U	-0.0849	pCi/g					
	TPU:			+/-0.0979						
Tin-113			U	0.00405	pCi/g					
	TPU:			+/-0.0123						
Uranium-235			U	-0.0494	pCi/g					
	TPU:			+/-0.0428						
Yttrium-88			U	0.0147	pCi/g					
	TPU:			+/-0.018						
Rad Liquid Scintillation										
Batch 883039										
QC1201875659 232851001 DUP										
Tritium		687		999	pCi/L	0.744		(0-1)	KXK2	07/16/0921:33
	TPU:	+/-96.5		+/-113						
QC1201875660 LCS										
Tritium	5730			7000	pCi/L		122	(75%-125%)		07/16/0907:54
	TPU:			+/-573						
QC1201875658 MB										
Tritium			U	-22.1	pCi/L					07/16/0920:36
	TPU:			+/-69.5						

Notes:
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

QC Summary

Workorder: 232746

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time

B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 882703 Product: Pu Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/17/09

Secondary Review Performed By: [signature] 7/18/09

LANL

7/12 - 7/23

Plutonium Que Sheet

06-JUL-09

Batch #: 882703 Analyst: CXM2 First Client Due Date:23-JUL-09 Internal Due Date:12-JUL-09

Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 1262-A Expiration Date: 5/11/10 Vol: 0.1mL

LCS Isotope(s): Pu-239/Pu-238 LCS Code: 0244-B Expiration Date: 4/30/20 Vol: 0.106g

Spike Isotope(s): Pu-239/Pu-238 Spike Code: — Expiration Date: — Vol: —

Prep Date: 7/9/09 Initials: CMM Pipet ID: 2971058 Balance ID: 5041027 Witness: MOL 1/9/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g) (1/f)	Pu Det #
232347001-1	CAMO-09-10462	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	1	1	1.250	31 ~~12~~
232347002-1	CAMO-09-10460	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	2	2	1.250	32 14
232347003-1	CAMO-09-10461	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	3	3	1.267	33 15
232347004-1	CAMO-09-10467	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	4	4	1.251	34 16
232664001-1	CAMO-09-9942	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	5	5	1.252	35 17
232664002-1	CAMO-09-9941	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	6	6	1.260	36 19
232664003-1	CAMO-09-9943	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	7	7	1.253	37 20
232664004-1	CAMO-09-10030	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	8	8	1.266	38 21
232664005-1	CAMO-09-9989	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	9	9	1.254	39 22
232746001-1	CAMO-09-9956	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	10	10	1.253	40 23
232746002-1	CAMO-09-9950	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	11	11	1.252	41 24
232746003-1	CAMO-09-9952	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	12	12	1.251	42 ~~25~~
232746004-1	CAMO-09-9958	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	13	13	1.256	43 ~~26~~
232746005-1	CAMO-09-9957	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	14	14	1.252	44 ~~27~~
232746006-1	CAMO-09-9951	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	15	15	1.257	45 ~~28~~
232746007-1	CAMO-09-10031	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	16	16	1.253	46 ~~29~~
232746008-1	CAMO-09-9990	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	17	17	1.253	47 ~~30~~
232754001-1	CAMO-09-6615	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	18	18	1.250	48 ~~31~~
232754002-1	CAMO-09-6614	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	19	19	1.255	65 ~~32~~
232754003-1	CAMO-09-6613	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	20	20	1.266	66 ~~33~~
1201874791-1	MB for batch 882703	MB		.05 pCi/g	SOIL	QC ACCOUNT		21	21	~~1.267~~ 1.017	67 ~~34~~
1201874792-1	CAMO-09-6614(232754002DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	30-JUN-09	22	22	1.254	68 ~~35~~
1201874793-1	LCS for batch 882703	LCS		.05 pCi/g	SOIL	QC ACCOUNT		23	23	0.106	69 ~~36~~

dailies

Choose SOP Used: ~~GL-RAD-A-011~~ trans
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: 7/17/09

Blank Correction Report

Batch ID 882703

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874792	DUP	Plutonium-238	1.25 g	0.00373	0.00329	0.0222	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0671	0.0102	0.0271	.004424	pCi/g	NO
1201874793	LCS	Plutonium-238	0.106 g	6.26	0.457	0.233	.078207547	pCi/g	NO
		Plutonium-239/240	0.106 g	38.3	2.29	0.285	.052169811	pCi/g	NO
1201874791	MB	Plutonium-238	1.00 g	0.00829	0.00619	0.0247	.00829	pCi/g	YES
		Plutonium-239/240	1.00 g	0.00553	0.00339	0.0302	.00553	pCi/g	YES
232347001	CAMO-09-10462	Plutonium-238	1.25 g	0.0025	0.00729	0.0223	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00375	0.00545	0.0273	.004424	pCi/g	YES
232347002	CAMO-09-10460	Plutonium-238	1.25 g	0.0101	0.00807	0.0258	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00	0.00457	0.0316	.004424	pCi/g	YES
232347003	CAMO-09-10461	Plutonium-238	1.27 g	-0.00236	0.00237	0.0211	.006527559	pCi/g	YES
		Plutonium-239/240	1.27 g	-0.00118	0.00264	0.0258	.004354331	pCi/g	YES
232347004	CAMO-09-10467	Plutonium-238	1.25 g	0.00984	0.00579	0.022	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00737	0.00325	0.0268	.004424	pCi/g	YES
232664001	CAMO-09-9942	Plutonium-238	1.25 g	0.130	0.0153	0.0233	.006632	pCi/g	NO
		Plutonium-239/240	1.25 g	0.483	0.0353	0.0284	.004424	pCi/g	NO
232664002	CAMO-09-9941	Plutonium-238	1.26 g	0.0424	0.00809	0.0211	.006579365	pCi/g	NO
		Plutonium-239/240	1.26 g	3.49	0.182	0.0257	.004388889	pCi/g	NO
232664003	CAMO-09-9943	Plutonium-238	1.25 g	0.0283	0.00702	0.0194	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.406	0.0293	0.0238	.004424	pCi/g	NO
232664004	CAMO-09-10030	Plutonium-238	1.27 g	0.0343	0.00808	0.0198	.006527559	pCi/g	NO
		Plutonium-239/240	1.27 g	2.95	0.153	0.0242	.004354331	pCi/g	NO
232664005	CAMO-09-9989	Plutonium-238	1.25 g	7.75	0.374	0.0169	.006632	pCi/g	NO
		Plutonium-239/240	1.25 g	3.13	0.157	0.0206	.004424	pCi/g	NO
232746001	CAMO-09-9956	Plutonium-238	1.25 g	0.00649	0.00432	0.0232	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.026	0.00674	0.0284	.004424	pCi/g	NO
232746002	CAMO-09-9950	Plutonium-238	1.25 g	0.0121	0.00543	0.0216	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.134	0.0149	0.0263	.004424	pCi/g	NO
232746003	CAMO-09-9952	Plutonium-238	1.25 g	0.0107	0.00398	0.0212	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00713	0.00376	0.026	.004424	pCi/g	YES
232746004	CAMO-09-9958	Plutonium-238	1.26 g	0.00691	0.00366	0.0206	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0265	0.0059	0.0251	.004388889	pCi/g	NO
232746005	CAMO-09-9957	Plutonium-238	1.25 g	0.00768	0.00427	0.0196	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00768	0.00454	0.024	.004424	pCi/g	YES
232746006	CAMO-09-9951	Plutonium-238	1.26 g	0.0065	0.00345	0.0232	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0182	0.00693	0.0284	.004388889	pCi/g	YES
232746007	CAMO-09-10031	Plutonium-238	1.25 g	0.011	0.00416	0.0197	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.180	0.0168	0.0241	.004424	pCi/g	NO
232746008	CAMO-09-9990	Plutonium-238	1.25 g	1.58	0.0885	0.0212	.006632	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232746008	CAMO-09-9990	Plutonium-239/240	1.25 g	0.380	0.0283	0.026	.004424	pCi/g	NO
232754001	CAMO-09-6615	Plutonium-238	1.25 g	-0.0064	0.00665	0.0229	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.147	0.0159	0.0279	.004424	pCi/g	NO
232754002	CAMO-09-6614	Plutonium-238	1.26 g	0.0153	0.00719	0.021	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0376	0.00882	0.0256	.004388889	pCi/g	NO
232754003	CAMO-09-6613	Plutonium-238	1.27 g	0.0143	0.00817	0.0233	.006527559	pCi/g	YES
		Plutonium-239/240	1.27 g	0.0912	0.0121	0.0285	.004354331	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746001_PU SAMPLE QTY: 1.253 G
DETECTOR NUMBER :78773 AVERAGE %EFFICIENCY :32.3636 % YIELD : 85.632	COUNT DATE:16-JUL-2009 10:10:41 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.473E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.473E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.60281 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B040.CNF;1048 BKG DATE : 12-JUL-2009 EFF FILE : W040.CNF;302 CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	23.000	20.000	3.000	4.1106	99.90000	2.60E-02	6.74E-03	1.24E-02	2.84E-02	6.62E-03
PU-236	5749.000	5.000	4.000	1.000	2.7154	100.0000	5.25E-03	3.23E-03	8.19E-03	1.99E-02	3.22E-03
PU-238	5499.000	8.000	5.000	3.000	3.2589	99.90000	6.49E-03	4.32E-03	9.84E-03	2.32E-02	4.31E-03
PU242	4890.000	1170.000	1166.000	4.000	2.0000	100.0000	1.51E+00	8.70E-02	6.04E-03	1.56E-02	4.44E-02
PU-244	4589.000	4.000	4.000	0.000	4.8319	99.90000	5.19E-03	2.61E-03	1.46E-02	3.27E-02	2.60E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

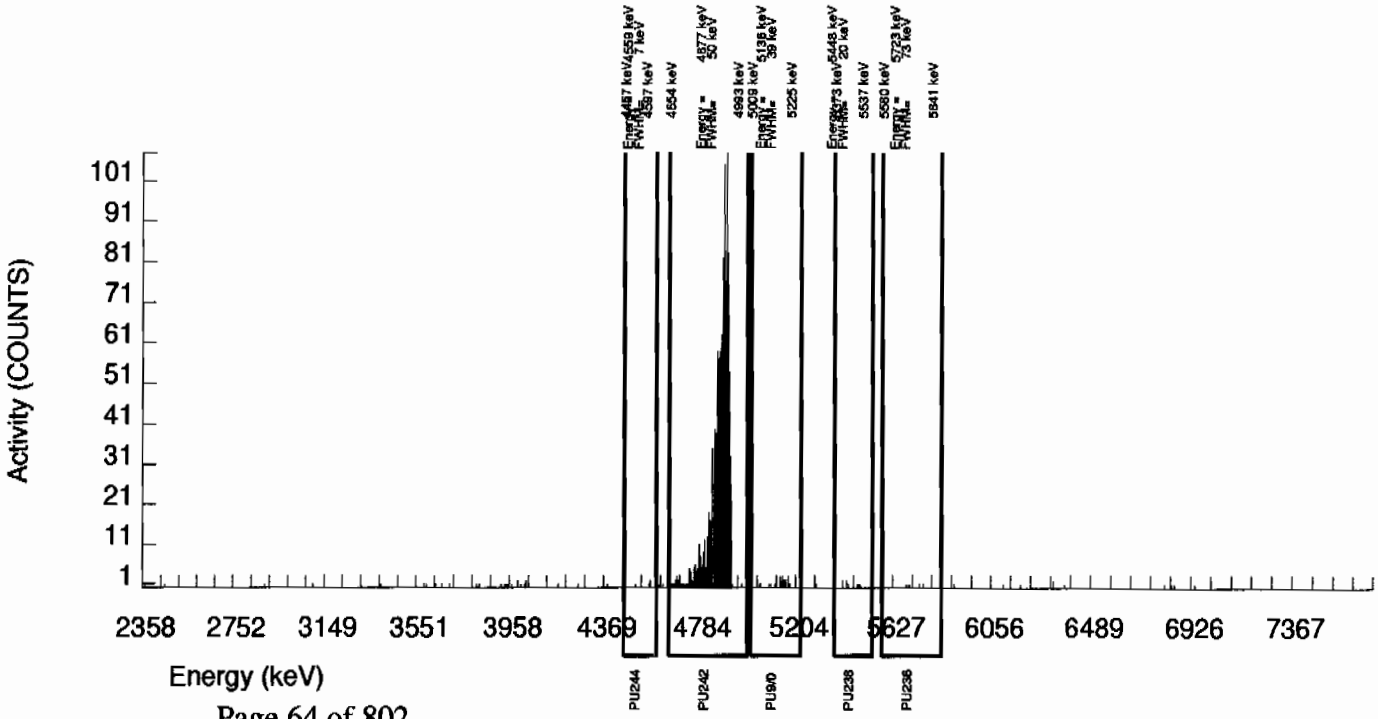

Alpha Spectroscopy Software Version 2.0
effective date: 06-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746002_PU SAMPLE QTY: 1.252 G
DETECTOR NUMBER :78205 AVERAGE %EFFICIENCY :32.7176 % YIELD : 91.244	COUNT DATE:16-JUL-2009 10:10:41 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.475E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.475E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.83891 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B041.CNF;1041 BKG DATE : 12-JUL-2009 EFF FILE : W041.CNF;306 CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	117.000	111.000	6.000	4.1106	99.90000	1.34E-01	1.49E-02	1.15E-02	2.63E-02	1.34E-02
PU-236	5749.000	1.000	-3.000	4.000	2.7154	100.0000	-3.66E-03	2.73E-03	7.61E-03	1.85E-02	2.73E-03
PU-238	5499.000	15.000	10.000	5.000	3.2589	99.90000	1.21E-02	5.43E-03	9.15E-03	2.16E-02	5.40E-03
PU242	4890.000	1265.000	1256.000	9.000	3.0000	100.0000	1.51E+00	8.56E-02	8.41E-03	2.01E-02	4.30E-02
PU-244	4589.000	9.000	8.000	1.000	4.8319	99.90000	9.65E-03	3.84E-03	1.36E-02	3.04E-02	3.81E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

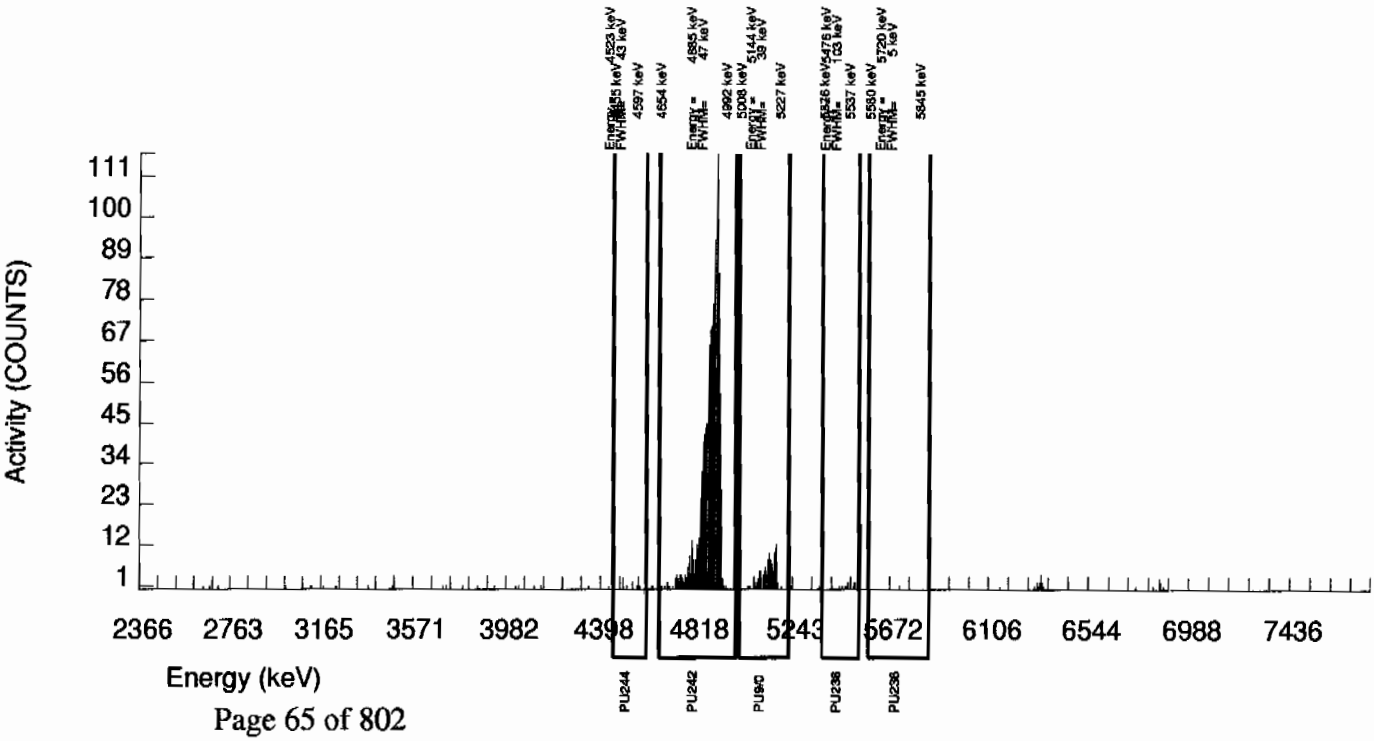

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746003_PU SAMPLE QTY: 1.251 G
DETECTOR NUMBER :78793 AVERAGE %EFFICIENCY :33.1201 % YIELD : 91.570	COUNT DATE:16-JUL-2009 10:10:41 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.476E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.476E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.85264 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B042.CNF;1040 BKG DATE : 12-JUL-2009 EFF FILE : W042.CNF;279 CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2.000	-6.000	8.000	4.1106	99.90000	-7.13E-03	3.76E-03	1.14E-02	2.60E-02	3.76E-03
PU-236	5749.000	3.000	-5.000	8.000	2.7154	100.0000	-6.01E-03	3.98E-03	7.50E-03	1.82E-02	3.98E-03
PU-238	5499.000	10.000	9.000	1.000	3.2589	99.90000	1.07E-02	3.98E-03	9.01E-03	2.12E-02	3.94E-03
PU242	4890.000	1279.000	1276.000	3.000	1.7321	100.0000	1.51E+00	8.51E-02	4.78E-03	1.28E-02	4.25E-02
PU-244	4589.000	5.000	3.000	2.000	4.8319	99.90000	3.57E-03	3.15E-03	1.34E-02	2.99E-02	3.14E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

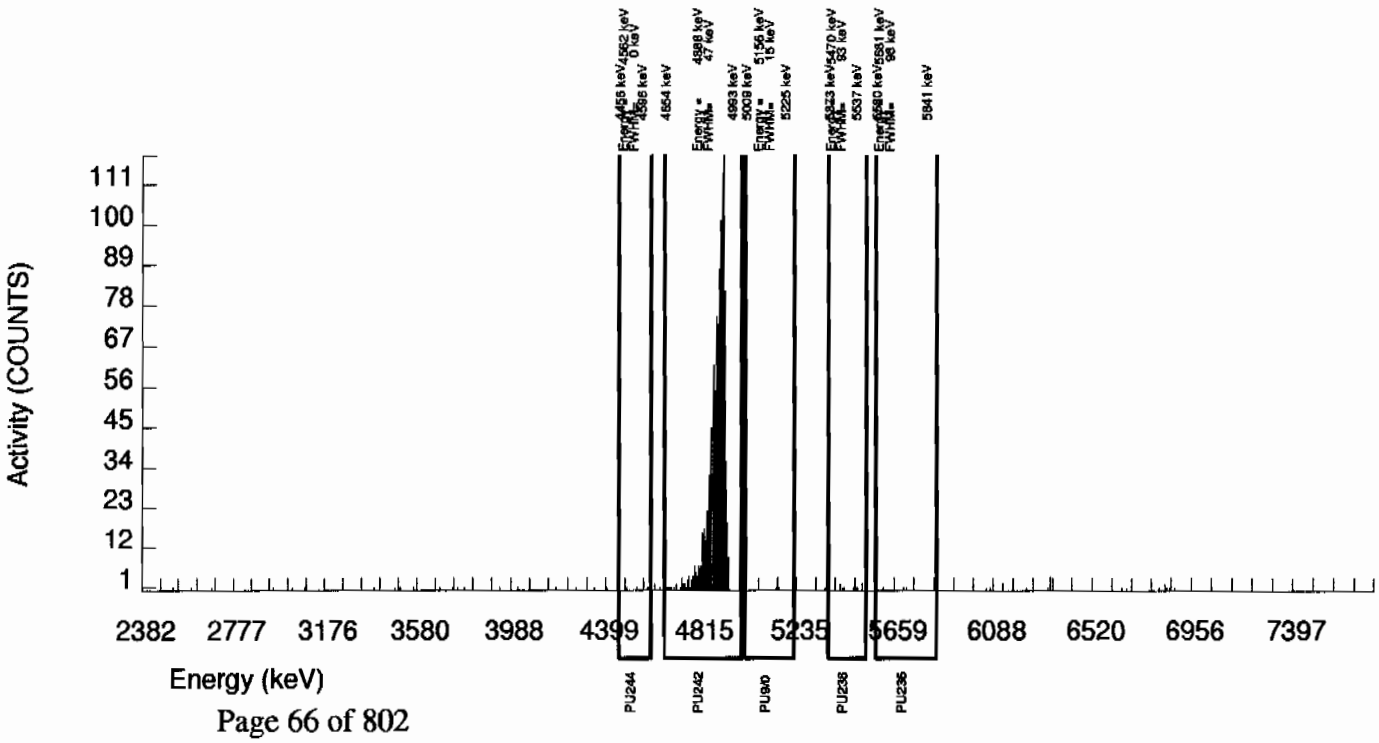

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746004_PU SAMPLE QTY: 1.256 G
DETECTOR NUMBER :76543 AVERAGE %EFFICIENCY :34.0622 % YIELD : 91.549	COUNT DATE:16-JUL-2009 10:10:45 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.470E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.470E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.85178 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B043.CNF;1036 BKG DATE : 12-JUL-2009 EFF FILE : W043.CNF;271 CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	24.000	23.000	1.000	4.1106	99.90000	2.65E-02	5.90E-03	1.10E-02	2.51E-02	5.76E-03
PU-236	5749.000	6.000	3.000	3.000	2.7154	100.0000	3.49E-03	3.50E-03	7.27E-03	1.76E-02	3.49E-03
PU-238	5499.000	8.000	6.000	2.000	3.2589	99.90000	6.91E-03	3.66E-03	8.73E-03	2.06E-02	3.64E-03
PU242	4890.000	1319.000	1312.000	7.000	2.6458	100.0000	1.51E+00	8.43E-02	7.08E-03	1.73E-02	4.19E-02
PU-244	4589.000	7.000	7.000	0.000	4.8319	99.90000	8.06E-03	3.07E-03	1.29E-02	2.90E-02	3.05E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

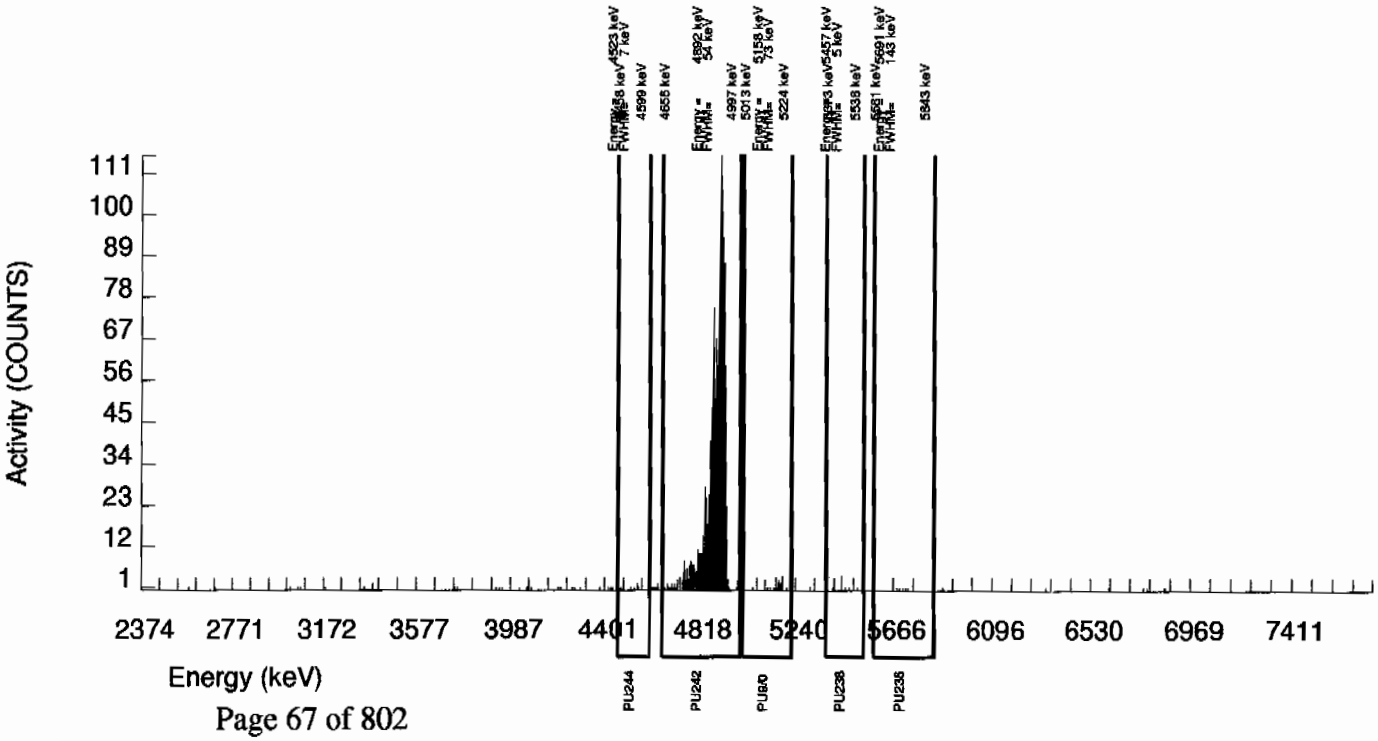

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746005_PU SAMPLE QTY: 1.252 G
DETECTOR NUMBER :79459 AVERAGE %EFFICIENCY :35.3936 % YIELD : 92.739	COUNT DATE:16-JUL-2009 10:10:45 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.475E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.475E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.90183 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B044.CNF;1046 BKG DATE : 12-JUL-2009 EFF FILE : W044.CNF;292 CAL DATE : 7-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	12.000	7.000	5.000	4.1106	99.90000	7.68E-03	4.54E-03	1.05E-02	2.40E-02	4.52E-03
PU-236	5749.000	5.000	2.000	3.000	2.7154	100.0000	2.22E-03	3.14E-03	6.92E-03	1.68E-02	3.14E-03
PU-238	5499.000	11.000	7.000	4.000	3.2589	99.90000	7.68E-03	4.27E-03	8.32E-03	1.96E-02	4.25E-03
PU242	4890.000	1386.000	1381.000	5.000	2.2361	100.0000	1.51E+00	8.34E-02	5.70E-03	1.44E-02	4.09E-02
PU-244	4589.000	15.000	15.000	0.000	4.8319	99.90000	1.65E-02	4.32E-03	1.23E-02	2.76E-02	4.25E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

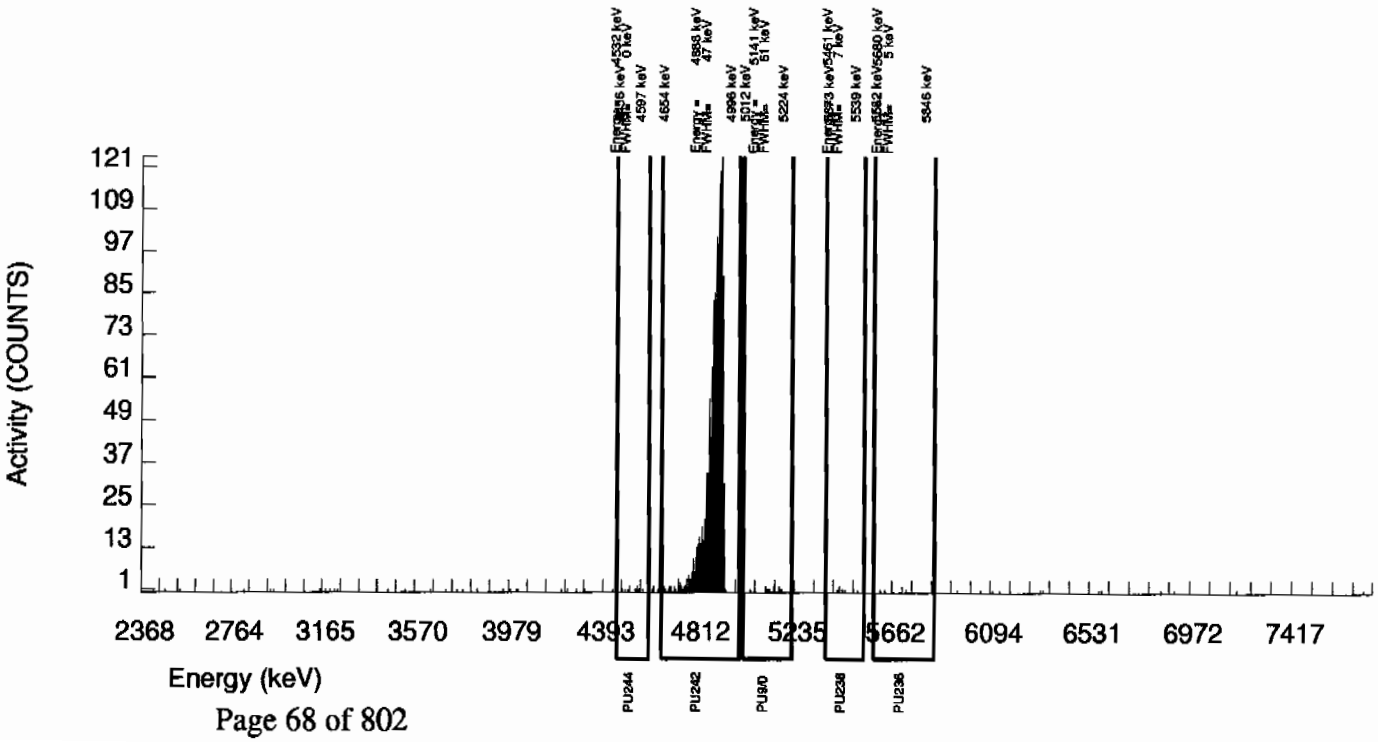

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746006_PU SAMPLE QTY: 1.257 G
DETECTOR NUMBER :78783 AVERAGE %EFFICIENCY :34.3051 % YIELD : 80.508	COUNT DATE:16-JUL-2009 10:10:45 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.469E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.469E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.38725 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B045.CNF;1035 BKG DATE : 13-JUL-2009 EFF FILE : W045.CNF;283 CAL DATE : 15-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	21.000	14.000	7.000	4.1106	99.90000	1.82E-02	6.93E-03	1.24E-02	2.84E-02	6.87E-03
PU-236	5749.000	3.000	3.000	0.000	2.7154	100.0000	3.94E-03	2.28E-03	8.20E-03	1.99E-02	2.27E-03
PU-238	5499.000	6.000	5.000	1.000	3.2589	99.90000	6.50E-03	3.45E-03	9.85E-03	2.32E-02	3.44E-03
PU242	4890.000	1169.000	1162.000	7.000	2.6458	100.0000	1.51E+00	8.69E-02	7.99E-03	1.95E-02	4.45E-02
PU-244	4589.000	4.000	3.000	1.000	4.8319	99.90000	3.90E-03	2.91E-03	1.46E-02	3.27E-02	2.90E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

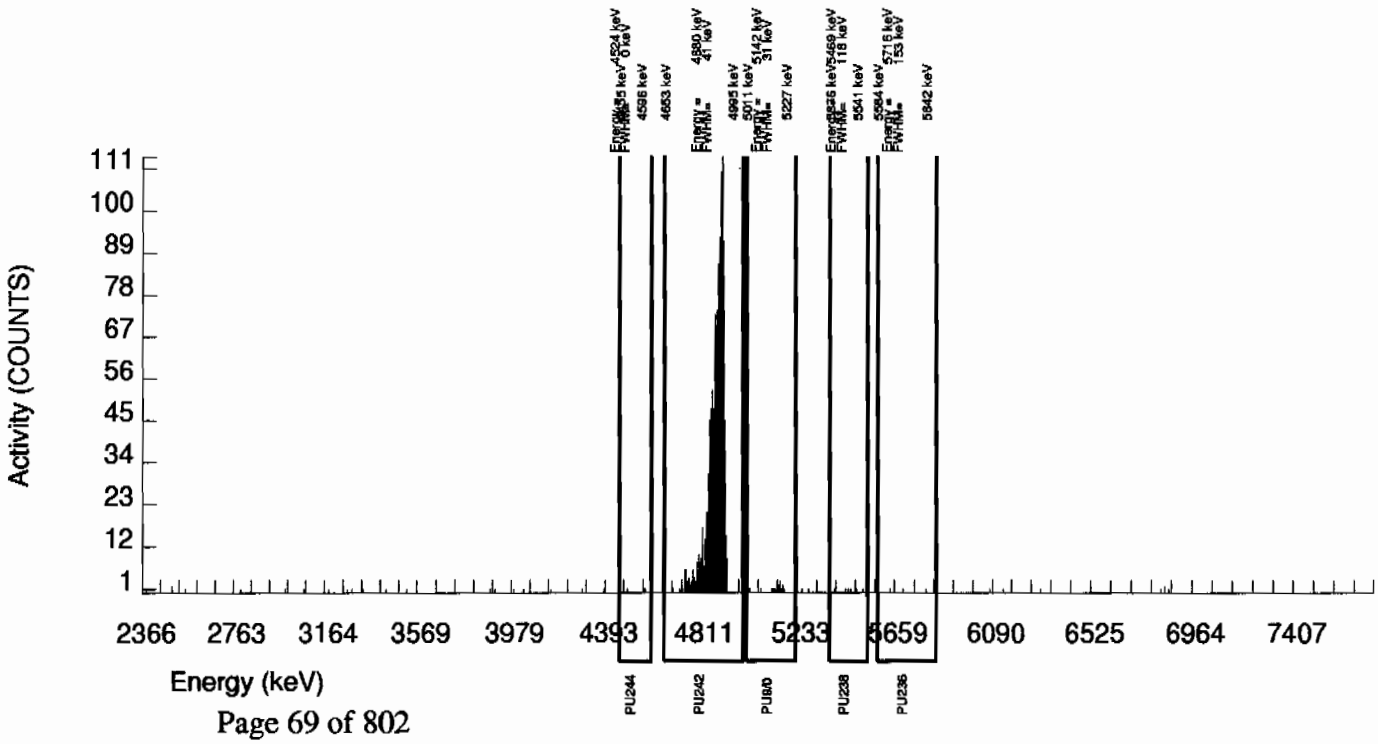

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746007_PU SAMPLE QTY: 1.253 G
DETECTOR NUMBER :76544 AVERAGE %EFFICIENCY :34.0638 % YIELD : 95.731	COUNT DATE:16-JUL-2009 10:10:45 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.473E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.473E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.02773 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B046.CNF;1046 BKG DATE : 12-JUL-2009 EFF FILE : W046.CNF;274 CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	166.000	163.000	3.000	4.1106	99.90000	1.80E-01	1.68E-02	1.06E-02	2.41E-02	1.43E-02
PU-236	5749.000	6.000	-4.000	10.000	2.7154	100.0000	-4.46E-03	4.46E-03	6.96E-03	1.69E-02	4.46E-03
PU-238	5499.000	12.000	10.000	2.000	3.2589	99.90000	1.10E-02	4.16E-03	8.37E-03	1.97E-02	4.13E-03
PU242	4890.000	1380.000	1372.000	8.000	2.8284	100.0000	1.51E+00	8.36E-02	7.25E-03	1.75E-02	4.11E-02
PU-244	4589.000	9.000	7.000	2.000	4.8319	99.90000	7.72E-03	3.68E-03	1.24E-02	2.78E-02	3.66E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

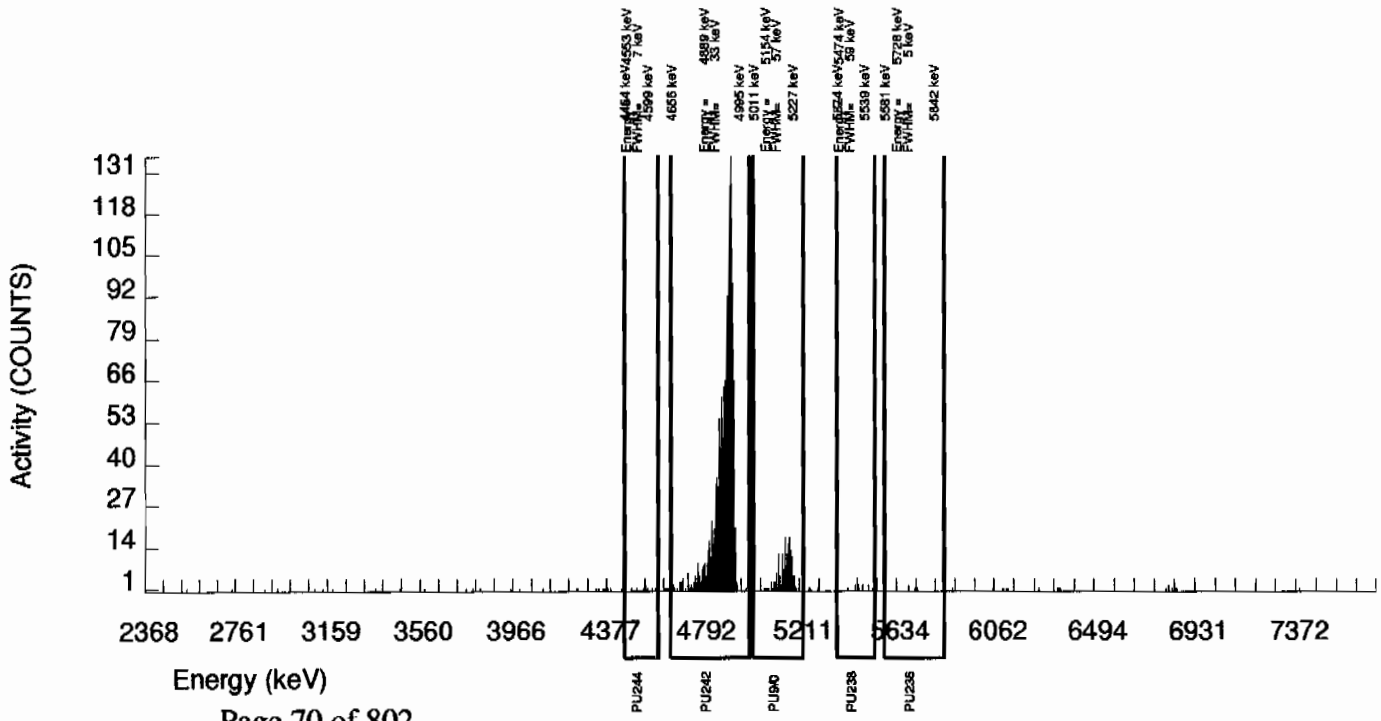

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746008_PU SAMPLE QTY: 1.253 G
DETECTOR NUMBER :46-089B1 AVERAGE %EFFICIENCY :34.4234 % YIELD : 87.965	COUNT DATE:16-JUL-2009 10:10:45 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.473E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.473E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 3.70097 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B047.CNF;1041 BKG DATE : 12-JUL-2009 EFF FILE : W047.CNF;288 CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	322.000	320.000	2.000	4.1106	99.90000	3.80E-01	2.83E-02	1.14E-02	2.59E-02	2.14E-02
PU-236	5749.000	14.000	11.000	3.000	2.7154	100.0000	1.32E-02	5.00E-03	7.50E-03	1.82E-02	4.95E-03
PU-238	5499.000	1335.000	1329.000	6.000	3.2589	99.90000	1.58E+00	8.85E-02	9.01E-03	2.12E-02	4.35E-02
PU242	4890.000	1285.000	1274.000	11.000	3.3166	100.0000	1.51E+00	8.53E-02	9.16E-03	2.15E-02	4.27E-02
PU-244	4589.000	13.000	12.000	1.000	4.8319	99.90000	1.43E-02	4.50E-03	1.34E-02	2.99E-02	4.45E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

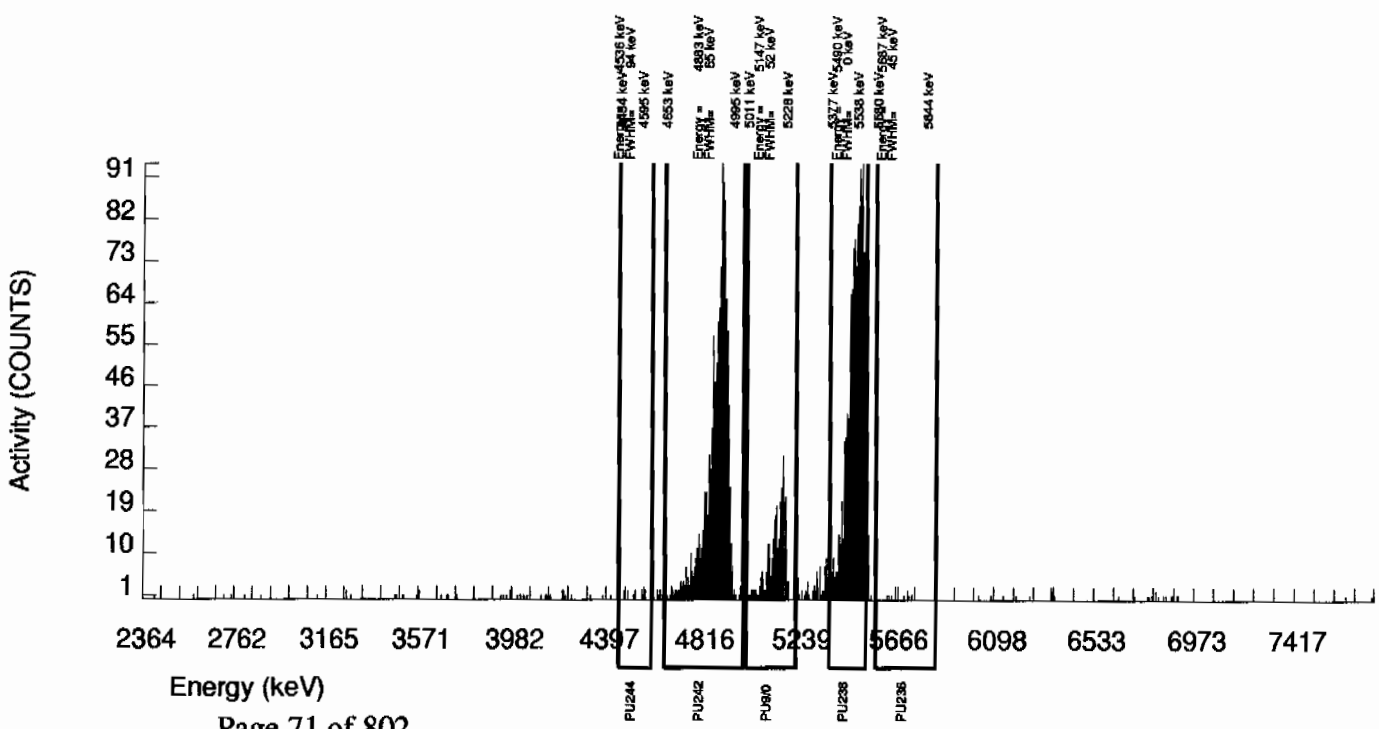

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S0232754002_PU SAMPLE QTY: 1.255 G
DETECTOR NUMBER :68551 AVERAGE %EFFICIENCY :31.6730 % YIELD : 96.579	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.471E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.471E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.06340 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B065.CNF;1879 BKG DATE : 12-JUL-2009 EFF FILE : W065.CNF;293 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	43.000	32.000	11.000	4.1106	99.90000	3.76E-02	8.82E-03	1.12E-02	2.56E-02	8.63E-03
PU-236	5749.000	29.000	17.000	12.000	2.7154	100.0000	2.02E-02	7.66E-03	7.41E-03	1.80E-02	7.60E-03
PU-238	5499.000	25.000	13.000	12.000	3.2589	99.90000	1.53E-02	7.19E-03	8.90E-03	2.10E-02	7.15E-03
PU242	4890.000	1294.000	1287.000	7.000	2.6458	100.0000	1.51E+00	8.48E-02	7.22E-03	1.76E-02	4.23E-02
PU-244	4589.000	9.000	6.000	3.000	4.8319	99.90000	7.05E-03	4.08E-03	1.32E-02	2.96E-02	4.07E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

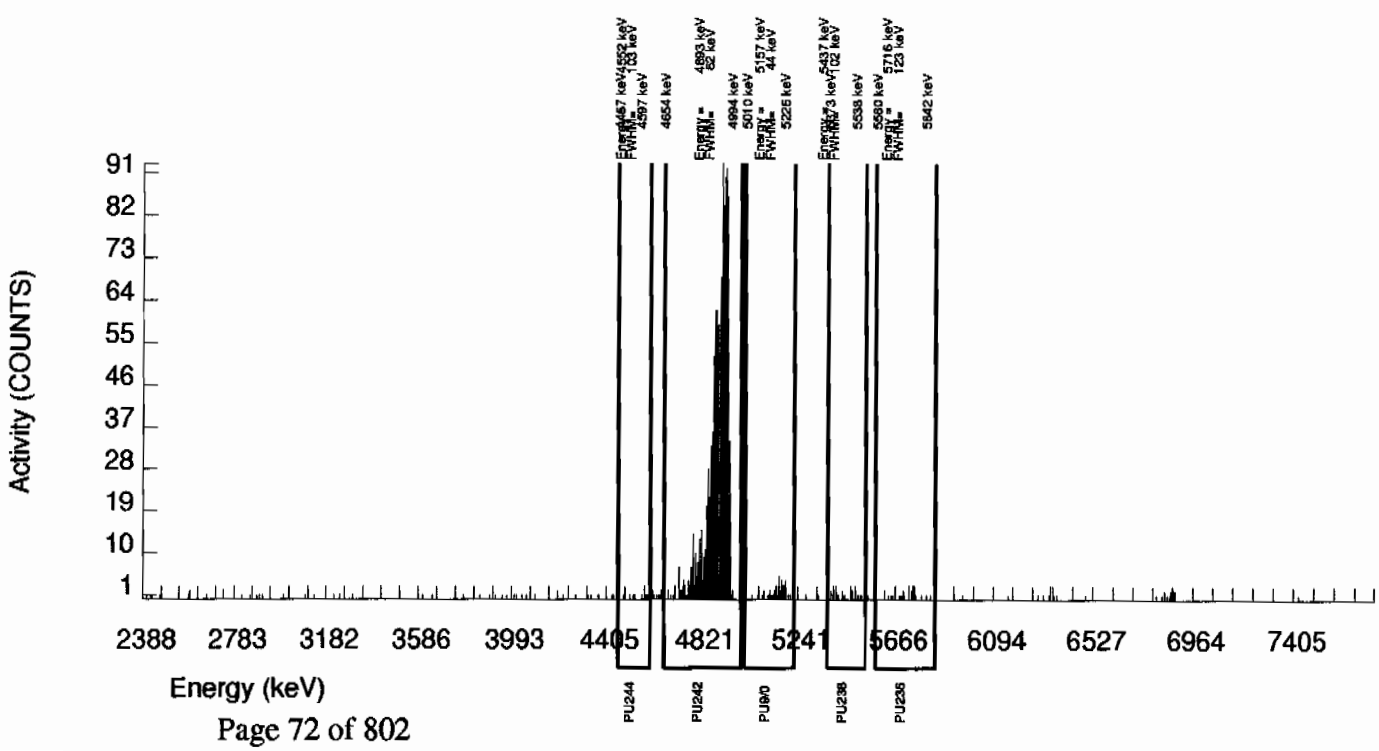

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874791_PU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :46-089B4 AVERAGE %EFFICIENCY :32.2511 % YIELD : 101.186	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.846E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.846E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.25722 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B067.CNF;1038 BKG DATE : 12-JUL-2009 EFF FILE : W067.CNF;275 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	5.000	4.000	1.000	4.1106	99.90000	5.53E-03	3.39E-03	1.32E-02	3.02E-02	3.38E-03
PU-236	5749.000	7.000	3.000	4.000	2.7154	100.0000	4.16E-03	4.61E-03	8.72E-03	2.12E-02	4.60E-03
PU-238	5499.000	13.000	6.000	7.000	3.2589	99.90000	8.29E-03	6.19E-03	1.05E-02	2.47E-02	6.18E-03
PU242	4890.000	1378.000	1373.000	5.000	2.2361	100.0000	1.90E+00	1.05E-01	7.18E-03	1.81E-02	5.13E-02
PU-244	4589.000	9.000	7.000	2.000	4.8319	99.90000	9.67E-03	4.61E-03	1.55E-02	3.48E-02	4.58E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

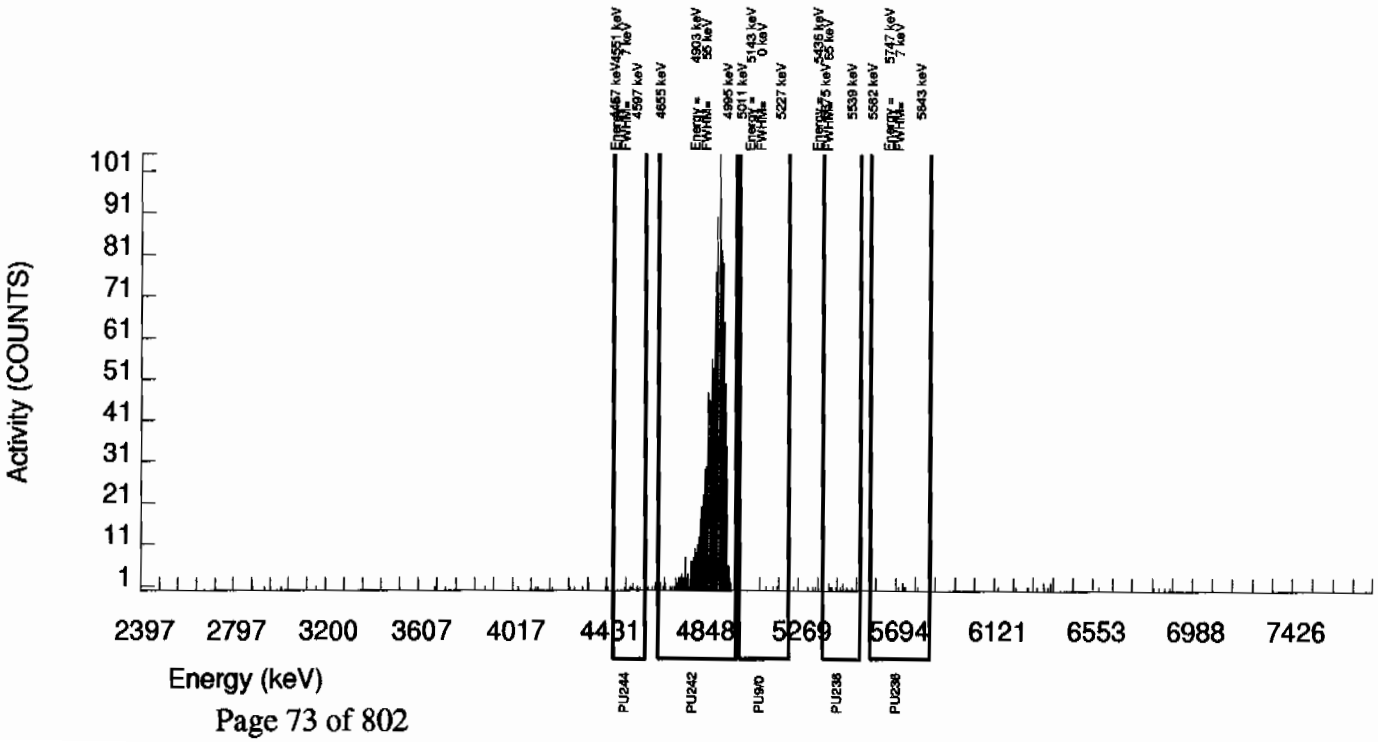

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S1201874792_PU SAMPLE QTY: 1.254 G
DETECTOR NUMBER :78794 AVERAGE %EFFICIENCY :30.1861 % YIELD : 95.904	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.472E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.472E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.03497 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B068.CNF;1031 BKG DATE : 12-JUL-2009 EFF FILE : W068.CNF;266 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	57.000	54.000	3.000	4.1106	99.90000	6.71E-02	1.02E-02	1.19E-02	2.71E-02	9.62E-03
PU-236	5749.000	6.000	0.000	6.000	2.7154	100.0000	0.00E+00	4.35E-03	7.84E-03	1.90E-02	4.35E-03
PU-238	5499.000	5.000	3.000	2.000	3.2589	99.90000	3.73E-03	3.29E-03	9.42E-03	2.22E-02	3.29E-03
PU242	4890.000	1226.000	1218.000	8.000	2.8284	100.0000	1.51E+00	8.61E-02	8.16E-03	1.97E-02	4.36E-02
PU-244	4589.000	6.000	4.000	2.000	4.8319	99.90000	4.97E-03	3.52E-03	1.40E-02	3.13E-02	3.51E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

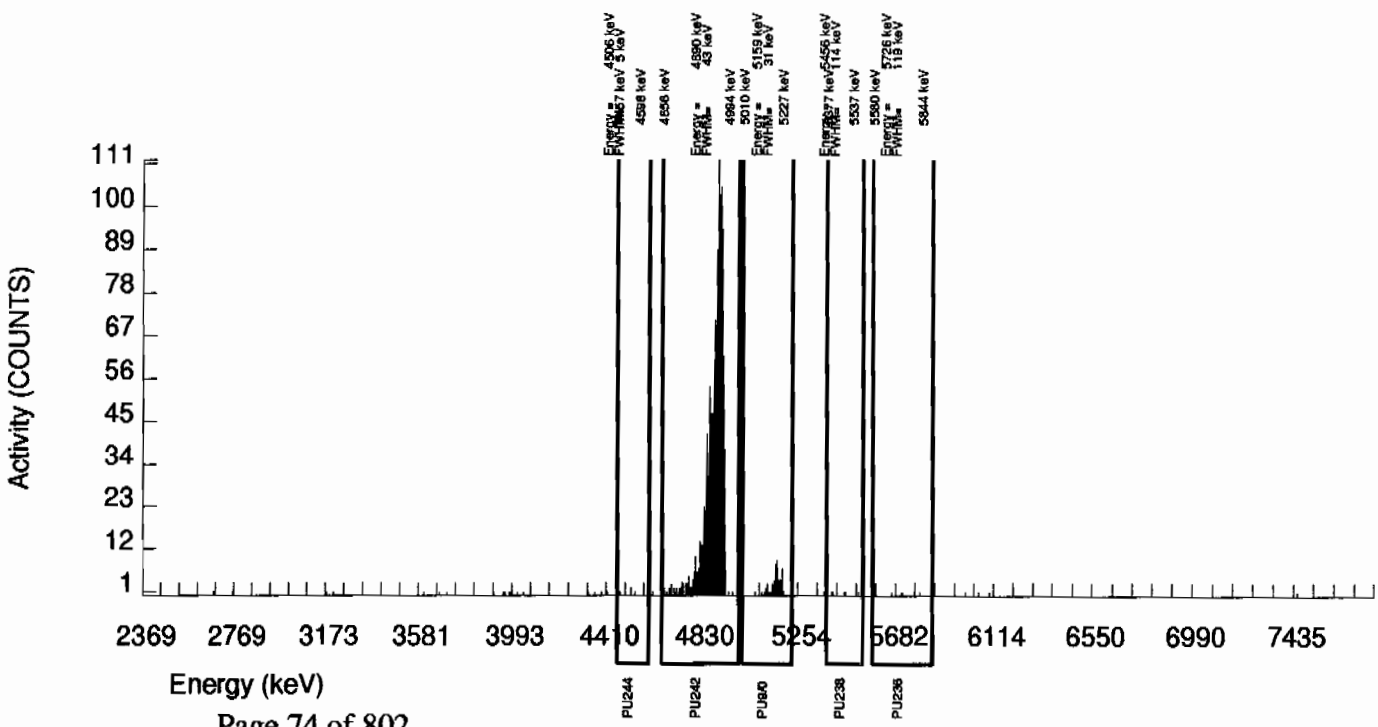

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874793_PU SAMPLE QTY: 0.106 G
DETECTOR NUMBER :78795 AVERAGE %EFFICIENCY :31.5901 % YIELD : 103.077	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B SOTOPE : PU-9/0 PCI/G : 1.742E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.742E+01	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.33680 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B069.CNF;1033 BKG DATE : 12-JUL-2009 EFF FILE : W069.CNF;273 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2934.000	2933.000	1.000	4.1106	99.90000	3.83E+01	2.29E+00	1.25E-01	2.85E-01	7.08E-01
PU-236	5749.000	1.000	-5.000	6.000	2.7154	100.0000	-6.56E-02	3.47E-02	8.24E-02	2.00E-01	3.47E-02
PU-238	5499.000	480.000	479.000	1.000	3.2589	99.90000	6.26E+00	4.57E-01	9.90E-02	2.33E-01	2.87E-01
PU242	4890.000	1377.000	1370.000	7.000	2.6458	100.0000	1.79E+01	1.13E+00	8.03E-02	1.96E-01	4.86E-01
PU-244	4589.000	5.000	3.000	2.000	4.8319	99.90000	3.92E-02	3.46E-02	1.47E-01	3.29E-01	3.46E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

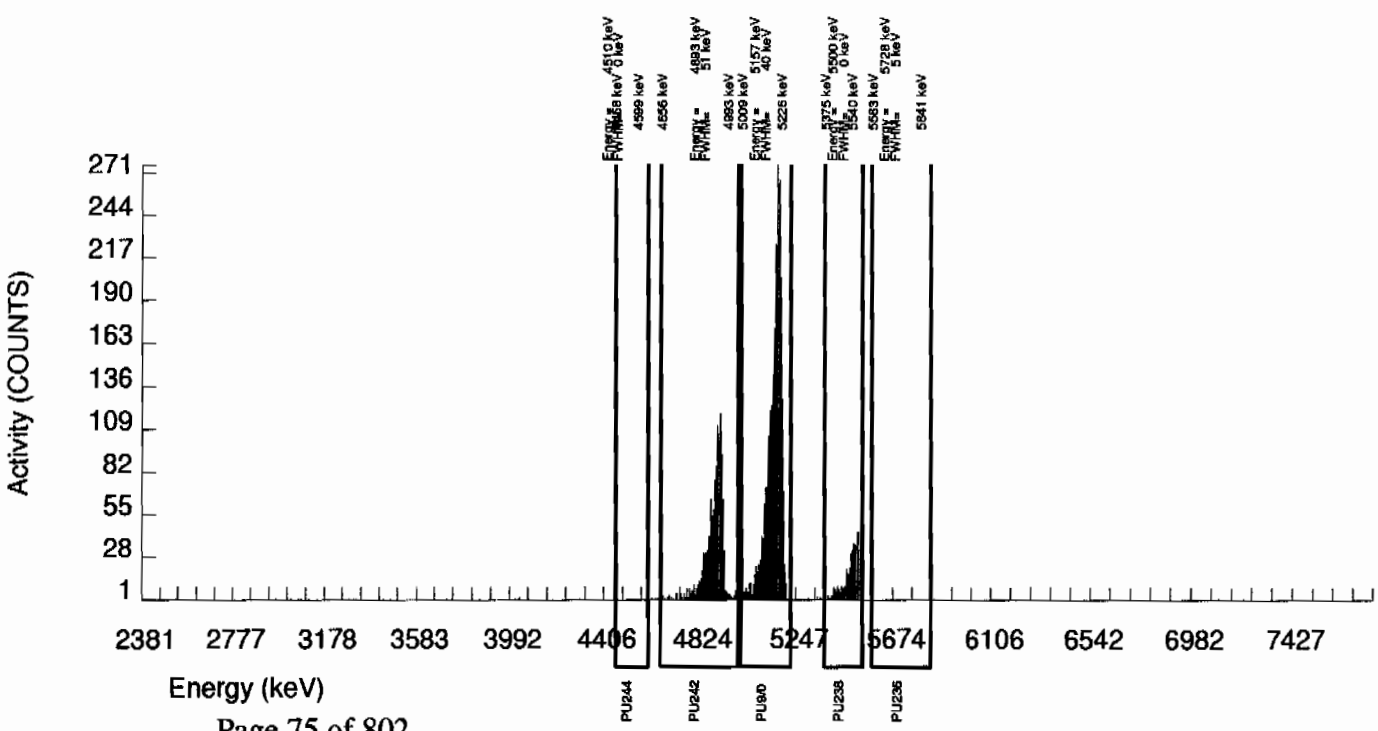

Radiochemistry Batch Checklist, Rev 9

Batch# 882704 Product: U Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument blg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples. < 5% of lowest activity)	✓		case narrative
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 7/17/09

Secondary Review Performed By: [signature] 7/18/09

LANL

7/12 - 7/23

Uranium Que Sheet

06-JUL-09

Batch #: 882704 **Analyst:** CXM2 **First Client Due Date:** 23-JUL-09 **Internal Due Date:** 12-JUL-09

Tracer Isotope: U-232/U-236 **Tracer Code:** 1283-B **Expiration Date:** 12/16/09 **Vol:** 0.1mL

LCS Isotope: U-238 **LCS Code:** 0244-A **Expiration Date:** 10/31/20 **Vol:** 0.114g

Spike Isotope: U-238 **Spike Code:** — **Expiration Date:** — **Vol:** —

Prep Date: 7/9/09 **Initials:** CMM **Pipet ID:** 2971058 **Balance ID:** 5010272 **Witness:** MAL 7/9/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g) 1/f	U Det #
232746001-1	CAMO-09-9956	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	1	1	0.505	127
232746002-1	CAMO-09-9950	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	2	2	0.504	157
232746003-1	CAMO-09-9952	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	3	3	0.501	~~156~~ 158
232746004-1	CAMO-09-9958	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	4	4	0.507	122
232746005-1	CAMO-09-9957	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	5	5	0.502	123
232746006-1	CAMO-09-9951	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	6	6	0.513	124
232746007-1	CAMO-09-10031	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	7	7	0.504	125 114
232746008-1	CAMO-09-9990	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	8	8	0.507	126 117 CM 7/14/09
232754001-1	CAMO-09-6615	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	9	9	0.515	129 118
232754002-1	CAMO-09-6614	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	10	10	0.502	130
232754003-1	CAMO-09-6613	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	11	11	0.511	131
232758002-1	CAMO-09-9962	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	12	12	0.506	~~132~~ 170 CM 7/17/09
232758003-1	CAMO-09-9964	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	13	13	0.507	139
232758004-1	CAMO-09-9963	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	14	14	0.515	140
232758005-1	CAMO-09-10032	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	15	15	0.505	141
232851001-1	CAMO-09-7145	SAMPLE		.1 pCi/g	SOIL	LANL010	01-JUL-09	16	16	0.502	142
232851002-1	CAMO-09-7146	SAMPLE		.1 pCi/g	SOIL	LANL010	01-JUL-09	17	17	0.506	144
1201874794-1	MB for batch 882704	MB		.1 pCi/g	SOIL	QC ACCOUNT		18	18	1.0	145
1201874795-1	CAMO-09-7146(232851002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	01-JUL-09	19	19	0.503	146
1201874796-1	LCS for batch 882704	LCS		.1 pCi/g	SOIL	QC ACCOUNT		20	20	0.114	147

HANS

Choose SOP used: GL-RAD-A-011
GL-RAD-A-038
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: 7/17/09

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 882704

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874795	DUP	Uranium-233/234	0.503 g	0.486	0.0547	0.164	-.01783300	pCi/g	NO
		Uranium-235/236	0.503 g	0.00445	0.00771	0.0749	0	pCi/g	NO
		Uranium-238	0.503 g	0.647	0.0662	0.0637	.024652087	pCi/g	NO
1201874796	LCS	Uranium-233/234	0.114 g	6.34	0.577	0.700	-.07868421	pCi/g	NO
		Uranium-235/236	0.114 g	0.343	0.093	0.321	0	pCi/g	NO
		Uranium-238	0.114 g	5.11	0.480	0.273	.108771930	pCi/g	NO
1201874794	MB	Uranium-233/234	1.00 g	-0.00897	0.0047	0.0808	-.00897	pCi/g	NO
		Uranium-235/236	1.00 g	0.00	0.00311	0.037	0	pCi/g	NO
		Uranium-238	1.00 g	0.0124	0.00478	0.0314	.0124	pCi/g	YES
232746001	CAMO-09-9956	Uranium-233/234	0.505 g	0.944	0.0899	0.174	-.01776238	pCi/g	NO
		Uranium-235/236	0.505 g	0.0521	0.0161	0.0799	0	pCi/g	NO
		Uranium-238	0.505 g	0.973	0.0915	0.0678	.024554455	pCi/g	NO
232746002	CAMO-09-9950	Uranium-233/234	0.504 g	0.712	0.0721	0.167	-.01779762	pCi/g	NO
		Uranium-235/236	0.504 g	0.0272	0.013	0.0764	0	pCi/g	NO
		Uranium-238	0.504 g	0.675	0.0686	0.0649	.024603175	pCi/g	NO
232746003	CAMO-09-9952	Uranium-233/234	0.501 g	0.622	0.0654	0.164	-.01790419	pCi/g	NO
		Uranium-235/236	0.501 g	0.0313	0.0186	0.0754	0	pCi/g	NO
		Uranium-238	0.501 g	0.684	0.0688	0.064	.024750499	pCi/g	NO
232746004	CAMO-09-9958	Uranium-233/234	0.507 g	0.751	0.0745	0.165	-.01769231	pCi/g	NO
		Uranium-235/236	0.507 g	0.0269	0.0128	0.0756	0	pCi/g	NO
		Uranium-238	0.507 g	0.769	0.0759	0.0642	.024457594	pCi/g	NO
232746005	CAMO-09-9957	Uranium-233/234	0.502 g	0.661	0.0677	0.168	-.01786853	pCi/g	NO
		Uranium-235/236	0.502 g	0.041	0.014	0.0768	0	pCi/g	NO
		Uranium-238	0.502 g	0.797	0.0779	0.0653	.024701195	pCi/g	NO
232746006	CAMO-09-9951	Uranium-233/234	0.513 g	0.716	0.0708	0.159	-.01748538	pCi/g	NO
		Uranium-235/236	0.513 g	0.0259	0.0163	0.0728	0	pCi/g	NO
		Uranium-238	0.513 g	0.768	0.0743	0.0618	.024171540	pCi/g	NO
232746007	CAMO-09-10031	Uranium-233/234	0.504 g	0.769	0.0766	0.172	-.01779762	pCi/g	NO
		Uranium-235/236	0.504 g	0.0515	0.0159	0.0789	0	pCi/g	NO
		Uranium-238	0.504 g	0.893	0.0855	0.067	.024603175	pCi/g	NO
232746008	CAMO-09-9990	Uranium-233/234	0.507 g	0.713	0.0705	0.154	-.01769231	pCi/g	NO
		Uranium-235/236	0.507 g	0.0376	0.0184	0.0705	0	pCi/g	NO
		Uranium-238	0.507 g	0.856	0.0802	0.0599	.024457594	pCi/g	NO
232754001	CAMO-09-6615	Uranium-233/234	0.515 g	0.764	0.0747	0.160	-.01741748	pCi/g	NO
		Uranium-235/236	0.515 g	0.0435	0.0154	0.0734	0	pCi/g	NO
		Uranium-238	0.515 g	0.637	0.0656	0.0623	.024077670	pCi/g	NO
232754002	CAMO-09-6614	Uranium-233/234	0.502 g	0.933	0.0886	0.170	-.01786853	pCi/g	NO
		Uranium-235/236	0.502 g	0.0509	0.0183	0.078	0	pCi/g	NO
		Uranium-238	0.502 g	0.816	0.0798	0.0662	.024701195	pCi/g	NO
232754003	CAMO-09-6613	Uranium-233/234	0.511 g	0.803	0.0793	0.173	-.01755382	pCi/g	NO
		Uranium-235/236	0.511 g	0.0564	0.018	0.0792	0	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232754003	CAMO-09-6613	Uranium-238	0.511 g	0.874	0.084	0.0673	.024266145	pCi/g	NO
232758002	CAMO-09-9962	Uranium-233/234	0.506 g	0.777	0.0684	0.110	-.01772727	pCi/g	NO
		Uranium-235/236	0.506 g	0.0686	0.0167	0.0503	0	pCi/g	NO
		Uranium-238	0.506 g	0.989	0.0829	0.0427	.024505929	pCi/g	NO
232758003	CAMO-09-9964	Uranium-233/234	0.507 g	0.705	0.0716	0.163	-.01769231	pCi/g	NO
		Uranium-235/236	0.507 g	0.0398	0.0162	0.0746	0	pCi/g	NO
		Uranium-238	0.507 g	0.741	0.075	0.0633	.024457594	pCi/g	NO
232758004	CAMO-09-9963	Uranium-233/234	0.515 g	0.778	0.0765	0.161	-.01741748	pCi/g	NO
		Uranium-235/236	0.515 g	0.0568	0.0174	0.0737	0	pCi/g	NO
		Uranium-238	0.515 g	0.718	0.0716	0.0626	.024077670	pCi/g	NO
232758005	CAMO-09-10032	Uranium-233/234	0.505 g	0.891	0.0885	0.179	-.01776238	pCi/g	NO
		Uranium-235/236	0.505 g	0.0632	0.0194	0.082	0	pCi/g	NO
		Uranium-238	0.505 g	0.980	0.0937	0.0696	.024554455	pCi/g	NO
232851001	CAMO-09-7145	Uranium-233/234	0.502 g	0.621	0.0662	0.160	-.01786853	pCi/g	NO
		Uranium-235/236	0.502 g	0.0217	0.0116	0.0731	0	pCi/g	NO
		Uranium-238	0.502 g	0.526	0.0568	0.0621	.024701195	pCi/g	NO
232851002	CAMO-09-7146	Uranium-233/234	0.506 g	0.491	0.0554	0.168	-.01772727	pCi/g	NO
		Uranium-235/236	0.506 g	0.0319	0.0139	0.0769	0	pCi/g	NO
		Uranium-238	0.506 g	0.731	0.074	0.0653	.024505929	pCi/g	NO

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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746001_UU SAMPLE QTY: 0.505 G
DETECTOR NUMBER :78770 AVERAGE %EFFICIENCY :24.7595 % YIELD : 94.004	COUNT DATE:14-JUL-2009 14:33:29 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.329E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.329E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29545 dpm RESULTS : 4.97796 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B127.CNF;384 BKG DATE : 12-JUL-2009 EFF FILE : W127.CNF;108 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	254.000	246.283	4.000	9.1924	100.0000	9.44E-01	8.99E-02	8.20E-02	1.74E-01	6.11E-02
U232	5302.100	1235.000	1232.000	3.000	1.7321	100.0000	4.72E+00	3.56E-01	1.54E-02	4.13E-02	1.35E-01
U-235	4391.000	11.000	11.000	0.000	3.0409	80.90000	5.21E-02	1.61E-02	3.35E-02	7.99E-02	1.57E-02
U-238	4184.730	255.000	254.000	1.000	3.2215	100.0000	9.73E-01	9.15E-02	2.87E-02	6.78E-02	6.13E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

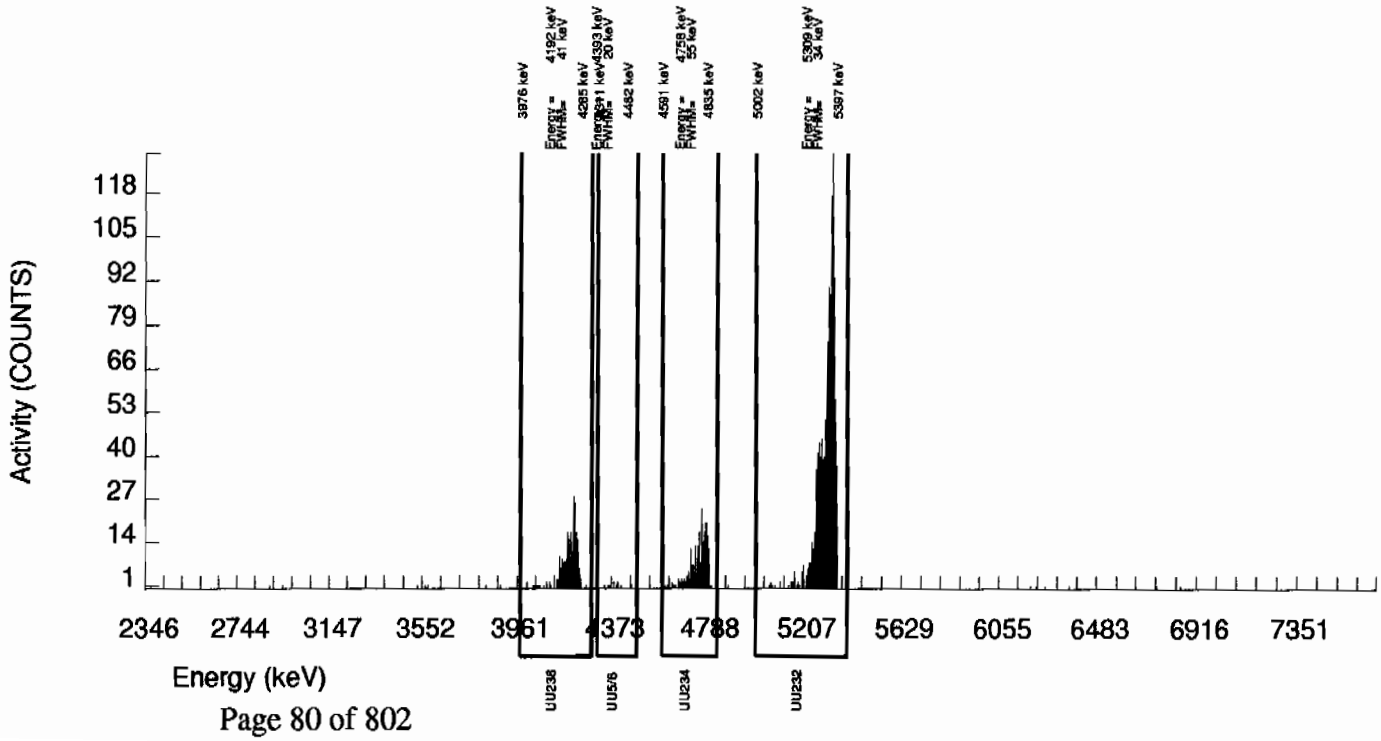

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746002_UU SAMPLE QTY: 0.504 G
DETECTOR NUMBER :75555 AVERAGE %EFFICIENCY :24.6763 % YIELD : 98.761	COUNT DATE:14-JUL-2009 14:33:33 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.333E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.333E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29546 dpm RESULTS : 5.22987 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B157.CNF;333 BKG DATE : 12-JUL-2009 EFF FILE : W157.CNF;95 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	203.000	194.108	5.000	9.1924	100.0000	7.12E-01	7.21E-02	7.84E-02	1.67E-01	5.24E-02
U232	5302.100	1295.000	1290.000	5.000	2.2361	100.0000	4.73E+00	3.55E-01	1.91E-02	4.81E-02	1.32E-01
U-235	4391.000	7.000	6.000	1.000	3.0409	80.90000	2.72E-02	1.30E-02	3.21E-02	7.64E-02	1.28E-02
U-238	4184.730	185.000	184.000	1.000	3.2215	100.0000	6.75E-01	6.86E-02	2.75E-02	6.49E-02	5.00E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

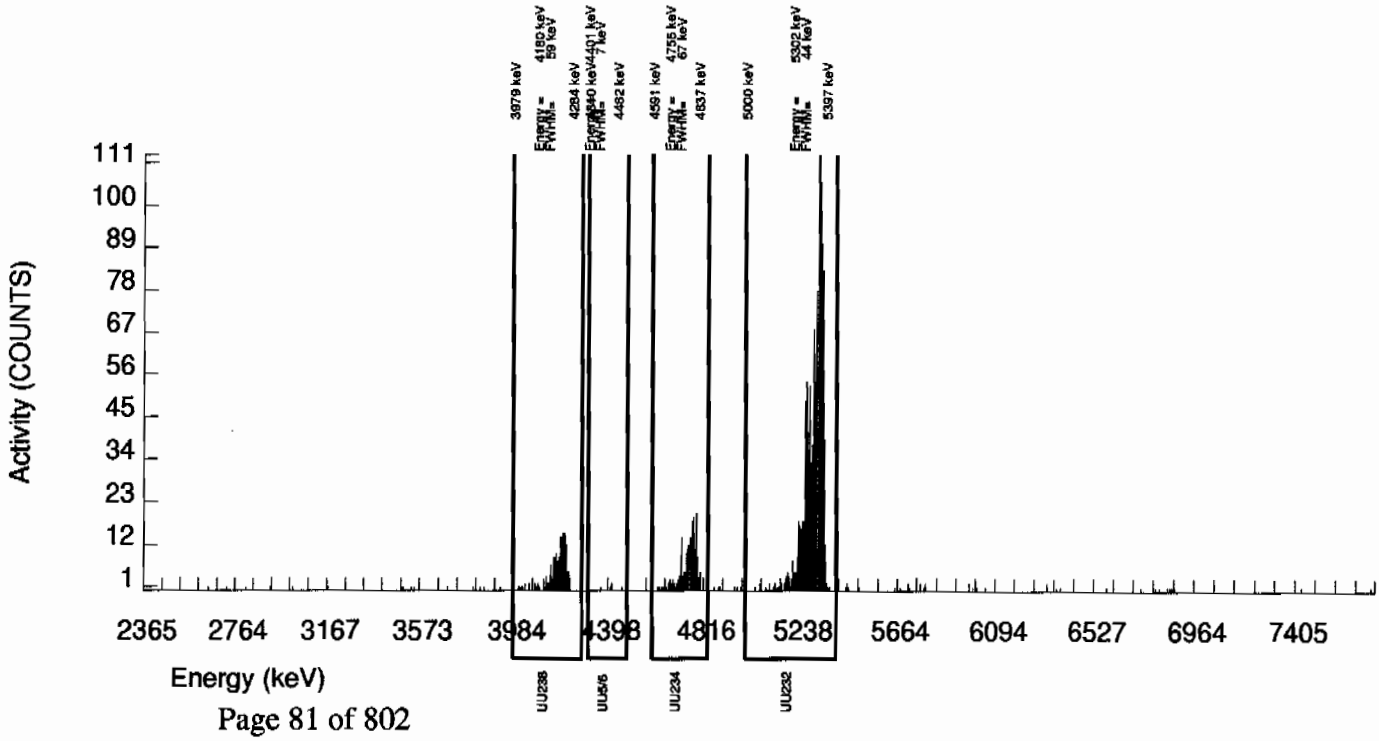

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746003_UU SAMPLE QTY: 0.501 G
DETECTOR NUMBER :33451 AVERAGE %EFFICIENCY :24.8480 % YIELD : 100.056	COUNT DATE:14-JUL-2009 14:33:36 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.347E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.347E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29546 dpm RESULTS : 5.29841 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B158.CNF;334 BKG DATE : 12-JUL-2009 EFF FILE : W158.CNF;98 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	182.000	172.029	6.000	9.1924	100.0000	6.22E-01	6.54E-02	7.73E-02	1.64E-01	4.91E-02
U232	5302.100	1327.000	1316.000	11.000	3.3166	100.0000	4.76E+00	3.57E-01	2.79E-02	6.56E-02	1.32E-01
U-235	4391.000	12.000	7.000	5.000	3.0409	80.90000	3.13E-02	1.86E-02	3.16E-02	7.54E-02	1.84E-02
U-238	4184.730	189.000	189.000	0.000	3.2215	100.0000	6.83E-01	6.88E-02	2.71E-02	6.40E-02	4.97E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

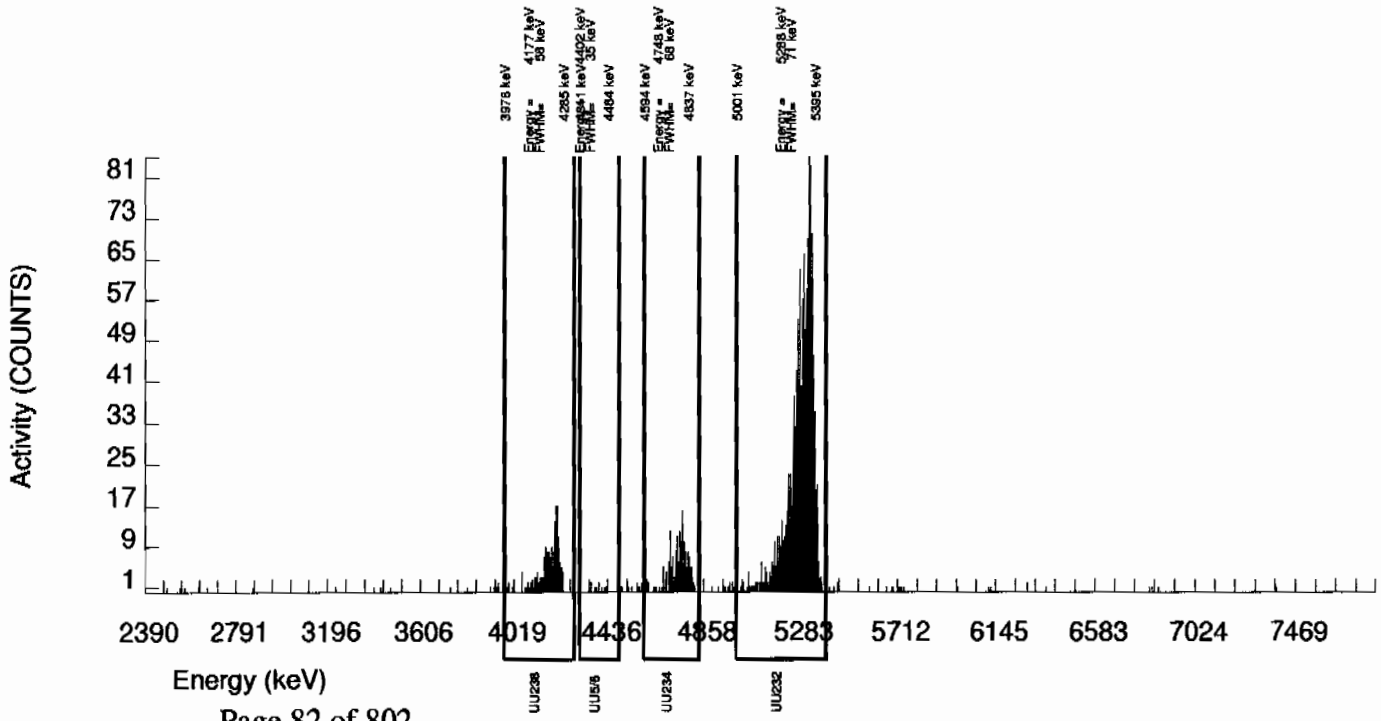

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effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746004_UU SAMPLE QTY: 0.507 G
DETECTOR NUMBER :75546 AVERAGE %EFFICIENCY :25.3247 % YIELD : 96.681	COUNT DATE:14-JUL-2009 15:19:50 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.319E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.319E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29546 dpm RESULTS : 5.11969 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B122.CNF;377 BKG DATE : 12-JUL-2009 EFF FILE : W122.CNF;105 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	214.000	207.090	3.000	9.1924	100.0000	7.51E-01	7.45E-02	7.76E-02	1.65E-01	5.30E-02
U232	5302.100	1314.000	1296.000	18.000	4.2426	100.0000	4.70E+00	3.53E-01	3.58E-02	8.15E-02	1.32E-01
U-235	4391.000	7.000	6.000	1.000	3.0409	80.90000	2.69E-02	1.28E-02	3.17E-02	7.56E-02	1.27E-02
U-238	4184.730	216.000	212.000	4.000	3.2215	100.0000	7.69E-01	7.59E-02	2.72E-02	6.42E-02	5.38E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

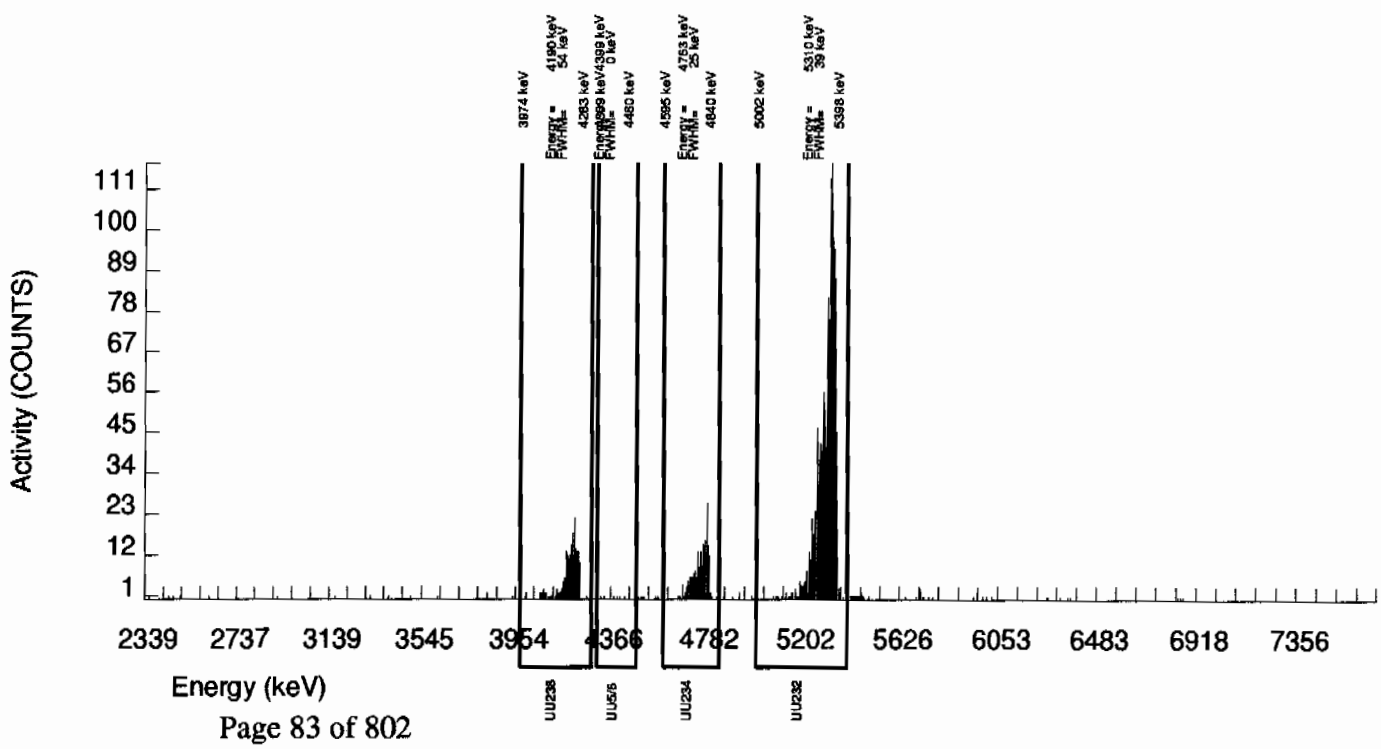

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746005_UU SAMPLE QTY: 0.502 G
DETECTOR NUMBER :45-142V3 AVERAGE %EFFICIENCY :25.9082 % YIELD : 93.920	COUNT DATE:14-JUL-2009 15:19:53 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.343E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.343E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29546 dpm RESULTS : 4.97350 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B123.CNF;375 BKG DATE : 12-JUL-2009 EFF FILE : W123.CNF;101 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	184.000	179.114	1.000	9.1924	100.0000	6.61E-01	6.76E-02	7.89E-02	1.68E-01	4.96E-02
U232	5302.100	1295.000	1288.000	7.000	2.6458	100.0000	4.75E+00	3.57E-01	2.27E-02	5.54E-02	1.33E-01
U-235	4391.000	9.000	9.000	0.000	3.0409	80.90000	4.10E-02	1.40E-02	3.22E-02	7.68E-02	1.37E-02
U-238	4184.730	218.000	216.000	2.000	3.2215	100.0000	7.97E-01	7.79E-02	2.76E-02	6.53E-02	5.47E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

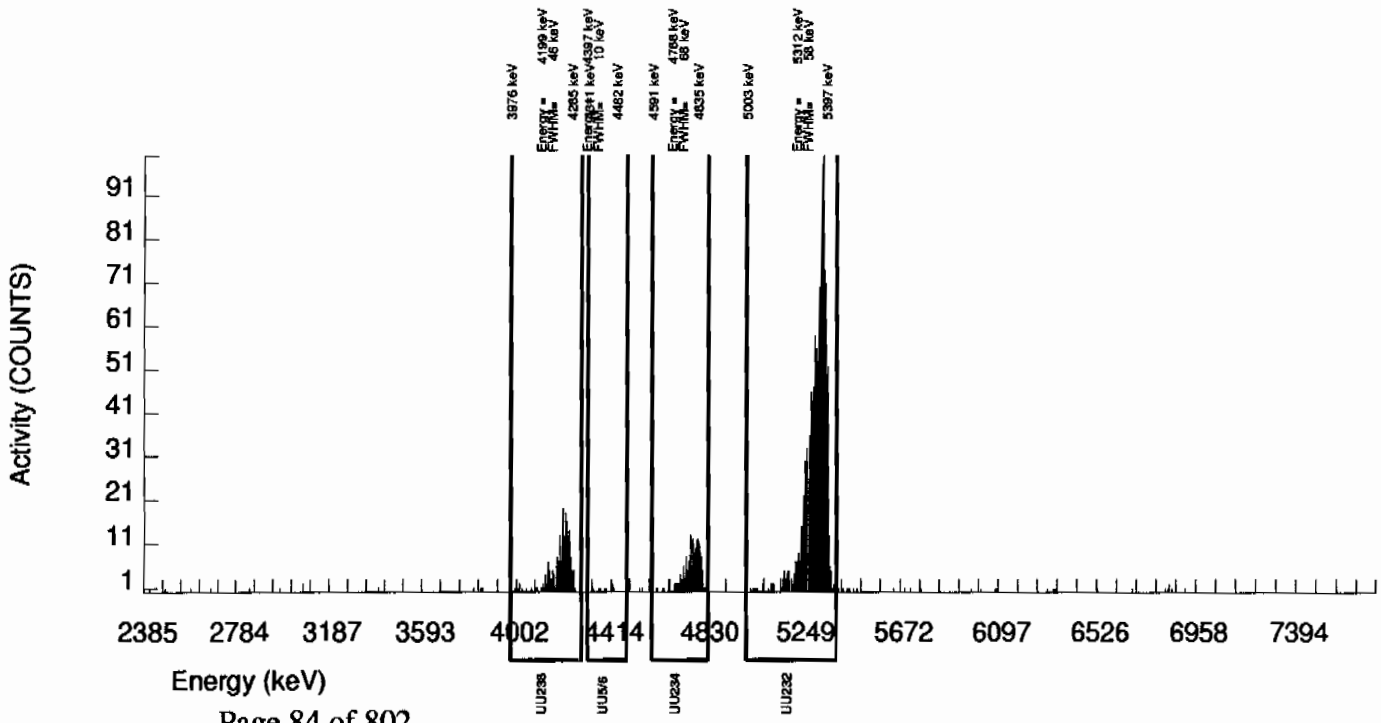

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746006_UU SAMPLE QTY: 0.513 G
DETECTOR NUMBER :45-142V2 AVERAGE %EFFICIENCY :26.0503 % YIELD : 96.526	COUNT DATE:14-JUL-2009 15:19:55 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.292E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.292E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29546 dpm RESULTS : 5.11151 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B124.CNF;371 BKG DATE : 12-JUL-2009 EFF FILE : W124.CNF;97 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	211.000	204.984	2.000	9.1924	100.0000	7.16E-01	7.08E-02	7.47E-02	1.59E-01	5.05E-02
U232	5302.100	1339.000	1331.000	8.000	2.8284	100.0000	4.65E+00	3.47E-01	2.30E-02	5.54E-02	1.28E-01
U-235	4391.000	10.000	6.000	4.000	3.0409	80.90000	2.59E-02	1.63E-02	3.05E-02	7.28E-02	1.62E-02
U-238	4184.730	220.000	220.000	0.000	3.2215	100.0000	7.68E-01	7.43E-02	2.62E-02	6.18E-02	5.18E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

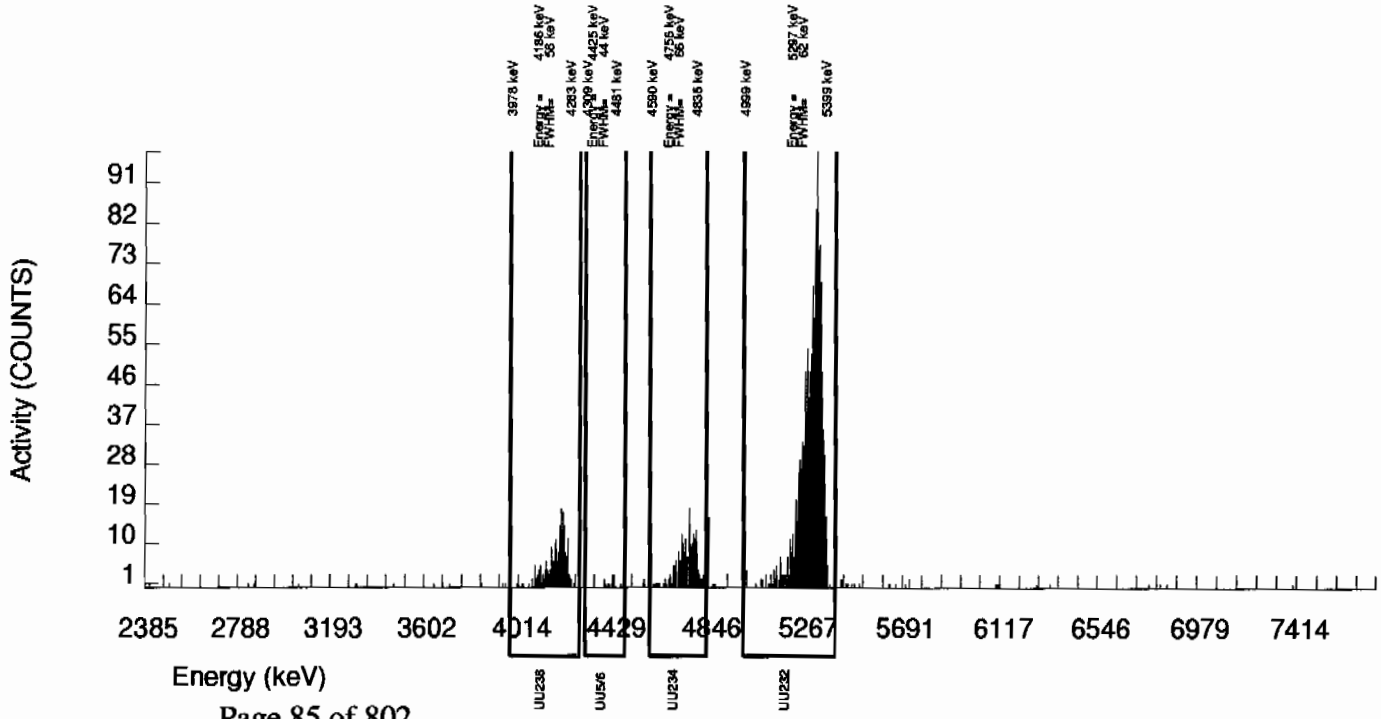

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746007_UU SAMPLE QTY: 0.504 G
DETECTOR NUMBER :75547 AVERAGE %EFFICIENCY :25.7650 % YIELD : 91.656	COUNT DATE:14-JUL-2009 21:22:58 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.333E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.333E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29546 dpm RESULTS : 4.85362 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B125.CNF;381 BKG DATE : 12-JUL-2009 EFF FILE : W125.CNF;115 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	210.000	203.228	3.000	9.1924	100.0000	7.69E-01	7.66E-02	8.09E-02	1.72E-01	5.47E-02
U232	5302.100	1253.000	1250.000	3.000	1.7321	100.0000	4.73E+00	3.56E-01	1.52E-02	4.08E-02	1.34E-01
U-235	4391.000	11.000	11.000	0.000	3.0409	80.90000	5.15E-02	1.59E-02	3.31E-02	7.89E-02	1.55E-02
U-238	4184.730	238.000	236.000	2.000	3.2215	100.0000	8.93E-01	8.55E-02	2.84E-02	6.70E-02	5.86E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

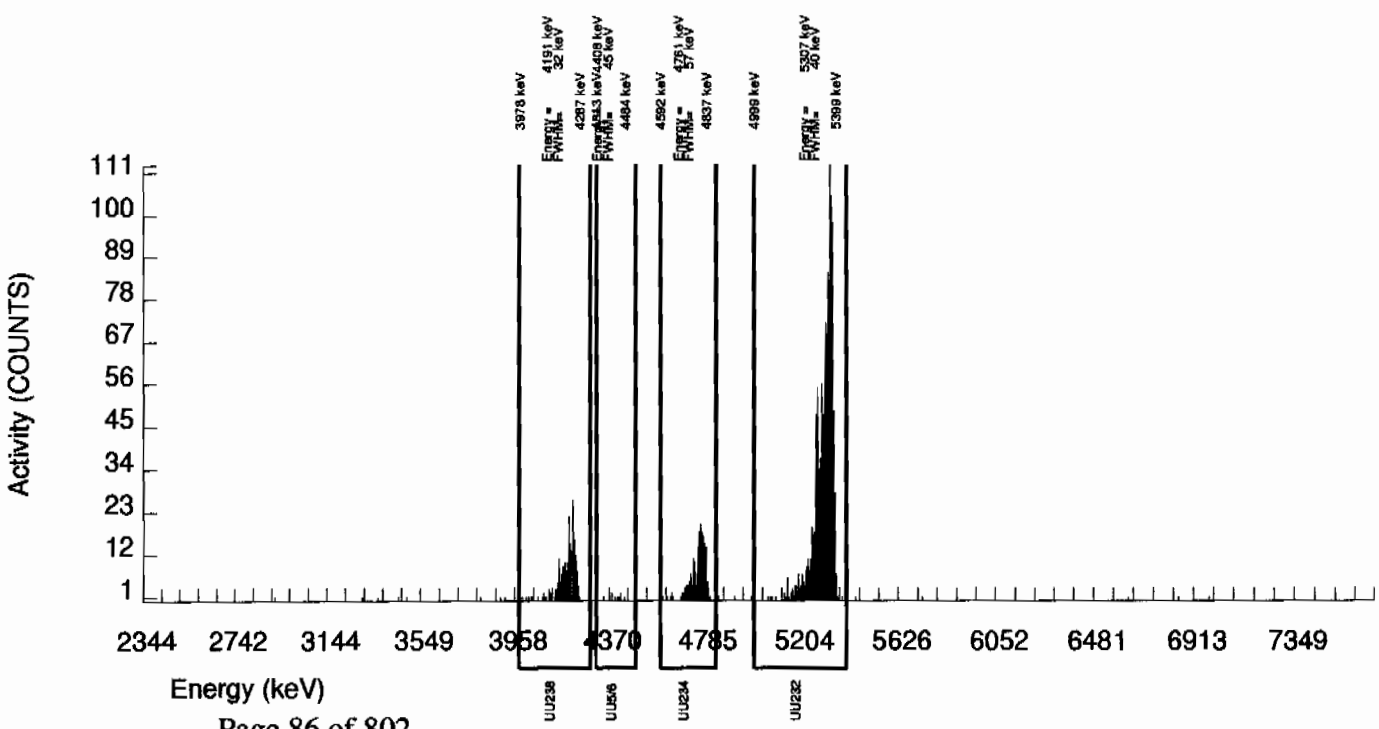

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effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 29-JUN-2009 00:00:00	SAMPLE ID : S0232746008_UU SAMPLE QTY: 0.507 G
DETECTOR NUMBER :75548 AVERAGE %EFFICIENCY :25.4638 % YIELD : 103.127	COUNT DATE:14-JUL-2009 21:23:00 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.319E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.319E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29546 dpm RESULTS : 5.46105 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B126.CNF;380 BKG DATE : 12-JUL-2009 EFF FILE : W126.CNF;117 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	220.000	210.806	5.000	9.1924	100.0000	7.13E-01	7.05E-02	7.24E-02	1.54E-01	5.03E-02
U232	5302.100	1403.000	1390.000	13.000	3.6056	100.0000	4.70E+00	3.50E-01	2.84E-02	6.59E-02	1.27E-01
U-235	4391.000	14.000	9.000	5.000	3.0409	80.90000	3.76E-02	1.84E-02	2.96E-02	7.05E-02	1.82E-02
U-238	4184.730	254.000	253.000	1.000	3.2215	100.0000	8.56E-01	8.02E-02	2.54E-02	5.99E-02	5.40E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

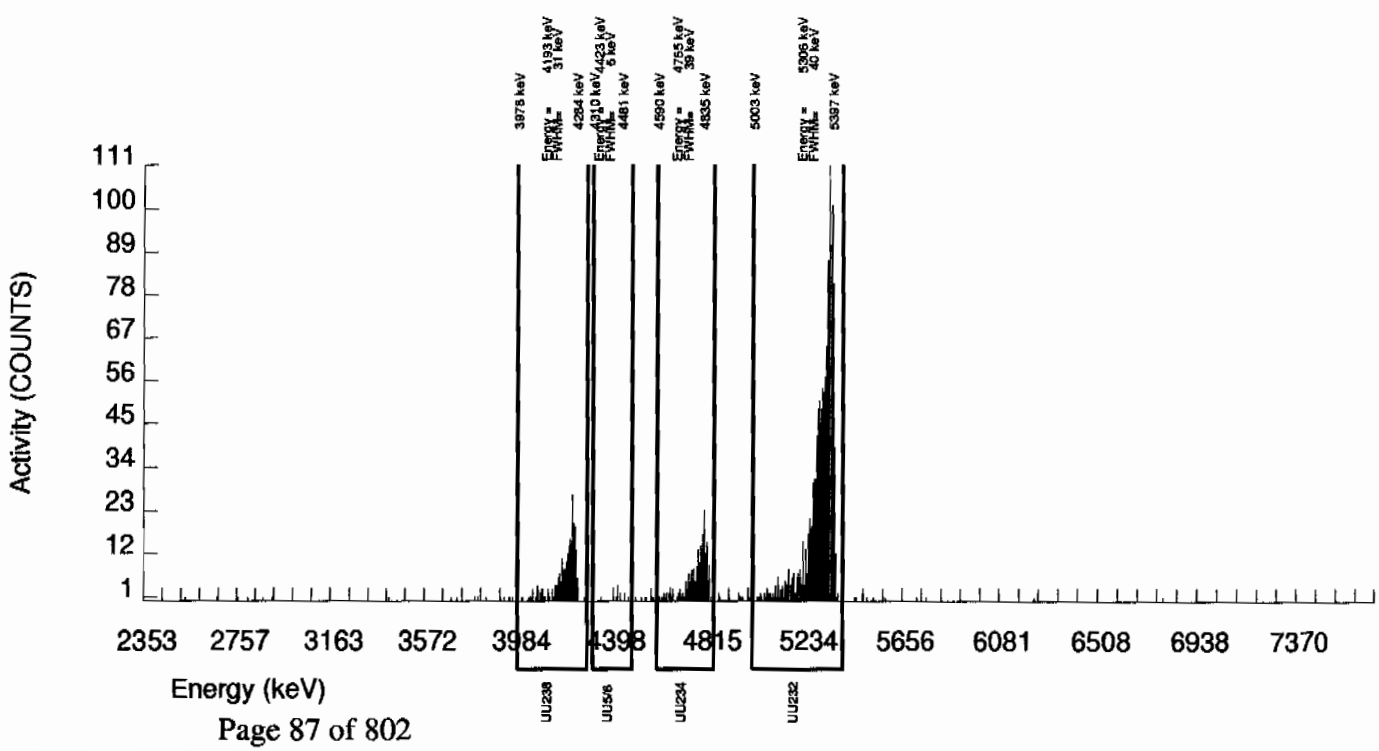

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 1-JUL-2009 00:00:00.	SAMPLE ID : S0232851002_UU SAMPLE QTY: 0.506 G
DETECTOR NUMBER :75551 AVERAGE %EFFICIENCY :24.7777 % YIELD : 97.367	COUNT DATE:14-JUL-2009 21:23:21 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.324E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.324E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29518 dpm RESULTS : 5.15577 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B144.CNF;329 BKG DATE : 12-JUL-2009 EFF FILE : W144.CNF;92 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	140.000	133.147	3.000	9.1924	100.0000	4.91E-01	5.54E-02	7.89E-02	1.68E-01	4.35E-02
U232	5302.100	1286.000	1277.000	9.000	3.0000	100.0000	4.71E+00	3.55E-01	2.58E-02	6.15E-02	1.33E-01
U-235	4391.000	8.000	7.000	1.000	3.0409	80.90000	3.19E-02	1.39E-02	3.23E-02	7.69E-02	1.37E-02
U-238	4184.730	205.000	198.000	7.000	3.2215	100.0000	7.31E-01	7.40E-02	2.77E-02	6.53E-02	5.37E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

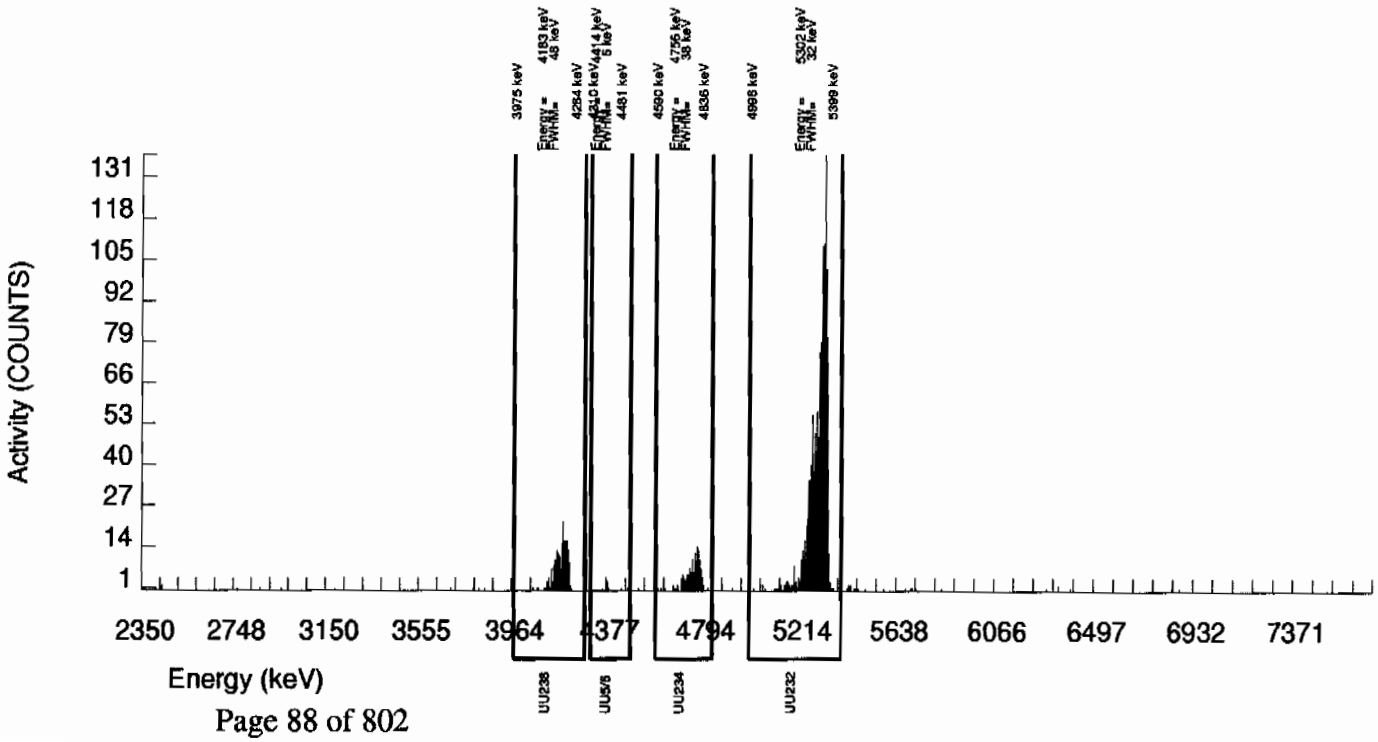

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874794_UU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :72526 AVERAGE %EFFICIENCY :24.8445 % YIELD : 102.048	COUNT DATE:14-JUL-2009 21:23:23 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 1.176E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29405 dpm RESULTS : 5.40249 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B145.CNF;327 BKG DATE : 12-JUL-2009 EFF FILE : W145.CNF;97 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	5.000	-5.049	6.000	9.1924	100.0000	-8.97E-03	4.70E-03	3.80E-02	8.08E-02	4.70E-03
U232	5302.100	1343.000	1342.000	1.000	1.0000	100.0000	2.38E+00	1.80E-01	4.13E-03	1.31E-02	6.51E-02
U-235	4391.000	1.000	0.000	1.000	3.0409	80.90000	0.00E+00	3.11E-03	1.55E-02	3.70E-02	3.11E-03
U-238	4184.730	7.000	7.000	0.000	3.2215	100.0000	1.24E-02	4.78E-03	1.33E-02	3.14E-02	4.70E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

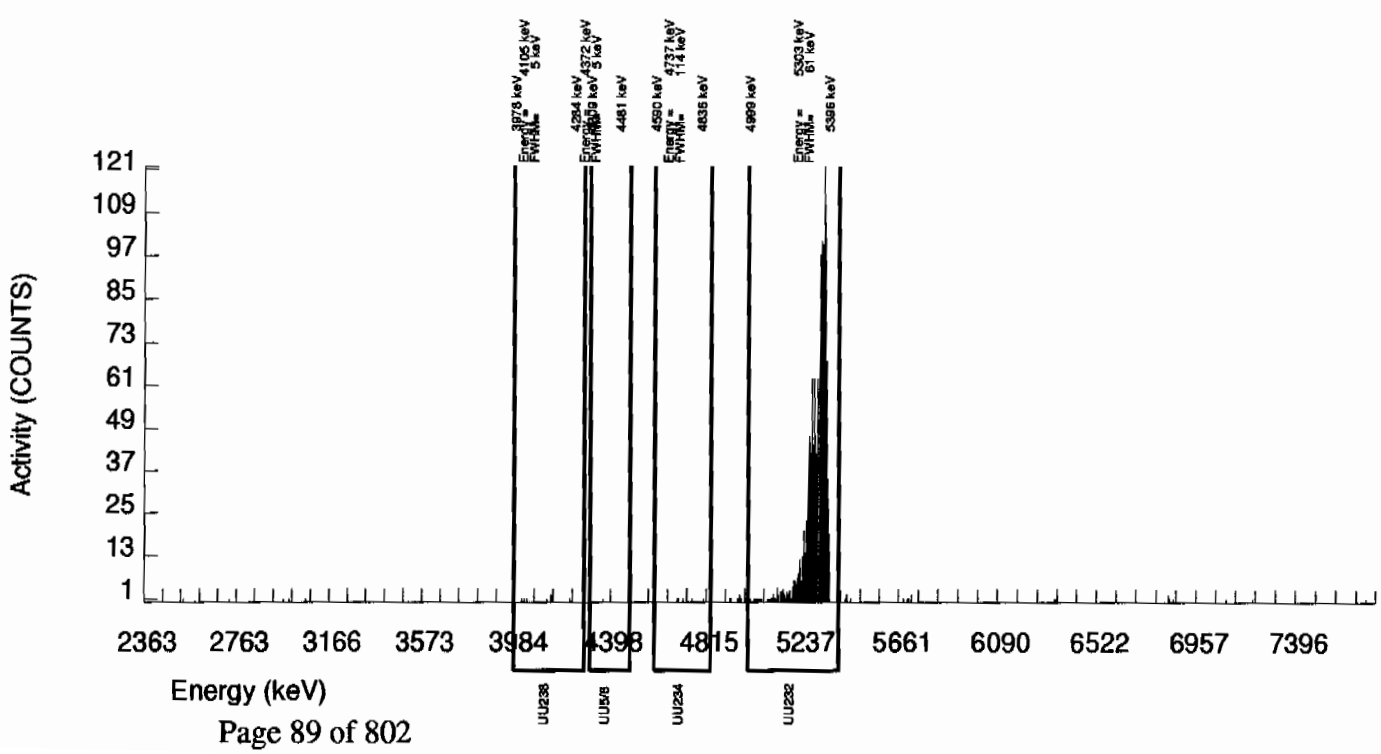

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 1-JUL-2009 00:00:00.	SAMPLE ID : S1201874795_UU SAMPLE QTY: 0.503 G
DETECTOR NUMBER :72527 AVERAGE %EFFICIENCY :24.9899 % YIELD : 99.640	COUNT DATE:14-JUL-2009 21:23:25 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 2.338E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.338E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29518 dpm RESULTS : 5.27611 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B146.CNF;332 BKG DATE : 12-JUL-2009 EFF FILE : W146.CNF;99 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	143.000	135.023	4.000	9.1924	100.0000	4.86E-01	5.47E-02	7.69E-02	1.64E-01	4.30E-02
U232	5302.100	1324.000	1318.000	6.000	2.4495	100.0000	4.74E+00	3.55E-01	2.05E-02	5.07E-02	1.31E-01
U-235	4391.000	2.000	1.000	1.000	3.0409	80.90000	4.45E-03	7.71E-03	3.14E-02	7.49E-02	7.70E-03
U-238	4184.730	181.000	180.000	1.000	3.2215	100.0000	6.47E-01	6.62E-02	2.70E-02	6.37E-02	4.85E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

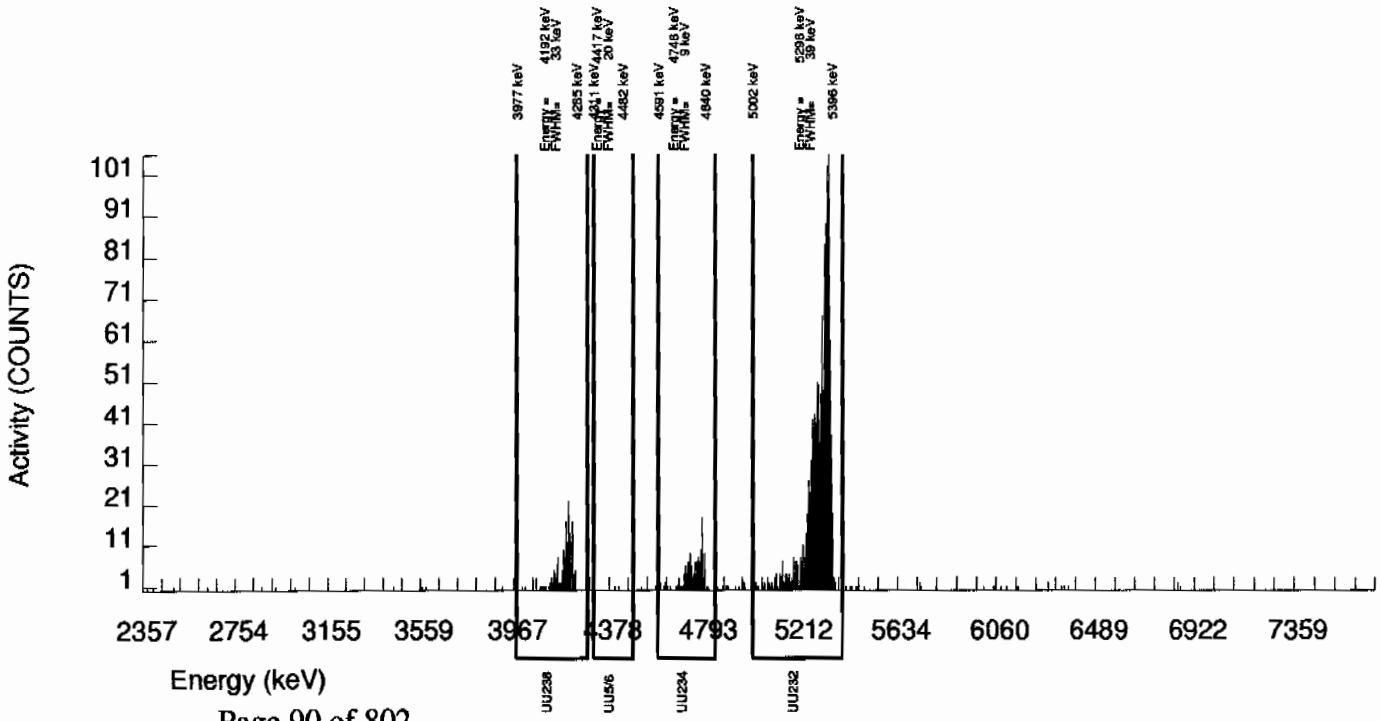

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874796_UU SAMPLE QTY: 0.114 G
DETECTOR NUMBER :75550 AVERAGE %EFFICIENCY :24.6626 % YIELD : 104.026	COUNT DATE:14-JUL-2009 21:23:28 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A SOTOPE : U-238 PCI/G : 1.032E+02	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.032E+02	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29406 dpm RESULTS : 5.50721 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B147.CNF;332 BKG DATE : 12-JUL-2009 EFF FILE : W147.CNF;98 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	422.000	411.902	6.000	9.1924	100.0000	6.34E+00	5.77E-01	3.29E-01	7.00E-01	3.17E-01
U232	5302.100	1362.000	1358.000	4.000	2.0000	100.0000	2.09E+01	1.69E+00	7.17E-02	1.85E-01	5.69E-01
U-235	4391.000	20.000	18.000	2.000	3.0409	80.90000	3.43E-01	9.30E-02	1.35E-01	3.21E-01	8.93E-02
U-238	4184.730	334.000	332.000	2.000	3.2215	100.0000	5.11E+00	4.80E-01	1.15E-01	2.73E-01	2.82E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

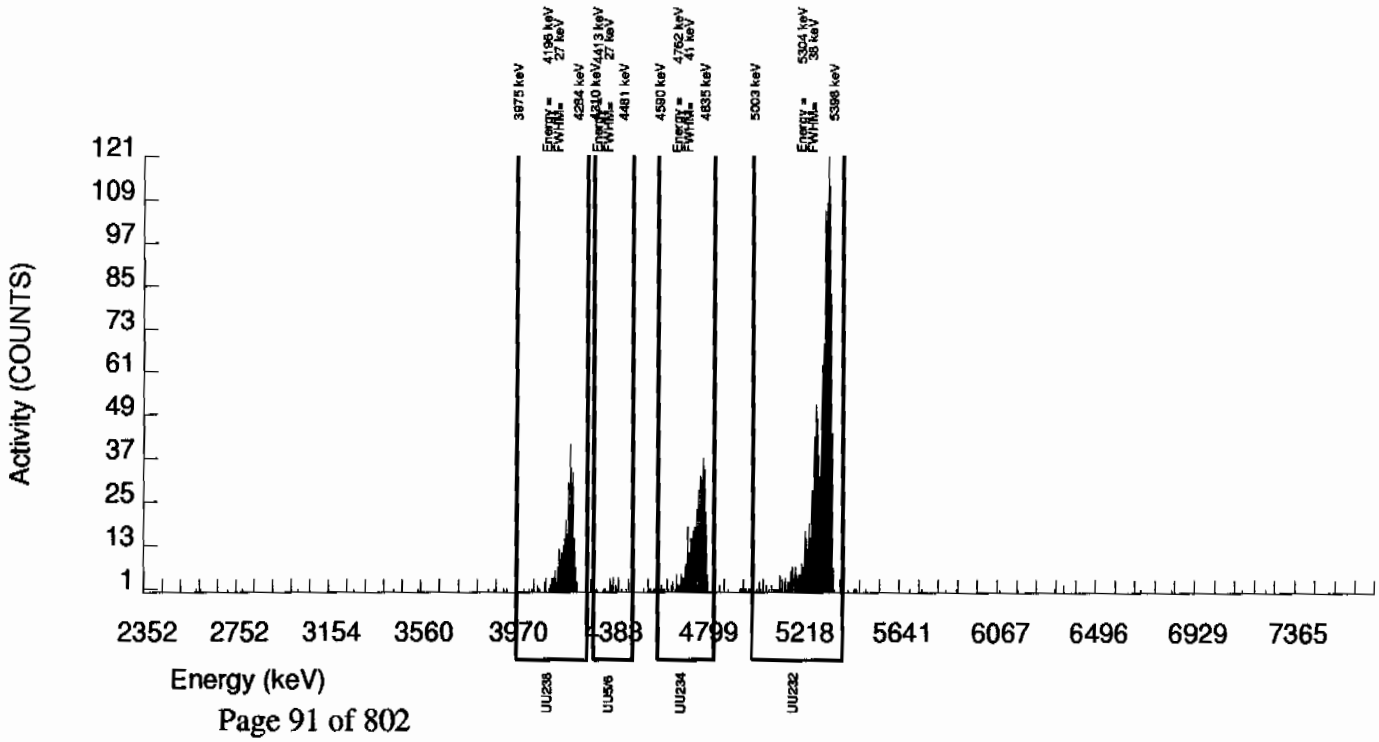

Radiochemistry Batch Checklist, Rev 9

Batch# 882713 Product: γ/LANL Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			n/a
Samples have been blank corrected (if required)			n/a
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			n/a
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			n/a
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			n/a
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			n/a
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			n/a
Batch non-conformances second reviewed and disposition verified to be completed.			n/a
Aliquot Correction completed if required.			n/a
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Maggie Stamps 7/17/09

Secondary Review Performed By: [illegible] 7/17/09

Gamma Spec Que Sheet

I.G. - 7/14/09

07/07/2009

Batch #: 882713 **Analyst:** MXR1 **First Client DueDate** 07/23/2009 **Internal Due Date:** 07/12/2009

Gamma Spike Isotope: Mixed Gamma **Spike Code:** n/a **Expiration Date:** n/a **Vol:** n/a **Nominal Concentration:** n/a

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1.0mL **Nominal Concentration:** Cs137-5.636 Co60-6.914 Am241-15.92

Initials: MS **Prep Date:** 7/7/09 **Witness:** n/a

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (I/G/F)	Detector	Sealing Date/Time (if Applicable)
232664001-1	CAMO-09-9942	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	104.07	16	7/2/09
232664002-1	CAMO-09-9941	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	105.14	18	
232664003-1	CAMO-09-9943	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	111.20	22	
232664004-1	CAMO-09-10030	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	101.93	23	
232664005-1	CAMO-09-9989	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	125.24	20	
232746001-1	CAMO-09-9956	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	130.35	2	7/7/09
232746002-1	CAMO-09-9950	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	127.35	9	
232746003-1	CAMO-09-9952	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	137.08	12	
232746004-1	CAMO-09-9958	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	137.82	5	
232746005-1	CAMO-09-9957	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	131.80	21	
232746006-1	CAMO-09-9951	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	131.37	14	
232746007-1	CAMO-09-10031	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	130.70	17	
232746008-1	CAMO-09-9990	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	144.47	13	
232754001-1	CAMO-09-6615	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	135.03	16	
232754002-1	CAMO-09-6614	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	133.25	18	
232754003-1	CAMO-09-6613	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	137.02	22	
232758002-1	CAMO-09-9962	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	121.73	2	
232758003-1	CAMO-09-9964	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	116.04	12	
232758004-1	CAMO-09-9963	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	116.48	9	
232758005-1	CAMO-09-10032	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	125.33	20	
1201874832-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	7/7/09	144.47	21 ~~10~~	21
1201874833-1	DUP CAMO-09-6615(232754001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	30-JUN-09 12:00:00	133.07	5	
1201874834-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	7/7/09	155.44	13	

7/17/09

Data Reviewed By: Maggie Stamps 7/17/09

GEL Laboratories LLC, Radiochemistry Division

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
882713	232664001	SAMPLE	14-JUL-09	Americium-241	0.298	0.3346	0.200
				Cerium-139	0.02451	0.06158	0.050
				Cesium-134	0.1115	0.1127	0.100
				Sodium-22	-0.00262	0.08357	0.080
				Thorium-234	2.212	2.712	2.00
882713	232664002	SAMPLE	14-JUL-09	Thorium-234	1.878	2.754	2.00
882713	232664003	SAMPLE	14-JUL-09	Americium-241	0.01167	0.2363	0.200
				Thorium-234	0.8017	2.045	2.00
882713	232664004	SAMPLE	14-JUL-09	Sodium-22	-0.01878	0.09959	0.080
				Thorium-234	1.654	2.394	2.00
882713	232664005	SAMPLE	14-JUL-09				
882713	232746001	SAMPLE	14-JUL-09	Americium-241	0.07321	0.3081	0.200
				Thorium-234	0.8008	2.375	2.00
882713	232746002	SAMPLE	14-JUL-09	Americium-241	-0.04631	0.2681	0.200
				Thorium-234	0.7057	2.449	2.00
882713	232746003	SAMPLE	14-JUL-09	Americium-241	0.02808	0.2475	0.200
				Thorium-234	0.692	2.007	2.00
882713	232746004	SAMPLE	14-JUL-09	Cerium-139	-0.00508	0.05139	0.050
				Sodium-22	-0.03144	0.08283	0.080
882713	232746005	SAMPLE	14-JUL-09	Cerium-139	0.00744	0.05605	0.050
				Cobalt-60	0.04706	0.107	0.100
				Europium-152	0.01525	0.2005	0.200
				Sodium-22	-0.02711	0.1192	0.080
882713	232746006	SAMPLE	14-JUL-09	Americium-241	0.1301	0.2201	0.200
				Cerium-139	0.01688	0.0524	0.050
882713	232746007	SAMPLE	14-JUL-09	Cerium-139	0.01118	0.05925	0.050
				Cesium-134	0.02656	0.112	0.100
				Sodium-22	-0.00346	0.09341	0.080
882713	232746008	SAMPLE	14-JUL-09	Cerium-139	-0.02121	0.05246	0.050
				Sodium-22	0.01578	0.0925	0.080
882713	232754001	SAMPLE	14-JUL-09	Americium-241	0.09817	0.2899	0.200
				Cerium-139	-0.01375	0.05154	0.050
				Thorium-234	1.486	2.378	2.00
882713	232754002	SAMPLE	14-JUL-09	Americium-241	-0.0349	0.2985	0.200
				Thorium-234	1.363	2.58	2.00
882713	232754003	SAMPLE	14-JUL-09	Americium-241	0.1579	0.2213	0.200
882713	232758002	SAMPLE	14-JUL-09	Americium-241	-0.1085	0.329	0.200
				Cerium-139	-0.02087	0.0523	0.050
				Cesium-134	0.06978	0.1015	0.100
				Sodium-22	0.03599	0.08858	0.080
				Thorium-234	0.5268	2.612	2.00
882713	232758003	SAMPLE	14-JUL-09	Americium-241	-0.00355	0.2809	0.200
				Cerium-139	-0.00348	0.05194	0.050

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
882713	232758003	SAMPLE	14-JUL-09	Sodium-22	-0.01567	0.09152	0.080
882713	232758004	SAMPLE	14-JUL-09	Americium-241	-0.06326	0.3138	0.200
				Cerium-139	-0.01329	0.05188	0.050
				Sodium-22	0.03741	0.08039	0.080
				Thorium-234	1.156	2.801	2.00
882713	232758005	SAMPLE	14-JUL-09				
882713	1201874832	MB	14-JUL-09				
882713	1201874833	DUP	14-JUL-09	Cerium-139	-0.01523	0.05411	0.050
				Cesium-134	0.07826	0.1097	0.100
				Sodium-22	-0.01244	0.09425	0.080
882713	1201874834	LCS	14-JUL-09	Cerium-139	0.01555	0.08511	0.050
				Cesium-134	0.03051	0.1905	0.100
				Europium-152	0.03026	0.3345	0.200
				Mercury-203	0.04059	0.1189	0.100
				Potassium-40	0.8487	1.261	1.00
				Ruthenium-106	-0.3975	1.078	0.800
				Sodium-22	-0.06454	0.09224	0.080
				Tin-113	0.08723	0.1647	0.100
				Uranium-235	-0.09912	0.5983	0.500
				Yttrium-88	0.06542	0.1092	0.100

Gamma Review Report based on Result > MDA for Batch:882713

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664001	26-JUN-09 12:00	14-JUL-09 08:26	17.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.809	0.2002	pCi/g	0.2344	N	911.6	3	1.648	IDENTIFIED	9.345	☐	
Americium-243 INT	0.4869	0.04549	pCi/g	0.1144	N	75.07	1	0.9184	IDENTIFIED	8.514	☐	
Annihilation Rad.	0.1513	0.04074	pCi/g	0.05033	N	511.1	2	1.653	IDENTIFIED	26.77	☐	
Pb214 Bismuth-211 INT	4.501	0.2829	pCi/g	0.3616	Y	352.1	4	1.054	IDENTIFIED	5.466	☑ UI	
Bismuth-212 ✓	1.494	0.2557	pCi/g	0.5626	N	727.7	1	1.336	IDENTIFIED	16.56	☐	
Bismuth-214 ✓	1.425	0.1093	pCi/g	0.1294	0.200	609.6	4	1.378	IDENTIFIED	6.55	☐	
Pb-214 Cadmium-109 INT	3.631	0.6229	pCi/g	1.749	Y	87.31	5	1.048	IDENTIFIED	16.61	☑ UI	
Cadmium-115	38.19	14.21	pCi/g	0	N	87.31	5	1.048	NOT_IDENTI	16.61	☐	
Cerium-143	3189	525.9	pCi/g	0	N	328.2	1	1.222	NOT_IDENTI	40.42	☐	
Gross Gamma	11.05	1.894	pCi/g	5.542	N		0				☐	
Iodine-123 HE	4.22E+07	1.12E+08	pCi/g	0	N	87.31	5	1.048	NOT_IDENTI	16.61	☐	
Iodine-133 HE	16030	30210	pCi/g	0	N	511.1	2	1.653	FAIL_DECAY	26.77	☐	
Krypton-85 LA	30.91	5.244	pCi/g	18.04	N	238.8	7	1.001	NOT_IDENTI	3.218	☐	
Lead-212 ✓	1.94	0.09261	pCi/g	0.1119	0.100	238.8	7	1.001	IDENTIFIED	3.218	☐	
Lead-214 ✓	1.566	0.1066	pCi/g	0.129	0.100	352.1	4	1.054	IDENTIFIED	5.466	☐	
Lutetium-177 HE	4.13	1.185	pCi/g	3.142	N	209.2	1	0.9456	FAIL_ABUND	28.57	☐	
Neptunium-237 INT	1.044	0.2089	pCi/g	0.4652	N	87.31	5	1.048	IDENTIFIED	16.61	☐	
Polonium-212 NV	1.94	0.09261	pCi/g	0.1119	N	238.8	7	1.001	IDENTIFIED	3.218	☐	
Polonium-214 NV	1.566	0.1066	pCi/g	0.129	N	352.1	4	1.054	IDENTIFIED	5.466	☐	
Polonium-216 NV	1.94	0.09261	pCi/g	0.1119	N	238.8	7	1.001	IDENTIFIED	3.218	☐	
Polonium-218 NV	1.566	0.1066	pCi/g	0.129	N	352.1	4	1.054	IDENTIFIED	5.466	☐	
Potassium-40 ✓	34.8	1.792	pCi/g	0.6581	1.00	1461	1	1.821	IDENTIFIED	2.964	☐	
Pb214 Radium-224 INT	5.566	0.5106	pCi/g	1.272	Y	241.8	1	1.705	IDENTIFIED	8.76	☑ UI	
Radium-226 ✓	1.425	0.1093	pCi/g	0.1294	Y	609.6	4	1.378	IDENTIFIED	6.55	☐	
Radium-228 ✓	1.809	0.2002	pCi/g	0.2344	0.500	911.6	3	1.648	IDENTIFIED	9.345	☐	
Strontium-85 LA	0.1631	0.02767	pCi/g	0.09522	Y	238.8	7	1.001	NOT_IDENTI	3.218	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.4851	0.04839	pCi/g	0.06862	0.080	583.6	1	1.17	IDENTIFIED	9.362	☐	
Thorium-228 ✓	1.94	0.09261	pCi/g	0.1118	N	238.8	7	1.001	IDENTIFIED	3.218	☐	
Thorium-230 ✓	1.425	0.1093	pCi/g	0.1294	N	609.6	4	1.378	IDENTIFIED	6.55	☐	
Thorium-232 ✓	1.809	0.2002	pCi/g	0.2344	N	911.6	3	1.648	IDENTIFIED	9.345	☐	
Tin-126 INT	0.3555	0.06098	pCi/g	0.1751	N	87.31	5	1.048	IDENTIFIED	16.61	☐	
Titanium-44 LA	0.457	0.03334	pCi/g	0.1065	N	77.37	1	0.9237	FAIL_ABUND	6.157	☐	
Total Uranium	6.5797	2.47E-06	ug/g	4.0372	N		0				☐	
Uranium-234 ✓	1.425	0.1093	pCi/g	0.1294	N	609.6	4	1.378	IDENTIFIED	6.55	☐	
Zirconium-97 HE	8.31E+06	1.70E+07	pCi/g	0	N	238.8	7	1.001	NOT_IDENTI	3.218	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664002	26-JUN-09 12:00	14-JUL-09 08:27	17.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.852	0.1735	pCi/g	0.2099	N	911.4	3	1.617	IDENTIFIED	6.622	☐	
Americium-241 ✓	0.382	0.1069	pCi/g	0.3424	0.200	59.45	1	0.8876	IDENTIFIED	27.67	☐	
Americium-243 INT	0.3481	0.0468	pCi/g	0.1001	N	74.87	2	1.139	IDENTIFIED	12.78	☐	
Annihilation Rad.	0.1157	0.03126	pCi/g	0.04269	N	511.2	2	1.873	IDENTIFIED	26.82	☐	
Pb214 Bismuth-211 INT	4.564	0.2609	pCi/g	0.3061	Y	352	4	1.194	IDENTIFIED	4.73	☑ UI	
Bismuth-212 LA	1.492	0.2098	pCi/g	0.6223	N	727.2	1	1.622	FAIL_ABUND	13.15	☐	
Bismuth-214 ✓	1.432	0.1004	pCi/g	0.1028	0.200	609.5	4	1.701	IDENTIFIED	5.405	☐	
Pb214 Cadmium-109 INT	4.467	0.5829	pCi/g	1.288	Y	87.29	4	1.23	IDENTIFIED	12.21	☑ UI	
Cadmium-115 HE	0.5475	11.3	pCi/g	0	N	87.29	4	1.23	NOT_IDENTI	12.21	☐	
Cerium-143	3281	484.4	pCi/g	0	N	328.4	1	0.7934	FAIL_DECAY	87.08	☐	
Cesium-134 LA	0.08514	0.02159	pCi/g	0.07897	0.100	511.2	2	1.873	NOT_IDENTI	26.82	☑ UI	Data rejected due to low abundance.

	Cesium-135 mp	0.5888	0.131	pCi/g	0.223	N	269.6	2	1.525	IDENTIFIED	21.93	☐
	Gross Gamma	10.11	1.52	pCi/g	2.771	N		0				☐
	Iodine-135	1.58E+18	0	pCi/g	0	N	269.6	2	1.525	NOT_IDENTI	21.93	☐
	Krypton-85 LA	27.28	4.178	pCi/g	14.29	N	238.7	8	1.277	NOT_IDENTI	3.025	☐
	Lead-212 ✓	1.905	0.08916	pCi/g	0.08398	0.100	238.7	8	1.277	IDENTIFIED	3.025	☐
	Lead-214 ✓	1.588	0.09977	pCi/g	0.1067	0.100	352	4	1.194	IDENTIFIED	4.73	☐
	Lutetium-177 HE	3.18	1.155	pCi/g	2.671	N	208.9	1	1.057	FAIL_ABUND	36.21	☐
	Neptunium-237 INT	1.284	0.2136	pCi/g	0.3785	N	87.29	4	1.23	IDENTIFIED	12.21	☐
	Niobium-95m HE	0.2172	0.06484	pCi/g	0.2053	N	238.7	8	1.277	NOT_IDENTI	3.025	☐
	Polonium-212 nr	1.905	0.08916	pCi/g	0.08398	N	238.7	8	1.277	IDENTIFIED	3.025	☐
	Polonium-214 nr	1.588	0.09977	pCi/g	0.1067	N	352	4	1.194	IDENTIFIED	4.73	☐
	Polonium-216 nr	1.905	0.08916	pCi/g	0.08398	N	238.7	8	1.277	IDENTIFIED	3.025	☐
	Polonium-218 nr	1.588	0.09977	pCi/g	0.1067	N	352	4	1.194	IDENTIFIED	4.73	☐
	Potassium-40 ✓	28.13	1.306	pCi/g	0.4898	1.00	1461	1	2.4	IDENTIFIED	2.678	☐
	Promethium-149 HE	129.9	100.6	pCi/g	0	N	90.08	1	1.05	NOT_IDENTI	17.18	☐
Pb214	Radium-224 INT	5.041	0.6758	pCi/g	0.9544	Y	241.7	1	1.944	IDENTIFIED	13.11	☑ UI
	Radium-226 ✓	1.432	0.1004	pCi/g	0.1028	Y	609.5	4	1.701	IDENTIFIED	5.405	☐
	Radium-228 ✓	1.852	0.1735	pCi/g	0.2099	0.500	911.4	3	1.617	IDENTIFIED	6.622	☐
	Strontium-85 LA	0.144	0.02204	pCi/g	0.07543	Y	238.7	8	1.277	NOT_IDENTI	3.025	☑ UI Data rejected due to low abundance.
	Thallium-200 HE	302.5	1163	pCi/g	0	N	74.87	2	1.139	NOT_IDENTI	12.78	☐
	Thallium-208 ✓	0.5055	0.04241	pCi/g	0.0563	0.080	583.4	1	1.356	IDENTIFIED	7.416	☐
	Thorium-228 ✓	1.905	0.08916	pCi/g	0.08397	N	238.7	8	1.277	IDENTIFIED	3.025	☐
	Thorium-230 ✓	1.432	0.1004	pCi/g	0.1028	N	609.5	4	1.701	IDENTIFIED	5.405	☐
	Thorium-232 ✓	1.852	0.1735	pCi/g	0.2099	N	911.4	3	1.617	IDENTIFIED	6.622	☐
	Tin-126 INT	0.4373	0.05706	pCi/g	0.1269	N	87.29	4	1.23	IDENTIFIED	12.21	☐
	Titanium-44 LA	0.4527	0.0364	pCi/g	0.09055	N	77.13	1	1.12	FAIL_ABUND	6.832	☐
	Total Uranium	5.5855	2.55E-06	ug/g	4.1004	N		0				☐
	Uranium-234 ✓	1.432	0.1004	pCi/g	0.1028	N	609.5	4	1.701	IDENTIFIED	5.405	☐
	Zirconium-97	5.65E+07	1.36E+07	pCi/g	0	N	238.7	8	1.277	NOT_IDENTI	3.025	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664003	26-JUN-09 12:00	14-JUL-09 08:37	17.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.835	0.1844	pCi/g	0.1879	N	911.4	3	2.341	IDENTIFIED	7.864	☐	
	Americium-243 INT	0.5195	0.04425	pCi/g	0.08951	N	74.85	2	1.354	IDENTIFIED	7.576	☐	
	Annihilation Rad.	0.145	0.03015	pCi/g	0.04015	N	511.2	2	2.037	IDENTIFIED	20.55	☐	
Pb214	Bismuth-211 INT	4.361	0.2495	pCi/g	0.3143	Y	352	4	1.507	IDENTIFIED	4.762	☑ UI	
	Bismuth-212 LA	1.253	0.2427	pCi/g	0.6079	N	727.3	1	1.664	FAIL_ABUND	18.76	☐	
	Bismuth-214 ✓	1.254	0.09352	pCi/g	0.102	0.200	609.5	4	1.743	IDENTIFIED	6.027	☐	
Pb214	Cadmium-109 INT	4.616	0.5852	pCi/g	1.179	Y	87.29	5	1.526	IDENTIFIED	11.88	☐	
	Cadmium-115 HE	10.67	10.92	pCi/g	0	N	87.29	5	1.526	NOT_IDENTI	11.88	☐	
	Cerium-143	3414	507.3	pCi/g	0	N	328	1	0.938	FAIL_DECAY	26.6	☐	
	Cesium-134 LA	0.1559	0.04611	pCi/g	0.08663	0.100	796.4	1	4.365	FAIL_ABUND	29.22	☑ UI Data rejected due to low abundance.	
	Gross Gamma	10.84	1.462	pCi/g	2.636	N		0				☐	
	Iodine-123 HE	4.64E+07	9.10E+07	pCi/g	0	N	87.29	5	1.526	NOT_IDENTI	11.88	☐	
	Iodine-133 HE	5161	23940	pCi/g	0	N	511.2	2	2.037	FAIL_DECAY	20.55	☐	
	Krypton-85 LA	32.44	4.072	pCi/g	14.3	N	238.7	8	1.299	NOT_IDENTI	2.857	☐	
	Lead-212 ✓	1.908	0.08671	pCi/g	0.08726	0.100	238.7	8	1.299	IDENTIFIED	2.857	☐	
	Lead-214 ✓	1.517	0.09538	pCi/g	0.1053	0.100	352	4	1.507	IDENTIFIED	4.762	☐	
	Lutetium-177 HE	3.1	0.7568	pCi/g	2.617	N	209.2	1	0.9849	FAIL_ABUND	24.26	☐	
	Neptunium-237 INT	1.327	0.2169	pCi/g	0.3436	N	87.29	5	1.526	IDENTIFIED	11.88	☐	
	Niobium-95m LA	0.4326	0.07395	pCi/g	0.2345	N	238.7	8	1.299	NOT_IDENTI	2.857	☐	
	Polonium-212 nr	1.908	0.08671	pCi/g	0.08726	N	238.7	8	1.299	IDENTIFIED	2.857	☐	
	Polonium-214 nr	1.517	0.09538	pCi/g	0.1053	N	352	4	1.507	IDENTIFIED	4.762	☐	
	Polonium-216 nr	1.908	0.08671	pCi/g	0.08726	N	238.7	8	1.299	IDENTIFIED	2.857	☐	
	Polonium-218 nr	1.517	0.09538	pCi/g	0.1053	N	352	4	1.507	IDENTIFIED	4.762	☐	
	Potassium-40 ✓	35.76	1.522	pCi/g	0.5119	1.00	1461	1	2.989	IDENTIFIED	2.449	☐	
Pb214	Radium-224 INT	5.145	0.6659	pCi/g	0.9915	Y	241.6	1	2.006	IDENTIFIED	12.65	☑ UI	

Radium-226 ✓		1.254	0.09352	pCi/g	0.102	Y	609.5	4	1.743	IDENTIFIED	6.027	☐	
Radium-228 ✓		1.835	0.1844	pCi/g	0.1879	0.500	911.4	3	2.341	IDENTIFIED	7.864	☐	
Strontium-85 LA		0.1712	0.02149	pCi/g	0.07544	Y	238.7	8	1.299	NOT_IDENTI	2.857	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	73.2	1247	pCi/g	0	N	74.85	2	1.354	NOT_IDENTI	7.576	☐	
Thallium-208 ✓		0.5983	0.03952	pCi/g	0.05238	0.080	583.3	1	1.902	IDENTIFIED	5.367	☐	
Thorium-228 ✓		1.908	0.08671	pCi/g	0.08725	N	238.7	8	1.299	IDENTIFIED	2.857	☐	
Thorium-230 ✓		1.253	0.09352	pCi/g	0.102	N	609.5	4	1.743	IDENTIFIED	6.027	☐	
Thorium-232 ✓		1.835	0.1844	pCi/g	0.1879	N	911.4	3	2.341	IDENTIFIED	7.864	☐	
Tin-126 INT		0.4519	0.05728	pCi/g	0.1159	N	87.29	5	1.526	IDENTIFIED	11.88	☐	
Titanium-44 LA		0.4151	0.03008	pCi/g	0.08223	N	77.18	1	1.135	FAIL_ABUND	6.055	☐	
Uranium-234 ✓		1.253	0.09352	pCi/g	0.102	N	609.5	4	1.743	IDENTIFIED	6.027	☐	
Zirconium-97		8.55E+07	1.44E+07	pCi/g	0	N	238.7	8	1.299	NOT_IDENTI	2.857	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664004	26-JUN-09 12:00	14-JUL-09 08:38	17.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.849	0.227	pCi/g	0.2781	N	911.5	3	2.117	IDENTIFIED	10.83	☐	
Americium-241 ✓		0.6932	0.1339	pCi/g	0.3054	0.200	59.4	1	0.9642	IDENTIFIED	18.75	☐	
Americium-243 INT		0.3872	0.04478	pCi/g	0.09869	N	74.94	2	0.8271	IDENTIFIED	10.67	☐	
Annihilation Rad.		0.1627	0.04393	pCi/g	0.05327	N	511.3	1	1.464	IDENTIFIED	26.85	☐	
Pb214 Bismuth-211 INT		4.545	0.3259	pCi/g	0.3555	Y	351.9	4	1.221	IDENTIFIED	6.389	☑ ✓UI	
Bismuth-212 LA		1.897	0.3528	pCi/g	0.9735	N	727.4	1	1.248	FAIL_ABUND	18.17	☐	
Bismuth-214 ✓		1.47	0.1169	pCi/g	0.1545	0.200	609.6	4	1.354	IDENTIFIED	7.008	☐	
Pb214 Cadmium-109 INT		4.354	0.6509	pCi/g	1.36	Y	87.13	4	1.173	IDENTIFIED	14.14	☑ ✓UI	
Cerium-143		1144	380.4	pCi/g	0	N	328.4	1	1.321	FAIL_DECAY	35.01	☐	
Cesium-134 LA		0.1942	0.04997	pCi/g	0.123	0.100	794.7	1	1.341	FAIL_ABUND	25.48	☑ UI	Data rejected due to low abundance.
Gross Gamma		10.64	1.76	pCi/g	3.904	N		0				☐	
Iodine-123	HE	1.31E+08	9.77E+07	pCi/g	0	N	87.13	4	1.173	NOT_IDENTI	14.14	☐	
Krypton-85	HE	25.71	4.927	pCi/g	17.37	N	238.8	7	1.048	NOT_IDENTI	4.154	☐	
Lead-212 ✓		1.84	0.1011	pCi/g	0.1172	0.100	238.8	7	1.048	IDENTIFIED	4.154	☐	
Lead-214 ✓		1.581	0.1206	pCi/g	0.124	0.100	351.9	4	1.221	IDENTIFIED	6.389	☐	
Lutetium-177	HE	4.056	1.037	pCi/g	2.895	N	209.4	1	0.7712	FAIL_ABUND	25.43	☐	
Neptunium-237 INT		1.252	0.2273	pCi/g	0.3186	N	87.13	4	1.173	IDENTIFIED	14.14	☐	
Polonium-212 nr		1.84	0.1011	pCi/g	0.1172	N	238.8	7	1.048	IDENTIFIED	4.154	☐	
Polonium-214 nr		1.581	0.1206	pCi/g	0.124	N	351.9	4	1.221	IDENTIFIED	6.389	☐	
Polonium-216 nr		1.84	0.1011	pCi/g	0.1172	N	238.8	7	1.048	IDENTIFIED	4.154	☐	
Polonium-218 nr		1.581	0.1206	pCi/g	0.124	N	351.9	4	1.221	IDENTIFIED	6.389	☐	
Potassium-40 ✓		29.39	1.522	pCi/g	0.7072	1.00	1461	1	2.226	IDENTIFIED	3.581	☐	
Pb-214 Radium-224 INT		3.913	0.5347	pCi/g	1.535	Y	242	1	1.367	IDENTIFIED	13.37	☑ ✓UI	
Radium-226 ✓		1.47	0.1169	pCi/g	0.1545	Y	609.6	4	1.354	IDENTIFIED	7.008	☐	
Radium-228 ✓		1.849	0.227	pCi/g	0.2781	0.500	911.5	3	2.117	IDENTIFIED	10.83	☐	
Strontium-85 LA		0.1357	0.026	pCi/g	0.09165	Y	238.8	7	1.048	NOT_IDENTI	4.154	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	296	1521	pCi/g	0	N	74.94	2	0.8271	NOT_IDENTI	10.67	☐	
Thallium-208 ✓		0.5745	0.05297	pCi/g	0.07089	0.080	583.5	1	1.243	IDENTIFIED	8.631	☐	
Thorium-228 ✓		1.84	0.1011	pCi/g	0.1172	N	238.8	7	1.048	IDENTIFIED	4.154	☐	
Thorium-230 ✓		1.47	0.1169	pCi/g	0.1545	N	609.6	4	1.354	IDENTIFIED	7.008	☐	
Thorium-232 ✓		1.849	0.227	pCi/g	0.2781	N	911.5	3	2.117	IDENTIFIED	10.83	☐	
Tin-126 INT		0.4262	0.06371	pCi/g	0.1216	N	87.13	4	1.173	IDENTIFIED	14.14	☐	
Titanium-44 LA		0.42	0.03442	pCi/g	0.07962	N	77.13	1	0.8674	FAIL_ABUND	6.849	☐	
Total Uranium		4.9944	3.43E-06	ug/g	3.5636	N		0				☐	
Uranium-234 ✓		1.47	0.1169	pCi/g	0.1545	N	609.6	4	1.354	IDENTIFIED	7.008	☐	
Zirconium-97	HE	1.38E+07	1.82E+07	pCi/g	0	N	238.8	7	1.048	NOT_IDENTI	4.154	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664005	26-JUN-09 12:00	14-JUL-09 08:57	17.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.517	0.1587	pCi/g	0.1684	N	911.3	3	1.628	IDENTIFIED	8.475		
Americium-241 ✓	1.519	0.1275	pCi/g	0.203	0.200	59.64	1	1.005	IDENTIFIED	7.504		
Americium-243 INT	0.285	0.03149	pCi/g	0.07834	N	74.87	2	1.016	IDENTIFIED	10.44		
Annihilation Rad.	0.1142	0.03247	pCi/g	0.04101	N	511	1	1.674	IDENTIFIED	28.15		
Barium-137m NR	1.186	0.07105	pCi/g	0.05201	N	661.5	3	1.44	IDENTIFIED	4.296		
Beryllium-7 ✓	2.889	0.3296	pCi/g	0.5915	N	477.5	1	1.174	IDENTIFIED	10.62		
Pb-214 Bismuth-211 INT	3.444	0.2589	pCi/g	0.2906	Y	351.8	4	1.357	IDENTIFIED	5.775	✓ UI	
Bismuth-212 ✓	0.9065	0.1841	pCi/g	0.4302	N	727.3	1	1.047	IDENTIFIED	19.65		
Bismuth-214 ✓	0.9258	0.08665	pCi/g	0.1012	0.200	609.3	4	1.38	IDENTIFIED	8.003		
Pb-214 Cadmium-109 INT	3.201	0.3781	pCi/g	1.184	Y	87.37	4	1.247	IDENTIFIED	11.09	✓ UI	
Cerium-143	2239	403.9	pCi/g	0	N	661.5	3	1.44	FAIL_DECAY	4.296		
Cesium-134 LA	0.1109	0.0246	pCi/g	0.0744	0.100	794.4	1	3.221	FAIL_ABUND	21.68	✓ UI	Data rejected due to low abundance.
Cesium-135 NVP	0.4721	0.1174	pCi/g	0.2219	N	269.7	2	1.347	IDENTIFIED	24.08		
Cesium-137 ✓	1.253	0.07518	pCi/g	0.05498	0.100	661.5	3	1.44	IDENTIFIED	4.296		
Gross Gamma	9.599	1.342	pCi/g	3.654	N		0					
Iodine-123 HE	2.67E+07	8.52E+07	pCi/g	0	N	87.37	4	1.247	NOT_IDENTI	11.09		
Iodine-135	1.45E+18	0	pCi/g	0	N	269.7	2	1.347	NOT_IDENTI	24.08		
Lead-212 ✓	1.368	0.08586	pCi/g	0.0825	0.100	238.6	8	1.065	IDENTIFIED	3.523		
Lead-214 ✓	1.198	0.09533	pCi/g	0.1013	0.100	351.8	4	1.357	IDENTIFIED	5.775		
Neptunium-237 INT	0.9202	0.1443	pCi/g	0.3795	N	87.37	4	1.247	IDENTIFIED	11.09		
Niobium-97 HE	4.47E+05	7.47E+05	pCi/g	0	N	238.6	8	1.065	NOT_IDENTI	3.523		
Polonium-212 NR	1.368	0.08586	pCi/g	0.0825	N	238.6	8	1.065	IDENTIFIED	3.523		
Polonium-214 NR	1.198	0.09533	pCi/g	0.1013	N	351.8	4	1.357	IDENTIFIED	5.775		
Polonium-216 NR	1.368	0.08586	pCi/g	0.0825	N	238.6	8	1.065	IDENTIFIED	3.523		
Polonium-218 NR	1.198	0.09533	pCi/g	0.1013	N	351.8	4	1.357	IDENTIFIED	5.775		
Potassium-40 ✓	23.7	1.078	pCi/g	0.4504	1.00	1461	1	1.67	IDENTIFIED	3.225		
Promethium-149 HE	13.75	93.31	pCi/g	0	N	89.9	1	1.037	NOT_IDENTI	18.39		
Pb214 Radium-224 INT	4.194	0.6635	pCi/g	0.9384	Y	241.5	1	1.972	IDENTIFIED	15.08	✓ UI	
Radium-226 ✓	0.9258	0.08665	pCi/g	0.1012	Y	609.3	4	1.38	IDENTIFIED	8.003		
Radium-228 ✓	1.517	0.1587	pCi/g	0.1684	0.500	911.3	3	1.628	IDENTIFIED	8.475		
Rhodium-102 HE	0.08465	0.017	pCi/g	0.05878	N	238.6	8	1.065	NOT_IDENTI	3.523		
Technetium-99m	5.16E+18	0	pCi/g	0	N	238.6	8	1.065	NOT_IDENTI	3.523		
Thallium-200 HE	107.1	1170	pCi/g	0	N	74.87	2	1.016	NOT_IDENTI	10.44		
Thallium-208 ✓	0.4197	0.04044	pCi/g	0.05558	0.080	583.2	1	1.151	IDENTIFIED	8.581		
Thorium-228 ✓	1.368	0.08586	pCi/g	0.08249	N	238.6	8	1.065	IDENTIFIED	3.523		
Thorium-230 ✓	0.9258	0.08665	pCi/g	0.1012	N	609.3	4	1.38	IDENTIFIED	8.003		
Thorium-232 ✓	1.517	0.1587	pCi/g	0.1684	N	911.3	3	1.628	IDENTIFIED	8.475		
Thorium-234 ✓	1.745	0.6948	pCi/g	1.66	2.00	63.31	2	1.333	IDENTIFIED	38.88		
Tin-126 INT	0.3134	0.03701	pCi/g	0.1162	N	87.37	4	1.247	IDENTIFIED	11.09		
Titanium-44 LA	0.3171	0.02404	pCi/g	0.06974	N	77.19	1	1.012	FAIL_ABUND	6.628		
Total Uranium	5.2024	2.07E-06	ug/g	2.4712	N		0					
Uranium-234 ✓	0.9258	0.08665	pCi/g	0.1012	N	609.3	4	1.38	IDENTIFIED	8.003		
Uranium-238 HE	1.745	0.6948	pCi/g	1.66	N	63.31	2	1.333	IDENTIFIED	38.88		
Zirconium-97	3.64E+07	1.33E+07	pCi/g	0	N	238.6	8	1.065	NOT_IDENTI	3.523		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746001	29-JUN-09 12:00	14-JUL-09 08:58	14.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.343	0.1676	pCi/g	0.2356	N	911.4	3	1.911	IDENTIFIED	11.03		
Americium-243 INT	0.3126	0.04099	pCi/g	0.09878	N	74.87	1	0.9929	IDENTIFIED	12.06		
Annihilation Rad. HE	0.09362	0.03543	pCi/g	0.05451	N	510.7	1	1.524	IDENTIFIED	37.7		
Pb-214 Bismuth-211 INT	4.281	0.2933	pCi/g	0.333	Y	352	4	1.22	IDENTIFIED	5.536	✓ UI	
Bismuth-212 HE	0.9188	0.2927	pCi/g	0.7075	N	727.8	1	1.505	FAIL_ABUND	31.55		
Bismuth-214 ✓	1.03	0.0985	pCi/g	0.1103	0.200	609.5	4	1.231	IDENTIFIED	8.61		
Cadmium-109 INT	3.643	0.5667	pCi/g	1.23	Y	87.29	4	1.119	IDENTIFIED	14.41	✓ UI	
Cerium-143	444.9	90.81	pCi/g	0	N	328.5	1	0.86	FAIL_DECAY	27.36		

Cesium-134 LA		0.1055	0.03728	pCi/g	0.103	0.100	795.7	2	1.74	FAIL_ABUND	35.1	☑ UI	Data rejected due to low abundance.
Gross Gamma		8.584	1.542	pCi/g	3.112	N		0				☐	
Iodine-123	HE	3.87E+06	2.15E+06	pCi/g	0	N	87.29	4	1.119	NOT_IDENTI	14.41	☐	
Iodine-135	HE	5.21E+14	1.65E+15	pCi/g	0	N	795.7	2	1.74	NOT_IDENTI	35.1	☐	
Lead-212 ✓		1.646	0.0961	pCi/g	0.09114	0.100	238.7	4	1.058	IDENTIFIED	3.414	☐	
Lead-214 ✓		1.489	0.1092	pCi/g	0.1161	0.100	352	4	1.22	IDENTIFIED	5.536	☐	
Lutetium-177	HE	2.368	0.6521	pCi/g	2.033	N	209.4	1	1.735	FAIL_ABUND	27.26	☐	
Neptunium-237 INT		1.052	0.1963	pCi/g	0.3623	N	87.29	4	1.119	IDENTIFIED	14.41	☐	
Polonium-212 nr		1.646	0.0961	pCi/g	0.09114	N	238.7	4	1.058	IDENTIFIED	3.414	☐	
Polonium-214 nr		1.489	0.1092	pCi/g	0.1161	N	352	4	1.22	IDENTIFIED	5.536	☐	
Polonium-216 nr		1.646	0.0961	pCi/g	0.09114	N	238.7	4	1.058	IDENTIFIED	3.414	☐	
Polonium-218 nr		1.489	0.1092	pCi/g	0.1161	N	352	4	1.22	IDENTIFIED	5.536	☐	
Potassium-40 ✓		23.57	1.226	pCi/g	0.536	1.00	1461	1	2.052	IDENTIFIED	3.652	☐	
Pb214 Radium-224 INT		4.137	0.7012	pCi/g	1.038	Y	241.5	1	1.723	IDENTIFIED	16.42	☑ UI	
Radium-226 ✓		1.03	0.0985	pCi/g	0.1103	Y	609.5	4	1.231	IDENTIFIED	8.61	☐	
Radium-228 ✓		1.343	0.1676	pCi/g	0.2356	0.500	911.4	3	1.911	IDENTIFIED	11.03	☐	
Sodium-24	HE	93220	2.88E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-208 ✓		0.4934	0.04293	pCi/g	0.06875	0.080	583.3	1	1.435	IDENTIFIED	7.888	☐	
Thorium-228 ✓		1.646	0.0961	pCi/g	0.09113	N	238.7	4	1.058	IDENTIFIED	3.414	☐	
Thorium-230 ✓		1.03	0.0985	pCi/g	0.1103	N	609.5	4	1.231	IDENTIFIED	8.61	☐	
Thorium-232 ✓		1.343	0.1676	pCi/g	0.2356	N	911.4	3	1.911	IDENTIFIED	11.03	☐	
Tin-126 INT		0.3582	0.05572	pCi/g	0.1216	N	87.29	4	1.119	IDENTIFIED	14.41	☐	
Titanium-44 LA		0.3819	0.0314	pCi/g	0.08093	N	77.07	1	0.8837	FAIL_ABUND	6.319	☐	
Uranium-234 ✓		1.03	0.0985	pCi/g	0.1103	N	609.5	4	1.231	IDENTIFIED	8.61	☐	
Zirconium-97	HE	1.08E+06	8.08E+05	pCi/g	0	N	303	1	1.667	NOT_IDENTI	53.39	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746002	29-JUN-09 12:00	14-JUL-09 08:58	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.67	0.1778	pCi/g	0.2073	N	911.4	3	1.627	IDENTIFIED	8.897	☐	
Americium-243 INT		0.3275	0.04602	pCi/g	0.09018	N	74.97	2	1.33	IDENTIFIED	13.55	☐	
Annihilation Rad.	HE	0.1076	0.03585	pCi/g	0.04149	N	511.3	3	1.655	IDENTIFIED	33.17	☐	
Pb214 Bismuth-211 INT		3.401	0.2301	pCi/g	0.302	Y	352	4	1.301	IDENTIFIED	5.973	☑ UI	
Bismuth-212 ✓		0.8768	0.2039	pCi/g	0.4619	N	727.5	1	1.378	IDENTIFIED	22.84	☐	
Bismuth-214 ✓		1.285	0.09998	pCi/g	0.1129	0.200	609.4	4	1.565	IDENTIFIED	6.629	☐	
Pb214 Cadmium-109 INT		3.1	0.4257	pCi/g	1.322	Y	87.38	4	1.127	IDENTIFIED	13.1	☑ UI	
Cerium-143		285.6	68.9	pCi/g	0	N	87.38	4	1.127	FAIL_DECAY	13.1	☐	
Gross Gamma		8.799	1.253	pCi/g	2.694	N		0				☐	
Iodine-133	HE	206	2235	pCi/g	0	N	511.3	3	1.655	FAIL_DECAY	33.17	☐	
Iodine-135	HE	2.85E+15	1.50E+15	pCi/g	0	N	511.3	3	1.655	NOT_IDENTI	33.17	☐	
Krypton-85	HE	13.22	3.626	pCi/g	12.49	N	238.8	8	1.232	NOT_IDENTI	3.529	☐	
Lead-212 ✓		1.576	0.07947	pCi/g	0.08331	0.100	238.8	8	1.232	IDENTIFIED	3.529	☐	
Lead-214 ✓		1.183	0.08578	pCi/g	0.1053	0.100	352	4	1.301	IDENTIFIED	5.973	☐	
Lutetium-177	HE	3.039	0.7763	pCi/g	1.822	N	209.7	1	1.148	FAIL_ABUND	25.4	☐	
Neptunium-237 INT		0.8951	0.1537	pCi/g	0.4029	N	87.38	4	1.127	IDENTIFIED	13.1	☐	
Polonium-212 nr		1.576	0.07947	pCi/g	0.08331	N	238.8	8	1.232	IDENTIFIED	3.529	☐	
Polonium-214 nr		1.183	0.08578	pCi/g	0.1053	N	352	4	1.301	IDENTIFIED	5.973	☐	
Polonium-216 nr		1.576	0.07947	pCi/g	0.08331	N	238.8	8	1.232	IDENTIFIED	3.529	☐	
Polonium-218 nr		1.183	0.08578	pCi/g	0.1053	N	352	4	1.301	IDENTIFIED	5.973	☐	
Potassium-40 ✓		29.13	1.401	pCi/g	0.4321	1.00	1461	1	2.068	IDENTIFIED	3.007	☐	
Pb214 Radium-224 INT		3.973	0.5657	pCi/g	0.948	Y	241.8	1	1.648	IDENTIFIED	13.95	☑ UI	
Radium-226 ✓		1.285	0.09998	pCi/g	0.1129	Y	609.4	4	1.565	IDENTIFIED	6.629	☐	
Radium-228 ✓		1.67	0.1778	pCi/g	0.2073	0.500	911.4	3	1.627	IDENTIFIED	8.897	☐	
Strontium-85 LA		0.06761	0.01855	pCi/g	0.06386	Y	238.8	8	1.232	NOT_IDENTI	3.529	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	1.32E+16	8.94E+15	pCi/g	0	N	238.8	8	1.232	NOT_IDENTI	3.529	☐	
Thallium-200	HE	73.18	172	pCi/g	0	N	74.97	2	1.33	NOT_IDENTI	13.55	☐	
Thallium-208 ✓		0.5284	0.04461	pCi/g	0.05499	0.080	583.3	1	1.365	IDENTIFIED	7.665	☐	
Thorium-228 ✓		1.576	0.07947	pCi/g	0.0833	N	238.8	8	1.232	IDENTIFIED	3.529	☐	

Thorium-230 ✓		1.285	0.09998	pCi/g	0.1129	N	609.4	4	1.565	IDENTIFIED	6.629	☐
Thorium-232 ✓		1.67	0.1778	pCi/g	0.2073	N	911.4	3	1.627	IDENTIFIED	8.897	☐
Tin-126 INT		0.3048	0.04185	pCi/g	0.1308	N	87.38	4	1.127	IDENTIFIED	13.1	☐
Titanium-44 LA		0.3605	0.03065	pCi/g	0.07734	N	77.27	1	1.178	FAIL_ABUND	7.612	☐
Uranium-234 ✓		1.285	0.09998	pCi/g	0.1129	N	609.4	4	1.565	IDENTIFIED	6.629	☐
Zirconium-97	HE	7.62E+05	7.09E+05	pCi/g	0	N	238.8	8	1.232	NOT_IDENTI	3.529	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746003	29-JUN-09 12:00	14-JUL-09 08:59	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.816	0.1702	pCi/g	0.2494	N	911.7	3	1.582	IDENTIFIED	7.593	☐	
Americium-243 INT		0.3749	0.03873	pCi/g	0.0918	N	74.84	1	1.011	IDENTIFIED	9.753	☐	
Annihilation Rad.	HE	0.1129	0.03753	pCi/g	0.04449	N	510.9	2	1.86	IDENTIFIED	33.11	☐	
Pb214 Bismuth-211 INT		3.782	0.2567	pCi/g	0.3241	Y	352	4	1.143	IDENTIFIED	6.017	☑ UI	
Bismuth-212	HE	0.885	0.229	pCi/g	0.6702	N	727.9	1	1.959	FAIL_ABUND	25.51	☐	
Bismuth-214 ✓		1.104	0.09375	pCi/g	0.1125	0.200	609.4	4	1.189	IDENTIFIED	7.43	☐	
Pb214 Cadmium-109 INT		2.353	0.6031	pCi/g	1.496	Y	87.34	5	1.017	IDENTIFIED	25.34	☑ UI	
Cerium-143		486.5	83.47	pCi/g	0	N	87.34	5	1.017	FAIL_DECAY	25.34	☐	
Gross Gamma		9.881	1.669	pCi/g	2.692	N		0				☐	
Iodine-123	HE	1.80E+06	1.99E+06	pCi/g	0	N	87.34	5	1.017	NOT_IDENTI	25.34	☐	
Iodine-133	HE	1567	2446	pCi/g	0	N	510.9	2	1.86	FAIL_DECAY	33.11	☐	
Iodine-135	HE	4.07E+14	1.67E+15	pCi/g	0	N	795.5	1	1.883	NOT_IDENTI	45.82	☐	
Krypton-85	HE	20.19	4.332	pCi/g	14.72	N	238.7	7	1.052	NOT_IDENTI	3.212	☐	
Lead-212 ✓		1.651	0.07907	pCi/g	0.08945	0.100	238.7	7	1.052	IDENTIFIED	3.212	☐	
Lead-214 ✓		1.316	0.09566	pCi/g	0.113	0.100	352	4	1.143	IDENTIFIED	6.017	☐	
Neptunium-237	HE	0.6795	0.1877	pCi/g	0.4489	N	87.34	5	1.017	IDENTIFIED	25.34	☐	
Polonium-212 nr		1.651	0.07907	pCi/g	0.08945	N	238.7	7	1.052	IDENTIFIED	3.212	☐	
Polonium-214 nr		1.316	0.09566	pCi/g	0.113	N	352	4	1.143	IDENTIFIED	6.017	☐	
Polonium-216 nr		1.651	0.07907	pCi/g	0.08945	N	238.7	7	1.052	IDENTIFIED	3.212	☐	
Polonium-218 nr		1.316	0.09566	pCi/g	0.113	N	352	4	1.143	IDENTIFIED	6.017	☐	
Potassium-40 ✓		35.66	1.574	pCi/g	0.4578	1.00	1461	1	2.239	IDENTIFIED	2.602	☐	
Pb214 Radium-224 INT		4.501	0.5787	pCi/g	1.018	Y	241.8	1	1.572	IDENTIFIED	12.56	☑ UI	
Radium-226 ✓		1.104	0.09375	pCi/g	0.1125	Y	609.4	4	1.189	IDENTIFIED	7.43	☐	
Radium-228 ✓		1.816	0.1702	pCi/g	0.2494	0.500	911.7	3	1.582	IDENTIFIED	7.593	☐	
Sodium-24	HE	4.70E+05	2.84E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1033	0.02216	pCi/g	0.07528	Y	238.7	7	1.052	NOT_IDENTI	3.212	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5957	0.04328	pCi/g	0.0613	0.080	583.5	1	1.257	IDENTIFIED	6.324	☐	
Thorium-228 ✓		1.651	0.07907	pCi/g	0.08944	N	238.7	7	1.052	IDENTIFIED	3.212	☐	
Thorium-230 ✓		1.104	0.09375	pCi/g	0.1125	N	609.4	4	1.189	IDENTIFIED	7.43	☐	
Thorium-232 ✓		1.816	0.1702	pCi/g	0.2494	N	911.7	3	1.582	IDENTIFIED	7.593	☐	
Tin-126	HE	0.2314	0.0593	pCi/g	0.1511	N	87.34	5	1.017	IDENTIFIED	25.34	☐	
Titanium-44 LA		0.4116	0.02879	pCi/g	0.08224	N	77.16	1	0.9704	FAIL_ABUND	6.078	☐	
Uranium-234 ✓		1.104	0.09375	pCi/g	0.1125	N	609.4	4	1.189	IDENTIFIED	7.43	☐	
Zirconium-97		2.72E+06	6.95E+05	pCi/g	0	N	238.7	7	1.052	NOT_IDENTI	3.212	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746004	29-JUN-09 12:00	14-JUL-09 09:13	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.651	0.1936	pCi/g	0.2641	N	911.2	3	1.557	IDENTIFIED	9.966	☐	
Americium-243 INT		0.3986	0.03208	pCi/g	0.06458	N	74.74	2	1.339	IDENTIFIED	7.031	☐	
Annihilation Rad.	HE	0.1169	0.03434	pCi/g	0.05759	N	511	2	2.324	IDENTIFIED	29.2	☐	
Pb214 Bismuth-211 INT		4.115	0.2833	pCi/g	0.3903	Y	352	4	1.4	IDENTIFIED	5.641	☑ UI	
Bismuth-212	HE	1.277	0.2884	pCi/g	0.7481	N	727.4	1	1.755	FAIL_ABUND	22.13	☐	
Bismuth-214 LA		1.323	0.09841	pCi/g	0.3012	0.200	609.1	4	1.484	FAIL_ABUND	6.147	☑ UI	Data rejected due to low abundance.
Pb214 Cadmium-109 INT		3.766	0.4367	pCi/g	0.963	Y	87.2	4	1.4	IDENTIFIED	10.95	☑ UI	
Cerium-143		635.4	109.2	pCi/g	0	N	327.9	1	1.095	FAIL_DECAY	38.81	☐	
Cesium-134 LA		0.16	0.03872	pCi/g	0.1061	0.100	794.8	1	1.927	FAIL_ABUND	23.82	☑ UI	Data rejected due to low abundance.

	Gross Gamma		10.26	1.626	pCi/g	4.011	N		0				☐	
	Iodine-123	HE	8.51E+05	2.26E+06	pCi/g	0	N	87.2	4	1.4	NOT_IDENTI	10.95	☐	
	Iodine-133	HE	1807	2781	pCi/g	0	N	511	2	2.324	FAIL_DECAY	29.2	☐	
	Krypton-85	HE	24.63	4.672	pCi/g	16.29	N	238.7	8	1.298	NOT_IDENTI	3.262	☐	
	Lead-212 ✓		1.794	0.1131	pCi/g	0.09337	0.100	238.7	8	1.298	IDENTIFIED	3.262	☐	
	Lead-214 ✓		1.431	0.1054	pCi/g	0.1258	0.100	352	4	1.4	IDENTIFIED	5.641	☐	
	Lutetium-177	HE	2.541	0.8582	pCi/g	2.134	N	209.1	1	1.384	FAIL_ABUND	33.41	☐	
	Neptunium-237 INT		1.087	0.1688	pCi/g	0.2768	N	87.2	4	1.4	IDENTIFIED	10.95	☐	
	Niobium-95m LA		0.4146	0.07792	pCi/g	0.2523	N	238.7	8	1.298	NOT_IDENTI	3.262	☐	
	Polonium-212 nr		1.794	0.1131	pCi/g	0.09337	N	238.7	8	1.298	IDENTIFIED	3.262	☐	
	Polonium-214 nr		1.431	0.1054	pCi/g	0.1258	N	352	4	1.4	IDENTIFIED	5.641	☐	
	Polonium-216 nr		1.794	0.1131	pCi/g	0.09337	N	238.7	8	1.298	IDENTIFIED	3.262	☐	
	Polonium-218 nr		1.431	0.1054	pCi/g	0.1258	N	352	4	1.4	IDENTIFIED	5.641	☐	
	Potassium-40 ✓		33.21	1.443	pCi/g	0.5177	1.00	1461	1	2.18	IDENTIFIED	3.037	☐	
Pb214	Radium-224 INT		4.703	0.6989	pCi/g	1.063	Y	241.7	1	1.773	IDENTIFIED	14.03	☑ UI	
	Radium-226 LA		1.323	0.09841	pCi/g	0.3012	Y	609.1	4	1.484	FAIL_ABUND	6.147	☑ UI	Data rejected due to low abundance.
	Radium-228 ✓		1.651	0.1936	pCi/g	0.2641	0.500	911.2	3	1.557	IDENTIFIED	9.966	☐	
	Strontium-85 LA		0.126	0.02389	pCi/g	0.08334	Y	238.7	8	1.298	NOT_IDENTI	3.262	☑ UI	Data rejected due to low abundance.
	Thallium-200	HE	192.2	220.6	pCi/g	0	N	74.74	2	1.339	NOT_IDENTI	7.031	☐	
	Thallium-208 ✓		0.5708	0.04552	pCi/g	0.06491	0.080	583	1	1.556	IDENTIFIED	7.076	☐	
	Thorium-228 ✓		1.794	0.1131	pCi/g	0.09336	N	238.7	8	1.298	IDENTIFIED	3.262	☐	
	Thorium-230 ✓		1.323	0.09841	pCi/g	0.3012	N	609.1	4	1.484	FAIL_ABUND	6.147	☐	
	Thorium-232 ✓		1.651	0.1936	pCi/g	0.2641	N	911.2	3	1.557	IDENTIFIED	9.966	☐	
	Thorium-234 ✓		1.32	0.4617	pCi/g	1.085	2.00	63.32	2	1.124	IDENTIFIED	33.84	☐	
	Tin-126 INT		0.3703	0.04294	pCi/g	0.09456	N	87.2	4	1.4	IDENTIFIED	10.95	☐	
	Titanium-44 LA		0.4207	0.02486	pCi/g	0.06807	N	77.02	1	1.222	FAIL_ABUND	4.447	☐	
	Total Uranium		3.9352	1.37E-06	ug/g	1.6174	N		0				☐	
	Uranium-234 LA		1.323	0.09841	pCi/g	0.3012	N	609.1	4	1.484	FAIL_ABUND	6.147	☐	
	Uranium-238	HE	1.32	0.4617	pCi/g	1.085	N	63.32	2	1.124	IDENTIFIED	33.84	☐	
	Zirconium-97		5.03E+06	9.47E+05	pCi/g	0	N	238.7	8	1.298	NOT_IDENTI	3.262	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746005	29-JUN-09 12:00	14-JUL-09 09:16	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓		2.08	0.2099	pCi/g	0.3103	N	911.6	3	1.615	IDENTIFIED	8.723	☐	
	Americium-243 INT		0.5131	0.04177	pCi/g	0.06751	N	75.01	1	1.861	IDENTIFIED	7.207	☐	
	Annihilation Rad.		0.1511	0.0426	pCi/g	0.06298	N	510.9	1	2.272	IDENTIFIED	28.01	☐	
	Bismuth-210	HE	1.324	0.3864	pCi/g	1	N	46.38	3	1.195	IDENTIFIED	28.94	☐	
Pb214	Bismuth-211 INT		4.555	0.2995	pCi/g	0.4215	Y	352	4	1.574	IDENTIFIED	5.757	☑ UI	
	Bismuth-212	HE	1.277	0.3236	pCi/g	0.9456	N	727.4	1	2.301	FAIL_ABUND	24.96	☐	
	Bismuth-214 ✓		1.475	0.131	pCi/g	0.1461	0.200	609.6	4	1.575	IDENTIFIED	7.748	☐	
Pb214	Cadmium-109 INT		3.703	0.3928	pCi/g	1.298	Y	87.27	5	1.385	IDENTIFIED	9.773	☑ UI	
	Cerium-143		830.2	133.2	pCi/g	0	N	327.7	1	1.397	FAIL_DECAY	30.69	☐	
	Cesium-134 LA		0.1432	0.04461	pCi/g	0.131	0.100	795.3	2	1.682	FAIL_ABUND	30.94	☑ UI	Data rejected due to low abundance.
	Gross Gamma		10.73	1.615	pCi/g	4.841	N		0				☐	
	Iodine-123	HE	1.70E+06	2.55E+06	pCi/g	0	N	87.27	5	1.385	NOT_IDENTI	9.773	☐	
	Iodine-135	HE	2.87E+15	2.59E+15	pCi/g	0	N	795.3	2	1.682	NOT_IDENTI	30.94	☐	
	Krypton-85	HE	26.28	5.654	pCi/g	19.34	N	238.6	8	1.464	NOT_IDENTI	3.426	☐	
	Lead-210	HE	1.324	0.3864	pCi/g	1	N	46.38	3	1.195	IDENTIFIED	28.94	☐	
	Lead-212 ✓		1.918	0.09825	pCi/g	0.1059	0.100	238.6	8	1.464	IDENTIFIED	3.426	☐	
	Lead-214 ✓		1.584	0.1121	pCi/g	0.1478	0.100	352	4	1.574	IDENTIFIED	5.757	☐	
	Lutetium-177	HE	2.997	0.6479	pCi/g	2.394	N	87.27	5	1.385	NOT_IDENTI	9.773	☐	
	Neptunium-237 INT		1.069	0.1582	pCi/g	0.354	N	87.27	5	1.385	IDENTIFIED	9.773	☐	
	Niobium-95m LA		0.7299	0.09405	pCi/g	0.3197	N	238.6	8	1.464	NOT_IDENTI	3.426	☐	
	Polonium-210	HE	1.324	0.3855	pCi/g	1	N	46.38	3	1.195	IDENTIFIED	28.94	☐	
	Polonium-212 nr		1.918	0.09825	pCi/g	0.1059	N	238.6	8	1.464	IDENTIFIED	3.426	☐	
	Polonium-214 nr		1.584	0.1121	pCi/g	0.1478	N	352	4	1.574	IDENTIFIED	5.757	☐	
	Polonium-216 nr		1.918	0.09825	pCi/g	0.1059	N	238.6	8	1.464	IDENTIFIED	3.426	☐	

	Polonium-218	1.584	0.1121	pCi/g	0.1478	N	352	4	1.574	IDENTIFIED	5.757	☐
	Potassium-40	35.75	1.658	pCi/g	0.7099	1.00	1461	1	2.315	IDENTIFIED	3.372	☐
Pb214	Radium-224 INT	5.289	0.8808	pCi/g	1.207	Y	241.6	1	2.112	IDENTIFIED	16.37	☑ UI
	Radium-226	1.475	0.131	pCi/g	0.1461	Y	609.6	4	1.575	IDENTIFIED	7.748	☐
	Radium-228	2.08	0.2099	pCi/g	0.3103	0.500	911.6	3	1.615	IDENTIFIED	8.723	☐
	Strontium-85 LA	0.1344	0.02892	pCi/g	0.0989	Y	238.6	8	1.464	NOT_IDENTI	3.426	☑ UI Data rejected due to low abundance.
	Thallium-208	0.5943	0.06808	pCi/g	0.08477	0.080	583.5	1	1.677	IDENTIFIED	10.81	☐
	Thorium-228	1.918	0.09825	pCi/g	0.1059	N	238.6	8	1.464	IDENTIFIED	3.426	☐
	Thorium-230	1.475	0.131	pCi/g	0.1461	N	609.6	4	1.575	IDENTIFIED	7.748	☐
	Thorium-232	2.08	0.2099	pCi/g	0.3103	N	911.6	3	1.615	IDENTIFIED	8.723	☐
	Tin-126 INT	0.3641	0.03862	pCi/g	0.1274	N	87.27	5	1.385	IDENTIFIED	9.773	☐
	Titanium-44 LA	0.4238	0.02592	pCi/g	0.07234	N	77.24	1	1.256	FAIL_ABUND	4.762	☐
	Total Uranium	2.5576	1.25E-06	ug/g	1.7688	N		0				☐
	Uranium-234	1.475	0.131	pCi/g	0.1461	N	609.6	4	1.575	IDENTIFIED	7.748	☐
	Zirconium-97	4.99E+06	1.04E+06	pCi/g	0	N	238.6	8	1.464	NOT_IDENTI	3.426	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746006	29-JUN-09 12:00	14-JUL-09 10:20	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228	1.876	0.1825	pCi/g	0.2314	N	911.3	3	1.497	IDENTIFIED	7.753	☐	
	Americium-243 INT	0.4552	0.0501	pCi/g	0.08713	N	74.88	1	1.916	IDENTIFIED	10.34	☐	
	Annihilation Rad.	0.1415	0.03727	pCi/g	0.04525	N	510.7	2	2.283	IDENTIFIED	26.18	☐	
Pb214	Bismuth-211 INT	3.832	0.2785	pCi/g	0.3168	Y	351.6	4	1.456	IDENTIFIED	6.541	☑ UI	
	Bismuth-212	1.425	0.2417	pCi/g	0.4896	N	727.7	1	1.364	IDENTIFIED	16.41	☐	
	Bismuth-214	1.276	0.09083	pCi/g	0.1061	0.200	609.1	4	1.45	IDENTIFIED	5.918	☐	
Pb214	Cadmium-109 INT	2.285	0.6088	pCi/g	1.52	Y	87.44	3	1.173	IDENTIFIED	26.29	☑ UI	
	Cerium-143	941.8	130.3	pCi/g	0	N	328.1	1	1.751	FAIL_DECAY	32.06	☐	
	Cesium-134 LA	0.1187	0.03124	pCi/g	0.09086	0.100	794.7	2	1.144	FAIL_ABUND	26.04	☑ UI Data rejected due to low abundance.	
	Cesium-135 HE	0.3181	0.08959	pCi/g	0.2955	N	794.7	2	1.144	NOT_IDENTI	26.04	☐	
	Gross Gamma	10.85	1.654	pCi/g	4.584	N		0				☐	
	Iodine-133 HE	1299	2511	pCi/g	0	N	510.7	2	2.283	FAIL_DECAY	26.18	☐	
	Lead-212	1.757	0.08498	pCi/g	0.09051	0.100	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Lead-214	1.333	0.1029	pCi/g	0.1104	0.100	351.6	4	1.456	IDENTIFIED	6.541	☐	
	Lutetium-177 HE	2.993	0.7705	pCi/g	2.107	N	209.2	1	1.649	FAIL_ABUND	25.59	☐	
	Neptunium-237 HE	0.6596	0.1885	pCi/g	0.4364	N	87.44	3	1.173	IDENTIFIED	26.29	☐	
	Niobium-95 HE	0.09913	0.02619	pCi/g	0.08646	N	238.4	7	1.375	NOT_IDENTI	3.183	☐	
	Niobium-95m LA	0.8223	0.08681	pCi/g	0.2893	N	238.4	7	1.375	NOT_IDENTI	3.183	☐	
	Polonium-212	1.757	0.08498	pCi/g	0.09051	N	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Polonium-214	1.333	0.1029	pCi/g	0.1104	N	351.6	4	1.456	IDENTIFIED	6.541	☐	
	Polonium-216	1.757	0.08498	pCi/g	0.09051	N	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Polonium-218	1.333	0.1029	pCi/g	0.1104	N	351.6	4	1.456	IDENTIFIED	6.541	☐	
	Potassium-40	34.87	1.565	pCi/g	0.5357	1.00	1461	1	1.873	IDENTIFIED	2.636	☐	
Pb214	Radium-224 INT	4.691	0.7796	pCi/g	1.029	Y	241.3	1	2.182	IDENTIFIED	16.37	☑ UI	
	Radium-226	1.276	0.09083	pCi/g	0.1061	Y	609.1	4	1.45	IDENTIFIED	5.918	☐	
	Radium-228	1.876	0.1825	pCi/g	0.2314	0.500	911.3	3	1.497	IDENTIFIED	7.753	☐	
	Thallium-208	0.4948	0.04496	pCi/g	0.06075	0.080	583	1	1.322	IDENTIFIED	8.418	☐	
	Thorium-228	1.757	0.08498	pCi/g	0.0905	N	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Thorium-230	1.276	0.09083	pCi/g	0.1061	N	609.1	4	1.45	IDENTIFIED	5.918	☐	
	Thorium-232	1.876	0.1825	pCi/g	0.2314	N	911.3	3	1.497	IDENTIFIED	7.753	☐	
	Tin-126 HE	0.2246	0.05985	pCi/g	0.1511	N	87.44	3	1.173	IDENTIFIED	26.29	☐	
	Titanium-44 LA	0.4319	0.03051	pCi/g	0.08398	N	77.2	1	1.26	FAIL_ABUND	5.919	☐	
	Total Uranium	4.1924	2.06E-06	ug/g	2.8044	N		0				☐	
	Uranium-234	1.276	0.09083	pCi/g	0.1061	N	609.1	4	1.45	IDENTIFIED	5.918	☐	
	Zirconium-97	5.81E+06	8.77E+05	pCi/g	0	N	238.4	7	1.375	NOT_IDENTI	3.183	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746007	29-JUN-09 12:00	14-JUL-09 10:27	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.723	0.184	pCi/g	0.2732	N	911	3	1.639	IDENTIFIED	9.374	☐	
Americium-243 INT	0.3667	0.03208	pCi/g	0.07127	N	75.03	1	1.178	IDENTIFIED	7.656	☐	
Pb214 Bismuth-211 INT	3.567	0.2541	pCi/g	0.3894	Y	352	4	1.07	IDENTIFIED	6.158	☑ UI	
Bismuth-212 HE	1.073	0.3407	pCi/g	0.8203	N	727.9	1	1.335	FAIL_ABUND	31.43	☐	
Bismuth-214 ✓	1.188	0.1067	pCi/g	0.1421	0.200	609.3	4	1.213	IDENTIFIED	7.782	☐	
Pb214 Cadmium-109 INT	3.563	0.4201	pCi/g	1.178	Y	87.52	3	1.037	IDENTIFIED	11.08	☑ UI	
Cerium-143	740.1	122.1	pCi/g	0	N	328	1	1.054	FAIL_DECAY	39.43	☐	
Gross Gamma	8.516	1.415	pCi/g	3.876	N		0				☐	
Iodine-133 HE	5818	3404	pCi/g	0	N	510.9	2	2.025	FAIL_DECAY	76.72	☐	
Iodine-135 HE	3.55E+15	2.28E+15	pCi/g	0	N	510.9	2	2.025	NOT_IDENTI	76.72	☐	
Krypton-85 HE	20.95	5.572	pCi/g	18.73	N	238.8	7	1.003	NOT_IDENTI	3.494	☐	
Lead-212 ✓	1.656	0.09286	pCi/g	0.0996	0.100	238.8	7	1.003	IDENTIFIED	3.494	☐	
Lead-214 ✓	1.241	0.09414	pCi/g	0.14	0.100	352	4	1.07	IDENTIFIED	6.158	☐	
Lutetium-177 HE	3.553	0.8847	pCi/g	2.24	N	208.8	1	1.314	FAIL_ABUND	24.62	☐	
Neptunium-237 INT	1.029	0.1612	pCi/g	0.3391	N	87.52	3	1.037	IDENTIFIED	11.08	☐	
Polonium-212 nr	1.656	0.09286	pCi/g	0.0996	N	238.8	7	1.003	IDENTIFIED	3.494	☐	
Polonium-214 nr	1.241	0.09414	pCi/g	0.14	N	352	4	1.07	IDENTIFIED	6.158	☐	
Polonium-216 nr	1.656	0.09286	pCi/g	0.0996	N	238.8	7	1.003	IDENTIFIED	3.494	☐	
Polonium-218 nr	1.241	0.09414	pCi/g	0.14	N	352	4	1.07	IDENTIFIED	6.158	☐	
Potassium-40 ✓	26.15	1.294	pCi/g	0.6702	1.00	1460	1	1.997	IDENTIFIED	3.878	☐	
Pb214 Radium-224 INT	5.245	0.7396	pCi/g	1.134	Y	241.8	1	1.965	IDENTIFIED	13.59	☑ UI	
Radium-226 ✓	1.188	0.1067	pCi/g	0.1421	Y	609.3	4	1.213	IDENTIFIED	7.782	☐	
Radium-228 ✓	1.723	0.184	pCi/g	0.2732	0.500	911	3	1.639	IDENTIFIED	9.374	☐	
Strontium-85 LA	0.1072	0.02851	pCi/g	0.09583	Y	238.8	7	1.003	NOT_IDENTI	3.494	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.4748	0.05056	pCi/g	0.07678	0.080	583.3	1	1.532	IDENTIFIED	9.882	☐	
Thorium-228 ✓	1.656	0.09286	pCi/g	0.09959	N	238.8	7	1.003	IDENTIFIED	3.494	☐	
Thorium-230 ✓	1.188	0.1067	pCi/g	0.1421	N	609.3	4	1.213	IDENTIFIED	7.782	☐	
Thorium-232 ✓	1.723	0.184	pCi/g	0.2732	N	911	3	1.639	IDENTIFIED	9.374	☐	
Tin-126 INT	0.3503	0.0413	pCi/g	0.1157	N	87.52	3	1.037	IDENTIFIED	11.08	☐	
Titanium-44 LA	0.3534	0.02309	pCi/g	0.07791	N	77.37	1	0.8566	FAIL_ABUND	5.011	☐	
Total Uranium	2.9726	1.47E-06	ug/g	1.8694	N		0				☐	
Uranium-234 ✓	1.188	0.1067	pCi/g	0.1421	N	609.3	4	1.213	IDENTIFIED	7.782	☐	
Zirconium-97 HE	1.05E+06	1.08E+06	pCi/g	0	N	238.8	7	1.003	NOT_IDENTI	3.494	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746008	29-JUN-09 12:00	14-JUL-09 10:28	14.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.857	0.1877	pCi/g	0.271	N	912	3	1.624	IDENTIFIED	8.673	☐	
Americium-243 INT	0.4006	0.03239	pCi/g	0.06333	N	75.1	1	1.22	IDENTIFIED	6.845	☐	
Annihilation Rad. HE	0.09404	0.03683	pCi/g	0.05855	N	511.3	2	1.865	IDENTIFIED	39.01	☐	
Bismuth-210 HE	1.642	0.4583	pCi/g	0.8324	N	46.58	3	1.199	IDENTIFIED	27.61	☐	
Pb214 Bismuth-211 INT	3.754	0.2722	pCi/g	0.3484	Y	352.3	4	1.364	IDENTIFIED	6.274	☑ UI	
Bismuth-212 HE	1.206	0.296	pCi/g	0.7929	N	728	1	1.644	FAIL_ABUND	24.07	☐	
Bismuth-214 ✓	1.15	0.1031	pCi/g	0.1396	0.200	609.7	4	1.582	IDENTIFIED	7.649	☐	
Pb214 Cadmium-109 INT	3.487	0.4584	pCi/g	1.288	Y	87.4	4	1.321	IDENTIFIED	12.53	☑ UI	
Cerium-143	314.9	79.69	pCi/g	0	N	328.6	1	1.301	FAIL_DECAY	24.9	☐	
Cesium-134 LA	0.1049	0.03538	pCi/g	0.1043	0.100	795.4	1	1.457	FAIL_ABUND	33.49	☑ UI	Data rejected due to low abundance.
Europium-155 HE	0.2353	0.07419	pCi/g	0.1645	N	105.8	1	1.801	IDENTIFIED	31.1	☐	
Gross Gamma	9.646	1.685	pCi/g	3.776	N		0				☐	
Iodine-123 HE	8.68E+05	2.50E+06	pCi/g	0	N	87.4	4	1.321	NOT_IDENTI	12.53	☐	
Iodine-133 HE	1630	3058	pCi/g	0	N	511.3	2	1.865	FAIL_DECAY	39.01	☐	
Krypton-85 LA	28.81	5.186	pCi/g	18.02	N	239	7	1.183	NOT_IDENTI	3.352	☐	
Lead-210 HE	1.642	0.4583	pCi/g	0.8324	N	46.58	3	1.199	IDENTIFIED	27.61	☐	
Lead-212 ✓	1.703	0.09611	pCi/g	0.09646	0.100	239	7	1.183	IDENTIFIED	3.352	☐	
Lead-214 ✓	1.306	0.1006	pCi/g	0.1318	0.100	352.3	4	1.364	IDENTIFIED	6.274	☐	
Lutetium-177 HE	3.643	0.9098	pCi/g	2.065	N	209.8	1	1.3	FAIL_ABUND	24.65	☐	
Neptunium-237 INT	1.007	0.1683	pCi/g	0.2919	N	87.4	4	1.321	IDENTIFIED	12.53	☐	

Polonium-210	HE	1.642	0.4571	pCi/g	0.8324	N	46.58	3	1.199	IDENTIFIED	27.61	☐	
Polonium-212 nr		1.703	0.09611	pCi/g	0.09646	N	239	7	1.183	IDENTIFIED	3.352	☐	
Polonium-214 nr		1.306	0.1006	pCi/g	0.1318	N	352.3	4	1.364	IDENTIFIED	6.274	☐	
Polonium-216 nr		1.703	0.09611	pCi/g	0.09646	N	239	7	1.183	IDENTIFIED	3.352	☐	
Polonium-218 nr		1.306	0.1006	pCi/g	0.1318	N	352.3	4	1.364	IDENTIFIED	6.274	☐	
Potassium-40 ✓		29.66	1.288	pCi/g	0.7954	1.00	1461	1	1.944	IDENTIFIED	3.083	☐	
Pb214 Radium-224 INT		4.187	0.6591	pCi/g	1.098	Y	242.1	1	1.832	IDENTIFIED	15.24	☑ UI	
Radium-226 ✓		1.15	0.1031	pCi/g	0.1396	Y	609.7	4	1.582	IDENTIFIED	7.649	☐	
Radium-228 ✓		1.857	0.1877	pCi/g	0.271	0.500	912	3	1.624	IDENTIFIED	8.673	☐	
Sodium-24	HE	6.35E+05	3.82E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1475	0.02654	pCi/g	0.09224	Y	239	7	1.183	NOT_IDENTI	3.352	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5137	0.04933	pCi/g	0.07254	0.080	583.6	1	1.385	IDENTIFIED	8.666	☐	
Thorium-228 ✓		1.703	0.09611	pCi/g	0.09645	N	239	7	1.183	IDENTIFIED	3.352	☐	
Thorium-230 ✓		1.15	0.1031	pCi/g	0.1396	N	609.7	4	1.582	IDENTIFIED	7.649	☐	
Thorium-232 ✓		1.857	0.1877	pCi/g	0.271	N	912	3	1.624	IDENTIFIED	8.673	☐	
Tin-126 INT		0.3429	0.04507	pCi/g	0.1251	N	87.4	4	1.321	IDENTIFIED	12.53	☐	
Titanium-44 LA		0.3786	0.02439	pCi/g	0.06775	N	77.43	1	1.008	FAIL_ABUND	4.851	☐	
Total Uranium		1.7923	1.61E-06	ug/g	1.5784	N		0				☐	
Uranium-234 ✓		1.15	0.1031	pCi/g	0.1396	N	609.7	4	1.582	IDENTIFIED	7.649	☐	
Zirconium-97	HE	1.39E+06	9.16E+05	pCi/g	0	N	239	7	1.183	NOT_IDENTI	3.352	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232754001	30-JUN-09 12:00	14-JUL-09 10:44	13.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.698	0.1715	pCi/g	0.2371	N	911.8	3	1.678	IDENTIFIED	8.176	☐	
Americium-243 INT		0.5143	0.04818	pCi/g	0.09721	N	74.93	1	1.524	IDENTIFIED	8.542	☐	
Annihilation Rad.	HE	0.08906	0.03096	pCi/g	0.04642	N	511.2	2	1.375	IDENTIFIED	34.64	☐	
Pb214 Bismuth-211 INT		4.134	0.2492	pCi/g	0.3081	Y	352.1	4	1.151	IDENTIFIED	5.167	☑ UI	
Bismuth-212	HE	0.8962	0.2433	pCi/g	0.6497	N	728.1	1	1.57	FAIL_ABUND	26.8	☐	
Bismuth-214 ✓		1.15	0.08395	pCi/g	0.116	0.200	609.8	4	1.285	IDENTIFIED	6.112	☐	
Pb214 Cadmium-109 INT		3.362	0.5232	pCi/g	1.554	Y	87.42	3	1.114	IDENTIFIED	14.96	☑ UI	
Cerium-143		401.1	62.61	pCi/g	0	N	328.3	1	1.273	NOT_IDENTI	34.06	☐	
Cesium-134 LA		0.1317	0.03326	pCi/g	0.09357	0.100	795.1	1	1.232	FAIL_ABUND	24.92	☑ UI	Data rejected due to low abundance.
Gross Gamma		10.62	1.6	pCi/g	4.298	N		0				☐	
Iodine-133	HE	942.1	1145	pCi/g	0	N	511.2	2	1.375	FAIL_DECAY	34.64	☐	
Krypton-85 LA		23.98	4.207	pCi/g	14.66	N	238.9	7	0.9798	NOT_IDENTI	2.907	☐	
Lead-212 ✓		1.819	0.08313	pCi/g	0.09341	0.100	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Lead-214 ✓		1.438	0.09445	pCi/g	0.1074	0.100	352.1	4	1.151	IDENTIFIED	5.167	☐	
Neptunium-237 INT		0.9719	0.1815	pCi/g	0.4362	N	87.42	3	1.114	IDENTIFIED	14.96	☐	
Polonium-212 nr		1.819	0.08313	pCi/g	0.09341	N	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Polonium-214 nr		1.438	0.09445	pCi/g	0.1074	N	352.1	4	1.151	IDENTIFIED	5.167	☐	
Polonium-216 nr		1.819	0.08313	pCi/g	0.09341	N	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Polonium-218 nr		1.438	0.09445	pCi/g	0.1074	N	352.1	4	1.151	IDENTIFIED	5.167	☐	
Potassium-40 ✓		35.49	1.784	pCi/g	0.5223	1.00	1461	1	2.005	IDENTIFIED	2.751	☐	
Pb214 Radium-224 INT		5.23	0.5408	pCi/g	1.062	Y	241.9	1	1.709	IDENTIFIED	9.975	☑ UI	
Radium-226 ✓		1.15	0.08395	pCi/g	0.116	Y	609.8	4	1.285	IDENTIFIED	6.112	☐	
Radium-228 ✓		1.698	0.1715	pCi/g	0.2371	0.500	911.8	3	1.678	IDENTIFIED	8.176	☐	
Sodium-24	HE	1.14E+05	1.00E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1215	0.02131	pCi/g	0.07425	Y	238.9	7	0.9798	NOT_IDENTI	2.907	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5743	0.04144	pCi/g	0.05993	0.080	583.6	1	1.23	IDENTIFIED	6.341	☐	
Thorium-228 ✓		1.819	0.08313	pCi/g	0.0934	N	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Thorium-230 ✓		1.15	0.08395	pCi/g	0.116	N	609.8	4	1.285	IDENTIFIED	6.112	☐	
Thorium-232 ✓		1.698	0.1715	pCi/g	0.2371	N	911.8	3	1.678	IDENTIFIED	8.176	☐	
Tin-126 INT		0.331	0.05152	pCi/g	0.1555	N	87.42	3	1.114	IDENTIFIED	14.96	☐	
Titanium-44 LA		0.4569	0.02942	pCi/g	0.09348	N	77.37	1	1.024	FAIL_ABUND	5.113	☐	
Total Uranium		4.3464	2.86E-06	ug/g	3.5402	N		0				☐	
Uranium-234 ✓		1.15	0.08395	pCi/g	0.116	N	609.8	4	1.285	IDENTIFIED	6.112	☐	
Zirconium-97	HE	4.73E+05	3.01E+05	pCi/g	0	N	238.9	7	0.9798	NOT_IDENTI	2.907	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232754002	30-JUN-09 12:00	14-JUL-09 10:45	13.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
	Actinium-228 ✓		1.753	0.1635	pCi/g	0.1676	N	911.5	3	1.964	IDENTIFIED	6.562	☐	
	Americium-243 INT		0.4169	0.04288	pCi/g	0.09238	N	74.91	1	1.147	IDENTIFIED	9.397	☐	
	Annihilation Rad.	HE	0.0501	0.02514	pCi/g	0.0392	N	511.1	1	1.715	IDENTIFIED	50.08	☐	
Pb214	Bismuth-211 INT		4.048	0.2328	pCi/g	0.2473	Y	352	4	1.415	IDENTIFIED	4.774	☑ UI	
	Bismuth-212 LA		1.187	0.1895	pCi/g	0.5431	N	727.8	1	0.899	FAIL_ABUND	15.17	☐	
	Bismuth-214 ✓		1.197	0.08347	pCi/g	0.09223	0.200	609.5	4	1.55	IDENTIFIED	5.359	☐	
Pb214	Cadmium-109 INT		2.323	0.5103	pCi/g	1.328	Y	87.22	4	1.079	IDENTIFIED	21.48	☑ UI	
	Cerium-143		399.5	56.18	pCi/g	0	N	327.9	1	1.072	FAIL_DECAY	43.43	☐	
	Cesium-134 LA		0.08569	0.02459	pCi/g	0.07298	0.100	795.4	1	2.414	FAIL_ABUND	28.28	☑ UI	Data rejected due to low abundance.
	Gross Gamma		10.23	1.415	pCi/g	2.553	N		0				☐	
	Iodine-123		1.26E+06	5.49E+05	pCi/g	0	N	87.22	4	1.079	NOT_IDENTI	21.48	☐	
	Krypton-85 LA		24.85	3.531	pCi/g	12.33	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	
	Lead-212 ✓		1.713	0.07789	pCi/g	0.07976	0.100	238.7	9	1.228	IDENTIFIED	2.813	☐	
	Lead-214 ✓		1.408	0.08894	pCi/g	0.08618	0.100	352	4	1.415	IDENTIFIED	4.774	☐	
	Lutetium-177 LA		3.431	0.5821	pCi/g	1.585	N	209.4	1	1.209	FAIL_ABUND	16.75	☐	
	Neptunium-237 INT		0.6717	0.163	pCi/g	0.3195	N	87.22	4	1.079	IDENTIFIED	21.48	☐	
	Niobium-95	HE	0.06956	0.01982	pCi/g	0.06466	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	
	Niobium-97	HE	10270	11750	pCi/g	0	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	
	Polonium-212 NV		1.713	0.07789	pCi/g	0.07976	N	238.7	9	1.228	IDENTIFIED	2.813	☐	
	Polonium-214 NV		1.408	0.08894	pCi/g	0.08618	N	352	4	1.415	IDENTIFIED	4.774	☐	
	Polonium-216 NV		1.713	0.07789	pCi/g	0.07976	N	238.7	9	1.228	IDENTIFIED	2.813	☐	
	Polonium-218 NV		1.408	0.08894	pCi/g	0.08618	N	352	4	1.415	IDENTIFIED	4.774	☐	
	Potassium-40 ✓		36.73	1.594	pCi/g	0.4334	1.00	1461	1	2.166	IDENTIFIED	2.108	☐	
Pb214	Radium-224 INT		4.971	0.5853	pCi/g	0.9064	Y	241.7	1	1.767	IDENTIFIED	11.44	☑ UI	
	Radium-226 ✓		1.197	0.08347	pCi/g	0.09223	Y	609.5	4	1.55	IDENTIFIED	5.359	☐	
	Radium-228 ✓		1.753	0.1635	pCi/g	0.1676	0.500	911.5	3	1.964	IDENTIFIED	6.562	☐	
	Sodium-24	HE	43990	78100	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Strontium-85 LA		0.1259	0.01788	pCi/g	0.06246	Y	238.7	9	1.228	NOT_IDENTI	2.813	☑ UI	Data rejected due to low abundance.
	Thallium-208 ✓		0.5118	0.04171	pCi/g	0.04738	0.080	583.5	1	1.425	IDENTIFIED	7.145	☐	
	Thorium-228 ✓		1.713	0.07789	pCi/g	0.07975	N	238.7	9	1.228	IDENTIFIED	2.813	☐	
	Thorium-230 ✓		1.196	0.08347	pCi/g	0.09223	N	609.5	4	1.55	IDENTIFIED	5.359	☐	
	Thorium-232 ✓		1.753	0.1635	pCi/g	0.1676	N	911.5	3	1.964	IDENTIFIED	6.562	☐	
	Tin-126	HE	0.2287	0.05025	pCi/g	0.132	N	87.22	4	1.079	IDENTIFIED	21.48	☐	
	Titanium-44 LA		0.3748	0.03096	pCi/g	0.0794	N	77.15	1	1.192	FAIL_ABUND	7.09	☐	
	Total Uranium		4.0891	2.19E-06	ug/g	3.8403	N		0				☐	
	Uranium-234 ✓		1.196	0.08347	pCi/g	0.09223	N	609.5	4	1.55	IDENTIFIED	5.359	☐	
	Zirconium-97		5.27E+05	2.61E+05	pCi/g	0	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232754003	30-JUN-09 12:00	14-JUL-09 10:48	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
	Actinium-228 ✓		1.853	0.167	pCi/g	0.1797	N	911.5	3	2.493	IDENTIFIED	6.491	☐	
	Americium-243 INT		0.428	0.03882	pCi/g	0.08113	N	74.73	2	1.259	IDENTIFIED	8.195	☐	
	Annihilation Rad.		0.1014	0.02572	pCi/g	0.03647	N	510.9	1	2.083	IDENTIFIED	25.17	☐	
Pb214	Bismuth-211 INT		4.258	0.2255	pCi/g	0.2786	Y	352	4	1.472	IDENTIFIED	4.241	☑ UI	
	Bismuth-212	HE	1.031	0.2502	pCi/g	0.5604	N	727.1	1	1.956	FAIL_ABUND	23.79	☐	
	Bismuth-214 ✓		1.407	0.09537	pCi/g	0.09179	0.200	609.3	4	1.841	IDENTIFIED	5.155	☐	
Pb214	Cadmium-109 INT		3.959	0.4801	pCi/g	1.071	Y	87.32	3	1.299	IDENTIFIED	11.29	☑ UI	
	Cerium-143		610.7	77.36	pCi/g	0	N	328.6	1	1.96	FAIL_DECAY	25.69	☐	
	Cesium-134 LA		0.09124	0.02929	pCi/g	0.07301	0.100	795.4	2	1.9	FAIL_ABUND	31.78	☑ UI	Data rejected due to low abundance.
	Cesium-135	HE	0.3031	0.07474	pCi/g	0.2461	N	795.4	2	1.9	NOT_IDENTI	31.78	☐	
	Gross Gamma		11	1.217	pCi/g	2.22	N		0				☐	
	Krypton-85 LA		29.87	3.408	pCi/g	12.3	N	238.7	8	1.36	NOT_IDENTI	2.609	☐	
	Lead-212 ✓		1.862	0.08182	pCi/g	0.08056	0.100	238.7	8	1.36	IDENTIFIED	2.609	☐	

	Lead-214 ✓	1.481	0.08743	pCi/g	0.0946	0.100	352	4	1.472	IDENTIFIED	4.241	☐	
	Lutetium-177 HE	2.659	0.5889	pCi/g	1.599	N	209.3	1	1.443	FAIL_ABUND	21.98	☐	
	Neptunium-237 INT	1.145	0.1822	pCi/g	0.314	N	87.32	3	1.299	IDENTIFIED	11.29	☐	
	Niobium-95m LA	0.5005	0.06922	pCi/g	0.2246	N	238.7	8	1.36	NOT_IDENTI	2.609	☐	
	Polonium-212 nr	1.862	0.08182	pCi/g	0.08056	N	238.7	8	1.36	IDENTIFIED	2.609	☐	
	Polonium-214 nr	1.481	0.08743	pCi/g	0.0946	N	352	4	1.472	IDENTIFIED	4.241	☐	
	Polonium-216 nr	1.862	0.08182	pCi/g	0.08056	N	238.7	8	1.36	IDENTIFIED	2.609	☐	
	Polonium-218 nr	1.481	0.08743	pCi/g	0.0946	N	352	4	1.472	IDENTIFIED	4.241	☐	
	Potassium-40 ✓	39.45	1.564	pCi/g	0.4274	1.00	1461	1	3.306	IDENTIFIED	1.898	☑ UI ~~Data rejected due to high peak width.~~ OK	
Pb214	Radium-224 INT	4.665	0.5732	pCi/g	0.9153	Y	241.7	1	1.823	IDENTIFIED	11.98	☑ UI MS 7/17/	
	Radium-226 ✓	1.407	0.09537	pCi/g	0.09179	Y	609.3	4	1.841	IDENTIFIED	5.155	☐	
	Radium-228 ✓	1.853	0.167	pCi/g	0.1797	0.500	911.5	3	2.493	IDENTIFIED	6.491	☐	
	Sodium-24 HE	7404	91140	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Strontium-85 LA	0.1513	0.01726	pCi/g	0.06229	Y	238.7	8	1.36	NOT_IDENTI	2.609	☑ UI Data rejected due to low abundance.	
	Thallium-200 HE	137.5	90.34	pCi/g	0	N	74.73	2	1.259	NOT_IDENTI	8.195	☐	
	Thallium-208 ✓	0.5768	0.03862	pCi/g	0.0471	0.080	583.1	1	1.858	IDENTIFIED	5.479	☐	
	Thorium-228 ✓	1.862	0.08182	pCi/g	0.08055	N	238.7	8	1.36	IDENTIFIED	2.609	☐	
	Thorium-230 ✓	1.407	0.09536	pCi/g	0.09179	N	609.3	4	1.841	IDENTIFIED	5.155	☐	
	Thorium-232 ✓	1.853	0.167	pCi/g	0.1797	N	911.5	3	2.493	IDENTIFIED	6.491	☐	
	Thorium-234 ✓	2.228	0.8423	pCi/g	1.833	2.00	62.92	2	1.265	IDENTIFIED	36.79	☐	
	Tin-126 INT	0.3898	0.04727	pCi/g	0.1059	N	87.32	3	1.299	IDENTIFIED	11.29	☐	
	Titanium-44 LA	0.4175	0.0278	pCi/g	0.0752	N	77.06	1	1.133	FAIL_ABUND	5.342	☐	
	Total Uranium	6.6453	2.51E-06	ug/g	2.7298	N		0				☐	
	Uranium-234 ✓	1.407	0.09536	pCi/g	0.09179	N	609.3	4	1.841	IDENTIFIED	5.155	☐	
	Uranium-238 HE	2.228	0.8423	pCi/g	1.833	N	62.92	2	1.265	IDENTIFIED	36.79	☐	
	Zirconium-97	1.80E+06	2.71E+05	pCi/g	0	N	238.7	8	1.36	NOT_IDENTI	2.609	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758002	30-JUN-09 12:00	14-JUL-09 11:02	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.884	0.2003	pCi/g	0.2489	N	911.1	3	1.556	IDENTIFIED	8.874	☐	
	Americium-243 INT	0.3821	0.04885	pCi/g	0.09958	N	74.72	2	1.085	IDENTIFIED	11.7	☐	
	Annihilation Rad.	0.1574	0.04343	pCi/g	0.05113	N	511.1	1	2.157	IDENTIFIED	27.41	☐	
Pb214	Bismuth-211 INT	4.232	0.2917	pCi/g	0.4026	Y	352	4	1.171	IDENTIFIED	5.587	☑ UI	
	Bismuth-212 HE	0.8514	0.2519	pCi/g	0.7138	N	727.2	1	1.55	FAIL_ABUND	29.26	☐	
	Bismuth-214 ✓	1.307	0.1014	pCi/g	0.1196	0.200	609.3	4	1.377	IDENTIFIED	6.548	☐	
Pb214	Cadmium-109 INT	4.2	0.6624	pCi/g	1.262	Y	87.14	3	1.256	IDENTIFIED	14.64	☑ UI	
	Cerium-143	294.4	60.39	pCi/g	0	N	327.8	1	0.9544	FAIL_DECAY	34.87	☐	
	Cesium-135 mp	0.6762	0.1378	pCi/g	0.268	N	269.7	2	1.239	IDENTIFIED	19.7	☐	
	Gross Gamma	9.479	1.897	pCi/g	3.638	N		0				☐	
	Iodine-135 HE	1.28E+14	1.78E+14	pCi/g	0	N	269.7	2	1.239	NOT_IDENTI	19.7	☐	
	Lead-212 ✓	1.665	0.1003	pCi/g	0.09985	0.100	238.7	7	1.086	IDENTIFIED	3.727	☐	
	Lead-214 ✓	1.472	0.1085	pCi/g	0.1345	0.100	352	4	1.171	IDENTIFIED	5.587	☐	
	Lutetium-177 HE	2.467	0.7176	pCi/g	2.039	N	209.1	1	1.078	FAIL_ABUND	28.84	☐	
	Neptunium-237 INT	1.214	0.2289	pCi/g	0.3723	N	87.14	3	1.256	IDENTIFIED	14.64	☐	
	Niobium-97 HE	28530	16890	pCi/g	0	N	238.7	7	1.086	NOT_IDENTI	3.727	☐	
	Polonium-212 nr	1.665	0.1003	pCi/g	0.09985	N	238.7	7	1.086	IDENTIFIED	3.727	☐	
	Polonium-214 nr	1.472	0.1085	pCi/g	0.1345	N	352	4	1.171	IDENTIFIED	5.587	☐	
	Polonium-216 nr	1.665	0.1003	pCi/g	0.09985	N	238.7	7	1.086	IDENTIFIED	3.727	☐	
	Polonium-218 nr	1.472	0.1085	pCi/g	0.1345	N	352	4	1.171	IDENTIFIED	5.587	☐	
	Potassium-40 ✓	26.33	1.334	pCi/g	0.5086	1.00	1461	1	2.501	IDENTIFIED	3.457	☐	
Pb214	Radium-224 INT	5.532	0.5747	pCi/g	1.137	Y	241.7	1	1.705	IDENTIFIED	9.5	☑ UI	
	Radium-226 ✓	1.307	0.1014	pCi/g	0.1196	Y	609.3	4	1.377	IDENTIFIED	6.548	☐	
	Radium-228 ✓	1.884	0.2003	pCi/g	0.2489	0.500	911.1	3	1.556	IDENTIFIED	8.874	☐	
	Rhenium-188 HE	0.3443	0.09311	pCi/g	0.3328	N	1121	1	1.542	NOT_IDENTI	18.15	☐	
	Technetium-99m HE	1.37E+15	8.21E+14	pCi/g	0	N	238.7	7	1.086	NOT_IDENTI	3.727	☐	
	Thallium-200 HE	81.03	124.3	pCi/g	0	N	74.72	2	1.085	NOT_IDENTI	11.7	☐	
	Thallium-208 ✓	0.5591	0.04784	pCi/g	0.06229	0.080	583.3	1	1.485	IDENTIFIED	7.729	☐	

Thorium-228 ✓		1.665	0.1003	pCi/g	0.09984	N	238.7	7	1.086	IDENTIFIED	3.727	☐
Thorium-230 ✓		1.307	0.1014	pCi/g	0.1196	N	609.3	4	1.377	IDENTIFIED	6.548	☐
Thorium-232 ✓		1.884	0.2003	pCi/g	0.2489	N	911.1	3	1.556	IDENTIFIED	8.874	☐
Tin-126 INT		0.4136	0.06522	pCi/g	0.125	N	87.14	3	1.256	IDENTIFIED	14.64	☐
Titanium-44 LA		0.4063	0.03334	pCi/g	0.08283	N	77.03	1	0.8932	FAIL_ABUND	6.296	☐
Uranium-234 ✓		1.307	0.1014	pCi/g	0.1196	N	609.3	4	1.377	IDENTIFIED	6.548	☐
Zirconium-97	HE	3.56E+05	3.64E+05	pCi/g	0	N	238.7	7	1.086	NOT_IDENTI	3.727	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758003	30-JUN-09 12:00	14-JUL-09 11:03	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.783	0.1863	pCi/g	0.2367	N	911.8	3	1.531	IDENTIFIED	8.887	☐	
Americium-243 INT		0.4427	0.04487	pCi/g	0.09457	N	74.83	2	1.085	IDENTIFIED	9.548	☐	
Annihilation Rad.	HE	0.109	0.04225	pCi/g	0.05264	N	511	1	2.431	IDENTIFIED	38.64	☐	
Pb214 Bismuth-211 INT		3.975	0.2748	pCi/g	0.3582	Y	352.1	4	1.08	IDENTIFIED	6.157	☑ UI	
Bismuth-212	HE	1.167	0.2714	pCi/g	0.7605	N	727.9	1	1.449	FAIL_ABUND	22.84	☐	
Bismuth-214 ✓		1.211	0.1005	pCi/g	0.1289	0.200	609.7	4	1.313	IDENTIFIED	7.203	☐	
Pb214 Cadmium-109 INT		3.988	0.6074	pCi/g	1.377	Y	87.15	4	1.092	IDENTIFIED	14.75	☑ UI	
Cerium-143		239.8	53.35	pCi/g	0	N	327.9	1	1.181	NOT_IDENTI	24.04	☐	
Cesium-134 LA		0.1727	0.0322	pCi/g	0.1079	0.100	795.7	1	2.639	FAIL_ABUND	18.25	☑ UI	Data rejected due to low abundance.
Gross Gamma		11.18	1.675	pCi/g	3.647	N		0				☐	
Iodine-123	HE	6.03E+05	6.93E+05	pCi/g	0	N	87.15	4	1.092	NOT_IDENTI	14.75	☐	
Krypton-85	HE	23.19	4.772	pCi/g	16.23	N	238.8	7	1.085	NOT_IDENTI	3.341	☐	
Lead-212 ✓		1.87	0.09118	pCi/g	0.09439	0.100	238.8	7	1.085	IDENTIFIED	3.341	☐	
Lead-214 ✓		1.383	0.1022	pCi/g	0.1249	0.100	352.1	4	1.08	IDENTIFIED	6.157	☐	
Lutetium-177	HE	2.982	0.8026	pCi/g	1.967	N	209.4	1	1.267	FAIL_ABUND	26.79	☐	
Neptunium-237 INT		1.153	0.2121	pCi/g	0.4631	N	87.15	4	1.092	IDENTIFIED	14.75	☐	
Polonium-212 nr		1.87	0.09118	pCi/g	0.09439	N	238.8	7	1.085	IDENTIFIED	3.341	☐	
Polonium-214 nr		1.383	0.1022	pCi/g	0.1249	N	352.1	4	1.08	IDENTIFIED	6.157	☐	
Polonium-216 nr		1.87	0.09118	pCi/g	0.09439	N	238.8	7	1.085	IDENTIFIED	3.341	☐	
Polonium-218 nr		1.383	0.1022	pCi/g	0.1249	N	352.1	4	1.08	IDENTIFIED	6.157	☐	
Potassium-40 ✓		37.45	1.693	pCi/g	0.5243	1.00	1462	1	2.195	IDENTIFIED	2.781	☐	
Pb214 Radium-224 INT		5.068	0.6865	pCi/g	1.074	Y	241.7	1	1.676	IDENTIFIED	13.26	☑ UI	
Radium-226 ✓		1.211	0.1005	pCi/g	0.1289	Y	609.7	4	1.313	IDENTIFIED	7.203	☐	
Radium-228 ✓		1.783	0.1863	pCi/g	0.2367	0.500	911.8	3	1.531	IDENTIFIED	8.887	☐	
Strontium-85 LA		0.1175	0.02417	pCi/g	0.08219	Y	238.8	7	1.085	NOT_IDENTI	3.341	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	178.9	120.1	pCi/g	0	N	74.83	2	1.085	NOT_IDENTI	9.548	☐	
Thallium-208 ✓		0.5342	0.05168	pCi/g	0.06755	0.080	583.5	1	1.387	IDENTIFIED	8.988	☐	
Thorium-228 ✓		1.87	0.09118	pCi/g	0.09438	N	238.8	7	1.085	IDENTIFIED	3.341	☐	
Thorium-230 ✓		1.211	0.1005	pCi/g	0.1289	N	609.7	4	1.313	IDENTIFIED	7.203	☐	
Thorium-232 ✓		1.783	0.1863	pCi/g	0.2367	N	911.8	3	1.531	IDENTIFIED	8.887	☐	
Thorium-234 ✓		3.508	1.161	pCi/g	2.21	2.00	63.27	2	1.481	IDENTIFIED	31.99	☐	
Tin-126 INT		0.3926	0.0598	pCi/g	0.1529	N	87.15	4	1.092	IDENTIFIED	14.75	☐	
Titanium-44 LA		0.5098	0.03273	pCi/g	0.08984	N	77.15	1	1.014	FAIL_ABUND	5.406	☐	
Total Uranium		10.461	3.45E-06	ug/g	3.2909	N		0				☐	
Uranium-234 ✓		1.211	0.1005	pCi/g	0.1289	N	609.7	4	1.313	IDENTIFIED	7.203	☐	
Uranium-238	HE	3.508	1.161	pCi/g	2.21	N	63.27	2	1.481	IDENTIFIED	31.99	☐	
Zirconium-97	HE	3.48E+05	3.62E+05	pCi/g	0	N	238.8	7	1.085	NOT_IDENTI	3.341	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758004	30-JUN-09 12:00	14-JUL-09 11:04	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		2.014	0.2049	pCi/g	0.2212	N	911.5	3	1.776	IDENTIFIED	8.323	☐	
Americium-243 INT		0.4223	0.04971	pCi/g	0.1037	N	74.84	2	1.121	IDENTIFIED	11.16	☐	
Annihilation Rad.	HE	0.1079	0.03689	pCi/g	0.04887	N	511	1	1.626	IDENTIFIED	34.06	☐	
Pb214 Bismuth-211 INT		3.957	0.306	pCi/g	0.3567	Y	352.1	4	1.409	IDENTIFIED	7.051	☑ UI	
Bismuth-212	HE	0.9668	0.2764	pCi/g	0.702	N	727.5	1	1.051	FAIL_ABUND	28.25	☐	

	Bismuth-214 ✓	1.277	0.1094	pCi/g	0.109	0.200	609.4	4	1.478	IDENTIFIED	7.534	☐	
Pb214	Cadmium-109 INT	3.596	0.6302	pCi/g	1.361	Y	87.11	3	1.082	IDENTIFIED	17.04	☑ ✓ UI	
	Cerium-143	195.5	49.15	pCi/g	0	N	327.7	1	1.748	FAIL_DECAY	36.49	☐	
	Cesium-134 LA	0.2453	0.04267	pCi/g	0.1125	0.100	796	1	3.84	FAIL_ABUND	16.92	☑ UI	Data rejected due to low abundance.
	Gross Gamma	10.9	1.648	pCi/g	3.207	N		0				☐	
	Lead-212 ✓	2.058	0.0995	pCi/g	0.09847	0.100	238.7	5	1.181	IDENTIFIED	3.223	☐	
	Lead-214 ✓	1.376	0.1123	pCi/g	0.1244	0.100	352.1	4	1.409	IDENTIFIED	7.051	☐	
	Lutetium-177 HE	3.195	0.8855	pCi/g	1.896	N	209	1	1.425	FAIL_ABUND	27.58	☐	
	Mercury-203 nvp	0.1223	0.03928	pCi/g	0.06338	0.100	277.9	1	1.347	IDENTIFIED	31.97	☑ ✓ UI	
	Neptunium-237 INT	1.04	0.2114	pCi/g	0.4309	N	87.11	3	1.082	IDENTIFIED	17.04	☐	
	Polonium-212 nr	2.058	0.0995	pCi/g	0.09847	N	238.7	5	1.181	IDENTIFIED	3.223	☐	
	Polonium-214 nr	1.376	0.1123	pCi/g	0.1244	N	352.1	4	1.409	IDENTIFIED	7.051	☐	
	Polonium-216 nr	2.058	0.0995	pCi/g	0.09847	N	238.7	5	1.181	IDENTIFIED	3.223	☐	
	Polonium-218 nr	1.376	0.1123	pCi/g	0.1244	N	352.1	4	1.409	IDENTIFIED	7.051	☐	
	Potassium-40 ✓	33.26	1.614	pCi/g	0.6447	1.00	1461	1	2.122	IDENTIFIED	3.076	☐	
Pb214	Radium-224 INT	4.827	0.7403	pCi/g	1.121	Y	241.8	1	1.734	IDENTIFIED	15.08	☑ ✓ UI	
	Radium-226 ✓	1.277	0.1094	pCi/g	0.109	Y	609.4	4	1.478	IDENTIFIED	7.534	☐	
	Radium-228 ✓	2.014	0.2049	pCi/g	0.2212	0.500	911.5	3	1.776	IDENTIFIED	8.323	☐	
	Thallium-200 HE	5.886	109.7	pCi/g	0	N	74.84	2	1.121	NOT_IDENTI	11.16	☐	
	Thallium-208 ✓	0.6306	0.05175	pCi/g	0.06456	0.080	583.4	1	1.188	IDENTIFIED	7.404	☐	
	Thorium-228 ✓	2.058	0.0995	pCi/g	0.09846	N	238.7	5	1.181	IDENTIFIED	3.223	☐	
	Thorium-230 ✓	1.277	0.1094	pCi/g	0.109	N	609.4	4	1.478	IDENTIFIED	7.534	☐	
	Thorium-232 ✓	2.014	0.2049	pCi/g	0.2212	N	911.5	3	1.776	IDENTIFIED	8.323	☐	
	Tin-126 INT	0.354	0.06205	pCi/g	0.1348	N	87.11	3	1.082	IDENTIFIED	17.04	☐	
	Titanium-44 LA	0.5158	0.03614	pCi/g	0.08868	N	77.11	1	1.064	FAIL_ABUND	5.896	☐	
	Uranium-234 ✓	1.277	0.1094	pCi/g	0.109	N	609.4	4	1.478	IDENTIFIED	7.534	☐	
	Zirconium-97 HE	3.89E+05	3.20E+05	pCi/g	0	N	238.7	5	1.181	NOT_IDENTI	3.223	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758005	30-JUN-09 12:00	14-JUL-09 11:05	14	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.682	0.1688	pCi/g	0.1977	N	911.3	3	1.834	IDENTIFIED	7.935	☐	
	Americium-243 INT	0.342	0.03296	pCi/g	0.07883	N	74.91	1	0.928	IDENTIFIED	8.935	☐	
	Annihilation Rad.	0.1348	0.03086	pCi/g	0.04177	N	510.8	1	1.978	IDENTIFIED	22.56	☐	
Pb214	Bismuth-211 INT	4.37	0.3076	pCi/g	0.276	Y	351.9	4	1.171	IDENTIFIED	5.14	☑ ✓ UI	
	Bismuth-212 ✓	1.047	0.2052	pCi/g	0.4355	N	727.3	1	1.745	IDENTIFIED	18.93	☐	
	Bismuth-214 ✓	1.288	0.09591	pCi/g	0.1078	0.200	609.4	4	1.523	IDENTIFIED	5.65	☐	
Pb214	Cadmium-109 INT	2.624	0.4885	pCi/g	1.159	Y	87.19	3	1.131	IDENTIFIED	18.17	☑ ✓ UI	
	Cerium-143	421.5	65.89	pCi/g	0	N	327.8	1	1.488	FAIL_DECAY	51.49	☐	
	Cesium-135 nvp	0.4749	0.1281	pCi/g	0.2171	N	269.7	2	1.568	IDENTIFIED	26.24	☐	
	Gross Gamma	9.19	1.433	pCi/g	3.542	N		0				☐	
	Iodine-135 HE	2.22E+14	1.38E+14	pCi/g	0	N	269.7	2	1.568	NOT_IDENTI	26.24	☐	
	Lead-212 ✓	1.723	0.1047	pCi/g	0.08207	0.100	238.6	5	1.151	IDENTIFIED	3.148	☐	
	Lead-214 ✓	1.52	0.1141	pCi/g	0.09622	0.100	351.9	4	1.171	IDENTIFIED	5.14	☐	
	Lutetium-177 HE	2.372	0.6309	pCi/g	1.74	N	209.2	1	1.041	FAIL_ABUND	26.32	☐	
	Neptunium-237 INT	0.7588	0.1615	pCi/g	0.3388	N	87.19	3	1.131	IDENTIFIED	18.17	☐	
	Polonium-212 nr	1.723	0.1047	pCi/g	0.08207	N	238.6	5	1.151	IDENTIFIED	3.148	☐	
	Polonium-214 nr	1.52	0.1141	pCi/g	0.09622	N	351.9	4	1.171	IDENTIFIED	5.14	☐	
	Polonium-216 nr	1.723	0.1047	pCi/g	0.08207	N	238.6	5	1.151	IDENTIFIED	3.148	☐	
	Polonium-218 nr	1.52	0.1141	pCi/g	0.09622	N	351.9	4	1.171	IDENTIFIED	5.14	☐	
	Potassium-40 ✓	25.21	1.122	pCi/g	0.471	1.00	1461	1	2.006	IDENTIFIED	3.084	☐	
Pb214	Radium-224 INT	4.989	0.6877	pCi/g	0.9335	Y	241.5	1	1.836	IDENTIFIED	12.93	☑ ✓ UI	
	Radium-226 ✓	1.288	0.09591	pCi/g	0.1078	Y	609.4	4	1.523	IDENTIFIED	5.65	☐	
	Radium-228 ✓	1.682	0.1688	pCi/g	0.1977	0.500	911.3	3	1.834	IDENTIFIED	7.935	☐	
	Thallium-208 ✓	0.5121	0.04695	pCi/g	0.05229	0.080	583.2	1	1.235	IDENTIFIED	8.053	☐	
	Thorium-228 ✓	1.723	0.1047	pCi/g	0.08206	N	238.6	5	1.151	IDENTIFIED	3.148	☐	
	Thorium-230 ✓	1.288	0.09591	pCi/g	0.1078	N	609.4	4	1.523	IDENTIFIED	5.65	☐	
	Thorium-232 ✓	1.682	0.1688	pCi/g	0.1977	N	911.3	3	1.834	IDENTIFIED	7.935	☐	

Thorium-234 ✓		2.375	0.7794	pCi/g	1.682	2.00	63.21	2	1.171	IDENTIFIED	31.67	☐
Tin-126 INT		0.2584	0.0481	pCi/g	0.1145	N	87.19	3	1.131	IDENTIFIED	18.17	☐
Titanium-44 LA		0.377	0.02598	pCi/g	0.07497	N	77.14	1	1.019	FAIL_ABUND	5.829	☐
Total Uranium		7.0923	2.32E-06	ug/g	2.5043	N		0				☐
Uranium-234 ✓		1.288	0.09591	pCi/g	0.1078	N	609.4	4	1.523	IDENTIFIED	5.65	☐
Uranium-238	HE	2.375	0.7794	pCi/g	1.682	N	63.21	2	1.171	IDENTIFIED	31.67	☐
Zirconium-97	HE	5.39E+05	2.93E+05	pCi/g	0	N	238.6	5	1.151	NOT_IDENTI	3.148	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201874832		14-JUL-09 11:22	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Iodine-123	HE	108.5	78.03	pCi/g	0	N	1076	2	0.576	NOT_IDENTI	71.2	☐	
Niobium-97	HE	8.596	14.24	pCi/g	0	N	1076	2	0.576	NOT_IDENTI	71.2	☐	
Sodium-24	HE	23.35	53.92	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201874833	30-JUN-09 12:00	14-JUL-09 11:23	14	DUP	LOAD	1		LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.926	0.2272	pCi/g	0.2851	N	911.5	3	1.893	IDENTIFIED	10.04	☐	
Americium-243 INT		0.3905	0.03003	pCi/g	0.06405	N	74.71	2	1.204	IDENTIFIED	6.618	☐	
Annihilation Rad.	HE	0.09893	0.0381	pCi/g	0.05919	N	510.7	2	1.823	IDENTIFIED	38.38	☐	
Bismuth-210	HE	1.139	0.5032	pCi/g	0.9172	N	46.69	3	1.169	IDENTIFIED	44.02	☐	
pb214 Bismuth-211 INT		4.096	0.2787	pCi/g	0.3667	Y	352	4	1.554	IDENTIFIED	5.543	☑ UI	
Bismuth-212	HE	1.405	0.3011	pCi/g	0.8102	N	727.4	1	1.525	FAIL_ABUND	20.95	☐	
Bismuth-214 ✓		1.283	0.1044	pCi/g	0.1374	0.200	609.4	4	1.547	IDENTIFIED	6.972	☐	
pb214 Cadmium-109 INT		3.731	0.441	pCi/g	1.055	Y	87.23	3	1.33	IDENTIFIED	11.19	☑ UI	
Cerium-143		445.4	72.21	pCi/g	0	N	328.4	1	1.865	FAIL_DECAY	45.63	☐	
Gross Gamma		10.19	1.464	pCi/g	4.075	N		0				☐	
Iodine-133	HE	345.5	1288	pCi/g	0	N	510.7	2	1.823	FAIL_DECAY	38.38	☐	
Lead-210	HE	1.139	0.5032	pCi/g	0.9172	N	46.69	3	1.169	IDENTIFIED	44.02	☐	
Lead-212 ✓		1.864	0.1171	pCi/g	0.1012	0.100	238.6	7	1.35	IDENTIFIED	3.226	☐	
Lead-214 ✓		1.425	0.1038	pCi/g	0.1233	0.100	352	4	1.554	IDENTIFIED	5.543	☐	
Lutetium-177 LA		3.447	0.6811	pCi/g	2.006	N	209	1	1.025	FAIL_ABUND	19.12	☐	
Neptunium-237 INT		1.079	0.1693	pCi/g	0.3037	N	87.23	3	1.33	IDENTIFIED	11.19	☐	
Niobium-95m	HE	0.3735	0.08482	pCi/g	0.2683	N	238.6	7	1.35	NOT_IDENTI	3.226	☐	
Niobium-97	HE	25570	19640	pCi/g	0	N	238.6	7	1.35	NOT_IDENTI	3.226	☐	
Polonium-210	HE	1.139	0.5027	pCi/g	0.9172	N	46.69	3	1.169	IDENTIFIED	44.02	☐	
Polonium-212 NV		1.864	0.1171	pCi/g	0.1012	N	238.6	7	1.35	IDENTIFIED	3.226	☐	
Polonium-214 NV		1.425	0.1038	pCi/g	0.1233	N	352	4	1.554	IDENTIFIED	5.543	☐	
Polonium-216 NV		1.864	0.1171	pCi/g	0.1012	N	238.6	7	1.35	IDENTIFIED	3.226	☐	
Polonium-218 NV		1.425	0.1038	pCi/g	0.1233	N	352	4	1.554	IDENTIFIED	5.543	☐	
Potassium-40 ✓		33.55	1.479	pCi/g	0.785	1.00	1461	1	2.046	IDENTIFIED	3.124	☐	
pb214 Radium-224 INT		4.724	0.5671	pCi/g	1.151	Y	241.7	1	1.773	IDENTIFIED	10.97	☑ UI	
Radium-226 ✓		1.283	0.1044	pCi/g	0.1374	Y	609.4	4	1.547	IDENTIFIED	6.972	☐	
Radium-228 ✓		1.926	0.2272	pCi/g	0.2851	0.500	911.5	3	1.893	IDENTIFIED	10.04	☐	
Sodium-24		2.54E+05	1.24E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-200	HE	45.6	112.6	pCi/g	0	N	74.71	2	1.204	NOT_IDENTI	6.618	☐	
Thallium-208 ✓		0.5373	0.0494	pCi/g	0.06903	0.080	583.3	1	1.542	IDENTIFIED	8.426	☐	
Thorium-228 ✓		1.864	0.1171	pCi/g	0.1012	N	238.6	7	1.35	IDENTIFIED	3.226	☐	
Thorium-230 ✓		1.283	0.1044	pCi/g	0.1374	N	609.4	4	1.547	IDENTIFIED	6.972	☐	
Thorium-232 ✓		1.926	0.2272	pCi/g	0.2851	N	911.5	3	1.893	IDENTIFIED	10.04	☐	
Thorium-234 ✓		1.702	0.6136	pCi/g	1.102	2.00	62.92	2	1.407	IDENTIFIED	34.95	☐	
Tin-126 INT		0.3674	0.04342	pCi/g	0.1037	N	87.23	3	1.33	IDENTIFIED	11.19	☐	
Titanium-44 LA		0.3745	0.02373	pCi/g	0.0661	N	76.95	1	1.103	FAIL_ABUND	5	☐	
Total Uranium		5.0744	1.83E-06	ug/g	1.6427	N		0				☐	
Uranium-234 ✓		1.283	0.1044	pCi/g	0.1374	N	609.4	4	1.547	IDENTIFIED	6.972	☐	
Uranium-238	HE	1.702	0.6136	pCi/g	1.102	N	62.92	2	1.407	IDENTIFIED	34.95	☐	

Zirconium-97		1.29E+06	3.73E+05	pCi/g	0	N	238.6	7	1.35	NOT_IDENTI	3.226

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201874834		14-JUL-09 12:33	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	HE	1.119	0.332	pCi/g	0.8422	N	910.9	3	0.8815	FAIL_ABUND	29.21		
Americium-241		13.66	0.7233	pCi/g	0.2687	0.200	59.87	1	1.118	IDENTIFIED	1.511	86%	
Americium-243		0.2676	0.0413	pCi/g	0.1027	N	75.15	1	1.22	IDENTIFIED	14.82		
Annihilation Rad.	HE	0.1742	0.0613	pCi/g	0.1075	N	511.1	1	1.71	IDENTIFIED	35.02		
Barium-137m		5.687	0.2724	pCi/g	0.1388	N	662.1	2	1.623	IDENTIFIED	2.511		
Bismuth-211		2.377	0.3478	pCi/g	0.6746	Y	352.4	4	1.1	IDENTIFIED	14.17		
Bismuth-214		0.9137	0.1717	pCi/g	0.3939	0.200	610.1	4	1.769	FAIL_ABUND	18.2		
Cadmium-109		47.45	2.3	pCi/g	1.93	Y	88.4	2	1.137	IDENTIFIED	2.782		
Cesium-137		6.012	0.2884	pCi/g	0.1467	0.100	662.1	2	1.623	IDENTIFIED	2.511	107%	
Cobalt-57		0.4118	0.05003	pCi/g	0.06721	N	122.4	1	1.207	IDENTIFIED	10.38		
Cobalt-60		6.848	0.2639	pCi/g	0.09409	0.100	1333	1	1.999	IDENTIFIED	2.6	99%	
Gross Gamma		29.1	3.529	pCi/g	5.954	N		0					
Lead-212		0.8114	0.1211	pCi/g	0.1851	0.100	238.8	4	1.05	IDENTIFIED	14.21		
Lead-214		0.8268	0.1229	pCi/g	0.2563	0.100	352.4	4	1.1	IDENTIFIED	14.17		
Neptunium-237		1.973	0.3021	pCi/g	0.785	N	93.07	1	1.113	NOT_IDENTI	98.72		
Niobium-97	HE	117.9	75.78	pCi/g	0	N	295.8	3	1.674	NOT_IDENTI	19.01		
Polonium-212		0.8114	0.1211	pCi/g	0.1851	N	238.8	4	1.05	IDENTIFIED	14.21		
Polonium-214		0.8268	0.1229	pCi/g	0.2563	N	352.4	4	1.1	IDENTIFIED	14.17		
Polonium-216		0.8114	0.1211	pCi/g	0.1851	N	238.8	4	1.05	IDENTIFIED	14.21		
Polonium-218		0.8268	0.1229	pCi/g	0.2563	N	352.4	4	1.1	IDENTIFIED	14.17		
Radium-226		0.9137	0.1717	pCi/g	0.3939	Y	610.1	4	1.769	FAIL_ABUND	18.2		
Radium-228		1.119	0.332	pCi/g	0.8422	0.500	910.9	3	0.8815	FAIL_ABUND	29.21		
Technetium-99m	HE	5.78E+06	2.16E+07	pCi/g	0	N	295.8	3	1.674	NOT_IDENTI	19.01		
Thallium-208		0.2333	0.06125	pCi/g	0.1443	0.080	583.5	1	1.363	IDENTIFIED	25.92		
Thorium-228		0.8114	0.1211	pCi/g	0.1851	N	238.8	4	1.05	IDENTIFIED	14.21		
Thorium-230		0.9137	0.1717	pCi/g	0.3939	N	610.1	4	1.769	FAIL_ABUND	18.2		
Thorium-232	HE	1.119	0.332	pCi/g	0.8422	N	910.9	3	0.8815	FAIL_ABUND	29.21		
Tin-126		4.718	0.2286	pCi/g	0.1917	N	88.4	2	1.137	IDENTIFIED	2.782		
Titanium-44		0.3032	0.03135	pCi/g	0.08929	N	77.34	1	1.228	FAIL_ABUND	9.428		
Uranium-234		0.9137	0.1717	pCi/g	0.3939	N	610.1	4	1.769	FAIL_ABUND	18.2		
Zirconium-97	HE	1020	1163	pCi/g	0	N	295.8	3	1.674	NOT_IDENTI	19.01		

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232664001-1 14-JUL-2009 08:26	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.501			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.631			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.566			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1631			
232664002-1 14-JUL-2009 08:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.564			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.467			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08514		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.041			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.144			
232664003-1 14-JUL-2009 08:37	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.361			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1559		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.145			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1712			
232664004-1 14-JUL-2009 08:38	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.545			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.354			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1942		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.913			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1357			
232664005-1 14-JUL-2009 08:57	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.444			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.201			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232664005-1 14-JUL-2009 08:57	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1109		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.194			
232746001-1 14-JUL-2009 08:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.281			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.643			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1055		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.137			
232746002-1 14-JUL-2009 08:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.401			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.1			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.973			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.06761			
232746003-1 14-JUL-2009 08:59	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.782			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.353			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.501			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1033			
232746004-1 14-JUL-2009 09:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.115			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.323		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.766			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.16		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.703			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.323			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232746004-1 14-JUL-2009 09:13	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.126			
232746005-1 14-JUL-2009 09:16	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.555			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.703			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1432		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.289			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1344			
232746006-1 14-JUL-2009 10:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.832			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.285			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1187		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.691			
232746007-1 14-JUL-2009 10:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.567			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.563			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.245			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1072			
232746008-1 14-JUL-2009 10:28	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.754			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.487			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1049		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.187			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1475			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232754001-1 14-JUL-2009 10:44	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.134			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.362			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1317		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.23			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1215			
232754002-1 14-JUL-2009 10:45	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.048			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.323			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08569		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.971			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1259			
232754003-1 14-JUL-2009 10:48	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.258			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.959			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09124		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.665			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1513			
232758002-1 14-JUL-2009 11:02	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.232			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.2			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.532			
232758003-1 14-JUL-2009 11:03	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.975			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.988			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232758003-1 14-JUL-2009 11:03	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1727		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.068			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1175			
232758004-1 14-JUL-2009 11:04	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.957			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.596			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.2453		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to no valid peak.		.1223		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.827			
232758005-1 14-JUL-2009 11:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.37			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.624			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.989			
1201874833-1 DUP 14-JUL-2009 11:23	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.096			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.731			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.724			

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertanty	Units	DL	RDL
882713	232758004	SAMPLE	14-JUL-09	Thallium-200	5.886	109.7	pCi/g	0	N
				Thallium-208	0.6306	0.05175	pCi/g	0.0323	0.080
				Zirconium-97	3.89E+05	3.20E+05	pCi/g	0	N
882713	232758005	SAMPLE	14-JUL-09	Bismuth-211	4.37	0.3076	pCi/g	0.1381	Y
				Bismuth-214	1.288	0.09591	pCi/g	0.05393	0.200
				Cadmium-109	2.624	0.4885	pCi/g	0.5799	Y
				Cerium-143	421.5	65.89	pCi/g	0	N
				Cesium-134	0.08474	0.02718	pCi/g	0.04534	0.100
				Cesium-137	0.05751	0.0187	pCi/g	0.03473	0.100
				Gross Gamma	9.19	1.433	pCi/g	1.718	N
				Iodine-135	2.22E+14	1.38E+14	pCi/g	0	N
				Lead-212	1.723	0.1047	pCi/g	0.04106	0.100
				Lead-214	1.52	0.1141	pCi/g	0.04814	0.100
				Potassium-40	25.21	1.122	pCi/g	0.2356	1.00
				Radium-224	4.989	0.6877	pCi/g	0.467	Y
				Radium-226	1.288	0.09591	pCi/g	0.05393	Y
				Radium-228	1.682	0.1688	pCi/g	0.09892	0.500
				Thallium-208	0.5121	0.04695	pCi/g	0.02616	0.080
				Thorium-234	2.375	0.7794	pCi/g	0.8413	2.00
				Zirconium-97	5.39E+05	2.93E+05	pCi/g	0	N
882713	1201874832	MB	14-JUL-09	Iodine-123	108.5	78.03	pCi/g	0	N
				Niobium-97	8.596	14.24	pCi/g	0	N
				Radium-224	0.2972	0.1533	pCi/g	0.2897	Y
				Sodium-24	23.35	53.92	pCi/g	0	N
882713	1201874833	DUP	14-JUL-09	Bismuth-211	4.096	0.2787	pCi/g	0.1835	Y
				Bismuth-214	1.283	0.1044	pCi/g	0.06876	0.200
				Cadmium-109	3.731	0.441	pCi/g	0.5278	Y
				Cerium-143	445.4	72.21	pCi/g	0	N
				Cesium-134	0.07826	0.03305	pCi/g	0.05489	0.100
				Gross Gamma	10.19	1.464	pCi/g	1.988	N
				Iodine-133	345.5	1288	pCi/g	0	N
				Krypton-85	17.19	5.453	pCi/g	8.781	N
				Lead-212	1.864	0.1171	pCi/g	0.05061	0.100
				Lead-214	1.425	0.1038	pCi/g	0.06171	0.100
				Mercury-203	0.04331	0.02248	pCi/g	0.04052	0.100
				Niobium-97	25570	19640	pCi/g	0	N
				Potassium-40	33.55	1.479	pCi/g	0.3928	1.00

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:00:27.11

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746001.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:58:27
Sample ID         : G232746001           Sample quantity  : 1.30350E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.38  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*************************************************************************
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.36*	27	502	0.80	125.93	121	10	3.76E-03	162.4	
2	2	74.87	291	367	0.99	148.96	143	15	4.05E-02	12.1	1.84E+00
3	2	77.07	558	313	0.88	153.36	143	15	7.75E-02	6.3	
4	2	84.49*	115	336	1.11	168.20	165	26	1.59E-02	28.9	2.59E+00
5	2	87.29	242	337	1.12	173.81	165	26	3.36E-02	14.4	
6	2	89.98	178	338	1.13	179.18	165	26	2.48E-02	18.7	
7	2	92.80*	181	339	1.13	184.83	165	26	2.52E-02	21.3	
8	0	129.31	104	316	1.18	257.88	254	8	1.45E-02	31.2	
9	0	186.08*	163	387	1.02	371.48	366	11	2.27E-02	26.2	
10	0	209.42	98	223	1.73	418.19	415	7	1.36E-02	27.3	
11	4	238.67*	1174	143	1.06	476.72	470	17	1.63E-01	3.4	2.81E+00
12	4	241.52	259	225	1.72	482.43	470	17	3.60E-02	16.4	
13	3	295.24*	379	144	1.19	589.92	585	26	5.26E-02	7.3	1.07E+00
14	3	300.24	96	125	1.31	599.93	585	26	1.34E-02	23.6	
15	3	302.95	50	141	1.67	605.34	585	26	6.93E-03	53.4	
16	0	328.50	89	154	0.86	656.46	652	9	1.24E-02	27.4	
17	0	338.43*	234	175	0.91	676.34	671	10	3.25E-02	12.6	
18	0	351.95*	666	155	1.22	703.40	696	13	9.25E-02	5.5	
19	0	463.19	82	104	1.86	926.01	919	13	1.15E-02	27.8	
20	0	510.73*	85	160	1.52	1021.13	1014	14	1.18E-02	37.7	
21	0	583.30*	339	91	1.44	1166.36	1161	11	4.71E-02	7.9	
22	0	609.48*	375	136	1.23	1218.75	1212	14	5.21E-02	8.6	
23	0	727.77*	73	98	1.51	1455.49	1449	15	1.02E-02	31.6	
24	0	795.65	50	63	1.74	1591.34	1587	11	6.96E-03	35.1	
25	0	860.51	104	43	2.22	1721.14	1713	17	1.44E-02	17.5	
26	0	911.37*	206	70	1.91	1822.92	1817	12	2.86E-02	11.0	
27	0	969.44*	108	95	1.52	1939.15	1931	14	1.50E-02	21.9	
28	0	1120.63*	88	65	1.76	2241.74	2236	12	1.23E-02	21.6	
29	0	1237.89*	50	49	1.28	2476.44	2470	13	6.92E-03	33.5	
30	0	1377.81*	40	20	2.35	2756.49	2750	12	5.49E-03	30.3	
31	0	1461.03*	914	30	2.05	2923.07	2915	19	1.27E-01	3.7	
32	0	1730.00	44	0	1.59	3461.45	3453	16	6.11E-03	15.1	
33	0	1764.65*	71	4	1.93	3530.81	3520	19	9.89E-03	15.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 11:00:29

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:58:27
Sample ID : G232746001 Sample quantity : 130.35 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA2 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.38 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.357E+01	2.453E+00	5.356E-01	3.970E-02	44.014
CD-109	+	88.03	*	3.643E+00	1.133E+00	1.174E+00	1.387E-01	3.103
SN-126	+	64.28		3.170E-01	1.031E+00	8.489E-01	1.324E-01	0.373
	+	86.94		1.489E+00	7.599E-01	4.868E-01	2.049E-01	3.059
	+	87.57	*	3.582E-01	1.114E-01	1.161E-01	1.366E-02	3.085
TL-208		277.35		3.707E-01	3.908E-01	6.809E-01	8.681E-02	0.544
	+	510.84		4.334E-01	3.300E-01	2.477E-01	2.624E-02	1.750
	+	583.14	*	4.934E-01	8.586E-02	6.766E-02	4.968E-03	7.292
	+	860.37		1.422E+00	5.145E-01	4.612E-01	4.358E-02	3.083
BI-211		72.87		9.363E-01	3.485E+00	5.361E+00	5.428E-01	0.175
	+	351.07	*	4.281E+00	5.867E-01	3.250E-01	2.633E-02	13.172
PB-212	+	74.81		1.928E+00	5.368E-01	5.781E-01	8.043E-02	3.335
	+	77.11		2.069E+00	3.404E-01	3.239E-01	3.411E-02	6.388
	+	87.30		1.657E+00	5.414E-01	5.390E-01	8.306E-02	3.074
	+	238.63	*	1.646E+00	1.922E-01	8.841E-02	8.376E-03	18.616
	+	300.09		2.091E+00	1.014E+00	1.238E+00	1.318E-01	1.689
PO-212	+	74.81		1.928E+00	5.368E-01	5.781E-01	8.043E-02	3.335
	+	77.11		2.069E+00	3.404E-01	3.239E-01	3.411E-02	6.388
	+	87.30		1.657E+00	5.414E-01	5.390E-01	8.306E-02	3.074
		115.19		8.530E-01	3.591E+00	5.988E+00	4.030E-01	0.142
	+	238.63	*	1.646E+00	1.922E-01	8.841E-02	8.376E-03	18.616
	+	300.09		2.091E+00	1.014E+00	1.238E+00	1.318E-01	1.689
BI-214	+	609.31	*	1.030E+00	1.970E-01	1.086E-01	9.045E-03	9.480
		768.36		1.231E+00	8.653E-01	1.546E+00	1.499E-01	0.796
		934.06		1.435E+00	1.237E+00	2.202E+00	2.409E-01	0.652
	+	1120.29		1.277E+00	5.651E-01	4.865E-01	4.510E-02	2.626
	+	1238.11		2.005E+00	1.353E+00	1.420E+00	1.204E-01	1.412
	+	1377.67		2.525E+00	1.549E+00	1.779E+00	1.718E-01	1.419
	+	1764.49		1.412E+00	4.411E-01	3.137E-01	1.845E-02	4.502
PB-214	+	74.81		3.323E+00	9.054E-01	9.962E-01	1.264E-01	3.335
	+	77.11		3.547E+00	6.430E-01	5.553E-01	7.218E-02	6.388
	+	87.30		2.838E+00	9.097E-01	9.233E-01	1.296E-01	3.074
	+	241.98		2.182E+00	7.496E-01	4.955E-01	5.013E-02	4.403
	+	295.21		1.440E+00	2.635E-01	2.167E-01	2.370E-02	6.644

Sample ID : G232746001 Acquisition date : 14-JUL-2009 08:58:27

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.489E+00	2.184E-01	1.133E-01	1.090E-02	13.144
PO-214	+	74.81		3.323E+00	9.054E-01	9.962E-01	1.264E-01	3.335
	+	77.11		3.547E+00	6.430E-01	5.553E-01	7.218E-02	6.388
	+	87.30		2.838E+00	9.097E-01	9.233E-01	1.296E-01	3.074
	+	241.98		2.182E+00	7.496E-01	4.955E-01	5.013E-02	4.403
	+	295.21		1.440E+00	2.635E-01	2.167E-01	2.370E-02	6.644
	+	351.92	*	1.489E+00	2.184E-01	1.133E-01	1.090E-02	13.144
PO-216	+	74.81		1.928E+00	5.368E-01	5.781E-01	8.043E-02	3.335
	+	77.11		2.069E+00	3.404E-01	3.239E-01	3.411E-02	6.388
	+	87.30		1.657E+00	5.414E-01	5.390E-01	8.306E-02	3.074
	+	238.63	*	1.646E+00	1.922E-01	8.841E-02	8.376E-03	18.616
	+	300.09		2.091E+00	1.014E+00	1.238E+00	1.318E-01	1.689
PO-218	+	74.81		3.323E+00	9.054E-01	9.962E-01	1.264E-01	3.335
	+	77.11		3.547E+00	6.430E-01	5.553E-01	7.218E-02	6.388
	+	87.30		2.838E+00	9.097E-01	9.233E-01	1.296E-01	3.074
	+	241.98		2.182E+00	7.496E-01	4.955E-01	5.013E-02	4.403
	+	295.21		1.440E+00	2.635E-01	2.167E-01	2.370E-02	6.644
	+	351.92	*	1.489E+00	2.184E-01	1.133E-01	1.090E-02	13.144
RA-224	+	240.98	*	4.137E+00	1.402E+00	1.007E+00	8.454E-02	4.110
RA-226	+	609.31	*	1.030E+00	1.970E-01	1.086E-01	9.045E-03	9.480
		768.36		1.231E+00	8.653E-01	1.546E+00	1.499E-01	0.796
		934.06		1.435E+00	1.237E+00	2.202E+00	2.409E-01	0.652
	+	1120.29		1.277E+00	5.651E-01	4.865E-01	4.510E-02	2.626
	+	1238.11		2.005E+00	1.353E+00	1.420E+00	1.204E-01	1.412
	+	1377.67		2.525E+00	1.549E+00	1.779E+00	1.718E-01	1.419
	+	1764.49		1.412E+00	4.411E-01	3.137E-01	1.845E-02	4.502
AC-228	+	338.32		1.661E+00	8.007E-01	3.867E-01	1.590E-01	4.295
	+	911.07	*	1.343E+00	3.353E-01	2.336E-01	2.735E-02	5.748
	+	969.11		1.239E+00	6.150E-01	4.527E-01	1.057E-01	2.737
RA-228	+	338.32		1.661E+00	8.007E-01	3.867E-01	1.590E-01	4.295
	+	911.07	*	1.343E+00	3.353E-01	2.336E-01	2.735E-02	5.748
	+	969.11		1.239E+00	6.150E-01	4.527E-01	1.057E-01	2.737
TH-228	+	84.40		5.427E+00	3.244E+00	3.715E+00	5.599E-01	1.461
	+	238.60	*	1.646E+00	1.922E-01	8.840E-02	8.375E-03	18.618
	+	300.10		2.091E+00	1.586E+00	1.238E+00	7.343E-01	1.689
TH-230	+	609.31	*	1.030E+00	1.970E-01	1.086E-01	9.045E-03	9.480
		768.36		1.231E+00	8.653E-01	1.546E+00	1.499E-01	0.796
		934.06		1.435E+00	1.237E+00	2.202E+00	2.409E-01	0.652
	+	1120.29		1.277E+00	5.651E-01	4.865E-01	4.510E-02	2.626
	+	1238.11		2.005E+00	1.353E+00	1.420E+00	1.204E-01	1.412
	+	1377.67		2.525E+00	1.549E+00	1.779E+00	1.718E-01	1.419
	+	1764.49		1.412E+00	4.411E-01	3.137E-01	1.845E-02	4.502
TH-232	+	338.32		1.661E+00	4.383E-01	3.867E-01	3.085E-02	4.295
	+	911.07	*	1.343E+00	3.353E-01	2.336E-01	2.735E-02	5.748
	+	969.11		1.239E+00	6.150E-01	4.527E-01	1.057E-01	2.737
TH-234	+	63.29	*	8.008E-01	2.606E+00	2.257E+00	4.126E-01	0.355
	+	92.38		1.717E+00	8.000E-01	7.530E-01	1.440E-01	2.280
U-234	+	609.31	*	1.030E+00	1.970E-01	1.086E-01	9.045E-03	9.480
		768.36		1.231E+00	8.653E-01	1.546E+00	1.499E-01	0.796

Sample ID : G232746001 Acquisition date : 14-JUL-2009 08:58:27

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		1.435E+00	1.237E+00	2.202E+00	2.409E-01	0.652
	+	1120.29		1.277E+00	5.651E-01	4.865E-01	4.510E-02	2.626
	+	1238.11		2.005E+00	1.353E+00	1.420E+00	1.204E-01	1.412
	+	1377.67		2.525E+00	1.549E+00	1.779E+00	1.718E-01	1.419
	+	1764.49		1.412E+00	4.411E-01	3.137E-01	1.845E-02	4.502
NP-237	+	86.50	*	1.052E+00	3.927E-01	3.459E-01	8.191E-02	3.041
		95.87		-3.112E-01	1.017E+00	1.492E+00	3.741E-01	-0.209
U-238	+	63.29	*	8.008E-01	2.606E+00	2.257E+00	4.126E-01	0.355
	+	92.38		1.717E+00	7.520E-01	7.530E-01	8.003E-02	2.280
AM-243	+	74.67	*	3.126E-01	8.198E-02	9.409E-02	9.684E-03	3.322
	+	86.72		3.944E+01	1.227E+01	1.293E+01	1.506E+00	3.050
		117.66		-2.663E+00	3.718E+00	5.932E+00	3.808E-01	-0.449
		142.18		7.233E+00	1.857E+01	3.008E+01	1.856E+00	0.240
ANH-511	+	511.00	*	9.362E-02	7.086E-02	5.352E-02	3.500E-03	1.749

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.850E-01	3.437E-01	5.766E-01	4.239E-02	0.321
NA-22		1274.54	*	-1.069E-02	4.588E-02	7.353E-02	4.915E-03	-0.145
NA-24		1368.53	*	9.322E-02	4.588E-02	Half-Life too short		
AL-26		1129.67		-5.367E-01	1.875E+00	3.035E+00	1.920E-01	-0.177
		1808.65	*	5.000E-03	3.396E-02	5.769E-02	3.249E-03	0.087
TI-44		67.85		-4.487E-02	5.596E-02	8.110E-02	7.848E-03	-0.553
	+	78.38	*	3.819E-01	6.281E-02	7.715E-02	8.224E-03	4.950
SC-46		889.25	*	-3.684E-02	4.187E-02	6.138E-02	5.655E-03	-0.600
	+	1120.51		2.182E-01	9.546E-02	1.436E-01	9.309E-03	1.519
V-48		944.10		-5.525E-01	9.674E-01	1.465E+00	1.303E-01	-0.377
		983.50	*	-1.588E-02	7.423E-02	1.165E-01	9.850E-03	-0.136
		1312.09		2.087E-02	8.550E-02	1.442E-01	1.026E-02	0.145
CR-51		320.08	*	1.200E-01	3.751E-01	6.351E-01	5.663E-02	0.189
MN-52		744.21		5.061E-02	2.525E-01	4.227E-01	3.112E-02	0.120
		848.13		-5.036E+00	6.964E+00	1.050E+01	9.100E-01	-0.480
		935.52		-3.045E-03	2.670E-01	4.306E-01	3.867E-02	-0.007
		1246.25		4.250E-01	8.146E+00	1.287E+01	8.171E-01	0.033
		1333.61		-3.557E+00	4.448E+00	6.364E+00	4.684E-01	-0.559
		1434.06	*	-6.965E-02	2.417E-01	3.759E-01	2.701E-02	-0.185
MN-54		834.83	*	3.505E-02	4.321E-02	7.488E-02	6.360E-03	0.468
CO-56		846.75	*	2.786E-02	3.877E-02	6.756E-02	5.843E-03	0.412
		977.42		-1.240E+00	3.180E+00	4.896E+00	4.174E-01	-0.253
		1037.82		-4.367E-02	3.110E-01	5.135E-01	4.244E-02	-0.085
		1175.09		1.822E+00	2.491E+00	4.383E+00	2.434E-01	0.416
	+	1238.25		2.027E-01	1.363E-01	1.964E-01	1.295E-02	1.032
		1360.21		8.679E-01	9.955E-01	1.815E+00	1.329E-01	0.478
		1771.40		1.598E-01	2.096E-01	3.717E-01	2.172E-02	0.430
CO-57		122.06	*	-9.633E-03	2.599E-02	4.211E-02	2.485E-03	-0.229
		136.48		2.940E-02	2.114E-01	3.479E-01	2.417E-02	0.085
CO-58		810.76	*	-3.135E-02	4.316E-02	6.569E-02	5.392E-03	-0.477

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		4.694E-01	2.900E+00	4.656E+00	2.878E-01	0.101
		192.34		-5.384E-01	9.787E-01	1.520E+00	1.918E-01	-0.354
		1099.22	*	-4.879E-02	9.854E-02	1.564E-01	1.204E-02	-0.312
		1291.56		-6.117E-02	1.344E-01	2.095E-01	1.736E-02	-0.292
CO-60		1173.22		4.699E-02	4.812E-02	8.652E-02	4.787E-03	0.543
		1332.49	*	-2.016E-02	3.605E-02	5.403E-02	3.977E-03	-0.373
ZN-65		1115.52	*	-6.810E-03	1.041E-01	1.479E-01	9.728E-03	-0.046
GE-68		1077.35	*	2.185E-01	1.408E+00	2.383E+00	1.710E-01	0.092
AS-73		53.44	*	-1.327E+00	1.087E+00	1.715E+00	1.534E-01	-0.774
AS-74		595.88	*	2.219E-02	9.644E-02	1.643E-01	1.074E-02	0.135
		634.78		5.959E-02	3.531E-01	5.973E-01	3.863E-02	0.100
SE-75		66.05		-4.163E+00	5.697E+00	8.275E+00	9.253E-01	-0.503
		96.73		-2.734E-01	8.259E-01	1.211E+00	1.732E-01	-0.226
		121.11		-5.808E-02	1.342E-01	2.166E-01	2.028E-02	-0.268
		136.00		-2.765E-02	4.072E-02	6.462E-02	3.967E-03	-0.428
		198.60		4.391E-02	1.920E+00	3.032E+00	2.583E-01	0.014
		264.65	*	8.926E-03	4.234E-02	7.209E-02	6.462E-03	0.124
		279.53		-2.122E-01	1.248E-01	1.815E-01	1.731E-02	-1.169
	+	303.91		3.066E+00	3.293E+00	3.436E+00	3.991E-01	0.892
		400.65		4.934E-02	2.537E-01	4.207E-01	3.953E-02	0.117
BR-77	+	87.88		7.335E+02	2.282E+02	3.235E+02	3.819E+01	2.268
		200.40		5.063E+01	1.599E+02	2.591E+02	1.940E+01	0.195
	+	239.00		2.462E+02	2.655E+01	3.675E+01	3.070E+00	6.700
		249.79		-6.310E+01	6.308E+01	1.011E+02	8.686E+00	-0.624
		281.68		4.675E+01	8.240E+01	1.422E+02	1.308E+01	0.329
		297.23		1.884E+02	5.907E+01	1.079E+02	9.645E+00	1.746
	+	303.76		2.438E+02	2.612E+02	2.742E+02	2.415E+01	0.889
		439.47		-4.291E+01	1.401E+02	2.225E+02	1.422E+01	-0.193
		484.57		-2.504E+01	2.168E+02	3.462E+02	2.251E+01	-0.072
		520.65	*	2.809E+00	9.610E+00	1.579E+01	1.034E+00	0.178
		574.64		-2.287E+01	2.283E+02	3.794E+02	2.487E+01	-0.060
		578.91		-1.243E+01	1.009E+02	1.458E+02	9.553E+00	-0.085
		585.48		1.165E+03	2.602E+02	4.741E+02	3.103E+01	2.457
		755.35		5.166E+01	1.714E+02	2.888E+02	2.165E+01	0.179
		817.79		5.631E+01	1.259E+02	2.146E+02	1.776E+01	0.262
SR-82		698.33		-2.106E+01	3.543E+01	5.580E+01	3.804E+00	-0.377
		776.49	*	-2.814E-01	4.226E-01	6.530E-01	5.064E-02	-0.431
		1395.20		-5.958E+00	1.148E+01	1.728E+01	1.255E+00	-0.345
RB-83		520.41	*	2.398E-02	6.839E-02	1.129E-01	7.396E-03	0.212
		529.64		1.515E-02	1.063E-01	1.723E-01	1.129E-02	0.088
		552.65		-2.196E-01	2.021E-01	3.122E-01	2.048E-02	-0.704
RB-84		881.50	*	4.530E-02	7.207E-02	1.242E-01	1.131E-02	0.365
KR-85		513.99	*	8.917E+00	9.586E+00	1.456E+01	9.524E-01	0.613
SR-85		513.99	*	4.560E-02	4.903E-02	7.444E-02	4.871E-03	0.613
RB-86		1076.63	*	-1.043E-01	8.909E-01	1.472E+00	1.058E-01	-0.071
Y-88		898.02		-1.196E-02	4.776E-02	7.555E-02	7.080E-03	-0.158
		1836.01	*	-2.722E-02	3.429E-02	4.661E-02	2.556E-03	-0.584
ZR-88		392.90	*	4.050E-03	3.354E-02	5.538E-02	3.442E-03	0.073
Y-91		1204.90	*	-1.447E+01	1.898E+01	2.896E+01	1.703E+00	-0.500

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	1.547E-02	3.609E-02	6.165E-02	4.234E-03	0.251
		871.10		2.863E-02	3.758E-02	6.526E-02	5.855E-03	0.439
NB-95		765.79	*	1.443E-02	5.091E-02	8.327E-02	6.348E-03	0.173
NB-95M		235.69	*	-1.291E-01	1.380E-01	1.942E-01	1.859E-02	-0.665
ZR-95		724.18		-9.051E-03	1.046E-01	1.480E-01	1.185E-02	-0.061
		756.15	*	2.743E-02	7.945E-02	1.343E-01	1.140E-02	0.204
NB-97		657.90	*	-9.309E-02	7.945E-02	Half-Life too short		
		1024.50		-7.492E-01	7.945E-02	Half-Life too short		
ZR-97		254.15		5.285E+00	7.945E-02	Half-Life too short		
		355.39		-3.038E-01	7.945E-02	Half-Life too short		
		507.63	*	1.080E+00	7.945E-02	Half-Life too short		
		602.52		-2.509E+00	7.945E-02	Half-Life too short		
		1021.30		2.782E+00	7.945E-02	Half-Life too short		
		1147.95		-4.046E-01	7.945E-02	Half-Life too short		
		1362.66		3.325E-01	7.945E-02	Half-Life too short		
		1750.46		4.963E+00	7.945E-02	Half-Life too short		
MO-99		140.51		-1.281E+01	2.566E+01	4.062E+01	1.098E+01	-0.315
		181.06		-1.763E+00	1.815E+01	2.581E+01	4.545E+00	-0.068
		366.43		-3.005E+01	8.418E+01	1.354E+02	9.645E+00	-0.222
		739.58	*	1.159E+00	1.162E+01	1.932E+01	2.796E+00	0.060
		778.00		-5.009E+00	3.505E+01	5.680E+01	4.416E+00	-0.088
TC-99M		140.51	*	-1.011E+10	3.505E+01	Half-Life too short		
RH-101		127.23		-2.657E-03	3.644E-02	5.330E-02	3.159E-03	-0.050
		198.01	*	5.793E-03	3.503E-02	5.571E-02	4.141E-03	0.104
		325.23		-8.369E-02	2.668E-01	3.801E-01	3.164E-02	-0.220
RH-102		418.52		-1.120E-02	2.999E-01	4.879E-01	3.084E-02	-0.023
		475.06	*	-3.546E-02	3.141E-02	4.602E-02	2.984E-03	-0.770
		631.29		-7.433E-03	5.673E-02	9.371E-02	6.068E-03	-0.079
		697.49		1.324E-02	7.884E-02	1.323E-01	9.007E-03	0.100
		766.84		6.280E-02	1.318E-01	2.185E-01	1.669E-02	0.287
		1046.59		3.694E-02	1.170E-01	2.016E-01	1.539E-02	0.183
		1112.84		-9.646E-03	2.400E-01	3.688E-01	2.438E-02	-0.026
RU-103		497.08	*	-8.486E-03	4.003E-02	6.319E-02	8.210E-03	-0.134
	+	610.33		1.107E+01	2.581E+00	3.004E+00	4.717E-01	3.686
RH-106	+	511.85		4.674E-01	3.538E-01	4.666E-01	3.052E-02	1.002
		621.84	*	5.972E-02	3.232E-01	5.478E-01	6.626E-02	0.109
		1050.47		1.498E+00	2.474E+00	4.360E+00	3.304E-01	0.344
RU-106	+	511.85		4.674E-01	3.538E-01	4.666E-01	3.052E-02	1.002
		621.84	*	5.972E-02	3.232E-01	5.478E-01	3.558E-02	0.109
		1050.47		1.498E+00	2.474E+00	4.360E+00	3.304E-01	0.344
AG-108M		433.93	*	-1.745E-02	3.614E-02	5.674E-02	3.876E-03	-0.307
		614.37		3.851E-02	4.233E-02	6.761E-02	4.698E-03	0.570
		722.95		1.386E-02	4.323E-02	6.449E-02	4.845E-03	0.215
AG-110M		657.75	*	-3.879E-02	3.983E-02	6.134E-02	4.141E-03	-0.632
		677.61		3.423E-01	3.346E-01	5.967E-01	4.114E-02	0.574
		706.67		-1.720E-01	2.345E-01	3.655E-01	2.635E-02	-0.471
		763.93		-2.446E-01	1.923E-01	2.825E-01	2.225E-02	-0.866
		884.67		-9.610E-03	5.199E-02	8.275E-02	7.790E-03	-0.116
		937.48		-8.460E-02	1.172E-01	1.741E-01	1.613E-02	-0.486

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1384.27		1.200E-01	1.949E-01	3.047E-01	2.307E-02	0.394
IN-111		171.28		-6.993E-02	9.758E-01	1.524E+00	1.047E-01	-0.046
		245.39	*	-1.963E-01	1.089E+00	1.607E+00	1.366E-01	-0.122
IN-113M		391.69	*	-2.227E-02	4.885E-02	7.770E-02	5.108E-03	-0.287
SN-113		391.69	*	-2.227E-02	4.885E-02	7.770E-02	5.108E-03	-0.287
IN-114M		190.27	*	1.722E-01	1.983E-01	2.988E-01	2.171E-02	0.576
CD-115		260.90		-2.235E+01	1.212E+02	2.024E+02	1.790E+01	-0.110
		492.35		2.279E+01	3.428E+01	5.810E+01	3.786E+00	0.392
		527.90	*	5.830E-01	9.924E+00	1.597E+01	1.047E+00	0.037
SN-117M		156.02		-1.761E+00	2.298E+00	3.594E+00	2.335E-01	-0.490
		158.56	*	5.661E-02	5.510E-02	9.327E-02	6.121E-03	0.607
SB-122		563.90	*	7.343E-01	2.091E+00	3.602E+00	2.363E-01	0.204
		692.80		-1.431E+01	4.449E+01	7.186E+01	4.853E+00	-0.199
I-123		159.00	*	3.871E+00	4.449E+01	Half-Life too short		
		528.96		-2.010E+01	4.449E+01	Half-Life too short		
TE-123M		159.00	*	2.598E-02	2.885E-02	4.859E-02	3.228E-03	0.535
I-124		602.71	*	-6.604E-01	7.675E-01	1.014E+00	6.619E-02	-0.651
		722.78		1.786E+00	4.370E+00	6.588E+00	4.680E-01	0.271
		1325.50		4.646E+00	3.477E+01	5.793E+01	4.215E+00	0.080
		1376.25		5.990E+01	4.531E+01	7.463E+01	5.447E+00	0.803
		1509.49		5.684E+00	1.811E+01	3.053E+01	2.132E+00	0.186
		1691.02		1.776E+00	3.868E+00	6.940E+00	4.346E-01	0.256
SB-124		602.71		-3.985E-02	4.632E-02	6.121E-02	3.995E-03	-0.651
		645.85		-1.342E-01	5.481E-01	8.962E-01	6.380E-02	-0.150
		709.31		2.950E+00	2.924E+00	5.204E+00	3.614E-01	0.567
		713.82		-1.443E+00	1.666E+00	2.529E+00	2.765E-01	-0.570
		722.78		1.562E-01	3.823E-01	5.762E-01	4.223E-02	0.271
	+	968.20		1.272E+01	5.679E+00	7.590E+00	6.551E-01	1.676
		1045.16		-4.383E-01	2.575E+00	4.240E+00	3.246E-01	-0.103
		1325.50		4.340E-01	3.248E+00	5.412E+00	3.938E-01	0.080
		1368.21		-1.346E+00	1.811E+00	2.620E+00	3.321E-01	-0.514
		1436.60		2.019E+00	3.906E+00	6.828E+00	4.902E-01	0.296
		1691.02	*	3.664E-02	7.982E-02	1.432E-01	9.627E-03	0.256
SB-125		427.89	*	-9.714E-03	1.021E-01	1.651E-01	1.086E-02	-0.059
	+	463.38		8.236E-01	4.612E-01	5.607E-01	4.113E-02	1.469
		600.56		7.808E-02	1.807E-01	3.120E-01	2.292E-02	0.250
		635.90		-1.243E-01	2.721E-01	4.364E-01	3.216E-02	-0.285
TE-125M		109.28	*	-2.357E+00	9.055E+00	1.483E+01	1.399E+00	-0.159
I-126		388.63		1.235E-01	2.120E-01	3.605E-01	2.281E-02	0.343
		666.33	*	-1.109E-01	2.023E-01	3.226E-01	2.081E-02	-0.344
		753.82		6.166E-01	1.597E+00	2.709E+00	2.026E-01	0.228
SB-126		223.80		-6.850E-02	4.228E+00	6.693E+00	5.363E-01	-0.010
		278.60		3.227E-01	2.713E+00	4.410E+00	4.069E-01	0.073
	+	296.50		1.414E+01	2.432E+00	3.822E+00	3.421E-01	3.700
		414.70		-7.367E-03	8.119E-02	1.317E-01	8.306E-03	-0.056
		415.30		2.553E+00	6.507E+00	1.090E+01	6.876E-01	0.234
		555.20		3.328E+00	3.953E+00	7.053E+00	4.627E-01	0.472
		573.80		9.490E-02	1.184E+00	2.001E+00	1.311E-01	0.047
		593.00		-4.210E-01	9.565E-01	1.551E+00	1.014E-01	-0.271

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		656.30		2.428E+00	3.578E+00	6.246E+00	4.007E-01	0.389
		666.33		-4.631E-02	8.450E-02	1.347E-01	8.692E-03	-0.344
		675.00		-3.008E-02	2.176E+00	3.610E+00	2.364E-01	-0.008
		695.00		1.767E-02	8.192E-02	1.362E-01	9.233E-03	0.130
		697.00		1.512E-01	2.760E-01	4.762E-01	3.239E-02	0.317
		720.50	*	2.870E-02	1.496E-01	2.293E-01	1.623E-02	0.125
		856.80		-3.020E-01	6.238E-01	8.218E-01	7.217E-02	-0.367
		989.30		5.180E-01	1.299E+00	2.177E+00	1.826E-01	0.238
		1034.80		-8.866E+00	8.878E+00	1.330E+01	1.037E+00	-0.667
		1213.00		-1.923E+00	5.219E+00	8.347E+00	4.984E-01	-0.230
SB-127		61.10		-2.930E+01	6.445E+01	9.638E+01	1.091E+01	-0.304
		252.40		-7.944E-01	4.381E+00	7.318E+00	3.075E+00	-0.109
		290.80		-1.827E+01	2.381E+01	3.296E+01	3.767E+00	-0.554
		411.60		1.453E+00	1.330E+01	2.186E+01	3.176E+00	0.066
		444.90		7.329E+00	1.018E+01	1.730E+01	1.913E+00	0.424
		473.00		-1.621E-02	1.625E+00	2.622E+00	3.008E-01	-0.006
		543.00		3.596E+00	1.590E+01	2.590E+01	3.420E+00	0.139
		603.60		-1.233E+01	1.307E+01	1.698E+01	1.884E+00	-0.726
		685.20	*	-6.791E-01	1.345E+00	2.133E+00	2.113E-01	-0.318
		698.50		-1.317E+01	1.574E+01	2.413E+01	3.586E+00	-0.546
		722.20		2.589E-01	3.108E+01	4.453E+01	4.432E+00	0.006
		783.80		3.316E+00	3.828E+00	6.683E+00	7.903E-01	0.496
XE-127		57.60		1.633E-01	6.998E+00	1.196E+01	1.047E+00	0.014
		145.22		-1.065E-01	6.998E-01	1.133E+00	7.065E-02	-0.094
		172.10		-9.100E-02	1.244E-01	1.876E-01	1.292E-02	-0.485
		202.84	*	3.284E-03	5.025E-02	8.041E-02	6.064E-03	0.041
		374.96		-1.710E-01	2.183E-01	3.409E-01	2.327E-02	-0.502
I-131		80.18		1.606E-01	5.255E+00	7.291E+00	7.945E-01	0.022
		284.30		-1.401E+00	1.444E+00	2.279E+00	2.184E-01	-0.615
		364.48	*	-4.102E-02	1.164E-01	1.873E-01	1.450E-02	-0.219
		636.97		-7.984E-01	1.554E+00	2.483E+00	1.761E-01	-0.322
		722.89		2.534E+00	7.150E+00	1.071E+01	7.679E-01	0.237
TE-132		49.72		4.892E+00	2.885E+01	4.514E+01	4.883E+00	0.108
		111.76		2.605E+00	2.839E+01	4.614E+01	4.468E+00	0.056
		116.30		6.132E-01	2.637E+01	4.357E+01	4.030E+00	0.014
		228.16	*	-1.473E-01	6.990E-01	1.093E+00	1.682E-01	-0.135
BA-133		53.15		-3.984E+00	4.721E+00	7.602E+00	6.804E-01	-0.524
		79.62		-2.426E-03	1.387E+00	2.098E+00	3.473E-01	-0.001
		81.00		8.438E-02	1.231E-01	1.553E-01	2.678E-02	0.543
		276.40		3.246E-01	3.858E-01	6.688E-01	9.891E-02	0.485
	+	302.84		2.091E-01	2.251E-01	2.454E-01	3.293E-02	0.852
		356.01	*	-2.435E-02	4.890E-02	6.746E-02	8.415E-03	-0.361
		383.85		-1.888E-03	3.062E-01	5.023E-01	5.659E-02	-0.004
I-133	+	510.53		7.842E-01	3.062E-01	Half-Life too short		
		529.87	*	-6.603E-04	3.062E-01	Half-Life too short		
		706.58		-2.933E-01	3.062E-01	Half-Life too short		
		856.28		5.596E-02	3.062E-01	Half-Life too short		
		875.33		-2.908E-02	3.062E-01	Half-Life too short		
	+	1236.41		1.212E+00	3.062E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		1298.22		3.026E-01	3.062E-01	Half-Life too short		
CS-134		475.35		-1.568E+00	2.012E+00	3.041E+00	1.972E-01	-0.516
		563.23		2.370E-01	3.934E-01	6.880E-01	4.586E-02	0.344
		569.32		-6.353E-03	2.087E-01	3.505E-01	2.352E-02	-0.018
		604.70		-1.581E-02	3.750E-02	5.208E-02	3.412E-03	-0.303
	+	795.84	*	1.055E-01	7.456E-02	1.019E-01	8.217E-03	1.035
		801.93		-2.502E-01	5.047E-01	6.706E-01	5.449E-02	-0.373
		1038.57		-4.342E-01	4.085E+00	6.773E+00	5.246E-01	-0.064
		1167.94		-1.239E+00	2.539E+00	4.003E+00	2.254E-01	-0.310
		1365.15		-1.112E+00	1.197E+00	1.658E+00	1.289E-01	-0.671
CS-135		268.24	*	-5.382E-02	1.646E-01	2.725E-01	2.807E-02	-0.197
I-135		288.45		1.349E+10	1.646E-01	Half-Life too short		
		417.63		-8.091E+09	1.646E-01	Half-Life too short		
		546.56		-1.950E+09	1.646E-01	Half-Life too short		
		836.80		1.044E+10	1.646E-01	Half-Life too short		
		1038.76		-4.985E+08	1.646E-01	Half-Life too short		
		1124.00		1.371E+10	1.646E-01	Half-Life too short		
		1131.51		-1.604E+09	1.646E-01	Half-Life too short		
		1260.41	*	5.206E+08	1.646E-01	Half-Life too short		
		1457.56		2.099E+11	1.646E-01	Half-Life too short		
		1678.03		1.553E+08	1.646E-01	Half-Life too short		
		1706.46		5.810E+09	1.646E-01	Half-Life too short		
		1791.20		-2.205E+09	1.646E-01	Half-Life too short		
CS-136		66.91		-7.892E-01	9.386E-01	1.349E+00	2.159E-01	-0.585
	+	86.29		4.615E+00	1.502E+00	2.019E+00	3.030E-01	2.286
		153.22		-2.071E-01	6.573E-01	1.052E+00	8.137E-02	-0.197
		163.89		8.023E-01	1.090E+00	1.769E+00	1.415E-01	0.453
		176.55		2.815E-02	3.650E-01	5.899E-01	4.473E-02	0.048
		273.65		-8.987E-01	4.967E-01	7.515E-01	7.259E-02	-1.196
		340.57		3.333E-01	1.509E-01	2.505E-01	2.051E-02	1.331
		818.51		-6.300E-03	7.635E-02	1.237E-01	1.026E-02	-0.051
		1048.07	*	-4.690E-02	1.159E-01	1.866E-01	1.497E-02	-0.251
		1235.34		8.967E-01	6.715E-01	1.101E+00	1.127E-01	0.814
BA-137M		661.65	*	1.389E-02	4.092E-02	6.965E-02	4.457E-03	0.199
CS-137		661.65	*	1.469E-02	4.326E-02	7.362E-02	4.728E-03	0.199
CE-139		165.85	*	-1.417E-02	2.973E-02	4.693E-02	3.176E-03	-0.302
BA-140		162.64		1.278E-01	7.744E-01	1.227E+00	8.975E-02	0.104
		304.84		2.943E-01	1.400E+00	2.087E+00	5.861E-01	0.141
		423.70		1.031E+00	2.007E+00	3.342E+00	1.066E+00	0.309
		537.32	*	2.217E-02	2.630E-01	4.234E-01	1.383E-01	0.052
LA-140	+	328.77		7.728E-01	4.283E-01	5.935E-01	5.186E-02	1.302
		432.53		2.748E-01	2.194E+00	3.600E+00	2.494E-01	0.076
		487.03		1.506E-01	1.347E-01	2.360E-01	1.699E-02	0.638
		751.79		7.561E-02	1.780E+00	2.940E+00	2.499E-01	0.026
		815.85		1.538E-01	3.353E-01	5.709E-01	5.300E-02	0.269
		867.82		-1.590E+00	1.814E+00	2.223E+00	2.082E-01	-0.716
		919.63		5.374E-01	2.877E+00	4.743E+00	5.250E-01	0.113
		925.24		2.535E-01	1.242E+00	2.047E+00	1.965E-01	0.124
		1596.49	*	-3.889E-02	8.662E-02	1.349E-01	9.011E-03	-0.288

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	-2.548E-02	6.284E-02	1.005E-01	6.491E-03	-0.253
CE-143		57.37		9.426E-05	6.284E-02	Half-Life too short		
		231.56		1.571E-03	6.284E-02	Half-Life too short		
		293.26	*	4.449E-04	6.284E-02	Half-Life too short		
	+	350.59		3.002E-02	6.284E-02	Half-Life too short		
		490.36		-1.134E-03	6.284E-02	Half-Life too short		
		664.57		-5.369E-05	6.284E-02	Half-Life too short		
		721.93		6.858E-05	6.284E-02	Half-Life too short		
CE-144		80.11		3.608E-02	2.469E+00	3.422E+00	3.712E-01	0.011
		133.54	*	3.014E-01	2.256E-01	3.499E-01	5.000E-02	0.861
PM-144		476.78		2.834E-02	7.016E-02	1.167E-01	8.786E-03	0.243
		618.01		-2.320E-02	3.335E-02	5.270E-02	3.591E-03	-0.440
		696.49	*	2.530E-02	3.594E-02	6.270E-02	4.264E-03	0.404
		778.57		2.588E-01	2.469E+00	4.087E+00	3.182E-01	0.063
PR-144		696.49	*	1.714E+00	2.435E+00	4.248E+00	2.887E-01	0.404
		1489.15		4.536E+00	1.247E+01	2.138E+01	1.506E+00	0.212
PM-146		453.90	*	-7.627E-03	4.569E-02	7.311E-02	6.624E-03	-0.104
		633.02		5.175E-02	1.378E+00	2.307E+00	8.522E-01	0.022
		735.90		-2.058E-01	1.688E-01	2.098E-01	5.920E-02	-0.981
		747.13		-6.120E-02	9.695E-02	1.501E-01	2.000E-02	-0.408
ND-147	+	91.11		8.639E-01	3.387E-01	5.117E-01	5.893E-02	1.688
		319.41		-1.274E+00	3.311E+00	5.379E+00	4.554E-01	-0.237
		439.89		-5.045E+00	6.163E+00	9.393E+00	6.008E-01	-0.537
		531.02	*	-7.029E-02	5.695E-01	9.013E-01	1.249E-01	-0.078
PM-149		285.90	*	-4.079E+01	8.440E+01	1.373E+02	2.174E+01	-0.297
EU-152		121.78		-4.682E-02	7.473E-02	1.196E-01	9.209E-03	-0.392
		244.69		-5.540E-02	3.499E-01	5.174E-01	4.388E-02	-0.107
		344.27	*	-1.766E-02	1.076E-01	1.629E-01	1.364E-02	-0.108
		443.98		7.225E-01	1.031E+00	1.754E+00	1.124E-01	0.412
		778.89		-6.465E-02	2.920E-01	4.699E-01	3.658E-02	-0.138
		867.32		-5.793E-01	1.046E+00	1.349E+00	1.203E-01	-0.430
		964.01		3.500E-01	3.596E-01	5.583E-01	4.845E-02	0.627
		1085.78		-1.513E-01	4.346E-01	7.012E-01	4.942E-02	-0.216
		1112.02		-6.781E-02	3.254E-01	5.186E-01	3.435E-02	-0.131
		1407.95		1.516E-01	2.241E-01	3.933E-01	2.848E-02	0.386
GD-153		69.67		1.264E+00	1.911E+00	2.997E+00	2.949E-01	0.422
	+	83.37		3.115E+01	1.836E+01	2.430E+01	2.727E+00	1.282
		97.43	*	1.650E-02	8.329E-02	1.258E-01	1.197E-02	0.131
		103.18		-7.713E-02	1.012E-01	1.623E-01	1.373E-02	-0.475
EU-154		123.07		3.163E-02	5.228E-02	8.809E-02	8.335E-03	0.359
		247.94		3.494E-01	3.579E-01	6.298E-01	7.197E-02	0.555
		591.81		-5.702E-01	6.509E-01	1.015E+00	1.039E-01	-0.562
		723.30		-6.160E-02	1.894E-01	2.593E-01	2.123E-02	-0.238
		756.87		8.262E-02	8.778E-01	1.455E+00	1.630E-01	0.057
		873.19		3.880E-01	3.292E-01	5.873E-01	7.349E-02	0.661
		996.32		-3.446E-01	3.934E-01	5.614E-01	9.887E-02	-0.614
		1004.76		-4.254E-02	2.306E-01	3.808E-01	4.314E-02	-0.112
		1274.45	*	-2.862E-02	1.283E-01	2.058E-01	2.039E-02	-0.139
EU-155		48.70		-1.954E+00	3.944E+00	5.950E+00	4.971E-01	-0.328

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		60.01		1.928E-01	5.900E+00	9.080E+00	7.925E-01	0.021
	+	86.54		4.314E-01	1.343E-01	1.907E-01	2.229E-02	2.262
		105.31	*	2.358E-02	1.065E-01	1.783E-01	1.468E-02	0.132
TB-160	+	86.79		1.150E+00	3.577E-01	5.147E-01	6.000E-02	2.234
		197.04		-5.531E-01	6.099E-01	9.172E-01	6.799E-02	-0.603
		215.65		5.918E-01	8.055E-01	1.325E+00	1.037E-01	0.447
		298.57		1.083E-01	1.136E-01	1.984E-01	1.768E-02	0.546
		879.36	*	-1.852E-02	1.478E-01	2.370E-01	2.152E-02	-0.078
		962.29		5.980E-02	6.334E-01	8.905E-01	7.745E-02	0.067
		966.15		6.324E-01	2.878E-01	4.833E-01	4.183E-02	1.309
		1177.93		-1.995E-01	4.092E-01	6.483E-01	3.620E-02	-0.308
		1271.85		2.353E-01	7.637E-01	1.296E+00	8.610E-02	0.182
HO-166M		80.57		2.797E-01	3.446E-01	4.399E-01	4.794E-02	0.636
		184.41		1.704E-02	4.394E-02	6.963E-02	4.971E-03	0.245
		280.46		-1.436E-01	9.684E-02	1.429E-01	1.318E-02	-1.005
		410.95		1.252E-01	2.769E-01	4.645E-01	2.923E-02	0.269
		711.68	*	1.803E-02	6.159E-02	1.043E-01	7.274E-03	0.173
		752.31		-6.310E-03	2.935E-01	4.821E-01	3.596E-02	-0.013
		810.29		-4.124E-02	6.662E-02	1.027E-01	8.403E-03	-0.401
TM-171		51.35		2.825E+01	4.114E+01	7.241E+01	6.436E+00	0.390
		52.39		-1.303E+01	2.124E+01	3.463E+01	3.097E+00	-0.376
		59.40		9.270E+00	3.245E+01	5.063E+01	4.373E+00	0.183
		66.72	*	-1.760E+01	3.357E+01	4.940E+01	4.729E+00	-0.356
LU-176	+	88.36		8.496E-01	2.643E-01	3.620E-01	4.241E-02	2.347
		201.83		-2.797E-02	3.115E-02	4.739E-02	3.563E-03	-0.590
		306.84	*	-7.619E-03	2.900E-02	4.167E-02	3.644E-03	-0.183
		401.10		3.409E-03	6.777E+00	1.109E+01	6.932E-01	0.000
LU-177		112.95		-4.487E-01	1.656E+00	2.652E+00	1.863E-01	-0.169
	+	208.36	*	2.368E+00	1.304E+00	1.968E+00	1.508E-01	1.204
LU-177M		52.97		-1.573E+00	2.154E+00	3.491E+00	3.124E-01	-0.451
		54.07		-1.145E+00	1.101E+00	1.753E+00	1.567E-01	-0.653
		61.30		-6.311E-01	1.737E+00	2.612E+00	2.336E-01	-0.242
		121.62		-3.763E-01	3.842E-01	6.046E-01	3.590E-02	-0.622
		147.16		-1.140E-01	6.497E-01	1.050E+00	6.591E-02	-0.109
		171.86		-3.046E-01	5.014E-01	7.611E-01	5.237E-02	-0.400
		218.09		2.181E-01	8.957E-01	1.440E+00	1.135E-01	0.151
		268.79		6.691E-01	8.508E-01	1.479E+00	1.333E-01	0.452
		319.02		-2.089E-01	2.629E-01	4.156E-01	3.522E-02	-0.503
		367.43		-4.008E-01	9.820E-01	1.575E+00	1.116E-01	-0.254
		413.65	*	-5.122E-02	1.949E-01	3.127E-01	1.971E-02	-0.164
HF-181		56.28		7.336E-02	1.121E+00	1.921E+00	1.697E-01	0.038
		57.53		1.184E-02	5.899E-01	1.008E+00	8.829E-02	0.012
		65.20		-1.752E-01	1.095E+00	1.662E+00	1.566E-01	-0.105
		133.02		1.876E-02	7.356E-02	1.093E-01	6.562E-03	0.172
		136.25		3.217E-02	4.601E-01	7.550E-01	4.574E-02	0.043
		345.85		-1.207E-01	2.263E-01	3.133E-01	2.433E-02	-0.385
		482.03	*	-7.410E-02	4.610E-02	6.414E-02	4.168E-03	-1.155
W-181		56.28		2.885E-02	4.398E-01	7.537E-01	6.658E-02	0.038
		57.53		4.629E-03	2.317E-01	3.960E-01	3.468E-02	0.012

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		65.20	*	-6.828E-02	4.267E-01	6.475E-01	6.102E-02	-0.105
TA-182		67.75		-1.313E-01	1.347E-01	1.932E-01	1.868E-02	-0.680
		100.10		-1.031E-01	1.797E-01	2.826E-01	2.543E-02	-0.365
		152.43		-7.619E-04	3.365E-01	5.467E-01	3.502E-02	-0.001
		222.10		-4.389E-02	3.643E-01	5.738E-01	4.575E-02	-0.076
		1001.68		-3.263E-01	2.388E+00	3.772E+00	3.105E-01	-0.087
	+	1121.28		6.031E-01	2.638E-01	3.985E-01	2.578E-02	1.513
		1189.05		-3.071E-02	3.209E-01	5.263E-01	3.003E-02	-0.058
		1221.42	*	-3.053E-02	2.103E-01	3.426E-01	2.078E-02	-0.089
		1230.97		2.685E-01	5.163E-01	7.860E-01	4.852E-02	0.342
RE-183		57.98		3.793E-02	2.374E-01	3.907E-01	3.410E-02	0.097
		59.32		4.771E-02	1.328E-01	2.080E-01	1.797E-02	0.229
		67.20		-1.633E-01	2.386E-01	3.480E-01	3.347E-02	-0.469
		162.32	*	-1.941E-02	1.148E-01	1.791E-01	1.194E-02	-0.108
	+	208.81		2.178E+00	1.199E+00	1.842E+00	1.414E-01	1.183
		291.72		-7.329E-01	1.053E+00	1.466E+00	1.325E-01	-0.500
RE-184		57.98		1.400E-01	8.762E-01	1.442E+00	1.258E-01	0.097
		59.32		1.759E-01	4.896E-01	7.668E-01	6.626E-02	0.229
		67.20		-6.025E-01	8.801E-01	1.284E+00	1.235E-01	-0.469
		161.27		-4.637E-01	3.693E-01	5.608E-01	3.722E-02	-0.827
		216.55		-1.330E-02	2.894E-01	4.585E-01	3.599E-02	-0.029
		252.85	*	7.179E-02	2.407E-01	4.123E-01	3.572E-02	0.174
		318.01		-3.947E-01	4.713E-01	7.444E-01	6.325E-02	-0.530
		792.07		3.772E-01	1.221E+00	1.796E+00	1.428E-01	0.210
		903.28		1.150E-01	1.104E+00	1.758E+00	1.633E-01	0.065
		920.93		4.299E-02	4.892E-01	7.981E-01	7.281E-02	0.054
OS-185		59.72		1.167E-01	3.508E-01	5.486E-01	4.759E-02	0.213
		61.14		-8.341E-02	1.911E-01	2.862E-01	2.553E-02	-0.291
		69.30		2.599E-01	3.230E-01	5.383E-01	5.279E-02	0.483
		592.07		-2.195E+00	2.597E+00	4.066E+00	2.658E-01	-0.540
		646.12	*	-7.489E-03	4.700E-02	7.737E-02	4.984E-03	-0.097
		717.42		-5.115E-01	8.719E-01	1.361E+00	9.585E-02	-0.376
		874.81		2.446E-02	6.355E-01	1.036E+00	9.346E-02	0.024
		880.27		1.150E-01	7.966E-01	1.312E+00	1.193E-01	0.088
RE-188		155.03	*	8.669E-02	1.710E-01	2.838E-01	1.836E-02	0.305
		477.96		2.712E+00	3.291E+00	5.628E+00	3.653E-01	0.482
		633.10		8.511E-02	2.777E+00	4.647E+00	3.007E-01	0.018
W-188	+	63.58		3.211E+01	1.044E+02	1.059E+02	9.795E+00	0.303
		227.08		3.888E+00	1.339E+01	2.153E+01	1.741E+00	0.181
		290.67	*	-4.943E+00	8.463E+00	1.191E+01	1.079E+00	-0.415
IR-192	+	295.96		1.095E+00	1.887E-01	3.081E-01	2.779E-02	3.555
		308.46		2.784E-02	1.073E-01	1.688E-01	1.478E-02	0.165
		316.51	*	3.759E-02	3.418E-02	6.026E-02	5.154E-03	0.624
		468.07		-2.593E-02	7.488E-02	1.015E-01	7.385E-03	-0.255
		604.41		-4.459E-01	5.259E-01	6.914E-01	8.115E-02	-0.645
		612.46		1.335E+00	8.764E-01	1.444E+00	1.174E-01	0.925
AU-195		65.12		-3.408E-02	1.979E-01	3.001E-01	2.826E-02	-0.114
		66.83		-5.039E-02	1.110E-01	1.640E-01	1.572E-02	-0.307
	+	75.70		1.011E+00	2.651E-01	4.592E-01	4.771E-02	2.201

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		98.88	*	5.826E-02	2.294E-01	3.747E-01	3.457E-02	0.155
	+	129.76		6.221E+00	3.904E+00	5.006E+00	2.983E-01	1.243
TL-200		367.94	*	-9.050E-05	3.904E+00	Half-Life too short		
		579.30		-8.979E-04	3.904E+00	Half-Life too short		
		828.27		3.878E-03	3.904E+00	Half-Life too short		
		1205.75		-2.534E-04	3.904E+00	Half-Life too short		
TL-201		68.90		4.267E+00	4.914E+00	8.211E+00	8.024E-01	0.520
		70.82		9.823E-01	2.916E+00	4.508E+00	4.482E-01	0.218
		80.30		5.661E-01	6.343E+00	7.689E+00	8.357E-01	0.074
		135.34		-1.849E+01	2.480E+01	3.923E+01	2.371E+00	-0.471
		167.43	*	-1.797E+00	6.510E+00	1.037E+01	7.049E-01	-0.173
TL-202		68.90		4.001E-01	4.607E-01	7.698E-01	7.523E-02	0.520
		70.82		9.184E-02	2.726E-01	4.215E-01	4.190E-02	0.218
		80.30		5.294E-02	5.932E-01	7.192E-01	7.816E-02	0.074
		439.56	*	-4.294E-02	7.301E-02	1.134E-01	7.250E-03	-0.379
HG-203		70.83		4.042E-01	1.194E+00	1.845E+00	2.672E-01	0.219
		72.87		1.856E-01	6.909E-01	1.062E+00	1.512E-01	0.175
		82.60		-6.561E-02	1.126E+00	1.694E+00	2.616E-01	-0.039
		279.20	*	-4.829E-02	4.571E-02	6.949E-02	6.581E-03	-0.695
BI-207		72.80		2.562E-02	2.026E-01	3.097E-01	3.134E-02	0.083
	+	74.97		5.612E-01	1.472E-01	2.268E-01	2.341E-02	2.475
	+	84.90		4.032E-01	2.377E-01	3.205E-01	3.658E-02	1.258
		569.67		-8.179E-03	3.251E-02	5.373E-02	3.523E-03	-0.152
		1063.62	*	4.627E-02	5.739E-02	1.019E-01	7.524E-03	0.454
		1770.23		7.024E-01	4.554E-01	9.227E-01	5.398E-02	0.761
TL-207		81.07		-1.265E-02	2.847E-01	3.413E-01	3.739E-02	-0.037
	+	83.78		2.658E-01	1.567E-01	2.088E-01	2.353E-02	1.273
		94.90		2.623E-01	2.496E-01	3.910E-01	3.926E-02	0.671
		122.32		-5.149E-01	1.808E+00	2.940E+00	1.992E-01	-0.175
		144.24		7.823E-02	7.238E-01	1.158E+00	8.767E-02	0.068
		154.21		-4.238E-02	3.993E-01	6.452E-01	4.877E-02	-0.066
		269.46		2.869E-01	2.023E-01	3.588E-01	3.302E-02	0.799
		323.87	*	-1.287E-01	7.592E-01	1.093E+00	1.922E-01	-0.118
	+	338.28		6.935E+00	1.929E+00	2.661E+00	3.159E-01	2.607
		445.03		1.629E+00	2.465E+00	4.177E+00	4.438E-01	0.390
PO-209		260.50		1.268E+00	9.560E+00	1.623E+01	1.433E+00	0.078
		262.80		7.270E+00	2.649E+01	4.524E+01	4.019E+00	0.161
		896.60	*	4.857E-01	8.467E+00	1.380E+01	1.285E+00	0.035
BI-210		46.50	*	-7.400E-02	6.199E+00	9.423E+00	7.593E-01	-0.008
PB-210		46.50	*	-7.400E-02	6.199E+00	9.423E+00	7.593E-01	-0.008
PO-210		46.50	*	-7.400E-02	6.199E+00	9.423E+00	6.617E-01	-0.008
PB-211		404.84	*	-1.034E+00	1.180E+00	1.500E+00	9.356E-01	-0.689
		427.08		-1.229E+00	2.452E+00	3.662E+00	2.265E+00	-0.336
		831.96		-1.849E+00	1.855E+00	2.105E+00	1.319E+00	-0.878
BI-212	+	727.18	*	9.188E-01	5.855E-01	6.988E-01	6.135E-02	1.315
		785.46		9.968E-01	1.954E+00	3.334E+00	2.623E-01	0.299
		1620.62		1.143E-02	1.201E+00	2.010E+00	1.323E-01	0.006
PO-215		81.07		-1.265E-02	2.847E-01	3.413E-01	3.739E-02	-0.037
	+	83.78		2.658E-01	1.567E-01	2.088E-01	2.353E-02	1.273

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		2.623E-01	2.496E-01	3.910E-01	3.926E-02	0.671
		122.32		-5.149E-01	1.808E+00	2.940E+00	1.992E-01	-0.175
		144.24		7.823E-02	7.238E-01	1.158E+00	8.767E-02	0.068
		154.21		-4.238E-02	3.993E-01	6.452E-01	4.877E-02	-0.066
		269.46		2.869E-01	2.023E-01	3.588E-01	3.302E-02	0.799
		323.87	*	-1.287E-01	7.592E-01	1.093E+00	1.922E-01	-0.118
	+	338.28		6.935E+00	1.929E+00	2.661E+00	3.159E-01	2.607
		445.03		1.629E+00	2.465E+00	4.177E+00	4.438E-01	0.390
RN-219		271.23		5.643E-01	2.682E-01	4.804E-01	5.135E-02	1.175
		401.81	*	-4.698E-02	4.185E-01	6.793E-01	9.378E-02	-0.069
RN-220		549.76	*	1.086E+00	2.795E+01	4.475E+01	2.936E+00	0.024
RA-223		81.07		-1.265E-02	2.847E-01	3.413E-01	3.739E-02	-0.037
	+	83.78		2.658E-01	1.567E-01	2.088E-01	2.353E-02	1.273
		94.90		2.623E-01	2.496E-01	3.910E-01	3.926E-02	0.671
		122.32		-5.149E-01	1.808E+00	2.940E+00	1.992E-01	-0.175
		144.24		7.823E-02	7.238E-01	1.158E+00	8.767E-02	0.068
		154.21		-4.238E-02	3.993E-01	6.452E-01	4.877E-02	-0.066
		269.46		2.869E-01	2.023E-01	3.588E-01	3.302E-02	0.799
		323.87	*	-1.287E-01	7.592E-01	1.093E+00	1.922E-01	-0.118
	+	338.28		6.935E+00	1.929E+00	2.661E+00	3.159E-01	2.607
		445.03		1.629E+00	2.465E+00	4.177E+00	4.438E-01	0.390
AC-227		79.80		-3.010E-02	1.914E+00	2.649E+00	5.954E-01	-0.011
		236.00		6.176E-02	2.557E-01	3.888E-01	4.670E-02	0.159
		256.20	*	-1.965E-02	4.069E-01	6.853E-01	1.056E-01	-0.029
		286.10		-6.842E-01	1.528E+00	2.494E+00	3.377E-01	-0.274
	+	299.80		3.875E+00	1.956E+00	2.754E+00	4.854E-01	1.407
	+	304.40		2.750E+00	2.980E+00	3.093E+00	5.729E-01	0.889
		334.20		-1.486E-01	2.685E+00	3.625E+00	6.953E-01	-0.041
TH-227		79.80		-3.010E-02	1.914E+00	2.649E+00	6.023E-01	-0.011
	+	94.00		6.636E+00	3.195E+00	4.083E+00	9.174E-01	1.625
		236.00		6.176E-02	2.557E-01	3.888E-01	4.207E-02	0.159
		256.20	*	-1.965E-02	4.069E-01	6.853E-01	1.242E-01	-0.029
		286.10		-6.842E-01	1.673E+00	2.494E+00	2.504E+00	-0.274
	+	299.80		3.875E+00	1.956E+00	2.754E+00	4.854E-01	1.407
	+	304.40		2.750E+00	2.980E+00	3.093E+00	5.729E-01	0.889
		334.20		-1.486E-01	2.685E+00	3.625E+00	6.953E-01	-0.041
TH-229	+	85.43		3.980E-01	2.346E-01	3.230E-01	3.708E-02	1.232
	+	88.47		4.891E-01	1.522E-01	2.080E-01	2.430E-02	2.351
		100.00		-7.154E-02	1.854E-01	2.941E-01	2.652E-02	-0.243
		193.63	*	-3.026E-02	5.306E-01	8.468E-01	6.214E-02	-0.036
		210.97		8.008E-01	9.502E-01	1.411E+00	1.089E-01	0.568
PA-231		283.67	*	-7.479E-01	1.518E+00	2.469E+00	3.829E-01	-0.303
	+	301.29		1.550E+00	7.579E-01	1.117E+00	1.387E-01	1.387
TH-231		81.07		-1.265E-02	2.847E-01	3.413E-01	3.739E-02	-0.037
	+	83.78		2.658E-01	1.567E-01	2.088E-01	2.353E-02	1.273
		94.90		2.623E-01	2.496E-01	3.910E-01	3.926E-02	0.671
		122.32		-5.149E-01	1.808E+00	2.940E+00	1.992E-01	-0.175
		144.24		7.823E-02	7.238E-01	1.158E+00	8.767E-02	0.068
		154.21		-4.238E-02	3.993E-01	6.452E-01	4.877E-02	-0.066

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		2.869E-01	2.023E-01	3.588E-01	3.302E-02	0.799
		323.87	*	-1.287E-01	7.592E-01	1.093E+00	1.922E-01	-0.118
	+	338.28		6.935E+00	1.929E+00	2.661E+00	3.159E-01	2.607
		445.03		1.629E+00	2.465E+00	4.177E+00	4.438E-01	0.390
U-231	+	84.21		1.100E+01	6.482E+00	8.654E+00	9.802E-01	1.271
	+	92.29		6.296E+00	2.757E+00	4.283E+00	4.561E-01	1.470
		95.87	*	-3.388E-01	1.104E+00	1.624E+00	1.596E-01	-0.209
		108.00		8.962E-02	1.968E+00	3.268E+00	2.520E-01	0.027
PA-233	+	75.28		1.638E+01	4.771E+00	6.677E+00	1.094E+00	2.452
	+	86.59		7.012E+00	2.816E+00	3.109E+00	8.685E-01	2.255
	+	300.12		1.080E+00	5.361E-01	7.681E-01	1.154E-01	1.406
		311.98	*	-7.890E-02	6.622E-02	1.020E-01	9.056E-03	-0.774
		340.50		1.735E+00	8.465E-01	1.254E+00	2.959E-01	1.383
		398.62		-2.130E+00	2.188E+00	3.215E+00	8.347E-01	-0.662
		415.76		4.587E-01	1.734E+00	2.876E+00	5.964E-01	0.160
PA-234	+	63.00		9.335E-01	3.036E+00	3.152E+00	4.986E-01	0.296
		94.67		4.421E-01	1.865E-01	2.965E-01	3.993E-02	1.491
		98.44		4.135E-02	9.895E-02	1.523E-01	8.512E-02	0.272
		99.86		-1.564E-01	4.705E-01	7.485E-01	6.768E-02	-0.209
		111.00		-1.279E-01	1.832E-01	2.933E-01	3.278E-02	-0.436
		131.20		2.433E-02	1.124E-01	1.668E-01	9.972E-03	0.146
		152.70		1.708E-01	3.227E-01	5.350E-01	8.583E-02	0.319
	+	186.00		4.325E+00	2.632E+00	2.878E+00	8.876E-01	1.503
		226.40		-1.318E-01	4.384E-01	6.824E-01	8.769E-02	-0.193
		227.20		1.470E-01	4.544E-01	7.316E-01	5.917E-02	0.201
		248.90		-2.572E-01	8.296E-01	1.379E+00	3.088E-01	-0.187
		293.70		5.230E+00	1.313E+00	1.776E+00	3.107E-01	2.945
		369.80		4.961E-01	9.294E-01	1.570E+00	3.327E-01	0.316
		568.70		7.610E-02	1.066E+00	1.803E+00	1.182E-01	0.042
		569.50		-2.848E-02	2.874E-01	4.803E-01	3.149E-02	-0.059
		574.00		8.942E-02	1.720E+00	2.902E+00	1.902E-01	0.031
		699.00		-6.185E-01	7.795E-01	1.196E+00	2.193E-01	-0.517
		706.10		-7.450E-01	1.199E+00	1.810E+00	8.018E-01	-0.412
		733.00		1.726E-01	3.960E-01	5.973E-01	1.296E-01	0.289
		742.81		4.791E-01	1.536E+00	2.539E+00	1.703E+00	0.189
	+	796.30		2.051E+00	1.542E+00	1.950E+00	5.237E-01	1.052
		805.60		-3.129E-01	1.097E+00	1.763E+00	5.378E-01	-0.178
		819.60		-2.271E-01	1.279E+00	2.047E+00	7.771E-01	-0.111
		826.30		7.072E-01	9.644E-01	1.589E+00	7.102E-01	0.445
		831.60		-9.157E-01	7.969E-01	1.093E+00	3.256E-01	-0.838
		876.40		-8.492E-01	1.275E+00	1.370E+00	1.409E+00	-0.620
		880.51		6.547E-02	2.879E-01	4.783E-01	4.351E-02	0.137
		883.24		1.961E-01	3.203E-01	5.060E-01	3.405E-01	0.388
		899.00		-4.113E-01	9.422E-01	1.432E+00	6.282E-01	-0.287
		925.00		2.668E-01	1.307E+00	2.155E+00	1.958E-01	0.124
		926.50		1.346E-02	2.049E-01	3.331E-01	8.473E-02	0.040
		946.00	*	4.878E-02	3.305E-01	5.409E-01	1.021E-01	0.090
		949.00		4.418E-01	4.997E-01	8.713E-01	7.704E-02	0.507
		980.50		5.283E-01	7.476E-01	1.292E+00	1.097E-01	0.409

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-6.185E-02	1.152E+00	1.863E+00	1.209E+00	-0.033
PA-234M		766.41		1.000E+01	2.264E+01	3.534E+01	2.706E+01	0.283
		1001.03	*	9.361E-01	7.563E+00	1.225E+01	1.334E+00	0.076
U-235	+	89.95		3.494E+00	1.712E+00	1.909E+00	6.050E-01	1.831
	+	93.35		2.065E+00	1.059E+00	1.395E+00	3.994E-01	1.479
		105.00		4.164E-01	1.047E+00	1.754E+00	5.212E-01	0.237
		143.76	*	-6.895E-02	2.251E-01	3.536E-01	5.818E-02	-0.195
		163.35		5.248E-01	4.921E-01	7.973E-01	1.458E-01	0.658
	+	185.71		1.602E-01	8.483E-02	1.057E-01	7.573E-03	1.516
		205.31		1.307E-01	6.368E-01	9.141E-01	1.704E-01	0.143
NP-236		94.67		3.373E-01	1.383E-01	2.251E-01	2.272E-02	1.498
		98.44		3.123E-02	7.279E-02	1.151E-01	1.072E-02	0.271
		111.00		-9.677E-02	1.383E-01	2.219E-01	1.617E-02	-0.436
		160.31	*	-5.813E-02	8.219E-02	1.286E-01	8.502E-03	-0.452
NP-239		99.55		1.669E-02	1.556E-01	2.521E-01	2.295E-02	0.066
		117.00	*	-1.204E-02	1.868E-01	3.073E-01	1.998E-02	-0.039
	+	209.75		1.723E+00	9.485E-01	1.474E+00	1.134E-01	1.169
		228.18		-5.208E-02	2.406E-01	3.761E-01	3.051E-02	-0.138
		277.60		1.863E-01	1.870E-01	3.276E-01	3.016E-02	0.569
		334.30		-8.420E-02	1.521E+00	2.054E+00	1.662E-01	-0.041
AM-241		59.54	*	7.321E-02	1.865E-01	2.924E-01	2.709E-02	0.250
CM-243		99.55		1.717E-02	1.601E-01	2.594E-01	2.361E-02	0.066
		103.76	*	-4.225E-02	9.429E-02	1.535E-01	1.285E-02	-0.275
		117.00		-1.239E-02	1.921E-01	3.162E-01	2.055E-02	-0.039
	+	209.75		1.698E+00	9.350E-01	1.453E+00	1.118E-01	1.169
		228.18		-5.263E-02	2.431E-01	3.800E-01	3.082E-02	-0.138
		277.60		1.879E-01	1.885E-01	3.303E-01	3.041E-02	0.569
CM-247		278.00		3.459E-01	8.342E-01	1.375E+00	1.267E-01	0.252
		287.40		1.100E+00	1.210E+00	2.120E+00	1.931E-01	0.519
		402.60	*	2.738E-02	3.670E-02	6.305E-02	3.946E-03	0.434
CF-249		252.85		2.697E-01	9.042E-01	1.549E+00	1.342E-01	0.174
		333.44		7.899E-02	2.441E-01	2.706E-01	2.195E-02	0.292
		387.95	*	2.743E-02	4.162E-02	7.111E-02	4.518E-03	0.386
CF-251		176.60	*	9.836E-03	1.275E-01	2.060E-01	1.437E-02	0.048
		227.00		1.075E-01	4.024E-01	6.461E-01	5.223E-02	0.166
		285.00		-2.201E+00	1.750E+00	2.707E+00	2.477E-01	-0.813

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746001 *
* Acquisition date : 14-JUL-2009 08:58:27 Detector SN#     :           *
* Detector ID        : GAM02               Sensitivity      : 5.000    *
* Geometry           : CAN                 Energy tolerance: 1.500     *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000    *
* Elapsed real time:     0 02:00:02.38     Half life ratio :  8.000    *
*************************************************************************
*                                                                       *
*                               SAMPLE DATA                             *
*                                                                       *
* Sample date        : 29-JUN-2009 12:00:00 Nuclide Library : SOLID    *
* Sample ID          : G232746001           Analyst initials: MXR1     *
* Batch Number       : 882713               Sample Quantity : 1.3035E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                                 QC DATA                               *
* Standard Weight  :   0.00000                                          *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :             *
* MSD DPM          :     0.000            MSD Isotope      :           *
* LCS DPM          :     0.000            LCS Isotope      :           *
* LCSD DPM         :     0.000            LCSD Isotope     :           *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.357E+01	2.404E+00	5.360E-01	0.000E+00
CD-109	3.643E+00	1.111E+00	1.230E+00	0.000E+00
SN-126	3.582E-01	1.092E-01	1.216E-01	0.000E+00
TL-208	4.934E-01	8.414E-02	6.875E-02	0.000E+00
BI-211	4.281E+00	5.749E-01	3.330E-01	0.000E+00
PB-212	1.646E+00	1.884E-01	9.114E-02	0.000E+00
PO-212	1.646E+00	1.884E-01	9.114E-02	0.000E+00
BI-214	1.030E+00	1.931E-01	1.103E-01	0.000E+00
PB-214	1.489E+00	2.140E-01	1.161E-01	0.000E+00
PO-214	1.489E+00	2.140E-01	1.161E-01	0.000E+00
PO-216	1.646E+00	1.884E-01	9.114E-02	0.000E+00
PO-218	1.489E+00	2.140E-01	1.161E-01	0.000E+00
RA-224	4.137E+00	1.374E+00	1.038E+00	0.000E+00
RA-226	1.030E+00	1.931E-01	1.103E-01	0.000E+00
AC-228	1.343E+00	3.286E-01	2.356E-01	0.000E+00
RA-228	1.343E+00	3.286E-01	2.356E-01	0.000E+00
TH-228	1.646E+00	1.884E-01	9.113E-02	0.000E+00
TH-230	1.030E+00	1.931E-01	1.103E-01	0.000E+00
TH-232	1.343E+00	3.286E-01	2.356E-01	0.000E+00
TH-234	8.008E-01	2.554E+00	2.375E+00	0.000E+00
U-234	1.030E+00	1.931E-01	1.103E-01	0.000E+00
NP-237	1.052E+00	3.848E-01	3.623E-01	0.000E+00
U-238	8.008E-01	2.554E+00	2.375E+00	0.000E+00
AM-243	3.126E-01	8.034E-02	9.878E-02	0.000E+00
ANH-511	9.362E-02	6.944E-02	5.451E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.850E-01	3.368E-01	5.879E-01	0.000E+00	NOT IDENT.
NA-22	-1.069E-02	4.496E-02	7.375E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	5.634E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	5.000E-03	3.328E-02	5.752E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.155E-02	8.093E-02	0.000E+00	FAIL ABUN
SC-46	-3.684E-02	4.103E-02	6.194E-02	0.000E+00	FAIL ABUN
V-48	-1.588E-02	7.275E-02	1.174E-01	0.000E+00	NOT IDENT.
CR-51	1.200E-01	3.676E-01	6.517E-01	0.000E+00	NOT IDENT.
MN-52	-6.965E-02	2.369E-01	3.763E-01	0.000E+00	NOT IDENT.
MN-54	3.505E-02	4.234E-02	7.564E-02	0.000E+00	NOT IDENT.
CO-56	2.786E-02	3.799E-02	6.823E-02	0.000E+00	FAIL ABUN
CO-57	-9.633E-03	2.547E-02	4.387E-02	0.000E+00	NOT IDENT.
CO-58	-3.135E-02	4.229E-02	6.640E-02	0.000E+00	NOT IDENT.
FE-59	-4.879E-02	9.657E-02	1.573E-01	0.000E+00	NOT IDENT.
CO-60	-2.016E-02	3.533E-02	5.416E-02	0.000E+00	NOT IDENT.
ZN-65	-6.810E-03	1.021E-01	1.487E-01	0.000E+00	NOT IDENT.
GE-68	2.185E-01	1.380E+00	2.397E+00	0.000E+00	NOT IDENT.
AS-73	-1.327E+00	1.065E+00	1.809E+00	0.000E+00	NOT IDENT.
AS-74	2.219E-02	9.451E-02	1.669E-01	0.000E+00	NOT IDENT.
SE-75	8.926E-03	4.149E-02	7.420E-02	0.000E+00	FAIL ABUN
BR-77	2.809E+00	9.418E+00	1.608E+01	0.000E+00	FAIL ABUN
SR-82	-2.814E-01	4.141E-01	6.604E-01	0.000E+00	NOT IDENT.
RB-83	2.398E-02	6.702E-02	1.150E-01	0.000E+00	NOT IDENT.
RB-84	4.530E-02	7.063E-02	1.253E-01	0.000E+00	NOT IDENT.
KR-85	8.917E+00	9.395E+00	1.482E+01	0.000E+00	NOT IDENT.
SR-85	4.560E-02	4.805E-02	7.580E-02	0.000E+00	NOT IDENT.
RB-86	-1.043E-01	8.731E-01	1.481E+00	0.000E+00	NOT IDENT.
Y-88	-2.722E-02	3.361E-02	4.646E-02	0.000E+00	NOT IDENT.
ZR-88	4.050E-03	3.287E-02	5.664E-02	0.000E+00	NOT IDENT.
Y-91	-1.447E+01	1.860E+01	2.907E+01	0.000E+00	NOT IDENT.
NB-94	1.547E-02	3.537E-02	6.246E-02	0.000E+00	NOT IDENT.
NB-95	1.443E-02	4.990E-02	8.424E-02	0.000E+00	NOT IDENT.
NB-95M	-1.291E-01	1.352E-01	2.003E-01	0.000E+00	NOT IDENT.
ZR-95	2.743E-02	7.786E-02	1.358E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.518E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.583E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.159E+00	1.139E+01	1.955E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.987E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	5.793E-03	3.433E-02	5.760E-02	0.000E+00	NOT IDENT.
RH-102	-3.546E-02	3.078E-02	4.693E-02	0.000E+00	NOT IDENT.
RU-103	-8.486E-03	3.923E-02	6.438E-02	0.000E+00	FAIL ABUN
RH-106	5.972E-02	3.167E-01	5.561E-01	0.000E+00	FAIL ABUN
RU-106	5.972E-02	3.167E-01	5.561E-01	0.000E+00	FAIL ABUN
AG-108M	-1.745E-02	3.541E-02	5.794E-02	0.000E+00	NOT IDENT.
AG-110M	-3.879E-02	3.904E-02	6.221E-02	0.000E+00	NOT IDENT.
IN-111	-1.963E-01	1.067E+00	1.656E+00	0.000E+00	NOT IDENT.
IN-113M	-2.227E-02	4.787E-02	7.947E-02	0.000E+00	NOT IDENT.
SN-113	-2.227E-02	4.787E-02	7.947E-02	0.000E+00	NOT IDENT.
IN-114M	1.722E-01	1.943E-01	3.092E-01	0.000E+00	NOT IDENT.
CD-115	5.830E-01	9.726E+00	1.626E+01	0.000E+00	NOT IDENT.
SN-117M	5.661E-02	5.400E-02	9.678E-02	0.000E+00	NOT IDENT.
SB-122	7.343E-01	2.049E+00	3.663E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.213E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.598E-02	2.828E-02	5.042E-02	0.000E+00	NOT IDENT.
I-124	-6.604E-01	7.522E-01	1.030E+00	0.000E+00	NOT IDENT.
SB-124	3.664E-02	7.822E-02	1.429E-01	0.000E+00	FAIL ABUN
SB-125	-9.714E-03	1.000E-01	1.686E-01	0.000E+00	FAIL ABUN
TE-125M	-2.357E+00	8.874E+00	1.548E+01	0.000E+00	NOT IDENT.
I-126	-1.109E-01	1.983E-01	3.271E-01	0.000E+00	NOT IDENT.
SB-126	2.870E-02	1.466E-01	2.322E-01	0.000E+00	FAIL ABUN
SB-127	-6.791E-01	1.318E+00	2.162E+00	0.000E+00	NOT IDENT.
XE-127	3.284E-03	4.924E-02	8.311E-02	0.000E+00	NOT IDENT.
I-131	-4.102E-02	1.141E-01	1.918E-01	0.000E+00	NOT IDENT.
TE-132	-1.473E-01	6.850E-01	1.127E+00	0.000E+00	NOT IDENT.
BA-133	-2.435E-02	4.793E-02	6.910E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	4.960E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	7.307E-02	1.030E-01	0.000E+00	FAIL ABUN
CS-135	-5.382E-02	1.613E-01	2.804E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.239E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.690E-02	1.136E-01	1.878E-01	0.000E+00	FAIL ABUN
BA-137M	1.389E-02	4.010E-02	7.063E-02	0.000E+00	NOT IDENT.
CS-137	1.469E-02	4.239E-02	7.466E-02	0.000E+00	NOT IDENT.
CE-139	-1.417E-02	2.914E-02	4.866E-02	0.000E+00	NOT IDENT.
BA-140	2.217E-02	2.578E-01	4.308E-01	0.000E+00	NOT IDENT.
LA-140	-3.889E-02	8.489E-02	1.348E-01	0.000E+00	FAIL ABUN
CE-141	-2.548E-02	6.158E-02	1.044E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.780E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.014E-01	2.211E-01	3.640E-01	0.000E+00	NOT IDENT.
PM-144	2.530E-02	3.522E-02	6.353E-02	0.000E+00	NOT IDENT.
PR-144	1.714E+00	2.387E+00	4.305E+00	0.000E+00	NOT IDENT.

PM-146	-7.627E-03	4.478E-02	7.460E-02	0.000E+00	NOT IDENT.
ND-147	-7.029E-02	5.581E-01	9.173E-01	0.000E+00	FAIL ABUN
PM-149	-4.079E+01	8.272E+01	1.411E+02	0.000E+00	NOT IDENT.
EU-152	-1.766E-02	1.054E-01	1.670E-01	0.000E+00	NOT IDENT.
GD-153	1.650E-02	8.163E-02	1.316E-01	0.000E+00	FAIL ABUN
EU-154	-2.862E-02	1.257E-01	2.065E-01	0.000E+00	NOT IDENT.
EU-155	2.358E-02	1.043E-01	1.862E-01	0.000E+00	FAIL ABUN
TB-160	-1.852E-02	1.449E-01	2.392E-01	0.000E+00	FAIL ABUN
HO-166M	1.803E-02	6.036E-02	1.056E-01	0.000E+00	NOT IDENT.
TM-171	-1.760E+01	3.290E+01	5.196E+01	0.000E+00	NOT IDENT.
LU-176	-7.619E-03	2.842E-02	4.279E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.278E+00	2.033E+00	0.000E+00	FAIL ABUN
LU-177M	-5.122E-02	1.910E-01	3.196E-01	0.000E+00	NOT IDENT.
HF-181	-7.410E-02	4.517E-02	6.539E-02	0.000E+00	NOT IDENT.
W-181	-6.828E-02	4.182E-01	6.811E-01	0.000E+00	NOT IDENT.
TA-182	-3.053E-02	2.060E-01	3.439E-01	0.000E+00	FAIL ABUN
RE-183	-1.941E-02	1.125E-01	1.858E-01	0.000E+00	FAIL ABUN
RE-184	7.179E-02	2.359E-01	4.247E-01	0.000E+00	NOT IDENT.
OS-185	-7.489E-03	4.606E-02	7.849E-02	0.000E+00	NOT IDENT.
RE-188	8.669E-02	1.676E-01	2.946E-01	0.000E+00	NOT IDENT.
W-188	-4.943E+00	8.294E+00	1.224E+01	0.000E+00	FAIL ABUN
IR-192	3.759E-02	3.350E-02	6.184E-02	0.000E+00	FAIL ABUN
AU-195	5.826E-02	2.248E-01	3.916E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.240E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.797E+00	6.380E+00	1.075E+01	0.000E+00	NOT IDENT.
TL-202	-4.294E-02	7.155E-02	1.158E-01	0.000E+00	NOT IDENT.
HG-203	-4.829E-02	4.479E-02	7.146E-02	0.000E+00	NOT IDENT.
BI-207	4.627E-02	5.624E-02	1.025E-01	0.000E+00	FAIL ABUN
TL-207	-1.287E-01	7.441E-01	1.122E+00	0.000E+00	FAIL ABUN
PO-209	4.857E-01	8.297E+00	1.392E+01	0.000E+00	NOT IDENT.
BI-210	-7.400E-02	6.075E+00	9.964E+00	0.000E+00	NOT IDENT.
PB-210	-7.400E-02	6.075E+00	9.964E+00	0.000E+00	NOT IDENT.
PO-210	-7.400E-02	6.075E+00	9.964E+00	0.000E+00	NOT IDENT.
PB-211	-1.034E+00	1.156E+00	1.533E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.738E-01	7.075E-01	0.000E+00	FAIL ABUN
PO-215	-1.287E-01	7.441E-01	1.122E+00	0.000E+00	FAIL ABUN
RN-219	-4.698E-02	4.102E-01	6.945E-01	0.000E+00	NOT IDENT.
RN-220	1.086E+00	2.740E+01	4.551E+01	0.000E+00	NOT IDENT.
RA-223	-1.287E-01	7.441E-01	1.122E+00	0.000E+00	FAIL ABUN
AC-227	-1.965E-02	3.987E-01	7.057E-01	0.000E+00	FAIL ABUN
TH-227	-1.965E-02	3.987E-01	7.057E-01	0.000E+00	FAIL ABUN
TH-229	-3.026E-02	5.200E-01	8.759E-01	0.000E+00	FAIL ABUN
PA-231	-7.479E-01	1.488E+00	2.539E+00	0.000E+00	FAIL ABUN
TH-231	-1.287E-01	7.441E-01	1.122E+00	0.000E+00	FAIL ABUN
U-231	-3.388E-01	1.082E+00	1.698E+00	0.000E+00	FAIL ABUN
PA-233	-7.890E-02	6.490E-02	1.047E-01	0.000E+00	FAIL ABUN
PA-234	4.878E-02	3.239E-01	5.453E-01	0.000E+00	FAIL ABUN
PA-234M	9.361E-01	7.412E+00	1.234E+01	0.000E+00	NOT IDENT.
U-235	-6.895E-02	2.206E-01	3.675E-01	0.000E+00	FAIL ABUN
NP-236	-5.813E-02	8.054E-02	1.334E-01	0.000E+00	NOT IDENT.
NP-239	-1.204E-02	1.830E-01	3.204E-01	0.000E+00	FAIL ABUN
AM-241	7.321E-02	1.827E-01	3.081E-01	0.000E+00	NOT IDENT.
CM-243	-4.225E-02	9.241E-02	1.604E-01	0.000E+00	FAIL ABUN
CM-247	2.738E-02	3.597E-02	6.446E-02	0.000E+00	NOT IDENT.
CF-249	2.743E-02	4.079E-02	7.274E-02	0.000E+00	NOT IDENT.
CF-251	9.836E-03	1.249E-01	2.134E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:00:28.12

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746001.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:58:27
Sample ID         : G232746001           Sample quantity  : 1.30350E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.38  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	914	10.67*	1.046E+00	2.357E+01	2.357E+01	10.41
CD-109	88.03	242	3.72*	5.259E+00	3.563E+00	3.643E+00	31.11
SN-126	64.28	27	9.60	2.564E+00	3.170E-01	3.170E-01	325.25
	86.94	242	8.90	5.259E+00	1.489E+00	1.489E+00	51.03
	87.57	242	37.00*	5.259E+00	3.582E-01	3.582E-01	31.11
TL-208	277.35	------	6.80	4.129E+00	------ Line Not Found		------
	510.84	85	21.60	2.610E+00	4.334E-01	4.334E-01	76.15
	583.14	339	84.20*	2.348E+00	4.934E-01	4.934E-01	17.40
	860.37	104	12.46	1.682E+00	1.422E+00	1.422E+00	36.18
BI-211	72.87	------	1.27	3.827E+00	------ Line Not Found		------
	351.07	666	12.94*	3.461E+00	4.281E+00	4.281E+00	13.71
PB-212	74.81	291	10.70	4.066E+00	1.928E+00	1.928E+00	27.84
	77.11	558	18.00	4.315E+00	2.069E+00	2.069E+00	16.45
	87.30	242	8.00	5.259E+00	1.657E+00	1.657E+00	32.68
	238.63	1174	44.60*	4.605E+00	1.646E+00	1.646E+00	11.68
	300.09	96	3.41	3.895E+00	2.091E+00	2.091E+00	48.48
PO-212	74.81	291	10.70	4.066E+00	1.928E+00	1.928E+00	27.84
	77.11	558	18.00	4.315E+00	2.069E+00	2.069E+00	16.45
	87.30	242	8.00	5.259E+00	1.657E+00	1.657E+00	32.68
	115.19	------	0.60	6.304E+00	------ Line Not Found		------
	238.63	1174	44.60*	4.605E+00	1.646E+00	1.646E+00	11.68
	300.09	96	3.41	3.895E+00	2.091E+00	2.091E+00	48.48
BI-214	609.31	375	46.30*	2.266E+00	1.030E+00	1.030E+00	19.13
	768.36	------	5.04	1.861E+00	------ Line Not Found		------
	934.06	------	3.21	1.561E+00	------ Line Not Found		------
	1120.29	88	15.10	1.319E+00	1.277E+00	1.277E+00	44.24
	1238.11	50	5.94	1.205E+00	2.005E+00	2.005E+00	67.45
	1377.67	40	4.11	1.098E+00	2.525E+00	2.525E+00	61.37
	1764.49	71	15.80	9.195E-01	1.412E+00	1.412E+00	31.24
PB-214	74.81	291	6.21	4.066E+00	3.323E+00	3.323E+00	27.25
	77.11	558	10.50	4.315E+00	3.547E+00	3.547E+00	18.13
	87.30	242	4.67	5.259E+00	2.838E+00	2.838E+00	32.05

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	259	7.49	4.566E+00	2.182E+00	2.182E+00	34.36
	295.21	379	19.20	3.944E+00	1.440E+00	1.440E+00	18.30
	351.92	666	37.20*	3.461E+00	1.489E+00	1.489E+00	14.67
PO-214	74.81	291	6.21	4.066E+00	3.323E+00	3.323E+00	27.25
	77.11	558	10.50	4.315E+00	3.547E+00	3.547E+00	18.13
	87.30	242	4.67	5.259E+00	2.838E+00	2.838E+00	32.05
	241.98	259	7.49	4.566E+00	2.182E+00	2.182E+00	34.36
	295.21	379	19.20	3.944E+00	1.440E+00	1.440E+00	18.30
	351.92	666	37.20*	3.461E+00	1.489E+00	1.489E+00	14.67
PO-216	74.81	291	10.70	4.066E+00	1.928E+00	1.928E+00	27.84
	77.11	558	18.00	4.315E+00	2.069E+00	2.069E+00	16.45
	87.30	242	8.00	5.259E+00	1.657E+00	1.657E+00	32.68
	238.63	1174	44.60*	4.605E+00	1.646E+00	1.646E+00	11.68
	300.09	96	3.41	3.895E+00	2.091E+00	2.091E+00	48.48
PO-218	74.81	291	6.21	4.066E+00	3.323E+00	3.323E+00	27.25
	77.11	558	10.50	4.315E+00	3.547E+00	3.547E+00	18.13
	87.30	242	4.67	5.259E+00	2.838E+00	2.838E+00	32.05
	241.98	259	7.49	4.566E+00	2.182E+00	2.182E+00	34.36
	295.21	379	19.20	3.944E+00	1.440E+00	1.440E+00	18.30
	351.92	666	37.20*	3.461E+00	1.489E+00	1.489E+00	14.67
RA-224	240.98	259	3.95*	4.566E+00	4.137E+00	4.137E+00	33.90
RA-226	609.31	375	46.30*	2.266E+00	1.030E+00	1.030E+00	19.13
	768.36	------	5.04	1.861E+00	------ Line Not Found		------
	934.06	------	3.21	1.561E+00	------ Line Not Found		------
	1120.29	88	15.10	1.319E+00	1.277E+00	1.277E+00	44.24
	1238.11	50	5.94	1.205E+00	2.005E+00	2.005E+00	67.45
	1377.67	40	4.11	1.098E+00	2.525E+00	2.525E+00	61.37
	1764.49	71	15.80	9.195E-01	1.412E+00	1.412E+00	31.24
AC-228	338.32	234	11.40	3.564E+00	1.661E+00	1.661E+00	48.21
	911.07	206	27.70*	1.597E+00	1.343E+00	1.343E+00	24.97
	969.11	108	16.60	1.508E+00	1.239E+00	1.239E+00	49.64
RA-228	338.32	234	11.40	3.564E+00	1.661E+00	1.661E+00	48.21
	911.07	206	27.70*	1.597E+00	1.343E+00	1.343E+00	24.97
	969.11	108	16.60	1.508E+00	1.239E+00	1.239E+00	49.64
TH-228	84.40	115	1.21	5.035E+00	5.427E+00	5.427E+00	59.77
	238.60	1174	44.60*	4.605E+00	1.646E+00	1.646E+00	11.68
	300.10	96	3.41	3.895E+00	2.091E+00	2.091E+00	75.87
TH-230	609.31	375	46.30*	2.266E+00	1.030E+00	1.030E+00	19.13
	768.36	------	5.04	1.861E+00	------ Line Not Found		------
	934.06	------	3.21	1.561E+00	------ Line Not Found		------
	1120.29	88	15.10	1.319E+00	1.277E+00	1.277E+00	44.24
	1238.11	50	5.94	1.205E+00	2.005E+00	2.005E+00	67.45
	1377.67	40	4.11	1.098E+00	2.525E+00	2.525E+00	61.37
	1764.49	71	15.80	9.195E-01	1.412E+00	1.412E+00	31.24
TH-232	338.32	234	11.40	3.564E+00	1.661E+00	1.661E+00	26.39
	911.07	206	27.70*	1.597E+00	1.343E+00	1.343E+00	24.97
	969.11	108	16.60	1.508E+00	1.239E+00	1.239E+00	49.64
TH-234	63.29	27	3.80*	2.564E+00	8.008E-01	8.008E-01	325.39
	92.38	181	5.41	5.623E+00	1.717E+00	1.717E+00	46.59

Sample ID : G232746001 Acquisition date : 14-JUL-2009 08:58:27

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	375	46.30*	2.266E+00	1.030E+00	1.030E+00	19.13
	768.36	------	5.04	1.861E+00	------	Line Not Found	------
	934.06	------	3.21	1.561E+00	------	Line Not Found	------
	1120.29	88	15.10	1.319E+00	1.277E+00	1.277E+00	44.24
	1238.11	50	5.94	1.205E+00	2.005E+00	2.005E+00	67.45
	1377.67	40	4.11	1.098E+00	2.525E+00	2.525E+00	61.37
	1764.49	71	15.80	9.195E-01	1.412E+00	1.412E+00	31.24
NP-237	86.50	242	12.60*	5.259E+00	1.052E+00	1.052E+00	37.33
	95.87	------	2.60	5.787E+00	------	Line Not Found	------
U-238	63.29	27	3.80*	2.564E+00	8.008E-01	8.008E-01	325.39
	92.38	181	5.41	5.623E+00	1.717E+00	1.717E+00	43.79
AM-243	74.67	291	66.00*	4.066E+00	3.126E-01	3.126E-01	26.22
	86.72	242	0.34	5.259E+00	3.944E+01	3.944E+01	31.11
	117.66	------	0.55	6.322E+00	------	Line Not Found	------
	142.18	------	0.13	6.186E+00	------	Line Not Found	------
ANH-511	511.00	85	100.00*	2.610E+00	9.362E-02	9.362E-02	75.69

Flag: "*" = Keyline

Sample ID : G232746001 Acquisition date : 14-JUL-2009 08:58:27

Total number of lines in spectrum 33
Number of unidentified lines 1
Number of lines tentatively identified by NID 32 96.97%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.357E+01	2.357E+01	0.245E+01	10.41	
CD-109	464.00D	1.02	3.563E+00	3.643E+00	1.133E+00	31.11	
SN-126	1.00E+05Y	1.00	3.582E-01	3.582E-01	1.114E-01	31.11	
TL-208	1.41E+10Y	1.00	4.934E-01	4.934E-01	0.859E-01	17.40	
BI-211	7.04E+08Y	1.00	4.281E+00	4.281E+00	0.587E+00	13.71	
PB-212	1.41E+10Y	1.00	1.646E+00	1.646E+00	0.192E+00	11.68	
PO-212	1.41E+10Y	1.00	1.646E+00	1.646E+00	0.192E+00	11.68	
BI-214	1600.00Y	1.00	1.030E+00	1.030E+00	0.197E+00	19.13	
PB-214	1600.00Y	1.00	1.489E+00	1.489E+00	0.218E+00	14.67	
PO-214	1600.00Y	1.00	1.489E+00	1.489E+00	0.218E+00	14.67	
PO-216	1.41E+10Y	1.00	1.646E+00	1.646E+00	0.192E+00	11.68	
PO-218	1600.00Y	1.00	1.489E+00	1.489E+00	0.218E+00	14.67	
RA-224	1.41E+10Y	1.00	4.137E+00	4.137E+00	1.402E+00	33.90	
RA-226	1600.00Y	1.00	1.030E+00	1.030E+00	0.197E+00	19.13	
AC-228	1.41E+10Y	1.00	1.343E+00	1.343E+00	0.335E+00	24.97	
RA-228	1.41E+10Y	1.00	1.343E+00	1.343E+00	0.335E+00	24.97	
TH-228	1.41E+10Y	1.00	1.646E+00	1.646E+00	0.192E+00	11.68	
TH-230	4.47E+09Y	1.00	1.030E+00	1.030E+00	0.197E+00	19.13	
TH-232	1.41E+10Y	1.00	1.343E+00	1.343E+00	0.335E+00	24.97	
TH-234	4.47E+09Y	1.00	8.008E-01	8.008E-01	26.06E-01	325.39	
U-234	4.47E+09Y	1.00	1.030E+00	1.030E+00	0.197E+00	19.13	
NP-237	2.14E+06Y	1.00	1.052E+00	1.052E+00	0.393E+00	37.33	
U-238	4.47E+09Y	1.00	8.008E-01	8.008E-01	26.06E-01	325.39	
AM-243	7380.00Y	1.00	3.126E-01	3.126E-01	0.820E-01	26.22	
ANH-511	1.00E+09Y	1.00	9.362E-02	9.362E-02	7.086E-02	75.69	
			---	---			
	Total Activity :		5.866E+01	5.874E+01			

Grand Total Activity : 5.866E+01 5.874E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232746001
Acquisition date : 14-JUL-2009 08:58:27

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.98	178	338	1.13	179.18	165	26	2.48E-02	37.4	5.45E+00	T
0	129.31	104	316	1.18	257.88	254	8	1.45E-02	62.5	6.31E+00	T
0	186.08	163	387	1.02	371.48	366	11	2.27E-02	52.5	5.44E+00	T
0	209.42	98	223	1.73	418.19	415	7	1.36E-02	54.5	5.04E+00	T
3	302.95	50	141	1.67	605.34	585	26	6.93E-03	****	3.87E+00	T
0	328.50	89	154	0.86	656.46	652	9	1.24E-02	54.7	3.64E+00	T
0	463.19	82	104	1.86	926.01	919	13	1.15E-02	55.5	2.81E+00	T
0	727.77	73	98	1.51	1455.49	1449	15	1.02E-02	63.1	1.95E+00	T
0	795.65	50	63	1.74	1591.34	1587	11	6.96E-03	70.2	1.80E+00	T
0	1730.00	44	0	1.59	3461.45	3453	16	6.11E-03	30.2	9.30E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:00:32.58

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746001.CNF;1  *
* Acquisition date : 14-JUL-2009 08:58:27  Detector SN#     :               *
* Detector ID      : GAM02                 Sensitivity      : 5.00000       *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:02.38         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      : 29-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232746001            Analyst initials: MXR1           *
* Batch Number     : 882713                Sample Quantity : 1.30350E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 1-NOV-2008 14:03:38.86MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1023-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.357E+01	2.453E+00	5.356E-01	3.970E-02	44.014
CD-109	3.643E+00	1.133E+00	1.174E+00	1.387E-01	3.103
SN-126	3.582E-01	1.114E-01	1.161E-01	1.366E-02	3.085
TL-208	4.934E-01	8.586E-02	6.766E-02	4.968E-03	7.292
BI-211	4.281E+00	5.867E-01	3.250E-01	2.633E-02	13.172
PB-212	1.646E+00	1.922E-01	8.841E-02	8.376E-03	18.616
PO-212	1.646E+00	1.922E-01	8.841E-02	8.376E-03	18.616
BI-214	1.030E+00	1.970E-01	1.086E-01	9.045E-03	9.480
PB-214	1.489E+00	2.184E-01	1.133E-01	1.090E-02	13.144
PO-214	1.489E+00	2.184E-01	1.133E-01	1.090E-02	13.144
PO-216	1.646E+00	1.922E-01	8.841E-02	8.376E-03	18.616
PO-218	1.489E+00	2.184E-01	1.133E-01	1.090E-02	13.144
RA-224	4.137E+00	1.402E+00	1.007E+00	8.454E-02	4.110
RA-226	1.030E+00	1.970E-01	1.086E-01	9.045E-03	9.480
AC-228	1.343E+00	3.353E-01	2.336E-01	2.735E-02	5.748
RA-228	1.343E+00	3.353E-01	2.336E-01	2.735E-02	5.748
TH-228	1.646E+00	1.922E-01	8.840E-02	8.375E-03	18.618
TH-230	1.030E+00	1.970E-01	1.086E-01	9.045E-03	9.480

Sample ID : G232746001 Acquisition date : 14-JUL-2009 08:58:27

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.343E+00	3.353E-01	2.336E-01	2.735E-02	5.748
TH-234	8.008E-01	2.606E+00	2.257E+00	4.126E-01	0.355
U-234	1.030E+00	1.970E-01	1.086E-01	9.045E-03	9.480
NP-237	1.052E+00	3.927E-01	3.459E-01	8.191E-02	3.041
U-238	8.008E-01	2.606E+00	2.257E+00	4.126E-01	0.355
AM-243	3.126E-01	8.198E-02	9.409E-02	9.684E-03	3.322
ANH-511	9.362E-02	7.086E-02	5.352E-02	3.500E-03	1.749

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.850E-01		3.437E-01	5.766E-01	4.239E-02	0.321
NA-22	-1.069E-02		4.588E-02	7.353E-02	4.915E-03	-0.145
NA-24	9.322E-02		2.875E-01	Half-Life too short		
AL-26	5.000E-03		3.396E-02	5.769E-02	3.249E-03	0.087
TI-44	3.819E-01	+	6.281E-02	7.715E-02	8.224E-03	4.950
SC-46	-3.684E-02		4.187E-02	6.138E-02	5.655E-03	-0.600
V-48	-1.588E-02		7.423E-02	1.165E-01	9.850E-03	-0.136
CR-51	1.200E-01		3.751E-01	6.351E-01	5.663E-02	0.189
MN-52	-6.965E-02		2.417E-01	3.759E-01	2.701E-02	-0.185
MN-54	3.505E-02		4.321E-02	7.488E-02	6.360E-03	0.468
CO-56	2.786E-02		3.877E-02	6.756E-02	5.843E-03	0.412
CO-57	-9.633E-03		2.599E-02	4.211E-02	2.485E-03	-0.229
CO-58	-3.135E-02		4.316E-02	6.569E-02	5.392E-03	-0.477
FE-59	-4.879E-02		9.854E-02	1.564E-01	1.204E-02	-0.312
CO-60	-2.016E-02		3.605E-02	5.403E-02	3.977E-03	-0.373
ZN-65	-6.810E-03		1.041E-01	1.479E-01	9.728E-03	-0.046
GE-68	2.185E-01		1.408E+00	2.383E+00	1.710E-01	0.092
AS-73	-1.327E+00		1.087E+00	1.715E+00	1.534E-01	-0.774
AS-74	2.219E-02		9.644E-02	1.643E-01	1.074E-02	0.135
SE-75	8.926E-03		4.234E-02	7.209E-02	6.462E-03	0.124
BR-77	2.809E+00		9.610E+00	1.579E+01	1.034E+00	0.178
SR-82	-2.814E-01		4.226E-01	6.530E-01	5.064E-02	-0.431
RB-83	2.398E-02		6.839E-02	1.129E-01	7.396E-03	0.212
RB-84	4.530E-02		7.207E-02	1.242E-01	1.131E-02	0.365
KR-85	8.917E+00		9.586E+00	1.456E+01	9.524E-01	0.613
SR-85	4.560E-02		4.903E-02	7.444E-02	4.871E-03	0.613
RB-86	-1.043E-01		8.909E-01	1.472E+00	1.058E-01	-0.071
Y-88	-2.722E-02		3.429E-02	4.661E-02	2.556E-03	-0.584
ZR-88	4.050E-03		3.354E-02	5.538E-02	3.442E-03	0.073
Y-91	-1.447E+01		1.898E+01	2.896E+01	1.703E+00	-0.500
NB-94	1.547E-02		3.609E-02	6.165E-02	4.234E-03	0.251
NB-95	1.443E-02		5.091E-02	8.327E-02	6.348E-03	0.173
NB-95M	-1.291E-01		1.380E-01	1.942E-01	1.859E-02	-0.665
ZR-95	2.743E-02		7.945E-02	1.343E-01	1.140E-02	0.204
NB-97	-9.309E-02		4.346E-02	Half-Life too short		
ZR-97	1.080E+00		8.077E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	1.159E+00		1.162E+01	1.932E+01	2.796E+00	0.060
TC-99M	-1.011E+10		1.014E+10	Half-Life too short		
RH-101	5.793E-03		3.503E-02	5.571E-02	4.141E-03	0.104
RH-102	-3.546E-02		3.141E-02	4.602E-02	2.984E-03	-0.770
RU-103	-8.486E-03		4.003E-02	6.319E-02	8.210E-03	-0.134
RH-106	5.972E-02		3.232E-01	5.478E-01	6.626E-02	0.109
RU-106	5.972E-02		3.232E-01	5.478E-01	3.558E-02	0.109
AG-108M	-1.745E-02		3.614E-02	5.674E-02	3.876E-03	-0.307
AG-110M	-3.879E-02		3.983E-02	6.134E-02	4.141E-03	-0.632
IN-111	-1.963E-01		1.089E+00	1.607E+00	1.366E-01	-0.122
IN-113M	-2.227E-02		4.885E-02	7.770E-02	5.108E-03	-0.287
SN-113	-2.227E-02		4.885E-02	7.770E-02	5.108E-03	-0.287
IN-114M	1.722E-01		1.983E-01	2.988E-01	2.171E-02	0.576
CD-115	5.830E-01		9.924E+00	1.597E+01	1.047E+00	0.037
SN-117M	5.661E-02		5.510E-02	9.327E-02	6.121E-03	0.607
SB-122	7.343E-01		2.091E+00	3.602E+00	2.363E-01	0.204
I-123	3.871E+00		2.149E+00	Half-Life too short		
TE-123M	2.598E-02		2.885E-02	4.859E-02	3.228E-03	0.535
I-124	-6.604E-01		7.675E-01	1.014E+00	6.619E-02	-0.651
SB-124	3.664E-02		7.982E-02	1.432E-01	9.627E-03	0.256
SB-125	-9.714E-03		1.021E-01	1.651E-01	1.086E-02	-0.059
TE-125M	-2.357E+00		9.055E+00	1.483E+01	1.399E+00	-0.159
I-126	-1.109E-01		2.023E-01	3.226E-01	2.081E-02	-0.344
SB-126	2.870E-02		1.496E-01	2.293E-01	1.623E-02	0.125
SB-127	-6.791E-01		1.345E+00	2.133E+00	2.113E-01	-0.318
XE-127	3.284E-03		5.025E-02	8.041E-02	6.064E-03	0.041
I-131	-4.102E-02		1.164E-01	1.873E-01	1.450E-02	-0.219
TE-132	-1.473E-01		6.990E-01	1.093E+00	1.682E-01	-0.135
BA-133	-2.435E-02		4.890E-02	6.746E-02	8.415E-03	-0.361
I-133	-6.603E-04		2.531E-03	Half-Life too short		
CS-134	1.055E-01	+	7.456E-02	1.019E-01	8.217E-03	1.035
CS-135	-5.382E-02		1.646E-01	2.725E-01	2.807E-02	-0.197
I-135	5.206E+08		1.653E+09	Half-Life too short		
CS-136	-4.690E-02		1.159E-01	1.866E-01	1.497E-02	-0.251
BA-137M	1.389E-02		4.092E-02	6.965E-02	4.457E-03	0.199
CS-137	1.469E-02		4.326E-02	7.362E-02	4.728E-03	0.199
CE-139	-1.417E-02		2.973E-02	4.693E-02	3.176E-03	-0.302
BA-140	2.217E-02		2.630E-01	4.234E-01	1.383E-01	0.052
LA-140	-3.889E-02		8.662E-02	1.349E-01	9.011E-03	-0.288
CE-141	-2.548E-02		6.284E-02	1.005E-01	6.491E-03	-0.253
CE-143	4.449E-04		9.081E-05	Half-Life too short		
CE-144	3.014E-01		2.256E-01	3.499E-01	5.000E-02	0.861
PM-144	2.530E-02		3.594E-02	6.270E-02	4.264E-03	0.404
PR-144	1.714E+00		2.435E+00	4.248E+00	2.887E-01	0.404
PM-146	-7.627E-03		4.569E-02	7.311E-02	6.624E-03	-0.104
ND-147	-7.029E-02		5.695E-01	9.013E-01	1.249E-01	-0.078
PM-149	-4.079E+01		8.440E+01	1.373E+02	2.174E+01	-0.297
EU-152	-1.766E-02		1.076E-01	1.629E-01	1.364E-02	-0.108

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	1.650E-02		8.329E-02	1.258E-01	1.197E-02	0.131
EU-154	-2.862E-02		1.283E-01	2.058E-01	2.039E-02	-0.139
EU-155	2.358E-02		1.065E-01	1.783E-01	1.468E-02	0.132
TB-160	-1.852E-02		1.478E-01	2.370E-01	2.152E-02	-0.078
HO-166M	1.803E-02		6.159E-02	1.043E-01	7.274E-03	0.173
TM-171	-1.760E+01		3.357E+01	4.940E+01	4.729E+00	-0.356
LU-176	-7.619E-03		2.900E-02	4.167E-02	3.644E-03	-0.183
LU-177	2.368E+00	+	1.304E+00	1.968E+00	1.508E-01	1.204
LU-177M	-5.122E-02		1.949E-01	3.127E-01	1.971E-02	-0.164
HF-181	-7.410E-02		4.610E-02	6.414E-02	4.168E-03	-1.155
W-181	-6.828E-02		4.267E-01	6.475E-01	6.102E-02	-0.105
TA-182	-3.053E-02		2.103E-01	3.426E-01	2.078E-02	-0.089
RE-183	-1.941E-02		1.148E-01	1.791E-01	1.194E-02	-0.108
RE-184	7.179E-02		2.407E-01	4.123E-01	3.572E-02	0.174
OS-185	-7.489E-03		4.700E-02	7.737E-02	4.984E-03	-0.097
RE-188	8.669E-02		1.710E-01	2.838E-01	1.836E-02	0.305
W-188	-4.943E+00		8.463E+00	1.191E+01	1.079E+00	-0.415
IR-192	3.759E-02		3.418E-02	6.026E-02	5.154E-03	0.624
AU-195	5.826E-02		2.294E-01	3.747E-01	3.457E-02	0.155
TL-200	-9.050E-05		2.163E-04	Half-Life too short		
TL-201	-1.797E+00		6.510E+00	1.037E+01	7.049E-01	-0.173
TL-202	-4.294E-02		7.301E-02	1.134E-01	7.250E-03	-0.379
HG-203	-4.829E-02		4.571E-02	6.949E-02	6.581E-03	-0.695
BI-207	4.627E-02		5.739E-02	1.019E-01	7.524E-03	0.454
TL-207	-1.287E-01		7.592E-01	1.093E+00	1.922E-01	-0.118
PO-209	4.857E-01		8.467E+00	1.380E+01	1.285E+00	0.035
BI-210	-7.400E-02		6.199E+00	9.423E+00	7.593E-01	-0.008
PB-210	-7.400E-02		6.199E+00	9.423E+00	7.593E-01	-0.008
PO-210	-7.400E-02		6.199E+00	9.423E+00	6.617E-01	-0.008
PB-211	-1.034E+00		1.180E+00	1.500E+00	9.356E-01	-0.689
BI-212	9.188E-01	+	5.855E-01	6.988E-01	6.135E-02	1.315
PO-215	-1.287E-01		7.592E-01	1.093E+00	1.922E-01	-0.118
RN-219	-4.698E-02		4.185E-01	6.793E-01	9.378E-02	-0.069
RN-220	1.086E+00		2.795E+01	4.475E+01	2.936E+00	0.024
RA-223	-1.287E-01		7.592E-01	1.093E+00	1.922E-01	-0.118
AC-227	-1.965E-02		4.069E-01	6.853E-01	1.056E-01	-0.029
TH-227	-1.965E-02		4.069E-01	6.853E-01	1.242E-01	-0.029
TH-229	-3.026E-02		5.306E-01	8.468E-01	6.214E-02	-0.036
PA-231	-7.479E-01		1.518E+00	2.469E+00	3.829E-01	-0.303
TH-231	-1.287E-01		7.592E-01	1.093E+00	1.922E-01	-0.118
U-231	-3.388E-01		1.104E+00	1.624E+00	1.596E-01	-0.209
PA-233	-7.890E-02		6.622E-02	1.020E-01	9.056E-03	-0.774
PA-234	4.878E-02		3.305E-01	5.409E-01	1.021E-01	0.090
PA-234M	9.361E-01		7.563E+00	1.225E+01	1.334E+00	0.076
U-235	-6.895E-02		2.251E-01	3.536E-01	5.818E-02	-0.195
NP-236	-5.813E-02		8.219E-02	1.286E-01	8.502E-03	-0.452
NP-239	-1.204E-02		1.868E-01	3.073E-01	1.998E-02	-0.039
AM-241	7.321E-02		1.865E-01	2.924E-01	2.709E-02	0.250

Sample ID : G232746001 Acquisition date : 14-JUL-2009 08:58:27

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-4.225E-02		9.429E-02	1.535E-01	1.285E-02	-0.275
CM-247	2.738E-02		3.670E-02	6.305E-02	3.946E-03	0.434
CF-249	2.743E-02		4.162E-02	7.111E-02	4.518E-03	0.386
CF-251	9.836E-03		1.275E-01	2.060E-01	1.437E-02	0.048

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232746001           *
* Acquisition date  : 14-JUL-2009 08:58:27 Detector SN#     :               *
* Detector ID       : GAM02                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:     0 02:00:02.38     Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232746001           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.3035E+02 GRAM *
* Recovery          :     1.00000          Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  1-NOV-2008 14:03:38 MS Isotope      :                 *
* MSD DPM          :     0.000             MSD Isotope     :                *
* LCS DPM          :     0.000             LCS Isotope     :                *
* LCSD DPM         :     0.000             LCSD Isotope    :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.357E+01	2.404E+00	2.681E-01	1.226E+00
CD-109	3.643E+00	1.111E+00	6.152E-01	5.667E-01
SN-126	3.582E-01	1.092E-01	6.084E-02	5.572E-02
TL-208	4.934E-01	8.414E-02	3.440E-02	4.293E-02
BI-211	4.281E+00	5.749E-01	1.666E-01	2.933E-01
PB-212	1.646E+00	1.884E-01	4.560E-02	9.610E-02
PO-212	1.646E+00	1.884E-01	4.560E-02	9.610E-02
BI-214	1.030E+00	1.931E-01	5.519E-02	9.850E-02
PB-214	1.489E+00	2.140E-01	5.807E-02	1.092E-01
PO-214	1.489E+00	2.140E-01	5.807E-02	1.092E-01
PO-216	1.646E+00	1.884E-01	4.560E-02	9.610E-02
PO-218	1.489E+00	2.140E-01	5.807E-02	1.092E-01
RA-224	4.137E+00	1.374E+00	5.191E-01	7.012E-01
RA-226	1.030E+00	1.931E-01	5.519E-02	9.850E-02
AC-228	1.343E+00	3.286E-01	1.179E-01	1.676E-01
RA-228	1.343E+00	3.286E-01	1.179E-01	1.676E-01
TH-228	1.646E+00	1.884E-01	4.559E-02	9.610E-02
TH-230	1.030E+00	1.931E-01	5.519E-02	9.850E-02
TH-232	1.343E+00	3.286E-01	1.179E-01	1.676E-01
TH-234	8.008E-01	2.554E+00	1.188E+00	1.303E+00
U-234	1.030E+00	1.931E-01	5.519E-02	9.850E-02
NP-237	1.052E+00	3.848E-01	1.813E-01	1.963E-01
U-238	8.008E-01	2.554E+00	1.188E+00	1.303E+00
AM-243	3.126E-01	8.034E-02	4.942E-02	4.099E-02
ANH-511	9.362E-02	6.944E-02	2.727E-02	3.543E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	1.850E-01	3.368E-01	2.941E-01	1.718E-01	NOT IDENT.
NA-22	-1.069E-02	4.496E-02	3.690E-02	2.294E-02	NOT IDENT.

NA-24	9.322E+04	5.634E+05	0.000E+00	2.875E+05	SHORT HLIF
AL-26	5.000E-03	3.328E-02	2.878E-02	1.698E-02	NOT IDENT.
TI-44	3.819E-01	6.155E-02	4.049E-02	3.140E-02	FAIL ABUN
SC-46	-3.684E-02	4.103E-02	3.099E-02	2.094E-02	FAIL ABUN
V-48	-1.588E-02	7.275E-02	5.872E-02	3.712E-02	NOT IDENT.
CR-51	1.200E-01	3.676E-01	3.260E-01	1.875E-01	NOT IDENT.
MN-52	-6.965E-02	2.369E-01	1.883E-01	1.209E-01	NOT IDENT.
MN-54	3.505E-02	4.234E-02	3.784E-02	2.160E-02	NOT IDENT.
CO-56	2.786E-02	3.799E-02	3.413E-02	1.938E-02	FAIL ABUN
CO-57	-9.633E-03	2.547E-02	2.195E-02	1.300E-02	NOT IDENT.
CO-58	-3.135E-02	4.229E-02	3.322E-02	2.158E-02	NOT IDENT.
FE-59	-4.879E-02	9.657E-02	7.870E-02	4.927E-02	NOT IDENT.
CO-60	-2.016E-02	3.533E-02	2.709E-02	1.803E-02	NOT IDENT.
ZN-65	-6.810E-03	1.021E-01	7.439E-02	5.207E-02	NOT IDENT.
GE-68	2.185E-01	1.380E+00	1.199E+00	7.040E-01	NOT IDENT.
AS-73	-1.327E+00	1.065E+00	9.051E-01	5.435E-01	NOT IDENT.
AS-74	2.219E-02	9.451E-02	8.351E-02	4.822E-02	NOT IDENT.
SE-75	8.926E-03	4.149E-02	3.712E-02	2.117E-02	FAIL ABUN
BR-77	2.809E+00	9.418E+00	8.045E+00	4.805E+00	FAIL ABUN
SR-82	-2.814E-01	4.141E-01	3.304E-01	2.113E-01	NOT IDENT.
RB-83	2.398E-02	6.702E-02	5.753E-02	3.420E-02	NOT IDENT.
RB-84	4.530E-02	7.063E-02	6.270E-02	3.604E-02	NOT IDENT.
KR-85	8.917E+00	9.395E+00	7.416E+00	4.793E+00	NOT IDENT.
SR-85	4.560E-02	4.805E-02	3.792E-02	2.451E-02	NOT IDENT.
RB-86	-1.043E-01	8.731E-01	7.408E-01	4.455E-01	NOT IDENT.
Y-88	-2.722E-02	3.361E-02	2.324E-02	1.715E-02	NOT IDENT.
ZR-88	4.050E-03	3.287E-02	2.834E-02	1.677E-02	NOT IDENT.
Y-91	-1.447E+01	1.860E+01	1.455E+01	9.488E+00	NOT IDENT.
NB-94	1.547E-02	3.537E-02	3.125E-02	1.805E-02	NOT IDENT.
NB-95	1.443E-02	4.990E-02	4.214E-02	2.546E-02	NOT IDENT.
NB-95M	-1.291E-01	1.352E-01	1.002E-01	6.898E-02	NOT IDENT.
ZR-95	2.743E-02	7.786E-02	6.796E-02	3.972E-02	NOT IDENT.
NB-97	-9.309E+04	8.518E+04	0.000E+00	4.346E+04	SHORT HLIF
ZR-97	1.080E+06	1.583E+06	0.000E+00	8.077E+05	SHORT HLIF
MO-99	1.159E+00	1.139E+01	9.781E+00	5.811E+00	NOT IDENT.
TC-99M	-1.011E+16	1.987E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	5.793E-03	3.433E-02	2.882E-02	1.752E-02	NOT IDENT.
RH-102	-3.546E-02	3.078E-02	2.348E-02	1.571E-02	NOT IDENT.
RU-103	-8.486E-03	3.923E-02	3.221E-02	2.002E-02	FAIL ABUN
RH-106	5.972E-02	3.167E-01	2.782E-01	1.616E-01	FAIL ABUN
RU-106	5.972E-02	3.167E-01	2.782E-01	1.616E-01	FAIL ABUN
AG-108M	-1.745E-02	3.541E-02	2.899E-02	1.807E-02	NOT IDENT.
AG-110M	-3.879E-02	3.904E-02	3.112E-02	1.992E-02	NOT IDENT.
IN-111	-1.963E-01	1.067E+00	8.285E-01	5.443E-01	NOT IDENT.
IN-113M	-2.227E-02	4.787E-02	3.976E-02	2.443E-02	NOT IDENT.
SN-113	-2.227E-02	4.787E-02	3.976E-02	2.443E-02	NOT IDENT.
IN-114M	1.722E-01	1.943E-01	1.547E-01	9.915E-02	NOT IDENT.
CD-115	5.830E-01	9.726E+00	8.133E+00	4.962E+00	NOT IDENT.
SN-117M	5.661E-02	5.400E-02	4.842E-02	2.755E-02	NOT IDENT.
SB-122	7.343E-01	2.049E+00	1.832E+00	1.045E+00	NOT IDENT.
I-123	3.871E+06	4.213E+06	0.000E+00	2.149E+06	SHORT HLIF
TE-123M	2.598E-02	2.828E-02	2.522E-02	1.443E-02	NOT IDENT.
I-124	-6.604E-01	7.522E-01	5.154E-01	3.838E-01	NOT IDENT.
SB-124	3.664E-02	7.822E-02	7.151E-02	3.991E-02	FAIL ABUN
SB-125	-9.714E-03	1.000E-01	8.437E-02	5.104E-02	FAIL ABUN
TE-125M	-2.357E+00	8.874E+00	7.743E+00	4.527E+00	NOT IDENT.
I-126	-1.109E-01	1.983E-01	1.636E-01	1.012E-01	NOT IDENT.
SB-126	2.870E-02	1.466E-01	1.162E-01	7.479E-02	FAIL ABUN
SB-127	-6.791E-01	1.318E+00	1.082E+00	6.726E-01	NOT IDENT.
XE-127	3.284E-03	4.924E-02	4.158E-02	2.512E-02	NOT IDENT.
I-131	-4.102E-02	1.141E-01	9.596E-02	5.821E-02	NOT IDENT.
TE-132	-1.473E-01	6.850E-01	5.639E-01	3.495E-01	NOT IDENT.
BA-133	-2.435E-02	4.793E-02	3.457E-02	2.445E-02	FAIL ABUN
I-133	-6.603E+02	4.960E+03	0.000E+00	2.531E+03	SHORT HLIF
CS-134	1.055E-01	7.307E-02	5.154E-02	3.728E-02	FAIL ABUN
CS-135	-5.382E-02	1.613E-01	1.403E-01	8.228E-02	NOT IDENT.
I-135	5.206E+14	3.239E+15	0.000E+00	1.653E+15	SHORT HLIF
CS-136	-4.690E-02	1.136E-01	9.394E-02	5.795E-02	FAIL ABUN
BA-137M	1.389E-02	4.010E-02	3.534E-02	2.046E-02	NOT IDENT.
CS-137	1.469E-02	4.239E-02	3.735E-02	2.163E-02	NOT IDENT.
CE-139	-1.417E-02	2.914E-02	2.434E-02	1.487E-02	NOT IDENT.
BA-140	2.217E-02	2.578E-01	2.155E-01	1.315E-01	NOT IDENT.
LA-140	-3.889E-02	8.489E-02	6.745E-02	4.331E-02	FAIL ABUN
CE-141	-2.548E-02	6.158E-02	5.226E-02	3.142E-02	NOT IDENT.
CE-143	4.449E+02	1.780E+02	0.000E+00	9.081E+01	SHORT HLIF
CE-144	3.014E-01	2.211E-01	1.821E-01	1.128E-01	NOT IDENT.
PM-144	2.530E-02	3.522E-02	3.178E-02	1.797E-02	NOT IDENT.
PR-144	1.714E+00	2.387E+00	2.154E+00	1.218E+00	NOT IDENT.

PM-146	-7.627E-03	4.478E-02	3.732E-02	2.285E-02	NOT IDENT.
ND-147	-7.029E-02	5.581E-01	4.589E-01	2.848E-01	FAIL ABUN
PM-149	-4.079E+01	8.272E+01	7.061E+01	4.220E+01	NOT IDENT.
EU-152	-1.766E-02	1.054E-01	8.353E-02	5.379E-02	NOT IDENT.
GD-153	1.650E-02	8.163E-02	6.583E-02	4.165E-02	FAIL ABUN
EU-154	-2.862E-02	1.257E-01	1.033E-01	6.415E-02	NOT IDENT.
EU-155	2.358E-02	1.043E-01	9.315E-02	5.324E-02	FAIL ABUN
TB-160	-1.852E-02	1.449E-01	1.197E-01	7.392E-02	FAIL ABUN
HO-166M	1.803E-02	6.036E-02	5.286E-02	3.080E-02	NOT IDENT.
TM-171	-1.760E+01	3.290E+01	2.599E+01	1.678E+01	NOT IDENT.
LU-176	-7.619E-03	2.842E-02	2.141E-02	1.450E-02	FAIL ABUN
LU-177	2.368E+00	1.278E+00	1.017E+00	6.521E-01	FAIL ABUN
LU-177M	-5.122E-02	1.910E-01	1.599E-01	9.747E-02	NOT IDENT.
HF-181	-7.410E-02	4.517E-02	3.271E-02	2.305E-02	NOT IDENT.
W-181	-6.828E-02	4.182E-01	3.408E-01	2.134E-01	NOT IDENT.
TA-182	-3.053E-02	2.060E-01	1.721E-01	1.051E-01	FAIL ABUN
RE-183	-1.941E-02	1.125E-01	9.295E-02	5.739E-02	FAIL ABUN
RE-184	7.179E-02	2.359E-01	2.125E-01	1.204E-01	NOT IDENT.
OS-185	-7.489E-03	4.606E-02	3.927E-02	2.350E-02	NOT IDENT.
RE-188	8.669E-02	1.676E-01	1.474E-01	8.550E-02	NOT IDENT.
W-188	-4.943E+00	8.294E+00	6.125E+00	4.232E+00	FAIL ABUN
IR-192	3.759E-02	3.350E-02	3.094E-02	1.709E-02	FAIL ABUN
AU-195	5.826E-02	2.248E-01	1.959E-01	1.147E-01	FAIL ABUN
TL-200	-9.050E+01	4.240E+02	0.000E+00	2.163E+02	SHORT HLIF
TL-201	-1.797E+00	6.380E+00	5.380E+00	3.255E+00	NOT IDENT.
TL-202	-4.294E-02	7.155E-02	5.792E-02	3.650E-02	NOT IDENT.
HG-203	-4.829E-02	4.479E-02	3.575E-02	2.285E-02	NOT IDENT.
BI-207	4.627E-02	5.624E-02	5.127E-02	2.869E-02	FAIL ABUN
TL-207	-1.287E-01	7.441E-01	5.612E-01	3.796E-01	FAIL ABUN
PO-209	4.857E-01	8.297E+00	6.965E+00	4.233E+00	NOT IDENT.
BI-210	-7.400E-02	6.075E+00	4.985E+00	3.099E+00	NOT IDENT.
PB-210	-7.400E-02	6.075E+00	4.985E+00	3.099E+00	NOT IDENT.
PO-210	-7.400E-02	6.075E+00	4.985E+00	3.099E+00	NOT IDENT.
PB-211	-1.034E+00	1.156E+00	7.670E-01	5.900E-01	NOT IDENT.
BI-212	9.188E-01	5.738E-01	3.540E-01	2.927E-01	FAIL ABUN
PO-215	-1.287E-01	7.441E-01	5.612E-01	3.796E-01	FAIL ABUN
RN-219	-4.698E-02	4.102E-01	3.474E-01	2.093E-01	NOT IDENT.
RN-220	1.086E+00	2.740E+01	2.277E+01	1.398E+01	NOT IDENT.
RA-223	-1.287E-01	7.441E-01	5.612E-01	3.796E-01	FAIL ABUN
AC-227	-1.965E-02	3.987E-01	3.531E-01	2.034E-01	FAIL ABUN
TH-227	-1.965E-02	3.987E-01	3.531E-01	2.034E-01	FAIL ABUN
TH-229	-3.026E-02	5.200E-01	4.382E-01	2.653E-01	FAIL ABUN
PA-231	-7.479E-01	1.488E+00	1.270E+00	7.590E-01	FAIL ABUN
TH-231	-1.287E-01	7.441E-01	5.612E-01	3.796E-01	FAIL ABUN
U-231	-3.388E-01	1.082E+00	8.496E-01	5.520E-01	FAIL ABUN
PA-233	-7.890E-02	6.490E-02	5.238E-02	3.311E-02	FAIL ABUN
PA-234	4.878E-02	3.239E-01	2.728E-01	1.653E-01	FAIL ABUN
PA-234M	9.361E-01	7.412E+00	6.172E+00	3.782E+00	NOT IDENT.
U-235	-6.895E-02	2.206E-01	1.838E-01	1.126E-01	FAIL ABUN
NP-236	-5.813E-02	8.054E-02	6.676E-02	4.109E-02	NOT IDENT.
NP-239	-1.204E-02	1.830E-01	1.603E-01	9.338E-02	FAIL ABUN
AM-241	7.321E-02	1.827E-01	1.541E-01	9.323E-02	NOT IDENT.
CM-243	-4.225E-02	9.241E-02	8.024E-02	4.715E-02	FAIL ABUN
CM-247	2.738E-02	3.597E-02	3.225E-02	1.835E-02	NOT IDENT.
CF-249	2.743E-02	4.079E-02	3.639E-02	2.081E-02	NOT IDENT.
CF-251	9.836E-03	1.249E-01	1.068E-01	6.375E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	225.7685
46.50	225.7685
46.50	225.7685
48.70	243.7117
49.72	228.3584
51.35	211.6511
52.39	229.1836
52.97	232.9918
53.15	233.1305
53.44	242.6213
54.07	239.7471
56.28	235.5109
56.28	235.5130
57.37	0.0000
57.53	242.4208
57.53	242.4223
57.60	242.4743
57.98	239.0013
57.98	239.0013
59.32	238.1936
59.32	238.1936
59.40	242.1157
59.54	235.7777
59.72	235.9075
60.01	245.1480
61.10	267.9667
61.14	267.9991
61.30	268.1278
63.00	267.3185
63.29	267.5469
63.29	267.5469
63.58	267.7748
64.28	268.3231
65.12	306.5287
65.20	306.5997
65.20	306.5997
66.05	319.1693
66.72	322.4074
66.83	322.5102
66.91	346.2831
67.20	337.3438
67.20	337.3438
67.75	358.9818
67.85	349.8424
68.90	303.9968
68.90	303.9968
69.30	311.7559
69.67	318.4460
70.82	331.4269
70.82	331.4269
70.83	331.4364
72.80	362.6407
72.87	362.7069
72.87	362.7069
74.67	351.4398
74.81	351.5674
74.81	351.5674
74.81	351.5674
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74.97	351.7150
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77.11	353.6709
77.11	353.6709

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77.11	353.6709
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80.30	330.1596
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81.07	325.3235
81.07	325.3235
81.07	325.3235
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83.78	312.3536
83.78	312.3536
83.78	312.3536
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84.40	284.8005
84.90	285.1427
85.43	285.5053
86.29	286.0887
86.50	286.2322
86.54	286.2590
86.59	286.2921
86.72	286.3804
86.79	286.4261
86.94	286.5286
87.30	286.7730
87.30	286.7730
87.30	286.7730
87.30	286.7730
87.30	286.7730
87.30	286.7730
87.57	286.9543
87.88	287.1625
88.03	287.2634
88.36	287.4841
88.47	287.5583
89.95	288.5453
91.11	289.3132
92.29	290.0905
92.38	290.1488
92.38	290.1488
93.35	290.7827
94.00	291.2068
94.67	258.2401
94.67	258.2429
94.90	293.6727
94.90	293.6727
94.90	293.6727
94.90	293.6727
95.87	297.1326
95.87	297.1326
96.73	289.1894
97.43	262.6538
98.44	250.4232
98.44	250.4232
98.88	260.1556
99.55	247.2187
99.55	247.2187
99.86	263.5577
100.00	263.6366
100.10	272.2635
103.18	279.7843
103.76	278.2057
105.00	265.4546
105.31	272.3613
108.00	283.5367
109.28	278.4473
111.00	294.0049
111.00	294.0049

111.76	251.5476
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115.19	276.7934
116.30	277.3843
117.00	261.9966
117.00	261.9966
117.66	273.1735
121.11	266.0180
121.62	296.0766
121.78	286.2261
122.06	286.3740
122.32	287.5066
122.32	287.5066
122.32	287.5066
122.32	287.5066
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136.00	301.7150
136.25	268.1916
136.48	268.2972
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140.51	0.0000
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144.24	261.4622
144.24	261.4622
144.24	261.4622
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145.44	282.6865
147.16	269.9764
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152.70	244.0830
153.22	273.6379
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154.21	265.6598
154.21	265.6598
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162.64	238.2575
163.35	206.5670
163.89	217.3912
165.85	251.1553
167.43	236.7414
171.28	224.0659
171.86	239.3483
172.10	243.7436
176.55	230.0980
176.60	230.1131
181.06	242.4715
184.41	248.5293
185.71	251.7150
186.00	251.8152
190.27	197.4133
192.34	247.3067
193.63	239.9502
197.04	262.2235
198.01	226.8014
198.60	232.5633
200.40	231.9822
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202.84	248.4429
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208.36	258.0957
208.81	256.5429

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209.75	252.8713
210.97	252.1167
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216.55	234.4016
218.09	209.6354
222.10	212.9427
223.80	212.2166
226.40	226.7466
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227.08	199.1409
227.20	199.1672
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228.18	213.3059
228.18	213.3059
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236.00	228.7949
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238.63	183.8955
238.63	183.8955
238.63	183.8955
239.00	183.9705
240.98	184.3787
241.98	159.6773
241.98	159.6773
241.98	159.6773
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249.79	204.8753
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252.85	183.2100
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256.20	200.9082
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268.79	189.9293
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269.46	179.1475
269.46	179.1475
269.46	179.1475
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277.60	165.0366
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286.10	159.9543
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295.21	150.1710
295.96	150.2791

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299.80	150.8245
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300.09	150.8663
300.09	150.8663
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303.91	147.4546
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323.87	142.4880
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334.20	127.5447
334.30	127.5568
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338.28	137.6903
338.28	137.6903
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338.32	137.6947
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351.92	118.6810
351.92	118.6810
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369.80	120.4166
374.96	146.8901
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388.63	110.0819
391.69	135.6460
391.69	135.6460
392.90	124.6253
398.62	122.1112
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402.60	92.8773
404.84	134.9467
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411.60	134.5940
413.65	129.6491
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439.56	112.1454
439.89	116.3640
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444.90	94.6761
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445.03	94.6843
445.03	94.6843
445.03	94.6843
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477.59	88.1635
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510.53	0.0000
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511.00	108.7088
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511.85	124.8064
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513.99	102.0869
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520.65	69.5869
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546.56	0.0000
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563.90	89.7236
568.70	91.7828
569.32	91.8148
569.50	91.8247
569.67	94.5623
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574.00	104.8168
574.64	104.8533
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595.88	83.9462
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602.71	100.3035
603.60	98.8073
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604.70	84.9640
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609.31	72.4737
609.31	72.4737

609.31	72.4737
610.33	72.5137
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614.37	62.1094
618.01	88.6763
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621.84	71.0830
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636.97	78.2421
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646.12	84.2893
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661.65	88.7655
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666.33	98.5390
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696.49	66.9836
696.49	66.9836
697.00	68.9425
697.49	71.8718
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698.50	92.3119
699.00	92.3351
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706.58	0.0000
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722.78	52.4167
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739.58	66.3555
742.81	68.4374
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747.13	73.5393
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752.31	68.7288
753.82	67.7792
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756.15	70.8423
756.87	75.8553
763.93	105.1282
765.79	80.1621
766.41	84.1948
766.84	82.2042
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768.36	77.2444
768.36	77.2444
768.36	77.2444
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778.57	65.4967
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783.80	62.6161

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796.30	52.4601
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911.07	59.5438
911.07	59.5438
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934.06	42.9004
934.06	42.9004
934.06	42.9004
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969.11	71.6993
969.11	71.6993
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1120.29	52.4062
1120.29	52.4062
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1147.95	0.0000
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1238.11	57.5695
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1274.54	44.9176
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1298.22	0.0000
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1325.50	31.3885
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1333.61	29.4295
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1362.66	0.0000
1365.15	29.6820
1368.21	31.7556
1368.53	0.0000
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1377.67	35.9428
1377.67	35.9428
1377.67	35.9428
1377.67	35.9428
1384.27	22.9268
1394.10	22.6920
1395.20	29.9204
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1434.06	26.0559
1436.60	19.8156
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1750.46	0.0000
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1764.49	11.5848
1764.49	11.5848
1764.49	11.5848
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1791.20	0.0000
1808.65	13.6431
1836.01	15.6814

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232746001

Total Uranium Activity	2.3505E+00	ug/g
Total Uranium Counting Unc.	7.5978E+00	ug/g
Total Uranium Tpu	3.8764E-06	ug/g
Total Uranium Mda	3.5365E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232746001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM02            *
*   SAMPLE DATE   : 29-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 08:58:27.05    SAMPLE ALQT:  130.350 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.584E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.542E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.112E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.501E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:01:21.10

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746002.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:58:55
Sample ID         : G232746002           Sample quantity  : 1.27350E+02 GRAM
Detector name     : GAM09                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.56  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	5	74.97	318	504	1.33	148.90	144	17	4.41E-02	13.5	1.21E+00
2	5	77.27	547	387	1.18	153.49	144	17	7.60E-02	7.6	
3	4	87.38	211	252	1.13	173.71	171	11	2.93E-02	13.1	8.35E-01
4	4	89.98	119	290	1.03	178.92	171	11	1.65E-02	24.8	
5	0	93.10*	223	384	1.22	185.15	182	9	3.10E-02	18.4	
6	0	186.13*	151	301	1.33	371.16	367	9	2.10E-02	23.5	
7	0	209.67	132	284	1.15	418.22	414	10	1.84E-02	25.4	
8	6	238.82*	1191	190	1.23	476.52	470	18	1.65E-01	3.5	1.97E+00
9	6	241.82	264	250	1.65	482.51	470	18	3.66E-02	14.0	
10	0	270.70	104	205	1.73	540.26	535	10	1.44E-02	27.7	
11	0	277.66	38	201	0.74	554.18	550	8	5.30E-03	66.5	
12	2	295.41	344	164	1.30	589.69	584	25	4.78E-02	8.4	1.60E+00
13	2	300.33	95	154	1.38	599.52	584	25	1.32E-02	24.7	
14	0	338.50	242	188	1.14	675.85	670	13	3.36E-02	13.3	
15	0	352.04*	563	157	1.30	702.93	697	10	7.82E-02	6.0	
16	0	463.04	85	66	1.59	924.92	921	9	1.17E-02	20.4	
17	0	511.29*	103	161	1.66	1021.42	1013	17	1.43E-02	33.2	
18	0	583.28*	384	93	1.36	1165.40	1158	15	5.33E-02	7.7	
19	0	609.43*	495	112	1.56	1217.72	1210	16	6.88E-02	6.6	
20	0	727.50	74	62	1.38	1453.90	1448	11	1.03E-02	22.8	
21	0	768.90	34	87	1.33	1536.73	1530	15	4.66E-03	62.9	
22	0	786.18	27	29	1.33	1571.30	1567	7	3.71E-03	38.9	
23	0	861.93	43	77	1.87	1722.84	1713	15	5.93E-03	47.7	
24	0	911.36*	272	61	1.63	1821.73	1815	15	3.78E-02	8.9	
25	0	968.87	142	50	1.63	1936.80	1932	10	1.98E-02	12.5	
26	0	1120.37	111	44	1.40	2239.97	2234	12	1.54E-02	15.6	
27	0	1460.69*	1205	18	2.07	2921.10	2912	17	1.67E-01	3.0	
28	0	1620.94	24	3	0.64	3241.90	3236	12	3.33E-03	25.0	
29	0	1729.73	17	12	1.44	3459.71	3452	12	2.36E-03	47.4	
30	0	1764.30	88	0	3.07	3528.91	3520	16	1.22E-02	10.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 11:01:23

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:58:55
Sample ID : G232746002 Sample quantity : 127.35 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA9 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.56 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.913E+01	2.801E+00	4.322E-01	3.243E-02	67.402
CD-109	+	88.03	*	3.100E+00	8.513E-01	1.269E+00	1.048E-01	2.444
SN-126		64.28		5.907E-02	5.554E-01	8.729E-01	1.259E-01	0.068
	+	86.94		1.267E+00	6.196E-01	5.467E-01	2.256E-01	2.318
	+	87.57	*	3.048E-01	8.370E-02	1.254E-01	1.032E-02	2.430
TL-208	+	277.35		3.680E-01	4.910E-01	5.817E-01	6.131E-02	0.633
	+	510.84		4.983E-01	3.346E-01	1.890E-01	1.947E-02	2.636
	+	583.14	*	5.284E-01	8.922E-02	5.423E-02	3.838E-03	9.743
		860.37		4.933E-01	3.273E-01	6.007E-01	5.669E-02	0.821
BI-211		72.87		1.336E+00	3.224E+00	5.079E+00	3.754E-01	0.263
	+	351.07	*	3.401E+00	4.601E-01	2.956E-01	1.878E-02	11.507
BI-212	+	727.18	*	8.768E-01	4.078E-01	4.570E-01	3.997E-02	1.919
	+	785.46		2.022E+00	1.582E+00	2.408E+00	1.887E-01	0.840
	+	1620.62		2.431E+00	1.228E+00	1.728E+00	1.162E-01	1.407
PB-212	+	74.81		2.020E+00	5.983E-01	5.304E-01	6.345E-02	3.808
	+	77.11		1.953E+00	3.321E-01	2.983E-01	2.257E-02	6.549
	+	87.30		1.410E+00	4.120E-01	5.821E-01	7.532E-02	2.422
	+	238.63	*	1.576E+00	1.589E-01	8.108E-02	5.841E-03	19.436
	+	300.09		1.933E+00	9.691E-01	1.115E+00	9.192E-02	1.733
PO-212	+	74.81		2.020E+00	5.983E-01	5.304E-01	6.345E-02	3.808
	+	77.11		1.953E+00	3.321E-01	2.983E-01	2.257E-02	6.549
	+	87.30		1.410E+00	4.120E-01	5.821E-01	7.532E-02	2.422
		115.19		2.544E+00	3.220E+00	5.584E+00	3.458E-01	0.456
	+	238.63	*	1.576E+00	1.589E-01	8.108E-02	5.841E-03	19.436
	+	300.09		1.933E+00	9.691E-01	1.115E+00	9.192E-02	1.733
BI-214	+	609.31	*	1.285E+00	2.000E-01	1.114E-01	9.081E-03	11.533
	+	768.36		9.730E-01	1.228E+00	1.038E+00	1.004E-01	0.937
		934.06		1.141E+00	1.145E+00	2.059E+00	2.251E-01	0.554
	+	1120.29		1.502E+00	4.898E-01	4.712E-01	4.351E-02	3.188
		1238.11		1.971E+00	1.014E+00	1.859E+00	1.575E-01	1.060
		1377.67		1.160E+00	1.080E+00	1.942E+00	1.886E-01	0.597
	+	1764.49		1.642E+00	3.641E-01	2.862E-01	1.741E-02	5.738
PB-214	+	74.81		3.480E+00	1.012E+00	9.139E-01	9.612E-02	3.808
	+	77.11		3.349E+00	6.239E-01	5.113E-01	5.491E-02	6.549

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.415E+00	6.888E-01	9.972E-01	1.123E-01	2.422
	+	241.98		2.095E+00	6.081E-01	4.883E-01	3.888E-02	4.291
	+	295.21		1.231E+00	2.310E-01	1.953E-01	1.664E-02	6.302
	+	351.92	*	1.183E+00	1.716E-01	1.030E-01	8.469E-03	11.482
PO-214	+	74.81		3.480E+00	1.012E+00	9.139E-01	9.612E-02	3.808
	+	77.11		3.349E+00	6.239E-01	5.113E-01	5.491E-02	6.549
	+	87.30		2.415E+00	6.888E-01	9.972E-01	1.123E-01	2.422
	+	241.98		2.095E+00	6.081E-01	4.883E-01	3.888E-02	4.291
	+	295.21		1.231E+00	2.310E-01	1.953E-01	1.664E-02	6.302
	+	351.92	*	1.183E+00	1.716E-01	1.030E-01	8.469E-03	11.482
PO-216	+	74.81		2.020E+00	5.983E-01	5.304E-01	6.345E-02	3.808
	+	77.11		1.953E+00	3.321E-01	2.983E-01	2.257E-02	6.549
	+	87.30		1.410E+00	4.120E-01	5.821E-01	7.532E-02	2.422
	+	238.63	*	1.576E+00	1.589E-01	8.108E-02	5.841E-03	19.436
	+	300.09		1.933E+00	9.691E-01	1.115E+00	9.192E-02	1.733
PO-218	+	74.81		3.480E+00	1.012E+00	9.139E-01	9.612E-02	3.808
	+	77.11		3.349E+00	6.239E-01	5.113E-01	5.491E-02	6.549
	+	87.30		2.415E+00	6.888E-01	9.972E-01	1.123E-01	2.422
	+	241.98		2.095E+00	6.081E-01	4.883E-01	3.888E-02	4.291
	+	295.21		1.231E+00	2.310E-01	1.953E-01	1.664E-02	6.302
	+	351.92	*	1.183E+00	1.716E-01	1.030E-01	8.469E-03	11.482
RA-224	+	240.98	*	3.973E+00	1.131E+00	9.227E-01	5.212E-02	4.306
RA-226	+	609.31	*	1.285E+00	2.000E-01	1.114E-01	9.081E-03	11.533
	+	768.36		9.730E-01	1.228E+00	1.038E+00	1.004E-01	0.937
		934.06		1.141E+00	1.145E+00	2.059E+00	2.251E-01	0.554
	+	1120.29		1.502E+00	4.898E-01	4.712E-01	4.351E-02	3.188
		1238.11		1.971E+00	1.014E+00	1.859E+00	1.575E-01	1.060
		1377.67		1.160E+00	1.080E+00	1.942E+00	1.886E-01	0.597
	+	1764.49		1.642E+00	3.641E-01	2.862E-01	1.741E-02	5.738
AC-228	+	338.32		1.613E+00	7.855E-01	3.247E-01	1.323E-01	4.967
	+	911.07	*	1.670E+00	3.556E-01	2.058E-01	2.408E-02	8.114
	+	969.11		1.543E+00	5.276E-01	4.424E-01	1.032E-01	3.488
RA-228	+	338.32		1.613E+00	7.855E-01	3.247E-01	1.323E-01	4.967
	+	911.07	*	1.670E+00	3.556E-01	2.058E-01	2.408E-02	8.114
	+	969.11		1.543E+00	5.276E-01	4.424E-01	1.032E-01	3.488
TH-228		84.40		3.079E+00	2.576E+00	4.084E+00	5.203E-01	0.754
	+	238.60	*	1.576E+00	1.589E-01	8.107E-02	5.840E-03	19.438
	+	300.10		1.933E+00	1.487E+00	1.115E+00	6.574E-01	1.733
TH-230	+	609.31	*	1.285E+00	2.000E-01	1.114E-01	9.081E-03	11.533
	+	768.36		9.730E-01	1.227E+00	1.038E+00	1.004E-01	0.937
		934.06		1.141E+00	1.145E+00	2.059E+00	2.251E-01	0.554
	+	1120.29		1.502E+00	4.898E-01	4.712E-01	4.350E-02	3.188
		1238.11		1.971E+00	1.014E+00	1.859E+00	1.575E-01	1.060
		1377.67		1.160E+00	1.080E+00	1.941E+00	1.886E-01	0.597
	+	1764.49		1.642E+00	3.641E-01	2.862E-01	1.741E-02	5.738
TH-232	+	338.32		1.613E+00	4.400E-01	3.247E-01	1.867E-02	4.967
	+	911.07	*	1.670E+00	3.556E-01	2.058E-01	2.408E-02	8.114
	+	969.11		1.543E+00	5.276E-01	4.424E-01	1.032E-01	3.488
U-234	+	609.31	*	1.285E+00	2.000E-01	1.114E-01	9.081E-03	11.533

Sample ID : G232746002 Acquisition date : 14-JUL-2009 08:58:55

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	768.36		9.730E-01	1.227E+00	1.038E+00	1.004E-01	0.937
		934.06		1.141E+00	1.145E+00	2.059E+00	2.251E-01	0.554
	+	1120.29		1.502E+00	4.898E-01	4.712E-01	4.350E-02	3.188
		1238.11		1.971E+00	1.014E+00	1.859E+00	1.575E-01	1.060
		1377.67		1.160E+00	1.080E+00	1.941E+00	1.886E-01	0.597
	+	1764.49		1.642E+00	3.641E-01	2.862E-01	1.741E-02	5.738
NP-237	+	86.50	*	8.951E-01	3.075E-01	3.864E-01	8.572E-02	2.317
		95.87		-7.519E-02	8.581E-01	1.303E+00	3.155E-01	-0.058
AM-243	+	74.67	*	3.275E-01	9.205E-02	8.630E-02	6.438E-03	3.794
	+	86.72		3.357E+01	9.217E+00	1.452E+01	1.186E+00	2.312
		117.66		-2.104E+00	3.379E+00	5.516E+00	3.364E-01	-0.381
		142.18		-5.147E+00	1.636E+01	2.685E+01	1.489E+00	-0.192
ANH-511	+	511.00	*	1.076E-01	7.171E-02	4.084E-02	2.473E-03	2.636

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.664E-01	2.940E-01	5.073E-01	3.483E-02	0.328
NA-22		1274.54	*	5.596E-03	4.293E-02	7.061E-02	4.733E-03	0.079
NA-24		1368.53	*	-2.972E-01	4.293E-02	Half-Life too short		
AL-26		1129.67		-2.148E+00	1.763E+00	2.521E+00	1.581E-01	-0.852
		1808.65	*	2.263E-02	2.652E-02	5.129E-02	3.002E-03	0.441
TI-44		67.85		-5.112E-03	4.807E-02	7.376E-02	5.349E-03	-0.069
	+	78.38	*	3.605E-01	6.129E-02	7.407E-02	5.653E-03	4.867
SC-46		889.25	*	-4.719E-03	3.785E-02	6.248E-02	5.752E-03	-0.076
	+	1120.51		2.567E-01	8.193E-02	1.329E-01	8.543E-03	1.932
V-48		944.10		1.240E-01	7.622E-01	1.289E+00	1.144E-01	0.096
		983.50	*	3.970E-02	6.460E-02	1.136E-01	9.572E-03	0.350
		1312.09		1.913E-02	7.636E-02	1.274E-01	9.125E-03	0.150
CR-51		320.08	*	-6.906E-02	3.604E-01	5.630E-01	3.628E-02	-0.123
MN-52		744.21		2.619E-02	2.358E-01	3.816E-01	2.795E-02	0.069
		848.13		-1.715E+00	5.860E+00	9.541E+00	8.255E-01	-0.180
		935.52		2.460E-01	2.387E-01	4.321E-01	3.874E-02	0.569
		1246.25		-2.998E-01	6.888E+00	1.114E+01	7.063E-01	-0.027
		1333.61		-4.430E+00	4.943E+00	6.966E+00	5.173E-01	-0.636
		1434.06	*	-8.036E-02	1.878E-01	2.929E-01	2.130E-02	-0.274
MN-54		834.83	*	-7.290E-03	3.509E-02	5.760E-02	4.882E-03	-0.127
CO-56		846.75	*	-1.774E-02	3.443E-02	5.470E-02	4.722E-03	-0.324
		977.42		-2.550E+00	2.635E+00	3.873E+00	3.293E-01	-0.658
		1037.82		1.929E-02	3.068E-01	5.092E-01	4.191E-02	0.038
		1175.09		-1.146E+00	2.096E+00	3.217E+00	1.769E-01	-0.356
		1238.25		2.031E-01	1.011E-01	1.871E-01	1.232E-02	1.086
		1360.21		6.842E-01	7.945E-01	1.459E+00	1.079E-01	0.469
		1771.40		-5.582E-01	2.607E-01	2.259E-01	1.367E-02	-2.471
CO-57		122.06	*	-4.200E-03	2.293E-02	3.813E-02	2.276E-03	-0.110
		136.48		-1.497E-02	1.875E-01	3.115E-01	2.050E-02	-0.048
CO-58		810.76	*	-1.594E-02	3.325E-02	5.320E-02	4.354E-03	-0.300
FE-59		142.65		-4.653E-01	2.542E+00	4.149E+00	2.298E-01	-0.112

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		192.34		1.198E-02	8.088E-01	1.324E+00	1.538E-01	0.009
		1099.22	*	-3.874E-02	9.456E-02	1.490E-01	1.140E-02	-0.260
		1291.56		-7.171E-02	1.244E-01	1.871E-01	1.556E-02	-0.383
CO-60		1173.22		-2.543E-02	4.134E-02	6.286E-02	3.443E-03	-0.405
		1332.49	*	-1.200E-02	3.979E-02	6.165E-02	4.579E-03	-0.195
ZN-65		1115.52	*	-9.931E-02	1.055E-01	1.291E-01	8.428E-03	-0.769
GE-68		1077.35	*	1.411E+00	1.229E+00	2.239E+00	1.597E-01	0.630
AS-73		53.44	*	1.165E+00	9.178E-01	1.537E+00	1.135E-01	0.758
AS-74		595.88	*	7.367E-03	8.169E-02	1.343E-01	8.417E-03	0.055
		634.78		-1.425E-01	3.134E-01	4.853E-01	3.069E-02	-0.294
SE-75		66.05		-6.928E-01	5.048E+00	7.741E+00	7.209E-01	-0.089
		96.73		-5.926E-01	7.291E-01	1.054E+00	1.352E-01	-0.562
		121.11		-5.398E-02	1.237E-01	2.033E-01	1.901E-02	-0.266
		136.00		-1.934E-03	3.452E-02	5.741E-02	3.294E-03	-0.034
		198.60		-1.284E+00	1.759E+00	2.701E+00	1.842E-01	-0.475
		264.65	*	7.119E-03	4.141E-02	6.712E-02	3.889E-03	0.106
		279.53		7.470E-02	1.120E-01	1.679E-01	1.048E-02	0.445
		303.91		-1.286E-01	2.265E+00	3.183E+00	3.035E-01	-0.040
		400.65		-1.270E-01	2.328E-01	3.759E-01	3.367E-02	-0.338
BR-77	+	87.88		6.243E+02	1.714E+02	2.949E+02	2.434E+01	2.117
		200.40		5.240E+01	1.437E+02	2.386E+02	1.296E+01	0.220
	+	239.00		2.358E+02	2.130E+01	3.414E+01	1.926E+00	6.906
		249.79		-6.014E+00	5.602E+01	8.959E+01	5.093E+00	-0.067
		281.68		2.044E+01	8.618E+01	1.249E+02	7.211E+00	0.164
		297.23		2.008E+02	5.582E+01	1.025E+02	5.935E+00	1.958
		303.76		-1.160E+01	1.800E+02	2.527E+02	1.463E+01	-0.046
		439.47		-7.703E+01	1.203E+02	1.909E+02	1.101E+01	-0.404
		484.57		-8.681E+01	1.796E+02	2.850E+02	1.698E+01	-0.305
		520.65	*	1.608E+00	7.919E+00	1.328E+01	8.083E-01	0.121
		574.64		6.701E+01	1.798E+02	3.031E+02	1.887E+01	0.221
		578.91		-1.352E+01	8.686E+01	1.221E+02	7.614E+00	-0.111
		585.48		8.900E+02	2.194E+02	4.009E+02	2.506E+01	2.220
		755.35		2.175E+02	1.512E+02	2.728E+02	2.035E+01	0.797
		817.79		6.676E+01	1.083E+02	1.925E+02	1.588E+01	0.347
SR-82		698.33		-2.712E+01	3.376E+01	5.032E+01	3.408E+00	-0.539
		776.49	*	-1.384E-01	3.978E-01	5.593E-01	4.321E-02	-0.247
		1395.20		4.857E+00	9.153E+00	1.602E+01	1.176E+00	0.303
RB-83		520.41	*	1.013E-02	5.596E-02	9.368E-02	5.701E-03	0.108
		529.64		4.637E-02	8.788E-02	1.512E-01	9.245E-03	0.307
		552.65		-1.720E-01	1.820E-01	2.730E-01	1.686E-02	-0.630
RB-84		881.50	*	-3.410E-02	6.253E-02	9.853E-02	8.967E-03	-0.346
KR-85		513.99	*	1.322E+01	7.253E+00	1.229E+01	7.455E-01	1.075
SR-85		513.99	*	6.761E-02	3.709E-02	6.286E-02	3.813E-03	1.075
RB-86		1076.63	*	-1.224E-01	7.791E-01	1.261E+00	9.010E-02	-0.097
Y-88		898.02		-5.174E-02	4.222E-02	6.114E-02	5.725E-03	-0.846
		1836.01	*	1.350E-02	2.325E-02	4.412E-02	2.522E-03	0.306
ZR-88		392.90	*	1.397E-02	2.965E-02	5.119E-02	2.828E-03	0.273
Y-91		1204.90	*	-6.967E+00	1.981E+01	3.121E+01	1.825E+00	-0.223
NB-94		702.63	*	2.701E-02	3.211E-02	5.543E-02	3.782E-03	0.487

---- Non-Identified Nuclides ----

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		871.10		-8.560E-04	3.120E-02	5.206E-02	4.664E-03	-0.016
NB-95		765.79	*	5.103E-03	4.307E-02	6.099E-02	4.630E-03	0.084
NB-95M		235.69	*	-7.342E-02	1.286E-01	1.777E-01	1.314E-02	-0.413
ZR-95		724.18		-7.786E-02	9.974E-02	1.242E-01	9.902E-03	-0.627
		756.15	*	3.110E-02	7.055E-02	1.175E-01	9.946E-03	0.265
NB-97		657.90	*	-1.722E-02	7.055E-02	Half-Life too short		
		1024.50		-3.447E+00	7.055E-02	Half-Life too short		
ZR-97		254.15		1.515E+00	7.055E-02	Half-Life too short		
		355.39		-1.641E-01	7.055E-02	Half-Life too short		
		507.63	*	7.621E-01	7.055E-02	Half-Life too short		
		602.52		7.308E+00	7.055E-02	Half-Life too short		
		1021.30		-3.079E+00	7.055E-02	Half-Life too short		
		1147.95		-1.723E-01	7.055E-02	Half-Life too short		
		1362.66		3.168E+00	7.055E-02	Half-Life too short		
		1750.46		-1.794E+00	7.055E-02	Half-Life too short		
MO-99		140.51		1.665E+01	2.259E+01	3.804E+01	1.023E+01	0.438
		181.06		9.206E-01	1.532E+01	2.406E+01	4.087E+00	0.038
		366.43		-1.855E+01	6.937E+01	1.149E+02	6.498E+00	-0.161
		739.58	*	3.692E+00	1.142E+01	1.882E+01	2.722E+00	0.196
		778.00		1.250E+01	2.910E+01	4.853E+01	3.759E+00	0.258
TC-99M		140.51	*	1.316E+10	2.910E+01	Half-Life too short		
RH-101		127.23		-3.374E-02	3.003E-02	4.777E-02	2.782E-03	-0.706
		198.01	*	-1.527E-02	3.179E-02	4.943E-02	2.679E-03	-0.309
		325.23		-2.666E-01	2.334E-01	3.408E-01	1.968E-02	-0.782
RH-102		418.52		7.794E-02	2.642E-01	4.505E-01	2.552E-02	0.173
		475.06	*	3.850E-03	2.657E-02	4.453E-02	2.638E-03	0.086
		631.29		3.143E-02	5.016E-02	8.600E-02	5.435E-03	0.366
		697.49		-1.877E-02	7.329E-02	1.152E-01	7.790E-03	-0.163
		766.84		5.257E-02	1.185E-01	1.742E-01	1.325E-02	0.302
		1046.59		-3.554E-03	1.188E-01	1.953E-01	1.483E-02	-0.018
		1112.84		1.163E-01	2.339E-01	3.818E-01	2.505E-02	0.305
RU-103		497.08	*	2.077E-03	3.585E-02	5.952E-02	7.583E-03	0.035
	+	610.33		1.381E+01	2.829E+00	2.984E+00	4.659E-01	4.629
RH-106	+	511.85		5.374E-01	3.580E-01	4.261E-01	2.581E-02	1.261
		621.84	*	2.368E-02	2.975E-01	4.869E-01	5.842E-02	0.049
		1050.47		-9.675E-01	2.476E+00	3.930E+00	2.963E-01	-0.246
RU-106	+	511.85		5.374E-01	3.580E-01	4.261E-01	2.581E-02	1.261
		621.84	*	2.368E-02	2.975E-01	4.869E-01	3.072E-02	0.049
		1050.47		-9.675E-01	2.476E+00	3.930E+00	2.963E-01	-0.246
AG-108M		433.93	*	1.111E-02	3.034E-02	5.188E-02	3.239E-03	0.214
		614.37		1.284E-02	4.267E-02	6.279E-02	4.241E-03	0.205
		722.95		-3.518E-02	4.510E-02	5.620E-02	4.200E-03	-0.626
AG-110M		657.75	*	-8.682E-03	3.411E-02	5.392E-02	3.606E-03	-0.161
		677.61		-1.620E-01	2.973E-01	4.547E-01	3.113E-02	-0.356
		706.67		-1.879E-01	1.911E-01	2.757E-01	1.976E-02	-0.681
		763.93		1.646E-02	1.648E-01	2.330E-01	1.828E-02	0.071
		884.67		8.285E-05	4.390E-02	7.337E-02	6.900E-03	0.001
		937.48		-6.619E-02	1.082E-01	1.690E-01	1.562E-02	-0.392
		1384.27		5.420E-02	1.439E-01	2.450E-01	1.873E-02	0.221

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IN-111		171.28		-4.868E-01	8.445E-01	1.351E+00	7.107E-02	-0.360
		245.39	*	-1.209E-01	9.860E-01	1.402E+00	7.945E-02	-0.086
IN-113M		391.69	*	3.276E-02	4.082E-02	7.194E-02	4.262E-03	0.455
SN-113		391.69	*	3.276E-02	4.082E-02	7.194E-02	4.262E-03	0.455
IN-114M		190.27	*	-6.720E-02	1.775E-01	2.528E-01	1.358E-02	-0.266
CD-115		260.90		4.710E+01	1.132E+02	1.863E+02	1.066E+01	0.253
		492.35		-1.578E+01	2.919E+01	4.604E+01	2.758E+00	-0.343
		527.90	*	1.644E+00	9.341E+00	1.446E+01	8.836E-01	0.114
SN-117M		156.02		-1.407E+00	2.109E+00	3.386E+00	1.813E-01	-0.416
		158.56	*	7.964E-04	4.960E-02	8.209E-02	4.370E-03	0.010
SB-122		563.90	*	6.708E-01	1.840E+00	3.100E+00	1.923E-01	0.216
		692.80		3.346E+01	3.709E+01	6.467E+01	4.337E+00	0.517
I-123		159.00	*	-1.287E+00	3.709E+01	Half-Life too short		
		528.96		1.563E+02	3.709E+01	Half-Life too short		
TE-123M		159.00	*	-8.635E-03	2.630E-02	4.284E-02	2.315E-03	-0.202
I-124		602.71	*	8.588E-01	6.625E-01	1.079E+00	6.775E-02	0.796
		722.78		-3.357E+00	4.537E+00	5.695E+00	4.023E-01	-0.590
		1325.50		-2.103E+01	3.523E+01	5.252E+01	3.853E+00	-0.400
		1376.25		2.938E+01	3.223E+01	5.761E+01	4.247E+00	0.510
		1509.49		9.896E-01	1.346E+01	2.274E+01	1.612E+00	0.044
		1691.02		1.775E+00	3.339E+00	6.073E+00	3.907E-01	0.292
SB-124		602.71		5.182E-02	3.997E-02	6.508E-02	4.089E-03	0.796
		645.85		-2.689E-01	5.025E-01	7.748E-01	5.440E-02	-0.347
		709.31		-1.386E+00	2.595E+00	3.950E+00	2.727E-01	-0.351
		713.82		1.713E-01	1.578E+00	2.561E+00	2.794E-01	0.067
		722.78		-2.937E-01	3.968E-01	4.981E-01	3.631E-02	-0.590
	+	968.20		1.584E+01	4.187E+00	7.173E+00	6.175E-01	2.209
		1045.16		6.226E-01	2.428E+00	4.104E+00	3.125E-01	0.152
		1325.50		-1.965E+00	3.291E+00	4.906E+00	3.599E-01	-0.400
		1368.21		-9.587E-01	1.572E+00	2.263E+00	2.879E-01	-0.424
		1436.60		-8.070E-01	3.169E+00	5.106E+00	3.711E-01	-0.158
		1691.02	*	3.662E-02	6.888E-02	1.253E-01	8.625E-03	0.292
SB-125		427.89	*	4.456E-02	8.995E-02	1.549E-01	9.233E-03	0.288
	+	463.38		7.952E-01	3.293E-01	5.193E-01	3.545E-02	1.531
		600.56		-1.161E-01	1.810E-01	2.781E-01	1.982E-02	-0.417
		635.90		-2.114E-01	2.389E-01	3.514E-01	2.546E-02	-0.602
TE-125M		109.28	*	5.703E+00	8.135E+00	1.409E+01	1.212E+00	0.405
I-126		388.63		-1.109E-01	1.837E-01	2.964E-01	1.641E-02	-0.374
		666.33	*	-1.716E-01	1.749E-01	2.567E-01	1.643E-02	-0.669
		753.82		1.272E+00	1.462E+00	2.521E+00	1.877E-01	0.504
SB-126		223.80		-1.581E+00	3.651E+00	5.777E+00	3.216E-01	-0.274
	+	278.60		2.400E+00	3.196E+00	4.156E+00	2.396E-01	0.578
	+	296.50		1.209E+01	2.139E+00	3.477E+00	2.012E-01	3.478
		414.70		-7.243E-02	6.780E-02	1.048E-01	5.914E-03	-0.691
		415.30		-5.430E+00	5.724E+00	8.940E+00	5.048E-01	-0.607
		555.20		6.154E-01	3.568E+00	5.934E+00	3.669E-01	0.104
		573.80		4.564E-01	9.561E-01	1.624E+00	1.011E-01	0.281
		593.00		-9.420E-02	8.336E-01	1.346E+00	8.430E-02	-0.070
		656.30		3.220E-01	3.034E+00	4.959E+00	3.145E-01	0.065

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		666.33		-7.168E-02	7.306E-02	1.072E-01	6.860E-03	-0.669
		675.00		2.051E-01	1.914E+00	3.121E+00	2.028E-01	0.066
		695.00		2.411E-02	7.302E-02	1.211E-01	8.153E-03	0.199
		697.00		-1.195E-01	2.569E-01	3.958E-01	2.674E-02	-0.302
		720.50	*	1.194E-01	1.382E-01	2.327E-01	1.637E-02	0.513
		856.80		-8.278E-02	4.646E-01	6.601E-01	5.788E-02	-0.125
		989.30		-3.011E-01	1.162E+00	1.826E+00	1.526E-01	-0.165
		1034.80		7.451E+00	8.768E+00	1.561E+01	1.211E+00	0.477
		1213.00		-2.769E+00	4.232E+00	6.396E+00	3.800E-01	-0.433
SB-127		61.10		-7.459E+01	6.123E+01	8.896E+01	8.887E+00	-0.838
		252.40		3.620E-01	3.764E+00	6.087E+00	2.527E+00	0.059
		290.80		-1.215E+01	2.118E+01	2.843E+01	2.576E+00	-0.427
		411.60		7.668E+00	1.106E+01	1.922E+01	2.739E+00	0.399
		444.90		-3.552E+00	8.224E+00	1.323E+01	1.417E+00	-0.269
		473.00		-1.320E+00	1.424E+00	2.170E+00	2.422E-01	-0.608
		543.00		1.411E+00	1.392E+01	2.306E+01	2.999E+00	0.061
		603.60		1.834E+00	1.198E+01	1.736E+01	1.902E+00	0.106
		685.20	*	6.157E-01	1.143E+00	1.940E+00	1.915E-01	0.317
		698.50		-8.489E+00	1.435E+01	2.178E+01	3.232E+00	-0.390
		722.20		-1.120E+01	3.108E+01	4.139E+01	4.107E+00	-0.271
		783.80		8.449E-01	3.379E+00	5.128E+00	6.054E-01	0.165
XE-127		57.60		5.432E+00	6.660E+00	1.085E+01	7.824E-01	0.501
		145.22		-2.948E-01	6.385E-01	1.027E+00	5.652E-02	-0.287
		172.10		-8.091E-02	1.063E-01	1.683E-01	8.862E-03	-0.481
		202.84	*	-4.437E-02	4.405E-02	6.814E-02	3.712E-03	-0.651
		374.96		2.338E-02	1.686E-01	2.866E-01	1.608E-02	0.082
I-131		80.18		1.727E-01	4.220E+00	6.514E+00	5.074E-01	0.027
		284.30		2.983E-01	1.350E+00	2.186E+00	1.404E-01	0.136
		364.48	*	1.190E-02	9.879E-02	1.680E-01	1.067E-02	0.071
		636.97		-5.242E-01	1.345E+00	2.096E+00	1.460E-01	-0.250
		722.89		-5.703E+00	7.444E+00	9.301E+00	6.632E-01	-0.613
TE-132		49.72		-1.490E+00	2.299E+01	3.607E+01	3.525E+00	-0.041
		111.76		-9.551E+00	2.521E+01	4.174E+01	3.786E+00	-0.229
		116.30		-6.841E-01	2.367E+01	3.973E+01	3.553E+00	-0.017
		228.16	*	3.455E-01	5.887E-01	9.810E-01	1.396E-01	0.352
BA-133		53.15		6.362E+00	4.065E+00	6.889E+00	5.090E-01	0.924
		79.62		-1.048E-01	1.228E+00	1.883E+00	2.773E-01	-0.056
		81.00		-5.791E-02	9.342E-02	1.387E-01	2.141E-02	-0.418
	+	276.40		3.637E-01	4.860E-01	6.428E-01	8.323E-02	0.566
		302.84		-1.747E-02	1.349E-01	2.125E-01	2.476E-02	-0.082
		356.01	*	-6.618E-03	4.293E-02	6.318E-02	7.271E-03	-0.105
		383.85		1.210E-01	2.797E-01	4.826E-01	5.187E-02	0.251
I-133	+	510.53		9.018E-01	2.797E-01	Half-Life too short		
		529.87	*	2.060E-04	2.797E-01	Half-Life too short		
		706.58		-2.483E-01	2.797E-01	Half-Life too short		
		856.28		-2.944E-01	2.797E-01	Half-Life too short		
		875.33		-2.288E-02	2.797E-01	Half-Life too short		
		1236.41		8.877E-01	2.797E-01	Half-Life too short		
		1298.22		1.877E-01	2.797E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-134		475.35		1.239E+00	1.714E+00	2.993E+00	1.773E-01	0.414
		563.23		8.123E-02	3.421E-01	5.707E-01	3.605E-02	0.142
		569.32		-8.469E-02	1.992E-01	2.964E-01	1.891E-02	-0.286
		604.70		5.136E-03	3.646E-02	5.279E-02	3.333E-03	0.097
		795.84	*	7.623E-02	4.688E-02	8.768E-02	7.048E-03	0.869
		801.93		-1.738E-01	3.720E-01	6.002E-01	4.862E-02	-0.290
		1038.57		-2.026E+00	3.873E+00	6.043E+00	4.659E-01	-0.335
		1167.94		-1.099E+00	2.336E+00	3.621E+00	2.019E-01	-0.303
		1365.15		-3.669E-01	1.052E+00	1.622E+00	1.272E-01	-0.226
CS-135		268.24	*	1.929E-02	1.655E-01	2.382E-01	1.814E-02	0.081
I-135		288.45		3.926E+09	1.655E-01	Half-Life too short		
		417.63		2.674E+09	1.655E-01	Half-Life too short		
		546.56		-2.645E+09	1.655E-01	Half-Life too short		
		836.80		3.241E+09	1.655E-01	Half-Life too short		
		1038.76		-4.937E+09	1.655E-01	Half-Life too short		
		1124.00		1.239E+10	1.655E-01	Half-Life too short		
		1131.51		2.814E+07	1.655E-01	Half-Life too short		
		1260.41	*	2.849E+09	1.655E-01	Half-Life too short		
		1457.56		2.388E+11	1.655E-01	Half-Life too short		
		1678.03		4.707E+09	1.655E-01	Half-Life too short		
		1706.46		-3.959E+09	1.655E-01	Half-Life too short		
		1791.20		2.649E+09	1.655E-01	Half-Life too short		
CS-136		66.91		-4.291E-01	8.093E-01	1.213E+00	1.783E-01	-0.354
	+	86.29		3.928E+00	1.142E+00	1.787E+00	2.238E-01	2.198
		153.22		7.664E-01	6.150E-01	1.068E+00	7.371E-02	0.717
		163.89		-1.924E-01	1.034E+00	1.638E+00	1.119E-01	-0.117
		176.55		-4.367E-02	3.349E-01	5.472E-01	3.321E-02	-0.080
		273.65		5.172E-01	5.294E-01	6.672E-01	4.388E-02	0.775
		340.57		1.835E-01	1.249E-01	2.067E-01	1.264E-02	0.888
		818.51		2.004E-02	6.568E-02	1.135E-01	9.389E-03	0.177
		1048.07	*	-1.186E-02	1.086E-01	1.771E-01	1.414E-02	-0.067
		1235.34		-7.942E-02	6.774E-01	1.098E+00	1.123E-01	-0.072
BA-137M		661.65	*	3.565E-03	3.684E-02	6.004E-02	3.810E-03	0.059
CS-137		661.65	*	3.768E-03	3.894E-02	6.347E-02	4.042E-03	0.059
CE-139		165.85	*	-1.518E-02	2.838E-02	4.569E-02	2.394E-03	-0.332
BA-140		162.64		6.975E-01	7.192E-01	1.197E+00	7.257E-02	0.582
		304.84		3.771E-01	1.349E+00	1.946E+00	5.310E-01	0.194
		423.70		-1.890E-01	1.786E+00	2.962E+00	9.408E-01	-0.064
		537.32	*	6.852E-02	2.293E-01	3.845E-01	1.253E-01	0.178
LA-140		328.77		4.903E-01	2.983E-01	5.159E-01	3.337E-02	0.950
		432.53		-9.109E-01	1.961E+00	3.167E+00	2.010E-01	-0.288
		487.03		3.683E-02	1.163E-01	1.974E-01	1.326E-02	0.187
		751.79		-6.488E-01	1.754E+00	2.707E+00	2.293E-01	-0.240
		815.85		-2.316E-02	2.695E-01	4.493E-01	4.162E-02	-0.052
		867.82		-2.804E-01	1.419E+00	2.109E+00	1.973E-01	-0.133
		919.63		-1.710E+00	2.617E+00	3.924E+00	4.340E-01	-0.436
		925.24		5.606E-01	1.068E+00	1.865E+00	1.787E-01	0.301
		1596.49	*	-1.251E-01	8.090E-02	9.668E-02	6.589E-03	-1.294
CE-141		145.44	*	-4.992E-02	5.747E-02	9.061E-02	5.202E-03	-0.551

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-143		57.37		1.155E-03	5.747E-02	Half-Life too short		
		231.56		-4.659E-04	5.747E-02	Half-Life too short		
		293.26	*	2.856E-04	5.747E-02	Half-Life too short		
	+	350.59		2.386E-02	5.747E-02	Half-Life too short		
		490.36		1.523E-04	5.747E-02	Half-Life too short		
		664.57		1.726E-05	5.747E-02	Half-Life too short		
		721.93		2.552E-04	5.747E-02	Half-Life too short		
CE-144		80.11		8.652E-02	1.983E+00	3.062E+00	2.366E-01	0.028
		133.54	*	1.063E-01	1.865E-01	3.178E-01	4.499E-02	0.334
PM-144		476.78		6.611E-02	6.107E-02	1.090E-01	7.687E-03	0.606
		618.01		-2.552E-02	3.119E-02	4.697E-02	3.112E-03	-0.543
		696.49	*	-9.505E-03	3.393E-02	5.326E-02	3.597E-03	-0.178
		778.57		1.199E+00	2.112E+00	3.567E+00	2.766E-01	0.336
PR-144		696.49	*	-6.440E-01	2.299E+00	3.608E+00	2.436E-01	-0.178
		1489.15		-5.179E+00	8.693E+00	1.274E+01	9.105E-01	-0.406
PM-146		453.90	*	8.143E-03	4.006E-02	6.758E-02	5.842E-03	0.120
		633.02		-1.132E-02	1.245E+00	2.018E+00	7.449E-01	-0.006
		735.90		1.075E-01	1.448E-01	2.437E-01	6.875E-02	0.441
		747.13		-4.619E-02	9.030E-02	1.368E-01	1.820E-02	-0.338
ND-147	+	91.11		5.612E-01	2.821E-01	4.205E-01	3.631E-02	1.334
		319.41		-1.661E+00	3.194E+00	4.871E+00	2.817E-01	-0.341
		439.89		-2.015E+00	5.138E+00	8.313E+00	4.799E-01	-0.242
		531.02	*	-2.800E-01	5.169E-01	7.867E-01	1.075E-01	-0.356
PM-149		285.90	*	3.619E+00	8.024E+01	1.284E+02	1.819E+01	0.028
EU-152		121.78		-2.642E-02	6.659E-02	1.097E-01	8.484E-03	-0.241
		244.69		-7.129E-03	3.254E-01	4.666E-01	2.643E-02	-0.015
		344.27	*	7.160E-02	9.145E-02	1.460E-01	9.458E-03	0.490
		443.98		2.933E-01	8.330E-01	1.424E+00	8.242E-02	0.206
		778.89		1.384E-01	2.440E-01	4.119E-01	3.194E-02	0.336
		867.32		1.039E-01	8.909E-01	1.318E+00	1.174E-01	0.079
		964.01		4.605E-01	3.158E-01	5.292E-01	4.581E-02	0.870
		1085.78		-1.103E-01	3.763E-01	5.988E-01	4.193E-02	-0.184
		1112.02		1.198E-01	3.179E-01	5.401E-01	3.551E-02	0.222
		1407.95		2.163E-01	1.975E-01	3.601E-01	2.636E-02	0.601
GD-153		69.67		2.104E-01	1.696E+00	2.645E+00	1.929E-01	0.080
		83.37		4.840E+00	1.495E+01	2.306E+01	1.828E+00	0.210
		97.43	*	-1.113E-01	8.146E-02	1.106E-01	7.991E-03	-1.006
		103.18		-6.735E-02	9.438E-02	1.545E-01	1.050E-02	-0.436
EU-154		123.07		2.591E-02	4.737E-02	8.112E-02	7.695E-03	0.319
		247.94		2.241E-01	3.194E-01	5.355E-01	5.070E-02	0.418
		591.81		-2.769E-01	5.716E-01	8.906E-01	8.956E-02	-0.311
		723.30		-2.094E-01	1.920E-01	2.267E-01	1.848E-02	-0.924
		756.87		1.716E-01	7.480E-01	1.223E+00	1.368E-01	0.140
		873.19		2.426E-01	2.765E-01	4.975E-01	6.222E-02	0.488
		996.32		2.058E-02	3.132E-01	5.222E-01	9.191E-02	0.039
		1004.76		-1.021E-01	1.898E-01	2.947E-01	3.332E-02	-0.347
		1274.45	*	1.680E-02	1.201E-01	1.977E-01	1.961E-02	0.085
EU-155		48.70		1.868E+00	3.031E+00	4.931E+00	3.540E-01	0.379
		60.01		-1.375E+00	5.249E+00	8.081E+00	5.765E-01	-0.170

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.54		3.671E-01	1.009E-01	1.720E-01	1.418E-02	2.135
		105.31	*	6.779E-02	9.507E-02	1.651E-01	1.123E-02	0.411
TB-160	+	86.79		9.784E-01	2.687E-01	4.637E-01	3.789E-02	2.110
		197.04		1.812E-02	5.347E-01	8.534E-01	4.619E-02	0.021
		215.65		9.903E-02	6.895E-01	1.129E+00	6.233E-02	0.088
		298.57		1.354E-01	1.092E-01	1.861E-01	1.077E-02	0.728
		879.36	*	8.945E-02	1.250E-01	2.230E-01	2.023E-02	0.401
		962.29		-2.181E-01	5.452E-01	8.183E-01	7.100E-02	-0.267
		966.15		7.298E-01	2.538E-01	4.566E-01	3.942E-02	1.598
		1177.93		3.095E-01	3.433E-01	6.095E-01	3.371E-02	0.508
		1271.85		5.758E-01	6.979E-01	1.232E+00	8.203E-02	0.467
HO-166M		80.57		-4.114E-02	2.555E-01	3.903E-01	3.026E-02	-0.105
		184.41		-1.101E-02	3.680E-02	5.601E-02	2.989E-03	-0.197
		280.46		-9.249E-03	8.952E-02	1.261E-01	7.276E-03	-0.073
		410.95		3.470E-01	2.353E-01	4.272E-01	2.403E-02	0.812
		711.68	*	7.518E-02	5.744E-02	1.030E-01	7.137E-03	0.730
		752.31		-9.593E-02	2.851E-01	4.417E-01	3.279E-02	-0.217
		810.29		-3.979E-02	5.153E-02	7.988E-02	6.516E-03	-0.498
TM-171		51.35		-4.798E+01	3.794E+01	5.517E+01	4.079E+00	-0.870
		52.39		1.097E+01	1.842E+01	2.986E+01	2.209E+00	0.367
		59.40		-7.288E-01	2.832E+01	4.418E+01	3.150E+00	-0.016
		66.72	*	-1.339E+01	2.986E+01	4.506E+01	3.258E+00	-0.297
LU-176	+	88.36		7.230E-01	1.985E-01	3.300E-01	2.710E-02	2.191
		201.83		1.495E-02	2.651E-02	4.443E-02	2.418E-03	0.337
		306.84	*	1.510E-03	2.682E-02	3.803E-02	2.202E-03	0.040
		401.10		-2.241E+00	6.164E+00	1.009E+01	5.621E-01	-0.222
LU-177		112.95		5.437E-02	1.439E+00	2.425E+00	1.524E-01	0.022
	+	208.36	*	3.039E+00	1.553E+00	1.769E+00	9.697E-02	1.717
LU-177M		52.97		3.101E+00	1.861E+00	3.165E+00	2.339E-01	0.980
		54.07		-3.929E-01	1.019E+00	1.564E+00	1.152E-01	-0.251
		61.30		-2.044E+00	1.639E+00	2.386E+00	1.707E-01	-0.857
		121.62		-1.218E-01	3.391E-01	5.594E-01	3.338E-02	-0.218
		147.16		-5.563E-01	5.777E-01	9.157E-01	5.011E-02	-0.608
		171.86		-3.424E-01	4.292E-01	6.780E-01	3.570E-02	-0.505
		218.09		1.425E-01	7.951E-01	1.303E+00	7.213E-02	0.109
		268.79		9.287E-01	8.313E-01	1.285E+00	7.383E-02	0.723
		319.02		7.595E-02	2.434E-01	3.940E-01	2.278E-02	0.193
		367.43		-1.171E-01	7.968E-01	1.331E+00	7.517E-02	-0.088
		413.65	*	-4.549E-02	1.655E-01	2.721E-01	1.534E-02	-0.167
HF-181		56.28		1.755E-01	1.043E+00	1.649E+00	1.199E-01	0.106
		57.53		6.019E-01	5.550E-01	9.157E-01	6.606E-02	0.657
		65.20		-1.562E+00	1.063E+00	1.520E+00	1.095E-01	-1.028
		133.02		1.391E-02	6.087E-02	1.026E-01	5.849E-03	0.136
		136.25		4.661E-02	4.049E-01	6.785E-01	3.829E-02	0.069
		345.85		4.385E-02	1.762E-01	2.826E-01	1.619E-02	0.155
		482.03	*	-1.675E-02	3.658E-02	5.825E-02	3.466E-03	-0.288
W-181		56.28		6.938E-02	4.094E-01	6.471E-01	4.706E-02	0.107
		57.53		2.366E-01	2.180E-01	3.597E-01	2.595E-02	0.658
		65.20	*	-6.087E-01	4.141E-01	5.921E-01	4.266E-02	-1.028

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		67.75		-1.624E-02	1.145E-01	1.754E-01	1.272E-02	-0.093
		100.10		1.658E-01	1.710E-01	2.881E-01	2.020E-02	0.575
		152.43		1.154E-01	3.082E-01	5.191E-01	2.804E-02	0.222
		222.10		2.659E-01	3.147E-01	5.328E-01	2.961E-02	0.499
		1001.68		-9.621E-02	1.754E+00	2.868E+00	2.353E-01	-0.034
	+	1121.28		7.093E-01	2.264E-01	3.646E-01	2.339E-02	1.945
		1189.05		-1.425E-01	3.103E-01	4.829E-01	2.733E-02	-0.295
		1221.42	*	1.600E-01	2.065E-01	3.583E-01	2.165E-02	0.447
		1230.97		-1.405E-01	4.963E-01	7.860E-01	4.839E-02	-0.179
RE-183		57.98		4.153E-02	2.233E-01	3.526E-01	2.536E-02	0.118
		59.32		2.590E-04	1.165E-01	1.820E-01	1.298E-02	0.001
		67.20		-8.146E-02	2.069E-01	3.129E-01	2.265E-02	-0.260
		162.32	*	9.629E-02	1.053E-01	1.750E-01	9.233E-03	0.550
	+	208.81		2.795E+00	1.428E+00	1.679E+00	9.208E-02	1.664
		291.72		-8.947E-01	9.929E-01	1.293E+00	7.477E-02	-0.692
RE-184		57.98		1.532E-01	8.239E-01	1.301E+00	9.359E-02	0.118
		59.32		9.548E-04	4.295E-01	6.711E-01	4.787E-02	0.001
		67.20		-3.005E-01	7.632E-01	1.154E+00	8.355E-02	-0.260
		161.27		-2.708E-02	3.338E-01	5.496E-01	2.908E-02	-0.049
		216.55		-2.685E-02	2.485E-01	4.014E-01	2.219E-02	-0.067
		252.85	*	1.129E-01	2.117E-01	3.514E-01	2.002E-02	0.321
		318.01		1.367E-01	4.286E-01	6.938E-01	4.013E-02	0.197
		792.07		1.572E-01	9.497E-01	1.622E+00	1.285E-01	0.097
		903.28		5.143E-01	1.022E+00	1.738E+00	1.612E-01	0.296
		920.93		6.717E-02	3.996E-01	6.771E-01	6.170E-02	0.099
OS-185		59.72		-1.696E-01	3.184E-01	4.830E-01	3.443E-02	-0.351
		61.14		-2.220E-01	1.808E-01	2.636E-01	1.885E-02	-0.842
		69.30		-1.706E-01	3.088E-01	4.660E-01	3.394E-02	-0.366
		592.07		-8.088E-01	2.301E+00	3.633E+00	2.275E-01	-0.223
		646.12	*	-1.031E-02	4.159E-02	6.587E-02	4.173E-03	-0.157
		717.42		-3.492E-01	8.696E-01	1.342E+00	9.395E-02	-0.260
		874.81		-6.804E-02	5.609E-01	9.274E-01	8.355E-02	-0.073
		880.27		2.268E-01	7.103E-01	1.223E+00	1.111E-01	0.185
RE-188		155.03	*	2.178E-02	1.639E-01	2.729E-01	1.465E-02	0.080
		477.96		1.438E+00	2.790E+00	4.800E+00	2.849E-01	0.300
		633.10		-9.583E-02	2.503E+00	4.047E+00	2.559E-01	-0.024
W-188		63.58		1.951E+01	5.852E+01	9.292E+01	6.675E+00	0.210
		227.08		1.591E+01	1.126E+01	1.959E+01	1.094E+00	0.812
		290.67	*	-4.178E+00	7.647E+00	1.030E+01	5.958E-01	-0.406
IR-192	+	295.96		9.365E-01	1.660E-01	2.772E-01	1.630E-02	3.378
		308.46		2.405E-02	9.051E-02	1.463E-01	8.567E-03	0.164
		316.51	*	5.205E-03	3.238E-02	5.190E-02	3.017E-03	0.100
		468.07		5.992E-02	6.806E-02	1.079E-01	7.305E-03	0.555
		604.41		4.988E-02	4.907E-01	7.074E-01	8.209E-02	0.071
		612.46		5.747E-01	8.353E-01	1.269E+00	1.010E-01	0.453
AU-195		65.12		-2.812E-01	1.921E-01	2.748E-01	1.980E-02	-1.023
		66.83		-4.888E-02	9.837E-02	1.480E-01	1.071E-02	-0.330
	+	75.70		1.059E+00	2.976E-01	4.085E-01	3.065E-02	2.592
		98.88	*	4.262E-02	2.141E-01	3.506E-01	2.490E-02	0.122

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		129.76		3.221E+00	2.730E+00	4.762E+00	2.747E-01	0.676
TL-200		367.94	*	7.318E-05	2.730E+00	Half-Life too short		
		579.30		-3.705E-04	2.730E+00	Half-Life too short		
		828.27		-1.960E-03	2.730E+00	Half-Life too short		
		1205.75		1.857E-03	2.730E+00	Half-Life too short		
TL-201		68.90		-3.641E+00	4.718E+00	7.037E+00	5.119E-01	-0.517
		70.82		1.440E+00	2.622E+00	4.164E+00	3.050E-01	0.346
		80.30		1.611E-01	4.440E+00	6.851E+00	5.301E-01	0.024
		135.34		-1.216E+01	2.170E+01	3.528E+01	1.997E+00	-0.345
		167.43	*	3.566E+00	6.200E+00	1.048E+01	5.495E-01	0.340
TL-202		68.90		-3.413E-01	4.423E-01	6.597E-01	4.799E-02	-0.517
		70.82		1.347E-01	2.451E-01	3.893E-01	2.852E-02	0.346
		80.30		1.506E-02	4.152E-01	6.407E-01	4.957E-02	0.024
		439.56	*	-3.821E-02	6.175E-02	9.816E-02	5.662E-03	-0.389
HG-203		70.83		5.968E-01	1.075E+00	1.705E+00	2.187E-01	0.350
		72.87		2.648E-01	6.395E-01	1.007E+00	1.252E-01	0.263
		82.60		-1.197E+00	1.123E+00	1.622E+00	2.156E-01	-0.738
		279.20	*	4.673E-02	4.277E-02	6.599E-02	4.044E-03	0.708
BI-207		72.80		6.411E-02	1.878E-01	2.950E-01	2.180E-02	0.217
	+	74.97		5.878E-01	1.652E-01	2.158E-01	1.613E-02	2.724
		84.90		1.599E-01	1.880E-01	2.961E-01	2.379E-02	0.540
		569.67		-1.697E-02	3.079E-02	4.520E-02	2.810E-03	-0.376
		1063.62	*	3.086E-02	5.052E-02	8.816E-02	6.475E-03	0.350
		1770.23		-1.106E-01	3.431E-01	4.134E-01	2.503E-02	-0.267
TL-207		81.07		-1.307E-01	2.053E-01	3.055E-01	2.378E-02	-0.428
		83.78		1.047E-01	1.269E-01	1.997E-01	1.589E-02	0.524
		94.90		3.203E-01	2.128E-01	3.487E-01	2.598E-02	0.919
		122.32		9.155E-02	1.589E+00	2.670E+00	1.824E-01	0.034
		144.24		3.194E-01	6.279E-01	1.054E+00	7.383E-02	0.303
		154.21		3.253E-01	3.724E-01	6.387E-01	4.260E-02	0.509
	+	269.46		4.916E-01	2.743E-01	3.262E-01	1.961E-02	1.507
		323.87	*	1.336E-03	6.485E-01	1.026E+00	1.694E-01	0.001
	+	338.28		6.734E+00	1.930E+00	2.350E+00	2.469E-01	2.865
		445.03		-1.349E+00	2.046E+00	3.230E+00	3.316E-01	-0.418
PO-209		260.50		6.469E+00	8.985E+00	1.504E+01	8.604E-01	0.430
		262.80		-6.579E+00	2.538E+01	4.008E+01	2.296E+00	-0.164
		896.60	*	-5.951E+00	7.027E+00	1.070E+01	9.958E-01	-0.556
BI-210		46.50	*	2.406E+00	4.672E+00	7.469E+00	5.717E-01	0.322
PB-210		46.50	*	2.406E+00	4.672E+00	7.469E+00	5.717E-01	0.322
PO-210		46.50	*	2.406E+00	4.671E+00	7.469E+00	4.896E-01	0.322
PB-211		404.84	*	-6.050E-02	8.387E-01	1.398E+00	8.710E-01	-0.043
		427.08		4.768E-03	2.006E+00	3.350E+00	2.071E+00	0.001
		831.96		-3.561E-01	1.108E+00	1.767E+00	1.107E+00	-0.202
PO-215		81.07		-1.307E-01	2.053E-01	3.055E-01	2.378E-02	-0.428
		83.78		1.047E-01	1.269E-01	1.997E-01	1.589E-02	0.524
		94.90		3.203E-01	2.128E-01	3.487E-01	2.598E-02	0.919
		122.32		9.155E-02	1.589E+00	2.670E+00	1.824E-01	0.034
		144.24		3.194E-01	6.279E-01	1.054E+00	7.383E-02	0.303
		154.21		3.253E-01	3.724E-01	6.387E-01	4.260E-02	0.509

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.916E-01	2.743E-01	3.262E-01	1.961E-02	1.507
		323.87	*	1.336E-03	6.485E-01	1.026E+00	1.694E-01	0.001
	+	338.28		6.734E+00	1.930E+00	2.350E+00	2.469E-01	2.865
		445.03		-1.349E+00	2.046E+00	3.230E+00	3.316E-01	-0.418
RN-219	+	271.23		6.307E-01	3.535E-01	4.234E-01	3.417E-02	1.490
		401.81	*	-7.943E-02	3.691E-01	6.099E-01	8.240E-02	-0.130
RN-220		549.76	*	1.494E+01	2.259E+01	3.916E+01	2.416E+00	0.382
RA-223		81.07		-1.307E-01	2.053E-01	3.055E-01	2.378E-02	-0.428
		83.78		1.047E-01	1.269E-01	1.997E-01	1.589E-02	0.524
		94.90		3.203E-01	2.128E-01	3.487E-01	2.598E-02	0.919
		122.32		9.155E-02	1.589E+00	2.670E+00	1.824E-01	0.034
		144.24		3.194E-01	6.279E-01	1.054E+00	7.383E-02	0.303
		154.21		3.253E-01	3.724E-01	6.387E-01	4.260E-02	0.509
	+	269.46		4.916E-01	2.743E-01	3.262E-01	1.961E-02	1.507
		323.87	*	1.336E-03	6.485E-01	1.026E+00	1.694E-01	0.001
	+	338.28		6.734E+00	1.930E+00	2.350E+00	2.469E-01	2.865
		445.03		-1.349E+00	2.046E+00	3.230E+00	3.316E-01	-0.418
AC-227		79.80		-1.656E-01	1.555E+00	2.382E+00	5.039E-01	-0.070
		236.00		-4.104E-02	2.375E-01	3.379E-01	3.500E-02	-0.121
		256.20	*	-2.653E-01	3.699E-01	5.662E-01	7.883E-02	-0.469
		286.10		3.905E-01	1.436E+00	2.331E+00	2.692E-01	0.168
	+	299.80		3.582E+00	1.865E+00	2.541E+00	4.136E-01	1.410
		304.40		2.926E-01	2.019E+00	2.887E+00	4.992E-01	0.101
		334.20		-1.198E+00	2.309E+00	3.301E+00	6.047E-01	-0.363
TH-227		79.80		-1.656E-01	1.555E+00	2.382E+00	5.105E-01	-0.070
	+	94.00		7.969E+00	3.396E+00	3.615E+00	7.726E-01	2.205
		236.00		-4.104E-02	2.375E-01	3.379E-01	3.023E-02	-0.121
		256.20	*	-2.653E-01	3.708E-01	5.662E-01	9.550E-02	-0.469
		286.10		3.905E-01	1.488E+00	2.331E+00	2.335E+00	0.168
	+	299.80		3.582E+00	1.865E+00	2.541E+00	4.136E-01	1.410
		304.40		2.926E-01	2.019E+00	2.887E+00	4.992E-01	0.101
		334.20		-1.198E+00	2.309E+00	3.301E+00	6.047E-01	-0.363
TH-229		85.43		1.358E-01	1.859E-01	2.912E-01	2.350E-02	0.466
	+	88.47		4.162E-01	1.143E-01	1.878E-01	1.540E-02	2.216
		100.00		1.692E-01	1.777E-01	2.991E-01	2.099E-02	0.566
		193.63	*	-1.073E-01	4.430E-01	7.153E-01	3.857E-02	-0.150
	+	210.97		2.194E+00	1.121E+00	1.222E+00	6.714E-02	1.795
PA-231		283.67	*	-1.562E-01	1.427E+00	2.262E+00	3.115E-01	-0.069
	+	301.29		1.433E+00	7.242E-01	9.883E-01	1.032E-01	1.450
TH-231		81.07		-1.307E-01	2.053E-01	3.055E-01	2.378E-02	-0.428
		83.78		1.047E-01	1.269E-01	1.997E-01	1.589E-02	0.524
		94.90		3.203E-01	2.128E-01	3.487E-01	2.598E-02	0.919
		122.32		9.155E-02	1.589E+00	2.670E+00	1.824E-01	0.034
		144.24		3.194E-01	6.279E-01	1.054E+00	7.383E-02	0.303
		154.21		3.253E-01	3.724E-01	6.387E-01	4.260E-02	0.509
	+	269.46		4.916E-01	2.743E-01	3.262E-01	1.961E-02	1.507
		323.87	*	1.336E-03	6.485E-01	1.026E+00	1.694E-01	0.001
	+	338.28		6.734E+00	1.930E+00	2.350E+00	2.469E-01	2.865
		445.03		-1.349E+00	2.046E+00	3.230E+00	3.316E-01	-0.418

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-231		84.21		6.010E+00	5.188E+00	8.270E+00	6.603E-01	0.727
	+	92.29		7.561E+00	2.845E+00	3.582E+00	2.767E-01	2.111
		95.87	*	-8.186E-02	9.339E-01	1.418E+00	1.044E-01	-0.058
		108.00		-1.026E+00	1.736E+00	2.852E+00	1.858E-01	-0.360
PA-233	+	75.28		1.715E+01	5.291E+00	6.397E+00	9.429E-01	2.682
	+	86.59		5.968E+00	2.232E+00	2.801E+00	7.472E-01	2.130
	+	300.12		9.986E-01	5.118E-01	6.989E-01	9.389E-02	1.429
		311.98	*	-8.324E-02	5.891E-02	8.297E-02	5.101E-03	-1.003
		340.50		1.208E+00	6.749E-01	1.053E+00	2.416E-01	1.147
		398.62		-6.699E-01	1.980E+00	3.238E+00	8.356E-01	-0.207
		415.76		-1.143E+00	1.540E+00	2.414E+00	4.960E-01	-0.474
PA-234		63.00		7.004E-01	1.726E+00	2.748E+00	4.052E-01	0.255
		94.67		3.311E-01	1.600E-01	2.627E-01	3.057E-02	1.260
		98.44		-8.920E-02	1.037E-01	1.358E-01	7.545E-02	-0.657
		99.86		3.391E-01	4.513E-01	7.547E-01	5.304E-02	0.449
		111.00		-8.009E-02	1.665E-01	2.744E-01	2.909E-02	-0.292
		131.20		-5.715E-02	1.022E-01	1.667E-01	9.568E-03	-0.343
		152.70		1.990E-01	3.028E-01	5.133E-01	8.040E-02	0.388
	+	186.00		3.814E+00	2.136E+00	2.475E+00	7.541E-01	1.541
		226.40		2.986E-01	3.653E-01	6.154E-01	7.047E-02	0.485
		227.20		5.316E-01	3.808E-01	6.621E-01	3.697E-02	0.803
		248.90		3.546E-01	7.205E-01	1.189E+00	2.552E-01	0.298
		293.70		3.153E+00	9.258E-01	1.392E+00	2.237E-01	2.266
		369.80		1.741E-02	7.607E-01	1.285E+00	2.669E-01	0.014
		568.70		-3.372E-01	9.808E-01	1.464E+00	9.098E-02	-0.230
		569.50		-1.331E-01	2.745E-01	4.059E-01	2.524E-02	-0.328
		574.00		8.356E-01	1.387E+00	2.378E+00	1.481E-01	0.351
		699.00		-2.871E-01	7.058E-01	1.092E+00	2.000E-01	-0.263
		706.10		-8.866E-01	1.050E+00	1.425E+00	6.312E-01	-0.622
		733.00		1.900E-02	4.179E-01	5.881E-01	1.275E-01	0.032
		742.81		1.339E+00	1.609E+00	2.341E+00	1.570E+00	0.572
		796.30		1.316E+00	9.518E-01	1.655E+00	4.444E-01	0.795
		805.60		4.275E-01	9.712E-01	1.680E+00	5.124E-01	0.255
		819.60		1.866E-01	1.104E+00	1.881E+00	7.139E-01	0.099
		826.30		1.622E-01	7.116E-01	1.216E+00	5.433E-01	0.133
		831.60		-1.640E-01	5.659E-01	9.213E-01	2.744E-01	-0.178
		876.40		-3.073E-01	8.633E-01	1.295E+00	1.332E+00	-0.237
		880.51		6.057E-02	2.575E-01	4.402E-01	4.000E-02	0.138
		883.24		-1.866E-01	2.920E-01	4.090E-01	2.752E-01	-0.456
		899.00		-3.701E-01	8.714E-01	1.360E+00	5.965E-01	-0.272
		925.00		4.858E-01	1.135E+00	1.965E+00	1.782E-01	0.247
		926.50		4.566E-02	1.696E-01	2.890E-01	7.348E-02	0.158
		946.00	*	4.013E-03	2.635E-01	4.387E-01	8.280E-02	0.009
		949.00		7.467E-02	3.966E-01	6.718E-01	5.927E-02	0.111
		980.50		-2.015E-01	6.702E-01	1.074E+00	9.088E-02	-0.188
		1394.10		6.917E-01	1.088E+00	1.779E+00	1.155E+00	0.389
PA-234M		766.41		7.793E+00	1.911E+01	2.672E+01	2.046E+01	0.292
		1001.03	*	1.446E+00	5.669E+00	9.581E+00	1.041E+00	0.151
TH-234		63.29	*	7.057E-01	1.467E+00	2.339E+00	4.056E-01	0.302

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.062E+00	8.423E-01	9.881E-01	1.746E-01	2.087
U-235	+	89.95		2.270E+00	1.322E+00	1.721E+00	5.282E-01	1.319
	+	93.35		2.479E+00	1.143E+00	1.210E+00	3.355E-01	2.049
		105.00		4.874E-01	9.447E-01	1.611E+00	4.727E-01	0.303
		143.76	*	1.118E-02	1.966E-01	3.240E-01	5.252E-02	0.035
		163.35		-3.472E-02	4.712E-01	7.517E-01	1.339E-01	-0.046
	+	185.71		1.412E-01	6.680E-02	9.070E-02	4.847E-03	1.557
		205.31		-1.180E-01	5.192E-01	7.431E-01	1.328E-01	-0.159
NP-236		94.67		2.528E-01	1.194E-01	1.995E-01	1.491E-02	1.267
		98.44		-6.751E-02	6.904E-02	1.026E-01	7.325E-03	-0.658
		111.00		-6.058E-02	1.259E-01	2.076E-01	1.322E-02	-0.292
		160.31	*	-4.021E-02	7.345E-02	1.183E-01	6.273E-03	-0.340
U-238		63.29	*	7.057E-01	1.467E+00	2.339E+00	4.056E-01	0.302
	+	92.38		2.062E+00	7.759E-01	9.881E-01	7.622E-02	2.087
NP-239		99.55		8.997E-02	1.498E-01	2.492E-01	1.757E-02	0.361
		117.00	*	-1.291E-01	1.703E-01	2.762E-01	1.691E-02	-0.467
	+	209.75		2.210E+00	1.129E+00	1.373E+00	7.534E-02	1.610
		228.18		1.186E-01	2.022E-01	3.378E-01	1.888E-02	0.351
	+	277.60		1.775E-01	2.363E-01	3.128E-01	1.803E-02	0.567
		334.30		-6.939E-01	1.302E+00	1.867E+00	1.075E-01	-0.372
AM-241		59.54	*	-4.631E-02	1.662E-01	2.557E-01	2.013E-02	-0.181
CM-243		99.55		9.258E-02	1.542E-01	2.564E-01	1.808E-02	0.361
		103.76	*	-8.623E-02	8.727E-02	1.409E-01	9.527E-03	-0.612
		117.00		-1.328E-01	1.752E-01	2.841E-01	1.740E-02	-0.467
	+	209.75		2.179E+00	1.113E+00	1.353E+00	7.427E-02	1.610
		228.18		1.198E-01	2.043E-01	3.413E-01	1.908E-02	0.351
	+	277.60		1.789E-01	2.382E-01	3.154E-01	1.818E-02	0.567
CM-247	+	278.00		7.361E-01	9.799E-01	1.303E+00	7.514E-02	0.565
		287.40		6.814E-01	1.118E+00	1.855E+00	1.072E-01	0.367
		402.60	*	3.724E-04	3.288E-02	5.517E-02	3.078E-03	0.007
CF-249		252.85		4.239E-01	7.951E-01	1.320E+00	7.518E-02	0.321
		333.44		-7.064E-02	1.758E-01	2.553E-01	1.471E-02	-0.277
		387.95	*	-1.977E-02	3.650E-02	5.916E-02	3.277E-03	-0.334
CF-251		176.60	*	-1.609E-02	1.169E-01	1.910E-01	1.011E-02	-0.084
		227.00		4.831E-01	3.388E-01	5.899E-01	3.293E-02	0.819
		285.00		5.310E-01	1.586E+00	2.588E+00	1.495E-01	0.205

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746002       *
* Acquisition date : 14-JUL-2009 08:58:55 Detector SN#     :               *
* Detector ID       : GAM09                Sensitivity     : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.56      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID         : G232746002           Analyst initials: MXR1          *
* Batch Number      : 882713               Sample Quantity : 1.2735E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 16-MAR-2009 10:48:05 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.913E+01	2.745E+00	4.321E-01	0.000E+00
CD-109	3.100E+00	8.343E-01	1.322E+00	0.000E+00
SN-126	3.048E-01	8.203E-02	1.308E-01	0.000E+00
TL-208	5.284E-01	8.744E-02	5.499E-02	0.000E+00
BI-211	3.401E+00	4.509E-01	3.020E-01	0.000E+00
BI-212	8.768E-01	3.997E-01	4.619E-01	0.000E+00
PB-212	1.576E+00	1.558E-01	8.331E-02	0.000E+00
PO-212	1.576E+00	1.558E-01	8.331E-02	0.000E+00
BI-214	1.285E+00	1.960E-01	1.129E-01	0.000E+00
PB-214	1.183E+00	1.681E-01	1.053E-01	0.000E+00
PO-214	1.183E+00	1.681E-01	1.053E-01	0.000E+00
PO-216	1.576E+00	1.558E-01	8.331E-02	0.000E+00
PO-218	1.183E+00	1.681E-01	1.053E-01	0.000E+00
RA-224	3.973E+00	1.109E+00	9.480E-01	0.000E+00
RA-226	1.285E+00	1.960E-01	1.129E-01	0.000E+00
AC-228	1.670E+00	3.485E-01	2.073E-01	0.000E+00
RA-228	1.670E+00	3.485E-01	2.073E-01	0.000E+00
TH-228	1.576E+00	1.558E-01	8.330E-02	0.000E+00
TH-230	1.285E+00	1.960E-01	1.129E-01	0.000E+00
TH-232	1.670E+00	3.485E-01	2.073E-01	0.000E+00
U-234	1.285E+00	1.960E-01	1.129E-01	0.000E+00
NP-237	8.951E-01	3.013E-01	4.029E-01	0.000E+00
AM-243	3.275E-01	9.021E-02	9.018E-02	0.000E+00
ANH-511	1.076E-01	7.027E-02	4.149E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.664E-01	2.881E-01	5.160E-01	0.000E+00	NOT IDENT.
NA-22	5.596E-03	4.207E-02	7.075E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	4.990E+05	0.000E+00	0.000E+00	SHORT HLIF

AL-26	2.263E-02	2.599E-02	5.111E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.007E-02	7.734E-02	0.000E+00	FAIL ABUN
SC-46	-4.719E-03	3.709E-02	6.295E-02	0.000E+00	FAIL ABUN
V-48	3.970E-02	6.330E-02	1.142E-01	0.000E+00	NOT IDENT.
CR-51	-6.906E-02	3.532E-01	5.760E-01	0.000E+00	NOT IDENT.
MN-52	-8.036E-02	1.840E-01	2.930E-01	0.000E+00	NOT IDENT.
MN-54	-7.290E-03	3.439E-02	5.808E-02	0.000E+00	NOT IDENT.
CO-56	-1.774E-02	3.374E-02	5.515E-02	0.000E+00	NOT IDENT.
CO-57	-4.200E-03	2.247E-02	3.957E-02	0.000E+00	NOT IDENT.
CO-58	-1.594E-02	3.258E-02	5.368E-02	0.000E+00	NOT IDENT.
FE-59	-3.874E-02	9.267E-02	1.496E-01	0.000E+00	NOT IDENT.
CO-60	-1.200E-02	3.899E-02	6.173E-02	0.000E+00	NOT IDENT.
ZN-65	-9.931E-02	1.034E-01	1.296E-01	0.000E+00	NOT IDENT.
GE-68	1.411E+00	1.205E+00	2.249E+00	0.000E+00	NOT IDENT.
AS-73	1.165E+00	8.994E-01	1.614E+00	0.000E+00	NOT IDENT.
AS-74	7.367E-03	8.006E-02	1.361E-01	0.000E+00	NOT IDENT.
SE-75	7.119E-03	4.058E-02	6.886E-02	0.000E+00	NOT IDENT.
BR-77	1.608E+00	7.761E+00	1.349E+01	0.000E+00	FAIL ABUN
SR-82	-1.384E-01	3.898E-01	5.647E-01	0.000E+00	NOT IDENT.
RB-83	1.013E-02	5.484E-02	9.516E-02	0.000E+00	NOT IDENT.
RB-84	-3.410E-02	6.128E-02	9.929E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.108E+00	1.249E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.635E-02	6.386E-02	0.000E+00	NOT IDENT.
RB-86	-1.224E-01	7.635E-01	1.267E+00	0.000E+00	NOT IDENT.
Y-88	1.350E-02	2.279E-02	4.396E-02	0.000E+00	NOT IDENT.
ZR-88	1.397E-02	2.906E-02	5.221E-02	0.000E+00	NOT IDENT.
Y-91	-6.967E+00	1.942E+01	3.130E+01	0.000E+00	NOT IDENT.
NB-94	2.701E-02	3.146E-02	5.605E-02	0.000E+00	NOT IDENT.
NB-95	5.103E-03	4.221E-02	6.158E-02	0.000E+00	NOT IDENT.
NB-95M	-7.342E-02	1.260E-01	1.826E-01	0.000E+00	NOT IDENT.
ZR-95	3.110E-02	6.914E-02	1.187E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	7.360E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.389E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.692E+00	1.119E+01	1.902E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.752E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.527E-02	3.115E-02	5.094E-02	0.000E+00	NOT IDENT.
RH-102	3.850E-03	2.604E-02	4.529E-02	0.000E+00	NOT IDENT.
RU-103	2.077E-03	3.513E-02	6.050E-02	0.000E+00	FAIL ABUN
RH-106	2.368E-02	2.916E-01	4.933E-01	0.000E+00	FAIL ABUN
RU-106	2.368E-02	2.916E-01	4.933E-01	0.000E+00	FAIL ABUN
AG-108M	1.111E-02	2.973E-02	5.284E-02	0.000E+00	NOT IDENT.
AG-110M	-8.682E-03	3.343E-02	5.458E-02	0.000E+00	NOT IDENT.
IN-111	-1.209E-01	9.663E-01	1.440E+00	0.000E+00	NOT IDENT.
IN-113M	3.276E-02	4.000E-02	7.338E-02	0.000E+00	NOT IDENT.
SN-113	3.276E-02	4.000E-02	7.338E-02	0.000E+00	NOT IDENT.
IN-114M	-6.720E-02	1.739E-01	2.606E-01	0.000E+00	NOT IDENT.
CD-115	1.644E+00	9.154E+00	1.469E+01	0.000E+00	NOT IDENT.
SN-117M	7.964E-04	4.860E-02	8.486E-02	0.000E+00	NOT IDENT.
SB-122	6.708E-01	1.804E+00	3.145E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.842E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-8.635E-03	2.578E-02	4.428E-02	0.000E+00	NOT IDENT.
I-124	8.588E-01	6.492E-01	1.093E+00	0.000E+00	NOT IDENT.
SB-124	3.662E-02	6.751E-02	1.250E-01	0.000E+00	FAIL ABUN
SB-125	4.456E-02	8.815E-02	1.578E-01	0.000E+00	FAIL ABUN
TE-125M	5.703E+00	7.972E+00	1.464E+01	0.000E+00	NOT IDENT.
I-126	-1.716E-01	1.714E-01	2.598E-01	0.000E+00	NOT IDENT.
SB-126	1.194E-01	1.354E-01	2.352E-01	0.000E+00	FAIL ABUN
SB-127	6.157E-01	1.120E+00	1.962E+00	0.000E+00	NOT IDENT.
XE-127	-4.437E-02	4.317E-02	7.018E-02	0.000E+00	NOT IDENT.
I-131	1.190E-02	9.682E-02	1.716E-01	0.000E+00	NOT IDENT.
TE-132	3.455E-01	5.770E-01	1.009E+00	0.000E+00	NOT IDENT.
BA-133	-6.618E-03	4.207E-02	6.454E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	4.380E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.623E-02	4.594E-02	8.849E-02	0.000E+00	NOT IDENT.
CS-135	1.929E-02	1.622E-01	2.444E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.946E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.186E-02	1.064E-01	1.780E-01	0.000E+00	FAIL ABUN
BA-137M	3.565E-03	3.610E-02	6.077E-02	0.000E+00	NOT IDENT.
CS-137	3.768E-03	3.816E-02	6.424E-02	0.000E+00	NOT IDENT.
CE-139	-1.518E-02	2.782E-02	4.720E-02	0.000E+00	NOT IDENT.
BA-140	6.852E-02	2.247E-01	3.903E-01	0.000E+00	NOT IDENT.
LA-140	-1.251E-01	7.928E-02	9.653E-02	0.000E+00	NOT IDENT.
CE-141	-4.992E-02	5.632E-02	9.378E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.350E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.063E-01	1.828E-01	3.293E-01	0.000E+00	NOT IDENT.
PM-144	-9.505E-03	3.325E-02	5.386E-02	0.000E+00	NOT IDENT.
PR-144	-6.440E-01	2.253E+00	3.649E+00	0.000E+00	NOT IDENT.
PM-146	8.143E-03	3.926E-02	6.879E-02	0.000E+00	NOT IDENT.

ND-147	-2.800E-01	5.066E-01	7.989E-01	0.000E+00	FAIL ABUN
PM-149	3.619E+00	7.864E+01	1.316E+02	0.000E+00	NOT IDENT.
EU-152	7.160E-02	8.962E-02	1.492E-01	0.000E+00	NOT IDENT.
GD-153	-1.113E-01	7.983E-02	1.152E-01	0.000E+00	NOT IDENT.
EU-154	1.680E-02	1.177E-01	1.981E-01	0.000E+00	NOT IDENT.
EU-155	6.779E-02	9.317E-02	1.716E-01	0.000E+00	FAIL ABUN
TB-160	8.945E-02	1.225E-01	2.247E-01	0.000E+00	FAIL ABUN
HO-166M	7.518E-02	5.629E-02	1.041E-01	0.000E+00	NOT IDENT.
TM-171	-1.339E+01	2.926E+01	4.716E+01	0.000E+00	NOT IDENT.
LU-176	1.510E-03	2.628E-02	3.894E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.522E+00	1.822E+00	0.000E+00	FAIL ABUN
LU-177M	-4.549E-02	1.622E-01	2.773E-01	0.000E+00	NOT IDENT.
HF-181	-1.675E-02	3.584E-02	5.923E-02	0.000E+00	NOT IDENT.
W-181	-6.087E-01	4.059E-01	6.199E-01	0.000E+00	NOT IDENT.
TA-182	1.600E-01	2.023E-01	3.592E-01	0.000E+00	FAIL ABUN
RE-183	9.629E-02	1.032E-01	1.808E-01	0.000E+00	FAIL ABUN
RE-184	1.129E-01	2.075E-01	3.608E-01	0.000E+00	NOT IDENT.
OS-185	-1.031E-02	4.076E-02	6.669E-02	0.000E+00	NOT IDENT.
RE-188	2.178E-02	1.606E-01	2.822E-01	0.000E+00	NOT IDENT.
W-188	-4.178E+00	7.494E+00	1.055E+01	0.000E+00	NOT IDENT.
IR-192	5.205E-03	3.174E-02	5.311E-02	0.000E+00	FAIL ABUN
AU-195	4.262E-02	2.098E-01	3.649E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.371E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.566E+00	6.076E+00	1.083E+01	0.000E+00	NOT IDENT.
TL-202	-3.821E-02	6.052E-02	9.995E-02	0.000E+00	NOT IDENT.
HG-203	4.673E-02	4.192E-02	6.766E-02	0.000E+00	NOT IDENT.
BI-207	3.086E-02	4.951E-02	8.858E-02	0.000E+00	FAIL ABUN
TL-207	1.336E-03	6.355E-01	1.050E+00	0.000E+00	FAIL ABUN
PO-209	-5.951E+00	6.887E+00	1.078E+01	0.000E+00	NOT IDENT.
BI-210	2.406E+00	4.578E+00	7.857E+00	0.000E+00	NOT IDENT.
PB-210	2.406E+00	4.578E+00	7.857E+00	0.000E+00	NOT IDENT.
PO-210	2.406E+00	4.577E+00	7.857E+00	0.000E+00	NOT IDENT.
PB-211	-6.050E-02	8.219E-01	1.425E+00	0.000E+00	NOT IDENT.
PO-215	1.336E-03	6.355E-01	1.050E+00	0.000E+00	FAIL ABUN
RN-219	-7.943E-02	3.618E-01	6.218E-01	0.000E+00	FAIL ABUN
RN-220	1.494E+01	2.214E+01	3.974E+01	0.000E+00	NOT IDENT.
RA-223	1.336E-03	6.355E-01	1.050E+00	0.000E+00	FAIL ABUN
AC-227	-2.653E-01	3.625E-01	5.812E-01	0.000E+00	FAIL ABUN
TH-227	-2.653E-01	3.634E-01	5.812E-01	0.000E+00	FAIL ABUN
TH-229	-1.073E-01	4.341E-01	7.372E-01	0.000E+00	FAIL ABUN
PA-231	-1.562E-01	1.399E+00	2.318E+00	0.000E+00	FAIL ABUN
TH-231	1.336E-03	6.355E-01	1.050E+00	0.000E+00	FAIL ABUN
U-231	-8.186E-02	9.153E-01	1.477E+00	0.000E+00	FAIL ABUN
PA-233	-8.324E-02	5.773E-02	8.492E-02	0.000E+00	FAIL ABUN
PA-234	4.013E-03	2.583E-01	4.416E-01	0.000E+00	FAIL ABUN
PA-234M	1.446E+00	5.556E+00	9.636E+00	0.000E+00	NOT IDENT.
TH-234	7.057E-01	1.438E+00	2.449E+00	0.000E+00	FAIL ABUN
U-235	1.118E-02	1.927E-01	3.354E-01	0.000E+00	FAIL ABUN
NP-236	-4.021E-02	7.198E-02	1.223E-01	0.000E+00	NOT IDENT.
U-238	7.057E-01	1.438E+00	2.449E+00	0.000E+00	FAIL ABUN
NP-239	-1.291E-01	1.668E-01	2.867E-01	0.000E+00	FAIL ABUN
AM-241	-4.631E-02	1.629E-01	2.681E-01	0.000E+00	NOT IDENT.
CM-243	-8.623E-02	8.552E-02	1.466E-01	0.000E+00	FAIL ABUN
CM-247	3.724E-04	3.222E-02	5.625E-02	0.000E+00	FAIL ABUN
CF-249	-1.977E-02	3.577E-02	6.035E-02	0.000E+00	NOT IDENT.
CF-251	-1.609E-02	1.146E-01	1.971E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:01:22.07

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746002.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:58:55
Sample ID         : G232746002           Sample quantity  : 1.27350E+02 GRAM
Detector name     : GAM09                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.56  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1205	10.67*	1.143E+00	2.913E+01	2.913E+01	9.62
CD-109	88.03	211	3.72*	5.515E+00	3.032E+00	3.100E+00	27.46
SN-126	64.28	------	9.60	2.949E+00	------ Line Not Found		------
	86.94	211	8.90	5.515E+00	1.267E+00	1.267E+00	48.89
	87.57	211	37.00*	5.515E+00	3.048E-01	3.048E-01	27.46
TL-208	277.35	38	6.80	4.491E+00	3.680E-01	3.680E-01	133.42
	510.84	103	21.60	2.829E+00	4.983E-01	4.983E-01	67.14
	583.14	384	84.20*	2.544E+00	5.284E-01	5.284E-01	16.88
	860.37	------	12.46	1.824E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	4.083E+00	------ Line Not Found		------
	351.07	563	12.94*	3.770E+00	3.401E+00	3.401E+00	13.53
BI-212	727.18	74	11.80*	2.114E+00	8.768E-01	8.768E-01	46.51
	785.46	27	1.97	1.976E+00	2.022E+00	2.022E+00	78.25
	1620.62	24	2.75	1.057E+00	2.431E+00	2.431E+00	50.53
PB-212	74.81	318	10.70	4.332E+00	2.020E+00	2.020E+00	29.62
	77.11	547	18.00	4.588E+00	1.953E+00	1.953E+00	17.00
	87.30	211	8.00	5.515E+00	1.410E+00	1.410E+00	29.22
	238.63	1191	44.60*	4.995E+00	1.576E+00	1.576E+00	10.09
	300.09	95	3.41	4.241E+00	1.933E+00	1.933E+00	50.14
PO-212	74.81	318	10.70	4.332E+00	2.020E+00	2.020E+00	29.62
	77.11	547	18.00	4.588E+00	1.953E+00	1.953E+00	17.00
	87.30	211	8.00	5.515E+00	1.410E+00	1.410E+00	29.22
	115.19	------	0.60	6.606E+00	------ Line Not Found		------
	238.63	1191	44.60*	4.995E+00	1.576E+00	1.576E+00	10.09
	300.09	95	3.41	4.241E+00	1.933E+00	1.933E+00	50.14
BI-214	609.31	495	46.30*	2.454E+00	1.285E+00	1.285E+00	15.56
	768.36	34	5.04	2.015E+00	9.730E-01	9.730E-01	126.15
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	111	15.10	1.437E+00	1.502E+00	1.502E+00	32.60
	1238.11	------	5.94	1.314E+00	------ Line Not Found		------
	1377.67	------	4.11	1.199E+00	------ Line Not Found		------
	1764.49	88	15.80	9.997E-01	1.642E+00	1.642E+00	22.17

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	318	6.21	4.332E+00	3.480E+00	3.480E+00	29.07
	77.11	547	10.50	4.588E+00	3.349E+00	3.349E+00	18.63
	87.30	211	4.67	5.515E+00	2.415E+00	2.415E+00	28.52
	241.98	264	7.49	4.952E+00	2.095E+00	2.095E+00	29.02
	295.21	344	19.20	4.293E+00	1.231E+00	1.231E+00	18.76
	351.92	563	37.20*	3.770E+00	1.183E+00	1.183E+00	14.50
PO-214	74.81	318	6.21	4.332E+00	3.480E+00	3.480E+00	29.07
	77.11	547	10.50	4.588E+00	3.349E+00	3.349E+00	18.63
	87.30	211	4.67	5.515E+00	2.415E+00	2.415E+00	28.52
	241.98	264	7.49	4.952E+00	2.095E+00	2.095E+00	29.02
	295.21	344	19.20	4.293E+00	1.231E+00	1.231E+00	18.76
	351.92	563	37.20*	3.770E+00	1.183E+00	1.183E+00	14.50
PO-216	74.81	318	10.70	4.332E+00	2.020E+00	2.020E+00	29.62
	77.11	547	18.00	4.588E+00	1.953E+00	1.953E+00	17.00
	87.30	211	8.00	5.515E+00	1.410E+00	1.410E+00	29.22
	238.63	1191	44.60*	4.995E+00	1.576E+00	1.576E+00	10.09
	300.09	95	3.41	4.241E+00	1.933E+00	1.933E+00	50.14
PO-218	74.81	318	6.21	4.332E+00	3.480E+00	3.480E+00	29.07
	77.11	547	10.50	4.588E+00	3.349E+00	3.349E+00	18.63
	87.30	211	4.67	5.515E+00	2.415E+00	2.415E+00	28.52
	241.98	264	7.49	4.952E+00	2.095E+00	2.095E+00	29.02
	295.21	344	19.20	4.293E+00	1.231E+00	1.231E+00	18.76
	351.92	563	37.20*	3.770E+00	1.183E+00	1.183E+00	14.50
RA-224	240.98	264	3.95*	4.952E+00	3.973E+00	3.973E+00	28.48
RA-226	609.31	495	46.30*	2.454E+00	1.285E+00	1.285E+00	15.56
	768.36	34	5.04	2.015E+00	9.730E-01	9.730E-01	126.15
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	111	15.10	1.437E+00	1.502E+00	1.502E+00	32.60
	1238.11	------	5.94	1.314E+00	------ Line Not Found		------
	1377.67	------	4.11	1.199E+00	------ Line Not Found		------
	1764.49	88	15.80	9.997E-01	1.642E+00	1.642E+00	22.17
AC-228	338.32	242	11.40	3.882E+00	1.613E+00	1.613E+00	48.71
	911.07	272	27.70*	1.733E+00	1.670E+00	1.670E+00	21.29
	969.11	142	16.60	1.639E+00	1.543E+00	1.543E+00	34.19
RA-228	338.32	242	11.40	3.882E+00	1.613E+00	1.613E+00	48.71
	911.07	272	27.70*	1.733E+00	1.670E+00	1.670E+00	21.29
	969.11	142	16.60	1.639E+00	1.543E+00	1.543E+00	34.19
TH-228	84.40	------	1.21	5.277E+00	------ Line Not Found		------
	238.60	1191	44.60*	4.995E+00	1.576E+00	1.576E+00	10.09
	300.10	95	3.41	4.241E+00	1.933E+00	1.933E+00	76.94
TH-230	609.31	495	46.30*	2.454E+00	1.285E+00	1.285E+00	15.56
	768.36	34	5.04	2.015E+00	9.730E-01	9.730E-01	126.15
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	111	15.10	1.437E+00	1.502E+00	1.502E+00	32.60
	1238.11	------	5.94	1.314E+00	------ Line Not Found		------
	1377.67	------	4.11	1.199E+00	------ Line Not Found		------
	1764.49	88	15.80	9.997E-01	1.642E+00	1.642E+00	22.17
TH-232	338.32	242	11.40	3.882E+00	1.613E+00	1.613E+00	27.28
	911.07	272	27.70*	1.733E+00	1.670E+00	1.670E+00	21.29

Sample ID : G232746002 Acquisition date : 14-JUL-2009 08:58:55

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	142	16.60	1.639E+00	1.543E+00	1.543E+00	34.19
U-234	609.31	495	46.30*	2.454E+00	1.285E+00	1.285E+00	15.56
	768.36	34	5.04	2.015E+00	9.730E-01	9.730E-01	126.15
	934.06	------	3.21	1.695E+00	------ Line Not Found		------
	1120.29	111	15.10	1.437E+00	1.502E+00	1.502E+00	32.60
	1238.11	------	5.94	1.314E+00	------ Line Not Found		------
	1377.67	------	4.11	1.199E+00	------ Line Not Found		------
	1764.49	88	15.80	9.997E-01	1.642E+00	1.642E+00	22.17
NP-237	86.50	211	12.60*	5.515E+00	8.951E-01	8.951E-01	34.35
	95.87	------	2.60	6.046E+00	------ Line Not Found		------
AM-243	74.67	318	66.00*	4.332E+00	3.275E-01	3.275E-01	28.11
	86.72	211	0.34	5.515E+00	3.357E+01	3.357E+01	27.46
	117.66	------	0.55	6.630E+00	------ Line Not Found		------
	142.18	------	0.13	6.551E+00	------ Line Not Found		------
ANH-511	511.00	103	100.00*	2.829E+00	1.076E-01	1.076E-01	66.62

Flag: "*" = Keyline

Sample ID : G232746002 Acquisition date : 14-JUL-2009 08:58:55

Total number of lines in spectrum 30
Number of unidentified lines 2
Number of lines tentatively identified by NID 28 93.33%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.913E+01	2.913E+01	0.280E+01	9.62	
CD-109	464.00D	1.02	3.032E+00	3.100E+00	0.851E+00	27.46	
SN-126	1.00E+05Y	1.00	3.048E-01	3.048E-01	0.837E-01	27.46	
TL-208	1.41E+10Y	1.00	5.284E-01	5.284E-01	0.892E-01	16.88	
BI-211	7.04E+08Y	1.00	3.401E+00	3.401E+00	0.460E+00	13.53	
BI-212	1.41E+10Y	1.00	8.768E-01	8.768E-01	4.078E-01	46.51	
PB-212	1.41E+10Y	1.00	1.576E+00	1.576E+00	0.159E+00	10.09	
PO-212	1.41E+10Y	1.00	1.576E+00	1.576E+00	0.159E+00	10.09	
BI-214	1600.00Y	1.00	1.285E+00	1.285E+00	0.200E+00	15.56	
PB-214	1600.00Y	1.00	1.183E+00	1.183E+00	0.172E+00	14.50	
PO-214	1600.00Y	1.00	1.183E+00	1.183E+00	0.172E+00	14.50	
PO-216	1.41E+10Y	1.00	1.576E+00	1.576E+00	0.159E+00	10.09	
PO-218	1600.00Y	1.00	1.183E+00	1.183E+00	0.172E+00	14.50	
RA-224	1.41E+10Y	1.00	3.973E+00	3.973E+00	1.131E+00	28.48	
RA-226	1600.00Y	1.00	1.285E+00	1.285E+00	0.200E+00	15.56	
AC-228	1.41E+10Y	1.00	1.670E+00	1.670E+00	0.356E+00	21.29	
RA-228	1.41E+10Y	1.00	1.670E+00	1.670E+00	0.356E+00	21.29	
TH-228	1.41E+10Y	1.00	1.576E+00	1.576E+00	0.159E+00	10.09	
TH-230	4.47E+09Y	1.00	1.285E+00	1.285E+00	0.200E+00	15.56	
TH-232	1.41E+10Y	1.00	1.670E+00	1.670E+00	0.356E+00	21.29	
U-234	4.47E+09Y	1.00	1.285E+00	1.285E+00	0.200E+00	15.56	
NP-237	2.14E+06Y	1.00	8.951E-01	8.951E-01	3.075E-01	34.35	
AM-243	7380.00Y	1.00	3.275E-01	3.275E-01	0.920E-01	28.11	
ANH-511	1.00E+09Y	1.00	1.076E-01	1.076E-01	0.717E-01	66.62	
			---	---			
	Total Activity :		6.258E+01	6.264E+01			

Grand Total Activity : 6.258E+01 6.264E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232746002 Acquisition date : 14-JUL-2009 08:58:55

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	89.98	119	290	1.03	178.92	171	11	1.65E-02	49.5	5.70E+00	T
0	93.10	223	384	1.22	185.15	182	9	3.10E-02	36.8	5.90E+00	T
0	186.13	151	301	1.33	371.16	367	9	2.10E-02	47.0	5.85E+00	T
0	209.67	132	284	1.15	418.22	414	10	1.84E-02	50.8	5.44E+00	T
0	270.70	104	205	1.73	540.26	535	10	1.44E-02	55.5	4.57E+00	T
0	463.04	85	66	1.59	924.92	921	9	1.17E-02	40.8	3.06E+00	T
0	861.93	43	77	1.87	1722.84	1713	15	5.93E-03	95.5	1.82E+00	
0	1729.73	17	12	1.44	3459.71	3452	12	2.36E-03	94.9	1.01E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:01:26.87

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746002.CNF;1  *
* Acquisition date : 14-JUL-2009 08:58:55  Detector SN#     :               *
* Detector ID      : GAM09                 Sensitivity      : 5.00000       *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:01.56         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 29-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232746002            Analyst initials: MXR1           *
* Batch Number     : 882713                Sample Quantity : 1.27350E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 10:48:05.3MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1023-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.913E+01	2.801E+00	4.322E-01	3.243E-02	67.402
CD-109	3.100E+00	8.513E-01	1.269E+00	1.048E-01	2.444
SN-126	3.048E-01	8.370E-02	1.254E-01	1.032E-02	2.430
TL-208	5.284E-01	8.922E-02	5.423E-02	3.838E-03	9.743
BI-211	3.401E+00	4.601E-01	2.956E-01	1.878E-02	11.507
BI-212	8.768E-01	4.078E-01	4.570E-01	3.997E-02	1.919
PB-212	1.576E+00	1.589E-01	8.108E-02	5.841E-03	19.436
PO-212	1.576E+00	1.589E-01	8.108E-02	5.841E-03	19.436
BI-214	1.285E+00	2.000E-01	1.114E-01	9.081E-03	11.533
PB-214	1.183E+00	1.716E-01	1.030E-01	8.469E-03	11.482
PO-214	1.183E+00	1.716E-01	1.030E-01	8.469E-03	11.482
PO-216	1.576E+00	1.589E-01	8.108E-02	5.841E-03	19.436
PO-218	1.183E+00	1.716E-01	1.030E-01	8.469E-03	11.482
RA-224	3.973E+00	1.131E+00	9.227E-01	5.212E-02	4.306
RA-226	1.285E+00	2.000E-01	1.114E-01	9.081E-03	11.533
AC-228	1.670E+00	3.556E-01	2.058E-01	2.408E-02	8.114
RA-228	1.670E+00	3.556E-01	2.058E-01	2.408E-02	8.114
TH-228	1.576E+00	1.589E-01	8.107E-02	5.840E-03	19.438

Sample ID : G232746002 Acquisition date : 14-JUL-2009 08:58:55

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.285E+00	2.000E-01	1.114E-01	9.081E-03	11.533
TH-232	1.670E+00	3.556E-01	2.058E-01	2.408E-02	8.114
U-234	1.285E+00	2.000E-01	1.114E-01	9.081E-03	11.533
NP-237	8.951E-01	3.075E-01	3.864E-01	8.572E-02	2.317
AM-243	3.275E-01	9.205E-02	8.630E-02	6.438E-03	3.794
ANH-511	1.076E-01	7.171E-02	4.084E-02	2.473E-03	2.636

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.664E-01		2.940E-01	5.073E-01	3.483E-02	0.328
NA-22	5.596E-03		4.293E-02	7.061E-02	4.733E-03	0.079
NA-24	-2.972E-01		2.546E-01	Half-Life too short		
AL-26	2.263E-02		2.652E-02	5.129E-02	3.002E-03	0.441
TI-44	3.605E-01	+	6.129E-02	7.407E-02	5.653E-03	4.867
SC-46	-4.719E-03		3.785E-02	6.248E-02	5.752E-03	-0.076
V-48	3.970E-02		6.460E-02	1.136E-01	9.572E-03	0.350
CR-51	-6.906E-02		3.604E-01	5.630E-01	3.628E-02	-0.123
MN-52	-8.036E-02		1.878E-01	2.929E-01	2.130E-02	-0.274
MN-54	-7.290E-03		3.509E-02	5.760E-02	4.882E-03	-0.127
CO-56	-1.774E-02		3.443E-02	5.470E-02	4.722E-03	-0.324
CO-57	-4.200E-03		2.293E-02	3.813E-02	2.276E-03	-0.110
CO-58	-1.594E-02		3.325E-02	5.320E-02	4.354E-03	-0.300
FE-59	-3.874E-02		9.456E-02	1.490E-01	1.140E-02	-0.260
CO-60	-1.200E-02		3.979E-02	6.165E-02	4.579E-03	-0.195
ZN-65	-9.931E-02		1.055E-01	1.291E-01	8.428E-03	-0.769
GE-68	1.411E+00		1.229E+00	2.239E+00	1.597E-01	0.630
AS-73	1.165E+00		9.178E-01	1.537E+00	1.135E-01	0.758
AS-74	7.367E-03		8.169E-02	1.343E-01	8.417E-03	0.055
SE-75	7.119E-03		4.141E-02	6.712E-02	3.889E-03	0.106
BR-77	1.608E+00		7.919E+00	1.328E+01	8.083E-01	0.121
SR-82	-1.384E-01		3.978E-01	5.593E-01	4.321E-02	-0.247
RB-83	1.013E-02		5.596E-02	9.368E-02	5.701E-03	0.108
RB-84	-3.410E-02		6.253E-02	9.853E-02	8.967E-03	-0.346
KR-85	1.322E+01		7.253E+00	1.229E+01	7.455E-01	1.075
SR-85	6.761E-02		3.709E-02	6.286E-02	3.813E-03	1.075
RB-86	-1.224E-01		7.791E-01	1.261E+00	9.010E-02	-0.097
Y-88	1.350E-02		2.325E-02	4.412E-02	2.522E-03	0.306
ZR-88	1.397E-02		2.965E-02	5.119E-02	2.828E-03	0.273
Y-91	-6.967E+00		1.981E+01	3.121E+01	1.825E+00	-0.223
NB-94	2.701E-02		3.211E-02	5.543E-02	3.782E-03	0.487
NB-95	5.103E-03		4.307E-02	6.099E-02	4.630E-03	0.084
NB-95M	-7.342E-02		1.286E-01	1.777E-01	1.314E-02	-0.413
ZR-95	3.110E-02		7.055E-02	1.175E-01	9.946E-03	0.265
NB-97	-1.722E-02		3.755E-02	Half-Life too short		
ZR-97	7.621E-01		7.085E-01	Half-Life too short		
MO-99	3.692E+00		1.142E+01	1.882E+01	2.722E+00	0.196

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TC-99M	1.316E+10		8.939E+09	Half-Life too short		
RH-101	-1.527E-02		3.179E-02	4.943E-02	2.679E-03	-0.309
RH-102	3.850E-03		2.657E-02	4.453E-02	2.638E-03	0.086
RU-103	2.077E-03		3.585E-02	5.952E-02	7.583E-03	0.035
RH-106	2.368E-02		2.975E-01	4.869E-01	5.842E-02	0.049
RU-106	2.368E-02		2.975E-01	4.869E-01	3.072E-02	0.049
AG-108M	1.111E-02		3.034E-02	5.188E-02	3.239E-03	0.214
AG-110M	-8.682E-03		3.411E-02	5.392E-02	3.606E-03	-0.161
IN-111	-1.209E-01		9.860E-01	1.402E+00	7.945E-02	-0.086
IN-113M	3.276E-02		4.082E-02	7.194E-02	4.262E-03	0.455
SN-113	3.276E-02		4.082E-02	7.194E-02	4.262E-03	0.455
IN-114M	-6.720E-02		1.775E-01	2.528E-01	1.358E-02	-0.266
CD-115	1.644E+00		9.341E+00	1.446E+01	8.836E-01	0.114
SN-117M	7.964E-04		4.960E-02	8.209E-02	4.370E-03	0.010
SB-122	6.708E-01		1.840E+00	3.100E+00	1.923E-01	0.216
I-123	-1.287E+00		1.960E+00	Half-Life too short		
TE-123M	-8.635E-03		2.630E-02	4.284E-02	2.315E-03	-0.202
I-124	8.588E-01		6.625E-01	1.079E+00	6.775E-02	0.796
SB-124	3.662E-02		6.888E-02	1.253E-01	8.625E-03	0.292
SB-125	4.456E-02		8.995E-02	1.549E-01	9.233E-03	0.288
TE-125M	5.703E+00		8.135E+00	1.409E+01	1.212E+00	0.405
I-126	-1.716E-01		1.749E-01	2.567E-01	1.643E-02	-0.669
SB-126	1.194E-01		1.382E-01	2.327E-01	1.637E-02	0.513
SB-127	6.157E-01		1.143E+00	1.940E+00	1.915E-01	0.317
XE-127	-4.437E-02		4.405E-02	6.814E-02	3.712E-03	-0.651
I-131	1.190E-02		9.879E-02	1.680E-01	1.067E-02	0.071
TE-132	3.455E-01		5.887E-01	9.810E-01	1.396E-01	0.352
BA-133	-6.618E-03		4.293E-02	6.318E-02	7.271E-03	-0.105
I-133	2.060E-04		2.235E-03	Half-Life too short		
CS-134	7.623E-02		4.688E-02	8.768E-02	7.048E-03	0.869
CS-135	1.929E-02		1.655E-01	2.382E-01	1.814E-02	0.081
I-135	2.849E+09		1.503E+09	Half-Life too short		
CS-136	-1.186E-02		1.086E-01	1.771E-01	1.414E-02	-0.067
BA-137M	3.565E-03		3.684E-02	6.004E-02	3.810E-03	0.059
CS-137	3.768E-03		3.894E-02	6.347E-02	4.042E-03	0.059
CE-139	-1.518E-02		2.838E-02	4.569E-02	2.394E-03	-0.332
BA-140	6.852E-02		2.293E-01	3.845E-01	1.253E-01	0.178
LA-140	-1.251E-01		8.090E-02	9.668E-02	6.589E-03	-1.294
CE-141	-4.992E-02		5.747E-02	9.061E-02	5.202E-03	-0.551
CE-143	2.856E-04		6.890E-05	Half-Life too short		
CE-144	1.063E-01		1.865E-01	3.178E-01	4.499E-02	0.334
PM-144	-9.505E-03		3.393E-02	5.326E-02	3.597E-03	-0.178
PR-144	-6.440E-01		2.299E+00	3.608E+00	2.436E-01	-0.178
PM-146	8.143E-03		4.006E-02	6.758E-02	5.842E-03	0.120
ND-147	-2.800E-01		5.169E-01	7.867E-01	1.075E-01	-0.356
PM-149	3.619E+00		8.024E+01	1.284E+02	1.819E+01	0.028
EU-152	7.160E-02		9.145E-02	1.460E-01	9.458E-03	0.490
GD-153	-1.113E-01		8.146E-02	1.106E-01	7.991E-03	-1.006

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154	1.680E-02		1.201E-01	1.977E-01	1.961E-02	0.085
EU-155	6.779E-02		9.507E-02	1.651E-01	1.123E-02	0.411
TB-160	8.945E-02		1.250E-01	2.230E-01	2.023E-02	0.401
HO-166M	7.518E-02		5.744E-02	1.030E-01	7.137E-03	0.730
TM-171	-1.339E+01		2.986E+01	4.506E+01	3.258E+00	-0.297
LU-176	1.510E-03		2.682E-02	3.803E-02	2.202E-03	0.040
LU-177	3.039E+00	+	1.553E+00	1.769E+00	9.697E-02	1.717
LU-177M	-4.549E-02		1.655E-01	2.721E-01	1.534E-02	-0.167
HF-181	-1.675E-02		3.658E-02	5.825E-02	3.466E-03	-0.288
W-181	-6.087E-01		4.141E-01	5.921E-01	4.266E-02	-1.028
TA-182	1.600E-01		2.065E-01	3.583E-01	2.165E-02	0.447
RE-183	9.629E-02		1.053E-01	1.750E-01	9.233E-03	0.550
RE-184	1.129E-01		2.117E-01	3.514E-01	2.002E-02	0.321
OS-185	-1.031E-02		4.159E-02	6.587E-02	4.173E-03	-0.157
RE-188	2.178E-02		1.639E-01	2.729E-01	1.465E-02	0.080
W-188	-4.178E+00		7.647E+00	1.030E+01	5.958E-01	-0.406
IR-192	5.205E-03		3.238E-02	5.190E-02	3.017E-03	0.100
AU-195	4.262E-02		2.141E-01	3.506E-01	2.490E-02	0.122
TL-200	7.318E-05		1.720E-04	Half-Life too short		
TL-201	3.566E+00		6.200E+00	1.048E+01	5.495E-01	0.340
TL-202	-3.821E-02		6.175E-02	9.816E-02	5.662E-03	-0.389
HG-203	4.673E-02		4.277E-02	6.599E-02	4.044E-03	0.708
BI-207	3.086E-02		5.052E-02	8.816E-02	6.475E-03	0.350
TL-207	1.336E-03		6.485E-01	1.026E+00	1.694E-01	0.001
PO-209	-5.951E+00		7.027E+00	1.070E+01	9.958E-01	-0.556
BI-210	2.406E+00		4.672E+00	7.469E+00	5.717E-01	0.322
PB-210	2.406E+00		4.672E+00	7.469E+00	5.717E-01	0.322
PO-210	2.406E+00		4.671E+00	7.469E+00	4.896E-01	0.322
PB-211	-6.050E-02		8.387E-01	1.398E+00	8.710E-01	-0.043
PO-215	1.336E-03		6.485E-01	1.026E+00	1.694E-01	0.001
RN-219	-7.943E-02		3.691E-01	6.099E-01	8.240E-02	-0.130
RN-220	1.494E+01		2.259E+01	3.916E+01	2.416E+00	0.382
RA-223	1.336E-03		6.485E-01	1.026E+00	1.694E-01	0.001
AC-227	-2.653E-01		3.699E-01	5.662E-01	7.883E-02	-0.469
TH-227	-2.653E-01		3.708E-01	5.662E-01	9.550E-02	-0.469
TH-229	-1.073E-01		4.430E-01	7.153E-01	3.857E-02	-0.150
PA-231	-1.562E-01		1.427E+00	2.262E+00	3.115E-01	-0.069
TH-231	1.336E-03		6.485E-01	1.026E+00	1.694E-01	0.001
U-231	-8.186E-02		9.339E-01	1.418E+00	1.044E-01	-0.058
PA-233	-8.324E-02		5.891E-02	8.297E-02	5.101E-03	-1.003
PA-234	4.013E-03		2.635E-01	4.387E-01	8.280E-02	0.009
PA-234M	1.446E+00		5.669E+00	9.581E+00	1.041E+00	0.151
TH-234	7.057E-01		1.467E+00	2.339E+00	4.056E-01	0.302
U-235	1.118E-02		1.966E-01	3.240E-01	5.252E-02	0.035
NP-236	-4.021E-02		7.345E-02	1.183E-01	6.273E-03	-0.340
U-238	7.057E-01		1.467E+00	2.339E+00	4.056E-01	0.302
NP-239	-1.291E-01		1.703E-01	2.762E-01	1.691E-02	-0.467
AM-241	-4.631E-02		1.662E-01	2.557E-01	2.013E-02	-0.181

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-8.623E-02		8.727E-02	1.409E-01	9.527E-03	-0.612
CM-247	3.724E-04		3.288E-02	5.517E-02	3.078E-03	0.007
CF-249	-1.977E-02		3.650E-02	5.916E-02	3.277E-03	-0.334
CF-251	-1.609E-02		1.169E-01	1.910E-01	1.011E-02	-0.084

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232746002           *
* Acquisition date  : 14-JUL-2009 08:58:55 Detector SN#     :               *
* Detector ID       : GAM09                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.56      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232746002           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.2735E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 10:48:05 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.913E+01	2.745E+00	2.162E-01	1.401E+00
CD-109	3.100E+00	8.343E-01	6.616E-01	4.257E-01
SN-126	3.048E-01	8.203E-02	6.543E-02	4.185E-02
TL-208	5.284E-01	8.744E-02	2.751E-02	4.461E-02
BI-211	3.401E+00	4.509E-01	1.511E-01	2.301E-01
BI-212	8.768E-01	3.997E-01	2.311E-01	2.039E-01
PB-212	1.576E+00	1.558E-01	4.168E-02	7.947E-02
PO-212	1.576E+00	1.558E-01	4.168E-02	7.947E-02
BI-214	1.285E+00	1.960E-01	5.648E-02	9.998E-02
PB-214	1.183E+00	1.681E-01	5.266E-02	8.578E-02
PO-214	1.183E+00	1.681E-01	5.266E-02	8.578E-02
PO-216	1.576E+00	1.558E-01	4.168E-02	7.947E-02
PO-218	1.183E+00	1.681E-01	5.266E-02	8.578E-02
RA-224	3.973E+00	1.109E+00	4.743E-01	5.657E-01
RA-226	1.285E+00	1.960E-01	5.648E-02	9.998E-02
AC-228	1.670E+00	3.485E-01	1.037E-01	1.778E-01
RA-228	1.670E+00	3.485E-01	1.037E-01	1.778E-01
TH-228	1.576E+00	1.558E-01	4.167E-02	7.947E-02
TH-230	1.285E+00	1.960E-01	5.648E-02	9.998E-02
TH-232	1.670E+00	3.485E-01	1.037E-01	1.778E-01
U-234	1.285E+00	1.960E-01	5.648E-02	9.998E-02
NP-237	8.951E-01	3.013E-01	2.016E-01	1.537E-01
AM-243	3.275E-01	9.021E-02	4.512E-02	4.602E-02
ANH-511	1.076E-01	7.027E-02	2.076E-02	3.585E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	1.664E-01	2.881E-01	2.581E-01	1.470E-01	NOT IDENT.
NA-22	5.596E-03	4.207E-02	3.539E-02	2.146E-02	NOT IDENT.
NA-24	-2.972E+05	4.990E+05	0.000E+00	2.546E+05	SHORT HLIF

AL-26	2.263E-02	2.599E-02	2.557E-02	1.326E-02	NOT IDENT.
TI-44	3.605E-01	6.007E-02	3.869E-02	3.065E-02	FAIL ABUN
SC-46	-4.719E-03	3.709E-02	3.149E-02	1.893E-02	FAIL ABUN
V-48	3.970E-02	6.330E-02	5.715E-02	3.230E-02	NOT IDENT.
CR-51	-6.906E-02	3.532E-01	2.882E-01	1.802E-01	NOT IDENT.
MN-52	-8.036E-02	1.840E-01	1.466E-01	9.388E-02	NOT IDENT.
MN-54	-7.290E-03	3.439E-02	2.906E-02	1.754E-02	NOT IDENT.
CO-56	-1.774E-02	3.374E-02	2.759E-02	1.721E-02	NOT IDENT.
CO-57	-4.200E-03	2.247E-02	1.980E-02	1.147E-02	NOT IDENT.
CO-58	-1.594E-02	3.258E-02	2.685E-02	1.662E-02	NOT IDENT.
FE-59	-3.874E-02	9.267E-02	7.484E-02	4.728E-02	NOT IDENT.
CO-60	-1.200E-02	3.899E-02	3.088E-02	1.989E-02	NOT IDENT.
ZN-65	-9.931E-02	1.034E-01	6.486E-02	5.275E-02	NOT IDENT.
GE-68	1.411E+00	1.205E+00	1.125E+00	6.147E-01	NOT IDENT.
AS-73	1.165E+00	8.994E-01	8.074E-01	4.589E-01	NOT IDENT.
AS-74	7.367E-03	8.006E-02	6.808E-02	4.085E-02	NOT IDENT.
SE-75	7.119E-03	4.058E-02	3.445E-02	2.071E-02	NOT IDENT.
BR-77	1.608E+00	7.761E+00	6.749E+00	3.959E+00	FAIL ABUN
SR-82	-1.384E-01	3.898E-01	2.825E-01	1.989E-01	NOT IDENT.
RB-83	1.013E-02	5.484E-02	4.761E-02	2.798E-02	NOT IDENT.
RB-84	-3.410E-02	6.128E-02	4.967E-02	3.127E-02	NOT IDENT.
KR-85	1.322E+01	7.108E+00	6.248E+00	3.626E+00	NOT IDENT.
SR-85	6.761E-02	3.635E-02	3.195E-02	1.855E-02	NOT IDENT.
RB-86	-1.224E-01	7.635E-01	6.337E-01	3.895E-01	NOT IDENT.
Y-88	1.350E-02	2.279E-02	2.199E-02	1.163E-02	NOT IDENT.
ZR-88	1.397E-02	2.906E-02	2.612E-02	1.482E-02	NOT IDENT.
Y-91	-6.967E+00	1.942E+01	1.566E+01	9.906E+00	NOT IDENT.
NB-94	2.701E-02	3.146E-02	2.804E-02	1.605E-02	NOT IDENT.
NB-95	5.103E-03	4.221E-02	3.081E-02	2.154E-02	NOT IDENT.
NB-95M	-7.342E-02	1.260E-01	9.135E-02	6.429E-02	NOT IDENT.
ZR-95	3.110E-02	6.914E-02	5.937E-02	3.528E-02	NOT IDENT.
NB-97	-1.722E+04	7.360E+04	0.000E+00	3.755E+04	SHORT HLIF
ZR-97	7.621E+05	1.389E+06	0.000E+00	7.085E+05	SHORT HLIF
MO-99	3.692E+00	1.119E+01	9.514E+00	5.712E+00	NOT IDENT.
TC-99M	1.316E+16	1.752E+16	0.000E+00	8.939E+15	SHORT HLIF
RH-101	-1.527E-02	3.115E-02	2.548E-02	1.589E-02	NOT IDENT.
RH-102	3.850E-03	2.604E-02	2.266E-02	1.329E-02	NOT IDENT.
RU-103	2.077E-03	3.513E-02	3.027E-02	1.793E-02	FAIL ABUN
RH-106	2.368E-02	2.916E-01	2.468E-01	1.488E-01	FAIL ABUN
RU-106	2.368E-02	2.916E-01	2.468E-01	1.488E-01	FAIL ABUN
AG-108M	1.111E-02	2.973E-02	2.644E-02	1.517E-02	NOT IDENT.
AG-110M	-8.682E-03	3.343E-02	2.730E-02	1.705E-02	NOT IDENT.
IN-111	-1.209E-01	9.663E-01	7.204E-01	4.930E-01	NOT IDENT.
IN-113M	3.276E-02	4.000E-02	3.671E-02	2.041E-02	NOT IDENT.
SN-113	3.276E-02	4.000E-02	3.671E-02	2.041E-02	NOT IDENT.
IN-114M	-6.720E-02	1.739E-01	1.304E-01	8.873E-02	NOT IDENT.
CD-115	1.644E+00	9.154E+00	7.349E+00	4.670E+00	NOT IDENT.
SN-117M	7.964E-04	4.860E-02	4.245E-02	2.480E-02	NOT IDENT.
SB-122	6.708E-01	1.804E+00	1.574E+00	9.202E-01	NOT IDENT.
I-123	-1.287E+06	3.842E+06	0.000E+00	1.960E+06	SHORT HLIF
TE-123M	-8.635E-03	2.578E-02	2.216E-02	1.315E-02	NOT IDENT.
I-124	8.588E-01	6.492E-01	5.469E-01	3.312E-01	NOT IDENT.
SB-124	3.662E-02	6.751E-02	6.253E-02	3.444E-02	FAIL ABUN
SB-125	4.456E-02	8.815E-02	7.895E-02	4.497E-02	FAIL ABUN
TE-125M	5.703E+00	7.972E+00	7.325E+00	4.067E+00	NOT IDENT.
I-126	-1.716E-01	1.714E-01	1.300E-01	8.747E-02	NOT IDENT.
SB-126	1.194E-01	1.354E-01	1.177E-01	6.908E-02	FAIL ABUN
SB-127	6.157E-01	1.120E+00	9.817E-01	5.715E-01	NOT IDENT.
XE-127	-4.437E-02	4.317E-02	3.511E-02	2.203E-02	NOT IDENT.
I-131	1.190E-02	9.682E-02	8.584E-02	4.940E-02	NOT IDENT.
TE-132	3.455E-01	5.770E-01	5.046E-01	2.944E-01	NOT IDENT.
BA-133	-6.618E-03	4.207E-02	3.229E-02	2.147E-02	FAIL ABUN
I-133	2.060E+02	4.380E+03	0.000E+00	2.235E+03	SHORT HLIF
CS-134	7.623E-02	4.594E-02	4.427E-02	2.344E-02	NOT IDENT.
CS-135	1.929E-02	1.622E-01	1.223E-01	8.275E-02	NOT IDENT.
I-135	2.849E+15	2.946E+15	0.000E+00	1.503E+15	SHORT HLIF
CS-136	-1.186E-02	1.064E-01	8.903E-02	5.429E-02	FAIL ABUN
BA-137M	3.565E-03	3.610E-02	3.040E-02	1.842E-02	NOT IDENT.
CS-137	3.768E-03	3.816E-02	3.214E-02	1.947E-02	NOT IDENT.
CE-139	-1.518E-02	2.782E-02	2.361E-02	1.419E-02	NOT IDENT.
BA-140	6.852E-02	2.247E-01	1.953E-01	1.147E-01	NOT IDENT.
LA-140	-1.251E-01	7.928E-02	4.830E-02	4.045E-02	NOT IDENT.
CE-141	-4.992E-02	5.632E-02	4.692E-02	2.874E-02	NOT IDENT.
CE-143	2.856E+02	1.350E+02	0.000E+00	6.890E+01	SHORT HLIF
CE-144	1.063E-01	1.828E-01	1.648E-01	9.324E-02	NOT IDENT.
PM-144	-9.505E-03	3.325E-02	2.694E-02	1.696E-02	NOT IDENT.
PR-144	-6.440E-01	2.253E+00	1.826E+00	1.149E+00	NOT IDENT.
PM-146	8.143E-03	3.926E-02	3.441E-02	2.003E-02	NOT IDENT.

ND-147	-2.800E-01	5.066E-01	3.997E-01	2.585E-01	FAIL ABUN
PM-149	3.619E+00	7.864E+01	6.584E+01	4.012E+01	NOT IDENT.
EU-152	7.160E-02	8.962E-02	7.465E-02	4.573E-02	NOT IDENT.
GD-153	-1.113E-01	7.983E-02	5.762E-02	4.073E-02	NOT IDENT.
EU-154	1.680E-02	1.177E-01	9.909E-02	6.003E-02	NOT IDENT.
EU-155	6.779E-02	9.317E-02	8.587E-02	4.754E-02	FAIL ABUN
TB-160	8.945E-02	1.225E-01	1.124E-01	6.251E-02	FAIL ABUN
HO-166M	7.518E-02	5.629E-02	5.208E-02	2.872E-02	NOT IDENT.
TM-171	-1.339E+01	2.926E+01	2.359E+01	1.493E+01	NOT IDENT.
LU-176	1.510E-03	2.628E-02	1.948E-02	1.341E-02	FAIL ABUN
LU-177	3.039E+00	1.522E+00	9.114E-01	7.763E-01	FAIL ABUN
LU-177M	-4.549E-02	1.622E-01	1.387E-01	8.277E-02	NOT IDENT.
HF-181	-1.675E-02	3.584E-02	2.963E-02	1.829E-02	NOT IDENT.
W-181	-6.087E-01	4.059E-01	3.101E-01	2.071E-01	NOT IDENT.
TA-182	1.600E-01	2.023E-01	1.797E-01	1.032E-01	FAIL ABUN
RE-183	9.629E-02	1.032E-01	9.045E-02	5.264E-02	FAIL ABUN
RE-184	1.129E-01	2.075E-01	1.805E-01	1.058E-01	NOT IDENT.
OS-185	-1.031E-02	4.076E-02	3.336E-02	2.080E-02	NOT IDENT.
RE-188	2.178E-02	1.606E-01	1.412E-01	8.194E-02	NOT IDENT.
W-188	-4.178E+00	7.494E+00	5.280E+00	3.823E+00	NOT IDENT.
IR-192	5.205E-03	3.174E-02	2.657E-02	1.619E-02	FAIL ABUN
AU-195	4.262E-02	2.098E-01	1.825E-01	1.070E-01	FAIL ABUN
TL-200	7.318E+01	3.371E+02	0.000E+00	1.720E+02	SHORT HLIF
TL-201	3.566E+00	6.076E+00	5.417E+00	3.100E+00	NOT IDENT.
TL-202	-3.821E-02	6.052E-02	5.001E-02	3.088E-02	NOT IDENT.
HG-203	4.673E-02	4.192E-02	3.385E-02	2.139E-02	NOT IDENT.
BI-207	3.086E-02	4.951E-02	4.432E-02	2.526E-02	FAIL ABUN
TL-207	1.336E-03	6.355E-01	5.251E-01	3.242E-01	FAIL ABUN
PO-209	-5.951E+00	6.887E+00	5.393E+00	3.514E+00	NOT IDENT.
BI-210	2.406E+00	4.578E+00	3.931E+00	2.336E+00	NOT IDENT.
PB-210	2.406E+00	4.578E+00	3.931E+00	2.336E+00	NOT IDENT.
PO-210	2.406E+00	4.577E+00	3.931E+00	2.335E+00	NOT IDENT.
PB-211	-6.050E-02	8.219E-01	7.129E-01	4.193E-01	NOT IDENT.
PO-215	1.336E-03	6.355E-01	5.251E-01	3.242E-01	FAIL ABUN
RN-219	-7.943E-02	3.618E-01	3.111E-01	1.846E-01	FAIL ABUN
RN-220	1.494E+01	2.214E+01	1.988E+01	1.129E+01	NOT IDENT.
RA-223	1.336E-03	6.355E-01	5.251E-01	3.242E-01	FAIL ABUN
AC-227	-2.653E-01	3.625E-01	2.908E-01	1.850E-01	FAIL ABUN
TH-227	-2.653E-01	3.634E-01	2.908E-01	1.854E-01	FAIL ABUN
TH-229	-1.073E-01	4.341E-01	3.688E-01	2.215E-01	FAIL ABUN
PA-231	-1.562E-01	1.399E+00	1.160E+00	7.136E-01	FAIL ABUN
TH-231	1.336E-03	6.355E-01	5.251E-01	3.242E-01	FAIL ABUN
U-231	-8.186E-02	9.153E-01	7.387E-01	4.670E-01	FAIL ABUN
PA-233	-8.324E-02	5.773E-02	4.248E-02	2.945E-02	FAIL ABUN
PA-234	4.013E-03	2.583E-01	2.209E-01	1.318E-01	FAIL ABUN
PA-234M	1.446E+00	5.556E+00	4.821E+00	2.835E+00	NOT IDENT.
TH-234	7.057E-01	1.438E+00	1.225E+00	7.335E-01	FAIL ABUN
U-235	1.118E-02	1.927E-01	1.678E-01	9.830E-02	FAIL ABUN
NP-236	-4.021E-02	7.198E-02	6.118E-02	3.672E-02	NOT IDENT.
U-238	7.057E-01	1.438E+00	1.225E+00	7.335E-01	FAIL ABUN
NP-239	-1.291E-01	1.668E-01	1.435E-01	8.513E-02	FAIL ABUN
AM-241	-4.631E-02	1.629E-01	1.341E-01	8.309E-02	NOT IDENT.
CM-243	-8.623E-02	8.552E-02	7.334E-02	4.363E-02	FAIL ABUN
CM-247	3.724E-04	3.222E-02	2.814E-02	1.644E-02	FAIL ABUN
CF-249	-1.977E-02	3.577E-02	3.019E-02	1.825E-02	NOT IDENT.
CF-251	-1.609E-02	1.146E-01	9.863E-02	5.847E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	196.3918
46.50	196.3918
46.50	196.3918
48.70	195.4051
49.72	217.2766
51.35	246.8350
52.39	194.0344
52.97	168.1335
53.15	167.0292
53.44	167.1712
54.07	236.8622
56.28	213.0834
56.28	213.0855
57.37	0.0000
57.53	199.3370
57.53	199.3383
57.60	210.2511
57.98	237.0843
57.98	237.0843
59.32	235.5324
59.32	235.5324
59.40	235.5835
59.54	246.6071
59.72	258.8820
60.01	245.7059
61.10	308.6449
61.14	308.6777
61.30	308.8099
63.00	256.2551
63.29	256.4496
63.29	256.4496
63.58	267.6958
64.28	269.4129
65.12	353.8321
65.20	353.9043
65.20	353.9043
66.05	281.7610
66.72	295.8562
66.83	295.9383
66.91	295.9984
67.20	288.7791
67.20	288.7791
67.75	284.2111
67.85	284.2827
68.90	324.8541
68.90	324.8541
69.30	322.6839
69.67	299.2859
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70.82	298.8740
70.83	298.8813
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72.87	345.5921
74.67	318.8772
74.81	318.9813
74.81	318.9813
74.81	318.9813
74.81	318.9813
74.81	318.9813
74.81	318.9813
74.97	319.1008
75.28	319.3321
75.70	319.6444
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77.11	320.6853
77.11	320.6853

77.11	320.6853
77.11	320.6853
77.11	320.6853
78.38	321.6145
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79.80	289.8687
79.80	289.8687
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80.18	281.1684
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80.30	281.2439
80.57	290.3675
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81.07	306.0565
81.07	306.0565
81.07	306.0565
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83.78	292.4198
83.78	292.4198
83.78	292.4198
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84.40	279.9120
84.90	287.9612
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86.50	374.4639
86.54	374.4948
86.59	378.4224
86.72	378.5271
86.79	378.5806
86.94	378.7031
87.30	350.4364
87.30	350.4364
87.30	350.4364
87.30	350.4364
87.30	350.4364
87.30	350.4364
87.57	350.6362
87.88	350.8628
88.03	350.9741
88.36	351.2151
88.47	351.2975
89.95	352.3769
91.11	248.5603
92.29	249.1576
92.38	249.2039
92.38	249.2039
93.35	224.7232
94.00	225.0155
94.67	218.7273
94.67	218.7286
94.90	218.8287
94.90	218.8287
94.90	218.8287
94.90	218.8287
95.87	227.1751
95.87	227.1751
96.73	252.6985
97.43	271.5915
98.44	270.7974
98.44	270.7974
98.88	239.1435
99.55	230.5839
99.55	230.5839
99.86	229.8340
100.00	222.7949
100.10	222.8383
103.18	262.5406
103.76	269.0840
105.00	227.5933
105.31	222.3445
108.00	252.2760
109.28	221.2537
111.00	259.9828
111.00	259.9828

111.76	255.7992
112.95	252.7025
115.19	228.1431
116.30	244.1253
117.00	251.7434
117.00	251.7434
117.66	244.6970
121.11	247.0543
121.62	240.8072
121.78	244.5624
122.06	240.0604
122.32	235.5450
122.32	235.5450
122.32	235.5450
122.32	235.5450
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131.20	298.0085
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135.34	252.7903
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136.25	228.5859
136.48	238.1162
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142.65	245.1257
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144.24	216.0684
144.24	216.0684
144.24	216.0684
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145.44	243.2694
147.16	255.4064
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152.70	237.1294
153.22	231.4948
154.21	236.6679
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154.21	236.6679
154.21	236.6679
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162.64	217.8605
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163.89	249.6876
165.85	261.1883
167.43	225.1959
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171.86	224.5287
172.10	224.5999
176.55	225.8965
176.60	225.9103
181.06	224.3784
184.41	228.6520
185.71	231.5485
186.00	231.6324
190.27	205.9010
192.34	186.5388
193.63	197.0365
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198.60	236.2001
200.40	216.1182
201.83	203.0761
202.84	243.5647
205.31	208.0337
208.36	224.3386
208.81	202.6311

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209.75	188.2839
210.97	184.3768
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216.55	203.3463
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223.80	193.3373
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227.08	143.1285
227.20	143.1464
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228.18	162.4022
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236.00	211.8977
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238.63	173.8422
238.63	173.8422
239.00	173.9073
240.98	174.2591
241.98	174.4371
241.98	174.4371
241.98	174.4371
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245.39	153.9706
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248.90	132.2833
249.79	151.9358
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252.85	140.4219
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256.20	180.1985
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260.90	145.9125
262.80	160.4657
264.65	149.7406
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268.79	142.5897
269.46	131.0656
269.46	131.0656
269.46	131.0656
269.46	131.0656
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277.60	168.2775
277.60	168.2775
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284.30	131.1823
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285.90	140.3529
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286.10	133.6402
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295.21	138.1187
295.96	138.2106

296.50	138.2751
297.23	138.3645
298.57	138.5258
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299.80	138.6722
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300.09	138.7070
300.09	138.7070
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303.76	141.9977
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304.40	136.9409
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319.41	138.6768
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323.87	135.7050
323.87	135.7050
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338.28	110.0025
338.28	110.0025
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391.69	94.3197
392.90	109.9805
398.62	115.9428
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444.90	87.3043
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445.03	93.9545
445.03	93.9545
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546.56	0.0000
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569.50	81.5796
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602.71	58.0850
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609.31	85.3358
609.31	85.3358

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621.84	64.9214
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661.65	78.9705
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696.49	74.8139
697.00	74.8307
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722.78	71.9542
722.89	71.9562
722.95	71.9582
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724.18	71.9962
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768.36	59.2627
768.36	59.2627
768.36	59.2627
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796.30	50.6652
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875.33	0.0000
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884.67	43.9868
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911.07	51.9680
911.07	51.9680
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925.24	43.6843
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934.06	45.7254
934.06	45.7254
934.06	45.7254
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944.10	38.2383
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949.00	41.1765
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964.01	46.5232
966.15	46.5562
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969.11	77.1367
969.11	77.1367
977.42	50.2811
980.50	41.6216
983.50	37.7879
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1001.68	37.0426
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1037.82	48.3325
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1050.47	62.3940
1063.62	40.7738
1076.63	50.9278
1077.35	36.9548
1085.78	47.0666
1099.22	59.3284
1112.02	49.4642
1112.84	46.7017
1115.52	67.3698
1120.29	55.6606
1120.29	55.6606
1120.29	55.6606
1120.29	55.6606
1120.51	55.6660
1121.28	69.1742
1124.00	0.0000
1129.67	69.0127
1131.51	0.0000
1147.95	0.0000
1167.94	51.3208
1173.22	51.3989
1175.09	52.4568
1177.93	40.1464
1189.05	60.9273
1204.90	67.4280
1205.75	0.0000
1213.00	55.1065
1221.42	56.2808
1230.97	70.0163
1235.34	89.9809
1236.41	0.0000
1238.11	56.5418
1238.11	56.5418
1238.11	56.5418
1238.11	56.5418
1238.25	54.4502
1246.25	50.3719
1260.41	0.0000
1271.85	33.8172
1274.45	40.1876
1274.54	40.1876
1291.56	45.6833
1298.22	0.0000
1312.09	30.9782
1325.50	41.8088
1325.50	41.8088
1332.49	35.4412
1333.61	39.7479
1360.21	12.9803
1362.66	0.0000
1365.15	20.5781
1368.21	26.0133
1368.53	0.0000
1376.25	28.2395
1377.67	29.3361
1377.67	29.3361
1377.67	29.3361
1377.67	29.3361
1384.27	19.5899
1394.10	14.1832
1395.20	15.2783
1407.95	22.9903
1434.06	20.2007
1436.60	20.2132
1457.56	0.0000
1460.81	14.7871
1489.15	14.8880
1509.49	19.6337
1596.49	29.5658
1620.62	13.4241
1678.03	0.0000
1691.02	9.7359
1691.02	9.7359

1706.46	0.0000
1750.46	0.0000
1764.49	10.8751
1764.49	10.8751
1764.49	10.8751
1764.49	10.8751
1770.23	6.7871
1771.40	30.6910
1791.20	0.0000
1808.65	5.9851
1836.01	4.0119

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232746002

Total Uranium Activity	2.1045E+00	ug/g
Total Uranium Counting Unc.	4.2781E+00	ug/g
Total Uranium Tpu	2.1827E-06	ug/g
Total Uranium Mda	3.6463E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232746002       *
*   ANALYST       : MXR1                      DETECTOR   : GAM09            *
*   SAMPLE DATE   : 29-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 08:58:55.71    SAMPLE ALQT:  127.350 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.799E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.253E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.694E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.298E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:02:15.24

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746003.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:59:26
Sample ID         : G232746003           Sample quantity  : 1.37080E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.67  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.18*	31	579	0.83	125.84	122	9	4.26E-03	145.6	
2	1	74.84*	416	468	1.01	149.17	142	17	5.77E-02	9.8	2.23E+00
3	1	77.16*	708	427	0.97	153.81	142	17	9.84E-02	6.1	
4	0	87.34*	177	599	1.02	174.19	170	8	2.46E-02	25.3	
5	0	93.04*	346	520	1.33	185.58	182	10	4.81E-02	14.2	
6	0	186.03*	154	459	1.43	371.66	367	10	2.14E-02	28.2	
7	0	209.02*	58	267	1.13	417.67	415	8	8.10E-03	51.3	
8	5	238.72*	1348	197	1.05	477.09	472	18	1.87E-01	3.2	8.60E-01
9	5	241.77	323	248	1.57	483.20	472	18	4.48E-02	12.6	
10	0	270.61	156	271	1.69	540.89	535	12	2.16E-02	22.7	
11	0	295.35*	484	204	1.17	590.40	584	12	6.72E-02	7.5	
12	0	300.11	77	182	1.69	599.93	596	9	1.07E-02	33.6	
13	0	330.52	30	260	2.57	660.77	650	12	4.16E-03	109.9	
14	0	338.62*	365	197	1.37	676.98	671	14	5.07E-02	9.8	
15	0	352.00*	672	218	1.14	703.76	697	13	9.33E-02	6.0	
16	0	409.90	58	124	1.02	819.58	814	11	8.04E-03	39.5	
17	0	463.00	78	107	1.54	925.84	921	10	1.08E-02	27.4	
18	0	510.86*	115	207	1.86	1021.58	1013	17	1.60E-02	33.1	
19	0	583.47*	458	96	1.26	1166.84	1161	11	6.37E-02	6.3	
20	0	609.43*	450	150	1.19	1218.78	1212	13	6.26E-02	7.4	
21	0	727.92*	79	83	1.96	1455.80	1450	11	1.10E-02	25.5	
22	0	768.45	46	102	1.33	1536.88	1530	13	6.43E-03	47.1	
23	0	795.54	41	72	1.88	1591.07	1582	13	5.62E-03	45.8	
24	0	860.89	61	50	1.38	1721.80	1716	10	8.52E-03	25.0	
25	0	911.67*	313	53	1.58	1823.38	1818	13	4.35E-02	7.6	
26	0	969.59*	166	50	1.29	1939.23	1935	11	2.30E-02	11.9	
27	0	1121.04*	145	74	2.12	2242.14	2233	21	2.02E-02	17.1	
28	0	1461.34*	1580	15	2.24	2922.69	2912	20	2.19E-01	2.6	
29	0	1730.29	36	4	2.20	3460.49	3453	12	5.06E-03	19.2	
30	0	1765.26*	71	14	2.16	3530.40	3520	16	9.85E-03	16.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 11:02:17

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:59:26
Sample ID : G232746003 Sample quantity : 137.08 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA12 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.67 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.566E+01	3.148E+00	4.564E-01	3.254E-02	78.136
CD-109	+	88.03	*	2.353E+00	1.206E+00	1.414E+00	1.082E-01	1.664
SN-126	+	64.28		2.739E-01	7.983E-01	7.606E-01	1.068E-01	0.360
	+	86.94		9.620E-01	6.281E-01	5.978E-01	2.460E-01	1.609
	+	87.57	*	2.314E-01	1.186E-01	1.428E-01	1.089E-02	1.620
TL-208		277.35		6.487E-01	3.699E-01	6.563E-01	6.873E-02	0.988
	+	510.84		5.226E-01	3.502E-01	2.011E-01	2.077E-02	2.598
	+	583.14	*	5.957E-01	8.655E-02	6.003E-02	4.294E-03	9.923
	+	860.37		7.520E-01	3.821E-01	4.401E-01	3.846E-02	1.709
BI-211		72.87		5.861E+00	3.014E+00	5.309E+00	3.562E-01	1.104
	+	351.07	*	3.782E+00	5.134E-01	3.143E-01	1.976E-02	12.031
PB-212	+	74.81		2.313E+00	5.244E-01	5.322E-01	6.151E-02	4.346
	+	77.11		2.230E+00	3.120E-01	3.020E-01	2.091E-02	7.385
	+	87.30		1.070E+00	5.588E-01	6.625E-01	8.321E-02	1.615
	+	238.63	*	1.651E+00	1.581E-01	8.613E-02	6.116E-03	19.173
	+	300.09		1.451E+00	9.814E-01	1.110E+00	9.065E-02	1.307
PO-212	+	74.81		2.313E+00	5.244E-01	5.322E-01	6.151E-02	4.346
	+	77.11		2.230E+00	3.120E-01	3.020E-01	2.091E-02	7.385
	+	87.30		1.070E+00	5.588E-01	6.625E-01	8.321E-02	1.615
		115.19		3.222E-01	3.281E+00	5.412E+00	3.433E-01	0.060
	+	238.63	*	1.651E+00	1.581E-01	8.613E-02	6.116E-03	19.173
	+	300.09		1.451E+00	9.814E-01	1.110E+00	9.065E-02	1.307
BI-214	+	609.31	*	1.104E+00	1.875E-01	1.102E-01	9.076E-03	10.012
	+	768.36		1.271E+00	1.202E+00	1.110E+00	1.048E-01	1.145
		934.06		9.328E-01	1.219E+00	2.092E+00	2.139E-01	0.446
	+	1120.29		1.851E+00	6.562E-01	4.527E-01	4.112E-02	4.089
		1238.11		1.297E+00	9.981E-01	1.767E+00	1.476E-01	0.734
		1377.67		1.834E+00	1.007E+00	1.935E+00	1.817E-01	0.948
	+	1764.49		1.242E+00	4.265E-01	2.366E-01	1.402E-02	5.250
PB-214	+	74.81		3.985E+00	8.745E-01	9.170E-01	9.221E-02	4.346
	+	77.11		3.824E+00	6.091E-01	5.177E-01	5.330E-02	7.385
	+	87.30		1.833E+00	9.502E-01	1.135E+00	1.229E-01	1.615
	+	241.98		2.374E+00	6.247E-01	5.188E-01	4.082E-02	4.576
	+	295.21		1.605E+00	2.771E-01	1.887E-01	1.593E-02	8.504

Sample ID : G232746003 Acquisition date : 14-JUL-2009 08:59:26

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.316E+00	1.913E-01	1.096E-01	8.952E-03	12.004
PO-214	+	74.81		3.985E+00	8.745E-01	9.170E-01	9.221E-02	4.346
	+	77.11		3.824E+00	6.091E-01	5.177E-01	5.330E-02	7.385
	+	87.30		1.833E+00	9.502E-01	1.135E+00	1.229E-01	1.615
	+	241.98		2.374E+00	6.247E-01	5.188E-01	4.082E-02	4.576
	+	295.21		1.605E+00	2.771E-01	1.887E-01	1.593E-02	8.504
	+	351.92	*	1.316E+00	1.913E-01	1.096E-01	8.952E-03	12.004
PO-216	+	74.81		2.313E+00	5.244E-01	5.322E-01	6.151E-02	4.346
	+	77.11		2.230E+00	3.120E-01	3.020E-01	2.091E-02	7.385
	+	87.30		1.070E+00	5.588E-01	6.625E-01	8.321E-02	1.615
	+	238.63	*	1.651E+00	1.581E-01	8.613E-02	6.116E-03	19.173
	+	300.09		1.451E+00	9.814E-01	1.110E+00	9.065E-02	1.307
PO-218	+	74.81		3.985E+00	8.745E-01	9.170E-01	9.221E-02	4.346
	+	77.11		3.824E+00	6.091E-01	5.177E-01	5.330E-02	7.385
	+	87.30		1.833E+00	9.502E-01	1.135E+00	1.229E-01	1.615
	+	241.98		2.374E+00	6.247E-01	5.188E-01	4.082E-02	4.576
	+	295.21		1.605E+00	2.771E-01	1.887E-01	1.593E-02	8.504
	+	351.92	*	1.316E+00	1.913E-01	1.096E-01	8.952E-03	12.004
RA-224	+	240.98	*	4.501E+00	1.157E+00	9.803E-01	5.408E-02	4.591
RA-226	+	609.31	*	1.104E+00	1.875E-01	1.102E-01	9.076E-03	10.012
	+	768.36		1.271E+00	1.202E+00	1.110E+00	1.048E-01	1.145
		934.06		9.328E-01	1.219E+00	2.092E+00	2.139E-01	0.446
	+	1120.29		1.851E+00	6.562E-01	4.527E-01	4.112E-02	4.089
		1238.11		1.297E+00	9.981E-01	1.767E+00	1.476E-01	0.734
		1377.67		1.834E+00	1.007E+00	1.935E+00	1.817E-01	0.948
	+	1764.49		1.242E+00	4.265E-01	2.366E-01	1.402E-02	5.250
AC-228	+	338.32		2.263E+00	1.024E+00	3.449E-01	1.405E-01	6.561
	+	911.07	*	1.816E+00	3.403E-01	2.464E-01	2.705E-02	7.371
	+	969.11		1.692E+00	5.611E-01	6.238E-01	1.438E-01	2.712
RA-228	+	338.32		2.263E+00	1.024E+00	3.449E-01	1.405E-01	6.561
	+	911.07	*	1.816E+00	3.403E-01	2.464E-01	2.705E-02	7.371
	+	969.11		1.692E+00	5.611E-01	6.238E-01	1.438E-01	2.712
TH-228		84.40		2.398E+00	2.692E+00	4.159E+00	5.143E-01	0.576
	+	238.60	*	1.651E+00	1.581E-01	8.612E-02	6.115E-03	19.175
	+	300.10		1.451E+00	1.296E+00	1.110E+00	6.543E-01	1.307
TH-230	+	609.31	*	1.104E+00	1.875E-01	1.102E-01	9.076E-03	10.012
	+	768.36		1.271E+00	1.202E+00	1.110E+00	1.048E-01	1.145
		934.06		9.328E-01	1.219E+00	2.092E+00	2.139E-01	0.446
	+	1120.29		1.851E+00	6.562E-01	4.527E-01	4.112E-02	4.089
		1238.11		1.297E+00	9.981E-01	1.767E+00	1.476E-01	0.734
		1377.67		1.834E+00	1.006E+00	1.935E+00	1.817E-01	0.948
	+	1764.49		1.242E+00	4.265E-01	2.366E-01	1.402E-02	5.250
TH-232	+	338.32		2.263E+00	4.628E-01	3.449E-01	1.954E-02	6.561
	+	911.07	*	1.816E+00	3.403E-01	2.464E-01	2.705E-02	7.371
	+	969.11		1.692E+00	5.611E-01	6.238E-01	1.438E-01	2.712
TH-234	+	63.29	*	6.920E-01	2.018E+00	1.886E+00	3.211E-01	0.367
	+	92.38		2.925E+00	9.748E-01	9.149E-01	1.600E-01	3.196
U-234	+	609.31	*	1.104E+00	1.875E-01	1.102E-01	9.076E-03	10.012
	+	768.36		1.271E+00	1.202E+00	1.110E+00	1.048E-01	1.145

Sample ID : G232746003 Acquisition date : 14-JUL-2009 08:59:26

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		9.328E-01	1.219E+00	2.092E+00	2.139E-01	0.446
	+	1120.29		1.851E+00	6.562E-01	4.527E-01	4.112E-02	4.089
		1238.11		1.297E+00	9.981E-01	1.767E+00	1.476E-01	0.734
		1377.67		1.834E+00	1.006E+00	1.935E+00	1.817E-01	0.948
	+	1764.49		1.242E+00	4.265E-01	2.366E-01	1.402E-02	5.250
NP-237	+	86.50	*	6.795E-01	3.754E-01	4.243E-01	9.321E-02	1.602
		95.87		-3.550E-01	9.407E-01	1.364E+00	3.290E-01	-0.260
U-238	+	63.29	*	6.920E-01	2.018E+00	1.886E+00	3.211E-01	0.367
	+	92.38		2.925E+00	8.568E-01	9.149E-01	6.661E-02	3.196
AM-243	+	74.67	*	3.749E-01	7.745E-02	8.654E-02	5.880E-03	4.333
	+	86.72		2.548E+01	1.306E+01	1.587E+01	1.199E+00	1.605
		117.66		-1.307E+00	3.543E+00	5.720E+00	3.603E-01	-0.229
		142.18		-6.294E+00	1.672E+01	2.670E+01	1.511E+00	-0.236
ANH-511	+	511.00	*	1.129E-01	7.506E-02	4.346E-02	2.649E-03	2.597

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.963E-01	3.273E-01	4.904E-01	3.375E-02	-0.604
NA-22		1274.54	*	-8.904E-03	4.310E-02	6.934E-02	4.466E-03	-0.128
NA-24		1368.53	*	4.697E-01	4.310E-02	Half-Life too short		
AL-26		1129.67		-1.461E+00	2.013E+00	2.597E+00	1.583E-01	-0.563
		1808.65	*	1.050E-02	2.701E-02	4.808E-02	2.759E-03	0.218
TI-44		67.85		-7.210E-02	4.967E-02	6.987E-02	4.548E-03	-1.032
	+	78.38	*	4.116E-01	5.758E-02	7.760E-02	5.427E-03	5.304
SC-46		889.25	*	2.729E-02	3.831E-02	6.616E-02	5.484E-03	0.412
	+	1120.51		3.162E-01	1.101E-01	1.318E-01	8.193E-03	2.398
V-48		944.10		-7.590E-01	9.936E-01	1.485E+00	1.193E-01	-0.511
		983.50	*	2.300E-03	7.124E-02	1.148E-01	8.841E-03	0.020
		1312.09		4.293E-02	8.443E-02	1.455E-01	9.871E-03	0.295
CR-51		320.08	*	-1.724E-01	3.391E-01	5.452E-01	3.466E-02	-0.316
MN-52		744.21		1.629E-01	2.336E-01	4.049E-01	2.892E-02	0.402
		848.13		-1.957E-01	6.505E+00	1.055E+01	8.405E-01	-0.019
		935.52		1.438E-02	2.700E-01	4.337E-01	3.512E-02	0.033
		1246.25		6.303E+00	7.925E+00	1.384E+01	8.529E-01	0.455
		1333.61		2.406E+00	4.627E+00	8.040E+00	5.615E-01	0.299
		1434.06	*	-7.502E-02	2.318E-01	3.599E-01	2.472E-02	-0.208
MN-54		834.83	*	2.951E-02	3.774E-02	6.530E-02	5.133E-03	0.452
CO-56		846.75	*	-6.634E-03	3.950E-02	6.327E-02	5.033E-03	-0.105
		977.42		1.082E+00	3.020E+00	4.761E+00	3.693E-01	0.227
		1037.82		-3.965E-01	3.126E-01	4.589E-01	3.544E-02	-0.864
		1175.09		2.798E-01	2.569E+00	4.289E+00	2.364E-01	0.065
		1238.25		1.080E-01	1.029E-01	1.798E-01	1.157E-02	0.601
		1360.21		-3.680E-01	9.218E-01	1.423E+00	9.904E-02	-0.259
		1771.40		-1.238E+00	3.501E-01	2.322E-01	1.369E-02	-5.332
CO-57		122.06	*	-1.242E-02	2.408E-02	3.854E-02	2.410E-03	-0.322
		136.48		9.761E-03	1.930E-01	3.148E-01	2.117E-02	0.031
CO-58		810.76	*	-2.521E-02	4.187E-02	6.480E-02	4.986E-03	-0.389

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		-2.006E-01	2.673E+00	4.240E+00	2.395E-01	-0.047
		192.34		7.519E-01	9.123E-01	1.504E+00	1.738E-01	0.500
		1099.22	*	-4.940E-04	9.192E-02	1.530E-01	1.130E-02	-0.003
		1291.56		1.029E-02	1.180E-01	1.955E-01	1.575E-02	0.053
CO-60		1173.22		-1.425E-02	5.091E-02	8.245E-02	4.532E-03	-0.173
		1332.49	*	2.637E-02	3.795E-02	6.706E-02	4.683E-03	0.393
ZN-65		1115.52	*	-6.424E-02	1.026E-01	1.348E-01	8.478E-03	-0.477
GE-68		1077.35	*	7.523E-01	1.230E+00	2.160E+00	1.456E-01	0.348
AS-73		53.44	*	5.022E-01	7.694E-01	1.339E+00	8.647E-02	0.375
AS-74		595.88	*	-3.977E-02	8.973E-02	1.455E-01	9.259E-03	-0.273
		634.78		5.028E-02	3.234E-01	5.453E-01	3.514E-02	0.092
SE-75		66.05		-1.304E+00	4.820E+00	7.199E+00	6.285E-01	-0.181
		96.73		-1.407E+00	8.219E-01	1.079E+00	1.366E-01	-1.304
		121.11		5.009E-03	1.273E-01	2.090E-01	1.990E-02	0.024
		136.00		8.495E-03	3.609E-02	5.935E-02	3.504E-03	0.143
		198.60		4.028E-01	1.754E+00	2.785E+00	1.872E-01	0.145
		264.65	*	-2.158E-02	4.553E-02	6.510E-02	3.690E-03	-0.331
		279.53		-1.580E-02	1.071E-01	1.779E-01	1.090E-02	-0.089
		303.91		-1.451E+00	2.276E+00	3.167E+00	2.999E-01	-0.458
		400.65		3.748E-02	2.416E-01	3.981E-01	3.558E-02	0.094
BR-77	+	87.88		4.740E+02	2.429E+02	3.055E+02	2.336E+01	1.551
		200.40		5.597E+01	1.462E+02	2.367E+02	1.255E+01	0.236
	+	239.00		2.471E+02	2.091E+01	3.433E+01	1.890E+00	7.199
		249.79		-8.604E+01	5.779E+01	9.011E+01	5.004E+00	-0.955
		281.68		-4.050E+01	7.995E+01	1.303E+02	7.363E+00	-0.311
		297.23		3.019E+02	6.949E+01	1.062E+02	6.027E+00	2.843
		303.76		-1.011E+02	1.813E+02	2.543E+02	1.445E+01	-0.398
		439.47		1.082E+02	1.259E+02	2.161E+02	1.244E+01	0.501
		484.57		-1.191E+01	2.233E+02	3.577E+02	2.140E+01	-0.033
		520.65	*	-6.634E+00	9.399E+00	1.412E+01	8.659E-01	-0.470
		574.64		4.900E+01	1.942E+02	3.313E+02	2.091E+01	0.148
		578.91		-4.137E+01	9.283E+01	1.297E+02	8.198E+00	-0.319
		585.48		1.584E+03	2.683E+02	4.941E+02	3.132E+01	3.206
		755.35		1.048E+02	1.578E+02	2.723E+02	1.969E+01	0.385
		817.79		2.334E+01	1.146E+02	1.906E+02	1.473E+01	0.122
SR-82		698.33		1.417E+01	3.742E+01	6.339E+01	4.295E+00	0.224
		776.49	*	-1.699E-02	3.799E-01	6.202E-01	4.589E-02	-0.027
		1395.20		2.274E+00	9.891E+00	1.665E+01	1.153E+00	0.137
RB-83		520.41	*	-4.652E-02	6.658E-02	1.001E-01	6.138E-03	-0.465
		529.64		2.623E-02	1.029E-01	1.677E-01	1.034E-02	0.156
		552.65		-1.137E-01	1.912E-01	3.082E-01	1.925E-02	-0.369
RB-84		881.50	*	-7.274E-03	6.698E-02	1.074E-01	8.838E-03	-0.068
KR-85		513.99	*	2.019E+01	8.665E+00	1.438E+01	8.782E-01	1.404
SR-85		513.99	*	1.033E-01	4.431E-02	7.354E-02	4.491E-03	1.404
RB-86		1076.63	*	2.382E-01	7.889E-01	1.350E+00	9.114E-02	0.176
Y-88		898.02		-1.215E-02	4.146E-02	6.517E-02	5.475E-03	-0.186
		1836.01	*	-3.158E-03	3.557E-02	5.787E-02	3.257E-03	-0.055
ZR-88		392.90	*	-5.153E-03	3.013E-02	4.870E-02	2.671E-03	-0.106
Y-91		1204.90	*	-9.073E+00	2.113E+01	3.374E+01	1.950E+00	-0.269

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	-1.992E-02	3.515E-02	5.563E-02	3.789E-03	-0.358
		871.10		1.188E-02	3.500E-02	5.855E-02	4.770E-03	0.203
NB-95		765.79	*	5.519E-02	5.026E-02	7.870E-02	5.757E-03	0.701
NB-95M		235.69	*	-6.350E-02	1.277E-01	1.851E-01	1.350E-02	-0.343
ZR-95		724.18		-5.993E-02	1.108E-01	1.488E-01	1.173E-02	-0.403
		756.15	*	4.038E-02	7.264E-02	1.244E-01	1.027E-02	0.325
NB-97		657.90	*	-4.569E-03	7.264E-02	Half-Life too short		
		1024.50		-7.529E+00	7.264E-02	Half-Life too short		
ZR-97		254.15		1.169E+00	7.264E-02	Half-Life too short		
		355.39		-4.179E-01	7.264E-02	Half-Life too short		
		507.63	*	2.716E+00	7.264E-02	Half-Life too short		
		602.52		7.574E+00	7.264E-02	Half-Life too short		
		1021.30		1.158E+00	7.264E-02	Half-Life too short		
		1147.95		-1.065E+00	7.264E-02	Half-Life too short		
		1362.66		-6.154E+00	7.264E-02	Half-Life too short		
		1750.46		-7.354E-01	7.264E-02	Half-Life too short		
MO-99		140.51		-1.941E+01	2.346E+01	3.577E+01	9.631E+00	-0.543
		181.06		-9.178E+00	1.789E+01	2.457E+01	4.164E+00	-0.373
		366.43		5.001E+01	7.395E+01	1.265E+02	7.073E+00	0.395
		739.58	*	8.289E+00	1.146E+01	1.980E+01	2.847E+00	0.419
		778.00		-1.364E+01	3.252E+01	5.137E+01	3.808E+00	-0.266
TC-99M		140.51	*	-1.535E+10	3.252E+01	Half-Life too short		
RH-101		127.23		-1.729E-02	3.200E-02	5.114E-02	3.103E-03	-0.338
		198.01	*	6.691E-03	3.199E-02	5.077E-02	2.686E-03	0.132
		325.23		1.740E-01	2.258E-01	3.480E-01	1.977E-02	0.500
RH-102		418.52		5.451E-03	2.860E-01	4.657E-01	2.627E-02	0.012
		475.06	*	2.455E-02	2.957E-02	5.033E-02	2.989E-03	0.488
		631.29		1.654E-03	5.442E-02	9.088E-02	5.851E-03	0.018
		697.49		1.019E-02	8.312E-02	1.386E-01	9.380E-03	0.074
		766.84		2.226E-01	1.317E-01	2.151E-01	1.575E-02	1.035
		1046.59		-5.752E-02	1.195E-01	1.914E-01	1.356E-02	-0.301
		1112.84		6.413E-02	2.479E-01	3.671E-01	2.317E-02	0.175
RU-103		497.08	*	-1.233E-02	4.044E-02	6.332E-02	8.076E-03	-0.195
	+	610.33		1.187E+01	2.561E+00	2.939E+00	4.601E-01	4.038
RH-106	+	511.85		5.636E-01	3.748E-01	4.418E-01	2.694E-02	1.276
		621.84	*	-1.628E-02	3.165E-01	5.260E-01	6.341E-02	-0.031
		1050.47		2.962E-01	2.337E+00	3.948E+00	2.781E-01	0.075
RU-106	+	511.85		5.636E-01	3.748E-01	4.418E-01	2.694E-02	1.276
		621.84	*	-1.628E-02	3.165E-01	5.260E-01	3.377E-02	-0.031
		1050.47		2.962E-01	2.337E+00	3.948E+00	2.781E-01	0.075
AG-108M		433.93	*	2.284E-02	3.075E-02	5.243E-02	3.267E-03	0.436
		614.37		-1.380E-02	4.381E-02	6.155E-02	4.220E-03	-0.224
		722.95		3.510E-03	4.748E-02	6.838E-02	5.051E-03	0.051
AG-110M		657.75	*	3.451E-03	3.052E-02	5.116E-02	3.487E-03	0.067
		677.61		-1.259E-01	3.149E-01	5.058E-01	3.502E-02	-0.249
		706.67		5.316E-02	2.097E-01	3.528E-01	2.519E-02	0.151
		763.93		-4.972E-03	1.868E-01	2.645E-01	2.007E-02	-0.019
		884.67		-3.941E-02	5.009E-02	7.469E-02	6.380E-03	-0.528
		937.48		-7.113E-02	1.209E-01	1.842E-01	1.550E-02	-0.386

---- Non-Identified Nuclides ----

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		1384.27		-1.073E-01	1.669E-01	2.496E-01	1.806E-02	-0.430
IN-111		171.28		2.272E-01	9.080E-01	1.474E+00	7.584E-02	0.154
		245.39	*	2.052E-01	1.027E+00	1.549E+00	8.572E-02	0.133
IN-113M		391.69	*	-1.852E-02	4.371E-02	6.949E-02	4.091E-03	-0.266
SN-113		391.69	*	-1.852E-02	4.371E-02	6.949E-02	4.091E-03	-0.266
IN-114M		190.27	*	2.055E-02	1.948E-01	2.781E-01	1.459E-02	0.074
CD-115		260.90		9.851E+01	1.084E+02	1.899E+02	1.063E+01	0.519
		492.35		-1.919E+01	3.335E+01	5.112E+01	3.076E+00	-0.375
		527.90	*	-5.862E+00	1.027E+01	1.563E+01	9.629E-01	-0.375
SN-117M		156.02		2.190E-01	2.030E+00	3.293E+00	1.758E-01	0.067
		158.56	*	-1.710E-02	5.150E-02	8.182E-02	4.322E-03	-0.209
SB-122		563.90	*	-1.427E-01	1.851E+00	3.093E+00	1.943E-01	-0.046
		692.80		1.729E+01	4.208E+01	7.163E+01	4.822E+00	0.241
I-123		159.00	*	1.803E+00	4.208E+01	Half-Life too short		
		528.96		-9.232E+01	4.208E+01	Half-Life too short		
TE-123M		159.00	*	1.209E-02	2.674E-02	4.399E-02	2.357E-03	0.275
I-124		602.71	*	4.619E-01	7.167E-01	1.106E+00	7.055E-02	0.418
		722.78		8.325E-01	4.797E+00	6.982E+00	4.867E-01	0.119
		1325.50		-2.226E+01	2.967E+01	4.357E+01	3.013E+00	-0.511
		1376.25		2.340E+01	3.100E+01	5.464E+01	3.795E+00	0.428
		1509.49		-1.787E+00	1.374E+01	2.178E+01	1.466E+00	-0.082
		1691.02		2.066E+00	3.279E+00	6.052E+00	3.757E-01	0.341
SB-124		602.71		2.787E-02	4.324E-02	6.670E-02	4.258E-03	0.418
		645.85		-2.993E-01	4.756E-01	7.504E-01	5.355E-02	-0.399
		709.31		-1.628E+00	2.817E+00	4.440E+00	3.048E-01	-0.367
		713.82		-2.424E-01	1.651E+00	2.692E+00	2.927E-01	-0.090
		722.78		7.281E-02	4.195E-01	6.106E-01	4.397E-02	0.119
	+	968.20		1.737E+01	4.359E+00	7.705E+00	6.038E-01	2.254
		1045.16		1.561E+00	2.477E+00	4.360E+00	3.096E-01	0.358
		1325.50		-2.080E+00	2.771E+00	4.070E+00	2.815E-01	-0.511
		1368.21		1.571E+00	1.773E+00	3.185E+00	3.973E-01	0.493
		1436.60		1.397E+00	3.443E+00	5.928E+00	4.070E-01	0.236
		1691.02	*	4.261E-02	6.766E-02	1.248E-01	8.331E-03	0.341
SB-125		427.89	*	6.689E-02	9.083E-02	1.545E-01	9.185E-03	0.433
	+	463.38		6.862E-01	3.792E-01	5.320E-01	3.636E-02	1.290
		600.56		1.085E-01	1.772E-01	3.079E-01	2.221E-02	0.352
		635.90		-1.302E-01	2.446E-01	3.890E-01	2.859E-02	-0.335
TE-125M		109.28	*	2.308E+00	8.483E+00	1.413E+01	1.218E+00	0.163
I-126		388.63		1.429E-01	1.915E-01	3.276E-01	1.800E-02	0.436
		666.33	*	1.159E-01	1.808E-01	3.133E-01	2.042E-02	0.370
		753.82		4.951E-01	1.468E+00	2.476E+00	1.787E-01	0.200
SB-126		223.80		-6.038E-01	3.541E+00	5.961E+00	3.238E-01	-0.101
		278.60		2.740E+00	2.425E+00	4.251E+00	2.400E-01	0.644
	+	296.50		1.576E+01	2.537E+00	3.609E+00	2.048E-01	4.367
		414.70		-7.286E-03	8.372E-02	1.183E-01	6.645E-03	-0.062
		415.30		3.785E+00	6.664E+00	9.985E+00	5.614E-01	0.379
		555.20		-3.013E+00	3.637E+00	5.736E+00	3.587E-01	-0.525
		573.80		1.037E+00	1.005E+00	1.798E+00	1.134E-01	0.577
		593.00		1.437E-01	8.895E-01	1.506E+00	9.577E-02	0.095

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		656.30		-7.790E-01	2.948E+00	4.788E+00	3.100E-01	-0.163
		666.33		4.839E-02	7.550E-02	1.308E-01	8.530E-03	0.370
		675.00		9.090E-01	1.915E+00	3.287E+00	2.166E-01	0.277
		695.00		4.803E-03	8.340E-02	1.385E-01	9.346E-03	0.035
		697.00		5.538E-02	2.846E-01	4.768E-01	3.226E-02	0.116
		720.50	*	1.580E-02	1.523E-01	2.390E-01	1.662E-02	0.066
		856.80		1.969E-01	5.006E-01	7.396E-01	5.942E-02	0.266
		989.30		2.290E-01	1.394E+00	2.270E+00	1.737E-01	0.101
		1034.80		2.141E+00	9.214E+00	1.546E+01	1.115E+00	0.138
		1213.00		9.609E-01	5.130E+00	8.589E+00	5.029E-01	0.112
SB-127		61.10		-1.484E+00	5.318E+01	8.090E+01	7.610E+00	-0.018
		252.40		2.185E+00	3.853E+00	6.480E+00	2.689E+00	0.337
		290.80		-6.159E+00	2.000E+01	2.866E+01	2.576E+00	-0.215
		411.60		-7.756E-01	1.360E+01	1.923E+01	2.739E+00	-0.040
		444.90		-8.082E+00	9.123E+00	1.374E+01	1.471E+00	-0.588
		473.00		1.756E+00	1.605E+00	2.766E+00	3.089E-01	0.635
		543.00		-8.566E+00	1.478E+01	2.379E+01	3.102E+00	-0.360
		603.60		9.833E-02	1.249E+01	1.818E+01	2.003E+00	0.005
		685.20	*	-8.524E-02	1.323E+00	2.179E+00	2.159E-01	-0.039
		698.50		5.331E+00	1.602E+01	2.704E+01	4.013E+00	0.197
		722.20		1.909E-01	3.279E+01	4.687E+01	4.621E+00	0.004
		783.80		4.284E+00	3.488E+00	6.206E+00	7.181E-01	0.690
XE-127		57.60		5.420E-01	5.391E+00	9.182E+00	5.802E-01	0.059
		145.22		5.690E-01	6.875E-01	1.129E+00	6.309E-02	0.504
		172.10		-4.279E-02	1.145E-01	1.805E-01	9.294E-03	-0.237
		202.84	*	-1.619E-02	4.544E-02	7.090E-02	3.770E-03	-0.228
		374.96		-7.429E-02	1.868E-01	2.984E-01	1.658E-02	-0.249
I-131		80.18		9.241E-01	4.418E+00	6.697E+00	4.800E-01	0.138
		284.30		4.420E-01	1.314E+00	2.233E+00	1.411E-01	0.198
		364.48	*	3.455E-02	1.107E-01	1.852E-01	1.165E-02	0.187
		636.97		1.295E-01	1.338E+00	2.246E+00	1.589E-01	0.058
		722.89		8.639E-01	7.850E+00	1.135E+01	7.989E-01	0.076
TE-132		49.72		-4.533E+00	1.638E+01	2.764E+01	2.548E+00	-0.164
		111.76		-7.747E+00	2.597E+01	4.218E+01	3.850E+00	-0.184
		116.30		-1.922E+00	2.435E+01	3.985E+01	3.611E+00	-0.048
		228.16	*	-2.056E-01	5.877E-01	9.792E-01	1.388E-01	-0.210
BA-133		53.15		1.614E+00	3.336E+00	5.775E+00	3.734E-01	0.279
		79.62		6.317E-01	1.284E+00	1.967E+00	2.834E-01	0.321
		81.00		-4.978E-02	9.880E-02	1.444E-01	2.185E-02	-0.345
		276.40		6.731E-01	3.897E-01	6.476E-01	8.350E-02	1.039
		302.84		6.402E-02	1.543E-01	2.322E-01	2.694E-02	0.276
		356.01	*	-4.199E-03	4.742E-02	6.794E-02	7.795E-03	-0.062
		383.85		-2.755E-02	2.731E-01	4.439E-01	4.760E-02	-0.062
I-133	+	510.53		9.461E-01	2.731E-01	Half-Life too short		
		529.87	*	1.567E-03	2.731E-01	Half-Life too short		
		706.58		7.012E-02	2.731E-01	Half-Life too short		
		856.28		1.377E-01	2.731E-01	Half-Life too short		
		875.33		-5.482E-02	2.731E-01	Half-Life too short		
		1236.41		4.855E-01	2.731E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1298.22		5.955E-02	2.731E-01	Half-Life too short		
CS-134		475.35		1.322E+00	1.942E+00	3.274E+00	1.945E-01	0.404
		563.23		-8.382E-02	3.404E-01	5.622E-01	3.592E-02	-0.149
		569.32		-7.452E-02	1.914E-01	3.127E-01	2.018E-02	-0.238
		604.70		-2.905E-02	3.935E-02	5.309E-02	3.406E-03	-0.547
	+	795.84	*	7.612E-02	7.000E-02	8.856E-02	6.752E-03	0.860
		801.93		-3.782E-01	4.292E-01	6.076E-01	4.652E-02	-0.622
		1038.57		-5.840E+00	3.760E+00	5.287E+00	3.791E-01	-1.104
		1167.94		1.732E+00	2.713E+00	4.716E+00	2.627E-01	0.367
		1365.15		3.452E-01	1.224E+00	2.070E+00	1.539E-01	0.167
CS-135		268.24	*	2.100E-01	1.663E-01	2.644E-01	1.988E-02	0.795
I-135		288.45		-4.633E+09	1.663E-01	Half-Life too short		
		417.63		-8.559E+08	1.663E-01	Half-Life too short		
		546.56		-8.793E+08	1.663E-01	Half-Life too short		
		836.80		1.657E+07	1.663E-01	Half-Life too short		
		1038.76		-1.429E+10	1.663E-01	Half-Life too short		
		1124.00		4.830E+10	1.663E-01	Half-Life too short		
		1131.51		-2.584E+09	1.663E-01	Half-Life too short		
		1260.41	*	4.066E+08	1.663E-01	Half-Life too short		
		1457.56		2.059E+11	1.663E-01	Half-Life too short		
		1678.03		1.513E+09	1.663E-01	Half-Life too short		
		1706.46		-5.571E+09	1.663E-01	Half-Life too short		
		1791.20		-3.490E+09	1.663E-01	Half-Life too short		
CS-136		66.91		-5.105E-01	7.901E-01	1.154E+00	1.657E-01	-0.442
	+	86.29		2.981E+00	1.554E+00	1.934E+00	2.349E-01	1.541
		153.22		-1.447E-01	6.178E-01	9.882E-01	6.826E-02	-0.146
		163.89		8.687E-02	1.025E+00	1.656E+00	1.118E-01	0.052
		176.55		1.284E-01	3.411E-01	5.561E-01	3.316E-02	0.231
		273.65		-4.615E-01	4.711E-01	6.474E-01	4.187E-02	-0.713
		340.57		4.169E-01	1.439E-01	2.446E-01	1.476E-02	1.705
		818.51		-3.516E-02	7.074E-02	1.098E-01	8.501E-03	-0.320
		1048.07	*	-8.531E-02	1.124E-01	1.753E-01	1.317E-02	-0.487
		1235.34		-1.128E-01	6.231E-01	1.013E+00	1.027E-01	-0.111
BA-137M		661.65	*	-2.889E-02	3.566E-02	5.529E-02	3.584E-03	-0.523
CS-137		661.65	*	-3.054E-02	3.769E-02	5.845E-02	3.802E-03	-0.523
CE-139		165.85	*	-6.285E-04	2.881E-02	4.630E-02	2.372E-03	-0.014
BA-140		162.64		-5.069E-01	7.292E-01	1.137E+00	6.811E-02	-0.446
		304.84		2.377E-01	1.285E+00	1.904E+00	5.191E-01	0.125
		423.70		-8.360E-01	1.910E+00	2.984E+00	9.476E-01	-0.280
		537.32	*	2.855E-01	2.620E-01	4.444E-01	1.448E-01	0.642
LA-140		328.77		4.267E-01	2.876E-01	5.089E-01	3.250E-02	0.839
		432.53		5.645E-01	1.972E+00	3.262E+00	2.067E-01	0.173
		487.03		1.192E-01	1.444E-01	2.449E-01	1.650E-02	0.487
		751.79		6.321E-01	1.647E+00	2.792E+00	2.313E-01	0.226
		815.85		8.798E-02	3.064E-01	5.132E-01	4.520E-02	0.171
		867.82		9.644E-01	1.425E+00	2.395E+00	2.060E-01	0.403
		919.63		-1.057E+00	3.137E+00	4.589E+00	4.736E-01	-0.230
		925.24		2.889E-01	1.156E+00	1.909E+00	1.669E-01	0.151
		1596.49	*	-2.049E-02	9.207E-02	1.498E-01	9.756E-03	-0.137

---- Non-Identified Nuclides ----

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CE-141		145.44	*	5.360E-02	6.013E-02	1.010E-01	5.877E-03	0.531
CE-143		57.37		1.037E-05	6.013E-02	Half-Life too short		
		231.56		2.767E-03	6.013E-02	Half-Life too short		
		293.26	*	4.865E-04	6.013E-02	Half-Life too short		
	+	350.59		2.653E-02	6.013E-02	Half-Life too short		
		490.36		-7.884E-04	6.013E-02	Half-Life too short		
		664.57		1.050E-03	6.013E-02	Half-Life too short		
		721.93		-1.453E-04	6.013E-02	Half-Life too short		
CE-144		80.11		5.169E-01	2.078E+00	3.156E+00	2.241E-01	0.164
		133.54	*	-2.425E-02	1.906E-01	3.088E-01	4.396E-02	-0.079
PM-144		476.78		-7.921E-03	6.777E-02	1.082E-01	7.643E-03	-0.073
		618.01		2.436E-02	3.095E-02	5.446E-02	3.665E-03	0.447
		696.49	*	3.930E-03	3.699E-02	6.161E-02	4.168E-03	0.064
		778.57		-5.361E-01	2.299E+00	3.691E+00	2.738E-01	-0.145
PR-144		696.49	*	2.662E-01	2.506E+00	4.174E+00	2.823E-01	0.064
		1489.15		5.352E+00	8.616E+00	1.565E+01	1.060E+00	0.342
PM-146		453.90	*	1.267E-02	3.986E-02	6.595E-02	5.702E-03	0.192
		633.02		5.844E-01	1.326E+00	2.254E+00	8.322E-01	0.259
		735.90		1.392E-02	1.516E-01	2.513E-01	7.082E-02	0.055
		747.13		-2.157E-02	9.092E-02	1.464E-01	1.932E-02	-0.147
ND-147		91.11		4.610E-01	3.682E-01	4.680E-01	3.837E-02	0.985
		319.41		3.333E-02	2.977E+00	4.939E+00	2.809E-01	0.007
		439.89		5.398E+00	5.499E+00	9.501E+00	5.476E-01	0.568
		531.02	*	1.605E-01	5.584E-01	9.108E-01	1.247E-01	0.176
PM-149		285.90	*	-6.205E+01	7.609E+01	1.206E+02	1.703E+01	-0.515
EU-152		121.78		-3.994E-02	6.991E-02	1.116E-01	8.874E-03	-0.358
		244.69		-2.352E-02	3.391E-01	5.025E-01	2.780E-02	-0.047
		344.27	*	-2.873E-02	9.978E-02	1.408E-01	9.025E-03	-0.204
		443.98		-7.180E-01	9.268E-01	1.413E+00	8.173E-02	-0.508
		778.89		-4.458E-02	2.631E-01	4.248E-01	3.152E-02	-0.105
		867.32		4.327E-01	8.745E-01	1.407E+00	1.142E-01	0.307
		964.01		9.496E-01	3.472E-01	6.133E-01	4.828E-02	1.548
		1085.78		-1.883E-01	4.278E-01	6.862E-01	4.559E-02	-0.274
		1112.02		1.438E-01	3.436E-01	5.374E-01	3.398E-02	0.268
		1407.95		2.583E-02	1.949E-01	3.224E-01	2.227E-02	0.080
GD-153		69.67		2.033E-01	1.745E+00	2.635E+00	1.732E-01	0.077
		83.37		1.454E+01	1.514E+01	2.359E+01	1.725E+00	0.616
		97.43	*	-5.463E-02	8.283E-02	1.185E-01	8.243E-03	-0.461
		103.18		-9.668E-02	9.806E-02	1.551E-01	1.036E-02	-0.623
EU-154		123.07		1.368E-02	4.919E-02	8.143E-02	7.869E-03	0.168
		247.94		2.803E-01	3.570E-01	5.824E-01	5.468E-02	0.481
		591.81		1.464E-01	6.108E-01	1.039E+00	1.051E-01	0.141
		723.30		-7.155E-02	2.007E-01	2.750E-01	2.220E-02	-0.260
		756.87		1.584E-01	8.050E-01	1.342E+00	1.480E-01	0.118
		873.19		-2.346E-01	3.257E-01	4.921E-01	5.869E-02	-0.477
		996.32		-3.804E-01	3.818E-01	5.762E-01	9.962E-02	-0.660
		1004.76		-1.969E-01	2.107E-01	3.220E-01	3.491E-02	-0.612
		1274.45	*	-2.816E-02	1.201E-01	1.926E-01	1.877E-02	-0.146
EU-155		48.70		-1.146E+00	2.192E+00	3.668E+00	2.397E-01	-0.312

---- Non-Identified Nuclides ----

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		60.01		1.272E+00	4.805E+00	7.420E+00	4.663E-01	0.171
	+	86.54		2.787E-01	1.429E-01	1.837E-01	1.404E-02	1.517
		105.31	*	9.320E-02	1.006E-01	1.718E-01	1.158E-02	0.543
TB-160	+	86.79		7.427E-01	3.806E-01	4.919E-01	3.719E-02	1.510
		197.04		-1.234E-01	5.482E-01	8.522E-01	4.504E-02	-0.145
		215.65		-6.977E-02	7.101E-01	1.117E+00	6.022E-02	-0.062
		298.57		2.095E-01	1.369E-01	1.754E-01	9.960E-03	1.194
		879.36	*	3.667E-02	1.372E-01	2.281E-01	1.873E-02	0.161
		962.29		-4.341E-01	6.495E-01	9.583E-01	7.557E-02	-0.453
		966.15		7.229E-01	2.822E-01	4.774E-01	3.749E-02	1.514
		1177.93		2.059E-01	4.109E-01	7.055E-01	3.907E-02	0.292
		1271.85		-2.661E-01	7.098E-01	1.122E+00	7.184E-02	-0.237
HO-166M		80.57		2.377E-02	2.646E-01	3.988E-01	2.842E-02	0.060
		184.41		4.259E-02	4.039E-02	6.285E-02	3.276E-03	0.678
		280.46		-1.034E-01	8.345E-02	1.309E-01	7.393E-03	-0.790
	+	410.95		4.245E-01	3.358E-01	4.269E-01	2.389E-02	0.994
		711.68	*	8.683E-03	6.050E-02	1.010E-01	6.949E-03	0.086
		752.31		7.905E-02	2.726E-01	4.584E-01	3.304E-02	0.172
		810.29		-3.909E-03	6.156E-02	9.998E-02	7.666E-03	-0.039
TM-171		51.35		-1.124E+01	2.789E+01	4.681E+01	3.050E+00	-0.240
		52.39		1.025E+01	1.476E+01	2.574E+01	1.671E+00	0.398
		59.40		4.154E+00	2.598E+01	3.994E+01	2.505E+00	0.104
		66.72	*	-2.834E+01	2.942E+01	4.247E+01	2.748E+00	-0.667
LU-176	+	88.36		5.488E-01	2.813E-01	3.474E-01	2.648E-02	1.580
		201.83		-1.395E-02	2.769E-02	4.288E-02	2.278E-03	-0.325
		306.84	*	-1.242E-02	2.239E-02	3.602E-02	2.047E-03	-0.345
		401.10		1.684E+00	6.395E+00	1.061E+01	5.873E-01	0.159
LU-177		112.95		-8.132E-01	1.491E+00	2.395E+00	1.530E-01	-0.339
	+	208.36	*	1.239E+00	1.272E+00	1.767E+00	9.449E-02	0.701
LU-177M		52.97		7.301E-01	1.508E+00	2.612E+00	1.690E-01	0.280
		54.07		7.373E-01	7.896E-01	1.386E+00	8.919E-02	0.532
		61.30		1.992E-01	1.441E+00	2.210E+00	1.396E-01	0.090
		121.62		-1.855E-01	3.588E-01	5.743E-01	3.586E-02	-0.323
		147.16		-4.935E-01	6.154E-01	9.610E-01	5.325E-02	-0.513
		171.86		-8.857E-02	4.666E-01	7.423E-01	3.820E-02	-0.119
		218.09		-3.459E-01	8.326E-01	1.287E+00	6.954E-02	-0.269
		268.79		1.600E+00	8.844E-01	1.440E+00	8.094E-02	1.111
		319.02		4.633E-02	2.380E-01	3.989E-01	2.268E-02	0.116
		367.43		3.763E-01	8.502E-01	1.434E+00	8.011E-02	0.262
		413.65	*	-6.327E-02	1.953E-01	2.698E-01	1.514E-02	-0.235
HF-181		56.28		-4.530E-01	8.733E-01	1.454E+00	9.250E-02	-0.311
		57.53		3.381E-02	4.535E-01	7.717E-01	4.878E-02	0.044
		65.20		-2.092E-01	9.465E-01	1.422E+00	9.138E-02	-0.147
		133.02		-3.234E-02	6.167E-02	9.819E-02	5.791E-03	-0.329
		136.25		3.113E-02	4.218E-01	6.888E-01	4.002E-02	0.045
		345.85		-4.845E-02	2.380E-01	2.832E-01	1.600E-02	-0.171
		482.03	*	-1.269E-02	4.240E-02	6.666E-02	3.980E-03	-0.190
W-181		56.28		-1.782E-01	3.427E-01	5.707E-01	3.630E-02	-0.312
		57.53		1.314E-02	1.781E-01	3.031E-01	1.916E-02	0.043

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		65.20	*	-8.153E-02	3.688E-01	5.542E-01	3.561E-02	-0.147
TA-182		67.75		-1.791E-01	1.182E-01	1.657E-01	1.078E-02	-1.081
		100.10		2.366E-01	1.693E-01	2.938E-01	2.003E-02	0.805
		152.43		-2.853E-03	3.108E-01	5.023E-01	2.722E-02	-0.006
		222.10		8.037E-02	3.069E-01	5.265E-01	2.856E-02	0.153
		1001.68		2.438E+00	1.999E+00	3.611E+00	2.722E-01	0.675
	+	1121.28		8.738E-01	3.044E-01	3.707E-01	2.300E-02	2.357
		1189.05		-1.377E-01	3.502E-01	5.615E-01	3.166E-02	-0.245
		1221.42	*	-2.273E-01	2.254E-01	3.426E-01	2.032E-02	-0.663
		1230.97		-2.891E-01	5.336E-01	8.435E-01	5.078E-02	-0.343
RE-183		57.98		4.242E-02	1.776E-01	3.039E-01	1.917E-02	0.140
		59.32		-1.709E-02	1.081E-01	1.636E-01	1.027E-02	-0.104
		67.20		-2.034E-01	2.058E-01	2.965E-01	1.923E-02	-0.686
		162.32	*	-4.626E-02	1.074E-01	1.697E-01	8.822E-03	-0.273
	+	208.81		1.139E+00	1.170E+00	1.617E+00	8.655E-02	0.704
		291.72		-1.081E-01	9.232E-01	1.343E+00	7.615E-02	-0.081
RE-184		57.98		1.565E-01	6.553E-01	1.121E+00	7.074E-02	0.140
		59.32		-6.300E-02	3.986E-01	6.034E-01	3.785E-02	-0.104
		67.20		-7.502E-01	7.592E-01	1.094E+00	7.095E-02	-0.686
		161.27		7.843E-02	3.437E-01	5.593E-01	2.921E-02	0.140
		216.55		3.779E-02	2.546E-01	4.057E-01	2.188E-02	0.093
		252.85	*	1.091E-01	2.092E-01	3.608E-01	2.008E-02	0.302
		318.01		2.006E-01	4.146E-01	7.059E-01	4.012E-02	0.284
		792.07		2.515E-01	1.076E+00	1.567E+00	1.179E-01	0.161
		903.28		3.713E-01	1.051E+00	1.752E+00	1.458E-01	0.212
		920.93		-6.721E-02	4.693E-01	7.475E-01	6.131E-02	-0.090
OS-185		59.72		7.764E-02	2.854E-01	4.411E-01	2.768E-02	0.176
		61.14		-2.562E-03	1.578E-01	2.401E-01	1.516E-02	-0.011
		69.30		7.284E-02	3.047E-01	4.627E-01	3.036E-02	0.157
		592.07		-1.033E-01	2.499E+00	4.172E+00	2.652E-01	-0.025
		646.12	*	-2.296E-02	4.071E-02	6.462E-02	4.176E-03	-0.355
		717.42		-6.785E-01	9.291E-01	1.443E+00	1.000E-01	-0.470
		874.81		-2.013E-01	6.152E-01	9.676E-01	7.910E-02	-0.208
		880.27		-5.655E-02	7.554E-01	1.216E+00	9.992E-02	-0.047
RE-188		155.03	*	1.455E-01	1.560E-01	2.622E-01	1.406E-02	0.555
		477.96		-2.413E+00	3.118E+00	4.725E+00	2.813E-01	-0.511
		633.10		1.075E+00	2.630E+00	4.517E+00	2.910E-01	0.238
W-188	+	63.58		2.774E+01	8.079E+01	8.659E+01	5.524E+00	0.320
		227.08		1.979E+00	1.143E+01	1.951E+01	1.063E+00	0.101
		290.67	*	1.200E+00	6.999E+00	1.042E+01	5.903E-01	0.115
IR-192	+	295.96		1.221E+00	1.969E-01	2.881E-01	1.662E-02	4.238
		308.46		-6.999E-02	8.708E-02	1.379E-01	7.931E-03	-0.508
		316.51	*	1.589E-02	3.314E-02	5.636E-02	3.221E-03	0.282
		468.07		1.063E-02	7.215E-02	1.031E-01	6.991E-03	0.103
		604.41		-1.179E-01	5.128E-01	7.288E-01	8.498E-02	-0.162
		612.46		9.464E-01	8.906E-01	1.402E+00	1.128E-01	0.675
AU-195		65.12		-3.371E-02	1.714E-01	2.579E-01	1.656E-02	-0.131
		66.83		-9.147E-02	9.723E-02	1.405E-01	9.098E-03	-0.651
	+	75.70		1.212E+00	2.504E-01	4.386E-01	3.003E-02	2.764

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	3.387E-01	2.208E-01	3.703E-01	2.547E-02	0.915
		129.76		4.872E+00	2.836E+00	4.906E+00	2.940E-01	0.993
TL-200		367.94	*	-2.173E-04	2.836E+00	Half-Life too short		
		579.30		-2.998E-04	2.836E+00	Half-Life too short		
		828.27		-4.112E-04	2.836E+00	Half-Life too short		
		1205.75		2.540E-04	2.836E+00	Half-Life too short		
TL-201		68.90		-1.034E+00	4.671E+00	6.949E+00	4.549E-01	-0.149
		70.82		2.502E+00	2.680E+00	4.176E+00	2.765E-01	0.599
		80.30		6.554E-01	4.639E+00	7.011E+00	4.985E-01	0.093
		135.34		-1.813E+00	2.225E+01	3.610E+01	2.106E+00	-0.050
		167.43	*	-7.226E-01	6.437E+00	1.030E+01	5.278E-01	-0.070
TL-202		68.90		-9.691E-02	4.379E-01	6.514E-01	4.265E-02	-0.149
		70.82		2.339E-01	2.505E-01	3.904E-01	2.585E-02	0.599
		80.30		6.129E-02	4.339E-01	6.556E-01	4.662E-02	0.093
		439.56	*	5.784E-02	6.467E-02	1.112E-01	6.406E-03	0.520
HG-203		70.83		1.026E+00	1.102E+00	1.709E+00	2.126E-01	0.600
		72.87		1.162E+00	6.085E-01	1.052E+00	1.267E-01	1.104
		82.60		-4.155E-01	1.141E+00	1.680E+00	2.173E-01	-0.247
		279.20	*	2.057E-02	4.012E-02	6.865E-02	4.128E-03	0.300
BI-207		72.80		3.181E-01	1.750E-01	3.076E-01	2.063E-02	1.034
	+	74.97		6.730E-01	1.390E-01	2.216E-01	1.509E-02	3.038
		84.90		2.565E-01	1.997E-01	3.137E-01	2.328E-02	0.818
		569.67		-1.874E-02	3.136E-02	4.869E-02	3.065E-03	-0.385
		1063.62	*	3.695E-02	5.720E-02	1.003E-01	6.918E-03	0.368
		1770.23		-1.992E-01	4.214E-01	4.965E-01	2.930E-02	-0.401
TL-207		81.07		-1.123E-01	2.175E-01	3.183E-01	2.278E-02	-0.353
		83.78		6.725E-02	1.329E-01	2.033E-01	1.492E-02	0.331
		94.90		3.199E-01	2.226E-01	3.533E-01	2.510E-02	0.906
		122.32		-3.567E-01	1.686E+00	2.736E+00	1.937E-01	-0.130
		144.24		4.936E-01	6.806E-01	1.113E+00	7.885E-02	0.443
		154.21		1.480E-01	3.672E-01	6.037E-01	4.027E-02	0.245
	+	269.46		6.843E-01	3.137E-01	3.563E-01	2.099E-02	1.921
		323.87	*	3.062E-01	7.003E-01	1.051E+00	1.731E-01	0.291
	+	338.28		9.450E+00	2.103E+00	2.576E+00	2.694E-01	3.668
		445.03		-1.532E+00	2.190E+00	3.352E+00	3.440E-01	-0.457
PO-209		260.50		2.921E+00	8.725E+00	1.490E+01	8.331E-01	0.196
		262.80		-6.809E+00	2.442E+01	4.045E+01	2.265E+00	-0.168
		896.60	*	-3.411E+00	7.425E+00	1.147E+01	9.569E-01	-0.297
BI-210		46.50	*	1.408E+00	3.110E+00	5.360E+00	4.038E-01	0.263
PB-210		46.50	*	1.408E+00	3.110E+00	5.360E+00	4.038E-01	0.263
PO-210		46.50	*	1.408E+00	3.110E+00	5.360E+00	3.438E-01	0.263
PB-211		404.84	*	-3.478E-01	1.021E+00	1.377E+00	8.581E-01	-0.253
		427.08		1.514E+00	2.254E+00	3.491E+00	2.157E+00	0.434
		831.96		-1.097E+00	1.441E+00	1.909E+00	1.194E+00	-0.575
BI-212	+	727.18	*	8.850E-01	4.579E-01	6.591E-01	5.707E-02	1.343
		785.46		1.375E+00	1.793E+00	3.108E+00	2.322E-01	0.442
		1620.62		2.277E-02	1.145E+00	1.919E+00	1.236E-01	0.012
PO-215		81.07		-1.123E-01	2.175E-01	3.183E-01	2.278E-02	-0.353
		83.78		6.725E-02	1.329E-01	2.033E-01	1.492E-02	0.331

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		3.199E-01	2.226E-01	3.533E-01	2.510E-02	0.906
		122.32		-3.567E-01	1.686E+00	2.736E+00	1.937E-01	-0.130
		144.24		4.936E-01	6.806E-01	1.113E+00	7.885E-02	0.443
		154.21		1.480E-01	3.672E-01	6.037E-01	4.027E-02	0.245
	+	269.46		6.843E-01	3.137E-01	3.563E-01	2.099E-02	1.921
		323.87	*	3.062E-01	7.003E-01	1.051E+00	1.731E-01	0.291
	+	338.28		9.450E+00	2.103E+00	2.576E+00	2.694E-01	3.668
		445.03		-1.532E+00	2.190E+00	3.352E+00	3.440E-01	-0.457
RN-219	+	271.23		8.780E-01	4.052E-01	4.591E-01	3.664E-02	1.912
		401.81	*	6.175E-02	3.916E-01	6.452E-01	8.709E-02	0.096
RN-220		549.76	*	3.479E+01	2.575E+01	4.696E+01	2.928E+00	0.741
RA-223		81.07		-1.123E-01	2.175E-01	3.183E-01	2.278E-02	-0.353
		83.78		6.725E-02	1.329E-01	2.033E-01	1.492E-02	0.331
		94.90		3.199E-01	2.226E-01	3.533E-01	2.510E-02	0.906
		122.32		-3.567E-01	1.686E+00	2.736E+00	1.937E-01	-0.130
		144.24		4.936E-01	6.806E-01	1.113E+00	7.885E-02	0.443
		154.21		1.480E-01	3.672E-01	6.037E-01	4.027E-02	0.245
	+	269.46		6.843E-01	3.137E-01	3.563E-01	2.099E-02	1.921
		323.87	*	3.062E-01	7.003E-01	1.051E+00	1.731E-01	0.291
	+	338.28		9.450E+00	2.103E+00	2.576E+00	2.694E-01	3.668
		445.03		-1.532E+00	2.190E+00	3.352E+00	3.440E-01	-0.457
AC-227		79.80		6.459E-01	1.625E+00	2.476E+00	5.183E-01	0.261
		236.00		-1.491E-02	2.417E-01	3.596E-01	3.698E-02	-0.041
		256.20	*	-3.020E-01	3.449E-01	5.507E-01	7.638E-02	-0.548
		286.10		-9.208E-01	1.362E+00	2.184E+00	2.510E-01	-0.422
	+	299.80		2.690E+00	1.858E+00	2.458E+00	3.992E-01	1.094
		304.40		1.299E+00	1.899E+00	2.903E+00	5.009E-01	0.448
		334.20		-4.192E-01	2.752E+00	3.307E+00	6.049E-01	-0.127
TH-227		79.80		6.459E-01	1.625E+00	2.476E+00	5.253E-01	0.261
	+	94.00		1.130E+01	4.009E+00	3.706E+00	7.874E-01	3.049
		236.00		-1.491E-02	2.417E-01	3.596E-01	3.187E-02	-0.041
		256.20	*	-3.020E-01	3.461E-01	5.507E-01	9.266E-02	-0.548
		286.10		-9.208E-01	1.642E+00	2.184E+00	2.188E+00	-0.422
	+	299.80		2.690E+00	1.858E+00	2.458E+00	3.992E-01	1.094
		304.40		1.299E+00	1.899E+00	2.903E+00	5.009E-01	0.448
		334.20		-4.192E-01	2.752E+00	3.307E+00	6.049E-01	-0.127
TH-229		85.43		1.231E-01	2.025E-01	3.103E-01	2.314E-02	0.397
	+	88.47		3.159E-01	1.619E-01	1.987E-01	1.512E-02	1.590
		100.00		3.225E-01	1.756E-01	3.086E-01	2.105E-02	1.045
		193.63	*	-4.666E-02	4.948E-01	7.846E-01	4.131E-02	-0.059
		210.97		6.158E-01	8.017E-01	1.183E+00	6.346E-02	0.521
PA-231		283.67	*	3.487E-01	1.376E+00	2.329E+00	3.195E-01	0.150
	+	301.29		1.076E+00	7.308E-01	1.033E+00	1.073E-01	1.041
TH-231		81.07		-1.123E-01	2.175E-01	3.183E-01	2.278E-02	-0.353
		83.78		6.725E-02	1.329E-01	2.033E-01	1.492E-02	0.331
		94.90		3.199E-01	2.226E-01	3.533E-01	2.510E-02	0.906
		122.32		-3.567E-01	1.686E+00	2.736E+00	1.937E-01	-0.130
		144.24		4.936E-01	6.806E-01	1.113E+00	7.885E-02	0.443
		154.21		1.480E-01	3.672E-01	6.037E-01	4.027E-02	0.245

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		6.843E-01	3.137E-01	3.563E-01	2.099E-02	1.921
		323.87	*	3.062E-01	7.003E-01	1.051E+00	1.731E-01	0.291
	+	338.28		9.450E+00	2.103E+00	2.576E+00	2.694E-01	3.668
		445.03		-1.532E+00	2.190E+00	3.352E+00	3.440E-01	-0.457
U-231		84.21		4.553E+00	5.435E+00	8.415E+00	6.203E-01	0.541
	+	92.29		1.072E+01	3.141E+00	3.880E+00	2.827E-01	2.764
		95.87	*	-3.865E-01	1.020E+00	1.485E+00	1.046E-01	-0.260
		108.00		-1.573E+00	1.853E+00	2.944E+00	1.918E-01	-0.535
PA-233	+	75.28		1.964E+01	4.762E+00	6.624E+00	9.550E-01	2.965
	+	86.59		4.530E+00	2.591E+00	2.995E+00	7.936E-01	1.512
	+	300.12		7.499E-01	5.132E-01	6.984E-01	9.349E-02	1.074
		311.98	*	1.006E-02	5.970E-02	1.001E-01	6.055E-03	0.101
		340.50		2.282E+00	8.790E-01	1.234E+00	2.830E-01	1.849
		398.62		-2.444E+00	2.165E+00	3.120E+00	8.047E-01	-0.783
		415.76		1.517E+00	1.748E+00	2.770E+00	5.690E-01	0.548
PA-234	+	63.00		8.066E-01	2.351E+00	2.552E+00	3.667E-01	0.316
		94.67		3.711E-01	1.687E-01	2.694E-01	3.074E-02	1.377
		98.44		8.903E-02	1.081E-01	1.493E-01	8.293E-02	0.596
		99.86		8.149E-01	4.459E-01	7.833E-01	5.348E-02	1.040
		111.00		-3.250E-02	1.695E-01	2.768E-01	2.945E-02	-0.117
		131.20		-9.974E-02	1.060E-01	1.661E-01	9.884E-03	-0.600
		152.70		-5.127E-02	3.042E-01	4.879E-01	7.646E-02	-0.105
	+	186.00		3.605E+00	2.311E+00	2.514E+00	7.656E-01	1.434
		226.40		1.668E-02	3.601E-01	6.115E-01	6.963E-02	0.027
		227.20		-2.241E-03	3.905E-01	6.616E-01	3.606E-02	-0.003
		248.90		-5.063E-01	7.737E-01	1.251E+00	2.680E-01	-0.405
		293.70		4.938E+00	1.151E+00	1.588E+00	2.547E-01	3.109
		369.80		1.026E-01	7.894E-01	1.306E+00	2.711E-01	0.079
		568.70		-1.556E-01	9.810E-01	1.630E+00	1.026E-01	-0.095
		569.50		-1.031E-01	2.648E-01	4.328E-01	2.725E-02	-0.238
		574.00		1.596E+00	1.470E+00	2.637E+00	1.663E-01	0.605
		699.00		3.154E-01	7.605E-01	1.289E+00	2.363E-01	0.245
		706.10		5.757E-02	1.038E+00	1.721E+00	7.620E-01	0.033
		733.00		-1.695E-01	4.374E-01	5.934E-01	1.284E-01	-0.286
		742.81		-5.750E-01	1.481E+00	2.276E+00	1.526E+00	-0.253
	+	796.30		1.480E+00	1.412E+00	1.743E+00	4.659E-01	0.849
		805.60		8.423E-01	1.036E+00	1.755E+00	5.332E-01	0.480
		819.60		-1.173E+00	1.299E+00	1.808E+00	6.842E-01	-0.649
		826.30		6.286E-01	8.689E-01	1.430E+00	6.378E-01	0.439
		831.60		-6.898E-01	6.945E-01	9.843E-01	2.916E-01	-0.701
		876.40		1.541E-01	8.689E-01	1.409E+00	1.448E+00	0.109
		880.51		1.218E-02	2.663E-01	4.338E-01	3.566E-02	0.028
		883.24		-3.298E-01	3.531E-01	3.886E-01	2.611E-01	-0.849
		899.00		-6.345E-01	8.913E-01	1.270E+00	5.546E-01	-0.500
		925.00		3.946E-01	1.203E+00	2.003E+00	1.637E-01	0.197
		926.50		-7.508E-02	1.871E-01	2.891E-01	7.263E-02	-0.260
		946.00	*	-8.247E-02	3.358E-01	5.285E-01	9.775E-02	-0.156
		949.00		3.958E-01	4.856E-01	8.367E-01	6.687E-02	0.473
		980.50		-2.414E-01	7.260E-01	1.125E+00	8.695E-02	-0.215

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		7.580E-01	1.187E+00	1.930E+00	1.253E+00	0.393
PA-234M		766.41		3.224E+01	3.210E+01	3.352E+01	2.566E+01	0.962
		1001.03	*	8.596E+00	6.171E+00	1.146E+01	1.189E+00	0.750
U-235		89.95		4.506E-01	1.468E+00	1.765E+00	5.394E-01	0.255
	+	93.35		3.516E+00	1.393E+00	1.280E+00	3.535E-01	2.748
		105.00		7.902E-01	1.011E+00	1.677E+00	4.917E-01	0.471
		143.76	*	1.770E-01	2.120E-01	3.458E-01	5.616E-02	0.512
		163.35		-4.138E-02	4.558E-01	7.308E-01	1.300E-01	-0.057
	+	185.71		1.335E-01	7.562E-02	9.354E-02	4.883E-03	1.427
		205.31		6.753E-02	5.574E-01	7.870E-01	1.404E-01	0.086
NP-236		94.67		2.838E-01	1.256E-01	2.046E-01	1.457E-02	1.387
		98.44		6.726E-02	7.277E-02	1.129E-01	7.786E-03	0.596
		111.00		-2.458E-02	1.282E-01	2.094E-01	1.347E-02	-0.117
		160.31	*	8.997E-02	7.562E-02	1.280E-01	6.714E-03	0.703
NP-239		99.55		2.647E-01	1.485E-01	2.606E-01	1.783E-02	1.016
		117.00	*	-6.703E-02	1.767E-01	2.852E-01	1.800E-02	-0.235
	+	209.75		9.009E-01	9.250E-01	1.256E+00	6.726E-02	0.717
		228.18		-9.274E-02	2.032E-01	3.372E-01	1.840E-02	-0.275
		277.60		2.885E-01	1.747E-01	3.125E-01	1.763E-02	0.923
		334.30		-2.307E-01	1.559E+00	1.875E+00	1.063E-01	-0.123
AM-241		59.54	*	2.808E-02	1.510E-01	2.324E-01	1.651E-02	0.121
CM-243		99.55		2.724E-01	1.528E-01	2.681E-01	1.835E-02	1.016
		103.76	*	-1.713E-02	8.998E-02	1.475E-01	9.820E-03	-0.116
		117.00		-6.896E-02	1.818E-01	2.935E-01	1.852E-02	-0.235
	+	209.75		8.880E-01	9.118E-01	1.238E+00	6.630E-02	0.717
		228.18		-9.371E-02	2.053E-01	3.407E-01	1.859E-02	-0.275
		277.60		2.909E-01	1.761E-01	3.151E-01	1.778E-02	0.923
CM-247		278.00		9.635E-01	7.394E-01	1.305E+00	7.363E-02	0.738
		287.40		1.602E-01	1.081E+00	1.819E+00	1.030E-01	0.088
		402.60	*	2.708E-02	3.444E-02	5.899E-02	3.272E-03	0.459
CF-249		252.85		4.097E-01	7.858E-01	1.355E+00	7.541E-02	0.302
		333.44		-3.941E-02	2.421E-01	2.478E-01	1.406E-02	-0.159
		387.95	*	1.670E-02	3.777E-02	6.348E-02	3.489E-03	0.263
CF-251		176.60	*	4.459E-02	1.191E-01	1.942E-01	1.004E-02	0.230
		227.00		5.405E-02	3.435E-01	5.861E-01	3.194E-02	0.092
		285.00		-4.406E-01	1.577E+00	2.595E+00	1.468E-01	-0.170

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746003   *
* Acquisition date : 14-JUL-2009 08:59:26 Detector SN#    :             *
* Detector ID       : GAM12               Sensitivity     : 5.000       *
* Geometry          : CAN                 Energy tolerance: 1.500       *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000      *
* Elapsed real time:    0 02:00:01.67     Half life ratio :  8.000      *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232746003           Analyst initials: MXR1       *
* Batch Number      : 882713               Sample Quantity : 1.3708E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
* Standard Weight   :   0.00000                                         *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :             *
* MSD DPM           :    0.000            MSD Isotope     :             *
* LCS DPM           :    0.000            LCS Isotope     :             *
* LCSD DPM          :    0.000            LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.566E+01	3.085E+00	4.578E-01	0.000E+00
CD-109	2.353E+00	1.182E+00	1.496E+00	0.000E+00
SN-126	2.314E-01	1.162E-01	1.511E-01	0.000E+00
TL-208	5.957E-01	8.482E-02	6.130E-02	0.000E+00
BI-211	3.782E+00	5.031E-01	3.241E-01	0.000E+00
PB-212	1.651E+00	1.550E-01	8.945E-02	0.000E+00
PO-212	1.651E+00	1.550E-01	8.945E-02	0.000E+00
BI-214	1.104E+00	1.838E-01	1.125E-01	0.000E+00
PB-214	1.316E+00	1.875E-01	1.130E-01	0.000E+00
PO-214	1.316E+00	1.875E-01	1.130E-01	0.000E+00
PO-216	1.651E+00	1.550E-01	8.945E-02	0.000E+00
PO-218	1.316E+00	1.875E-01	1.130E-01	0.000E+00
RA-224	4.501E+00	1.134E+00	1.018E+00	0.000E+00
RA-226	1.104E+00	1.838E-01	1.125E-01	0.000E+00
AC-228	1.816E+00	3.335E-01	2.494E-01	0.000E+00
RA-228	1.816E+00	3.335E-01	2.494E-01	0.000E+00
TH-228	1.651E+00	1.550E-01	8.944E-02	0.000E+00
TH-230	1.104E+00	1.838E-01	1.125E-01	0.000E+00
TH-232	1.816E+00	3.335E-01	2.494E-01	0.000E+00
TH-234	6.920E-01	1.978E+00	2.007E+00	0.000E+00
U-234	1.104E+00	1.838E-01	1.125E-01	0.000E+00
NP-237	6.795E-01	3.679E-01	4.489E-01	0.000E+00
U-238	6.920E-01	1.978E+00	2.007E+00	0.000E+00
AM-243	3.749E-01	7.591E-02	9.180E-02	0.000E+00
ANH-511	1.129E-01	7.356E-02	4.449E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-2.963E-01	3.208E-01	5.027E-01	0.000E+00	NOT IDENT.
NA-22	-8.904E-03	4.224E-02	6.973E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	5.560E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.050E-02	2.647E-02	4.801E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.643E-02	8.224E-02	0.000E+00	FAIL ABUN
SC-46	2.729E-02	3.754E-02	6.701E-02	0.000E+00	FAIL ABUN
V-48	2.300E-03	6.981E-02	1.160E-01	0.000E+00	NOT IDENT.
CR-51	-1.724E-01	3.323E-01	5.631E-01	0.000E+00	NOT IDENT.
MN-52	-7.502E-02	2.271E-01	3.610E-01	0.000E+00	NOT IDENT.
MN-54	2.951E-02	3.699E-02	6.621E-02	0.000E+00	NOT IDENT.
CO-56	-6.634E-03	3.871E-02	6.414E-02	0.000E+00	NOT IDENT.
CO-57	-1.242E-02	2.360E-02	4.052E-02	0.000E+00	NOT IDENT.
CO-58	-2.521E-02	4.103E-02	6.574E-02	0.000E+00	NOT IDENT.
FE-59	-4.940E-04	9.008E-02	1.543E-01	0.000E+00	NOT IDENT.
CO-60	2.637E-02	3.719E-02	6.737E-02	0.000E+00	NOT IDENT.
ZN-65	-6.424E-02	1.006E-01	1.359E-01	0.000E+00	NOT IDENT.
GE-68	7.523E-01	1.205E+00	2.179E+00	0.000E+00	NOT IDENT.
AS-73	5.022E-01	7.541E-01	1.429E+00	0.000E+00	NOT IDENT.
AS-74	-3.977E-02	8.794E-02	1.485E-01	0.000E+00	NOT IDENT.
SE-75	-2.158E-02	4.462E-02	6.748E-02	0.000E+00	NOT IDENT.
BR-77	-6.634E+00	9.211E+00	1.445E+01	0.000E+00	FAIL ABUN
SR-82	-1.699E-02	3.723E-01	6.298E-01	0.000E+00	NOT IDENT.
RB-83	-4.652E-02	6.525E-02	1.024E-01	0.000E+00	NOT IDENT.
RB-84	-7.274E-03	6.564E-02	1.088E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.492E+00	1.472E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.343E-02	7.528E-02	0.000E+00	NOT IDENT.
RB-86	2.382E-01	7.731E-01	1.362E+00	0.000E+00	NOT IDENT.
Y-88	-3.158E-03	3.486E-02	5.777E-02	0.000E+00	NOT IDENT.
ZR-88	-5.153E-03	2.953E-02	5.010E-02	0.000E+00	NOT IDENT.
Y-91	-9.073E+00	2.070E+01	3.396E+01	0.000E+00	NOT IDENT.
NB-94	-1.992E-02	3.445E-02	5.660E-02	0.000E+00	NOT IDENT.
NB-95	5.519E-02	4.926E-02	7.994E-02	0.000E+00	NOT IDENT.
NB-95M	-6.350E-02	1.252E-01	1.923E-01	0.000E+00	NOT IDENT.
ZR-95	4.038E-02	7.119E-02	1.264E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	6.658E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.362E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	8.289E+00	1.123E+01	2.012E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.822E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	6.691E-03	3.135E-02	5.291E-02	0.000E+00	NOT IDENT.
RH-102	2.455E-02	2.898E-02	5.160E-02	0.000E+00	NOT IDENT.
RU-103	-1.233E-02	3.963E-02	6.485E-02	0.000E+00	FAIL ABUN
RH-106	-1.628E-02	3.102E-01	5.364E-01	0.000E+00	FAIL ABUN
RU-106	-1.628E-02	3.102E-01	5.364E-01	0.000E+00	FAIL ABUN
AG-108M	2.284E-02	3.014E-02	5.384E-02	0.000E+00	NOT IDENT.
AG-110M	3.451E-03	2.991E-02	5.212E-02	0.000E+00	NOT IDENT.
IN-111	2.052E-01	1.007E+00	1.607E+00	0.000E+00	NOT IDENT.
IN-113M	-1.852E-02	4.284E-02	7.150E-02	0.000E+00	NOT IDENT.
SN-113	-1.852E-02	4.284E-02	7.150E-02	0.000E+00	NOT IDENT.
IN-114M	2.055E-02	1.909E-01	2.900E-01	0.000E+00	NOT IDENT.
CD-115	-5.862E+00	1.006E+01	1.599E+01	0.000E+00	NOT IDENT.
SN-117M	-1.710E-02	5.047E-02	8.562E-02	0.000E+00	NOT IDENT.
SB-122	-1.427E-01	1.814E+00	3.161E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.907E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.209E-02	2.620E-02	4.603E-02	0.000E+00	NOT IDENT.
I-124	4.619E-01	7.024E-01	1.128E+00	0.000E+00	NOT IDENT.
SB-124	4.261E-02	6.630E-02	1.248E-01	0.000E+00	FAIL ABUN
SB-125	6.689E-02	8.901E-02	1.587E-01	0.000E+00	FAIL ABUN
TE-125M	2.308E+00	8.313E+00	1.488E+01	0.000E+00	NOT IDENT.
I-126	1.159E-01	1.772E-01	3.190E-01	0.000E+00	NOT IDENT.
SB-126	1.580E-02	1.492E-01	2.430E-01	0.000E+00	FAIL ABUN
SB-127	-8.524E-02	1.296E+00	2.218E+00	0.000E+00	NOT IDENT.
XE-127	-1.619E-02	4.454E-02	7.386E-02	0.000E+00	NOT IDENT.
I-131	3.455E-02	1.085E-01	1.908E-01	0.000E+00	NOT IDENT.
TE-132	-2.056E-01	5.760E-01	1.018E+00	0.000E+00	NOT IDENT.
BA-133	-4.199E-03	4.647E-02	7.003E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.794E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.612E-02	6.860E-02	8.989E-02	0.000E+00	FAIL ABUN
CS-135	2.100E-01	1.629E-01	2.739E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.267E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-8.531E-02	1.101E-01	1.769E-01	0.000E+00	FAIL ABUN
BA-137M	-2.889E-02	3.494E-02	5.632E-02	0.000E+00	NOT IDENT.
CS-137	-3.054E-02	3.694E-02	5.954E-02	0.000E+00	NOT IDENT.
CE-139	-6.285E-04	2.823E-02	4.841E-02	0.000E+00	NOT IDENT.
BA-140	2.855E-01	2.568E-01	4.545E-01	0.000E+00	NOT IDENT.
LA-140	-2.049E-02	9.023E-02	1.500E-01	0.000E+00	NOT IDENT.
CE-141	5.360E-02	5.893E-02	1.058E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.636E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.425E-02	1.868E-01	3.241E-01	0.000E+00	NOT IDENT.
PM-144	3.930E-03	3.625E-02	6.270E-02	0.000E+00	NOT IDENT.
PR-144	2.662E-01	2.456E+00	4.248E+00	0.000E+00	NOT IDENT.

PM-146	1.267E-02	3.906E-02	6.767E-02	0.000E+00	NOT IDENT.
ND-147	1.605E-01	5.472E-01	9.317E-01	0.000E+00	NOT IDENT.
PM-149	-6.205E+01	7.457E+01	1.248E+02	0.000E+00	NOT IDENT.
EU-152	-2.873E-02	9.778E-02	1.452E-01	0.000E+00	NOT IDENT.
GD-153	-5.463E-02	8.117E-02	1.252E-01	0.000E+00	NOT IDENT.
EU-154	-2.816E-02	1.177E-01	1.937E-01	0.000E+00	NOT IDENT.
EU-155	9.320E-02	9.854E-02	1.811E-01	0.000E+00	FAIL ABUN
TB-160	3.667E-02	1.345E-01	2.311E-01	0.000E+00	FAIL ABUN
HO-166M	8.683E-03	5.929E-02	1.027E-01	0.000E+00	FAIL ABUN
TM-171	-2.834E+01	2.883E+01	4.514E+01	0.000E+00	NOT IDENT.
LU-176	-1.242E-02	2.194E-02	3.724E-02	0.000E+00	FAIL ABUN
LU-177	1.239E+00	1.246E+00	1.839E+00	0.000E+00	FAIL ABUN
LU-177M	-6.327E-02	1.914E-01	2.773E-01	0.000E+00	NOT IDENT.
HF-181	-1.269E-02	4.155E-02	6.832E-02	0.000E+00	NOT IDENT.
W-181	-8.153E-02	3.614E-01	5.893E-01	0.000E+00	NOT IDENT.
TA-182	-2.273E-01	2.209E-01	3.448E-01	0.000E+00	FAIL ABUN
RE-183	-4.626E-02	1.053E-01	1.775E-01	0.000E+00	FAIL ABUN
RE-184	1.091E-01	2.050E-01	3.743E-01	0.000E+00	NOT IDENT.
OS-185	-2.296E-02	3.990E-02	6.586E-02	0.000E+00	NOT IDENT.
RE-188	1.455E-01	1.529E-01	2.745E-01	0.000E+00	NOT IDENT.
W-188	1.200E+00	6.859E+00	1.078E+01	0.000E+00	FAIL ABUN
IR-192	1.589E-02	3.247E-02	5.823E-02	0.000E+00	FAIL ABUN
AU-195	3.387E-01	2.164E-01	3.909E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.700E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-7.226E-01	6.309E+00	1.076E+01	0.000E+00	NOT IDENT.
TL-202	5.784E-02	6.338E-02	1.142E-01	0.000E+00	NOT IDENT.
HG-203	2.057E-02	3.932E-02	7.109E-02	0.000E+00	NOT IDENT.
BI-207	3.695E-02	5.606E-02	1.012E-01	0.000E+00	FAIL ABUN
TL-207	3.062E-01	6.863E-01	1.085E+00	0.000E+00	FAIL ABUN
PO-209	-3.411E+00	7.276E+00	1.161E+01	0.000E+00	NOT IDENT.
BI-210	1.408E+00	3.048E+00	5.734E+00	0.000E+00	NOT IDENT.
PB-210	1.408E+00	3.048E+00	5.734E+00	0.000E+00	NOT IDENT.
PO-210	1.408E+00	3.048E+00	5.734E+00	0.000E+00	NOT IDENT.
PB-211	-3.478E-01	1.001E+00	1.416E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.487E-01	6.702E-01	0.000E+00	FAIL ABUN
PO-215	3.062E-01	6.863E-01	1.085E+00	0.000E+00	FAIL ABUN
RN-219	6.175E-02	3.838E-01	6.636E-01	0.000E+00	FAIL ABUN
RN-220	3.479E+01	2.524E+01	4.800E+01	0.000E+00	NOT IDENT.
RA-223	3.062E-01	6.863E-01	1.085E+00	0.000E+00	FAIL ABUN
AC-227	-3.020E-01	3.380E-01	5.712E-01	0.000E+00	FAIL ABUN
TH-227	-3.020E-01	3.392E-01	5.712E-01	0.000E+00	FAIL ABUN
TH-229	-4.666E-02	4.849E-01	8.180E-01	0.000E+00	FAIL ABUN
PA-231	3.487E-01	1.349E+00	2.411E+00	0.000E+00	FAIL ABUN
TH-231	3.062E-01	6.863E-01	1.085E+00	0.000E+00	FAIL ABUN
U-231	-3.865E-01	9.998E-01	1.568E+00	0.000E+00	FAIL ABUN
PA-233	1.006E-02	5.851E-02	1.034E-01	0.000E+00	FAIL ABUN
PA-234	-8.247E-02	3.291E-01	5.346E-01	0.000E+00	FAIL ABUN
PA-234M	8.596E+00	6.047E+00	1.158E+01	0.000E+00	NOT IDENT.
U-235	1.770E-01	2.078E-01	3.625E-01	0.000E+00	FAIL ABUN
NP-236	8.997E-02	7.411E-02	1.340E-01	0.000E+00	NOT IDENT.
NP-239	-6.703E-02	1.732E-01	3.001E-01	0.000E+00	FAIL ABUN
AM-241	2.808E-02	1.480E-01	2.475E-01	0.000E+00	NOT IDENT.
CM-243	-1.713E-02	8.818E-02	1.555E-01	0.000E+00	FAIL ABUN
CM-247	2.708E-02	3.375E-02	6.067E-02	0.000E+00	NOT IDENT.
CF-249	1.670E-02	3.701E-02	6.533E-02	0.000E+00	NOT IDENT.
CF-251	4.459E-02	1.167E-01	2.028E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:02:16.36

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746003.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 08:59:26
Sample ID         : G232746003           Sample quantity  : 1.37080E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.67  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1580	10.67*	1.137E+00	3.566E+01	3.566E+01	8.83
CD-109	88.03	177	3.72*	5.660E+00	2.302E+00	2.353E+00	51.25
SN-126	64.28	31	9.60	3.191E+00	2.739E-01	2.739E-01	291.47
	86.94	177	8.90	5.660E+00	9.620E-01	9.620E-01	65.29
	87.57	177	37.00*	5.660E+00	2.314E-01	2.314E-01	51.25
TL-208	277.35	------	6.80	4.505E+00	------ Line Not Found		------
	510.84	115	21.60	2.794E+00	5.226E-01	5.226E-01	67.01
	583.14	458	84.20*	2.503E+00	5.957E-01	5.957E-01	14.53
	860.37	61	12.46	1.794E+00	7.520E-01	7.520E-01	50.82
BI-211	72.87	------	1.27	4.387E+00	------ Line Not Found		------
	351.07	672	12.94*	3.760E+00	3.782E+00	3.782E+00	13.58
PB-212	74.81	416	10.70	4.598E+00	2.313E+00	2.313E+00	22.67
	77.11	708	18.00	4.832E+00	2.230E+00	2.230E+00	13.99
	87.30	177	8.00	5.660E+00	1.070E+00	1.070E+00	52.22
	238.63	1348	44.60*	5.013E+00	1.651E+00	1.651E+00	9.58
	300.09	77	3.41	4.248E+00	1.451E+00	1.451E+00	67.62
PO-212	74.81	416	10.70	4.598E+00	2.313E+00	2.313E+00	22.67
	77.11	708	18.00	4.832E+00	2.230E+00	2.230E+00	13.99
	87.30	177	8.00	5.660E+00	1.070E+00	1.070E+00	52.22
	115.19	------	0.60	6.604E+00	------ Line Not Found		------
	238.63	1348	44.60*	5.013E+00	1.651E+00	1.651E+00	9.58
	300.09	77	3.41	4.248E+00	1.451E+00	1.451E+00	67.62
BI-214	609.31	450	46.30*	2.414E+00	1.104E+00	1.104E+00	16.99
	768.36	46	5.04	1.981E+00	1.271E+00	1.271E+00	94.63
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	145	15.10	1.422E+00	1.851E+00	1.851E+00	35.46
	1238.11	------	5.94	1.305E+00	------ Line Not Found		------
	1377.67	------	4.11	1.192E+00	------ Line Not Found		------
	1764.49	71	15.80	9.898E-01	1.242E+00	1.242E+00	34.34
PB-214	74.81	416	6.21	4.598E+00	3.985E+00	3.985E+00	21.95
	77.11	708	10.50	4.832E+00	3.824E+00	3.824E+00	15.93
	87.30	177	4.67	5.660E+00	1.833E+00	1.833E+00	51.83

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	323	7.49	4.969E+00	2.374E+00	2.374E+00	26.32
	295.21	484	19.20	4.299E+00	1.605E+00	1.605E+00	17.26
	351.92	672	37.20*	3.760E+00	1.315E+00	1.316E+00	14.54
PO-214	74.81	416	6.21	4.598E+00	3.985E+00	3.985E+00	21.95
	77.11	708	10.50	4.832E+00	3.824E+00	3.824E+00	15.93
	87.30	177	4.67	5.660E+00	1.833E+00	1.833E+00	51.83
	241.98	323	7.49	4.969E+00	2.374E+00	2.374E+00	26.32
	295.21	484	19.20	4.299E+00	1.605E+00	1.605E+00	17.26
	351.92	672	37.20*	3.760E+00	1.315E+00	1.316E+00	14.54
PO-216	74.81	416	10.70	4.598E+00	2.313E+00	2.313E+00	22.67
	77.11	708	18.00	4.832E+00	2.230E+00	2.230E+00	13.99
	87.30	177	8.00	5.660E+00	1.070E+00	1.070E+00	52.22
	238.63	1348	44.60*	5.013E+00	1.651E+00	1.651E+00	9.58
	300.09	77	3.41	4.248E+00	1.451E+00	1.451E+00	67.62
PO-218	74.81	416	6.21	4.598E+00	3.985E+00	3.985E+00	21.95
	77.11	708	10.50	4.832E+00	3.824E+00	3.824E+00	15.93
	87.30	177	4.67	5.660E+00	1.833E+00	1.833E+00	51.83
	241.98	323	7.49	4.969E+00	2.374E+00	2.374E+00	26.32
	295.21	484	19.20	4.299E+00	1.605E+00	1.605E+00	17.26
	351.92	672	37.20*	3.760E+00	1.315E+00	1.316E+00	14.54
RA-224	240.98	323	3.95*	4.969E+00	4.501E+00	4.501E+00	25.71
RA-226	609.31	450	46.30*	2.414E+00	1.104E+00	1.104E+00	16.99
	768.36	46	5.04	1.981E+00	1.271E+00	1.271E+00	94.63
	934.06	------	3.21	1.670E+00	------	Line Not Found	------
	1120.29	145	15.10	1.422E+00	1.851E+00	1.851E+00	35.46
	1238.11	------	5.94	1.305E+00	------	Line Not Found	------
	1377.67	------	4.11	1.192E+00	------	Line Not Found	------
	1764.49	71	15.80	9.898E-01	1.242E+00	1.242E+00	34.34
AC-228	338.32	365	11.40	3.875E+00	2.263E+00	2.263E+00	45.24
	911.07	313	27.70*	1.706E+00	1.816E+00	1.816E+00	18.74
	969.11	166	16.60	1.615E+00	1.692E+00	1.692E+00	33.17
RA-228	338.32	365	11.40	3.875E+00	2.263E+00	2.263E+00	45.24
	911.07	313	27.70*	1.706E+00	1.816E+00	1.816E+00	18.74
	969.11	166	16.60	1.615E+00	1.692E+00	1.692E+00	33.17
TH-228	84.40	------	1.21	5.453E+00	------	Line Not Found	------
	238.60	1348	44.60*	5.013E+00	1.651E+00	1.651E+00	9.58
	300.10	77	3.41	4.248E+00	1.451E+00	1.451E+00	89.32
TH-230	609.31	450	46.30*	2.414E+00	1.104E+00	1.104E+00	16.99
	768.36	46	5.04	1.981E+00	1.271E+00	1.271E+00	94.63
	934.06	------	3.21	1.670E+00	------	Line Not Found	------
	1120.29	145	15.10	1.422E+00	1.851E+00	1.851E+00	35.46
	1238.11	------	5.94	1.305E+00	------	Line Not Found	------
	1377.67	------	4.11	1.192E+00	------	Line Not Found	------
	1764.49	71	15.80	9.898E-01	1.242E+00	1.242E+00	34.34
TH-232	338.32	365	11.40	3.875E+00	2.263E+00	2.263E+00	20.45
	911.07	313	27.70*	1.706E+00	1.816E+00	1.816E+00	18.74
	969.11	166	16.60	1.615E+00	1.692E+00	1.692E+00	33.17
TH-234	63.29	31	3.80*	3.191E+00	6.920E-01	6.920E-01	291.63
	92.38	346	5.41	5.991E+00	2.925E+00	2.925E+00	33.33

Sample ID : G232746003 Acquisition date : 14-JUL-2009 08:59:26

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	450	46.30*	2.414E+00	1.104E+00	1.104E+00	16.99
	768.36	46	5.04	1.981E+00	1.271E+00	1.271E+00	94.63
	934.06	------	3.21	1.670E+00	------ Line Not Found		------
	1120.29	145	15.10	1.422E+00	1.851E+00	1.851E+00	35.46
	1238.11	------	5.94	1.305E+00	------ Line Not Found		------
	1377.67	------	4.11	1.192E+00	------ Line Not Found		------
	1764.49	71	15.80	9.898E-01	1.242E+00	1.242E+00	34.34
NP-237	86.50	177	12.60*	5.660E+00	6.795E-01	6.795E-01	55.25
	95.87	------	2.60	6.124E+00	------ Line Not Found		------
U-238	63.29	31	3.80*	3.191E+00	6.920E-01	6.920E-01	291.63
	92.38	346	5.41	5.991E+00	2.925E+00	2.925E+00	29.30
AM-243	74.67	416	66.00*	4.598E+00	3.749E-01	3.749E-01	20.66
	86.72	177	0.34	5.660E+00	2.548E+01	2.548E+01	51.25
	117.66	------	0.55	6.624E+00	------ Line Not Found		------
	142.18	------	0.13	6.534E+00	------ Line Not Found		------
ANH-511	511.00	115	100.00*	2.794E+00	1.129E-01	1.129E-01	66.49

Flag: "*" = Keyline

Sample ID : G232746003 Acquisition date : 14-JUL-2009 08:59:26

Total number of lines in spectrum 30
Number of unidentified lines 2
Number of lines tentatively identified by NID 28 93.33%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.566E+01	3.566E+01	0.315E+01	8.83	
CD-109	464.00D	1.02	2.302E+00	2.353E+00	1.206E+00	51.25	
SN-126	1.00E+05Y	1.00	2.314E-01	2.314E-01	1.186E-01	51.25	
TL-208	1.41E+10Y	1.00	5.957E-01	5.957E-01	0.866E-01	14.53	
BI-211	7.04E+08Y	1.00	3.782E+00	3.782E+00	0.513E+00	13.58	
PB-212	1.41E+10Y	1.00	1.651E+00	1.651E+00	0.158E+00	9.58	
PO-212	1.41E+10Y	1.00	1.651E+00	1.651E+00	0.158E+00	9.58	
BI-214	1600.00Y	1.00	1.104E+00	1.104E+00	0.188E+00	16.99	
PB-214	1600.00Y	1.00	1.315E+00	1.316E+00	0.191E+00	14.54	
PO-214	1600.00Y	1.00	1.315E+00	1.316E+00	0.191E+00	14.54	
PO-216	1.41E+10Y	1.00	1.651E+00	1.651E+00	0.158E+00	9.58	
PO-218	1600.00Y	1.00	1.315E+00	1.316E+00	0.191E+00	14.54	
RA-224	1.41E+10Y	1.00	4.501E+00	4.501E+00	1.157E+00	25.71	
RA-226	1600.00Y	1.00	1.104E+00	1.104E+00	0.188E+00	16.99	
AC-228	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.340E+00	18.74	
RA-228	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.340E+00	18.74	
TH-228	1.41E+10Y	1.00	1.651E+00	1.651E+00	0.158E+00	9.58	
TH-230	4.47E+09Y	1.00	1.104E+00	1.104E+00	0.188E+00	16.99	
TH-232	1.41E+10Y	1.00	1.816E+00	1.816E+00	0.340E+00	18.74	
TH-234	4.47E+09Y	1.00	6.920E-01	6.920E-01	20.18E-01	291.63	
U-234	4.47E+09Y	1.00	1.104E+00	1.104E+00	0.188E+00	16.99	
NP-237	2.14E+06Y	1.00	6.795E-01	6.795E-01	3.754E-01	55.25	
U-238	4.47E+09Y	1.00	6.920E-01	6.920E-01	20.18E-01	291.63	
AM-243	7380.00Y	1.00	3.749E-01	3.749E-01	0.775E-01	20.66	
ANH-511	1.00E+09Y	1.00	1.129E-01	1.129E-01	0.751E-01	66.49	
			---	---			
	Total Activity :		7.004E+01	7.010E+01			

Grand Total Activity : 7.004E+01 7.010E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232746003 Acquisition date : 14-JUL-2009 08:59:26

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	186.03	154	459	1.43	371.66	367	10	2.14E-02	56.4	5.86E+00	T
0	209.02	58	267	1.13	417.67	415	8	8.10E-03	****	5.47E+00	T
0	270.61	156	271	1.69	540.89	535	12	2.16E-02	45.5	4.59E+00	T
0	330.52	30	260	2.57	660.77	650	12	4.16E-03	****	3.95E+00	
0	409.90	58	124	1.02	819.58	814	11	8.04E-03	78.9	3.34E+00	T
0	463.00	78	107	1.54	925.84	921	10	1.08E-02	54.8	3.03E+00	T
0	727.92	79	83	1.96	1455.80	1450	11	1.10E-02	51.0	2.08E+00	T
0	795.54	41	72	1.88	1591.07	1582	13	5.62E-03	91.6	1.92E+00	T
0	1730.29	36	4	2.20	3460.49	3453	12	5.06E-03	38.4	1.00E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:02:20.81

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746003.CNF;1 *
* Acquisition date  : 14-JUL-2009 08:59:26  Detector SN#     :             *
* Detector ID       : GAM12                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.67          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232746003            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.37080E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24.5MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1023-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.566E+01	3.148E+00	4.564E-01	3.254E-02	78.136
CD-109	2.353E+00	1.206E+00	1.414E+00	1.082E-01	1.664
SN-126	2.314E-01	1.186E-01	1.428E-01	1.089E-02	1.620
TL-208	5.957E-01	8.655E-02	6.003E-02	4.294E-03	9.923
BI-211	3.782E+00	5.134E-01	3.143E-01	1.976E-02	12.031
PB-212	1.651E+00	1.581E-01	8.613E-02	6.116E-03	19.173
PO-212	1.651E+00	1.581E-01	8.613E-02	6.116E-03	19.173
BI-214	1.104E+00	1.875E-01	1.102E-01	9.076E-03	10.012
PB-214	1.316E+00	1.913E-01	1.096E-01	8.952E-03	12.004
PO-214	1.316E+00	1.913E-01	1.096E-01	8.952E-03	12.004
PO-216	1.651E+00	1.581E-01	8.613E-02	6.116E-03	19.173
PO-218	1.316E+00	1.913E-01	1.096E-01	8.952E-03	12.004
RA-224	4.501E+00	1.157E+00	9.803E-01	5.408E-02	4.591
RA-226	1.104E+00	1.875E-01	1.102E-01	9.076E-03	10.012
AC-228	1.816E+00	3.403E-01	2.464E-01	2.705E-02	7.371
RA-228	1.816E+00	3.403E-01	2.464E-01	2.705E-02	7.371
TH-228	1.651E+00	1.581E-01	8.612E-02	6.115E-03	19.175
TH-230	1.104E+00	1.875E-01	1.102E-01	9.076E-03	10.012

Sample ID : G232746003 Acquisition date : 14-JUL-2009 08:59:26

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.816E+00	3.403E-01	2.464E-01	2.705E-02	7.371
TH-234	6.920E-01	2.018E+00	1.886E+00	3.211E-01	0.367
U-234	1.104E+00	1.875E-01	1.102E-01	9.076E-03	10.012
NP-237	6.795E-01	3.754E-01	4.243E-01	9.321E-02	1.602
U-238	6.920E-01	2.018E+00	1.886E+00	3.211E-01	0.367
AM-243	3.749E-01	7.745E-02	8.654E-02	5.880E-03	4.333
ANH-511	1.129E-01	7.506E-02	4.346E-02	2.649E-03	2.597

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.963E-01		3.273E-01	4.904E-01	3.375E-02	-0.604
NA-22	-8.904E-03		4.310E-02	6.934E-02	4.466E-03	-0.128
NA-24	4.697E-01		2.837E-01	Half-Life too short		
AL-26	1.050E-02		2.701E-02	4.808E-02	2.759E-03	0.218
TI-44	4.116E-01	+	5.758E-02	7.760E-02	5.427E-03	5.304
SC-46	2.729E-02		3.831E-02	6.616E-02	5.484E-03	0.412
V-48	2.300E-03		7.124E-02	1.148E-01	8.841E-03	0.020
CR-51	-1.724E-01		3.391E-01	5.452E-01	3.466E-02	-0.316
MN-52	-7.502E-02		2.318E-01	3.599E-01	2.472E-02	-0.208
MN-54	2.951E-02		3.774E-02	6.530E-02	5.133E-03	0.452
CO-56	-6.634E-03		3.950E-02	6.327E-02	5.033E-03	-0.105
CO-57	-1.242E-02		2.408E-02	3.854E-02	2.410E-03	-0.322
CO-58	-2.521E-02		4.187E-02	6.480E-02	4.986E-03	-0.389
FE-59	-4.940E-04		9.192E-02	1.530E-01	1.130E-02	-0.003
CO-60	2.637E-02		3.795E-02	6.706E-02	4.683E-03	0.393
ZN-65	-6.424E-02		1.026E-01	1.348E-01	8.478E-03	-0.477
GE-68	7.523E-01		1.230E+00	2.160E+00	1.456E-01	0.348
AS-73	5.022E-01		7.694E-01	1.339E+00	8.647E-02	0.375
AS-74	-3.977E-02		8.973E-02	1.455E-01	9.259E-03	-0.273
SE-75	-2.158E-02		4.553E-02	6.510E-02	3.690E-03	-0.331
BR-77	-6.634E+00		9.399E+00	1.412E+01	8.659E-01	-0.470
SR-82	-1.699E-02		3.799E-01	6.202E-01	4.589E-02	-0.027
RB-83	-4.652E-02		6.658E-02	1.001E-01	6.138E-03	-0.465
RB-84	-7.274E-03		6.698E-02	1.074E-01	8.838E-03	-0.068
KR-85	2.019E+01		8.665E+00	1.438E+01	8.782E-01	1.404
SR-85	1.033E-01		4.431E-02	7.354E-02	4.491E-03	1.404
RB-86	2.382E-01		7.889E-01	1.350E+00	9.114E-02	0.176
Y-88	-3.158E-03		3.557E-02	5.787E-02	3.257E-03	-0.055
ZR-88	-5.153E-03		3.013E-02	4.870E-02	2.671E-03	-0.106
Y-91	-9.073E+00		2.113E+01	3.374E+01	1.950E+00	-0.269
NB-94	-1.992E-02		3.515E-02	5.563E-02	3.789E-03	-0.358
NB-95	5.519E-02		5.026E-02	7.870E-02	5.757E-03	0.701
NB-95M	-6.350E-02		1.277E-01	1.851E-01	1.350E-02	-0.343
ZR-95	4.038E-02		7.264E-02	1.244E-01	1.027E-02	0.325
NB-97	-4.569E-03		3.397E-02	Half-Life too short		
ZR-97	2.716E+00		6.949E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	8.289E+00		1.146E+01	1.980E+01	2.847E+00	0.419
TC-99M	-1.535E+10		9.295E+09	Half-Life too short		
RH-101	6.691E-03		3.199E-02	5.077E-02	2.686E-03	0.132
RH-102	2.455E-02		2.957E-02	5.033E-02	2.989E-03	0.488
RU-103	-1.233E-02		4.044E-02	6.332E-02	8.076E-03	-0.195
RH-106	-1.628E-02		3.165E-01	5.260E-01	6.341E-02	-0.031
RU-106	-1.628E-02		3.165E-01	5.260E-01	3.377E-02	-0.031
AG-108M	2.284E-02		3.075E-02	5.243E-02	3.267E-03	0.436
AG-110M	3.451E-03		3.052E-02	5.116E-02	3.487E-03	0.067
IN-111	2.052E-01		1.027E+00	1.549E+00	8.572E-02	0.133
IN-113M	-1.852E-02		4.371E-02	6.949E-02	4.091E-03	-0.266
SN-113	-1.852E-02		4.371E-02	6.949E-02	4.091E-03	-0.266
IN-114M	2.055E-02		1.948E-01	2.781E-01	1.459E-02	0.074
CD-115	-5.862E+00		1.027E+01	1.563E+01	9.629E-01	-0.375
SN-117M	-1.710E-02		5.150E-02	8.182E-02	4.322E-03	-0.209
SB-122	-1.427E-01		1.851E+00	3.093E+00	1.943E-01	-0.046
I-123	1.803E+00		1.994E+00	Half-Life too short		
TE-123M	1.209E-02		2.674E-02	4.399E-02	2.357E-03	0.275
I-124	4.619E-01		7.167E-01	1.106E+00	7.055E-02	0.418
SB-124	4.261E-02		6.766E-02	1.248E-01	8.331E-03	0.341
SB-125	6.689E-02		9.083E-02	1.545E-01	9.185E-03	0.433
TE-125M	2.308E+00		8.483E+00	1.413E+01	1.218E+00	0.163
I-126	1.159E-01		1.808E-01	3.133E-01	2.042E-02	0.370
SB-126	1.580E-02		1.523E-01	2.390E-01	1.662E-02	0.066
SB-127	-8.524E-02		1.323E+00	2.179E+00	2.159E-01	-0.039
XE-127	-1.619E-02		4.544E-02	7.090E-02	3.770E-03	-0.228
I-131	3.455E-02		1.107E-01	1.852E-01	1.165E-02	0.187
TE-132	-2.056E-01		5.877E-01	9.792E-01	1.388E-01	-0.210
BA-133	-4.199E-03		4.742E-02	6.794E-02	7.795E-03	-0.062
I-133	1.567E-03		2.446E-03	Half-Life too short		
CS-134	7.612E-02	+	7.000E-02	8.856E-02	6.752E-03	0.860
CS-135	2.100E-01		1.663E-01	2.644E-01	1.988E-02	0.795
I-135	4.066E+08		1.667E+09	Half-Life too short		
CS-136	-8.531E-02		1.124E-01	1.753E-01	1.317E-02	-0.487
BA-137M	-2.889E-02		3.566E-02	5.529E-02	3.584E-03	-0.523
CS-137	-3.054E-02		3.769E-02	5.845E-02	3.802E-03	-0.523
CE-139	-6.285E-04		2.881E-02	4.630E-02	2.372E-03	-0.014
BA-140	2.855E-01		2.620E-01	4.444E-01	1.448E-01	0.642
LA-140	-2.049E-02		9.207E-02	1.498E-01	9.756E-03	-0.137
CE-141	5.360E-02		6.013E-02	1.010E-01	5.877E-03	0.531
CE-143	4.865E-04		8.347E-05	Half-Life too short		
CE-144	-2.425E-02		1.906E-01	3.088E-01	4.396E-02	-0.079
PM-144	3.930E-03		3.699E-02	6.161E-02	4.168E-03	0.064
PR-144	2.662E-01		2.506E+00	4.174E+00	2.823E-01	0.064
PM-146	1.267E-02		3.986E-02	6.595E-02	5.702E-03	0.192
ND-147	1.605E-01		5.584E-01	9.108E-01	1.247E-01	0.176
PM-149	-6.205E+01		7.609E+01	1.206E+02	1.703E+01	-0.515
EU-152	-2.873E-02		9.978E-02	1.408E-01	9.025E-03	-0.204

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-5.463E-02		8.283E-02	1.185E-01	8.243E-03	-0.461
EU-154	-2.816E-02		1.201E-01	1.926E-01	1.877E-02	-0.146
EU-155	9.320E-02		1.006E-01	1.718E-01	1.158E-02	0.543
TB-160	3.667E-02		1.372E-01	2.281E-01	1.873E-02	0.161
HO-166M	8.683E-03		6.050E-02	1.010E-01	6.949E-03	0.086
TM-171	-2.834E+01		2.942E+01	4.247E+01	2.748E+00	-0.667
LU-176	-1.242E-02		2.239E-02	3.602E-02	2.047E-03	-0.345
LU-177	1.239E+00	+	1.272E+00	1.767E+00	9.449E-02	0.701
LU-177M	-6.327E-02		1.953E-01	2.698E-01	1.514E-02	-0.235
HF-181	-1.269E-02		4.240E-02	6.666E-02	3.980E-03	-0.190
W-181	-8.153E-02		3.688E-01	5.542E-01	3.561E-02	-0.147
TA-182	-2.273E-01		2.254E-01	3.426E-01	2.032E-02	-0.663
RE-183	-4.626E-02		1.074E-01	1.697E-01	8.822E-03	-0.273
RE-184	1.091E-01		2.092E-01	3.608E-01	2.008E-02	0.302
OS-185	-2.296E-02		4.071E-02	6.462E-02	4.176E-03	-0.355
RE-188	1.455E-01		1.560E-01	2.622E-01	1.406E-02	0.555
W-188	1.200E+00		6.999E+00	1.042E+01	5.903E-01	0.115
IR-192	1.589E-02		3.314E-02	5.636E-02	3.221E-03	0.282
AU-195	3.387E-01		2.208E-01	3.703E-01	2.547E-02	0.915
TL-200	-2.173E-04		1.888E-04	Half-Life too short		
TL-201	-7.226E-01		6.437E+00	1.030E+01	5.278E-01	-0.070
TL-202	5.784E-02		6.467E-02	1.112E-01	6.406E-03	0.520
HG-203	2.057E-02		4.012E-02	6.865E-02	4.128E-03	0.300
BI-207	3.695E-02		5.720E-02	1.003E-01	6.918E-03	0.368
TL-207	3.062E-01		7.003E-01	1.051E+00	1.731E-01	0.291
PO-209	-3.411E+00		7.425E+00	1.147E+01	9.569E-01	-0.297
BI-210	1.408E+00		3.110E+00	5.360E+00	4.038E-01	0.263
PB-210	1.408E+00		3.110E+00	5.360E+00	4.038E-01	0.263
PO-210	1.408E+00		3.110E+00	5.360E+00	3.438E-01	0.263
PB-211	-3.478E-01		1.021E+00	1.377E+00	8.581E-01	-0.253
BI-212	8.850E-01	+	4.579E-01	6.591E-01	5.707E-02	1.343
PO-215	3.062E-01		7.003E-01	1.051E+00	1.731E-01	0.291
RN-219	6.175E-02		3.916E-01	6.452E-01	8.709E-02	0.096
RN-220	3.479E+01		2.575E+01	4.696E+01	2.928E+00	0.741
RA-223	3.062E-01		7.003E-01	1.051E+00	1.731E-01	0.291
AC-227	-3.020E-01		3.449E-01	5.507E-01	7.638E-02	-0.548
TH-227	-3.020E-01		3.461E-01	5.507E-01	9.266E-02	-0.548
TH-229	-4.666E-02		4.948E-01	7.846E-01	4.131E-02	-0.059
PA-231	3.487E-01		1.376E+00	2.329E+00	3.195E-01	0.150
TH-231	3.062E-01		7.003E-01	1.051E+00	1.731E-01	0.291
U-231	-3.865E-01		1.020E+00	1.485E+00	1.046E-01	-0.260
PA-233	1.006E-02		5.970E-02	1.001E-01	6.055E-03	0.101
PA-234	-8.247E-02		3.358E-01	5.285E-01	9.775E-02	-0.156
PA-234M	8.596E+00		6.171E+00	1.146E+01	1.189E+00	0.750
U-235	1.770E-01		2.120E-01	3.458E-01	5.616E-02	0.512
NP-236	8.997E-02		7.562E-02	1.280E-01	6.714E-03	0.703
NP-239	-6.703E-02		1.767E-01	2.852E-01	1.800E-02	-0.235
AM-241	2.808E-02		1.510E-01	2.324E-01	1.651E-02	0.121

Sample ID : G232746003 Acquisition date : 14-JUL-2009 08:59:26

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.713E-02		8.998E-02	1.475E-01	9.820E-03	-0.116
CM-247	2.708E-02		3.444E-02	5.899E-02	3.272E-03	0.459
CF-249	1.670E-02		3.777E-02	6.348E-02	3.489E-03	0.263
CF-251	4.459E-02		1.191E-01	1.942E-01	1.004E-02	0.230

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232746003           *
* Acquisition date  : 14-JUL-2009 08:59:26 Detector SN#     :               *
* Detector ID       : GAM12                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.67      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232746003           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.3708E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.566E+01	3.085E+00	2.290E-01	1.574E+00
CD-109	2.353E+00	1.182E+00	7.482E-01	6.031E-01
SN-126	2.314E-01	1.162E-01	7.559E-02	5.930E-02
TL-208	5.957E-01	8.482E-02	3.067E-02	4.328E-02
BI-211	3.782E+00	5.031E-01	1.621E-01	2.567E-01
PB-212	1.651E+00	1.550E-01	4.475E-02	7.907E-02
PO-212	1.651E+00	1.550E-01	4.475E-02	7.907E-02
BI-214	1.104E+00	1.838E-01	5.627E-02	9.375E-02
PB-214	1.316E+00	1.875E-01	5.652E-02	9.566E-02
PO-214	1.316E+00	1.875E-01	5.652E-02	9.566E-02
PO-216	1.651E+00	1.550E-01	4.475E-02	7.907E-02
PO-218	1.316E+00	1.875E-01	5.652E-02	9.566E-02
RA-224	4.501E+00	1.134E+00	5.093E-01	5.787E-01
RA-226	1.104E+00	1.838E-01	5.627E-02	9.375E-02
AC-228	1.816E+00	3.335E-01	1.248E-01	1.702E-01
RA-228	1.816E+00	3.335E-01	1.248E-01	1.702E-01
TH-228	1.651E+00	1.550E-01	4.475E-02	7.907E-02
TH-230	1.104E+00	1.838E-01	5.627E-02	9.375E-02
TH-232	1.816E+00	3.335E-01	1.248E-01	1.702E-01
TH-234	6.920E-01	1.978E+00	1.004E+00	1.009E+00
U-234	1.104E+00	1.838E-01	5.627E-02	9.375E-02
NP-237	6.795E-01	3.679E-01	2.246E-01	1.877E-01
U-238	6.920E-01	1.978E+00	1.004E+00	1.009E+00
AM-243	3.749E-01	7.591E-02	4.593E-02	3.873E-02
ANH-511	1.129E-01	7.356E-02	2.226E-02	3.753E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-2.963E-01	3.208E-01	2.515E-01	1.637E-01	NOT IDENT.
NA-22	-8.904E-03	4.224E-02	3.489E-02	2.155E-02	NOT IDENT.

NA-24	4.697E+05	5.560E+05	0.000E+00	2.837E+05	SHORT HLIF
AL-26	1.050E-02	2.647E-02	2.402E-02	1.350E-02	NOT IDENT.
TI-44	4.116E-01	5.643E-02	4.114E-02	2.879E-02	FAIL ABUN
SC-46	2.729E-02	3.754E-02	3.352E-02	1.915E-02	FAIL ABUN
V-48	2.300E-03	6.981E-02	5.803E-02	3.562E-02	NOT IDENT.
CR-51	-1.724E-01	3.323E-01	2.817E-01	1.695E-01	NOT IDENT.
MN-52	-7.502E-02	2.271E-01	1.806E-01	1.159E-01	NOT IDENT.
MN-54	2.951E-02	3.699E-02	3.313E-02	1.887E-02	NOT IDENT.
CO-56	-6.634E-03	3.871E-02	3.209E-02	1.975E-02	NOT IDENT.
CO-57	-1.242E-02	2.360E-02	2.027E-02	1.204E-02	NOT IDENT.
CO-58	-2.521E-02	4.103E-02	3.289E-02	2.094E-02	NOT IDENT.
FE-59	-4.940E-04	9.008E-02	7.719E-02	4.596E-02	NOT IDENT.
CO-60	2.637E-02	3.719E-02	3.371E-02	1.897E-02	NOT IDENT.
ZN-65	-6.424E-02	1.006E-01	6.799E-02	5.132E-02	NOT IDENT.
GE-68	7.523E-01	1.205E+00	1.090E+00	6.150E-01	NOT IDENT.
AS-73	5.022E-01	7.541E-01	7.150E-01	3.847E-01	NOT IDENT.
AS-74	-3.977E-02	8.794E-02	7.428E-02	4.487E-02	NOT IDENT.
SE-75	-2.158E-02	4.462E-02	3.376E-02	2.277E-02	NOT IDENT.
BR-77	-6.634E+00	9.211E+00	7.229E+00	4.700E+00	FAIL ABUN
SR-82	-1.699E-02	3.723E-01	3.151E-01	1.899E-01	NOT IDENT.
RB-83	-4.652E-02	6.525E-02	5.125E-02	3.329E-02	NOT IDENT.
RB-84	-7.274E-03	6.564E-02	5.443E-02	3.349E-02	NOT IDENT.
KR-85	2.019E+01	8.492E+00	7.364E+00	4.332E+00	NOT IDENT.
SR-85	1.033E-01	4.343E-02	3.766E-02	2.216E-02	NOT IDENT.
RB-86	2.382E-01	7.731E-01	6.815E-01	3.944E-01	NOT IDENT.
Y-88	-3.158E-03	3.486E-02	2.890E-02	1.779E-02	NOT IDENT.
ZR-88	-5.153E-03	2.953E-02	2.507E-02	1.507E-02	NOT IDENT.
Y-91	-9.073E+00	2.070E+01	1.699E+01	1.056E+01	NOT IDENT.
NB-94	-1.992E-02	3.445E-02	2.832E-02	1.757E-02	NOT IDENT.
NB-95	5.519E-02	4.926E-02	3.999E-02	2.513E-02	NOT IDENT.
NB-95M	-6.350E-02	1.252E-01	9.619E-02	6.386E-02	NOT IDENT.
ZR-95	4.038E-02	7.119E-02	6.322E-02	3.632E-02	NOT IDENT.
NB-97	-4.569E+03	6.658E+04	0.000E+00	3.397E+04	SHORT HLIF
ZR-97	2.716E+06	1.362E+06	0.000E+00	6.949E+05	SHORT HLIF
MO-99	8.289E+00	1.123E+01	1.007E+01	5.732E+00	NOT IDENT.
TC-99M	-1.535E+16	1.822E+16	0.000E+00	9.295E+15	SHORT HLIF
RH-101	6.691E-03	3.135E-02	2.647E-02	1.600E-02	NOT IDENT.
RH-102	2.455E-02	2.898E-02	2.581E-02	1.478E-02	NOT IDENT.
RU-103	-1.233E-02	3.963E-02	3.245E-02	2.022E-02	FAIL ABUN
RH-106	-1.628E-02	3.102E-01	2.684E-01	1.582E-01	FAIL ABUN
RU-106	-1.628E-02	3.102E-01	2.684E-01	1.582E-01	FAIL ABUN
AG-108M	2.284E-02	3.014E-02	2.694E-02	1.538E-02	NOT IDENT.
AG-110M	3.451E-03	2.991E-02	2.607E-02	1.526E-02	NOT IDENT.
IN-111	2.052E-01	1.007E+00	8.042E-01	5.137E-01	NOT IDENT.
IN-113M	-1.852E-02	4.284E-02	3.577E-02	2.185E-02	NOT IDENT.
SN-113	-1.852E-02	4.284E-02	3.577E-02	2.185E-02	NOT IDENT.
IN-114M	2.055E-02	1.909E-01	1.451E-01	9.740E-02	NOT IDENT.
CD-115	-5.862E+00	1.006E+01	8.002E+00	5.133E+00	NOT IDENT.
SN-117M	-1.710E-02	5.047E-02	4.283E-02	2.575E-02	NOT IDENT.
SB-122	-1.427E-01	1.814E+00	1.581E+00	9.253E-01	NOT IDENT.
I-123	1.803E+06	3.907E+06	0.000E+00	1.994E+06	SHORT HLIF
TE-123M	1.209E-02	2.620E-02	2.303E-02	1.337E-02	NOT IDENT.
I-124	4.619E-01	7.024E-01	5.644E-01	3.584E-01	NOT IDENT.
SB-124	4.261E-02	6.630E-02	6.246E-02	3.383E-02	FAIL ABUN
SB-125	6.689E-02	8.901E-02	7.940E-02	4.541E-02	FAIL ABUN
TE-125M	2.308E+00	8.313E+00	7.446E+00	4.241E+00	NOT IDENT.
I-126	1.159E-01	1.772E-01	1.596E-01	9.038E-02	NOT IDENT.
SB-126	1.580E-02	1.492E-01	1.216E-01	7.613E-02	FAIL ABUN
SB-127	-8.524E-02	1.296E+00	1.110E+00	6.614E-01	NOT IDENT.
XE-127	-1.619E-02	4.454E-02	3.695E-02	2.272E-02	NOT IDENT.
I-131	3.455E-02	1.085E-01	9.548E-02	5.535E-02	NOT IDENT.
TE-132	-2.056E-01	5.760E-01	5.092E-01	2.939E-01	NOT IDENT.
BA-133	-4.199E-03	4.647E-02	3.504E-02	2.371E-02	NOT IDENT.
I-133	1.567E+03	4.794E+03	0.000E+00	2.446E+03	SHORT HLIF
CS-134	7.612E-02	6.860E-02	4.497E-02	3.500E-02	FAIL ABUN
CS-135	2.100E-01	1.629E-01	1.371E-01	8.314E-02	NOT IDENT.
I-135	4.066E+14	3.267E+15	0.000E+00	1.667E+15	SHORT HLIF
CS-136	-8.531E-02	1.101E-01	8.852E-02	5.618E-02	FAIL ABUN
BA-137M	-2.889E-02	3.494E-02	2.818E-02	1.783E-02	NOT IDENT.
CS-137	-3.054E-02	3.694E-02	2.979E-02	1.885E-02	NOT IDENT.
CE-139	-6.285E-04	2.823E-02	2.422E-02	1.440E-02	NOT IDENT.
BA-140	2.855E-01	2.568E-01	2.274E-01	1.310E-01	NOT IDENT.
LA-140	-2.049E-02	9.023E-02	7.502E-02	4.604E-02	NOT IDENT.
CE-141	5.360E-02	5.893E-02	5.294E-02	3.006E-02	NOT IDENT.
CE-143	4.865E+02	1.636E+02	0.000E+00	8.347E+01	SHORT HLIF
CE-144	-2.425E-02	1.868E-01	1.622E-01	9.530E-02	NOT IDENT.
PM-144	3.930E-03	3.625E-02	3.137E-02	1.850E-02	NOT IDENT.
PR-144	2.662E-01	2.456E+00	2.125E+00	1.253E+00	NOT IDENT.

PM-146	1.267E-02	3.906E-02	3.385E-02	1.993E-02	NOT IDENT.
ND-147	1.605E-01	5.472E-01	4.661E-01	2.792E-01	NOT IDENT.
PM-149	-6.205E+01	7.457E+01	6.245E+01	3.805E+01	NOT IDENT.
EU-152	-2.873E-02	9.778E-02	7.266E-02	4.989E-02	NOT IDENT.
GD-153	-5.463E-02	8.117E-02	6.261E-02	4.141E-02	NOT IDENT.
EU-154	-2.816E-02	1.177E-01	9.689E-02	6.004E-02	NOT IDENT.
EU-155	9.320E-02	9.854E-02	9.059E-02	5.028E-02	FAIL ABUN
TB-160	3.667E-02	1.345E-01	1.156E-01	6.861E-02	FAIL ABUN
HO-166M	8.683E-03	5.929E-02	5.137E-02	3.025E-02	FAIL ABUN
TM-171	-2.834E+01	2.883E+01	2.258E+01	1.471E+01	NOT IDENT.
LU-176	-1.242E-02	2.194E-02	1.863E-02	1.119E-02	FAIL ABUN
LU-177	1.239E+00	1.246E+00	9.202E-01	6.360E-01	FAIL ABUN
LU-177M	-6.327E-02	1.914E-01	1.387E-01	9.767E-02	NOT IDENT.
HF-181	-1.269E-02	4.155E-02	3.418E-02	2.120E-02	NOT IDENT.
W-181	-8.153E-02	3.614E-01	2.948E-01	1.844E-01	NOT IDENT.
TA-182	-2.273E-01	2.209E-01	1.725E-01	1.127E-01	FAIL ABUN
RE-183	-4.626E-02	1.053E-01	8.880E-02	5.371E-02	FAIL ABUN
RE-184	1.091E-01	2.050E-01	1.872E-01	1.046E-01	NOT IDENT.
OS-185	-2.296E-02	3.990E-02	3.295E-02	2.035E-02	NOT IDENT.
RE-188	1.455E-01	1.529E-01	1.373E-01	7.800E-02	NOT IDENT.
W-188	1.200E+00	6.859E+00	5.392E+00	3.500E+00	FAIL ABUN
IR-192	1.589E-02	3.247E-02	2.913E-02	1.657E-02	FAIL ABUN
AU-195	3.387E-01	2.164E-01	1.955E-01	1.104E-01	FAIL ABUN
TL-200	-2.173E+02	3.700E+02	0.000E+00	1.888E+02	SHORT HLIF
TL-201	-7.226E-01	6.309E+00	5.385E+00	3.219E+00	NOT IDENT.
TL-202	5.784E-02	6.338E-02	5.713E-02	3.234E-02	NOT IDENT.
HG-203	2.057E-02	3.932E-02	3.556E-02	2.006E-02	NOT IDENT.
BI-207	3.695E-02	5.606E-02	5.063E-02	2.860E-02	FAIL ABUN
TL-207	3.062E-01	6.863E-01	5.429E-01	3.502E-01	FAIL ABUN
PO-209	-3.411E+00	7.276E+00	5.809E+00	3.712E+00	NOT IDENT.
BI-210	1.408E+00	3.048E+00	2.869E+00	1.555E+00	NOT IDENT.
PB-210	1.408E+00	3.048E+00	2.869E+00	1.555E+00	NOT IDENT.
PO-210	1.408E+00	3.048E+00	2.869E+00	1.555E+00	NOT IDENT.
PB-211	-3.478E-01	1.001E+00	7.084E-01	5.105E-01	NOT IDENT.
BI-212	8.850E-01	4.487E-01	3.353E-01	2.290E-01	FAIL ABUN
PO-215	3.062E-01	6.863E-01	5.429E-01	3.502E-01	FAIL ABUN
RN-219	6.175E-02	3.838E-01	3.320E-01	1.958E-01	FAIL ABUN
RN-220	3.479E+01	2.524E+01	2.402E+01	1.288E+01	NOT IDENT.
RA-223	3.062E-01	6.863E-01	5.429E-01	3.502E-01	FAIL ABUN
AC-227	-3.020E-01	3.380E-01	2.858E-01	1.725E-01	FAIL ABUN
TH-227	-3.020E-01	3.392E-01	2.858E-01	1.731E-01	FAIL ABUN
TH-229	-4.666E-02	4.849E-01	4.092E-01	2.474E-01	FAIL ABUN
PA-231	3.487E-01	1.349E+00	1.206E+00	6.880E-01	FAIL ABUN
TH-231	3.062E-01	6.863E-01	5.429E-01	3.502E-01	FAIL ABUN
U-231	-3.865E-01	9.998E-01	7.843E-01	5.101E-01	FAIL ABUN
PA-233	1.006E-02	5.851E-02	5.173E-02	2.985E-02	FAIL ABUN
PA-234	-8.247E-02	3.291E-01	2.675E-01	1.679E-01	FAIL ABUN
PA-234M	8.596E+00	6.047E+00	5.793E+00	3.085E+00	NOT IDENT.
U-235	1.770E-01	2.078E-01	1.813E-01	1.060E-01	FAIL ABUN
NP-236	8.997E-02	7.411E-02	6.702E-02	3.781E-02	NOT IDENT.
NP-239	-6.703E-02	1.732E-01	1.502E-01	8.835E-02	FAIL ABUN
AM-241	2.808E-02	1.480E-01	1.238E-01	7.550E-02	NOT IDENT.
CM-243	-1.713E-02	8.818E-02	7.780E-02	4.499E-02	FAIL ABUN
CM-247	2.708E-02	3.375E-02	3.035E-02	1.722E-02	NOT IDENT.
CF-249	1.670E-02	3.701E-02	3.268E-02	1.888E-02	NOT IDENT.
CF-251	4.459E-02	1.167E-01	1.015E-01	5.955E-02	NOT IDENT.

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*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                           CHARLESTON ,SC 29417                        *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT              *
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ENERGY	MDA COUNTS
46.50	258.2489
46.50	258.2489
46.50	258.2489
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49.72	281.6232
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52.97	287.2012
53.15	287.3650
53.44	282.4304
54.07	274.3101
56.28	323.3830
56.28	323.3859
57.37	0.0000
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57.53	293.0289
57.60	293.0892
57.98	293.4230
57.98	293.4230
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59.32	317.5232
59.40	301.7175
59.54	301.8419
59.72	299.3519
60.01	300.9319
61.10	321.8332
61.14	321.8706
61.30	322.0183
63.00	325.3663
63.29	325.6318
63.29	325.6318
63.58	325.8978
64.28	366.3475
65.12	377.9625
65.20	376.7007
65.20	376.7007
66.05	357.3533
66.72	403.9370
66.83	404.0602
66.91	385.2258
67.20	401.7607
67.20	401.7607
67.75	442.9963
67.85	443.1185
68.90	391.3660
68.90	391.3660
69.30	378.1777
69.67	403.0593
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70.82	382.4216
70.83	382.4323
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72.87	420.1523
72.87	420.1523
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74.81	422.2231
74.81	422.2231
74.81	422.2231
74.81	422.2231
74.81	422.2231
74.81	422.2231
74.97	422.3924
75.28	422.7204
75.70	423.1640
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77.11	424.6441
77.11	424.6441

77.11	424.6441
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77.11	424.6441
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79.80	365.9689
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80.30	366.4086
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81.07	404.9113
81.07	404.9113
81.07	404.9113
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83.78	421.5979
83.78	421.5979
83.78	421.5979
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84.90	401.4854
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86.72	553.6327
86.79	553.7189
86.94	553.9094
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87.30	554.3587
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87.30	554.3587
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88.47	499.7626
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92.29	536.0851
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92.38	536.1904
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94.67	277.3638
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96.73	365.6338
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98.44	292.6777
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99.55	266.5928
99.86	266.7628
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103.76	299.3005
105.00	277.4145
105.31	274.6321
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109.28	280.7372
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111.00	291.6170

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115.19	280.8830
116.30	286.4873
117.00	288.8685
117.00	288.8685
117.66	289.2188
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121.62	299.4143
121.78	299.4998
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122.32	298.7717
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122.32	298.7717
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136.48	273.8138
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140.51	0.0000
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144.24	279.3655
144.24	279.3655
144.24	279.3655
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147.16	311.3611
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152.70	286.2495
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154.21	265.4905
154.21	265.4905
154.21	265.4905
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163.89	285.5828
165.85	283.1187
167.43	284.8475
171.28	261.1526
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172.10	275.7313
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176.60	246.4912
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184.41	291.5275
185.71	300.9749
186.00	301.0899
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198.60	251.3767
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202.84	269.8525
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208.81	272.9656

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209.75	249.0601
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216.55	230.1480
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226.40	222.1880
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228.18	233.2357
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236.00	272.3382
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238.63	228.7930
238.63	228.7930
238.63	228.7930
239.00	228.8828
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241.98	229.6211
241.98	229.6211
241.98	229.6211
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248.90	218.6663
249.79	233.3421
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252.85	176.0197
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256.20	202.1224
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268.79	190.3254
269.46	190.0823
269.46	190.0823
269.46	190.0823
269.46	190.0823
271.23	190.4155
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277.60	175.7888
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284.30	156.3281
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286.10	169.7234
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295.21	149.8003
295.96	149.9043

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298.57	113.8348
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300.09	159.5918
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303.76	187.5720
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306.84	158.6544
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319.41	143.9936
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323.87	147.4587
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334.20	143.5380
334.30	143.5492
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338.28	143.3712
338.28	143.3712
338.28	143.3712
338.32	143.3779
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338.32	143.3779
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340.57	138.5270
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351.92	144.9797
351.92	144.9797
351.92	144.9797
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391.69	139.2560
392.90	134.2562
398.62	151.2865
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401.81	119.6604
402.60	105.2778
404.84	124.0576
410.95	121.2787
411.60	134.6328
413.65	128.1704
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415.76	105.5793
417.63	0.0000

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439.56	91.0863
439.89	92.1667
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444.90	120.1142
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445.03	114.8093
445.03	114.8093
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511.00	90.8812
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511.85	90.9275
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513.99	95.9284
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520.65	96.9776
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529.87	0.0000
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546.56	0.0000
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552.65	100.8214
555.20	95.5074
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569.50	101.7699
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574.00	80.8801
574.64	95.6186
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579.30	0.0000
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592.07	92.8076
593.00	86.3520
595.88	100.4326
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602.52	0.0000
602.71	90.2167
602.71	90.2167
603.60	101.1525
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604.70	119.8958
609.31	93.6499
609.31	93.6499
609.31	93.6499

609.31	93.6499
610.33	89.0138
612.46	112.5645
614.37	100.1563
618.01	75.2578
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621.84	88.6000
631.29	85.2385
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633.10	71.0962
634.78	70.2079
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636.97	65.5348
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646.12	83.9631
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657.90	0.0000
661.65	90.3717
661.65	90.3717
664.57	0.0000
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666.33	81.9038
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677.61	91.0671
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692.80	84.8908
695.00	101.5828
696.49	98.7216
696.49	98.7216
697.00	97.7661
697.49	100.7217
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698.50	101.7478
699.00	92.9659
702.63	102.9236
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711.68	78.7441
713.82	83.7466
717.42	94.7414
720.50	81.5312
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722.78	82.4402
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727.18	69.3865
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735.90	76.6221
739.58	71.7645
742.81	86.8386
744.21	66.9166
747.13	76.0037
751.79	66.1370
752.31	70.1624
753.82	72.2145
755.35	69.2510
756.15	71.2825
756.87	78.3352
763.93	78.9109
765.79	70.5725
766.41	67.2298
766.84	68.9239
768.36	75.6976
768.36	75.6976
768.36	75.6976
768.36	75.6976
776.49	73.9339
778.00	79.0493
778.57	75.0135
778.89	72.9967
783.80	59.9406

785.46	68.1156
792.07	64.5672
795.84	56.1588
796.30	54.4674
801.93	79.6178
805.60	59.4627
810.29	72.9310
810.76	83.2188
815.85	56.6248
817.79	52.5477
818.51	64.9303
819.60	73.2084
826.30	55.8312
828.27	0.0000
831.60	90.1414
831.96	86.0092
834.83	64.3220
836.80	0.0000
846.75	66.7125
848.13	62.5767
856.28	0.0000
856.80	54.0696
860.37	59.7345
867.32	55.1673
867.82	54.8856
871.10	58.9312
873.19	78.9899
874.81	69.5546
875.33	0.0000
876.40	60.1061
879.36	54.8958
880.27	57.0270
880.51	52.8076
881.50	55.9981
883.24	66.6068
884.67	68.7594
889.25	48.7458
896.60	63.7573
898.02	62.7293
899.00	69.1339
903.28	63.9185
911.07	83.6920
911.07	83.6920
911.07	83.6920
919.63	69.6671
920.93	63.2666
925.00	55.8441
925.24	57.9973
926.50	68.7688
934.06	59.2620
934.06	59.2620
934.06	59.2620
934.06	59.2620
935.52	67.9173
937.48	76.5971
944.10	80.0251
946.00	73.5864
949.00	58.4996
962.29	111.2665
964.01	45.3807
966.15	72.6644
968.20	136.3434
969.11	172.7596
969.11	172.7596
969.11	172.7596
977.42	47.8761
980.50	56.9651
983.50	55.9282
989.30	65.9312
996.32	76.1880
1001.03	40.4542
1001.68	42.3024
1004.76	69.9651
1021.30	0.0000
1024.50	0.0000
1034.80	53.9408
1037.82	72.6140
1038.57	70.7676

1038.76	0.0000
1045.16	52.2607
1046.59	69.0889
1048.07	73.7957
1050.47	58.8959
1050.47	58.8959
1063.62	61.9663
1076.63	55.6294
1077.35	49.9829
1085.78	71.8685
1099.22	60.7813
1112.02	54.3536
1112.84	53.9588
1115.52	70.3669
1120.29	58.3169
1120.29	58.3169
1120.29	58.3169
1120.29	58.3169
1120.51	58.3218
1121.28	58.3367
1124.00	0.0000
1129.67	70.6788
1131.51	0.0000
1147.95	0.0000
1167.94	65.9663
1173.22	84.5326
1175.09	81.6655
1177.93	75.8958
1189.05	88.8376
1204.90	90.2368
1205.75	0.0000
1213.00	81.6018
1221.42	104.4688
1230.97	97.8398
1235.34	92.0275
1236.41	0.0000
1238.11	77.2446
1238.11	77.2446
1238.11	77.2446
1238.11	77.2446
1238.25	85.1707
1246.25	67.4992
1260.41	0.0000
1271.85	53.9912
1274.45	51.0291
1274.54	51.0311
1291.56	42.2239
1298.22	0.0000
1312.09	42.4631
1325.50	36.5303
1325.50	36.5303
1332.49	29.4826
1333.61	29.4909
1360.21	31.7493
1362.66	0.0000
1365.15	29.7399
1368.21	25.6592
1368.53	0.0000
1376.25	34.9698
1377.67	22.6356
1377.67	22.6356
1377.67	22.6356
1377.67	22.6356
1384.27	40.1965
1394.10	20.6665
1395.20	23.7730
1407.95	35.2589
1434.06	31.3184
1436.60	20.8919
1457.56	0.0000
1460.81	18.9170
1489.15	9.5251
1509.49	23.3992
1596.49	31.6390
1620.62	18.7144
1678.03	0.0000
1691.02	10.4560
1691.02	10.4560

1706.46	0.0000
1750.46	0.0000
1764.49	8.4497
1764.49	8.4497
1764.49	8.4497
1764.49	8.4497
1770.23	11.8437
1771.40	66.7282
1791.20	0.0000
1808.65	9.7461
1836.01	16.6620

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232746003

Total Uranium Activity	2.1404E+00	ug/g
Total Uranium Counting Unc.	5.8840E+00	ug/g
Total Uranium Tpu	3.0021E-06	ug/g
Total Uranium Mda	2.9878E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232746003       *
*   ANALYST       : MXR1                      DETECTOR   : GAM12            *
*   SAMPLE DATE   : 29-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 08:59:26.95    SAMPLE ALQT:  137.080 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.881E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.669E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.692E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.302E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:13:47.83

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746004.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 09:13:23
Sample ID         : G232746004           Sample quantity  : 1.37820E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.84  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.31*	46	611	1.10	93.80	89	10	6.42E-03	108.7	
2	0	63.32*	148	700	1.12	127.80	124	9	2.06E-02	33.8	
3	3	74.74*	776	650	1.34	150.64	146	20	1.08E-01	7.0	1.14E+00
4	3	77.02*	1207	527	1.22	155.20	146	20	1.68E-01	4.4	
5	3	84.11*	180	528	1.65	169.36	165	27	2.51E-02	22.8	7.30E-01
6	3	87.20	395	494	1.40	175.54	165	27	5.49E-02	11.0	
7	3	89.74	253	402	1.24	180.62	165	27	3.51E-02	15.1	
8	3	92.85*	395	526	1.67	186.83	165	27	5.49E-02	12.9	
9	0	128.79	213	471	1.74	258.70	253	12	2.96E-02	21.5	
10	0	186.12*	156	407	1.64	373.29	367	10	2.17E-02	26.4	
11	0	209.14	115	363	1.38	419.30	414	11	1.60E-02	33.4	
12	2	238.67*	1402	213	1.30	478.34	470	22	1.95E-01	3.3	1.08E+00
13	2	241.69	323	275	1.77	484.38	470	22	4.48E-02	14.0	
14	3	270.40	150	207	1.99	541.76	536	25	2.09E-02	20.9	1.40E+00
15	3	277.05	96	200	2.00	555.05	536	25	1.33E-02	31.8	
16	0	295.28	332	252	1.32	591.49	586	11	4.61E-02	10.8	
17	0	299.62	81	194	0.89	600.18	597	9	1.12E-02	33.1	
18	0	327.87	63	166	1.09	656.64	653	9	8.76E-03	38.8	
19	0	338.21	299	201	1.48	677.31	671	14	4.16E-02	11.6	
20	0	352.01*	687	171	1.40	704.89	699	14	9.54E-02	5.6	
21	0	409.46	59	78	1.56	819.72	815	8	8.18E-03	29.3	
22	0	463.02	106	153	1.37	926.77	919	16	1.47E-02	28.1	
23	0	511.00*	109	156	2.32	1022.64	1016	13	1.52E-02	29.2	
24	0	582.97*	399	85	1.56	1166.48	1158	14	5.54E-02	7.1	
25	0	609.15*	488	83	1.48	1218.79	1211	15	6.78E-02	6.1	
26	0	727.39	102	87	1.76	1455.08	1446	15	1.42E-02	22.1	
27	0	794.75	76	56	1.93	1589.67	1582	14	1.06E-02	23.8	
28	0	860.28	61	49	2.42	1720.60	1714	11	8.43E-03	25.9	
29	0	911.23*	253	78	1.56	1822.39	1815	15	3.52E-02	10.0	
30	3	964.37	97	36	2.64	1928.56	1921	23	1.34E-02	19.4	8.24E-01
31	3	968.80*	182	32	2.28	1937.41	1921	23	2.52E-02	9.9	
32	0	1122.48	41	151	1.84	2244.40	2234	20	5.67E-03	76.2	
33	0	1377.98*	22	13	1.41	2754.74	2750	10	3.12E-03	39.9	
34	0	1460.62*	1305	36	2.18	2919.77	2908	24	1.81E-01	3.0	
35	0	1764.63	74	16	1.78	3526.81	3518	15	1.03E-02	16.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 11:13:50

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746004.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 09:13:23
Sample ID : G232746004 Sample quantity : 137.82 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.84 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.321E+01	2.887E+00	5.161E-01	3.210E-02	64.342
CD-109	+	88.03	*	3.766E+00	8.734E-01	9.095E-01	6.926E-02	4.141
SN-126	+	64.28		5.224E-01	3.620E-01	3.945E-01	5.880E-02	1.324
	+	86.94		1.539E+00	7.178E-01	3.705E-01	1.525E-01	4.154
	+	87.57	*	3.703E-01	8.588E-02	8.930E-02	6.801E-03	4.147
TL-208	+	277.35		8.985E-01	5.831E-01	5.807E-01	7.450E-02	1.547
	+	510.84		5.412E-01	3.211E-01	2.602E-01	2.734E-02	2.080
	+	583.14	*	5.708E-01	9.103E-02	6.354E-02	4.675E-03	8.983
	+	860.37		8.341E-01	4.396E-01	4.995E-01	5.068E-02	1.670
BI-210	+	46.50	*	4.085E-01	8.887E-01	8.769E-01	6.841E-02	0.466
PB-210	+	46.50	*	4.085E-01	8.887E-01	8.769E-01	6.841E-02	0.466
PO-210	+	46.50	*	4.085E-01	8.886E-01	8.769E-01	5.898E-02	0.466
BI-211		72.87		1.143E+01	2.471E+00	3.935E+00	3.098E-01	2.905
	+	351.07	*	4.115E+00	5.666E-01	3.783E-01	2.997E-02	10.879
PB-212	+	74.81		2.458E+00	4.576E-01	3.752E-01	4.574E-02	6.553
	+	77.11		2.280E+00	2.695E-01	2.241E-01	1.744E-02	10.174
	+	87.30		1.713E+00	4.325E-01	4.127E-01	5.188E-02	4.150
	+	238.63	*	1.794E+00	2.261E-01	8.983E-02	9.685E-03	19.975
	+	300.09		1.603E+00	1.075E+00	1.201E+00	1.276E-01	1.336
PO-212	+	74.81		2.458E+00	4.576E-01	3.752E-01	4.574E-02	6.553
	+	77.11		2.280E+00	2.695E-01	2.241E-01	1.744E-02	10.174
	+	87.30		1.713E+00	4.325E-01	4.127E-01	5.188E-02	4.150
		115.19		-7.148E-01	3.486E+00	5.720E+00	7.278E-01	-0.125
	+	238.63	*	1.794E+00	2.261E-01	8.983E-02	9.685E-03	19.975
	+	300.09		1.603E+00	1.075E+00	1.201E+00	1.276E-01	1.336
PB-214	+	74.81		4.236E+00	7.506E-01	6.465E-01	6.968E-02	6.553
	+	77.11		3.908E+00	5.496E-01	3.842E-01	4.184E-02	10.174
	+	87.30		2.934E+00	7.170E-01	7.069E-01	7.662E-02	4.150
	+	241.98		2.480E+00	7.502E-01	5.411E-01	6.097E-02	4.585
	+	295.21		1.160E+00	2.805E-01	2.371E-01	2.592E-02	4.895
	+	351.92	*	1.431E+00	2.108E-01	1.219E-01	1.154E-02	11.744
PO-214	+	74.81		4.236E+00	7.506E-01	6.465E-01	6.968E-02	6.553
	+	77.11		3.908E+00	5.496E-01	3.842E-01	4.184E-02	10.174
	+	87.30		2.934E+00	7.170E-01	7.069E-01	7.662E-02	4.150

Sample ID : G232746004 Acquisition date : 14-JUL-2009 09:13:23

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.480E+00	7.502E-01	5.411E-01	6.097E-02	4.585
	+	295.21		1.160E+00	2.805E-01	2.371E-01	2.592E-02	4.895
	+	351.92	*	1.431E+00	2.108E-01	1.219E-01	1.154E-02	11.744
PO-216	+	74.81		2.458E+00	4.576E-01	3.752E-01	4.574E-02	6.553
	+	77.11		2.280E+00	2.695E-01	2.241E-01	1.744E-02	10.174
	+	87.30		1.713E+00	4.325E-01	4.127E-01	5.188E-02	4.150
	+	238.63	*	1.794E+00	2.261E-01	8.983E-02	9.685E-03	19.975
	+	300.09		1.603E+00	1.075E+00	1.201E+00	1.276E-01	1.336
PO-218	+	74.81		4.236E+00	7.506E-01	6.465E-01	6.968E-02	6.553
	+	77.11		3.908E+00	5.496E-01	3.842E-01	4.184E-02	10.174
	+	87.30		2.934E+00	7.170E-01	7.069E-01	7.662E-02	4.150
	+	241.98		2.480E+00	7.502E-01	5.411E-01	6.097E-02	4.585
	+	295.21		1.160E+00	2.805E-01	2.371E-01	2.592E-02	4.895
	+	351.92	*	1.431E+00	2.108E-01	1.219E-01	1.154E-02	11.744
RA-224	+	240.98	*	4.703E+00	1.398E+00	1.022E+00	1.000E-01	4.600
AC-228	+	338.32		1.967E+00	9.291E-01	3.811E-01	1.567E-01	5.162
	+	911.07	*	1.651E+00	3.873E-01	2.608E-01	3.227E-02	6.330
	+	969.11		2.084E+00	6.432E-01	4.059E-01	9.587E-02	5.134
RA-228	+	338.32		1.967E+00	9.291E-01	3.811E-01	1.567E-01	5.162
	+	911.07	*	1.651E+00	3.873E-01	2.608E-01	3.227E-02	6.330
	+	969.11		2.084E+00	6.432E-01	4.059E-01	9.587E-02	5.134
TH-228	+	84.40		5.134E+00	2.429E+00	2.705E+00	3.390E-01	1.898
	+	238.60	*	1.794E+00	2.261E-01	8.982E-02	9.684E-03	19.977
	+	300.10		1.603E+00	1.425E+00	1.201E+00	7.122E-01	1.336
TH-232	+	338.32		1.967E+00	4.828E-01	3.811E-01	2.988E-02	5.162
	+	911.07	*	1.651E+00	3.873E-01	2.608E-01	3.227E-02	6.330
	+	969.11		2.084E+00	6.432E-01	4.059E-01	9.587E-02	5.134
TH-234	+	63.29	*	1.320E+00	9.234E-01	1.019E+00	1.810E-01	1.295
	+	92.38		2.569E+00	8.098E-01	6.201E-01	1.114E-01	4.142
NP-237	+	86.50	*	1.087E+00	3.376E-01	2.614E-01	5.751E-02	4.160
		95.87		-8.256E-01	9.515E-01	1.304E+00	3.229E-01	-0.633
U-238	+	63.29	*	1.320E+00	9.234E-01	1.019E+00	1.810E-01	1.295
	+	92.38		2.569E+00	6.993E-01	6.201E-01	5.188E-02	4.142
AM-243	+	74.67	*	3.986E-01	6.415E-02	6.081E-02	4.763E-03	6.554
	+	86.72		4.078E+01	9.457E+00	9.808E+00	7.481E-01	4.157
		117.66		2.476E+00	3.708E+00	6.249E+00	8.274E-01	0.396
		142.18		2.946E+00	1.755E+01	2.898E+01	3.601E+00	0.102
ANH-511	+	511.00	*	1.169E-01	6.867E-02	5.623E-02	3.599E-03	2.079

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-3.365E-01	3.717E-01	5.728E-01	4.104E-02	-0.587
NA-22		1274.54	*	-3.144E-02	5.410E-02	8.235E-02	4.796E-03	-0.382
NA-24		1368.53	*	-1.919E-01	5.410E-02	Half-Life too short		
AL-26		1129.67		-1.378E+00	2.471E+00	3.198E+00	2.143E-01	-0.431
		1808.65	*	8.979E-03	2.972E-02	5.184E-02	2.975E-03	0.173
TI-44		67.85		-1.696E-02	2.860E-02	4.135E-02	3.309E-03	-0.410

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	78.38	*	4.207E-01	4.973E-02	6.416E-02	4.978E-03	6.558
SC-46		889.25	*	-3.151E-02	4.655E-02	7.244E-02	7.276E-03	-0.435
		1120.51		1.989E-01	7.522E-02	1.411E-01	9.707E-03	1.410
V-48		944.10		-5.191E-01	1.061E+00	1.673E+00	1.619E-01	-0.310
		983.50	*	-2.127E-02	8.462E-02	1.362E-01	1.247E-02	-0.156
		1312.09		-7.325E-02	9.796E-02	1.447E-01	8.389E-03	-0.506
CR-51		320.08	*	-1.380E-01	3.956E-01	6.510E-01	5.757E-02	-0.212
MN-52		744.21		4.050E-02	2.758E-01	4.666E-01	3.623E-02	0.087
		848.13		-2.128E+00	7.721E+00	1.253E+01	1.175E+00	-0.170
		935.52		2.576E-01	3.030E-01	5.318E-01	5.199E-02	0.484
		1246.25		-1.090E+01	9.037E+00	1.302E+01	7.572E-01	-0.837
		1333.61		-2.431E+00	6.468E+00	9.997E+00	5.786E-01	-0.243
		1434.06	*	5.257E-02	2.385E-01	4.091E-01	2.396E-02	0.128
MN-54		834.83	*	1.800E-02	4.375E-02	7.531E-02	6.899E-03	0.239
CO-56		846.75	*	2.241E-02	4.551E-02	7.851E-02	7.342E-03	0.285
		977.42		6.431E-01	3.527E+00	5.777E+00	5.340E-01	0.111
		1037.82		-1.489E-01	3.652E-01	5.758E-01	5.079E-02	-0.259
		1175.09		-1.586E+00	3.033E+00	4.724E+00	2.741E-01	-0.336
		1238.25		1.977E-01	1.137E-01	2.058E-01	1.272E-02	0.961
		1360.21		8.396E-01	1.109E+00	2.007E+00	1.166E-01	0.418
		1771.40		-1.217E+00	3.995E-01	3.294E-01	1.902E-02	-3.696
CO-57		122.06	*	-1.548E-02	2.605E-02	4.036E-02	5.727E-03	-0.383
		136.48		-3.066E-02	2.118E-01	3.461E-01	4.636E-02	-0.089
CO-58		810.76	*	-2.120E-02	4.080E-02	6.472E-02	5.696E-03	-0.328
FE-59		142.65		1.150E-01	2.705E+00	4.445E+00	5.504E-01	0.026
		192.34		-2.036E-01	9.597E-01	1.541E+00	2.209E-01	-0.132
		1099.22	*	7.487E-02	1.120E-01	1.930E-01	1.563E-02	0.388
		1291.56		-3.189E-02	1.460E-01	2.303E-01	1.711E-02	-0.138
CO-60		1173.22		-3.577E-02	6.021E-02	9.317E-02	5.404E-03	-0.384
		1332.49	*	-1.667E-02	5.148E-02	8.004E-02	4.632E-03	-0.208
ZN-65		1115.52	*	-4.968E-02	1.281E-01	1.703E-01	1.190E-02	-0.292
GE-68		1077.35	*	-1.007E+00	1.558E+00	2.399E+00	1.843E-01	-0.420
AS-73		53.44	*	2.693E-01	2.313E-01	4.026E-01	3.030E-02	0.669
AS-74		595.88	*	-6.508E-03	1.062E-01	1.714E-01	1.127E-02	-0.038
		634.78		-1.182E-01	4.313E-01	6.821E-01	4.496E-02	-0.173
SE-75		66.05		4.832E-02	2.736E+00	4.046E+00	4.037E-01	0.012
		96.73		-7.652E-01	7.660E-01	1.057E+00	1.476E-01	-0.724
		121.11		-1.951E-01	1.386E-01	2.109E-01	3.315E-02	-0.925
		136.00		1.322E-02	3.967E-02	6.596E-02	8.601E-03	0.200
		198.60		1.038E-02	1.966E+00	3.116E+00	3.368E-01	0.003
		264.65	*	2.181E-02	5.091E-02	7.321E-02	6.989E-03	0.298
		279.53		-4.643E-02	1.262E-01	1.808E-01	1.731E-02	-0.257
		303.91		1.693E+00	2.333E+00	3.580E+00	4.151E-01	0.473
		400.65		3.612E-01	2.942E-01	5.163E-01	4.724E-02	0.700
BR-77	+	87.88		7.606E+02	1.764E+02	2.793E+02	2.126E+01	2.723
		200.40		-4.428E+01	1.635E+02	2.614E+02	2.610E+01	-0.169
	+	239.00		2.692E+02	3.171E+01	3.738E+01	3.664E+00	7.203
		249.79		2.486E+00	6.601E+01	1.060E+02	1.028E+01	0.023
		281.68		-2.633E+01	9.339E+01	1.344E+02	1.241E+01	-0.196

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		297.23		3.392E+02	9.781E+01	1.265E+02	1.129E+01	2.682
		303.76		1.322E+02	1.855E+02	2.849E+02	2.502E+01	0.464
		439.47		1.266E+02	1.509E+02	2.611E+02	1.591E+01	0.485
		484.57		-1.111E+00	2.400E+02	3.937E+02	2.482E+01	-0.003
		520.65	*	-4.847E+00	1.060E+01	1.672E+01	1.075E+00	-0.290
		574.64		-3.045E+02	2.565E+02	3.331E+02	2.182E+01	-0.914
		578.91		1.990E+01	1.025E+02	1.468E+02	9.626E+00	0.136
		585.48		1.325E+03	2.892E+02	5.085E+02	3.339E+01	2.605
		755.35		-9.841E+01	1.896E+02	3.053E+02	2.421E+01	-0.322
		817.79		-8.277E+01	1.288E+02	2.013E+02	1.790E+01	-0.411
SR-82		698.33		-3.786E+01	4.203E+01	6.265E+01	4.444E+00	-0.604
		776.49	*	-8.742E-02	4.382E-01	7.208E-01	5.947E-02	-0.121
		1395.20		-4.840E+00	1.078E+01	1.687E+01	9.846E-01	-0.287
RB-83		520.41	*	-6.581E-02	7.659E-02	1.170E-01	7.525E-03	-0.562
		529.64		4.447E-02	1.184E-01	1.983E-01	1.280E-02	0.224
		552.65		-1.098E-02	2.231E-01	3.621E-01	2.358E-02	-0.030
RB-84		881.50	*	8.219E-02	8.347E-02	1.485E-01	1.473E-02	0.553
KR-85		513.99	*	2.463E+01	9.343E+00	1.591E+01	1.020E+00	1.548
SR-85		513.99	*	1.260E-01	4.779E-02	8.137E-02	5.216E-03	1.548
RB-86		1076.63	*	-6.526E-01	9.783E-01	1.503E+00	1.156E-01	-0.434
Y-88		898.02		-2.665E-02	4.677E-02	7.333E-02	7.498E-03	-0.363
		1836.01	*	-2.689E-02	3.935E-02	5.550E-02	3.175E-03	-0.484
ZR-88		392.90	*	3.144E-02	3.360E-02	5.855E-02	3.409E-03	0.537
Y-91		1204.90	*	7.697E+00	2.527E+01	4.196E+01	2.438E+00	0.183
NB-94		702.63	*	-3.680E-04	4.197E-02	6.732E-02	4.817E-03	-0.005
		871.10		3.682E-02	4.070E-02	7.211E-02	7.028E-03	0.511
NB-95		765.79	*	-3.772E-03	5.119E-02	8.516E-02	6.888E-03	-0.044
NB-95M		235.69	*	4.146E-01	1.558E-01	2.426E-01	2.654E-02	1.709
ZR-95		724.18		1.222E-01	1.181E-01	1.882E-01	1.565E-02	0.649
		756.15	*	-1.797E-02	8.561E-02	1.411E-01	1.253E-02	-0.127
NB-97		657.90	*	-1.930E-02	8.561E-02	Half-Life too short		
		1024.50		5.510E+00	8.561E-02	Half-Life too short		
ZR-97		254.15		3.019E+00	8.561E-02	Half-Life too short		
		355.39		4.148E+00	8.561E-02	Half-Life too short		
		507.63	*	5.027E+00	8.561E-02	Half-Life too short		
		602.52		8.377E-01	8.561E-02	Half-Life too short		
		1021.30		-7.226E-01	8.561E-02	Half-Life too short		
		1147.95		1.028E-01	8.561E-02	Half-Life too short		
		1362.66		-7.378E-01	8.561E-02	Half-Life too short		
		1750.46		1.710E+00	8.561E-02	Half-Life too short		
MO-99		140.51		-2.078E+00	2.441E+01	3.993E+01	1.165E+01	-0.052
		181.06		3.855E+00	1.963E+01	2.820E+01	5.348E+00	0.137
		366.43		-5.909E+01	9.130E+01	1.466E+02	1.006E+01	-0.403
		739.58	*	-7.964E+00	1.293E+01	2.058E+01	3.021E+00	-0.387
		778.00		2.446E+00	3.714E+01	6.234E+01	5.158E+00	0.039
TC-99M		140.51	*	-1.684E+09	3.714E+01	Half-Life too short		
RH-101		127.23		3.119E-02	3.880E-02	5.787E-02	7.966E-03	0.539
		198.01	*	1.267E-02	3.596E-02	5.781E-02	5.773E-03	0.219
		325.23		1.306E-01	2.613E-01	3.941E-01	3.243E-02	0.331

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RH-102		418.52		-2.132E-01	3.295E-01	5.160E-01	3.086E-02	-0.413
		475.06	*	5.710E-03	3.338E-02	5.542E-02	3.472E-03	0.103
		631.29		2.584E-03	6.614E-02	1.072E-01	7.066E-03	0.024
		697.49		-7.431E-02	9.679E-02	1.461E-01	1.035E-02	-0.508
		766.84		2.058E-01	1.321E-01	2.405E-01	1.949E-02	0.856
		1046.59		5.633E-02	1.336E-01	2.271E-01	1.863E-02	0.248
		1112.84		-2.191E-01	3.083E-01	4.106E-01	2.886E-02	-0.534
RU-103		497.08	*	4.331E-02	4.546E-02	7.864E-02	1.015E-02	0.551
	+	610.33		1.422E+01	2.840E+00	3.119E+00	4.907E-01	4.560
RH-106	+	511.85		5.837E-01	3.429E-01	4.855E-01	3.109E-02	1.202
		621.84	*	-1.573E-01	3.690E-01	5.759E-01	6.996E-02	-0.273
		1050.47		1.246E+00	2.672E+00	4.560E+00	3.712E-01	0.273
RU-106	+	511.85		5.837E-01	3.429E-01	4.855E-01	3.109E-02	1.202
		621.84	*	-1.573E-01	3.686E-01	5.759E-01	3.796E-02	-0.273
		1050.47		1.246E+00	2.672E+00	4.560E+00	3.712E-01	0.273
AG-108M		433.93	*	1.782E-03	3.635E-02	6.017E-02	3.937E-03	0.030
		614.37		-2.666E-02	4.763E-02	6.203E-02	4.359E-03	-0.430
		722.95		6.728E-03	4.719E-02	6.947E-02	5.445E-03	0.097
AG-110M		657.75	*	6.714E-03	4.384E-02	7.145E-02	4.939E-03	0.094
		677.61		3.349E-02	3.704E-01	6.002E-01	4.264E-02	0.056
		706.67		1.436E-01	2.684E-01	4.469E-01	3.350E-02	0.321
		763.93		-2.179E-01	2.031E-01	3.130E-01	2.604E-02	-0.696
		884.67		-5.461E-02	5.964E-02	9.063E-02	9.253E-03	-0.603
		937.48		-3.988E-02	1.359E-01	2.188E-01	2.194E-02	-0.182
		1384.27		4.974E-02	1.799E-01	2.715E-01	1.678E-02	0.183
IN-111		171.28		8.943E-01	9.851E-01	1.658E+00	1.648E-01	0.539
		245.39	*	3.576E-01	1.188E+00	1.697E+00	1.653E-01	0.211
IN-113M		391.69	*	-7.297E-03	4.981E-02	8.197E-02	5.085E-03	-0.089
SN-113		391.69	*	-7.297E-03	4.981E-02	8.197E-02	5.085E-03	-0.089
IN-114M		190.27	*	2.011E-01	2.015E-01	3.021E-01	3.016E-02	0.666
CD-115		260.90		-5.266E+01	1.261E+02	1.968E+02	1.882E+01	-0.268
		492.35		5.326E+00	3.863E+01	6.390E+01	4.048E+00	0.083
		527.90	*	5.616E+00	1.143E+01	1.929E+01	1.245E+00	0.291
SN-117M		156.02		-6.104E-01	2.320E+00	3.754E+00	4.139E-01	-0.163
		158.56	*	-5.200E-04	5.696E-02	9.304E-02	1.000E-02	-0.006
SB-122		563.90	*	-1.204E-01	2.246E+00	3.639E+00	2.378E-01	-0.033
		692.80		3.175E+01	4.877E+01	8.221E+01	5.766E+00	0.386
I-123		159.00	*	8.513E-01	4.877E+01	Half-Life too short		
		528.96		4.901E+02	4.877E+01	Half-Life too short		
TE-123M		159.00	*	5.640E-03	2.988E-02	4.917E-02	5.283E-03	0.115
I-124		602.71	*	-3.784E-01	8.191E-01	1.086E+00	7.152E-02	-0.348
		722.78		2.593E+00	4.556E+00	7.042E+00	5.245E-01	0.368
		1325.50		4.925E+00	4.225E+01	6.896E+01	3.993E+00	0.071
		1376.25		3.515E+01	3.866E+01	6.392E+01	3.722E+00	0.550
		1509.49		1.903E+00	1.765E+01	2.970E+01	1.746E+00	0.064
		1691.02		-5.843E-01	3.385E+00	5.367E+00	3.132E-01	-0.109
SB-124		602.71		-2.279E-02	4.935E-02	6.545E-02	4.310E-03	-0.348
		645.85		-1.209E-01	5.978E-01	9.492E-01	6.883E-02	-0.127
		709.31		1.137E+00	3.215E+00	5.526E+00	4.007E-01	0.206

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		713.82		-5.284E-01	1.798E+00	2.950E+00	3.288E-01	-0.179
		722.78		2.265E-01	3.979E-01	6.150E-01	4.712E-02	0.368
	+	968.20		2.140E+01	4.699E+00	8.450E+00	7.915E-01	2.532
		1045.16		-7.988E-01	2.900E+00	4.631E+00	3.811E-01	-0.172
		1325.50		4.594E-01	3.940E+00	6.432E+00	3.725E-01	0.071
		1368.21		-6.653E-01	1.730E+00	2.740E+00	3.255E-01	-0.243
		1436.60		7.064E-01	4.035E+00	6.875E+00	4.027E-01	0.103
		1691.02	*	-1.204E-02	6.972E-02	1.105E-01	6.997E-03	-0.109
SB-125		427.89	*	-2.341E-02	9.921E-02	1.614E-01	1.012E-02	-0.145
	+	463.38		1.013E+00	5.738E-01	6.187E-01	4.405E-02	1.636
		600.56		4.492E-02	2.077E-01	3.229E-01	2.388E-02	0.139
		635.90		8.687E-03	3.297E-01	5.335E-01	3.990E-02	0.016
TE-125M		109.28	*	-4.223E+00	9.099E+00	1.481E+01	1.903E+00	-0.285
I-126		388.63		1.908E-01	2.184E-01	3.796E-01	2.259E-02	0.503
		666.33	*	6.858E-02	2.160E-01	3.561E-01	2.365E-02	0.193
		753.82		1.040E+00	1.734E+00	3.019E+00	2.388E-01	0.345
SB-126		223.80		2.934E+00	4.355E+00	7.209E+00	7.144E-01	0.407
		278.60		3.996E+00	2.729E+00	4.357E+00	4.048E-01	0.917
	+	296.50		1.140E+01	2.663E+00	3.762E+00	3.365E-01	3.031
		414.70		-3.510E-02	8.804E-02	1.281E-01	7.633E-03	-0.274
		415.30		-9.421E-01	6.849E+00	1.093E+01	6.517E-01	-0.086
		555.20		-3.033E+00	4.368E+00	6.724E+00	4.383E-01	-0.451
		573.80		-1.314E-01	1.207E+00	1.891E+00	1.239E-01	-0.069
		593.00		4.263E-01	1.075E+00	1.793E+00	1.179E-01	0.238
		656.30		-9.656E-01	4.229E+00	6.704E+00	4.412E-01	-0.144
		666.33		2.864E-02	9.023E-02	1.487E-01	9.876E-03	0.193
		675.00		9.938E-02	2.359E+00	3.808E+00	2.575E-01	0.026
		695.00		2.470E-02	9.494E-02	1.516E-01	1.068E-02	0.163
		697.00		-2.232E-01	3.414E-01	5.077E-01	3.591E-02	-0.440
		720.50	*	5.846E-02	1.697E-01	2.554E-01	1.893E-02	0.229
		856.80		1.716E-01	6.517E-01	9.583E-01	9.116E-02	0.179
		989.30		8.301E-01	1.419E+00	2.455E+00	2.229E-01	0.338
		1034.80		3.013E+00	1.045E+01	1.758E+01	1.476E+00	0.171
		1213.00		-8.996E-01	6.140E+00	9.848E+00	5.725E-01	-0.091
SB-127		61.10		4.417E+01	2.685E+01	4.170E+01	4.502E+00	1.059
		252.40		-6.303E-01	4.556E+00	7.233E+00	3.056E+00	-0.087
		290.80		5.401E+00	2.371E+01	3.529E+01	4.037E+00	0.153
		411.60		2.685E+00	1.440E+01	2.099E+01	3.018E+00	0.128
		444.90		-6.952E+00	1.003E+01	1.573E+01	1.713E+00	-0.442
		473.00		1.067E-01	1.876E+00	3.093E+00	3.510E-01	0.034
		543.00		6.526E+00	1.862E+01	3.106E+01	4.092E+00	0.210
		603.60		-3.488E+00	1.401E+01	1.904E+01	2.120E+00	-0.183
		685.20	*	6.677E-01	1.534E+00	2.550E+00	2.569E-01	0.262
		698.50		-1.386E+01	1.803E+01	2.703E+01	4.052E+00	-0.513
		722.20		1.791E+01	3.239E+01	4.984E+01	5.084E+00	0.359
		783.80		2.547E+00	3.952E+00	6.888E+00	8.388E-01	0.370
XE-127		57.60		-3.287E+00	2.300E+00	3.560E+00	2.867E-01	-0.923
		145.22		4.678E-01	7.174E-01	1.182E+00	1.434E-01	0.396
		172.10		4.503E-02	1.233E-01	2.038E-01	2.026E-02	0.221

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		202.84	*	5.840E-03	5.288E-02	7.947E-02	7.932E-03	0.073
		374.96		-7.023E-02	2.171E-01	3.545E-01	2.313E-02	-0.198
I-131		80.18		-4.977E+00	3.709E+00	5.143E+00	4.005E-01	-0.968
		284.30		8.625E-01	1.525E+00	2.572E+00	2.471E-01	0.335
		364.48	*	7.757E-03	1.274E-01	2.129E-01	1.598E-02	0.036
		636.97		2.136E-02	1.834E+00	2.964E+00	2.136E-01	0.007
		722.89		1.146E+00	7.793E+00	1.148E+01	8.621E-01	0.100
TE-132		49.72		-4.284E+00	4.259E+00	6.058E+00	5.824E-01	-0.707
		111.76		2.433E+01	2.746E+01	4.647E+01	6.350E+00	0.524
		116.30		1.639E+00	2.577E+01	4.268E+01	6.185E+00	0.038
		228.16	*	-1.894E-01	7.027E-01	1.115E+00	1.829E-01	-0.170
BA-133		53.15		9.120E-01	9.729E-01	1.686E+00	1.263E-01	0.541
		79.62		-3.093E-02	1.083E+00	1.593E+00	2.348E-01	-0.019
		81.00		8.257E-02	1.000E-01	1.126E-01	1.735E-02	0.733
	+	276.40		8.879E-01	5.800E-01	6.897E-01	1.026E-01	1.287
		302.84		5.565E-02	1.653E-01	2.473E-01	3.316E-02	0.225
		356.01	*	5.837E-03	4.887E-02	7.150E-02	8.830E-03	0.082
		383.85		-3.580E-01	3.222E-01	4.955E-01	5.484E-02	-0.723
I-133	+	510.53		9.874E-01	3.222E-01	Half-Life too short		
		529.87	*	1.807E-03	3.222E-01	Half-Life too short		
		706.58		2.119E-01	3.222E-01	Half-Life too short		
		856.28		2.370E-02	3.222E-01	Half-Life too short		
		875.33		-9.742E-02	3.222E-01	Half-Life too short		
		1236.41		5.152E-01	3.222E-01	Half-Life too short		
		1298.22		-1.845E-01	3.222E-01	Half-Life too short		
CS-134		475.35		2.924E-01	2.177E+00	3.606E+00	2.259E-01	0.081
		563.23		-9.381E-02	4.165E-01	6.666E-01	4.427E-02	-0.141
		569.32		1.761E-01	2.288E-01	3.913E-01	2.621E-02	0.450
		604.70		1.842E-03	4.254E-02	6.035E-02	3.991E-03	0.031
	+	795.84	*	1.600E-01	7.745E-02	1.045E-01	8.999E-03	1.531
		801.93		-1.161E-01	5.168E-01	7.606E-01	6.611E-02	-0.153
		1038.57		1.868E+00	4.480E+00	7.620E+00	6.352E-01	0.245
		1167.94		1.887E+00	3.304E+00	5.611E+00	3.318E-01	0.336
		1365.15		-8.847E-01	1.307E+00	1.994E+00	1.273E-01	-0.444
CS-135		268.24	*	2.112E-01	1.942E-01	2.890E-01	3.091E-02	0.731
I-135		288.45		-4.666E+09	1.942E-01	Half-Life too short		
		417.63		1.439E+09	1.942E-01	Half-Life too short		
		546.56		-4.596E+08	1.942E-01	Half-Life too short		
		836.80		4.001E+09	1.942E-01	Half-Life too short		
		1038.76		5.599E+09	1.942E-01	Half-Life too short		
		1124.00		-8.312E+09	1.942E-01	Half-Life too short		
		1131.51		-3.327E+09	1.942E-01	Half-Life too short		
		1260.41	*	-2.091E+09	1.942E-01	Half-Life too short		
		1457.56		5.214E+11	1.942E-01	Half-Life too short		
		1678.03		5.234E+09	1.942E-01	Half-Life too short		
		1706.46		-1.384E+10	1.942E-01	Half-Life too short		
		1791.20		-7.004E+09	1.942E-01	Half-Life too short		
CS-136		66.91		-2.355E-01	4.583E-01	6.618E-01	1.000E-01	-0.356
	+	86.29		4.773E+00	1.197E+00	1.703E+00	2.079E-01	2.803

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		153.22		4.206E-01	6.785E-01	1.133E+00	1.372E-01	0.371
		163.89		-4.034E-01	1.094E+00	1.757E+00	1.941E-01	-0.230
		176.55		-1.509E-01	3.832E-01	6.128E-01	6.369E-02	-0.246
		273.65		4.174E-01	4.461E-01	7.447E-01	7.371E-02	0.560
		340.57		5.946E-01	1.573E-01	2.723E-01	2.190E-02	2.184
		818.51		-4.991E-02	7.775E-02	1.217E-01	1.084E-02	-0.410
		1048.07	*	4.227E-02	1.253E-01	2.115E-01	1.812E-02	0.200
		1235.34		3.152E-01	7.623E-01	1.271E+00	1.270E-01	0.248
BA-137M		661.65	*	2.083E-03	4.390E-02	7.098E-02	4.668E-03	0.029
CS-137		661.65	*	2.201E-03	4.641E-02	7.504E-02	4.950E-03	0.029
CE-139		165.85	*	-5.080E-03	3.032E-02	4.911E-02	4.876E-03	-0.103
BA-140		162.64		7.284E-02	7.719E-01	1.265E+00	1.356E-01	0.058
		304.84		9.476E-01	1.410E+00	2.128E+00	5.973E-01	0.445
		423.70		2.628E-01	2.131E+00	3.545E+00	1.128E+00	0.074
		537.32	*	8.845E-02	2.841E-01	4.716E-01	1.540E-01	0.188
LA-140	+	328.77		5.045E-01	3.940E-01	5.780E-01	4.994E-02	0.873
		432.53		1.407E+00	2.182E+00	3.744E+00	2.487E-01	0.376
		487.03		8.674E-03	1.504E-01	2.477E-01	1.740E-02	0.035
		751.79		9.074E-01	2.050E+00	3.534E+00	3.137E-01	0.257
		815.85		-3.127E-01	3.197E-01	4.790E-01	4.708E-02	-0.653
		867.82		-4.086E-01	1.684E+00	2.675E+00	2.702E-01	-0.153
		919.63		-1.686E+00	3.195E+00	4.574E+00	5.378E-01	-0.369
		925.24		-2.130E-01	1.142E+00	1.852E+00	1.920E-01	-0.115
		1596.49	*	4.001E-02	8.748E-02	1.544E-01	9.077E-03	0.259
CE-141		145.44	*	4.267E-02	6.493E-02	1.070E-01	1.308E-02	0.399
CE-143		57.37		-5.894E-04	6.493E-02	Half-Life too short		
		231.56		-1.188E-03	6.493E-02	Half-Life too short		
		293.26	*	6.354E-04	6.493E-02	Half-Life too short		
	+	350.59		2.901E-02	6.493E-02	Half-Life too short		
		490.36		1.818E-04	6.493E-02	Half-Life too short		
		664.57		-5.836E-04	6.493E-02	Half-Life too short		
		721.93		7.746E-04	6.493E-02	Half-Life too short		
CE-144		80.11		-2.274E+00	1.740E+00	2.417E+00	1.868E-01	-0.941
		133.54	*	1.357E-01	2.331E-01	3.445E-01	6.379E-02	0.394
PM-144		476.78		-2.173E-02	7.690E-02	1.239E-01	9.099E-03	-0.175
		618.01		-2.021E-03	3.567E-02	5.746E-02	3.964E-03	-0.035
		696.49	*	-2.303E-02	4.391E-02	6.596E-02	4.663E-03	-0.349
		778.57		6.053E-01	2.702E+00	4.585E+00	3.799E-01	0.132
PR-144		696.49	*	-1.561E+00	2.975E+00	4.469E+00	3.158E-01	-0.349
		1489.15		-1.029E+01	1.286E+01	1.876E+01	1.102E+00	-0.549
PM-146		453.90	*	1.568E-02	5.150E-02	8.417E-02	7.469E-03	0.186
		633.02		-1.902E-01	1.683E+00	2.693E+00	9.953E-01	-0.071
		735.90		8.477E-02	1.710E-01	2.940E-01	8.327E-02	0.288
		747.13		-5.971E-02	1.105E-01	1.773E-01	2.403E-02	-0.337
ND-147	+	91.11		8.074E-01	2.534E-01	4.542E-01	4.040E-02	1.778
		319.41		-3.098E-01	3.491E+00	5.823E+00	4.887E-01	-0.053
		439.89		7.220E+00	6.380E+00	1.121E+01	6.841E-01	0.644
		531.02	*	-2.048E-01	6.230E-01	9.917E-01	1.370E-01	-0.206
PM-149		285.90	*	1.497E+01	8.809E+01	1.495E+02	2.369E+01	0.100

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152		121.78		-4.644E-02	7.554E-02	1.169E-01	1.748E-02	-0.397
		244.69		3.014E-01	4.039E-01	5.917E-01	5.768E-02	0.509
		344.27	*	-1.321E-01	1.248E-01	1.539E-01	1.266E-02	-0.858
		443.98		-9.875E-01	1.034E+00	1.593E+00	9.750E-02	-0.620
		778.89		1.477E-01	3.112E-01	5.374E-01	4.454E-02	0.275
		867.32		-1.656E-01	1.029E+00	1.604E+00	1.554E-01	-0.103
	+	964.01		1.278E+00	5.099E-01	6.972E-01	6.569E-02	1.833
		1085.78		2.009E-01	4.957E-01	8.382E-01	6.311E-02	0.240
		1112.02		4.215E-02	4.001E-01	6.110E-01	4.303E-02	0.069
		1407.95		-6.372E-03	1.910E-01	3.174E-01	1.855E-02	-0.020
GD-153		69.67		3.907E-01	1.055E+00	1.582E+00	1.258E-01	0.247
	+	83.37		2.947E+01	1.363E+01	1.970E+01	1.512E+00	1.496
		97.43	*	5.045E-02	7.715E-02	1.152E-01	1.068E-02	0.438
		103.18		-9.730E-02	1.000E-01	1.597E-01	1.651E-02	-0.609
EU-154		123.07		2.160E-02	5.824E-02	8.578E-02	1.367E-02	0.252
		247.94		8.377E-02	4.390E-01	6.220E-01	7.663E-02	0.135
		591.81		1.201E-01	7.477E-01	1.227E+00	1.258E-01	0.098
		723.30		2.291E-02	1.969E-01	2.890E-01	2.453E-02	0.079
		756.87		-6.928E-02	9.244E-01	1.538E+00	1.770E-01	-0.045
		873.19		4.118E-02	3.601E-01	6.026E-01	7.886E-02	0.068
		996.32		3.312E-01	4.128E-01	7.207E-01	1.293E-01	0.460
		1004.76		1.906E-01	2.578E-01	4.481E-01	5.295E-02	0.425
		1274.45	*	-8.996E-02	1.511E-01	2.293E-01	2.144E-02	-0.392
EU-155		48.70		3.898E-01	4.942E-01	7.636E-01	5.322E-02	0.510
		60.01		3.009E+00	2.237E+00	3.480E+00	2.881E-01	0.865
	+	86.54		4.459E-01	1.036E-01	1.571E-01	1.214E-02	2.839
		105.31	*	1.248E-01	1.059E-01	1.776E-01	1.924E-02	0.703
TB-160	+	86.79		1.189E+00	2.757E-01	4.163E-01	3.175E-02	2.855
		197.04		4.804E-01	6.004E-01	9.805E-01	9.792E-02	0.490
		215.65		2.863E-01	7.961E-01	1.261E+00	1.254E-01	0.227
	+	298.57		2.328E-01	1.554E-01	2.220E-01	1.976E-02	1.048
		879.36	*	9.383E-02	1.704E-01	2.942E-01	2.907E-02	0.319
		962.29		9.651E-01	7.157E-01	1.153E+00	1.089E-01	0.837
		966.15		1.550E+00	3.381E-01	6.356E-01	5.971E-02	2.439
		1177.93		3.293E-01	4.846E-01	8.281E-01	4.805E-02	0.398
		1271.85		3.176E-02	8.480E-01	1.376E+00	7.999E-02	0.023
HO-166M		80.57		2.262E-01	2.729E-01	3.093E-01	2.388E-02	0.731
		184.41		9.069E-02	4.591E-02	7.105E-02	7.090E-03	1.276
		280.46		-1.263E-01	9.927E-02	1.318E-01	1.220E-02	-0.958
	+	410.95		4.632E-01	2.726E-01	4.527E-01	2.687E-02	1.023
		711.68	*	-3.674E-03	7.052E-02	1.180E-01	8.595E-03	-0.031
		752.31		2.301E-01	3.286E-01	5.758E-01	4.540E-02	0.400
		810.29		-3.635E-02	6.262E-02	9.881E-02	8.669E-03	-0.368
TM-171		51.35		-1.435E+01	8.515E+00	1.172E+01	8.524E-01	-1.225
		52.39		-1.114E+00	4.164E+00	6.753E+00	4.997E-01	-0.165
		59.40		1.308E+01	1.165E+01	1.802E+01	1.493E+00	0.726
		66.72	*	-2.688E+00	1.650E+01	2.422E+01	1.947E+00	-0.111
LU-176	+	88.36		8.782E-01	2.037E-01	3.281E-01	2.517E-02	2.677
		201.83		-1.976E-02	3.032E-02	4.757E-02	4.748E-03	-0.415

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		306.84	*	-1.629E-03	2.505E-02	4.083E-02	3.556E-03	-0.040
		401.10		7.305E+00	7.564E+00	1.317E+01	7.738E-01	0.555
LU-177		112.95		-1.521E-01	1.542E+00	2.542E+00	3.118E-01	-0.060
	+	208.36	*	2.541E+00	1.716E+00	2.048E+00	2.042E-01	1.241
LU-177M		52.97		3.373E-01	4.318E-01	7.456E-01	5.569E-02	0.452
		54.07		4.155E-01	2.486E-01	4.369E-01	3.322E-02	0.951
		61.30		1.408E+00	7.317E-01	1.150E+00	9.463E-02	1.224
		121.62		-3.319E-01	3.767E-01	5.964E-01	8.401E-02	-0.556
		147.16		-2.430E-01	6.723E-01	1.086E+00	1.297E-01	-0.224
		171.86		2.731E-01	5.026E-01	8.357E-01	8.311E-02	0.327
		218.09		-3.562E-01	8.831E-01	1.396E+00	1.387E-01	-0.255
		268.79		1.514E+00	1.006E+00	1.527E+00	1.443E-01	0.991
		319.02		-3.920E-02	2.800E-01	4.660E-01	3.914E-02	-0.084
		367.43		3.439E-01	1.001E+00	1.697E+00	1.158E-01	0.203
		413.65	*	1.227E-01	2.041E-01	3.086E-01	1.836E-02	0.398
HF-181		56.28		-3.050E-01	3.177E-01	5.197E-01	4.096E-02	-0.587
		57.53		-2.797E-01	1.929E-01	2.983E-01	2.399E-02	-0.938
		65.20		4.316E-01	5.340E-01	8.118E-01	6.563E-02	0.532
		133.02		2.274E-02	7.359E-02	1.078E-01	1.430E-02	0.211
		136.25		-1.915E-02	4.641E-01	7.615E-01	9.883E-02	-0.025
		345.85		-7.456E-03	2.579E-01	3.267E-01	2.482E-02	-0.023
		482.03	*	1.749E-02	4.728E-02	7.947E-02	5.001E-03	0.220
W-181		56.28		-1.199E-01	1.247E-01	2.040E-01	1.608E-02	-0.588
		57.53		-1.099E-01	7.576E-02	1.171E-01	9.421E-03	-0.938
		65.20	*	1.681E-01	2.081E-01	3.163E-01	2.557E-02	0.532
TA-182		67.75		-4.188E-02	6.801E-02	9.824E-02	7.865E-03	-0.426
		100.10		1.175E-01	1.631E-01	2.732E-01	2.667E-02	0.430
		152.43		1.943E-01	3.516E-01	5.863E-01	6.687E-02	0.331
		222.10		1.623E-01	3.703E-01	6.079E-01	6.029E-02	0.267
		1001.68		-1.056E+00	2.505E+00	3.901E+00	3.473E-01	-0.271
	+	1121.28		2.768E-01	4.222E-01	3.830E-01	2.629E-02	0.723
		1189.05		1.357E-01	3.810E-01	6.372E-01	3.700E-02	0.213
		1221.42	*	1.928E-02	2.618E-01	4.270E-01	2.482E-02	0.045
		1230.97		-2.105E-01	5.816E-01	9.142E-01	5.316E-02	-0.230
RE-183		57.98		-6.793E-02	7.929E-02	1.202E-01	9.738E-03	-0.565
		59.32		5.261E-02	4.755E-02	7.351E-02	6.085E-03	0.716
		67.20		-5.761E-02	1.195E-01	1.731E-01	1.389E-02	-0.333
		162.32	*	4.448E-02	1.153E-01	1.910E-01	1.973E-02	0.233
	+	208.81		2.334E+00	1.577E+00	1.871E+00	1.865E-01	1.248
		291.72		-3.291E-02	1.102E+00	1.612E+00	1.458E-01	-0.020
RE-184		57.98		-2.506E-01	2.926E-01	4.436E-01	3.593E-02	-0.565
		59.32		1.940E-01	1.753E-01	2.710E-01	2.243E-02	0.716
		67.20		-2.125E-01	4.407E-01	6.385E-01	5.122E-02	-0.333
		161.27		2.367E-01	3.729E-01	6.225E-01	6.506E-02	0.380
		216.55		2.630E-02	2.729E-01	4.421E-01	4.396E-02	0.059
		252.85	*	6.125E-02	2.501E-01	4.055E-01	3.918E-02	0.151
		318.01		-4.491E-02	4.808E-01	8.021E-01	6.760E-02	-0.056
		792.07		1.034E+00	1.299E+00	2.023E+00	1.718E-01	0.511
		903.28		1.077E-01	1.218E+00	1.825E+00	1.849E-01	0.059

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		920.93		-3.430E-01	4.801E-01	7.355E-01	7.313E-02	-0.466
OS-185		59.72		1.639E-01	1.307E-01	2.028E-01	1.682E-02	0.808
		61.14		1.356E-01	7.927E-02	1.241E-01	1.022E-02	1.092
		69.30		-3.545E-02	1.884E-01	2.768E-01	2.204E-02	-0.128
		592.07		1.154E+00	2.986E+00	4.977E+00	3.272E-01	0.232
		646.12	*	-9.303E-03	5.099E-02	8.110E-02	5.342E-03	-0.115
		717.42		-1.167E-01	9.983E-01	1.584E+00	1.167E-01	-0.074
		874.81		-2.879E-01	7.137E-01	1.143E+00	1.121E-01	-0.252
		880.27		7.889E-01	9.305E-01	1.641E+00	1.624E-01	0.481
RE-188		155.03	*	1.344E-02	1.780E-01	2.919E-01	3.250E-02	0.046
		477.96		-1.266E+00	3.481E+00	5.577E+00	3.500E-01	-0.227
		633.10		-2.880E-01	3.397E+00	5.454E+00	3.595E-01	-0.053
W-188	+	63.58		5.292E+01	3.607E+01	4.586E+01	3.732E+00	1.154
		227.08		-6.950E+00	1.389E+01	2.181E+01	2.157E+00	-0.319
		290.67	*	1.946E+00	8.541E+00	1.271E+01	1.152E+00	0.153
IR-192	+	295.96		8.829E-01	2.064E-01	2.906E-01	2.620E-02	3.038
		308.46		-2.038E-02	9.377E-02	1.555E-01	1.355E-02	-0.131
		316.51	*	2.658E-02	3.667E-02	6.354E-02	5.393E-03	0.418
		468.07		-3.389E-02	8.526E-02	1.168E-01	8.251E-03	-0.290
		604.41		-1.281E-01	5.701E-01	7.856E-01	9.247E-02	-0.163
		612.46		2.132E+00	9.851E-01	1.623E+00	1.329E-01	1.314
AU-195		65.12		9.126E-02	9.659E-02	1.474E-01	1.192E-02	0.619
		66.83		-9.228E-03	5.469E-02	8.028E-02	6.448E-03	-0.115
	+	75.70		1.289E+00	2.074E-01	3.726E-01	2.911E-02	3.458
		98.88	*	1.571E-01	2.102E-01	3.423E-01	3.264E-02	0.459
	+	129.76		1.098E+01	4.957E+00	5.220E+00	7.073E-01	2.104
TL-200		367.94	*	1.922E-04	4.957E+00	Half-Life too short		
		579.30		4.178E-03	4.957E+00	Half-Life too short		
		828.27		-4.241E-03	4.957E+00	Half-Life too short		
		1205.75		5.812E-04	4.957E+00	Half-Life too short		
TL-201		68.90		-4.960E-01	3.036E+00	4.162E+00	3.318E-01	-0.119
		70.82		9.953E-01	1.692E+00	2.554E+00	2.024E-01	0.390
		80.30		-5.485E+00	3.914E+00	5.411E+00	4.180E-01	-1.014
		135.34		1.704E+01	2.505E+01	4.073E+01	5.320E+00	0.418
		167.43	*	-3.293E+00	6.807E+00	1.086E+01	1.079E+00	-0.303
TL-202		68.90		-4.642E-02	2.841E-01	3.895E-01	3.105E-02	-0.119
		70.82		9.289E-02	1.579E-01	2.384E-01	1.889E-02	0.390
		80.30		-5.121E-01	3.654E-01	5.051E-01	3.902E-02	-1.014
		439.56	*	6.474E-02	7.716E-02	1.335E-01	8.136E-03	0.485
HG-203		70.83		4.098E-01	6.926E-01	1.044E+00	1.375E-01	0.393
		72.87		2.265E+00	5.397E-01	7.800E-01	9.927E-02	2.904
		82.60		2.021E+00	1.206E+00	1.411E+00	1.860E-01	1.432
		279.20	*	2.285E-02	4.645E-02	7.041E-02	6.695E-03	0.324
BI-207		72.80		6.122E-01	1.414E-01	2.254E-01	1.775E-02	2.716
	+	74.97		7.154E-01	1.152E-01	1.810E-01	1.417E-02	3.952
	+	84.90		3.815E-01	1.764E-01	2.719E-01	2.081E-02	1.403
		569.67		1.717E-02	3.601E-02	6.044E-02	3.956E-03	0.284
		1063.62	*	3.731E-03	5.691E-02	9.377E-02	7.426E-03	0.040
		1770.23		1.422E-01	4.404E-01	6.860E-01	3.962E-02	0.207

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-207		81.07		1.813E-01	2.196E-01	2.487E-01	1.918E-02	0.729
	+	83.78		2.515E-01	1.163E-01	1.691E-01	1.297E-02	1.487
		94.90		4.836E-01	2.299E-01	3.594E-01	3.167E-02	1.346
		122.32		-8.824E-01	1.888E+00	2.817E+00	4.104E-01	-0.313
		144.24		3.531E-01	7.000E-01	1.148E+00	1.490E-01	0.307
		154.21		2.194E-01	4.121E-01	6.863E-01	8.162E-02	0.320
	+	269.46		6.919E-01	2.968E-01	3.753E-01	3.604E-02	1.843
		323.87	*	1.662E-01	7.667E-01	1.134E+00	1.989E-01	0.146
	+	338.28		8.215E+00	2.142E+00	2.647E+00	3.119E-01	3.103
		445.03		-2.090E+00	2.456E+00	3.801E+00	3.974E-01	-0.550
PO-209		260.50		-5.353E+00	9.978E+00	1.546E+01	1.479E+00	-0.346
		262.80		2.114E+00	2.748E+01	4.411E+01	4.206E+00	0.048
		896.60	*	-3.279E+00	8.550E+00	1.367E+01	1.390E+00	-0.240
PB-211		404.84	*	-8.798E-01	1.338E+00	1.649E+00	1.028E+00	-0.533
		427.08		-7.589E-01	2.329E+00	3.693E+00	2.283E+00	-0.206
		831.96		1.382E-01	1.370E+00	2.292E+00	1.438E+00	0.060
BI-212	+	727.18	*	1.277E+00	5.767E-01	7.354E-01	6.671E-02	1.736
		785.46		-5.994E-01	2.106E+00	3.272E+00	2.745E-01	-0.183
		1620.62		5.427E-01	1.317E+00	2.275E+00	1.335E-01	0.239
BI-214	+	609.31	*	1.323E+00	1.968E-01	2.951E-01	2.473E-02	4.483
		768.36		1.421E+00	8.880E-01	1.613E+00	1.625E-01	0.881
		934.06		1.558E+00	1.363E+00	2.436E+00	2.827E-01	0.640
		1120.29		1.181E+00	4.484E-01	8.289E-01	7.918E-02	1.425
		1238.11		1.922E+00	1.126E+00	2.028E+00	1.655E-01	0.948
	+	1377.67		1.414E+00	1.135E+00	2.015E+00	1.733E-01	0.702
	+	1764.49		1.490E+00	4.918E-01	8.831E-01	5.105E-02	1.688
PO-215		81.07		1.813E-01	2.196E-01	2.487E-01	1.918E-02	0.729
	+	83.78		2.515E-01	1.163E-01	1.691E-01	1.297E-02	1.487
		94.90		4.836E-01	2.299E-01	3.594E-01	3.167E-02	1.346
		122.32		-8.824E-01	1.888E+00	2.817E+00	4.104E-01	-0.313
		144.24		3.531E-01	7.000E-01	1.148E+00	1.490E-01	0.307
		154.21		2.194E-01	4.121E-01	6.863E-01	8.162E-02	0.320
	+	269.46		6.919E-01	2.968E-01	3.753E-01	3.604E-02	1.843
		323.87	*	1.662E-01	7.667E-01	1.134E+00	1.989E-01	0.146
	+	338.28		8.215E+00	2.142E+00	2.647E+00	3.119E-01	3.103
		445.03		-2.090E+00	2.456E+00	3.801E+00	3.974E-01	-0.550
RN-219	+	271.23		8.877E-01	3.837E-01	4.858E-01	5.336E-02	1.827
		401.81	*	1.971E-01	4.722E-01	7.989E-01	1.090E-01	0.247
RN-220		549.76	*	1.336E+01	3.053E+01	5.124E+01	3.334E+00	0.261
RA-223		81.07		1.813E-01	2.196E-01	2.487E-01	1.918E-02	0.729
	+	83.78		2.515E-01	1.163E-01	1.691E-01	1.297E-02	1.487
		94.90		4.836E-01	2.299E-01	3.594E-01	3.167E-02	1.346
		122.32		-8.824E-01	1.888E+00	2.817E+00	4.104E-01	-0.313
		144.24		3.531E-01	7.000E-01	1.148E+00	1.490E-01	0.307
		154.21		2.194E-01	4.121E-01	6.863E-01	8.162E-02	0.320
	+	269.46		6.919E-01	2.968E-01	3.753E-01	3.604E-02	1.843
		323.87	*	1.662E-01	7.667E-01	1.134E+00	1.989E-01	0.146
	+	338.28		8.215E+00	2.142E+00	2.647E+00	3.119E-01	3.103
		445.03		-2.090E+00	2.456E+00	3.801E+00	3.974E-01	-0.550

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	+	609.31	*	1.323E+00	1.968E-01	2.951E-01	2.473E-02	4.483
		768.36		1.421E+00	8.880E-01	1.613E+00	1.625E-01	0.881
		934.06		1.558E+00	1.363E+00	2.436E+00	2.827E-01	0.640
		1120.29		1.181E+00	4.484E-01	8.289E-01	7.918E-02	1.425
		1238.11		1.922E+00	1.126E+00	2.028E+00	1.655E-01	0.948
	+	1377.67		1.414E+00	1.135E+00	2.015E+00	1.733E-01	0.702
	+	1764.49		1.490E+00	4.918E-01	8.831E-01	5.105E-02	1.688
AC-227		79.80		-7.074E-01	1.369E+00	1.964E+00	4.157E-01	-0.360
		236.00		1.518E+00	3.641E-01	5.342E-01	7.010E-02	2.842
		256.20	*	4.160E-01	4.161E-01	6.910E-01	1.101E-01	0.602
		286.10		6.315E-01	1.572E+00	2.693E+00	3.651E-01	0.234
	+	299.80		2.972E+00	2.035E+00	2.841E+00	5.005E-01	1.046
		304.40		9.793E-01	2.108E+00	3.176E+00	5.876E-01	0.308
		334.20		-7.638E-01	3.253E+00	4.047E+00	7.741E-01	-0.189
TH-227		79.80		-7.074E-01	1.369E+00	1.964E+00	4.212E-01	-0.360
	+	94.00		9.927E+00	3.353E+00	3.332E+00	7.261E-01	2.979
		236.00		1.518E+00	3.554E-01	5.342E-01	6.432E-02	2.842
		256.20	*	4.160E-01	4.180E-01	6.910E-01	1.283E-01	0.602
		286.10		6.315E-01	1.693E+00	2.693E+00	2.704E+00	0.234
	+	299.80		2.972E+00	2.035E+00	2.841E+00	5.005E-01	1.046
		304.40		9.793E-01	2.108E+00	3.176E+00	5.876E-01	0.308
		334.20		-7.638E-01	3.253E+00	4.047E+00	7.741E-01	-0.189
TH-229	+	85.43		3.765E-01	1.742E-01	2.856E-01	2.183E-02	1.319
	+	88.47		5.056E-01	1.173E-01	1.881E-01	1.446E-02	2.688
		100.00		1.087E-01	1.701E-01	2.844E-01	2.771E-02	0.382
		193.63	*	-5.577E-01	5.306E-01	8.154E-01	8.143E-02	-0.684
		210.97		1.403E+00	9.333E-01	1.415E+00	1.410E-01	0.992
TH-230	+	609.31	*	1.323E+00	1.968E-01	2.951E-01	2.473E-02	4.483
		768.36		1.421E+00	8.880E-01	1.613E+00	1.625E-01	0.881
		934.06		1.558E+00	1.363E+00	2.436E+00	2.827E-01	0.640
		1120.29		1.181E+00	4.484E-01	8.289E-01	7.918E-02	1.425
		1238.11		1.922E+00	1.126E+00	2.028E+00	1.655E-01	0.948
	+	1377.67		1.414E+00	1.135E+00	2.015E+00	1.733E-01	0.702
	+	1764.49		1.490E+00	4.918E-01	8.831E-01	5.105E-02	1.688
PA-231		283.67	*	6.946E-01	1.635E+00	2.660E+00	4.129E-01	0.261
		301.29		1.131E+00	7.023E-01	1.110E+00	1.377E-01	1.019
TH-231		81.07		1.813E-01	2.196E-01	2.487E-01	1.918E-02	0.729
	+	83.78		2.515E-01	1.163E-01	1.691E-01	1.297E-02	1.487
		94.90		4.836E-01	2.299E-01	3.594E-01	3.167E-02	1.346
		122.32		-8.824E-01	1.888E+00	2.817E+00	4.104E-01	-0.313
		144.24		3.531E-01	7.000E-01	1.148E+00	1.490E-01	0.307
		154.21		2.194E-01	4.121E-01	6.863E-01	8.162E-02	0.320
	+	269.46		6.919E-01	2.968E-01	3.753E-01	3.604E-02	1.843
		323.87	*	1.662E-01	7.667E-01	1.134E+00	1.989E-01	0.146
	+	338.28		8.215E+00	2.142E+00	2.647E+00	3.119E-01	3.103
		445.03		-2.090E+00	2.456E+00	3.801E+00	3.974E-01	-0.550
U-231	+	84.21		1.042E+01	4.821E+00	7.028E+00	5.385E-01	1.483
	+	92.29		9.434E+00	2.568E+00	3.359E+00	2.805E-01	2.809
		95.87	*	-9.003E-01	1.017E+00	1.422E+00	1.278E-01	-0.633

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		108.00		-2.061E+00	1.933E+00	3.063E+00	3.452E-01	-0.673
PA-233	+	75.28		2.088E+01	4.280E+00	5.687E+00	8.481E-01	3.671
	+	86.59		7.249E+00	2.493E+00	2.549E+00	6.759E-01	2.844
	+	300.12		8.285E-01	5.622E-01	7.968E-01	1.197E-01	1.040
		311.98	*	2.098E-03	6.535E-02	1.098E-01	9.696E-03	0.019
		340.50		3.113E+00	1.045E+00	1.363E+00	3.208E-01	2.285
		398.62		7.072E-01	2.435E+00	4.088E+00	1.057E+00	0.173
		415.76		1.990E-01	1.828E+00	2.964E+00	6.115E-01	0.067
PA-234	+	63.00		1.538E+00	1.067E+00	1.338E+00	2.040E-01	1.150
		94.67		6.038E-01	1.767E-01	2.691E-01	3.366E-02	2.244
		98.44		5.048E-02	9.274E-02	1.380E-01	7.719E-02	0.366
		99.86		2.954E-01	4.311E-01	7.216E-01	7.011E-02	0.409
		111.00		1.048E-01	1.784E-01	3.002E-01	4.378E-02	0.349
		131.20		3.305E-02	1.236E-01	1.807E-01	2.426E-02	0.183
		152.70		2.516E-01	3.412E-01	5.686E-01	1.057E-01	0.443
	+	186.00		3.758E+00	2.310E+00	2.661E+00	8.413E-01	1.412
		226.40		9.011E-02	4.354E-01	7.073E-01	9.950E-02	0.127
		227.20		-2.377E-01	4.702E-01	7.383E-01	7.301E-02	-0.322
		248.90		1.296E-01	9.482E-01	1.413E+00	3.230E-01	0.092
		293.70		5.256E+00	1.335E+00	1.776E+00	3.107E-01	2.959
		369.80		4.568E-01	9.283E-01	1.578E+00	3.330E-01	0.289
		568.70		4.598E-01	1.157E+00	1.933E+00	1.265E-01	0.238
		569.50		2.012E-01	3.198E-01	5.420E-01	3.547E-02	0.371
		574.00		-6.948E-01	1.850E+00	2.739E+00	1.794E-01	-0.254
		699.00		-5.516E-01	8.945E-01	1.359E+00	2.507E-01	-0.406
		706.10		-1.000E-01	1.348E+00	2.150E+00	9.534E-01	-0.047
		733.00		-1.130E-01	4.798E-01	6.745E-01	1.472E-01	-0.167
		742.81		1.204E+00	1.763E+00	2.769E+00	1.858E+00	0.435
		796.30		1.533E+00	1.294E+00	1.985E+00	5.367E-01	0.772
		805.60		8.107E-01	1.138E+00	1.958E+00	6.004E-01	0.414
		819.60		-6.748E-01	1.338E+00	2.084E+00	7.941E-01	-0.324
		826.30		-2.645E-01	9.429E-01	1.520E+00	6.813E-01	-0.174
		831.60		-2.322E-01	7.225E-01	1.165E+00	3.495E-01	-0.199
		876.40		-8.674E-01	1.358E+00	1.576E+00	1.622E+00	-0.550
		880.51		2.259E-01	3.384E-01	5.896E-01	5.837E-02	0.383
		883.24		1.045E-01	3.514E-01	5.846E-01	3.940E-01	0.179
		899.00		-8.292E-01	1.015E+00	1.442E+00	6.352E-01	-0.575
		925.00		-1.660E-01	1.208E+00	1.968E+00	1.948E-01	-0.084
		926.50		-6.303E-02	1.765E-01	2.796E-01	7.197E-02	-0.225
		946.00	*	-3.806E-01	3.800E-01	5.612E-01	1.081E-01	-0.678
		949.00		6.598E-01	5.433E-01	9.771E-01	9.392E-02	0.675
		980.50		5.881E-02	8.733E-01	1.446E+00	1.331E-01	0.041
		1394.10		-3.299E-01	1.153E+00	1.813E+00	1.175E+00	-0.182
PA-234M		766.41		2.139E+01	2.636E+01	3.682E+01	2.821E+01	0.581
		1001.03	*	-2.014E-01	7.923E+00	1.278E+01	1.457E+00	-0.016
U-234	+	609.31	*	1.323E+00	1.968E-01	2.951E-01	2.473E-02	4.483
		768.36		1.421E+00	8.880E-01	1.613E+00	1.625E-01	0.881
		934.06		1.558E+00	1.363E+00	2.436E+00	2.827E-01	0.640
		1120.29		1.181E+00	4.484E-01	8.289E-01	7.918E-02	1.425

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1238.11		1.922E+00	1.126E+00	2.028E+00	1.655E-01	0.948
	+	1377.67		1.414E+00	1.135E+00	2.015E+00	1.733E-01	0.702
	+	1764.49		1.490E+00	4.918E-01	8.831E-01	5.105E-02	1.688
U-235	+	89.95		3.263E+00	1.404E+00	1.649E+00	5.058E-01	1.979
	+	93.35		3.088E+00	1.177E+00	1.077E+00	3.017E-01	2.866
		105.00		1.009E+00	1.077E+00	1.734E+00	5.289E-01	0.582
		143.76	*	1.998E-02	2.169E-01	3.512E-01	6.872E-02	0.057
		163.35		-1.682E-01	4.912E-01	7.889E-01	1.566E-01	-0.213
	+	185.71		1.392E-01	7.467E-02	9.812E-02	9.793E-03	1.418
		205.31		5.183E-02	6.148E-01	8.729E-01	1.722E-01	0.059
NP-236		94.67		4.601E-01	1.278E-01	2.043E-01	1.792E-02	2.252
		98.44		3.817E-02	6.688E-02	1.043E-01	9.865E-03	0.366
		111.00		7.931E-02	1.348E-01	2.271E-01	2.695E-02	0.349
		160.31	*	5.266E-02	8.352E-02	1.394E-01	1.472E-02	0.378
NP-239		99.55		1.468E-01	1.426E-01	2.407E-01	2.325E-02	0.610
		117.00	*	1.181E-01	1.865E-01	3.140E-01	4.114E-02	0.376
	+	209.75		1.846E+00	1.247E+00	1.490E+00	1.485E-01	1.239
		228.18		-6.635E-02	2.413E-01	3.832E-01	3.787E-02	-0.173
	+	277.60		4.333E-01	2.786E-01	3.302E-01	3.073E-02	1.313
		334.30		-4.621E-01	1.841E+00	2.288E+00	1.822E-01	-0.202
AM-241		59.54	*	8.073E-02	6.832E-02	1.057E-01	9.462E-03	0.763
CM-243		99.55		1.511E-01	1.467E-01	2.477E-01	2.393E-02	0.610
		103.76	*	6.795E-02	9.332E-02	1.552E-01	1.621E-02	0.438
		117.00		1.215E-01	1.919E-01	3.231E-01	4.233E-02	0.376
	+	209.75		1.819E+00	1.229E+00	1.469E+00	1.464E-01	1.239
		228.18		-6.704E-02	2.438E-01	3.872E-01	3.826E-02	-0.173
	+	277.60		4.369E-01	2.809E-01	3.328E-01	3.098E-02	1.313
CM-247	+	278.00		1.797E+00	1.155E+00	1.339E+00	1.246E-01	1.342
		287.40		-1.016E+00	1.283E+00	2.073E+00	1.892E-01	-0.490
		402.60	*	1.508E-03	4.524E-02	7.088E-02	4.171E-03	0.021
CF-249		252.85		2.300E-01	9.394E-01	1.523E+00	1.472E-01	0.151
		333.44		1.902E-01	2.848E-01	3.056E-01	2.442E-02	0.622
		387.95	*	1.525E-02	4.237E-02	7.178E-02	4.293E-03	0.212
CF-251		176.60	*	-5.267E-02	1.338E-01	2.139E-01	2.131E-02	-0.246
		227.00		-2.513E-01	4.203E-01	6.568E-01	6.496E-02	-0.383
		285.00		1.452E+00	1.793E+00	3.125E+00	2.867E-01	0.465

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746004      *
* Acquisition date : 14-JUL-2009 09:13:23 Detector SN#     :               *
* Detector ID        : GAM05               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.84     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 29-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232746004           Analyst initials: MXR1         *
* Batch Number       : 882713               Sample Quantity : 1.3782E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.321E+01	2.829E+00	5.177E-01	0.000E+00
CD-109	3.766E+00	8.560E-01	9.630E-01	0.000E+00
SN-126	3.703E-01	8.416E-02	9.456E-02	0.000E+00
TL-208	5.708E-01	8.921E-02	6.491E-02	0.000E+00
BI-210	4.085E-01	8.709E-01	9.393E-01	0.000E+00
PB-210	4.085E-01	8.709E-01	9.393E-01	0.000E+00
PO-210	4.085E-01	8.708E-01	9.393E-01	0.000E+00
BI-211	4.115E+00	5.553E-01	3.903E-01	0.000E+00
PB-212	1.794E+00	2.216E-01	9.337E-02	0.000E+00
PO-212	1.794E+00	2.216E-01	9.337E-02	0.000E+00
PB-214	1.431E+00	2.066E-01	1.258E-01	0.000E+00
PO-214	1.431E+00	2.066E-01	1.258E-01	0.000E+00
PO-216	1.794E+00	2.216E-01	9.337E-02	0.000E+00
PO-218	1.431E+00	2.066E-01	1.258E-01	0.000E+00
RA-224	4.703E+00	1.370E+00	1.063E+00	0.000E+00
AC-228	1.651E+00	3.795E-01	2.641E-01	0.000E+00
RA-228	1.651E+00	3.795E-01	2.641E-01	0.000E+00
TH-228	1.794E+00	2.216E-01	9.336E-02	0.000E+00
TH-232	1.651E+00	3.795E-01	2.641E-01	0.000E+00
TH-234	1.320E+00	9.049E-01	1.085E+00	0.000E+00
NP-237	1.087E+00	3.308E-01	2.768E-01	0.000E+00
U-238	1.320E+00	9.049E-01	1.085E+00	0.000E+00
AM-243	3.986E-01	6.287E-02	6.458E-02	0.000E+00
ANH-511	1.169E-01	6.730E-02	5.759E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-3.365E-01	3.643E-01	5.875E-01	0.000E+00	NOT IDENT.
NA-22	-3.144E-02	5.301E-02	8.283E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	5.572E+05	0.000E+00	0.000E+00	SHORT HLIF

AL-26	8.979E-03	2.913E-02	5.177E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.873E-02	6.807E-02	0.000E+00	FAIL ABUN
SC-46	-3.151E-02	4.562E-02	7.340E-02	0.000E+00	NOT IDENT.
V-48	-2.127E-02	8.293E-02	1.377E-01	0.000E+00	NOT IDENT.
CR-51	-1.380E-01	3.877E-01	6.729E-01	0.000E+00	NOT IDENT.
MN-52	5.257E-02	2.338E-01	4.105E-01	0.000E+00	NOT IDENT.
MN-54	1.800E-02	4.287E-02	7.640E-02	0.000E+00	NOT IDENT.
CO-56	2.241E-02	4.460E-02	7.962E-02	0.000E+00	NOT IDENT.
CO-57	-1.548E-02	2.552E-02	4.248E-02	0.000E+00	NOT IDENT.
CO-58	-2.120E-02	3.999E-02	6.569E-02	0.000E+00	NOT IDENT.
FE-59	7.487E-02	1.097E-01	1.947E-01	0.000E+00	NOT IDENT.
CO-60	-1.667E-02	5.045E-02	8.044E-02	0.000E+00	NOT IDENT.
ZN-65	-4.968E-02	1.255E-01	1.718E-01	0.000E+00	NOT IDENT.
GE-68	-1.007E+00	1.527E+00	2.421E+00	0.000E+00	NOT IDENT.
AS-73	2.693E-01	2.267E-01	4.301E-01	0.000E+00	NOT IDENT.
AS-74	-6.508E-03	1.040E-01	1.750E-01	0.000E+00	NOT IDENT.
SE-75	2.181E-02	4.989E-02	7.594E-02	0.000E+00	NOT IDENT.
BR-77	-4.847E+00	1.039E+01	1.712E+01	0.000E+00	FAIL ABUN
SR-82	-8.742E-02	4.294E-01	7.323E-01	0.000E+00	NOT IDENT.
RB-83	-6.581E-02	7.506E-02	1.198E-01	0.000E+00	NOT IDENT.
RB-84	8.219E-02	8.180E-02	1.505E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.156E+00	1.629E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.683E-02	8.334E-02	0.000E+00	NOT IDENT.
RB-86	-6.526E-01	9.588E-01	1.517E+00	0.000E+00	NOT IDENT.
Y-88	-2.689E-02	3.856E-02	5.541E-02	0.000E+00	NOT IDENT.
ZR-88	3.144E-02	3.293E-02	6.027E-02	0.000E+00	NOT IDENT.
Y-91	7.697E+00	2.477E+01	4.226E+01	0.000E+00	NOT IDENT.
NB-94	-3.680E-04	4.113E-02	6.853E-02	0.000E+00	NOT IDENT.
NB-95	-3.772E-03	5.017E-02	8.654E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.527E-01	2.523E-01	0.000E+00	NOT IDENT.
ZR-95	-1.797E-02	8.390E-02	1.434E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.699E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.857E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-7.964E+00	1.267E+01	2.092E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.939E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.267E-02	3.524E-02	6.029E-02	0.000E+00	NOT IDENT.
RH-102	5.710E-03	3.271E-02	5.685E-02	0.000E+00	NOT IDENT.
RU-103	4.331E-02	4.455E-02	8.059E-02	0.000E+00	FAIL ABUN
RH-106	-1.573E-01	3.616E-01	5.876E-01	0.000E+00	FAIL ABUN
RU-106	-1.573E-01	3.613E-01	5.876E-01	0.000E+00	FAIL ABUN
AG-108M	1.782E-03	3.562E-02	6.183E-02	0.000E+00	NOT IDENT.
AG-110M	6.714E-03	4.296E-02	7.282E-02	0.000E+00	NOT IDENT.
IN-111	3.576E-01	1.165E+00	1.763E+00	0.000E+00	NOT IDENT.
IN-113M	-7.297E-03	4.881E-02	8.439E-02	0.000E+00	NOT IDENT.
SN-113	-7.297E-03	4.881E-02	8.439E-02	0.000E+00	NOT IDENT.
IN-114M	2.011E-01	1.975E-01	3.153E-01	0.000E+00	NOT IDENT.
CD-115	5.616E+00	1.120E+01	1.975E+01	0.000E+00	NOT IDENT.
SN-117M	-5.200E-04	5.582E-02	9.745E-02	0.000E+00	NOT IDENT.
SB-122	-1.204E-01	2.201E+00	3.720E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.420E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	5.640E-03	2.928E-02	5.149E-02	0.000E+00	NOT IDENT.
I-124	-3.784E-01	8.028E-01	1.109E+00	0.000E+00	NOT IDENT.
SB-124	-1.204E-02	6.832E-02	1.106E-01	0.000E+00	FAIL ABUN
SB-125	-2.341E-02	9.723E-02	1.659E-01	0.000E+00	FAIL ABUN
TE-125M	-4.223E+00	8.917E+00	1.562E+01	0.000E+00	NOT IDENT.
I-126	6.858E-02	2.117E-01	3.629E-01	0.000E+00	NOT IDENT.
SB-126	5.846E-02	1.663E-01	2.598E-01	0.000E+00	FAIL ABUN
SB-127	6.677E-01	1.503E+00	2.597E+00	0.000E+00	NOT IDENT.
XE-127	5.840E-03	5.182E-02	8.286E-02	0.000E+00	NOT IDENT.
I-131	7.757E-03	1.249E-01	2.195E-01	0.000E+00	NOT IDENT.
TE-132	-1.894E-01	6.886E-01	1.160E+00	0.000E+00	NOT IDENT.
BA-133	5.837E-03	4.789E-02	7.375E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	5.451E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	7.590E-02	1.061E-01	0.000E+00	FAIL ABUN
CS-135	2.112E-01	1.903E-01	2.997E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.743E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.227E-02	1.228E-01	2.136E-01	0.000E+00	FAIL ABUN
BA-137M	2.083E-03	4.302E-02	7.234E-02	0.000E+00	NOT IDENT.
CS-137	2.201E-03	4.548E-02	7.647E-02	0.000E+00	NOT IDENT.
CE-139	-5.080E-03	2.971E-02	5.139E-02	0.000E+00	NOT IDENT.
BA-140	8.845E-02	2.784E-01	4.826E-01	0.000E+00	NOT IDENT.
LA-140	4.001E-02	8.573E-02	1.546E-01	0.000E+00	FAIL ABUN
CE-141	4.267E-02	6.363E-02	1.122E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.141E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.357E-01	2.284E-01	3.620E-01	0.000E+00	NOT IDENT.
PM-144	-2.303E-02	4.303E-02	6.715E-02	0.000E+00	NOT IDENT.
PR-144	-1.561E+00	2.916E+00	4.550E+00	0.000E+00	NOT IDENT.
PM-146	1.568E-02	5.047E-02	8.641E-02	0.000E+00	NOT IDENT.

ND-147	-2.048E-01	6.105E-01	1.015E+00	0.000E+00	FAIL ABUN
PM-149	1.497E+01	8.633E+01	1.548E+02	0.000E+00	NOT IDENT.
EU-152	-1.321E-01	1.223E-01	1.589E-01	0.000E+00	FAIL ABUN
GD-153	5.045E-02	7.560E-02	1.217E-01	0.000E+00	FAIL ABUN
EU-154	-8.996E-02	1.480E-01	2.307E-01	0.000E+00	NOT IDENT.
EU-155	1.248E-01	1.038E-01	1.874E-01	0.000E+00	FAIL ABUN
TB-160	9.383E-02	1.670E-01	2.982E-01	0.000E+00	FAIL ABUN
HO-166M	-3.674E-03	6.911E-02	1.201E-01	0.000E+00	FAIL ABUN
TM-171	-2.688E+00	1.617E+01	2.578E+01	0.000E+00	NOT IDENT.
LU-176	-1.629E-03	2.455E-02	4.223E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.682E+00	2.134E+00	0.000E+00	FAIL ABUN
LU-177M	1.227E-01	2.000E-01	3.174E-01	0.000E+00	NOT IDENT.
HF-181	1.749E-02	4.633E-02	8.149E-02	0.000E+00	NOT IDENT.
W-181	1.681E-01	2.039E-01	3.367E-01	0.000E+00	NOT IDENT.
TA-182	1.928E-02	2.566E-01	4.299E-01	0.000E+00	FAIL ABUN
RE-183	4.448E-02	1.130E-01	1.999E-01	0.000E+00	FAIL ABUN
RE-184	6.125E-02	2.451E-01	4.210E-01	0.000E+00	NOT IDENT.
OS-185	-9.303E-03	4.997E-02	8.268E-02	0.000E+00	NOT IDENT.
RE-188	1.344E-02	1.744E-01	3.059E-01	0.000E+00	NOT IDENT.
W-188	1.946E+00	8.370E+00	1.317E+01	0.000E+00	FAIL ABUN
IR-192	2.658E-02	3.594E-02	6.568E-02	0.000E+00	FAIL ABUN
AU-195	1.571E-01	2.060E-01	3.616E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.323E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.293E+00	6.671E+00	1.137E+01	0.000E+00	NOT IDENT.
TL-202	6.474E-02	7.562E-02	1.371E-01	0.000E+00	NOT IDENT.
HG-203	2.285E-02	4.552E-02	7.297E-02	0.000E+00	NOT IDENT.
BI-207	3.731E-03	5.577E-02	9.467E-02	0.000E+00	FAIL ABUN
TL-207	1.662E-01	7.513E-01	1.172E+00	0.000E+00	FAIL ABUN
PO-209	-3.279E+00	8.379E+00	1.385E+01	0.000E+00	NOT IDENT.
PB-211	-8.798E-01	1.311E+00	1.697E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.652E-01	7.481E-01	0.000E+00	FAIL ABUN
BI-214	0.000E+00	1.929E-01	3.012E-01	0.000E+00	FAIL ABUN
PO-215	1.662E-01	7.513E-01	1.172E+00	0.000E+00	FAIL ABUN
RN-219	1.971E-01	4.628E-01	8.221E-01	0.000E+00	FAIL ABUN
RN-220	1.336E+01	2.992E+01	5.241E+01	0.000E+00	NOT IDENT.
RA-223	1.662E-01	7.513E-01	1.172E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	1.929E-01	3.012E-01	0.000E+00	FAIL ABUN
AC-227	4.160E-01	4.077E-01	7.172E-01	0.000E+00	FAIL ABUN
TH-227	4.160E-01	4.096E-01	7.172E-01	0.000E+00	FAIL ABUN
TH-229	-5.577E-01	5.200E-01	8.508E-01	0.000E+00	FAIL ABUN
TH-230	0.000E+00	1.929E-01	3.012E-01	0.000E+00	FAIL ABUN
PA-231	6.946E-01	1.602E+00	2.756E+00	0.000E+00	NOT IDENT.
TH-231	1.662E-01	7.513E-01	1.172E+00	0.000E+00	FAIL ABUN
U-231	-9.003E-01	9.963E-01	1.503E+00	0.000E+00	FAIL ABUN
PA-233	2.098E-03	6.404E-02	1.136E-01	0.000E+00	FAIL ABUN
PA-234	-3.806E-01	3.724E-01	5.678E-01	0.000E+00	FAIL ABUN
PA-234M	-2.014E-01	7.765E+00	1.291E+01	0.000E+00	NOT IDENT.
U-234	0.000E+00	1.929E-01	3.012E-01	0.000E+00	FAIL ABUN
U-235	1.998E-02	2.125E-01	3.685E-01	0.000E+00	FAIL ABUN
NP-236	5.266E-02	8.185E-02	1.460E-01	0.000E+00	NOT IDENT.
NP-239	1.181E-01	1.828E-01	3.308E-01	0.000E+00	FAIL ABUN
AM-241	8.073E-02	6.695E-02	1.128E-01	0.000E+00	NOT IDENT.
CM-243	6.795E-02	9.145E-02	1.638E-01	0.000E+00	FAIL ABUN
CM-247	1.508E-03	4.434E-02	7.294E-02	0.000E+00	FAIL ABUN
CF-249	1.525E-02	4.153E-02	7.391E-02	0.000E+00	NOT IDENT.
CF-251	-5.267E-02	1.311E-01	2.236E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:13:48.69

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746004.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 09:13:23
Sample ID         : G232746004           Sample quantity  : 1.37820E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.84  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1305	10.67*	1.003E+00	3.321E+01	3.321E+01	8.69
CD-109	88.03	395	3.72*	7.860E+00	3.683E+00	3.766E+00	23.19
SN-126	64.28	148	9.60	8.065E+00	5.224E-01	5.224E-01	69.30
	86.94	395	8.90	7.860E+00	1.539E+00	1.539E+00	46.63
	87.57	395	37.00*	7.860E+00	3.703E-01	3.703E-01	23.19
TL-208	277.35	96	6.80	4.265E+00	8.985E-01	8.985E-01	64.89
	510.84	109	21.60	2.543E+00	5.412E-01	5.412E-01	59.33
	583.14	399	84.20*	2.260E+00	5.708E-01	5.708E-01	15.95
	860.37	61	12.46	1.590E+00	8.341E-01	8.341E-01	52.71
BI-210	46.50	46	4.05*	7.621E+00	4.080E-01	4.085E-01	217.53
PB-210	46.50	46	4.05*	7.621E+00	4.080E-01	4.085E-01	217.53
PO-210	46.50	46	4.05*	7.621E+00	4.080E-01	4.085E-01	217.49
BI-211	72.87	------	1.27	8.052E+00	------ Line Not Found		------
	351.07	687	12.94*	3.515E+00	4.115E+00	4.115E+00	13.77
PB-212	74.81	776	10.70	8.037E+00	2.458E+00	2.458E+00	18.61
	77.11	1207	18.00	8.013E+00	2.280E+00	2.280E+00	11.82
	87.30	395	8.00	7.860E+00	1.713E+00	1.713E+00	25.26
	238.63	1402	44.60*	4.772E+00	1.794E+00	1.794E+00	12.60
	300.09	81	3.41	4.010E+00	1.603E+00	1.603E+00	67.02
PO-212	74.81	776	10.70	8.037E+00	2.458E+00	2.458E+00	18.61
	77.11	1207	18.00	8.013E+00	2.280E+00	2.280E+00	11.82
	87.30	395	8.00	7.860E+00	1.713E+00	1.713E+00	25.26
	115.19	------	0.60	7.241E+00	------ Line Not Found		------
	238.63	1402	44.60*	4.772E+00	1.794E+00	1.794E+00	12.60
	300.09	81	3.41	4.010E+00	1.603E+00	1.603E+00	67.02
PB-214	74.81	776	6.21	8.037E+00	4.236E+00	4.236E+00	17.72
	77.11	1207	10.50	8.013E+00	3.908E+00	3.908E+00	14.06
	87.30	395	4.67	7.860E+00	2.934E+00	2.934E+00	24.44
	241.98	323	7.49	4.728E+00	2.480E+00	2.480E+00	30.24
	295.21	332	19.20	4.057E+00	1.160E+00	1.160E+00	24.17
	351.92	687	37.20*	3.515E+00	1.431E+00	1.431E+00	14.73
PO-214	74.81	776	6.21	8.037E+00	4.236E+00	4.236E+00	17.72

Sample ID : G232746004 Acquisition date : 14-JUL-2009 09:13:23

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	1207	10.50	8.013E+00	3.908E+00	3.908E+00	14.06
	87.30	395	4.67	7.860E+00	2.934E+00	2.934E+00	24.44
	241.98	323	7.49	4.728E+00	2.480E+00	2.480E+00	30.24
	295.21	332	19.20	4.057E+00	1.160E+00	1.160E+00	24.17
	351.92	687	37.20*	3.515E+00	1.431E+00	1.431E+00	14.73
PO-216	74.81	776	10.70	8.037E+00	2.458E+00	2.458E+00	18.61
	77.11	1207	18.00	8.013E+00	2.280E+00	2.280E+00	11.82
	87.30	395	8.00	7.860E+00	1.713E+00	1.713E+00	25.26
	238.63	1402	44.60*	4.772E+00	1.794E+00	1.794E+00	12.60
	300.09	81	3.41	4.010E+00	1.603E+00	1.603E+00	67.02
PO-218	74.81	776	6.21	8.037E+00	4.236E+00	4.236E+00	17.72
	77.11	1207	10.50	8.013E+00	3.908E+00	3.908E+00	14.06
	87.30	395	4.67	7.860E+00	2.934E+00	2.934E+00	24.44
	241.98	323	7.49	4.728E+00	2.480E+00	2.480E+00	30.24
	295.21	332	19.20	4.057E+00	1.160E+00	1.160E+00	24.17
	351.92	687	37.20*	3.515E+00	1.431E+00	1.431E+00	14.73
RA-224	240.98	323	3.95*	4.728E+00	4.703E+00	4.703E+00	29.72
AC-228	338.32	299	11.40	3.634E+00	1.967E+00	1.967E+00	47.23
	911.07	253	27.70*	1.510E+00	1.651E+00	1.651E+00	23.46
	969.11	182	16.60	1.430E+00	2.084E+00	2.084E+00	30.87
RA-228	338.32	299	11.40	3.634E+00	1.967E+00	1.967E+00	47.23
	911.07	253	27.70*	1.510E+00	1.651E+00	1.651E+00	23.46
	969.11	182	16.60	1.430E+00	2.084E+00	2.084E+00	30.87
TH-228	84.40	180	1.21	7.913E+00	5.134E+00	5.134E+00	47.31
	238.60	1402	44.60*	4.772E+00	1.794E+00	1.794E+00	12.60
	300.10	81	3.41	4.010E+00	1.603E+00	1.603E+00	88.87
TH-232	338.32	299	11.40	3.634E+00	1.967E+00	1.967E+00	24.54
	911.07	253	27.70*	1.510E+00	1.651E+00	1.651E+00	23.46
	969.11	182	16.60	1.430E+00	2.084E+00	2.084E+00	30.87
TH-234	63.29	148	3.80*	8.065E+00	1.320E+00	1.320E+00	69.97
	92.38	395	5.41	7.750E+00	2.569E+00	2.569E+00	31.53
NP-237	86.50	395	12.60*	7.860E+00	1.087E+00	1.087E+00	31.04
	95.87	------	2.60	7.687E+00	------ Line Not Found		------
U-238	63.29	148	3.80*	8.065E+00	1.320E+00	1.320E+00	69.97
	92.38	395	5.41	7.750E+00	2.569E+00	2.569E+00	27.22
AM-243	74.67	776	66.00*	8.037E+00	3.986E-01	3.986E-01	16.10
	86.72	395	0.34	7.860E+00	4.078E+01	4.078E+01	23.19
	117.66	------	0.55	7.181E+00	------ Line Not Found		------
	142.18	------	0.13	6.593E+00	------ Line Not Found		------
ANH-511	511.00	109	100.00*	2.543E+00	1.169E-01	1.169E-01	58.74

Flag: "*" = Keyline

Sample ID : G232746004 Acquisition date : 14-JUL-2009 09:13:23

Total number of lines in spectrum 35
Number of unidentified lines 0
Number of lines tentatively identified by NID 35 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.321E+01	3.321E+01	0.289E+01	8.69	
CD-109	464.00D	1.02	3.683E+00	3.766E+00	0.873E+00	23.19	
SN-126	1.00E+05Y	1.00	3.703E-01	3.703E-01	0.859E-01	23.19	
TL-208	1.41E+10Y	1.00	5.708E-01	5.708E-01	0.910E-01	15.95	
BI-210	22.26Y	1.00	4.080E-01	4.085E-01	8.887E-01	217.53	
PB-210	22.26Y	1.00	4.080E-01	4.085E-01	8.887E-01	217.53	
PO-210	22.26Y	1.00	4.080E-01	4.085E-01	8.886E-01	217.49	
BI-211	7.04E+08Y	1.00	4.115E+00	4.115E+00	0.567E+00	13.77	
PB-212	1.41E+10Y	1.00	1.794E+00	1.794E+00	0.226E+00	12.60	
PO-212	1.41E+10Y	1.00	1.794E+00	1.794E+00	0.226E+00	12.60	
PB-214	1600.00Y	1.00	1.431E+00	1.431E+00	0.211E+00	14.73	
PO-214	1600.00Y	1.00	1.431E+00	1.431E+00	0.211E+00	14.73	
PO-216	1.41E+10Y	1.00	1.794E+00	1.794E+00	0.226E+00	12.60	
PO-218	1600.00Y	1.00	1.431E+00	1.431E+00	0.211E+00	14.73	
RA-224	1.41E+10Y	1.00	4.703E+00	4.703E+00	1.398E+00	29.72	
AC-228	1.41E+10Y	1.00	1.651E+00	1.651E+00	0.387E+00	23.46	
RA-228	1.41E+10Y	1.00	1.651E+00	1.651E+00	0.387E+00	23.46	
TH-228	1.41E+10Y	1.00	1.794E+00	1.794E+00	0.226E+00	12.60	
TH-232	1.41E+10Y	1.00	1.651E+00	1.651E+00	0.387E+00	23.46	
TH-234	4.47E+09Y	1.00	1.320E+00	1.320E+00	0.923E+00	69.97	
NP-237	2.14E+06Y	1.00	1.087E+00	1.087E+00	0.338E+00	31.04	
U-238	4.47E+09Y	1.00	1.320E+00	1.320E+00	0.923E+00	69.97	
AM-243	7380.00Y	1.00	3.986E-01	3.986E-01	0.642E-01	16.10	
ANH-511	1.00E+09Y	1.00	1.169E-01	1.169E-01	0.687E-01	58.74	
	Total Activity :		6.854E+01	6.862E+01			

Grand Total Activity : 6.854E+01 6.862E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232746004 Acquisition date : 14-JUL-2009 09:13:23

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	89.74	253	402	1.24	180.62	165	27	3.51E-02	30.2	7.81E+00	T
0	128.79	213	471	1.74	258.70	253	12	2.96E-02	43.0	6.91E+00	T
0	186.12	156	407	1.64	373.29	367	10	2.17E-02	52.7	5.65E+00	T
0	209.14	115	363	1.38	419.30	414	11	1.60E-02	66.8	5.24E+00	T
3	270.40	150	207	1.99	541.76	536	25	2.09E-02	41.8	4.35E+00	T
0	327.87	63	166	1.09	656.64	653	9	8.76E-03	77.6	3.73E+00	T
0	409.46	59	78	1.56	819.72	815	8	8.18E-03	58.6	3.09E+00	T
0	463.02	106	153	1.37	926.77	919	16	1.47E-02	56.2	2.78E+00	T
0	609.15	488	83	1.48	1218.79	1211	15	6.78E-02	12.3	2.17E+00	T
0	727.39	102	87	1.76	1455.08	1446	15	1.42E-02	44.3	1.85E+00	T
0	794.75	76	56	1.93	1589.67	1582	14	1.06E-02	47.6	1.71E+00	T
3	964.37	97	36	2.64	1928.56	1921	23	1.34E-02	38.8	1.44E+00	T
0	1122.48	41	151	1.84	2244.40	2234	20	5.67E-03	****	1.26E+00	T
0	1377.98	22	13	1.41	2754.74	2750	10	3.12E-03	79.8	1.05E+00	T
0	1764.63	74	16	1.78	3526.81	3518	15	1.03E-02	32.5	8.61E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:13:53.35

```
*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746004.CNF;1  *
* Acquisition date : 14-JUL-2009 09:13:23  Detector SN#     :              *
* Detector ID      : GAM05                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:01.84         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 29-JUN-2009 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G232746004            Analyst initials: MXR1          *
* Batch Number     : 882713                Sample Quantity : 1.37820E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00.5MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1023-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.321E+01	2.887E+00	5.161E-01	3.210E-02	64.342
CD-109	3.766E+00	8.734E-01	9.095E-01	6.926E-02	4.141
SN-126	3.703E-01	8.588E-02	8.930E-02	6.801E-03	4.147
TL-208	5.708E-01	9.103E-02	6.354E-02	4.675E-03	8.983
BI-210	4.085E-01	8.887E-01	8.769E-01	6.841E-02	0.466
PB-210	4.085E-01	8.887E-01	8.769E-01	6.841E-02	0.466
PO-210	4.085E-01	8.886E-01	8.769E-01	5.898E-02	0.466
BI-211	4.115E+00	5.666E-01	3.783E-01	2.997E-02	10.879
PB-212	1.794E+00	2.261E-01	8.983E-02	9.685E-03	19.975
PO-212	1.794E+00	2.261E-01	8.983E-02	9.685E-03	19.975
PB-214	1.431E+00	2.108E-01	1.219E-01	1.154E-02	11.744
PO-214	1.431E+00	2.108E-01	1.219E-01	1.154E-02	11.744
PO-216	1.794E+00	2.261E-01	8.983E-02	9.685E-03	19.975
PO-218	1.431E+00	2.108E-01	1.219E-01	1.154E-02	11.744
RA-224	4.703E+00	1.398E+00	1.022E+00	1.000E-01	4.600
AC-228	1.651E+00	3.873E-01	2.608E-01	3.227E-02	6.330
RA-228	1.651E+00	3.873E-01	2.608E-01	3.227E-02	6.330
TH-228	1.794E+00	2.261E-01	8.982E-02	9.684E-03	19.977

Sample ID : G232746004 Acquisition date : 14-JUL-2009 09:13:23

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.651E+00	3.873E-01	2.608E-01	3.227E-02	6.330
TH-234	1.320E+00	9.234E-01	1.019E+00	1.810E-01	1.295
NP-237	1.087E+00	3.376E-01	2.614E-01	5.751E-02	4.160
U-238	1.320E+00	9.234E-01	1.019E+00	1.810E-01	1.295
AM-243	3.986E-01	6.415E-02	6.081E-02	4.763E-03	6.554
ANH-511	1.169E-01	6.867E-02	5.623E-02	3.599E-03	2.079

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-3.365E-01		3.717E-01	5.728E-01	4.104E-02	-0.587
NA-22	-3.144E-02		5.410E-02	8.235E-02	4.796E-03	-0.382
NA-24	-1.919E-01		2.843E-01	Half-Life too short		
AL-26	8.979E-03		2.972E-02	5.184E-02	2.975E-03	0.173
TI-44	4.207E-01	+	4.973E-02	6.416E-02	4.978E-03	6.558
SC-46	-3.151E-02		4.655E-02	7.244E-02	7.276E-03	-0.435
V-48	-2.127E-02		8.462E-02	1.362E-01	1.247E-02	-0.156
CR-51	-1.380E-01		3.956E-01	6.510E-01	5.757E-02	-0.212
MN-52	5.257E-02		2.385E-01	4.091E-01	2.396E-02	0.128
MN-54	1.800E-02		4.375E-02	7.531E-02	6.899E-03	0.239
CO-56	2.241E-02		4.551E-02	7.851E-02	7.342E-03	0.285
CO-57	-1.548E-02		2.605E-02	4.036E-02	5.727E-03	-0.383
CO-58	-2.120E-02		4.080E-02	6.472E-02	5.696E-03	-0.328
FE-59	7.487E-02		1.120E-01	1.930E-01	1.563E-02	0.388
CO-60	-1.667E-02		5.148E-02	8.004E-02	4.632E-03	-0.208
ZN-65	-4.968E-02		1.281E-01	1.703E-01	1.190E-02	-0.292
GE-68	-1.007E+00		1.558E+00	2.399E+00	1.843E-01	-0.420
AS-73	2.693E-01		2.313E-01	4.026E-01	3.030E-02	0.669
AS-74	-6.508E-03		1.062E-01	1.714E-01	1.127E-02	-0.038
SE-75	2.181E-02		5.091E-02	7.321E-02	6.989E-03	0.298
BR-77	-4.847E+00		1.060E+01	1.672E+01	1.075E+00	-0.290
SR-82	-8.742E-02		4.382E-01	7.208E-01	5.947E-02	-0.121
RB-83	-6.581E-02		7.659E-02	1.170E-01	7.525E-03	-0.562
RB-84	8.219E-02		8.347E-02	1.485E-01	1.473E-02	0.553
KR-85	2.463E+01		9.343E+00	1.591E+01	1.020E+00	1.548
SR-85	1.260E-01		4.779E-02	8.137E-02	5.216E-03	1.548
RB-86	-6.526E-01		9.783E-01	1.503E+00	1.156E-01	-0.434
Y-88	-2.689E-02		3.935E-02	5.550E-02	3.175E-03	-0.484
ZR-88	3.144E-02		3.360E-02	5.855E-02	3.409E-03	0.537
Y-91	7.697E+00		2.527E+01	4.196E+01	2.438E+00	0.183
NB-94	-3.680E-04		4.197E-02	6.732E-02	4.817E-03	-0.005
NB-95	-3.772E-03		5.119E-02	8.516E-02	6.888E-03	-0.044
NB-95M	4.146E-01		1.558E-01	2.426E-01	2.654E-02	1.709
ZR-95	-1.797E-02		8.561E-02	1.411E-01	1.253E-02	-0.127
NB-97	-1.930E-02		4.949E-02	Half-Life too short		
ZR-97	5.027E+00		9.474E-01	Half-Life too short		
MO-99	-7.964E+00		1.293E+01	2.058E+01	3.021E+00	-0.387

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TC-99M	-1.684E+09		9.890E+09	Half-Life too short		
RH-101	1.267E-02		3.596E-02	5.781E-02	5.773E-03	0.219
RH-102	5.710E-03		3.338E-02	5.542E-02	3.472E-03	0.103
RU-103	4.331E-02		4.546E-02	7.864E-02	1.015E-02	0.551
RH-106	-1.573E-01		3.690E-01	5.759E-01	6.996E-02	-0.273
RU-106	-1.573E-01		3.686E-01	5.759E-01	3.796E-02	-0.273
AG-108M	1.782E-03		3.635E-02	6.017E-02	3.937E-03	0.030
AG-110M	6.714E-03		4.384E-02	7.145E-02	4.939E-03	0.094
IN-111	3.576E-01		1.188E+00	1.697E+00	1.653E-01	0.211
IN-113M	-7.297E-03		4.981E-02	8.197E-02	5.085E-03	-0.089
SN-113	-7.297E-03		4.981E-02	8.197E-02	5.085E-03	-0.089
IN-114M	2.011E-01		2.015E-01	3.021E-01	3.016E-02	0.666
CD-115	5.616E+00		1.143E+01	1.929E+01	1.245E+00	0.291
SN-117M	-5.200E-04		5.696E-02	9.304E-02	1.000E-02	-0.006
SB-122	-1.204E-01		2.246E+00	3.639E+00	2.378E-01	-0.033
I-123	8.513E-01		2.255E+00	Half-Life too short		
TE-123M	5.640E-03		2.988E-02	4.917E-02	5.283E-03	0.115
I-124	-3.784E-01		8.191E-01	1.086E+00	7.152E-02	-0.348
SB-124	-1.204E-02		6.972E-02	1.105E-01	6.997E-03	-0.109
SB-125	-2.341E-02		9.921E-02	1.614E-01	1.012E-02	-0.145
TE-125M	-4.223E+00		9.099E+00	1.481E+01	1.903E+00	-0.285
I-126	6.858E-02		2.160E-01	3.561E-01	2.365E-02	0.193
SB-126	5.846E-02		1.697E-01	2.554E-01	1.893E-02	0.229
SB-127	6.677E-01		1.534E+00	2.550E+00	2.569E-01	0.262
XE-127	5.840E-03		5.288E-02	7.947E-02	7.932E-03	0.073
I-131	7.757E-03		1.274E-01	2.129E-01	1.598E-02	0.036
TE-132	-1.894E-01		7.027E-01	1.115E+00	1.829E-01	-0.170
BA-133	5.837E-03		4.887E-02	7.150E-02	8.830E-03	0.082
I-133	1.807E-03		2.781E-03	Half-Life too short		
CS-134	1.600E-01	+	7.745E-02	1.045E-01	8.999E-03	1.531
CS-135	2.112E-01		1.942E-01	2.890E-01	3.091E-02	0.731
I-135	-2.091E+09		1.910E+09	Half-Life too short		
CS-136	4.227E-02		1.253E-01	2.115E-01	1.812E-02	0.200
BA-137M	2.083E-03		4.390E-02	7.098E-02	4.668E-03	0.029
CS-137	2.201E-03		4.641E-02	7.504E-02	4.950E-03	0.029
CE-139	-5.080E-03		3.032E-02	4.911E-02	4.876E-03	-0.103
BA-140	8.845E-02		2.841E-01	4.716E-01	1.540E-01	0.188
LA-140	4.001E-02		8.748E-02	1.544E-01	9.077E-03	0.259
CE-141	4.267E-02		6.493E-02	1.070E-01	1.308E-02	0.399
CE-143	6.354E-04		1.092E-04	Half-Life too short		
CE-144	1.357E-01		2.331E-01	3.445E-01	6.379E-02	0.394
PM-144	-2.303E-02		4.391E-02	6.596E-02	4.663E-03	-0.349
PR-144	-1.561E+00		2.975E+00	4.469E+00	3.158E-01	-0.349
PM-146	1.568E-02		5.150E-02	8.417E-02	7.469E-03	0.186
ND-147	-2.048E-01		6.230E-01	9.917E-01	1.370E-01	-0.206
PM-149	1.497E+01		8.809E+01	1.495E+02	2.369E+01	0.100
EU-152	-1.321E-01		1.248E-01	1.539E-01	1.266E-02	-0.858
GD-153	5.045E-02		7.715E-02	1.152E-01	1.068E-02	0.438

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154	-8.996E-02		1.511E-01	2.293E-01	2.144E-02	-0.392
EU-155	1.248E-01		1.059E-01	1.776E-01	1.924E-02	0.703
TB-160	9.383E-02		1.704E-01	2.942E-01	2.907E-02	0.319
HO-166M	-3.674E-03		7.052E-02	1.180E-01	8.595E-03	-0.031
TM-171	-2.688E+00		1.650E+01	2.422E+01	1.947E+00	-0.111
LU-176	-1.629E-03		2.505E-02	4.083E-02	3.556E-03	-0.040
LU-177	2.541E+00	+	1.716E+00	2.048E+00	2.042E-01	1.241
LU-177M	1.227E-01		2.041E-01	3.086E-01	1.836E-02	0.398
HF-181	1.749E-02		4.728E-02	7.947E-02	5.001E-03	0.220
W-181	1.681E-01		2.081E-01	3.163E-01	2.557E-02	0.532
TA-182	1.928E-02		2.618E-01	4.270E-01	2.482E-02	0.045
RE-183	4.448E-02		1.153E-01	1.910E-01	1.973E-02	0.233
RE-184	6.125E-02		2.501E-01	4.055E-01	3.918E-02	0.151
OS-185	-9.303E-03		5.099E-02	8.110E-02	5.342E-03	-0.115
RE-188	1.344E-02		1.780E-01	2.919E-01	3.250E-02	0.046
W-188	1.946E+00		8.541E+00	1.271E+01	1.152E+00	0.153
IR-192	2.658E-02		3.667E-02	6.354E-02	5.393E-03	0.418
AU-195	1.571E-01		2.102E-01	3.423E-01	3.264E-02	0.459
TL-200	1.922E-04		2.206E-04	Half-Life too short		
TL-201	-3.293E+00		6.807E+00	1.086E+01	1.079E+00	-0.303
TL-202	6.474E-02		7.716E-02	1.335E-01	8.136E-03	0.485
HG-203	2.285E-02		4.645E-02	7.041E-02	6.695E-03	0.324
BI-207	3.731E-03		5.691E-02	9.377E-02	7.426E-03	0.040
TL-207	1.662E-01		7.667E-01	1.134E+00	1.989E-01	0.146
PO-209	-3.279E+00		8.550E+00	1.367E+01	1.390E+00	-0.240
PB-211	-8.798E-01		1.338E+00	1.649E+00	1.028E+00	-0.533
BI-212	1.277E+00	+	5.767E-01	7.354E-01	6.671E-02	1.736
BI-214	1.323E+00	+	1.968E-01	2.951E-01	2.473E-02	4.483
PO-215	1.662E-01		7.667E-01	1.134E+00	1.989E-01	0.146
RN-219	1.971E-01		4.722E-01	7.989E-01	1.090E-01	0.247
RN-220	1.336E+01		3.053E+01	5.124E+01	3.334E+00	0.261
RA-223	1.662E-01		7.667E-01	1.134E+00	1.989E-01	0.146
RA-226	1.323E+00	+	1.968E-01	2.951E-01	2.473E-02	4.483
AC-227	4.160E-01		4.161E-01	6.910E-01	1.101E-01	0.602
TH-227	4.160E-01		4.180E-01	6.910E-01	1.283E-01	0.602
TH-229	-5.577E-01		5.306E-01	8.154E-01	8.143E-02	-0.684
TH-230	1.323E+00	+	1.968E-01	2.951E-01	2.473E-02	4.483
PA-231	6.946E-01		1.635E+00	2.660E+00	4.129E-01	0.261
TH-231	1.662E-01		7.667E-01	1.134E+00	1.989E-01	0.146
U-231	-9.003E-01		1.017E+00	1.422E+00	1.278E-01	-0.633
PA-233	2.098E-03		6.535E-02	1.098E-01	9.696E-03	0.019
PA-234	-3.806E-01		3.800E-01	5.612E-01	1.081E-01	-0.678
PA-234M	-2.014E-01		7.923E+00	1.278E+01	1.457E+00	-0.016
U-234	1.323E+00	+	1.968E-01	2.951E-01	2.473E-02	4.483
U-235	1.998E-02		2.169E-01	3.512E-01	6.872E-02	0.057
NP-236	5.266E-02		8.352E-02	1.394E-01	1.472E-02	0.378
NP-239	1.181E-01		1.865E-01	3.140E-01	4.114E-02	0.376
AM-241	8.073E-02		6.832E-02	1.057E-01	9.462E-03	0.763

Sample ID : G232746004 Acquisition date : 14-JUL-2009 09:13:23

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	6.795E-02		9.332E-02	1.552E-01	1.621E-02	0.438
CM-247	1.508E-03		4.524E-02	7.088E-02	4.171E-03	0.021
CF-249	1.525E-02		4.237E-02	7.178E-02	4.293E-03	0.212
CF-251	-5.267E-02		1.338E-01	2.139E-01	2.131E-02	-0.246

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232746004           *
* Acquisition date  : 14-JUL-2009 09:13:23 Detector SN#     :               *
* Detector ID       : GAM05                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.84      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232746004           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.3782E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.321E+01	2.829E+00	2.590E-01	1.443E+00
CD-109	3.766E+00	8.560E-01	4.818E-01	4.367E-01
SN-126	3.703E-01	8.416E-02	4.731E-02	4.294E-02
TL-208	5.708E-01	8.921E-02	3.247E-02	4.552E-02
BI-210	4.085E-01	8.709E-01	4.699E-01	4.444E-01
PB-210	4.085E-01	8.709E-01	4.699E-01	4.444E-01
PO-210	4.085E-01	8.708E-01	4.699E-01	4.443E-01
BI-211	4.115E+00	5.553E-01	1.953E-01	2.833E-01
PB-212	1.794E+00	2.216E-01	4.671E-02	1.131E-01
PO-212	1.794E+00	2.216E-01	4.671E-02	1.131E-01
PB-214	1.431E+00	2.066E-01	6.291E-02	1.054E-01
PO-214	1.431E+00	2.066E-01	6.291E-02	1.054E-01
PO-216	1.794E+00	2.216E-01	4.671E-02	1.131E-01
PO-218	1.431E+00	2.066E-01	6.291E-02	1.054E-01
RA-224	4.703E+00	1.370E+00	5.316E-01	6.989E-01
AC-228	1.651E+00	3.795E-01	1.321E-01	1.936E-01
RA-228	1.651E+00	3.795E-01	1.321E-01	1.936E-01
TH-228	1.794E+00	2.216E-01	4.671E-02	1.131E-01
TH-232	1.651E+00	3.795E-01	1.321E-01	1.936E-01
TH-234	1.320E+00	9.049E-01	5.429E-01	4.617E-01
NP-237	1.087E+00	3.308E-01	1.385E-01	1.688E-01
U-238	1.320E+00	9.049E-01	5.429E-01	4.617E-01
AM-243	3.986E-01	6.287E-02	3.231E-02	3.208E-02
ANH-511	1.169E-01	6.730E-02	2.881E-02	3.434E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-3.365E-01	3.643E-01	2.939E-01	1.859E-01 NOT IDENT.
NA-22	-3.144E-02	5.301E-02	4.144E-02	2.705E-02 NOT IDENT.
NA-24	-1.919E+05	5.572E+05	0.000E+00	2.843E+05 SHORT HLIF

AL-26	8.979E-03	2.913E-02	2.590E-02	1.486E-02	NOT IDENT.
TI-44	4.207E-01	4.873E-02	3.406E-02	2.486E-02	FAIL ABUN
SC-46	-3.151E-02	4.562E-02	3.672E-02	2.327E-02	NOT IDENT.
V-48	-2.127E-02	8.293E-02	6.887E-02	4.231E-02	NOT IDENT.
CR-51	-1.380E-01	3.877E-01	3.366E-01	1.978E-01	NOT IDENT.
MN-52	5.257E-02	2.338E-01	2.054E-01	1.193E-01	NOT IDENT.
MN-54	1.800E-02	4.287E-02	3.822E-02	2.187E-02	NOT IDENT.
CO-56	2.241E-02	4.460E-02	3.983E-02	2.276E-02	NOT IDENT.
CO-57	-1.548E-02	2.552E-02	2.125E-02	1.302E-02	NOT IDENT.
CO-58	-2.120E-02	3.999E-02	3.287E-02	2.040E-02	NOT IDENT.
FE-59	7.487E-02	1.097E-01	9.742E-02	5.598E-02	NOT IDENT.
CO-60	-1.667E-02	5.045E-02	4.024E-02	2.574E-02	NOT IDENT.
ZN-65	-4.968E-02	1.255E-01	8.595E-02	6.405E-02	NOT IDENT.
GE-68	-1.007E+00	1.527E+00	1.211E+00	7.791E-01	NOT IDENT.
AS-73	2.693E-01	2.267E-01	2.152E-01	1.156E-01	NOT IDENT.
AS-74	-6.508E-03	1.040E-01	8.756E-02	5.309E-02	NOT IDENT.
SE-75	2.181E-02	4.989E-02	3.799E-02	2.545E-02	NOT IDENT.
BR-77	-4.847E+00	1.039E+01	8.566E+00	5.299E+00	FAIL ABUN
SR-82	-8.742E-02	4.294E-01	3.664E-01	2.191E-01	NOT IDENT.
RB-83	-6.581E-02	7.506E-02	5.996E-02	3.829E-02	NOT IDENT.
RB-84	8.219E-02	8.180E-02	7.528E-02	4.173E-02	NOT IDENT.
KR-85	2.463E+01	9.156E+00	8.152E+00	4.672E+00	NOT IDENT.
SR-85	1.260E-01	4.683E-02	4.169E-02	2.389E-02	NOT IDENT.
RB-86	-6.526E-01	9.588E-01	7.590E-01	4.892E-01	NOT IDENT.
Y-88	-2.689E-02	3.856E-02	2.772E-02	1.967E-02	NOT IDENT.
ZR-88	3.144E-02	3.293E-02	3.015E-02	1.680E-02	NOT IDENT.
Y-91	7.697E+00	2.477E+01	2.114E+01	1.264E+01	NOT IDENT.
NB-94	-3.680E-04	4.113E-02	3.429E-02	2.098E-02	NOT IDENT.
NB-95	-3.772E-03	5.017E-02	4.329E-02	2.560E-02	NOT IDENT.
NB-95M	4.146E-01	1.527E-01	1.262E-01	7.792E-02	NOT IDENT.
ZR-95	-1.797E-02	8.390E-02	7.173E-02	4.281E-02	NOT IDENT.
NB-97	-1.930E+04	9.699E+04	0.000E+00	4.949E+04	SHORT HLIF
ZR-97	5.027E+06	1.857E+06	0.000E+00	9.474E+05	SHORT HLIF
MO-99	-7.964E+00	1.267E+01	1.047E+01	6.463E+00	NOT IDENT.
TC-99M	-1.684E+15	1.939E+16	0.000E+00	9.890E+15	SHORT HLIF
RH-101	1.267E-02	3.524E-02	3.017E-02	1.798E-02	NOT IDENT.
RH-102	5.710E-03	3.271E-02	2.844E-02	1.669E-02	NOT IDENT.
RU-103	4.331E-02	4.455E-02	4.032E-02	2.273E-02	FAIL ABUN
RH-106	-1.573E-01	3.616E-01	2.940E-01	1.845E-01	FAIL ABUN
RU-106	-1.573E-01	3.613E-01	2.940E-01	1.843E-01	FAIL ABUN
AG-108M	1.782E-03	3.562E-02	3.093E-02	1.817E-02	NOT IDENT.
AG-110M	6.714E-03	4.296E-02	3.643E-02	2.192E-02	NOT IDENT.
IN-111	3.576E-01	1.165E+00	8.820E-01	5.942E-01	NOT IDENT.
IN-113M	-7.297E-03	4.881E-02	4.222E-02	2.490E-02	NOT IDENT.
SN-113	-7.297E-03	4.881E-02	4.222E-02	2.490E-02	NOT IDENT.
IN-114M	2.011E-01	1.975E-01	1.577E-01	1.008E-01	NOT IDENT.
CD-115	5.616E+00	1.120E+01	9.879E+00	5.714E+00	NOT IDENT.
SN-117M	-5.200E-04	5.582E-02	4.876E-02	2.848E-02	NOT IDENT.
SB-122	-1.204E-01	2.201E+00	1.861E+00	1.123E+00	NOT IDENT.
I-123	8.513E+05	4.420E+06	0.000E+00	2.255E+06	SHORT HLIF
TE-123M	5.640E-03	2.928E-02	2.576E-02	1.494E-02	NOT IDENT.
I-124	-3.784E-01	8.028E-01	5.549E-01	4.096E-01	NOT IDENT.
SB-124	-1.204E-02	6.832E-02	5.531E-02	3.486E-02	FAIL ABUN
SB-125	-2.341E-02	9.723E-02	8.300E-02	4.961E-02	FAIL ABUN
TE-125M	-4.223E+00	8.917E+00	7.813E+00	4.550E+00	NOT IDENT.
I-126	6.858E-02	2.117E-01	1.815E-01	1.080E-01	NOT IDENT.
SB-126	5.846E-02	1.663E-01	1.300E-01	8.487E-02	FAIL ABUN
SB-127	6.677E-01	1.503E+00	1.299E+00	7.671E-01	NOT IDENT.
XE-127	5.840E-03	5.182E-02	4.145E-02	2.644E-02	NOT IDENT.
I-131	7.757E-03	1.249E-01	1.098E-01	6.371E-02	NOT IDENT.
TE-132	-1.894E-01	6.886E-01	5.805E-01	3.513E-01	NOT IDENT.
BA-133	5.837E-03	4.789E-02	3.690E-02	2.443E-02	FAIL ABUN
I-133	1.807E+03	5.451E+03	0.000E+00	2.781E+03	SHORT HLIF
CS-134	1.600E-01	7.590E-02	5.309E-02	3.872E-02	FAIL ABUN
CS-135	2.112E-01	1.903E-01	1.499E-01	9.711E-02	NOT IDENT.
I-135	-2.091E+15	3.743E+15	0.000E+00	1.910E+15	SHORT HLIF
CS-136	4.227E-02	1.228E-01	1.069E-01	6.266E-02	FAIL ABUN
BA-137M	2.083E-03	4.302E-02	3.619E-02	2.195E-02	NOT IDENT.
CS-137	2.201E-03	4.548E-02	3.826E-02	2.320E-02	NOT IDENT.
CE-139	-5.080E-03	2.971E-02	2.571E-02	1.516E-02	NOT IDENT.
BA-140	8.845E-02	2.784E-01	2.414E-01	1.421E-01	NOT IDENT.
LA-140	4.001E-02	8.573E-02	7.737E-02	4.374E-02	FAIL ABUN
CE-141	4.267E-02	6.363E-02	5.615E-02	3.246E-02	NOT IDENT.
CE-143	6.354E+02	2.141E+02	0.000E+00	1.092E+02	SHORT HLIF
CE-144	1.357E-01	2.284E-01	1.811E-01	1.165E-01	NOT IDENT.
PM-144	-2.303E-02	4.303E-02	3.360E-02	2.196E-02	NOT IDENT.
PR-144	-1.561E+00	2.916E+00	2.276E+00	1.488E+00	NOT IDENT.
PM-146	1.568E-02	5.047E-02	4.323E-02	2.575E-02	NOT IDENT.

ND-147	-2.048E-01	6.105E-01	5.078E-01	3.115E-01	FAIL ABUN
PM-149	1.497E+01	8.633E+01	7.746E+01	4.404E+01	NOT IDENT.
EU-152	-1.321E-01	1.223E-01	7.948E-02	6.242E-02	FAIL ABUN
GD-153	5.045E-02	7.560E-02	6.091E-02	3.857E-02	FAIL ABUN
EU-154	-8.996E-02	1.480E-01	1.154E-01	7.553E-02	NOT IDENT.
EU-155	1.248E-01	1.038E-01	9.378E-02	5.294E-02	FAIL ABUN
TB-160	9.383E-02	1.670E-01	1.492E-01	8.518E-02	FAIL ABUN
HO-166M	-3.674E-03	6.911E-02	6.006E-02	3.526E-02	FAIL ABUN
TM-171	-2.688E+00	1.617E+01	1.290E+01	8.249E+00	NOT IDENT.
LU-176	-1.629E-03	2.455E-02	2.113E-02	1.253E-02	FAIL ABUN
LU-177	2.541E+00	1.682E+00	1.068E+00	8.582E-01	FAIL ABUN
LU-177M	1.227E-01	2.000E-01	1.588E-01	1.021E-01	NOT IDENT.
HF-181	1.749E-02	4.633E-02	4.077E-02	2.364E-02	NOT IDENT.
W-181	1.681E-01	2.039E-01	1.685E-01	1.040E-01	NOT IDENT.
TA-182	1.928E-02	2.566E-01	2.151E-01	1.309E-01	FAIL ABUN
RE-183	4.448E-02	1.130E-01	1.000E-01	5.766E-02	FAIL ABUN
RE-184	6.125E-02	2.451E-01	2.106E-01	1.251E-01	NOT IDENT.
OS-185	-9.303E-03	4.997E-02	4.137E-02	2.549E-02	NOT IDENT.
RE-188	1.344E-02	1.744E-01	1.530E-01	8.899E-02	NOT IDENT.
W-188	1.946E+00	8.370E+00	6.586E+00	4.270E+00	FAIL ABUN
IR-192	2.658E-02	3.594E-02	3.286E-02	1.834E-02	FAIL ABUN
AU-195	1.571E-01	2.060E-01	1.809E-01	1.051E-01	FAIL ABUN
TL-200	1.922E+02	4.323E+02	0.000E+00	2.206E+02	SHORT HLIF
TL-201	-3.293E+00	6.671E+00	5.687E+00	3.404E+00	NOT IDENT.
TL-202	6.474E-02	7.562E-02	6.860E-02	3.858E-02	NOT IDENT.
HG-203	2.285E-02	4.552E-02	3.650E-02	2.323E-02	NOT IDENT.
BI-207	3.731E-03	5.577E-02	4.736E-02	2.845E-02	FAIL ABUN
TL-207	1.662E-01	7.513E-01	5.865E-01	3.833E-01	FAIL ABUN
PO-209	-3.279E+00	8.379E+00	6.928E+00	4.275E+00	NOT IDENT.
PB-211	-8.798E-01	1.311E+00	8.490E-01	6.688E-01	NOT IDENT.
BI-212	1.277E+00	5.652E-01	3.743E-01	2.884E-01	FAIL ABUN
BI-214	1.323E+00	1.929E-01	1.507E-01	9.841E-02	FAIL ABUN
PO-215	1.662E-01	7.513E-01	5.865E-01	3.833E-01	FAIL ABUN
RN-219	1.971E-01	4.628E-01	4.113E-01	2.361E-01	FAIL ABUN
RN-220	1.336E+01	2.992E+01	2.622E+01	1.527E+01	NOT IDENT.
RA-223	1.662E-01	7.513E-01	5.865E-01	3.833E-01	FAIL ABUN
RA-226	1.323E+00	1.929E-01	1.507E-01	9.841E-02	FAIL ABUN
AC-227	4.160E-01	4.077E-01	3.588E-01	2.080E-01	FAIL ABUN
TH-227	4.160E-01	4.096E-01	3.588E-01	2.090E-01	FAIL ABUN
TH-229	-5.577E-01	5.200E-01	4.257E-01	2.653E-01	FAIL ABUN
TH-230	1.323E+00	1.929E-01	1.507E-01	9.841E-02	FAIL ABUN
PA-231	6.946E-01	1.602E+00	1.379E+00	8.175E-01	NOT IDENT.
TH-231	1.662E-01	7.513E-01	5.865E-01	3.833E-01	FAIL ABUN
U-231	-9.003E-01	9.963E-01	7.521E-01	5.083E-01	FAIL ABUN
PA-233	2.098E-03	6.404E-02	5.681E-02	3.268E-02	FAIL ABUN
PA-234	-3.806E-01	3.724E-01	2.841E-01	1.900E-01	FAIL ABUN
PA-234M	-2.014E-01	7.765E+00	6.461E+00	3.962E+00	NOT IDENT.
U-234	1.323E+00	1.929E-01	1.507E-01	9.841E-02	FAIL ABUN
U-235	1.998E-02	2.125E-01	1.843E-01	1.084E-01	FAIL ABUN
NP-236	5.266E-02	8.185E-02	7.306E-02	4.176E-02	NOT IDENT.
NP-239	1.181E-01	1.828E-01	1.655E-01	9.325E-02	FAIL ABUN
AM-241	8.073E-02	6.695E-02	5.642E-02	3.416E-02	NOT IDENT.
CM-243	6.795E-02	9.145E-02	8.194E-02	4.666E-02	FAIL ABUN
CM-247	1.508E-03	4.434E-02	3.649E-02	2.262E-02	FAIL ABUN
CF-249	1.525E-02	4.153E-02	3.698E-02	2.119E-02	NOT IDENT.
CF-251	-5.267E-02	1.311E-01	1.119E-01	6.688E-02	NOT IDENT.

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*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                           CHARLESTON ,SC 29417                        *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                *
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ENERGY	MDA COUNTS
46.50	456.7691
46.50	456.7691
46.50	456.7691
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49.72	481.9288
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52.39	479.3809
52.97	446.6757
53.15	446.8300
53.44	447.0794
54.07	429.7484
56.28	546.3713
56.28	546.3748
57.37	0.0000
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57.53	586.8199
57.60	586.8921
57.98	561.5867
57.98	561.5867
59.32	492.2220
59.32	492.2220
59.40	493.7364
59.54	493.8606
59.72	494.0203
60.01	495.7213
61.10	529.9874
61.14	530.0253
61.30	530.1750
63.00	607.4852
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63.29	607.7902
63.58	608.0938
64.28	582.4347
65.12	575.9800
65.20	576.0577
65.20	576.0577
66.05	568.1243
66.72	577.5332
66.83	577.6417
66.91	604.0453
67.20	604.3389
67.20	604.3389
67.75	634.1848
67.85	632.8257
68.90	603.4738
68.90	603.4738
69.30	613.7793
69.67	587.7075
70.82	593.2197
70.82	593.2197
70.83	593.2271
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72.87	580.3994
72.87	580.3994
74.67	648.6939
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74.81	648.8356
74.81	648.8356
74.81	648.8356
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74.97	648.9987
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77.11	651.1481
77.11	651.1481

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80.30	654.2972
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81.07	463.6188
81.07	463.6188
81.07	463.6188
81.07	463.6188
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83.37	465.1892
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83.78	420.4238
83.78	420.4238
83.78	420.4238
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84.40	417.7975
84.90	418.0995
85.43	418.4185
86.29	418.9343
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86.54	419.0836
86.59	419.1142
86.72	419.1922
86.79	419.2329
86.94	419.3229
87.30	419.5367
87.30	419.5367
87.30	419.5367
87.30	419.5367
87.30	419.5367
87.30	419.5367
87.57	419.6979
87.88	419.8811
88.03	419.9710
88.36	420.1662
88.47	420.2307
89.95	421.1028
91.11	421.7798
92.29	422.4653
92.38	422.5179
92.38	422.5179
93.35	397.2062
94.00	386.8942
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94.67	393.3429
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94.90	446.8411
94.90	446.8411
94.90	446.8411
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95.87	484.0732
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98.44	399.6637
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99.55	380.7456
99.86	399.1279
100.00	399.2009
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103.76	391.4958
105.00	392.1122
105.31	382.6038
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111.00	388.2314

111.76	380.7993
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115.19	398.9978
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117.00	357.7124
117.00	357.7124
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121.78	377.3073
122.06	377.4285
122.32	377.3531
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122.32	377.3531
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136.00	345.4027
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136.48	359.6026
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144.24	334.2678
144.24	334.2678
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147.16	370.7191
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152.70	336.1205
153.22	338.3324
154.21	336.6241
154.21	336.6241
154.21	336.6241
154.21	336.6241
155.03	348.1259
156.02	350.5078
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161.27	320.4551
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162.64	329.1016
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163.89	335.6727
165.85	315.6629
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171.28	284.0844
171.86	296.6853
172.10	296.7508
176.55	325.0421
176.60	325.0563
181.06	329.7057
184.41	335.7178
185.71	289.0448
186.00	289.1183
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192.34	286.2669
193.63	317.2485
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198.60	292.0302
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201.83	314.1127
202.84	289.8633
205.31	290.4526
208.36	306.5877
208.81	269.8610

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209.75	255.4917
210.97	272.9047
215.65	252.2658
216.55	255.3710
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223.80	262.2356
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227.20	284.6496
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228.18	267.4672
228.18	267.4672
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236.00	236.2352
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238.63	227.9285
238.63	227.9285
238.63	227.9285
239.00	227.9919
240.98	228.3236
241.98	228.4910
241.98	228.4910
241.98	228.4910
244.69	228.9425
245.39	216.7244
247.94	215.3586
248.90	217.8628
249.79	217.6346
252.40	229.1068
252.85	214.7880
252.85	214.7880
254.15	0.0000
256.20	198.6498
256.20	198.6498
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260.90	205.9853
262.80	190.6477
264.65	176.8247
268.24	200.5391
268.79	204.1953
269.46	195.3298
269.46	195.3298
269.46	195.3298
269.46	195.3298
271.23	174.9311
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277.35	176.5507
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277.60	153.1577
278.00	153.1971
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284.30	178.9730
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286.10	184.8227
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290.80	190.8380
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293.26	0.0000
293.70	207.8859
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295.21	212.6432
295.21	212.6432
295.96	196.0300

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297.23	196.1875
298.57	196.3555
299.80	184.3212
299.80	184.3212
300.09	167.5960
300.09	167.5960
300.09	167.5960
300.10	167.5972
300.12	167.5983
301.29	182.9712
302.84	175.5182
303.76	154.2391
303.91	154.2535
304.40	160.4117
304.40	160.4117
304.84	149.7594
306.84	163.2053
308.46	161.7365
311.98	167.6146
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319.02	188.6851
319.41	182.2515
320.08	187.8791
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323.87	162.3343
323.87	162.3343
323.87	162.3343
325.23	165.5613
328.77	210.8758
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334.20	193.6650
334.30	193.6751
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338.28	155.3008
338.28	155.3008
338.28	155.3008
338.32	155.3048
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338.32	155.3048
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351.92	158.4064
351.92	158.4064
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383.85	160.2442
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388.63	130.8286
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391.69	157.0546
392.90	130.1583
398.62	157.6217
400.65	136.4905
401.10	137.4914
401.81	151.1022
402.60	161.0953
404.84	168.1537
410.95	137.8604
411.60	134.6622
413.65	110.4391
414.70	139.2840
415.30	135.4557
415.76	130.0667
417.63	0.0000

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427.08	138.3235
427.89	128.5645
432.53	110.1680
433.93	127.9608
439.47	117.4500
439.56	117.4544
439.89	108.5887
443.98	132.5409
444.90	125.6730
445.03	129.6391
445.03	129.6391
445.03	129.6391
445.03	129.6391
453.90	126.9854
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468.07	126.7177
473.00	126.3368
475.06	119.4300
475.35	119.4460
476.78	125.5508
477.59	138.6587
477.96	124.6130
482.03	107.7275
484.57	113.8994
487.03	108.9795
490.36	0.0000
492.35	113.2852
497.08	94.2658
507.63	0.0000
510.53	0.0000
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511.00	127.4765
511.85	125.8227
511.85	125.8227
513.99	90.1993
513.99	90.1993
520.41	113.6585
520.65	103.4288
527.90	96.5588
528.96	0.0000
529.64	96.6300
529.87	0.0000
531.02	105.9447
537.32	92.8169
543.00	102.3403
546.56	0.0000
549.76	99.5180
552.65	98.5973
555.20	103.8965
563.23	109.4476
563.90	106.3479
568.70	100.2867
569.32	95.0879
569.50	99.2745
569.67	101.3716
573.80	102.3516
574.00	109.9219
574.64	124.1613
578.91	94.4011
579.30	0.0000
583.14	91.0571
585.48	112.1745
591.81	103.3163
592.07	95.9455
593.00	93.8715
595.88	102.4231
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602.52	0.0000
602.71	102.3425
602.71	102.3425
603.60	98.8454
604.41	95.3459
604.70	93.5911
609.31	87.0329
609.31	87.0329
609.31	87.0329

609.31	87.0329
610.33	81.4041
612.46	86.7848
614.37	92.1637
618.01	88.3861
621.84	97.0452
621.84	97.0452
631.29	96.3193
633.02	98.5227
633.10	98.5249
634.78	101.8026
635.90	96.4841
636.97	95.4490
645.85	94.6859
646.12	94.6945
656.30	111.2480
657.75	102.6608
657.90	0.0000
661.65	101.7224
661.65	101.7224
664.57	0.0000
666.33	94.3045
666.33	94.3045
675.00	90.2483
677.61	89.2431
685.20	79.6602
692.80	83.1528
695.00	87.5977
696.49	105.1711
696.49	105.1711
697.00	109.5728
697.49	116.1652
698.33	115.1027
698.50	111.8215
699.00	111.8414
702.63	103.1980
706.10	108.8154
706.58	0.0000
706.67	98.9429
709.31	88.0293
711.68	91.7704
713.82	84.4906
717.42	76.1342
720.50	67.8504
721.93	0.0000
722.20	61.5741
722.78	56.8489
722.78	56.8489
722.89	66.3267
722.95	66.3281
723.30	66.3354
724.18	74.2538
727.18	74.7246
733.00	80.8117
735.90	74.0169
739.58	93.5594
742.81	71.4042
744.21	85.3534
747.13	96.5796
751.79	84.6367
752.31	79.0684
753.82	80.0389
755.35	99.6333
756.15	93.1396
756.87	89.4336
763.93	117.6508
765.79	103.7079
766.41	86.9075
766.84	82.2458
768.36	81.3519
768.36	81.3519
768.36	81.3519
768.36	81.3519
776.49	83.4393
778.00	78.7893
778.57	79.7411
778.89	75.9968
783.80	72.3567

785.46	84.6167
792.07	71.0642
795.84	71.1486
796.30	71.1593
801.93	72.2977
805.60	61.4995
810.29	68.2207
810.76	65.3880
815.85	63.5922
817.79	63.6304
818.51	66.4937
819.60	65.5663
826.30	72.3648
828.27	0.0000
831.60	79.1583
831.96	71.5363
834.83	72.5535
836.80	0.0000
846.75	65.1487
848.13	75.7180
856.28	0.0000
856.80	77.4241
860.37	61.0154
867.32	72.8730
867.82	75.7234
871.10	58.8642
873.19	70.4871
874.81	78.2496
875.33	0.0000
876.40	84.0848
879.36	66.7455
880.27	59.9893
880.51	62.8973
881.50	58.0750
883.24	66.8199
884.67	81.3801
889.25	76.6373
896.60	69.0225
898.02	69.0499
899.00	72.9614
903.28	59.9009
911.07	74.1878
911.07	74.1878
911.07	74.1878
919.63	60.0156
920.93	60.6894
925.00	50.9590
925.24	50.9622
926.50	50.9801
934.06	56.0004
934.06	56.0004
934.06	56.0004
934.06	56.0004
935.52	63.8852
937.48	76.7051
944.10	72.9040
946.00	84.7700
949.00	55.2446
962.29	64.4981
964.01	56.4619
966.15	56.4944
968.20	56.5257
969.11	57.8149
969.11	57.8149
969.11	57.8149
977.42	60.7330
980.50	63.6784
983.50	68.7080
989.30	51.8604
996.32	48.9591
1001.03	64.0260
1001.68	72.0410
1004.76	59.0816
1021.30	0.0000
1024.50	0.0000
1034.80	59.5450
1037.82	65.6506
1038.57	54.5515

1038.76	0.0000
1045.16	64.7630
1046.59	55.6759
1048.07	57.7213
1050.47	54.7163
1050.47	54.7163
1063.62	51.8488
1076.63	76.4954
1077.35	76.5106
1085.78	63.3800
1099.22	60.5149
1112.02	63.1053
1112.84	78.7256
1115.52	79.4374
1120.29	72.1647
1120.29	72.1647
1120.29	72.1647
1120.29	72.1647
1120.51	72.1704
1121.28	72.1818
1124.00	0.0000
1129.67	77.9392
1131.51	0.0000
1147.95	0.0000
1167.94	76.1159
1173.22	93.9551
1175.09	95.0435
1177.93	78.3844
1189.05	71.2511
1204.90	88.3374
1205.75	0.0000
1213.00	93.7658
1221.42	92.8913
1230.97	86.7446
1235.34	96.3580
1236.41	0.0000
1238.11	72.0480
1238.11	72.0480
1238.11	72.0480
1238.11	72.0480
1238.25	72.0508
1246.25	91.2840
1260.41	0.0000
1271.85	54.4407
1274.45	65.1525
1274.54	65.1550
1291.56	52.5310
1298.22	0.0000
1312.09	55.9927
1325.50	46.4346
1325.50	46.4346
1332.49	52.9916
1333.61	54.0873
1360.21	27.9712
1362.66	0.0000
1365.15	35.4673
1368.21	28.9511
1368.53	0.0000
1376.25	29.4675
1377.67	24.3297
1377.67	24.3297
1377.67	24.3297
1377.67	24.3297
1384.27	22.9568
1394.10	25.3502
1395.20	28.1731
1407.95	29.1879
1434.06	23.6625
1436.60	25.5686
1457.56	0.0000
1460.81	19.0304
1489.15	28.7036
1509.49	29.7772
1596.49	17.5737
1620.62	14.7091
1678.03	0.0000
1691.02	11.9155
1691.02	11.9155

1706.46	0.0000
1750.46	0.0000
1764.49	10.5586
1764.49	10.5586
1764.49	10.5586
1764.49	10.5586
1770.23	7.0459
1771.40	61.4127
1791.20	0.0000
1808.65	9.1174
1836.01	18.3177

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232746004

Total Uranium Activity	3.9352E+00	ug/g
Total Uranium Counting Unc.	2.6939E+00	ug/g
Total Uranium Tpu	1.3744E-06	ug/g
Total Uranium Mda	1.6174E+00	ug/g

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*******************************************************************************
*                                                                             *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                              *
*                             CHARLESTON ,SC 29417                            *
*                              GROSS GAMMA REPORT                             *
*                                                                             *
*                                                                             *
*******************************************************************************
*                                                                             *
*   BATCH ID      : 882713                    SAMPLE ID  : G232746004         *
*   ANALYST       : MXR1                      DETECTOR   : GAM05              *
*   SAMPLE DATE   : 29-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE: 14-JUL-2009 09:13:23.08    SAMPLE ALQT:  137.820 GRAM      *
*                                                                             *
*******************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.026E+01
        GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.626E+00
        GROSS GAMMA MDA    (pCi/GRAM  )   : 4.011E+00
        GROSS GAMMA DLC    (pCi/GRAM  )   : 1.957E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:16:58.23

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746005.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 09:16:25
Sample ID         : G232746005           Sample quantity  : 1.31800E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:10.03  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.38	141	475	1.20	91.93	89	9	1.96E-02	28.9	
2	0	63.28*	90	699	1.15	125.68	122	8	1.25E-02	51.6	
3	7	75.01	1005	905	1.86	149.11	143	15	1.40E-01	7.2	3.93E+00
4	7	77.24	1225	574	1.26	153.55	143	15	1.70E-01	4.8	
5	3	87.27	393	451	1.39	173.57	170	12	5.46E-02	9.8	1.81E+00
6	3	89.91	184	353	1.11	178.85	170	12	2.56E-02	17.1	
7	0	92.66*	325	678	1.74	184.35	182	12	4.51E-02	17.3	
8	0	186.13*	252	371	1.89	371.01	365	11	3.51E-02	16.4	
9	0	209.93	105	535	1.69	418.55	410	15	1.46E-02	49.0	
10	5	238.61*	1356	226	1.46	475.85	467	26	1.88E-01	3.4	7.44E-01
11	5	241.56	328	309	2.11	481.74	467	26	4.55E-02	16.4	
12	0	269.85	127	213	1.17	538.24	534	11	1.77E-02	23.9	
13	0	277.61	81	213	1.09	553.75	548	11	1.13E-02	36.6	
14	0	295.33*	362	247	1.51	589.16	582	13	5.03E-02	10.5	
15	0	299.48	52	219	0.92	597.46	595	11	7.16E-03	56.9	
16	0	327.69	76	144	1.40	653.82	650	9	1.06E-02	30.7	
17	0	338.59	250	170	1.66	675.59	670	12	3.47E-02	12.2	
18	0	352.04*	638	168	1.57	702.48	698	12	8.87E-02	5.8	
19	0	463.05	84	107	1.24	924.35	917	13	1.17E-02	27.5	
20	0	510.90*	111	140	2.27	1020.02	1012	16	1.54E-02	28.0	
21	0	570.13*	82	132	2.13	1138.43	1131	18	1.14E-02	35.4	
22	0	583.47*	319	167	1.68	1165.12	1158	16	4.43E-02	10.8	
23	0	609.56	416	132	1.57	1217.29	1211	15	5.78E-02	7.7	
24	0	727.40	76	72	2.30	1452.99	1447	12	1.06E-02	25.0	
25	0	795.27	50	48	1.68	1588.79	1582	12	6.98E-03	30.9	
26	0	911.59	233	35	1.62	1821.58	1815	16	3.23E-02	8.7	
27	0	964.91*	32	39	1.24	1928.34	1925	8	4.44E-03	39.2	
28	0	969.32	112	65	1.87	1937.15	1932	11	1.56E-02	16.9	
29	0	1121.21	54	68	1.72	2241.31	2233	13	7.44E-03	34.6	
30	0	1460.87	976	16	2.31	2921.98	2915	19	1.35E-01	3.4	
31	0	1763.92	49	8	1.52	3529.87	3524	11	6.80E-03	18.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 11:17:00

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746005.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 09:16:25
Sample ID : G232746005 Sample quantity : 131.80 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:10.03 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.575E+01	3.315E+00	7.090E-01	4.512E-02	50.426
CD-109	+	88.03	*	3.703E+00	7.855E-01	1.237E+00	1.025E-01	2.995
SN-126	+	64.28		3.187E-01	3.320E-01	4.635E-01	6.677E-02	0.688
	+	86.94		1.514E+00	6.914E-01	4.986E-01	2.058E-01	3.036
	+	87.57	*	3.641E-01	7.724E-02	1.214E-01	1.003E-02	2.999
TL-208	+	277.35		8.695E-01	6.429E-01	6.875E-01	7.283E-02	1.265
	+	510.84		6.995E-01	3.987E-01	2.859E-01	3.000E-02	2.447
	+	583.14	*	5.943E-01	1.362E-01	8.333E-02	6.321E-03	7.132
		860.37		8.438E-01	4.750E-01	8.809E-01	7.043E-02	0.958
BI-210	+	46.50	*	1.324E+00	7.727E-01	9.433E-01	7.146E-02	1.403
PB-210	+	46.50	*	1.324E+00	7.727E-01	9.433E-01	7.146E-02	1.403
PO-210	+	46.50	*	1.324E+00	7.710E-01	9.433E-01	6.097E-02	1.403
BI-211		72.87		1.241E+01	2.784E+00	4.289E+00	3.205E-01	2.892
	+	351.07	*	4.555E+00	5.991E-01	4.108E-01	2.614E-02	11.088
PB-212	+	74.81		3.165E+00	5.942E-01	3.958E-01	4.757E-02	7.997
	+	77.11		2.297E+00	2.809E-01	2.359E-01	1.809E-02	9.737
	+	87.30		1.684E+00	3.949E-01	5.552E-01	7.194E-02	3.033
	+	238.63	*	1.918E+00	1.965E-01	1.026E-01	7.815E-03	18.695
	+	300.09		1.185E+00	1.353E+00	1.456E+00	1.208E-01	0.814
PO-212	+	74.81		3.165E+00	5.942E-01	3.958E-01	4.757E-02	7.997
	+	77.11		2.297E+00	2.809E-01	2.359E-01	1.809E-02	9.737
	+	87.30		1.684E+00	3.949E-01	5.552E-01	7.194E-02	3.033
		115.19		2.438E+00	3.716E+00	6.107E+00	6.569E-01	0.399
	+	238.63	*	1.918E+00	1.965E-01	1.026E-01	7.815E-03	18.695
	+	300.09		1.185E+00	1.353E+00	1.456E+00	1.208E-01	0.814
BI-214	+	609.31	*	1.475E+00	2.619E-01	1.437E-01	1.245E-02	10.265
		768.36		5.664E-01	1.091E+00	1.884E+00	1.779E-01	0.301
		934.06		1.338E+00	1.723E+00	3.031E+00	2.854E-01	0.442
	+	1120.29		1.076E+00	7.516E-01	6.670E-01	6.000E-02	1.613
		1238.11		1.506E+00	1.505E+00	2.625E+00	2.143E-01	0.574
		1377.67		1.580E+00	1.445E+00	2.646E+00	2.312E-01	0.597
	+	1764.49		1.450E+00	5.349E-01	4.697E-01	2.660E-02	3.087
PB-214	+	74.81		5.454E+00	9.755E-01	6.819E-01	7.217E-02	7.997
	+	77.11		3.937E+00	5.674E-01	4.044E-01	4.371E-02	9.737

Sample ID : G232746005 Acquisition date : 14-JUL-2009 09:16:25

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.885E+00	6.511E-01	9.511E-01	1.073E-01	3.033
	+	241.98		2.789E+00	9.421E-01	6.192E-01	5.151E-02	4.505
	+	295.21		1.460E+00	3.312E-01	2.662E-01	2.281E-02	5.484
	+	351.92	*	1.584E+00	2.242E-01	1.441E-01	1.185E-02	10.999
PO-214	+	74.81		5.454E+00	9.755E-01	6.819E-01	7.217E-02	7.997
	+	77.11		3.937E+00	5.674E-01	4.044E-01	4.371E-02	9.737
	+	87.30		2.885E+00	6.511E-01	9.511E-01	1.073E-01	3.033
	+	241.98		2.789E+00	9.421E-01	6.192E-01	5.151E-02	4.505
	+	295.21		1.460E+00	3.312E-01	2.662E-01	2.281E-02	5.484
	+	351.92	*	1.584E+00	2.242E-01	1.441E-01	1.185E-02	10.999
PO-216	+	74.81		3.165E+00	5.942E-01	3.958E-01	4.757E-02	7.997
	+	77.11		2.297E+00	2.809E-01	2.359E-01	1.809E-02	9.737
	+	87.30		1.684E+00	3.949E-01	5.552E-01	7.194E-02	3.033
	+	238.63	*	1.918E+00	1.965E-01	1.026E-01	7.815E-03	18.695
	+	300.09		1.185E+00	1.353E+00	1.456E+00	1.208E-01	0.814
PO-218	+	74.81		5.454E+00	9.755E-01	6.819E-01	7.217E-02	7.997
	+	77.11		3.937E+00	5.674E-01	4.044E-01	4.371E-02	9.737
	+	87.30		2.885E+00	6.511E-01	9.511E-01	1.073E-01	3.033
	+	241.98		2.789E+00	9.421E-01	6.192E-01	5.151E-02	4.505
	+	295.21		1.460E+00	3.312E-01	2.662E-01	2.281E-02	5.484
	+	351.92	*	1.584E+00	2.242E-01	1.441E-01	1.185E-02	10.999
RA-224	+	240.98	*	5.289E+00	1.762E+00	1.169E+00	7.191E-02	4.523
RA-226	+	609.31	*	1.475E+00	2.619E-01	1.437E-01	1.245E-02	10.265
		768.36		5.664E-01	1.091E+00	1.884E+00	1.779E-01	0.301
		934.06		1.338E+00	1.723E+00	3.031E+00	2.854E-01	0.442
	+	1120.29		1.076E+00	7.516E-01	6.670E-01	6.000E-02	1.613
		1238.11		1.506E+00	1.505E+00	2.625E+00	2.143E-01	0.574
		1377.67		1.580E+00	1.445E+00	2.646E+00	2.312E-01	0.597
	+	1764.49		1.450E+00	5.349E-01	4.697E-01	2.660E-02	3.087
AC-228	+	338.32		1.944E+00	9.241E-01	4.463E-01	1.819E-01	4.355
	+	911.07	*	2.080E+00	4.198E-01	3.074E-01	3.118E-02	6.768
	+	969.11		1.778E+00	7.241E-01	5.259E-01	1.197E-01	3.380
RA-228	+	338.32		1.944E+00	9.241E-01	4.463E-01	1.819E-01	4.355
	+	911.07	*	2.080E+00	4.198E-01	3.074E-01	3.118E-02	6.768
	+	969.11		1.778E+00	7.241E-01	5.259E-01	1.197E-01	3.380
TH-228		84.40		1.901E+00	2.483E+00	3.604E+00	4.607E-01	0.528
	+	238.60	*	1.918E+00	1.965E-01	1.026E-01	7.814E-03	18.698
	+	300.10		1.185E+00	1.519E+00	1.456E+00	8.584E-01	0.814
TH-230	+	609.31	*	1.475E+00	2.619E-01	1.437E-01	1.245E-02	10.265
		768.36		5.664E-01	1.091E+00	1.884E+00	1.779E-01	0.301
		934.06		1.338E+00	1.723E+00	3.031E+00	2.854E-01	0.442
	+	1120.29		1.076E+00	7.516E-01	6.670E-01	6.000E-02	1.613
		1238.11		1.506E+00	1.505E+00	2.625E+00	2.143E-01	0.574
		1377.67		1.580E+00	1.445E+00	2.646E+00	2.312E-01	0.597
	+	1764.49		1.450E+00	5.349E-01	4.697E-01	2.660E-02	3.087
TH-232	+	338.32		1.944E+00	4.886E-01	4.463E-01	2.584E-02	4.355
	+	911.07	*	2.080E+00	4.198E-01	3.074E-01	3.118E-02	6.768
	+	969.11		1.778E+00	7.241E-01	5.259E-01	1.197E-01	3.380
TH-234	+	63.29	*	8.050E-01	8.424E-01	1.125E+00	1.949E-01	0.716

Sample ID : G232746005 Acquisition date : 14-JUL-2009 09:16:25

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.085E+00	8.157E-01	7.258E-01	1.313E-01	2.872
U-234	+	609.31	*	1.475E+00	2.619E-01	1.437E-01	1.245E-02	10.265
		768.36		5.664E-01	1.091E+00	1.884E+00	1.779E-01	0.301
		934.06		1.338E+00	1.723E+00	3.031E+00	2.854E-01	0.442
	+	1120.29		1.076E+00	7.516E-01	6.670E-01	6.000E-02	1.613
		1238.11		1.506E+00	1.505E+00	2.625E+00	2.143E-01	0.574
		1377.67		1.580E+00	1.445E+00	2.646E+00	2.312E-01	0.597
	+	1764.49		1.450E+00	5.349E-01	4.697E-01	2.660E-02	3.087
NP-237	+	86.50	*	1.069E+00	3.164E-01	3.373E-01	7.487E-02	3.170
		95.87		-1.291E+00	1.066E+00	1.352E+00	3.344E-01	-0.955
U-238	+	63.29	*	8.050E-01	8.424E-01	1.125E+00	1.949E-01	0.716
	+	92.38		2.085E+00	7.454E-01	7.258E-01	6.263E-02	2.872
AM-243	+	74.67	*	5.131E-01	8.354E-02	6.416E-02	4.846E-03	7.998
	+	86.72		4.010E+01	8.505E+00	1.265E+01	1.038E+00	3.169
		117.66		3.446E+00	3.975E+00	6.570E+00	7.239E-01	0.524
		142.18		4.473E+00	1.943E+01	3.137E+01	2.913E+00	0.143
ANH-511	+	511.00	*	1.511E-01	8.520E-02	6.178E-02	3.941E-03	2.446

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.898E-01	4.341E-01	6.835E-01	4.811E-02	-0.278
NA-22		1274.54	*	-2.711E-02	7.581E-02	1.188E-01	7.025E-03	-0.228
NA-24		1368.53	*	-5.392E-01	7.581E-02	Half-Life too short		
AL-26		1129.67		1.506E+00	2.724E+00	4.672E+00	2.811E-01	0.322
		1808.65	*	2.581E-02	4.953E-02	8.962E-02	4.990E-03	0.288
TI-44		67.85		-3.487E-02	3.625E-02	4.593E-02	3.341E-03	-0.759
	+	78.38	*	4.238E-01	5.184E-02	6.881E-02	5.321E-03	6.160
SC-46		889.25	*	8.732E-04	5.825E-02	9.656E-02	6.933E-03	0.009
	+	1120.51		1.839E-01	1.278E-01	1.728E-01	1.052E-02	1.064
V-48		944.10		7.471E-01	1.250E+00	2.181E+00	1.533E-01	0.343
		983.50	*	2.532E-02	1.079E-01	1.816E-01	1.250E-02	0.139
		1312.09		-2.799E-03	1.168E-01	1.889E-01	1.129E-02	-0.015
CR-51		320.08	*	4.562E-01	4.566E-01	7.917E-01	5.149E-02	0.576
MN-52		744.21		2.364E-01	3.408E-01	5.985E-01	4.377E-02	0.395
		848.13		6.262E+00	9.143E+00	1.609E+01	1.170E+00	0.389
		935.52		2.579E-01	3.635E-01	6.376E-01	4.499E-02	0.405
		1246.25		4.416E+00	1.131E+01	1.906E+01	1.113E+00	0.232
		1333.61		1.262E+00	7.674E+00	1.268E+01	7.629E-01	0.100
		1434.06	*	-1.596E-02	3.079E-01	4.922E-01	2.967E-02	-0.032
MN-54		834.83	*	8.646E-03	5.790E-02	9.724E-02	7.093E-03	0.089
CO-56		846.75	*	3.734E-02	5.528E-02	9.712E-02	7.066E-03	0.384
		977.42		2.318E+00	4.418E+00	7.343E+00	5.070E-01	0.316
		1037.82		9.572E-02	4.729E-01	7.917E-01	5.704E-02	0.121
		1175.09		-2.906E+00	3.451E+00	5.155E+00	2.924E-01	-0.564
		1238.25		1.566E-01	1.523E-01	2.664E-01	1.648E-02	0.588
		1360.21		9.445E-01	1.395E+00	2.472E+00	1.489E-01	0.382
		1771.40		-5.175E-01	3.967E-01	4.890E-01	2.762E-02	-1.058

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-1.259E-02	2.708E-02	4.269E-02	4.912E-03	-0.295
		136.48		1.018E-01	2.298E-01	3.741E-01	3.936E-02	0.272
CO-58		810.76	*	-2.542E-02	5.461E-02	8.687E-02	6.381E-03	-0.293
FE-59		142.65		2.633E+00	2.970E+00	4.896E+00	4.519E-01	0.538
		192.34		-4.334E-01	1.107E+00	1.723E+00	2.068E-01	-0.252
		1099.22	*	-1.349E-01	1.389E-01	2.043E-01	1.465E-02	-0.660
		1291.56		-5.927E-02	2.030E-01	3.191E-01	2.403E-02	-0.186
CO-60		1173.22		-2.276E-02	6.815E-02	1.075E-01	6.094E-03	-0.212
		1332.49	*	4.706E-02	6.026E-02	1.067E-01	6.421E-03	0.441
ZN-65		1115.52	*	-4.154E-02	1.623E-01	2.198E-01	1.348E-02	-0.189
GE-68		1077.35	*	1.045E+00	1.868E+00	3.226E+00	2.059E-01	0.324
AS-73		53.44	*	-4.443E-02	2.607E-01	4.241E-01	2.850E-02	-0.105
AS-74		595.88	*	-1.133E-03	1.203E-01	1.936E-01	1.332E-02	-0.006
		634.78		-1.543E-01	4.958E-01	7.741E-01	5.458E-02	-0.199
SE-75		66.05		9.578E-01	3.219E+00	4.639E+00	4.318E-01	0.206
		96.73		-9.813E-01	8.298E-01	1.089E+00	1.510E-01	-0.901
		121.11		-1.261E-01	1.478E-01	2.282E-01	3.074E-02	-0.553
		136.00		2.836E-02	4.284E-02	7.024E-02	7.069E-03	0.404
		198.60		4.567E-01	2.017E+00	3.411E+00	2.539E-01	0.134
		264.65	*	4.274E-02	5.837E-02	8.836E-02	5.345E-03	0.484
		279.53		1.274E-01	1.467E-01	2.233E-01	1.409E-02	0.571
		303.91		-1.248E+00	2.906E+00	4.033E+00	3.864E-01	-0.310
		400.65		3.830E-02	3.265E-01	5.387E-01	4.792E-02	0.071
BR-77	+	87.88		7.484E+02	1.587E+02	2.962E+02	2.452E+01	2.527
		200.40		1.940E+01	1.753E+02	2.951E+02	1.827E+01	0.066
	+	239.00		2.879E+02	2.653E+01	4.118E+01	2.536E+00	6.992
		249.79		1.030E+01	8.368E+01	1.221E+02	7.449E+00	0.084
		281.68		-2.744E+01	1.135E+02	1.606E+02	9.389E+00	-0.171
		297.23		4.527E+02	1.051E+02	1.461E+02	8.571E+00	3.098
		303.76		-9.170E+01	2.319E+02	3.230E+02	1.895E+01	-0.284
		439.47		2.632E+02	1.747E+02	3.120E+02	1.816E+01	0.843
		484.57		-1.129E+01	2.759E+02	4.471E+02	2.766E+01	-0.025
		520.65	*	-1.257E+01	1.285E+01	1.910E+01	1.231E+00	-0.658
		574.64		-2.122E+02	3.712E+02	4.521E+02	3.062E+01	-0.469
		578.91		-2.017E+01	1.926E+02	2.056E+02	1.397E+01	-0.098
		585.48		2.097E+03	3.818E+02	6.848E+02	4.678E+01	3.062
		755.35		-2.229E+02	2.245E+02	3.423E+02	2.507E+01	-0.651
		817.79		4.999E+00	1.720E+02	2.867E+02	2.097E+01	0.017
SR-82		698.33		3.383E+01	5.205E+01	9.082E+01	6.576E+00	0.372
		776.49	*	-4.789E-01	5.490E-01	8.452E-01	6.197E-02	-0.567
		1395.20		-6.637E+00	1.562E+01	2.354E+01	1.419E+00	-0.282
RB-83		520.41	*	-7.900E-02	8.972E-02	1.345E-01	8.665E-03	-0.587
		529.64		-1.054E-01	1.429E-01	2.173E-01	1.414E-02	-0.485
		552.65		1.362E-01	2.744E-01	4.605E-01	3.061E-02	0.296
RB-84		881.50	*	-3.087E-02	1.009E-01	1.623E-01	1.169E-02	-0.190
KR-85		513.99	*	2.628E+01	1.131E+01	1.897E+01	1.214E+00	1.386
SR-85		513.99	*	1.344E-01	5.784E-02	9.702E-02	6.210E-03	1.386
RB-86		1076.63	*	3.025E-01	1.197E+00	2.010E+00	1.284E-01	0.150
Y-88		898.02		-2.872E-02	6.128E-02	9.688E-02	6.981E-03	-0.296

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	-2.133E-02	5.606E-02	8.574E-02	4.732E-03	-0.249
ZR-88		392.90	*	-1.001E-03	3.739E-02	6.119E-02	3.300E-03	-0.016
Y-91		1204.90	*	-1.108E+01	3.008E+01	4.735E+01	2.720E+00	-0.234
NB-94		702.63	*	2.465E-02	4.974E-02	8.608E-02	6.241E-03	0.286
		871.10		2.535E-02	5.457E-02	9.383E-02	6.781E-03	0.270
NB-95		765.79	*	6.274E-03	6.164E-02	1.035E-01	7.589E-03	0.061
NB-95M		235.69	*	7.299E-01	1.881E-01	3.096E-01	2.420E-02	2.357
ZR-95		724.18		-3.822E-02	1.728E-01	2.435E-01	1.987E-02	-0.157
		756.15	*	-1.144E-01	9.961E-02	1.487E-01	1.240E-02	-0.769
NB-97		657.90	*	-3.773E-02	9.961E-02	Half-Life too short		
		1024.50		-1.582E+00	9.961E-02	Half-Life too short		
ZR-97		254.15		1.886E+00	9.961E-02	Half-Life too short		
		355.39		8.180E+00	9.961E-02	Half-Life too short		
		507.63	*	4.988E+00	9.961E-02	Half-Life too short		
		602.52		-8.594E+00	9.961E-02	Half-Life too short		
		1021.30		3.603E+00	9.961E-02	Half-Life too short		
		1147.95		6.271E+00	9.961E-02	Half-Life too short		
		1362.66		-2.991E+00	9.961E-02	Half-Life too short		
		1750.46		-2.766E+00	9.961E-02	Half-Life too short		
MO-99		140.51		-1.449E+01	2.791E+01	4.332E+01	1.212E+01	-0.334
		181.06		-1.168E+01	2.132E+01	3.023E+01	5.216E+00	-0.387
		366.43		1.733E+01	9.518E+01	1.582E+02	8.893E+00	0.110
		739.58	*	-1.874E+00	1.558E+01	2.576E+01	3.730E+00	-0.073
		778.00		-5.907E+01	4.579E+01	6.719E+01	4.926E+00	-0.879
TC-99M		140.51	*	-1.181E+10	4.579E+01	Half-Life too short		
RH-101		127.23		2.015E-02	3.662E-02	5.980E-02	6.563E-03	0.337
		198.01	*	-6.668E-03	3.684E-02	6.136E-02	3.797E-03	-0.109
		325.23		2.336E-01	3.171E-01	4.779E-01	2.788E-02	0.489
RH-102		418.52		-2.711E-01	3.862E-01	6.026E-01	3.395E-02	-0.450
		475.06	*	3.613E-02	3.955E-02	6.828E-02	4.174E-03	0.529
		631.29		1.939E-02	7.705E-02	1.265E-01	8.899E-03	0.153
		697.49		1.820E-02	1.167E-01	1.975E-01	1.429E-02	0.092
		766.84		5.825E-02	1.591E-01	2.722E-01	1.995E-02	0.214
		1046.59		-3.555E-02	1.675E-01	2.689E-01	1.766E-02	-0.132
		1112.84		1.868E-01	3.996E-01	5.960E-01	3.660E-02	0.314
RU-103		497.08	*	2.689E-02	5.200E-02	8.761E-02	1.128E-02	0.307
	+	610.33		1.586E+01	3.521E+00	4.019E+00	6.384E-01	3.948
RH-106	+	511.85		7.544E-01	4.254E-01	5.528E-01	3.530E-02	1.365
		621.84	*	1.514E-01	4.409E-01	7.292E-01	9.022E-02	0.208
		1050.47		6.028E-01	3.395E+00	5.671E+00	3.712E-01	0.106
RU-106	+	511.85		7.544E-01	4.254E-01	5.528E-01	3.530E-02	1.365
		621.84	*	1.514E-01	4.407E-01	7.292E-01	5.103E-02	0.208
		1050.47		6.028E-01	3.395E+00	5.671E+00	3.712E-01	0.106
AG-108M		433.93	*	-4.989E-02	4.254E-02	6.348E-02	3.981E-03	-0.786
		614.37		4.317E-02	6.141E-02	9.185E-02	6.780E-03	0.470
		722.95		2.872E-02	7.091E-02	1.065E-01	8.184E-03	0.270
AG-110M		657.75	*	-1.697E-02	4.748E-02	7.747E-02	5.763E-03	-0.219
		677.61		3.031E-01	4.464E-01	7.842E-01	5.865E-02	0.387
		706.67		-3.717E-01	3.081E-01	4.662E-01	3.515E-02	-0.797

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		-1.325E-01	2.389E-01	3.807E-01	2.898E-02	-0.348
		884.67		1.448E-02	7.224E-02	1.218E-01	9.163E-03	0.119
		937.48		-3.513E-02	1.646E-01	2.663E-01	1.978E-02	-0.132
		1384.27		-1.889E-01	2.543E-01	3.674E-01	2.341E-02	-0.514
IN-111		171.28		-9.766E-01	1.057E+00	1.717E+00	1.044E-01	-0.569
		245.39	*	7.990E-02	1.280E+00	1.861E+00	1.140E-01	0.043
IN-113M		391.69	*	-4.988E-03	5.422E-02	8.836E-02	5.123E-03	-0.056
SN-113		391.69	*	-4.988E-03	5.422E-02	8.836E-02	5.123E-03	-0.056
IN-114M		190.27	*	-7.488E-02	2.258E-01	3.240E-01	1.997E-02	-0.231
CD-115		260.90		-1.095E+02	1.418E+02	2.269E+02	1.367E+01	-0.483
		492.35		2.148E+01	4.594E+01	7.712E+01	4.816E+00	0.279
		527.90	*	-1.170E+00	1.367E+01	2.200E+01	1.428E+00	-0.053
SN-117M		156.02		9.738E-01	2.633E+00	4.260E+00	3.191E-01	0.229
		158.56	*	2.849E-02	6.444E-02	1.045E-01	7.453E-03	0.273
SB-122		563.90	*	1.139E+00	3.164E+00	4.579E+00	3.074E-01	0.249
		692.80		-3.126E+01	6.335E+01	1.024E+02	7.401E+00	-0.305
I-123		159.00	*	1.701E+00	6.335E+01	Half-Life too short		
		528.96		-1.487E+02	6.335E+01	Half-Life too short		
TE-123M		159.00	*	1.124E-02	3.366E-02	5.439E-02	3.879E-03	0.207
I-124		602.71	*	-1.012E+00	1.043E+00	1.274E+00	8.807E-02	-0.795
		722.78		2.740E+00	7.118E+00	1.067E+01	7.777E-01	0.257
		1325.50		-1.760E+01	5.002E+01	7.730E+01	4.640E+00	-0.228
		1376.25		6.447E+01	4.186E+01	8.058E+01	4.857E+00	0.800
		1509.49		2.194E+01	1.851E+01	3.647E+01	2.187E+00	0.602
		1691.02		9.130E-01	6.309E+00	1.072E+01	6.212E-01	0.085
SB-124		602.71		-6.097E-02	6.279E-02	7.671E-02	5.305E-03	-0.795
		645.85		-2.281E-01	6.848E-01	1.065E+00	8.210E-02	-0.214
		709.31		8.085E-01	3.990E+00	6.776E+00	4.922E-01	0.119
		713.82		-3.616E-01	2.372E+00	3.921E+00	4.357E-01	-0.092
		722.78		2.392E-01	6.214E-01	9.318E-01	6.994E-02	0.257
	+	968.20		1.825E+01	6.293E+00	1.053E+01	7.313E-01	1.732
		1045.16		-3.648E-01	3.634E+00	5.906E+00	3.883E-01	-0.062
		1325.50		-1.641E+00	4.664E+00	7.208E+00	4.326E-01	-0.228
		1368.21		-1.870E+00	2.437E+00	3.432E+00	4.113E-01	-0.545
		1436.60		4.702E+00	4.843E+00	9.053E+00	5.456E-01	0.519
		1691.02	*	1.880E-02	1.299E-01	2.207E-01	1.389E-02	0.085
SB-125		427.89	*	-5.099E-02	1.244E-01	1.978E-01	1.180E-02	-0.258
	+	463.38		1.014E+00	5.618E-01	7.335E-01	5.100E-02	1.382
		600.56		7.643E-02	2.335E-01	3.863E-01	2.968E-02	0.198
		635.90		-2.397E-02	3.720E-01	5.939E-01	4.686E-02	-0.040
TE-125M		109.28	*	-7.483E+00	9.814E+00	1.520E+01	1.769E+00	-0.492
I-126		388.63		8.909E-02	2.479E-01	4.157E-01	2.251E-02	0.214
		666.33	*	5.756E-02	2.420E-01	4.131E-01	2.957E-02	0.139
		753.82		4.578E-01	2.045E+00	3.474E+00	2.544E-01	0.132
SB-126		223.80		-2.805E+00	4.588E+00	7.470E+00	4.632E-01	-0.376
	+	278.60		5.675E+00	4.166E+00	5.257E+00	3.074E-01	1.080
	+	296.50		1.435E+01	3.130E+00	4.260E+00	2.499E-01	3.367
		414.70		2.085E-02	9.534E-02	1.581E-01	8.853E-03	0.132
		415.30		4.753E+00	7.885E+00	1.339E+01	7.504E-01	0.355

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		-1.668E+00	5.509E+00	8.687E+00	5.789E-01	-0.192
		573.80		1.644E-01	1.719E+00	2.417E+00	1.636E-01	0.068
		593.00		-9.952E-01	1.214E+00	1.807E+00	1.241E-01	-0.551
		656.30		5.760E-01	4.446E+00	7.537E+00	5.371E-01	0.076
		666.33		2.404E-02	1.011E-01	1.725E-01	1.235E-02	0.139
		675.00		4.257E-01	2.905E+00	4.921E+00	3.535E-01	0.087
		695.00		-6.927E-02	1.188E-01	1.907E-01	1.379E-02	-0.363
		697.00		3.301E-02	4.073E-01	6.857E-01	4.963E-02	0.048
		720.50	*	6.499E-02	2.433E-01	3.608E-01	2.628E-02	0.180
		856.80		-4.784E-01	7.264E-01	1.137E+00	8.252E-02	-0.421
		989.30		-2.246E-01	1.994E+00	3.269E+00	2.241E-01	-0.069
		1034.80		2.717E+00	1.361E+01	2.277E+01	1.511E+00	0.119
		1213.00		-2.299E+00	7.602E+00	1.205E+01	6.946E-01	-0.191
SB-127		61.10		3.626E+01	3.011E+01	4.468E+01	4.444E+00	0.811
		252.40		1.865E+00	5.006E+00	8.372E+00	3.480E+00	0.223
		290.80		9.251E+00	2.843E+01	4.179E+01	3.809E+00	0.221
		411.60		3.235E+00	1.531E+01	2.536E+01	3.609E+00	0.128
		444.90		-8.075E+00	1.198E+01	1.853E+01	1.992E+00	-0.436
		473.00		3.639E-01	2.180E+00	3.588E+00	4.042E-01	0.101
		543.00		1.187E+00	2.170E+01	3.526E+01	4.661E+00	0.034
		603.60		-8.835E+00	1.737E+01	2.257E+01	2.559E+00	-0.391
		685.20	*	-1.379E+00	1.825E+00	2.864E+00	2.945E-01	-0.481
		698.50		2.092E+01	2.229E+01	3.929E+01	5.917E+00	0.533
		722.20		1.450E+01	4.845E+01	7.203E+01	7.269E+00	0.201
		783.80		7.124E-01	4.729E+00	7.974E+00	9.165E-01	0.089
XE-127		57.60		-6.133E-01	2.591E+00	4.056E+00	2.814E-01	-0.151
		145.22		3.145E-01	7.692E-01	1.249E+00	1.113E-01	0.252
		172.10		-8.885E-02	1.336E-01	2.195E-01	1.335E-02	-0.405
		202.84	*	4.955E-03	6.145E-02	9.001E-02	5.579E-03	0.055
		374.96		2.060E-01	2.526E-01	4.342E-01	2.409E-02	0.475
I-131		80.18		-1.976E+00	4.198E+00	5.847E+00	4.612E-01	-0.338
		284.30		3.705E-01	1.859E+00	2.942E+00	1.910E-01	0.126
		364.48	*	2.786E-02	1.330E-01	2.215E-01	1.401E-02	0.126
		636.97		-9.985E-01	2.095E+00	3.214E+00	2.455E-01	-0.311
		722.89		4.694E+00	1.170E+01	1.757E+01	1.292E+00	0.267
TE-132		49.72		-4.224E+00	4.954E+00	6.815E+00	6.294E-01	-0.620
		111.76		-1.870E+01	2.937E+01	4.608E+01	5.651E+00	-0.406
		116.30		2.071E+00	2.788E+01	4.498E+01	5.698E+00	0.046
		228.16	*	1.446E-01	7.312E-01	1.231E+00	1.782E-01	0.118
BA-133		53.15		-2.761E-01	1.145E+00	1.794E+00	1.203E-01	-0.154
		79.62		3.986E+00	1.375E+00	1.957E+00	2.892E-01	2.036
		81.00		-1.520E-01	9.398E-02	1.206E-01	1.867E-02	-1.261
	+	276.40		8.593E-01	6.386E-01	7.774E-01	1.010E-01	1.105
		302.84		8.147E-02	1.981E-01	2.925E-01	3.420E-02	0.279
		356.01	*	4.131E-02	5.962E-02	8.970E-02	1.032E-02	0.461
		383.85		2.712E-01	3.721E-01	6.362E-01	6.805E-02	0.426
I-133	+	510.53		1.278E+00	3.721E-01	Half-Life too short		
		529.87	*	-6.188E-03	3.721E-01	Half-Life too short		
		706.58		-5.795E-01	3.721E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		856.28		-7.808E-01	3.721E-01	Half-Life too short		
		875.33		-1.689E-02	3.721E-01	Half-Life too short		
		1236.41		8.062E-01	3.721E-01	Half-Life too short		
		1298.22		1.333E-01	3.721E-01	Half-Life too short		
CS-134		475.35		2.729E+00	2.561E+00	4.464E+00	2.730E-01	0.611
		563.23		4.524E-01	5.540E-01	8.414E-01	5.734E-02	0.538
	+	569.32		8.245E-01	5.870E-01	6.045E-01	4.167E-02	1.364
		604.70		-2.536E-03	4.923E-02	6.784E-02	4.715E-03	-0.037
	+	795.84	*	1.432E-01	8.922E-02	1.295E-01	9.586E-03	1.106
		801.93		-4.351E-01	6.217E-01	8.336E-01	6.154E-02	-0.522
		1038.57		-2.569E+00	5.930E+00	9.318E+00	6.162E-01	-0.276
		1167.94		2.581E+00	3.949E+00	6.821E+00	3.896E-01	0.378
		1365.15		8.080E-03	1.623E+00	2.629E+00	1.728E-01	0.003
CS-135		268.24	*	3.471E-01	2.261E-01	3.539E-01	2.752E-02	0.981
I-135		288.45		5.509E+09	2.261E-01	Half-Life too short		
		417.63		-8.546E+08	2.261E-01	Half-Life too short		
		546.56		-8.469E+08	2.261E-01	Half-Life too short		
		836.80		1.782E+10	2.261E-01	Half-Life too short		
		1038.76		-7.478E+09	2.261E-01	Half-Life too short		
		1124.00		3.149E+10	2.261E-01	Half-Life too short		
		1131.51		3.948E+09	2.261E-01	Half-Life too short		
		1260.41	*	2.873E+09	2.261E-01	Half-Life too short		
		1457.56		4.371E+11	2.261E-01	Half-Life too short		
		1678.03		-4.119E+09	2.261E-01	Half-Life too short		
		1706.46		3.058E+08	2.261E-01	Half-Life too short		
		1791.20		-8.341E+09	2.261E-01	Half-Life too short		
CS-136		66.91		-1.823E-01	5.332E-01	7.494E-01	1.103E-01	-0.243
	+	86.29		4.694E+00	1.092E+00	1.792E+00	2.251E-01	2.619
		153.22		3.598E-01	7.502E-01	1.219E+00	1.094E-01	0.295
		163.89		-6.269E-02	1.156E+00	1.946E+00	1.498E-01	-0.032
		176.55		2.496E-01	4.220E-01	7.235E-01	4.914E-02	0.345
		273.65		-1.402E-01	8.610E-01	8.018E-01	5.376E-02	-0.175
		340.57		6.487E-01	2.016E-01	3.390E-01	2.083E-02	1.914
		818.51		-7.593E-02	1.037E-01	1.602E-01	1.173E-02	-0.474
		1048.07	*	-1.033E-02	1.596E-01	2.602E-01	1.830E-02	-0.040
		1235.34		9.948E-01	9.895E-01	1.724E+00	1.724E-01	0.577
BA-137M		661.65	*	-5.877E-02	4.632E-02	6.914E-02	4.939E-03	-0.850
CS-137		661.65	*	-6.213E-02	4.896E-02	7.309E-02	5.236E-03	-0.850
CE-139		165.85	*	7.442E-03	3.176E-02	5.396E-02	3.269E-03	0.138
BA-140		162.64		-5.756E-01	8.209E-01	1.349E+00	9.698E-02	-0.427
		304.84		-6.873E-02	1.776E+00	2.541E+00	6.939E-01	-0.027
		423.70		2.235E+00	2.594E+00	4.307E+00	1.368E+00	0.519
		537.32	*	-1.019E-01	3.448E-01	5.420E-01	1.770E-01	-0.188
LA-140	+	328.77		7.145E-01	4.410E-01	6.660E-01	4.341E-02	1.073
		432.53		-1.044E-01	2.552E+00	4.155E+00	2.646E-01	-0.025
		487.03		2.589E-02	1.785E-01	2.933E-01	2.031E-02	0.088
		751.79		1.371E+00	2.459E+00	4.276E+00	3.586E-01	0.321
		815.85		5.585E-01	4.363E-01	8.030E-01	6.796E-02	0.695
		867.82		-8.599E-01	2.237E+00	3.588E+00	2.789E-01	-0.240

---- Non-Identified Nuclides ----

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		919.63		2.467E+00	4.204E+00	6.486E+00	6.136E-01	0.380
		925.24		1.625E-01	1.489E+00	2.488E+00	1.925E-01	0.065
		1596.49	*	1.587E-02	1.381E-01	2.338E-01	1.385E-02	0.068
CE-141		145.44	*	2.321E-02	6.960E-02	1.127E-01	1.018E-02	0.206
CE-143		57.37		-1.554E-04	6.960E-02	Half-Life too short		
		231.56		-1.087E-03	6.960E-02	Half-Life too short		
		293.26	*	8.302E-04	6.960E-02	Half-Life too short		
	+	350.59		3.215E-02	6.960E-02	Half-Life too short		
		490.36		-2.051E-04	6.960E-02	Half-Life too short		
		664.57		3.268E-04	6.960E-02	Half-Life too short		
		721.93		6.238E-04	6.960E-02	Half-Life too short		
CE-144		80.11		9.884E-01	1.929E+00	2.788E+00	2.182E-01	0.354
		133.54	*	-3.423E-01	2.393E-01	3.520E-01	5.826E-02	-0.973
PM-144		476.78		2.045E-03	9.213E-02	1.501E-01	1.083E-02	0.014
		618.01		-5.598E-03	4.664E-02	6.969E-02	5.069E-03	-0.080
		696.49	*	-7.798E-03	5.312E-02	8.804E-02	6.375E-03	-0.089
		778.57		-2.901E+00	3.282E+00	5.037E+00	3.694E-01	-0.576
PR-144		696.49	*	-5.284E-01	3.599E+00	5.966E+00	4.317E-01	-0.089
		1489.15		-7.201E+00	1.527E+01	2.343E+01	1.408E+00	-0.307
PM-146		453.90	*	3.706E-02	5.749E-02	9.768E-02	8.516E-03	0.379
		633.02		2.149E-01	1.952E+00	3.163E+00	1.172E+00	0.068
		735.90		-4.387E-02	2.144E-01	3.436E-01	9.701E-02	-0.128
		747.13		-2.880E-02	1.399E-01	2.297E-01	3.050E-02	-0.125
ND-147	+	91.11		5.828E-01	2.059E-01	4.602E-01	4.255E-02	1.266
		319.41		3.649E+00	4.046E+00	6.987E+00	4.088E-01	0.522
		439.89		1.061E+01	7.589E+00	1.347E+01	7.845E-01	0.788
		531.02	*	-5.110E-01	7.603E-01	1.159E+00	1.605E-01	-0.441
PM-149		285.90	*	-1.612E+01	1.028E+02	1.691E+02	2.401E+01	-0.095
EU-152		121.78		-3.586E-02	7.826E-02	1.234E-01	1.540E-02	-0.291
		244.69		3.500E-01	4.340E-01	6.588E-01	4.040E-02	0.531
		344.27	*	1.525E-02	1.356E-01	1.954E-01	1.271E-02	0.078
		443.98		-1.268E+00	1.243E+00	1.875E+00	1.098E-01	-0.676
		778.89		-2.822E-01	3.780E-01	5.882E-01	4.312E-02	-0.480
		867.32		-9.919E-01	1.384E+00	2.156E+00	1.560E-01	-0.460
	+	964.01		5.834E-01	4.587E-01	8.377E-01	5.829E-02	0.696
		1085.78		-3.542E-01	6.424E-01	9.965E-01	6.305E-02	-0.355
		1112.02		3.954E-01	5.169E-01	8.502E-01	5.227E-02	0.465
		1407.95		1.243E-01	2.889E-01	4.928E-01	2.972E-02	0.252
GD-153		69.67		-1.631E-01	1.231E+00	1.745E+00	1.281E-01	-0.093
		83.37		9.547E+00	1.388E+01	2.018E+01	1.615E+00	0.473
		97.43	*	2.073E-03	8.290E-02	1.172E-01	1.061E-02	0.018
		103.18		-9.792E-02	1.051E-01	1.633E-01	1.562E-02	-0.600
EU-154		123.07		-3.929E-04	5.597E-02	8.990E-02	1.223E-02	-0.004
		247.94		-3.794E-01	4.968E-01	6.815E-01	6.634E-02	-0.557
		591.81		1.193E-01	8.785E-01	1.300E+00	1.357E-01	0.092
		723.30		7.453E-02	2.989E-01	4.421E-01	3.688E-02	0.169
		756.87		-7.631E-01	1.097E+00	1.717E+00	1.903E-01	-0.444
		873.19		1.880E-01	4.606E-01	7.890E-01	8.919E-02	0.238
		996.32		-2.751E-01	5.709E-01	8.938E-01	1.517E-01	-0.308

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		-9.859E-02	3.193E-01	5.094E-01	5.274E-02	-0.194
		1274.45	*	-6.697E-02	2.126E-01	3.346E-01	3.147E-02	-0.200
EU-155		48.70		1.297E-01	5.898E-01	8.549E-01	5.580E-02	0.152
		60.01		2.666E+00	2.563E+00	3.803E+00	2.686E-01	0.701
	+	86.54		4.385E-01	9.317E-02	1.670E-01	1.384E-02	2.625
		105.31	*	-8.280E-03	1.087E-01	1.749E-01	1.724E-02	-0.047
TB-160	+	86.79		1.169E+00	2.479E-01	4.443E-01	3.648E-02	2.630
		197.04		-3.304E-02	6.247E-01	1.046E+00	6.468E-02	-0.032
		215.65		-2.104E-01	9.984E-01	1.436E+00	8.913E-02	-0.147
	+	298.57		1.721E-01	1.962E-01	2.584E-01	1.516E-02	0.666
		879.36	*	-8.581E-02	2.027E-01	3.221E-01	2.321E-02	-0.266
		962.29		7.396E-01	9.072E-01	1.411E+00	9.827E-02	0.524
	+	966.15		3.998E-01	3.143E-01	7.174E-01	4.986E-02	0.557
		1177.93		-1.045E-01	5.577E-01	8.935E-01	5.074E-02	-0.117
		1271.85		-1.660E-03	1.228E+00	1.994E+00	1.176E-01	-0.001
HO-166M		80.57		-3.266E-01	2.504E-01	3.352E-01	2.631E-02	-0.974
		184.41		1.274E-01	4.738E-02	7.645E-02	4.696E-03	1.667
		280.46		5.577E-02	1.115E-01	1.662E-01	9.709E-03	0.336
		410.95		-4.583E-02	3.222E-01	5.227E-01	2.908E-02	-0.088
		711.68	*	6.032E-02	8.740E-02	1.535E-01	1.116E-02	0.393
		752.31		1.043E-01	3.906E-01	6.656E-01	4.873E-02	0.157
		810.29		-3.863E-02	8.302E-02	1.321E-01	9.672E-03	-0.292
TM-171		51.35		1.259E+00	9.288E+00	1.340E+01	8.879E-01	0.094
		52.39		-5.653E-01	4.975E+00	7.498E+00	5.002E-01	-0.075
		59.40		1.578E+01	1.334E+01	1.990E+01	1.402E+00	0.793
		66.72	*	-7.195E+00	1.947E+01	2.737E+01	1.981E+00	-0.263
LU-176	+	88.36		8.636E-01	1.832E-01	3.487E-01	2.899E-02	2.476
		201.83		-7.552E-03	3.638E-02	5.497E-02	3.406E-03	-0.137
		306.84	*	1.256E-02	3.397E-02	5.009E-02	2.938E-03	0.251
		401.10		3.554E+00	8.538E+00	1.434E+01	7.848E-01	0.248
LU-177		112.95		-1.422E+00	1.666E+00	2.589E+00	2.725E-01	-0.549
		208.36	*	2.997E+00	1.296E+00	2.313E+00	1.436E-01	1.295
LU-177M		52.97		-2.364E-02	5.081E-01	8.015E-01	5.368E-02	-0.029
		54.07		1.145E-01	2.801E-01	4.636E-01	3.129E-02	0.247
		61.30		1.055E+00	8.225E-01	1.227E+00	8.696E-02	0.860
		121.62		-1.947E-01	4.003E-01	6.303E-01	7.218E-02	-0.309
		147.16		-4.147E-01	7.307E-01	1.141E+00	9.888E-02	-0.363
		171.86		-3.184E-01	5.354E-01	8.818E-01	5.363E-02	-0.361
		218.09		6.843E-01	9.933E-01	1.704E+00	1.057E-01	0.402
	+	268.79		2.825E+00	1.360E+00	1.854E+00	1.104E-01	1.524
		319.02		3.471E-01	3.203E-01	5.576E-01	3.262E-02	0.623
		367.43		-4.094E-01	1.091E+00	1.750E+00	9.818E-02	-0.234
		413.65	*	-1.449E-01	2.344E-01	3.683E-01	2.058E-02	-0.393
HF-181		56.28		-2.223E-01	3.624E-01	5.810E-01	3.988E-02	-0.383
		57.53		-6.111E-02	2.172E-01	3.395E-01	2.354E-02	-0.180
		65.20		6.072E-01	6.222E-01	9.152E-01	6.579E-02	0.663
		133.02		-1.491E-01	7.710E-02	1.122E-01	1.161E-02	-1.329
		136.25		2.303E-01	5.019E-01	8.175E-01	8.162E-02	0.282
		345.85		-1.111E-02	2.906E-01	3.898E-01	2.242E-02	-0.029

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	-4.343E-02	5.600E-02	8.558E-02	5.278E-03	-0.507
W-181		56.28		-8.702E-02	1.422E-01	2.280E-01	1.565E-02	-0.382
		57.53		-2.411E-02	8.529E-02	1.333E-01	9.244E-03	-0.181
		65.20	*	2.366E-01	2.424E-01	3.566E-01	2.563E-02	0.663
TA-182		67.75		-1.387E-02	8.286E-02	1.090E-01	7.927E-03	-0.127
		100.10		2.638E-01	1.907E-01	2.848E-01	2.645E-02	0.926
		152.43		3.360E-01	3.840E-01	6.325E-01	5.047E-02	0.531
		222.10		-2.671E-02	4.052E-01	6.755E-01	4.190E-02	-0.040
		1001.68		1.320E+00	2.997E+00	5.131E+00	3.489E-01	0.257
	+	1121.28		5.081E-01	3.533E-01	4.853E-01	2.951E-02	1.047
		1189.05		-4.210E-01	5.112E-01	7.704E-01	4.396E-02	-0.546
		1221.42	*	4.519E-01	3.477E-01	6.204E-01	3.588E-02	0.728
		1230.97		8.000E-02	7.883E-01	1.294E+00	7.510E-02	0.062
RE-183		57.98		1.774E-02	8.951E-02	1.362E-01	9.479E-03	0.130
		59.32		6.379E-02	5.455E-02	8.134E-02	5.728E-03	0.784
		67.20		-9.915E-02	1.417E-01	1.966E-01	1.426E-02	-0.504
		162.32	*	-4.863E-02	1.202E-01	1.998E-01	1.316E-02	-0.243
	+	208.81		2.306E+00	2.266E+00	2.133E+00	1.324E-01	1.081
		291.72		2.097E-01	1.333E+00	1.937E+00	1.135E-01	0.108
RE-184		57.98		6.547E-02	3.303E-01	5.025E-01	3.498E-02	0.130
		59.32		2.352E-01	2.011E-01	2.999E-01	2.112E-02	0.784
		67.20		-3.657E-01	5.228E-01	7.251E-01	5.259E-02	-0.504
		161.27		-5.827E-02	3.924E-01	6.584E-01	4.438E-02	-0.089
		216.55		-6.567E-02	3.448E-01	5.200E-01	3.228E-02	-0.126
		252.85	*	1.504E-01	2.748E-01	4.684E-01	2.849E-02	0.321
		318.01		1.703E-01	5.514E-01	9.257E-01	5.416E-02	0.184
		792.07		8.487E-01	1.672E+00	2.534E+00	1.858E-01	0.335
		903.28		-1.726E-01	1.570E+00	2.377E+00	1.698E-01	-0.073
		920.93		-5.669E-01	6.879E-01	9.397E-01	6.670E-02	-0.603
OS-185		59.72		1.828E-01	1.490E-01	2.225E-01	1.570E-02	0.822
		61.14		1.110E-01	8.904E-02	1.328E-01	9.405E-03	0.836
		69.30		-4.115E-02	2.187E-01	3.093E-01	2.266E-02	-0.133
		592.07		5.669E-02	3.502E+00	5.317E+00	3.649E-01	0.011
		646.12	*	-2.046E-02	5.824E-02	9.039E-02	6.410E-03	-0.226
		717.42		-1.208E-01	1.331E+00	2.210E+00	1.608E-01	-0.055
		874.81		1.169E-02	9.054E-01	1.502E+00	1.084E-01	0.008
		880.27		-2.174E-01	1.126E+00	1.831E+00	1.319E-01	-0.119
RE-188		155.03	*	4.339E-02	2.022E-01	3.253E-01	2.481E-02	0.133
		477.96		-2.587E+00	4.236E+00	6.584E+00	4.040E-01	-0.393
		633.10		4.836E-01	3.937E+00	6.392E+00	4.503E-01	0.076
W-188	+	63.58		3.228E+01	3.339E+01	4.821E+01	3.444E+00	0.670
		227.08		-1.529E+00	1.451E+01	2.413E+01	1.495E+00	-0.063
		290.67	*	3.447E+00	1.024E+01	1.507E+01	8.830E-01	0.229
IR-192	+	295.96		1.111E+00	2.426E-01	3.325E-01	1.980E-02	3.340
		308.46		-8.689E-03	1.171E-01	1.929E-01	1.144E-02	-0.045
		316.51	*	-2.827E-02	4.246E-02	6.758E-02	3.975E-03	-0.418
		468.07		-5.727E-02	1.051E-01	1.396E-01	9.649E-03	-0.410
		604.41		-6.291E-02	6.623E-01	9.077E-01	1.086E-01	-0.069
		612.46		6.224E+00	1.455E+00	2.571E+00	2.183E-01	2.421

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		6.467E-02	1.136E-01	1.650E-01	1.186E-02	0.392
		66.83		-2.416E-02	6.454E-02	9.069E-02	6.566E-03	-0.266
	+	75.70		1.659E+00	2.701E-01	3.906E-01	2.969E-02	4.247
		98.88	*	2.388E-01	2.417E-01	3.557E-01	3.265E-02	0.671
		129.76		6.368E+00	3.261E+00	5.471E+00	5.857E-01	1.164
TL-200		367.94	*	-2.970E-05	3.261E+00	Half-Life too short		
		579.30		3.142E-04	3.261E+00	Half-Life too short		
		828.27		3.102E-03	3.261E+00	Half-Life too short		
		1205.75		-2.519E-04	3.261E+00	Half-Life too short		
TL-201		68.90		3.090E-01	3.542E+00	4.710E+00	3.445E-01	0.066
		70.82		-5.667E-01	1.970E+00	2.774E+00	2.049E-01	-0.204
		80.30		-4.216E+00	4.398E+00	5.991E+00	4.694E-01	-0.704
		135.34		3.034E+00	2.646E+01	4.259E+01	4.296E+00	0.071
		167.43	*	-1.883E+00	7.266E+00	1.213E+01	7.347E-01	-0.155
TL-202		68.90		2.890E-02	3.314E-01	4.407E-01	3.222E-02	0.066
		70.82		-5.287E-02	1.838E-01	2.588E-01	1.911E-02	-0.204
		80.30		-3.934E-01	4.104E-01	5.592E-01	4.381E-02	-0.704
		439.56	*	1.286E-01	8.966E-02	1.595E-01	9.283E-03	0.806
HG-203		70.83		-2.271E-01	8.047E-01	1.133E+00	1.457E-01	-0.201
		72.87		2.459E+00	6.042E-01	8.503E-01	1.061E-01	2.892
		82.60		9.998E-01	1.214E+00	1.502E+00	2.003E-01	0.666
		279.20	*	6.362E-02	5.544E-02	8.572E-02	5.311E-03	0.742
BI-207		72.80		6.643E-01	1.598E-01	2.461E-01	1.838E-02	2.699
	+	74.97		9.211E-01	1.500E-01	1.953E-01	1.478E-02	4.715
		84.90		3.689E-01	1.898E-01	2.847E-01	2.304E-02	1.296
	+	569.67		1.285E-01	9.148E-02	9.434E-02	6.364E-03	1.362
		1063.62	*	1.325E-02	8.040E-02	1.340E-01	8.664E-03	0.099
		1770.23		-1.965E+00	1.029E+00	1.199E+00	6.773E-02	-1.639
TL-207		81.07		-3.308E-01	2.028E-01	2.668E-01	2.102E-02	-1.240
		83.78		7.818E-02	1.185E-01	1.720E-01	1.381E-02	0.454
		94.90		4.773E-01	2.478E-01	3.733E-01	3.299E-02	1.279
		122.32		-6.165E-01	1.878E+00	2.978E+00	3.563E-01	-0.207
		144.24		6.458E-01	7.593E-01	1.249E+00	1.251E-01	0.517
		154.21		3.989E-03	4.655E-01	7.435E-01	6.458E-02	0.005
	+	269.46		6.619E-01	3.189E-01	4.316E-01	2.677E-02	1.534
		323.87	*	-5.160E-01	9.807E-01	1.343E+00	2.220E-01	-0.384
	+	338.28		8.117E+00	2.161E+00	2.983E+00	3.139E-01	2.721
		445.03		-2.092E+00	2.900E+00	4.468E+00	4.605E-01	-0.468
PO-209		260.50		-7.689E+00	1.118E+01	1.797E+01	1.083E+00	-0.428
		262.80		-1.284E+01	3.229E+01	5.122E+01	3.077E+00	-0.251
		896.60	*	-3.266E+00	1.093E+01	1.757E+01	1.258E+00	-0.186
PB-211		404.84	*	-9.530E-01	1.406E+00	1.994E+00	1.242E+00	-0.478
		427.08		-6.496E-01	2.841E+00	4.528E+00	2.798E+00	-0.143
		831.96		-1.036E+00	1.937E+00	2.887E+00	1.804E+00	-0.359
BI-212	+	727.18	*	1.277E+00	6.472E-01	9.331E-01	8.296E-02	1.368
		785.46		-4.619E-01	2.458E+00	4.028E+00	2.953E-01	-0.115
		1620.62		-8.177E-01	1.772E+00	2.710E+00	1.597E-01	-0.302
PO-215		81.07		-3.308E-01	2.028E-01	2.668E-01	2.102E-02	-1.240
		83.78		7.818E-02	1.185E-01	1.720E-01	1.381E-02	0.454

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		4.773E-01	2.478E-01	3.733E-01	3.299E-02	1.279
		122.32		-6.165E-01	1.878E+00	2.978E+00	3.563E-01	-0.207
		144.24		6.458E-01	7.593E-01	1.249E+00	1.251E-01	0.517
		154.21		3.989E-03	4.655E-01	7.435E-01	6.458E-02	0.005
	+	269.46		6.619E-01	3.189E-01	4.316E-01	2.677E-02	1.534
		323.87	*	-5.160E-01	9.807E-01	1.343E+00	2.220E-01	-0.384
	+	338.28		8.117E+00	2.161E+00	2.983E+00	3.139E-01	2.721
		445.03		-2.092E+00	2.900E+00	4.468E+00	4.605E-01	-0.468
RN-219	+	271.23		8.493E-01	4.116E-01	5.483E-01	4.494E-02	1.549
		401.81	*	2.933E-01	5.304E-01	8.958E-01	1.207E-01	0.327
RN-220		549.76	*	9.823E-01	3.718E+01	6.024E+01	3.995E+00	0.016
RA-223		81.07		-3.308E-01	2.028E-01	2.668E-01	2.102E-02	-1.240
		83.78		7.818E-02	1.185E-01	1.720E-01	1.381E-02	0.454
		94.90		4.773E-01	2.478E-01	3.733E-01	3.299E-02	1.279
		122.32		-6.165E-01	1.878E+00	2.978E+00	3.563E-01	-0.207
		144.24		6.458E-01	7.593E-01	1.249E+00	1.251E-01	0.517
		154.21		3.989E-03	4.655E-01	7.435E-01	6.458E-02	0.005
	+	269.46		6.619E-01	3.189E-01	4.316E-01	2.677E-02	1.534
		323.87	*	-5.160E-01	9.807E-01	1.343E+00	2.220E-01	-0.384
	+	338.28		8.117E+00	2.161E+00	2.983E+00	3.139E-01	2.721
		445.03		-2.092E+00	2.900E+00	4.468E+00	4.605E-01	-0.468
AC-227		79.80		2.661E+00	1.629E+00	2.306E+00	4.886E-01	1.154
		236.00		2.610E+00	4.595E-01	6.844E-01	7.297E-02	3.813
		256.20	*	3.460E-01	4.415E-01	7.564E-01	1.064E-01	0.457
		286.10		6.433E-02	1.847E+00	3.068E+00	3.556E-01	0.021
	+	299.80		2.197E+00	2.526E+00	3.064E+00	4.997E-01	0.717
		304.40		-1.544E-01	2.618E+00	3.741E+00	6.480E-01	-0.041
		334.20		-4.340E-01	3.630E+00	4.474E+00	8.203E-01	-0.097
TH-227		79.80		2.661E+00	1.632E+00	2.306E+00	4.950E-01	1.154
	+	94.00		8.056E+00	3.300E+00	3.318E+00	7.246E-01	2.428
		236.00		2.610E+00	4.389E-01	6.844E-01	6.363E-02	3.813
		256.20	*	3.460E-01	4.427E-01	7.564E-01	1.285E-01	0.457
		286.10		6.433E-02	1.849E+00	3.068E+00	3.074E+00	0.021
	+	299.80		2.197E+00	2.526E+00	3.064E+00	4.997E-01	0.717
		304.40		-1.544E-01	2.618E+00	3.741E+00	6.480E-01	-0.041
		334.20		-4.340E-01	3.630E+00	4.474E+00	8.203E-01	-0.097
TH-229		85.43		7.053E-01	1.973E-01	3.023E-01	2.457E-02	2.333
	+	88.47		4.971E-01	1.055E-01	2.005E-01	1.668E-02	2.480
		100.00		2.716E-01	1.980E-01	2.955E-01	2.742E-02	0.919
		193.63	*	2.150E-01	5.617E-01	9.558E-01	5.903E-02	0.225
	+	210.97		1.810E+00	1.778E+00	1.684E+00	1.045E-01	1.075
PA-231		283.67	*	-5.198E-01	2.010E+00	2.978E+00	4.110E-01	-0.175
		301.29		1.435E+00	7.976E-01	1.263E+00	1.324E-01	1.137
TH-231		81.07		-3.308E-01	2.028E-01	2.668E-01	2.102E-02	-1.240
		83.78		7.818E-02	1.185E-01	1.720E-01	1.381E-02	0.454
		94.90		4.773E-01	2.478E-01	3.733E-01	3.299E-02	1.279
		122.32		-6.165E-01	1.878E+00	2.978E+00	3.563E-01	-0.207
		144.24		6.458E-01	7.593E-01	1.249E+00	1.251E-01	0.517
		154.21		3.989E-03	4.655E-01	7.435E-01	6.458E-02	0.005

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		6.619E-01	3.189E-01	4.316E-01	2.677E-02	1.534
		323.87	*	-5.160E-01	9.807E-01	1.343E+00	2.220E-01	-0.384
	+	338.28		8.117E+00	2.161E+00	2.983E+00	3.139E-01	2.721
		445.03		-2.092E+00	2.900E+00	4.468E+00	4.605E-01	-0.468
U-231		84.21		3.383E+00	4.957E+00	7.200E+00	5.799E-01	0.470
	+	92.29		7.659E+00	2.738E+00	3.392E+00	2.924E-01	2.258
		95.87	*	-1.408E+00	1.117E+00	1.474E+00	1.315E-01	-0.955
		108.00		7.820E-01	2.047E+00	3.313E+00	3.323E-01	0.236
PA-233	+	75.28		2.688E+01	5.550E+00	6.018E+00	8.901E-01	4.466
	+	86.59		7.128E+00	2.359E+00	2.715E+00	7.244E-01	2.626
	+	300.12		6.124E-01	7.020E-01	8.570E-01	1.154E-01	0.715
		311.98	*	1.412E-03	7.567E-02	1.252E-01	7.784E-03	0.011
		340.50		3.810E+00	1.288E+00	1.685E+00	3.870E-01	2.261
		398.62		-1.948E+00	2.735E+00	4.202E+00	1.083E+00	-0.464
		415.76		1.317E+00	2.134E+00	3.601E+00	7.395E-01	0.366
PA-234	+	63.00		9.384E-01	9.782E-01	1.394E+00	2.053E-01	0.673
		94.67		4.551E-01	1.860E-01	2.763E-01	3.465E-02	1.647
		98.44		6.093E-02	1.038E-01	1.425E-01	7.963E-02	0.427
		99.86		9.969E-01	4.896E-01	7.475E-01	6.926E-02	1.334
		111.00		7.513E-02	1.888E-01	3.080E-01	4.114E-02	0.244
		131.20		6.490E-02	1.200E-01	1.959E-01	2.066E-02	0.331
		152.70		3.317E-01	3.750E-01	6.127E-01	1.024E-01	0.541
	+	186.00		6.426E+00	2.885E+00	2.841E+00	8.701E-01	2.261
		226.40		1.447E-01	4.513E-01	7.633E-01	8.980E-02	0.190
		227.20		2.641E-02	4.887E-01	8.180E-01	5.068E-02	0.032
		248.90		-3.003E-01	1.123E+00	1.595E+00	3.441E-01	-0.188
		293.70		5.986E+00	1.488E+00	2.048E+00	3.298E-01	2.923
		369.80		-3.189E-01	1.028E+00	1.653E+00	3.432E-01	-0.193
	+	568.70		4.183E+00	2.977E+00	3.012E+00	2.030E-01	1.389
	+	569.50		1.141E+00	8.120E-01	8.388E-01	5.658E-02	1.360
		574.00		-8.378E-01	2.623E+00	3.523E+00	2.385E-01	-0.238
		699.00		6.159E-01	1.107E+00	1.913E+00	3.538E-01	0.322
		706.10		-1.489E+00	1.680E+00	2.399E+00	1.064E+00	-0.621
		733.00		1.286E-01	5.802E-01	8.574E-01	1.862E-01	0.150
		742.81		1.768E-01	1.980E+00	3.323E+00	2.229E+00	0.053
	+	796.30		2.783E+00	1.875E+00	2.510E+00	6.695E-01	1.109
		805.60		9.092E-01	1.350E+00	2.334E+00	7.074E-01	0.390
		819.60		-1.034E+00	1.752E+00	2.675E+00	1.010E+00	-0.387
		826.30		2.860E-01	1.118E+00	1.889E+00	8.406E-01	0.151
		831.60		-7.585E-01	9.777E-01	1.475E+00	4.348E-01	-0.514
		876.40		-5.476E-01	1.375E+00	1.995E+00	2.049E+00	-0.274
		880.51		-9.457E-02	4.099E-01	6.641E-01	4.784E-02	-0.142
		883.24		2.288E-02	4.092E-01	6.807E-01	4.564E-01	0.034
		899.00		-2.572E-01	1.252E+00	2.024E+00	8.793E-01	-0.127
		925.00		1.471E-02	1.567E+00	2.592E+00	1.837E-01	0.006
		926.50		1.142E-01	2.465E-01	4.230E-01	1.049E-01	0.270
		946.00	*	1.713E-01	4.495E-01	7.661E-01	1.386E-01	0.224
		949.00		1.691E-01	6.888E-01	1.161E+00	8.142E-02	0.146
		980.50		-6.185E-01	1.132E+00	1.766E+00	1.217E-01	-0.350

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-1.301E+00	1.889E+00	2.388E+00	1.548E+00	-0.545
PA-234M		766.41		1.427E+01	2.716E+01	4.321E+01	3.307E+01	0.330
		1001.03	*	8.923E+00	9.737E+00	1.729E+01	1.703E+00	0.516
U-235	+	89.95		2.355E+00	1.083E+00	1.762E+00	5.428E-01	1.337
	+	93.35		2.506E+00	1.118E+00	1.058E+00	2.968E-01	2.369
		105.00		3.909E-02	1.058E+00	1.709E+00	5.158E-01	0.023
		143.76	*	3.517E-01	2.383E-01	3.893E-01	6.907E-02	0.903
		163.35		-1.584E-01	5.163E-01	8.598E-01	1.565E-01	-0.184
	+	185.71		2.380E-01	7.949E-02	1.063E-01	6.536E-03	2.239
		205.31		-2.590E-01	6.845E-01	9.753E-01	1.767E-01	-0.266
NP-236		94.67		3.471E-01	1.377E-01	2.097E-01	1.849E-02	1.655
		98.44		4.603E-02	7.426E-02	1.077E-01	9.848E-03	0.427
		111.00		5.683E-02	1.427E-01	2.329E-01	2.405E-02	0.244
		160.31	*	3.065E-03	9.421E-02	1.505E-01	1.035E-02	0.020
NP-239		99.55		3.247E-01	1.646E-01	2.507E-01	2.316E-02	1.295
		117.00	*	1.823E-01	2.009E-01	3.323E-01	3.638E-02	0.549
	+	209.75		1.823E+00	1.792E+00	1.723E+00	1.069E-01	1.058
		228.18		4.766E-02	2.510E-01	4.226E-01	2.617E-02	0.113
	+	277.60		4.194E-01	3.079E-01	3.860E-01	2.261E-02	1.086
		334.30		-1.942E-01	2.059E+00	2.545E+00	1.477E-01	-0.076
AM-241		59.54	*	9.410E-02	7.810E-02	1.165E-01	9.092E-03	0.808
CM-243		99.55		3.341E-01	1.694E-01	2.580E-01	2.383E-02	1.295
		103.76	*	-5.134E-02	9.738E-02	1.540E-01	1.482E-02	-0.333
		117.00		1.876E-01	2.067E-01	3.419E-01	3.743E-02	0.549
	+	209.75		1.797E+00	1.766E+00	1.698E+00	1.054E-01	1.058
		228.18		4.815E-02	2.536E-01	4.270E-01	2.644E-02	0.113
	+	277.60		4.228E-01	3.104E-01	3.891E-01	2.280E-02	1.086
CM-247	+	278.00		1.739E+00	1.277E+00	1.600E+00	9.365E-02	1.087
		287.40		1.599E-01	1.597E+00	2.512E+00	1.471E-01	0.064
		402.60	*	3.861E-02	4.844E-02	8.305E-02	4.556E-03	0.465
CF-249		252.85		5.650E-01	1.032E+00	1.759E+00	1.070E-01	0.321
		333.44		1.449E-03	3.558E-01	3.398E-01	1.973E-02	0.004
		387.95	*	5.352E-03	4.941E-02	8.160E-02	4.424E-03	0.066
CF-251		176.60	*	1.171E-01	1.463E-01	2.526E-01	1.542E-02	0.464
		227.00		-4.283E-02	4.364E-01	7.260E-01	4.498E-02	-0.059
		285.00		-6.022E-02	2.096E+00	3.471E+00	2.031E-01	-0.017

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746005      *
* Acquisition date : 14-JUL-2009 09:16:25 Detector SN#     :               *
* Detector ID        : GAM21               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:10.03     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 29-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232746005           Analyst initials: MXR1          *
* Batch Number       : 882713               Sample Quantity : 1.3180E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.575E+01	3.249E+00	7.099E-01	0.000E+00
CD-109	3.703E+00	7.698E-01	1.298E+00	0.000E+00
SN-126	3.641E-01	7.569E-02	1.274E-01	0.000E+00
TL-208	5.943E-01	1.334E-01	8.477E-02	0.000E+00
BI-210	1.324E+00	7.573E-01	1.000E+00	0.000E+00
PB-210	1.324E+00	7.573E-01	1.000E+00	0.000E+00
PO-210	1.324E+00	7.555E-01	1.000E+00	0.000E+00
BI-211	4.555E+00	5.871E-01	4.215E-01	0.000E+00
PB-212	1.918E+00	1.926E-01	1.059E-01	0.000E+00
PO-212	1.918E+00	1.926E-01	1.059E-01	0.000E+00
BI-214	1.475E+00	2.567E-01	1.461E-01	0.000E+00
PB-214	1.584E+00	2.197E-01	1.478E-01	0.000E+00
PO-214	1.584E+00	2.197E-01	1.478E-01	0.000E+00
PO-216	1.918E+00	1.926E-01	1.059E-01	0.000E+00
PO-218	1.584E+00	2.197E-01	1.478E-01	0.000E+00
RA-224	5.289E+00	1.726E+00	1.207E+00	0.000E+00
RA-226	1.475E+00	2.567E-01	1.461E-01	0.000E+00
AC-228	2.080E+00	4.114E-01	3.103E-01	0.000E+00
RA-228	2.080E+00	4.114E-01	3.103E-01	0.000E+00
TH-228	1.918E+00	1.926E-01	1.059E-01	0.000E+00
TH-230	1.475E+00	2.567E-01	1.461E-01	0.000E+00
TH-232	2.080E+00	4.114E-01	3.103E-01	0.000E+00
TH-234	8.050E-01	8.256E-01	1.187E+00	0.000E+00
U-234	1.475E+00	2.567E-01	1.461E-01	0.000E+00
NP-237	1.069E+00	3.101E-01	3.540E-01	0.000E+00
U-238	8.050E-01	8.256E-01	1.187E+00	0.000E+00
AM-243	5.131E-01	8.187E-02	6.751E-02	0.000E+00
ANH-511	1.511E-01	8.349E-02	6.298E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-1.898E-01	4.255E-01	6.977E-01	0.000E+00	NOT IDENT.
NA-22	-2.711E-02	7.429E-02	1.192E-01	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.907E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.581E-02	4.854E-02	8.939E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.081E-02	7.234E-02	0.000E+00	FAIL ABUN
SC-46	8.732E-04	5.709E-02	9.752E-02	0.000E+00	FAIL ABUN
V-48	2.532E-02	1.058E-01	1.831E-01	0.000E+00	NOT IDENT.
CR-51	4.562E-01	4.474E-01	8.135E-01	0.000E+00	NOT IDENT.
MN-52	-1.596E-02	3.017E-01	4.930E-01	0.000E+00	NOT IDENT.
MN-54	8.646E-03	5.674E-02	9.831E-02	0.000E+00	NOT IDENT.
CO-56	3.734E-02	5.417E-02	9.817E-02	0.000E+00	NOT IDENT.
CO-57	-1.259E-02	2.654E-02	4.456E-02	0.000E+00	NOT IDENT.
CO-58	-2.542E-02	5.351E-02	8.787E-02	0.000E+00	NOT IDENT.
FE-59	-1.349E-01	1.361E-01	2.055E-01	0.000E+00	NOT IDENT.
CO-60	4.706E-02	5.905E-02	1.070E-01	0.000E+00	NOT IDENT.
ZN-65	-4.154E-02	1.591E-01	2.211E-01	0.000E+00	NOT IDENT.
GE-68	1.045E+00	1.831E+00	3.247E+00	0.000E+00	NOT IDENT.
AS-73	-4.443E-02	2.555E-01	4.486E-01	0.000E+00	NOT IDENT.
AS-74	-1.133E-03	1.179E-01	1.968E-01	0.000E+00	NOT IDENT.
SE-75	4.274E-02	5.720E-02	9.108E-02	0.000E+00	NOT IDENT.
BR-77	-1.257E+01	1.260E+01	1.947E+01	0.000E+00	FAIL ABUN
SR-82	-4.789E-01	5.380E-01	8.556E-01	0.000E+00	NOT IDENT.
RB-83	-7.900E-02	8.793E-02	1.371E-01	0.000E+00	NOT IDENT.
RB-84	-3.087E-02	9.891E-02	1.639E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.108E+01	1.934E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.668E-02	9.890E-02	0.000E+00	NOT IDENT.
RB-86	3.025E-01	1.173E+00	2.023E+00	0.000E+00	NOT IDENT.
Y-88	-2.133E-02	5.494E-02	8.550E-02	0.000E+00	NOT IDENT.
ZR-88	-1.001E-03	3.664E-02	6.266E-02	0.000E+00	NOT IDENT.
Y-91	-1.108E+01	2.947E+01	4.757E+01	0.000E+00	NOT IDENT.
NB-94	2.465E-02	4.875E-02	8.729E-02	0.000E+00	NOT IDENT.
NB-95	6.274E-03	6.041E-02	1.048E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.843E-01	3.197E-01	0.000E+00	NOT IDENT.
ZR-95	-1.144E-01	9.762E-02	1.506E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.035E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.040E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.874E+00	1.527E+01	2.609E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.230E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.668E-03	3.610E-02	6.356E-02	0.000E+00	NOT IDENT.
RH-102	3.613E-02	3.876E-02	6.970E-02	0.000E+00	NOT IDENT.
RU-103	2.689E-02	5.096E-02	8.937E-02	0.000E+00	FAIL ABUN
RH-106	1.514E-01	4.321E-01	7.409E-01	0.000E+00	FAIL ABUN
RU-106	1.514E-01	4.318E-01	7.409E-01	0.000E+00	FAIL ABUN
AG-108M	-4.989E-02	4.169E-02	6.490E-02	0.000E+00	NOT IDENT.
AG-110M	-1.697E-02	4.653E-02	7.865E-02	0.000E+00	NOT IDENT.
IN-111	7.990E-02	1.254E+00	1.921E+00	0.000E+00	NOT IDENT.
IN-113M	-4.988E-03	5.313E-02	9.049E-02	0.000E+00	NOT IDENT.
SN-113	-4.988E-03	5.313E-02	9.049E-02	0.000E+00	NOT IDENT.
IN-114M	-7.488E-02	2.213E-01	3.358E-01	0.000E+00	NOT IDENT.
CD-115	-1.170E+00	1.340E+01	2.241E+01	0.000E+00	NOT IDENT.
SN-117M	2.849E-02	6.315E-02	1.086E-01	0.000E+00	NOT IDENT.
SB-122	1.139E+00	3.101E+00	4.660E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.993E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.124E-02	3.299E-02	5.653E-02	0.000E+00	NOT IDENT.
I-124	-1.012E+00	1.022E+00	1.295E+00	0.000E+00	NOT IDENT.
SB-124	1.880E-02	1.273E-01	2.204E-01	0.000E+00	FAIL ABUN
SB-125	-5.099E-02	1.219E-01	2.022E-01	0.000E+00	FAIL ABUN
TE-125M	-7.483E+00	9.617E+00	1.590E+01	0.000E+00	NOT IDENT.
I-126	5.756E-02	2.371E-01	4.193E-01	0.000E+00	NOT IDENT.
SB-126	6.499E-02	2.384E-01	3.657E-01	0.000E+00	FAIL ABUN
SB-127	-1.379E+00	1.789E+00	2.906E+00	0.000E+00	NOT IDENT.
XE-127	4.955E-03	6.022E-02	9.319E-02	0.000E+00	NOT IDENT.
I-131	2.786E-02	1.303E-01	2.271E-01	0.000E+00	NOT IDENT.
TE-132	1.446E-01	7.166E-01	1.272E+00	0.000E+00	NOT IDENT.
BA-133	4.131E-02	5.843E-02	9.201E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	6.677E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	8.743E-02	1.310E-01	0.000E+00	FAIL ABUN
CS-135	3.471E-01	2.216E-01	3.647E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	5.069E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.033E-02	1.564E-01	2.621E-01	0.000E+00	FAIL ABUN
BA-137M	-5.877E-02	4.539E-02	7.018E-02	0.000E+00	NOT IDENT.
CS-137	-6.213E-02	4.798E-02	7.419E-02	0.000E+00	NOT IDENT.
CE-139	7.442E-03	3.112E-02	5.605E-02	0.000E+00	NOT IDENT.
BA-140	-1.019E-01	3.379E-01	5.521E-01	0.000E+00	NOT IDENT.
LA-140	1.587E-02	1.354E-01	2.337E-01	0.000E+00	FAIL ABUN
CE-141	2.321E-02	6.821E-02	1.173E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.611E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-3.423E-01	2.346E-01	3.669E-01	0.000E+00	NOT IDENT.
PM-144	-7.798E-03	5.206E-02	8.929E-02	0.000E+00	NOT IDENT.
PR-144	-5.284E-01	3.527E+00	6.050E+00	0.000E+00	NOT IDENT.
PM-146	3.706E-02	5.634E-02	9.978E-02	0.000E+00	NOT IDENT.
ND-147	-5.110E-01	7.451E-01	1.181E+00	0.000E+00	FAIL ABUN
PM-149	-1.612E+01	1.008E+02	1.741E+02	0.000E+00	NOT IDENT.
EU-152	1.525E-02	1.329E-01	2.005E-01	0.000E+00	FAIL ABUN
GD-153	2.073E-03	8.125E-02	1.228E-01	0.000E+00	NOT IDENT.
EU-154	-6.697E-02	2.084E-01	3.358E-01	0.000E+00	NOT IDENT.
EU-155	-8.280E-03	1.065E-01	1.830E-01	0.000E+00	FAIL ABUN
TB-160	-8.581E-02	1.986E-01	3.254E-01	0.000E+00	FAIL ABUN
HO-166M	6.032E-02	8.565E-02	1.556E-01	0.000E+00	NOT IDENT.
TM-171	-7.195E+00	1.908E+01	2.885E+01	0.000E+00	NOT IDENT.
LU-176	1.256E-02	3.329E-02	5.151E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.270E+00	2.394E+00	0.000E+00	NOT IDENT.
LU-177M	-1.449E-01	2.297E-01	3.768E-01	0.000E+00	FAIL ABUN
HF-181	-4.343E-02	5.488E-02	8.734E-02	0.000E+00	NOT IDENT.
W-181	2.366E-01	2.375E-01	3.760E-01	0.000E+00	NOT IDENT.
TA-182	4.519E-01	3.408E-01	6.232E-01	0.000E+00	FAIL ABUN
RE-183	-4.863E-02	1.178E-01	2.076E-01	0.000E+00	FAIL ABUN
RE-184	1.504E-01	2.693E-01	4.832E-01	0.000E+00	NOT IDENT.
OS-185	-2.046E-02	5.708E-02	9.179E-02	0.000E+00	NOT IDENT.
RE-188	4.339E-02	1.981E-01	3.383E-01	0.000E+00	NOT IDENT.
W-188	3.447E+00	1.004E+01	1.551E+01	0.000E+00	FAIL ABUN
IR-192	-2.827E-02	4.161E-02	6.945E-02	0.000E+00	FAIL ABUN
AU-195	2.388E-01	2.369E-01	3.726E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.675E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.883E+00	7.121E+00	1.260E+01	0.000E+00	NOT IDENT.
TL-202	1.286E-01	8.786E-02	1.630E-01	0.000E+00	NOT IDENT.
HG-203	6.362E-02	5.433E-02	8.828E-02	0.000E+00	NOT IDENT.
BI-207	1.325E-02	7.879E-02	1.349E-01	0.000E+00	FAIL ABUN
TL-207	-5.160E-01	9.611E-01	1.380E+00	0.000E+00	FAIL ABUN
PO-209	-3.266E+00	1.071E+01	1.774E+01	0.000E+00	NOT IDENT.
PB-211	-9.530E-01	1.378E+00	2.041E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.343E-01	9.456E-01	0.000E+00	FAIL ABUN
PO-215	-5.160E-01	9.611E-01	1.380E+00	0.000E+00	FAIL ABUN
RN-219	2.933E-01	5.198E-01	9.170E-01	0.000E+00	FAIL ABUN
RN-220	9.823E-01	3.644E+01	6.134E+01	0.000E+00	NOT IDENT.
RA-223	-5.160E-01	9.611E-01	1.380E+00	0.000E+00	FAIL ABUN
AC-227	3.460E-01	4.326E-01	7.801E-01	0.000E+00	FAIL ABUN
TH-227	3.460E-01	4.338E-01	7.801E-01	0.000E+00	FAIL ABUN
TH-229	2.150E-01	5.504E-01	9.903E-01	0.000E+00	FAIL ABUN
PA-231	-5.198E-01	1.970E+00	3.066E+00	0.000E+00	NOT IDENT.
TH-231	-5.160E-01	9.611E-01	1.380E+00	0.000E+00	FAIL ABUN
U-231	-1.408E+00	1.094E+00	1.545E+00	0.000E+00	FAIL ABUN
PA-233	1.412E-03	7.416E-02	1.287E-01	0.000E+00	FAIL ABUN
PA-234	1.713E-01	4.405E-01	7.729E-01	0.000E+00	FAIL ABUN
PA-234M	8.923E+00	9.542E+00	1.743E+01	0.000E+00	NOT IDENT.
U-235	3.517E-01	2.335E-01	4.053E-01	0.000E+00	FAIL ABUN
NP-236	3.065E-03	9.233E-02	1.564E-01	0.000E+00	NOT IDENT.
NP-239	1.823E-01	1.969E-01	3.471E-01	0.000E+00	FAIL ABUN
AM-241	9.410E-02	7.654E-02	1.230E-01	0.000E+00	NOT IDENT.
CM-243	-5.134E-02	9.543E-02	1.612E-01	0.000E+00	FAIL ABUN
CM-247	3.861E-02	4.747E-02	8.501E-02	0.000E+00	FAIL ABUN
CF-249	5.352E-03	4.843E-02	8.358E-02	0.000E+00	NOT IDENT.
CF-251	1.171E-01	1.434E-01	2.621E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:16:59.11

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746005.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 09:16:25
Sample ID         : G232746005           Sample quantity  : 1.31800E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:10.03  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	976	10.67*	7.283E-01	3.575E+01	3.575E+01	9.27
CD-109	88.03	393	3.72*	8.312E+00	3.622E+00	3.703E+00	21.21
SN-126	64.28	90	9.60	8.361E+00	3.187E-01	3.187E-01	104.20
	86.94	393	8.90	8.312E+00	1.514E+00	1.514E+00	45.67
	87.57	393	37.00*	8.312E+00	3.641E-01	3.641E-01	21.21
TL-208	277.35	81	6.80	3.914E+00	8.695E-01	8.695E-01	73.94
	510.84	111	21.60	2.089E+00	6.995E-01	6.995E-01	57.00
	583.14	319	84.20*	1.817E+00	5.943E-01	5.943E-01	22.91
	860.37	------	12.46	1.219E+00	------ Line Not Found		------
BI-210	46.50	141	4.05*	7.520E+00	1.322E+00	1.324E+00	58.37
PB-210	46.50	141	4.05*	7.520E+00	1.322E+00	1.324E+00	58.37
PO-210	46.50	141	4.05*	7.520E+00	1.322E+00	1.324E+00	58.23
BI-211	72.87	------	1.27	8.456E+00	------ Line Not Found		------
	351.07	638	12.94*	3.084E+00	4.555E+00	4.555E+00	13.15
PB-212	74.81	1005	10.70	8.452E+00	3.165E+00	3.165E+00	18.77
	77.11	1225	18.00	8.441E+00	2.297E+00	2.297E+00	12.23
	87.30	393	8.00	8.312E+00	1.684E+00	1.684E+00	23.45
	238.63	1356	44.60*	4.517E+00	1.918E+00	1.918E+00	10.25
	300.09	52	3.41	3.633E+00	1.185E+00	1.185E+00	114.13
PO-212	74.81	1005	10.70	8.452E+00	3.165E+00	3.165E+00	18.77
	77.11	1225	18.00	8.441E+00	2.297E+00	2.297E+00	12.23
	87.30	393	8.00	8.312E+00	1.684E+00	1.684E+00	23.45
	115.19	------	0.60	7.596E+00	------ Line Not Found		------
	238.63	1356	44.60*	4.517E+00	1.918E+00	1.918E+00	10.25
	300.09	52	3.41	3.633E+00	1.185E+00	1.185E+00	114.13
BI-214	609.31	416	46.30*	1.736E+00	1.475E+00	1.475E+00	17.76
	768.36	------	5.04	1.367E+00	------ Line Not Found		------
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	54	15.10	9.384E-01	1.076E+00	1.076E+00	69.84
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	49	15.80	6.088E-01	1.450E+00	1.450E+00	36.89

Sample ID : G232746005 Acquisition date : 14-JUL-2009 09:16:25

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	1005	6.21	8.452E+00	5.454E+00	5.454E+00	17.89
	77.11	1225	10.50	8.441E+00	3.937E+00	3.937E+00	14.41
	87.30	393	4.67	8.312E+00	2.885E+00	2.885E+00	22.57
	241.98	328	7.49	4.466E+00	2.789E+00	2.789E+00	33.78
	295.21	362	19.20	3.683E+00	1.460E+00	1.460E+00	22.69
	351.92	638	37.20*	3.084E+00	1.584E+00	1.584E+00	14.15
PO-214	74.81	1005	6.21	8.452E+00	5.454E+00	5.454E+00	17.89
	77.11	1225	10.50	8.441E+00	3.937E+00	3.937E+00	14.41
	87.30	393	4.67	8.312E+00	2.885E+00	2.885E+00	22.57
	241.98	328	7.49	4.466E+00	2.789E+00	2.789E+00	33.78
	295.21	362	19.20	3.683E+00	1.460E+00	1.460E+00	22.69
	351.92	638	37.20*	3.084E+00	1.584E+00	1.584E+00	14.15
PO-216	74.81	1005	10.70	8.452E+00	3.165E+00	3.165E+00	18.77
	77.11	1225	18.00	8.441E+00	2.297E+00	2.297E+00	12.23
	87.30	393	8.00	8.312E+00	1.684E+00	1.684E+00	23.45
	238.63	1356	44.60*	4.517E+00	1.918E+00	1.918E+00	10.25
	300.09	52	3.41	3.633E+00	1.185E+00	1.185E+00	114.13
PO-218	74.81	1005	6.21	8.452E+00	5.454E+00	5.454E+00	17.89
	77.11	1225	10.50	8.441E+00	3.937E+00	3.937E+00	14.41
	87.30	393	4.67	8.312E+00	2.885E+00	2.885E+00	22.57
	241.98	328	7.49	4.466E+00	2.789E+00	2.789E+00	33.78
	295.21	362	19.20	3.683E+00	1.460E+00	1.460E+00	22.69
	351.92	638	37.20*	3.084E+00	1.584E+00	1.584E+00	14.15
RA-224	240.98	328	3.95*	4.466E+00	5.289E+00	5.289E+00	33.31
RA-226	609.31	416	46.30*	1.736E+00	1.475E+00	1.475E+00	17.76
	768.36	------	5.04	1.367E+00	------	Line Not Found	------
	934.06	------	3.21	1.123E+00	------	Line Not Found	------
	1120.29	54	15.10	9.384E-01	1.076E+00	1.076E+00	69.84
	1238.11	------	5.94	8.528E-01	------	Line Not Found	------
	1377.67	------	4.11	7.701E-01	------	Line Not Found	------
	1764.49	49	15.80	6.088E-01	1.450E+00	1.450E+00	36.89
AC-228	338.32	250	11.40	3.210E+00	1.944E+00	1.944E+00	47.54
	911.07	233	27.70*	1.150E+00	2.080E+00	2.080E+00	20.18
	969.11	112	16.60	1.082E+00	1.778E+00	1.778E+00	40.73
RA-228	338.32	250	11.40	3.210E+00	1.944E+00	1.944E+00	47.54
	911.07	233	27.70*	1.150E+00	2.080E+00	2.080E+00	20.18
	969.11	112	16.60	1.082E+00	1.778E+00	1.778E+00	40.73
TH-228	84.40	------	1.21	8.360E+00	------	Line Not Found	------
	238.60	1356	44.60*	4.517E+00	1.918E+00	1.918E+00	10.25
	300.10	52	3.41	3.633E+00	1.185E+00	1.185E+00	128.18
TH-230	609.31	416	46.30*	1.736E+00	1.475E+00	1.475E+00	17.76
	768.36	------	5.04	1.367E+00	------	Line Not Found	------
	934.06	------	3.21	1.123E+00	------	Line Not Found	------
	1120.29	54	15.10	9.384E-01	1.076E+00	1.076E+00	69.84
	1238.11	------	5.94	8.528E-01	------	Line Not Found	------
	1377.67	------	4.11	7.701E-01	------	Line Not Found	------
	1764.49	49	15.80	6.088E-01	1.450E+00	1.450E+00	36.89
TH-232	338.32	250	11.40	3.210E+00	1.944E+00	1.944E+00	25.14
	911.07	233	27.70*	1.150E+00	2.080E+00	2.080E+00	20.18

Sample ID : G232746005 Acquisition date : 14-JUL-2009 09:16:25

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	112	16.60	1.082E+00	1.778E+00	1.778E+00	40.73
TH-234	63.29	90	3.80*	8.361E+00	8.050E-01	8.050E-01	104.65
	92.38	325	5.41	8.203E+00	2.085E+00	2.085E+00	39.13
U-234	609.31	416	46.30*	1.736E+00	1.475E+00	1.475E+00	17.76
	768.36	------	5.04	1.367E+00	------ Line Not Found		------
	934.06	------	3.21	1.123E+00	------ Line Not Found		------
	1120.29	54	15.10	9.384E-01	1.076E+00	1.076E+00	69.84
	1238.11	------	5.94	8.528E-01	------ Line Not Found		------
	1377.67	------	4.11	7.701E-01	------ Line Not Found		------
	1764.49	49	15.80	6.088E-01	1.450E+00	1.450E+00	36.89
NP-237	86.50	393	12.60*	8.312E+00	1.069E+00	1.069E+00	29.59
	95.87	------	2.60	8.129E+00	------ Line Not Found		------
U-238	63.29	90	3.80*	8.361E+00	8.050E-01	8.050E-01	104.65
	92.38	325	5.41	8.203E+00	2.085E+00	2.085E+00	35.75
AM-243	74.67	1005	66.00*	8.452E+00	5.131E-01	5.131E-01	16.28
	86.72	393	0.34	8.312E+00	4.010E+01	4.010E+01	21.21
	117.66	------	0.55	7.522E+00	------ Line Not Found		------
	142.18	------	0.13	6.781E+00	------ Line Not Found		------
ANH-511	511.00	111	100.00*	2.089E+00	1.511E-01	1.511E-01	56.38

Flag: "*" = Keyline

Sample ID : G232746005 Acquisition date : 14-JUL-2009 09:16:25

Total number of lines in spectrum 31
Number of unidentified lines 0
Number of lines tentatively identified by NID 31 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.575E+01	3.575E+01	0.332E+01	9.27	
CD-109	464.00D	1.02	3.622E+00	3.703E+00	0.786E+00	21.21	
SN-126	1.00E+05Y	1.00	3.641E-01	3.641E-01	0.772E-01	21.21	
TL-208	1.41E+10Y	1.00	5.943E-01	5.943E-01	1.362E-01	22.91	
BI-210	22.26Y	1.00	1.322E+00	1.324E+00	0.773E+00	58.37	
PB-210	22.26Y	1.00	1.322E+00	1.324E+00	0.773E+00	58.37	
PO-210	22.26Y	1.00	1.322E+00	1.324E+00	0.771E+00	58.23	
BI-211	7.04E+08Y	1.00	4.555E+00	4.555E+00	0.599E+00	13.15	
PB-212	1.41E+10Y	1.00	1.918E+00	1.918E+00	0.197E+00	10.25	
PO-212	1.41E+10Y	1.00	1.918E+00	1.918E+00	0.197E+00	10.25	
BI-214	1600.00Y	1.00	1.475E+00	1.475E+00	0.262E+00	17.76	
PB-214	1600.00Y	1.00	1.584E+00	1.584E+00	0.224E+00	14.15	
PO-214	1600.00Y	1.00	1.584E+00	1.584E+00	0.224E+00	14.15	
PO-216	1.41E+10Y	1.00	1.918E+00	1.918E+00	0.197E+00	10.25	
PO-218	1600.00Y	1.00	1.584E+00	1.584E+00	0.224E+00	14.15	
RA-224	1.41E+10Y	1.00	5.289E+00	5.289E+00	1.762E+00	33.31	
RA-226	1600.00Y	1.00	1.475E+00	1.475E+00	0.262E+00	17.76	
AC-228	1.41E+10Y	1.00	2.080E+00	2.080E+00	0.420E+00	20.18	
RA-228	1.41E+10Y	1.00	2.080E+00	2.080E+00	0.420E+00	20.18	
TH-228	1.41E+10Y	1.00	1.918E+00	1.918E+00	0.197E+00	10.25	
TH-230	4.47E+09Y	1.00	1.475E+00	1.475E+00	0.262E+00	17.76	
TH-232	1.41E+10Y	1.00	2.080E+00	2.080E+00	0.420E+00	20.18	
TH-234	4.47E+09Y	1.00	8.050E-01	8.050E-01	8.424E-01	104.65	
U-234	4.47E+09Y	1.00	1.475E+00	1.475E+00	0.262E+00	17.76	
NP-237	2.14E+06Y	1.00	1.069E+00	1.069E+00	0.316E+00	29.59	
U-238	4.47E+09Y	1.00	8.050E-01	8.050E-01	8.424E-01	104.65	
AM-243	7380.00Y	1.00	5.131E-01	5.131E-01	0.835E-01	16.28	
ANH-511	1.00E+09Y	1.00	1.511E-01	1.511E-01	0.852E-01	56.38	
	Total Activity :		8.205E+01	8.214E+01			

Grand Total Activity : 8.205E+01 8.214E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232746005
Acquisition date : 14-JUL-2009 09:16:25

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	89.91	184	353	1.11	178.85	170	12	2.56E-02	34.1	8.26E+00	T
0	186.13	252	371	1.89	371.01	365	11	3.51E-02	32.8	5.59E+00	T
0	209.93	105	535	1.69	418.55	410	15	1.46E-02	98.1	5.06E+00	T
0	269.85	127	213	1.17	538.24	534	11	1.77E-02	47.8	4.02E+00	T
0	327.69	76	144	1.40	653.82	650	9	1.06E-02	61.4	3.32E+00	T
0	463.05	84	107	1.24	924.35	917	13	1.17E-02	55.0	2.32E+00	T
0	570.13	82	132	2.13	1138.43	1131	18	1.14E-02	70.9	1.86E+00	T
0	727.40	76	72	2.30	1452.99	1447	12	1.06E-02	49.9	1.45E+00	T
0	795.27	50	48	1.68	1588.79	1582	12	6.98E-03	61.9	1.32E+00	T
0	964.91	32	39	1.24	1928.34	1925	8	4.44E-03	78.3	1.09E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 11:17:03.91

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746005.CNF;1 *
* Acquisition date  : 14-JUL-2009 09:16:25  Detector SN#     :             *
* Detector ID       : GAM21                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:10.03          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232746005            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.31800E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1023-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.575E+01	3.315E+00	7.090E-01	4.512E-02	50.426
CD-109	3.703E+00	7.855E-01	1.237E+00	1.025E-01	2.995
SN-126	3.641E-01	7.724E-02	1.214E-01	1.003E-02	2.999
TL-208	5.943E-01	1.362E-01	8.333E-02	6.321E-03	7.132
BI-210	1.324E+00	7.727E-01	9.433E-01	7.146E-02	1.403
PB-210	1.324E+00	7.727E-01	9.433E-01	7.146E-02	1.403
PO-210	1.324E+00	7.710E-01	9.433E-01	6.097E-02	1.403
BI-211	4.555E+00	5.991E-01	4.108E-01	2.614E-02	11.088
PB-212	1.918E+00	1.965E-01	1.026E-01	7.815E-03	18.695
PO-212	1.918E+00	1.965E-01	1.026E-01	7.815E-03	18.695
BI-214	1.475E+00	2.619E-01	1.437E-01	1.245E-02	10.265
PB-214	1.584E+00	2.242E-01	1.441E-01	1.185E-02	10.999
PO-214	1.584E+00	2.242E-01	1.441E-01	1.185E-02	10.999
PO-216	1.918E+00	1.965E-01	1.026E-01	7.815E-03	18.695
PO-218	1.584E+00	2.242E-01	1.441E-01	1.185E-02	10.999
RA-224	5.289E+00	1.762E+00	1.169E+00	7.191E-02	4.523
RA-226	1.475E+00	2.619E-01	1.437E-01	1.245E-02	10.265
AC-228	2.080E+00	4.198E-01	3.074E-01	3.118E-02	6.768

Sample ID : G232746005 Acquisition date : 14-JUL-2009 09:16:25

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	2.080E+00	4.198E-01	3.074E-01	3.118E-02	6.768
TH-228	1.918E+00	1.965E-01	1.026E-01	7.814E-03	18.698
TH-230	1.475E+00	2.619E-01	1.437E-01	1.245E-02	10.265
TH-232	2.080E+00	4.198E-01	3.074E-01	3.118E-02	6.768
TH-234	8.050E-01	8.424E-01	1.125E+00	1.949E-01	0.716
U-234	1.475E+00	2.619E-01	1.437E-01	1.245E-02	10.265
NP-237	1.069E+00	3.164E-01	3.373E-01	7.487E-02	3.170
U-238	8.050E-01	8.424E-01	1.125E+00	1.949E-01	0.716
AM-243	5.131E-01	8.354E-02	6.416E-02	4.846E-03	7.998
ANH-511	1.511E-01	8.520E-02	6.178E-02	3.941E-03	2.446

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.898E-01		4.341E-01	6.835E-01	4.811E-02	-0.278
NA-22	-2.711E-02		7.581E-02	1.188E-01	7.025E-03	-0.228
NA-24	-5.392E-01		4.034E-01	Half-Life too short		
AL-26	2.581E-02		4.953E-02	8.962E-02	4.990E-03	0.288
TI-44	4.238E-01	+	5.184E-02	6.881E-02	5.321E-03	6.160
SC-46	8.732E-04		5.825E-02	9.656E-02	6.933E-03	0.009
V-48	2.532E-02		1.079E-01	1.816E-01	1.250E-02	0.139
CR-51	4.562E-01		4.566E-01	7.917E-01	5.149E-02	0.576
MN-52	-1.596E-02		3.079E-01	4.922E-01	2.967E-02	-0.032
MN-54	8.646E-03		5.790E-02	9.724E-02	7.093E-03	0.089
CO-56	3.734E-02		5.528E-02	9.712E-02	7.066E-03	0.384
CO-57	-1.259E-02		2.708E-02	4.269E-02	4.912E-03	-0.295
CO-58	-2.542E-02		5.461E-02	8.687E-02	6.381E-03	-0.293
FE-59	-1.349E-01		1.389E-01	2.043E-01	1.465E-02	-0.660
CO-60	4.706E-02		6.026E-02	1.067E-01	6.421E-03	0.441
ZN-65	-4.154E-02		1.623E-01	2.198E-01	1.348E-02	-0.189
GE-68	1.045E+00		1.868E+00	3.226E+00	2.059E-01	0.324
AS-73	-4.443E-02		2.607E-01	4.241E-01	2.850E-02	-0.105
AS-74	-1.133E-03		1.203E-01	1.936E-01	1.332E-02	-0.006
SE-75	4.274E-02		5.837E-02	8.836E-02	5.345E-03	0.484
BR-77	-1.257E+01		1.285E+01	1.910E+01	1.231E+00	-0.658
SR-82	-4.789E-01		5.490E-01	8.452E-01	6.197E-02	-0.567
RB-83	-7.900E-02		8.972E-02	1.345E-01	8.665E-03	-0.587
RB-84	-3.087E-02		1.009E-01	1.623E-01	1.169E-02	-0.190
KR-85	2.628E+01		1.131E+01	1.897E+01	1.214E+00	1.386
SR-85	1.344E-01		5.784E-02	9.702E-02	6.210E-03	1.386
RB-86	3.025E-01		1.197E+00	2.010E+00	1.284E-01	0.150
Y-88	-2.133E-02		5.606E-02	8.574E-02	4.732E-03	-0.249
ZR-88	-1.001E-03		3.739E-02	6.119E-02	3.300E-03	-0.016
Y-91	-1.108E+01		3.008E+01	4.735E+01	2.720E+00	-0.234
NB-94	2.465E-02		4.974E-02	8.608E-02	6.241E-03	0.286
NB-95	6.274E-03		6.164E-02	1.035E-01	7.589E-03	0.061
NB-95M	7.299E-01		1.881E-01	3.096E-01	2.420E-02	2.357

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-1.144E-01		9.961E-02	1.487E-01	1.240E-02	-0.769
NB-97	-3.773E-02		5.279E-02	Half-Life too short		
ZR-97	4.988E+00		1.041E+00	Half-Life too short		
MO-99	-1.874E+00		1.558E+01	2.576E+01	3.730E+00	-0.073
TC-99M	-1.181E+10		1.138E+10	Half-Life too short		
RH-101	-6.668E-03		3.684E-02	6.136E-02	3.797E-03	-0.109
RH-102	3.613E-02		3.955E-02	6.828E-02	4.174E-03	0.529
RU-103	2.689E-02		5.200E-02	8.761E-02	1.128E-02	0.307
RH-106	1.514E-01		4.409E-01	7.292E-01	9.022E-02	0.208
RU-106	1.514E-01		4.407E-01	7.292E-01	5.103E-02	0.208
AG-108M	-4.989E-02		4.254E-02	6.348E-02	3.981E-03	-0.786
AG-110M	-1.697E-02		4.748E-02	7.747E-02	5.763E-03	-0.219
IN-111	7.990E-02		1.280E+00	1.861E+00	1.140E-01	0.043
IN-113M	-4.988E-03		5.422E-02	8.836E-02	5.123E-03	-0.056
SN-113	-4.988E-03		5.422E-02	8.836E-02	5.123E-03	-0.056
IN-114M	-7.488E-02		2.258E-01	3.240E-01	1.997E-02	-0.231
CD-115	-1.170E+00		1.367E+01	2.200E+01	1.428E+00	-0.053
SN-117M	2.849E-02		6.444E-02	1.045E-01	7.453E-03	0.273
SB-122	1.139E+00		3.164E+00	4.579E+00	3.074E-01	0.249
I-123	1.701E+00		2.548E+00	Half-Life too short		
TE-123M	1.124E-02		3.366E-02	5.439E-02	3.879E-03	0.207
I-124	-1.012E+00		1.043E+00	1.274E+00	8.807E-02	-0.795
SB-124	1.880E-02		1.299E-01	2.207E-01	1.389E-02	0.085
SB-125	-5.099E-02		1.244E-01	1.978E-01	1.180E-02	-0.258
TE-125M	-7.483E+00		9.814E+00	1.520E+01	1.769E+00	-0.492
I-126	5.756E-02		2.420E-01	4.131E-01	2.957E-02	0.139
SB-126	6.499E-02		2.433E-01	3.608E-01	2.628E-02	0.180
SB-127	-1.379E+00		1.825E+00	2.864E+00	2.945E-01	-0.481
XE-127	4.955E-03		6.145E-02	9.001E-02	5.579E-03	0.055
I-131	2.786E-02		1.330E-01	2.215E-01	1.401E-02	0.126
TE-132	1.446E-01		7.312E-01	1.231E+00	1.782E-01	0.118
BA-133	4.131E-02		5.962E-02	8.970E-02	1.032E-02	0.461
I-133	-6.188E-03		3.407E-03	Half-Life too short		
CS-134	1.432E-01	+	8.922E-02	1.295E-01	9.586E-03	1.106
CS-135	3.471E-01		2.261E-01	3.539E-01	2.752E-02	0.981
I-135	2.873E+09		2.586E+09	Half-Life too short		
CS-136	-1.033E-02		1.596E-01	2.602E-01	1.830E-02	-0.040
BA-137M	-5.877E-02		4.632E-02	6.914E-02	4.939E-03	-0.850
CS-137	-6.213E-02		4.896E-02	7.309E-02	5.236E-03	-0.850
CE-139	7.442E-03		3.176E-02	5.396E-02	3.269E-03	0.138
BA-140	-1.019E-01		3.448E-01	5.420E-01	1.770E-01	-0.188
LA-140	1.587E-02		1.381E-01	2.338E-01	1.385E-02	0.068
CE-141	2.321E-02		6.960E-02	1.127E-01	1.018E-02	0.206
CE-143	8.302E-04		1.332E-04	Half-Life too short		
CE-144	-3.423E-01		2.393E-01	3.520E-01	5.826E-02	-0.973
PM-144	-7.798E-03		5.312E-02	8.804E-02	6.375E-03	-0.089
PR-144	-5.284E-01		3.599E+00	5.966E+00	4.317E-01	-0.089
PM-146	3.706E-02		5.749E-02	9.768E-02	8.516E-03	0.379

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-5.110E-01		7.603E-01	1.159E+00	1.605E-01	-0.441
PM-149	-1.612E+01		1.028E+02	1.691E+02	2.401E+01	-0.095
EU-152	1.525E-02		1.356E-01	1.954E-01	1.271E-02	0.078
GD-153	2.073E-03		8.290E-02	1.172E-01	1.061E-02	0.018
EU-154	-6.697E-02		2.126E-01	3.346E-01	3.147E-02	-0.200
EU-155	-8.280E-03		1.087E-01	1.749E-01	1.724E-02	-0.047
TB-160	-8.581E-02		2.027E-01	3.221E-01	2.321E-02	-0.266
HO-166M	6.032E-02		8.740E-02	1.535E-01	1.116E-02	0.393
TM-171	-7.195E+00		1.947E+01	2.737E+01	1.981E+00	-0.263
LU-176	1.256E-02		3.397E-02	5.009E-02	2.938E-03	0.251
LU-177	2.997E+00		1.296E+00	2.313E+00	1.436E-01	1.295
LU-177M	-1.449E-01		2.344E-01	3.683E-01	2.058E-02	-0.393
HF-181	-4.343E-02		5.600E-02	8.558E-02	5.278E-03	-0.507
W-181	2.366E-01		2.424E-01	3.566E-01	2.563E-02	0.663
TA-182	4.519E-01		3.477E-01	6.204E-01	3.588E-02	0.728
RE-183	-4.863E-02		1.202E-01	1.998E-01	1.316E-02	-0.243
RE-184	1.504E-01		2.748E-01	4.684E-01	2.849E-02	0.321
OS-185	-2.046E-02		5.824E-02	9.039E-02	6.410E-03	-0.226
RE-188	4.339E-02		2.022E-01	3.253E-01	2.481E-02	0.133
W-188	3.447E+00		1.024E+01	1.507E+01	8.830E-01	0.229
IR-192	-2.827E-02		4.246E-02	6.758E-02	3.975E-03	-0.418
AU-195	2.388E-01		2.417E-01	3.557E-01	3.265E-02	0.671
TL-200	-2.970E-05		2.385E-04	Half-Life too short		
TL-201	-1.883E+00		7.266E+00	1.213E+01	7.347E-01	-0.155
TL-202	1.286E-01		8.966E-02	1.595E-01	9.283E-03	0.806
HG-203	6.362E-02		5.544E-02	8.572E-02	5.311E-03	0.742
BI-207	1.325E-02		8.040E-02	1.340E-01	8.664E-03	0.099
TL-207	-5.160E-01		9.807E-01	1.343E+00	2.220E-01	-0.384
PO-209	-3.266E+00		1.093E+01	1.757E+01	1.258E+00	-0.186
PB-211	-9.530E-01		1.406E+00	1.994E+00	1.242E+00	-0.478
BI-212	1.277E+00	+	6.472E-01	9.331E-01	8.296E-02	1.368
PO-215	-5.160E-01		9.807E-01	1.343E+00	2.220E-01	-0.384
RN-219	2.933E-01		5.304E-01	8.958E-01	1.207E-01	0.327
RN-220	9.823E-01		3.718E+01	6.024E+01	3.995E+00	0.016
RA-223	-5.160E-01		9.807E-01	1.343E+00	2.220E-01	-0.384
AC-227	3.460E-01		4.415E-01	7.564E-01	1.064E-01	0.457
TH-227	3.460E-01		4.427E-01	7.564E-01	1.285E-01	0.457
TH-229	2.150E-01		5.617E-01	9.558E-01	5.903E-02	0.225
PA-231	-5.198E-01		2.010E+00	2.978E+00	4.110E-01	-0.175
TH-231	-5.160E-01		9.807E-01	1.343E+00	2.220E-01	-0.384
U-231	-1.408E+00		1.117E+00	1.474E+00	1.315E-01	-0.955
PA-233	1.412E-03		7.567E-02	1.252E-01	7.784E-03	0.011
PA-234	1.713E-01		4.495E-01	7.661E-01	1.386E-01	0.224
PA-234M	8.923E+00		9.737E+00	1.729E+01	1.703E+00	0.516
U-235	3.517E-01		2.383E-01	3.893E-01	6.907E-02	0.903
NP-236	3.065E-03		9.421E-02	1.505E-01	1.035E-02	0.020
NP-239	1.823E-01		2.009E-01	3.323E-01	3.638E-02	0.549
AM-241	9.410E-02		7.810E-02	1.165E-01	9.092E-03	0.808

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-5.134E-02		9.738E-02	1.540E-01	1.482E-02	-0.333
CM-247	3.861E-02		4.844E-02	8.305E-02	4.556E-03	0.465
CF-249	5.352E-03		4.941E-02	8.160E-02	4.424E-03	0.066
CF-251	1.171E-01		1.463E-01	2.526E-01	1.542E-02	0.464

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232746005       *
* Acquisition date  : 14-JUL-2009 09:16:25 Detector SN#     :           *
* Detector ID       : GAM21                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:10.03      Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232746005           Analyst initials: MXR1       *
* Batch Number      : 882713               Sample Quantity : 1.3180E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
*                                                                       *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.575E+01	3.249E+00	3.551E-01	1.658E+00
CD-109	3.703E+00	7.698E-01	6.492E-01	3.928E-01
SN-126	3.641E-01	7.569E-02	6.376E-02	3.862E-02
TL-208	5.943E-01	1.334E-01	4.241E-02	6.808E-02
BI-210	1.324E+00	7.573E-01	5.003E-01	3.864E-01
PB-210	1.324E+00	7.573E-01	5.003E-01	3.864E-01
PO-210	1.324E+00	7.555E-01	5.003E-01	3.855E-01
BI-211	4.555E+00	5.871E-01	2.109E-01	2.995E-01
PB-212	1.918E+00	1.926E-01	5.299E-02	9.825E-02
PO-212	1.918E+00	1.926E-01	5.299E-02	9.825E-02
BI-214	1.475E+00	2.567E-01	7.308E-02	1.310E-01
PB-214	1.584E+00	2.197E-01	7.394E-02	1.121E-01
PO-214	1.584E+00	2.197E-01	7.394E-02	1.121E-01
PO-216	1.918E+00	1.926E-01	5.299E-02	9.825E-02
PO-218	1.584E+00	2.197E-01	7.394E-02	1.121E-01
RA-224	5.289E+00	1.726E+00	6.040E-01	8.808E-01
RA-226	1.475E+00	2.567E-01	7.308E-02	1.310E-01
AC-228	2.080E+00	4.114E-01	1.552E-01	2.099E-01
RA-228	2.080E+00	4.114E-01	1.552E-01	2.099E-01
TH-228	1.918E+00	1.926E-01	5.298E-02	9.825E-02
TH-230	1.475E+00	2.567E-01	7.308E-02	1.310E-01
TH-232	2.080E+00	4.114E-01	1.552E-01	2.099E-01
TH-234	8.050E-01	8.256E-01	5.937E-01	4.212E-01
U-234	1.475E+00	2.567E-01	7.308E-02	1.310E-01
NP-237	1.069E+00	3.101E-01	1.771E-01	1.582E-01
U-238	8.050E-01	8.256E-01	5.937E-01	4.212E-01
AM-243	5.131E-01	8.187E-02	3.377E-02	4.177E-02
ANH-511	1.511E-01	8.349E-02	3.151E-02	4.260E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-1.898E-01	4.255E-01	3.490E-01	2.171E-01	NOT IDENT.
NA-22	-2.711E-02	7.429E-02	5.965E-02	3.790E-02	NOT IDENT.
NA-24	-5.392E+05	7.907E+05	0.000E+00	4.034E+05	SHORT HLIF
AL-26	2.581E-02	4.854E-02	4.472E-02	2.476E-02	NOT IDENT.
TI-44	4.238E-01	5.081E-02	3.619E-02	2.592E-02	FAIL ABUN
SC-46	8.732E-04	5.709E-02	4.879E-02	2.913E-02	FAIL ABUN
V-48	2.532E-02	1.058E-01	9.161E-02	5.397E-02	NOT IDENT.
CR-51	4.562E-01	4.474E-01	4.070E-01	2.283E-01	NOT IDENT.
MN-52	-1.596E-02	3.017E-01	2.466E-01	1.539E-01	NOT IDENT.
MN-54	8.646E-03	5.674E-02	4.919E-02	2.895E-02	NOT IDENT.
CO-56	3.734E-02	5.417E-02	4.911E-02	2.764E-02	NOT IDENT.
CO-57	-1.259E-02	2.654E-02	2.229E-02	1.354E-02	NOT IDENT.
CO-58	-2.542E-02	5.351E-02	4.396E-02	2.730E-02	NOT IDENT.
FE-59	-1.349E-01	1.361E-01	1.028E-01	6.946E-02	NOT IDENT.
CO-60	4.706E-02	5.905E-02	5.355E-02	3.013E-02	NOT IDENT.
ZN-65	-4.154E-02	1.591E-01	1.106E-01	8.117E-02	NOT IDENT.
GE-68	1.045E+00	1.831E+00	1.625E+00	9.339E-01	NOT IDENT.
AS-73	-4.443E-02	2.555E-01	2.244E-01	1.303E-01	NOT IDENT.
AS-74	-1.133E-03	1.179E-01	9.848E-02	6.013E-02	NOT IDENT.
SE-75	4.274E-02	5.720E-02	4.557E-02	2.919E-02	NOT IDENT.
BR-77	-1.257E+01	1.260E+01	9.739E+00	6.427E+00	FAIL ABUN
SR-82	-4.789E-01	5.380E-01	4.280E-01	2.745E-01	NOT IDENT.
RB-83	-7.900E-02	8.793E-02	6.857E-02	4.486E-02	NOT IDENT.
RB-84	-3.087E-02	9.891E-02	8.200E-02	5.047E-02	NOT IDENT.
KR-85	2.628E+01	1.108E+01	9.674E+00	5.654E+00	NOT IDENT.
SR-85	1.344E-01	5.668E-02	4.948E-02	2.892E-02	NOT IDENT.
RB-86	3.025E-01	1.173E+00	1.012E+00	5.985E-01	NOT IDENT.
Y-88	-2.133E-02	5.494E-02	4.278E-02	2.803E-02	NOT IDENT.
ZR-88	-1.001E-03	3.664E-02	3.135E-02	1.869E-02	NOT IDENT.
Y-91	-1.108E+01	2.947E+01	2.380E+01	1.504E+01	NOT IDENT.
NB-94	2.465E-02	4.875E-02	4.367E-02	2.487E-02	NOT IDENT.
NB-95	6.274E-03	6.041E-02	5.245E-02	3.082E-02	NOT IDENT.
NB-95M	7.299E-01	1.843E-01	1.600E-01	9.405E-02	NOT IDENT.
ZR-95	-1.144E-01	9.762E-02	7.536E-02	4.980E-02	NOT IDENT.
NB-97	-3.773E+04	1.035E+05	0.000E+00	5.279E+04	SHORT HLIF
ZR-97	4.988E+06	2.040E+06	0.000E+00	1.041E+06	SHORT HLIF
MO-99	-1.874E+00	1.527E+01	1.305E+01	7.790E+00	NOT IDENT.
TC-99M	-1.181E+16	2.230E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.668E-03	3.610E-02	3.180E-02	1.842E-02	NOT IDENT.
RH-102	3.613E-02	3.876E-02	3.487E-02	1.977E-02	NOT IDENT.
RU-103	2.689E-02	5.096E-02	4.471E-02	2.600E-02	FAIL ABUN
RH-106	1.514E-01	4.321E-01	3.707E-01	2.205E-01	FAIL ABUN
RU-106	1.514E-01	4.318E-01	3.707E-01	2.203E-01	FAIL ABUN
AG-108M	-4.989E-02	4.169E-02	3.247E-02	2.127E-02	NOT IDENT.
AG-110M	-1.697E-02	4.653E-02	3.935E-02	2.374E-02	NOT IDENT.
IN-111	7.990E-02	1.254E+00	9.610E-01	6.400E-01	NOT IDENT.
IN-113M	-4.988E-03	5.313E-02	4.527E-02	2.711E-02	NOT IDENT.
SN-113	-4.988E-03	5.313E-02	4.527E-02	2.711E-02	NOT IDENT.
IN-114M	-7.488E-02	2.213E-01	1.680E-01	1.129E-01	NOT IDENT.
CD-115	-1.170E+00	1.340E+01	1.121E+01	6.837E+00	NOT IDENT.
SN-117M	2.849E-02	6.315E-02	5.435E-02	3.222E-02	NOT IDENT.
SB-122	1.139E+00	3.101E+00	2.332E+00	1.582E+00	NOT IDENT.
I-123	1.701E+06	4.993E+06	0.000E+00	2.548E+06	SHORT HLIF
TE-123M	1.124E-02	3.299E-02	2.828E-02	1.683E-02	NOT IDENT.
I-124	-1.012E+00	1.022E+00	6.479E-01	5.213E-01	NOT IDENT.
SB-124	1.880E-02	1.273E-01	1.103E-01	6.496E-02	FAIL ABUN
SB-125	-5.099E-02	1.219E-01	1.012E-01	6.220E-02	FAIL ABUN
TE-125M	-7.483E+00	9.617E+00	7.954E+00	4.907E+00	NOT IDENT.
I-126	5.756E-02	2.371E-01	2.098E-01	1.210E-01	NOT IDENT.
SB-126	6.499E-02	2.384E-01	1.830E-01	1.216E-01	FAIL ABUN
SB-127	-1.379E+00	1.789E+00	1.454E+00	9.127E-01	NOT IDENT.
XE-127	4.955E-03	6.022E-02	4.662E-02	3.072E-02	NOT IDENT.
I-131	2.786E-02	1.303E-01	1.136E-01	6.649E-02	NOT IDENT.
TE-132	1.446E-01	7.166E-01	6.364E-01	3.656E-01	NOT IDENT.
BA-133	4.131E-02	5.843E-02	4.603E-02	2.981E-02	FAIL ABUN
I-133	-6.188E+03	6.677E+03	0.000E+00	3.407E+03	SHORT HLIF
CS-134	1.432E-01	8.743E-02	6.556E-02	4.461E-02	FAIL ABUN
CS-135	3.471E-01	2.216E-01	1.825E-01	1.131E-01	NOT IDENT.
I-135	2.873E+15	5.069E+15	0.000E+00	2.586E+15	SHORT HLIF
CS-136	-1.033E-02	1.564E-01	1.311E-01	7.978E-02	FAIL ABUN
BA-137M	-5.877E-02	4.539E-02	3.511E-02	2.316E-02	NOT IDENT.
CS-137	-6.213E-02	4.798E-02	3.712E-02	2.448E-02	NOT IDENT.
CE-139	7.442E-03	3.112E-02	2.804E-02	1.588E-02	NOT IDENT.
BA-140	-1.019E-01	3.379E-01	2.762E-01	1.724E-01	NOT IDENT.
LA-140	1.587E-02	1.354E-01	1.169E-01	6.907E-02	FAIL ABUN
CE-141	2.321E-02	6.821E-02	5.869E-02	3.480E-02	NOT IDENT.
CE-143	8.302E+02	2.611E+02	0.000E+00	1.332E+02	SHORT HLIF

CE-144	-3.423E-01	2.346E-01	1.836E-01	1.197E-01	NOT IDENT.
PM-144	-7.798E-03	5.206E-02	4.467E-02	2.656E-02	NOT IDENT.
PR-144	-5.284E-01	3.527E+00	3.027E+00	1.800E+00	NOT IDENT.
PM-146	3.706E-02	5.634E-02	4.992E-02	2.875E-02	NOT IDENT.
ND-147	-5.110E-01	7.451E-01	5.910E-01	3.801E-01	FAIL ABUN
PM-149	-1.612E+01	1.008E+02	8.710E+01	5.140E+01	NOT IDENT.
EU-152	1.525E-02	1.329E-01	1.003E-01	6.781E-02	FAIL ABUN
GD-153	2.073E-03	8.125E-02	6.142E-02	4.145E-02	NOT IDENT.
EU-154	-6.697E-02	2.084E-01	1.680E-01	1.063E-01	NOT IDENT.
EU-155	-8.280E-03	1.065E-01	9.155E-02	5.436E-02	FAIL ABUN
TB-160	-8.581E-02	1.986E-01	1.628E-01	1.014E-01	FAIL ABUN
HO-166M	6.032E-02	8.565E-02	7.785E-02	4.370E-02	NOT IDENT.
TM-171	-7.195E+00	1.908E+01	1.443E+01	9.737E+00	NOT IDENT.
LU-176	1.256E-02	3.329E-02	2.577E-02	1.698E-02	FAIL ABUN
LU-177	2.997E+00	1.270E+00	1.198E+00	6.479E-01	NOT IDENT.
LU-177M	-1.449E-01	2.297E-01	1.885E-01	1.172E-01	FAIL ABUN
HF-181	-4.343E-02	5.488E-02	4.369E-02	2.800E-02	NOT IDENT.
W-181	2.366E-01	2.375E-01	1.881E-01	1.212E-01	NOT IDENT.
TA-182	4.519E-01	3.408E-01	3.118E-01	1.739E-01	FAIL ABUN
RE-183	-4.863E-02	1.178E-01	1.039E-01	6.010E-02	FAIL ABUN
RE-184	1.504E-01	2.693E-01	2.417E-01	1.374E-01	NOT IDENT.
OS-185	-2.046E-02	5.708E-02	4.592E-02	2.912E-02	NOT IDENT.
RE-188	4.339E-02	1.981E-01	1.693E-01	1.011E-01	NOT IDENT.
W-188	3.447E+00	1.004E+01	7.758E+00	5.120E+00	FAIL ABUN
IR-192	-2.827E-02	4.161E-02	3.475E-02	2.123E-02	FAIL ABUN
AU-195	2.388E-01	2.369E-01	1.864E-01	1.208E-01	FAIL ABUN
TL-200	-2.970E+01	4.675E+02	0.000E+00	2.385E+02	SHORT HLIF
TL-201	-1.883E+00	7.121E+00	6.303E+00	3.633E+00	NOT IDENT.
TL-202	1.286E-01	8.786E-02	8.157E-02	4.483E-02	NOT IDENT.
HG-203	6.362E-02	5.433E-02	4.417E-02	2.772E-02	NOT IDENT.
BI-207	1.325E-02	7.879E-02	6.747E-02	4.020E-02	FAIL ABUN
TL-207	-5.160E-01	9.611E-01	6.904E-01	4.903E-01	FAIL ABUN
PO-209	-3.266E+00	1.071E+01	8.876E+00	5.464E+00	NOT IDENT.
PB-211	-9.530E-01	1.378E+00	1.021E+00	7.032E-01	NOT IDENT.
BI-212	1.277E+00	6.343E-01	4.731E-01	3.236E-01	FAIL ABUN
PO-215	-5.160E-01	9.611E-01	6.904E-01	4.903E-01	FAIL ABUN
RN-219	2.933E-01	5.198E-01	4.588E-01	2.652E-01	FAIL ABUN
RN-220	9.823E-01	3.644E+01	3.069E+01	1.859E+01	NOT IDENT.
RA-223	-5.160E-01	9.611E-01	6.904E-01	4.903E-01	FAIL ABUN
AC-227	3.460E-01	4.326E-01	3.903E-01	2.207E-01	FAIL ABUN
TH-227	3.460E-01	4.338E-01	3.903E-01	2.213E-01	FAIL ABUN
TH-229	2.150E-01	5.504E-01	4.955E-01	2.808E-01	FAIL ABUN
PA-231	-5.198E-01	1.970E+00	1.534E+00	1.005E+00	NOT IDENT.
TH-231	-5.160E-01	9.611E-01	6.904E-01	4.903E-01	FAIL ABUN
U-231	-1.408E+00	1.094E+00	7.730E-01	5.584E-01	FAIL ABUN
PA-233	1.412E-03	7.416E-02	6.441E-02	3.784E-02	FAIL ABUN
PA-234	1.713E-01	4.405E-01	3.867E-01	2.247E-01	FAIL ABUN
PA-234M	8.923E+00	9.542E+00	8.718E+00	4.869E+00	NOT IDENT.
U-235	3.517E-01	2.335E-01	2.028E-01	1.192E-01	FAIL ABUN
NP-236	3.065E-03	9.233E-02	7.824E-02	4.711E-02	NOT IDENT.
NP-239	1.823E-01	1.969E-01	1.737E-01	1.005E-01	FAIL ABUN
AM-241	9.410E-02	7.654E-02	6.154E-02	3.905E-02	NOT IDENT.
CM-243	-5.134E-02	9.543E-02	8.065E-02	4.869E-02	FAIL ABUN
CM-247	3.861E-02	4.747E-02	4.253E-02	2.422E-02	FAIL ABUN
CF-249	5.352E-03	4.843E-02	4.181E-02	2.471E-02	NOT IDENT.
CF-251	1.171E-01	1.434E-01	1.311E-01	7.316E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	470.7299
46.50	470.7299
46.50	470.7299
48.70	501.3828
49.72	542.7052
51.35	509.7015
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52.97	536.2078
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53.44	550.0969
54.07	536.2482
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56.28	621.7643
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57.53	629.6340
57.60	629.6879
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57.98	604.9589
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59.32	582.3834
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59.54	582.5411
59.72	582.6697
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61.14	631.4930
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63.29	728.3773
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65.20	725.6647
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67.20	808.7131
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68.90	746.6357
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77.11	732.3749

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81.07	782.1816
81.07	782.1816
81.07	782.1816
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83.78	664.3245
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83.78	664.3245
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84.90	678.6088
85.43	646.7980
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86.54	713.6160
86.59	713.6520
86.72	713.7445
86.79	713.7908
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88.47	794.7888
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92.38	592.3747
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94.67	509.0936
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94.90	509.2037
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94.90	509.2037
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98.44	442.3021
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99.55	365.5269
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100.10	398.3330
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111.00	424.7050

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117.00	387.6503
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121.78	407.7510
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122.32	409.0226
122.32	409.0226
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144.24	372.5735
144.24	372.5735
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154.21	405.4797
154.21	405.4797
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163.89	364.4359
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167.43	358.0677
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172.10	370.0588
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176.60	344.7619
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186.00	334.0138
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198.60	319.0764
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201.83	339.2262
202.84	325.1221
205.31	341.0276
208.36	312.5745
208.81	312.6547

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209.75	312.8254
210.97	294.1594
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216.55	315.5137
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227.08	270.9110
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228.18	249.5016
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236.00	254.3346
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238.63	243.3741
238.63	243.3741
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241.98	243.8087
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252.85	217.6367
254.15	0.0000
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256.20	198.9710
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269.46	214.0396
269.46	214.0396
269.46	214.0396
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279.53	189.4141
280.46	181.4709
281.68	200.8591
283.67	201.2821
284.30	193.0688
285.00	196.9950
285.90	201.9100
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286.10	197.0996
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290.80	198.5062
291.72	214.7396
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295.21	202.1535
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297.23	155.4004
298.57	155.4980
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299.80	184.7583
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300.09	184.7838
300.09	184.7838
300.10	184.7838
300.12	184.7861
301.29	167.0460
302.84	180.1492
303.76	193.2128
303.91	193.2273
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304.40	188.3985
304.84	190.0607
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308.46	178.6595
311.98	161.3433
316.51	184.2088
318.01	164.7208
319.02	152.0446
319.41	155.0124
320.08	152.1146
323.87	198.2448
323.87	198.2448
323.87	198.2448
323.87	198.2448
325.23	167.2151
328.77	182.2516
333.44	167.8148
334.20	165.4022
334.20	165.4022
334.30	165.4083
338.28	152.3382
338.28	152.3382
338.28	152.3382
338.28	152.3382
338.32	152.3401
338.32	152.3401
338.32	152.3401
340.50	141.9213
340.57	165.0289
344.27	147.1075
345.85	156.7984
350.59	0.0000
351.07	154.1599
351.92	155.8730
351.92	155.8730
351.92	155.8730
355.39	0.0000
356.01	126.2391
364.48	118.0115
366.43	121.1093
367.43	132.1724
367.94	0.0000
369.80	130.2952
374.96	126.5476
383.85	114.9018
387.95	125.1822
388.63	119.1567
391.69	122.3323
391.69	122.3323
392.90	120.3669
398.62	142.9363
400.65	127.8288
401.10	122.7784
401.81	121.7959
402.60	122.8493
404.84	161.5678
410.95	139.5353
411.60	130.4000
413.65	144.7752
414.70	119.3337
415.30	111.1981
415.76	111.2180
417.63	0.0000

418.52	141.9744
423.70	110.5233
427.08	133.2040
427.89	132.2187
432.53	105.7498
433.93	129.4299
439.47	88.5185
439.56	90.5803
439.89	92.6499
443.98	122.6839
444.90	113.4429
445.03	113.4482
445.03	113.4482
445.03	113.4482
445.03	113.4482
453.90	99.3223
463.38	112.4567
468.07	121.3037
473.00	104.1516
475.06	92.7612
475.35	88.6005
476.78	107.4157
477.59	111.6186
477.96	117.8927
482.03	108.6528
484.57	93.0621
487.03	93.1393
490.36	0.0000
492.35	93.3066
497.08	80.8528
507.63	0.0000
510.53	0.0000
510.84	94.9334
511.00	94.9384
511.85	94.9647
511.85	94.9647
513.99	82.7128
513.99	82.7128
520.41	95.2295
520.65	98.4106
527.90	90.1548
528.96	0.0000
529.64	98.6967
529.87	0.0000
531.02	98.7398
537.32	89.3628
543.00	86.3255
546.56	0.0000
549.76	92.9154
552.65	81.2398
555.20	93.0726
563.23	73.2832
563.90	87.6003
568.70	100.2627
569.32	96.6995
569.50	96.7039
569.67	96.7104
573.80	93.2450
574.00	107.5952
574.64	114.0742
578.91	122.1239
579.30	0.0000
583.14	92.7880
585.48	88.1745
591.81	67.9934
592.07	71.6684
593.00	83.3220
595.88	75.8105
600.56	73.7458
602.52	0.0000
602.71	101.2835
602.71	101.2835
603.60	90.4561
604.41	76.0002
604.70	76.0071
609.31	76.1096
609.31	76.1096
609.31	76.1096

609.31	76.1096
610.33	76.1318
612.46	67.1107
614.37	74.4059
618.01	77.6635
621.84	70.9287
621.84	70.9287
631.29	72.2149
633.02	73.3450
633.10	73.3467
634.78	77.7620
635.90	71.2128
636.97	76.7146
645.85	72.5114
646.12	72.5162
656.30	72.5372
657.75	80.8332
657.90	0.0000
661.65	85.5187
661.65	85.5187
664.57	0.0000
666.33	73.6589
666.33	73.6589
675.00	83.0621
677.61	72.0380
685.20	83.2910
692.80	102.0060
695.00	104.8501
696.49	98.3938
696.49	98.3938
697.00	94.6932
697.49	91.9202
698.33	87.2969
698.50	80.7996
699.00	89.1699
702.63	81.8179
706.10	99.5745
706.58	0.0000
706.67	101.4490
709.31	77.3042
711.68	68.9640
713.82	80.1928
717.42	82.1348
720.50	78.4646
721.93	0.0000
722.20	80.1008
722.78	80.1130
722.78	80.1130
722.89	80.1147
722.95	80.1165
723.30	83.3284
724.18	105.7860
727.18	67.3711
733.00	61.0462
735.90	70.5912
739.58	70.4010
742.81	70.4590
744.21	64.8447
747.13	81.8209
751.79	64.9697
752.31	65.9198
753.82	65.0020
755.35	82.9333
756.15	80.1233
756.87	76.3660
763.93	85.0012
765.79	80.3152
766.41	73.7122
766.84	80.3360
768.36	82.2581
768.36	82.2581
768.36	82.2581
768.36	82.2581
776.49	79.5806
778.00	80.5574
778.57	76.7780
778.89	74.8886
783.80	61.6913

785.46	68.3628
792.07	66.8424
795.84	40.7942
796.30	45.6953
801.93	62.9156
805.60	46.7510
810.29	63.9971
810.76	63.0486
815.85	40.1705
817.79	54.5427
818.51	65.0795
819.60	61.2669
826.30	49.8587
828.27	0.0000
831.60	80.6418
831.96	76.8083
834.83	75.8980
836.80	0.0000
846.75	49.1344
848.13	47.2225
856.28	0.0000
856.80	80.1479
860.37	57.0194
867.32	84.2140
867.82	76.4782
871.10	62.0039
873.19	58.1555
874.81	63.0256
875.33	0.0000
876.40	64.0181
879.36	60.1785
880.27	57.2787
880.51	58.2520
881.50	58.2654
883.24	52.4597
884.67	53.4480
889.25	57.3939
896.60	59.4375
898.02	62.3802
899.00	60.4434
903.28	58.5498
911.07	54.7399
911.07	54.7399
911.07	54.7399
919.63	38.6144
920.93	57.4707
925.00	44.1220
925.24	43.1438
926.50	44.1367
934.06	51.0859
934.06	51.0859
934.06	51.0859
934.06	51.0859
935.52	49.1364
937.48	58.9893
944.10	43.3197
946.00	51.2171
949.00	57.1634
962.29	55.9142
964.01	67.7986
966.15	69.5250
968.20	71.2515
969.11	50.9044
969.11	50.9044
969.11	50.9044
977.42	44.0242
980.50	62.5065
983.50	53.6111
989.30	58.6459
996.32	63.7083
1001.03	45.8344
1001.68	50.8236
1004.76	57.8360
1021.30	0.0000
1024.50	0.0000
1034.80	53.1747
1037.82	51.1992
1038.57	58.2336

1038.76	0.0000
1045.16	51.2739
1046.59	51.2885
1048.07	52.3089
1050.47	48.3086
1050.47	48.3086
1063.62	52.4718
1076.63	50.5819
1077.35	45.5310
1085.78	64.8594
1099.22	64.0126
1112.02	47.5345
1112.84	52.3933
1115.52	64.6519
1120.29	51.0091
1120.29	51.0091
1120.29	51.0091
1120.29	51.0091
1120.51	50.7197
1121.28	43.7308
1124.00	0.0000
1129.67	55.1887
1131.51	0.0000
1147.95	0.0000
1167.94	53.5256
1173.22	59.7606
1175.09	66.9969
1177.93	60.8437
1189.05	78.5327
1204.90	70.4681
1205.75	0.0000
1213.00	74.7246
1221.42	66.5208
1230.97	74.9648
1235.34	72.9395
1236.41	0.0000
1238.11	74.0161
1238.11	74.0161
1238.11	74.0161
1238.11	74.0161
1238.25	74.0190
1246.25	56.3752
1260.41	0.0000
1271.85	57.6766
1274.45	61.9001
1274.54	61.9001
1291.56	51.5601
1298.22	0.0000
1312.09	34.8463
1325.50	35.9839
1325.50	35.9839
1332.49	27.5488
1333.61	33.9128
1360.21	20.2254
1362.66	0.0000
1365.15	21.3070
1368.21	28.7798
1368.53	0.0000
1376.25	17.0768
1377.67	22.4185
1377.67	22.4185
1377.67	22.4185
1377.67	22.4185
1384.27	36.3367
1394.10	28.9017
1395.20	26.7649
1407.95	26.8209
1434.06	19.3916
1436.60	11.8553
1457.56	0.0000
1460.81	17.3105
1489.15	18.6286
1509.49	9.3436
1596.49	23.6668
1620.62	19.0004
1678.03	0.0000
1691.02	17.2736
1691.02	17.2736

1706.46	0.0000
1750.46	0.0000
1764.49	11.6338
1764.49	11.6338
1764.49	11.6338
1764.49	11.6338
1770.23	42.6910
1771.40	24.2597
1791.20	0.0000
1808.65	10.7284
1836.01	15.6618

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232746005

Total Uranium Activity	2.5576E+00	ug/g
Total Uranium Counting Unc.	2.4584E+00	ug/g
Total Uranium Tpu	1.2543E-06	ug/g
Total Uranium Mda	1.7688E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232746005       *
*   ANALYST       : MXR1                      DETECTOR   : GAM21            *
*   SAMPLE DATE   : 29-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 09:16:25.89    SAMPLE ALQT:  131.800 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.073E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.615E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 4.841E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.366E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:21:21.86

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746006.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:20:53
Sample ID         : G232746006           Sample quantity  : 1.31370E+02 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.62  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.32*	87	531	1.09	126.37	123	8	1.20E-02	48.4	
2	4	74.88*	640	835	1.92	149.47	143	17	8.89E-02	10.3	9.24E-01
3	4	77.20*	931	565	1.26	154.11	143	17	1.29E-01	5.9	
4	0	87.44	205	832	1.17	174.56	169	9	2.85E-02	26.3	
5	0	93.28*	209	734	1.71	186.24	181	10	2.91E-02	26.4	
6	0	129.61	131	478	1.25	258.82	253	11	1.82E-02	33.7	
7	0	185.94*	329	474	1.45	371.39	365	14	4.57E-02	15.4	
8	0	209.17	149	370	1.65	417.82	413	10	2.07E-02	25.6	
9	4	238.42*	1528	252	1.37	476.26	470	21	2.12E-01	3.2	9.59E-01
10	4	241.30	358	337	2.18	482.02	470	21	4.98E-02	16.4	
11	0	270.27	167	238	1.86	539.91	535	12	2.32E-02	20.2	
12	0	277.47	87	289	1.35	554.31	550	12	1.21E-02	40.4	
13	0	295.10*	438	261	1.46	589.54	585	11	6.09E-02	8.6	
14	0	300.06*	96	211	0.90	599.46	595	9	1.33E-02	29.7	
15	0	328.06	94	203	1.75	655.41	649	12	1.31E-02	32.1	
16	0	338.36*	361	233	1.65	676.00	670	15	5.02E-02	10.7	
17	0	351.64*	725	302	1.46	702.55	695	16	1.01E-01	6.5	
18	0	461.70*	89	140	2.13	922.55	916	14	1.23E-02	30.6	
19	0	510.70*	153	200	2.28	1020.49	1011	20	2.12E-02	26.2	
20	0	567.89	172	162	2.79	1134.84	1128	15	2.39E-02	17.8	
21	0	583.01*	402	157	1.32	1165.06	1159	14	5.59E-02	8.4	
22	0	609.13*	549	109	1.45	1217.29	1211	14	7.62E-02	5.9	
23	0	727.66*	133	71	1.36	1454.29	1449	13	1.85E-02	16.4	
24	0	769.04	110	113	6.99	1537.03	1528	19	1.53E-02	25.2	
25	0	794.68	66	57	1.14	1588.30	1582	12	9.15E-03	26.0	
26	0	860.39	95	39	1.87	1719.71	1713	12	1.32E-02	16.7	
27	0	911.30*	335	67	1.50	1821.54	1814	15	4.66E-02	7.8	
28	1	964.84	61	72	2.09	1928.62	1921	24	8.48E-03	33.5	1.73E+00
29	1	968.95	192	80	2.03	1936.84	1921	24	2.67E-02	11.5	
30	0	1120.82	100	105	2.01	2240.64	2231	15	1.39E-02	24.5	
31	0	1239.64	56	100	3.72	2478.37	2468	16	7.79E-03	42.6	
32	0	1378.30	22	47	2.40	2755.82	2744	17	3.08E-03	73.9	
33	0	1460.77*	1577	26	1.87	2920.87	2912	17	2.19E-01	2.6	
34	0	1589.65	34	25	5.17	3178.84	3171	19	4.78E-03	38.1	
35	0	1620.27	25	10	1.57	3240.13	3233	13	3.52E-03	32.2	
36	0	1729.67*	28	8	1.68	3459.13	3452	16	3.84E-03	30.7	
37	0	1764.50	92	8	1.65	3528.87	3522	15	1.27E-02	12.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 12:21:24

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746006.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:20:53
Sample ID : G232746006 Sample quantity : 131.37 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA14 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.62 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.487E+01	3.129E+00	5.351E-01	3.885E-02	65.174
CD-109	+	88.03	*	2.285E+00	1.218E+00	1.449E+00	1.267E-01	1.577
SN-126	+	64.28		5.572E-01	5.448E-01	7.118E-01	1.014E-01	0.783
	+	86.94		9.338E-01	6.248E-01	6.114E-01	2.529E-01	1.527
	+	87.57	*	2.246E-01	1.197E-01	1.440E-01	1.253E-02	1.560
TL-208	+	277.35		7.333E-01	5.969E-01	5.850E-01	6.186E-02	1.254
	+	510.84		6.550E-01	3.494E-01	2.055E-01	2.095E-02	3.188
	+	583.14	*	4.948E-01	8.992E-02	5.974E-02	4.085E-03	8.284
	+	860.37		1.119E+00	3.882E-01	4.368E-01	4.109E-02	2.562
BI-211		72.87		1.303E+01	3.479E+00	5.490E+00	4.046E-01	2.373
	+	351.07	*	3.832E+00	5.570E-01	3.089E-01	1.957E-02	12.407
BI-212	+	727.18	*	1.425E+00	4.833E-01	4.833E-01	4.111E-02	2.949
		785.46		1.520E+00	1.898E+00	3.234E+00	2.474E-01	0.470
	+	1620.62		2.351E+00	1.523E+00	1.651E+00	1.082E-01	1.424
PB-212	+	74.81		2.808E+00	6.714E-01	5.100E-01	6.116E-02	5.506
	+	77.11		2.341E+00	3.306E-01	2.928E-01	2.254E-02	7.995
	+	87.30		1.039E+00	5.633E-01	6.783E-01	8.979E-02	1.532
	+	238.63	*	1.757E+00	1.700E-01	8.770E-02	6.388E-03	20.035
	+	300.09		1.705E+00	1.024E+00	1.130E+00	9.347E-02	1.509
PO-212	+	74.81		2.808E+00	6.714E-01	5.100E-01	6.116E-02	5.506
	+	77.11		2.341E+00	3.306E-01	2.928E-01	2.254E-02	7.995
	+	87.30		1.039E+00	5.633E-01	6.783E-01	8.979E-02	1.532
		115.19		1.840E+00	3.413E+00	5.687E+00	4.138E-01	0.323
	+	238.63	*	1.757E+00	1.700E-01	8.770E-02	6.388E-03	20.035
	+	300.09		1.705E+00	1.024E+00	1.130E+00	9.347E-02	1.509
BI-214	+	609.31	*	1.276E+00	1.817E-01	1.044E-01	8.266E-03	12.217
	+	768.36		2.890E+00	1.480E+00	1.145E+00	1.088E-01	2.523
		934.06		1.011E+00	1.245E+00	2.192E+00	2.407E-01	0.461
	+	1120.29		1.241E+00	6.188E-01	5.080E-01	4.706E-02	2.443
		1238.11		8.826E-01	1.037E+00	1.794E+00	1.507E-01	0.492
	+	1377.67		1.213E+00	1.795E+00	1.654E+00	1.571E-01	0.733
	+	1764.49		1.563E+00	3.964E-01	2.770E-01	1.661E-02	5.642
PB-214	+	74.81		4.838E+00	1.124E+00	8.787E-01	9.272E-02	5.506
	+	77.11		4.013E+00	6.440E-01	5.019E-01	5.437E-02	7.995

Sample ID : G232746006 Acquisition date : 14-JUL-2009 10:20:53

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		1.780E+00	9.583E-01	1.162E+00	1.348E-01	1.532
	+	241.98		2.474E+00	8.339E-01	5.278E-01	4.240E-02	4.688
	+	295.21		1.365E+00	2.633E-01	1.981E-01	1.693E-02	6.894
	+	351.92	*	1.333E+00	2.059E-01	1.077E-01	8.835E-03	12.381
PO-214	+	74.81		4.838E+00	1.124E+00	8.787E-01	9.272E-02	5.506
	+	77.11		4.013E+00	6.440E-01	5.019E-01	5.437E-02	7.995
	+	87.30		1.780E+00	9.583E-01	1.162E+00	1.348E-01	1.532
	+	241.98		2.474E+00	8.339E-01	5.278E-01	4.240E-02	4.688
	+	295.21		1.365E+00	2.633E-01	1.981E-01	1.693E-02	6.894
	+	351.92	*	1.333E+00	2.059E-01	1.077E-01	8.835E-03	12.381
PO-216	+	74.81		2.808E+00	6.714E-01	5.100E-01	6.116E-02	5.506
	+	77.11		2.341E+00	3.306E-01	2.928E-01	2.254E-02	7.995
	+	87.30		1.039E+00	5.633E-01	6.783E-01	8.979E-02	1.532
	+	238.63	*	1.757E+00	1.700E-01	8.770E-02	6.388E-03	20.035
	+	300.09		1.705E+00	1.024E+00	1.130E+00	9.347E-02	1.509
PO-218	+	74.81		4.838E+00	1.124E+00	8.787E-01	9.272E-02	5.506
	+	77.11		4.013E+00	6.440E-01	5.019E-01	5.437E-02	7.995
	+	87.30		1.780E+00	9.583E-01	1.162E+00	1.348E-01	1.532
	+	241.98		2.474E+00	8.339E-01	5.278E-01	4.240E-02	4.688
	+	295.21		1.365E+00	2.633E-01	1.981E-01	1.693E-02	6.894
	+	351.92	*	1.333E+00	2.059E-01	1.077E-01	8.835E-03	12.381
RA-224	+	240.98	*	4.691E+00	1.559E+00	9.976E-01	5.734E-02	4.702
RA-226	+	609.31	*	1.276E+00	1.817E-01	1.044E-01	8.266E-03	12.217
	+	768.36		2.890E+00	1.480E+00	1.145E+00	1.088E-01	2.523
		934.06		1.011E+00	1.245E+00	2.192E+00	2.407E-01	0.461
	+	1120.29		1.241E+00	6.188E-01	5.080E-01	4.706E-02	2.443
		1238.11		8.826E-01	1.037E+00	1.794E+00	1.507E-01	0.492
	+	1377.67		1.213E+00	1.795E+00	1.654E+00	1.571E-01	0.733
	+	1764.49		1.563E+00	3.964E-01	2.770E-01	1.661E-02	5.642
AC-228	+	338.32		2.104E+00	9.683E-01	3.679E-01	1.499E-01	5.718
	+	911.07	*	1.876E+00	3.650E-01	2.293E-01	2.693E-02	8.183
	+	969.11		1.896E+00	6.222E-01	3.877E-01	9.054E-02	4.891
RA-228	+	338.32		2.104E+00	9.683E-01	3.679E-01	1.499E-01	5.718
	+	911.07	*	1.876E+00	3.650E-01	2.293E-01	2.693E-02	8.183
	+	969.11		1.896E+00	6.222E-01	3.877E-01	9.054E-02	4.891
TH-228		84.40		4.693E-01	2.938E+00	4.264E+00	5.534E-01	0.110
	+	238.60	*	1.757E+00	1.700E-01	8.769E-02	6.387E-03	20.037
	+	300.10		1.705E+00	1.428E+00	1.130E+00	6.662E-01	1.509
TH-230	+	609.31	*	1.276E+00	1.817E-01	1.044E-01	8.266E-03	12.217
	+	768.36		2.889E+00	1.480E+00	1.145E+00	1.088E-01	2.523
		934.06		1.011E+00	1.245E+00	2.192E+00	2.407E-01	0.461
	+	1120.29		1.241E+00	6.188E-01	5.080E-01	4.706E-02	2.443
		1238.11		8.825E-01	1.037E+00	1.794E+00	1.507E-01	0.492
	+	1377.67		1.213E+00	1.795E+00	1.654E+00	1.571E-01	0.733
	+	1764.49		1.563E+00	3.964E-01	2.770E-01	1.661E-02	5.642
TH-232	+	338.32		2.104E+00	4.658E-01	3.679E-01	2.114E-02	5.718
	+	911.07	*	1.876E+00	3.650E-01	2.293E-01	2.693E-02	8.183
	+	969.11		1.896E+00	6.222E-01	3.877E-01	9.054E-02	4.891
TH-234	+	63.29	*	1.408E+00	1.383E+00	1.786E+00	3.071E-01	0.788

Sample ID : G232746006 Acquisition date : 14-JUL-2009 10:20:53

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		1.507E+00	8.401E-01	9.721E-01	1.746E-01	1.550
U-234	+	609.31	*	1.276E+00	1.817E-01	1.044E-01	8.266E-03	12.217
	+	768.36		2.889E+00	1.480E+00	1.145E+00	1.088E-01	2.523
		934.06		1.011E+00	1.245E+00	2.192E+00	2.407E-01	0.461
	+	1120.29		1.241E+00	6.188E-01	5.080E-01	4.706E-02	2.443
		1238.11		8.825E-01	1.037E+00	1.794E+00	1.507E-01	0.492
	+	1377.67		1.213E+00	1.795E+00	1.654E+00	1.571E-01	0.733
	+	1764.49		1.563E+00	3.964E-01	2.770E-01	1.661E-02	5.642
NP-237	+	86.50	*	6.596E-01	3.769E-01	4.160E-01	9.297E-02	1.586
		95.87		7.182E-02	1.002E+00	1.449E+00	3.544E-01	0.050
U-238	+	63.29	*	1.408E+00	1.383E+00	1.786E+00	3.071E-01	0.788
	+	92.38		1.507E+00	8.052E-01	9.721E-01	8.132E-02	1.550
AM-243	+	74.67	*	4.552E-01	1.002E-01	8.286E-02	6.218E-03	5.493
	+	86.72		2.474E+01	1.318E+01	1.557E+01	1.341E+00	1.588
		117.66		1.854E+00	3.736E+00	6.212E+00	4.479E-01	0.298
		142.18		-2.896E+00	1.762E+01	2.848E+01	1.791E+00	-0.102
ANH-511	+	511.00	*	1.415E-01	7.455E-02	4.440E-02	2.608E-03	3.187

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-3.119E-02	2.873E-01	4.695E-01	3.165E-02	-0.066
NA-22		1274.54	*	-4.730E-02	5.224E-02	7.890E-02	5.154E-03	-0.599
NA-24		1368.53	*	-1.906E-01	5.224E-02	Half-Life too short		
AL-26		1129.67		-1.221E+00	1.859E+00	2.903E+00	1.833E-01	-0.421
		1808.65	*	3.068E-02	2.590E-02	5.236E-02	3.035E-03	0.586
TI-44		67.85		-3.041E-02	5.036E-02	6.626E-02	4.663E-03	-0.459
	+	78.38	*	4.319E-01	6.101E-02	7.992E-02	6.240E-03	5.404
SC-46		889.25	*	1.692E-02	4.000E-02	6.910E-02	6.385E-03	0.245
	+	1120.51		2.121E-01	1.048E-01	1.331E-01	8.617E-03	1.594
V-48		944.10		-5.982E-01	9.146E-01	1.439E+00	1.286E-01	-0.416
		983.50	*	-6.374E-02	7.035E-02	1.072E-01	9.100E-03	-0.595
		1312.09		-1.637E-02	8.058E-02	1.290E-01	8.918E-03	-0.127
CR-51		320.08	*	2.925E-02	3.824E-01	6.258E-01	4.044E-02	0.047
MN-52		744.21		2.022E-01	2.541E-01	4.339E-01	3.062E-02	0.466
		848.13		-1.008E+00	6.574E+00	1.089E+01	9.357E-01	-0.093
		935.52		1.734E-01	2.699E-01	4.708E-01	4.249E-02	0.368
		1246.25		-2.572E-01	8.421E+00	1.233E+01	7.682E-01	-0.021
		1333.61		4.074E-01	5.701E+00	9.392E+00	6.693E-01	0.043
		1434.06	*	-4.314E-02	2.394E-01	3.807E-01	2.668E-02	-0.113
MN-54		834.83	*	-2.309E-02	3.895E-02	6.251E-02	5.244E-03	-0.369
CO-56		846.75	*	2.448E-02	3.826E-02	6.725E-02	5.765E-03	0.364
		977.42		2.170E-01	3.172E+00	4.933E+00	4.224E-01	0.044
		1037.82		2.444E-02	3.268E-01	5.457E-01	4.521E-02	0.045
		1175.09		1.941E+00	2.479E+00	4.325E+00	2.390E-01	0.449
	+	1238.25		1.962E-01	1.678E-01	1.822E-01	1.183E-02	1.077
		1360.21		-3.337E-01	1.041E+00	1.636E+00	1.162E-01	-0.204
		1771.40		-6.189E-02	2.233E-01	2.926E-01	1.746E-02	-0.212

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	7.406E-03	2.554E-02	4.213E-02	2.997E-03	0.176
		136.48		1.401E-02	2.069E-01	3.376E-01	2.478E-02	0.042
CO-58		810.76	*	2.144E-03	4.040E-02	6.517E-02	5.244E-03	0.033
FE-59		142.65		-1.987E-01	2.734E+00	4.401E+00	2.760E-01	-0.045
		192.34		9.953E-02	1.124E+00	1.588E+00	1.854E-01	0.063
		1099.22	*	-7.613E-03	9.631E-02	1.583E-01	1.218E-02	-0.048
		1291.56		-2.869E-02	1.325E-01	2.126E-01	1.731E-02	-0.135
CO-60		1173.22		2.419E-03	5.015E-02	8.298E-02	4.571E-03	0.029
		1332.49	*	2.837E-02	4.521E-02	7.838E-02	5.585E-03	0.362
ZN-65		1115.52	*	-9.340E-02	1.247E-01	1.627E-01	1.070E-02	-0.574
GE-68		1077.35	*	3.900E-01	1.335E+00	2.263E+00	1.627E-01	0.172
AS-73		53.44	*	7.145E-03	6.022E-01	1.002E+00	6.531E-02	0.007
AS-74		595.88	*	2.809E-02	9.123E-02	1.520E-01	9.091E-03	0.185
		634.78		-1.042E-02	3.535E-01	5.735E-01	3.425E-02	-0.018
SE-75		66.05		-1.287E-01	4.595E+00	6.679E+00	6.074E-01	-0.019
		96.73		-6.046E-01	8.394E-01	1.162E+00	1.543E-01	-0.521
		121.11		-4.544E-04	1.360E-01	2.220E-01	2.246E-02	-0.002
		136.00		9.607E-03	3.981E-02	6.319E-02	4.174E-03	0.152
		198.60		4.682E-01	1.852E+00	2.973E+00	2.058E-01	0.157
		264.65	*	-1.938E-02	5.029E-02	7.209E-02	4.232E-03	-0.269
		279.53		1.131E-01	1.205E-01	1.863E-01	1.173E-02	0.607
		303.91		9.482E-02	2.126E+00	3.113E+00	2.975E-01	0.030
		400.65		5.865E-02	2.517E-01	4.230E-01	3.767E-02	0.139
BR-77	+	87.88		4.677E+02	2.493E+02	3.259E+02	2.846E+01	1.435
		200.40		-1.201E+02	1.590E+02	2.475E+02	1.376E+01	-0.485
	+	239.00		2.673E+02	2.291E+01	3.642E+01	2.091E+00	7.339
		249.79		3.083E+01	6.358E+01	1.039E+02	5.999E+00	0.297
		281.68		-2.208E+01	9.540E+01	1.376E+02	8.026E+00	-0.160
		297.23		2.661E+02	9.452E+01	1.174E+02	6.846E+00	2.267
		303.76		-6.372E+01	1.759E+02	2.500E+02	1.457E+01	-0.255
		439.47		-8.546E+00	1.318E+02	2.170E+02	1.227E+01	-0.039
		484.57		-1.293E+01	2.043E+02	3.348E+02	1.944E+01	-0.039
		520.65	*	2.150E+00	9.969E+00	1.617E+01	9.534E-01	0.133
		574.64		-2.248E+02	2.351E+02	2.986E+02	1.783E+01	-0.753
		578.91		8.065E+01	9.185E+01	1.407E+02	8.402E+00	0.573
		585.48		1.233E+03	2.451E+02	4.435E+02	2.651E+01	2.781
		755.35		2.281E+02	1.734E+02	3.052E+02	2.202E+01	0.747
		817.79		1.549E+01	1.323E+02	2.145E+02	1.744E+01	0.072
SR-82		698.33		-8.222E+00	3.430E+01	5.447E+01	3.501E+00	-0.151
		776.49	*	-2.568E-01	4.629E-01	5.980E-01	4.496E-02	-0.430
		1395.20		-1.703E+00	1.048E+01	1.672E+01	1.182E+00	-0.102
RB-83		520.41	*	3.924E-03	6.872E-02	1.102E-01	6.497E-03	0.036
		529.64		4.699E-03	1.026E-01	1.687E-01	9.975E-03	0.028
		552.65		5.448E-02	1.901E-01	3.174E-01	1.888E-02	0.172
RB-84		881.50	*	-2.389E-02	6.708E-02	1.088E-01	9.917E-03	-0.220
KR-85		513.99	*	1.116E+01	7.884E+00	1.254E+01	7.374E-01	0.890
SR-85		513.99	*	5.711E-02	4.035E-02	6.416E-02	3.773E-03	0.890
RB-86		1076.63	*	-1.576E-01	8.816E-01	1.439E+00	1.036E-01	-0.109
Y-88		898.02		-2.022E-02	4.521E-02	7.295E-02	6.872E-03	-0.277

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	2.503E-02	3.666E-02	6.734E-02	3.824E-03	0.372
ZR-88		392.90	*	1.203E-02	2.971E-02	5.043E-02	2.746E-03	0.239
Y-91		1204.90	*	1.105E+00	2.221E+01	3.669E+01	2.134E+00	0.030
NB-94		702.63	*	2.384E-02	3.589E-02	6.074E-02	3.939E-03	0.393
		871.10		1.946E-02	3.408E-02	5.958E-02	5.334E-03	0.327
NB-95		765.79	*	9.913E-02	5.238E-02	8.541E-02	6.290E-03	1.161
NB-95M		235.69	*	8.223E-01	1.736E-01	2.802E-01	2.094E-02	2.935
ZR-95		724.18		7.483E-03	1.201E-01	1.683E-01	1.296E-02	0.044
		756.15	*	9.804E-02	7.662E-02	1.347E-01	1.111E-02	0.728
NB-97		657.90	*	-2.909E-02	7.662E-02	Half-Life too short		
		1024.50		3.320E+00	7.662E-02	Half-Life too short		
ZR-97		254.15		-3.427E+00	7.662E-02	Half-Life too short		
		355.39		1.639E+00	7.662E-02	Half-Life too short		
		507.63	*	5.808E+00	7.662E-02	Half-Life too short		
		602.52		-3.836E+00	7.662E-02	Half-Life too short		
		1021.30		-1.584E+00	7.662E-02	Half-Life too short		
		1147.95		-1.598E+00	7.662E-02	Half-Life too short		
		1362.66		1.429E+00	7.662E-02	Half-Life too short		
		1750.46		8.953E-01	7.662E-02	Half-Life too short		
MO-99		140.51		-2.301E+01	2.582E+01	3.936E+01	1.065E+01	-0.585
		181.06		1.124E+01	1.804E+01	2.620E+01	4.460E+00	0.429
		366.43		6.041E+01	7.905E+01	1.368E+02	7.679E+00	0.442
		739.58	*	-8.407E-01	1.214E+01	1.947E+01	2.789E+00	-0.043
		778.00		-2.141E+01	3.651E+01	5.199E+01	3.921E+00	-0.412
TC-99M		140.51	*	-2.098E+10	3.651E+01	Half-Life too short		
RH-101		127.23		1.656E-02	3.800E-02	5.536E-02	3.809E-03	0.299
		198.01	*	1.121E-02	3.431E-02	5.526E-02	3.065E-03	0.203
		325.23		6.713E-02	2.539E-01	3.758E-01	2.175E-02	0.179
RH-102		418.52		-2.571E-01	2.860E-01	4.481E-01	2.494E-02	-0.574
		475.06	*	3.663E-03	2.678E-02	4.453E-02	2.574E-03	0.082
		631.29		1.136E-02	5.318E-02	8.792E-02	5.253E-03	0.129
		697.49		-3.242E-02	7.689E-02	1.203E-01	7.717E-03	-0.270
		766.84		1.819E-01	1.392E-01	2.161E-01	1.595E-02	0.842
		1046.59		4.543E-02	1.253E-01	2.138E-01	1.636E-02	0.213
		1112.84		-3.583E-02	2.974E-01	4.169E-01	2.754E-02	-0.086
RU-103		497.08	*	-1.626E-04	3.565E-02	5.861E-02	7.422E-03	-0.003
	+	610.33		1.373E+01	2.677E+00	2.906E+00	4.500E-01	4.726
RH-106	+	511.85		7.065E-01	3.722E-01	4.084E-01	2.400E-02	1.730
		621.84	*	3.967E-02	3.346E-01	5.492E-01	6.495E-02	0.072
		1050.47		-1.151E+00	2.595E+00	4.150E+00	3.152E-01	-0.277
RU-106	+	511.85		7.065E-01	3.722E-01	4.084E-01	2.400E-02	1.730
		621.84	*	3.967E-02	3.346E-01	5.492E-01	3.284E-02	0.072
		1050.47		-1.151E+00	2.595E+00	4.150E+00	3.152E-01	-0.277
AG-108M		433.93	*	1.443E-03	3.113E-02	5.164E-02	3.172E-03	0.028
		614.37		1.083E-02	4.332E-02	6.253E-02	4.039E-03	0.173
		722.95		1.642E-03	5.154E-02	7.203E-02	5.177E-03	0.023
AG-110M		657.75	*	-1.604E-02	3.569E-02	5.591E-02	3.532E-03	-0.287
		677.61		-6.623E-02	2.918E-01	4.637E-01	3.009E-02	-0.143
		706.67		-7.555E-02	2.228E-01	3.511E-01	2.405E-02	-0.215

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		2.181E-01	1.848E-01	2.898E-01	2.209E-02	0.753
		884.67		-7.568E-03	4.995E-02	8.254E-02	7.783E-03	-0.092
		937.48		-3.863E-02	1.171E-01	1.902E-01	1.770E-02	-0.203
		1384.27		-1.019E-01	2.049E-01	2.614E-01	1.927E-02	-0.390
IN-111		171.28		-1.135E+00	9.835E-01	1.513E+00	8.159E-02	-0.750
		245.39	*	-1.255E-01	1.172E+00	1.620E+00	9.336E-02	-0.077
IN-113M		391.69	*	1.489E-02	4.401E-02	7.441E-02	4.354E-03	0.200
SN-113		391.69	*	1.489E-02	4.401E-02	7.441E-02	4.354E-03	0.200
IN-114M		190.27	*	-1.038E-03	2.105E-01	2.960E-01	1.629E-02	-0.004
CD-115		260.90		-7.107E+01	1.214E+02	1.994E+02	1.158E+01	-0.356
		492.35		8.850E+00	3.207E+01	5.375E+01	3.133E+00	0.165
		527.90	*	-4.252E+00	9.881E+00	1.570E+01	9.277E-01	-0.271
SN-117M		156.02		8.485E-01	2.352E+00	3.863E+00	2.224E-01	0.220
		158.56	*	-3.372E-02	5.697E-02	9.022E-02	5.103E-03	-0.374
SB-122		563.90	*	2.446E+00	2.429E+00	3.738E+00	2.228E-01	0.654
		692.80		1.663E+01	4.033E+01	6.739E+01	4.282E+00	0.247
I-123		159.00	*	-2.727E+00	4.033E+01	Half-Life too short		
		528.96		-9.301E+01	4.033E+01	Half-Life too short		
TE-123M		159.00	*	-1.703E-02	2.970E-02	4.706E-02	2.692E-03	-0.362
I-124		602.71	*	-3.215E-01	7.013E-01	9.380E-01	5.611E-02	-0.343
		722.78		6.165E-02	5.214E+00	7.271E+00	4.915E-01	0.008
		1325.50		-6.260E+00	3.674E+01	5.906E+01	4.165E+00	-0.106
		1376.25		4.678E+01	3.180E+01	5.932E+01	4.204E+00	0.789
		1509.49		2.546E+01	1.439E+01	2.861E+01	1.963E+00	0.890
		1691.02		-4.723E-01	3.141E+00	4.899E+00	3.087E-01	-0.096
SB-124		602.71		-1.923E-02	4.195E-02	5.610E-02	3.357E-03	-0.343
		645.85		-3.074E-02	5.191E-01	8.394E-01	5.615E-02	-0.037
		709.31		1.114E+00	2.669E+00	4.460E+00	2.933E-01	0.250
		713.82		-1.508E+00	1.622E+00	2.401E+00	2.571E-01	-0.628
		722.78		5.345E-03	4.520E-01	6.304E-01	4.410E-02	0.008
	+	968.20		1.948E+01	4.797E+00	7.695E+00	6.672E-01	2.532
		1045.16		1.666E+00	2.680E+00	4.658E+00	3.575E-01	0.358
		1325.50		-5.797E-01	3.402E+00	5.469E+00	3.857E-01	-0.106
		1368.21		-1.103E-01	2.021E+00	2.800E+00	3.516E-01	-0.039
		1436.60		8.976E-01	3.717E+00	6.248E+00	4.377E-01	0.144
		1691.02	*	-9.659E-03	6.425E-02	1.002E-01	6.772E-03	-0.096
SB-125		427.89	*	3.066E-02	9.282E-02	1.565E-01	9.170E-03	0.196
		463.38		4.459E-01	3.387E-01	5.315E-01	3.568E-02	0.839
		600.56		-1.075E-01	1.765E-01	2.748E-01	1.887E-02	-0.391
		635.90		-8.281E-02	2.707E-01	4.295E-01	2.980E-02	-0.193
TE-125M		109.28	*	2.620E+00	9.107E+00	1.506E+01	1.413E+00	0.174
I-126		388.63		-1.426E-02	1.995E-01	3.301E-01	1.803E-02	-0.043
		666.33	*	1.282E-02	1.795E-01	2.927E-01	1.758E-02	0.044
		753.82		9.782E-01	1.628E+00	2.738E+00	1.969E-01	0.357
SB-126		223.80		1.957E+00	3.964E+00	6.492E+00	3.687E-01	0.302
	+	278.60		4.798E+00	3.883E+00	4.473E+00	2.608E-01	1.073
	+	296.50		1.345E+01	2.454E+00	3.631E+00	2.118E-01	3.706
		414.70		6.373E-02	7.205E-02	1.252E-01	6.950E-03	0.509
		415.30		2.094E+00	6.058E+00	1.023E+01	5.682E-01	0.205

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		-1.551E+00	3.845E+00	6.103E+00	3.632E-01	-0.254
		573.80		-1.133E+00	1.243E+00	1.590E+00	9.491E-02	-0.713
		593.00		-8.612E-01	9.307E-01	1.411E+00	8.439E-02	-0.610
		656.30		-5.763E-01	3.298E+00	5.279E+00	3.143E-01	-0.109
		666.33		5.355E-03	7.498E-02	1.223E-01	7.343E-03	0.044
		675.00		5.248E-01	1.870E+00	3.101E+00	1.897E-01	0.169
		695.00		-7.534E-02	7.663E-02	1.139E-01	7.270E-03	-0.662
		697.00		-1.423E-01	2.660E-01	4.120E-01	2.641E-02	-0.345
		720.50	*	-3.646E-02	1.653E-01	2.464E-01	1.658E-02	-0.148
		856.80		-3.443E-02	5.305E-01	7.615E-01	6.646E-02	-0.045
		989.30		5.482E-01	1.281E+00	2.205E+00	1.857E-01	0.249
		1034.80		-1.523E+00	9.259E+00	1.515E+01	1.185E+00	-0.101
		1213.00		8.812E-01	4.893E+00	8.163E+00	4.814E-01	0.108
SB-127		61.10		7.256E+01	4.993E+01	7.653E+01	7.413E+00	0.948
		252.40		-5.945E-02	4.325E+00	6.896E+00	2.864E+00	-0.009
		290.80		-2.123E+01	2.237E+01	3.047E+01	2.777E+00	-0.697
		411.60		-3.498E+00	1.152E+01	1.875E+01	2.668E+00	-0.187
		444.90		4.408E+00	8.831E+00	1.503E+01	1.603E+00	0.293
		473.00		6.328E-01	1.518E+00	2.568E+00	2.851E-01	0.246
		543.00		-2.070E-01	1.609E+01	2.633E+01	3.401E+00	-0.008
		603.60		-3.031E+00	1.189E+01	1.628E+01	1.758E+00	-0.186
		685.20	*	7.538E-01	1.336E+00	2.256E+00	2.177E-01	0.334
		698.50		-7.806E-01	1.480E+01	2.384E+01	3.504E+00	-0.033
		722.20		5.514E+00	3.540E+01	5.012E+01	4.875E+00	0.110
		783.80		2.636E-01	3.778E+00	6.110E+00	7.145E-01	0.043
XE-127		57.60		-1.818E+00	4.959E+00	7.859E+00	5.176E-01	-0.231
		145.22		8.551E-01	7.015E-01	1.179E+00	7.273E-02	0.726
		172.10		-7.321E-02	1.231E-01	1.941E-01	1.048E-02	-0.377
		202.84	*	-2.675E-02	5.181E-02	7.482E-02	4.171E-03	-0.358
		374.96		-4.051E-02	1.927E-01	3.168E-01	1.761E-02	-0.128
I-131		80.18		-3.425E+00	4.939E+00	6.945E+00	5.574E-01	-0.493
		284.30		-1.062E-01	1.680E+00	2.449E+00	1.586E-01	-0.043
		364.48	*	-6.629E-02	1.119E-01	1.803E-01	1.138E-02	-0.368
		636.97		-4.012E-01	1.553E+00	2.474E+00	1.644E-01	-0.162
		722.89		2.123E-01	8.538E+00	1.192E+01	8.143E-01	0.018
TE-132		49.72		-6.102E+00	1.291E+01	2.103E+01	1.928E+00	-0.290
		111.76		-2.049E+01	2.736E+01	4.342E+01	4.275E+00	-0.472
		116.30		1.332E+01	2.586E+01	4.301E+01	4.192E+00	0.310
		228.16	*	-3.742E-01	6.579E-01	1.022E+00	1.460E-01	-0.366
BA-133		53.15		-7.490E-01	2.602E+00	4.286E+00	2.792E-01	-0.175
		79.62		1.673E+00	1.471E+00	2.189E+00	3.247E-01	0.764
		81.00		-1.083E-01	1.294E-01	1.493E-01	2.324E-02	-0.726
	+	276.40		7.247E-01	5.924E-01	6.711E-01	8.708E-02	1.080
		302.84		6.466E-03	1.532E-01	2.243E-01	2.618E-02	0.029
		356.01	*	-6.058E-03	4.734E-02	6.789E-02	7.804E-03	-0.089
		383.85		-9.019E-02	2.981E-01	4.869E-01	5.217E-02	-0.185
I-133	+	510.53		1.241E+00	2.981E-01	Half-Life too short		
		529.87	*	1.299E-03	2.981E-01	Half-Life too short		
		706.58		-5.059E-03	2.981E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		856.28		-1.293E-01	2.981E-01	Half-Life too short		
		875.33		2.877E-02	2.981E-01	Half-Life too short		
		1236.41		5.357E-01	2.981E-01	Half-Life too short		
		1298.22		-7.534E-02	2.981E-01	Half-Life too short		
CS-134		475.35		3.737E-01	1.727E+00	2.887E+00	1.669E-01	0.129
		563.23		2.788E-01	4.432E-01	6.621E-01	4.025E-02	0.421
	+	569.32		1.144E+00	4.137E-01	4.957E-01	3.040E-02	2.309
		604.70		3.606E-03	3.497E-02	4.980E-02	2.995E-03	0.072
	+	795.84	*	1.187E-01	6.249E-02	8.982E-02	7.069E-03	1.321
		801.93		-4.634E-01	4.599E-01	6.216E-01	4.939E-02	-0.745
		1038.57		3.785E-02	4.084E+00	6.783E+00	5.269E-01	0.006
		1167.94		-1.993E+00	2.680E+00	4.140E+00	2.322E-01	-0.481
		1365.15		4.419E-01	1.285E+00	2.183E+00	1.653E-01	0.202
CS-135		268.24	*	3.181E-01	1.792E-01	2.868E-01	2.200E-02	1.109
I-135		288.45		-7.534E+09	1.792E-01	Half-Life too short		
		417.63		-4.296E+09	1.792E-01	Half-Life too short		
		546.56		-5.149E+09	1.792E-01	Half-Life too short		
		836.80		1.026E+10	1.792E-01	Half-Life too short		
		1038.76		-5.673E+08	1.792E-01	Half-Life too short		
		1124.00		4.329E+10	1.792E-01	Half-Life too short		
		1131.51		-1.820E+09	1.792E-01	Half-Life too short		
		1260.41	*	-1.106E+09	1.792E-01	Half-Life too short		
		1457.56		4.621E+11	1.792E-01	Half-Life too short		
		1678.03		4.598E+09	1.792E-01	Half-Life too short		
		1706.46		1.881E+10	1.792E-01	Half-Life too short		
		1791.20		6.390E+09	1.792E-01	Half-Life too short		
CS-136		66.91		1.466E-01	7.486E-01	1.097E+00	1.600E-01	0.134
	+	86.29		2.903E+00	1.571E+00	2.040E+00	2.615E-01	1.423
		153.22		6.771E-01	6.718E-01	1.127E+00	8.196E-02	0.601
		163.89		1.017E-01	1.078E+00	1.752E+00	1.221E-01	0.058
		176.55		-7.773E-02	3.741E-01	5.993E-01	3.706E-02	-0.130
		273.65		-1.899E-01	6.927E-01	6.592E-01	4.375E-02	-0.288
		340.57		4.211E-01	1.496E-01	2.501E-01	1.527E-02	1.684
		818.51		4.446E-02	7.835E-02	1.317E-01	1.073E-02	0.338
		1048.07	*	-1.915E-02	1.186E-01	1.941E-01	1.561E-02	-0.099
		1235.34		3.359E-01	7.795E-01	1.145E+00	1.165E-01	0.293
BA-137M		661.65	*	-7.369E-03	3.732E-02	5.924E-02	3.522E-03	-0.124
CS-137		661.65	*	-7.790E-03	3.945E-02	6.262E-02	3.738E-03	-0.124
CE-139		165.85	*	1.688E-02	3.056E-02	5.047E-02	2.710E-03	0.334
BA-140		162.64		-3.490E-01	7.710E-01	1.226E+00	7.670E-02	-0.285
		304.84		1.135E+00	1.271E+00	1.921E+00	5.245E-01	0.591
		423.70		6.901E-01	1.932E+00	3.242E+00	1.029E+00	0.213
		537.32	*	-7.767E-02	2.504E-01	3.992E-01	1.299E-01	-0.195
LA-140	+	328.77		6.691E-01	4.312E-01	5.290E-01	3.426E-02	1.265
		432.53		8.303E-02	1.929E+00	3.200E+00	2.000E-01	0.026
		487.03		-1.067E-01	1.301E-01	2.016E-01	1.327E-02	-0.529
		751.79		-8.981E-01	1.901E+00	2.951E+00	2.434E-01	-0.304
		815.85		-9.778E-02	3.227E-01	5.032E-01	4.604E-02	-0.194
		867.82		6.122E-01	1.424E+00	2.365E+00	2.209E-01	0.259

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		919.63		1.886E+00	2.946E+00	4.960E+00	5.509E-01	0.380
		925.24		-1.242E+00	1.176E+00	1.778E+00	1.714E-01	-0.699
		1596.49	*	-1.614E-02	9.154E-02	1.212E-01	8.034E-03	-0.133
CE-141		145.44	*	1.015E-01	6.226E-02	1.066E-01	6.803E-03	0.952
CE-143		57.37		-3.300E-04	6.226E-02	Half-Life too short		
		231.56		-7.594E-04	6.226E-02	Half-Life too short		
		293.26	*	9.418E-04	6.226E-02	Half-Life too short		
	+	350.59		2.766E-02	6.226E-02	Half-Life too short		
		490.36		1.864E-03	6.226E-02	Half-Life too short		
		664.57		9.399E-04	6.226E-02	Half-Life too short		
		721.93		5.153E-04	6.226E-02	Half-Life too short		
CE-144		80.11		-1.464E+00	2.312E+00	3.260E+00	2.595E-01	-0.449
		133.54	*	-4.694E-02	2.272E-01	3.201E-01	4.660E-02	-0.147
PM-144		476.78		-1.717E-02	6.105E-02	9.856E-02	6.829E-03	-0.174
		618.01		-3.385E-03	3.306E-02	5.342E-02	3.376E-03	-0.063
		696.49	*	-2.089E-02	3.455E-02	5.320E-02	3.409E-03	-0.393
		778.57		2.453E-01	2.425E+00	3.829E+00	2.891E-01	0.064
PR-144		696.49	*	-1.415E+00	2.341E+00	3.605E+00	2.308E-01	-0.393
		1489.15		-6.221E+00	1.071E+01	1.567E+01	1.082E+00	-0.397
PM-146		453.90	*	2.449E-02	4.336E-02	7.028E-02	6.017E-03	0.348
		633.02		-8.616E-01	1.415E+00	2.131E+00	7.854E-01	-0.404
		735.90		1.171E-01	1.599E-01	2.548E-01	7.170E-02	0.460
		747.13		6.601E-03	9.916E-02	1.607E-01	2.115E-02	0.041
ND-147		91.11		1.353E-01	4.654E-01	5.074E-01	4.664E-02	0.267
		319.41		1.309E+00	3.288E+00	5.605E+00	3.253E-01	0.234
		439.89		-1.276E+00	5.652E+00	9.212E+00	5.212E-01	-0.138
		531.02	*	1.322E-01	5.398E-01	8.996E-01	1.221E-01	0.147
PM-149		285.90	*	4.483E+01	8.269E+01	1.419E+02	2.014E+01	0.316
EU-152		121.78		2.463E-02	7.377E-02	1.219E-01	1.054E-02	0.202
		244.69		3.427E-01	3.684E-01	5.436E-01	3.131E-02	0.630
		344.27	*	-5.589E-02	1.670E-01	1.546E-01	9.999E-03	-0.362
		443.98		6.556E-01	9.027E-01	1.558E+00	8.835E-02	0.421
		778.89		2.156E-02	2.795E-01	4.404E-01	3.326E-02	0.049
		867.32		4.259E-01	8.745E-01	1.424E+00	1.266E-01	0.299
	+	964.01		6.946E-01	4.695E-01	6.042E-01	5.268E-02	1.150
		1085.78		-2.995E-01	4.400E-01	6.862E-01	4.841E-02	-0.436
		1112.02		1.872E-01	3.944E-01	5.912E-01	3.914E-02	0.317
		1407.95		1.699E-02	1.893E-01	3.120E-01	2.199E-02	0.054
GD-153		69.67		6.681E-01	1.657E+00	2.445E+00	1.748E-01	0.273
		83.37		1.269E+01	1.950E+01	2.460E+01	2.034E+00	0.516
		97.43	*	-1.999E-02	8.619E-02	1.227E-01	9.840E-03	-0.163
		103.18		-1.569E-01	1.045E-01	1.611E-01	1.243E-02	-0.974
EU-154		123.07		1.106E-02	5.649E-02	8.601E-02	8.801E-03	0.129
		247.94		-7.571E-02	4.260E-01	5.854E-01	5.575E-02	-0.129
		591.81		-4.631E-01	6.514E-01	9.731E-01	9.616E-02	-0.476
		723.30		1.758E-02	2.161E-01	3.036E-01	2.396E-02	0.058
		756.87		1.167E+00	8.232E-01	1.454E+00	1.603E-01	0.803
		873.19		-7.049E-02	3.051E-01	5.013E-01	6.268E-02	-0.141
		996.32		-1.679E-01	3.773E-01	6.018E-01	1.061E-01	-0.279

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		-6.960E-02	2.116E-01	3.414E-01	3.875E-02	-0.204
		1274.45	*	-1.321E-01	1.463E-01	2.204E-01	2.161E-02	-0.599
EU-155		48.70		9.747E-01	1.631E+00	2.754E+00	1.765E-01	0.354
		60.01		3.542E+00	4.446E+00	6.697E+00	4.452E-01	0.529
	+	86.54		2.705E-01	1.442E-01	1.894E-01	1.644E-02	1.428
		105.31	*	7.013E-02	1.053E-01	1.763E-01	1.365E-02	0.398
TB-160	+	86.79		7.214E-01	3.844E-01	5.020E-01	4.326E-02	1.437
		197.04		4.587E-01	5.809E-01	9.519E-01	5.276E-02	0.482
		215.65		4.359E-01	7.889E-01	1.252E+00	7.063E-02	0.348
	+	298.57		2.477E-01	1.481E-01	2.180E-01	1.271E-02	1.136
		879.36	*	-4.897E-02	1.376E-01	2.234E-01	2.029E-02	-0.219
		962.29		4.849E-01	6.669E-01	1.024E+00	8.946E-02	0.474
	+	966.15		4.761E-01	3.218E-01	5.353E-01	4.655E-02	0.889
		1177.93		2.683E-01	4.301E-01	7.397E-01	4.108E-02	0.363
		1271.85		-2.295E-01	8.233E-01	1.318E+00	8.559E-02	-0.174
HO-166M		80.57		-3.197E-01	3.208E-01	4.114E-01	3.292E-02	-0.777
		184.41		1.128E-01	4.335E-02	6.877E-02	3.761E-03	1.641
		280.46		6.415E-02	9.208E-02	1.407E-01	8.205E-03	0.456
		410.95		1.747E-01	2.369E-01	4.084E-01	2.259E-02	0.428
		711.68	*	-4.341E-02	5.942E-02	8.999E-02	5.946E-03	-0.482
		752.31		5.315E-02	3.024E-01	4.939E-01	3.542E-02	0.108
		810.29		1.487E-02	6.051E-02	9.924E-02	7.955E-03	0.150
TM-171		51.35		-1.161E+01	2.160E+01	3.528E+01	2.288E+00	-0.329
		52.39		-9.335E+00	1.135E+01	1.834E+01	1.193E+00	-0.509
		59.40		2.074E+01	2.373E+01	3.587E+01	2.376E+00	0.578
		66.72	*	2.861E+00	2.738E+01	4.000E+01	2.789E+00	0.072
LU-176	+	88.36		5.328E-01	2.839E-01	3.758E-01	3.274E-02	1.418
		201.83		-3.085E-02	2.931E-02	4.497E-02	2.504E-03	-0.686
		306.84	*	1.891E-03	2.334E-02	3.828E-02	2.229E-03	0.049
		401.10		5.757E+00	6.587E+00	1.143E+01	6.273E-01	0.503
LU-177		112.95		-1.892E+00	1.539E+00	2.392E+00	1.757E-01	-0.791
	+	208.36	*	2.993E+00	1.541E+00	2.037E+00	1.142E-01	1.469
LU-177M		52.97		-4.553E-01	1.170E+00	1.920E+00	1.250E-01	-0.237
		54.07		-3.862E-02	6.309E-01	1.047E+00	6.834E-02	-0.037
		61.30		2.199E+00	1.336E+00	2.070E+00	1.388E-01	1.062
		121.62		1.003E-01	3.770E-01	6.214E-01	4.420E-02	0.161
		147.16		-2.591E-01	6.647E-01	1.064E+00	6.486E-02	-0.244
		171.86		-3.746E-01	4.945E-01	7.744E-01	4.179E-02	-0.484
		218.09		3.710E-01	8.674E-01	1.417E+00	8.008E-02	0.262
	+	268.79		2.939E+00	1.197E+00	1.491E+00	8.673E-02	1.972
		319.02		1.319E-01	2.601E-01	4.454E-01	2.584E-02	0.296
		367.43		1.573E-01	8.890E-01	1.494E+00	8.375E-02	0.105
		413.65	*	-3.741E-02	1.768E-01	2.895E-01	1.605E-02	-0.129
HF-181		56.28		1.260E-02	7.254E-01	1.206E+00	7.913E-02	0.010
		57.53		-1.591E-01	4.171E-01	6.606E-01	4.350E-02	-0.241
		65.20		4.873E-02	9.194E-01	1.341E+00	9.241E-02	0.036
		133.02		2.148E-02	7.171E-02	1.038E-01	6.899E-03	0.207
		136.25		1.267E-01	4.481E-01	7.370E-01	4.803E-02	0.172
		345.85		-1.162E-01	3.292E-01	3.037E-01	1.736E-02	-0.383

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	4.376E-02	3.822E-02	6.770E-02	3.927E-03	0.646
W-181		56.28		5.054E-03	2.845E-01	4.730E-01	3.104E-02	0.011
		57.53		-6.254E-02	1.637E-01	2.593E-01	1.707E-02	-0.241
		65.20	*	1.897E-02	3.580E-01	5.223E-01	3.598E-02	0.036
TA-182		67.75		-7.155E-02	1.200E-01	1.580E-01	1.111E-02	-0.453
		100.10		1.785E-01	1.721E-01	2.913E-01	2.292E-02	0.613
		152.43		1.813E-01	3.457E-01	5.713E-01	3.368E-02	0.317
		222.10		6.811E-02	3.488E-01	5.640E-01	3.199E-02	0.121
		1001.68		1.655E-01	1.923E+00	3.221E+00	2.662E-01	0.051
	+	1121.28		5.862E-01	2.896E-01	3.660E-01	2.365E-02	1.601
		1189.05		3.681E-02	3.613E-01	5.995E-01	3.395E-02	0.061
		1221.42	*	2.147E-01	2.188E-01	3.848E-01	2.302E-02	0.558
		1230.97		4.993E-01	6.143E-01	9.391E-01	5.707E-02	0.532
RE-183		57.98		-3.698E-02	1.697E-01	2.590E-01	1.708E-02	-0.143
		59.32		8.533E-02	9.738E-02	1.472E-01	9.750E-03	0.580
		67.20		-4.646E-02	1.973E-01	2.842E-01	1.990E-02	-0.163
		162.32	*	-4.620E-02	1.133E-01	1.806E-01	9.947E-03	-0.256
	+	208.81		2.738E+00	1.410E+00	1.863E+00	1.045E-01	1.469
		291.72		-4.123E-01	9.771E-01	1.387E+00	8.090E-02	-0.297
RE-184		57.98		-1.364E-01	6.259E-01	9.554E-01	6.299E-02	-0.143
		59.32		3.145E-01	3.589E-01	5.426E-01	3.594E-02	0.580
		67.20		-1.713E-01	7.275E-01	1.048E+00	7.337E-02	-0.163
		161.27		-1.662E-02	3.634E-01	5.877E-01	3.261E-02	-0.028
		216.55		-2.025E-02	2.739E-01	4.381E-01	2.473E-02	-0.046
		252.85	*	-6.248E-02	2.416E-01	3.806E-01	2.201E-02	-0.164
		318.01		-2.067E-02	4.488E-01	7.496E-01	4.351E-02	-0.028
		792.07		-3.491E-02	1.216E+00	1.678E+00	1.299E-01	-0.021
		903.28		9.954E-01	1.199E+00	1.937E+00	1.808E-01	0.514
		920.93		1.734E-01	4.616E-01	7.936E-01	7.278E-02	0.218
OS-185		59.72		2.495E-01	2.611E-01	3.958E-01	2.627E-02	0.630
		61.14		2.189E-01	1.461E-01	2.254E-01	1.509E-02	0.971
		69.30		2.805E-01	3.094E-01	4.357E-01	3.106E-02	0.644
		592.07		-1.751E+00	2.543E+00	3.934E+00	2.352E-01	-0.445
		646.12	*	-1.862E-03	4.450E-02	7.206E-02	4.297E-03	-0.026
		717.42		5.388E-01	9.201E-01	1.553E+00	1.038E-01	0.347
		874.81		1.849E-01	5.793E-01	9.945E-01	8.961E-02	0.186
		880.27		5.231E-02	7.364E-01	1.240E+00	1.128E-01	0.042
RE-188		155.03	*	5.062E-02	1.804E-01	2.954E-01	1.712E-02	0.171
		477.96		-2.180E+00	2.829E+00	4.401E+00	2.547E-01	-0.495
		633.10		-1.755E+00	2.782E+00	4.296E+00	2.566E-01	-0.409
W-188	+	63.58		5.647E+01	5.477E+01	7.535E+01	5.130E+00	0.749
		227.08		-8.913E+00	1.277E+01	1.978E+01	1.126E+00	-0.451
		290.67	*	-7.199E+00	7.993E+00	1.096E+01	6.393E-01	-0.657
IR-192	+	295.96		1.039E+00	1.899E-01	2.874E-01	1.702E-02	3.617
		308.46		-4.108E-02	8.851E-02	1.448E-01	8.524E-03	-0.284
		316.51	*	1.540E-03	3.420E-02	5.737E-02	3.349E-03	0.027
		468.07		-2.488E-03	7.229E-02	1.029E-01	6.845E-03	-0.024
		604.41		2.955E-02	4.709E-01	6.677E-01	7.642E-02	0.044
		612.46		1.748E+00	8.390E-01	1.384E+00	1.068E-01	1.263

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		1.932E-02	1.661E-01	2.430E-01	1.673E-02	0.080
		66.83		1.397E-02	9.062E-02	1.326E-01	9.257E-03	0.105
	+	75.70		1.472E+00	3.240E-01	4.651E-01	3.528E-02	3.165
		98.88	*	3.296E-01	2.314E-01	3.703E-01	2.939E-02	0.890
	+	129.76		6.430E+00	4.356E+00	5.063E+00	3.430E-01	1.270
TL-200		367.94	*	-1.727E-04	4.356E+00	Half-Life too short		
		579.30		4.568E-03	4.356E+00	Half-Life too short		
		828.27		7.931E-04	4.356E+00	Half-Life too short		
		1205.75		3.728E-04	4.356E+00	Half-Life too short		
TL-201		68.90		1.184E+00	4.873E+00	6.672E+00	4.738E-01	0.177
		70.82		-7.850E-01	2.663E+00	3.823E+00	2.763E-01	-0.205
		80.30		-4.172E+00	5.233E+00	7.323E+00	5.842E-01	-0.570
		135.34		8.511E-02	2.566E+01	3.863E+01	2.531E+00	0.002
		167.43	*	2.804E+00	6.876E+00	1.130E+01	6.068E-01	0.248
TL-202		68.90		1.099E-01	4.524E-01	6.194E-01	4.399E-02	0.177
		70.82		-7.268E-02	2.465E-01	3.540E-01	2.558E-02	-0.205
		80.30		-3.864E-01	4.846E-01	6.782E-01	5.411E-02	-0.570
		439.56	*	-4.324E-03	6.666E-02	1.097E-01	6.205E-03	-0.039
HG-203		70.83		-3.145E-01	1.077E+00	1.546E+00	1.974E-01	-0.203
		72.87		2.584E+00	7.369E-01	1.089E+00	1.353E-01	2.373
		82.60		9.484E-01	1.690E+00	1.828E+00	2.464E-01	0.519
		279.20	*	5.616E-02	4.574E-02	7.171E-02	4.437E-03	0.783
BI-207		72.80		7.286E-01	2.010E-01	3.171E-01	2.335E-02	2.298
	+	74.97		8.171E-01	1.799E-01	2.323E-01	1.749E-02	3.517
		84.90		2.037E-01	2.216E-01	3.295E-01	2.775E-02	0.618
		569.67		1.584E-01	4.321E-02	7.613E-02	4.542E-03	2.080
		1063.62	*	9.516E-03	5.867E-02	9.847E-02	7.287E-03	0.097
		1770.23		6.747E-02	4.161E-01	6.249E-01	3.732E-02	0.108
TL-207		81.07		-2.282E-01	2.841E-01	3.305E-01	2.660E-02	-0.690
		83.78		1.218E-01	1.510E-01	2.100E-01	1.745E-02	0.580
		94.90		5.861E-01	2.516E-01	3.919E-01	3.207E-02	1.496
		122.32		5.447E-01	1.768E+00	2.918E+00	2.290E-01	0.187
		144.24		2.260E-01	7.017E-01	1.145E+00	8.665E-02	0.197
		154.21		2.468E-01	4.116E-01	6.815E-01	4.794E-02	0.362
	+	269.46		6.887E-01	2.808E-01	3.543E-01	2.154E-02	1.944
		323.87	*	-1.659E-01	7.469E-01	1.069E+00	1.766E-01	-0.155
	+	338.28		8.785E+00	2.093E+00	2.479E+00	2.604E-01	3.543
		445.03		9.886E-01	2.122E+00	3.606E+00	3.677E-01	0.274
PO-209		260.50		-2.229E+00	9.373E+00	1.564E+01	9.075E-01	-0.143
		262.80		-4.328E+00	2.686E+01	4.379E+01	2.543E+00	-0.099
		896.60	*	1.898E+00	7.673E+00	1.308E+01	1.224E+00	0.145
BI-210		46.50	*	-6.003E-01	2.232E+00	3.735E+00	2.770E-01	-0.161
PB-210		46.50	*	-6.003E-01	2.232E+00	3.735E+00	2.770E-01	-0.161
PO-210		46.50	*	-6.003E-01	2.232E+00	3.735E+00	2.344E-01	-0.161
PB-211		404.84	*	-5.730E-01	1.005E+00	1.506E+00	9.383E-01	-0.381
		427.08		1.429E+00	2.258E+00	3.572E+00	2.207E+00	0.400
		831.96		2.883E-01	1.246E+00	2.105E+00	1.318E+00	0.137
PO-215		81.07		-2.282E-01	2.841E-01	3.305E-01	2.660E-02	-0.690
		83.78		1.218E-01	1.510E-01	2.100E-01	1.745E-02	0.580

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		5.861E-01	2.516E-01	3.919E-01	3.207E-02	1.496
		122.32		5.447E-01	1.768E+00	2.918E+00	2.290E-01	0.187
		144.24		2.260E-01	7.017E-01	1.145E+00	8.665E-02	0.197
		154.21		2.468E-01	4.116E-01	6.815E-01	4.794E-02	0.362
	+	269.46		6.887E-01	2.808E-01	3.543E-01	2.154E-02	1.944
		323.87	*	-1.659E-01	7.469E-01	1.069E+00	1.766E-01	-0.155
	+	338.28		8.785E+00	2.093E+00	2.479E+00	2.604E-01	3.543
		445.03		9.886E-01	2.122E+00	3.606E+00	3.677E-01	0.274
RN-219	+	271.23		8.837E-01	3.634E-01	4.488E-01	3.644E-02	1.969
		401.81	*	4.355E-01	4.093E-01	7.111E-01	9.583E-02	0.612
RN-220		549.76	*	3.717E+00	2.591E+01	4.283E+01	2.546E+00	0.087
RA-223		81.07		-2.282E-01	2.841E-01	3.305E-01	2.660E-02	-0.690
		83.78		1.218E-01	1.510E-01	2.100E-01	1.745E-02	0.580
		94.90		5.861E-01	2.516E-01	3.919E-01	3.207E-02	1.496
		122.32		5.447E-01	1.768E+00	2.918E+00	2.290E-01	0.187
		144.24		2.260E-01	7.017E-01	1.145E+00	8.665E-02	0.197
		154.21		2.468E-01	4.116E-01	6.815E-01	4.794E-02	0.362
	+	269.46		6.887E-01	2.808E-01	3.543E-01	2.154E-02	1.944
		323.87	*	-1.659E-01	7.469E-01	1.069E+00	1.766E-01	-0.155
	+	338.28		8.785E+00	2.093E+00	2.479E+00	2.604E-01	3.543
		445.03		9.886E-01	2.122E+00	3.606E+00	3.677E-01	0.274
AC-227		79.80		3.349E-01	1.798E+00	2.620E+00	5.565E-01	0.128
		236.00		2.812E+00	4.407E-01	6.191E-01	6.448E-02	4.542
		256.20	*	1.694E-01	3.726E-01	6.389E-01	8.918E-02	0.265
		286.10		8.549E-01	1.471E+00	2.530E+00	2.930E-01	0.338
	+	299.80		3.160E+00	1.949E+00	2.713E+00	4.421E-01	1.165
		304.40		1.039E+00	1.879E+00	2.840E+00	4.915E-01	0.366
		334.20		2.932E-01	3.160E+00	3.656E+00	6.698E-01	0.080
TH-227		79.80		3.349E-01	1.798E+00	2.620E+00	5.638E-01	0.128
	+	94.00		5.824E+00	3.322E+00	3.615E+00	7.819E-01	1.611
		236.00		2.812E+00	4.156E-01	6.191E-01	5.580E-02	4.542
		256.20	*	1.694E-01	3.730E-01	6.389E-01	1.080E-01	0.265
		286.10		8.549E-01	1.699E+00	2.530E+00	2.535E+00	0.338
	+	299.80		3.160E+00	1.949E+00	2.713E+00	4.421E-01	1.165
		304.40		1.039E+00	1.879E+00	2.840E+00	4.915E-01	0.366
		334.20		2.932E-01	3.160E+00	3.656E+00	6.698E-01	0.080
TH-229		85.43		4.242E-01	2.274E-01	3.450E-01	2.924E-02	1.230
	+	88.47		3.067E-01	1.634E-01	2.159E-01	1.879E-02	1.420
		100.00		1.944E-01	1.791E-01	3.037E-01	2.391E-02	0.640
		193.63	*	3.448E-02	5.504E-01	8.575E-01	4.736E-02	0.040
		210.97		1.118E+00	8.935E-01	1.335E+00	7.499E-02	0.838
PA-231		283.67	*	3.243E-02	1.709E+00	2.505E+00	3.455E-01	0.013
	+	301.29		1.264E+00	7.636E-01	1.051E+00	1.100E-01	1.203
TH-231		81.07		-2.282E-01	2.841E-01	3.305E-01	2.660E-02	-0.690
		83.78		1.218E-01	1.510E-01	2.100E-01	1.745E-02	0.580
		94.90		5.861E-01	2.516E-01	3.919E-01	3.207E-02	1.496
		122.32		5.447E-01	1.768E+00	2.918E+00	2.290E-01	0.187
		144.24		2.260E-01	7.017E-01	1.145E+00	8.665E-02	0.197
		154.21		2.468E-01	4.116E-01	6.815E-01	4.794E-02	0.362

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		6.887E-01	2.808E-01	3.543E-01	2.154E-02	1.944
		323.87	*	-1.659E-01	7.469E-01	1.069E+00	1.766E-01	-0.155
	+	338.28		8.785E+00	2.093E+00	2.479E+00	2.604E-01	3.543
		445.03		9.886E-01	2.122E+00	3.606E+00	3.677E-01	0.274
U-231		84.21		3.286E+00	5.944E+00	8.747E+00	7.305E-01	0.376
	+	92.29		5.577E+00	2.980E+00	3.774E+00	3.160E-01	1.478
		95.87	*	7.892E-02	1.101E+00	1.592E+00	1.292E-01	0.050
		108.00		1.032E+00	1.965E+00	3.274E+00	2.460E-01	0.315
PA-233	+	75.28		2.384E+01	6.059E+00	7.186E+00	1.062E+00	3.318
	+	86.59		4.397E+00	2.596E+00	3.076E+00	8.246E-01	1.430
	+	300.12		8.810E-01	5.374E-01	7.499E-01	1.009E-01	1.175
		311.98	*	1.354E-02	6.024E-02	1.020E-01	6.299E-03	0.133
		340.50		2.236E+00	8.913E-01	1.247E+00	2.863E-01	1.793
		398.62		-1.329E+00	2.083E+00	3.285E+00	8.470E-01	-0.405
		415.76		5.873E-01	1.594E+00	2.689E+00	5.518E-01	0.218
PA-234	+	63.00		1.641E+00	1.605E+00	2.227E+00	3.242E-01	0.737
	+	94.67		5.193E-01	2.813E-01	2.927E-01	3.545E-02	1.774
		98.44		1.233E-01	1.156E-01	1.492E-01	8.310E-02	0.826
		99.86		6.674E-01	4.507E-01	7.718E-01	6.083E-02	0.865
		111.00		-1.932E-03	1.777E-01	2.907E-01	3.272E-02	-0.007
		131.20		1.200E-01	1.172E-01	1.756E-01	1.179E-02	0.683
		152.70		2.060E-01	3.358E-01	5.544E-01	8.781E-02	0.372
	+	186.00		7.207E+00	3.120E+00	2.612E+00	7.966E-01	2.759
		226.40		-1.443E-01	4.000E-01	6.295E-01	7.244E-02	-0.229
		227.20		-3.058E-01	4.320E-01	6.688E-01	3.808E-02	-0.457
		248.90		-3.132E-02	9.138E-01	1.342E+00	2.883E-01	-0.023
	+	293.70		6.554E+00	1.548E+00	1.727E+00	2.780E-01	3.795
		369.80		-8.785E-02	8.398E-01	1.390E+00	2.886E-01	-0.063
	+	568.70		5.806E+00	2.097E+00	2.575E+00	1.536E-01	2.255
		569.50		1.456E+00	3.845E-01	6.807E-01	4.061E-02	2.139
		574.00		-1.644E+00	1.803E+00	2.307E+00	1.377E-01	-0.713
		699.00		2.810E-02	7.296E-01	1.184E+00	2.155E-01	0.024
		706.10		-6.392E-02	1.106E+00	1.780E+00	7.873E-01	-0.036
		733.00		-1.255E-02	4.220E-01	5.851E-01	1.263E-01	-0.021
		742.81		1.134E+00	1.692E+00	2.547E+00	1.707E+00	0.445
		796.30		1.402E+00	1.151E+00	1.719E+00	4.607E-01	0.816
		805.60		1.557E-01	1.066E+00	1.731E+00	5.275E-01	0.090
		819.60		1.659E+00	1.446E+00	2.311E+00	8.766E-01	0.718
		826.30		-1.237E+00	1.004E+00	1.239E+00	5.537E-01	-0.998
		831.60		1.126E-01	6.361E-01	1.080E+00	3.215E-01	0.104
		876.40		4.677E-01	9.434E-01	1.423E+00	1.463E+00	0.329
		880.51		-2.222E-02	2.649E-01	4.401E-01	4.005E-02	-0.050
		883.24		-1.254E-01	2.965E-01	4.580E-01	3.082E-01	-0.274
		899.00		-7.692E-02	9.131E-01	1.516E+00	6.651E-01	-0.051
		925.00		-1.055E+00	1.236E+00	1.911E+00	1.745E-01	-0.552
		926.50		-6.180E-02	1.763E-01	2.844E-01	7.237E-02	-0.217
		946.00	*	2.102E-02	3.028E-01	5.078E-01	9.598E-02	0.041
		949.00		3.037E-02	4.593E-01	7.699E-01	6.840E-02	0.039
		980.50		3.436E-01	7.099E-01	1.230E+00	1.049E-01	0.279

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-1.527E-01	1.165E+00	1.861E+00	1.208E+00	-0.082
PA-234M		766.41		3.464E+01	3.432E+01	3.481E+01	2.665E+01	0.995
		1001.03	*	-6.340E-01	6.308E+00	1.039E+01	1.135E+00	-0.061
U-235		89.95		-6.073E-01	1.866E+00	1.892E+00	5.836E-01	-0.321
	+	93.35		1.812E+00	1.082E+00	1.171E+00	3.269E-01	1.548
		105.00		5.661E-01	1.040E+00	1.715E+00	5.072E-01	0.330
		143.76	*	1.050E-02	2.166E-01	3.502E-01	5.765E-02	0.030
		163.35		-1.224E-03	4.842E-01	7.839E-01	1.401E-01	-0.002
	+	185.71		2.669E-01	8.331E-02	9.617E-02	5.267E-03	2.776
		205.31		2.007E-01	6.018E-01	8.586E-01	1.538E-01	0.234
NP-236	+	94.67		3.939E-01	2.104E-01	2.222E-01	1.822E-02	1.773
		98.44		9.317E-02	7.070E-02	1.128E-01	8.980E-03	0.826
		111.00		-1.462E-03	1.344E-01	2.199E-01	1.629E-02	-0.007
		160.31	*	-2.314E-02	8.204E-02	1.315E-01	7.346E-03	-0.176
NP-239		99.55		2.338E-01	1.508E-01	2.587E-01	2.043E-02	0.904
		117.00	*	5.069E-02	1.877E-01	3.098E-01	2.239E-02	0.164
	+	209.75		2.164E+00	1.114E+00	1.463E+00	8.207E-02	1.479
		228.18		-1.284E-01	2.232E-01	3.476E-01	1.981E-02	-0.370
	+	277.60		3.537E-01	2.862E-01	3.304E-01	1.926E-02	1.071
		334.30		1.468E-01	1.789E+00	2.068E+00	1.191E-01	0.071
AM-241		59.54	*	1.301E-01	1.377E-01	2.086E-01	1.548E-02	0.624
CM-243		99.55		2.406E-01	1.552E-01	2.662E-01	2.102E-02	0.904
		103.76	*	-7.577E-02	9.524E-02	1.515E-01	1.165E-02	-0.500
		117.00		5.215E-02	1.932E-01	3.188E-01	2.304E-02	0.164
	+	209.75		2.133E+00	1.098E+00	1.442E+00	8.091E-02	1.479
		228.18		-1.298E-01	2.255E-01	3.512E-01	2.002E-02	-0.370
	+	277.60		3.565E-01	2.885E-01	3.331E-01	1.941E-02	1.071
CM-247	+	278.00		1.467E+00	1.187E+00	1.381E+00	8.049E-02	1.062
		287.40		6.676E-01	1.181E+00	2.033E+00	1.186E-01	0.328
		402.60	*	3.220E-02	3.655E-02	6.346E-02	3.486E-03	0.507
CF-249		252.85		-2.346E-01	9.072E-01	1.429E+00	8.267E-02	-0.164
		333.44		1.036E-01	2.580E-01	2.667E-01	1.537E-02	0.388
		387.95	*	1.452E-02	3.879E-02	6.575E-02	3.595E-03	0.221
CF-251		176.60	*	-2.923E-02	1.302E-01	2.084E-01	1.130E-02	-0.140
		227.00		-2.654E-01	3.840E-01	5.950E-01	3.388E-02	-0.446
		285.00		-6.537E-02	1.788E+00	2.835E+00	1.654E-01	-0.023

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746006   *
* Acquisition date : 14-JUL-2009 10:20:53 Detector SN#  :               *
* Detector ID       : GAM14                Sensitivity     : 5.000      *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:01.62      Half life ratio :  8.000     *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232746006           Analyst initials: MXR1       *
* Batch Number      : 882713               Sample Quantity : 1.3137E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
* Standard Weight  :   0.00000                                          *
* CALIB. DATE/TIME :  6-MAR-2009 11:43:06 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
*************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.487E+01	3.067E+00	5.357E-01	0.000E+00
CD-109	2.285E+00	1.193E+00	1.520E+00	0.000E+00
SN-126	2.246E-01	1.173E-01	1.511E-01	0.000E+00
TL-208	4.948E-01	8.812E-02	6.075E-02	0.000E+00
BI-211	3.832E+00	5.459E-01	3.168E-01	0.000E+00
BI-212	1.425E+00	4.737E-01	4.896E-01	0.000E+00
PB-212	1.757E+00	1.666E-01	9.051E-02	0.000E+00
PO-212	1.757E+00	1.666E-01	9.051E-02	0.000E+00
BI-214	1.276E+00	1.780E-01	1.061E-01	0.000E+00
PB-214	1.333E+00	2.018E-01	1.104E-01	0.000E+00
PO-214	1.333E+00	2.018E-01	1.104E-01	0.000E+00
PO-216	1.757E+00	1.666E-01	9.051E-02	0.000E+00
PO-218	1.333E+00	2.018E-01	1.104E-01	0.000E+00
RA-224	4.691E+00	1.528E+00	1.029E+00	0.000E+00
RA-226	1.276E+00	1.780E-01	1.061E-01	0.000E+00
AC-228	1.876E+00	3.577E-01	2.314E-01	0.000E+00
RA-228	1.876E+00	3.577E-01	2.314E-01	0.000E+00
TH-228	1.757E+00	1.666E-01	9.050E-02	0.000E+00
TH-230	1.276E+00	1.780E-01	1.061E-01	0.000E+00
TH-232	1.876E+00	3.577E-01	2.314E-01	0.000E+00
TH-234	1.408E+00	1.355E+00	1.883E+00	0.000E+00
U-234	1.276E+00	1.780E-01	1.061E-01	0.000E+00
NP-237	6.596E-01	3.694E-01	4.364E-01	0.000E+00
U-238	1.408E+00	1.355E+00	1.883E+00	0.000E+00
AM-243	4.552E-01	9.819E-02	8.713E-02	0.000E+00
ANH-511	1.415E-01	7.306E-02	4.525E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-3.119E-02	2.815E-01	4.791E-01	0.000E+00	NOT IDENT.

NA-22	-4.730E-02	5.120E-02	7.917E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.015E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.068E-02	2.538E-02	5.223E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.979E-02	8.398E-02	0.000E+00	FAIL ABUN
SC-46	1.692E-02	3.920E-02	6.977E-02	0.000E+00	FAIL ABUN
V-48	-6.374E-02	6.894E-02	1.080E-01	0.000E+00	NOT IDENT.
CR-51	2.925E-02	3.747E-01	6.428E-01	0.000E+00	NOT IDENT.
MN-52	-4.314E-02	2.346E-01	3.812E-01	0.000E+00	NOT IDENT.
MN-54	-2.309E-02	3.817E-02	6.319E-02	0.000E+00	NOT IDENT.
CO-56	2.448E-02	3.749E-02	6.796E-02	0.000E+00	FAIL ABUN
CO-57	7.406E-03	2.503E-02	4.396E-02	0.000E+00	NOT IDENT.
CO-58	2.144E-03	3.959E-02	6.591E-02	0.000E+00	NOT IDENT.
FE-59	-7.613E-03	9.438E-02	1.592E-01	0.000E+00	NOT IDENT.
CO-60	2.837E-02	4.431E-02	7.859E-02	0.000E+00	NOT IDENT.
ZN-65	-9.340E-02	1.222E-01	1.637E-01	0.000E+00	NOT IDENT.
GE-68	3.900E-01	1.308E+00	2.277E+00	0.000E+00	NOT IDENT.
AS-73	7.145E-03	5.902E-01	1.059E+00	0.000E+00	NOT IDENT.
AS-74	2.809E-02	8.941E-02	1.545E-01	0.000E+00	NOT IDENT.
SE-75	-1.938E-02	4.929E-02	7.427E-02	0.000E+00	NOT IDENT.
BR-77	2.150E+00	9.770E+00	1.648E+01	0.000E+00	FAIL ABUN
SR-82	-2.568E-01	4.537E-01	6.052E-01	0.000E+00	NOT IDENT.
RB-83	3.924E-03	6.735E-02	1.123E-01	0.000E+00	NOT IDENT.
RB-84	-2.389E-02	6.574E-02	1.099E-01	0.000E+00	NOT IDENT.
KR-85	1.116E+01	7.727E+00	1.278E+01	0.000E+00	NOT IDENT.
SR-85	5.711E-02	3.954E-02	6.538E-02	0.000E+00	NOT IDENT.
RB-86	-1.576E-01	8.640E-01	1.448E+00	0.000E+00	NOT IDENT.
Y-88	2.503E-02	3.592E-02	6.714E-02	0.000E+00	NOT IDENT.
ZR-88	1.203E-02	2.911E-02	5.162E-02	0.000E+00	NOT IDENT.
Y-91	1.105E+00	2.177E+01	3.685E+01	0.000E+00	NOT IDENT.
NB-94	2.384E-02	3.517E-02	6.157E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	5.134E-02	8.646E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.701E-01	2.893E-01	0.000E+00	NOT IDENT.
ZR-95	9.804E-02	7.509E-02	1.363E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.048E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.719E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-8.407E-01	1.189E+01	1.972E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.313E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.121E-02	3.363E-02	5.720E-02	0.000E+00	NOT IDENT.
RH-102	3.663E-03	2.625E-02	4.544E-02	0.000E+00	NOT IDENT.
RU-103	-1.626E-04	3.494E-02	5.976E-02	0.000E+00	FAIL ABUN
RH-106	3.967E-02	3.280E-01	5.579E-01	0.000E+00	FAIL ABUN
RU-106	3.967E-02	3.279E-01	5.579E-01	0.000E+00	FAIL ABUN
AG-108M	1.443E-03	3.051E-02	5.277E-02	0.000E+00	NOT IDENT.
AG-110M	-1.604E-02	3.497E-02	5.674E-02	0.000E+00	NOT IDENT.
IN-111	-1.255E-01	1.149E+00	1.671E+00	0.000E+00	NOT IDENT.
IN-113M	1.489E-02	4.313E-02	7.617E-02	0.000E+00	NOT IDENT.
SN-113	1.489E-02	4.313E-02	7.617E-02	0.000E+00	NOT IDENT.
IN-114M	-1.038E-03	2.063E-01	3.067E-01	0.000E+00	NOT IDENT.
CD-115	-4.252E+00	9.683E+00	1.599E+01	0.000E+00	NOT IDENT.
SN-117M	-3.372E-02	5.583E-02	9.373E-02	0.000E+00	NOT IDENT.
SB-122	2.446E+00	2.380E+00	3.803E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.662E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.703E-02	2.911E-02	4.890E-02	0.000E+00	NOT IDENT.
I-124	-3.215E-01	6.873E-01	9.534E-01	0.000E+00	NOT IDENT.
SB-124	-9.659E-03	6.296E-02	1.000E-01	0.000E+00	FAIL ABUN
SB-125	3.066E-02	9.096E-02	1.599E-01	0.000E+00	NOT IDENT.
TE-125M	2.620E+00	8.925E+00	1.574E+01	0.000E+00	NOT IDENT.
I-126	1.282E-02	1.759E-01	2.970E-01	0.000E+00	NOT IDENT.
SB-126	-3.646E-02	1.620E-01	2.497E-01	0.000E+00	FAIL ABUN
SB-127	7.538E-01	1.310E+00	2.287E+00	0.000E+00	NOT IDENT.
XE-127	-2.675E-02	5.077E-02	7.743E-02	0.000E+00	NOT IDENT.
I-131	-6.629E-02	1.097E-01	1.848E-01	0.000E+00	NOT IDENT.
TE-132	-3.742E-01	6.447E-01	1.056E+00	0.000E+00	NOT IDENT.
BA-133	-6.058E-03	4.639E-02	6.961E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	4.922E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.124E-02	9.086E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.756E-01	2.955E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.953E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.915E-02	1.162E-01	1.954E-01	0.000E+00	FAIL ABUN
BA-137M	-7.369E-03	3.657E-02	6.011E-02	0.000E+00	NOT IDENT.
CS-137	-7.790E-03	3.866E-02	6.354E-02	0.000E+00	NOT IDENT.
CE-139	1.688E-02	2.995E-02	5.240E-02	0.000E+00	NOT IDENT.
BA-140	-7.767E-02	2.454E-01	4.065E-01	0.000E+00	NOT IDENT.
LA-140	-1.614E-02	8.971E-02	1.211E-01	0.000E+00	FAIL ABUN
CE-141	1.015E-01	6.101E-02	1.109E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.554E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-4.694E-02	2.226E-01	3.335E-01	0.000E+00	NOT IDENT.
PM-144	-2.089E-02	3.386E-02	5.394E-02	0.000E+00	NOT IDENT.

PR-144	-1.415E+00	2.294E+00	3.655E+00	0.000E+00	NOT IDENT.
PM-146	2.449E-02	4.249E-02	7.178E-02	0.000E+00	NOT IDENT.
ND-147	1.322E-01	5.290E-01	9.163E-01	0.000E+00	NOT IDENT.
PM-149	4.483E+01	8.104E+01	1.461E+02	0.000E+00	NOT IDENT.
EU-152	-5.589E-02	1.637E-01	1.586E-01	0.000E+00	FAIL ABUN
GD-153	-1.999E-02	8.446E-02	1.285E-01	0.000E+00	NOT IDENT.
EU-154	-1.321E-01	1.433E-01	2.212E-01	0.000E+00	NOT IDENT.
EU-155	7.013E-02	1.032E-01	1.844E-01	0.000E+00	FAIL ABUN
TB-160	-4.897E-02	1.349E-01	2.256E-01	0.000E+00	FAIL ABUN
HO-166M	-4.341E-02	5.823E-02	9.120E-02	0.000E+00	NOT IDENT.
TM-171	2.861E+00	2.683E+01	4.213E+01	0.000E+00	NOT IDENT.
LU-176	1.891E-03	2.287E-02	3.934E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.510E+00	2.107E+00	0.000E+00	FAIL ABUN
LU-177M	-3.741E-02	1.732E-01	2.961E-01	0.000E+00	FAIL ABUN
HF-181	4.376E-02	3.746E-02	6.907E-02	0.000E+00	NOT IDENT.
W-181	1.897E-02	3.509E-01	5.504E-01	0.000E+00	NOT IDENT.
TA-182	2.147E-01	2.145E-01	3.864E-01	0.000E+00	FAIL ABUN
RE-183	-4.620E-02	1.110E-01	1.876E-01	0.000E+00	FAIL ABUN
RE-184	-6.248E-02	2.368E-01	3.924E-01	0.000E+00	NOT IDENT.
OS-185	-1.862E-03	4.361E-02	7.315E-02	0.000E+00	NOT IDENT.
RE-188	5.062E-02	1.768E-01	3.071E-01	0.000E+00	NOT IDENT.
W-188	-7.199E+00	7.833E+00	1.127E+01	0.000E+00	FAIL ABUN
IR-192	1.540E-03	3.351E-02	5.894E-02	0.000E+00	FAIL ABUN
AU-195	3.296E-01	2.268E-01	3.877E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.960E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.804E+00	6.738E+00	1.173E+01	0.000E+00	NOT IDENT.
TL-202	-4.324E-03	6.533E-02	1.121E-01	0.000E+00	NOT IDENT.
HG-203	5.616E-02	4.482E-02	7.383E-02	0.000E+00	NOT IDENT.
BI-207	9.516E-03	5.750E-02	9.912E-02	0.000E+00	FAIL ABUN
TL-207	-1.659E-01	7.319E-01	1.098E+00	0.000E+00	FAIL ABUN
PO-209	1.898E+00	7.519E+00	1.320E+01	0.000E+00	NOT IDENT.
BI-210	-6.003E-01	2.188E+00	3.957E+00	0.000E+00	NOT IDENT.
PB-210	-6.003E-01	2.188E+00	3.957E+00	0.000E+00	NOT IDENT.
PO-210	-6.003E-01	2.187E+00	3.957E+00	0.000E+00	NOT IDENT.
PB-211	-5.730E-01	9.849E-01	1.541E+00	0.000E+00	NOT IDENT.
PO-215	-1.659E-01	7.319E-01	1.098E+00	0.000E+00	FAIL ABUN
RN-219	4.355E-01	4.011E-01	7.277E-01	0.000E+00	FAIL ABUN
RN-220	3.717E+00	2.539E+01	4.360E+01	0.000E+00	NOT IDENT.
RA-223	-1.659E-01	7.319E-01	1.098E+00	0.000E+00	FAIL ABUN
AC-227	1.694E-01	3.652E-01	6.587E-01	0.000E+00	FAIL ABUN
TH-227	1.694E-01	3.655E-01	6.587E-01	0.000E+00	FAIL ABUN
TH-229	3.448E-02	5.394E-01	8.881E-01	0.000E+00	FAIL ABUN
PA-231	3.243E-02	1.675E+00	2.578E+00	0.000E+00	FAIL ABUN
TH-231	-1.659E-01	7.319E-01	1.098E+00	0.000E+00	FAIL ABUN
U-231	7.892E-02	1.079E+00	1.667E+00	0.000E+00	FAIL ABUN
PA-233	1.354E-02	5.904E-02	1.048E-01	0.000E+00	FAIL ABUN
PA-234	2.102E-02	2.967E-01	5.121E-01	0.000E+00	FAIL ABUN
PA-234M	-6.340E-01	6.181E+00	1.047E+01	0.000E+00	NOT IDENT.
U-235	1.050E-02	2.122E-01	3.644E-01	0.000E+00	FAIL ABUN
NP-236	-2.314E-02	8.040E-02	1.366E-01	0.000E+00	FAIL ABUN
NP-239	5.069E-02	1.840E-01	3.235E-01	0.000E+00	FAIL ABUN
AM-241	1.301E-01	1.349E-01	2.201E-01	0.000E+00	NOT IDENT.
CM-243	-7.577E-02	9.334E-02	1.585E-01	0.000E+00	FAIL ABUN
CM-247	3.220E-02	3.582E-02	6.493E-02	0.000E+00	FAIL ABUN
CF-249	1.452E-02	3.801E-02	6.732E-02	0.000E+00	NOT IDENT.
CF-251	-2.923E-02	1.276E-01	2.162E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:21:22.88

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746006.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:20:53
Sample ID         : G232746006           Sample quantity  : 1.31370E+02 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.62  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1577	10.67*	1.211E+00	3.487E+01	3.487E+01	8.97
CD-109	88.03	205	3.72*	7.061E+00	2.234E+00	2.285E+00	53.29
SN-126	64.28	87	9.60	4.632E+00	5.572E-01	5.572E-01	97.79
	86.94	205	8.90	7.061E+00	9.338E-01	9.338E-01	66.90
	87.57	205	37.00*	7.061E+00	2.246E-01	2.246E-01	53.29
TL-208	277.35	87	6.80	5.000E+00	7.333E-01	7.333E-01	81.40
	510.84	153	21.60	3.089E+00	6.550E-01	6.550E-01	53.34
	583.14	402	84.20*	2.759E+00	4.948E-01	4.948E-01	18.17
	860.37	95	12.46	1.944E+00	1.119E+00	1.119E+00	34.69
BI-211	72.87	------	1.27	5.875E+00	------ Line Not Found		------
	351.07	725	12.94*	4.180E+00	3.832E+00	3.832E+00	14.54
BI-212	727.18	133	11.80*	2.267E+00	1.425E+00	1.425E+00	33.91
	785.46	------	1.97	2.114E+00	------ Line Not Found		------
	1620.62	25	2.75	1.120E+00	2.351E+00	2.351E+00	64.78
PB-212	74.81	640	10.70	6.088E+00	2.808E+00	2.808E+00	23.91
	77.11	931	18.00	6.313E+00	2.341E+00	2.341E+00	14.13
	87.30	205	8.00	7.061E+00	1.039E+00	1.039E+00	54.22
	238.63	1528	44.60*	5.571E+00	1.757E+00	1.757E+00	9.67
	300.09	96	3.41	4.718E+00	1.705E+00	1.705E+00	60.06
PO-212	74.81	640	10.70	6.088E+00	2.808E+00	2.808E+00	23.91
	77.11	931	18.00	6.313E+00	2.341E+00	2.341E+00	14.13
	87.30	205	8.00	7.061E+00	1.039E+00	1.039E+00	54.22
	115.19	------	0.60	7.689E+00	------ Line Not Found		------
	238.63	1528	44.60*	5.571E+00	1.757E+00	1.757E+00	9.67
	300.09	96	3.41	4.718E+00	1.705E+00	1.705E+00	60.06
BI-214	609.31	549	46.30*	2.656E+00	1.276E+00	1.276E+00	14.24
	768.36	110	5.04	2.156E+00	2.889E+00	2.890E+00	51.22
	934.06	------	3.21	1.802E+00	------ Line Not Found		------
	1120.29	100	15.10	1.523E+00	1.241E+00	1.241E+00	49.86
	1238.11	------	5.94	1.393E+00	------ Line Not Found		------
	1377.67	22	4.11	1.270E+00	1.213E+00	1.213E+00	148.02
	1764.49	92	15.80	1.059E+00	1.563E+00	1.563E+00	25.36

Sample ID : G232746006 Acquisition date : 14-JUL-2009 10:20:53

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	640	6.21	6.088E+00	4.838E+00	4.838E+00	23.22
	77.11	931	10.50	6.313E+00	4.012E+00	4.013E+00	16.05
	87.30	205	4.67	7.061E+00	1.780E+00	1.780E+00	53.84
	241.98	358	7.49	5.525E+00	2.474E+00	2.474E+00	33.71
	295.21	438	19.20	4.777E+00	1.365E+00	1.365E+00	19.29
	351.92	725	37.20*	4.180E+00	1.333E+00	1.333E+00	15.44
PO-214	74.81	640	6.21	6.088E+00	4.838E+00	4.838E+00	23.22
	77.11	931	10.50	6.313E+00	4.012E+00	4.013E+00	16.05
	87.30	205	4.67	7.061E+00	1.780E+00	1.780E+00	53.84
	241.98	358	7.49	5.525E+00	2.474E+00	2.474E+00	33.71
	295.21	438	19.20	4.777E+00	1.365E+00	1.365E+00	19.29
	351.92	725	37.20*	4.180E+00	1.333E+00	1.333E+00	15.44
PO-216	74.81	640	10.70	6.088E+00	2.808E+00	2.808E+00	23.91
	77.11	931	18.00	6.313E+00	2.341E+00	2.341E+00	14.13
	87.30	205	8.00	7.061E+00	1.039E+00	1.039E+00	54.22
	238.63	1528	44.60*	5.571E+00	1.757E+00	1.757E+00	9.67
	300.09	96	3.41	4.718E+00	1.705E+00	1.705E+00	60.06
PO-218	74.81	640	6.21	6.088E+00	4.838E+00	4.838E+00	23.22
	77.11	931	10.50	6.313E+00	4.012E+00	4.013E+00	16.05
	87.30	205	4.67	7.061E+00	1.780E+00	1.780E+00	53.84
	241.98	358	7.49	5.525E+00	2.474E+00	2.474E+00	33.71
	295.21	438	19.20	4.777E+00	1.365E+00	1.365E+00	19.29
	351.92	725	37.20*	4.180E+00	1.333E+00	1.333E+00	15.44
RA-224	240.98	358	3.95*	5.525E+00	4.691E+00	4.691E+00	33.24
RA-226	609.31	549	46.30*	2.656E+00	1.276E+00	1.276E+00	14.24
	768.36	110	5.04	2.156E+00	2.889E+00	2.890E+00	51.22
	934.06	------	3.21	1.802E+00	------ Line Not Found		------
	1120.29	100	15.10	1.523E+00	1.241E+00	1.241E+00	49.86
	1238.11	------	5.94	1.393E+00	------ Line Not Found		------
	1377.67	22	4.11	1.270E+00	1.213E+00	1.213E+00	148.02
	1764.49	92	15.80	1.059E+00	1.563E+00	1.563E+00	25.36
AC-228	338.32	361	11.40	4.306E+00	2.104E+00	2.104E+00	46.03
	911.07	335	27.70*	1.844E+00	1.876E+00	1.876E+00	19.45
	969.11	192	16.60	1.742E+00	1.896E+00	1.896E+00	32.81
RA-228	338.32	361	11.40	4.306E+00	2.104E+00	2.104E+00	46.03
	911.07	335	27.70*	1.844E+00	1.876E+00	1.876E+00	19.45
	969.11	192	16.60	1.742E+00	1.896E+00	1.896E+00	32.81
TH-228	84.40	------	1.21	6.878E+00	------ Line Not Found		------
	238.60	1528	44.60*	5.571E+00	1.757E+00	1.757E+00	9.67
	300.10	96	3.41	4.718E+00	1.705E+00	1.705E+00	83.74
TH-230	609.31	549	46.30*	2.656E+00	1.276E+00	1.276E+00	14.24
	768.36	110	5.04	2.156E+00	2.889E+00	2.889E+00	51.22
	934.06	------	3.21	1.802E+00	------ Line Not Found		------
	1120.29	100	15.10	1.523E+00	1.241E+00	1.241E+00	49.86
	1238.11	------	5.94	1.393E+00	------ Line Not Found		------
	1377.67	22	4.11	1.270E+00	1.213E+00	1.213E+00	148.02
	1764.49	92	15.80	1.059E+00	1.563E+00	1.563E+00	25.36
TH-232	338.32	361	11.40	4.306E+00	2.104E+00	2.104E+00	22.14
	911.07	335	27.70*	1.844E+00	1.876E+00	1.876E+00	19.45

Sample ID : G232746006 Acquisition date : 14-JUL-2009 10:20:53

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	192	16.60	1.742E+00	1.896E+00	1.896E+00	32.81
TH-234	63.29	87	3.80*	4.632E+00	1.408E+00	1.408E+00	98.26
	92.38	209	5.41	7.334E+00	1.507E+00	1.507E+00	55.75
U-234	609.31	549	46.30*	2.656E+00	1.276E+00	1.276E+00	14.24
	768.36	110	5.04	2.156E+00	2.889E+00	2.889E+00	51.22
	934.06	------	3.21	1.802E+00	------ Line Not Found		------
	1120.29	100	15.10	1.523E+00	1.241E+00	1.241E+00	49.86
	1238.11	------	5.94	1.393E+00	------ Line Not Found		------
	1377.67	22	4.11	1.270E+00	1.213E+00	1.213E+00	148.02
	1764.49	92	15.80	1.059E+00	1.563E+00	1.563E+00	25.36
NP-237	86.50	205	12.60*	7.061E+00	6.596E-01	6.596E-01	57.15
	95.87	------	2.60	7.425E+00	------ Line Not Found		------
U-238	63.29	87	3.80*	4.632E+00	1.408E+00	1.408E+00	98.26
	92.38	209	5.41	7.334E+00	1.507E+00	1.507E+00	53.43
AM-243	74.67	640	66.00*	6.088E+00	4.552E-01	4.552E-01	22.01
	86.72	205	0.34	7.061E+00	2.474E+01	2.474E+01	53.29
	117.66	------	0.55	7.685E+00	------ Line Not Found		------
	142.18	------	0.13	7.399E+00	------ Line Not Found		------
ANH-511	511.00	153	100.00*	3.089E+00	1.415E-01	1.415E-01	52.69

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232746006 Acquisition date : 14-JUL-2009 10:20:53

Total number of lines in spectrum 37
Number of unidentified lines 3
Number of lines tentatively identified by NID 34 91.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.487E+01	3.487E+01	0.313E+01	8.97	
CD-109	464.00D	1.02	2.234E+00	2.285E+00	1.218E+00	53.29	
SN-126	1.00E+05Y	1.00	2.246E-01	2.246E-01	1.197E-01	53.29	
TL-208	1.41E+10Y	1.00	4.948E-01	4.948E-01	0.899E-01	18.17	
BI-211	7.04E+08Y	1.00	3.832E+00	3.832E+00	0.557E+00	14.54	
BI-212	1.41E+10Y	1.00	1.425E+00	1.425E+00	0.483E+00	33.91	
PB-212	1.41E+10Y	1.00	1.757E+00	1.757E+00	0.170E+00	9.67	
PO-212	1.41E+10Y	1.00	1.757E+00	1.757E+00	0.170E+00	9.67	
BI-214	1600.00Y	1.00	1.276E+00	1.276E+00	0.182E+00	14.24	
PB-214	1600.00Y	1.00	1.333E+00	1.333E+00	0.206E+00	15.44	
PO-214	1600.00Y	1.00	1.333E+00	1.333E+00	0.206E+00	15.44	
PO-216	1.41E+10Y	1.00	1.757E+00	1.757E+00	0.170E+00	9.67	
PO-218	1600.00Y	1.00	1.333E+00	1.333E+00	0.206E+00	15.44	
RA-224	1.41E+10Y	1.00	4.691E+00	4.691E+00	1.559E+00	33.24	
RA-226	1600.00Y	1.00	1.276E+00	1.276E+00	0.182E+00	14.24	
AC-228	1.41E+10Y	1.00	1.876E+00	1.876E+00	0.365E+00	19.45	
RA-228	1.41E+10Y	1.00	1.876E+00	1.876E+00	0.365E+00	19.45	
TH-228	1.41E+10Y	1.00	1.757E+00	1.757E+00	0.170E+00	9.67	
TH-230	4.47E+09Y	1.00	1.276E+00	1.276E+00	0.182E+00	14.24	
TH-232	1.41E+10Y	1.00	1.876E+00	1.876E+00	0.365E+00	19.45	
TH-234	4.47E+09Y	1.00	1.408E+00	1.408E+00	1.383E+00	98.26	
U-234	4.47E+09Y	1.00	1.276E+00	1.276E+00	0.182E+00	14.24	
NP-237	2.14E+06Y	1.00	6.596E-01	6.596E-01	3.769E-01	57.15	
U-238	4.47E+09Y	1.00	1.408E+00	1.408E+00	1.383E+00	98.26	
AM-243	7380.00Y	1.00	4.552E-01	4.552E-01	1.002E-01	22.01	
ANH-511	1.00E+09Y	1.00	1.415E-01	1.415E-01	0.745E-01	52.69	
			---	---			
	Total Activity :		7.361E+01	7.366E+01			

Grand Total Activity : 7.361E+01 7.366E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232746006 Acquisition date : 14-JUL-2009 10:20:53

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	129.61	131	478	1.25	258.82	253	11	1.82E-02	67.4	7.59E+00	T
0	185.94	329	474	1.45	371.39	365	14	4.57E-02	30.7	6.53E+00	T
0	209.17	149	370	1.65	417.82	413	10	2.07E-02	51.2	6.08E+00	T
0	270.27	167	238	1.86	539.91	535	12	2.32E-02	40.3	5.10E+00	T
0	328.06	94	203	1.75	655.41	649	12	1.31E-02	64.1	4.41E+00	T
0	461.70	89	140	2.13	922.55	916	14	1.23E-02	61.2	3.36E+00	
0	567.89	172	162	2.79	1134.84	1128	15	2.39E-02	35.6	2.82E+00	T
0	794.68	66	57	1.14	1588.30	1582	12	9.15E-03	52.1	2.09E+00	T
1	964.84	61	72	2.09	1928.62	1921	24	8.48E-03	67.0	1.75E+00	T
0	1239.64	56	100	3.72	2478.37	2468	16	7.79E-03	85.2	1.39E+00	T
0	1589.65	34	25	5.17	3178.84	3171	19	4.78E-03	76.1	1.14E+00	
0	1729.67	28	8	1.68	3459.13	3452	16	3.84E-03	61.4	1.07E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:21:27.42

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746006.CNF;1 *
* Acquisition date  : 14-JUL-2009 10:20:53  Detector SN#     :             *
* Detector ID       : GAM14                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.62          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232746006            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.31370E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 6-MAR-2009 11:43:06.61MS Isotope      :                *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1023-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.487E+01	3.129E+00	5.351E-01	3.885E-02	65.174
CD-109	2.285E+00	1.218E+00	1.449E+00	1.267E-01	1.577
SN-126	2.246E-01	1.197E-01	1.440E-01	1.253E-02	1.560
TL-208	4.948E-01	8.992E-02	5.974E-02	4.085E-03	8.284
BI-211	3.832E+00	5.570E-01	3.089E-01	1.957E-02	12.407
BI-212	1.425E+00	4.833E-01	4.833E-01	4.111E-02	2.949
PB-212	1.757E+00	1.700E-01	8.770E-02	6.388E-03	20.035
PO-212	1.757E+00	1.700E-01	8.770E-02	6.388E-03	20.035
BI-214	1.276E+00	1.817E-01	1.044E-01	8.266E-03	12.217
PB-214	1.333E+00	2.059E-01	1.077E-01	8.835E-03	12.381
PO-214	1.333E+00	2.059E-01	1.077E-01	8.835E-03	12.381
PO-216	1.757E+00	1.700E-01	8.770E-02	6.388E-03	20.035
PO-218	1.333E+00	2.059E-01	1.077E-01	8.835E-03	12.381
RA-224	4.691E+00	1.559E+00	9.976E-01	5.734E-02	4.702
RA-226	1.276E+00	1.817E-01	1.044E-01	8.266E-03	12.217
AC-228	1.876E+00	3.650E-01	2.293E-01	2.693E-02	8.183
RA-228	1.876E+00	3.650E-01	2.293E-01	2.693E-02	8.183
TH-228	1.757E+00	1.700E-01	8.769E-02	6.387E-03	20.037

Sample ID : G232746006 Acquisition date : 14-JUL-2009 10:20:53

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.276E+00	1.817E-01	1.044E-01	8.266E-03	12.217
TH-232	1.876E+00	3.650E-01	2.293E-01	2.693E-02	8.183
TH-234	1.408E+00	1.383E+00	1.786E+00	3.071E-01	0.788
U-234	1.276E+00	1.817E-01	1.044E-01	8.266E-03	12.217
NP-237	6.596E-01	3.769E-01	4.160E-01	9.297E-02	1.586
U-238	1.408E+00	1.383E+00	1.786E+00	3.071E-01	0.788
AM-243	4.552E-01	1.002E-01	8.286E-02	6.218E-03	5.493
ANH-511	1.415E-01	7.455E-02	4.440E-02	2.608E-03	3.187

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-3.119E-02		2.873E-01	4.695E-01	3.165E-02	-0.066
NA-22	-4.730E-02		5.224E-02	7.890E-02	5.154E-03	-0.599
NA-24	-1.906E-01		3.579E-01	Half-Life too short		
AL-26	3.068E-02		2.590E-02	5.236E-02	3.035E-03	0.586
TI-44	4.319E-01	+	6.101E-02	7.992E-02	6.240E-03	5.404
SC-46	1.692E-02		4.000E-02	6.910E-02	6.385E-03	0.245
V-48	-6.374E-02		7.035E-02	1.072E-01	9.100E-03	-0.595
CR-51	2.925E-02		3.824E-01	6.258E-01	4.044E-02	0.047
MN-52	-4.314E-02		2.394E-01	3.807E-01	2.668E-02	-0.113
MN-54	-2.309E-02		3.895E-02	6.251E-02	5.244E-03	-0.369
CO-56	2.448E-02		3.826E-02	6.725E-02	5.765E-03	0.364
CO-57	7.406E-03		2.554E-02	4.213E-02	2.997E-03	0.176
CO-58	2.144E-03		4.040E-02	6.517E-02	5.244E-03	0.033
FE-59	-7.613E-03		9.631E-02	1.583E-01	1.218E-02	-0.048
CO-60	2.837E-02		4.521E-02	7.838E-02	5.585E-03	0.362
ZN-65	-9.340E-02		1.247E-01	1.627E-01	1.070E-02	-0.574
GE-68	3.900E-01		1.335E+00	2.263E+00	1.627E-01	0.172
AS-73	7.145E-03		6.022E-01	1.002E+00	6.531E-02	0.007
AS-74	2.809E-02		9.123E-02	1.520E-01	9.091E-03	0.185
SE-75	-1.938E-02		5.029E-02	7.209E-02	4.232E-03	-0.269
BR-77	2.150E+00		9.969E+00	1.617E+01	9.534E-01	0.133
SR-82	-2.568E-01		4.629E-01	5.980E-01	4.496E-02	-0.430
RB-83	3.924E-03		6.872E-02	1.102E-01	6.497E-03	0.036
RB-84	-2.389E-02		6.708E-02	1.088E-01	9.917E-03	-0.220
KR-85	1.116E+01		7.884E+00	1.254E+01	7.374E-01	0.890
SR-85	5.711E-02		4.035E-02	6.416E-02	3.773E-03	0.890
RB-86	-1.576E-01		8.816E-01	1.439E+00	1.036E-01	-0.109
Y-88	2.503E-02		3.666E-02	6.734E-02	3.824E-03	0.372
ZR-88	1.203E-02		2.971E-02	5.043E-02	2.746E-03	0.239
Y-91	1.105E+00		2.221E+01	3.669E+01	2.134E+00	0.030
NB-94	2.384E-02		3.589E-02	6.074E-02	3.939E-03	0.393
NB-95	9.913E-02		5.238E-02	8.541E-02	6.290E-03	1.161
NB-95M	8.223E-01		1.736E-01	2.802E-01	2.094E-02	2.935
ZR-95	9.804E-02		7.662E-02	1.347E-01	1.111E-02	0.728
NB-97	-2.909E-02		4.106E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	5.808E+00		8.768E-01	Half-Life too short		
MO-99	-8.407E-01		1.214E+01	1.947E+01	2.789E+00	-0.043
TC-99M	-2.098E+10		1.180E+10	Half-Life too short		
RH-101	1.121E-02		3.431E-02	5.526E-02	3.065E-03	0.203
RH-102	3.663E-03		2.678E-02	4.453E-02	2.574E-03	0.082
RU-103	-1.626E-04		3.565E-02	5.861E-02	7.422E-03	-0.003
RH-106	3.967E-02		3.346E-01	5.492E-01	6.495E-02	0.072
RU-106	3.967E-02		3.346E-01	5.492E-01	3.284E-02	0.072
AG-108M	1.443E-03		3.113E-02	5.164E-02	3.172E-03	0.028
AG-110M	-1.604E-02		3.569E-02	5.591E-02	3.532E-03	-0.287
IN-111	-1.255E-01		1.172E+00	1.620E+00	9.336E-02	-0.077
IN-113M	1.489E-02		4.401E-02	7.441E-02	4.354E-03	0.200
SN-113	1.489E-02		4.401E-02	7.441E-02	4.354E-03	0.200
IN-114M	-1.038E-03		2.105E-01	2.960E-01	1.629E-02	-0.004
CD-115	-4.252E+00		9.881E+00	1.570E+01	9.277E-01	-0.271
SN-117M	-3.372E-02		5.697E-02	9.022E-02	5.103E-03	-0.374
SB-122	2.446E+00		2.429E+00	3.738E+00	2.228E-01	0.654
I-123	-2.727E+00		2.378E+00	Half-Life too short		
TE-123M	-1.703E-02		2.970E-02	4.706E-02	2.692E-03	-0.362
I-124	-3.215E-01		7.013E-01	9.380E-01	5.611E-02	-0.343
SB-124	-9.659E-03		6.425E-02	1.002E-01	6.772E-03	-0.096
SB-125	3.066E-02		9.282E-02	1.565E-01	9.170E-03	0.196
TE-125M	2.620E+00		9.107E+00	1.506E+01	1.413E+00	0.174
I-126	1.282E-02		1.795E-01	2.927E-01	1.758E-02	0.044
SB-126	-3.646E-02		1.653E-01	2.464E-01	1.658E-02	-0.148
SB-127	7.538E-01		1.336E+00	2.256E+00	2.177E-01	0.334
XE-127	-2.675E-02		5.181E-02	7.482E-02	4.171E-03	-0.358
I-131	-6.629E-02		1.119E-01	1.803E-01	1.138E-02	-0.368
TE-132	-3.742E-01		6.579E-01	1.022E+00	1.460E-01	-0.366
BA-133	-6.058E-03		4.734E-02	6.789E-02	7.804E-03	-0.089
I-133	1.299E-03		2.511E-03	Half-Life too short		
CS-134	1.187E-01	+	6.249E-02	8.982E-02	7.069E-03	1.321
CS-135	3.181E-01		1.792E-01	2.868E-01	2.200E-02	1.109
I-135	-1.106E+09		2.017E+09	Half-Life too short		
CS-136	-1.915E-02		1.186E-01	1.941E-01	1.561E-02	-0.099
BA-137M	-7.369E-03		3.732E-02	5.924E-02	3.522E-03	-0.124
CS-137	-7.790E-03		3.945E-02	6.262E-02	3.738E-03	-0.124
CE-139	1.688E-02		3.056E-02	5.047E-02	2.710E-03	0.334
BA-140	-7.767E-02		2.504E-01	3.992E-01	1.299E-01	-0.195
LA-140	-1.614E-02		9.154E-02	1.212E-01	8.034E-03	-0.133
CE-141	1.015E-01		6.226E-02	1.066E-01	6.803E-03	0.952
CE-143	9.418E-04		1.303E-04	Half-Life too short		
CE-144	-4.694E-02		2.272E-01	3.201E-01	4.660E-02	-0.147
PM-144	-2.089E-02		3.455E-02	5.320E-02	3.409E-03	-0.393
PR-144	-1.415E+00		2.341E+00	3.605E+00	2.308E-01	-0.393
PM-146	2.449E-02		4.336E-02	7.028E-02	6.017E-03	0.348
ND-147	1.322E-01		5.398E-01	8.996E-01	1.221E-01	0.147
PM-149	4.483E+01		8.269E+01	1.419E+02	2.014E+01	0.316

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-5.589E-02		1.670E-01	1.546E-01	9.999E-03	-0.362
GD-153	-1.999E-02		8.619E-02	1.227E-01	9.840E-03	-0.163
EU-154	-1.321E-01		1.463E-01	2.204E-01	2.161E-02	-0.599
EU-155	7.013E-02		1.053E-01	1.763E-01	1.365E-02	0.398
TB-160	-4.897E-02		1.376E-01	2.234E-01	2.029E-02	-0.219
HO-166M	-4.341E-02		5.942E-02	8.999E-02	5.946E-03	-0.482
TM-171	2.861E+00		2.738E+01	4.000E+01	2.789E+00	0.072
LU-176	1.891E-03		2.334E-02	3.828E-02	2.229E-03	0.049
LU-177	2.993E+00	+	1.541E+00	2.037E+00	1.142E-01	1.469
LU-177M	-3.741E-02		1.768E-01	2.895E-01	1.605E-02	-0.129
HF-181	4.376E-02		3.822E-02	6.770E-02	3.927E-03	0.646
W-181	1.897E-02		3.580E-01	5.223E-01	3.598E-02	0.036
TA-182	2.147E-01		2.188E-01	3.848E-01	2.302E-02	0.558
RE-183	-4.620E-02		1.133E-01	1.806E-01	9.947E-03	-0.256
RE-184	-6.248E-02		2.416E-01	3.806E-01	2.201E-02	-0.164
OS-185	-1.862E-03		4.450E-02	7.206E-02	4.297E-03	-0.026
RE-188	5.062E-02		1.804E-01	2.954E-01	1.712E-02	0.171
W-188	-7.199E+00		7.993E+00	1.096E+01	6.393E-01	-0.657
IR-192	1.540E-03		3.420E-02	5.737E-02	3.349E-03	0.027
AU-195	3.296E-01		2.314E-01	3.703E-01	2.939E-02	0.890
TL-200	-1.727E-04		2.020E-04	Half-Life too short		
TL-201	2.804E+00		6.876E+00	1.130E+01	6.068E-01	0.248
TL-202	-4.324E-03		6.666E-02	1.097E-01	6.205E-03	-0.039
HG-203	5.616E-02		4.574E-02	7.171E-02	4.437E-03	0.783
BI-207	9.516E-03		5.867E-02	9.847E-02	7.287E-03	0.097
TL-207	-1.659E-01		7.469E-01	1.069E+00	1.766E-01	-0.155
PO-209	1.898E+00		7.673E+00	1.308E+01	1.224E+00	0.145
BI-210	-6.003E-01		2.232E+00	3.735E+00	2.770E-01	-0.161
PB-210	-6.003E-01		2.232E+00	3.735E+00	2.770E-01	-0.161
PO-210	-6.003E-01		2.232E+00	3.735E+00	2.344E-01	-0.161
PB-211	-5.730E-01		1.005E+00	1.506E+00	9.383E-01	-0.381
PO-215	-1.659E-01		7.469E-01	1.069E+00	1.766E-01	-0.155
RN-219	4.355E-01		4.093E-01	7.111E-01	9.583E-02	0.612
RN-220	3.717E+00		2.591E+01	4.283E+01	2.546E+00	0.087
RA-223	-1.659E-01		7.469E-01	1.069E+00	1.766E-01	-0.155
AC-227	1.694E-01		3.726E-01	6.389E-01	8.918E-02	0.265
TH-227	1.694E-01		3.730E-01	6.389E-01	1.080E-01	0.265
TH-229	3.448E-02		5.504E-01	8.575E-01	4.736E-02	0.040
PA-231	3.243E-02		1.709E+00	2.505E+00	3.455E-01	0.013
TH-231	-1.659E-01		7.469E-01	1.069E+00	1.766E-01	-0.155
U-231	7.892E-02		1.101E+00	1.592E+00	1.292E-01	0.050
PA-233	1.354E-02		6.024E-02	1.020E-01	6.299E-03	0.133
PA-234	2.102E-02		3.028E-01	5.078E-01	9.598E-02	0.041
PA-234M	-6.340E-01		6.308E+00	1.039E+01	1.135E+00	-0.061
U-235	1.050E-02		2.166E-01	3.502E-01	5.765E-02	0.030
NP-236	-2.314E-02		8.204E-02	1.315E-01	7.346E-03	-0.176
NP-239	5.069E-02		1.877E-01	3.098E-01	2.239E-02	0.164
AM-241	1.301E-01		1.377E-01	2.086E-01	1.548E-02	0.624

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-7.577E-02		9.524E-02	1.515E-01	1.165E-02	-0.500
CM-247	3.220E-02		3.655E-02	6.346E-02	3.486E-03	0.507
CF-249	1.452E-02		3.879E-02	6.575E-02	3.595E-03	0.221
CF-251	-2.923E-02		1.302E-01	2.084E-01	1.130E-02	-0.140

VAX/VMS Nuclide Identification Report Generated

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232746006      *
* Acquisition date  : 14-JUL-2009 10:20:53 Detector SN#     :          *
* Detector ID       : GAM14                Sensitivity      : 5.000    *
* Geometry          : CAN                  Energy tolerance: 1.500     *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000    *
* Elapsed real time:    0 02:00:01.62      Half life ratio : 8.000     *
*************************************************************************
*                                                                       *
*                               SAMPLE DATA                             *
*                                                                       *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID     *
* Sample ID         : G232746006           Analyst initials: MXR1      *
* Batch Number      : 882713               Sample Quantity : 1.3137E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                                 QC DATA                               *
*                                                                       *
* CALIB. DATE/TIME :  6-MAR-2009 11:43:06 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
*************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.487E+01	3.067E+00	2.680E-01	1.565E+00
CD-109	2.285E+00	1.193E+00	7.604E-01	6.088E-01
SN-126	2.246E-01	1.173E-01	7.557E-02	5.985E-02
TL-208	4.948E-01	8.812E-02	3.039E-02	4.496E-02
BI-211	3.832E+00	5.459E-01	1.585E-01	2.785E-01
BI-212	1.425E+00	4.737E-01	2.450E-01	2.417E-01
PB-212	1.757E+00	1.666E-01	4.528E-02	8.498E-02
PO-212	1.757E+00	1.666E-01	4.528E-02	8.498E-02
BI-214	1.276E+00	1.780E-01	5.309E-02	9.083E-02
PB-214	1.333E+00	2.018E-01	5.524E-02	1.029E-01
PO-214	1.333E+00	2.018E-01	5.524E-02	1.029E-01
PO-216	1.757E+00	1.666E-01	4.528E-02	8.498E-02
PO-218	1.333E+00	2.018E-01	5.524E-02	1.029E-01
RA-224	4.691E+00	1.528E+00	5.150E-01	7.796E-01
RA-226	1.276E+00	1.780E-01	5.309E-02	9.083E-02
AC-228	1.876E+00	3.577E-01	1.158E-01	1.825E-01
RA-228	1.876E+00	3.577E-01	1.158E-01	1.825E-01
TH-228	1.757E+00	1.666E-01	4.528E-02	8.498E-02
TH-230	1.276E+00	1.780E-01	5.309E-02	9.083E-02
TH-232	1.876E+00	3.577E-01	1.158E-01	1.825E-01
TH-234	1.408E+00	1.355E+00	9.422E-01	6.916E-01
U-234	1.276E+00	1.780E-01	5.309E-02	9.083E-02
NP-237	6.596E-01	3.694E-01	2.183E-01	1.885E-01
U-238	1.408E+00	1.355E+00	9.422E-01	6.916E-01
AM-243	4.552E-01	9.819E-02	4.359E-02	5.010E-02
ANH-511	1.415E-01	7.306E-02	2.264E-02	3.727E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-3.119E-02	2.815E-01	2.397E-01	1.436E-01 NOT IDENT.

NA-22	-4.730E-02	5.120E-02	3.961E-02	2.612E-02	NOT IDENT.
NA-24	-1.906E+05	7.015E+05	0.000E+00	3.579E+05	SHORT HLIF
AL-26	3.068E-02	2.538E-02	2.613E-02	1.295E-02	NOT IDENT.
TI-44	4.319E-01	5.979E-02	4.201E-02	3.051E-02	FAIL ABUN
SC-46	1.692E-02	3.920E-02	3.490E-02	2.000E-02	FAIL ABUN
V-48	-6.374E-02	6.894E-02	5.404E-02	3.517E-02	NOT IDENT.
CR-51	2.925E-02	3.747E-01	3.216E-01	1.912E-01	NOT IDENT.
MN-52	-4.314E-02	2.346E-01	1.907E-01	1.197E-01	NOT IDENT.
MN-54	-2.309E-02	3.817E-02	3.161E-02	1.947E-02	NOT IDENT.
CO-56	2.448E-02	3.749E-02	3.400E-02	1.913E-02	FAIL ABUN
CO-57	7.406E-03	2.503E-02	2.199E-02	1.277E-02	NOT IDENT.
CO-58	2.144E-03	3.959E-02	3.297E-02	2.020E-02	NOT IDENT.
FE-59	-7.613E-03	9.438E-02	7.965E-02	4.815E-02	NOT IDENT.
CO-60	2.837E-02	4.431E-02	3.932E-02	2.261E-02	NOT IDENT.
ZN-65	-9.340E-02	1.222E-01	8.188E-02	6.237E-02	NOT IDENT.
GE-68	3.900E-01	1.308E+00	1.139E+00	6.674E-01	NOT IDENT.
AS-73	7.145E-03	5.902E-01	5.298E-01	3.011E-01	NOT IDENT.
AS-74	2.809E-02	8.941E-02	7.730E-02	4.562E-02	NOT IDENT.
SE-75	-1.938E-02	4.929E-02	3.716E-02	2.515E-02	NOT IDENT.
BR-77	2.150E+00	9.770E+00	8.243E+00	4.984E+00	FAIL ABUN
SR-82	-2.568E-01	4.537E-01	3.028E-01	2.315E-01	NOT IDENT.
RB-83	3.924E-03	6.735E-02	5.618E-02	3.436E-02	NOT IDENT.
RB-84	-2.389E-02	6.574E-02	5.496E-02	3.354E-02	NOT IDENT.
KR-85	1.116E+01	7.727E+00	6.392E+00	3.942E+00	NOT IDENT.
SR-85	5.711E-02	3.954E-02	3.271E-02	2.017E-02	NOT IDENT.
RB-86	-1.576E-01	8.640E-01	7.246E-01	4.408E-01	NOT IDENT.
Y-88	2.503E-02	3.592E-02	3.359E-02	1.833E-02	NOT IDENT.
ZR-88	1.203E-02	2.911E-02	2.583E-02	1.485E-02	NOT IDENT.
Y-91	1.105E+00	2.177E+01	1.844E+01	1.111E+01	NOT IDENT.
NB-94	2.384E-02	3.517E-02	3.080E-02	1.794E-02	NOT IDENT.
NB-95	9.913E-02	5.134E-02	4.325E-02	2.619E-02	NOT IDENT.
NB-95M	8.223E-01	1.701E-01	1.447E-01	8.681E-02	NOT IDENT.
ZR-95	9.804E-02	7.509E-02	6.821E-02	3.831E-02	NOT IDENT.
NB-97	-2.909E+04	8.048E+04	0.000E+00	4.106E+04	SHORT HLIF
ZR-97	5.808E+06	1.719E+06	0.000E+00	8.768E+05	SHORT HLIF
MO-99	-8.407E-01	1.189E+01	9.868E+00	6.068E+00	NOT IDENT.
TC-99M	-2.098E+16	2.313E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.121E-02	3.363E-02	2.862E-02	1.716E-02	NOT IDENT.
RH-102	3.663E-03	2.625E-02	2.273E-02	1.339E-02	NOT IDENT.
RU-103	-1.626E-04	3.494E-02	2.990E-02	1.783E-02	FAIL ABUN
RH-106	3.967E-02	3.280E-01	2.791E-01	1.673E-01	FAIL ABUN
RU-106	3.967E-02	3.279E-01	2.791E-01	1.673E-01	FAIL ABUN
AG-108M	1.443E-03	3.051E-02	2.640E-02	1.557E-02	NOT IDENT.
AG-110M	-1.604E-02	3.497E-02	2.839E-02	1.784E-02	NOT IDENT.
IN-111	-1.255E-01	1.149E+00	8.361E-01	5.861E-01	NOT IDENT.
IN-113M	1.489E-02	4.313E-02	3.811E-02	2.200E-02	NOT IDENT.
SN-113	1.489E-02	4.313E-02	3.811E-02	2.200E-02	NOT IDENT.
IN-114M	-1.038E-03	2.063E-01	1.534E-01	1.052E-01	NOT IDENT.
CD-115	-4.252E+00	9.683E+00	8.000E+00	4.941E+00	NOT IDENT.
SN-117M	-3.372E-02	5.583E-02	4.689E-02	2.848E-02	NOT IDENT.
SB-122	2.446E+00	2.380E+00	1.903E+00	1.214E+00	NOT IDENT.
I-123	-2.727E+06	4.662E+06	0.000E+00	2.378E+06	SHORT HLIF
TE-123M	-1.703E-02	2.911E-02	2.446E-02	1.485E-02	NOT IDENT.
I-124	-3.215E-01	6.873E-01	4.770E-01	3.507E-01	NOT IDENT.
SB-124	-9.659E-03	6.296E-02	5.005E-02	3.212E-02	FAIL ABUN
SB-125	3.066E-02	9.096E-02	8.002E-02	4.641E-02	NOT IDENT.
TE-125M	2.620E+00	8.925E+00	7.873E+00	4.553E+00	NOT IDENT.
I-126	1.282E-02	1.759E-01	1.486E-01	8.975E-02	NOT IDENT.
SB-126	-3.646E-02	1.620E-01	1.249E-01	8.264E-02	FAIL ABUN
SB-127	7.538E-01	1.310E+00	1.144E+00	6.682E-01	NOT IDENT.
XE-127	-2.675E-02	5.077E-02	3.874E-02	2.590E-02	NOT IDENT.
I-131	-6.629E-02	1.097E-01	9.244E-02	5.596E-02	NOT IDENT.
TE-132	-3.742E-01	6.447E-01	5.281E-01	3.289E-01	NOT IDENT.
BA-133	-6.058E-03	4.639E-02	3.483E-02	2.367E-02	FAIL ABUN
I-133	1.299E+03	4.922E+03	0.000E+00	2.511E+03	SHORT HLIF
CS-134	1.187E-01	6.124E-02	4.546E-02	3.124E-02	FAIL ABUN
CS-135	3.181E-01	1.756E-01	1.478E-01	8.959E-02	NOT IDENT.
I-135	-1.106E+15	3.953E+15	0.000E+00	2.017E+15	SHORT HLIF
CS-136	-1.915E-02	1.162E-01	9.778E-02	5.929E-02	FAIL ABUN
BA-137M	-7.369E-03	3.657E-02	3.007E-02	1.866E-02	NOT IDENT.
CS-137	-7.790E-03	3.866E-02	3.179E-02	1.972E-02	NOT IDENT.
CE-139	1.688E-02	2.995E-02	2.622E-02	1.528E-02	NOT IDENT.
BA-140	-7.767E-02	2.454E-01	2.034E-01	1.252E-01	NOT IDENT.
LA-140	-1.614E-02	8.971E-02	6.061E-02	4.577E-02	FAIL ABUN
CE-141	1.015E-01	6.101E-02	5.549E-02	3.113E-02	NOT IDENT.
CE-143	9.418E+02	2.554E+02	0.000E+00	1.303E+02	SHORT HLIF
CE-144	-4.694E-02	2.226E-01	1.668E-01	1.136E-01	NOT IDENT.
PM-144	-2.089E-02	3.386E-02	2.699E-02	1.728E-02	NOT IDENT.

PR-144	-1.415E+00	2.294E+00	1.829E+00	1.171E+00	NOT IDENT.
PM-146	2.449E-02	4.249E-02	3.591E-02	2.168E-02	NOT IDENT.
ND-147	1.322E-01	5.290E-01	4.584E-01	2.699E-01	NOT IDENT.
PM-149	4.483E+01	8.104E+01	7.307E+01	4.134E+01	NOT IDENT.
EU-152	-5.589E-02	1.637E-01	7.933E-02	8.350E-02	FAIL ABUN
GD-153	-1.999E-02	8.446E-02	6.427E-02	4.309E-02	NOT IDENT.
EU-154	-1.321E-01	1.433E-01	1.106E-01	7.313E-02	NOT IDENT.
EU-155	7.013E-02	1.032E-01	9.224E-02	5.264E-02	FAIL ABUN
TB-160	-4.897E-02	1.349E-01	1.129E-01	6.881E-02	FAIL ABUN
HO-166M	-4.341E-02	5.823E-02	4.563E-02	2.971E-02	NOT IDENT.
TM-171	2.861E+00	2.683E+01	2.108E+01	1.369E+01	NOT IDENT.
LU-176	1.891E-03	2.287E-02	1.968E-02	1.167E-02	FAIL ABUN
LU-177	2.993E+00	1.510E+00	1.054E+00	7.705E-01	FAIL ABUN
LU-177M	-3.741E-02	1.732E-01	1.481E-01	8.839E-02	FAIL ABUN
HF-181	4.376E-02	3.746E-02	3.456E-02	1.911E-02	NOT IDENT.
W-181	1.897E-02	3.509E-01	2.753E-01	1.790E-01	NOT IDENT.
TA-182	2.147E-01	2.145E-01	1.933E-01	1.094E-01	FAIL ABUN
RE-183	-4.620E-02	1.110E-01	9.384E-02	5.665E-02	FAIL ABUN
RE-184	-6.248E-02	2.368E-01	1.963E-01	1.208E-01	NOT IDENT.
OS-185	-1.862E-03	4.361E-02	3.660E-02	2.225E-02	NOT IDENT.
RE-188	5.062E-02	1.768E-01	1.536E-01	9.019E-02	NOT IDENT.
W-188	-7.199E+00	7.833E+00	5.639E+00	3.996E+00	FAIL ABUN
IR-192	1.540E-03	3.351E-02	2.949E-02	1.710E-02	FAIL ABUN
AU-195	3.296E-01	2.268E-01	1.940E-01	1.157E-01	FAIL ABUN
TL-200	-1.727E+02	3.960E+02	0.000E+00	2.020E+02	SHORT HLIF
TL-201	2.804E+00	6.738E+00	5.867E+00	3.438E+00	NOT IDENT.
TL-202	-4.324E-03	6.533E-02	5.610E-02	3.333E-02	NOT IDENT.
HG-203	5.616E-02	4.482E-02	3.694E-02	2.287E-02	NOT IDENT.
BI-207	9.516E-03	5.750E-02	4.959E-02	2.934E-02	FAIL ABUN
TL-207	-1.659E-01	7.319E-01	5.494E-01	3.734E-01	FAIL ABUN
PO-209	1.898E+00	7.519E+00	6.604E+00	3.836E+00	NOT IDENT.
BI-210	-6.003E-01	2.188E+00	1.979E+00	1.116E+00	NOT IDENT.
PB-210	-6.003E-01	2.188E+00	1.979E+00	1.116E+00	NOT IDENT.
PO-210	-6.003E-01	2.187E+00	1.979E+00	1.116E+00	NOT IDENT.
PB-211	-5.730E-01	9.849E-01	7.708E-01	5.025E-01	NOT IDENT.
PO-215	-1.659E-01	7.319E-01	5.494E-01	3.734E-01	FAIL ABUN
RN-219	4.355E-01	4.011E-01	3.641E-01	2.047E-01	FAIL ABUN
RN-220	3.717E+00	2.539E+01	2.181E+01	1.295E+01	NOT IDENT.
RA-223	-1.659E-01	7.319E-01	5.494E-01	3.734E-01	FAIL ABUN
AC-227	1.694E-01	3.652E-01	3.295E-01	1.863E-01	FAIL ABUN
TH-227	1.694E-01	3.655E-01	3.295E-01	1.865E-01	FAIL ABUN
TH-229	3.448E-02	5.394E-01	4.443E-01	2.752E-01	FAIL ABUN
PA-231	3.243E-02	1.675E+00	1.290E+00	8.544E-01	FAIL ABUN
TH-231	-1.659E-01	7.319E-01	5.494E-01	3.734E-01	FAIL ABUN
U-231	7.892E-02	1.079E+00	8.342E-01	5.507E-01	FAIL ABUN
PA-233	1.354E-02	5.904E-02	5.245E-02	3.012E-02	FAIL ABUN
PA-234	2.102E-02	2.967E-01	2.562E-01	1.514E-01	FAIL ABUN
PA-234M	-6.340E-01	6.181E+00	5.240E+00	3.154E+00	NOT IDENT.
U-235	1.050E-02	2.122E-01	1.823E-01	1.083E-01	FAIL ABUN
NP-236	-2.314E-02	8.040E-02	6.832E-02	4.102E-02	FAIL ABUN
NP-239	5.069E-02	1.840E-01	1.618E-01	9.387E-02	FAIL ABUN
AM-241	1.301E-01	1.349E-01	1.101E-01	6.884E-02	NOT IDENT.
CM-243	-7.577E-02	9.334E-02	7.928E-02	4.762E-02	FAIL ABUN
CM-247	3.220E-02	3.582E-02	3.248E-02	1.828E-02	FAIL ABUN
CF-249	1.452E-02	3.801E-02	3.368E-02	1.939E-02	NOT IDENT.
CF-251	-2.923E-02	1.276E-01	1.082E-01	6.511E-02	NOT IDENT.

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                            CHARLESTON ,SC 29417                       *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT              *
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ENERGY	MDA COUNTS
46.50	397.6907
46.50	397.6907
46.50	397.6907
48.70	393.3258
49.72	434.7352
51.35	434.8172
52.39	447.8540
52.97	432.0110
53.15	432.1216
53.44	421.8014
54.07	433.6367
56.28	456.0417
56.28	456.0435
57.37	0.0000
57.53	493.5627
57.53	493.5647
57.60	493.6098
57.98	487.8268
57.98	487.8268
59.32	457.1478
59.32	457.1478
59.40	457.1958
59.54	452.6620
59.72	452.7697
60.01	468.3500
61.10	456.6772
61.14	456.7016
61.30	456.7964
63.00	558.7188
63.29	558.9266
63.29	558.9266
63.58	553.3297
64.28	602.6206
65.12	592.4055
65.20	592.4643
65.20	592.4643
66.05	560.4908
66.72	567.1736
66.83	567.2515
66.91	567.3073
67.20	603.2720
67.20	603.2720
67.75	634.0201
67.85	634.0997
68.90	584.2758
68.90	584.2758
69.30	541.6920
69.67	589.5026
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70.83	646.5465
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74.97	623.8135
75.28	624.0367
75.70	624.3400
77.11	625.3492
77.11	625.3492
77.11	625.3492

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77.11	625.3492
77.11	625.3492
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79.62	649.9989
79.80	650.1297
79.80	650.1297
80.11	669.2984
80.18	669.3502
80.30	669.4407
80.30	669.4407
80.57	687.0128
81.00	684.7084
81.07	684.7614
81.07	684.7614
81.07	684.7614
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83.37	625.7606
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83.78	624.0615
83.78	624.0615
83.78	624.0615
84.21	651.7049
84.40	683.5574
84.90	682.3389
85.43	698.6074
86.29	705.6061
86.50	764.1227
86.54	764.1550
86.59	764.1961
86.72	764.3017
86.79	764.3574
86.94	829.6073
87.30	829.9257
87.30	829.9257
87.30	829.9257
87.30	829.9257
87.30	829.9257
87.30	829.9257
87.57	803.6386
87.88	803.9037
88.03	792.0890
88.36	792.3653
88.47	804.4030
89.95	805.6483
91.11	790.6435
92.29	834.2496
92.38	834.3292
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93.35	579.7668
94.00	405.3034
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94.67	426.4183
94.90	426.5173
94.90	426.5173
94.90	426.5173
94.90	426.5173
95.87	438.1696
95.87	438.1696
96.73	464.2486
97.43	443.6737
98.44	375.4610
98.44	375.4610
98.88	375.6241
99.55	373.5220
99.55	373.5220
99.86	373.6352
100.00	392.8237
100.10	392.8639
103.18	472.8417
103.76	443.7878
105.00	395.7312
105.31	395.8475
108.00	405.9845
109.28	406.4682
111.00	393.8824
111.00	393.8824

111.76	411.4714
112.95	425.1716
115.19	362.6892
116.30	370.2096
117.00	380.6733
117.00	380.6733
117.66	368.6092
121.11	385.1338
121.62	378.1116
121.78	378.1636
122.06	383.3956
122.32	383.4810
122.32	383.4810
122.32	383.4810
122.32	383.4810
123.07	388.1880
127.23	427.8377
129.76	368.3255
131.20	351.3657
133.02	351.8936
133.54	370.3101
135.34	365.8655
136.00	361.3075
136.25	360.9359
136.48	373.4877
140.51	421.6645
140.51	0.0000
142.18	402.3654
142.65	388.9238
143.76	398.6821
144.24	389.4091
144.24	389.4091
144.24	389.4091
144.24	389.4091
145.22	346.7581
145.44	337.3861
147.16	412.3274
152.43	382.3918
152.70	382.4694
153.22	369.9704
154.21	387.1235
154.21	387.1235
154.21	387.1235
154.21	387.1235
155.03	406.3602
156.02	396.1000
158.56	409.5459
159.00	0.0000
159.00	406.5029
160.31	386.7627
161.27	375.3688
162.32	392.6367
162.64	395.9113
163.35	375.9387
163.89	366.5257
165.85	355.3388
167.43	354.6763
171.28	383.4150
171.86	373.9552
172.10	374.0193
176.55	360.1710
176.60	360.1838
181.06	309.6738
184.41	355.2092
185.71	350.5568
186.00	350.6262
190.27	342.7488
192.34	350.1490
193.63	353.1711
197.04	319.4899
198.01	334.9129
198.60	329.6008
200.40	359.3841
201.83	362.9815
202.84	349.0356
205.31	328.6053
208.36	353.7515
208.81	320.7862

209.75	319.0021
209.75	319.0021
210.97	315.7339
215.65	296.5371
216.55	316.8149
218.09	292.8878
222.10	286.9736
223.80	268.4825
226.40	286.6010
227.00	297.7733
227.08	297.7877
227.20	297.8082
228.16	285.7916
228.18	285.7936
228.18	285.7936
231.56	0.0000
235.69	290.1627
236.00	268.8489
236.00	268.8489
238.60	268.5803
238.63	268.5858
238.63	268.5858
238.63	268.5858
239.00	268.6428
240.98	268.9462
241.98	269.0988
241.98	269.0988
241.98	269.0988
244.69	230.8174
245.39	261.3368
247.94	256.3334
248.90	252.5837
249.79	232.1485
252.40	248.2068
252.85	258.3798
252.85	258.3798
254.15	0.0000
256.20	237.6959
256.20	237.6959
260.50	247.2756
260.90	259.9664
262.80	244.9730
264.65	256.2728
268.24	222.0223
268.79	243.2393
269.46	240.3018
269.46	240.3018
269.46	240.3018
269.46	240.3018
271.23	237.1246
273.65	227.2003
276.40	227.5269
277.35	224.2252
277.60	224.2552
277.60	224.2552
278.00	224.3003
278.60	224.3725
279.20	215.7070
279.53	214.2224
280.46	205.2054
281.68	232.7124
283.67	219.2490
284.30	229.9807
285.00	215.9675
285.90	198.4628
286.10	198.4814
286.10	198.4814
287.40	199.5291
288.45	0.0000
290.67	229.1962
290.80	229.2114
291.72	207.9152
293.26	0.0000
293.70	188.2261
295.21	186.8373
295.21	186.8373
295.21	186.8373
295.96	257.3799

296.50	257.4482
297.23	257.5439
298.57	257.7148
299.80	176.5196
299.80	176.5196
300.09	187.2915
300.09	187.2915
300.09	187.2915
300.10	187.2915
300.12	187.2940
301.29	188.9368
302.84	195.2310
303.76	189.1671
303.91	173.7991
304.40	158.4564
304.40	158.4564
304.84	144.6432
306.84	175.5876
308.46	185.9005
311.98	176.0260
316.51	196.8350
318.01	201.6203
319.02	192.4226
319.41	193.3877
320.08	201.5090
323.87	203.4215
323.87	203.4215
323.87	203.4215
323.87	203.4215
325.23	203.5521
328.77	194.5496
333.44	159.0948
334.20	184.1157
334.20	184.1157
334.30	184.1253
338.28	184.7741
338.28	184.7741
338.28	184.7741
338.28	184.7741
338.32	184.7765
338.32	184.7765
338.32	184.7765
340.50	176.8223
340.57	176.8292
344.27	192.8006
345.85	192.9382
350.59	0.0000
351.07	158.4844
351.92	158.5438
351.92	158.5438
351.92	158.5438
355.39	0.0000
356.01	165.4510
364.48	172.7067
366.43	145.3108
367.43	156.7762
367.94	0.0000
369.80	162.6420
374.96	161.0967
383.85	164.5737
387.95	146.6462
388.63	159.1509
391.69	150.7139
391.69	150.7139
392.90	142.1447
398.62	163.6603
400.65	149.3427
401.10	137.8068
401.81	133.9911
402.60	138.8549
404.84	172.7617
410.95	136.4216
411.60	155.8135
413.65	158.8470
414.70	125.9677
415.30	137.6284
415.76	131.8380
417.63	0.0000

418.52	161.0962
423.70	143.9224
427.08	133.4011
427.89	138.3148
432.53	122.9515
433.93	123.9940
439.47	130.1296
439.56	130.1345
439.89	135.0436
443.98	107.8126
444.90	108.8307
445.03	108.8361
445.03	108.8361
445.03	108.8361
445.03	108.8361
453.90	108.2181
463.38	134.9283
468.07	117.0304
473.00	103.0415
475.06	103.1189
475.35	99.1626
476.78	106.1601
477.59	101.2293
477.96	116.1316
482.03	82.5046
484.57	108.4491
487.03	121.4907
490.36	0.0000
492.35	99.7717
497.08	90.9445
507.63	0.0000
510.53	0.0000
510.84	106.4471
511.00	106.4522
511.85	106.4846
511.85	106.4846
513.99	105.5582
513.99	105.5582
520.41	104.1129
520.65	104.1204
527.90	108.0815
528.96	0.0000
529.64	103.0907
529.87	0.0000
531.02	99.0958
537.32	106.3997
543.00	107.6174
546.56	0.0000
549.76	101.7529
552.65	92.6818
555.20	104.9916
563.23	114.1257
563.90	109.0391
568.70	120.8117
569.32	93.8688
569.50	93.8755
569.67	95.5869
573.80	126.4799
574.00	126.4889
574.64	123.0938
578.91	92.4478
579.30	0.0000
583.14	109.0278
585.48	97.7855
591.81	113.4509
592.07	110.3673
593.00	114.5257
595.88	98.1056
600.56	113.7625
602.52	0.0000
602.71	101.7640
602.71	101.7640
603.60	96.6169
604.41	89.7389
604.70	89.7453
609.31	93.3311
609.31	93.3311
609.31	93.3311

609.31	93.3311
610.33	102.0040
612.46	88.2311
614.37	95.2071
618.01	105.0168
621.84	102.0171
621.84	102.0171
631.29	83.5156
633.02	98.1836
633.10	98.1859
634.78	90.9188
635.90	94.0847
636.97	97.2527
645.85	96.4607
646.12	97.5183
656.30	92.5504
657.75	102.0584
657.90	0.0000
661.65	95.8544
661.65	95.8544
664.57	0.0000
666.33	92.8211
666.33	92.8211
675.00	75.0770
677.61	80.4234
685.20	80.5978
692.80	79.7076
695.00	103.1525
696.49	100.0058
696.49	100.0058
697.00	98.9555
697.49	97.9050
698.33	97.9274
698.50	94.7385
699.00	95.8162
702.63	94.8471
706.10	101.3411
706.58	0.0000
706.67	106.6919
709.31	75.8067
711.68	90.8126
713.82	94.0736
717.42	80.2551
720.50	104.4197
721.93	0.0000
722.20	98.2194
722.78	101.8073
722.78	101.8073
722.89	101.8096
722.95	101.8119
723.30	101.8212
724.18	112.5674
727.18	94.7772
733.00	77.0154
735.90	68.5624
739.58	94.7354
742.81	79.7325
744.21	81.9189
747.13	90.6127
751.79	104.7652
752.31	92.8993
753.82	89.6931
755.35	76.7566
756.15	73.5300
756.87	68.1357
763.93	66.8186
765.79	72.2705
766.41	83.1261
766.84	90.3646
768.36	87.8680
768.36	87.8680
768.36	87.8680
768.36	87.8680
776.49	90.5924
778.00	91.0802
778.57	78.5558
778.89	78.5611
783.80	91.4894

785.46	80.6322
792.07	89.1375
795.84	65.5518
796.30	71.0223
801.93	86.1713
805.60	79.9525
810.29	70.1797
810.76	73.4775
815.85	72.4727
817.79	72.5082
818.51	69.2246
819.60	59.3525
826.30	95.4159
828.27	0.0000
831.60	79.0048
831.96	79.0118
834.83	98.3750
836.80	0.0000
846.75	61.7806
848.13	73.7923
856.28	0.0000
856.80	74.4768
860.37	63.4389
867.32	61.7811
867.82	63.3944
871.10	61.2184
873.19	74.2415
874.81	63.1288
875.33	0.0000
876.40	57.5813
879.36	70.6331
880.27	60.4231
880.51	61.3553
881.50	66.9492
883.24	71.6282
884.67	70.7227
889.25	65.2092
896.60	69.0558
898.02	86.8148
899.00	82.1652
903.28	71.4993
911.07	77.7162
911.07	77.7162
911.07	77.7162
919.63	60.7948
920.93	63.8164
925.00	81.7236
925.24	83.6077
926.50	69.5361
934.06	70.5978
934.06	70.5978
934.06	70.5978
934.06	70.5978
935.52	72.5039
937.48	79.1311
944.10	76.4195
946.00	65.1255
949.00	68.9484
962.29	87.6954
964.01	71.0754
966.15	71.1105
968.20	71.1426
969.11	71.1563
969.11	71.1563
969.11	71.1563
977.42	62.0994
980.50	53.2645
983.50	72.3354
989.30	60.0379
996.32	72.5380
1001.03	63.0580
1001.68	59.2451
1004.76	66.9338
1021.30	0.0000
1024.50	0.0000
1034.80	69.2900
1037.82	66.4451
1038.57	67.4194

1038.76	0.0000
1045.16	64.6200
1046.59	68.4981
1048.07	77.2070
1050.47	83.0396
1050.47	83.0396
1063.62	74.5530
1076.63	78.6368
1077.35	66.0244
1085.78	81.7031
1099.22	70.2217
1112.02	68.7271
1112.84	85.5040
1115.52	107.3571
1120.29	77.3767
1120.29	77.3767
1120.29	77.3767
1120.29	77.3767
1120.51	73.8817
1121.28	75.5734
1124.00	0.0000
1129.67	84.3903
1131.51	0.0000
1147.95	0.0000
1167.94	84.0385
1173.22	81.1558
1175.09	70.2951
1177.93	85.1917
1189.05	91.3337
1204.90	96.5856
1205.75	0.0000
1213.00	76.7901
1221.42	75.9134
1230.97	82.3393
1235.34	101.2910
1236.41	0.0000
1238.11	99.1974
1238.11	99.1974
1238.11	99.1974
1238.11	99.1974
1238.25	99.1974
1246.25	72.2520
1260.41	0.0000
1271.85	73.6000
1274.45	85.7402
1274.54	85.7402
1291.56	58.6868
1298.22	0.0000
1312.09	46.7169
1325.50	49.8813
1325.50	49.8813
1332.49	45.8661
1333.61	51.9919
1360.21	40.9684
1362.66	0.0000
1365.15	33.8285
1368.21	33.4064
1368.53	0.0000
1376.25	30.8118
1377.67	42.2662
1377.67	42.2662
1377.67	42.2662
1377.67	42.2662
1384.27	44.0778
1394.10	31.9360
1395.20	30.9119
1407.95	35.1095
1434.06	33.1901
1436.60	26.9775
1457.56	0.0000
1460.81	27.0865
1489.15	24.0725
1509.49	12.6011
1596.49	21.8998
1620.62	14.6540
1678.03	0.0000
1691.02	12.9585
1691.02	12.9585

1706.46	0.0000
1750.46	0.0000
1764.49	12.1621
1764.49	12.1621
1764.49	12.1621
1764.49	12.1621
1770.23	9.8313
1771.40	13.1104
1791.20	0.0000
1808.65	5.6484
1836.01	14.1750

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232746006

Total Uranium Activity	4.1924E+00	ug/g
Total Uranium Counting Unc.	4.0337E+00	ug/g
Total Uranium Tpu	2.0580E-06	ug/g
Total Uranium Mda	2.8044E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232746006       *
*   ANALYST       : MXR1                      DETECTOR   : GAM14            *
*   SAMPLE DATE   : 29-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 10:20:53.55    SAMPLE ALQT:  131.370 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.085E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.654E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 4.584E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.235E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:27:54.88

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746007.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:27:26
Sample ID         : G232746007           Sample quantity  : 1.30700E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.07  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.50*	85	548	0.85	128.17	125	8	1.18E-02	50.0	
2	4	75.03*	560	459	1.18	151.22	144	16	7.78E-02	7.7	3.42E+00
3	4	77.37*	797	311	0.86	155.90	144	16	1.11E-01	5.0	
4	2	84.50*	101	441	1.33	170.14	165	29	1.41E-02	36.4	1.61E+00
5	2	87.52*	297	306	1.04	176.18	165	29	4.12E-02	11.1	
6	2	90.15	163	283	1.04	181.44	165	29	2.26E-02	18.5	
7	2	92.99*	290	343	1.34	187.12	165	29	4.02E-02	13.7	
8	0	130.00	83	378	2.83	261.07	255	11	1.15E-02	46.8	
9	0	186.15*	151	315	0.99	373.30	368	11	2.10E-02	24.7	
10	0	208.82	132	235	1.31	418.61	414	12	1.84E-02	24.6	
11	4	238.82*	1062	89	1.00	478.57	472	28	1.47E-01	3.5	2.13E+00
12	4	241.84	295	187	1.96	484.60	472	28	4.10E-02	13.6	
13	0	277.73	43	125	1.18	556.34	553	7	5.93E-03	46.4	
14	0	295.42*	301	175	1.12	591.69	587	11	4.18E-02	10.5	
15	0	300.22	76	104	1.27	601.29	597	9	1.05E-02	26.9	
16	0	328.05	56	131	1.05	656.91	653	9	7.72E-03	39.4	
17	0	338.29*	146	152	1.12	677.38	674	9	2.03E-02	17.5	
18	0	351.97*	475	108	1.07	704.71	700	9	6.60E-02	6.2	
19	0	407.91	26	106	0.94	816.52	816	10	3.62E-03	74.9	
20	0	463.65	40	99	1.07	927.95	922	12	5.59E-03	52.4	
21	0	510.92*	33	108	2.02	1022.42	1017	11	4.56E-03	76.7	
22	0	583.32*	254	87	1.53	1167.15	1162	12	3.53E-02	9.9	
23	0	609.33*	335	78	1.21	1219.14	1214	12	4.65E-02	7.8	
24	0	727.88	65	73	1.33	1456.13	1449	15	9.05E-03	31.4	
25	0	911.02*	200	33	1.64	1822.26	1816	12	2.78E-02	9.4	
26	4	964.26	47	21	2.23	1928.70	1924	39	6.50E-03	21.3	2.90E+00
27	4	968.82*	135	20	2.18	1937.80	1924	39	1.87E-02	11.6	
28	0	1119.83*	77	36	1.71	2239.73	2233	12	1.07E-02	19.7	
29	0	1460.39*	776	23	2.00	2920.71	2913	16	1.08E-01	3.9	
30	0	1763.78*	52	7	0.75	3527.43	3521	14	7.22E-03	18.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 12:27:57

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746007.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:27:26
Sample ID : G232746007 Sample quantity : 130.70 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.07 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.615E+01	2.588E+00	6.696E-01	4.117E-02	39.050
CD-109	+	88.03	*	3.563E+00	8.402E-01	1.124E+00	9.053E-02	3.170
SN-126	+	64.28		3.835E-01	3.884E-01	4.899E-01	7.516E-02	0.783
	+	86.94		1.456E+00	6.819E-01	4.584E-01	1.891E-01	3.177
	+	87.57	*	3.503E-01	8.260E-02	1.104E-01	8.904E-03	3.173
HG-203		70.83		-4.513E-01	8.489E-01	1.218E+00	1.657E-01	-0.371
		72.87		1.352E+00	5.433E-01	8.287E-01	1.090E-01	1.631
		82.60		7.597E-03	1.159E+00	1.581E+00	2.134E-01	0.005
	+	279.20	*	5.425E-02	5.050E-02	7.903E-02	6.097E-03	0.686
TL-208	+	277.35		4.936E-01	4.614E-01	7.273E-01	8.395E-02	0.679
	+	510.84		2.105E-01	3.238E-01	2.901E-01	3.113E-02	0.726
	+	583.14	*	4.748E-01	1.011E-01	7.554E-02	5.989E-03	6.286
		860.37		3.466E-01	3.859E-01	6.921E-01	5.647E-02	0.501
BI-211		72.87		6.814E+00	2.653E+00	4.178E+00	3.572E-01	1.631
	+	351.07	*	3.567E+00	5.083E-01	3.799E-01	2.729E-02	9.388
PB-212	+	74.81		2.262E+00	4.487E-01	4.186E-01	5.282E-02	5.403
	+	77.11		1.915E+00	2.503E-01	2.495E-01	2.095E-02	7.674
	+	87.30		1.620E+00	4.150E-01	5.104E-01	6.559E-02	3.175
	+	238.63	*	1.656E+00	1.857E-01	9.657E-02	8.475E-03	17.143
	+	300.09		1.863E+00	1.017E+00	1.296E+00	1.211E-01	1.438
PO-212	+	74.81		2.262E+00	4.487E-01	4.186E-01	5.282E-02	5.403
	+	77.11		1.915E+00	2.503E-01	2.495E-01	2.095E-02	7.674
	+	87.30		1.620E+00	4.150E-01	5.104E-01	6.559E-02	3.175
		115.19		4.219E+00	3.905E+00	6.662E+00	6.932E-01	0.633
	+	238.63	*	1.656E+00	1.857E-01	9.657E-02	8.475E-03	17.143
	+	300.09		1.863E+00	1.017E+00	1.296E+00	1.211E-01	1.438
BI-214	+	609.31	*	1.188E+00	2.134E-01	1.399E-01	1.256E-02	8.489
		768.36		2.155E-01	1.017E+00	1.663E+00	1.606E-01	0.130
		934.06		2.530E+00	1.545E+00	2.910E+00	2.761E-01	0.869
	+	1120.29		1.456E+00	5.878E-01	6.637E-01	5.926E-02	2.194
		1238.11		4.922E-01	1.247E+00	2.103E+00	1.686E-01	0.234
		1377.67		1.513E+00	1.242E+00	2.327E+00	1.988E-01	0.650
	+	1764.49		1.397E+00	5.189E-01	3.985E-01	2.291E-02	3.506
PB-214	+	74.81		3.897E+00	7.405E-01	7.213E-01	8.120E-02	5.403

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		3.283E+00	4.967E-01	4.278E-01	4.850E-02	7.674
	+	87.30		2.776E+00	6.886E-01	8.743E-01	9.759E-02	3.175
	+	241.98		2.766E+00	7.954E-01	5.820E-01	5.470E-02	4.752
	+	295.21		1.300E+00	3.014E-01	2.422E-01	2.331E-02	5.369
	+	351.92	*	1.241E+00	1.883E-01	1.366E-01	1.211E-02	9.083
PO-214	+	74.81		3.897E+00	7.405E-01	7.213E-01	8.120E-02	5.403
	+	77.11		3.283E+00	4.967E-01	4.278E-01	4.850E-02	7.674
	+	87.30		2.776E+00	6.886E-01	8.743E-01	9.759E-02	3.175
	+	241.98		2.766E+00	7.954E-01	5.820E-01	5.470E-02	4.752
	+	295.21		1.300E+00	3.014E-01	2.422E-01	2.331E-02	5.369
	+	351.92	*	1.241E+00	1.883E-01	1.366E-01	1.211E-02	9.083
PO-216	+	74.81		2.262E+00	4.487E-01	4.186E-01	5.282E-02	5.403
	+	77.11		1.915E+00	2.503E-01	2.495E-01	2.095E-02	7.674
	+	87.30		1.620E+00	4.150E-01	5.104E-01	6.559E-02	3.175
	+	238.63	*	1.656E+00	1.857E-01	9.657E-02	8.475E-03	17.143
	+	300.09		1.863E+00	1.017E+00	1.296E+00	1.211E-01	1.438
PO-218	+	74.81		3.897E+00	7.405E-01	7.213E-01	8.120E-02	5.403
	+	77.11		3.283E+00	4.967E-01	4.278E-01	4.850E-02	7.674
	+	87.30		2.776E+00	6.886E-01	8.743E-01	9.759E-02	3.175
	+	241.98		2.766E+00	7.954E-01	5.820E-01	5.470E-02	4.752
	+	295.21		1.300E+00	3.014E-01	2.422E-01	2.331E-02	5.369
	+	351.92	*	1.241E+00	1.883E-01	1.366E-01	1.211E-02	9.083
RA-224	+	240.98	*	5.245E+00	1.479E+00	1.100E+00	8.295E-02	4.769
RA-226	+	609.31	*	1.188E+00	2.134E-01	1.399E-01	1.256E-02	8.489
		768.36		2.155E-01	1.017E+00	1.663E+00	1.606E-01	0.130
		934.06		2.530E+00	1.545E+00	2.910E+00	2.761E-01	0.869
	+	1120.29		1.456E+00	5.878E-01	6.637E-01	5.926E-02	2.194
		1238.11		4.922E-01	1.247E+00	2.103E+00	1.686E-01	0.234
		1377.67		1.513E+00	1.242E+00	2.327E+00	1.988E-01	0.650
	+	1764.49		1.397E+00	5.189E-01	3.985E-01	2.291E-02	3.506
AC-228	+	338.32		1.202E+00	6.465E-01	4.604E-01	1.884E-01	2.610
	+	911.07	*	1.723E+00	3.680E-01	2.708E-01	2.771E-02	6.363
	+	969.11		2.044E+00	6.658E-01	4.391E-01	1.001E-01	4.654
RA-228	+	338.32		1.202E+00	6.465E-01	4.604E-01	1.884E-01	2.610
	+	911.07	*	1.723E+00	3.680E-01	2.708E-01	2.771E-02	6.363
	+	969.11		2.044E+00	6.658E-01	4.391E-01	1.001E-01	4.654
TH-228	+	84.40		3.643E+00	2.696E+00	3.356E+00	4.310E-01	1.085
	+	238.60	*	1.656E+00	1.857E-01	9.656E-02	8.474E-03	17.145
	+	300.10		1.863E+00	1.489E+00	1.296E+00	7.658E-01	1.438
TH-230	+	609.31	*	1.188E+00	2.134E-01	1.399E-01	1.256E-02	8.489
		768.36		2.155E-01	1.017E+00	1.663E+00	1.606E-01	0.130
		934.06		2.530E+00	1.545E+00	2.910E+00	2.761E-01	0.869
	+	1120.29		1.456E+00	5.877E-01	6.637E-01	5.925E-02	2.194
		1238.11		4.922E-01	1.247E+00	2.103E+00	1.686E-01	0.234
		1377.67		1.513E+00	1.242E+00	2.327E+00	1.988E-01	0.650
	+	1764.49		1.397E+00	5.189E-01	3.985E-01	2.291E-02	3.506
TH-232	+	338.32		1.202E+00	4.275E-01	4.604E-01	3.144E-02	2.610
	+	911.07	*	1.723E+00	3.680E-01	2.708E-01	2.771E-02	6.363
	+	969.11		2.044E+00	6.658E-01	4.391E-01	1.001E-01	4.654

Sample ID : G232746007 Acquisition date : 14-JUL-2009 10:27:26

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-234	+	63.29	*	9.689E-01	9.857E-01	1.191E+00	2.161E-01	0.813
	+	92.38		2.359E+00	7.743E-01	7.629E-01	1.371E-01	3.092
U-234	+	609.31	*	1.188E+00	2.134E-01	1.399E-01	1.256E-02	8.489
		768.36		2.155E-01	1.017E+00	1.663E+00	1.606E-01	0.130
		934.06		2.530E+00	1.545E+00	2.910E+00	2.761E-01	0.869
	+	1120.29		1.456E+00	5.877E-01	6.637E-01	5.925E-02	2.194
		1238.11		4.922E-01	1.247E+00	2.103E+00	1.686E-01	0.234
		1377.67		1.513E+00	1.242E+00	2.327E+00	1.988E-01	0.650
	+	1764.49		1.397E+00	5.189E-01	3.985E-01	2.291E-02	3.506
NP-237	+	86.50	*	1.029E+00	3.223E-01	3.235E-01	7.172E-02	3.180
		95.87		1.700E-01	1.048E+00	1.536E+00	3.788E-01	0.111
U-238	+	63.29	*	9.689E-01	9.857E-01	1.191E+00	2.161E-01	0.813
	+	92.38		2.359E+00	6.775E-01	7.629E-01	6.404E-02	3.092
AM-243	+	74.67	*	3.667E-01	6.416E-02	6.785E-02	5.756E-03	5.404
	+	86.72		3.858E+01	9.096E+00	1.214E+01	9.819E-01	3.178
		117.66		-8.196E-01	4.047E+00	6.606E+00	7.033E-01	-0.124
		142.18		-1.507E+01	1.986E+01	3.139E+01	2.976E+00	-0.480
ANH-511	+	511.00	*	4.548E-02	6.985E-02	6.884E-02	4.652E-03	0.661

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.338E-01	3.627E-01	5.786E-01	4.267E-02	-0.231
NA-22		1274.54	*	-3.462E-03	5.753E-02	9.311E-02	5.277E-03	-0.037
NA-24		1368.53	*	-1.393E-02	5.753E-02	Half-Life too short		
AL-26		1129.67		-1.094E+00	2.477E+00	3.895E+00	2.302E-01	-0.281
		1808.65	*	-1.575E-02	3.225E-02	4.597E-02	2.628E-03	-0.343
TI-44		67.85		4.608E-03	4.026E-02	5.042E-02	4.409E-03	0.091
	+	78.38	*	3.534E-01	4.619E-02	7.423E-02	6.201E-03	4.761
SC-46		889.25	*	6.034E-02	5.359E-02	9.797E-02	7.180E-03	0.616
	+	1120.51		2.489E-01	9.910E-02	1.679E-01	1.005E-02	1.482
V-48		944.10		9.114E-01	1.228E+00	2.175E+00	1.548E-01	0.419
		983.50	*	-3.829E-02	1.075E-01	1.446E-01	1.001E-02	-0.265
		1312.09		-7.883E-02	1.053E-01	1.539E-01	8.759E-03	-0.512
CR-51		320.08	*	-6.459E-02	4.140E-01	6.880E-01	5.247E-02	-0.094
MN-52		744.21		2.616E-01	3.227E-01	5.566E-01	4.241E-02	0.470
		848.13		-2.223E+00	8.629E+00	1.406E+01	1.050E+00	-0.158
		935.52		4.919E-01	3.408E-01	6.351E-01	4.542E-02	0.775
		1246.25		-6.783E-01	9.288E+00	1.504E+01	8.455E-01	-0.045
		1333.61		6.394E-01	5.992E+00	9.888E+00	5.647E-01	0.065
		1434.06	*	6.044E-02	3.383E-01	5.608E-01	3.241E-02	0.108
MN-54		834.83	*	-1.191E-02	5.163E-02	8.468E-02	6.353E-03	-0.141
CO-56		846.75	*	2.500E-02	4.924E-02	8.618E-02	6.439E-03	0.290
		977.42		2.680E+00	3.864E+00	6.836E+00	4.754E-01	0.392
		1037.82		-8.785E-02	4.339E-01	7.020E-01	5.048E-02	-0.125
		1175.09		8.844E-01	3.275E+00	5.497E+00	3.036E-01	0.161
		1238.25		4.643E-02	1.267E-01	2.133E-01	1.277E-02	0.218
		1360.21		9.311E-01	1.345E+00	2.384E+00	1.367E-01	0.391

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1771.40		-6.341E-01	3.307E-01	2.916E-01	1.675E-02	-2.175
CO-57		122.06	*	-2.633E-03	2.695E-02	4.313E-02	4.785E-03	-0.061
		136.48		-3.654E-02	2.340E-01	3.810E-01	4.008E-02	-0.096
CO-58		810.76	*	-1.155E-02	5.647E-02	9.298E-02	7.046E-03	-0.124
FE-59		142.65		-6.979E-01	3.054E+00	4.950E+00	4.673E-01	-0.141
		192.34		1.020E-01	1.146E+00	1.724E+00	2.189E-01	0.059
		1099.22	*	4.447E-02	1.237E-01	2.108E-01	1.497E-02	0.211
		1291.56		9.388E-02	1.713E-01	2.957E-01	2.165E-02	0.317
CO-60		1173.22		6.608E-02	6.573E-02	1.171E-01	6.465E-03	0.564
		1332.49	*	5.370E-04	4.802E-02	7.816E-02	4.464E-03	0.007
ZN-65		1115.52	*	-1.362E-02	1.351E-01	1.878E-01	1.134E-02	-0.073
GE-68		1077.35	*	8.954E-01	1.631E+00	2.837E+00	1.795E-01	0.316
AS-73		53.44	*	4.261E-02	2.702E-01	4.492E-01	3.644E-02	0.095
AS-74		595.88	*	5.643E-02	1.202E-01	2.031E-01	1.475E-02	0.278
		634.78		3.502E-01	4.542E-01	7.866E-01	5.847E-02	0.445
SE-75		66.05		3.479E-01	3.327E+00	4.882E+00	5.176E-01	0.071
		96.73		-5.789E-01	8.581E-01	1.199E+00	1.644E-01	-0.483
		121.11		-9.785E-02	1.455E-01	2.260E-01	2.967E-02	-0.433
		136.00		-2.241E-02	4.602E-02	7.114E-02	7.146E-03	-0.315
		198.60		1.304E+00	2.115E+00	3.458E+00	2.951E-01	0.377
		264.65	*	-1.211E-03	5.159E-02	8.236E-02	6.213E-03	-0.015
		279.53		1.047E-01	1.492E-01	2.294E-01	1.790E-02	0.456
		303.91		-1.283E+00	2.546E+00	3.561E+00	3.733E-01	-0.360
		400.65		-5.040E-02	3.134E-01	5.150E-01	4.708E-02	-0.098
BR-77	+	87.88		7.304E+02	1.722E+02	3.122E+02	2.515E+01	2.340
		200.40		2.097E+01	1.789E+02	2.909E+02	2.173E+01	0.072
	+	239.00		2.522E+02	2.593E+01	4.004E+01	3.021E+00	6.298
		249.79		-9.129E+01	8.518E+01	1.080E+02	8.141E+00	-0.845
		281.68		9.258E+01	1.102E+02	1.716E+02	1.273E+01	0.540
		297.23		4.523E+02	9.753E+01	1.445E+02	1.056E+01	3.130
		303.76		-1.038E+02	2.058E+02	2.880E+02	2.088E+01	-0.360
		439.47		4.177E+01	1.698E+02	2.855E+02	1.772E+01	0.146
		484.57		-1.582E+02	2.544E+02	3.967E+02	2.605E+01	-0.399
		520.65	*	4.275E+00	1.188E+01	2.006E+01	1.369E+00	0.213
		574.64		-1.374E+02	2.659E+02	4.153E+02	2.970E+01	-0.331
		578.91		-3.342E+01	1.159E+02	1.574E+02	1.129E+01	-0.212
		585.48		1.612E+03	3.349E+02	6.090E+02	4.391E+01	2.647
		755.35		-1.825E+02	2.316E+02	3.440E+02	2.620E+01	-0.531
		817.79		-1.067E+02	1.627E+02	2.547E+02	1.921E+01	-0.419
SR-82		698.33		4.777E+01	4.841E+01	8.415E+01	6.390E+00	0.568
		776.49	*	-1.280E-02	5.089E-01	8.526E-01	6.482E-02	-0.015
		1395.20		-8.206E+00	1.435E+01	2.113E+01	1.216E+00	-0.388
RB-83		520.41	*	2.293E-02	8.554E-02	1.433E-01	9.777E-03	0.160
		529.64		1.197E-01	1.368E-01	2.387E-01	1.643E-02	0.501
		552.65		6.895E-03	2.601E-01	4.261E-01	2.994E-02	0.016
RB-84		881.50	*	-1.014E-02	8.419E-02	1.386E-01	1.020E-02	-0.073
KR-85		513.99	*	2.095E+01	1.114E+01	1.838E+01	1.246E+00	1.140
SR-85		513.99	*	1.072E-01	5.703E-02	9.408E-02	6.378E-03	1.140
RB-86		1076.63	*	3.765E-01	1.030E+00	1.761E+00	1.115E-01	0.214

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-88		898.02		1.164E-02	5.621E-02	9.541E-02	7.008E-03	0.122
		1836.01	*	5.141E-03	3.478E-02	5.977E-02	3.412E-03	0.086
ZR-88		392.90	*	-1.300E-02	3.872E-02	6.300E-02	3.646E-03	-0.206
Y-91		1204.90	*	-1.223E+01	2.443E+01	3.786E+01	2.107E+00	-0.323
NB-94		702.63	*	1.350E-03	4.779E-02	7.730E-02	5.873E-03	0.017
		871.10		2.647E-02	4.738E-02	8.292E-02	6.132E-03	0.319
NB-95		765.79	*	3.798E-03	6.251E-02	1.009E-01	7.676E-03	0.038
NB-95M		235.69	*	5.749E-03	1.520E-01	2.137E-01	1.910E-02	0.027
ZR-95		724.18		4.262E-02	1.530E-01	2.194E-01	1.854E-02	0.194
		756.15	*	-7.566E-02	1.049E-01	1.570E-01	1.349E-02	-0.482
NB-97		657.90	*	-9.395E-03	1.049E-01	Half-Life too short		
		1024.50		-5.014E+00	1.049E-01	Half-Life too short		
ZR-97		254.15		2.103E+00	1.049E-01	Half-Life too short		
		355.39		-1.301E-01	1.049E-01	Half-Life too short		
		507.63	*	1.046E+00	1.049E-01	Half-Life too short		
		602.52		5.880E+00	1.049E-01	Half-Life too short		
		1021.30		-1.257E+00	1.049E-01	Half-Life too short		
		1147.95		-1.408E+00	1.049E-01	Half-Life too short		
		1362.66		3.649E+00	1.049E-01	Half-Life too short		
		1750.46		1.623E-01	1.049E-01	Half-Life too short		
MO-99		140.51		-1.116E+01	2.802E+01	4.483E+01	1.256E+01	-0.249
		181.06		5.974E+00	2.010E+01	2.906E+01	5.155E+00	0.206
		366.43		-1.545E+01	9.169E+01	1.512E+02	9.582E+00	-0.102
		739.58	*	-7.295E+00	1.574E+01	2.415E+01	3.535E+00	-0.302
		778.00		-1.054E+00	4.399E+01	7.371E+01	5.603E+00	-0.014
TC-99M		140.51	*	-1.029E+10	4.399E+01	Half-Life too short		
RH-101		127.23		1.806E-02	3.956E-02	5.841E-02	6.246E-03	0.309
		198.01	*	1.051E-02	3.886E-02	6.263E-02	4.673E-03	0.168
		325.23		5.016E-02	2.812E-01	4.164E-01	2.919E-02	0.120
RH-102		418.52		7.582E-02	3.327E-01	5.603E-01	3.375E-02	0.135
		475.06	*	-5.570E-03	3.364E-02	5.468E-02	3.551E-03	-0.102
		631.29		7.326E-03	7.034E-02	1.153E-01	8.552E-03	0.064
		697.49		5.765E-02	1.094E-01	1.842E-01	1.398E-02	0.313
		766.84		6.412E-02	1.523E-01	2.532E-01	1.927E-02	0.253
		1046.59		-3.281E-02	1.614E-01	2.611E-01	1.708E-02	-0.126
		1112.84		1.866E-01	3.307E-01	5.061E-01	3.062E-02	0.369
RU-103		497.08	*	-2.558E-02	5.262E-02	8.296E-02	1.084E-02	-0.308
	+	610.33		1.279E+01	2.859E+00	3.614E+00	5.803E-01	3.538
RH-106	+	511.85		2.271E-01	3.488E-01	5.344E-01	3.615E-02	0.425
		621.84	*	1.478E-01	4.431E-01	7.390E-01	9.306E-02	0.200
		1050.47		2.319E-01	3.176E+00	5.278E+00	3.440E-01	0.044
RU-106	+	511.85		2.271E-01	3.488E-01	5.344E-01	3.615E-02	0.425
		621.84	*	1.478E-01	4.429E-01	7.390E-01	5.454E-02	0.200
		1050.47		2.319E-01	3.176E+00	5.278E+00	3.439E-01	0.044
AG-108M		433.93	*	-7.320E-03	3.997E-02	6.527E-02	4.326E-03	-0.112
		614.37		-3.071E-02	5.713E-02	7.464E-02	5.779E-03	-0.411
		722.95		-3.154E-02	6.562E-02	8.517E-02	6.808E-03	-0.370
AG-110M		657.75	*	-1.123E-02	5.041E-02	8.012E-02	6.258E-03	-0.140
		677.61		1.928E-01	3.651E-01	6.213E-01	4.870E-02	0.310

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		706.67		2.301E-01	2.548E-01	4.456E-01	3.507E-02	0.516
		763.93		-1.772E-01	2.532E-01	3.818E-01	3.011E-02	-0.464
		884.67		-7.108E-02	6.513E-02	9.598E-02	7.362E-03	-0.741
		937.48		-2.846E-02	1.516E-01	2.474E-01	1.860E-02	-0.115
		1384.27		-1.603E-01	2.045E-01	2.887E-01	1.764E-02	-0.555
IN-111		171.28		-7.934E-01	1.055E+00	1.651E+00	1.211E-01	-0.481
		245.39	*	-3.802E-01	1.128E+00	1.772E+00	1.336E-01	-0.215
IN-113M		391.69	*	2.562E-03	5.619E-02	9.368E-02	5.776E-03	0.027
SN-113		391.69	*	2.562E-03	5.619E-02	9.368E-02	5.776E-03	0.027
IN-114M		190.27	*	-6.727E-03	2.354E-01	3.328E-01	2.472E-02	-0.020
CD-115		260.90		-1.368E+02	1.446E+02	2.174E+02	1.633E+01	-0.629
		492.35		2.983E+01	4.311E+01	7.451E+01	4.937E+00	0.400
		527.90	*	3.528E+00	1.305E+01	2.185E+01	1.501E+00	0.161
SN-117M		156.02		3.847E-01	2.492E+00	4.093E+00	3.379E-01	0.094
		158.56	*	-2.936E-02	6.163E-02	9.830E-02	7.881E-03	-0.299
SB-122		563.90	*	3.065E+00	2.624E+00	4.651E+00	3.298E-01	0.659
		692.80		1.270E+01	5.437E+01	8.966E+01	6.801E+00	0.142
I-123		159.00	*	-3.204E+00	5.437E+01	Half-Life too short		
		528.96		3.243E+02	5.437E+01	Half-Life too short		
TE-123M		159.00	*	-1.989E-02	3.237E-02	5.128E-02	4.119E-03	-0.388
I-124		602.71	*	3.826E-01	9.769E-01	1.495E+00	1.091E-01	0.256
		722.78		-3.499E+00	6.630E+00	8.542E+00	6.503E-01	-0.410
		1325.50		2.368E+01	4.220E+01	7.378E+01	4.208E+00	0.321
		1376.25		3.513E+01	3.906E+01	7.062E+01	4.057E+00	0.497
		1509.49		1.206E+01	1.916E+01	3.404E+01	1.977E+00	0.354
		1691.02		3.544E+00	4.388E+00	8.442E+00	4.886E-01	0.420
SB-124		602.71		2.287E-02	5.839E-02	8.936E-02	6.520E-03	0.256
		645.85		1.339E-01	6.605E-01	1.090E+00	8.795E-02	0.123
		709.31		-1.606E+00	3.345E+00	5.119E+00	3.892E-01	-0.314
		713.82		3.960E-01	1.955E+00	3.217E+00	3.647E-01	0.123
		722.78		-3.032E-01	5.745E-01	7.401E-01	5.790E-02	-0.410
	+	968.20		2.099E+01	5.105E+00	9.482E+00	6.640E-01	2.214
		1045.16		1.402E+00	3.376E+00	5.797E+00	3.799E-01	0.242
		1325.50		2.191E+00	3.905E+00	6.827E+00	3.894E-01	0.321
		1368.21		-5.051E-01	2.201E+00	3.440E+00	4.074E-01	-0.147
		1436.60		-6.643E-01	4.936E+00	7.808E+00	4.513E-01	-0.085
		1691.02	*	7.243E-02	8.970E-02	1.725E-01	1.084E-02	0.420
SB-125		427.89	*	9.058E-02	1.158E-01	2.014E-01	1.277E-02	0.450
	+	463.38		4.956E-01	5.211E-01	6.374E-01	4.645E-02	0.777
		600.56		1.703E-03	2.514E-01	4.094E-01	3.286E-02	0.004
		635.90		2.668E-01	3.458E-01	5.989E-01	4.932E-02	0.445
TE-125M		109.28	*	-1.088E+01	9.939E+00	1.557E+01	1.770E+00	-0.699
I-126		388.63		1.505E-01	2.576E-01	4.431E-01	2.592E-02	0.340
		666.33	*	-1.808E-01	2.352E-01	3.527E-01	2.660E-02	-0.513
		753.82		-2.918E-01	2.102E+00	3.335E+00	2.540E-01	-0.087
SB-126		223.80		-4.818E+00	4.678E+00	7.100E+00	5.348E-01	-0.679
	+	278.60		3.230E+00	3.006E+00	5.154E+00	3.832E-01	0.627
	+	296.50		1.281E+01	2.860E+00	4.213E+00	3.081E-01	3.042
		414.70		-4.848E-02	1.058E-01	1.454E-01	8.707E-03	-0.333

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.30		-3.269E+00	8.608E+00	1.191E+01	7.141E-01	-0.274
		555.20		5.256E+00	5.276E+00	9.263E+00	6.523E-01	0.567
		573.80		1.728E-01	1.388E+00	2.286E+00	1.634E-01	0.076
		593.00		-9.671E-01	1.207E+00	1.824E+00	1.322E-01	-0.530
		656.30		-4.149E+00	4.857E+00	7.283E+00	5.472E-01	-0.570
		666.33		-7.554E-02	9.825E-02	1.473E-01	1.111E-02	-0.513
		675.00		-1.173E+00	2.542E+00	3.924E+00	2.965E-01	-0.299
		695.00		-5.299E-02	1.105E-01	1.709E-01	1.297E-02	-0.310
		697.00		-8.381E-02	3.906E-01	6.192E-01	4.701E-02	-0.135
		720.50	*	-6.075E-02	2.338E-01	3.136E-01	2.387E-02	-0.194
		856.80		-2.639E-01	6.402E-01	1.030E+00	7.662E-02	-0.256
		989.30		-5.435E-02	1.752E+00	2.892E+00	1.993E-01	-0.019
		1034.80		-2.341E-02	1.241E+01	2.050E+01	1.357E+00	-0.001
		1213.00		-5.772E+00	6.303E+00	9.340E+00	5.209E-01	-0.618
SB-127		61.10		4.397E+00	3.227E+01	4.790E+01	5.476E+00	0.092
		252.40		-4.539E-01	5.671E+00	7.866E+00	3.289E+00	-0.058
		290.80		-9.654E-01	2.566E+01	3.754E+01	3.813E+00	-0.026
		411.60		1.467E+01	1.635E+01	2.530E+01	3.643E+00	0.580
		444.90		-3.544E-01	1.233E+01	2.035E+01	2.235E+00	-0.017
		473.00		-4.345E-01	1.919E+00	3.105E+00	3.567E-01	-0.140
		543.00		-2.358E+00	2.073E+01	3.360E+01	4.511E+00	-0.070
		603.60		3.737E+00	1.722E+01	2.479E+01	2.872E+00	0.151
		685.20	*	2.681E+00	1.705E+00	3.109E+00	3.283E-01	0.862
		698.50		1.986E+01	2.107E+01	3.626E+01	5.527E+00	0.548
		722.20		-3.412E+00	4.448E+01	6.112E+01	6.323E+00	-0.056
		783.80		7.014E+00	4.832E+00	8.896E+00	1.039E+00	0.789
XE-127		57.60		2.910E-01	2.623E+00	4.417E+00	3.886E-01	0.066
		145.22		9.141E-01	7.653E-01	1.306E+00	1.205E-01	0.700
		172.10		-7.123E-02	1.303E-01	2.062E-01	1.513E-02	-0.346
		202.84	*	-3.040E-02	5.768E-02	8.328E-02	6.229E-03	-0.365
		374.96		1.131E-01	2.373E-01	4.069E-01	2.507E-02	0.278
I-131		80.18		3.508E-01	5.711E+00	6.089E+00	5.084E-01	0.058
°		284.30		-1.894E-01	1.728E+00	2.897E+00	2.294E-01	-0.065
		364.48	*	-4.337E-02	1.343E-01	2.194E-01	1.534E-02	-0.198
		636.97		-4.789E-01	1.979E+00	3.139E+00	2.509E-01	-0.153
		722.89		-5.509E+00	1.086E+01	1.404E+01	1.077E+00	-0.392
TE-132		49.72		-1.068E+01	4.674E+00	7.060E+00	7.015E-01	-1.513
		111.76		-1.379E+01	3.073E+01	4.973E+01	5.968E+00	-0.277
		116.30		2.782E+01	2.888E+01	4.904E+01	6.066E+00	0.567
		228.16	*	3.411E-01	7.932E-01	1.301E+00	1.966E-01	0.262
BA-133		53.15		2.116E-01	1.139E+00	1.895E+00	1.529E-01	0.112
		79.62		2.330E+00	1.699E+00	1.947E+00	2.931E-01	1.197
		81.00		-2.064E-03	1.250E-01	1.324E-01	2.077E-02	-0.016
	+	276.40		4.877E-01	4.574E-01	7.812E-01	1.076E-01	0.624
		302.84		6.135E-03	1.748E-01	2.568E-01	3.196E-02	0.024
		356.01	*	-4.021E-02	6.288E-02	8.610E-02	1.029E-02	-0.467
		383.85		-2.691E-01	3.930E-01	6.251E-01	6.851E-02	-0.431
I-133	+	510.53		4.002E-01	3.930E-01	Half-Life too short		
		529.87	*	5.818E-03	3.930E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		706.58		4.044E-01	3.930E-01	Half-Life too short		
		856.28		-1.021E-01	3.930E-01	Half-Life too short		
		875.33		-3.241E-02	3.930E-01	Half-Life too short		
		1236.41		6.596E-01	3.930E-01	Half-Life too short		
		1298.22		-2.764E-02	3.930E-01	Half-Life too short		
CS-134		475.35		-2.082E-01	2.212E+00	3.616E+00	2.349E-01	-0.058
		563.23		2.807E-01	4.797E-01	8.181E-01	5.880E-02	0.343
		569.32		-9.749E-02	2.850E-01	4.550E-01	3.305E-02	-0.214
		604.70		-4.298E-02	5.517E-02	7.067E-02	5.180E-03	-0.608
		795.84	*	2.656E-02	6.398E-02	1.108E-01	8.472E-03	0.240
		801.93		-1.976E-01	5.625E-01	9.173E-01	6.994E-02	-0.215
		1038.57		9.466E-02	5.480E+00	9.064E+00	5.979E-01	0.010
		1167.94		-2.429E+00	3.694E+00	5.675E+00	3.160E-01	-0.428
		1365.15		-9.500E-01	1.568E+00	2.295E+00	1.448E-01	-0.414
CS-135		268.24	*	6.533E-02	1.887E-01	3.072E-01	2.765E-02	0.213
I-135		288.45		-1.591E+10	1.887E-01	Half-Life too short		
		417.63		5.419E+09	1.887E-01	Half-Life too short		
		546.56		1.177E+10	1.887E-01	Half-Life too short		
		836.80		6.831E+09	1.887E-01	Half-Life too short		
		1038.76		6.249E+09	1.887E-01	Half-Life too short		
		1124.00		-3.428E+09	1.887E-01	Half-Life too short		
		1131.51		2.252E+09	1.887E-01	Half-Life too short		
		1260.41	*	3.554E+09	1.887E-01	Half-Life too short		
		1457.56		5.084E+11	1.887E-01	Half-Life too short		
		1678.03		5.923E+08	1.887E-01	Half-Life too short		
		1706.46		4.527E+09	1.887E-01	Half-Life too short		
		1791.20		-3.598E+09	1.887E-01	Half-Life too short		
CS-136		66.91		2.433E-01	5.555E-01	8.243E-01	1.280E-01	0.295
	+	86.29		4.528E+00	1.152E+00	1.948E+00	2.437E-01	2.325
		153.22		5.514E-01	7.097E-01	1.195E+00	1.140E-01	0.461
		163.89		2.840E-01	1.233E+00	2.027E+00	1.759E-01	0.140
		176.55		-3.062E-01	4.063E-01	6.349E-01	5.041E-02	-0.482
		273.65		-9.472E-01	6.698E-01	8.239E-01	6.682E-02	-1.150
		340.57		5.043E-01	1.913E-01	3.212E-01	2.283E-02	1.570
		818.51		-7.324E-02	9.712E-02	1.507E-01	1.137E-02	-0.486
		1048.07	*	-9.514E-04	1.476E-01	2.434E-01	1.706E-02	-0.004
		1235.34		2.995E-01	8.232E-01	1.386E+00	1.368E-01	0.216
BA-137M		661.65	*	4.087E-02	4.848E-02	8.388E-02	6.317E-03	0.487
CS-137		661.65	*	4.320E-02	5.125E-02	8.867E-02	6.694E-03	0.487
CE-139		165.85	*	1.118E-02	3.460E-02	5.712E-02	4.177E-03	0.196
BA-140		162.64		1.291E-01	8.539E-01	1.400E+00	1.147E-01	0.092
		304.84		-2.373E-01	1.558E+00	2.249E+00	6.215E-01	-0.106
		423.70		-1.999E-01	2.249E+00	3.701E+00	1.178E+00	-0.054
		537.32	*	-1.751E-01	3.395E-01	5.245E-01	1.717E-01	-0.334
LA-140	+	328.77		5.564E-01	4.408E-01	6.432E-01	4.859E-02	0.865
		432.53		-7.947E-01	2.513E+00	4.064E+00	2.732E-01	-0.196
		487.03		1.341E-02	1.632E-01	2.703E-01	1.965E-02	0.050
		751.79		3.558E-01	2.411E+00	3.927E+00	3.396E-01	0.091
		815.85		-1.030E-01	4.223E-01	6.911E-01	5.986E-02	-0.149

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		867.82		3.949E-01	1.854E+00	3.154E+00	2.502E-01	0.125
		919.63		1.684E-01	3.503E+00	5.855E+00	5.590E-01	0.029
		925.24		3.242E-01	1.398E+00	2.380E+00	1.865E-01	0.136
		1596.49	*	-6.107E-02	9.719E-02	1.428E-01	8.301E-03	-0.428
CE-141		145.44	*	8.847E-02	6.925E-02	1.185E-01	1.108E-02	0.747
CE-143		57.37		-1.648E-06	6.925E-02	Half-Life too short		
		231.56		-2.920E-04	6.925E-02	Half-Life too short		
		293.26	*	7.401E-04	6.925E-02	Half-Life too short		
	+	350.59		2.581E-02	6.925E-02	Half-Life too short		
		490.36		1.781E-03	6.925E-02	Half-Life too short		
		664.57		-1.747E-03	6.925E-02	Half-Life too short		
		721.93		4.377E-05	6.925E-02	Half-Life too short		
CE-144		80.11		2.109E-01	2.668E+00	2.848E+00	2.363E-01	0.074
		133.54	*	1.238E-01	2.537E-01	3.740E-01	6.168E-02	0.331
PM-144		476.78		-1.384E-02	7.570E-02	1.228E-01	9.262E-03	-0.113
		618.01		2.129E-02	4.279E-02	7.238E-02	5.531E-03	0.294
		696.49	*	-3.189E-02	5.043E-02	7.697E-02	5.845E-03	-0.414
		778.57		-1.104E+00	3.120E+00	5.080E+00	3.862E-01	-0.217
PR-144		696.49	*	-2.161E+00	3.417E+00	5.215E+00	3.959E-01	-0.414
		1489.15		-1.257E+00	1.445E+01	2.291E+01	1.329E+00	-0.055
PM-146		453.90	*	1.120E-02	5.248E-02	8.801E-02	7.907E-03	0.127
		633.02		-1.232E+00	1.895E+00	2.800E+00	1.039E+00	-0.440
		735.90		2.305E-02	2.027E-01	3.109E-01	8.804E-02	0.074
		747.13		-7.593E-02	1.354E-01	2.058E-01	2.768E-02	-0.369
ND-147	+	91.11		6.570E-01	2.503E-01	5.016E-01	4.530E-02	1.310
		319.41		-5.390E-01	3.668E+00	6.100E+00	4.322E-01	-0.088
		439.89		3.496E+00	7.229E+00	1.234E+01	7.667E-01	0.283
		531.02	*	2.254E-01	7.496E-01	1.255E+00	1.760E-01	0.180
PM-149		285.90	*	-2.434E+01	9.845E+01	1.636E+02	2.438E+01	-0.149
EU-152		121.78		-6.691E-03	7.822E-02	1.253E-01	1.517E-02	-0.053
		244.69		1.951E-01	3.774E-01	6.220E-01	4.690E-02	0.314
		344.27	*	-7.606E-02	1.298E-01	1.886E-01	1.392E-02	-0.403
		443.98		-5.910E-01	1.237E+00	1.976E+00	1.234E-01	-0.299
		778.89		-2.172E-01	3.679E-01	5.866E-01	4.458E-02	-0.370
		867.32		-1.741E-01	1.095E+00	1.800E+00	1.333E-01	-0.097
	+	964.01		8.178E-01	3.530E-01	7.185E-01	5.046E-02	1.138
		1085.78		2.131E-01	5.644E-01	9.596E-01	6.009E-02	0.222
		1112.02		4.157E-01	4.333E-01	7.214E-01	4.369E-02	0.576
		1407.95		1.459E-01	2.058E-01	3.718E-01	2.144E-02	0.392
GD-153		69.67		-1.682E-01	1.272E+00	1.860E+00	1.613E-01	-0.090
	+	83.37		2.091E+01	1.534E+01	2.206E+01	1.807E+00	0.948
		97.43	*	-3.642E-03	8.641E-02	1.247E-01	1.098E-02	-0.029
		103.18		-1.289E-01	1.095E-01	1.716E-01	1.595E-02	-0.751
EU-154		123.07		7.572E-03	5.542E-02	8.862E-02	1.176E-02	0.085
		247.94		2.584E-02	4.449E-01	6.251E-01	6.680E-02	0.041
		591.81		-7.534E-01	8.122E-01	1.207E+00	1.291E-01	-0.624
		723.30		-9.162E-02	2.772E-01	3.679E-01	3.175E-02	-0.249
		756.87		-1.133E+00	1.176E+00	1.712E+00	1.930E-01	-0.662
		873.19		9.201E-02	4.149E-01	7.057E-01	8.053E-02	0.130

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		996.32		-4.199E-01	4.849E-01	7.195E-01	1.222E-01	-0.584
		1004.76		5.320E-02	2.803E-01	4.724E-01	4.898E-02	0.113
		1274.45	*	-9.671E-03	1.607E-01	2.601E-01	2.406E-02	-0.037
EU-155		48.70		1.849E-01	5.256E-01	8.949E-01	6.559E-02	0.207
		60.01		1.130E+00	2.731E+00	4.102E+00	3.727E-01	0.276
	+	86.54		4.219E-01	9.961E-02	1.793E-01	1.468E-02	2.352
		105.31	*	1.601E-01	1.132E-01	1.953E-01	1.871E-02	0.820
TB-160	+	86.79		1.125E+00	2.653E-01	4.758E-01	3.848E-02	2.365
		197.04		1.928E-01	6.447E-01	1.057E+00	7.886E-02	0.182
		215.65		2.082E-01	9.345E-01	1.410E+00	1.060E-01	0.148
		298.57		3.033E-01	1.820E-01	2.257E-01	1.647E-02	1.344
		879.36	*	1.087E-02	1.714E-01	2.876E-01	2.119E-02	0.038
		962.29		8.911E-01	8.027E-01	1.300E+00	9.142E-02	0.685
		966.15		1.526E+00	3.583E-01	7.184E-01	5.038E-02	2.125
		1177.93		-2.723E-01	5.285E-01	8.234E-01	4.550E-02	-0.331
		1271.85		5.404E-01	8.900E-01	1.554E+00	8.782E-02	0.348
HO-166M		80.57		-1.055E-02	3.433E-01	3.632E-01	3.008E-02	-0.029
		184.41		1.306E-01	4.499E-02	7.285E-02	5.392E-03	1.793
		280.46		5.470E-02	1.121E-01	1.704E-01	1.265E-02	0.321
		410.95		2.793E-01	3.530E-01	5.433E-01	3.235E-02	0.514
		711.68	*	-1.148E-01	7.609E-02	1.016E-01	7.728E-03	-1.129
		752.31		1.724E-01	3.835E-01	6.416E-01	4.887E-02	0.269
		810.29		-1.384E-02	8.486E-02	1.402E-01	1.059E-02	-0.099
TM-171		51.35		-1.977E+00	8.208E+00	1.369E+01	1.064E+00	-0.144
		52.39		1.192E-01	4.596E+00	7.734E+00	6.141E-01	0.015
		59.40		1.603E+01	1.397E+01	2.154E+01	1.959E+00	0.744
		66.72	*	1.215E+01	2.008E+01	3.002E+01	2.640E+00	0.405
LU-176	+	88.36		8.309E-01	1.959E-01	3.658E-01	2.956E-02	2.271
		201.83		-1.089E-02	3.263E-02	5.187E-02	3.877E-03	-0.210
		306.84	*	1.078E-02	2.792E-02	4.679E-02	3.378E-03	0.230
		401.10		1.006E+00	8.319E+00	1.392E+01	8.164E-01	0.072
LU-177		112.95		-7.596E-01	1.734E+00	2.808E+00	2.861E-01	-0.271
	+	208.36	*	3.553E+00	1.769E+00	2.168E+00	1.625E-01	1.639
LU-177M		52.97		-5.692E-02	5.112E-01	8.423E-01	6.769E-02	-0.068
		54.07		-1.400E-01	2.948E-01	4.795E-01	3.940E-02	-0.292
		61.30		2.009E-01	8.701E-01	1.296E+00	1.170E-01	0.155
		121.62		-4.976E-02	4.000E-01	6.394E-01	7.060E-02	-0.078
		147.16		-4.178E-01	7.157E-01	1.139E+00	1.031E-01	-0.367
		171.86		-3.572E-01	5.236E-01	8.220E-01	6.031E-02	-0.435
		218.09		1.024E-01	9.819E-01	1.591E+00	1.197E-01	0.064
		268.79		1.227E+00	9.353E-01	1.596E+00	1.194E-01	0.769
		319.02		-1.727E-02	2.906E-01	4.858E-01	3.443E-02	-0.036
		367.43		-5.395E-01	1.022E+00	1.643E+00	1.038E-01	-0.328
		413.65	*	-9.916E-02	2.538E-01	3.517E-01	2.103E-02	-0.282
HF-181		56.28		-1.745E-01	3.766E-01	6.224E-01	5.340E-02	-0.280
		57.53		1.740E-02	2.198E-01	3.697E-01	3.249E-02	0.047
		65.20		2.870E-01	6.727E-01	9.999E-01	8.855E-02	0.287
		133.02		4.866E-02	8.052E-02	1.197E-01	1.225E-02	0.407
		136.25		-1.090E-01	5.101E-01	8.285E-01	8.263E-02	-0.132

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		345.85		-2.441E-01	2.585E-01	3.643E-01	2.445E-02	-0.670
		482.03	*	-1.154E-02	4.803E-02	7.746E-02	5.072E-03	-0.149
W-181		56.28		-6.804E-02	1.477E-01	2.442E-01	2.095E-02	-0.279
		57.53		6.747E-03	8.627E-02	1.451E-01	1.275E-02	0.046
		65.20	*	1.118E-01	2.619E-01	3.893E-01	3.448E-02	0.287
TA-182		67.75		-7.959E-03	8.810E-02	1.198E-01	1.049E-02	-0.066
		100.10		2.772E-02	1.832E-01	2.920E-01	2.637E-02	0.095
		152.43		1.215E-01	3.668E-01	6.075E-01	5.215E-02	0.200
		222.10		-2.545E-01	3.933E-01	6.108E-01	4.600E-02	-0.417
		1001.68		-6.764E-01	2.570E+00	4.135E+00	2.821E-01	-0.164
	+	1121.28		6.876E-01	2.738E-01	4.564E-01	2.730E-02	1.506
		1189.05		3.959E-01	4.208E-01	7.489E-01	4.151E-02	0.529
		1221.42	*	1.765E-01	2.730E-01	4.721E-01	2.638E-02	0.374
		1230.97		-1.701E-03	6.545E-01	1.069E+00	5.987E-02	-0.002
RE-183		57.98		4.719E-02	9.069E-02	1.496E-01	1.326E-02	0.315
		59.32		6.370E-02	5.708E-02	8.793E-02	7.985E-03	0.724
		67.20		5.816E-02	1.443E-01	2.141E-01	1.878E-02	0.272
		162.32	*	2.242E-02	1.259E-01	2.068E-01	1.583E-02	0.108
	+	208.81		3.249E+00	1.618E+00	2.008E+00	1.505E-01	1.618
		291.72		-8.126E-01	1.188E+00	1.647E+00	1.211E-01	-0.493
RE-184		57.98		1.741E-01	3.345E-01	5.519E-01	4.890E-02	0.315
		59.32		2.348E-01	2.104E-01	3.241E-01	2.943E-02	0.724
		67.20		2.145E-01	5.321E-01	7.896E-01	6.927E-02	0.272
		161.27		1.082E-01	4.030E-01	6.644E-01	5.155E-02	0.163
		216.55		-5.240E-02	3.128E-01	4.999E-01	3.759E-02	-0.105
		252.85	*	-7.083E-02	3.050E-01	4.434E-01	3.339E-02	-0.160
		318.01		-2.066E-01	5.072E-01	8.303E-01	5.895E-02	-0.249
		792.07		3.378E-01	1.312E+00	2.248E+00	1.705E-01	0.150
		903.28		1.037E+00	1.508E+00	2.498E+00	1.818E-01	0.415
		920.93		-1.769E-02	5.884E-01	9.756E-01	7.036E-02	-0.018
OS-185		59.72		1.663E-01	1.570E-01	2.413E-01	2.196E-02	0.689
		61.14		1.473E-02	9.490E-02	1.410E-01	1.274E-02	0.104
		69.30		7.651E-02	2.400E-01	3.341E-01	2.903E-02	0.229
		592.07		-3.467E+00	3.342E+00	4.931E+00	3.571E-01	-0.703
		646.12	*	2.288E-02	5.635E-02	9.462E-02	7.075E-03	0.242
		717.42		8.305E-01	1.222E+00	2.087E+00	1.588E-01	0.398
		874.81		-7.641E-02	7.887E-01	1.303E+00	9.623E-02	-0.059
		880.27		1.072E-01	9.506E-01	1.604E+00	1.181E-01	0.067
RE-188		155.03	*	6.348E-02	1.898E-01	3.142E-01	2.622E-02	0.202
		477.96		-6.933E-01	3.479E+00	5.634E+00	3.671E-01	-0.123
		633.10		-2.562E+00	3.708E+00	5.628E+00	4.180E-01	-0.455
W-188	+	63.58		3.887E+01	3.907E+01	5.436E+01	4.852E+00	0.715
		227.08		2.478E+01	1.486E+01	2.572E+01	1.939E+00	0.964
		290.67	*	-2.824E-01	9.166E+00	1.342E+01	9.872E-01	-0.021
IR-192	+	295.96		9.897E-01	2.211E-01	3.280E-01	2.424E-02	3.017
		308.46		5.154E-02	1.069E-01	1.844E-01	1.338E-02	0.280
		316.51	*	7.658E-03	3.886E-02	6.595E-02	4.709E-03	0.116
		468.07		-1.099E-02	9.016E-02	1.271E-01	9.210E-03	-0.087
		604.41		-2.617E-01	7.096E-01	9.543E-01	1.163E-01	-0.274

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		612.46		1.786E+00	1.082E+00	1.770E+00	1.559E-01	1.009
AU-195		65.12		7.502E-02	1.218E-01	1.821E-01	1.614E-02	0.412
		66.83		2.958E-02	6.708E-02	9.970E-02	8.761E-03	0.297
	+	75.70		1.186E+00	2.075E-01	3.975E-01	3.357E-02	2.983
		98.88	*	1.967E-01	2.479E-01	3.726E-01	3.327E-02	0.528
	+	129.76		5.238E+00	4.938E+00	5.556E+00	5.831E-01	0.943
TL-200		367.94	*	-1.005E-04	4.938E+00	Half-Life too short		
		579.30		-9.750E-05	4.938E+00	Half-Life too short		
		828.27		2.413E-04	4.938E+00	Half-Life too short		
		1205.75		9.093E-04	4.938E+00	Half-Life too short		
TL-201		68.90		1.562E+00	4.041E+00	5.135E+00	4.469E-01	0.304
		70.82		-1.133E+00	2.097E+00	3.012E+00	2.598E-01	-0.376
		80.30		1.930E-01	6.073E+00	6.459E+00	5.355E-01	0.030
		135.34		-1.135E+01	2.959E+01	4.397E+01	4.418E+00	-0.258
		167.43	*	8.966E+00	7.602E+00	1.297E+01	9.488E-01	0.691
TL-202		68.90		1.449E-01	3.749E-01	4.764E-01	4.146E-02	0.304
		70.82		-1.048E-01	1.940E-01	2.786E-01	2.404E-02	-0.376
		80.30		1.786E-02	5.620E-01	5.977E-01	4.955E-02	0.030
		439.56	*	1.480E-02	8.658E-02	1.448E-01	8.989E-03	0.102
BI-207		72.80		3.311E-01	1.518E-01	2.377E-01	2.033E-02	1.393
	+	74.97		6.581E-01	1.152E-01	1.852E-01	1.569E-02	3.555
	+	84.90		2.706E-01	1.985E-01	2.923E-01	2.381E-02	0.926
		569.67		-5.089E-03	4.398E-02	7.144E-02	5.090E-03	-0.071
		1063.62	*	9.621E-04	7.333E-02	1.211E-01	7.778E-03	0.008
		1770.23		5.698E-02	4.767E-01	7.100E-01	4.079E-02	0.080
TL-207		81.07		-4.983E-03	2.762E-01	2.924E-01	2.417E-02	-0.017
	+	83.78		1.784E-01	1.309E-01	1.877E-01	1.535E-02	0.951
		94.90		8.776E-01	2.702E-01	4.339E-01	3.730E-02	2.023
		122.32		-1.104E-01	1.865E+00	2.990E+00	3.460E-01	-0.037
		144.24		8.181E-01	7.537E-01	1.281E+00	1.314E-01	0.639
		154.21		3.334E-01	4.385E-01	7.375E-01	6.858E-02	0.452
		269.46		3.108E-01	2.217E-01	3.795E-01	2.916E-02	0.819
		323.87	*	1.752E-01	8.207E-01	1.219E+00	2.070E-01	0.144
	+	338.28		5.019E+00	1.839E+00	2.799E+00	3.116E-01	1.793
		445.03		4.482E-01	2.951E+00	4.927E+00	5.188E-01	0.091
PO-209		260.50		-1.073E+01	1.155E+01	1.741E+01	1.308E+00	-0.616
		262.80		-1.745E+00	3.118E+01	4.969E+01	3.729E+00	-0.035
		896.60	*	1.282E+00	1.004E+01	1.692E+01	1.235E+00	0.076
BI-210		46.50	*	-2.998E-02	6.198E-01	1.089E+00	8.717E-02	-0.028
PB-210		46.50	*	-2.998E-02	6.198E-01	1.089E+00	8.717E-02	-0.028
PO-210		46.50	*	-2.998E-02	6.198E-01	1.089E+00	7.580E-02	-0.028
PB-211		404.84	*	1.033E+00	1.409E+00	1.947E+00	1.214E+00	0.531
		427.08		1.843E+00	2.818E+00	4.469E+00	2.764E+00	0.412
		831.96		8.074E-01	1.762E+00	2.935E+00	1.835E+00	0.275
BI-212	+	727.18	*	1.073E+00	6.814E-01	8.100E-01	7.417E-02	1.324
		785.46		1.416E+00	2.496E+00	4.366E+00	3.315E-01	0.324
		1620.62		2.520E+00	1.768E+00	3.524E+00	2.046E-01	0.715
PO-215		81.07		-4.983E-03	2.762E-01	2.924E-01	2.417E-02	-0.017
	+	83.78		1.784E-01	1.309E-01	1.877E-01	1.535E-02	0.951

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		8.776E-01	2.702E-01	4.339E-01	3.730E-02	2.023
		122.32		-1.104E-01	1.865E+00	2.990E+00	3.460E-01	-0.037
		144.24		8.181E-01	7.537E-01	1.281E+00	1.314E-01	0.639
		154.21		3.334E-01	4.385E-01	7.375E-01	6.858E-02	0.452
		269.46		3.108E-01	2.217E-01	3.795E-01	2.916E-02	0.819
		323.87	*	1.752E-01	8.207E-01	1.219E+00	2.070E-01	0.144
	+	338.28		5.019E+00	1.839E+00	2.799E+00	3.116E-01	1.793
		445.03		4.482E-01	2.951E+00	4.927E+00	5.188E-01	0.091
RN-219		271.23		1.275E-01	2.937E-01	4.798E-01	4.497E-02	0.266
		401.81	*	4.187E-02	5.116E-01	8.540E-01	1.164E-01	0.049
RN-220		549.76	*	-2.857E+01	3.389E+01	5.136E+01	3.600E+00	-0.556
RA-223		81.07		-4.983E-03	2.762E-01	2.924E-01	2.417E-02	-0.017
	+	83.78		1.784E-01	1.309E-01	1.877E-01	1.535E-02	0.951
		94.90		8.776E-01	2.702E-01	4.339E-01	3.730E-02	2.023
		122.32		-1.104E-01	1.865E+00	2.990E+00	3.460E-01	-0.037
		144.24		8.181E-01	7.537E-01	1.281E+00	1.314E-01	0.639
		154.21		3.334E-01	4.385E-01	7.375E-01	6.858E-02	0.452
		269.46		3.108E-01	2.217E-01	3.795E-01	2.916E-02	0.819
		323.87	*	1.752E-01	8.207E-01	1.219E+00	2.070E-01	0.144
	+	338.28		5.019E+00	1.839E+00	2.799E+00	3.116E-01	1.793
		445.03		4.482E-01	2.951E+00	4.927E+00	5.188E-01	0.091
AC-227		79.80		1.859E+00	2.129E+00	2.370E+00	5.066E-01	0.784
		236.00		4.211E-01	2.929E-01	4.457E-01	5.131E-02	0.945
		256.20	*	7.581E-02	4.530E-01	7.319E-01	1.080E-01	0.104
		286.10		-1.938E-01	1.734E+00	2.905E+00	3.612E-01	-0.067
	+	299.80		3.453E+00	1.946E+00	2.852E+00	4.812E-01	1.211
		304.40		-5.607E-01	2.278E+00	3.262E+00	5.817E-01	-0.172
		334.20		-1.875E-02	3.317E+00	4.229E+00	7.911E-01	-0.004
TH-227		79.80		1.859E+00	2.130E+00	2.370E+00	5.132E-01	0.784
	+	94.00		9.115E+00	3.190E+00	3.946E+00	8.578E-01	2.310
		236.00		4.211E-01	2.921E-01	4.457E-01	4.573E-02	0.945
		256.20	*	7.581E-02	4.531E-01	7.319E-01	1.286E-01	0.104
		286.10		-1.938E-01	1.745E+00	2.905E+00	2.913E+00	-0.067
	+	299.80		3.453E+00	1.946E+00	2.852E+00	4.812E-01	1.211
		304.40		-5.607E-01	2.278E+00	3.262E+00	5.817E-01	-0.172
		334.20		-1.875E-02	3.317E+00	4.229E+00	7.911E-01	-0.004
TH-229	+	85.43		2.671E-01	1.959E-01	3.090E-01	2.512E-02	0.865
	+	88.47		4.783E-01	1.128E-01	2.121E-01	1.716E-02	2.255
		100.00		2.955E-02	1.903E-01	3.033E-01	2.737E-02	0.097
		193.63	*	-6.177E-02	5.787E-01	9.321E-01	6.938E-02	-0.066
		210.97		1.162E+00	1.025E+00	1.543E+00	1.158E-01	0.753
PA-231		283.67	*	6.765E-01	1.840E+00	3.079E+00	4.474E-01	0.220
	+	301.29		1.381E+00	7.589E-01	1.150E+00	1.303E-01	1.202
TH-231		81.07		-4.983E-03	2.762E-01	2.924E-01	2.417E-02	-0.017
	+	83.78		1.784E-01	1.309E-01	1.877E-01	1.535E-02	0.951
		94.90		8.776E-01	2.702E-01	4.339E-01	3.730E-02	2.023
		122.32		-1.104E-01	1.865E+00	2.990E+00	3.460E-01	-0.037
		144.24		8.181E-01	7.537E-01	1.281E+00	1.314E-01	0.639
		154.21		3.334E-01	4.385E-01	7.375E-01	6.858E-02	0.452

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		269.46		3.108E-01	2.217E-01	3.795E-01	2.916E-02	0.819
		323.87	*	1.752E-01	8.207E-01	1.219E+00	2.070E-01	0.144
	+	338.28		5.019E+00	1.839E+00	2.799E+00	3.116E-01	1.793
		445.03		4.482E-01	2.951E+00	4.927E+00	5.188E-01	0.091
U-231	+	84.21		7.457E+00	5.470E+00	7.873E+00	6.429E-01	0.947
	+	92.29		8.736E+00	2.509E+00	3.903E+00	3.273E-01	2.238
		95.87	*	1.869E-01	1.151E+00	1.690E+00	1.466E-01	0.111
		108.00		-1.328E+00	2.109E+00	3.390E+00	3.298E-01	-0.392
PA-233	+	75.28		1.921E+01	4.152E+00	5.667E+00	8.648E-01	3.389
	+	86.59		6.858E+00	2.377E+00	2.908E+00	7.752E-01	2.358
	+	300.12		9.627E-01	5.352E-01	7.958E-01	1.125E-01	1.210
		311.98	*	1.897E-03	7.241E-02	1.218E-01	9.084E-03	0.016
		340.50		2.852E+00	1.130E+00	1.599E+00	3.716E-01	1.783
		398.62		-8.823E-01	2.597E+00	4.204E+00	1.087E+00	-0.210
		415.76		1.470E-01	2.238E+00	3.242E+00	6.693E-01	0.045
PA-234	+	63.00		1.129E+00	1.144E+00	1.588E+00	2.491E-01	0.711
		94.67		8.246E-01	2.144E-01	3.255E-01	4.027E-02	2.533
		98.44		1.512E-01	1.284E-01	1.517E-01	8.469E-02	0.997
		99.86		7.735E-02	4.815E-01	7.676E-01	6.917E-02	0.101
		111.00		-1.103E-02	1.921E-01	3.161E-01	4.145E-02	-0.035
	+	131.20		1.965E-01	1.852E-01	2.010E-01	2.087E-02	0.978
		152.70		1.511E-01	3.545E-01	5.883E-01	1.001E-01	0.257
	+	186.00		4.406E+00	2.569E+00	2.804E+00	8.664E-01	1.571
		226.40		4.897E-01	4.714E-01	7.918E-01	9.915E-02	0.618
		227.20		7.112E-01	5.062E-01	8.669E-01	6.534E-02	0.820
		248.90		-1.249E+00	1.144E+00	1.407E+00	3.099E-01	-0.888
		293.70		5.916E+00	1.455E+00	2.012E+00	3.359E-01	2.940
		369.80		-6.566E-01	9.981E-01	1.575E+00	3.302E-01	-0.417
		568.70		-1.072E+00	1.457E+00	2.255E+00	1.605E-01	-0.476
		569.50		-1.473E-01	3.977E-01	6.336E-01	4.514E-02	-0.232
		574.00		1.670E-01	1.994E+00	3.275E+00	2.341E-01	0.051
		699.00		1.090E+00	1.024E+00	1.764E+00	3.287E-01	0.618
		706.10		1.243E+00	1.404E+00	2.271E+00	1.008E+00	0.547
		733.00		1.777E-01	5.279E-01	7.669E-01	1.674E-01	0.232
		742.81		1.680E+00	2.191E+00	3.270E+00	2.194E+00	0.514
		796.30		5.194E-01	1.235E+00	2.127E+00	5.688E-01	0.244
		805.60		1.371E-01	1.482E+00	2.501E+00	7.595E-01	0.055
		819.60		-8.829E-01	1.627E+00	2.523E+00	9.537E-01	-0.350
		826.30		-5.541E-01	1.179E+00	1.848E+00	8.233E-01	-0.300
		831.60		2.323E-01	8.791E-01	1.498E+00	4.426E-01	0.155
		876.40		-1.896E-01	1.137E+00	1.838E+00	1.888E+00	-0.103
		880.51		1.061E-01	3.402E-01	5.854E-01	4.310E-02	0.181
		883.24		-2.478E-01	3.996E-01	5.628E-01	3.774E-01	-0.440
		899.00		-4.895E-01	1.214E+00	1.917E+00	8.333E-01	-0.255
		925.00		2.091E-01	1.533E+00	2.584E+00	1.860E-01	0.081
		926.50		3.798E-02	2.170E-01	3.670E-01	9.112E-02	0.103
		946.00	*	2.273E-01	4.239E-01	7.351E-01	1.332E-01	0.309
		949.00		-7.560E-02	6.216E-01	1.020E+00	7.235E-02	-0.074
		980.50		-4.759E-01	1.069E+00	1.412E+00	9.798E-02	-0.337

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-4.872E-01	1.542E+00	2.318E+00	1.502E+00	-0.210
PA-234M		766.41		6.013E+00	2.519E+01	4.058E+01	3.107E+01	0.148
		1001.03	*	-4.754E+00	8.495E+00	1.322E+01	1.304E+00	-0.360
U-235	+	89.95		2.647E+00	1.274E+00	1.826E+00	5.614E-01	1.449
	+	93.35		2.836E+00	1.111E+00	1.238E+00	3.464E-01	2.291
		105.00		1.867E+00	1.224E+00	1.912E+00	5.756E-01	0.976
		143.76	*	1.944E-01	2.342E-01	3.922E-01	7.010E-02	0.496
		163.35		1.520E-01	5.478E-01	9.019E-01	1.680E-01	0.169
	+	185.71		1.632E-01	8.159E-02	1.026E-01	7.603E-03	1.590
		205.31		-5.541E-02	6.305E-01	8.839E-01	1.644E-01	-0.063
NP-236		94.67		6.281E-01	1.529E-01	2.471E-01	2.120E-02	2.542
		98.44		1.143E-01	7.382E-02	1.147E-01	1.019E-02	0.997
		111.00		-8.344E-03	1.453E-01	2.391E-01	2.393E-02	-0.035
		160.31	*	-3.171E-02	8.963E-02	1.437E-01	1.128E-02	-0.221
NP-239		99.55		6.330E-02	1.657E-01	2.564E-01	2.304E-02	0.247
		117.00	*	1.160E-01	2.079E-01	3.494E-01	3.697E-02	0.332
	+	209.75		2.567E+00	1.279E+00	1.557E+00	1.168E-01	1.649
		228.18		1.150E-01	2.692E-01	4.421E-01	3.333E-02	0.260
	+	277.60		2.380E-01	2.215E-01	3.757E-01	2.795E-02	0.634
		334.30		-2.880E-02	1.879E+00	2.393E+00	1.648E-01	-0.012
AM-241		59.54	*	8.660E-02	8.224E-02	1.263E-01	1.225E-02	0.686
CM-243		99.55		6.513E-02	1.705E-01	2.639E-01	2.371E-02	0.247
		103.76	*	4.119E-02	9.833E-02	1.651E-01	1.543E-02	0.250
		117.00		1.194E-01	2.139E-01	3.595E-01	3.804E-02	0.332
	+	209.75		2.531E+00	1.260E+00	1.535E+00	1.151E-01	1.649
		228.18		1.162E-01	2.720E-01	4.467E-01	3.367E-02	0.260
	+	277.60		2.400E-01	2.233E-01	3.787E-01	2.818E-02	0.634
CM-247	+	278.00		9.871E-01	9.187E-01	1.560E+00	1.160E-01	0.633
		287.40		1.227E-01	1.365E+00	2.310E+00	1.705E-01	0.053
		402.60	*	2.724E-02	4.561E-02	7.678E-02	4.513E-03	0.355
CF-249		252.85		-2.660E-01	1.145E+00	1.665E+00	1.254E-01	-0.160
		333.44		8.253E-02	3.084E-01	3.161E-01	2.181E-02	0.261
		387.95	*	2.402E-02	5.099E-02	8.716E-02	5.113E-03	0.276
CF-251		176.60	*	-1.088E-01	1.413E-01	2.207E-01	1.625E-02	-0.493
		227.00		7.623E-01	4.478E-01	7.757E-01	5.847E-02	0.983
		285.00		-9.034E-01	2.021E+00	3.326E+00	2.460E-01	-0.272

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746007      *
* Acquisition date : 14-JUL-2009 10:27:26 Detector SN#     :               *
* Detector ID        : GAM17               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:08.07      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 29-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232746007           Analyst initials: MXR1         *
* Batch Number       : 882713               Sample Quantity : 1.3070E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.615E+01	2.536E+00	6.702E-01	0.000E+00
CD-109	3.563E+00	8.234E-01	1.178E+00	0.000E+00
SN-126	3.503E-01	8.095E-02	1.157E-01	0.000E+00
HG-203	5.425E-02	4.949E-02	8.130E-02	0.000E+00
TL-208	4.748E-01	9.909E-02	7.678E-02	0.000E+00
BI-211	3.567E+00	4.981E-01	3.894E-01	0.000E+00
PB-212	1.656E+00	1.820E-01	9.960E-02	0.000E+00
PO-212	1.656E+00	1.820E-01	9.960E-02	0.000E+00
BI-214	1.188E+00	2.092E-01	1.421E-01	0.000E+00
PB-214	1.241E+00	1.845E-01	1.400E-01	0.000E+00
PO-214	1.241E+00	1.845E-01	1.400E-01	0.000E+00
PO-216	1.656E+00	1.820E-01	9.960E-02	0.000E+00
PO-218	1.241E+00	1.845E-01	1.400E-01	0.000E+00
RA-224	5.245E+00	1.450E+00	1.134E+00	0.000E+00
RA-226	1.188E+00	2.092E-01	1.421E-01	0.000E+00
AC-228	1.723E+00	3.606E-01	2.732E-01	0.000E+00
RA-228	1.723E+00	3.606E-01	2.732E-01	0.000E+00
TH-228	1.656E+00	1.820E-01	9.959E-02	0.000E+00
TH-230	1.188E+00	2.092E-01	1.421E-01	0.000E+00
TH-232	1.723E+00	3.606E-01	2.732E-01	0.000E+00
TH-234	9.689E-01	9.660E-01	1.254E+00	0.000E+00
U-234	1.188E+00	2.092E-01	1.421E-01	0.000E+00
NP-237	1.029E+00	3.159E-01	3.391E-01	0.000E+00
U-238	9.689E-01	9.660E-01	1.254E+00	0.000E+00
AM-243	3.667E-01	6.288E-02	7.127E-02	0.000E+00
ANH-511	4.548E-02	6.845E-02	7.012E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-1.338E-01	3.555E-01	5.901E-01	0.000E+00	NOT IDENT.

NA-22	-3.462E-03	5.638E-02	9.341E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.157E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.575E-02	3.160E-02	4.584E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.526E-02	7.791E-02	0.000E+00	FAIL ABUN
SC-46	6.034E-02	5.252E-02	9.888E-02	0.000E+00	FAIL ABUN
V-48	-3.829E-02	1.053E-01	1.457E-01	0.000E+00	NOT IDENT.
CR-51	-6.459E-02	4.057E-01	7.062E-01	0.000E+00	NOT IDENT.
MN-52	6.044E-02	3.315E-01	5.615E-01	0.000E+00	NOT IDENT.
MN-54	-1.191E-02	5.060E-02	8.556E-02	0.000E+00	NOT IDENT.
CO-56	2.500E-02	4.826E-02	8.706E-02	0.000E+00	NOT IDENT.
CO-57	-2.633E-03	2.641E-02	4.496E-02	0.000E+00	NOT IDENT.
CO-58	-1.155E-02	5.534E-02	9.399E-02	0.000E+00	NOT IDENT.
FE-59	4.447E-02	1.212E-01	2.120E-01	0.000E+00	NOT IDENT.
CO-60	5.370E-04	4.706E-02	7.836E-02	0.000E+00	NOT IDENT.
ZN-65	-1.362E-02	1.324E-01	1.888E-01	0.000E+00	NOT IDENT.
GE-68	8.954E-01	1.598E+00	2.854E+00	0.000E+00	NOT IDENT.
AS-73	4.261E-02	2.648E-01	4.742E-01	0.000E+00	NOT IDENT.
AS-74	5.643E-02	1.178E-01	2.064E-01	0.000E+00	NOT IDENT.
SE-75	-1.211E-03	5.056E-02	8.480E-02	0.000E+00	NOT IDENT.
BR-77	4.275E+00	1.164E+01	2.042E+01	0.000E+00	FAIL ABUN
SR-82	-1.280E-02	4.987E-01	8.625E-01	0.000E+00	NOT IDENT.
RB-83	2.293E-02	8.383E-02	1.459E-01	0.000E+00	NOT IDENT.
RB-84	-1.014E-02	8.250E-02	1.399E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.092E+01	1.873E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.589E-02	9.583E-02	0.000E+00	NOT IDENT.
RB-86	3.765E-01	1.010E+00	1.772E+00	0.000E+00	NOT IDENT.
Y-88	5.141E-03	3.408E-02	5.959E-02	0.000E+00	NOT IDENT.
ZR-88	-1.300E-02	3.794E-02	6.445E-02	0.000E+00	NOT IDENT.
Y-91	-1.223E+01	2.394E+01	3.802E+01	0.000E+00	NOT IDENT.
NB-94	1.350E-03	4.684E-02	7.833E-02	0.000E+00	NOT IDENT.
NB-95	3.798E-03	6.126E-02	1.021E-01	0.000E+00	NOT IDENT.
NB-95M	5.749E-03	1.490E-01	2.204E-01	0.000E+00	NOT IDENT.
ZR-95	-7.566E-02	1.028E-01	1.589E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.128E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.122E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-7.295E+00	1.542E+01	2.445E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.534E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.051E-02	3.808E-02	6.478E-02	0.000E+00	NOT IDENT.
RH-102	-5.570E-03	3.297E-02	5.576E-02	0.000E+00	NOT IDENT.
RU-103	-2.558E-02	5.157E-02	8.455E-02	0.000E+00	FAIL ABUN
RH-106	1.478E-01	4.343E-01	7.503E-01	0.000E+00	FAIL ABUN
RU-106	1.478E-01	4.340E-01	7.503E-01	0.000E+00	FAIL ABUN
AG-108M	-7.320E-03	3.917E-02	6.666E-02	0.000E+00	NOT IDENT.
AG-110M	-1.123E-02	4.940E-02	8.128E-02	0.000E+00	NOT IDENT.
IN-111	-3.802E-01	1.105E+00	1.827E+00	0.000E+00	NOT IDENT.
IN-113M	2.562E-03	5.506E-02	9.584E-02	0.000E+00	NOT IDENT.
SN-113	2.562E-03	5.506E-02	9.584E-02	0.000E+00	NOT IDENT.
IN-114M	-6.727E-03	2.307E-01	3.444E-01	0.000E+00	NOT IDENT.
CD-115	3.528E+00	1.279E+01	2.224E+01	0.000E+00	NOT IDENT.
SN-117M	-2.936E-02	6.040E-02	1.020E-01	0.000E+00	NOT IDENT.
SB-122	3.065E+00	2.571E+00	4.730E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.110E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.989E-02	3.172E-02	5.323E-02	0.000E+00	NOT IDENT.
I-124	3.826E-01	9.573E-01	1.519E+00	0.000E+00	NOT IDENT.
SB-124	7.243E-02	8.790E-02	1.722E-01	0.000E+00	FAIL ABUN
SB-125	9.058E-02	1.135E-01	2.057E-01	0.000E+00	FAIL ABUN
TE-125M	-1.088E+01	9.740E+00	1.626E+01	0.000E+00	NOT IDENT.
I-126	-1.808E-01	2.305E-01	3.577E-01	0.000E+00	NOT IDENT.
SB-126	-6.075E-02	2.291E-01	3.176E-01	0.000E+00	FAIL ABUN
SB-127	2.681E+00	1.671E+00	3.152E+00	0.000E+00	NOT IDENT.
XE-127	-3.040E-02	5.652E-02	8.612E-02	0.000E+00	NOT IDENT.
I-131	-4.337E-02	1.316E-01	2.247E-01	0.000E+00	NOT IDENT.
TE-132	3.411E-01	7.774E-01	1.343E+00	0.000E+00	NOT IDENT.
BA-133	-4.021E-02	6.162E-02	8.823E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	6.671E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	2.656E-02	6.270E-02	1.120E-01	0.000E+00	NOT IDENT.
CS-135	6.533E-02	1.849E-01	3.162E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.475E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-9.514E-04	1.447E-01	2.450E-01	0.000E+00	FAIL ABUN
BA-137M	4.087E-02	4.751E-02	8.508E-02	0.000E+00	NOT IDENT.
CS-137	4.320E-02	5.022E-02	8.994E-02	0.000E+00	NOT IDENT.
CE-139	1.118E-02	3.391E-02	5.925E-02	0.000E+00	NOT IDENT.
BA-140	-1.751E-01	3.327E-01	5.338E-01	0.000E+00	NOT IDENT.
LA-140	-6.107E-02	9.524E-02	1.427E-01	0.000E+00	FAIL ABUN
CE-141	8.847E-02	6.786E-02	1.232E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.393E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.238E-01	2.486E-01	3.893E-01	0.000E+00	NOT IDENT.
PM-144	-3.189E-02	4.942E-02	7.800E-02	0.000E+00	NOT IDENT.

PR-144	-2.161E+00	3.349E+00	5.285E+00	0.000E+00	NOT IDENT.
PM-146	1.120E-02	5.143E-02	8.982E-02	0.000E+00	NOT IDENT.
ND-147	2.254E-01	7.346E-01	1.277E+00	0.000E+00	FAIL ABUN
PM-149	-2.434E+01	9.649E+01	1.683E+02	0.000E+00	NOT IDENT.
EU-152	-7.606E-02	1.272E-01	1.933E-01	0.000E+00	FAIL ABUN
GD-153	-3.642E-03	8.468E-02	1.304E-01	0.000E+00	FAIL ABUN
EU-154	-9.671E-03	1.575E-01	2.609E-01	0.000E+00	NOT IDENT.
EU-155	1.601E-01	1.110E-01	2.040E-01	0.000E+00	FAIL ABUN
TB-160	1.087E-02	1.679E-01	2.904E-01	0.000E+00	FAIL ABUN
HO-166M	-1.148E-01	7.456E-02	1.029E-01	0.000E+00	NOT IDENT.
TM-171	1.215E+01	1.968E+01	3.159E+01	0.000E+00	NOT IDENT.
LU-176	1.078E-02	2.736E-02	4.806E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.734E+00	2.240E+00	0.000E+00	FAIL ABUN
LU-177M	-9.916E-02	2.487E-01	3.595E-01	0.000E+00	NOT IDENT.
HF-181	-1.154E-02	4.707E-02	7.898E-02	0.000E+00	NOT IDENT.
W-181	1.118E-01	2.567E-01	4.098E-01	0.000E+00	NOT IDENT.
TA-182	1.765E-01	2.675E-01	4.740E-01	0.000E+00	FAIL ABUN
RE-183	2.242E-02	1.234E-01	2.146E-01	0.000E+00	FAIL ABUN
RE-184	-7.083E-02	2.989E-01	4.569E-01	0.000E+00	NOT IDENT.
OS-185	2.288E-02	5.522E-02	9.601E-02	0.000E+00	NOT IDENT.
RE-188	6.348E-02	1.860E-01	3.263E-01	0.000E+00	NOT IDENT.
W-188	-2.824E-01	8.982E+00	1.379E+01	0.000E+00	FAIL ABUN
IR-192	7.658E-03	3.808E-02	6.771E-02	0.000E+00	FAIL ABUN
AU-195	1.967E-01	2.429E-01	3.897E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.473E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	8.966E+00	7.450E+00	1.346E+01	0.000E+00	NOT IDENT.
TL-202	1.480E-02	8.485E-02	1.479E-01	0.000E+00	NOT IDENT.
BI-207	9.621E-04	7.186E-02	1.218E-01	0.000E+00	FAIL ABUN
TL-207	1.752E-01	8.043E-01	1.251E+00	0.000E+00	FAIL ABUN
PO-209	1.282E+00	9.837E+00	1.708E+01	0.000E+00	NOT IDENT.
BI-210	-2.998E-02	6.074E-01	1.152E+00	0.000E+00	NOT IDENT.
PB-210	-2.998E-02	6.074E-01	1.152E+00	0.000E+00	NOT IDENT.
PO-210	-2.998E-02	6.074E-01	1.152E+00	0.000E+00	NOT IDENT.
PB-211	1.033E+00	1.381E+00	1.990E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.678E-01	8.203E-01	0.000E+00	FAIL ABUN
PO-215	1.752E-01	8.043E-01	1.251E+00	0.000E+00	FAIL ABUN
RN-219	4.187E-02	5.014E-01	8.733E-01	0.000E+00	NOT IDENT.
RN-220	-2.857E+01	3.321E+01	5.226E+01	0.000E+00	NOT IDENT.
RA-223	1.752E-01	8.043E-01	1.251E+00	0.000E+00	FAIL ABUN
AC-227	7.581E-02	4.440E-01	7.540E-01	0.000E+00	FAIL ABUN
TH-227	7.581E-02	4.440E-01	7.540E-01	0.000E+00	FAIL ABUN
TH-229	-6.177E-02	5.671E-01	9.645E-01	0.000E+00	FAIL ABUN
PA-231	6.765E-01	1.804E+00	3.167E+00	0.000E+00	FAIL ABUN
TH-231	1.752E-01	8.043E-01	1.251E+00	0.000E+00	FAIL ABUN
U-231	1.869E-01	1.128E+00	1.768E+00	0.000E+00	FAIL ABUN
PA-233	1.897E-03	7.096E-02	1.250E-01	0.000E+00	FAIL ABUN
PA-234	2.273E-01	4.155E-01	7.412E-01	0.000E+00	FAIL ABUN
PA-234M	-4.754E+00	8.325E+00	1.332E+01	0.000E+00	NOT IDENT.
U-235	1.944E-01	2.295E-01	4.077E-01	0.000E+00	FAIL ABUN
NP-236	-3.171E-02	8.783E-02	1.492E-01	0.000E+00	NOT IDENT.
NP-239	1.160E-01	2.037E-01	3.645E-01	0.000E+00	FAIL ABUN
AM-241	8.660E-02	8.059E-02	1.331E-01	0.000E+00	NOT IDENT.
CM-243	4.119E-02	9.637E-02	1.725E-01	0.000E+00	FAIL ABUN
CM-247	2.724E-02	4.470E-02	7.852E-02	0.000E+00	FAIL ABUN
CF-249	2.402E-02	4.997E-02	8.919E-02	0.000E+00	NOT IDENT.
CF-251	-1.088E-01	1.385E-01	2.287E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:27:55.80

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746007.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:27:26
Sample ID         : G232746007           Sample quantity  : 1.30700E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.07  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	776	10.67*	7.983E-01	2.615E+01	2.615E+01	9.90
CD-109	88.03	297	3.72*	6.572E+00	3.484E+00	3.563E+00	23.58
SN-126	64.28	85	9.60	6.650E+00	3.835E-01	3.835E-01	101.27
	86.94	297	8.90	6.572E+00	1.456E+00	1.456E+00	46.82
	87.57	297	37.00*	6.572E+00	3.503E-01	3.503E-01	23.58
HG-203	70.83	------	4.75	6.658E+00	------	Line Not Found	------
	72.87	------	8.00	6.655E+00	------	Line Not Found	------
	82.60	------	3.55	6.611E+00	------	Line Not Found	------
	279.20	43	77.30*	3.651E+00	4.342E-02	5.425E-02	93.09
TL-208	277.35	43	6.80	3.651E+00	4.936E-01	4.936E-01	93.48
	510.84	33	21.60	2.072E+00	2.105E-01	2.105E-01	153.82
	583.14	254	84.20*	1.824E+00	4.748E-01	4.748E-01	21.29
	860.37	------	12.46	1.267E+00	------	Line Not Found	------
BI-211	72.87	------	1.27	6.655E+00	------	Line Not Found	------
	351.07	475	12.94*	2.956E+00	3.567E+00	3.567E+00	14.25
PB-212	74.81	560	10.70	6.649E+00	2.262E+00	2.262E+00	19.84
	77.11	797	18.00	6.641E+00	1.915E+00	1.915E+00	13.07
	87.30	297	8.00	6.572E+00	1.620E+00	1.620E+00	25.61
	238.63	1062	44.60*	4.130E+00	1.656E+00	1.656E+00	11.22
	300.09	76	3.41	3.413E+00	1.863E+00	1.863E+00	54.57
PO-212	74.81	560	10.70	6.649E+00	2.262E+00	2.262E+00	19.84
	77.11	797	18.00	6.641E+00	1.915E+00	1.915E+00	13.07
	87.30	297	8.00	6.572E+00	1.620E+00	1.620E+00	25.61
	115.19	------	0.60	6.204E+00	------	Line Not Found	------
	238.63	1062	44.60*	4.130E+00	1.656E+00	1.656E+00	11.22
	300.09	76	3.41	3.413E+00	1.863E+00	1.863E+00	54.57
BI-214	609.31	335	46.30*	1.749E+00	1.188E+00	1.188E+00	17.96
	768.36	------	5.04	1.406E+00	------	Line Not Found	------
	934.06	------	3.21	1.177E+00	------	Line Not Found	------
	1120.29	77	15.10	1.003E+00	1.456E+00	1.456E+00	40.37
	1238.11	------	5.94	9.200E-01	------	Line Not Found	------
	1377.67	------	4.11	8.394E-01	------	Line Not Found	------

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	1764.49	52	15.80	6.764E-01	1.397E+00	1.397E+00	37.15
PB-214	74.81	560	6.21	6.649E+00	3.897E+00	3.897E+00	19.00
	77.11	797	10.50	6.641E+00	3.283E+00	3.283E+00	15.13
	87.30	297	4.67	6.572E+00	2.776E+00	2.776E+00	24.81
	241.98	295	7.49	4.090E+00	2.766E+00	2.766E+00	28.76
	295.21	301	19.20	3.461E+00	1.300E+00	1.300E+00	23.18
	351.92	475	37.20*	2.956E+00	1.241E+00	1.241E+00	15.18
PO-214	74.81	560	6.21	6.649E+00	3.897E+00	3.897E+00	19.00
	77.11	797	10.50	6.641E+00	3.283E+00	3.283E+00	15.13
	87.30	297	4.67	6.572E+00	2.776E+00	2.776E+00	24.81
	241.98	295	7.49	4.090E+00	2.766E+00	2.766E+00	28.76
	295.21	301	19.20	3.461E+00	1.300E+00	1.300E+00	23.18
	351.92	475	37.20*	2.956E+00	1.241E+00	1.241E+00	15.18
PO-216	74.81	560	10.70	6.649E+00	2.262E+00	2.262E+00	19.84
	77.11	797	18.00	6.641E+00	1.915E+00	1.915E+00	13.07
	87.30	297	8.00	6.572E+00	1.620E+00	1.620E+00	25.61
	238.63	1062	44.60*	4.130E+00	1.656E+00	1.656E+00	11.22
	300.09	76	3.41	3.413E+00	1.863E+00	1.863E+00	54.57
PO-218	74.81	560	6.21	6.649E+00	3.897E+00	3.897E+00	19.00
	77.11	797	10.50	6.641E+00	3.283E+00	3.283E+00	15.13
	87.30	297	4.67	6.572E+00	2.776E+00	2.776E+00	24.81
	241.98	295	7.49	4.090E+00	2.766E+00	2.766E+00	28.76
	295.21	301	19.20	3.461E+00	1.300E+00	1.300E+00	23.18
	351.92	475	37.20*	2.956E+00	1.241E+00	1.241E+00	15.18
RA-224	240.98	295	3.95*	4.090E+00	5.245E+00	5.245E+00	28.21
RA-226	609.31	335	46.30*	1.749E+00	1.188E+00	1.188E+00	17.96
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	77	15.10	1.003E+00	1.456E+00	1.456E+00	40.37
	1238.11	------	5.94	9.200E-01	------ Line Not Found		------
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	52	15.80	6.764E-01	1.397E+00	1.397E+00	37.15
AC-228	338.32	146	11.40	3.065E+00	1.202E+00	1.202E+00	53.79
	911.07	200	27.70*	1.204E+00	1.723E+00	1.723E+00	21.36
	969.11	135	16.60	1.139E+00	2.044E+00	2.044E+00	32.58
RA-228	338.32	146	11.40	3.065E+00	1.202E+00	1.202E+00	53.79
	911.07	200	27.70*	1.204E+00	1.723E+00	1.723E+00	21.36
	969.11	135	16.60	1.139E+00	2.044E+00	2.044E+00	32.58
TH-228	84.40	101	1.21	6.597E+00	3.643E+00	3.643E+00	74.02
	238.60	1062	44.60*	4.130E+00	1.656E+00	1.656E+00	11.22
	300.10	76	3.41	3.413E+00	1.863E+00	1.863E+00	79.89
TH-230	609.31	335	46.30*	1.749E+00	1.188E+00	1.188E+00	17.96
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	77	15.10	1.003E+00	1.456E+00	1.456E+00	40.37
	1238.11	------	5.94	9.200E-01	------ Line Not Found		------
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	52	15.80	6.764E-01	1.397E+00	1.397E+00	37.15
TH-232	338.32	146	11.40	3.065E+00	1.202E+00	1.202E+00	35.57

Sample ID : G232746007 Acquisition date : 14-JUL-2009 10:27:26

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	911.07	200	27.70*	1.204E+00	1.723E+00	1.723E+00	21.36
	969.11	135	16.60	1.139E+00	2.044E+00	2.044E+00	32.58
TH-234	63.29	85	3.80*	6.650E+00	9.689E-01	9.689E-01	101.73
	92.38	290	5.41	6.517E+00	2.359E+00	2.359E+00	32.83
U-234	609.31	335	46.30*	1.749E+00	1.188E+00	1.188E+00	17.96
	768.36	------	5.04	1.406E+00	------ Line Not Found		------
	934.06	------	3.21	1.177E+00	------ Line Not Found		------
	1120.29	77	15.10	1.003E+00	1.456E+00	1.456E+00	40.37
	1238.11	------	5.94	9.200E-01	------ Line Not Found		------
	1377.67	------	4.11	8.394E-01	------ Line Not Found		------
	1764.49	52	15.80	6.764E-01	1.397E+00	1.397E+00	37.15
NP-237	86.50	297	12.60*	6.572E+00	1.029E+00	1.029E+00	31.33
	95.87	------	2.60	6.484E+00	------ Line Not Found		------
U-238	63.29	85	3.80*	6.650E+00	9.689E-01	9.689E-01	101.73
	92.38	290	5.41	6.517E+00	2.359E+00	2.359E+00	28.72
AM-243	74.67	560	66.00*	6.649E+00	3.667E-01	3.667E-01	17.50
	86.72	297	0.34	6.572E+00	3.858E+01	3.858E+01	23.58
	117.66	------	0.55	6.163E+00	------ Line Not Found		------
	142.18	------	0.13	5.726E+00	------ Line Not Found		------
ANH-511	511.00	33	100.00*	2.072E+00	4.548E-02	4.548E-02	153.59

Flag: "*" = Keyline

Sample ID : G232746007 Acquisition date : 14-JUL-2009 10:27:26

Total number of lines in spectrum 30
Number of unidentified lines 1
Number of lines tentatively identified by NID 29 96.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.615E+01	2.615E+01	0.259E+01	9.90	
CD-109	464.00D	1.02	3.484E+00	3.563E+00	0.840E+00	23.58	
SN-126	1.00E+05Y	1.00	3.503E-01	3.503E-01	0.826E-01	23.58	
HG-203	46.60D	1.25	4.342E-02	5.425E-02	5.050E-02	93.09	
TL-208	1.41E+10Y	1.00	4.748E-01	4.748E-01	1.011E-01	21.29	
BI-211	7.04E+08Y	1.00	3.567E+00	3.567E+00	0.508E+00	14.25	
PB-212	1.41E+10Y	1.00	1.656E+00	1.656E+00	0.186E+00	11.22	
PO-212	1.41E+10Y	1.00	1.656E+00	1.656E+00	0.186E+00	11.22	
BI-214	1600.00Y	1.00	1.188E+00	1.188E+00	0.213E+00	17.96	
PB-214	1600.00Y	1.00	1.241E+00	1.241E+00	0.188E+00	15.18	
PO-214	1600.00Y	1.00	1.241E+00	1.241E+00	0.188E+00	15.18	
PO-216	1.41E+10Y	1.00	1.656E+00	1.656E+00	0.186E+00	11.22	
PO-218	1600.00Y	1.00	1.241E+00	1.241E+00	0.188E+00	15.18	
RA-224	1.41E+10Y	1.00	5.245E+00	5.245E+00	1.479E+00	28.21	
RA-226	1600.00Y	1.00	1.188E+00	1.188E+00	0.213E+00	17.96	
AC-228	1.41E+10Y	1.00	1.723E+00	1.723E+00	0.368E+00	21.36	
RA-228	1.41E+10Y	1.00	1.723E+00	1.723E+00	0.368E+00	21.36	
TH-228	1.41E+10Y	1.00	1.656E+00	1.656E+00	0.186E+00	11.22	
TH-230	4.47E+09Y	1.00	1.188E+00	1.188E+00	0.213E+00	17.96	
TH-232	1.41E+10Y	1.00	1.723E+00	1.723E+00	0.368E+00	21.36	
TH-234	4.47E+09Y	1.00	9.689E-01	9.689E-01	9.857E-01	101.73	
U-234	4.47E+09Y	1.00	1.188E+00	1.188E+00	0.213E+00	17.96	
NP-237	2.14E+06Y	1.00	1.029E+00	1.029E+00	0.322E+00	31.33	
U-238	4.47E+09Y	1.00	9.689E-01	9.689E-01	9.857E-01	101.73	
AM-243	7380.00Y	1.00	3.667E-01	3.667E-01	0.642E-01	17.50	
ANH-511	1.00E+09Y	1.00	4.548E-02	4.548E-02	6.985E-02	153.59	
	Total Activity :		6.296E+01	6.305E+01			

Grand Total Activity : 6.296E+01 6.305E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232746007 Acquisition date : 14-JUL-2009 10:27:26

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	90.15	163	283	1.04	181.44	165	29	2.26E-02	37.0	6.55E+00	T
0	130.00	83	378	2.83	261.07	255	11	1.15E-02	93.7	5.95E+00	T
0	186.15	151	315	0.99	373.30	368	11	2.10E-02	49.4	4.94E+00	T
0	208.82	132	235	1.31	418.61	414	12	1.84E-02	49.2	4.57E+00	T
0	328.05	56	131	1.05	656.91	653	9	7.72E-03	78.9	3.15E+00	T
0	407.91	26	106	0.94	816.52	816	10	3.62E-03	****	2.57E+00	
0	463.65	40	99	1.07	927.95	922	12	5.59E-03	****	2.28E+00	T
0	727.88	65	73	1.33	1456.13	1449	15	9.05E-03	62.9	1.48E+00	T
4	964.26	47	21	2.23	1928.70	1924	39	6.50E-03	42.6	1.14E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:28:00.36

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746007.CNF;1 *
* Acquisition date  : 14-JUL-2009 10:27:26  Detector SN#     :             *
* Detector ID       : GAM17                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:08.07          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232746007            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.30700E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14.8MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1023-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.615E+01	2.588E+00	6.696E-01	4.117E-02	39.050
CD-109	3.563E+00	8.402E-01	1.124E+00	9.053E-02	3.170
SN-126	3.503E-01	8.260E-02	1.104E-01	8.904E-03	3.173
HG-203	5.425E-02	5.050E-02	7.903E-02	6.097E-03	0.686
TL-208	4.748E-01	1.011E-01	7.554E-02	5.989E-03	6.286
BI-211	3.567E+00	5.083E-01	3.799E-01	2.729E-02	9.388
PB-212	1.656E+00	1.857E-01	9.657E-02	8.475E-03	17.143
PO-212	1.656E+00	1.857E-01	9.657E-02	8.475E-03	17.143
BI-214	1.188E+00	2.134E-01	1.399E-01	1.256E-02	8.489
PB-214	1.241E+00	1.883E-01	1.366E-01	1.211E-02	9.083
PO-214	1.241E+00	1.883E-01	1.366E-01	1.211E-02	9.083
PO-216	1.656E+00	1.857E-01	9.657E-02	8.475E-03	17.143
PO-218	1.241E+00	1.883E-01	1.366E-01	1.211E-02	9.083
RA-224	5.245E+00	1.479E+00	1.100E+00	8.295E-02	4.769
RA-226	1.188E+00	2.134E-01	1.399E-01	1.256E-02	8.489
AC-228	1.723E+00	3.680E-01	2.708E-01	2.771E-02	6.363
RA-228	1.723E+00	3.680E-01	2.708E-01	2.771E-02	6.363
TH-228	1.656E+00	1.857E-01	9.656E-02	8.474E-03	17.145

Sample ID : G232746007 Acquisition date : 14-JUL-2009 10:27:26

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.188E+00	2.134E-01	1.399E-01	1.256E-02	8.489
TH-232	1.723E+00	3.680E-01	2.708E-01	2.771E-02	6.363
TH-234	9.689E-01	9.857E-01	1.191E+00	2.161E-01	0.813
U-234	1.188E+00	2.134E-01	1.399E-01	1.256E-02	8.489
NP-237	1.029E+00	3.223E-01	3.235E-01	7.172E-02	3.180
U-238	9.689E-01	9.857E-01	1.191E+00	2.161E-01	0.813
AM-243	3.667E-01	6.416E-02	6.785E-02	5.756E-03	5.404
ANH-511	4.548E-02	6.985E-02	6.884E-02	4.652E-03	0.661

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.338E-01		3.627E-01	5.786E-01	4.267E-02	-0.231
NA-22	-3.462E-03		5.753E-02	9.311E-02	5.277E-03	-0.037
NA-24	-1.393E-02		3.651E-01	Half-Life too short		
AL-26	-1.575E-02		3.225E-02	4.597E-02	2.628E-03	-0.343
TI-44	3.534E-01	+	4.619E-02	7.423E-02	6.201E-03	4.761
SC-46	6.034E-02		5.359E-02	9.797E-02	7.180E-03	0.616
V-48	-3.829E-02		1.075E-01	1.446E-01	1.001E-02	-0.265
CR-51	-6.459E-02		4.140E-01	6.880E-01	5.247E-02	-0.094
MN-52	6.044E-02		3.383E-01	5.608E-01	3.241E-02	0.108
MN-54	-1.191E-02		5.163E-02	8.468E-02	6.353E-03	-0.141
CO-56	2.500E-02		4.924E-02	8.618E-02	6.439E-03	0.290
CO-57	-2.633E-03		2.695E-02	4.313E-02	4.785E-03	-0.061
CO-58	-1.155E-02		5.647E-02	9.298E-02	7.046E-03	-0.124
FE-59	4.447E-02		1.237E-01	2.108E-01	1.497E-02	0.211
CO-60	5.370E-04		4.802E-02	7.816E-02	4.464E-03	0.007
ZN-65	-1.362E-02		1.351E-01	1.878E-01	1.134E-02	-0.073
GE-68	8.954E-01		1.631E+00	2.837E+00	1.795E-01	0.316
AS-73	4.261E-02		2.702E-01	4.492E-01	3.644E-02	0.095
AS-74	5.643E-02		1.202E-01	2.031E-01	1.475E-02	0.278
SE-75	-1.211E-03		5.159E-02	8.236E-02	6.213E-03	-0.015
BR-77	4.275E+00		1.188E+01	2.006E+01	1.369E+00	0.213
SR-82	-1.280E-02		5.089E-01	8.526E-01	6.482E-02	-0.015
RB-83	2.293E-02		8.554E-02	1.433E-01	9.777E-03	0.160
RB-84	-1.014E-02		8.419E-02	1.386E-01	1.020E-02	-0.073
KR-85	2.095E+01		1.114E+01	1.838E+01	1.246E+00	1.140
SR-85	1.072E-01		5.703E-02	9.408E-02	6.378E-03	1.140
RB-86	3.765E-01		1.030E+00	1.761E+00	1.115E-01	0.214
Y-88	5.141E-03		3.478E-02	5.977E-02	3.412E-03	0.086
ZR-88	-1.300E-02		3.872E-02	6.300E-02	3.646E-03	-0.206
Y-91	-1.223E+01		2.443E+01	3.786E+01	2.107E+00	-0.323
NB-94	1.350E-03		4.779E-02	7.730E-02	5.873E-03	0.017
NB-95	3.798E-03		6.251E-02	1.009E-01	7.676E-03	0.038
NB-95M	5.749E-03		1.520E-01	2.137E-01	1.910E-02	0.027
ZR-95	-7.566E-02		1.049E-01	1.570E-01	1.349E-02	-0.482
NB-97	-9.395E-03		5.753E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	1.046E+00		1.082E+00	Half-Life too short		
MO-99	-7.295E+00		1.574E+01	2.415E+01	3.535E+00	-0.302
TC-99M	-1.029E+10		1.293E+10	Half-Life too short		
RH-101	1.051E-02		3.886E-02	6.263E-02	4.673E-03	0.168
RH-102	-5.570E-03		3.364E-02	5.468E-02	3.551E-03	-0.102
RU-103	-2.558E-02		5.262E-02	8.296E-02	1.084E-02	-0.308
RH-106	1.478E-01		4.431E-01	7.390E-01	9.306E-02	0.200
RU-106	1.478E-01		4.429E-01	7.390E-01	5.454E-02	0.200
AG-108M	-7.320E-03		3.997E-02	6.527E-02	4.326E-03	-0.112
AG-110M	-1.123E-02		5.041E-02	8.012E-02	6.258E-03	-0.140
IN-111	-3.802E-01		1.128E+00	1.772E+00	1.336E-01	-0.215
IN-113M	2.562E-03		5.619E-02	9.368E-02	5.776E-03	0.027
SN-113	2.562E-03		5.619E-02	9.368E-02	5.776E-03	0.027
IN-114M	-6.727E-03		2.354E-01	3.328E-01	2.472E-02	-0.020
CD-115	3.528E+00		1.305E+01	2.185E+01	1.501E+00	0.161
SN-117M	-2.936E-02		6.163E-02	9.830E-02	7.881E-03	-0.299
SB-122	3.065E+00		2.624E+00	4.651E+00	3.298E-01	0.659
I-123	-3.204E+00		2.607E+00	Half-Life too short		
TE-123M	-1.989E-02		3.237E-02	5.128E-02	4.119E-03	-0.388
I-124	3.826E-01		9.769E-01	1.495E+00	1.091E-01	0.256
SB-124	7.243E-02		8.970E-02	1.725E-01	1.084E-02	0.420
SB-125	9.058E-02		1.158E-01	2.014E-01	1.277E-02	0.450
TE-125M	-1.088E+01		9.939E+00	1.557E+01	1.770E+00	-0.699
I-126	-1.808E-01		2.352E-01	3.527E-01	2.660E-02	-0.513
SB-126	-6.075E-02		2.338E-01	3.136E-01	2.387E-02	-0.194
SB-127	2.681E+00		1.705E+00	3.109E+00	3.283E-01	0.862
XE-127	-3.040E-02		5.768E-02	8.328E-02	6.229E-03	-0.365
I-131	-4.337E-02		1.343E-01	2.194E-01	1.534E-02	-0.198
TE-132	3.411E-01		7.932E-01	1.301E+00	1.966E-01	0.262
BA-133	-4.021E-02		6.288E-02	8.610E-02	1.029E-02	-0.467
I-133	5.818E-03		3.404E-03	Half-Life too short		
CS-134	2.656E-02		6.398E-02	1.108E-01	8.472E-03	0.240
CS-135	6.533E-02		1.887E-01	3.072E-01	2.765E-02	0.213
I-135	3.554E+09		2.283E+09	Half-Life too short		
CS-136	-9.514E-04		1.476E-01	2.434E-01	1.706E-02	-0.004
BA-137M	4.087E-02		4.848E-02	8.388E-02	6.317E-03	0.487
CS-137	4.320E-02		5.125E-02	8.867E-02	6.694E-03	0.487
CE-139	1.118E-02		3.460E-02	5.712E-02	4.177E-03	0.196
BA-140	-1.751E-01		3.395E-01	5.245E-01	1.717E-01	-0.334
LA-140	-6.107E-02		9.719E-02	1.428E-01	8.301E-03	-0.428
CE-141	8.847E-02		6.925E-02	1.185E-01	1.108E-02	0.747
CE-143	7.401E-04		1.221E-04	Half-Life too short		
CE-144	1.238E-01		2.537E-01	3.740E-01	6.168E-02	0.331
PM-144	-3.189E-02		5.043E-02	7.697E-02	5.845E-03	-0.414
PR-144	-2.161E+00		3.417E+00	5.215E+00	3.959E-01	-0.414
PM-146	1.120E-02		5.248E-02	8.801E-02	7.907E-03	0.127
ND-147	2.254E-01		7.496E-01	1.255E+00	1.760E-01	0.180
PM-149	-2.434E+01		9.845E+01	1.636E+02	2.438E+01	-0.149

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-7.606E-02		1.298E-01	1.886E-01	1.392E-02	-0.403
GD-153	-3.642E-03		8.641E-02	1.247E-01	1.098E-02	-0.029
EU-154	-9.671E-03		1.607E-01	2.601E-01	2.406E-02	-0.037
EU-155	1.601E-01		1.132E-01	1.953E-01	1.871E-02	0.820
TB-160	1.087E-02		1.714E-01	2.876E-01	2.119E-02	0.038
HO-166M	-1.148E-01		7.609E-02	1.016E-01	7.728E-03	-1.129
TM-171	1.215E+01		2.008E+01	3.002E+01	2.640E+00	0.405
LU-176	1.078E-02		2.792E-02	4.679E-02	3.378E-03	0.230
LU-177	3.553E+00	+	1.769E+00	2.168E+00	1.625E-01	1.639
LU-177M	-9.916E-02		2.538E-01	3.517E-01	2.103E-02	-0.282
HF-181	-1.154E-02		4.803E-02	7.746E-02	5.072E-03	-0.149
W-181	1.118E-01		2.619E-01	3.893E-01	3.448E-02	0.287
TA-182	1.765E-01		2.730E-01	4.721E-01	2.638E-02	0.374
RE-183	2.242E-02		1.259E-01	2.068E-01	1.583E-02	0.108
RE-184	-7.083E-02		3.050E-01	4.434E-01	3.339E-02	-0.160
OS-185	2.288E-02		5.635E-02	9.462E-02	7.075E-03	0.242
RE-188	6.348E-02		1.898E-01	3.142E-01	2.622E-02	0.202
W-188	-2.824E-01		9.166E+00	1.342E+01	9.872E-01	-0.021
IR-192	7.658E-03		3.886E-02	6.595E-02	4.709E-03	0.116
AU-195	1.967E-01		2.479E-01	3.726E-01	3.327E-02	0.528
TL-200	-1.005E-04		2.282E-04	Half-Life too short		
TL-201	8.966E+00		7.602E+00	1.297E+01	9.488E-01	0.691
TL-202	1.480E-02		8.658E-02	1.448E-01	8.989E-03	0.102
BI-207	9.621E-04		7.333E-02	1.211E-01	7.778E-03	0.008
TL-207	1.752E-01		8.207E-01	1.219E+00	2.070E-01	0.144
PO-209	1.282E+00		1.004E+01	1.692E+01	1.235E+00	0.076
BI-210	-2.998E-02		6.198E-01	1.089E+00	8.717E-02	-0.028
PB-210	-2.998E-02		6.198E-01	1.089E+00	8.717E-02	-0.028
PO-210	-2.998E-02		6.198E-01	1.089E+00	7.580E-02	-0.028
PB-211	1.033E+00		1.409E+00	1.947E+00	1.214E+00	0.531
BI-212	1.073E+00	+	6.814E-01	8.100E-01	7.417E-02	1.324
PO-215	1.752E-01		8.207E-01	1.219E+00	2.070E-01	0.144
RN-219	4.187E-02		5.116E-01	8.540E-01	1.164E-01	0.049
RN-220	-2.857E+01		3.389E+01	5.136E+01	3.600E+00	-0.556
RA-223	1.752E-01		8.207E-01	1.219E+00	2.070E-01	0.144
AC-227	7.581E-02		4.530E-01	7.319E-01	1.080E-01	0.104
TH-227	7.581E-02		4.531E-01	7.319E-01	1.286E-01	0.104
TH-229	-6.177E-02		5.787E-01	9.321E-01	6.938E-02	-0.066
PA-231	6.765E-01		1.840E+00	3.079E+00	4.474E-01	0.220
TH-231	1.752E-01		8.207E-01	1.219E+00	2.070E-01	0.144
U-231	1.869E-01		1.151E+00	1.690E+00	1.466E-01	0.111
PA-233	1.897E-03		7.241E-02	1.218E-01	9.084E-03	0.016
PA-234	2.273E-01		4.239E-01	7.351E-01	1.332E-01	0.309
PA-234M	-4.754E+00		8.495E+00	1.322E+01	1.304E+00	-0.360
U-235	1.944E-01		2.342E-01	3.922E-01	7.010E-02	0.496
NP-236	-3.171E-02		8.963E-02	1.437E-01	1.128E-02	-0.221
NP-239	1.160E-01		2.079E-01	3.494E-01	3.697E-02	0.332
AM-241	8.660E-02		8.224E-02	1.263E-01	1.225E-02	0.686

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.119E-02		9.833E-02	1.651E-01	1.543E-02	0.250
CM-247	2.724E-02		4.561E-02	7.678E-02	4.513E-03	0.355
CF-249	2.402E-02		5.099E-02	8.716E-02	5.113E-03	0.276
CF-251	-1.088E-01		1.413E-01	2.207E-01	1.625E-02	-0.493

VAX/VMS Nuclide Identification Report Generated

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232746007       *
* Acquisition date  : 14-JUL-2009 10:27:26 Detector SN#    :            *
* Detector ID       : GAM17                Sensitivity     : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500     *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000    *
* Elapsed real time:    0 02:00:08.07      Half life ratio : 8.000     *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232746007           Analyst initials: MXR1       *
* Batch Number      : 882713               Sample Quantity : 1.3070E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
*                                                                       *
* CALIB. DATE/TIME : 27-JAN-2009 16:21:14 MS Isotope      :             *
* MSD DPM          :    0.000             MSD Isotope     :             *
* LCS DPM          :    0.000             LCS Isotope     :             *
* LCSD DPM         :    0.000             LCSD Isotope    :             *
*************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.615E+01	2.536E+00	3.353E-01	1.294E+00
CD-109	3.563E+00	8.234E-01	5.892E-01	4.201E-01
SN-126	3.503E-01	8.095E-02	5.788E-02	4.130E-02
HG-203	5.425E-02	4.949E-02	4.068E-02	2.525E-02
TL-208	4.748E-01	9.909E-02	3.841E-02	5.056E-02
BI-211	3.567E+00	4.981E-01	1.948E-01	2.541E-01
PB-212	1.656E+00	1.820E-01	4.983E-02	9.286E-02
PO-212	1.656E+00	1.820E-01	4.983E-02	9.286E-02
BI-214	1.188E+00	2.092E-01	7.111E-02	1.067E-01
PB-214	1.241E+00	1.845E-01	7.004E-02	9.414E-02
PO-214	1.241E+00	1.845E-01	7.004E-02	9.414E-02
PO-216	1.656E+00	1.820E-01	4.983E-02	9.286E-02
PO-218	1.241E+00	1.845E-01	7.004E-02	9.414E-02
RA-224	5.245E+00	1.450E+00	5.673E-01	7.396E-01
RA-226	1.188E+00	2.092E-01	7.111E-02	1.067E-01
AC-228	1.723E+00	3.606E-01	1.367E-01	1.840E-01
RA-228	1.723E+00	3.606E-01	1.367E-01	1.840E-01
TH-228	1.656E+00	1.820E-01	4.982E-02	9.286E-02
TH-230	1.188E+00	2.092E-01	7.111E-02	1.067E-01
TH-232	1.723E+00	3.606E-01	1.367E-01	1.840E-01
TH-234	9.689E-01	9.660E-01	6.276E-01	4.928E-01
U-234	1.188E+00	2.092E-01	7.111E-02	1.067E-01
NP-237	1.029E+00	3.159E-01	1.696E-01	1.612E-01
U-238	9.689E-01	9.660E-01	6.276E-01	4.928E-01
AM-243	3.667E-01	6.288E-02	3.566E-02	3.208E-02
ANH-511	4.548E-02	6.845E-02	3.508E-02	3.492E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.338E-01	3.555E-01	2.952E-01	1.814E-01 NOT IDENT.

NA-22	-3.462E-03	5.638E-02	4.673E-02	2.876E-02	NOT IDENT.
NA-24	-1.393E+04	7.157E+05	0.000E+00	3.651E+05	SHORT HLIF
AL-26	-1.575E-02	3.160E-02	2.293E-02	1.612E-02	NOT IDENT.
TI-44	3.534E-01	4.526E-02	3.898E-02	2.309E-02	FAIL ABUN
SC-46	6.034E-02	5.252E-02	4.947E-02	2.679E-02	FAIL ABUN
V-48	-3.829E-02	1.053E-01	7.290E-02	5.374E-02	NOT IDENT.
CR-51	-6.459E-02	4.057E-01	3.533E-01	2.070E-01	NOT IDENT.
MN-52	6.044E-02	3.315E-01	2.809E-01	1.691E-01	NOT IDENT.
MN-54	-1.191E-02	5.060E-02	4.281E-02	2.582E-02	NOT IDENT.
CO-56	2.500E-02	4.826E-02	4.356E-02	2.462E-02	NOT IDENT.
CO-57	-2.633E-03	2.641E-02	2.249E-02	1.348E-02	NOT IDENT.
CO-58	-1.155E-02	5.534E-02	4.703E-02	2.824E-02	NOT IDENT.
FE-59	4.447E-02	1.212E-01	1.060E-01	6.185E-02	NOT IDENT.
CO-60	5.370E-04	4.706E-02	3.920E-02	2.401E-02	NOT IDENT.
ZN-65	-1.362E-02	1.324E-01	9.446E-02	6.756E-02	NOT IDENT.
GE-68	8.954E-01	1.598E+00	1.428E+00	8.153E-01	NOT IDENT.
AS-73	4.261E-02	2.648E-01	2.373E-01	1.351E-01	NOT IDENT.
AS-74	5.643E-02	1.178E-01	1.032E-01	6.009E-02	NOT IDENT.
SE-75	-1.211E-03	5.056E-02	4.243E-02	2.580E-02	NOT IDENT.
BR-77	4.275E+00	1.164E+01	1.022E+01	5.938E+00	FAIL ABUN
SR-82	-1.280E-02	4.987E-01	4.315E-01	2.544E-01	NOT IDENT.
RB-83	2.293E-02	8.383E-02	7.301E-02	4.277E-02	NOT IDENT.
RB-84	-1.014E-02	8.250E-02	6.998E-02	4.209E-02	NOT IDENT.
KR-85	2.095E+01	1.092E+01	9.368E+00	5.572E+00	NOT IDENT.
SR-85	1.072E-01	5.589E-02	4.794E-02	2.851E-02	NOT IDENT.
RB-86	3.765E-01	1.010E+00	8.865E-01	5.151E-01	NOT IDENT.
Y-88	5.141E-03	3.408E-02	2.981E-02	1.739E-02	NOT IDENT.
ZR-88	-1.300E-02	3.794E-02	3.224E-02	1.936E-02	NOT IDENT.
Y-91	-1.223E+01	2.394E+01	1.902E+01	1.221E+01	NOT IDENT.
NB-94	1.350E-03	4.684E-02	3.919E-02	2.390E-02	NOT IDENT.
NB-95	3.798E-03	6.126E-02	5.106E-02	3.125E-02	NOT IDENT.
NB-95M	5.749E-03	1.490E-01	1.103E-01	7.600E-02	NOT IDENT.
ZR-95	-7.566E-02	1.028E-01	7.949E-02	5.246E-02	NOT IDENT.
NB-97	-9.395E+03	1.128E+05	0.000E+00	5.753E+04	SHORT HLIF
ZR-97	1.046E+06	2.122E+06	0.000E+00	1.082E+06	SHORT HLIF
MO-99	-7.295E+00	1.542E+01	1.223E+01	7.870E+00	NOT IDENT.
TC-99M	-1.029E+16	2.534E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.051E-02	3.808E-02	3.241E-02	1.943E-02	NOT IDENT.
RH-102	-5.570E-03	3.297E-02	2.790E-02	1.682E-02	NOT IDENT.
RU-103	-2.558E-02	5.157E-02	4.230E-02	2.631E-02	FAIL ABUN
RH-106	1.478E-01	4.343E-01	3.754E-01	2.216E-01	FAIL ABUN
RU-106	1.478E-01	4.340E-01	3.754E-01	2.214E-01	FAIL ABUN
AG-108M	-7.320E-03	3.917E-02	3.335E-02	1.998E-02	NOT IDENT.
AG-110M	-1.123E-02	4.940E-02	4.066E-02	2.520E-02	NOT IDENT.
IN-111	-3.802E-01	1.105E+00	9.141E-01	5.638E-01	NOT IDENT.
IN-113M	2.562E-03	5.506E-02	4.795E-02	2.809E-02	NOT IDENT.
SN-113	2.562E-03	5.506E-02	4.795E-02	2.809E-02	NOT IDENT.
IN-114M	-6.727E-03	2.307E-01	1.723E-01	1.177E-01	NOT IDENT.
CD-115	3.528E+00	1.279E+01	1.113E+01	6.525E+00	NOT IDENT.
SN-117M	-2.936E-02	6.040E-02	5.105E-02	3.081E-02	NOT IDENT.
SB-122	3.065E+00	2.571E+00	2.366E+00	1.312E+00	NOT IDENT.
I-123	-3.204E+06	5.110E+06	0.000E+00	2.607E+06	SHORT HLIF
TE-123M	-1.989E-02	3.172E-02	2.663E-02	1.619E-02	NOT IDENT.
I-124	3.826E-01	9.573E-01	7.599E-01	4.884E-01	NOT IDENT.
SB-124	7.243E-02	8.790E-02	8.617E-02	4.485E-02	FAIL ABUN
SB-125	9.058E-02	1.135E-01	1.029E-01	5.789E-02	FAIL ABUN
TE-125M	-1.088E+01	9.740E+00	8.134E+00	4.969E+00	NOT IDENT.
I-126	-1.808E-01	2.305E-01	1.790E-01	1.176E-01	NOT IDENT.
SB-126	-6.075E-02	2.291E-01	1.589E-01	1.169E-01	FAIL ABUN
SB-127	2.681E+00	1.671E+00	1.577E+00	8.526E-01	NOT IDENT.
XE-127	-3.040E-02	5.652E-02	4.308E-02	2.884E-02	NOT IDENT.
I-131	-4.337E-02	1.316E-01	1.124E-01	6.717E-02	NOT IDENT.
TE-132	3.411E-01	7.774E-01	6.717E-01	3.966E-01	NOT IDENT.
BA-133	-4.021E-02	6.162E-02	4.414E-02	3.144E-02	FAIL ABUN
I-133	5.818E+03	6.671E+03	0.000E+00	3.404E+03	SHORT HLIF
CS-134	2.656E-02	6.270E-02	5.603E-02	3.199E-02	NOT IDENT.
CS-135	6.533E-02	1.849E-01	1.582E-01	9.434E-02	NOT IDENT.
I-135	3.554E+15	4.475E+15	0.000E+00	2.283E+15	SHORT HLIF
CS-136	-9.514E-04	1.447E-01	1.226E-01	7.381E-02	FAIL ABUN
BA-137M	4.087E-02	4.751E-02	4.256E-02	2.424E-02	NOT IDENT.
CS-137	4.320E-02	5.022E-02	4.499E-02	2.562E-02	NOT IDENT.
CE-139	1.118E-02	3.391E-02	2.964E-02	1.730E-02	NOT IDENT.
BA-140	-1.751E-01	3.327E-01	2.671E-01	1.697E-01	NOT IDENT.
LA-140	-6.107E-02	9.524E-02	7.140E-02	4.859E-02	FAIL ABUN
CE-141	8.847E-02	6.786E-02	6.162E-02	3.462E-02	NOT IDENT.
CE-143	7.401E+02	2.393E+02	0.000E+00	1.221E+02	SHORT HLIF
CE-144	1.238E-01	2.486E-01	1.948E-01	1.268E-01	NOT IDENT.
PM-144	-3.189E-02	4.942E-02	3.903E-02	2.522E-02	NOT IDENT.

PR-144	-2.161E+00	3.349E+00	2.644E+00	1.709E+00	NOT IDENT.
PM-146	1.120E-02	5.143E-02	4.494E-02	2.624E-02	NOT IDENT.
ND-147	2.254E-01	7.346E-01	6.391E-01	3.748E-01	FAIL ABUN
PM-149	-2.434E+01	9.649E+01	8.419E+01	4.923E+01	NOT IDENT.
EU-152	-7.606E-02	1.272E-01	9.672E-02	6.488E-02	FAIL ABUN
GD-153	-3.642E-03	8.468E-02	6.524E-02	4.320E-02	FAIL ABUN
EU-154	-9.671E-03	1.575E-01	1.305E-01	8.035E-02	NOT IDENT.
EU-155	1.601E-01	1.110E-01	1.021E-01	5.662E-02	FAIL ABUN
TB-160	1.087E-02	1.679E-01	1.453E-01	8.569E-02	FAIL ABUN
HO-166M	-1.148E-01	7.456E-02	5.150E-02	3.804E-02	NOT IDENT.
TM-171	1.215E+01	1.968E+01	1.581E+01	1.004E+01	NOT IDENT.
LU-176	1.078E-02	2.736E-02	2.405E-02	1.396E-02	FAIL ABUN
LU-177	3.553E+00	1.734E+00	1.121E+00	8.847E-01	FAIL ABUN
LU-177M	-9.916E-02	2.487E-01	1.798E-01	1.269E-01	NOT IDENT.
HF-181	-1.154E-02	4.707E-02	3.951E-02	2.401E-02	NOT IDENT.
W-181	1.118E-01	2.567E-01	2.050E-01	1.310E-01	NOT IDENT.
TA-182	1.765E-01	2.675E-01	2.371E-01	1.365E-01	FAIL ABUN
RE-183	2.242E-02	1.234E-01	1.073E-01	6.296E-02	FAIL ABUN
RE-184	-7.083E-02	2.989E-01	2.286E-01	1.525E-01	NOT IDENT.
OS-185	2.288E-02	5.522E-02	4.804E-02	2.818E-02	NOT IDENT.
RE-188	6.348E-02	1.860E-01	1.632E-01	9.490E-02	NOT IDENT.
W-188	-2.824E-01	8.982E+00	6.901E+00	4.583E+00	FAIL ABUN
IR-192	7.658E-03	3.808E-02	3.387E-02	1.943E-02	FAIL ABUN
AU-195	1.967E-01	2.429E-01	1.950E-01	1.239E-01	FAIL ABUN
TL-200	-1.005E+02	4.473E+02	0.000E+00	2.282E+02	SHORT HLIF
TL-201	8.966E+00	7.450E+00	6.732E+00	3.801E+00	NOT IDENT.
TL-202	1.480E-02	8.485E-02	7.400E-02	4.329E-02	NOT IDENT.
BI-207	9.621E-04	7.186E-02	6.094E-02	3.666E-02	FAIL ABUN
TL-207	1.752E-01	8.043E-01	6.258E-01	4.104E-01	FAIL ABUN
PO-209	1.282E+00	9.837E+00	8.543E+00	5.019E+00	NOT IDENT.
BI-210	-2.998E-02	6.074E-01	5.766E-01	3.099E-01	NOT IDENT.
PB-210	-2.998E-02	6.074E-01	5.766E-01	3.099E-01	NOT IDENT.
PO-210	-2.998E-02	6.074E-01	5.766E-01	3.099E-01	NOT IDENT.
PB-211	1.033E+00	1.381E+00	9.958E-01	7.046E-01	NOT IDENT.
BI-212	1.073E+00	6.678E-01	4.104E-01	3.407E-01	FAIL ABUN
PO-215	1.752E-01	8.043E-01	6.258E-01	4.104E-01	FAIL ABUN
RN-219	4.187E-02	5.014E-01	4.369E-01	2.558E-01	NOT IDENT.
RN-220	-2.857E+01	3.321E+01	2.614E+01	1.694E+01	NOT IDENT.
RA-223	1.752E-01	8.043E-01	6.258E-01	4.104E-01	FAIL ABUN
AC-227	7.581E-02	4.440E-01	3.772E-01	2.265E-01	FAIL ABUN
TH-227	7.581E-02	4.440E-01	3.772E-01	2.265E-01	FAIL ABUN
TH-229	-6.177E-02	5.671E-01	4.825E-01	2.893E-01	FAIL ABUN
PA-231	6.765E-01	1.804E+00	1.585E+00	9.202E-01	FAIL ABUN
TH-231	1.752E-01	8.043E-01	6.258E-01	4.104E-01	FAIL ABUN
U-231	1.869E-01	1.128E+00	8.845E-01	5.757E-01	FAIL ABUN
PA-233	1.897E-03	7.096E-02	6.256E-02	3.620E-02	FAIL ABUN
PA-234	2.273E-01	4.155E-01	3.708E-01	2.120E-01	FAIL ABUN
PA-234M	-4.754E+00	8.325E+00	6.662E+00	4.248E+00	NOT IDENT.
U-235	1.944E-01	2.295E-01	2.040E-01	1.171E-01	FAIL ABUN
NP-236	-3.171E-02	8.783E-02	7.464E-02	4.481E-02	NOT IDENT.
NP-239	1.160E-01	2.037E-01	1.823E-01	1.040E-01	FAIL ABUN
AM-241	8.660E-02	8.059E-02	6.661E-02	4.112E-02	NOT IDENT.
CM-243	4.119E-02	9.637E-02	8.630E-02	4.917E-02	FAIL ABUN
CM-247	2.724E-02	4.470E-02	3.929E-02	2.281E-02	FAIL ABUN
CF-249	2.402E-02	4.997E-02	4.462E-02	2.550E-02	NOT IDENT.
CF-251	-1.088E-01	1.385E-01	1.144E-01	7.066E-02	NOT IDENT.

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                             2040 SAVAGE ROAD                          *
*                            CHARLESTON ,SC 29417                       *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT              *
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ENERGY	MDA COUNTS
46.50	361.9901
46.50	361.9901
46.50	361.9901
48.70	386.0853
49.72	486.6548
51.35	385.1478
52.39	381.2737
52.97	388.0404
53.15	375.3724
53.44	381.0384
54.07	413.4571
56.28	458.1159
56.28	458.1178
57.37	0.0000
57.53	459.0477
57.53	459.0486
57.60	459.0991
57.98	447.1490
57.98	447.1490
59.32	426.5952
59.32	426.5952
59.40	426.6490
59.54	435.6031
59.72	435.7273
60.01	477.3013
61.10	510.6807
61.14	510.7122
61.30	510.8396
63.00	519.5996
63.29	507.9480
63.29	507.9480
63.58	518.2015
64.28	548.8718
65.12	554.0334
65.20	554.0993
65.20	554.0993
66.05	493.6534
66.72	482.1993
66.83	495.7163
66.91	495.7751
67.20	495.9858
67.20	495.9858
67.75	523.2974
67.85	523.3754
68.90	504.2068
68.90	504.2068
69.30	509.4916
69.67	530.7559
70.82	572.1767
70.82	572.1767
70.83	572.1837
72.80	498.4778
72.87	498.5263
72.87	498.5263
74.67	497.3213
74.81	497.4178
74.81	497.4178
74.81	497.4178
74.81	497.4178
74.81	497.4178
74.81	497.4178
74.97	497.5263
75.28	497.7394
75.70	498.0249
77.11	498.9798
77.11	498.9798
77.11	498.9798

77.11	498.9798
77.11	498.9798
77.11	498.9798
78.38	457.7862
79.62	467.4098
79.80	467.5205
79.80	467.5205
80.11	467.7119
80.18	467.7560
80.30	467.8302
80.30	467.8302
80.57	467.9972
81.00	468.2618
81.07	468.3050
81.07	468.3050
81.07	468.3050
81.07	468.3050
82.60	494.0369
83.37	484.2163
83.78	402.1361
83.78	402.1361
83.78	402.1361
83.78	402.1361
84.21	402.3577
84.40	402.4557
84.90	402.7142
85.43	402.9856
86.29	403.4241
86.50	403.5317
86.54	403.5526
86.59	403.5766
86.72	403.6441
86.79	403.6778
86.94	403.7549
87.30	403.9380
87.30	403.9380
87.30	403.9380
87.30	403.9380
87.30	403.9380
87.30	403.9380
87.57	404.0745
87.88	404.2303
88.03	404.3074
88.36	404.4728
88.47	404.5290
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91.11	405.8475
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92.38	406.4738
92.38	406.4738
93.35	406.9508
94.00	407.2688
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94.67	325.3013
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94.90	336.2374
94.90	336.2374
94.90	336.2374
95.87	366.0982
95.87	366.0982
96.73	371.1312
97.43	321.7028
98.44	252.0641
98.44	252.0650
98.88	289.5556
99.55	301.2060
99.55	301.2060
99.86	311.7041
100.00	311.7542
100.10	311.7920
103.18	365.6895
103.76	307.2240
105.00	279.2390
105.31	293.0575
108.00	347.0171
109.28	358.3333
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111.00	309.6903

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115.19	292.2576
116.30	283.6729
117.00	293.8072
117.00	293.8072
117.66	295.0037
121.11	279.1113
121.62	263.3001
121.78	263.3424
122.06	263.4179
122.32	262.4893
122.32	262.4893
122.32	262.4893
122.32	262.4893
123.07	257.9813
127.23	287.2593
129.76	291.5974
131.20	285.1619
133.02	264.6842
133.54	268.0479
135.34	304.6347
136.00	309.8376
136.25	295.4564
136.48	295.5221
140.51	303.7563
140.51	0.0000
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142.65	310.4684
143.76	267.9902
144.24	259.9532
144.24	259.9532
144.24	259.9532
144.24	259.9532
145.22	255.0850
145.44	251.0543
147.16	290.2879
152.43	256.7463
152.70	254.7529
153.22	244.5932
154.21	252.0058
154.21	252.0058
154.21	252.0058
154.21	252.0058
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156.02	264.7695
158.56	280.8424
159.00	0.0000
159.00	286.1127
160.31	272.9932
161.27	262.8696
162.32	271.3908
162.64	271.4648
163.35	273.7022
163.89	275.9016
165.85	269.0856
167.43	230.9513
171.28	251.5191
171.86	244.3296
172.10	244.3778
176.55	256.7928
176.60	256.8040
181.06	227.2159
184.41	217.6922
185.71	240.7192
186.00	240.7749
190.27	245.8097
192.34	232.0514
193.63	242.1943
197.04	241.7538
198.01	231.2728
198.60	221.7776
200.40	241.2940
201.83	243.6886
202.84	246.7235
205.31	210.8807
208.36	201.0409
208.81	224.5261

209.75	224.6776
209.75	224.6776
210.97	232.4070
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216.55	233.3348
218.09	215.2043
222.10	219.0619
223.80	236.6928
226.40	190.3461
227.00	175.1909
227.08	175.2008
227.20	183.9206
228.16	211.2669
228.18	211.2698
228.18	211.2698
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236.00	185.6760
238.60	177.6633
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238.63	177.6671
238.63	177.6671
239.00	177.7103
240.98	177.9427
241.98	178.0601
241.98	178.0601
241.98	178.0601
244.69	178.3765
245.39	178.4581
247.94	150.0646
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252.85	190.3873
254.15	0.0000
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256.20	175.2644
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260.90	184.6831
262.80	165.9676
264.65	166.1586
268.24	177.7032
268.79	153.1655
269.46	154.3488
269.46	154.3488
269.46	154.3488
269.46	154.3488
271.23	183.6266
273.65	242.2057
276.40	167.1298
277.35	183.1835
277.60	182.0869
277.60	182.0869
278.00	182.1313
278.60	183.5452
279.20	177.0120
279.53	177.0456
280.46	163.6331
281.68	147.2273
283.67	161.4389
284.30	170.6283
285.00	170.6975
285.90	161.7511
286.10	157.2521
286.10	157.2521
287.40	147.4243
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290.67	148.0069
290.80	148.0188
291.72	166.2331
293.26	0.0000
293.70	152.8069
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295.21	145.3691
295.21	145.3691
295.96	145.4316

296.50	100.0151
297.23	100.0568
298.57	100.1346
299.80	116.9052
299.80	116.9052
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300.09	127.5535
300.09	127.5535
300.10	127.5552
300.12	127.5552
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302.84	132.3160
303.76	136.9501
303.91	136.9611
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304.40	132.4329
304.84	133.9873
306.84	124.9936
308.46	125.4122
311.98	133.9129
316.51	127.8114
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319.02	130.7502
319.41	130.7780
320.08	130.8248
323.87	120.0167
323.87	120.0167
323.87	120.0167
323.87	120.0167
325.23	127.8047
328.77	111.0776
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334.20	127.6457
334.30	127.6524
338.28	145.1322
338.28	145.1322
338.28	145.1322
338.28	145.1322
338.32	145.1341
338.32	145.1341
338.32	145.1341
340.50	133.5019
340.57	142.8216
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351.07	118.9385
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351.92	126.4867
351.92	126.4867
355.39	0.0000
356.01	151.7875
364.48	119.7493
366.43	107.5958
367.43	111.4259
367.94	0.0000
369.80	119.1201
374.96	108.9973
383.85	144.6895
387.95	120.1768
388.63	117.3545
391.69	122.3031
391.69	122.3031
392.90	127.1536
398.62	120.7859
400.65	116.1036
401.10	115.1689
401.81	115.2070
402.60	100.3098
404.84	92.9366
410.95	107.6618
411.60	94.8355
413.65	119.0576
414.70	114.2858
415.30	107.8772
415.76	96.6260
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432.53	102.2263
433.93	98.3936
439.47	95.7043
439.56	98.6377
439.89	92.7920
443.98	110.5709
444.90	105.7206
445.03	101.8113
445.03	101.8113
445.03	101.8113
445.03	101.8113
453.90	85.4962
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468.07	84.0350
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475.06	77.3402
475.35	77.3497
476.78	73.4264
477.59	76.4295
477.96	74.4553
482.03	73.5863
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487.03	76.7265
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497.08	90.0472
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511.85	112.3864
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513.99	85.6200
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563.23	75.9512
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568.70	100.7874
569.32	93.6105
569.50	95.6724
569.67	88.4775
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574.00	80.3747
574.64	88.6392
578.91	73.9797
579.30	0.0000
583.14	75.4719
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591.81	84.0019
592.07	87.1213
593.00	83.0000
595.88	70.6230
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602.71	83.2871
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604.41	92.0168
604.70	105.9185
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609.31	72.0019
609.31	72.0019

609.31	72.0019
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614.37	78.4003
618.01	68.0326
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621.84	73.3633
631.29	63.0864
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634.78	54.7396
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636.97	67.4219
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661.65	62.6673
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666.33	76.5932
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677.61	45.9122
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696.49	90.2323
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697.49	71.9939
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698.50	66.6424
699.00	63.4279
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713.82	48.6024
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722.78	74.0105
722.78	74.0105
722.89	74.0122
722.95	74.0139
723.30	74.0222
724.18	74.0422
727.18	56.3964
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735.90	53.0121
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747.13	77.4708
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752.31	59.0137
753.82	69.9734
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756.15	79.8705
756.87	86.4525
763.93	93.2157
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766.84	70.2453
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768.36	72.4727
768.36	72.4727
768.36	72.4727
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778.57	67.9191
778.89	73.4326
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796.30	61.8106
801.93	63.7596
805.60	71.2256
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810.76	68.5515
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818.51	61.2748
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831.60	61.5004
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880.27	41.5490
880.51	38.7186
881.50	42.5070
883.24	51.9776
884.67	59.5611
889.25	40.7018
896.60	50.2655
898.02	50.2838
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903.28	50.6706
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911.07	45.6963
911.07	45.6963
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920.93	46.7679
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925.24	40.1312
926.50	40.1449
934.06	34.4766
934.06	34.4766
934.06	34.4766
934.06	34.4766
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946.00	48.0296
949.00	54.7955
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964.01	52.9353
966.15	38.6190
968.20	38.6393
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969.11	38.6483
969.11	38.6483
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980.50	44.8478
983.50	48.2052
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1050.47	48.2842
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1063.62	50.4086
1076.63	40.6480
1077.35	38.6715
1085.78	42.7201
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1112.84	39.4125
1115.52	49.7244
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1120.29	56.6428
1120.29	56.6428
1120.29	56.6428
1120.51	56.6451
1121.28	54.9397
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1147.95	0.0000
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1175.09	56.7497
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1189.05	43.7069
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1205.75	0.0000
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1221.42	52.1953
1230.97	60.5028
1235.34	64.6637
1236.41	0.0000
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1238.11	64.6996
1238.11	64.6996
1238.11	64.6996
1238.25	65.7292
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1271.85	29.9900
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1274.54	39.3189
1291.56	35.3005
1298.22	0.0000
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1325.50	22.9963
1325.50	22.9963
1332.49	25.1211
1333.61	24.0800
1360.21	22.0997
1362.66	0.0000
1365.15	27.3880
1368.21	24.2419
1368.53	0.0000
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1377.67	17.9504
1377.67	17.9504
1377.67	17.9504
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1394.10	24.3626
1395.20	27.5457
1407.95	13.8062
1434.06	25.6123
1436.60	22.4219
1457.56	0.0000
1460.81	18.2320
1489.15	16.1700
1509.49	15.1473
1596.49	17.8894
1620.62	10.3996
1678.03	0.0000
1691.02	6.6958
1691.02	6.6958

1706.46	0.0000
1750.46	0.0000
1764.49	10.1627
1764.49	10.1627
1764.49	10.1627
1764.49	10.1627
1770.23	5.0859
1771.40	24.2231
1791.20	0.0000
1808.65	8.7715
1836.01	5.8723

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232746007

Total Uranium Activity	2.9726E+00	ug/g
Total Uranium Counting Unc.	2.8757E+00	ug/g
Total Uranium Tpu	1.4672E-06	ug/g
Total Uranium Mda	1.8694E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID   : G232746007      *
*   ANALYST       : MXR1                      DETECTOR    : GAM17           *
*   SAMPLE DATE   : 29-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 10:27:26.97    SAMPLE ALQT:  130.700 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.516E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.415E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.876E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.887E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:28:49.36

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746008.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:28:15
Sample ID         : G232746008           Sample quantity  : 1.44470E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.82  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.58*	187	646	1.20	92.92	88	10	2.59E-02	27.6	
2	0	60.32	57	540	0.88	120.40	117	6	7.87E-03	66.1	
3	0	63.58*	65	859	0.98	126.93	123	9	9.01E-03	89.5	
4	3	75.10	748	664	1.22	149.97	145	15	1.04E-01	6.8	1.06E+00
5	3	77.43*	1043	562	1.01	154.63	145	15	1.45E-01	4.9	
6	0	84.42*	154	539	1.23	168.62	165	7	2.14E-02	27.2	
7	0	87.40	354	592	1.32	174.58	172	7	4.91E-02	12.5	
8	0	93.19*	310	600	1.49	186.16	183	9	4.30E-02	17.6	
9	0	105.78	130	466	1.80	211.35	207	9	1.81E-02	31.1	
10	0	129.14	125	469	1.04	258.08	254	9	1.74E-02	32.3	
11	0	154.31	90	353	1.14	308.43	304	8	1.25E-02	37.6	
12	0	186.26*	205	432	1.27	372.34	367	10	2.85E-02	21.8	
13	0	209.80	169	380	1.30	419.45	415	12	2.34E-02	24.7	
14	4	239.02*	1376	244	1.18	477.89	471	20	1.91E-01	3.4	1.22E+00
15	4	242.09	297	329	1.83	484.04	471	20	4.13E-02	15.2	
16	0	270.57	209	326	1.61	541.01	534	14	2.90E-02	19.6	
17	0	295.50*	419	268	1.36	590.88	585	12	5.82E-02	9.4	
18	0	328.58	117	193	1.30	657.05	652	11	1.62E-02	24.9	
19	0	338.74*	208	308	1.20	677.38	673	11	2.88E-02	18.2	
20	0	352.31*	653	241	1.36	704.54	699	12	9.07E-02	6.3	
21	0	411.47	99	230	4.71	822.90	816	16	1.37E-02	35.9	
22	0	463.35	129	155	1.67	926.67	920	14	1.80E-02	22.2	
23	0	511.32*	92	224	1.87	1022.66	1017	12	1.27E-02	39.0	
24	0	583.62*	375	156	1.38	1167.29	1162	12	5.21E-02	8.7	
25	0	609.71*	444	156	1.58	1219.50	1213	13	6.17E-02	7.6	
26	0	664.78	110	183	6.66	1329.66	1319	25	1.53E-02	34.3	
27	0	727.98	102	116	1.64	1456.12	1449	13	1.41E-02	24.1	
28	0	795.36	53	68	1.46	1590.93	1586	11	7.30E-03	33.5	
29	0	861.28	62	99	1.49	1722.82	1717	14	8.55E-03	36.5	
30	0	911.95*	303	67	1.62	1824.20	1818	15	4.20E-02	8.7	
31	0	970.57	92	150	1.44	1941.49	1933	13	1.27E-02	29.7	
32	0	1121.05	109	90	2.01	2242.56	2233	18	1.52E-02	22.5	
33	0	1238.35	63	50	2.35	2477.27	2472	10	8.75E-03	24.5	
34	0	1461.47*	1267	40	1.94	2923.73	2916	19	1.76E-01	3.1	
35	0	1765.10*	84	0	1.56	3531.31	3523	15	1.17E-02	11.9	
36	0	1847.72	26	9	0.65	3696.63	3685	18	3.61E-03	33.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 12:28:51

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746008.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:28:15
Sample ID : G232746008 Sample quantity : 144.47 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.82 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.966E+01	2.575E+00	7.913E-01	4.838E-02	37.479
CD-109	+	88.03	*	3.487E+00	9.169E-01	1.205E+00	9.510E-02	2.894
SN-126	+	64.28		2.376E-01	4.267E-01	3.900E-01	6.073E-02	0.609
	+	86.94		1.425E+00	6.877E-01	3.870E-01	1.595E-01	3.684
	+	87.57	*	3.429E-01	9.014E-02	1.170E-01	9.253E-03	2.931
EU-155		48.70		2.190E-03	4.526E-01	7.013E-01	5.293E-02	0.003
	+	60.01		1.807E+00	2.393E+00	3.145E+00	3.010E-01	0.575
	+	86.54		4.129E-01	1.087E-01	1.120E-01	9.025E-03	3.688
	+	105.31	*	2.353E-01	1.484E-01	1.544E-01	1.585E-02	1.524
RE-188	+	155.03	*	2.981E-01	2.260E-01	2.858E-01	2.615E-02	1.043
		477.96		2.459E+00	3.815E+00	6.585E+00	4.400E-01	0.373
		633.10		-7.306E-01	3.432E+00	5.516E+00	4.389E-01	-0.132
TL-208		277.35		1.964E-01	4.062E-01	6.633E-01	7.769E-02	0.296
	+	510.84		4.354E-01	3.430E-01	2.632E-01	2.861E-02	1.654
	+	583.14	*	5.137E-01	9.866E-02	7.067E-02	5.850E-03	7.268
	+	860.37		8.001E-01	5.876E-01	6.051E-01	5.102E-02	1.322
BI-210	+	46.50	*	1.642E+00	9.166E-01	7.685E-01	6.265E-02	2.137
PB-210	+	46.50	*	1.642E+00	9.166E-01	7.685E-01	6.265E-02	2.137
PO-210	+	46.50	*	1.642E+00	9.143E-01	7.685E-01	5.479E-02	2.137
BI-211		72.87		1.496E+00	2.059E+00	3.188E+00	2.788E-01	0.469
	+	351.07	*	3.754E+00	5.443E-01	3.356E-01	2.446E-02	11.184
PB-212	+	74.81		2.471E+00	4.615E-01	3.643E-01	4.634E-02	6.782
	+	77.11		2.052E+00	2.643E-01	2.178E-01	1.850E-02	9.421
	+	87.30		1.586E+00	4.460E-01	5.406E-01	6.897E-02	2.934
	+	238.63	*	1.703E+00	1.922E-01	9.215E-02	8.371E-03	18.476
		300.09		1.186E+00	9.367E-01	1.448E+00	1.378E-01	0.819
PO-212	+	74.81		2.471E+00	4.615E-01	3.643E-01	4.634E-02	6.782
	+	77.11		2.052E+00	2.643E-01	2.178E-01	1.850E-02	9.421
	+	87.30		1.586E+00	4.460E-01	5.406E-01	6.897E-02	2.934
		115.19		4.096E-01	3.576E+00	5.878E+00	6.816E-01	0.070
	+	238.63	*	1.703E+00	1.922E-01	9.215E-02	8.371E-03	18.476
		300.09		1.186E+00	9.367E-01	1.448E+00	1.378E-01	0.819
BI-214	+	609.31	*	1.150E+00	2.062E-01	1.361E-01	1.273E-02	8.450
		768.36		1.218E+00	9.171E-01	1.641E+00	1.645E-01	0.742

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		9.207E-01	1.463E+00	2.516E+00	2.425E-01	0.366
	+	1120.29		1.462E+00	6.703E-01	5.868E-01	5.249E-02	2.491
	+	1238.11		2.322E+00	1.152E+00	1.598E+00	1.278E-01	1.453
		1377.67		9.829E-01	1.224E+00	2.161E+00	1.843E-01	0.455
	+	1764.49		1.543E+00	3.786E-01	3.520E-01	1.999E-02	4.382
PB-214	+	74.81		4.257E+00	7.573E-01	6.277E-01	7.139E-02	6.782
	+	77.11		3.517E+00	5.264E-01	3.733E-01	4.260E-02	9.421
	+	87.30		2.717E+00	7.443E-01	9.260E-01	1.024E-01	2.934
	+	241.98		2.208E+00	7.061E-01	5.553E-01	5.375E-02	3.977
	+	295.21		1.410E+00	2.981E-01	2.433E-01	2.383E-02	5.793
	+	351.92	*	1.306E+00	2.012E-01	1.270E-01	1.137E-02	10.285
PO-214	+	74.81		4.257E+00	7.573E-01	6.277E-01	7.139E-02	6.782
	+	77.11		3.517E+00	5.264E-01	3.733E-01	4.260E-02	9.421
	+	87.30		2.717E+00	7.443E-01	9.260E-01	1.024E-01	2.934
	+	241.98		2.208E+00	7.061E-01	5.553E-01	5.375E-02	3.977
	+	295.21		1.410E+00	2.981E-01	2.433E-01	2.383E-02	5.793
	+	351.92	*	1.306E+00	2.012E-01	1.270E-01	1.137E-02	10.285
PO-216	+	74.81		2.471E+00	4.615E-01	3.643E-01	4.634E-02	6.782
	+	77.11		2.052E+00	2.643E-01	2.178E-01	1.850E-02	9.421
	+	87.30		1.586E+00	4.460E-01	5.406E-01	6.897E-02	2.934
	+	238.63	*	1.703E+00	1.922E-01	9.215E-02	8.371E-03	18.476
		300.09		1.186E+00	9.367E-01	1.448E+00	1.378E-01	0.819
PO-218	+	74.81		4.257E+00	7.573E-01	6.277E-01	7.139E-02	6.782
	+	77.11		3.517E+00	5.264E-01	3.733E-01	4.260E-02	9.421
	+	87.30		2.717E+00	7.443E-01	9.260E-01	1.024E-01	2.934
	+	241.98		2.208E+00	7.061E-01	5.553E-01	5.375E-02	3.977
	+	295.21		1.410E+00	2.981E-01	2.433E-01	2.383E-02	5.793
	+	351.92	*	1.306E+00	2.012E-01	1.270E-01	1.137E-02	10.285
RA-224	+	240.98	*	4.187E+00	1.318E+00	1.049E+00	8.282E-02	3.991
RA-226	+	609.31	*	1.150E+00	2.062E-01	1.361E-01	1.273E-02	8.450
		768.36		1.218E+00	9.171E-01	1.641E+00	1.645E-01	0.742
		934.06		9.207E-01	1.463E+00	2.516E+00	2.425E-01	0.366
	+	1120.29		1.462E+00	6.703E-01	5.868E-01	5.249E-02	2.491
	+	1238.11		2.322E+00	1.152E+00	1.598E+00	1.278E-01	1.453
		1377.67		9.829E-01	1.224E+00	2.161E+00	1.843E-01	0.455
	+	1764.49		1.543E+00	3.786E-01	3.520E-01	1.999E-02	4.382
AC-228	+	338.32		1.311E+00	7.189E-01	4.435E-01	1.816E-01	2.957
	+	911.07	*	1.857E+00	3.754E-01	2.667E-01	2.770E-02	6.963
	+	969.11		9.894E-01	6.288E-01	5.526E-01	1.262E-01	1.790
RA-228	+	338.32		1.311E+00	7.189E-01	4.435E-01	1.816E-01	2.957
	+	911.07	*	1.857E+00	3.754E-01	2.667E-01	2.770E-02	6.963
	+	969.11		9.894E-01	6.288E-01	5.526E-01	1.262E-01	1.790
TH-228	+	84.40		4.551E+00	2.542E+00	3.197E+00	4.090E-01	1.424
	+	238.60	*	1.703E+00	1.922E-01	9.214E-02	8.370E-03	18.478
		300.10		1.189E+00	1.166E+00	1.449E+00	8.565E-01	0.821
TH-230	+	609.31	*	1.150E+00	2.062E-01	1.361E-01	1.273E-02	8.450
		768.36		1.218E+00	9.171E-01	1.641E+00	1.645E-01	0.742
		934.06		9.207E-01	1.463E+00	2.516E+00	2.425E-01	0.366
	+	1120.29		1.462E+00	6.703E-01	5.868E-01	5.249E-02	2.491

Sample ID : G232746008 Acquisition date : 14-JUL-2009 10:28:15

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1238.11		2.322E+00	1.152E+00	1.598E+00	1.278E-01	1.453
		1377.67		9.829E-01	1.224E+00	2.161E+00	1.843E-01	0.455
	+	1764.49		1.543E+00	3.786E-01	3.520E-01	1.999E-02	4.382
TH-232	+	338.32		1.311E+00	4.867E-01	4.435E-01	3.088E-02	2.957
	+	911.07	*	1.857E+00	3.754E-01	2.667E-01	2.770E-02	6.963
	+	969.11		9.894E-01	6.288E-01	5.526E-01	1.262E-01	1.790
TH-234	+	63.29	*	6.002E-01	1.080E+00	9.837E-01	1.805E-01	0.610
	+	92.38		2.074E+00	8.214E-01	8.213E-01	1.478E-01	2.526
U-234	+	609.31	*	1.150E+00	2.062E-01	1.361E-01	1.273E-02	8.450
		768.36		1.218E+00	9.171E-01	1.641E+00	1.645E-01	0.742
		934.06		9.207E-01	1.463E+00	2.516E+00	2.425E-01	0.366
	+	1120.29		1.462E+00	6.703E-01	5.868E-01	5.249E-02	2.491
	+	1238.11		2.322E+00	1.152E+00	1.598E+00	1.278E-01	1.453
		1377.67		9.829E-01	1.224E+00	2.161E+00	1.843E-01	0.455
	+	1764.49		1.543E+00	3.786E-01	3.520E-01	1.999E-02	4.382
NP-237	+	86.50	*	1.007E+00	3.365E-01	2.730E-01	6.038E-02	3.688
		95.87		4.003E-02	8.497E-01	1.263E+00	3.123E-01	0.032
U-238	+	63.29	*	6.002E-01	1.080E+00	9.837E-01	1.805E-01	0.610
	+	92.38		2.074E+00	7.523E-01	8.213E-01	6.933E-02	2.526
AM-241	+	59.54	*	5.556E-02	7.361E-02	9.349E-02	9.507E-03	0.594
AM-243	+	74.67	*	4.006E-01	6.478E-02	5.904E-02	5.100E-03	6.785
	+	86.72		3.776E+01	9.926E+00	1.024E+01	8.150E-01	3.686
		117.66		-5.709E-01	3.767E+00	6.122E+00	7.327E-01	-0.093
		142.18		-5.879E+00	1.804E+01	2.873E+01	3.044E+00	-0.205
ANH-511	+	511.00	*	9.404E-02	7.367E-02	5.687E-02	3.969E-03	1.653

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.686E-01	3.944E-01	6.899E-01	5.187E-02	0.534
NA-22		1274.54	*	1.578E-02	5.393E-02	9.174E-02	5.178E-03	0.172
NA-24		1368.53	*	6.351E-01	5.393E-02	Half-Life too short		
AL-26		1129.67		-5.527E-01	2.485E+00	3.501E+00	2.075E-01	-0.158
		1808.65	*	3.083E-02	3.302E-02	6.295E-02	3.552E-03	0.490
TI-44		67.85		-1.332E-02	2.765E-02	4.119E-02	3.729E-03	-0.323
	+	78.38	*	3.786E-01	4.878E-02	6.322E-02	5.325E-03	5.989
SC-46		889.25	*	2.131E-02	5.139E-02	8.752E-02	6.627E-03	0.244
	+	1120.51		2.498E-01	1.134E-01	1.395E-01	8.388E-03	1.791
V-48		944.10		-5.646E-01	1.085E+00	1.711E+00	1.249E-01	-0.330
		983.50	*	-4.361E-02	9.481E-02	1.500E-01	1.061E-02	-0.291
		1312.09		-2.381E-02	1.019E-01	1.654E-01	9.379E-03	-0.144
CR-51		320.08	*	2.924E-01	4.011E-01	6.790E-01	5.284E-02	0.431
MN-52		744.21		-1.970E-01	3.114E-01	4.767E-01	3.870E-02	-0.413
		848.13		-2.892E+00	8.301E+00	1.345E+01	1.048E+00	-0.215
		935.52		2.845E-01	3.166E-01	5.541E-01	4.071E-02	0.513
		1246.25		5.553E+00	9.411E+00	1.545E+01	8.649E-01	0.359
		1333.61		3.757E+00	6.387E+00	1.111E+01	6.320E-01	0.338
		1434.06	*	1.894E-01	2.640E-01	4.693E-01	2.697E-02	0.404

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MN-54		834.83	*	1.711E-02	4.774E-02	8.129E-02	6.379E-03	0.210
CO-56		846.75	*	-2.024E-02	5.005E-02	8.083E-02	6.300E-03	-0.250
		977.42		5.475E-02	4.364E+00	6.636E+00	4.719E-01	0.008
		1037.82		-2.796E-02	3.786E-01	6.140E-01	4.472E-02	-0.046
		1175.09		-2.673E+00	3.168E+00	4.659E+00	2.562E-01	-0.574
	+	1238.25		2.349E-01	1.159E-01	2.021E-01	1.206E-02	1.162
		1360.21		-5.476E-01	1.167E+00	1.829E+00	1.044E-01	-0.299
		1771.40		-1.891E-01	2.588E-01	2.817E-01	1.598E-02	-0.671
CO-57		122.06	*	-1.162E-02	2.468E-02	3.941E-02	4.985E-03	-0.295
		136.48		1.165E-01	2.089E-01	3.449E-01	4.037E-02	0.338
CO-58		810.76	*	-2.188E-02	4.870E-02	7.868E-02	6.267E-03	-0.278
FE-59		142.65		-7.022E-01	2.898E+00	4.522E+00	4.768E-01	-0.155
		192.34		-8.328E-01	9.325E-01	1.519E+00	1.971E-01	-0.548
		1099.22	*	7.100E-02	1.119E-01	1.908E-01	1.363E-02	0.372
		1291.56		-1.334E-01	1.481E-01	2.256E-01	1.648E-02	-0.591
CO-60		1173.22		-3.314E-02	6.039E-02	9.065E-02	4.982E-03	-0.366
		1332.49	*	4.694E-02	4.951E-02	8.869E-02	5.044E-03	0.529
ZN-65		1115.52	*	-4.636E-02	1.224E-01	1.614E-01	9.802E-03	-0.287
GE-68		1077.35	*	9.627E-01	1.585E+00	2.699E+00	1.725E-01	0.357
AS-73		53.44	*	9.584E-02	2.298E-01	3.846E-01	3.249E-02	0.249
AS-74		595.88	*	4.202E-02	1.016E-01	1.713E-01	1.315E-02	0.245
		634.78		1.391E-01	4.364E-01	7.269E-01	5.793E-02	0.191
SE-75		66.05		-2.415E-01	2.670E+00	4.047E+00	4.409E-01	-0.060
		96.73		-4.752E-01	7.132E-01	1.018E+00	1.413E-01	-0.467
		121.11		-3.869E-02	1.322E-01	2.131E-01	3.071E-02	-0.182
		136.00		2.309E-02	3.922E-02	6.485E-02	7.325E-03	0.356
		198.60		1.210E+00	1.850E+00	3.096E+00	2.767E-01	0.391
		264.65	*	-2.387E-03	4.938E-02	7.175E-02	5.621E-03	-0.033
		279.53		5.071E-02	1.137E-01	1.915E-01	1.541E-02	0.265
		303.91		-4.064E+00	2.467E+00	3.560E+00	3.782E-01	-1.142
		400.65		1.420E-01	2.974E-01	4.898E-01	4.502E-02	0.290
BR-77	+	87.88		7.150E+02	1.880E+02	2.717E+02	2.145E+01	2.631
		200.40		1.349E+02	1.523E+02	2.655E+02	2.103E+01	0.508
	+	239.00		2.594E+02	2.687E+01	3.637E+01	2.873E+00	7.132
		249.79		-3.964E+01	6.364E+01	1.029E+02	8.089E+00	-0.385
		281.68		-1.670E+01	8.924E+01	1.460E+02	1.119E+01	-0.114
		297.23		2.461E+02	7.993E+01	1.288E+02	9.690E+00	1.910
		303.76		-3.904E+02	2.018E+02	2.888E+02	2.152E+01	-1.351
		439.47		8.329E+01	1.507E+02	2.610E+02	1.649E+01	0.319
		484.57		8.726E+00	2.606E+02	4.359E+02	2.939E+01	0.020
		520.65	*	-2.555E+00	1.125E+01	1.840E+01	1.299E+00	-0.139
		574.64		-5.468E+01	2.371E+02	3.843E+02	2.887E+01	-0.142
		578.91		2.044E+01	1.109E+02	1.606E+02	1.212E+01	0.127
		585.48		2.175E+03	3.358E+02	5.864E+02	4.456E+01	3.709
		755.35		-1.038E+02	2.091E+02	3.231E+02	2.617E+01	-0.321
		817.79		3.734E+01	1.487E+02	2.527E+02	2.000E+01	0.148
SR-82		698.33		-1.978E+01	4.594E+01	7.218E+01	5.893E+00	-0.274
		776.49	*	-2.906E-01	4.785E-01	7.690E-01	6.190E-02	-0.378
		1395.20		-4.783E+00	1.247E+01	1.964E+01	1.125E+00	-0.244

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-83		520.41	*	-2.629E-02	7.834E-02	1.272E-01	8.983E-03	-0.207
		529.64		4.469E-02	1.225E-01	2.075E-01	1.482E-02	0.215
		552.65		5.262E-02	2.286E-01	3.831E-01	2.810E-02	0.137
RB-84		881.50	*	2.418E-02	8.710E-02	1.473E-01	1.122E-02	0.164
KR-85		513.99	*	2.881E+01	1.037E+01	1.751E+01	1.227E+00	1.646
SR-85		513.99	*	1.475E-01	5.308E-02	8.961E-02	6.277E-03	1.646
RB-86		1076.63	*	7.324E-01	1.021E+00	1.751E+00	1.120E-01	0.418
Y-88		898.02		-6.410E-02	5.304E-02	7.923E-02	5.997E-03	-0.809
		1836.01	*	3.191E-02	4.010E-02	7.029E-02	3.958E-03	0.454
ZR-88		392.90	*	-7.545E-04	3.693E-02	5.667E-02	3.319E-03	-0.013
Y-91		1204.90	*	1.758E+01	2.455E+01	4.286E+01	2.376E+00	0.410
NB-94		702.63	*	2.699E-02	4.468E-02	7.490E-02	6.114E-03	0.360
		871.10		5.215E-03	4.585E-02	7.665E-02	5.881E-03	0.068
NB-95		765.79	*	-5.960E-03	5.166E-02	8.607E-02	6.950E-03	-0.069
NB-95M		235.69	*	5.825E-02	1.330E-01	2.007E-01	1.857E-02	0.290
ZR-95		724.18		-1.502E-01	1.467E-01	1.826E-01	1.631E-02	-0.823
		756.15	*	6.407E-02	9.084E-02	1.530E-01	1.380E-02	0.419
NB-97		657.90	*	-1.804E-02	9.084E-02	Half-Life too short		
		1024.50		-1.410E+01	9.084E-02	Half-Life too short		
ZR-97		254.15		-1.527E-01	9.084E-02	Half-Life too short		
		355.39		5.520E-01	9.084E-02	Half-Life too short		
		507.63	*	1.392E+00	9.084E-02	Half-Life too short		
		602.52		-8.270E-01	9.084E-02	Half-Life too short		
		1021.30		-1.742E-02	9.084E-02	Half-Life too short		
		1147.95		3.055E+00	9.084E-02	Half-Life too short		
		1362.66		-3.456E+00	9.084E-02	Half-Life too short		
		1750.46		-4.058E-01	9.084E-02	Half-Life too short		
MO-99		140.51		-6.911E+00	2.512E+01	4.000E+01	1.137E+01	-0.173
		181.06		1.170E+01	1.999E+01	2.804E+01	5.034E+00	0.417
		366.43		1.748E+01	9.260E+01	1.512E+02	9.728E+00	0.116
		739.58	*	6.333E+00	1.481E+01	2.449E+01	3.651E+00	0.259
		778.00		-8.007E+00	4.091E+01	6.767E+01	5.444E+00	-0.118
TC-99M		140.51	*	-6.381E+09	4.091E+01	Half-Life too short		
RH-101		127.23		8.646E-03	3.517E-02	5.167E-02	6.275E-03	0.167
		198.01	*	2.578E-03	3.415E-02	5.607E-02	4.440E-03	0.046
		325.23		-2.934E-02	2.710E-01	3.843E-01	2.755E-02	-0.076
RH-102		418.52		2.442E-01	3.678E-01	5.415E-01	3.311E-02	0.451
		475.06	*	-4.028E-02	3.619E-02	5.669E-02	3.772E-03	-0.710
	°	631.29		1.784E-02	6.690E-02	1.111E-01	8.827E-03	0.161
		697.49		-3.541E-02	1.040E-01	1.644E-01	1.342E-02	-0.215
		766.84		1.228E-01	1.323E-01	2.335E-01	1.885E-02	0.526
		1046.59		2.132E-01	1.352E-01	2.476E-01	1.644E-02	0.861
		1112.84		-1.506E-03	3.269E-01	4.528E-01	2.754E-02	-0.003
RU-103		497.08	*	-2.677E-02	4.563E-02	7.302E-02	9.612E-03	-0.367
	+	610.33		1.238E+01	2.764E+00	3.147E+00	5.120E-01	3.934
RH-106	+	511.85		4.695E-01	3.678E-01	5.017E-01	3.505E-02	0.936
		621.84	*	8.737E-02	3.940E-01	6.531E-01	8.418E-02	0.134
		1050.47		-2.841E+00	2.851E+00	4.236E+00	2.799E-01	-0.671
RU-106	+	511.85		4.695E-01	3.678E-01	5.017E-01	3.505E-02	0.936

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		621.84	*	8.737E-02	3.939E-01	6.531E-01	5.143E-02	0.134
		1050.47		-2.841E+00	2.851E+00	4.236E+00	2.799E-01	-0.671
AG-108M		433.93	*	-1.114E-02	3.674E-02	6.087E-02	4.095E-03	-0.183
		614.37		-9.131E-04	5.268E-02	7.443E-02	6.096E-03	-0.012
		722.95		-5.228E-02	6.387E-02	8.124E-02	6.908E-03	-0.644
AG-110M		657.75	*	-1.377E-03	4.658E-02	6.521E-02	5.478E-03	-0.021
		677.61		-1.367E-01	3.842E-01	6.069E-01	5.110E-02	-0.225
		706.67		-6.326E-02	2.895E-01	4.610E-01	3.877E-02	-0.137
		763.93		-3.904E-01	2.092E-01	3.043E-01	2.538E-02	-1.283
		884.67		-3.992E-02	6.223E-02	9.791E-02	7.746E-03	-0.408
		937.48		3.316E-02	1.352E-01	2.269E-01	1.747E-02	0.146
		1384.27		-2.453E-01	2.137E-01	3.108E-01	1.890E-02	-0.789
IN-111		171.28		-2.646E-01	1.025E+00	1.613E+00	1.266E-01	-0.164
		245.39	*	9.307E-01	1.139E+00	1.752E+00	1.381E-01	0.531
IN-113M		391.69	*	2.127E-02	5.111E-02	8.409E-02	5.240E-03	0.253
SN-113		391.69	*	2.127E-02	5.111E-02	8.409E-02	5.240E-03	0.253
IN-114M		190.27	*	2.092E-01	2.093E-01	3.103E-01	2.452E-02	0.674
CD-115		260.90		-2.518E+01	1.273E+02	2.094E+02	1.636E+01	-0.120
		492.35		1.467E+01	3.990E+01	6.793E+01	4.627E+00	0.216
		527.90	*	4.935E+00	1.176E+01	2.000E+01	1.425E+00	0.247
SN-117M		156.02		2.476E+00	2.546E+00	3.816E+00	3.447E-01	0.649
		158.56	*	2.011E-02	6.013E-02	9.204E-02	8.038E-03	0.219
SB-122		563.90	*	2.579E+00	2.392E+00	4.184E+00	3.107E-01	0.617
		692.80		-7.841E+00	5.339E+01	8.553E+01	6.984E+00	-0.092
I-123		159.00	*	8.678E-01	5.339E+01	Half-Life too short		
		528.96		2.987E+02	5.339E+01	Half-Life too short		
TE-123M		159.00	*	5.384E-03	3.095E-02	4.702E-02	4.106E-03	0.115
I-124		602.71	*	1.385E-01	8.418E-01	1.212E+00	9.374E-02	0.114
		722.78		-4.388E+00	6.471E+00	8.370E+00	6.819E-01	-0.524
		1325.50		-3.425E+01	4.061E+01	6.159E+01	3.499E+00	-0.556
		1376.25		2.473E+01	3.662E+01	6.415E+01	3.668E+00	0.385
		1509.49		1.787E+01	1.801E+01	3.272E+01	1.886E+00	0.546
		1691.02		1.677E+00	3.731E+00	6.526E+00	3.737E-01	0.257
SB-124		602.71		8.279E-03	5.031E-02	7.246E-02	5.604E-03	0.114
		645.85		-1.202E-01	6.128E-01	9.841E-01	8.462E-02	-0.122
		709.31		6.141E-01	3.828E+00	6.243E+00	5.094E-01	0.098
		713.82		-1.700E-01	2.403E+00	3.861E+00	4.522E-01	-0.044
		722.78		-3.801E-01	5.606E-01	7.251E-01	6.051E-02	-0.524
		968.20		1.237E+01	5.007E+00	8.184E+00	5.865E-01	1.511
		1045.16		3.166E+00	3.031E+00	5.343E+00	3.552E-01	0.592
		1325.50		-3.169E+00	3.758E+00	5.699E+00	3.238E-01	-0.556
		1368.21		1.078E+00	2.282E+00	3.931E+00	4.651E-01	0.274
		1436.60		6.742E-01	4.441E+00	7.425E+00	4.268E-01	0.091
		1691.02	*	3.427E-02	7.625E-02	1.333E-01	8.305E-03	0.257
SB-125		427.89	*	-4.279E-02	1.072E-01	1.770E-01	1.139E-02	-0.242
	+	463.38		1.187E+00	5.338E-01	6.355E-01	4.710E-02	1.868
		600.56		-1.350E-01	2.110E-01	3.307E-01	2.785E-02	-0.408
		635.90		-2.870E-03	3.339E-01	5.442E-01	4.748E-02	-0.005
TE-125M		109.28	*	-2.365E-01	8.962E+00	1.314E+01	1.597E+00	-0.018

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-126		388.63		-2.613E-02	2.396E-01	3.830E-01	2.268E-02	-0.068
		666.33	*	1.234E-01	2.255E-01	3.791E-01	3.093E-02	0.325
		753.82		-2.226E+00	1.961E+00	2.869E+00	2.324E-01	-0.776
SB-126		223.80		2.760E+00	3.869E+00	6.676E+00	5.292E-01	0.413
		278.60		2.209E+00	2.591E+00	4.434E+00	3.411E-01	0.498
	+	296.50		1.389E+01	2.807E+00	3.741E+00	2.817E-01	3.713
		414.70		4.877E-02	9.734E-02	1.414E-01	8.590E-03	0.345
		415.30		4.572E+00	8.003E+00	1.170E+01	7.112E-01	0.391
		555.20		-8.283E-01	4.462E+00	7.272E+00	5.349E-01	-0.114
		573.80		-1.241E+00	1.262E+00	1.940E+00	1.456E-01	-0.640
		593.00		-2.456E-01	1.012E+00	1.631E+00	1.249E-01	-0.151
		656.30		1.751E+00	4.476E+00	6.537E+00	5.308E-01	0.268
		666.33		5.153E-02	9.420E-02	1.583E-01	1.292E-02	0.325
		675.00		2.170E+00	2.689E+00	4.069E+00	3.322E-01	0.533
		695.00		1.530E-01	9.842E-02	1.740E-01	1.420E-02	0.880
		697.00		-7.868E-03	3.575E-01	5.773E-01	4.713E-02	-0.014
		720.50	*	-1.545E-01	2.378E-01	3.100E-01	2.527E-02	-0.498
		856.80		2.990E-01	6.502E-01	9.740E-01	7.544E-02	0.307
		989.30		7.656E-01	1.610E+00	2.733E+00	1.924E-01	0.280
		1034.80		-1.228E+00	1.098E+01	1.776E+01	1.194E+00	-0.069
		1213.00		-3.911E+00	5.687E+00	9.034E+00	5.017E-01	-0.433
SB-127	+	61.10		2.083E+01	2.762E+01	4.050E+01	4.779E+00	0.514
		252.40		1.393E+00	4.232E+00	7.083E+00	2.966E+00	0.197
		290.80		-8.344E+00	2.433E+01	3.431E+01	3.542E+00	-0.243
	+	411.60		3.616E+01	2.652E+01	2.407E+01	3.474E+00	1.503
		444.90		-2.439E+00	1.054E+01	1.748E+01	1.932E+00	-0.140
		473.00		1.940E-01	1.950E+00	3.280E+00	3.797E-01	0.059
		543.00		-1.106E+01	1.867E+01	2.958E+01	4.016E+00	-0.374
		603.60		8.863E+00	1.457E+01	2.178E+01	2.584E+00	0.407
		685.20	*	3.037E-01	1.526E+00	2.508E+00	2.756E-01	0.121
		698.50		-1.145E+01	2.019E+01	3.133E+01	4.868E+00	-0.365
		722.20		-1.756E+01	4.434E+01	5.916E+01	6.356E+00	-0.297
		783.80		1.071E+00	4.595E+00	7.801E+00	9.333E-01	0.137
XE-127		57.60		-6.208E-01	2.254E+00	3.417E+00	3.158E-01	-0.182
		145.22		3.827E-01	7.439E-01	1.193E+00	1.224E-01	0.321
		172.10		-4.162E-02	1.278E-01	2.005E-01	1.574E-02	-0.208
		202.84	*	-9.427E-02	4.744E-02	7.311E-02	5.794E-03	-1.289
		374.96		-8.987E-02	2.241E-01	3.529E-01	2.204E-02	-0.255
I-131		80.18		-5.407E-01	4.559E+00	5.394E+00	4.517E-01	-0.100
		284.30		-1.579E+00	1.557E+00	2.433E+00	1.982E-01	-0.649
		364.48	*	6.862E-02	1.321E-01	2.195E-01	1.555E-02	0.313
		636.97		-1.413E+00	1.928E+00	2.979E+00	2.532E-01	-0.474
		722.89		-8.264E+00	1.061E+01	1.356E+01	1.113E+00	-0.609
TE-132		49.72		-1.909E-01	3.831E+00	5.915E+00	5.986E-01	-0.032
		111.76		-1.091E+00	2.693E+01	4.293E+01	5.523E+00	-0.025
		116.30		-3.687E+00	2.667E+01	4.341E+01	5.837E+00	-0.085
		228.16	*	-7.802E-01	6.635E-01	1.039E+00	1.590E-01	-0.751
BA-133		53.15		4.539E-01	9.760E-01	1.636E+00	1.373E-01	0.277
		79.62		4.327E-01	1.127E+00	1.574E+00	2.373E-01	0.275

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		81.00		-9.869E-03	1.001E-01	1.185E-01	1.859E-02	-0.083
		276.40		3.537E-01	4.399E-01	6.666E-01	9.282E-02	0.531
		302.84		-1.765E-01	1.663E-01	2.496E-01	3.137E-02	-0.707
		356.01	*	-2.241E-02	5.855E-02	8.043E-02	9.656E-03	-0.279
		383.85		-8.544E-02	3.604E-01	5.723E-01	6.296E-02	-0.149
I-133	+	510.53		8.280E-01	3.604E-01	Half-Life too short		
		529.87	*	1.630E-03	3.604E-01	Half-Life too short		
		706.58		-1.135E-01	3.604E-01	Half-Life too short		
		856.28		2.533E-01	3.604E-01	Half-Life too short		
		875.33		-4.808E-02	3.604E-01	Half-Life too short		
		1236.41		1.361E+00	3.604E-01	Half-Life too short		
		1298.22		6.631E-02	3.604E-01	Half-Life too short		
CS-134		475.35		-2.762E+00	2.393E+00	3.741E+00	2.490E-01	-0.738
		563.23		4.072E-01	4.321E-01	7.510E-01	5.645E-02	0.542
		569.32		1.498E-02	2.376E-01	3.929E-01	2.988E-02	0.038
		604.70		1.933E-02	4.361E-02	6.436E-02	5.001E-03	0.300
	+	795.84	*	1.049E-01	7.077E-02	1.023E-01	8.249E-03	1.025
		801.93		-5.342E-01	5.855E-01	7.553E-01	6.062E-02	-0.707
		1038.57		-3.164E+00	4.729E+00	7.263E+00	4.864E-01	-0.436
		1167.94		9.096E-01	3.330E+00	5.481E+00	3.042E-01	0.166
		1365.15		2.611E-02	1.528E+00	2.528E+00	1.590E-01	0.010
CS-135		268.24	*	2.032E-01	1.833E-01	2.837E-01	2.621E-02	0.716
I-135		288.45		1.416E+10	1.833E-01	Half-Life too short		
		417.63		4.492E+09	1.833E-01	Half-Life too short		
		546.56		4.358E+09	1.833E-01	Half-Life too short		
		836.80		9.964E+09	1.833E-01	Half-Life too short		
		1038.76		-1.132E+10	1.833E-01	Half-Life too short		
		1124.00		5.941E+10	1.833E-01	Half-Life too short		
		1131.51		-1.025E+09	1.833E-01	Half-Life too short		
		1260.41	*	-3.557E+09	1.833E-01	Half-Life too short		
		1457.56		2.807E+11	1.833E-01	Half-Life too short		
		1678.03		3.160E+09	1.833E-01	Half-Life too short		
		1706.46		8.117E+09	1.833E-01	Half-Life too short		
		1791.20		3.283E+09	1.833E-01	Half-Life too short		
CS-136		66.91		-1.542E-01	4.431E-01	6.636E-01	1.043E-01	-0.232
	+	86.29		4.432E+00	1.239E+00	1.564E+00	1.944E-01	2.834
	+	153.22		1.136E+00	8.627E-01	1.137E+00	1.171E-01	0.999
		163.89		-2.669E-01	1.177E+00	1.823E+00	1.674E-01	-0.146
		176.55		-1.089E-01	3.900E-01	6.119E-01	5.146E-02	-0.178
		273.65		-8.625E-02	5.230E-01	7.521E-01	6.287E-02	-0.115
		340.57		6.336E-01	1.744E-01	2.923E-01	2.115E-02	2.168
		818.51		1.533E-02	8.563E-02	1.447E-01	1.147E-02	0.106
		1048.07	*	4.889E-02	1.322E-01	2.220E-01	1.575E-02	0.220
		1235.34		7.468E-01	7.817E-01	1.217E+00	1.200E-01	0.614
BA-137M		661.65	*	3.921E-02	5.131E-02	7.705E-02	6.284E-03	0.509
CS-137		661.65	*	4.145E-02	5.424E-02	8.145E-02	6.657E-03	0.509
CE-139		165.85	*	-2.121E-02	3.209E-02	4.973E-02	3.899E-03	-0.427
BA-140		162.64		4.561E-01	8.169E-01	1.306E+00	1.144E-01	0.349
		304.84		-1.091E+00	1.436E+00	2.148E+00	5.945E-01	-0.508

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		423.70		-4.183E-01	2.271E+00	3.578E+00	1.140E+00	-0.117
		537.32	*	2.359E-01	2.978E-01	5.009E-01	1.643E-01	0.471
LA-140	+	328.77		9.018E-01	4.544E-01	5.775E-01	4.444E-02	1.561
		432.53		-1.827E-01	2.356E+00	3.954E+00	2.696E-01	-0.046
		487.03		-7.313E-03	1.626E-01	2.706E-01	2.011E-02	-0.027
		751.79		6.899E-01	2.134E+00	3.508E+00	3.184E-01	0.197
		815.85		-5.130E-02	3.739E-01	6.174E-01	5.553E-02	-0.083
		867.82		3.437E-01	2.152E+00	3.122E+00	2.559E-01	0.110
		919.63		4.279E-01	3.770E+00	5.419E+00	5.259E-01	0.079
		925.24		-5.351E-01	1.412E+00	2.260E+00	1.813E-01	-0.237
		1596.49	*	-2.981E-02	1.056E-01	1.655E-01	9.535E-03	-0.180
CE-141		145.44	*	3.796E-02	6.699E-02	1.076E-01	1.116E-02	0.353
CE-143		57.37		-1.380E-04	6.699E-02	Half-Life too short		
		231.56		4.289E-04	6.699E-02	Half-Life too short		
		293.26	*	3.149E-04	6.699E-02	Half-Life too short		
		350.59		2.026E-02	6.699E-02	Half-Life too short		
		490.36		-2.138E-03	6.699E-02	Half-Life too short		
	+	664.57		5.210E-03	6.699E-02	Half-Life too short		
		721.93		-7.164E-04	6.699E-02	Half-Life too short		
CE-144		80.11		-2.335E-01	2.129E+00	2.520E+00	2.097E-01	-0.093
		133.54	*	4.268E-02	2.311E-01	3.372E-01	5.845E-02	0.127
PM-144		476.78		3.894E-02	8.285E-02	1.419E-01	1.090E-02	0.274
		618.01		-2.265E-02	3.877E-02	6.079E-02	4.929E-03	-0.373
		696.49	*	1.724E-04	4.608E-02	7.454E-02	6.088E-03	0.002
		778.57		-1.121E+00	2.857E+00	4.660E+00	3.750E-01	-0.241
PR-144		696.49	*	1.168E-02	3.122E+00	5.051E+00	4.124E-01	0.002
		1489.15		5.543E+00	1.329E+01	2.294E+01	1.322E+00	0.242
PM-146		453.90	*	5.969E-02	4.998E-02	8.872E-02	8.053E-03	0.673
		633.02		-2.988E-01	1.709E+00	2.748E+00	1.023E+00	-0.109
		735.90		-9.030E-02	1.981E-01	3.056E-01	8.696E-02	-0.296
		747.13		1.337E-02	1.167E-01	1.891E-01	2.597E-02	0.071
ND-147		91.11		8.340E-01	3.168E-01	4.200E-01	3.787E-02	1.986
		319.41		2.486E+00	3.450E+00	5.845E+00	4.240E-01	0.425
		439.89		5.032E+00	6.350E+00	1.113E+01	7.039E-01	0.452
		531.02	*	-2.600E-02	6.365E-01	1.052E+00	1.489E-01	-0.025
PM-149		285.90	*	2.736E+01	8.877E+01	1.484E+02	2.229E+01	0.184
EU-152		121.78		1.926E-02	6.976E-02	1.150E-01	1.555E-02	0.168
		244.69		5.257E-01	3.755E-01	5.929E-01	4.673E-02	0.887
		344.27	*	6.043E-02	1.175E-01	1.735E-01	1.301E-02	0.348
		443.98		-4.324E-01	1.067E+00	1.752E+00	1.115E-01	-0.247
		778.89		-1.211E-01	3.305E-01	5.401E-01	4.344E-02	-0.224
		867.32		4.904E-01	1.250E+00	1.855E+00	1.427E-01	0.264
		964.01		1.404E-01	4.530E-01	6.571E-01	4.725E-02	0.214
		1085.78		1.210E-01	4.617E-01	7.674E-01	4.851E-02	0.158
		1112.02		-2.382E-01	4.874E-01	6.371E-01	3.880E-02	-0.374
		1407.95		1.385E-01	2.512E-01	4.308E-01	2.471E-02	0.321
GD-153		69.67		3.489E-02	9.749E-01	1.573E+00	1.406E-01	0.022
	+	83.37		2.613E+01	1.436E+01	1.919E+01	1.562E+00	1.362
		97.43	*	-6.459E-02	7.643E-02	1.083E-01	9.857E-03	-0.596

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		103.18		-7.331E-02	1.039E-01	1.473E-01	1.455E-02	-0.498
EU-154		123.07		-9.038E-02	5.340E-02	7.847E-02	1.144E-02	-1.152
		247.94		6.111E-02	4.110E-01	6.084E-01	6.647E-02	0.100
		591.81		-3.150E-01	6.984E-01	1.108E+00	1.216E-01	-0.284
		723.30		-2.688E-01	2.649E-01	3.281E-01	2.987E-02	-0.819
		756.87		6.474E-01	1.004E+00	1.681E+00	1.951E-01	0.385
		873.19		-1.290E-01	3.946E-01	6.389E-01	7.404E-02	-0.202
		996.32		-9.575E-01	5.151E-01	6.743E-01	1.149E-01	-1.420
		1004.76		-2.028E-01	2.918E-01	4.517E-01	4.722E-02	-0.449
		1274.45	*	4.293E-02	1.506E-01	2.560E-01	2.364E-02	0.168
TB-160	+	86.79		1.101E+00	2.895E-01	4.078E-01	3.243E-02	2.700
		197.04		-3.930E-01	5.614E-01	9.253E-01	7.325E-02	-0.425
		215.65		3.177E-01	8.147E-01	1.236E+00	9.803E-02	0.257
		298.57		1.081E-01	1.386E-01	2.092E-01	1.571E-02	0.517
		879.36	*	1.993E-02	1.745E-01	2.916E-01	2.224E-02	0.068
		962.29		3.648E-02	7.906E-01	1.120E+00	8.068E-02	0.033
		966.15		5.216E-01	3.234E-01	5.157E-01	3.702E-02	1.012
		1177.93		3.287E-01	4.685E-01	7.946E-01	4.373E-02	0.414
		1271.85		3.573E-01	8.971E-01	1.537E+00	8.651E-02	0.232
HO-166M		80.57		1.160E-01	2.664E-01	3.256E-01	2.702E-02	0.356
		184.41		7.602E-02	4.367E-02	6.616E-02	5.220E-03	1.149
		280.46		-4.734E-02	9.129E-02	1.470E-01	1.129E-02	-0.322
	+	410.95		7.468E-01	5.388E-01	4.951E-01	2.990E-02	1.508
		711.68	*	-2.286E-02	8.676E-02	1.377E-01	1.123E-02	-0.166
		752.31		-6.895E-02	3.474E-01	5.494E-01	4.452E-02	-0.126
		810.29		-3.508E-02	7.399E-02	1.194E-01	9.482E-03	-0.294
TM-171		51.35		-5.979E+00	7.325E+00	1.147E+01	9.231E-01	-0.521
		52.39		-2.099E+00	3.927E+00	6.494E+00	5.356E-01	-0.323
	+	59.40		9.503E+00	1.259E+01	1.777E+01	1.703E+00	0.535
		66.72	*	-6.132E+00	1.613E+01	2.415E+01	2.204E+00	-0.254
LU-176	+	88.36		8.132E-01	2.138E-01	3.024E-01	2.399E-02	2.689
		201.83		-3.081E-02	2.861E-02	4.625E-02	3.665E-03	-0.666
		306.84	*	1.384E-02	2.636E-02	4.434E-02	3.288E-03	0.312
		401.10		2.840E+00	7.781E+00	1.274E+01	7.568E-01	0.223
LU-177		112.95		-3.029E-01	1.583E+00	2.514E+00	2.832E-01	-0.120
	+	208.36	*	3.643E+00	1.820E+00	1.967E+00	1.559E-01	1.853
LU-177M		52.97		7.607E-03	4.366E-01	7.227E-01	6.040E-02	0.011
		54.07		1.644E-01	2.474E-01	4.165E-01	3.568E-02	0.395
	+	61.30		5.600E-01	7.417E-01	1.081E+00	1.025E-01	0.518
		121.62		1.210E-01	3.583E-01	5.917E-01	7.440E-02	0.204
		147.16		-7.976E-01	6.820E-01	1.038E+00	1.044E-01	-0.768
		171.86		-1.542E-01	5.149E-01	8.088E-01	6.351E-02	-0.191
		218.09		6.900E-01	8.520E-01	1.476E+00	1.170E-01	0.468
		268.79		1.515E+00	8.703E-01	1.531E+00	1.189E-01	0.989
		319.02		6.309E-02	2.767E-01	4.577E-01	3.322E-02	0.138
		367.43		-5.433E-02	1.042E+00	1.678E+00	1.076E-01	-0.032
		413.65	*	1.601E-02	2.347E-01	3.292E-01	1.997E-02	0.049
HF-181		56.28		-2.756E-01	3.336E-01	4.935E-01	4.435E-02	-0.559
		57.53		-5.646E-02	1.889E-01	2.861E-01	2.641E-02	-0.197

---- Non-Identified Nuclides ----

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		65.20		8.313E-01	5.302E-01	8.432E-01	7.777E-02	0.986
		133.02		-3.884E-03	7.444E-02	1.074E-01	1.241E-02	-0.036
		136.25		2.951E-01	4.580E-01	7.585E-01	8.514E-02	0.389
		345.85		-1.757E-01	2.465E-01	3.307E-01	2.260E-02	-0.531
		482.03	*	-2.566E-02	5.211E-02	8.465E-02	5.687E-03	-0.303
W-181		56.28		-1.082E-01	1.308E-01	1.936E-01	1.740E-02	-0.559
		57.53		-2.224E-02	7.415E-02	1.123E-01	1.036E-02	-0.198
		65.20	*	3.237E-01	2.064E-01	3.283E-01	3.028E-02	0.986
TA-182		67.75		-3.221E-02	6.571E-02	9.785E-02	8.865E-03	-0.329
		100.10		5.696E-02	1.628E-01	2.660E-01	2.515E-02	0.214
		152.43		-1.727E-01	3.958E-01	5.521E-01	5.219E-02	-0.313
		222.10		4.784E-04	3.421E-01	5.748E-01	4.557E-02	0.001
		1001.68		3.378E+00	2.684E+00	4.787E+00	3.330E-01	0.706
	+	1121.28		6.903E-01	3.133E-01	3.914E-01	2.350E-02	1.764
		1189.05		-1.857E-01	3.885E-01	6.284E-01	3.469E-02	-0.295
		1221.42	*	-3.747E-02	2.310E-01	3.812E-01	2.121E-02	-0.098
		1230.97		3.000E-02	6.080E-01	9.046E-01	5.046E-02	0.033
RE-183		57.98		-6.198E-03	7.433E-02	1.136E-01	1.058E-02	-0.055
	+	59.32		3.888E-02	5.149E-02	7.228E-02	6.920E-03	0.538
		67.20		-4.468E-02	1.162E-01	1.740E-01	1.582E-02	-0.257
		162.32	*	6.577E-02	1.203E-01	1.922E-01	1.591E-02	0.342
	+	208.81		3.331E+00	1.664E+00	1.826E+00	1.448E-01	1.824
		291.72		-6.490E-02	1.101E+00	1.583E+00	1.200E-01	-0.041
RE-184		57.98		-2.286E-02	2.742E-01	4.189E-01	3.902E-02	-0.055
	+	59.32		1.433E-01	1.898E-01	2.664E-01	2.550E-02	0.538
		67.20		-1.648E-01	4.286E-01	6.415E-01	5.834E-02	-0.257
		161.27		-1.764E-02	3.721E-01	5.940E-01	4.992E-02	-0.030
		216.55		1.430E-01	2.793E-01	4.473E-01	3.548E-02	0.320
		252.85	*	8.602E-02	2.338E-01	3.954E-01	3.104E-02	0.218
		318.01		-1.656E-01	4.789E-01	7.685E-01	5.588E-02	-0.215
		792.07		-1.152E-01	1.462E+00	2.094E+00	1.676E-01	-0.055
		903.28		1.447E+00	1.295E+00	2.222E+00	1.666E-01	0.651
		920.93		-1.787E-01	5.948E-01	8.822E-01	6.544E-02	-0.203
OS-185	+	59.72		1.061E-01	1.405E-01	2.006E-01	1.925E-02	0.529
	+	61.14		6.122E-02	8.108E-02	1.190E-01	1.130E-02	0.514
		69.30		2.048E-02	1.638E-01	2.771E-01	2.484E-02	0.074
		592.07		-1.541E+00	2.828E+00	4.457E+00	3.410E-01	-0.346
		646.12	*	-1.328E-02	5.199E-02	8.311E-02	6.689E-03	-0.160
		717.42		1.022E+00	1.275E+00	2.155E+00	1.757E-01	0.474
		874.81		-5.261E-02	7.692E-01	1.269E+00	9.713E-02	-0.041
		880.27		7.468E-02	9.706E-01	1.618E+00	1.233E-01	0.046
W-188	+	63.58		2.408E+01	4.315E+01	5.287E+01	4.933E+00	0.455
		227.08		-7.500E+00	1.212E+01	1.977E+01	1.566E+00	-0.379
		290.67	*	-3.383E+00	8.734E+00	1.228E+01	9.318E-01	-0.275
IR-192	+	295.96		1.073E+00	2.171E-01	2.914E-01	2.216E-02	3.683
		308.46		1.475E-02	1.023E-01	1.689E-01	1.258E-02	0.087
		316.51	*	-1.892E-02	3.580E-02	5.683E-02	4.157E-03	-0.333
		468.07		-3.931E-02	8.764E-02	1.229E-01	9.075E-03	-0.320
		604.41		2.346E-01	5.876E-01	8.633E-01	1.075E-01	0.272

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		612.46		5.156E+00	1.302E+00	2.182E+00	2.008E-01	2.363
AU-195		65.12		1.896E-01	9.706E-02	1.553E-01	1.434E-02	1.220
		66.83		-1.935E-02	5.351E-02	8.018E-02	7.311E-03	-0.241
	+	75.70		1.295E+00	2.095E-01	3.099E-01	2.658E-02	4.180
		98.88	*	2.326E-01	2.038E-01	3.406E-01	3.165E-02	0.683
	+	129.76		6.477E+00	4.260E+00	5.035E+00	5.987E-01	1.286
TL-200		367.94	*	-2.968E-04	4.260E+00	Half-Life too short		
		579.30		4.404E-04	4.260E+00	Half-Life too short		
		828.27		1.407E-03	4.260E+00	Half-Life too short		
		1205.75		8.871E-04	4.260E+00	Half-Life too short		
TL-201		68.90		-4.735E-01	2.512E+00	4.215E+00	3.789E-01	-0.112
		70.82		7.773E-01	1.637E+00	2.521E+00	2.236E-01	0.308
		80.30		-5.725E-01	4.853E+00	5.740E+00	4.772E-01	-0.100
		135.34		-5.160E+00	2.461E+01	3.952E+01	4.473E+00	-0.131
		167.43	*	3.665E+00	6.976E+00	1.137E+01	8.910E-01	0.322
TL-202		68.90		-4.392E-02	2.330E-01	3.910E-01	3.514E-02	-0.112
		70.82		7.191E-02	1.515E-01	2.332E-01	2.069E-02	0.308
		80.30		-5.297E-02	4.490E-01	5.311E-01	4.415E-02	-0.100
		439.56	*	5.681E-02	7.535E-02	1.319E-01	8.331E-03	0.431
HG-203		70.83		3.144E-01	6.623E-01	1.019E+00	1.402E-01	0.309
		72.87		2.967E-01	4.095E-01	6.325E-01	8.402E-02	0.469
		82.60		-5.379E-01	1.017E+00	1.342E+00	1.809E-01	-0.401
		279.20	*	2.707E-02	4.283E-02	7.269E-02	5.788E-03	0.372
BI-207		72.80		7.717E-02	1.197E-01	1.849E-01	1.618E-02	0.417
	+	74.97		7.190E-01	1.163E-01	1.611E-01	1.389E-02	4.462
	+	84.90		3.382E-01	1.859E-01	2.539E-01	2.046E-02	1.332
		569.67		-1.707E-03	3.681E-02	6.045E-02	4.518E-03	-0.028
		1063.62	*	3.766E-02	7.298E-02	1.232E-01	8.011E-03	0.306
		1770.23		5.302E-01	5.048E-01	9.030E-01	5.124E-02	0.587
TL-207		81.07		-2.520E-02	2.211E-01	2.614E-01	2.162E-02	-0.096
	+	83.78		2.230E-01	1.226E-01	1.675E-01	1.360E-02	1.331
		94.90		9.004E-01	2.248E-01	3.675E-01	3.222E-02	2.450
		122.32		-1.212E+00	1.726E+00	2.724E+00	3.559E-01	-0.445
		144.24		3.748E-01	7.292E-01	1.169E+00	1.314E-01	0.321
	+	154.21		6.899E-01	5.239E-01	6.897E-01	6.933E-02	1.000
	+	269.46		9.277E-01	3.719E-01	3.785E-01	3.012E-02	2.451
		323.87	*	-2.831E-01	8.369E-01	1.166E+00	1.988E-01	-0.243
	+	338.28		5.475E+00	2.089E+00	2.667E+00	2.992E-01	2.053
		445.03		-6.252E-01	2.541E+00	4.213E+00	4.467E-01	-0.148
PO-209		260.50		4.836E+00	9.840E+00	1.669E+01	1.304E+00	0.290
		262.80		-2.365E+01	2.695E+01	4.274E+01	3.333E+00	-0.554
		896.60	*	-1.344E+01	9.725E+00	1.431E+01	1.078E+00	-0.939
PB-211		404.84	*	-5.807E-01	1.313E+00	1.697E+00	1.058E+00	-0.342
		427.08		-1.615E+00	2.723E+00	3.884E+00	2.402E+00	-0.416
		831.96		-1.401E+00	1.752E+00	2.364E+00	1.479E+00	-0.592
BI-212	+	727.18	*	1.206E+00	5.919E-01	7.763E-01	7.452E-02	1.553
		785.46		7.196E-01	2.329E+00	3.971E+00	3.186E-01	0.181
		1620.62		7.606E-01	1.572E+00	2.709E+00	1.559E-01	0.281
PO-215		81.07		-2.520E-02	2.211E-01	2.614E-01	2.162E-02	-0.096

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	83.78		2.230E-01	1.226E-01	1.675E-01	1.360E-02	1.331
		94.90		9.004E-01	2.248E-01	3.675E-01	3.222E-02	2.450
		122.32		-1.212E+00	1.726E+00	2.724E+00	3.559E-01	-0.445
		144.24		3.748E-01	7.292E-01	1.169E+00	1.314E-01	0.321
	+	154.21		6.899E-01	5.239E-01	6.897E-01	6.933E-02	1.000
	+	269.46		9.277E-01	3.719E-01	3.785E-01	3.012E-02	2.451
		323.87	*	-2.831E-01	8.369E-01	1.166E+00	1.988E-01	-0.243
	+	338.28		5.475E+00	2.089E+00	2.667E+00	2.992E-01	2.053
		445.03		-6.252E-01	2.541E+00	4.213E+00	4.467E-01	-0.148
RN-219	+	271.23		1.190E+00	4.815E-01	4.925E-01	4.725E-02	2.417
		401.81	*	1.667E-01	4.734E-01	7.740E-01	1.058E-01	0.215
RN-220		549.76	*	1.304E+01	3.095E+01	5.245E+01	3.834E+00	0.249
RA-223		81.07		-2.520E-02	2.211E-01	2.614E-01	2.162E-02	-0.096
	+	83.78		2.230E-01	1.226E-01	1.675E-01	1.360E-02	1.331
		94.90		9.004E-01	2.248E-01	3.675E-01	3.222E-02	2.450
		122.32		-1.212E+00	1.726E+00	2.724E+00	3.559E-01	-0.445
		144.24		3.748E-01	7.292E-01	1.169E+00	1.314E-01	0.321
	+	154.21		6.899E-01	5.239E-01	6.897E-01	6.933E-02	1.000
	+	269.46		9.277E-01	3.719E-01	3.785E-01	3.012E-02	2.451
		323.87	*	-2.831E-01	8.369E-01	1.166E+00	1.988E-01	-0.243
	+	338.28		5.475E+00	2.089E+00	2.667E+00	2.992E-01	2.053
		445.03		-6.252E-01	2.541E+00	4.213E+00	4.467E-01	-0.148
AC-227		79.80		-4.796E-01	1.456E+00	1.947E+00	4.164E-01	-0.246
		236.00		2.060E-01	2.509E-01	3.848E-01	4.523E-02	0.535
		256.20	*	-4.360E-01	4.141E-01	6.367E-01	9.499E-02	-0.685
		286.10		6.119E-01	1.581E+00	2.653E+00	3.337E-01	0.231
		299.80		1.637E+00	1.763E+00	2.658E+00	4.509E-01	0.616
		304.40		-2.930E+00	2.193E+00	3.161E+00	5.662E-01	-0.927
		334.20		1.289E+00	3.891E+00	4.150E+00	7.784E-01	0.311
TH-227		79.80		-4.796E-01	1.456E+00	1.947E+00	4.218E-01	-0.246
	+	94.00		8.016E+00	3.320E+00	3.862E+00	8.415E-01	2.076
		236.00		2.060E-01	2.507E-01	3.848E-01	4.053E-02	0.535
		256.20	*	-4.360E-01	4.162E-01	6.367E-01	1.127E-01	-0.685
		286.10		6.119E-01	1.694E+00	2.653E+00	2.661E+00	0.231
		299.80		1.637E+00	1.763E+00	2.658E+00	4.509E-01	0.616
		304.40		-2.930E+00	2.193E+00	3.161E+00	5.662E-01	-0.927
		334.20		1.289E+00	3.891E+00	4.150E+00	7.784E-01	0.311
TH-229	+	85.43		3.338E-01	1.835E-01	2.534E-01	2.034E-02	1.317
	+	88.47		4.681E-01	1.231E-01	1.727E-01	1.372E-02	2.711
		100.00		6.156E-02	1.691E-01	2.764E-01	2.611E-02	0.223
		193.63	*	-4.012E-01	5.023E-01	8.249E-01	6.526E-02	-0.486
	+	210.97		2.613E+00	1.305E+00	1.365E+00	1.083E-01	1.914
PA-231		283.67	*	-1.219E+00	1.607E+00	2.536E+00	3.716E-01	-0.481
		301.29		9.480E-01	6.984E-01	1.080E+00	1.239E-01	0.878
TH-231		81.07		-2.520E-02	2.211E-01	2.614E-01	2.162E-02	-0.096
	+	83.78		2.230E-01	1.226E-01	1.675E-01	1.360E-02	1.331
		94.90		9.004E-01	2.248E-01	3.675E-01	3.222E-02	2.450
		122.32		-1.212E+00	1.726E+00	2.724E+00	3.559E-01	-0.445
		144.24		3.748E-01	7.292E-01	1.169E+00	1.314E-01	0.321

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	154.21		6.899E-01	5.239E-01	6.897E-01	6.933E-02	1.000
	+	269.46		9.277E-01	3.719E-01	3.785E-01	3.012E-02	2.451
		323.87	*	-2.831E-01	8.369E-01	1.166E+00	1.988E-01	-0.243
	+	338.28		5.475E+00	2.089E+00	2.667E+00	2.992E-01	2.053
		445.03		-6.252E-01	2.541E+00	4.213E+00	4.467E-01	-0.148
U-231	+	84.21		9.319E+00	5.123E+00	7.084E+00	5.734E-01	1.316
	+	92.29		7.683E+00	2.787E+00	3.784E+00	3.190E-01	2.030
		95.87	*	4.403E-02	9.345E-01	1.389E+00	1.235E-01	0.032
		108.00		6.150E-01	1.936E+00	2.891E+00	3.051E-01	0.213
PA-233	+	75.28		2.098E+01	4.314E+00	4.760E+00	7.300E-01	4.408
	+	86.59		6.712E+00	2.454E+00	2.451E+00	6.524E-01	2.739
		300.12		6.177E-01	4.886E-01	7.489E-01	1.067E-01	0.825
		311.98	*	-4.354E-04	6.623E-02	1.084E-01	8.281E-03	-0.004
		340.50		3.306E+00	1.133E+00	1.456E+00	3.388E-01	2.271
		398.62		-9.590E-01	2.545E+00	3.880E+00	1.004E+00	-0.247
		415.76		1.374E+00	2.153E+00	3.139E+00	6.488E-01	0.438
PA-234	+	63.00		6.996E-01	1.257E+00	1.515E+00	2.413E-01	0.462
	+	94.67		7.148E-01	2.670E-01	2.852E-01	3.561E-02	2.506
		98.44		7.666E-02	9.452E-02	1.351E-01	7.553E-02	0.567
		99.86		8.475E-02	4.312E-01	7.012E-01	6.609E-02	0.121
		111.00		-1.730E-01	1.688E-01	2.630E-01	3.648E-02	-0.658
		131.20		1.501E-01	1.204E-01	1.833E-01	2.153E-02	0.819
		152.70		-8.389E-02	3.844E-01	5.427E-01	9.478E-02	-0.155
	+	186.00		4.824E+00	2.583E+00	2.882E+00	8.939E-01	1.674
		226.40		-1.201E-01	3.855E-01	6.378E-01	8.137E-02	-0.188
		227.20		-3.017E-01	4.138E-01	6.711E-01	5.317E-02	-0.450
		248.90		-2.107E-01	8.515E-01	1.353E+00	2.995E-01	-0.156
		293.70		3.518E+00	1.045E+00	1.516E+00	2.546E-01	2.321
		369.80		-4.901E-01	9.744E-01	1.519E+00	3.188E-01	-0.323
		568.70		-2.080E-01	1.223E+00	1.994E+00	1.488E-01	-0.104
		569.50		2.281E-03	3.277E-01	5.400E-01	4.035E-02	0.004
		574.00		-1.778E+00	1.832E+00	2.820E+00	2.117E-01	-0.631
		699.00		-6.061E-01	9.752E-01	1.502E+00	2.836E-01	-0.403
		706.10		-2.714E-01	1.437E+00	2.284E+00	1.017E+00	-0.119
		733.00		-1.445E-01	5.377E-01	7.224E-01	1.590E-01	-0.200
		742.81		-1.252E-01	1.779E+00	2.842E+00	1.909E+00	-0.044
	+	796.30		2.039E+00	1.471E+00	1.980E+00	5.317E-01	1.030
		805.60		1.118E+00	1.280E+00	2.185E+00	6.659E-01	0.511
		819.60		4.836E-01	1.451E+00	2.462E+00	9.323E-01	0.196
		826.30		-3.243E-01	9.886E-01	1.590E+00	7.091E-01	-0.204
		831.60		-7.440E-01	8.145E-01	1.219E+00	3.613E-01	-0.610
		876.40		-4.676E-01	1.184E+00	1.739E+00	1.786E+00	-0.269
		880.51		3.348E-02	3.519E-01	5.872E-01	4.476E-02	0.057
		883.24		9.239E-03	3.501E-01	5.811E-01	3.899E-01	0.016
		899.00		-1.532E+00	1.262E+00	1.578E+00	6.867E-01	-0.970
		925.00		-5.538E-01	1.473E+00	2.358E+00	1.745E-01	-0.235
		926.50		-9.069E-02	2.248E-01	3.574E-01	8.895E-02	-0.254
		946.00	*	5.309E-03	3.778E-01	6.227E-01	1.133E-01	0.009
		949.00		7.604E-01	5.655E-01	1.017E+00	7.400E-02	0.748

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		980.50		4.774E-01	9.741E-01	1.655E+00	1.174E-01	0.289
		1394.10		-3.753E-01	1.374E+00	2.157E+00	1.397E+00	-0.174
PA-234M		766.41		1.655E+01	2.461E+01	3.704E+01	2.838E+01	0.447
		1001.03	*	8.907E+00	8.775E+00	1.539E+01	1.532E+00	0.579
U-235		89.95		1.662E+00	1.323E+00	1.560E+00	4.794E-01	1.065
	+	93.35		2.494E+00	1.123E+00	1.279E+00	3.583E-01	1.949
	+	105.00		2.306E+00	1.596E+00	1.689E+00	5.121E-01	1.365
		143.76	*	1.475E-02	2.281E-01	3.603E-01	6.652E-02	0.041
		163.35		-3.844E-02	5.198E-01	8.104E-01	1.529E-01	-0.047
	+	185.71		1.787E-01	7.923E-02	1.064E-01	8.402E-03	1.679
		205.31		5.283E-01	5.974E-01	8.958E-01	1.682E-01	0.590
NP-236	+	94.67		5.421E-01	1.966E-01	2.168E-01	1.894E-02	2.501
		98.44		5.791E-02	6.391E-02	1.022E-01	9.433E-03	0.567
		111.00		-1.308E-01	1.272E-01	1.989E-01	2.185E-02	-0.658
		160.31	*	-8.544E-02	8.690E-02	1.329E-01	1.133E-02	-0.643
NP-239		99.55		1.356E-01	1.436E-01	2.388E-01	2.241E-02	0.568
		117.00	*	8.318E-02	1.892E-01	3.140E-01	3.726E-02	0.265
	+	209.75		2.633E+00	1.315E+00	1.463E+00	1.160E-01	1.800
		228.18		-2.366E-01	2.215E-01	3.532E-01	2.798E-02	-0.670
		277.60		8.051E-02	1.961E-01	3.195E-01	2.460E-02	0.252
		334.30		-3.459E-01	2.353E+00	2.366E+00	1.663E-01	-0.146
CM-243		99.55		1.395E-01	1.478E-01	2.457E-01	2.305E-02	0.568
		103.76	*	-3.380E-02	9.573E-02	1.386E-01	1.380E-02	-0.244
		117.00		8.558E-02	1.947E-01	3.231E-01	3.834E-02	0.265
	+	209.75		2.595E+00	1.296E+00	1.442E+00	1.144E-01	1.800
		228.18		-2.390E-01	2.239E-01	3.569E-01	2.827E-02	-0.670
		277.60		8.116E-02	1.977E-01	3.221E-01	2.480E-02	0.252
CM-247		278.00		4.037E-01	7.912E-01	1.336E+00	1.028E-01	0.302
		287.40		4.127E-01	1.317E+00	2.203E+00	1.678E-01	0.187
		402.60	*	1.935E-02	4.225E-02	6.955E-02	4.141E-03	0.278
CF-249		252.85		3.230E-01	8.779E-01	1.485E+00	1.166E-01	0.218
		333.44		-1.609E-01	3.040E-01	2.899E-01	2.042E-02	-0.555
		387.95	*	-3.438E-02	4.807E-02	7.412E-02	4.402E-03	-0.464°
CF-251		176.60	*	-3.672E-02	1.356E-01	2.128E-01	1.674E-02	-0.173
		227.00		-2.352E-01	3.640E-01	5.928E-01	4.697E-02	-0.397
		285.00		-1.027E+00	1.845E+00	2.958E+00	2.259E-01	-0.347

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746008   *
* Acquisition date : 14-JUL-2009 10:28:15 Detector SN#    :             *
* Detector ID       : GAM13               Sensitivity     : 5.000       *
* Geometry          : CAN                 Energy tolerance: 1.500       *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000      *
* Elapsed real time:    0 02:00:01.82     Half life ratio :  8.000      *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232746008          Analyst initials: MXR1        *
* Batch Number      : 882713              Sample Quantity : 1.4447E+02 GRAM *
* Recovery          :    1.00000          Carrier Weight :    0.00000   *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
* Standard Weight  :   0.00000                                          *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :             *
* MSD DPM          :    0.000            MSD Isotope      :             *
* LCS DPM          :    0.000            LCS Isotope      :             *
* LCSD DPM         :    0.000            LCSD Isotope     :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.966E+01	2.524E+00	7.954E-01	0.000E+00
CD-109	3.487E+00	8.985E-01	1.288E+00	0.000E+00
SN-126	3.429E-01	8.834E-02	1.251E-01	0.000E+00
EU-155	2.353E-01	1.454E-01	1.645E-01	0.000E+00
RE-188	2.981E-01	2.215E-01	3.019E-01	0.000E+00
TL-208	5.137E-01	9.669E-02	7.254E-02	0.000E+00
BI-210	1.642E+00	8.983E-01	8.324E-01	0.000E+00
PB-210	1.642E+00	8.983E-01	8.324E-01	0.000E+00
PO-210	1.642E+00	8.960E-01	8.324E-01	0.000E+00
BI-211	3.754E+00	5.334E-01	3.484E-01	0.000E+00
PB-212	1.703E+00	1.884E-01	9.646E-02	0.000E+00
PO-212	1.703E+00	1.884E-01	9.646E-02	0.000E+00
BI-214	1.150E+00	2.021E-01	1.396E-01	0.000E+00
PB-214	1.306E+00	1.972E-01	1.318E-01	0.000E+00
PO-214	1.306E+00	1.972E-01	1.318E-01	0.000E+00
PO-216	1.703E+00	1.884E-01	9.646E-02	0.000E+00
PO-218	1.306E+00	1.972E-01	1.318E-01	0.000E+00
RA-224	4.187E+00	1.292E+00	1.098E+00	0.000E+00
RA-226	1.150E+00	2.021E-01	1.396E-01	0.000E+00
AC-228	1.857E+00	3.679E-01	2.710E-01	0.000E+00
RA-228	1.857E+00	3.679E-01	2.710E-01	0.000E+00
TH-228	1.703E+00	1.884E-01	9.645E-02	0.000E+00
TH-230	1.150E+00	2.021E-01	1.396E-01	0.000E+00
TH-232	1.857E+00	3.679E-01	2.710E-01	0.000E+00
TH-234	6.002E-01	1.058E+00	1.059E+00	0.000E+00
U-234	1.150E+00	2.021E-01	1.396E-01	0.000E+00
NP-237	1.007E+00	3.298E-01	2.919E-01	0.000E+00
U-238	6.002E-01	1.058E+00	1.059E+00	0.000E+00
AM-241	5.556E-02	7.214E-02	1.007E-01	0.000E+00
AM-243	4.006E-01	6.349E-02	6.333E-02	0.000E+00
ANH-511	9.404E-02	7.219E-02	5.855E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error)	Ided	MDA (pCi/GRAM	)	
BE-7	3.686E-01	3.865E-01		7.113E-01	0.000E+00	NOT IDENT.
NA-22	1.578E-02	5.285E-02		9.250E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.489E+05		0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.083E-02	3.236E-02		6.296E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.780E-02		6.775E-02	0.000E+00	FAIL ABUN
SC-46	2.131E-02	5.036E-02		8.898E-02	0.000E+00	FAIL ABUN
V-48	-4.361E-02	9.291E-02		1.522E-01	0.000E+00	NOT IDENT.
CR-51	2.924E-01	3.931E-01		7.063E-01	0.000E+00	NOT IDENT.
MN-52	1.894E-01	2.587E-01		4.719E-01	0.000E+00	NOT IDENT.
MN-54	1.711E-02	4.679E-02		8.277E-02	0.000E+00	NOT IDENT.
CO-56	-2.024E-02	4.905E-02		8.227E-02	0.000E+00	FAIL ABUN
CO-57	-1.162E-02	2.418E-02		4.185E-02	0.000E+00	NOT IDENT.
CO-58	-2.188E-02	4.772E-02		8.017E-02	0.000E+00	NOT IDENT.
FE-59	7.100E-02	1.097E-01		1.931E-01	0.000E+00	NOT IDENT.
CO-60	4.694E-02	4.852E-02		8.934E-02	0.000E+00	NOT IDENT.
ZN-65	-4.636E-02	1.199E-01		1.633E-01	0.000E+00	NOT IDENT.
GE-68	9.627E-01	1.553E+00		2.732E+00	0.000E+00	NOT IDENT.
AS-73	9.584E-02	2.252E-01		4.154E-01	0.000E+00	NOT IDENT.
AS-74	4.202E-02	9.954E-02		1.757E-01	0.000E+00	NOT IDENT.
SE-75	-2.387E-03	4.839E-02		7.495E-02	0.000E+00	NOT IDENT.
BR-77	-2.555E+00	1.102E+01		1.893E+01	0.000E+00	FAIL ABUN
SR-82	-2.906E-01	4.689E-01		7.843E-01	0.000E+00	NOT IDENT.
RB-83	-2.629E-02	7.677E-02		1.309E-01	0.000E+00	NOT IDENT.
RB-84	2.418E-02	8.536E-02		1.497E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.016E+01		1.802E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.202E-02		9.224E-02	0.000E+00	NOT IDENT.
RB-86	7.324E-01	1.001E+00		1.772E+00	0.000E+00	NOT IDENT.
Y-88	3.191E-02	3.930E-02		7.027E-02	0.000E+00	NOT IDENT.
ZR-88	-7.545E-04	3.619E-02		5.869E-02	0.000E+00	NOT IDENT.
Y-91	1.758E+01	2.406E+01		4.328E+01	0.000E+00	NOT IDENT.
NB-94	2.699E-02	4.378E-02		7.656E-02	0.000E+00	NOT IDENT.
NB-95	-5.960E-03	5.063E-02		8.781E-02	0.000E+00	NOT IDENT.
NB-95M	5.825E-02	1.304E-01		2.102E-01	0.000E+00	NOT IDENT.
ZR-95	6.407E-02	8.902E-02		1.561E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.085E+05		0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.795E+06		0.000E+00	0.000E+00	SHORT HLIF
MO-99	6.333E+00	1.452E+01		2.500E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.274E+16		0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.578E-03	3.347E-02		5.893E-02	0.000E+00	NOT IDENT.
RH-102	-4.028E-02	3.547E-02		5.846E-02	0.000E+00	NOT IDENT.
RU-103	-2.677E-02	4.471E-02		7.523E-02	0.000E+00	FAIL ABUN
RH-106	8.737E-02	3.862E-01		6.694E-01	0.000E+00	FAIL ABUN
RU-106	8.737E-02	3.861E-01		6.694E-01	0.000E+00	FAIL ABUN
AG-108M	-1.114E-02	3.601E-02		6.289E-02	0.000E+00	NOT IDENT.
AG-110M	-1.377E-03	4.565E-02		6.675E-02	0.000E+00	NOT IDENT.
IN-111	9.307E-01	1.117E+00		1.833E+00	0.000E+00	NOT IDENT.
IN-113M	2.127E-02	5.009E-02		8.709E-02	0.000E+00	NOT IDENT.
SN-113	2.127E-02	5.009E-02		8.709E-02	0.000E+00	NOT IDENT.
IN-114M	2.092E-01	2.052E-01		3.264E-01	0.000E+00	NOT IDENT.
CD-115	4.935E+00	1.153E+01		2.057E+01	0.000E+00	NOT IDENT.
SN-117M	2.011E-02	5.893E-02		9.720E-02	0.000E+00	NOT IDENT.
SB-122	2.579E+00	2.344E+00		4.298E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.889E+06		0.000E+00	0.000E+00	SHORT HLIF
TE-123M	5.384E-03	3.033E-02		4.965E-02	0.000E+00	NOT IDENT.
I-124	1.385E-01	8.249E-01		1.244E+00	0.000E+00	NOT IDENT.
SB-124	3.427E-02	7.473E-02		1.336E-01	0.000E+00	NOT IDENT.
SB-125	-4.279E-02	1.050E-01		1.829E-01	0.000E+00	FAIL ABUN
TE-125M	-2.365E-01	8.783E+00		1.399E+01	0.000E+00	NOT IDENT.
I-126	1.234E-01	2.210E-01		3.880E-01	0.000E+00	NOT IDENT.
SB-126	-1.545E-01	2.331E-01		3.167E-01	0.000E+00	FAIL ABUN
SB-127	3.037E-01	1.495E+00		2.565E+00	0.000E+00	FAIL ABUN
XE-127	-9.427E-02	4.649E-02		7.680E-02	0.000E+00	NOT IDENT.
I-131	6.862E-02	1.295E-01		2.277E-01	0.000E+00	NOT IDENT.
TE-132	-7.802E-01	6.503E-01		1.088E+00	0.000E+00	NOT IDENT.
BA-133	-2.241E-02	5.738E-02		8.347E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.994E+03		0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.935E-02		1.043E-01	0.000E+00	FAIL ABUN
CS-135	2.032E-01	1.796E-01		2.963E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.439E+15		0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.889E-02	1.296E-01		2.249E-01	0.000E+00	FAIL ABUN
BA-137M	3.921E-02	5.029E-02		7.887E-02	0.000E+00	NOT IDENT.
CS-137	4.145E-02	5.316E-02		8.337E-02	0.000E+00	NOT IDENT.
CE-139	-2.121E-02	3.145E-02		5.246E-02	0.000E+00	NOT IDENT.
BA-140	2.359E-01	2.919E-01		5.151E-01	0.000E+00	NOT IDENT.

LA-140	-2.981E-02	1.034E-01	1.660E-01	0.000E+00	FAIL ABUN
CE-141	3.796E-02	6.565E-02	1.138E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.562E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	4.268E-02	2.265E-01	3.574E-01	0.000E+00	NOT IDENT.
PM-144	1.724E-04	4.515E-02	7.621E-02	0.000E+00	NOT IDENT.
PR-144	1.168E-02	3.060E+00	5.164E+00	0.000E+00	NOT IDENT.
PM-146	5.969E-02	4.898E-02	9.158E-02	0.000E+00	NOT IDENT.
ND-147	-2.600E-02	6.238E-01	1.082E+00	0.000E+00	NOT IDENT.
PM-149	2.736E+01	8.700E+01	1.548E+02	0.000E+00	NOT IDENT.
EU-152	6.043E-02	1.152E-01	1.802E-01	0.000E+00	NOT IDENT.
GD-153	-6.459E-02	7.490E-02	1.156E-01	0.000E+00	FAIL ABUN
EU-154	4.293E-02	1.476E-01	2.581E-01	0.000E+00	NOT IDENT.
TB-160	1.993E-02	1.710E-01	2.965E-01	0.000E+00	FAIL ABUN
HO-166M	-2.286E-02	8.502E-02	1.407E-01	0.000E+00	FAIL ABUN
TM-171	-6.132E+00	1.581E+01	2.596E+01	0.000E+00	FAIL ABUN
LU-176	1.384E-02	2.584E-02	4.617E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.783E+00	2.065E+00	0.000E+00	FAIL ABUN
LU-177M	1.601E-02	2.301E-01	3.405E-01	0.000E+00	FAIL ABUN
HF-181	-2.566E-02	5.107E-02	8.726E-02	0.000E+00	NOT IDENT.
W-181	3.237E-01	2.023E-01	3.531E-01	0.000E+00	NOT IDENT.
TA-182	-3.747E-02	2.264E-01	3.847E-01	0.000E+00	FAIL ABUN
RE-183	6.577E-02	1.178E-01	2.028E-01	0.000E+00	FAIL ABUN
RE-184	8.602E-02	2.291E-01	4.134E-01	0.000E+00	FAIL ABUN
OS-185	-1.328E-02	5.095E-02	8.512E-02	0.000E+00	FAIL ABUN
W-188	-3.383E+00	8.559E+00	1.280E+01	0.000E+00	FAIL ABUN
IR-192	-1.892E-02	3.508E-02	5.912E-02	0.000E+00	FAIL ABUN
AU-195	2.326E-01	1.997E-01	3.633E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.613E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.665E+00	6.837E+00	1.199E+01	0.000E+00	NOT IDENT.
TL-202	5.681E-02	7.384E-02	1.362E-01	0.000E+00	NOT IDENT.
HG-203	2.707E-02	4.198E-02	7.584E-02	0.000E+00	NOT IDENT.
BI-207	3.766E-02	7.152E-02	1.247E-01	0.000E+00	FAIL ABUN
TL-207	-2.831E-01	8.201E-01	1.212E+00	0.000E+00	FAIL ABUN
PO-209	-1.344E+01	9.530E+00	1.455E+01	0.000E+00	NOT IDENT.
PB-211	-5.807E-01	1.287E+00	1.756E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.801E-01	7.929E-01	0.000E+00	FAIL ABUN
PO-215	-2.831E-01	8.201E-01	1.212E+00	0.000E+00	FAIL ABUN
RN-219	1.667E-01	4.639E-01	8.011E-01	0.000E+00	FAIL ABUN
RN-220	1.304E+01	3.033E+01	5.391E+01	0.000E+00	NOT IDENT.
RA-223	-2.831E-01	8.201E-01	1.212E+00	0.000E+00	FAIL ABUN
AC-227	-4.360E-01	4.058E-01	6.654E-01	0.000E+00	NOT IDENT.
TH-227	-4.360E-01	4.079E-01	6.654E-01	0.000E+00	FAIL ABUN
TH-229	-4.012E-01	4.923E-01	8.674E-01	0.000E+00	FAIL ABUN
PA-231	-1.219E+00	1.575E+00	2.644E+00	0.000E+00	NOT IDENT.
TH-231	-2.831E-01	8.201E-01	1.212E+00	0.000E+00	FAIL ABUN
U-231	4.403E-02	9.158E-01	1.482E+00	0.000E+00	FAIL ABUN
PA-233	-4.354E-04	6.491E-02	1.129E-01	0.000E+00	FAIL ABUN
PA-234	5.309E-03	3.703E-01	6.322E-01	0.000E+00	FAIL ABUN
PA-234M	8.907E+00	8.599E+00	1.560E+01	0.000E+00	NOT IDENT.
U-235	1.475E-02	2.235E-01	3.812E-01	0.000E+00	FAIL ABUN
NP-236	-8.544E-02	8.516E-02	1.403E-01	0.000E+00	FAIL ABUN
NP-239	8.318E-02	1.854E-01	3.337E-01	0.000E+00	FAIL ABUN
CM-243	-3.380E-02	9.382E-02	1.476E-01	0.000E+00	FAIL ABUN
CM-247	1.935E-02	4.140E-02	7.198E-02	0.000E+00	NOT IDENT.
CF-249	-3.438E-02	4.711E-02	7.677E-02	0.000E+00	NOT IDENT.
CF-251	-3.672E-02	1.329E-01	2.242E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:28:50.24

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746008.CNF;1
Sample date       : 29-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:28:15
Sample ID         : G232746008           Sample quantity  : 1.44470E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.82  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1267	10.67*	1.041E+00	2.966E+01	2.966E+01	8.68
CD-109	88.03	354	3.72*	7.245E+00	3.410E+00	3.487E+00	26.29
SN-126	64.28	65	9.60	7.391E+00	2.376E-01	2.376E-01	179.63
	86.94	354	8.90	7.245E+00	1.425E+00	1.425E+00	48.24
	87.57	354	37.00*	7.245E+00	3.429E-01	3.429E-01	26.29
EU-155	48.70	------	4.60	7.317E+00	------ Line Not Found		------
	60.01	57	1.11	7.387E+00	1.797E+00	1.807E+00	132.45
	86.54	354	30.90	7.245E+00	4.106E-01	4.129E-01	26.32
	105.31	130	20.70*	6.983E+00	2.340E-01	2.353E-01	63.06
RE-188	155.03	90	15.00*	6.095E+00	2.567E-01	2.981E-01	75.83
	477.96	------	1.04	2.690E+00	------ Line Not Found		------
	633.10	------	1.26	2.098E+00	------ Line Not Found		------
TL-208	277.35	------	6.80	4.225E+00	------ Line Not Found		------
	510.84	92	21.60	2.534E+00	4.354E-01	4.354E-01	78.78
	583.14	375	84.20*	2.255E+00	5.137E-01	5.137E-01	19.21
	860.37	62	12.46	1.604E+00	8.001E-01	8.001E-01	73.44
BI-210	46.50	187	4.05*	7.298E+00	1.640E+00	1.642E+00	55.82
PB-210	46.50	187	4.05*	7.298E+00	1.640E+00	1.642E+00	55.82
PO-210	46.50	187	4.05*	7.298E+00	1.640E+00	1.642E+00	55.68
BI-211	72.87	------	1.27	7.369E+00	------ Line Not Found		------
	351.07	653	12.94*	3.493E+00	3.754E+00	3.754E+00	14.50
PB-212	74.81	748	10.70	7.356E+00	2.471E+00	2.471E+00	18.68
	77.11	1043	18.00	7.340E+00	2.052E+00	2.052E+00	12.88
	87.30	354	8.00	7.245E+00	1.586E+00	1.586E+00	28.13
	238.63	1376	44.60*	4.708E+00	1.703E+00	1.703E+00	11.29
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PO-212	74.81	748	10.70	7.356E+00	2.471E+00	2.471E+00	18.68
	77.11	1043	18.00	7.340E+00	2.052E+00	2.052E+00	12.88
	87.30	354	8.00	7.245E+00	1.586E+00	1.586E+00	28.13
	115.19	------	0.60	6.822E+00	------ Line Not Found		------
	238.63	1376	44.60*	4.708E+00	1.703E+00	1.703E+00	11.29
	300.09	------	3.41	3.976E+00	------ Line Not Found		------

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
BI-214	609.31	444	46.30*	2.169E+00	1.150E+00	1.150E+00	17.93
	768.36	------	5.04	1.770E+00	------	Line Not Found	------
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	109	15.10	1.286E+00	1.462E+00	1.462E+00	45.86
	1238.11	63	5.94	1.187E+00	2.322E+00	2.322E+00	49.62
	1377.67	------	4.11	1.090E+00	------	Line Not Found	------
	1764.49	84	15.80	8.985E-01	1.543E+00	1.543E+00	24.54
PB-214	74.81	748	6.21	7.356E+00	4.257E+00	4.257E+00	17.79
	77.11	1043	10.50	7.340E+00	3.517E+00	3.517E+00	14.97
	87.30	354	4.67	7.245E+00	2.717E+00	2.717E+00	27.40
	241.98	297	7.49	4.666E+00	2.208E+00	2.208E+00	31.98
	295.21	419	19.20	4.024E+00	1.409E+00	1.410E+00	21.15
	351.92	653	37.20*	3.493E+00	1.306E+00	1.306E+00	15.41
PO-214	74.81	748	6.21	7.356E+00	4.257E+00	4.257E+00	17.79
	77.11	1043	10.50	7.340E+00	3.517E+00	3.517E+00	14.97
	87.30	354	4.67	7.245E+00	2.717E+00	2.717E+00	27.40
	241.98	297	7.49	4.666E+00	2.208E+00	2.208E+00	31.98
	295.21	419	19.20	4.024E+00	1.409E+00	1.410E+00	21.15
	351.92	653	37.20*	3.493E+00	1.306E+00	1.306E+00	15.41
PO-216	74.81	748	10.70	7.356E+00	2.471E+00	2.471E+00	18.68
	77.11	1043	18.00	7.340E+00	2.052E+00	2.052E+00	12.88
	87.30	354	8.00	7.245E+00	1.586E+00	1.586E+00	28.13
	238.63	1376	44.60*	4.708E+00	1.703E+00	1.703E+00	11.29
	300.09	------	3.41	3.976E+00	------	Line Not Found	------
PO-218	74.81	748	6.21	7.356E+00	4.257E+00	4.257E+00	17.79
	77.11	1043	10.50	7.340E+00	3.517E+00	3.517E+00	14.97
	87.30	354	4.67	7.245E+00	2.717E+00	2.717E+00	27.40
	241.98	297	7.49	4.666E+00	2.208E+00	2.208E+00	31.98
	295.21	419	19.20	4.024E+00	1.409E+00	1.410E+00	21.15
	351.92	653	37.20*	3.493E+00	1.306E+00	1.306E+00	15.41
RA-224	240.98	297	3.95*	4.666E+00	4.187E+00	4.187E+00	31.48
RA-226	609.31	444	46.30*	2.169E+00	1.150E+00	1.150E+00	17.93
	768.36	------	5.04	1.770E+00	------	Line Not Found	------
	934.06	------	3.21	1.497E+00	------	Line Not Found	------
	1120.29	109	15.10	1.286E+00	1.462E+00	1.462E+00	45.86
	1238.11	63	5.94	1.187E+00	2.322E+00	2.322E+00	49.62
	1377.67	------	4.11	1.090E+00	------	Line Not Found	------
	1764.49	84	15.80	8.985E-01	1.543E+00	1.543E+00	24.54
AC-228	338.32	208	11.40	3.608E+00	1.311E+00	1.311E+00	54.83
	911.07	303	27.70*	1.528E+00	1.857E+00	1.857E+00	20.21
	969.11	92	16.60	1.450E+00	9.894E-01	9.894E-01	63.55
RA-228	338.32	208	11.40	3.608E+00	1.311E+00	1.311E+00	54.83
	911.07	303	27.70*	1.528E+00	1.857E+00	1.857E+00	20.21
	969.11	92	16.60	1.450E+00	9.894E-01	9.894E-01	63.55
TH-228	84.40	154	1.21	7.278E+00	4.551E+00	4.551E+00	55.86
	238.60	1376	44.60*	4.708E+00	1.703E+00	1.703E+00	11.29
	300.10	------	3.41	3.976E+00	------	Line Not Found	------
TH-230	609.31	444	46.30*	2.169E+00	1.150E+00	1.150E+00	17.93
	768.36	------	5.04	1.770E+00	------	Line Not Found	------

Sample ID : G232746008 Acquisition date : 14-JUL-2009 10:28:15

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	109	15.10	1.286E+00	1.462E+00	1.462E+00	45.86
	1238.11	63	5.94	1.187E+00	2.322E+00	2.322E+00	49.62
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	84	15.80	8.985E-01	1.543E+00	1.543E+00	24.54
TH-232	338.32	208	11.40	3.608E+00	1.311E+00	1.311E+00	37.12
	911.07	303	27.70*	1.528E+00	1.857E+00	1.857E+00	20.21
	969.11	92	16.60	1.450E+00	9.894E-01	9.894E-01	63.55
TH-234	63.29	65	3.80*	7.391E+00	6.002E-01	6.002E-01	179.89
	92.38	310	5.41	7.172E+00	2.074E+00	2.074E+00	39.60
U-234	609.31	444	46.30*	2.169E+00	1.150E+00	1.150E+00	17.93
	768.36	------	5.04	1.770E+00	------ Line Not Found		------
	934.06	------	3.21	1.497E+00	------ Line Not Found		------
	1120.29	109	15.10	1.286E+00	1.462E+00	1.462E+00	45.86
	1238.11	63	5.94	1.187E+00	2.322E+00	2.322E+00	49.62
	1377.67	------	4.11	1.090E+00	------ Line Not Found		------
	1764.49	84	15.80	8.985E-01	1.543E+00	1.543E+00	24.54
NP-237	86.50	354	12.60*	7.245E+00	1.007E+00	1.007E+00	33.42
	95.87	------	2.60	7.135E+00	------ Line Not Found		------
U-238	63.29	65	3.80*	7.391E+00	6.002E-01	6.002E-01	179.89
	92.38	310	5.41	7.172E+00	2.074E+00	2.074E+00	36.27
AM-241	59.54	57	35.90*	7.387E+00	5.555E-02	5.556E-02	132.49
AM-243	74.67	748	66.00*	7.356E+00	4.006E-01	4.006E-01	16.17
	86.72	354	0.34	7.245E+00	3.776E+01	3.776E+01	26.29
	117.66	------	0.55	6.778E+00	------ Line Not Found		------
	142.18	------	0.13	6.323E+00	------ Line Not Found		------
ANH-511	511.00	92	100.00*	2.534E+00	9.404E-02	9.404E-02	78.34

Flag: "*" = Keyline

Sample ID : G232746008 Acquisition date : 14-JUL-2009 10:28:15

Total number of lines in spectrum 36
Number of unidentified lines 1
Number of lines tentatively identified by NID 35 97.22%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.966E+01	2.966E+01	0.258E+01	8.68	
CD-109	464.00D	1.02	3.410E+00	3.487E+00	0.917E+00	26.29	
SN-126	1.00E+05Y	1.00	3.429E-01	3.429E-01	0.901E-01	26.29	
EU-155	4.96Y	1.01	2.340E-01	2.353E-01	1.484E-01	63.06	
RE-188	69.40D	1.16	2.567E-01	2.981E-01	2.260E-01	75.83	
TL-208	1.41E+10Y	1.00	5.137E-01	5.137E-01	0.987E-01	19.21	
BI-210	22.26Y	1.00	1.640E+00	1.642E+00	0.917E+00	55.82	
PB-210	22.26Y	1.00	1.640E+00	1.642E+00	0.917E+00	55.82	
PO-210	22.26Y	1.00	1.640E+00	1.642E+00	0.914E+00	55.68	
BI-211	7.04E+08Y	1.00	3.754E+00	3.754E+00	0.544E+00	14.50	
PB-212	1.41E+10Y	1.00	1.703E+00	1.703E+00	0.192E+00	11.29	
PO-212	1.41E+10Y	1.00	1.703E+00	1.703E+00	0.192E+00	11.29	
BI-214	1600.00Y	1.00	1.150E+00	1.150E+00	0.206E+00	17.93	
PB-214	1600.00Y	1.00	1.306E+00	1.306E+00	0.201E+00	15.41	
PO-214	1600.00Y	1.00	1.306E+00	1.306E+00	0.201E+00	15.41	
PO-216	1.41E+10Y	1.00	1.703E+00	1.703E+00	0.192E+00	11.29	
PO-218	1600.00Y	1.00	1.306E+00	1.306E+00	0.201E+00	15.41	
RA-224	1.41E+10Y	1.00	4.187E+00	4.187E+00	1.318E+00	31.48	
RA-226	1600.00Y	1.00	1.150E+00	1.150E+00	0.206E+00	17.93	
AC-228	1.41E+10Y	1.00	1.857E+00	1.857E+00	0.375E+00	20.21	
RA-228	1.41E+10Y	1.00	1.857E+00	1.857E+00	0.375E+00	20.21	
TH-228	1.41E+10Y	1.00	1.703E+00	1.703E+00	0.192E+00	11.29	
TH-230	4.47E+09Y	1.00	1.150E+00	1.150E+00	0.206E+00	17.93	
TH-232	1.41E+10Y	1.00	1.857E+00	1.857E+00	0.375E+00	20.21	
TH-234	4.47E+09Y	1.00	6.002E-01	6.002E-01	10.80E-01	179.89	
U-234	4.47E+09Y	1.00	1.150E+00	1.150E+00	0.206E+00	17.93	
NP-237	2.14E+06Y	1.00	1.007E+00	1.007E+00	0.337E+00	33.42	
U-238	4.47E+09Y	1.00	6.002E-01	6.002E-01	10.80E-01	179.89	
AM-241	432.20Y	1.00	5.555E-02	5.556E-02	7.361E-02	132.49	
AM-243	7380.00Y	1.00	4.006E-01	4.006E-01	0.648E-01	16.17	
ANH-511	1.00E+09Y	1.00	9.404E-02	9.404E-02	7.367E-02	78.34	
	Total Activity :		7.093E+01	7.106E+01			

Grand Total Activity : 7.093E+01 7.106E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G232746008 Acquisition date : 14-JUL-2009 10:28:15

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	129.14	125	469	1.04	258.08	254	9	1.74E-02	64.7	6.57E+00	T
0	186.26	205	432	1.27	372.34	367	10	2.85E-02	43.6	5.52E+00	T
0	209.80	169	380	1.30	419.45	415	12	2.34E-02	49.3	5.14E+00	T
0	270.57	209	326	1.61	541.01	534	14	2.90E-02	39.3	4.30E+00	T
0	328.58	117	193	1.30	657.05	652	11	1.62E-02	49.8	3.70E+00	T
0	411.47	99	230	4.71	822.90	816	16	1.37E-02	71.9	3.06E+00	T
0	463.35	129	155	1.67	926.67	920	14	1.80E-02	44.4	2.76E+00	T
0	664.78	110	183	6.66	1329.66	1319	25	1.53E-02	68.5	2.01E+00	T
0	727.98	102	116	1.64	1456.12	1449	13	1.41E-02	48.1	1.86E+00	T
0	795.36	53	68	1.46	1590.93	1586	11	7.30E-03	67.0	1.72E+00	T
0	1847.72	26	9	0.65	3696.63	3685	18	3.61E-03	66.8	8.67E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:28:54.93

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232746008.CNF;1 *
* Acquisition date  : 14-JUL-2009 10:28:15  Detector SN#     :             *
* Detector ID       : GAM13                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.82          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232746008            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.44470E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 2-FEB-2009 10:41:22.03MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1023-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.966E+01	2.575E+00	7.913E-01	4.838E-02	37.479
CD-109	3.487E+00	9.169E-01	1.205E+00	9.510E-02	2.894
SN-126	3.429E-01	9.014E-02	1.170E-01	9.253E-03	2.931
EU-155	2.353E-01	1.484E-01	1.544E-01	1.585E-02	1.524
RE-188	2.981E-01	2.260E-01	2.858E-01	2.615E-02	1.043
TL-208	5.137E-01	9.866E-02	7.067E-02	5.850E-03	7.268
BI-210	1.642E+00	9.166E-01	7.685E-01	6.265E-02	2.137
PB-210	1.642E+00	9.166E-01	7.685E-01	6.265E-02	2.137
PO-210	1.642E+00	9.143E-01	7.685E-01	5.479E-02	2.137
BI-211	3.754E+00	5.443E-01	3.356E-01	2.446E-02	11.184
PB-212	1.703E+00	1.922E-01	9.215E-02	8.371E-03	18.476
PO-212	1.703E+00	1.922E-01	9.215E-02	8.371E-03	18.476
BI-214	1.150E+00	2.062E-01	1.361E-01	1.273E-02	8.450
PB-214	1.306E+00	2.012E-01	1.270E-01	1.137E-02	10.285
PO-214	1.306E+00	2.012E-01	1.270E-01	1.137E-02	10.285
PO-216	1.703E+00	1.922E-01	9.215E-02	8.371E-03	18.476
PO-218	1.306E+00	2.012E-01	1.270E-01	1.137E-02	10.285
RA-224	4.187E+00	1.318E+00	1.049E+00	8.282E-02	3.991

Sample ID : G232746008 Acquisition date : 14-JUL-2009 10:28:15

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	1.150E+00	2.062E-01	1.361E-01	1.273E-02	8.450
AC-228	1.857E+00	3.754E-01	2.667E-01	2.770E-02	6.963
RA-228	1.857E+00	3.754E-01	2.667E-01	2.770E-02	6.963
TH-228	1.703E+00	1.922E-01	9.214E-02	8.370E-03	18.478
TH-230	1.150E+00	2.062E-01	1.361E-01	1.273E-02	8.450
TH-232	1.857E+00	3.754E-01	2.667E-01	2.770E-02	6.963
TH-234	6.002E-01	1.080E+00	9.837E-01	1.805E-01	0.610
U-234	1.150E+00	2.062E-01	1.361E-01	1.273E-02	8.450
NP-237	1.007E+00	3.365E-01	2.730E-01	6.038E-02	3.688
U-238	6.002E-01	1.080E+00	9.837E-01	1.805E-01	0.610
AM-241	5.556E-02	7.361E-02	9.349E-02	9.507E-03	0.594
AM-243	4.006E-01	6.478E-02	5.904E-02	5.100E-03	6.785
ANH-511	9.404E-02	7.367E-02	5.687E-02	3.969E-03	1.653

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.686E-01		3.944E-01	6.899E-01	5.187E-02	0.534
NA-22	1.578E-02		5.393E-02	9.174E-02	5.178E-03	0.172
NA-24	6.351E-01		3.821E-01	Half-Life too short		
AL-26	3.083E-02		3.302E-02	6.295E-02	3.552E-03	0.490
TI-44	3.786E-01	+	4.878E-02	6.322E-02	5.325E-03	5.989
SC-46	2.131E-02		5.139E-02	8.752E-02	6.627E-03	0.244
V-48	-4.361E-02		9.481E-02	1.500E-01	1.061E-02	-0.291
CR-51	2.924E-01		4.011E-01	6.790E-01	5.284E-02	0.431
MN-52	1.894E-01		2.640E-01	4.693E-01	2.697E-02	0.404
MN-54	1.711E-02		4.774E-02	8.129E-02	6.379E-03	0.210
CO-56	-2.024E-02		5.005E-02	8.083E-02	6.300E-03	-0.250
CO-57	-1.162E-02		2.468E-02	3.941E-02	4.985E-03	-0.295
CO-58	-2.188E-02		4.870E-02	7.868E-02	6.267E-03	-0.278
FE-59	7.100E-02		1.119E-01	1.908E-01	1.363E-02	0.372
CO-60	4.694E-02		4.951E-02	8.869E-02	5.044E-03	0.529
ZN-65	-4.636E-02		1.224E-01	1.614E-01	9.802E-03	-0.287
GE-68	9.627E-01		1.585E+00	2.699E+00	1.725E-01	0.357
AS-73	9.584E-02		2.298E-01	3.846E-01	3.249E-02	0.249
AS-74	4.202E-02		1.016E-01	1.713E-01	1.315E-02	0.245
SE-75	-2.387E-03		4.938E-02	7.175E-02	5.621E-03	-0.033
BR-77	-2.555E+00		1.125E+01	1.840E+01	1.299E+00	-0.139
SR-82	-2.906E-01		4.785E-01	7.690E-01	6.190E-02	-0.378
RB-83	-2.629E-02		7.834E-02	1.272E-01	8.983E-03	-0.207
RB-84	2.418E-02		8.710E-02	1.473E-01	1.122E-02	0.164
KR-85	2.881E+01		1.037E+01	1.751E+01	1.227E+00	1.646
SR-85	1.475E-01		5.308E-02	8.961E-02	6.277E-03	1.646
RB-86	7.324E-01		1.021E+00	1.751E+00	1.120E-01	0.418
Y-88	3.191E-02		4.010E-02	7.029E-02	3.958E-03	0.454
ZR-88	-7.545E-04		3.693E-02	5.667E-02	3.319E-03	-0.013
Y-91	1.758E+01		2.455E+01	4.286E+01	2.376E+00	0.410

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	2.699E-02		4.468E-02	7.490E-02	6.114E-03	0.360
NB-95	-5.960E-03		5.166E-02	8.607E-02	6.950E-03	-0.069
NB-95M	5.825E-02		1.330E-01	2.007E-01	1.857E-02	0.290
ZR-95	6.407E-02		9.084E-02	1.530E-01	1.380E-02	0.419
NB-97	-1.804E-02		5.537E-02	Half-Life too short		
ZR-97	1.392E+00		9.158E-01	Half-Life too short		
MO-99	6.333E+00		1.481E+01	2.449E+01	3.651E+00	0.259
TC-99M	-6.381E+09		1.160E+10	Half-Life too short		
RH-101	2.578E-03		3.415E-02	5.607E-02	4.440E-03	0.046
RH-102	-4.028E-02		3.619E-02	5.669E-02	3.772E-03	-0.710
RU-103	-2.677E-02		4.563E-02	7.302E-02	9.612E-03	-0.367
RH-106	8.737E-02		3.940E-01	6.531E-01	8.418E-02	0.134
RU-106	8.737E-02		3.939E-01	6.531E-01	5.143E-02	0.134
AG-108M	-1.114E-02		3.674E-02	6.087E-02	4.095E-03	-0.183
AG-110M	-1.377E-03		4.658E-02	6.521E-02	5.478E-03	-0.021
IN-111	9.307E-01		1.139E+00	1.752E+00	1.381E-01	0.531
IN-113M	2.127E-02		5.111E-02	8.409E-02	5.240E-03	0.253
SN-113	2.127E-02		5.111E-02	8.409E-02	5.240E-03	0.253
IN-114M	2.092E-01		2.093E-01	3.103E-01	2.452E-02	0.674
CD-115	4.935E+00		1.176E+01	2.000E+01	1.425E+00	0.247
SN-117M	2.011E-02		6.013E-02	9.204E-02	8.038E-03	0.219
SB-122	2.579E+00		2.392E+00	4.184E+00	3.107E-01	0.617
I-123	8.678E-01		2.495E+00	Half-Life too short		
TE-123M	5.384E-03		3.095E-02	4.702E-02	4.106E-03	0.115
I-124	1.385E-01		8.418E-01	1.212E+00	9.374E-02	0.114
SB-124	3.427E-02		7.625E-02	1.333E-01	8.305E-03	0.257
SB-125	-4.279E-02		1.072E-01	1.770E-01	1.139E-02	-0.242
TE-125M	-2.365E-01		8.962E+00	1.314E+01	1.597E+00	-0.018
I-126	1.234E-01		2.255E-01	3.791E-01	3.093E-02	0.325
SB-126	-1.545E-01		2.378E-01	3.100E-01	2.527E-02	-0.498
SB-127	3.037E-01		1.526E+00	2.508E+00	2.756E-01	0.121
XE-127	-9.427E-02		4.744E-02	7.311E-02	5.794E-03	-1.289
I-131	6.862E-02		1.321E-01	2.195E-01	1.555E-02	0.313
TE-132	-7.802E-01		6.635E-01	1.039E+00	1.590E-01	-0.751
BA-133	-2.241E-02		5.855E-02	8.043E-02	9.656E-03	-0.279
I-133	1.630E-03		3.058E-03	Half-Life too short		
CS-134	1.049E-01	+	7.077E-02	1.023E-01	8.249E-03	1.025
CS-135	2.032E-01		1.833E-01	2.837E-01	2.621E-02	0.716
I-135	-3.557E+09		2.265E+09	Half-Life too short		
CS-136	4.889E-02		1.322E-01	2.220E-01	1.575E-02	0.220
BA-137M	3.921E-02		5.131E-02	7.705E-02	6.284E-03	0.509
CS-137	4.145E-02		5.424E-02	8.145E-02	6.657E-03	0.509
CE-139	-2.121E-02		3.209E-02	4.973E-02	3.899E-03	-0.427
BA-140	2.359E-01		2.978E-01	5.009E-01	1.643E-01	0.471
LA-140	-2.981E-02		1.056E-01	1.655E-01	9.535E-03	-0.180
CE-141	3.796E-02		6.699E-02	1.076E-01	1.116E-02	0.353
CE-143	3.149E-04		7.969E-05	Half-Life too short		
CE-144	4.268E-02		2.311E-01	3.372E-01	5.845E-02	0.127

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-144	1.724E-04		4.608E-02	7.454E-02	6.088E-03	0.002
PR-144	1.168E-02		3.122E+00	5.051E+00	4.124E-01	0.002
PM-146	5.969E-02		4.998E-02	8.872E-02	8.053E-03	0.673
ND-147	-2.600E-02		6.365E-01	1.052E+00	1.489E-01	-0.025
PM-149	2.736E+01		8.877E+01	1.484E+02	2.229E+01	0.184
EU-152	6.043E-02		1.175E-01	1.735E-01	1.301E-02	0.348
GD-153	-6.459E-02		7.643E-02	1.083E-01	9.857E-03	-0.596
EU-154	4.293E-02		1.506E-01	2.560E-01	2.364E-02	0.168
TB-160	1.993E-02		1.745E-01	2.916E-01	2.224E-02	0.068
HO-166M	-2.286E-02		8.676E-02	1.377E-01	1.123E-02	-0.166
TM-171	-6.132E+00		1.613E+01	2.415E+01	2.204E+00	-0.254
LU-176	1.384E-02		2.636E-02	4.434E-02	3.288E-03	0.312
LU-177	3.643E+00	+	1.820E+00	1.967E+00	1.559E-01	1.853
LU-177M	1.601E-02		2.347E-01	3.292E-01	1.997E-02	0.049
HF-181	-2.566E-02		5.211E-02	8.465E-02	5.687E-03	-0.303
W-181	3.237E-01		2.064E-01	3.283E-01	3.028E-02	0.986
TA-182	-3.747E-02		2.310E-01	3.812E-01	2.121E-02	-0.098
RE-183	6.577E-02		1.203E-01	1.922E-01	1.591E-02	0.342
RE-184	8.602E-02		2.338E-01	3.954E-01	3.104E-02	0.218
OS-185	-1.328E-02		5.199E-02	8.311E-02	6.689E-03	-0.160
W-188	-3.383E+00		8.734E+00	1.228E+01	9.318E-01	-0.275
IR-192	-1.892E-02		3.580E-02	5.683E-02	4.157E-03	-0.333
AU-195	2.326E-01		2.038E-01	3.406E-01	3.165E-02	0.683
TL-200	-2.968E-04		2.353E-04	Half-Life too short		
TL-201	3.665E+00		6.976E+00	1.137E+01	8.910E-01	0.322
TL-202	5.681E-02		7.535E-02	1.319E-01	8.331E-03	0.431
HG-203	2.707E-02		4.283E-02	7.269E-02	5.788E-03	0.372
BI-207	3.766E-02		7.298E-02	1.232E-01	8.011E-03	0.306
TL-207	-2.831E-01		8.369E-01	1.166E+00	1.988E-01	-0.243
PO-209	-1.344E+01		9.725E+00	1.431E+01	1.078E+00	-0.939
PB-211	-5.807E-01		1.313E+00	1.697E+00	1.058E+00	-0.342
BI-212	1.206E+00	+	5.919E-01	7.763E-01	7.452E-02	1.553
PO-215	-2.831E-01		8.369E-01	1.166E+00	1.988E-01	-0.243
RN-219	1.667E-01		4.734E-01	7.740E-01	1.058E-01	0.215
RN-220	1.304E+01		3.095E+01	5.245E+01	3.834E+00	0.249
RA-223	-2.831E-01		8.369E-01	1.166E+00	1.988E-01	-0.243
AC-227	-4.360E-01		4.141E-01	6.367E-01	9.499E-02	-0.685
TH-227	-4.360E-01		4.162E-01	6.367E-01	1.127E-01	-0.685
TH-229	-4.012E-01		5.023E-01	8.249E-01	6.526E-02	-0.486
PA-231	-1.219E+00		1.607E+00	2.536E+00	3.716E-01	-0.481
TH-231	-2.831E-01		8.369E-01	1.166E+00	1.988E-01	-0.243
U-231	4.403E-02		9.345E-01	1.389E+00	1.235E-01	0.032
PA-233	-4.354E-04		6.623E-02	1.084E-01	8.281E-03	-0.004
PA-234	5.309E-03		3.778E-01	6.227E-01	1.133E-01	0.009
PA-234M	8.907E+00		8.775E+00	1.539E+01	1.532E+00	0.579
U-235	1.475E-02		2.281E-01	3.603E-01	6.652E-02	0.041
NP-236	-8.544E-02		8.690E-02	1.329E-01	1.133E-02	-0.643
NP-239	8.318E-02		1.892E-01	3.140E-01	3.726E-02	0.265

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.380E-02		9.573E-02	1.386E-01	1.380E-02	-0.244
CM-247	1.935E-02		4.225E-02	6.955E-02	4.141E-03	0.278
CF-249	-3.438E-02		4.807E-02	7.412E-02	4.402E-03	-0.464
CF-251	-3.672E-02		1.356E-01	2.128E-01	1.674E-02	-0.173

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232746008           *
* Acquisition date  : 14-JUL-2009 10:28:15 Detector SN#     :               *
* Detector ID       : GAM13                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.82      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 29-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232746008           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.4447E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.966E+01	2.524E+00	3.979E-01	1.288E+00
CD-109	3.487E+00	8.985E-01	6.446E-01	4.584E-01
SN-126	3.429E-01	8.834E-02	6.257E-02	4.507E-02
EU-155	2.353E-01	1.454E-01	8.229E-02	7.419E-02
RE-188	2.981E-01	2.215E-01	1.510E-01	1.130E-01
TL-208	5.137E-01	9.669E-02	3.629E-02	4.933E-02
BI-210	1.642E+00	8.983E-01	4.164E-01	4.583E-01
PB-210	1.642E+00	8.983E-01	4.164E-01	4.583E-01
PO-210	1.642E+00	8.960E-01	4.164E-01	4.571E-01
BI-211	3.754E+00	5.334E-01	1.743E-01	2.722E-01
PB-212	1.703E+00	1.884E-01	4.826E-02	9.611E-02
PO-212	1.703E+00	1.884E-01	4.826E-02	9.611E-02
BI-214	1.150E+00	2.021E-01	6.982E-02	1.031E-01
PB-214	1.306E+00	1.972E-01	6.593E-02	1.006E-01
PO-214	1.306E+00	1.972E-01	6.593E-02	1.006E-01
PO-216	1.703E+00	1.884E-01	4.826E-02	9.611E-02
PO-218	1.306E+00	1.972E-01	6.593E-02	1.006E-01
RA-224	4.187E+00	1.292E+00	5.493E-01	6.591E-01
RA-226	1.150E+00	2.021E-01	6.982E-02	1.031E-01
AC-228	1.857E+00	3.679E-01	1.356E-01	1.877E-01
RA-228	1.857E+00	3.679E-01	1.356E-01	1.877E-01
TH-228	1.703E+00	1.884E-01	4.825E-02	9.611E-02
TH-230	1.150E+00	2.021E-01	6.982E-02	1.031E-01
TH-232	1.857E+00	3.679E-01	1.356E-01	1.877E-01
TH-234	6.002E-01	1.058E+00	5.297E-01	5.398E-01
U-234	1.150E+00	2.021E-01	6.982E-02	1.031E-01
NP-237	1.007E+00	3.298E-01	1.461E-01	1.683E-01
U-238	6.002E-01	1.058E+00	5.297E-01	5.398E-01
AM-241	5.556E-02	7.214E-02	5.040E-02	3.680E-02
AM-243	4.006E-01	6.349E-02	3.168E-02	3.239E-02
ANH-511	9.404E-02	7.219E-02	2.929E-02	3.683E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	3.686E-01	3.865E-01	3.559E-01	1.972E-01	NOT IDENT.
NA-22	1.578E-02	5.285E-02	4.628E-02	2.696E-02	NOT IDENT.
NA-24	6.351E+05	7.489E+05	0.000E+00	3.821E+05	SHORT HLIF
AL-26	3.083E-02	3.236E-02	3.150E-02	1.651E-02	NOT IDENT.
TI-44	3.786E-01	4.780E-02	3.389E-02	2.439E-02	FAIL ABUN
SC-46	2.131E-02	5.036E-02	4.452E-02	2.569E-02	FAIL ABUN
V-48	-4.361E-02	9.291E-02	7.614E-02	4.740E-02	NOT IDENT.
CR-51	2.924E-01	3.931E-01	3.533E-01	2.006E-01	NOT IDENT.
MN-52	1.894E-01	2.587E-01	2.361E-01	1.320E-01	NOT IDENT.
MN-54	1.711E-02	4.679E-02	4.141E-02	2.387E-02	NOT IDENT.
CO-56	-2.024E-02	4.905E-02	4.116E-02	2.503E-02	FAIL ABUN
CO-57	-1.162E-02	2.418E-02	2.094E-02	1.234E-02	NOT IDENT.
CO-58	-2.188E-02	4.772E-02	4.011E-02	2.435E-02	NOT IDENT.
FE-59	7.100E-02	1.097E-01	9.661E-02	5.597E-02	NOT IDENT.
CO-60	4.694E-02	4.852E-02	4.469E-02	2.475E-02	NOT IDENT.
ZN-65	-4.636E-02	1.199E-01	8.170E-02	6.118E-02	NOT IDENT.
GE-68	9.627E-01	1.553E+00	1.367E+00	7.923E-01	NOT IDENT.
AS-73	9.584E-02	2.252E-01	2.078E-01	1.149E-01	NOT IDENT.
AS-74	4.202E-02	9.954E-02	8.791E-02	5.078E-02	NOT IDENT.
SE-75	-2.387E-03	4.839E-02	3.749E-02	2.469E-02	NOT IDENT.
BR-77	-2.555E+00	1.102E+01	9.471E+00	5.623E+00	FAIL ABUN
SR-82	-2.906E-01	4.689E-01	3.924E-01	2.393E-01	NOT IDENT.
RB-83	-2.629E-02	7.677E-02	6.550E-02	3.917E-02	NOT IDENT.
RB-84	2.418E-02	8.536E-02	7.492E-02	4.355E-02	NOT IDENT.
KR-85	2.881E+01	1.016E+01	9.017E+00	5.186E+00	NOT IDENT.
SR-85	1.475E-01	5.202E-02	4.615E-02	2.654E-02	NOT IDENT.
RB-86	7.324E-01	1.001E+00	8.867E-01	5.106E-01	NOT IDENT.
Y-88	3.191E-02	3.930E-02	3.516E-02	2.005E-02	NOT IDENT.
ZR-88	-7.545E-04	3.619E-02	2.936E-02	1.846E-02	NOT IDENT.
Y-91	1.758E+01	2.406E+01	2.165E+01	1.227E+01	NOT IDENT.
NB-94	2.699E-02	4.378E-02	3.830E-02	2.234E-02	NOT IDENT.
NB-95	-5.960E-03	5.063E-02	4.393E-02	2.583E-02	NOT IDENT.
NB-95M	5.825E-02	1.304E-01	1.052E-01	6.652E-02	NOT IDENT.
ZR-95	6.407E-02	8.902E-02	7.810E-02	4.542E-02	NOT IDENT.
NB-97	-1.804E+04	1.085E+05	0.000E+00	5.537E+04	SHORT HLIF
ZR-97	1.392E+06	1.795E+06	0.000E+00	9.158E+05	SHORT HLIF
MO-99	6.333E+00	1.452E+01	1.251E+01	7.407E+00	NOT IDENT.
TC-99M	-6.381E+15	2.274E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.578E-03	3.347E-02	2.948E-02	1.707E-02	NOT IDENT.
RH-102	-4.028E-02	3.547E-02	2.925E-02	1.809E-02	NOT IDENT.
RU-103	-2.677E-02	4.471E-02	3.764E-02	2.281E-02	FAIL ABUN
RH-106	8.737E-02	3.862E-01	3.349E-01	1.970E-01	FAIL ABUN
RU-106	8.737E-02	3.861E-01	3.349E-01	1.970E-01	FAIL ABUN
AG-108M	-1.114E-02	3.601E-02	3.147E-02	1.837E-02	NOT IDENT.
AG-110M	-1.377E-03	4.565E-02	3.340E-02	2.329E-02	NOT IDENT.
IN-111	9.307E-01	1.117E+00	9.171E-01	5.697E-01	NOT IDENT.
IN-113M	2.127E-02	5.009E-02	4.357E-02	2.555E-02	NOT IDENT.
SN-113	2.127E-02	5.009E-02	4.357E-02	2.555E-02	NOT IDENT.
IN-114M	2.092E-01	2.052E-01	1.633E-01	1.047E-01	NOT IDENT.
CD-115	4.935E+00	1.153E+01	1.029E+01	5.881E+00	NOT IDENT.
SN-117M	2.011E-02	5.893E-02	4.863E-02	3.006E-02	NOT IDENT.
SB-122	2.579E+00	2.344E+00	2.150E+00	1.196E+00	NOT IDENT.
I-123	8.678E+05	4.889E+06	0.000E+00	2.495E+06	SHORT HLIF
TE-123M	5.384E-03	3.033E-02	2.484E-02	1.548E-02	NOT IDENT.
I-124	1.385E-01	8.249E-01	6.222E-01	4.209E-01	NOT IDENT.
SB-124	3.427E-02	7.473E-02	6.683E-02	3.813E-02	NOT IDENT.
SB-125	-4.279E-02	1.050E-01	9.153E-02	5.359E-02	FAIL ABUN
TE-125M	-2.365E-01	8.783E+00	6.999E+00	4.481E+00	NOT IDENT.
I-126	1.234E-01	2.210E-01	1.941E-01	1.128E-01	NOT IDENT.
SB-126	-1.545E-01	2.331E-01	1.585E-01	1.189E-01	FAIL ABUN
SB-127	3.037E-01	1.495E+00	1.283E+00	7.628E-01	FAIL ABUN
XE-127	-9.427E-02	4.649E-02	3.842E-02	2.372E-02	NOT IDENT.
I-131	6.862E-02	1.295E-01	1.139E-01	6.605E-02	NOT IDENT.
TE-132	-7.802E-01	6.503E-01	5.445E-01	3.318E-01	NOT IDENT.
BA-133	-2.241E-02	5.738E-02	4.176E-02	2.928E-02	NOT IDENT.
I-133	1.630E+03	5.994E+03	0.000E+00	3.058E+03	SHORT HLIF
CS-134	1.049E-01	6.935E-02	5.219E-02	3.538E-02	FAIL ABUN
CS-135	2.032E-01	1.796E-01	1.482E-01	9.166E-02	NOT IDENT.
I-135	-3.557E+15	4.439E+15	0.000E+00	2.265E+15	SHORT HLIF
CS-136	4.889E-02	1.296E-01	1.125E-01	6.612E-02	FAIL ABUN
BA-137M	3.921E-02	5.029E-02	3.946E-02	2.566E-02	NOT IDENT.
CS-137	4.145E-02	5.316E-02	4.171E-02	2.712E-02	NOT IDENT.
CE-139	-2.121E-02	3.145E-02	2.625E-02	1.604E-02	NOT IDENT.
BA-140	2.359E-01	2.919E-01	2.577E-01	1.489E-01	NOT IDENT.

LA-140	-2.981E-02	1.034E-01	8.304E-02	5.278E-02	FAIL ABUN
CE-141	3.796E-02	6.565E-02	5.693E-02	3.349E-02	NOT IDENT.
CE-143	3.149E+02	1.562E+02	0.000E+00	7.969E+01	SHORT HLIF
CE-144	4.268E-02	2.265E-01	1.788E-01	1.156E-01	NOT IDENT.
PM-144	1.724E-04	4.515E-02	3.813E-02	2.304E-02	NOT IDENT.
PR-144	1.168E-02	3.060E+00	2.583E+00	1.561E+00	NOT IDENT.
PM-146	5.969E-02	4.898E-02	4.582E-02	2.499E-02	NOT IDENT.
ND-147	-2.600E-02	6.238E-01	5.413E-01	3.183E-01	NOT IDENT.
PM-149	2.736E+01	8.700E+01	7.744E+01	4.439E+01	NOT IDENT.
EU-152	6.043E-02	1.152E-01	9.015E-02	5.876E-02	NOT IDENT.
GD-153	-6.459E-02	7.490E-02	5.781E-02	3.822E-02	FAIL ABUN
EU-154	4.293E-02	1.476E-01	1.291E-01	7.529E-02	NOT IDENT.
TB-160	1.993E-02	1.710E-01	1.484E-01	8.724E-02	FAIL ABUN
HO-166M	-2.286E-02	8.502E-02	7.038E-02	4.338E-02	FAIL ABUN
TM-171	-6.132E+00	1.581E+01	1.299E+01	8.064E+00	FAIL ABUN
LU-176	1.384E-02	2.584E-02	2.310E-02	1.318E-02	FAIL ABUN
LU-177	3.643E+00	1.783E+00	1.033E+00	9.098E-01	FAIL ABUN
LU-177M	1.601E-02	2.301E-01	1.703E-01	1.174E-01	FAIL ABUN
HF-181	-2.566E-02	5.107E-02	4.366E-02	2.605E-02	NOT IDENT.
W-181	3.237E-01	2.023E-01	1.767E-01	1.032E-01	NOT IDENT.
TA-182	-3.747E-02	2.264E-01	1.925E-01	1.155E-01	FAIL ABUN
RE-183	6.577E-02	1.178E-01	1.015E-01	6.013E-02	FAIL ABUN
RE-184	8.602E-02	2.291E-01	2.068E-01	1.169E-01	FAIL ABUN
OS-185	-1.328E-02	5.095E-02	4.258E-02	2.599E-02	FAIL ABUN
W-188	-3.383E+00	8.559E+00	6.404E+00	4.367E+00	FAIL ABUN
IR-192	-1.892E-02	3.508E-02	2.958E-02	1.790E-02	FAIL ABUN
AU-195	2.326E-01	1.997E-01	1.817E-01	1.019E-01	FAIL ABUN
TL-200	-2.968E+02	4.613E+02	0.000E+00	2.353E+02	SHORT HLIF
TL-201	3.665E+00	6.837E+00	5.999E+00	3.488E+00	NOT IDENT.
TL-202	5.681E-02	7.384E-02	6.814E-02	3.767E-02	NOT IDENT.
HG-203	2.707E-02	4.198E-02	3.794E-02	2.142E-02	NOT IDENT.
BI-207	3.766E-02	7.152E-02	6.240E-02	3.649E-02	FAIL ABUN
TL-207	-2.831E-01	8.201E-01	6.065E-01	4.184E-01	FAIL ABUN
PO-209	-1.344E+01	9.530E+00	7.279E+00	4.862E+00	NOT IDENT.
PB-211	-5.807E-01	1.287E+00	8.787E-01	6.566E-01	NOT IDENT.
BI-212	1.206E+00	5.801E-01	3.967E-01	2.960E-01	FAIL ABUN
PO-215	-2.831E-01	8.201E-01	6.065E-01	4.184E-01	FAIL ABUN
RN-219	1.667E-01	4.639E-01	4.008E-01	2.367E-01	FAIL ABUN
RN-220	1.304E+01	3.033E+01	2.697E+01	1.548E+01	NOT IDENT.
RA-223	-2.831E-01	8.201E-01	6.065E-01	4.184E-01	FAIL ABUN
AC-227	-4.360E-01	4.058E-01	3.329E-01	2.071E-01	NOT IDENT.
TH-227	-4.360E-01	4.079E-01	3.329E-01	2.081E-01	FAIL ABUN
TH-229	-4.012E-01	4.923E-01	4.340E-01	2.512E-01	FAIL ABUN
PA-231	-1.219E+00	1.575E+00	1.323E+00	8.034E-01	NOT IDENT.
TH-231	-2.831E-01	8.201E-01	6.065E-01	4.184E-01	FAIL ABUN
U-231	4.403E-02	9.158E-01	7.416E-01	4.672E-01	FAIL ABUN
PA-233	-4.354E-04	6.491E-02	5.646E-02	3.312E-02	FAIL ABUN
PA-234	5.309E-03	3.703E-01	3.163E-01	1.889E-01	FAIL ABUN
PA-234M	8.907E+00	8.599E+00	7.805E+00	4.387E+00	NOT IDENT.
U-235	1.475E-02	2.235E-01	1.907E-01	1.140E-01	FAIL ABUN
NP-236	-8.544E-02	8.516E-02	7.021E-02	4.345E-02	FAIL ABUN
NP-239	8.318E-02	1.854E-01	1.670E-01	9.460E-02	FAIL ABUN
CM-243	-3.380E-02	9.382E-02	7.385E-02	4.787E-02	FAIL ABUN
CM-247	1.935E-02	4.140E-02	3.601E-02	2.112E-02	NOT IDENT.
CF-249	-3.438E-02	4.711E-02	3.841E-02	2.403E-02	NOT IDENT.
CF-251	-3.672E-02	1.329E-01	1.122E-01	6.779E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	352.5061
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46.50	352.5061
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49.72	379.9527
51.35	433.6400
52.39	428.9964
52.97	418.0804
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53.44	401.8235
54.07	395.9805
56.28	463.4431
56.28	463.4486
57.37	0.0000
57.53	439.6743
57.53	439.6781
57.60	439.7881
57.98	423.5162
57.98	423.5162
59.32	420.3710
59.32	420.3710
59.40	420.4926
59.54	420.7051
59.72	449.7416
60.01	450.2114
61.10	494.0078
61.14	494.0780
61.30	494.3577
63.00	522.4403
63.29	522.9647
63.29	522.9647
63.58	523.4891
64.28	524.7480
65.12	530.2456
65.20	530.3891
65.20	530.3891
66.05	542.6013
66.72	555.8674
66.83	556.0763
66.91	556.2220
67.20	566.1481
67.20	566.1481
67.75	569.8632
67.85	570.0541
68.90	555.8253
68.90	555.8253
69.30	543.9373
69.67	557.2162
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70.82	525.3341
70.83	525.3518
72.80	555.9454
72.87	556.0665
72.87	556.0665
74.67	563.2933
74.81	563.5342
74.81	563.5342
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74.97	563.8126
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77.11	567.4755
77.11	567.4755

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77.11	567.4755
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80.30	539.3080
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81.07	540.5140
81.07	540.5140
81.07	540.5140
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83.78	541.8867
83.78	541.8867
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84.40	542.8315
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86.54	426.6151
86.59	426.6747
86.72	426.8257
86.79	426.9058
86.94	427.0844
87.30	672.6086
87.30	672.6086
87.30	672.6086
87.30	672.6086
87.30	672.6086
87.30	672.6086
87.57	673.1056
87.88	673.6746
88.03	689.6547
88.36	690.2737
88.47	602.3236
89.95	508.0837
91.11	489.4997
92.29	662.4022
92.38	697.7101
92.38	697.7101
93.35	532.9363
94.00	533.8347
94.67	315.3298
94.67	315.3347
94.90	315.5202
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94.90	315.5202
94.90	315.5202
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95.87	373.1523
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97.43	418.5329
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98.44	335.6765
98.88	340.7465
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99.55	351.1225
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100.10	364.3709
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103.76	362.6771
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105.31	338.1652
108.00	319.7958
109.28	319.2422
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111.00	367.8775

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115.19	392.7341
116.30	391.6602
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117.00	359.5750
117.66	370.3260
121.11	344.2422
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121.78	312.7385
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122.32	359.5972
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122.32	359.5972
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136.48	321.1914
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144.24	323.8342
144.24	323.8342
144.24	323.8342
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147.16	390.7141
152.43	363.2492
152.70	363.4246
153.22	342.3640
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154.21	341.3182
154.21	341.3182
154.21	341.3182
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162.64	314.5764
163.35	333.9417
163.89	343.1920
165.85	361.1527
167.43	303.6319
171.28	329.3376
171.86	330.7842
172.10	333.1785
176.55	329.8758
176.60	328.7607
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186.00	317.4229
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193.63	324.3305
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201.83	333.5838
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209.75	288.7731
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216.55	257.8950
218.09	258.4367
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226.40	253.0373
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227.08	255.1058
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228.18	278.5284
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236.00	259.3645
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238.63	257.0509
238.63	257.0509
238.63	257.0509
239.00	257.1705
240.98	257.8115
241.98	258.1335
241.98	258.1335
241.98	258.1335
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245.39	218.6930
247.94	223.9187
248.90	231.5379
249.79	241.6714
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252.85	214.9821
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256.20	260.7332
260.50	213.1079
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262.80	231.9684
264.65	205.2668
268.24	210.7668
268.79	224.8597
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269.46	225.0297
269.46	225.0297
269.46	225.0297
271.23	225.4863
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277.60	229.3452
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278.60	220.5025
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304.40	242.8129
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323.87	212.0815
323.87	212.0815
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334.20	186.8198
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338.28	228.3913
338.28	228.3913
338.28	228.3913
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338.32	228.4013
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391.69	158.4654
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439.89	128.1307
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445.03	146.8771
445.03	146.8771
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513.99	129.3533
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569.50	128.0867
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579.30	0.0000
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602.71	111.4180
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609.31	128.1164
609.31	128.1164

609.31	128.1164
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618.01	124.6717
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621.84	113.6802
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661.65	106.4497
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666.33	111.2664
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696.49	132.2465
697.00	134.4164
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722.78	135.1105
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768.36	104.9940
768.36	104.9940
768.36	104.9940
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934.06	83.1592
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969.11	121.4579
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1120.29	89.0894
1120.29	89.0894
1120.29	89.0894
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1173.22	98.2390
1175.09	113.4210
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1238.11	86.9174
1238.11	86.9174
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1298.22	0.0000
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1325.50	62.0893
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1360.21	48.0208
1362.66	0.0000
1365.15	47.1077
1368.21	47.1479
1368.53	0.0000
1376.25	47.2567
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1377.67	47.2768
1377.67	47.2768
1377.67	47.2768
1384.27	66.1144
1394.10	40.5696
1395.20	41.5723
1407.95	44.7018
1434.06	29.0162
1436.60	36.0452
1457.56	0.0000
1460.81	52.9138
1489.15	25.3889
1509.49	27.5678
1596.49	36.5393
1620.62	27.3058
1678.03	0.0000
1691.02	12.8186
1691.02	12.8186

1706.46	0.0000
1750.46	0.0000
1764.49	17.1145
1764.49	17.1145
1764.49	17.1145
1764.49	17.1145
1770.23	8.4625
1771.40	16.9298
1791.20	0.0000
1808.65	10.5633
1836.01	11.2422

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232746008

Total Uranium Activity	1.7923E+00	ug/g
Total Uranium Counting Unc.	3.1494E+00	ug/g
Total Uranium Tpu	1.6068E-06	ug/g
Total Uranium Mda	1.5784E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232746008       *
*   ANALYST       : MXR1                      DETECTOR   : GAM13            *
*   SAMPLE DATE   : 29-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 10:28:15.19    SAMPLE ALQT:  144.470 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 9.646E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.685E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.776E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.839E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:00.92

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:44:32
Sample ID         : G232754001           Sample quantity  : 1.35030E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.21  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.74*	71	598	1.08	127.48	123	9	9.90E-03	64.0	
2	2	74.93*	617	669	1.52	149.87	143	19	8.58E-02	8.5	1.01E+01
3	2	77.37*	856	424	1.02	154.75	143	19	1.19E-01	5.1	
4	0	87.42*	276	505	1.11	174.85	172	7	3.83E-02	15.0	
5	0	90.13	120	413	0.96	180.27	178	6	1.66E-02	28.5	
6	0	93.28*	318	482	1.36	186.57	183	9	4.42E-02	14.5	
7	0	186.18*	238	357	1.02	372.35	368	10	3.31E-02	16.9	
8	0	209.87	124	451	1.13	419.74	414	12	1.72E-02	35.5	
9	5	238.87*	1599	173	0.98	477.73	470	19	2.22E-01	2.9	1.89E+00
10	5	241.88	404	258	1.71	483.77	470	19	5.61E-02	10.0	
11	0	270.47	121	237	1.51	540.94	537	10	1.68E-02	25.5	
12	0	277.65*	36	229	1.19	555.30	552	9	4.98E-03	79.0	
13	0	295.52	446	182	0.99	591.03	587	9	6.19E-02	7.3	
14	0	300.06	113	172	1.18	600.12	596	9	1.56E-02	23.0	
15	0	328.34*	74	162	1.27	656.68	653	9	1.03E-02	34.1	
16	0	338.58	309	228	1.11	677.16	670	13	4.30E-02	11.6	
17	0	352.09*	802	196	1.15	704.18	697	14	1.11E-01	5.2	
18	0	409.75	49	184	0.71	819.50	815	12	6.81E-03	57.0	
19	0	463.54	128	141	0.81	927.08	922	14	1.78E-02	21.5	
20	0	511.17*	100	184	1.37	1022.35	1015	15	1.39E-02	34.6	
21	0	583.61*	488	104	1.23	1167.22	1162	12	6.78E-02	6.3	
22	0	609.76*	518	113	1.29	1219.51	1214	12	7.19E-02	6.1	
23	0	728.07	88	111	1.57	1456.14	1448	13	1.22E-02	26.8	
24	0	768.75	79	78	1.45	1537.50	1531	12	1.10E-02	24.9	
25	0	795.12	77	69	1.23	1590.23	1584	13	1.07E-02	24.9	
26	0	861.70	63	78	1.73	1723.40	1715	13	8.73E-03	31.6	
27	0	911.76*	319	70	1.68	1823.53	1817	16	4.43E-02	8.2	
28	2	965.00	73	52	2.04	1930.00	1925	20	1.02E-02	21.4	1.63E+00
29	2	969.49*	223	50	1.90	1938.97	1925	20	3.10E-02	9.2	
30	0	1121.34*	99	104	2.21	2242.69	2233	16	1.37E-02	25.5	
31	0	1239.37	51	85	1.19	2478.75	2474	12	7.04E-03	38.9	
32	0	1379.31*	35	19	1.40	2758.61	2752	15	4.93E-03	35.4	
33	0	1461.27*	1672	69	2.01	2922.54	2914	20	2.32E-01	2.8	
34	0	1509.98*	25	25	0.59	3019.95	3012	19	3.45E-03	52.6	
35	0	1589.67	29	28	1.50	3179.34	3171	15	4.02E-03	45.0	
36	0	1729.77	23	7	2.63	3459.54	3451	14	3.19E-03	32.1	
37	0	1764.94*	74	8	1.73	3529.87	3524	11	1.02E-02	14.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 12:45:03

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:44:32
Sample ID : G232754001 Sample quantity : 135.03 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.21 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.549E+01	3.568E+00	5.212E-01	4.387E-02	68.092
CD-109	+	88.03	*	3.362E+00	1.046E+00	1.473E+00	1.271E-01	2.282
SN-126	+	64.28		5.882E-01	7.580E-01	8.861E-01	1.283E-01	0.664
	+	86.94		1.376E+00	7.023E-01	6.043E-01	2.498E-01	2.277
	+	87.57	*	3.310E-01	1.030E-01	1.474E-01	1.266E-02	2.245
TL-208	+	277.35		2.966E-01	4.698E-01	5.848E-01	6.103E-02	0.507
	+	510.84		4.123E-01	2.887E-01	2.102E-01	2.143E-02	1.962
	+	583.14	*	5.743E-01	8.289E-02	5.878E-02	4.049E-03	9.770
	+	860.37		7.059E-01	4.511E-01	4.229E-01	4.039E-02	1.669
BI-211		72.87		9.515E+00	3.645E+00	5.758E+00	4.369E-01	1.652
	+	351.07	*	4.134E+00	4.984E-01	2.994E-01	1.859E-02	13.809
PB-212	+	74.81		3.173E+00	6.642E-01	5.652E-01	6.838E-02	5.613
	+	77.11		2.476E+00	3.189E-01	3.196E-01	2.497E-02	7.747
	+	87.30		1.531E+00	5.005E-01	6.802E-01	8.956E-02	2.251
	+	238.63	*	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
	+	300.09		1.962E+00	9.156E-01	1.085E+00	8.798E-02	1.808
PO-212	+	74.81		3.173E+00	6.642E-01	5.652E-01	6.838E-02	5.613
	+	77.11		2.476E+00	3.189E-01	3.196E-01	2.497E-02	7.747
	+	87.30		1.531E+00	5.005E-01	6.802E-01	8.956E-02	2.251
		115.19		3.916E-02	3.780E+00	6.229E+00	3.986E-01	0.006
	+	238.63	*	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
	+	300.09		1.962E+00	9.156E-01	1.085E+00	8.798E-02	1.808
BI-214	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.199E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.486E-01	1.572E-02	4.858
PB-214	+	74.81		5.467E+00	1.101E+00	9.739E-01	1.039E-01	5.613
	+	77.11		4.245E+00	6.351E-01	5.479E-01	5.979E-02	7.747
	+	87.30		2.622E+00	8.410E-01	1.165E+00	1.343E-01	2.251
	+	241.98		2.758E+00	5.911E-01	5.424E-01	4.245E-02	5.085
	+	295.21		1.364E+00	2.288E-01	2.208E-01	1.852E-02	6.178

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-214	+	74.81		5.467E+00	1.101E+00	9.739E-01	1.039E-01	5.613
	+	77.11		4.245E+00	6.351E-01	5.479E-01	5.979E-02	7.747
	+	87.30		2.622E+00	8.410E-01	1.165E+00	1.343E-01	2.251
	+	241.98		2.758E+00	5.911E-01	5.424E-01	4.245E-02	5.085
	+	295.21		1.364E+00	2.288E-01	2.208E-01	1.852E-02	6.178
	+	351.92	*	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-216	+	74.81		3.173E+00	6.642E-01	5.652E-01	6.838E-02	5.613
	+	77.11		2.476E+00	3.189E-01	3.196E-01	2.497E-02	7.747
	+	87.30		1.531E+00	5.005E-01	6.802E-01	8.956E-02	2.251
	+	238.63	*	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
	+	300.09		1.962E+00	9.156E-01	1.085E+00	8.798E-02	1.808
PO-218	+	74.81		5.467E+00	1.101E+00	9.739E-01	1.039E-01	5.613
	+	77.11		4.245E+00	6.351E-01	5.479E-01	5.979E-02	7.747
	+	87.30		2.622E+00	8.410E-01	1.165E+00	1.343E-01	2.251
	+	241.98		2.758E+00	5.911E-01	5.424E-01	4.245E-02	5.085
	+	295.21		1.364E+00	2.288E-01	2.208E-01	1.852E-02	6.178
	+	351.92	*	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
RA-224	+	240.98	*	5.230E+00	1.082E+00	1.025E+00	5.594E-02	5.101
RA-226	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.199E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.486E-01	1.572E-02	4.858
AC-228	+	338.32		1.759E+00	8.238E-01	3.306E-01	1.347E-01	5.321
	+	911.07	*	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
	+	969.11		2.097E+00	6.248E-01	3.219E-01	7.533E-02	6.516
RA-228	+	338.32		1.759E+00	8.238E-01	3.306E-01	1.347E-01	5.321
	+	911.07	*	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
	+	969.11		2.097E+00	6.248E-01	3.219E-01	7.533E-02	6.516
TH-228		84.40		1.620E+00	3.220E+00	4.458E+00	5.772E-01	0.363
	+	238.60	*	1.819E+00	1.663E-01	9.014E-02	6.358E-03	20.176
	+	300.10		1.962E+00	1.466E+00	1.085E+00	6.392E-01	1.808
TH-230	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.198E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.485E-01	1.572E-02	4.858
TH-232	+	338.32		1.759E+00	4.181E-01	3.306E-01	1.844E-02	5.321
	+	911.07	*	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
	+	969.11		2.097E+00	6.248E-01	3.219E-01	7.533E-02	6.516
TH-234	+	63.29	*	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
	+	92.38		2.462E+00	8.376E-01	6.912E-01	1.232E-01	3.561
U-234	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.198E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.485E-01	1.572E-02	4.858
NP-237	+	86.50	*	9.719E-01	3.630E-01	4.135E-01	9.228E-02	2.350
		95.87		-2.170E-01	1.078E+00	1.552E+00	3.776E-01	-0.140
U-238	+	63.29	*	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
	+	92.38		2.462E+00	7.405E-01	6.912E-01	5.574E-02	3.561
AM-243	+	74.67	*	5.143E-01	9.636E-02	9.193E-02	7.057E-03	5.595
	+	86.72		3.645E+01	1.135E+01	1.592E+01	1.355E+00	2.290
		117.66		-2.315E+00	4.018E+00	6.401E+00	4.023E-01	-0.362
		142.18		-7.251E+00	1.775E+01	2.861E+01	1.592E+00	-0.253
ANH-511	+	511.00	*	8.906E-02	6.192E-02	4.542E-02	2.668E-03	1.961

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	9.288E-02	2.806E-01	4.723E-01	3.176E-02	0.197
NA-22		1274.54	*	-4.793E-03	4.537E-02	7.320E-02	5.441E-03	-0.065
NA-24		1368.53	*	1.141E-01	4.537E-02	Half-Life too short		
AL-26		1129.67		1.107E+00	2.007E+00	3.288E+00	2.096E-01	0.337
		1808.65	*	1.860E-02	1.889E-02	3.867E-02	2.309E-03	0.481
TI-44		67.85		-1.010E-02	5.900E-02	8.000E-02	5.918E-03	-0.126
	+	78.38	*	4.569E-01	5.884E-02	8.847E-02	6.980E-03	5.164
SC-46		889.25	*	2.384E-03	3.671E-02	6.149E-02	5.779E-03	0.039
	+	1120.51		1.989E-01	1.023E-01	1.291E-01	8.440E-03	1.541
V-48		944.10		-5.530E-01	8.400E-01	1.314E+00	1.193E-01	-0.421
		983.50	*	-3.724E-02	6.745E-02	1.063E-01	9.165E-03	-0.350
		1312.09		-1.506E-02	7.887E-02	1.257E-01	1.027E-02	-0.120
CR-51		320.08	*	4.986E-02	3.435E-01	5.800E-01	3.645E-02	0.086
MN-52		744.21		1.065E-01	2.070E-01	3.462E-01	2.494E-02	0.308
		848.13		-9.856E-02	5.624E+00	9.383E+00	8.206E-01	-0.011
		935.52		2.209E-01	2.243E-01	3.986E-01	3.656E-02	0.554
		1246.25		7.471E+00	7.324E+00	1.148E+01	7.894E-01	0.651
		1333.61		-1.046E-01	4.744E+00	7.691E+00	6.597E-01	-0.014
		1434.06	*	2.378E-01	1.832E-01	3.467E-01	2.867E-02	0.686
MN-54		834.83	*	-2.570E-02	3.862E-02	6.149E-02	5.251E-03	-0.418
CO-56		846.75	*	-1.565E-02	3.925E-02	6.356E-02	5.545E-03	-0.246
		977.42		-5.496E-01	2.875E+00	4.455E+00	3.875E-01	-0.123
		1037.82		5.647E-02	3.186E-01	5.335E-01	4.474E-02	0.106
		1175.09		-8.730E-01	2.319E+00	3.680E+00	2.051E-01	-0.237
	+	1238.25		1.680E-01	1.312E-01	1.872E-01	1.318E-02	0.898
		1360.21		1.895E-01	9.143E-01	1.523E+00	1.296E-01	0.124
		1771.40		-1.148E+00	3.549E-01	3.170E-01	1.988E-02	-3.620
CO-57		122.06	*	-1.479E-02	2.655E-02	4.249E-02	2.598E-03	-0.348
		136.48		6.007E-02	2.108E-01	3.489E-01	2.314E-02	0.172
CO-58		810.76	*	-7.979E-03	3.718E-02	6.123E-02	5.018E-03	-0.130

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		-1.222E+00	2.699E+00	4.344E+00	2.412E-01	-0.281
		192.34		1.189E-01	9.809E-01	1.476E+00	1.702E-01	0.081
		1099.22	*	2.087E-02	1.022E-01	1.707E-01	1.326E-02	0.122
		1291.56		3.138E-02	1.249E-01	2.082E-01	1.881E-02	0.151
CO-60		1173.22		-4.644E-03	4.881E-02	7.938E-02	4.397E-03	-0.059
		1332.49	*	-2.782E-03	4.155E-02	6.703E-02	5.751E-03	-0.042
ZN-65		1115.52	*	3.442E-02	1.071E-01	1.566E-01	1.040E-02	0.220
GE-68		1077.35	*	-1.327E-01	1.246E+00	2.034E+00	1.480E-01	-0.065
AS-73		53.44	*	3.128E-05	8.870E-01	1.491E+00	1.101E-01	0.000
AS-74		595.88	*	2.807E-02	8.568E-02	1.427E-01	8.630E-03	0.197
		634.78		1.264E-01	3.436E-01	5.721E-01	3.482E-02	0.221
SE-75		66.05		9.294E-01	5.614E+00	8.289E+00	7.802E-01	0.112
		96.73		-1.207E-01	8.584E-01	1.240E+00	1.614E-01	-0.097
		121.11		2.586E-02	1.410E-01	2.317E-01	2.190E-02	0.112
		136.00		1.294E-02	3.935E-02	6.524E-02	3.783E-03	0.198
		198.60		-3.174E-01	1.864E+00	2.936E+00	1.960E-01	-0.108
		264.65	*	-4.835E-03	4.735E-02	6.935E-02	3.885E-03	-0.070
		279.53		9.776E-02	1.208E-01	1.840E-01	1.115E-02	0.531
		303.91		-9.905E-02	2.197E+00	3.206E+00	3.021E-01	-0.031
		400.65		1.997E-01	2.494E-01	4.306E-01	3.824E-02	0.464
BR-77	+	87.88		5.173E+02	1.610E+02	2.538E+02	2.187E+01	2.038
		200.40		3.291E+01	1.173E+02	1.917E+02	1.006E+01	0.172
	+	239.00		2.076E+02	1.654E+01	2.700E+01	1.471E+00	7.691
		249.79		-4.040E+01	4.871E+01	7.486E+01	4.110E+00	-0.540
		281.68		-2.628E+01	7.093E+01	1.018E+02	5.678E+00	-0.258
		297.23		3.555E+02	6.330E+01	9.383E+01	5.253E+00	3.789
		303.76		-8.752E+00	1.339E+02	1.951E+02	1.093E+01	-0.045
		439.47		1.344E+02	9.411E+01	1.684E+02	9.465E+00	0.798
		484.57		-6.950E+01	1.518E+02	2.420E+02	1.402E+01	-0.287
		520.65	*	-2.680E-01	7.201E+00	1.178E+01	6.949E-01	-0.023
		574.64		2.833E+00	1.511E+02	2.468E+02	1.485E+01	0.011
		578.91		-6.413E+01	7.287E+01	9.376E+01	5.649E+00	-0.684
		585.48		1.628E+03	2.221E+02	4.026E+02	2.430E+01	4.045
		755.35		3.102E+01	1.262E+02	2.065E+02	1.520E+01	0.150
		817.79		-3.553E+01	8.837E+01	1.430E+02	1.184E+01	-0.248
SR-82		698.33		-1.490E+01	3.260E+01	5.075E+01	3.336E+00	-0.294
		776.49	*	-3.104E-02	3.825E-01	6.095E-01	4.672E-02	-0.051
		1395.20		1.390E-01	9.869E+00	1.602E+01	1.346E+00	0.009
RB-83		520.41	*	1.743E-03	6.660E-02	1.094E-01	6.454E-03	0.016
		529.64		4.821E-02	1.004E-01	1.697E-01	1.005E-02	0.284
		552.65		-2.352E-02	2.014E-01	3.266E-01	1.952E-02	-0.072
RB-84		881.50	*	2.938E-02	6.280E-02	1.087E-01	1.008E-02	0.270
KR-85		513.99	*	2.398E+01	8.414E+00	1.435E+01	8.439E-01	1.672
SR-85		513.99	*	1.215E-01	4.261E-02	7.266E-02	4.274E-03	1.672
RB-86		1076.63	*	2.569E-01	7.541E-01	1.278E+00	9.315E-02	0.201
Y-88		898.02		5.619E-03	4.038E-02	6.799E-02	6.512E-03	0.083
		1836.01	*	-5.829E-03	2.923E-02	4.638E-02	2.670E-03	-0.126
ZR-88		392.90	*	-1.709E-02	2.993E-02	4.819E-02	2.603E-03	-0.355
Y-91		1204.90	*	7.053E+00	1.942E+01	3.265E+01	1.994E+00	0.216

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	4.245E-03	3.471E-02	5.649E-02	3.746E-03	0.075
		871.10		-7.653E-03	3.109E-02	5.074E-02	4.621E-03	-0.151
NB-95		765.79	*	5.622E-02	5.065E-02	7.757E-02	5.826E-03	0.725
NB-95M		235.69	*	7.605E-02	1.410E-01	2.035E-01	1.475E-02	0.374
ZR-95		724.18		6.694E-02	1.065E-01	1.573E-01	1.232E-02	0.426
		756.15	*	-1.555E-02	7.354E-02	1.162E-01	9.731E-03	-0.134
NB-97		657.90	*	-4.388E-03	7.354E-02	Half-Life too short		
		1024.50		-1.022E+00	7.354E-02	Half-Life too short		
ZR-97		254.15		4.416E-01	7.354E-02	Half-Life too short		
		355.39		1.790E+00	7.354E-02	Half-Life too short		
		507.63	*	4.727E-01	7.354E-02	Half-Life too short		
		602.52		3.698E-01	7.354E-02	Half-Life too short		
		1021.30		-4.839E-01	7.354E-02	Half-Life too short		
		1147.95		-5.369E-01	7.354E-02	Half-Life too short		
		1362.66		-1.712E+00	7.354E-02	Half-Life too short		
		1750.46		-4.716E-01	7.354E-02	Half-Life too short		
MO-99		140.51		-9.321E+00	1.988E+01	3.126E+01	8.411E+00	-0.298
		181.06		6.199E+00	1.447E+01	2.096E+01	3.548E+00	0.296
		366.43		-2.214E+01	5.822E+01	9.498E+01	5.230E+00	-0.233
		739.58	*	-1.213E+00	8.731E+00	1.388E+01	1.998E+00	-0.087
		778.00		-1.378E+01	2.500E+01	4.026E+01	3.095E+00	-0.342
TC-99M		140.51	*	-7.186E+08	2.500E+01	Half-Life too short		
RH-101		127.23		5.751E-03	3.391E-02	5.601E-02	3.328E-03	0.103
		198.01	*	-1.054E-03	3.427E-02	5.429E-02	2.842E-03	-0.019
		325.23		-6.500E-02	2.473E-01	3.542E-01	1.983E-02	-0.184
RH-102		418.52		-4.547E-02	2.732E-01	4.483E-01	2.478E-02	-0.101
		475.06	*	-2.612E-02	2.657E-02	4.073E-02	2.345E-03	-0.641
		631.29		2.053E-02	5.439E-02	9.068E-02	5.517E-03	0.226
		697.49		-2.662E-02	7.531E-02	1.182E-01	7.759E-03	-0.225
		766.84		1.329E-01	1.413E-01	2.119E-01	1.595E-02	0.627
		1046.59		4.941E-02	1.208E-01	2.058E-01	1.596E-02	0.240
		1112.84		2.244E-01	2.649E-01	4.102E-01	2.739E-02	0.547
RU-103		497.08	*	-8.257E-03	3.757E-02	6.081E-02	7.698E-03	-0.136
	+	610.33		1.217E+01	2.404E+00	2.738E+00	4.249E-01	4.444
RH-106	+	511.85		4.439E-01	3.086E-01	4.029E-01	2.368E-02	1.102
		621.84	*	2.002E-02	3.127E-01	5.103E-01	6.061E-02	0.039
		1050.47		1.393E-01	2.514E+00	4.166E+00	3.207E-01	0.033
RU-106	+	511.85		4.439E-01	3.086E-01	4.029E-01	2.368E-02	1.102
		621.84	*	2.002E-02	3.127E-01	5.103E-01	3.101E-02	0.039
		1050.47		1.393E-01	2.514E+00	4.166E+00	3.207E-01	0.033
AG-108M		433.93	*	-2.232E-02	3.182E-02	5.038E-02	3.079E-03	-0.443
		614.37		1.711E-02	4.308E-02	6.286E-02	4.112E-03	0.272
		722.95		-9.103E-04	4.847E-02	6.713E-02	4.917E-03	-0.014
AG-110M		657.75	*	-3.145E-03	3.572E-02	5.746E-02	3.707E-03	-0.055
		677.61		-1.139E-02	3.218E-01	5.189E-01	3.440E-02	-0.022
		706.67		1.012E-01	2.259E-01	3.753E-01	2.623E-02	0.270
		763.93		1.275E-01	1.961E-01	2.893E-01	2.246E-02	0.441
		884.67		2.103E-03	4.545E-02	7.605E-02	7.286E-03	0.028
		937.48		-5.874E-02	1.124E-01	1.786E-01	1.687E-02	-0.329

---- Non-Identified Nuclides ----

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		1384.27		-7.520E-02	1.800E-01	2.290E-01	1.989E-02	-0.328
IN-111		171.28		-2.713E-01	7.934E-01	1.273E+00	6.469E-02	-0.213
		245.39	*	1.996E-01	9.126E-01	1.294E+00	7.084E-02	0.154
IN-113M		391.69	*	-5.894E-03	4.363E-02	7.200E-02	4.185E-03	-0.082
SN-113		391.69	*	-5.894E-03	4.363E-02	7.200E-02	4.185E-03	-0.082
IN-114M		190.27	*	-1.061E-01	2.005E-01	2.750E-01	1.427E-02	-0.386
CD-115		260.90		5.321E+01	9.440E+01	1.549E+02	8.565E+00	0.343
		492.35		-1.764E+01	2.483E+01	3.891E+01	2.263E+00	-0.453
		527.90	*	2.771E+00	7.222E+00	1.214E+01	7.184E-01	0.228
SN-117M		156.02		-1.153E-01	2.215E+00	3.606E+00	1.898E-01	-0.032
		158.56	*	-2.933E-02	5.232E-02	8.345E-02	4.346E-03	-0.351
SB-122		563.90	*	-1.388E-01	1.563E+00	2.537E+00	1.522E-01	-0.055
		692.80		-1.659E+00	3.193E+01	5.135E+01	3.338E+00	-0.032
I-123		159.00	*	-6.777E-01	3.193E+01	Half-Life too short		
		528.96		3.039E+01	3.193E+01	Half-Life too short		
TE-123M		159.00	*	-1.463E-02	2.834E-02	4.527E-02	2.393E-03	-0.323
I-124		602.71	*	1.271E-01	5.850E-01	8.787E-01	5.323E-02	0.145
		722.78		-3.577E-02	4.173E+00	5.786E+00	3.996E-01	-0.006
		1325.50		-1.317E+00	3.123E+01	5.054E+01	4.264E+00	-0.026
		1376.25		3.642E+01	2.899E+01	4.779E+01	4.044E+00	0.762
	+	1509.49		2.017E+01	2.128E+01	2.503E+01	1.989E+00	0.806
		1691.02		2.484E+00	2.627E+00	5.064E+00	3.479E-01	0.491
SB-124		602.71		8.846E-03	4.073E-02	6.117E-02	3.707E-03	0.145
		645.85		2.965E-01	5.180E-01	8.726E-01	5.936E-02	0.340
		709.31		-9.509E-01	3.001E+00	4.730E+00	3.179E-01	-0.201
		713.82		4.342E-01	1.713E+00	2.812E+00	3.036E-01	0.154
		722.78		-3.610E-03	4.211E-01	5.839E-01	4.167E-02	-0.006
	+	968.20		2.130E+01	4.351E+00	7.629E+00	6.719E-01	2.792
		1045.16		1.232E+00	2.496E+00	4.283E+00	3.331E-01	0.288
		1325.50		-1.419E-01	3.365E+00	5.447E+00	4.596E-01	-0.026
		1368.21		5.723E-01	1.715E+00	2.891E+00	3.871E-01	0.198
		1436.60		-8.266E-02	3.478E+00	5.604E+00	4.628E-01	-0.015
		1691.02	*	5.914E-02	6.254E-02	1.205E-01	8.791E-03	0.491
SB-125		427.89	*	-7.543E-02	9.131E-02	1.437E-01	8.374E-03	-0.525
	+	463.38		1.026E+00	4.473E-01	5.567E-01	3.725E-02	1.843
		600.56		-9.259E-02	1.797E-01	2.820E-01	1.954E-02	-0.328
		635.90		-9.537E-04	2.725E-01	4.420E-01	3.111E-02	-0.002
TE-125M		109.28	*	-4.912E+00	9.719E+00	1.575E+01	1.385E+00	-0.312
I-126		388.63		2.482E-01	1.858E-01	3.296E-01	1.784E-02	0.753
		666.33	*	4.560E-02	1.703E-01	2.808E-01	1.728E-02	0.162
		753.82		1.109E-01	1.450E+00	2.344E+00	1.720E-01	0.047
SB-126		223.80		-1.189E+00	3.756E+00	5.960E+00	3.204E-01	-0.199
	+	278.60		1.837E+00	2.905E+00	3.972E+00	2.214E-01	0.462
	+	296.50		1.272E+01	1.981E+00	3.342E+00	1.871E-01	3.806
		414.70		9.702E-03	7.626E-02	1.109E-01	6.110E-03	0.087
		415.30		-9.944E-02	6.421E+00	9.227E+00	5.087E-01	-0.011
		555.20		3.157E+00	3.691E+00	6.367E+00	3.808E-01	0.496
		573.80		2.287E-01	9.826E-01	1.628E+00	9.793E-02	0.141
		593.00		-8.476E-01	8.754E-01	1.324E+00	8.003E-02	-0.640

---- Non-Identified Nuclides ----

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		656.30		-4.609E-01	3.152E+00	5.049E+00	3.077E-01	-0.091
		666.33		1.900E-02	7.096E-02	1.170E-01	7.201E-03	0.162
		675.00		6.925E-01	1.928E+00	3.198E+00	2.004E-01	0.217
		695.00		3.086E-02	7.059E-02	1.177E-01	7.684E-03	0.262
		697.00		-1.068E-01	2.487E-01	3.880E-01	2.544E-02	-0.275
		720.50	*	7.391E-02	1.583E-01	2.307E-01	1.586E-02	0.320
		856.80		5.116E-02	4.464E-01	6.516E-01	5.787E-02	0.079
		989.30		6.747E-01	1.236E+00	2.132E+00	1.822E-01	0.317
		1034.80		2.193E+00	8.900E+00	1.498E+01	1.188E+00	0.146
		1213.00		6.281E-02	4.890E+00	8.002E+00	5.005E-01	0.008
SB-127		61.10		2.782E+01	5.266E+01	7.942E+01	7.757E+00	0.350
		252.40		-1.694E+00	3.604E+00	5.527E+00	2.289E+00	-0.307
		290.80		-7.122E+00	1.955E+01	2.803E+01	2.412E+00	-0.254
		411.60		1.188E+01	1.154E+01	1.770E+01	2.476E+00	0.671
		444.90		-1.037E+00	7.363E+00	1.206E+01	1.248E+00	-0.086
		473.00		-2.847E-01	1.237E+00	2.006E+00	2.168E-01	-0.142
		543.00		-2.026E+00	1.373E+01	2.224E+01	2.821E+00	-0.091
		603.60		2.140E+00	1.043E+01	1.495E+01	1.578E+00	0.143
		685.20	*	-2.785E-01	1.116E+00	1.768E+00	1.666E-01	-0.157
		698.50		-3.432E+00	1.197E+01	1.888E+01	2.746E+00	-0.182
		722.20		-2.175E+00	2.859E+01	3.935E+01	3.741E+00	-0.055
		783.80		1.703E+00	2.720E+00	4.758E+00	5.483E-01	0.358
XE-127		57.60		-1.544E+00	6.521E+00	1.049E+01	7.636E-01	-0.147
		145.22		4.936E-01	7.106E-01	1.177E+00	6.466E-02	0.420
		172.10		-4.935E-02	1.225E-01	1.961E-01	9.971E-03	-0.252
		202.84	*	-5.837E-02	5.013E-02	7.401E-02	3.895E-03	-0.789
		374.96		-3.391E-02	1.846E-01	3.044E-01	1.666E-02	-0.111
I-131		80.18		-4.019E+00	4.913E+00	6.943E+00	5.595E-01	-0.579
		284.30		-1.512E-01	1.385E+00	2.194E+00	1.370E-01	-0.069
		364.48	*	6.332E-02	9.451E-02	1.633E-01	1.014E-02	0.388
		636.97		-5.628E-01	1.414E+00	2.225E+00	1.500E-01	-0.253
		722.89		-1.120E-01	7.382E+00	1.023E+01	7.124E-01	-0.011
TE-132		49.72		-1.366E+01	1.697E+01	2.772E+01	2.643E+00	-0.493
		111.76		1.853E+01	2.471E+01	4.164E+01	3.729E+00	0.445
		116.30		-1.047E+01	2.259E+01	3.659E+01	3.218E+00	-0.286
		228.16	*	7.211E-02	5.598E-01	9.052E-01	1.265E-01	0.080
BA-133		53.15		5.103E-01	3.890E+00	6.566E+00	4.852E-01	0.078
		79.62		1.781E+00	1.559E+00	2.349E+00	3.492E-01	0.758
		81.00		-1.677E-01	1.217E-01	1.644E-01	2.562E-02	-1.020
	+	276.40		2.930E-01	4.646E-01	6.268E-01	8.062E-02	0.467
		302.84		6.808E-02	1.537E-01	2.313E-01	2.674E-02	0.294
		356.01	*	5.033E-02	4.318E-02	6.785E-02	7.756E-03	0.742
		383.85		-1.409E-01	2.858E-01	4.618E-01	4.933E-02	-0.305
I-133	+	510.53		3.556E-01	2.858E-01	Half-Life too short		
		529.87	*	9.421E-04	2.858E-01	Half-Life too short		
		706.58		7.981E-02	2.858E-01	Half-Life too short		
		856.28		-5.990E-02	2.858E-01	Half-Life too short		
		875.33		1.628E-02	2.858E-01	Half-Life too short		
		1236.41		5.923E-01	2.858E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1298.22		8.017E-03	2.858E-01	Half-Life too short		
CS-134		475.35		-1.148E+00	1.734E+00	2.725E+00	1.569E-01	-0.421
		563.23		5.231E-02	3.664E-01	6.038E-01	3.692E-02	0.087
		569.32		1.479E-02	2.199E-01	3.380E-01	2.087E-02	0.044
		604.70		-4.499E-04	3.781E-02	5.307E-02	3.232E-03	-0.008
	+	795.84	*	1.317E-01	6.651E-02	9.230E-02	7.400E-03	1.427
		801.93		-5.754E-01	4.575E-01	5.633E-01	4.558E-02	-1.022
		1038.57		-1.347E+00	4.055E+00	6.508E+00	5.125E-01	-0.207
		1167.94		1.523E+00	2.626E+00	4.499E+00	2.539E-01	0.338
		1365.15		-4.354E-01	1.245E+00	1.931E+00	1.718E-01	-0.225
CS-135		268.24	*	1.565E-01	1.786E-01	2.627E-01	1.962E-02	0.596
I-135		288.45		-6.554E+07	1.786E-01	Half-Life too short		
		417.63		-2.533E+06	1.786E-01	Half-Life too short		
		546.56		-1.592E+08	1.786E-01	Half-Life too short		
		836.80		3.948E+08	1.786E-01	Half-Life too short		
		1038.76		-4.144E+08	1.786E-01	Half-Life too short		
		1124.00		2.115E+09	1.786E-01	Half-Life too short		
		1131.51		4.571E+08	1.786E-01	Half-Life too short		
		1260.41	*	-2.994E+08	1.786E-01	Half-Life too short		
		1457.56		2.512E+10	1.786E-01	Half-Life too short		
		1678.03		-1.565E+08	1.786E-01	Half-Life too short		
		1706.46		9.366E+08	1.786E-01	Half-Life too short		
		1791.20		1.950E+08	1.786E-01	Half-Life too short		
CS-136		66.91		3.282E-01	8.664E-01	1.288E+00	1.903E-01	0.255
	+	86.29		4.061E+00	1.322E+00	2.038E+00	2.599E-01	1.993
		153.22		2.945E-01	6.532E-01	1.083E+00	7.408E-02	0.272
		163.89		3.124E-01	1.024E+00	1.686E+00	1.130E-01	0.185
		176.55		-1.157E-01	3.567E-01	5.721E-01	3.381E-02	-0.202
		273.65		-1.707E-01	6.717E-01	6.454E-01	4.134E-02	-0.264
		340.57		6.048E-01	1.494E-01	2.585E-01	1.539E-02	2.340
		818.51		-3.183E-02	6.727E-02	1.083E-01	8.988E-03	-0.294
		1048.07	*	-6.774E-02	1.120E-01	1.757E-01	1.430E-02	-0.386
		1235.34		1.078E-01	6.980E-01	9.922E-01	1.043E-01	0.109
BA-137M		661.65	*	-2.116E-02	3.838E-02	5.791E-02	3.529E-03	-0.365
CS-137		661.65	*	-2.237E-02	4.057E-02	6.122E-02	3.745E-03	-0.365
CE-139		165.85	*	-1.375E-02	3.088E-02	4.942E-02	2.500E-03	-0.278
BA-140		162.64		6.718E-01	7.092E-01	1.194E+00	7.082E-02	0.562
		304.84		5.019E-01	1.245E+00	1.862E+00	5.073E-01	0.270
		423.70		4.984E-01	1.712E+00	2.871E+00	9.111E-01	0.174
		537.32	*	6.234E-02	2.466E-01	4.089E-01	1.331E-01	0.152
LA-140	+	328.77		4.873E-01	3.334E-01	4.846E-01	3.059E-02	1.006
		432.53		1.218E+00	1.905E+00	3.265E+00	2.030E-01	0.373
		487.03		6.350E-02	1.241E-01	2.106E-01	1.383E-02	0.301
		751.79		7.427E-01	1.637E+00	2.722E+00	2.280E-01	0.273
		815.85		-4.773E-01	2.815E-01	3.957E-01	3.673E-02	-1.206
		867.82		1.339E-01	1.318E+00	1.996E+00	1.895E-01	0.067
		919.63		-3.640E-01	2.975E+00	4.195E+00	4.713E-01	-0.087
		925.24		1.115E+00	1.086E+00	1.918E+00	1.877E-01	0.582
		1596.49	*	6.182E-02	6.660E-02	1.163E-01	8.698E-03	0.532

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	5.186E-02	6.450E-02	1.072E-01	6.145E-03	0.484
CE-143		57.37		-2.588E-04	6.450E-02	Half-Life too short		
		231.56		9.742E-05	6.450E-02	Half-Life too short		
		293.26	*	4.011E-04	6.450E-02	Half-Life too short		
		350.59		1.613E-02	6.450E-02	Half-Life too short		
		490.36		-1.113E-03	6.450E-02	Half-Life too short		
		664.57		7.724E-04	6.450E-02	Half-Life too short		
		721.93		-1.210E-05	6.450E-02	Half-Life too short		
CE-144		80.11		-1.821E+00	2.500E+00	3.548E+00	2.839E-01	-0.513
		133.54	*	-2.073E-01	2.149E-01	3.371E-01	4.783E-02	-0.615
PM-144		476.78		-1.288E-03	6.059E-02	9.964E-02	6.888E-03	-0.013
		618.01		-2.167E-02	3.234E-02	4.996E-02	3.201E-03	-0.434
		696.49	*	-6.172E-03	3.387E-02	5.391E-02	3.533E-03	-0.114
		778.57		-9.119E-01	2.221E+00	3.615E+00	2.783E-01	-0.252
PR-144		696.49	*	-4.180E-01	2.294E+00	3.651E+00	2.391E-01	-0.114
		1489.15		2.533E+00	1.221E+01	2.025E+01	1.628E+00	0.125
PM-146		453.90	*	2.814E-02	4.278E-02	7.324E-02	6.256E-03	0.384
		633.02		4.314E-01	1.414E+00	2.330E+00	8.590E-01	0.185
		735.90		-9.421E-02	1.455E-01	2.169E-01	6.113E-02	-0.434
		747.13		-6.083E-03	9.195E-02	1.470E-01	1.946E-02	-0.041
ND-147	+	91.11		4.453E-01	2.568E-01	4.947E-01	4.432E-02	0.900
		319.41		2.146E-01	2.905E+00	4.889E+00	2.740E-01	0.044
		439.89		6.776E+00	5.079E+00	9.036E+00	5.083E-01	0.750
		531.02	*	-2.171E-01	5.169E-01	8.213E-01	1.115E-01	-0.264
PM-149		285.90	*	2.711E+01	6.131E+01	1.051E+02	1.480E+01	0.258
EU-152		121.78		-3.254E-02	7.764E-02	1.249E-01	9.806E-03	-0.261
		244.69		6.836E-01	3.837E-01	5.919E-01	3.238E-02	1.155
		344.27	*	1.031E-01	1.078E-01	1.504E-01	9.529E-03	0.686
		443.98		-9.049E-02	9.014E-01	1.480E+00	8.350E-02	-0.061
		778.89		-9.267E-02	2.579E-01	4.214E-01	3.245E-02	-0.220
		867.32		5.134E-01	8.552E-01	1.319E+00	1.193E-01	0.389
	+	964.01		7.928E-01	3.471E-01	5.814E-01	5.149E-02	1.364
		1085.78		-3.233E-02	3.894E-01	6.364E-01	4.543E-02	-0.051
		1112.02		1.226E-01	3.684E-01	5.609E-01	3.753E-02	0.219
		1407.95		1.113E-01	2.022E-01	3.519E-01	2.943E-02	0.316
GD-153		69.67		1.633E-01	1.927E+00	2.828E+00	2.109E-01	0.058
		83.37		8.685E+00	2.388E+01	2.598E+01	2.141E+00	0.334
		97.43	*	1.574E-02	8.769E-02	1.277E-01	9.643E-03	0.123
		103.18		-8.308E-02	1.083E-01	1.742E-01	1.235E-02	-0.477
EU-154		123.07		-3.471E-02	5.480E-02	8.733E-02	8.362E-03	-0.398
		247.94		3.510E-01	3.914E-01	6.069E-01	5.676E-02	0.578
		591.81		-2.066E-01	6.228E-01	9.607E-01	9.531E-02	-0.215
		723.30		-7.802E-02	2.092E-01	2.786E-01	2.234E-02	-0.280
		756.87		1.128E-01	8.166E-01	1.325E+00	1.474E-01	0.085
		873.19		2.999E-02	2.704E-01	4.552E-01	5.742E-02	0.066
		996.32		-2.802E-01	3.746E-01	5.753E-01	1.018E-01	-0.487
		1004.76		2.539E-02	2.254E-01	3.762E-01	4.303E-02	0.067
		1274.45	*	-1.443E-02	1.267E-01	2.043E-01	2.130E-02	-0.071
EU-155		48.70		-1.631E-01	2.769E+00	4.653E+00	3.375E-01	-0.035

---- Non-Identified Nuclides ----

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		60.01		2.995E+00	5.746E+00	8.673E+00	6.276E-01	0.345
	+	86.54		3.984E-01	1.241E-01	1.985E-01	1.705E-02	2.007
		105.31	*	2.625E-02	1.105E-01	1.840E-01	1.302E-02	0.143
TB-160	+	86.79		1.053E+00	3.278E-01	5.220E-01	4.448E-02	2.017
		197.04		-5.408E-01	5.808E-01	8.852E-01	4.629E-02	-0.611
		215.65		2.710E-01	8.877E-01	1.271E+00	6.778E-02	0.213
	+	298.57		2.823E-01	1.307E-01	1.975E-01	1.106E-02	1.429
		879.36	*	-4.083E-02	1.252E-01	2.027E-01	1.872E-02	-0.201
		962.29		3.847E-01	5.839E-01	8.975E-01	7.966E-02	0.429
	+	966.15		5.384E-01	2.357E-01	4.801E-01	4.240E-02	1.121
		1177.93		5.345E-02	3.706E-01	6.141E-01	3.453E-02	0.087
		1271.85		2.363E-01	7.288E-01	1.223E+00	9.011E-02	0.193
HO-166M		80.57		-3.958E-01	3.269E-01	4.535E-01	3.644E-02	-0.873
		184.41		1.008E-01	4.197E-02	6.566E-02	3.385E-03	1.535
		280.46		8.110E-02	9.147E-02	1.416E-01	7.898E-03	0.573
	+	410.95		3.275E-01	3.738E-01	4.349E-01	2.389E-02	0.753
		711.68	*	8.218E-03	6.472E-02	1.053E-01	7.112E-03	0.078
		752.31		5.756E-02	2.874E-01	4.688E-01	3.431E-02	0.123
		810.29		-8.290E-03	5.657E-02	9.368E-02	7.650E-03	-0.088
TM-171		51.35		-1.071E+00	3.347E+01	5.623E+01	4.158E+00	-0.019
		52.39		-4.574E+00	1.723E+01	2.871E+01	2.124E+00	-0.159
		59.40		3.250E+01	3.062E+01	4.722E+01	3.415E+00	0.688
		66.72	*	1.424E+01	3.323E+01	4.955E+01	3.649E+00	0.287
LU-176	+	88.36		7.850E-01	2.444E-01	3.972E-01	3.406E-02	1.977
		201.83		-2.766E-02	2.963E-02	4.603E-02	2.420E-03	-0.601
		306.84	*	-9.748E-04	2.416E-02	3.947E-02	2.212E-03	-0.025
		401.10		-1.438E-01	6.534E+00	1.084E+01	5.900E-01	-0.013
LU-177		112.95		1.052E-01	1.533E+00	2.533E+00	1.649E-01	0.042
		208.36	*	1.497E+00	1.201E+00	1.795E+00	9.501E-02	0.834
LU-177M		52.97		9.744E-02	1.760E+00	2.963E+00	2.191E-01	0.033
		54.07		1.480E-01	9.123E-01	1.541E+00	1.136E-01	0.096
		61.30		4.641E-01	1.700E+00	2.537E+00	1.841E-01	0.183
		121.62		-1.426E-01	3.960E-01	6.385E-01	3.907E-02	-0.223
		147.16		1.426E-01	6.851E-01	1.128E+00	6.149E-02	0.126
		171.86		-2.153E-01	5.018E-01	8.023E-01	4.079E-02	-0.268
		218.09		-4.163E-02	8.922E-01	1.435E+00	7.671E-02	-0.029
		268.79		1.258E+00	9.293E-01	1.401E+00	7.777E-02	0.897
		319.02		-1.277E-02	2.457E-01	4.111E-01	2.303E-02	-0.031
		367.43		-3.276E-01	8.490E-01	1.385E+00	7.619E-02	-0.237
		413.65	*	4.716E-02	1.911E-01	2.806E-01	1.545E-02	0.168
HF-181		56.28		-5.435E-01	9.934E-01	1.636E+00	1.197E-01	-0.332
		57.53		-1.646E-01	5.516E-01	8.857E-01	6.447E-02	-0.186
	+	65.20		1.127E+00	1.445E+00	1.708E+00	1.251E-01	0.660
		133.02		-1.007E-01	6.828E-02	1.058E-01	6.118E-03	-0.952
		136.25		1.620E-01	4.538E-01	7.532E-01	4.295E-02	0.215
		345.85		1.116E-01	1.999E-01	2.877E-01	1.601E-02	0.388
		482.03	*	-7.761E-03	3.857E-02	6.263E-02	3.622E-03	-0.124
W-181		56.28		-2.158E-01	3.937E-01	6.485E-01	4.744E-02	-0.333
		57.53		-6.536E-02	2.188E-01	3.513E-01	2.557E-02	-0.186

---- Non-Identified Nuclides ----

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	+	65.20	*	4.434E-01	5.686E-01	6.720E-01	4.924E-02	0.660
TA-182		67.75		-1.795E-02	1.401E-01	1.903E-01	1.407E-02	-0.094
		100.10		1.501E-01	1.800E-01	3.018E-01	2.210E-02	0.497
		152.43		3.445E-01	3.482E-01	5.874E-01	3.136E-02	0.587
		222.10		-1.800E-01	3.454E-01	5.432E-01	2.916E-02	-0.331
		1001.68		1.461E+00	2.041E+00	3.560E+00	2.987E-01	0.410
	+	1121.28		5.508E-01	2.833E-01	3.564E-01	2.326E-02	1.546
		1189.05		1.330E-01	3.473E-01	5.842E-01	3.400E-02	0.228
		1221.42	*	1.570E-01	2.184E-01	3.748E-01	2.402E-02	0.419
		1230.97		-1.222E-02	5.238E-01	8.349E-01	5.501E-02	-0.015
RE-183		57.98		-6.598E-03	2.233E-01	3.473E-01	2.524E-02	-0.019
		59.32		1.306E-01	1.247E-01	1.921E-01	1.390E-02	0.679
		67.20		9.373E-02	2.328E-01	3.468E-01	2.558E-02	0.270
		162.32	*	8.126E-02	1.089E-01	1.822E-01	9.347E-03	0.446
	+	208.81		2.240E+00	1.596E+00	1.784E+00	9.448E-02	1.256
		291.72		-3.678E-02	1.016E+00	1.487E+00	8.316E-02	-0.025
RE-184		57.98		-2.448E-02	8.283E-01	1.289E+00	9.364E-02	-0.019
		59.32		4.840E-01	4.621E-01	7.123E-01	5.152E-02	0.679
		67.20		3.476E-01	8.634E-01	1.286E+00	9.489E-02	0.270
		161.27		-9.475E-02	3.559E-01	5.741E-01	2.957E-02	-0.165
		216.55		1.653E-01	2.829E-01	4.514E-01	2.410E-02	0.366
		252.85	*	-1.824E-01	2.359E-01	3.631E-01	1.998E-02	-0.502
		318.01		-1.281E-01	4.168E-01	6.884E-01	3.857E-02	-0.186
		792.07		-2.476E-01	1.129E+00	1.608E+00	1.269E-01	-0.154
		903.28		7.779E-01	1.076E+00	1.810E+00	1.718E-01	0.430
		920.93		-1.813E-01	4.913E-01	7.290E-01	6.796E-02	-0.249
OS-185		59.72		1.610E-01	3.397E-01	5.119E-01	3.702E-02	0.314
		61.14		3.258E-02	1.861E-01	2.768E-01	2.008E-02	0.118
		69.30		9.922E-02	3.661E-01	5.065E-01	3.770E-02	0.196
		592.07		-7.652E-01	2.460E+00	3.917E+00	2.368E-01	-0.195
		646.12	*	4.332E-02	4.334E-02	7.507E-02	4.573E-03	0.577
		717.42		-5.819E-01	9.475E-01	1.455E+00	9.940E-02	-0.400
		874.81		8.793E-02	5.214E-01	8.821E-01	8.086E-02	0.100
		880.27		-4.989E-02	7.105E-01	1.177E+00	1.089E-01	-0.042
RE-188		155.03	*	5.337E-03	1.760E-01	2.875E-01	1.519E-02	0.019
		477.96		1.095E+00	2.712E+00	4.586E+00	2.646E-01	0.239
		633.10		8.622E-01	2.808E+00	4.656E+00	2.833E-01	0.185
W-188	+	63.58		5.904E+01	7.571E+01	9.619E+01	7.017E+00	0.614
		227.08		5.500E+00	1.285E+01	2.104E+01	1.135E+00	0.261
		290.67	*	-3.140E+00	8.254E+00	1.182E+01	6.610E-01	-0.266
IR-192	+	295.96		1.029E+00	1.605E-01	2.689E-01	1.531E-02	3.825
		308.46		1.019E-02	8.841E-02	1.493E-01	8.470E-03	0.068
		316.51	*	-1.047E-02	3.283E-02	5.261E-02	2.964E-03	-0.199
		468.07		3.997E-03	6.892E-02	9.898E-02	6.562E-03	0.040
		604.41		2.201E-03	5.067E-01	7.123E-01	8.180E-02	0.003
		612.46		5.037E+00	1.066E+00	1.860E+00	1.447E-01	2.708
AU-195	+	65.12		2.053E-01	2.633E-01	3.144E-01	2.303E-02	0.653
		66.83		5.221E-02	1.096E-01	1.637E-01	1.206E-02	0.319
	+	75.70		1.657E+00	3.105E-01	4.929E-01	3.810E-02	3.362

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	3.340E-02	2.458E-01	3.756E-01	2.788E-02	0.089
		129.76		4.204E+00	2.982E+00	5.104E+00	2.997E-01	0.824
TL-200		367.94	*	-6.071E-05	2.982E+00	Half-Life too short		
		579.30		-1.581E-03	2.982E+00	Half-Life too short		
		828.27		7.291E-04	2.982E+00	Half-Life too short		
		1205.75		4.361E-04	2.982E+00	Half-Life too short		
TL-201		68.90		6.837E-01	5.042E+00	6.302E+00	4.683E-01	0.108
		70.82		-1.463E+00	2.425E+00	3.474E+00	2.606E-01	-0.421
		80.30		-3.738E+00	4.535E+00	6.406E+00	5.135E-01	-0.583
		135.34		7.943E+00	1.950E+01	3.242E+01	1.856E+00	0.245
		167.43	*	3.929E-01	5.638E+00	9.199E+00	4.655E-01	0.043
TL-202		68.90		7.510E-02	5.539E-01	6.923E-01	5.144E-02	0.108
		70.82		-1.603E-01	2.657E-01	3.806E-01	2.855E-02	-0.421
		80.30		-4.096E-01	4.969E-01	7.020E-01	5.627E-02	-0.583
		439.56	*	8.667E-02	6.003E-02	1.075E-01	6.042E-03	0.806
HG-203		70.83		-7.301E-01	1.211E+00	1.732E+00	2.238E-01	-0.422
		72.87		1.860E+00	7.363E-01	1.125E+00	1.413E-01	1.652
		82.60		7.293E-01	1.507E+00	1.907E+00	2.569E-01	0.382
		279.20	*	3.206E-02	4.532E-02	6.863E-02	4.081E-03	0.467
BI-207		72.80		5.204E-01	2.115E-01	3.333E-01	2.528E-02	1.561
	+	74.97		9.232E-01	1.730E-01	2.401E-01	1.847E-02	3.845
		84.90		1.336E-01	2.248E-01	3.335E-01	2.789E-02	0.401
		569.67		-1.109E-02	3.464E-02	5.190E-02	3.119E-03	-0.214
		1063.62	*	1.108E-02	5.624E-02	9.416E-02	7.058E-03	0.118
		1770.23		-6.397E-02	3.850E-01	5.140E-01	3.228E-02	-0.124
TL-207		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
PO-209		260.50		3.759E+00	1.000E+01	1.628E+01	8.998E-01	0.231
		262.80		-1.146E+01	2.746E+01	4.299E+01	2.379E+00	-0.267
		896.60	*	-2.964E+00	7.275E+00	1.170E+01	1.114E+00	-0.253
BI-210		46.50	*	2.697E+00	4.096E+00	7.010E+00	5.536E-01	0.385
PB-210		46.50	*	2.697E+00	4.096E+00	7.010E+00	5.536E-01	0.385
PO-210		46.50	*	2.697E+00	4.095E+00	7.010E+00	4.794E-01	0.385
PB-211		404.84	*	-9.671E-01	1.201E+00	1.382E+00	8.610E-01	-0.700
		427.08		-1.782E+00	2.314E+00	3.198E+00	1.976E+00	-0.557
		831.96		-1.289E-01	1.189E+00	1.968E+00	1.233E+00	-0.066
BI-212	+	727.18	*	8.962E-01	4.866E-01	6.398E-01	5.518E-02	1.401
		785.46		6.055E-01	1.690E+00	2.920E+00	2.277E-01	0.207
		1620.62		1.813E+00	1.300E+00	2.518E+00	1.847E-01	0.720
PO-215		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
RN-219	+	271.23		6.295E-01	3.252E-01	4.454E-01	3.533E-02	1.413
		401.81	*	-1.213E-01	4.003E-01	6.531E-01	8.790E-02	-0.186
RN-220		549.76	*	-2.386E+00	2.593E+01	4.213E+01	2.515E+00	-0.057
RA-223		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
AC-227		79.80		1.107E+00	1.933E+00	2.872E+00	6.105E-01	0.385
		236.00		4.312E-01	2.751E-01	4.132E-01	4.237E-02	1.044
		256.20	*	-2.018E-01	3.978E-01	6.197E-01	8.578E-02	-0.326
		286.10		2.169E-01	1.500E+00	2.543E+00	2.913E-01	0.085
	+	299.80		3.636E+00	1.772E+00	2.534E+00	4.109E-01	1.435
		304.40		2.461E-01	1.976E+00	2.916E+00	5.026E-01	0.084
		334.20		-3.460E-04	2.950E+00	3.389E+00	6.190E-01	0.000
TH-227		79.80		1.107E+00	1.933E+00	2.872E+00	6.185E-01	0.385
	+	94.00		9.513E+00	3.436E+00	4.004E+00	8.609E-01	2.376
		236.00		4.312E-01	2.742E-01	4.132E-01	3.648E-02	1.044
		256.20	*	-2.018E-01	3.983E-01	6.197E-01	1.041E-01	-0.326
		286.10		2.169E-01	1.516E+00	2.543E+00	2.547E+00	0.085
	+	299.80		3.636E+00	1.772E+00	2.534E+00	4.109E-01	1.435
		304.40		2.461E-01	1.976E+00	2.916E+00	5.026E-01	0.084
		334.20		-3.460E-04	2.950E+00	3.389E+00	6.190E-01	0.000
TH-229		85.43		4.927E-01	2.282E-01	3.520E-01	2.959E-02	1.400
	+	88.47		4.519E-01	1.407E-01	2.296E-01	1.965E-02	1.968
		100.00		1.602E-01	1.884E-01	3.159E-01	2.316E-02	0.507
		193.63	*	2.370E-01	4.994E-01	8.237E-01	4.291E-02	0.288
	+	210.97		1.775E+00	1.265E+00	1.397E+00	7.418E-02	1.270
PA-231		283.67	*	-6.139E-01	1.626E+00	2.440E+00	3.340E-01	-0.252
	+	301.29		1.454E+00	6.852E-01	1.026E+00	1.062E-01	1.417
TH-231		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
U-231		84.21		3.027E+00	5.612E+00	7.792E+00	6.473E-01	0.388
	+	92.29		7.745E+00	2.330E+00	3.426E+00	2.766E-01	2.261
		95.87	*	-2.028E-01	1.006E+00	1.450E+00	1.116E-01	-0.140
		108.00		-9.512E-01	1.758E+00	2.847E+00	1.930E-01	-0.334
PA-233	+	75.28		2.694E+01	6.098E+00	7.336E+00	1.090E+00	3.672
	+	86.59		6.480E+00	2.603E+00	3.222E+00	8.629E-01	2.011
	+	300.12		1.014E+00	4.852E-01	7.111E-01	9.495E-02	1.426
		311.98	*	2.406E-02	5.995E-02	1.026E-01	6.128E-03	0.235
		340.50		3.237E+00	1.056E+00	1.347E+00	3.086E-01	2.403
		398.62		1.485E+00	2.113E+00	3.580E+00	9.227E-01	0.415
		415.76		4.699E-01	1.793E+00	2.632E+00	5.397E-01	0.179
PA-234	+	63.00		1.732E+00	2.233E+00	2.850E+00	4.219E-01	0.608
	+	94.67		8.483E-01	2.661E-01	3.317E-01	3.933E-02	2.557
		98.44		4.587E-02	1.075E-01	1.540E-01	8.565E-02	0.298
		99.86		4.172E-01	4.774E-01	8.012E-01	5.882E-02	0.521
		111.00		2.105E-01	1.966E-01	3.334E-01	3.583E-02	0.631
		131.20		8.139E-02	1.098E-01	1.845E-01	1.076E-02	0.441
		152.70		3.254E-01	3.436E-01	5.733E-01	8.967E-02	0.568
	+	186.00		5.190E+00	2.359E+00	2.513E+00	7.649E-01	2.065
		226.40		-5.712E-02	4.052E-01	6.478E-01	7.359E-02	-0.088
		227.20		1.797E-01	4.387E-01	7.179E-01	3.872E-02	0.250
		248.90		-2.838E-01	8.326E-01	1.309E+00	2.802E-01	-0.217
		293.70		5.159E+00	1.220E+00	1.648E+00	2.639E-01	3.130
		369.80		-1.423E-01	8.039E-01	1.326E+00	2.750E-01	-0.107
		568.70		6.109E-01	1.108E+00	1.755E+00	1.055E-01	0.348
		569.50		-8.043E-02	3.084E-01	4.643E-01	2.790E-02	-0.173
		574.00		3.283E-01	1.505E+00	2.491E+00	1.499E-01	0.132
		699.00		-1.081E-01	6.985E-01	1.113E+00	2.032E-01	-0.097
		706.10		9.580E-01	1.180E+00	1.884E+00	8.337E-01	0.509
		733.00		1.268E-01	3.966E-01	5.702E-01	1.234E-01	0.222
		742.81		4.157E-01	1.391E+00	2.245E+00	1.505E+00	0.185
	+	796.30		2.563E+00	1.451E+00	1.791E+00	4.808E-01	1.431
		805.60		8.817E-01	9.935E-01	1.709E+00	5.215E-01	0.516
		819.60		1.484E-01	1.176E+00	1.986E+00	7.540E-01	0.075
		826.30		-1.796E-01	8.201E-01	1.343E+00	6.002E-01	-0.134
		831.60		-1.174E-01	6.211E-01	1.023E+00	3.049E-01	-0.115
		876.40		-6.661E-02	7.600E-01	1.252E+00	1.288E+00	-0.053
		880.51		7.229E-02	2.538E-01	4.333E-01	4.011E-02	0.167
		883.24		6.951E-02	2.693E-01	4.518E-01	3.041E-01	0.154
		899.00		-6.790E-01	9.016E-01	1.326E+00	5.824E-01	-0.512
		925.00		1.412E+00	1.196E+00	2.157E+00	2.002E-01	0.655
		926.50		-4.361E-02	1.846E-01	2.972E-01	7.580E-02	-0.147
		946.00	*	-2.120E-01	3.015E-01	4.664E-01	8.847E-02	-0.454
		949.00		3.708E-01	4.722E-01	8.277E-01	7.471E-02	0.448
		980.50		1.124E-01	6.809E-01	1.145E+00	9.910E-02	0.098

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-4.116E-01	1.118E+00	1.664E+00	1.083E+00	-0.247
PA-234M		766.41		2.803E+01	3.047E+01	3.358E+01	2.571E+01	0.835
		1001.03	*	2.432E+00	6.744E+00	1.146E+01	1.262E+00	0.212
U-235	+	89.95		1.909E+00	1.236E+00	1.965E+00	6.049E-01	0.972
	+	93.35		2.959E+00	1.190E+00	1.267E+00	3.526E-01	2.335
		105.00		6.973E-01	1.086E+00	1.802E+00	5.298E-01	0.387
		143.76	*	-1.614E-01	2.212E-01	3.461E-01	5.611E-02	-0.466
		163.35		3.739E-01	4.819E-01	8.001E-01	1.422E-01	0.467
	+	185.71		1.922E-01	6.562E-02	9.316E-02	4.809E-03	2.063
		205.31		3.458E-01	6.025E-01	8.724E-01	1.555E-01	0.396
NP-236	+	94.67		6.434E-01	1.935E-01	2.517E-01	1.968E-02	2.556
		98.44		3.470E-02	7.902E-02	1.164E-01	8.685E-03	0.298
		111.00		1.592E-01	1.481E-01	2.522E-01	1.667E-02	0.631
		160.31	*	-1.010E-01	8.198E-02	1.271E-01	6.572E-03	-0.795
NP-239		99.55		8.366E-02	1.654E-01	2.664E-01	1.962E-02	0.314
		117.00	*	2.369E-02	1.982E-01	3.277E-01	2.070E-02	0.072
	+	209.75		1.788E+00	1.274E+00	1.427E+00	7.568E-02	1.252
		228.18		2.951E-02	2.348E-01	3.796E-01	2.049E-02	0.078
	+	277.60		1.430E-01	2.262E-01	3.060E-01	1.705E-02	0.467
		334.30		1.247E-02	1.672E+00	1.923E+00	1.074E-01	0.006
AM-241		59.54	*	9.817E-02	1.808E-01	2.731E-01	2.175E-02	0.359
CM-243		99.55		8.608E-02	1.702E-01	2.741E-01	2.019E-02	0.314
		103.76	*	1.908E-03	9.836E-02	1.627E-01	1.147E-02	0.012
		117.00		2.437E-02	2.039E-01	3.372E-01	2.129E-02	0.072
	+	209.75		1.762E+00	1.256E+00	1.407E+00	7.460E-02	1.252
		228.18		2.982E-02	2.372E-01	3.835E-01	2.070E-02	0.078
	+	277.60		1.442E-01	2.280E-01	3.085E-01	1.719E-02	0.467
CM-247	+	278.00		5.932E-01	9.381E-01	1.265E+00	7.047E-02	0.469
		287.40		5.896E-01	1.192E+00	2.049E+00	1.145E-01	0.288
		402.60	*	-2.998E-02	3.735E-02	5.744E-02	3.132E-03	-0.522
CF-249		252.85		-6.878E-01	8.894E-01	1.369E+00	7.531E-02	-0.502
		333.44		2.141E-01	2.283E-01	2.560E-01	1.430E-02	0.836
		387.95	*	5.757E-02	3.877E-02	6.922E-02	3.748E-03	0.832
CF-251		176.60	*	-4.365E-02	1.308E-01	2.097E-01	1.071E-02	-0.208
		227.00		2.321E-01	3.870E-01	6.384E-01	3.442E-02	0.364
		285.00		5.804E-03	1.718E+00	2.822E+00	1.576E-01	0.002

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                            DETECTOR DATA                              *
*                                                                       *
* Configuration     : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001   *
* Acquisition date : 14-JUL-2009 10:44:32 Detector SN#    :             *
* Detector ID       : GAM16               Sensitivity     : 5.000       *
* Geometry          : CAN                 Energy tolerance: 1.500       *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000      *
* Elapsed real time:    0 02:00:02.21     Half life ratio :  8.000      *
*************************************************************************
*                                                                       *
*                            SAMPLE DATA                                *
*                                                                       *
* Sample date       : 30-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232754001           Analyst initials: MXR1       *
* Batch Number      : 882713               Sample Quantity : 1.3503E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                              QC DATA                                  *
* Standard Weight   :   0.00000                                         *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :             *
* MSD DPM           :    0.000            MSD Isotope     :             *
* LCS DPM           :    0.000            LCS Isotope     :             *
* LCSD DPM          :    0.000            LCSD Isotope    :             *
*************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.549E+01	3.497E+00	5.223E-01	0.000E+00
CD-109	3.362E+00	1.026E+00	1.554E+00	0.000E+00
SN-126	3.310E-01	1.010E-01	1.555E-01	0.000E+00
TL-208	5.743E-01	8.123E-02	5.993E-02	0.000E+00
BI-211	4.134E+00	4.884E-01	3.081E-01	0.000E+00
PB-212	1.819E+00	1.629E-01	9.341E-02	0.000E+00
PO-212	1.819E+00	1.629E-01	9.341E-02	0.000E+00
BI-214	1.150E+00	1.645E-01	1.160E-01	0.000E+00
PB-214	1.438E+00	1.851E-01	1.074E-01	0.000E+00
PO-214	1.438E+00	1.851E-01	1.074E-01	0.000E+00
PO-216	1.819E+00	1.629E-01	9.341E-02	0.000E+00
PO-218	1.438E+00	1.851E-01	1.074E-01	0.000E+00
RA-224	5.230E+00	1.060E+00	1.062E+00	0.000E+00
RA-226	1.150E+00	1.645E-01	1.160E-01	0.000E+00
AC-228	1.698E+00	3.361E-01	2.371E-01	0.000E+00
RA-228	1.698E+00	3.361E-01	2.371E-01	0.000E+00
TH-228	1.819E+00	1.629E-01	9.340E-02	0.000E+00
TH-230	1.150E+00	1.645E-01	1.160E-01	0.000E+00
TH-232	1.698E+00	3.361E-01	2.371E-01	0.000E+00
TH-234	1.486E+00	1.882E+00	2.378E+00	0.000E+00
U-234	1.150E+00	1.645E-01	1.160E-01	0.000E+00
NP-237	9.719E-01	3.557E-01	4.362E-01	0.000E+00
U-238	1.486E+00	1.882E+00	2.378E+00	0.000E+00
AM-243	5.143E-01	9.444E-02	9.721E-02	0.000E+00
ANH-511	8.906E-02	6.069E-02	4.642E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	9.288E-02	2.750E-01	4.833E-01	0.000E+00	NOT IDENT.
NA-22	-4.793E-03	4.446E-02	7.355E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	1.962E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.860E-02	1.851E-02	3.860E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.766E-02	9.348E-02	0.000E+00	FAIL ABUN
SC-46	2.384E-03	3.597E-02	6.220E-02	0.000E+00	FAIL ABUN
V-48	-3.724E-02	6.610E-02	1.073E-01	0.000E+00	NOT IDENT.
CR-51	4.986E-02	3.366E-01	5.979E-01	0.000E+00	NOT IDENT.
MN-52	2.378E-01	1.795E-01	3.476E-01	0.000E+00	NOT IDENT.
MN-54	-2.570E-02	3.785E-02	6.228E-02	0.000E+00	NOT IDENT.
CO-56	-1.565E-02	3.847E-02	6.436E-02	0.000E+00	FAIL ABUN
CO-57	-1.479E-02	2.602E-02	4.455E-02	0.000E+00	NOT IDENT.
CO-58	-7.979E-03	3.644E-02	6.206E-02	0.000E+00	NOT IDENT.
FE-59	2.087E-02	1.002E-01	1.720E-01	0.000E+00	NOT IDENT.
CO-60	-2.782E-03	4.072E-02	6.729E-02	0.000E+00	NOT IDENT.
ZN-65	3.442E-02	1.049E-01	1.577E-01	0.000E+00	NOT IDENT.
GE-68	-1.327E-01	1.221E+00	2.050E+00	0.000E+00	NOT IDENT.
AS-73	3.128E-05	8.693E-01	1.585E+00	0.000E+00	NOT IDENT.
AS-74	2.807E-02	8.397E-02	1.454E-01	0.000E+00	NOT IDENT.
SE-75	-4.835E-03	4.640E-02	7.173E-02	0.000E+00	NOT IDENT.
BR-77	-2.680E-01	7.057E+00	1.203E+01	0.000E+00	FAIL ABUN
SR-82	-3.104E-02	3.749E-01	6.182E-01	0.000E+00	NOT IDENT.
RB-83	1.743E-03	6.527E-02	1.118E-01	0.000E+00	NOT IDENT.
RB-84	2.938E-02	6.155E-02	1.100E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.246E+00	1.466E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.176E-02	7.425E-02	0.000E+00	NOT IDENT.
RB-86	2.569E-01	7.390E-01	1.288E+00	0.000E+00	NOT IDENT.
Y-88	-5.829E-03	2.864E-02	4.628E-02	0.000E+00	NOT IDENT.
ZR-88	-1.709E-02	2.934E-02	4.949E-02	0.000E+00	NOT IDENT.
Y-91	7.053E+00	1.903E+01	3.284E+01	0.000E+00	NOT IDENT.
NB-94	4.245E-03	3.402E-02	5.739E-02	0.000E+00	NOT IDENT.
NB-95	5.622E-02	4.964E-02	7.869E-02	0.000E+00	NOT IDENT.
NB-95M	7.605E-02	1.381E-01	2.109E-01	0.000E+00	NOT IDENT.
ZR-95	-1.555E-02	7.207E-02	1.179E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.086E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.908E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.213E+00	8.557E+00	1.409E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.501E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.054E-03	3.359E-02	5.644E-02	0.000E+00	NOT IDENT.
RH-102	-2.612E-02	2.604E-02	4.168E-02	0.000E+00	NOT IDENT.
RU-103	-8.257E-03	3.682E-02	6.218E-02	0.000E+00	FAIL ABUN
RH-106	2.002E-02	3.065E-01	5.197E-01	0.000E+00	FAIL ABUN
RU-106	2.002E-02	3.065E-01	5.197E-01	0.000E+00	FAIL ABUN
AG-108M	-2.232E-02	3.119E-02	5.165E-02	0.000E+00	NOT IDENT.
AG-110M	-3.145E-03	3.500E-02	5.846E-02	0.000E+00	NOT IDENT.
IN-111	1.996E-01	8.943E-01	1.341E+00	0.000E+00	NOT IDENT.
IN-113M	-5.894E-03	4.276E-02	7.395E-02	0.000E+00	NOT IDENT.
SN-113	-5.894E-03	4.276E-02	7.395E-02	0.000E+00	NOT IDENT.
IN-114M	-1.061E-01	1.965E-01	2.861E-01	0.000E+00	NOT IDENT.
CD-115	2.771E+00	7.078E+00	1.240E+01	0.000E+00	NOT IDENT.
SN-117M	-2.933E-02	5.127E-02	8.710E-02	0.000E+00	NOT IDENT.
SB-122	-1.388E-01	1.531E+00	2.588E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.286E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.463E-02	2.777E-02	4.725E-02	0.000E+00	NOT IDENT.
I-124	1.271E-01	5.733E-01	8.954E-01	0.000E+00	FAIL ABUN
SB-124	5.914E-02	6.129E-02	1.205E-01	0.000E+00	FAIL ABUN
SB-125	-7.543E-02	8.949E-02	1.474E-01	0.000E+00	FAIL ABUN
TE-125M	-4.912E+00	9.524E+00	1.655E+01	0.000E+00	NOT IDENT.
I-126	4.560E-02	1.668E-01	2.856E-01	0.000E+00	NOT IDENT.
SB-126	7.391E-02	1.552E-01	2.343E-01	0.000E+00	FAIL ABUN
SB-127	-2.785E-01	1.094E+00	1.798E+00	0.000E+00	NOT IDENT.
XE-127	-5.837E-02	4.913E-02	7.692E-02	0.000E+00	NOT IDENT.
I-131	6.332E-02	9.262E-02	1.680E-01	0.000E+00	NOT IDENT.
TE-132	7.211E-02	5.486E-01	9.387E-01	0.000E+00	NOT IDENT.
BA-133	5.033E-02	4.231E-02	6.981E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.245E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.518E-02	9.357E-02	0.000E+00	FAIL ABUN
CS-135	1.565E-01	1.750E-01	2.716E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.328E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-6.774E-02	1.098E-01	1.772E-01	0.000E+00	FAIL ABUN
BA-137M	-2.116E-02	3.762E-02	5.891E-02	0.000E+00	NOT IDENT.
CS-137	-2.237E-02	3.976E-02	6.227E-02	0.000E+00	NOT IDENT.
CE-139	-1.375E-02	3.026E-02	5.154E-02	0.000E+00	NOT IDENT.
BA-140	6.234E-02	2.416E-01	4.175E-01	0.000E+00	NOT IDENT.
LA-140	6.182E-02	6.527E-02	1.163E-01	0.000E+00	FAIL ABUN
CE-141	5.186E-02	6.321E-02	1.120E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.227E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.073E-01	2.106E-01	3.529E-01	0.000E+00	NOT IDENT.
PM-144	-6.172E-03	3.319E-02	5.479E-02	0.000E+00	NOT IDENT.
PR-144	-4.180E-01	2.248E+00	3.710E+00	0.000E+00	NOT IDENT.

PM-146	2.814E-02	4.193E-02	7.502E-02	0.000E+00	NOT IDENT.
ND-147	-2.171E-01	5.066E-01	8.389E-01	0.000E+00	FAIL ABUN
PM-149	2.711E+01	6.009E+01	1.085E+02	0.000E+00	NOT IDENT.
EU-152	1.031E-01	1.056E-01	1.549E-01	0.000E+00	FAIL ABUN
GD-153	1.574E-02	8.594E-02	1.344E-01	0.000E+00	NOT IDENT.
EU-154	-1.443E-02	1.242E-01	2.053E-01	0.000E+00	NOT IDENT.
EU-155	2.625E-02	1.083E-01	1.934E-01	0.000E+00	FAIL ABUN
TB-160	-4.083E-02	1.227E-01	2.051E-01	0.000E+00	FAIL ABUN
HO-166M	8.218E-03	6.343E-02	1.070E-01	0.000E+00	FAIL ABUN
TM-171	1.424E+01	3.256E+01	5.250E+01	0.000E+00	NOT IDENT.
LU-176	-9.748E-04	2.368E-02	4.072E-02	0.000E+00	FAIL ABUN
LU-177	1.497E+00	1.177E+00	1.864E+00	0.000E+00	NOT IDENT.
LU-177M	4.716E-02	1.873E-01	2.879E-01	0.000E+00	NOT IDENT.
HF-181	-7.761E-03	3.780E-02	6.408E-02	0.000E+00	FAIL ABUN
W-181	4.434E-01	5.572E-01	7.123E-01	0.000E+00	FAIL ABUN
TA-182	1.570E-01	2.140E-01	3.769E-01	0.000E+00	FAIL ABUN
RE-183	8.126E-02	1.067E-01	1.901E-01	0.000E+00	FAIL ABUN
RE-184	-1.824E-01	2.312E-01	3.758E-01	0.000E+00	NOT IDENT.
OS-185	4.332E-02	4.247E-02	7.640E-02	0.000E+00	NOT IDENT.
RE-188	5.337E-03	1.725E-01	3.002E-01	0.000E+00	NOT IDENT.
W-188	-3.140E+00	8.089E+00	1.221E+01	0.000E+00	FAIL ABUN
IR-192	-1.047E-02	3.217E-02	5.424E-02	0.000E+00	FAIL ABUN
AU-195	3.340E-02	2.409E-01	3.953E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.018E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.929E-01	5.526E+00	9.593E+00	0.000E+00	NOT IDENT.
TL-202	8.667E-02	5.883E-02	1.102E-01	0.000E+00	NOT IDENT.
HG-203	3.206E-02	4.441E-02	7.091E-02	0.000E+00	NOT IDENT.
BI-207	1.108E-02	5.512E-02	9.494E-02	0.000E+00	FAIL ABUN
TL-207	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
PO-209	-2.964E+00	7.129E+00	1.184E+01	0.000E+00	NOT IDENT.
BI-210	2.697E+00	4.014E+00	7.473E+00	0.000E+00	NOT IDENT.
PB-210	2.697E+00	4.014E+00	7.473E+00	0.000E+00	NOT IDENT.
PO-210	2.697E+00	4.013E+00	7.473E+00	0.000E+00	NOT IDENT.
PB-211	-9.671E-01	1.177E+00	1.418E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.768E-01	6.497E-01	0.000E+00	FAIL ABUN
PO-215	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
RN-219	-1.213E-01	3.923E-01	6.704E-01	0.000E+00	FAIL ABUN
RN-220	-2.386E+00	2.541E+01	4.300E+01	0.000E+00	NOT IDENT.
RA-223	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
AC-227	-2.018E-01	3.898E-01	6.413E-01	0.000E+00	FAIL ABUN
TH-227	-2.018E-01	3.903E-01	6.413E-01	0.000E+00	FAIL ABUN
TH-229	2.370E-01	4.894E-01	8.568E-01	0.000E+00	FAIL ABUN
PA-231	-6.139E-01	1.593E+00	2.521E+00	0.000E+00	FAIL ABUN
TH-231	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
U-231	-2.028E-01	9.859E-01	1.527E+00	0.000E+00	FAIL ABUN
PA-233	2.406E-02	5.875E-02	1.058E-01	0.000E+00	FAIL ABUN
PA-234	-2.120E-01	2.955E-01	4.713E-01	0.000E+00	FAIL ABUN
PA-234M	2.432E+00	6.609E+00	1.157E+01	0.000E+00	NOT IDENT.
U-235	-1.614E-01	2.168E-01	3.619E-01	0.000E+00	FAIL ABUN
NP-236	-1.010E-01	8.034E-02	1.326E-01	0.000E+00	FAIL ABUN
NP-239	2.369E-02	1.943E-01	3.439E-01	0.000E+00	FAIL ABUN
AM-241	9.817E-02	1.772E-01	2.899E-01	0.000E+00	NOT IDENT.
CM-243	1.908E-03	9.640E-02	1.710E-01	0.000E+00	FAIL ABUN
CM-247	-2.998E-02	3.660E-02	5.896E-02	0.000E+00	FAIL ABUN
CF-249	5.757E-02	3.800E-02	7.110E-02	0.000E+00	NOT IDENT.
CF-251	-4.365E-02	1.282E-01	2.184E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:01.90

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:44:32
Sample ID         : G232754001           Sample quantity  : 1.35030E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.21  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1672	10.67*	1.228E+00	3.549E+01	3.549E+01	10.06
CD-109	88.03	276	3.72*	6.263E+00	3.292E+00	3.362E+00	31.13
SN-126	64.28	71	9.60	3.508E+00	5.882E-01	5.882E-01	128.85
	86.94	276	8.90	6.263E+00	1.376E+00	1.376E+00	51.04
	87.57	276	37.00*	6.263E+00	3.310E-01	3.310E-01	31.13
TL-208	277.35	36	6.80	4.944E+00	2.966E-01	2.966E-01	158.39
	510.84	100	21.60	3.128E+00	4.123E-01	4.123E-01	70.03
	583.14	488	84.20*	2.806E+00	5.743E-01	5.743E-01	14.43
	860.37	63	12.46	1.987E+00	7.059E-01	7.059E-01	63.90
BI-211	72.87	------	1.27	4.802E+00	------ Line Not Found		------
	351.07	802	12.94*	4.166E+00	4.134E+00	4.134E+00	12.06
PB-212	74.81	617	10.70	5.057E+00	3.173E+00	3.173E+00	20.94
	77.11	856	18.00	5.338E+00	2.476E+00	2.476E+00	12.88
	87.30	276	8.00	6.263E+00	1.531E+00	1.531E+00	32.70
	238.63	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.09	113	3.41	4.679E+00	1.962E+00	1.962E+00	46.67
PO-212	74.81	617	10.70	5.057E+00	3.173E+00	3.173E+00	20.94
	77.11	856	18.00	5.338E+00	2.476E+00	2.476E+00	12.88
	87.30	276	8.00	6.263E+00	1.531E+00	1.531E+00	32.70
	115.19	------	0.60	7.278E+00	------ Line Not Found		------
	238.63	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.09	113	3.41	4.679E+00	1.962E+00	1.962E+00	46.67
BI-214	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
PB-214	74.81	617	6.21	5.057E+00	5.466E+00	5.467E+00	20.15
	77.11	856	10.50	5.338E+00	4.245E+00	4.245E+00	14.96
	87.30	276	4.67	6.263E+00	2.622E+00	2.622E+00	32.07

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	404	7.49	5.434E+00	2.758E+00	2.758E+00	21.43
	295.21	446	19.20	4.731E+00	1.364E+00	1.364E+00	16.78
	351.92	802	37.20*	4.166E+00	1.438E+00	1.438E+00	13.14
PO-214	74.81	617	6.21	5.057E+00	5.466E+00	5.467E+00	20.15
	77.11	856	10.50	5.338E+00	4.245E+00	4.245E+00	14.96
	87.30	276	4.67	6.263E+00	2.622E+00	2.622E+00	32.07
	241.98	404	7.49	5.434E+00	2.758E+00	2.758E+00	21.43
	295.21	446	19.20	4.731E+00	1.364E+00	1.364E+00	16.78
	351.92	802	37.20*	4.166E+00	1.438E+00	1.438E+00	13.14
PO-216	74.81	617	10.70	5.057E+00	3.173E+00	3.173E+00	20.94
	77.11	856	18.00	5.338E+00	2.476E+00	2.476E+00	12.88
	87.30	276	8.00	6.263E+00	1.531E+00	1.531E+00	32.70
	238.63	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.09	113	3.41	4.679E+00	1.962E+00	1.962E+00	46.67
PO-218	74.81	617	6.21	5.057E+00	5.466E+00	5.467E+00	20.15
	77.11	856	10.50	5.338E+00	4.245E+00	4.245E+00	14.96
	87.30	276	4.67	6.263E+00	2.622E+00	2.622E+00	32.07
	241.98	404	7.49	5.434E+00	2.758E+00	2.758E+00	21.43
	295.21	446	19.20	4.731E+00	1.364E+00	1.364E+00	16.78
	351.92	802	37.20*	4.166E+00	1.438E+00	1.438E+00	13.14
RA-224	240.98	404	3.95*	5.434E+00	5.230E+00	5.230E+00	20.68
RA-226	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
AC-228	338.32	309	11.40	4.288E+00	1.759E+00	1.759E+00	46.83
	911.07	319	27.70*	1.885E+00	1.698E+00	1.698E+00	20.20
	969.11	223	16.60	1.780E+00	2.097E+00	2.097E+00	29.79
RA-228	338.32	309	11.40	4.288E+00	1.759E+00	1.759E+00	46.83
	911.07	319	27.70*	1.885E+00	1.698E+00	1.698E+00	20.20
	969.11	223	16.60	1.780E+00	2.097E+00	2.097E+00	29.79
TH-228	84.40	------	1.21	6.023E+00	------ Line Not Found		------
	238.60	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.10	113	3.41	4.679E+00	1.962E+00	1.962E+00	74.72
TH-230	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
TH-232	338.32	309	11.40	4.288E+00	1.759E+00	1.759E+00	23.77
	911.07	319	27.70*	1.885E+00	1.698E+00	1.698E+00	20.20
	969.11	223	16.60	1.780E+00	2.097E+00	2.097E+00	29.79
TH-234	63.29	71	3.80*	3.508E+00	1.486E+00	1.486E+00	129.21
	92.38	318	5.41	6.640E+00	2.462E+00	2.462E+00	34.02

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
NP-237	86.50	276	12.60*	6.263E+00	9.719E-01	9.719E-01	37.35
	95.87	------	2.60	6.774E+00	------ Line Not Found		------
U-238	63.29	71	3.80*	3.508E+00	1.486E+00	1.486E+00	129.21
	92.38	318	5.41	6.640E+00	2.462E+00	2.462E+00	30.08
AM-243	74.67	617	66.00*	5.057E+00	5.143E-01	5.143E-01	18.74
	86.72	276	0.34	6.263E+00	3.645E+01	3.645E+01	31.13
	117.66	------	0.55	7.296E+00	------ Line Not Found		------
	142.18	------	0.13	7.157E+00	------ Line Not Found		------
ANH-511	511.00	100	100.00*	3.128E+00	8.906E-02	8.906E-02	69.53

Flag: "*" = Keyline

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

Total number of lines in spectrum 37
Number of unidentified lines 3
Number of lines tentatively identified by NID 34 91.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.549E+01	3.549E+01	0.357E+01	10.06	
CD-109	464.00D	1.02	3.292E+00	3.362E+00	1.046E+00	31.13	
SN-126	1.00E+05Y	1.00	3.310E-01	3.310E-01	1.030E-01	31.13	
TL-208	1.41E+10Y	1.00	5.743E-01	5.743E-01	0.829E-01	14.43	
BI-211	7.04E+08Y	1.00	4.134E+00	4.134E+00	0.498E+00	12.06	
PB-212	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
PO-212	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
BI-214	1600.00Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
PB-214	1600.00Y	1.00	1.438E+00	1.438E+00	0.189E+00	13.14	
PO-214	1600.00Y	1.00	1.438E+00	1.438E+00	0.189E+00	13.14	
PO-216	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
PO-218	1600.00Y	1.00	1.438E+00	1.438E+00	0.189E+00	13.14	
RA-224	1.41E+10Y	1.00	5.230E+00	5.230E+00	1.082E+00	20.68	
RA-226	1600.00Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
AC-228	1.41E+10Y	1.00	1.698E+00	1.698E+00	0.343E+00	20.20	
RA-228	1.41E+10Y	1.00	1.698E+00	1.698E+00	0.343E+00	20.20	
TH-228	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
TH-230	4.47E+09Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
TH-232	1.41E+10Y	1.00	1.698E+00	1.698E+00	0.343E+00	20.20	
TH-234	4.47E+09Y	1.00	1.486E+00	1.486E+00	1.920E+00	129.21	
U-234	4.47E+09Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
NP-237	2.14E+06Y	1.00	9.719E-01	9.719E-01	3.630E-01	37.35	
U-238	4.47E+09Y	1.00	1.486E+00	1.486E+00	1.920E+00	129.21	
AM-243	7380.00Y	1.00	5.143E-01	5.143E-01	0.964E-01	18.74	
ANH-511	1.00E+09Y	1.00	8.906E-02	8.906E-02	6.192E-02	69.53	
	Total Activity :		7.488E+01	7.495E+01			

Grand Total Activity : 7.488E+01 7.495E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	90.13	120	413	0.96	180.27	178	6	1.66E-02	57.0	6.45E+00	T
0	186.18	238	357	1.02	372.35	368	10	3.31E-02	33.7	6.39E+00	T
0	209.87	124	451	1.13	419.74	414	12	1.72E-02	71.1	5.95E+00	T
0	270.47	121	237	1.51	540.94	537	10	1.68E-02	51.1	5.04E+00	T
0	328.34	74	162	1.27	656.68	653	9	1.03E-02	68.1	4.38E+00	T
0	409.75	49	184	0.71	819.50	815	12	6.81E-03	****	3.72E+00	T
0	463.54	128	141	0.81	927.08	922	14	1.78E-02	43.1	3.38E+00	T
0	728.07	88	111	1.57	1456.14	1448	13	1.22E-02	53.6	2.32E+00	T
0	795.12	77	69	1.23	1590.23	1584	13	1.07E-02	49.8	2.14E+00	T
2	965.00	73	52	2.04	1930.00	1925	20	1.02E-02	42.9	1.79E+00	T
0	1379.31	35	19	1.40	2758.61	2752	15	4.93E-03	70.8	1.29E+00	
0	1509.98	25	25	0.59	3019.95	3012	19	3.45E-03	****	1.20E+00	T
0	1589.67	29	28	1.50	3179.34	3171	15	4.02E-03	90.0	1.15E+00	
0	1729.77	23	7	2.63	3459.54	3451	14	3.19E-03	64.2	1.09E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:06.60

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*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1 *
* Acquisition date  : 14-JUL-2009 10:44:32  Detector SN#     :             *
* Detector ID       : GAM16                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:02.21          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232754001            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.35030E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09.0MS Isotope       :              *
* MSD ID           :                      MSD Isotope      :              *
* LCS ID           : 1023-A               LCS Isotope      :              *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.549E+01	3.568E+00	5.212E-01	4.387E-02	68.092
CD-109	3.362E+00	1.046E+00	1.473E+00	1.271E-01	2.282
SN-126	3.310E-01	1.030E-01	1.474E-01	1.266E-02	2.245
TL-208	5.743E-01	8.289E-02	5.878E-02	4.049E-03	9.770
BI-211	4.134E+00	4.984E-01	2.994E-01	1.859E-02	13.809
PB-212	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
PO-212	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
BI-214	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
PB-214	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-214	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-216	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
PO-218	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
RA-224	5.230E+00	1.082E+00	1.025E+00	5.594E-02	5.101
RA-226	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
AC-228	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
RA-228	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
TH-228	1.819E+00	1.663E-01	9.014E-02	6.358E-03	20.176
TH-230	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
TH-234	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
U-234	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
NP-237	9.719E-01	3.630E-01	4.135E-01	9.228E-02	2.350
U-238	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
AM-243	5.143E-01	9.636E-02	9.193E-02	7.057E-03	5.595
ANH-511	8.906E-02	6.192E-02	4.542E-02	2.668E-03	1.961

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	9.288E-02		2.806E-01	4.723E-01	3.176E-02	0.197
NA-22	-4.793E-03		4.537E-02	7.320E-02	5.441E-03	-0.065
NA-24	1.141E-01		1.001E-01	Half-Life too short		
AL-26	1.860E-02		1.889E-02	3.867E-02	2.309E-03	0.481
TI-44	4.569E-01	+	5.884E-02	8.847E-02	6.980E-03	5.164
SC-46	2.384E-03		3.671E-02	6.149E-02	5.779E-03	0.039
V-48	-3.724E-02		6.745E-02	1.063E-01	9.165E-03	-0.350
CR-51	4.986E-02		3.435E-01	5.800E-01	3.645E-02	0.086
MN-52	2.378E-01		1.832E-01	3.467E-01	2.867E-02	0.686
MN-54	-2.570E-02		3.862E-02	6.149E-02	5.251E-03	-0.418
CO-56	-1.565E-02		3.925E-02	6.356E-02	5.545E-03	-0.246
CO-57	-1.479E-02		2.655E-02	4.249E-02	2.598E-03	-0.348
CO-58	-7.979E-03		3.718E-02	6.123E-02	5.018E-03	-0.130
FE-59	2.087E-02		1.022E-01	1.707E-01	1.326E-02	0.122
CO-60	-2.782E-03		4.155E-02	6.703E-02	5.751E-03	-0.042
ZN-65	3.442E-02		1.071E-01	1.566E-01	1.040E-02	0.220
GE-68	-1.327E-01		1.246E+00	2.034E+00	1.480E-01	-0.065
AS-73	3.128E-05		8.870E-01	1.491E+00	1.101E-01	0.000
AS-74	2.807E-02		8.568E-02	1.427E-01	8.630E-03	0.197
SE-75	-4.835E-03		4.735E-02	6.935E-02	3.885E-03	-0.070
BR-77	-2.680E-01		7.201E+00	1.178E+01	6.949E-01	-0.023
SR-82	-3.104E-02		3.825E-01	6.095E-01	4.672E-02	-0.051
RB-83	1.743E-03		6.660E-02	1.094E-01	6.454E-03	0.016
RB-84	2.938E-02		6.280E-02	1.087E-01	1.008E-02	0.270
KR-85	2.398E+01		8.414E+00	1.435E+01	8.439E-01	1.672
SR-85	1.215E-01		4.261E-02	7.266E-02	4.274E-03	1.672
RB-86	2.569E-01		7.541E-01	1.278E+00	9.315E-02	0.201
Y-88	-5.829E-03		2.923E-02	4.638E-02	2.670E-03	-0.126
ZR-88	-1.709E-02		2.993E-02	4.819E-02	2.603E-03	-0.355
Y-91	7.053E+00		1.942E+01	3.265E+01	1.994E+00	0.216
NB-94	4.245E-03		3.471E-02	5.649E-02	3.746E-03	0.075
NB-95	5.622E-02		5.065E-02	7.757E-02	5.826E-03	0.725
NB-95M	7.605E-02		1.410E-01	2.035E-01	1.475E-02	0.374
ZR-95	-1.555E-02		7.354E-02	1.162E-01	9.731E-03	-0.134
NB-97	-4.388E-03		1.575E-02	Half-Life too short		
ZR-97	4.727E-01		3.014E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	-1.213E+00		8.731E+00	1.388E+01	1.998E+00	-0.087
TC-99M	-7.186E+08		7.659E+08	Half-Life too short		
RH-101	-1.054E-03		3.427E-02	5.429E-02	2.842E-03	-0.019
RH-102	-2.612E-02		2.657E-02	4.073E-02	2.345E-03	-0.641
RU-103	-8.257E-03		3.757E-02	6.081E-02	7.698E-03	-0.136
RH-106	2.002E-02		3.127E-01	5.103E-01	6.061E-02	0.039
RU-106	2.002E-02		3.127E-01	5.103E-01	3.101E-02	0.039
AG-108M	-2.232E-02		3.182E-02	5.038E-02	3.079E-03	-0.443
AG-110M	-3.145E-03		3.572E-02	5.746E-02	3.707E-03	-0.055
IN-111	1.996E-01		9.126E-01	1.294E+00	7.084E-02	0.154
IN-113M	-5.894E-03		4.363E-02	7.200E-02	4.185E-03	-0.082
SN-113	-5.894E-03		4.363E-02	7.200E-02	4.185E-03	-0.082
IN-114M	-1.061E-01		2.005E-01	2.750E-01	1.427E-02	-0.386
CD-115	2.771E+00		7.222E+00	1.214E+01	7.184E-01	0.228
SN-117M	-2.933E-02		5.232E-02	8.345E-02	4.346E-03	-0.351
SB-122	-1.388E-01		1.563E+00	2.537E+00	1.522E-01	-0.055
I-123	-6.777E-01		6.564E-01	Half-Life too short		
TE-123M	-1.463E-02		2.834E-02	4.527E-02	2.393E-03	-0.323
I-124	1.271E-01		5.850E-01	8.787E-01	5.323E-02	0.145
SB-124	5.914E-02		6.254E-02	1.205E-01	8.791E-03	0.491
SB-125	-7.543E-02		9.131E-02	1.437E-01	8.374E-03	-0.525
TE-125M	-4.912E+00		9.719E+00	1.575E+01	1.385E+00	-0.312
I-126	4.560E-02		1.703E-01	2.808E-01	1.728E-02	0.162
SB-126	7.391E-02		1.583E-01	2.307E-01	1.586E-02	0.320
SB-127	-2.785E-01		1.116E+00	1.768E+00	1.666E-01	-0.157
XE-127	-5.837E-02		5.013E-02	7.401E-02	3.895E-03	-0.789
I-131	6.332E-02		9.451E-02	1.633E-01	1.014E-02	0.388
TE-132	7.211E-02		5.598E-01	9.052E-01	1.265E-01	0.080
BA-133	5.033E-02		4.318E-02	6.785E-02	7.756E-03	0.742
I-133	9.421E-04		1.145E-03	Half-Life too short		
CS-134	1.317E-01	+	6.651E-02	9.230E-02	7.400E-03	1.427
CS-135	1.565E-01		1.786E-01	2.627E-01	1.962E-02	0.596
I-135	-2.994E+08		1.698E+08	Half-Life too short		
CS-136	-6.774E-02		1.120E-01	1.757E-01	1.430E-02	-0.386
BA-137M	-2.116E-02		3.838E-02	5.791E-02	3.529E-03	-0.365
CS-137	-2.237E-02		4.057E-02	6.122E-02	3.745E-03	-0.365
CE-139	-1.375E-02		3.088E-02	4.942E-02	2.500E-03	-0.278
BA-140	6.234E-02		2.466E-01	4.089E-01	1.331E-01	0.152
LA-140	6.182E-02		6.660E-02	1.163E-01	8.698E-03	0.532
CE-141	5.186E-02		6.450E-02	1.072E-01	6.145E-03	0.484
CE-143	4.011E-04		6.261E-05	Half-Life too short		
CE-144	-2.073E-01		2.149E-01	3.371E-01	4.783E-02	-0.615
PM-144	-6.172E-03		3.387E-02	5.391E-02	3.533E-03	-0.114
PR-144	-4.180E-01		2.294E+00	3.651E+00	2.391E-01	-0.114
PM-146	2.814E-02		4.278E-02	7.324E-02	6.256E-03	0.384
ND-147	-2.171E-01		5.169E-01	8.213E-01	1.115E-01	-0.264
PM-149	2.711E+01		6.131E+01	1.051E+02	1.480E+01	0.258
EU-152	1.031E-01		1.078E-01	1.504E-01	9.529E-03	0.686

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	1.574E-02		8.769E-02	1.277E-01	9.643E-03	0.123
EU-154	-1.443E-02		1.267E-01	2.043E-01	2.130E-02	-0.071
EU-155	2.625E-02		1.105E-01	1.840E-01	1.302E-02	0.143
TB-160	-4.083E-02		1.252E-01	2.027E-01	1.872E-02	-0.201
HO-166M	8.218E-03		6.472E-02	1.053E-01	7.112E-03	0.078
TM-171	1.424E+01		3.323E+01	4.955E+01	3.649E+00	0.287
LU-176	-9.748E-04		2.416E-02	3.947E-02	2.212E-03	-0.025
LU-177	1.497E+00		1.201E+00	1.795E+00	9.501E-02	0.834
LU-177M	4.716E-02		1.911E-01	2.806E-01	1.545E-02	0.168
HF-181	-7.761E-03		3.857E-02	6.263E-02	3.622E-03	-0.124
W-181	4.434E-01	+	5.686E-01	6.720E-01	4.924E-02	0.660
TA-182	1.570E-01		2.184E-01	3.748E-01	2.402E-02	0.419
RE-183	8.126E-02		1.089E-01	1.822E-01	9.347E-03	0.446
RE-184	-1.824E-01		2.359E-01	3.631E-01	1.998E-02	-0.502
OS-185	4.332E-02		4.334E-02	7.507E-02	4.573E-03	0.577
RE-188	5.337E-03		1.760E-01	2.875E-01	1.519E-02	0.019
W-188	-3.140E+00		8.254E+00	1.182E+01	6.610E-01	-0.266
IR-192	-1.047E-02		3.283E-02	5.261E-02	2.964E-03	-0.199
AU-195	3.340E-02		2.458E-01	3.756E-01	2.788E-02	0.089
TL-200	-6.071E-05		1.030E-04	Half-Life too short		
TL-201	3.929E-01		5.638E+00	9.199E+00	4.655E-01	0.043
TL-202	8.667E-02		6.003E-02	1.075E-01	6.042E-03	0.806
HG-203	3.206E-02		4.532E-02	6.863E-02	4.081E-03	0.467
BI-207	1.108E-02		5.624E-02	9.416E-02	7.058E-03	0.118
TL-207	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
PO-209	-2.964E+00		7.275E+00	1.170E+01	1.114E+00	-0.253
BI-210	2.697E+00		4.096E+00	7.010E+00	5.536E-01	0.385
PB-210	2.697E+00		4.096E+00	7.010E+00	5.536E-01	0.385
PO-210	2.697E+00		4.095E+00	7.010E+00	4.794E-01	0.385
PB-211	-9.671E-01		1.201E+00	1.382E+00	8.610E-01	-0.700
BI-212	8.962E-01	+	4.866E-01	6.398E-01	5.518E-02	1.401
PO-215	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
RN-219	-1.213E-01		4.003E-01	6.531E-01	8.790E-02	-0.186
RN-220	-2.386E+00		2.593E+01	4.213E+01	2.515E+00	-0.057
RA-223	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
AC-227	-2.018E-01		3.978E-01	6.197E-01	8.578E-02	-0.326
TH-227	-2.018E-01		3.983E-01	6.197E-01	1.041E-01	-0.326
TH-229	2.370E-01		4.994E-01	8.237E-01	4.291E-02	0.288
PA-231	-6.139E-01		1.626E+00	2.440E+00	3.340E-01	-0.252
TH-231	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
U-231	-2.028E-01		1.006E+00	1.450E+00	1.116E-01	-0.140
PA-233	2.406E-02		5.995E-02	1.026E-01	6.128E-03	0.235
PA-234	-2.120E-01		3.015E-01	4.664E-01	8.847E-02	-0.454
PA-234M	2.432E+00		6.744E+00	1.146E+01	1.262E+00	0.212
U-235	-1.614E-01		2.212E-01	3.461E-01	5.611E-02	-0.466
NP-236	-1.010E-01		8.198E-02	1.271E-01	6.572E-03	-0.795
NP-239	2.369E-02		1.982E-01	3.277E-01	2.070E-02	0.072
AM-241	9.817E-02		1.808E-01	2.731E-01	2.175E-02	0.359

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.908E-03		9.836E-02	1.627E-01	1.147E-02	0.012
CM-247	-2.998E-02		3.735E-02	5.744E-02	3.132E-03	-0.522
CF-249	5.757E-02		3.877E-02	6.922E-02	3.748E-03	0.832
CF-251	-4.365E-02		1.308E-01	2.097E-01	1.071E-02	-0.208

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232754001       *
* Acquisition date  : 14-JUL-2009 10:44:32 Detector SN#     :           *
* Detector ID       : GAM16                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 02:00:02.21      Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                              SAMPLE DATA                              *
*                                                                       *
* Sample date       : 30-JUN-2009 12:00:00 Nuclide Library : SOLID      *
* Sample ID         : G232754001           Analyst initials: MXR1       *
* Batch Number      : 882713               Sample Quantity : 1.3503E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000  *
*************************************************************************
*                                                                       *
*                                QC DATA                                *
*                                                                       *
* CALIB. DATE/TIME  : 12-NOV-2008 16:52:09 MS Isotope      :            *
* MSD DPM           :    0.000             MSD Isotope     :            *
* LCS DPM           :    0.000             LCS Isotope     :            *
* LCSD DPM          :    0.000             LCSD Isotope    :            *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.549E+01	3.497E+00	2.613E-01	1.784E+00
CD-109	3.362E+00	1.026E+00	7.773E-01	5.232E-01
SN-126	3.310E-01	1.010E-01	7.778E-02	5.152E-02
TL-208	5.743E-01	8.123E-02	2.998E-02	4.144E-02
BI-211	4.134E+00	4.884E-01	1.541E-01	2.492E-01
PB-212	1.819E+00	1.629E-01	4.673E-02	8.313E-02
PO-212	1.819E+00	1.629E-01	4.673E-02	8.313E-02
BI-214	1.150E+00	1.645E-01	5.806E-02	8.395E-02
PB-214	1.438E+00	1.851E-01	5.372E-02	9.445E-02
PO-214	1.438E+00	1.851E-01	5.372E-02	9.445E-02
PO-216	1.819E+00	1.629E-01	4.673E-02	8.313E-02
PO-218	1.438E+00	1.851E-01	5.372E-02	9.445E-02
RA-224	5.230E+00	1.060E+00	5.314E-01	5.408E-01
RA-226	1.150E+00	1.645E-01	5.806E-02	8.395E-02
AC-228	1.698E+00	3.361E-01	1.186E-01	1.715E-01
RA-228	1.698E+00	3.361E-01	1.186E-01	1.715E-01
TH-228	1.819E+00	1.629E-01	4.673E-02	8.313E-02
TH-230	1.150E+00	1.645E-01	5.806E-02	8.395E-02
TH-232	1.698E+00	3.361E-01	1.186E-01	1.715E-01
TH-234	1.486E+00	1.882E+00	1.190E+00	9.601E-01
U-234	1.150E+00	1.645E-01	5.806E-02	8.395E-02
NP-237	9.719E-01	3.557E-01	2.182E-01	1.815E-01
U-238	1.486E+00	1.882E+00	1.190E+00	9.601E-01
AM-243	5.143E-01	9.444E-02	4.863E-02	4.818E-02
ANH-511	8.906E-02	6.069E-02	2.322E-02	3.096E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	9.288E-02	2.750E-01	2.418E-01	1.403E-01 NOT IDENT.
NA-22	-4.793E-03	4.446E-02	3.680E-02	2.268E-02 NOT IDENT.

NA-24	1.141E+05	1.962E+05	0.000E+00	1.001E+05	SHORT HLIF
AL-26	1.860E-02	1.851E-02	1.931E-02	9.445E-03	NOT IDENT.
TI-44	4.569E-01	5.766E-02	4.677E-02	2.942E-02	FAIL ABUN
SC-46	2.384E-03	3.597E-02	3.112E-02	1.835E-02	FAIL ABUN
V-48	-3.724E-02	6.610E-02	5.370E-02	3.373E-02	NOT IDENT.
CR-51	4.986E-02	3.366E-01	2.991E-01	1.717E-01	NOT IDENT.
MN-52	2.378E-01	1.795E-01	1.739E-01	9.158E-02	NOT IDENT.
MN-54	-2.570E-02	3.785E-02	3.116E-02	1.931E-02	NOT IDENT.
CO-56	-1.565E-02	3.847E-02	3.220E-02	1.963E-02	FAIL ABUN
CO-57	-1.479E-02	2.602E-02	2.229E-02	1.328E-02	NOT IDENT.
CO-58	-7.979E-03	3.644E-02	3.105E-02	1.859E-02	NOT IDENT.
FE-59	2.087E-02	1.002E-01	8.607E-02	5.111E-02	NOT IDENT.
CO-60	-2.782E-03	4.072E-02	3.367E-02	2.077E-02	NOT IDENT.
ZN-65	3.442E-02	1.049E-01	7.891E-02	5.353E-02	NOT IDENT.
GE-68	-1.327E-01	1.221E+00	1.026E+00	6.231E-01	NOT IDENT.
AS-73	3.128E-05	8.693E-01	7.931E-01	4.435E-01	NOT IDENT.
AS-74	2.807E-02	8.397E-02	7.274E-02	4.284E-02	NOT IDENT.
SE-75	-4.835E-03	4.640E-02	3.589E-02	2.367E-02	NOT IDENT.
BR-77	-2.680E-01	7.057E+00	6.020E+00	3.600E+00	FAIL ABUN
SR-82	-3.104E-02	3.749E-01	3.093E-01	1.913E-01	NOT IDENT.
RB-83	1.743E-03	6.527E-02	5.592E-02	3.330E-02	NOT IDENT.
RB-84	2.938E-02	6.155E-02	5.502E-02	3.140E-02	NOT IDENT.
KR-85	2.398E+01	8.246E+00	7.335E+00	4.207E+00	NOT IDENT.
SR-85	1.215E-01	4.176E-02	3.715E-02	2.131E-02	NOT IDENT.
RB-86	2.569E-01	7.390E-01	6.445E-01	3.770E-01	NOT IDENT.
Y-88	-5.829E-03	2.864E-02	2.315E-02	1.461E-02	NOT IDENT.
ZR-88	-1.709E-02	2.934E-02	2.476E-02	1.497E-02	NOT IDENT.
Y-91	7.053E+00	1.903E+01	1.643E+01	9.708E+00	NOT IDENT.
NB-94	4.245E-03	3.402E-02	2.871E-02	1.736E-02	NOT IDENT.
NB-95	5.622E-02	4.964E-02	3.937E-02	2.533E-02	NOT IDENT.
NB-95M	7.605E-02	1.381E-01	1.055E-01	7.048E-02	NOT IDENT.
ZR-95	-1.555E-02	7.207E-02	5.897E-02	3.677E-02	NOT IDENT.
NB-97	-4.388E+03	3.086E+04	0.000E+00	1.575E+04	SHORT HLIF
ZR-97	4.727E+05	5.908E+05	0.000E+00	3.014E+05	SHORT HLIF
MO-99	-1.213E+00	8.557E+00	7.051E+00	4.366E+00	NOT IDENT.
TC-99M	-7.186E+14	1.501E+15	0.000E+00	7.659E+14	SHORT HLIF
RH-101	-1.054E-03	3.359E-02	2.824E-02	1.714E-02	NOT IDENT.
RH-102	-2.612E-02	2.604E-02	2.085E-02	1.328E-02	NOT IDENT.
RU-103	-8.257E-03	3.682E-02	3.111E-02	1.878E-02	FAIL ABUN
RH-106	2.002E-02	3.065E-01	2.600E-01	1.564E-01	FAIL ABUN
RU-106	2.002E-02	3.065E-01	2.600E-01	1.564E-01	FAIL ABUN
AG-108M	-2.232E-02	3.119E-02	2.584E-02	1.591E-02	NOT IDENT.
AG-110M	-3.145E-03	3.500E-02	2.925E-02	1.786E-02	NOT IDENT.
IN-111	1.996E-01	8.943E-01	6.707E-01	4.563E-01	NOT IDENT.
IN-113M	-5.894E-03	4.276E-02	3.700E-02	2.181E-02	NOT IDENT.
SN-113	-5.894E-03	4.276E-02	3.700E-02	2.181E-02	NOT IDENT.
IN-114M	-1.061E-01	1.965E-01	1.432E-01	1.002E-01	NOT IDENT.
CD-115	2.771E+00	7.078E+00	6.202E+00	3.611E+00	NOT IDENT.
SN-117M	-2.933E-02	5.127E-02	4.358E-02	2.616E-02	NOT IDENT.
SB-122	-1.388E-01	1.531E+00	1.295E+00	7.813E-01	NOT IDENT.
I-123	-6.777E+05	1.286E+06	0.000E+00	6.564E+05	SHORT HLIF
TE-123M	-1.463E-02	2.777E-02	2.364E-02	1.417E-02	NOT IDENT.
I-124	1.271E-01	5.733E-01	4.480E-01	2.925E-01	FAIL ABUN
SB-124	5.914E-02	6.129E-02	6.027E-02	3.127E-02	FAIL ABUN
SB-125	-7.543E-02	8.949E-02	7.374E-02	4.566E-02	FAIL ABUN
TE-125M	-4.912E+00	9.524E+00	8.280E+00	4.859E+00	NOT IDENT.
I-126	4.560E-02	1.668E-01	1.429E-01	8.513E-02	NOT IDENT.
SB-126	7.391E-02	1.552E-01	1.172E-01	7.917E-02	FAIL ABUN
SB-127	-2.785E-01	1.094E+00	8.994E-01	5.581E-01	NOT IDENT.
XE-127	-5.837E-02	4.913E-02	3.848E-02	2.506E-02	NOT IDENT.
I-131	6.332E-02	9.262E-02	8.403E-02	4.726E-02	NOT IDENT.
TE-132	7.211E-02	5.486E-01	4.696E-01	2.799E-01	NOT IDENT.
BA-133	5.033E-02	4.231E-02	3.492E-02	2.159E-02	FAIL ABUN
I-133	9.421E+02	2.245E+03	0.000E+00	1.145E+03	SHORT HLIF
CS-134	1.317E-01	6.518E-02	4.681E-02	3.326E-02	FAIL ABUN
CS-135	1.565E-01	1.750E-01	1.359E-01	8.930E-02	NOT IDENT.
I-135	-2.994E+14	3.328E+14	0.000E+00	1.698E+14	SHORT HLIF
CS-136	-6.774E-02	1.098E-01	8.866E-02	5.601E-02	FAIL ABUN
BA-137M	-2.116E-02	3.762E-02	2.947E-02	1.919E-02	NOT IDENT.
CS-137	-2.237E-02	3.976E-02	3.115E-02	2.029E-02	NOT IDENT.
CE-139	-1.375E-02	3.026E-02	2.579E-02	1.544E-02	NOT IDENT.
BA-140	6.234E-02	2.416E-01	2.089E-01	1.233E-01	NOT IDENT.
LA-140	6.182E-02	6.527E-02	5.819E-02	3.330E-02	FAIL ABUN
CE-141	5.186E-02	6.321E-02	5.604E-02	3.225E-02	NOT IDENT.
CE-143	4.011E+02	1.227E+02	0.000E+00	6.261E+01	SHORT HLIF
CE-144	-2.073E-01	2.106E-01	1.766E-01	1.075E-01	NOT IDENT.
PM-144	-6.172E-03	3.319E-02	2.741E-02	1.694E-02	NOT IDENT.
PR-144	-4.180E-01	2.248E+00	1.856E+00	1.147E+00	NOT IDENT.

PM-146	2.814E-02	4.193E-02	3.753E-02	2.139E-02	NOT IDENT.
ND-147	-2.171E-01	5.066E-01	4.197E-01	2.585E-01	FAIL ABUN
PM-149	2.711E+01	6.009E+01	5.430E+01	3.066E+01	NOT IDENT.
EU-152	1.031E-01	1.056E-01	7.749E-02	5.389E-02	FAIL ABUN
GD-153	1.574E-02	8.594E-02	6.726E-02	4.384E-02	NOT IDENT.
EU-154	-1.443E-02	1.242E-01	1.027E-01	6.335E-02	NOT IDENT.
EU-155	2.625E-02	1.083E-01	9.676E-02	5.525E-02	FAIL ABUN
TB-160	-4.083E-02	1.227E-01	1.026E-01	6.259E-02	FAIL ABUN
HO-166M	8.218E-03	6.343E-02	5.351E-02	3.236E-02	FAIL ABUN
TM-171	1.424E+01	3.256E+01	2.626E+01	1.661E+01	NOT IDENT.
LU-176	-9.748E-04	2.368E-02	2.037E-02	1.208E-02	FAIL ABUN
LU-177	1.497E+00	1.177E+00	9.327E-01	6.005E-01	NOT IDENT.
LU-177M	4.716E-02	1.873E-01	1.440E-01	9.557E-02	NOT IDENT.
HF-181	-7.761E-03	3.780E-02	3.206E-02	1.929E-02	FAIL ABUN
W-181	4.434E-01	5.572E-01	3.563E-01	2.843E-01	FAIL ABUN
TA-182	1.570E-01	2.140E-01	1.885E-01	1.092E-01	FAIL ABUN
RE-183	8.126E-02	1.067E-01	9.512E-02	5.444E-02	FAIL ABUN
RE-184	-1.824E-01	2.312E-01	1.880E-01	1.179E-01	NOT IDENT.
OS-185	4.332E-02	4.247E-02	3.822E-02	2.167E-02	NOT IDENT.
RE-188	5.337E-03	1.725E-01	1.502E-01	8.800E-02	NOT IDENT.
W-188	-3.140E+00	8.089E+00	6.106E+00	4.127E+00	FAIL ABUN
IR-192	-1.047E-02	3.217E-02	2.714E-02	1.641E-02	FAIL ABUN
AU-195	3.340E-02	2.409E-01	1.978E-01	1.229E-01	FAIL ABUN
TL-200	-6.071E+01	2.018E+02	0.000E+00	1.030E+02	SHORT HLIF
TL-201	3.929E-01	5.526E+00	4.799E+00	2.819E+00	NOT IDENT.
TL-202	8.667E-02	5.883E-02	5.511E-02	3.002E-02	NOT IDENT.
HG-203	3.206E-02	4.441E-02	3.548E-02	2.266E-02	NOT IDENT.
BI-207	1.108E-02	5.512E-02	4.750E-02	2.812E-02	FAIL ABUN
TL-207	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
PO-209	-2.964E+00	7.129E+00	5.921E+00	3.637E+00	NOT IDENT.
BI-210	2.697E+00	4.014E+00	3.739E+00	2.048E+00	NOT IDENT.
PB-210	2.697E+00	4.014E+00	3.739E+00	2.048E+00	NOT IDENT.
PO-210	2.697E+00	4.013E+00	3.739E+00	2.047E+00	NOT IDENT.
PB-211	-9.671E-01	1.177E+00	7.096E-01	6.003E-01	NOT IDENT.
BI-212	8.962E-01	4.768E-01	3.250E-01	2.433E-01	FAIL ABUN
PO-215	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
RN-219	-1.213E-01	3.923E-01	3.354E-01	2.002E-01	FAIL ABUN
RN-220	-2.386E+00	2.541E+01	2.151E+01	1.296E+01	NOT IDENT.
RA-223	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
AC-227	-2.018E-01	3.898E-01	3.208E-01	1.989E-01	FAIL ABUN
TH-227	-2.018E-01	3.903E-01	3.208E-01	1.991E-01	FAIL ABUN
TH-229	2.370E-01	4.894E-01	4.286E-01	2.497E-01	FAIL ABUN
PA-231	-6.139E-01	1.593E+00	1.261E+00	8.128E-01	FAIL ABUN
TH-231	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
U-231	-2.028E-01	9.859E-01	7.640E-01	5.030E-01	FAIL ABUN
PA-233	2.406E-02	5.875E-02	5.291E-02	2.998E-02	FAIL ABUN
PA-234	-2.120E-01	2.955E-01	2.358E-01	1.508E-01	FAIL ABUN
PA-234M	2.432E+00	6.609E+00	5.790E+00	3.372E+00	NOT IDENT.
U-235	-1.614E-01	2.168E-01	1.811E-01	1.106E-01	FAIL ABUN
NP-236	-1.010E-01	8.034E-02	6.635E-02	4.099E-02	FAIL ABUN
NP-239	2.369E-02	1.943E-01	1.721E-01	9.911E-02	FAIL ABUN
AM-241	9.817E-02	1.772E-01	1.450E-01	9.038E-02	NOT IDENT.
CM-243	1.908E-03	9.640E-02	8.557E-02	4.918E-02	FAIL ABUN
CM-247	-2.998E-02	3.660E-02	2.950E-02	1.867E-02	FAIL ABUN
CF-249	5.757E-02	3.800E-02	3.557E-02	1.939E-02	NOT IDENT.
CF-251	-4.365E-02	1.282E-01	1.093E-01	6.539E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
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46.50	390.2813
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52.97	402.9661
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54.07	397.3041
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56.28	441.0214
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57.53	447.1777
57.53	447.1786
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57.98	436.0942
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59.32	401.8176
59.40	401.8682
59.54	431.5127
59.72	434.5921
60.01	434.7903
61.10	438.4943
61.14	463.7067
61.30	463.8223
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63.29	513.7359
63.58	513.9632
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65.20	585.8396
66.05	517.9246
66.72	515.4470
66.83	515.5333
66.91	524.5612
67.20	524.7840
67.20	524.7840
67.75	557.3768
67.85	557.4586
68.90	539.5759
68.90	539.5759
69.30	534.2641
69.67	547.6805
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74.97	556.4969
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75.70	557.0542
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77.11	558.1237
77.11	558.1237

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77.11	558.1237
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80.30	627.3093
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81.07	685.8627
81.07	685.8627
81.07	685.8627
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83.78	583.7632
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84.90	586.6440
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86.94	671.0873
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87.30	692.9005
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94.67	389.1190
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94.90	412.4867
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98.44	393.9675
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99.55	398.7076
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100.10	382.2458
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109.28	471.9140
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111.00	419.4975

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117.00	414.2369
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121.78	412.2958
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154.21	389.1146
154.21	389.1146
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172.10	386.7143
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176.60	373.4453
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209.75	356.1093
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236.00	313.7941
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238.63	290.8567
238.63	290.8567
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241.98	291.5016
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269.46	232.8225
269.46	232.8225
269.46	232.8225
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323.87	180.1679
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595.88	101.8592
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602.71	108.6547
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609.31	121.8363
609.31	121.8363

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614.37	101.1295
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621.84	98.5921
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633.10	97.9202
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636.97	106.4840
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661.65	117.9944
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666.33	99.0123
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696.49	99.9795
696.49	99.9795
697.00	104.2963
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722.78	99.3585
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722.95	99.3652
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727.18	100.9422
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742.81	81.7932
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747.13	87.3613
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752.31	91.8709
753.82	94.1024
755.35	95.2391
756.15	97.4524
756.87	94.1885
763.93	91.4591
765.79	91.5100
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766.84	113.5077
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768.36	119.7856
768.36	119.7856
768.36	119.7856
776.49	91.4317
778.00	95.5132
778.57	90.9353
778.89	90.9434
783.80	73.5954

785.46	77.3127
792.07	91.6890
795.84	60.1371
796.30	60.1450
801.93	101.4621
805.60	67.5791
810.29	78.7934
810.76	79.7309
815.85	89.1309
817.79	75.2454
818.51	80.8350
819.60	71.5656
826.30	82.8744
828.27	0.0000
831.60	87.6603
831.96	84.8719
834.83	107.3422
836.80	0.0000
846.75	87.0929
848.13	74.0111
856.28	0.0000
856.80	62.7833
860.37	65.7988
867.32	54.8907
867.82	62.1637
871.10	65.0469
873.19	60.3672
874.81	58.5072
875.33	0.0000
876.40	62.3074
879.36	65.1915
880.27	64.2633
880.51	57.6517
881.50	57.6665
883.24	60.5299
884.67	62.4457
889.25	65.3641
896.60	75.9326
898.02	70.2633
899.00	87.3768
903.28	73.0234
911.07	89.8315
911.07	89.8315
911.07	89.8315
919.63	70.3879
920.93	77.6896
925.00	58.3280
925.24	57.3755
926.50	78.4399
934.06	55.5892
934.06	55.5892
934.06	55.5892
934.06	55.5892
935.52	65.1985
937.48	82.4971
944.10	76.8717
946.00	78.8319
949.00	70.2331
962.29	72.8121
964.01	64.5652
966.15	54.1099
968.20	54.1372
969.11	54.1497
969.11	54.1497
969.11	54.1497
977.42	62.7882
980.50	57.2115
983.50	74.7222
989.30	67.0543
996.32	80.7980
1001.03	68.2212
1001.68	61.4081
1004.76	77.0616
1021.30	0.0000
1024.50	0.0000
1034.80	72.7083
1037.82	68.8265
1038.57	76.7051

1038.76	0.0000
1045.16	64.0214
1046.59	68.9689
1048.07	88.7036
1050.47	78.8932
1050.47	78.8932
1063.62	74.1913
1076.63	61.5156
1077.35	67.4798
1085.78	63.6328
1099.22	84.7717
1112.02	72.0146
1112.84	63.4544
1115.52	75.5022
1120.29	76.1577
1120.29	76.1577
1120.29	76.1577
1120.29	76.1577
1120.51	76.1608
1121.28	68.7277
1124.00	0.0000
1129.67	80.7337
1131.51	0.0000
1147.95	0.0000
1167.94	70.8830
1173.22	85.1587
1175.09	82.1503
1177.93	75.0960
1189.05	88.5010
1204.90	77.5710
1205.75	0.0000
1213.00	95.0851
1221.42	87.0614
1230.97	95.1647
1235.34	100.3742
1236.41	0.0000
1238.11	79.2868
1238.11	79.2868
1238.11	79.2868
1238.11	79.2868
1238.25	79.2899
1246.25	58.2426
1260.41	0.0000
1271.85	56.9224
1274.45	62.1289
1274.54	62.1313
1291.56	52.9922
1298.22	0.0000
1312.09	52.1667
1325.50	52.3051
1325.50	52.3051
1332.49	48.1881
1333.61	50.2930
1360.21	30.5435
1362.66	0.0000
1365.15	40.0596
1368.21	32.7004
1368.53	0.0000
1376.25	30.7888
1377.67	32.6087
1377.67	32.6087
1377.67	32.6087
1377.67	32.6087
1384.27	36.2779
1394.10	31.8018
1395.20	29.6885
1407.95	35.0732
1434.06	16.0205
1436.60	27.7816
1457.56	0.0000
1460.81	27.9064
1489.15	26.9714
1509.49	24.9036
1596.49	9.8939
1620.62	14.1922
1678.03	0.0000
1691.02	8.6155
1691.02	8.6155

1706.46	0.0000
1750.46	0.0000
1764.49	10.6551
1764.49	10.6551
1764.49	10.6551
1764.49	10.6551
1770.23	10.1799
1771.40	73.6966
1791.20	0.0000
1808.65	2.9261
1836.01	13.7129

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232754001

Total Uranium Activity	4.3464E+00	ug/g
Total Uranium Counting Unc.	5.5993E+00	ug/g
Total Uranium Tpu	2.8568E-06	ug/g
Total Uranium Mda	3.5402E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232754001       *
*   ANALYST       : MXR1                      DETECTOR   : GAM16            *
*   SAMPLE DATE   : 30-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 10:44:32.05    SAMPLE ALQT:  135.030 GRAM    *
*                                                                           *
*****************************************************************************


         GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.062E+01
         GROSS GAMMA ERROR  (pCi/GRAM  )   : 1.600E+00
         GROSS GAMMA MDA    (pCi/GRAM  )   : 4.298E+00
         GROSS GAMMA DLC    (pCi/GRAM  )   : 2.094E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:23:39.22

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1
Sample date       : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 11:22:57
Sample ID         : G1201874832          Sample quantity  : 1.44470E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.64  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	1075.81	10	9	0.58	2150.38	2141	13	1.39E-03	71.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 13:23:41

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 7-JUL-2009 00:00:00 Acquisition date : 14-JUL-2009 11:22:57
Sample ID : G1201874832 Sample quantity : 144.47 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA21 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:08.64 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86	+	1076.63	*	4.005E-01	5.708E-01	5.488E-01	3.505E-02	0.730

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.503E-02	1.536E-01	2.457E-01	1.730E-02	-0.061
NA-22		1274.54	*	-1.239E-03	2.584E-02	4.145E-02	2.451E-03	-0.030
NA-24		1368.53	*	2.335E-05	2.584E-02	Half-Life too short		
AL-26		1129.67		9.437E-02	8.731E-01	1.467E+00	8.829E-02	0.064
		1808.65	*	6.492E-04	2.998E-02	4.991E-02	2.779E-03	0.013
K-40		1460.81	*	1.401E-01	3.153E-01	5.572E-01	3.546E-02	0.251
TI-44		67.85		1.017E-03	7.397E-03	1.220E-02	8.875E-04	0.083
		78.38	*	-2.974E-03	7.341E-03	1.147E-02	8.868E-04	-0.259
SC-46		889.25	*	-2.258E-02	2.347E-02	3.062E-02	2.199E-03	-0.738
		1120.51		1.502E-02	2.604E-02	4.791E-02	2.916E-03	0.314
V-48		944.10		3.811E-01	4.165E-01	8.009E-01	5.628E-02	0.476
		983.50	*	1.966E-02	3.794E-02	6.792E-02	4.673E-03	0.289
		1312.09		2.155E-02	4.086E-02	7.404E-02	4.425E-03	0.291
CR-51		320.08	*	-4.493E-02	1.646E-01	2.635E-01	1.714E-02	-0.171
MN-52		744.21		-7.946E-04	5.039E-02	8.386E-02	6.133E-03	-0.009
		848.13		1.814E-01	2.007E+00	3.376E+00	2.455E-01	0.054
		935.52		4.924E-02	6.976E-02	1.285E-01	9.069E-03	0.383
		1246.25		-8.047E-01	1.320E+00	1.720E+00	1.004E-01	-0.468
		1333.61		1.047E+00	1.364E+00	2.605E+00	1.567E-01	0.402
		1434.06	*	-6.918E-02	6.816E-02	7.168E-02	4.321E-03	-0.965
MN-54		834.83	*	-1.473E-02	2.603E-02	3.920E-02	2.859E-03	-0.376
CO-56		846.75	*	1.631E-02	2.819E-02	5.071E-02	3.690E-03	0.322
		977.42		-1.085E+00	1.916E+00	2.796E+00	1.931E-01	-0.388
		1037.82		-5.171E-02	2.333E-01	3.686E-01	2.655E-02	-0.140
		1175.09		8.375E-02	1.260E+00	2.087E+00	1.183E-01	0.040
		1238.25		2.999E-03	4.322E-02	7.145E-02	4.419E-03	0.042
		1360.21		2.122E-01	7.452E-01	1.284E+00	7.739E-02	0.165
		1771.40		3.738E-02	2.537E-01	4.340E-01	2.451E-02	0.086

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	3.780E-03	9.064E-03	1.515E-02	1.744E-03	0.249
		136.48		-1.493E-02	8.079E-02	1.270E-01	1.337E-02	-0.118
CO-58		810.76	*	-9.316E-03	2.202E-02	3.354E-02	2.463E-03	-0.278
FE-59		142.65		-3.296E-02	9.658E-01	1.540E+00	1.422E-01	-0.021
		192.34		1.877E-03	3.576E-01	6.005E-01	7.205E-02	0.003
		1099.22	*	-2.196E-02	5.792E-02	8.772E-02	6.291E-03	-0.250
		1291.56		-7.813E-02	7.144E-02	7.877E-02	5.930E-03	-0.992
CO-60		1173.22		-9.686E-04	2.763E-02	4.474E-02	2.535E-03	-0.022
		1332.49	*	6.596E-03	2.726E-02	4.680E-02	2.815E-03	0.141
ZN-65		1115.52	*	-2.489E-03	5.225E-02	8.460E-02	5.190E-03	-0.029
GE-68		1077.35	*	5.249E-01	9.049E-01	1.487E+00	9.488E-02	0.353
AS-73		53.44	*	2.123E-02	7.102E-02	1.194E-01	8.027E-03	0.178
AS-74		595.88	*	-2.515E-02	4.570E-02	6.699E-02	4.610E-03	-0.375
		634.78		1.712E-02	1.821E-01	2.970E-01	2.094E-02	0.058
SE-75		66.05		4.599E-01	6.947E-01	1.190E+00	1.116E-01	0.384
		96.73		-1.781E-01	2.117E-01	3.097E-01	4.295E-02	-0.575
		121.11		1.773E-02	4.526E-02	7.560E-02	1.018E-02	0.235
		136.00		-2.257E-03	1.483E-02	2.340E-02	2.355E-03	-0.096
		198.60		4.348E-01	7.218E-01	1.273E+00	9.480E-02	0.341
		264.65	*	-2.727E-03	2.091E-02	3.430E-02	2.075E-03	-0.079
		279.53		7.256E-03	4.595E-02	7.764E-02	4.897E-03	0.093
		303.91		2.088E-01	1.079E+00	1.821E+00	1.745E-01	0.115
		400.65		7.829E-02	1.392E-01	2.436E-01	2.167E-02	0.321
BR-77		87.88		8.704E-01	4.350E+00	7.181E+00	5.944E-01	0.121
		200.40		-2.364E+00	7.621E+00	1.242E+01	7.692E-01	-0.190
		239.00		3.035E-01	5.198E-01	8.784E-01	5.410E-02	0.346
		249.79		2.157E-01	3.2[illegible]E+00	5.37[illegible]E+00	3.27[illegible]E-01	0.4[illegible]
		281.68		2.510E+00	4.529E+00	7.9[illegible]E+00	4.655E-01	0.31[illegible]
		297.23		5.622E-01	2.927E+00	4.941E+00	2.898E-01	0.114
		303.76		1.507E+00	1.029E+01	1.729E+01	1.014E+00	0.087
		439.47		5.211E+00	1.043E+01	1.802E+01	1.048E+00	0.289
		484.57		1.325E+01	1.410E+01	2.604E+01	1.611E+00	0.509
		520.65	*	1.850E-01	7.128E-01	1.199E+00	7.730E-02	0.154
		574.64		-8.874E+00	1.460E+01	2.119E+01	1.435E+00	-0.419
		578.91		-1.925E+00	5.742E+00	8.745E+00	5.943E-01	-0.220
		585.48		6.678E+00	1.142E+01	1.999E+01	1.365E+00	0.334
		755.35		-1.155E+01	9.699E+00	1.177E+01	8.616E-01	-0.981
		817.79		7.923E+00	1.038E+01	1.922E+01	1.406E+00	0.412
SR-82		698.33		-1.175E+01	2.157E+01	3.360E+01	2.433E+00	-0.350
		776.49	*	1.080E-01	2.041E-01	3.680E-01	2.698E-02	0.293
		1395.20		6.442E+00	6.747E+00	1.334E+01	8.042E-01	0.483
RB-83		520.41	*	1.301E-02	4.058E-02	6.890E-02	4.440E-03	0.189
		529.64		-4.785E-03	5.445E-02	8.679E-02	5.646E-03	-0.055
		552.65		-3.615E-02	1.197E-01	1.840E-01	1.223E-02	-0.196
RB-84		881.50	*	-6.888E-03	4.191E-02	6.737E-02	4.851E-03	-0.102
KR-85		513.99	*	-9.011E-01	7.249E+00	1.163E+01	7.444E-01	-0.077
SR-85		513.99	*	-4.263E-03	3.430E-02	5.503E-02	3.522E-03	-0.077
Y-88		898.02		3.189E-03	2.659E-02	4.494E-02	3.238E-03	0.071
		1836.01	*	1.465E-02	3.600E-02	6.536E-02	3.607E-03	0.224

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	2.467E-03	1.722E-02	2.871E-02	1.548E-03	0.086
Y-91		1204.90	*	1.042E+00	1.153E+01	1.911E+01	1.098E+00	0.055
NB-94		702.63	*	-1.940E-03	2.341E-02	3.873E-02	2.808E-03	-0.050
		871.10		-2.650E-03	2.259E-02	3.661E-02	2.646E-03	-0.072
NB-95		765.79	*	5.445E-03	2.462E-02	4.245E-02	3.111E-03	0.128
NB-95M		235.69	*	-6.197E-02	5.205E-02	7.664E-02	5.991E-03	-0.809
ZR-95		724.18		-3.569E-02	4.723E-02	6.746E-02	5.503E-03	-0.529
		756.15	*	-3.389E-02	3.721E-02	5.025E-02	4.188E-03	-0.674
NB-97		657.90	*	8.596E-06	3.721E-02	Half-Life too short		
		1024.50		-3.458E-03	3.721E-02	Half-Life too short		
ZR-97		254.15		1.302E-03	3.721E-02	Half-Life too short		
		355.39		-7.717E-04	3.721E-02	Half-Life too short		
		507.63	*	-1.327E-03	3.721E-02	Half-Life too short		
		602.52		3.845E-04	3.721E-02	Half-Life too short		
		1021.30		1.798E-03	3.721E-02	Half-Life too short		
		1147.95		6.996E-04	3.721E-02	Half-Life too short		
		1362.66		2.933E-03	3.721E-02	Half-Life too short		
		1750.46		7.977E-04	3.721E-02	Half-Life too short		
MO-99		140.51		-9.759E-04	1.509E+00	2.415E+00	6.757E-01	0.000
		181.06		4.673E-01	1.075E+00	1.867E+00	3.222E-01	0.250
		366.43		1.701E+00	7.331E+00	1.237E+01	6.951E-01	0.138
		739.58	*	9.682E-01	1.053E+00	2.000E+00	2.896E-01	0.483
		778.00		-6.022E-02	3.358E+00	5.578E+00	4.090E-01	-0.011
TC-99M		140.51	*	-6.548E-03	3.358E+00	Half-Life too short		
RH-101		127.23		-1.674E-03	1.254E-02	1.988E-02	2.182E-03	-0.084
		198.01	*	1.010E-02	1.393E-02	2.479E-02	1.534E-03	0.407
		325.93		1.2[illegible]E-02	1.1[illegible]E-01	1.[illegible]E-01	1.1[illegible]E-02	0.[illegible]
RH-102		418.[illegible]		-6.9[illegible]E-02	1.7[illegible]E-01	2.7[illegible]E-01	1.5[illegible]E-02	-0.[illegible]
		475.06	*	-2.232E-03	1.673E-02	2.666E-02	1.630E-03	-0.0[illegible]
		631.29		8.312E-03	3.509E-02	5.865E-02	4.127E-03	0.142
		697.49		-1.878E-02	5.986E-02	9.628E-02	6.970E-03	-0.195
		766.84		1.086E-02	6.281E-02	1.077E-01	7.894E-03	0.101
		1046.59		-3.301E-02	9.189E-02	1.414E-01	9.290E-03	-0.233
		1112.84		-1.427E-02	1.353E-01	2.162E-01	1.328E-02	-0.066
RU-103		497.08	*	3.455E-03	2.321E-02	3.846E-02	4.950E-03	0.090
		610.33		-2.458E-02	3.976E-01	6.332E-01	1.006E-01	-0.039
RH-102		511.85		-4.93[illegible]E-02	1.712E-01	3.241E-01	2.069E-02	-0.1[illegible]
		621.84	*	-1.957E-01	2.181E-01	2.942E-01	3.641E-02	-0.665
		1050.47		3.675E-02	1.843E+00	3.035E+00	1.987E-01	0.012
RU-106		511.85		-4.932E-02	1.712E-01	3.241E-01	2.069E-02	-0.152
		621.84	*	-1.957E-01	2.172E-01	2.942E-01	2.059E-02	-0.665
		1050.47		3.675E-02	1.843E+00	3.035E+00	1.987E-01	0.012
AG-108M		433.93	*	7.511E-05	2.065E-02	3.374E-02	2.115E-03	0.002
		614.37		-5.196E-03	2.274E-02	3.506E-02	2.588E-03	-0.148
		722.95		-3.563E-03	2.349E-02	3.821E-02	2.936E-03	-0.093
CD-109		88.03	*	4.211E-02	1.855E-01	3.069E-01	2.543E-02	0.137
AG-110M		657.75	*	5.583E-03	1.851E-02	3.264E-02	2.428E-03	0.171
		677.61		7.378E-02	1.980E-01	3.498E-01	2.616E-02	0.211
		706.67		-5.741E-02	1.344E-01	2.101E-01	1.584E-02	-0.273

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		1.677E-03	1.053E-01	1.760E-01	1.340E-02	0.010
		884.67		2.853E-02	3.182E-02	6.083E-02	4.576E-03	0.469
		937.48		-1.921E-02	8.122E-02	1.286E-01	9.554E-03	-0.149
		1384.27		1.139E-01	1.247E-01	2.421E-01	1.543E-02	0.470
IN-111		171.28		2.600E-02	6.692E-02	1.162E-01	7.064E-03	0.224
		245.39	*	-3.361E-02	7.082E-02	1.119E-01	6.855E-03	-0.300
IN-113M		391.69	*	4.047E-03	2.459E-02	4.113E-02	2.385E-03	0.098
SN-113		391.69	*	4.047E-03	2.459E-02	4.113E-02	2.385E-03	0.098
IN-114M		190.27	*	-8.922E-03	7.250E-02	1.205E-01	7.427E-03	-0.074
CD-115		260.90		-7.978E-02	5.948E+00	9.879E+00	5.951E-01	-0.008
		492.35		1.040E+00	1.976E+00	3.460E+00	2.161E-01	0.301
		527.90	*	-3.885E-01	5.618E-01	7.924E-01	5.14[illegible]E-02	-0.490
SN-117M		156.02		-4.330E-01	6.692E-01	9.991E-01	7.402E-02	-0.433
		158.56	*	1.236E-02	1.610E-02	2.751E-02	1.962E-03	0.449
SB-122		563.90	*	-2.962E-02	1.703E-01	2.668E-01	1.791E-02	-0.111
		602.89		9.346E-01	4.5[illegible]E+00	7.8[illegible]E+00	5.8[illegible]E-01	0.11[illegible]
I-123		159.00	*	1.085E-04	4.554E+00	Half-Life too short		
		528.96		-5.883E-03	4.5[illegible]E+00	Half-Life too short		
TE-132M		159.00	*	8.220E-03	1.183E-02	2.01[illegible]E-02	1.433E-03	0.43[illegible]
I-124		602.71	*	1.931E-02	1.311E-01	2.155E-01	1.490E-02	0.090
		722.79		-4.824E-02	7.013E-01	1.15[illegible]E+00	8.44[illegible]E-02	-0.0[illegible]
		1325.50		-3.657E+00	7.88[illegible]E+00	1.14[illegible]E+01	6.851E-01	-0.32[illegible]
		1376.25		-4.564E+00	6.851E+00	9.256E+00	5.579E-01	-0.493
		1509.49		1.622E+00	3.748E+00	6.832E+00	4.098E-01	0.237
		1691.02		-5.019E-01	1.169E+00	1.736E+00	1.006E-01	-0.289
SB-124		602.71		3.650E-03	2.478E-02	4.074E-02	2.818E-03	0.090
		645.85		1.210E-02	2.829E-01	4.576E-01	3.529E-02	0.026
		709.31		-4.866E-01	1.69[illegible]E+00	2.707E+00	1.9[illegible]E-01	-0.180
		713.82		6.204E-01	1.0[illegible]E+00	1.827E+00	2.[illegible]E-01	0.315
		722.78		-1.322E-02	1.922E-01	3.174E-01	2.2[illegible]E-02	-0.042
		968.20		-1.925E-01	1.589E+00	2.565E+00	1.780E-01	-0.075
		1045.16		-1.072E+00	1.902E+00	2.824E+00	1.857E-01	-0.380
		1325.50		-1.070E+00	2.307E+00	3.340E+00	2.005E-01	-0.320
		1368.21		4.301E-01	1.172E+00	2.070E+00	2.481E-01	0.208
		1436.60		4.234E-01	2.371E+00	4.027E+00	2.427E-01	0.105
		1691.02	*	-3.244E-02	7.554E-02	1.122E-01	7.061E-03	-0.289
SB-125		427.89	*	-3.6[illegible]E-02	5.493E-02	8.1[illegible]E-02	4.857E-03	-0.4[illegible]
		463.38		1.102E-01	1.732E-01	3.043E-01	2.116E-02	0.362
		600.56		1.392E-01	1.241E-01	2.295E-01	1.763E-02	0.607
		635.90		4.372E-02	1.853E-01	3.089E-01	2.437E-02	0.142
TE-125M		109.28	*	-1.841E+00	2.927E+00	4.084E+00	4.748E-01	-0.451
I-126		388.63		-4.479E-03	7.303E-02	1.188E-01	6.432E-03	-0.038
		666.33	*	6.899E-02	7.533E-02	1.424E-01	1.019E-02	0.485
		753.82		-2.128E-01	5.102E-01	7.757E-01	5.679E-02	-0.274
SB-126		223.80		-5.339E-01	1.188E+00	1.898E+00	1.177E-01	-0.281
		278.60		-2.942E-01	7.098E-01	1.120E+00	6.550E-02	-0.263
		296.50		-1.845E-01	5.162E-01	7.507E-01	4.403E-02	-0.246
		414.70		-6.993E-03	2.924E-02	4.634E-02	2.594E-03	-0.151
		415.30		5.935E-01	2.469E+00	4.158E+00	2.330E-01	0.143

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		4.408E-01	1.571E+00	2.654E+00	1.768E-01	0.166
		573.80		-3.524E-01	4.385E-01	6.109E-01	4.135E-02	-0.577
		593.00		-1.301E-01	3.551E-01	5.329E-01	3.660E-02	-0.244
		656.30		4.503E-01	1.240E+00	2.203E+00	1.570E-01	0.204
		666.33		2.833E-02	3.093E-02	5.847E-02	4.185E-03	0.485
		675.00		9.942E-01	8.813E-01	1.696E+00	1.218E-01	0.586
		695.00		3.411E-02	3.802E-02	7.048E-02	5.098E-03	0.484
		697.00		-9.229E-03	1.289E-01	2.137E-01	1.547E-02	-0.043
		720.50	*	-3.045E-03	5.691E-02	9.430E-02	6.868E-03	-0.032
		856.80		5.824E-02	2.187E-01	3.779E-01	2.743E-02	0.154
		989.30		1.468E-01	5.393E-01	9.597E-01	6.579E-02	0.153
		1034.80		-1.586E+00	4.815E+00	7.473E+00	4.957E-01	-0.212
		1213.00		9.963E-01	1.792E+00	3.255E+00	1.876E-01	0.306
SN-126		64.28		3.885E-02	7.437E-02	1.228E-01	1.769E-02	0.316
		86.94		1.890E-03	7.353E-02	1.194E-01	4.929E-02	0.016
		87.37	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SB-127		61.10		2.584E-01	1.836E+00	3.035E+00	2.409E-01	[illegible]
		252.40		-3.776E-03	[illegible]	8.857E-01	[illegible]	-0.004
		290.80		-4.496E-01	2.779E+00	4.527E+00	3.094E-01	-0.099
		411.60		1.802E+00	1.737E+00	3.184E+00	4.103E-01	0.566
		444.90		-1.671E+00	1.516E+00	2.068E+00	1.839E-01	-0.809
		473.00		1.511E-01	2.320E-01	4.141E-01	3.939E-02	0.365
		543.00		-1.195E+00	3.173E+00	4.869E+00	5.728E-01	-0.246
		603.60		-1.686E+00	2.172E+00	3.099E+00	2.974E-01	-0.544
		685.20	*	-1.750E-01	2.060E-01	2.919E-01	2.431E-02	-0.599
		698.50		-9.532E-01	2.003E+00	4.650E+00	[illegible]	-0.205
		722.20		-7.257E-01	4.500E+00	[illegible]	[illegible]	[illegible]
		783.80		-2.129E-01	5.857E-01	9.141E-01	8.511E-02	-0.233
XE-1[illegible]		57.60		1.957E-02	5.321E-01	9.638E-01	[illegible]	0.020
		145.22		4.585E-02	2.379E-01	3.871E-01	3.454E-02	0.118
		172.10		2.512E-02	4.531E-02	7.963E-02	4.844E-03	0.315
		202.84	*	-6.565E-03	1.726E-02	2.790E-02	1.72[illegible]E-03	-0.235
		374.96		-3.454E-02	1.003E-01	1.577E-01	8.751E-03	-0.219
I-131		80.18		-2.971E-01	5.088E-01	7.786E-01	6.106E-02	-0.382
		284.30		-1.251E-01	4.009E-01	6.429E-01	4.140E-02	-0.195
		364.48	*	5.277E-02	3.684E-02	6.937E-02	4.349E-03	0.761
		636.[illegible]		[illegible]	5.501E-01	[illegible]	6.955E-02	[illegible]
		722.89		-2.422E-01	2.060E+00	3.372E+00	2.463E-01	-0.072
TE-132		49.72		4.528E-02	2.521E-01	4.203E-01	3.082E-02	0.108
		111.76		1.046E-01	1.851E+00	2.998E+00	3.270E-01	0.035
		116.30		-4.251E-01	1.847E+00	2.899E+00	3.292E-01	-0.147
		228.16	*	4.611E-03	6.199E-02	1.043E-01	1.392E-02	0.044
BA-133		53.15		1.168E-01	3.292E-01	5.560E-01	3.729E-02	0.210
		79.62		-1.966E-01	2.692E-01	4.028E-01	5.951E-02	-0.488
		81.00		-4.161E-03	1.990E-02	3.159E-02	4.891E-03	-0.132
		276.40		-2.239E-02	1.532E-01	2.497E-01	3.245E-02	-0.090
		302.84		-6.611E-03	7.411E-02	1.215E-01	1.420E-02	-0.054
		356.01	*	-8.596E-03	2.662E-02	4.224E-02	4.861E-03	-0.203
		383.85		-9.660E-02	1.642E-01	2.473E-01	2.645E-02	-0.391

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-133		510.53		-8.616E-04	1.642E-01	Half-Life too short		
		529.87	*	-1.488E-06	1.642E-01	Half-Life too short		
		706.58		-2.481E-04	1.642E-01	Half-Life too short		
		856.28		6.860E-05	1.642E-01	Half-Life too short		
		875.33		5.330E-05	1.642E-01	Half-Life too short		
		1236.41		4.492E-04	1.642E-01	Half-Life too short		
		1298.22		4.774E-04	1.642E-01	Half-Life too short		
CS-134		475.35		9.417E-02	1.077E+00	1.776E+00	1.086E-01	0.053
		563.23		-6.412E-02	2.051E-01	3.128E-01	2.132E-02	-0.205
		569.32		4.941E-02	1.480E-01	2.412E-01	1.663E-02	0.205
		604.70		-4.880E-03	2.377E-02	3.715E-02	2.582E-03	-0.131
		795.84	*	3.451E-03	2.878E-02	4.886E-02	3.617E-03	0.071
		801.93		1.551E-01	2.917E-01	4.867E-01	3.593E-02	0.319
		1038.57		-1.475E+00	3.130E+00	4.719E+00	3.121E-01	-0.313
		1167.94		-1.762E+00	1.667E+00	2.065E+00	1.170E-01	-0.853
		13[illegible]		-1.0[illegible]E+00	1.[illegible]	1.324E+00	[illegible]	-0.78[illegible]
CS-135		268.24	*	1.[illegible]E-02	7.632E-02	1.2[illegible]E-01	1.09[illegible]E-02	0.127
I-133		288.45		2.1[illegible]E+01	7.632E-02	Half-Life too short		
		417.63		-1.542E+01	7.632E-02	Half-Life too short		
		546.56		1.061E+01	7.632E-02	Half-Life too short		
		836.80		6.514E+01	7.632E-02	Half-Life too short		
		1038.76		-2.835E+01	7.632E-02	Half-Life too short		
		1124.00		-2.222E+01	7.632E-02	Half-Life too short		
		1131.51		2.260E+00	7.632E-02	Half-Life too short		
		1260.41	*	-4.293E+00	7.632E-02	Half-Life too short		
		1457.56		-2.473E+01	7.632E-02	Half-Life too short		
		167[illegible]		7.[illegible]E+00	7.[illegible]E-02	Half-Life too short		
		1706.46		-9.837E+01	7.632E-02	Half-Life too short		
		1791.20		4.450E+01	7.632E-02	Half-Life too short		
CS-136		66.91		-1.113E-02	8.232E-02	1.324E-01	1.947E-02	-0.084
		86.29		4.376E-02	1.518E-01	2.529E-01	3.176E-02	0.173
		153.22		6.076E-02	1.732E-01	2.863E-01	2.537E-02	0.212
		163.89		-5.846E-02	2.946E-01	4.883E-01	3.758E-02	-0.120
		176.55		-7.981E-02	1.083E-01	1.705E-01	1.157E-02	-0.468
		273.65		-4.473E-02	1.606E-01	2.119E-01	1.419E-02	-0.211
		340.57		1.544E-02	4.601E-02	7.849E-02	4.818E-03	0.197
		818.51		2.167E-02	3.686E-02	6.662E-02	4.874E-03	0.325
		1048.07	*	-8.120E-03	6.019E-02	9.663E-02	6.790E-03	-0.084
		1235.34		2.071E-01	1.932E-01	3.874E-01	3.870E-02	0.535
BA-137M		661.65	*	-9.564E-03	2.045E-02	3.158E-02	2.256E-03	-0.303
CS-137		661.65	*	-1.011E-02	2.162E-02	3.338E-02	2.3[illegible]E-03	-0.303
CE-139		165.85	*	-1.049E-03	1.170E-02	1.957E-02	1.186E-03	-0.054
BA-140		162.64		-8.486E-02	2.072E-01	3.372E-01	2.424E-02	-0.252
		304.84		-2.062E-02	4.554E-01	7.498E-01	2.047E-01	-0.027
		423.70		4.087E-01	7.434E-01	1.283E+00	4.075E-01	0.319
		537.32	*	1.035E-01	1.193E-01	2.083E-01	6.803E-02	0.497
LA-140		328.77		7.164E-02	9.589E-02	1.715E-01	1.118E-02	0.418
		432.53		-7.302E-02	8.194E-01	1.322E+00	8.421E-02	-0.055
		487.03		-1.279E-02	5.539E-02	8.689E-02	6.018E-03	-0.147

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		751.79		-1.589E-04	5.696E-01	9.503E-01	7.969E-02	0.000
		815.85		-1.869E-03	1.454E-01	2.412E-01	2.042E-02	-0.008
		867.82		2.040E-01	5.461E-01	9.711E-01	7.518E-02	0.210
		919.63		5.218E-01	1.252E+00	2.222E+00	2.102E-01	0.235
		925.24		-1.811E-01	4.710E-01	7.146E-01	5.528E-02	-0.253
		1596.49	*	-4.419E-02	5.002E-02	6.396E-02	3.790E-03	-0.691
CE-141		145.44	*	2.435E-03	2.107E-02	3.409E-02	3.080E-03	0.071
CE-143		57.37		-4.083E-01	2.457E+00	3.946E+00	3.279E-01	-0.103
		231.56		1.904E+01	2.490E+01	4.333E+01	1.342E+01	0.439
		293.26	*	-3.681E-01	1.390E+00	2.235E+00	4.572E-01	-0.165
		350.59		-3.819E+00	2.246E+01	3.476E+01	1.0[illegible]E+01	-0.110
		490.36		-2.540E+01	3.742E+01	5.28[illegible]E+01	1.63[illegible]E+01	-0.4[illegible]
		664.57		-4.237E+00	1.7[illegible]E+01	2.8[illegible]E+01	9.016E+00	-0.150
		721.93		-5.123E+00	1.778E+01	2.819E+01	8.111E+00	-0.182
CE-144		80.11		-1.84[illegible]E-01	4.351E-01	6.76[illegible]E-01	5.0[illegible]E-02	-0.[illegible]
		1[illegible]	*	2.288E-02	7.[illegible]E-02	1.204E-01	2.[illegible]E-02	0.177
PM-144		476.78		-2.793E-03	3.603E-02	5.737E-02	4.176E-03	-0.048
		618.01		-4.032E-03	1.937E-02	2.999E-02	2.18[illegible]E-03	-0.134
		696.49	*	1.133E-02	2.510E-02	4.440E-02	3.214E-03	0.255
		778.57		7.123E-02	1.546E+00	2.594E+00	1.902E-01	0.027
PR-144		696.49	*	7.648E-01	1.694E+00	2.907E+00	2.16[illegible]E-01	0.[illegible]
		1489.15		3.816E+00	9.196E+00	1.690E+01	1.015E+00	0.226
PM-146		453.90	*	3.115E-03	2.510E-02	4.2[illegible]E-02	3.67[illegible]E-03	0.[illegible]
		633.02		-1.111E-01	9.695E-01	1.527E+00	5.657E-01	-0.073
		735.90		1.184E-02	9.949E-02	1.691E-01	4.775E-02	0.070
		747.13		-1.310E-02	4.925E-02	7.774E-02	1.030E-02	-0.168
ND-147		91.11		4.[illegible]E-03	4.2[illegible]E-02	6.[illegible]E-02	6.4[illegible]E-03	0.[illegible]
		312.41		-5.064E-01	1.[illegible]E+00	1.74[illegible]E+00	1.[illegible]E-01	-0.[illegible]
		439.89		1.276E+00	2.[illegible]E+00	4.0[illegible]E+00	2.[illegible]E-01	0.[illegible]
		531.02	*	-6.510E-02	2.004E-01	3.0[illegible]E-01	4.[illegible]E-02	-0.21[illegible]
PM-149		285.90	*	1.198E+00	4.519E+00	7.683E+00	1.089E+00	0.156
EU-152		121.78		1.588E-02	2.619E-02	4.452E-02	5.559E-03	0.357
		244.69		-9.597E-02	1.487E-01	2.310E-01	1.416E-02	-0.415
		344.27	*	-1.395E-02	5.580E-02	8.934E-02	5.810E-03	-0.156
		443.98		-1.936E-01	5.914E-01	9.216E-01	5.390E-02	-0.210
		778.89		1.301E-02	1.769E-01	2.982E-01	2.186E-02	0.044
		867.32		1.034E-01	5.158E-01	8.875E-01	6.421E-02	0.117
		964.01		9.723E-02	1.925E-01	3.349E-01	2.330E-02	0.290
		1085.78		3.601E-03	2.040E-01	3.359E-01	2.125E-02	0.011
		1112.02		7.689E-04	1.877E-01	3.074E-01	1.890E-02	0.003
		1407.95		4.243E-03	1.656E-01	2.680E-01	1.[illegible]E-02	0.016
GD-153		69.67		-2.746E-01	2.756E-01	4.038E-01	2.965E-02	-0.680
		83.37		-1.981E-01	3.014E+00	4.854E+00	3.886E-01	-0.041
		97.43	*	1.013E-04	2.118E-02	3.424E-02	3.100E-03	0.003
		103.18		-3.198E-04	3.243E-02	5.228E-02	5.003E-03	-0.006
EU-154		123.07		-5.766E-03	1.982E-02	3.092E-02	4.205E-03	-0.187
		247.94		-7.936E-02	1.637E-01	2.582E-01	2.514E-02	-0.307
		591.81		-2.344E-01	3.453E-01	4.784E-01	4.994E-02	-0.490
		723.30		-4.469E-02	9.869E-02	1.514E-01	1.263E-02	-0.295

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		756.87		-2.772E-01	4.319E-01	6.249E-01	6.924E-02	-0.444
		873.19		1.300E-01	1.927E-01	3.569E-01	4.035E-02	0.364
		996.32		-2.619E-01	2.432E-01	2.951E-01	5.008E-02	-0.887
		1004.76		-1.250E-01	1.552E-01	2.143E-01	2.219E-02	-0.583
		1274.45	*	-3.475E-03	7.246E-02	1.162E-01	1.093E-02	-0.030
EU-155		48.70		-8.254E-02	1.494E-01	2.308E-01	1.506E-02	-0.358
		60.01		-2.850E-01	6.092E-01	9.482E-01	6.696E-02	-0.301
		86.54		5.761E-03	2.087E-02	3.475E-02	2.879E-03	0.166
		105.31	*	3.584E-02	3.332E-02	5.914E-02	5.832E-03	0.606
TB-160		86.79		1.222E-02	5.178E-02	8.590E-02	7.051E-03	0.142
		197.04		5.385E-02	2.215E-01	3.794E-01	2.347E-02	0.142
		215.65		5.530E-02	[illegible]	[illegible]	[illegible]	[illegible]
		298.57		1.562E-02	[illegible]	[illegible]	[illegible]	[illegible]
		879.36	*	-1.175E-01	[illegible]	1.146E-01	8.264E-03	-1.025
		962.29		3.078E-02	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		5.188E-02	[illegible]	[illegible]	[illegible]	[illegible]
		1177.93		-1.253E-01	[illegible]	[illegible]	[illegible]	[illegible]
		1271.85		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HO-166M		80.57		-1.656E-02	5.632E-02	8.873E-02	6.964E-03	-0.187
		184.41		9.731E-03	1.436E-02	2.540E-02	1.560E-03	0.383
		280.46		8.330E-03	3.870E-02	6.575E-02	3.842E-03	0.127
		410.95		1.194E-01	1.356E-01	2.462E-01	1.370E-02	0.485
		711.68	*	-3.624E-03	[illegible]	7.116E-02	5.172E-03	-0.051
		752.31		2.807E-02	1.315E-01	2.295E-01	1.680E-02	0.122
		810.29		9.164E-03	3.254E-02	5.717E-02	[illegible]	[illegible]
TM-171		51.35		1.496E+00	2.331E+00	4.049E+00	2.683E-01	0.369
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		3.932E-01	[illegible]	[illegible]	[illegible]	[illegible]
		66.73	*	-3.998E-02	[illegible]	[illegible]	[illegible]	[illegible]
LU-176		88.36		1.165E-02	4.354E-02	7.231E-02	6.010E-03	0.161
		201.83		1.484E-04	1.232E-02	2.068E-02	1.281E-03	0.007
		306.84	*	4.576E-03	[illegible]	[illegible]	[illegible]	[illegible]
		401.10		1.652E+00	3.800E+00	6.561E+00	3.590E-01	0.252
LU-177		112.95		-2.457E-02	2.476E-01	3.946E-01	4.153E-02	-0.062
		208.36	*	5.930E-02	2.075E-01	3.563E-01	2.211E-02	0.166
LU-177M		52.97		7.579E-02	1.400E-01	2.405E-01	1.611E-02	0.315
		54.07		-1.153E-02	7.726E-02	1.245E-01	8.402E-03	-0.093
		61.30		-4.569E-03	1.835E-01	2.987E-01	2.117E-02	-0.015
		121.62		7.687E-02	1.297E-01	2.205E-01	2.525E-02	0.349
		147.16		2.386E-02	2.462E-01	3.975E-01	3.445E-02	0.060
		171.86		1.257E-01	[illegible]	[illegible]	[illegible]	[illegible]
		218.09		2.651E-01	3.805E-01	6.744E-01	4.186E-02	0.393
		268.79		2.841E-01	3.546E-01	6.365E-01	3.789E-02	0.446
		319.02		-8.280E-02	1.389E-01	2.140E-01	1.252E-02	-0.387
		367.43		-3.921E-01	5.470E-01	8.236E-01	4.621E-02	-0.476
		413.65	*	-2.588E-02	1.050E-01	1.665E-01	9.306E-03	-0.155
HF-181		56.28		-4.871E-02	8.671E-02	1.335E-01	9.161E-03	-0.365
		57.53		-1.247E-03	5.007E-02	8.159E-02	5.658E-03	-0.015
		65.20		2.688E-02	1.301E-01	2.081E-01	1.496E-02	0.129

---- Non-Identified Nuclides ----

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		133.02		5.480E-03	2.243E-02	3.681E-02	3.809E-03	0.149
		136.25		-2.944E-02	1.592E-01	2.504E-01	2.500E-02	-0.118
		345.85		-3.499E-03	9.511E-02	1.560E-01	8.974E-03	-0.022
		482.03	*	3.124E-03	2.186E-02	3.631E-02	2.239E-03	0.086
W-181		56.28		-2.070E-02	3.682E-02	5.666E-02	3.890E-03	-0.365
		57.53		-5.664E-04	2.127E-02	3.465E-02	2.403E-03	-0.016
		65.20	*	1.133E-02	5.483E-02	8.772E-02	6.306E-03	0.129
TA-182		67.75		5.415E-03	1.666E-02	2.7[illegible]E-02	2.032E-03	0.194
		100.10		-5.222E-02	5.003E-02	7.114E-02	6.6[illegible]E-03	-0.734
		152.43		-4.084E-03	1.295E-01	2.062E-01	1.646E-02	-0.020
		222.10		-6.679E-02	1.522E-01	2.4[illegible]E-01	1.513E-02	-0.274
		1001.68		1.168E+00	1.252E+00	2.407E+00	1.637E-01	0.485
		1121.23		5.976E-02	6.941E-02	1.251E-01	8.21[illegible]E-03	0.442
		1189.05		3.061E-02	1.[illegible]E-01	2.754E-01	1.5[illegible]E-02	0.111
		1221.42	*	2.823E-02	1.077E-01	1.6[illegible]E-01	1.0[illegible]E-02	0.1[illegible]
		1230.97		-8.044E-02	2.362E-01	3.510E-01	2.037E-02	-0.229
RE-183		57.98		1.0[illegible]E-02	2.[illegible]E-02	3.471E-02	2.416E-03	0.3[illegible]
		59.32		1.604E-03	1.1[illegible]E-02	1.[illegible]	1.[illegible]E-03	0.[illegible]
		67.20		3.684E-03	2.867E-02	4.746E-02	3.427E-03	0.078
		162.32	*	-2.612E-03	4.198E-02	7.042E-02	4.638E-03	-0.037
		208.81		1.556E-01	3.765E-01	6.5[illegible]E-01	4.057E-02	0.238
		291.72		-1.375E-01	4.578E-01	7.352E-01	4.310E-02	-0.187
RE-184		57.98		4.184E-02	7.779E-02	1.3[illegible]E-01	9.307E-03	0.313
		59.32		6.174E-03	4.495E-02	7.43[illegible]E-02	5.2[illegible]E-03	0.083
		67.20		1.416E-02	1.104E-01	1.82[illegible]E-01	1.320E-02	0.078
		161.27		6.909E-03	1.452E-01	2.458E-01	1.657E-02	0.028
		21[illegible]		4.2[illegible]E-02	1.219E-01	2.1[illegible]E-01	1.304E-02	0.207
		259.[illegible]	*	1.707[illegible]E-02	1.[illegible]E-01	1.8[illegible]E-01	1.[illegible]E-02	0.[illegible]
		37[illegible]		-5.11[illegible]E-02	2.[illegible]E-01	3.[illegible]E-01	2.[illegible]E-02	-[illegible]
		792.07		-2.153E-01	6.175E-01	9.664E-01	7.084E-02	-0.223
		903.28		-1.126E+00	7.034E-01	7.803E-01	5.578E-02	-1.443
		920.93		1.992E-02	2.9[illegible]E-01	5.007E-01	3.[illegible]E-02	0.0[illegible]
OS-185		59.72		-9.069E-03	3.336E-02	5.299E-02	3.739E-03	-0.171
		61.14		1.014E-04	1.985E-02	3.240E-02	2.295E-03	0.003
		69.30		-2.954E-02	4.638E-02	7.073E-02	5.182E-03	-0.418
		592.07		-1.221E+00	1.413E+00	1.891E+00	1.299E-01	-0.646
		646.12	*	-6.696E-03	2.596E-02	3.971E-02	2.816E-03	-0.169
		717.42		-3.106E-03	5.783E-01	9.662E-01	7.032E-02	-0.003
		874.81		9.505E-02	3.549E-01	6.173E-01	4.456E-02	0.154
		880.27		-3.994E-01	4.920E-01	6.8[illegible]E-01	4.905E-02	-0.[illegible]
RE-186		155.03	*	-7.877E-03	6.532E-02	1.0[illegible]E-01	7.856E-03	-0.076
		477.96		-6.846E-01	1.583E+00	2.390E+00	1.467E-01	-0.286
		633.10		-2.512E-01	1.813E+00	2.846E+00	2.005E-01	-0.088
W-188		63.58		-2.984E+00	7.286E+00	1.101E+01	7.863E-01	-0.271
		227.08		7.075E-01	5.310E+00	8.981E+00	5.564E-01	0.079
		290.67	*	-4.238E-01	3.544E+00	5.801E+00	3.400E-01	-0.073
IR-192		295.96		-2.065E-03	5.658E-02	8.543E-02	5.088E-03	-0.024
		308.46		-1.649E-02	4.840E-02	7.705E-02	4.568E-03	-0.214
		316.51	*	4.161E-03	1.729E-02	2.932E-02	1.725E-03	0.142

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		468.07		-1.119E-02	3.679E-02	5.721E-02	3.954E-03	-0.196
		604.41		-1.168E-01	3.058E-01	4.652E-01	5.565E-02	-0.251
		612.46		-4.027E-01	4.001E-01	5.237E-01	4.447E-02	-0.769
AU-195		65.12		9.607E-03	2.550E-02	4.139E-02	2.975E-03	0.232
		66.83		-1.735E-03	1.435E-02	2.312E-02	1.674E-03	-0.075
		75.70		3.565E-02	3.558E-02	6.245E-02	4.746E-03	0.571
		98.88	*	1.295E-02	5.735E-02	9.497E-02	8.717E-03	0.136
		129.76		-4.475E-01	1.076E+00	1.656E+00	1.773E-01	-0.270
TL-200		367.94	*	-1.459E+00	2.151E+00	3.250E+00	1.822E-01	-0.449
		579.30		-2.718E+00	1.659E+01	2.604E+01	1.770E+00	-0.104
		828.27		1.083E+01	2.550E+01	4.532E+01	3.310E+00	0.239
		1205.75		-3.017E+00	1.335E+01	2.081E+01	1.196E+00	-0.145
TL-201		63.90		-5.8[illegible]E-02	1.2[illegible]E-01	2.1[illegible]E-01	1.9[illegible]E-02	-0.[illegible]
		70.82		-6.166E-02	8.[illegible]91E-02	1.2[illegible]E-01	9.241E-03	-0.493
		80.30		-1.040E-01	1.8[illegible]E-01	2.9[illegible]E-01	2.[illegible]E-02	-0.[illegible]
		135.34		8.893E-01	1.694E+00	2.851E+00	2.879E-01	0.312
		167.43	*	-1.571E-01	5.099E-01	8.364E-01	5.066E-02	-0.188
TL-[illegible]		[illegible]		-1.9[illegible]E-02	4.[illegible]E-02	7.[illegible]	5.[illegible]E-03	-0.[illegible]
		70.82		-2.043E-02	2.7[illegible]E-02	4.146E-02	3.06[illegible]E-03	-0.493
		80.30		-3.448E-02	6.262E-02	9.618E-02	7.535E-03	-0.359
		439.56	*	1.776E-02	3.030E-02	5.281E-02	3.074E-03	0.336
HG-203		70.83		-1.212E-01	1.645E-01	2.476E-01	3.1[illegible]E-02	-0.499
		72.87		-3.484E-02	1.03[illegible]E-01	1.6[illegible]6E-01	2.0[illegible]E-02	-0.113
		82.60		2.402E-02	2.036E-01	3.340E-01	4.4[illegible]E-02	0.072
		279.20	*	-5.990E-03	1.653E-02	2.62[illegible]E-02	1.628E-03	-0.[illegible]
BI-207		72.80		-1.341E-02	3.388E-02	5.315E-02	3.969E-03	-0.252
		74.97		3.637E-02	1.966E-02	3.65[illegible]E-02	2.7[illegible]E-03	0.[illegible]
		[illegible]		-1.75[illegible]E-02	4.[illegible]02	6.[illegible]02	5.[illegible]03	-0.[illegible]
		5[illegible].67		6.72[illegible]E-04	2.[illegible]E-02	3.6[illegible]02	2.[illegible]E-03	0.[illegible]
		1063.62	*	2.165E-02	3.011E-02	5.71[illegible]E-02	3.4[illegible]E-03	0.379
		1770.23		-5.765E-02	5.055E-01	8.140E-01	4.599E-02	-0.071
TL-2[illegible]		81.07		-9.786E-03	4.3[illegible]E-02	6.969E-02	5.[illegible]E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		94.90		4.509E-02	6.295E-02	1.084E-01	9.579E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.21[illegible]E-01	4.216E-02	-0.[illegible]
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.17[illegible]
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.2[illegible]E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.1[illegible]E-01	9.675E-02	0.192
		445.03		-1.565E+00	1.49[illegible]E+00	1.8[illegible]E+00	1.9[illegible]E-01	-0.827
TL-208		277.35		-1.083E-01	1.593E-01	2.41[illegible]E-01	2.53[illegible]E-02	-0.4[illegible]
		510.84		-1.310E-01	1.623E-01	2.966E-01	3.112E-02	-0.442
		583.14	*	5.226E-03	2.639E-02	4.301E-02	3.263E-03	0.121
		860.37		-3.135E-02	1.889E-01	3.040E-01	2.431E-02	-0.103
PO-209		260.50		-8.924E-01	4.780E+00	7.800E+00	4.701E-01	-0.114
		262.80		7.029E+00	1.303E+01	2.283E+01	1.371E+00	0.308
		896.60	*	2.613E+00	4.889E+00	8.862E+00	6.344E-01	0.295
BI-210		46.50	*	-9.202E-02	1.715E-01	2.654E-01	2.010E-02	-0.347

---- Non-Identified Nuclides ----

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PB-210		46.50	*	-9.202E-02	1.715E-01	2.654E-01	2.010E-02	-0.347
PO-210		46.50	*	-9.202E-02	1.715E-01	2.654E-01	1.715E-02	-0.347
BI-211		72.87		-1.963E-01	5.842E-01	9.215E-01	6.886E-02	-0.213
		351.07	*	-1.104E-02	1.359E-01	2.130E-01	1.355E-02	-0.052
PB-211		404.84	*	-5.992E-01	6.258E-01	6.759E-01	4.212E-01	-0.886
		427.08		-1.124E+00	1.415E+00	1.755E+00	1.085E+00	-0.640
		831.96		-4.658E-01	8.882E-01	1.261E+00	7.884E-01	-0.369
BI-212		727.18	*	2.395E-02	1.581E-01	2.713E-01	2.412E-02	0.088
		785.46		-2.967E-01	1.120E+00	1.780E+00	1.305E-01	-0.167
		1620.62		4.372E-01	1.005E+00	1.860E+00	1.096E-01	0.235
PB-212		74.81		1.2[illegible]E-01	6.838E-02	1.25[illegible]E-01	1.505E-02	0.[illegible]3
		77.11		7.0[illegible]E-03	4.040E-02	6.6[illegible]E-02	5.1[illegible]E-03	0.[illegible]
		87.30		9.0[illegible]E-03	8.1[illegible]E-02	1.3[illegible]E-01	1.[illegible]E-02	0.[illegible]
		238.63	*	1.502E-02	3.[illegible]E-02	5.072E-02	3.[illegible]E-03	0.[illegible]
		300.09		-2.0[illegible]E-01	3.9[illegible]E-01	6.[illegible]E-01	5.1[illegible]E-02	-0.[illegible]
PO-212		74.81		1.2[illegible]E-01	6.838E-02	1.2[illegible]E-01	1.505E-02	0.983
		77.11		7.001E-03	4.040E-02	6.662E-02	5.169E-03	0.105
		87.30		9.059E-03	8.174E-02	1.3[illegible]E-01	1.7[illegible]E-02	0.0[illegible]
		115.19		9.549E-01	1.208E+00	2.088E+00	2.246E-01	0.457
		238.63	*	1.502E-02	3.021E-02	5.072E-02	3.864E-03	0.296
		300.09		-2.090E-01	3.957E-01	6.2[illegible]E-01	5.1[illegible]E-02	-0.336
BI-214		609.31	*	2.328E-02	4.268E-02	7.4[illegible]E-02	6.45[illegible]E-03	0.312
		768.36		-5.4[illegible]E-02	4.[illegible]E-01	6.[illegible]E-01	6.5[illegible]E-02	-0.0[illegible]
		934.06		1.018E+00	8.169E-01	1.607E+00	1.513E-01	0.634
		1120.29		5.607E-02	1.7[illegible]E-01	2.931E-01	2.6[illegible]E-02	0.180
		1238.11		9.838E-02	4.167E-01	7.639E-01	6.236E-02	0.129
		1377.67		-3.690E-01	6.[illegible]E-01	9.487E-01	8.2[illegible]E-02	-0.389
		1[illegible]		-1.189E-02	2.[illegible]E-01	3.616E-01	2.[illegible]E-02	-0.033
PB-214		74.81		2.1[illegible]E-01	1.[illegible]E-01	2.178E-01	2.2[illegible]E-02	0.983
		77.11		1.200E-02	6.927E-02	1.1[illegible]E-01	1.235E-02	0.105
		87.30		1.552E-02	1.400E-01	2.293E-01	2.588E-02	0.068
		241.98		-1.361E-02	1.6[illegible]E-01	2.[illegible]E-01	2.[illegible]E-02	-0.[illegible]
		295.21		-6.499E-03	7.981E-02	1.200E-01	1.0[illegible]E-02	-0.054
		351.92	*	1.965E-03	4.753E-02	7.545E-02	6.207E-03	0.026
PO-214		74.81		2.122E-01	1.172E-01	2.15[illegible]E-01	2.234E-02	0.983
		77.11		1.200E-02	6.927E-02	1.1[illegible]E-01	1.235E-02	0.[illegible]
		87.30		1.552E-02	1.400E-01	2.293E-01	2.5[illegible]E-02	0.0[illegible]
		241.98		-1.361E-02	1.607E-01	2.659E-01	2.212E-02	-0.051
		295.21		-6.499E-03	7.981E-02	1.200E-01	1.029E-02	-0.054
		351.92	*	1.965E-03	4.753E-02	7.545E-02	6.207E-03	0.026
PO-215		81.07		-9.786E-03	4.394E-02	6.9[illegible]E-02	5.4[illegible]E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.0[illegible]E-02	3.242E-03	-0.[illegible]
		94.90		4.509E-02	6.295E-02	1.084E-01	9.579E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.179
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.258E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-1.565E+00	1.400E+00	1.893E+00	1.951E-01	-0.827
PO-216		74.81		1.232E-01	6.838E-02	1.252E-01	1.505E-02	0.983
		77.11		7.001E-03	4.040E-02	6.662E-02	5.109E-03	0.105
		87.30		9.059E-03	8.174E-02	1.339E-01	1.735E-02	0.068
		238.63	*	1.502E-02	3.021E-02	5.072E-02	3.864E-03	0.296
		300.09		-2.090E-01	3.987E-01	6.230E-01	5.168E-02	-0.336
PO-218		74.81		2.122E-01	1.172E-01	2.158E-01	2.284E-02	0.983
		77.11		1.200E-02	6.927E-02	1.142E-01	1.235E-02	0.105
		87.30		1.552E-02	1.400E-01	2.293E-01	2.588E-02	0.068
		241.98		-1.361E-02	1.607E-01	2.659E-01	2.212E-02	-0.051
		295.21		-6.499E-03	7.981E-02	1.209E-01	1.020E-02	-0.054
		351.92	*	[illegible]	[illegible]	[illegible]	6.207E-03	[illegible]
RN [illegible]		271.22		[illegible]	[illegible]	[illegible]	1.577E-02	[illegible]
		401.21	*	7.475E-02	[illegible]	[illegible]	[illegible]	[illegible]
RN-2[illegible]		549.76	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RA-223		81.07		-9.786E-03	4.394E-02	6.969E-02	5.480E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		94.90		4.509E-02	[illegible]	1.084E-01	9.570E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	[illegible]	[illegible]	[illegible]	[illegible]
		269.46		6.667E-02	8.965E-02	1.596E-01	[illegible]	[illegible]
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.258E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192
		445.03		-1.565E+00	[illegible]	[illegible]	[illegible]	[illegible]
RA-224		240.98	*	2.972E-01	3.055E-01	5.532E-01	[illegible]	0.537
RA-226		609.31	*	2.328E-02	4.268E-02	7.453E-02	6.459E-03	0.312
		768.36		-5.461E-02	4.246E-01	6.9[illegible]5E-01	6.536E-02	[illegible]
		[illegible]		1.018E+00	[illegible]	[illegible]	[illegible]	[illegible]
		1120.29		5.607E-02	1.704E-01	[illegible]	[illegible]	[illegible]
		1238.11		9.839E-02	4.467E-01	[illegible]	6.236E-02	[illegible]
		1377.67		[illegible]	[illegible]	[illegible]	[illegible]	-0.389
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.043E-02	-0.033
AC-227		79.80		-2.394E-01	3.456E-01	5.166E-01	1.095E-01	-0.463
		236.00		-1.038E-01	[illegible]	[illegible]	[illegible]	[illegible]
		256.20	*	-3.958E-02	[illegible]	[illegible]	[illegible]	[illegible]
		286.10		3.987E-01	[illegible]	[illegible]	[illegible]	0.281
		299.80		-2.050E-02	7.127E-01	1.176E+00	1.918E-01	-0.017
		304.40		4.919E-02	1.007E+00	1.675E+00	2.902E-01	0.029
		334.20		-1.474E-01	1.183E+00	1.922E+00	3.523E-01	-0.077
TH-227		79.80		[illegible]	3.457E-01	[illegible]	1.109E-01	[illegible]
		94.00		-1.4[illegible]E-01	[illegible]	[illegible]	[illegible]	[illegible]
		236.00		-1.038E-01	1.047E-01	1.573E-01	1.466E-02	-0.658
		256.20	*	-3.958E-02	1.898E-01	3.091E-01	5.251E-02	-0.128
		286.10		3.987E-01	9.079E-01	1.417E+00	1.420E+00	0.281
		299.80		-2.050E-02	7.127E-01	1.176E+00	1.918E-01	-0.017
		304.40		4.919E-02	1.007E+00	1.675E+00	2.902E-01	0.029
		334.20		-1.474E-01	1.183E+00	1.922E+00	3.523E-01	-0.077
AC-228		338.32		4.333E-02	1.304E-01	2.205E-01	8.990E-02	0.196

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		911.07	*	1.781E-02	9.382E-02	1.600E-01	1.623E-02	0.111
		969.11		3.703E-02	1.641E-01	2.806E-01	6.388E-02	0.132
RA-228		338.32		4.333E-02	1.304E-01	2.205E-01	8.990E-02	0.196
		911.07	*	1.781E-02	9.382E-02	1.600E-01	1.623E-02	0.111
		969.11		3.703E-02	1.641E-01	2.806E-01	6.388E-02	0.132
TH-228		84.40		-2.859E-01	5.363E-01	8.190E-01	1.047E-01	-0.349
		238.60	*	1.509E-02	3.022E-02	5.073E-02	3.866E-03	0.298
		300.10		-2.090E-01	4.170E-01	6.230E-01	3.672E-01	-0.336
TH-229		85.43		-8.251E-03	4.018E-02	6.376E-02	5.183E-03	-0.129
		88.47		5.691E-03	2.497E-02	4.103E-02	3.439E-03	0.139
		100.00		-5.563E-02	5.444E-02	7.787E-02	7.207E-03	-0.715
		193.63	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		210.97		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TH-[illegible]		[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		768.36		-5.461E-02	4.246E-01	[illegible]	[illegible]	[illegible]
		934.06		1.018E+00	[illegible]	[illegible]	[illegible]	[illegible]
		1120.29		5.607E-02	1.704E-01	2.981E-01	2.681E-02	0.188
		1238.11		9.838E-02	4.467E-01	7.639E-01	6.236E-02	0.129
		1377.67		-3.693E-01	6.890E-01	9.427E-01	8.190E-02	-0.299
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.048E-02	-0.033
PA-2[illegible]		283.67	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		301.29		-1.096E-01	2.985E-01	[illegible]	4.931E-02	-0.2[illegible]
TH-231		81.07		-9.786E-03	4.394E-02	6.969E-02	5.489E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		91.00		4.502E-02	[illegible]	[illegible]	[illegible]	[illegible]
		122.32		1.396E-01	6.523E-01	[illegible]	1.230E-01	[illegible]
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.179
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.455E-01	5.701E-01	9.223E-02	-0.1[illegible]
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192
		445.03		-1.565E+00	[illegible]	[illegible]	[illegible]	-0.[illegible]
U-231		84.21		-1.803E-01	3.190E-01	[illegible]	3.914E-02	-0.[illegible]
		92.29		4.367E-02	1.509E-01	2.511E-01	2.165E-02	0.174
		95.87	*	-2.913E-02	8.441E-02	1.316E-01	1.173E-02	-0.221
		103.00		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TH-232		338.32		4.333E-02	1.292E-01	[illegible]	1.274E-02	[illegible]
		911.07	*	1.781E-02	9.382E-02	1.600E-01	1.623E-02	0.111
		969.11		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PA-2[illegible]		75.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		86.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	0.163
		300.1[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		311.98	*	-1.932E-02	3.515E-02	5.4[illegible]E-02	3.391E-03	-0.3[illegible]
		340.50		1.437E-01	3.309E-01	5.679E-01	1.304E-01	0.253
		398.62		-8.041E-02	1.266E+00	2.058E+00	5.306E-01	-0.039
		415.76		3.104E-01	9.813E-01	1.666E+00	3.421E-01	0.186
PA-234		63.00		-7.251E-02	2.268E-01	3.453E-01	5.085E-02	-0.210
		94.67		3.074E-02	4.442E-02	7.625E-02	9.563E-03	0.403
		98.44		1.307E-02	2.489E-02	4.078E-02	2.278E-02	0.321

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		99.86		-1.309E-01	1.371E-01	1.974E-01	1.829E-02	-0.663
		111.00		-2.528E-02	5.890E-02	9.034E-02	1.207E-02	-0.280
		131.20		-4.844E-03	4.072E-02	6.455E-02	6.809E-03	-0.075
		152.70		2.517E-02	1.283E-01	2.089E-01	3.492E-02	0.120
		186.00		-2.727E-01	6.039E-01	9.081E-01	2.781E-01	-0.300
		226.40		6.101E-02	1.789E-01	3.083E-01	3.626E-02	0.198
		227.20		1.659E-02	1.927E-01	3.245E-01	2.010E-02	0.051
		248.90		-2.479E-01	3.821E-01	5.858E-01	1.264E-01	-0.423
		293.70		-4.013E-02	3.282E-01	5.3[illegible]E-01	8.612E-02	-0.075
		369.80		-4.003E-01	5.107E-01	7.467E-01	1.551E-01	-0.536
		568.70		2.083E-01	7.747E-01	1.253E+00	8.448E-02	0.166
		569.50		[illegible]	[illegible]	[illegible]	2.242E-02	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	-
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		706.10		1.783E-01	6.712E-01	1.150E+00	5.14[illegible]E-01	0.154
		733.00		2.510E-02	2.3[illegible]E-01	4.0[illegible]E-01	8.8[illegible]E-02	0.062
		742.81		-4.770E-01	8.7[illegible]E-01	1.21[illegible]E+00	8.1[illegible]E-01	[illegible]
		795.30		-1.786E-02	5.[illegible]E-01	9.631E-01	2.[illegible]E-01	-0.019
		805.60		-6.515E-02	6.493E-01	1.061E+00	3.215E-01	-0.061
		819.60		8.703E-01	9.595E-01	1.714E+00	6.459E-01	0.508
		826.30		-1.526E-01	5.904E-01	9.316E-01	4.146E-01	-0.163
		831.60		-1.884E-01	4.351E-01	6.635E-01	1.957E-01	-0.284
		876.40		8.523E-02	4.901E-01	8.284E-01	8.507E-01	0.103
		880.51		-1.433E-01	1.906E-01	2.674E-01	1.927E-02	-0.535
		8[illegible].24		1.802E-01	2.1[illegible]E-01	3.5[illegible]E-01	2.3[illegible]E-01	0.506
		899.00		3.0[illegible]E-01	5.[illegible]E-01	9.[illegible]E-01	4.[illegible]E-01	0.[illegible]
		925.00		-2.848E-01	7.404E-01	1.12[illegible]E+00	7.962E-02	-0.[illegible]
		926.50		-1.220E-01	1.202E-01	1.4[illegible]E-01	3.684E-02	-0.[illegible]
		946.00	*	2.306E-02	1.940E-01	3.275E-01	5.922E-02	0.070
		949.00		-2.042E-01	2.[illegible]E-01	4.166E-01	2.[illegible]E-02	-0.490
		980.50		5.706E-03	5.3[illegible]E-01	8.747E-01	6.0[illegible]E-02	0.007
		1394.10		7.026E-01	1.07[illegible]E+00	1.0[illegible]E+00	1.10[illegible]E+00	0.394
PA-234M		766.41		2.1[illegible]E+00	1.087E+01	1.[illegible]E+01	1.414E+01	0.114
		1001.03	*	4.544E+00	4.203E+00	8.240E+00	8.113E-01	0.552
TH-234		63.29	*	-8.490E-02	1.958E-01	2.9[illegible]E-01	5.100E-02	-0.288
		92.[illegible]		3.2[illegible]E-02	1.401E-01	2.[illegible]E-01	4.1[illegible]E-02	0.[illegible]
U-2[illegible]		609.31	*	2.[illegible]E-02	4.2[illegible]E-02	7.[illegible]E-02	6.[illegible]E-03	0.[illegible]
		768.36		-5.461E-02	4.246E-01	6.9[illegible]E-01	6.53[illegible]E-02	-0.079
		934.06		1.0[illegible]E+00	8.16[illegible]E-01	1.[illegible]E+00	1.5[illegible]E-01	0.[illegible]
		1120.29		5.[illegible]E-02	1.704E-01	2.[illegible]E-01	2.681E-02	0.[illegible]
		1338.11		9.838E-02	4.46[illegible]E-01	7.[illegible]E-01	0.[illegible]E-2	
		1377.67		-3.693E-01	6.590E-01	9.467E-01	8.2[illegible]E-02	-0.39[illegible]
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.010E-02	-0.033
U-235		89.95		-1.862E-01	2.792E-01	4.141E-01	1.276E-01	-0.450
		93.35		-3.309E-02	1.695E-01	2.700E-01	7.574E-02	-0.123
		105.00		3.115E-01	3.413E-01	5.786E-01	1.747E-01	0.538
		143.76	*	-4.942E-02	8.567E-02	1.285E-01	2.281E-02	-0.384
		163.35		-1.023E-01	1.946E-01	3.120E-01	5.677E-02	-0.328
		185.71		-1.108E-02	2.206E-02	3.331E-02	2.048E-03	-0.333

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		205.31		4.047E-02	2.201E-01	3.746E-01	6.787E-02	0.108
NP-236		94.67		2.324E-02	3.362E-02	5.781E-02	5.097E-03	0.402
		98.44		9.887E-03	1.801E-02	3.083E-02	2.818E-03	0.321
		111.00		-1.912E-02	4.452E-02	6.833E-02	7.055E-03	-0.280
		160.31	*	1.730E-02	3.475E-02	5.802E-02	3.992E-03	0.298
NP-237		86.50	*	1.428E-02	5.113E-02	8.503E-02	1.889E-02	0.168
		95.87		-9.074E-02	2.638E-01	4.099E-01	1.014E-01	-0.221
U-238		63.29	*	-8.490E-02	1.958E-01	2.944E-01	5.100E-02	-0.288
		92.38		3.242E-02	1.400E-01	2.319E-01	2.001E-02	0.140
NP-239		99.55		-3.699E-02	4.482E-02	6.556E-02	6.0[illegible]E-03	-0.564
		117.00	*	-2.697E-02	6.572E-02	1.010E-01	1.10[illegible]E-02	-0.267
		209.75		-5.681E-02	3.25[illegible]E-01	5.[illegible]E-01	3.3[illegible]E-02	-0.[illegible]
		[illegible]		8.4[illegible]E-03	1.[illegible]E-01	1.756E-01	1.075E-02	0.049
		277.[illegible]		-6.05[illegible]E-02	7.[illegible]E-02	1.187E-01	6.955E-03	-0.513
		334.30		-6.785E-02	6.719E-01	1.095E+00	6.357E-02	-0.062
AM-241		59.54	*	2.082E-03	1.792E-02	2.959E-02	2.310E-03	0.070
AM-243		74.67	*	1.823E-02	1.093E-02	2.011E-02	1.519E-03	0.906
		86.72		4.752E-01	1.909E+00	3.[illegible]E+00	2.[illegible]E-01	0.[illegible]
		117.66		-5.0[illegible]E-02	1.239E+00	2.[illegible]E+00	2.292E-01	-0.[illegible]
		142.18		2.856E+00	6.901E+00	1.148E+01	1.066E+00	0.249
CM-242		99.55		-3.6[illegible]E-02	4.60[illegible]E-02	6.7[illegible]E-02	6.22[illegible]E-03	-0.[illegible]
		103.76	*	-5.270E-03	3.057E-02	4.6[illegible]E-02	4.[illegible]E-03	-0.109
		117.00		-2.773E-02	6.758E-02	1.039E-01	1.138E-02	-0.2[illegible]7
		209.75		-5.598E-02	3.206E-01	5.261E-01	3.278E-02	-0.1[illegible]6
		228.18		8.576E-03	1.042E-01	1.753E-01	1.036E-02	0.049
		27[illegible].60		-6.1[illegible]E-02	7.[illegible]E-02	1.1[illegible]	7.608E-03	-0.[illegible]
CM-247		276.00		-3.090E-01	3.3[illegible]E-01	4.[illegible]E-01	2.640E-02	-0.[illegible]
		287.40		9.8[illegible]E-02	6.[illegible]E-01	1.[illegible]E+00	6.[illegible]E-02	0.[illegible]
		402.60	*	6.831E-03	1.927E-02	3.[illegible]E-02	1.81[illegible]E-03	0.206
CF-249		252.85		6.610E-02	4.2[illegible]E-01	7.20[illegible]E-01	4.2[illegible]E-02	0.092
		333.44		2.597E-02	8.711E-02	1.486E-01	8.629E-03	0.175
		387.95	*	2.591E-03	2.01[illegible]E-02	3.415E-02	1.9[illegible]E-03	0.076
CF-251		176.60	*	-3.373E-02	5.529E-02	8.813E-02	5.36[illegible]E-03	-0.383
		227.00		2.576E-02	1.722E-01	2.918E-01	1.808E-02	0.088
		285.00		-1.042E-01	9.080E-01	1.488E+00	8.707E-02	-0.070
ANH-511		511.00	*	-2.552E-02	3.517E-02	6.497E-02	4.127E-03	-0.395

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
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*                                                                       *
*                            DETECTOR DATA                              *
*                                                                       *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832 *
* Acquisition date : 14-JUL-2009 11:22:57 Detector SN#     :            *
* Detector ID        : GAM21               Sensitivity      : 5.000    *
* Geometry           : CAN                 Energy tolerance: 1.500     *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000    *
* Elapsed real time:     0 02:00:08.64     Half life ratio :  8.000    *
*************************************************************************
*                                                                       *
*                             SAMPLE DATA                               *
*                                                                       *
* Sample date        :  7-JUL-2009 00:00:00 Nuclide Library : SOLID     *
* Sample ID          : G1201874832          Analyst initials: MXR1      *
* Batch Number       : 882713               Sample Quantity : 1.4447E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000 *
*************************************************************************
*                                                                       *
*                               QC DATA                                 *
* Standard Weight  :   0.00000                                          *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope       :            *
* MSD DPM          :    0.000             MSD Isotope       :          *
* LCS DPM          :    0.000             LCS Isotope       :          *
* LCSD DPM         :    0.000             LCSD Isotope      :          *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
RB-86	4.005E-01	5.594E-01	5.555E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-1.503E-02	1.505E-01	2.534E-01	0.000E+00	NOT IDENT.
NA-22	-1.239E-03	2.532E-02	4.180E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.057E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	6.492E-04	2.938E-02	4.991E-02	0.000E+00	NOT IDENT.
K-40	1.401E-01	3.090E-01	5.601E-01	0.000E+00	NOT IDENT.
TI-44	-2.974E-03	7.194E-03	1.229E-02	0.000E+00	NOT IDENT.
SC-46	-2.258E-02	2.300E-02	3.113E-02	0.000E+00	NOT IDENT.
V-48	1.966E-02	3.718E-02	6.890E-02	0.000E+00	NOT IDENT.
CR-51	-4.493E-02	1.613E-01	2.740E-01	0.000E+00	NOT IDENT.
MN-52	-6.918E-02	6.679E-02	7.208E-02	0.000E+00	NOT IDENT.
MN-54	-1.473E-02	2.551E-02	3.991E-02	0.000E+00	NOT IDENT.
CO-56	1.631E-02	2.762E-02	5.162E-02	0.000E+00	NOT IDENT.
CO-57	3.780E-03	8.882E-03	1.609E-02	0.000E+00	NOT IDENT.
CO-58	-9.316E-03	2.157E-02	3.417E-02	0.000E+00	NOT IDENT.
FE-59	-2.196E-02	5.676E-02	8.875E-02	0.000E+00	NOT IDENT.
CO-60	6.596E-03	2.671E-02	4.714E-02	0.000E+00	NOT IDENT.
ZN-65	-2.489E-03	5.121E-02	8.557E-02	0.000E+00	NOT IDENT.
GE-68	5.249E-01	8.868E-01	1.505E+00	0.000E+00	NOT IDENT.
AS-73	2.123E-02	6.960E-02	1.290E-01	0.000E+00	NOT IDENT.
AS-74	-2.515E-02	4.479E-02	6.873E-02	0.000E+00	NOT IDENT.
SE-75	-2.727E-03	2.050E-02	3.583E-02	0.000E+00	NOT IDENT.
BR-77	1.850E-01	6.985E-01	1.234E+00	0.000E+00	NOT IDENT.
SR-82	1.080E-01	2.001E-01	3.753E-01	0.000E+00	NOT IDENT.
RB-83	1.301E-02	3.977E-02	7.091E-02	0.000E+00	NOT IDENT.
RB-84	-6.888E-03	4.107E-02	6.851E-02	0.000E+00	NOT IDENT.
KR-85	-9.011E-01	7.104E+00	1.197E+01	0.000E+00	NOT IDENT.

SR-85	-4.263E-03	3.361E-02	5.664E-02	0.000E+00	NOT IDENT.
Y-88	1.465E-02	3.528E-02	6.535E-02	0.000E+00	NOT IDENT.
ZR-88	2.467E-03	1.687E-02	2.973E-02	0.000E+00	NOT IDENT.
Y-91	1.042E+00	1.130E+01	1.929E+01	0.000E+00	NOT IDENT.
NB-94	-1.940E-03	2.294E-02	3.959E-02	0.000E+00	NOT IDENT.
NB-95	5.445E-03	2.413E-02	4.331E-02	0.000E+00	NOT IDENT.
NB-95M	-6.197E-02	5.101E-02	8.024E-02	0.000E+00	NOT IDENT.
ZR-95	-3.389E-02	3.646E-02	5.128E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.792E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.946E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	9.682E-01	1.032E+00	2.042E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	9.921E+06	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.010E-02	1.365E-02	2.606E-02	0.000E+00	NOT IDENT.
RH-102	-2.232E-03	1.640E-02	2.749E-02	0.000E+00	NOT IDENT.
RU-103	3.455E-03	2.274E-02	3.962E-02	0.000E+00	NOT IDENT.
RH-106	-1.957E-01	2.138E-01	3.016E-01	0.000E+00	NOT IDENT.
RU-106	-1.957E-01	2.129E-01	3.016E-01	0.000E+00	NOT IDENT.
AG-108M	7.511E-05	2.024E-02	3.486E-02	0.000E+00	NOT IDENT.
CD-109	4.211E-02	1.818E-01	3.281E-01	0.000E+00	NOT IDENT.
AG-110M	5.583E-03	1.814E-02	3.342E-02	0.000E+00	NOT IDENT.
IN-111	-3.361E-02	6.940E-02	1.170E-01	0.000E+00	NOT IDENT.
IN-113M	4.047E-03	2.410E-02	4.260E-02	0.000E+00	NOT IDENT.
SN-113	4.047E-03	2.410E-02	4.260E-02	0.000E+00	NOT IDENT.
IN-114M	-8.922E-03	7.105E-02	1.267E-01	0.000E+00	NOT IDENT.
CD-115	-3.885E-01	5.506E-01	8.152E-01	0.000E+00	NOT IDENT.
SN-117M	1.236E-02	1.578E-02	2.905E-02	0.000E+00	NOT IDENT.
SB-122	-2.962E-02	1.669E-01	2.741E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.529E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	8.229E-03	1.160E-02	2.122E-02	0.000E+00	NOT IDENT.
I-124	1.931E-02	1.285E-01	2.211E-01	0.000E+00	NOT IDENT.
SB-124	-3.244E-02	7.403E-02	1.124E-01	0.000E+00	NOT IDENT.
SB-125	-3.660E-02	5.383E-02	8.413E-02	0.000E+00	NOT IDENT.
TE-125M	-1.841E+00	2.869E+00	4.347E+00	0.000E+00	NOT IDENT.
I-126	6.899E-02	7.383E-02	1.457E-01	0.000E+00	NOT IDENT.
SB-126	-3.045E-03	5.577E-02	9.633E-02	0.000E+00	NOT IDENT.
SN-126	2.990E-03	1.760E-02	3.161E-02	0.000E+00	NOT IDENT.
SB-127	-1.750E-01	2.019E-01	2.985E-01	0.000E+00	NOT IDENT.
XE-127	-6.565E-03	1.691E-02	2.931E-02	0.000E+00	NOT IDENT.
I-131	5.277E-02	3.611E-02	7.195E-02	0.000E+00	NOT IDENT.
TE-132	4.611E-03	6.075E-02	1.092E-01	0.000E+00	NOT IDENT.
BA-133	-8.596E-03	2.609E-02	4.384E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.059E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.451E-03	2.820E-02	4.981E-02	0.000E+00	NOT IDENT.
CS-135	1.644E-02	7.479E-02	1.352E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.428E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-8.120E-03	5.899E-02	9.788E-02	0.000E+00	NOT IDENT.
BA-137M	-9.564E-03	2.004E-02	3.232E-02	0.000E+00	NOT IDENT.
CS-137	-1.011E-02	2.119E-02	3.417E-02	0.000E+00	NOT IDENT.
CE-139	-1.049E-03	1.147E-02	2.064E-02	0.000E+00	NOT IDENT.
BA-140	1.035E-01	1.169E-01	2.112E-01	0.000E+00	NOT IDENT.
LA-140	-4.413E-02	4.902E-02	6.416E-02	0.000E+00	NOT IDENT.
CE-141	2.435E-03	2.065E-02	3.606E-02	0.000E+00	NOT IDENT.
CE-143	-3.681E-01	1.362E+00	2.330E+00	0.000E+00	NOT IDENT.
CE-144	2.288E-02	7.704E-02	1.372E-01	0.000E+00	NOT IDENT.
PM-144	1.133E-02	2.460E-02	4.539E-02	0.000E+00	NOT IDENT.
PR-144	7.648E-01	1.660E+00	3.064E+00	0.000E+00	NOT IDENT.
PM-146	3.145E-03	2.489E-02	4.348E-02	0.000E+00	NOT IDENT.
ND-147	-6.510E-02	1.964E-01	3.147E-01	0.000E+00	NOT IDENT.
PM-149	1.198E+00	4.429E+00	8.012E+00	0.000E+00	NOT IDENT.
EU-152	-1.395E-02	5.469E-02	9.278E-02	0.000E+00	NOT IDENT.
GD-153	1.013E-04	2.076E-02	3.653E-02	0.000E+00	NOT IDENT.
EU-154	-3.475E-03	7.101E-02	1.172E-01	0.000E+00	NOT IDENT.
EU-155	3.584E-02	3.265E-02	6.298E-02	0.000E+00	NOT IDENT.
TB-160	-1.175E-01	9.094E-02	1.166E-01	0.000E+00	NOT IDENT.
HO-166M	-3.624E-03	4.220E-02	7.272E-02	0.000E+00	NOT IDENT.
TM-171	-3.809E-02	4.304E+00	7.685E+00	0.000E+00	NOT IDENT.
LU-176	4.576E-03	1.311E-02	2.387E-02	0.000E+00	NOT IDENT.
LU-177	5.930E-02	2.034E-01	3.741E-01	0.000E+00	NOT IDENT.
LU-177M	-2.588E-02	1.029E-01	1.722E-01	0.000E+00	NOT IDENT.
HF-181	3.124E-03	2.142E-02	3.743E-02	0.000E+00	NOT IDENT.
W-181	1.133E-02	5.373E-02	9.435E-02	0.000E+00	NOT IDENT.
TA-182	2.828E-02	1.056E-01	1.871E-01	0.000E+00	NOT IDENT.
RE-183	-2.612E-03	4.114E-02	7.432E-02	0.000E+00	NOT IDENT.
RE-184	1.707E-02	1.080E-01	1.947E-01	0.000E+00	NOT IDENT.
OS-185	-6.696E-03	2.544E-02	4.066E-02	0.000E+00	NOT IDENT.
RE-188	-7.877E-03	6.402E-02	1.088E-01	0.000E+00	NOT IDENT.
W-188	-4.238E-01	3.473E+00	6.047E+00	0.000E+00	NOT IDENT.
IR-192	4.161E-03	1.694E-02	3.051E-02	0.000E+00	NOT IDENT.

AU-195	1.295E-02	5.620E-02	1.013E-01	0.000E+00	NOT IDENT.
TL-200	-1.459E+00	2.108E+00	3.370E+00	0.000E+00	NOT IDENT.
TL-201	-1.571E-01	4.997E-01	8.822E-01	0.000E+00	NOT IDENT.
TL-202	1.776E-02	2.970E-02	5.455E-02	0.000E+00	NOT IDENT.
HG-203	-5.990E-03	1.620E-02	2.742E-02	0.000E+00	NOT IDENT.
BI-207	2.165E-02	2.951E-02	5.782E-02	0.000E+00	NOT IDENT.
TL-207	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
TL-208	5.226E-03	2.586E-02	4.415E-02	0.000E+00	NOT IDENT.
PO-209	2.613E+00	4.791E+00	9.008E+00	0.000E+00	NOT IDENT.
BI-210	-9.202E-02	1.681E-01	2.874E-01	0.000E+00	NOT IDENT.
PB-210	-9.202E-02	1.681E-01	2.874E-01	0.000E+00	NOT IDENT.
PO-210	-9.202E-02	1.680E-01	2.874E-01	0.000E+00	NOT IDENT.
BI-211	-1.104E-02	1.332E-01	2.211E-01	0.000E+00	NOT IDENT.
PB-211	-5.992E-01	6.132E-01	6.995E-01	0.000E+00	NOT IDENT.
BI-212	2.395E-02	1.549E-01	2.771E-01	0.000E+00	NOT IDENT.
PB-212	1.502E-02	2.961E-02	5.309E-02	0.000E+00	NOT IDENT.
PO-212	1.502E-02	2.961E-02	5.309E-02	0.000E+00	NOT IDENT.
BI-214	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
PB-214	1.965E-03	4.658E-02	7.832E-02	0.000E+00	NOT IDENT.
PO-214	1.965E-03	4.658E-02	7.832E-02	0.000E+00	NOT IDENT.
PO-215	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
PO-216	1.502E-02	2.961E-02	5.309E-02	0.000E+00	NOT IDENT.
PO-218	1.965E-03	4.658E-02	7.832E-02	0.000E+00	NOT IDENT.
RN-219	7.473E-02	2.225E-01	4.010E-01	0.000E+00	NOT IDENT.
RN-220	1.964E+00	1.733E+01	2.986E+01	0.000E+00	NOT IDENT.
RA-223	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
RA-224	2.972E-01	3.004E-01	5.791E-01	0.000E+00	NOT IDENT.
RA-226	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
AC-227	-3.958E-02	1.859E-01	3.230E-01	0.000E+00	NOT IDENT.
TH-227	-3.958E-02	1.860E-01	3.230E-01	0.000E+00	NOT IDENT.
AC-228	1.781E-02	9.195E-02	[illegible]	[illegible]	[illegible]
TH-228	1.781E-02	9.195E-02	[illegible]	[illegible]	[illegible]
TH-228	1.509E-02	2.961E-02	5.311E-02	0.000E+00	NOT IDENT.
TH-229	3.421E-03	2.110E-01	3.805E-01	0.000E+00	NOT IDENT.
TH-230	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
PA-231	-1.986E-01	7.807E-01	1.341E+00	0.000E+00	NOT IDENT.
TH-231	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
U-231	-2.913E-02	8.272E-02	1.404E-01	0.000E+00	NOT IDENT.
TH-232	1.781E-02	9.195E-02	1.626E-01	0.000E+00	NOT IDENT.
PA-233	-1.932E-02	3.445E-02	5.677E-02	0.000E+00	NOT IDENT.
PA-234	2.306E-02	1.901E-01	3.325E-01	0.000E+00	NOT IDENT.
PA-234M	4.544E+00	4.119E+00	8.355E+00	0.000E+00	NOT IDENT.
TH-234	-8.490E-02	1.919E-01	3.168E-01	0.000E+00	NOT IDENT.
U-234	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
U-235	-4.942E-02	8.396E-02	1.360E-01	0.000E+00	NOT IDENT.
NP-236	1.730E-02	3.406E-02	6.126E-02	0.000E+00	NOT IDENT.
NP-237	1.428E-02	5.011E-02	9.093E-02	0.000E+00	NOT IDENT.
U-238	-8.490E-02	1.919E-01	3.168E-01	0.000E+00	NOT IDENT.
NP-239	-2.697E-02	6.441E-02	1.074E-01	0.000E+00	NOT IDENT.
AM-241	2.082E-03	1.756E-02	3.189E-02	0.000E+00	NOT IDENT.
AM-243	1.823E-02	1.071E-02	2.157E-02	0.000E+00	NOT IDENT.
CM-243	-5.270E-03	2.995E-02	[illegible]	0.000E+00	NOT IDENT.
CM-247	6.831E-03	1.889E-02	3.421E-02	0.000E+00	NOT IDENT.
CF-249	2.591E-03	2.005E-02	3.537E-02	0.000E+00	NOT IDENT.
CF-251	-3.373E-02	5.419E-02	9.285E-02	0.000E+00	NOT IDENT.
ANH-511	-2.552E-02	3.446E-02	6.658E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:23:40.19

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1
Sample date       : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 11:22:57
Sample ID         : G1201874832          Sample quantity  : 1.44470[illegible]E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:[illegible] 0.1[illegible]
Energy tolerance : 1.50000 keV           Analyst initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
RB-86	1076.63	10	8.78*	9.769E-01	3.029E-01	4.005E-01	142.53

Flag: "*" = Keyline

Sample ID : G1201874832 Acquisition date : 14-JUL-2009 11:22:57

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RB-86	18.66D	1.32	3.029E-01	4.005E-01	5.708E-01	142.55	
		Total Activity :	3.029E-01	4.005E-01			
		Grand Total Activity :	3.029E-01	4.005E-01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific act. limit

None

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:23:44.98

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1  *
* Acquisition date  : 14-JUL-2009 11:22:57  Detector SN#     :             *
* Detector ID       : GAM21                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:08.64          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 7-JUL-2009 00:00:00.  Nuclide Library : SOLID        *
* Sample ID         : G1201874832           Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.444707 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1023-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86	4.005E-01	5.708E-01	5.488E-01	3.505E-02	0.730

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.503E-02		1.536E-01	2.457E-01	1.730E-02	-0.061
NA-22	-1.239E-03		2.584E-02	4.145E-02	2.451E-03	-0.030
NA-24	2.335E-05		5.392E-05	Half-Life too short		
AL-26	6.492E-04		2.998E-02	4.991E-02	2.779E-03	0.013
K-40	1.401E-01		3.153E-01	5.572E-01	3.546E-02	0.251
TI-44	-2.974E-03		7.341E-03	1.147E-02	8.868E-04	-0.259
SC-46	-2.258E-02		2.347E-02	3.062E-02	2.199E-03	-0.738
V-48	1.966E-02		3.794E-02	6.792E-02	4.673E-03	0.289
CR-51	-4.493E-02		1.646E-01	2.635E-01	1.714E-02	-0.171
MN-52	-6.918E-02		6.816E-02	7.168E-02	4.321E-03	-0.965
MN-54	-1.473E-02		2.603E-02	3.920E-02	2.859E-03	-0.376

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-56	1.631E-02		2.819E-02	5.071E-02	3.690E-03	0.322
CO-57	3.780E-02		9.064E-03	1.515E-02	1.744E-03	0.249
CO-58	-9.316E-03		2.202E-02	3.354E-02	2.463E-03	-0.278
FE-59	-2.196E-02		5.792E-02	8.772E-02	6.291E-03	-0.250
CO-60	6.596E-03		2.726E-02	4.680E-02	2.815E-03	0.141
ZN-65	-2.489E-03		5.225E-02	8.460E-02	5.190E-03	-0.029
GE-68	5.249E-01		9.049E-01	1.487E+00	9.488E-02	0.353
AS-73	2.123E-02		7.102E-02	1.194E-01	8.027E-03	0.178
AS-74	-2.515E-02		4.570E-02	6.699E-02	4.610E-03	-0.375
SE-75	-2.727E-03		2.091E-02	3.430E-02	2.075E-03	-0.079
BR-77	1.850E-01		7.128E-01	1.199E+00	7.730E-02	0.154
SR-82	1.080E-01		2.041E-01	3.680E-01	2.698E-02	0.293
[illegible]	1.301E-02		4.058E-02	[illegible]	[illegible]	[illegible]
[illegible]	-6.888E-03		4.191E-02	[illegible]	[illegible]	[illegible]
KR-85	-9.011E-01		7.249E+00	1.163E+01	7.411E-01	-0.077
SR-85	-4.263E-03		3.430E-02	5.503E-02	3.522E-03	-0.077
Y-88	1.465E-02		3.600E-02	6.536E-02	3.607E-03	0.224
ZR-88	2.467E-03		1.722E-02	2.871E-02	1.548E-03	0.086
Y-91	1.042E+00		1.153E+01	1.911E+01	1.098E+00	0.055
NB-94	-1.940E-03		2.341E-02	3.873E-02	2.808E-03	-0.050
NB-95	5.445E-03		2.462E-02	4.240E-02	3.111E-03	0.128
NB-95M	-6.197E-02		5.205E-02	7.664E-02	5.991E-03	-0.809
ZR-95	-3.389E-02		3.721E-02	5.025E-02	4.188E-03	-0.674
NB-97	8.596E-06		1.424E-05	Half-Life too short		
ZR-97	-1.327E-03		4.564E-04	Half-Life too short		
MO-99	9.682E-01		1.053E+00	2.000E+00	2.896E-01	0.484
TC-99M	-6.548E-03		5.062E+00	Half-Life too short		
RH-101	1.010E-02		1.393E-02	2.479E-02	1.534E-03	0.407
RH-102	-2.232E-03		1.673E-02	2.666E-02	1.630E-03	-0.084
RU-103	3.455E-03		2.321E-02	3.846E-02	4.950E-03	0.090
RH-106	-1.957E-01		2.181E-01	2.942E-01	3.641E-02	-0.665
RU-106	-1.957E-01		2.172E-01	2.942E-01	2.059E-02	-0.665
AG-108M	7.511E-05		2.065E-02	3.374E-02	2.115E-03	0.002
CD-109	4.211E-02		1.855E-01	3.069E-01	2.543E-02	0.137
AG-110M	5.583E-03		1.851E-02	3.264E-02	2.428E-03	0.171
IN-111	-3.361E-02		7.082E-02	1.119E-01	6.855E-03	-0.300
IN-113M	4.047E-03		2.459E-02	4.113E-02	2.385E-03	0.098
SN-113	4.047E-03		2.459E-02	4.113E-02	2.385E-03	0.098
IN-114M	-8.922E-03		7.250E-02	1.205E-01	7.427E-03	-0.074
CD-115	-3.885E-01		5.618E-01	7.924E-01	5.146E-02	-0.490
SN-117M	1.236E-02		1.610E-02	2.751E-02	1.962E-03	0.449
SB-122	-2.962E-02		1.703E-01	2.668E-01	1.791E-02	-0.111
I-123	1.085E-04		7.803E-05	Half-Life too short		
TE-123M	8.229E-03		1.183E-02	2.010E-02	1.433E-03	0.409
I-124	1.931E-02		1.311E-01	2.155E-01	1.490E-02	0.090
SB-124	-3.244E-02		7.554E-02	1.122E-01	7.061E-03	-0.289
SB-125	-3.660E-02		5.493E-02	8.140E-02	4.857E-03	-0.450
TE-125M	-1.841E+00		2.927E+00	4.084E+00	4.748E-01	-0.451

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-126	6.899E-02		7.533E-02	1.424E-01	1.019E-02	0.485
SB-126	-3.045E-03		5.691E-02	9.430E-02	6.263E-03	-0.032
SB-127	2.990E-03		1.796E-02	2.9[illegible]E-02	2.441E-0[illegible]	0.101
SB-127	-1.750E-01		2.060E-01	2.919E-01	2.431E-02	-0.599
XE-127	-6.565E-03		1.726E-02	2.790E-02	1.729E-03	-0.235
I-131	5.277E-02		3.684E-02	6.937E-02	4.349E-03	0.761
TE-132	4.611E-03		6.199E-02	1.043E-01	1.392E-02	0.044
BA-133	-8.596E-03		2.662E-02	4.224E-02	4.861E-03	-0.203
I-133	-1.488E-06		3.602E-06	Half-Life too short		
CS-134	3.451E-03		2.878E-02	4.826E-02	2.617E-03	0.071
CS-135	1.614E-02		7.632E-02	1.215E-01	1.137E-02	0.127
I-135	-4.293E+00		7.288E+00	Half-Life too short		
CS-136	-5.120E-03		6.019E-[illegible]	1.663E-02	[illegible]	-0.084
LA-[illegible]	-9.[illegible]E-03		[illegible]	[illegible]	[illegible]	[illegible]
CS-137	-1.011E-02		2.162E-02	3.328E-02	2.391E-03	-0.303
CE-139	-1.0[illegible]E-03		1.170E-02	1.957E-02	1.185E-0[illegible]	-0.051
BA-140	1.0[illegible]E-01		1.193E-01	2.083E-01	6.[illegible]E-02	0.497
LA-140	-4.419E-02		5.002E-02	6.396E-02	2.790E-02	-0.[illegible]
CE-141	2.435E-03		2.107E-02	3.409E-02	3.080E-03	0.071
CE-143	-3.681E-01		1.390E+00	2.235E+00	4.572E-01	-0.165
CE-144	2.[illegible]E-02		7.861E-[illegible]	1.[illegible]E-01	[illegible]	0.177
PM-144	1.133E-02		2.510E-02	4.440E-02	3.214E-03	0.255
PR-144	7.648E-01		1.694E+00	2.997E+00	2.169E-01	0.255
PM-146	3.145E-03		2.540E-02	4.212E-02	3.672E-03	0.075
ND-147	-6.510E-02		2.004E-02	3.059E-01	1.235E-02	-[illegible]
PM-149	1.198E+00		4.519E+00	7.653E+00	1.089E+00	0.156
EU-152	-1.395E-02		5.580E-02	8.934E-02	5.810E-03	-0.156
GD-153	1.013E-04		2.118E-02	3.424E-02	3.100E-03	0.003
EU-154	-3.475E-03		7.246E-02	1.162E-01	1.093E-02	-0.030
EU-155	3.584E-02		3.332E-02	5.914E-02	5.832E-03	0.606
TB-160	-1.175E-01		9.279E-02	1.146E-01	8.262E-03	-1.025
HO-166M	-3.624E-03		4.306E-02	7.116E-02	5.172E-03	-0.051
TM-171	-3.809E-02		4.392E+00	7.148E+00	5.172E-01	-0.005
LU-176	4.576E-03		1.338E-02	2.293E-02	1.345E-03	0.200
LU-177	5.930E-02		2.075E-01	3.563E-01	2.211E-02	0.166
LU-177M	-2.588E-02		1.050E-01	1.665E-01	9.306E-03	-0.155
HF-181	3.124E-03		2.186E-02	3.631E-02	2.239E-03	0.086
W-181	1.133E-02		5.483E-02	8.772E-02	6.306E-03	0.129
TA-182	2.828E-02		1.077E-01	1.854E-01	1.072E-02	0.153
RE-183	-2.612E-03		4.198E-02	7.042E-02	4.638E-03	-0.037
RE-184	1.707E-02		1.102E-01	1.862E-01	1.133E-02	0.092
OS-185	-6.696E-03		2.596E-02	3.971E-02	2.816E-03	-0.169
RE-188	-7.877E-03		6.532E-02	1.030E-01	7.856E-03	-0.076
W-188	-4.238E-01		3.544E+00	5.801E+00	3.400E-01	-0.073
IR-192	4.161E-03		1.729E-02	2.932E-02	1.725E-03	0.142
AU-195	1.295E-02		5.735E-02	9.497E-02	8.717E-03	0.136
TL-200	-1.459E+00		2.151E+00	3.250E+00	1.822E-01	-0.449
TL-201	-1.571E-01		5.099E-01	8.364E-01	5.066E-02	-0.188

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202	1.776E-02		3.030E-02	5.281E-02	3.074E-03	0.336
HG-203	-5.990E-03		1.653E-02	[illegible]	[illegible]	[illegible]
PT-2[illegible]	2.165E-02		[illegible]	[illegible]	[illegible]	[illegible]
TL-207	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
TL-208	5.226E-03		2.639E-02	4.301E-02	3.263E-03	0.121
PO-20[illegible]	2.613E+00		4.889E+00	8.862E+00	6.344E-01	0.295
BI-210	-9.202E-02		1.715E-01	2.654E-01	2.010E-02	-0.347
PB-21[illegible]	-9.202E-02		1.715E-01	2.654E-01	[illegible]	-0.347
PO-210	-9.202E-02		1.715E-01	2.654E-01	1.715E-02	-0.347
BI-211	-1.104E-02		1.359E-01	2.1[illegible]E-01	1.[illegible]E-01	[illegible]
PB-21[illegible]	-5.992E-01		6.2[illegible]E-01	6.7[illegible]E-01	4.212E-01	[illegible]
BI-212	2.395E-02		1.501E-01	2.713E-01	[illegible]	0.088
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
PO-2[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
BI-214	2.328E-02		4.268E-02	7.453E-02	[illegible]	0.312
PB-2[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
PO-21[illegible]	[illegible]		[illegible]	7.545E-02	6.207E-03	0.026
PO-215	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
PO-21[illegible]	1.502E-02		3.021E-02	5.072E-02	[illegible]	0.296
PO-21[illegible]	1.965E-03		4.753E-02	7.545E-02	6.207E-03	0.026
RN-21[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
RN-220	1.984E+00		1.768E+01	2.9[illegible]E+01	1.9[illegible]E+01	0.068
RA-22[illegible]	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
PA-224	2.972E-01		3.065E-01	5.533E-01	3.403E-02	0.537
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
AC-[illegible]	-3.9[illegible]E-02		1.897E-01	[illegible]	[illegible]	[illegible]
TH-[illegible]	-3.958E-02		1.898E-01	[illegible]	5.251E-02	-0.128
AC-2[illegible]	1.781E-02		9.382E-02	1.600E-01	1.623E-02	0.111
RA-228	1.781E-02		9.382E-02	1.600E-01	1.623E-02	0.111
TH-228	1.509E-02		3.022E-02	5.073E-02	3.866E-03	0.298
TH-229	3.421E-03		2.153E-01	3.619E-01	2.235E-02	0.009
TH-230	2.328E-02		4.268E-02	7.453E-02	6.459E-03	0.312
PA-231	-1.986E-01		7.966E-01	1.286E+00	1.775E-01	-0.154
TH-231	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
U-231	-2.912E-02		8.441E-02	1.316E-01	1.173E-02	-0.221
TH-232	1.781E-02		9.382E-02	1.600E-01	1.623E-02	0.111
PA-233	-1.932E-02		3.515E-02	5.454E-02	3.391E-03	-0.354
PA-234	2.306E-02		1.940E-01	3.275E-01	5.922E-02	0.070
PA-234M	4.544E+00		4.203E+00	8.240E+00	8.113E-01	0.552
TH-234	-8.490E-02		1.958E-01	2.944E-01	5.100E-02	-0.288
U-234	2.328E-02		4.268E-02	7.453E-02	[illegible]	0.312
U-235	-4.942E-02		8.567E-02	1.285E-01	2.281E-02	-0.384
NP-236	1.730E-02		3.475E-02	5.802E-02	3.992E-03	0.298
NP-237	1.428E-02		5.113E-02	8.503E-02	1.888E-02	0.168
U-238	-8.490E-02		1.958E-01	2.944E-01	5.100E-02	-0.288
NP-239	-2.697E-02		6.572E-02	1.010E-01	1.106E-02	-0.267
AM-241	2.082E-03		1.792E-02	2.959E-02	2.310E-03	0.070
AM-243	1.823E-02		1.093E-02	2.011E-02	1.519E-03	0.906

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-5.270E-03		3.057E-02	4.845E-02	4.662E-03	-0.109
CM-[illegible]	6.831E-03		[illegible]	[illegible]	[illegible]	[illegible]
CM-[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
CF-25[illegible]	-3.375E-02		5.529E-02	[illegible]	[illegible]	[illegible]
ANH-511	-2.552E-02		3.517E-02	6.467E-02	4.125E-03	-0.395

VAX/VMS Nuclide Identification Report Generated

```
*************************************************************************
*                        GEL Laboratories LLC                           *
*                            2040 Savage Road                           *
*                          Charleston, SC 29414                         *
*************************************************************************
*                                                                       *
*                          DETECTOR DATA                                *
*                                                                       *
* Configuration      : SYS[illegible]                                  *
* [illegible]        : [illegible]                                     *
* Detector ID        : GAMMA                  Sample Mass/Vol          : 5.000 *
* Geometry           : CAN                    Energy tolerance:  1.500 *
* Elapsed live time:     0 02:00:00.00        Abundance limit  : 75.000 *
* Elapsed real time:     0 02:00:08.64        Half life ratio  : 3.000 *
*************************************************************************
*                                                                       *
*                          SAMPLE DATA                                  *
*                                                                       *
* Sample date        :  7-JUL-2009 00:00:00 Nuclide Library : SOLID     *
* Sample ID          : G12[illegible]         Analyst          : MXR1    *
* Batch [illegible]  : 88[illegible]          Sample [illegible]  1.4447[illegible]
* Recovery           :     1.00000           Carrier [illegible]  :  0.00000
*************************************************************************
*                                                                       *
*                          QC DATA                                      *
*                                                                       *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :             *
* MSD DPM          :     0.[illegible]      MSD Isotope    :             *
* LCS DPM          :     0.000              LCS Isotope    :             *
* LCSD DPM         :     0.000              LCSD Isotope   :             *
*************************************************************************
```

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
RB-86	4.005E-01	5.594E-01	2.779E-01	2.854E-01

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-1.503E-02	1.505E-01	1.268E-01	7.680E-02	NOT IDENT.
NA-22	-1.239E-03	2.532E-02	2.091E-02	1.292E-02	NOT IDENT.
NA-24	2.335E+01	1.057E+02	0.000E+00	5.392E+01	SHORT HLIF
AL-26	6.492E-04	2.938E-02	2.497E-02	1.499E-02	NOT IDENT.
K-40	1.401E-01	3.090E-01	2.802E-01	1.576E-01	NOT IDENT.
TI-44	-2.974E-03	7.194E-03	6.148E-03	3.670E-03	NOT IDENT.
SC-46	-2.258E-02	2.300E-02	1.558E-02	1.174E-02	NOT IDENT.
V-48	1.966E-02	3.718E-02	3.447E-02	1.897E-02	NOT IDENT.
CR-51	-4.493E-02	1.613E-01	1.371E-01	8.232E-02	NOT IDENT.
MN-52	-6.918E-02	6.679E-02	3.606E-02	3.408E-02	NOT IDENT.
MN-54	-1.473E-02	2.551E-02	1.997E-02	1.302E-02	NOT IDENT.
CO-56	1.631E-02	2.762E-02	2.583E-02	1.409E-02	NOT IDENT.
CO-57	3.780E-03	8.882E-03	8.048E-03	4.532E-03	NOT IDENT.
CO-58	-9.316E-03	2.157E-02	1.709E-02	1.101E-02	NOT IDENT.
FE-59	-2.196E-02	5.676E-02	4.440E-02	2.896E-02	NOT IDENT.
CO-60	6.596E-03	2.671E-02	2.358E-02	1.363E-02	NOT IDENT.
ZN-65	-2.489E-03	5.121E-02	4.281E-02	2.613E-02	NOT IDENT.
GE-68	5.249E-01	8.868E-01	7.528E-01	4.524E-01	NOT IDENT.
AS-73	2.123E-02	6.960E-02	6.454E-02	3.551E-02	NOT IDENT.
AS-74	-2.515E-02	4.479E-02	3.439E-02	2.285E-02	NOT IDENT.
SE-75	-2.727E-03	2.050E-02	1.792E-02	1.046E-02	NOT IDENT.
BR-77	1.850E-01	6.985E-01	6.174E-01	3.564E-01	NOT IDENT.
SR-82	1.080E-01	2.001E-01	1.878E-01	1.021E-01	NOT IDENT.
RB-83	1.301E-02	3.977E-02	3.548E-02	2.029E-02	NOT IDENT.
RB-84	-6.888E-03	4.107E-02	3.428E-02	2.095E-02	NOT IDENT.
KR-85	-9.011E-01	7.104E+00	5.989E+00	3.624E+00	NOT IDENT.

SR-85	-4.263E-03	3.361E-02	2.834E-02	1.715E-02	NOT IDENT.
Y-88	1.465E-02	3.528E-02	3.269E-02	1.800E-02	NOT IDENT.
ZR-88	2.467E-03	1.687E-02	1.487E-02	8.609E-03	NOT IDENT.
Y-91	1.042E+00	1.130E+01	9.652E+00	5.763E+00	NOT IDENT.
NB-94	-1.940E-03	2.294E-02	1.981E-02	1.171E-02	NOT IDENT.
NB-95	5.445E-03	2.413E-02	2.167E-02	1.231E-02	NOT IDENT.
NB-95M	-6.197E-02	5.101E-02	4.015E-02	2.603E-02	NOT IDENT.
ZR-95	-3.389E-02	3.646E-02	2.566E-02	1.860E-02	NOT IDENT.
NB-97	8.596E+00	2.792E+01	0.000E+00	1.424E+01	SHORT HLIF
ZR-97	-1.327E+03	8.946E+02	0.000E+00	4.564E+02	SHORT HLIF
MO-99	9.682E-01	1.032E+00	1.022E+00	5.265E-01	NOT IDENT.
TC-99M	-6.548E+03	9.921E+06	0.000E+00	5.062E+06	SHORT HLIF
RH-101	1.010E-02	1.365E-02	1.304E-02	[illegible]	NOT IDENT.
RH [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RU-103	3.455E-03	2.274E-02	[illegible]	[illegible]	NOT IDENT.
RH-106	-1.957E-01	2.138E-01	1.509E-01	[illegible]	NOT IDENT.
RU-106	-1.957E-01	2.129E-01	1.509E-01	[illegible]	NOT IDENT.
AG-108M	7.511E-05	2.024E-02	1.744E-02	1.033E-02	NOT IDENT.
CD-109	4.211E-02	1.818E-01	1.641E-01	9.274E-02	NOT IDENT.
AG-110M	5.583E-03	1.814E-02	1.672E-02	9.253E-03	NOT IDENT.
IN-111	-3.361E-02	6.940E-02	[illegible]	3.541E-02	NOT IDENT.
IN-113M	4.047E-03	2.410E-02	2.131E-02	1.229E-02	NOT IDENT.
SN-113	4.047E-03	2.410E-02	2.131E-02	1.229E-02	NOT IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SN-117M	1.236E-02	1.578E-02	[illegible]	8.050E-03	[illegible]
SN-121	-2.352E-02	[illegible]	[illegible]	[illegible]	[illegible]
I-123	1.085E+02	1.529E+02	0.000E+00	[illegible]	[illegible]
TE-123M	8.229E-03	1.160E-02	1.062E-02	5.917E-03	NOT IDENT.
I-124	1.931E-02	1.285E-01	1.106E-01	6.556E-02	NOT IDENT.
SB-124	-3.244E-02	7.403E-02	5.624E-02	3.777E-02	NOT IDENT.
SN-125	-3.650E-02	5.333E-02	[illegible]	[illegible]	[illegible]
TE-125M	-1.841E+00	2.869E+00	[illegible]	1.464E+00	[illegible]
I-125	6.899E-02	7.383E-02	[illegible]	3.767E-02	[illegible]
SB-126	-3.045E-03	5.577E-02	4.819E-02	2.845E-02	NOT IDENT.
SN-126	2.990E-03	1.760E-02	1.581E-02	8.980E-03	NOT IDENT.
SB-127	-1.750E-01	2.019E-01	1.494E-01	1.030E-01	NOT IDENT.
XE-127	-6.565E-03	1.691E-02	1.466E-02	8.628E-03	NOT IDENT.
I-131	5.277E-02	3.611E-02	3.600E-02	1.842E-02	NOT IDENT.
TE-132	4.611E-03	6.075E-02	5.465E-02	3.100E-02	NOT IDENT.
BA-133	-8.596E-03	2.609E-02	2.193E-02	1.331E-02	NOT IDENT.
I-133	-1.488E+00	7.059E+00	0.000E+00	3.602E+00	SHORT HLIF
CS-134	3.451E-03	2.820E-02	2.433E-02	1.430E-02	NOT IDENT.
CS-135	1.644E-02	7.479E-02	6.766E-02	3.816E-02	NOT IDENT.
I-135	-4.293E+06	1.428E+07	0.000E+00	7.288E+06	SHORT HLIF
CS-136	-8.120E-03	5.899E-02	4.897E-02	2.910E-02	NOT IDENT.
BA-137M	-9.564E-03	2.004E-02	1.617E-02	1.023E-02	NOT IDENT.
CS-137	-1.011E-02	2.119E-02	1.709E-02	1.081E-02	NOT IDENT.
CE-139	-1.049E-03	1.147E-02	1.033E-02	5.850E-03	NOT IDENT.
BA-140	1.035E-01	1.169E-01	[illegible]	[illegible]	NOT IDENT.
LA-140	-4.419E-02	4.902E-02	3.270E-02	2.501E-02	NOT IDENT.
CE-141	2.435E-03	2.065E-02	1.804E-02	1.054E-02	NOT IDENT.
CE-143	-3.681E-01	1.362E+00	1.165E+00	6.949E-01	NOT IDENT.
CE-144	2.288E-02	7.704E-02	6.862E-02	3.931E-02	NOT IDENT.
PM-144	1.133E-02	2.460E-02	2.271E-02	1.255E-02	NOT IDENT.
PR-144	7.648E-01	1.660E+00	1.533E+00	8.471E-01	NOT IDENT.
PM-146	3.145E-03	2.489E-02	2.175E-02	1.270E-02	NOT IDENT.
ND-147	-6.510E-02	1.964E-01	1.574E-01	1.002E-01	NOT IDENT.
PM-149	1.198E+00	4.429E+00	4.008E+00	2.260E+00	NOT IDENT.
EU-152	-1.395E-02	5.469E-02	4.642E-02	2.790E-02	NOT IDENT.
GD-153	1.013E-04	2.076E-02	1.828E-02	1.059E-02	NOT IDENT.
EU-154	-3.475E-03	7.101E-02	5.864E-02	3.623E-02	NOT IDENT.
EU-155	3.584E-02	3.265E-02	3.151E-02	1.666E-02	NOT IDENT.
TB-160	-1.175E-01	9.094E-02	5.833E-02	4.640E-02	NOT IDENT.
HO-166M	-3.624E-03	4.220E-02	3.638E-02	2.153E-02	NOT IDENT.
TM-171	-3.809E-02	4.304E+00	3.845E+00	2.196E+00	NOT IDENT.
LU-176	4.576E-03	1.311E-02	1.194E-02	6.691E-03	NOT IDENT.
LU-177	5.930E-02	2.034E-01	1.871E-01	1.038E-01	NOT IDENT.
LU-177M	-2.588E-02	1.029E-01	8.617E-02	5.250E-02	NOT IDENT.
HF-181	3.124E-03	2.142E-02	1.873E-02	1.093E-02	NOT IDENT.
W-181	1.133E-02	5.373E-02	4.720E-02	2.742E-02	NOT IDENT.
TA-182	2.828E-02	1.056E-01	9.362E-02	5.387E-02	NOT IDENT.
RE-183	-2.612E-03	4.114E-02	3.718E-02	2.099E-02	NOT IDENT.
RE-184	1.707E-02	1.080E-01	9.739E-02	5.508E-02	NOT IDENT.
OS-185	-6.696E-03	2.544E-02	2.034E-02	1.298E-02	NOT IDENT.
RE-188	-7.877E-03	6.402E-02	5.445E-02	3.266E-02	NOT IDENT.
W-188	-4.238E-01	3.473E+00	3.025E+00	1.772E+00	NOT IDENT.
IR-192	4.161E-03	1.694E-02	1.526E-02	8.645E-03	NOT IDENT.

AU-195	1.295E-02	5.620E-02	5.067E-02	2.868E-02	NOT IDENT.
TL-200	-1.459E+00	2.108E+00	1.686E+00	1.076E+00	NOT IDENT.
TL-201	-1.571E-01	4.997E-01	4.414E-01	2.550E-01	NOT IDENT.
TL-202	1.776E-02	2.970E-02	2.729E-02	1.515E-02	NOT IDENT.
HG-203	-5.990E-03	1.620E-02	1.372E-02	8.264E-03	NOT IDENT.
BI-207	2.165E-02	2.951E-02	2.893E-02	1.506E-02	NOT IDENT.
TL-207	-5.650E-02	3.389E-01	2.914E-01	1.729E-01	NOT IDENT.
TL-208	5.226E-03	2.586E-02	2.209E-02	1.320E-02	NOT IDENT.
PO-209	2.613E+00	4.791E+00	4.507E+00	2.445E+00	NOT IDENT.
BI-210	-9.202E-02	1.681E-01	1.438E-01	8.576E-02	NOT IDENT.
PB-210	-9.202E-02	1.681E-01	1.438E-01	8.576E-02	NOT IDENT.
PO-210	-9.202E-02	1.680E-01	1.438E-01	8.574E-02	NOT IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	2.[illegible]E-02	1.549E-[illegible]	1.[illegible]	[illegible]04E-02	NOT IDENT.
[illegible]	1.502E-02	2.961E-02	[illegible]	1.511E-02	NOT IDENT.
PO-[illegible]	1.502E-02	2.961E-02	[illegible]06E-02	1.511E-02	[illegible] IDENT.
BI-[illegible]	2.328E-02	4.183E-02	3.[illegible]E-02	2.134E-02	NOT IDENT.
[illegible]	1.965E-03	4.658E-02	[illegible]	2.377E-02	[illegible] IDENT.
[illegible]	1.965E-03	4.658E-02	3.[illegible]E-02	2.377E-02	[illegible] IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	1.[illegible]E-03	2.961E-[illegible]	[illegible]	[illegible]	IDENT.
[illegible]	1.[illegible]E-03	4.658E-02	[illegible]	[illegible]	[illegible] IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-5.650E-02	[illegible].389E-01	2.9[illegible]E-01	1.729E-01	NOT IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	2.[illegible]	4.183E-[illegible]	[illegible]	[illegible]	[illegible]
AC-227	-3.958E-02	1.859E-01	1.616E-01	9.486E-02	NOT IDENT.
TH-227	-3.958E-02	1.860E-01	1.616E-01	9.48[illegible]E-02	NOT IDENT.
AC-[illegible]	1.731E-02	9.195E-02	8.135E-02	4.69[illegible]E-02	NOT IDENT.
[illegible]	1.[illegible]E-02	[illegible]	8.135E-[illegible]	[illegible]	[illegible]
[illegible]	1.[illegible]9E-01	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	3.421E-03	2.110E-01	[illegible]	1.077E-[illegible]	[illegible] IDENT.
TH-230	2.328E-02	4.183E-02	3.824E-02	2.134E-02	NOT IDENT.
PA-[illegible]	-1.986E-01	7.807E-01	[illegible]	[illegible]	[illegible]
[illegible]	-5.[illegible]E-02	[illegible]	[illegible]	[illegible]	IDENT.
[illegible]	-2.[illegible]	[illegible]	[illegible]	[illegible]	IDENT.
[illegible]	1.731E-[illegible]	[illegible].195E-[illegible]	[illegible]	[illegible]	[illegible]
PA-233	-1.932E-02	3.445E-02	2.[illegible]E-02	1.75[illegible]E-02	[illegible] IDENT.
PA-234	2.306E-02	1.901E-01	1.[illegible]	[illegible]	[illegible]
PA-234M	4.544E+00	[illegible].119E+00	4.130E+00	[illegible]	IDENT.
TH-234	-8.490E-02	1.919E-01	1.585E-01	9.791E-02	NOT IDENT.
U-234	2.328E-02	4.183E-02	3.824E-02	2.134E-02	NOT IDENT.
U-235	-4.942E-02	8.396E-02	6.8[illegible]E-02	4.[illegible]E-02	NOT IDENT.
NP-[illegible]	1.730E-02	3.406E-02	3.065E-02	1.[illegible]E-02	NOT [illegible]
[illegible]	1.4[illegible]E-02	5.011E-02	4.54[illegible]	[illegible]	NOT [illegible]
[illegible]	-3.430E-02	1.019E-[illegible]	1.[illegible]	[illegible]	[illegible]
[illegible]	-2.697E-02	6.441E-02	5.[illegible]	[illegible].286E-[illegible]	[illegible]
[illegible]	[illegible]	1.75[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	1.82[illegible]E-02	1.071E-[illegible]	[illegible]	[illegible]	[illegible]
CM-243	-5.270E-03	2.995E-02	2.582E-02	1.528E-02	NOT IDENT.
CM-247	6.831E-03	1.889E-02	1.713E-02	9.635E-03	NOT IDENT.
CF-249	2.591E-03	2.005E-02	1.770E-02	1.023E-02	NOT IDENT.
CF-251	-3.373E-02	5.419E-02	4.645E-02	2.765E-02	NOT IDENT.
ANH-511	-2.552E-02	3.446E-02	3.331E-02	1.758E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 SAVAGE ROAD                             *
*                             CHARLESTON ,SC 29417                          *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	55.6060
46.50	55.6060
[illegible]	[illegible]
48.70	56.7909
49.72	47.7304
51.35	44.7821
52.39	43.8243
52.97	[illegible]
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77.11	66.1026

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185.71	58.5559
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277.60	42.3382
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280.46	34.6882
281.68	32.7802
283.67	47.2875
284.30	47.3019
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391.69	31.3413
392.90	33.3791
398.62	35.4807
400.65	26.3774
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445.03	37.1285
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609.31	17.3965

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969.11	14.8471
969.11	14.8471
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1377.67	10.6755
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TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201874832

Total Uranium Activity	-2.7544E-01	ug/g
Total Uranium Counting Unc.	5.7222E-01	ug/g
Total Uranium Tpu	2.9195E-07	ug/g
Total Uranium Mda	4.7259E-01	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID   : G1201874832     *
*   ANALYST       : MXR1                      DETECTOR    : GAM21           *
*   SAMPLE DATE   :  7-JUL-2009 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 11:22:57.85    SAMPLE ADJ:  141.170 GRAM     *
*                                                                           *
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GROSS GAMMA ACTIVITY (pCi/GRAM) : 2.660E-02
GROSS GAMMA ERROR (pCi/GRAM) : 1.304E-02
GROSS GAMMA MDA (pCi/GRAM) : 9.343E-02
GROSS GAMMA DLC (pCi/GRAM) : 4.614E-02

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:24:36.71

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : [illegible]                  [illegible]
Sample date       : 30-JUN-2009 12:00:00  Acquisition date : 14-JUL-[illegible]
Sample ID         : G1201874833           Sample quantity  : 1.330[illegible]
Detector name     : GAM05                 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00          Elapsed real time: 0 02:00:01.[illegible]
Energy tolerance : 1.500[illegible]       Analyst initials : MYPI
Abundance limit  : 75.00[illegible]       Sensitivity      : 5.00000
Batch ID         : 882713                 Det[illegible]   :
Matrix Spike ID  :                        ICS ID           : 1023-[illegible]
*****[illegible]*****
```

Pk	Id	Energy	Area	Background	[illegible]	Channel	Lib.	Pk	[illegible]	[illegible]	[illegible]
1	0	46.69*	125	678	1.17	94.57	90	11	1.7[illegible]-02	43.[illegible]	
2	0	62.92*	185	976	1.41	127.09	120	12	2.5[illegible]-02	35.[illegible]	
3	3	74.71*	734	552	1.20	150.58	143	16	1.0[illegible]-01	6.[illegible]	1.31E+00
4	3	76.95*	1038	520	1.10	155.05	143	16	1.44E-01	5.0	
5	2	84.33*	168	425	1.52	169.81	166	27	2.33E-02	21.5	2.79E+00
6	2	87.23	379	456	1.33	175.60	166	27	5.26E-02	11.2	
7	2	89.68	287	431	1.29	180.50	166	27	3.99E-02	14.4	
8	2	92.70*	354	454	1.53	186.53	166	27	4.92E-02	13.2	
9	0	185.99*	155	398	1.34	373.03	368	10	2.16E-02	26.3	
10	0	209.00	166	259	1.0[illegible]	419.0[illegible]	415	9	2.3[illegible]-02	19[illegible]	
11	2	238.60*	1406	193	1.3[illegible]	478.2[illegible]	471	18	1.9[illegible]-01	2.[illegible]	4.62E+0[illegible]
12	2	241.70	313	209	1.77	484.39	471	18	4.3[illegible]-02	11.0	
13	0	270.17	120	311	1.64	541.30	535	14	1.66E-02	32.7	
14	1	295.18	422	140	1.67	591.30	584	34	5.87E-02	7.2	2.86E+00
15	1	299.88	128	148	1.68	600.70	584	34	1.7[illegible]-02	20.[illegible]	
16	0	328.40	73	241	1.87	657.69	651	13	1.0[illegible]-02	45.[illegible]	
17	0	338.04	246	213	1.17	676.98	672	12	3.42E-02	13.4	
18	0	351.95*	660	161	1.55	704.78	699	12	9.17E-02	5.5	
19	0	408.72	54	113	2.73	818.23	815	10	7.5[illegible]-03	38.8	
20	0	463.16	67	116	1.8[illegible]	927.04	922	11	9.[illegible]-03	33.5	
21	0	510.66*	89	176	1.8[illegible]	1021.98	1014	15	1.2[illegible]-02	38.4	
22	0	583.29*	362	123	1.5[illegible]	1167.12	1160	14	5.0[illegible]-02	8.[illegible]	
23	0	609.38*	457	127	1.55	1219.2[illegible]	1212	13	6.35[illegible]-02	7.[illegible]	
24	0	727.43	109	86	1.53	1455.16	1447	15	1.51E-02	21.0	
25	0	795.33	36	60	1.53	1590.83	1587	9	4.99E-03	42.0	
26	0	860.63	50	62	1.33	1721.30	1717	9	7.01E-03	31.6	
27	0	911.52*	286	100	1.89	1822.98	1814	18	3.97E-02	10.0	
28	2	964.51	54	68	2.40	1928.83	1920	43	7.47E-03	33.4	1.59E+00
29	2	969.01*	144	51	2.37	1937.83	1920	43	2.00E-02	14.2	
30	0	1120.21	109	38	1.46	2239.87	2234	11	1.51E-02	14.6	
31	0	1460.92*	1273	52	2.05	2920.37	2912	18	1.77E-01	3.1	
32	0	1729.72	23	3	1.61	3457.12	3450	13	3.20E-03	26.2	
33	0	1764.70	64	8	2.94	3526.94	3519	16	8.90E-03	15.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 13:24:39

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 11:23:48
Sample ID : G1201874833 Sample quantity : 133.07 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.87 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.0 keV Half life ratio : 8.00
[illegible] : Y [illegible] : [illegible]
Efficiency type : Empi[illegible] [illegible] at : Peak Energy
Abundance limit : 75 WTM error limit : 3.00

E[illegible] mbined Activity-[illegible]rt

---- Identified Nuclides ----

Nuclide		Energy (keV)	Activity	[illegible]	[illegible]	[illegible]	[illegible]
K-40	+	1460.81 *	2.[illegible]5E+01	[illegible]	7.[illegible]	[illegible]	[illegible]
CS-137	+	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SN-126	+	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	86.94	1.[illegible]E+00	7.[illegible]	4.[illegible]	[illegible]	[illegible]
	+	87.57 *	3.674E-01	8.684E-02	9.82[illegible]E-02	7.[illegible]3	3.7[illegible]
TL-208		277.35	4.333E-01	4.529E-01	7.27[illegible]E-01	9.32[illegible]E-02	0.[illegible]
	+	510.84	4.580E-01	3.548E-01	2.684E-01	2.820E-02	1.706
	+	583.14 *	5.373E-01	9.881E-02	6.780E-02	4.98[illegible]E-03	7.925
	+	860.37	7.189E-01	4.597E-01	5.15[illegible]E-01	5.[illegible]E-02	1.[illegible]
BI-210	+	46.50 *	1.[illegible]E+00	1.[illegible]E+00	8.[illegible]	6.[illegible]2	1.[illegible]
PB-210	+	4[illegible] *	1.[illegible]	1.[illegible]	[illegible]	7.[illegible]2	[illegible]
PO-210	+	[illegible]	1.[illegible]	1.[illegible]	[illegible]	[illegible]	[illegible]
BI-211		72.87	1.[illegible]	[illegible]00	4.[illegible]	[illegible]01	[illegible]
	+	351.07 *	4.096E+00	5.574E-01	3.[illegible]	2.[illegible]29E-02	1[illegible]
PB-214	+	74.81	2.[illegible]E+00	4.335E-01	[illegible]	4.570E-02	[illegible]
	+	77.11	2.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	87.30	1.699E+00	[illegible]	[illegible]	[illegible]	[illegible]
	+	238.63 *	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.[illegible]
	+	300.09	2.649E+00	1.105E+00	1.256E+00	1.335E-01	2.1[illegible]
PO-212	+	74.81	2.[illegible]E+00	[illegible]	3.[illegible]	[illegible]	[illegible]
	+	77.11	2.[illegible]E+00	[illegible]	2.[illegible]	[illegible]	[illegible]
	+	87.30	1.[illegible]E+00	[illegible]	4.[illegible]	[illegible]	3.7[illegible]
		115.19	1.904E+00	3.[illegible]E+00	5.[illegible]	[illegible]	[illegible]
	+	238.63 *	1.864E+00	2.[illegible]	9.703E-02	1.055E-[illegible]	1[illegible]
	+	300.09	2.649E+00	1.105E+00	1.256E+00	1.[illegible]	2.1[illegible]
BI-214	+	609.31 *	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
		768.36	9.582E-02	9.513E-01	1.600E+00	1.612E-01	0.060
		934.06	1.078E+00	1.456E+00	2.535E+00	2.942E-01	0.425
	+	1120.29	1.613E+00	4.968E-01	5.909E-01	5.644E-02	2.730
		1238.11	2.169E+00	1.230E+00	2.210E+00	1.803E-01	0.982
		1377.67	1.166E+00	1.257E+00	2.290E+00	1.969E-01	0.509
	+	1764.49	1.329E+00	4.298E-01	3.057E-01	1.767E-02	4.346
PB-214	+	74.81	4.151E+00	7.085E-01	6.458E-01	6.961E-02	6.427
	+	77.11	3.479E+00	5.144E-01	3.788E-01	4.126E-02	9.183

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.911E+00	7.237E-01	7.809E-01	8.464E-02	3.727
	+	241.98		2.491E+00	6.142E-01	5.625E-01	6.339E-02	4.428
	+	295.21		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	351.92	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	77.11		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	87.30		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	241.98		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	295.21		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	351.92	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	+	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	77.11		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	87.30		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]				[illegible]		[illegible]		[illegible]
	+			3.[illegible]	[illegible]	3.[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RA[illegible]	+	[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RA-[illegible]	+	609.31	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		769.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		934.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	1120.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	1.23[illegible]	[illegible]	1.8[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AC[illegible]	+	338.32		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	911.07	*	1.926E+00	[illegible]	[illegible]	[illegible]	[illegible]
RA[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	911.07	*	1.926E+00	4.5[illegible]E-01	2.623E-01	3.4[illegible]E-02	6.022
	+	969.11		1.713E+00	6.340E-01	3.971E-01	9.378E-02	4.315
TH[illegible]	+	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TH-[illegible]	+	609.31	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		769.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		934.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	1120.29		1.615E+00	4.960E-01	5.[illegible]E-01	5.0[illegible]E-02	[illegible]
		1238.11		2.169E+00	1.230E+00	2.20[illegible]E+00	1.803E-01	0.[illegible]
		1377.67		1.166E+00	1.257E+00	2.290E+00	1.969E-01	0.509
	+	1764.49		1.329E+00	4.298E-01	3.057E-01	1.767E-02	4.346
TH-232	+	338.32		1.674E+00	4.681E-01	4.178E-01	3.276E-02	4.006
	+	911.07	*	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
	+	969.11		1.713E+00	6.340E-01	3.971E-01	9.378E-02	4.315
TH-234	+	63.29	*	1.702E+00	1.227E+00	1.042E+00	1.852E-01	1.632

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.383E+00	7.606E-01	6.850E-01	1.231E-01	3.479
U-234	+	609.31	*	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
		768.36		9.582E-02	9.513E-01	1.600E+00	1.612E-01	0.0[illegible]
		934.06		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		1377.67		[illegible]	1.25[illegible]	[illegible]	[illegible]	[illegible]
	+	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	+	[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
U-[illegible]		[illegible]		1.[illegible]	1.22[illegible]	1.[illegible]	[illegible]	[illegible]
	+	9[illegible]		2.[illegible]	6.[illegible]	[illegible]	5.[illegible]	[illegible]
[illegible]-2[illegible]		[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		46.7		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
				6[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Al			*	9[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
E[illegible]-[illegible]		477.5[illegible]	*	7.[illegible]-04	[illegible]-01	5.[illegible]-01	[illegible]-02	0.[illegible]
N[illegible]		1[illegible]	*	-[illegible]-02	[illegible]-02	[illegible]-02	[illegible]-03	-0.[illegible]
[illegible]		13[illegible]	*	[illegible]-01	5.[illegible]-2	[illegible] to [illegible]		
[illegible]		112[illegible]		8[illegible]-01	2.[illegible]	[illegible]0	2.[illegible]	[illegible]
		1[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		7[illegible]8	*	3.[illegible]	4.[illegible]-02	6.[illegible]	[illegible]-3	[illegible]
[illegible]		[illegible]	*	[illegible]	[illegible]-02	[illegible]	[illegible]-03	[illegible]
		120.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		983.50	*	-8.271E-02	9.[illegible]-02	1.2[illegible]-01	1.[illegible]-02	-0.667
		1312.09		3.732E-02	9.[illegible]-02	1.621E-01	9.[illegible]-03	0.230
CR-51		[illegible]	*	4.710E-02	3.[illegible]-01	6.[illegible]9E-01	5.694E-02	0.073
[illegible]-[illegible]		744.21		[illegible]-02	2.376E-01	[illegible]8E-01	3.065E-02	-0.061
		[illegible]		[illegible]	[illegible]	[illegible]+01	1.101E+00	0.074
		9[illegible]		3.[illegible]-01	2.[illegible]-01	5.[illegible]	5.[illegible]-02	[illegible]
		1[illegible]		-5.[illegible]	[illegible]	[illegible]+01	7.[illegible]	[illegible]
		12[illegible]41		-6.7[illegible]-02	5.[illegible]+00	8.4[illegible]	4.[illegible]1	-0.[illegible]
		14[illegible].06	*	8.[illegible]-02	2.[illegible]-01	4.[illegible]01	2.[illegible]-02	[illegible]
MN-[illegible]		834.83	*	-1.6[illegible]-02	4.648E-02	7.[illegible]-02	6.[illegible]-03	-0.[illegible]
CO-56		846.75	*	-1.413E-02	4.797E-02	7.79[illegible]E-02	7.275E-03	-0.182
		977.42		1.762E+00	3.390E+00	5.839E+00	5.398E-01	0.302
		1037.82		2.653E-01	3.793E-01	6.590E-01	5.813E-02	0.403
		1175.09		7.117E-01	3.214E+00	5.312E+00	3.082E-01	0.134
		1238.25		2.130E-01	1.225E-01	2.207E-01	1.364E-02	0.965
		1360.21		-7.940E-01	1.089E+00	1.654E+00	9.610E-02	-0.480
		1771.40		-9.057E-02	2.842E-01	3.579E-01	2.067E-02	-0.253

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-3.816E-04	2.639E-02	4.351E-02	6.174E-03	-0.009
		136.48		1.290E-01	2.248E-01	3.761E-01	5.037E-02	0.343
CO-[illegible]		810.76	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	-7.236E-03	3.857E-02	6.075E-02	3.476E-03	-0.119
ZR-89		392.90	*	-4.993E-04	3.437E-02	5.696E-02	3.317E-03	-0.009
Y-9[illegible]		12[illegible]	*	1.[illegible]-01	2.[illegible]-01	4[illegible]-01	2[illegible]-10	0[illegible]
N[illegible]-94		7[illegible]	*	[illegible]-02	4.21[illegible]E-02	7.[illegible]-02	5.0[illegible]E-03	0.350
		[illegible]		2.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NB-9[illegible]		765.79	*	2.[illegible]-02	5.635E-02	[illegible]-02	7.[illegible]-03	[illegible]
N[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MO-9[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		18[illegible]		1.1[illegible]+01	1.[illegible]-01	2.[illegible]+01	[illegible]+00	[illegible]
		[illegible]		-5.[illegible]-01	[illegible]	[illegible]	[illegible]E+00	-0.[illegible]
		7[illegible]	*	-2.[illegible]+00	1.[illegible]-01	[illegible]	2.86E+00	-0.1[illegible]
		7[illegible]		[illegible]	3.[illegible]-01	[illegible]	2.[illegible]1E+00	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
P[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	0.[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		-2.62[illegible]E-02	[illegible]	5.[illegible]	[illegible]	-0.4[illegible]
		[illegible]31.29		-4.605E-[illegible]	[illegible]40E-02	9.9[illegible]	[illegible]-03	-0.[illegible]
		[illegible]7.49		1.21[illegible]-02	[illegible]-02	1.[illegible]	[illegible]02	0.[illegible]78
		7[illegible].31		1.[illegible]-01	1.[illegible]-01	2.[illegible]	2.[illegible]02	0.420
		1046.59		8.640E-04	1.340E-01	2.198E-01	1.804E-02	0.004
		1112.84		3.262E-01	3.122E-01	5.067E-01	3.561E-02	0.644
RU-103		497.08	*	-7.603E-03	4.440E-02	7.183E-02	9.272E-03	-0.106
	+	610.33		1.358E+01	2.855E+00	3.310E+00	5.208E-01	4.103
RH-106	+	511.85		4.931E-01	3.798E-01	5.015E-01	3.211E-02	0.983
		621.84	*	1.283E-01	3.803E-01	6.304E-01	7.659E-02	0.204
		1050.47		1.010E+00	2.760E+00	4.671E+00	3.803E-01	0.216
RU-[illegible]	+	[illegible]		4.[illegible]01	[illegible]01	5.[illegible]	[illegible]02	0[illegible]
		6[illegible]	*	1.[illegible]3E-01	[illegible]	[illegible]	[illegible]	[illegible]
		1[illegible].17		1.[illegible]+00	2.76[illegible]00	4.[illegible]+00	3.80[illegible]01	[illegible]
AG-108M		433.93	*	4.809E-03	3.840E-02	6.385E-02	4.178E-03	0.075
		614.37		-1.087E-02	5.557E-02	7.603E-02	5.342E-03	-0.143
		722.95		1.402E-02	4.942E-02	7.388E-02	5.791E-03	0.190
AG-110M		657.75	*	2.380E-02	4.363E-02	7.313E-02	5.055E-03	0.325
		677.61		2.832E-01	3.491E-01	5.991E-01	4.256E-02	0.473
		706.67		6.737E-03	2.553E-01	4.105E-01	3.077E-02	0.016

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		4.449E-02	2.193E-01	3.713E-01	3.089E-02	0.120
		884.67		-1.718E-02	6.004E-02	9.702E-02	9.905E-03	-0.177
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		1384.27		-1.231E-01	2.016E-01	3.167E-01	1.939E-02	[illegible]
[illegible]		171.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		245.[illegible]	*	-3.467E-01	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		692.80		[illegible]	4.091E+01	[illegible]	[illegible]	[illegible]
I-123		159.00	*	-6.087E-01	4.091E+01	Half-Life too short		
		528.96		-4.035E+01	4.091E+01	Half-Life too short		
TE-123M		159.00	*	-1.270E-02	3.144E-02	5.052E-02	5.428E-03	-0.251
I-124		602.71	*	-1.478E-01	7.602E-01	1.041E+00	6.855E-02	-0.142
		722.78		-5.[illegible]E-02	4.416E+00	6.385E+00	4.755E-01	-0.008
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SB		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	1.915[illegible]	[illegible]	3.66[illegible]	[illegible]
		[illegible]		-5.3[illegible]-03	[illegible]	[illegible]	[illegible]	[illegible]
	+	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		-1.[illegible]E+00	[illegible]	[illegible]	[illegible]	[illegible]
		1323.50		-8.030E-01	[illegible]	[illegible]	[illegible]	[illegible]
		1368.21		2.109E+00	2.063E+00	3.804E+00	4.519E-01	0.555
		1436.60		-2.641E+00	4.659E+00	7.230E+00	4.235E-01	-0.365
		1691.02	*	1.196E-02	6.689E-02	1.145E-01	7.247E-03	0.104
SB-125		427.89	*	6.328E-02	1.093E-01	1.865E-01	1.169E-02	0.339
	+	463.38		6.621E-01	4.462E-01	6.081E-01	4.330E-02	1.089
		600.56		2.046E-01	2.073E-01	3.516E-01	2.600E-02	0.582
		635.90		1.850E-02	3.205E-01	5.[illegible]E-01	3.88[illegible]E-02	0.[illegible]
TE [illegible]		1[illegible]	*	8[illegible]	[illegible]	1[illegible]	1[illegible]	[illegible]
[illegible]		3[illegible]		[illegible]6E-02	[illegible]	[illegible]	2[illegible]	[illegible]
		666.[illegible]	*	1.[illegible]-01	2.[illegible]	[illegible]	2.[illegible]	[illegible]
		753.82		8.578E-01	1.688E+00	2.922E+00	2.312E-01	[illegible]
SB-126		223.80		2.216E+00	4.129E+00	6.806E+00	6.746E-01	0.330
		278.60		2.550E+00	2.572E+00	4.498E+00	4.179E-01	0.567
	+	296.50		1.428E+01	2.427E+00	3.712E+00	3.320E-01	3.847
		414.70		8.501E-02	8.931E-02	1.383E-01	8.241E-03	0.615
		415.30		3.733E+00	7.484E+00	1.166E+01	6.950E-01	0.320

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		-8.026E-02	4.220E+00	6.861E+00	4.472E-01	-0.012
		573.80		-3.025E-01	1.174E+00	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		675.00		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		290.00		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		411.60		-3.418E+00	1.373E+01	1.932E+01	2.738E+00	-0.177
		444.90		-3.639E+00	9.332E+00	1.499E+01	1.594E+00	-0.243
		473.00		-8.743E-01	1.637E+00	2.592E+00	2.876E-01	-0.337
		543.00		6.088E+00	1.559E+01	2.611E+01	3.382E+00	0.233
		603.60		-4.395E+00	1.301E+01	1.754E+01	1.907E+00	-0.251
		685.20	*	[illegible]	1.399E+00	[illegible]	[illegible]	0
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	0.412
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	0.395
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
I-		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		364.48	*	-1.142E-01	1.108E-01	[illegible]	[illegible]	[illegible]
		636.97		-1.494E-01	1.714E+00	2.749E+00	1.979E-01	-0.054
		722.89		2.241E+00	7.550E+00	1.130E+01	8.482E-01	0.198
TE-132		49.72		-3.233E+00	3.699E+00	5.306E+00	4.961E-01	-0.609
		111.76		-1.976E+01	2.318E+01	3.696E+01	4.982E+00	-0.535
		116.30		6.022E+00	2.162E+01	3.605E+01	5.163E+00	0.167
		228.16	*	-5.910E-01	6.022E-01	9.110E-01	1.480E-01	-0.649
BA-133		53.15		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		3.772E-01	[illegible]	[illegible]	[illegible]	[illegible]
		302.84		1.845E-01	[illegible]	[illegible]	[illegible]	[illegible]
		356.01	*	-1.495E-02	5.213E-02	7.369E-02	9.100E-03	-0.203
		383.85		2.291E-02	3.529E-01	5.882E-01	6.509E-02	0.039
I-133	+	510.53		4.038E-01	3.529E-01	Half-Life too short		
		529.87	*	3.455E-04	3.529E-01	Half-Life too short		
		706.58		2.124E-02	3.529E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		856.28		4.080E-02	3.529E-01	Half-Life too short		
		875.33		2.005E-02	3.529E-01	Half-Life too short		
		[illegible]		[illegible]	[illegible]	[illegible]		
		1298.22		-1.189E-01	3.529E-01	Half-Life too [illegible]		
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]				0.1[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	-0.4[illegible]
		1365.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
		417.[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
		546.56		-7.706E+07	2.14[illegible]E-01	Half-Life too short		
		836.80		5.607E+07	2.149E-01	Half-Life too short		
		1038.76		1.601E+08	2.149E-01	Half-Life too short		
		1124.00		-5.235E+08	2.149E-01	Half-Life too short		
		1131.51		2.555E+08	2.14[illegible]E-01	Half-Life too [illegible]		
		12[illegible]	*	-1.[illegible]E+08	2.[illegible]E-01	Half-Life too [illegible]		
		[illegible]		[illegible]	2.14[illegible]E-01	[illegible]		
		[illegible]		[illegible]	[illegible]	[illegible]		
		[illegible]		[illegible]	[illegible]	[illegible]		
		17[illegible]		[illegible]+08	2.[illegible]	[illegible] Half-Life too [illegible]		
CS-136		66.[illegible]		-1.155E-01	4.[illegible]	6.772E-01	1.[illegible]	-0.171
	+	86.[illegible]		4.514E+00	1.1[illegible]	1.635E+00	1.[illegible]	2.761
		153.22		-3.156E-02	6.[illegible]E-01	1.123E+00	1.[illegible]	-0.[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
		[illegible]		[illegible]E-01	[illegible]	[illegible]-01	[illegible]	[illegible]
		[illegible]		[illegible]-01	[illegible]	[illegible]-01	[illegible]	[illegible]
		340.57		3.831E-01	1.652E-01	2.[illegible]-01	2.1[illegible]E-02	1.[illegible]
		818.51		-3.842E-02	8.068E-02	1.287E-01	1.147E-02	-0.2[illegible]
		1048.07	*	4.139E-02	1.216E-01	2.054E-01	1.760E-02	0.201
		1235.34		4.170E-01	7.869E-01	1.320E+00	1.319E-01	0.316
BA-137M		661.65	*	-4.820E-02	4.737E-02	7.040E-02	4.630E-03	-0.685
CS-137		661.65	*	-5.095E-02	5.008E-02	7.442E-02	4.910E-03	-0.685
CE-139		165.85	*	-1.523E-02	3.252E-02	5.201E-02	5.163E-03	-0.293
BA-140		162.64		3.01[illegible]E-01	7.6[illegible]E-01	1.[illegible]E+00	1.[illegible]E-01	0.[illegible]
		30[illegible].84		8.[illegible]-01	1.[illegible]	2.[illegible]+00	6.[illegible]	[illegible]
		423.[illegible]		-2.[illegible]E+00	2.2[illegible]	[illegible]E+00	1.[illegible]	[illegible]
		537.[illegible]	*	-1.[illegible]-01	2.7[illegible]	[illegible]-01	1.[illegible]	[illegible]
LA-[illegible]	+	328.77		5.[illegible]-01	5.2[illegible]E-01	5.[illegible]-01	5.[illegible]	0.[illegible]
		432.53		-7.574E-01	2.296E+00	3.715E+00	2.46[illegible]E-01	-0.2[illegible]
		487.03		-4.147E-02	1.477E-01	2.378E-01	1.66[illegible]E-02	-0.175
		751.79		-1.277E+00	1.951E+00	3.100E+00	2.751E-01	-0.412
		815.85		-2.127E-02	3.558E-01	5.896E-01	5.795E-02	-0.036
		867.82		9.382E-02	1.613E+00	2.568E+00	2.594E-01	0.037

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		-1.676E+00	3.814E+00	5.111E+00	6.009E-01	-0.328
		925.24		2.546E-01	1.246E+00	2.095E+00	2.172E-01	0.122
		[illegible]	*	-2.733E-02	[illegible]	[illegible]	[illegible]	[illegible]
CE-141		[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		-4.36[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CE-1[illegible]		[illegible]		1.2[illegible]	[illegible]	2.[illegible]	[illegible]	0
		[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		698.[illegible]	*	-1.41[illegible]-02	4.[illegible]-02	[illegible]	[illegible]	[illegible]
		778.57		1.21[illegible]+00	2.[illegible]+00	4.8[illegible]+00	4.[illegible]-01	0.[illegible]
PR-144		696.49	*	-9.542E-01	3.0[illegible]+00	4.[illegible]+00	3.[illegible]-01	[illegible]
		1489.15		-5.848E+00	1.2[illegible]+01	1.9[illegible]+01	1.[illegible]+00	[illegible]
PM-146		45[illegible].90	*	-2.[illegible]-02	4.[illegible]-02	7.[illegible]-02	6.[illegible]-03	[illegible]
		6[illegible].02		-7.3[illegible]-01	1.[illegible]+00	2.[illegible]+00	9.[illegible]-01	[illegible]
		7[illegible]		-2.[illegible]-02	1.[illegible]01	2.[illegible]01	[illegible]02	[illegible]
		[illegible]		1.407[illegible]-02	[illegible]01	1.[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		4[illegible]		[illegible]+00	6.[illegible]	[illegible]	[illegible]	[illegible]
		5[illegible]		-7.[illegible]E-02	5.[illegible]	9.14[illegible]-01	1.[illegible]	-0.0[illegible]
PM-1[illegible]9		28[illegible]	*	[illegible]+00	7.[illegible]	[illegible]+02	1.[illegible]	[illegible]
E[illegible]-[illegible]2		121.78		-1.[illegible]E-02	7.635E-02	1.[illegible]E-01	1.[illegible]02	-0.[illegible]
		[illegible]		[illegible]-01	[illegible]-01	[illegible]	[illegible]02	[illegible]
		[illegible]		[illegible]-02	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]01	[illegible]	[illegible]	[illegible]	[illegible]
		778.89		1.9[illegible]-01	3.[illegible]-01	5.[illegible]-01	4.[illegible]-02	[illegible]
		867.32		-1.500E-04	1.033E+00	1.3[illegible]E+00	1.[illegible]E-01	[illegible]
	+	964.01		7.352E-01	4.962E-01	6.990E-01	6.586E-02	1.052
		1085.78		4.462E-02	5.184E-01	8.538E-01	6.429E-02	0.052
		1112.02		3.084E-01	4.315E-01	6.986E-01	4.920E-02	0.441
		1407.95		4.800E-02	2.200E-01	3.760E-01	2.197E-02	0.128
GD-153		69.67		3.454E-01	1.108E+00	1.658E+00	1.313E-01	0.208
	+	83.37		2.[illegible]E+01	1.[illegible]E+01	1.[illegible]E+01	1.[illegible]E+00	[illegible]
		[illegible]	*	-1.[illegible]-02	7.[illegible]2	1.[illegible]01	1.[illegible]2	-
		10[illegible]		[illegible]-02	1.[illegible]	[illegible]-01	1.754E[illegible]	[illegible]
[illegible]		1[illegible]		[illegible]-03	5.[illegible]2	[illegible]-02	1.[illegible]	[illegible]
		2[illegible]		-1.3[illegible]-01	4.[illegible]-01	6.[illegible]-01	7.[illegible]-02	[illegible]
		591.61		6.370E-02	7.009[illegible]-01	1.1[illegible]+00	1.[illegible]-01	0.[illegible]
		723.30		4.242E-02	2.0[illegible]-01	3.044E-01	2.5[illegible]-02	0.139
		756.87		-3.362E-01	1.007E+00	1.645E+00	1.892E-01	-0.204
		873.19		-3.005E-01	3.583E-01	5.465E-01	7.152E-02	-0.550
		996.32		-9.735E-01	4.952E-01	6.110E-01	1.096E-01	-1.593

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1004.76		-3.937E-01	2.644E-01	3.665E-01	4.331E-02	-1.074
		1274.45	*	-1.490E-02	1.631E-01	2.615E-01	2.445E-02	-0.057
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		482.03	*	-1.297E-02	4.748E-02	7.645E-02	4.811E-03	-0.170
W-181		56.28		-1.226E-01	1.386E-01	2.100E-01	1.655E-02	-0.584
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		65.20	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AU-195		65.12		6.043E-02	1.032E-01	1.558E-01	1.260E-02	0.388
		66.83		-2.4[illegible]E-02	5.8[illegible]E-02	8.[illegible]E-02	6.[illegible]E-03	-0.[illegible]
	+	7[illegible]		1.[illegible]	1.[illegible]	[illegible]	[illegible]	
		[illegible]		[illegible]	2.[illegible]	[illegible]	[illegible]	
TL				4.[illegible]		[illegible]		
				6[illegible]-0[illegible]	[illegible]	[illegible]		
				[illegible]	[illegible]	[illegible]		
				1.[illegible]		[illegible]		
[illegible]				[illegible]				
				[illegible]				
		8[illegible]		2.[illegible]0	4.[illegible]	[illegible]	[illegible]	
		13[illegible]		1.[illegible]01	2.[illegible]	[illegible]01	4.[illegible]	
		16[illegible]		2.[illegible]00	5.[illegible]	[illegible]	[illegible]	
TL-202		[illegible]		-7.000E-02	2.[illegible]01	[illegible]	[illegible]	[illegible]
		[illegible]		1.184E-01	1.[illegible]	[illegible]		
				[illegible]		[illegible]		
			*	[illegible]	[illegible]-02	[illegible]	[illegible]03	[illegible]
[illegible]				[illegible]	[illegible]	[illegible]	[illegible]	
				[illegible]		[illegible]		
				[illegible]		[illegible]		
				[illegible]		[illegible]		
BI				[illegible]		[illegible]	[illegible]2	
				[illegible]				
				[illegible]		[illegible]		
		62		[illegible]		[illegible]		
[illegible]				[illegible]	[illegible]	[illegible]	[illegible]	
				[illegible]		[illegible]	[illegible]	
				[illegible]		[illegible]	[illegible]	
		[illegible]		5.[illegible]	[illegible]+00	3.[illegible]	.430E-01	0.[illegible]
		144.24		2.857E-01	7.[illegible]E-01	1.20[illegible]+00	1.[illegible]E-01	0.[illegible]
		154.21		2.61[illegible]E-01	4.[illegible]-01	7.[illegible]-01	8.[illegible]02	0.[illegible]
	+	269.46		5.715E-01	3.770E-01	4.012E-01	3.8[illegible]E-02	1.424
		323.87	*	-2.857E-01	7.838E-01	1.108E+00	1.942E-01	-0.258
	+	338.28		6.990E+00	2.049E+00	2.701E+00	3.181E-01	2.588
		4[illegible]03		-1.[illegible]+00	2.[illegible]00	4.[illegible]00	4.[illegible]-01	-0.[illegible]
PO-[illegible]		26[illegible]		9.[illegible]+00	1.[illegible]01	1.[illegible]01	1.[illegible]00	0.[illegible]
		262.80		-2.7[illegible]01	3.[illegible]01	4.[illegible]	4.[illegible]00	-0.[illegible]
		[illegible]	*	-6.[illegible]	9.[illegible]	[illegible]	[illegible]	[illegible]
BI				[illegible]		[illegible]		
				5.[illegible]	[illegible]0	[illegible]	[illegible]0	0.[illegible]
BI [illegible]	+	727.19	*	1.405E+00	6.[illegible]-01	7.9[illegible]-01	7.2[illegible]-02	1.[illegible]
		785.46		-1.0[illegible]00	2.161E+00	3.[illegible]00	2.01[illegible]01	-0.[illegible]
		1620.62		1.15[illegible]E+00	1.426E+00	2.5[illegible]E+00	1.522E-01	0.[illegible]
PO-215		81.07		8.737E-02	2.379E-01	2.609E-01	2.012E-02	0.335
	+	83.78		2.421E-01	1.057E-01	1.667E-01	1.279E-02	1.453

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		4.060E-01	2.309E-01	3.587E-01	3.161E-02	1.132
		122.32		5.803E-02	1.842E+00	3.042E+00	4.420E-01	0.019
		144.24		2.867E-01	7.353E-01	1.203E+00	1.560E-01	0.238
		154.21		2.616E-01	4.393E-01	7.325E-01	8.712E-02	0.357
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.715E-01	3.776E-01	4.012E-01	3.853E-02	1.424
		323.87	*	-2.857E-01	7.838E-01	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-2.188E-01	1.392E+00	2.269E+00	1.470E+00	-0.096
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		103.[illegible]		[illegible]	9.[illegible]	[illegible]	1.[illegible]	[illegible]
		117[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CM-247		2[illegible]		1.[illegible]E+00	8.[illegible]01	1.[illegible]	1.[illegible]01	[illegible]
		28[illegible]		1.957E-01	1.[illegible]-00	2.[illegible]73E+00	2.[illegible]-01	0.086
		402.60	*	1.07[illegible]E-02	4.[illegible]-02	7.[illegible]	4.[illegible]3	0.[illegible]51
CF-249		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CF-[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		227.00		-3.65[illegible]E-02	4.[illegible]-01	6.[illegible]-01	[illegible]-02	-0.[illegible]
		285.00		9.200E-02	1.[illegible]E+00	3.[illegible]	[illegible]-01	0.[illegible]

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
*                                                                           *
*                                                                           
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BE-7	7.318E-04	3.555E-01	6.088E-01	0.000E+00	NOT IDENT.
NA-22	-1.244E-02	5.803E-02	9.425E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.429E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.370E-02	3.176E-02	6.052E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.651E-02	6.610E-02	0.000E+00	FAIL ABUN
SC-46	-5.056E-03	4.509E-02	7.628E-02	0.000E+00	FAIL ABUN
V-48	-8.271E-02	9.712E-02	1.250E-01	0.000E+00	NOT IDENT.
CR-51	4.720E-02	3.840E-01	6.625E-01	0.000E+00	NOT IDENT.
MN-52	8.575E-02	2.292E-01	4.083E-01	0.000E+00	NOT IDENT.
MN-54	-1.838E-02	4.555E-02	7.627E-02	0.000E+00	NOT IDENT.
CO-56	-1.413E-02	4.701E-02	7.869E-02	0.000E+00	NOT IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]58	-1.[illegible]	4.492E-0[illegible]	[illegible]-02	0.[illegible]	[illegible]DENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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[illegible]	-3.[illegible]	[illegible].671E-[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-3.[illegible]	[illegible].547E+[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]91	1.[illegible]	2.4[illegible]	[illegible]2+01	[illegible]	[illegible]
NB-94	2.473E-02	4.134E-02	7.169E-02	0.000E+00	NOT IDENT.
NB-95	2.494E-02	5.523E-02	9.797E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.663E-01	2.683E-01	0.000E+00	NOT IDENT.
ZR-95	1.462E-02	8.627E-02	1.510E-01	0.000E+00	NOT IDENT.
NB-97	0.0[illegible]	3.849E+0[illegible]	[illegible]	0.[illegible]	[illegible]
[illegible]	0.0[illegible]	7.[illegible]1E+0[illegible]	[illegible]	0.[illegible]	[illegible]
MO-99	-2.39[illegible]	1.009E+01	[illegible]17E+01	0.[illegible]	[illegible]
TC-99M	0.000E+00	1.823E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.277E-03	3.621E-02	6.026E-02	0.000E+00	NOT IDENT.
RH-102	-2.623E-02	3.341E-02	5.421E-02	0.000E+00	NOT IDENT.
RU-103	-7.603E-03	4.351E-02	7.[illegible]02	0.000E+00	FAIL ABUN
RH-106	1.283E-01	3.726E-01	6.412E-01	0.000E+00	FAIL ABUN
RU-106	1.283E-01	3.724E-01	6.412E-01	0.000E+00	FAIL ABUN
AG-108M	4.809E-03	3.763E-02	6.535E-02	0.000E+00	NOT IDENT.
AG-110M	2.380E-02	4.276E-02	7.430E-02	0.000E+00	NOT IDENT.
IN-111	-3.467E-01	9.669E-01	1.390E+00	0.000E+00	NOT IDENT.
IN-11[illegible]	-2.4[illegible]-02	1.[illegible]	8.409E-0[illegible]	0.[illegible]+00	NOT IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	0.000E+00	1.47[illegible]E106	[illegible]	0.000E+0[illegible]	[illegible]
TE-123M	-1.270E-02	3.081E-02	5.259E-02	0.000E+00	NOT IDENT.
I-124	-1.478E-01	7.450E-01	1.060E+00	0.000E+00	NOT IDENT.
SB-124	1.196E-02	6.555E-02	1.144E-01	0.000E+00	FAIL ABUN
SB-125	6.328E-02	1.071E-01	1.909E-01	0.000E+00	FAIL ABUN
TE-125M	8.096E+00	8.850E+00	1.604E+01	0.000E+00	NOT IDENT.
I-126	1.461E-01	2.028E-01	3.563E-01	0.000E+00	NOT IDENT.
SB-126	-7.414E-02	1.704E-01	2.428E-01	0.000E+00	FAIL ABUN
SB-127	1.004E+00	1.371E+00	2.403E+00	0.000E+00	NOT IDENT.
XE-127	-5.371E-03	5.039E-02	8.281E-02	0.000E+00	NOT IDENT.
I-131	-1.142E-01	1.086E-01	1.770E-01	0.000E+00	NOT IDENT.
TE-132	-5.910E-01	5.901E-01	9.427E-01	0.000E+00	NOT IDENT.
BA-133	-1.495E-02	5.109E-02	7.567E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.524E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.826E-02	6.477E-02	1.097E-01	0.000E+00	FAIL ABUN
CS-135	3.282E-01	2.106E-01	3.350E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.223E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.139E-02	1.192E-01	2.070E-01	0.000E+00	FAIL ABUN
BA-137M	-4.820E-02	4.642E-02	7.153E-02	0.000E+00	NOT IDENT.
CS-137	-5.095E-02	4.908E-02	7.561E-02	0.000E+00	NOT IDENT.
CE-139	-1.523E-02	3.187E-02	5.411E-02	0.000E+00	NOT IDENT.
BA-140	-1.614E-01	2.693E-01	4.278E-01	0.000E+00	NOT IDENT.
LA-140	-2.730E-02	1.025E-01	1.671E-01	0.000E+00	FAIL ABUN
CE-141	3.812E-02	6.562E-02	1.148E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.415E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-2.777E-01	2.288E-01	3.741E-01	0.000E+00	NOT IDENT.
PM-144	-1.410E-02	4.351E-02	6.875E-02	0.000E+00	NOT IDENT.
PR-144	-9.549E-01	2.946E+00	4.656E+00	0.000E+00	NOT IDENT.
PM-146	-2.806E-02	4.744E-02	7.824E-02	0.000E+00	NOT IDENT.
ND-147	-7.919E-02	5.549E-01	9.323E-01	0.000E+00	FAIL ABUN
PM-149	4.045E+00	6.971E+01	1.238E+02	0.000E+00	NOT IDENT.
EU-152	5.763E-02	1.256E-01	1.874E-01	0.000E+00	FAIL ABUN
GD-153	-1.234E-02	7.788E-02	1.201E-01	0.000E+00	FAIL ABUN
EU-154	-1.490E-02	1.599E-01	2.626E-01	0.000E+00	NOT IDENT.
EU-155	-5.227E-02	1.067E-01	1.824E-01	0.000E+00	FAIL ABUN
TB-160	-4.167E-03	1.651E-01	2.817E-01	0.000E+00	FAIL ABUN
HO-166M	1.862E-02	6.962E-02	1.232E-01	0.000E+00	NOT IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	6.1[illegible]	[illegible]4E-0[illegible]	[illegible]	0[illegible]	[illegible]
[illegible]	[illegible]	2.2[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-3.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RE-[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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TL [illegible]	-2.[illegible]	[illegible]1E-[illegible]	[illegible]	[illegible]	[illegible]
PO-[illegible]	-6.595E-01	[illegible].340E+00	1.[illegible]	0.000[illegible]	[illegible]
PB-[illegible]	-4.954E-01	[illegible].232E+00	1.[illegible]	0.000E+0[illegible]	[illegible]
[illegible]	0.000[illegible]	[illegible].[illegible]02E-01	[illegible]	0[illegible]	[illegible]
[illegible]	-2.[illegible]	7[illegible]	[illegible]+0[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-[illegible]	[illegible]	[illegible]59[illegible]	[illegible]	[illegible]
PA [illegible]	-2.857E-01	7.681E-01	1.[illegible]	0.[illegible]	[illegible]
AC-227	-2.604E-01	4.106E-01	6.6[illegible]	0.000E+0[illegible]	[illegible]
TH-[illegible]	-2.60[illegible]	[illegible].113E-01	[illegible]	[illegible]	[illegible]
TH-229	-3.461E-01	5.449E-01	9.08[illegible]E-01	0.000E+00	[illegible]
PA-231	1.345E-01	1.685E+00	2.996E+00	0.000E+00	FAIL ABUN
TH-[illegible]	-2.857E-01	7.681E-01	1.1[illegible]+00	0.000E+01	[illegible]
U-231	-5.131E-01	8.545E-01	1.300E+00	0.000E+00	FAIL ABUN
PA-233	2.334E-02	7.119E-02	1.167E-01	0.000E+00	FAIL ABUN
PA-234	-2.712E-01	3.552E-01	5.559E-01	0.000E+00	FAIL ABUN
PA-[illegible]	1.091E+01	[illegible]01E+00	1.40[illegible]	0.[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]52[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	9.[illegible]5	[illegible]1	[illegible]	[illegible]
C[illegible]	1.075E-02	[illegible].39[illegible]E-0[illegible]	7.[illegible]	0.[illegible]	[illegible]
CF-249	-5.836E-03	4.589E-02	7.916E-02	0.000E+00	NOT IDENT.
CF-251	-1.280E-01	1.354E-01	2.235E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:24:37.64

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 11:23:48
[illegible]       : [illegible]                  [illegible] : 1.330[illegible]
                  :                              [illegible] : [illegible]CAN
[illegible] time: [illegible]                    [illegible] : 0 02:[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	734	6.21	8.037E+00	4.150E+00	4.151E+00	17.07
	77.11	1038	10.50	8.014E+00	3.479E+00	3.479E+00	14.79
	[illegible]	379	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]					
		[illegible]					
		[illegible]				

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	144	16.60	1.429E+00	1.713E+00	1.713E+00	37.00
TH-234	63.29	185	3.80*	8.063E+00	1.702E+00	1.702E+00	72.12
	92.38	354	5.41	[illegible]	[illegible]	[illegible]	[illegible]

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

Total number of lines in spectrum	33	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	31	93.94%

Nuclide Type :

Nuclide	Half-Life	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr Conc.	2-Sigma
[illegible]						
[illegible]						
[illegible]						

Sample ID : G1201874833
Acquisition date : 14-JUL-2009 11:23:48

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.68	287	431	1.29	180.50	166	27	3.99E-02	28.8	7.81E+00	T
0	185.99	155	398	1.34	373.03	368	10	2.16E-02	52.5	5.66E+00	T
0	209.00	166	259	1.02	419.03	415	9	2.30E-02	38.2	5.24E+00	T
0	270.17	120	311	1.64	541.30	535	14	1.66E-02	65.4	4.35E+00	T
0	328.40	73	241	1.87	657.69	651	13	1.01E-02	91.3	3.72E+00	T
0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:24:42.80

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                            DETECTOR DATA                                  *
*                                                                           *
```

Nuclide	Activity (pCi/GRAM)	[illegible]	MDA (pCi/GRAM)	[illegible] Error	Act/MDA
K-40	3.355E+01	2.958E+00	7.838E-01	4.874E-02	42.808
CD-109	3.731E+00	8.820E-01	1.003E+00	[illegible]	[illegible]
SN-113	3.674E-01	[illegible]	[illegible]	[illegible]	[illegible]
TL-[illegible]	5.373E-01	[illegible]	[illegible]	[illegible]	[illegible]
BI-210	1.139E+00	[illegible]	[illegible]	6.735E-01	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PO-21[illegible]	1.139E+00	[illegible]	[illegible]	[illegible]	[illegible]
BI-211	4.096E+00	5.574E-01	3.570E-01	[illegible]	[illegible]
PB-212	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PO-212	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BI-214	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
PB-214	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
PO-214	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
PO-216	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
PO-218	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
RA-224	4.724E+00	1.134E+00	1.114E+00	1.090E-01	4.242
RA-226	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
AC-228	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
TH-228	1.864E+00	2.342E-01	[illegible]	[illegible]	12.051
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ANH-5[illegible]	9.[illegible]	[illegible].620E-0[illegible]	5.800E[illegible]	[illegible]2E-0[illegible]	[illegible]
[illegible]	[illegible]	Act	[illegible]	[illegible]	[illegible]
[illegible]	7.318E-04	1	5.[illegible]	.268E-02	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]75E-0[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]838E-0[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C[illegible]	[illegible].733E-03	[illegible]	7.[illegible]	[illegible]	[illegible]
F[illegible]	2.663E-02	[illegible]	[illegible]	[illegible]	[illegible]
CO-5[illegible]	3.091E-02	[illegible].598E-0[illegible]	7.[illegible]	4.[illegible]E-0[illegible]	[illegible]
ZN[illegible]	2.034E-0[illegible]	[illegible]E-0[illegible]	[illegible]	[illegible]E-02	[illegible]
C[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-3.[illegible]	5.786E-02	[illegible]	7.[illegible]	[illegible].45
[illegible]	[illegible].03	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-[illegible]	[illegible]51E-	[illegible]	[illegible]	[illegible]
[illegible]	1.2[illegible]	[illegible] 2	[illegible]	[illegible]	[illegible]
[illegible]	1.7[illegible]	[illegible] 1	[illegible]	[illegible]	[illegible]
SR[illegible]	[illegible].709E-02	[illegible]	[illegible]	[illegible]	[illegible]
RB-8[illegible]	9.856E-01	[illegible].898E-0[illegible]	1.747E[illegible]	[illegible].344E-01	[illegible]
Y-8[illegible]	-7.236E-03	3.857E-02	6.075E-02	[illegible].476E-03	-0.[illegible]19
ZR-88	-4.993E-04	3.437E-02	5.696E-02	3.317E-03	-0.009
Y-91	1.532E+01	2.496E+01	4.241E+01	2.465E+00	0.361
NB-94	2.473E-02	4.218E-02	7.064E-02	5.054E-03	0.350
NB-95	2.494E-02	5.635E-02	9.669E-02	7.820E-03	0.258
NB-95M	3.735E-01	1.696E-01	2.594E-01	2.838E-02	1.439

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-7.919E-02		5.662E-01	9.141E-01	1.262E-01	-0.087
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-242	5.218E-02		9.643E-02	1.505E-01	1.667E-02	0.327
TM-2[illegible]	[illegible]					

VAX/VMS Nuclide Identification Report Generated

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*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
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[illegible]

[illegible]

[illegible] : 30-[illegible]
* Sample ID : G12[illegible]3 [illegible] ils: MXR1

[illegible]

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	[illegible]	2.899E[illegible]	3.[illegible]-01	[illegible]
C[illegible]	[illegible]	[illegible]	5.2[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
B[illegible]	1.139E+00	[illegible]	[illegible]	[illegible]
PB-210	1.139E+00	9.863E-01	4.589E-01	5.032E-01
PO-210	1.139E+00	9.853E-01	4.589E-01	5.027E-01
BI-211	4.096E+00	5.463E-01	1.835E-01	2.787E-01
PB-212	1.864E+00	2.295E-01	5.061E-02	1.171E-01
B[illegible]-212	1.864E+00	2.295E-01	[illegible]1E-02	1.171E-01
BI-214	1.283E+00	2.046E-01	[illegible]	1.044E-01
PB-214	1.425E+00	2.035E-01	6.171E-02	1.038E-01
PO-214	1.425E+00	2.035E-01	6.171E-02	1.038E-01
PO-216	1.864E+00	2.295E-01	5.061E-02	1.171E-01
PO-218	1.425E+00	2.035E-01	6.171E-02	1.038E-01
RA-224	4.724E+00	1.112E+00	5.760E-01	5.671E-01
RA-226	1.283E+00	2.046E-01	6.876E-02	1.044E-01
AC-228	1.926E+00	4.453E-01	1.426E-01	2.272E-01
RA-228	1.926E+00	4.453E-01	1.426E-01	2.272E-01
TH-228	1.864E+00	2.295E-01	5.061E-02	1.171E-01
TH-230	1.283E+00	2.046E-01	6.876E-02	1.044E-01
TH-232	1.926E+00	4.453E-01	1.426E-01	2.272E-01
TH-234	1.702E+00	1.203E+00	5.513E-01	6.136E-01
U-234	1.283E+00	2.046E-01	6.876E-02	1.044E-01
NP-237	1.079E+00	3.317E-01	1.519E-01	1.693E-01
U-238	1.702E+00	1.203E+00	5.513E-01	6.136E-01
AM-243	3.905E-01	5.886E-02	3.204E-02	3.003E-02
ANH-511	9.893E-02	7.468E-02	2.961E-02	3.810E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	7.318E-04	3.555E-01	3.046E-01	1.814E-01	NOT IDENT.
NA-22	-1.244E-02	5.803E-02	4.715E-02	2.961E-02	NOT IDENT.
NA-24	2.539E+05	2.429E+05	0.000E+00	1.239E+05	SHORT HLIF
AL-26	2.370E-02	3.176E-02	3.028E-02	1.621E-02	NOT IDENT.
TI-44	3.745E-01	4.651E-02	3.307E-02	2.373E-02	FAIL ABUN
SC-46	-5.056E-03	4.509E-02	3.816E-02	2.301E-02	FAIL ABUN
V-48	-8.271E-02	9.712E-02	6.254E-02	4.955E-02	NOT IDENT.
CR-51	4.720E-02	3.840E-01	3.314E-01	1.959E-01	NOT IDENT.
MN-52	8.575E-02	2.292E-01	2.043E-01	1.170E-01	NOT IDENT.
MN-54	-1.838E-02	4.555E-02	3.816E-02	2.324E-02	NOT IDENT.
CO-56	-1.413E-02	4.701E-02	3.937E-02	2.399E-02	NOT IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GE-[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[

CE-144	-2.777E-01	2.288E-01	1.872E-01	1.167E-01	NOT IDENT.
PM-144	-1.410E-02	4.351E-02	3.440E-02	2.220E-02	NOT IDENT.
PR-144	-9.549E-01	2.946E+00	2.329E+00	1.503E+00	NOT IDENT.
PM-146	-2.806E-02	4.744E-02	3.914E-02	2.421E-02	NOT IDENT.
ND-147	-7.919E-02	5.549E-01	4.664E-01	2.831E-01	FAIL ABUN
PM-149	4.045E+00	6.971E+01	6.194E+01	3.557E+01	NOT IDENT.
EU-152	5.763E-02	1.256E-01	9.374E-02	6.410E-02	FAIL ABUN
GD-153	-1.234E-02	7.788E-02	6.010E-02	3.974E-02	FAIL ABUN
EU-154	-1.490E-02	1.599E-01	1.314E-01	8.157E-02	NOT IDENT.
EU-155	-5.227E-02	1.067E-01	9.126E-02	5.443E-02	FAIL ABUN
TB-160	-4.167E-03	1.651E-01	1.409E-01	8.424E-02	FAIL ABUN
HO-166M	1.962E-02	6.962E-[illegible]	6.166E-[illegible]	[illegible]-02	NOT IDENT.
TM-1[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
*****************************************************************************
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ENERGY	MDA COUNTS
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[illegible]	[illegible]
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[illegible]	634.3927
[illegible]	[illegible]
66.03	639.0618
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	622.5[illegible]
68.90	649.3304
68.90	649.3304
69.30	619.6528
69.67	609.7466
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70.83	596.1712
72.80	601.7465
72.87	601.8137
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74.81	603.6542
74.97	603.8058
75.28	604.0969
75.70	604.4899
77.11	590.1959
77.11	590.1959
77.11	590.1959

77.11	590.1959
77.11	590.1959
77.11	590.1959
78.38	580.9129
79.62	518.5776
79.80	518.7176
79.80	518.7176
80.11	515.2258
80.18	515.2785
80.30	515.3712
80.30	515.3712
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

111.76	422.6775
112.95	380.3729
115.19	361.8362
116.30	365.2510
117.00	371.4328
117.00	371.4328
117.66	380.5492
121.11	371.2489
121.62	380.3339
121.78	375.4771
122.06	375.5977
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

209.75	245.2035
209.75	245.2035
210.97	224.8460
215.65	264.8791
216.55	245.6733
218.09	262.1531
222.10	280.2896
223.80	245.9813
226.40	258.4168
227.00	253.1034
227.08	255.2921
227.20	255.3151
228.16	279.4212
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

296.50	170.5599
297.23	170.6375
298.57	170.7836
299.80	170.9160
299.80	170.9160
300.09	170.9480
300.09	170.9480
300.09	170.9480
300.10	170.9491
300.12	170.9502
301.29	171.0781
302.84	171.2447
303.76	171.3429
303.91	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]

418.52	154.3432
423.70	160.6187
427.08	119.6842
427.89	131.5088
432.53	142.6282
433.93	131.8981
439.47	111.5282
439.56	111.5323
439.89	112.5374
443.98	128.5845
444.90	135.5685
445.03	136.5664
445.03	136.5664
445.03	136.[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[

609.31	107.1991
610.33	111.4882
612.46	108.0382
614.37	111.6599
618.01	97.9701
621.84	86.3809
621.84	86.3809
631.29	97.3896
633.02	93.1682
633.10	93.1703
634.78	79.2989
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

785.46	94.0186
792.07	82.3698
795.84	73.5741
796.30	75.4720
801.93	83.6385
805.60	66.2303
810.29	79.5908
810.76	72.0216
815.85	69.2870
817.79	67.4292
818.51	71.2433
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

1038.76	0.0000
1045.16	60.7153
1046.59	56.6881
1048.07	55.6960
1050.47	55.7296
1050.47	55.7296
1063.62	48.7988
1076.63	58.1365
1077.35	61.2085
1085.78	68.4913
1099.22	59.48[illegible]
1112.02	61.7[illegible]
[illegible]	57.[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
1120.2[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
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[illegible]	[illegible]
[illegible]	[illegible]
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[illegible]	[illegible]
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[illegible]	[illegible]
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[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
1246.25	90.[illegible]
1260.41	0.0000
1271.85	57.6431
[illegible]	[illegible]
[illegible]	68.35[illegible]
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[illegible]	[illegible]
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[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[

1706.46	0.0000
1750.46	0.0000
1764.49	10.0558
1764.49	10.0558
1764.49	10.0558
1764.49	10.0558
1770.23	12.3303
1771.40	14.0947
1791.20	0.0000
1808.65	8.1044
1836.01	14.2471

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201874833

Total Uranium Activity	5.0744E+00	ug/g
Total Uranium Counting Unc.	3.5796E+00	ug/g
Total Uranium Tpu	1.8263E-06	ug/g
Total Uranium Mda	1.6427E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID       : 882713                    SAMPLE ID   : G1201874832    *
*   ANALYST        : MXR1                      [illegible]  : GAM05         *
*   SAMPLE DATE    : [illegible]               [illegible]                  *
*   [illegible]    : [illegible]               [illegible]                  *
*                                                                           *
*   [illegible]                                                             *
```

[illegible]

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:34:14.89

****

* GEL Laboratories LLC *
* 2040 Savage Road *
* Charleston, SC [illegible] *

[illegible]

[illegible] : [illegible] [illegible] : [illegible]
[illegible]te : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 12:33:44
[illegible] : G1201874834 Sample quantity : 1.55440E+02 GRAM
Detector name : GAMMA Detector geometry: CAN
[illegible]

[illegible]									
[illegible]									
[illegible]									

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 13:34:17

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 7-JUL-2009 00:00:00 Acquisition date : 14-JUL-2009 12:33:44
Sample ID : G1201874834 Sample quantity : 155.44 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 01:[illegible] Elapsed [illegible] time: 0 01 [illegible]
[illegible]
[illegible] propagated: Yes Sys[illegible] : 0.[illegible]
Efficiency type : Empir[illegible] Efficie[illegible] : Peak En[illegible]
Al[illegible]ce limit : 75. WTM err[illegible] : 3.0[illegible]

---- I[illegible] ----

[illegible]

C[illegible] 2 [illegible] -01

[illegible] 01 [illegible]

BI-211		[illegible]	1.151E+0[illegible]	[illegible]	5.005E[illegible]	[illegible]	[illegible]	[illegible]
	+	[illegible] *	2.377E+0[illegible]	[illegible]	6.4[illegible]	[illegible]	2	2[illegible]
PB-212	+	[illegible]	1.651E+0[illegible]	[illegible]	5.[illegible]	[illegible]	2	[illegible]
	+	[illegible]	1.644E+0[illegible]	3.398E-01	3.[illegible]	2.951E-02	[illegible]	4.[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26.[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	2	4.6[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	1	0.6[illegible]
	+	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	[illegible] *	8.114E-01	[illegible]	[illegible]	[illegible]	[illegible]	4.[illegible]
		300.09	1.522E+00	1.494[illegible]+00	2.305E+00	[illegible]	[illegible]	[illegible]
PB-214	+	74.81	2.844E+00	9.028[illegible]-01	1.0[illegible]E+00	1.[illegible]	[illegible]	2.[illegible]
	+	77.11	2.818E+00	6.209[illegible]-01	5.956E-01	6.7[illegible]-02	[illegible]	4.[illegible]
	+	87.30	3.738E+01	4.629E+00	1.397E+00	1.5[illegible]-01	[illegible]	26.[illegible]
	+	241.98	4.562E-01	6.902E-01	1.277E+00	1.2[illegible]-01	[illegible]	0.3[illegible]
	+	295.21	1.111E+00	4.362E-01	3.849E-01	3.[illegible]-02	[illegible]	2.[illegible]
	+	351.92 *	8.268E-01	2.458E-01	2.445E-01	2.189E-02	[illegible]	3.382
PO-214	+	74.81	2.844E+00	9.028E-01	1.001E+00	1.139E-01	[illegible]	2.840

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		2.818E+00	6.209E-01	5.956E-01	[illegible]	[illegible]
	+	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	74.		[illegible]	5.	[illegible]	7.	[illegible]
	+	77.11		[illegible]	3.	[illegible]	2.	[illegible]
	+	87.30		2.1[illegible]	3.[illegible]	8.[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	+	87.3[illegible]		3.738E+0[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]		[

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MN-5[illegible]		744.21		-1.4[illegible]E-01	2.[illegible]E-01	3.[illegible]E-01	2.[illegible]	-0.41[illegible]
[illegible]				[illegible]				
[illegible]				[illegible]				
[illegible]				[illegible]				
[illegible]				[illegible]				
[illegible]				[illegible]				
[illegible]				[illegible]				
[illegible]				[illegible]				
[illegible]				[illegible]				[illegible]
[illegible]				[illegible]				[illegible]
[illegible]				[illegible]				[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		776.49	*	-3.721E-01	7.061E-01	1.[illegible]E+00	1.043E-01	-0.[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]E-02	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1050.47		-4.860E-01	6.232E+00	1.010E+01	6.674E-01	-0.048
[illegible]	+	511.85		8.577E-01	6.037E-01	7.088E-01	4.952E-02	1.210
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		635.90		4.642E-02	5.947E-01	9.753E-01	8.509E-02	0.048
TE-125M		109.28	*	4.579E+00	1.175E+01	1.963E+01	2.382E+00	0.233
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BA-133		53.15		-5.247E-01	2.877E+00	4.407E+00	3.699E-01	-0.119
		79.62		5.893E-02	1.589E+00	2.391E+00	3.604E-01	0.025
		81.00		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]						
		[illegible]						
		[illegible]		[illegible]		[illegible]		
C[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]						
		304.84		-2.567E+00	1.770E+00	2.421E+00	6.705E-01	-1.060

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		423.70		1.587E-01	2.930E+00	4.690E+00	1.494E+00	0.034
		537.32	*	8.597E-02	3.866E-01	[illegible]	[illegible]	[illegible]
L[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
			*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
N[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		97.43	*	-1.72[illegible]E-02	1.148E-01	1.0[illegible]E-01	1.534E-02	-0.162

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		103.18		-1.059E-01	1.479E-01	2.357E-01	2.328E-02	-0.449
EU-[illegible]	+	122.07		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		367.43		-3.268E-01	1.750E+00	2.795E+00	1.791E-01	-0.117
		41[illegible]	*	-1[illegible]-01	3[illegible]01	6[illegible]01	3[illegible]02	[illegible]
[illegible]		5[illegible]		[illegible]01	8[illegible]1	1[illegible]00	1[illegible]1	
		[illegible]						
		[illegible]						
		[illegible]				

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		227.08		1.164E+01	2.146E+01	3.676E+01	2.912E+00	0.316
		[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
[illegible]		46.50	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Line Idcd	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
				[illegible]		[illegible]		
				[illegible]		[illegible]		
				[illegible]		[illegible]	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                                                                           *
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                 tion                                  ...
* 2                n date :  --J                33:44 |                    ...
* 4                     : GA                   Gens                    00
* G                     : CAN                  Energy t                 00
* F                 me:     0                  Abund                    00
* F                         0                  ...
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                                                                  ty

                  Acti                    error
Nuclide         (pCi/GRAM )                        (pCi/GRAM )

                  1.1                                                  000

                                                  .6
B1                    0                                                  ...
                  8.1                                                  00

                                                                    ...
                                                                    2.                    +00
PO-2                                                                1.                    +00
PO-2                  0.                  2.409                     2.
RA-224            8.651E-01           1.282E+00           2.612E+00           0.000E+00
TH-228            8.114E-01           2.373E-01           1.851E-01           0.000E+00
TH-234            2.387E-01           1.205E+00           1.655E+00           0.000E+00
U-238             2.387E-01           1.205E+00           1.655E+00           0.000E+00
AM-241            1.366E+01           1.418E+00           2.687E-01           0.000E+00
AM-243            2.676E-01           8.095E-02           1.027E-01           0.000E+00
ANH-511           1.742E-01           1.202E-01           1.075E-01           0.000E+00
```

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM	)	
BE-7	-1.094E+00	6.857E-01	1.107E+00	0.000E+00	NOT IDENT.
NA-22	-6.454E-02	6.237E-02	9.224E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.357E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	4.048E-02	4.884E-02	9.609E-02	0.000E+00	NOT IDENT.
K-40	8.487E-01	7.086E-01	1.261E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.144E-02	8.929E-02	0.000E+00	FAIL ABUN

SC-46	3.071E-02	9.950E-02	1.751E-01	0.000E+00	NOT IDENT.
V-48	1.313E-01	1.413E-01	2.547E-01	0.000E+00	NOT IDENT.
CR-51	4.273E-01	5.721E-01	1.041E+00	0.000E+00	NOT IDENT.
MN-52	-4.232E-02	1.378E-01	2.213E-01	0.000E+00	FAIL ABUN
MN-54	2.164E-02	8.338E-02	1.475E-01	0.000E+00	NOT IDENT.
CO-56	-2.815E-02	9.506E-02	1.621E-01	0.000E+00	FAIL ABUN
CO-58	2.024E-02	8.575E-02	1.520E-01	0.000E+00	NOT IDENT.
FE-59	-1.190E-02	2.234E-01	3.748E-01	0.000E+00	NOT IDENT.
ZN-65	-1.820E-01	2.317E-01	3.681E-01	0.000E+00	NOT IDENT.
GE-68	-3.425E-01	3.342E+00	5.601E+00	0.000E+00	NOT IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TB-160	2.097E-01	3.422E-01	6.138E-01	0.000E+00	NOT IDENT.
HO-166M	-5.154E-02	1.429E-01	2.361E-01	0.000E+00	NOT IDENT.
TM-171	2.271E+00	2.553E+01	4.345E+01	0.000E+00	FAIL ABUN
LU-176	3.521E-02	4.574E-02	8.360E-02	0.000E+00	FAIL ABUN
LU-177	-3.542E-01	8.114E-01	1.458E+00	0.000E+00	NOT IDENT.
LU-177M	-1.966E-01	3.790E-01	6.263E-01	0.000E+00	FAIL ABUN
HF-181	6.145E-02	8.514E-02	1.563E-01	0.000E+00	NOT IDENT.
W-181	4.039E-02	3.112E-01	5.314E-01	0.000E+00	NOT IDENT.
TA-182	1.161E-01	2.763E-01	4.970E-01	0.000E+00	NOT IDENT.
RE-183	-6.246E-02	1.627E-01	2.775E-01	0.000E+00	FAIL ABUN
[illegible]	8.001E-03	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:34:15.90

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[[illegible].GAMMA.ARCHIVE.[illegible]]20167483[illegible]
[illegible]       : 7[illegible]
```

[illegible]	2614	4.67	[illegible]	3.738E[illegible]	[illegible]	12.[illegible]
2[illegible]	33	7.49	[illegible]00	4.562E-0[illegible]	[illegible]	151.2[illegible]
295.21	178	19.20	4.021E+00	1.111E+00	1.111E+00	39.27

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	222	37.20*	3.493E+00	8.268E-01	8.2[illegible]E-01	29.7[illegible]

Line No:

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

Total number of lines in spectrum	23	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	22	95.65%

Nuclide Type :

K" = Key

cepted

Sample ID : G1201874834
Acquisition date : 14-JUL-2009 12:33:44

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	49.99	197	1256	1.62	99.75	96	8	5.48E-02	63.6	7.33E+00	T
0	186.26	135	363	1.02	372.34	367	11	3.74E-02	59.7	5.52E+00	T
0	338.47	69	178	0.91	676.86	673	9	1.92E-02	74.2	3.61E+00	T
0	610.12	190	177	1.77	1220.31	1212	18	5.27E-02	36.4	2.17E+00	T
0	[illegible]	[illegible]	159	[illegible]	[illegible]	1816	14	[illegible]	[illegible]	[illegible]	[illegible]

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:34:21.43

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Acquisition date : 14-JUL-2009 12:33:44  Detector SN#     :               *
* Detector ID      : GAM13                 Sensitivity      : 5.00000       *
* Geometry         : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 01:00:00.00         Abundance limit : 75.00000       *
* Elapsed real time: 0 01:00:01.74         Half life ratio : 8.00000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 7-JUL-2009 00:00:00.  Nuclide Library : SOLID          *
```

PO-212	8.114E-01	2.421E-01	1.748E-01	1.588E-02	[illegible]
PB-214	8.268E-01	2.458E-01	2.445E-01	2.189E-02	[illegible]
PO-214	8.268E-01	[illegible]	[illegible]	[illegible]	[illegible]
PO-216	[illegible]	[illegible]	1.748E-01	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RA-224	[illegible]	1.306E+00	[illegible]	[illegible]	[illegible]
TH-228	8.114E-01	2.421E-01	[illegible]	[illegible]	[illegible]
TH-234	2.387E-01	1.230E+00	1.512E+00	2.774E-01	0.158
U-238	2.387E-01	1.230E+00	1.512E+00	2.774E-01	0.158

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-241	1.366E+01	1.447E+00	2.452E-01	2.493E-02	55.724
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AM-241	1.742E-01	1.226E-01	1.036E-01	7.228E-03	1.682

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.094E+00		6.997E-01	1.064E+00	8.000E-02	-1.028
NA-22	-6.454E-02		6.364E-02	9.111E-02	5.142E-03	-0.708
NA-24	-4.946E-05		1.203E-04	Half-Life too short		
AL-26	4.048E-02		4.984E-02	9.586E-02	5.409E-03	0.422
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RU-1[illegible]	-3.975E-01		6.699E-01	1.044E+00	1.345E-01	-0.381
RU-106	-3.975E-01		6.687E-01	1.044E+00	8.219E-02	-0.381
AG-108M	1.746E-02		7.811E-02	1.330E-01	8.944E-03	0.131
AG-110M	4.341E-02		9.526E-02	1.393E-01	1.170E-02	0.312
IN-111	1.475E-01		3.369E-01	5.078E-01	4.001E-02	0.290
IN-113M	8.723E-02		9.330E-02	1.575E-01	9.813E-03	0.554
SN-113	8.723E-02		9.330E-02	1.575E-01	9.813E-03	0.554
IN-114M	-1.099E-01		3.065E-01	4.185E-01	3.308E-02	-0.262
CD-115	2.723E-01		2.191E+00	3.659E+00	2.608E-01	0.074
SN-117M	5.098E-03		5.777E-02	9.267E-02	8.092E-03	0.055
SB-122	4.838E-01		6.568E-01	1.129E+00	8.385E-02	0.429
I-123	-6.549E-07		2.901E-04	Half-Life too short		
TE-123M	-4.790E-05		4.244E-02	6.775E-02	5.916E-03	-0.001
[illegible]	-2.[illegible]		4.697E-01	[illegible]	4.011E-02	-0.251
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	-3.542E-01		8.280E-01	1.372E+00	1.088E-01	-0.258
LU-177M	-1.966E-01		3.867E-01	6.000E-01	3.639E-02	-0.328
HF-181	6.145E-02		8.688E-02	1.503E-01	1.010E-02	0.409
W-181	4.039E-02		3.175E-01	4.859E-01	4.482E-02	0.083
TA-182	1.161E-01		2.820E-01	4.903E-01	2.729E-02	0.237
RE-183	-6.246E-02		1.661E-01	2.595E-01	2.148E-02	-0.241
RE-184	8.001E-03		3.955E-01	6.589E-01	5.173E-02	0.012
OS-185	-5.014E-03		9.267E-02	1.504E-01	1.210E-02	-0.033
RE-188	7.196E-02		2.514E-01	4.088E-01	3.741E-02	0.176
W-188	9.208E-01		1.415E+01	2.054E+01	1.559E+00	0.045
IR-192	1.431E-02		6.148E-02	1.018E-01	7.448E-03	0.141
AU-195	-1.089E-01		3.246E-01	5.022E-01	4.667E-02	-0.217
TL-200	-1.486E+00		7.184E+00	1.146E+01	7.334E-01	-0.130
TL-201	1.850E+00		2.113E+00	3.504E+00	2.746E-01	0.528
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	1.		1.193E+00	[illegible]	1.	371
[illegible]	1.		1.193E+00	[illegible]	1.	371
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-3		[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
TH-229	[illegible]E-01		[illegible]	1.405[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
PA-2[illegible]	[illegible]01		[illegible]	2.818E+[illegible]	[illegible]	[illegible]
U-2[illegible]	[illegible]-01	+	[illegible]	3.813E-[illegible]	[illegible]	[illegible]
[illegible]	[illegible]E-0[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.816E-01		1.407E-01	2.169E-01	2.160E-02	-0.837
CM-247	-1.640E-02		8.228E-02	1.304E-01	7.766E-03	-0.126
CF-249	-7.953E-02		8.672E-02	1.318E-01	7.825E-03	-0.604
CF-251	1.160E-01		1.986E-01	3.252E-01	2.558E-02	0.357

VAX/VMS Nuclide Identification Report Generated

```
*************************************************************************
*                          GEL Laboratories LLC                         *
*                              2040 Savage Road                         *
*                            Charleston, SC 29414                       *
*************************************************************************
*                                                                       *
*                              DETECTOR DATA                            *
*                                                                       *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201874834      *
* Acquisition date  : 14-JUL-2009 12:33:44 Detector SN#     :           *
* Detector ID       : GAM13                Sensitivity      : 5.000     *
* Geometry          : CAN                  Energy tolerance: 1.500      *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000     *
* Elapsed real time:    0 01:00:01.74      Half life ratio : 8.000      *
*************************************************************************
*                                                                       *
*                               SAMPLE DATA                             *
*                                                                       *
* Sample date       :  7-JUL-2009 00:00:00 Nuclide Library : SOLID      *
* Sample ID         : G1201874834          Analyst initials: MXR1       *
* Batch Number      : 882713               Sample Quantity : 1.5544E+02 GRAM *
* Recovery          :    1.[illegible]     Carri[illegible] :    0.00[illegible] *
*[illegible]
```

[illegible]

[illegible]				
[illegible]				
PO-21[illegible]	[illegible]		[illegible]	
PO-21[illegible]	[illegible]		[illegible]	
R[illegible]	8.651E-01	[illegible]	[illegible]	[illegible]
TH-228	8.114E-01	2.373E-01	9.2[illegible]0E-02	1.211E-01
TH-234	2.387E-01	1.205E+00	8.278E-01	6.150E-01
U-238	2.387E-01	1.205E+00	8.278E-01	6.150E-01
AM-241	1.366E+01	1.418E+00	1.344E-01	7.233E-01
AM-243	2.676E-01	8.095E-02	5.137E-02	4.130E-02
ANH-511	1.742E-01	1.202E-01	5.379E-02	6.130E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-1.094E+00	6.857E-01	5.536E-01	3.499E-01	NOT IDENT.
NA-22	-6.454E-02	6.237E-02	4.615E-02	3.182E-02	NOT IDENT.
NA-24	-4.946E+01	2.357E+02	0.000E+00	1.203E+02	SHORT HLIF
AL-26	4.048E-02	4.884E-02	4.807E-02	2.492E-02	NOT IDENT.
K-40	8.487E-01	7.086E-01	6.308E-01	3.615E-01	NOT IDENT.
TI-44	3.032E-01	6.144E-02	4.467E-02	3.135E-02	FAIL ABUN

SC-46	3.071E-02	9.950E-02	8.760E-02	5.077E-02	NOT IDENT.
V-48	1.313E-01	1.413E-01	1.274E-01	7.211E-02	NOT IDENT.
CR-51	4.273E-01	5.721E-01	5.207E-01	2.919E-01	NOT IDENT.
MN-52	-4.232E-02	1.378E-01	1.107E-01	7.031E-02	FAIL ABUN
MN-54	2.164E-02	8.338E-02	7.381E-02	4.254E-02	NOT IDENT.
CO-56	-2.815E-02	9.506E-02	8.111E-02	4.850E-02	FAIL ABUN
CO-58	2.024E-02	8.575E-02	7.606E-02	4.375E-02	NOT IDENT.
FE-59	-1.190E-02	2.234E-01	1.875E-01	1.140E-01	NOT IDENT.
ZN-65	-1.820E-01	2.317E-01	1.842E-01	1.182E-01	NOT IDENT.
GE-68	-3.425E-01	3.342E+00	2.802E+00	1.705E+00	NOT IDENT.
AS-73	-1.476E-01	6.241E-01	5.354E-01	3.184E-01	NOT IDENT.
AS-74	9.234E-02	1.435E-01	1.292E-01	7.319E-02	NOT IDENT.
SE-75	-1.751E-03	7.638E-02	6.823E-02	3.897E-02	FAIL ABUN
BR-77	-6.629E-02	2.456E+00	2.156E+00	1.253E+00	FAIL ABUN
SR-82	-3.721E-01	7.802E-01	6.657E-01	3.981E-01	NOT IDENT.
RB-83	-3.598E-02	1.408E-01	1.219E-01	7.185E-02	NOT IDENT.
RB-84	4.753E-02	1.601E-01	1.410E-01	8.170E-02	NOT IDENT.
KR-85	2.638E+01	1.686E+01	1.435E+01	8.602E+00	NOT IDENT.
SR-85	1.248E-01	7.980E-02	6.793E-02	4.071E-02	NOT IDENT.
RB-86	-6.828E-01	1.654E+00	1.357E+00	8.438E-01	NOT IDENT.
Y-88	6.542E-02	5.231E-02	5.461E-02	2.669E-02	NOT IDENT.
ZR-88	-3.649E-03	6.365E-02	5.405E-02	3.247E-02	NOT IDENT.
Y-91	-1.523E+01	2.486E+01	2.007E+01	1.269E+01	NOT IDENT.
NB-94	-7.769E-02	8.090E-02	6.411E-02	4.127E-02	NOT IDENT.
NB-95	2.157E-03	8.898E-02	7.838E-02	4.540E-02	NOT IDENT.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TB-160	2.097E-01	3.422E-01	3.071E-01	1.746E-01	NOT IDENT.
HO-166M	-5.154E-02	1.429E-01	1.181E-01	7.293E-02	NOT IDENT.
TM-171	2.271E+00	2.553E+01	2.174E+01	1.303E+01	FAIL ABUN
LU-176	3.521E-02	4.574E-02	4.183E-02	2.334E-02	FAIL ABUN
LU-177	-3.542E-01	8.114E-01	7.295E-01	4.140E-01	NOT IDENT.
LU-177M	-1.966E-01	3.790E-01	3.133E-01	1.934E-01	FAIL ABUN
HF-181	6.145E-02	8.514E-02	7.820E-02	4.344E-02	NOT IDENT.
W-181	4.039E-02	3.112E-01	2.659E-01	1.588E-01	NOT IDENT.
TA-182	1.161E-01	2.763E-01	2.486E-01	1.410E-01	NOT IDENT.
RE-183	-6.246E-02	1.627E-01	1.388E-01	8.303E-02	FAIL ABUN
RE-184	8.001E-03	3.876E-01	3.486E-01	1.978E-01	FAIL ABUN
OS-185	-5.014E-03	9.082E-02	7.759E-02	4.634E-02	FAIL ABUN
RE-188	7.196E-02	2.464E-01	2.190E-01	1.257E-01	NOT IDENT.
W-188	9.208E-01	1.387E+01	1.083E+01	7.075E+00	FAIL ABUN
IR-192	1.431E-02	6.026E-02	5.356E-02	3.074E-02	FAIL ABUN
AU-195	-1.089E-01	3.181E-01	2.720E-01	1.623E-01	FAIL ABUN
TL-200	-1.486E+00	7.040E+00	6.004E+00	3.592E+00	NOT IDENT.
TL-201	1.850E+00	2.070E+00	1.873E+00	1.056E+00	NOT IDENT.
TL-202	6.004E-02	1.025E-01	9.427E-02	5.231E-02	NOT IDENT.
HG-203	4.059E-02	6.504E-02	5.950E-02	3.319E-02	NOT IDENT.
BI-207	5.817E-03	1.388E-01	1.177E-01	7.084E-02	FAIL ABUN
TL-207	-3.317E-01	1.250E+00	1.079E+00	6.380E-01	FAIL ABUN
PO-209	4.631E+00	2.161E+01	1.889E+01	1.103E+01	NOT IDENT.
BI-210	1.595E+00	1.169E+00	1.010E+00	5.964E-01	NOT IDENT.
PB-210	1.595E+00	1.169E+00	1.010E+00	5.964E-01	NOT IDENT.
PO-210	1.595E+00	[illegible]	[illegible]	[illegible]	[illegible]

```
*************************************************************************
*                        GEL Laboratories LLC                           *
*                           2040 SAVAGE ROAD                            *
*                          CHARLESTON ,SC 29417                         *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                *
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```

ENERGY	MDA COUNTS
46.50	428.6342
46.50	428.6342
46.50	428.6342
48.70	641.4492
49.72	831.1990
51.35	934.6563
52.39	962.6985
52.97	1001.8633
53.15	956.6517
53.44	957.7360
54.07	974.1633
56.28	943.6683
56.28	943.6794
57.37	1007.1532
57.53	1007.7480
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

77.11	417.9942
77.11	417.9942
77.11	417.9942
78.38	370.9506
79.62	391.8290
79.80	392.0348
79.80	392.0348
80.11	375.6317
80.18	375.7097
80.30	375.8390
80.30	375.8390
80.57	405.4982
81.00	422.8028
81.07	422.8892
81.07	422.8892
81.07	422.8892
81.07	422.8892
82.60	436.9390
83.37	411.5785
83.78	386.6588
83.78	386.6588
83.78	386.6588
83.78	386.6588
84.21	401.2557
84.40	418.4326
84.90	387.8754
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

111.76	243.3204
112.95	236.8910
115.19	246.2219
116.30	239.8918
117.00	228.3097
117.00	228.3097
117.66	233.2440
121.11	243.2370
121.62	243.5022
121.78	243.5851
122.06	243.7303
122.32	243.8647
122.32	243.8647
122.32	243.8647
122.32	243.8647
123.07	244.2525
127.23	227.0686
129.76	252.9073
131.20	229.4384
133.02	223.9388
133.54	251.6621
135.34	222.8473
136.00	224.1982
136.25	224.3077
136.48	199.9470
140.51	239.024[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[

209.75	231.1984
209.75	231.1984
210.97	231.5925
215.65	232.1836
216.55	231.5607
218.09	230.2271
222.10	253.4299
223.80	247.5838
226.40	241.0755
227.00	241.2654
227.08	241.2914
227.20	251.4594
228.16	246.2425
228.18	245.3263
228.18	245.3263
231.56	244.5533
235.69	208.6021
236.00	208.6841
236.00	208.6841
238.60	267.6981
238.63	267.7068
238.63	267.7068
238.63	267.7068
239.00	267.8314
240.98	412.4983
241.98	394.9912
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

296.50	195.0481
297.23	208.0000
298.57	193.8747
299.80	171.6624
299.80	171.6624
300.09	150.8521
300.09	150.8521
300.09	150.8521
300.10	150.8544
300.12	150.8567
301.29	146.2221
302.84	192.1250
303.76	199.3565
303.91	213.4848
304.40	227.7001
304.40	227.7001
304.84	217.7238
306.84	162.6214
308.46	167.9504
311.98	197.9993
316.51	169.3258
318.01	198.1828
319.02	183.0451
319.41	170.8402
320.08	156.6210
323.87	185.9824
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

418.52	144.1093
423.70	173.8665
427.08	186.7019
427.89	188.1689
432.53	203.3075
433.93	190.8633
439.47	183.5039
439.56	171.7058
439.89	171.7496
443.98	188.6929
444.90	184.2634
445.03	186.1052
445.03	186.1052
445.03	186.1052
445.03	186.1052
453.90	186.4294
463.38	220.1064
468.07	222.7178
473.00	153.6643
475.06	165.0840
475.35	176.3108
476.78	187.6990
477.59	202.7567
477.96	185.9868
482.03	146.2214
484.57	156.8133
[illegible]	163.[illegible]
490.[illegible]	154.[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	0.[illegible]
[illegible]	13[illegible]
[illegible]	[illegible]
[illegible]	136.[illegible]
[illegible]	121.[illegible]
5[illegible]	[illegible]68[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
5[illegible]	[illegible]000
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]63.90	[illegible]
[illegible]8.70	[illegible]
[illegible]4.32	127.[illegible]
[illegible]	[illegible]
569.67	127.1063
573.80	118.4683
5[illegible]1.00	118.[illegible]
574.64	131.4779
578.91	118.171[illegible]
579.30	111.5413
583.14	139.1663
585.48	138.6913
591.81	119.7612
592.07	119.7786
593.00	120.8525
595.88	101.8926
600.56	117.3481
602.52	0.0000
602.71	126.6113
602.71	126.6113
603.60	116.5442
604.41	114.9077
604.70	114.9271
609.31	108.7973
609.31	108.7973
609.31	108.7973

609.31	108.7973
610.33	108.8626
612.46	108.6563
614.37	100.2779
618.01	109.0026
621.84	108.5594
621.84	108.5594
631.29	114.2899
633.02	110.2784
633.10	110.2837
634.78	112.4515
635.90	102.2001
636.97	88.8324
645.85	114.1841
646.12	111.0856
656.30	130.4993
657.75	118.4134
657.90	0.0000
661.65	118.3162
661.65	118.3162
664.57	103.1204
666.33	120.7135
666.33	120.7135
675.00	118.1113
677.61	111.9366
685.20	106.0254
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

785.46	107.6974
792.07	121.0683
795.84	109.1519
796.30	118.5044
801.93	115.0698
805.60	134.0043
810.29	95.7889
810.76	99.5669
815.85	100.7370
817.79	95.1724
818.51	93.3181
819.60	92.4193
826.30	97.4280
828.27	96.5651
831.60	116.6188
831.96	121.3802
834.83	100.6452
836.80	0.0000
846.75	124.0808
848.13	104.1013
856.28	0.0000
856.80	125.5843
860.37	129.6167
867.32	124.2260
867.82	119.4388
871.10	128.2863
873.19	144.8120
874.81	145.8788
875.33	0.0000
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

1038.76	0.0000
1045.16	111.5508
1046.59	99.2070
1048.07	107.5335
1050.47	110.7312
1050.47	110.7312
1063.62	106.0549
1076.63	122.2178
1077.35	113.8876
1085.78	122.6129
1099.22	117.9245
1112.02	96.2395
1112.84	105.7861
1115.52	131.2959
1120.29	89.0894
1120.29	89.0894
1120.29	89.0894
1120.29	89.0894
1120.51	90.1569
1121.28	92.3030
1124.00	0.0000
1129.67	87.2451
1131.51	0.0000
1147.95	0.0000
1167.94	44.3387
1173.22	55.0570
1175.09	59.2567
1177.93	55.6055
1189.05	51.1558
1204.90	44.8744
1205.75	47.6915
1213.00	48.7391
[illegible]	[illegible]
[illegible]	.458[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[

1706.46	0.0000
1750.46	0.0000
1764.49	11.4097
1764.49	11.4097
1764.49	11.4097
1764.49	11.4097
1770.23	10.1549
1771.40	11.8509
1791.20	0.0000
1808.65	6.7221
1836.01	4.8306

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201874834

Total Uranium Activity	6.6438E-01	ug/g
Total Uranium Counting Unc.	3.5896E+00	ug/g
Total Uranium Tpu	1.8314E-06	ug/g
Total Uranium Mda	2.4666E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G1201874834      *
*   ANALYST       : MXR1                      DETECTOR   : GAM13            *
*   SAMPLE DATE   :  7-JUL-2009 00:00:00.00   COUNT TIME :    0 01:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 12:33:44.30    SAMPLE ALQT:  155.440 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 2.910E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.529E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 5.954E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 2.921E+00
```

Radiochemistry Batch Checklist, Rev 9

Batch# 883039 Product: H3 Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time	✓		
[illegible] required			
Aux data is correct.			N/A
Client Special requirements page has been checked	✓		
Raw Data and/ or spectrum are included a[illegible]	✓		
QC data entered into QC database and bat[illegible]	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if appl[illegible]	✓		[illegible]
Batch non-conformances second reviewed and disposition verified to be completed.	✓		N/A [illegible] 7/17/09
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Nana Marie Hunt

Secondary Review Performed By: Heather G. McCarty 7/17/09

7/17/09

Tritium Que Sheet

17-JUL-09

Batch #: 883039 **Analyst** [illegible] **nal Due Date:** 09-JUL-09

Spike Isotope: Hydrogen-3 **Spike C** N/A **Exp** [illegible] N/A

LCS Isotope: Hydrogen-3 **LCS C** [illegible] **Expiratio** [illegible] at [illegible]

Prep Date: 7/13/09 **Initials:** KX [illegible] 7/14/09

Sample ID	Client Samp ID	Type	[illegible]	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	Dist Vol (mL) TOTAL Moisture
232433001-1	CAMO-09-6007	SAMPL	[illegible]	10	35-1	21		626.41	600.10	26.31 *
232746001-1	CAMO-09-9956	SAM	[illegible]	10	54-2	1		390.82	336.11	54.71
232746002-1	CAMO-09-9950	SAM	[illegible]	10	54-3	2		479.50	429.15	50.35
232746003-1	CAMO-09-9952	SA	[illegible]	10	54-4	3		353.54	313.65	39.89
232746004-1	CAMO-09-9958	SA	[illegible]	10	54-5	4		504.96	453.45	51.51
232746005-1	CAMO-09-9957	SA	[illegible]	10	54-6	5		395.05	355.15	39.90
232746006-1	CAMO-09-9951	SAM	[illegible]	10	54-7	6		471.75	424.10	47.65
232746007-1	CAMO-09-10031	SA	[illegible]	10	54-8	7		641.44	569.60	71.84
232746008-1	CAMO-09-9990	SAM	[illegible]	10	54-9	8		682.54	548.76	133.78
232754001-1	CAMO-09-6615	SAM	[illegible]	10	54-10	9		321.59	298.44	23.15
232754002-1	CAMO-09-6614	SA	[illegible]	10	54-11	10		431.06	389.25	41.81
232754003-1	CAMO-09-6613	SAM	[illegible]	10	54-12	11		454.58	410.49	44.09
232758002-1	CAMO-09-9962	SAM	[illegible]	10	27-1	12		634.14	537.12	97.02
232758003-1	CAMO-09-9964	SAM	[illegible]	10	27-2	13		572.53	493.52	79.01
232758004-1	CAMO-09-9963	SA	[illegible]	10	27-3	14		706.07	588.16	117.91
232758005-1	CAMO-09-10032	SA	[illegible]	10	27-4	15		646.69	550.33	96.36
232851001-1	CAMO-09-7145	SA	[illegible]	10	27-5	16		566.54	487.22	79.32
232851002-1	CAMO-09-7146	SA	[illegible]	10	27-6	17		547.42	494.32	53.10
1201875658-1	MB for batch 883039	M	[illegible]	10	27-7	18		20	0	20
1201875659-1	CAMO-09-7145(232851001DUP)	D	[illegible]	10	27-8	19		566.54	487.22	79.32
1201875660-1	LCS for batch 883039	LCS	[illegible]	10	28-1	20		20	0	20

7/17/09 **Bkg Rack #:** 54-1

* 30-1

Comments:

Instrument Used (circle as appropriate): [illegible] 70[illegible] *(Gold) 7070506, LS6500 (Green) 7067404, Wallac (Pink) 2200082, Wallac (White) 41[illegible]*

prepared with dead water? Yes/No

ibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly*

Ecoscint Ultra (10 mL sample/13 mL Econscint Ultra)

ta Reviewed By: [signature] 7/17/09

Alecia M McCord

DATE	7/13/2009		CH NUMBER	883039

Sample #	Sample Wet (g)	(B... usin...	...e rface ture	mLs liquoted into LSC vial	Collection Tube Number
232433001	626.41			10	82
232746001	390.82			10	912
232746002	479.50			10	706
232746003	383.54			10	801
232746004	504.96			10	98
232746005	395.05			10	102
232746006	471.75			10	610
232746007	641.44			10	151
232746008	682.54			10	206
232754001	321.59			10	306
232754002	431.06			10	701
232754003	454.58			10	48
232758002	634.14			10	1707
232758003	572.53			10	73
232758004	706.07			10	136
232758005	646.69			10	8
232851001	566.54			10	914
232851002	547.42			10	24
MB	20			10	6101
LCS	20			10	413

AHM
7/17/09

Filename : H3
File type : Ex
Version # :

Batch :
Analyst :
Prep Date :

H-3 Abundance : 1
Method Uncertainty : 0.0
Geometry: 10m
Ecc

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2544.29
LCS Volume Added: 0.10

Procedure Code : LSC_VH3S
Parmname : Tritium
Required MDC : 250 pCi/L
Halflife of Tritium : 12.28 years

Sample Characteristics

Pos.	Sample ID	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232433001.1	600.10	4.20%	21	6/23/2009 12:00
2	232746001.1	336.11	14.00%	1	6/29/2009 12:00
3	232746002.1	429.15	10.50%	2	6/29/2009 12:00
4	232746003.1	343.65	10.40%	3	6/29/2009 12:00
5	232746004.1	453.45	10.20%	4	6/29/2009 12:00
6	232746005.1	355.15	10.10%	5	6/29/2009 12:00
7	232746006.1	424.10	10.10%	6	6/29/2009 12:00
8	232746007.1	589.60	11.20%	7	6/29/2009 12:00
9	232746008.1	548.76	19.60%	8	6/29/2009 12:00
10	232754001.1	298.44	7.20%	9	6/30/2009 12:00
11	232754002.1	389.25	9.70%	10	6/30/2009 12:00
12	232754003.1	410.49	9.70%	11	6/30/2009 12:00
13	232758002.1	537.12	15.30%	12	6/30/2009 12:00
14	232758003.1	493.52	13.80%	13	6/30/2009 12:00
15	232758004.1	588.16	16.70%	14	6/30/2009 12:00
16	232758005.1	550.33	14.90%	15	6/30/2009 12:00
17	232851001.1	487.22	14.00%	16	7/1/2009 12:00
18	232851002.1	4.32	9.70%	17	7/1/2009 12:00
19	1201875658.1	0.00	100.00%	18	7/13/2009 0:00
20	1201875659.1	7.22	[illegible]%	19	7/1/2009 12:00
21	1201875660.1	0.00	[illegible]%	20	7/13/2009 0:00

Hcm
7/17/09

| Count raw Data | | |

Notes:
1 - Results are decay corrected to Sample D.
2 - Reference date for Spike Activity (dom/m
3 - Spike Nominals are decay corrected to S

Results

Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	M	c. /L		SIGMA Prep.	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	157.4682	111.1725	250						SAMPLE				
2	143.4304	101.2631	250						SAMPLE				
3	142.1582	100.3649	250				.7768		SAMPLE				
4	140.4447	99.1552	250				.6734		SAMPLE				
5	166.0279	117.2171	250				.3804		SAMPLE				
6	161.5436	114.0511	250				.6022		SAMPLE				
7	161.0224	113.6832	250				.1338		SAMPLE				
8	161.5456	114.0526	250				.7607		SAMPLE				
9	161.9678	114.3506	250				.3569		SAMPLE				
10	165.2031	116.6348	250				.8447		SAMPLE				
11	160.5873	113.3760	250			.020	.9960		SAMPLE				
12	164.5389	116.1659	250			.070	.8878		SAMPLE				
13	160.3833	113.2320	250			.110	1261		SAMPLE				
14	161.4218	113.9651	250						SAMPLE				
15	160.4881	113.3060	250						SAMPLE				
16	159.8747	112.8729	250		02				SAMPLE				
17	162.9922	115.0739	250		.7				SAMPLE				
18	161.8211	114.2471	250										
19	163.0280	115.0992	250										
20	161.9287	114.3230	250				8	232851001.1	DUP	37.0%	0.7441		
21	263.4888	186.0254	250				2		LCS			5730.3738	122.1%

AGW
7/17/09

Instrument Type	LS 6000
Data Capture Date	16 Jul 2009 15:25:05
User Filename	C:\LSCCAPTURE\RED\USER07\UN071601.BSF

User Number	7
User Id	TRITIUM
User Comments	BROWN

Scintillator Choice: LIQUID

	Sa	Rack	Time	H#	Raw CPM1	CPM Iso1	%Err1	LumEx	Eff Time
BKG	1	30-1	120.00	111.0	8.52	3.40	15.68	10.66	125.14

ID:TRITIUM 17 JUL 2007 12

LP #: 7 COMMENT:BROWN

PRESET TIME : 120.0

DATA CALC :	[illegible]	INH	:YES	SAMPLE REPEATS:	1	PRINT	: [illegible]
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:E[illegible]
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: [illegible]
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0		
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

ID:TRITIUM 15 JUL 2009 22:36

USER: 4 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERR	LUMEX %	ELAPSED TIME
1	54-1	95.00	129.3	[illegible]	8.02	[illegible]	[illegible]	1.01	[illegible]
2	54-2	95.00	132.6	7.17	[illegible]	45.59	[illegible]	[illegible]	[illegible]
3	54-3	95.00	131.3	6.91	8.13	44.87	3.08	1.04	[illegible]
4	54-4	95.00	129.5	7.43	7.73	44.94	3.07	0.99	[illegible]
~~5~~	~~54-5~~	~~10.72~~	~~134.0~~	[illegible]	~~[illegible]~~	~~47.10~~	[illegible]	~~1.17~~	[illegible]
6	54-6	SAMPLE TERMINATED							
7	54-7	SAMPLE TERMI[illegible]							
8	[illegible]	TERMI[illegible]							
9	[illegible]	TERMIN[illegible]							

[illegible]

C[illegible]ibration [illegible]essful

[illegible]

Calc[illegible] :

C[illegible]ati[illegible] [illegible]ful

ID:TRITIUM 16 JUL 2009 06:35

USER: 4 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STD
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: [illegible] BKG. SUB: [illegible]

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	DAC	TIME	H#	[illegible]	[illegible]	LUMEX %	[illegible]
[illegible] SAMPLE							
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	[illegible]	[illegible]	128.0	40.00	[illegible]	40.00	[illegible]
20	[illegible]	[illegible]	127.5	[illegible]	[illegible]	40.00	[illegible]

ID:TRITIUM 16 JUL 2000 08:00

USER: 4 COMMENT:SILVER

PRESET TIME : 55.00

DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STD
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: [illegible] - 200.0 %ERROR: 0.00 FACTOR: [illegible] BKG SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: [illegible] BKG. SUB. 0

SCM	POS	TIME	H#	[illegible]	[illegible]	LUMEX	[illegible]
N	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	%	[illegible]

MISSING SAMPLE

[illegible]

Filename: 3:43 PMab

Instrument Type	LS 6000
Data Capture Date	16 Jul 2009 07:53:15
User Filename	C:\LSCCAPTURE\SILVER\USER03\UN071601.BSF
User Number	3
User Id	TRITIUM
User Comments	SILVER
Scintillator Choice:	LIQUID

Sample Count Start Time:	16 Jul 2009 15:30:13
Data Capture Date	16 Jul 2009 17:30:21
User Filename	S07071630-1A.XLS
	U07071630-1A.XLS
Spectrum Type	Log Counts
User Number	07
User Id	TRITIUM
User Comment	BROWN
Isotope Name	14C
[illegible]	LIQUID
Sample, Rack-Pos, Time:	1 30-1 100.00
H#, Total Counts:	[illegible] 4520

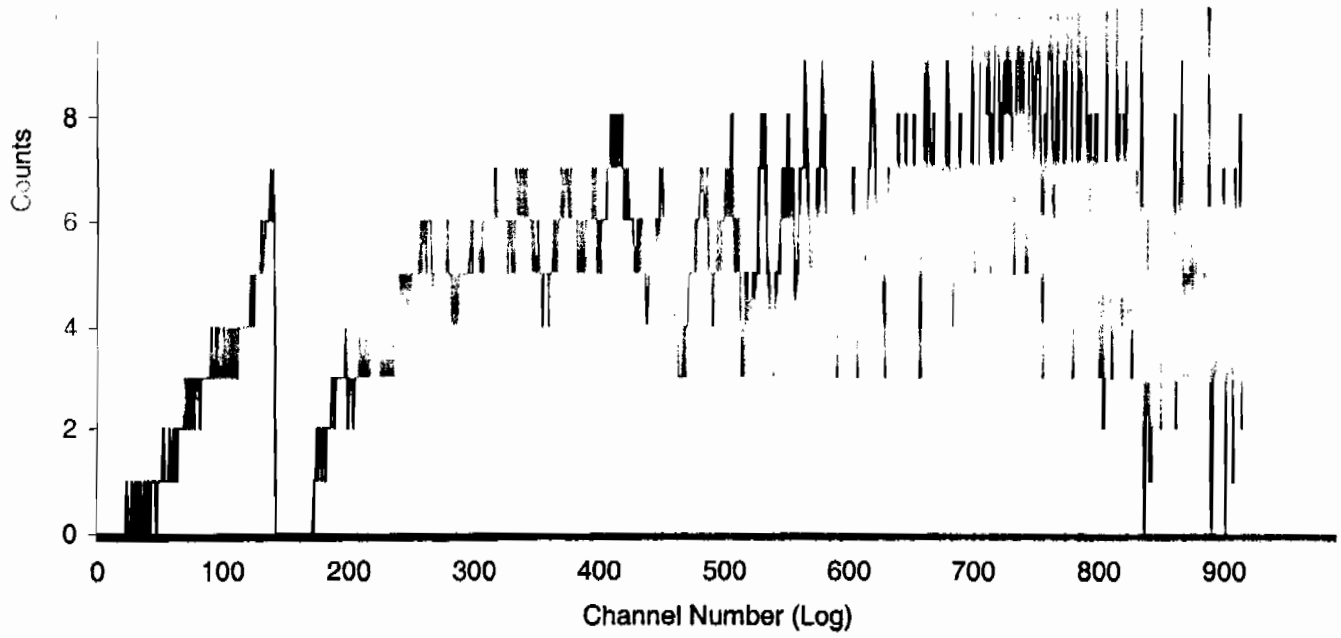

Sample Count Start Time:	**15 Jul 2009 22:46:15**
Data Capture Date	**16 Jul 2009 00:21:38**
User Filename	**S04071654-1A.XLS**
	U04071554-1A.XLS
Spectrum Type	Log Counts
User Number	04
User Id	TRITIUM
User Comment	SILVER
Isotope Name	14C
[illegible]	LIQUID
Sample Rack-Pos, Time:	1 54-1 [illegible]
[illegible] Counts:	[illegible] [illegible]
[illegible]	[illegible]

SPECTRUM PLOT

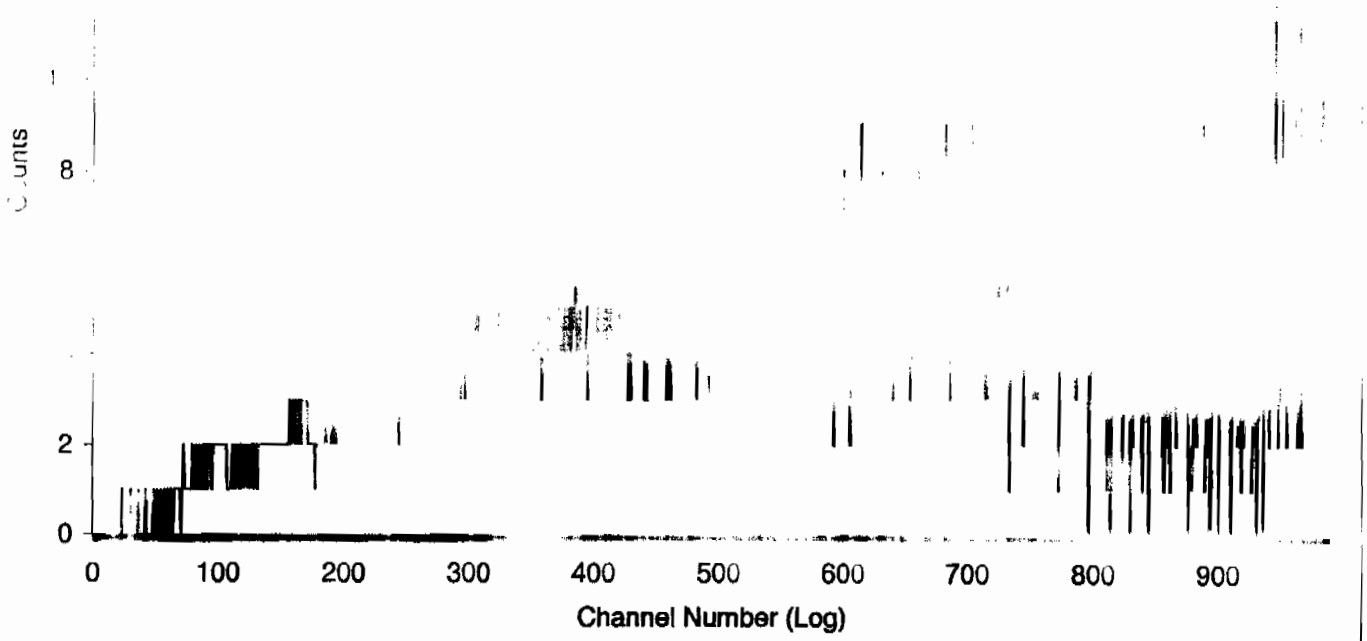

Sample Count Start Time:	**17 Jul 2009 11:56:08**
Data Capture Date	**17 Jul 2009 12:31:47**
User Filename	**S07071735-1A.XLS**
Spectrum Type	Log Counts
User Number	07
User Id	TRITIUM
User Comment	BROWN
Isotope Name	14C
Calibrator	LIQUID
[illegible]	[illegible] 35-1
[illegible]	[illegible]

SPECTRUM PLOT

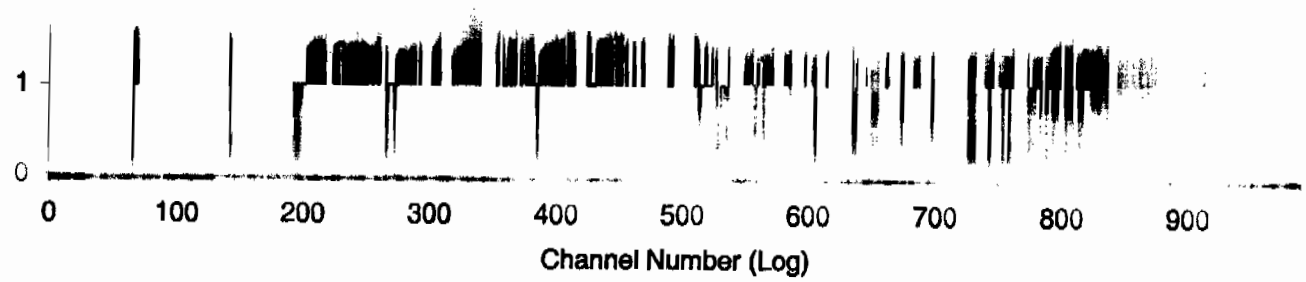

Sample Count Start Time:	**16 Jul 2009 00:24:47**
Data Capture Date	**16 Jul 2009 02:00:11**
User Filename	**S04071654-2A.XLS**
	U04071554-1A.XLS
Spectrum Type	Log Counts
User Number	04
User Id	TRITIUM
User Comment	SILVER
Isotope Name	14C
[illegible]	[illegible]
[illegible]	[illegible] 54-2
[illegible]	[illegible]
[illegible]	[illegible]

SPECTRUM PLOT

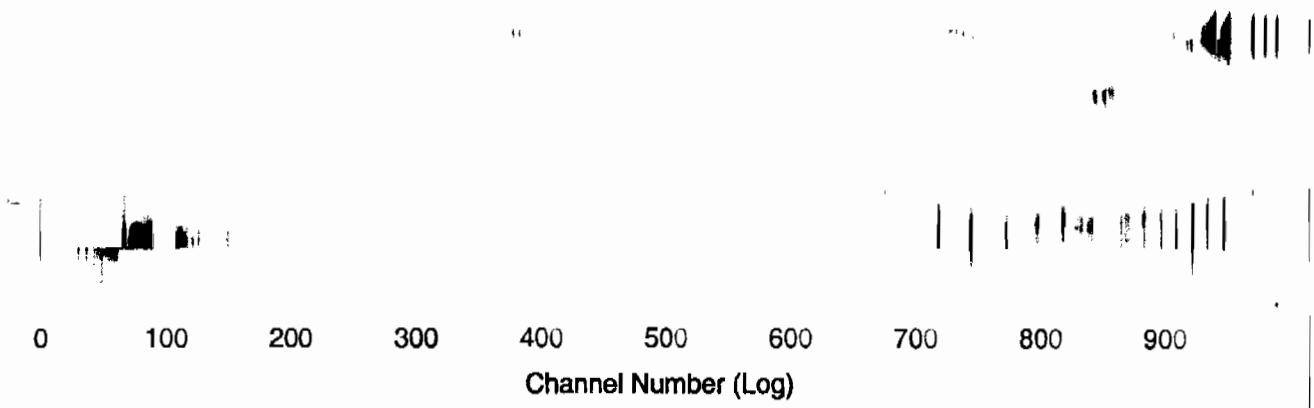

Sample Count Start Time:	**16 Jul 2009 02:03:06**
Data Capture Date	**16 Jul 2009 03:38:30**
User Filename	**S04071654-3A.XLS**
	U04071554-1A.XLS
Spectrum Type	Log Counts
User Number	04
User Id	TRITIUM
User Comment	SILVER
Isotope Name	14C
	GID

SPECTRUM PLOT

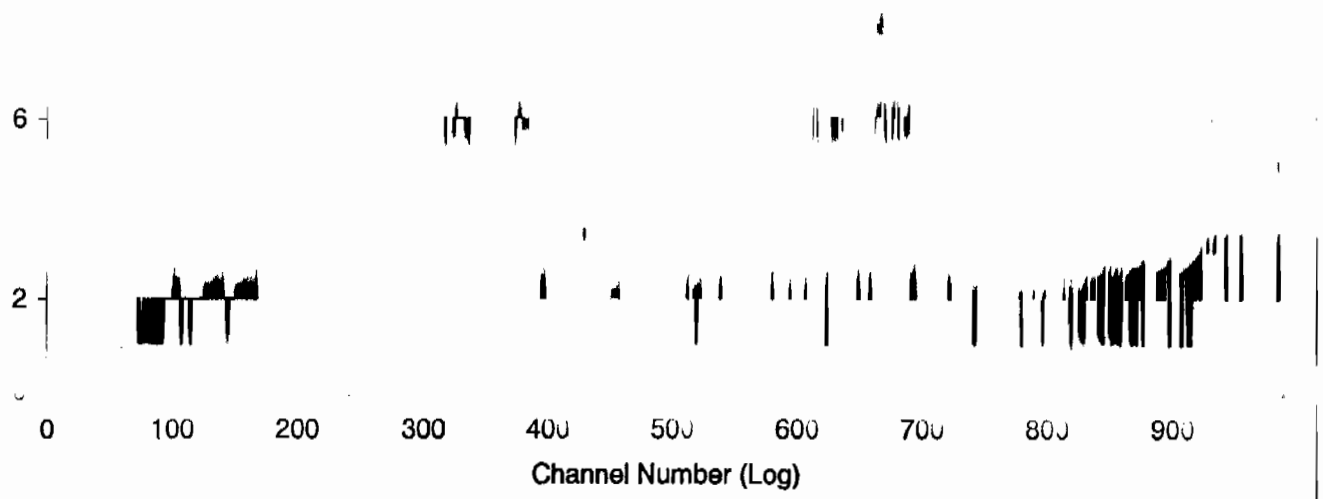

Sample Count Start Time:	16 Jul 2009 03:41:21
Data Capture Date	16 Jul 2009 05:16:45
User Filename	S04071654-4A.XLS
	U04071554-1A.XLS
Spectrum Type	Log Counts
User Number	04
User Id	TRITIUM
User Comment	SILVER
Isotope Name	14C
[illegible]	[illegible]ID

S[illegible] PLOT

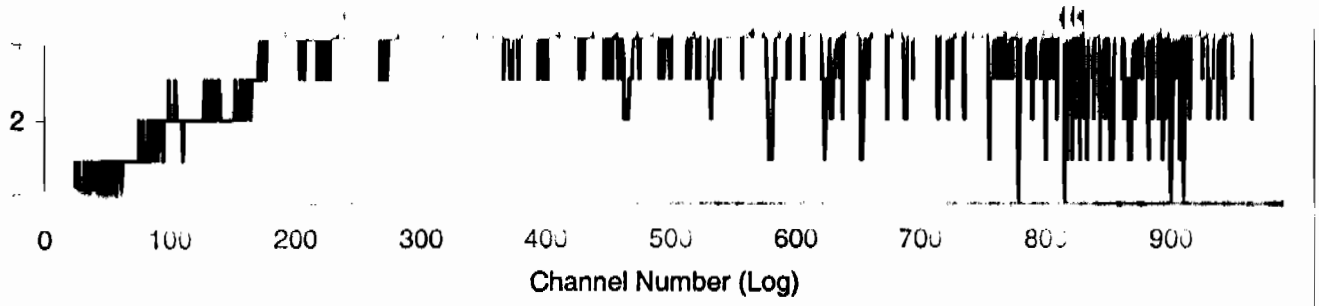

Sample Count Start Time:	16 Jul 2009 06:44:41
Data Capture Date	16 Jul 2009 07:39:10
User Filename	S04071654-5B.XLS
	U04071654-5A.XLS
Spectrum Type	Log Counts
User Number	04
User Id	TRITIUM
User Comment	SILVER
	14C

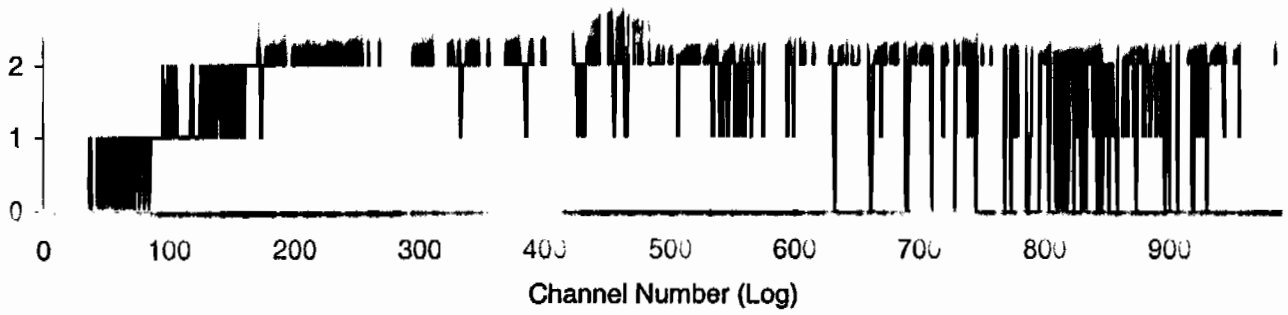

Sample Count Start Time:	**16 Jul 2009 08:11:33**
Data Capture Date	**16 Jul 2009 09:06:57**
User Filename	**S04071654-6B.XLS**
	U04071654-6A.XLS
Spectrum Type	Log Counts
User Number	04
User Id	TRITIUM
User Comment	SILVER
Isotope Name	14C

SPECTRUM PLOT

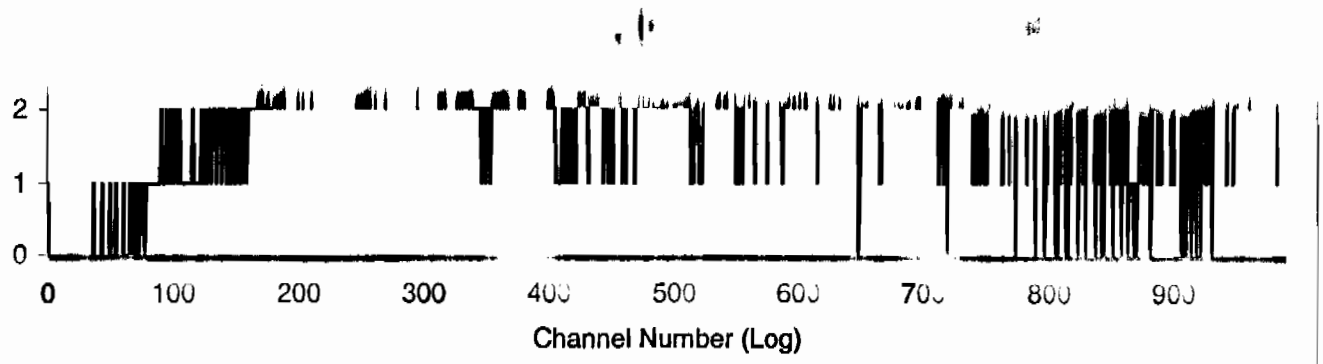

Sample Count Start Time:	16 Jul 2009 09:08:50
Data Capture Date	16 Jul 2009 10:04:14
User Filename	S04071654-7B.XLS
	U04071654-6A.XLS
Spectrum Type	[illegible] Counts
User Number	04
User Id	[illegible]TIUM
User Comment	[illegible]VER
Isotope Name	14C
[illegible]	[illegible]

SPECTRUM PLOT

[illegible]

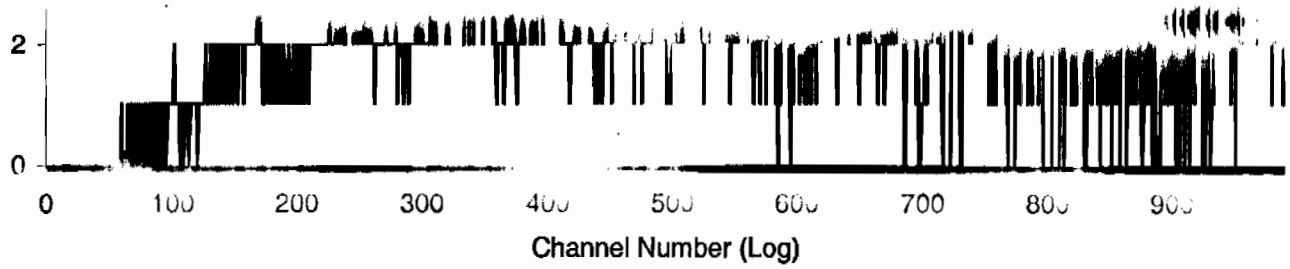

Sample Count Start Time:	**16 Jul 2009 10:06:07**
Data Capture Date	**16 Jul 2009 11:01:41**
User Filename	**S04071654-8B.XLS**
	U0 1071654-6A.XLS
Spectrum T[illegible]	[illegible] Counts
User Number	04
User Id	[illegible]TIUM
User Co[illegible]	[illegible]VER
Is[illegible]	14C

SPECTRUM PLOT

[illegible]UM

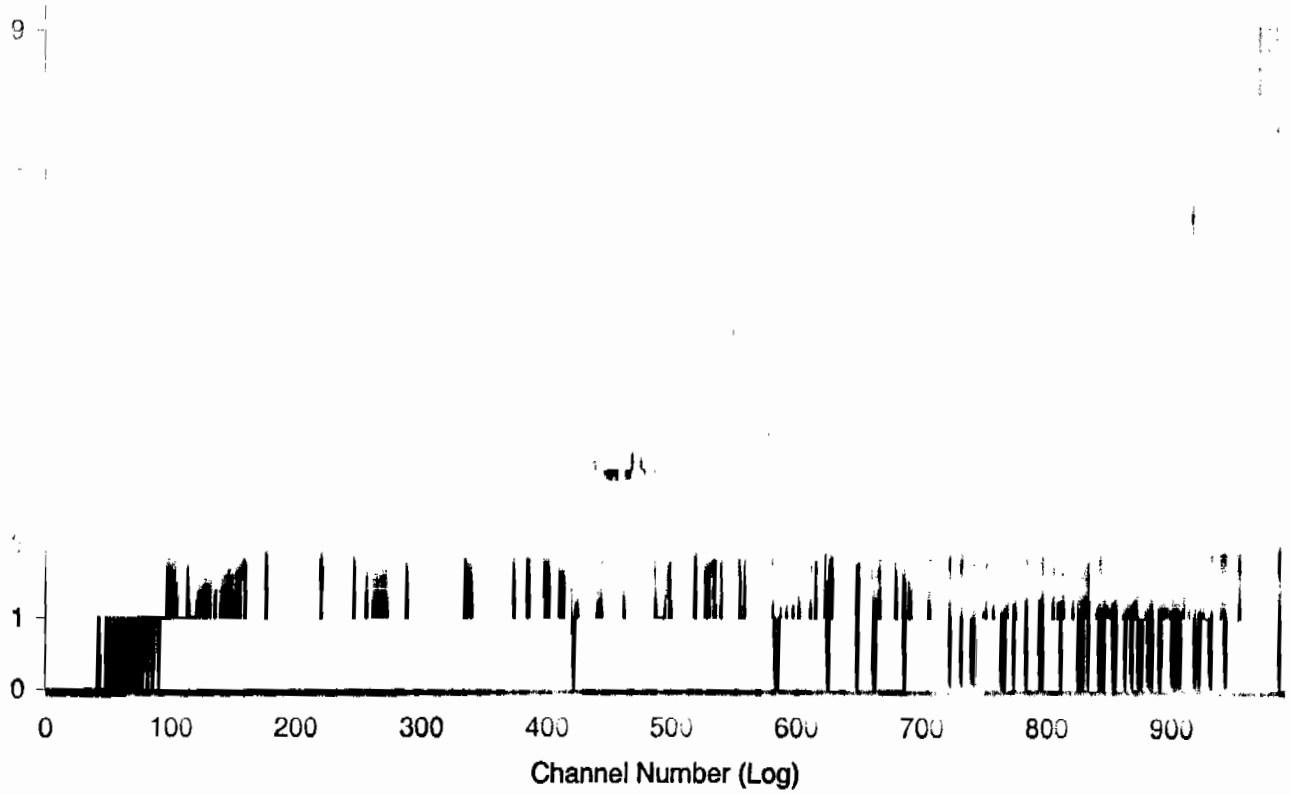

Sample Count Start Time:	16 Jul 2009 11:03:30
Data Capture Date	16 Jul 2009 11:58:53
User Filename	S04071654-9B.XLS
	U04071654-6A.XLS
Spectrum Type	Log Counts
User Number	04
User Id	TRITIUM
User Comment	ER
Sample Name	14C

SPECTRUM PLOT

USER 04 - TRITIUM

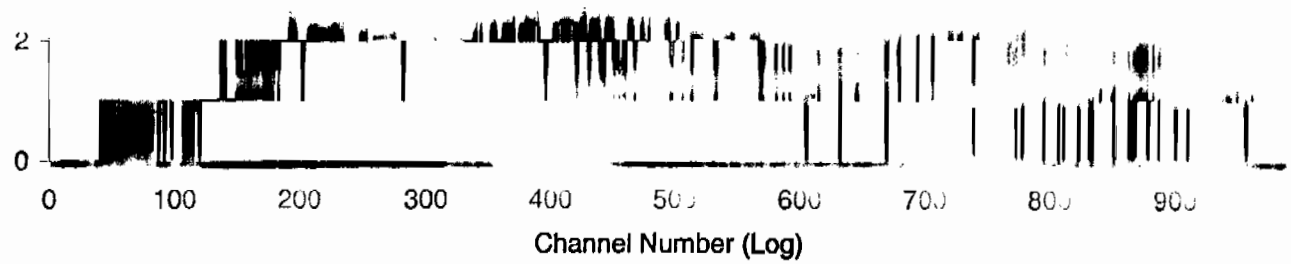

Sample Count Start Time:	16 Jul 2009 12:00:52
Data Capture Date	16 Jul 2009 12:56:16
User Filename	S04071654-10B.XLS
	U04071654-6A.XLS
Spectrum T[illegible]	[illegible] Counts
U[illegible]	04
U[illegible]	[illegible]IUM
U[illegible]	[illegible]ER
[illegible]	[illegible]

SPECTRUM PLOT

U[illegible]IM

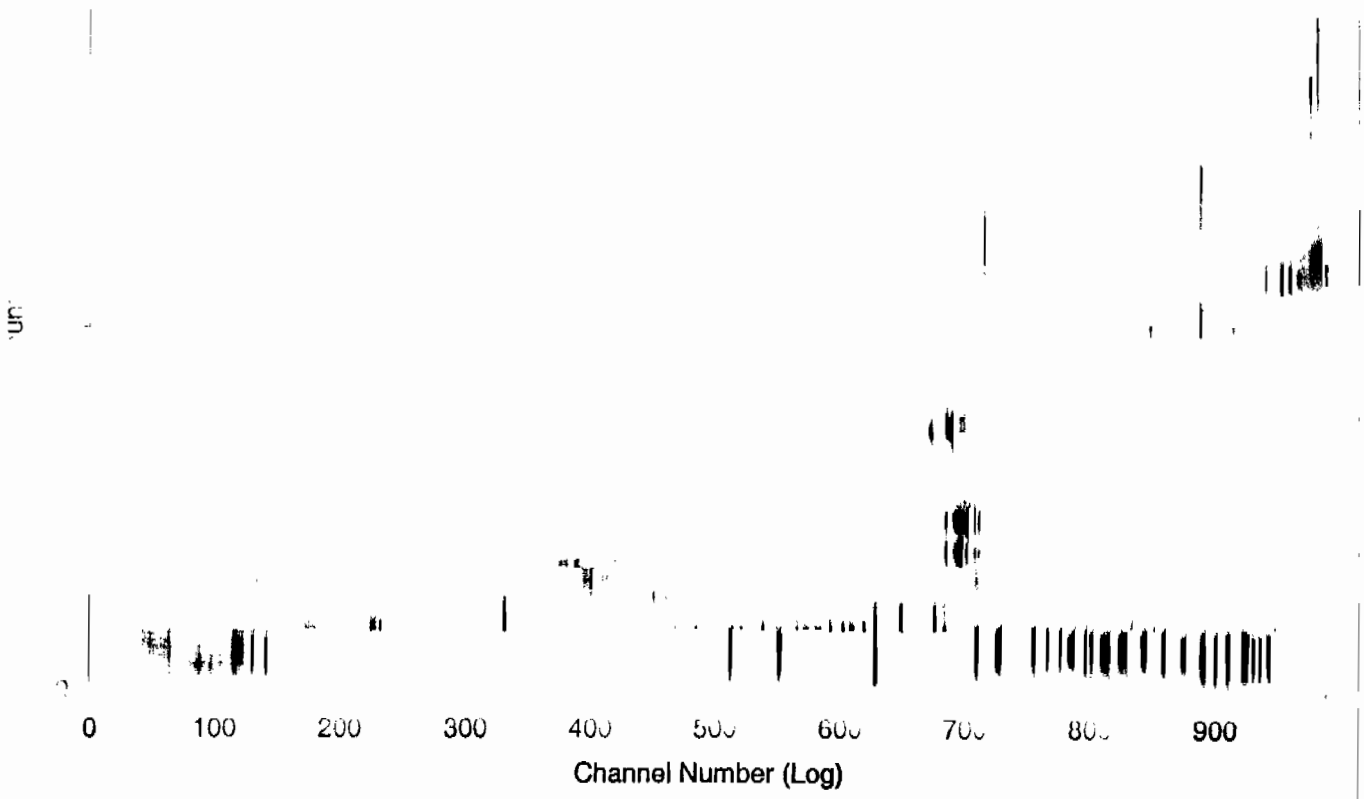

Sample Count Start Time:	16 Jul 2009 12:58:10
Data Capture Date	16 Jul 2009 13:53:34
User Filename	S04071654-11B.XLS
	U04071654-6A.XLS
Spectrum T[illegible]	[illegible] Counts
User [illegible]	04
User Id	[illegible]TIUM
[illegible]	[illegible]VER
[illegible]	[illegible]0

SPECTRUM PLOT

[illegible]M

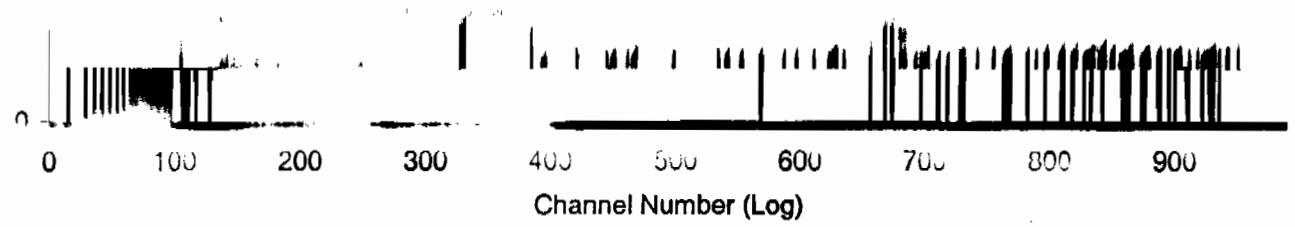

Sample Count Start Time:	16 Jul 2009 13:55:30	
Data Capture Date	16 Jul 2009 14:50:53	
User Filename	S04071654-12B.XLS	
	U04071654-6A.XLS	
Spectrum Type	[illegible]ants	
User [illegible]	[illegible]	
User [illegible]	[illegible]UM	
[illegible]	[illegible]	
	[illegible]	
[illegible]k-Pos, Time:	12	54-12
[illegible]unts:	130.0	2211
[illegible]		[illegible] [illegible]ber

SPECTRUM PLOT

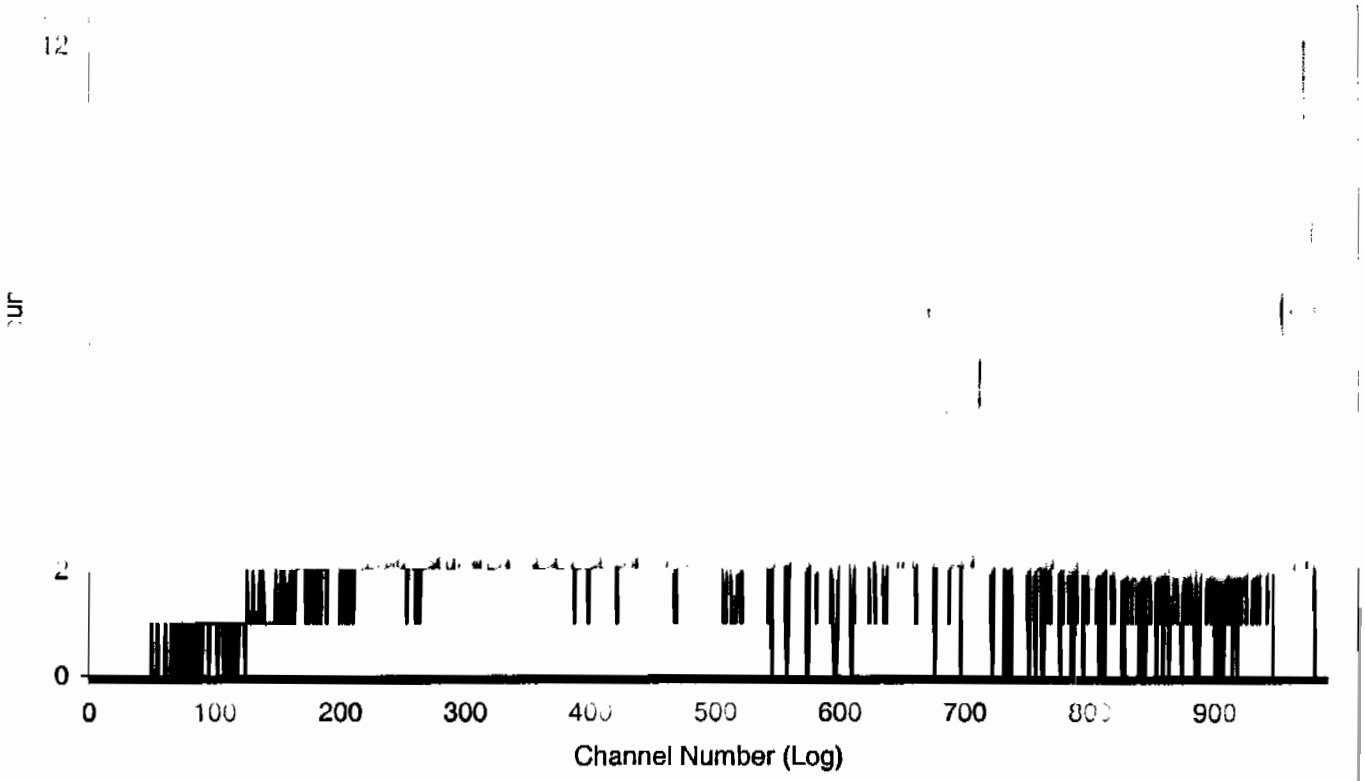

Sample Count Start Time:	16 Jul 2009 14:52:53		
Data Capture Date	16 Jul 2009 15:48:16		
User Filename	S04071627-1B.XLS		
	U04071651-6A.XLS		
Spectrum Type	Log Counts		
[illegible]	04		
[illegible]	TRITIUM		
[illegible]	SILVER		
[illegible]	14C		
	[illegible]		
Sample, Rack-Pos, Time:	13	27-1	[illegible]
H#, Total Counts:	126.1	2221	
Start [illegible] Y Axis:	[illegible]	999	[illegible]

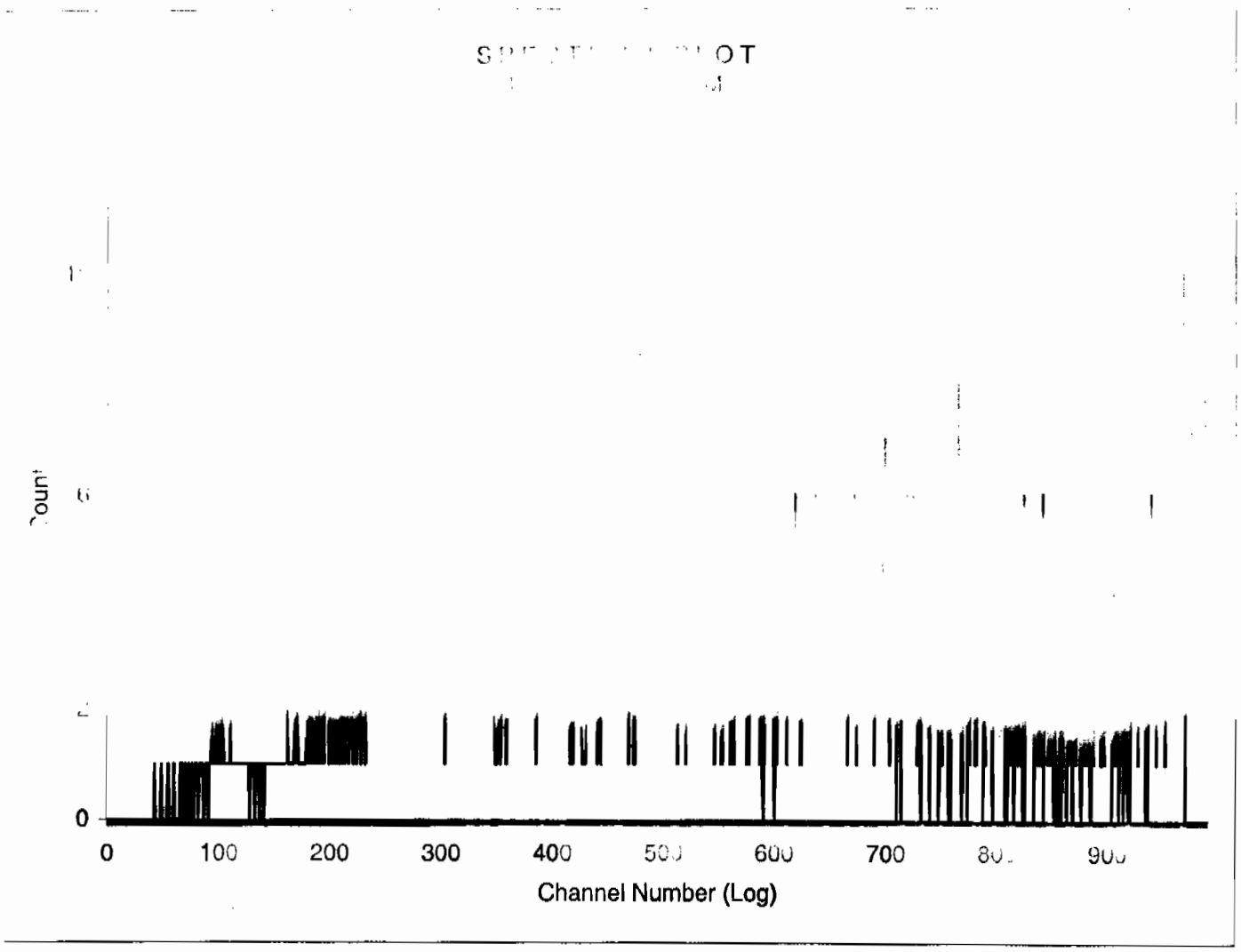

Sample Count Start Time:	16 Jul 2009 15:50:09		
Data Capture Date	16 Jul 2009 16:45:33		
User Filename	S04071627-2B.XLS		
	U04071651-6A.XLS		
Spectrum Type	[illegible] Counts		
[illegible]	01		
[illegible]	TRITIUM		
User Comment	SILVER		
[illegible]	14C		
[illegible]	LIQUID		
Sample, [illegible] Pos, Time:	[illegible]	27-2	[illegible]
H#, Total Counts:	127.1	2266	
[illegible]	[illegible]	930	Channel Number

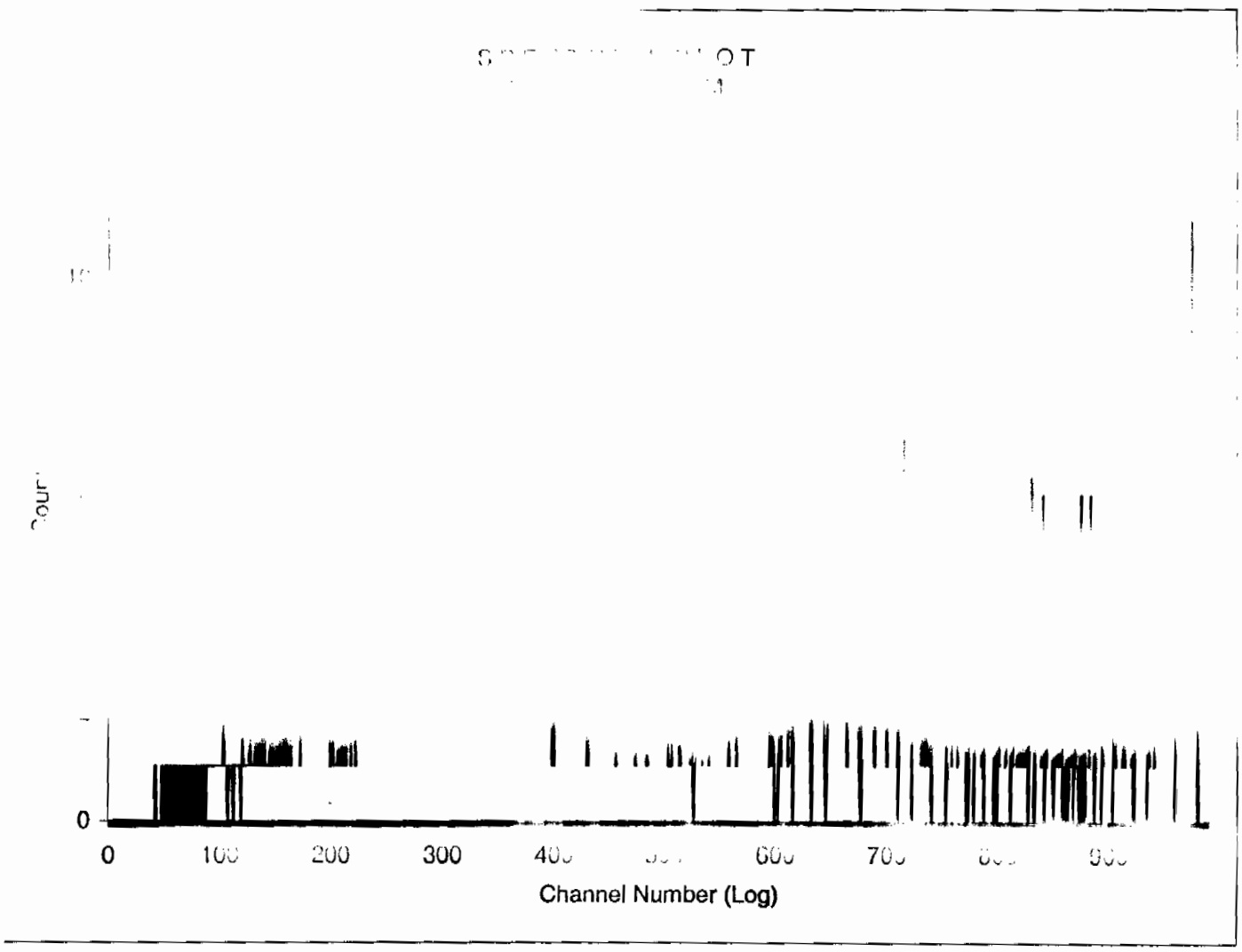

Sample Count Start Time:	16 Jul 2009 16:47:24		
Data Capture Date	16 Jul 2009 17:42:49		
User Filename	S04071627-3B.XLS		
	U04071654-6A.XLS		
[illegible]	[illegible] Counts		
[illegible]	04		
User ID	[illegible]UM		
User [illegible]	[illegible]ER		
Is[illegible]	14C		
S[illegible]er	L[illegible]UID		
S[illegible] Pos, Time:	[illegible]	27-3	[illegible]
H#, Total Counts:	126.2	2358	
Start, End, X-Axis:	**0**	**990**	**Channel Number**

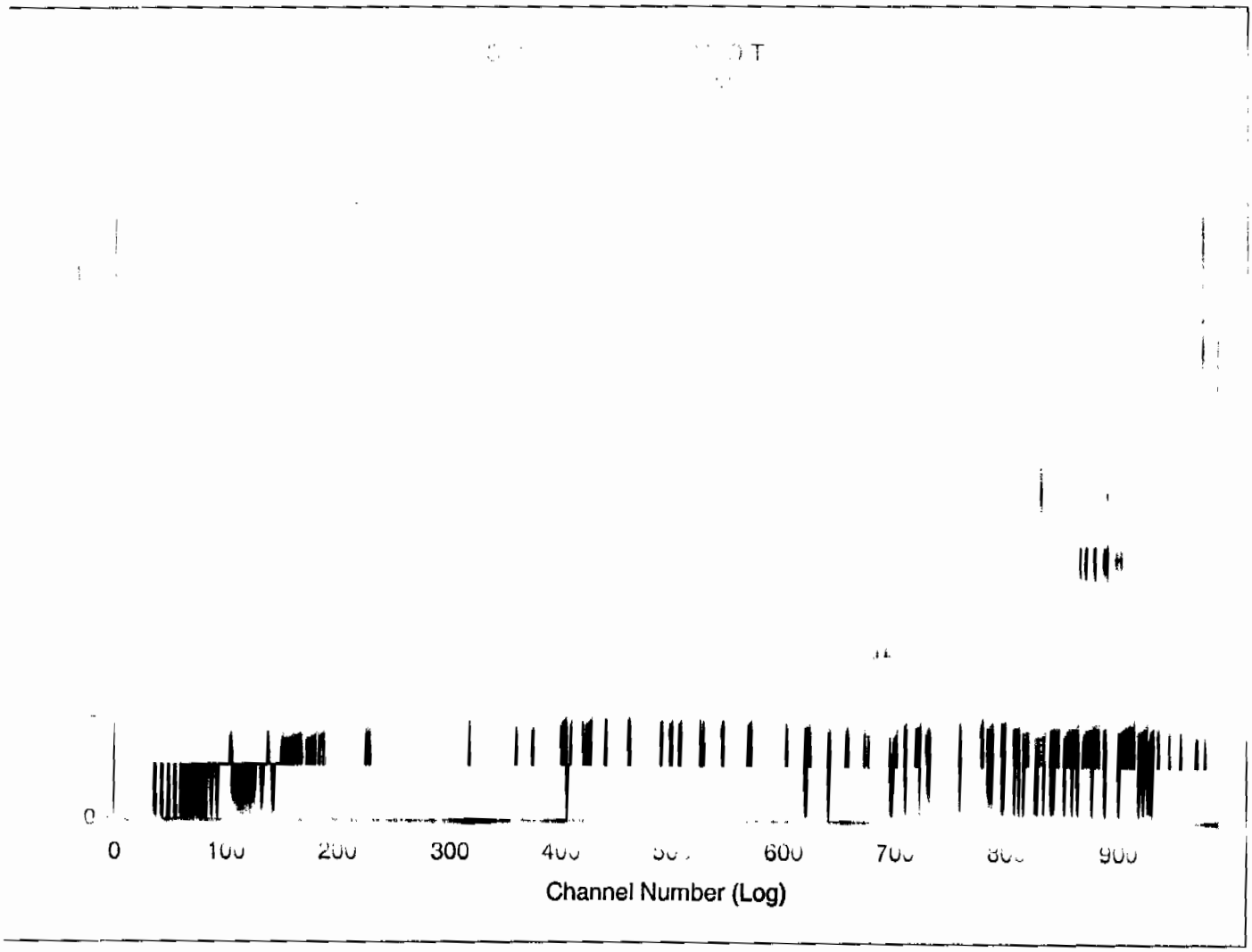

Sample Count Start Time:	16 Jul 2009 17:44:42		
Data Capture Date	16 Jul 2009 18:40:06		
User Filename	S04071627-4B.XLS		
	U04071654-6A.XLS		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
H#, Total Counts:	125.6	2265	
Start, End, X-Axis:	**0**	**990**	**Channel Number**

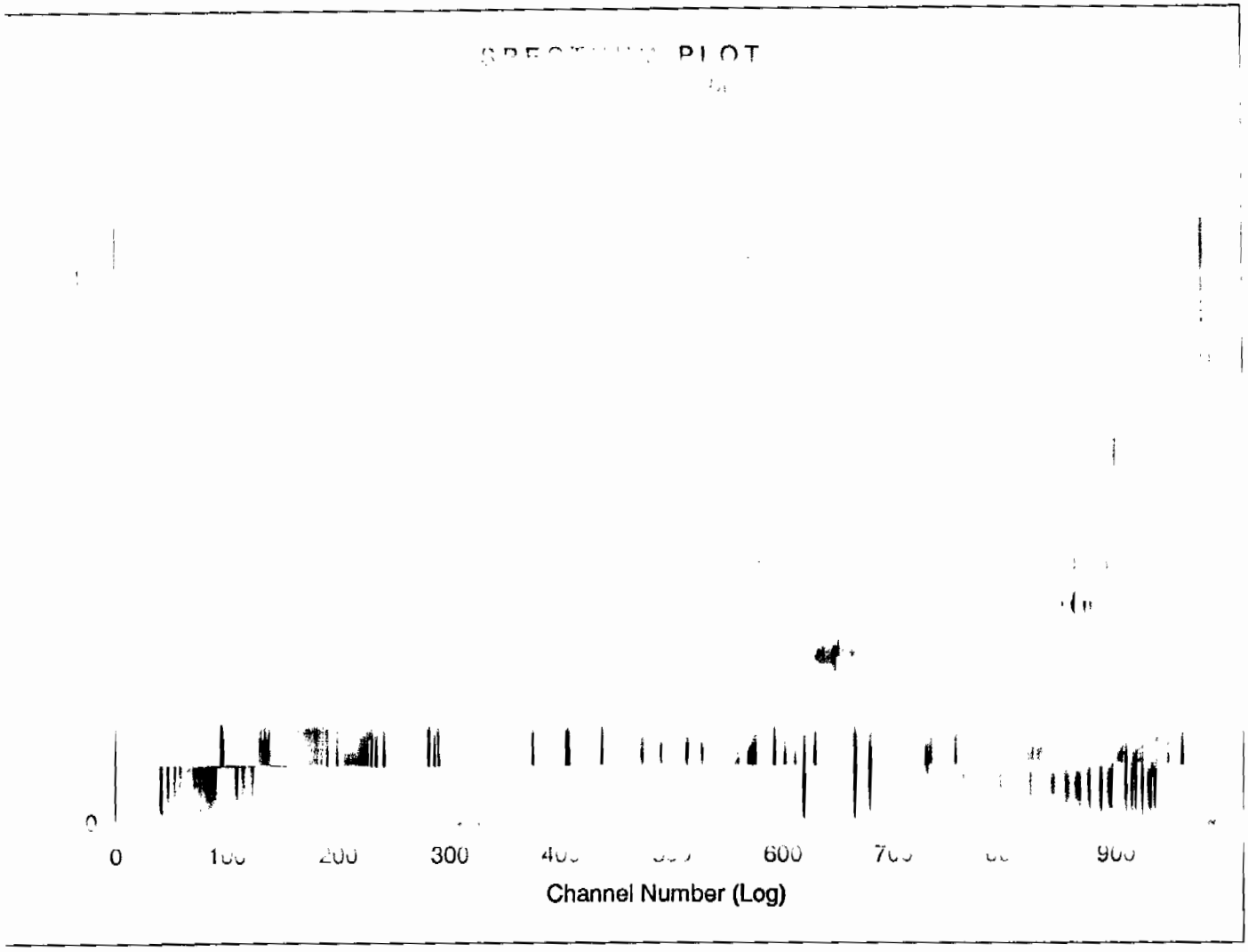

Sample Count Start Time:	16 Jul 2009 18:42:00		
Data Capture Date	16 Jul 2009 19:37:24		
User Filename	S04071627-5B.XLS		
	[illegible]6A.XLS		
Spectr[illegible]	[illegible]		
[illegible]	04		
[illegible]ld	[illegible]		
[illegible]	SILVER		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	
I#, Total Counts:	[illegible]8.6	2518	
Start, End, X-Axis:	0	990	Channel Number

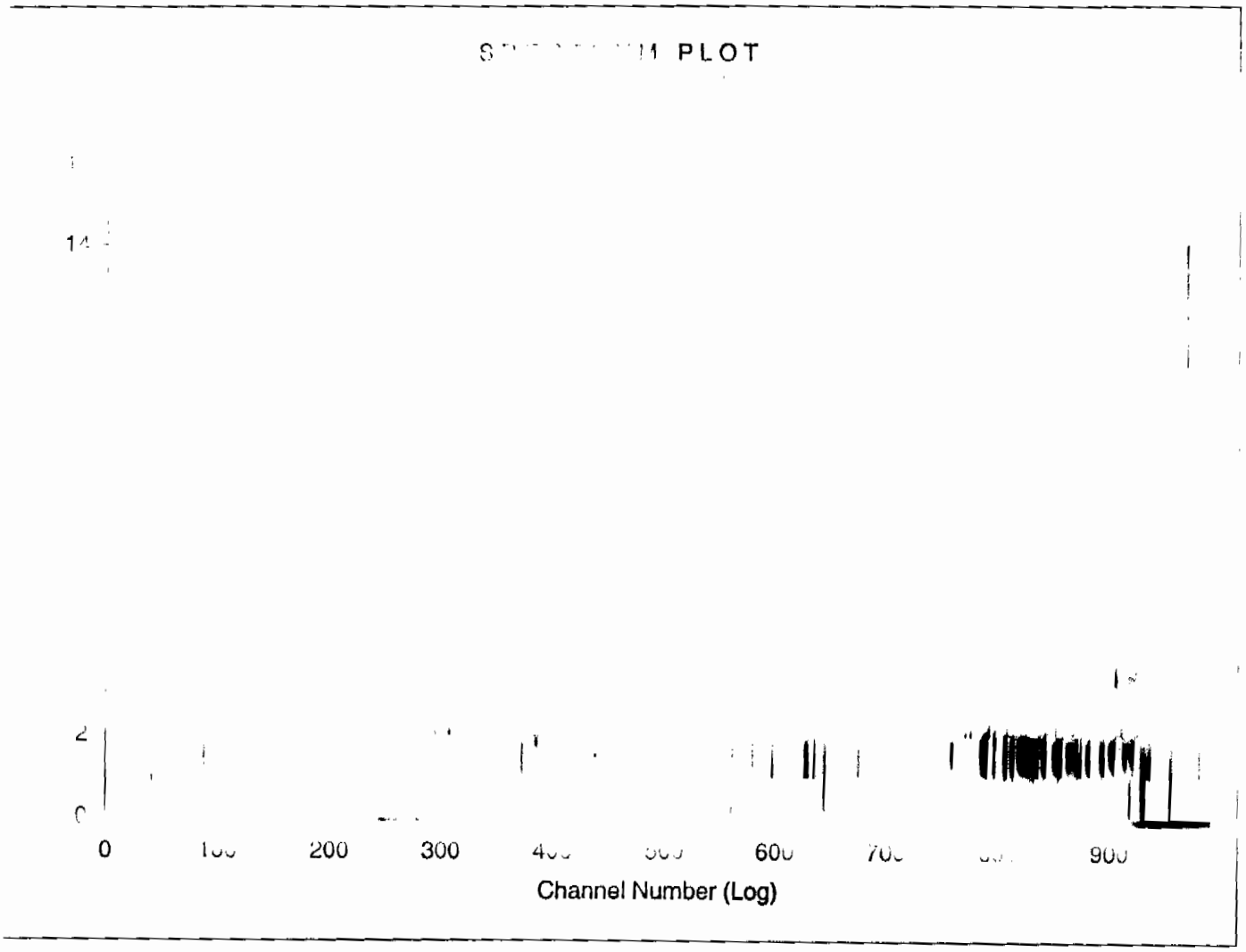

Sample Count Start Time:	16 Jul 2009 19:39:15		
Data Capture Date	16 Jul 2009 20:34:39		
User Filename	S04071627-6B.XLS		
User Id			
#, Total	7.5	2404	
Start, End, X-Axis:	0	990	Channel Number

SPECTRUM PLOT

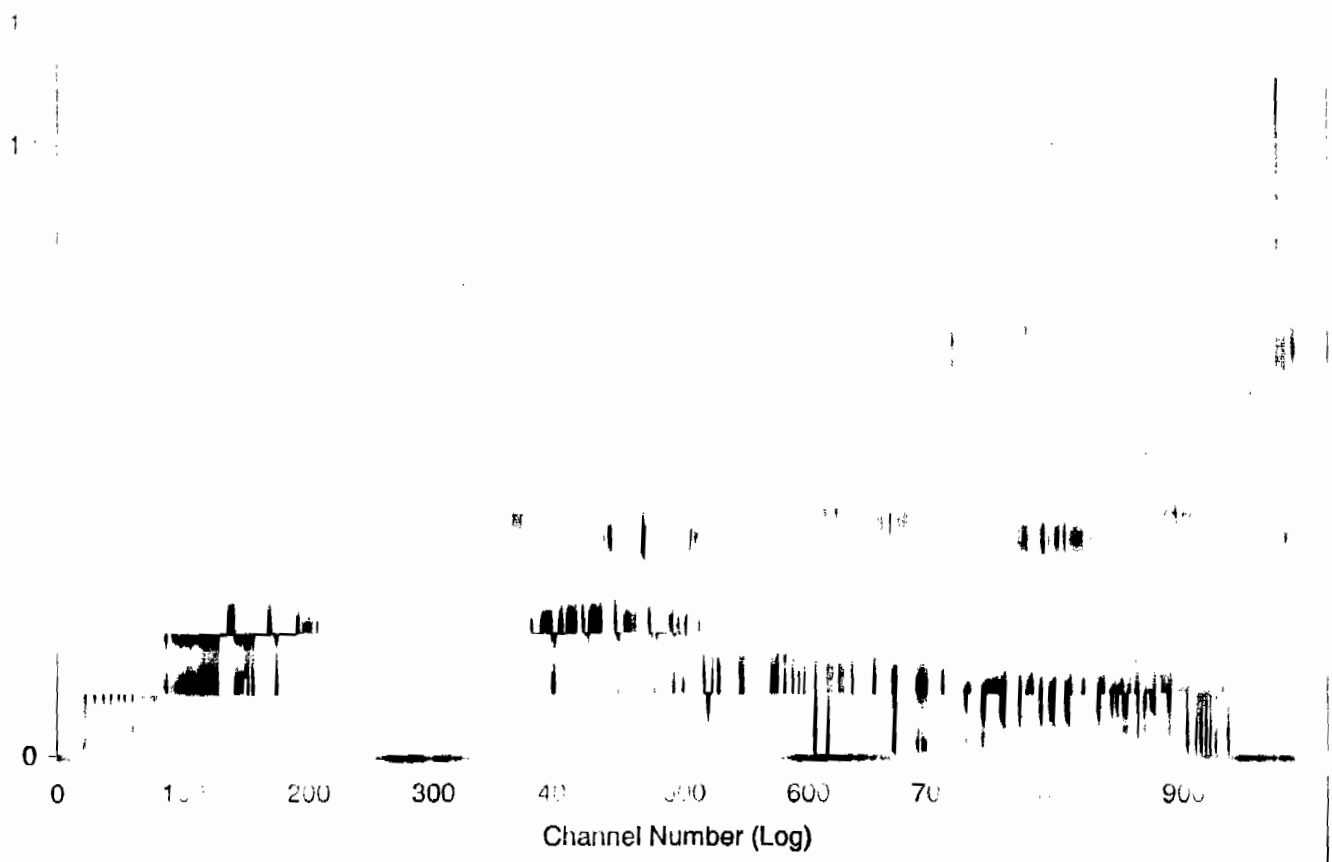

Sample Count Start Time:	16 Jul 2009 20:36:28		
Data Capture Date	16 Jul 2009 21:31:53		
User Filename	S04071627-7B.XLS		
	U04071054-6A.XLS		
User Id			
User C			
H#, Tot	3.9	2210	
Start, End, X-Axis:	0	990	Channel Number

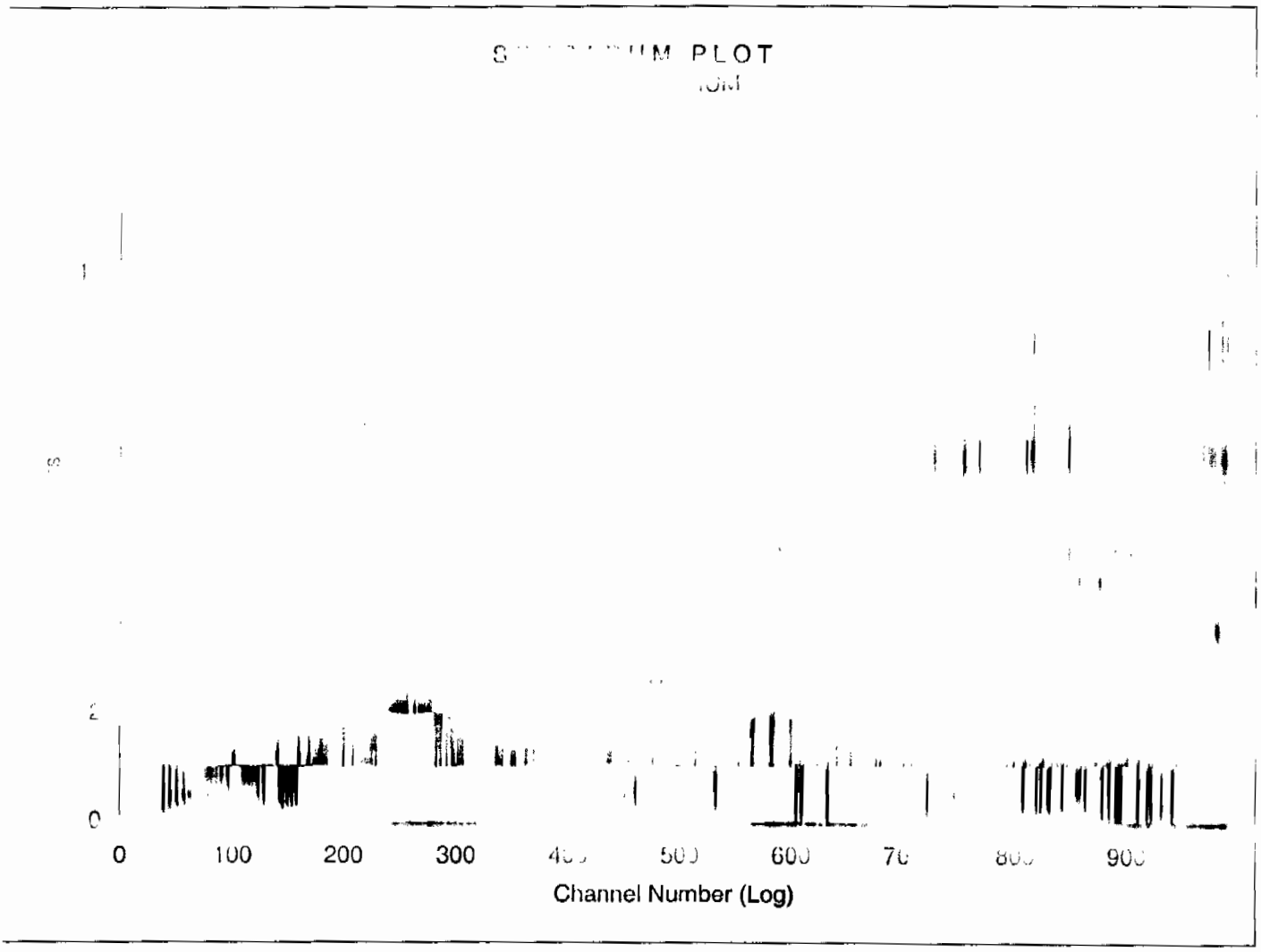

Sample Count Start Time:	16 Jul 2009 21:33:46		
Data Capture Date	16 Jul 2009 22:29:10		
User Filename	S04071627-8B.XLS		
	U0[illegible]8A.XLS		
S[illegible] T	[illegible]		
[illegible]			
U[illegible]d			
[illegible] Comm[illegible]			
[illegible]			
S[illegible]			
H#, T[illegible]:	[illegible].6	2671	
Start, End, X-Axis:	0	990	Channel Number

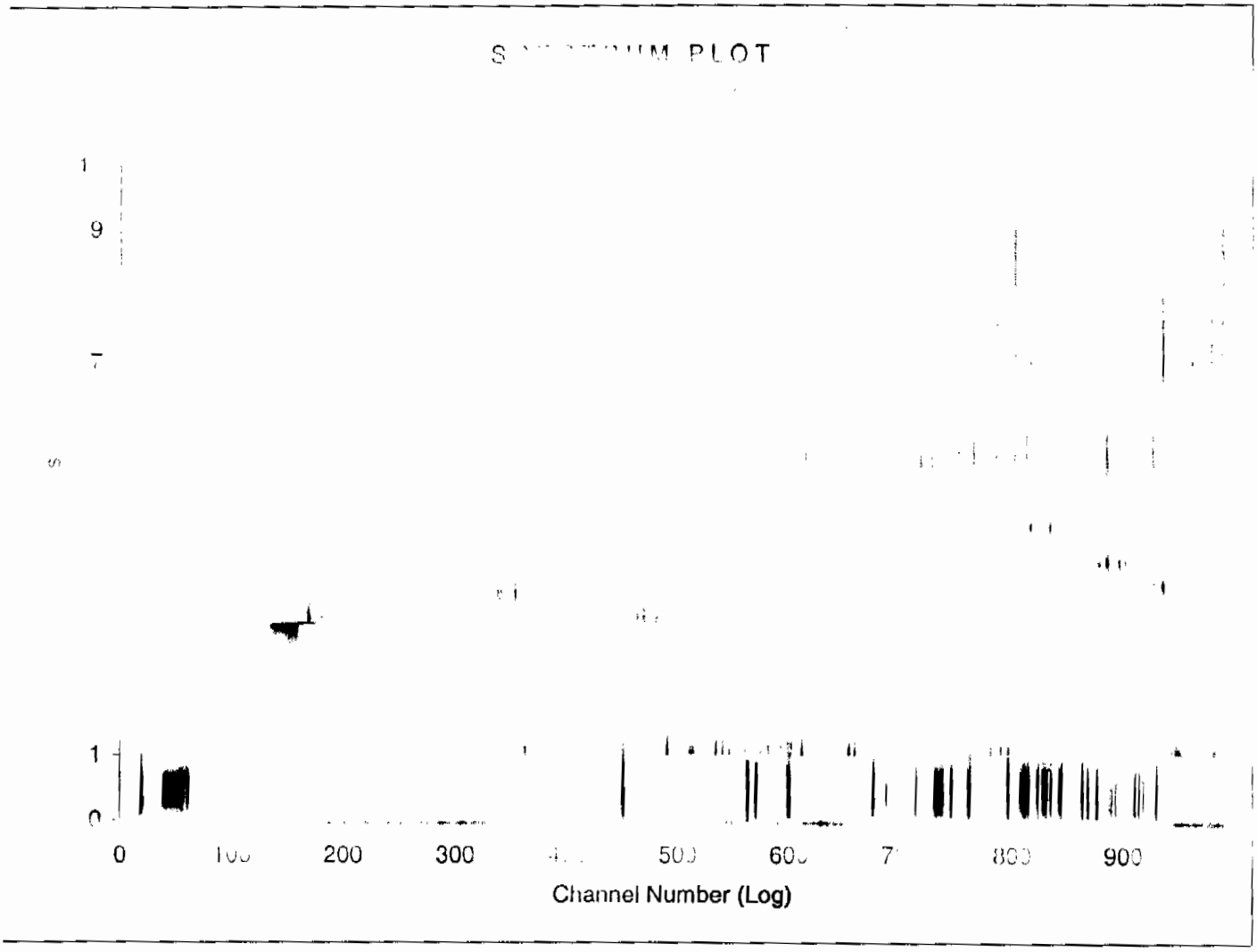

Sample Count Start Time:	16 Jul 2009 07:53:50		
Data Capture Date	16 Jul 2009 08:09:14		
User Filename	S03071628-1A.XLS		
H#, Total Counts:	[illegible].7	1251	
Start, End, X-Axis:	0	990	Channel Number

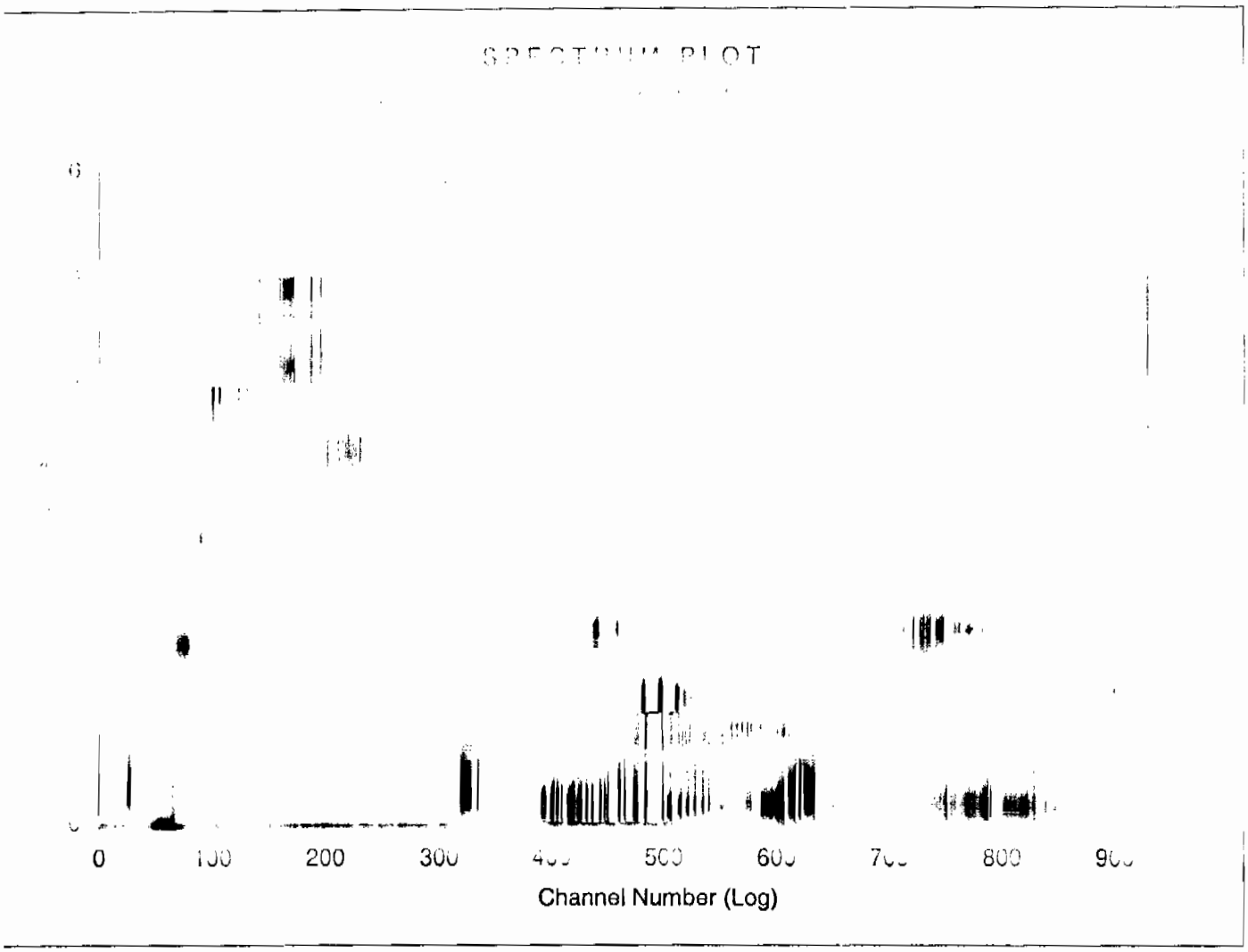

BACKGROUND

LSCSILVER BKG

Generated 07/16/20(

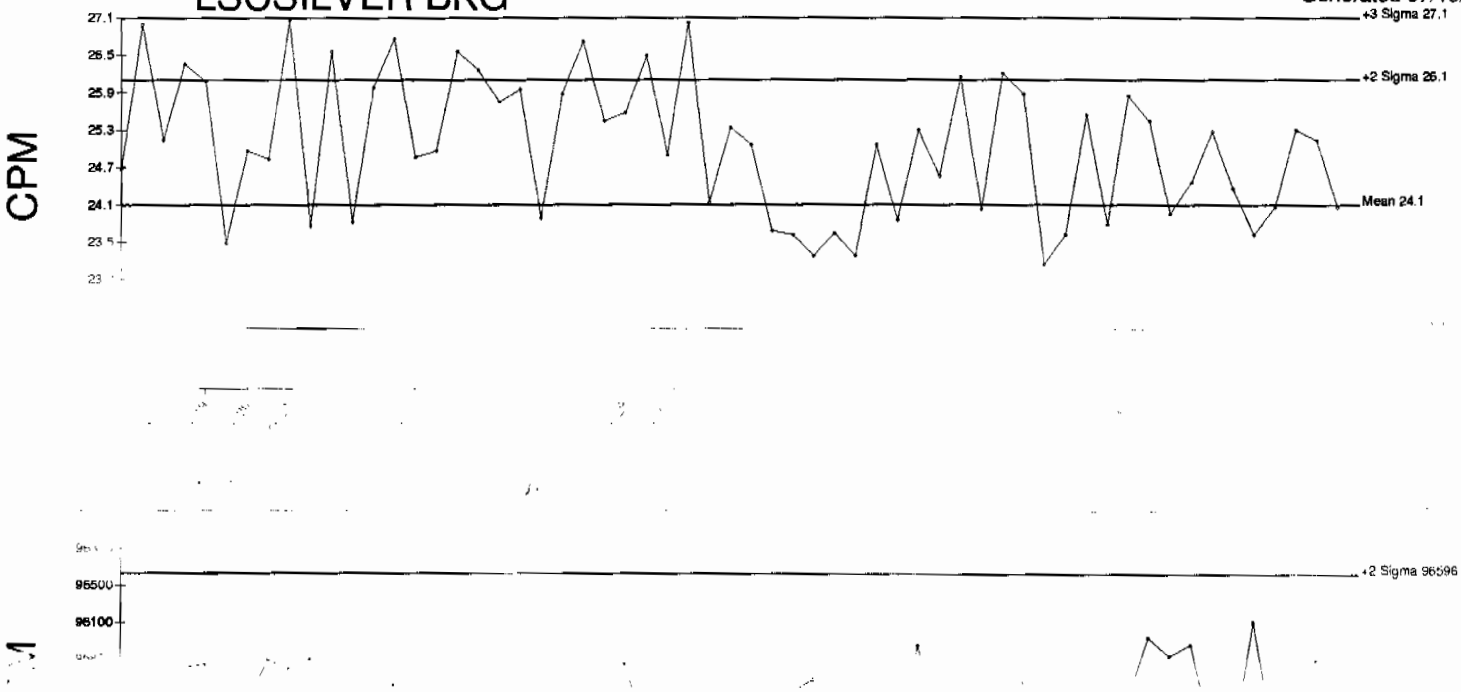

SILVE

● Denotes Outlier

QA filename : D
Parameter Name : A
Start/End Dates : 5
Lower/Upper Lmts: 0.3

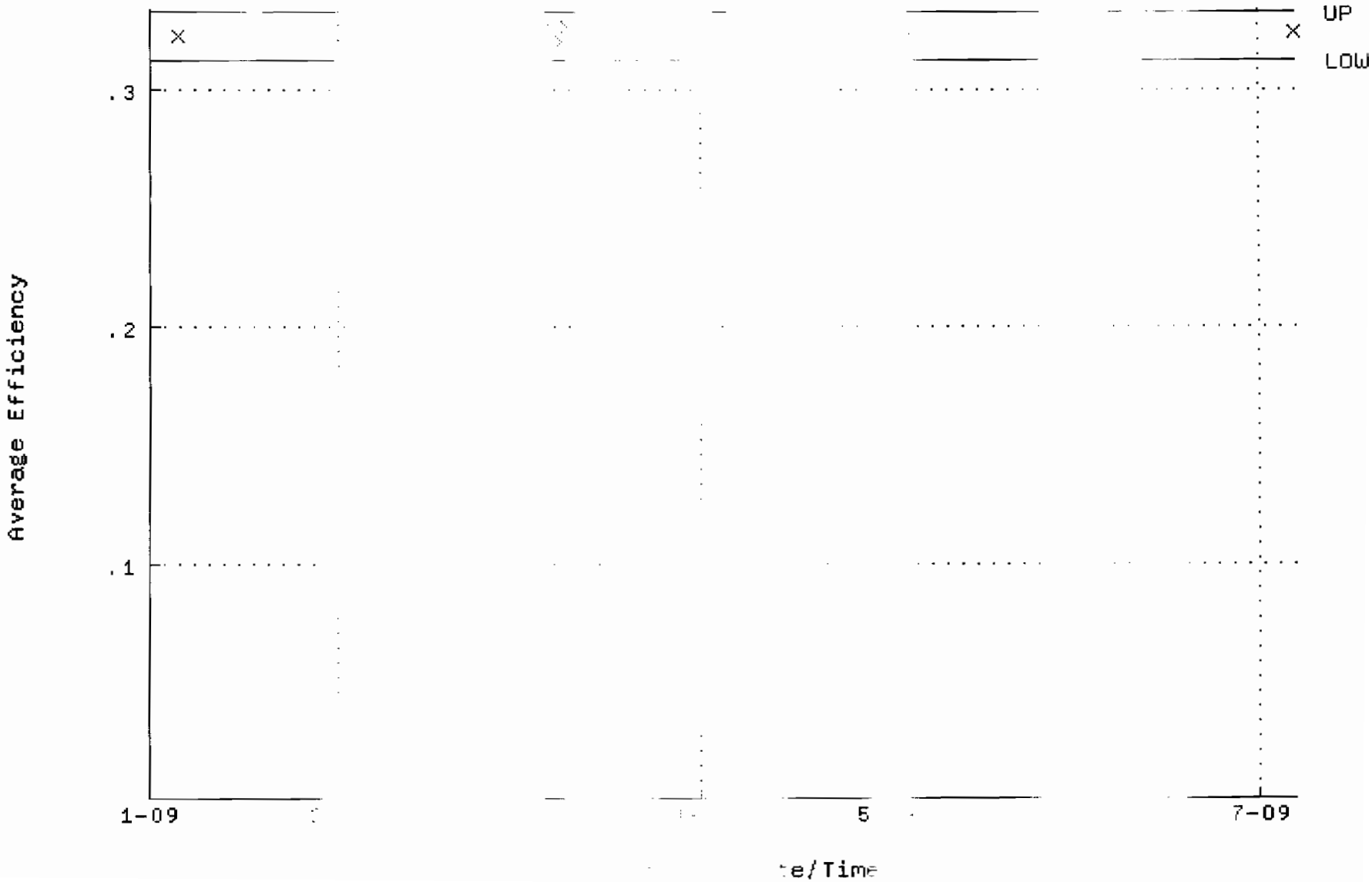

QA filename : D A. ;3
Parameter Name : N NL Y GD-14
Start/End Dates : 5 :0 L-2009 :00:00
Lower/Upper Lmts: 82.0 .5

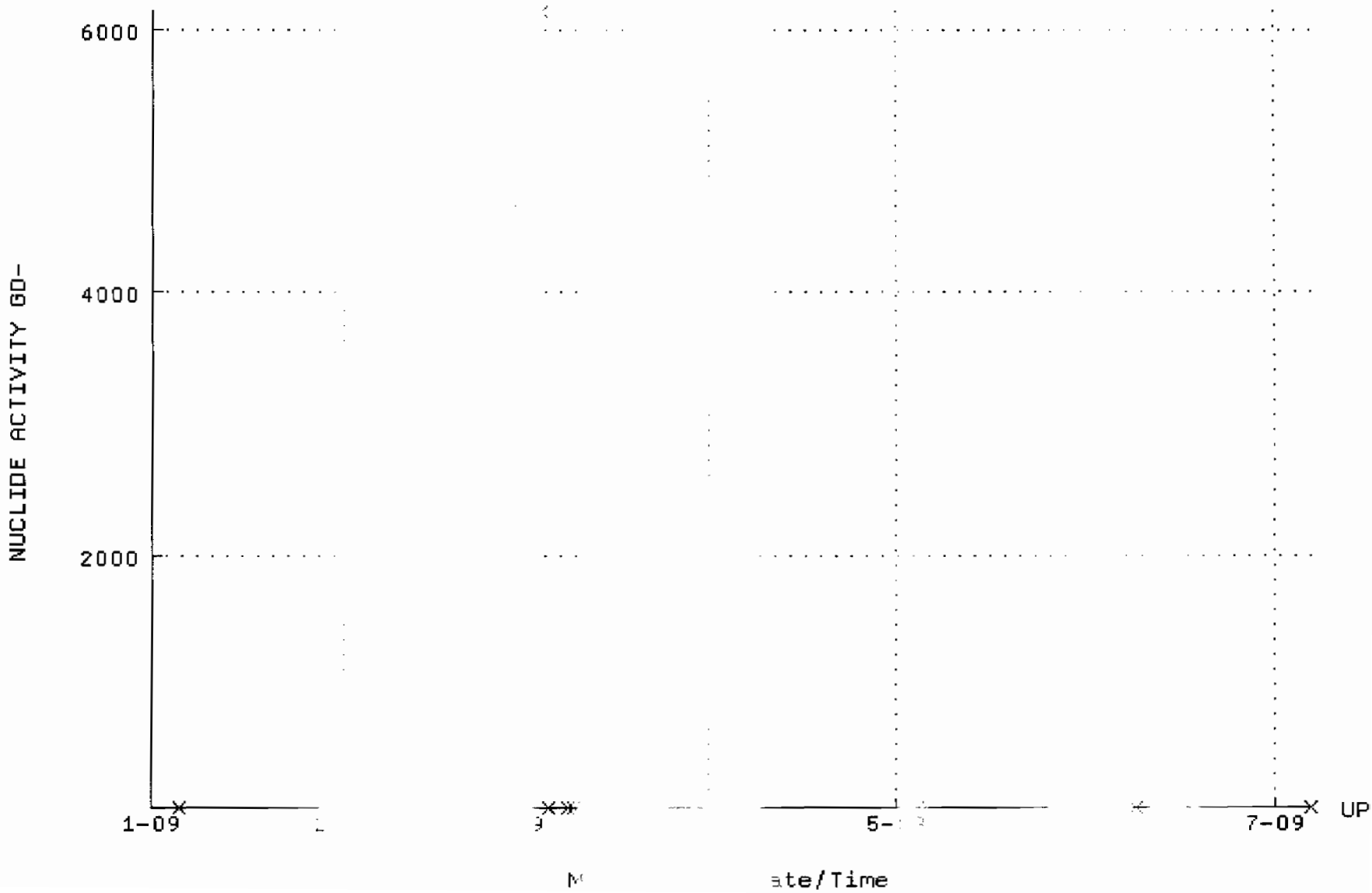

QA filename : DK HA.C ... ;1
Parameter Name : BA R rou
Start/End Dates : 4- 1:2 JUL-2009 12:00:00
Lower/Upper Lmts: 0.00 0 ugh 2

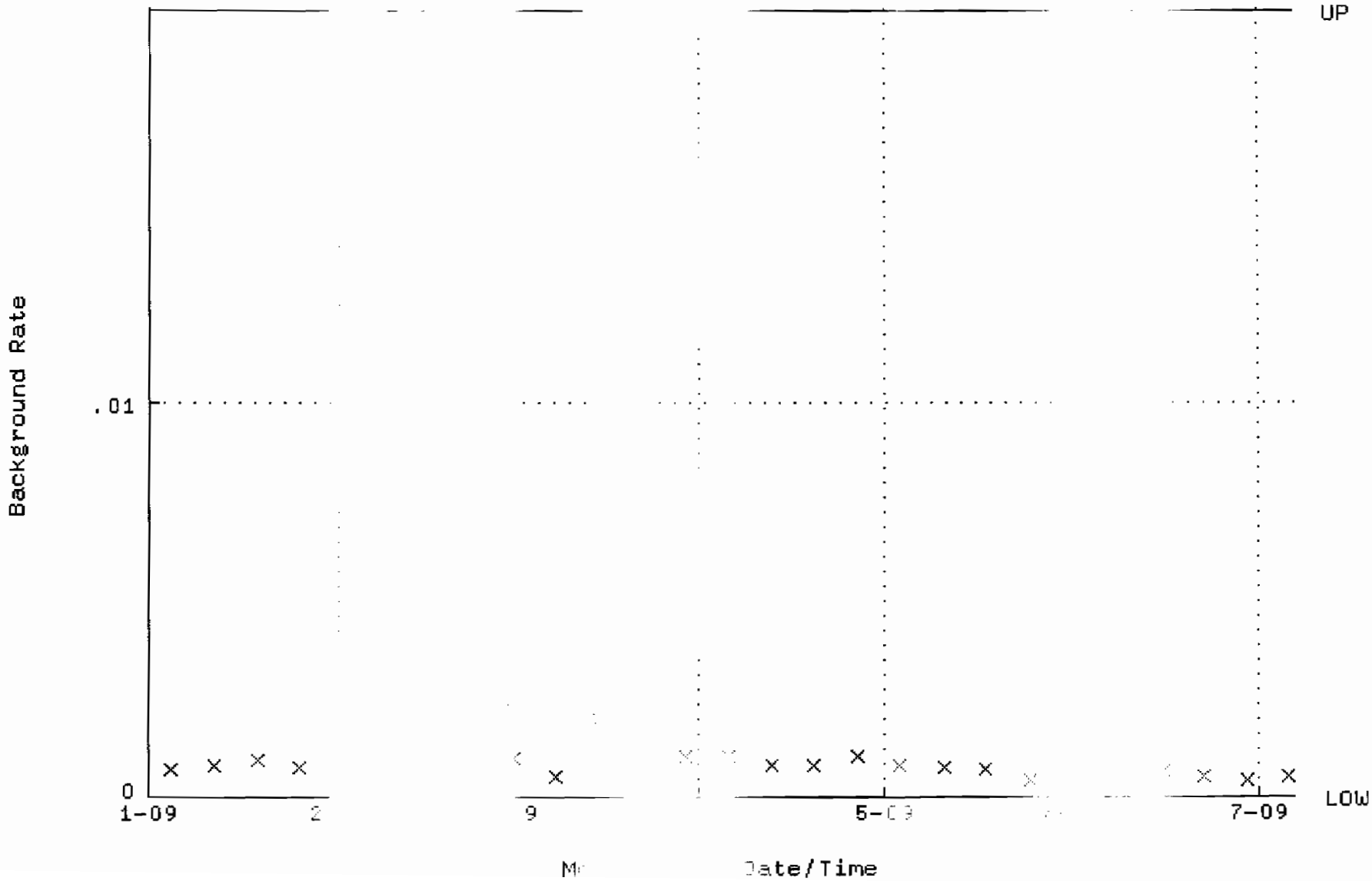

QA filename : DK HA.Q ... AF;5
Parameter Name : AV ... ge Ef
Start/End Dates : 5- 9 1 57:01 -JUL-2009 12:00:00
Lower/Upper Lmts: 0.3 3 0.34

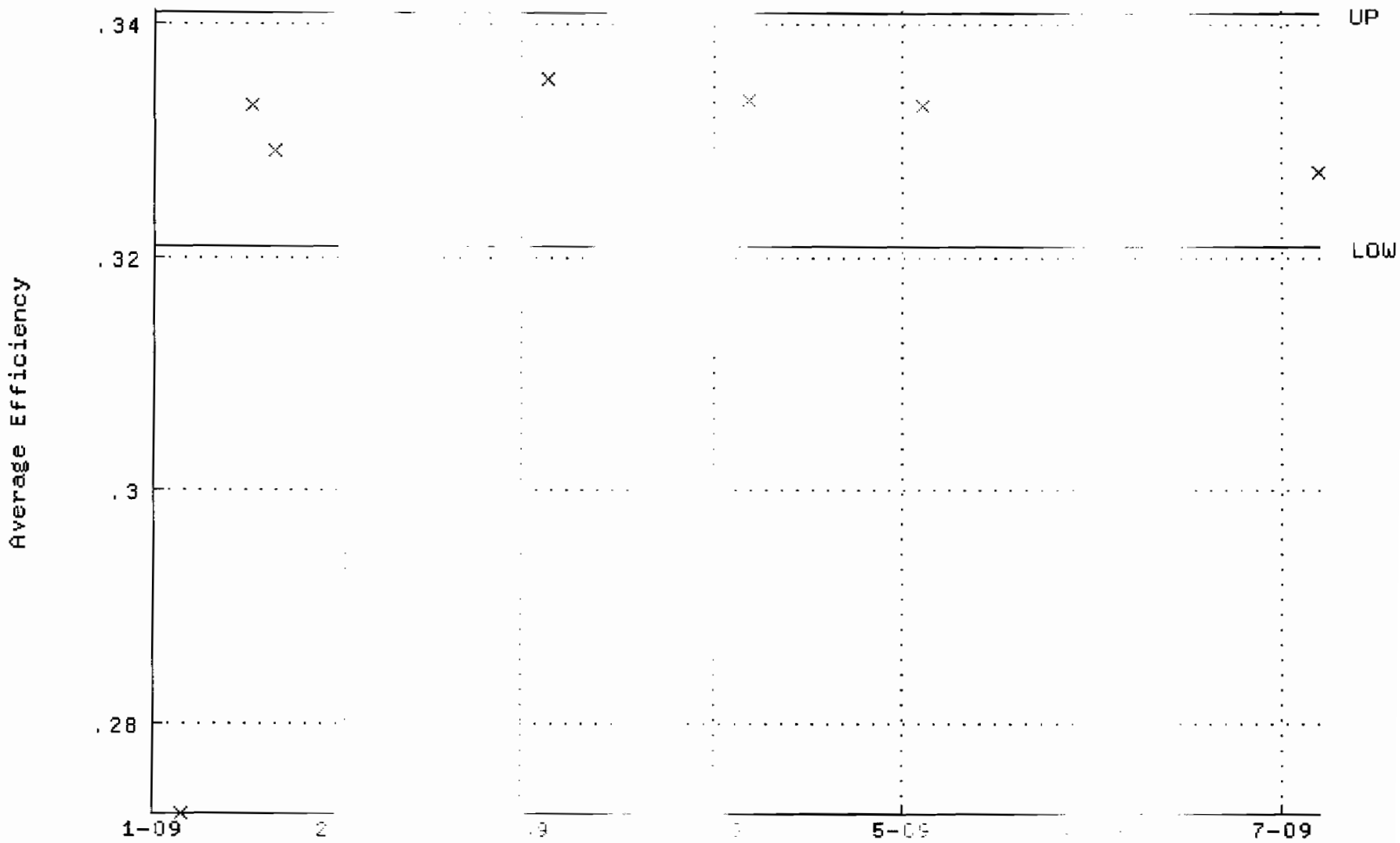

QA filename : DY HA.C .CAF;5
Parameter Name : NI (NU TY GD-148)
Start/End Dates : 5- 37:01 -JUL-2009 12:00:00
Lower/Upper Lmts: 86.0 35.76

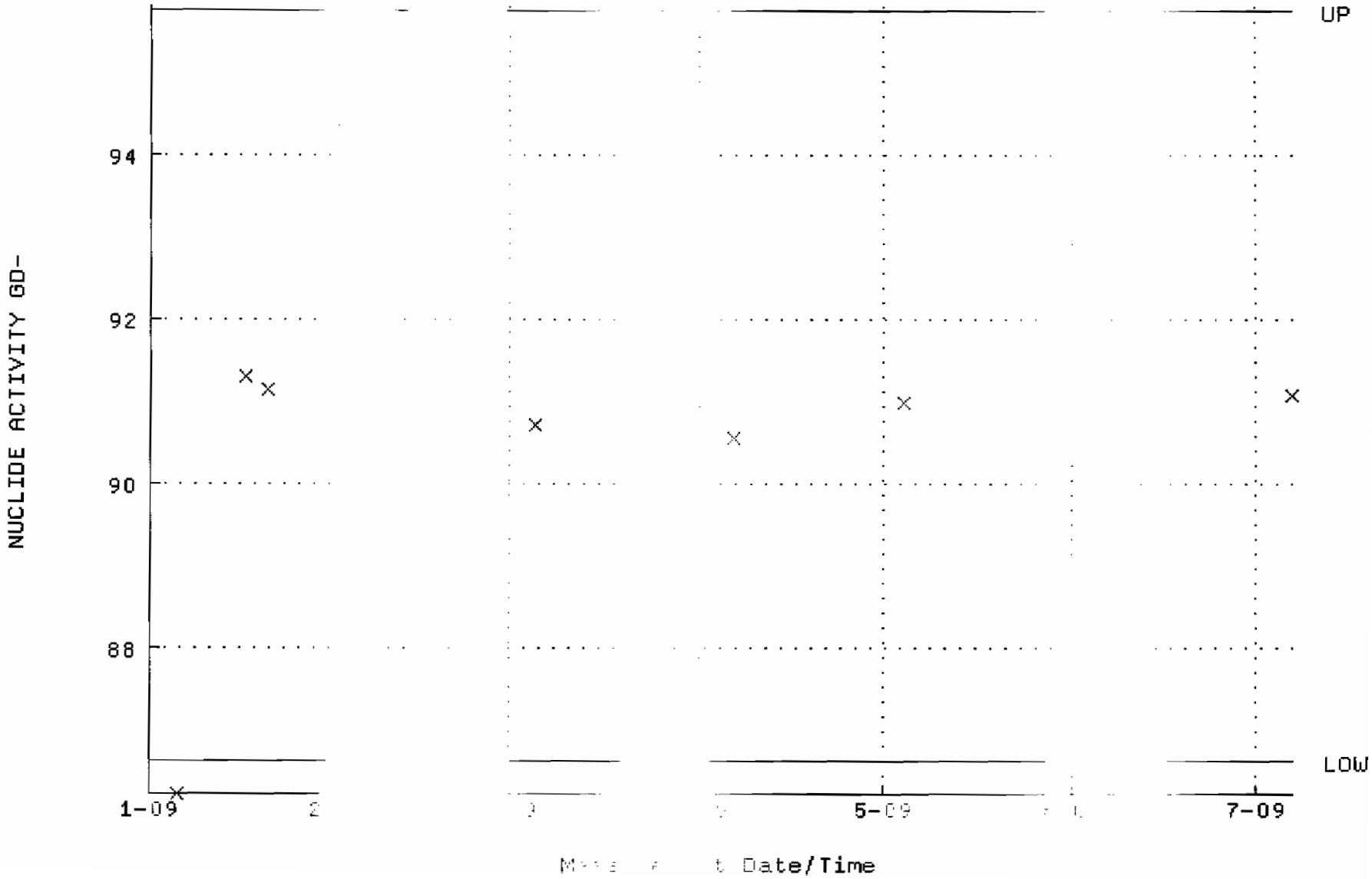

QA filename : DX[illegible]NA.GA.B[illegible].QAF;1
Parameter Name : E[illegible]T [illegible] [illegible]round R te
Start/End Dates : 4-[illegible]-2[illegible]09 [illegible]1:2[illegible] th[illegible]ou [illegible]-JUL-2009 12:00:00
Lower/Upper Lmts: 0.0[illegible] [illegible]E 0[illegible] [illegible]ugh 2.[illegible] 0[illegible] [illegible]-02

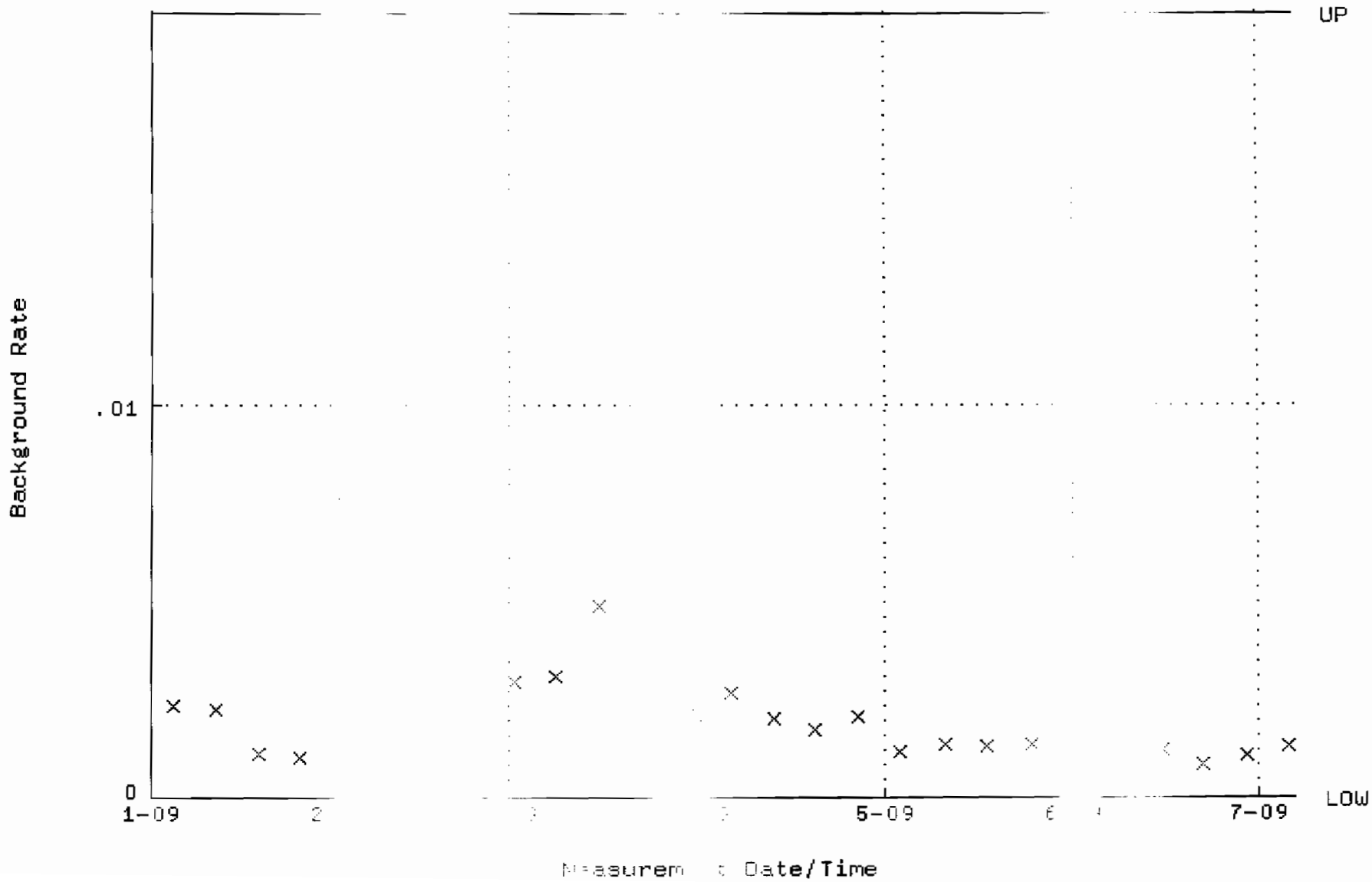

QA filename : D[illegible]A.QA.W]W[illegible].QAF;3
Parameter Name : A[illegible] [illegible]ficien[illegible]
Start/End Dates : 2[illegible] [illegible]22:[illegible] thro[illegible] 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.3[illegible] [illegible] 0.34[illegible]

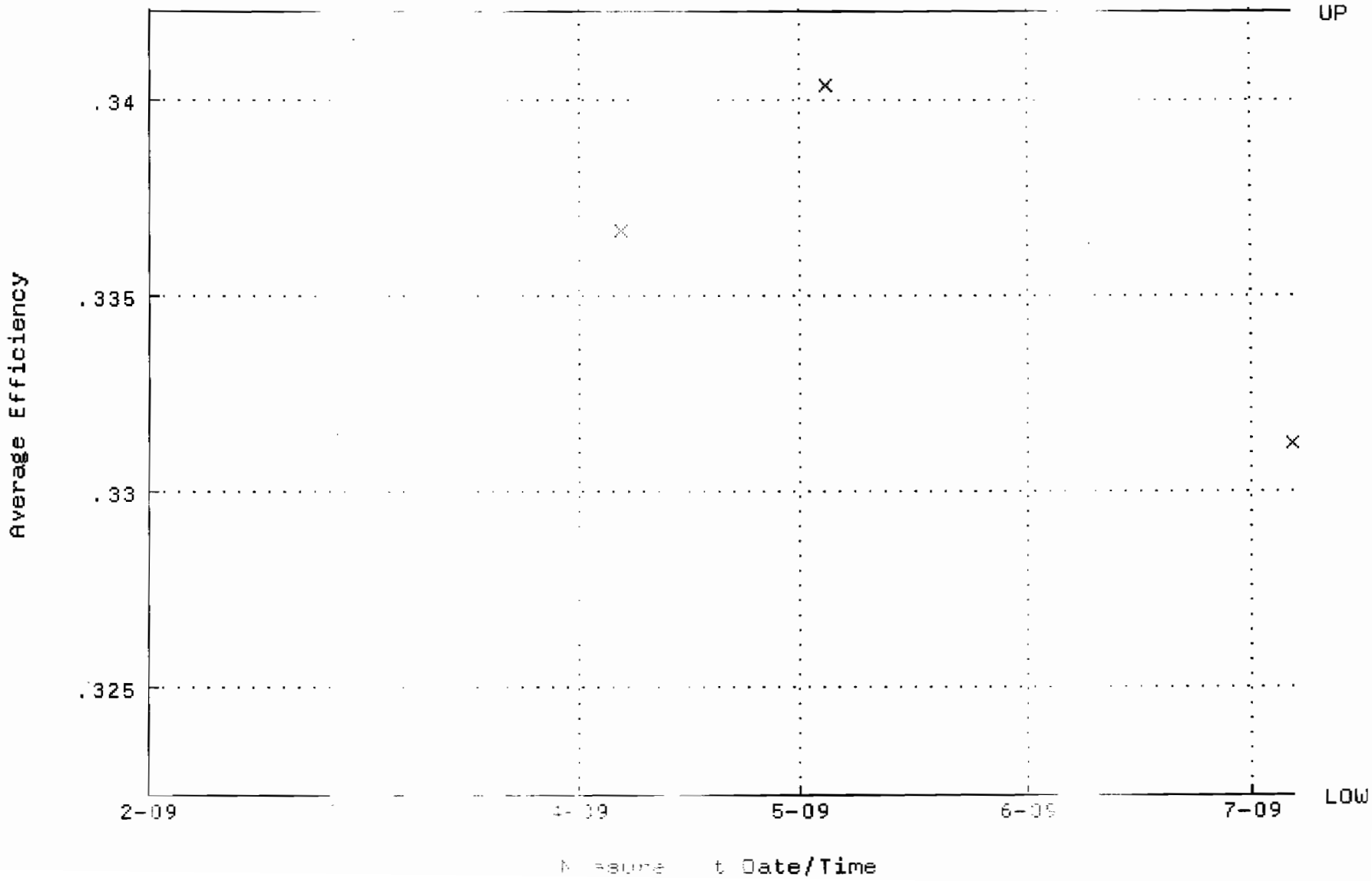

QA filename : D[illegible].QAF;3
Parameter Name : N[illegible]TY GD-148)
Start/End Dates : [illegible] 6-JUL-2009 12:00:00
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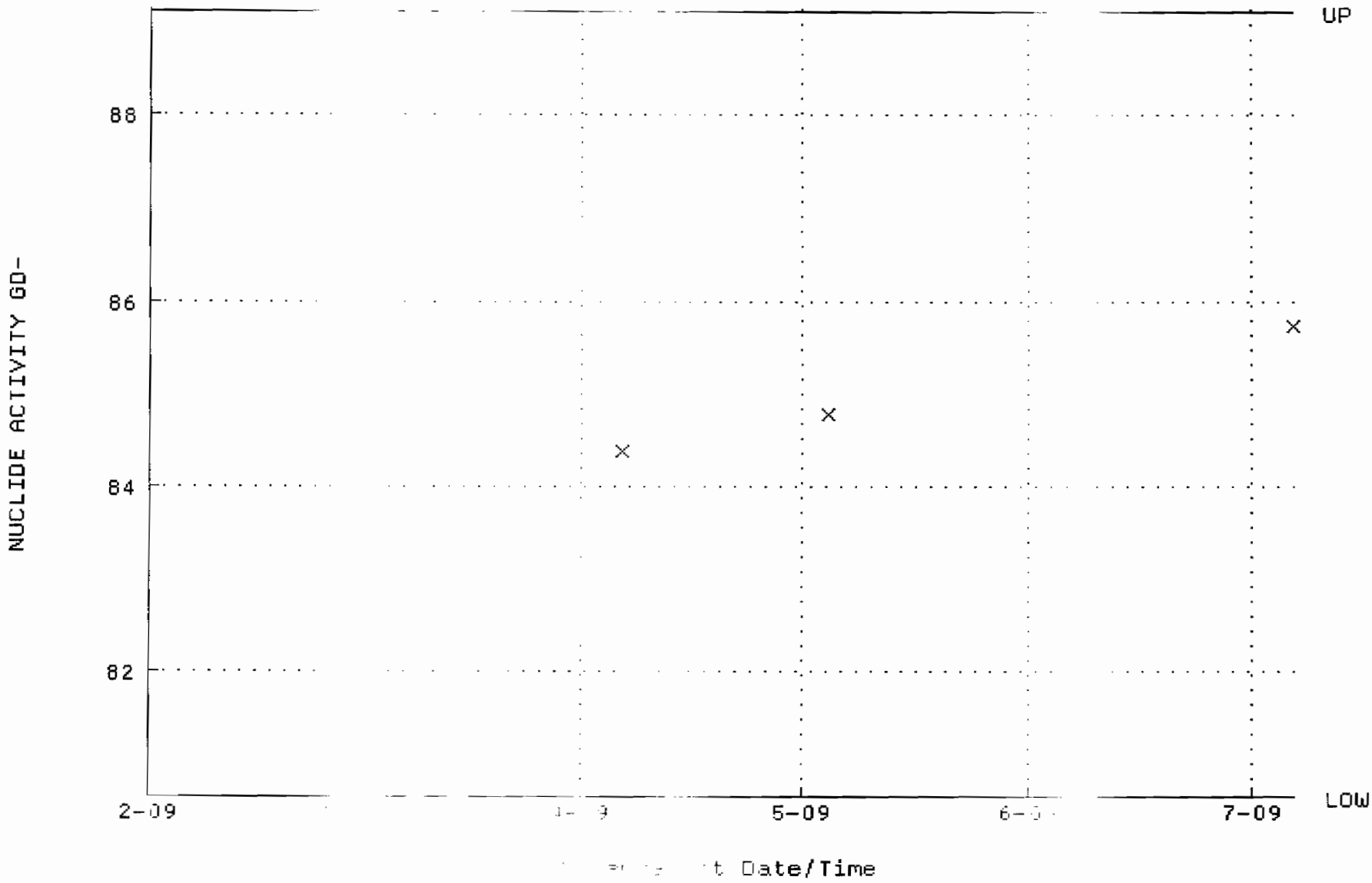

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Lower/Upper Lmts: 0.[illegible]E-02

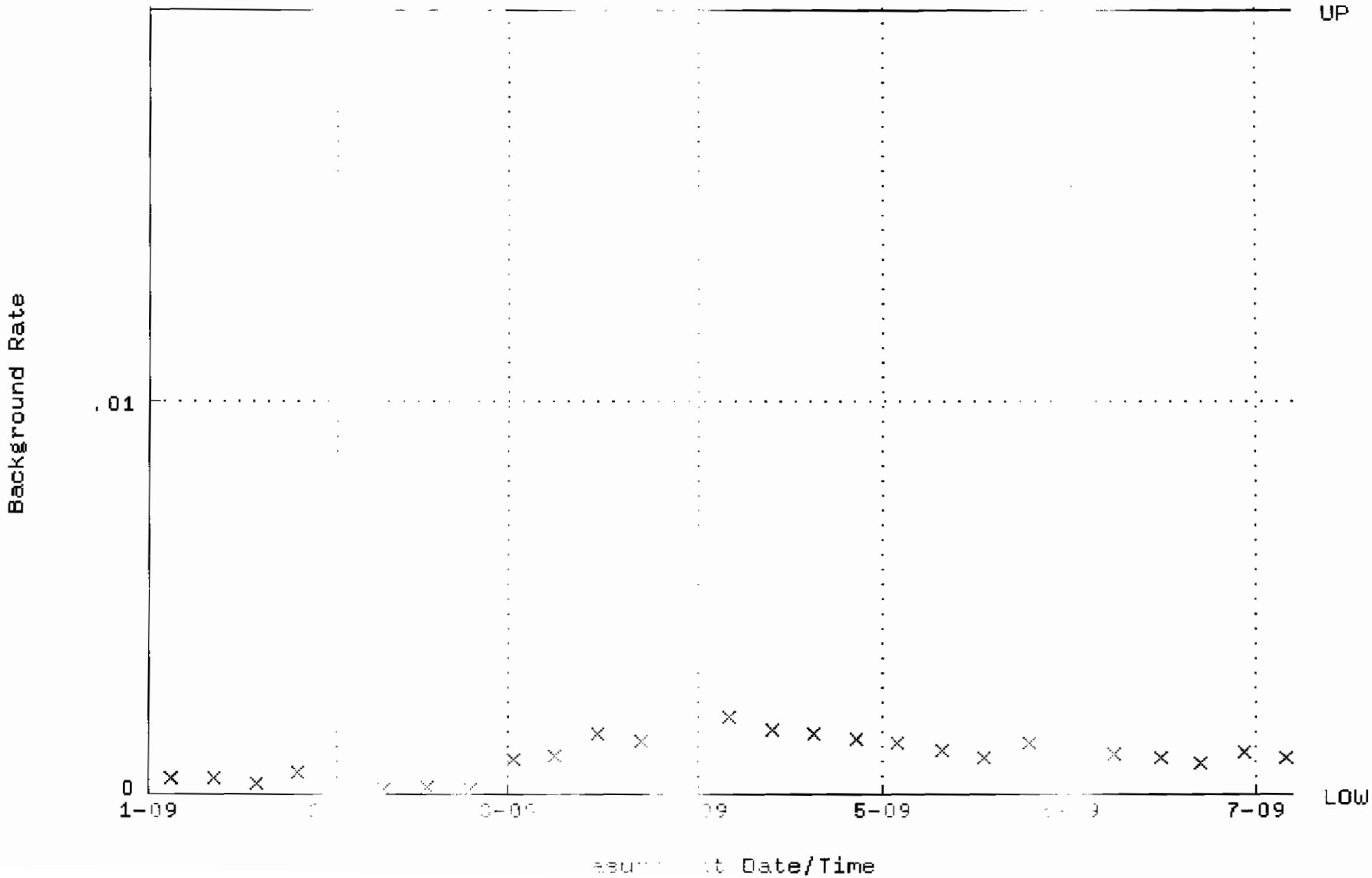

QA filename : [illegible] .QAF;102
Parameter Name : [illegible]
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Lower/Upper Lmts: [illegible]

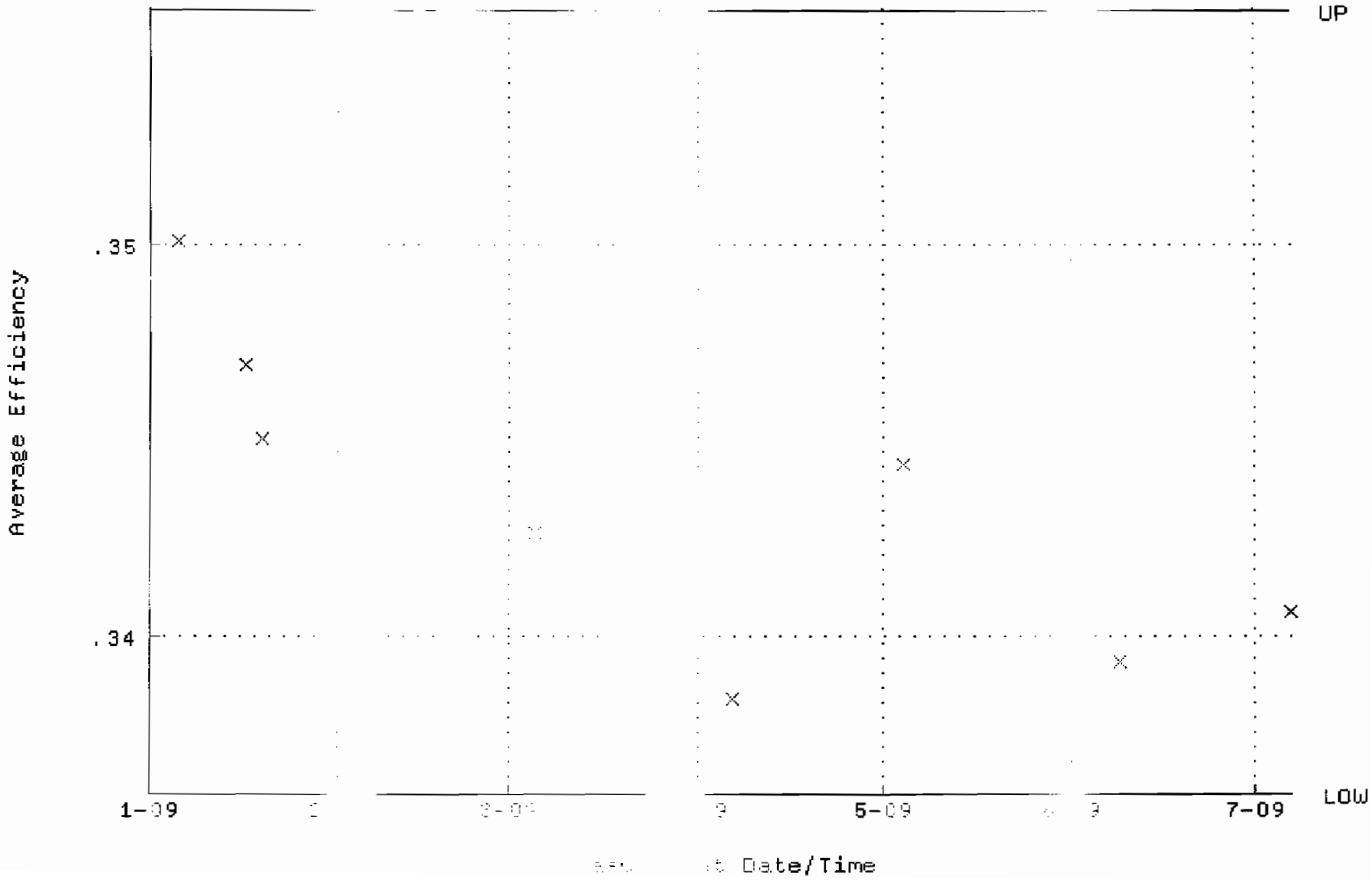

QA filename : [illegible] .QAF;102
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Start/End Dates : [illegible] -JUL-2009 12:00:00
Lower/Upper Lmts: 84. [illegible] 90.

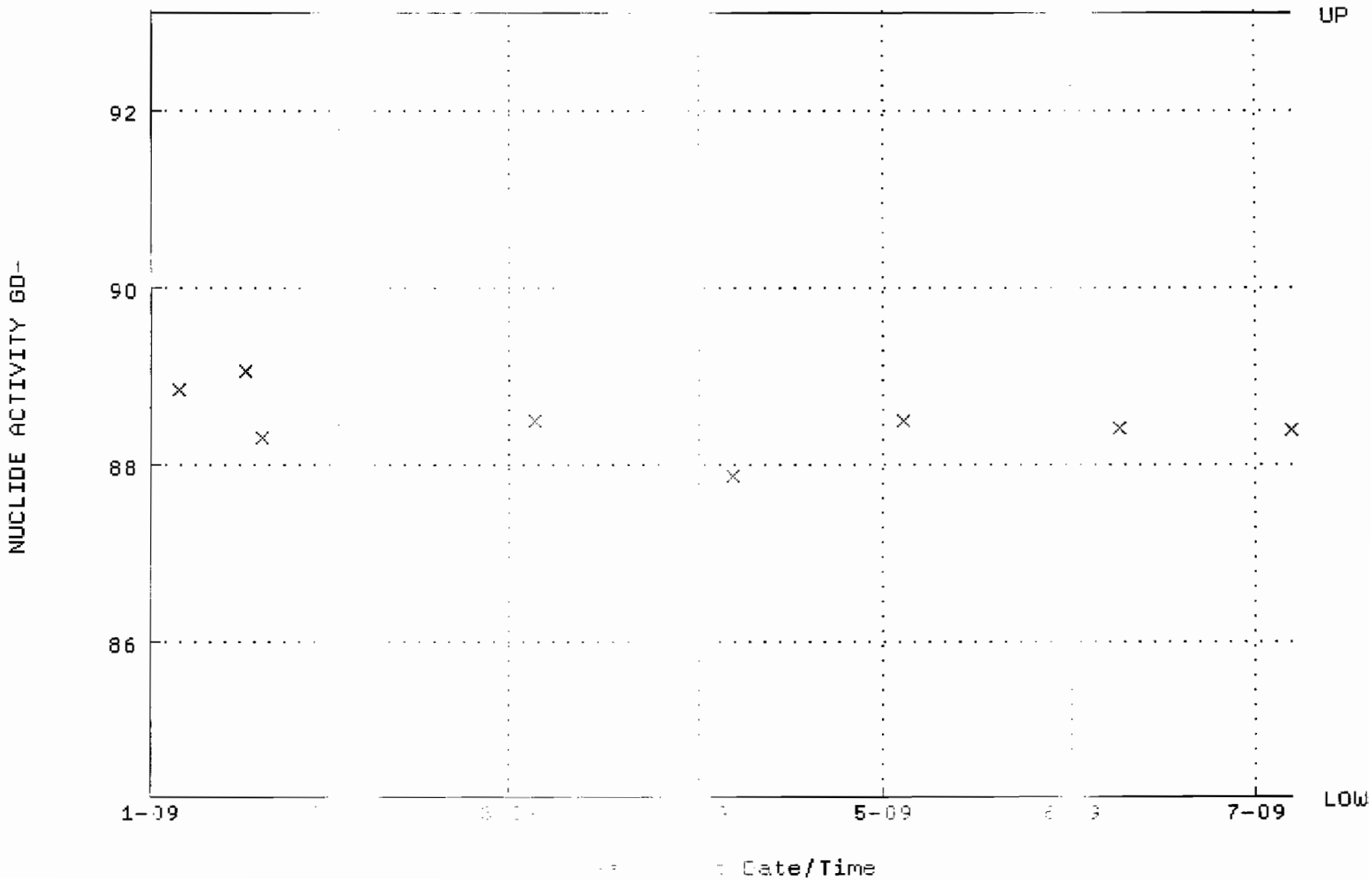

QA filename : [illegible] .045;1
Parameter Name : [illegible]
Start/End Dates : [illegible] 8-JUL-2009 12:00:00
Lower/Upper Lmts: [illegible] -02

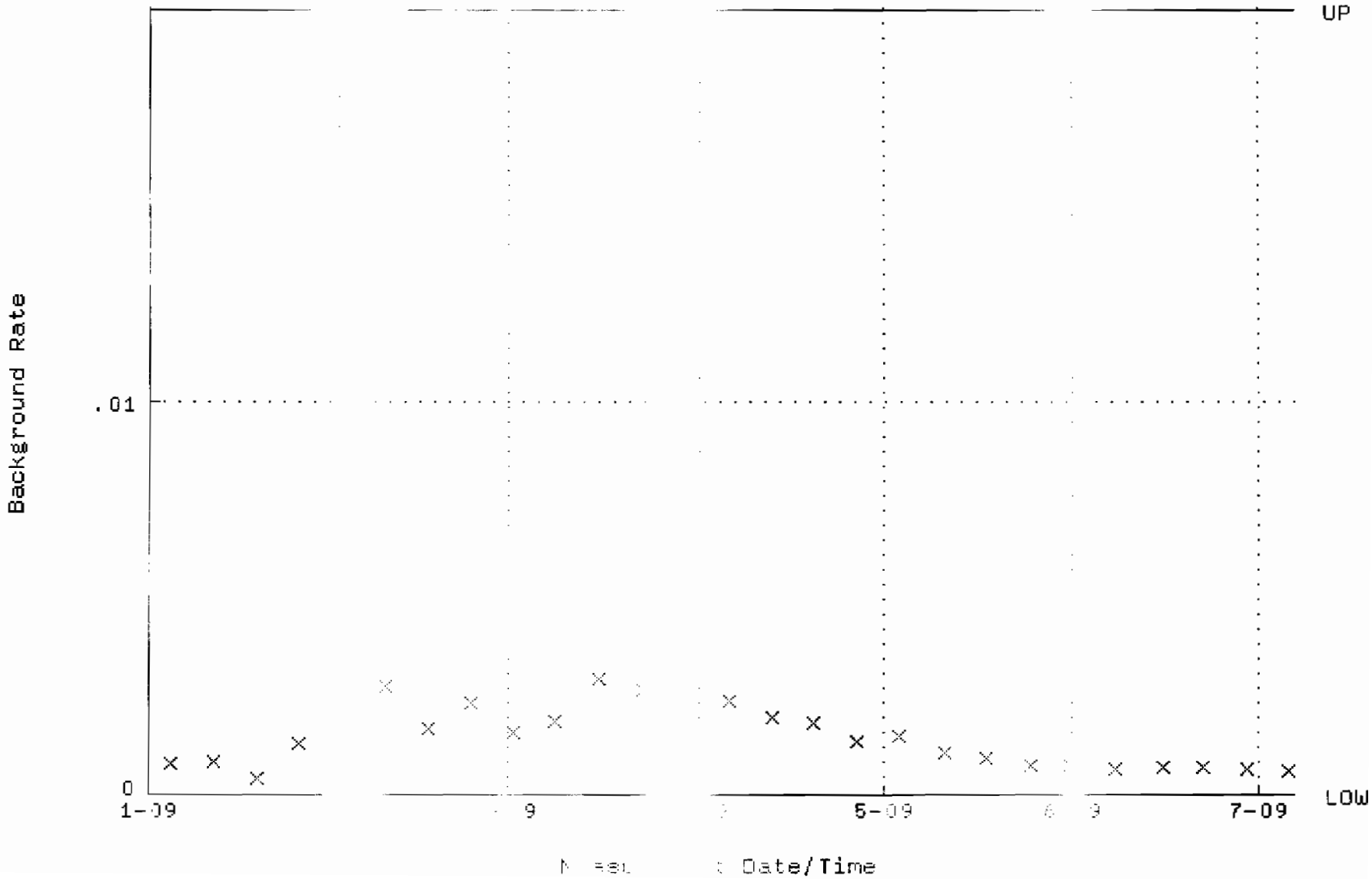

QA filename : [illegible] PHA.QA.W[illegible] .QAF;5
Parameter Name : [illegible] e E[illegible]
Start/End Dates : [illegible] 57:0[illegible] --JUL-2009 12:00:00
Lower/Upper Lmts: 0.[illegible] 0.[illegible]

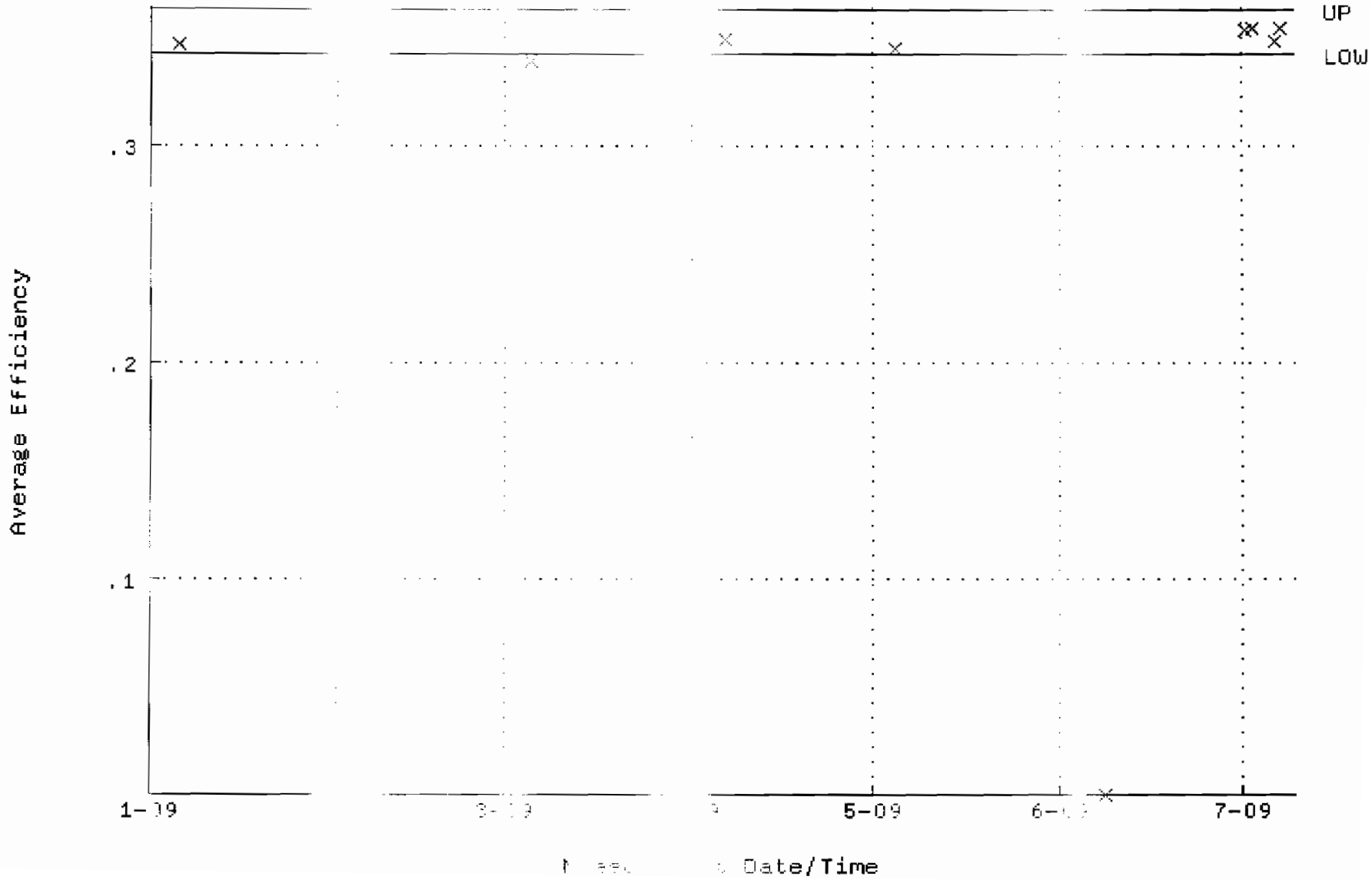

QA filename : [illegible] HA.09.W[illegible] .QAF;5
Parameter Name : [illegible] 43 (NU[illegible] /ITY GD-148)
Start/End Dates : [illegible] 57:0[illegible] [illegible]-JUL-2009 12:00:00
Lower/Upper Lmts: 00 [illegible] 33.[illegible]

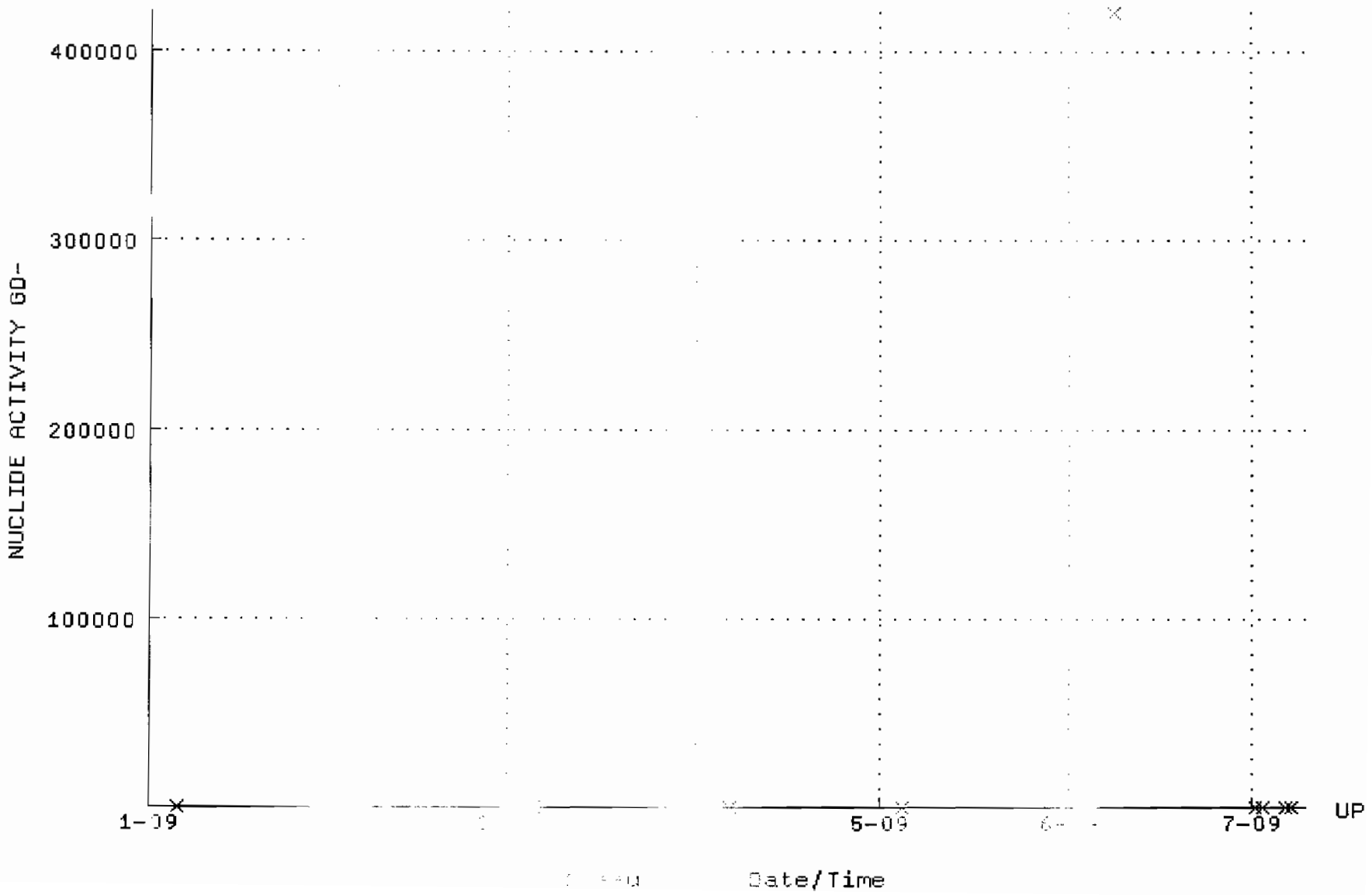

QA filename : [illegible] F;2
Parameter Name : [illegible]
Start/End Dates : [illegible]-JUL-2009 12:00:00
Lower/Upper Lmts: 0. [illegible] -02

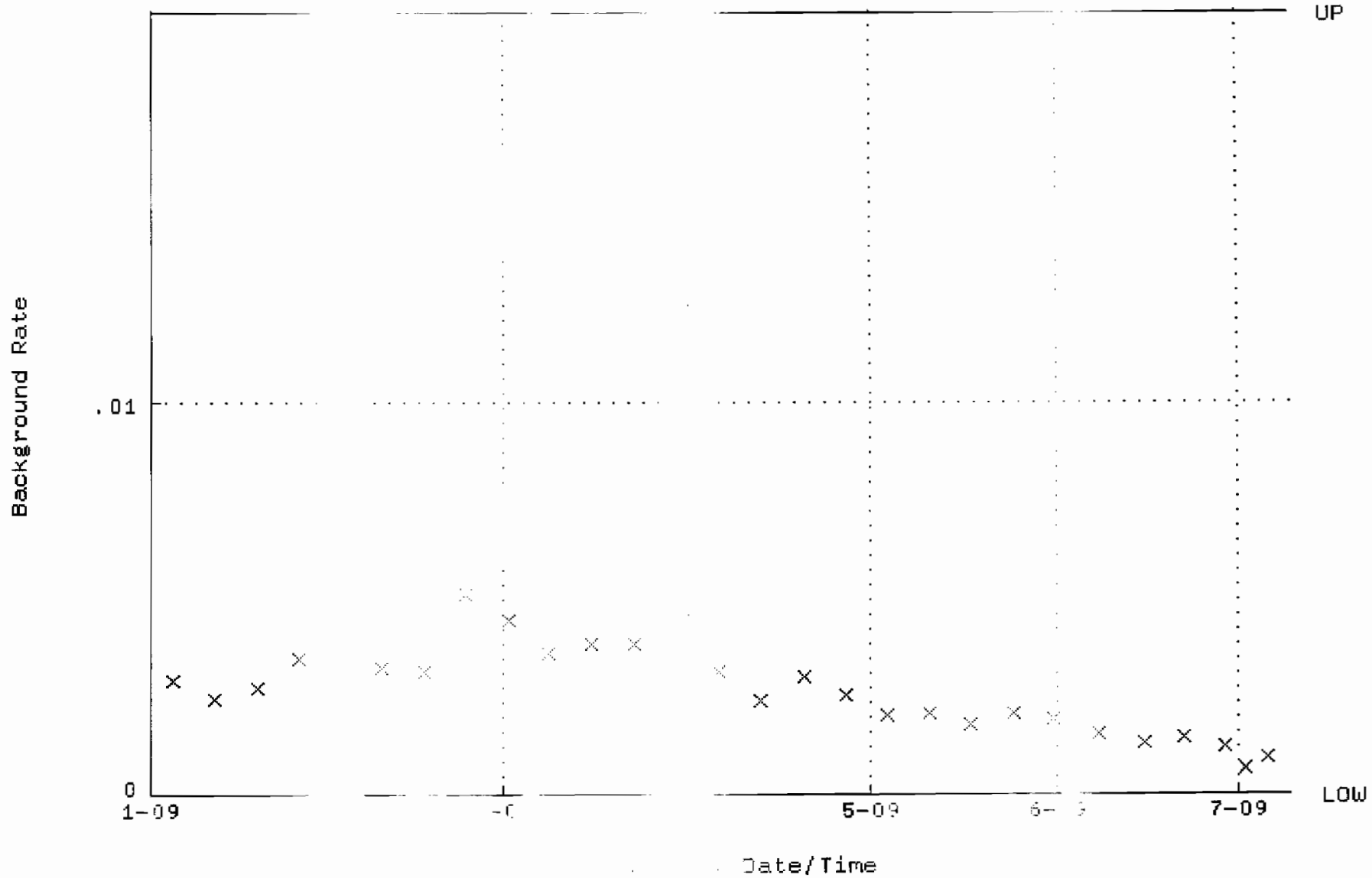

QA filename : [illegible] 3AF;5
Parameter Name : [illegible]
Start/End Dates : [illegible] 2:1[illegible] [illegible]-JUL-2009 12:00:00
Lower/Upper Lmts: 0.[illegible] [illegible] through [illegible]

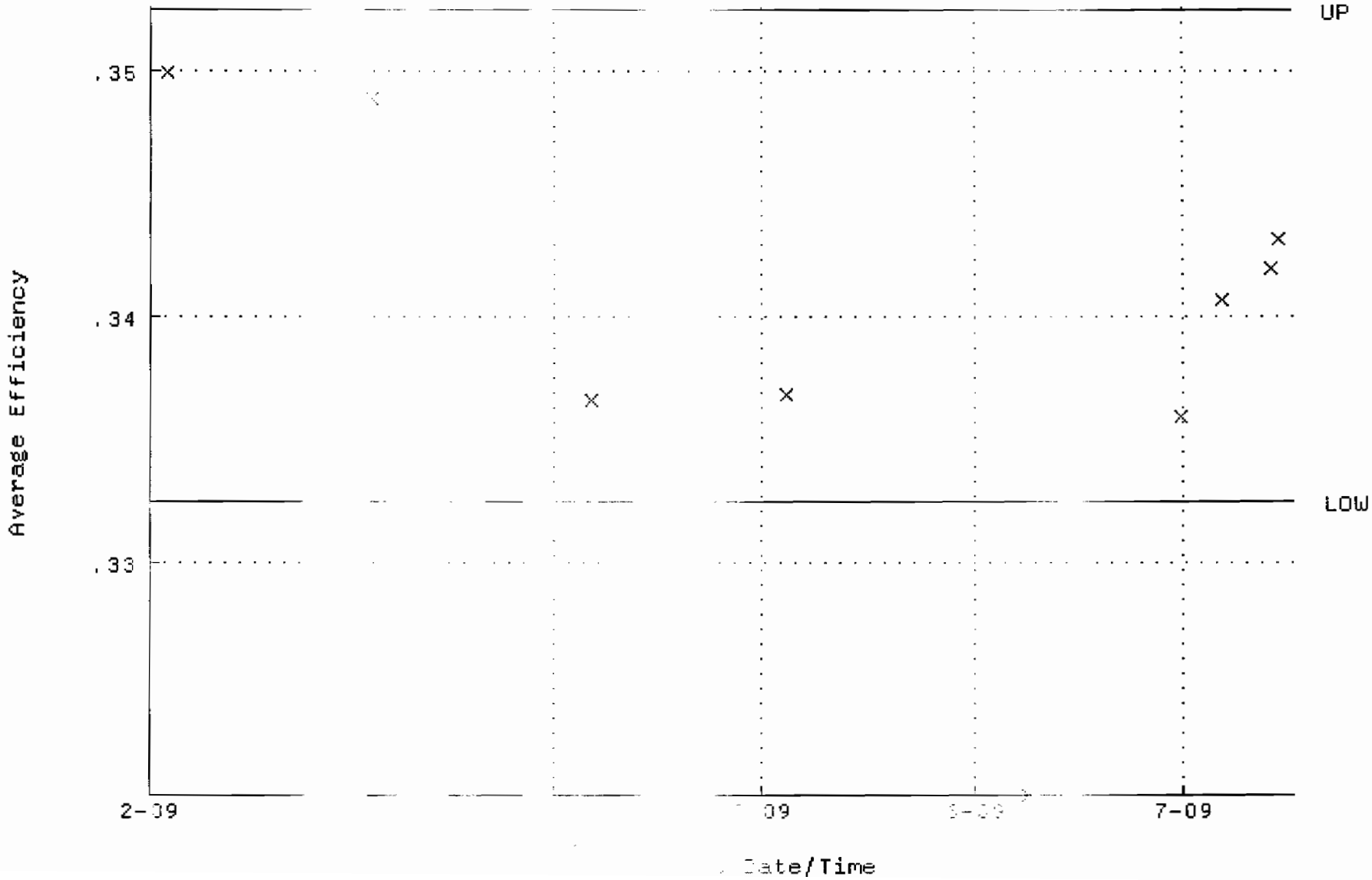

QA filename : [illegible] .QAF;5
Parameter Name : [illegible] GD-148)
Start/End Dates : [illegible] -JUL-2009 12:00:00
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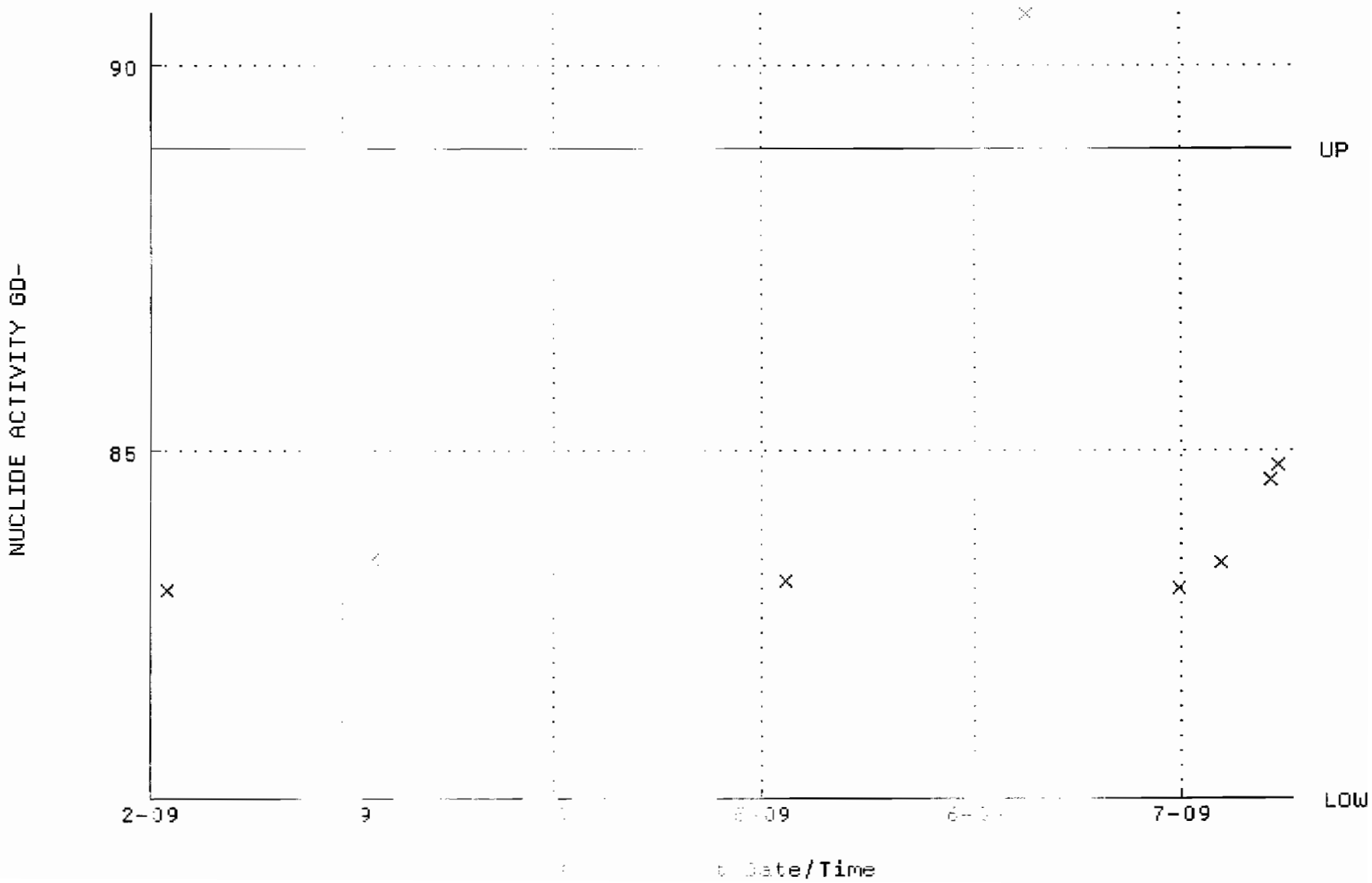

QA filename : [illegible] .CONF;1
Parameter Name : [illegible]
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Lower/Upper Lmts: 0.[illegible] [illegible] 00 [illegible] [illegible]-02

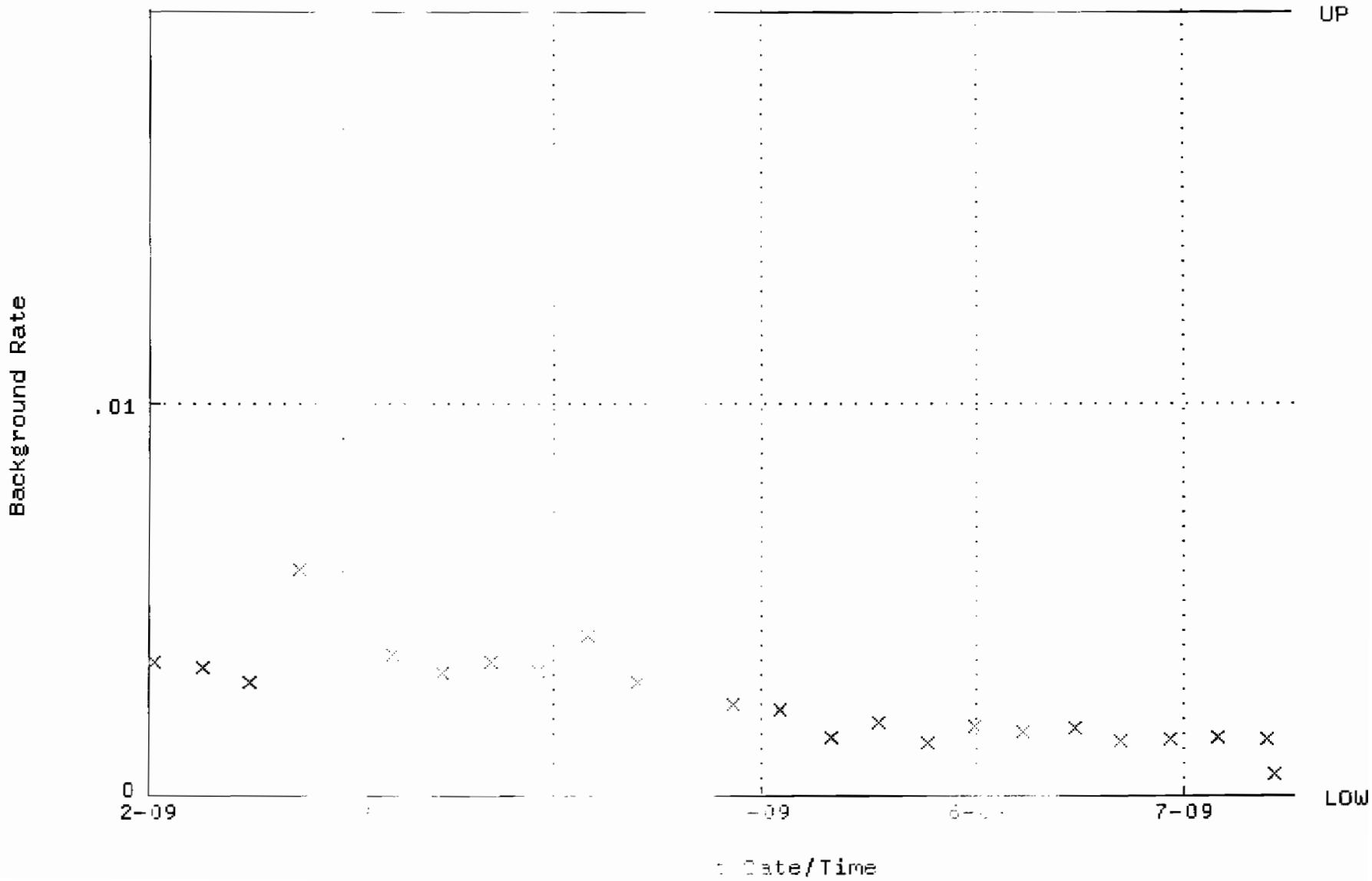

QA filename : [illegible] .DAF;4
Parameter Name : [illegible]
Start/End Dates : [illegible] 12:[illegible] [illegible]-JUL-2009 12:[illegible]
Lower/Upper Lmts: 0.[illegible] [illegible] through [illegible]

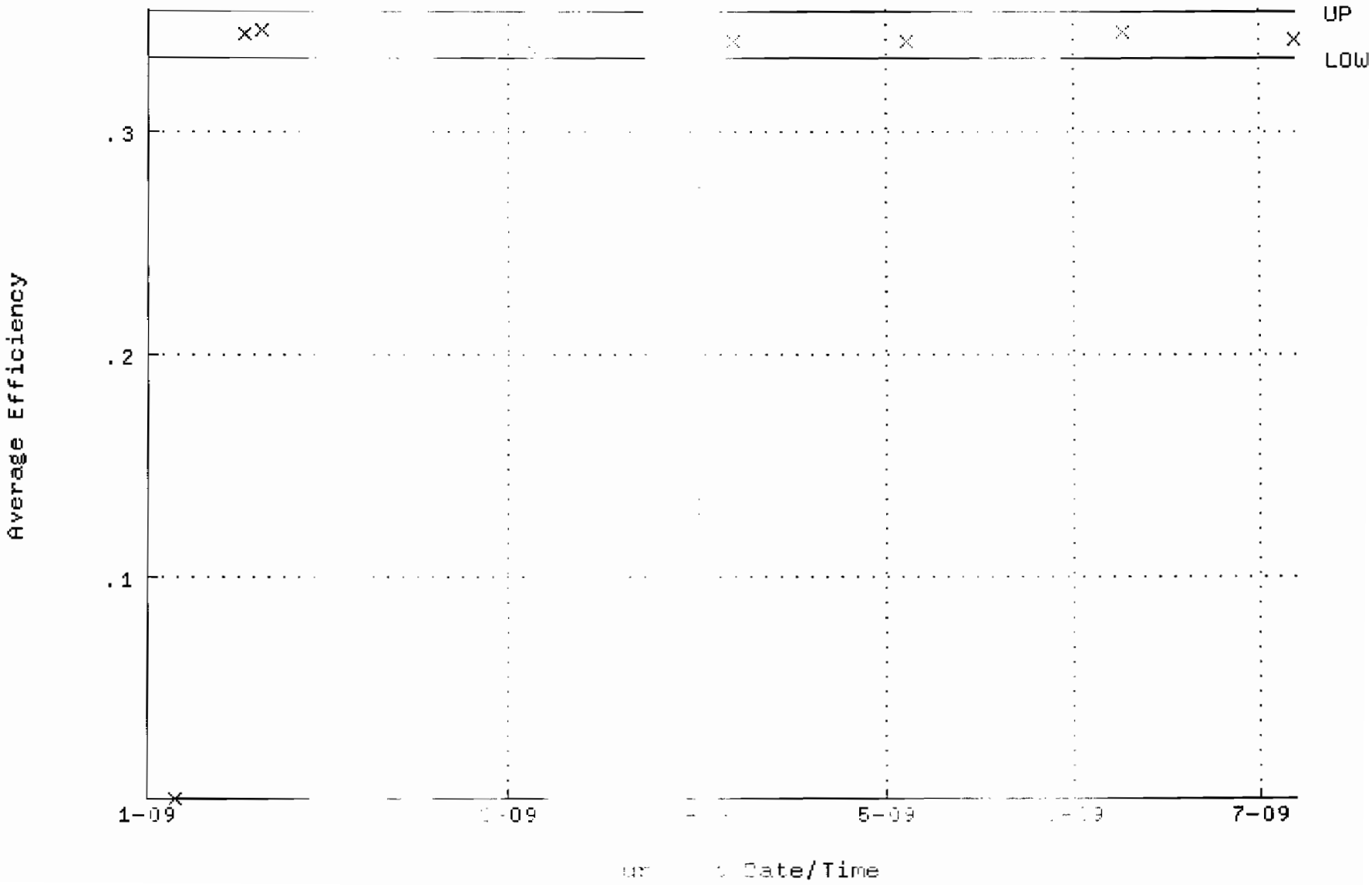

QA filename : [illegible]
Parameter Name : [illegible] (GD-148)
Start/End Dates : [illegible]-JUL-2009 [illegible]
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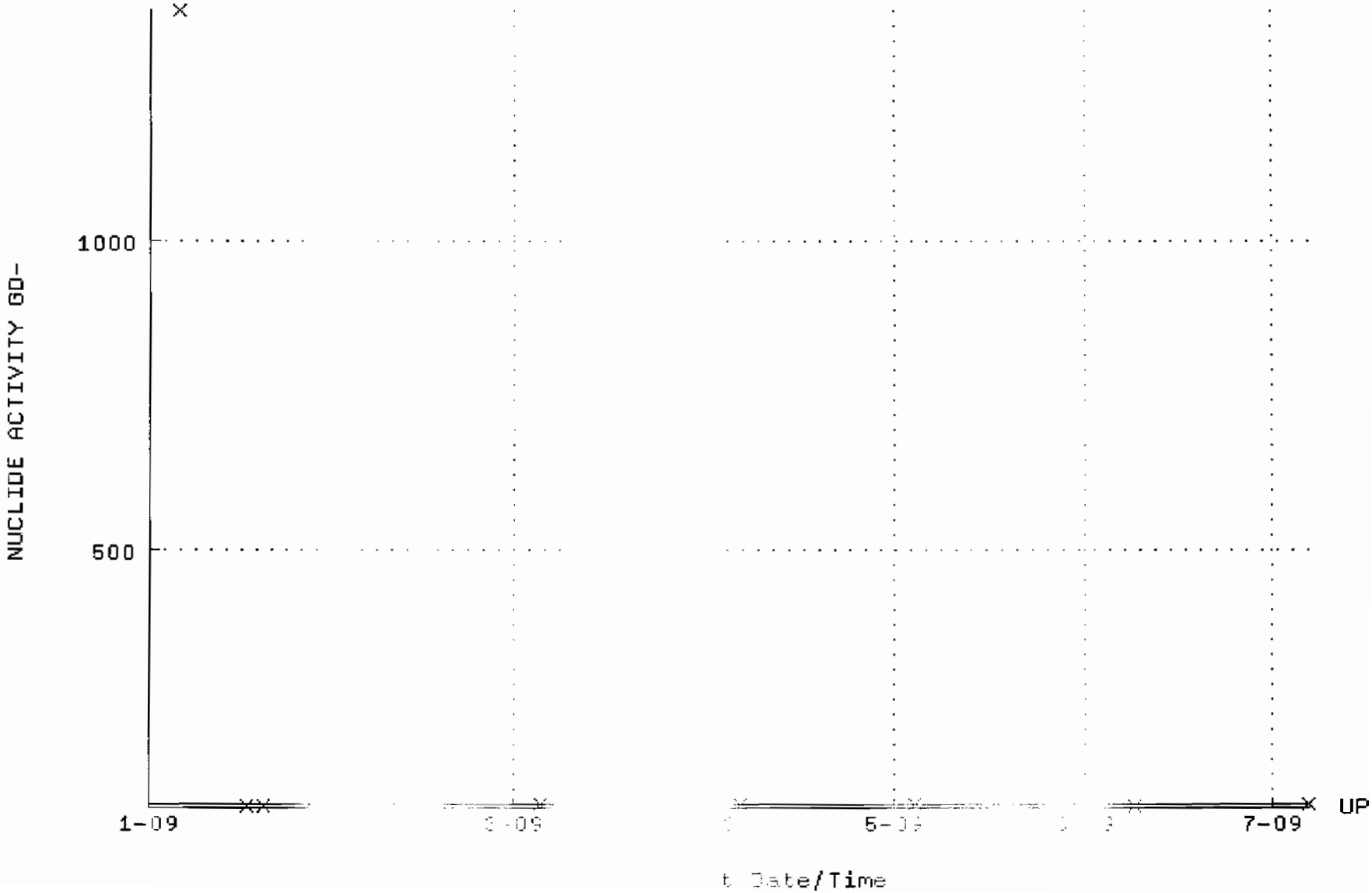

QA filename : [illegible] CAF;1
Parameter Name : [illegible]
Start/End Dates : [illegible] -JUL-2009 12:00:[illegible]
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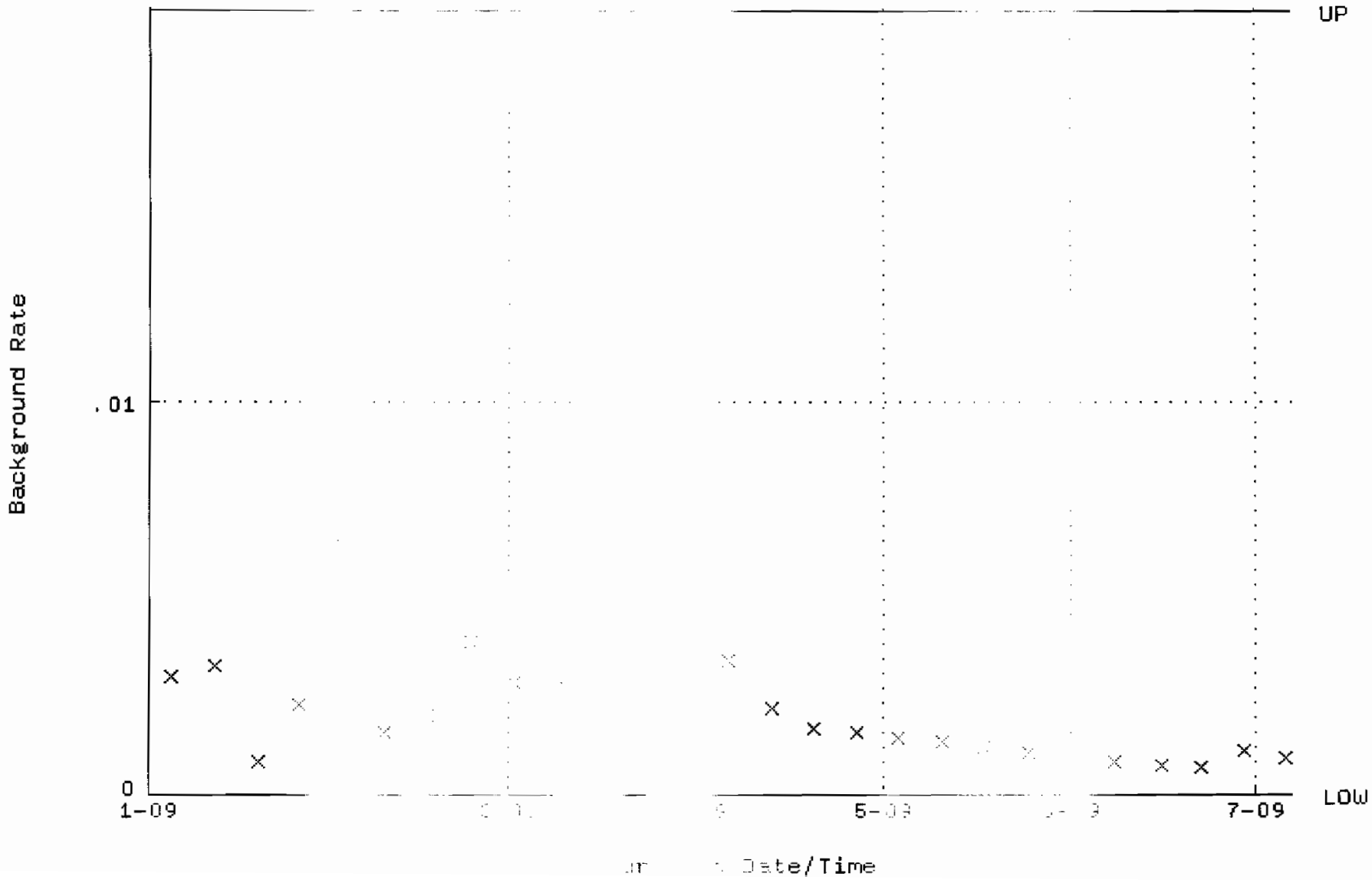

QA filename : [illegible] ;5
Parameter Name : [illegible]
Start/End Dates : [illegible] -JUL-2009 12:00:[illegible]
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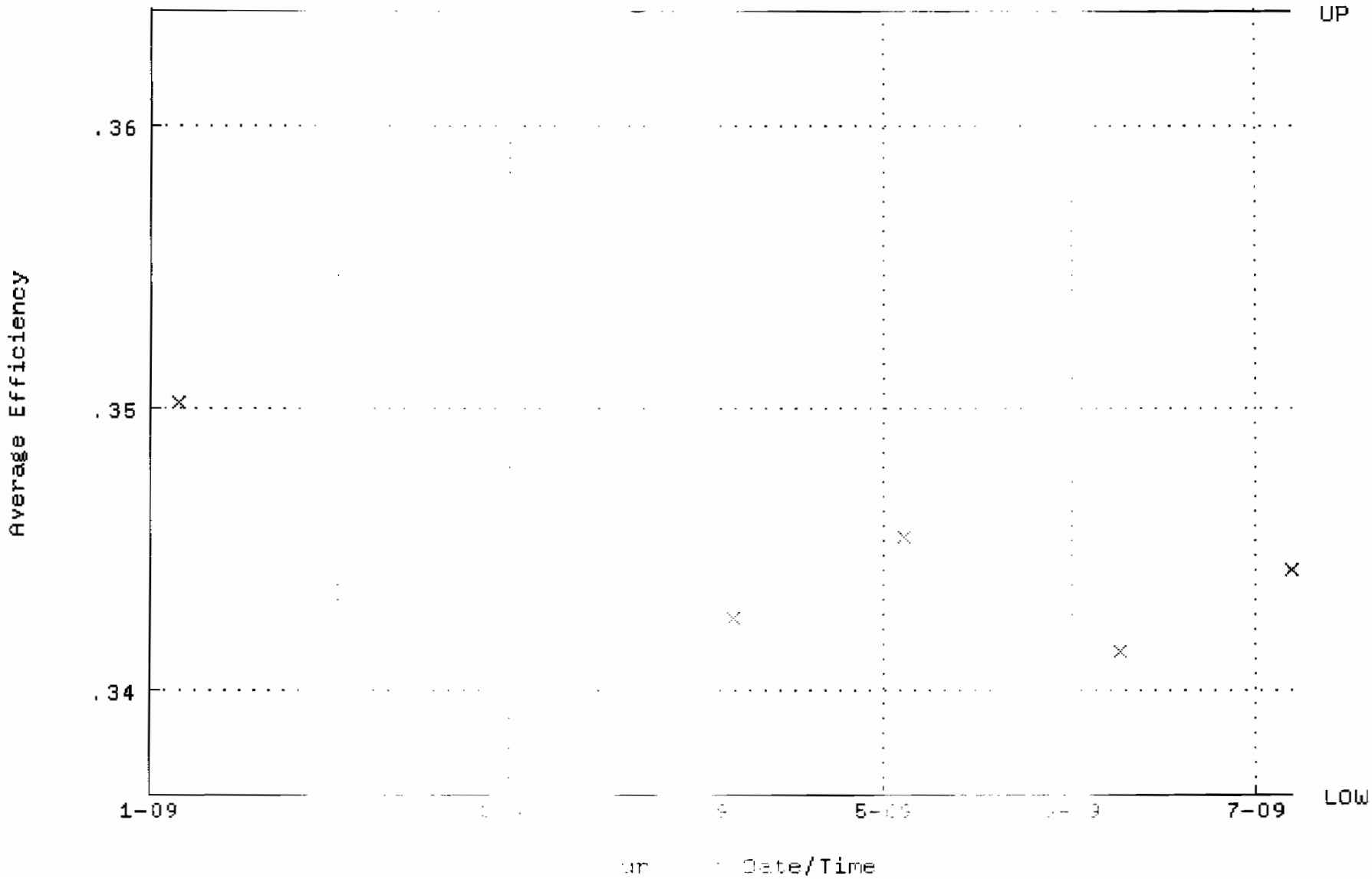

QA filename : [illegible] ;5
Parameter Name : [illegible] GD-148]
Start/End Dates : 5-[illegible] 9 [illegible] -JUL-2009 12:00:[illegible]
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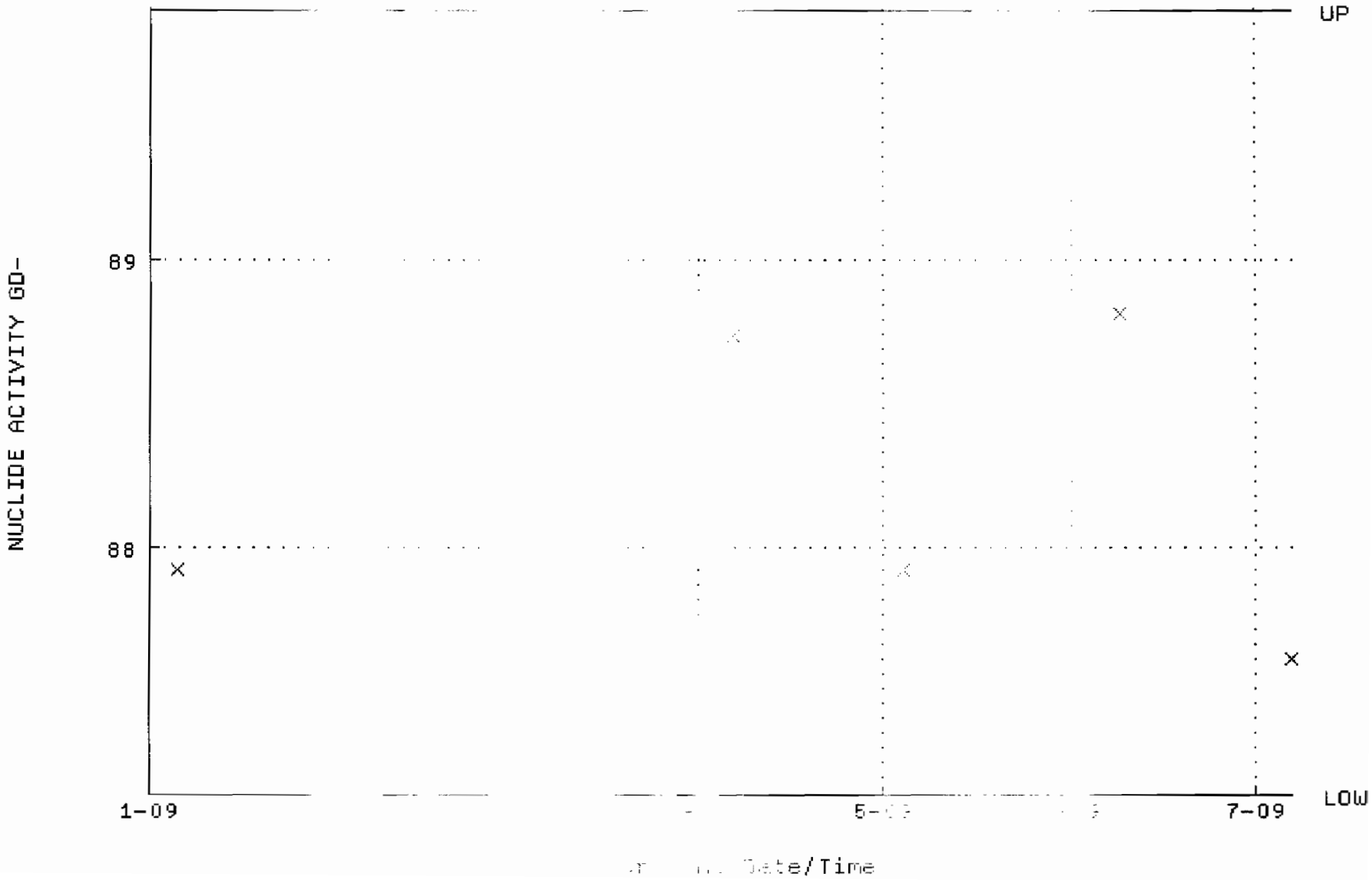

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Lower/Upper Lmts: [illegible]

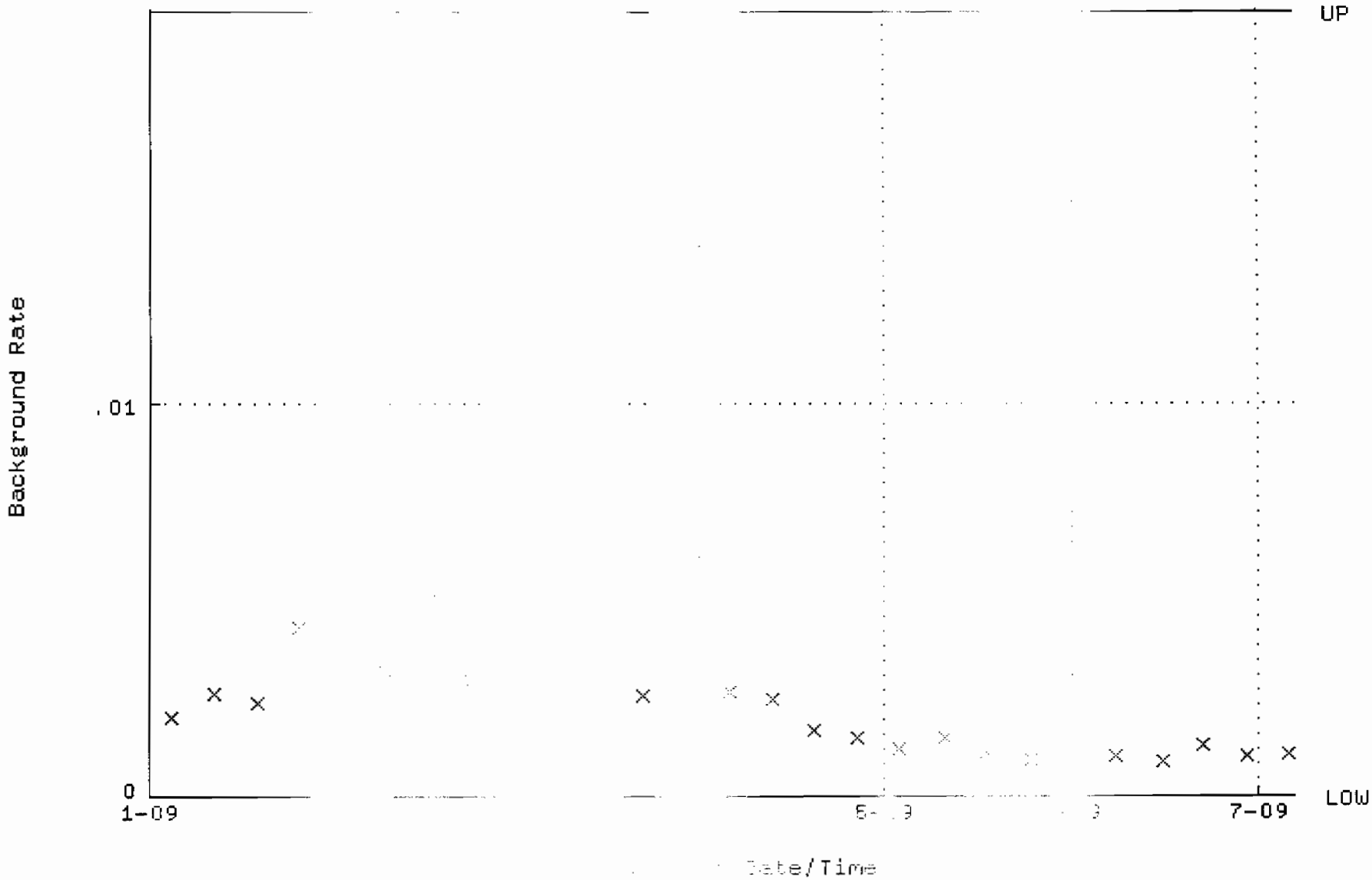

QA filename : [illegible]]ω [illegible];3
Parameter Name : [illegible] cie
Start/End Dates : [illegible] nrc [illegible]JL-2009 12:0[illegible]
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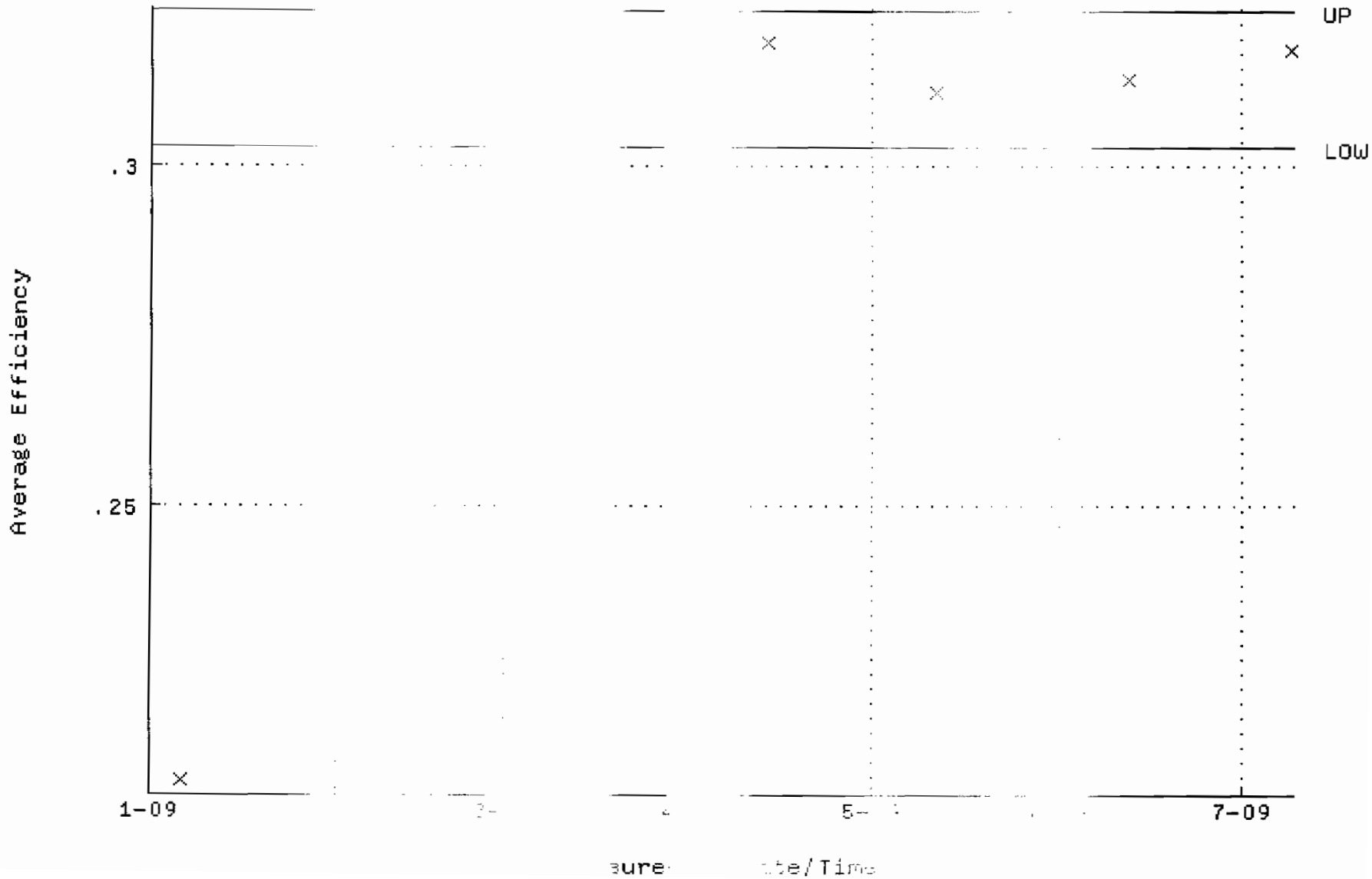

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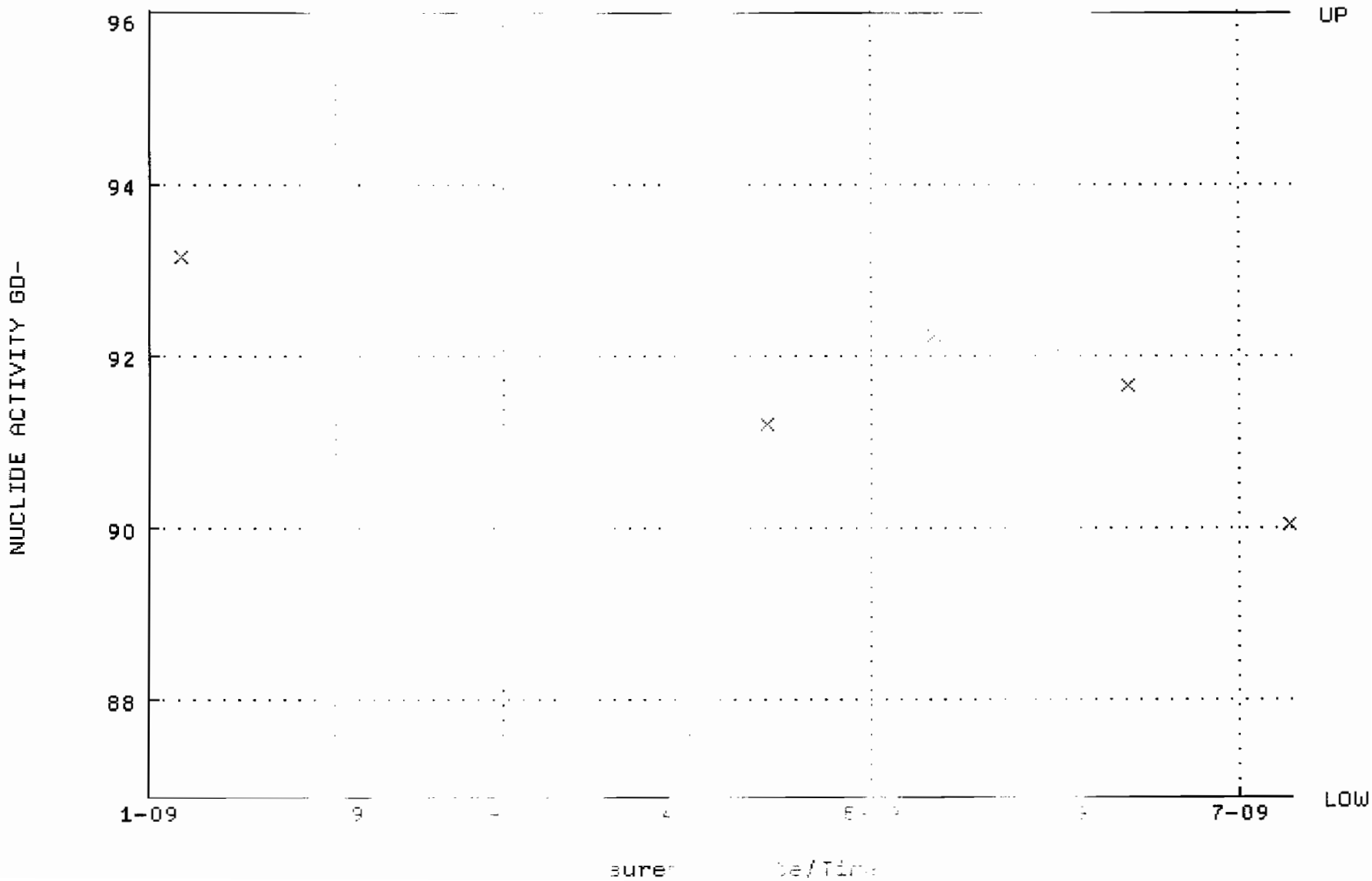

QA filename : [illegible] .8]B[illegible] [illegible]1
Parameter Name : [illegible]Rat[illegible]
Start/End Dates : [illegible]hrou[illegible] [illegible]L-2009 [illegible]
Lower/Upper Lmts: 0. [illegible] .0000 [illegible]

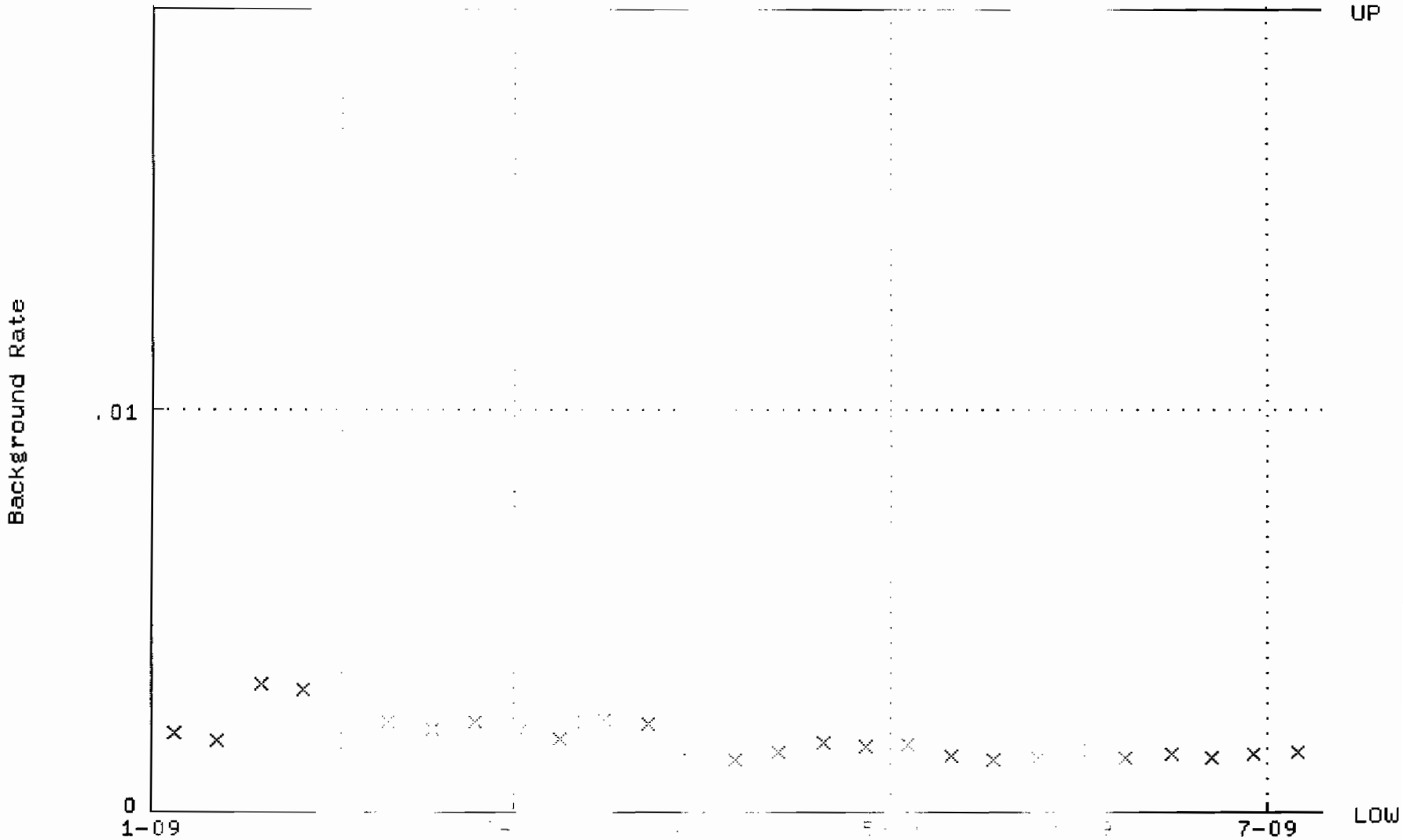

[illegible]sure [illegible]ate/Ti[illegible]

QA filename : [illegible]
Parameter Name : [illegible]
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Lower/Upper Lmts: [illegible]

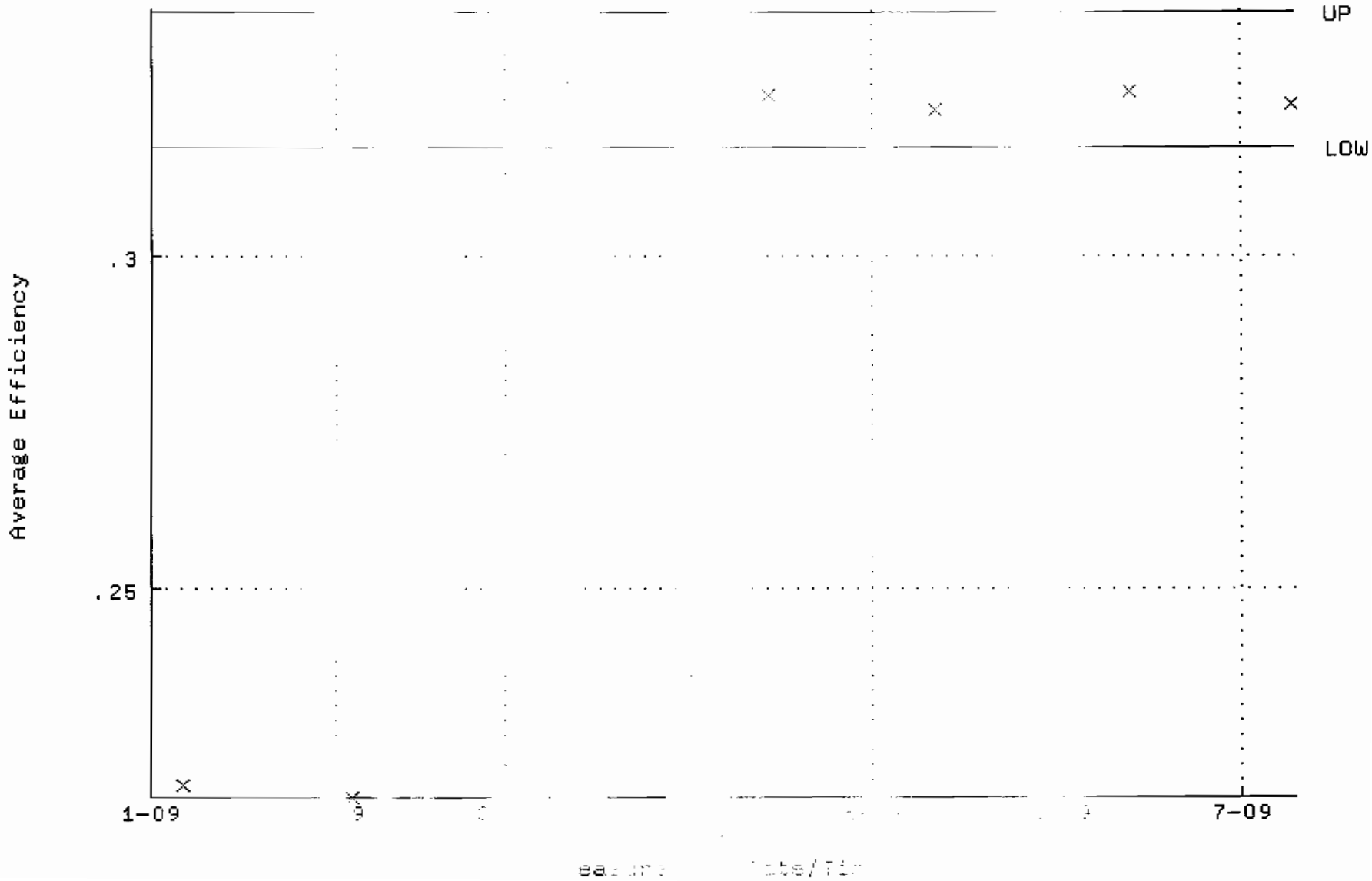

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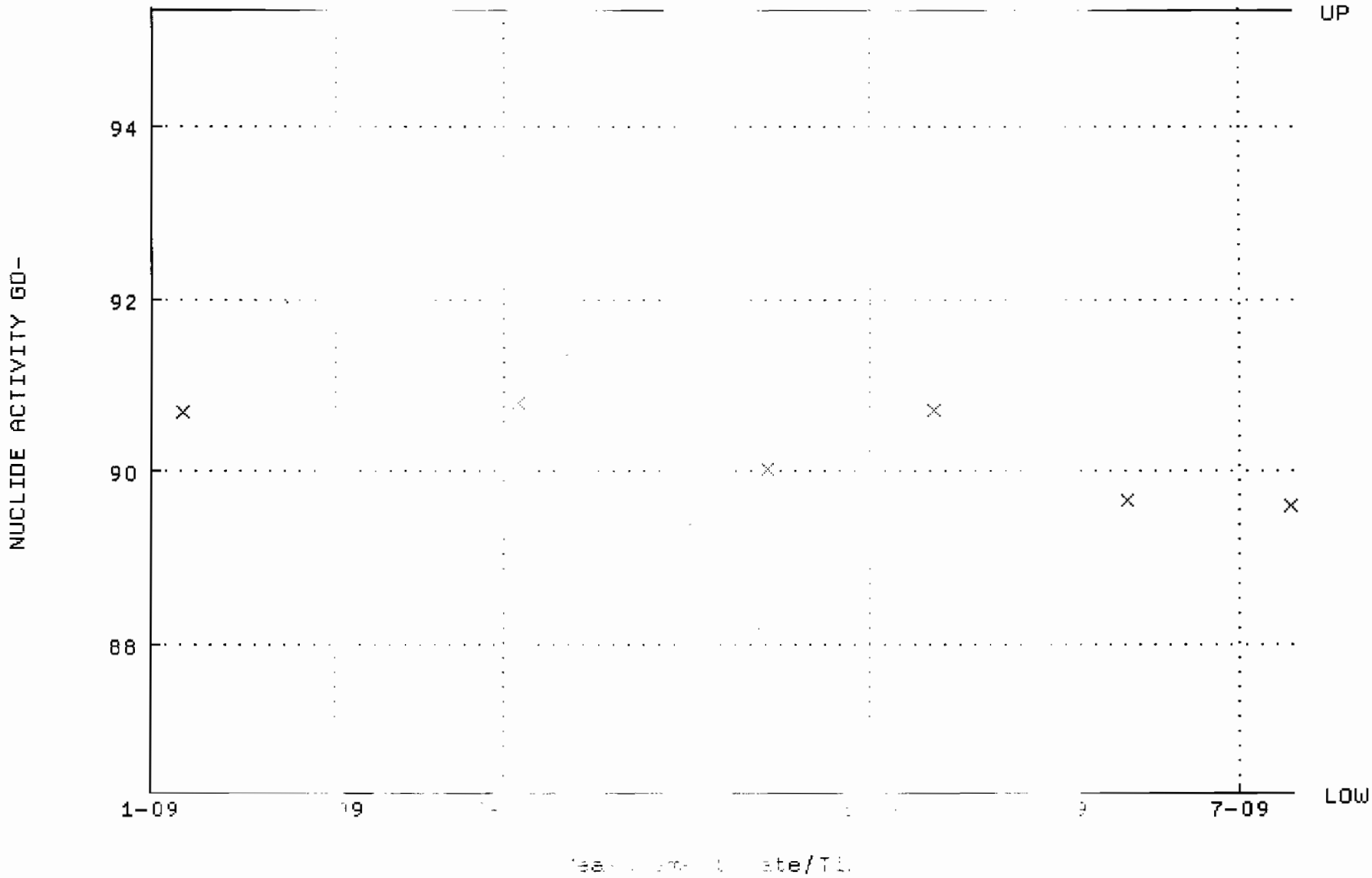

QA filename : [illegible]
Parameter Name : Back[illegible]
Start/End Dates : [illegible] 17: [illegible] -JUL-2009 [illegible]
Lower/Upper Lmts: [illegible] th: [illegible]

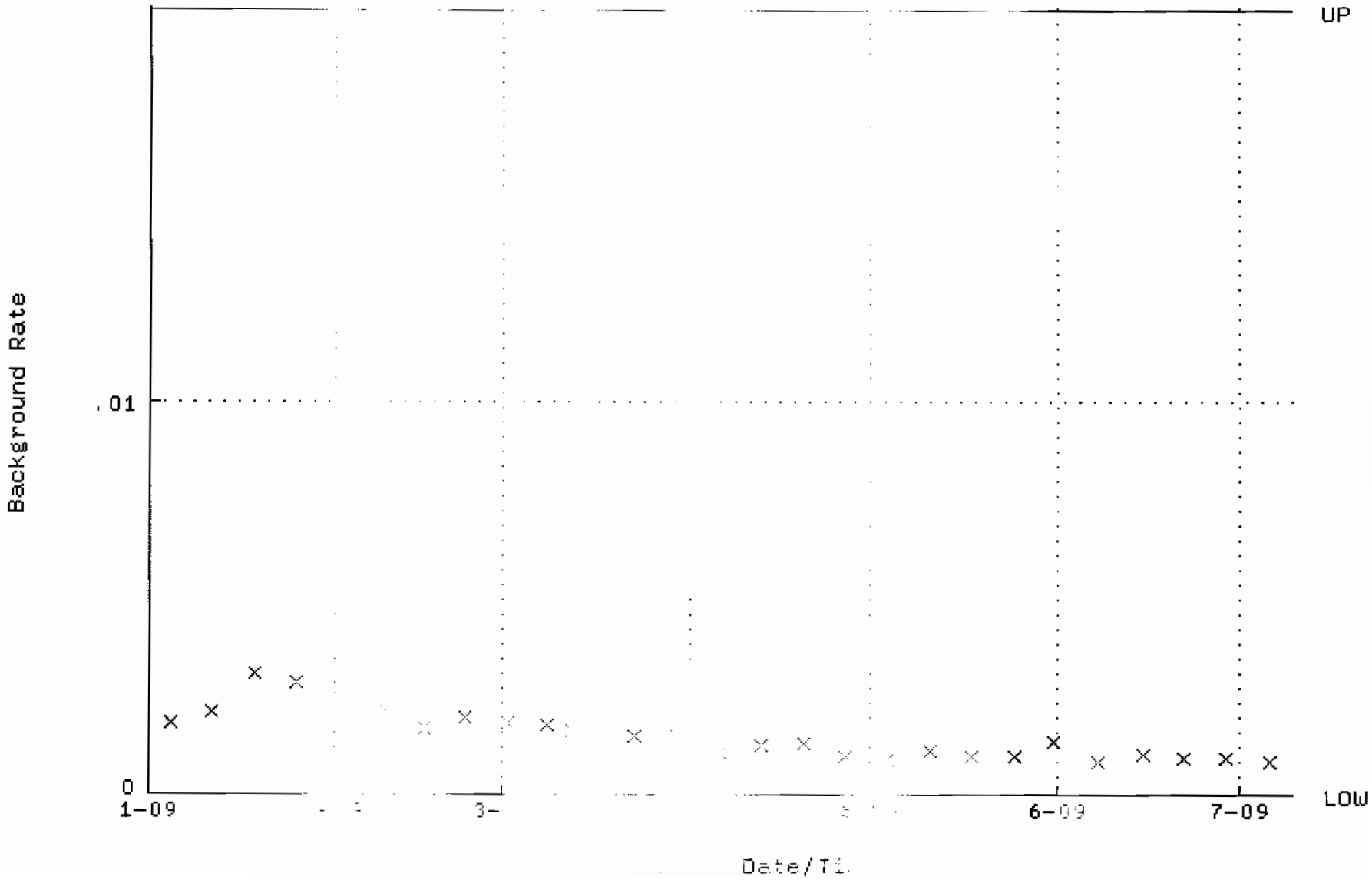

QA filename : _AL P;2
Parameter Name : vere
Start/End Dates : 12: -JUL-200 :00:00
Lower/Upper Lmts: 0. rough

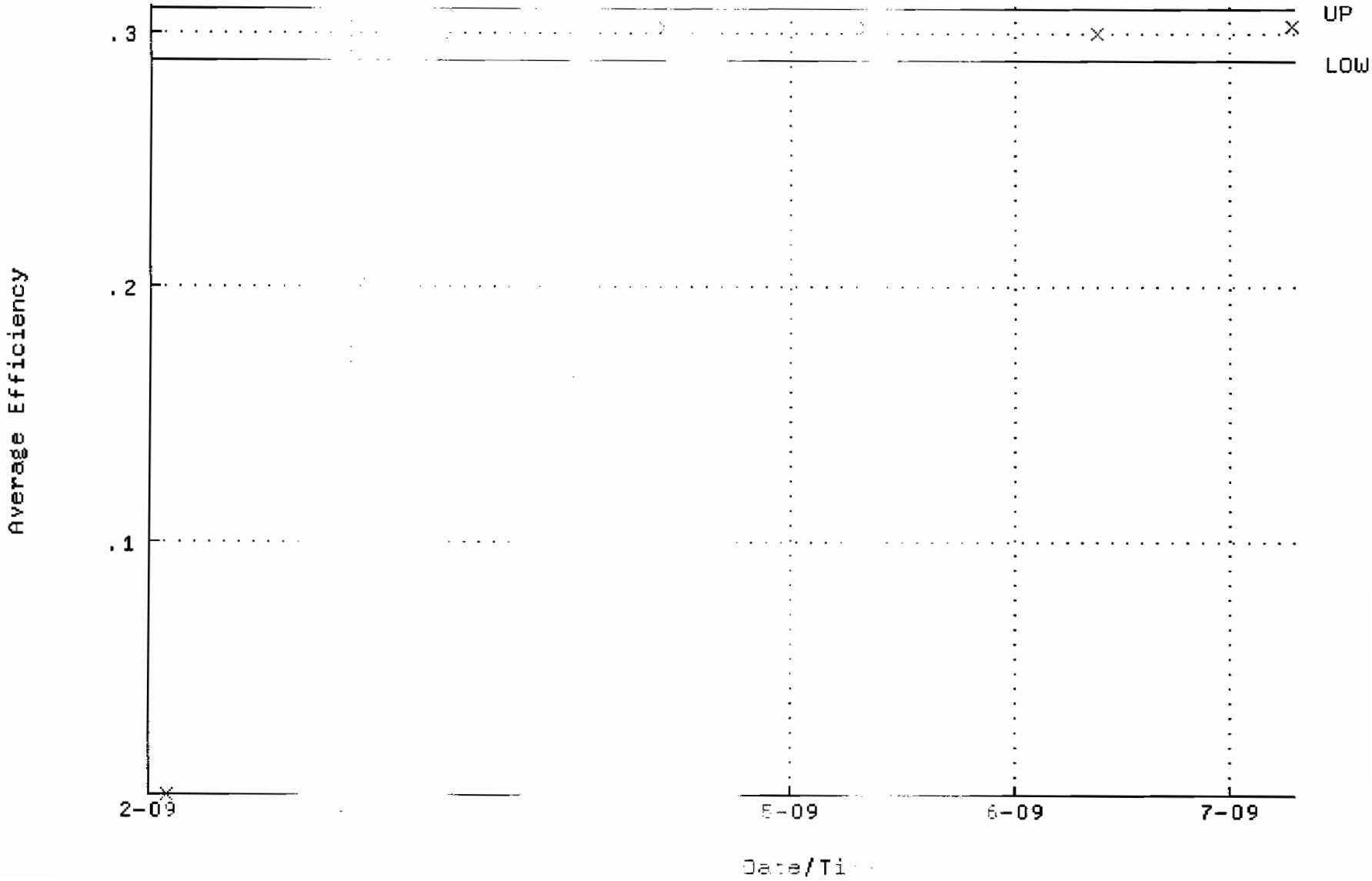

QA filename : V_ALF AF;2
Parameter Name : 3148 GD-
Start/End Dates : 12:1 -JUL-20 00
Lower/Upper Lmts: 87. ugh 9

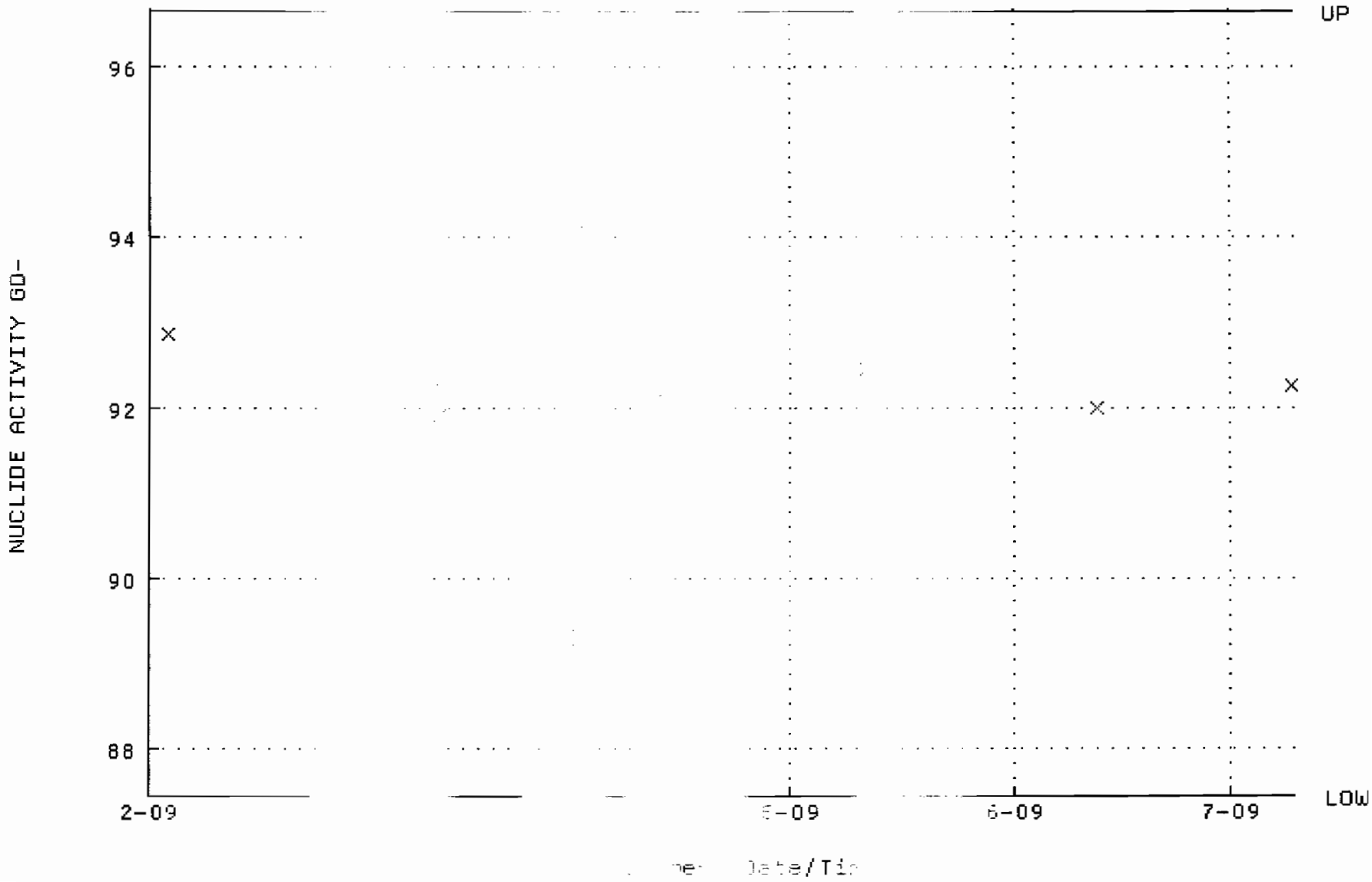

QA filename : D V_ALP F;1
Parameter Name : F \Backg)
Start/End Dates : 4 09 17:2 JUL-200 :00:00
Lower/Upper Lmts: 0.0 through 2

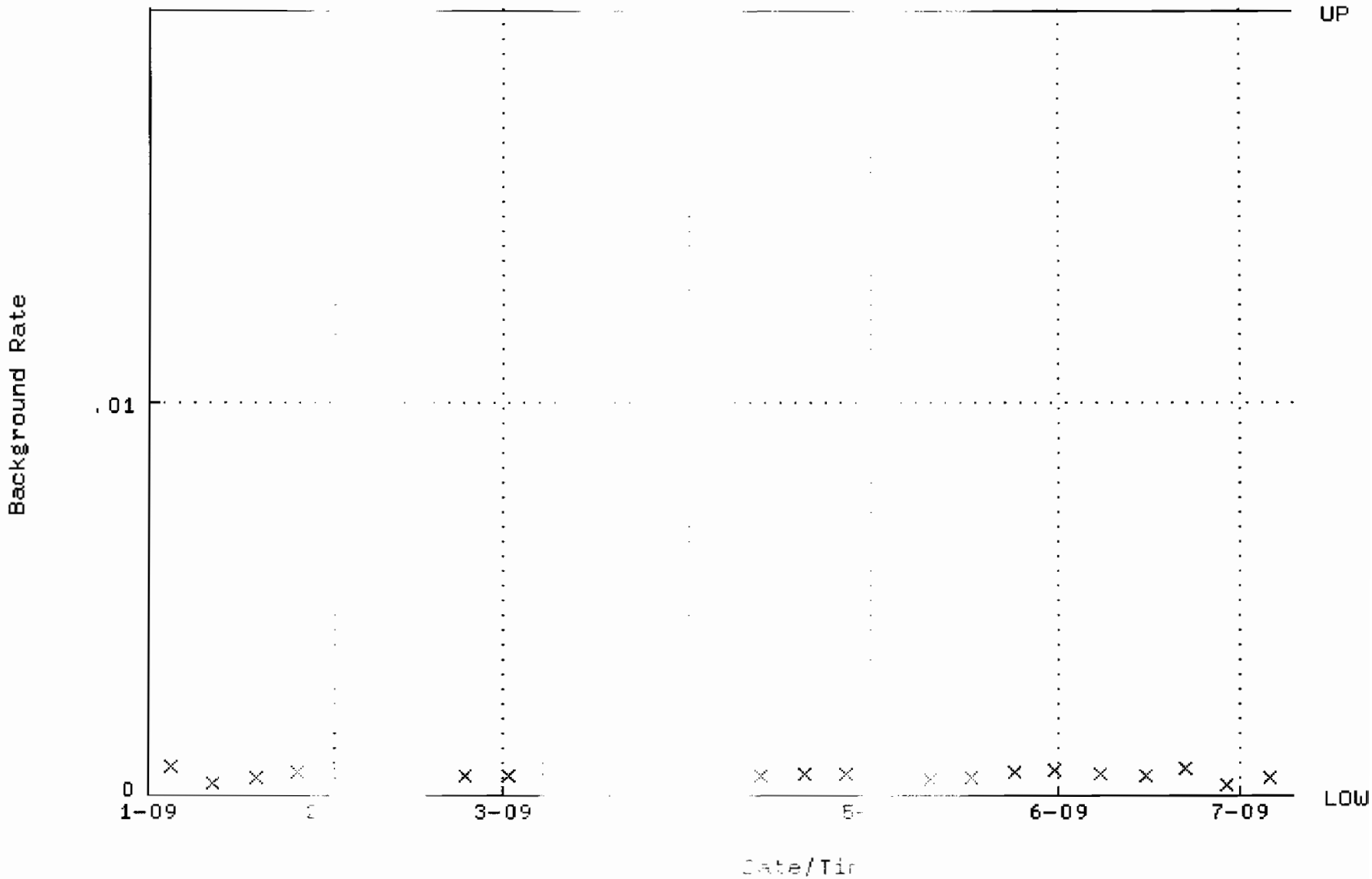

QA filename : [illegible] NV_ALPH [illegible] ;3
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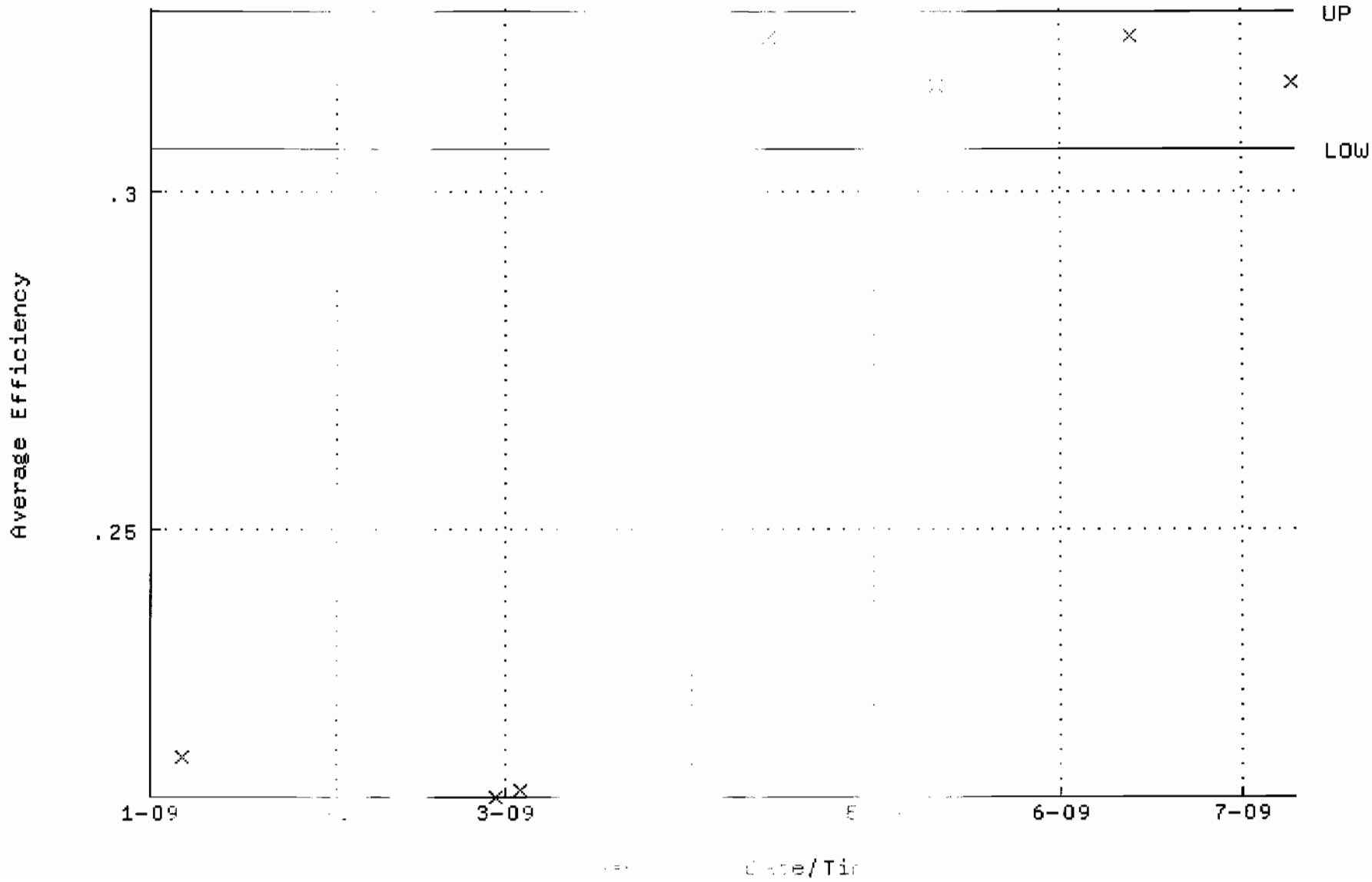

QA filename : [illegible] ENV_ALPHA[illegible].W [illegible]:3
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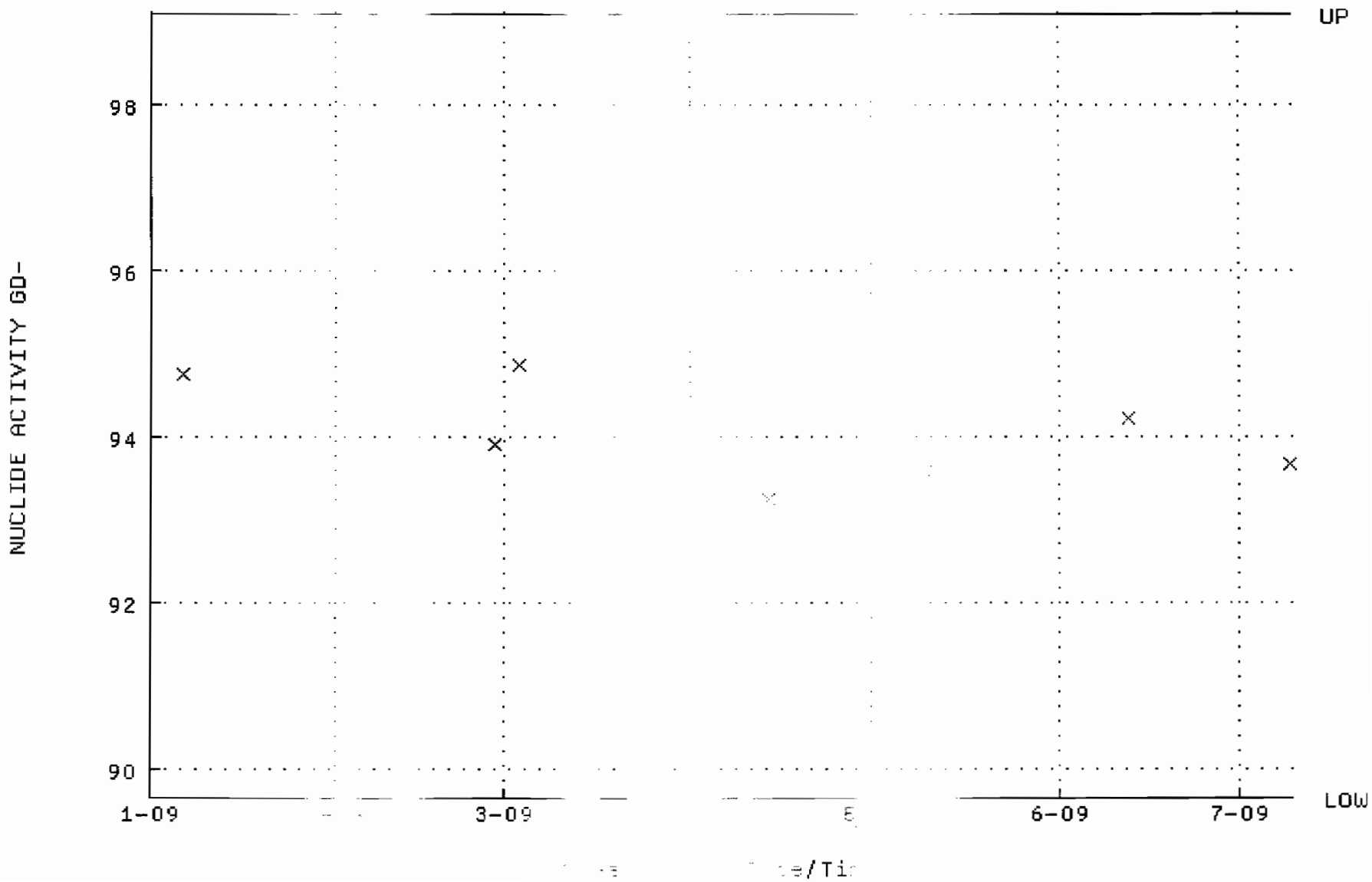

QA filename : [illegible] ENV_ALPHA[illegible]
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Lower/Upper Lmts: 0.[illegible] [illegible] through [illegible]

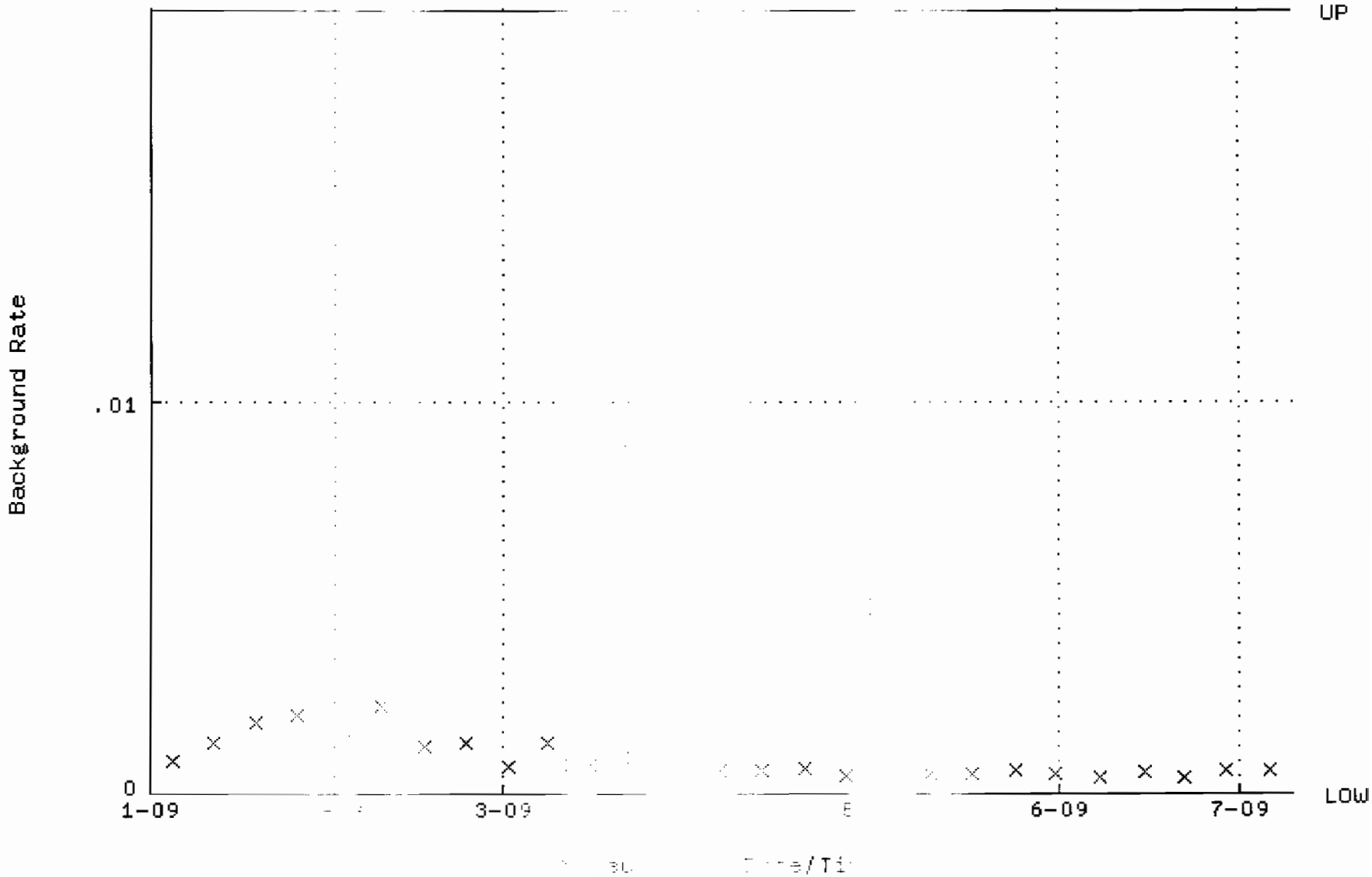

QA filename : [illegible]:[ENV_ALPHA. [illegible]
Parameter Name : [illegible]EF [illegible]Average [illegible]oi
Start/End Dates : [illegible]mN- [illegible]9 07:23: [illegible] [illegible]L-2[illegible] [illegible]0:00
Lower/Upper Lmts: 0. [illegible] 55[illegible] through 0. [illegible]

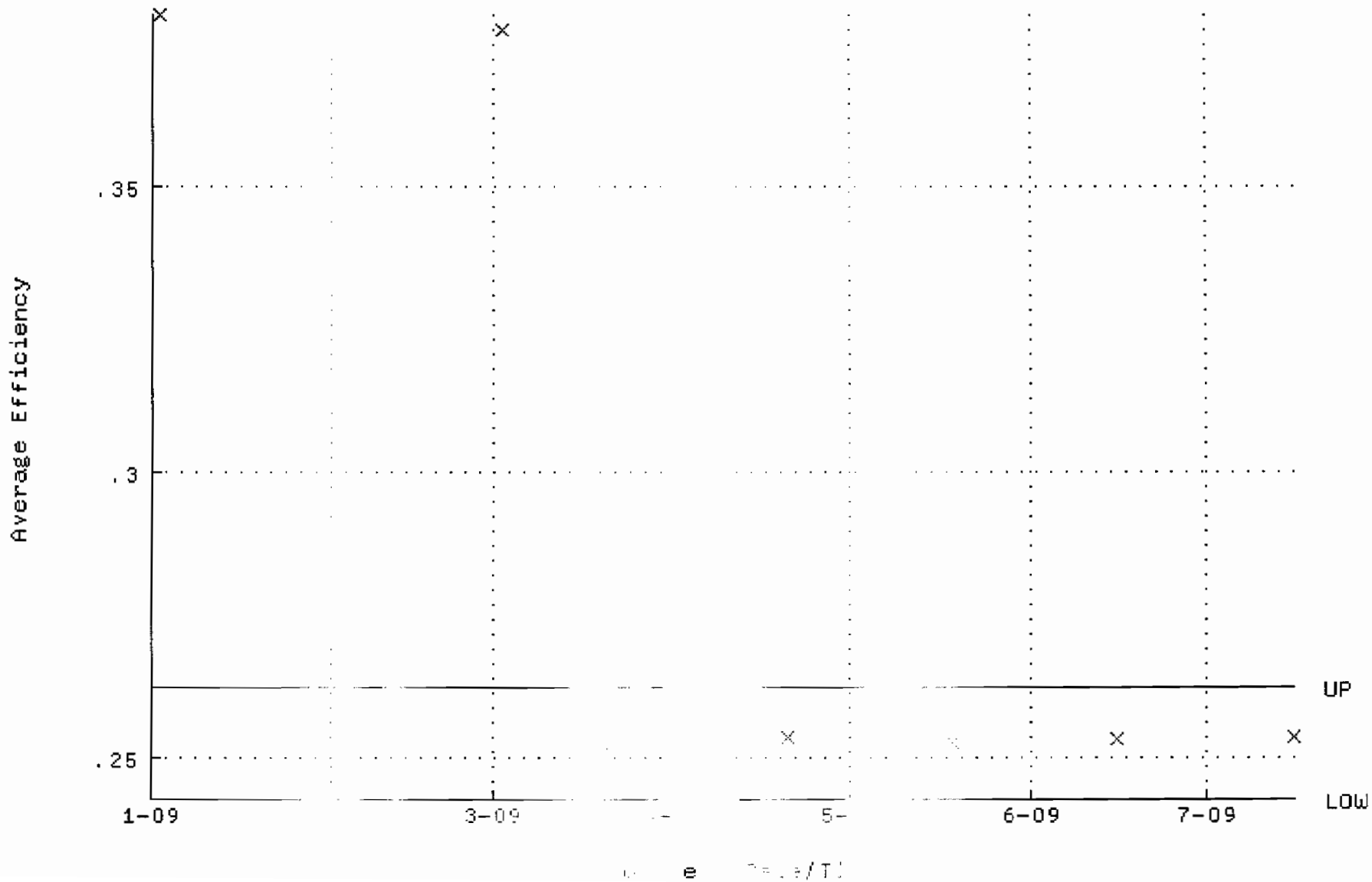

QA filename : [illegible]:[ENV_ALPHA. [illegible]
Parameter Name : [illegible] GD148 [illegible]
Start/End Dates : [illegible] 07:23:23 [illegible] 00:00
Lower/Upper Lmts: [illegible] through 100.1

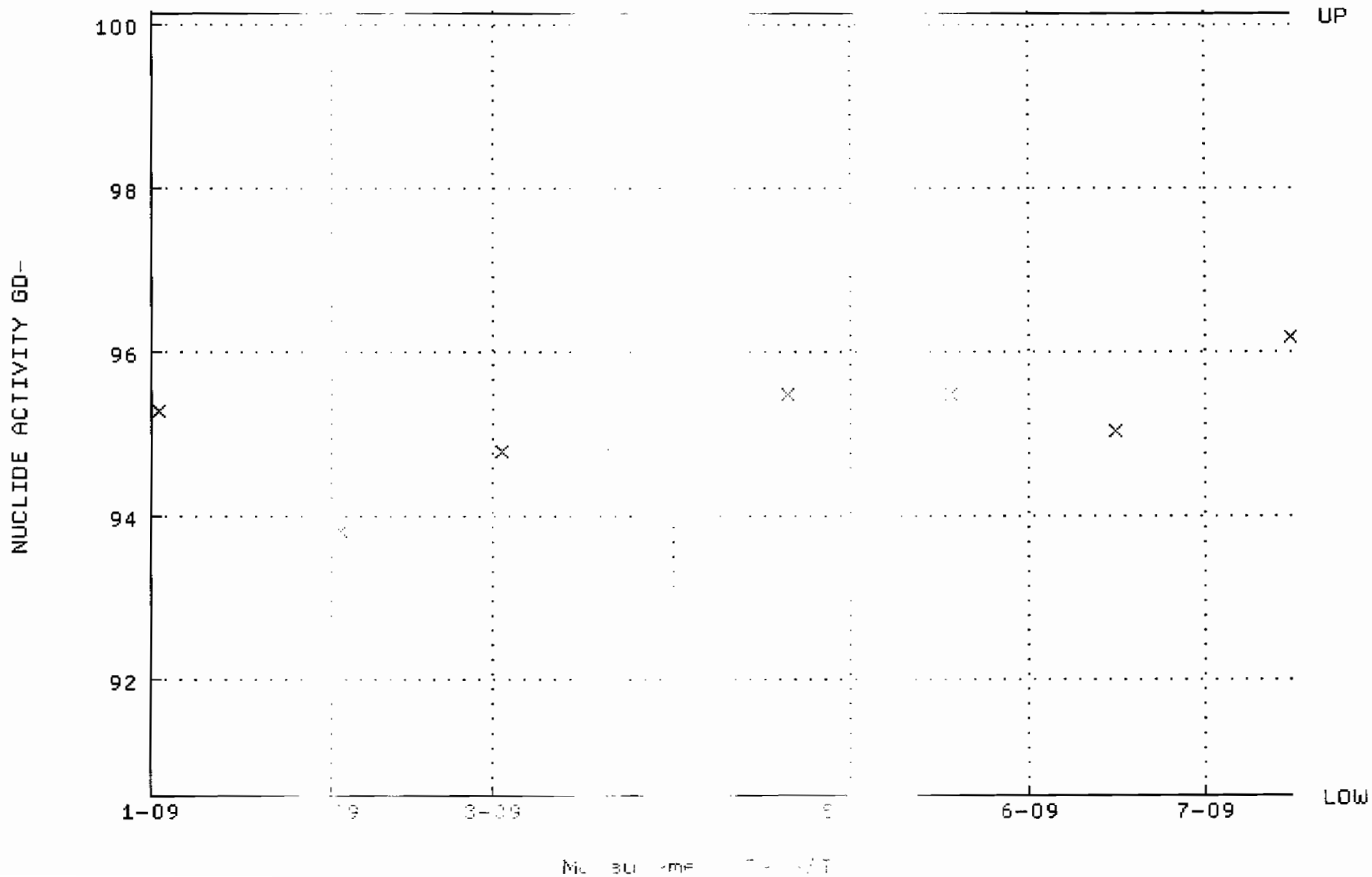

QA filename : [illegible]100:[ENV_ALPHA.[illegible]
Parameter Name : [illegible]
Start/End Dates : [illegible] 17:20:26 [illegible] 0:00:00
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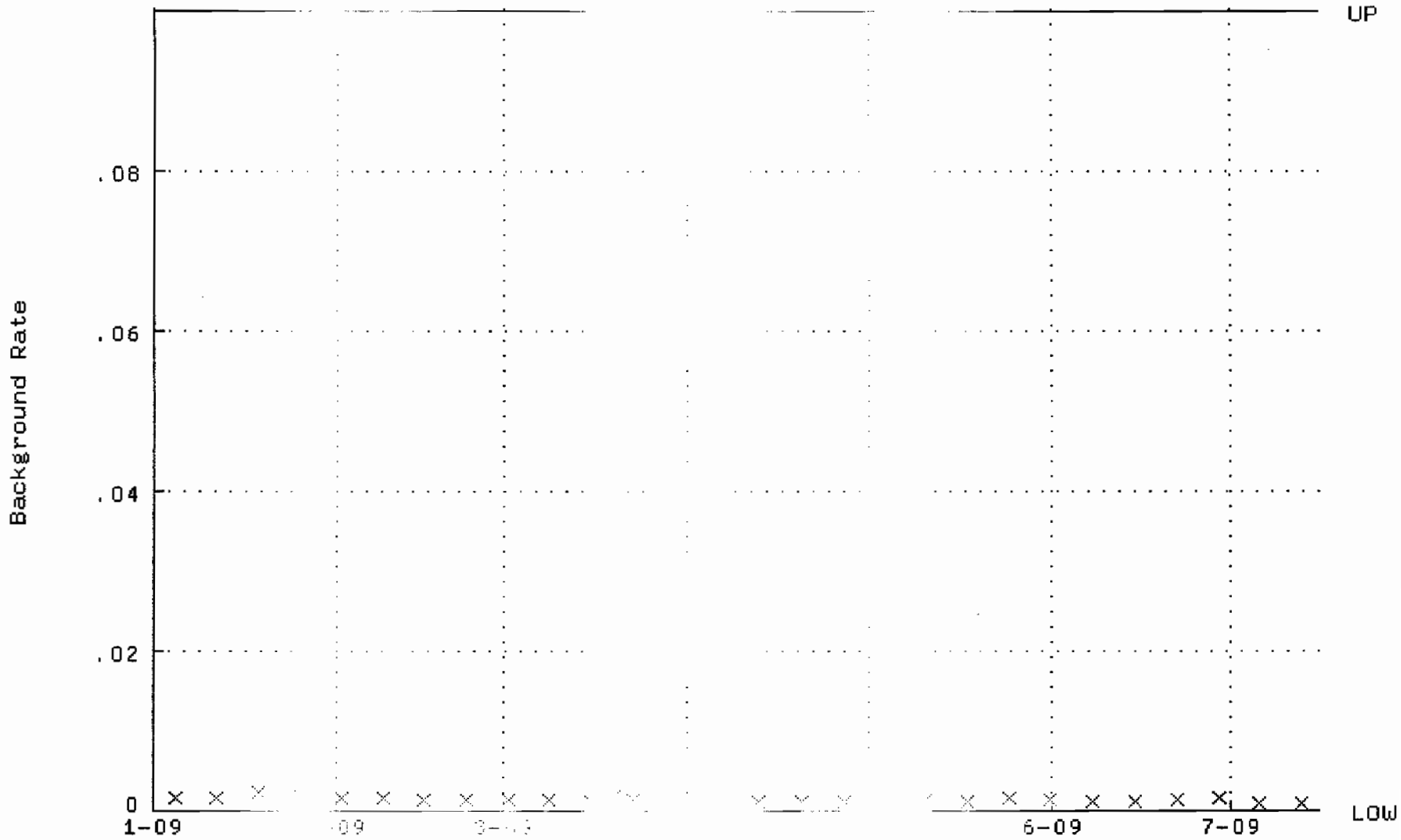

QA filename XA10C:[E'V_ALPHA.
Parameter Name /RGE F ici
Start/End Dates -JAN 20 07:23:2 thr 0:00:00
Lower/Upper Lmts: 0 .972 through 0.2 752

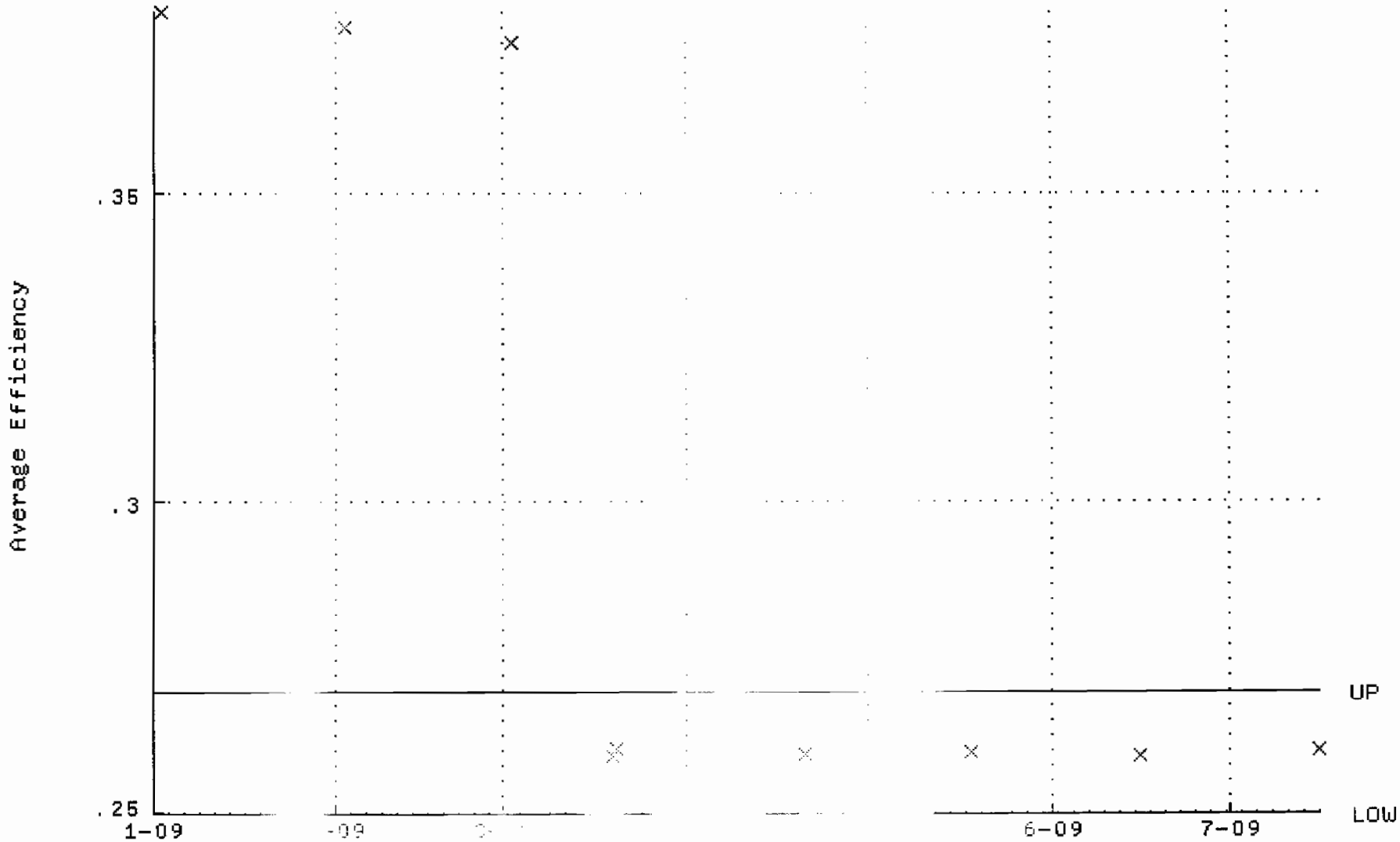

QA filename KA100:[ENV_ALPHA. .W]
Parameter Name 'ACTIVTY- IDE
Start/End Dates -JAN-200 07: thru 2:00:00
Lower/Upper Lmts: 3460 through 95. 74

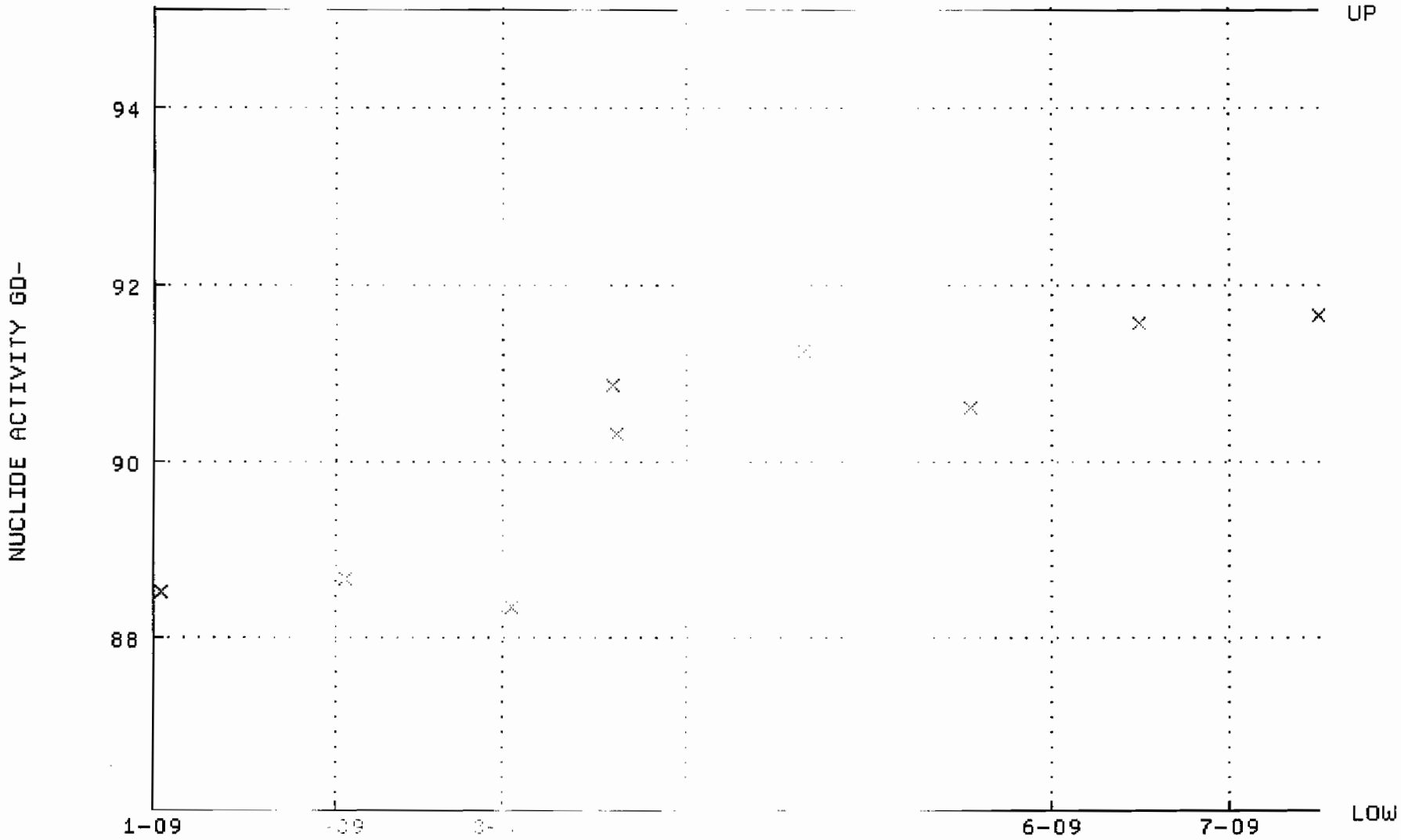

QA filename : KA100:[[illegible].B]
Parameter Name : [illegible] Ra
Start/End Dates : [illegible] thro [illegible] 12:00:00
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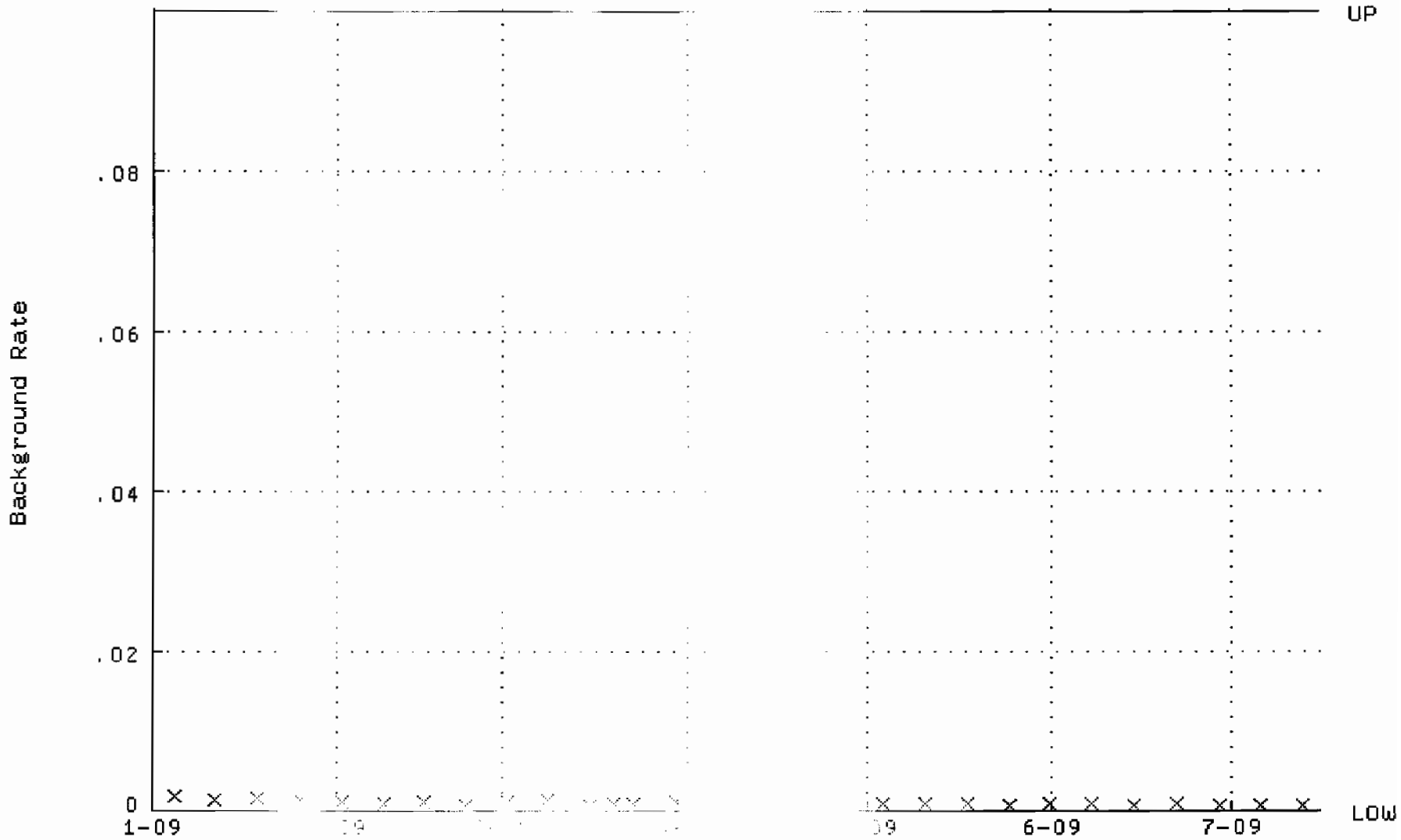

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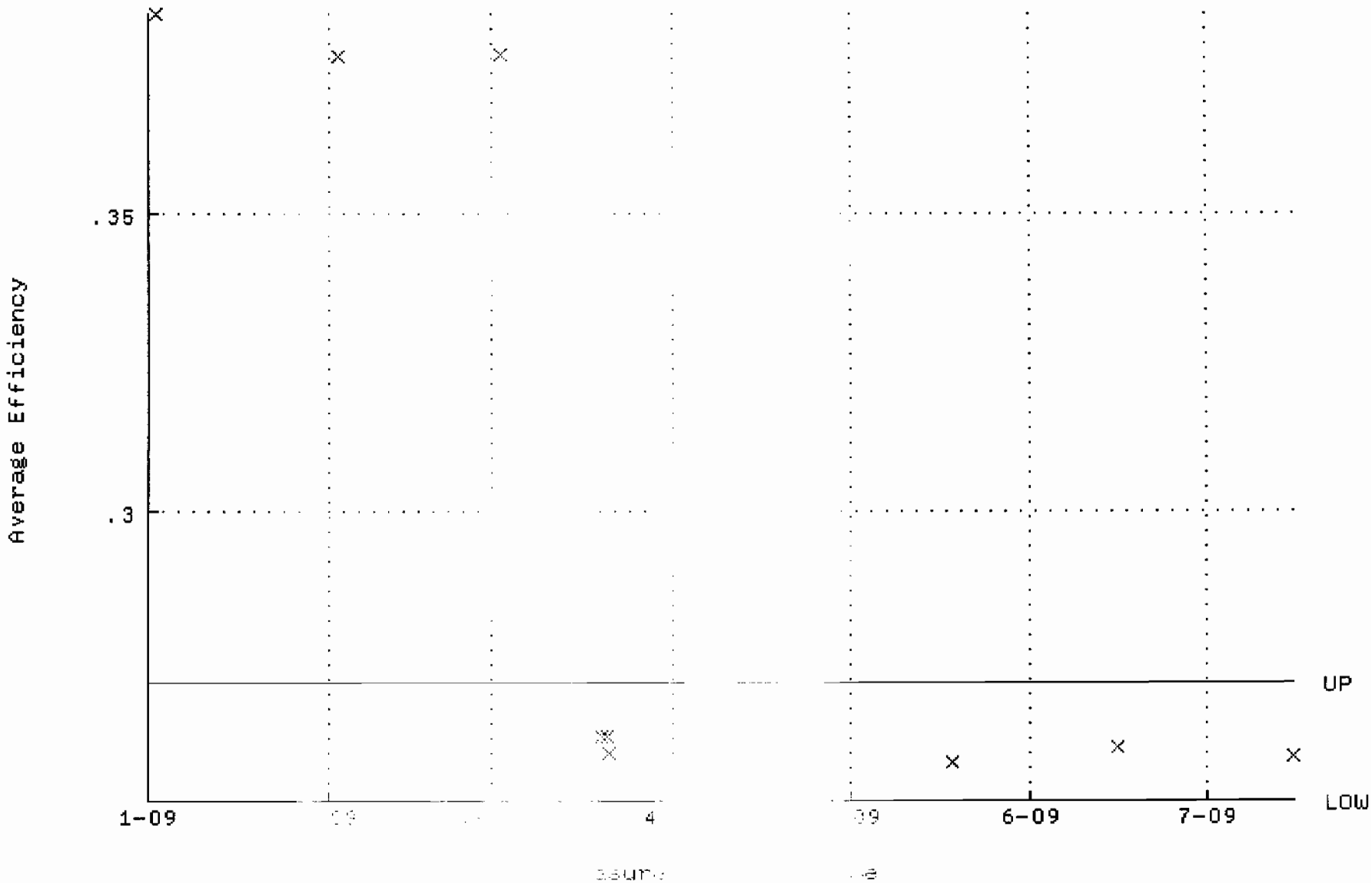

QA filename : JKA102:[E[illegible] .W]W
Parameter Name : ILA[illegible]Y [illegible]E [illegible] [illegible]19)
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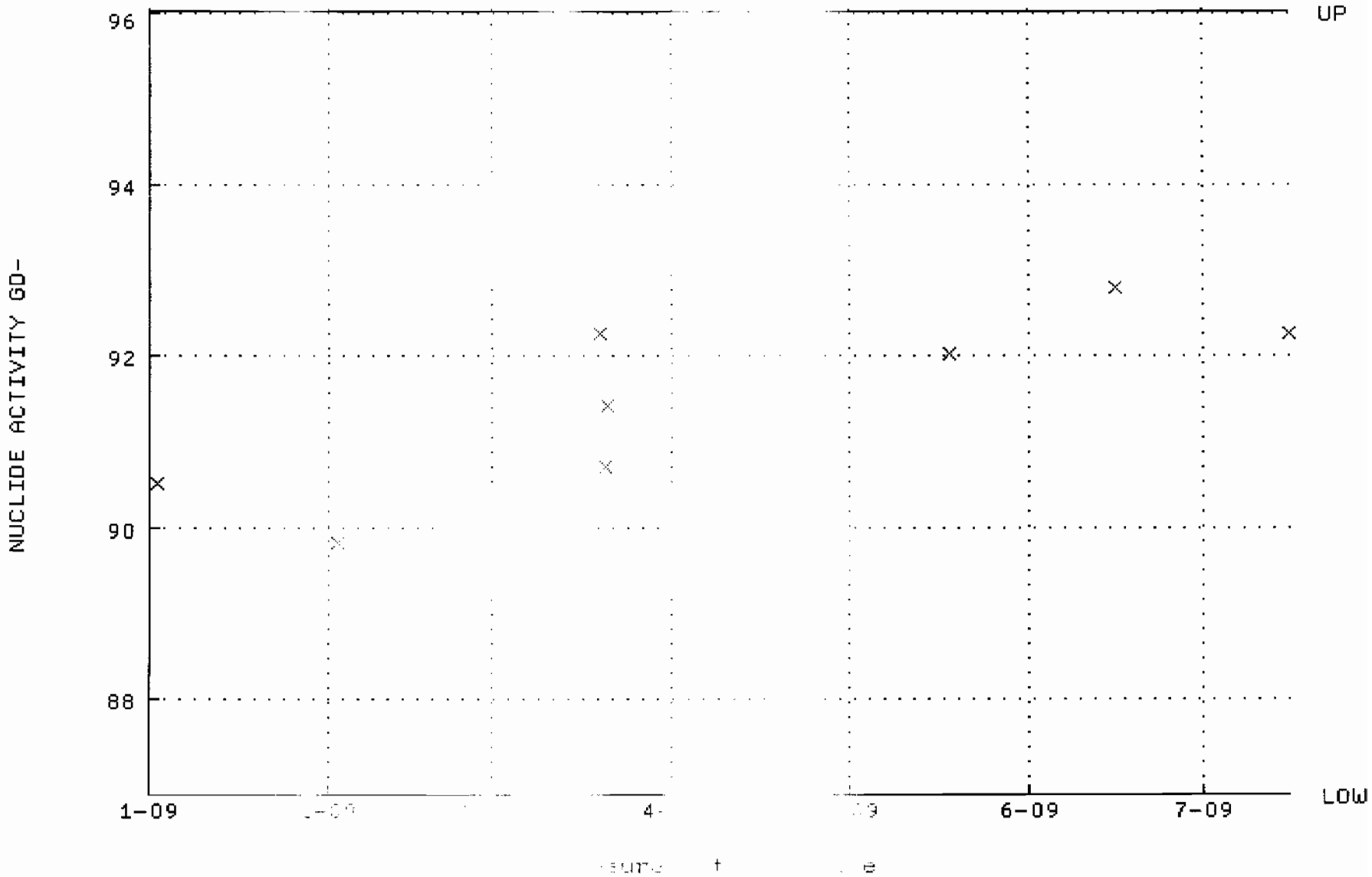

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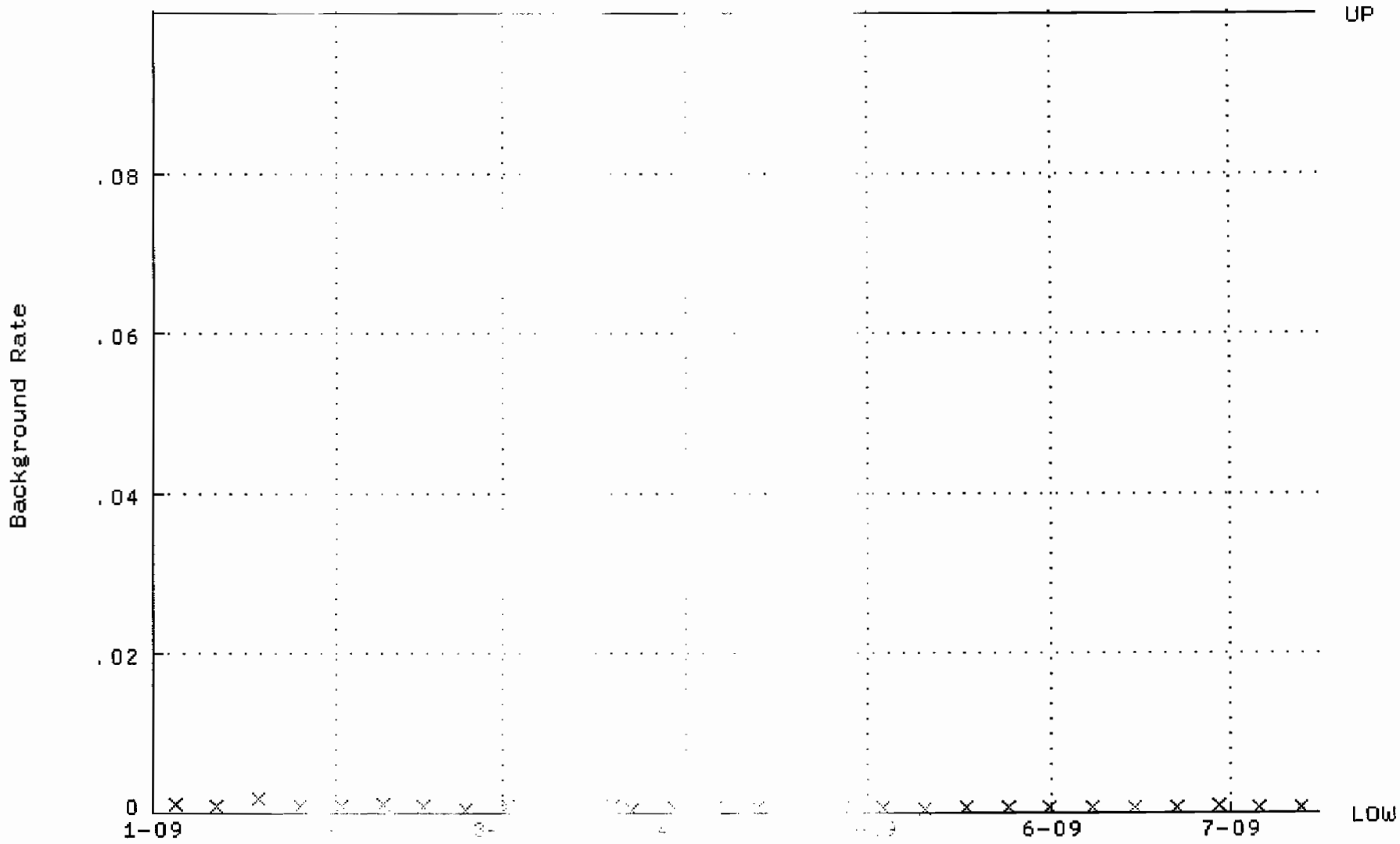

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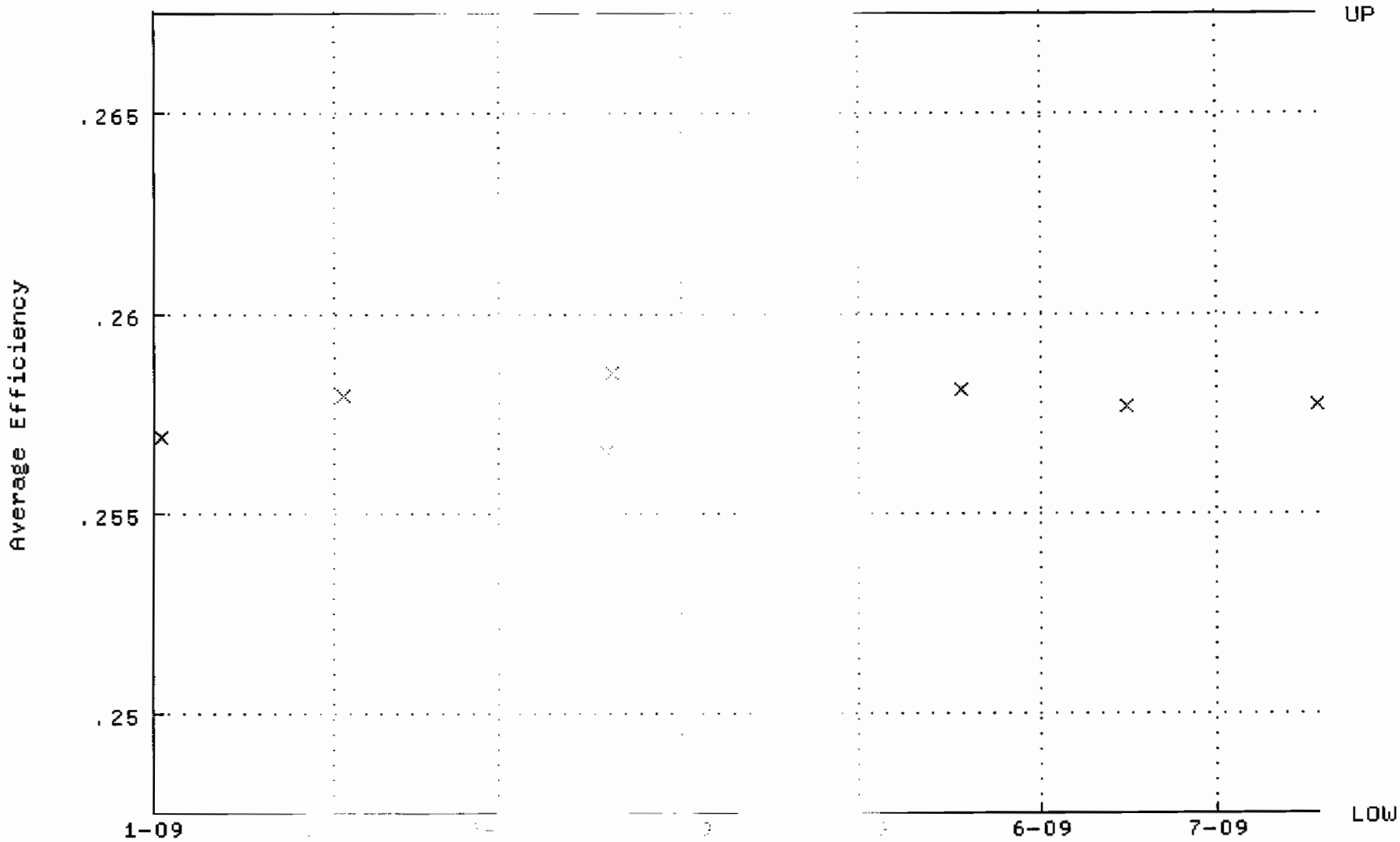

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Lower/Upper Lmts: 87.6956 th: [illegible]

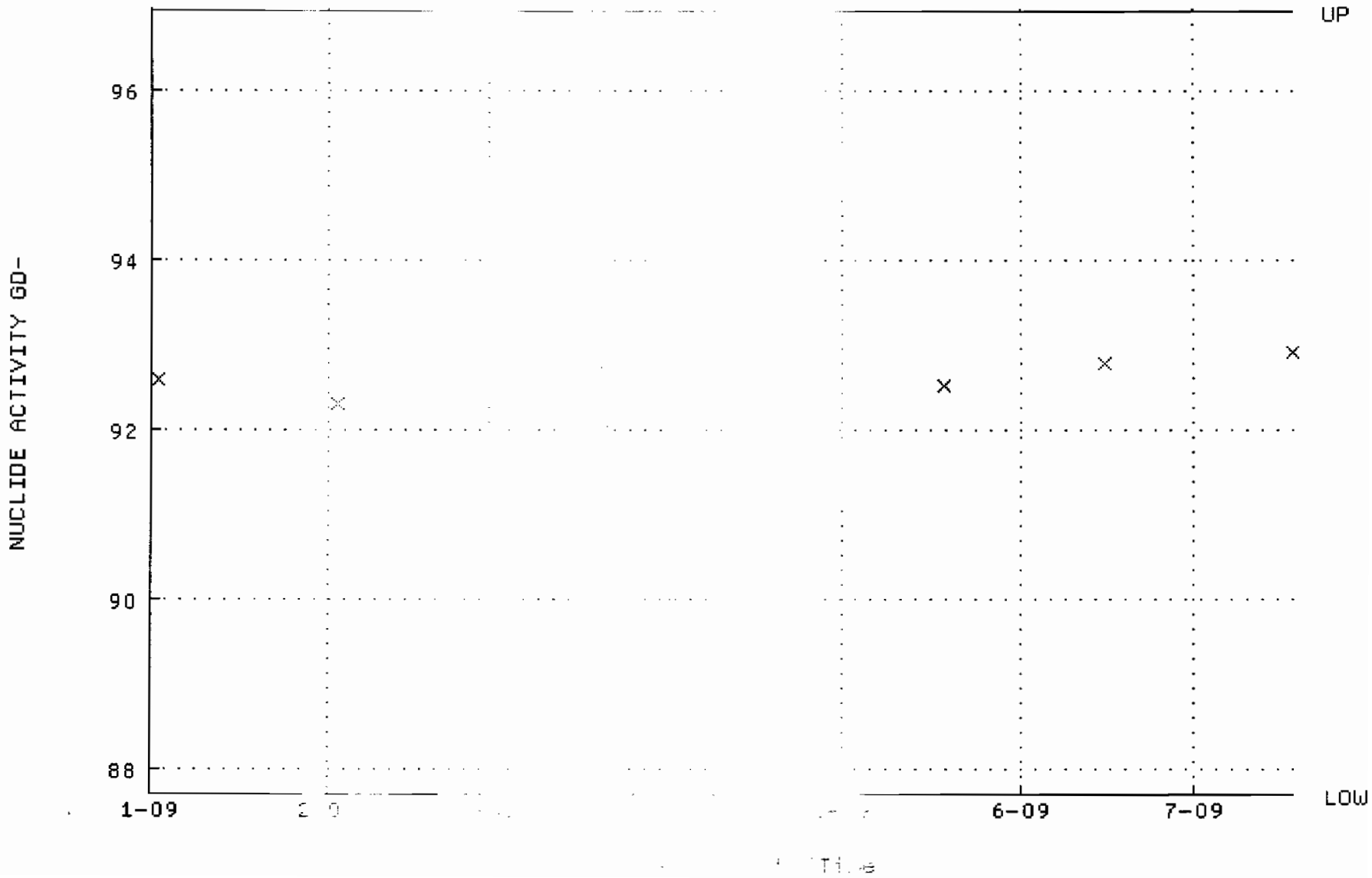

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Start/End Dates : [illegible]-JAN-[illegible] [illegible] [illegible] [illegible]09 12:00:00
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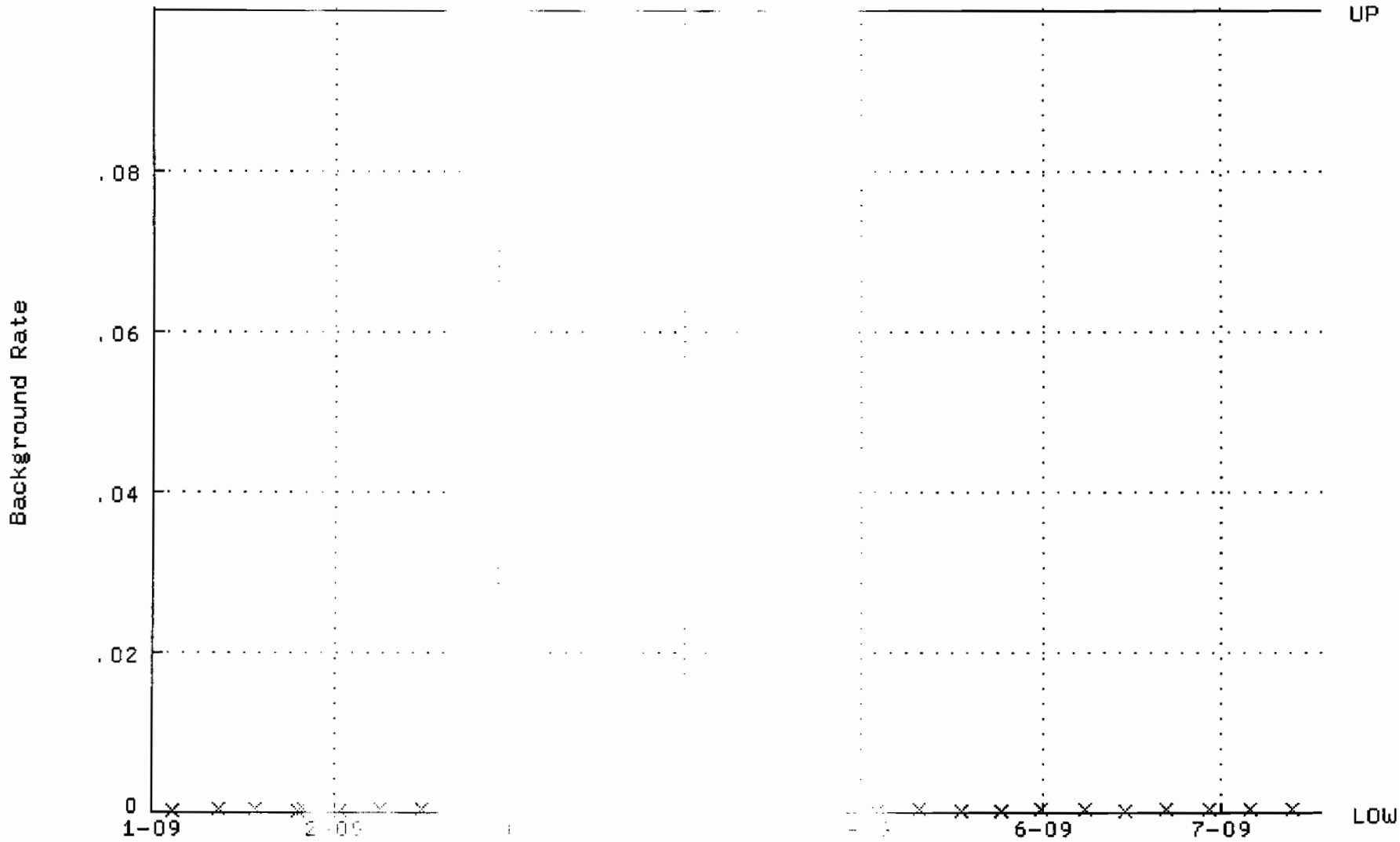

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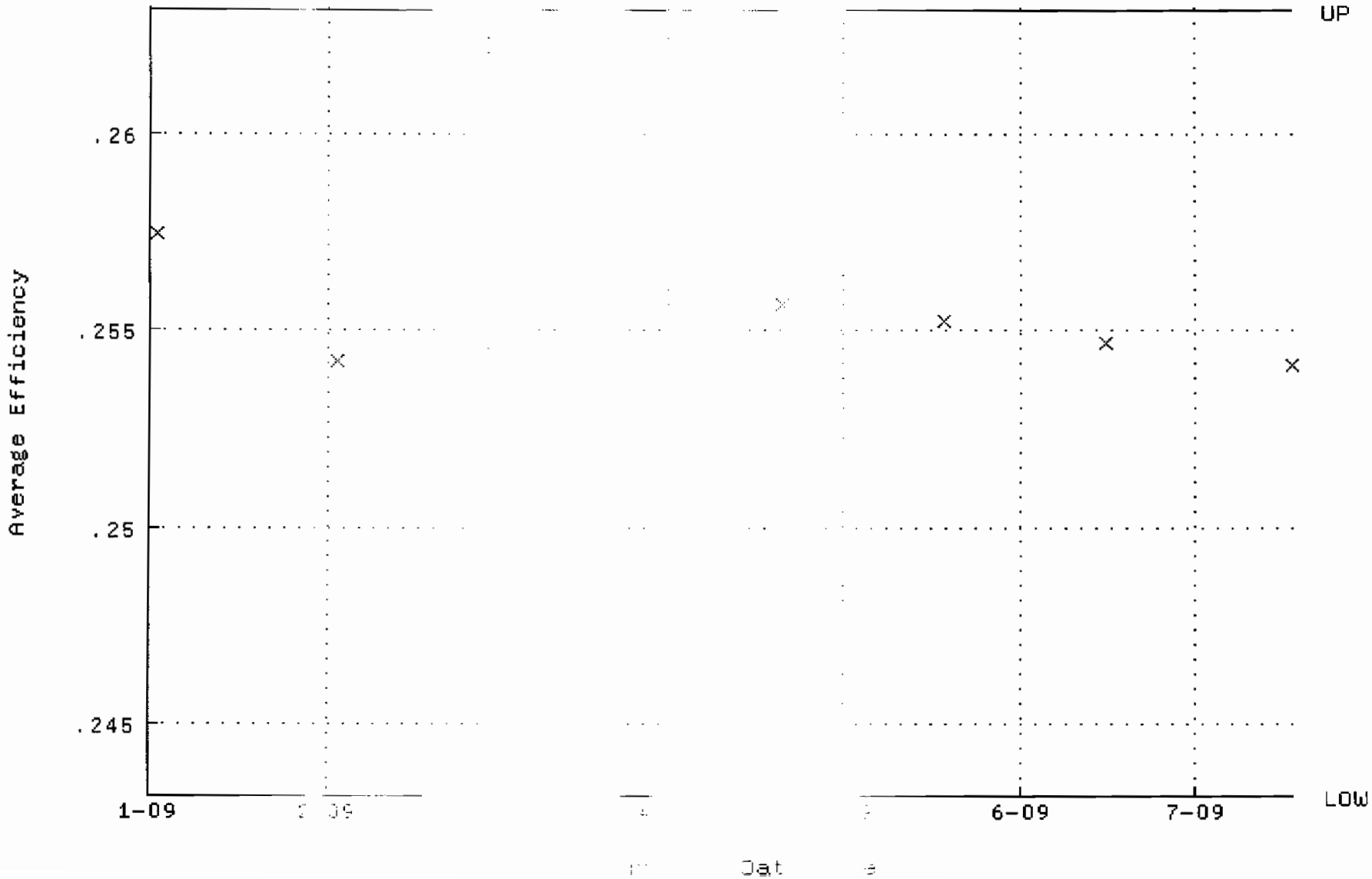

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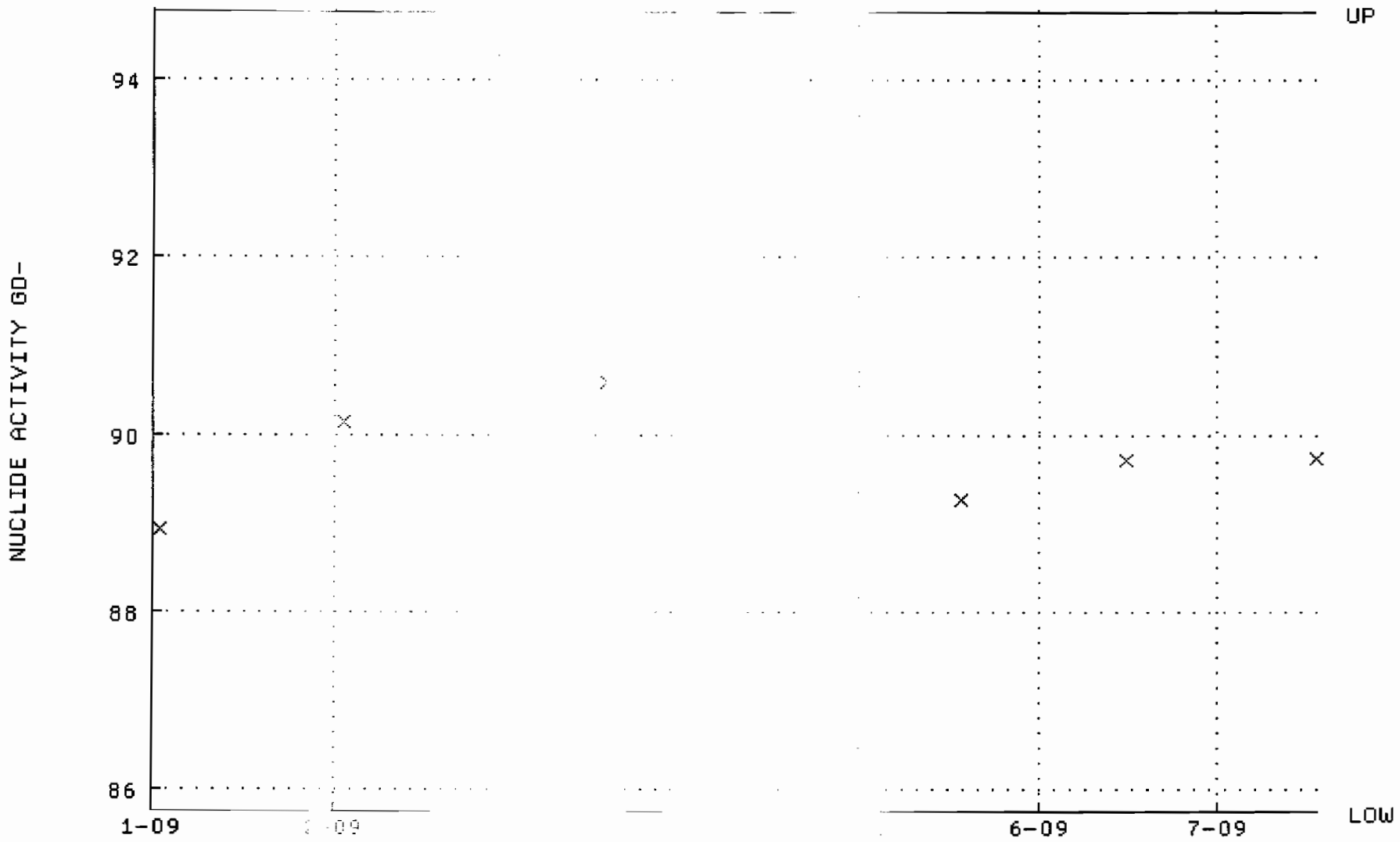

QA filename : [illegible]
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Lower/Upper Lmts: 0. [illegible]E+

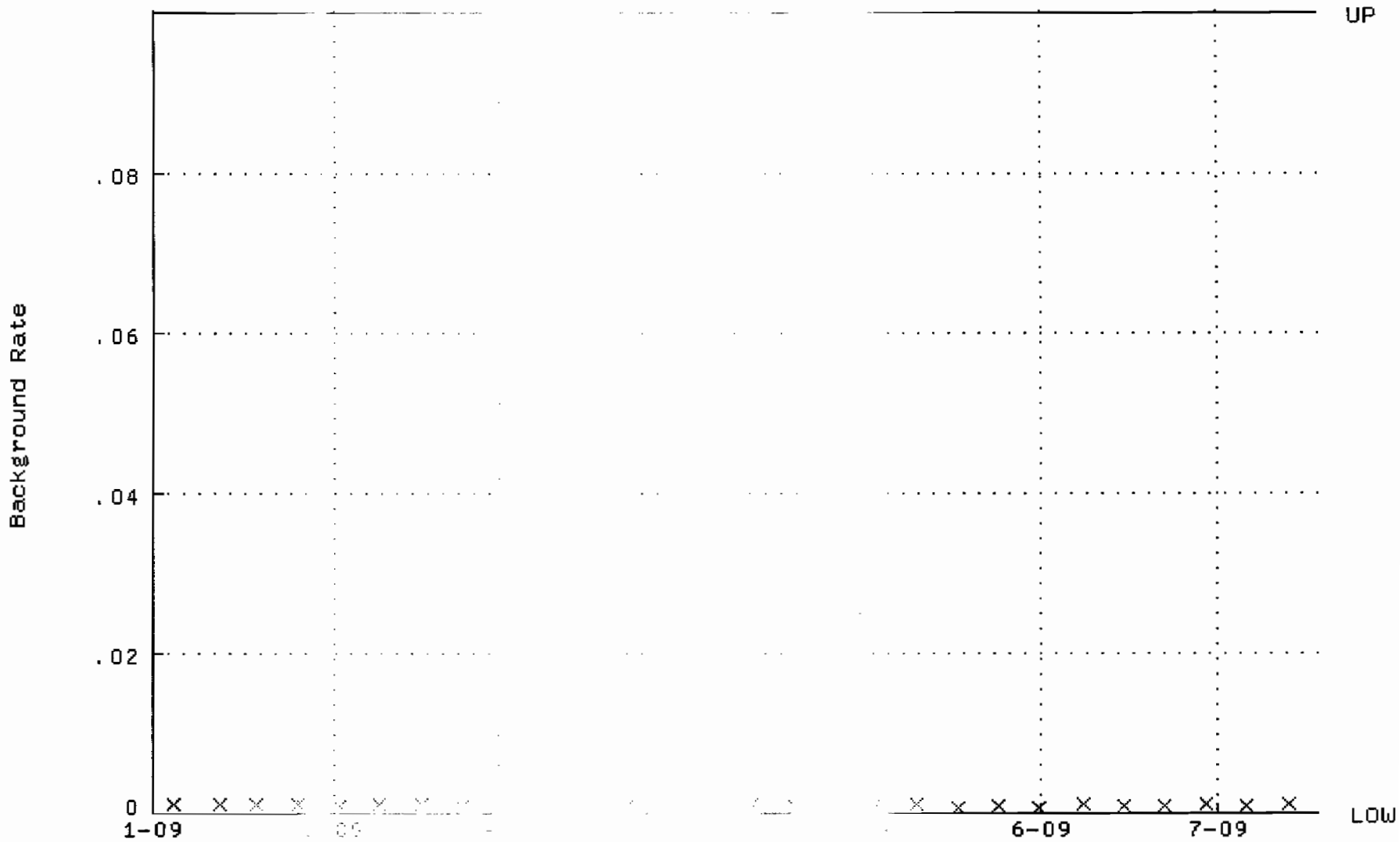

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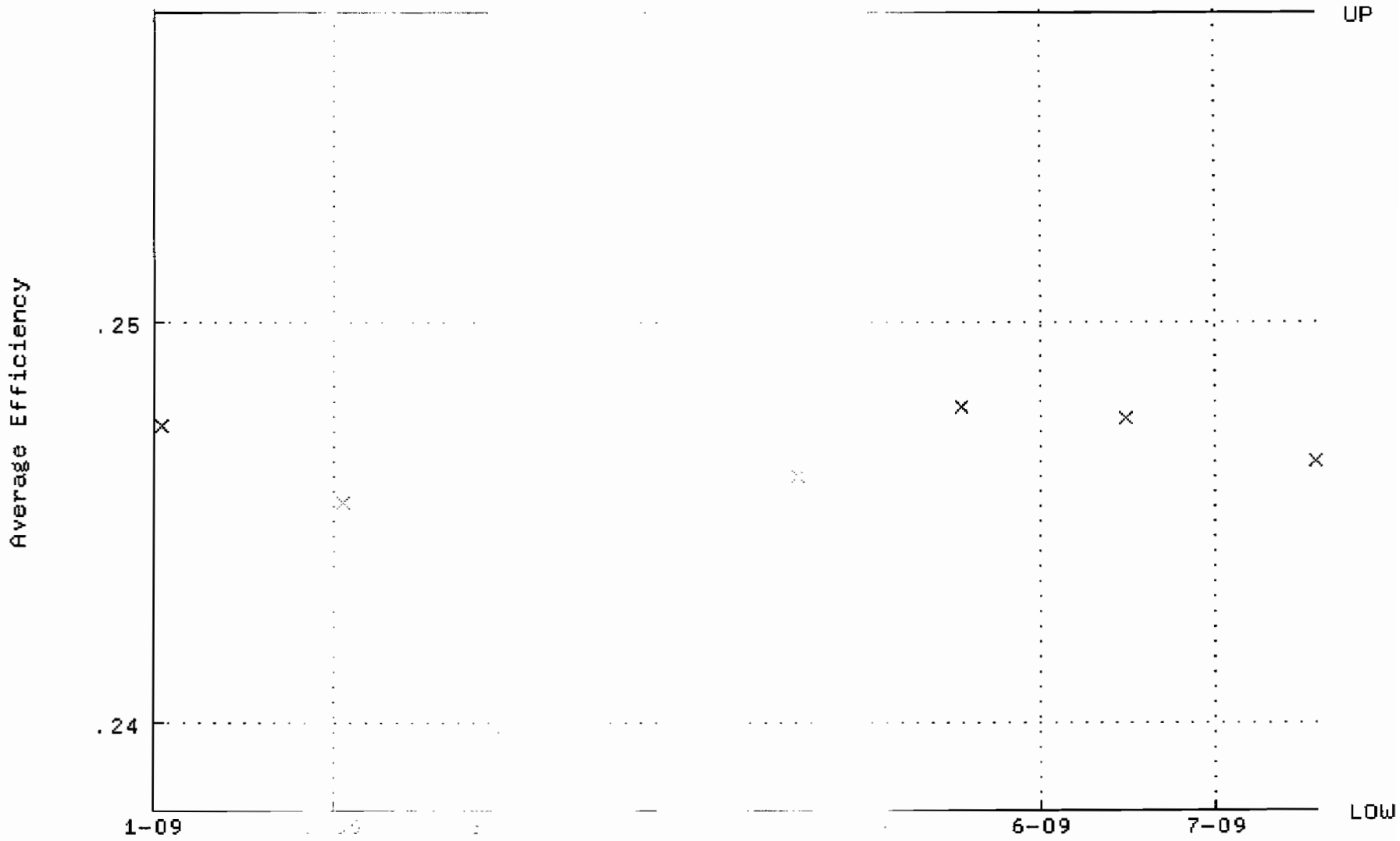

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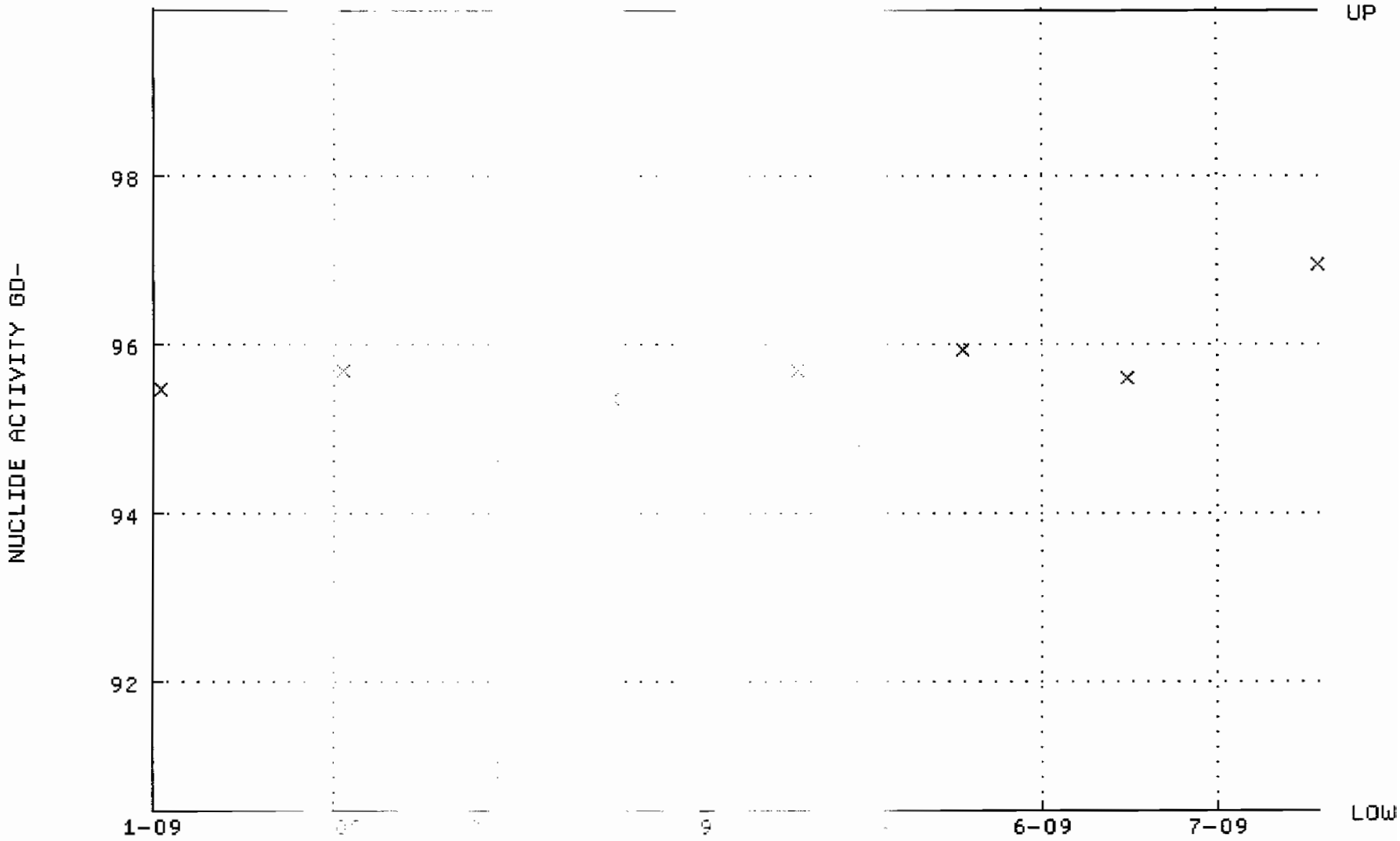

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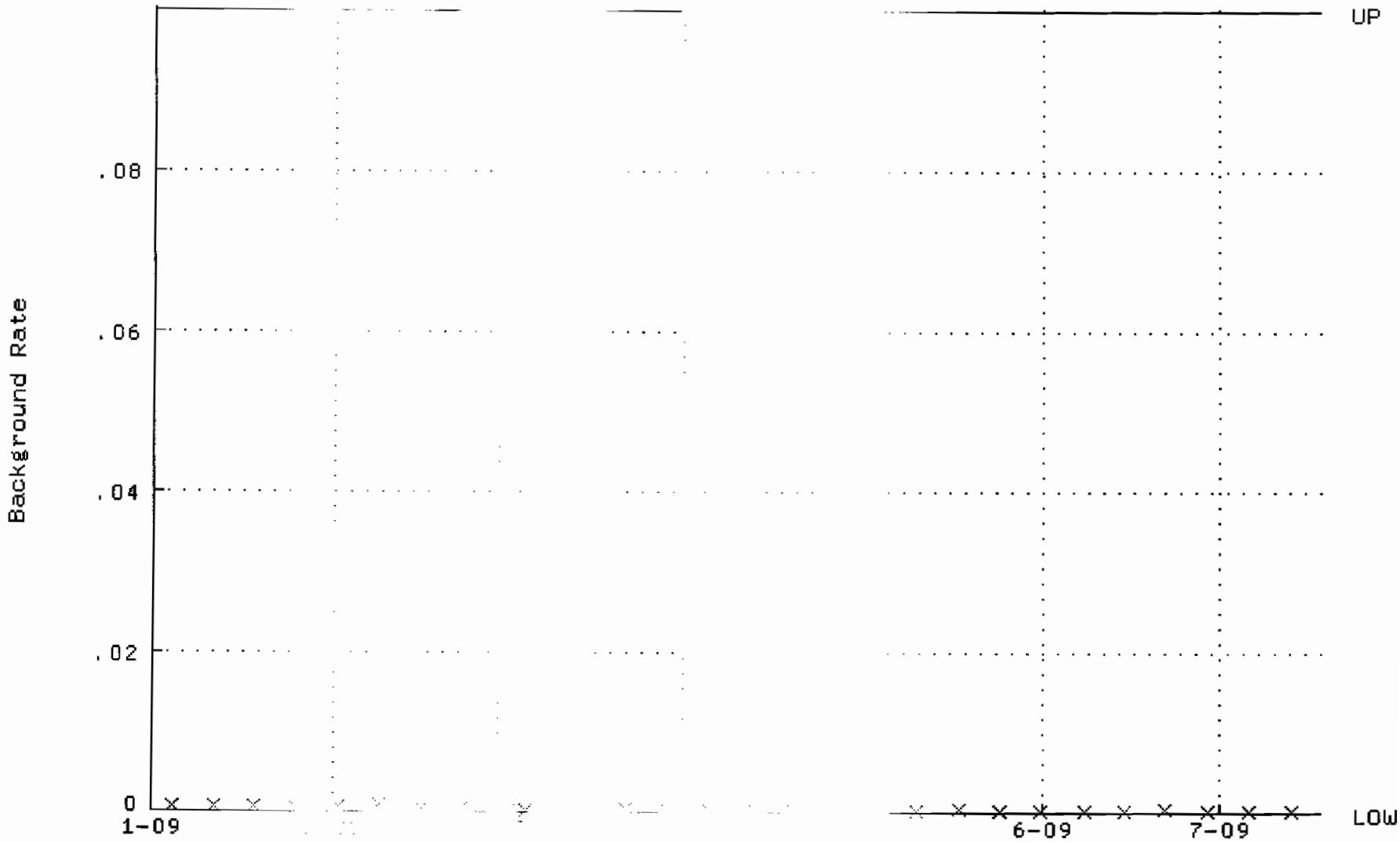

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Parameter Name :
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Parameter Name :
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Lower/Upper Lmts:

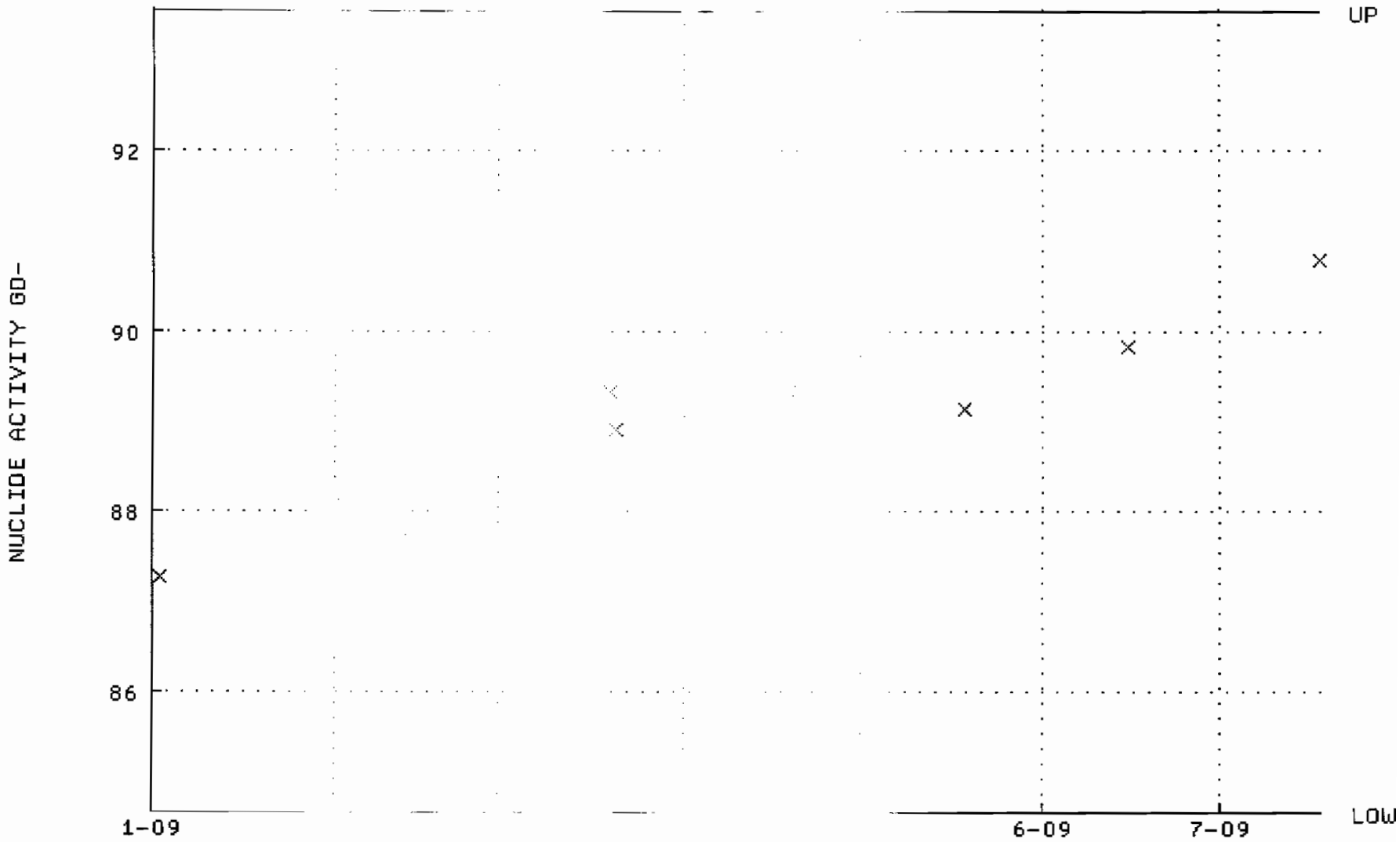

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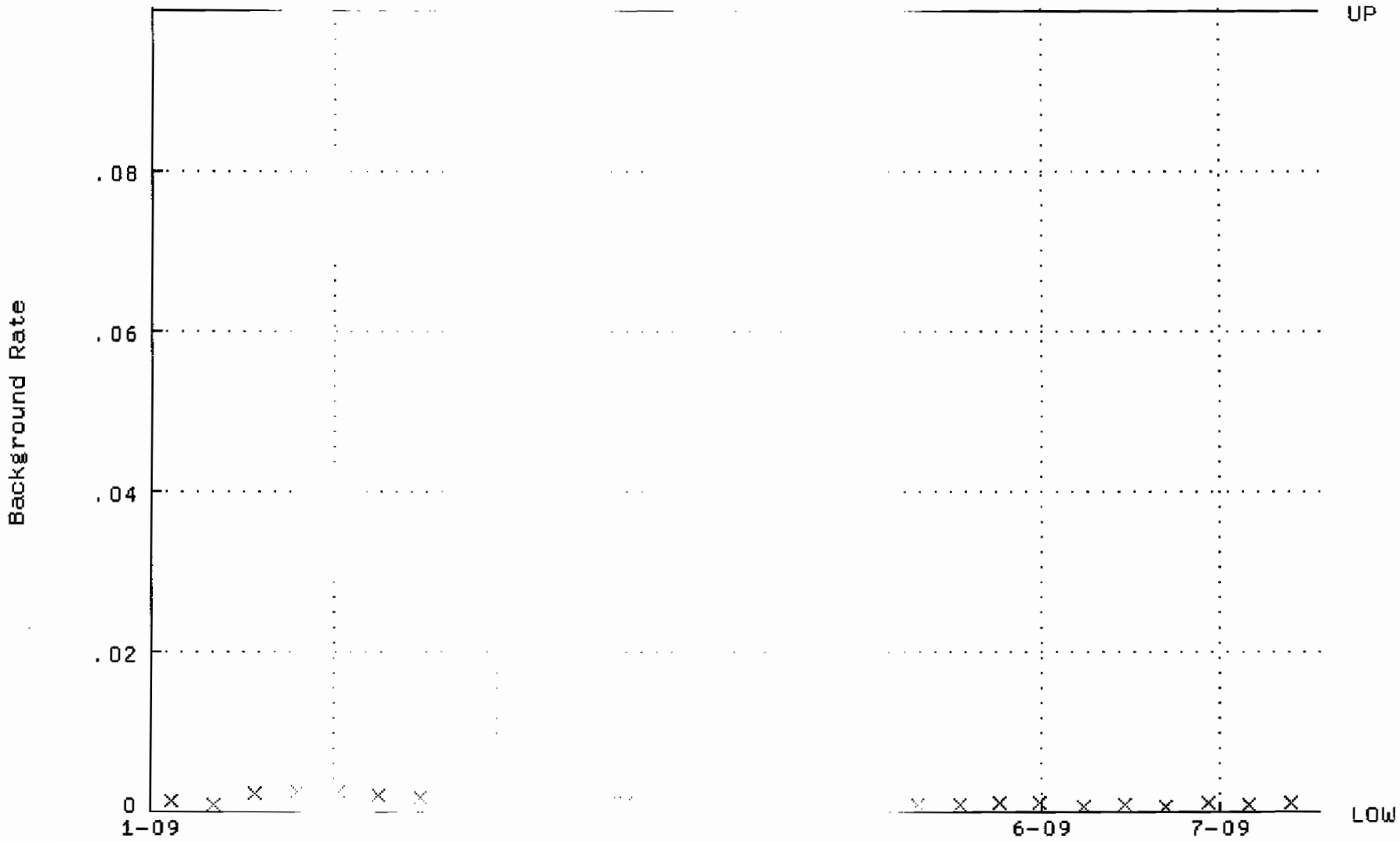

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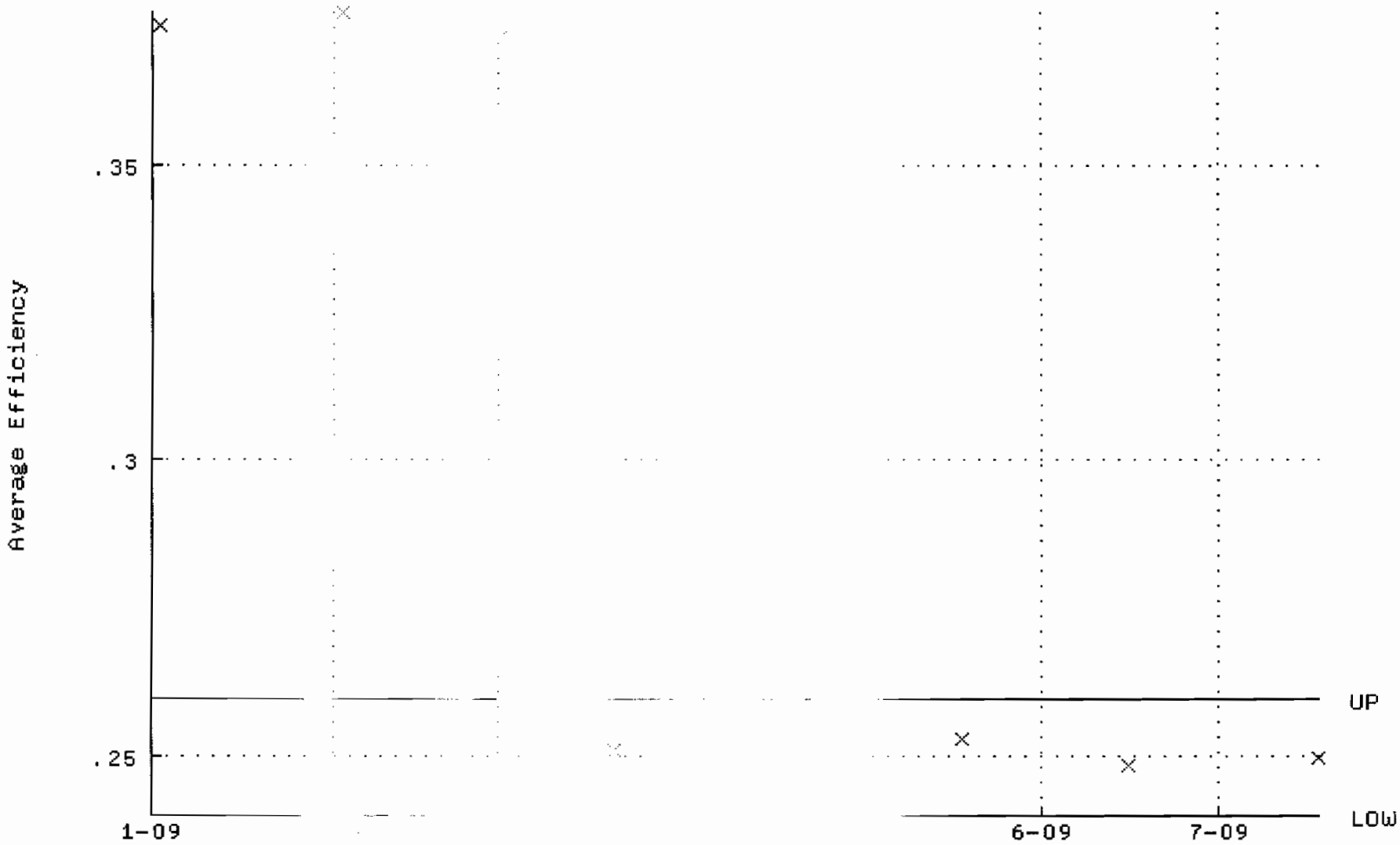

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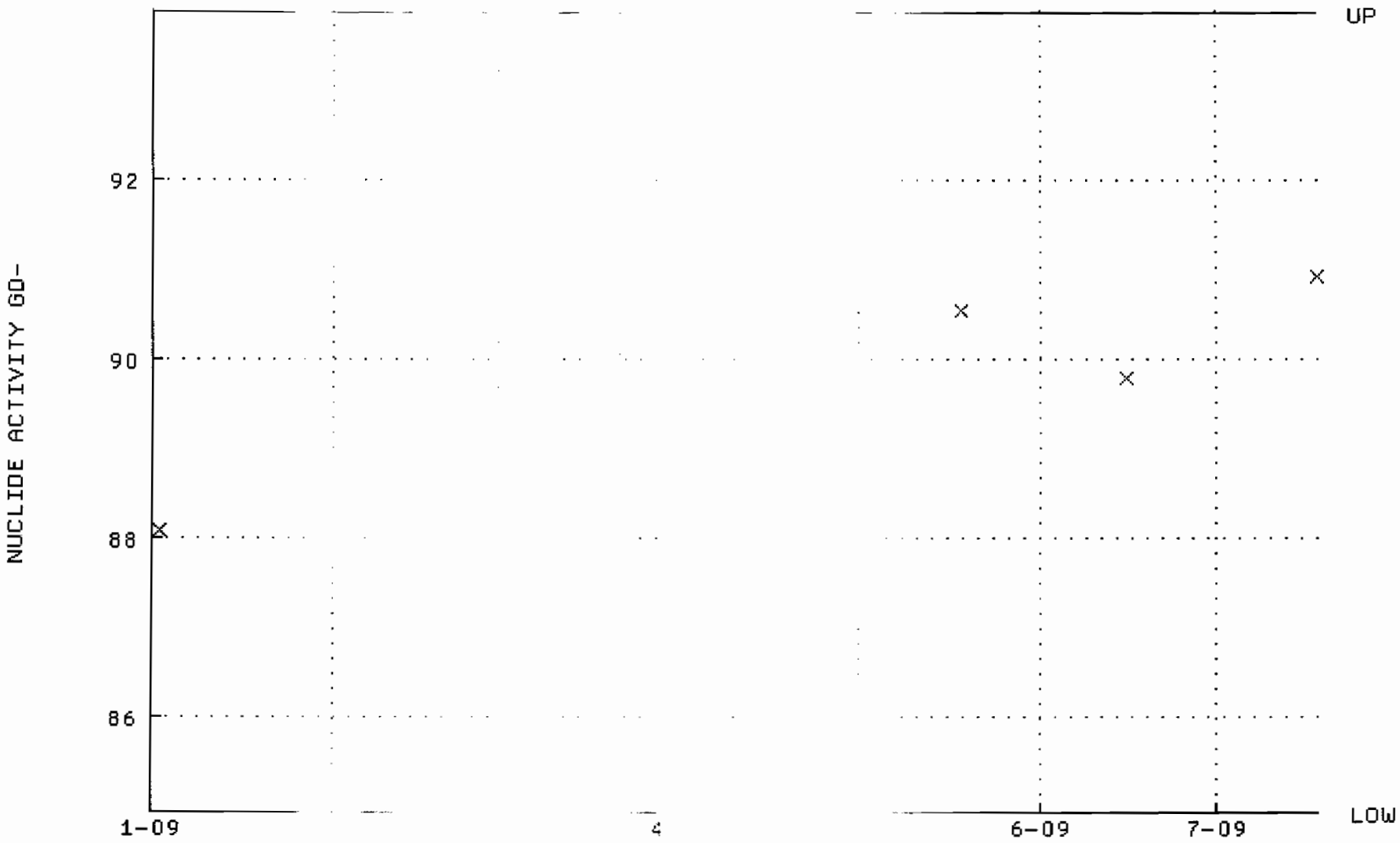

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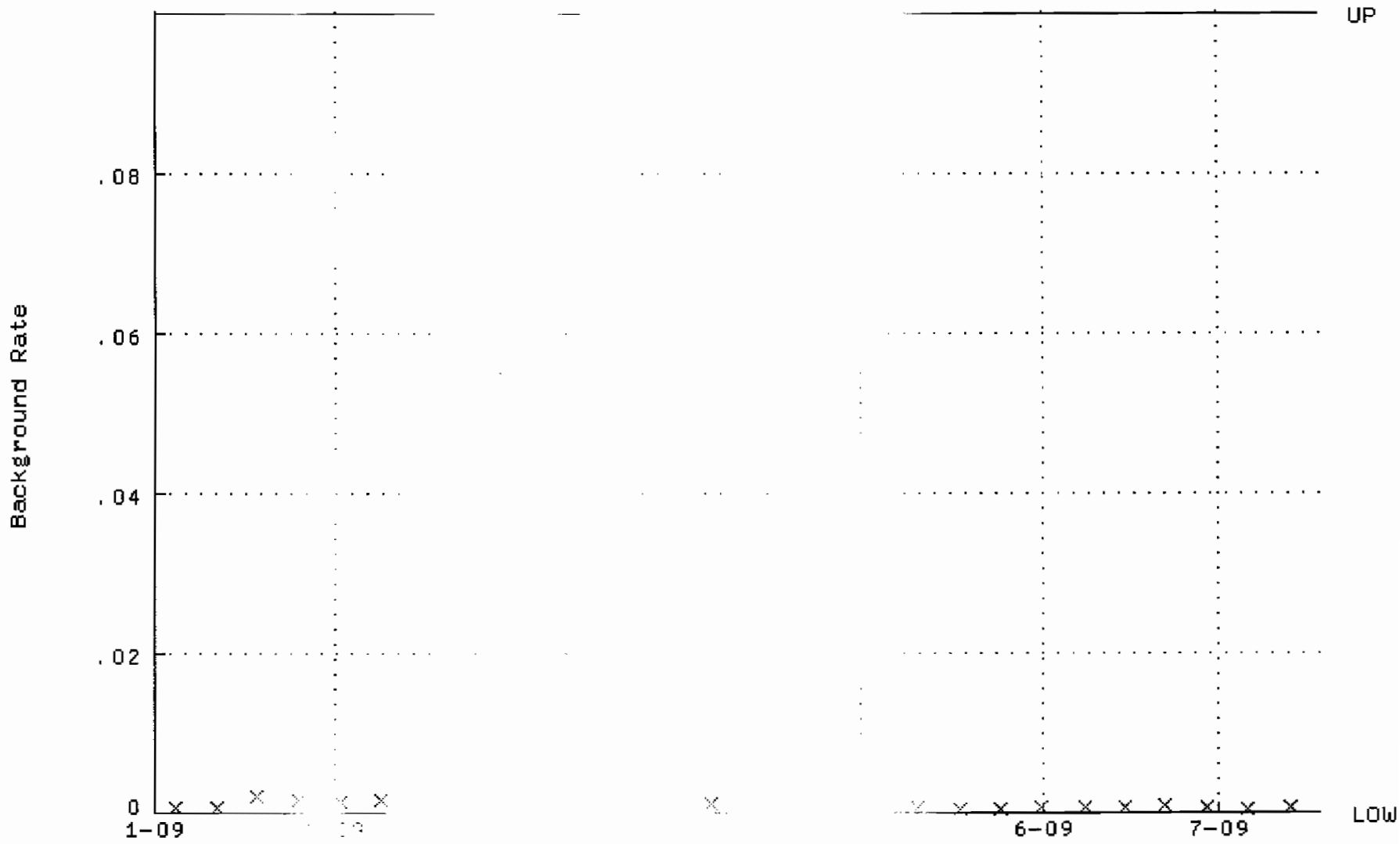

QA filename :
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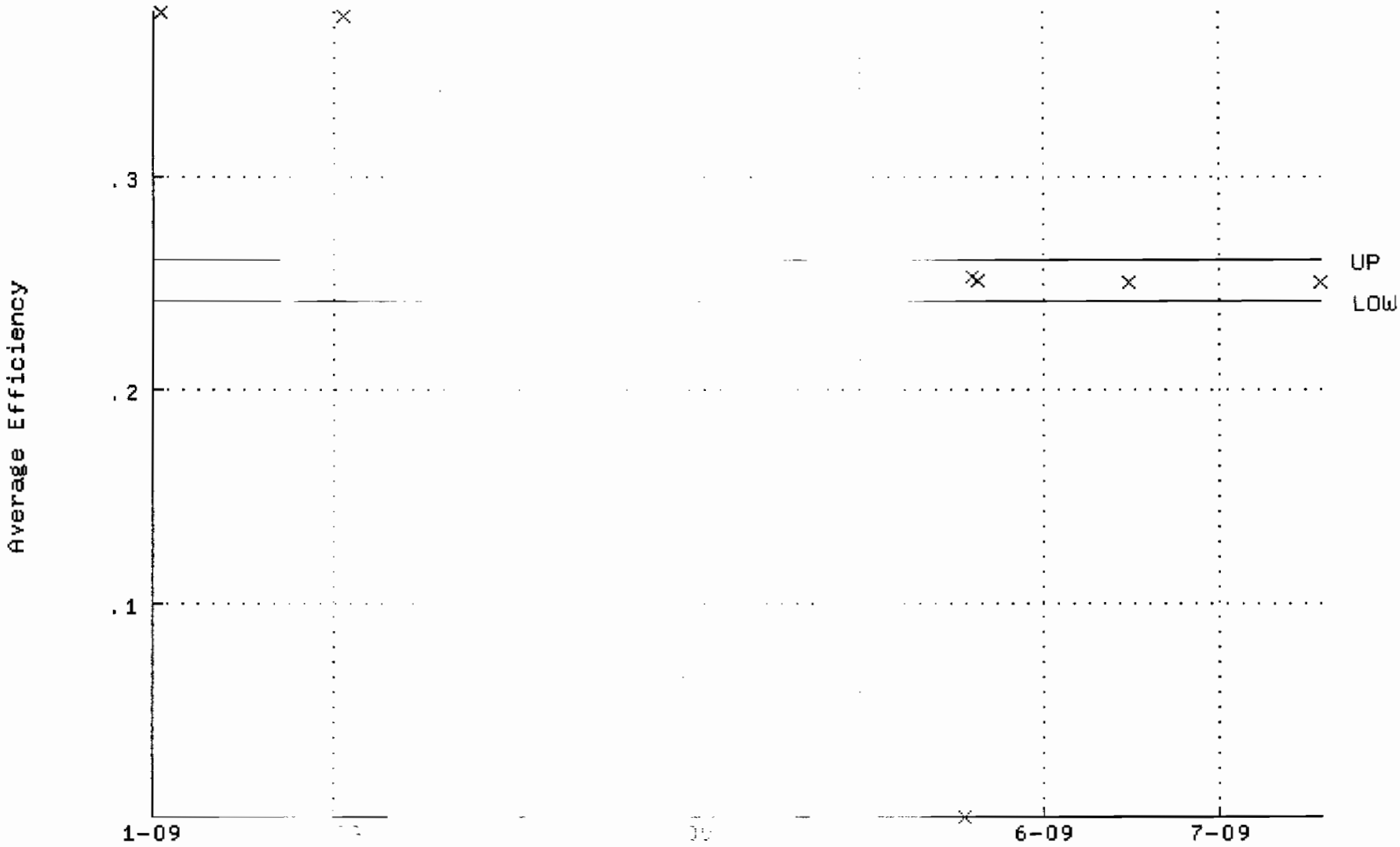

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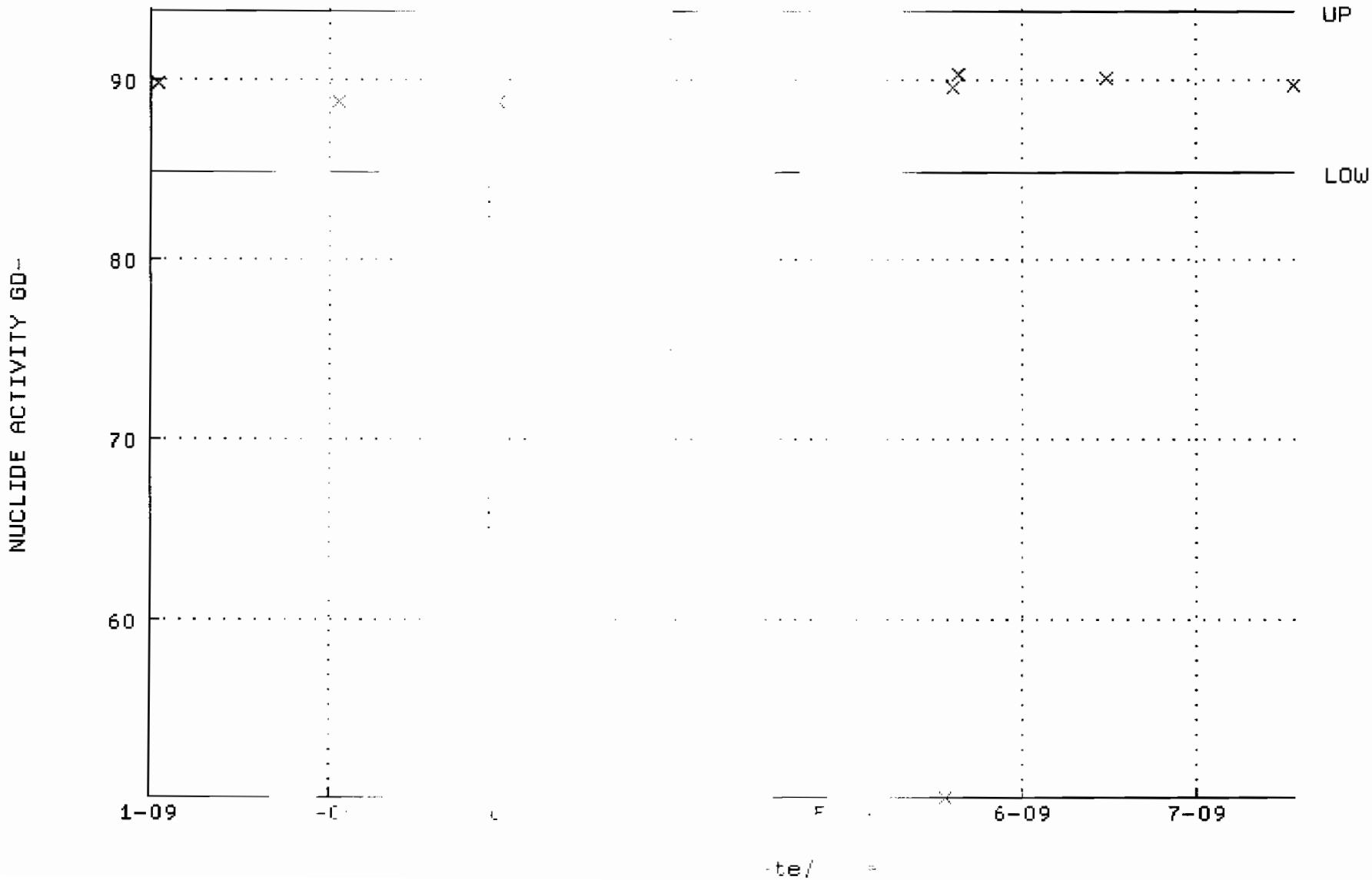

QA filename : [illegible] ;2
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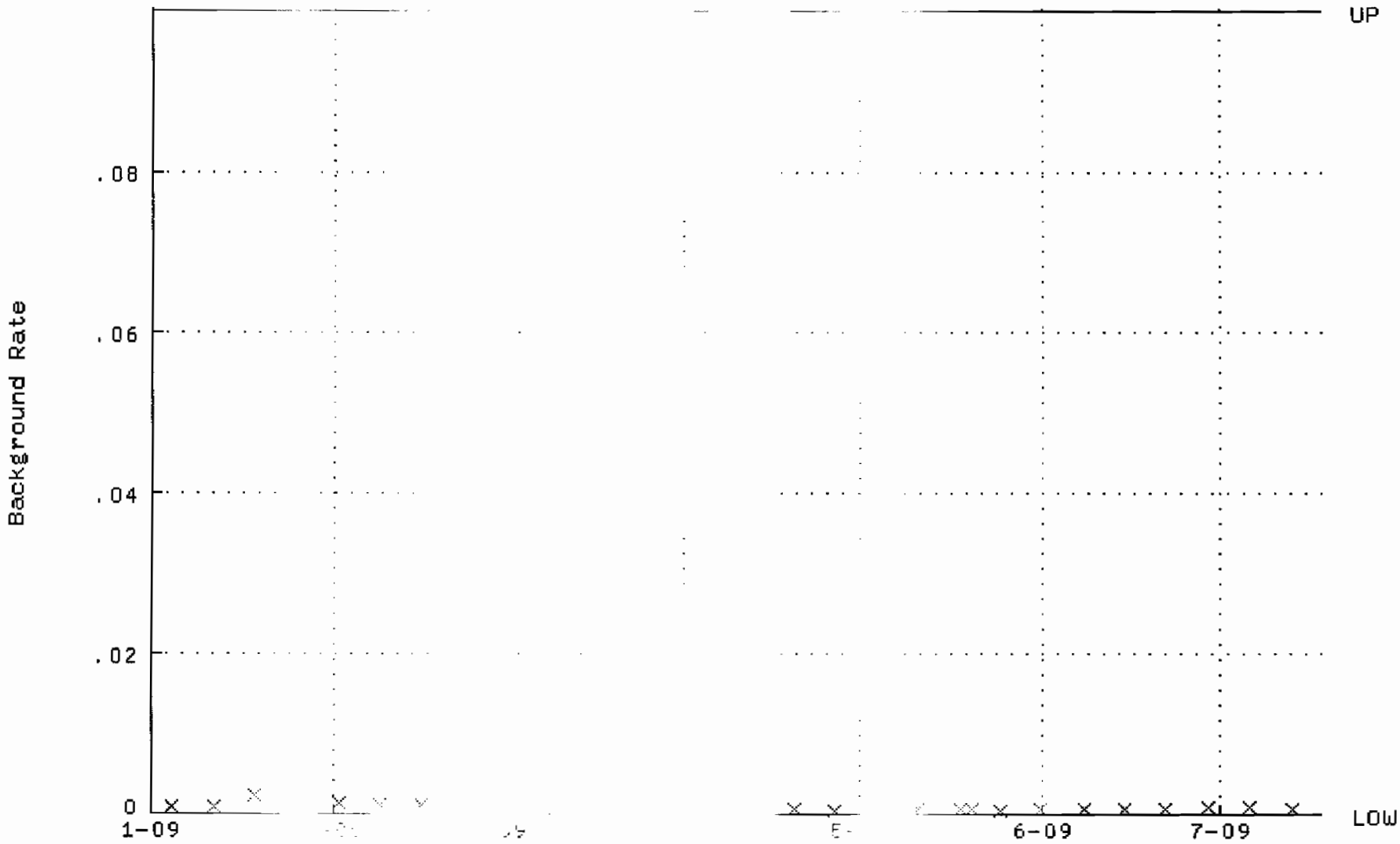

QA filename : LPHA. :1
Parameter Name :
Start/End Dates : -JUL- 12:00:00
Lower/Upper Lmts:

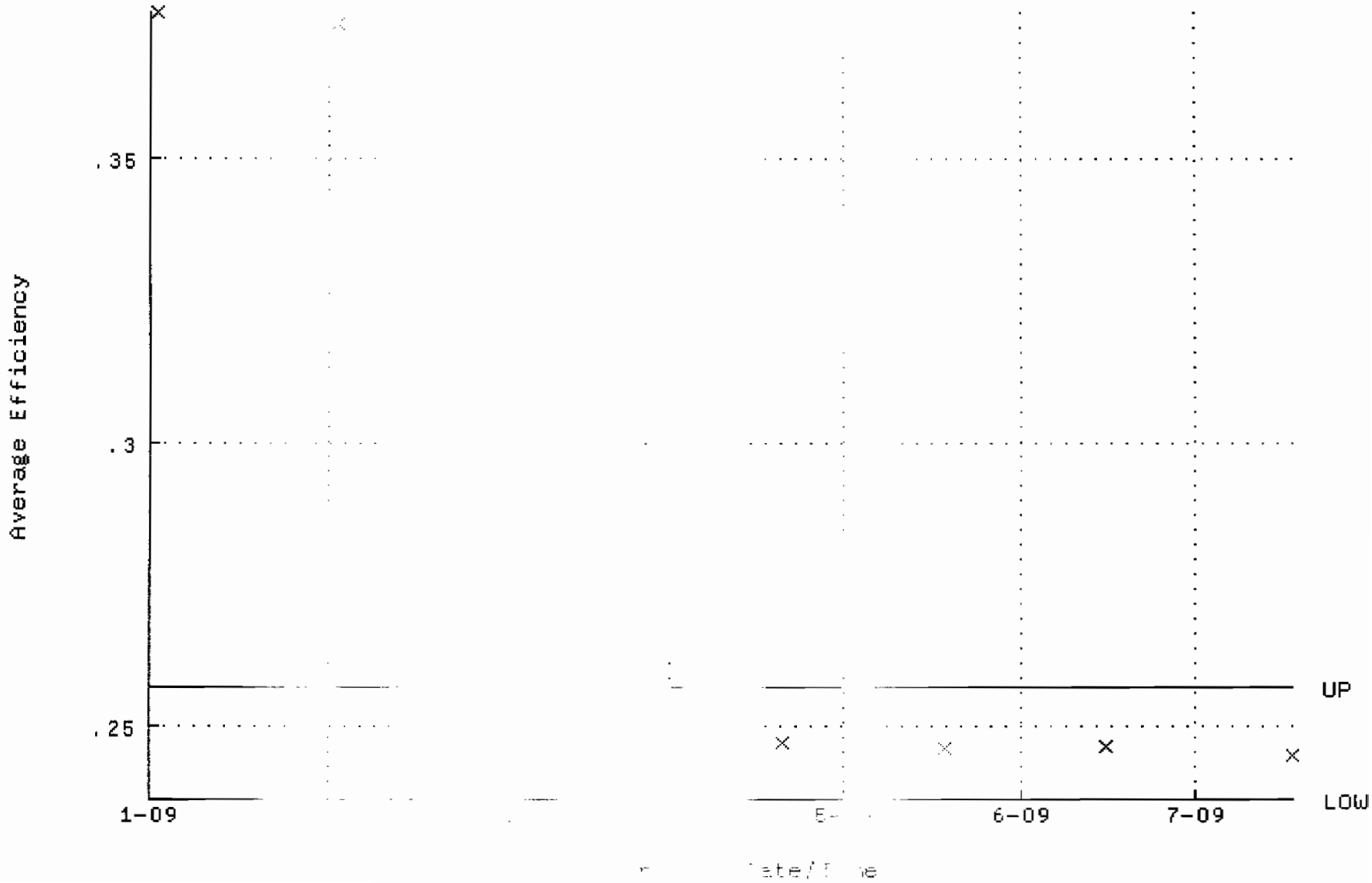

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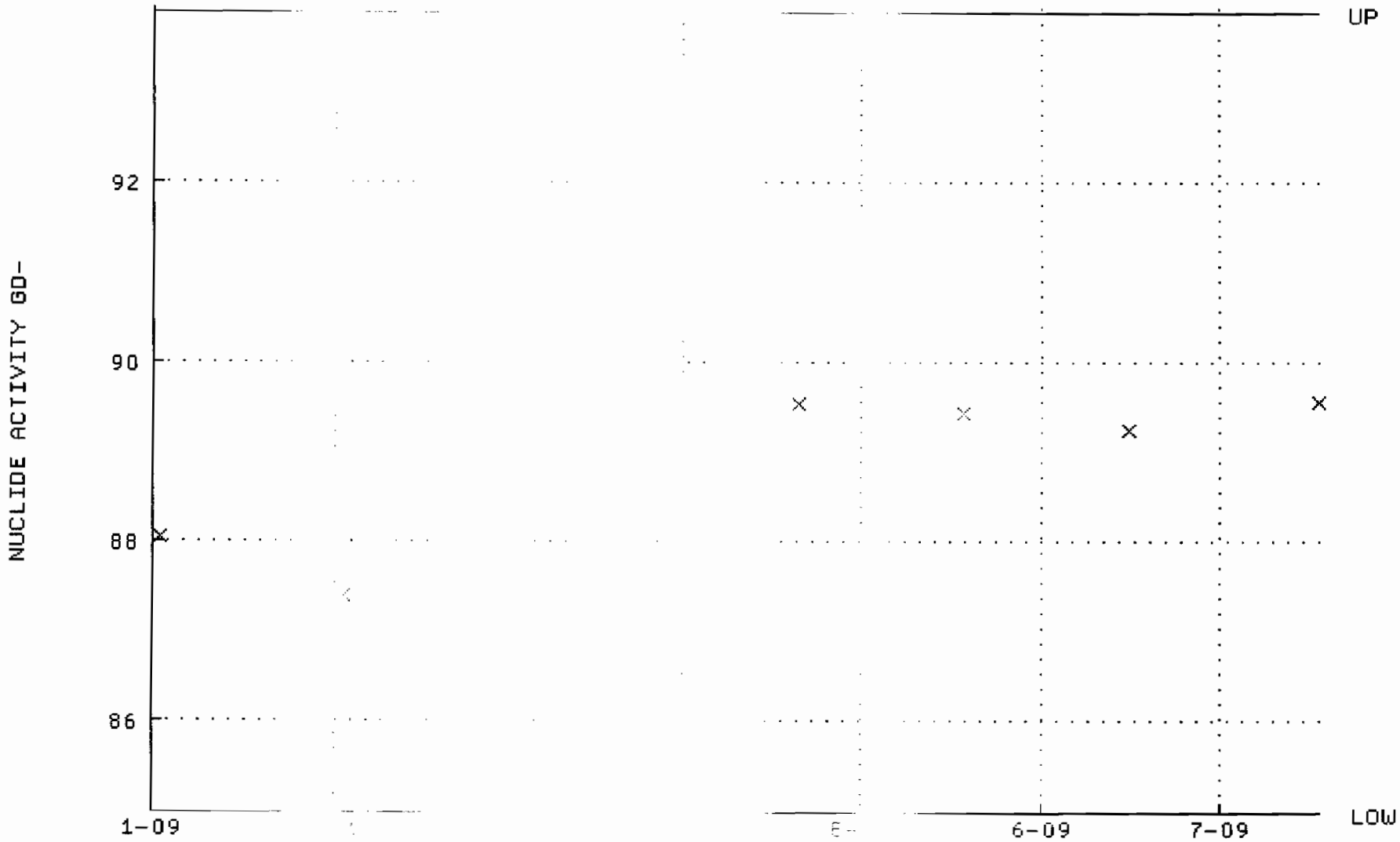

QA filename : A1 [E ;1
Parameter Name : CK
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Lower/Upper Lmts:

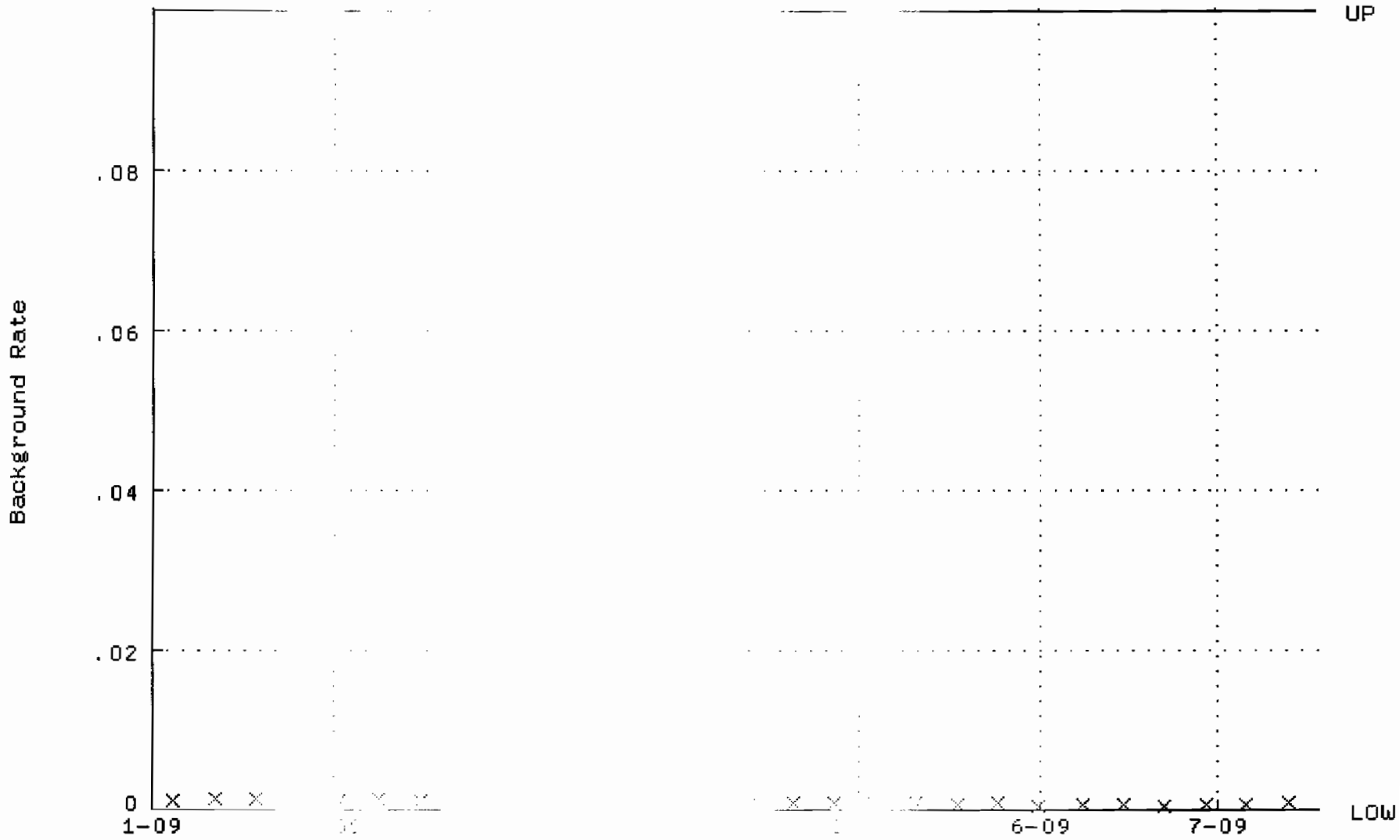

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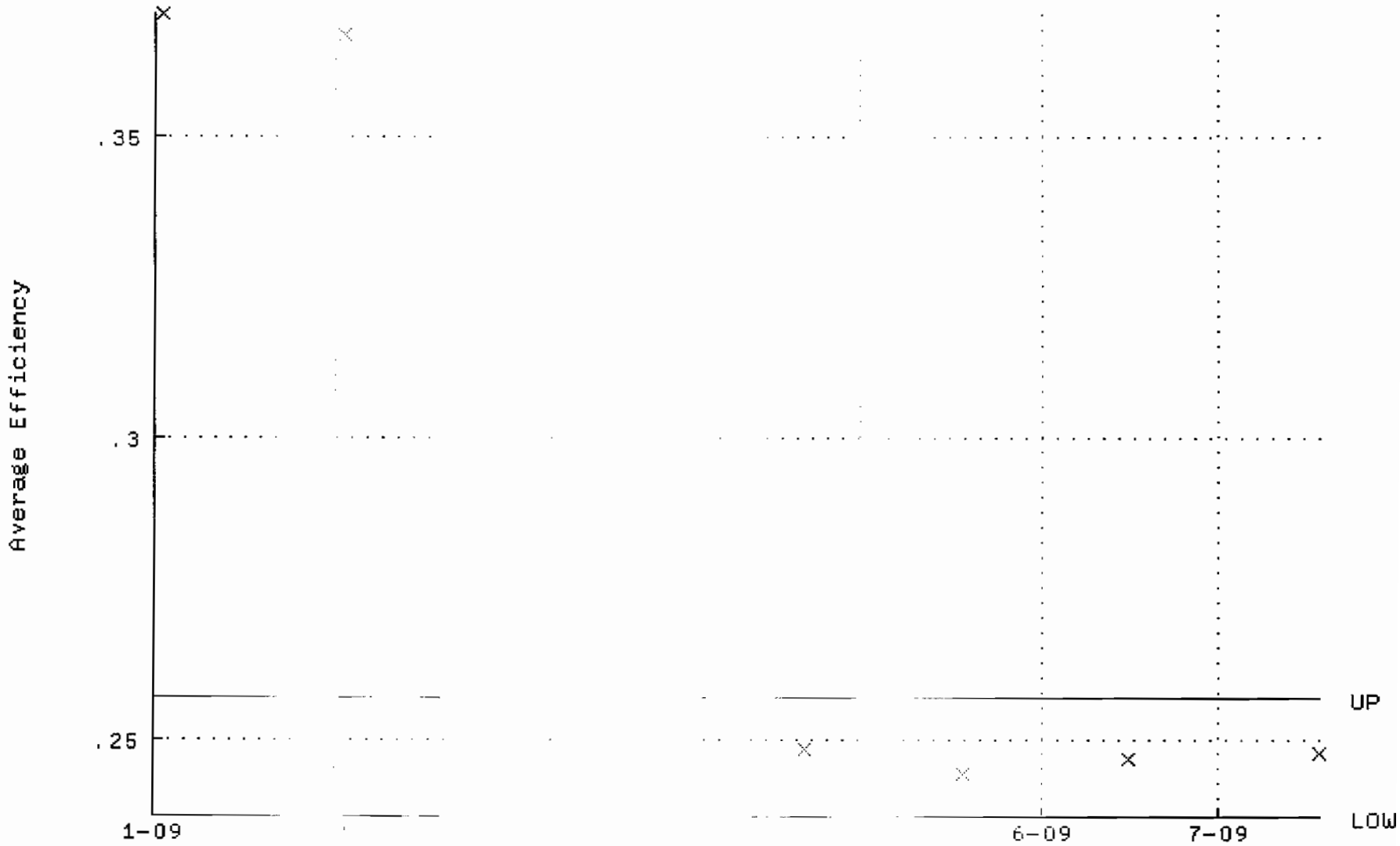

QA filename
Parameter Name
Start/End Dates
Lower/Upper Lmts:

12:00:00

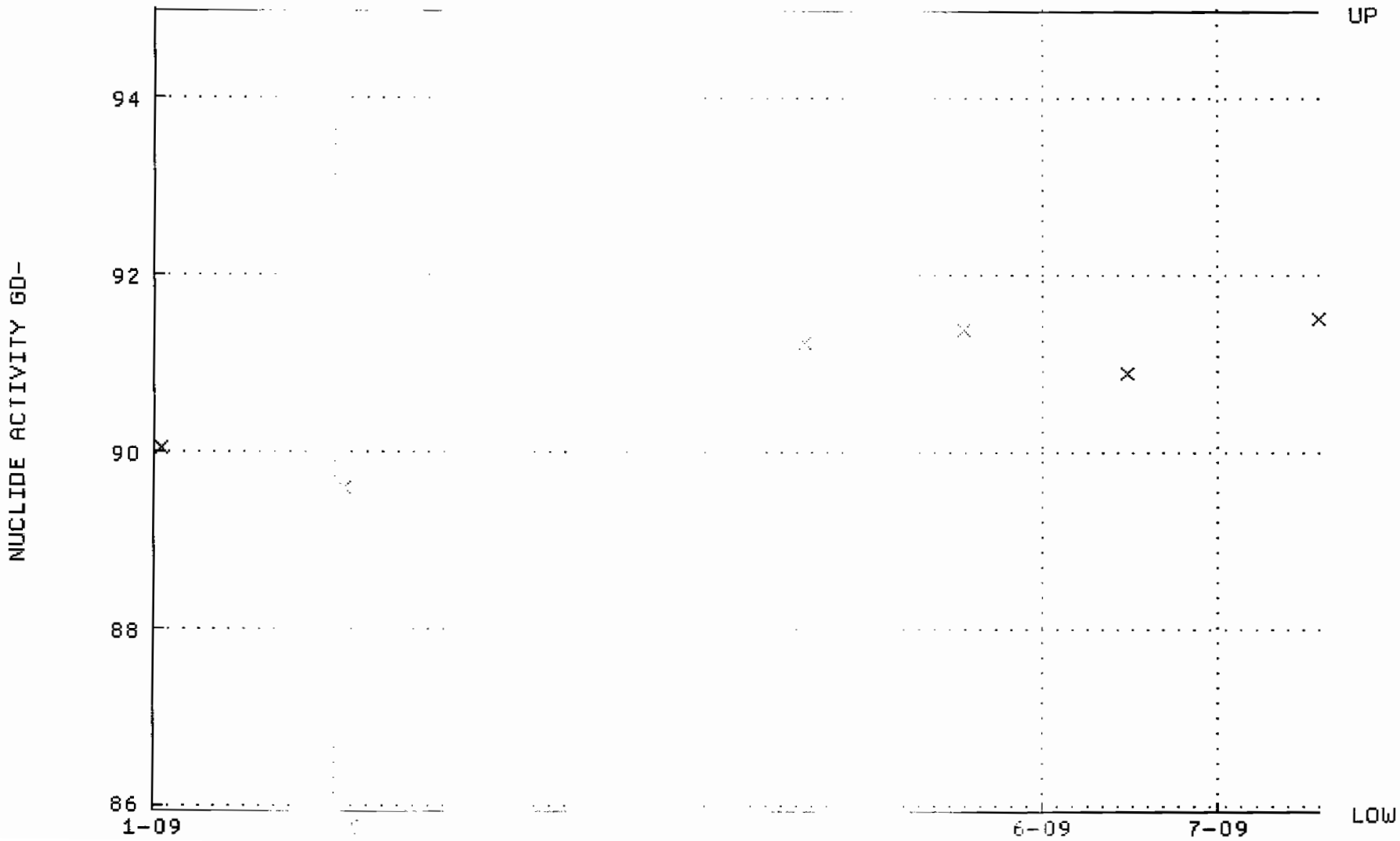

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Parameter Name :
Start/End Dates 12:00:00
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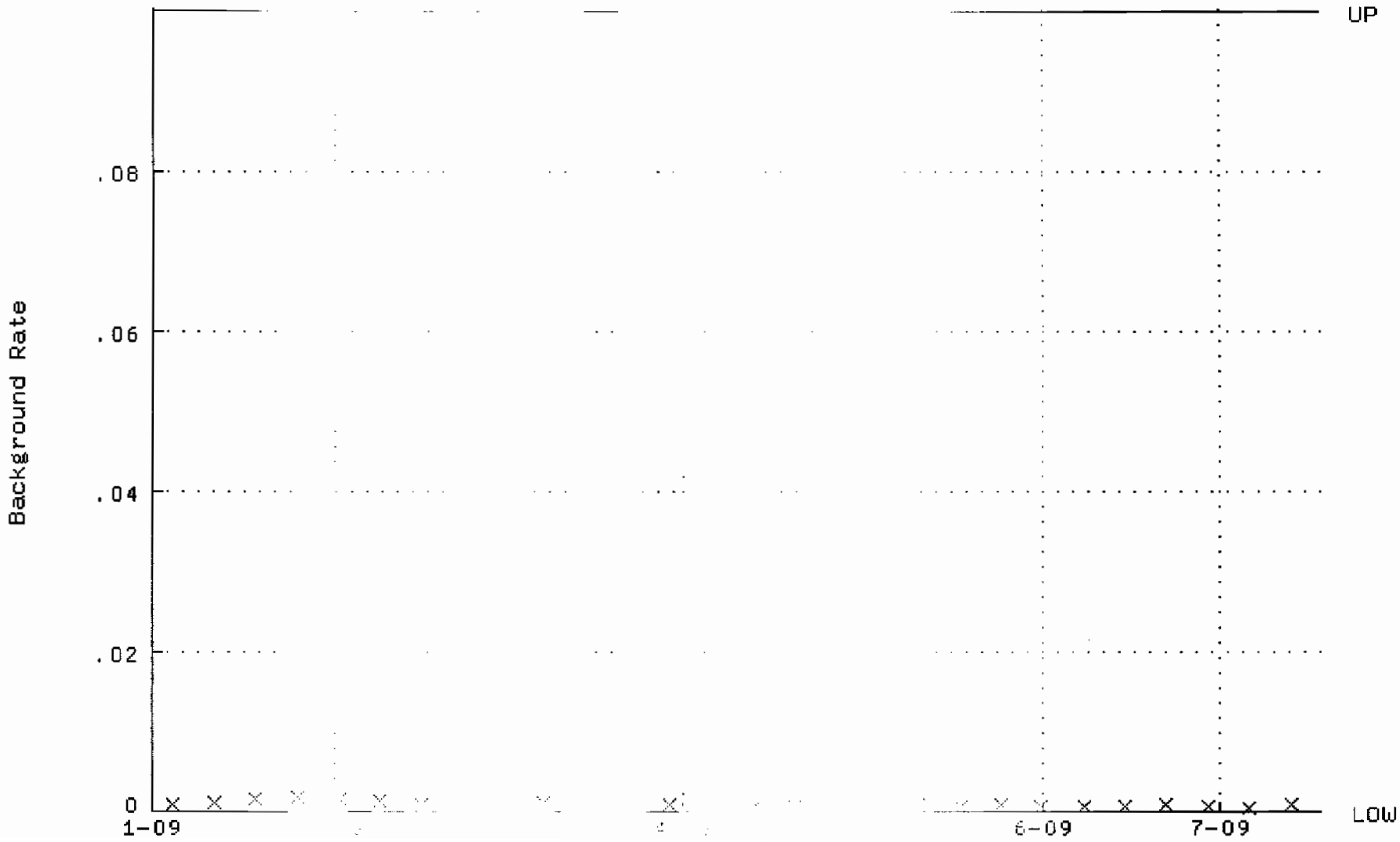

QA filename
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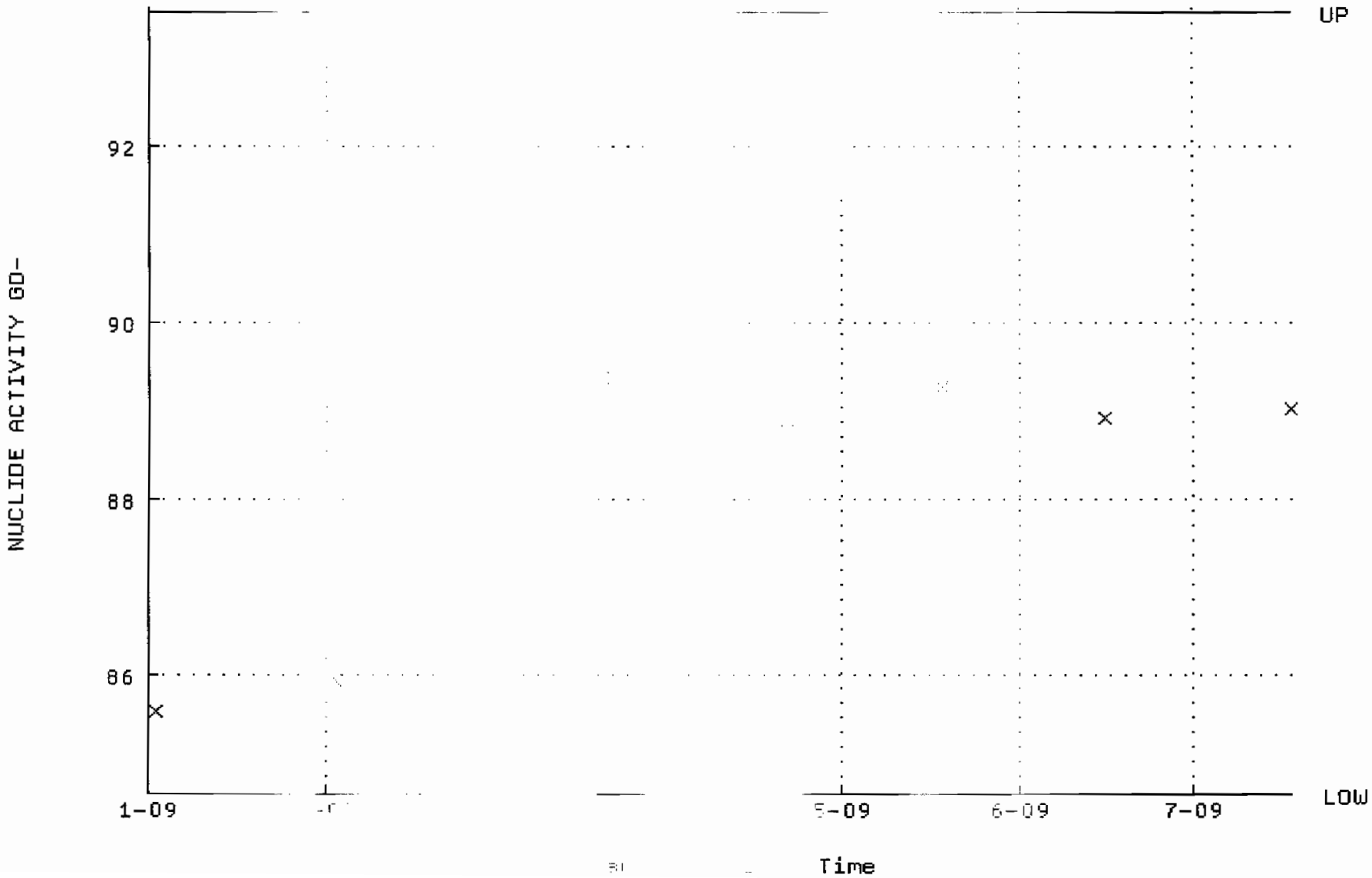

QA filename .B
Parameter Name
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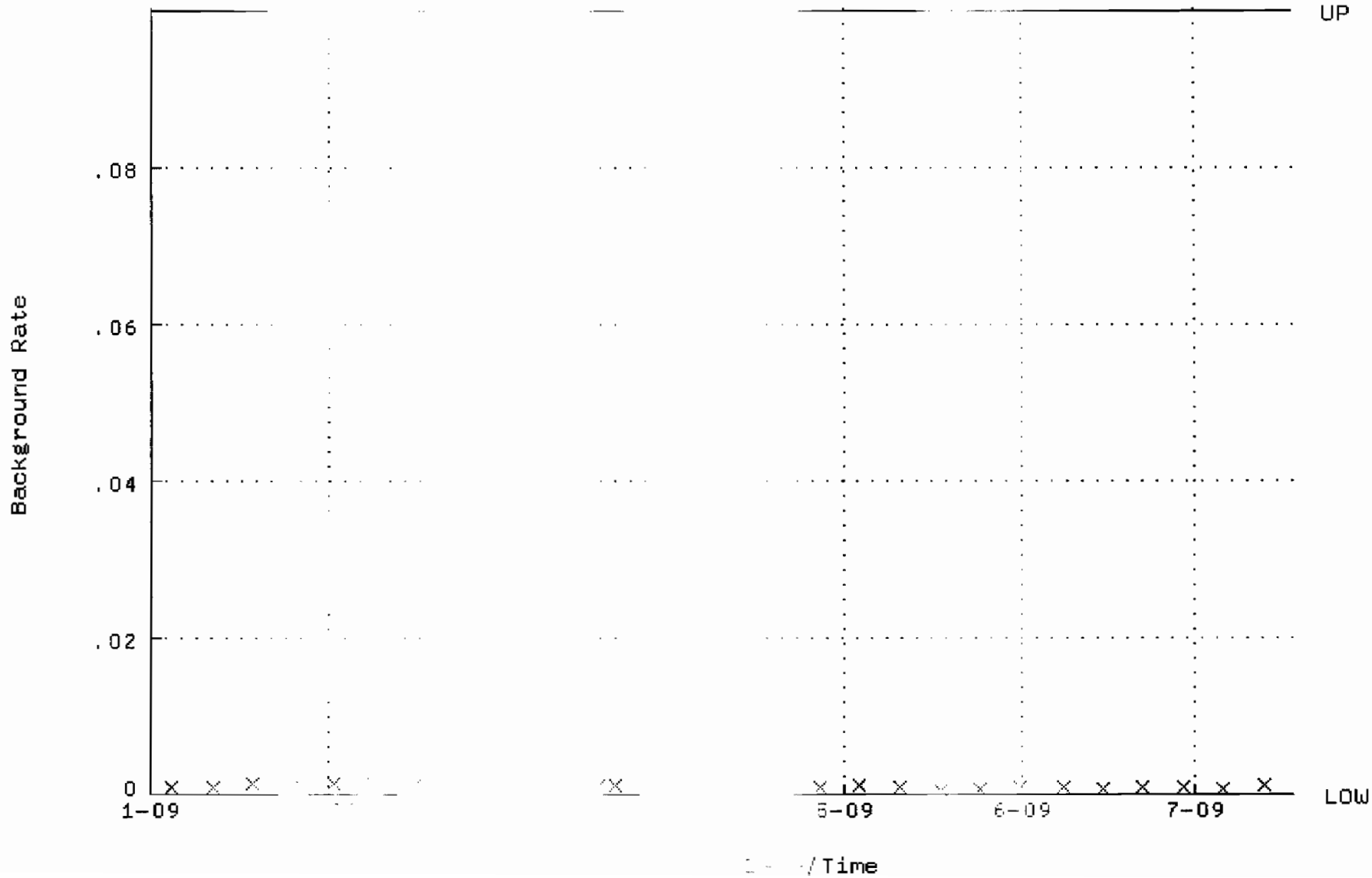

QA filename : C_GAM02_CAN.QAF;1
Parameter Name)
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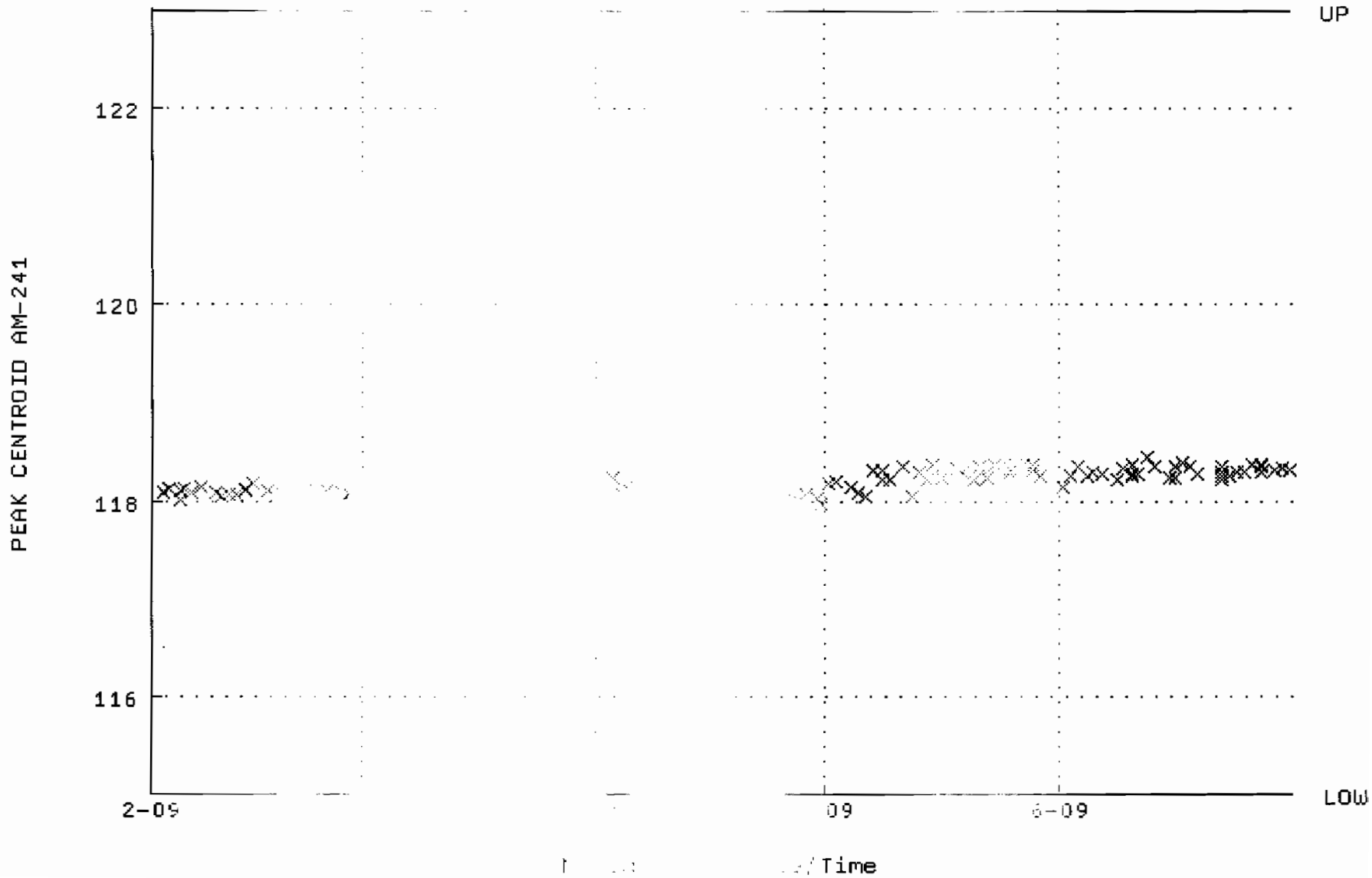

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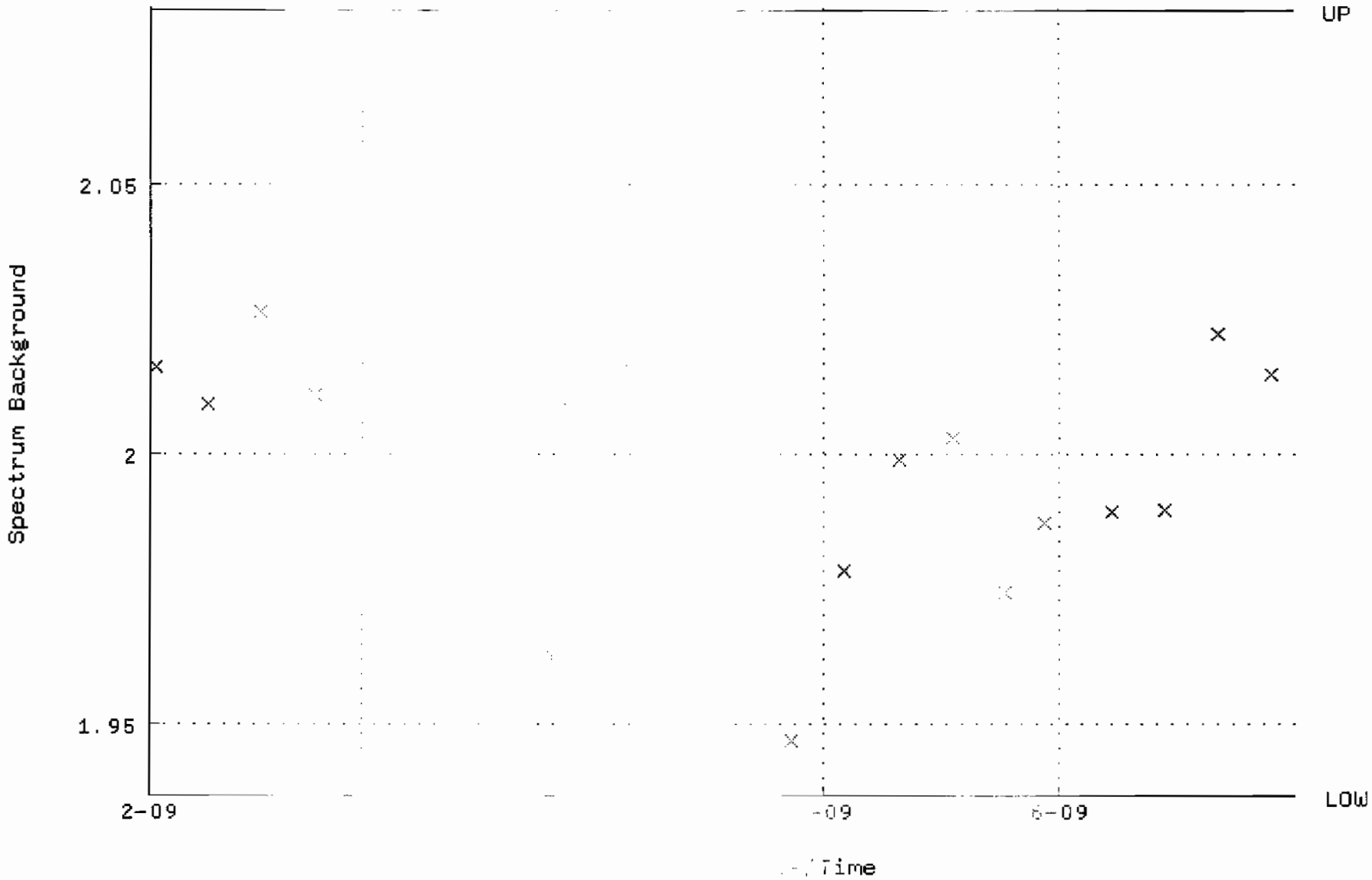

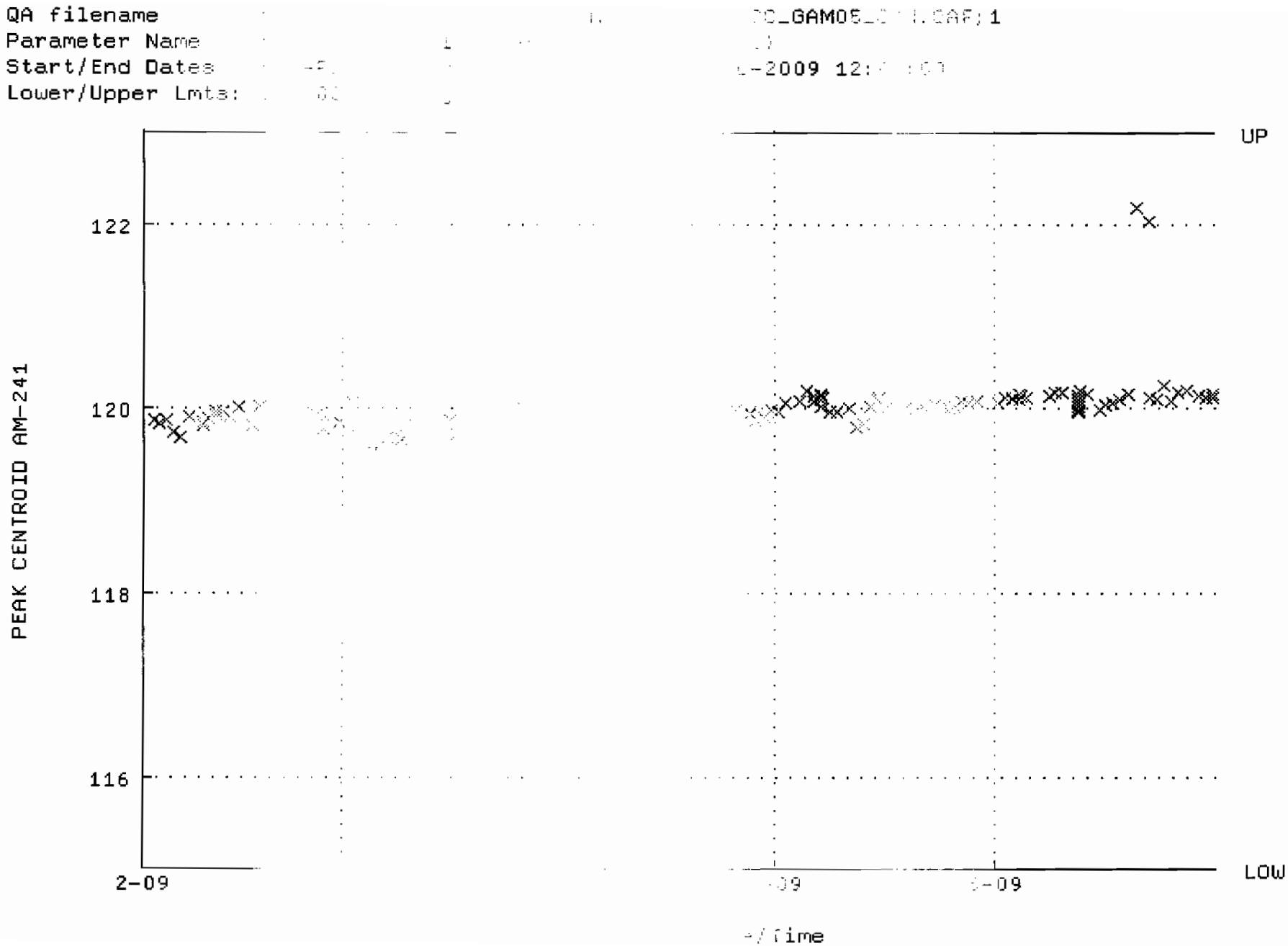
QA filename
Parameter Name
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2-09
UP
LOW
time

QA filename
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Start/End Dates
Lower/Upper Lmts:

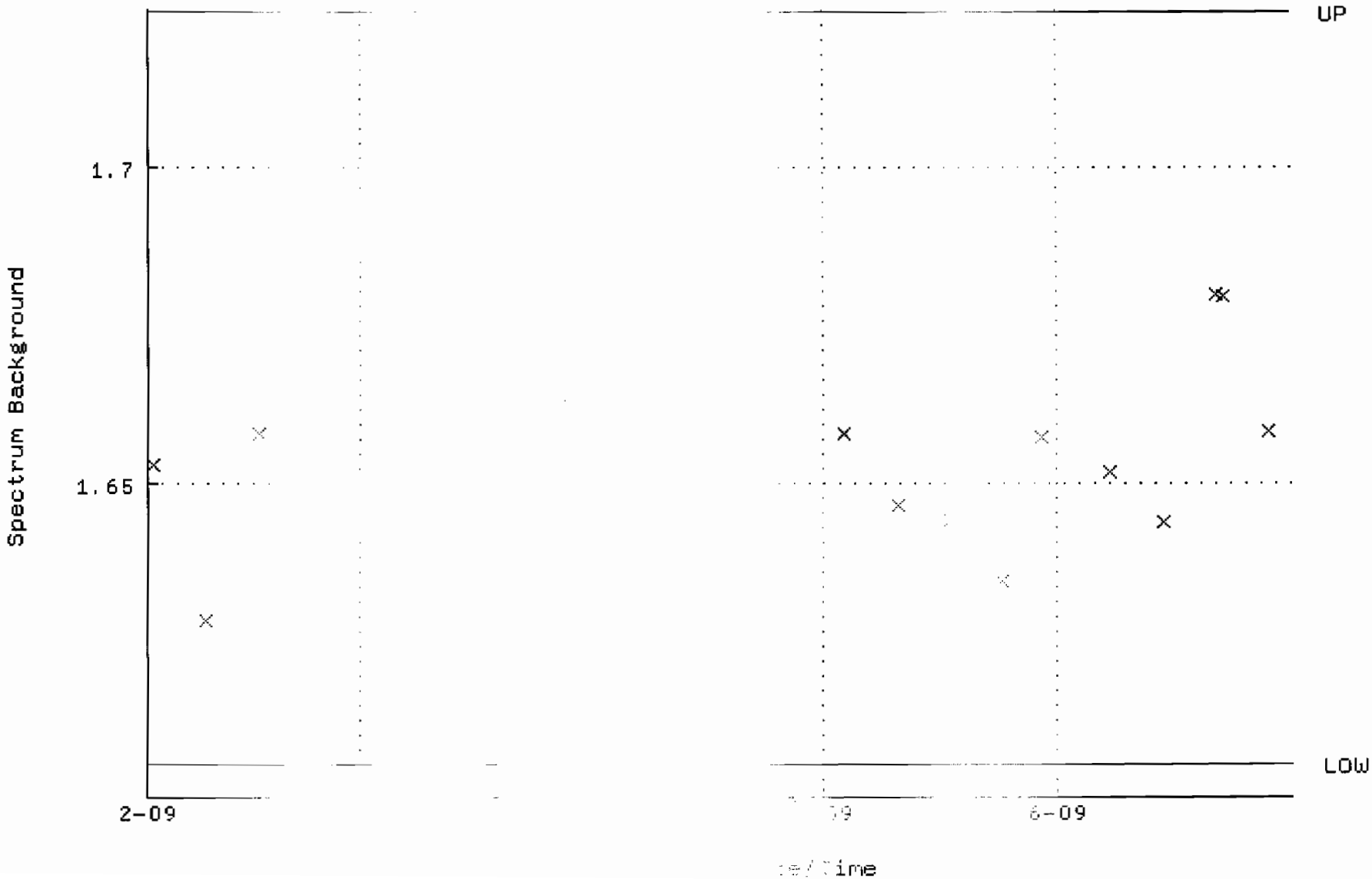

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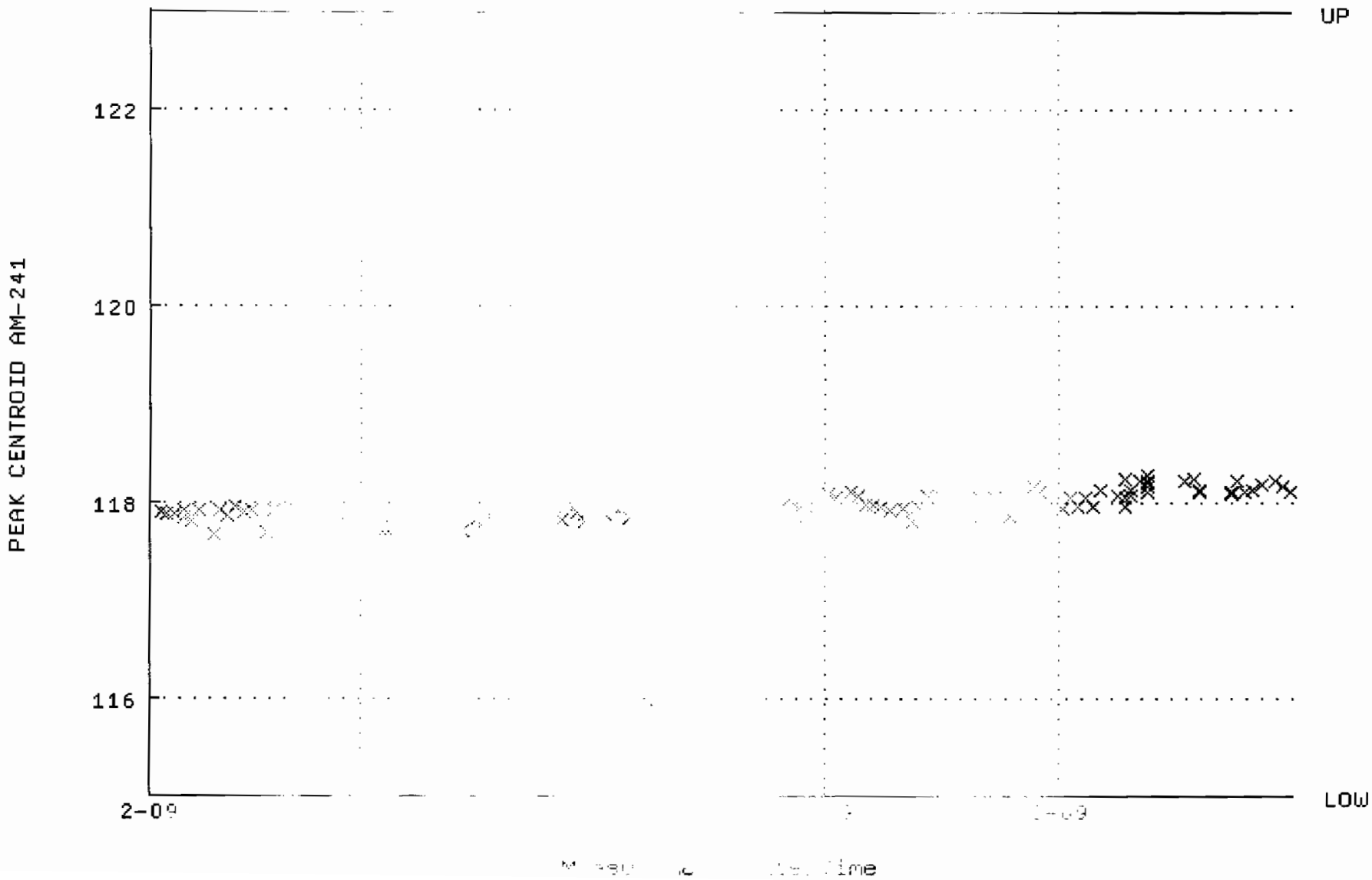

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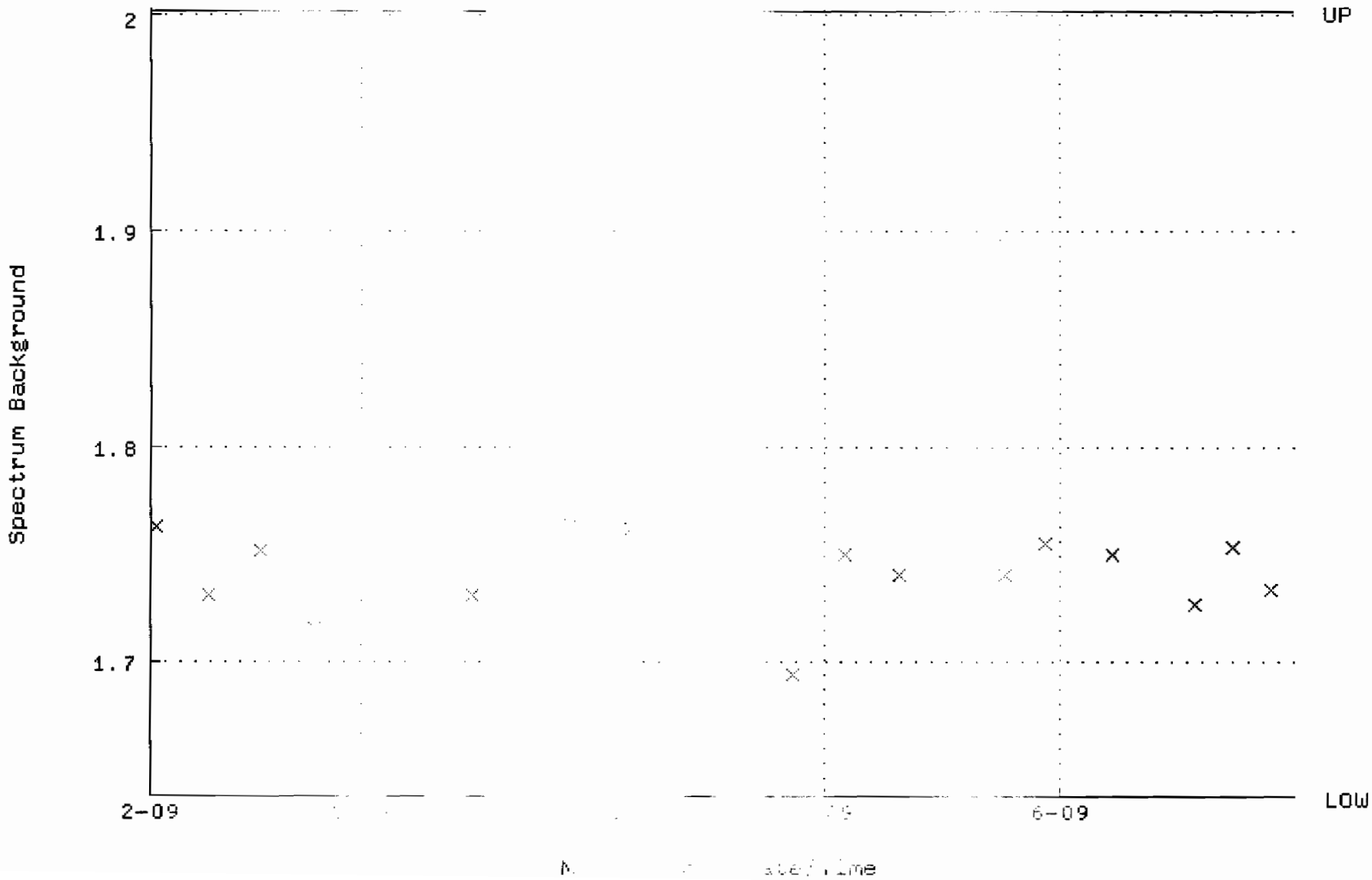

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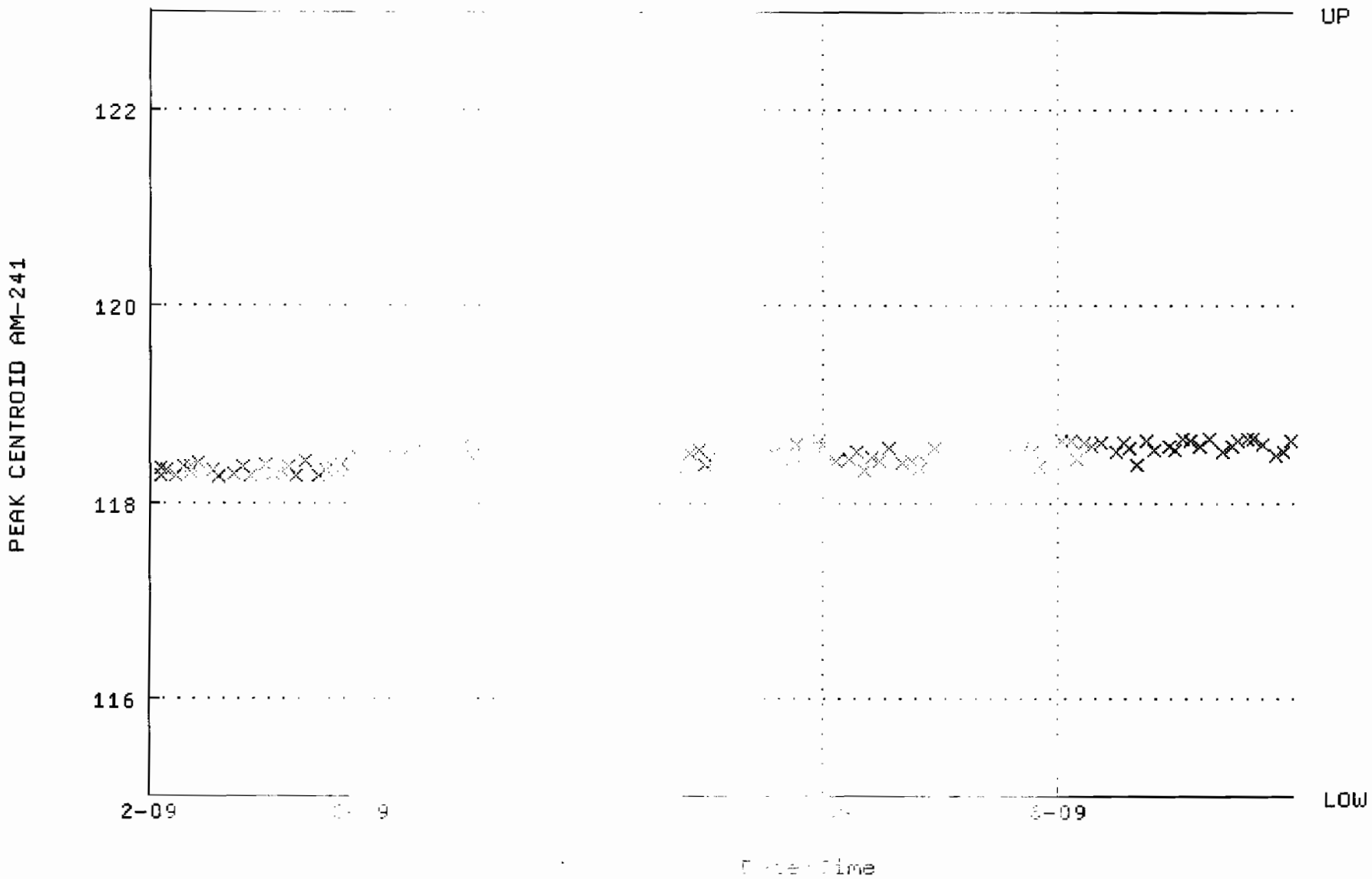

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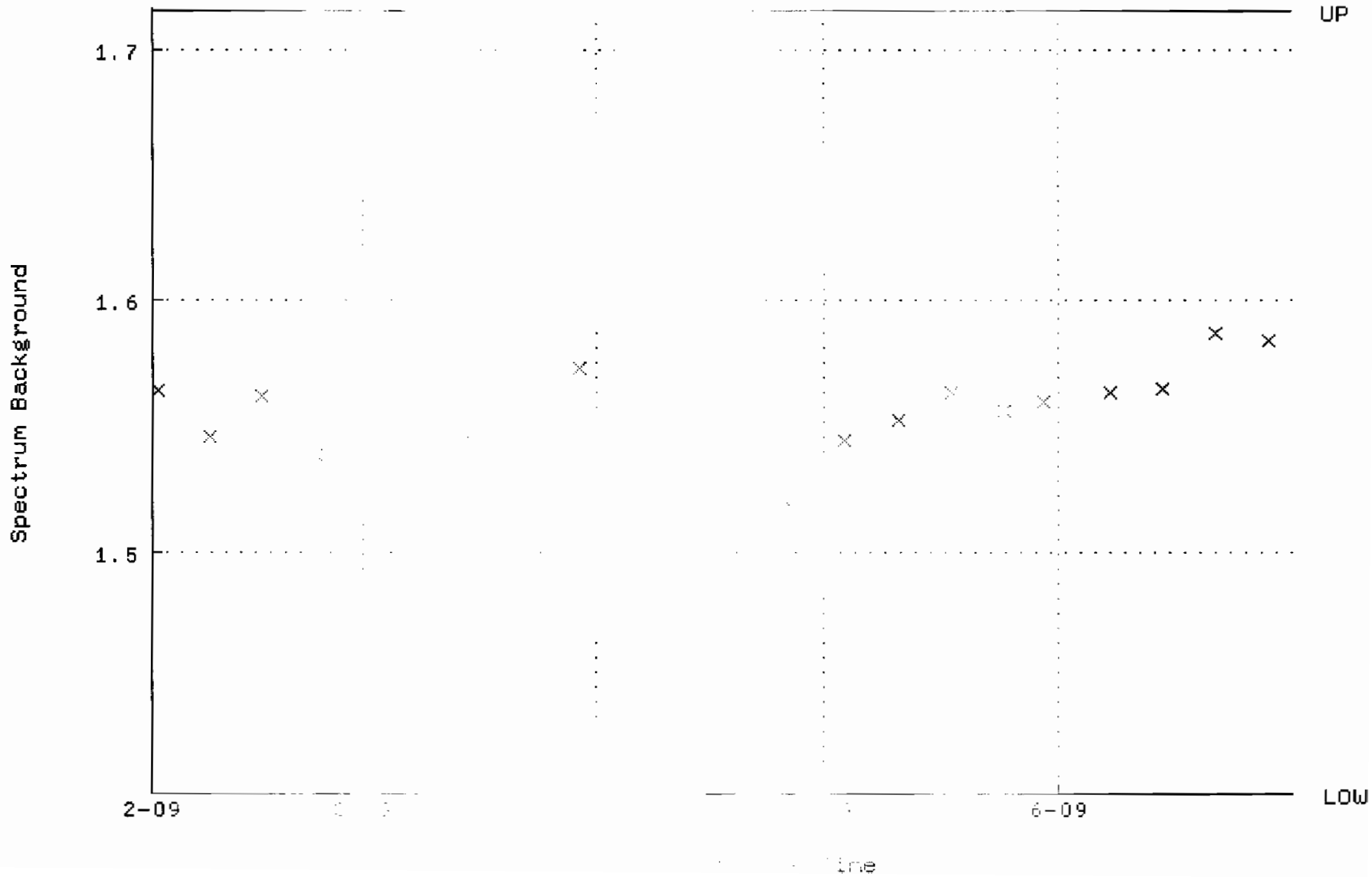

QA filename
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Start/End Dates
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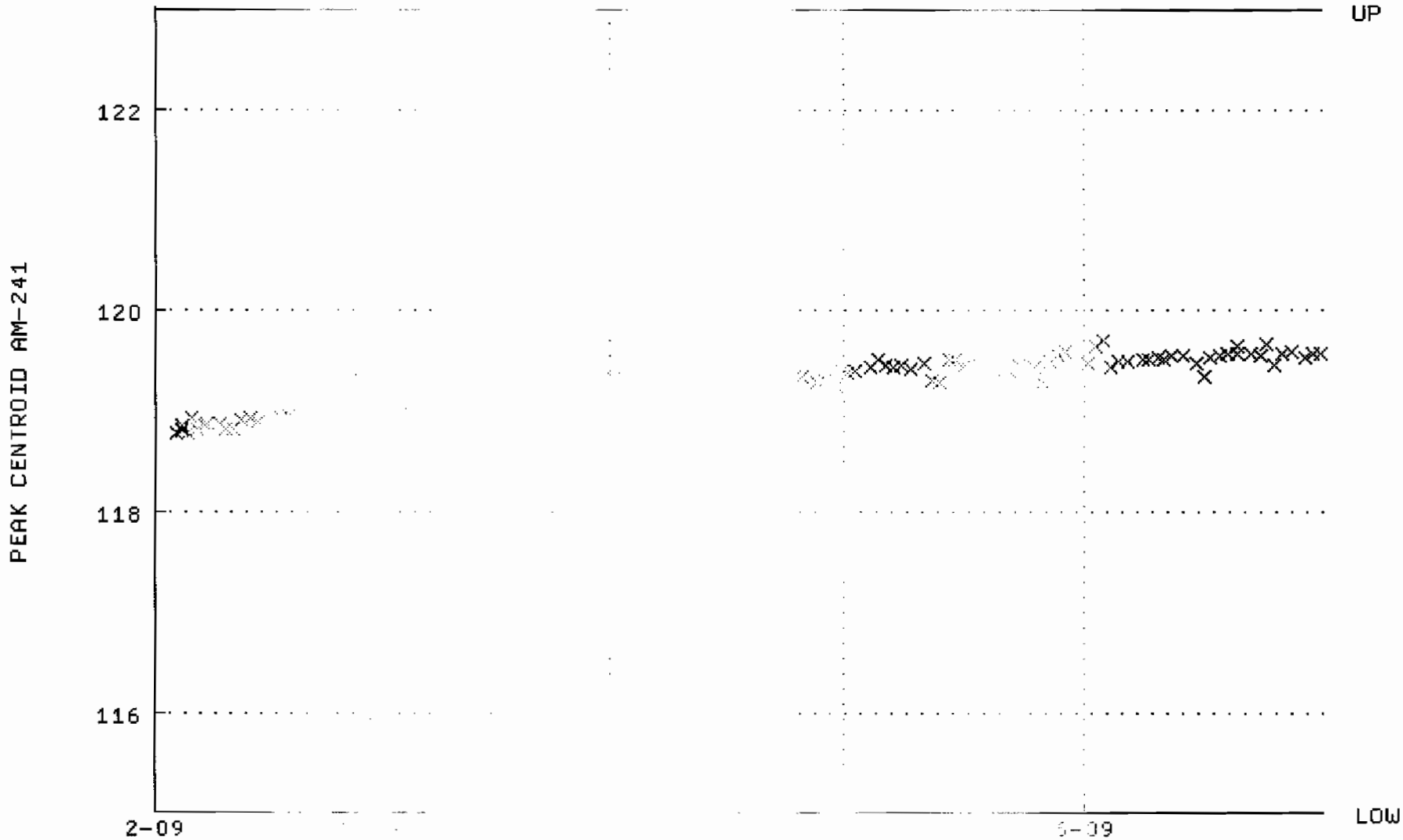

QA filename : D: GA L ORMI
Parameter Name : ATE m
Start/End Dates : -20' 1- 09 12: 0
Lower/Upper Lmts: 2. th

QA filename : [illegible] .QAF;1
Parameter Name : [illegible]
Start/End Dates : [illegible] 1009 12:[illegible]
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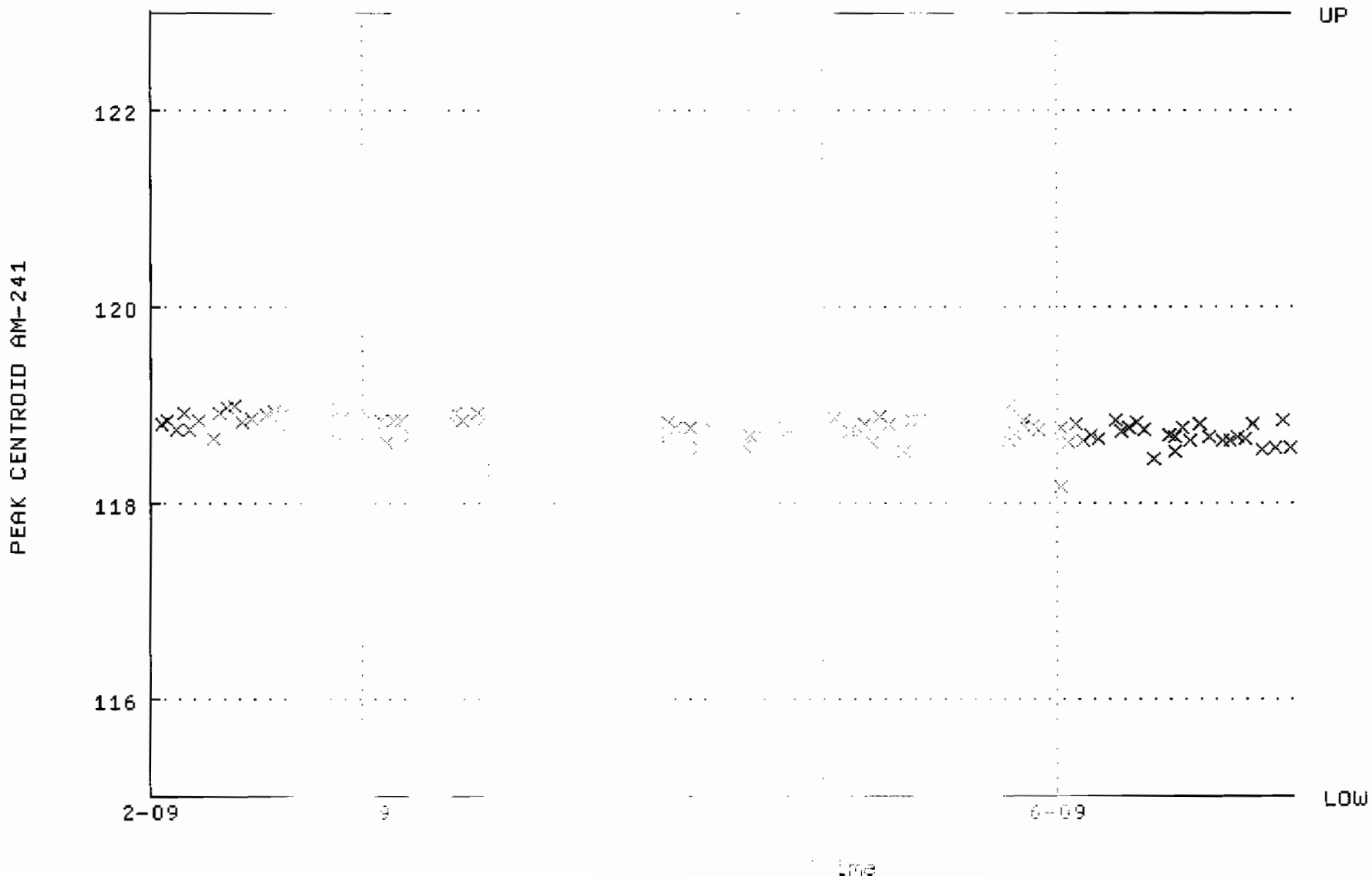

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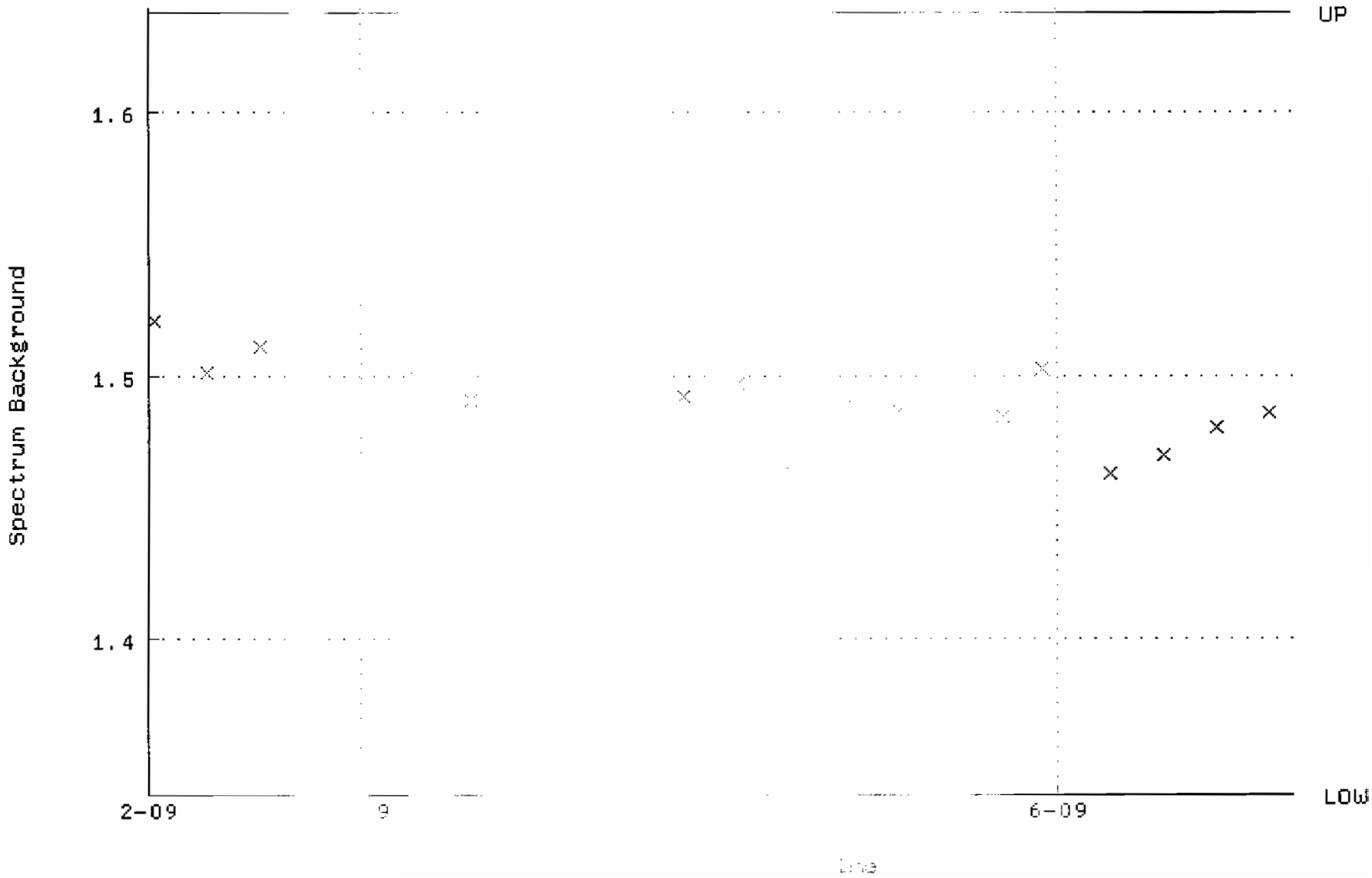

QA filename
Parameter Name
Start/End Dates
Lower/Upper Lmts:

QA filename
Parameter Name
Start/End Dates
Lower/Upper Limits:

QA filename
Parameter Name
Start/End Date
Lower/Upper Limits:

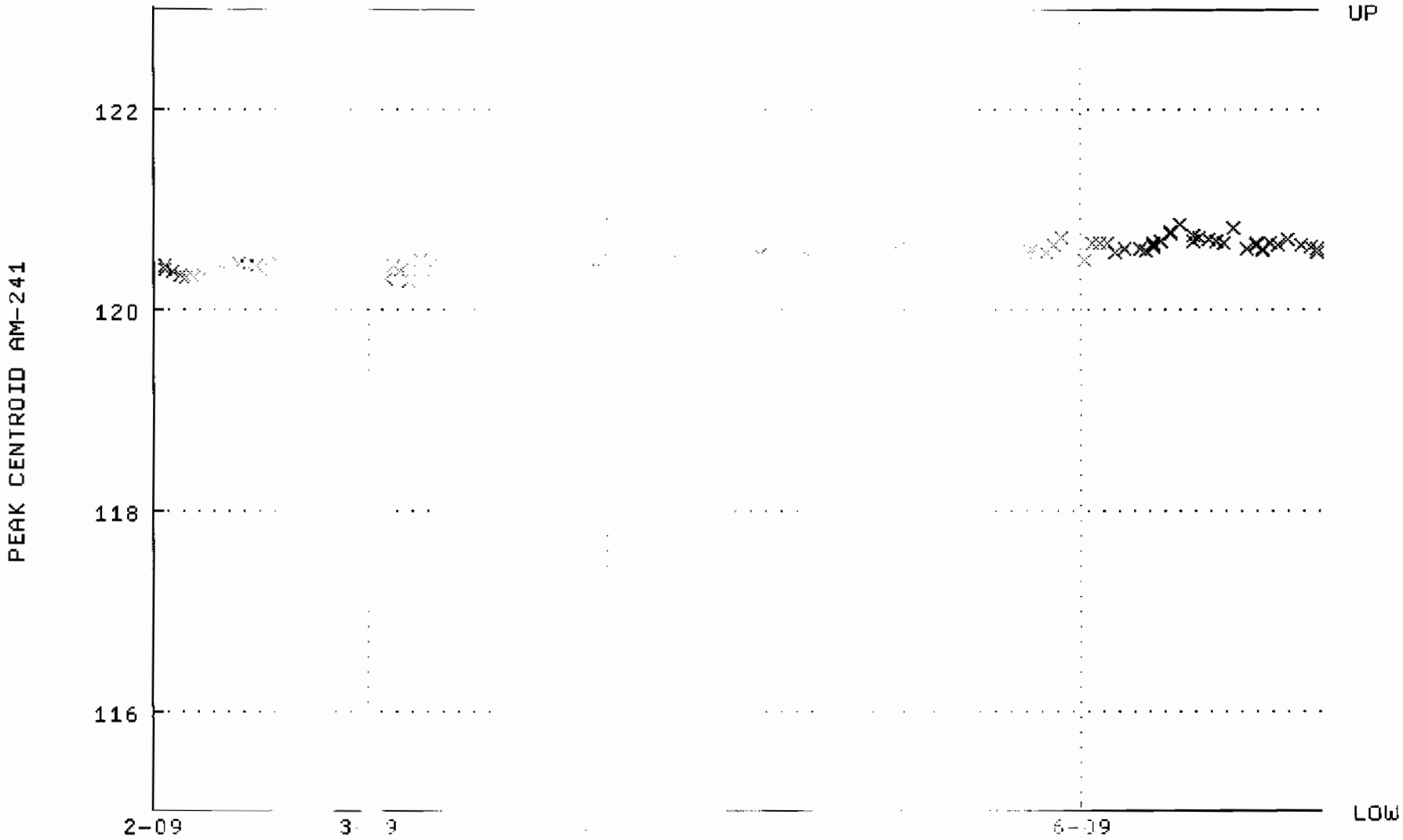

QA filename
Parameter Name :
Start/End Date :
Lower/Upper Limit :

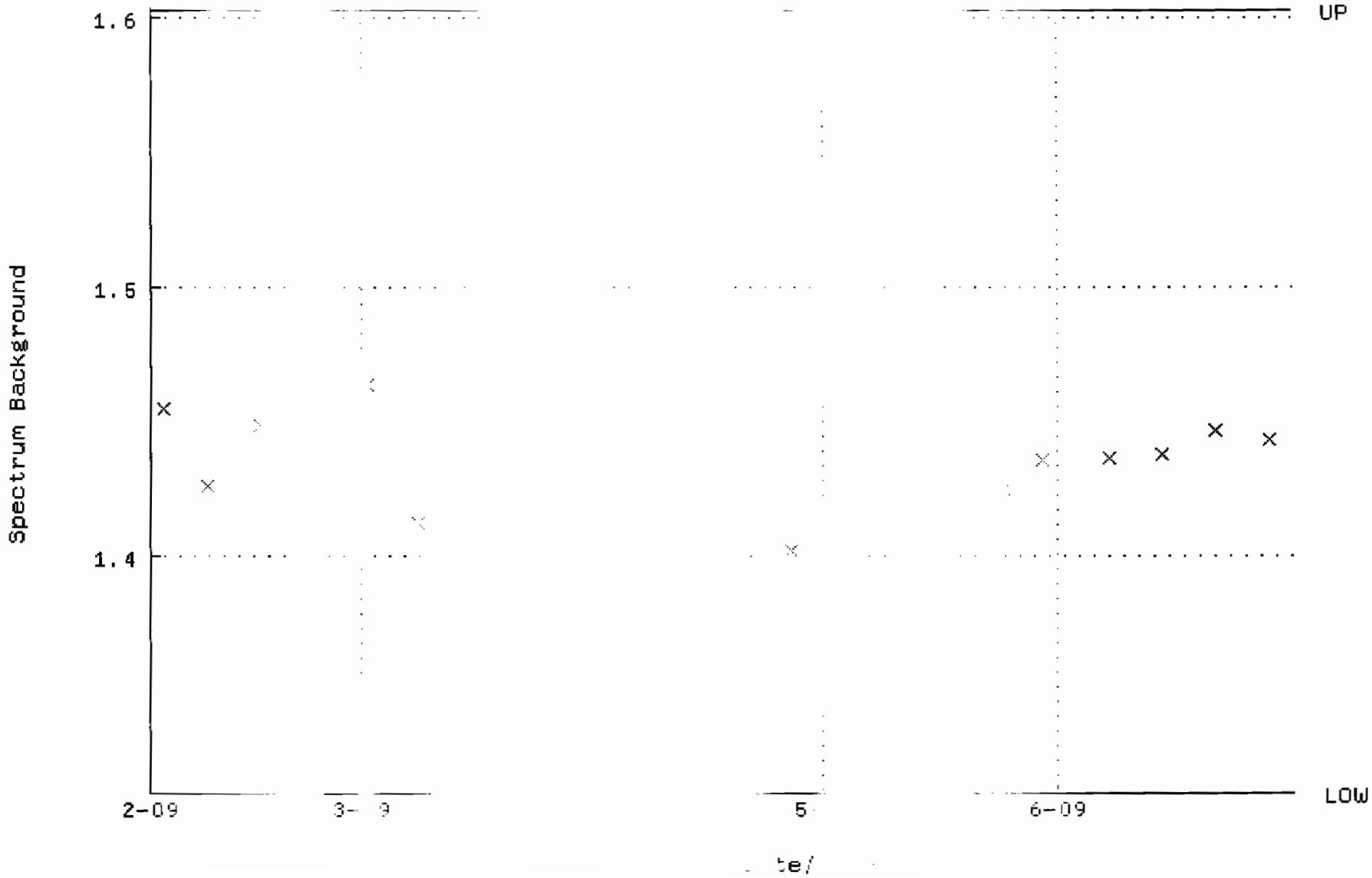

QA filename : [illegible]]QCC [illegible] F;1
Parameter Nam : [illegible] NTRC 241
Start/End Dar : 2- 8-20[illegible] - JL-
Lower/Upper L. s: 1[illegible] 0 thr

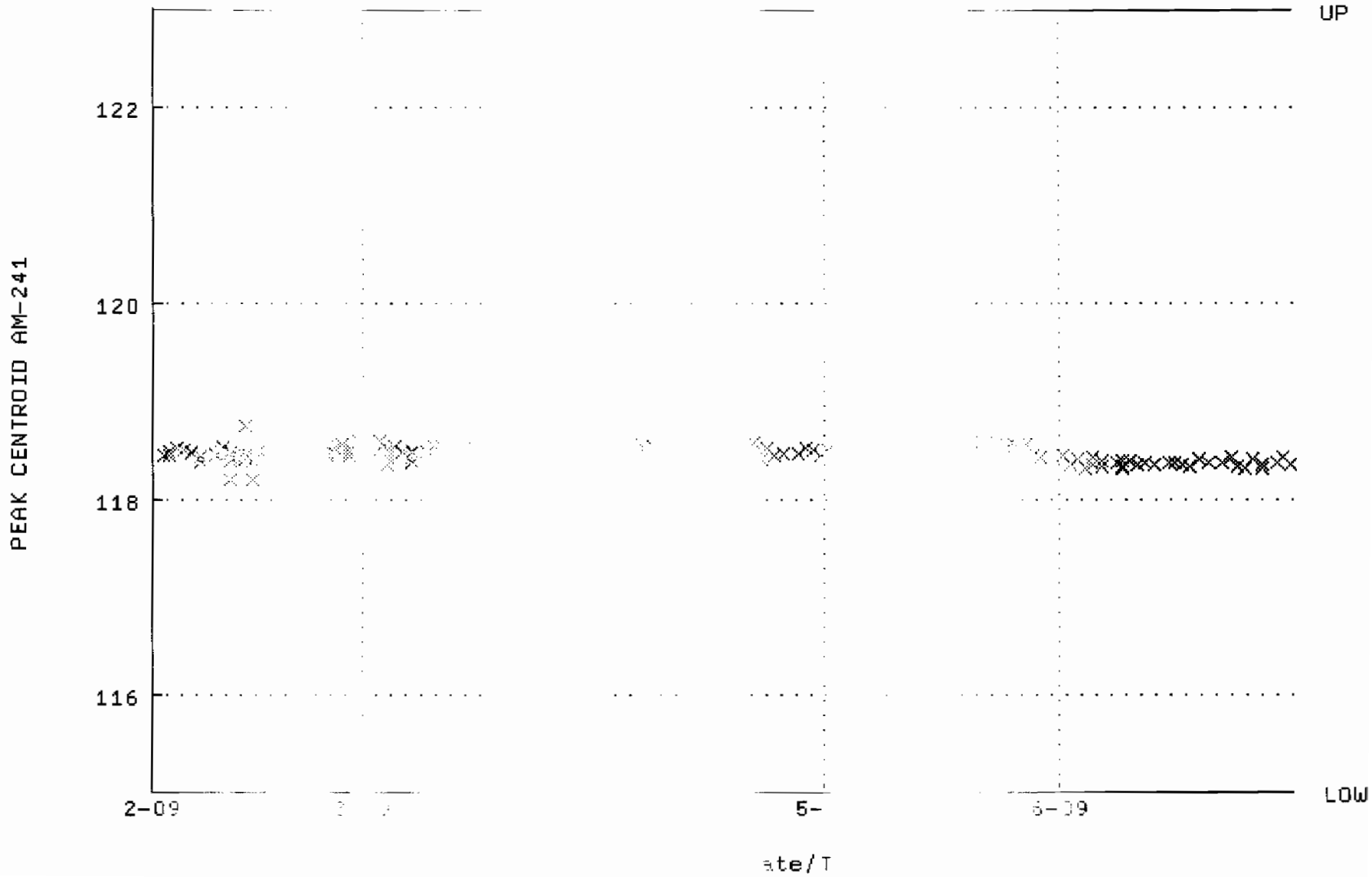

QA filename : J0:]LBC.
Parameter Na : BA RATE ate)
Start/End Dat : 1- B-20 UL-2
Lower/Upper L : 1.7 0 thr 2.0

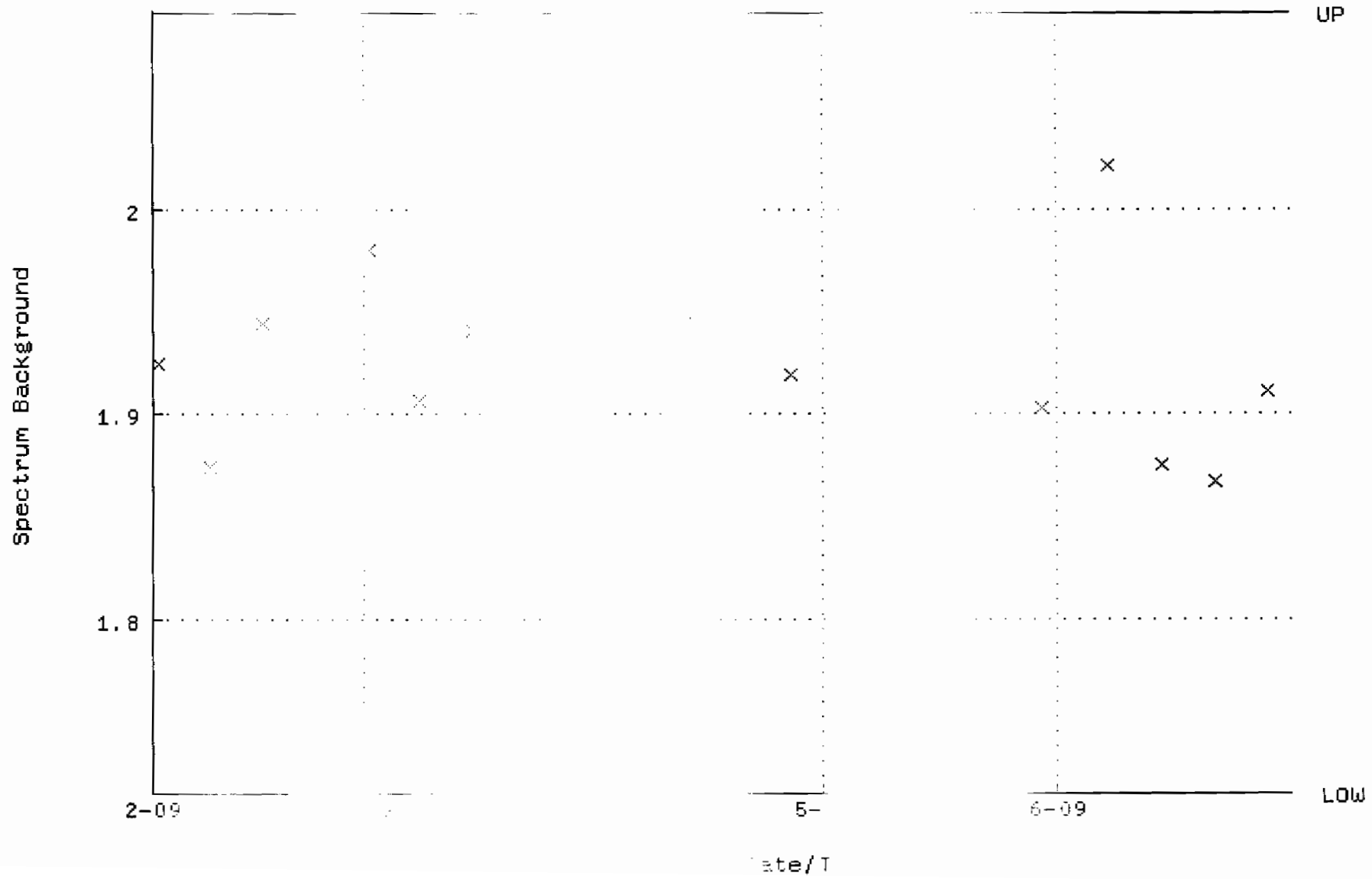

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standar[illegible] dionuclide sourc[illegible] prepared using [illegible] sured gravi[illegible] ically from [illegible] The Am-241 [illegible] dilution [illegible] jug. All [illegible]

g[illegible]

[illegible]escribed [illegible] [illegible]ratory [illegible] [illegible]ev. 1, [illegible]

C[illegible]bration date: Octo[illegible] 1, 2006 12:00 [illegible]

13	15.1		
[illegible]	[illegible].6		
Co-60	3.2714	57[illegible]	[illegible]
Co-60	3.2714	57[illegible]	[illegible]

3.31725 g[illegible]
P O NUM[illegible] [illegible] Item 1

[illegible] DA[illegible]

[illegible] M. Dimitrov [illegible]

Q A APPROVED: [illegible] 11-28-06

This standard will expire one year after the calibration date.

Rec'd 11/30/06
RC-S-045-073

Corporate Office
24937 Avenue [illegible]

Laboratory
1380 Seaboard Industrial Blvd. Atlanta, Georgia 30318

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318

Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

Cd-109	88	HP[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	17[illegible]	[illegible]		[illegible]							
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL

A Solution Material Info	
Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/200[illegible]

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L

David D'Ay 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

Isotope	Result	
Mixed Gamma N1	440.7	pCi/L
Mixed Gamma N2	461.1	pCi/L
Mixed Gamma N3	467.4	pCi/L
Mean Value (Caution) =	456.40	100.71 Pass
S =	13.957	
C =	37	

David D. 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr 12/4/2008	Isotope	Result pCi/L	
	Mixed Gamma N1	578.1	pCi/L
	Mixed Gamma N2	603.2	pCi/L
	Mixed Gamma N3	569.6	pCi/L
[illegible]	[illegible]	pCi/L	99.9931
		pCi/L	Rule 3

12/4/08

Amanda Fehr

Amersham International plc
Amersham Laboratories

0134

NAMAS
CALIBRATION
No.

Certificate of calibration of standardised tritium labelled water

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

emical form: water Batch: 111

per gram of we

asurement

ne

Purity

e been detected.

radioactivity is the becquerel.

l (Bq) = 1 nuclear transformation per second, therefore
= $3{\cdot}7 \times 10^{10}$ becquerels exactly.

sion factors are:

1 = 2 erels (kBq)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

RC-5-024-061

Amersham

Standard Traceability Log Rad

Source	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	WATER

A Solution Material Info	
Isotope	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification	09/10/2008

Bal

07/20/2004	Amanda Fehr	5.86	1000	0134-H	dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007					5503.5128		

Version 1.0

Verification for ; 34-K

M. Aders
4/9/2009

	tector CPM	B/
	1097.2000	5
	1073.2000	5
	1085.2000	5
Mean Value (Counting) =		104
Stdev =		0.0
Certificate Value =	dpm/mL	
Lower Limit =	dpm/mL	
Upper Limit =	dpm/mL	
Rule 1 Pass/Fail	xception taken du	
Two sigma =	dpm/mL	
10 % of Mean =	upm/mL	
Rule 2 (Pass/Fail)		

Verification Rules

Rule 1 = The certificate va ncertainty) shall
determined from the me d deviation of th
Rule 2 = The two sigma v nfidence interva
of the three verification m
Rule 3 = The determined n 10% of the certi

The analys ification source
of the stan tion vials. Ten m
added to e aken to mix. A
of DI water liquid scintillati
Backgrour or two hours an
The H-3 e s used for verific
A (H-3). C n this logbook u
performed a

C)(D)

m,

ciency, (cpm/dpm)
r standard veri

Reference

Mr Aders 4/9/09
[illegible] 4/9/09

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 2	6.36	6.07	28.5
0244-A 3	[illegible]	5.5	26.5
[illegible]		[illegible]	[illegible]
[illegible]			[illegible]
[illegible] Result	[illegible]	6.	24.5 +/
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATE 4/14/2005 Jeff C Reid 12/1/04

TRM

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	425 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

99 1627-01-

SF 2001-COC (10-97)

Supersedes (5-97) issue

Internal
Batch N

ANAL
SAR/WR N

Page 1 of 1

602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUIS
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Samples Shipped
Waybill No.
Contact: EDIE KENT
Destination: G.E.L.
Contact/Phone: Doug S
Report to SMO: Suzi

Location Tech
Building N/A Room

Sample No. - Fraction	Sa	Beginning Depth in Ft.	ER Site No.	Requested	Lab Sample ID
050484 - 001	PEM-1	N/A	N/A		
050485 - 001	TRM-2	N/A	N/A		
050486 - 001	NRM-2		N/A		
-					
-					
-					
-					
-					
-					
-					

RMMA ☐ Yes ☒ No

Sample Disposal ☐ Return ... by lab

Turnaround Time ☒ ... Report Date

Sample Team Members	Name
	Douglas E.

1. Relinquished by		Date
1. Received by		Date
2. Relinquished by		Date
2. Received by		Date
3. Relinquished by		Date
3. Received by	Org.	Date

LAB USE

Abnormal Conditions on Receipt LAB USE

	Date
	Date
	Date
	Date
	Date
	Date

Original To Accompany Sample Laboratory Copy

To Accor... return

Field ... y (Pink)

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1			
0244-B 2	44.1	[illegible]	40.[illegible]
0244-B 3	[illegible]	[illegible]	31.3
[illegible]			
	[illegible]	3.03 [illegible]	[illegible]
Average Results	41.7[illegible]	7.[illegible]	35.68 [illegible]

REFER[illegible] DATE 4/14/[illegible]

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los A[illegible] National Laboratory (LANL) [illegible] and characterize a soil [illegible]

AAA 2750-2	[illegible]
AAA 3205	[illegible]
AAA 8581	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

was being [illegible] samples were [illegible] homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

SF 2001-COC (10-97)

Supersedes (5-97) issue

Internal
Batch N

'627-01-2

Page 1 of 1

IC C- 602945

Dept. No./Mail Stop: 7132 / 104
Project/Task Manager: PAM PU
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

ation: G.E.
acu Phone: D
ort to SMO: S

Location	
Building N/A	Ro
Sample No. - Fraction	E Sam
050484 - 001	PEM-1
050485 - 001	TRM-2
050486 - 001	NR
-	
-	
-	
-	
-	
-	
-	

Beginning

LAB USE

d Requested	Lab Sample ID

RMMA ☐ Yes ☒ No

Sample Disposal ☐ Return

Turnaround Time ☒

Sample Team Members	Name
	Douglas

Abnormal Conditions on Receipt LAB USE

1. Relinquished by	
1. Received by	Date
2. Relinquished by	Date
2. Received by	Date
3. Relinquished by	Date
3. Received by	Date
	Date

Original To Accompany Sa
Laboratory C

Field Copy (Pink)

1262

National Institute of Standards & Technology

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

hersburg, Maryland 20899
ary 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

RECEIVED 11/5/08

Recommended Procedure for O[illegible] the SRM [illegible]

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

instrument(s)	germanium detector system, and a surface-barrier detector

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty	Method Used To Evaluate $u(x_i)$, [illegible]	Relative [illegible]	Relative [illegible]	Rel[illegible]
[illegible]	(B) [illegible]	Quant[illegible] $u(x_i)$ [illegible]	[illegible]	[illegible]antity, [illegible]
	Limit of detection (B) [s]	100.	0.001	0.10

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$ where f is a mathematical funct[illegible] [illegible] from th[illegible]

[illegible] mation on the [illegible] uncertainties, [illegible]

[c] **The value of each component of combined standard uncertainty and hence the value of the expanded**

[f] **The stated uncertainty is**

column 5

s are indep

The relative standard uncertainty of [illegible] determined by [illegible]

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

A Solution Material Info

Verification for Pu-242 Standard 1262-*A*

M. Aders	Isotope	Value	Uncertainty

Eckert & Ziegler

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

78747-27

RECEIVED
12/15/05
DC-S-

Standard Traceability Log Rad

A Solution Material Info

Verification for Uranium-232 Standard *1283-B*

71

within 1

1/5/09

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882703**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347004	SAMPLE	CXM2	1016	11-JUL-09 15:57	DONE		
232664001	SAMPLE	CXM2	1017	11-JUL-09 15:57	DONE		
232740008	SAMPLE	CXM2	1047	16-JUL-09 10:10	DONE		
232754001	SAMPLE	CXM2	1048	16-JUL-09 10:10	DONE		
232754002	SAMPLE	CXM2	1065	16-JUL-09 10:10	DONE		
232754003	SAMPLE	CXM2	1066	16-JUL-09 10:10	DONE		
1201874791	MB	CXM2	1067	16-JUL-09 10:10	DONE		
1201874792	DUP	CXM2	1068	16-JUL-09 10:10	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882704**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232746004	SAMPLE	CXM2	[illegible]	[illegible]	[illegible]		
232746005	SAMPLE	CXM2	[illegible]	[illegible] 15:19	[illegible]		

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 882713**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status		Geometry	Calibration Date
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
232758004	SAMPLE	MXR1	GAM05	14-JUL-09 11:04	DONE	CAN		15-MAR-09 00:00
232758005	SAMPLE	MXR1	GAM20	14-JUL-09 11:05	DONE	CAN		30-SEP-08 00:00
1201874832	MB	MXR1	GAM21	14-JUL-09 11:22	DONE	CAN		25-JUL-08 00:00
1201874833	DUP	MXR1	GAM05	14-JUL-09 11:23	DONE	CAN		11-JUN-09 00:00
1201874834	LCS	MXR1	GAM13	14-JUL-09 12:33	DONE	CAN		02-FEB-09 00:00

Instrument Run Log

Instrument Type: LSC **Batch ID: 883039**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232754001	SAMPLE	KXK2	LSCSILVER	16-JUL-09 12:00	DONE	Ecoscint Ultra 10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232754003	SAMPLE	KXK2	LSCSILVER	16-JUL-09 13:55	DONE	Ecoscint Ultra 10mL DW/13mL	06-AUG-08 00:00
232758002	SAMPLE	KXK2	LSCSILVER	16-JUL-09 14:52	DONE	Ecoscint Ultra 10mL DW/13mL	06-AUG-08 00:00
232758003	SAMPLE	KXK2	LSCSILVER	16-JUL-09 15:50	DONE	Ecoscint Ultra 10mL DW/13mL	06-AUG-08 00:00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Ecoscint Ultra	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1201875[illegible]	[illegible]	[illegible]	LSCSILVER	[illegible]	DONE	Ecoscint Ultra	[illegible]
1201875[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2536

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2536
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/16/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	EPA:353.2	1	CAMO-09-6636	W	6/30/2009	
	EPA:901.1	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	EPA:906.0	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2536

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-6615	R	6/30/2009	
	HASL-300:ISOPU	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	HASL-300:ISOU	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	SW-846:6010B	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
		1	CAMO-09-6636	W	6/30/2009	
	SW-846:6020	1	CAMO-09-6636	W	6/30/2009	
	SW-846:6850	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
		1	CAMO-09-6636	W	6/30/2009	
	SW-846:8260B	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	SW-846:8270C	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	SW-846:9012A	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
		1	CAMO-09-6636	W	6/30/2009	
	SW-846:9045C	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2536

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9045C	1	CAMO-09-6615	R	6/30/2009	

Final Page of REQUEST NUMBER 09-2536

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2536C

REQUEST NUMBER: 09-2536

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/16/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6615	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6615	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6615	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6615	1	POLY	H3	Ice	R
CAMO-09-6615	1	POLY	METALS-GEL	Ice	R
CAMO-09-6615	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6614	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6614	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6614	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6614	1	POLY	H3	Ice	R
CAMO-09-6614	1	POLY	METALS-GEL	Ice	R
CAMO-09-6614	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6613	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6613	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6613	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6613	1	POLY	H3	Ice	R
CAMO-09-6613	1	POLY	METALS-GEL	Ice	R
CAMO-09-6613	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6636	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-6636	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-6636	1	POLY	SW-846:6850	Ice	W
CAMO-09-6636	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:		Date	Time	Received By:		Date	Time
		7/1/09	3:00				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6636

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/30/2009	MEDIA:	NA	OK
TIME COLLECTED (HH:MM)		1547	SUB-MEDIA:	OTHER	
PRS ID:	50-004(a)-00	OK	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	50-03001	FIELD QC TYPE:	FR	
~~LOCATION TYPE:~~	~~GENERIC~~	OK	~~FIELD PREP:~~	~~UF~~	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
~2		8290	~~1 LITER AMBER GLASS~~	~~Ice~~ JB 3/31/09	N	N
1	15-Day	METALS-GEL	1 LITER POLY	Nitric Acid	Y	Full Data Package
1		NO3NO2	250 ML POLY	Sulfuric Acid (Hydrogen Sulfate)		
1		SW-846:6850	250 ML POLY	Ice		
1		TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of CAMO-09-~~6613~~ 6615
J.B 6/30/09

SAMPLE COMMENTS: None

LOCATION DESC: 50-004(a)-00-04

FIELD SCREENING/MEASUREMENT RESULTS: N/A

COLLECTED BY (PRINT) A. Gomez REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gomez	6.30.09	(Printed Name)	6/30/09
(Signature)	1615	(Signature)	1615
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6615

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/30/2009	MEDIA:	QBT4	Qbt3
TIME COLLECTED (HH:MM)		1530	SUB-MEDIA:	UA	ok
PRS ID:	50-004(a)-00	ok	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	50-03001	ok	FIELD QC TYPE:	NA	ok
~~LOCATION TYPE:~~	~~BH~~	~~[illegible]~~	~~FIELD PREP:~~	~~NA~~	
TOP DEPTH:	0	10.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	11.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / NO / NA

BOREHOLE: ~~YES~~/NO/~~NA~~ AG 6.30.09 5.84/20/09 BOREHOLE DECLINATION: ~~-90~~ AG 6.30.09 NA BOREHOLE DIRECTION: N/A

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	AG 6.30.09 ~~Expedited~~ 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISOU	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+N03+pH	500 ML POLY	Ice		
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	✓	✓

SAMPLE DESC: Purple/gray indurated tuff

FR: CAMO-09-6636

AG 6.30.09

SAMPLE COMMENTS: ~~No~~ Power auger used to depth, sampled by hand auger. Power and hand auger refusal @ 11.5' bgs

LOCATION DESC: 50-004(a)-00

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 34$ dpm

$\beta/\gamma \leq 1455$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) A. Goumas

REVIEWED BY (PRINT) J. Branch

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Goumas	6.30.09	(Printed Name) [illegible]	6/30/09
(Signature) [illegible]	1615	(Signature)	1615

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6614

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/30/2009	MEDIA:	QBT4	Qbt3
TIME COLLECTED (HH:MM)		1430	SUB-MEDIA:	UA	ok
PRS ID:	50-004(a)-00	ok	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	50-03001	↓	FIELD QC TYPE:	NA	ok
~~LOCATION TYPE:~~	~~BH~~	Generic	~~FIELD PREP:~~	~~NA~~	↓
TOP DEPTH:	0	7.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	8.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: N/A AG 6.30.09 COMPOSITE TIME INTERVAL: N/A AG 6.30.09 WATER FLOWING: YES / NO / NA

BOREHOLE: ~~YES~~ / NO / NA BOREHOLE DECLINATION: ~~=90~~ NA BOREHOLE DIRECTION: N/A

#	PRIORITY 6.30.09	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Regular~~ 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Purple Indurated tuff

SAMPLE COMMENTS: Power auger used to depth, sampled by hand auger. sample collected before depth for extent

LOCATION DESC: 50-004(a)-00-04

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq$ 11 dpm

$\beta/\gamma \leq$ 1714 dpm

PID Ambient Reading = 0.0 / 0.0 ppm

COLLECTED BY (PRINT) J. Branch

REVIEWED BY (PRINT) A Gonzales

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gonzales	6.30.09	(Printed Name)	6/30/09
(Signature)	1615	(Signature)	1615

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 737 **EVENT NAME:** 3rd Qtr FY09, AOC 03-004(c), Mortandad Cyn, TA-03: SWMU 50-004 (a)-00

SAMPLE ID: CAMO-09-6613

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		06/30/2009	MEDIA:	OBT4	Qbt3
TIME COLLECTED (HH:MM)		1355	SUB-MEDIA:	UA	ok
PRS ID:	50-004(a)-00	ok	SAMPLE TECH CODE:	CBS	HA
LOCATION ID:	50-03001	ok	FIELD QC TYPE:	NA	ok
~~LOCATION TYPE:~~	~~BH~~	Generic	~~FIELD PREP:~~	~~NA~~	
TOP DEPTH:	0	5.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	6.0	SCREEN/PORT DESC:	N/A	
FIELD MATRIX:	R	R	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: N/A COMPOSITE TIME INTERVAL: N/A WATER FLOWING: YES / (NO) / NA

BOREHOLE: AG 6.30.09 (YES) / (NO) / NA BOREHOLE DECLINATION: AG 6.30.09 ~~-90~~ NA BOREHOLE DIRECTION: N/A

#	PRIORITY AG 6.30.09	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	~~Regular~~ 15 Day	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	Full Data Package
1		8270C	250 ML AMBER GLASS	Ice		
2		8290	125 ML GLASS	Ice		
1		GS+ISOPU+ISO U	250 ML POLY	Ice		
1		H3	500 ML POLY	Ice		
1		METALS-GEL	125 ML POLY	Ice		
1		Perchlorate+CN+ N03+pH	500 ML POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Purple indurated tuff

SAMPLE COMMENTS: Interface @ 2.0' bgs, sample collected before depth to ensure extent is achieved

LOCATION DESC: 50-004(a)-00-04

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 28$ dpm

$\beta/\gamma \leq 1748$ dpm

PID $\frac{\text{Ambient}}{\text{Reading}} = \frac{0.0}{0.0}$ ppm

COLLECTED BY (PRINT) J. Branch **REVIEWED BY (PRINT)** A. Gournas

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) A. Gournas	6.30.09	(Printed Name)	6/30/09
(Signature)	1615	(Signature)	1615

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): CAMO-09-9962 → 9964
-10032
-6613 → 6615

These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): CAMO-09-10015
-10026
-6636

Reason: QC of Samples.

Print Last Name Branch Signature [signature] Date 6/30/09

DATA VALIDATION COVER SHEET

5114-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Section I.

REQUEST NUMBER: 09-2536 VALIDATION DATE: 07/30/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eyda Hergenreder ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ HIGH EXPLOSIVES
- ☐ DIOXIN FURANS
- ☐ LCMSMS PERCHLORATES
- ☐ TPH-DRO
- ☐ METALS
- ☐ PCB CONGENERS
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ GENERAL CHEMISTRY
- ☐ RADIOCHEMISTRY
- ☐ LCMSMS HIGH EXPLOSIVES
- ☒ OTHER (DESCRIBE): GC/MS VOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The ICV and/or CCV %Ds for dichlorodifluoromethane, acetone, 2-butanone, 2-hexanone, trichlorofluoromethane and n-butylbenzene were >20%. All associated sample results were NDs and, thus, were qualified UJ,V7c.
2. It should be noted that the raw data for the ICAL standards were not included in the data package. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/31/09

VALIDATOR'S SIGNATURE: Eyda Hergenreder (Eyda Hergenreder) DATE: 07/30/09

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, V9	J-, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	J-, V9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, V16	R, V16
☐	☒	☐	4. Samples were analyzed outside specific method tune time criteria.	N/A	J, V16b
☐	☒	☐	5. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, V16c	R, V16c
☐	☒	☐	6. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ or R, V7	J, V7
☐	☒	☐	7. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, V7a	J, V7a
☐	☒	☐	8. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or CCV.	R, V7b	J, V7b
☒	☐	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, V7c	J, V7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, V7d	J, V7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, V7f	R, V7f

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The sample result is ≤5X (10X for common organic laboratory contaminants) the concentration of the related analyte in the method blank.	U, V4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X (10X for common laboratory contaminants).	N/A	J, V4a
☐	☐	☒	14. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, V4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V4e	R, V4e
☐	☒	☐	16. The IS retention time has shifted by more than 30 seconds.	UJ, V0	J, V0
☐	☐	☒	17. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, V0a
☐	☒	☐	18. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V0b	R, V0b
☐	☒	☐	19. The quantitating IS are count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, V1a	J, V1a
☐	☒	☐	20. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow the method-specific windows.	UJ, V1b	J, V1b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2 Volatile Organic Compound (VOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is >200% of the area count for the previous organic continuing calibration. Follow the method-specific windows.	UJ, V1c	J, V1c
☐	☒	☐	22. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V1d	R, V1d
☐	☒	☐	23. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, V3	J-, V3
☐	☒	☐	24. The surrogate is < the Lower Acceptance Limit (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, V3a	J-, V3a
☐	☒	☐	25. The surrogate %R is > the Upper Acceptance Limit (UAL) Follow the external laboratory limits located within the associated data package.	N/A	J+, V3b
☐	☒	☐	26. At least one surrogate is > the UAL and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, V3c	J, V3c
☐	☒	☐	27. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V3d	R, V3d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, V12	J-, V12
☐	☒	☐	29. The LCS percent recovery was < the LAL but > 10%. Follow the external laboratory limits located within the associated data package.	UV, V12a	J-, V12a
☐	☒	☐	30. The LCS percent recover was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, V12b

VOLATILE ORGANIC COMPOUND (VOC) ANALYTICAL DATA VALIDATION CHECKLIST

5114-2

Volatile Organic Compound (VOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V12c	R, V12c
☐	☐	☒	32. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, V8
☐	☐	☒	33. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, V8a	R, V8a
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, V88	J, V88
☐	☒	☐	35. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, V15	R, V15
☒	☐	☐	36. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	37. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, V19	J, R, V19

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6613	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 14:40	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:07	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u111.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.377	1.11	UJ,V7c
74-87-3	Chloromethane	U	1.11	ug/kg	0.332	1.11	
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.332	1.11	
74-83-9	Bromomethane	U	1.11	ug/kg	0.332	1.11	
75-00-3	Chloroethane	U	1.11	ug/kg	0.332	1.11	
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.632	1.11	UJ,V7c
67-64-1	Acetone	U	5.54	ug/kg	1.84	5.54	UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.332	1.11	
74-88-4	Iodomethane	U	5.54	ug/kg	1.77	5.54	
75-09-2	Methylene chloride	U	5.54	ug/kg	2.22	5.54	
75-15-0	Carbon disulfide	U	5.54	ug/kg	1.38	5.54	
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.332	1.11	
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.332	1.11	
78-93-3	2-Butanone	U	5.54	ug/kg	1.66	5.54	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.332	1.11	
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.332	1.11	
67-66-3	Chloroform	U	1.11	ug/kg	0.332	1.11	
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.366	1.11	
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.332	1.11	
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.332	1.11	
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.332	1.11	
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.332	1.11	
71-43-2	Benzene	U	1.11	ug/kg	0.332	1.11	
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.366	1.11	
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.332	1.11	
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.332	1.11	
74-95-3	Dibromomethane	U	1.11	ug/kg	0.332	1.11	
108-10-1	4-Methyl-2-pentanone	U	5.54	ug/kg	1.38	5.54	
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.332	1.11	
108-88-3	Toluene	U	1.11	ug/kg	0.332	1.11	
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.332	1.11	
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.332	1.11	
591-78-6	2-Hexanone	U	5.54	ug/kg	1.66	5.54	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.332	1.11	
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.332	1.11	
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.332	1.11	
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.332	1.11	
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.332	1.11	

EH
07/30/09

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	Date Collected:	06/30/2009 12:00	Matrix:	R
Lab Sample ID:	232754003	Date Received:	07/02/2009 08:40	%Moisture:	9.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6613	Method:	SW846 8260B	SOP Ref:	GL-OA-E-038
Batch ID:	884831	Inst:	VOA1.I	Dilution:	1
Run Date:	07/13/2009 14:40	Analyst:	RXM4	Purge Vol:	5 mL
Prep Date:	07/13/2009 12:07	Aliquot:	5 g	Final Volume:	5 mL
Data File:	1u111.d	Column:	RTX-Volatiles	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.332	1.11	
179601-23-1	m,p-Xylenes	U	2.22	ug/kg	0.332	2.22	
95-47-6	o-Xylene	U	1.11	ug/kg	0.332	1.11	
100-42-5	Styrene	U	1.11	ug/kg	0.332	1.11	
75-25-2	Bromoform	U	1.11	ug/kg	0.332	1.11	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.332	1.11	
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.332	1.11	
108-86-1	Bromobenzene	U	1.11	ug/kg	0.332	1.11	
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.332	1.11	
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.332	1.11	
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.332	1.11	
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.332	1.11	
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.332	1.11	
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.332	1.11	
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.332	1.11	
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.332	1.11	
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.332	1.11	
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.332	1.11	
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.332	1.11	
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.332	1.11	UJ,V7c
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.332	1.11	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.54	ug/kg	1.77	5.54	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.332	1.11	
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.332	1.11	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	16.58	8.56	ug/kg	99	NJ
	Unknown Siloxane	18.09	11.4	ug/kg		J

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6614	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 14:10	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:06	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u110.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.377	1.11	UJ,V7c
74-87-3	Chloromethane	U	1.11	ug/kg	0.333	1.11	
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.333	1.11	
74-83-9	Bromomethane	U	1.11	ug/kg	0.333	1.11	
75-00-3	Chloroethane	U	1.11	ug/kg	0.333	1.11	
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.632	1.11	UJ,V7c
67-64-1	Acetone	U	5.54	ug/kg	1.84	5.54	UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.333	1.11	
74-88-4	Iodomethane	U	5.54	ug/kg	1.77	5.54	
75-09-2	Methylene chloride	U	5.54	ug/kg	2.22	5.54	
75-15-0	Carbon disulfide	U	5.54	ug/kg	1.39	5.54	
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11	
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.333	1.11	
78-93-3	2-Butanone	U	5.54	ug/kg	1.66	5.54	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11	
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11	
67-66-3	Chloroform	U	1.11	ug/kg	0.333	1.11	
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.366	1.11	
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.333	1.11	
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.333	1.11	
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.333	1.11	
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.333	1.11	
71-43-2	Benzene	U	1.11	ug/kg	0.333	1.11	
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.366	1.11	
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11	
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.333	1.11	
74-95-3	Dibromomethane	U	1.11	ug/kg	0.333	1.11	
108-10-1	4-Methyl-2-pentanone	U	5.54	ug/kg	1.39	5.54	
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11	
108-88-3	Toluene	U	1.11	ug/kg	0.333	1.11	
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11	
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.333	1.11	
591-78-6	2-Hexanone	U	5.54	ug/kg	1.66	5.54	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.333	1.11	
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.333	1.11	
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.333	1.11	
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.333	1.11	
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.333	1.11	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6614	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 14:10	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:06	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u110.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.333	1.11	
179601-23-1	m,p-Xylenes	U	2.22	ug/kg	0.333	2.22	
95-47-6	o-Xylene	U	1.11	ug/kg	0.333	1.11	
100-42-5	Styrene	U	1.11	ug/kg	0.333	1.11	
75-25-2	Bromoform	U	1.11	ug/kg	0.333	1.11	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11	
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.333	1.11	
108-86-1	Bromobenzene	U	1.11	ug/kg	0.333	1.11	
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.333	1.11	
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.333	1.11	
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.333	1.11	
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11	
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.333	1.11	
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.333	1.11	
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11	
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.333	1.11	
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.333	1.11	
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11	
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11	
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.333	1.11	UJ,V7c
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.333	1.11	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.54	ug/kg	1.77	5.54	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11	
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754001	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6615	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 13:40	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u109.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
75-71-8	Dichlorodifluoromethane	U	1.08	ug/kg	0.367	1.08	UJ,V7c
74-87-3	Chloromethane	U	1.08	ug/kg	0.323	1.08	
75-01-4	Vinyl chloride	U	1.08	ug/kg	0.323	1.08	
74-83-9	Bromomethane	U	1.08	ug/kg	0.323	1.08	
75-00-3	Chloroethane	U	1.08	ug/kg	0.323	1.08	
75-69-4	Trichlorofluoromethane	U	1.08	ug/kg	0.614	1.08	UJ,V7c
67-64-1	Acetone	U	5.39	ug/kg	1.79	5.39	UJ,V7c
75-35-4	1,1-Dichloroethylene	U	1.08	ug/kg	0.323	1.08	
74-88-4	Iodomethane	U	5.39	ug/kg	1.72	5.39	
75-09-2	Methylene chloride	U	5.39	ug/kg	2.16	5.39	
75-15-0	Carbon disulfide	U	5.39	ug/kg	1.35	5.39	
156-60-5	trans-1,2-Dichloroethylene	U	1.08	ug/kg	0.323	1.08	
75-34-3	1,1-Dichloroethane	U	1.08	ug/kg	0.323	1.08	
78-93-3	2-Butanone	U	5.39	ug/kg	1.62	5.39	UJ,V7c
156-59-2	cis-1,2-Dichloroethylene	U	1.08	ug/kg	0.323	1.08	
594-20-7	2,2-Dichloropropane	U	1.08	ug/kg	0.323	1.08	
67-66-3	Chloroform	U	1.08	ug/kg	0.323	1.08	
74-97-5	Bromochloromethane	U	1.08	ug/kg	0.356	1.08	
71-55-6	1,1,1-Trichloroethane	U	1.08	ug/kg	0.323	1.08	
563-58-6	1,1-Dichloropropene	U	1.08	ug/kg	0.323	1.08	
56-23-5	Carbon tetrachloride	U	1.08	ug/kg	0.323	1.08	
107-06-2	1,2-Dichloroethane	U	1.08	ug/kg	0.323	1.08	
71-43-2	Benzene	U	1.08	ug/kg	0.323	1.08	
79-01-6	Trichloroethylene	U	1.08	ug/kg	0.356	1.08	
78-87-5	1,2-Dichloropropane	U	1.08	ug/kg	0.323	1.08	
75-27-4	Bromodichloromethane	U	1.08	ug/kg	0.323	1.08	
74-95-3	Dibromomethane	U	1.08	ug/kg	0.323	1.08	
108-10-1	4-Methyl-2-pentanone	U	5.39	ug/kg	1.35	5.39	
10061-01-5	cis-1,3-Dichloropropylene	U	1.08	ug/kg	0.323	1.08	
108-88-3	Toluene	U	1.08	ug/kg	0.323	1.08	
10061-02-6	trans-1,3-Dichloropropylene	U	1.08	ug/kg	0.323	1.08	
79-00-5	1,1,2-Trichloroethane	U	1.08	ug/kg	0.323	1.08	
591-78-6	2-Hexanone	U	5.39	ug/kg	1.62	5.39	UJ,V7c
142-28-9	1,3-Dichloropropane	U	1.08	ug/kg	0.323	1.08	
127-18-4	Tetrachloroethylene	U	1.08	ug/kg	0.323	1.08	
124-48-1	Dibromochloromethane	U	1.08	ug/kg	0.323	1.08	
106-93-4	1,2-Dibromoethane	U	1.08	ug/kg	0.323	1.08	
108-90-7	Chlorobenzene	U	1.08	ug/kg	0.323	1.08	

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754001	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6615	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 13:40	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u109.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
100-41-4	Ethylbenzene	U	1.08	ug/kg	0.323	1.08	
179601-23-1	m,p-Xylenes	U	2.16	ug/kg	0.323	2.16	
95-47-6	o-Xylene	U	1.08	ug/kg	0.323	1.08	
100-42-5	Styrene	U	1.08	ug/kg	0.323	1.08	
75-25-2	Bromoform	U	1.08	ug/kg	0.323	1.08	
79-34-5	1,1,2,2-Tetrachloroethane	U	1.08	ug/kg	0.323	1.08	
96-18-4	1,2,3-Trichloropropane	U	1.08	ug/kg	0.323	1.08	
108-86-1	Bromobenzene	U	1.08	ug/kg	0.323	1.08	
103-65-1	n-Propylbenzene	U	1.08	ug/kg	0.323	1.08	
95-49-8	2-Chlorotoluene	U	1.08	ug/kg	0.323	1.08	
98-82-8	Isopropylbenzene	U	1.08	ug/kg	0.323	1.08	
108-67-8	1,3,5-Trimethylbenzene	U	1.08	ug/kg	0.323	1.08	
106-43-4	4-Chlorotoluene	U	1.08	ug/kg	0.323	1.08	
98-06-6	tert-Butylbenzene	U	1.08	ug/kg	0.323	1.08	
95-63-6	1,2,4-Trimethylbenzene	U	1.08	ug/kg	0.323	1.08	
135-98-8	sec-Butylbenzene	U	1.08	ug/kg	0.323	1.08	
99-87-6	4-Isopropyltoluene	U	1.08	ug/kg	0.323	1.08	
541-73-1	1,3-Dichlorobenzene	U	1.08	ug/kg	0.323	1.08	
106-46-7	1,4-Dichlorobenzene	U	1.08	ug/kg	0.323	1.08	
104-51-8	n-Butylbenzene	U	1.08	ug/kg	0.323	1.08	UJ,V7c
96-12-8	1,2-Dibromo-3-chloropropane	U	1.08	ug/kg	0.323	1.08	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.39	ug/kg	1.72	5.39	
630-20-6	1,1,1,2-Tetrachloroethane	U	1.08	ug/kg	0.323	1.08	
95-50-1	1,2-Dichlorobenzene	U	1.08	ug/kg	0.323	1.08	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	100	ug/kg		J
	Unknown	20	53.7	ug/kg		J

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DATA VALIDATION COVER SHEET

5115-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Section I.

REQUEST NUMBER: 09-2536 VALIDATION DATE: 07/30/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eyda Hergenreder ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☒ OTHER (DESCRIBE): GC/MS SVOCs

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☒	☐	☐	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☒	☐	☐	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The ICV or CCV %Ds for benzoic acid, 2-methyl-4,6-dinitrophenol, butylbenzylphthalate, hexachlorocyclopentadiene, 3-nitroaniline and 4-nitroaniline were >20%. All associated sample results were NDs and, thus, were qualified UJ,SV7c.
2. It should be noted that the MS/MSD analyses were performed on a parent sample from another LANL RN. Since MS/MSD analyses are not required for this method, no sample data were qualified.
3. It should be noted that the raw data for the ICAL standards were not included in the data package. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/31/09

VALIDATOR'S SIGNATURE: Eyda Hergenreder (Eyda Hergenreder)	DATE: 07/30/09
Form 5115-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, SV9	J-, SV9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, SV9a	J-, SV9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, SV9b	R, SV9b
☐	☒	☐	4. The instrument performance sample did not pass method acceptance criteria.	R, SV16	R, SV16
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, SV16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, SV16c	R, SV16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, SV7	J, SV7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, SV7a	J, SV7a
☐	☒	☐	9. The affected analytes were analyzed with an RRF of <0.05 in the initial calibration and/or Continuing Calibration Verification (CCV).	R, SV7b	J, SV7b
☒	☐	☐	10. The Initial Calibration Verification (ICV) and/or CCV were recovered outside the method-specific limits.	UJ, SV7c	J, SV7c
☐	☒	☐	11. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, SV7d	J, SV7d

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, SV7f	R, SV7f
☐	☒	☐	13. The sample result is ≤5X (10X for common organic laboratory contaminates) the concentration of the related analyte in the method blank.	U, SV4	J, V4a
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X (10X for common laboratory contaminates).	N/A	J, SV4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, SV4d	N/A
☐	☒	☐	16. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV4e	R, SV4e
☐	☒	☐	17. The IS retention time has shifted by more than 30 seconds.	UJ, SV0	J, SV0
☐	☐	☒	18. Analyte is positively confirmed but outside the IS retention time window; however, spectral matches must be provided.	N/A	J, SV0a
☐	☒	☐	19. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV0b	R, SV0b
☐	☒	☐	20. The quantitating IS area count is <10% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow method-specific windows.	R, SV1a	J, SV1a

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The IS area count for the quantitating IS is <50% but >10% for organics window relation to the previous continuing calibration. Follow method-specific windows.	UJ, SV1b	J, SV1b
☐	☒	☐	22. The IS area count for the quantitating IS is >200% of the area count for the previous continuing calibration. Follow method-specific windows.	UJ, SV1c	J, SV1c
☐	☒	☐	23. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV1d	R, SV1d
☐	☒	☐	24. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, SV3	J-, SV3
☐	☒	☐	25. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, SV3a	J-, SV3a
☐	☒	☐	26. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV3b
☐	☒	☐	27. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, SV3c	J, SV3c
☐	☒	☐	28. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV3d	R, SV3d
☐	☒	☐	29. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, SV12	J-, SV12

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2

Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	30. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, SV12a	J-, SV12a
☐	☒	☐	31. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, SV12b
☐	☒	☐	32. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV12c	R, SV12c
☐	☐	☒	33. The affected analyte is considered not detected because mass spectrum did not meet specifications.	N/A	U, SV8
☐	☐	☒	34. The mass spectrum column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, SV8a	R, SV8a
☐	☒	☐	35. Duplicate, dilution, or reanalysis.	UJ, SV88	J, SV88
☐	☒	☐	36. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, SV15	R, SV15
☒	☐	☐	37. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYTICAL DATA VALIDATION CHECKLIST

5115-2 Semivolatile Organic Compound (SVOC) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, SV19	J, R, SV19

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	Date Collected:	06/30/2009 12:00	Matrix:	R
Lab Sample ID:	232754003	Date Received:	07/02/2009 08:40	%Moisture:	9.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6613	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882732	Inst:	MSD2.I	Dilution:	1
Run Date:	07/07/2009 17:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	07/07/2009 09:20	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s2g0709.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	369	ug/kg	73.8	369	
108-95-2	Phenol	U	369	ug/kg	73.8	369	
95-57-8	2-Chlorophenol	U	369	ug/kg	73.8	369	
106-46-7	1,4-Dichlorobenzene	U	369	ug/kg	73.8	369	
621-64-7	N-Nitrosodipropylamine	U	369	ug/kg	73.8	369	
59-50-7	4-Chloro-3-methylphenol	U	369	ug/kg	73.8	369	
83-32-9	Acenaphthene	U	36.9	ug/kg	12.2	36.9	
121-14-2	2,4-Dinitrotoluene	U	369	ug/kg	36.9	369	
100-02-7	4-Nitrophenol	U	369	ug/kg	122	369	
87-86-5	Pentachlorophenol	U	369	ug/kg	92.2	369	
129-00-0	Pyrene	U	36.9	ug/kg	11.1	36.9	
110-86-1	Pyridine	U	369	ug/kg	73.8	369	
62-53-3	Aniline	U	369	ug/kg	111	369	
111-44-4	bis(2-Chloroethyl) ether	U	369	ug/kg	73.8	369	
541-73-1	1,3-Dichlorobenzene	U	369	ug/kg	73.8	369	
100-51-6	Benzyl alcohol	U	369	ug/kg	111	369	
95-50-1	1,2-Dichlorobenzene	U	369	ug/kg	73.8	369	
108-60-1	bis(2-Chloroisopropyl)ether	U	369	ug/kg	73.8	369	
95-48-7	o-Cresol	U	369	ug/kg	73.8	369	
65794-96-9	m,p-Cresols	U	369	ug/kg	111	369	
67-72-1	Hexachloroethane	U	369	ug/kg	73.8	369	
98-95-3	Nitrobenzene	U	369	ug/kg	73.8	369	
78-59-1	Isophorone	U	369	ug/kg	73.8	369	
88-75-5	2-Nitrophenol	U	369	ug/kg	73.8	369	
105-67-9	2,4-Dimethylphenol	U	369	ug/kg	129	369	
111-91-1	bis(2-Chloroethoxy)methane	U	369	ug/kg	73.8	369	
120-83-2	2,4-Dichlorophenol	U	369	ug/kg	73.8	369	
65-85-0	Benzoic acid	U	738	ug/kg	184	738	UJ,SV7c
91-20-3	Naphthalene	U	36.9	ug/kg	11.1	36.9	
106-47-8	4-Chloroaniline	U	369	ug/kg	73.8	369	
87-68-3	Hexachlorobutadiene	U	369	ug/kg	73.8	369	
91-57-6	2-Methylnaphthalene	U	36.9	ug/kg	7.38	36.9	
77-47-4	Hexachlorocyclopentadiene	U	369	ug/kg	73.8	369	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	369	ug/kg	73.8	369	
95-95-4	2,4,5-Trichlorophenol	U	369	ug/kg	73.8	369	
91-58-7	2-Chloronaphthalene	U	36.9	ug/kg	12.2	36.9	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	369	ug/kg	73.8	369	
99-09-2	3-Nitroaniline	U	369	ug/kg	73.8	369	UJ,SV7c

EH
07/30/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6613	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 17:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s2g0709.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	369	ug/kg	73.8	369	
606-20-2	2,6-Dinitrotoluene	U	369	ug/kg	36.9	369	
208-96-8	Acenaphthylene	U	36.9	ug/kg	11.1	36.9	
51-28-5	2,4-Dinitrophenol	U	738	ug/kg	140	738	
132-64-9	Dibenzofuran	U	369	ug/kg	73.8	369	
84-66-2	Diethylphthalate	U	369	ug/kg	73.8	369	
86-73-7	Fluorene	U	36.9	ug/kg	11.1	36.9	
7005-72-3	4-Chlorophenylphenylether	U	369	ug/kg	73.8	369	
534-52-1	2-Methyl-4,6-dinitrophenol	U	369	ug/kg	73.8	369	UJ,SV7c
100-01-6	4-Nitroaniline	U	369	ug/kg	111	369	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	369	ug/kg	73.8	369	
122-66-7	Azobenzene	U	369	ug/kg	73.8	369	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	369	ug/kg	73.8	369	
118-74-1	Hexachlorobenzene	U	369	ug/kg	73.8	369	
85-01-8	Phenanthrene	U	36.9	ug/kg	11.1	36.9	
120-12-7	Anthracene	U	36.9	ug/kg	7.38	36.9	
84-74-2	Di-n-butylphthalate	U	369	ug/kg	73.8	369	
206-44-0	Fluoranthene	U	36.9	ug/kg	11.1	36.9	
85-68-7	Butylbenzylphthalate	U	369	ug/kg	73.8	369	UJ,SV7c
56-55-3	Benzo(a)anthracene	U	36.9	ug/kg	11.1	36.9	
91-94-1	3,3'-Dichlorobenzidine	U	369	ug/kg	111	369	
218-01-9	Chrysene	U	36.9	ug/kg	11.1	36.9	
117-81-7	bis(2-Ethylhexyl)phthalate	U	369	ug/kg	73.8	369	
117-84-0	Di-n-octylphthalate	U	369	ug/kg	73.8	369	
205-99-2	Benzo(b)fluoranthene	U	36.9	ug/kg	11.1	36.9	
207-08-9	Benzo(k)fluoranthene	U	36.9	ug/kg	11.1	36.9	
50-32-8	Benzo(a)pyrene	U	36.9	ug/kg	11.1	36.9	
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.9	ug/kg	11.1	36.9	
53-70-3	Dibenzo(a,h)anthracene	U	36.9	ug/kg	11.1	36.9	
191-24-2	Benzo(ghi)perylene	U	36.9	ug/kg	11.1	36.9	
120-82-1	1,2,4-Trichlorobenzene	U	369	ug/kg	73.8	369	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.14	243	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.98	172	ug/kg	99	NJ

EH
07/30/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	Date Collected:	06/30/2009 12:00	Matrix:	R
Lab Sample ID:	232754002	Date Received:	07/02/2009 08:40	%Moisture:	9.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6614	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882732	Inst:	MSD2.I	Dilution:	1
Run Date:	07/07/2009 16:51	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	07/07/2009 09:20	Aliquot:	30.09 g	Final Volume:	1 mL
Data File:	s2g0708.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	368	ug/kg	73.7	368	
108-95-2	Phenol	U	368	ug/kg	73.7	368	
95-57-8	2-Chlorophenol	U	368	ug/kg	73.7	368	
106-46-7	1,4-Dichlorobenzene	U	368	ug/kg	73.7	368	
621-64-7	N-Nitrosodipropylamine	U	368	ug/kg	73.7	368	
59-50-7	4-Chloro-3-methylphenol	U	368	ug/kg	73.7	368	
83-32-9	Acenaphthene	U	36.8	ug/kg	12.2	36.8	
121-14-2	2,4-Dinitrotoluene	U	368	ug/kg	36.8	368	
100-02-7	4-Nitrophenol	U	368	ug/kg	122	368	
87-86-5	Pentachlorophenol	U	368	ug/kg	92.1	368	
129-00-0	Pyrene	U	36.8	ug/kg	11.1	36.8	
110-86-1	Pyridine	U	368	ug/kg	73.7	368	
62-53-3	Aniline	U	368	ug/kg	111	368	
111-44-4	bis(2-Chloroethyl) ether	U	368	ug/kg	73.7	368	
541-73-1	1,3-Dichlorobenzene	U	368	ug/kg	73.7	368	
100-51-6	Benzyl alcohol	U	368	ug/kg	111	368	
95-50-1	1,2-Dichlorobenzene	U	368	ug/kg	73.7	368	
108-60-1	bis(2-Chloroisopropyl)ether	U	368	ug/kg	73.7	368	
95-48-7	o-Cresol	U	368	ug/kg	73.7	368	
65794-96-9	m,p-Cresols	U	368	ug/kg	111	368	
67-72-1	Hexachloroethane	U	368	ug/kg	73.7	368	
98-95-3	Nitrobenzene	U	368	ug/kg	73.7	368	
78-59-1	Isophorone	U	368	ug/kg	73.7	368	
88-75-5	2-Nitrophenol	U	368	ug/kg	73.7	368	
105-67-9	2,4-Dimethylphenol	U	368	ug/kg	129	368	
111-91-1	bis(2-Chloroethoxy)methane	U	368	ug/kg	73.7	368	
120-83-2	2,4-Dichlorophenol	U	368	ug/kg	73.7	368	
65-85-0	Benzoic acid	U	737	ug/kg	184	737	UJ,SV7c
91-20-3	Naphthalene	U	36.8	ug/kg	11.1	36.8	
106-47-8	4-Chloroaniline	U	368	ug/kg	73.7	368	
87-68-3	Hexachlorobutadiene	U	368	ug/kg	73.7	368	
91-57-6	2-Methylnaphthalene	U	36.8	ug/kg	7.37	36.8	
77-47-4	Hexachlorocyclopentadiene	U	368	ug/kg	73.7	368	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	368	ug/kg	73.7	368	
95-95-4	2,4,5-Trichlorophenol	U	368	ug/kg	73.7	368	
91-58-7	2-Chloronaphthalene	U	36.8	ug/kg	12.2	36.8	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	368	ug/kg	73.7	368	
99-09-2	3-Nitroaniline	U	368	ug/kg	73.7	368	UJ,SV7c

EH
07/30/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	Date Collected:	06/30/2009 12:00	Matrix:	R
Lab Sample ID:	232754002	Date Received:	07/02/2009 08:40	%Moisture:	9.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6614	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882732	Inst:	MSD2.I	Dilution:	1
Run Date:	07/07/2009 16:51	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	07/07/2009 09:20	Aliquot:	30.09 g	Final Volume:	1 mL
Data File:	s2g0708.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	368	ug/kg	73.7	368	
606-20-2	2,6-Dinitrotoluene	U	368	ug/kg	36.8	368	
208-96-8	Acenaphthylene	U	36.8	ug/kg	11.1	36.8	
51-28-5	2,4-Dinitrophenol	U	737	ug/kg	140	737	
132-64-9	Dibenzofuran	U	368	ug/kg	73.7	368	
84-66-2	Diethylphthalate	U	368	ug/kg	73.7	368	
86-73-7	Fluorene	U	36.8	ug/kg	11.1	36.8	
7005-72-3	4-Chlorophenylphenylether	U	368	ug/kg	73.7	368	
534-52-1	2-Methyl-4,6-dinitrophenol	U	368	ug/kg	73.7	368	UJ,SV7c
100-01-6	4-Nitroaniline	U	368	ug/kg	111	368	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	368	ug/kg	73.7	368	
122-66-7	Azobenzene	U	368	ug/kg	73.7	368	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	368	ug/kg	73.7	368	
118-74-1	Hexachlorobenzene	U	368	ug/kg	73.7	368	
85-01-8	Phenanthrene	U	36.8	ug/kg	11.1	36.8	
120-12-7	Anthracene	U	36.8	ug/kg	7.37	36.8	
84-74-2	Di-n-butylphthalate	U	368	ug/kg	73.7	368	
206-44-0	Fluoranthene	U	36.8	ug/kg	11.1	36.8	
85-68-7	Butylbenzylphthalate	U	368	ug/kg	73.7	368	UJ,SV7c
56-55-3	Benzo(a)anthracene	U	36.8	ug/kg	11.1	36.8	
91-94-1	3,3'-Dichlorobenzidine	U	368	ug/kg	111	368	
218-01-9	Chrysene	U	36.8	ug/kg	11.1	36.8	
117-81-7	bis(2-Ethylhexyl)phthalate	U	368	ug/kg	73.7	368	
117-84-0	Di-n-octylphthalate	U	368	ug/kg	73.7	368	
205-99-2	Benzo(b)fluoranthene	U	36.8	ug/kg	11.1	36.8	
207-08-9	Benzo(k)fluoranthene	U	36.8	ug/kg	11.1	36.8	
50-32-8	Benzo(a)pyrene	U	36.8	ug/kg	11.1	36.8	
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.8	ug/kg	11.1	36.8	
53-70-3	Dibenzo(a,h)anthracene	U	36.8	ug/kg	11.1	36.8	
191-24-2	Benzo(ghi)perylene	U	36.8	ug/kg	11.1	36.8	
120-82-1	1,2,4-Trichlorobenzene	U	368	ug/kg	73.7	368	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.14	416	ug/kg		JA
511-15-9	2-Phenanthrenol, 4b,5,6,7,8,8a,9,10-octa	8.45	168	ug/kg	91	NJ

EH
07/30/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6614	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 16:51	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.09 g	**Final Volume:**	1 mL
Data File:	s2g0708.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.69	379	ug/kg		J

EH
07/30/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754001	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6615	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 16:31	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2g0707.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
62-75-9	N-Methyl-N-nitrosomethylamine	U	359	ug/kg	71.8	359	
108-95-2	Phenol	U	359	ug/kg	71.8	359	
95-57-8	2-Chlorophenol	U	359	ug/kg	71.8	359	
106-46-7	1,4-Dichlorobenzene	U	359	ug/kg	71.8	359	
621-64-7	N-Nitrosodipropylamine	U	359	ug/kg	71.8	359	
59-50-7	4-Chloro-3-methylphenol	U	359	ug/kg	71.8	359	
83-32-9	Acenaphthene	U	35.9	ug/kg	11.8	35.9	
121-14-2	2,4-Dinitrotoluene	U	359	ug/kg	35.9	359	
100-02-7	4-Nitrophenol	U	359	ug/kg	118	359	
87-86-5	Pentachlorophenol	U	359	ug/kg	89.8	359	
129-00-0	Pyrene	U	35.9	ug/kg	10.8	35.9	
110-86-1	Pyridine	U	359	ug/kg	71.8	359	
62-53-3	Aniline	U	359	ug/kg	108	359	
111-44-4	bis(2-Chloroethyl) ether	U	359	ug/kg	71.8	359	
541-73-1	1,3-Dichlorobenzene	U	359	ug/kg	71.8	359	
100-51-6	Benzyl alcohol	U	359	ug/kg	108	359	
95-50-1	1,2-Dichlorobenzene	U	359	ug/kg	71.8	359	
108-60-1	bis(2-Chloroisopropyl)ether	U	359	ug/kg	71.8	359	
95-48-7	o-Cresol	U	359	ug/kg	71.8	359	
65794-96-9	m,p-Cresols	U	359	ug/kg	108	359	
67-72-1	Hexachloroethane	U	359	ug/kg	71.8	359	
98-95-3	Nitrobenzene	U	359	ug/kg	71.8	359	
78-59-1	Isophorone	U	359	ug/kg	71.8	359	
88-75-5	2-Nitrophenol	U	359	ug/kg	71.8	359	
105-67-9	2,4-Dimethylphenol	U	359	ug/kg	126	359	
111-91-1	bis(2-Chloroethoxy)methane	U	359	ug/kg	71.8	359	
120-83-2	2,4-Dichlorophenol	U	359	ug/kg	71.8	359	
65-85-0	Benzoic acid	U	718	ug/kg	180	718	UJ,SV7c
91-20-3	Naphthalene	U	35.9	ug/kg	10.8	35.9	
106-47-8	4-Chloroaniline	U	359	ug/kg	71.8	359	
87-68-3	Hexachlorobutadiene	U	359	ug/kg	71.8	359	
91-57-6	2-Methylnaphthalene	U	35.9	ug/kg	7.18	35.9	
77-47-4	Hexachlorocyclopentadiene	U	359	ug/kg	71.8	359	UJ,SV7c
88-06-2	2,4,6-Trichlorophenol	U	359	ug/kg	71.8	359	
95-95-4	2,4,5-Trichlorophenol	U	359	ug/kg	71.8	359	
91-58-7	2-Chloronaphthalene	U	35.9	ug/kg	11.8	35.9	
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	359	ug/kg	71.8	359	
99-09-2	3-Nitroaniline	U	359	ug/kg	71.8	359	UJ,SV7c

EH
07/30/09

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	Date Collected:	06/30/2009 12:00	Matrix:	R
Lab Sample ID:	232754001	Date Received:	07/02/2009 08:40	%Moisture:	7.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6615	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882732	Inst:	MSD2.I	Dilution:	1
Run Date:	07/07/2009 16:31	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	07/07/2009 09:20	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s2g0707.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	
	m-Nitroaniline						
131-11-3	Dimethylphthalate	U	359	ug/kg	71.8	359	
606-20-2	2,6-Dinitrotoluene	U	359	ug/kg	35.9	359	
208-96-8	Acenaphthylene	U	35.9	ug/kg	10.8	35.9	
51-28-5	2,4-Dinitrophenol	U	718	ug/kg	136	718	
132-64-9	Dibenzofuran	U	359	ug/kg	71.8	359	
84-66-2	Diethylphthalate	U	359	ug/kg	71.8	359	
86-73-7	Fluorene	U	35.9	ug/kg	10.8	35.9	
7005-72-3	4-Chlorophenylphenylether	U	359	ug/kg	71.8	359	
534-52-1	2-Methyl-4,6-dinitrophenol	U	359	ug/kg	71.8	359	UJ,SV7c
100-01-6	4-Nitroaniline	U	359	ug/kg	108	359	UJ,SV7c
	p-Nitroaniline						
122-39-4	Diphenylamine	U	359	ug/kg	71.8	359	
122-66-7	Azobenzene	U	359	ug/kg	71.8	359	
	1,2-Diphenylhydrazine						
101-55-3	4-Bromophenylphenylether	U	359	ug/kg	71.8	359	
118-74-1	Hexachlorobenzene	U	359	ug/kg	71.8	359	
85-01-8	Phenanthrene	U	35.9	ug/kg	10.8	35.9	
120-12-7	Anthracene	U	35.9	ug/kg	7.18	35.9	
84-74-2	Di-n-butylphthalate	U	359	ug/kg	71.8	359	
206-44-0	Fluoranthene	U	35.9	ug/kg	10.8	35.9	
85-68-7	Butylbenzylphthalate	U	359	ug/kg	71.8	359	UJ,SV7c
56-55-3	Benzo(a)anthracene	U	35.9	ug/kg	10.8	35.9	
91-94-1	3,3'-Dichlorobenzidine	U	359	ug/kg	108	359	
218-01-9	Chrysene	U	35.9	ug/kg	10.8	35.9	
117-81-7	bis(2-Ethylhexyl)phthalate	U	359	ug/kg	71.8	359	
117-84-0	Di-n-octylphthalate	U	359	ug/kg	71.8	359	
205-99-2	Benzo(b)fluoranthene	U	35.9	ug/kg	10.8	35.9	
207-08-9	Benzo(k)fluoranthene	U	35.9	ug/kg	10.8	35.9	
50-32-8	Benzo(a)pyrene	U	35.9	ug/kg	10.8	35.9	
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.9	ug/kg	10.8	35.9	
53-70-3	Dibenzo(a,h)anthracene	U	35.9	ug/kg	10.8	35.9	
191-24-2	Benzo(ghi)perylene	U	35.9	ug/kg	10.8	35.9	
120-82-1	1,2,4-Trichlorobenzene	U	359	ug/kg	71.8	359	

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.14	420	ug/kg		JA

EH
07/30/09

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Section I.

REQUEST NUMBER: 09-2536 VALIDATION DATE: 07/30/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eyda Hergenreder ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☒ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☒	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. It should be noted that he raw data for the ICAL standards were not included in the data package. No sample data were qualified as a result.
2. The soil and water MS/MSD %R calculations were performed incorrectly. The parent sample results were < the MDLs and, thus, results of 0 µg/kg and 0 µg/L, respectively, should have been used to calculate the %Rs. The laboratory subtracted the parent sample concentrations. The %Rs were within the acceptance limits when calculated correctly. No sample data were qualified. It should be noted that the MS/MSD analyses for both soil and water samples were performed on parent samples from other LANL RNs. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/31/09

VALIDATOR'S SIGNATURE: Eyda Hergenreder / Eyda Hergenreder	DATE: 07/30/09
Form 5121-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2

LC/MS/MS Perchlorate Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☒	☐	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☒	☐	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☒	☐	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☒	☐	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☒	☐	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☒	☐	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☒	☐	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST

5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☒	☐	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☒	☐	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☒	☐	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☒	☐	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☒	☐	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6615

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536

GEL Sample ID: 232754001

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 92.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.539	2.16	1.01	ug/kg	J	1	09-JUL-09 21:31	per0709052a
	Perchlorate-O(18)			5.31	ug/kg		1	09-JUL-09 21:31	per0709052a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

EH
07/30/09

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6614

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536

GEL Sample ID: 232754002

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90.2

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.576	ug/kg	J	1	09-JUL-09 21:43	per0709053a
	Perchlorate-O(18)			5.70	ug/kg		1	09-JUL-09 21:43	per0709053a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

EH
07/30/09

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6613

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536

GEL Sample ID: 232754003

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90.3

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.554	ug/kg	U	1	09-JUL-09 21:55	per0709054a
	Perchlorate-O(18)			5.60	ug/kg		1	09-JUL-09 21:55	per0709054a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

EH
07/30/09

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-6636

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536-1

GEL Sample ID: 232755001

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:57	per0708027a
	Perchlorate Isotope Ratio						1	08-JUL-09 15:57	per0708027a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:57	per0708027a
	Perchlorate-O(18)			0.479	ug/L		1	08-JUL-09 15:57	per0708027a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

EH
07/30/09

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DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 09-2536 VALIDATION DATE: 07/30/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eyda Hergenreder ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☒ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the FR blank, sample CAMO-09-6636, associated with all soil samples, Mn, K and Na were detected. All associated sample results were detects >5X the FR blank values and, thus, were not qualified.
2. In the CCB associated with the water sample, Tl was detected. The associated Tl sample result was an ND and, thus, was not qualified.
3. The MS %Rs for Al and Fe associated with the soil samples were > the laboratory UAL. The parent sample results for Al and Fe were >4X the spike concentrations and, thus, sample data were not qualified based on professional judgment. The MS %R for Tl associated with the water sample was < the laboratory LAL but ≥10%. The associated Tl sample result was an ND and, thus, was qualified UJ,I6a.
4. The duplicate RPDs for Be and Ni associated with the soil samples were >35%, and the parent and duplicate sample results were ≥5X the PQL. All associated sample results were detects and, thus, were qualified J,I10a.

DATA VALIDATION COVER SHEET

5118-1

Records Use only

Data Validation Cover Sheet

5. Results > the MDL but < the PQL were "J" flagged by the laboratory and, thus, were not further qualified J,I1.
6. It should be noted that the matrix QC analyses for Hg associated with all samples and for the ICP analytes associated with the water sample were performed on parent samples from other LANL RNs. No data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/31/09

VALIDATOR'S SIGNATURE: Eyda Hergenreder DATE: 07/30/09

Form 5118-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☒	☐	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☒	☐	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☒	☐	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☒	☐	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

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Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☐	☒	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☐	☒	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☒	☐	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☒	☐	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☒	☐	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST

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Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☒	☐	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☒	☐	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☒	☐	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☒	☐	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☒	☐	☐	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2536 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232754001 **BASIS:** Dry Weight **DATE COLLECTED** 30-JUN-09

CLIENT ID: CAMO-09-6615 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 92.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2400000	ug/Kg		7240	21300	21300	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-36-0	Antimony	1070	ug/Kg	U	352	1070	1070	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-38-2	Arsenic	924	ug/kg	J	216	1080	1080	2	MS	RMJ	07/14/09 10:30	090713-2	882366
7440-39-3	Barium	22100	ug/Kg		107	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-41-7	Beryllium J,I10a	641	ug/kg	*	21.6	108	108	2	MS	RMJ	07/14/09 10:30	090713-2	882366
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-70-2	Calcium	515000	ug/Kg		8520	26600	26600	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-47-3	Chromium	29300	ug/Kg		160	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-48-4	Cobalt	996	ug/Kg		160	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-50-8	Copper	2160	ug/Kg		320	1070	1070	1	P	HSC	07/08/09 23:32	070809A-1	882348
7439-89-6	Iron	8250000	ug/Kg		8520	26600	26600	1	P	HSC	07/08/09 23:32	070809A-1	882348
7439-92-1	Lead	4930	ug/Kg		266	1070	1070	1	P	HSC	07/08/09 23:32	070809A-1	882348
7439-95-4	Magnesium	331000	ug/Kg		9050	32000	32000	1	P	HSC	07/08/09 23:32	070809A-1	882348
7439-96-5	Manganese	276000	ug/Kg		213	1070	1070	1	P	HSC	07/08/09 23:32	070809A-1	882348
7439-97-6	Mercury	12.9	ug/kg	U	4.4	12.9	12.9	1	AV	JXL1	07/16/09 10:40	071609S1-4	882932
7440-02-0	Nickel J,I10a	2150	ug/kg	*	108	431	431	2	MS	RMJ	07/15/09 00:16	090714-3	882366
7440-09-7	Potassium	294000	ug/Kg		6820	26600	26600	1	P	HSC	07/08/09 23:32	070809A-1	882348
7782-49-2	Selenium	1080	ug/kg	U*N	539	1080	1080	2	MS	RMJ	07/14/09 10:30	090713-2	882366
7440-22-4	Silver	341	ug/Kg	J	107	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-23-5	Sodium	121000	ug/Kg		7460	26600	26600	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-28-0	Thallium	113	ug/kg	J	64.7	216	216	2	MS	RMJ	07/14/09 10:30	090713-2	882366
7440-62-2	Vanadium	4300	ug/Kg		107	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-66-6	Zinc	45000	ug/Kg		352	1070	1070	1	P	HSC	07/08/09 23:32	070809A-1	882348

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882348	882347	SW846 3050B	0.506	g	50	mL	07/07/09	BXA1
882366	882365	SW846 3050B	0.5	g	50	mL	07/07/09	BXA1
882932	882926	SW846 7471A Prep	0.5	g	30	mL	07/15/09	TXB3

EH
07/30/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2536 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232754002 **BASIS:** Dry Weight **DATE COLLECTED** 30-JUN-09

CLIENT ID: CAMO-09-6614 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3100000	ug/Kg		7400	21800	21800	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-36-0	Antimony	1090	ug/Kg	U	359	1090	1090	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-38-2	Arsenic	982	ug/kg	J	217	1090	1090	2	MS	RMJ	07/14/09 11:00	090713-2	882366
7440-39-3	Barium	19900	ug/Kg		109	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-41-7	Beryllium J,I10a	834	ug/kg	*	21.7	109	109	2	MS	RMJ	07/14/09 11:00	090713-2	882366
7440-43-9	Cadmium	544	ug/Kg	U	109	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-70-2	Calcium	540000	ug/Kg		8710	27200	27200	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-47-3	Chromium	27300	ug/Kg		163	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-48-4	Cobalt	1070	ug/Kg		163	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-50-8	Copper	2690	ug/Kg		327	1090	1090	1	P	HSC	07/09/09 00:08	070809A-1	882348
7439-89-6	Iron	8970000	ug/Kg		8710	27200	27200	1	P	HSC	07/09/09 00:08	070809A-1	882348
7439-92-1	Lead	5500	ug/Kg		272	1090	1090	1	P	HSC	07/09/09 00:08	070809A-1	882348
7439-95-4	Magnesium	495000	ug/Kg		9250	32700	32700	1	P	HSC	07/09/09 00:08	070809A-1	882348
7439-96-5	Manganese	247000	ug/Kg		218	1090	1090	1	P	HSC	07/09/09 00:08	070809A-1	882348
7439-97-6	Mercury	12.9	ug/kg	U	4.37	12.9	12.9	1	AV	JXL1	07/16/09 10:42	071609S1-4	882932
7440-02-0	Nickel J,I10a	2660	ug/kg	*	109	435	435	2	MS	RMJ	07/15/09 00:36	090714-3	882366
7440-09-7	Potassium	346000	ug/Kg		6970	27200	27200	1	P	HSC	07/09/09 00:08	070809A-1	882348
7782-49-2	Selenium	1090	ug/kg	U*N	543	1090	1090	2	MS	RMJ	07/14/09 11:00	090713-2	882366
7440-22-4	Silver	291	ug/Kg	J	109	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-23-5	Sodium	106000	ug/Kg		7620	27200	27200	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-28-0	Thallium	73.7	ug/kg	J	65.2	217	217	2	MS	RMJ	07/14/09 11:00	090713-2	882366
7440-62-2	Vanadium	5720	ug/Kg		109	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-66-6	Zinc	46800	ug/Kg		359	1090	1090	1	P	HSC	07/09/09 00:08	070809A-1	882348

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882348	882347	SW846 3050B	0.509	g	50	mL	07/07/09	BXA1
882366	882365	SW846 3050B	0.51	g	50	mL	07/07/09	BXA1
882932	882926	SW846 7471A Prep	0.517	g	30	mL	07/15/09	TXB3

EH
07/30/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2536 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232754003 **BASIS:** Dry Weight **DATE COLLECTED** 30-JUN-09

CLIENT ID: CAMO-09-6613 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1600000	ug/Kg		7420	21800	21800	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-36-0	Antimony	1090	ug/Kg	U	360	1090	1090	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-38-2	Arsenic	822	ug/kg	J	219	1100	1100	2	MS	RMJ	07/14/09 11:06	090713-2	882366
7440-39-3	Barium	19600	ug/Kg		109	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-41-7	Beryllium J,I10a	658	ug/kg	*	21.9	110	110	2	MS	RMJ	07/14/09 11:06	090713-2	882366
7440-43-9	Cadmium	545	ug/Kg	U	109	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-70-2	Calcium	269000	ug/Kg		8720	27300	27300	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-47-3	Chromium	19100	ug/Kg		164	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-48-4	Cobalt	836	ug/Kg		164	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-50-8	Copper	2200	ug/Kg		327	1090	1090	1	P	HSC	07/09/09 00:15	070809A-1	882348
7439-89-6	Iron	8470000	ug/Kg		8720	27300	27300	1	P	HSC	07/09/09 00:15	070809A-1	882348
7439-92-1	Lead	6590	ug/Kg		273	1090	1090	1	P	HSC	07/09/09 00:15	070809A-1	882348
7439-95-4	Magnesium	174000	ug/Kg		9270	32700	32700	1	P	HSC	07/09/09 00:15	070809A-1	882348
7439-96-5	Manganese	411000	ug/Kg		218	1090	1090	1	P	HSC	07/09/09 00:15	070809A-1	882348
7439-97-6	Mercury	12.9	ug/kg	U	4.39	12.9	12.9	1	AV	JXL1	07/16/09 10:48	071609S1-4	882932
7440-02-0	Nickel J,I10a	1910	ug/kg	*	110	439	439	2	MS	RMJ	07/15/09 00:40	090714-3	882366
7440-09-7	Potassium	227000	ug/Kg		6980	27300	27300	1	P	HSC	07/09/09 00:15	070809A-1	882348
7782-49-2	Selenium	1100	ug/kg	U*N	548	1100	1100	2	MS	RMJ	07/14/09 11:06	090713-2	882366
7440-22-4	Silver	343	ug/Kg	J	109	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-23-5	Sodium	129000	ug/Kg		7630	27300	27300	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-28-0	Thallium	219	ug/kg	U	65.8	219	219	2	MS	RMJ	07/14/09 11:06	090713-2	882366
7440-62-2	Vanadium	4880	ug/Kg		109	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-66-6	Zinc	51000	ug/Kg		360	1090	1090	1	P	HSC	07/09/09 00:15	070809A-1	882348

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882348	882347	SW846 3050B	0.508	g	50	mL	07/07/09	BXA1
882366	882365	SW846 3050B	0.505	g	50	mL	07/07/09	BXA1
882932	882926	SW846 7471A Prep	0.515	g	30	mL	07/15/09	TXB3

EH
07/30/09

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2536-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232755001 **BASIS:** As Received **DATE COLLECTED** 30-JUN-09

CLIENT ID: CAMO-09-6636 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/15/09 04:08	090714-4	882357
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/14/09 18:42	090714-2	882357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/14/09 18:42	090714-2	882357
7440-70-2	Calcium	200	ug/L	U	50	200	200	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	07/08/09 20:04	070809A-1	882339
7439-89-6	Iron	100	ug/L	U	30	100	100	1	P	HSC	07/08/09 20:04	070809A-1	882339
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/14/09 18:42	090714-2	882357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	07/08/09 20:04	070809A-1	882339
7439-96-5	Manganese	1.21	ug/L	J	1	5	5	1	MS	PRB	07/14/09 18:42	090714-2	882357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	07/15/09 10:45	071509W2-5	884332
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-09-7	Potassium	234	ug/L		50	150	150	1	P	HSC	07/08/09 20:04	070809A-1	882339
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-23-5	Sodium	182	ug/L	J	100	300	300	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-28-0	Thallium UJ,I6a	1	ug/L	UN	0.3	1	1	1	MS	PRB	07/14/09 18:42	090714-2	882357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	07/08/09 20:04	070809A-1	882339

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882339	882338	SW846 3005A	50	mL	50	mL	07/07/09	BXA1
882357	882356	SW846 3005A	50	mL	50	mL	07/07/09	BXA1
884332	884331	SW846 7470A Prep	20	mL	20	mL	07/14/09	TXB3

EH
07/30/09

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Section I.

REQUEST NUMBER: 09-2536 VALIDATION DATE: 07/30/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eyda Hergenreder ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☒ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☐ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☒	☐	☐	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the MB associated with the water sample, nitrate/nitrite was detected. The associated sample result was an ND and, thus, was not qualified.
2. In the CCB associated with the water sample, total cyanide was detected. The associated sample result was an ND and, thus, was not qualified.
3. It should be noted that the matrix QC for all analytes associated with both water and soil samples were performed on parent samples from other LANL RNs. No sample data were qualified as a result.

Reviewed by: JEJ Level: 1 Date: 7/31/09

VALIDATOR'S SIGNATURE: Eyda Hergenreder (Eyda Hergenreder)	DATE: 07/30/09
Form 5120-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☒	☐	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☐	☒	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2536

Client Sample ID:	CAMO-09-6615	Project:	LANL01004
Sample ID:	232754001	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	7.23%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.2C	H	8.40	0.010	0.100	SU	1	RXG2 07/06/09	1226	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	64.3	236	ug/kg	1	AXC2 07/08/09	1251	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.323	1.08	mg/kg	1	VH1 07/15/09	1237	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

EH
07/30/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2536

Client Sample ID:	CAMO-09-6614	Project:	LANL01004
Sample ID:	232754002	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	9.78%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.3C	H	7.38	0.010	0.100	SU	1	RXG2	07/06/09	1226	882616	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND	71.1	261	ug/kg	1	AXC2	07/08/09	1252	882479	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	0.333	1.11	mg/kg	1	VH1	07/15/09	1257	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

EH
07/30/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2536

Client Sample ID:	CAMO-09-6613	Project:	LANL01004
Sample ID:	232754003	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	9.74%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.0C	H	7.45	0.010	0.100	SU	1	RXG2 07/06/09	1230	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.1	261	ug/kg	1	AXC2 07/08/09	1253	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.332	1.11	mg/kg	1	VH1 07/15/09	1317	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

EH
07/30/09

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 9, 2009

Client SDG: 09-2536-1

Client Sample ID:	CAMO-09-6636	Project:	LANL01004
Sample ID:	232755001	Client ID:	LANL010
Matrix:	W		
Collect Date:	30-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal										
SW9012A Cyanide, Total "As Received"										
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2 07/07/09	1239	882142	1
Nutrient Analysis										
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"										
Nitrogen, Nitrate/Nitrite	U	ND	0.010	0.050	mg/L	1	AXH3 07/07/09	0903	882466	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0854	882141

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

EH
07/30/09

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 09-2536 VALIDATION DATE: 07/30/09 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Eyda Hergenreder ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO
- ☐ TPH-DRO
- ☐ GENERAL CHEMISTRY
- ☐ HIGH EXPLOSIVES
- ☐ METALS
- ☒ RADIOCHEMISTRY
- ☐ DIOXIN FURANS
- ☐ PCB CONGENERS
- ☐ LCMSMS HIGH EXPLOSIVES
- ☐ LCMSMS PERCHLORATES
- ☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
- ☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The gamma spec results that were rejected by the laboratory due to interference or low abundance were qualified R,R5a. In the duplicate sample several results were also rejected by the laboratory. No data were qualified as a result.
2. All reported sample results that were ≤ the MDCs were qualified U,R5.
3. The gamma spec Th-234 result for sample CAMO-09-6613 was > the MDC but ≤3X the 1-sigma TPU and, thus, was qualified U,R11.
4. It should be noted that an MS was not analyzed with tritium. However an LCS was analyzed and met acceptance criteria and, thus, no sample data were qualified as a result. It should be noted that the matrix QC for alpha spec isotopic-U and tritium were performed on parent samples from other LANL RNs. No sample data were qualified as a result.

DATA VALIDATION COVER SHEET

5119-1

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Data Validation Cover Sheet

Reviewed by: JEJ Level: 1 Date: 7/31/09

VALIDATOR'S SIGNATURE: Eyda Hergenreder Eyda Hergenreder DATE: 07/30/09

Form 5119-1, Revision 0.0

LOS ALAMOS
Environmental Restoration Project

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☒	☐	☐	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☒	☐	☐	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below if Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☒	☐	☐	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

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Certificate of Analysis

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TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-6615	Project:	LANL01004
Sample ID:	232754001	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	7.23%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	-0.0064	U,R5	0.0229	+/-0.00665	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240		0.147		0.0279	+/-0.0159	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.764		0.160	+/-0.0747	0.100	pCi/g		CXM2	07/14/09	2123	882704	4
Uranium-235/236	U	0.0435	U,R5	0.0734	+/-0.0154	0.100	pCi/g						
Uranium-238		0.637		0.0623	+/-0.0656	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0982	U,R5	0.290	+/-0.0904	0.200	pCi/g		MXR1	07/14/09	1044	882713	5
Bismuth-211	UI	4.13	R,R5a	0.308	+/-0.249		pCi/g						
Bismuth-214		1.15		0.116	+/-0.084	0.200	pCi/g						
Cadmium-109	UI	3.36	R,R5a	1.55	+/-0.523		pCi/g						
Cerium-139	U	-0.0138	U,R5	0.0515	+/-0.0154	0.050	pCi/g						
Cesium-134	UI	0.132	R,R5a	0.0936	+/-0.0333	0.100	pCi/g						
Cesium-137	U	-0.0224	U,R5	0.0623	+/-0.0203	0.100	pCi/g						
Cobalt-60	U	-0.00278		0.0673	+/-0.0208	0.100	pCi/g						
Europium-152	U	0.103		0.155	+/-0.0539	0.200	pCi/g						
Lanthanum-140	U	0.0618		0.116	+/-0.0333		pCi/g						
Lead-212		1.82		0.0934	+/-0.0831	0.100	pCi/g						
Lead-214		1.44		0.107	+/-0.0945	0.100	pCi/g						
Mercury-203	U	0.0321	U,R5	0.0709	+/-0.0227	0.100	pCi/g						
Potassium-40		35.5		0.522	+/-1.78	1.00	pCi/g						
Radium-223	U	0.338	U,R5	1.10	+/-0.355		pCi/g						
Radium-224	UI	5.23	R,R5a	1.06	+/-0.541		pCi/g						
Radium-226		1.15		0.116	+/-0.084		pCi/g						
Radium-228		1.70		0.237	+/-0.172	0.500	pCi/g						
Ruthenium-106	U	0.020	U,R5	0.520	+/-0.156	0.800	pCi/g						
Sodium-22	U	-0.00479	U,R5	0.0736	+/-0.0227	0.080	pCi/g						
Strontium-85	UI	0.122	R,R5a	0.0743	+/-0.0213		pCi/g						
Thallium-208		0.574		0.0599	+/-0.0414	0.080	pCi/g						
Thorium-227	U	-0.202	U,R5	0.641	+/-0.199		pCi/g						
Thorium-231	U	0.338		1.10	+/-0.355		pCi/g						
Thorium-234	U	1.49		2.38	+/-0.960	2.00	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-6615
Sample ID: 232754001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Tin-113	U	-0.00589	U,R5	0.074	+/-0.0218	0.100	pCi/g						
Uranium-235	U	-0.161		0.362	+/-0.111	0.500	pCi/g						
Yttrium-88	U	-0.00583		0.0463	+/-0.0146	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	79.3		243	+/-72.8	250	pCi/L		KXK2	07/16/09	1200	883039	6

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	88.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.2	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-6614
Sample ID: 232754002
Matrix: R
Collect Date: 30-JUN-09
Receive Date: 02-JUL-09
Collector: Client
Moisture: 9.78%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.0153	U,R5	0.021	+/-0.00719	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240		0.0376		0.0256	+/-0.00882	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.933		0.170	+/-0.0886	0.100	pCi/g		CXM2	07/14/09	2123	882704	4
Uranium-235/236	U	0.0509	U,R5	0.078	+/-0.0183	0.100	pCi/g						
Uranium-238		0.816		0.0662	+/-0.0798	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.0349	U,R5	0.299	+/-0.0849	0.200	pCi/g		MXR1	07/14/09	1045	882713	5
Bismuth-211	UI	4.05	R,R5a	0.247	+/-0.233		pCi/g						
Bismuth-214		1.20		0.0922	+/-0.0835	0.200	pCi/g						
Cadmium-109	UI	2.32	R,R5a	1.33	+/-0.510		pCi/g						
Cerium-139	U	-0.00089	U,R5	0.0433	+/-0.0123	0.050	pCi/g						
Cesium-134	UI	0.0857	R,R5a	0.073	+/-0.0246	0.100	pCi/g						
Cesium-137	U	-0.0117	U,R5	0.0485	+/-0.0146	0.100	pCi/g						
Cobalt-60	U	0.00146		0.0527	+/-0.016	0.100	pCi/g						
Europium-152	U	-0.0259		0.125	+/-0.0536	0.200	pCi/g						
Lanthanum-140	U	0.0375		0.103	+/-0.0333		pCi/g						
Lead-212		1.71		0.0798	+/-0.0779	0.100	pCi/g						
Lead-214		1.41		0.0862	+/-0.0889	0.100	pCi/g						
Mercury-203	U	0.0359	U,R5	0.0598	+/-0.0171	0.100	pCi/g						
Potassium-40		36.7		0.433	+/-1.59	1.00	pCi/g						
Radium-223	U	-0.549	U,R5	0.899	+/-0.333		pCi/g						
Radium-224	UI	4.97	R,R5a	0.906	+/-0.585		pCi/g						
Radium-226		1.20		0.0922	+/-0.0835		pCi/g						
Radium-228		1.75		0.168	+/-0.164	0.500	pCi/g						
Ruthenium-106	U	-0.279	U,R5	0.411	+/-0.135	0.800	pCi/g						
Sodium-22	U	-0.021	U,R5	0.0581	+/-0.0184	0.080	pCi/g						
Strontium-85	UI	0.126	R,R5a	0.0625	+/-0.0179		pCi/g						
Thallium-208		0.512		0.0474	+/-0.0417	0.080	pCi/g						
Thorium-227	U	-0.246	U,R5	0.516	+/-0.159		pCi/g						
Thorium-231	U	-0.549		0.899	+/-0.333		pCi/g						
Thorium-234	U	1.36		2.58	+/-0.735	2.00	pCi/g						
Tin-113	U	-0.0277		0.0594	+/-0.018	0.100	pCi/g						

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07/30/09

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-6614
Sample ID: 232754002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Uranium-235	U	0.0756	U,R5	0.316	+/-0.0963	0.500	pCi/g						
Yttrium-88	U	-0.000297		0.0451	+/-0.0138	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	3.35		236	+/-69.0	250	pCi/L		KXK2	07/16/09	1258	883039	6

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	96.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	97.2	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-6613	Project:	LANL01004
Sample ID:	232754003	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	9.74%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.0143	U,R5	0.0233	+/-0.00817	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240		0.0912		0.0285	+/-0.0121	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.803		0.173	+/-0.0793	0.100	pCi/g		CXM2	07/14/09	2123	882704	4
Uranium-235/236	U	0.0564	U,R5	0.0792	+/-0.018	0.100	pCi/g						
Uranium-238		0.874		0.0673	+/-0.084	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.158	U,R5	0.221	+/-0.0697	0.200	pCi/g		MXR1	07/14/09	1048	882713	5
Bismuth-211	UI	4.26	R,R5a	0.279	+/-0.226		pCi/g						
Bismuth-214		1.41		0.0918	+/-0.0954	0.200	pCi/g						
Cadmium-109	UI	3.96	R,R5a	1.07	+/-0.480		pCi/g						
Cerium-139	U	-0.00987	U,R5	0.0445	+/-0.0132	0.050	pCi/g						
Cesium-134	UI	0.0912	R,R5a	0.073	+/-0.0293	0.100	pCi/g						
Cesium-137	U	0.0101	U,R5	0.0541	+/-0.016	0.100	pCi/g						
Cobalt-60	U	0.0153		0.0531	+/-0.0153	0.100	pCi/g						
Europium-152	U	0.0101		0.138	+/-0.0534	0.200	pCi/g						
Lanthanum-140	U	-0.112		0.102	+/-0.0369		pCi/g						
Lead-212		1.86		0.0806	+/-0.0818	0.100	pCi/g						
Lead-214		1.48		0.0946	+/-0.0874	0.100	pCi/g						
Mercury-203	U	0.056	U,R5	0.0625	+/-0.0172	0.100	pCi/g						
Potassium-40		39.5		0.427	+/-1.56	1.00	pCi/g						
Radium-223	U	-0.0481	U,R5	0.890	+/-0.302		pCi/g						
Radium-224	UI	4.67	R,R5a	0.915	+/-0.573		pCi/g						
Radium-226		1.41		0.0918	+/-0.0954		pCi/g						
Radium-228		1.85		0.180	+/-0.167	0.500	pCi/g						
Ruthenium-106	U	-0.0215	U,R5	0.425	+/-0.127	0.800	pCi/g						
Sodium-22	U	-0.00953	U,R5	0.0595	+/-0.0181	0.080	pCi/g						
Strontium-85	UI	0.151	R,R5a	0.0623	+/-0.0173		pCi/g						
Thallium-208		0.577		0.0471	+/-0.0386	0.080	pCi/g						
Thorium-227	U	0.206	U,R5	0.562	+/-0.159		pCi/g						
Thorium-231	U	-0.0481	U,R5	0.890	+/-0.302		pCi/g						
Thorium-234		2.23	U,R11	1.83	+/-0.842	2.00	pCi/g						
Tin-113	U	-0.00808	U,R5	0.0586	+/-0.0177	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-6613
Sample ID: 232754003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Uranium-235	U	0.0349	U,R5	0.323	+/-0.0942	0.500	pCi/g						
Yttrium-88	U	-0.00314		0.0327	+/-0.0101	0.100	pCi/g						
Rad Liquid Scintillation Analysis													
H3 "As Received"													
Tritium	U	12.0		242	+/-70.9	250	pCi/L		KXK2	07/16/09	1355	883039	6

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	88.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	91.2	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated

EH
07/30/09

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2536C

REQUEST NUMBER: 09-2536

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/16/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232754, 232755 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6615	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6615	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6615	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6615	1	POLY	H3	Ice	R
CAMO-09-6615	1	POLY	METALS-GEL	Ice	R
CAMO-09-6615	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6614	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6614	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6614	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6614	1	POLY	H3	Ice	R
CAMO-09-6614	1	POLY	METALS-GEL	Ice	R
CAMO-09-6614	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6613	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6613	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6613	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6613	1	POLY	H3	Ice	R
CAMO-09-6613	1	POLY	METALS-GEL	Ice	R
CAMO-09-6613	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6636	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-6636	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-6636	1	POLY	SW-846:6850	Ice	W
CAMO-09-6636	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	7/1/09	3:00	Patricia Dent P. Dent	7/2/09	08:40
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2536

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2536
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/16/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	EPA:353.2	1	CAMO-09-6636	W	6/30/2009	
	EPA:901.1	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	EPA:906.0	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2536

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-6615	R	6/30/2009	
	HASL-300:ISOPU	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	HASL-300:ISOU	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	SW-846:6010B	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
		1	CAMO-09-6636	W	6/30/2009	
	SW-846:6020	1	CAMO-09-6636	W	6/30/2009	
	SW-846:6850	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
		1	CAMO-09-6636	W	6/30/2009	
	SW-846:8260B	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	SW-846:8270C	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	SW-846:9012A	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
		1	CAMO-09-6636	W	6/30/2009	
	SW-846:9045C	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2536

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9045C	1	CAMO-09-6615	R	6/30/2009	

Final Page of REQUEST NUMBER 09-2536

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407

P 843.556.8171 F 843.766.1178

www.gel.com

July 27, 2009

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Orders: 232754 232755
SDG: 09-2536

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on July 02, 2009, and analyzed for GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This data package has been revised to include the data for Radiochemistry.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 09-2536
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 232754 and 232755
SDG: 09-2536

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Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 232754 and 232755
SDG # : 09-2536

July 06, 2009

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on July 02, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
232755001	CAMO-09-6636

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

Valerie Davis

Project Manager

List of current GEL Certifications as of 06 July 2009

State	Certification
Arizona	AZ0668
Arkansas	88–0651
CLIA	42D0904046
California – NELAP	01151CA
Colorado	GEL
Connecticut	PH–0169
Dept. of Navy	NFESC 413
EPA Region 5	WG–15J
Florida – NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois – NELAP	200029
Indiana	C–SC–01
Kansas – NELAP	E–10332
Kentucky	90129
Louisiana – NELAP	03046
Maryland	270
Massachusetts	M–SC012
Nevada	SC00012
New Jersey – NELAP	SC002
New Mexico	FL NELAP E87156
New York – NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania – NELAP	68–00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas – NELAP	T104704235–07B–TX
U.S. Dept. of Agriculture	S–52597
Utah – NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Wednesday, July 01, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 09-2536C

REQUEST NUMBER: 09-2536

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 7/16/2009

TURNAROUND REQ'D: 15

LAB REQUEST COMMENTS: 232754, 232755 %

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
CAMO-09-6615	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6615	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6615	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6615	1	POLY	H3	Ice	R
CAMO-09-6615	1	POLY	METALS-GEL	Ice	R
CAMO-09-6615	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6614	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6614	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6614	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6614	1	POLY	H3	Ice	R
CAMO-09-6614	1	POLY	METALS-GEL	Ice	R
CAMO-09-6614	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6613	1	SEPTUM AMBER GLASS	8260B	Ice	R
CAMO-09-6613	1	AMBER GLASS	8270C	Ice	R
CAMO-09-6613	1	POLY	GS+ISOPU+ISOU	Ice	R
CAMO-09-6613	1	POLY	H3	Ice	R
CAMO-09-6613	1	POLY	METALS-GEL	Ice	R
CAMO-09-6613	1	POLY	Perchlorate+CN+N03+pH	Ice	R
CAMO-09-6636	1	POLY	METALS-GEL	Nitric Acid	W
CAMO-09-6636	1	POLY	NO3NO2	Sulfuric Acid (Hydrogen Sulfate)	W
CAMO-09-6636	1	POLY	SW-846:6850	Ice	W
CAMO-09-6636	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:		Date	Time	Received By:		Date	Time
		7/1/09	3:00	Patricia Dent	P. Dent	7/2/09	08:40
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2536

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:09-2536
Per Agreement Number:126310011
Project Cost Code: MR2A0512BGD0

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 7/1/2009
TURNAROUND/REPORT DUE: 7/16/2009
TURNAROUND REQ'D: 15 Days

RAD SCREENING: Yes, Below Background
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:300.0	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	EPA:353.2	1	CAMO-09-6636	W	6/30/2009	
	EPA:901.1	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	EPA:906.0	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	

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Wednesday, July 01, 2009

REQUEST NUMBER: 09-2536

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:906.0	1	CAMO-09-6615	R	6/30/2009	
	HASL-300:ISOPU	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	HASL-300:ISOU	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	SW-846:6010B	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
		1	CAMO-09-6636	W	6/30/2009	
	SW-846:6020	1	CAMO-09-6636	W	6/30/2009	
	SW-846:6850	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
		1	CAMO-09-6636	W	6/30/2009	
	SW-846:8260B	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	SW-846:8270C	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
	SW-846:9012A	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	
		1	CAMO-09-6615	R	6/30/2009	
		1	CAMO-09-6636	W	6/30/2009	
	SW-846:9045C	1	CAMO-09-6613	R	6/30/2009	
		1	CAMO-09-6614	R	6/30/2009	

Wednesday, July 01, 2009

REQUEST NUMBER: 09-2536

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9045C	1	CAMO-09-6615	R	6/30/2009	

Final Page of REQUEST NUMBER 09-2536

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: LANL	**SDG/ARCOC/Work Order:09-2536**
Received By: Patricia Dent	**Date Received: JULY 2, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: 40 C.P.M.
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within 0 ≤ 6 deg. C?	X			Preservation Method: ice bags BLUE ICE dry ice NONE other (describe) 2,3,4,6,24C
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other(describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's containers affected and observed: Preservation added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments: FEDEX#
7209 7847 5930 6C
7209 7847 5860 24C
7209 7847 5881 3C
7209 7847 5892 2C
7209 7847 5940 6C
7209 7847 5951 4C
7209 7847 5918 4C
7209 7847 5929 2C
7209 7847 5870 4C

PM (or PMA) review: Initials [illegible] Date 7/8/09

ORIGIN ID: SAFA (505) 665-9050
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
Actual: 56.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: [redacted]

[redacted]

Delivery Address Barcode

2°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5882 Form 0201

THU
Deliver By:
02JUL09

29407 -SC-US XX CHS CHSA A1

[redacted]

ORIGIN ID: SAFA (505) 665-9050
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
Actual: 56.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: [redacted]

[redacted]

Delivery Address Barcode

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BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5881 Form 0201

THU
Deliver By:
02JUL09

29407 -SC-US XX CHS CHSA A1

[redacted]

Part # 156148-434 NRRT V3.04-09

ORIGIN ID: SAFA (505) 665-9060
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA03 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 57.0 LB MAN
System#: 0014176/CAFE2361
Account: S **********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2540 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: [redacted]

[redacted]

Delivery Address Barcode

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BILL SENDER

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TRK# 7288 7847 5881 Form 0201

THU
Deliver By:
02JUL09

CHS A1

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[redacted]

Part # 156148-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-9060
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA03 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 35.0 LB MAN
System#: 0014176/CAFE2361
Account: S **********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2540 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: [redacted]

[redacted]

Delivery Address Barcode

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PRIORITY OVERNIGHT

TRK# 7288 7847 5881 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

[redacted]

Part # 156148-434 NRIT V3.04-09

ORIGIN ID: SAFA (505) 665-[illegible]
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 20.0 LB MAN
System#: 5014176/CAFE2361
Account: S *********

TO VALDEZ DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) [illegible]

Ref: [illegible]

[redacted]

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5948 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

[redacted]

Part # 156146-434 NRRT V3 04-09

ORIGIN ID: SAFA (505) 665-9068
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 55.0 LB MAN
System#: 5014176/CAFE2361
Account: S *********

TO VALDEZ DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

(843) 556-8171

FedEx Express

Ref: [illegible]

[redacted]

Delivery Address Barcode

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BILL SENDER

PRIORITY OVERNIGHT

TRK# 7289 7847 5918 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

[redacted]

Part # 156146-434 NRRT V3 04-09

ORIGIN ID: SAFA (505) 665-9868
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TRAG BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 62.0 LB MAN
System#: 9014176/CAFE2361
Account: S *********

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

(843) 556-8171

FedEx Express

CHARLESTON, SC 29407

Ref: [redacted]

[redacted]

Delivery Address Barcode

6°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5666 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

[redacted]

Part # 156108-434 NSRT V2.04-09

ORIGIN ID: SAFA (505) 665-9868
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TRAG BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
ActWgt: 78.0 LB MAN
System#: 9014176/CAFE2361
Account: S *********

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

(843) 556-8171

FedEx Express

CHARLESTON, SC 29407

Ref: [redacted]

[redacted]

Delivery Address Barcode

24°C

BILL SENDER

PRIORITY OVERNIGHT

TRK# 7288 7847 5666 Form 0201

THU
Deliver By:
02JUL09

CHS A1

29407 -SC-US XX CHSA

[redacted]

Part # 156108-434 NSRT V2.04-09

ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA59 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

Ship Date: 01JUL09
Actwgt: 56.0 LB MAN
System#: 8014176/CAFE2361
Account: S *********

TO VALERIE DAVIS (843) 556-8171
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON, SC 29407

FedEx Express

Ref: [redacted]

[redacted]

Delivery Address Barcode

4C

BILL SENDER

RAD II

PRIORITY OVERNIGHT

THU
Deliver By:
02JUL09

TRK# 7288 7847 5679 Form 0201

CHS A1

29407 -SC-US XX CHSA

-16-434 NRIT V3 04-08

[redacted]

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

GC/MS Volatile Analysis

GC/MS Volatile Organics
Los Alamos National Laboratory (LANL)
SDG 09-2536

Method/Analysis Information

Procedure:	Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
Analytical Method:	SW846 8260B
Prep Method:	SW846 5030
Analytical Batch Number:	884831
Prep Batch Number:	884827

Sample Analysis

The following client and quality control samples were analyzed to complete this SDG using the methods referenced in the Analysis Information section:

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201880054	Method Blank (MB)
1201880057	Laboratory Control Sample (LCS)
1201880058	Laboratory Control Sample (LCS)
1201880678	Method Blank (MB)
1201880679	Laboratory Control Sample (LCS)
1201880680	Laboratory Control Sample (LCS)
1201880055	232754001(CAMO-09-6615) Post Spike (PS)
1201880056	232754001(CAMO-09-6615) Post Spike Duplicate (PSD)

NOTE: For volatile organic analyses the matrix spike designations may be indicated as "PS" or "PSD". The "PS" designation (post spike) indicates that the matrix was fortified prior to analysis but after applying any prep factors, such as a dilution. The laboratory considers the MS/MSD and PS/PSD designations interchangeable.

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-038 REV# 12.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 19.1.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

The surrogate compounds were calibrated using a minimum five-point calibration curve. The surrogates were added by the auto sampler at a concentration of 50 ug/L. GEL Laboratories LLC will not have surrogate recoveries reported for Dibromofluoromethane. This is due to increased regulations for this analyte and an industry shortage.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration

All initial calibration requirements have been met for this sample delivery groups (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

Continuing Calibration Verification Requirements

All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement

The MBs analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

Surrogate recoveries in all client and quality control samples were within the acceptance limits.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

QC Sample Designation

Sample 232754001 (CAMO-09-6615) was designated for spike analysis in this SDG.

Matrix Spike (PS) Recovery Statement

The spike recoveries for this SDG were within the required acceptance limits.

Matrix Spike Duplicate (PSD) Recovery Statement

The spike duplicate recoveries for this SDG were within the required acceptance limits.

Relative Percent Difference (RPD) Statement
The RPD(s) between the matrix spike pair met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses in all client and quality control samples met the required acceptance criteria.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Preservation and Integrity
All samples met the sample preservation and integrity requirements.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-analyses were not required for samples in this SDG.

Miscellaneous Information

Electronic Package Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance (NCR) Documentation
A nonconformance report was not required for this SDG.

Manual Integrations
Data files associated with the initial calibration, continuing calibration check, and samples did not require manual integrations.

TIC Comment
Tentatively identified compounds (TIC) were required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Residual Chlorine
Residual Chlorine was not detected in any of the samples in this SDG.

System Configuration

The Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description	P & T Trap
VOA1.I	Gas Chromatograph/Mass Spectrometer	HP6890/HP5973	RTX-624	Restek, 60m x 0.25mm x 1.4um	Trap 10

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Date: 07/23/09

Roadmap for LANL 09-2536 VOA

This roadmap was analyzed by ron01469 on 07-20-2009, 13:21.
This roadmap was reviewed by sar00518 on 07-21-2009, 16:41.

Sample

exclude	manual	datafile	smpid	clientid	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA1.i/071309v1/1u109.d	232754001	CAMO-09-6615	13-JUL-2009	13:40	09-2536.sub	1	884831	
☐	N	/chem/VOA1.i/071309v1/1u110.d	232754002	CAMO-09-6614	13-JUL-2009	14:10	09-2536.sub	1	884831	
☐	N	/chem/VOA1.i/071309v1/1u111.d	232754003	CAMO-09-6613	13-JUL-2009	14:40	09-2536.sub	1	884831	

QC Sample

exclude	manual	datafile	smpid	clientid	sampletype	injdate	injtime	sublist	dilution	batchid	comment
☐	N	/chem/VOA1.i/071309v1/1u102LB.d	1201880057	LCS	lcs	13-JUL-2009	10:00	all.sub	1	884831	
☐	N	/chem/VOA1.i/071309v1/1u103sLB.d	1201880058	LCS	lcs	13-JUL-2009	10:31	all.sub	1	884831	
☐	N	/chem/VOA1.i/071309v1/1u104BB.d	1201880054	BLANK	mb	13-JUL-2009	11:01	all.sub	1	884831	
☐	N	/chem/VOA1.i/071409v1/1u213.d	1201880055	CAMO-09-6615MS	ms	14-JUL-2009	14:28	09-2536.sub	1	884831	
☐	N	/chem/VOA1.i/071409v1/1u214.d	1201880056	CAMO-09-6615MSD	msd	14-JUL-2009	14:58	09-2536.sub	1	884831	
☐	Y	/chem/VOA1.i/071409v1/1u203LB.d	1201880679	LCS	lcs	14-JUL-2009	09:25	all.sub	1.00000	884831	
☐	Y	/chem/VOA1.i/071409v1/1u205sLB.d	1201880680	LCS	lcs	14-JUL-2009	10:25	all.sub	1.00000	884831	
☐	Y	/chem/VOA1.i/071409v1/1u207BB.d	1201880678	BLANK	mb	14-JUL-2009	11:27	all.sub	1.00000	884831	

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6613	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 14:40	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:07	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u111.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.377	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.332	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.332	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.332	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.332	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.632	1.11
67-64-1	Acetone	U	5.54	ug/kg	1.84	5.54
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.332	1.11
74-88-4	Iodomethane	U	5.54	ug/kg	1.77	5.54
75-09-2	Methylene chloride	U	5.54	ug/kg	2.22	5.54
75-15-0	Carbon disulfide	U	5.54	ug/kg	1.38	5.54
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.332	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.332	1.11
78-93-3	2-Butanone	U	5.54	ug/kg	1.66	5.54
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.332	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.332	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.332	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.366	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.332	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.332	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.332	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.332	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.332	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.366	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.332	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.332	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.332	1.11
108-10-1	4-Methyl-2-pentanone	U	5.54	ug/kg	1.38	5.54
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.332	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.332	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.332	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.332	1.11
591-78-6	2-Hexanone	U	5.54	ug/kg	1.66	5.54
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.332	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.332	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.332	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.332	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.332	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6613	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 14:40	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:07	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u111.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.332	1.11
179601-23-1	m,p-Xylenes	U	2.22	ug/kg	0.332	2.22
95-47-6	o-Xylene	U	1.11	ug/kg	0.332	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.332	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.332	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.332	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.332	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.332	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.332	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.332	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.332	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.332	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.332	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.332	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.332	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.332	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.332	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.332	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.332	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.332	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.332	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.54	ug/kg	1.77	5.54
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.332	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.332	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	16.58	8.56	ug/kg	99	NJ
	Unknown Siloxane	18.09	11.4	ug/kg		J

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**	**Date Collected:**	**06/30/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232754002**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**9.8**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6614**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/13/2009 14:10**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/13/2009 12:06**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u110.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.377	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.333	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.333	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.333	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.333	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.632	1.11
67-64-1	Acetone	U	5.54	ug/kg	1.84	5.54
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
74-88-4	Iodomethane	U	5.54	ug/kg	1.77	5.54
75-09-2	Methylene chloride	U	5.54	ug/kg	2.22	5.54
75-15-0	Carbon disulfide	U	5.54	ug/kg	1.39	5.54
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.333	1.11
78-93-3	2-Butanone	U	5.54	ug/kg	1.66	5.54
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.333	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.366	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.333	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.333	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.333	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.333	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.333	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.366	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.333	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.333	1.11
108-10-1	4-Methyl-2-pentanone	U	5.54	ug/kg	1.39	5.54
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.333	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.333	1.11
591-78-6	2-Hexanone	U	5.54	ug/kg	1.66	5.54
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.333	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.333	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.333	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.333	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.333	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**	**Date Collected:**	**06/30/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232754002**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**9.8**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6614**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/13/2009 14:10**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/13/2009 12:06**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u110.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.333	1.11
179601-23-1	m,p-Xylenes	U	2.22	ug/kg	0.333	2.22
95-47-6	o-Xylene	U	1.11	ug/kg	0.333	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.333	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.333	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.333	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.333	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.333	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.333	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.333	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.333	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.333	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.333	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.333	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.333	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.333	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.54	ug/kg	1.77	5.54
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754001	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6615	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 13:40	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u109.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.08	ug/kg	0.367	1.08
74-87-3	Chloromethane	U	1.08	ug/kg	0.323	1.08
75-01-4	Vinyl chloride	U	1.08	ug/kg	0.323	1.08
74-83-9	Bromomethane	U	1.08	ug/kg	0.323	1.08
75-00-3	Chloroethane	U	1.08	ug/kg	0.323	1.08
75-69-4	Trichlorofluoromethane	U	1.08	ug/kg	0.614	1.08
67-64-1	Acetone	U	5.39	ug/kg	1.79	5.39
75-35-4	1,1-Dichloroethylene	U	1.08	ug/kg	0.323	1.08
74-88-4	Iodomethane	U	5.39	ug/kg	1.72	5.39
75-09-2	Methylene chloride	U	5.39	ug/kg	2.16	5.39
75-15-0	Carbon disulfide	U	5.39	ug/kg	1.35	5.39
156-60-5	trans-1,2-Dichloroethylene	U	1.08	ug/kg	0.323	1.08
75-34-3	1,1-Dichloroethane	U	1.08	ug/kg	0.323	1.08
78-93-3	2-Butanone	U	5.39	ug/kg	1.62	5.39
156-59-2	cis-1,2-Dichloroethylene	U	1.08	ug/kg	0.323	1.08
594-20-7	2,2-Dichloropropane	U	1.08	ug/kg	0.323	1.08
67-66-3	Chloroform	U	1.08	ug/kg	0.323	1.08
74-97-5	Bromochloromethane	U	1.08	ug/kg	0.356	1.08
71-55-6	1,1,1-Trichloroethane	U	1.08	ug/kg	0.323	1.08
563-58-6	1,1-Dichloropropene	U	1.08	ug/kg	0.323	1.08
56-23-5	Carbon tetrachloride	U	1.08	ug/kg	0.323	1.08
107-06-2	1,2-Dichloroethane	U	1.08	ug/kg	0.323	1.08
71-43-2	Benzene	U	1.08	ug/kg	0.323	1.08
79-01-6	Trichloroethylene	U	1.08	ug/kg	0.356	1.08
78-87-5	1,2-Dichloropropane	U	1.08	ug/kg	0.323	1.08
75-27-4	Bromodichloromethane	U	1.08	ug/kg	0.323	1.08
74-95-3	Dibromomethane	U	1.08	ug/kg	0.323	1.08
108-10-1	4-Methyl-2-pentanone	U	5.39	ug/kg	1.35	5.39
10061-01-5	cis-1,3-Dichloropropylene	U	1.08	ug/kg	0.323	1.08
108-88-3	Toluene	U	1.08	ug/kg	0.323	1.08
10061-02-6	trans-1,3-Dichloropropylene	U	1.08	ug/kg	0.323	1.08
79-00-5	1,1,2-Trichloroethane	U	1.08	ug/kg	0.323	1.08
591-78-6	2-Hexanone	U	5.39	ug/kg	1.62	5.39
142-28-9	1,3-Dichloropropane	U	1.08	ug/kg	0.323	1.08
127-18-4	Tetrachloroethylene	U	1.08	ug/kg	0.323	1.08
124-48-1	Dibromochloromethane	U	1.08	ug/kg	0.323	1.08
106-93-4	1,2-Dibromoethane	U	1.08	ug/kg	0.323	1.08
108-90-7	Chlorobenzene	U	1.08	ug/kg	0.323	1.08

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754001	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6615	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 13:40	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u109.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.08	ug/kg	0.323	1.08
179601-23-1	m,p-Xylenes	U	2.16	ug/kg	0.323	2.16
95-47-6	o-Xylene	U	1.08	ug/kg	0.323	1.08
100-42-5	Styrene	U	1.08	ug/kg	0.323	1.08
75-25-2	Bromoform	U	1.08	ug/kg	0.323	1.08
79-34-5	1,1,2,2-Tetrachloroethane	U	1.08	ug/kg	0.323	1.08
96-18-4	1,2,3-Trichloropropane	U	1.08	ug/kg	0.323	1.08
108-86-1	Bromobenzene	U	1.08	ug/kg	0.323	1.08
103-65-1	n-Propylbenzene	U	1.08	ug/kg	0.323	1.08
95-49-8	2-Chlorotoluene	U	1.08	ug/kg	0.323	1.08
98-82-8	Isopropylbenzene	U	1.08	ug/kg	0.323	1.08
108-67-8	1,3,5-Trimethylbenzene	U	1.08	ug/kg	0.323	1.08
106-43-4	4-Chlorotoluene	U	1.08	ug/kg	0.323	1.08
98-06-6	tert-Butylbenzene	U	1.08	ug/kg	0.323	1.08
95-63-6	1,2,4-Trimethylbenzene	U	1.08	ug/kg	0.323	1.08
135-98-8	sec-Butylbenzene	U	1.08	ug/kg	0.323	1.08
99-87-6	4-Isopropyltoluene	U	1.08	ug/kg	0.323	1.08
541-73-1	1,3-Dichlorobenzene	U	1.08	ug/kg	0.323	1.08
106-46-7	1,4-Dichlorobenzene	U	1.08	ug/kg	0.323	1.08
104-51-8	n-Butylbenzene	U	1.08	ug/kg	0.323	1.08
96-12-8	1,2-Dibromo-3-chloropropane	U	1.08	ug/kg	0.323	1.08
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.39	ug/kg	1.72	5.39
630-20-6	1,1,1,2-Tetrachloroethane	U	1.08	ug/kg	0.323	1.08
95-50-1	1,2-Dichlorobenzene	U	1.08	ug/kg	0.323	1.08

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	100	ug/kg		J
	Unknown	20	53.7	ug/kg		J

QC Summary

Volatile

Surrogate Recovery Report

SDG Number: 09-2536

Matrix Type: SOLID

CAP Column (1) : RTX-Volatiles

Sample ID	Client ID	DCED4 %REC	TOL %REC	BFB %REC
1201880057	LCS for batch 884827	107	95	98
1201880058	LCS for batch 884827	98	94	99
1201880054	MB for batch 884827	102	96	101
232754001	CAMO-09-6615	110	99	107
232754002	CAMO-09-6614	110	100	105
232754003	CAMO-09-6613	113	97	103
1201880679	LCS for batch 884827	104	95	95
1201880680	LCS for batch 884827	104	95	101
1201880678	MB for batch 884827	111	99	101
1201880055	CAMO-09-6615PS	111	96	95
1201880056	CAMO-09-6615PSD	107	99	100

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(68%-131%)
TOL	= Toluene-d8	(75%-129%)
BFB	= Bromofluorobenzene	(68%-133%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-6615PS
Lab Sample ID: 1201880055
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 7.2
Analysis Date: 07/14/2009 14:28
Prep Batch ID: 884827
Batch ID: 884831
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	65.8	132	25-149
74-87-3	PS	Chloromethane	50.0	0.00	U	55.1	110	39-140
75-01-4	PS	Vinyl chloride	50.0	0.00	U	51.9	104	47-129
74-83-9	PS	Bromomethane	50.0	0.00	U	51.9	104	31-135
75-00-3	PS	Chloroethane	50.0	0.00	U	51.7	103	53-128
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	63.9	128	51-151
67-64-1	PS	Acetone	250	0.00	U	132	53	21-153
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	50.0	100	61-125
74-88-4	PS	Iodomethane	250	0.00	U	242	97	53-142
75-09-2	PS	Methylene chloride	50.0	0.00	U	51.5	103	59-136
75-15-0	PS	Carbon disulfide	250	0.00	U	263	105	46-129
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	47.7	95	56-126
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	50.2	100	62-125
78-93-3	PS	2-Butanone	250	0.00	U	165	66	26-152
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	51.7	103	60-130
594-20-7	PS	2,2-Dichloropropane	50.0	0.00	U	53.1	106	55-135
67-66-3	PS	Chloroform	50.0	0.00	U	49.6	99	60-127
74-97-5	PS	Bromochloromethane	50.0	0.00	U	48.1	96	61-131
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	54.2	108	59-131
563-58-6	PS	1,1-Dichloropropene	50.0	0.00	U	52.4	105	57-128
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	54.1	108	58-136
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	51.5	103	58-126

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-6615PS
Lab Sample ID: 1201880055
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 7.2
Analysis Date: 07/14/2009 14:28
Prep Batch ID: 884827
Batch ID: 884831
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	PS	Benzene	50.0	0.00	U	45.9	92	56-123
79-01-6	PS	Trichloroethylene	50.0	0.00	U	50.8	102	51-137
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	50.4	101	60-126
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	53.5	107	55-138
74-95-3	PS	Dibromomethane	50.0	0.00	U	50.0	100	60-132
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	238	95	58-136
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	51.9	104	54-133
108-88-3	PS	Toluene	50.0	0.00	U	42.5	85	52-128
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	48.7	97	53-137
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	46.8	94	59-130
591-78-6	PS	2-Hexanone	250	0.00	U	173	69	31-148
142-28-9	PS	1,3-Dichloropropane	50.0	0.00	U	46.1	92	57-127
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	43.0	86	51-128
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	47.6	95	59-139
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	46.1	92	57-133
108-90-7	PS	Chlorobenzene	50.0	0.00	U	44.8	90	53-122
100-41-4	PS	Ethylbenzene	50.0	0.00	U	44.5	89	51-125
179601-23-1	PS	m,p-Xylenes	100	0.00	U	90.1	90	50-126
95-47-6	PS	o-Xylene	50.0	0.00	U	47.4	95	52-127
100-42-5	PS	Styrene	50.0	0.00	U	46.1	92	49-135
75-25-2	PS	Bromoform	50.0	0.00	U	47.4	95	57-149
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	44.0	88	63-127

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-6615PS
Lab Sample ID: 1201880055
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: R
%Moisture: 7.2
Analysis Date: 07/14/2009 14:28
Prep Batch ID: 884827
Batch ID: 884831
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	PS	1,2,3-Trichloropropane	50.0	0.00	U	48.4	97	57-149
108-86-1	PS	Bromobenzene	50.0	0.00	U	41.0	82	49-131
103-65-1	PS	n-Propylbenzene	50.0	0.00	U	40.8	82	40-136
95-49-8	PS	2-Chlorotoluene	50.0	0.00	U	42.0	84	44-135
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	39.1	78	44-140
108-67-8	PS	1,3,5-Trimethylbenzene	50.0	0.00	U	42.2	84	42-140
106-43-4	PS	4-Chlorotoluene	50.0	0.00	U	41.7	83	44-132
98-06-6	PS	tert-Butylbenzene	50.0	0.00	U	43.7	87	42-142
95-63-6	PS	1,2,4-Trimethylbenzene	50.0	0.00	U	41.8	84	43-137
135-98-8	PS	sec-Butylbenzene	50.0	0.00	U	41.9	84	39-139
99-87-6	PS	4-Isopropyltoluene	50.0	0.00	U	40.9	82	38-145
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	40.1	80	43-129
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	38.7	77	44-125
104-51-8	PS	n-Butylbenzene	50.0	0.00	U	40.1	80	36-141
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	48.2	96	47-151
630-20-6	PS	1,1,1,2-Tetrachloroethane	50.0	0.00	U	46.6	93	59-131
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	41.0	82	43-129

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-6615PSD
Lab Sample ID: 1201880056
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 7.2
Analysis Date: 07/14/2009 14:58
Dilution: 1
Prep Batch ID: 884827
Batch ID: 884831

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	68.1	136	25-149	4	0-25
74-87-3	PSD	Chloromethane	50.0	0.00	U	57.2	114	39-140	4	0-25
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	52.7	105	47-129	2	0-25
74-83-9	PSD	Bromomethane	50.0	0.00	U	51.9	104	31-135	0	0-25
75-00-3	PSD	Chloroethane	50.0	0.00	U	53.1	106	53-128	3	0-25
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	63.8	128	51-151	0	0-25
67-64-1	PSD	Acetone	250	0.00	U	130	52	21-153	1	0-25
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	50.7	101	61-125	1	0-25
74-88-4	PSD	Iodomethane	250	0.00	U	246	98	53-142	1	0-25
75-09-2	PSD	Methylene chloride	50.0	0.00	U	52.8	106	59-136	3	0-25
75-15-0	PSD	Carbon disulfide	250	0.00	U	265	106	46-129	1	0-25
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	48.1	96	56-126	1	0-25
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	50.2	100	62-125	0	0-25
78-93-3	PSD	2-Butanone	250	0.00	U	159	64	26-152	4	0-25
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	52.8	106	60-130	2	0-25
594-20-7	PSD	2,2-Dichloropropane	50.0	0.00	U	54.4	109	55-135	2	0-25
67-66-3	PSD	Chloroform	50.0	0.00	U	50.2	100	60-127	1	0-25
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	48.6	97	61-131	1	0-25
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	54.9	110	59-131	1	0-25
563-58-6	PSD	1,1-Dichloropropene	50.0	0.00	U	52.6	105	57-128	0	0-25
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	53.8	108	58-136	1	0-25
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	51.5	103	58-126	0	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-6615PSD
Lab Sample ID: 1201880056
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 7.2
Analysis Date: 07/14/2009 14:58
Prep Batch ID: 884827
Batch ID: 884831
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
71-43-2	PSD	Benzene	50.0	0.00	U	47.4	95	56-123	3	0-25
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	49.5	99	51-137	3	0-25
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	51.7	103	60-126	3	0-25
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	53.9	108	55-138	1	0-25
74-95-3	PSD	Dibromomethane	50.0	0.00	U	50.0	100	60-132	0	0-25
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	241	96	58-136	1	0-25
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	51.8	104	54-133	0	0-25
108-88-3	PSD	Toluene	50.0	0.00	U	43.6	87	52-128	3	0-25
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	49.7	99	53-137	2	0-25
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	48.6	97	59-130	4	0-25
591-78-6	PSD	2-Hexanone	250	0.00	U	156	62	31-148	11	0-25
142-28-9	PSD	1,3-Dichloropropane	50.0	0.00	U	47.9	96	57-127	4	0-25
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	42.9	86	51-128	0	0-25
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	48.8	98	59-139	3	0-25
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	48.3	97	57-133	5	0-25
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	44.1	88	53-122	2	0-25
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	43.4	87	51-125	3	0-25
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	88.2	88	50-126	2	0-25
95-47-6	PSD	o-Xylene	50.0	0.00	U	46.7	93	52-127	1	0-25
100-42-5	PSD	Styrene	50.0	0.00	U	44.9	90	49-135	2	0-25
75-25-2	PSD	Bromoform	50.0	0.00	U	50.7	101	57-149	7	0-25
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	48.4	97	63-127	10	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-6615PSD
Lab Sample ID: 1201880056
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: R
%Moisture: 7.2
Analysis Date: 07/14/2009 14:58
Prep Batch ID: 884827
Batch ID: 884831
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
96-18-4	PSD	1,2,3-Trichloropropane	50.0	0.00	U	52.2	104	57-149	8	0-25
108-86-1	PSD	Bromobenzene	50.0	0.00	U	42.5	85	49-131	4	0-25
103-65-1	PSD	n-Propylbenzene	50.0	0.00	U	41.3	83	40-136	1	0-25
95-49-8	PSD	2-Chlorotoluene	50.0	0.00	U	43.0	86	44-135	2	0-25
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	40.1	80	44-140	2	0-25
108-67-8	PSD	1,3,5-Trimethylbenzene	50.0	0.00	U	43.1	86	42-140	2	0-25
106-43-4	PSD	4-Chlorotoluene	50.0	0.00	U	42.1	84	44-132	1	0-25
98-06-6	PSD	tert-Butylbenzene	50.0	0.00	U	44.3	89	42-142	1	0-25
95-63-6	PSD	1,2,4-Trimethylbenzene	50.0	0.00	U	42.3	85	43-137	1	0-25
135-98-8	PSD	sec-Butylbenzene	50.0	0.00	U	42.3	85	39-139	1	0-25
99-87-6	PSD	4-Isopropyltoluene	50.0	0.00	U	39.8	80	38-145	3	0-25
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	40.8	82	43-129	2	0-25
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	39.3	79	44-125	2	0-25
104-51-8	PSD	n-Butylbenzene	50.0	0.00	U	39.7	79	36-141	1	0-25
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	51.8	104	47-151	7	0-25
630-20-6	PSD	1,1,1,2-Tetrachloroethane	50.0	0.00	U	47.2	94	59-131	1	0-25
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	41.6	83	43-129	2	0-25

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: LCS for batch 884827
Lab Sample ID: 1201880057
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/13/2009 10:00
Dilution: 1
Prep Batch ID: 884827
Batch ID: 884831

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	65.2	130	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	52.7	105	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	49.0	98	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	48.0	96	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	50.1	100	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	63.1	126	67-151
67-64-1	LCS	Acetone	250	0.0	129	51	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	48.1	96	70-125
74-88-4	LCS	Iodomethane	250	0.0	233	93	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	48.0	96	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	264	106	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	46.4	93	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	46.4	93	75-120
78-93-3	LCS	2-Butanone	250	0.0	156	63	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	49.1	98	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	55.2	110	74-135
67-66-3	LCS	Chloroform	50.0	0.0	45.0	90	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	44.6	89	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	51.2	102	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	51.5	103	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	49.8	100	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	44.9	90	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 884827 **Matrix:** SOIL

Lab Sample ID: 1201880057

Instrument: VOA1.I **Analysis Date:** 07/13/2009 10:00 **Dilution:** 1

Analyst: RXM4 **Prep Batch ID** 884827

Purge Vol: 5 mL **Batch ID:** 884831

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	44.9	90	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	47.5	95	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	47.1	94	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	47.6	95	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	45.3	91	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	237	95	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	50.2	100	80-125
108-88-3	LCS	Toluene	50.0	0.0	43.2	86	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	48.8	98	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	45.5	91	76-120
591-78-6	LCS	2-Hexanone	250	0.0	176	71	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	44.3	89	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	44.3	89	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	45.0	90	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	45.2	90	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	44.8	90	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	44.9	90	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	91.1	91	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	47.6	95	74-120
100-42-5	LCS	Styrene	50.0	0.0	46.8	94	76-125
75-25-2	LCS	Bromoform	50.0	0.0	48.3	97	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	46.1	92	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 884827 **Matrix:** SOIL

Lab Sample ID: 1201880057

Instrument: VOA1.I **Analysis Date:** 07/13/2009 10:00 **Dilution:** 1

Analyst: RXM4 **Prep Batch ID** 884827

Purge Vol: 5 mL **Batch ID:** 884831

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	48.6	97	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	43.7	87	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	46.0	92	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	45.9	92	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	41.4	83	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	47.1	94	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	47.1	94	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	48.2	96	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	46.5	93	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	48.0	96	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	49.6	99	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	45.5	91	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	44.0	88	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	50.5	101	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	51.3	103	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	44.6	89	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	45.3	91	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: LCS for batch 884827
Lab Sample ID: 1201880058
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/13/2009 10:31
Dilution: 1
Prep Batch ID: 884827
Batch ID: 884831

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	211	85	52-139

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: **09-2536**
Client ID: **LCS for batch 884827**
Lab Sample ID: **1201880679**
Instrument: **VOA1.I**
Analyst: **RXM4**
Purge Vol: **5 mL**

Sample Type: **Laboratory Control Sample**
Matrix: **SOIL**
Analysis Date: **07/14/2009 09:25**
Dilution: **1**
Prep Batch ID: **884827**
Batch ID: **884831**

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	73.3	147	33-155
74-87-3	LCS	Chloromethane	50.0	0.0	59.6	119	53-132
75-01-4	LCS	Vinyl chloride	50.0	0.0	57.8	116	61-128
74-83-9	LCS	Bromomethane	50.0	0.0	54.8	110	63-126
75-00-3	LCS	Chloroethane	50.0	0.0	56.3	113	67-124
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	70.8	142	67-151
67-64-1	LCS	Acetone	250	0.0	145	58	29-160
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	53.4	107	70-125
74-88-4	LCS	Iodomethane	250	0.0	262	105	74-131
75-09-2	LCS	Methylene chloride	50.0	0.0	52.5	105	72-127
75-15-0	LCS	Carbon disulfide	250	0.0	289	115	64-127
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	51.4	103	71-122
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	53.2	106	75-120
78-93-3	LCS	2-Butanone	250	0.0	177	71	35-162
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	55.1	110	76-122
594-20-7	LCS	2,2-Dichloropropane	50.0	0.0	62.0	124	74-135
67-66-3	LCS	Chloroform	50.0	0.0	52.0	104	77-120
74-97-5	LCS	Bromochloromethane	50.0	0.0	50.9	102	76-122
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	58.5	117	75-128
563-58-6	LCS	1,1-Dichloropropene	50.0	0.0	57.1	114	77-125
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	58.0	116	77-134
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	53.3	107	72-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: LCS for batch 884827
Lab Sample ID: 1201880679
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/14/2009 09:25
Dilution: 1
Prep Batch ID: 884827
Batch ID: 884831

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
71-43-2	LCS	Benzene	50.0	0.0	49.5	99	72-120
79-01-6	LCS	Trichloroethylene	50.0	0.0	54.1	108	78-121
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	53.3	107	74-120
75-27-4	LCS	Bromodichloromethane	50.0	0.0	55.9	112	79-125
74-95-3	LCS	Dibromomethane	50.0	0.0	51.9	104	78-122
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	251	101	71-134
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	57.0	114	80-125
108-88-3	LCS	Toluene	50.0	0.0	47.2	94	65-124
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	54.4	109	71-134
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	49.6	99	76-120
591-78-6	LCS	2-Hexanone	250	0.0	196	78	42-159
142-28-9	LCS	1,3-Dichloropropane	50.0	0.0	49.7	99	72-120
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	48.8	98	74-123
124-48-1	LCS	Dibromochloromethane	50.0	0.0	51.1	102	83-128
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	50.3	101	79-121
108-90-7	LCS	Chlorobenzene	50.0	0.0	49.4	99	75-120
100-41-4	LCS	Ethylbenzene	50.0	0.0	49.9	100	74-120
179601-23-1	LCS	m,p-Xylenes	100	0.0	102	102	74-120
95-47-6	LCS	o-Xylene	50.0	0.0	52.8	106	74-120
100-42-5	LCS	Styrene	50.0	0.0	52.4	105	76-125
75-25-2	LCS	Bromoform	50.0	0.0	52.7	105	77-138
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	48.4	97	72-122

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: LCS for batch 884827
Lab Sample ID: 1201880679
Instrument: VOA1.I
Analyst: RXM4
Purge Vol: 5 mL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 07/14/2009 09:25
Dilution: 1
Prep Batch ID: 884827
Batch ID: 884831

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
96-18-4	LCS	1,2,3-Trichloropropane	50.0	0.0	52.2	104	75-135
108-86-1	LCS	Bromobenzene	50.0	0.0	46.7	93	73-120
103-65-1	LCS	n-Propylbenzene	50.0	0.0	49.1	98	68-121
95-49-8	LCS	2-Chlorotoluene	50.0	0.0	50.2	100	69-120
98-82-8	LCS	Isopropylbenzene	50.0	0.0	44.0	88	66-127
108-67-8	LCS	1,3,5-Trimethylbenzene	50.0	0.0	51.1	102	67-126
106-43-4	LCS	4-Chlorotoluene	50.0	0.0	51.0	102	72-120
98-06-6	LCS	tert-Butylbenzene	50.0	0.0	52.2	104	72-124
95-63-6	LCS	1,2,4-Trimethylbenzene	50.0	0.0	50.8	102	72-122
135-98-8	LCS	sec-Butylbenzene	50.0	0.0	52.0	104	71-124
99-87-6	LCS	4-Isopropyltoluene	50.0	0.0	54.5	109	72-130
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	49.7	99	73-120
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	48.4	97	73-120
104-51-8	LCS	n-Butylbenzene	50.0	0.0	54.2	108	72-128
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	53.8	108	68-145
630-20-6	LCS	1,1,1,2-Tetrachloroethane	50.0	0.0	50.8	102	78-121
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	49.0	98	74-120

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Sample Type: Laboratory Control Sample
Client ID: LCS for batch 884827
Matrix: SOIL
Lab Sample ID: 1201880680
Instrument: VOA1.I
Analysis Date: 07/14/2009 10:25
Dilution: 1
Analyst: RXM4
Prep Batch ID: 884827
Purge Vol: 5 mL
Batch ID: 884831

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
76-13-1	LCS	1,1,2-Trichloro-1,2,2-Trifluor *Trichlorotrifluoroethane*	250	0.0	237	95	52-139

Method Blank Summary

SDG Number:	09-2536	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 884827	Instrument ID:	VOA1.I	Data File:	1u104BB.d
Lab Sample ID:	1201880054	Prep Date:	07/13/2009 08:00	Analyzed:	07/13/09 11:01
Column:	RTX-Volatiles	Heated Purge:	Yes		

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 884827	1201880057	1u102LB.d	07/13/09	1000
02	LCS for batch 884827	1201880058	1u103sLB.d	07/13/09	1031
03	CAMO-09-6615	232754001	1u109.d	07/13/09	1340
04	CAMO-09-6614	232754002	1u110.d	07/13/09	1410
05	CAMO-09-6613	232754003	1u111.d	07/13/09	1440

Method Blank Summary

SDG Number:	09-2536	**Client:**	LANL010	**Matrix:**	SOIL
Client ID:	MB for batch 884827	**Instrument ID:**	VOA1.I	**Data File:**	1u207BB.d
Lab Sample ID:	1201880678	**Prep Date:**	07/14/2009 08:00	**Analyzed:**	07/14/09 11:27
Column:	RTX-Volatiles	**Heated Purge:**	Yes		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 884827	1201880679	1u203LB.d	07/14/09	0925
02 LCS for batch 884827	1201880680	1u205sLB.d	07/14/09	1025
03 CAMO-09-6615PS	1201880055	1u213.d	07/14/09	1428
04 CAMO-09-6615PSD	1201880056	1u214.d	07/14/09	1458

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2536

Instrument ID: VOA1.I **Injection Date/Time:** 01-JUL-09 14:32

Column Description: RTX-Volatiles **Lab File ID** /070109v1/1s309.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	20
75	30.0 - 60.0% of mass 95	48.2
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	73
175	5.0 -9.0% of mass 174	7.5
176	95.0 - 101.0% of mass 174	98
177	5.0 - 9.0% of mass 176	6.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD0005	W1VM090701-05	/070109v1/1s310.d	01-JUL-09 15:01
VSTD001	W1VM090701-06	/070109v1/1s311.d	01-JUL-09 15:31
VSTD002	W1VM090701-08	/070109v1/1s313.d	01-JUL-09 16:32
VSTD005	W1VM090701-09	/070109v1/1s314.d	01-JUL-09 17:02
VSTD010	W1VM090701-10	/070109v1/1s315.d	01-JUL-09 17:32
VSTD020	W1VM090701-11	/070109v1/1s316.d	01-JUL-09 18:02
VSTD050	W1VM090701-12	/070109v1/1s317.d	01-JUL-09 18:33
VSTD100	W1VM090701-13	/070109v1/1s318.d	01-JUL-09 19:04
VSTD005S	W1VM090701-14	/070109v1/1s320.d	01-JUL-09 20:05
VSTD010S	W1VM090701-15	/070109v1/1s321.d	01-JUL-09 20:36
VSTD025S	W1VM090701-16	/070109v1/1s322.d	01-JUL-09 21:06
VSTD050S	W1VM090701-17	/070109v1/1s323.d	01-JUL-09 21:36
VSTD100S	W1VM090701-18	/070109v1/1s324.d	01-JUL-09 22:07
VSTD250S	W1VM090701-19	/070109v1/1s325.d	01-JUL-09 22:38
VSTD500S	W1VM090701-20	/070109v1/1s326.d	01-JUL-09 23:08
ICV	W1VM090701-22	/070109v1/1s329.d	02-JUL-09 00:41
SHORT ICV	W1VM090701-23	/070109v1/1s330.d	02-JUL-09 01:12

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2536

Instrument ID: VOA1.I **Injection Date/Time:** 13-JUL-09 09:23

Column Description: RTX-Volatiles **Lab File ID** /071309v1/1u101.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	20.2
75	30.0 - 60.0% of mass 95	48.6
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	74.2
175	5.0 -9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	96.5
177	5.0 - 9.0% of mass 176	6.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD050	W1VM090713-01	/071309v1/1u102.d	13-JUL-09 10:00
LCS	1201880057	/071309v1/1u102LB.d	13-JUL-09 10:00
VSTD250S	W1VM090713-02	/071309v1/1u103.d	13-JUL-09 10:31
LCS	1201880058	/071309v1/1u103sLB.d	13-JUL-09 10:31
BLANK	1201880054	/071309v1/1u104BB.d	13-JUL-09 11:01
CAMO-09-6615	232754001	/071309v1/1u109.d	13-JUL-09 13:40
CAMO-09-6614	232754002	/071309v1/1u110.d	13-JUL-09 14:10
CAMO-09-6613	232754003	/071309v1/1u111.d	13-JUL-09 14:40

Instrument Performance Check

BFB

Lab Name GEL Laboratories LLC **Client SDG:** 09-2536

Instrument ID: VOA1.I **Injection Date/Time:** 14-JUL-09 08:55

Column Description: RTX-Volatiles **Lab File ID** /071409v1/1u202BFB.d

m/e	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% Relative Abundance	100
50	15.0 - 40.0% of mass 95	21.3
75	30.0 - 60.0% of mass 95	50.8
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.7
174	50.0 - 100.0% of mass 95	75.2
175	5.0 -9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	95.9
177	5.0 - 9.0% of mass 176	6.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
VSTD050	W1VM090714-01	/071409v1/1u202.d	14-JUL-09 08:55
LCS	1201880679	/071409v1/1u203LB.d	14-JUL-09 09:25
VSTD250S	W1VM090714-03	/071409v1/1u204.d	14-JUL-09 09:55
LCS	1201880680	/071409v1/1u205sLB.d	14-JUL-09 10:25
BLANK	1201880678	/071409v1/1u207BB.d	14-JUL-09 11:27
CAMO-09-6615MS	1201880055	/071409v1/1u213.d	14-JUL-09 14:28
CAMO-09-6615MSD	1201880056	/071409v1/1u214.d	14-JUL-09 14:58

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA1.I

GC Column: RTX-Volatiles

Client SDG: 09-2536

STD Analysis Time: 13-JUL-09 10:00

Data File: 1u102.d

	Fluorobenzene				Chlorobenzene-d5				1,4-Dichlorobenzene-d4			
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 Hour STD	1302291		13.7		1121244		17.2		592606		19.6	
Upper Limit	2604582		14.2		2242488		17.7		1185212		20.1	
Lower Limit	651146		13.2		560622		16.7		296303		19.1	
Sample ID												
BLK01LCS	1302291		13.7		1121244		17.2		592606		19.6	
BLK01SLCS	1336804		13.7		1144707		17.2		585241		19.6	
BLK01	1272102		13.7		1101623		17.2		558574		19.6	
CAMO-09-6615	987844		13.7		852943		17.2		447461		19.6	
CAMO-09-6614	954500		13.7		826261		17.2		426127		19.6	
CAMO-09-6613	955445		13.7		857931		17.2		443763		19.6	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: VOA1.I

GC Column: RTX-Volatiles

Client SDG: 09-2536

STD Analysis Time: 14-JUL-09 08:55

Data File: 1u202.d

	Fluorobenzene			Chlorobenzene-d5			1,4-Dichlorobenzene-d4		
	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	1039551		13.7	929005		17.2	530915		19.6
Upper Limit	2079102		14.2	1858010		17.7	1061830		20.1
Lower Limit	519776		13.2	464503		16.7	265458		19.1
Sample ID									
BLK02LCS	1092399		13.7	978949		17.2	544041		19.6
BLK02SLCS	1129871		13.7	985471		17.2	517763		19.6
BLK02	990347		13.7	871539		17.2	460694		19.6
CAMO-09-6615MS	967784		13.7	898345		17.2	518859		19.6
CAMO-09-6615MSD	1023033		13.7	915032		17.2	496875		19.6

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**	**Date Collected:**	**06/30/2009 12:00**	**Matrix:**	**R**
Lab Sample ID:	**232754003**	**Date Received:**	**07/02/2009 08:40**	**%Moisture:**	**9.7**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**CAMO-09-6613**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/13/2009 14:40**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/13/2009 12:07**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u111.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.377	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.332	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.332	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.332	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.332	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.632	1.11
67-64-1	Acetone	U	5.54	ug/kg	1.84	5.54
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.332	1.11
74-88-4	Iodomethane	U	5.54	ug/kg	1.77	5.54
75-09-2	Methylene chloride	U	5.54	ug/kg	2.22	5.54
75-15-0	Carbon disulfide	U	5.54	ug/kg	1.38	5.54
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.332	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.332	1.11
78-93-3	2-Butanone	U	5.54	ug/kg	1.66	5.54
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.332	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.332	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.332	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.366	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.332	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.332	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.332	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.332	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.332	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.366	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.332	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.332	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.332	1.11
108-10-1	4-Methyl-2-pentanone	U	5.54	ug/kg	1.38	5.54
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.332	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.332	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.332	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.332	1.11
591-78-6	2-Hexanone	U	5.54	ug/kg	1.66	5.54
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.332	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.332	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.332	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.332	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.332	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6613	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 14:40	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:07	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u111.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.332	1.11
179601-23-1	m,p-Xylenes	U	2.22	ug/kg	0.332	2.22
95-47-6	o-Xylene	U	1.11	ug/kg	0.332	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.332	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.332	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.332	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.332	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.332	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.332	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.332	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.332	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.332	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.332	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.332	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.332	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.332	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.332	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.332	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.332	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.332	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.332	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.54	ug/kg	1.77	5.54
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.332	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.332	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	16.58	8.56	ug/kg	99	NJ
	Unknown Siloxane	18.09	11.4	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u111.d
Lab Smp Id: 232754003 Client Smp ID: CAMO-09-6613
Inj Date : 13-JUL-2009 14:40
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232754003|884831|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	9.74370	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	955445	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.162	(1.000)	857931	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	443763	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.337	(0.975)	457224	56.2600	62.3
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1442846	48.3091	53.5
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	588633	51.5022	57.1

ION RATIO REPORT

VOA REPORT

Data file: 1u111.d
Report Date: 07/14/2009 07:28
Lab. ID: 232754003 SampleType: SAMPLE
Injection Date: 13-JUL-2009 14:40
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232754003|884831|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2536
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
51 1,2-Dichloroethane				CAS#: 107-06-2		
62	15252	13.69	13.44	80-120	100	(T)
64	2540	13.70	13.44	2- 62	17	(T)
64 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	14239	15.53	15.36	80-120	100	(T)
43	7547	15.53	15.36	209-269	53	(QT)
100	960359	15.53	15.36	0- 60	6745	(QT)
74 1,2-Dibromoethane				CAS#: 106-93-4		
107	15088	16.58	16.73	80-120	100	(T)
109	8711	16.58	16.73	65-125	58	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u111.d
Lab Smp Id: 232754003 Client Smp ID: CAMO-09-6613
Inj Date : 13-JUL-2009 14:40
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232754003|884831|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	9.74370	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.166	2689083	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
1,4-Methanoazulene, decahydro-4,8,8-trim				CAS #: 475-20-7			
16.577	415293	7.72183017	8.6	99	NIST05.L	60020	76
Unknown Siloxane				CAS #:			
18.087	551636	10.2569583	11.4	0		0	76

Data File: /chem/VOA1.i/071309v1/1u111.d
Date : 13-JUL-2009 14:40
Client ID: CAMD-09-6613
Sample Info: |2327540031884831|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

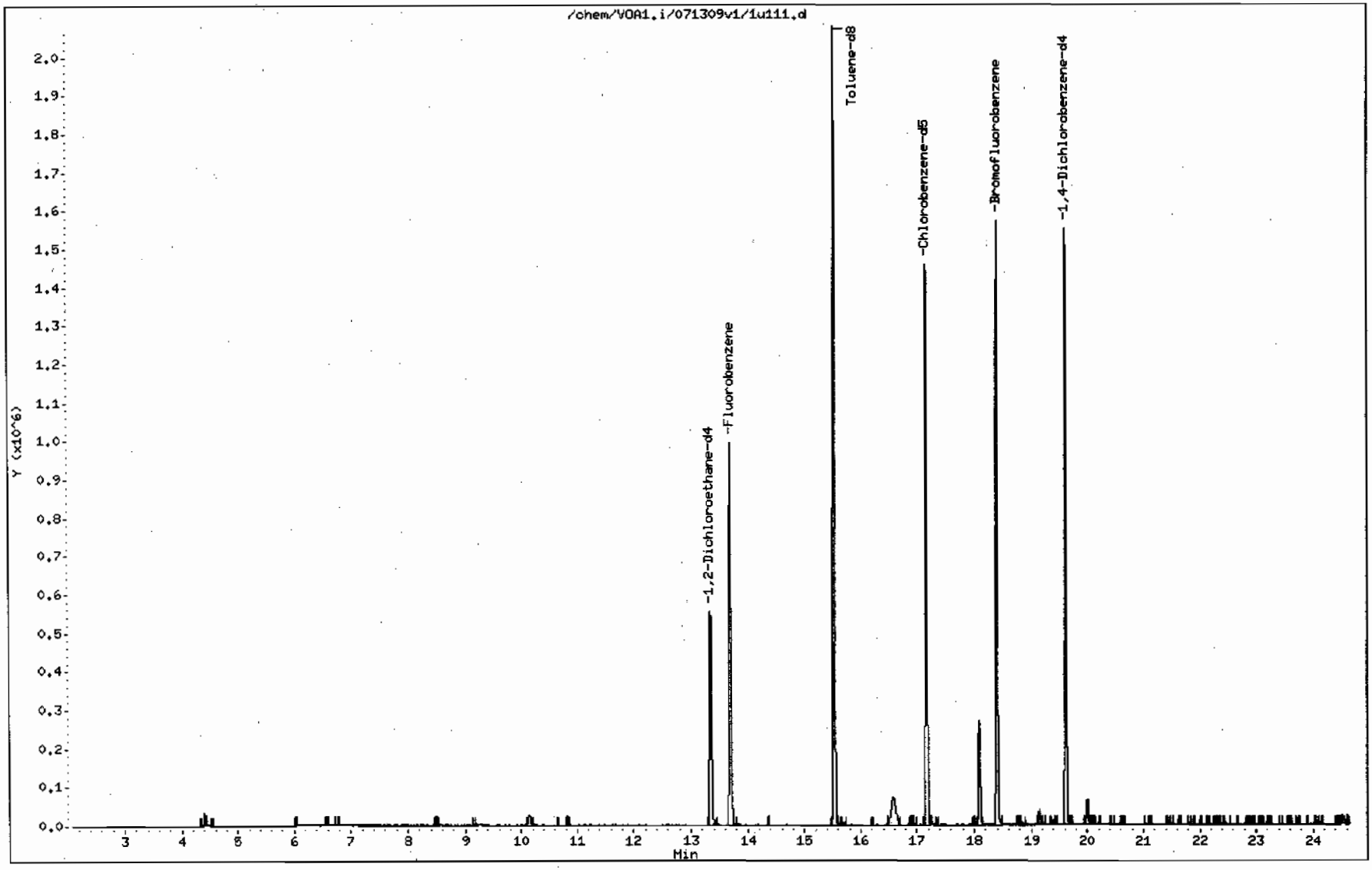

Data File: /chem/VOA1.i/071309v1/1u111.d

Date : 13-JUL-2009 14:40

Client ID: CAMO-09-6613

Instrument: VOA1.i

Sample Info: 1232754003188483111VOAF11

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60020	99	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60048	98	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	10219-75-7	NIST05.L	60053	98	C15H24	204

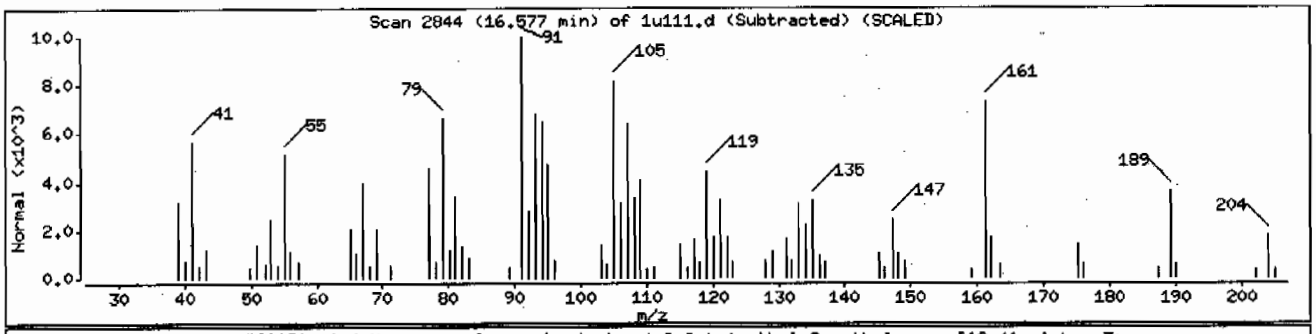

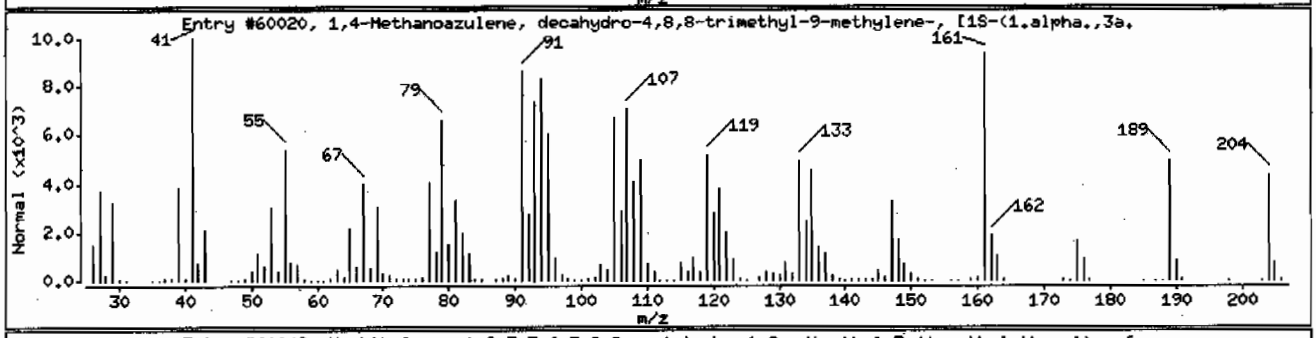

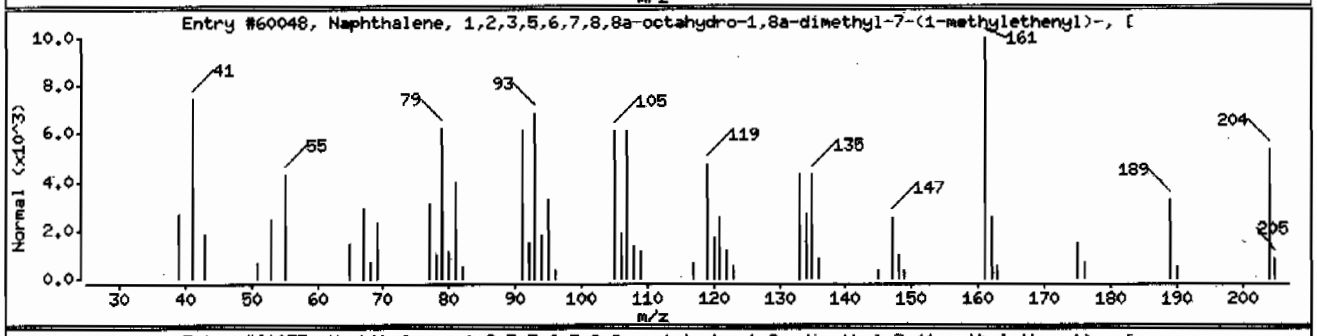

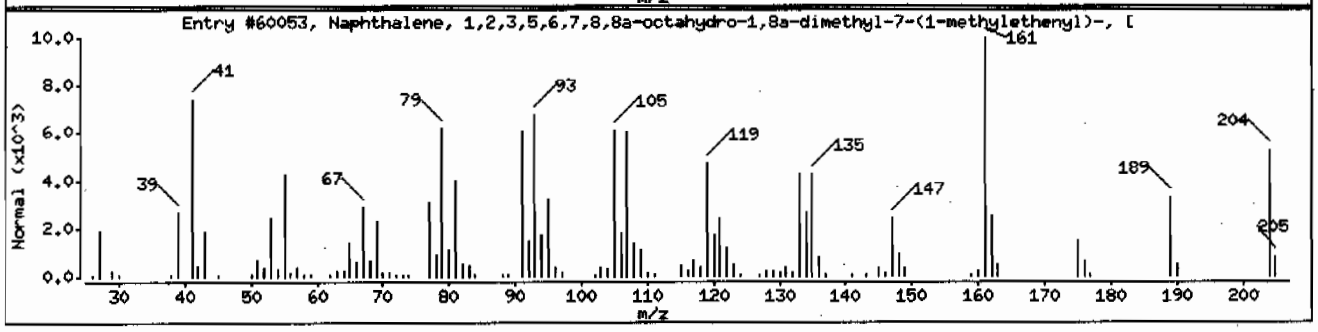

Data File: /chem/VOA1.i/071309v1/1u111.d

Date : 13-JUL-2009 14:40

Client ID: CAMO-09-6613

Instrument: VOA1.i

Sample Info: |2327540031884831|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Anthracene, 9,10-dihydro-9,10-dimethyl-	22566-43-4	NIST05.L	63100	25	C16H16	208
2-Phenylindolizine	25379-20-8	NIST05.L	52067	22	C14H11N	193
Trisiloxane, 1,1,3,3,5,5-hexamethyl-	1189-93-1	NIST05.L	63149	22	C6H20O2Si3	208

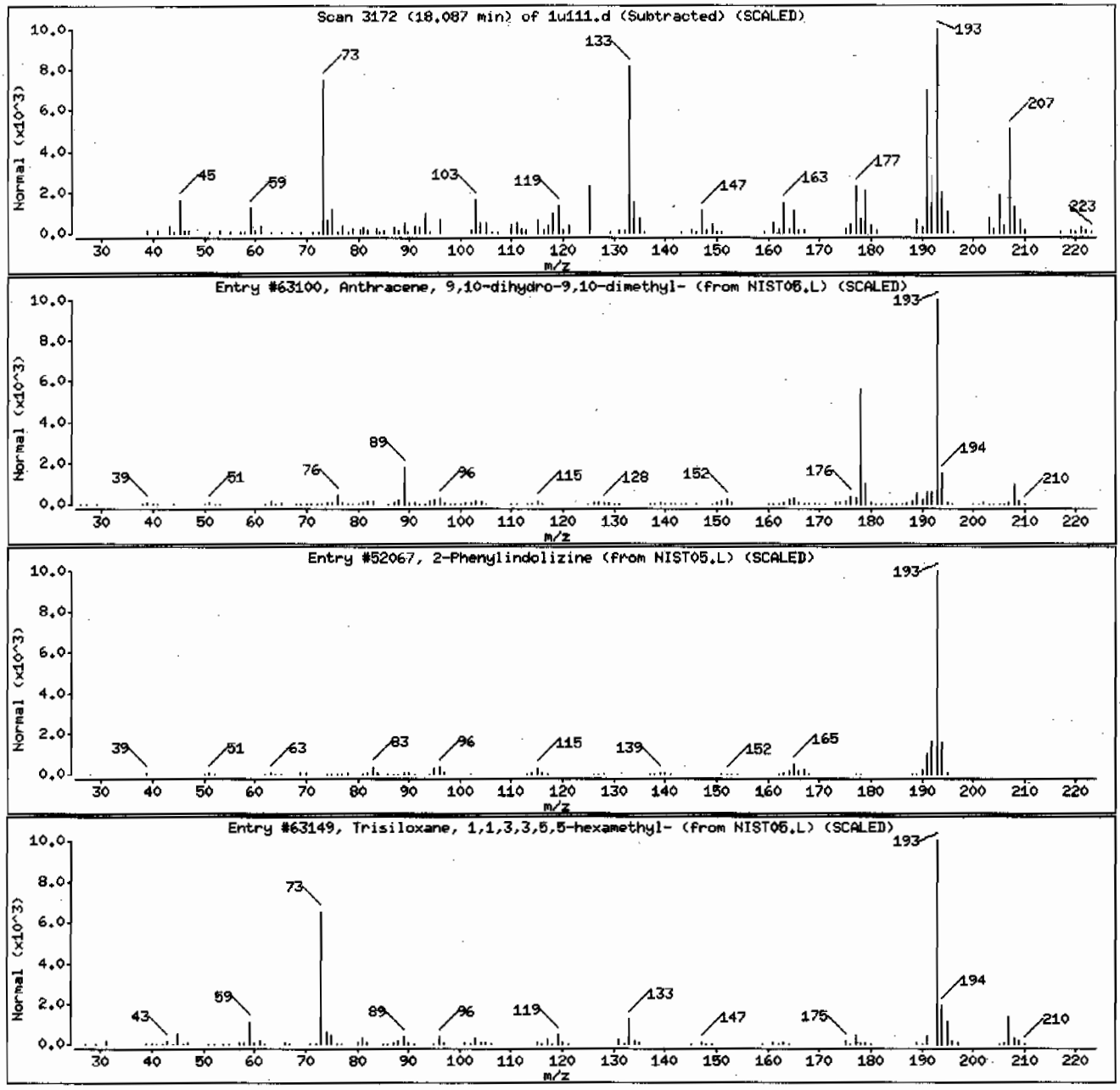

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6614	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 14:10	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:06	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u110.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.11	ug/kg	0.377	1.11
74-87-3	Chloromethane	U	1.11	ug/kg	0.333	1.11
75-01-4	Vinyl chloride	U	1.11	ug/kg	0.333	1.11
74-83-9	Bromomethane	U	1.11	ug/kg	0.333	1.11
75-00-3	Chloroethane	U	1.11	ug/kg	0.333	1.11
75-69-4	Trichlorofluoromethane	U	1.11	ug/kg	0.632	1.11
67-64-1	Acetone	U	5.54	ug/kg	1.84	5.54
75-35-4	1,1-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
74-88-4	Iodomethane	U	5.54	ug/kg	1.77	5.54
75-09-2	Methylene chloride	U	5.54	ug/kg	2.22	5.54
75-15-0	Carbon disulfide	U	5.54	ug/kg	1.39	5.54
156-60-5	trans-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
75-34-3	1,1-Dichloroethane	U	1.11	ug/kg	0.333	1.11
78-93-3	2-Butanone	U	5.54	ug/kg	1.66	5.54
156-59-2	cis-1,2-Dichloroethylene	U	1.11	ug/kg	0.333	1.11
594-20-7	2,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11
67-66-3	Chloroform	U	1.11	ug/kg	0.333	1.11
74-97-5	Bromochloromethane	U	1.11	ug/kg	0.366	1.11
71-55-6	1,1,1-Trichloroethane	U	1.11	ug/kg	0.333	1.11
563-58-6	1,1-Dichloropropene	U	1.11	ug/kg	0.333	1.11
56-23-5	Carbon tetrachloride	U	1.11	ug/kg	0.333	1.11
107-06-2	1,2-Dichloroethane	U	1.11	ug/kg	0.333	1.11
71-43-2	Benzene	U	1.11	ug/kg	0.333	1.11
79-01-6	Trichloroethylene	U	1.11	ug/kg	0.366	1.11
78-87-5	1,2-Dichloropropane	U	1.11	ug/kg	0.333	1.11
75-27-4	Bromodichloromethane	U	1.11	ug/kg	0.333	1.11
74-95-3	Dibromomethane	U	1.11	ug/kg	0.333	1.11
108-10-1	4-Methyl-2-pentanone	U	5.54	ug/kg	1.39	5.54
10061-01-5	cis-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11
108-88-3	Toluene	U	1.11	ug/kg	0.333	1.11
10061-02-6	trans-1,3-Dichloropropylene	U	1.11	ug/kg	0.333	1.11
79-00-5	1,1,2-Trichloroethane	U	1.11	ug/kg	0.333	1.11
591-78-6	2-Hexanone	U	5.54	ug/kg	1.66	5.54
142-28-9	1,3-Dichloropropane	U	1.11	ug/kg	0.333	1.11
127-18-4	Tetrachloroethylene	U	1.11	ug/kg	0.333	1.11
124-48-1	Dibromochloromethane	U	1.11	ug/kg	0.333	1.11
106-93-4	1,2-Dibromoethane	U	1.11	ug/kg	0.333	1.11
108-90-7	Chlorobenzene	U	1.11	ug/kg	0.333	1.11

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6614	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 14:10	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:06	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u110.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.11	ug/kg	0.333	1.11
179601-23-1	m,p-Xylenes	U	2.22	ug/kg	0.333	2.22
95-47-6	o-Xylene	U	1.11	ug/kg	0.333	1.11
100-42-5	Styrene	U	1.11	ug/kg	0.333	1.11
75-25-2	Bromoform	U	1.11	ug/kg	0.333	1.11
79-34-5	1,1,2,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11
96-18-4	1,2,3-Trichloropropane	U	1.11	ug/kg	0.333	1.11
108-86-1	Bromobenzene	U	1.11	ug/kg	0.333	1.11
103-65-1	n-Propylbenzene	U	1.11	ug/kg	0.333	1.11
95-49-8	2-Chlorotoluene	U	1.11	ug/kg	0.333	1.11
98-82-8	Isopropylbenzene	U	1.11	ug/kg	0.333	1.11
108-67-8	1,3,5-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11
106-43-4	4-Chlorotoluene	U	1.11	ug/kg	0.333	1.11
98-06-6	tert-Butylbenzene	U	1.11	ug/kg	0.333	1.11
95-63-6	1,2,4-Trimethylbenzene	U	1.11	ug/kg	0.333	1.11
135-98-8	sec-Butylbenzene	U	1.11	ug/kg	0.333	1.11
99-87-6	4-Isopropyltoluene	U	1.11	ug/kg	0.333	1.11
541-73-1	1,3-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11
106-46-7	1,4-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11
104-51-8	n-Butylbenzene	U	1.11	ug/kg	0.333	1.11
96-12-8	1,2-Dibromo-3-chloropropane	U	1.11	ug/kg	0.333	1.11
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.54	ug/kg	1.77	5.54
630-20-6	1,1,1,2-Tetrachloroethane	U	1.11	ug/kg	0.333	1.11
95-50-1	1,2-Dichlorobenzene	U	1.11	ug/kg	0.333	1.11

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	No Tentatively Identified Compounds Found			ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u110.d
Lab Smp Id: 232754002 Client Smp ID: CAMO-09-6614
Inj Date : 13-JUL-2009 14:10
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232754002|884831|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	9.77710	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	954500	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.162	(1.000)	826261	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	426127	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.337	(0.975)	446871	55.0406	61.0
$ 65 Toluene-d8	98	15.528	15.523	(0.904)	1434712	49.8780	55.3
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	576309	52.5108	58.2

ION RATIO REPORT

VOA REPORT

Data file: 1u110.d
Report Date: 07/13/2009 14:32
Lab. ID: 232754002 SampleType: SAMPLE
Injection Date: 13-JUL-2009 14:10
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232754002|884831|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2536
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
51	1,2-Dichloroethane			CAS#: 107-06-2		
62	15219	13.69	13.44	80-120	100	(T)
64	2964	13.69	13.44	2- 62	19	(T)
64	4-Methyl-2-pentanone			CAS#: 108-10-1		
58	14024	15.53	15.36	80-120	100	(T)
43	7410	15.53	15.36	209-269	53	(QT)
100	959698	15.53	15.36	0- 60	6843	(QT)
74	1,2-Dibromoethane			CAS#: 106-93-4		
107	5996	16.59	16.73	80-120	100	(T)
109	3100	16.59	16.73	65-125	52	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u110.d
Lab Smp Id: 232754002 Client Smp ID: CAMO-09-6614
Inj Date : 13-JUL-2009 14:10
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232754002|884831|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/071309v1/1u110.d
Date : 13-JUL-2009 14:10
Client ID: CAMO-09-6614
Sample Info: |2327540021884831|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

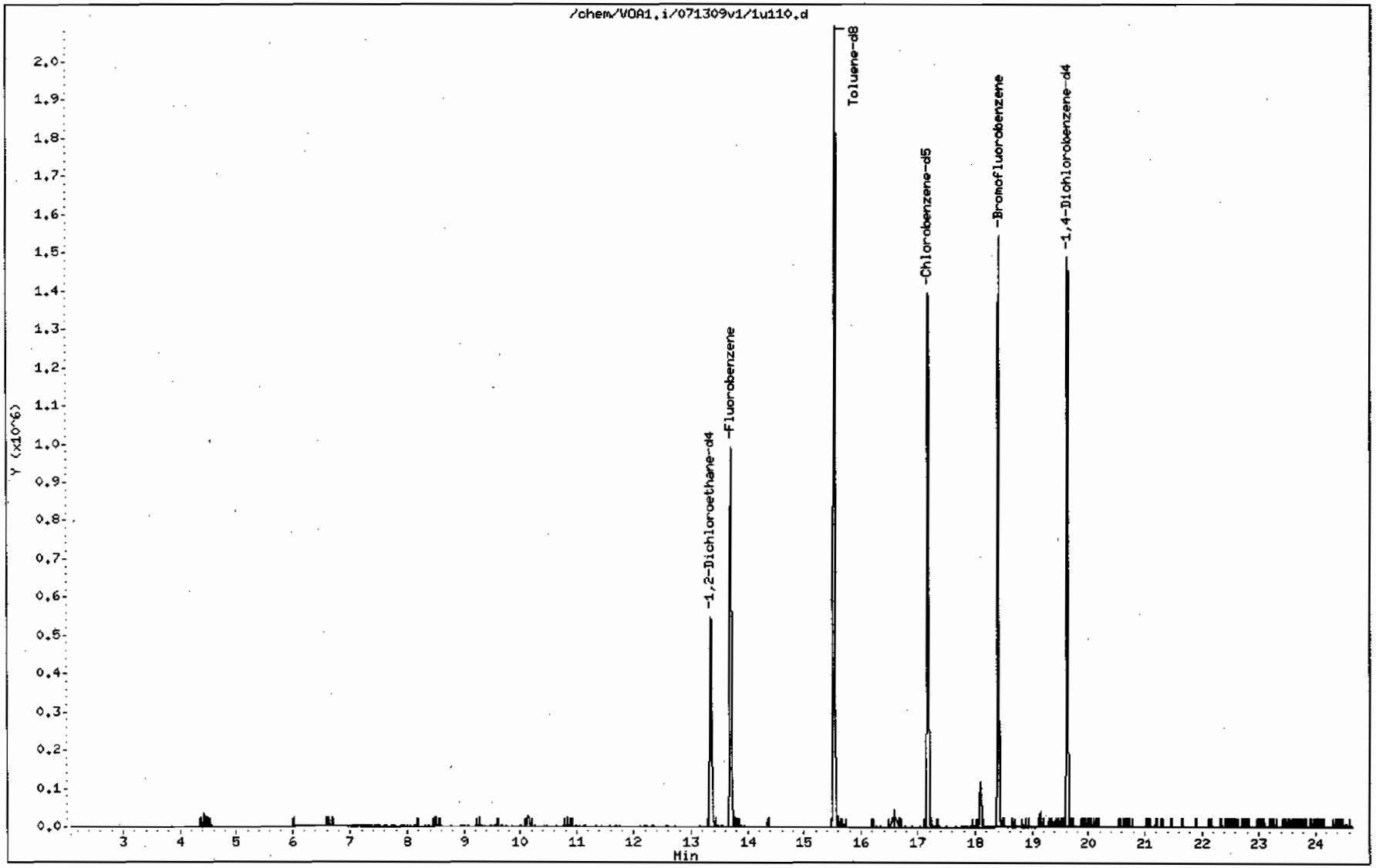

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754001	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6615	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 13:40	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u109.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.08	ug/kg	0.367	1.08
74-87-3	Chloromethane	U	1.08	ug/kg	0.323	1.08
75-01-4	Vinyl chloride	U	1.08	ug/kg	0.323	1.08
74-83-9	Bromomethane	U	1.08	ug/kg	0.323	1.08
75-00-3	Chloroethane	U	1.08	ug/kg	0.323	1.08
75-69-4	Trichlorofluoromethane	U	1.08	ug/kg	0.614	1.08
67-64-1	Acetone	U	5.39	ug/kg	1.79	5.39
75-35-4	1,1-Dichloroethylene	U	1.08	ug/kg	0.323	1.08
74-88-4	Iodomethane	U	5.39	ug/kg	1.72	5.39
75-09-2	Methylene chloride	U	5.39	ug/kg	2.16	5.39
75-15-0	Carbon disulfide	U	5.39	ug/kg	1.35	5.39
156-60-5	trans-1,2-Dichloroethylene	U	1.08	ug/kg	0.323	1.08
75-34-3	1,1-Dichloroethane	U	1.08	ug/kg	0.323	1.08
78-93-3	2-Butanone	U	5.39	ug/kg	1.62	5.39
156-59-2	cis-1,2-Dichloroethylene	U	1.08	ug/kg	0.323	1.08
594-20-7	2,2-Dichloropropane	U	1.08	ug/kg	0.323	1.08
67-66-3	Chloroform	U	1.08	ug/kg	0.323	1.08
74-97-5	Bromochloromethane	U	1.08	ug/kg	0.356	1.08
71-55-6	1,1,1-Trichloroethane	U	1.08	ug/kg	0.323	1.08
563-58-6	1,1-Dichloropropene	U	1.08	ug/kg	0.323	1.08
56-23-5	Carbon tetrachloride	U	1.08	ug/kg	0.323	1.08
107-06-2	1,2-Dichloroethane	U	1.08	ug/kg	0.323	1.08
71-43-2	Benzene	U	1.08	ug/kg	0.323	1.08
79-01-6	Trichloroethylene	U	1.08	ug/kg	0.356	1.08
78-87-5	1,2-Dichloropropane	U	1.08	ug/kg	0.323	1.08
75-27-4	Bromodichloromethane	U	1.08	ug/kg	0.323	1.08
74-95-3	Dibromomethane	U	1.08	ug/kg	0.323	1.08
108-10-1	4-Methyl-2-pentanone	U	5.39	ug/kg	1.35	5.39
10061-01-5	cis-1,3-Dichloropropylene	U	1.08	ug/kg	0.323	1.08
108-88-3	Toluene	U	1.08	ug/kg	0.323	1.08
10061-02-6	trans-1,3-Dichloropropylene	U	1.08	ug/kg	0.323	1.08
79-00-5	1,1,2-Trichloroethane	U	1.08	ug/kg	0.323	1.08
591-78-6	2-Hexanone	U	5.39	ug/kg	1.62	5.39
142-28-9	1,3-Dichloropropane	U	1.08	ug/kg	0.323	1.08
127-18-4	Tetrachloroethylene	U	1.08	ug/kg	0.323	1.08
124-48-1	Dibromochloromethane	U	1.08	ug/kg	0.323	1.08
106-93-4	1,2-Dibromoethane	U	1.08	ug/kg	0.323	1.08
108-90-7	Chlorobenzene	U	1.08	ug/kg	0.323	1.08

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754001	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6615	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 13:40	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 12:05	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u109.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.08	ug/kg	0.323	1.08
179601-23-1	m,p-Xylenes	U	2.16	ug/kg	0.323	2.16
95-47-6	o-Xylene	U	1.08	ug/kg	0.323	1.08
100-42-5	Styrene	U	1.08	ug/kg	0.323	1.08
75-25-2	Bromoform	U	1.08	ug/kg	0.323	1.08
79-34-5	1,1,2,2-Tetrachloroethane	U	1.08	ug/kg	0.323	1.08
96-18-4	1,2,3-Trichloropropane	U	1.08	ug/kg	0.323	1.08
108-86-1	Bromobenzene	U	1.08	ug/kg	0.323	1.08
103-65-1	n-Propylbenzene	U	1.08	ug/kg	0.323	1.08
95-49-8	2-Chlorotoluene	U	1.08	ug/kg	0.323	1.08
98-82-8	Isopropylbenzene	U	1.08	ug/kg	0.323	1.08
108-67-8	1,3,5-Trimethylbenzene	U	1.08	ug/kg	0.323	1.08
106-43-4	4-Chlorotoluene	U	1.08	ug/kg	0.323	1.08
98-06-6	tert-Butylbenzene	U	1.08	ug/kg	0.323	1.08
95-63-6	1,2,4-Trimethylbenzene	U	1.08	ug/kg	0.323	1.08
135-98-8	sec-Butylbenzene	U	1.08	ug/kg	0.323	1.08
99-87-6	4-Isopropyltoluene	U	1.08	ug/kg	0.323	1.08
541-73-1	1,3-Dichlorobenzene	U	1.08	ug/kg	0.323	1.08
106-46-7	1,4-Dichlorobenzene	U	1.08	ug/kg	0.323	1.08
104-51-8	n-Butylbenzene	U	1.08	ug/kg	0.323	1.08
96-12-8	1,2-Dibromo-3-chloropropane	U	1.08	ug/kg	0.323	1.08
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.39	ug/kg	1.72	5.39
630-20-6	1,1,1,2-Tetrachloroethane	U	1.08	ug/kg	0.323	1.08
95-50-1	1,2-Dichlorobenzene	U	1.08	ug/kg	0.323	1.08

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Siloxane	18.09	100	ug/kg		J
	Unknown	20	53.7	ug/kg		J

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u109.d
Lab Smp Id: 232754001 Client Smp ID: CAMO-09-6615
Inj Date : 13-JUL-2009 13:40
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232754001|884831|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: ls326.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	7.23460	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	987844	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.162	(1.000)	852943	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	447461	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.337	(0.975)	461955	54.9779	59.3
$ 65 Toluene-d8	98	15.528	15.523	(0.904)	1470956	49.5383	53.4
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	618551	53.6726	57.8

ION RATIO REPORT

VOA REPORT

Data file: 1u109.d
Report Date: 07/13/2009 14:08
Lab. ID: 232754001 SampleType: SAMPLE
Injection Date: 13-JUL-2009 13:40
Operator: RXM4 Instrument: VOA1.i
Sample Info: |232754001|884831|1|VOAF|1|
Miscellaneous Info: LANL 5G N/A
Comment:
Method used: /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2536
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
51 1,2-Dichloroethane				CAS#: 107-06-2		
62	15642	13.69	13.44	80-120	100	(T)
64	2703	13.69	13.44	2- 62	17	(T)
64 4-Methyl-2-pentanone				CAS#: 108-10-1		
58	14568	15.53	15.36	80-120	100	(T)
43	7389	15.53	15.36	209-269	51	(QT)
100	979087	15.53	15.36	0- 60	6720	(QT)
81 o-Xylene				CAS#: 95-47-6		
106	4420	18.08	17.79	80-120	100	(T)
91	32439	18.11	17.79	189-249	734	(QT)
82 Styrene				CAS#: 100-42-5		
104	27190	18.08	17.81	80-120	100	(T)
78	158	18.07	17.81	22- 82	1	(QT)
83 Bromoform				CAS#: 75-25-2		
173	1412	18.09	18.11	80-120	100	( )
171	297	18.10	18.11	21- 81	21	( )
84 Isopropylbenzene				CAS#: 98-82-8		
105	29408	18.09	18.14	80-120	100	( )
120	9833	18.08	18.14	0- 54	33	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
89 n-Propylbenzene			CAS#: 103-65-1			
91	32026	18.11	18.57	80-120	100	(T)
120	8440	18.08	18.57	0- 51	26	(T)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u109.d
Lab Smp Id: 232754001 Client Smp ID: CAMO-09-6615
Inj Date : 13-JUL-2009 13:40
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |232754001|884831|1|VOAF|1|
Misc Info : LANL 5G N/A
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	7.23460	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 76 Chlorobenzene-d5	17.171	2671726	50.000
* 102 1,4-Dichlorobenzene-d4	19.620	2788514	50.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Siloxane				CAS #:			
18.087	4956779	92.7636041	100	0		0	76

RT	AREA	CONCENTRATIONS ON-COL(ug/l)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
20.002	2779407	49.8367043	53.7	0		0	102

Data File: /chem/VOA1.i/071309v1/1u109.d
Date : 13-JUL-2009 13:40
Client ID: CAMO-09-6615
Sample Info: |2327540001|884831|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

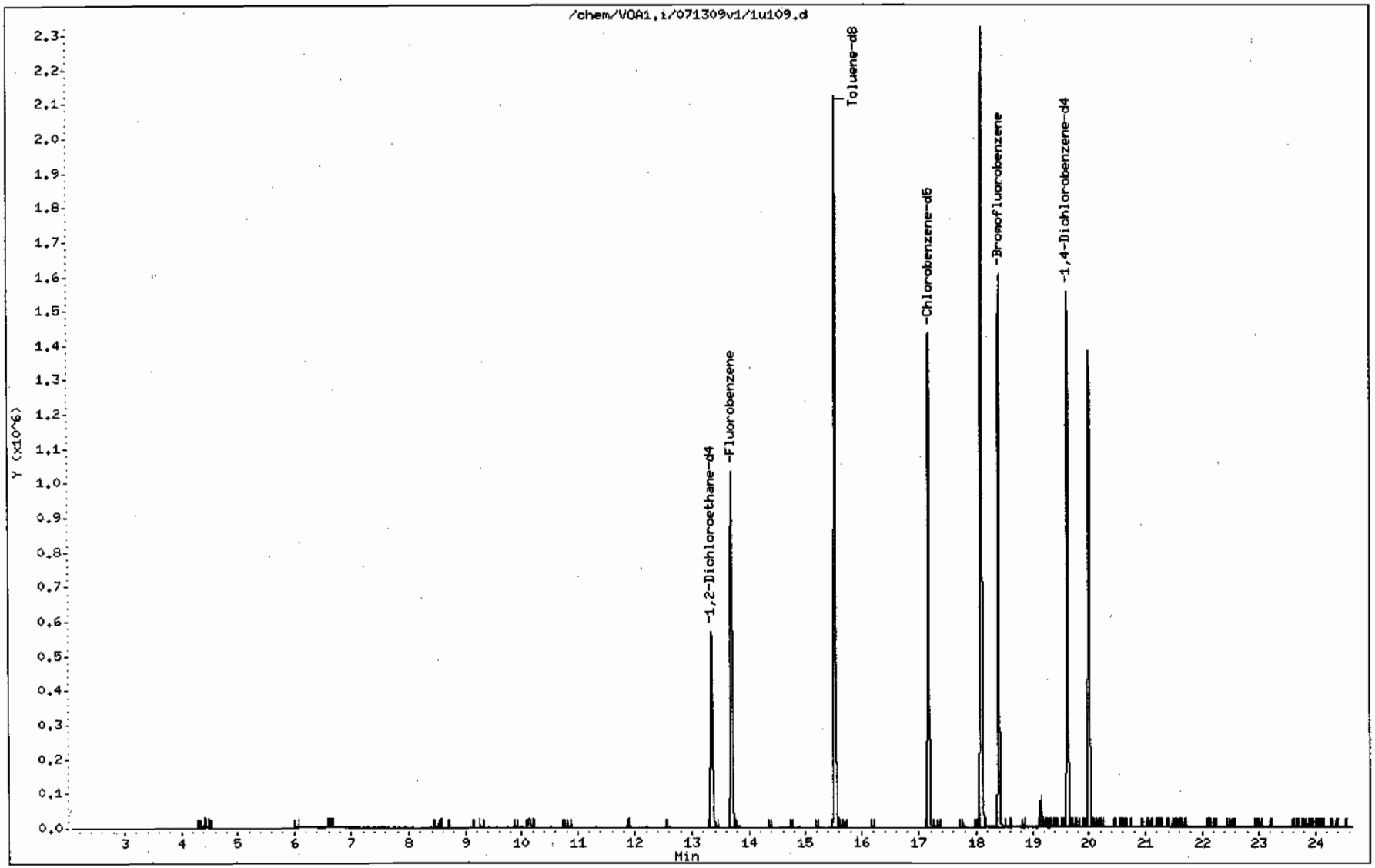

Data File: /chem/VOA1.i/071309v1/1u109.d

Date : 13-JUL-2009 13:40

Client ID: CAMO-09-6615

Instrument: VOA1.i

Sample Info: |2327540011884831|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Siloxane						
Anthracene, 9,10-dihydro-9,10-dimethyl-	22566-43-4	NIST05.L	63100	25	C16H16	208
Benzaldehyde, p-nitro-, dimethylhydrazon	10424-92-7	NIST05.L	52177	18	C9H11N3O2	193
1H-Indole, 2-phenyl-	948-65-2	NIST05.L	52074	18	C14H11N	193

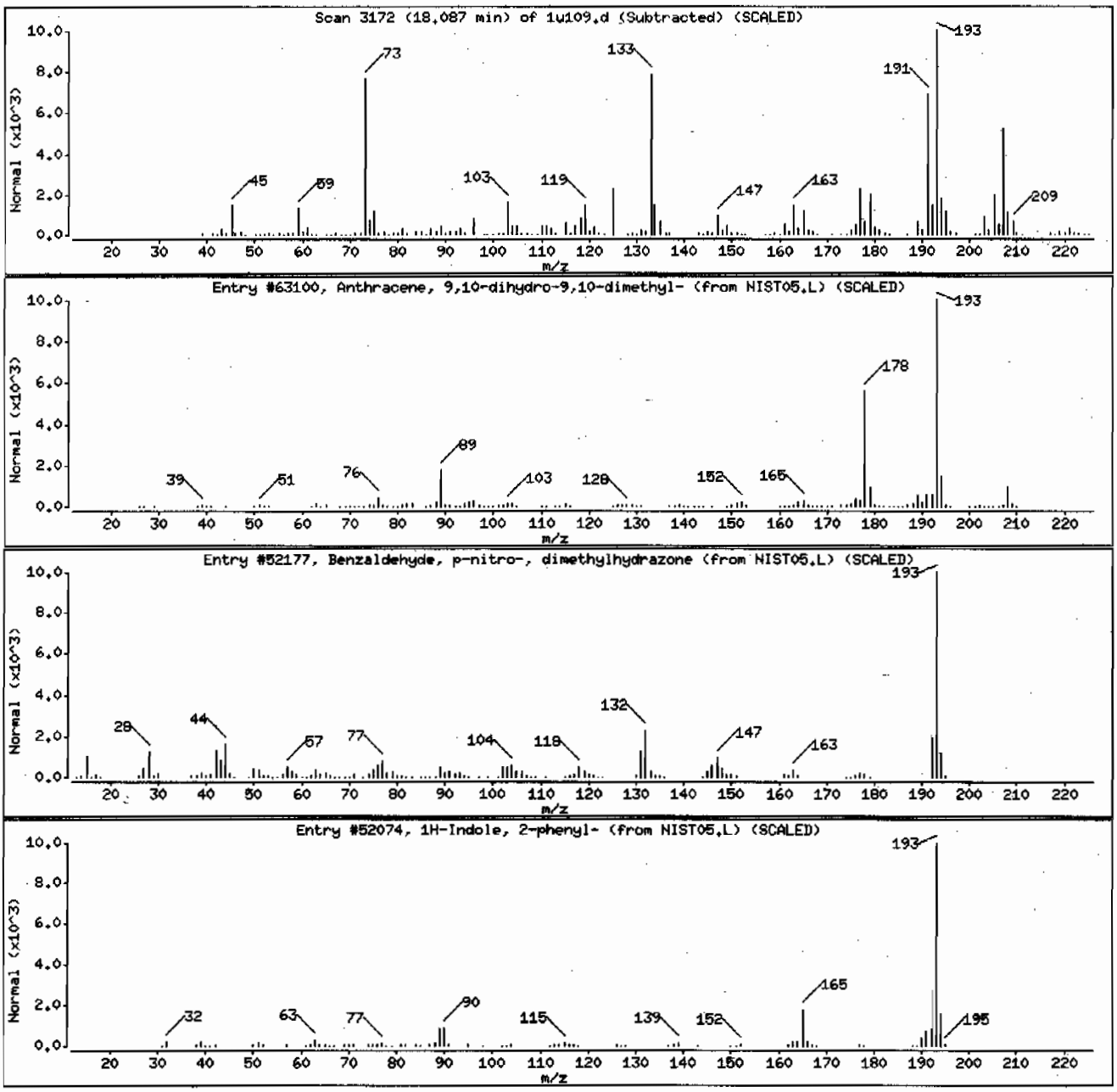

Data File: /chem/VOA1.i/071309v1/1u109.d

Date : 13-JUL-2009 13:40

Client ID: CAMO-09-6615

Instrument: VOA1.i

Sample Info: |2327540011884831|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown			0	0		0

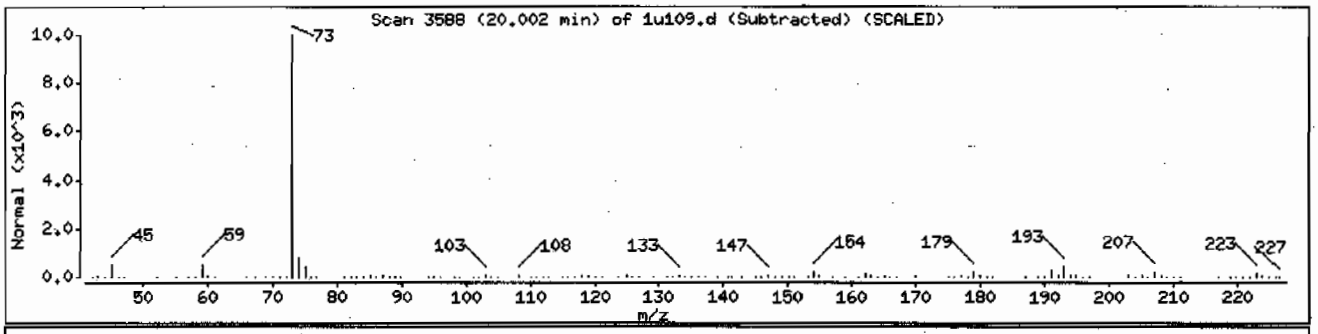

Standard Data

EPA 524.2/Low level SW846 8260B and Regular level 8260B and EPA 624
Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4 #	Level 5	Level 6	Level 7 !	Level 7a
1,2-Dichloroethane-d4(surr)		0.5	1	2	5	10	20	50	100
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol			50	100	250	500	1000	2500	5000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane			5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	250	500
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	250	500

tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Toluene-d8 (surr)		0.5	1	2	5	10	20	50	100
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Cyclohexanone			50	100	250	500	1000	2500	5000
Ethyl methacrylate			5	10	25	50	100	250	500
Bromofluorobenzene (surr)		0.5	1	2	5	10	20	50	100
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Tetrahydrofuran			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Report Date: 13-Jul-2009 11:23

Calibration History

Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Start Cal Date: 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
01-JUL-2009 20:05	ICALsubS	/chem/VOA1.i/070109v1/1s320.d
01-JUL-2009 15:31	ICALsubL+	/chem/VOA1.i/070109v1/1s311.d
Cal Level: 2 , Cal Amount: 2.00000		
01-JUL-2009 20:36	ICALsubS	/chem/VOA1.i/070109v1/1s321.d
01-JUL-2009 16:32	ICALsubL+	/chem/VOA1.i/070109v1/1s313.d
Cal Level: 3 , Cal Amount: 5.00000		
01-JUL-2009 21:06	ICALsubS	/chem/VOA1.i/070109v1/1s322.d
01-JUL-2009 17:02	ICALsubL+	/chem/VOA1.i/070109v1/1s314.d
Cal Level: 4 , Cal Amount: 10.00000		
01-JUL-2009 21:36	ICALsubS	/chem/VOA1.i/070109v1/1s323.d
01-JUL-2009 17:32	ICALsubL+	/chem/VOA1.i/070109v1/1s315.d
Cal Level: 5 , Cal Amount: 20.00000		
01-JUL-2009 22:07	ICALsubS	/chem/VOA1.i/070109v1/1s324.d
01-JUL-2009 18:02	ICALsubL+	/chem/VOA1.i/070109v1/1s316.d
Cal Level: 6 , Cal Amount: 50.00000		
01-JUL-2009 22:38	ICALsubS	/chem/VOA1.i/070109v1/1s325.d
01-JUL-2009 18:33	ICALsubL+	/chem/VOA1.i/070109v1/1s317.d
Cal Level: 7 , Cal Amount: 100.00000		
01-JUL-2009 23:08	ICALsubS	/chem/VOA1.i/070109v1/1s326.d
01-JUL-2009 19:04	ICALsubL+	/chem/VOA1.i/070109v1/1s318.d
Cal Level: 8 , Cal Amount: 200.00000		
01-JUL-2009 15:01	BENZENE+	/chem/VOA1.i/070109v1/1s310.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

Ccal Level: 6 , Ccal Amount: 50.0		
13-JUL-2009 10:00	CALsubL+	/chem/VOA1.i/071309v1/1u102.d
Ccal Level: 6 , Ccal Amount: 50.0		
13-JUL-2009 10:31	CALsubS+SS	/chem/VOA1.i/071309v1/1u103.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Cal Date : 13-Jul-2009 11:08 ron01469

Calibration File Names:
Level 1: /chem/VOA1.i/070109v1/1s320.d
Level 2: /chem/VOA1.i/070109v1/1s321.d
Level 3: /chem/VOA1.i/070109v1/1s322.d
Level 4: /chem/VOA1.i/070109v1/1s323.d
Level 5: /chem/VOA1.i/070109v1/1s324.d
Level 6: /chem/VOA1.i/070109v1/1s325.d
Level 7: /chem/VOA1.i/070109v1/1s326.d
Level 8: /chem/VOA1.i/070109v1/1s310.d

Compound	1 Level 1 / 100 Level 7	2 Level 2 / 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
M 1 Xylenes (total)	0.63742	0.69307	0.71573	0.71943	0.73946	0.68749					
	0.64982	+++++					AVRG		0.69178		5.39184
M 2 1,2-Dichloroethylene (total)	0.32788	0.33738	0.34683	0.33689	0.34479	0.32967					
	0.31727	+++++					AVRG		0.33439		3.07833
M 3 1,3-Dichloropropylene	0.55477	0.55186	0.59320	0.59302	0.62220	0.61476					
	0.61636	+++++					AVRG		0.59231		4.88471
4 Chlorotrifluoroethylene	+++++	0.15817	0.18048	0.16606	0.19195	0.22587					
	0.21863	+++++					AVRG		0.19019		14.46938
5 Dichlorodifluoromethane	0.20632	0.20427	0.22782	0.22758	0.24392	0.24683					
	0.24622	+++++					AVRG		0.22899		7.90587

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Cal Date : 13-Jul-2009 11:08 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
6 Chloromethane	0.45944	0.44185	0.45669	0.43521	0.44598	0.44230					
	0.41328	+++++					AVRG		0.44211		3.46324
7 Vinyl chloride	0.40464	0.37453	0.36050	0.33937	0.32232	0.30711					
	0.29856	+++++					AVRG		0.34386		11.13694
8 2-Chloro-1,1,1-trifluoroethan	+++++	0.33951	0.33712	0.34484	0.34565	0.34536					
	0.33039	+++++					AVRG		0.34048		1.77924
9 Bromomethane	0.23528	0.23489	0.24562	0.23527	0.23982	0.23784					
	0.22252	+++++					AVRG		0.23589		2.96933
10 Chloroethane	0.25488	0.24919	0.27580	0.25358	0.25901	0.26045					
	0.25180	+++++					AVRG		0.25782		3.42847
11 Trichlorofluoromethane	0.29908	0.30975	0.33790	0.32430	0.33766	0.33952					
	0.33111	+++++					AVRG		0.32562		4.81819
12 Ethyl Ether	0.28323	0.26535	0.29293	0.27952	0.29122	0.30219					
	0.29467	+++++					AVRG		0.28702		4.22281
13 Acrolein	0.04645	0.04741	0.05129	0.05174	0.05387	0.05109					
	0.04441	+++++					AVRG		0.04947		6.87869
14 Trichlorotrifluoroethane	0.30167	0.30505	0.30545	0.28816	0.27868	0.25372					
	0.23745	+++++					AVRG		0.28145		9.51098

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INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Cal Date : 13-Jul-2009 11:08 ron01469

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
15 1,1-Dichloroethylene	0.58633	0.59852	0.61194	0.60535	0.62516	0.57999					
	0.55744	+++++					AVRG		0.59496		3.77574
16 Acetone	0.27649	0.24089	0.23620	0.21911	0.20456	0.21940					
	0.20910	+++++					AVRG		0.22939		10.72331
17 Isopropyl Alcohol	+++++	0.01903	0.01848	0.01937	0.01689	0.02192					
	0.02133	+++++					AVRG		0.01950		9.53962
18 Iodomethane	0.47169	0.47936	0.50244	0.48655	0.49232	0.46886					
	0.43739	+++++					AVRG		0.47694		4.40006
19 Carbon disulfide	0.94241	0.98959	1.00350	0.97652	0.98129	0.91611					
	0.88668	+++++					AVRG		0.95658		4.48087
20 Allyl chloride	11825	25078	68054	154967	339827	930196					
	1941178	+++++					LINR	0.10458	0.14018		0.99985
21 Methyl acetate	0.30042	0.26814	0.26181	0.25233	0.25898	0.24408					
	0.22827	+++++					AVRG		0.25915		8.65589
22 Acetonitrile	0.04401	0.04236	0.04219	0.04208	0.03937	0.04098					
	0.03948	+++++					AVRG		0.04150		4.02704
23 Methylene chloride	+++++	45400	86731	102507	229407	486437					
	1000803	+++++					LINR	-0.08086	0.32678		0.99824

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Method file : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Cal Date : 13-Jul-2009 11:08 ron01469

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
24 tert-Butyl Alcohol	0.02763	0.03053	0.02951	0.03125	0.02699	0.03504					
	0.03341	+++++					AVRG		0.03062		9.52456
25 tert-Butyl methyl ether	0.80459	0.85216	0.80875	0.86628	0.87306	0.85045					
	0.84198	+++++					AVRG		0.84247		3.15261
26 trans-1,2-Dichloroethylene	0.31895	0.33623	0.33538	0.32788	0.33529	0.32120					
	0.31023	+++++					AVRG		0.32645		3.07043
27 Acrylonitrile	0.10755	0.10844	0.11306	0.11361	0.11675	0.11761					
	0.11246	+++++					AVRG		0.11278		3.35889
28 Isopropyl ether	+++++	1.07710	1.08781	1.16279	1.19797	1.25502					
	1.19456	+++++					AVRG		1.16254		5.92447
29 Vinyl acetate	0.41643	0.46281	0.53553	0.53867	0.48575	0.56484					
	0.52591	+++++					AVRG		0.50428		10.26480
30 1,1-Dichloroethane	0.65284	0.66928	0.68115	0.65627	0.65730	0.63135					
	0.59933	+++++					AVRG		0.64965		4.14793
31 2-Chloro-1,3-butadiene	0.38690	0.39861	0.44120	0.44446	0.47248	0.48524					
	0.47521	+++++					AVRG		0.44344		8.64196
32 Ethyl tert-butyl ether	+++++	0.92556	0.96820	1.02086	1.06883	1.12074					
	1.09267	+++++					AVRG		1.03281		7.30147

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Cal Date : 13-Jul-2009 11:08 ron01469

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
33 2,2-Dichloropropane	0.33247	0.34211	0.34943	0.33062	0.33228	0.33275					
	0.32222	+++++					AVRG		0.33455		2.61340
34 Ethyl acetate	0.38164	0.33676	0.30866	0.30424	0.30932	0.29939					
	0.28047	+++++					AVRG		0.31721		10.37983
35 2-Butanone	0.26815	0.25900	0.26099	0.25451	0.24319	0.26629					
	0.24429	+++++					AVRG		0.25663		3.85743
36 cis-1,2-Dichloroethylene	0.33682	0.33854	0.35827	0.34590	0.35430	0.33813					
	0.32432	+++++					AVRG		0.34232		3.36605
37 Propionitrile	0.04329	0.04599	0.04588	0.04568	0.04700	0.04674					
	0.04519	+++++					AVRG		0.04568		2.67174
38 Tetrahydrofuran	0.22029	0.22977	0.22377	0.22605	0.23556	0.23596					
	0.22266	+++++					AVRG		0.22772		2.73431
39 Bromochloromethane	0.15645	0.16431	0.16271	0.15768	0.16039	0.15335					
	0.14755	+++++					AVRG		0.15749		3.65976
40 Methacrylonitrile	0.21475	0.23375	0.23677	0.24017	0.24375	0.24120					
	0.22345	+++++					AVRG		0.23340		4.53488
41 Chloroform	0.60646	0.59906	0.60013	0.57961	0.59162	0.56875					
	0.54762	+++++					AVRG		0.58475		3.57452

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Method file : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Cal Date : 13-Jul-2009 11:08 ron01469

Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	b	Coefficients m1	m2	%RSD or R^2
42 Cyclohexane	0.57075	0.58050	0.61393	0.62030	0.65216	0.62351					
	0.60504	+++++					AVRG		0.60946		4.50126
43 1,1,1-Trichloroethane	0.37096	0.37376	0.39116	0.37314	0.38143	0.36685					
	0.35213	+++++					AVRG		0.37278		3.24628
44 Carbon tetrachloride	0.37013	0.40086	0.41182	0.38843	0.40660	0.38432					
	0.37196	+++++					AVRG		0.39059		4.20967
45 I,1-Dichloropropene	0.39691	0.41672	0.42535	0.41776	0.44198	0.42560					
	0.41493	+++++					AVRG		0.41989		3.25058
46 Isobutyl alcohol	0.00854	0.00893	0.00965	0.01013	0.00872	0.01120					
	0.01066	+++++					AVRG		0.00969		10.55116
47 Benzene	1.39449	1.46750	1.41356	1.35299	1.40086	1.31677					
	1.26683	1.51325					AVRG		1.39078		5.68698
49 Methyl tert-amyl ether	+++++	0.77402	0.79681	0.83942	0.87387	0.93349					
	0.91006	+++++					AVRG		0.85461		7.35148
50 Cyclohexene	0.41493	0.47837	0.47993	0.47186	0.50345	0.47582					
	0.46267	+++++					AVRG		0.46958		5.77312
51 1,2-Dichloroethane	0.49042	0.47001	0.49409	0.46993	0.47311	0.45474					
	0.43564	+++++					AVRG		0.46971		4.27552

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Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
53 n-Butyl alcohol	0.00764	0.00811	0.00875	0.00932	0.00776	0.01022					
	0.00990	0.00723					AVRG		0.00862		12.86198
54 Trichloroethylene	0.31564	0.33648	0.34197	0.33142	0.34778	0.32371					
	0.31947	+++++					AVRG		0.33093		3.60488
55 Methylcyclohexane	0.48351	0.51949	0.55612	0.54714	0.57893	0.55558					
	0.53835	+++++					AVRG		0.53987		5.70100
56 Methyl methacrylate	0.15877	0.16659	0.18170	0.19222	0.19896	0.20156					
	0.18963	+++++					AVRG		0.18420		8.79914
57 1,2-Dichloropropane	0.36236	0.37297	0.38103	0.36522	0.38019	0.36451					
	0.35578	+++++					AVRG		0.36887		2.56917
58 1,4-Dioxane	0.00239	0.00259	0.00278	0.00279	0.00295	0.00289					
	0.00289	+++++					AVRG		0.00275		7.25832
59 Dibromomethane	0.21417	0.19938	0.20546	0.19903	0.20141	0.19814					
	0.19045	+++++					AVRG		0.20115		3.62711
60 Bromodichloromethane	0.42624	0.42295	0.44563	0.43221	0.44757	0.43834					
	0.42585	+++++					AVRG		0.43411		2.28390
61 2-Chloroethylvinyl ether	0.14887	0.14797	0.17549	0.17681	0.19232	0.20036					
	0.18662	+++++					AVRG		0.17549		11.61553

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
62 2-Nitropropane	0.06048	0.06760	0.07470	0.08031	0.08763	0.09044					
	0.08889	+++++					AVRG		0.07858		14.64738
63 cis-1,3-Dichloropropylene	0.48756	0.48284	0.52873	0.52083	0.54741	0.54533					
	0.53277	+++++					AVRG		0.52078		4.99583
64 4-Methyl-2-pentanone	0.14782	0.15429	0.16272	0.16142	0.16519	0.16937					
	0.16545	+++++					AVRG		0.16089		4.60510
66 Toluene	1.13113	1.09224	1.08809	1.03710	1.06393	0.98601					
	0.96656	+++++					AVRG		1.05215		5.64994
67 Ethyl methacrylate	0.37984	0.39715	0.43645	0.46502	0.48032	0.47739					
	0.43267	+++++					AVRG		0.43841		8.90923
68 trans-1,3-Dichloropropylene	0.52796	0.51933	0.55262	0.55817	0.59005	0.58620					
	0.59001	+++++					AVRG		0.56062		5.26429
69 1,1,2-Trichloroethane	0.28530	0.29644	0.29642	0.29740	0.29230	0.28013					
	0.27689	+++++					AVRG		0.28927		2.92817
70 Tetrachloroethylene	0.32329	0.33887	0.30967	0.30777	0.30966	0.28616					
	0.27627	+++++					AVRG		0.30738		6.86655
71 2-Hexanone	0.36867	0.37735	0.41796	0.39231	0.40164	0.41658					
	0.39543	+++++					AVRG		0.39571		4.66544

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Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	200 Level 8									
72 1,3-Dichloropropane	0.62050	0.62012	0.62391	0.61130	0.61237	0.58505					
	0.57129	+++++					AVRG		0.60636		3.32717
73 Dibromochloromethane	0.33323	0.34691	0.35991	0.36270	0.37774	0.37051					
	0.36748	+++++					AVRG		0.35978		4.20841
74 1,2-Dibromoethane	0.32347	0.32547	0.32709	0.32483	0.33127	0.32168					
	0.31965	+++++					AVRG		0.32478		1.16321
75 1-Chlorohexane	+++++	0.30553	0.31129	0.33948	0.35041	0.36061					
	0.34080	+++++					AVRG		0.33469		6.51503
77 Chlorobenzene	1.07007	1.11894	1.10866	1.06375	1.06937	1.01055					
	0.95085	+++++					AVRG		1.05603		5.50719
78 Ethylbenzene	1.86980	1.94783	1.96801	1.94555	2.01579	1.85661					
	1.78345	+++++					AVRG		1.91243		4.14445
79 1,1,1,2-Tetrachloroethane	0.34282	0.36441	0.37391	0.36744	0.37328	0.35568					
	0.35107	+++++					AVRG		0.36123		3.25137
80 m,p-Xylenes	0.65605	0.71176	0.73123	0.72861	0.74849	0.68471					
	0.64142	+++++					AVRG		0.70032		5.79417
81 o-Xylene	0.60017	0.65571	0.68473	0.70109	0.72140	0.69303					
	0.66661	+++++					AVRG		0.67468		5.83391

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Compound	1 Level 1 100 Level 7	2 Level 2 200 Level 8	5 Level 3	10 Level 4	20 Level 5	50 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
82 Styrene	1.03580	1.09802	1.20570	1.21427	1.28019	1.22726					
	1.18675	+++++					AVRG		1.17829		7.07070
83 Bromoform	0.39081	0.40179	0.40914	0.41890	0.43989	0.44680					
	0.44947	+++++					AVRG		0.42240		5.50563
84 Isopropylbenzene	2.94591	3.23534	3.34391	3.41143	3.62700	3.42641					
	3.32247	+++++					AVRG		3.33035		6.26108
85 cis-1,4-Dichloro-2-butene	0.23617	0.25186	0.27708	0.28678	0.29845	0.29689					
	0.27683	+++++					AVRG		0.27487		8.42676
86 Cyclohexanone	0.05523	0.05656	0.05762	0.05962	0.06115	0.06777					
	0.05607	+++++					AVRG		0.05915		7.31819
88 1,1,2,2-Tetrachloroethane	0.90072	0.87226	0.84547	0.83529	0.81511	0.81891					
	0.80723	+++++					AVRG		0.84214		4.02248
89 n-Propylbenzene	4.04987	4.28142	4.24485	4.25599	4.42302	4.19700					
	4.03168	+++++					AVRG		4.21198		3.23486
90 trans-1,4-Dichloro-2-butene	0.24090	0.25718	0.26682	0.26814	0.27962	0.27825					
	0.26249	+++++					AVRG		0.26477		4.99726
91 Bromobenzene	0.89018	0.87881	0.87665	0.85304	0.85181	0.80797					
	0.77454	+++++					AVRG		0.84757		4.95580

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92 1,2,3-Trichloropropane	0.22747	0.22342	0.21233	0.20823	0.20225	0.19958					
	0.19405	+++++					AVRG		0.20962		5.89382
93 1,3,5-Trimethylbenzene	2.51031	2.72431	2.88255	2.92274	3.05427	2.93501					
	2.81037	+++++					AVRG		2.83423		6.21753
94 2-Chlorotoluene	2.78674	3.02174	2.99428	2.95239	3.02505	2.86110					
	2.74147	+++++					AVRG		2.91182		3.98006
95 4-Chlorotoluene	2.48531	2.62664	2.63816	2.62773	2.70483	2.60436					
	2.53638	+++++					AVRG		2.60334		2.76398
96 tert-Butylbenzene	2.06305	2.20843	2.31301	2.34602	2.46194	2.36335					
	2.27287	+++++					AVRG		2.28981		5.55461
97 1,2,4-Trimethylbenzene	2.59369	2.83735	3.06488	3.05432	3.15003	3.05593					
	2.93303	+++++					AVRG		2.95560		6.40510
98 Pentachloroethane	0.19347	0.17011	0.20735	0.19822	0.18406	0.18595					
	0.15090	+++++					AVRG		0.18429		10.21986
99 sec-Butylbenzene	3.47707	3.79894	3.92758	3.95919	4.13231	3.94113					
	3.76469	+++++					AVRG		3.85727		5.33974
100 4-Isopropyltoluene	2.44681	2.73492	2.85033	2.91831	3.06839	2.90522					
	2.83037	+++++					AVRG		2.82205		6.87926

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101 1,3-Dichlorobenzene	1.70464	1.68434	1.66071	1.64839	1.64732	1.55602					
	1.51174	+++++					AVRG		1.63045		4.30527
103 1,4-Dichlorobenzene	1.85318	1.78158	1.70716	1.64151	1.65701	1.58116					
	1.52422	+++++					AVRG		1.67797		6.75413
104 Benzyl chloride	1.20768	1.25335	1.34065	1.38827	1.44828	1.41999					
	1.26672	+++++					AVRG		1.33213		6.88050
105 n-Butylbenzene	2.68203	2.89691	3.06940	3.12080	3.30027	3.16184					
	3.05387	+++++					AVRG		3.04073		6.56078
106 1,2-Dichlorobenzene	1.57728	1.58898	1.56911	1.53679	1.56346	1.49121					
	1.46860	+++++					AVRG		1.54220		2.97644
107 bis(2-Chloroisopropyl)ether	0.32849	0.34538	0.37251	0.38535	0.42051	0.43022					
	0.40346	+++++					AVRG		0.38370		9.84055
108 1,2-Dibromo-3-chloropropane	0.13303	0.12798	0.13270	0.13246	0.13578	0.14510					
	0.15104	+++++					AVRG		0.13687		5.96947
109 1,2,4-Trichlorobenzene	1.06040	0.99119	1.01214	1.00264	1.01910	0.96691					
	0.96541	+++++					AVRG		1.00254		3.28080
110 Hexachlorobutadiene	0.60216	0.61753	0.61676	0.58430	0.60106	0.54635					
	0.53755	+++++					AVRG		0.58653		5.54598

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	100 Level 7	200 Level 8									
111 Naphthalene	2.19216	2.05679	2.11133	2.16086	2.26430	2.22815					
	2.26133	+++++					AVRG		2.18213		3.57027
112 1,2,3-Trichlorobenzene	0.93774	0.87907	0.91495	0.89203	0.90422	0.83521					
	0.83174	+++++					AVRG		0.88500		4.48407
$ 48 1,2-Dichloroethane-d4	0.43165	0.42329	0.43625	0.43027	0.43244	0.41983					
	0.40336	+++++					AVRG		0.42530		2.63096
$ 65 Toluene-d8	1.73503	1.73326	1.78247	1.75638	1.75210	1.73005					
	1.69520	+++++					AVRG		1.74064		1.55429
$ 87 Bromofluorobenzene	1.31083	1.28212	1.29820	1.28398	1.28276	1.28008					
	1.27640	+++++					AVRG		1.28777		0.95123

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INITIAL CALIBRATION DATA

Start Cal Date : 01-JUL-2009 15:01
End Cal Date : 01-JUL-2009 23:08
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Cal Date : 13-Jul-2009 11:08 ron01469

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 02-JUL-2009 00:41
Lab File ID: 1s329.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 19:04
Lab Sample ID: W1VM090701-22 Quant Type: ISTD
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	1 Xylenes (total)	0.69178	0.69099	0.69099	0.050	-0.11307	60.00000	Averaged	
M	2 1,2-Dichloroethylene (total	0.33439	0.33348	0.33348	0.050	-0.27052	60.00000	Averaged	
M	3 1,3-Dichloropropylene	0.59231	0.62667	0.62667	0.050	5.80071	60.00000	Averaged	
	5 Dichlorodifluoromethane	0.22899	0.28395	0.28395	0.050	23.99958	60.00000	Averaged	
	6 Chloromethane	0.44211	0.46191	0.46191	0.100	4.47901	60.00000	Averaged	spcc
	7 Vinyl chloride	0.34386	0.31618	0.31618	0.050	-8.05070	20.00000	Averaged	ccc
	9 Bromomethane	0.23589	0.24192	0.24192	0.050	2.55626	60.00000	Averaged	
	10 Chloroethane	0.25782	0.25807	0.25807	0.050	0.09885	60.00000	Averaged	
	11 Trichlorofluoromethane	0.32562	0.36747	0.36747	0.050	12.85233	60.00000	Averaged	
	12 Ethyl Ether	0.28702	0.31356	0.31356	0.010	9.24758	60.00000	Averaged	
	16 Acetone	0.22939	0.10981	0.10981	0.000	-52.12872	60.00000	Averaged	
	22 Acetonitrile	0.04150	0.04348	0.04348	0.010	4.77078	60.00000	Averaged	
	15 1,1-Dichloroethylene	0.59496	0.58444	0.58444	0.050	-1.76751	20.00000	Averaged	ccc
	21 Methyl acetate	0.25915	0.25688	0.25688	0.010	-0.87437	60.00000	Averaged	
	18 Iodomethane	0.47694	0.46686	0.46686	0.050	-2.11460	60.00000	Averaged	
	23 Methylene chloride	49.37745	50.00000	0.34913	0.000	-1.24510	60.00000	Linear	
	19 Carbon disulfide	0.95658	0.96988	0.96988	0.050	1.39020	60.00000	Averaged	
	25 tert-Butyl methyl ether	0.84247	0.87925	0.87925	0.050	4.36558	60.00000	Averaged	
	26 trans-1,2-Dichloroethylene	0.32645	0.30827	0.30827	0.050	-5.57103	60.00000	Averaged	
	29 Vinyl acetate	0.50428	0.47242	0.47242	0.010	-6.31723	60.00000	Averaged	
	30 1,1-Dichloroethane	0.64965	0.63260	0.63260	0.100	-2.62347	60.00000	Averaged	spcc
	35 2-Butanone	0.25663	0.16288	0.16288	0.030	-36.53172	60.00000	Averaged	
	36 cis-1,2-Dichloroethylene	0.34232	0.35870	0.35870	0.050	4.78423	60.00000	Averaged	
	33 2,2-Dichloropropane	0.33455	0.33990	0.33990	0.050	1.59794	60.00000	Averaged	
	41 Chloroform	0.58475	0.56790	0.56790	0.010	-2.88189	20.00000	Averaged	ccc
	39 Bromochloromethane	0.15749	0.15380	0.15380	0.010	-2.34019	60.00000	Averaged	
	43 1,1,1-Trichloroethane	0.37278	0.36883	0.36883	0.010	-1.05836	60.00000	Averaged	
	42 Cyclohexane	0.60946	0.63025	0.63025	0.010	3.41141	60.00000	Averaged	
	45 1,1-Dichloropropene	0.41989	0.43075	0.43075	0.010	2.58653	60.00000	Averaged	
	53 n-Butyl alcohol	0.00862	0.01124	0.01124	0.001	30.46837	60.00000	Averaged	
	44 Carbon tetrachloride	0.39059	0.38407	0.38407	0.010	-1.66998	60.00000	Averaged	
$	48 1,2-Dichloroethane-d4	0.42530	0.43340	0.43340	0.010	1.90521	60.00000	Averaged	
	51 1,2-Dichloroethane	0.46971	0.45910	0.45910	0.010	-2.25899	60.00000	Averaged	
	47 Benzene	1.39078	1.30256	1.30256	0.010	-6.34341	60.00000	Averaged	
	50 Cyclohexene	0.46958	0.48749	0.48749	0.010	3.81418	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1s329.d
Analysis Type: WATER
Lab Sample ID: W1VM090701-22
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

Injection Date: 02-JUL-2009 00:41
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 19:04
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	54 Trichloroethylene	0.33093	0.33688	0.33688	0.010	1.80000	60.00000	Averaged	
	57 1,2-Dichloropropane	0.36887	0.37359	0.37359	0.010	1.28008	20.00000	Averaged	ccc
	55 Methylcyclohexane	0.53987	0.56735	0.56735	0.010	5.08861	60.00000	Averaged	
	60 Bromodichloromethane	0.43411	0.45428	0.45428	0.010	4.64458	60.00000	Averaged	
	59 Dibromomethane	0.20115	0.19940	0.19940	0.010	-0.87067	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	0.17549	0.18878	0.18878	0.000	7.57059	60.00000	Averaged	
	64 4-Methyl-2-pentanone	0.16089	0.16292	0.16292	0.010	1.25758	60.00000	Averaged	
	63 cis-1,3-Dichloropropylene	0.52078	0.54956	0.54956	0.010	5.52669	60.00000	Averaged	
$	65 Toluene-d8	1.74064	1.75470	1.75470	0.010	0.80797	60.00000	Averaged	
	66 Toluene	1.05215	0.98353	0.98353	0.010	-6.52143	20.00000	Averaged	ccc
	68 trans-1,3-Dichloropropylene	0.56062	0.59964	0.59964	0.010	6.96056	60.00000	Averaged	
	69 1,1,2-Trichloroethane	0.28927	0.29141	0.29141	0.010	0.74219	60.00000	Averaged	
	71 2-Hexanone	0.39571	0.29363	0.29363	0.010	-25.79494	60.00000	Averaged	
	72 1,3-Dichloropropane	0.60636	0.60613	0.60613	0.010	-0.03879	60.00000	Averaged	
	70 Tetrachloroethylene	0.30738	0.28293	0.28293	0.010	-7.95603	60.00000	Averaged	
	73 Dibromochloromethane	0.35978	0.36546	0.36546	0.010	1.57906	60.00000	Averaged	
	74 1,2-Dibromoethane	0.32478	0.32881	0.32881	0.010	1.24189	60.00000	Averaged	
	77 Chlorobenzene	1.05603	1.03831	1.03831	0.300	-1.67816	60.00000	Averaged	spcc
	79 1,1,1,2-Tetrachloroethane	0.36123	0.36199	0.36199	0.010	0.21007	60.00000	Averaged	
	78 Ethylbenzene	1.91243	1.85146	1.85146	0.010	-3.18848	20.00000	Averaged	ccc
	80 m,p-Xylenes	0.70032	0.68536	0.68536	0.010	-2.13634	60.00000	Averaged	
	81 o-Xylene	0.67468	0.70225	0.70225	0.010	4.08728	60.00000	Averaged	
	82 Styrene	1.17829	1.21703	1.21703	0.010	3.28830	60.00000	Averaged	
	83 Bromoform	0.42240	0.45176	0.45176	0.100	6.95130	60.00000	Averaged	spcc
	84 Isopropylbenzene	3.33035	2.92102	2.92102	0.010	-12.29109	60.00000	Averaged	
	88 1,1,2,2-Tetrachloroethane	0.84214	0.81538	0.81538	0.300	-3.17812	60.00000	Averaged	spcc
$	87 Bromofluorobenzene	1.28777	1.29862	1.29862	0.010	0.84289	60.00000	Averaged	
	92 1,2,3-Trichloropropane	0.20962	0.23043	0.23043	0.010	9.92846	60.00000	Averaged	
	91 Bromobenzene	0.84757	0.81481	0.81481	0.010	-3.86540	60.00000	Averaged	
	89 n-Propylbenzene	4.21198	4.05325	4.05325	0.010	-3.76854	60.00000	Averaged	
	94 2-Chlorotoluene	2.91182	2.87996	2.87996	0.010	-1.09418	60.00000	Averaged	
	93 1,3,5-Trimethylbenzene	2.83423	2.85267	2.85267	0.010	0.65086	60.00000	Averaged	
	95 4-Chlorotoluene	2.60334	2.59987	2.59987	0.010	-0.13330	60.00000	Averaged	
	96 tert-Butylbenzene	2.28981	2.36366	2.36366	0.010	3.22505	60.00000	Averaged	
	97 1,2,4-Trimethylbenzene	2.95560	2.95341	2.95341	0.010	-0.07431	60.00000	Averaged	
	99 sec-Butylbenzene	3.85727	3.90621	3.90621	0.010	1.26878	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1s329.d
Analysis Type: WATER
Lab Sample ID: W1VM090701-22
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

Injection Date: 02-JUL-2009 00:41
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 19:04
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
100 4-Isopropyltoluene	2.82205	2.92025	2.92025	0.010	3.47968	60.00000	Averaged
101 1,3-Dichlorobenzene	1.63045	1.57857	1.57857	0.010	-3.18209	60.00000	Averaged
103 1,4-Dichlorobenzene	1.67797	1.57318	1.57318	0.010	-6.24555	60.00000	Averaged
105 n-Butylbenzene	3.04073	3.04200	3.04200	0.010	0.04164	60.00000	Averaged
106 1,2-Dichlorobenzene	1.54220	1.50957	1.50957	0.010	-2.11580	60.00000	Averaged
108 1,2-Dibromo-3-chloropropane	0.13687	0.15514	0.15514	0.010	13.35051	60.00000	Averaged
109 1,2,4-Trichlorobenzene	1.00254	0.93020	0.93020	0.010	-7.21589	60.00000	Averaged
110 Hexachlorobutadiene	0.58653	0.51957	0.51957	0.010	-11.41679	60.00000	Averaged
111 Naphthalene	2.18213	2.26958	2.26958	0.010	4.00766	60.00000	Averaged
112 1,2,3-Trichlorobenzene	0.88500	0.86180	0.86180	0.010	-2.62146	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 5.52480
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070109v1/1s329.d
Lab Smp Id: W1VM090701-22 Client Smp ID: ICV
Inj Date : 02-JUL-2009 00:41
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090701-22|ICV|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090605-01D/IVM090630-01
Comment :
Method : /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m
Meth Date : 02-Jul-2009 08:37 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 19:04 Cal File: 1s318.d
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 1 Xylenes (total)	106				2342600	150.000	150
M 2 1,2-Dichloroethylene (total)	96				896533	100.000	99.6
M 3 1,3-Dichloropropylene	75				1416353	100.000	106
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	381684	50.0000	62.0
6 Chloromethane	50	5.535	5.535	(0.404)	620892	50.0000	52.2
7 Vinyl chloride	62	5.908	5.908	(0.432)	425003	50.0000	46.0
9 Bromomethane	96	6.948	6.948	(0.507)	325187	50.0000	51.3
10 Chloroethane	64	7.215	7.215	(0.527)	346895	50.0000	50.0
11 Trichlorofluoromethane	101	7.854	7.854	(0.574)	493945	50.0000	56.4
12 Ethyl Ether	59	8.485	8.485	(0.620)	421484	50.0000	54.6
16 Acetone	43	9.263	9.263	(0.677)	738053	250.000	120
22 Acetonitrile	41	9.986	9.986	(0.729)	1460985	1250.00	1310
15 1,1-Dichloroethylene	61	9.088	9.088	(0.664)	785606	50.0000	49.1
21 Methyl acetate	43	9.843	9.843	(0.719)	1726492	250.000	248
18 Iodomethane	142	9.470	9.470	(0.692)	3137738	250.000	245
23 Methylene chloride	84	10.147	10.147	(0.741)	469296	50.0000	49.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	19 Carbon disulfide	76	9.585	9.585	(0.700)	6518547	250.000	253
	25 tert-Butyl methyl ether	73	10.451	10.451	(0.763)	1181876	50.0000	52.2
	26 trans-1,2-Dichloroethylene	96	10.552	10.552	(0.771)	414368	50.0000	47.2
	29 Vinyl acetate	43	11.307	11.307	(0.826)	3175126	250.000	234
	30 1,1-Dichloroethane	63	11.325	11.325	(0.827)	850340	50.0000	48.7
	35 2-Butanone	43	12.195	12.195	(0.891)	1094712	250.000	159
	36 cis-1,2-Dichloroethylene	96	12.204	12.204	(0.891)	482165	50.0000	52.4
	33 2,2-Dichloropropane	77	12.172	12.172	(0.889)	456891	50.0000	50.8
	41 Chloroform	83	12.619	12.619	(0.922)	763361	50.0000	48.6
	39 Bromochloromethane	128	12.563	12.563	(0.918)	206742	50.0000	48.8
	43 1,1,1-Trichloroethane	97	12.853	12.853	(0.939)	495779	50.0000	49.5
	42 Cyclohexane	56	12.849	12.849	(0.938)	847173	50.0000	51.7
	45 1,1-Dichloropropene	75	13.060	13.060	(0.954)	579014	50.0000	51.3
	53 n-Butyl alcohol	56	13.940	13.940	(1.018)	1511201	5000.00	6520
	44 Carbon tetrachloride	117	13.033	13.033	(0.952)	516259	50.0000	49.2
$	48 1,2-Dichloroethane-d4	65	13.350	13.350	(0.975)	582574	50.0000	51.0
	51 1,2-Dichloroethane	62	13.447	13.447	(0.982)	617112	50.0000	48.9
	47 Benzene	78	13.341	13.341	(0.974)	1750887	50.0000	46.8
	50 Cyclohexene	54	13.406	13.406	(0.979)	655276	50.0000	51.9
*	52 Fluorobenzene	96	13.691	13.691	(1.000)	1344192	50.0000	
	54 Trichloroethylene	95	14.124	14.124	(1.032)	452834	50.0000	50.9
	57 1,2-Dichloropropane	63	14.469	14.469	(1.057)	502173	50.0000	50.6
	55 Methylcyclohexane	83	14.294	14.294	(1.044)	762622	50.0000	52.5
	60 Bromodichloromethane	83	14.759	14.759	(1.078)	610633	50.0000	52.3
	59 Dibromomethane	93	14.630	14.630	(1.069)	268028	50.0000	49.6
	61 2-Chloroethylvinyl ether	63	15.040	15.040	(1.099)	1268768	250.000	269
	64 4-Methyl-2-pentanone	58	15.371	15.371	(0.895)	920527	250.000	253
	63 cis-1,3-Dichloropropylene	75	15.265	15.265	(1.115)	738719	50.0000	52.8
$	65 Toluene-d8	98	15.528	15.528	(0.904)	1982927	50.0000	50.4
	66 Toluene	92	15.606	15.606	(0.909)	1111457	50.0000	46.7
	68 trans-1,3-Dichloropropylene	75	15.887	15.887	(0.925)	677634	50.0000	53.5
	69 1,1,2-Trichloroethane	83	16.112	16.112	(0.938)	329317	50.0000	50.4
	71 2-Hexanone	43	16.278	16.278	(0.948)	1659126	250.000	186
	72 1,3-Dichloropropane	76	16.315	16.315	(0.950)	684963	50.0000	50.0
	70 Tetrachloroethylene	164	16.200	16.200	(0.943)	319727	50.0000	46.0
	73 Dibromochloromethane	129	16.554	16.554	(0.964)	412996	50.0000	50.8
	74 1,2-Dibromoethane	107	16.738	16.738	(0.975)	371579	50.0000	50.6
*	76 Chlorobenzene-d5	117	17.171	17.171	(1.000)	1130064	50.0000	
	77 Chlorobenzene	112	17.203	17.203	(1.002)	1173351	50.0000	49.2
	79 1,1,1,2-Tetrachloroethane	131	17.272	17.272	(1.006)	409068	50.0000	50.1
	78 Ethylbenzene	91	17.231	17.231	(1.003)	2092263	50.0000	48.4
	80 m,p-Xylenes	106	17.346	17.346	(1.010)	1549009	100.000	97.9
	81 o-Xylene	106	17.792	17.792	(1.036)	793591	50.0000	52.0
	82 Styrene	104	17.815	17.815	(1.038)	1375322	50.0000	51.6
	83 Bromoform	173	18.115	18.115	(0.923)	270432	50.0000	53.5
	84 Isopropylbenzene	105	18.142	18.142	(0.925)	1748572	50.0000	43.8
	88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	488097	50.0000	48.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
$ 87 Bromofluorobenzene	95	18.400	18.400	(0.938)	777377	50.0000	50.4
92 1,2,3-Trichloropropane	110	18.616	18.616	(0.949)	137939	50.0000	55.0
91 Bromobenzene	156	18.602	18.602	(0.948)	487758	50.0000	48.1
89 n-Propylbenzene	91	18.570	18.570	(0.946)	2426343	50.0000	48.1
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1723997	50.0000	49.4
93 1,3,5-Trimethylbenzene	105	18.731	18.731	(0.955)	1707659	50.0000	50.3
95 4-Chlorotoluene	91	18.865	18.865	(0.962)	1556330	50.0000	49.9
96 tert-Butylbenzene	119	19.090	19.090	(0.973)	1414927	50.0000	51.6
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1767961	50.0000	50.0
99 sec-Butylbenzene	105	19.316	19.316	(0.984)	2338328	50.0000	50.6
100 4-Isopropyltoluene	119	19.436	19.436	(0.991)	1748111	50.0000	51.7
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	944959	50.0000	48.4
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	598617	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	941730	50.0000	46.9
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1820993	50.0000	50.0
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	903656	50.0000	48.9
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	92871	50.0000	56.7
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	556834	50.0000	46.4
110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	311021	50.0000	44.3
111 Naphthalene	128	22.455	22.455	(1.145)	1358612	50.0000	52.0
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	515885	50.0000	48.7

Data File: /chem/VOA1.i/070109v1/1s329.d

Date : 02-JUL-2009 00:41

Client ID: ICV

Sample Info: IW1VM090701-22|ICV|1|VOAF|1|

Purge Volume: 5.0

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4

Column diameter: 0.25

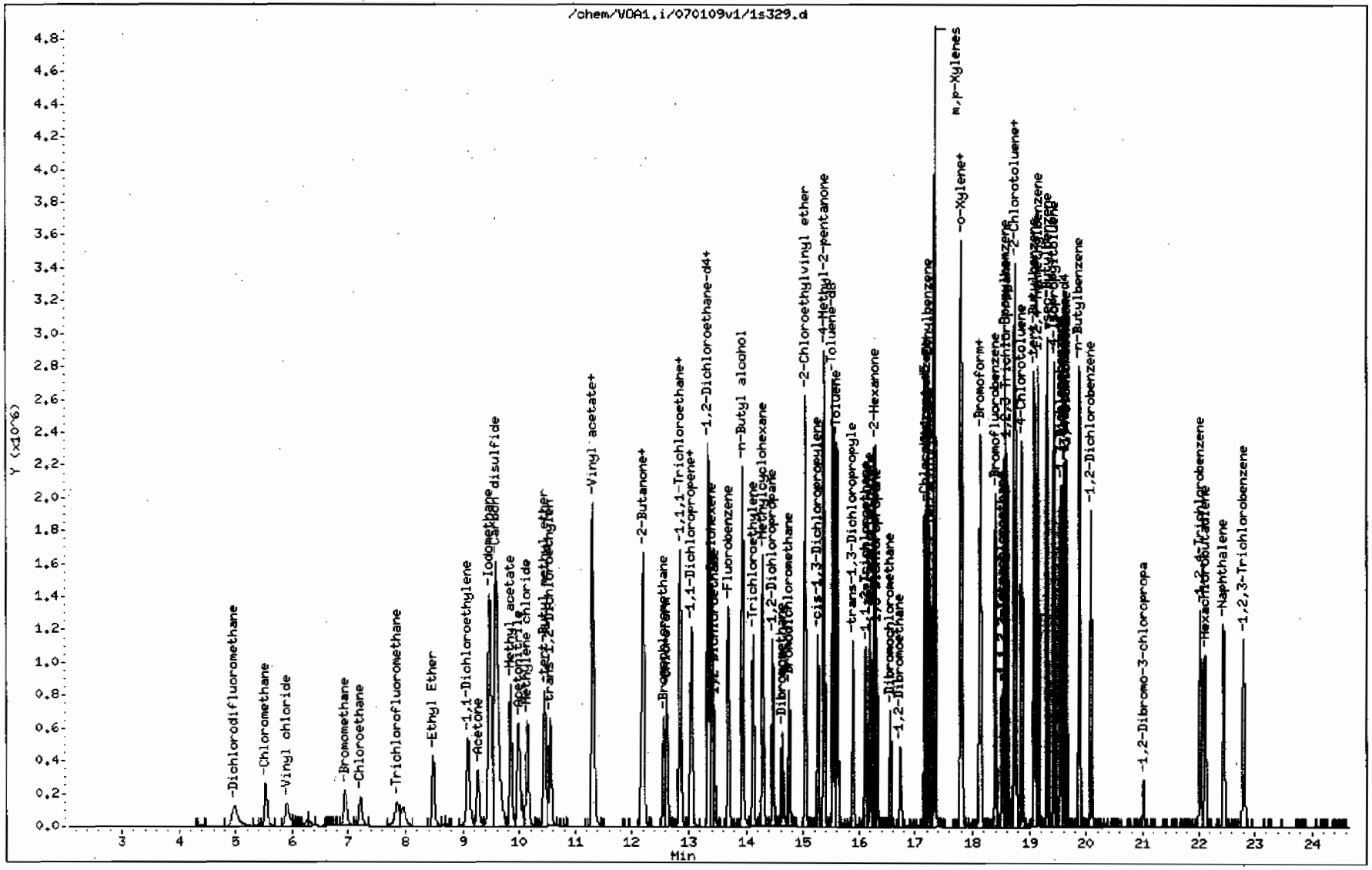

Data File: /chem/VOA1.i/070109v1/1s330.d
Report Date: 02-Jul-2009 14:30

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1s330.d
Analysis Type: WATER
Lab Sample ID: W1VM090701-23
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

Injection Date: 02-JUL-2009 01:12
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
4 Chlorotrifluoroethylene	0.19019	0.17560	0.17560	0.010	-7.67423	60.00000	Averaged
8 2-Chloro-1,1,1-trifluoroeth	0.34048	0.33492	0.33492	0.010	-1.63260	60.00000	Averaged
13 Acrolein	0.04947	0.05557	0.05557	0.001	12.33149	60.00000	Averaged
14 Trichlorotrifluoroethane	0.28145	0.26997	0.26997	0.030	-4.08137	60.00000	Averaged
17 Isopropyl Alcohol	0.01950	0.02260	0.02260	0.000	15.89812	60.00000	Averaged
20 Allyl chloride	226	250	0.12353	0.010	-9.78593	60.00000	Linear
24 tert-Butyl Alcohol	0.03062	0.03521	0.03521	0.010	14.98536	60.00000	Averaged
27 Acrylonitrile	0.11278	0.11450	0.11450	0.010	1.52364	60.00000	Averaged
28 Isopropyl ether	1.16254	1.22253	1.22253	0.010	5.15998	60.00000	Averaged
31 2-Chloro-1,3-butadiene	0.44344	0.50184	0.50184	0.010	13.16949	60.00000	Averaged
32 Ethyl tert-butyl ether	1.03281	1.11176	1.11176	0.010	7.64399	60.00000	Averaged
37 Propionitrile	0.04568	0.04645	0.04645	0.010	1.67818	60.00000	Averaged
34 Ethyl acetate	0.31721	0.29400	0.29400	0.010	-7.31606	60.00000	Averaged
40 Methacrylonitrile	0.23340	0.23672	0.23672	0.010	1.42136	60.00000	Averaged
38 Tetrahydrofuran	0.22772	0.23864	0.23864	0.010	4.79383	60.00000	Averaged
46 Isobutyl alcohol	0.00969	0.01087	0.01087	0.001	12.20050	60.00000	Averaged
49 Methyl tert-amyl ether	0.85461	0.90854	0.90854	0.010	6.31010	60.00000	Averaged
56 Methyl methacrylate	0.18420	0.20151	0.20151	0.010	9.39565	60.00000	Averaged
67 Ethyl methacrylate	0.43841	0.45868	0.45868	0.010	4.62443	60.00000	Averaged
75 1-Chlorohexane	0.33469	0.34952	0.34952	0.000	4.43165	60.00000	Averaged
58 1,4-Dioxane	0.00275	0.00290	0.00290	0.001	5.12077	60.00000	Averaged
62 2-Nitropropane	0.07858	0.08874	0.08874	0.000	12.93389	60.00000	Averaged
85 cis-1,4-Dichloro-2-butene	0.27487	0.28014	0.28014	0.010	1.92061	60.00000	Averaged
86 Cyclohexanone	0.05915	0.06299	0.06299	0.010	6.49868	60.00000	Averaged
90 trans-1,4-Dichloro-2-butene	0.26477	0.26300	0.26300	0.010	-0.66843	60.00000	Averaged
98 Pentachloroethane	0.18429	0.16521	0.16521	0.010	-10.35572	60.00000	Averaged
104 Benzyl chloride	1.33213	1.23309	1.23309	0.010	-7.43482	60.00000	Averaged
107 bis(2-Chloroisopropyl)ether	0.38370	0.40845	0.40845	0.010	6.44894	60.00000	Averaged
$ 48 1,2-Dichloroethane-d4	0.42530	0.41230	0.41230	0.010	-3.05727	60.00000	Averaged
$ 65 Toluene-d8	1.74064	1.72808	1.72808	0.010	-0.72137	60.00000	Averaged
$ 87 Bromofluorobenzene	1.28777	1.30124	1.30124	0.010	1.04628	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1s330.d
Analysis Type: WATER
Lab Sample ID: W1VM090701-23
Method: /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m

Injection Date: 02-JUL-2009 01:12
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

Average %D / Drift Results.	
Calculated Average %D/Drift =	6.52467
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/070109v1/1s330.d
Lab Smp Id: W1VM090701-23 Client Smp ID: SHORT ICV
Inj Date : 02-JUL-2009 01:12
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090701-23|SHORT ICV|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090701-08A/UVM090624-02A
Comment :
Method : /chem/VOA1.i/070109v1/VOA1-8260ox-070109.m
Meth Date : 02-Jul-2009 14:30 slg Quant Type: ISTD
Cal Date : 01-JUL-2009 22:38 Cal File: 1s325.d
Als bottle: 30 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
4 Chlorotrifluoroethylene	116	4.876	4.876	(0.356)	738922	150.000	138
8 2-Chloro-1,1,1-trifluoroethane	118	6.289	6.289	(0.459)	1409368	150.000	148
13 Acrolein	56	8.950	8.950	(0.654)	389715	250.000	281
14 Trichlorotrifluoroethane	101	8.996	8.996	(0.657)	1893394	250.000	240
17 Isopropyl Alcohol	45	9.452	9.452	(0.690)	1585372	2500.00	2900
20 Allyl chloride	76	9.852	9.852	(0.720)	866349	250.000	226
24 tert-Butyl Alcohol	59	10.207	10.207	(0.745)	2469524	2500.00	2870
27 Acrylonitrile	53	10.681	10.681	(0.780)	803051	250.000	254
28 Isopropyl ether	45	11.210	11.210	(0.819)	1714824	50.0000	52.6
31 2-Chloro-1,3-butadiene	53	11.399	11.399	(0.833)	703926	50.0000	56.6
32 Ethyl tert-butyl ether	59	11.767	11.767	(0.859)	1559450	50.0000	53.8
37 Propionitrile	54	12.416	12.416	(0.907)	325746	250.000	254
34 Ethyl acetate	43	12.177	12.177	(0.889)	2061981	250.000	232
40 Methacrylonitrile	41	12.573	12.573	(0.918)	1660231	250.000	254
38 Tetrahydrofuran	42	12.545	12.545	(0.639)	716928	250.000	262

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
46 Isobutyl alcohol	41	13.116	13.116	(0.958)	762605	2500.00	2800
49 Methyl tert-amyl ether	73	13.360	13.360	(0.976)	1274397	50.0000	53.2
56 Methyl methacrylate	69	14.446	14.446	(1.055)	1413280	250.000	273
67 Ethyl methacrylate	69	15.822	15.822	(0.922)	2660724	250.000	262
75 1-Chlorohexane	55	17.042	17.042	(1.245)	490265	50.0000	52.2
58 1,4-Dioxane	88	14.556	14.556	(1.063)	203109	2500.00	2630
62 2-Nitropropane	43	15.090	15.090	(1.102)	622384	250.000	282
85 cis-1,4-Dichloro-2-butene	53	18.285	18.285	(0.932)	841616	250.000	255
86 Cyclohexanone	55	18.395	18.395	(1.072)	1826998	1250.00	1330
90 trans-1,4-Dichloro-2-butene	53	18.579	18.579	(0.947)	790118	250.000	248
98 Pentachloroethane	167	19.206	19.206	(0.979)	496323	250.000	224
104 Benzyl chloride	91	19.785	19.785	(1.008)	3704479	250.000	231
107 bis(2-Chloroisopropyl)ether	45	20.181	20.181	(1.029)	1227064	250.000	266
* 52 Fluorobenzene	96	13.691	13.691	(1.000)	1402688	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	1160167	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	600844	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.346	(0.975)	578322	50.0000	48.5
$ 65 Toluene-d8	98	15.528	15.528	(0.905)	2004865	50.0000	49.6
$ 87 Bromofluorobenzene	95	18.400	18.400	(0.938)	781843	50.0000	50.5

Data File: /chem/VOA1.i/070109v1/1s330.d
Date : 02-JUL-2009 01:12
Client ID: SHORT ICV
Sample Info: IW1VH090701-231SHORT ICV|1|VOAF|1|
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXM4
Column diameter: 0.25

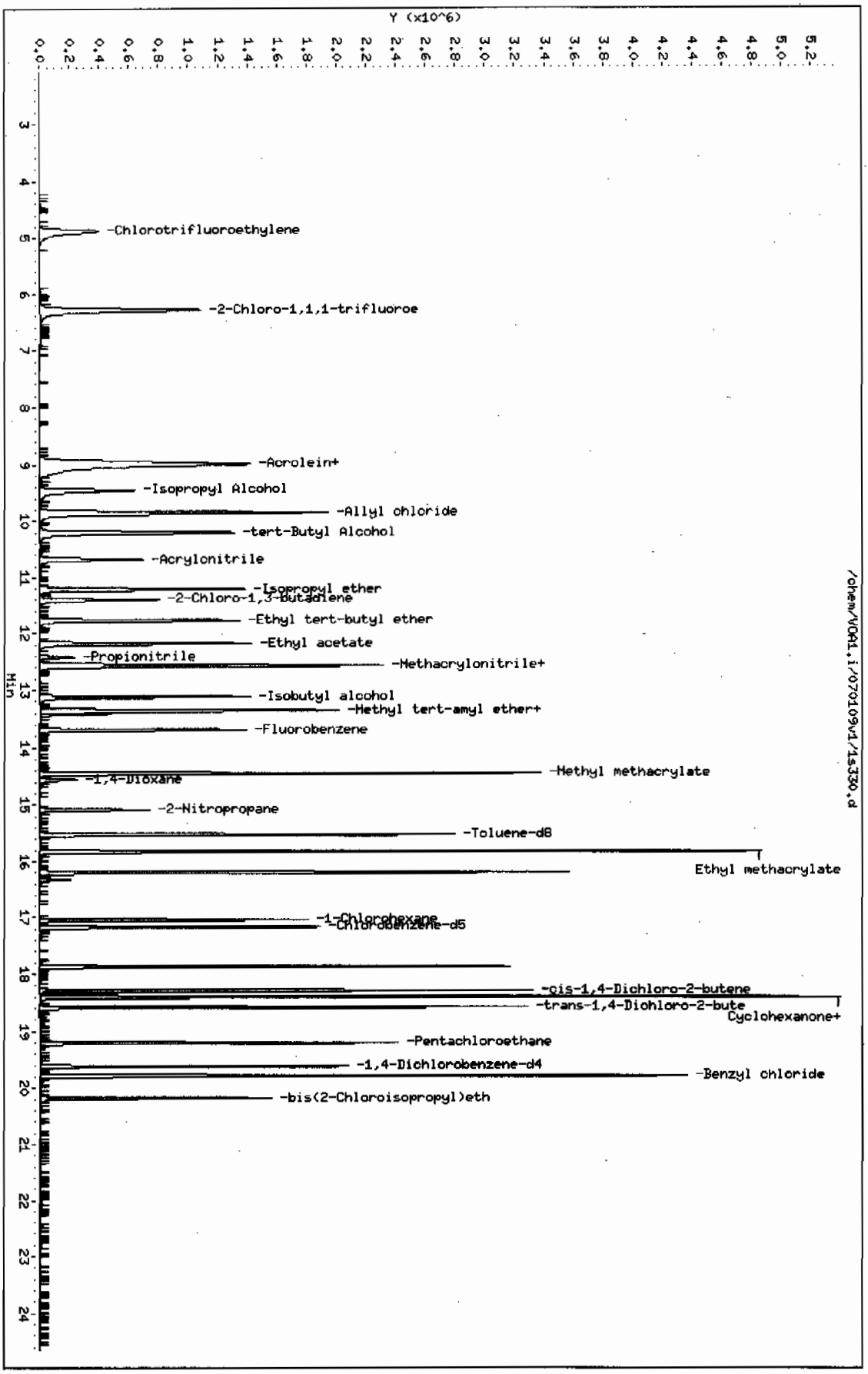

Page 1

Data File: /chem/VOA1.i/071309v1/1u102.d
Report Date: 13-Jul-2009 11:08

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1u102.d
Analysis Type: SOIL
Lab Sample ID: W1VM090713-01
Method: /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m

Injection Date: 13-JUL-2009 10:00
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	1 Xylenes (total)	0.69178	0.63962	0.63962	0.050	-7.53913	60.00000	Averaged	
M	2 1,2-Dichloroethylene (total	0.33439	0.31954	0.31954	0.050	-4.43957	60.00000	Averaged	
M	3 1,3-Dichloropropylene	0.59231	0.57695	0.57695	0.050	-2.59295	60.00000	Averaged	
	5 Dichlorodifluoromethane	0.22899	0.29842	0.29842	0.050	30.31810	60.00000	Averaged	
	6 Chloromethane	0.44211	0.46558	0.46558	0.100	5.31055	60.00000	Averaged	spcc
	7 Vinyl chloride	0.34386	0.33673	0.33673	0.050	-2.07458	20.00000	Averaged	ccc
	9 Bromomethane	0.23589	0.22652	0.22652	0.050	-3.97172	60.00000	Averaged	
	10 Chloroethane	0.25782	0.25811	0.25811	0.050	0.11563	60.00000	Averaged	
	11 Trichlorofluoromethane	0.32562	0.41112	0.41112	0.050	26.25787	60.00000	Averaged	
	12 Ethyl Ether	0.28702	0.29339	0.29339	0.010	2.21904	60.00000	Averaged	
	16 Acetone	0.22939	0.11802	0.11802	0.000	-48.55151	60.00000	Averaged	
	22 Acetonitrile	0.04150	0.00054	0.00054	0.010	-98.68759	60.00000	Averaged	<-
	15 1,1-Dichloroethylene	0.59496	0.57210	0.57210	0.050	-3.84307	20.00000	Averaged	ccc
	21 Methyl acetate	0.25915	0.24463	0.24463	0.010	-5.60153	60.00000	Averaged	
	18 Iodomethane	0.47694	0.44409	0.44409	0.050	-6.88775	60.00000	Averaged	
	23 Methylene chloride	48.03226	50.00000	0.34034	0.000	-3.93548	60.00000	Linear	
	19 Carbon disulfide	0.95658	1.01021	1.01021	0.050	5.60562	60.00000	Averaged	
	25 tert-Butyl methyl ether	0.84247	0.80975	0.80975	0.050	-3.88302	60.00000	Averaged	
	26 trans-1,2-Dichloroethylene	0.32645	0.30322	0.30322	0.050	-7.11739	60.00000	Averaged	
	29 Vinyl acetate	0.50428	0.60853	0.60853	0.010	20.67264	60.00000	Averaged	
	30 1,1-Dichloroethane	0.64965	0.60332	0.60332	0.100	-7.13032	60.00000	Averaged	spcc
	35 2-Butanone	0.25663	0.16045	0.16045	0.030	-37.47804	60.00000	Averaged	
	36 cis-1,2-Dichloroethylene	0.34232	0.33587	0.33587	0.050	-1.88591	60.00000	Averaged	
	33 2,2-Dichloropropane	0.33455	0.36941	0.36941	0.050	10.41901	60.00000	Averaged	
	41 Chloroform	0.58475	0.52657	0.52657	0.010	-9.94896	20.00000	Averaged	ccc
	39 Bromochloromethane	0.15749	0.14058	0.14058	0.010	-10.73829	60.00000	Averaged	
	43 1,1,1-Trichloroethane	0.37278	0.38190	0.38190	0.010	2.44879	60.00000	Averaged	
	42 Cyclohexane	0.60946	0.65333	0.65333	0.010	7.19884	60.00000	Averaged	
	45 1,1-Dichloropropene	0.41989	0.43237	0.43237	0.010	2.97144	60.00000	Averaged	
	53 n-Butyl alcohol	0.00862	0.01059	0.01059	0.001	22.94710	60.00000	Averaged	
	44 Carbon tetrachloride	0.39059	0.38913	0.38913	0.010	-0.37244	60.00000	Averaged	
$	48 1,2-Dichloroethane-d4	0.42530	0.45458	0.45458	0.010	6.88439	60.00000	Averaged	
	51 1,2-Dichloroethane	0.46971	0.42150	0.42150	0.010	-10.26339	60.00000	Averaged	
	47 Benzene	1.39078	1.24968	1.24968	0.010	-10.14566	60.00000	Averaged	
	50 Cyclohexene	0.46958	0.49726	0.49726	0.010	5.89619	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1u102.d
Analysis Type: SOIL
Lab Sample ID: W1VM090713-01
Method: /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m

Injection Date: 13-JUL-2009 10:00
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	54 Trichloroethylene	0.33093	0.31414	0.31414	0.010	-5.07257	60.00000	Averaged	
	57 1,2-Dichloropropane	0.36887	0.34745	0.34745	0.010	-5.80505	20.00000	Averaged	ccc
	55 Methylcyclohexane	0.53987	0.57681	0.57681	0.010	6.84086	60.00000	Averaged	
	60 Bromodichloromethane	0.43411	0.41304	0.41304	0.010	-4.85340	60.00000	Averaged	
	59 Dibromomethane	0.20115	0.18239	0.18239	0.010	-9.32423	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	0.17549	0.15220	0.15220	0.000	-13.27470	60.00000	Averaged	
	64 4-Methyl-2-pentanone	0.16089	0.15222	0.15222	0.010	-5.39075	60.00000	Averaged	
	63 cis-1,3-Dichloropropylene	0.52078	0.52254	0.52254	0.010	0.33764	60.00000	Averaged	
$	65 Toluene-d8	1.74064	1.65920	1.65920	0.010	-4.67876	60.00000	Averaged	
	66 Toluene	1.05215	0.90856	0.90856	0.010	-13.64766	20.00000	Averaged	ccc
	68 trans-1,3-Dichloropropylene	0.56062	0.54699	0.54699	0.010	-2.43089	60.00000	Averaged	
	69 1,1,2-Trichloroethane	0.28927	0.26313	0.26313	0.010	-9.03458	60.00000	Averaged	
	71 2-Hexanone	0.39571	0.27902	0.27902	0.010	-29.48709	60.00000	Averaged	
	72 1,3-Dichloropropane	0.60636	0.53768	0.53768	0.010	-11.32709	60.00000	Averaged	
	70 Tetrachloroethylene	0.30738	0.27250	0.27250	0.010	-11.34715	60.00000	Averaged	
	73 Dibromochloromethane	0.35978	0.32362	0.32362	0.010	-10.05190	60.00000	Averaged	
	74 1,2-Dibromoethane	0.32478	0.29361	0.29361	0.010	-9.59558	60.00000	Averaged	
	77 Chlorobenzene	1.05603	0.94597	0.94597	0.300	-10.42166	60.00000	Averaged	spcc
	79 1,1,1,2-Tetrachloroethane	0.36123	0.32235	0.32235	0.010	-10.76284	60.00000	Averaged	
	78 Ethylbenzene	1.91243	1.71661	1.71661	0.010	-10.23932	20.00000	Averaged	ccc
	80 m,p-Xylenes	0.70032	0.63816	0.63816	0.010	-8.87611	60.00000	Averaged	
	81 o-Xylene	0.67468	0.64254	0.64254	0.010	-4.76351	60.00000	Averaged	
	82 Styrene	1.17829	1.10301	1.10301	0.010	-6.38827	60.00000	Averaged	
	83 Bromoform	0.42240	0.40774	0.40774	0.100	-3.47162	60.00000	Averaged	spcc
	84 Isopropylbenzene	3.33035	2.75425	2.75425	0.010	-17.29861	60.00000	Averaged	
	88 1,1,2,2-Tetrachloroethane	0.84214	0.77604	0.77604	0.300	-7.84847	60.00000	Averaged	spcc
$	87 Bromofluorobenzene	1.28777	1.26552	1.26552	0.010	-1.72782	60.00000	Averaged	
	92 1,2,3-Trichloropropane	0.20962	0.20376	0.20376	0.010	-2.79596	60.00000	Averaged	
	91 Bromobenzene	0.84757	0.73995	0.73995	0.010	-12.69774	60.00000	Averaged	
	89 n-Propylbenzene	4.21198	3.87820	3.87820	0.010	-7.92441	60.00000	Averaged	
	94 2-Chlorotoluene	2.91182	2.67314	2.67314	0.010	-8.19695	60.00000	Averaged	
	93 1,3,5-Trimethylbenzene	2.83423	2.66972	2.66972	0.010	-5.80420	60.00000	Averaged	
	95 4-Chlorotoluene	2.60334	2.45126	2.45126	0.010	-5.84173	60.00000	Averaged	
	96 tert-Butylbenzene	2.28981	2.19956	2.19956	0.010	-3.94136	60.00000	Averaged	
	97 1,2,4-Trimethylbenzene	2.95560	2.74929	2.74929	0.010	-6.98026	60.00000	Averaged	
	99 sec-Butylbenzene	3.85727	3.70679	3.70679	0.010	-3.90132	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 13-JUL-2009 10:00
Lab File ID: 1u102.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: SOIL Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090713-01 Quant Type: ISTD
Method: /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
100 4-Isopropyltoluene	2.82205	2.80161	2.80161	0.010	-0.72431	60.00000	Averaged
101 1,3-Dichlorobenzene	1.63045	1.48359	1.48359	0.010	-9.00756	60.00000	Averaged
103 1,4-Dichlorobenzene	1.67797	1.47741	1.47741	0.010	-11.95252	60.00000	Averaged
105 n-Butylbenzene	3.04073	0.00392	0.00392	0.010	-100	60.00000	Averaged <-
106 1,2-Dichlorobenzene	1.54220	1.39575	1.39575	0.010	-9.49623	60.00000	Averaged
108 1,2-Dibromo-3-chloropropane	0.13687	0.14043	0.14043	0.010	2.59841	60.00000	Averaged
109 1,2,4-Trichlorobenzene	1.00254	0.95183	0.95183	0.010	-5.05850	60.00000	Averaged
110 Hexachlorobutadiene	0.58653	0.51974	0.51974	0.010	-11.38687	60.00000	Averaged
111 Naphthalene	2.18213	2.09911	2.09911	0.010	-3.80446	60.00000	Averaged
112 1,2,3-Trichlorobenzene	0.88500	0.83519	0.83519	0.010	-5.62724	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 10.96620
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u102.d
Lab Smp Id: W1VM090713-01 Client Smp ID: VSTD050
Inj Date : 13-JUL-2009 10:00
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090713-01|CCV/LCS|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090605-01E/IVM090708-01
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:08 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 1 Xylenes (total)	106				2151518	150.000	139
M 2 1,2-Dichloroethylene (total)	96				832276	100.000	95.5
M 3 1,3-Dichloropropylene	75				1293811	100.000	99.0
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	388629	50.0000	65.2
6 Chloromethane	50	5.535	5.535	(0.405)	606325	50.0000	52.6
7 Vinyl chloride	62	5.908	5.908	(0.432)	438516	50.0000	49.0
9 Bromomethane	96	6.943	6.943	(0.507)	294996	50.0000	48.0
10 Chloroethane	64	7.205	7.205	(0.527)	336138	50.0000	50.0
11 Trichlorofluoromethane	101	7.831	7.831	(0.572)	535394	50.0000	63.1
12 Ethyl Ether	59	8.467	8.467	(0.619)	382074	50.0000	51.1
16 Acetone	43	9.244	9.244	(0.676)	768479	250.000	129
22 Acetonitrile	41	9.824	9.824	(0.718)	17730	1250.00	16.4(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	15 1,1-Dichloroethylene	61	9.079	9.079	(0.664)	745035	50.0000	48.1
	21 Methyl acetate	43	9.829	9.829	(0.718)	1592906	250.000	236
	18 Iodomethane	142	9.461	9.461	(0.691)	2891692	250.000	233
	23 Methylene chloride	84	10.133	10.133	(0.741)	443218	50.0000	48.0
	19 Carbon disulfide	76	9.567	9.567	(0.699)	6577917	250.000	264
	25 tert-Butyl methyl ether	73	10.437	10.437	(0.763)	1054535	50.0000	48.0
	26 trans-1,2-Dichloroethylene	96	10.538	10.538	(0.770)	394877	50.0000	46.4
	29 Vinyl acetate	43	11.288	11.288	(0.825)	3962385	250.000	302
	30 1,1-Dichloroethane	63	11.307	11.307	(0.826)	785703	50.0000	46.4
	35 2-Butanone	43	12.181	12.181	(0.890)	1044774	250.000	156
	36 cis-1,2-Dichloroethylene	96	12.190	12.190	(0.891)	437398	50.0000	49.0
	33 2,2-Dichloropropane	77	12.154	12.154	(0.888)	481081	50.0000	55.2
	41 Chloroform	83	12.605	12.605	(0.921)	685749	50.0000	45.0
	39 Bromochloromethane	128	12.554	12.554	(0.918)	183073	50.0000	44.6
	43 1,1,1-Trichloroethane	97	12.839	12.839	(0.938)	497350	50.0000	51.2
	42 Cyclohexane	56	12.839	12.839	(0.938)	850825	50.0000	53.6
	45 1,1-Dichloropropene	75	13.047	13.047	(0.954)	563070	50.0000	51.5
	53 n-Butyl alcohol	56	13.926	13.926	(1.018)	1379691	5000.00	6150
	44 Carbon tetrachloride	117	13.019	13.019	(0.952)	506766	50.0000	49.8
$	48 1,2-Dichloroethane-d4	65	13.337	13.337	(0.975)	591991	50.0000	53.4
	51 1,2-Dichloroethane	62	13.438	13.438	(0.982)	548913	50.0000	44.9
	47 Benzene	78	13.332	13.332	(0.974)	1627441	50.0000	44.9
	50 Cyclohexene	54	13.392	13.392	(0.979)	647582	50.0000	52.9
*	52 Fluorobenzene	96	13.682	13.682	(1.000)	1302291	50.0000	
	54 Trichloroethylene	95	14.114	14.114	(1.032)	409100	50.0000	47.5
	57 1,2-Dichloropropane	63	14.460	14.460	(1.057)	452484	50.0000	47.1
	55 Methylcyclohexane	83	14.280	14.280	(1.044)	751169	50.0000	53.4
	60 Bromodichloromethane	83	14.750	14.750	(1.078)	537903	50.0000	47.6
	59 Dibromomethane	93	14.621	14.621	(1.069)	237528	50.0000	45.3
	61 2-Chloroethylvinyl ether	63	15.030	15.030	(1.099)	991017	250.000	217
	64 4-Methyl-2-pentanone	58	15.362	15.362	(0.895)	853375	250.000	236
	63 cis-1,3-Dichloropropylene	75	15.256	15.256	(1.115)	680498	50.0000	50.2
$	65 Toluene-d8	98	15.523	15.523	(0.904)	1860368	50.0000	47.7
	66 Toluene	92	15.601	15.601	(0.909)	1018713	50.0000	43.2
	68 trans-1,3-Dichloropropylene	75	15.882	15.882	(0.925)	613312	50.0000	48.8
	69 1,1,2-Trichloroethane	83	16.103	16.103	(0.938)	295037	50.0000	45.5
	71 2-Hexanone	43	16.273	16.273	(0.948)	1564271	250.000	176
	72 1,3-Dichloropropane	76	16.310	16.310	(0.950)	602870	50.0000	44.3
	70 Tetrachloroethylene	164	16.195	16.195	(0.944)	305544	50.0000	44.3
	73 Dibromochloromethane	129	16.549	16.549	(0.964)	362853	50.0000	45.0
	74 1,2-Dibromoethane	107	16.729	16.729	(0.975)	329214	50.0000	45.2
*	76 Chlorobenzene-d5	117	17.162	17.162	(1.000)	1121244	50.0000	
	77 Chlorobenzene	112	17.198	17.198	(1.002)	1060665	50.0000	44.8
	79 1,1,1,2-Tetrachloroethane	131	17.263	17.263	(1.006)	361433	50.0000	44.6
	78 Ethylbenzene	91	17.226	17.226	(1.004)	1924743	50.0000	44.9
	80 m,p-Xylenes	106	17.341	17.341	(1.010)	1431074	100.000	91.1
	81 o-Xylene	106	17.792	17.792	(1.037)	720443	50.0000	47.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
82 Styrene	104	17.811	17.811	(1.038)	1236748	50.0000	46.8
83 Bromoform	173	18.110	18.110	(0.923)	241626	50.0000	48.3
84 Isopropylbenzene	105	18.138	18.138	(0.924)	1632184	50.0000	41.4
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	459888	50.0000	46.1
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	749953	50.0000	49.1
92 1,2,3-Trichloropropane	110	18.612	18.612	(0.949)	120748	50.0000	48.6
91 Bromobenzene	156	18.598	18.598	(0.948)	438497	50.0000	43.6
89 n-Propylbenzene	91	18.566	18.566	(0.946)	2298245	50.0000	46.0
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1584121	50.0000	45.9
93 1,3,5-Trimethylbenzene	105	18.727	18.727	(0.954)	1582093	50.0000	47.1
95 4-Chlorotoluene	91	18.860	18.860	(0.961)	1452634	50.0000	47.1
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1303473	50.0000	48.0
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1629248	50.0000	46.5
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	2196666	50.0000	48.0
100 4-Isopropyltoluene	119	19.431	19.431	(0.990)	1660250	50.0000	49.6
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	879183	50.0000	45.5
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	592606	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	875524	50.0000	44.0
106 1,2-Dichlorobenzene	146	20.085	20.085	(1.024)	827131	50.0000	45.2
108 1,2-Dibromo-3-chloropropane	157	21.010	21.010	(1.071)	83217	50.0000	51.3
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	564059	50.0000	47.5
110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	308002	50.0000	44.3
111 Naphthalene	128	22.451	22.451	(1.144)	1243947	50.0000	48.1
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	494941	50.0000	47.2

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/VOA1.i/071309v1/1ul02.d
Date : 13-JUL-2009 10:00
Client ID: VSTD050
Sample Info: IW1VM090713-01|CCV/LCS1|1|VOAF|1|
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

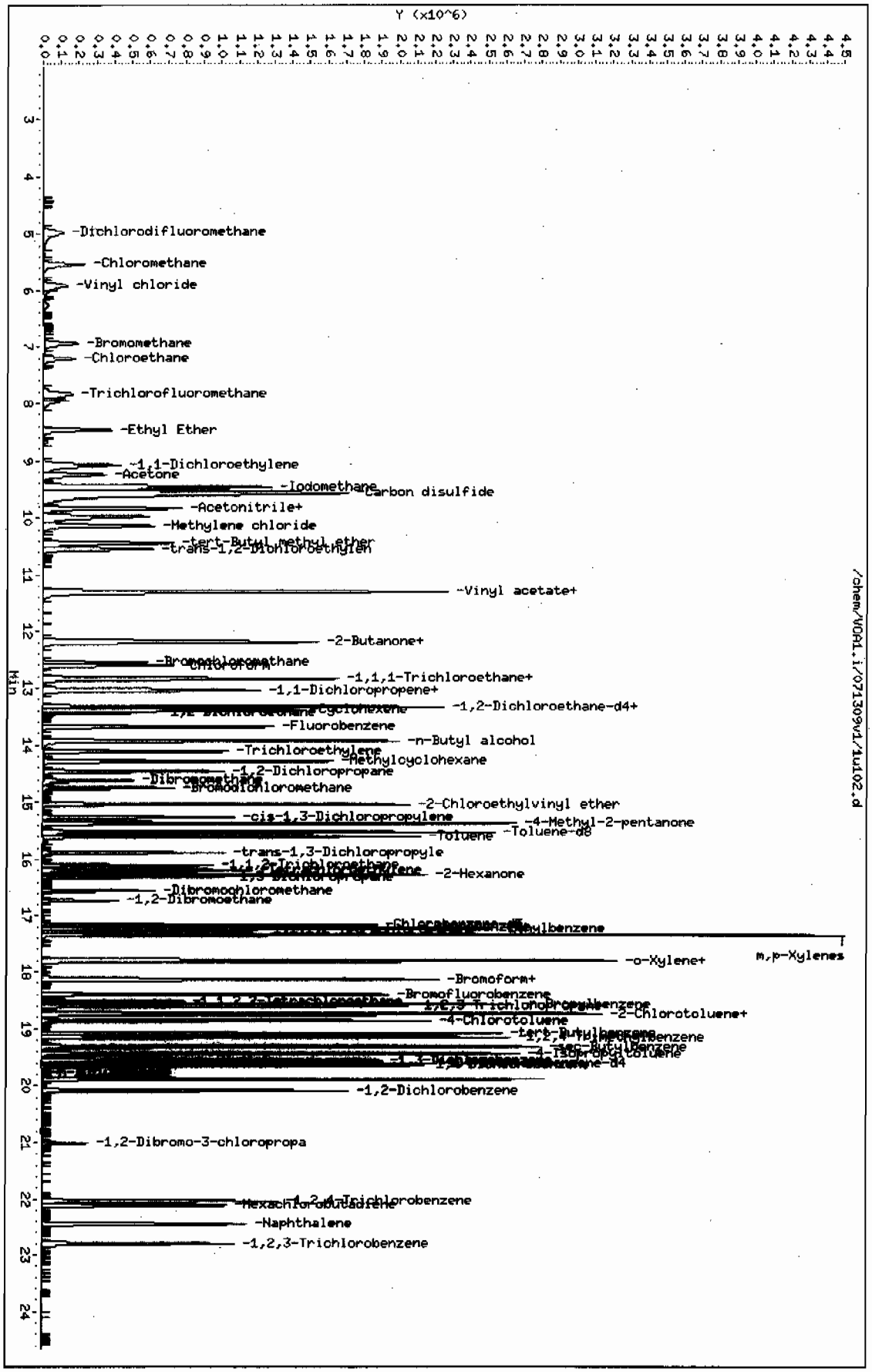

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GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 13-JUL-2009 10:31
Lab File ID: 1u103.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: SOIL Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090713-02 Quant Type: ISTD
Method: /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
4 Chlorotrifluoroethylene	0.19019	0.21827	0.21827	0.010	14.76011	60.00000	Averaged
8 2-Chloro-1,1,1-trifluoroeth	0.34048	0.36165	0.36165	0.010	6.21819	60.00000	Averaged
13 Acrolein	0.04947	0.05369	0.05369	0.001	8.54528	60.00000	Averaged
14 Trichlorotrifluoroethane	0.28145	0.23794	0.23794	0.030	-15.45906	60.00000	Averaged
17 Isopropyl Alcohol	0.01950	0.02216	0.02216	0.000	13.59623	60.00000	Averaged
20 Allyl chloride	212	250	0.11602	0.010	-15.14134	60.00000	Linear
24 tert-Butyl Alcohol	0.03062	0.03459	0.03459	0.010	12.97135	60.00000	Averaged
27 Acrylonitrile	0.11278	0.10619	0.10619	0.010	-5.84855	60.00000	Averaged
28 Isopropyl ether	1.16254	1.22408	1.22408	0.010	5.29336	60.00000	Averaged
31 2-Chloro-1,3-butadiene	0.44344	0.45299	0.45299	0.010	2.15399	60.00000	Averaged
32 Ethyl tert-butyl ether	1.03281	1.08078	1.08078	0.010	4.64469	60.00000	Averaged
37 Propionitrile	0.04568	0.04383	0.04383	0.010	-4.04827	60.00000	Averaged
34 Ethyl acetate	0.31721	0.27437	0.27437	0.010	-13.50627	60.00000	Averaged
40 Methacrylonitrile	0.23340	0.21694	0.21694	0.010	-7.05257	60.00000	Averaged
38 Tetrahydrofuran	0.22772	0.21543	0.21543	0.010	-5.40068	60.00000	Averaged
46 Isobutyl alcohol	0.00969	0.01072	0.01072	0.001	10.57654	60.00000	Averaged
49 Methyl tert-amyl ether	0.85461	0.89032	0.89032	0.010	4.17840	60.00000	Averaged
56 Methyl methacrylate	0.18420	0.18332	0.18332	0.010	-0.47949	60.00000	Averaged
67 Ethyl methacrylate	0.43841	0.40332	0.40332	0.010	-8.00415	60.00000	Averaged
75 1-Chlorohexane	0.33469	0.40430	0.40430	0.000	20.80050	60.00000	Averaged
58 1,4-Dioxane	0.00275	0.00263	0.00263	0.001	-4.56403	60.00000	Averaged
62 2-Nitropropane	0.07858	0.08598	0.08598	0.000	9.41736	60.00000	Averaged
85 cis-1,4-Dichloro-2-butene	0.27487	0.28043	0.28043	0.010	2.02369	60.00000	Averaged
86 Cyclohexanone	0.05915	0.06078	0.06078	0.010	2.76896	60.00000	Averaged
90 trans-1,4-Dichloro-2-butene	0.26477	0.26424	0.26424	0.010	-0.20129	60.00000	Averaged
98 Pentachloroethane	0.18429	0.36714	0.36714	0.010	99	60.00000	Averaged <-
104 Benzyl chloride	1.33213	1.58902	1.58902	0.010	19.28351	60.00000	Averaged
107 bis(2-Chloroisopropyl)ether	0.38370	0.39336	0.39336	0.010	2.51665	60.00000	Averaged
$ 48 1,2-Dichloroethane-d4	0.42530	0.41674	0.41674	0.010	-2.01309	60.00000	Averaged
$ 65 Toluene-d8	1.74064	1.64069	1.64069	0.010	-5.74215	60.00000	Averaged
$ 87 Bromofluorobenzene	1.28777	1.27646	1.27646	0.010	-0.87832	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 13-JUL-2009 10:31
Lab File ID: 1u103.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: SOIL Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090713-02 Quant Type: ISTD
Method: /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m

Average %D / Drift Results.	
Calculated Average %D/Drift =	10.55819
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u103.d
Lab Smp Id: W1VM090713-02 Client Smp ID: VSTD250S
Inj Date : 13-JUL-2009 10:31
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090713-02|SHORT|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090701-08A/UVM090624-02B
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:07 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
4 Chlorotrifluoroethylene	116	4.883	4.883	(0.357)	875333	150.000	172
8 2-Chloro-1,1,1-trifluoroethane	118	6.294	6.294	(0.460)	1450370	150.000	159
13 Acrolein	56	8.950	8.950	(0.654)	358891	250.000	271
14 Trichlorotrifluoroethane	101	8.996	8.996	(0.657)	1590420	250.000	211
17 Isopropyl Alcohol	45	9.452	9.452	(0.690)	1480899	2500.00	2840
20 Allyl chloride	76	9.852	9.852	(0.720)	775479	250.000	212
24 tert-Butyl Alcohol	59	10.202	10.202	(0.745)	2312308	2500.00	2820
27 Acrylonitrile	53	10.681	10.681	(0.780)	709757	250.000	235
28 Isopropyl ether	45	11.205	11.205	(0.818)	1636352	50.0000	52.6
31 2-Chloro-1,3-butadiene	53	11.399	11.399	(0.833)	605563	50.0000	51.1
32 Ethyl tert-butyl ether	59	11.767	11.767	(0.859)	1444793	50.0000	52.3
37 Propionitrile	54	12.416	12.416	(0.907)	292961	250.000	240

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
34 Ethyl acetate	43	12.177	12.177	(0.889)	1833882	250.000	216
40 Methacrylonitrile	41	12.572	12.572	(0.918)	1450051	250.000	232
38 Tetrahydrofuran	42	12.545	12.545	(0.639)	630378	250.000	236
46 Isobutyl alcohol	41	13.116	13.116	(0.958)	716266	2500.00	2760
49 Methyl tert-amyl ether	73	13.360	13.360	(0.976)	1190185	50.0000	52.1
56 Methyl methacrylate	69	14.451	14.451	(1.055)	1225314	250.000	249
67 Ethyl methacrylate	69	15.822	15.822	(0.921)	2308389	250.000	230
75 1-Chlorohexane	55	17.042	17.042	(1.245)	540473	50.0000	60.4
58 1,4-Dioxane	88	14.552	14.552	(1.063)	175735	2500.00	2380
62 2-Nitropropane	43	15.090	15.090	(1.102)	574681	250.000	274
85 cis-1,4-Dichloro-2-butene	53	18.285	18.285	(0.932)	820590	250.000	255
86 Cyclohexanone	55	18.395	18.395	(1.071)	1739521	1250.00	1280
90 trans-1,4-Dichloro-2-butene	53	18.579	18.579	(0.947)	773220	250.000	249
98 Pentachloroethane	167	19.205	19.205	(0.979)	1074333	250.000	498(A)
104 Benzyl chloride	91	19.785	19.785	(1.008)	4649793	250.000	298
107 bis(2-Chloroisopropyl)ether	45	20.177	20.177	(1.028)	1151049	250.000	256
* 52 Fluorobenzene	96	13.691	13.691	(1.000)	1336804	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.171	(1.000)	1144707	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	585241	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.346	(0.975)	557095	50.0000	49.0
$ 65 Toluene-d8	98	15.528	15.528	(0.904)	1878109	50.0000	47.1
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	747036	50.0000	49.6

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/VOA1.i/071309v1/1u103.d
Date : 13-JUL-2009 10:31
Client ID: VSID250S
Sample Info: iWIVH090713-02|SHORT|1|VOAF|1|
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

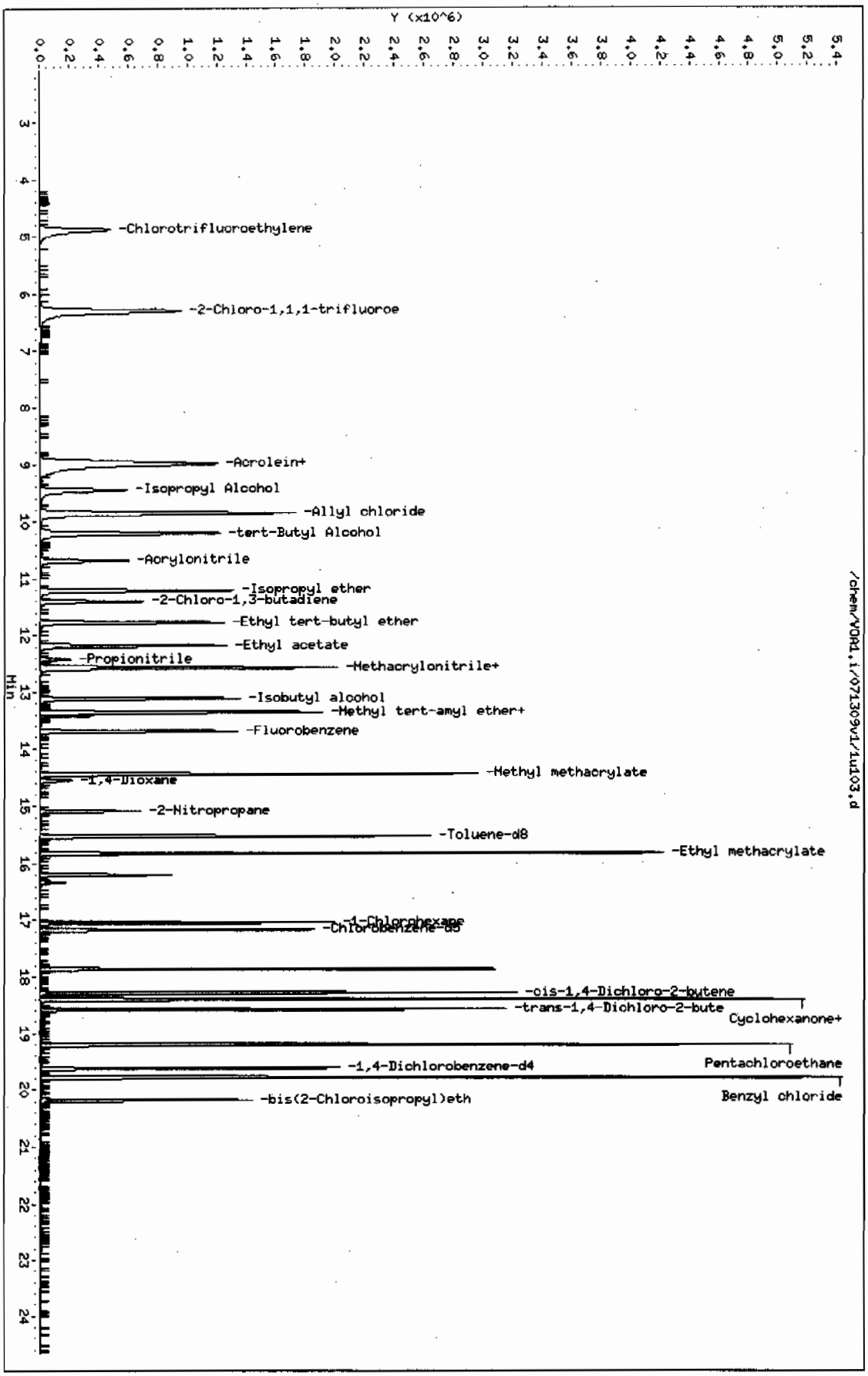

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Data File: /chem/VOA1.i/071409v1/1u202.d
Report Date: 14-Jul-2009 10:45

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1u202.d
Analysis Type: WATER
Lab Sample ID: W1VM090714-01
Method: /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m

Injection Date: 14-JUL-2009 08:55
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
M	1 Xylenes (total)	0.69178	0.69968	0.69968	0.050	1.14273	60.00000	Averaged	
M	2 1,2-Dichloroethylene (total	0.33439	0.34594	0.34594	0.050	3.45426	60.00000	Averaged	
M	3 1,3-Dichloropropylene	0.59231	0.61815	0.61815	0.050	4.36188	60.00000	Averaged	
	5 Dichlorodifluoromethane	0.22899	0.33275	0.33275	0.050	45.30899	60.00000	Averaged	
	6 Chloromethane	0.44211	0.51500	0.51500	0.100	16.48813	60.00000	Averaged	spcc
	7 Vinyl chloride	0.34386	0.37391	0.37391	0.050	8.74008	20.00000	Averaged	ccc
	9 Bromomethane	0.23589	0.25618	0.25618	0.050	8.60175	60.00000	Averaged	
	10 Chloroethane	0.25782	0.28061	0.28061	0.050	8.84106	60.00000	Averaged	
	11 Trichlorofluoromethane	0.32562	0.46504	0.46504	0.050	42.81670	60.00000	Averaged	
	12 Ethyl Ether	0.28702	0.31554	0.31554	0.010	9.93662	60.00000	Averaged	
	16 Acetone	0.22939	0.12630	0.12630	0.000	-44.94027	60.00000	Averaged	
	22 Acetonitrile	0.04150	0.04508	0.04508	0.010	8.64655	60.00000	Averaged	
	15 1,1-Dichloroethylene	0.59496	0.61846	0.61846	0.050	3.94977	20.00000	Averaged	ccc
	21 Methyl acetate	0.25915	0.26105	0.26105	0.010	0.73337	60.00000	Averaged	
	18 Iodomethane	0.47694	0.48591	0.48591	0.050	1.88010	60.00000	Averaged	
	23 Methylene chloride	51.38653	50.00000	0.36226	0.000	2.77306	60.00000	Linear	
	19 Carbon disulfide	0.95658	1.07243	1.07243	0.050	12.10993	60.00000	Averaged	
	25 tert-Butyl methyl ether	0.84247	0.86713	0.86713	0.050	2.92789	60.00000	Averaged	
	26 trans-1,2-Dichloroethylene	0.32645	0.32159	0.32159	0.050	-1.48999	60.00000	Averaged	
	29 Vinyl acetate	0.50428	0.66277	0.66277	0.010	31.42961	60.00000	Averaged	
	30 1,1-Dichloroethane	0.64965	0.68667	0.68667	0.100	5.69937	60.00000	Averaged	spcc
	35 2-Butanone	0.25663	0.17241	0.17241	0.030	-32.81789	60.00000	Averaged	
	36 cis-1,2-Dichloroethylene	0.34232	0.37029	0.37029	0.050	8.16926	60.00000	Averaged	
	33 2,2-Dichloropropane	0.33455	0.40092	0.40092	0.050	19.83749	60.00000	Averaged	
	41 Chloroform	0.58475	0.60359	0.60359	0.010	3.22165	20.00000	Averaged	ccc
	39 Bromochloromethane	0.15749	0.15498	0.15498	0.010	-1.59577	60.00000	Averaged	
	43 1,1,1-Trichloroethane	0.37278	0.43011	0.43011	0.010	15.37932	60.00000	Averaged	
	42 Cyclohexane	0.60946	0.68677	0.68677	0.010	12.68545	60.00000	Averaged	
	45 1,1-Dichloropropene	0.41989	0.46672	0.46672	0.010	11.15332	60.00000	Averaged	
	53 n-Butyl alcohol	0.00862	0.01087	0.01087	0.001	26.10837	60.00000	Averaged	
	44 Carbon tetrachloride	0.39059	0.44559	0.44559	0.010	14.08184	60.00000	Averaged	
$	48 1,2-Dichloroethane-d4	0.42530	0.44501	0.44501	0.010	4.63531	60.00000	Averaged	
	51 1,2-Dichloroethane	0.46971	0.50038	0.50038	0.010	6.52970	60.00000	Averaged	
	47 Benzene	1.39078	1.34815	1.34815	0.010	-3.06522	60.00000	Averaged	
	50 Cyclohexene	0.46958	0.54303	0.54303	0.010	15.64293	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1u202.d
Analysis Type: WATER
Lab Sample ID: W1VM090714-01
Method: /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m

Injection Date: 14-JUL-2009 08:55
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
	54 Trichloroethylene	0.33093	0.34955	0.34955	0.010	5.62826	60.00000	Averaged	
	57 1,2-Dichloropropane	0.36887	0.38264	0.38264	0.010	3.73431	20.00000	Averaged	ccc
	55 Methylcyclohexane	0.53987	0.61930	0.61930	0.010	14.71167	60.00000	Averaged	
	60 Bromodichloromethane	0.43411	0.47501	0.47501	0.010	9.42081	60.00000	Averaged	
	59 Dibromomethane	0.20115	0.20221	0.20221	0.010	0.52600	60.00000	Averaged	
	61 2-Chloroethylvinyl ether	0.17549	0.16011	0.16011	0.000	-8.76287	60.00000	Averaged	
	64 4-Methyl-2-pentanone	0.16089	0.15388	0.15388	0.010	-4.35654	60.00000	Averaged	
	63 cis-1,3-Dichloropropylene	0.52078	0.57647	0.57647	0.010	10.69264	60.00000	Averaged	
$	65 Toluene-d8	1.74064	1.67909	1.67909	0.010	-3.53589	60.00000	Averaged	
	66 Toluene	1.05215	0.98184	0.98184	0.010	-6.68220	20.00000	Averaged	ccc
	68 trans-1,3-Dichloropropylene	0.56062	0.59123	0.59123	0.010	5.46027	60.00000	Averaged	
	69 1,1,2-Trichloroethane	0.28927	0.28182	0.28182	0.010	-2.57569	60.00000	Averaged	
	71 2-Hexanone	0.39571	0.29693	0.29693	0.010	-24.96208	60.00000	Averaged	
	72 1,3-Dichloropropane	0.60636	0.59501	0.59501	0.010	-1.87308	60.00000	Averaged	
	70 Tetrachloroethylene	0.30738	0.29689	0.29689	0.010	-3.41431	60.00000	Averaged	
	73 Dibromochloromethane	0.35978	0.36242	0.36242	0.010	0.73416	60.00000	Averaged	
	74 1,2-Dibromoethane	0.32478	0.31651	0.31651	0.010	-2.54672	60.00000	Averaged	
	77 Chlorobenzene	1.05603	1.03633	1.03633	0.300	-1.86475	60.00000	Averaged	spcc
	79 1,1,1,2-Tetrachloroethane	0.36123	0.36410	0.36410	0.010	0.79380	60.00000	Averaged	
	78 Ethylbenzene	1.91243	1.87123	1.87123	0.010	-2.15427	20.00000	Averaged	ccc
	80 m,p-Xylenes	0.70032	0.70018	0.70018	0.010	-0.02061	60.00000	Averaged	
	81 o-Xylene	0.67468	0.69868	0.69868	0.010	3.55785	60.00000	Averaged	
	82 Styrene	1.17829	1.21739	1.21739	0.010	3.31885	60.00000	Averaged	
	83 Bromoform	0.42240	0.41855	0.41855	0.100	-0.91081	60.00000	Averaged	spcc
	84 Isopropylbenzene	3.33035	2.83478	2.83478	0.010	-14.88044	60.00000	Averaged	
	88 1,1,2,2-Tetrachloroethane	0.84214	0.76311	0.76311	0.300	-9.38481	60.00000	Averaged	spcc
$	87 Bromofluorobenzene	1.28777	1.17803	1.17803	0.010	-8.52164	60.00000	Averaged	
	92 1,2,3-Trichloropropane	0.20962	0.20892	0.20892	0.010	-0.33228	60.00000	Averaged	
	91 Bromobenzene	0.84757	0.76984	0.76984	0.010	-9.17157	60.00000	Averaged	
	89 n-Propylbenzene	4.21198	3.97684	3.97684	0.010	-5.58252	60.00000	Averaged	
	94 2-Chlorotoluene	2.91182	2.81004	2.81004	0.010	-3.49543	60.00000	Averaged	
	93 1,3,5-Trimethylbenzene	2.83423	2.75481	2.75481	0.010	-2.80192	60.00000	Averaged	
	95 4-Chlorotoluene	2.60334	2.56242	2.56242	0.010	-1.57200	60.00000	Averaged	
	96 tert-Butylbenzene	2.28981	2.29722	2.29722	0.010	0.32344	60.00000	Averaged	
	97 1,2,4-Trimethylbenzene	2.95560	2.90496	2.90496	0.010	-1.71355	60.00000	Averaged	
	99 sec-Butylbenzene	3.85727	3.89052	3.89052	0.010	0.86180	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1u202.d
Analysis Type: WATER
Lab Sample ID: W1VM090714-01
Method: /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m

Injection Date: 14-JUL-2009 08:55
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
100 4-Isopropyltoluene	2.82205	2.96158	2.96158	0.010	4.94435	60.00000	Averaged
101 1,3-Dichlorobenzene	1.63045	1.58022	1.58022	0.010	-3.08072	60.00000	Averaged
103 1,4-Dichlorobenzene	1.67797	1.57898	1.57898	0.010	-5.89936	60.00000	Averaged
105 n-Butylbenzene	3.04073	3.22632	3.22632	0.010	6.10340	60.00000	Averaged
106 1,2-Dichlorobenzene	1.54220	1.48096	1.48096	0.010	-3.97118	60.00000	Averaged
108 1,2-Dibromo-3-chloropropane	0.13687	0.13572	0.13572	0.010	-0.83985	60.00000	Averaged
109 1,2,4-Trichlorobenzene	1.00254	0.98671	0.98671	0.010	-1.57882	60.00000	Averaged
110 Hexachlorobutadiene	0.58653	0.56363	0.56363	0.010	-3.90485	60.00000	Averaged
111 Naphthalene	2.18213	2.05913	2.05913	0.010	-5.63663	60.00000	Averaged
112 1,2,3-Trichlorobenzene	0.88500	0.86607	0.86607	0.010	-2.13881	60.00000	Averaged

Average %D / Drift Results.

Calculated Average %D/Drift = 8.15029
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071409v1/1u202.d
Lab Smp Id: W1VM090714-01 Client Smp ID: VSTD050
Inj Date : 14-JUL-2009 08:55
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090714-01|CCV/LCS|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090605-01E/IVM090708-01
Comment :
Method : /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m
Meth Date : 14-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubL+.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
M 1 Xylenes (total)	106				1950022	150.000	152
M 2 1,2-Dichloroethylene (total)	96				719243	100.000	103
M 3 1,3-Dichloropropylene	75				1148524	100.000	108
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	345909	50.0000	72.6
6 Chloromethane	50	5.535	5.535	(0.405)	535369	50.0000	58.2
7 Vinyl chloride	62	5.908	5.908	(0.432)	388702	50.0000	54.4
9 Bromomethane	96	6.938	6.938	(0.507)	266313	50.0000	54.3
10 Chloroethane	64	7.205	7.205	(0.527)	291707	50.0000	54.4
11 Trichlorofluoromethane	101	7.841	7.841	(0.573)	483428	50.0000	71.4
12 Ethyl Ether	59	8.471	8.471	(0.619)	328017	50.0000	55.0
16 Acetone	43	9.244	9.244	(0.676)	656495	250.000	138
22 Acetonitrile	41	9.972	9.972	(0.729)	1171673	1250.00	1360
15 1,1-Dichloroethylene	61	9.079	9.079	(0.664)	642921	50.0000	52.0
21 Methyl acetate	43	9.829	9.829	(0.718)	1356864	250.000	252
18 Iodomethane	142	9.461	9.461	(0.691)	2525647	250.000	255

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	23 Methylene chloride	84	10.133	10.133	(0.741)	376587	50.0000	51.4
	19 Carbon disulfide	76	9.567	9.567	(0.699)	5574213	250.000	280
	25 tert-Butyl methyl ether	73	10.437	10.437	(0.763)	901430	50.0000	51.5
	26 trans-1,2-Dichloroethylene	96	10.543	10.543	(0.771)	334307	50.0000	49.2
	29 Vinyl acetate	43	11.293	11.293	(0.825)	3444920	250.000	328
	30 1,1-Dichloroethane	63	11.316	11.316	(0.827)	713831	50.0000	52.8
	35 2-Butanone	43	12.186	12.186	(0.891)	896151	250.000	168
	36 cis-1,2-Dichloroethylene	96	12.195	12.195	(0.891)	384935	50.0000	54.1
	33 2,2-Dichloropropane	77	12.158	12.158	(0.889)	416778	50.0000	59.9
	41 Chloroform	83	12.605	12.605	(0.921)	627459	50.0000	51.6
	39 Bromochloromethane	128	12.549	12.549	(0.917)	161106	50.0000	49.2
	43 1,1,1-Trichloroethane	97	12.844	12.844	(0.939)	447117	50.0000	57.7
	42 Cyclohexane	56	12.835	12.835	(0.938)	713931	50.0000	56.3
	45 1,1-Dichloropropene	75	13.047	13.047	(0.954)	485184	50.0000	55.6
	53 n-Butyl alcohol	56	13.930	13.930	(1.018)	1129654	5000.00	6300
	44 Carbon tetrachloride	117	13.024	13.024	(0.952)	463215	50.0000	57.0
$	48 1,2-Dichloroethane-d4	65	13.337	13.337	(0.975)	462612	50.0000	52.3
	51 1,2-Dichloroethane	62	13.438	13.438	(0.982)	520167	50.0000	53.3
	47 Benzene	78	13.332	13.332	(0.974)	1401471	50.0000	48.5
	50 Cyclohexene	54	13.392	13.392	(0.979)	564510	50.0000	57.8
*	52 Fluorobenzene	96	13.682	13.682	(1.000)	1039551	50.0000	
	54 Trichloroethylene	95	14.114	14.114	(1.032)	363376	50.0000	52.8
	57 1,2-Dichloropropane	63	14.460	14.460	(1.057)	397774	50.0000	51.9
	55 Methylcyclohexane	83	14.285	14.285	(1.044)	643793	50.0000	57.4
	60 Bromodichloromethane	83	14.750	14.750	(1.078)	493797	50.0000	54.7
	59 Dibromomethane	93	14.625	14.625	(1.069)	210204	50.0000	50.3
	61 2-Chloroethylvinyl ether	63	15.035	15.035	(1.099)	832233	250.000	228
	64 4-Methyl-2-pentanone	58	15.367	15.367	(0.895)	714792	250.000	239
	63 cis-1,3-Dichloropropylene	75	15.261	15.261	(1.115)	599266	50.0000	55.3
$	65 Toluene-d8	98	15.523	15.523	(0.904)	1559886	50.0000	48.2
	66 Toluene	92	15.601	15.601	(0.909)	912137	50.0000	46.6
	68 trans-1,3-Dichloropropylene	75	15.882	15.882	(0.925)	549257	50.0000	52.7
	69 1,1,2-Trichloroethane	83	16.108	16.108	(0.938)	261809	50.0000	48.7
	71 2-Hexanone	43	16.273	16.273	(0.948)	1379247	250.000	188
	72 1,3-Dichloropropane	76	16.310	16.310	(0.950)	552763	50.0000	49.1
	70 Tetrachloroethylene	164	16.195	16.195	(0.943)	275811	50.0000	48.3
	73 Dibromochloromethane	129	16.549	16.549	(0.964)	336692	50.0000	50.4
	74 1,2-Dibromoethane	107	16.729	16.729	(0.975)	294037	50.0000	48.7
*	76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	929005	50.0000	
	77 Chlorobenzene	112	17.198	17.198	(1.002)	962761	50.0000	49.1
	79 1,1,1,2-Tetrachloroethane	131	17.268	17.268	(1.006)	338247	50.0000	50.4
	78 Ethylbenzene	91	17.226	17.226	(1.003)	1738387	50.0000	48.9
	80 m,p-Xylenes	106	17.341	17.341	(1.010)	1300943	100.000	100
	81 o-Xylene	106	17.792	17.792	(1.036)	649078	50.0000	51.8
	82 Styrene	104	17.811	17.811	(1.038)	1130963	50.0000	51.6
	83 Bromoform	173	18.110	18.110	(0.923)	222215	50.0000	49.5
	84 Isopropylbenzene	105	18.138	18.138	(0.924)	1505028	50.0000	42.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	405144	50.0000	45.3
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	625433	50.0000	45.7
92 1,2,3-Trichloropropane	110	18.612	18.612	(0.949)	110919	50.0000	49.8
91 Bromobenzene	156	18.598	18.598	(0.948)	408717	50.0000	45.4
89 n-Propylbenzene	91	18.566	18.566	(0.946)	2111364	50.0000	47.2
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1491894	50.0000	48.2
93 1,3,5-Trimethylbenzene	105	18.727	18.727	(0.954)	1462571	50.0000	48.6
95 4-Chlorotoluene	91	18.860	18.860	(0.961)	1360427	50.0000	49.2
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1219627	50.0000	50.2
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1542286	50.0000	49.1
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	2065533	50.0000	50.4
100 4-Isopropyltoluene	119	19.436	19.436	(0.991)	1572348	50.0000	52.5
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	838964	50.0000	48.4
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	530915	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	838306	50.0000	47.0
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1712901	50.0000	53.0
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	786263	50.0000	48.0
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	72056	50.0000	49.6
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	523861	50.0000	49.2
110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	299237	50.0000	48.0
111 Naphthalene	128	22.451	22.451	(1.144)	1093224	50.0000	47.2
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	459807	50.0000	48.9

Data File: /chem/VOA1.i/071409v1/1u202.d
Date : 14-JUL-2009 08:55
Client ID: VSTD050
Sample Info: IW1VH090714-01ICCV/LCS1|VOAFI1|
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RKM4
Column diameter: 0.25

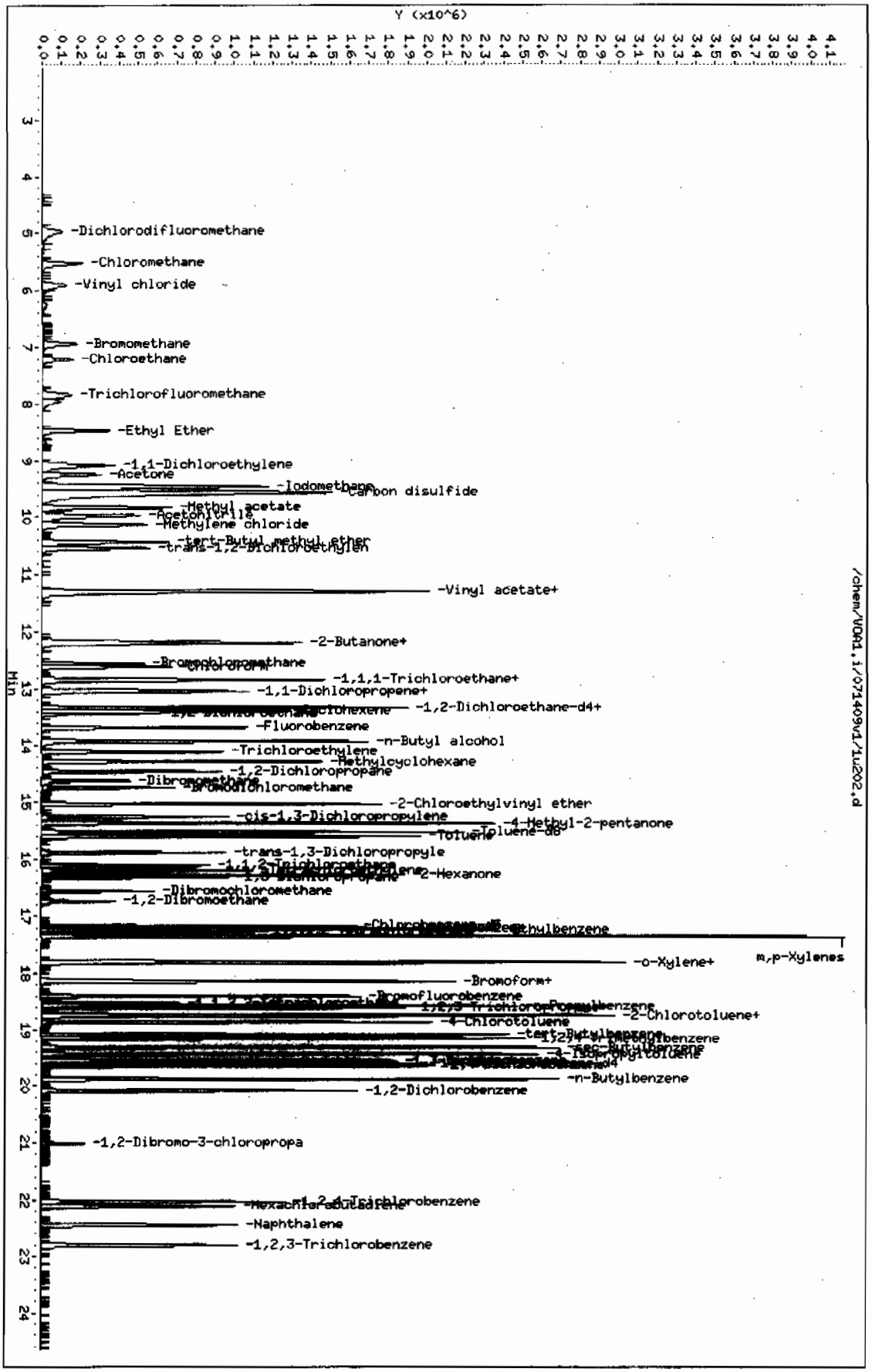

Page 1

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i
Lab File ID: 1u204.d
Analysis Type: WATER
Lab Sample ID: W1VM090714-03
Method: /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m

Injection Date: 14-JUL-2009 09:55
Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Init. Cal. Times: 15:01 23:08
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
4 Chlorotrifluoroethylene	0.19019	0.20404	0.20404	0.010	7.27944	60.00000	Averaged
8 2-Chloro-1,1,1-trifluoroeth	0.34048	0.35605	0.35605	0.010	4.57344	60.00000	Averaged
13 Acrolein	0.04947	0.05439	0.05439	0.001	9.95458	60.00000	Averaged
14 Trichlorotrifluoroethane	0.28145	0.26445	0.26445	0.030	-6.04108	60.00000	Averaged
17 Isopropyl Alcohol	0.01950	0.02370	0.02370	0.000	21.49225	60.00000	Averaged
20 Allyl chloride	228	250	0.12512	0.010	-8.64674	60.00000	Linear
24 tert-Butyl Alcohol	0.03062	0.03710	0.03710	0.010	21.15909	60.00000	Averaged
27 Acrylonitrile	0.11278	0.11107	0.11107	0.010	-1.52101	60.00000	Averaged
28 Isopropyl ether	1.16254	1.29278	1.29278	0.010	11.20344	60.00000	Averaged
31 2-Chloro-1,3-butadiene	0.44344	0.51025	0.51025	0.010	15.06631	60.00000	Averaged
32 Ethyl tert-butyl ether	1.03281	1.14160	1.14160	0.010	10.53343	60.00000	Averaged
37 Propionitrile	0.04568	0.04523	0.04523	0.010	-0.99107	60.00000	Averaged
34 Ethyl acetate	0.31721	0.29602	0.29602	0.010	-6.68050	60.00000	Averaged
40 Methacrylonitrile	0.23340	0.23906	0.23906	0.010	2.42221	60.00000	Averaged
38 Tetrahydrofuran	0.22772	0.21711	0.21711	0.010	-4.65970	60.00000	Averaged
46 Isobutyl alcohol	0.00969	0.01193	0.01193	0.001	23.15236	60.00000	Averaged
49 Methyl tert-amyl ether	0.85461	0.94285	0.94285	0.010	10.32528	60.00000	Averaged
56 Methyl methacrylate	0.18420	0.19973	0.19973	0.010	8.43083	60.00000	Averaged
67 Ethyl methacrylate	0.43841	0.43016	0.43016	0.010	-1.88125	60.00000	Averaged
75 1-Chlorohexane	0.33469	0.39733	0.39733	0.000	18.71608	60.00000	Averaged
58 1,4-Dioxane	0.00275	0.00276	0.00276	0.001	0.31506	60.00000	Averaged
62 2-Nitropropane	0.07858	0.09441	0.09441	0.000	20.14202	60.00000	Averaged
85 cis-1,4-Dichloro-2-butene	0.27487	0.29998	0.29998	0.010	9.13590	60.00000	Averaged
86 Cyclohexanone	0.05915	0.06121	0.06121	0.010	3.49125	60.00000	Averaged
90 trans-1,4-Dichloro-2-butene	0.26477	0.28454	0.28454	0.010	7.46710	60.00000	Averaged
98 Pentachloroethane	0.18429	0.36394	0.36394	0.010	97.47687	60.00000	Averaged <-
104 Benzyl chloride	1.33213	1.62315	1.62315	0.010	21.84601	60.00000	Averaged
107 bis(2-Chloroisopropyl)ether	0.38370	0.39741	0.39741	0.010	3.57311	60.00000	Averaged
$ 48 1,2-Dichloroethane-d4	0.42530	0.43849	0.43849	0.010	3.10248	60.00000	Averaged
$ 65 Toluene-d8	1.74064	1.66012	1.66012	0.010	-4.62593	60.00000	Averaged
$ 87 Bromofluorobenzene	1.28777	1.29540	1.29540	0.010	0.59258	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: VOA1.i Injection Date: 14-JUL-2009 09:55
Lab File ID: 1u204.d Init. Cal. Date(s): 01-JUL-2009 01-JUL-2009
Analysis Type: WATER Init. Cal. Times: 15:01 23:08
Lab Sample ID: W1VM090714-03 Quant Type: ISTD
Method: /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m

Average %D / Drift Results.	
Calculated Average %D/Drift =	11.82253
Maximun Average %D/Drift =	20.00000
* Passed Average %D/Drift Test.	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071409v1/1u204.d
Lab Smp Id: W1VM090714-03 Client Smp ID: VSTD250S
Inj Date : 14-JUL-2009 09:55
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |W1VM090714-03|SHORT|1|VOAF|1|
Misc Info : GEL 5ML N/A UVM090701-08A/UVM090624-02B
Comment :
Method : /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m
Meth Date : 14-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: CALsubS+SS.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (Uf/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	5.00000	ng unit correction factor
Vo	5.00000	sample purged

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
4 Chlorotrifluoroethylene	116	4.883	4.883	(0.357)	689509	150.000	161
8 2-Chloro-1,1,1-trifluoroethane	118	6.298	6.298	(0.460)	1203214	150.000	157
13 Acrolein	56	8.950	8.950	(0.654)	306342	250.000	275
14 Trichlorotrifluoroethane	101	8.996	8.996	(0.657)	1489444	250.000	235
17 Isopropyl Alcohol	45	9.452	9.452	(0.690)	1334601	2500.00	3040
20 Allyl chloride	76	9.857	9.857	(0.720)	704724	250.000	228
24 tert-Butyl Alcohol	59	10.202	10.202	(0.745)	2089657	2500.00	3030
27 Acrylonitrile	53	10.681	10.681	(0.780)	625558	250.000	246
28 Isopropyl ether	45	11.210	11.210	(0.819)	1456248	50.0000	55.6
31 2-Chloro-1,3-butadiene	53	11.399	11.399	(0.833)	574770	50.0000	57.5
32 Ethyl tert-butyl ether	59	11.767	11.767	(0.859)	1285948	50.0000	55.3
37 Propionitrile	54	12.416	12.416	(0.907)	254726	250.000	248
34 Ethyl acetate	43	12.177	12.177	(0.889)	1667250	250.000	233
40 Methacrylonitrile	41	12.572	12.572	(0.918)	1346423	250.000	256
38 Tetrahydrofuran	42	12.545	12.545	(0.639)	566836	250.000	238

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
46 Isobutyl alcohol	41	13.116	13.116	(0.958)	672195	2500.00	3080
49 Methyl tert-amyl ether	73	13.360	13.360	(0.976)	1062071	50.0000	55.2
56 Methyl methacrylate	69	14.450	14.450	(1.055)	1124939	250.000	271
67 Ethyl methacrylate	69	15.822	15.822	(0.921)	2137930	250.000	245
75 1-Chlorohexane	55	17.042	17.042	(1.245)	447565	50.0000	59.4
58 1,4-Dioxane	88	14.556	14.556	(1.063)	155652	2500.00	2510
62 2-Nitropropane	43	15.090	15.090	(1.102)	531713	250.000	300
85 cis-1,4-Dichloro-2-butene	53	18.285	18.285	(0.932)	783178	250.000	273
86 Cyclohexanone	55	18.395	18.395	(1.071)	1521151	1250.00	1290
90 trans-1,4-Dichloro-2-butene	53	18.579	18.579	(0.947)	742884	250.000	269
98 Pentachloroethane	167	19.205	19.205	(0.979)	950165	250.000	494(A)
104 Benzyl chloride	91	19.785	19.785	(1.008)	4237719	250.000	305
107 bis(2-Chloroisopropyl)ether	45	20.177	20.177	(1.028)	1037562	250.000	259
* 52 Fluorobenzene	96	13.691	13.691	(1.000)	1126443	50.0000	
* 76 Chlorobenzene-d5	117	17.171	17.171	(1.000)	994020	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	522159	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13:346	13.346	(0.975)	493937	50.0000	51.6
$ 65 Toluene-d8	98	15.528	15.528	(0.904)	1650192	50.0000	47.7
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	676404	50.0000	50.3

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/VOA1.i/071409v1/1u204.d
Date : 14-JUL-2009 09:55
Client ID: VSTD250S
Sample Info: |W1VM090714-03|SHORT|1|VOAF|1|
Purge Volume: 5.0
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXM4
Column diameter: 0.25

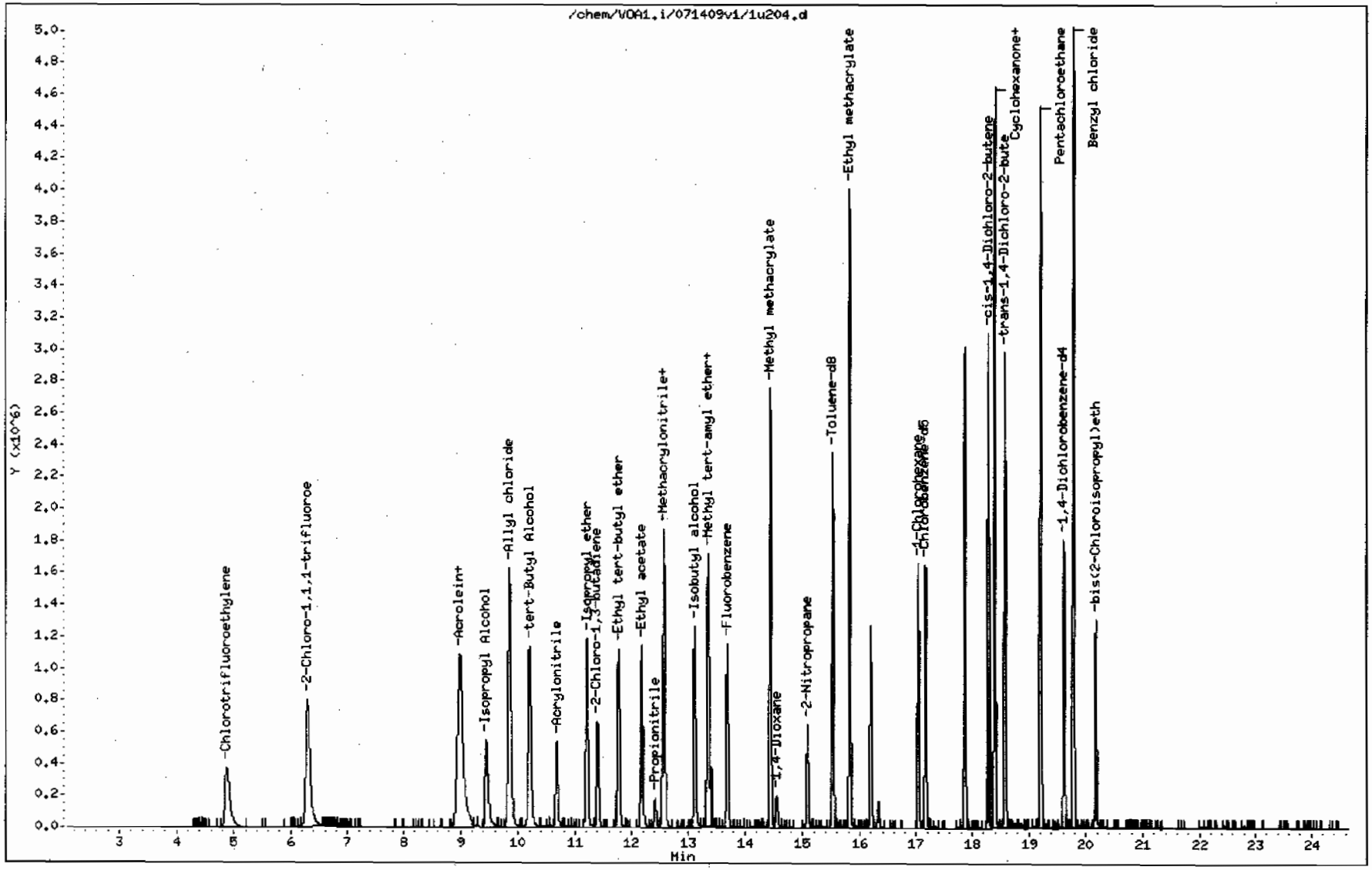

QC Data

Data File: /chem/VOA1.i/070109v1/1s309.d

Page 1

Date : 01-JUL-2009 14:32

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

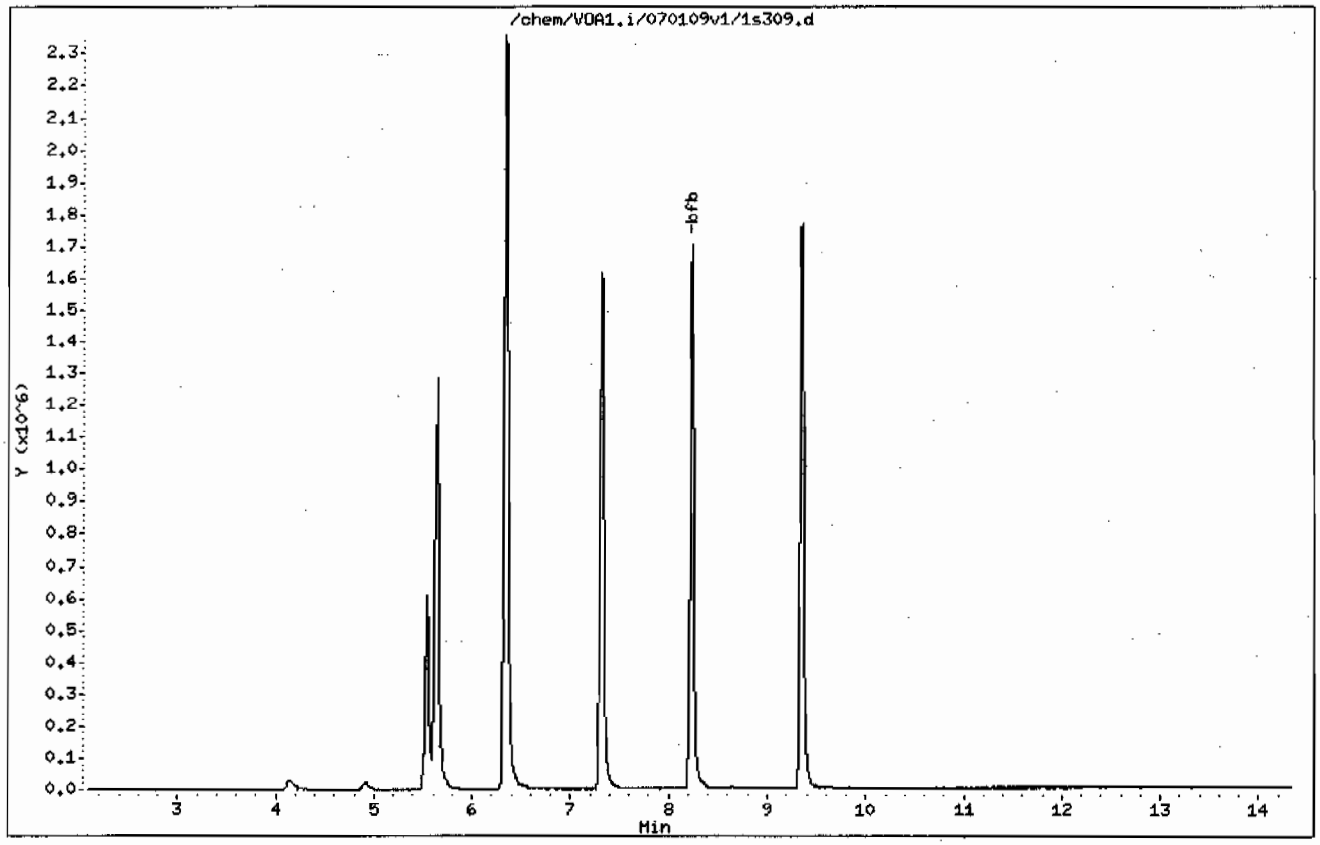

Data File: /chem/VOA1.i/070109v1/1s309.d

Date : 01-JUL-2009 14:32

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVH090413-02|BFB|1|VOAF|1|

Operator: RXH4

Column phase: RTX-Volatiles

Column diameter: 0.25

1 bfb

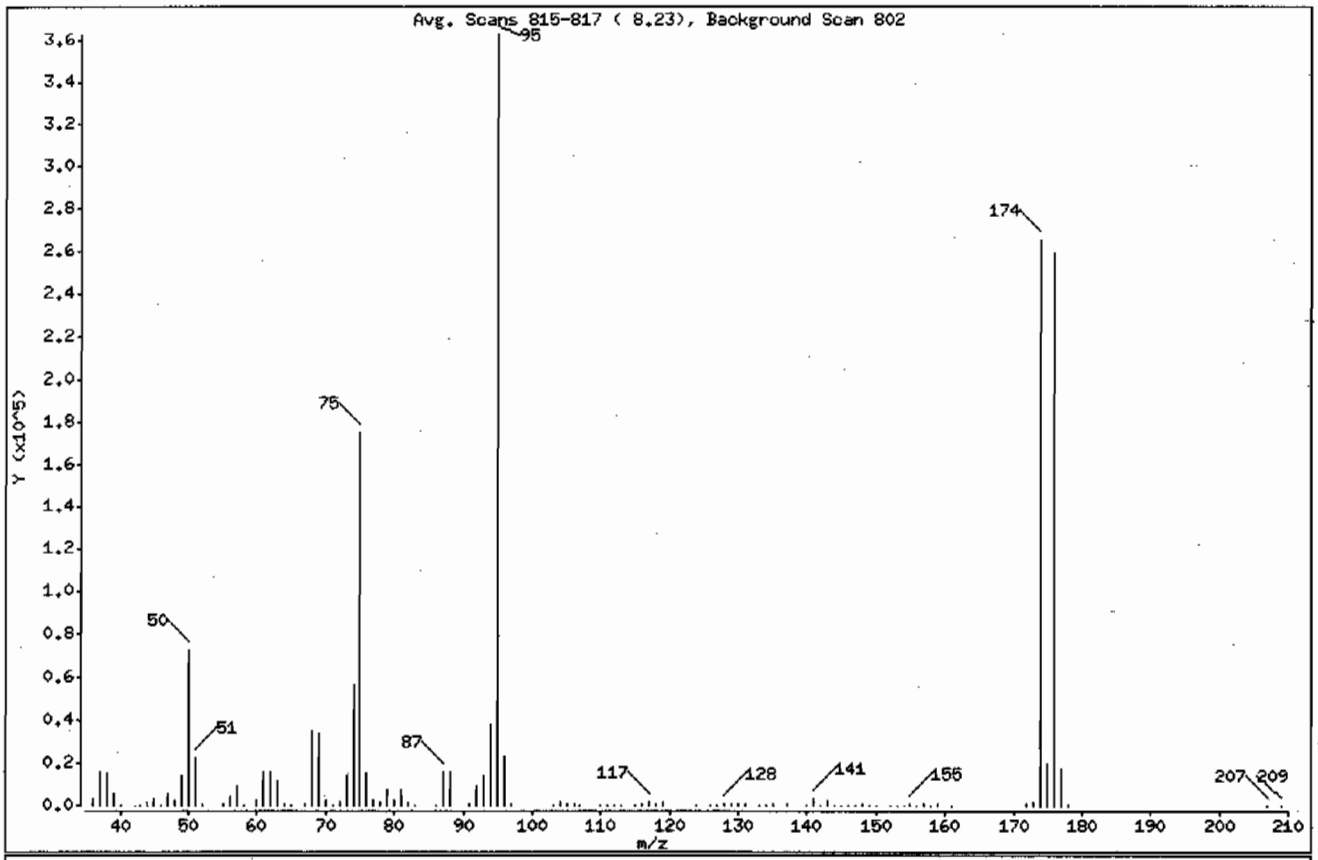

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.99
75	30.00 - 60.00% of mass 95	48.22
96	5.00 - 9.00% of mass 95	6.62
173	Less than 2.00% of mass 174	0.51 (0.70)
174	50.00 - 100.00% of mass 95	72.99
175	5.00 - 9.00% of mass 174	5.47 (7.49)
176	95.00 - 101.00% of mass 174	71.54 (98.02)
177	5.00 - 9.00% of mass 176	4.76 (6.63)

Data File: /chem/VOA1.i/070109v1/1s309.d

Date : 01-JUL-2009 14:32

Client ID: BFB01 Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles Column diameter: 0.25

Data File: 1s309.d

Spectrum: Avg. Scans 815-817 (8.23), Background Scan 802

Location of Maximum: 95.00

Number of points: 107

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2987	68.00	35144	104.00	1379	143.00	2894
37.00	15962	69.00	33824	105.00	452	144.00	194
38.00	15049	70.00	2527	106.00	1148	145.00	326
39.00	5607	71.00	65	107.00	197	146.00	410
40.00	46	72.00	1757	110.00	207	147.00	269
42.00	56	73.00	13802	111.00	228	148.00	792
43.00	203	74.00	56696	112.00	122	149.00	198
44.00	1542	75.00	174720	113.00	201	150.00	398
45.00	2973	76.00	15205	115.00	268	152.00	104
46.00	141	77.00	2174	116.00	994	153.00	135
47.00	6030	78.00	1423	117.00	1788	154.00	51
48.00	2091	79.00	7784	118.00	1022	155.00	775
49.00	14352	80.00	2513	119.00	1547	156.00	51
50.00	72416	81.00	7510	124.00	149	157.00	540
51.00	22592	82.00	1769	126.00	56	158.00	50
52.00	1046	83.00	251	127.00	56	159.00	476
55.00	931	86.00	317	128.00	1115	161.00	242
56.00	4576	87.00	16104	129.00	570	172.00	425
57.00	9188	88.00	15611	130.00	1059	173.00	1854
58.00	364	91.00	1103	131.00	456	174.00	264448
60.00	2757	92.00	9230	133.00	110	175.00	19800
61.00	15582	93.00	14536	134.00	68	176.00	259200
62.00	15896	94.00	38184	135.00	542	177.00	17192
63.00	11969	95.00	362304	137.00	472	178.00	441
64.00	1209	96.00	23624	140.00	121	207.00	96
65.00	341	97.00	792	141.00	2972	209.00	120
67.00	883	103.00	248	142.00	308		

Data File: /chem/VOA1.i/071309v1/1u101.d

Date : 13-JUL-2009 09:23

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVH090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

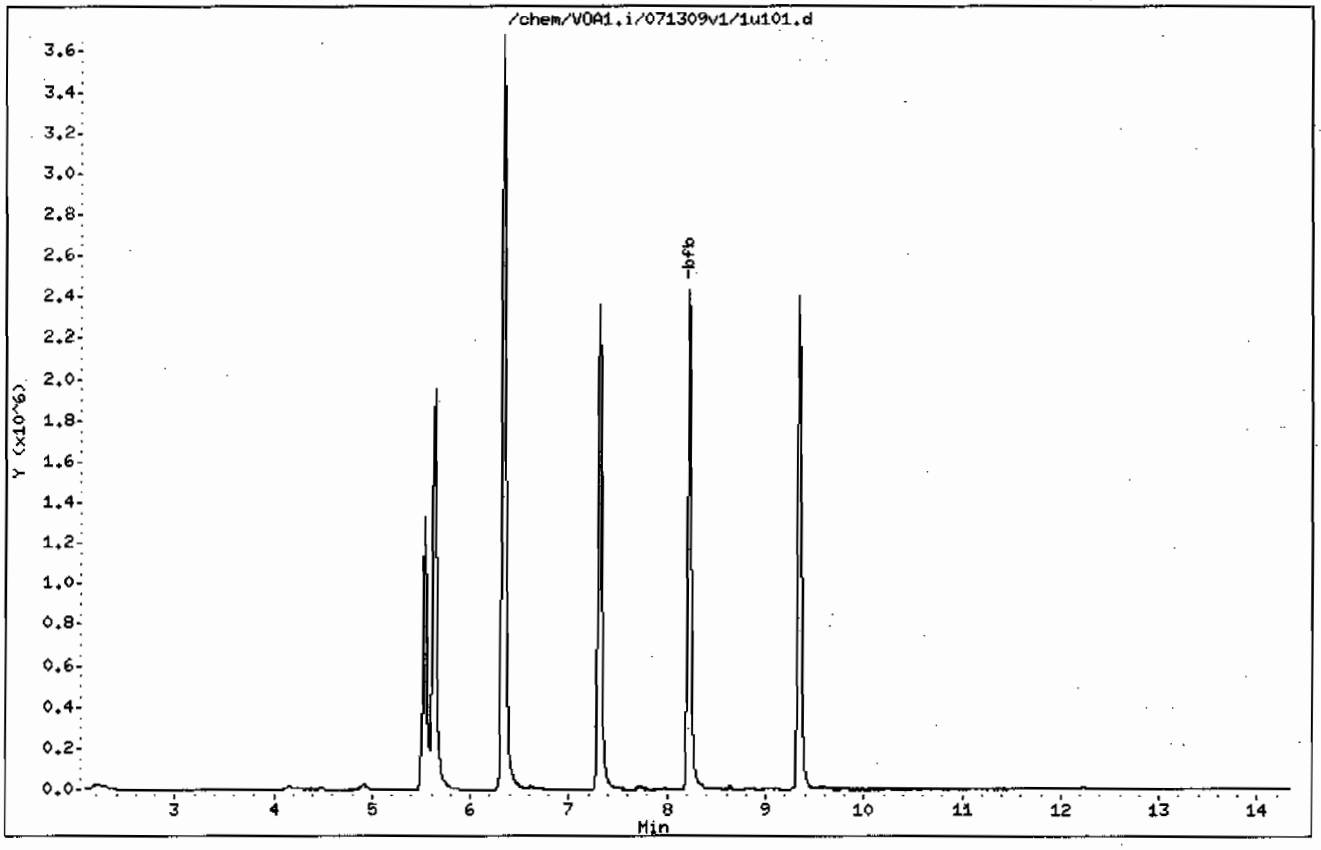

Data File: /chem/VOA1.i/071309v1/1u101.d

Date : 13-JUL-2009 09:23

Client ID: BFB01

Instrument: VOA1.i

Sample Info: |UVM090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

1 bfb

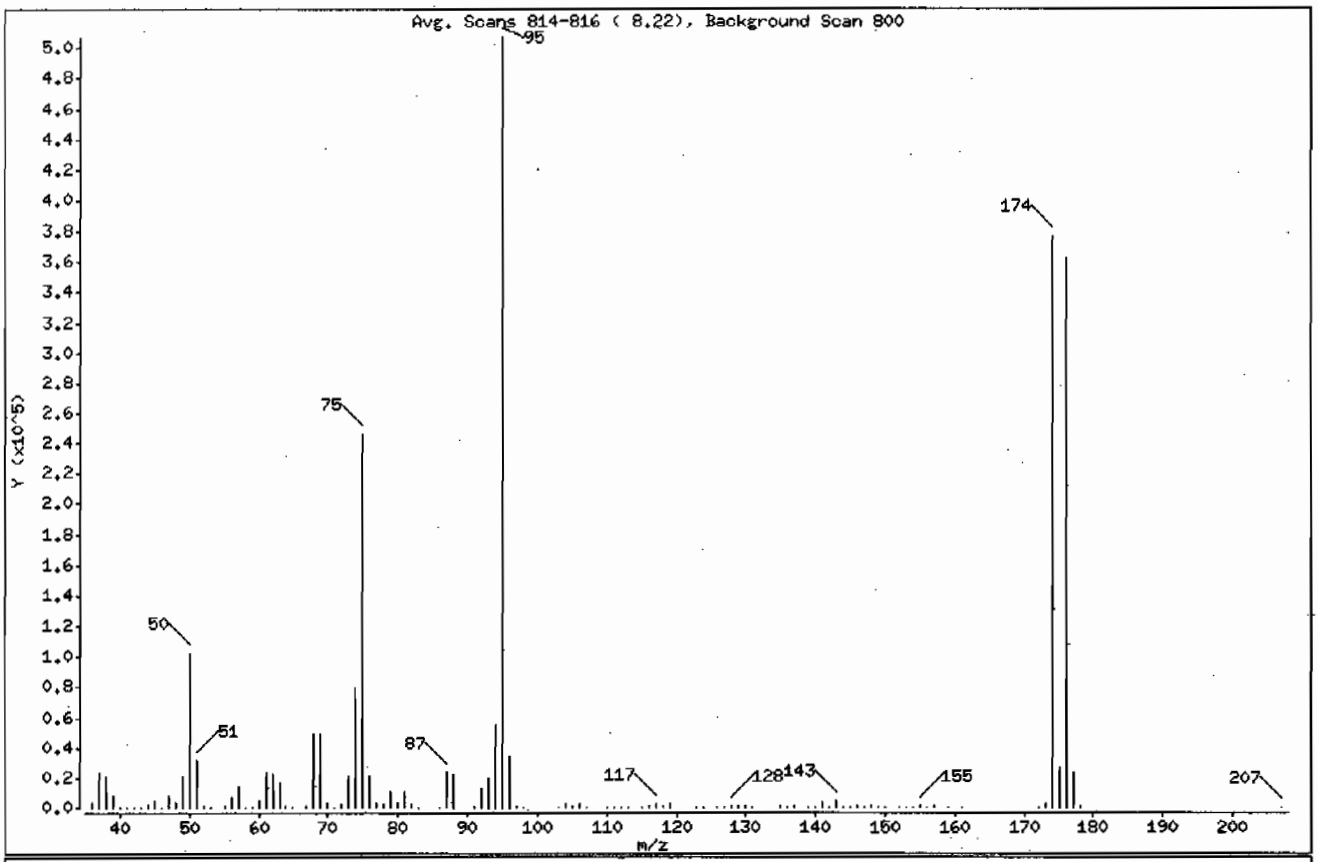

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.25
75	30.00 - 60.00% of mass 95	48.61
96	5.00 - 9.00% of mass 95	6.73
173	Less than 2.00% of mass 174	0.52 (0.70)
174	50.00 - 100.00% of mass 95	74.17
175	5.00 - 9.00% of mass 174	5.36 (7.23)
176	95.00 - 101.00% of mass 174	71.55 (96.46)
177	5.00 - 9.00% of mass 176	4.69 (6.55)

Data File: /chem/VOA1.i/071309v1/1u101.d

Date : 13-JUL-2009 09:23

Client ID: BFB01 Instrument: VOA1.i

Sample Info: |UVH090413-02|BFB|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles Column diameter: 0.25

Data File: 1u101.d
Spectrum: Avg. Scans 814-816 (8.22), Background Scan 800
Location of Maximum: 95.00
Number of points: 110

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3950	65.00	328	98.00	145	141.00	3937
37.00	22864	67.00	1131	103.00	197	142.00	571
38.00	20608	68.00	49272	104.00	2064	143.00	4159
39.00	8289	69.00	48656	105.00	606	144.00	279
40.00	114	70.00	3763	106.00	1771	145.00	385
41.00	416	71.00	246	107.00	411	146.00	595
42.00	285	72.00	2241	110.00	280	147.00	291
43.00	497	73.00	20408	111.00	255	148.00	1112
44.00	2443	74.00	79736	112.00	238	149.00	247
45.00	4257	75.00	246592	113.00	336	150.00	423
46.00	375	76.00	21216	115.00	435	152.00	233
47.00	8511	77.00	2939	116.00	1446	153.00	347
48.00	3028	78.00	2070	117.00	2584	154.00	282
49.00	20616	79.00	11005	118.00	1463	155.00	1091
50.00	102712	80.00	3186	119.00	1989	156.00	61
51.00	31792	81.00	10425	123.00	57	157.00	828
52.00	1553	82.00	2302	124.00	261	159.00	555
53.00	121	83.00	288	126.00	101	161.00	421
55.00	1374	86.00	509	127.00	139	172.00	509
56.00	7074	87.00	23104	128.00	1554	173.00	2642
57.00	13575	88.00	21952	129.00	744	174.00	376256
58.00	497	91.00	1632	130.00	1532	175.00	27200
59.00	52	92.00	12978	131.00	582	176.00	362944
60.00	4468	93.00	19888	135.00	769	177.00	23776
61.00	22824	94.00	54352	136.00	116	178.00	687
62.00	22616	95.00	507264	137.00	749	207.00	215
63.00	16320	96.00	34160	139.00	105		
64.00	1577	97.00	1139	140.00	268		

Data File: /chem/VOA1.i/071409v1/1u202BFB.d

Date : 14-JUL-2009 08:55

Client ID: BFB

Instrument: VOA1.i

Sample Info: |W1VM090714-01|CCV/LCS|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

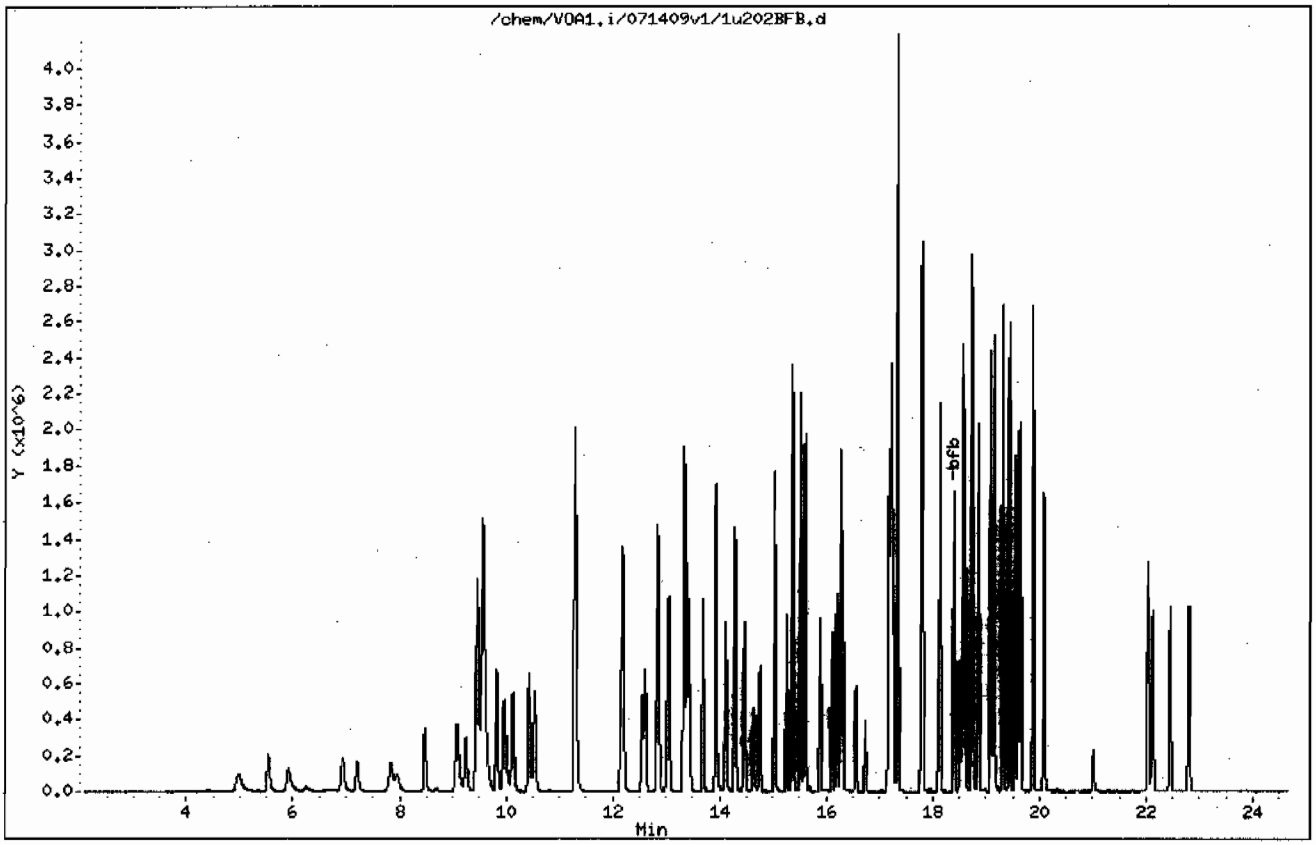

Data File: /chem/VOA1.i/071409v1/1u202BFB.d

Date : 14-JUL-2009 08:55

Client ID: BFB

Instrument: VOA1.i

Sample Info: |W1VM090714-01|CCV/LCS|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

1 bfb

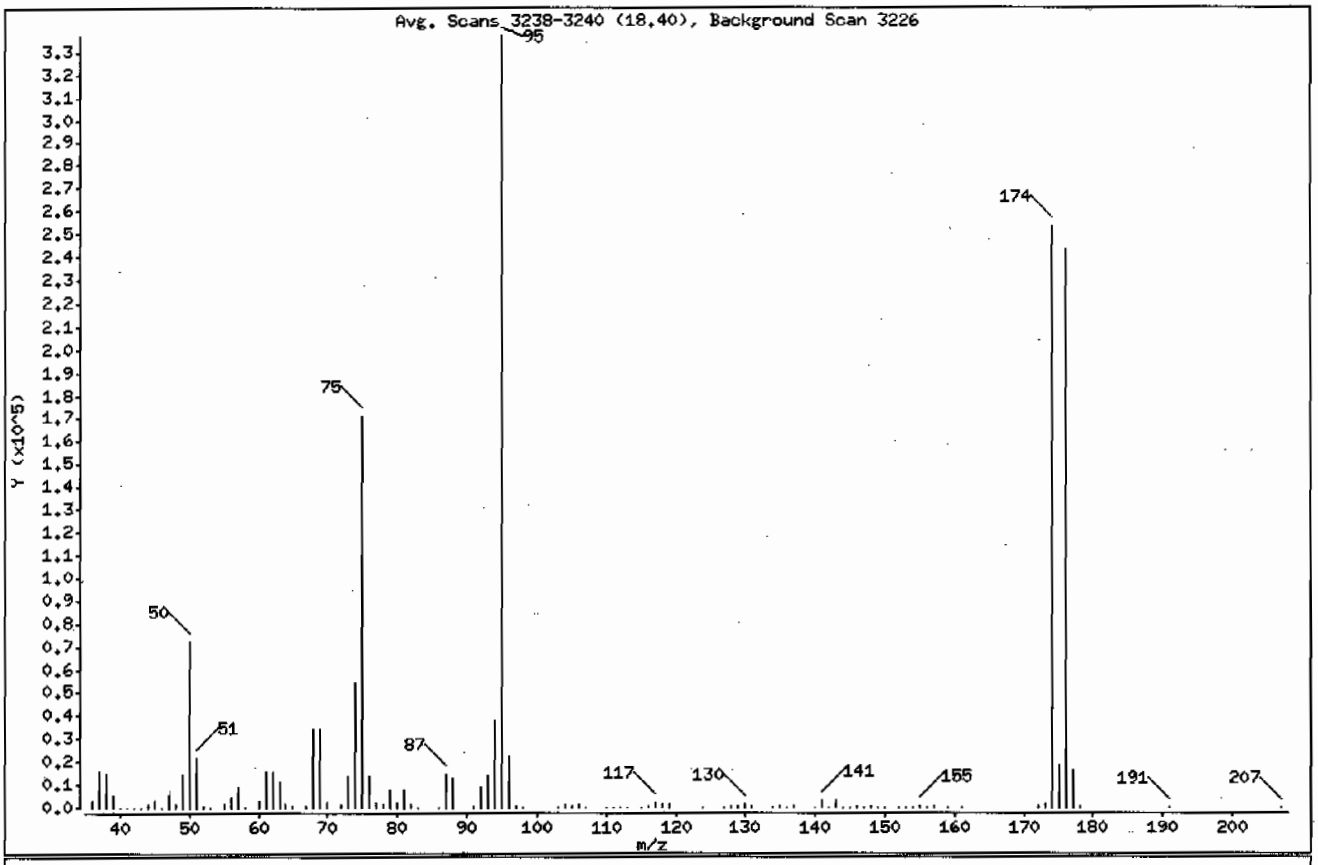

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.31
75	30.00 - 60.00% of mass 95	50.75
96	5.00 - 9.00% of mass 95	6.63
173	Less than 2.00% of mass 174	0.56 (0.73)
174	50.00 - 100.00% of mass 95	75.19
175	5.00 - 9.00% of mass 174	5.43 (7.23)
176	95.00 - 101.00% of mass 174	72.09 (95.88)
177	5.00 - 9.00% of mass 176	4.81 (6.68)

Data File: /chem/VOA1.i/071409v1/1u202BFB.d

Date : 14-JUL-2009 08:55

Client ID: BFB

Instrument: VOA1.i

Sample Info: |W1VM090714-01|CCV/LCS|1|VOAF|1|

Operator: RXM4

Column phase: RTX-Volatiles

Column diameter: 0.25

Data File: 1u202BFB.d

Spectrum: Avg. Scans 3238-3240 (18.40), Background Scan 3226

Location of Maximum: 95.00

Number of points: 107

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2928	65.00	486	98.00	170	142.00	311
37.00	16090	67.00	845	103.00	215	143.00	2880
38.00	14407	68.00	34112	104.00	1362	144.00	134
39.00	5651	69.00	33736	105.00	545	145.00	307
40.00	32	70.00	2304	106.00	1487	146.00	439
41.00	98	72.00	1784	107.00	339	147.00	131
42.00	316	73.00	13705	110.00	166	148.00	687
43.00	278	74.00	54248	111.00	67	149.00	222
44.00	1468	75.00	170944	112.00	124	150.00	330
45.00	3064	76.00	14296	113.00	218	152.00	51
46.00	226	77.00	2104	115.00	335	153.00	237
47.00	5291	78.00	1491	116.00	1107	154.00	251
48.00	1854	79.00	7854	117.00	1961	155.00	707
49.00	14428	80.00	2352	118.00	1245	156.00	128
50.00	71792	81.00	8012	119.00	1651	157.00	514
51.00	22056	82.00	1679	124.00	120	159.00	316
52.00	988	83.00	228	127.00	50	161.00	364
53.00	121	86.00	354	128.00	1130	172.00	587
55.00	1187	87.00	14501	129.00	480	173.00	1858
56.00	4678	88.00	13523	130.00	1259	174.00	253248
57.00	9473	91.00	1139	131.00	547	175.00	18304
58.00	361	92.00	8981	134.00	52	176.00	242816
60.00	2955	93.00	13746	135.00	582	177.00	16212
61.00	15238	94.00	37568	136.00	67	178.00	479
62.00	15821	95.00	336832	137.00	455	191.00	52
63.00	11570	96.00	22320	140.00	245	207.00	124
64.00	1240	97.00	709	141.00	2932		

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201880054**				
Client Sample:	**QC for batch 884827**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 884827**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/13/2009 11:01**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/13/2009 08:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u104BB.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201880054**				
Client Sample:	**QC for batch 884827**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 884827**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/13/2009 11:01**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/13/2009 08:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u104BB.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u104BB.d
Lab Smp Id: 1201880054 Client Smp ID: BLANK
Inj Date : 13-JUL-2009 11:01
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201880054|884831|1|VOAF|1|
Misc Info : GEL 5G N/A
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
$ 48 1,2-Dichloroethane-d4	65	13.350	13.337	(0.975)	553874	51.1877	51.2
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1272102	50.0000	
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1835138	47.8516	47.8
* 76 Chlorobenzene-d5	117	17.166	17.162	(1.000)	1101623	50.0000	
$ 87 Bromofluorobenzene	95	18.400	18.395	(0.938)	729384	50.7000	50.7
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	558574	50.0000	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u104BB.d
Lab Smp Id: 1201880054 Client Smp ID: BLANK
Inj Date : 13-JUL-2009 11:01
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201880054|884831|1|VOAF|1|
Misc Info : GEL 5G N/A
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/071309v1/1u104BB.d

Date : 13-JUL-2009 11:01

Client ID: BLANK

Sample Info: |1201880054|884831|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4

Column diameter: 0.25

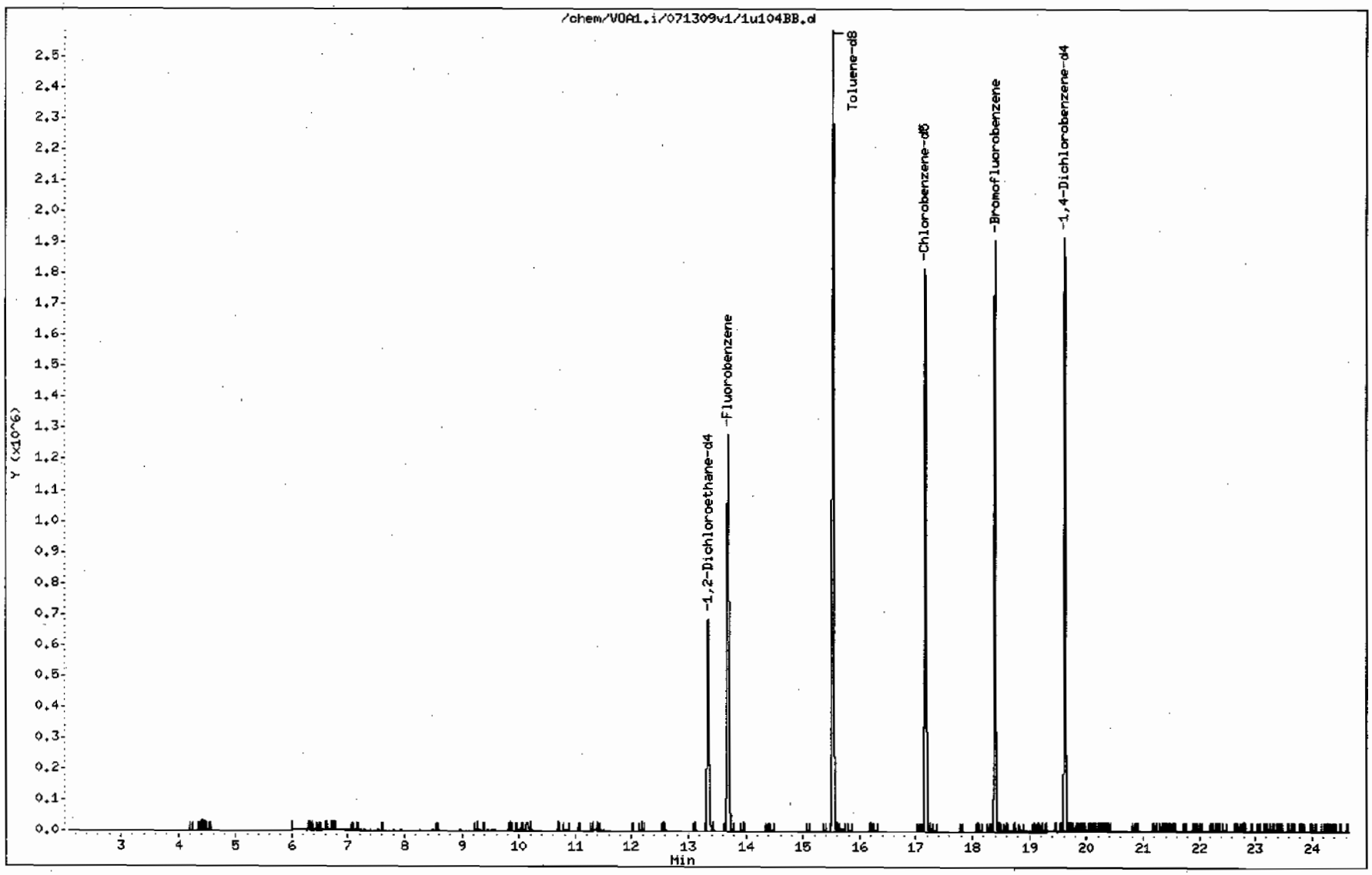

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201880678**				
Client Sample:	**QC for batch 884827**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 884827**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 11:27**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/14/2009 08:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u207BB.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201880678**				
Client Sample:	**QC for batch 884827**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 884827**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 11:27**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/14/2009 08:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u207BB.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated Units	Fit	Qual
	No Tentatively Identified Compounds Found		ug/kg		

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071409v1/1u207BB.d
Lab Smp Id: 1201880678 Client Smp ID: BLANK
Inj Date : 14-JUL-2009 11:27
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201880678|884831|1|VOAF|1|
Misc Info : GEL 5G N/A
Comment :
Method : /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m
Meth Date : 14-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
$ 48 1,2-Dichloroethane-d4	65	13.346	13.337	(0.975)	466105	55.3316	55.3
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	990347	50.0000	
$ 65 Toluene-d8	98	15.528	15.523	(0.904)	1495500	49.2902	49.3
* 76 Chlorobenzene-d5	117	17.171	17.166	(1.000)	871539	50.0000	
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	599144	50.4953	50.5
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	460694	50.0000	

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071409v1/1u207BB.d
Lab Smp Id: 1201880678 Client Smp ID: BLANK
Inj Date : 14-JUL-2009 11:27
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201880678|884831|1|VOAF|1|
Misc Info : GEL 5G N/A
Comment :
Method : /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m
Meth Date : 14-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Data File: /chem/VOA1.i/071409v1/1u207BB.d

Date : 14-JUL-2009 11:27

Client ID: BLANK

Sample Info: |120188067818848311|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4

Column diameter: 0.25

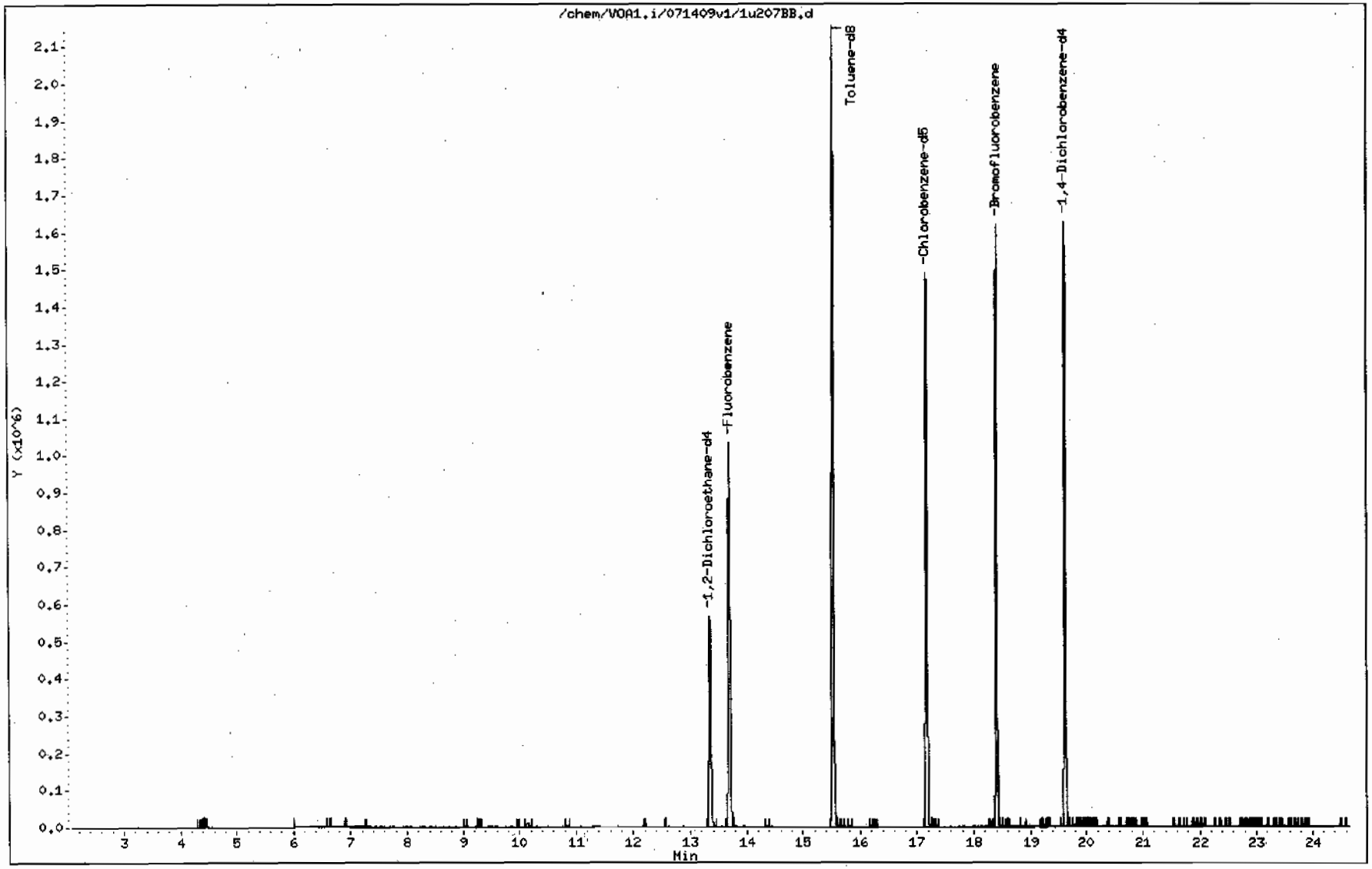

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536			**Matrix:**	SOIL
Lab Sample ID:	1201880057				
Client Sample:	QC for batch 884827	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 884827	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 10:00	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 08:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u102LB.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		65.2	ug/kg	0.340	1.00
74-87-3	Chloromethane		52.7	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		49.0	ug/kg	0.300	1.00
74-83-9	Bromomethane		48.0	ug/kg	0.300	1.00
75-00-3	Chloroethane		50.1	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		63.1	ug/kg	0.570	1.00
67-64-1	Acetone		129	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		48.1	ug/kg	0.300	1.00
74-88-4	Iodomethane		233	ug/kg	1.60	5.00
75-09-2	Methylene chloride		48.0	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		264	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		46.4	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		46.4	ug/kg	0.300	1.00
78-93-3	2-Butanone		156	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		49.1	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		55.2	ug/kg	0.300	1.00
67-66-3	Chloroform		45.0	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		44.6	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		51.2	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		51.5	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		49.8	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		44.9	ug/kg	0.300	1.00
71-43-2	Benzene		44.9	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		47.5	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		47.1	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		47.6	ug/kg	0.300	1.00
74-95-3	Dibromomethane		45.3	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		237	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		50.2	ug/kg	0.300	1.00
108-88-3	Toluene		43.2	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		48.8	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		45.5	ug/kg	0.300	1.00
591-78-6	2-Hexanone		176	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		44.3	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		44.3	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		45.0	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		45.2	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		44.8	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536			**Matrix:**	SOIL
Lab Sample ID:	1201880057				
Client Sample:	QC for batch 884827	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 884827	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 10:00	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 08:01	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u102LB.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		44.9	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		91.1	ug/kg	0.300	2.00
95-47-6	o-Xylene		47.6	ug/kg	0.300	1.00
100-42-5	Styrene		46.8	ug/kg	0.300	1.00
75-25-2	Bromoform		48.3	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		46.1	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		48.6	ug/kg	0.300	1.00
108-86-1	Bromobenzene		43.7	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		46.0	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		45.9	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		41.4	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		47.1	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		47.1	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		48.2	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		46.5	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		48.0	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		49.6	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		45.5	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		44.0	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		50.5	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		51.3	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		44.6	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		45.3	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u102LB.d
Lab Smp Id: 1201880057 Client Smp ID: LCS
Inj Date : 13-JUL-2009 10:00
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201880057|884831|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090605-01E/IVM090708-01
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 2 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1 Xylenes (total)	106				2151517	138.742	139
M 2 1,2-Dichloroethylene (total)	96				832275	95.4982	95.5
M 3 1,3-Dichloropropylene	75				1293810	98.9533	99.0
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	388629	65.1589	65.2
6 Chloromethane	50	5.535	5.535	(0.405)	606325	52.6552	52.6
7 Vinyl chloride	62	5.908	5.908	(0.432)	438516	48.9627	49.0
9 Bromomethane	96	6.943	6.943	(0.507)	294996	48.0140	48.0
10 Chloroethane	64	7.205	7.205	(0.527)	336138	50.0577	50.0
11 Trichlorofluoromethane	101	7.831	7.831	(0.572)	535394	63.1289	63.1
12 Ethyl Ether	59	8.467	8.467	(0.619)	382074	51.1094	51.1
15 1,1-Dichloroethylene	61	9.079	9.079	(0.664)	745035	48.0784	48.1
16 Acetone	43	9.244	9.244	(0.676)	768479	128.621	129

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
	18 Iodomethane	142	9.461	9.461	(0.691)	2891692	232.781	233
	19 Carbon disulfide	76	9.567	9.567	(0.699)	6571671	263.763	264
	21 Methyl acetate	43	9.829	9.829	(0.718)	1592906	235.996	236
	22 Acetonitrile	41	9.967	9.824	(0.728)	1390333	1286.40	1290
	23 Methylene chloride	84	10.133	10.133	(0.741)	443218	48.0322	48.0
	25 tert-Butyl methyl ether	73	10.437	10.437	(0.763)	1054535	48.0585	48.0
	26 trans-1,2-Dichloroethylene	96	10.538	10.538	(0.770)	394877	46.4413	46.4
	29 Vinyl acetate	43	11.288	11.288	(0.825)	3962385	301.682	302
	30 1,1-Dichloroethane	63	11.307	11.307	(0.826)	785703	46.4348	46.4
	33 2,2-Dichloropropane	77	12.154	12.154	(0.888)	481081	55.2095	55.2
	35 2-Butanone	43	12.181	12.181	(0.890)	1044774	156.305	156
	36 cis-1,2-Dichloroethylene	96	12.190	12.190	(0.891)	437398	49.0569	49.0
	39 Bromochloromethane	128	12.554	12.554	(0.918)	182880	44.5837	44.6
	41 Chloroform	83	12.605	12.605	(0.921)	685749	45.0255	45.0
	42 Cyclohexane	56	12.839	12.839	(0.938)	850825	53.5994	53.6
	43 1,1,1-Trichloroethane	97	12.839	12.839	(0.938)	497216	51.2105	51.2
	44 Carbon tetrachloride	117	13.019	13.019	(0.952)	506766	49.8137	49.8
	45 1,1-Dichloropropene	75	13.047	13.047	(0.954)	563070	51.4857	51.5
	47 Benzene	78	13.332	13.332	(0.974)	1627441	44.9271	44.9
$	48 1,2-Dichloroethane-d4	65	13.337	13.337	(0.975)	591991	53.4421	53.4
	50 Cyclohexene	54	13.392	13.392	(0.979)	647582	52.9481	52.9
	51 1,2-Dichloroethane	62	13.438	13.438	(0.982)	548913	44.8683	44.9
*	52 Fluorobenzene	96	13.682	13.682	(1.000)	1302291	50.0000	
	53 n-Butyl alcohol	56	13.926	13.926	(1.018)	1379724	6147.50	6150
	54 Trichloroethylene	95	14.114	14.114	(1.032)	409100	47.4637	47.5
	55 Methylcyclohexane	83	14.280	14.280	(1.044)	751169	53.4204	53.4
	57 1,2-Dichloropropane	63	14.460	14.460	(1.057)	452484	47.0974	47.1
	59 Dibromomethane	93	14.621	14.621	(1.069)	237528	45.3377	45.3
	60 Bromodichloromethane	83	14.750	14.750	(1.078)	537903	47.5733	47.6
	61 2-Chloroethylvinyl ether	63	15.030	15.030	(1.099)	991017	216.813	217
	63 cis-1,3-Dichloropropylene	75	15.256	15.256	(1.115)	680498	50.1688	50.2
	64 4-Methyl-2-pentanone	58	15.362	15.362	(0.895)	853375	236.523	236
$	65 Toluene-d8	98	15.523	15.523	(0.904)	1860368	47.6606	47.7
	66 Toluene	92	15.601	15.601	(0.909)	1018713	43.1762	43.2
	68 trans-1,3-Dichloropropylene	75	15.882	15.882	(0.925)	613312	48.7846	48.8
	69 1,1,2-Trichloroethane	83	16.103	16.103	(0.938)	295037	45.4827	45.5
	70 Tetrachloroethylene	164	16.195	16.195	(0.944)	305544	44.3264	44.3
	71 2-Hexanone	43	16.273	16.273	(0.948)	1564271	176.282	176
	72 1,3-Dichloropropane	76	16.310	16.310	(0.950)	602870	44.3365	44.3
	73 Dibromochloromethane	129	16.549	16.549	(0.964)	362853	44.9740	45.0
	74 1,2-Dibromoethane	107	16.729	16.729	(0.975)	329214	45.2022	45.2
*	76 Chlorobenzene-d5	117	17.162	17.162	(1.000)	1121244	50.0000	
	77 Chlorobenzene	112	17.198	17.198	(1.002)	1060665	44.7892	44.8
	78 Ethylbenzene	91	17.226	17.226	(1.004)	1924743	44.8804	44.9
	79 1,1,1,2-Tetrachloroethane	131	17.263	17.263	(1.006)	361433	44.6186	44.6
	80 m,p-Xylenes	106	17.341	17.341	(1.010)	1431074	91.1239	91.1
	81 o-Xylene	106	17.792	17.792	(1.037)	720443	47.6183	47.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
	82 Styrene	104	17.811	17.811	(1.038)	1236748	46.8059	46.8
	83 Bromoform	173	18.110	18.110	(0.923)	241626	48.2640	48.3
	84 Isopropylbenzene	105	18.138	18.138	(0.924)	1632184	41.3507	41.4
$	87 Bromofluorobenzene	95	18.395	18.395	(0.938)	749953	49.1361	49.1
	88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	459888	46.0757	46.1
	89 n-Propylbenzene	91	18.566	18.566	(0.946)	2298245	46.0378	46.0
	91 Bromobenzene	156	18.598	18.598	(0.948)	438497	43.6510	43.6
	92 1,2,3-Trichloropropane	110	18.612	18.612	(0.949)	120748	48.6020	48.6
	93 1,3,5-Trimethylbenzene	105	18.727	18.727	(0.954)	1582093	47.0979	47.1
	94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1584121	45.9015	45.9
	95 4-Chlorotoluene	91	18.860	18.860	(0.961)	1452634	47.0791	47.1
	96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1309377	48.2469	48.2
	97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1629248	46.5099	46.5
	99 sec-Butylbenzene	105	19.311	19.311	(0.984)	2196666	48.0493	48.0
	100 4-Isopropyltoluene	119	19.431	19.431	(0.990)	1660250	49.6378	49.6
	101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	879183	45.4962	45.5
*	102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	592606	50.0000	
	103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	875524	44.0237	44.0
	105 n-Butylbenzene	91	19.882	19.785	(1.013)	1818251	50.4521	50.4
	106 1,2-Dichlorobenzene	146	20.085	20.085	(1.024)	827131	45.2519	45.2
	108 1,2-Dibromo-3-chloropropane	157	21.010	21.010	(1.071)	83210	51.2944	51.3
	109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	564059	47.4707	47.5
	110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	307869	44.2874	44.3
	111 Naphthalene	128	22.451	22.451	(1.144)	1243839	48.0936	48.1
	112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	494941	47.1864	47.2

Data File: /chem/VOA1.i/071309v1/1u102LB.d
Date : 13-JUL-2009 10:00
Client ID: LCS
Sample Info: |120188005718848311|1VOAF11|

Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

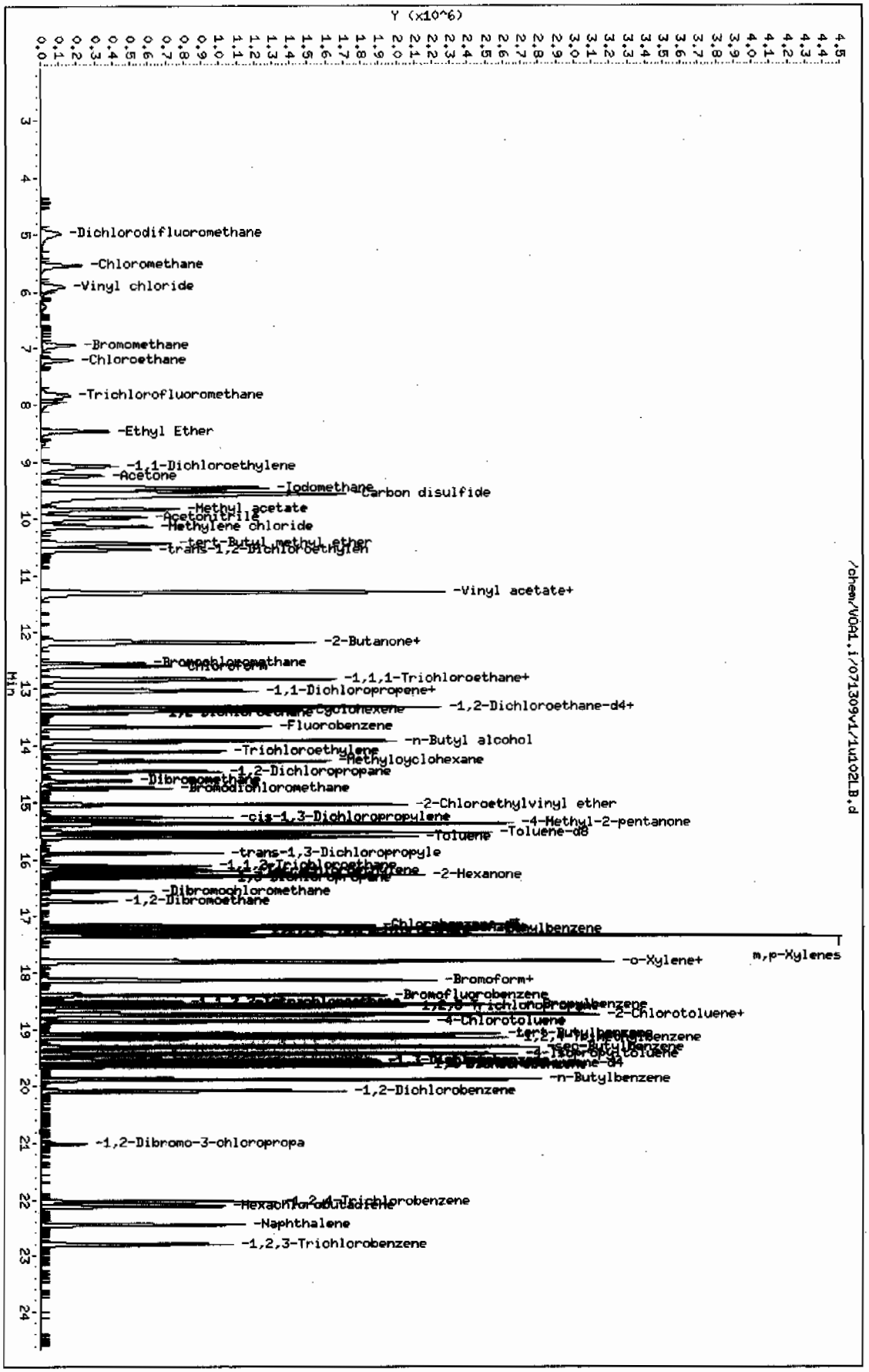

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536			**Matrix:**	SOIL
Lab Sample ID:	1201880058				
Client Sample:	QC for batch 884827	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 884827	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/13/2009 10:31	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/13/2009 08:02	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u103sLB.d	**Columu:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Uuits	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201880058**				
Client Sample:	**QC for batch 884827**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 884827**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/13/2009 10:31**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/13/2009 08:02**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u103sLB.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		211	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071309v1/1u103sLB.d
Lab Smp Id: 1201880058 Client Smp ID: LCS
Inj Date : 13-JUL-2009 10:31
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201880058|884831|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090701-08A/UVM090624-02B
Comment :
Method : /chem/VOA1.i/071309v1/VOA1-8260ox-070109.m
Meth Date : 13-Jul-2009 11:23 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
4 Chlorotrifluoroethylene	116	4.883	4.883	(0.357)	875333	172.140	172
8 2-Chloro-1,1,1-trifluoroethane	118	6.294	6.294	(0.460)	1450370	159.327	159
13 Acrolein	56	8.950	8.950	(0.654)	358891	271.363	271
14 Trichlorotrifluoroethane	101	8.996	8.996	(0.657)	1590420	211.352	211
17 Isopropyl Alcohol	45	9.452	9.452	(0.690)	1480899	2839.91	2840
20 Allyl chloride	76	9.852	9.852	(0.720)	775479	212.146	212
24 tert-Butyl Alcohol	59	10.202	10.202	(0.745)	2312308	2824.28	2820
27 Acrylonitrile	53	10.681	10.681	(0.780)	709757	235.379	235
28 Isopropyl ether	45	11.205	11.205	(0.818)	1636352	52.6467	52.6
31 2-Chloro-1,3-butadiene	53	11.399	11.399	(0.833)	605563	51.0770	51.1
32 Ethyl tert-butyl ether	59	11.767	11.767	(0.859)	1444793	52.3224	52.3
34 Ethyl acetate	43	12.177	12.177	(0.889)	1833882	216.234	216

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
	37 Propionitrile	54	12.416	12.416	(0.907)	292961	239.879	240
	38 Tetrahydrofuran	42	12.545	12.545	(0.639)	630378	236.498	236
	40 Methacrylonitrile	41	12.572	12.572	(0.918)	1450051	232.369	232
	46 Isobutyl alcohol	41	13.116	13.116	(0.958)	716266	2764.41	2760
$	48 1,2-Dichloroethane-d4	65	13.346	13.337	(0.975)	557095	48.9935	49.0
	49 Methyl tert-amyl ether	73	13.360	13.360	(0.976)	1190185	52.0892	52.1
*	52 Fluorobenzene	96	13.691	13.682	(1.000)	1336804	50.0000	
	56 Methyl methacrylate	69	14.451	14.451	(1.055)	1225314	248.801	249
	58 1,4-Dioxane	88	14.552	14.552	(1.063)	175735	2385.89	2380
	62 2-Nitropropane	43	15.090	15.090	(1.102)	574681	273.543	274
$	65 Toluene-d8	98	15.528	15.523	(0.904)	1878109	47.1289	47.1
	67 Ethyl methacrylate	69	15.822	15.822	(0.921)	2308389	229.990	230
	75 1-Chlorohexane	55	17.042	17.042	(1.245)	540473	60.4002	60.4
*	76 Chlorobenzene-d5	117	17.171	17.162	(1.000)	1144707	50.0000	
	85 cis-1,4-Dichloro-2-butene	53	18.285	18.285	(0.932)	820590	255.059	255
	86 Cyclohexanone	55	18.395	18.395	(1.071)	1739521	1284.61	1280
$	87 Bromofluorobenzene	95	18.395	18.395	(0.938)	747036	49.5609	49.6
	90 trans-1,4-Dichloro-2-butene	53	18.579	18.579	(0.947)	773220	249.497	249
	98 Pentachloroethane	167	19.205	19.205	(0.979)	1074333	498.040	498(AR)
*	102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	585241	50.0000	
	104 Benzyl chloride	91	19.785	19.785	(1.008)	4649793	298.209	298
	107 bis(2-Chloroisopropyl)ether	45	20.177	20.177	(1.028)	1151049	256.292	256

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA1.i/071309v1/1u103sLB.d
Date : 13-JUL-2009 10:31
Client ID: LCS
Sample Info: 1120188005818848331|1|VOAF|1|
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

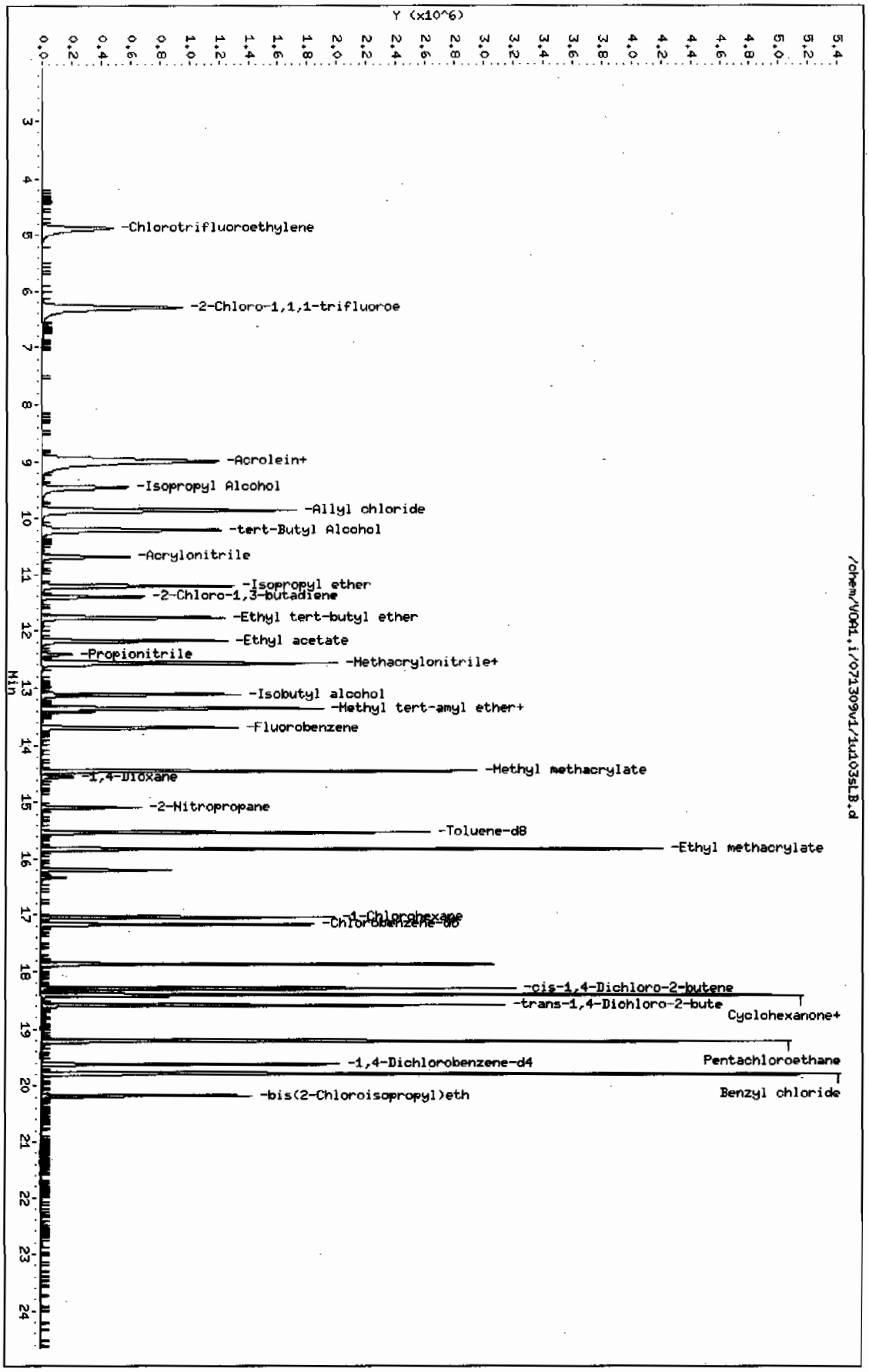

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Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201880679**				
Client Sample:	**QC for batch 884827**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 884827**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 09:25**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/14/2009 08:01**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u203LB.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		73.3	ug/kg	0.340	1.00
74-87-3	Chloromethane		59.6	ug/kg	0.300	1.00
75-01-4	Vinyl chloride		57.8	ug/kg	0.300	1.00
74-83-9	Bromomethane		54.8	ug/kg	0.300	1.00
75-00-3	Chloroethane		56.3	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane		70.8	ug/kg	0.570	1.00
67-64-1	Acetone		145	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene		53.4	ug/kg	0.300	1.00
74-88-4	Iodomethane		262	ug/kg	1.60	5.00
75-09-2	Methylene chloride		52.5	ug/kg	2.00	5.00
75-15-0	Carbon disulfide		289	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene		51.4	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane		53.2	ug/kg	0.300	1.00
78-93-3	2-Butanone		177	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene		55.1	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane		62.0	ug/kg	0.300	1.00
67-66-3	Chloroform		52.0	ug/kg	0.300	1.00
74-97-5	Bromochloromethane		50.9	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane		58.5	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene		57.1	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride		58.0	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane		53.3	ug/kg	0.300	1.00
71-43-2	Benzene		49.5	ug/kg	0.300	1.00
79-01-6	Trichloroethylene		54.1	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane		53.3	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane		55.9	ug/kg	0.300	1.00
74-95-3	Dibromomethane		51.9	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone		251	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene		57.0	ug/kg	0.300	1.00
108-88-3	Toluene		47.2	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene		54.4	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane		49.6	ug/kg	0.300	1.00
591-78-6	2-Hexanone		196	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane		49.7	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene		48.8	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane		51.1	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane		50.3	ug/kg	0.300	1.00
108-90-7	Chlorobenzene		49.4	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201880679**				
Client Sample:	**QC for batch 884827**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 884827**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 09:25**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/14/2009 08:01**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u203LB.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		49.9	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes		102	ug/kg	0.300	2.00
95-47-6	o-Xylene		52.8	ug/kg	0.300	1.00
100-42-5	Styrene		52.4	ug/kg	0.300	1.00
75-25-2	Bromoform		52.7	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane		48.4	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane		52.2	ug/kg	0.300	1.00
108-86-1	Bromobenzene		46.7	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene		49.1	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene		50.2	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene		44.0	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene		51.1	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene		51.0	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene		52.2	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene		50.8	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene		52.0	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene		54.5	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene		49.7	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene		48.4	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene		54.2	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane		53.8	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.00	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane		50.8	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene		49.0	ug/kg	0.300	1.00

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071409v1/1u203LB.d
Lab Smp Id: 1201880679 Client Smp ID: LCS
Inj Date : 14-JUL-2009 09:25
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201880679|884831|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090708-01A/IVM090708-01
Comment :
Method : /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m
Meth Date : 14-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
M 1 Xylenes (total)	106				2095296	154.745	155
M 2 1,2-Dichloroethylene (total)	96				778661	106.496	106
M 3 1,3-Dichloropropylene	75				1245520	111.387	111
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	366600	73.2754	73.3
6 Chloromethane	50	5.543	5.535	(0.405)	575610	59.5924	59.6
7 Vinyl chloride	62	5.915	5.908	(0.432)	433916	57.7580	57.8
9 Bromomethane	96	6.948	6.938	(0.507)	282475	54.8098	54.8
10 Chloroethane	64	7.219	7.205	(0.527)	317118	56.2990	56.3
11 Trichlorofluoromethane	101	7.845	7.841	(0.573)	503599	70.7891	70.8
12 Ethyl Ether	59	8.480	8.471	(0.619)	358134	57.1118	57.1
15 1,1-Dichloroethylene	61	9.088	9.079	(0.664)	694574	53.4341	53.4
16 Acetone	43	9.258	9.244	(0.676)	728404	145.338	145

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
	18 Iodomethane	142	9.470	9.461	(0.692)	2734847	262.455	262
	19 Carbon disulfide	76	9.580	9.567	(0.700)	6032846	288.661	289
	21 Methyl acetate	43	9.843	9.829	(0.719)	1509440	266.598	266
	22 Acetonitrile	41	9.981	9.972	(0.729)	1292793	1425.98	1420
	23 Methylene chloride	84	10.147	10.133	(0.741)	403597	52.4882	52.5
	25 tert-Butyl methyl ether	73	10.450	10.437	(0.763)	996780	54.1545	54.2
	26 trans-1,2-Dichloroethylene	96	10.552	10.543	(0.771)	366765	51.4229	51.4
	29 Vinyl acetate	43	11.302	11.293	(0.826)	3681799	334.179	334(R)
	30 1,1-Dichloroethane	63	11.325	11.316	(0.827)	755264	53.2121	53.2
	33 2,2-Dichloropropane	77	12.167	12.158	(0.889)	453538	62.0492	62.0
	35 2-Butanone	43	12.195	12.186	(0.891)	991679	176.867	177
	36 cis-1,2-Dichloroethylene	96	12.204	12.195	(0.891)	411896	55.0729	55.1
	39 Bromochloromethane	128	12.563	12.549	(0.918)	175090	50.8860	50.9
	41 Chloroform	83	12.614	12.605	(0.921)	664535	52.0161	52.0
	42 Cyclohexane	56	12.849	12.835	(0.938)	783326	58.8287	58.8
	43 1,1,1-Trichloroethane	97	12.853	12.844	(0.939)	476329	58.4854	58.5
	44 Carbon tetrachloride	117	13.028	13.024	(0.952)	494822	57.9852	58.0
	45 1,1-Dichloropropene	75	13.056	13.047	(0.954)	523495	57.0641	57.1
	47 Benzene	78	13.341	13.332	(0.974)	1503043	49.4654	49.5
$	48 1,2-Dichloroethane-d4	65	13.346	13.337	(0.975)	481378	51.8062	51.8
	50 Cyclohexene	54	13.401	13.392	(0.979)	613469	59.7964	59.8
	51 1,2-Dichloroethane	62	13.447	13.438	(0.982)	547192	53.3215	53.3
*	52 Fluorobenzene	96	13.691	13.682	(1.000)	1092399	50.0000	
	53 n-Butyl alcohol	56	13.935	13.930	(1.018)	1295109	6879.22	6880
	54 Trichloroethylene	95	14.124	14.114	(1.032)	391442	54.1410	54.1
	55 Methylcyclohexane	83	14.289	14.285	(1.044)	707623	59.9926	60.0
	57 1,2-Dichloropropane	63	14.464	14.460	(1.056)	429629	53.3107	53.3
	59 Dibromomethane	93	14.630	14.625	(1.069)	228256	51.9390	51.9
	60 Bromodichloromethane	83	14.759	14.750	(1.078)	529853	55.8652	55.9
	61 2-Chloroethylvinyl ether	63	15.040	15.035	(1.099)	904562	235.923	236
	63 cis-1,3-Dichloropropylene	75	15.265	15.261	(1.115)	648650	57.0090	57.0
	64 4-Methyl-2-pentanone	58	15.371	15.367	(0.895)	791647	251.307	251
$	65 Toluene-d8	98	15.528	15.523	(0.905)	1620868	47.5608	47.6
	66 Toluene	92	15.606	15.601	(0.909)	973213	47.2433	47.2
	68 trans-1,3-Dichloropropylene	75	15.887	15.882	(0.925)	596870	54.3777	54.4
	69 1,1,2-Trichloroethane	83	16.112	16.108	(0.939)	280897	49.5972	49.6
	70 Tetrachloroethylene	164	16.200	16.195	(0.944)	293711	48.8032	48.8
	71 2-Hexanone	43	16.278	16.273	(0.948)	1519900	196.179	196
	72 1,3-Dichloropropane	76	16.315	16.310	(0.950)	590173	49.7115	49.7
	73 Dibromochloromethane	129	16.554	16.549	(0.964)	359746	51.0701	51.1
	74 1,2-Dibromoethane	107	16.734	16.729	(0.975)	320060	50.3330	50.3
*	76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	978949	50.0000	
	77 Chlorobenzene	112	17.198	17.198	(1.002)	1021571	49.4087	49.4
	78 Ethylbenzene	91	17.231	17.226	(1.004)	1867400	49.8725	49.9
	79 1,1,1,2-Tetrachloroethane	131	17.268	17.268	(1.006)	359543	50.8369	50.8
	80 m,p-Xylenes	106	17.346	17.341	(1.010)	1397866	101.947	102
	81 o-Xylene	106	17.792	17.792	(1.036)	697430	52.7976	52.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
82 Styrene	104	17.815	17.811	(1.038)	1209005	52.4068	52.4
83 Bromoform	173	18.110	18.110	(0.923)	242142	52.6847	52.7
84 Isopropylbenzene	105	18.138	18.138	(0.924)	1593722	43.9805	44.0
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	664901	47.4524	47.4
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	443650	48.4167	48.4
89 n-Propylbenzene	91	18.570	18.566	(0.946)	2251650	49.1308	49.1
91 Bromobenzene	156	18.602	18.598	(0.948)	430568	46.6879	46.7
92 1,2,3-Trichloropropane	110	18.612	18.612	(0.949)	118985	52.1676	52.2
93 1,3,5-Trimethylbenzene	105	18.731	18.727	(0.955)	1575308	51.0822	51.1
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1590662	50.2055	50.2
95 4-Chlorotoluene	91	18.865	18.860	(0.962)	1443807	50.9701	51.0
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1300034	52.1787	52.2
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1632717	50.7695	50.8
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	2181148	51.9688	52.0
100 4-Isopropyltoluene	119	19.436	19.436	(0.991)	1674331	54.5274	54.5
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	882293	49.7328	49.7
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	544041	50.0000	
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	883342	48.3818	48.4
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1794731	54.2450	54.2
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	821622	48.9631	49.0
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	80125	53.8018	53.8
109 1,2,4-Trichlorobenzene	180	22.036	22.036	(1.123)	543875	49.8580	49.8
110 Hexachlorobutadiene	225	22.124	22.124	(1.128)	302480	47.3964	47.4
111 Naphthalene	128	22.451	22.451	(1.144)	1170944	49.3167	49.3
112 1,2,3-Trichlorobenzene	180	22.805	22.805	(1.162)	469375	48.7436	48.7

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA1.i/071409v1/1u203LB.d
Date : 14-JUL-2009 09:25
Client ID: LCS
Sample Info: 1120188067918848331111VOAF111

Instrument: VOA1.i
Operator: RXM4
Column diameter: 0.25

Column phase: RTX-Volatiles

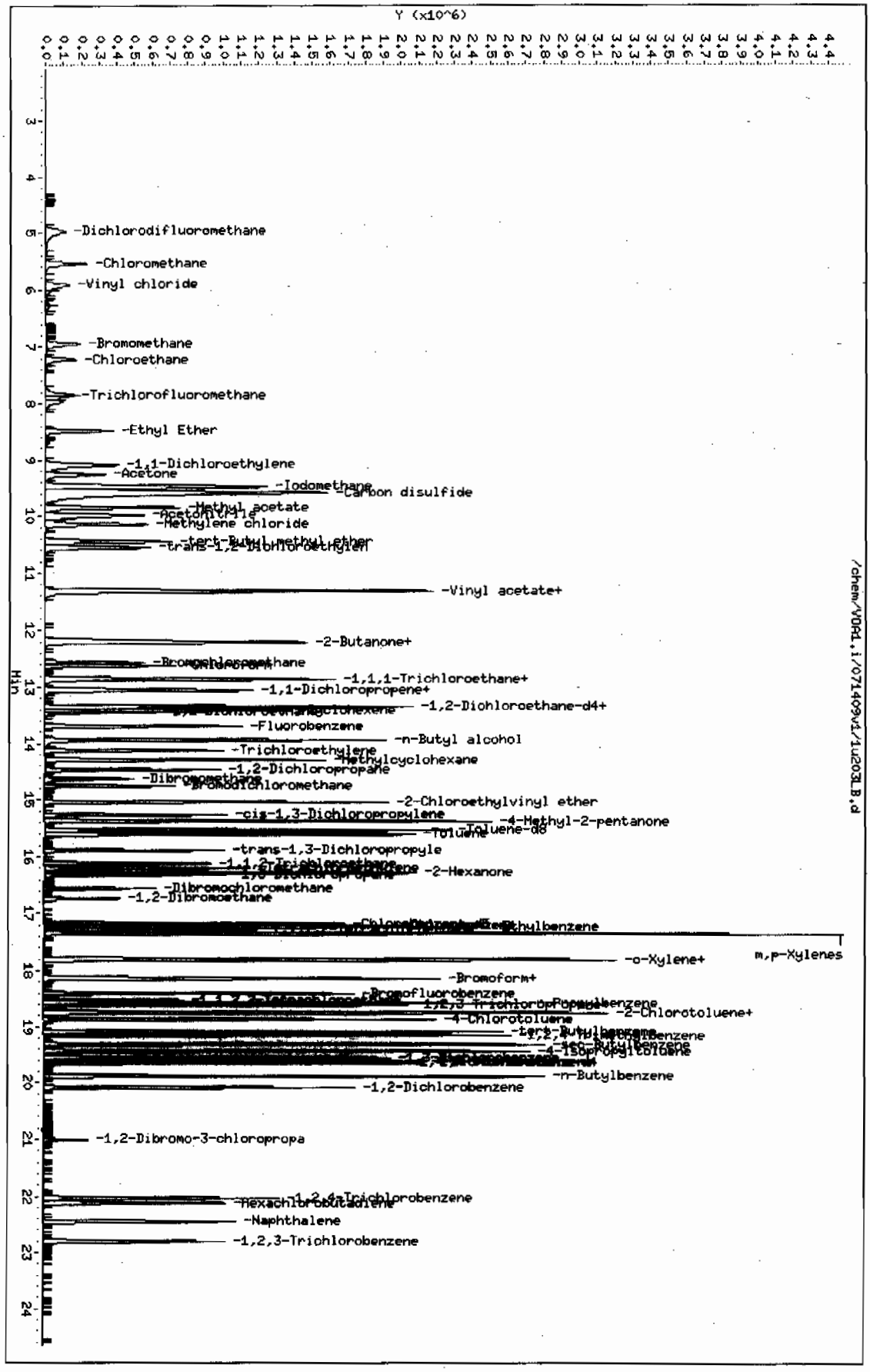

Column phase: RTX-Volatiles

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201880680**				
Client Sample:	**QC for batch 884827**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 884827**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 10:25**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/14/2009 08:02**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u205sLB.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane	U	1.00	ug/kg	0.340	1.00
74-87-3	Chloromethane	U	1.00	ug/kg	0.300	1.00
75-01-4	Vinyl chloride	U	1.00	ug/kg	0.300	1.00
74-83-9	Bromomethane	U	1.00	ug/kg	0.300	1.00
75-00-3	Chloroethane	U	1.00	ug/kg	0.300	1.00
75-69-4	Trichlorofluoromethane	U	1.00	ug/kg	0.570	1.00
67-64-1	Acetone	U	5.00	ug/kg	1.66	5.00
75-35-4	1,1-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
74-88-4	Iodomethane	U	5.00	ug/kg	1.60	5.00
75-09-2	Methylene chloride	U	5.00	ug/kg	2.00	5.00
75-15-0	Carbon disulfide	U	5.00	ug/kg	1.25	5.00
156-60-5	trans-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
75-34-3	1,1-Dichloroethane	U	1.00	ug/kg	0.300	1.00
78-93-3	2-Butanone	U	5.00	ug/kg	1.50	5.00
156-59-2	cis-1,2-Dichloroethylene	U	1.00	ug/kg	0.300	1.00
594-20-7	2,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
67-66-3	Chloroform	U	1.00	ug/kg	0.300	1.00
74-97-5	Bromochloromethane	U	1.00	ug/kg	0.330	1.00
71-55-6	1,1,1-Trichloroethane	U	1.00	ug/kg	0.300	1.00
563-58-6	1,1-Dichloropropene	U	1.00	ug/kg	0.300	1.00
56-23-5	Carbon tetrachloride	U	1.00	ug/kg	0.300	1.00
107-06-2	1,2-Dichloroethane	U	1.00	ug/kg	0.300	1.00
71-43-2	Benzene	U	1.00	ug/kg	0.300	1.00
79-01-6	Trichloroethylene	U	1.00	ug/kg	0.330	1.00
78-87-5	1,2-Dichloropropane	U	1.00	ug/kg	0.300	1.00
75-27-4	Bromodichloromethane	U	1.00	ug/kg	0.300	1.00
74-95-3	Dibromomethane	U	1.00	ug/kg	0.300	1.00
108-10-1	4-Methyl-2-pentanone	U	5.00	ug/kg	1.25	5.00
10061-01-5	cis-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
108-88-3	Toluene	U	1.00	ug/kg	0.300	1.00
10061-02-6	trans-1,3-Dichloropropylene	U	1.00	ug/kg	0.300	1.00
79-00-5	1,1,2-Trichloroethane	U	1.00	ug/kg	0.300	1.00
591-78-6	2-Hexanone	U	5.00	ug/kg	1.50	5.00
142-28-9	1,3-Dichloropropane	U	1.00	ug/kg	0.300	1.00
127-18-4	Tetrachloroethylene	U	1.00	ug/kg	0.300	1.00
124-48-1	Dibromochloromethane	U	1.00	ug/kg	0.300	1.00
106-93-4	1,2-Dibromoethane	U	1.00	ug/kg	0.300	1.00
108-90-7	Chlorobenzene	U	1.00	ug/kg	0.300	1.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201880680**				
Client Sample:	**QC for batch 884827**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 884827**	**Method:**	**SW846 8260B**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**884831**	**Inst:**	**VOA1.I**	**Dilution:**	**1**
Run Date:	**07/14/2009 10:25**	**Analyst:**	**RXM4**	**Purge Vol:**	**5 mL**
Prep Date:	**07/14/2009 08:02**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**1u205sLB.d**	**Column:**	**RTX-Volatiles**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene	U	1.00	ug/kg	0.300	1.00
179601-23-1	m,p-Xylenes	U	2.00	ug/kg	0.300	2.00
95-47-6	o-Xylene	U	1.00	ug/kg	0.300	1.00
100-42-5	Styrene	U	1.00	ug/kg	0.300	1.00
75-25-2	Bromoform	U	1.00	ug/kg	0.300	1.00
79-34-5	1,1,2,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
96-18-4	1,2,3-Trichloropropane	U	1.00	ug/kg	0.300	1.00
108-86-1	Bromobenzene	U	1.00	ug/kg	0.300	1.00
103-65-1	n-Propylbenzene	U	1.00	ug/kg	0.300	1.00
95-49-8	2-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-82-8	Isopropylbenzene	U	1.00	ug/kg	0.300	1.00
108-67-8	1,3,5-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
106-43-4	4-Chlorotoluene	U	1.00	ug/kg	0.300	1.00
98-06-6	tert-Butylbenzene	U	1.00	ug/kg	0.300	1.00
95-63-6	1,2,4-Trimethylbenzene	U	1.00	ug/kg	0.300	1.00
135-98-8	sec-Butylbenzene	U	1.00	ug/kg	0.300	1.00
99-87-6	4-Isopropyltoluene	U	1.00	ug/kg	0.300	1.00
541-73-1	1,3-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
106-46-7	1,4-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00
104-51-8	n-Butylbenzene	U	1.00	ug/kg	0.300	1.00
96-12-8	1,2-Dibromo-3-chloropropane	U	1.00	ug/kg	0.300	1.00
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*		237	ug/kg	1.60	5.00
630-20-6	1,1,1,2-Tetrachloroethane	U	1.00	ug/kg	0.300	1.00
95-50-1	1,2-Dichlorobenzene	U	1.00	ug/kg	0.300	1.00

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071409v1/1u205sLB.d
Lab Smp Id: 1201880680 Client Smp ID: LCS
Inj Date : 14-JUL-2009 10:25
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201880680|884831|1|VOAF|1|
Misc Info : GEL 5G N/A UVM090701-08A/UVM090624-02B
Comment :
Method : /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m
Meth Date : 14-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	0.00000	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
4 Chlorotrifluoroethylene	116	4.883	4.883	(0.357)	742047	172.655	173
8 2-Chloro-1,1,1-trifluoroethane	118	6.298	6.298	(0.460)	1283904	166.872	167
13 Acrolein	56	8.950	8.950	(0.654)	327111	292.632	293
14 Trichlorotrifluoroethane	101	8.996	8.996	(0.657)	1505546	236.716	237
17 Isopropyl Alcohol	45	9.456	9.452	(0.691)	1363358	3093.34	3090
20 Allyl chloride	76	9.857	9.857	(0.720)	686486	221.948	222
24 tert-Butyl Alcohol	59	10.206	10.202	(0.745)	2126653	3073.25	3070
27 Acrylonitrile	53	10.681	10.681	(0.780)	642302	252.020	252
28 Isopropyl ether	45	11.210	11.210	(0.819)	1451768	55.2625	55.3
31 2-Chloro-1,3-butadiene	53	11.403	11.399	(0.833)	578056	57.6865	57.7
32 Ethyl tert-butyl ether	59	11.767	11.767	(0.859)	1282632	54.9570	55.0
34 Ethyl acetate	43	12.177	12.177	(0.889)	1665474	232.343	232

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
37 Propionitrile	54	12.420	12.416	(0.907)	259528	251.423	251
38 Tetrahydrofuran	42	12.549	12.545	(0.640)	575874	244.207	244
40 Methacrylonitrile	41	12.572	12.572	(0.918)	1348290	255.633	256
46 Isobutyl alcohol	41	13.116	13.116	(0.958)	688773	3145.17	3140
$ 48 1,2-Dichloroethane-d4	65	13.346	13.337	(0.975)	497360	51.7510	51.8
49 Methyl tert-amyl ether	73	13.360	13.360	(0.976)	1052935	54.5222	54.5
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1129871	50.0000	
56 Methyl methacrylate	69	14.450	14.450	(1.055)	1116041	268.117	268
58 1,4-Dioxane	88	14.556	14.556	(1.063)	159449	2561.26	2560
62 2-Nitropropane	43	15.090	15.090	(1.102)	536167	301.952	302
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1635562	47.6743	47.7
67 Ethyl methacrylate	69	15.822	15.822	(0.922)	2118472	245.173	245
75 1-Chlorohexane	55	17.042	17.042	(1.245)	470783	62.2478	62.2
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	985471	50.0000	
85 cis-1,4-Dichloro-2-butene	53	18.285	18.285	(0.932)	780617	274.256	274
86 Cyclohexanone	55	18.395	18.395	(1.072)	1589632	1363.61	1360
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	673692	50.5199	50.5
90 trans-1,4-Dichloro-2-butene	53	18.579	18.579	(0.947)	743160	271.049	271
98 Pentachloroethane	167	19.205	19.205	(0.979)	877358	459.733	460(AR)
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	517763	50.0000	
104 Benzyl chloride	91	19.785	19.785	(1.008)	4193647	304.007	304
107 bis(2-Chloroisopropyl)ether	45	20.177	20.177	(1.028)	1071684	269.719	270

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/VOA1.i/071409v1/1u205sLB.d
Date : 14-JUL-2009 10:25
Client ID: LCS
Sample Info: 1120180680188483|1|VOAF1|
Column phase: RTX-Volatiles

Instrument: VOA1.i
Operator: RXH4
Column diameter: 0.25

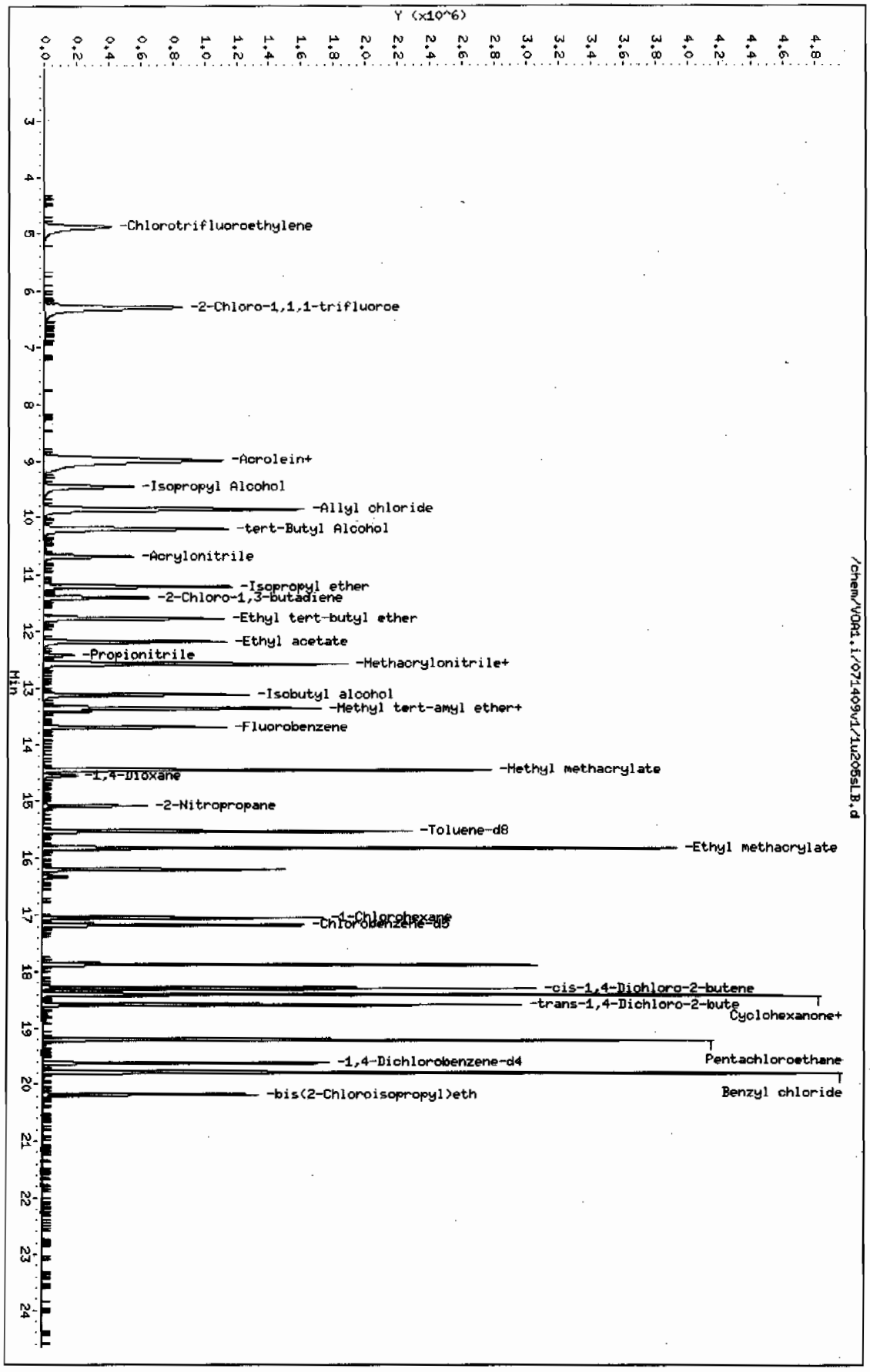

Page 1

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201880055	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
Client Sample:	QC for batch 884827	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-6615PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/14/2009 14:28	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/14/2009 08:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u213.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		70.9	ug/kg	0.367	1.08
74-87-3	Chloromethane		59.4	ug/kg	0.323	1.08
75-01-4	Vinyl chloride		56.0	ug/kg	0.323	1.08
74-83-9	Bromomethane		55.9	ug/kg	0.323	1.08
75-00-3	Chloroethane		55.7	ug/kg	0.323	1.08
75-69-4	Trichlorofluoromethane		68.9	ug/kg	0.614	1.08
67-64-1	Acetone		142	ug/kg	1.79	5.39
75-35-4	1,1-Dichloroethylene		53.9	ug/kg	0.323	1.08
74-88-4	Iodomethane		261	ug/kg	1.72	5.39
75-09-2	Methylene chloride		55.5	ug/kg	2.16	5.39
75-15-0	Carbon disulfide		284	ug/kg	1.35	5.39
156-60-5	trans-1,2-Dichloroethylene		51.4	ug/kg	0.323	1.08
75-34-3	1,1-Dichloroethane		54.1	ug/kg	0.323	1.08
78-93-3	2-Butanone		178	ug/kg	1.62	5.39
156-59-2	cis-1,2-Dichloroethylene		55.7	ug/kg	0.323	1.08
594-20-7	2,2-Dichloropropane		57.2	ug/kg	0.323	1.08
67-66-3	Chloroform		53.5	ug/kg	0.323	1.08
74-97-5	Bromochloromethane		51.9	ug/kg	0.356	1.08
71-55-6	1,1,1-Trichloroethane		58.4	ug/kg	0.323	1.08
563-58-6	1,1-Dichloropropene		56.5	ug/kg	0.323	1.08
56-23-5	Carbon tetrachloride		58.3	ug/kg	0.323	1.08
107-06-2	1,2-Dichloroethane		55.5	ug/kg	0.323	1.08
71-43-2	Benzene		49.4	ug/kg	0.323	1.08
79-01-6	Trichloroethylene		54.7	ug/kg	0.356	1.08
78-87-5	1,2-Dichloropropane		54.3	ug/kg	0.323	1.08
75-27-4	Bromodichloromethane		57.7	ug/kg	0.323	1.08
74-95-3	Dibromomethane		53.9	ug/kg	0.323	1.08
108-10-1	4-Methyl-2-pentanone		256	ug/kg	1.35	5.39
10061-01-5	cis-1,3-Dichloropropylene		55.9	ug/kg	0.323	1.08
108-88-3	Toluene		45.8	ug/kg	0.323	1.08
10061-02-6	trans-1,3-Dichloropropylene		52.5	ug/kg	0.323	1.08
79-00-5	1,1,2-Trichloroethane		50.4	ug/kg	0.323	1.08
591-78-6	2-Hexanone		187	ug/kg	1.62	5.39
142-28-9	1,3-Dichloropropane		49.7	ug/kg	0.323	1.08
127-18-4	Tetrachloroethylene		46.4	ug/kg	0.323	1.08
124-48-1	Dibromochloromethane		51.3	ug/kg	0.323	1.08
106-93-4	1,2-Dibromoethane		49.7	ug/kg	0.323	1.08
108-90-7	Chlorobenzene		48.3	ug/kg	0.323	1.08

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201880055	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
Client Sample:	QC for batch 884827	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-6615PS	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/14/2009 14:28	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/14/2009 08:26	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u213.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		48.0	ug/kg	0.323	1.08
179601-23-1	m,p-Xylenes		97.1	ug/kg	0.323	2.16
95-47-6	o-Xylene		51.1	ug/kg	0.323	1.08
100-42-5	Styrene		49.7	ug/kg	0.323	1.08
75-25-2	Bromoform		51.1	ug/kg	0.323	1.08
79-34-5	1,1,2,2-Tetrachloroethane		47.4	ug/kg	0.323	1.08
96-18-4	1,2,3-Trichloropropane		52.2	ug/kg	0.323	1.08
108-86-1	Bromobenzene		44.2	ug/kg	0.323	1.08
103-65-1	n-Propylbenzene		44.0	ug/kg	0.323	1.08
95-49-8	2-Chlorotoluene		45.3	ug/kg	0.323	1.08
98-82-8	Isopropylbenzene		42.2	ug/kg	0.323	1.08
108-67-8	1,3,5-Trimethylbenzene		45.5	ug/kg	0.323	1.08
106-43-4	4-Chlorotoluene		45.0	ug/kg	0.323	1.08
98-06-6	tert-Butylbenzene		47.1	ug/kg	0.323	1.08
95-63-6	1,2,4-Trimethylbenzene		45.1	ug/kg	0.323	1.08
135-98-8	sec-Butylbenzene		45.2	ug/kg	0.323	1.08
99-87-6	4-Isopropyltoluene		44.0	ug/kg	0.323	1.08
541-73-1	1,3-Dichlorobenzene		43.3	ug/kg	0.323	1.08
106-46-7	1,4-Dichlorobenzene		41.8	ug/kg	0.323	1.08
104-51-8	n-Butylbenzene		43.3	ug/kg	0.323	1.08
96-12-8	1,2-Dibromo-3-chloropropane		51.9	ug/kg	0.323	1.08
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.39	ug/kg	1.72	5.39
630-20-6	1,1,1,2-Tetrachloroethane		50.3	ug/kg	0.323	1.08
95-50-1	1,2-Dichlorobenzene		44.2	ug/kg	0.323	1.08

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VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071409v1/1u213.d
Lab Smp Id: 1201880055 Client Smp ID: CAMO-09-6615MS
Inj Date : 14-JUL-2009 14:28
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201880055|884831|1|VOAF|1|
Misc Info : LAN 5G N/A MS 232754001
Comment :
Method : /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m
Meth Date : 14-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	7.23460	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	967784	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	898345	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	518859	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.337	(0.975)	455911	55.3832	59.7
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1508861	48.2467	52.0
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	637778	47.7257	51.4
5 Dichlorodifluoromethane	85	4.991	4.983	(0.364)	291487	65.7639	70.9
6 Chloromethane	50	5.535	5.535	(0.404)	471409	55.0888	59.4
7 Vinyl chloride	62	5.915	5.908	(0.432)	345726	51.9447	56.0
9 Bromomethane	96	6.943	6.938	(0.507)	236907	51.8871	55.9
10 Chloroethane	64	7.219	7.205	(0.527)	257986	51.6986	55.7
11 Trichlorofluoromethane	101	7.850	7.841	(0.573)	402623	63.8827	68.9
16 Acetone	43	9.263	9.244	(0.677)	585683	131.909	142

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
15 1,1-Dichloroethylene	61	9.093	9.079	(0.664)	575539	49.9779	53.9
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	674441	38.7328	41.8
18 Iodomethane	142	9.470	9.461	(0.692)	2236079	242.221	261
23 Methylene chloride	84	10.142	10.133	(0.741)	351229	51.4878	55.5
19 Carbon disulfide	76	9.581	9.567	(0.700)	4873148	263.195	284
26 trans-1,2-Dichloroethylene	96	10.552	10.543	(0.771)	301141	47.6587	51.4
30 1,1-Dichloroethane	63	11.325	11.316	(0.827)	631455	50.2177	54.1
35 2-Butanone	43	12.195	12.186	(0.891)	820929	165.267	178
36 cis-1,2-Dichloroethylene	96	12.204	12.195	(0.891)	342548	51.6981	55.7
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	679169	40.1412	43.3
33 2,2-Dichloropropane	77	12.167	12.158	(0.889)	343863	53.1020	57.2
41 Chloroform	83	12.619	12.605	(0.922)	561786	49.6357	53.5
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	655603	40.9657	44.2
39 Bromochloromethane	128	12.563	12.549	(0.918)	146677	48.1173	51.9
43 1,1,1-Trichloroethane	97	12.853	12.844	(0.939)	391106	54.2048	58.4
45 1,1-Dichloropropene	75	13.056	13.047	(0.954)	425929	52.4072	56.5
44 Carbon tetrachloride	117	13.033	13.024	(0.952)	408711	54.0614	58.3
51 1,2-Dichloroethane	62	13.447	13.438	(0.982)	468363	51.5167	55.5
47 Benzene	78	13.341	13.332	(0.974)	1234799	45.8701	49.4
54 Trichloroethylene	95	14.124	14.114	(1.032)	325236	50.7762	54.7
57 1,2-Dichloropropane	63	14.469	14.460	(1.057)	359727	50.3845	54.3
60 Bromodichloromethane	83	14.759	14.750	(1.078)	449663	53.5151	57.7
59 Dibromomethane	93	14.630	14.625	(1.069)	194736	50.0174	53.9
64 4-Methyl-2-pentanone	58	15.371	15.367	(0.895)	687243	237.739	256
63 cis-1,3-Dichloropropylene	75	15.265	15.261	(1.115)	523084	51.8928	55.9
66 Toluene	92	15.606	15.601	(0.909)	803727	42.5165	45.8
68 trans-1,3-Dichloropropylene	75	15.887	15.882	(0.925)	490713	48.7176	52.5
69 1,1,2-Trichloroethane	83	16.112	16.108	(0.939)	242974	46.7505	50.4
71 2-Hexanone	43	16.278	16.273	(0.948)	1230989	173.144	187
72 1,3-Dichloropropane	76	16.315	16.310	(0.950)	502676	46.1405	49.7
70 Tetrachloroethylene	164	16.200	16.195	(0.944)	237715	43.0429	46.4
73 Dibromochloromethane	129	16.554	16.549	(0.964)	307540	47.5762	51.3
74 1,2-Dibromoethane	107	16.734	16.729	(0.975)	268945	46.0895	49.7
77 Chlorobenzene	112	17.203	17.198	(1.002)	850850	44.8440	48.3
79 1,1,1,2-Tetrachloroethane	131	17.268	17.268	(1.006)	302747	46.6471	50.3
78 Ethylbenzene	91	17.231	17.226	(1.004)	1528630	44.4880	48.0
80 m,p-Xylenes	106	17.346	17.341	(1.010)	1133680	90.0985	97.1
81 o-Xylene	106	17.792	17.792	(1.036)	574585	47.4007	51.1
82 Styrene	104	17.815	17.811	(1.038)	975434	46.0759	49.7
83 Bromoform	173	18.115	18.110	(0.923)	207814	47.4102	51.1
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	384446	43.9918	47.4
92 1,2,3-Trichloropropane	110	18.612	18.612	(0.949)	105350	48.4312	52.2(Q)
91 Bromobenzene	156	18.602	18.598	(0.948)	360730	41.0135	44.2
89 n-Propylbenzene	91	18.570	18.566	(0.946)	1783292	40.7997	44.0
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1269378	42.0094	45.3
84 Isopropylbenzene	105	18.142	18.138	(0.925)	1352607	39.1383	42.2
93 1,3,5-Trimethylbenzene	105	18.731	18.727	(0.955)	1241643	42.2166	45.5

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
95 4-Chlorotoluene	91	18.865	18.860	(0.962)	1126503	41.6986	45.0
96 tert-Butylbenzene	119	19.090	19.086	(0.973)	1037884	43.6787	47.1
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1283329	41.8420	45.1
99 sec-Butylbenzene	105	19.311	19.311	(0.984)	1678314	41.9289	45.2
100 4-Isopropyltoluene	119	19.436	19.436	(0.991)	1196377	40.8530	44.0
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1266881	40.1493	43.3
108 1,2-Dibromo-3-chloropropane	157	21.014	21.014	(1.071)	68441	48.1867	51.9

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA1.i/071409v1/1u213.d
Date : 14-JUL-2009 14:28
Client ID: CAMO-09-6615MS
Sample Info: |120188005|884831|1|VOAF|1|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

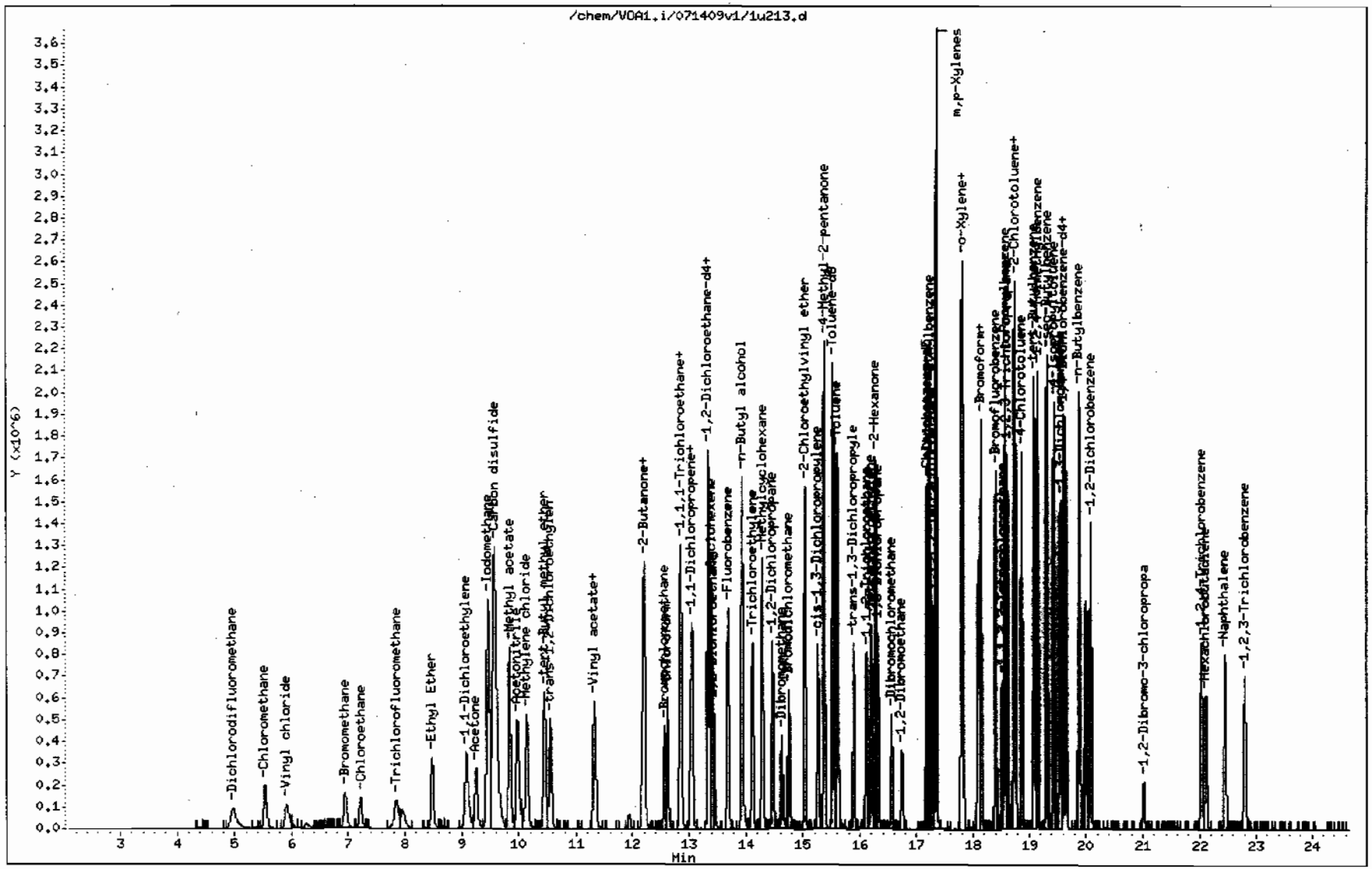

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Volatile
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Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201880056	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
Client Sample:	QC for batch 884827	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-6615PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/14/2009 14:58	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/14/2009 08:27	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u214.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
75-71-8	Dichlorodifluoromethane		73.5	ug/kg	0.367	1.08
74-87-3	Chloromethane		61.6	ug/kg	0.323	1.08
75-01-4	Vinyl chloride		56.9	ug/kg	0.323	1.08
74-83-9	Bromomethane		56.0	ug/kg	0.323	1.08
75-00-3	Chloroethane		57.3	ug/kg	0.323	1.08
75-69-4	Trichlorofluoromethane		68.8	ug/kg	0.614	1.08
67-64-1	Acetone		140	ug/kg	1.79	5.39
75-35-4	1,1-Dichloroethylene		54.7	ug/kg	0.323	1.08
74-88-4	Iodomethane		265	ug/kg	1.72	5.39
75-09-2	Methylene chloride		57.0	ug/kg	2.16	5.39
75-15-0	Carbon disulfide		286	ug/kg	1.35	5.39
156-60-5	trans-1,2-Dichloroethylene		51.9	ug/kg	0.323	1.08
75-34-3	1,1-Dichloroethane		54.1	ug/kg	0.323	1.08
78-93-3	2-Butanone		171	ug/kg	1.62	5.39
156-59-2	cis-1,2-Dichloroethylene		56.9	ug/kg	0.323	1.08
594-20-7	2,2-Dichloropropane		58.6	ug/kg	0.323	1.08
67-66-3	Chloroform		54.1	ug/kg	0.323	1.08
74-97-5	Bromochloromethane		52.4	ug/kg	0.356	1.08
71-55-6	1,1,1-Trichloroethane		59.2	ug/kg	0.323	1.08
563-58-6	1,1-Dichloropropene		56.7	ug/kg	0.323	1.08
56-23-5	Carbon tetrachloride		58.0	ug/kg	0.323	1.08
107-06-2	1,2-Dichloroethane		55.5	ug/kg	0.323	1.08
71-43-2	Benzene		51.1	ug/kg	0.323	1.08
79-01-6	Trichloroethylene		53.4	ug/kg	0.356	1.08
78-87-5	1,2-Dichloropropane		55.8	ug/kg	0.323	1.08
75-27-4	Bromodichloromethane		58.1	ug/kg	0.323	1.08
74-95-3	Dibromomethane		53.8	ug/kg	0.323	1.08
108-10-1	4-Methyl-2-pentanone		260	ug/kg	1.35	5.39
10061-01-5	cis-1,3-Dichloropropylene		55.8	ug/kg	0.323	1.08
108-88-3	Toluene		47.0	ug/kg	0.323	1.08
10061-02-6	trans-1,3-Dichloropropylene		53.5	ug/kg	0.323	1.08
79-00-5	1,1,2-Trichloroethane		52.4	ug/kg	0.323	1.08
591-78-6	2-Hexanone		168	ug/kg	1.62	5.39
142-28-9	1,3-Dichloropropane		51.7	ug/kg	0.323	1.08
127-18-4	Tetrachloroethylene		46.3	ug/kg	0.323	1.08
124-48-1	Dibromochloromethane		52.6	ug/kg	0.323	1.08
106-93-4	1,2-Dibromoethane		52.1	ug/kg	0.323	1.08
108-90-7	Chlorobenzene		47.5	ug/kg	0.323	1.08

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	1201880056	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
Client Sample:	QC for batch 884827	**Client:**	LANL010	**Project:**	QC
Client ID:	CAMO-09-6615PSD	**Method:**	SW846 8260B	**SOP Ref:**	GL-OA-E-038
Batch ID:	884831	**Inst:**	VOA1.I	**Dilution:**	1
Run Date:	07/14/2009 14:58	**Analyst:**	RXM4	**Purge Vol:**	5 mL
Prep Date:	07/14/2009 08:27	**Aliquot:**	5 g	**Final Volume:**	5 mL
Data File:	1u214.d	**Column:**	RTX-Volatiles	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-41-4	Ethylbenzene		46.7	ug/kg	0.323	1.08
179601-23-1	m,p-Xylenes		95.1	ug/kg	0.323	2.16
95-47-6	o-Xylene		50.4	ug/kg	0.323	1.08
100-42-5	Styrene		48.5	ug/kg	0.323	1.08
75-25-2	Bromoform		54.7	ug/kg	0.323	1.08
79-34-5	1,1,2,2-Tetrachloroethane		52.2	ug/kg	0.323	1.08
96-18-4	1,2,3-Trichloropropane		56.3	ug/kg	0.323	1.08
108-86-1	Bromobenzene		45.8	ug/kg	0.323	1.08
103-65-1	n-Propylbenzene		44.5	ug/kg	0.323	1.08
95-49-8	2-Chlorotoluene		46.4	ug/kg	0.323	1.08
98-82-8	Isopropylbenzene		43.2	ug/kg	0.323	1.08
108-67-8	1,3,5-Trimethylbenzene		46.5	ug/kg	0.323	1.08
106-43-4	4-Chlorotoluene		45.4	ug/kg	0.323	1.08
98-06-6	tert-Butylbenzene		47.8	ug/kg	0.323	1.08
95-63-6	1,2,4-Trimethylbenzene		45.6	ug/kg	0.323	1.08
135-98-8	sec-Butylbenzene		45.6	ug/kg	0.323	1.08
99-87-6	4-Isopropyltoluene		42.9	ug/kg	0.323	1.08
541-73-1	1,3-Dichlorobenzene		44.0	ug/kg	0.323	1.08
106-46-7	1,4-Dichlorobenzene		42.4	ug/kg	0.323	1.08
104-51-8	n-Butylbenzene		42.8	ug/kg	0.323	1.08
96-12-8	1,2-Dibromo-3-chloropropane		55.8	ug/kg	0.323	1.08
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha *Trichlorotrifluoroethane*	U	5.39	ug/kg	1.72	5.39
630-20-6	1,1,1,2-Tetrachloroethane		50.8	ug/kg	0.323	1.08
95-50-1	1,2-Dichlorobenzene		44.8	ug/kg	0.323	1.08

GEL Laboratories LLC

VOLATILE GC/MS : SOP# GL-OA-E-038,-039,-026

Data file : /chem/VOA1.i/071409v1/1u214.d
Lab Smp Id: 1201880056 Client Smp ID: CAMO-09-6615MSD
Inj Date : 14-JUL-2009 14:58
Operator : RXM4 Inst ID: VOA1.i
Smp Info : |1201880056|884831|1|VOAF|1|
Misc Info : LAN 5G N/A MSD 232754001
Comment :
Method : /chem/VOA1.i/071409v1/VOA1-8260ox-070109.m
Meth Date : 14-Jul-2009 10:45 ron01469 Quant Type: ISTD
Cal Date : 01-JUL-2009 23:08 Cal File: 1s326.d
Als bottle: 14 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: prdsvr07

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws)*(Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
M	7.23460	% moisture
Vt	5.00000	Purge Volume (ml)
Ws	5.00000	weight of sample (g)
Uf	1.00000	Unit correction factor
Va	100.00000	Soil Aliquot Volume (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
* 52 Fluorobenzene	96	13.691	13.682	(1.000)	1023033	50.0000	
* 76 Chlorobenzene-d5	117	17.166	17.166	(1.000)	915032	50.0000	
* 102 1,4-Dichlorobenzene-d4	152	19.620	19.620	(1.000)	496875	50.0000	
$ 48 1,2-Dichloroethane-d4	65	13.346	13.337	(0.975)	465088	53.4469	57.6
$ 65 Toluene-d8	98	15.528	15.523	(0.905)	1568903	49.2517	53.1
$ 87 Bromofluorobenzene	95	18.395	18.395	(0.938)	639521	49.9735	53.9
5 Dichlorodifluoromethane	85	4.983	4.983	(0.364)	319278	68.1438	73.4
6 Chloromethane	50	5.543	5.535	(0.405)	516985	57.1521	61.6
7 Vinyl chloride	62	5.923	5.908	(0.433)	371084	52.7437	56.8
9 Bromomethane	96	6.943	6.938	(0.507)	250560	51.9137	56.0
10 Chloroethane	64	7.215	7.205	(0.527)	280234	53.1242	57.3
11 Trichlorofluoromethane	101	7.850	7.841	(0.573)	425240	63.8274	68.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
16 Acetone	43	9.263	9.244	(0.677)	611486	130.282	140
15 1,1-Dichloroethylene	61	9.093	9.079	(0.664)	617493	50.7252	54.7
103 1,4-Dichlorobenzene	146	19.647	19.647	(1.001)	656020	39.3418	42.4
18 Iodomethane	142	9.470	9.461	(0.692)	2397438	245.675	265
23 Methylene chloride	84	10.147	10.133	(0.741)	380263	52.8313	57.0
19 Carbon disulfide	76	9.581	9.567	(0.700)	5186854	265.009	286
26 trans-1,2-Dichloroethylene	96	10.552	10.543	(0.771)	321477	48.1294	51.9
30 1,1-Dichloroethane	63	11.325	11.316	(0.827)	667283	50.2011	54.1
35 2-Butanone	43	12.195	12.186	(0.891)	835123	159.045	171
36 cis-1,2-Dichloroethylene	96	12.204	12.195	(0.891)	369625	52.7720	56.9
101 1,3-Dichlorobenzene	146	19.551	19.551	(0.996)	661212	40.8089	44.0
33 2,2-Dichloropropane	77	12.172	12.158	(0.889)	372299	54.3883	58.6
41 Chloroform	83	12.614	12.605	(0.921)	600140	50.1608	54.1
106 1,2-Dichlorobenzene	146	20.089	20.089	(1.024)	637520	41.5983	44.8
39 Bromochloromethane	128	12.563	12.549	(0.918)	156643	48.6115	52.4
43 1,1,1-Trichloroethane	97	12.853	12.844	(0.939)	419052	54.9415	59.2
45 1,1-Dichloropropene	75	13.056	13.047	(0.954)	452195	52.6342	56.7
44 Carbon tetrachloride	117	13.033	13.024	(0.952)	429710	53.7694	58.0
51 1,2-Dichloroethane	62	13.447	13.438	(0.982)	494460	51.4500	55.5
47 Benzene	78	13.341	13.332	(0.974)	1348442	47.3865	51.1
54 Trichloroethylene	95	14.124	14.114	(1.032)	335148	49.4979	53.4
57 1,2-Dichloropropane	63	14.469	14.460	(1.057)	390362	51.7225	55.8
60 Bromodichloromethane	83	14.759	14.750	(1.078)	479015	53.9296	58.1
59 Dibromomethane	93	14.630	14.625	(1.069)	205588	49.9529	53.8
64 4-Methyl-2-pentanone	58	15.371	15.367	(0.895)	709302	240.896	260
63 cis-1,3-Dichloropropylene	75	15.265	15.261	(1.115)	551513	51.7584	55.8
66 Toluene	92	15.606	15.601	(0.909)	839805	43.6149	47.0
68 trans-1,3-Dichloropropylene	75	15.887	15.882	(0.925)	509501	49.6604	53.5
69 1,1,2-Trichloroethane	83	16.112	16.108	(0.939)	257193	48.5839	52.4
71 2-Hexanone	43	16.278	16.273	(0.948)	1127844	155.743	168
72 1,3-Dichloropropane	76	16.315	16.310	(0.950)	532039	47.9451	51.7
70 Tetrachloroethylene	164	16.200	16.195	(0.944)	241420	42.9166	46.3
73 Dibromochloromethane	129	16.554	16.549	(0.964)	321172	48.7790	52.6
74 1,2-Dibromoethane	107	16.734	16.729	(0.975)	287244	48.3277	52.1
77 Chlorobenzene	112	17.199	17.198	(1.002)	852328	44.1027	47.5
79 1,1,1,2-Tetrachloroethane	131	17.268	17.268	(1.006)	311780	47.1628	50.8
78 Ethylbenzene	91	17.231	17.226	(1.004)	1517504	43.3588	46.7
80 m,p-Xylenes	106	17.346	17.341	(1.010)	1130236	88.1867	95.1
81 o-Xylene	106	17.792	17.792	(1.036)	577191	46.7474	50.4
82 Styrene	104	17.815	17.811	(1.038)	969265	44.9496	48.4
83 Bromoform	173	18.115	18.110	(0.923)	213005	50.7445	54.7
88 1,1,2,2-Tetrachloroethane	83	18.515	18.515	(0.944)	405362	48.4375	52.2
92 1,2,3-Trichloropropane	110	18.612	18.612	(0.949)	108817	52.2384	56.3(Q)
91 Bromobenzene	156	18.602	18.598	(0.948)	358021	42.5065	45.8
89 n-Propylbenzene	91	18.570	18.566	(0.946)	1729801	41.3269	44.5
94 2-Chlorotoluene	91	18.750	18.750	(0.956)	1244580	43.0111	46.4
84 Isopropylbenzene	105	18.142	18.138	(0.925)	1325530	40.0518	43.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/Kg)
93 1,3,5-Trimethylbenzene	105	18.731	18.727	(0.955)	1213982	43.1023	46.5
95 4-Chlorotoluene	91	18.865	18.860	(0.962)	1089362	42.1079	45.4
96 tert-Butylbenzene	119	19.086	19.086	(0.973)	1008669	44.3274	47.8
97 1,2,4-Trimethylbenzene	105	19.146	19.146	(0.976)	1243537	42.3385	45.6
99 sec-Butylbenzene	105	19.316	19.311	(0.984)	1622502	42.3280	45.6
100 4-Isopropyltoluene	119	19.436	19.436	(0.991)	1115598	39.7801	42.9
105 n-Butylbenzene	91	19.882	19.882	(1.013)	1200056	39.7142	42.8
108 1,2-Dibromo-3-chloropropane	157	21.010	21.014	(1.071)	70400	51.7590	55.8

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/VOA1.i/071409v1/1u214.d
Date : 14-JUL-2009 14:58
Client ID: CAMO-09-6615MSD
Sample Info: |120188005618848311|VOAF11|

Column phase: RTX-Volatiles

Instrument: VOA1.i

Operator: RXM4
Column diameter: 0.25

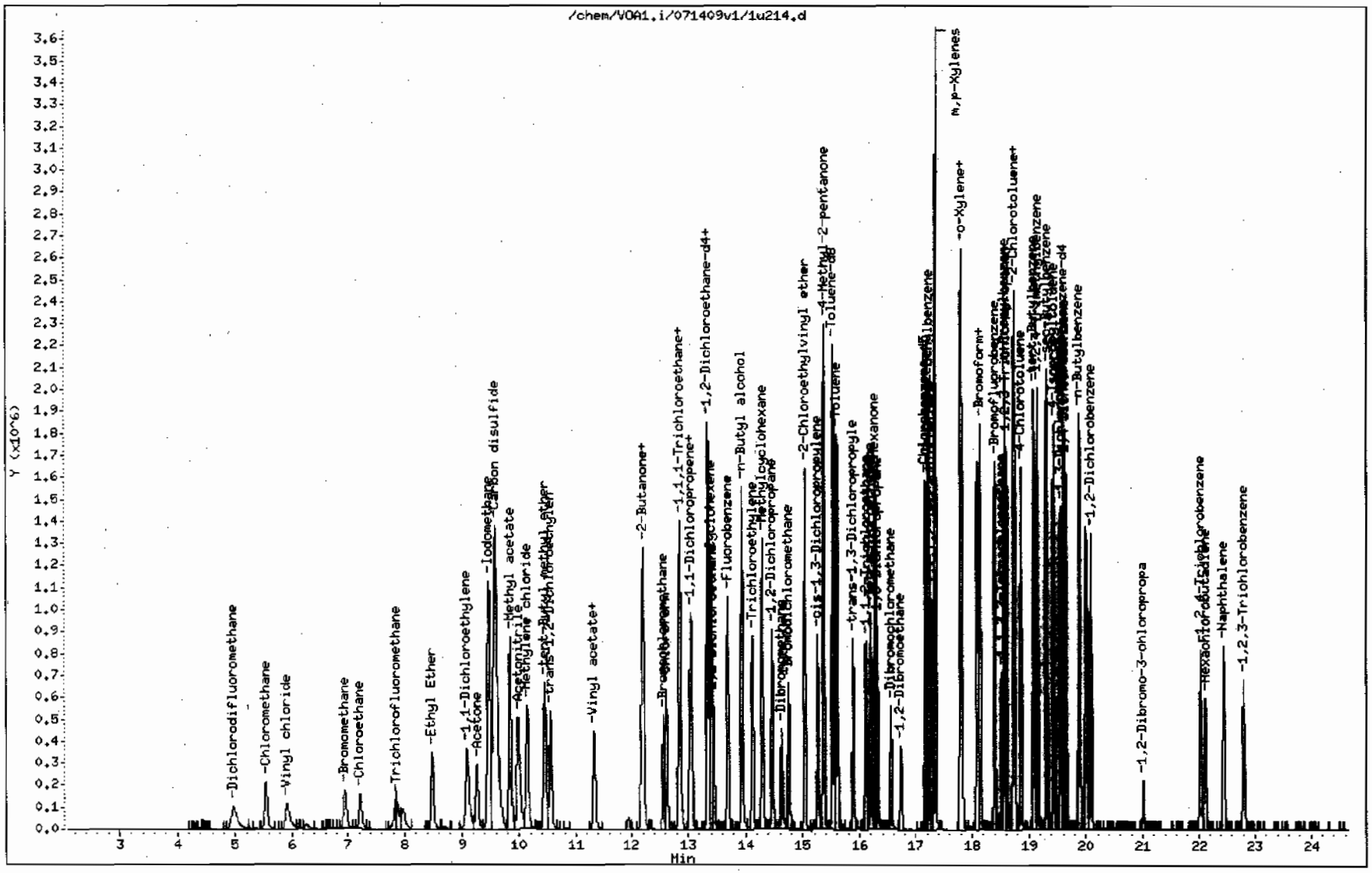

Miscellaneous Data

Prep LogBook

Analyst: RXM4 Verified by:_____

Batch: 884827

Lab SOP: GL-OA-E-038 REV# 12

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201880054		SW846 5030	13-JUL-2009 08:00	5 g	5 mL	1	SOIL
MB	1201880678		SW846 5030	14-JUL-2009 08:00	5 g	5 mL	1	SOIL
LCS	1201880057		SW846 5030	13-JUL-2009 08:01	5 g	5 mL	1	SOIL
LCS	1201880058		SW846 5030	13-JUL-2009 08:02	5 g	5 mL	1	SOIL
LCS	1201880679		SW846 5030	14-JUL-2009 08:01	5 g	5 mL	1	SOIL
LCS	1201880680		SW846 5030	14-JUL-2009 08:02	5 g	5 mL	1	SOIL
SAMPLE	232754001		SW846 5030	13-JUL-2009 12:05	5 g	5 mL	1	SOIL
PS	1201880055	232754001	SW846 5030	14-JUL-2009 08:26	5 g	5 mL	1	SOIL
PSD	1201880056	232754001	SW846 5030	14-JUL-2009 08:27	5 g	5 mL	1	SOIL
SAMPLE	232754002		SW846 5030	13-JUL-2009 12:06	5 g	5 mL	1	SOIL
SAMPLE	232754003		SW846 5030	13-JUL-2009 12:07	5 g	5 mL	1	SOIL
SAMPLE	232758001		SW846 5030	13-JUL-2009 12:08	5 g	5 mL	1	SOIL
SAMPLE	232758002		SW846 5030	13-JUL-2009 12:09	5 g	5 mL	1	SOIL
SAMPLE	232758003		SW846 5030	13-JUL-2009 12:10	5 g	5 mL	1	SOIL
SAMPLE	232758004		SW846 5030	13-JUL-2009 12:11	5 g	5 mL	1	SOIL
SAMPLE	232758005		SW846 5030	13-JUL-2009 12:12	5 g	5 mL	1	SOIL
SAMPLE	232846001		SW846 5030	13-JUL-2009 12:13	5 g	5 mL	1	SOIL
SAMPLE	232846002		SW846 5030	13-JUL-2009 12:14	5 g	5 mL	1	SOIL
SAMPLE	232846003		SW846 5030	14-JUL-2009 08:25	5 g	5 mL	1	SOIL
SAMPLE	232846004		SW846 5030	13-JUL-2009 12:16	5 g	5 mL	1	SOIL

Comments

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/1/2009 Method 8260B/624 Operator: RJM

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 81710

Sequence Number: 070109v1

Daily Standard

	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090701-03		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090701-04			5+5	
BFB	UVM090413-02				1
SHORT	W1VM090701-23		5+5	5+5	

Purge Amount

5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable O/X	Comments
1 Jul 2009 08:55	1S301.D	UVM090413-02	GEL	BFB	5ML	1	N/A	1	W	RXM4	N/A	X	See 1S309
1 Jul 2009 09:23	1S302.D	W1VM090701-01	GEL	CCV/LCS	5ML	1	N/A	2	S	RXM4	N/A	X	UVM090605-01C/IVM090630-01
1 Jul 2009 09:54	1S303.D	W1VM090701-021	GEL	LCS	5G	1	N/A	3	W	RXM4	N/A	X	UVM090605-01C/IVM090630-01
1 Jul 2009 12:01	1S304.D	120187---	GEL	BLANK	5ML	1	N/A	4	W	RXM4	N/A	X	
1 Jul 2009 12:31	1S305.D	W1VM090701-03	GEL	CCV/LCS	5ML	1	N/A	5	W	RXM4	N/A	X	UVM090605-01D/IVM090630-01
1 Jul 2009 13:01	1S306.D	W1VM090701-04	GEL	LCS	5G	1	N/A	6	S	RXM4	N/A	X	UVM090605-01D/IVM090630-01
1 Jul 2009 13:31	1S307.D	12018--	GEL	BLANK	5ML	1	N/A	7	W	RXM4	N/A	X	
1 Jul 2009 14:04	1S308.D	12018--	GEL	BLANK	5ML	1	N/A	8	W	RXM4	N/A	X	
1 Jul 2009 14:32	1S309.D	UVM090413-02	GEL	BFB	5ML	1	N/A	9	W	RXM4	N/A	O	Passed.
1 Jul 2009 15:01	1S310.D	W1VM090701-05	GEL	VSTD0005	5ML	1	N/A	10	W	RXM4	N/A	O	UVM090603-01B/UVM090617-01C
1 Jul 2009 15:31	1S311.D	W1VM090701-06	GEL	VSTD001	5ML	1	N/A	11	W	RXM4	N/A	O	UVM090603-02B/UVM090617-02C
1 Jul 2009 16:01	1S312.D	W1VM090701-07	GEL	VSTD001	5ML	1	N/A	12	W	RXM4	N/A	X	UVM090603-02B/UVM090617-02C; not needed.
1 Jul 2009 16:32	1S313.D	W1VM090701-08	GEL	VSTD002	5ML	1	N/A	13	W	RXM4	N/A	O	UVM090603-03B/UVM090617-03C
1 Jul 2009 17:02	1S314.D	W1VM090701-09	GEL	VSTD005	5ML	1	N/A	14	W	RXM4	N/A	O	UVM090603-04B/UVM090617-04C
1 Jul 2009 17:32	1S315.D	W1VM090701-10	GEL	VSTD010	5ML	1	N/A	15	W	RXM4	N/A	O	UVM090603-05B/UVM090617-05C
1 Jul 2009 18:02	1S316.D	W1VM090701-11	GEL	VSTD020	5ML	1	N/A	16	W	RXM4	N/A	O	UVM090603-06B/UVM090617-06C
1 Jul 2009 18:33	1S317.D	W1VM090701-12	GEL	VSTD050	5ML	1	N/A	17	W	RXM4	N/A	O	UVM090603-07B/UVM090617-07C
1 Jul 2009 19:04	1S318.D	W1VM090701-13	GEL	VSTD100	5ML	1	N/A	18	W	RXM4	N/A	O	UVM090603-08B/UVM090617-08C
1 Jul 2009 19:34	1S319.D	12018--	GEL	BLANK	5ML	1	N/A	19	W	RXM4	N/A	X	
1 Jul 2009 20:05	1S320.D	W1VM090701-14	GEL	VSTD005S	5ML	1	N/A	20	W	RXM4	N/A	O	UVM090701-01/UVM090625-01A
1 Jul 2009 20:36	1S321.D	W1VM090701-15	GEL	VSTD010S	5ML	1	N/A	21	W	RXM4	N/A	O	UVM090701-02/UVM090625-02A
1 Jul 2009 21:06	1S322.D	W1VM090701-16	GEL	VSTD025S	5ML	1	N/A	22	W	RXM4	N/A	O	UVM090701-03/UVM090625-03A
1 Jul 2009 21:36	1S323.D	W1VM090701-17	GEL	VSTD050S	5ML	1	N/A	23	W	RXM4	N/A	O	UVM090701-04/UVM090625-04A
1 Jul 2009 22:07	1S324.D	W1VM090701-18	GEL	VSTD100S	5ML	1	N/A	24	W	RXM4	N/A	O	UVM090701-05/UVM090625-05A
1 Jul 2009 22:38	1S325.D	W1VM090701-19	GEL	VSTD250S	5ML	1	N/A	25	W	RXM4	N/A	O	UVM090701-06/UVM090625-06A
1 Jul 2009 23:08	1S326.D	W1VM090701-20	GEL	VSTD500S	5ML	1	N/A	26	W	RXM4	N/A	O	UVM090701-07/UVM090625-07A
1 Jul 2009 23:39	1S327.D	12018--	GEL	BLANK	5ML	1	N/A	27	W	RXM4	N/A	X	

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/1/2009 Method 8260B/624 Operator: RJM

REVIEWED BY:
DATE:

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 81710

Sequence Number: 070109v1

Daily Standard

Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090701-03		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090701-04			5+5	
BFB	UVM090413-02				1
SHORT	W1VM090701-23		5+5	5+5	

Purge Amount

5	Water Purge Vol:ML
N/A	Soil Purge Wt.:G
	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable O/X	Comments
2 Jul 2009 00:10	1S328.D	W1VM090701-21	GEL	ICV	5ML	1	N/A	28	W	RXM4	N/A	X	UVM090527-01E/IVM090630-01; Vinyl Chloride low
2 Jul 2009 00:41	1S329.D	W1VM090701-22	GEL	ICV	5ML	1	N/A	29	W	RXM4	N/A	O	UVM090605-01D/IVM090630-01
2 Jul 2009 01:12	1S330.D	W1VM090701-23	GEL	SHORT ICV	5ML	1	N/A	30	W	RXM4	N/A	O	UVM090701-01/UVM090527-01E

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/13/2009 Method 8260B/624 Operator: RJM

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # N/A

Sequence Number: 071309v1

Daily Standard — Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090713-01		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090713-01			5+5	
BFB	UVM090413-02				1
SHORT	W1VM090713-02		5+5	5+5	

Purge Amount

5	Water Purge Vol:ML
5	Soil Purge Wt.:G
	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable O/X	Comments
7/13/2009 9:23	1U101.D	UVM090413-02	GEL	BFB	5ML	1	N/A	1	W	RXM4	N/A	O	
7/13/2009 10:00	1U102.D	W1VM090713-01	GEL	CCV/LCS	5G	1	N/A	2	S	RXM4	N/A	O	UVM090708-01A/IVM0907080-01
7/13/2009 10:31	1U103.D	W1VM090713-02	GEL	SHORT	5G	1	N/A	5	S	RXM4	N/A	O	UVM090701-08A/UVM090624-02B
7/13/2009 11:01	1U104.D	120187--	GEL	BLANK	5G	1	N/A	7	S	RXM4	N/A	O	
7/13/2009 11:39	1U105.D	233254001	BRKL	884825	5G	1	N/A	5	S	RXM4	N/A	X	Fails IS RR See 1U217
7/13/2009 12:09	1U106.D	233254003	BRKL	884825	5G	1	N/A	6	S	RXM4	N/A	X	
7/13/2009 12:39	1U107.D	233254003	BRKL	884825	5G	1	N/A	7	S	RXM4	N/A	O	
7/13/2009 13:10	1U108.D	233254005	BRKL	884825	5G	1	N/A	8	S	RXM4	N/A	X	Fails SS/IS RR see 1u211
7/13/2009 13:40	1U109.D	232754001	LANL	884831	5G	1	N/A	9	S	RXM4	N/A	O	
7/13/2009 14:10	1U110.D	232754002	LANL	884831	5G	1	N/A	10	S	RXM4	N/A	O	
7/13/2009 14:40	1U111.D	232754003	LANL	884831	5G	1	N/A	11	S	RXM4	N/A	O	
7/13/2009 15:10	1U112.D	232758001	LANL	884831	5G	1	N/A	12	S	RXM4	N/A	O	
7/13/2009 15:41	1U113.D	232758002	LANL	884831	5G	1	N/A	13	S	RXM4	N/A	O	
7/13/2009 16:11	1U114.D	232758003	LANL	884831	5G	1	N/A	14	S	RXM4	N/A	O	
7/13/2009 16:41	1U115.D	232758004	LANL	884831	5G	1	N/A	15	S	RXM4	N/A	O	
7/13/2009 17:11	1U116.D	232758005	LANL	884831	5G	1	N/A	16	S	RXM4	N/A	O	
7/13/2009 17:41	1U117.D	232846001	LANL	884831	5G	1	N/A	17	S	RXM4	N/A	O	
7/13/2009 18:12	1U118.D	232846002	LANL	884831	5G	1	N/A	18	S	RXM4	N/A	O	
7/13/2009 18:42	1U119.D	232846003	LANL	884831	5G	1	N/A	19	S	RXM4	N/A	X	ISTD failure. See 7/14/09
7/13/2009 19:12	1U120.D	232846004	LANL	884831	5G	1	N/A	20	S	RXM4	N/A	O	

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GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA1

Date: 7/14/2009 Method 8260B/624 Operator: RJM

REVIEWED BY: SLC
DATE: 07/23/09

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 2

Daily Instrument Readings:
Multiplier Voltage: 1247

CALIBRATION & CC INFORMATION:

nitial Calibration Date: 7/1/2009

(See pg. 177 for ICAL Std. Sci. Ids)

NaHSO4 lot # N/A

Cl test lot # 81710

Sequence Number: 071409v1

Daily Standard	Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W1VM090714-01		5+5		
IS	UVM090413-01	1	1	1	
SS	UVM090413-02	1	1	1	
LCS/MS	W1VM090714-01/02			5+5	
BFB	UVM090413-02				1
SHORT	W1VM090714-03/04		5+5	5+5	

Purge Amount	
5	Water Purge Vol:ML
5	Soil Purge Wt.:G
	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

RJM 7/23/09

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	Cl test (Y/N)	Acceptable O/X	Comments
7/14/2009 6:27	1U201.D	[illegible]	GEL	BFB	5ML	1	N/A	1	W	RXM4	N/A	X	See 1U202
7/14/[illegible]	1U202.D	[illegible]	GEL	BFB/CCV/LCS	5ML	1	N/A	2	W	RXM4	N/A	O	UVM090706-01A/IVM090706-01
7/14/[illegible]	1U203.D	[illegible]	GEL	LCS	5G	1	N/A	3	S	RXM4	N/A	O	UVM090706-01A/IVM090706-01
7/14/[illegible]	1U204.D	[illegible]	GEL	SHORT	5ML	1	N/A	4	W	RXM4	N/A	O	UVM090624-02B/UVM090701-06A
7/14/[illegible] 10:[illegible]	1U205.D	[illegible]	GEL	SHORT	5G	1	N/A	5	S	RXM4	N/A	O	UVM090624-02B/UVM090701-06A
7/14/[illegible] 10:[illegible]	1U206.D	120187--	GEL	BLANK	5ML	1	N/A	6	W	RXM4	N/A	O	
7/14/[illegible] 11:27	1U207.D	120187--	GEL	BLANK	5G	1	N/A	7	S	RXM4	N/A	O	
7/14/[illegible] 11:57	1U208.D	1201[illegible]027	BRKL	664825	5G	1	N/A	8	S	RXM4	N/A	O	MS 233254003
7/14/[illegible] 12:27	1U209.D	1201[illegible]	BRKL	664825	5G	1	N/A	9	S	RXM4	N/A	O	MSD 233254003
7/14/[illegible] 12:[illegible]	1U210.D	120187--	GEL	BLANK	5ML	1	N/A	10	w	RXM4	N/A	X	Rinse
7/14/[illegible] 13:[illegible]	1U211.D	[illegible]005	BRKL	664825	5G	1	N/A	11	S	RXM4	N/A	X	RA CF ISTD failure
7/14/[illegible] 13:[illegible]	1U212.D	[illegible]	LANL	664831	5G	1	N/A	12	S	RXM4	N/A	O	RA
7/14/[illegible] 14:[illegible]	1U213.D	[illegible]	LAN	664831	5G	1	N/A	13	S	RXM4	N/A	O	MS 232754001
7/14/[illegible] 14:[illegible]	1U214.D	[illegible]	LAN	664831	5G	1	N/A	14	S	RXM4	N/A	O	MSD 232754001
7/14/[illegible] 16:[illegible]	1U215.D	120187--	GEL	BLANK	5ML	1	N/A	15	W	RXM4	N/A	X	Rinse
7/14/[illegible] 16:[illegible]	1U216.D	[illegible]01	RPBL	665043	5ML	1	PH2	16	W	RXM4	N	O	
7/14/[illegible] 16:[illegible]	1U217.D	[illegible]01	BRKL	664825	5G	1	N/A	17	S	RXM4	N/A	O	RA
7/14/[illegible] 16:[illegible]	1U218.D	[illegible]	RPBL	665045	5ML	1	PH7	18	W	RXM4	N	O	
7/14/[illegible] 17:[illegible]	1U219.D	[illegible]	RPBL	665045	5ML	1	PH7	19	W	RXM4	N	O	
7/14/2009 17:[illegible]	1U220.D	[illegible]	RPBL	665045	5ML	1	PH7	20	W	RXM4	N	O	
7/14/[illegible] 18:[illegible]	1U221.D	[illegible]	RPBL	665045	5ML	1	PH7	21	W	RXM4	N	O	
7/14/[illegible] 18:[illegible]	1U222.D	[illegible]	RPBL	665045	5ML	1	PH7	22	W	RXM4	N	O	
7/14/2009 19:29	1U223.D	[illegible]007	RPBL	665045	5ML	1	PH7	23	W	RXM4	N	O	
7/14/2009 20:00	1U224.D	1201[illegible]00	RPBL	665045	5ML	1	PH7	24	W	RXM4	N	O	MS 233228002
7/14/2009 20:30	1U225.D	1201[illegible]01	RPBL	665045	5ML	1	PH7	25	W	RXM4	N	O	MSD 233228002

GC/MS Semivolatile Analysis

Semi-Volatile Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2536

Method/Analysis Information

Procedure:	**Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method:	SW846 8270C
Prep Method:	SW846 3550B
Analytical Batch Number:	882732
Prep Batch Number:	882731

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8270C:

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201874895	Method Blank (MB)
1201874896	Laboratory Control Sample (LCS)
1201874897	232846001(CAMO-09-7145) Matrix Spike (MS)
1201874898	232846001(CAMO-09-7145) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-009 REV# 22.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 18.2.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package. Please note that the second level of the initial calibration (5 mg/L) is only used for n-Nitrosodipropylamine. The various calibration mixes may not be calibrated using all of the calibration levels. In addition, not all of the mixes are calibrated using the same levels.

Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC on Quantitation Reports, Initial Calibration Reports, Calibration Check Standard Reports, etc. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only co-elute, but also have similar mass spectra. N-Nitroso-diphenylamine and Diphenylamine will be reported as Diphenylamine on all reports and forms.

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG). A second source initial calibration verification (ICV) was included in the standard section directly behind the initial calibration.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 232846001 (CAMO-09-7145) was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

Technical Information

Holding Time Specifications
All samples in this SDG met the specified holding time. GEL assigns holding times based on the associated

methodology that assigns the date and time from sample collection or sample receipt. Those holding times expressed in hours are calculated in the ALPHALIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for confirmations and/or dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations. Please see the raw data in the Miscellaneous Section.

Additional Comments
Additional comments were not required for this SDG.

Electronic Package Comment
The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually generate all data packages electronically. The following change from "traditional" packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

System Configuration
The samples reported in this SDG were analyzed on one or more of the following instrument systems. Instrument systems are referenced in the raw data and individual form headers by the Instrument ID designations listed below:

The Semi-Volatile-GC/MS analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
MSD2.I	Agilent 5975 Mass Spectrometer	HP7890A/HP5975C	DB-5MS	25m x 0.2mm, 0.33um (5% Phenylmethylpolysiloxane)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: _____ Date: 07-23-09

Roadmap for LANL 09-2536 SVOA

This roadmap was analyzed by ANN00964 on 07-08-2009, 15:00.
This roadmap was reviewed by jcb on 07-09-2009, 10:22.

Sample

exclude	manual	datafile	smpid	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	N	/chem/MSD2.i/s070709.b/s2g0707.d	232754001	07-JUL-2009	16:31	09-2536.sub	CAMO-09-6615	1	882732	USE
☐	N	/chem/MSD2.i/s070709.b/s2g0708.d	232754002	07-JUL-2009	16:51	09-2536.sub	CAMO-09-6614	1	882732	USE
☐	N	/chem/MSD2.i/s070709.b/s2g0709.d	232754003	07-JUL-2009	17:12	09-2536.sub	CAMO-09-6613	1	882732	USE

QC Sample

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	batchid	comment
☐	Y	/chem/MSD2.i/s070709.b/s2g0705.d	1201874895	mb	07-JUL-2009	15:51	09-2536.sub	SBLK01	1.00000	882732	
☐	Y	/chem/MSD2.i/s070709.b/s2g0706.d	1201874896	lcs	07-JUL-2009	16:11	09-2536.sub	SBLK01LCS	1.00000	882732	

Sample Data Summary

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754003	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.7
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6613	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 17:12	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.03 g	**Final Volume:**	1 mL
Data File:	s2g0709.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	369	ug/kg	73.8	369
108-95-2	Phenol	U	369	ug/kg	73.8	369
95-57-8	2-Chlorophenol	U	369	ug/kg	73.8	369
106-46-7	1,4-Dichlorobenzene	U	369	ug/kg	73.8	369
621-64-7	N-Nitrosodipropylamine	U	369	ug/kg	73.8	369
59-50-7	4-Chloro-3-methylphenol	U	369	ug/kg	73.8	369
83-32-9	Acenaphthene	U	36.9	ug/kg	12.2	36.9
121-14-2	2,4-Dinitrotoluene	U	369	ug/kg	36.9	369
100-02-7	4-Nitrophenol	U	369	ug/kg	122	369
87-86-5	Pentachlorophenol	U	369	ug/kg	92.2	369
129-00-0	Pyrene	U	36.9	ug/kg	11.1	36.9
110-86-1	Pyridine	U	369	ug/kg	73.8	369
62-53-3	Aniline	U	369	ug/kg	111	369
111-44-4	bis(2-Chloroethyl) ether	U	369	ug/kg	73.8	369
541-73-1	1,3-Dichlorobenzene	U	369	ug/kg	73.8	369
100-51-6	Benzyl alcohol	U	369	ug/kg	111	369
95-50-1	1,2-Dichlorobenzene	U	369	ug/kg	73.8	369
108-60-1	bis(2-Chloroisopropyl)ether	U	369	ug/kg	73.8	369
95-48-7	o-Cresol	U	369	ug/kg	73.8	369
65794-96-9	m,p-Cresols	U	369	ug/kg	111	369
67-72-1	Hexachloroethane	U	369	ug/kg	73.8	369
98-95-3	Nitrobenzene	U	369	ug/kg	73.8	369
78-59-1	Isophorone	U	369	ug/kg	73.8	369
88-75-5	2-Nitrophenol	U	369	ug/kg	73.8	369
105-67-9	2,4-Dimethylphenol	U	369	ug/kg	129	369
111-91-1	bis(2-Chloroethoxy)methane	U	369	ug/kg	73.8	369
120-83-2	2,4-Dichlorophenol	U	369	ug/kg	73.8	369
65-85-0	Benzoic acid	U	738	ug/kg	184	738
91-20-3	Naphthalene	U	36.9	ug/kg	11.1	36.9
106-47-8	4-Chloroaniline	U	369	ug/kg	73.8	369
87-68-3	Hexachlorobutadiene	U	369	ug/kg	73.8	369
91-57-6	2-Methylnaphthalene	U	36.9	ug/kg	7.38	36.9
77-47-4	Hexachlorocyclopentadiene	U	369	ug/kg	73.8	369
88-06-2	2,4,6-Trichlorophenol	U	369	ug/kg	73.8	369
95-95-4	2,4,5-Trichlorophenol	U	369	ug/kg	73.8	369
91-58-7	2-Chloronaphthalene	U	36.9	ug/kg	12.2	36.9
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	369	ug/kg	73.8	369
99-09-2	3-Nitroaniline	U	369	ug/kg	73.8	369

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	Date Collected:	06/30/2009 12:00	Matrix:	R
Lab Sample ID:	232754003	Date Received:	07/02/2009 08:40	%Moisture:	9.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6613	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882732	Inst:	MSD2.I	Dilution:	1
Run Date:	07/07/2009 17:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	07/07/2009 09:20	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s2g0709.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	369	ug/kg	73.8	369
606-20-2	2,6-Dinitrotoluene	U	369	ug/kg	36.9	369
208-96-8	Acenaphthylene	U	36.9	ug/kg	11.1	36.9
51-28-5	2,4-Dinitrophenol	U	738	ug/kg	140	738
132-64-9	Dibenzofuran	U	369	ug/kg	73.8	369
84-66-2	Diethylphthalate	U	369	ug/kg	73.8	369
86-73-7	Fluorene	U	36.9	ug/kg	11.1	36.9
7005-72-3	4-Chlorophenylphenylether	U	369	ug/kg	73.8	369
534-52-1	2-Methyl-4,6-dinitrophenol	U	369	ug/kg	73.8	369
100-01-6	4-Nitroaniline	U	369	ug/kg	111	369
	p-Nitroaniline					
122-39-4	Diphenylamine	U	369	ug/kg	73.8	369
122-66-7	Azobenzene	U	369	ug/kg	73.8	369
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	369	ug/kg	73.8	369
118-74-1	Hexachlorobenzene	U	369	ug/kg	73.8	369
85-01-8	Phenanthrene	U	36.9	ug/kg	11.1	36.9
120-12-7	Anthracene	U	36.9	ug/kg	7.38	36.9
84-74-2	Di-n-butylphthalate	U	369	ug/kg	73.8	369
206-44-0	Fluoranthene	U	36.9	ug/kg	11.1	36.9
85-68-7	Butylbenzylphthalate	U	369	ug/kg	73.8	369
56-55-3	Benzo(a)anthracene	U	36.9	ug/kg	11.1	36.9
91-94-1	3,3'-Dichlorobenzidine	U	369	ug/kg	111	369
218-01-9	Chrysene	U	36.9	ug/kg	11.1	36.9
117-81-7	bis(2-Ethylhexyl)phthalate	U	369	ug/kg	73.8	369
117-84-0	Di-n-octylphthalate	U	369	ug/kg	73.8	369
205-99-2	Benzo(b)fluoranthene	U	36.9	ug/kg	11.1	36.9
207-08-9	Benzo(k)fluoranthene	U	36.9	ug/kg	11.1	36.9
50-32-8	Benzo(a)pyrene	U	36.9	ug/kg	11.1	36.9
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.9	ug/kg	11.1	36.9
53-70-3	Dibenzo(a,h)anthracene	U	36.9	ug/kg	11.1	36.9
191-24-2	Benzo(ghi)perylene	U	36.9	ug/kg	11.1	36.9
120-82-1	1,2,4-Trichlorobenzene	U	369	ug/kg	73.8	369

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.14	243	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.98	172	ug/kg	99	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6614	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 16:51	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.09 g	**Final Volume:**	1 mL
Data File:	s2g0708.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	368	ug/kg	73.7	368
108-95-2	Phenol	U	368	ug/kg	73.7	368
95-57-8	2-Chlorophenol	U	368	ug/kg	73.7	368
106-46-7	1,4-Dichlorobenzene	U	368	ug/kg	73.7	368
621-64-7	N-Nitrosodipropylamine	U	368	ug/kg	73.7	368
59-50-7	4-Chloro-3-methylphenol	U	368	ug/kg	73.7	368
83-32-9	Acenaphthene	U	36.8	ug/kg	12.2	36.8
121-14-2	2,4-Dinitrotoluene	U	368	ug/kg	36.8	368
100-02-7	4-Nitrophenol	U	368	ug/kg	122	368
87-86-5	Pentachlorophenol	U	368	ug/kg	92.1	368
129-00-0	Pyrene	U	36.8	ug/kg	11.1	36.8
110-86-1	Pyridine	U	368	ug/kg	73.7	368
62-53-3	Aniline	U	368	ug/kg	111	368
111-44-4	bis(2-Chloroethyl) ether	U	368	ug/kg	73.7	368
541-73-1	1,3-Dichlorobenzene	U	368	ug/kg	73.7	368
100-51-6	Benzyl alcohol	U	368	ug/kg	111	368
95-50-1	1,2-Dichlorobenzene	U	368	ug/kg	73.7	368
108-60-1	bis(2-Chloroisopropyl)ether	U	368	ug/kg	73.7	368
95-48-7	o-Cresol	U	368	ug/kg	73.7	368
65794-96-9	m,p-Cresols	U	368	ug/kg	111	368
67-72-1	Hexachloroethane	U	368	ug/kg	73.7	368
98-95-3	Nitrobenzene	U	368	ug/kg	73.7	368
78-59-1	Isophorone	U	368	ug/kg	73.7	368
88-75-5	2-Nitrophenol	U	368	ug/kg	73.7	368
105-67-9	2,4-Dimethylphenol	U	368	ug/kg	129	368
111-91-1	bis(2-Chloroethoxy)methane	U	368	ug/kg	73.7	368
120-83-2	2,4-Dichlorophenol	U	368	ug/kg	73.7	368
65-85-0	Benzoic acid	U	737	ug/kg	184	737
91-20-3	Naphthalene	U	36.8	ug/kg	11.1	36.8
106-47-8	4-Chloroaniline	U	368	ug/kg	73.7	368
87-68-3	Hexachlorobutadiene	U	368	ug/kg	73.7	368
91-57-6	2-Methylnaphthalene	U	36.8	ug/kg	7.37	36.8
77-47-4	Hexachlorocyclopentadiene	U	368	ug/kg	73.7	368
88-06-2	2,4,6-Trichlorophenol	U	368	ug/kg	73.7	368
95-95-4	2,4,5-Trichlorophenol	U	368	ug/kg	73.7	368
91-58-7	2-Chloronaphthalene	U	36.8	ug/kg	12.2	36.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	368	ug/kg	73.7	368
99-09-2	3-Nitroaniline	U	368	ug/kg	73.7	368

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6614	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 16:51	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.09 g	**Final Volume:**	1 mL
Data File:	s2g0708.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	368	ug/kg	73.7	368
606-20-2	2,6-Dinitrotoluene	U	368	ug/kg	36.8	368
208-96-8	Acenaphthylene	U	36.8	ug/kg	11.1	36.8
51-28-5	2,4-Dinitrophenol	U	737	ug/kg	140	737
132-64-9	Dibenzofuran	U	368	ug/kg	73.7	368
84-66-2	Diethylphthalate	U	368	ug/kg	73.7	368
86-73-7	Fluorene	U	36.8	ug/kg	11.1	36.8
7005-72-3	4-Chlorophenylphenylether	U	368	ug/kg	73.7	368
534-52-1	2-Methyl-4,6-dinitrophenol	U	368	ug/kg	73.7	368
100-01-6	4-Nitroaniline	U	368	ug/kg	111	368
	p-Nitroaniline					
122-39-4	Diphenylamine	U	368	ug/kg	73.7	368
122-66-7	Azobenzene	U	368	ug/kg	73.7	368
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	368	ug/kg	73.7	368
118-74-1	Hexachlorobenzene	U	368	ug/kg	73.7	368
85-01-8	Phenanthrene	U	36.8	ug/kg	11.1	36.8
120-12-7	Anthracene	U	36.8	ug/kg	7.37	36.8
84-74-2	Di-n-butylphthalate	U	368	ug/kg	73.7	368
206-44-0	Fluoranthene	U	36.8	ug/kg	11.1	36.8
85-68-7	Butylbenzylphthalate	U	368	ug/kg	73.7	368
56-55-3	Benzo(a)anthracene	U	36.8	ug/kg	11.1	36.8
91-94-1	3,3'-Dichlorobenzidine	U	368	ug/kg	111	368
218-01-9	Chrysene	U	36.8	ug/kg	11.1	36.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	368	ug/kg	73.7	368
117-84-0	Di-n-octylphthalate	U	368	ug/kg	73.7	368
205-99-2	Benzo(b)fluoranthene	U	36.8	ug/kg	11.1	36.8
207-08-9	Benzo(k)fluoranthene	U	36.8	ug/kg	11.1	36.8
50-32-8	Benzo(a)pyrene	U	36.8	ug/kg	11.1	36.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.8	ug/kg	11.1	36.8
53-70-3	Dibenzo(a,h)anthracene	U	36.8	ug/kg	11.1	36.8
191-24-2	Benzo(ghi)perylene	U	36.8	ug/kg	11.1	36.8
120-82-1	1,2,4-Trichlorobenzene	U	368	ug/kg	73.7	368

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.14	416	ug/kg		JA
511-15-9	2-Phenanthrenol, 4b,5,6,7,8,8a,9,10-octa	8.45	168	ug/kg	91	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6614	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 16:51	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.09 g	**Final Volume:**	1 mL
Data File:	s2g0708.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.69	379	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	Date Collected:	06/30/2009 12:00	Matrix:	R
Lab Sample ID:	232754001	Date Received:	07/02/2009 08:40	%Moisture:	7.2
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6615	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882732	Inst:	MSD2.I	Dilution:	1
Run Date:	07/07/2009 16:31	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	07/07/2009 09:20	Aliquot:	30.02 g	Final Volume:	1 mL
Data File:	s2g0707.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	359	ug/kg	71.8	359
108-95-2	Phenol	U	359	ug/kg	71.8	359
95-57-8	2-Chlorophenol	U	359	ug/kg	71.8	359
106-46-7	1,4-Dichlorobenzene	U	359	ug/kg	71.8	359
621-64-7	N-Nitrosodipropylamine	U	359	ug/kg	71.8	359
59-50-7	4-Chloro-3-methylphenol	U	359	ug/kg	71.8	359
83-32-9	Acenaphthene	U	35.9	ug/kg	11.8	35.9
121-14-2	2,4-Dinitrotoluene	U	359	ug/kg	35.9	359
100-02-7	4-Nitrophenol	U	359	ug/kg	118	359
87-86-5	Pentachlorophenol	U	359	ug/kg	89.8	359
129-00-0	Pyrene	U	35.9	ug/kg	10.8	35.9
110-86-1	Pyridine	U	359	ug/kg	71.8	359
62-53-3	Aniline	U	359	ug/kg	108	359
111-44-4	bis(2-Chloroethyl) ether	U	359	ug/kg	71.8	359
541-73-1	1,3-Dichlorobenzene	U	359	ug/kg	71.8	359
100-51-6	Benzyl alcohol	U	359	ug/kg	108	359
95-50-1	1,2-Dichlorobenzene	U	359	ug/kg	71.8	359
108-60-1	bis(2-Chloroisopropyl)ether	U	359	ug/kg	71.8	359
95-48-7	o-Cresol	U	359	ug/kg	71.8	359
65794-96-9	m,p-Cresols	U	359	ug/kg	108	359
67-72-1	Hexachloroethane	U	359	ug/kg	71.8	359
98-95-3	Nitrobenzene	U	359	ug/kg	71.8	359
78-59-1	Isophorone	U	359	ug/kg	71.8	359
88-75-5	2-Nitrophenol	U	359	ug/kg	71.8	359
105-67-9	2,4-Dimethylphenol	U	359	ug/kg	126	359
111-91-1	bis(2-Chloroethoxy)methane	U	359	ug/kg	71.8	359
120-83-2	2,4-Dichlorophenol	U	359	ug/kg	71.8	359
65-85-0	Benzoic acid	U	718	ug/kg	180	718
91-20-3	Naphthalene	U	35.9	ug/kg	10.8	35.9
106-47-8	4-Chloroaniline	U	359	ug/kg	71.8	359
87-68-3	Hexachlorobutadiene	U	359	ug/kg	71.8	359
91-57-6	2-Methylnaphthalene	U	35.9	ug/kg	7.18	35.9
77-47-4	Hexachlorocyclopentadiene	U	359	ug/kg	71.8	359
88-06-2	2,4,6-Trichlorophenol	U	359	ug/kg	71.8	359
95-95-4	2,4,5-Trichlorophenol	U	359	ug/kg	71.8	359
91-58-7	2-Chloronaphthalene	U	35.9	ug/kg	11.8	35.9
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	359	ug/kg	71.8	359
99-09-2	3-Nitroaniline	U	359	ug/kg	71.8	359

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754001	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6615	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 16:31	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2g0707.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	359	ug/kg	71.8	359
606-20-2	2,6-Dinitrotoluene	U	359	ug/kg	35.9	359
208-96-8	Acenaphthylene	U	35.9	ug/kg	10.8	35.9
51-28-5	2,4-Dinitrophenol	U	718	ug/kg	136	718
132-64-9	Dibenzofuran	U	359	ug/kg	71.8	359
84-66-2	Diethylphthalate	U	359	ug/kg	71.8	359
86-73-7	Fluorene	U	35.9	ug/kg	10.8	35.9
7005-72-3	4-Chlorophenylphenylether	U	359	ug/kg	71.8	359
534-52-1	2-Methyl-4,6-dinitrophenol	U	359	ug/kg	71.8	359
100-01-6	4-Nitroaniline	U	359	ug/kg	108	359
	p-Nitroaniline					
122-39-4	Diphenylamine	U	359	ug/kg	71.8	359
122-66-7	Azobenzene	U	359	ug/kg	71.8	359
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	359	ug/kg	71.8	359
118-74-1	Hexachlorobenzene	U	359	ug/kg	71.8	359
85-01-8	Phenanthrene	U	35.9	ug/kg	10.8	35.9
120-12-7	Anthracene	U	35.9	ug/kg	7.18	35.9
84-74-2	Di-n-butylphthalate	U	359	ug/kg	71.8	359
206-44-0	Fluoranthene	U	35.9	ug/kg	10.8	35.9
85-68-7	Butylbenzylphthalate	U	359	ug/kg	71.8	359
56-55-3	Benzo(a)anthracene	U	35.9	ug/kg	10.8	35.9
91-94-1	3,3'-Dichlorobenzidine	U	359	ug/kg	108	359
218-01-9	Chrysene	U	35.9	ug/kg	10.8	35.9
117-81-7	bis(2-Ethylhexyl)phthalate	U	359	ug/kg	71.8	359
117-84-0	Di-n-octylphthalate	U	359	ug/kg	71.8	359
205-99-2	Benzo(b)fluoranthene	U	35.9	ug/kg	10.8	35.9
207-08-9	Benzo(k)fluoranthene	U	35.9	ug/kg	10.8	35.9
50-32-8	Benzo(a)pyrene	U	35.9	ug/kg	10.8	35.9
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.9	ug/kg	10.8	35.9
53-70-3	Dibenzo(a,h)anthracene	U	35.9	ug/kg	10.8	35.9
191-24-2	Benzo(ghi)perylene	U	35.9	ug/kg	10.8	35.9
120-82-1	1,2,4-Trichlorobenzene	U	359	ug/kg	71.8	359

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.14	420	ug/kg		JA

QC Summary

Semi-Volatile

Surrogate Recovery Report

SDG Number: 09-2536

Matrix Type: SOLID

CAP Column (1) : J&W DB-5MS

Sample ID	Client ID	2FP %REC	PHL %REC	NBZ %REC	FBP %REC	TBP %REC	TPH %REC
1201874895	MB for batch 882731	67	68	75	76	72	108
1201874896	LCS for batch 882731	69	70	76	80	89	97
232754001	CAMO-09-6615	67	70	71	70	88	100
232754002	CAMO-09-6614	64	67	68	65	82	97
232754003	CAMO-09-6613	51	53	54	55	70	81

Surrogate		Acceptance Limits
2FP	= 2-Fluorophenol	(35%-96%)
PHL	= Phenol-d5	(36%-96%)
NBZ	= Nitrobenzene-d5	(34%-104%)
FBP	= 2-Fluorobiphenyl	(36%-100%)
TBP	= 2,4,6-Tribromophenol	(37%-106%)
TPH	= p-Terphenyl-d14	(40%-124%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882731 **Matrix:** SOIL

Lab Sample ID: 1201874896

Instrument: MSD2.I **Analysis Date:** 07/07/2009 16:11 **Dilution:** 1

Analyst: AGS1 **Prep Batch ID** 882731

Inj. Vol: .5 uL **Batch ID:** 882732

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	LCS	N-Methyl-N-nitrosomethylam	1670	0.0	1180	71	31-95
108-95-2	LCS	Phenol	1670	0.0	1200	72	37-104
95-57-8	LCS	2-Chlorophenol	1670	0.0	1260	76	40-105
106-46-7	LCS	1,4-Dichlorobenzene	1670	0.0	1190	72	34-103
621-64-7	LCS	N-Nitrosodipropylamine	1670	0.0	1240	74	36-110
59-50-7	LCS	4-Chloro-3-methylphenol	1670	0.0	1440	87	46-114
83-32-9	LCS	Acenaphthene	1670	0.0	1270	76	40-105
121-14-2	LCS	2,4-Dinitrotoluene	1670	0.0	1440	87	49-107
100-02-7	LCS	4-Nitrophenol	1670	0.0	1410	85	33-110
87-86-5	LCS	Pentachlorophenol	1670	0.0	1510	91	38-116
129-00-0	LCS	Pyrene	1670	0.0	1480	89	43-108
110-86-1	LCS	Pyridine	1670	0.0	1200	72	13-129
62-53-3	LCS	Aniline	1670	0.0	1290	77	30-121
111-44-4	LCS	bis(2-Chloroethyl) ether	1670	0.0	1160	70	37-106
541-73-1	LCS	1,3-Dichlorobenzene	1670	0.0	1190	71	33-103
100-51-6	LCS	Benzyl alcohol	1670	0.0	909	55	31-100
95-50-1	LCS	1,2-Dichlorobenzene	1670	0.0	1260	75	34-108
108-60-1	LCS	bis(2-Chloroisopropyl)ether	1670	0.0	1230	74	34-120
95-48-7	LCS	o-Cresol	1670	0.0	1270	76	39-111
65794-96-9	LCS	m,p-Cresols	1670	0.0	1430	86	43-118
67-72-1	LCS	Hexachloroethane	1670	0.0	1190	72	34-105
98-95-3	LCS	Nitrobenzene	1670	0.0	1290	77	37-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536 **Sample Type:** Laboratory Control Sample
Client ID: LCS for batch 882731 **Matrix:** SOIL
Lab Sample ID: 1201874896
Instrument: MSD2.I **Analysis Date:** 07/07/2009 16:11 **Dilution:** 1
Analyst: AGS1 **Prep Batch ID:** 882731
Inj. Vol: .5 uL **Batch ID:** 882732

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	LCS	Isophorone	1670	0.0	1300	78	41-108
88-75-5	LCS	2-Nitrophenol	1670	0.0	1310	78	35-112
105-67-9	LCS	2,4-Dimethylphenol	1670	0.0	1400	84	35-114
111-91-1	LCS	bis(2-Chloroethoxy)methane	1670	0.0	1290	77	40-109
120-83-2	LCS	2,4-Dichlorophenol	1670	0.0	1350	81	45-109
65-85-0	LCS	Benzoic acid	1670	0.0	1510	90	27-137
91-20-3	LCS	Naphthalene	1670	0.0	1140	69	35-105
106-47-8	LCS	4-Chloroaniline	1670	0.0	1340	80	30-122
87-68-3	LCS	Hexachlorobutadiene	1670	0.0	1360	82	37-111
91-57-6	LCS	2-Methylnaphthalene	1670	0.0	1340	80	40-106
77-47-4	LCS	Hexachlorocyclopentadiene	1670	0.0	1980	119	24-135
88-06-2	LCS	2,4,6-Trichlorophenol	1670	0.0	1410	85	46-107
95-95-4	LCS	2,4,5-Trichlorophenol	1670	0.0	1440	87	44-110
91-58-7	LCS	2-Chloronaphthalene	1670	0.0	1360	82	44-104
88-74-4	LCS	2-Nitroaniline *o-Nitroaniline*	1670	0.0	1420	85	44-113
99-09-2	LCS	3-Nitroaniline *m-Nitroaniline*	1670	0.0	1470	88	48-113
131-11-3	LCS	Dimethylphthalate	1670	0.0	1370	82	47-104
606-20-2	LCS	2,6-Dinitrotoluene	1670	0.0	1390	83	47-103
208-96-8	LCS	Acenaphthylene	1670	0.0	1390	83	43-104
51-28-5	LCS	2,4-Dinitrophenol	1670	0.0	1520	91	32-114
132-64-9	LCS	Dibenzofuran	1670	0.0	1420	85	47-112
84-66-2	LCS	Diethylphthalate	1670	0.0	1420	85	50-108

Semi-Volatile

Quality Control Summary

Spike Recovery Report

SDG Number: 09-2536

Sample Type: Laboratory Control Sample

Client ID: LCS for batch 882731

Matrix: SOIL

Lab Sample ID: 1201874896

Instrument: MSD2.I

Analysis Date: 07/07/2009 16:11

Dilution: 1

Analyst: AGS1

Prep Batch ID: 882731

Inj. Vol: .5 uL

Batch ID: 882732

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	LCS	Fluorene	1670	0.0	1320	79	49-102
7005-72-3	LCS	4-Chlorophenylphenylether	1670	0.0	1410	85	50-109
534-52-1	LCS	2-Methyl-4,6-dinitrophenol	1670	0.0	1550	93	35-114
100-01-6	LCS	4-Nitroaniline *p-Nitroaniline*	1670	0.0	1670	100	44-139
122-39-4	LCS	Diphenylamine	1670	0.0	1480	89	46-111
122-66-7	LCS	Azobenzene *1,2-Diphenylhydrazine*	1670	0.0	1420	85	40-119
101-55-3	LCS	4-Bromophenylphenylether	1670	0.0	1480	89	45-112
118-74-1	LCS	Hexachlorobenzene	1670	0.0	1490	90	44-115
85-01-8	LCS	Phenanthrene	1670	0.0	1390	83	45-107
120-12-7	LCS	Anthracene	1670	0.0	1470	88	46-106
84-74-2	LCS	Di-n-butylphthalate	1670	0.0	1500	90	52-115
206-44-0	LCS	Fluoranthene	1670	0.0	1570	94	50-115
85-68-7	LCS	Butylbenzylphthalate	1670	0.0	1650	99	49-115
56-55-3	LCS	Benzo(a)anthracene	1670	0.0	1460	88	48-105
91-94-1	LCS	3,3'-Dichlorobenzidine	1670	0.0	1500	90	45-98
218-01-9	LCS	Chrysene	1670	0.0	1510	91	48-105
117-81-7	LCS	bis(2-Ethylhexyl)phthalate	1670	0.0	1520	91	50-117
117-84-0	LCS	Di-n-octylphthalate	1670	0.0	1620	97	39-123
205-99-2	LCS	Benzo(b)fluoranthene	1670	0.0	1730	104	46-111
207-08-9	LCS	Benzo(k)fluoranthene	1670	0.0	1530	92	46-114
50-32-8	LCS	Benzo(a)pyrene	1670	0.0	1590	96	49-112
193-39-5	LCS	Indeno(1,2,3-cd)pyrene	1670	0.0	1460	88	45-128

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 882731 **Matrix:** SOIL

Lab Sample ID: 1201874896

Instrument: MSD2.1 **Analysis Date:** 07/07/2009 16:11 **Dilution:** 1

Analyst: AGS1 **Prep Batch ID:** 882731

Inj. Vol: .5 uL **Batch ID:** 882732

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	LCS	Dibenzo(a,h)anthracene	1670	0.0	1420	85	44-131
191-24-2	LCS	Benzo(ghi)perylene	1670	0.0	1470	88	42-128
120-82-1	LCS	1,2,4-Trichlorobenzene	1670	0.0	1290	78	36-109

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-7145MS
Lab Sample ID: 1201874897
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 14
Analysis Date: 07/07/2009 19:13
Prep Batch II 882731
Batch ID: 882732

Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
62-75-9	MS	N-Methyl-N-nitrosomethylam	1930	0.00	U	1310	68	32-90
108-95-2	MS	Phenol	1930	0.00	U	1340	70	32-105
95-57-8	MS	2-Chlorophenol	1930	0.00	U	1410	73	33-106
106-46-7	MS	1,4-Dichlorobenzene	1930	0.00	U	1230	64	33-95
621-64-7	MS	N-Nitrosodipropylamine	1930	0.00	U	1390	72	31-109
59-50-7	MS	4-Chloro-3-methylphenol	1930	0.00	U	1580	82	38-119
83-32-9	MS	Acenaphthene	1930	0.00	U	1350	70	39-100
121-14-2	MS	2,4-Dinitrotoluene	1930	0.00	U	1510	78	42-107
100-02-7	MS	4-Nitrophenol	1930	0.00	U	1550	81	24-120
87-86-5	MS	Pentachlorophenol	1930	0.00	U	1560	81	26-121
129-00-0	MS	Pyrene	1930	28.8	J	1710	87	34-120
110-86-1	MS	Pyridine	1930	0.00	U	1280	66	30-95
62-53-3	MS	Aniline	1930	0.00	U	1490	77	34-111
111-44-4	MS	bis(2-Chloroethyl) ether	1930	0.00	U	1300	67	34-101
541-73-1	MS	1,3-Dichlorobenzene	1930	0.00	U	1220	63	31-97
100-51-6	MS	Benzyl alcohol	1930	0.00	U	770	40	17-120
95-50-1	MS	1,2-Dichlorobenzene	1930	0.00	U	1320	69	32-102
108-60-1	MS	bis(2-Chloroisopropyl)ether	1930	0.00	U	1390	72	32-113
95-48-7	MS	o-Cresol	1930	0.00	U	1640	85	31-119
65794-96-9	MS	m,p-Cresols	1930	0.00	U	1670	87	35-125
67-72-1	MS	Hexachloroethane	1930	0.00	U	1220	63	30-100
98-95-3	MS	Nitrobenzene	1930	0.00	U	1410	73	33-108

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-7145MS
Lab Sample ID: 1201874897
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 14
Analysis Date: 07/07/2009 19:13
Prep Batch ID: 882731
Batch ID: 882732
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
78-59-1	MS	Isophorone	1930	0.00	U	1450	75	34-110
88-75-5	MS	2-Nitrophenol	1930	0.00	U	1400	73	32-108
105-67-9	MS	2,4-Dimethylphenol	1930	0.00	U	1430	74	32-115
111-91-1	MS	bis(2-Chloroethoxy)methane	1930	0.00	U	1420	74	35-108
120-83-2	MS	2,4-Dichlorophenol	1930	0.00	U	1490	78	38-110
65-85-0	MS	Benzoic acid	1930	0.00	U	1110	58	18-134
91-20-3	MS	Naphthalene	1930	0.00	U	1240	64	31-105
106-47-8	MS	4-Chloroaniline	1930	0.00	U	1540	80	29-123
87-68-3	MS	Hexachlorobutadiene	1930	0.00	U	1390	72	31-109
91-57-6	MS	2-Methylnaphthalene	1930	0.00	U	1450	75	32-110
77-47-4	MS	Hexachlorocyclopentadiene	1930	0.00	U	1620	84	21-122
88-06-2	MS	2,4,6-Trichlorophenol	1930	0.00	U	1630	85	37-108
95-95-4	MS	2,4,5-Trichlorophenol	1930	0.00	U	1520	79	37-116
91-58-7	MS	2-Chloronaphthalene	1930	0.00	U	1500	78	37-103
88-74-4	MS	2-Nitroaniline *o-Nitroaniline*	1930	0.00	U	1560	81	36-115
99-09-2	MS	3-Nitroaniline *m-Nitroaniline*	1930	0.00	U	1650	86	39-117
131-11-3	MS	Dimethylphthalate	1930	0.00	U	1480	77	41-105
606-20-2	MS	2,6-Dinitrotoluene	1930	0.00	U	1480	77	41-103
208-96-8	MS	Acenaphthylene	1930	0.00	U	1510	78	41-103
51-28-5	MS	2,4-Dinitrophenol	1930	0.00	U	1150	60	25-104
132-64-9	MS	Dibenzofuran	1930	0.00	U	1530	79	40-114
84-66-2	MS	Diethylphthalate	1930	0.00	U	1520	79	43-110

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-7145MS
Lab Sample ID: 1201874897
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 14
Analysis Date: 07/07/2009 19:13
Prep Batch ID: 882731
Batch ID: 882732
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
86-73-7	MS	Fluorene	1930	0.00	U	1420	73	48-99
7005-72-3	MS	4-Chlorophenylphenylether	1930	0.00	U	1500	78	42-111
534-52-1	MS	2-Methyl-4,6-dinitrophenol	1930	0.00	U	1130	59	19-118
100-01-6	MS	4-Nitroaniline *p-Nitroaniline*	1930	0.00	U	1750	91	35-139
122-39-4	MS	Diphenylamine	1930	0.00	U	1630	85	41-112
122-66-7	MS	Azobenzene *1,2-Diphenylhydrazine*	1930	0.00	U	1580	82	37-118
101-55-3	MS	4-Bromophenylphenylether	1930	0.00	U	1560	81	39-112
118-74-1	MS	Hexachlorobenzene	1930	0.00	U	1510	79	38-113
85-01-8	MS	Phenanthrene	1930	22.3	J	1510	77	38-110
120-12-7	MS	Anthracene	1930	13.6	J	1560	80	38-112
84-74-2	MS	Di-n-butylphthalate	1930	0.00	U	1600	83	42-119
206-44-0	MS	Fluoranthene	1930	28.4	J	1600	81	38-119
85-68-7	MS	Butylbenzylphthalate	1930	0.00	U	1920	99	39-126
56-55-3	MS	Benzo(a)anthracene	1930	0.00	U	1560	81	39-110
91-94-1	MS	3,3'-Dichlorobenzidine	1930	0.00	U	1700	88	35-106
218-01-9	MS	Chrysene	1930	0.00	U	1520	79	39-109
117-81-7	MS	bis(2-Ethylhexyl)phthalate	1930	0.00	U	1700	88	40-125
117-84-0	MS	Di-n-octylphthalate	1930	0.00	U	2100	109	30-147
205-99-2	MS	Benzo(b)fluoranthene	1930	19.2	J	1860	95	38-117
207-08-9	MS	Benzo(k)fluoranthene	1930	0.00	U	1750	91	39-120
50-32-8	MS	Benzo(a)pyrene	1930	11.6	J	1680	87	40-115
193-39-5	MS	Indeno(1,2,3-cd)pyrene	1930	0.00	U	1260	65	32-120

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-7145MS
Lab Sample ID: 1201874897
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike
Matrix: R
%Moisture: 14
Analysis Date: 07/07/2009 19:13
Prep Batch ID: 882731
Batch ID: 882732
Dilution: 1

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
53-70-3	MS	Dibenzo(a,h)anthracene	1930	0.00	U	1320	69	32-124
191-24-2	MS	Benzo(ghi)perylene	1930	0.00	U	1050	55	28-119
120-82-1	MS	1,2,4-Trichlorobenzene	1930	0.00	U	1350	70	31-105

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-7145MSD
Lab Sample ID: 1201874898
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 14
Analysis Date: 07/07/2009 19:33
Dilution: 1
Prep Batch ID: 882731
Batch ID: 882732

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
62-75-9	MSD N-Methyl-N-nitrosomethylam	1930	0.00	U	1330	69	32-90	2	0-30
108-95-2	MSD Phenol	1930	0.00	U	1360	71	32-105	2	0-30
95-57-8	MSD 2-Chlorophenol	1930	0.00	U	1430	74	33-106	2	0-30
106-46-7	MSD 1,4-Dichlorobenzene	1930	0.00	U	1250	65	33-95	2	0-30
621-64-7	MSD N-Nitrosodipropylamine	1930	0.00	U	1430	74	31-109	3	0-30
59-50-7	MSD 4-Chloro-3-methylphenol	1930	0.00	U	1670	86	38-119	5	0-30
83-32-9	MSD Acenaphthene	1930	0.00	U	1410	73	39-100	4	0-30
121-14-2	MSD 2,4-Dinitrotoluene	1930	0.00	U	1650	86	42-107	9	0-30
100-02-7	MSD 4-Nitrophenol	1930	0.00	U	1710	88	24-120	10	0-30
87-86-5	MSD Pentachlorophenol	1930	0.00	U	1610	83	26-121	3	0-30
129-00-0	MSD Pyrene	1930	28.8	J	1830	93	34-120	7	0-30
110-86-1	MSD Pyridine	1930	0.00	U	1320	68	30-95	3	0-30
62-53-3	MSD Aniline	1930	0.00	U	1510	78	34-111	1	0-30
111-44-4	MSD bis(2-Chloroethyl) ether	1930	0.00	U	1330	69	34-101	3	0-30
541-73-1	MSD 1,3-Dichlorobenzene	1930	0.00	U	1250	65	31-97	3	0-30
100-51-6	MSD Benzyl alcohol	1930	0.00	U	811	42	17-120	5	0-30
95-50-1	MSD 1,2-Dichlorobenzene	1930	0.00	U	1350	70	32-102	2	0-30
108-60-1	MSD bis(2-Chloroisopropyl)ether	1930	0.00	U	1430	74	32-113	3	0-30
95-48-7	MSD o-Cresol	1930	0.00	U	1490	77	31-119	10	0-30
65794-96-9	MSD m,p-Cresols	1930	0.00	U	1700	88	35-125	2	0-30
67-72-1	MSD Hexachloroethane	1930	0.00	U	1270	66	30-100	3	0-30
98-95-3	MSD Nitrobenzene	1930	0.00	U	1470	76	33-108	4	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-7145MSD
Lab Sample ID: 1201874898
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 14
Analysis Date: 07/07/2009 19:33
Dilution: 1
Prep Batch ID: 882731
Batch ID: 882732

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
78-59-1	MSD	Isophorone	1930	0.00	U	1500	78	34-110	3	0-30
88-75-5	MSD	2-Nitrophenol	1930	0.00	U	1470	76	32-108	5	0-30
105-67-9	MSD	2,4-Dimethylphenol	1930	0.00	U	1530	79	32-115	7	0-30
111-91-1	MSD	bis(2-Chloroethoxy)methane	1930	0.00	U	1470	76	35-108	3	0-30
120-83-2	MSD	2,4-Dichlorophenol	1930	0.00	U	1570	81	38-110	5	0-30
65-85-0	MSD	Benzoic acid	1930	0.00	U	1270	66	18-134	13	0-30
91-20-3	MSD	Naphthalene	1930	0.00	U	1270	66	31-105	3	0-30
106-47-8	MSD	4-Chloroaniline	1930	0.00	U	1620	84	29-123	5	0-30
87-68-3	MSD	Hexachlorobutadiene	1930	0.00	U	1450	75	31-109	4	0-30
91-57-6	MSD	2-Methylnaphthalene	1930	0.00	U	1500	78	32-110	4	0-30
77-47-4	MSD	Hexachlorocyclopentadiene	1930	0.00	U	1710	88	21-122	5	0-30
88-06-2	MSD	2,4,6-Trichlorophenol	1930	0.00	U	1690	87	37-108	3	0-30
95-95-4	MSD	2,4,5-Trichlorophenol	1930	0.00	U	1620	84	37-116	6	0-30
91-58-7	MSD	2-Chloronaphthalene	1930	0.00	U	1550	80	37-103	3	0-30
88-74-4	MSD	2-Nitroaniline *o-Nitroaniline*	1930	0.00	U	1690	88	36-115	8	0-30
99-09-2	MSD	3-Nitroaniline *m-Nitroaniline*	1930	0.00	U	1790	93	39-117	8	0-30
131-11-3	MSD	Dimethylphthalate	1930	0.00	U	1550	80	41-105	5	0-30
606-20-2	MSD	2,6-Dinitrotoluene	1930	0.00	U	1560	81	41-103	5	0-30
208-96-8	MSD	Acenaphthylene	1930	0.00	U	1580	82	41-103	5	0-30
51-28-5	MSD	2,4-Dinitrophenol	1930	0.00	U	1230	64	25-104	6	0-30
132-64-9	MSD	Dibenzofuran	1930	0.00	U	1600	83	40-114	5	0-30
84-66-2	MSD	Diethylphthalate	1930	0.00	U	1610	83	43-110	5	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-7145MSD
Lab Sample ID: 1201874898
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 14
Analysis Date: 07/07/2009 19:33
Dilution: 1
Prep Batch ID: 882731
Batch ID: 882732

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
86-73-7	MSD	Fluorene	1930	0.00	U	1480	77	48-99	5	0-30
7005-72-3	MSD	4-Chlorophenylphenylether	1930	0.00	U	1580	82	42-111	5	0-30
534-52-1	MSD	2-Methyl-4,6-dinitrophenol	1930	0.00	U	1200	62	19-118	6	0-30
100-01-6	MSD	4-Nitroaniline *p-Nitroaniline*	1930	0.00	U	1940	100	35-139	11	0-30
122-39-4	MSD	Diphenylamine	1930	0.00	U	1710	89	41-112	5	0-30
122-66-7	MSD	Azobenzene *1,2-Diphenylhydrazine*	1930	0.00	U	1650	86	37-118	5	0-30
101-55-3	MSD	4-Bromophenylphenylether	1930	0.00	U	1640	85	39-112	5	0-30
118-74-1	MSD	Hexachlorobenzene	1930	0.00	U	1580	82	38-113	4	0-30
85-01-8	MSD	Phenanthrene	1930	22.3	J	1560	80	38-110	4	0-30
120-12-7	MSD	Anthracene	1930	13.6	J	1650	85	38-112	5	0-30
84-74-2	MSD	Di-n-butylphthalate	1930	0.00	U	1660	86	42-119	4	0-30
206-44-0	MSD	Fluoranthene	1930	28.4	J	1670	85	38-119	4	0-30
85-68-7	MSD	Butylbenzylphthalate	1930	0.00	U	2020	104	39-126	5	0-30
56-55-3	MSD	Benzo(a)anthracene	1930	0.00	U	1650	86	39-110	6	0-30
91-94-1	MSD	3,3'-Dichlorobenzidine	1930	0.00	U	1840	95	35-106	8	0-30
218-01-9	MSD	Chrysene	1930	0.00	U	1600	83	39-109	6	0-30
117-81-7	MSD	bis(2-Ethylhexyl)phthalate	1930	0.00	U	1790	93	40-125	5	0-30
117-84-0	MSD	Di-n-octylphthalate	1930	0.00	U	2310	120	30-147	10	0-30
205-99-2	MSD	Benzo(b)fluoranthene	1930	19.2	J	1940	99	38-117	4	0-30
207-08-9	MSD	Benzo(k)fluoranthene	1930	0.00	U	1880	97	39-120	7	0-30
50-32-8	MSD	Benzo(a)pyrene	1930	11.6	J	1770	91	40-115	5	0-30
193-39-5	MSD	Indeno(1,2,3-cd)pyrene	1930	0.00	U	1320	69	32-120	5	0-30

Semi-Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 09-2536
Client ID: CAMO-09-7145MSD
Lab Sample ID: 1201874898
Instrument: MSD2.I
Analyst: AGS1
Inj. Vol: .5 uL

Sample Type: Matrix Spike Duplicate
Matrix: R
%Moisture: 14
Analysis Date: 07/07/2009 19:33
Dilution: 1
Prep Batch ID: 882731
Batch ID: 882732

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
53-70-3	MSD	Dibenzo(a,h)anthracene	1930	0.00	U	1390	72	32-124	5	0-30
191-24-2	MSD	Benzo(ghi)perylene	1930	0.00	U	1160	60	28-119	10	0-30
120-82-1	MSD	1,2,4-Trichlorobenzene	1930	0.00	U	1400	73	31-105	4	0-30

Method Blank Summary

SDG Number:	09-2536	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 882731	Instrument ID:	MSD2.I	Data File:	s2g0705-1.d
Lab Sample ID:	1201874895	Prep Date:	07/07/2009 09:20	Analyzed:	07/07/09 15:51
Column:	J&W DB-5MS	Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 882731	1201874896	s2g0706-1.d	07/07/09	1611
02 CAMO-09-6615	232754001	s2g0707.d	07/07/09	1631
03 CAMO-09-6614	232754002	s2g0708.d	07/07/09	1651
04 CAMO-09-6613	232754003	s2g0709.d	07/07/09	1712

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2536

Instrument ID: MSD2.I **Injection Date/Time:** 07-JUL-09 13:51

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD2.i/s070709.b/s2g0701.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	40
68	Less than 2% of mass 69	1.6
69	Mass 69 Relative Abundance	38.6
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	50.6
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	22.7
365	Greater than 1% of mass 198	3.2
441	Present, but less than mass 443	76.4
442	Greater than 40% of mass 198	82.4
443	17 - 23% of mass 442	19.6

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGACVS	WBN090626-05.3	/chem/MSD2.i/s070709.b/s2g070	07-JUL-09 14:03
APCVS	WBN090619-01.2	/chem/MSD2.i/s070709.b/s2g070	07-JUL-09 14:28
SBLK01	1201874895	/chem/MSD2.i/s070709.b/s2g070	07-JUL-09 15:51
SBLK01LCS	1201874896	/chem/MSD2.i/s070709.b/s2g070	07-JUL-09 16:11
CAMO-09-6615	232754001	/chem/MSD2.i/s070709.b/s2g070	07-JUL-09 16:31
CAMO-09-6614	232754002	/chem/MSD2.i/s070709.b/s2g070	07-JUL-09 16:51
CAMO-09-6613	232754003	/chem/MSD2.i/s070709.b/s2g070	07-JUL-09 17:12

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2536

Instrument ID: MSD2.I **Injection Date/Time:** 27-JUN-09 01:45

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD2.i/s062609.b/s2f2614.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	45.4
68	Less than 2% of mass 69	1.7
69	Mass 69 Relative Abundance	42.4
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	52.6
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	21.8
365	Greater than 1% of mass 198	2.9
441	Present, but less than mass 443	77.4
442	Greater than 40% of mass 198	73.5
443	17 - 23% of mass 442	20.4

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
MEGA001	WBN090626-08	/chem/MSD2.i/s062609.b/s2f2616	27-JUN-09 02:16
MEGA010	WBN090626-07	/chem/MSD2.i/s062609.b/s2f2617	27-JUN-09 02:40
MEGA020	WBN090626-06	/chem/MSD2.i/s062609.b/s2f2618	27-JUN-09 03:04
MEGA040	WBN090626-05.1	/chem/MSD2.i/s062609.b/s2f2619	27-JUN-09 03:29
MEGA050	WBN090626-04	/chem/MSD2.i/s062609.b/s2f2620	27-JUN-09 03:53
MEGA080	WBN090626-03	/chem/MSD2.i/s062609.b/s2f2621	27-JUN-09 04:17
MEGA100	WBN090626-02	/chem/MSD2.i/s062609.b/s2f2622	27-JUN-09 04:41
MEGA120	WBN090626-01	/chem/MSD2.i/s062609.b/s2f2623	27-JUN-09 05:05
MEGAICV	WBN090626-09.1	/chem/MSD2.i/s062609.b/s2f2625	27-JUN-09 05:54

Instrument Performance Check

DFTPP

Lab Name GEL Laboratories LLC **Client SDG:** 09-2536

Instrument ID: MSD2.I **Injection Date/Time:** 28-JUN-09 18:00

Column Description: J&W DB-5MS **Lab File ID** /chem/MSD2.i/s062809.b/s2f2801.d

m/e	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% Relative Abundance	100
51	30 - 60% of mass 198	42.6
68	Less than 2% of mass 69	1.8
69	Mass 69 Relative Abundance	40.2
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	51.7
197	0 - 1% of mass 198	0
199	5 - 9% of mass 198	7
275	10 - 30% of mass 198	22.4
365	Greater than 1% of mass 198	2.9
441	Present, but less than mass 443	79.1
442	Greater than 40% of mass 198	77
443	17 - 23% of mass 442	20

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
APICAL	WBN090528-07	/chem/MSD2.i/s062809.b/s2f2803	28-JUN-09 18:31
APICAL	WBN090528-06	/chem/MSD2.i/s062809.b/s2f2804	28-JUN-09 18:51
APICAL	WBN090528-05.1	/chem/MSD2.i/s062809.b/s2f2805	28-JUN-09 19:10
APICAL	WBN090528-04	/chem/MSD2.i/s062809.b/s2f2806	28-JUN-09 19:30
APICAL	WBN090528-03	/chem/MSD2.i/s062809.b/s2f2807	28-JUN-09 19:49
APICAL	WBN090528-02	/chem/MSD2.i/s062809.b/s2f2808	28-JUN-09 20:08
APICAL	WBN090528-01	/chem/MSD2.i/s062809.b/s2f2809	28-JUN-09 20:28
APICV	WBN090528-8.1	/chem/MSD2.i/s062809.b/s2f2823	29-JUN-09 00:59

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Instrument: MSD2.I

GC Column: J&W DB-5MS

Client SDG: 09-2536

STD Analysis Time: 07-JUL-09 14:03

Data File: s2g0702.d

	1,4-Dichlorobenzene-d4			Naphthalene-d8			Acenaphthene-d10			Phenanthrene-d10			Chrysene-d12			Perylene-d12		
	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #	Area	#	RT #
12 Hour STD	220951		4.12	889057		5	457501		6.24	758581		7.22	602823		8.99	508094		10.7
Upper Limit	441902		4.62	1778114		5.5	915002		6.74	1517162		7.72	1205646		9.49	1016188		11.2
Lower Limit	110476		3.62	444529		4.5	228751		5.74	379291		6.72	301412		8.49	254047		10.2
Sample ID																		
BLK01	191624		4.12	705464		4.99	387230		6.24	623030		7.22	463149		8.98	376910		10.7
BLK01LCS	197167		4.12	791623		4.99	410569		6.24	700291		7.22	577713		8.98	466365		10.7
CAMO-09-6615	213777		4.12	800871		4.99	446022		6.24	744176		7.22	592521		8.98	455770		10.7
CAMO-09-6614	209699		4.12	791370		4.99	437559		6.24	710624		7.22	532703		8.98	422554		10.7
CAMO-09-6613	200887		4.12	750535		4.99	413997		6.24	697516		7.22	569508		8.98	447867		10.7

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	Date Collected:	06/30/2009 12:00	Matrix:	R
Lab Sample ID:	232754003	Date Received:	07/02/2009 08:40	%Moisture:	9.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6613	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882732	Inst:	MSD2.I	Dilution:	1
Run Date:	07/07/2009 17:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	07/07/2009 09:20	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s2g0709.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	369	ug/kg	73.8	369
108-95-2	Phenol	U	369	ug/kg	73.8	369
95-57-8	2-Chlorophenol	U	369	ug/kg	73.8	369
106-46-7	1,4-Dichlorobenzene	U	369	ug/kg	73.8	369
621-64-7	N-Nitrosodipropylamine	U	369	ug/kg	73.8	369
59-50-7	4-Chloro-3-methylphenol	U	369	ug/kg	73.8	369
83-32-9	Acenaphthene	U	36.9	ug/kg	12.2	36.9
121-14-2	2,4-Dinitrotoluene	U	369	ug/kg	36.9	369
100-02-7	4-Nitrophenol	U	369	ug/kg	122	369
87-86-5	Pentachlorophenol	U	369	ug/kg	92.2	369
129-00-0	Pyrene	U	36.9	ug/kg	11.1	36.9
110-86-1	Pyridine	U	369	ug/kg	73.8	369
62-53-3	Aniline	U	369	ug/kg	111	369
111-44-4	bis(2-Chloroethyl) ether	U	369	ug/kg	73.8	369
541-73-1	1,3-Dichlorobenzene	U	369	ug/kg	73.8	369
100-51-6	Benzyl alcohol	U	369	ug/kg	111	369
95-50-1	1,2-Dichlorobenzene	U	369	ug/kg	73.8	369
108-60-1	bis(2-Chloroisopropyl)ether	U	369	ug/kg	73.8	369
95-48-7	o-Cresol	U	369	ug/kg	73.8	369
65794-96-9	m,p-Cresols	U	369	ug/kg	111	369
67-72-1	Hexachloroethane	U	369	ug/kg	73.8	369
98-95-3	Nitrobenzene	U	369	ug/kg	73.8	369
78-59-1	Isophorone	U	369	ug/kg	73.8	369
88-75-5	2-Nitrophenol	U	369	ug/kg	73.8	369
105-67-9	2,4-Dimethylphenol	U	369	ug/kg	129	369
111-91-1	bis(2-Chloroethoxy)methane	U	369	ug/kg	73.8	369
120-83-2	2,4-Dichlorophenol	U	369	ug/kg	73.8	369
65-85-0	Benzoic acid	U	738	ug/kg	184	738
91-20-3	Naphthalene	U	36.9	ug/kg	11.1	36.9
106-47-8	4-Chloroaniline	U	369	ug/kg	73.8	369
87-68-3	Hexachlorobutadiene	U	369	ug/kg	73.8	369
91-57-6	2-Methylnaphthalene	U	36.9	ug/kg	7.38	36.9
77-47-4	Hexachlorocyclopentadiene	U	369	ug/kg	73.8	369
88-06-2	2,4,6-Trichlorophenol	U	369	ug/kg	73.8	369
95-95-4	2,4,5-Trichlorophenol	U	369	ug/kg	73.8	369
91-58-7	2-Chloronaphthalene	U	36.9	ug/kg	12.2	36.9
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	369	ug/kg	73.8	369
99-09-2	3-Nitroaniline	U	369	ug/kg	73.8	369

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	Date Collected:	06/30/2009 12:00	Matrix:	R
Lab Sample ID:	232754003	Date Received:	07/02/2009 08:40	%Moisture:	9.7
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6613	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882732	Inst:	MSD2.I	Dilution:	1
Run Date:	07/07/2009 17:12	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	07/07/2009 09:20	Aliquot:	30.03 g	Final Volume:	1 mL
Data File:	s2g0709.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	369	ug/kg	73.8	369
606-20-2	2,6-Dinitrotoluene	U	369	ug/kg	36.9	369
208-96-8	Acenaphthylene	U	36.9	ug/kg	11.1	36.9
51-28-5	2,4-Dinitrophenol	U	738	ug/kg	140	738
132-64-9	Dibenzofuran	U	369	ug/kg	73.8	369
84-66-2	Diethylphthalate	U	369	ug/kg	73.8	369
86-73-7	Fluorene	U	36.9	ug/kg	11.1	36.9
7005-72-3	4-Chlorophenylphenylether	U	369	ug/kg	73.8	369
534-52-1	2-Methyl-4,6-dinitrophenol	U	369	ug/kg	73.8	369
100-01-6	4-Nitroaniline	U	369	ug/kg	111	369
	p-Nitroaniline					
122-39-4	Diphenylamine	U	369	ug/kg	73.8	369
122-66-7	Azobenzene	U	369	ug/kg	73.8	369
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	369	ug/kg	73.8	369
118-74-1	Hexachlorobenzene	U	369	ug/kg	73.8	369
85-01-8	Phenanthrene	U	36.9	ug/kg	11.1	36.9
120-12-7	Anthracene	U	36.9	ug/kg	7.38	36.9
84-74-2	Di-n-butylphthalate	U	369	ug/kg	73.8	369
206-44-0	Fluoranthene	U	36.9	ug/kg	11.1	36.9
85-68-7	Butylbenzylphthalate	U	369	ug/kg	73.8	369
56-55-3	Benzo(a)anthracene	U	36.9	ug/kg	11.1	36.9
91-94-1	3,3'-Dichlorobenzidine	U	369	ug/kg	111	369
218-01-9	Chrysene	U	36.9	ug/kg	11.1	36.9
117-81-7	bis(2-Ethylhexyl)phthalate	U	369	ug/kg	73.8	369
117-84-0	Di-n-octylphthalate	U	369	ug/kg	73.8	369
205-99-2	Benzo(b)fluoranthene	U	36.9	ug/kg	11.1	36.9
207-08-9	Benzo(k)fluoranthene	U	36.9	ug/kg	11.1	36.9
50-32-8	Benzo(a)pyrene	U	36.9	ug/kg	11.1	36.9
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.9	ug/kg	11.1	36.9
53-70-3	Dibenzo(a,h)anthracene	U	36.9	ug/kg	11.1	36.9
191-24-2	Benzo(ghi)perylene	U	36.9	ug/kg	11.1	36.9
120-82-1	1,2,4-Trichlorobenzene	U	369	ug/kg	73.8	369

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.14	243	ug/kg		JA
475-20-7	1,4-Methanoazulene, decahydro-4,8,8-trim	5.98	172	ug/kg	99	NJ

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s070709.b/s2g0709.d
Lab Smp Id: 232754003 Client Smp ID: CAMO-09-6613
Inj Date : 07-JUL-2009 17:12
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232754003|882732|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	9.74370	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.121	4.121	(1.000)	200887	40.0000	
* 29 Naphthalene-d8	136	4.993	4.998	(1.000)	750535	40.0000	
* 46 Acenaphthene-d10	164	6.239	6.244	(1.000)	413997	40.0000	
* 67 Phenanthrene-d10	188	7.218	7.223	(1.000)	697516	40.0000	
* 91 Chrysene-d12	240	8.983	8.988	(1.000)	569508	40.0000	
* 98 Perylene-d12	264	10.657	10.668	(1.000)	447867	40.0000	
$ 3 2-Fluorophenol	112	3.303	3.297	(0.801)	284029	51.0955	1880
$ 5 Phenol-d5	99	3.821	3.827	(0.927)	363701	52.9834	1950
$ 20 Nitrobenzene-d5	82	4.479	4.485	(0.897)	152311	26.8974	992
$ 39 2-Fluorobiphenyl	172	5.736	5.736	(0.919)	320807	27.4372	1010
$ 60 2,4,6-Tribromophenol	329	6.769	6.769	(1.085)	99774	70.3648	2600
$ 81 p-Terphenyl-d14	244	8.148	8.149	(0.907)	393952	40.6119	1500

ION RATIO REPORT

SV REPORT

Data file: s2g0709.d
Report Date: 07/07/2009 18:17
Lab. ID: 232754003 SampleType: SAMPLE
Injection Date: 07-JUL-2009 17:12
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232754003|882732|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01|
Comment:
Method used: /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2536
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline			CAS#: 62-53-3			
66	16152	3.82	3.90	80-120	100	(T)
93	611	3.89	3.90	440-500	4	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	20222	4.48	4.36	80-120	100	(T)
42	13409	4.48	4.36	43-103	66	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	88115	6.24	6.01	80-120	100	(T)
164	413997	6.24	6.01	0- 40	470	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	53217	6.24	6.06	80-120	100	(T)
63	731	6.24	6.06	46-106	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	53217	6.24	6.35	80-120	100	(T)
89	714	6.24	6.35	37- 97	1	(QT)
63	731	6.24	6.35	16- 76	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	6071	6.76	6.61	80-120	100	(T)
165	6221	6.76	6.61	60-120	102	(T)
167	1964	6.76	6.61	0- 44	32	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
55	2-Methyl-4,6-dinitrophenol			CAS#: 534-52-1		
198	237	6.76	6.62	80-120	100	(T)
105	775	6.76	6.62	10- 70	326	(QT)
51	667	6.76	6.62	41-101	281	(QT)

Q qualifier indicates ion failed ratio requirement

GEL Laboratories LLC

GEL Laboratories, LLC

Data file : /chem/MSD2.i/s070709.b/s2g0709.d
Lab Smp Id: 232754003 Client Smp ID: CAMO-09-6613
Inj Date : 07-JUL-2009 17:12
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232754003|882732|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.03000	weight of sample
M	9.74370	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.121	1216674	40.000
* 46 Acenaphthene-d10	6.239	1804033	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.137	200741	6.59965183	243	0		0	10

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
1,4-Methanoazulene, decahydro-4,8,8-trim				CAS #: 475-20-7			
5.982	210685	4.67142424	172	99	NIST05.L	60024	46

Data File: /chem/MSD2.i/s070709.b/s2g0709.d
Date : 07-JUL-2009 17:12
Client ID: CAMO-09-6613
Sample Info: 1232754003188273211SVMF11LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

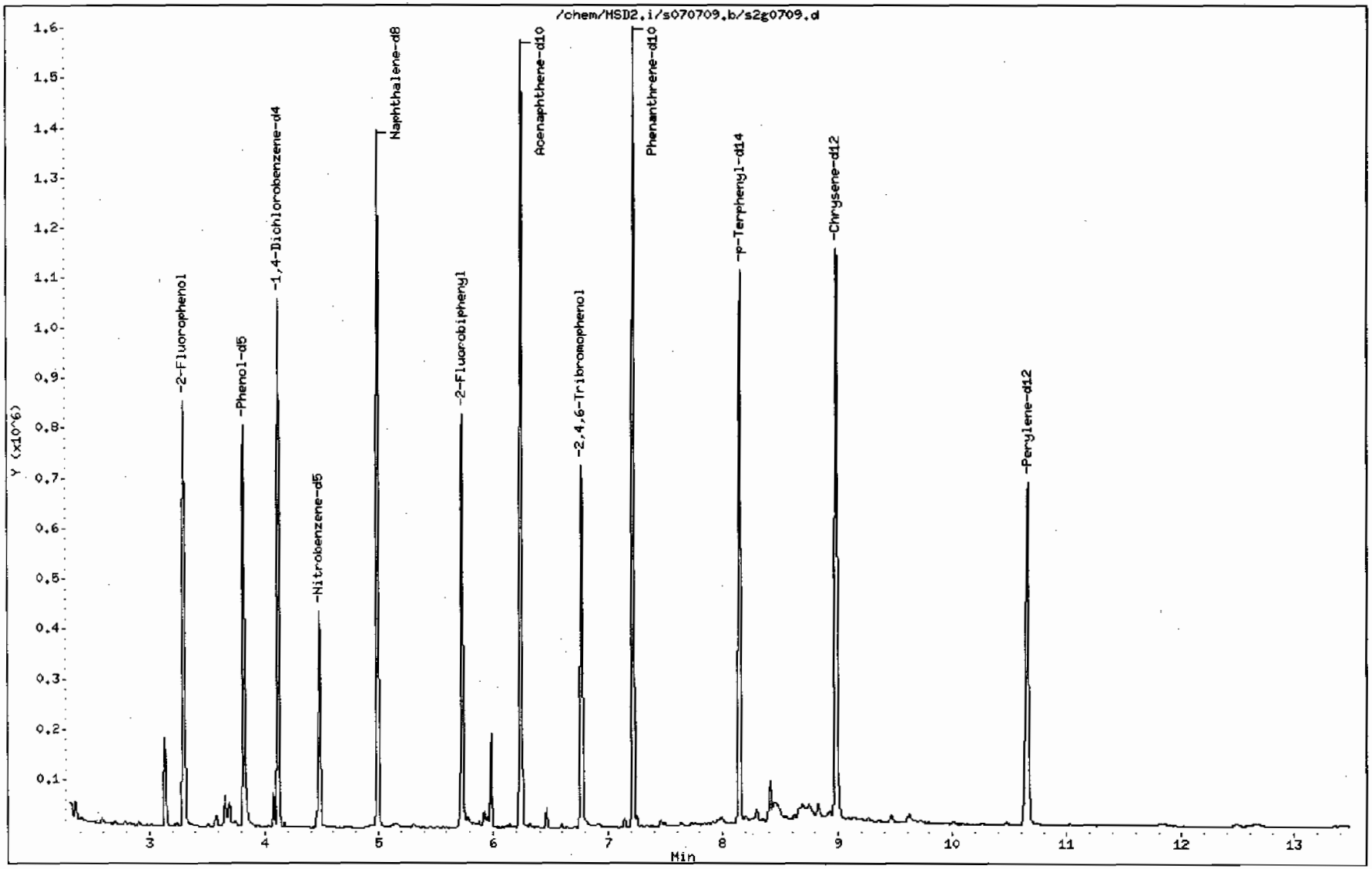

Data File: /chem/MSD2.i/s070709.b/s2g0709.d

Date : 07-JUL-2009 17:12

Client ID: CAMO-09-6613

Instrument: MSD2.i

Sample Info: |2327540031882732|1|SVHF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7945	38	C6H12O2	116

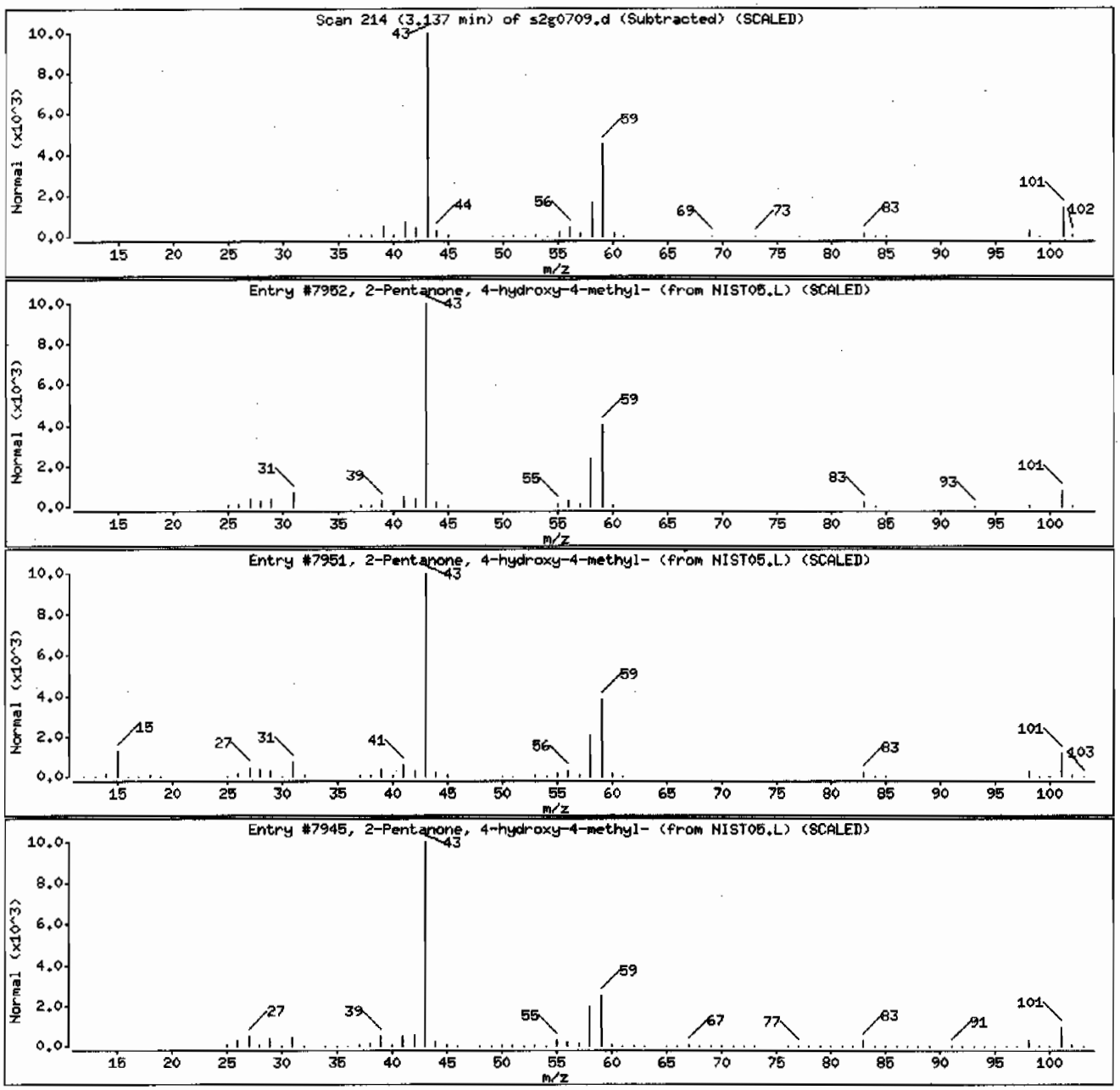

Data File: /chem/MSD2.i/s070709.b/s2g0709.d

Date : 07-JUL-2009 17:12

Client ID: CAMO-09-6613 Instrument: MSD2.i

Sample Info: |2327540031882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60024	99	C15H24	204
1,4-Methanoazulene, decahydro-4,8,8-trim	475-20-7	NIST05.L	60018	99	C15H24	204
Naphthalene, 1,2,3,5,6,7,8,8a-octahydro-	4630-07-3	NIST05.L	60047	98	C15H24	204

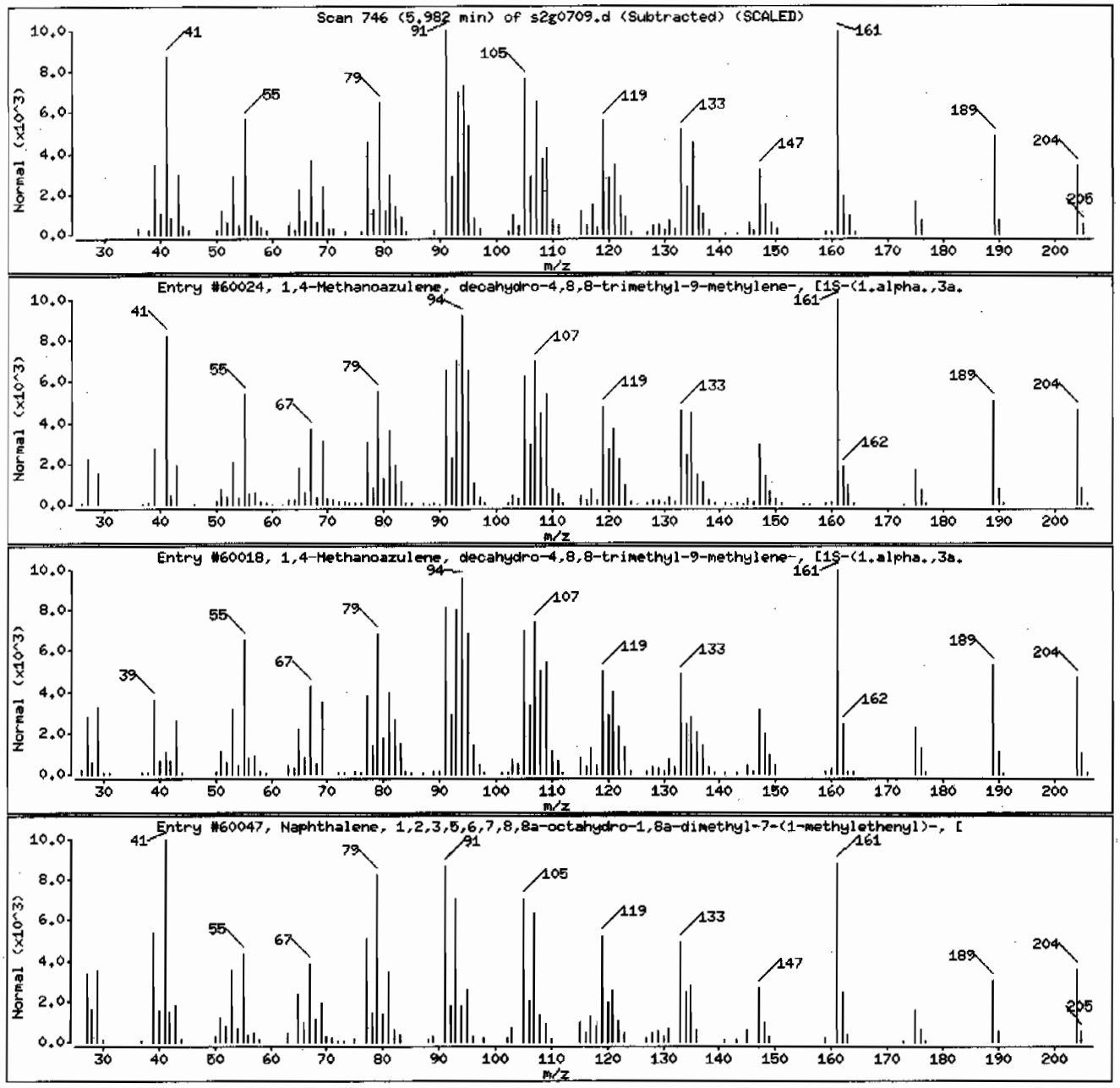

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	Date Collected:	06/30/2009 12:00	Matrix:	R
Lab Sample ID:	232754002	Date Received:	07/02/2009 08:40	%Moisture:	9.8
		Client:	LANL010	Project:	LANL01004
Client ID:	CAMO-09-6614	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882732	Inst:	MSD2.I	Dilution:	1
Run Date:	07/07/2009 16:51	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	07/07/2009 09:20	Aliquot:	30.09 g	Final Volume:	1 mL
Data File:	s2g0708.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	368	ug/kg	73.7	368
108-95-2	Phenol	U	368	ug/kg	73.7	368
95-57-8	2-Chlorophenol	U	368	ug/kg	73.7	368
106-46-7	1,4-Dichlorobenzene	U	368	ug/kg	73.7	368
621-64-7	N-Nitrosodipropylamine	U	368	ug/kg	73.7	368
59-50-7	4-Chloro-3-methylphenol	U	368	ug/kg	73.7	368
83-32-9	Acenaphthene	U	36.8	ug/kg	12.2	36.8
121-14-2	2,4-Dinitrotoluene	U	368	ug/kg	36.8	368
100-02-7	4-Nitrophenol	U	368	ug/kg	122	368
87-86-5	Pentachlorophenol	U	368	ug/kg	92.1	368
129-00-0	Pyrene	U	36.8	ug/kg	11.1	36.8
110-86-1	Pyridine	U	368	ug/kg	73.7	368
62-53-3	Aniline	U	368	ug/kg	111	368
111-44-4	bis(2-Chloroethyl) ether	U	368	ug/kg	73.7	368
541-73-1	1,3-Dichlorobenzene	U	368	ug/kg	73.7	368
100-51-6	Benzyl alcohol	U	368	ug/kg	111	368
95-50-1	1,2-Dichlorobenzene	U	368	ug/kg	73.7	368
108-60-1	bis(2-Chloroisopropyl)ether	U	368	ug/kg	73.7	368
95-48-7	o-Cresol	U	368	ug/kg	73.7	368
65794-96-9	m,p-Cresols	U	368	ug/kg	111	368
67-72-1	Hexachloroethane	U	368	ug/kg	73.7	368
98-95-3	Nitrobenzene	U	368	ug/kg	73.7	368
78-59-1	Isophorone	U	368	ug/kg	73.7	368
88-75-5	2-Nitrophenol	U	368	ug/kg	73.7	368
105-67-9	2,4-Dimethylphenol	U	368	ug/kg	129	368
111-91-1	bis(2-Chloroethoxy)methane	U	368	ug/kg	73.7	368
120-83-2	2,4-Dichlorophenol	U	368	ug/kg	73.7	368
65-85-0	Benzoic acid	U	737	ug/kg	184	737
91-20-3	Naphthalene	U	36.8	ug/kg	11.1	36.8
106-47-8	4-Chloroaniline	U	368	ug/kg	73.7	368
87-68-3	Hexachlorobutadiene	U	368	ug/kg	73.7	368
91-57-6	2-Methylnaphthalene	U	36.8	ug/kg	7.37	36.8
77-47-4	Hexachlorocyclopentadiene	U	368	ug/kg	73.7	368
88-06-2	2,4,6-Trichlorophenol	U	368	ug/kg	73.7	368
95-95-4	2,4,5-Trichlorophenol	U	368	ug/kg	73.7	368
91-58-7	2-Chloronaphthalene	U	36.8	ug/kg	12.2	36.8
88-74-4	2-Nitroaniline *o-Nitroaniline*	U	368	ug/kg	73.7	368
99-09-2	3-Nitroaniline	U	368	ug/kg	73.7	368

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6614	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 16:51	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.09 g	**Final Volume:**	1 mL
Data File:	s2g0708.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	368	ug/kg	73.7	368
606-20-2	2,6-Dinitrotoluene	U	368	ug/kg	36.8	368
208-96-8	Acenaphthylene	U	36.8	ug/kg	11.1	36.8
51-28-5	2,4-Dinitrophenol	U	737	ug/kg	140	737
132-64-9	Dibenzofuran	U	368	ug/kg	73.7	368
84-66-2	Diethylphthalate	U	368	ug/kg	73.7	368
86-73-7	Fluorene	U	36.8	ug/kg	11.1	36.8
7005-72-3	4-Chlorophenylphenylether	U	368	ug/kg	73.7	368
534-52-1	2-Methyl-4,6-dinitrophenol	U	368	ug/kg	73.7	368
100-01-6	4-Nitroaniline	U	368	ug/kg	111	368
	p-Nitroaniline					
122-39-4	Diphenylamine	U	368	ug/kg	73.7	368
122-66-7	Azobenzene	U	368	ug/kg	73.7	368
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	368	ug/kg	73.7	368
118-74-1	Hexachlorobenzene	U	368	ug/kg	73.7	368
85-01-8	Phenanthrene	U	36.8	ug/kg	11.1	36.8
120-12-7	Anthracene	U	36.8	ug/kg	7.37	36.8
84-74-2	Di-n-butylphthalate	U	368	ug/kg	73.7	368
206-44-0	Fluoranthene	U	36.8	ug/kg	11.1	36.8
85-68-7	Butylbenzylphthalate	U	368	ug/kg	73.7	368
56-55-3	Benzo(a)anthracene	U	36.8	ug/kg	11.1	36.8
91-94-1	3,3'-Dichlorobenzidine	U	368	ug/kg	111	368
218-01-9	Chrysene	U	36.8	ug/kg	11.1	36.8
117-81-7	bis(2-Ethylhexyl)phthalate	U	368	ug/kg	73.7	368
117-84-0	Di-n-octylphthalate	U	368	ug/kg	73.7	368
205-99-2	Benzo(b)fluoranthene	U	36.8	ug/kg	11.1	36.8
207-08-9	Benzo(k)fluoranthene	U	36.8	ug/kg	11.1	36.8
50-32-8	Benzo(a)pyrene	U	36.8	ug/kg	11.1	36.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	36.8	ug/kg	11.1	36.8
53-70-3	Dibenzo(a,h)anthracene	U	36.8	ug/kg	11.1	36.8
191-24-2	Benzo(ghi)perylene	U	36.8	ug/kg	11.1	36.8
120-82-1	1,2,4-Trichlorobenzene	U	368	ug/kg	73.7	368

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.14	416	ug/kg		JA
511-15-9	2-Phenanthrenol, 4b,5,6,7,8,8a,9,10-octa	8.45	168	ug/kg	91	NJ

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754002	**Date Received:**	07/02/2009 08:40	**%Moisture:**	9.8
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6614	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.1	**Dilution:**	1
Run Date:	07/07/2009 16:51	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.09 g	**Final Volume:**	1 mL
Data File:	s2g0708.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	8.69	379	ug/kg		J

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Data file : /chem/MSD2.i/s070709.b/s2g0708.d
Lab Smp Id: 232754002 Client Smp ID: CAMO-09-6614
Inj Date : 07-JUL-2009 16:51
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232754002|882732|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.09000	weight of sample
M	9.77710	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.116	4.121	(1.000)	209699	40.0000	
* 29 Naphthalene-d8	136	4.993	4.998	(1.000)	791370	40.0000	
* 46 Acenaphthene-d10	164	6.239	6.244	(1.000)	437559	40.0000	
* 67 Phenanthrene-d10	188	7.218	7.223	(1.000)	710624	40.0000	
* 91 Chrysene-d12	240	8.978	8.988	(1.000)	532703	40.0000	
* 98 Perylene-d12	264	10.652	10.668	(1.000)	422554	40.0000	
$ 3 2-Fluorophenol	112	3.297	3.297	(0.801)	372790	64.2451	2370
$ 5 Phenol-d5	99	3.816	3.827	(0.927)	479475	66.9140	2460
$ 20 Nitrobenzene-d5	82	4.479	4.485	(0.897)	203084	34.0132	1250
$ 39 2-Fluorobiphenyl	172	5.731	5.736	(0.919)	404600	32.7403	1200
$ 60 2,4,6-Tribromophenol	329	6.769	6.769	(1.085)	122343	81.6352	3010
$ 81 p-Terphenyl-d14	244	8.143	8.149	(0.907)	439622	48.4512	1780

ION RATIO REPORT

SV REPORT

Data file: s2g0708.d
Report Date: 07/07/2009 18:17
Lab. ID: 232754002 SampleType: SAMPLE
Injection Date: 07-JUL-2009 16:51
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232754002|882732|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01|
Comment:
Method used: /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2536
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	22018	3.82	3.90	80-120	100	(T)
93	471	3.79	3.90	440-500	2	(QT)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	27221	4.48	4.36	80-120	100	(T)
42	18299	4.48	4.36	43-103	67	(T)
40 2-Chloronaphthalene				CAS#: 91-58-7		
162	3704	5.98	5.85	80-120	100	(T)
164	154	5.98	5.85	3- 63	4	(T)
127	278	5.98	5.85	8- 68	8	(QT)
43 Dimethylphthalate				CAS#: 131-11-3		
163	92866	6.24	6.01	80-120	100	(T)
164	437559	6.24	6.01	0- 40	471	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	56200	6.24	6.06	80-120	100	(T)
63	823	6.24	6.06	46-106	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	56200	6.24	6.35	80-120	100	(T)
89	872	6.24	6.35	37- 97	2	(QT)
63	823	6.24	6.35	16- 76	1	(QT)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
53 Fluorene			CAS#: 86-73-7			
166	7768	6.76	6.61	80-120	100	(T)
165	8017	6.76	6.61	60-120	103	(T)
167	2569	6.76	6.61	0- 44	33	(T)
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	287	6.76	6.62	80-120	100	(T)
105	891	6.76	6.62	10- 70	310	(QT)
51	1389	6.76	6.62	41-101	483	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	7032	6.76	6.91	80-120	100	(T)
141	51444	6.76	6.91	51-111	731	(QT)
250	14386	6.76	6.91	67-127	205	(QT)

Q qualifier indicates ion failed ratio requirement

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Data file : /chem/MSD2.i/s070709.b/s2g0708.d
Lab Smp Id: 232754002 Client Smp ID: CAMO-09-6614
Inj Date : 07-JUL-2009 16:51
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232754002|882732|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.09000	weight of sample
M	9.77710	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.116	1284235	40.000
* 91 Chrysene-d12	8.978	1434452	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.137	362620	11.2945004	416	0		0	10

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
2-Phenanthrenol, 4b,5,6,7,8,8a,9,10-octa				CAS #: 511-15-9			
8.448	163260	4.55254942	168	91	NIST05.L	116239	91
Unknown				CAS #:			
8.694	368737	10.2823126	379	0		0	91

Data File: /chem/MSD2.i/s070709.b/s2g0708.d
Date : 07-JUL-2009 16:51
Client ID: CAMD-09-6614
Sample Info: 1232754002|882732|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

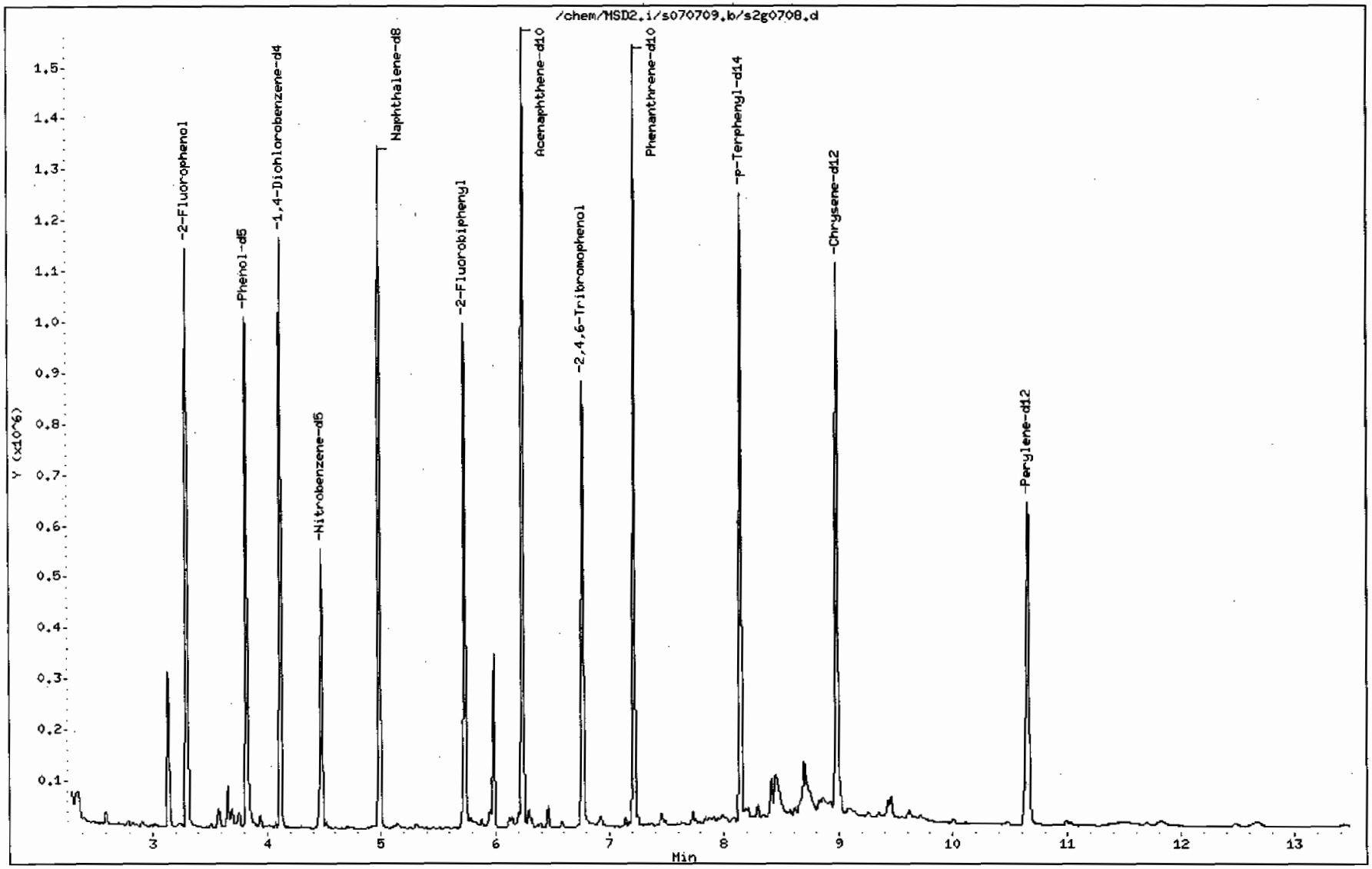

Data File: /chem/MSD2.i/s070709.b/s2g0708.d

Date : 07-JUL-2009 16:51

Client ID: CAMO-09-6614

Instrument: MSD2.i

Sample Info: 1232754002188273211SVMF11LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2,3-Butanedione, monooxime	57-71-6	NIST05.L	3949	16	C4H7NO2	101

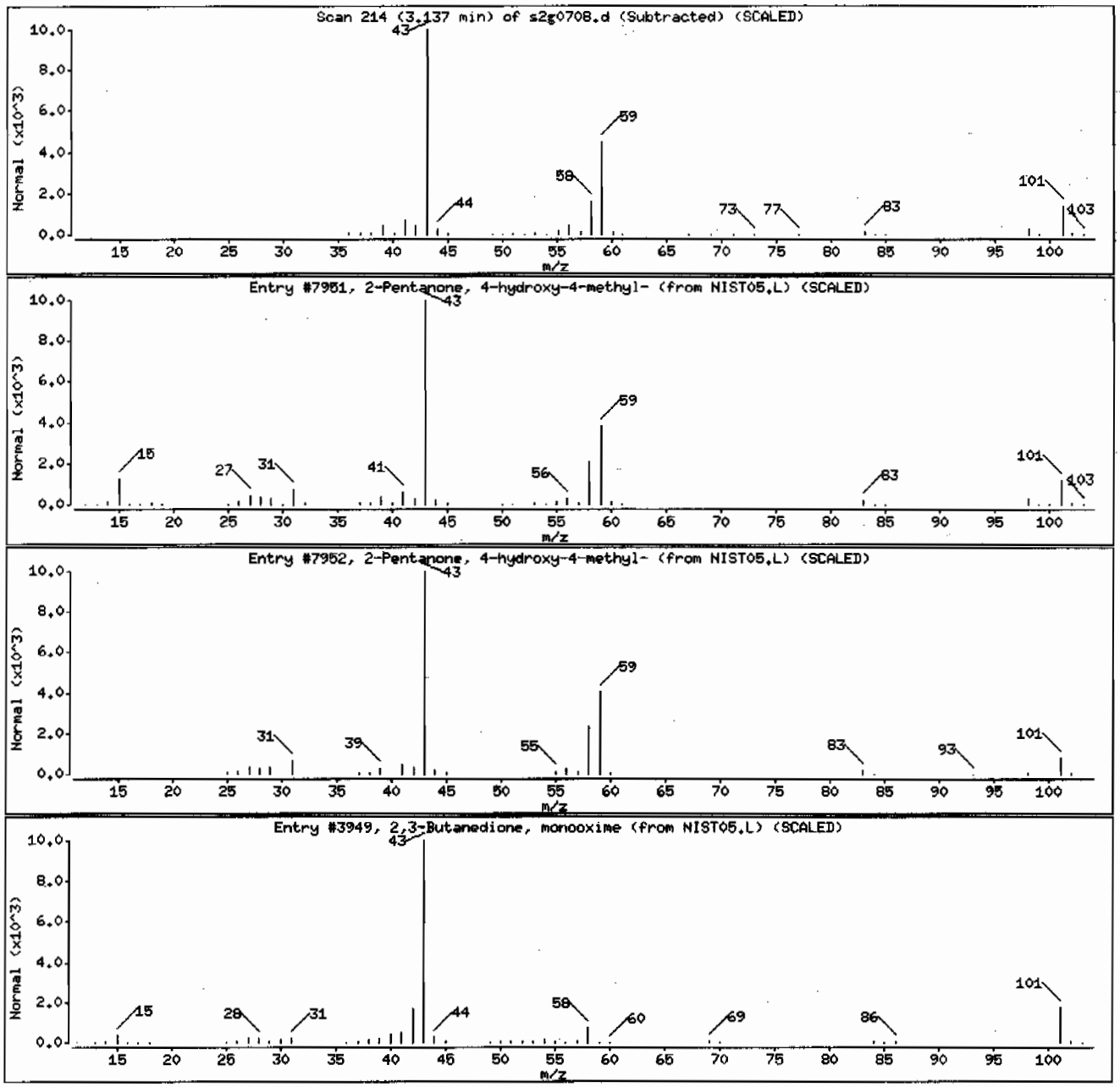

Data File: /chem/MSD2.i/s070709.b/s2g0708.d

Date : 07-JUL-2009 16:51

Client ID: CAMO-09-6614

Instrument: MSD2.i

Sample Info: |2327540021882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2-Phenanthrenol, 4b,5,6,7,8,8a,9,10-octa	511-15-9	NIST05.L	116239	91	C20H30O	286
2-Phenanthrenol, 4b,5,6,7,8,8a,9,10-octa	511-15-9	NIST05.L	116238	58	C20H30O	286
2,2-Bis(4'-methoxyphenyl)-2-ethoxyethane	1000283-53-7	NIST05.L	116102	30	C18H22O3	286

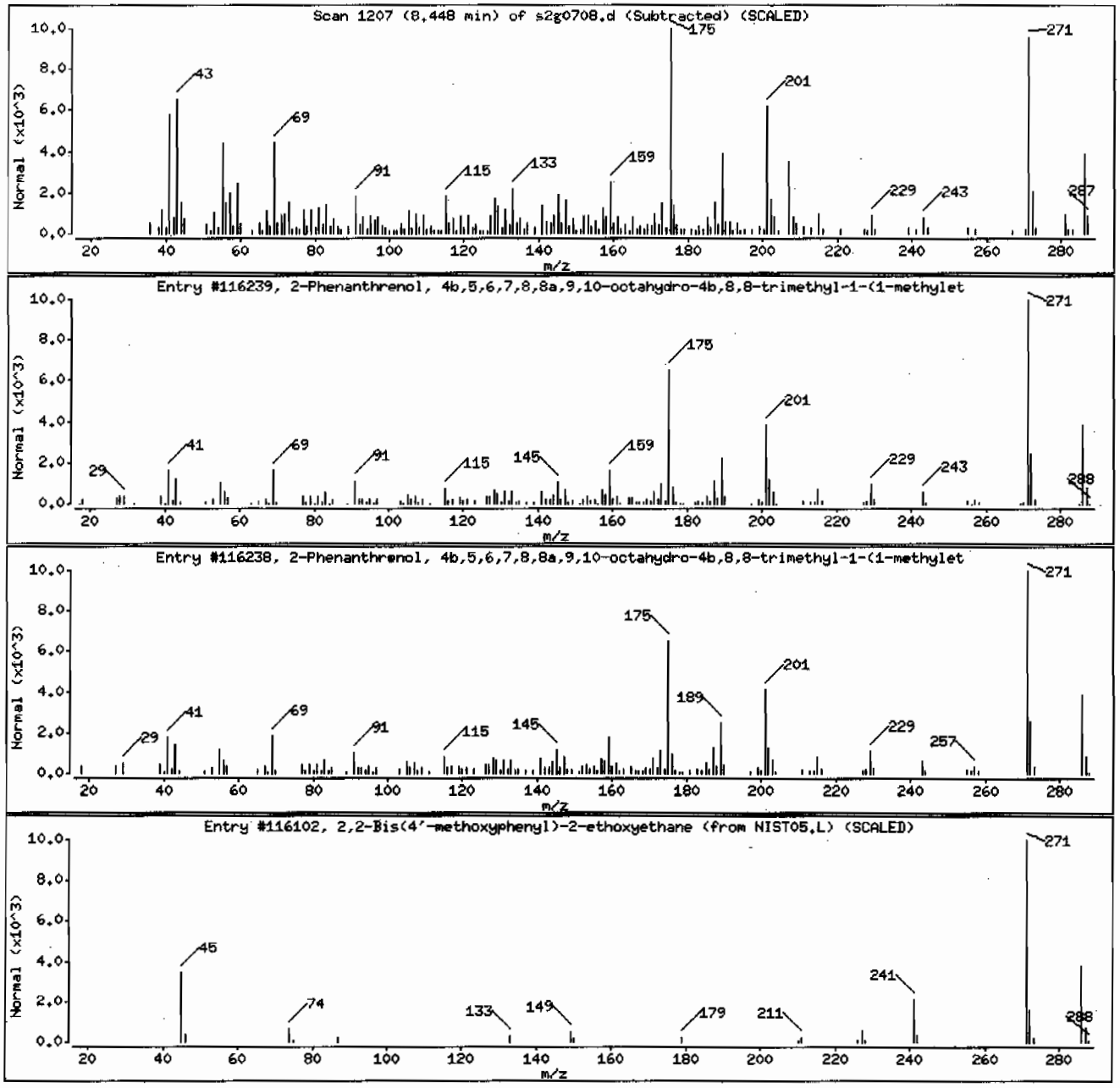

Data File: /chem/HSD2.i/s070709.b/s2g0708.d

Date : 07-JUL-2009 16:51

Client ID: CAMO-09-6614

Instrument: HSD2.i

Sample Info: 1232754002188273211SVHF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cedran-diol, 8S,14-	62600-05-9	NIST05.L	83830	59	C15H26O2	238
2H-Pyran, 2-(7-heptadecynyloxy)tetrahydr	56599-50-9	NIST05.L	145900	50	C22H40O2	336
5.alpha.-Pregnane-3.beta.,20.beta.-diol,	17182-23-9	NIST05.L	158174	43	C23H38O3	362

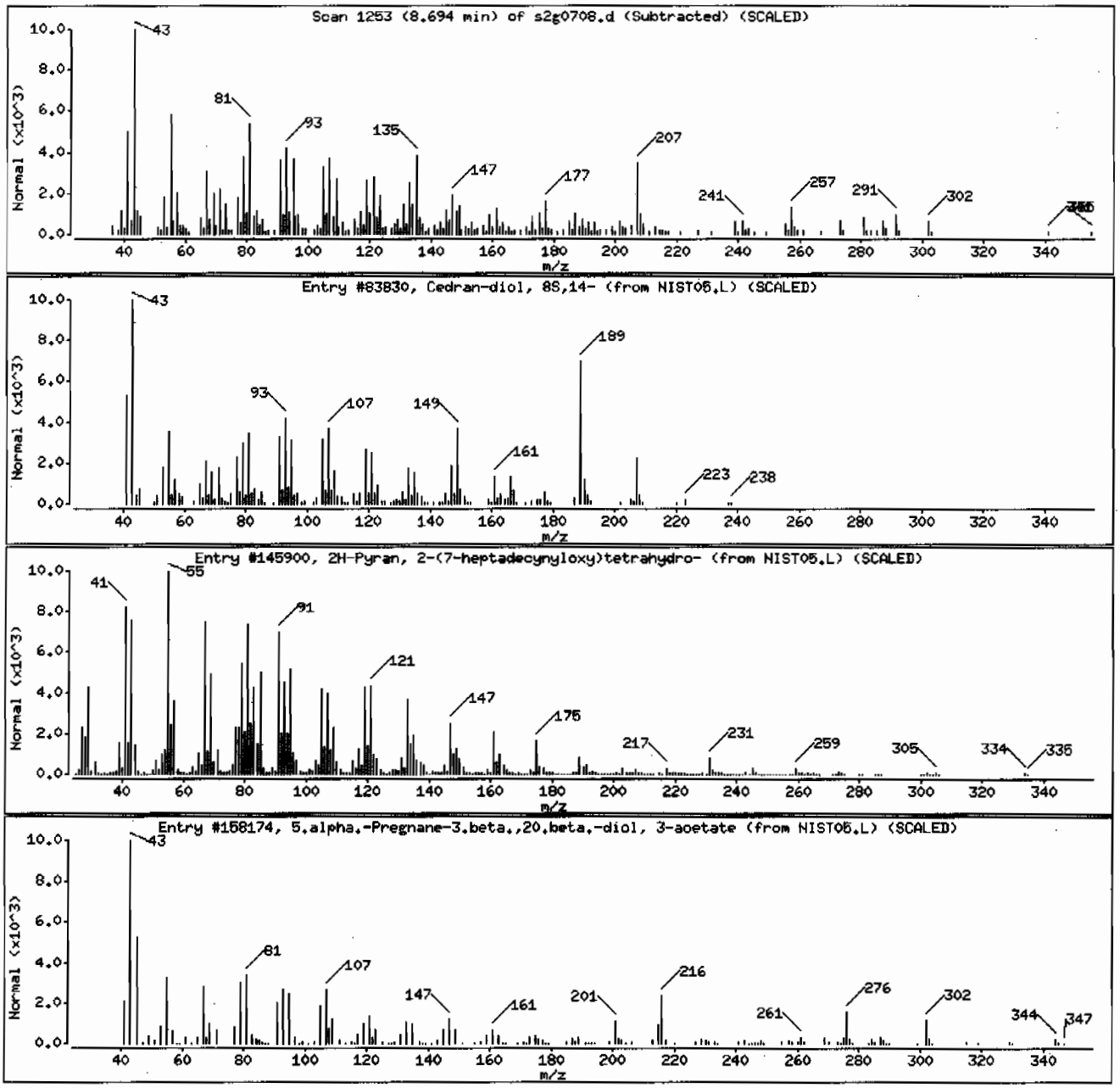

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754001	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6615	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 16:31	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2g0707.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	359	ug/kg	71.8	359
108-95-2	Phenol	U	359	ug/kg	71.8	359
95-57-8	2-Chlorophenol	U	359	ug/kg	71.8	359
106-46-7	1,4-Dichlorobenzene	U	359	ug/kg	71.8	359
621-64-7	N-Nitrosodipropylamine	U	359	ug/kg	71.8	359
59-50-7	4-Chloro-3-methylphenol	U	359	ug/kg	71.8	359
83-32-9	Acenaphthene	U	35.9	ug/kg	11.8	35.9
121-14-2	2,4-Dinitrotoluene	U	359	ug/kg	35.9	359
100-02-7	4-Nitrophenol	U	359	ug/kg	118	359
87-86-5	Pentachlorophenol	U	359	ug/kg	89.8	359
129-00-0	Pyrene	U	35.9	ug/kg	10.8	35.9
110-86-1	Pyridine	U	359	ug/kg	71.8	359
62-53-3	Aniline	U	359	ug/kg	108	359
111-44-4	bis(2-Chloroethyl) ether	U	359	ug/kg	71.8	359
541-73-1	1,3-Dichlorobenzene	U	359	ug/kg	71.8	359
100-51-6	Benzyl alcohol	U	359	ug/kg	108	359
95-50-1	1,2-Dichlorobenzene	U	359	ug/kg	71.8	359
108-60-1	bis(2-Chloroisopropyl)ether	U	359	ug/kg	71.8	359
95-48-7	o-Cresol	U	359	ug/kg	71.8	359
65794-96-9	m,p-Cresols	U	359	ug/kg	108	359
67-72-1	Hexachloroethane	U	359	ug/kg	71.8	359
98-95-3	Nitrobenzene	U	359	ug/kg	71.8	359
78-59-1	Isophorone	U	359	ug/kg	71.8	359
88-75-5	2-Nitrophenol	U	359	ug/kg	71.8	359
105-67-9	2,4-Dimethylphenol	U	359	ug/kg	126	359
111-91-1	bis(2-Chloroethoxy)methane	U	359	ug/kg	71.8	359
120-83-2	2,4-Dichlorophenol	U	359	ug/kg	71.8	359
65-85-0	Benzoic acid	U	718	ug/kg	180	718
91-20-3	Naphthalene	U	35.9	ug/kg	10.8	35.9
106-47-8	4-Chloroaniline	U	359	ug/kg	71.8	359
87-68-3	Hexachlorobutadiene	U	359	ug/kg	71.8	359
91-57-6	2-Methylnaphthalene	U	35.9	ug/kg	7.18	35.9
77-47-4	Hexachlorocyclopentadiene	U	359	ug/kg	71.8	359
88-06-2	2,4,6-Trichlorophenol	U	359	ug/kg	71.8	359
95-95-4	2,4,5-Trichlorophenol	U	359	ug/kg	71.8	359
91-58-7	2-Chloronaphthalene	U	35.9	ug/kg	11.8	35.9
88-74-4	2-Nitroaniline	U	359	ug/kg	71.8	359
99-09-2	*o-Nitroaniline* 3-Nitroaniline	U	359	ug/kg	71.8	359

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536	**Date Collected:**	06/30/2009 12:00	**Matrix:**	R
Lab Sample ID:	232754001	**Date Received:**	07/02/2009 08:40	**%Moisture:**	7.2
		Client:	LANL010	**Project:**	LANL01004
Client ID:	CAMO-09-6615	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 16:31	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30.02 g	**Final Volume:**	1 mL
Data File:	s2g0707.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	359	ug/kg	71.8	359
606-20-2	2,6-Dinitrotoluene	U	359	ug/kg	35.9	359
208-96-8	Acenaphthylene	U	35.9	ug/kg	10.8	35.9
51-28-5	2,4-Dinitrophenol	U	718	ug/kg	136	718
132-64-9	Dibenzofuran	U	359	ug/kg	71.8	359
84-66-2	Diethylphthalate	U	359	ug/kg	71.8	359
86-73-7	Fluorene	U	35.9	ug/kg	10.8	35.9
7005-72-3	4-Chlorophenylphenylether	U	359	ug/kg	71.8	359
534-52-1	2-Methyl-4,6-dinitrophenol	U	359	ug/kg	71.8	359
100-01-6	4-Nitroaniline	U	359	ug/kg	108	359
	p-Nitroaniline					
122-39-4	Diphenylamine	U	359	ug/kg	71.8	359
122-66-7	Azobenzene	U	359	ug/kg	71.8	359
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	359	ug/kg	71.8	359
118-74-1	Hexachlorobenzene	U	359	ug/kg	71.8	359
85-01-8	Phenanthrene	U	35.9	ug/kg	10.8	35.9
120-12-7	Anthracene	U	35.9	ug/kg	7.18	35.9
84-74-2	Di-n-butylphthalate	U	359	ug/kg	71.8	359
206-44-0	Fluoranthene	U	35.9	ug/kg	10.8	35.9
85-68-7	Butylbenzylphthalate	U	359	ug/kg	71.8	359
56-55-3	Benzo(a)anthracene	U	35.9	ug/kg	10.8	35.9
91-94-1	3,3'-Dichlorobenzidine	U	359	ug/kg	108	359
218-01-9	Chrysene	U	35.9	ug/kg	10.8	35.9
117-81-7	bis(2-Ethylhexyl)phthalate	U	359	ug/kg	71.8	359
117-84-0	Di-n-octylphthalate	U	359	ug/kg	71.8	359
205-99-2	Benzo(b)fluoranthene	U	35.9	ug/kg	10.8	35.9
207-08-9	Benzo(k)fluoranthene	U	35.9	ug/kg	10.8	35.9
50-32-8	Benzo(a)pyrene	U	35.9	ug/kg	10.8	35.9
193-39-5	Indeno(1,2,3-cd)pyrene	U	35.9	ug/kg	10.8	35.9
53-70-3	Dibenzo(a,h)anthracene	U	35.9	ug/kg	10.8	35.9
191-24-2	Benzo(ghi)perylene	U	35.9	ug/kg	10.8	35.9
120-82-1	1,2,4-Trichlorobenzene	U	359	ug/kg	71.8	359

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.14	420	ug/kg		JA

GEL Laboratories LLC

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Data file : /chem/MSD2.i/s070709.b/s2g0707.d
Lab Smp Id: 232754001 Client Smp ID: CAMO-09-6615
Inj Date : 07-JUL-2009 16:31
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232754001|882732|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	7.23460	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.116	4.121	(1.000)	213777	40.0000	
* 29 Naphthalene-d8	136	4.993	4.998	(1.000)	800871	40.0000	
* 46 Acenaphthene-d10	164	6.239	6.244	(1.000)	446022	40.0000	
* 67 Phenanthrene-d10	188	7.218	7.223	(1.000)	744176	40.0000	
* 91 Chrysene-d12	240	8.978	8.988	(1.000)	592521	40.0000	
* 98 Perylene-d12	264	10.652	10.668	(1.000)	455770	40.0000	
$ 3 2-Fluorophenol	112	3.297	3.297	(0.801)	394907	66.7584	2400
$ 5 Phenol-d5	99	3.816	3.827	(0.927)	507942	69.5345	2500
$ 20 Nitrobenzene-d5	82	4.479	4.485	(0.897)	215464	35.6585	1280
$ 39 2-Fluorobiphenyl	172	5.731	5.736	(0.919)	443423	35.2011	1260
$ 60 2,4,6-Tribromophenol	329	6.769	6.769	(1.085)	134382	87.9670	3160
$ 81 p-Terphenyl-d14	244	8.143	8.149	(0.907)	502915	49.8311	1790

ION RATIO REPORT

SV REPORT

Data file: s2g0707.d
Report Date: 07/07/2009 18:17
Lab. ID: 232754001 SampleType: SAMPLE
Injection Date: 07-JUL-2009 16:31
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232754001|882732|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01|
Comment:
Method used: /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2536
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
4 Aniline		CAS#: 62-53-3				
66	23429	3.82	3.90	80-120	100	(T)
93	2144	3.89	3.90	440-500	9	(Q)
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	28761	4.48	4.36	80-120	100	(T)
42	19009	4.48	4.36	43-103	66	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	95028	6.24	6.01	80-120	100	(T)
164	446022	6.24	6.01	0- 40	469	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	57397	6.24	6.06	80-120	100	(T)
63	828	6.24	6.06	46-106	1	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	57397	6.24	6.35	80-120	100	(T)
89	894	6.24	6.35	37- 97	2	(QT)
63	828	6.24	6.35	16- 76	1	(QT)
53 Fluorene			CAS#: 86-73-7			
166	8250	6.76	6.61	80-120	100	(T)
165	8625	6.76	6.61	60-120	105	(T)
167	2831	6.76	6.61	0- 44	34	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	325	6.76	6.62	80-120	100	(T)
105	1111	6.76	6.62	10- 70	341	(QT)
51	1515	6.76	6.62	41-101	466	(QT)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	7871	6.76	6.91	80-120	100	(T)
141	55517	6.76	6.91	51-111	705	(QT)
250	15809	6.76	6.91	67-127	201	(QT)
92 Chrysene			CAS#: 218-01-9			
228	4202	8.97	9.01	80-120	100	( )
229	1757	8.97	9.01	0- 50	42	( )
226	1120	9.00	9.01	0- 59	27	( )

Q qualifier indicates ion failed ratio requirement

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GEL Laboratories, LLC

Data file : /chem/MSD2.i/s070709.b/s2g0707.d
Lab Smp Id: 232754001 Client Smp ID: CAMO-09-6615
Inj Date : 07-JUL-2009 16:31
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232754001|882732|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.02000	weight of sample
M	7.23460	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.116	1312353	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown Aldol Condensate				CAS #:			
3.137	383315	11.6832919	420	0		0	10

Data File: /chem/MSD2.i/s070709.b/s2g0707.d
Date : 07-JUL-2009 16:31
Client ID: CAMO-09-6615
Sample Info: |2327540011882732|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

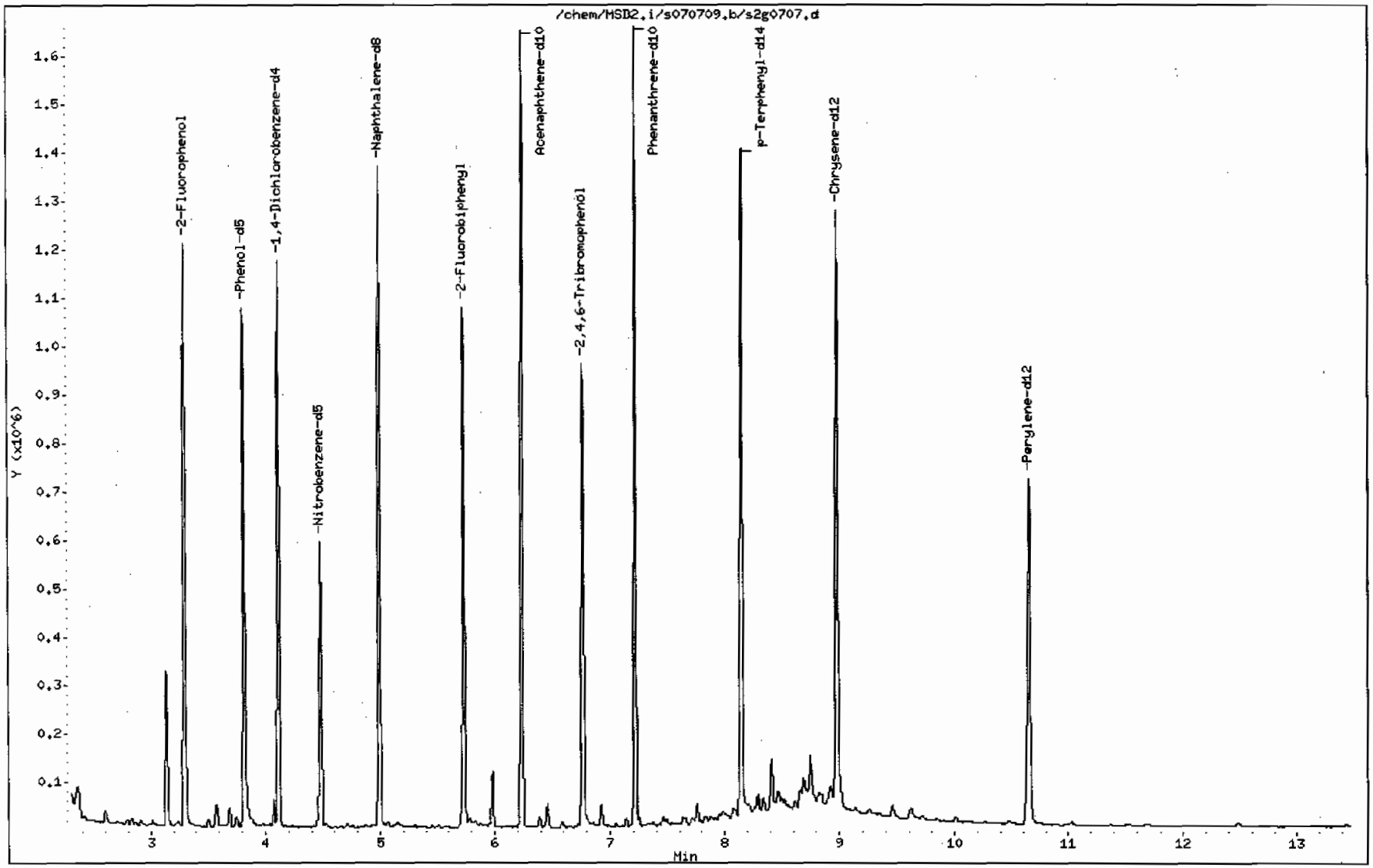

Data File: /chem/MSD2.i/s070709.b/s2g0707.d

Date : 07-JUL-2009 16:31

Client ID: CAMO-09-6615

Instrument: MSD2.i

Sample Info: |2327540001|882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	23	C6H12O2	116

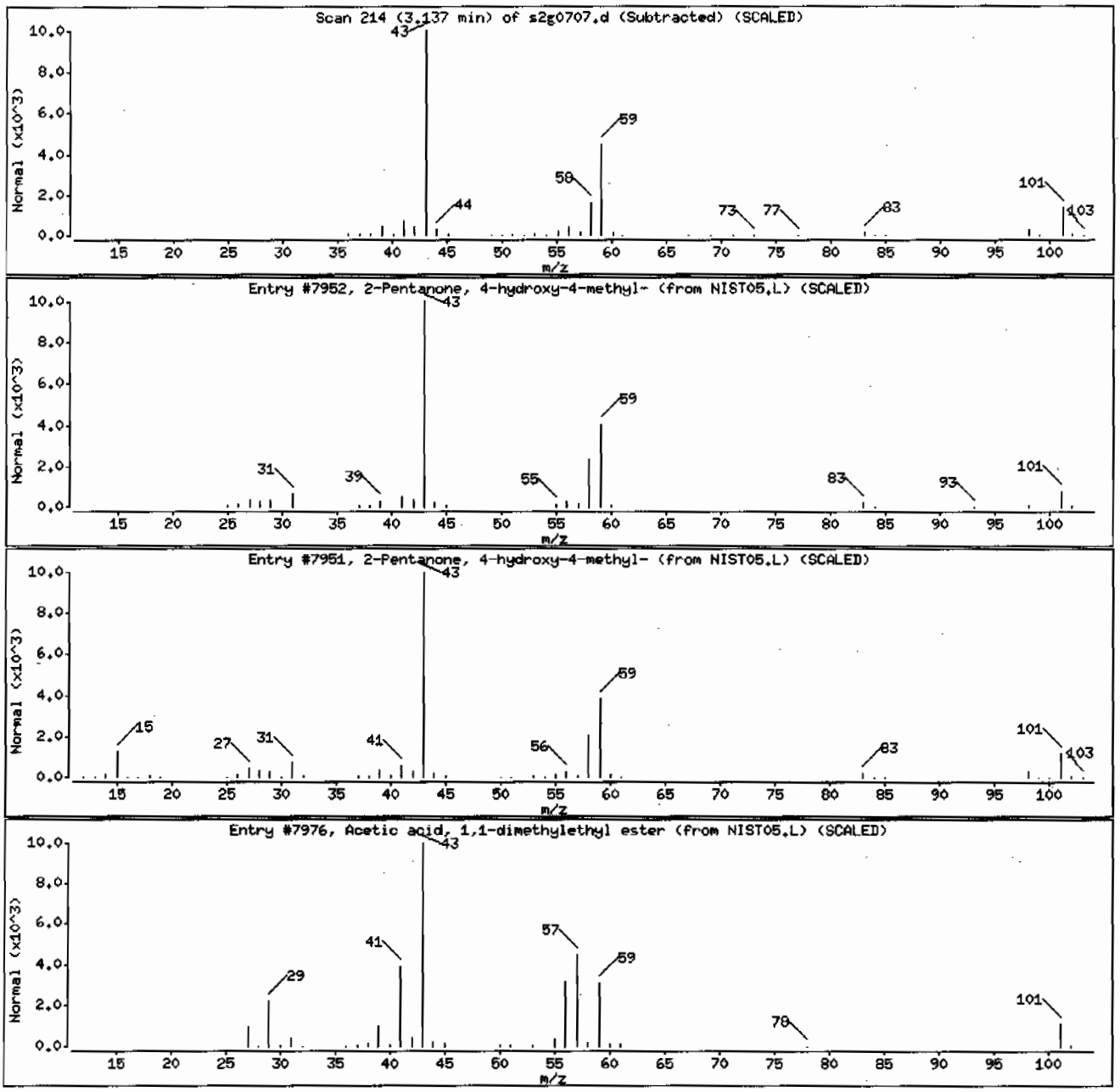

Standard Data

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
1,4-Dichlorobenzene-d4 (INTERNAL STANDARD)								
Naphthalene-d8 (INTERNAL STANDARD)								
Acenaphthene-d10 (INTERNAL STANDARD)								
Phenanthrene-d10 (INTERNAL STANDARD)								
Chrysene-d12 (INTERNAL STANDARD)								
Perylene-d12 (INTERNAL STANDARD)								
2-Fluorophenol (SURROGATE)		10	20	40	50	80	100	120
Phenol-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Chlorophenol-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
1,2-Dichlorobenzene-d4 (CLP SURROGATE)		10	20	40	50	80	100	120
Nitrobenzene-d5 (SURROGATE)		10	20	40	50	80	100	120
2-Fluorobiphenyl (SURROGATE)		10	20	40	50	80	100	120
2,4,6-Tribromophenol (SURROGATE)		10	20	40	50	80	100	120
p-Terphenyl-d14 (SURROGATE)		10	20	40	50	80	100	120
N-Nitrosodimethylamine		10	20	40	50	80	100	120
Pyridine		10	20	40	50	80	100	120
Aniline		10	20	40	50	80	100	120
Benzaldehyde		10	20	40	50	80	100	120
Phenol		10	20	40	50	80	100	120
bis(2-Chloroethyl)ether	1	10	20	40	50	80	100	120
2-Chlorophenol		10	20	40	50	80	100	120
n-Decane		10	20	40	50	80	100	120
1,3-Dichlorobenzene		10	20	40	50	80	100	120
1,4-Dichlorobenzene		10	20	40	50	80	100	120
Benzyl Alcohol		10	20	40	50	80	100	120
1,2-Dichlorobenzene		10	20	40	50	80	100	120
bis(2-Chloroisopropyl)ether		10	20	40	50	80	100	120
o-Cresol (2-Methylphenol)		10	20	40	50	80	100	120
Acetophenone		10	20	40	50	80	100	120
N-Nitrosodipropylamine	1	10	20	40	50	80	100	120
m,p-Cresols (3-Methylphenol & 4-Methylphenol)		10	20	40	50	80	100	120
Hexachloroethane		10	20	40	50	80	100	120
Nitrobenzene		10	20	40	50	80	100	120
Isophorone		10	20	40	50	80	100	120
2-Nitrophenol		10	20	40	50	80	100	120
2,4-Dimethylphenol		10	20	40	50	80	100	120
bis(2-Chloroethoxy)methane		10	20	40	50	80	100	120
2,4-Dichlorophenol		10	20	40	50	80	100	120
Benzoic Acid			20	40	50	80	100	120
1,2,4-Trichlorobenzene		10	20	40	50	80	100	120
Naphthalene	1	10	20	40	50	80	100	120
4-Chloroaniline		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Caprolactam		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Hexachlorobutadiene		10	20	40	50	80	100	120
4-Chloro-3-methylphenol		10	20	40	50	80	100	120

2-Methylnaphthalene	1	10	20	40	50	80	100	120
1-Methylnaphthalene	1	10	20	40	50	80	100	120
Hexachlorocyclopentadiene		10	20	40	50	80	100	120
1,1'-Biphenyl		10	20	40	50	80	100	120
2,3-Dichloroaniline		10	20	40	50	80	100	120
2,4,6-Trichlorophenol		10	20	40	50	80	100	120
2,4,5-Trichlorophenol		10	20	40	50	80	100	120
2-Chloronaphthalene	1	10	20	40	50	80	100	120
o-Nitroaniline		10	20	40	50	80	100	120
m-Nitroaniline		10	20	40	50	80	100	120
Dimethylphthalate	1	10	20	40	50	80	100	120
2,6-Dinitrotoluene		10	20	40	50	80	100	120
Acenaphthylene	1	10	20	40	50	80	100	120
Acenaphthene	1	10	20	40	50	80	100	120
2,4-Dinitrophenol			20	40	50	80	100	120
Dibenzofuran		10	20	40	50	80	100	120
2,4-Dinitrotoluene		10	20	40	50	80	100	120
Diethylphthalate	1	10	20	40	50	80	100	120
4-Nitrophenol		10	20	40	50	80	100	120
Fluorene	1	10	20	40	50	80	100	120
4-Chlorophenyl phenyl ether		10	20	40	50	80	100	120
2-Methyl-4,6-dinitrophenol		10	20	40	50	80	100	120
p-Nitroaniline		10	20	40	50	80	100	120
Diphenylamine		10	20	40	50	80	100	120
1,2-Diphenylhydrazine		10	20	40	50	80	100	120
Tributylphosphate		10	20	40	50	80	100	120
4-Bromophenyl phenyether		10	20	40	50	80	100	120
Hexachlorobenzene		10	20	40	50	80	100	120
Atrazine		10	20	40	50	80	100	120
Pentachlorophenol		10	20	40	50	80	100	120
n-Octadecane		10	20	40	50	80	100	120
Phenanthrene	1	10	20	40	50	80	100	120
Anthracene	1	10	20	40	50	80	100	120
Di-n-butylphthalate	1	10	20	40	50	80	100	120
Fluoranthene	1	10	20	40	50	80	100	120
Benzidine		10	20	40	50	80	100	120
Pyrene	1	10	20	40	50	80	100	120
Butylbenzylphthalate	1	10	20	40	50	80	100	120
Benzo(a)anthracene	1	10	20	40	50	80	100	120
3,3'-Dichlorobenzidene		10	20	40	50	80	100	120
Chrysene	1	10	20	40	50	80	100	120
bis (2-Ethylhexyl) phthalate	1	10	20	40	50	80	100	120
Di-n-octylphthalate	1	10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Benzo(b)fluoranthene	1	10	20	40	50	80	100	120
Benzo(k)fluoranthene	1	10	20	40	50	80	100	120
Benzo(a)pyrene	1	10	20	40	50	80	100	120
Indeno-(1,2,3-cd)pyrene	1	10	20	40	50	80	100	120
Dibenzo(a,h)anthracene	1	10	20	40	50	80	100	120
Benzo(g,h,i)perylene	1	10	20	40	50	80	100	120
Carbazole	1	10	20	40	50	80	100	120

APPENDIX IX

1,4-Dioxane		10	20	40	50	80	100	120
Methyl methacrylate		10	20	40	50	80	100	120
Ethyl methacrylate		10	20	40	50	80	100	120
2-Picoline		10	20	40	50	80	100	120
N-Nitrosomethylethylamine		10	20	40	50	80	100	120
Methyl methanesulfonate		10	20	40	50	80	100	120
N-Nitrosodiethylamine		10	20	40	50	80	100	120
Ethyl methanesulfonate		10	20	40	50	80	100	120
Pentachloroethane		10	20	40	50	80	100	120
N-Nitrosopyrrolidine		10	20	40	50	80	100	120
N-Nitrosomorpholine		10	20	40	50	80	100	120
o-Toluidine		10	20	40	50	80	100	120
N-Nitrosopiperidine		10	20	40	50	80	100	120
a,a-Dimethylphenethylamine		10	20	40	50	80	100	120
Triethylphosphorothioate		10	20	40	50	80	100	120
2,6-Dichlorophenol		10	20	40	50	80	100	120
Hexachloropropene		10	20	40	50	80	100	120
p-Phenylenediamine		10	20	40	50	80	100	120
N-Nitrosodi-n-butylamine		10	20	40	50	80	100	120
Safrole		10	20	40	50	80	100	120
1,2,4,5-Tetrachlorobenzene		10	20	40	50	80	100	120
Isosafrole		10	20	40	50	80	100	120
1,4-Naphthoquinone		10	20	40	50	80	100	120
m-Dinitrobenzene		10	20	40	50	80	100	120
Pentachlorobenzene		10	20	40	50	80	100	120
1-Naphthylamine		10	20	40	50	80	100	120
2-Naphthylamine		10	20	40	50	80	100	120
2,3,4,6-Tetrachlorophenol		10	20	40	50	80	100	120
5-Nitro-o-toluidine		10	20	40	50	80	100	120
Thionazin		10	20	40	50	80	100	120
Sulfotepp		10	20	40	50	80	100	120
Phorate		10	20	40	50	80	100	120
1,3,5-Trinitrobenzene		10	20	40	50	80	100	120
Phenacetin		10	20	40	50	80	100	120
Diallate (cis and trans)		10	20	40	50	80	100	120

SW846 8270C//8270D/EPA 625

Calibration Standard Concentration Levels*

	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
Dimethoate		10	20	40	50	80	100	120
4-Aminobiphenyl		10	20	40	50	80	100	120
Pentachloronitrobenzene		10	20	40	50	80	100	120
Pronamide		10	20	40	50	80	100	120
Disulfoton		10	20	40	50	80	100	120
Diphenamid		10	20	40	50	80	100	120
Methyl parathion		10	20	40	50	80	100	120
4-Nitroquinoline oxide		10	20	40	50	80	100	120
Propylenimine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
Aramite		10	20	40	50	80	100	120
Kepone		10	20	40	50	80	100	120
p-(Dimethylamino)azobenzene		10	20	40	50	80	100	120

Chlorobenzilate		10	20	40	50	80	100	120
3,3'-Dimethylbenzidine		10	20	40	50	80	100	120
Famphur		10	20	40	50	80	100	120
2-Acetylaminofluorene		10	20	40	50	80	100	120
7,12-Dimethylbenz(a)anthracene		10	20	40	50	80	100	120
3-Methylcholanthrene		10	20	40	50	80	100	120
Hexachlorophene		500	1000	1250	1500	1750	2000	
p-Benzoquinone		10	20	40	50	80	100	120
Parathion		10	20	40	50	80	100	120
Methoxychlor		10	20	40	50	80	100	120
2-Ethoxyethanol		50	75	100	125	150	200	250
cis-Diallate		1.5	3	6	7.5	12	15	18
trans-Diallate		8.5	17	34	42	68	85	102
Dibenzo(a,e)pyrene		50	75	100	125	150	200	250
Phthalic anhydride		50	75	100	125	150	200	250
1,4-Dinitrobenzene		50	75	100	125	150	200	250
(2,3-Dibromopropyl)phosphate		50	75	100	125	150	200	250
Methylenebis(2-chloroaniline)		50	75	100	125	150	200	250
p-Toluidine		10	20	40	50	80	100	120
m-Toluidine		10	20	40	50	80	10	120

SW846 8270C//8270D/EPA 625								
Calibration Standard Concentration Levels*								
	Level 1	Level 2	Level 3	Level 4#	Level 5	Level 6	Level 7	Level 8
bis(Chloromethyl)ether		10	20	40	50	80	100	120
Thiophenol		10	20	40	50	80	100	120
4-Chlorothiophenol		10	20	40	50	80	100	120
4-Chlorophenyl anisole		10	20	40	50	80	100	120
Phthalic acid		10	20	40	50	80	100	120
Hydroxymethyl phthalamide		10	20	40	50	80	100	120
[illegible]		10	20	40	50	80	100	120
[illegible]		10	20	40	50	80	100	120
[illegible]		10	20	40	50	80	100	120
[illegible]		10	20	40	50	80	100	120
[illegible]		10	20	40	50	80	100	120
[illegible]		10	20	40	50	80	100	120
[illegible]		10	20	40	50	80	10	120

All values are mg/L without the prep factor.
# Indicates the calibration verification concentration level used
* Usual calibration levels using SCAN methodology
Level 1 may be included at request of client
(06/08)

Report Date: 07-Jul-2009 16:15

Calibration History

Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Start Cal Date: 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 1.00000		
27-JUN-2009 02:16	MEGAII	/chem/MSD2.i/s062609.b/s2f2616.d
Cal Level: 2 , Cal Amount: 10.00000		
29-JUN-2009 02:32	NEV	/chem/MSD2.i/s062809.b/s2f2828.d
28-JUN-2009 23:03	HEX	/chem/MSD2.i/s062809.b/s2f2817.d
28-JUN-2009 20:47	PEST	/chem/MSD2.i/s062809.b/s2f2810.d
28-JUN-2009 18:31	AP12	/chem/MSD2.i/s062809.b/s2f2803.d
27-JUN-2009 02:40	MEGAII	/chem/MSD2.i/s062609.b/s2f2617.d
Cal Level: 3 , Cal Amount: 20.00000		
29-JUN-2009 02:51	NEV	/chem/MSD2.i/s062809.b/s2f2829.d
28-JUN-2009 23:23	HEX	/chem/MSD2.i/s062809.b/s2f2818.d
28-JUN-2009 21:07	PEST	/chem/MSD2.i/s062809.b/s2f2811.d
28-JUN-2009 18:51	AP12	/chem/MSD2.i/s062809.b/s2f2804.d
27-JUN-2009 03:04	MEGAII	/chem/MSD2.i/s062609.b/s2f2618.d
Cal Level: 4 , Cal Amount: 40.00000		
29-JUN-2009 03:11	NEV	/chem/MSD2.i/s062809.b/s2f2830.d
28-JUN-2009 23:42	HEX	/chem/MSD2.i/s062809.b/s2f2819.d
28-JUN-2009 21:26	PEST	/chem/MSD2.i/s062809.b/s2f2812.d
28-JUN-2009 19:10	AP12	/chem/MSD2.i/s062809.b/s2f2805.d
27-JUN-2009 03:29	MEGAII	/chem/MSD2.i/s062609.b/s2f2619.d
Cal Level: 5 , Cal Amount: 50.00000		
29-JUN-2009 03:30	NEV	/chem/MSD2.i/s062809.b/s2f2831.d
29-JUN-2009 00:01	HEX	/chem/MSD2.i/s062809.b/s2f2820.d
28-JUN-2009 21:45	PEST	/chem/MSD2.i/s062809.b/s2f2813.d
28-JUN-2009 19:30	AP12	/chem/MSD2.i/s062809.b/s2f2806.d
27-JUN-2009 03:53	MEGAII	/chem/MSD2.i/s062609.b/s2f2620.d
Cal Level: 6 , Cal Amount: 80.00000		
29-JUN-2009 03:49	NEV	/chem/MSD2.i/s062809.b/s2f2832.d
29-JUN-2009 00:21	HEX	/chem/MSD2.i/s062809.b/s2f2821.d
28-JUN-2009 22:05	PEST	/chem/MSD2.i/s062809.b/s2f2814.d
28-JUN-2009 19:49	AP12	/chem/MSD2.i/s062809.b/s2f2807.d
27-JUN-2009 04:17	MEGAII	/chem/MSD2.i/s062609.b/s2f2621.d
Cal Level: 7 , Cal Amount: 100.00000		

29-JUN-2009 04:09	NEV	/chem/MSD2.i/s062809.b/s2f2833.d
29-JUN-2009 00:40	HEX	/chem/MSD2.i/s062809.b/s2f2822.d
28-JUN-2009 22:24	PEST	/chem/MSD2.i/s062809.b/s2f2815.d
28-JUN-2009 20:08	AP12	/chem/MSD2.i/s062809.b/s2f2808.d
27-JUN-2009 04:41	MEGAII	/chem/MSD2.i/s062609.b/s2f2622.d

Cal Level: 8 , Cal Amount: 120.00000		
29-JUN-2009 04:28	NEV	/chem/MSD2.i/s062809.b/s2f2834.d
28-JUN-2009 22:44	PEST	/chem/MSD2.i/s062809.b/s2f2816.d
28-JUN-2009 20:28	AP12	/chem/MSD2.i/s062809.b/s2f2809.d
27-JUN-2009 05:05	MEGAII	/chem/MSD2.i/s062609.b/s2f2623.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 40.0		
07-JUL-2009 14:03	MEGAII	/chem/MSD2.i/s070709.b/s2g0702.d
Ccal Level: 4 , Ccal Amount: 40.0		
07-JUL-2009 15:31	PEST	/chem/MSD2.i/s070709.b/s2g0704.d
Ccal Level: 4 , Ccal Amount: 40.0		
07-JUL-2009 14:28	AP12	/chem/MSD2.i/s070709.b/s2g0703.d

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Cal Date : 07-Jul-2009 16:11 ann00964

Calibration File Names:
Level 1: /chem/MSD2.i/s062609.b/s2f2616.d
Level 2: /chem/MSD2.i/s062809.b/s2f2828.d
Level 3: /chem/MSD2.i/s062809.b/s2f2829.d
Level 4: /chem/MSD2.i/s062809.b/s2f2830.d
Level 5: /chem/MSD2.i/s062809.b/s2f2831.d
Level 6: /chem/MSD2.i/s062809.b/s2f2832.d
Level 7: /chem/MSD2.i/s062809.b/s2f2833.d
Level 8: /chem/MSD2.i/s062809.b/s2f2834.d

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
1 N-Methyl-N-nitrosomethylamine	+++++	0.69039	0.72951	0.70150	0.66093	0.67965					
	0.66886	0.66718					AVRG		0.68543		3.50704
2 Pyridine	+++++	0.86520	0.92170	0.93760	0.89132	0.90626					
	0.97413	0.93351					AVRG		0.91853		3.82967
4 Aniline	+++++	0.54735	0.57712	0.56139	0.53009	0.55143					
	0.54745	0.54019					AVRG		0.55072		2.74368
209 Benzaldehyde	+++++	0.87905	0.93930	0.87221	0.86925	0.84625					
	0.82101	0.75879					AVRG		0.85512		6.52380
6 Phenol	+++++	1.46571	1.51634	1.43616	1.34991	1.34475					
	1.33903	1.29504					AVRG		1.39242		5.79415

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Cal Date : 07-Jul-2009 16:11 ann00964

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
7 bis(2-Chloroethyl) ether	1.05547	1.07090	1.10049	1.04112	0.98051	0.98108					
	0.97714	0.94276					AVRG		1.01868		5.45749
8 2-Chlorophenol	+++++	1.22115	1.29024	1.22223	1.14751	1.14427					
	1.14285	1.11008					AVRG		1.18262		5.36811
203 n-Decane	+++++	1.79885	1.79755	1.64128	1.53904	1.36489					
	1.40609	1.23127					AVRG		1.53985		14.21564
9 1,3-Dichlorobenzene	+++++	1.44788	1.45807	1.37028	1.28760	1.24616					
	1.24913	1.17375					AVRG		1.31898		8.23866
11 1,4-Dichlorobenzene	+++++	1.46286	1.46802	1.36944	1.28961	1.23077					
	1.24012	1.16149					AVRG		1.31747		9.03997
12 Benzyl alcohol	+++++	0.77831	0.82396	0.80753	0.75509	0.77236					
	0.75853	0.75992					AVRG		0.77939		3.40855
13 1,2-Dichlorobenzene	+++++	1.36658	1.36378	1.23263	1.15598	1.04264					
	1.07125	0.95328					AVRG		1.16945		13.66615
14 bis(2-Chloroisopropyl)ether	+++++	2.50121	2.52978	2.38393	2.23799	2.15967					
	2.17847	2.00949					AVRG		2.28579		8.40797
15 o-Cresol	+++++	0.95590	0.98573	0.91181	0.85653	0.80175					
	0.81510	0.74571					AVRG		0.86750		10.06907

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
16 Acetophenone	+++++	1.22384	1.29748	1.21187	1.20257	1.19254					
	1.17596	1.08741					AVRG		1.19881		5.22238
17 N-Nitrosodipropylamine	0.73956	0.87005	0.91720	0.87383	0.82323	0.83620					
	0.82564	0.80637					AVRG		0.83651		6.33048
18 m,p-Cresols	+++++	1.22788	1.28634	1.23739	1.16848	1.19210					
	1.17119	1.17505					AVRG		1.20835		3.64675
19 Hexachloroethane	+++++	0.51229	0.53508	0.50797	0.47973	0.47238					
	0.47342	0.45215					AVRG		0.49043		5.87067
21 Nitrobenzene	+++++	0.32753	0.33058	0.30836	0.28626	0.27168					
	0.25189	0.24815					AVRG		0.28921		11.76073
22 Isophorone	+++++	0.61385	0.62546	0.57462	0.53543	0.51915					
	0.48565	0.48570					AVRG		0.54855		10.47275
23 2-Nitrophenol	+++++	0.16270	0.15720	0.14780	0.13984	0.13238					
	0.12726	0.12055					AVRG		0.14110		11.06292
24 2,4-Dimethylphenol	+++++	0.34805	0.38714	0.38568	0.36156	0.35852					
	0.33752	0.34099					AVRG		0.35992		5.56929
25 bis(2-Chloroethoxy)methane	+++++	0.38255	0.38068	0.34149	0.31672	0.29025					
	0.27765	0.26754					AVRG		0.32241		14.68930

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Cal Date : 07-Jul-2009 16:11 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
26 2,4-Dichlorophenol	+++++	0.24032	0.25043	0.23132	0.21657	0.20464					
	0.18978	0.18966					AVRG		0.21753		11.11236
27 Benzoic acid	+++++	+++++	0.12323	0.14092	0.13590	0.15073					
	0.14033	0.15639					AVRG		0.14125		8.21762
28 1,2,4-Trichlorobenzene	+++++	0.29566	0.29122	0.26037	0.24344	0.22377					
	0.21259	+++++					AVRG		0.25451		13.49716
30 Naphthalene	1.06207	1.01462	0.98540	0.85424	0.79343	+++++					
	+++++	+++++					AVRG		0.94195		12.02841
204 alpha-Terpineol	+++++	0.30102	0.30144	0.27351	0.25618	0.23365					
	0.22385	0.20916					AVRG		0.25697		14.31412
31 4-Chloroaniline	+++++	0.38934	0.42365	0.39825	0.37594	0.34649					
	0.32934	0.31761					AVRG		0.36866		10.51922
189 Caprolactam	+++++	0.07438	0.08756	0.08798	0.08978	0.09316					
	0.09272	0.07649					AVRG		0.08601		8.78430
32 Hexachlorobutadiene	+++++	0.15222	0.15253	0.13591	0.12725	0.11677					
	0.11329	0.10593					AVRG		0.12913		14.39176
33 4-Chloro-3-methylphenol	+++++	0.24254	0.25133	0.23305	0.21576	0.20869					
	0.19634	0.19460					AVRG		0.22033		10.16630

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
34 2-Methylnaphthalene	0.61627	0.61413	0.59557	0.52918	0.49047	0.43750					
	+++++	+++++					AVRG		0.54719		13.47068
35 1-Methylnaphthalene	0.65836	0.64408	0.62164	0.55038	0.51269	0.45385					
	+++++	+++++					AVRG		0.57350		14.17642
36 Hexachlorocyclopentadiene	+++++	0.15683	0.18566	0.18509	0.17867	0.17719					
	0.16396	0.16091					AVRG		0.17262		6.87379
208 1,1'-Biphenyl	+++++	1.31230	1.35004	1.20122	1.20269	1.12846					
	1.07439	+++++					AVRG		1.21152		8.67510
205 2,3-Dichloroaniline	+++++	0.58190	0.61084	0.56762	0.53224	0.49923					
	0.50106	0.44766					AVRG		0.53436		10.55301
37 2,4,6-Trichlorophenol	+++++	0.30229	0.32112	0.32700	0.31364	0.27643					
	0.28448	0.24464					AVRG		0.29566		9.85703
38 2,4,5-Trichlorophenol	+++++	0.34231	0.38184	0.34308	0.32995	0.33854					
	0.33063	0.32601					AVRG		0.34176		5.51289
40 2-Chloronaphthalene	1.09290	1.08113	1.08949	1.01572	0.95230	0.89075					
	0.89856	0.82202					AVRG		0.98036		10.66760
42 o-Nitroaniline	+++++	0.27903	0.30714	0.31024	0.29525	0.30377					
	0.29871	0.29495					AVRG		0.29844		3.46682

GEL Laboratories LLC

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Cal Date : 07-Jul-2009 16:11 ann00964

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
41 m-Nitroaniline	+++++	0.19547	0.22895	0.25638	0.24356	0.25315					
	0.24606	0.24731					AVRG		0.23870		8.78227
43 Dimethylphthalate	+++++	1.22393	1.25917	1.17520	1.11662	1.08535					
	1.07942	1.02338					AVRG		1.13758		7.46313
44 2,6-Dinitrotoluene	+++++	0.27918	0.30041	0.28943	0.27384	0.26719					
	0.26625	0.25103					AVRG		0.27533		5.90117
45 Acenaphthylene	1.63476	1.78414	1.81104	1.66333	1.56180	1.46336					
	1.45283	1.33623					AVRG		1.58844		10.47930
47 Acenaphthene	1.24714	1.12257	1.11696	1.01038	0.93440	0.83192					
	+++++	+++++					AVRG		1.04389		14.26541
48 2,4-Dinitrophenol	+++++	+++++	14830	38648	42093	86876					
	73327	114749					LINR	0.19589	0.11047		0.99746
49 Dibenzofuran	+++++	1.54218	1.54361	1.42238	1.33354	1.23825					
	1.23959	1.14217					AVRG		1.35168		11.61081
50 2,4-Dinitrotoluene	+++++	0.32241	0.35522	0.36066	0.34084	0.34591					
	0.34092	0.33105					AVRG		0.34243		3.85045
51 Diethylphthalate	+++++	1.23228	1.24147	1.15655	1.09394	1.04036					
	1.04596	0.96131					AVRG		1.11027		9.42648

GEL Laboratories LLC

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Cal Date : 07-Jul-2009 16:11 ann00964

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
52 4-Nitrophenol	+++++	0.14566	0.16856	0.18182	0.17258	0.17034					
	0.16713	0.16802					AVRG		0.16773		6.51871
53 Fluorene	1.27314	1.30157	1.27309	1.13280	1.06756	0.94025					
	0.94446	+++++					AVRG		1.13327		13.70159
54 4-Chlorophenylphenylether	+++++	0.58604	0.58562	0.54938	0.51757	0.47803					
	0.48248	0.43360					AVRG		0.51896		11.16990
55 2-Methyl-4,6-dinitrophenol	+++++	9100	30013	65052	69783	134205					
	116111	178378					LINR	0.10059	0.09828		0.99935
56 p-Nitroaniline	+++++	0.16374	0.17999	0.22053	0.21515	0.22182					
	0.20157	0.20958					AVRG		0.20177		10.92280
133 Diphenylamine	+++++	0.61082	0.60843	0.55622	0.52177	0.49063					
	0.49083	0.46088					AVRG		0.53423		11.12025
58 1,2-Diphenylhydrazine	+++++	0.75120	0.79654	0.72292	0.68243	0.64978					
	0.64441	0.61112					AVRG		0.69406		9.49164
59 Tributylphosphate	+++++	1.08075	1.14516	1.15861	1.09688	1.06726					
	1.03024	0.99069					AVRG		1.08137		5.51158
61 4-Bromophenylphenylether	+++++	0.18307	0.19354	0.17513	0.16553	0.15356					
	0.15325	0.14245					AVRG		0.16665		10.96239

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INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Cal Date : 07-Jul-2009 16:11 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
63 Hexachlorobenzene	+++++	0.20045	0.21246	0.19273	0.18176	0.17202						
	0.16827	0.15968					AVRG		0.18391		10.27984	
207 Atrazine	+++++	0.04721	0.04969	0.04483	0.04470	0.04375						
	0.04029	0.03794					AVRG		0.04406		8.99731	
65 Pentachlorophenol	+++++	0.07738	0.09995	0.10308	0.09843	0.10166						
	0.09959	0.09530					AVRG		0.09648		9.09625	
206 n-Octadecane	+++++	0.61277	0.64232	0.55712	0.52071	0.42108						
	+++++	+++++					AVRG		0.55080		15.72005	<-
68 Phenanthrene	1.12620	1.04733	1.03801	0.96924	0.86678	0.79753						
	0.82243	+++++					AVRG		0.95250		13.21323	
69 Anthracene	0.99489	1.04469	1.05390	0.94444	0.92789	0.82252						
	0.80159	0.75921					AVRG		0.91864		12.28174	
72 Di-n-butylphthalate	+++++	1.13957	1.24371	1.12414	1.05987	0.97905						
	0.98201	0.89443					AVRG		1.06040		11.17434	
76 Fluoranthene	0.86288	1.00215	1.00056	0.93825	0.87050	0.79440						
	0.80778	0.73329					AVRG		0.87623		11.18058	
77 Benzidine	+++++	22872	62918	166793	224649	446051						
	564014	848216					LINR	0.23685	0.44179		0.99510	

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Cal Date : 07-Jul-2009 16:11 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
79 Pyrene	1.34330	1.27250	1.37499	1.21096	1.13484	1.07700					
	1.09795	1.01424					AVRG		1.19072		11.00224
85 Butylbenzylphthalate	+++++	0.52085	0.59986	0.51594	0.49136	0.45596					
	0.47145	0.42685					AVRG		0.49747		11.25114
89 Benzo(a)anthracene	1.04673	0.97487	1.05606	0.99557	0.93319	0.92987					
	0.93218	0.91723					AVRG		0.97321		5.63703
90 3,3'-Dichlorobenzidine	+++++	0.18780	0.23328	0.25613	0.27282	0.29355					
	0.29207	0.27475					AVRG		0.25863		14.52335
92 Chrysene	0.97507	1.02354	0.98860	0.94517	0.89334	0.88895					
	0.91213	0.88692					AVRG		0.93921		5.54276
93 bis(2-Ethylhexyl)phthalate	0.54232	0.72896	0.86988	0.79184	0.75313	0.73043					
	0.76239	0.69130					AVRG		0.73378		12.78238
94 Di-n-octylphthalate	+++++	1.14313	1.45599	1.36696	1.26834	1.28529					
	1.35701	1.22886					AVRG		1.30080		7.87435
95 Benzo(b)fluoranthene	0.87387	1.01569	0.99473	0.99671	0.92029	0.94238					
	0.95465	0.98368					AVRG		0.96025		4.90832
96 Benzo(k)fluoranthene	0.93389	1.01628	1.12965	1.06131	1.03858	0.99069					
	1.02832	0.90660					AVRG		1.01317		6.97095

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
97 Benzo(a)pyrene	0.67985	0.83878	0.87957	0.89970	0.84749	0.85752					
	0.87472	0.83416					AVRG		0.83897		8.10580
99 Indeno(1,2,3-cd)pyrene	0.64000	0.82233	0.81361	0.88071	0.77965	0.82885					
	0.85683	0.82546					AVRG		0.80593		9.09898
100 Dibenzo(a,h)anthracene	0.50405	0.64680	0.63724	0.70642	0.63479	0.67471					
	0.69689	0.67274					AVRG		0.64671		9.80209
101 Benzo(ghi)perylene	0.59868	0.71182	0.70702	0.75708	0.66677	0.71134					
	0.74457	0.70082					AVRG		0.69976		7.02871
102 1,4-Dioxane	+++++	0.39772	0.40311	0.37296	0.36975	0.37134					
	0.36894	0.33784					AVRG		0.37452		5.73436
103 Methyl methacrylate	+++++	0.20996	0.22614	0.21209	0.21072	0.21330					
	0.21114	0.18984					AVRG		0.21046		5.06778
104 Ethyl methacrylate	+++++	0.79857	0.84722	0.80112	0.80411	0.80737					
	0.81266	0.74558					AVRG		0.80237		3.73419
105 2-Picoline	+++++	1.25271	1.33893	1.25469	1.25060	1.24109					
	1.23220	1.11687					AVRG		1.24101		5.25228
106 N-Nitrosomethylethylamine	+++++	0.49901	0.54314	0.52387	0.52344	0.53620					
	0.54908	0.53084					AVRG		0.52937		3.09819

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
107 Methyl methanesulfonate	+++++	0.47052	0.50126	0.47524	0.46945	0.47491					
	0.47042	0.45601					AVRG		0.47397		2.87551
108 N-Nitrosodiethylamine	+++++	0.51998	0.56646	0.54327	0.53716	0.54527					
	0.55248	0.52328					AVRG		0.54113		2.99287
109 Ethyl Methanesulfonate	+++++	0.63006	0.67809	0.63459	0.63852	0.64934					
	0.65680	0.63462					AVRG		0.64600		2.62667
110 Pentachloroethane	+++++	0.30499	0.32835	0.31041	0.31171	0.31672					
	0.31609	0.29592					AVRG		0.31203		3.24854
111 N-Nitrosopyrrolidine	+++++	0.49461	0.55822	0.55049	0.55217	0.56133					
	0.56208	0.52723					AVRG		0.54373		4.54126
113 N-Nitrosomorpholine	+++++	0.70881	0.75811	0.72140	0.72252	0.73332					
	0.73620	0.67535					AVRG		0.72224		3.56797
114 o-Toluidine	+++++	1.81344	1.94243	1.83859	1.82660	1.77553					
	1.76318	1.60663					AVRG		1.79520		5.65548
115 N-Nitrosopiperidine	+++++	0.14337	0.15582	0.14726	0.14726	0.15193					
	0.14972	0.14382					AVRG		0.14845		2.98731
116 a,a-Dimethylphenethylamine	+++++	0.57425	0.72322	0.76162	0.78421	0.85786					
	0.86301	0.82195					AVRG		0.76945		12.97979

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
117 Triethylphosphorothioate	+++++	0.14418	0.14938	0.14232	0.13965	0.13684					
	0.12762	0.11819					AVRG		0.13688		7.78882
118 2,6-Dichlorophenol	+++++	0.19961	0.22277	0.21643	0.21941	0.22653					
	0.22167	0.20864					AVRG		0.21644		4.31018
119 Hexachloropropene	+++++	0.07288	0.09224	0.09316	0.09615	0.10218					
	0.10311	0.09990					AVRG		0.09423		10.95111
120 p-Phenylenediamine	+++++	0.15582	0.20451	0.23862	0.24890	0.24828					
	0.23839	0.22055					AVRG		0.22216		14.98248
121 N-Nitrosodi-n-butylamine	+++++	0.22439	0.25129	0.23557	0.19879	0.19823					
	0.19383	0.18437					AVRG		0.21235		11.70943
122 Safrole	+++++	0.19695	0.21207	0.19719	0.19841	0.19789					
	0.19197	0.17613					AVRG		0.19580		5.44019
123 1,2,4,5-Tetrachlorobenzene	+++++	0.44571	0.45113	0.41057	0.40974	0.39204					
	0.37322	0.34950					AVRG		0.40456		9.07998
124 Isosafrole	+++++	0.33722	0.36762	0.35274	0.35141	0.35716					
	0.35384	0.33963					AVRG		0.35137		2.94726
125 1,4-Naphthoquinone	+++++	0.30635	0.38081	0.36257	0.35511	0.32509					
	0.30744	0.28441					AVRG		0.33168		10.60498

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Cal Date : 07-Jul-2009 16:11 ann00964

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
126 m-Dinitrobenzene	+++++	0.17541	0.20057	0.20342	0.19466	0.19942					
	0.19513	0.19233					AVRG		0.19442		4.74365
127 Pentachlorobenzene	+++++	0.38078	0.39337	0.36052	0.36180	0.35374					
	0.33562	0.30840					AVRG		0.35632		7.89644
128 1-Naphthylamine	+++++	0.89219	0.96731	0.94680	0.96309	0.93980					
	0.90534	0.83429					AVRG		0.92126		5.15448
129 2-Naphthylamine	+++++	0.95674	1.03123	1.02844	1.05408	1.03895					
	0.99761	0.92539					AVRG		1.00463		4.72498
130 2,3,4,6-Tetrachlorophenol	+++++	0.28377	0.31045	0.28533	0.26800	0.27346					
	0.26536	0.23698					AVRG		0.27476		8.17853
131 5-Nitro-o-toluidine	+++++	16520	48018	110753	131396	238779					
	306628	428864					LINR	0.10413	0.31599		0.99907
132 Thionazin	+++++	0.16905	0.17849	0.18173	0.17207	0.17103					
	0.16242	0.15725					AVRG		0.17029		5.00232
134 Sulfotepp	+++++	0.10023	0.10187	0.10250	0.09686	0.09057					
	0.08805	0.08077					AVRG		0.09441		8.67017
135 Phorate	+++++	0.38689	0.39399	0.39568	0.37643	0.36365					
	0.35192	0.32231					AVRG		0.37013		7.15082

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Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
136 1,3,5-Trinitrobenzene	+++++	7249	24622	65831	82495	150694					
	193765	278057					LINR	0.17364	0.12282		0.99955
137 Phenacetin	+++++	0.18974	0.23994	0.24142	0.24633	0.26389					
	0.26582	0.26374					AVRG		0.24441		10.86750
138 Diallate	+++++	0.29105	0.29277	0.25721	0.25477	0.25095					
	0.24113	0.22815					AVRG		0.25943		9.34012
139 Dimethoate	+++++	0.20718	0.22900	0.24121	0.23799	0.24471					
	0.24405	0.23962					AVRG		0.23482		5.64543
140 4-Aminobiphenyl	+++++	0.44908	0.51202	0.47968	0.49819	0.53554					
	0.50604	0.45671					AVRG		0.49104		6.31269
141 Pentachloronitrobenzene	+++++	0.06058	0.06747	0.06295	0.06212	0.06304					
	0.06031	0.05529					AVRG		0.06168		5.96047
142 Pronamide	+++++	0.27080	0.29112	0.25926	0.25598	0.22611					
	0.21066	+++++					AVRG		0.25232		11.66466
143 Dinoseb	+++++	12725	46848	105565	110643	211821					
	185297	272725					LINR	0.08825	0.15291		0.99806
144 Disulfoton	+++++	0.34980	0.35064	0.34865	0.33531	0.31908					
	0.30426	0.27842					AVRG		0.32659		8.43667

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	100 Level 7	120 Level 8									
145 Methyl parathion	+++++	0.13639	0.16231	0.18078	0.17561	0.18580					
	0.18424	0.18201					AVRG		0.17245		10.29419
146 4-Nitroquinoline-1-oxide	+++++	1986	8303	17052	21060	34048					
	+++++	+++++					LINR	0.05856	0.02694		0.99309
147 Methapyrilene	+++++	0.43796	0.52317	0.47267	0.47915	0.45098					
	0.40172	0.34816					AVRG		0.44483		12.77554
148 Isodrin	+++++	0.10982	0.11290	0.10130	0.10133	0.09963					
	0.09488	0.08905					AVRG		0.10127		8.07610
149 Aramite	+++++	0.03964	0.04717	0.04605	0.04734	0.04932					
	0.04730	0.04602					AVRG		0.04612		6.63351
150 Kepone	+++++	0.06380	0.07655	0.07250	0.07309	0.07540					
	0.07338	0.07194					AVRG		0.07238		5.69557
151 p-(Dimethylamino)azobenzene	+++++	0.30974	0.34670	0.32805	0.31690	0.31425					
	0.31275	0.28115					AVRG		0.31565		6.27537
152 Chlorobenzilate	+++++	0.28985	0.29768	0.27730	0.26468	0.26092					
	0.25904	0.22989					AVRG		0.26848		8.37983
153 3,3'-Dimethylbenzidine	+++++	0.40033	0.46884	0.47816	0.49648	0.52910					
	0.53546	0.52449					AVRG		0.49041		9.65612

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154 Famphur	+++++	0.33413	0.33836	0.37345	0.36796	0.36875					
	0.38338	0.35503					AVRG		0.36015		5.10679
155 2-Acetylaminofluorene	+++++	13639	53322	139323	180338	352859					
	426563	617426					LINR	0.18098	0.32395		0.99879
157 7,12Dimethylbenz(a)anthracene	+++++	0.45506	0.48633	0.47694	0.47156	0.48232					
	0.48628	0.45160					AVRG		0.47287		3.03811
158 3-Methylcholanthrene	+++++	0.32290	0.39428	0.39389	0.41296	0.44058					
	0.43581	0.42267					AVRG		0.40330		9.89218
26 Phthalic anhydride	+++++	9279	28432	88382	98010	174350					
	155303	233968					LINR	0.08557	0.10270		0.99452
173 Carbazole	0.76996	0.78964	0.67561	0.73091	0.70289	0.71013					
	0.69698	0.66805					AVRG		0.71802		6.00716
174 Hexachlorophene	+++++	0.04729	0.05480	0.06131	0.06240	0.05994					
	0.06360	+++++					AVRG		0.05822		10.58982
179 Dibenzo(a,e)pyrene	+++++	0.40291	0.35847	0.45818	0.33173	0.41418					
	0.46603	0.40080					AVRG		0.40461		12.01988
185 (2,3-Dibromopropyl)phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-

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	100 Level 7	120 Level 8									
184 p-Benzoquinone	+++++	3150	11516	23358	26594	48466					
	46443	68308					LINR	0.16246	0.14101		0.99754
191 Parathion	+++++	0.05529	0.06328	0.07150	0.06943	0.07088					
	0.07101	0.06676					AVRG		0.06688		8.80608
192 Methoxychlor	+++++	0.46435	0.58624	0.57649	0.51368	0.54017					
	0.54881	0.50354					AVRG		0.53333		8.02107
210 m-Toluidine	+++++	1.49620	1.38339	1.68036	1.63844	1.62579					
	1.55123	1.72011					AVRG		1.58507		7.35471
211 p-Toluidine	+++++	1.01959	1.23757	1.10717	1.03885	1.13933					
	1.16181	0.98132					AVRG		1.09795		8.19734
212 Cis Diallate	+++++	0.28988	0.29966	0.28366	0.28200	0.28772					
	0.28729	0.28618					AVRG		0.28806		1.99541
213 Trans Diallate	+++++	0.34241	0.34326	0.30222	0.29953	0.29524					
	0.28357	0.26826					AVRG		0.30493		9.28034
214 1,4-Dinitrobenzene	+++++	0.17749	0.21032	0.22035	0.21167	0.22213					
	0.21406	0.21900					AVRG		0.21072		7.27016
215 2-Ethoxyethanol	+++++	0.77687	0.83191	0.80656	0.77164	0.78617					
	0.79097	0.78383					AVRG		0.79256		2.60025

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Cal Date : 07-Jul-2009 16:11 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	100 Level 7	120 Level 8									
216 Methylenebis(2-chloroaniline)	+++++	12805	28290	73347	76015	163504					
	143350	227450					LINR	0.22688	0.16489		0.99276
226 2,2'-Dichlorobenzil	+++++	0.66353	0.63564	0.69938	0.71605	+++++					
	0.61894	0.61670					AVRG		0.65837		6.38794
227 4-Chlorothioanisole	+++++	0.24506	0.23206	0.25611	0.24444	+++++					
	0.22647	0.22185					AVRG		0.23767		5.47811
228 4-Chlorothiophenol	+++++	16402	35170	110583	127434	+++++					
	369945	362685					LINR	0.16556	0.19296		0.99881
229 bis(p-Chlorophenyl)sulfone	+++++	0.43190	0.39213	0.41296	0.42357	+++++					
	0.35674	0.35512					AVRG		0.39540		8.43542
230 bis(p-Chlorophenyl)disulfide	+++++	0.13289	0.12954	0.13348	0.13989	+++++					
	0.13874	0.13358					AVRG		0.13469		2.89412
231 Diphenyl disulfide	+++++	0.21076	0.20544	0.20636	0.21043	+++++					
	0.20788	0.19706					AVRG		0.20632		2.42897
232 Diphenyl sulfide	+++++	0.77433	0.71574	0.74089	0.72654	+++++					
	0.63212	0.61110					AVRG		0.70012		9.18145
233 Phenyl sulfone	+++++	0.45053	0.43893	0.43334	0.43289	+++++					
	0.40522	0.38870					AVRG		0.42493		5.45500

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Cal Date : 07-Jul-2009 16:11 ann00964

Compound	1 Level 1 100 Level 7	10 Level 2 120 Level 8	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
234 Hydroxymethyl phthalimide	+++++	0.10467	0.13108	0.13853	0.12812	+++++						
	0.09771	0.10338					AVRG		0.11725		14.74617	
235 Phthalic acid	+++++	6901	14671	49475	59125	+++++						
	224418	229358					LINR	0.33489	0.12663		0.99106	
236 Thiophenol	+++++	32180	64610	165609	195072	+++++						
	558912	549454					LINR	0.11114	1.06569		0.99908	
237 bis(Chloromethyl)ether	+++++	0.84495	0.79365	0.86291	0.82523	+++++						
	0.79051	0.76601					AVRG		0.81388		4.51297	
238 Octachlorostyrene	+++++	0.07576	0.07428	0.07540	0.07664	+++++						
	0.06778	0.06554					AVRG		0.07257		6.46624	
M 222 Trichlorophenols	+++++	0.32230	0.35148	0.33504	0.32180	0.30748						
	0.30756	0.28533					AVRG		0.31871		6.69034	
M 223 Tetrachlorophenols	+++++	0.28377	0.31045	0.28533	0.26800	0.27346						
	0.26536	0.23698					AVRG		0.27476		8.17853	
M 224 Benzo(b,k)fluoranthene	0.90388	1.01599	1.06219	1.02901	0.97944	0.96653						
	0.99148	0.94514					AVRG		0.98671		5.05498	
M 225 TTO Sum Semivolatiles	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Cal Date : 07-Jul-2009 16:11 ann00964

Compound	1 Level 1	10 Level 2	20 Level 3	40 Level 4	50 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	100 Level 7	120 Level 8										
$ 3 2-Fluorophenol	+++++	1.11390	1.17947	1.13740	1.07315	1.08214						
	1.09504	1.06683					AVRG		1.10685		3.64091	
$ 5 Phenol-d5	+++++	1.40468	1.49093	1.41246	1.33021	1.32629						
	1.31886	1.28434					AVRG		1.36682		5.25941	
$ 187 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 188 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
$ 20 Nitrobenzene-d5	+++++	0.33115	0.34312	0.31862	0.29770	0.28653						
	0.26834	0.26708					AVRG		0.30179		9.96470	
$ 39 2-Fluorobiphenyl	+++++	1.30270	1.30016	1.18745	1.11084	1.02835						
	1.04071	0.93774					AVRG		1.12971		12.39866	
$ 60 2,4,6-Tribromophenol	+++++	0.12926	0.14519	0.14483	0.13812	0.13844						
	0.13560	0.12756					AVRG		0.13700		5.00904	
$ 81 p-Terphenyl-d14	+++++	0.73551	0.79284	0.69691	0.65932	0.63740						
	0.64073	0.60652					AVRG		0.68132		9.52562	

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2009 02:16
End Cal Date : 29-JUN-2009 04:28
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Cal Date : 07-Jul-2009 16:11 ann00964

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

Data File: /chem/MSD2.i/s062609.b/s2f2625.d
Report Date: 29-Jun-2009 12:08

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2f2625.d
Analysis Type:
Lab Sample ID: WBN090626-09.1
Method: /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m

Injection Date: 27-JUN-2009 05:54
Init. Cal. Date(s): 27-JUN-2009 27-JUN-2009
Init. Cal. Times: 02:16 05:05
Quant Type: ISTD

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$	3 2-Fluorophenol	1.10685	1.17178	1.17178	0.000	5.86682	60.00000	Averaged	
$	5 Phenol-d5	1.36682	1.39574	1.39574	0.000	2.11573	60.00000	Averaged	
$	20 Nitrobenzene-d5	0.30179	0.33074	0.33074	0.000	9.59180	60.00000	Averaged	
$	39 2-Fluorobiphenyl	1.12971	1.24615	1.24615	0.000	10.30702	60.00000	Averaged	
$	60 2,4,6-Tribromophenol	0.13700	0.15078	0.15078	0.000	10.06079	60.00000	Averaged	
$	81 p-Terphenyl-d14	0.68132	0.78070	0.78070	0.000	14.58697	60.00000	Averaged	
	1 N-Methyl-N-nitrosomethylami	0.68543	0.76584	0.76584	0.000	11.73072	60.00000	Averaged	
	2 Pyridine	0.91853	0.86229	0.86229	0.000	-6.12306	60.00000	Averaged	
	4 Aniline	0.55072	0.57317	0.57317	0.000	4.07658	60.00000	Averaged	
	6 Phenol	1.39242	1.43236	1.43236	0.001	2.86843	20.00000	Averaged	ccc
	7 bis(2-Chloroethyl) ether	1.01868	1.03922	1.03922	0.000	2.01606	60.00000	Averaged	
	8 2-Chlorophenol	1.18262	1.23519	1.23519	0.000	4.44553	60.00000	Averaged	
	203 n-Decane	1.53985	1.60413	1.60413	0.000	4.17402	60.00000	Averaged	
	9 1,3-Dichlorobenzene	1.31898	1.40893	1.40893	0.000	6.81954	60.00000	Averaged	
	11 1,4-Dichlorobenzene	1.31747	1.36837	1.36837	0.001	3.86361	20.00000	Averaged	ccc
	13 1,2-Dichlorobenzene	1.16945	1.21643	1.21643	0.000	4.01722	60.00000	Averaged	
	14 bis(2-Chloroisopropyl)ether	2.28579	2.41210	2.41210	0.000	5.52573	60.00000	Averaged	
	12 Benzyl alcohol	0.77939	0.82303	0.82303	0.000	5.59989	60.00000	Averaged	
	15 o-Cresol	0.86750	0.87142	0.87142	0.000	0.45124	60.00000	Averaged	
	18 m,p-Cresols	1.20835	1.28000	1.28000	0.000	5.92963	60.00000	Averaged	
	17 N-Nitrosodipropylamine	0.83651	0.88727	0.88727	0.050	6.06876	60.00000	Averaged	spcc
	19 Hexachloroethane	0.49043	0.50579	0.50579	0.000	3.13108	60.00000	Averaged	
	21 Nitrobenzene	0.28921	0.31629	0.31629	0.000	9.36578	60.00000	Averaged	
	22 Isophorone	0.54855	0.57925	0.57925	0.000	5.59589	60.00000	Averaged	
	23 2-Nitrophenol	0.14110	0.15568	0.15568	0.001	10.33046	20.00000	Averaged	ccc
	24 2,4-Dimethylphenol	0.35992	0.42881	0.42881	0.000	19.13912	60.00000	Averaged	
	25 bis(2-Chloroethoxy)methane	0.32241	0.35122	0.35122	0.000	8.93649	60.00000	Averaged	
	26 2,4-Dichlorophenol	0.21753	0.23746	0.23746	0.001	9.16146	20.00000	Averaged	ccc
	27 Benzoic acid	0.14125	0.17436	0.17436	0.000	23.44089	60.00000	Averaged	
	28 1,2,4-Trichlorobenzene	0.25451	0.25793	0.25793	0.000	1.34477	60.00000	Averaged	
	30 Naphthalene	0.94195	0.88268	0.88268	0.000	-6.29195	60.00000	Averaged	
	204 alpha-Terpineol	0.25697	0.26727	0.26727	0.000	4.00622	60.00000	Averaged	
	31 4-Chloroaniline	0.36866	0.41756	0.41756	0.000	13.26317	60.00000	Averaged	
	32 Hexachlorobutadiene	0.12913	0.13787	0.13787	0.001	6.76658	20.00000	Averaged	ccc
	33 4-Chloro-3-methylphenol	0.22033	0.24191	0.24191	0.001	9.79481	20.00000	Averaged	ccc
	34 2-Methylnaphthalene	0.54719	0.59562	0.59562	0.000	8.85038	60.00000	Averaged	

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2f2625.d
Analysis Type:
Lab Sample ID: WBN090626-09.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m

Injection Date: 27-JUN-2009 05:54
Init. Cal. Date(s): 27-JUN-2009 27-JUN-2009
Init. Cal. Times: 02:16 05:05

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
35	1-Methylnaphthalene	0.57350	0.55994	0.55994	0.000	-2.36393	60.00000	Averaged
36	Hexachlorocyclopentadiene	0.17262	0.16622	0.16622	0.050	-3.70260	60.00000	Averaged spcc
205	2,3-Dichloroaniline	0.53436	0.58180	0.58180	0.000	8.87692	60.00000	Averaged
37	2,4,6-Trichlorophenol	0.29566	0.34293	0.34293	0.001	15.98835	20.00000	Averaged ccc
38	2,4,5-Trichlorophenol	0.34176	0.36993	0.36993	0.000	8.24257	60.00000	Averaged
40	2-Chloronaphthalene	0.98036	1.04394	1.04394	0.000	6.48523	60.00000	Averaged
42	o-Nitroaniline	0.29844	0.32423	0.32423	0.000	8.64225	60.00000	Averaged
41	m-Nitroaniline	0.23870	0.27422	0.27422	0.000	14.88399	60.00000	Averaged
43	Dimethylphthalate	1.13758	1.28061	1.28061	0.000	12.57297	60.00000	Averaged
44	2,6-Dinitrotoluene	0.27533	0.29805	0.29805	0.000	8.25341	60.00000	Averaged
50	2,4-Dinitrotoluene	0.34243	0.36829	0.36829	0.000	7.55082	60.00000	Averaged
45	Acenaphthylene	1.58844	1.78524	1.78524	0.000	12.38970	60.00000	Averaged
47	Acenaphthene	1.04389	1.03692	1.03692	0.001	-0.66848	20.00000	Averaged ccc
48	2,4-Dinitrophenol	41.54860	40.00000	0.09311	0.050	3.87150	60.00000	Linear spcc
49	Dibenzofuran	1.35168	1.47216	1.47216	0.000	8.91346	60.00000	Averaged
51	Diethylphthalate	1.11027	1.25912	1.25912	0.000	13.40739	60.00000	Averaged
52	4-Nitrophenol	0.16773	0.18740	0.18740	0.050	11.72935	60.00000	Averaged spcc
53	Fluorene	1.13327	1.18450	1.18450	0.000	4.52096	60.00000	Averaged
54	4-Chlorophenylphenylether	0.51896	0.58121	0.58121	0.000	11.99434	60.00000	Averaged
55	2-Methyl-4,6-dinitrophenol	51.45183	40.00000	0.11653	0.000	28.62959	60.00000	Linear
56	p-Nitroaniline	0.20177	0.23693	0.23693	0.000	17.42550	60.00000	Averaged
133	Diphenylamine	0.53423	0.57681	0.57681	0.001	7.97087	20.00000	Averaged ccc
58	1,2-Diphenylhydrazine	0.69406	0.75023	0.75023	0.000	8.09262	60.00000	Averaged
61	4-Bromophenylphenylether	0.16665	0.18185	0.18185	0.000	9.12215	60.00000	Averaged
63	Hexachlorobenzene	0.18391	0.19930	0.19930	0.000	8.36942	60.00000	Averaged
65	Pentachlorophenol	0.09648	0.11255	0.11255	0.001	16.64996	20.00000	Averaged ccc
206	n-Octadecane	0.55080	0.55599	0.55599	0.000	0.94275	60.00000	Averaged
68	Phenanthrene	0.95250	0.95419	0.95419	0.000	0.17665	60.00000	Averaged
69	Anthracene	0.91864	1.02669	1.02669	0.000	11.76167	60.00000	Averaged
72	Di-n-butylphthalate	1.06040	1.21201	1.21201	0.000	14.29748	60.00000	Averaged
76	Fluoranthene	0.87623	0.98279	0.98279	0.001	12.16116	20.00000	Averaged ccc
79	Pyrene	1.19072	1.24730	1.24730	0.000	4.75140	60.00000	Averaged
85	Butylbenzylphthalate	0.49747	0.61856	0.61856	0.000	24.34130	60.00000	Averaged
89	Benzo(a)anthracene	0.97321	1.02966	1.02966	0.000	5.80050	60.00000	Averaged
92	Chrysene	0.93921	0.99173	0.99173	0.000	5.59137	60.00000	Averaged
93	bis(2-Ethylhexyl)phthalate	0.73378	0.85303	0.85303	0.000	16.25197	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 27-JUN-2009 05:54
Lab File ID: s2f2625.d Init. Cal. Date(s): 27-JUN-2009 27-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 05:05
Lab Sample ID: WBN090626-09.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
94 Di-n-octylphthalate	1.30080	1.42438	1.42438	0.001	9.50026	20.00000	Averaged	ccc
95 Benzo(b)fluoranthene	0.96025	1.01654	1.01654	0.000	5.86244	60.00000	Averaged	
96 Benzo(k)fluoranthene	1.01317	1.14707	1.14707	0.000	13.21595	60.00000	Averaged	
97 Benzo(a)pyrene	0.83897	0.93000	0.93000	0.001	10.84982	20.00000	Averaged	ccc
99 Indeno(1,2,3-cd)pyrene	0.80593	0.81608	0.81608	0.000	1.25966	60.00000	Averaged	
100 Dibenzo(a,h)anthracene	0.64671	0.68007	0.68007	0.000	5.15846	60.00000	Averaged	
101 Benzo(ghi)perylene	0.69976	0.70004	0.70004	0.000	0.03956	60.00000	Averaged	
126 m-Dinitrobenzene	0.19442	0.21031	0.21031	0.000	8.17273	60.00000	Averaged	
130 2,3,4,6-Tetrachlorophenol	0.27476	0.27345	0.27345	0.000	-0.47639	60.00000	Averaged	
143 Dinoseb	40.99235	40.00000	0.14321	0.000	2.48087	60.00000	Linear	
173 Carbazole	0.71802	0.83406	0.83406	0.000	16.16014	60.00000	Averaged	
184 p-Benzoquinone	36.34465	40.00000	0.10522	0.000	-9.13838	60.00000	Linear	
192 Methoxychlor	0.53333	0.55997	0.55997	0.000	4.99631	60.00000	Averaged	
211 p-Toluidine	1.09795	1.09966	1.09966	0.000	0.15562	60.00000	Averaged	
210 m-Toluidine	1.58507	1.77063	1.77063	0.000	11.70669	60.00000	Averaged	
214 1,4-Dinitrobenzene	0.21072	0.23347	0.23347	0.000	10.79737	60.00000	Averaged	
215 2-Ethoxyethanol	0.79256	0.84757	0.84757	0.000	6.94050	60.00000	Averaged	
216 Methylenebis(2-chloroanilin	43.43535	40.00000	0.14164	0.000	8.58838	60.00000	Linear	
179 Dibenzo(a,e)pyrene	0.40461	0.25194	0.25194	0.000	-37.73433	60.00000	Averaged	
26 Phthalic anhydride	54.66208	40.00000	0.13156	0.000	36.65520	60.00000	Linear	
M 222 Trichlorophenols	0.31871	0.35643	0.35643	0.000	11.83533	60.00000	Averaged	
M 223 Tetrachlorophenols	0.27476	0.27345	0.27345	0.000	-0.47639	60.00000	Averaged	
M 224 Benzo(b,k)fluoranthene	0.98671	1.08180	1.08180	0.000	9.63779	60.00000	Averaged	

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s062609.b/s2f2625.d
Lab Smp Id: WBN090626-09.1 Client Smp ID: MEGAICV
Inj Date : 27-JUN-2009 05:54
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090626-09.1|40 PPM|1|SVMF|1|MEGAICV
Misc Info : |MSD8270|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s062609.b/MSD2-M8270CAQA-062609.m
Meth Date : 29-Jun-2009 12:08 jos00786 Quant Type: ISTD
Cal Date : 27-JUN-2009 03:29 Cal File: s2f2619.d
Als bottle: 12 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAII.sub
Target Version: 3.50
Processing Host: kilroy

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.057	4.057	(1.000)	205606	40.0000	
* 29 Naphthalene-d8	136	4.929	4.929	(1.000)	846162	40.0000	
* 46 Acenaphthene-d10	164	6.175	6.175	(1.000)	422231	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.148	(1.000)	715323	40.0000	
* 91 Chrysene-d12	240	8.881	8.881	(1.000)	589663	40.0000	
* 98 Perylene-d12	264	10.491	10.491	(1.000)	544803	40.0000	
$ 3 2-Fluorophenol	112	3.228	3.228	(0.796)	240926	40.0000	42.3
$ 5 Phenol-d5	99	3.757	3.757	(0.926)	286973	40.0000	40.8
$ 20 Nitrobenzene-d5	82	4.421	4.421	(0.897)	279860	40.0000	43.8
$ 39 2-Fluorobiphenyl	172	5.667	5.667	(0.918)	526162	40.0000	44.1
$ 60 2,4,6-Tribromophenol	329	6.699	6.699	(1.085)	63666	40.0000	44.0
$ 81 p-Terphenyl-d14	244	8.074	8.074	(0.909)	460351	40.0000	45.8
1 N-Methyl-N-nitrosomethylamine	74	2.522	2.522	(0.622)	157461	40.0000	44.7
2 Pyridine	79	2.554	2.554	(0.630)	177292	40.0000	37.6
4 Aniline	66	3.838	3.838	(0.946)	117847	40.0000	41.6
6 Phenol	94	3.768	3.768	(0.929)	294502	40.0000	41.1
7 bis(2-Chloroethyl) ether	63	3.848	3.848	(0.949)	213670	40.0000	40.8
8 2-Chlorophenol	128	3.918	3.918	(0.966)	253963	40.0000	41.8
203 n-Decane	43	3.902	3.902	(0.962)	329818	40.0000	41.7
9 1,3-Dichlorobenzene	146	4.019	4.019	(0.991)	289685	40.0000	42.7
11 1,4-Dichlorobenzene	146	4.068	4.068	(1.003)	281346	40.0000	41.5
13 1,2-Dichlorobenzene	146	4.175	4.175	(1.029)	250105	40.0000	41.6
14 bis(2-Chloroisopropyl)ether	45	4.196	4.196	(1.034)	495942	40.0000	42.2
12 Benzyl alcohol	108	4.116	4.116	(1.014)	169220	40.0000	42.2
15 o-Cresol	107	4.164	4.164	(1.026)	179169	40.0000	40.2
18 m,p-Cresols	107	4.265	4.265	(1.051)	263175	40.0000	42.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.292	4.292	(1.058)	182429	40.0000	42.4
19 Hexachloroethane	117	4.405	4.405	(1.086)	103993	40.0000	41.2
21 Nitrobenzene	77	4.431	4.431	(0.899)	267636	40.0000	43.7
22 Isophorone	82	4.586	4.586	(0.931)	490137	40.0000	42.2
23 2-Nitrophenol	139	4.645	4.645	(0.942)	131732	40.0000	44.1
24 2,4-Dimethylphenol	122	4.635	4.635	(0.940)	362843	40.0000	47.6
25 bis(2-Chloroethoxy)methane	93	4.704	4.704	(0.954)	297191	40.0000	43.6
26 2,4-Dichlorophenol	162	4.806	4.806	(0.975)	200929	40.0000	43.7
27 Benzoic acid	105	4.688	4.688	(0.951)	147536	40.0000	49.4
28 1,2,4-Trichlorobenzene	180	4.875	4.875	(0.989)	218251	40.0000	40.5
30 Naphthalene	128	4.945	4.945	(1.003)	746894	40.0000	37.5
204 alpha-Terpineol	59	4.913	4.913	(0.997)	226152	40.0000	41.6
31 4-Chloroaniline	127	4.950	4.950	(1.004)	353320	40.0000	45.3
32 Hexachlorobutadiene	225	5.004	5.004	(1.015)	116658	40.0000	42.7
33 4-Chloro-3-methylphenol	107	5.260	5.260	(1.067)	204697	40.0000	43.9
34 2-Methylnaphthalene	142	5.421	5.421	(1.100)	503988	40.0000	43.5
35 1-Methylnaphthalene	142	5.496	5.496	(1.115)	473804	40.0000	39.0
36 Hexachlorocyclopentadiene	237	5.528	5.528	(0.895)	70185	40.0000	38.5
205 2,3-Dichloroaniline	161	5.619	5.619	(0.910)	245654	40.0000	43.6
37 2,4,6-Trichlorophenol	196	5.608	5.608	(0.908)	144796	40.0000	46.4
38 2,4,5-Trichlorophenol	196	5.635	5.635	(0.912)	156198	40.0000	43.3
40 2-Chloronaphthalene	162	5.779	5.779	(0.936)	440783	40.0000	42.6
42 o-Nitroaniline	65	5.827	5.827	(0.944)	136901	40.0000	43.4
41 m-Nitroaniline	138	6.121	6.121	(0.991)	115786	40.0000	46.0
43 Dimethylphthalate	163	5.940	5.940	(0.962)	540713	40.0000	45.0
44 2,6-Dinitrotoluene	165	5.993	5.993	(0.971)	125848	40.0000	43.3
50 2,4-Dinitrotoluene	165	6.271	6.271	(1.016)	155502	40.0000	43.0
45 Acenaphthylene	152	6.079	6.079	(0.984)	753783	40.0000	45.0
47 Acenaphthene	154	6.196	6.196	(1.003)	437818	40.0000	39.7
48 2,4-Dinitrophenol	184	6.186	6.186	(1.002)	39313	40.0000	41.5
49 Dibenzofuran	168	6.314	6.314	(1.023)	621590	40.0000	43.6
51 Diethylphthalate	149	6.416	6.416	(1.039)	531641	40.0000	45.4
52 4-Nitrophenol	139	6.196	6.196	(1.003)	79128	40.0000	44.7
53 Fluorene	166	6.544	6.544	(1.060)	500134	40.0000	41.8
54 4-Chlorophenylphenylether	204	6.517	6.517	(1.055)	245403	40.0000	44.8
55 2-Methyl-4,6-dinitrophenol	198	6.549	6.549	(0.916)	83355	40.0000	51.4
56 p-Nitroaniline	138	6.539	6.539	(1.059)	100038	40.0000	47.0
133 Diphenylamine	169	6.592	6.592	(0.922)	412604	40.0000	43.2
58 1,2-Diphenylhydrazine	77	6.624	6.624	(0.927)	536654	40.0000	43.2
61 4-Bromophenylphenylether	248	6.844	6.844	(0.957)	130081	40.0000	43.6
63 Hexachlorobenzene	284	6.902	6.902	(0.966)	142565	40.0000	43.3
65 Pentachlorophenol	266	7.015	7.015	(0.981)	80509	40.0000	46.6
206 n-Octadecane	57	6.993	6.993	(0.978)	397713	40.0000	40.4
68 Phenanthrene	178	7.164	7.164	(1.002)	682552	40.0000	40.1
69 Anthracene	178	7.197	7.197	(1.007)	734414	40.0000	44.7
72 Di-n-butylphthalate	149	7.432	7.432	(1.040)	866976	40.0000	45.7
76 Fluoranthene	202	7.881	7.881	(1.103)	703009	40.0000	44.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	8.026	8.026	(0.904)	735485	40.0000	41.9
85 Butylbenzylphthalate	149	8.347	8.347	(0.940)	364740	40.0000	49.7
89 Benzo(a)anthracene	228	8.871	8.871	(0.999)	607155	40.0000	42.3
92 Chrysene	228	8.903	8.903	(1.002)	584785	40.0000	42.2
93 bis(2-Ethylhexyl)phthalate	149	8.737	8.737	(0.984)	503003	40.0000	46.5
94 Di-n-octylphthalate	149	9.320	9.320	(0.888)	776004	40.0000	43.8
95 Benzo(b)fluoranthene	252	9.972	9.972	(0.951)	553816	40.0000	42.3
96 Benzo(k)fluoranthene	252	10.010	10.010	(0.954)	624925	40.0000	45.3
97 Benzo(a)pyrene	252	10.416	10.416	(0.993)	506668	40.0000	44.3
99 Indeno(1,2,3-cd)pyrene	276	12.326	12.326	(1.175)	444604	40.0000	40.5
100 Dibenzo(a,h)anthracene	278	12.331	12.331	(1.175)	370502	40.0000	42.1
101 Benzo(ghi)perylene	276	12.887	12.887	(1.228)	381383	40.0000	40.0
126 m-Dinitrobenzene	168	5.977	5.977	(0.968)	88799	40.0000	43.3
130 2,3,4,6-Tetrachlorophenol	232	6.378	6.378	(1.033)	115461	40.0000	39.8
143 Dinoseb	211	7.100	7.100	(0.993)	102438	40.0000	41.0
173 Carbazole	167	7.277	7.277	(1.018)	596619	40.0000	46.5
184 p-Benzoquinone	54	3.533	3.533	(0.871)	21633	40.0000	36.3
192 Methoxychlor	227	8.721	8.721	(0.982)	330195	40.0000	42.0
211 p-Toluidine	106	4.330	4.330	(1.067)	226096	40.0000	40.1
210 m-Toluidine	106	4.351	4.351	(1.073)	364053	40.0000	44.7
214 1,4-Dinitrobenzene	75	5.918	5.918	(0.958)	98577	40.0000	44.3
215 2-Ethoxyethanol	59	2.356	2.356	(0.581)	174266	40.0000	42.8
216 Methylenebis(2-chloroaniline)	231	8.790	8.790	(0.990)	83518	40.0000	43.4
179 Dibenzo(a,e)pyrene	302	17.257	17.257	(1.645)	137255	40.0000	24.9
26 Phthalic anhydride	104	5.458	5.458	(1.107)	111320	40.0000	54.7
M 222 Trichlorophenols	196				300994	80.0000	89.5
M 223 Tetrachlorophenols	232				115461	40.0000	39.8
M 224 Benzo(b,k)fluoranthene	252				1178741	80.0000	87.7

Data File: /chem/MSD2.i/s062609.b/s2f2625.d
Date : 27-JUN-2009 05:54
Client ID: MEGAICV
Sample Info: IWBN090626-09,1|40 PPM|1|SVMF1|MEGAICV
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

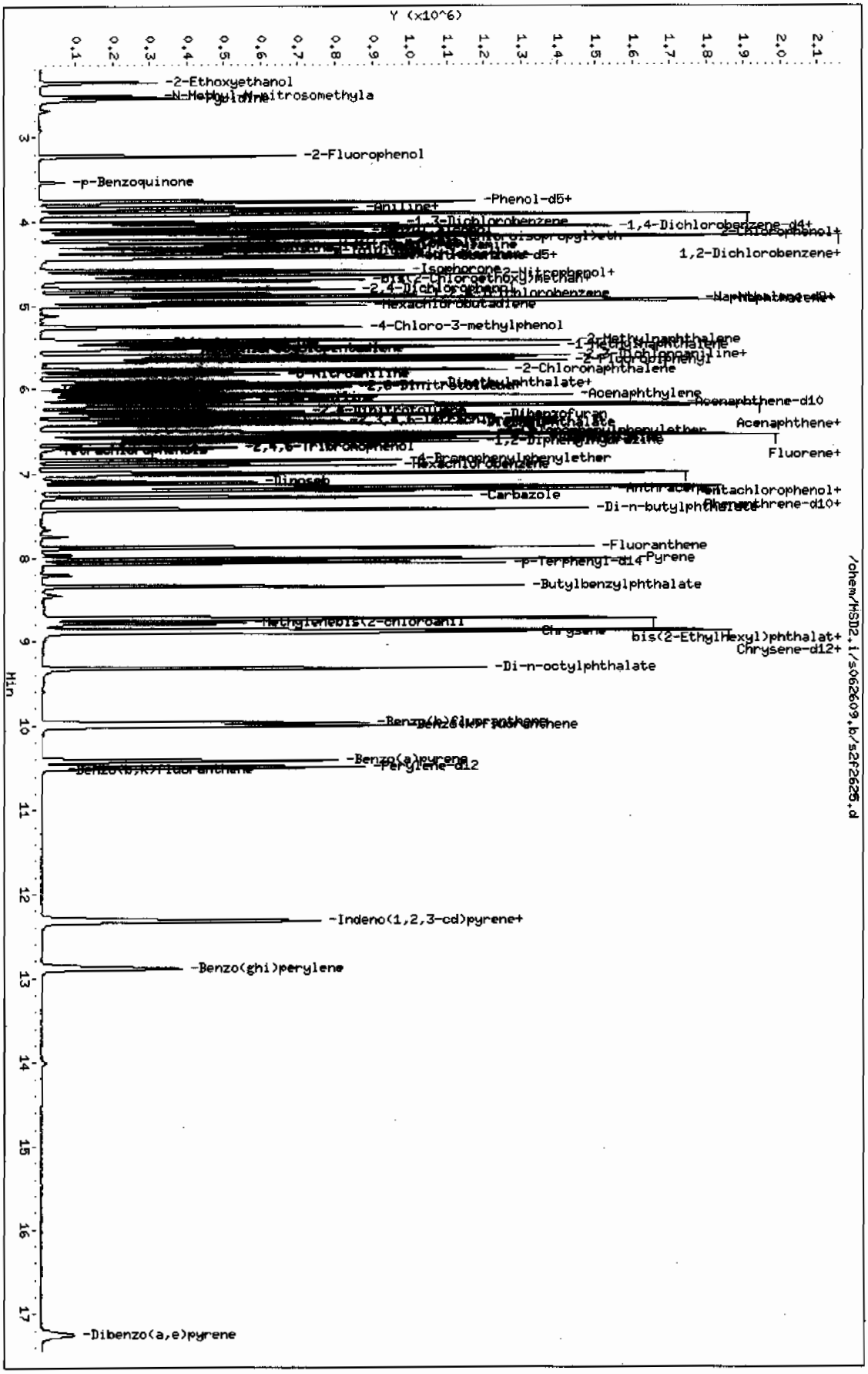

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 29-JUN-2009 00:59
Lab File ID: s2f2823.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090528-8.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062809.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.85512	0.73215	0.73215	0.000	-14.38070	60.00000	Averaged
16 Acetophenone	1.19881	1.22790	1.22790	0.000	2.42616	60.00000	Averaged
189 Caprolactam	0.08601	0.09673	0.09673	0.000	12.46213	60.00000	Averaged
208 1,1'-Biphenyl	1.21152	1.22593	1.22593	0.000	1.18934	60.00000	Averaged
207 Atrazine	0.04406	0.04635	0.04635	0.000	5.20660	60.00000	Averaged
77 Benzidine	32.96272	40.00000	0.25943	0.000	-17.59321	60.00000	Linear
90 3,3'-Dichlorobenzidine	0.25863	0.27950	0.27950	0.000	8.07052	60.00000	Averaged
102 1,4-Dioxane	0.37452	0.45026	0.45026	0.000	20.22257	60.00000	Averaged
103 Methyl methacrylate	0.21046	0.26097	0.26097	0.000	24.00158	60.00000	Averaged
104 Ethyl methacrylate	0.80237	0.96882	0.96882	0.000	20.74475	60.00000	Averaged
105 2-Picoline	1.24101	1.23730	1.23730	0.000	-0.29905	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.52937	0.53916	0.53916	0.000	1.85004	60.00000	Averaged
107 Methyl methanesulfonate	0.47397	0.50724	0.50724	0.000	7.01905	60.00000	Averaged
108 N-Nitrosodiethylamine	0.54113	0.54765	0.54765	0.000	1.20582	60.00000	Averaged
109 Ethyl Methanesulfonate	0.64600	0.79249	0.79249	0.000	22.67636	60.00000	Averaged
110 Pentachloroethane	0.31203	0.42180	0.42180	0.000	35.18260	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.54373	0.54895	0.54895	0.000	0.95984	60.00000	Averaged
113 N-Nitrosomorpholine	0.72224	0.75660	0.75660	0.000	4.75732	60.00000	Averaged
114 o-Toluidine	1.79520	1.86436	1.86436	0.000	3.85230	60.00000	Averaged
115 N-Nitrosopiperidine	0.14845	0.14948	0.14948	0.000	0.69168	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.76945	0.78098	0.78098	0.000	1.49868	60.00000	Averaged
118 2,6-Dichlorophenol	0.21644	0.22654	0.22654	0.000	4.66964	60.00000	Averaged
119 Hexachloropropene	0.09423	0.14226	0.14226	0.000	50.96975	60.00000	Averaged
120 p-Phenylenediamine	0.22216	0.23975	0.23975	0.000	7.92199	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.21235	0.25105	0.25105	0.000	18.22302	60.00000	Averaged
122 Safrole	0.19580	0.23292	0.23292	0.000	18.95759	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.40456	0.43809	0.43809	0.000	8.28861	60.00000	Averaged
124 Isosafrole	0.35137	0.46660	0.46660	0.000	32.79214	60.00000	Averaged
125 1,4-Naphthoquinone	0.33168	0.35285	0.35285	0.000	6.38276	60.00000	Averaged
127 Pentachlorobenzene	0.35632	0.38055	0.38055	0.000	6.79978	60.00000	Averaged
128 1-Naphthylamine	0.92126	0.99462	0.99462	0.000	7.96341	60.00000	Averaged
129 2-Naphthylamine	1.00463	1.03173	1.03173	0.000	2.69747	60.00000	Averaged
131 5-Nitro-o-toluidine	40.98178	40.00000	0.29084	0.000	2.45445	60.00000	Linear
136 1,3,5-Trinitrobenzene	52.14849	40.00000	0.13880	0.000	30.37122	60.00000	Linear
137 Phenacetin	0.24441	0.25948	0.25948	0.000	6.16755	60.00000	Averaged
138 Diallate	0.25943	0.26304	0.26304	0.000	1.39040	60.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 29-JUN-2009 00:59
Lab File ID: s2f2823.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090528-8.1 Quant Type: ISTD
Method: /chem/MSD2.i/s062809.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.28806	0.30517	0.30517	0.000	5.94019	60.00000	Averaged
213 Trans Diallate	0.30493	0.30905	0.30905	0.000	1.35293	60.00000	Averaged
140 4-Aminobiphenyl	0.49104	0.54713	0.54713	0.000	11.42323	60.00000	Averaged
141 Pentachloronitrobenzene	0.06168	0.06578	0.06578	0.000	6.64718	60.00000	Averaged
142 Pronamide	0.25232	0.26349	0.26349	0.000	4.42401	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	40.26838	40.00000	0.02554	0.000	0.67094	60.00000	Linear
147 Methapyrilene	0.44483	0.45204	0.45204	0.000	1.61954	60.00000	Averaged
148 Isodrin	0.10127	0.09742	0.09742	0.000	-3.80395	60.00000	Averaged
149 Aramite	0.04612	0.04281	0.04281	0.000	-7.17325	60.00000	Averaged
150 Kepone	0.07238	0.07563	0.07563	0.000	4.49567	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.31565	0.32885	0.32885	0.000	4.18054	60.00000	Averaged
152 Chlorobenzilate	0.26848	0.29038	0.29038	0.000	8.15609	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.49041	0.49218	0.49218	0.000	0.36220	60.00000	Averaged
155 2-Acetylaminofluorene	41.17782	40.00000	0.27486	0.000	2.94454	60.00000	Linear
157 7,12Dimethylbenz(a)anthrace	0.47287	0.44162	0.44162	0.000	-6.60888	60.00000	Averaged
158 3-Methylcholanthrene	0.40330	0.39491	0.39491	0.000	-2.07992	60.00000	Averaged

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Data file : /chem/MSD2.i/s062809.b/s2f2823.d
Lab Smp Id: WBN090528-8.1 Client Smp ID: APICV
Inj Date : 29-JUN-2009 00:59
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090528-8.1|40 PPM|1|SVMF|1|APICV
Misc Info : |MSD8270|WBN090617-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s062809.b/MSD2-M8270CAQA-062809.m
Meth Date : 29-Jun-2009 12:07 jos00786 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.052	4.052	(1.000)	164062	40.0000	
* 29 Naphthalene-d8	136	4.923	4.923	(1.000)	623167	40.0000	
* 46 Acenaphthene-d10	164	6.170	6.170	(1.000)	350836	40.0000	
* 67 Phenanthrene-d10	188	7.148	7.148	(1.000)	600630	40.0000	
* 91 Chrysene-d12	240	8.876	8.876	(1.000)	507539	40.0000	
* 98 Perylene-d12	264	10.486	10.513	(1.000)	420039	40.0000	
209 Benzaldehyde	77	3.773	3.773	(0.931)	120118	40.0000	34.2
16 Acetophenone	105	4.303	4.303	(1.062)	201451	40.0000	41.0
189 Caprolactam	113	5.191	5.191	(1.054)	60278	40.0000	45.0
208 1,1'-Biphenyl	154	5.747	5.747	(0.932)	430099	40.0000	40.5
207 Atrazine	173	6.908	6.908	(0.966)	27840	40.0000	42.1
77 Benzidine	184	7.924	7.924	(0.893)	131669	40.0000	33.0
90 3,3'-Dichlorobenzidine	252	8.796	8.796	(0.991)	141857	40.0000	43.2
102 1,4-Dioxane	88	2.356	2.356	(0.582)	73871	40.0000	48.1
103 Methyl methacrylate	100	2.351	2.351	(0.580)	42815	40.0000	49.6
104 Ethyl methacrylate	69	2.736	2.736	(0.675)	158947	40.0000	48.3
105 2-Picoline	93	2.934	2.934	(0.724)	202994	40.0000	39.9
106 N-Nitrosomethylethylamine	88	2.976	2.976	(0.735)	88456	40.0000	40.7
107 Methyl methanesulfonate	80	3.137	3.137	(0.774)	83219	40.0000	42.8
108 N-Nitrosodiethylamine	102	3.372	3.372	(0.832)	89849	40.0000	40.5
109 Ethyl Methanesulfonate	79	3.527	3.527	(0.871)	130018	40.0000	49.1
110 Pentachloroethane	167	3.880	3.880	(0.958)	69202	40.0000	54.1
111 N-Nitrosopyrrolidine	100	4.287	4.287	(1.058)	90062	40.0000	40.4
113 N-Nitrosomorpholine	56	4.308	4.308	(1.063)	124130	40.0000	41.9
114 o-Toluidine	106	4.330	4.330	(1.069)	305870	40.0000	41.5
115 N-Nitrosopiperidine	114	4.533	4.533	(0.921)	93151	40.0000	40.3
116 a,a-Dimethylphenethylamine	58	4.784	4.784	(0.972)	486679	40.0000	40.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
118 2,6-Dichlorophenol	162	4.966	4.966	(1.009)	141174	40.0000	41.9
119 Hexachloropropene	213	4.998	4.998	(1.015)	88654	40.0000	60.4
120 p-Phenylenediamine	108	5.196	5.196	(1.055)	149407	40.0000	43.2
121 N-Nitrosodi-n-butylamine	84	5.164	5.164	(1.049)	156447	40.0000	47.3
122 Safrole	162	5.335	5.335	(1.084)	145148	40.0000	47.6
123 1,2,4,5-Tetrachlorobenzene	216	5.538	5.538	(0.898)	153698	40.0000	43.3
124 Isosafrole	162	5.704	5.704	(0.925)	163699	40.0000	53.1
125 1,4-Naphthoquinone	158	5.891	5.891	(0.955)	123794	40.0000	42.6
127 Pentachlorobenzene	250	6.282	6.282	(1.018)	133510	40.0000	42.7
128 1-Naphthylamine	143	6.357	6.357	(1.030)	348950	40.0000	43.2
129 2-Naphthylamine	143	6.410	6.410	(1.039)	361969	40.0000	41.1
131 5-Nitro-o-toluidine	152	6.528	6.528	(1.058)	102037	40.0000	41.0
136 1,3,5-Trinitrobenzene	75	6.731	6.731	(0.942)	83365	40.0000	52.1
137 Phenacetin	108	6.769	6.769	(0.947)	155854	40.0000	42.5
138 Diallate	86	6.763	6.763	(0.946)	157989	40.0000	40.6
212 Cis Diallate	86	6.827	6.827	(0.955)	27494	6.00000	6.4
213 Trans Diallate	86	6.763	6.763	(0.946)	157782	34.0000	34.4
140 4-Aminobiphenyl	169	7.004	7.004	(0.980)	328623	40.0000	44.6
141 Pentachloronitrobenzene	237	7.025	7.025	(0.983)	39510	40.0000	42.6
142 Pronamide	173	7.009	7.009	(0.981)	158257	40.0000	41.8
146 4-Nitroquinoline-1-oxide	101	7.614	7.614	(1.065)	15343	40.0000	40.3
147 Methapyrilene	58	7.624	7.624	(1.067)	271506	40.0000	40.6
148 Isodrin	193	7.790	7.790	(1.090)	58514	40.0000	38.5
149 Aramite	185	8.015	8.015	(1.121)	25715	40.0000	37.1
150 Kepone	272	8.475	8.475	(1.186)	45428	40.0000	41.8
151 p-(Dimethylamino)azobenzene	120	8.149	8.149	(0.918)	166902	40.0000	41.7
152 Chlorobenzilate	251	8.165	8.165	(0.920)	147378	40.0000	43.3
153 3,3'-Dimethylbenzidine	212	8.373	8.373	(0.943)	249802	40.0000	40.1
155 2-Acetylaminofluorene	181	8.566	8.566	(0.965)	139501	40.0000	41.2
157 7,12Dimethylbenz(a)anthracene	256	9.935	9.935	(0.947)	185497	40.0000	37.4
158 3-Methylcholanthrene	268	10.892	10.892	(1.039)	165878	40.0000	39.2

Data File: /chem/MSD2.i/s062809.b/s2f2823.d
Date : 29-JUN-2009 00:59
Client ID: APICV
Sample Info: IWBN090528-8,1140 PPM|1|SVHF1|APICV
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

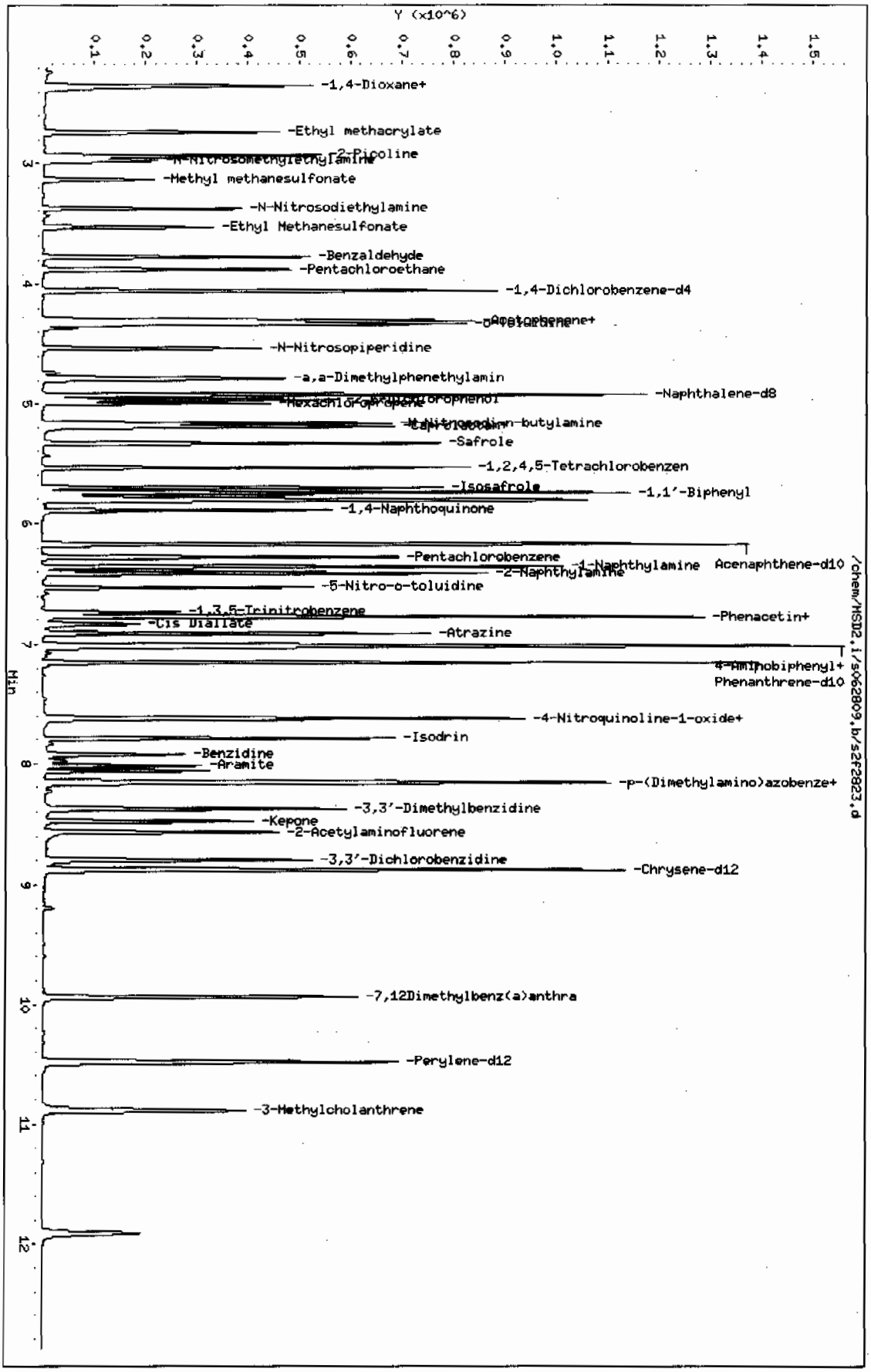

Page 1

Data File: /chem/MSD2.i/s070709.b/s2g0702.d
Report Date: 07-Jul-2009 16:11

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2g0702.d
Analysis Type:
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m

Injection Date: 07-JUL-2009 14:03
Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Init. Cal. Times: 02:16 04:28

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 3 2-Fluorophenol	1.10685	1.05009	1.05009	0.000	-5.12808	60.00000	Averaged
$ 5 Phenol-d5	1.36682	1.30822	1.30822	0.000	-4.28745	60.00000	Averaged
$ 20 Nitrobenzene-d5	0.30179	0.31993	0.31993	0.000	6.01121	60.00000	Averaged
$ 39 2-Fluorobiphenyl	1.12971	1.17476	1.17476	0.000	3.98835	60.00000	Averaged
$ 60 2,4,6-Tribromophenol	0.13700	0.15714	0.15714	0.000	14.70167	60.00000	Averaged
$ 81 p-Terphenyl-d14	0.68132	0.73668	0.73668	0.000	8.12530	60.00000	Averaged
1 N-Methyl-N-nitrosomethylami	0.68543	0.64469	0.64469	0.000	-5.94398	60.00000	Averaged
2 Pyridine	0.91853	0.85259	0.85259	0.000	-7.17939	60.00000	Averaged
4 Aniline	0.55072	0.51929	0.51929	0.000	-5.70736	60.00000	Averaged
6 Phenol	1.39242	1.31360	1.31360	0.001	-5.66075	20.00000	Averaged ccc
7 bis(2-Chloroethyl) ether	1.01868	0.98317	0.98317	0.000	-3.48594	60.00000	Averaged
8 2-Chlorophenol	1.18262	1.16460	1.16460	0.000	-1.52384	60.00000	Averaged
203 n-Decane	1.53985	1.56053	1.56053	0.000	1.34262	60.00000	Averaged
9 1,3-Dichlorobenzene	1.31898	1.31126	1.31126	0.000	-0.58567	60.00000	Averaged
11 1,4-Dichlorobenzene	1.31747	1.33075	1.33075	0.001	1.00761	20.00000	Averaged ccc
13 1,2-Dichlorobenzene	1.16945	1.20279	1.20279	0.000	2.85112	60.00000	Averaged
14 bis(2-Chloroisopropyl)ether	2.28579	2.27293	2.27293	0.000	-0.56273	60.00000	Averaged
12 Benzyl alcohol	0.77939	0.63024	0.63024	0.000	-19.13583	60.00000	Averaged
15 o-Cresol	0.86750	0.85024	0.85024	0.000	-1.98982	60.00000	Averaged
18 m,p-Cresols	1.20835	1.14091	1.14091	0.000	-5.58095	60.00000	Averaged
17 N-Nitrosodipropylamine	0.83651	0.82947	0.82947	0.050	-0.84159	60.00000	Averaged spcc
19 Hexachloroethane	0.49043	0.50013	0.50013	0.000	1.97724	60.00000	Averaged
21 Nitrobenzene	0.28921	0.30209	0.30209	0.000	4.45355	60.00000	Averaged
22 Isophorone	0.54855	0.56220	0.56220	0.000	2.48742	60.00000	Averaged
23 2-Nitrophenol	0.14110	0.14707	0.14707	0.001	4.22608	20.00000	Averaged ccc
24 2,4-Dimethylphenol	0.35992	0.38432	0.38432	0.000	6.77796	60.00000	Averaged
25 bis(2-Chloroethoxy)methane	0.32241	0.32998	0.32998	0.000	2.34892	60.00000	Averaged
26 2,4-Dichlorophenol	0.21753	0.22551	0.22551	0.001	3.66973	20.00000	Averaged ccc
27 Benzoic acid	0.14125	0.15458	0.15458	0.000	9.43440	60.00000	Averaged
28 1,2,4-Trichlorobenzene	0.25451	0.26502	0.26502	0.000	4.13039	60.00000	Averaged
30 Naphthalene	0.94195	0.84103	0.84103	0.000	-10.71428	60.00000	Averaged
204 alpha-Terpineol	0.25697	0.27117	0.27117	0.000	5.52399	60.00000	Averaged
31 4-Chloroaniline	0.36866	0.36647	0.36647	0.000	-0.59426	60.00000	Averaged
32 Hexachlorobutadiene	0.12913	0.14271	0.14271	0.001	10.51923	20.00000	Averaged ccc
33 4-Chloro-3-methylphenol	0.22033	0.23192	0.23192	0.001	5.26168	20.00000	Averaged ccc
34 2-Methylnaphthalene	0.54719	0.52702	0.52702	0.000	-3.68555	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2g0702.d
Analysis Type:
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m

Injection Date: 07-JUL-2009 14:03
Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Init. Cal. Times: 02:16 04:28

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
35	1-Methylnaphthalene	0.57350	0.55023	0.55023	0.000	-4.05804	60.00000	Averaged	
36	Hexachlorocyclopentadiene	0.17262	0.24584	0.24584	0.050	42.41931	60.00000	Averaged	spcc
205	2,3-Dichloroaniline	0.53436	0.55967	0.55967	0.000	4.73531	60.00000	Averaged	
37	2,4,6-Trichlorophenol	0.29566	0.31456	0.31456	0.001	6.39296	20.00000	Averaged	ccc
38	2,4,5-Trichlorophenol	0.34176	0.36393	0.36393	0.000	6.48467	60.00000	Averaged	
40	2-Chloronaphthalene	0.98036	0.98935	0.98935	0.000	0.91693	60.00000	Averaged	
42	o-Nitroaniline	0.29844	0.29637	0.29637	0.000	-0.69346	60.00000	Averaged	
41	m-Nitroaniline	0.23870	0.14685	0.14685	0.000	-38.48026	60.00000	Averaged	
43	Dimethylphthalate	1.13758	1.16015	1.16015	0.000	1.98393	60.00000	Averaged	
44	2,6-Dinitrotoluene	0.27533	0.28018	0.28018	0.000	1.76077	60.00000	Averaged	
50	2,4-Dinitrotoluene	0.34243	0.34858	0.34858	0.000	1.79483	60.00000	Averaged	
45	Acenaphthylene	1.58844	1.65400	1.65400	0.000	4.12777	60.00000	Averaged	
47	Acenaphthene	1.04389	1.00783	1.00783	0.001	-3.45502	20.00000	Averaged	ccc
48	2,4-Dinitrophenol	47.93084	40.00000	0.11073	0.050	19.82709	60.00000	Linear	spcc
49	Dibenzofuran	1.35168	1.38728	1.38728	0.000	2.63380	60.00000	Averaged	
51	Diethylphthalate	1.11027	1.14995	1.14995	0.000	3.57424	60.00000	Averaged	
52	4-Nitrophenol	0.16773	0.16126	0.16126	0.050	-3.85995	60.00000	Averaged	spcc
53	Fluorene	1.13327	1.13429	1.13429	0.000	0.09016	60.00000	Averaged	
54	4-Chlorophenylphenylether	0.51896	0.53882	0.53882	0.000	3.82748	60.00000	Averaged	
55	2-Methyl-4,6-dinitrophenol	45.05205	40.00000	0.10080	0.000	12.63013	60.00000	Linear	
56	p-Nitroaniline	0.20177	0.13113	0.13113	0.000	-35.00749	60.00000	Averaged	
133	Diphenylamine	0.53423	0.52290	0.52290	0.001	-2.11999	20.00000	Averaged	ccc
58	1,2-Diphenylhydrazine	0.69406	0.69831	0.69831	0.000	0.61184	60.00000	Averaged	
61	4-Bromophenylphenylether	0.16665	0.18249	0.18249	0.000	9.50388	60.00000	Averaged	
63	Hexachlorobenzene	0.18391	0.20298	0.20298	0.000	10.36684	60.00000	Averaged	
65	Pentachlorophenol	0.09648	0.11476	0.11476	0.001	18.93623	20.00000	Averaged	ccc
206	n-Octadecane	0.55080	0.55618	0.55618	0.000	0.97768	60.00000	Averaged	
68	Phenanthrene	0.95250	0.94523	0.94523	0.000	-0.76421	60.00000	Averaged	
69	Anthracene	0.91864	0.99406	0.99406	0.000	8.21012	60.00000	Averaged	
72	Di-n-butylphthalate	1.06040	1.13964	1.13964	0.000	7.47312	60.00000	Averaged	
76	Fluoranthene	0.87623	0.94415	0.94415	0.001	7.75168	20.00000	Averaged	ccc
79	Pyrene	1.19072	1.27091	1.27091	0.000	6.73436	60.00000	Averaged	
85	Butylbenzylphthalate	0.49747	0.53426	0.53426	0.000	7.39537	60.00000	Averaged	
89	Benzo(a)anthracene	0.97321	0.97305	0.97305	0.000	-0.01641	60.00000	Averaged	
92	Chrysene	0.93921	0.94864	0.94864	0.000	1.00428	60.00000	Averaged	
93	bis(2-Ethylhexyl)phthalate	0.73378	0.80158	0.80158	0.000	9.23995	60.00000	Averaged	

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 07-JUL-2009 14:03
Lab File ID: s2g0702.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090626-05.3 Quant Type: ISTD
Method: /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m

	COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
94	Di-n-octylphthalate	1.30080	1.42868	1.42868	0.001	9.83106	20.00000	Averaged	ccc
95	Benzo(b)fluoranthene	0.96025	1.08877	1.08877	0.000	13.38418	60.00000	Averaged	
96	Benzo(k)fluoranthene	1.01317	1.00117	1.00117	0.000	-1.18356	60.00000	Averaged	
97	Benzo(a)pyrene	0.83897	0.87406	0.87406	0.001	4.18174	20.00000	Averaged	ccc
99	Indeno(1,2,3-cd)pyrene	0.80593	0.79575	0.79575	0.000	-1.26335	60.00000	Averaged	
100	Dibenzo(a,h)anthracene	0.64671	0.61239	0.61239	0.000	-5.30678	60.00000	Averaged	
101	Benzo(ghi)perylene	0.69976	0.69687	0.69687	0.000	-0.41250	60.00000	Averaged	
126	m-Dinitrobenzene	0.19442	0.19923	0.19923	0.000	2.47654	60.00000	Averaged	
130	2,3,4,6-Tetrachlorophenol	0.27476	0.29141	0.29141	0.000	6.05739	60.00000	Averaged	
143	Dinoseb	45.60171	40.00000	0.16083	0.000	14.00427	60.00000	Linear	
173	Carbazole	0.71802	0.47485	0.47485	0.000	-33.86715	60.00000	Averaged	
184	p-Benzoquinone	37.02311	40.00000	0.10761	0.000	-7.44221	60.00000	Linear	
192	Methoxychlor	0.53333	0.62434	0.62434	0.000	17.06493	60.00000	Averaged	
211	p-Toluidine	1.09795	0.98322	0.98322	0.000	-10.44950	60.00000	Averaged	
210	m-Toluidine	1.58507	1.28737	1.28737	0.000	-18.78164	60.00000	Averaged	
214	1,4-Dinitrobenzene	0.21072	0.21585	0.21585	0.000	2.43619	60.00000	Averaged	
215	2-Ethoxyethanol	0.79256	0.69468	0.69468	0.000	-12.35050	60.00000	Averaged	
216	Methylenebis(2-chloroanilin	27.00181	40.00000	0.07390	0.000	-32.49547	60.00000	Linear	
179	Dibenzo(a,e)pyrene	0.40461	0.36794	0.36794	0.000	-9.06284	60.00000	Averaged	
26	Phthalic anhydride	26.45747	40.00000	0.05914	0.000	-33.85634	60.00000	Linear	
M 222	Trichlorophenols	0.31871	0.33924	0.33924	0.000	6.44213	60.00000	Averaged	
M 223	Tetrachlorophenols	0.27476	0.29141	0.29141	0.000	6.05739	60.00000	Averaged	
M 224	Benzo(b,k)fluoranthene	0.98671	1.04497	1.04497	0.000	5.90499	60.00000	Averaged	

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s070709.b/s2g0702.d
Lab Smp Id: WBN090626-05.3 Client Smp ID: MEGACVS
Inj Date : 07-JUL-2009 14:03
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090626-05.3|40 PPM|1|SVMF|1|MEGACVS
Misc Info : |MSD8270|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:11 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: MEGAII.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.121	4.121	(1.000)	220951	40.0000	
* 29 Naphthalene-d8	136	4.998	4.998	(1.000)	889057	40.0000	
* 46 Acenaphthene-d10	164	6.244	6.244	(1.000)	457501	40.0000	
* 67 Phenanthrene-d10	188	7.223	7.223	(1.000)	758581	40.0000	
* 91 Chrysene-d12	240	8.988	8.988	(1.000)	602823	40.0000	
* 98 Perylene-d12	264	10.668	10.668	(1.000)	508094	40.0000	
$ 3 2-Fluorophenol	112	3.297	3.297	(0.800)	232018	40.0000	37.9
$ 5 Phenol-d5	99	3.827	3.827	(0.929)	289053	40.0000	38.3
$ 20 Nitrobenzene-d5	82	4.485	4.485	(0.897)	284440	40.0000	42.4
$ 39 2-Fluorobiphenyl	172	5.736	5.736	(0.919)	537456	40.0000	41.6
$ 60 2,4,6-Tribromophenol	329	6.769	6.769	(1.084)	71893	40.0000	45.9
$ 81 p-Terphenyl-d14	244	8.149	8.149	(0.907)	444086	40.0000	43.2
1 N-Methyl-N-nitrosomethylamine	74	2.597	2.597	(0.630)	142445	40.0000	37.6
2 Pyridine	79	2.634	2.634	(0.639)	188380	40.0000	37.1
4 Aniline	66	3.902	3.902	(0.947)	114737	40.0000	37.7
6 Phenol	94	3.832	3.832	(0.930)	290241	40.0000	37.7
7 bis(2-Chloroethyl) ether	63	3.912	3.912	(0.949)	217233	40.0000	38.6
8 2-Chlorophenol	128	3.987	3.987	(0.968)	257319	40.0000	39.4
203 n-Decane	43	3.966	3.966	(0.962)	344800	40.0000	40.5
9 1,3-Dichlorobenzene	146	4.089	4.089	(0.992)	289724	40.0000	39.8
11 1,4-Dichlorobenzene	146	4.137	4.137	(1.004)	294030	40.0000	40.4
13 1,2-Dichlorobenzene	146	4.239	4.239	(1.029)	265758	40.0000	41.1
14 bis(2-Chloroisopropyl)ether	45	4.260	4.260	(1.034)	502206	40.0000	39.8
12 Benzyl alcohol	108	4.185	4.185	(1.016)	139253	40.0000	32.3
15 o-Cresol	107	4.233	4.233	(1.027)	187862	40.0000	39.2
18 m,p-Cresols	107	4.335	4.335	(1.052)	252085	40.0000	37.8

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
17 N-Nitrosodipropylamine	70	4.356	4.356	(1.057)	183272	40.0000	39.7
19 Hexachloroethane	117	4.474	4.474	(1.086)	110504	40.0000	40.8
21 Nitrobenzene	77	4.501	4.501	(0.900)	268573	40.0000	41.8
22 Isophorone	82	4.656	4.656	(0.932)	499824	40.0000	41.0
23 2-Nitrophenol	139	4.715	4.715	(0.943)	130752	40.0000	41.7
24 2,4-Dimethylphenol	122	4.704	4.704	(0.941)	341682	40.0000	42.7
25 bis(2-Chloroethoxy)methane	93	4.768	4.768	(0.954)	293374	40.0000	40.9
26 2,4-Dichlorophenol	162	4.880	4.880	(0.976)	200494	40.0000	41.5
27 Benzoic acid	105	4.752	4.752	(0.951)	137426	40.0000	43.8
28 1,2,4-Trichlorobenzene	180	4.945	4.945	(0.989)	235618	40.0000	41.6
30 Naphthalene	128	5.014	5.014	(1.003)	747722	40.0000	35.7
204 alpha-Terpineol	59	4.982	4.982	(0.997)	241084	40.0000	42.2
31 4-Chloroaniline	127	5.020	5.020	(1.004)	325812	40.0000	39.8
32 Hexachlorobutadiene	225	5.073	5.073	(1.015)	126880	40.0000	44.2
33 4-Chloro-3-methylphenol	107	5.330	5.330	(1.066)	206194	40.0000	42.1
34 2-Methylnaphthalene	142	5.496	5.496	(1.100)	468552	40.0000	38.5
35 1-Methylnaphthalene	142	5.570	5.570	(1.115)	489185	40.0000	38.4
36 Hexachlorocyclopentadiene	237	5.597	5.597	(0.896)	112471	40.0000	57.0
205 2,3-Dichloroaniline	161	5.688	5.688	(0.911)	256049	40.0000	41.9
37 2,4,6-Trichlorophenol	196	5.683	5.683	(0.910)	143912	40.0000	42.6
38 2,4,5-Trichlorophenol	196	5.710	5.710	(0.914)	166497	40.0000	42.6
40 2-Chloronaphthalene	162	5.849	5.849	(0.937)	452628	40.0000	40.4
42 o-Nitroaniline	65	5.902	5.902	(0.945)	135590	40.0000	39.7
41 m-Nitroaniline	138	6.191	6.191	(0.991)	67182	40.0000	24.6
43 Dimethylphthalate	163	6.009	6.009	(0.962)	530770	40.0000	40.8
44 2,6-Dinitrotoluene	165	6.063	6.063	(0.971)	128182	40.0000	40.7
50 2,4-Dinitrotoluene	165	6.346	6.346	(1.016)	159474	40.0000	40.7
45 Acenaphthylene	152	6.153	6.153	(0.985)	756708	40.0000	41.6
47 Acenaphthene	154	6.266	6.266	(1.003)	461082	40.0000	38.6
48 2,4-Dinitrophenol	184	6.255	6.255	(1.002)	50661	40.0000	47.9
49 Dibenzofuran	168	6.383	6.383	(1.022)	634680	40.0000	41.0
51 Diethylphthalate	149	6.480	6.480	(1.038)	526103	40.0000	41.4
52 4-Nitrophenol	139	6.266	6.266	(1.003)	73775	40.0000	38.4
53 Fluorene	166	6.613	6.613	(1.059)	518939	40.0000	40.0
54 4-Chlorophenylphenylether	204	6.587	6.587	(1.055)	246512	40.0000	41.5
55 2-Methyl-4,6-dinitrophenol	198	6.619	6.619	(0.916)	76468	40.0000	45.0
56 p-Nitroaniline	138	6.608	6.608	(1.058)	59994	40.0000	26.0
133 Diphenylamine	169	6.662	6.662	(0.922)	396662	40.0000	39.2
58 1,2-Diphenylhydrazine	77	6.694	6.694	(0.927)	529721	40.0000	40.2
61 4-Bromophenylphenylether	248	6.913	6.913	(0.957)	138430	40.0000	43.8
63 Hexachlorobenzene	284	6.972	6.972	(0.965)	153973	40.0000	44.1
65 Pentachlorophenol	266	7.084	7.084	(0.981)	87051	40.0000	47.6
206 n-Octadecane	57	7.057	7.057	(0.977)	421910	40.0000	40.4
68 Phenanthrene	178	7.239	7.239	(1.002)	717030	40.0000	39.7
69 Anthracene	178	7.266	7.266	(1.006)	754077	40.0000	43.3
72 Di-n-butylphthalate	149	7.496	7.496	(1.038)	864510	40.0000	43.0
76 Fluoranthene	202	7.956	7.956	(1.101)	716213	40.0000	43.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
79 Pyrene	202	8.106	8.106	(0.902)	766133	40.0000	42.7
85 Butylbenzylphthalate	149	8.437	8.437	(0.939)	322062	40.0000	43.0
89 Benzo(a)anthracene	228	8.978	8.978	(0.999)	586579	40.0000	40.0
92 Chrysene	228	9.015	9.015	(1.003)	571865	40.0000	40.4
93 bis(2-Ethylhexyl)phthalate	149	8.833	8.833	(0.983)	483212	40.0000	43.7
94 Di-n-octylphthalate	149	9.438	9.438	(0.885)	725903	40.0000	43.9
95 Benzo(b)fluoranthene	252	10.122	10.122	(0.949)	553198	40.0000	45.4
96 Benzo(k)fluoranthene	252	10.160	10.160	(0.952)	508691	40.0000	39.5
97 Benzo(a)pyrene	252	10.587	10.587	(0.992)	444104	40.0000	41.7
99 Indeno(1,2,3-cd)pyrene	276	12.572	12.572	(1.178)	404315	40.0000	39.5
100 Dibenzo(a,h)anthracene	278	12.577	12.577	(1.179)	311150	40.0000	37.9
101 Benzo(ghi)perylene	276	13.166	13.166	(1.234)	354078	40.0000	39.8
126 m-Dinitrobenzene	168	6.046	6.046	(0.968)	91150	40.0000	41.0
130 2,3,4,6-Tetrachlorophenol	232	6.453	6.453	(1.033)	133319	40.0000	42.4
143 Dinoseb	211	7.170	7.170	(0.993)	121999	40.0000	45.6
173 Carbazole	167	7.352	7.352	(1.018)	360211	40.0000	26.4
184 p-Benzoquinone	54	3.597	3.597	(0.873)	23776	40.0000	37.0
192 Methoxychlor	227	8.822	8.822	(0.982)	376365	40.0000	46.8
211 p-Toluidine	106	4.399	4.399	(1.067)	217243	40.0000	35.8
210 m-Toluidine	106	4.420	4.420	(1.073)	284446	40.0000	32.5
214 1,4-Dinitrobenzene	75	5.993	5.993	(0.960)	98751	40.0000	41.0
215 2-Ethoxyethanol	59	2.436	2.436	(0.591)	153490	40.0000	35.0
216 Methylenebis(2-chloroaniline)	231	8.892	8.892	(0.989)	44546	40.0000	27.0
179 Dibenzo(a,e)pyrene	302	17.733	17.733	(1.662)	186950	40.0000	36.4
26 Phthalic anhydride	104	5.528	5.528	(1.106)	52581	40.0000	26.4
M 222 Trichlorophenols	196				310409	80.0000	85.2
M 223 Tetrachlorophenols	232				133319	40.0000	42.4
M 224 Benzo(b,k)fluoranthene	252				1061889	80.0000	84.7

Data File: /chem/MSD2.i/s070709.b/s2g0702.d

Date : 07-JUL-2009 14:03

Client ID: MEGACVS

Sample Info: IWBN090626-05,3|40 PPMI|1|SVMF|1|MEGACVS

Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: ACS1

Column diameter: 0.20

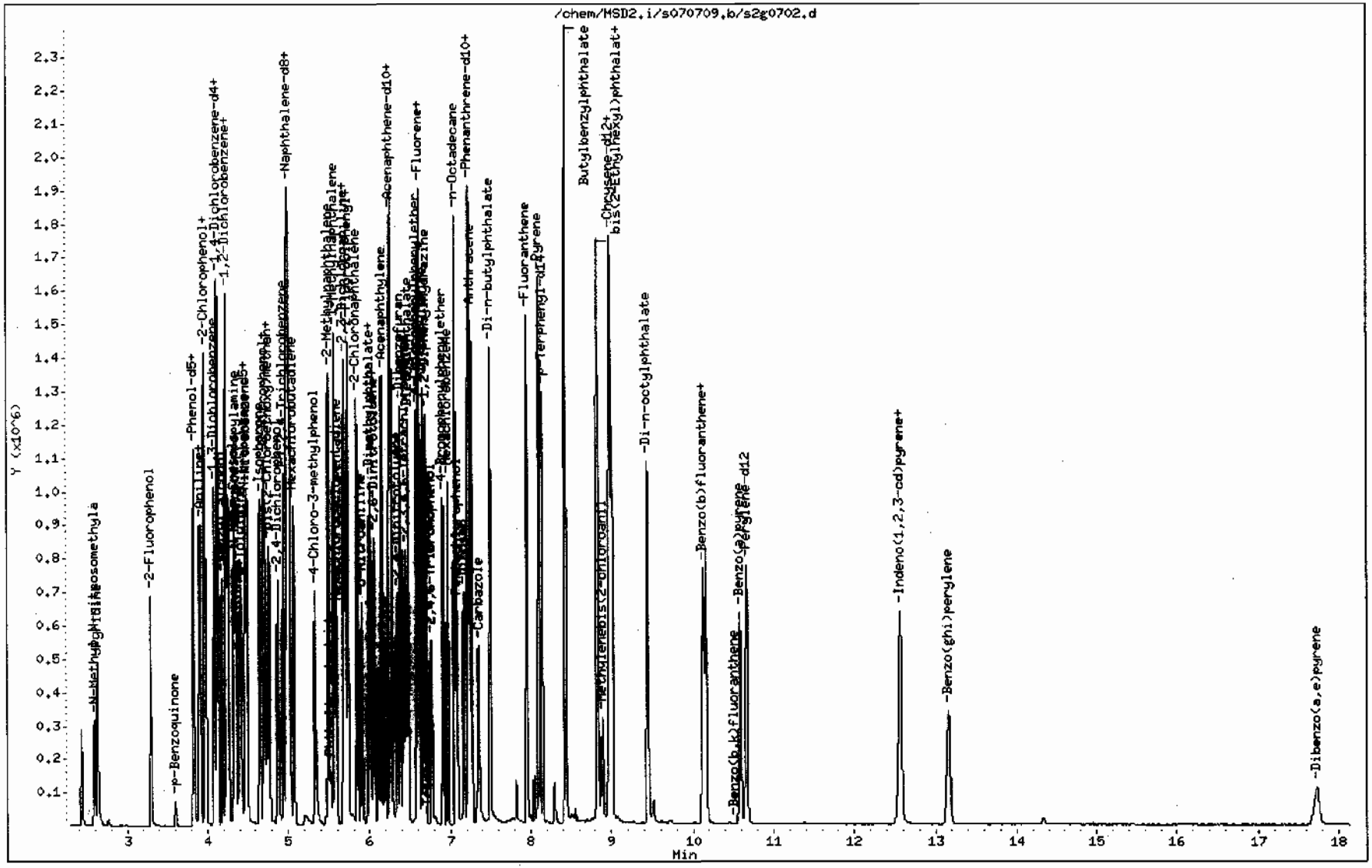

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i Injection Date: 07-JUL-2009 14:28
Lab File ID: s2g0703.d Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Analysis Type: Init. Cal. Times: 02:16 04:28
Lab Sample ID: WBN090619-01.2 Quant Type: ISTD
Method: /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
209 Benzaldehyde	0.85512	0.90983	0.90983	0.000	6.39793	60.00000	Averaged
16 Acetophenone	1.19881	1.22152	1.22152	0.000	1.89409	60.00000	Averaged
189 Caprolactam	0.08601	0.09936	0.09936	0.000	15.51877	60.00000	Averaged
208 1,1'-Biphenyl	1.21152	1.30995	1.30995	0.000	8.12438	60.00000	Averaged
207 Atrazine	0.04406	0.04979	0.04979	0.000	13.00448	60.00000	Averaged
77 Benzidine	26.76831	40.00000	0.19101	0.000	-33.07922	60.00000	Linear
90 3,3'-Dichlorobenzidine	0.25863	0.25568	0.25568	0.000	-1.14007	60.00000	Averaged
102 1,4-Dioxane	0.37452	0.37867	0.37867	0.000	1.10801	60.00000	Averaged
103 Methyl methacrylate	0.21046	0.21700	0.21700	0.000	3.10871	60.00000	Averaged
104 Ethyl methacrylate	0.80237	0.81299	0.81299	0.000	1.32330	60.00000	Averaged
105 2-Picoline	1.24101	1.26213	1.26213	0.000	1.70169	60.00000	Averaged
106 N-Nitrosomethylethylamine	0.52937	0.52946	0.52946	0.000	0.01694	60.00000	Averaged
107 Methyl methanesulfonate	0.47397	0.49763	0.49763	0.000	4.99101	60.00000	Averaged
108 N-Nitrosodiethylamine	0.54113	0.55067	0.55067	0.000	1.76296	60.00000	Averaged
109 Ethyl Methanesulfonate	0.64600	0.65616	0.65616	0.000	1.57259	60.00000	Averaged
110 Pentachloroethane	0.31203	0.33394	0.33394	0.000	7.02232	60.00000	Averaged
111 N-Nitrosopyrrolidine	0.54373	0.57030	0.57030	0.000	4.88604	60.00000	Averaged
113 N-Nitrosomorpholine	0.72224	0.77549	0.77549	0.000	7.37211	60.00000	Averaged
114 o-Toluidine	1.79520	1.86480	1.86480	0.000	3.87689	60.00000	Averaged
115 N-Nitrosopiperidine	0.14845	0.16034	0.16034	0.000	8.00620	60.00000	Averaged
116 a,a-Dimethylphenethylamine	0.76945	0.91745	0.91745	0.000	19.23465	60.00000	Averaged
118 2,6-Dichlorophenol	0.21644	0.24008	0.24008	0.000	10.92468	60.00000	Averaged
119 Hexachloropropene	0.09423	0.12128	0.12128	0.000	28.70023	60.00000	Averaged
120 p-Phenylenediamine	0.22216	0.22075	0.22075	0.000	-0.63253	60.00000	Averaged
121 N-Nitrosodi-n-butylamine	0.21235	0.21871	0.21871	0.000	2.99152	60.00000	Averaged
122 Safrole	0.19580	0.21731	0.21731	0.000	10.98575	60.00000	Averaged
123 1,2,4,5-Tetrachlorobenzene	0.40456	0.46488	0.46488	0.000	14.91046	60.00000	Averaged
124 Isosafrole	0.35137	0.37901	0.37901	0.000	7.86375	60.00000	Averaged
125 1,4-Naphthoquinone	0.33168	0.38008	0.38008	0.000	14.59149	60.00000	Averaged
127 Pentachlorobenzene	0.35632	0.41068	0.41068	0.000	15.25553	60.00000	Averaged
128 1-Naphthylamine	0.92126	0.98503	0.98503	0.000	6.92244	60.00000	Averaged
129 2-Naphthylamine	1.00463	1.09518	1.09518	0.000	9.01294	60.00000	Averaged
131 5-Nitro-o-toluidine	42.42690	40.00000	0.30226	0.000	6.06726	60.00000	Linear
136 1,3,5-Trinitrobenzene	46.73718	40.00000	0.12218	0.000	16.84296	60.00000	Linear
137 Phenacetin	0.24441	0.25571	0.25571	0.000	4.62496	60.00000	Averaged
138 Diallate	0.25943	0.28108	0.28108	0.000	8.34322	60.00000	Averaged

GEL Laboratories LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSD2.i
Lab File ID: s2g0703.d
Analysis Type:
Lab Sample ID: WBN090619-01.2
Method: /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m

Injection Date: 07-JUL-2009 14:28
Init. Cal. Date(s): 27-JUN-2009 29-JUN-2009
Init. Cal. Times: 02:16 04:28
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF40	CCAL RRF40	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
212 Cis Diallate	0.28806	0.30618	0.30618	0.000	6.29189	60.00000	Averaged
213 Trans Diallate	0.30493	0.33065	0.33065	0.000	8.43730	60.00000	Averaged
140 4-Aminobiphenyl	0.49104	0.51413	0.51413	0.000	4.70208	60.00000	Averaged
141 Pentachloronitrobenzene	0.06168	0.07277	0.07277	0.000	17.97692	60.00000	Averaged
142 Pronamide	0.25232	0.28393	0.28393	0.000	12.52497	60.00000	Averaged
146 4-Nitroquinoline-1-oxide	38.67551	40.00000	0.02447	0.000	-3.31121	60.00000	Linear
147 Methapyrilene	0.44483	0.51415	0.51415	0.000	15.58238	60.00000	Averaged
148 Isodrin	0.10127	0.11331	0.11331	0.000	11.89004	60.00000	Averaged
149 Aramite	0.04612	0.05431	0.05431	0.000	17.74786	60.00000	Averaged
150 Kepone	0.07238	0.09098	0.09098	0.000	25.69677	60.00000	Averaged
151 p-(Dimethylamino)azobenzene	0.31565	0.35546	0.35546	0.000	12.61156	60.00000	Averaged
152 Chlorobenzilate	0.26848	0.33583	0.33583	0.000	25.08734	60.00000	Averaged
153 3,3'-Dimethylbenzidine	0.49041	0.43596	0.43596	0.000	-11.10306	60.00000	Averaged
155 2-Acetylaminofluorene	41.48441	40.00000	0.27734	0.000	3.71102	60.00000	Linear
157 7,12Dimethylbenz(a)anthrace	0.47287	0.54395	0.54395	0.000	15.03182	60.00000	Averaged
158 3-Methylcholanthrene	0.40330	0.42284	0.42284	0.000	4.84486	60.00000	Averaged

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GEL Laboratories, LLC
Data file : /chem/MSD2.i/s070709.b/s2g0703.d
Lab Smp Id: WBN090619-01.2 Client Smp ID: APCVS
Inj Date : 07-JUL-2009 14:28
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |WBN090619-01.2|40 PPM|1|SVMF|1|APCVS
Misc Info : |MSD8270|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:02 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AP12.sub
Target Version: 3.50
Processing Host: hpclp1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
* 10 1,4-Dichlorobenzene-d4	152	4.121	4.121	(1.000)	228154	40.0000	
* 29 Naphthalene-d8	136	4.993	4.993	(1.000)	823189	40.0000	
* 46 Acenaphthene-d10	164	6.239	6.239	(1.000)	461788	40.0000	
* 67 Phenanthrene-d10	188	7.218	7.218	(1.000)	774682	40.0000	
* 91 Chrysene-d12	240	8.978	8.978	(1.000)	619516	40.0000	
* 98 Perylene-d12	264	10.652	10.652	(1.000)	484996	40.0000	
209 Benzaldehyde	77	3.843	3.843	(0.932)	207582	40.0000	42.6
16 Acetophenone	105	4.372	4.372	(1.061)	278694	40.0000	40.8
189 Caprolactam	113	5.266	5.266	(1.055)	81790	40.0000	46.2
208 1,1'-Biphenyl	154	5.817	5.817	(0.932)	604917	40.0000	43.2
207 Atrazine	173	6.977	6.977	(0.967)	38569	40.0000	45.2
77 Benzidine	184	7.999	7.999	(0.891)	118334	40.0000	26.8
90 3,3'-Dichlorobenzidine	252	8.892	8.892	(0.990)	158397	40.0000	39.5
102 1,4-Dioxane	88	2.447	2.447	(0.594)	86396	40.0000	40.4
103 Methyl methacrylate	100	2.436	2.436	(0.591)	49509	40.0000	41.2
104 Ethyl methacrylate	69	2.811	2.811	(0.682)	185487	40.0000	40.5
105 2-Picoline	93	3.009	3.009	(0.730)	287960	40.0000	40.7
106 N-Nitrosomethylethylamine	88	3.046	3.046	(0.739)	120798	40.0000	40.0
107 Methyl methanesulfonate	80	3.206	3.206	(0.778)	113536	40.0000	42.0
108 N-Nitrosodiethylamine	102	3.442	3.442	(0.835)	125637	40.0000	40.7
109 Ethyl Methanesulfonate	79	3.597	3.597	(0.873)	149706	40.0000	40.6
110 Pentachloroethane	167	3.945	3.945	(0.957)	76189	40.0000	42.8
111 N-Nitrosopyrrolidine	100	4.362	4.362	(1.058)	130116	40.0000	42.0
113 N-Nitrosomorpholine	56	4.378	4.378	(1.062)	176931	40.0000	42.9
114 o-Toluidine	106	4.399	4.399	(1.067)	425461	40.0000	41.6
115 N-Nitrosopiperidine	114	4.602	4.602	(0.922)	131989	40.0000	43.2

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/ul)	AMOUNTS ON-COL (ng/ul)
116 a,a-Dimethylphenethylamine	58	4.848	4.848	(0.971)	755231	40.0000	47.7
118 2,6-Dichlorophenol	162	5.036	5.036	(1.009)	197632	40.0000	44.4
119 Hexachloropropene	213	5.068	5.068	(1.015)	99835	40.0000	51.5
120 p-Phenylenediamine	108	5.271	5.271	(1.056)	181719	40.0000	39.7
121 N-Nitrosodi-n-butylamine	84	5.234	5.234	(1.048)	180037	40.0000	41.2
122 Safrole	162	5.405	5.405	(1.082)	178888	40.0000	44.4
123 1,2,4,5-Tetrachlorobenzene	216	5.608	5.608	(0.899)	214676	40.0000	46.0
124 Isosafrole	162	5.774	5.774	(0.925)	175020	40.0000	43.1
125 1,4-Naphthoquinone	158	5.966	5.966	(0.956)	175517	40.0000	45.8
127 Pentachlorobenzene	250	6.351	6.351	(1.018)	189646	40.0000	46.1
128 1-Naphthylamine	143	6.432	6.432	(1.031)	454877	40.0000	42.8
129 2-Naphthylamine	143	6.480	6.480	(1.039)	505741	40.0000	43.6
131 5-Nitro-o-toluidine	152	6.597	6.597	(1.057)	139578	40.0000	42.4
136 1,3,5-Trinitrobenzene	75	6.801	6.801	(0.942)	94651	40.0000	46.7
137 Phenacetin	108	6.838	6.838	(0.947)	198097	40.0000	41.8
138 Diallate	86	6.833	6.833	(0.947)	217745	40.0000	43.3
212 Cis Diallate	86	6.892	6.892	(0.955)	35579	6.00000	6.4
213 Trans Diallate	86	6.833	6.833	(0.947)	217729	34.0000	36.9
140 4-Aminobiphenyl	169	7.074	7.074	(0.980)	398285	40.0000	41.9
141 Pentachloronitrobenzene	237	7.095	7.095	(0.983)	56373	40.0000	47.2
142 Pronamide	173	7.079	7.079	(0.981)	219952	40.0000	45.0
146 4-Nitroquinoline-1-oxide	101	7.683	7.683	(1.064)	18958	40.0000	38.7
147 Methapyrilene	58	7.694	7.694	(1.066)	398300	40.0000	46.2
148 Isodrin	193	7.865	7.865	(1.090)	87783	40.0000	44.8
149 Aramite	185	8.090	8.090	(1.121)	42071	40.0000	47.1
150 Kepone	272	8.566	8.566	(1.187)	70480	40.0000	50.3
151 p-(Dimethylamino)azobenzene	120	8.229	8.229	(0.917)	220212	40.0000	45.0
152 Chlorobenzilate	251	8.245	8.245	(0.918)	208055	40.0000	50.0
153 3,3'-Dimethylbenzidine	212	8.459	8.459	(0.942)	270082	40.0000	35.6
155 2-Acetylaminofluorene	181	8.651	8.651	(0.964)	171817	40.0000	41.5
157 7,12Dimethylbenz(a)anthracene	256	10.079	10.079	(0.946)	263814	40.0000	46.0
158 3-Methylcholanthrene	268	11.069	11.069	(1.039)	205075	40.0000	41.9

Data File: /chem/MSD2.i/s070709.b/s2g0703.d
Date : 07-JUL-2009 14:28
Client ID: APCVS
Sample Info: IWBN090619-01,2|40 PPM|1|SVHF|1|APCVS
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

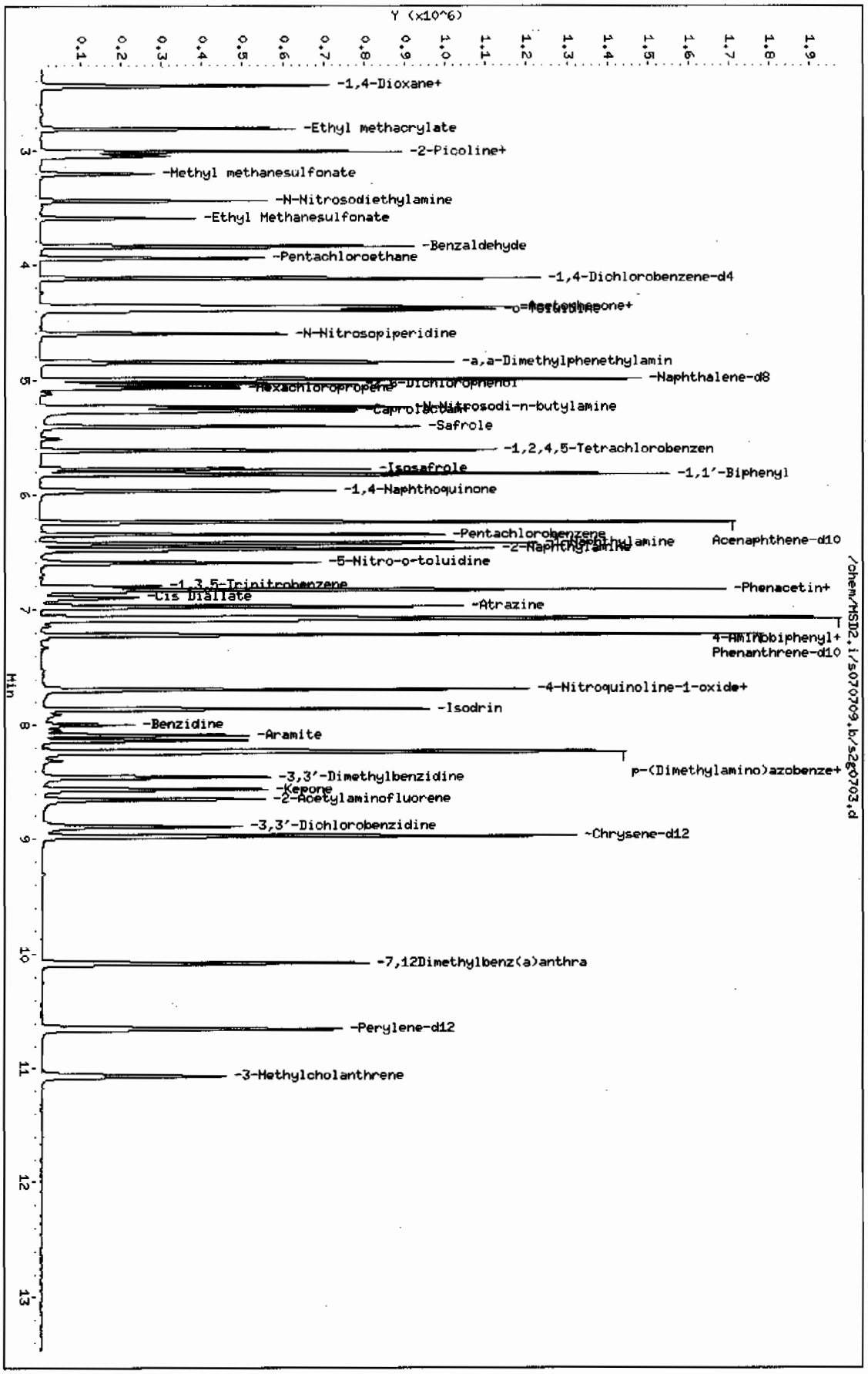

Page 1

QC Data

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Page 1

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

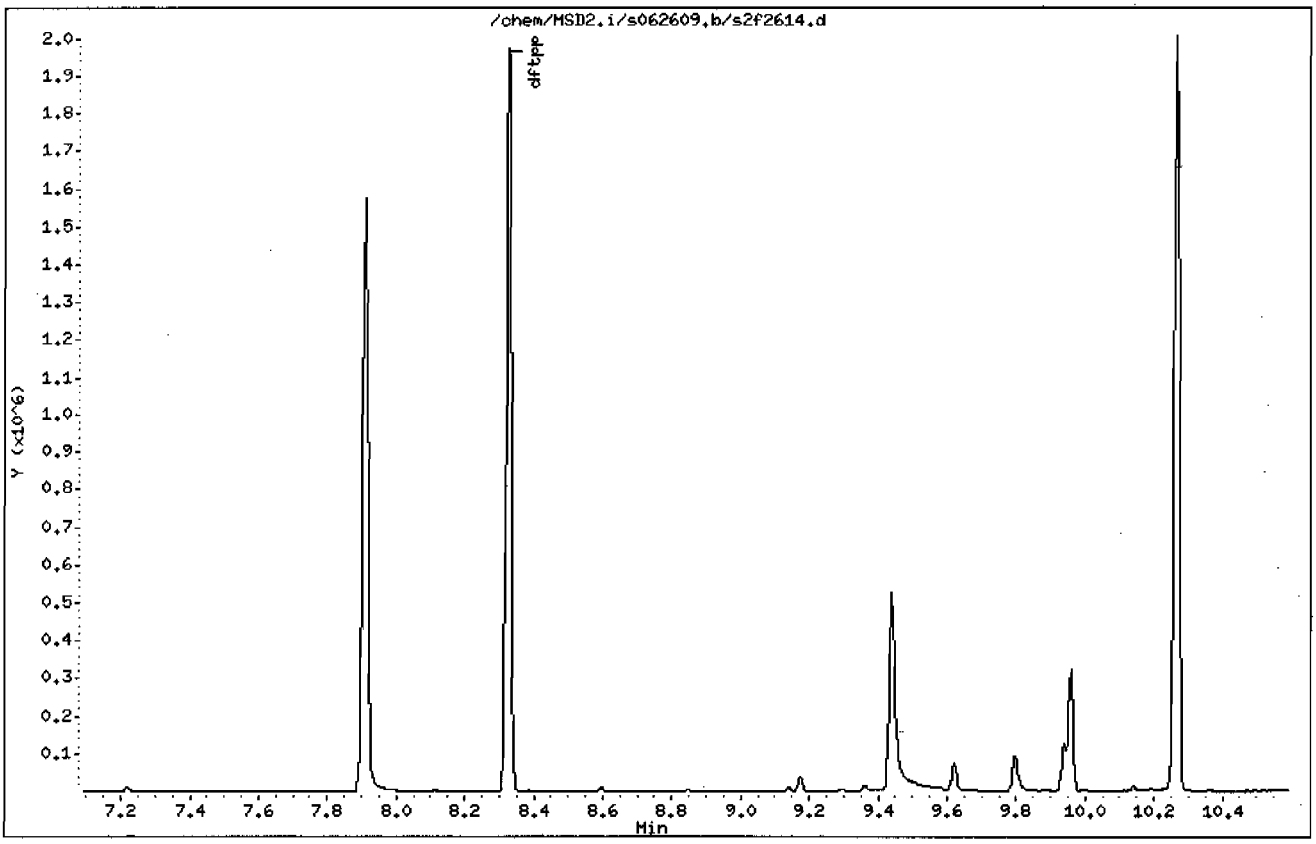

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

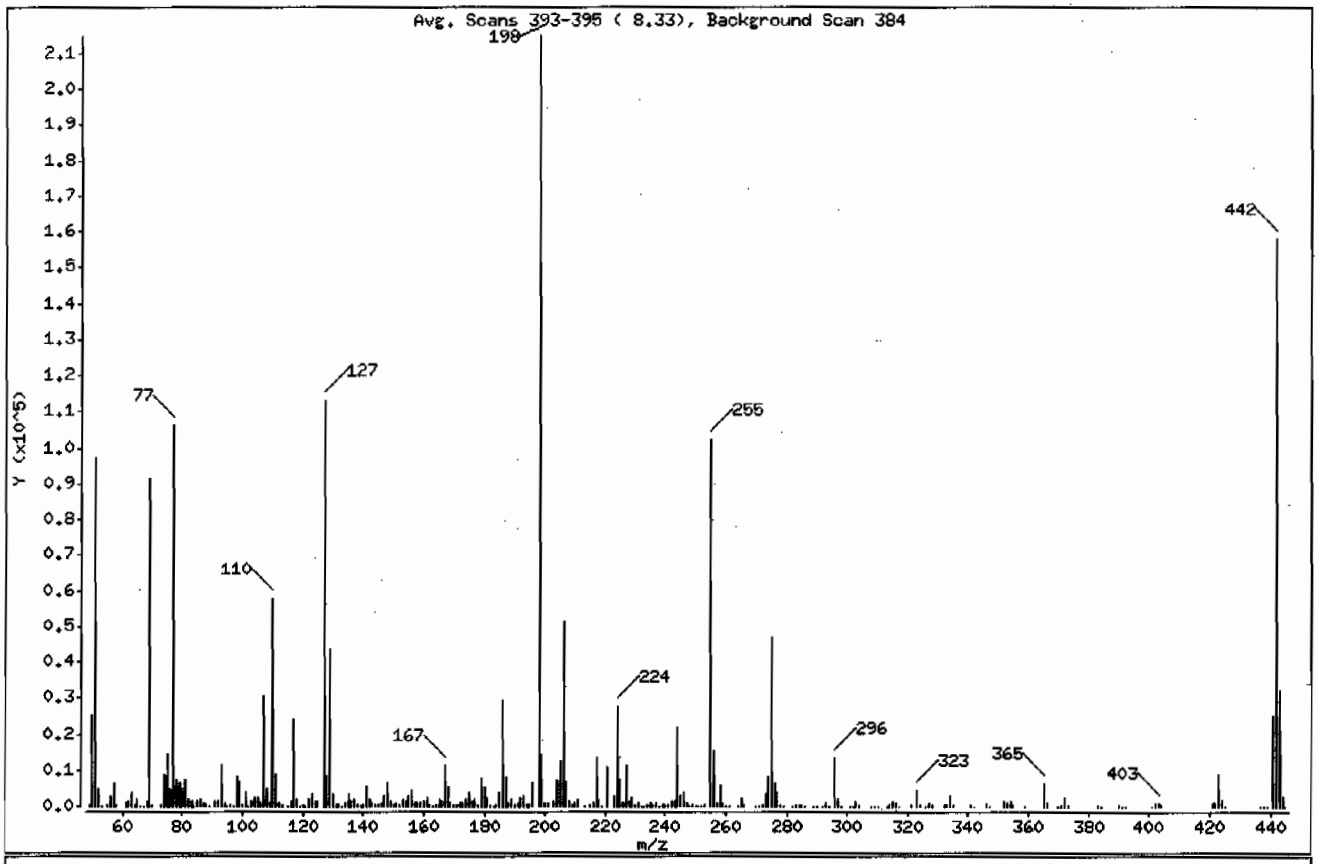

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	45.36
68	Less than 2.00% of mass 69	0.72 (1.70)
69	Mass 69 relative abundance	42.44
70	Less than 2.00% of mass 69	0.22 (0.52)
127	40.00 - 60.00% of mass 198	52.55
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.78
275	10.00 - 30.00% of mass 198	21.80
365	Greater than 1.00% of mass 198	2.92
441	Present, but less than mass 443	11.61
442	Greater than 40.00% of mass 198	73.53
443	17.00 - 23.00% of mass 442	14.99 (20.39)

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2614.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	614	128.00	8592	200.00	1143	284.00	310
50.00	25008	129.00	43336	201.00	1044	285.00	735
51.00	97448	130.00	3663	203.00	1400	286.00	119
52.00	4985	131.00	694	204.00	7284	289.00	146
53.00	190	132.00	351	205.00	12447	290.00	144
55.00	491	133.00	170	206.00	51520	292.00	190
56.00	2897	134.00	1204	207.00	6748	293.00	838
57.00	6609	135.00	3455	208.00	1648	294.00	213
58.00	305	136.00	1376	209.00	489	296.00	13138
61.00	1214	137.00	1780	210.00	807	297.00	1941
62.00	1343	138.00	387	211.00	2033	298.00	82
63.00	3769	139.00	227	213.00	120	301.00	181
64.00	526	140.00	566	215.00	553	302.00	230
65.00	1861	141.00	5437	216.00	1167	303.00	1569
66.00	121	142.00	1865	217.00	13546	304.00	428
67.00	111	143.00	1171	218.00	1809	308.00	186
68.00	1548	144.00	337	219.00	160	309.00	108
69.00	91176	145.00	287	221.00	10832	310.00	176
70.00	471	146.00	986	223.00	3042	313.00	114
73.00	721	147.00	2892	224.00	27504	314.00	658
74.00	9123	148.00	6325	225.00	7208	315.00	1379
75.00	14484	149.00	1310	226.00	756	316.00	774
76.00	5107	150.00	348	227.00	11424	317.00	136
77.00	106208	151.00	770	228.00	1587	321.00	432
78.00	7249	152.00	425	229.00	2297	323.00	4314
79.00	6623	153.00	1734	230.00	333	324.00	737
80.00	5066	154.00	1275	231.00	1016	326.00	35
81.00	7387	155.00	2964	232.00	174	327.00	788
82.00	1734	156.00	4464	233.00	183	328.00	405
83.00	1706	157.00	897	234.00	705	332.00	335
84.00	210	158.00	967	235.00	799	333.00	402
85.00	1366	159.00	745	236.00	546	334.00	2732
86.00	2092	160.00	1677	237.00	890	335.00	676
87.00	956	161.00	2489	238.00	74	341.00	464
88.00	379	162.00	685	239.00	420	342.00	139

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2614.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	150	163.00	176	240.00	353	346.00	993
91.00	1589	164.00	315	241.00	654	347.00	138
92.00	1702	165.00	2043	242.00	1474	352.00	1407
93.00	11186	166.00	1560	243.00	1653	353.00	951
94.00	794	167.00	11200	244.00	21544	354.00	1340
95.00	181	168.00	5550	245.00	2866	355.00	255
96.00	559	169.00	967	246.00	4187	359.00	69
97.00	65	170.00	346	247.00	812	365.00	6266
98.00	8574	171.00	422	248.00	176	366.00	896
99.00	6953	172.00	970	249.00	716	370.00	83
100.00	621	173.00	1180	250.00	136	371.00	324
101.00	4062	174.00	2181	251.00	166	372.00	2367
102.00	222	175.00	4122	252.00	220	373.00	619
103.00	1381	176.00	1274	253.00	501	383.00	616
104.00	2630	177.00	1912	255.00	102400	384.00	139
105.00	2491	178.00	647	256.00	15378	390.00	299
106.00	776	179.00	7737	257.00	1232	391.00	220
107.00	30744	180.00	5302	258.00	6162	392.00	129
108.00	4922	181.00	2538	259.00	883	401.00	81
109.00	883	182.00	404	260.00	156	402.00	933
110.00	58008	183.00	203	261.00	175	403.00	1205
111.00	8805	184.00	589	264.00	183	404.00	414
112.00	1066	185.00	3711	265.00	2391	421.00	1187
113.00	324	186.00	28960	266.00	388	422.00	1178
115.00	121	187.00	7958	270.00	119	423.00	8795
116.00	1682	188.00	885	271.00	213	424.00	1900
117.00	24112	189.00	1751	272.00	315	425.00	166
118.00	1865	190.00	309	273.00	3233	437.00	78
119.00	222	191.00	879	274.00	8403	438.00	81
120.00	400	192.00	2552	275.00	46840	439.00	68
121.00	148	193.00	2752	276.00	6339	441.00	24944
122.00	2153	194.00	564	277.00	4030	442.00	157952
123.00	3238	195.00	328	278.00	616	443.00	32208
124.00	1466	196.00	6406	279.00	123	444.00	2899
125.00	1359	198.00	214848	282.00	33	445.00	156

Data File: /chem/MSD2.i/s062609.b/s2f2614.d

Date : 27-JUN-2009 01:45

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2614.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
127.00	112912	199.00	14557	283.00	443		

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

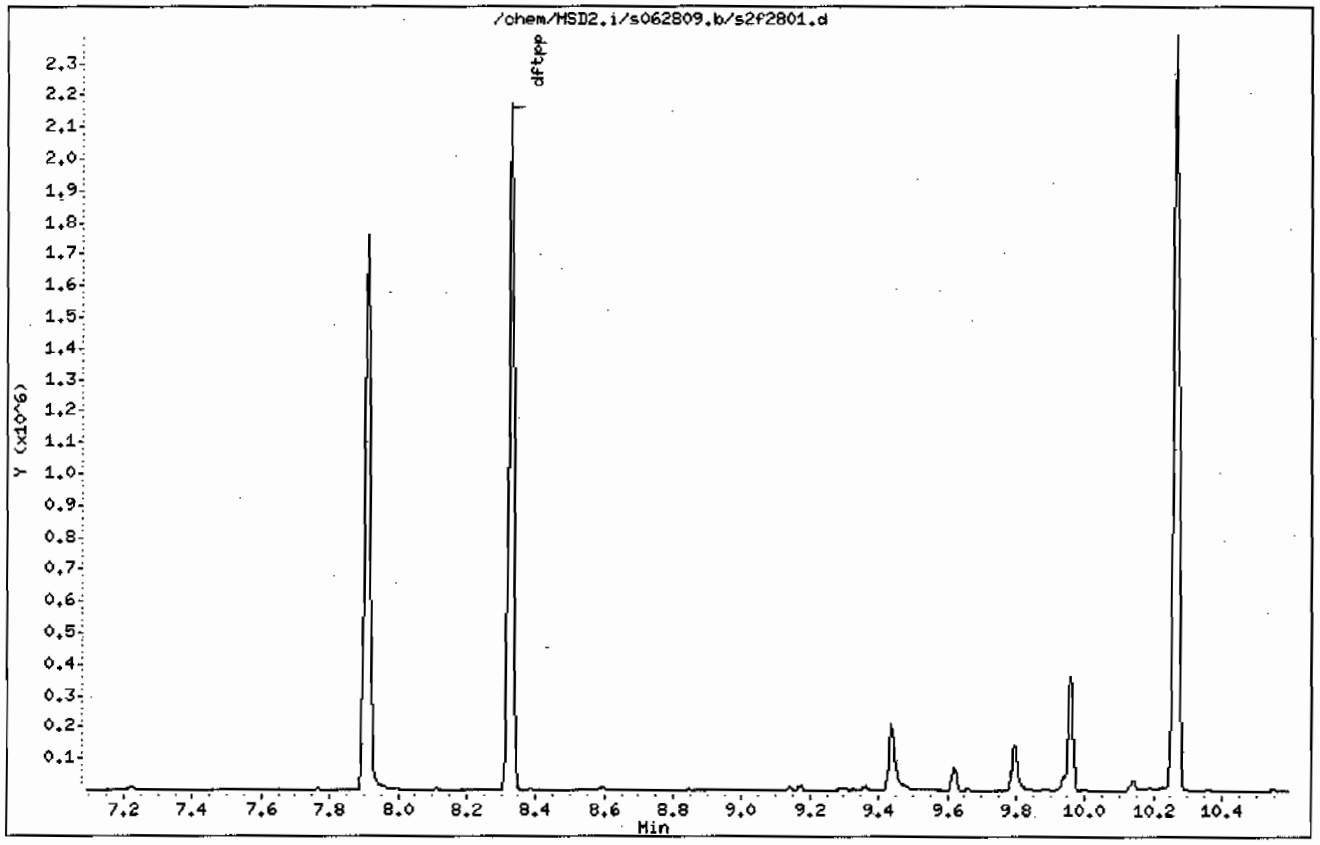

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVHF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

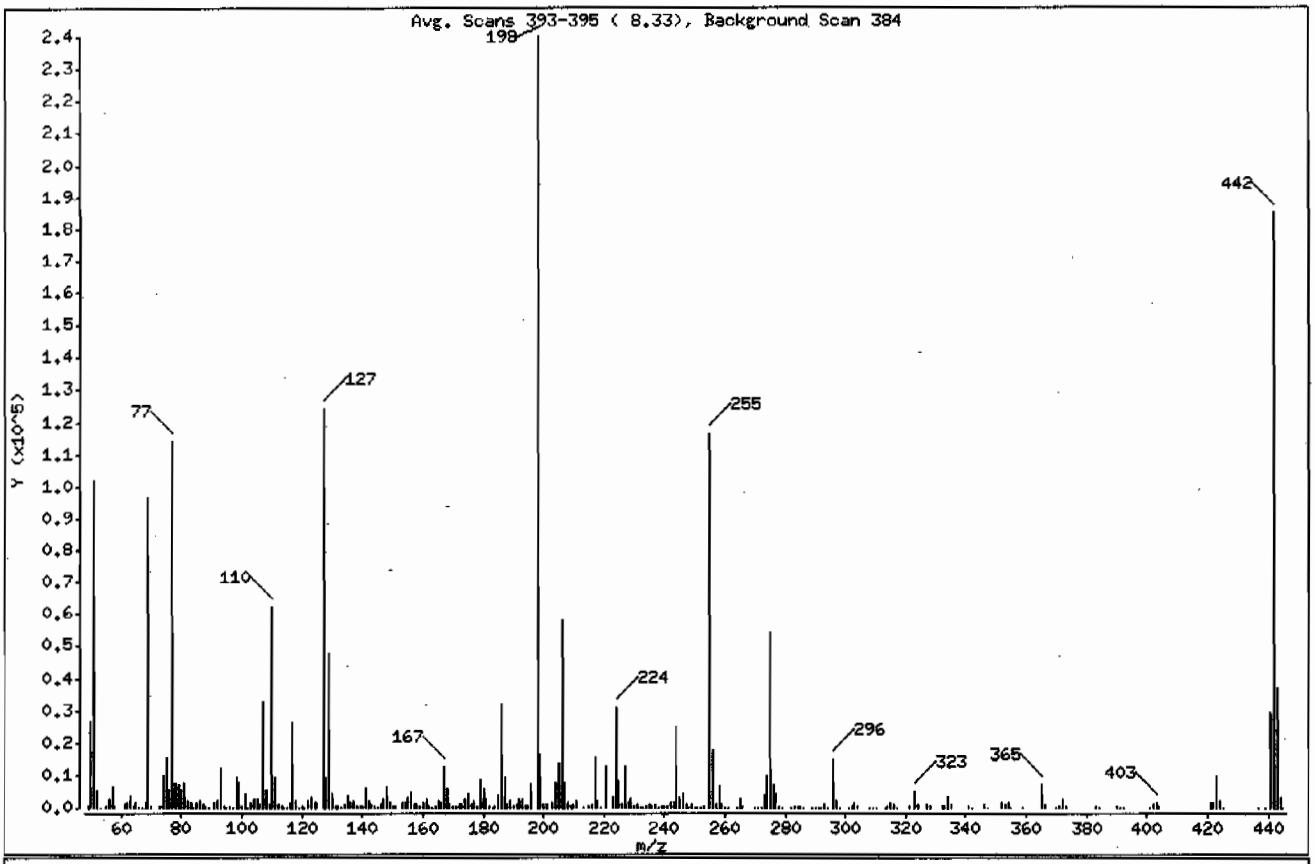

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.62
68	Less than 2.00% of mass 69	0.71 (1.76)
69	Mass 69 relative abundance	40.19
70	Less than 2.00% of mass 69	0.20 (0.50)
127	40.00 - 60.00% of mass 198	51.69
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.97
275	10.00 - 30.00% of mass 198	22.46
365	Greater than 1.00% of mass 198	2.94
441	Present, but less than mass 443	12.18
442	Greater than 40.00% of mass 198	76.96
443	17.00 - 23.00% of mass 442	15.40 (20.01)

Data File: /chem/HSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: HSD2.i

Sample Info: |WBN090624-01|50PPH|1|SVHF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2801.d
Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384
Location of Maximum: 198.00
Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	636	127.00	124088	200.00	1261	284.00	322
50.00	26320	128.00	9638	201.00	1053	285.00	811
51.00	102312	129.00	47320	203.00	1556	286.00	90
52.00	5308	130.00	4152	204.00	7994	289.00	194
53.00	201	131.00	757	205.00	13846	290.00	175
55.00	496	132.00	411	206.00	58152	291.00	82
56.00	3006	133.00	143	207.00	7575	292.00	215
57.00	6853	134.00	1285	208.00	1929	293.00	1013
58.00	292	135.00	3912	209.00	629	294.00	260
61.00	1294	136.00	1523	210.00	975	296.00	14731
62.00	1456	137.00	2032	211.00	2273	297.00	2049
63.00	3980	138.00	415	213.00	151	298.00	125
64.00	549	139.00	328	215.00	600	301.00	159
65.00	1891	140.00	648	216.00	1223	302.00	299
66.00	112	141.00	5858	217.00	15209	303.00	1713
67.00	119	142.00	2040	218.00	2055	304.00	438
68.00	1696	143.00	1266	219.00	196	308.00	215
69.00	96480	144.00	318	221.00	12612	309.00	145
70.00	487	145.00	250	223.00	3385	310.00	190
73.00	740	146.00	1066	224.00	31128	313.00	135
74.00	10024	147.00	3032	225.00	8054	314.00	698
75.00	15526	148.00	6877	226.00	946	315.00	1696
76.00	5742	149.00	1461	227.00	12526	316.00	875
77.00	114344	150.00	387	228.00	1852	317.00	155
78.00	7971	151.00	769	229.00	2722	321.00	518
79.00	7075	153.00	1842	230.00	344	323.00	4765
80.00	5517	154.00	1462	231.00	1104	324.00	871
81.00	7750	155.00	3356	232.00	186	327.00	864
82.00	1963	156.00	4882	233.00	210	328.00	448
83.00	1916	157.00	912	234.00	789	332.00	367
84.00	251	158.00	1141	235.00	955	333.00	458
85.00	1386	159.00	819	236.00	608	334.00	3132
86.00	2224	160.00	1889	237.00	1001	335.00	862
87.00	1020	161.00	2810	238.00	171	341.00	554
88.00	415	162.00	741	239.00	499	342.00	90

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2801.d

Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384

Location of Maximum: 198.00

Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	170	163.00	188	240.00	363	346.00	1128
91.00	1736	164.00	300	241.00	698	347.00	204
92.00	1946	165.00	2270	242.00	1661	352.00	1582
93.00	12042	166.00	1896	243.00	1817	353.00	1093
94.00	785	167.00	12669	244.00	24936	354.00	1642
95.00	207	168.00	6276	245.00	3284	355.00	253
96.00	603	169.00	1053	246.00	4498	359.00	76
97.00	220	170.00	378	247.00	920	365.00	7046
98.00	9460	171.00	462	248.00	218	366.00	1044
99.00	7763	172.00	1099	249.00	837	370.00	133
100.00	654	173.00	1317	250.00	170	371.00	368
101.00	4442	174.00	2561	251.00	212	372.00	2645
102.00	233	175.00	4478	252.00	226	373.00	620
103.00	1506	176.00	1341	253.00	521	383.00	686
104.00	2693	177.00	2154	255.00	116384	384.00	174
105.00	2602	178.00	721	256.00	17392	390.00	312
106.00	899	179.00	8799	257.00	1370	391.00	251
107.00	32792	180.00	5795	258.00	6789	392.00	168
108.00	5314	181.00	2762	259.00	1104	401.00	162
109.00	1039	182.00	449	260.00	205	402.00	1111
110.00	62136	183.00	265	261.00	197	403.00	1532
111.00	9534	184.00	682	264.00	230	404.00	490
112.00	1232	185.00	4068	265.00	2707	421.00	1391
113.00	373	186.00	32232	266.00	452	422.00	1464
114.00	34	187.00	9194	270.00	135	423.00	10125
115.00	129	188.00	910	271.00	249	424.00	2189
116.00	1883	189.00	2044	272.00	101	425.00	234
117.00	26408	190.00	340	273.00	3643	437.00	84
118.00	2016	191.00	874	274.00	9719	439.00	181
119.00	245	192.00	2771	275.00	53880	441.00	29232
120.00	438	193.00	2950	276.00	7249	442.00	184704
121.00	150	194.00	640	277.00	4412	443.00	36960
122.00	2323	195.00	307	278.00	719	444.00	3426
123.00	3438	196.00	7325	279.00	134	445.00	185
124.00	1590	198.00	240064	282.00	73		

Data File: /chem/MSD2.i/s062809.b/s2f2801.d

Date : 28-JUN-2009 18:00

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2f2801.d

Spectrum: Avg. Scans 393-395 (8.33), Background Scan 384

Location of Maximum: 198.00

Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	1554	199.00	16728	283.00	473		

Data File: /chem/MSD2.i/s070709.b/s2g0701.d

Date : 07-JUL-2009 13:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

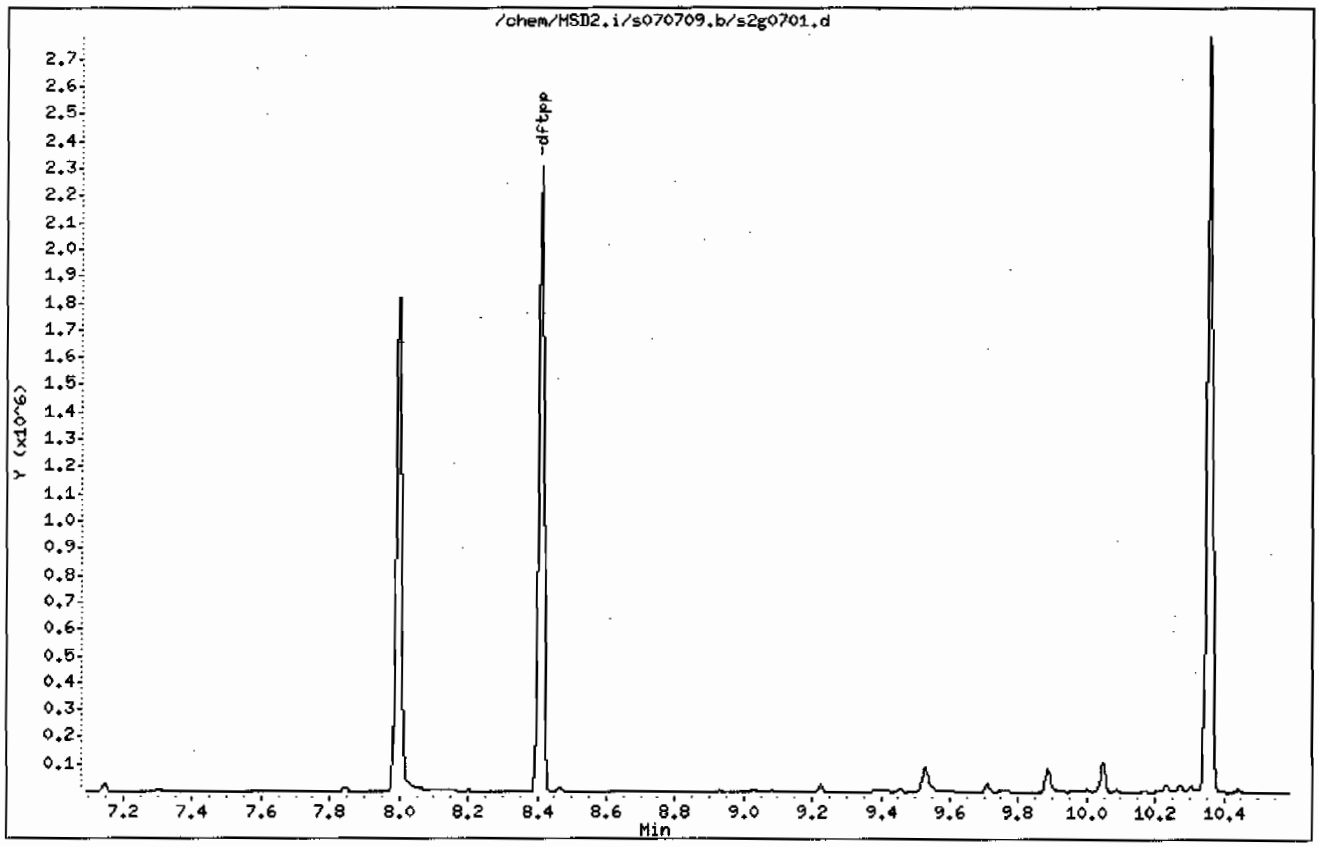

Data File: /chem/MSD2.i/s070709.b/s2g0701.d

Date : 07-JUL-2009 13:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

1 dftpp

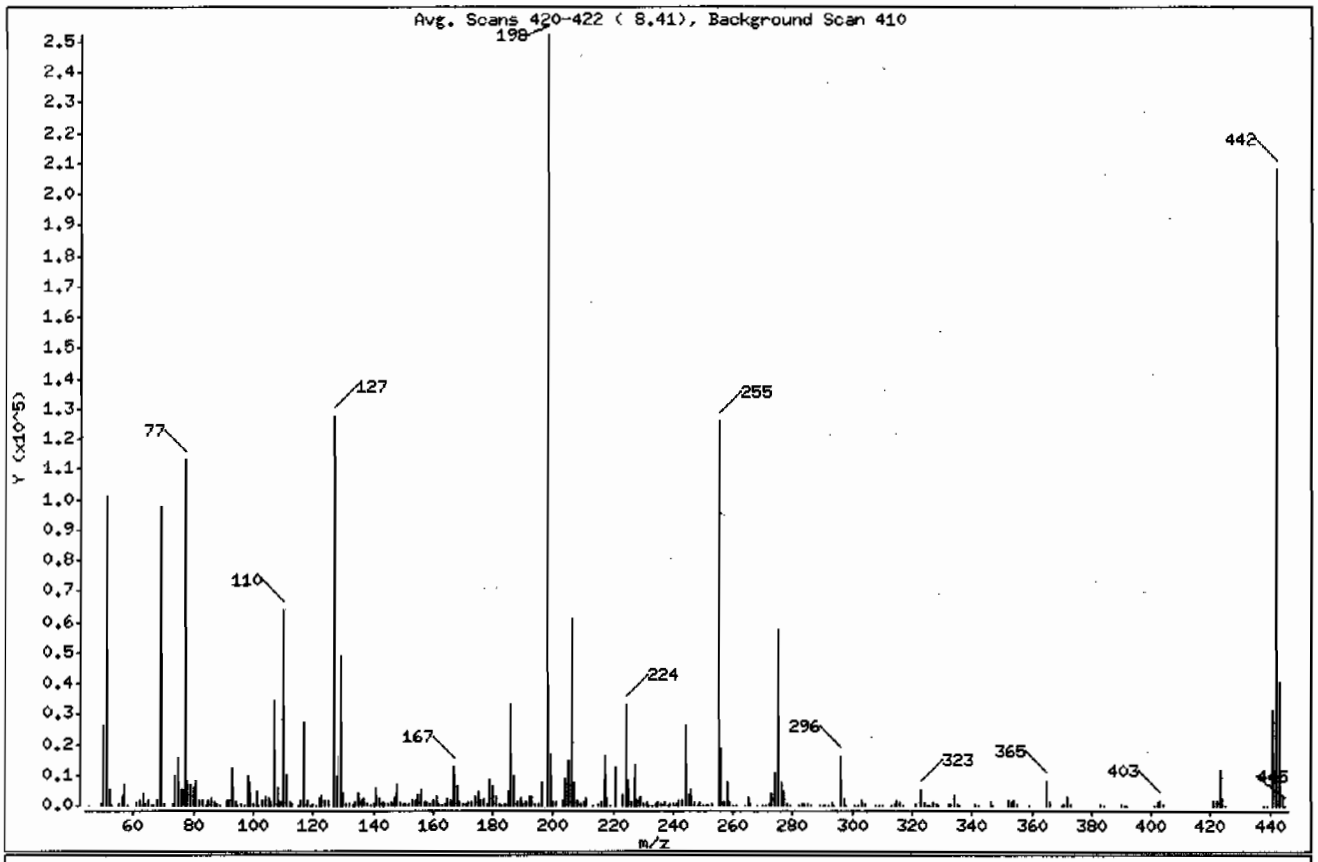

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.05
68	Less than 2.00% of mass 69	0.60 (1.55)
69	Mass 69 relative abundance	38.58
70	Less than 2.00% of mass 69	0.19 (0.48)
127	40.00 - 60.00% of mass 198	50.60
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.70
275	10.00 - 30.00% of mass 198	22.68
365	Greater than 1.00% of mass 198	3.24
441	Present, but less than mass 443	12.34
442	Greater than 40.00% of mass 198	82.41
443	17.00 - 23.00% of mass 442	16.14 (19.58)

Data File: /chem/MSD2.i/s070709.b/s2g0701.d

Date : 07-JUL-2009 13:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2g0701.d

Spectrum: Avg, Scans 420-422 (8.41), Background Scan 410

Location of Maximum: 198.00

Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	114	129.00	48640	204.00	8554	290.00	176
49.00	616	130.00	4134	205.00	14353	291.00	110
50.00	25912	131.00	740	206.00	60744	292.00	227
51.00	101056	132.00	428	207.00	7829	293.00	1096
52.00	5154	133.00	183	208.00	2019	294.00	283
53.00	198	134.00	1310	209.00	619	296.00	16360
55.00	508	135.00	3932	210.00	990	297.00	2429
56.00	3076	136.00	1487	211.00	2334	298.00	150
57.00	6911	137.00	2036	213.00	167	301.00	206
58.00	277	138.00	429	215.00	658	302.00	273
61.00	1249	139.00	256	216.00	1320	303.00	1934
62.00	1464	140.00	610	217.00	16159	304.00	506
63.00	3981	141.00	6087	218.00	2072	308.00	218
64.00	527	142.00	2063	219.00	170	309.00	124
65.00	1939	143.00	1400	221.00	12876	310.00	199
66.00	143	144.00	396	223.00	3567	313.00	141
67.00	114	145.00	345	224.00	32992	314.00	840
68.00	1512	146.00	1053	225.00	8263	315.00	1855
69.00	97352	147.00	3161	226.00	890	316.00	1016
70.00	472	148.00	7195	227.00	13587	317.00	162
73.00	785	149.00	1441	228.00	1848	321.00	532
74.00	9824	150.00	416	229.00	2745	323.00	5319
75.00	15375	151.00	804	230.00	431	324.00	1015
76.00	5439	152.00	537	231.00	1204	325.00	36
77.00	112864	153.00	1829	232.00	182	326.00	115
78.00	7847	154.00	1471	233.00	238	327.00	945
79.00	7096	155.00	3494	234.00	849	328.00	516
80.00	5518	156.00	5007	235.00	940	329.00	71
81.00	7904	157.00	1026	236.00	679	332.00	340
82.00	1930	158.00	1169	237.00	986	333.00	484
83.00	1824	159.00	866	238.00	144	334.00	3427
84.00	142	160.00	1879	239.00	529	335.00	832
85.00	1578	161.00	2804	240.00	377	336.00	104
86.00	2274	162.00	790	241.00	781	341.00	591
87.00	1046	163.00	217	242.00	1794	342.00	137

Data File: /chem/MSD2.i/s070709.b/s2g0701.d

Date : 07-JUL-2009 13:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2g0701.d
Spectrum: Avg. Scans 420-422 (8.41), Background Scan 410
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	398	164.00	315	243.00	1882	346.00	1232
89.00	175	165.00	2193	244.00	25976	347.00	209
91.00	1771	166.00	1843	245.00	3364	352.00	1750
92.00	2020	167.00	12761	246.00	4935	353.00	1183
93.00	12176	168.00	6404	247.00	987	354.00	1862
94.00	875	169.00	1029	248.00	256	355.00	314
95.00	234	170.00	362	249.00	916	359.00	125
96.00	570	171.00	524	250.00	185	365.00	8172
97.00	230	172.00	1127	251.00	198	366.00	1142
98.00	9699	173.00	1389	252.00	229	370.00	147
99.00	7582	174.00	2641	253.00	573	371.00	393
100.00	633	175.00	4728	255.00	126072	372.00	3036
101.00	4462	176.00	1453	256.00	18688	373.00	714
102.00	228	177.00	2147	257.00	1433	383.00	754
103.00	1562	178.00	740	258.00	7292	384.00	209
104.00	2851	179.00	8920	259.00	1135	390.00	371
105.00	2532	180.00	6182	260.00	221	391.00	263
106.00	874	181.00	2993	261.00	216	392.00	176
107.00	34080	182.00	487	264.00	117	401.00	180
108.00	5555	183.00	261	265.00	2960	402.00	1198
109.00	1062	184.00	690	266.00	406	403.00	1748
110.00	63944	185.00	4364	268.00	106	404.00	609
111.00	9692	186.00	33328	270.00	152	421.00	1501
112.00	1276	187.00	9808	271.00	272	422.00	1483
113.00	378	188.00	978	272.00	363	423.00	11320
115.00	129	189.00	2114	273.00	3965	424.00	2349
116.00	1989	190.00	337	274.00	10316	425.00	216
117.00	27408	191.00	943	275.00	57224	438.00	99
118.00	2015	192.00	2928	276.00	7705	439.00	159
119.00	252	193.00	3164	277.00	4751	441.00	31128
120.00	453	194.00	672	278.00	834	442.00	207936
121.00	128	195.00	464	279.00	141	443.00	40720
122.00	2385	196.00	7431	282.00	120	444.00	3650
123.00	3552	198.00	252288	283.00	487	445.00	204
124.00	1599	199.00	16904	284.00	337		

Data File: /chem/MSD2.i/s070709.b/s2g0701.d

Date : 07-JUL-2009 13:51

Client ID: DFTPP

Instrument: MSD2.i

Sample Info: |WBN090624-01|50PPM|1|SVMF|1|DFTPP|

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Data File: s2g0701.d
Spectrum: Avg. Scans 420-422 (8.41), Background Scan 410
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	1526	200.00	1299	285.00	852		
127.00	127688	201.00	1160	286.00	142		
128.00	9544	203.00	1689	289.00	188		

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536			**Matrix:**	SOIL
Lab Sample ID:	1201874895				
Client Sample:	QC for batch 882731	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882731	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 15:51	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s2g0705-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine	U	333	ug/kg	66.7	333
108-95-2	Phenol	U	333	ug/kg	66.7	333
95-57-8	2-Chlorophenol	U	333	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene	U	333	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine	U	333	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol	U	333	ug/kg	66.7	333
83-32-9	Acenaphthene	U	33.3	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene	U	333	ug/kg	33.3	333
100-02-7	4-Nitrophenol	U	333	ug/kg	110	333
87-86-5	Pentachlorophenol	U	333	ug/kg	83.3	333
129-00-0	Pyrene	U	33.3	ug/kg	10.0	33.3
110-86-1	Pyridine	U	333	ug/kg	66.7	333
62-53-3	Aniline	U	333	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether	U	333	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene	U	333	ug/kg	66.7	333
100-51-6	Benzyl alcohol	U	333	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene	U	333	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether	U	333	ug/kg	66.7	333
95-48-7	o-Cresol	U	333	ug/kg	66.7	333
65794-96-9	m,p-Cresols	U	333	ug/kg	100	333
67-72-1	Hexachloroethane	U	333	ug/kg	66.7	333
98-95-3	Nitrobenzene	U	333	ug/kg	66.7	333
78-59-1	Isophorone	U	333	ug/kg	66.7	333
88-75-5	2-Nitrophenol	U	333	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol	U	333	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane	U	333	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol	U	333	ug/kg	66.7	333
65-85-0	Benzoic acid	U	667	ug/kg	167	667
91-20-3	Naphthalene	U	33.3	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline	U	333	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene	U	333	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene	U	33.3	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene	U	333	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol	U	333	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol	U	333	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene	U	33.3	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline	U	333	ug/kg	66.7	333
	o-Nitroaniline					
99-09-2	3-Nitroaniline	U	333	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536			Matrix:	SOIL
Lab Sample ID:	1201874895				
Client Sample:	QC for batch 882731	Client:	LANL010	Project:	QC
Client ID:	MB for batch 882731	Method:	SW846 8270C	SOP Ref:	GL-OA-E-009
Batch ID:	882732	Inst:	MSD2.I	Dilution:	1
Run Date:	07/07/2009 15:51	Analyst:	AGS1	Inj. Vol:	.5 uL
Prep Date:	07/07/2009 09:20	Aliquot:	30 g	Final Volume:	1 mL
Data File:	s2g0705-1.d	Column:	J&W DB-5MS	Level:	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate	U	333	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene	U	333	ug/kg	33.3	333
208-96-8	Acenaphthylene	U	33.3	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol	U	667	ug/kg	127	667
132-64-9	Dibenzofuran	U	333	ug/kg	66.7	333
84-66-2	Diethylphthalate	U	333	ug/kg	66.7	333
86-73-7	Fluorene	U	33.3	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether	U	333	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol	U	333	ug/kg	66.7	333
100-01-6	4-Nitroaniline	U	333	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine	U	333	ug/kg	66.7	333
122-66-7	Azobenzene	U	333	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether	U	333	ug/kg	66.7	333
118-74-1	Hexachlorobenzene	U	333	ug/kg	66.7	333
85-01-8	Phenanthrene	U	33.3	ug/kg	10.0	33.3
120-12-7	Anthracene	U	33.3	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate	U	333	ug/kg	66.7	333
206-44-0	Fluoranthene	U	33.3	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate	U	333	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene	U	33.3	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine	U	333	ug/kg	100	333
218-01-9	Chrysene	U	33.3	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate	U	333	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate	U	333	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene	U	33.3	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene	U	33.3	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene	U	33.3	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene	U	33.3	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene	U	33.3	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene	U	33.3	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene	U	333	ug/kg	66.7	333

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown	2.22	1170	ug/kg		J
	Unknown	2.35	140	ug/kg		J

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536			**Matrix:**	SOIL
Lab Sample ID:	1201874895				
Client Sample:	QC for batch 882731	**Client:**	LANL010	**Project:**	QC
Client ID:	MB for batch 882731	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 15:51	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s2g0705-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ

Tentatively Identified Compound Summary

CAS No.	Tentatively Identified Compound (TIC)	RT	Estimated	Units	Fit	Qual
	Unknown Aldol Condensate	3.14	440	ug/kg		JA

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Data file : /chem/MSD2.i/s070709.b/s2g0705.d
Lab Smp Id: 1201874895 Client Smp ID: SBLK01
Inj Date : 07-JUL-2009 15:51
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201874895|882732|1|SVMF|1|MB
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.121	4.121	(1.000)	191624	40.0000	
* 29 Naphthalene-d8	136	4.993	4.998	(1.000)	705464	40.0000	
* 46 Acenaphthene-d10	164	6.239	6.244	(1.000)	387230	40.0000	
* 67 Phenanthrene-d10	188	7.218	7.223	(1.000)	623030	40.0000	
* 91 Chrysene-d12	240	8.978	8.988	(1.000)	463149	40.0000	
* 98 Perylene-d12	264	10.652	10.668	(1.000)	376910	40.0000	
$ 3 2-Fluorophenol	112	3.303	3.297	(0.801)	356644	67.2600	2240
$ 5 Phenol-d5	99	3.821	3.827	(0.927)	445226	67.9952	2270
$ 20 Nitrobenzene-d5	82	4.479	4.485	(0.897)	198824	37.3547	1240
$ 39 2-Fluorobiphenyl	172	5.736	5.736	(0.919)	417762	38.1992	1270
$ 60 2,4,6-Tribromophenol	329	6.769	6.769	(1.085)	95003	71.6314	2390
$ 81 p-Terphenyl-d14	244	8.148	8.149	(0.908)	424177	53.7696	1790

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Data file : /chem/MSD2.i/s070709.b/s2g0705.d
Lab Smp Id: 1201874895 Client Smp ID: SBLK01
Inj Date : 07-JUL-2009 15:51
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201874895|882732|1|SVMF|1|MB
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.121	1152882	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.222	1015579	35.2361505	1170	0		0	10
Unknown				CAS #:			
2.345	121204	4.20524366	140	0		0	10

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	========	==========	======
Unknown Aldol Condensate					CAS #:		
3.137	380675	13.2077543	440	0		0	10

Data File: /chem/MSD2.i/s070709.b/s2g0705.d
Date : 07-JUL-2009 15:51
Client ID: SBLK01
Sample Info: 1120187489518827321 1|SVMF1 1|MB
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i

Operator: AGS1
Column diameter: 0.20

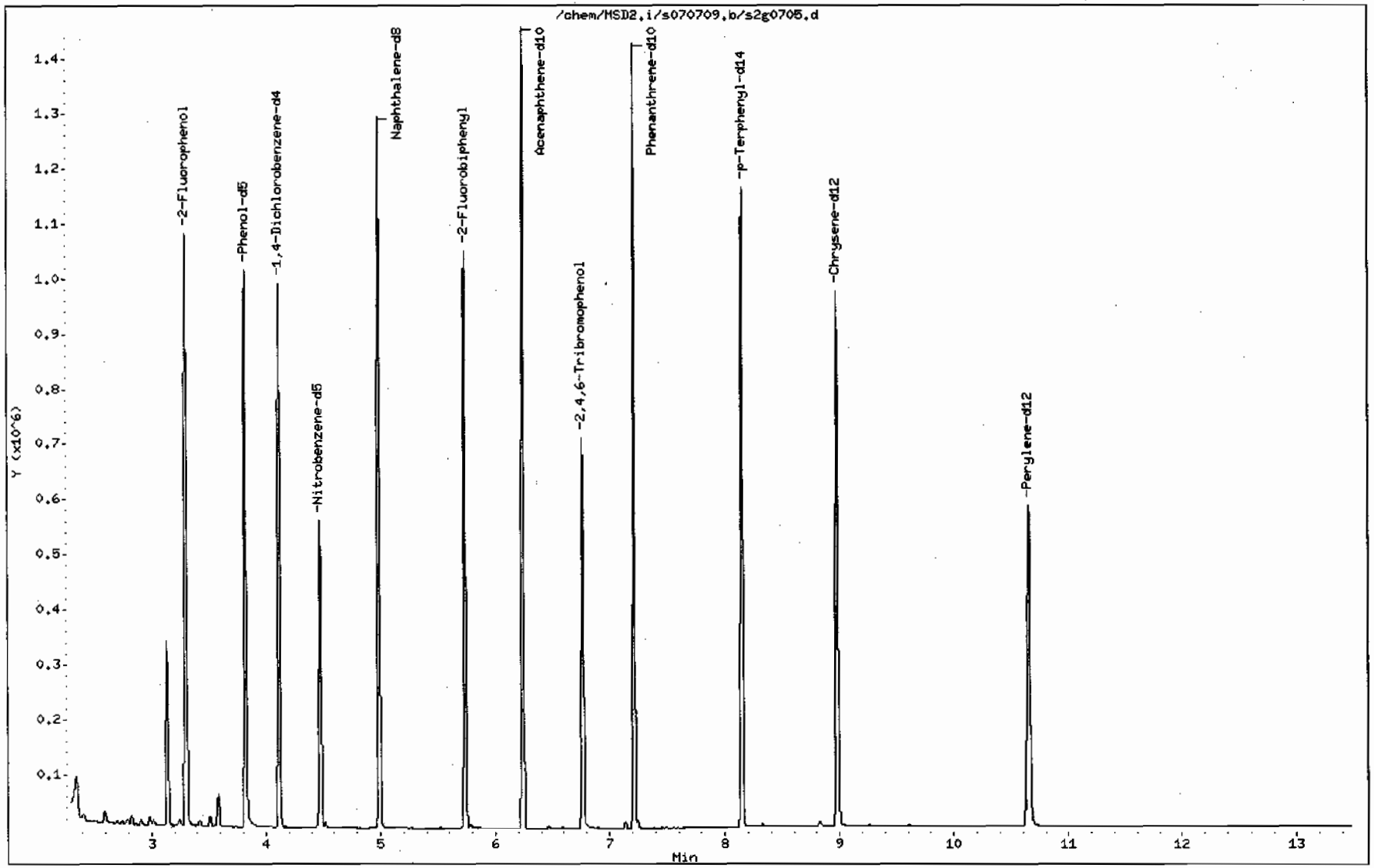

Data File: /chem/MSD2.i/s070709.b/s2g0705.d

Date : 07-JUL-2009 15:51

Client ID: SBLK01

Instrument: MSD2.i

Sample Info: |120187489518827321|1|SVMF|1|MB

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	45	C5H12O2	104
1,3-Diaminoguanidine	4364-78-7	NIST05.L	2178	43	CH7N5	89
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	42	C5H12O2	104

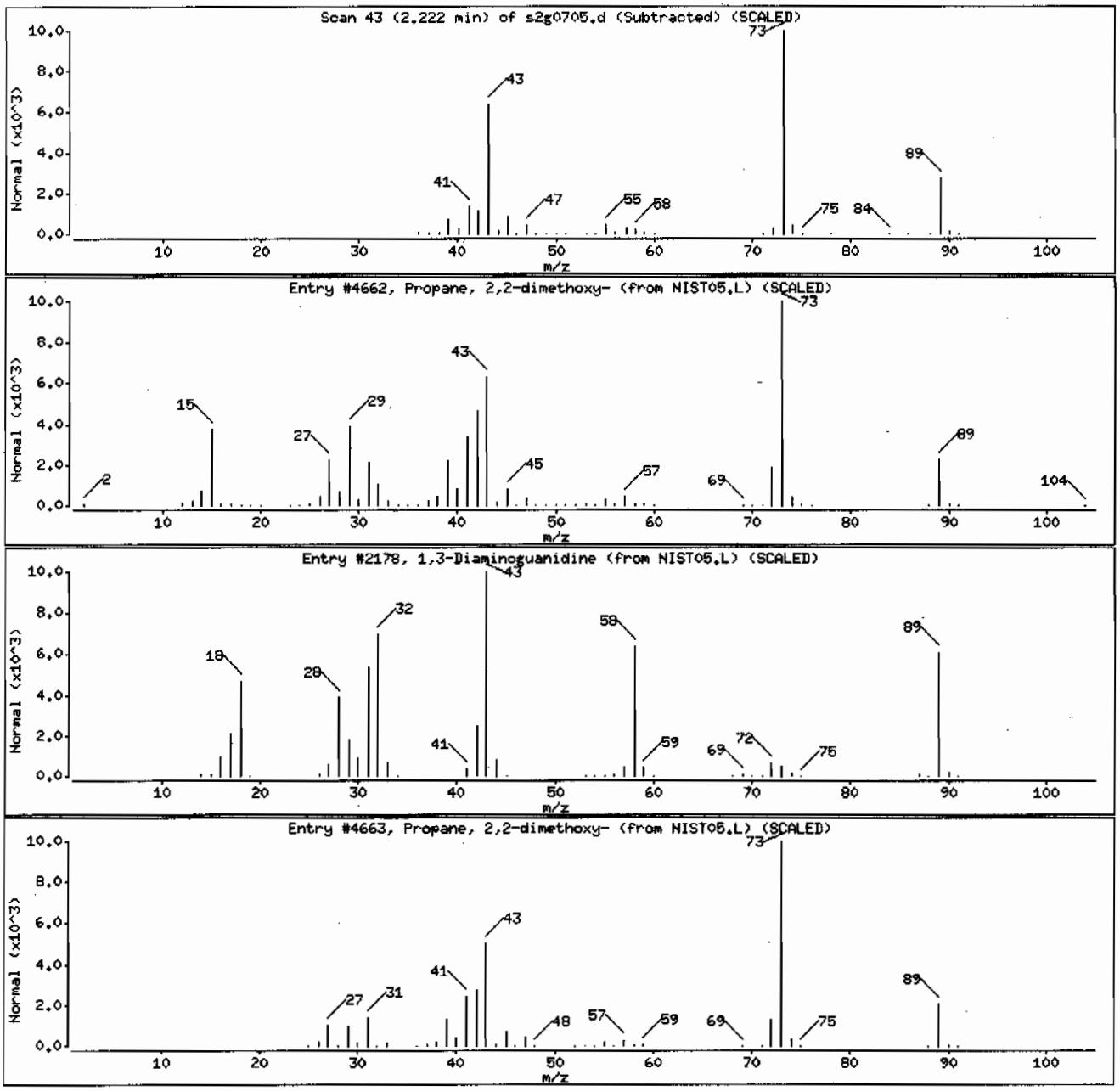

Data File: /chem/MSD2.i/s070709.b/s2g0705.d

Date : 07-JUL-2009 15:51

Client ID: SBLK01

Instrument: MSD2.i

Sample Info: |1201874895|882732|1|SVMF|1|MB

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2355	46	C3H5Cl0	92
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2354	46	C3H5Cl0	92
2-Propanone, 1-chloro-	78-95-5	NIST05.L	2356	43	C3H5Cl0	92

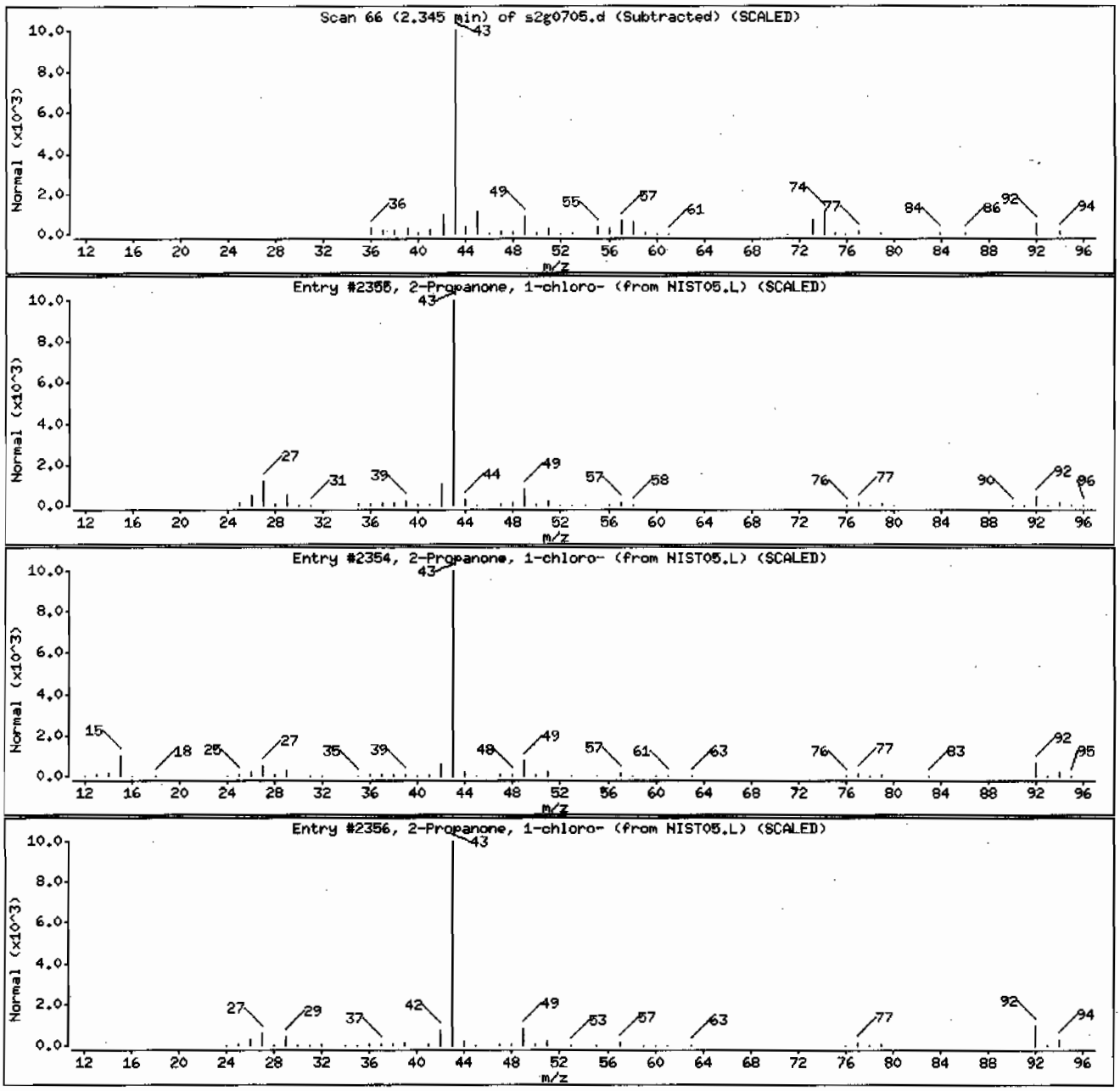

Data File: /chem/MSD2.i/s070709.b/s2g0705.d

Date : 07-JUL-2009 15:51

Client ID: SBLK01

Instrument: MSD2.i

Sample Info: |120187489518827321|SVMF|1|MB

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	39	C6H12O2	116

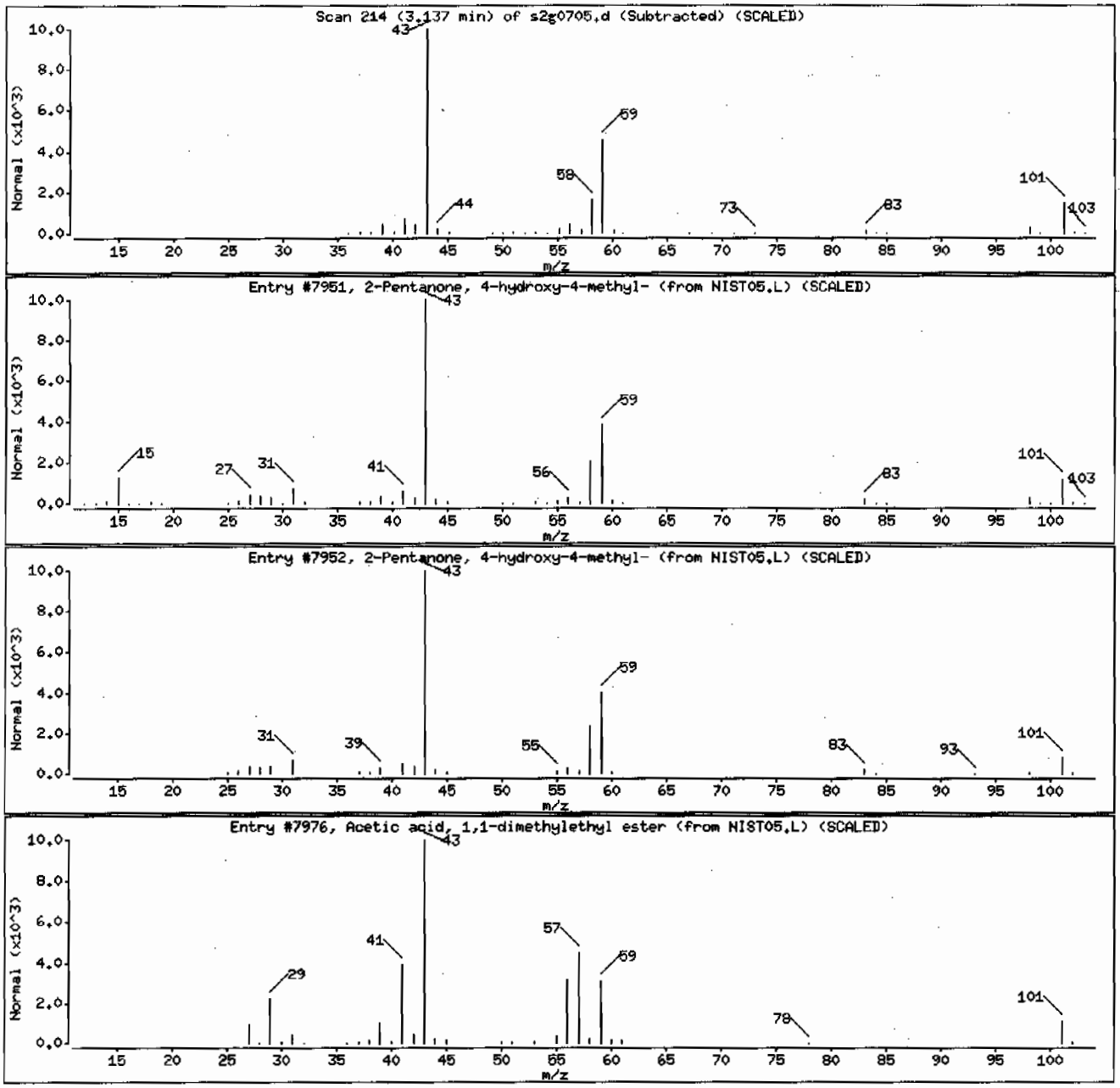

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	09-2536			**Matrix:**	SOIL
Lab Sample ID:	1201874896				
Client Sample:	QC for batch 882731	**Client:**	LANL010	**Project:**	QC
Client ID:	LCS for batch 882731	**Method:**	SW846 8270C	**SOP Ref:**	GL-OA-E-009
Batch ID:	882732	**Inst:**	MSD2.I	**Dilution:**	1
Run Date:	07/07/2009 16:11	**Analyst:**	AGS1	**Inj. Vol:**	.5 uL
Prep Date:	07/07/2009 09:20	**Aliquot:**	30 g	**Final Volume:**	1 mL
Data File:	s2g0706-1.d	**Column:**	J&W DB-5MS	**Level:**	LOW

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
62-75-9	N-Methyl-N-nitrosomethylamine		1180	ug/kg	66.7	333
108-95-2	Phenol		1200	ug/kg	66.7	333
95-57-8	2-Chlorophenol		1260	ug/kg	66.7	333
106-46-7	1,4-Dichlorobenzene		1190	ug/kg	66.7	333
621-64-7	N-Nitrosodipropylamine		1240	ug/kg	66.7	333
59-50-7	4-Chloro-3-methylphenol		1440	ug/kg	66.7	333
83-32-9	Acenaphthene		1270	ug/kg	11.0	33.3
121-14-2	2,4-Dinitrotoluene		1440	ug/kg	33.3	333
100-02-7	4-Nitrophenol		1410	ug/kg	110	333
87-86-5	Pentachlorophenol		1510	ug/kg	83.3	333
129-00-0	Pyrene		1480	ug/kg	10.0	33.3
110-86-1	Pyridine		1200	ug/kg	66.7	333
62-53-3	Aniline		1290	ug/kg	100	333
111-44-4	bis(2-Chloroethyl) ether		1160	ug/kg	66.7	333
541-73-1	1,3-Dichlorobenzene		1190	ug/kg	66.7	333
100-51-6	Benzyl alcohol		909	ug/kg	100	333
95-50-1	1,2-Dichlorobenzene		1260	ug/kg	66.7	333
108-60-1	bis(2-Chloroisopropyl)ether		1230	ug/kg	66.7	333
95-48-7	o-Cresol		1270	ug/kg	66.7	333
65794-96-9	m,p-Cresols		1430	ug/kg	100	333
67-72-1	Hexachloroethane		1190	ug/kg	66.7	333
98-95-3	Nitrobenzene		1290	ug/kg	66.7	333
78-59-1	Isophorone		1300	ug/kg	66.7	333
88-75-5	2-Nitrophenol		1310	ug/kg	66.7	333
105-67-9	2,4-Dimethylphenol		1400	ug/kg	117	333
111-91-1	bis(2-Chloroethoxy)methane		1290	ug/kg	66.7	333
120-83-2	2,4-Dichlorophenol		1350	ug/kg	66.7	333
65-85-0	Benzoic acid		1510	ug/kg	167	667
91-20-3	Naphthalene		1140	ug/kg	10.0	33.3
106-47-8	4-Chloroaniline		1340	ug/kg	66.7	333
87-68-3	Hexachlorobutadiene		1360	ug/kg	66.7	333
91-57-6	2-Methylnaphthalene		1340	ug/kg	6.67	33.3
77-47-4	Hexachlorocyclopentadiene		1980	ug/kg	66.7	333
88-06-2	2,4,6-Trichlorophenol		1410	ug/kg	66.7	333
95-95-4	2,4,5-Trichlorophenol		1440	ug/kg	66.7	333
91-58-7	2-Chloronaphthalene		1360	ug/kg	11.0	33.3
88-74-4	2-Nitroaniline		1420	ug/kg	66.7	333
99-09-2	*o-Nitroaniline* 3-Nitroaniline		1470	ug/kg	66.7	333

Semi-Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**09-2536**			**Matrix:**	**SOIL**
Lab Sample ID:	**1201874896**				
Client Sample:	**QC for batch 882731**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 882731**	**Method:**	**SW846 8270C**	**SOP Ref:**	**GL-OA-E-009**
Batch ID:	**882732**	**Inst:**	**MSD2.I**	**Dilution:**	**1**
Run Date:	**07/07/2009 16:11**	**Analyst:**	**AGS1**	**Inj. Vol:**	**.5 uL**
Prep Date:	**07/07/2009 09:20**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**s2g0706-1.d**	**Column:**	**J&W DB-5MS**	**Level:**	**LOW**

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
	m-Nitroaniline					
131-11-3	Dimethylphthalate		1370	ug/kg	66.7	333
606-20-2	2,6-Dinitrotoluene		1390	ug/kg	33.3	333
208-96-8	Acenaphthylene		1390	ug/kg	10.0	33.3
51-28-5	2,4-Dinitrophenol		1520	ug/kg	127	667
132-64-9	Dibenzofuran		1420	ug/kg	66.7	333
84-66-2	Diethylphthalate		1420	ug/kg	66.7	333
86-73-7	Fluorene		1320	ug/kg	10.0	33.3
7005-72-3	4-Chlorophenylphenylether		1410	ug/kg	66.7	333
534-52-1	2-Methyl-4,6-dinitrophenol		1550	ug/kg	66.7	333
100-01-6	4-Nitroaniline		1670	ug/kg	100	333
	p-Nitroaniline					
122-39-4	Diphenylamine		1480	ug/kg	66.7	333
122-66-7	Azobenzene		1420	ug/kg	66.7	333
	1,2-Diphenylhydrazine					
101-55-3	4-Bromophenylphenylether		1480	ug/kg	66.7	333
118-74-1	Hexachlorobenzene		1490	ug/kg	66.7	333
85-01-8	Phenanthrene		1390	ug/kg	10.0	33.3
120-12-7	Anthracene		1470	ug/kg	6.67	33.3
84-74-2	Di-n-butylphthalate		1500	ug/kg	66.7	333
206-44-0	Fluoranthene		1570	ug/kg	10.0	33.3
85-68-7	Butylbenzylphthalate		1650	ug/kg	66.7	333
56-55-3	Benzo(a)anthracene		1460	ug/kg	10.0	33.3
91-94-1	3,3'-Dichlorobenzidine		1500	ug/kg	100	333
218-01-9	Chrysene		1510	ug/kg	10.0	33.3
117-81-7	bis(2-Ethylhexyl)phthalate		1520	ug/kg	66.7	333
117-84-0	Di-n-octylphthalate		1620	ug/kg	66.7	333
205-99-2	Benzo(b)fluoranthene		1730	ug/kg	10.0	33.3
207-08-9	Benzo(k)fluoranthene		1530	ug/kg	10.0	33.3
50-32-8	Benzo(a)pyrene		1590	ug/kg	10.0	33.3
193-39-5	Indeno(1,2,3-cd)pyrene		1460	ug/kg	10.0	33.3
53-70-3	Dibenzo(a,h)anthracene		1420	ug/kg	10.0	33.3
191-24-2	Benzo(ghi)perylene		1470	ug/kg	10.0	33.3
120-82-1	1,2,4-Trichlorobenzene		1290	ug/kg	66.7	333

GEL Laboratories LLC

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Data file : /chem/MSD2.i/s070709.b/s2g0706.d
Lab Smp Id: 1201874896 Client Smp ID: SBLK01LCS
Inj Date : 07-JUL-2009 16:11
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201874896|882732|1|SVMF|1|LCS
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2536.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.00000	weight of sample
M	0.00000	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.116	4.121	(1.000)	197167	40.0000	
* 29 Naphthalene-d8	136	4.993	4.998	(1.000)	791623	40.0000	
* 46 Acenaphthene-d10	164	6.244	6.244	(1.000)	410569	40.0000	
* 67 Phenanthrene-d10	188	7.218	7.223	(1.000)	700291	40.0000	
* 91 Chrysene-d12	240	8.983	8.988	(1.000)	577713	40.0000	
* 98 Perylene-d12	264	10.657	10.668	(1.000)	466365	40.0000	
$ 3 2-Fluorophenol	112	3.297	3.297	(0.801)	378253	69.3298	2310
$ 5 Phenol-d5	99	3.821	3.827	(0.929)	469990	69.7592	2320
$ 20 Nitrobenzene-d5	82	4.479	4.485	(0.897)	228132	38.1961	1270
$ 39 2-Fluorobiphenyl	172	5.736	5.736	(0.919)	462467	39.8831	1330
$ 60 2,4,6-Tribromophenol	329	6.768	6.769	(1.084)	125622	89.3336	2980
$ 81 p-Terphenyl-d14	244	8.148	8.149	(0.907)	476752	48.4496	1610

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.832	3.832	(0.931)	247662	36.0840	1200
8 2-Chlorophenol	128	3.982	3.987	(0.968)	220297	37.7911	1260
11 1,4-Dichlorobenzene	146	4.126	4.137	(1.003)	232531	35.8068	1190
17 N-Nitrosodipropylamine	70	4.351	4.356	(1.057)	153468	37.2197	1240(Q)
28 1,2,4-Trichlorobenzene	180	4.939	4.945	(0.989)	195315	38.7771	1290
33 4-Chloro-3-methylphenol	107	5.335	5.330	(1.069)	188625	43.2578	1440
47 Acenaphthene	154	6.266	6.266	(1.003)	407751	38.0551	1270
50 2,4-Dinitrotoluene	165	6.341	6.346	(1.015)	152266	43.3216	1440
52 4-Nitrophenol	139	6.271	6.266	(1.004)	72761	42.2629	1410
65 Pentachlorophenol	266	7.084	7.084	(0.981)	76632	45.3664	1510
79 Pyrene	202	8.100	8.106	(0.902)	761359	44.2718	1480
2 Pyridine	79	2.661	2.634	(0.646)	163651	36.1451	1200
4 Aniline	66	3.896	3.902	(0.947)	104682	38.5628	1280
7 bis(2-Chloroethyl) ether	63	3.907	3.912	(0.949)	175176	34.8868	1160
9 1,3-Dichlorobenzene	146	4.083	4.089	(0.992)	232157	35.7082	1190
12 Benzyl alcohol	108	4.180	4.185	(1.016)	104738	27.2632	909
13 1,2-Dichlorobenzene	146	4.233	4.239	(1.029)	217070	37.6569	1260
14 bis(2-Chloroisopropyl)ether	45	4.255	4.260	(1.034)	415383	36.8670	1230
15 o-Cresol	107	4.233	4.233	(1.029)	162461	37.9930	1270
18 m,p-Cresols	107	4.330	4.335	(1.052)	256385	43.0454	1430
19 Hexachloroethane	117	4.469	4.474	(1.086)	86595	35.8212	1190
21 Nitrobenzene	77	4.495	4.501	(0.900)	220801	38.5774	1280
22 Isophorone	82	4.650	4.656	(0.931)	424508	39.1030	1300
23 2-Nitrophenol	139	4.709	4.715	(0.943)	109385	39.1703	1300
24 2,4-Dimethylphenol	122	4.704	4.704	(0.942)	300144	42.1367	1400
25 bis(2-Chloroethoxy)methane	93	4.768	4.768	(0.955)	247187	38.7399	1290
26 2,4-Dichlorophenol	162	4.875	4.880	(0.976)	174843	40.6135	1350
27 Benzoic acid	105	4.741	4.752	(0.950)	126438	45.2307	1510
30 Naphthalene	128	5.009	5.014	(1.003)	638937	34.2745	1140
31 4-Chloroaniline	127	5.019	5.020	(1.005)	292399	40.0767	1340
32 Hexachlorobutadiene	225	5.073	5.073	(1.016)	104271	40.8018	1360
34 2-Methylnaphthalene	142	5.490	5.496	(1.100)	435416	40.2077	1340
36 Hexachlorocyclopentadiene	237	5.597	5.597	(0.896)	105096	59.3172	1980
37 2,4,6-Trichlorophenol	196	5.677	5.683	(0.909)	128231	42.2547	1410
38 2,4,5-Trichlorophenol	196	5.709	5.710	(0.914)	151909	43.3042	1440
40 2-Chloronaphthalene	162	5.849	5.849	(0.937)	411879	40.9315	1360
42 o-Nitroaniline	65	5.902	5.902	(0.945)	130418	42.5749	1420
41 m-Nitroaniline	138	6.185	6.191	(0.991)	108286	44.1977	1470
43 Dimethylphthalate	163	6.004	6.009	(0.961)	480391	41.1421	1370
44 2,6-Dinitrotoluene	165	6.057	6.063	(0.970)	117436	41.5547	1380
45 Acenaphthylene	152	6.148	6.153	(0.985)	680401	41.7320	1390
48 2,4-Dinitrophenol	184	6.255	6.255	(1.002)	42824	45.6026	1520(Q)
49 Dibenzofuran	168	6.378	6.383	(1.021)	589373	42.4807	1420
51 Diethylphthalate	149	6.480	6.480	(1.038)	485350	42.5894	1420
53 Fluorene	166	6.613	6.613	(1.059)	459356	39.4903	1320
54 4-Chlorophenylphenylether	204	6.587	6.587	(1.055)	225542	42.3416	1410
55 2-Methyl-4,6-dinitrophenol	198	6.619	6.619	(0.917)	72855	46.3672	1540

Compounds	QUANT STG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.603	6.608	(1.057)	103491	49.9717	1660
133 Diphenylamine	169	6.662	6.662	(0.923)	414506	44.3188	1480
58 1,2-Diphenylhydrazine	77	6.694	6.694	(0.927)	518200	42.6464	1420
61 4-Bromophenylphenylether	248	6.908	6.913	(0.957)	129449	44.3692	1480
63 Hexachlorobenzene	284	6.972	6.972	(0.966)	144268	44.8072	1490
68 Phenanthrene	178	7.234	7.239	(1.002)	694343	41.6379	1390
69 Anthracene	178	7.266	7.266	(1.007)	711584	44.2448	1470
72 Di-n-butylphthalate	149	7.496	7.496	(1.039)	835932	45.0282	1500
76 Fluoranthene	202	7.951	7.956	(1.102)	721080	47.0055	1570
85 Butylbenzylphthalate	149	8.432	8.437	(0.939)	355173	49.4338	1650
89 Benzo(a)anthracene	228	8.972	8.978	(0.999)	616599	43.8675	1460
90 3,3'-Dichlorobenzidine	252	8.897	8.892	(0.990)	167647	44.8817	1500
92 Chrysene	228	9.010	9.015	(1.003)	615142	45.3481	1510
93 bis(2-Ethylhexyl)phthalate	149	8.828	8.833	(0.983)	484562	45.7226	1520
94 Di-n-octylphthalate	149	9.432	9.438	(0.885)	737735	48.6435	1620
95 Benzo(b)fluoranthene	252	10.117	10.122	(0.949)	582328	52.0137	1730
96 Benzo(k)fluoranthene	252	10.154	10.160	(0.953)	541154	45.8115	1530
97 Benzo(a)pyrene	252	10.582	10.587	(0.993)	467344	47.7773	1590
99 Indeno(1,2,3-cd)pyrene	276	12.566	12.572	(1.179)	411686	43.8130	1460
100 Dibenzo(a,h)anthracene	278	12.572	12.577	(1.180)	321731	42.6698	1420
101 Benzo(ghi)perylene	276	13.160	13.166	(1.235)	360396	44.1737	1470
1 N-Methyl-N-nitrosomethylamine	74	2.613	2.597	(0.635)	119886	35.4838	1180

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD2.i/s070709.b/s2g0706.d
Date : 07-JUL-2009 16:11
Client ID: SBLK01LCS
Sample Info: !1201874896!88273214!SVMF11LCS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

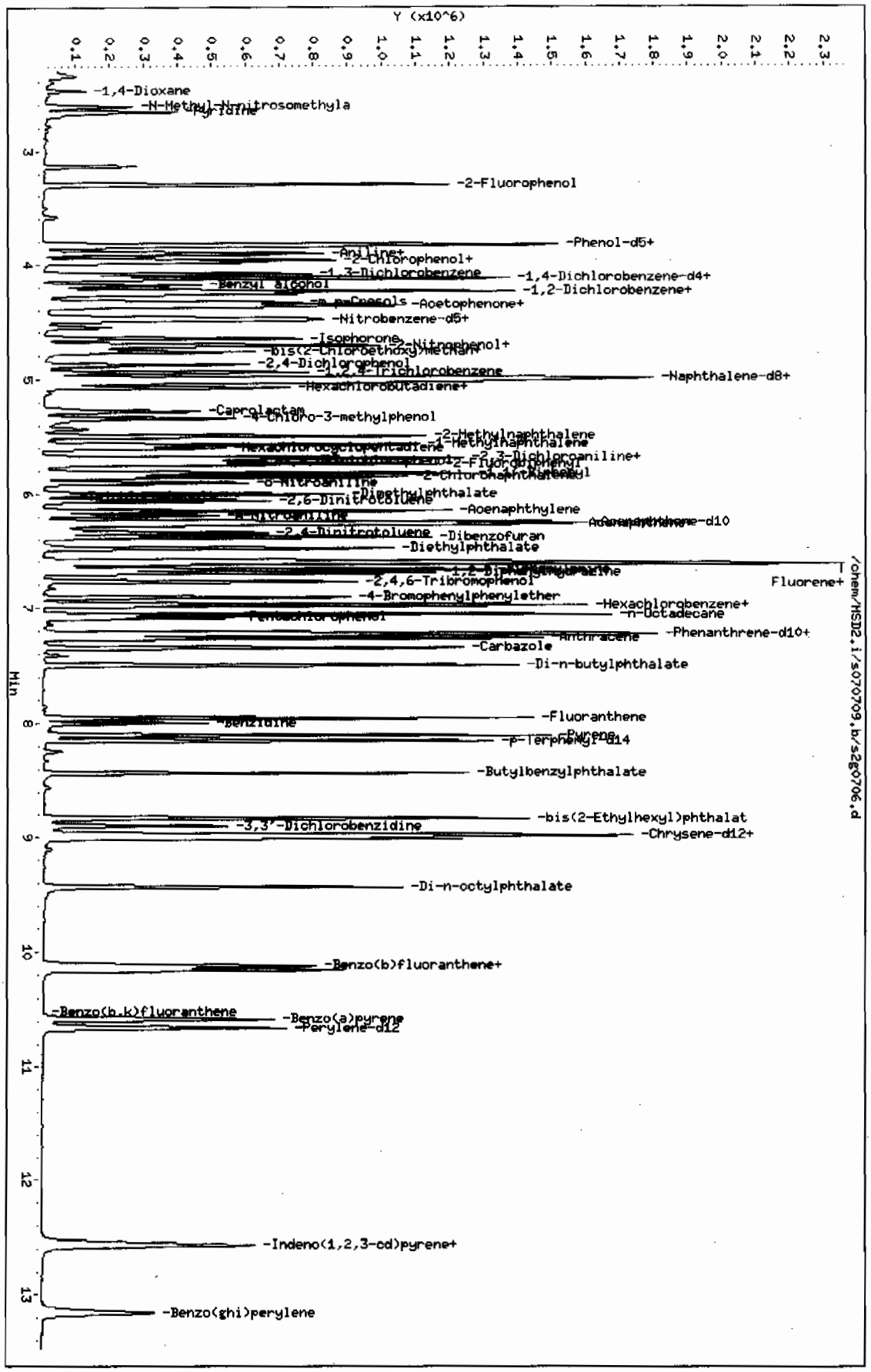

Page 1

Miscellaneous Data

Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 882731 **Verified by:** _____

Analyst: Robin Hunt

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201874895 MB	07-JUL-2009 09:20:48	30	1	0.03333
1201874896 LCS	07-JUL-2009 09:20:48	30	1	0.03333
232754001	07-JUL-2009 09:20:48	30.02	1	0.03331
232754002	07-JUL-2009 09:20:48	30.09	1	0.03323
232754003	07-JUL-2009 09:20:48	30.03	1	0.0333
232758002	07-JUL-2009 09:20:48	30.12	1	0.0332
232758003	07-JUL-2009 09:20:48	30.02	1	0.03331
232758004	07-JUL-2009 09:20:48	30.17	1	0.03315
232758005	07-JUL-2009 09:20:48	30.11	1	0.03321
232846001	07-JUL-2009 09:20:48	30.07	1	0.03326
1201874897 MS (232846001)	07-JUL-2009 09:20:48	30.18	1	0.03313
1201874898 MSD (232846001)	07-JUL-2009 09:20:48	30.11	1	0.03321
232846002	07-JUL-2009 09:20:48	30.03	1	0.0333

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1201874896	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
LCS	1201874896	BENZIDINE LCS	UE090622-18	1	mL
MS	1201874897	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MS	1201874897	BENZIDINE LCS	UE090622-18	1	mL
MSD	1201874898	BNA LCS w/o Benzidine 50ppm	UE090622-12	1	mL
MSD	1201874898	BENZIDINE LCS	UE090622-18	1	mL
SURR	All	BNA for all Surrogate	UE090619-06	1	mL
REGNT	All	Acetone	1129640	150	mL
REGNT	All	Methylene Chloride	1150785-D	150	mL
SOURC	All	SODIUM SULFATE	1149626	30	g

Comments:

Verified By: AJS

Final Solvent: CH2Cl2

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD2

DATE: 07/07/2009 METHOD:See raw data OPERATOR:AGS1 REVIEWED BY:_____ DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 3 on pg. 3 SOLVENT LOT 1116462-D
Multiplier Voltage: 941 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090628-01
Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
SOP: GL-OA-E-009 Rev. 22

Sequence Number: /chem/MSD2.i/s070709.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s2g0701.d	WBN090624-01	AGS1	07-JUL-2009 13:51	50PPM	s070709	1.0	DFTPP	TUNE passes 8270C
s2g0702.d	WBN090626-05.3	AGS1	07-JUL-2009 14:03	40 PPM	s070709	1.0	MEGACVS	PASSES 8270C (IS1: 220951)
s2g0703.d	WBN090619-01.2	AGS1	07-JUL-2009 14:28	40 PPM	s070709	1.0	APCVS	passes 8270C
s2g0704.d	WBN090609-22.5	AGS1	07-JUL-2009 15:31	40 PPM	s070709	1.0	PESTCVS	passes 8270C
s2g0705-1.d	1201874895	AGS1	07-JUL-2009 15:51	882732	09-2541	1.0	MB	USE
s2g0705-2.d	1201874895	AGS1	07-JUL-2009 15:51	882732	09-2546	1.0	MB	USE
s2g0705.d	1201874895	AGS1	07-JUL-2009 15:51	882732	09-2536	1.0	MB	USE
s2g0706-1.d	1201874896	AGS1	07-JUL-2009 16:11	882732	09-2541	1.0	LCS	USE
s2g0706-2.d	1201874896	AGS1	07-JUL-2009 16:11	882732	09-2546	1.0	LCS	USE
s2g0706.d	1201874896	AGS1	07-JUL-2009 16:11	882732	09-2536	1.0	LCS	USE
s2g0707.d	232754001	AGS1	07-JUL-2009 16:31	882732	09-2536	1.0	LANL	USE
s2g0708.d	232754002	AGS1	07-JUL-2009 16:51	882732	09-2536	1.0	LANL	USE
s2g0709.d	232754003	AGS1	07-JUL-2009 17:12	882732	09-2536	1.0	LANL	USE
s2g0710.d	232758002	AGS1	07-JUL-2009 17:32	882732	09-2541	1.0	LANL	USE
s2g0711.d	232758003	AGS1	07-JUL-2009 17:52	882732	09-2541	1.0	LANL	USE
s2g0712.d	232758004	AGS1	07-JUL-2009 18:12	882732	09-2541	1.0	LANL	USE
s2g0713.d	232758005	AGS1	07-JUL-2009 18:32	882732	09-2541	1.0	LANL	USE
s2g0714.d	232846001	AGS1	07-JUL-2009 18:52	882732	09-2546	1.0	LANL	USE
s2g0715.d	1201874897	AGS1	07-JUL-2009 19:13	882732	09-2546	1.0	MS	USE

s2g0716.d	1201874898	AGS1	07-JUL-2009 19:33	882732	09-2546	1.0	MSD	USE
s2g0717.d	232846002	AGS1	07-JUL-2009 19:53	882732	09-2546	1.0	LANL	USE

Instrument Batch: /chem/MSD2.i/s070709.b

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD2

DATE: 06/26/2009 METHOD:See raw data OPERATOR:ANN REVIEWED BY:_____ DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 3 on pg. 3 SOLVENT LOT 1116462-D
Multiplier Voltage: 941 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
SOP: GL-OA-E-009 Rev. 22

Sequence Number: /chem/MSD2.i/s062609.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s2f2601.d	WBN090624-01	AGS1	26-JUN-2009 20:54	50PPM	s062609	1.0	DFTPP	DUSE
s2f2602.d	WBN090624-01	AGS1	26-JUN-2009 21:09	50PPM	s062609	1.0	DFTPP	DUSE
s2f2603.d	INSTBLK	AGS1	26-JUN-2009 21:21	------	s062609	1.0	INSTBLK	DUSE
s2f2604.d	WBN090626-08	AGS1	26-JUN-2009 21:40	1 PPM	s062609	1.0	MEGA001	DUSE
s2f2605.d	WBN090626-07	AGS1	26-JUN-2009 22:04	10 PPM	s062609	1.0	MEGA010	DUSE
s2f2606.d	WBN090626-06	AGS1	26-JUN-2009 22:28	20 PPM	s062609	1.0	MEGA020	DUSE
s2f2607.d	WBN090626-05.1	AGS1	26-JUN-2009 22:53	40 PPM	s062609	1.0	MEGA040	DUSE
s2f2608.d	WBN090626-04	AGS1	26-JUN-2009 23:17	50 PPM	s062609	1.0	MEGA050	DUSE
s2f2609.d	WBN090626-03	AGS1	26-JUN-2009 23:41	80 PPM	s062609	1.0	MEGA080	DUSE
s2f2610.d	WBN090626-02	AGS1	27-JUN-2009 00:05	100 PPM	s062609	1.0	MEGA100	DUSE
s2f2611.d	WBN090626-01	AGS1	27-JUN-2009 00:29	120 PPM	s062609	1.0	MEGA120	DUSE
s2f2612.d	INSTBLK	AGS1	27-JUN-2009 00:54	------	s062609	1.0	INSTBLK	DUSE
s2f2613.d	WBN090626-09.1	AGS1	27-JUN-2009 01:18	40 PPM	s062609	1.0	MEGAICV	DUSE
s2f2614-D.d	WBN090624-01	AGS1	27-JUN-2009 01:45	50PPM	s062609	1.0	DFTPP	TUNE: 8270D - MEGA
s2f2614.d	WBN090624-01	AGS1	27-JUN-2009 01:45	50PPM	s062609	1.0	DFTPP	TUNE: 8270C - MEGA
s2f2615.d	INSTBLK	AGS1	27-JUN-2009 01:57	------	s062609	1.0	INSTBLK	
s2f2616.d	WBN090626-08	AGS1	27-JUN-2009 02:16	1 PPM	s062609	1.0	MEGA001	lev 1
s2f2617.d	WBN090626-07	AGS1	27-JUN-2009 02:40	10 PPM	s062609	1.0	MEGA010	lev 2
s2f2618.d	WBN090626-06	AGS1	27-JUN-2009 03:04	20 PPM	s062609	1.0	MEGA020	lev 3

s2f2619.d	WBN090626-05.1	AGS1	27-JUN-2009 03:29	40 PPM	s062609	1.0	MEGA040	lev 4
s2f2620.d	WBN090626-04	AGS1	27-JUN-2009 03:53	50 PPM	s062609	1.0	MEGA050	lev 5
s2f2621.d	WBN090626-03	AGS1	27-JUN-2009 04:17	80 PPM	s062609	1.0	MEGA080	lev 6
s2f2622.d	WBN090626-02	AGS1	27-JUN-2009 04:41	100 PPM	s062609	1.0	MEGA100	lev 7
s2f2623.d	WBN090626-01	AGS1	27-JUN-2009 05:05	120 PPM	s062609	1.0	MEGA120	lev 8
s2f2624.d	INSTBLK	AGS1	27-JUN-2009 05:30	------	s062609	1.0	INSTBLK	
s2f2625-625.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609	1.0	MEGAICV	625 some analytes failed- C55/C27/C179/C26-phthalic >20% drift
s2f2625-BOE.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609	1.0	MEGAICV	pass BOE
s2f2625-D.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609	1.0	MEGAICV	pass 8270D
s2f2625.d	WBN090626-09.1	AGS1	27-JUN-2009 05:54	40 PPM	s062609	1.0	MEGAICV	ICV pass 205606

Instrument Batch: /chem/MSD2.i/s062609.b

GEL ORGANIC RUN LOG INSTRUMENT ID: MSD2

DATE: 06/28/2009 METHOD:8270C MSD2-DFTPP8270D.m OPERATOR:AGS1 REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 3 on pg. 3 SOLVENT LOT 1116462-D
Multiplier Voltage: 941 Emv Extr. Injection Volume: 0.5, 1.0 ul
DFTPP Solution ID: WBN090624-01 Internal Std ID: WBN090617-01
Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standard Logbook.
Initial Calibration Std ID's: See Calibration History and Standard Logbook.
SOP: GL-OA-E-009 Rev. 22

Sequence Number: /chem/MSD2.i/s062809.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
s2f2801-D.d	WBN090624-01	AGS1	28-JUN-2009 18:00	50PPM	s062809	1.0	DFTPP	TUNE: 8270D - AP/PEST/HEX
s2f2801.d	WBN090624-01	AGS1	28-JUN-2009 18:00	50PPM	s062809	1.0	DFTPP	TUNE: 8270C - AP/PEST/HEX
s2f2802.d	INSTBLK	AGS1	28-JUN-2009 18:12	------	s062809	1.0	INSTBLK	
s2f2803-D.d	WBN090528-07	AGS1	28-JUN-2009 18:31	10 PPM	s062809	1.0	APICAL	8270D req. as sample for linear analytes; benzidine <70%
s2f2803.d	WBN090528-07	AGS1	28-JUN-2009 18:31	10 PPM	s062809	1.0	APICAL	lev 2
s2f2804.d	WBN090528-06	AGS1	28-JUN-2009 18:51	20 PPM	s062809	1.0	APICAL	lev 3
s2f2805.d	WBN090528-05.1	AGS1	28-JUN-2009 19:10	40 PPM	s062809	1.0	APICAL	lev 4
s2f2806.d	WBN090528-04	AGS1	28-JUN-2009 19:30	50 PPM	s062809	1.0	APICAL	lev 5
s2f2807.d	WBN090528-03	AGS1	28-JUN-2009 19:49	80 PPM	s062809	1.0	APICAL	lev 6
s2f2808.d	WBN090528-02	AGS1	28-JUN-2009 20:08	100 PPM	s062809	1.0	APICAL	lev 7
s2f2809.d	WBN090528-01	AGS1	28-JUN-2009 20:28	120 PPM	s062809	1.0	APICAL	lev 8
s2f2810.d	WBN090609-24	AGS1	28-JUN-2009 20:47	10 PPM	s062809	1.0	PESTICAL	lev 2
s2f2811.d	WBN090609-23	AGS1	28-JUN-2009 21:07	20 PPM	s062809	1.0	PESTICAL	lev 3
s2f2812.d	WBN090609-22.1	AGS1	28-JUN-2009 21:26	40 PPM	s062809	1.0	PESTICAL	lev 4
s2f2813.d	WBN090609-21	AGS1	28-JUN-2009 21:45	50 PPM	s062809	1.0	PESTICAL	lev 5
s2f2814.d	WBN090609-20	AGS1	28-JUN-2009 22:05	80 PPM	s062809	1.0	PESTICAL	lev 6
s2f2815.d	WBN090609-19	AGS1	28-JUN-2009 22:24	100 PPM	s062809	1.0	PESTICAL	lev 7
s2f2816.d	WBN090609-18	AGS1	28-JUN-2009 22:44	120 PPM	s062809	1.0	PESTICAL	lev 8
s2f2817.d	WBN090624-16	AGS1	28-JUN-2009 23:03	500 PPM	s062809	1.0	HEXICAL	lev 2

s2f2818.d	WBN090624-15	AGS1	28-JUN-2009 23:23	1000 PPM	s062809	1.0	HEXICAL	lev 3
s2f2819.d	WBN090624-14	AGS1	28-JUN-2009 23:42	1250 PPM	s062809	1.0	HEXICAL	lev 4
s2f2820.d	WBN090624-13	AGS1	29-JUN-2009 00:01	1500 PPM	s062809	1.0	HEXICAL	lev 5
s2f2821.d	WBN090624-12	AGS1	29-JUN-2009 00:21	1750 PPM	s062809	1.0	HEXICAL	lev 6
s2f2822.d	UBN090317-02.6	AGS1	29-JUN-2009 00:40	2000 PPM	s062809	1.0	HEXICAL	lev 7
s2f2823-D.d	WBN090528-8.1	AGS1	29-JUN-2009 00:59	40 PPM	s062809	1.0	APICV	8270D AP ICV: PASSES
s2f2823.d	WBN090528-8.1	AGS1	29-JUN-2009 00:59	40 PPM	s062809	1.0	APICV	8270C AP ICV: PASSES
s2f2824-D.d	WBN090609-25.1	AGS1	29-JUN-2009 01:19	40 PPM	s062809	1.0	PESTICV	8270D PEST ICV: PASSES
s2f2824.d	WBN090609-25.1	AGS1	29-JUN-2009 01:19	40 PPM	s062809	1.0	PESTICV	8270C PEST ICV: PASSES
s2f2825-D.d	WBN090624-10.1	AGS1	29-JUN-2009 01:38	1250 PPM	s062809	1.0	HEXICV	8270D HEX ICV: PASSES
s2f2825.d	WBN090624-10.1	AGS1	29-JUN-2009 01:38	1250 PPM	s062809	1.0	HEXICV	8270C HEX ICV: PASSES
s2f2826-D.d	WBN090624-01	AGS1	29-JUN-2009 02:01	50PPM	s062809	1.0	DFTPP	TUNE: 8270D - NEV
s2f2826.d	WBN090624-01	AGS1	29-JUN-2009 02:01	50PPM	s062809	1.0	DFTPP	TUNE: 8270C - NEV
s2f2827.d	INSTBLK	AGS1	29-JUN-2009 02:12	------	s062809	1.0	INSTBLK	
s2f2828-D.d	UBN090428-01	AGS1	29-JUN-2009 02:32	10 PPM	s062809	1.0	NEVICAL	8270D
s2f2828.d	UBN090428-01	AGS1	29-JUN-2009 02:32	10 PPM	s062809	1.0	NEVICAL	lev 2
s2f2829.d	UBN090428-02	AGS1	29-JUN-2009 02:51	20 PPM	s062809	1.0	NEVICAL	lev 3
s2f2830.d	UBN090428-03	AGS1	29-JUN-2009 03:11	40 PPM	s062809	1.0	NEVICAL	lev 4
s2f2831.d	UBN090428-04	AGS1	29-JUN-2009 03:30	50 PPM	s062809	1.0	NEVICAL	lev 5
s2f2832.d	UBN090428-05	AGS1	29-JUN-2009 03:49	80 PPM	s062809	1.0	NEVICAL	DUSE: disable level for all NEV analytes
s2f2833.d	UBN090428-06	AGS1	29-JUN-2009 04:09	100 PPM	s062809	1.0	NEVICAL	lev 7
s2f2834.d	UBN090428-07	AGS1	29-JUN-2009 04:28	120 PPM	s062809	1.0	NEVICAL	lev 8

Instrument Batch: /chem/MSD2.i/s062809.b

No non conformance reports were generated for this work order

GEL Laboratories LLC

GEL Laboratories, LLC
Data file : /chem/MSD2.i/s070709.b/s2g0714.d
Lab Smp Id: 232846001 Client Smp ID: CAMO-09-7145
Inj Date : 07-JUL-2009 18:52
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232846001|882732|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2546.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.07000	weight of sample
M	14.02170	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.121	4.121	(1.000)	218199	40.0000	
* 29 Naphthalene-d8	136	4.993	4.998	(1.000)	809004	40.0000	
* 46 Acenaphthene-d10	164	6.244	6.244	(1.000)	449750	40.0000	
* 67 Phenanthrene-d10	188	7.218	7.223	(1.000)	732987	40.0000	
* 91 Chrysene-d12	240	8.978	8.988	(1.000)	537676	40.0000	
* 98 Perylene-d12	264	10.652	10.668	(1.000)	329476	40.0000	
$ 3 2-Fluorophenol	112	3.303	3.297	(0.801)	387936	64.2509	2480
$ 5 Phenol-d5	99	3.821	3.827	(0.927)	504610	67.6785	2620
$ 20 Nitrobenzene-d5	82	4.479	4.485	(0.897)	213315	34.9479	1350
$ 39 2-Fluorobiphenyl	172	5.736	5.736	(0.919)	463544	36.4933	1410
$ 60 2,4,6-Tribromophenol	329	6.769	6.769	(1.084)	112548	73.0637	2830
$ 81 p-Terphenyl-d14	244	8.143	8.149	(0.907)	462791	50.5329	1950

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
79 Pyrene	202	8.095	8.106	(0.902)	11897	0.74330	28.8(a)
68 Phenanthrene	178	7.234	7.239	(1.002)	10075	0.57722	22.3(a)
69 Anthracene	178	7.261	7.266	(1.006)	5911	0.35114	13.6(aQ)
76 Fluoranthene	202	7.945	7.956	(1.101)	11792	0.73440	28.4(a)
95 Benzo(b)fluoranthene	252	10.111	10.122	(0.949)	3930	0.49687	19.2(a)
97 Benzo(a)pyrene	252	10.566	10.587	(0.992)	2080	0.30099	11.6(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

ION RATIO REPORT

SV REPORT

Data file: s2g0714.d
Report Date: 07/07/2009 19:13
Lab. ID: 232846001 SampleType: SAMPLE
Injection Date: 07-JUL-2009 18:52
Operator: AGS1 Instrument: MSD2.i
Sample Info: |232846001|882732|1|SVMF|1|LANL
Miscellaneous Info: |MSD8270_SF|WBN090628-01|
Comment:
Method used: /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Dilution Factor= 1.0
Integrator: HP RTE Compound Sublist: 09-2546
Sample Matrix: SOIL

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
17 N-Nitrosodipropylamine				CAS#: 621-64-7		
70	28110	4.48	4.36	80-120	100	(T)
42	18939	4.48	4.36	43-103	67	(T)
43 Dimethylphthalate				CAS#: 131-11-3		
163	95664	6.24	6.01	80-120	100	(T)
164	447740	6.24	6.01	0- 40	468	(QT)
44 2,6-Dinitrotoluene				CAS#: 606-20-2		
165	58331	6.24	6.06	80-120	100	(T)
63	1120	6.24	6.06	46-106	2	(QT)
48 2,4-Dinitrophenol				CAS#: 51-28-5		
184	292	6.47	6.26	80-120	100	(T)
154	1661	6.46	6.26	880-940	569	(QT)
50 2,4-Dinitrotoluene				CAS#: 121-14-2		
165	58690	6.24	6.35	80-120	100	(T)
89	1641	6.24	6.35	37- 97	3	(QT)
63	1749	6.24	6.35	16- 76	3	(QT)
53 Fluorene				CAS#: 86-73-7		
166	8065	6.77	6.61	80-120	100	(T)
165	8005	6.77	6.61	60-120	99	(T)
167	3042	6.77	6.61	0- 44	38	(T)

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
55 2-Methyl-4,6-dinitrophenol				CAS#: 534-52-1		
198	261	6.67	6.62	80-120	100	( )
105	1222	6.63	6.62	10- 70	467	(Q)
51	243	6.69	6.62	41-101	93	(T)
61 4-Bromophenylphenylether				CAS#: 101-55-3		
248	6780	6.77	6.91	80-120	100	(T)
141	56266	6.77	6.91	51-111	830	(QT)
250	18778	6.77	6.91	67-127	277	(QT)
68 Phenanthrene				CAS#: 85-01-8		
178	10075	7.23	7.24	80-120	100	( )
179	2058	7.23	7.24	0- 46	20	( )
176	1700	7.23	7.24	0- 49	17	( )
69 Anthracene				CAS#: 120-12-7		
178	5911	7.26	7.27	80-120	100	( )
179	3865	7.27	7.27	0- 46	65	(Q)
176	1370	7.26	7.27	0- 48	23	( )
76 Fluoranthene				CAS#: 206-44-0		
202	11792	7.95	7.96	80-120	100	( )
203	2168	7.95	7.96	0- 48	18	( )
101	1893	7.95	7.96	0- 45	16	( )
79 Pyrene				CAS#: 129-00-0		
202	11897	8.10	8.11	80-120	100	( )
200	2691	8.10	8.11	0- 50	23	( )
101	2508	8.10	8.11	0- 47	21	( )
89 Benzo(a)anthracene				CAS#: 56-55-3		
228	4721	8.97	8.98	80-120	100	( )
226	851	8.97	8.98	0- 56	18	( )
229	1254	8.97	8.98	0- 50	27	( )
92 Chrysene				CAS#: 218-01-9		
228	7811	8.97	9.01	80-120	100	( )
229	2983	8.97	9.01	0- 50	38	( )
226	961	8.97	9.01	0- 59	12	( )
95 Benzo(b)fluoranthene				CAS#: 205-99-2		
252	3930	10.11	10.12	80-120	100	( )
253	585	10.11	10.12	0- 52	15	( )
125	533	10.11	10.12	0- 43	14	( )
96 Benzo(k)fluoranthene				CAS#: 207-08-9		
252	3930	10.11	10.16	80-120	100	( )
253	585	10.11	10.16	0- 52	15	( )
125	533	10.11	10.16	0- 44	14	( )

MASS	RESPONSE	RT	EXPECT RT	TARGET RANGE	RATIO	QUAL
97 Benzo(a)pyrene			CAS#: 50-32-8			
252	2080	10.57	10.59	80-120	100	( )
253	372	10.57	10.59	0- 52	18	( )
125	283	10.57	10.59	0- 46	14	( )

Q qualifier indicates ion failed ratio requirement
T qualifier indicates RT outside 0.06 minute window of expected RT

GEL Laboratories LLC

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Data file : /chem/MSD2.i/s070709.b/s2g0714.d
Lab Smp Id: 232846001 Client Smp ID: CAMO-09-7145
Inj Date : 07-JUL-2009 18:52
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |232846001|882732|1|SVMF|1|LANL
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2546.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.07000	weight of sample
M	14.02170	% moisture

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 10 1,4-Dichlorobenzene-d4	4.121	1333099	40.000
* 46 Acenaphthene-d10	6.244	1996519	40.000
* 67 Phenanthrene-d10	7.218	1866325	40.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

RT	AREA	CONCENTRATIONS ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.233	558209	16.7492043	648	0		0	10
Unknown Aldol Condensate				CAS #:			
3.137	394034	11.8231000	457	0		0	10
Pentadecane				CAS #:	629-62-9		
6.127	316219	6.33541342	245	97	NIST05.L	66064	46
Dodecane, 4,9-dipropyl-				CAS #:	3054-63-5		
6.608	316076	6.33254456	245	87	NIST05.L	94945	46
Octadecane				CAS #:	593-45-3		
7.057	188970	4.05009953	157	98	NIST05.L	94930	67
Nonadecane				CAS #:	629-92-5		
7.314	696321	14.9238821	577	96	NIST05.L	104271	67
Eicosane				CAS #:	112-95-8		
7.555	701074	15.0257608	581	98	NIST05.L	113488	67
Unknown				CAS #:			
7.779	537852	11.5274979	446	0		0	67
Unknown				CAS #:			
7.993	390739	8.37451803	324	0		0	67

Data File: /chem/MSD2.i/s070709.b/s2g0714.d
Date : 07-JUL-2009 18:52
Client ID: CAMO-09-7145
Sample Info: |2328460001|882732|1|SVMF|1|LANL
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

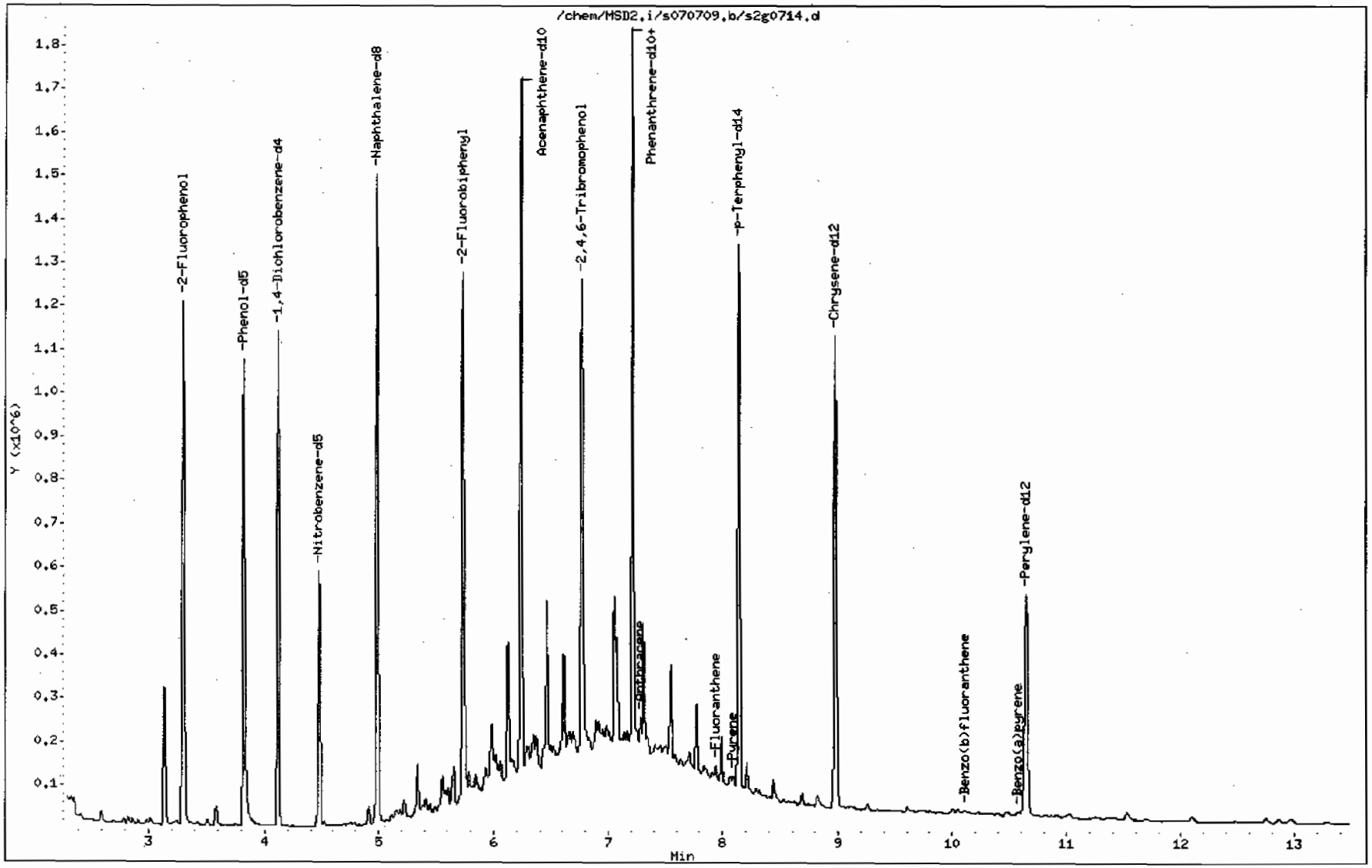

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: 1232846001188273211ISVMF11LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

79 Pyrene

Concentration: 28.8 ug/Kg

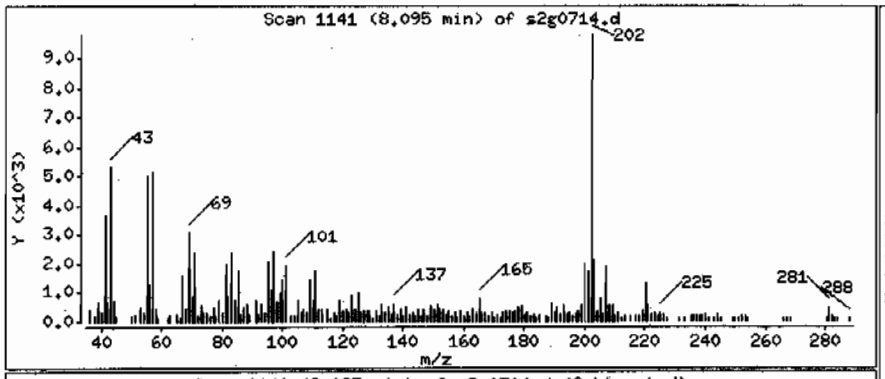

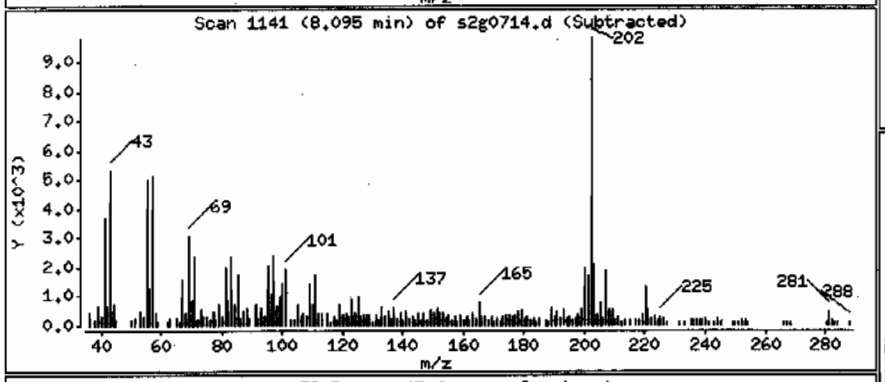

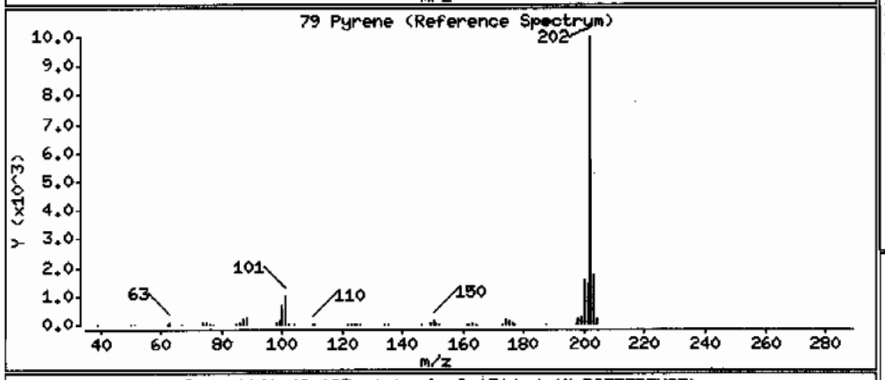

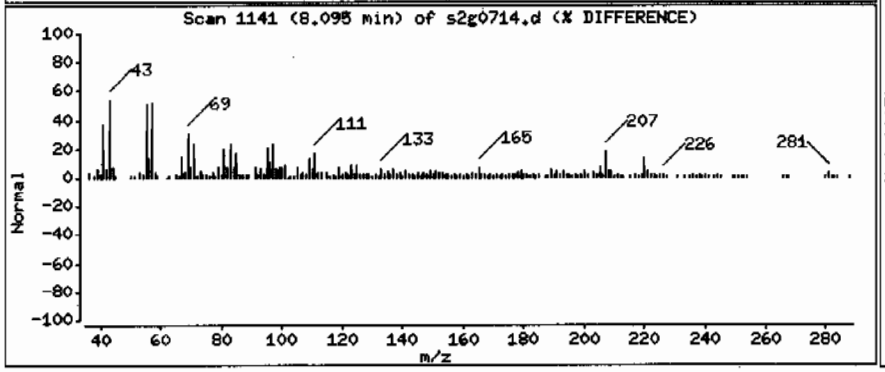

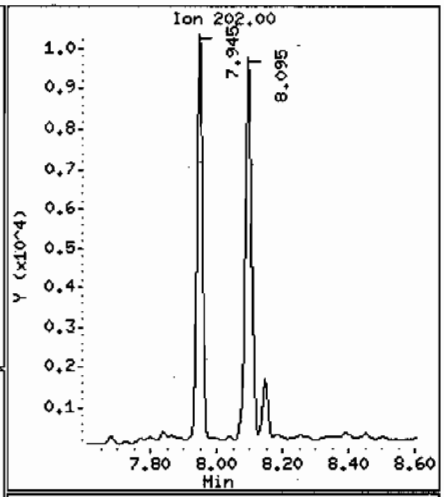

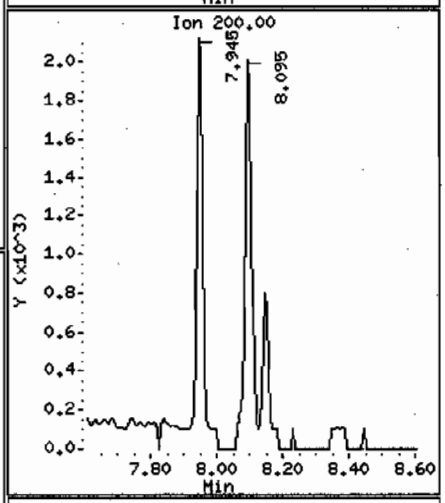

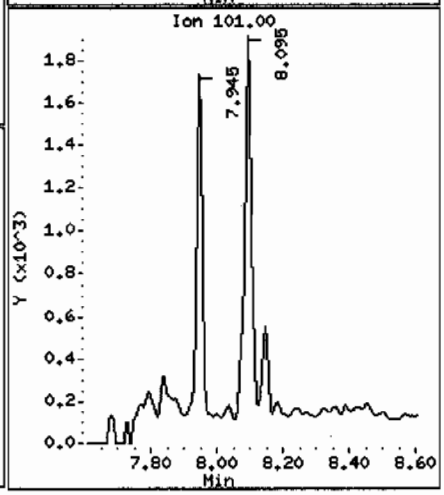

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: |2328460011882732111SVMF111LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

68 Phenanthrene

Concentration: 22.3 ug/Kg

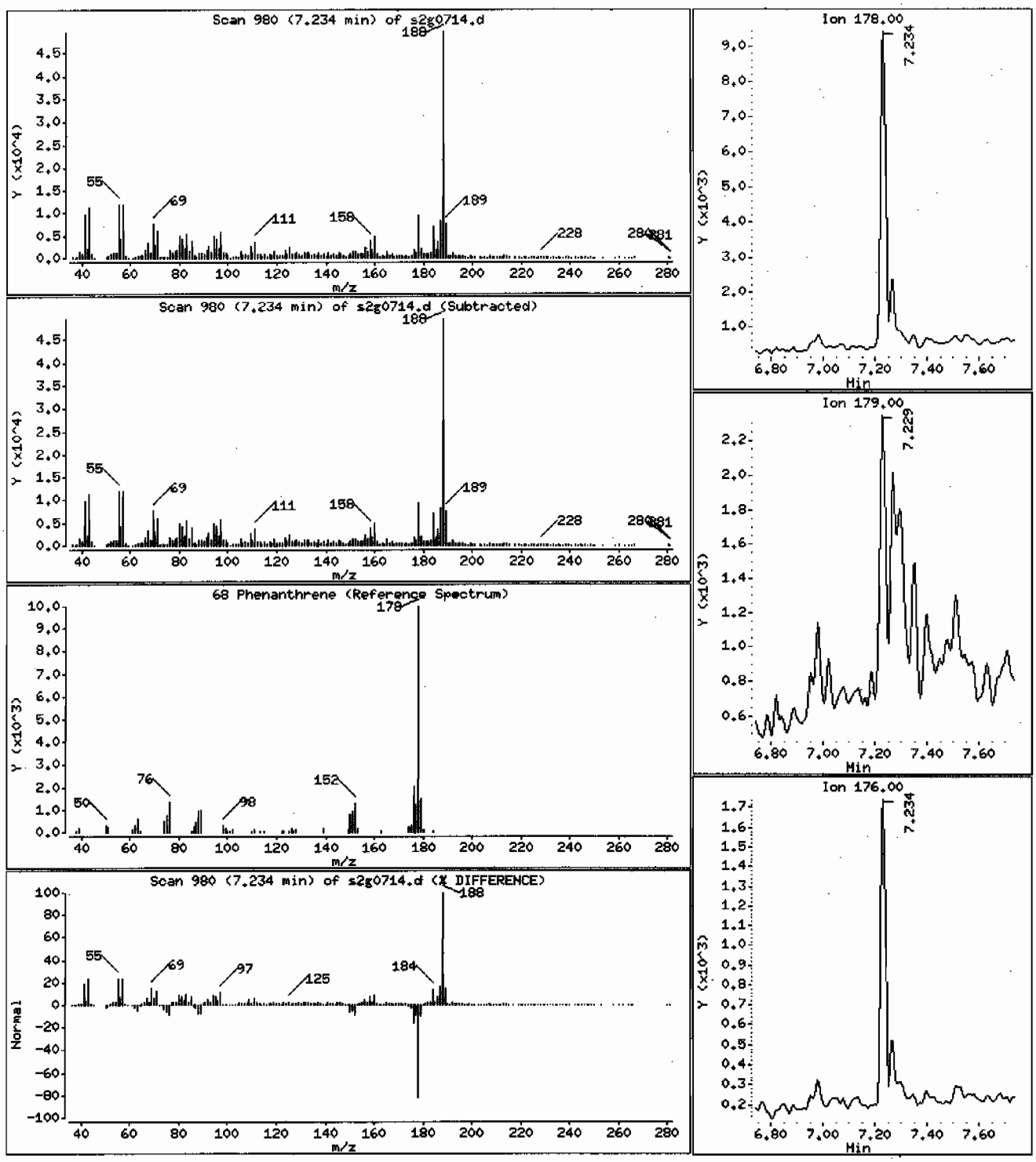

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: 1232846001|882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

69 Anthracene

Concentration: 13.6 ug/Kg

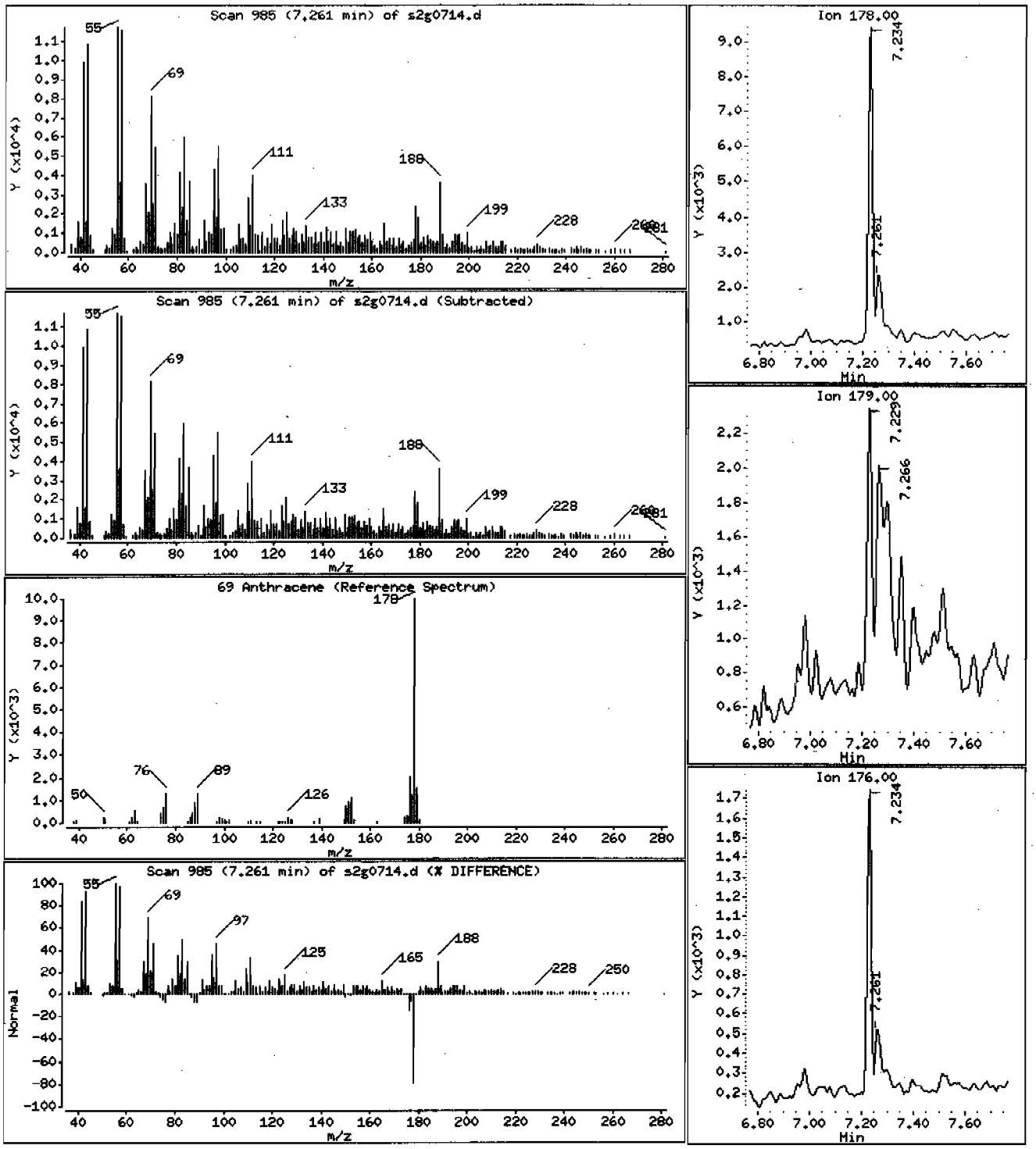

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: 1232846001|882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

76 Fluoranthene

Concentration: 28.4 ug/Kg

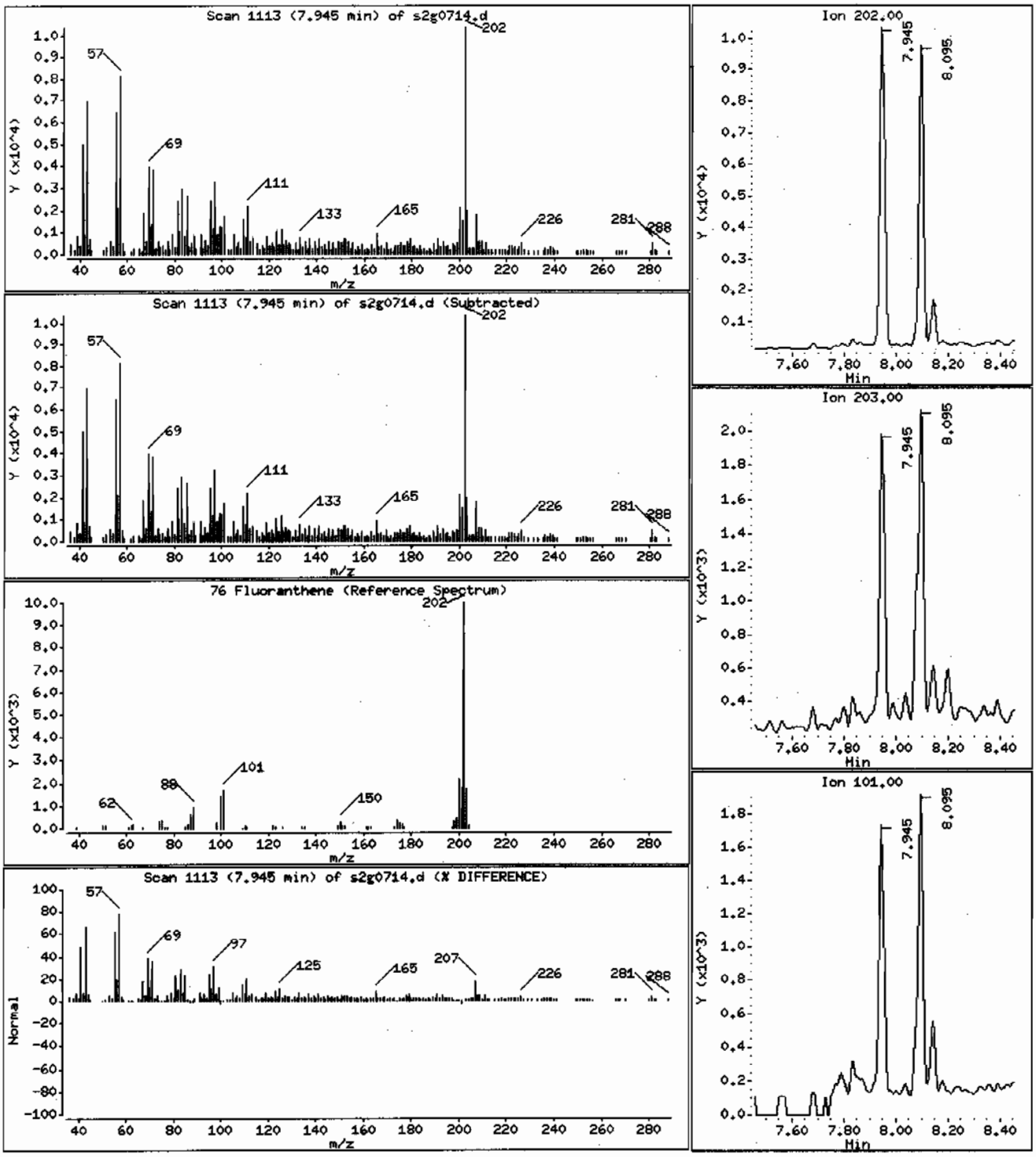

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: |2328460001|882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

95 Benzo(b)fluoranthene

Concentration: 19.2 ug/Kg

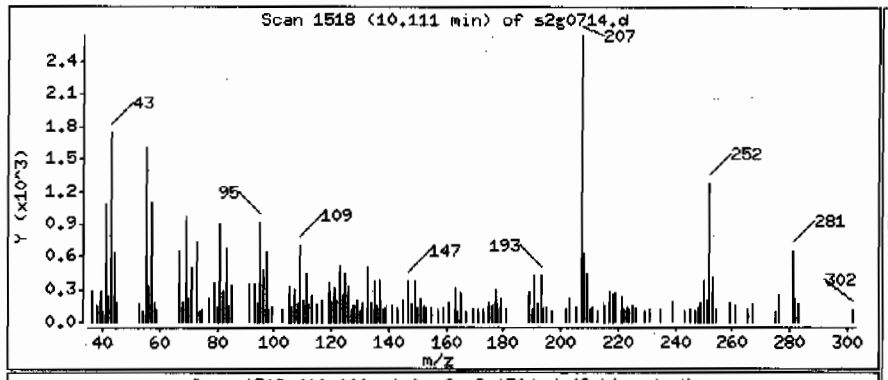

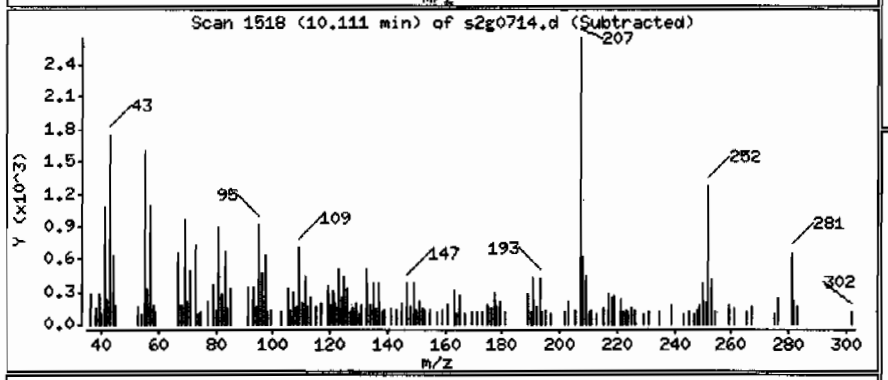

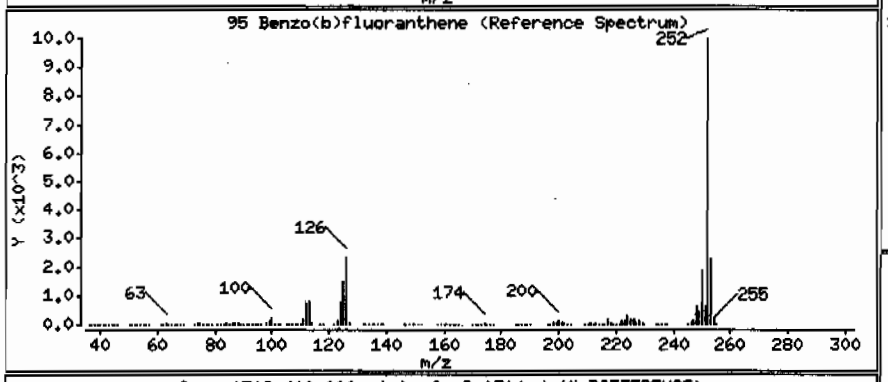

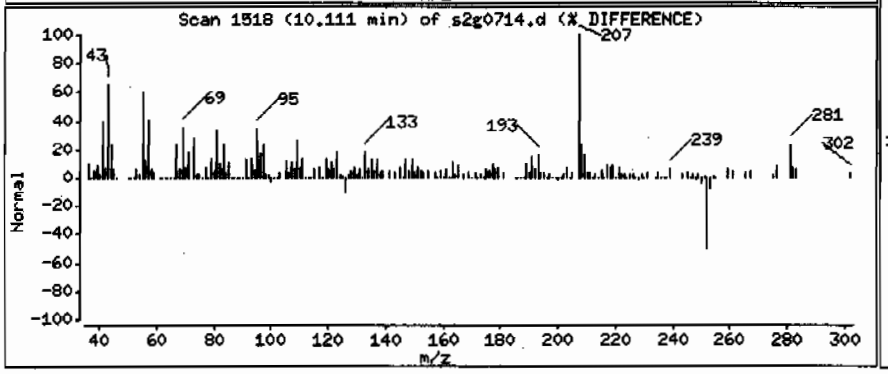

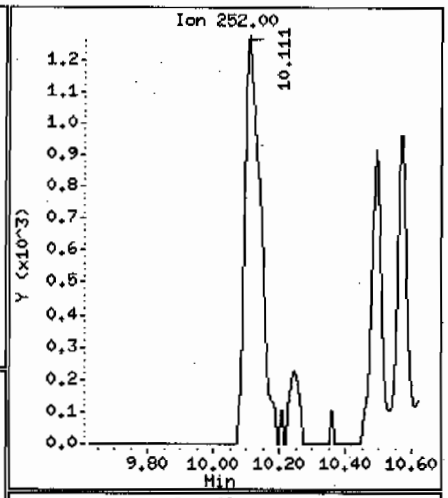

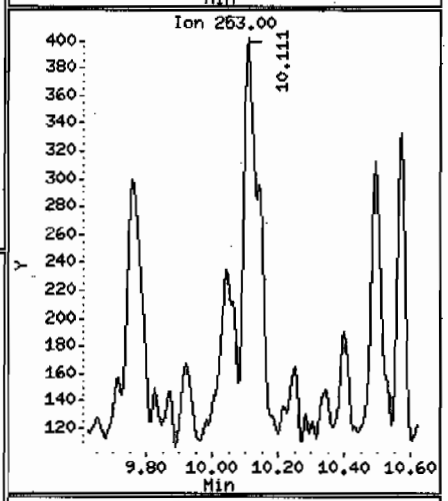

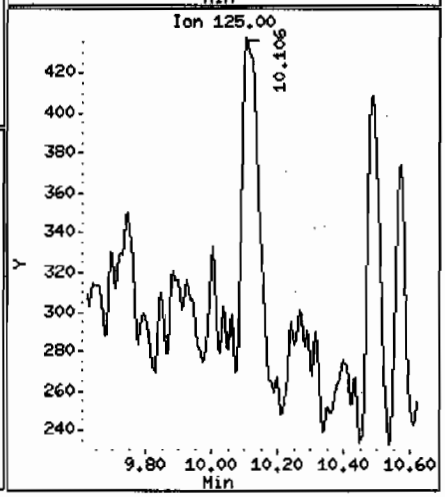

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: |2328460011882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

97 Benzo(a)pyrene

Concentration: 11.6 ug/Kg

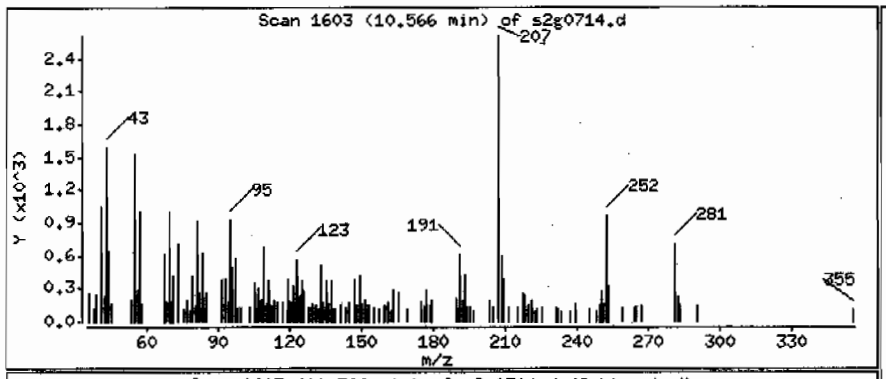

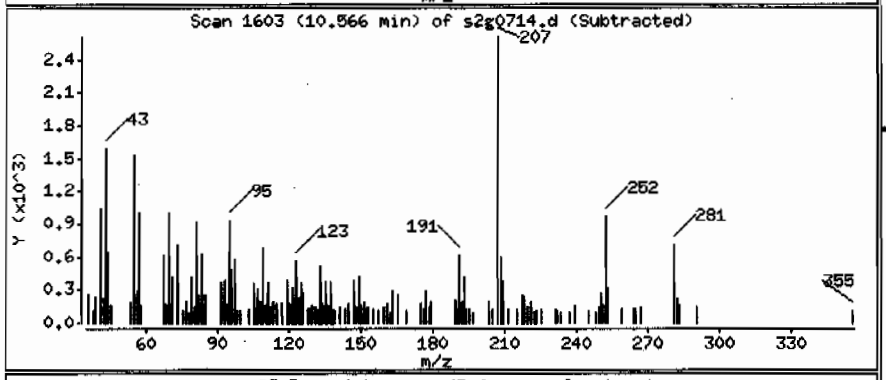

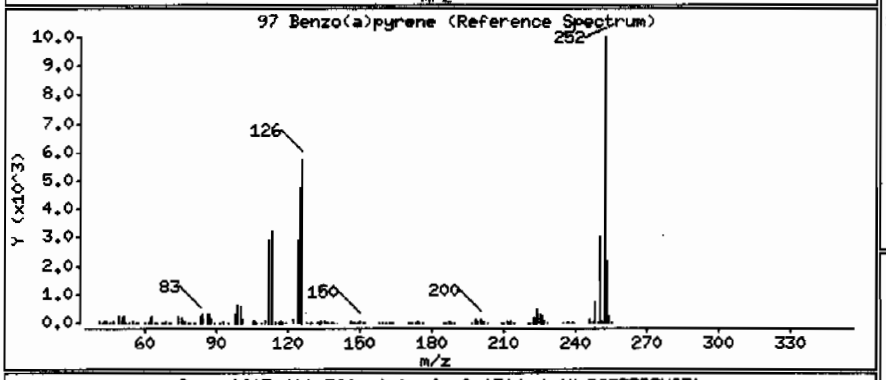

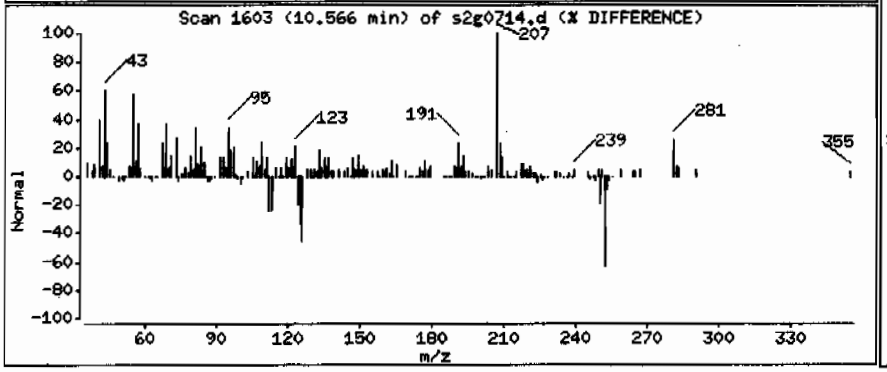

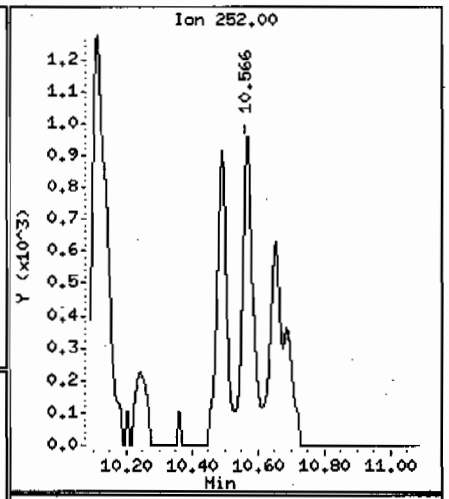

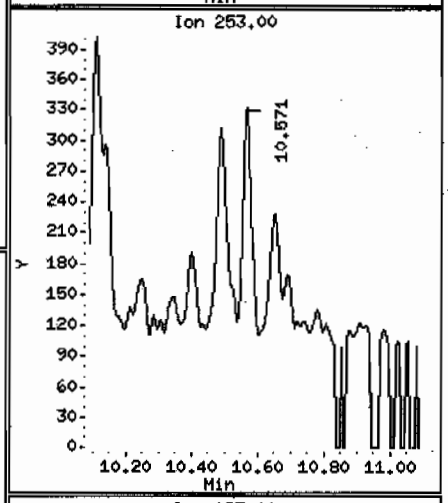

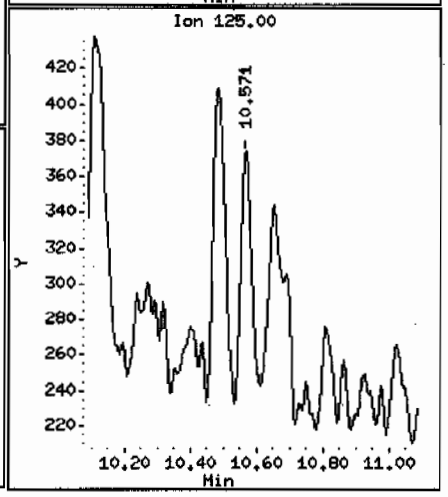

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: 1232846001|882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4663	45	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4662	42	C5H12O2	104
Propane, 2,2-dimethoxy-	77-76-9	NIST05.L	4658	38	C5H12O2	104

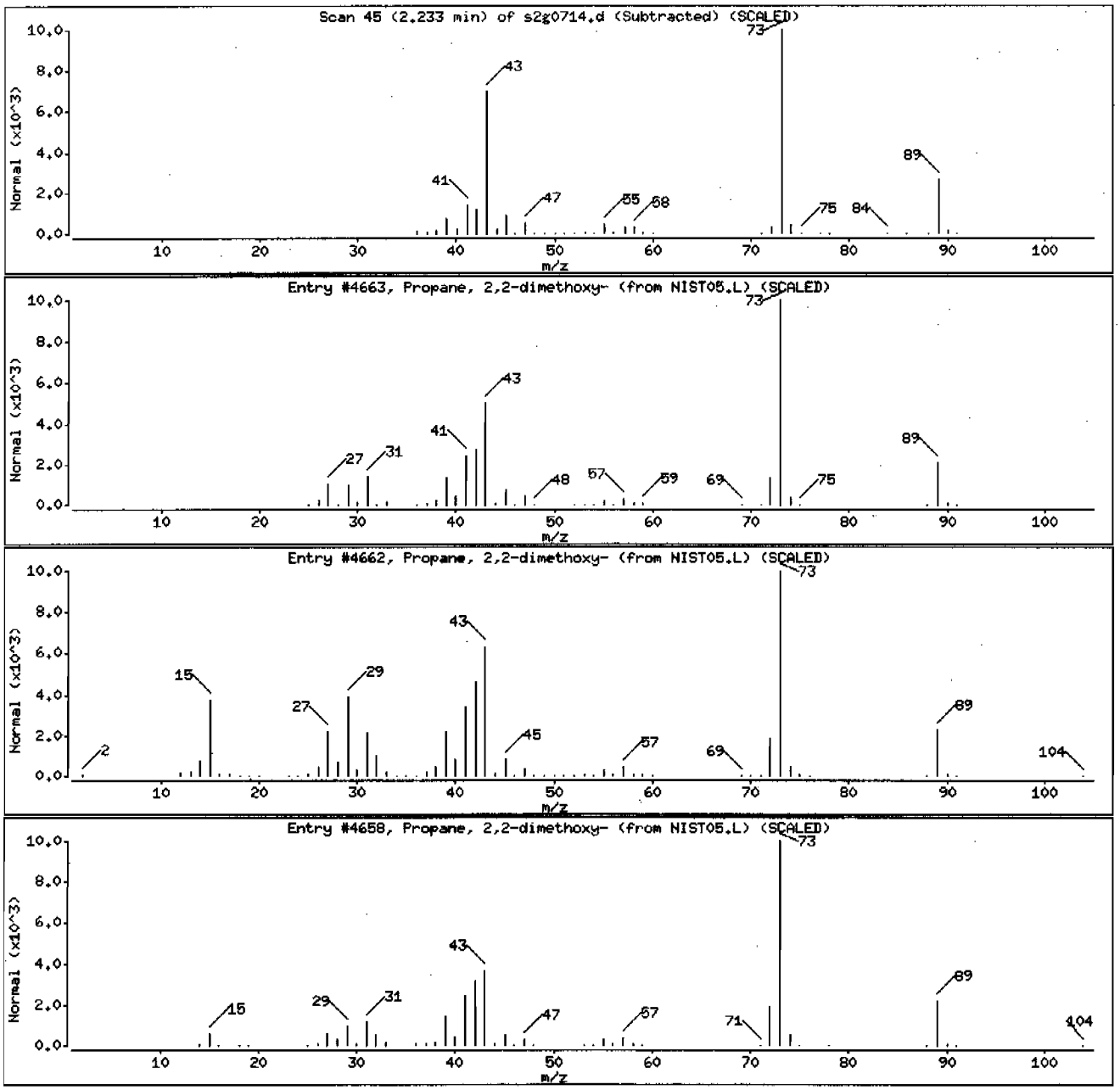

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: |2328460011882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown Aldol Condensate						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7951	50	C6H12O2	116
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST05.L	7952	50	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST05.L	7976	39	C6H12O2	116

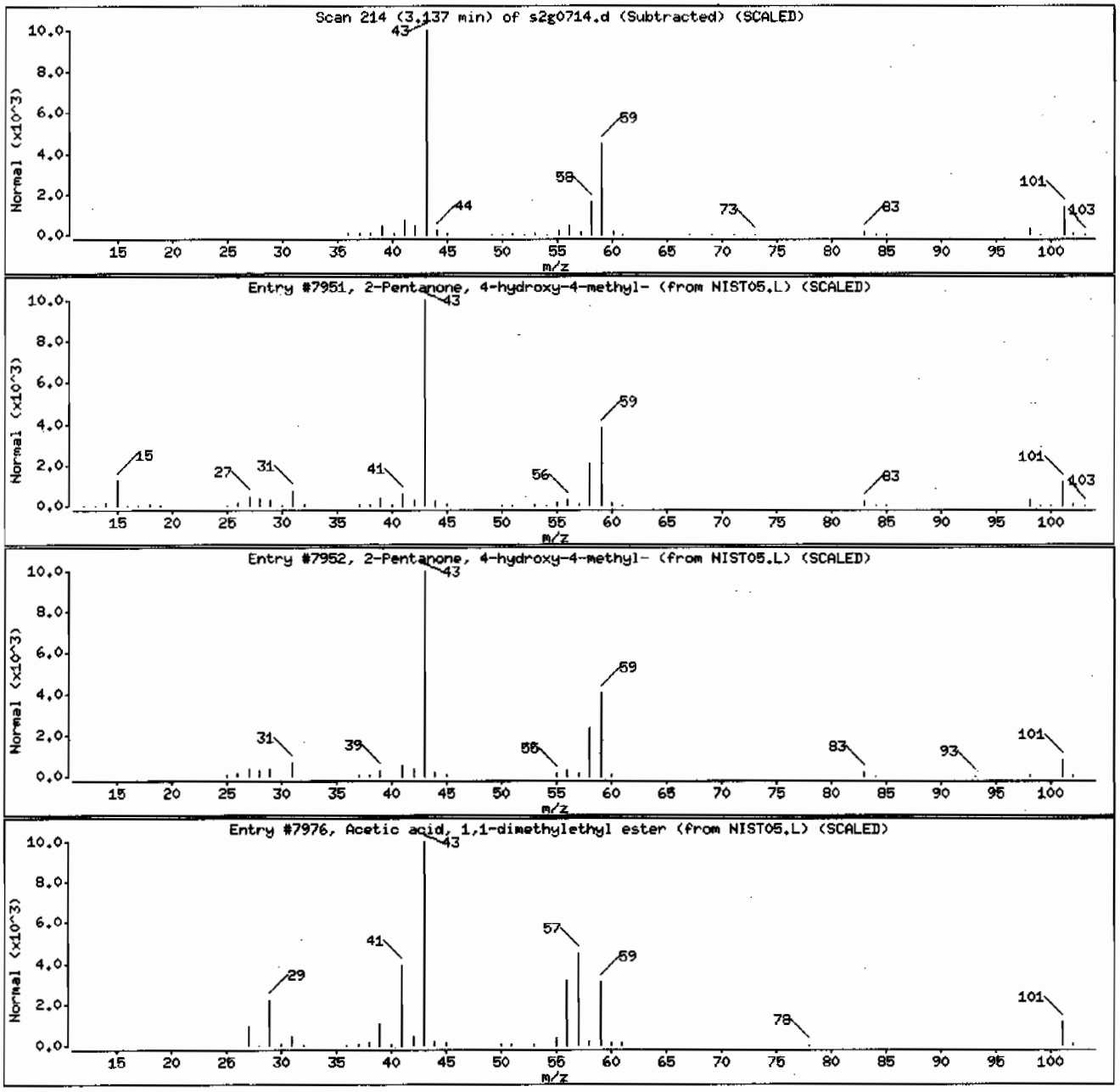

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMD-09-7145

Instrument: MSD2.i

Sample Info: |2328460001882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Pentadecane	629-62-9	NIST05.L	66064	97	C15H32	212
Pentadecane	629-62-9	NIST05.L	66067	96	C15H32	212
Pentadecane	629-62-9	NIST05.L	66063	96	C15H32	212

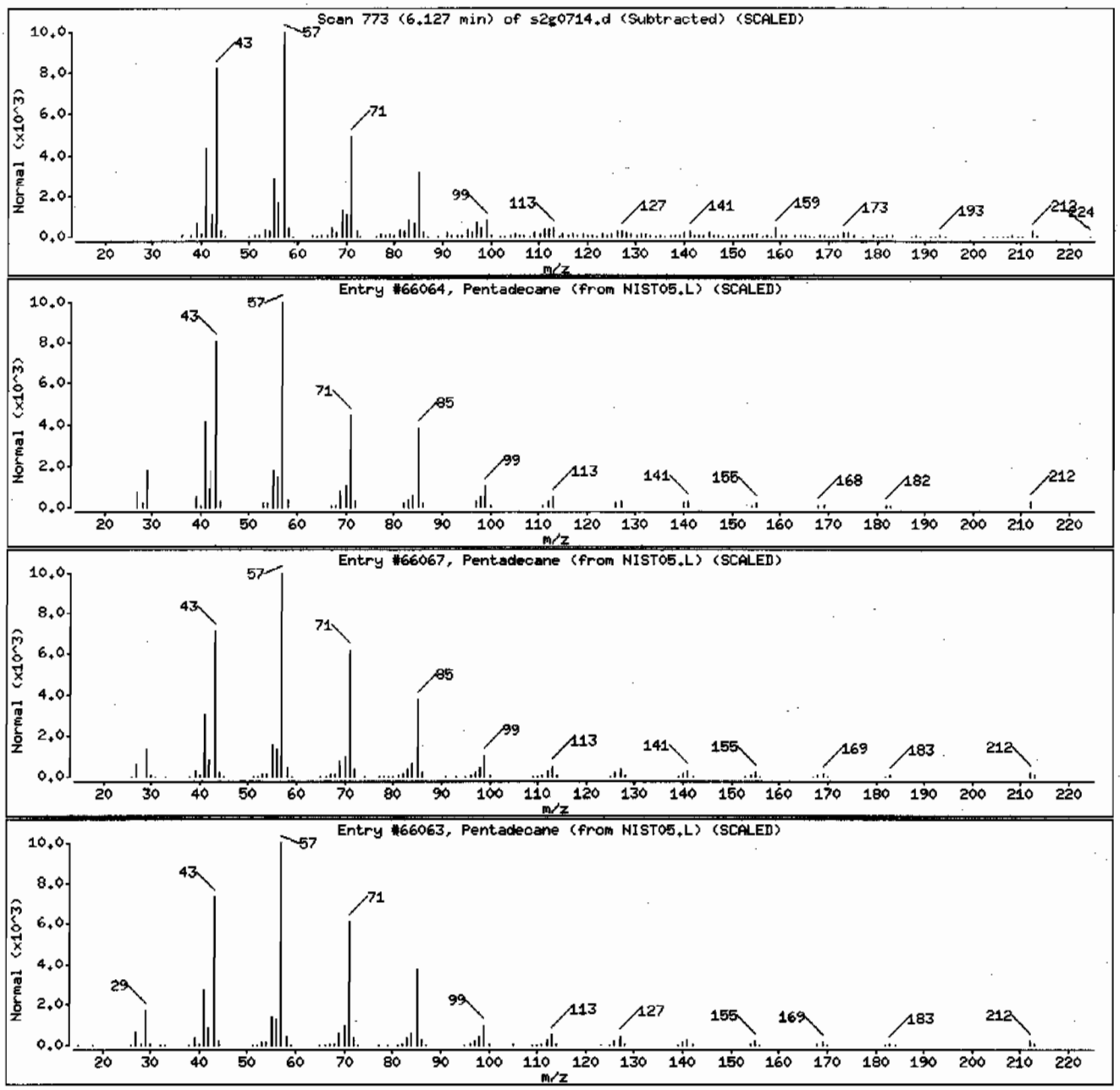

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: 1232846001188273211SVMF11LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Dodecane, 4,9-dipropyl-	3054-63-5	NIST05.L	94945	87	C18H38	254
Pentadecane, 2,6,10-trimethyl-	3892-00-0	NIST05.L	94947	80	C18H38	254
Octacosane	630-02-4	NIST05.L	169720	80	C28H58	394

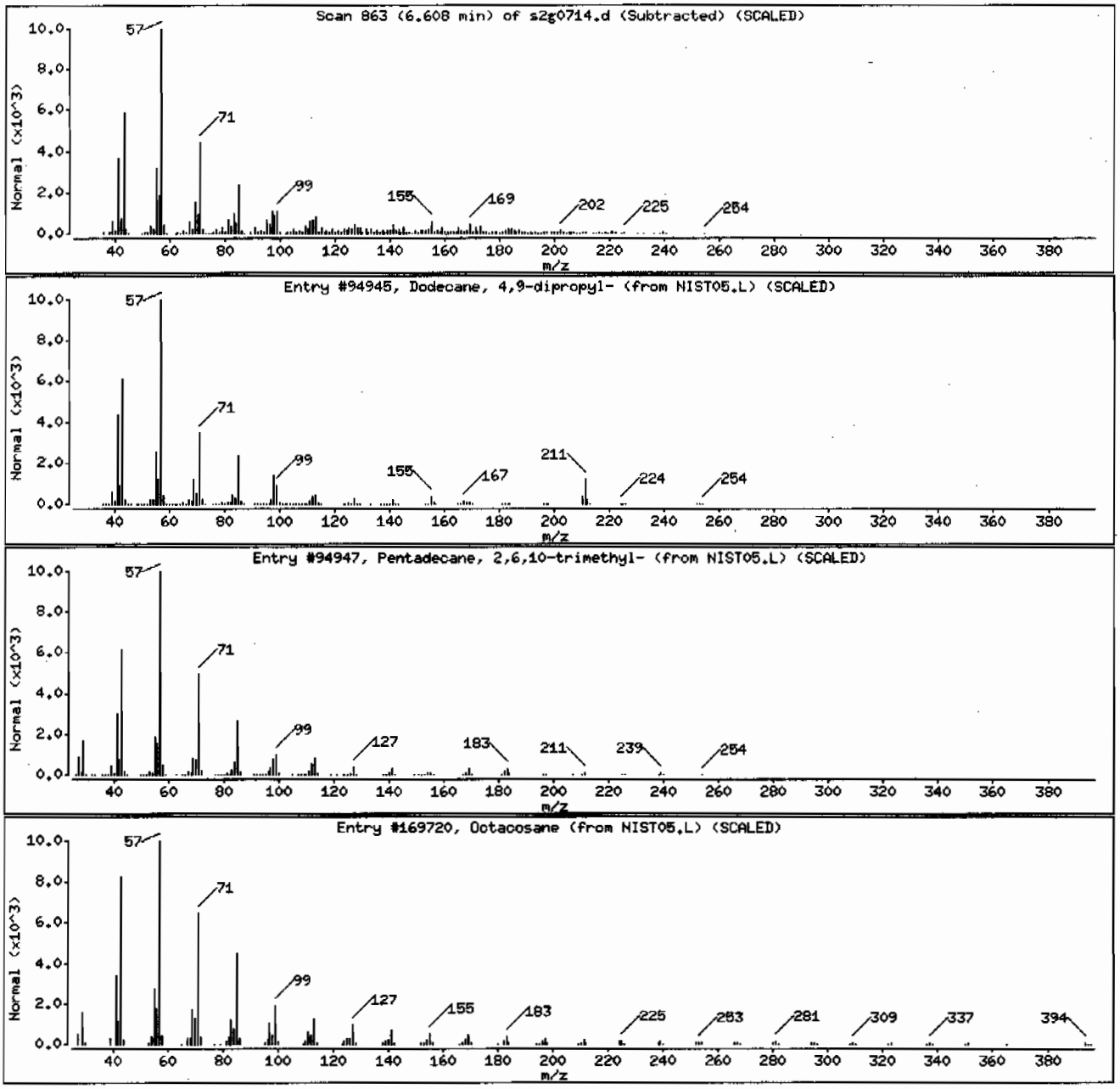

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: |232846001|882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Octadecane	593-45-3	NIST05.L	94930	98	C18H38	254
Octadecane	593-45-3	NIST05.L	94929	96	C18H38	254
Tetratetracontane	7098-22-8	NIST05.L	188836	91	C44H90	619

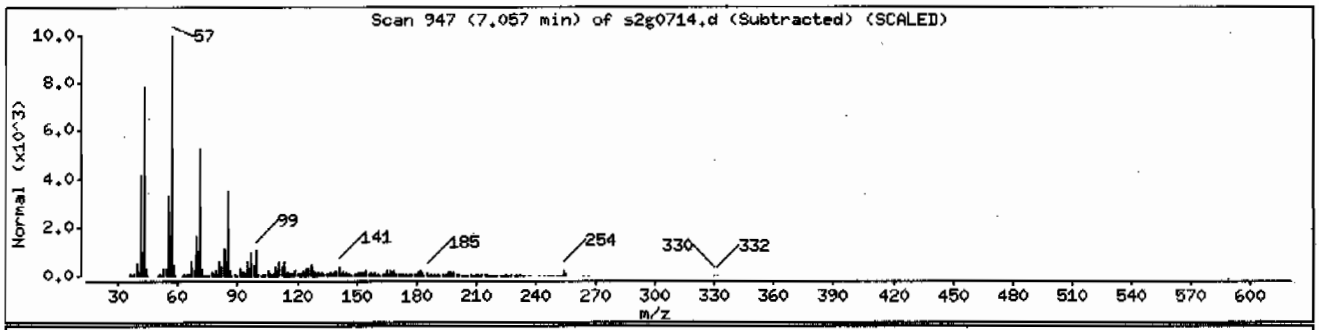

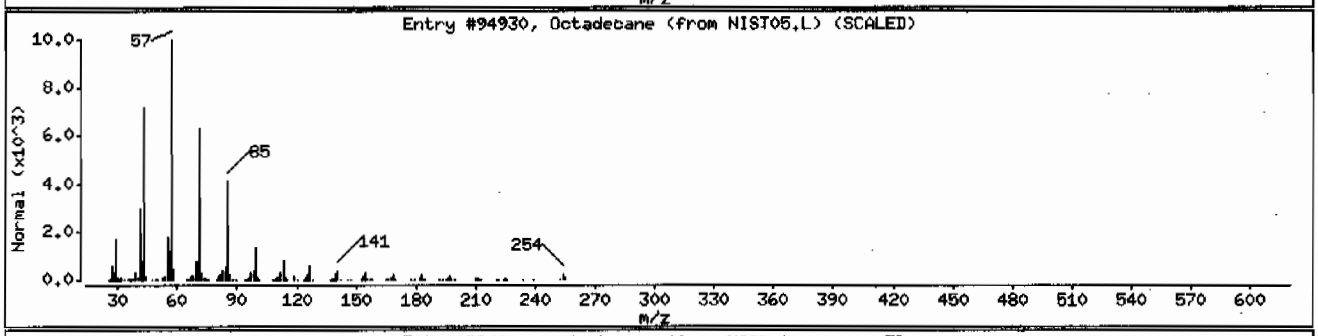

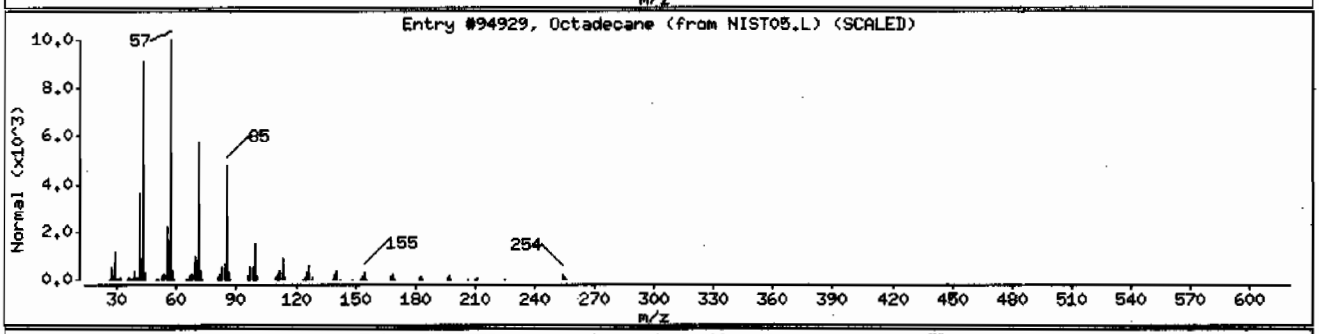

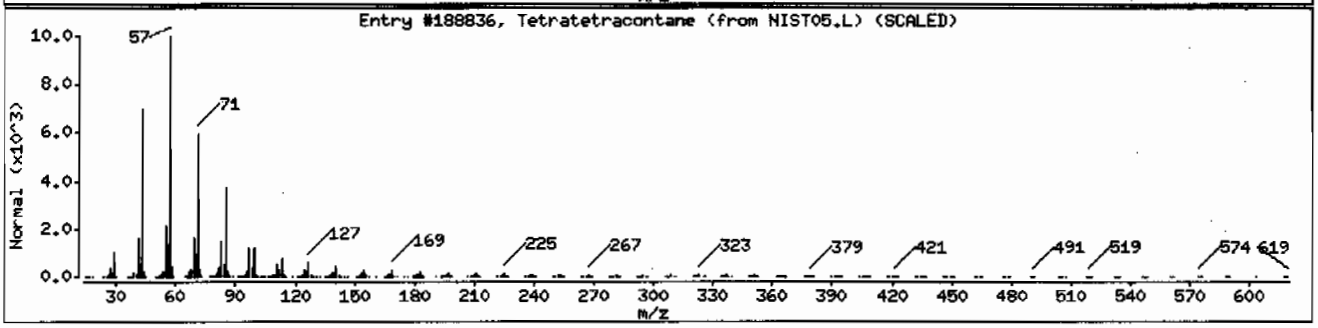

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145 Instrument: MSD2.i

Sample Info: |2328460011882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5 Operator: ACS1

Column phase: J&W DB-5MS Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Nonadecane	629-92-5	NIST05.L	104271	96	C19H40	268
Nonadecane	629-92-5	NIST05.L	104270	95	C19H40	268
Hexadecane	544-76-3	NIST05.L	76090	93	C16H34	226

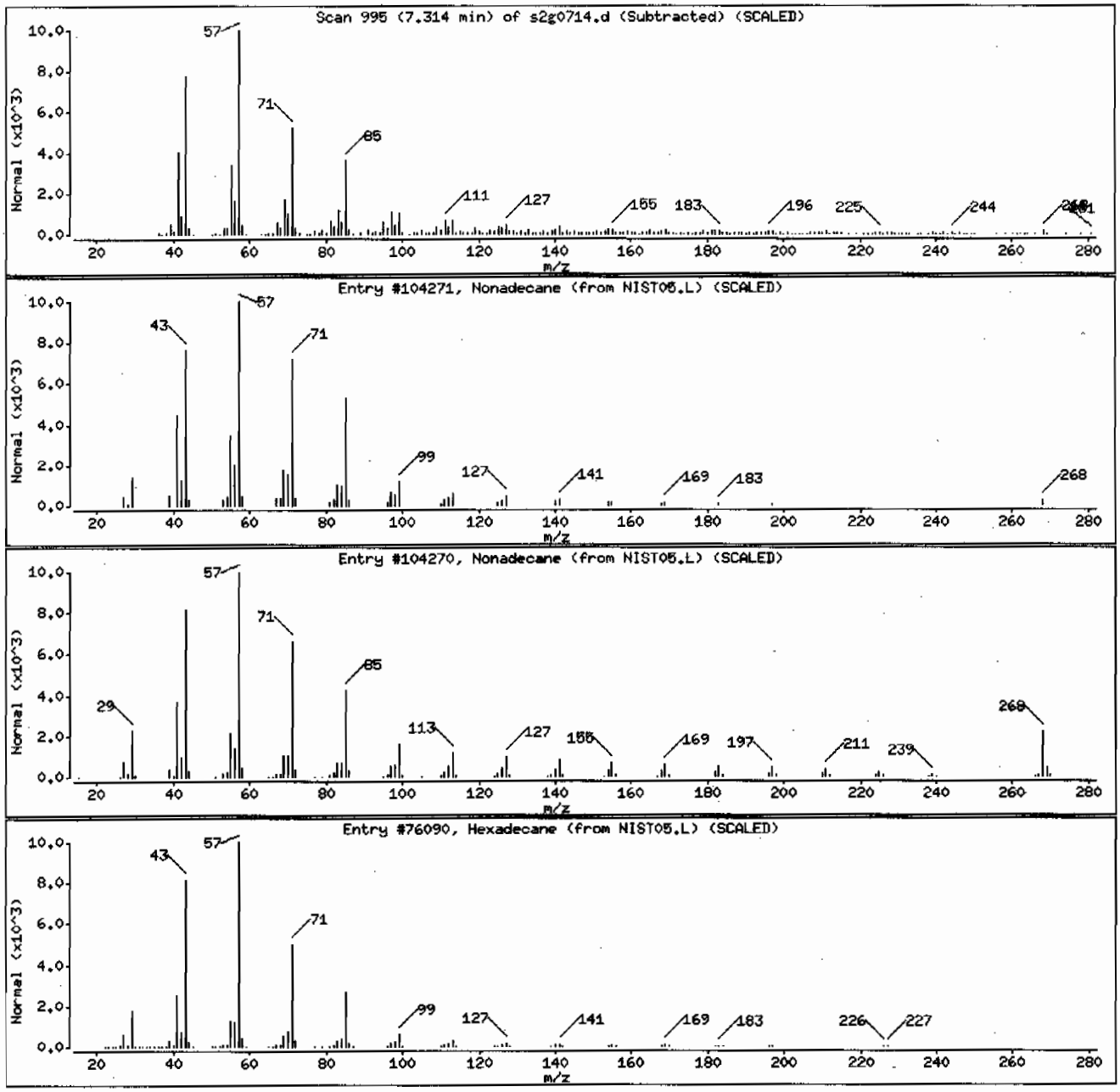

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: |2328460001|882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Eicosane	112-95-8	NIST05.L	113488	98	C20H42	282
Eicosane	112-95-8	NIST05.L	113489	98	C20H42	282
Eicosane	112-95-8	NIST05.L	113491	95	C20H42	282

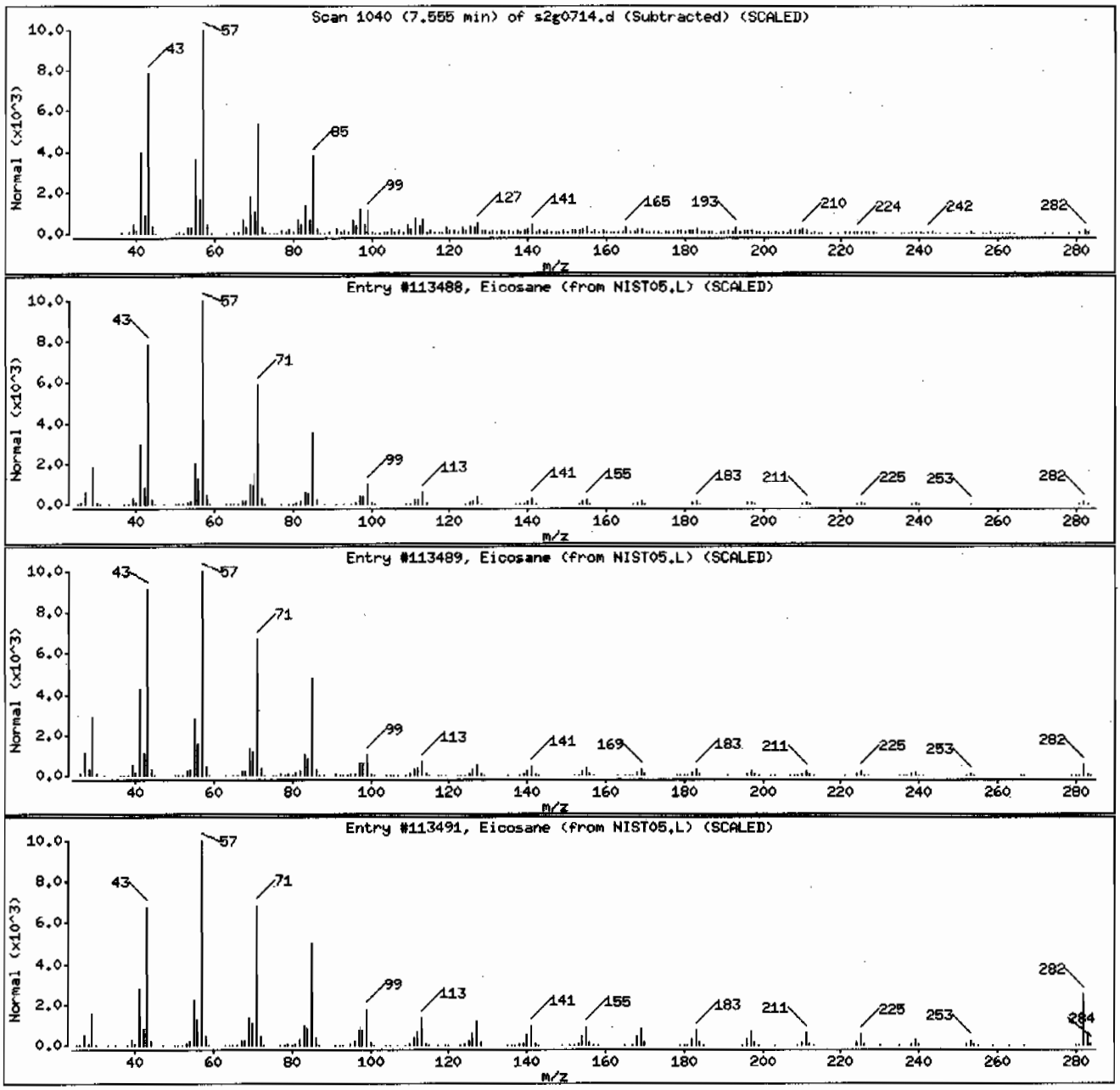

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: |2328460011882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: AGS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Eicosane	112-95-8	NIST05.L	113489	95	C20H42	282
Heneicosane	629-94-7	NIST05.L	122436	94	C21H44	296
Hexadecane	544-76-3	NIST05.L	76090	93	C16H34	226

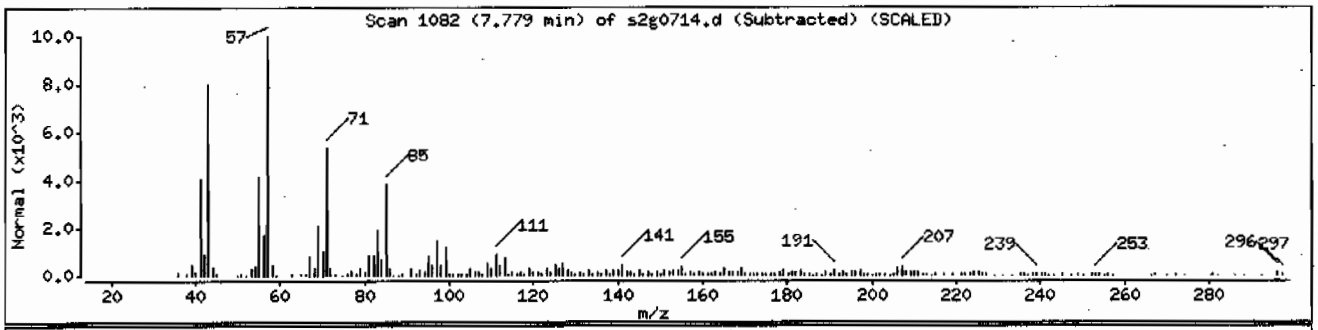

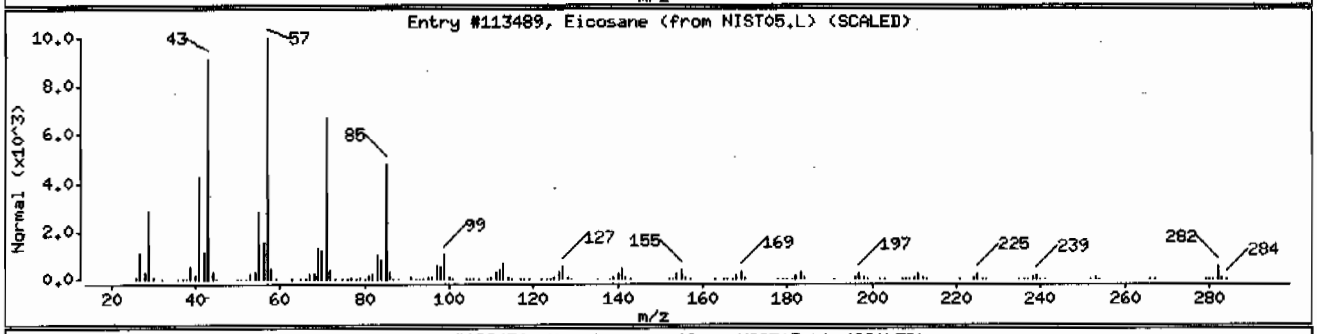

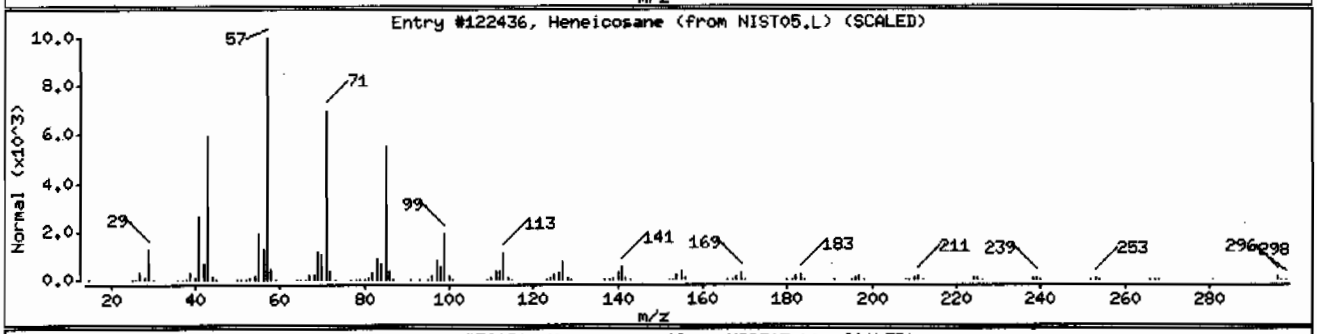

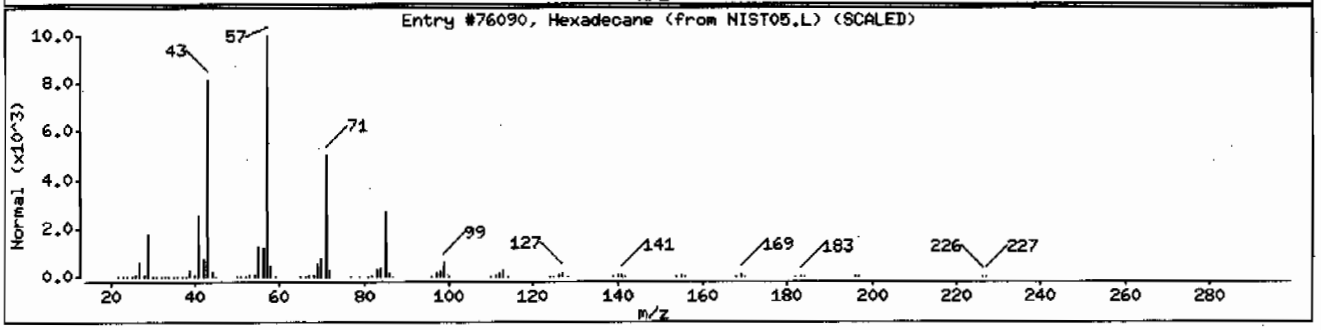

Data File: /chem/MSD2.i/s070709.b/s2g0714.d

Date : 07-JUL-2009 18:52

Client ID: CAMO-09-7145

Instrument: MSD2.i

Sample Info: |2328460011882732|1|SVMF|1|LANL

Volume Injected (uL): 0.5

Operator: ACS1

Column phase: J&W DB-5MS

Column diameter: 0.20

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Eicosane	112-95-8	NIST05.L	113489	97	C20H42	282
Hexadecane	544-76-3	NIST05.L	76088	96	C16H34	226
Eicosane	112-95-8	NIST05.L	113490	96	C20H42	282

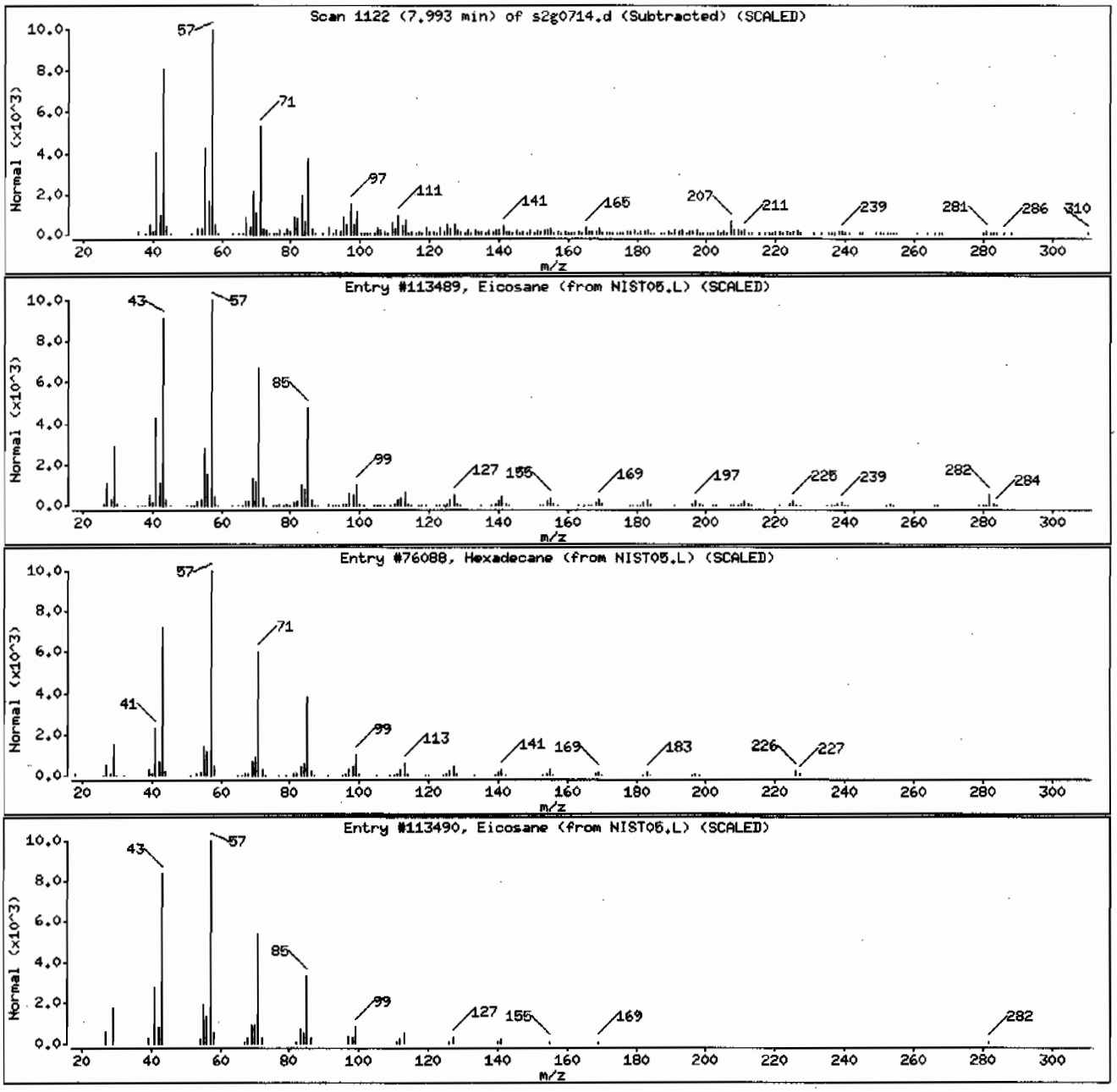

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Data file : /chem/MSD2.i/s070709.b/s2g0715.d
Lab Smp Id: 1201874897 Client Smp ID: CAMO-09-7145MS
Inj Date : 07-JUL-2009 19:13
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201874897|882732|1|SVMF|1|MS
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 15 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2546.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.18000	weight of sample
M	14.02170	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.116	4.121	(1.000)	210749	40.0000	
* 29 Naphthalene-d8	136	4.993	4.998	(1.000)	854134	40.0000	
* 46 Acenaphthene-d10	164	6.244	6.244	(1.000)	435642	40.0000	
* 67 Phenanthrene-d10	188	7.218	7.223	(1.000)	730015	40.0000	
* 91 Chrysene-d12	240	8.983	8.988	(1.000)	526116	40.0000	
* 98 Perylene-d12	264	10.657	10.668	(1.000)	319590	40.0000	
$ 3 2-Fluorophenol	112	3.297	3.297	(0.801)	393942	67.5521	2600
$ 5 Phenol-d5	99	3.827	3.827	(0.930)	497427	69.0735	2660
$ 20 Nitrobenzene-d5	82	4.479	4.485	(0.897)	238190	36.9614	1420
$ 39 2-Fluorobiphenyl	172	5.736	5.736	(0.919)	470424	38.2343	1470
$ 60 2,4,6-Tribromophenol	329	6.774	6.769	(1.085)	122542	82.1278	3160
$ 81 p-Terphenyl-d14	244	8.148	8.149	(0.907)	453409	50.5963	1950

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.832	3.832	(0.931)	255464	34.8220	1340
8 2-Chlorophenol	128	3.982	3.987	(0.968)	227906	36.5768	1410
11 1,4-Dichlorobenzene	146	4.126	4.137	(1.003)	220669	31.7903	1220
17 N-Nitrosodipropylamine	70	4.351	4.356	(1.057)	158635	35.9934	1390(Q)
28 1,2,4-Trichlorobenzene	180	4.939	4.945	(0.989)	190756	35.1003	1350
33 4-Chloro-3-methylphenol	107	5.340	5.330	(1.070)	193165	41.0569	1580
47 Acenaphthene	154	6.266	6.266	(1.003)	399645	35.1519	1350
50 2,4-Dinitrotoluene	165	6.341	6.346	(1.015)	145933	39.1302	1510
52 4-Nitrophenol	139	6.276	6.266	(1.005)	73585	40.2816	1550
65 Pentachlorophenol	266	7.089	7.084	(0.982)	71384	40.5389	1560
79 Pyrene	202	8.100	8.106	(0.902)	695596	44.4146	1710
2 Pyridine	79	2.666	2.634	(0.648)	160325	33.1285	1280
4 Aniline	66	3.896	3.902	(0.947)	112318	38.7092	1490(Q)
7 bis(2-Chloroethyl) ether	63	3.907	3.912	(0.949)	180558	33.6412	1300
9 1,3-Dichlorobenzene	146	4.083	4.089	(0.992)	219633	31.6048	1220
12 Benzyl alcohol	108	4.185	4.185	(1.017)	82011	19.9717	770
13 1,2-Dichlorobenzene	146	4.233	4.239	(1.029)	211839	34.3810	1320
14 bis(2-Chloroisopropyl)ether	45	4.255	4.260	(1.034)	432961	35.9506	1380
15 o-Cresol	107	4.233	4.233	(1.029)	194480	42.5498	1640
18 m,p-Cresols	107	4.330	4.335	(1.052)	276186	43.3815	1670
19 Hexachloroethane	117	4.469	4.474	(1.086)	82014	31.7398	1220
21 Nitrobenzene	77	4.495	4.501	(0.900)	226440	36.6672	1410
22 Isophorone	82	4.650	4.656	(0.931)	441898	37.7259	1450
23 2-Nitrophenol	139	4.715	4.715	(0.944)	109407	36.3109	1400
24 2,4-Dimethylphenol	122	4.709	4.704	(0.943)	285316	37.1235	1430
25 bis(2-Chloroethoxy)methane	93	4.768	4.768	(0.955)	254441	36.9583	1420
26 2,4-Dichlorophenol	162	4.880	4.880	(0.978)	180137	38.7808	1490
27 Benzoic acid	105	4.741	4.752	(0.950)	87117	28.8836	1110(Q)
30 Naphthalene	128	5.009	5.014	(1.003)	644858	32.0604	1240
31 4-Chloroaniline	127	5.019	5.020	(1.005)	315504	40.0786	1540
32 Hexachlorobutadiene	225	5.073	5.073	(1.016)	99399	36.0488	1390
34 2-Methylnaphthalene	142	5.490	5.496	(1.100)	438286	37.5107	1440
36 Hexachlorocyclopentadiene	237	5.597	5.597	(0.896)	78921	41.9801	1620
37 2,4,6-Trichlorophenol	196	5.683	5.683	(0.910)	136130	42.2758	1630
38 2,4,5-Trichlorophenol	196	5.715	5.710	(0.915)	146443	39.3434	1520
40 2-Chloronaphthalene	162	5.849	5.849	(0.937)	416008	38.9625	1500
42 o-Nitroaniline	65	5.902	5.902	(0.945)	131490	40.4543	1560
41 m-Nitroaniline	138	6.191	6.191	(0.991)	111201	42.7752	1650
43 Dimethylphthalate	163	6.004	6.009	(0.961)	476652	38.4724	1480
44 2,6-Dinitrotoluene	165	6.062	6.063	(0.971)	115401	38.4844	1480
45 Acenaphthylene	152	6.148	6.153	(0.985)	675640	39.0549	1500
48 2,4-Dinitrophenol	184	6.255	6.255	(1.002)	26538	29.8928	1150(Q)
49 Dibenzofuran	168	6.378	6.383	(1.021)	583653	39.6472	1530
51 Diethylphthalate	149	6.480	6.480	(1.038)	477357	39.4772	1520
53 Fluorene	166	6.613	6.613	(1.059)	453208	36.7193	1420
54 4-Chlorophenylphenylether	204	6.587	6.587	(1.055)	220263	38.9707	1500
55 2-Methyl-4,6-dinitrophenol	198	6.619	6.619	(0.917)	45493	29.3877	1130

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.608	6.608	(1.058)	99574	45.3131	1750
133 Diphenylamine	169	6.662	6.662	(0.923)	413598	42.4211	1630
58 1,2-Diphenylhydrazine	77	6.694	6.694	(0.927)	517689	40.8697	1580
61 4-Bromophenylphenylether	248	6.913	6.913	(0.958)	123506	40.6086	1560
63 Hexachlorobenzene	284	6.972	6.972	(0.966)	131874	39.2901	1510
68 Phenanthrene	178	7.234	7.239	(1.002)	679467	39.0867	1510
69 Anthracene	178	7.266	7.266	(1.007)	680471	40.5875	1560
72 Di-n-butylphthalate	149	7.496	7.496	(1.039)	802915	41.4887	1600
76 Fluoranthene	202	7.951	7.956	(1.102)	662935	41.4556	1600
85 Butylbenzylphthalate	149	8.427	8.437	(0.938)	325283	49.7137	1920
89 Benzo(a)anthracene	228	8.967	8.978	(0.998)	516614	40.3587	1560
90 3,3'-Dichlorobenzidine	252	8.897	8.892	(0.990)	149809	44.0395	1700
92 Chrysene	228	9.004	9.015	(1.002)	486067	39.3469	1520
93 bis(2-Ethylhexyl)phthalate	149	8.822	8.833	(0.982)	425679	44.1057	1700
94 Di-n-octylphthalate	149	9.432	9.438	(0.885)	566396	54.4976	2100
95 Benzo(b)fluoranthene	252	10.117	10.122	(0.949)	369647	48.1803	1860
96 Benzo(k)fluoranthene	252	10.149	10.160	(0.952)	366983	45.3348	1750
97 Benzo(a)pyrene	252	10.577	10.587	(0.992)	292159	43.5850	1680
99 Indeno(1,2,3-cd)pyrene	276	12.556	12.572	(1.178)	210480	32.6874	1260
100 Dibenzo(a,h)anthracene	278	12.561	12.577	(1.179)	177306	34.3150	1320
101 Benzo(ghi)perylene	276	13.149	13.166	(1.234)	152650	27.3032	1050(M)
1 N-Methyl-N-nitrosomethylamine	74	2.618	2.597	(0.636)	122472	33.9130	1310

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: /chem/MSD2.i/s070709.b/s2g0715.d
Date : 07-JUL-2009 19:13
Client ID: CAMO-09-7145MS
Sample Info: 1120187489718827321|1|SVMF|1|MS
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: AGS1
Column diameter: 0.20

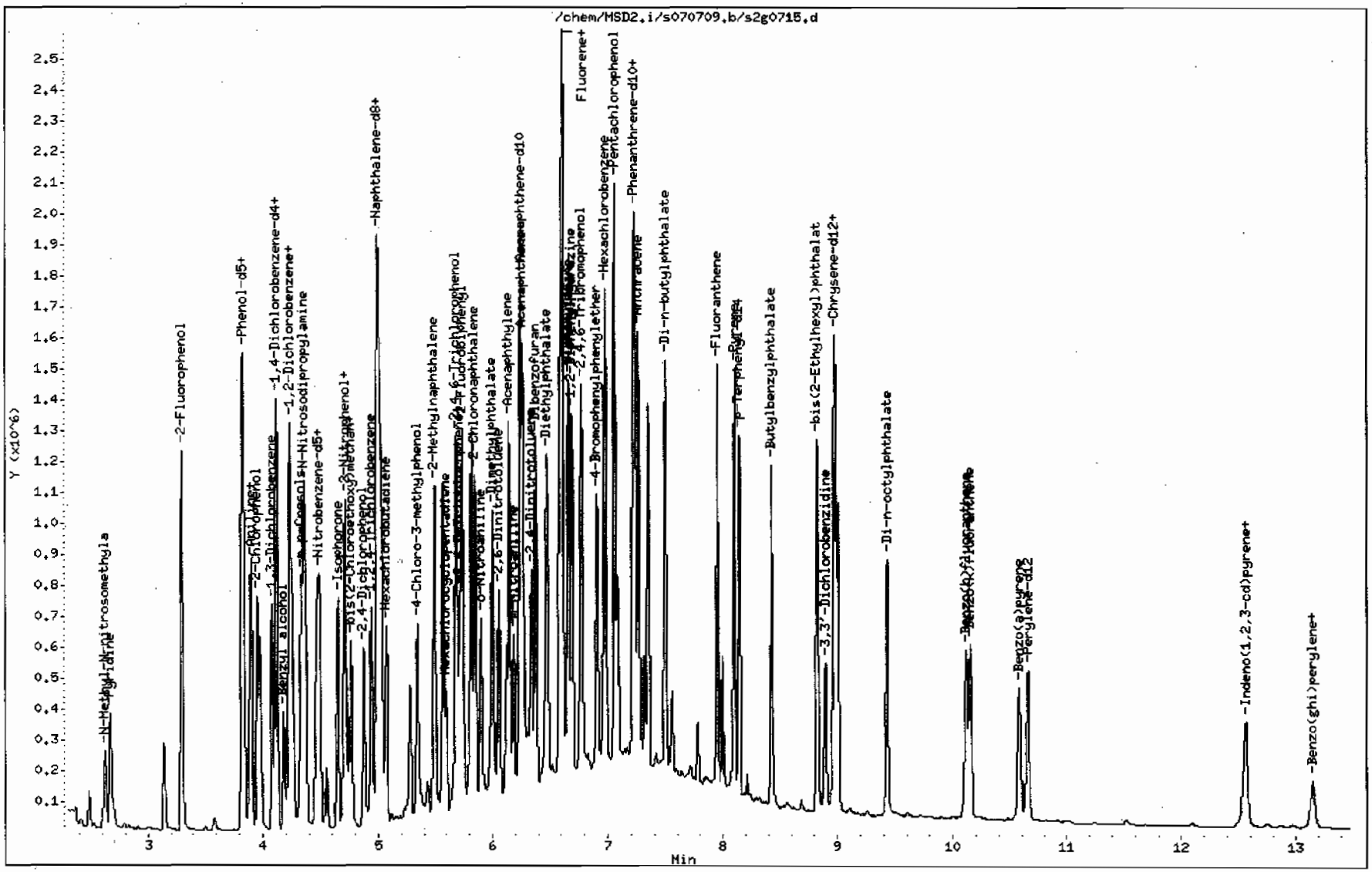

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Data file : /chem/MSD2.i/s070709.b/s2g0716.d
Lab Smp Id: 1201874898 Client Smp ID: CAMO-09-7145MSD
Inj Date : 07-JUL-2009 19:33
Operator : AGS1 Inst ID: MSD2.i
Smp Info : |1201874898|882732|1|SVMF|1|MSD
Misc Info : |MSD8270_SF|WBN090628-01|
Comment : Column: J & W Scientific DB-5MS 25m x 0.2mm x 0.33um
Method : /chem/MSD2.i/s070709.b/MSD2-M8270CAQA-062809.m
Meth Date : 07-Jul-2009 16:37 ann00964 Quant Type: ISTD
Cal Date : 29-JUN-2009 03:11 Cal File: s2f2830.d
Als bottle: 16 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 09-2546.sub
Target Version: 3.50
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf *Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	500.00000	ng unit correction factor
Vt	1.00000	volume of final ext
Vi	0.50000	volume injected
Ws	30.11000	weight of sample
M	14.02170	% moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
* 10 1,4-Dichlorobenzene-d4	152	4.116	4.121	(1.000)	218026	40.0000	
* 29 Naphthalene-d8	136	4.993	4.998	(1.000)	876431	40.0000	
* 46 Acenaphthene-d10	164	6.244	6.244	(1.000)	445835	40.0000	
* 67 Phenanthrene-d10	188	7.223	7.223	(1.000)	759510	40.0000	
* 91 Chrysene-d12	240	8.983	8.988	(1.000)	524024	40.0000	
* 98 Perylene-d12	264	10.657	10.668	(1.000)	303720	40.0000	
$ 3 2-Fluorophenol	112	3.297	3.297	(0.801)	410531	68.0471	2630
$ 5 Phenol-d5	99	3.821	3.827	(0.929)	517950	69.5227	2680
$ 20 Nitrobenzene-d5	82	4.479	4.485	(0.897)	249746	37.7687	1460
$ 39 2-Fluorobiphenyl	172	5.736	5.736	(0.919)	491513	39.0350	1510
$ 60 2,4,6-Tribromophenol	329	6.774	6.769	(1.085)	129938	85.0937	3290
$ 81 p-Terphenyl-d14	244	8.148	8.149	(0.907)	470512	52.7144	2040

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
6 Phenol	94	3.832	3.832	(0.931)	267841	35.2905	1360
8 2-Chlorophenol	128	3.982	3.987	(0.968)	239324	37.1273	1430
11 1,4-Dichlorobenzene	146	4.126	4.137	(1.003)	232062	32.3157	1250
17 N-Nitrosodipropylamine	70	4.351	4.356	(1.057)	168328	36.9179	1430(Q)
28 1,2,4-Trichlorobenzene	180	4.939	4.945	(0.989)	202436	36.3018	1400
33 4-Chloro-3-methylphenol	107	5.340	5.330	(1.070)	208397	43.1676	1670
47 Acenaphthene	154	6.266	6.266	(1.003)	424437	36.4790	1410
50 2,4-Dinitrotoluene	165	6.346	6.346	(1.016)	163502	42.8387	1650
52 4-Nitrophenol	139	6.282	6.266	(1.006)	82711	44.2422	1710
65 Pentachlorophenol	266	7.089	7.084	(0.981)	76258	41.6250	1610
79 Pyrene	202	8.100	8.106	(0.902)	739560	47.4102	1830
2 Pyridine	79	2.671	2.634	(0.649)	170485	34.0521	1320
4 Aniline	66	3.896	3.902	(0.947)	117525	39.1518	1510(Q)
7 bis(2-Chloroethyl) ether	63	3.907	3.912	(0.949)	191157	34.4273	1330
9 1,3-Dichlorobenzene	146	4.083	4.089	(0.992)	232917	32.3976	1250
12 Benzyl alcohol	108	4.185	4.185	(1.017)	89235	21.0056	811
13 1,2-Dichlorobenzene	146	4.233	4.239	(1.029)	222932	34.9738	1350
14 bis(2-Chloroisopropyl)ether	45	4.255	4.260	(1.034)	461204	37.0176	1430
15 o-Cresol	107	4.233	4.233	(1.029)	182433	38.5819	1490
18 m,p-Cresols	107	4.329	4.335	(1.052)	290355	44.0849	1700
19 Hexachloroethane	117	4.469	4.474	(1.086)	87568	32.7581	1260
21 Nitrobenzene	77	4.495	4.501	(0.900)	241310	38.0810	1470
22 Isophorone	82	4.650	4.656	(0.931)	466582	38.8198	1500
23 2-Nitrophenol	139	4.715	4.715	(0.944)	117373	37.9637	1470
24 2,4-Dimethylphenol	122	4.709	4.704	(0.943)	312495	39.6255	1530
25 bis(2-Chloroethoxy)methane	93	4.768	4.768	(0.955)	268733	38.0412	1470
26 2,4-Dichlorophenol	162	4.880	4.880	(0.978)	193756	40.6516	1570
27 Benzoic acid	105	4.747	4.752	(0.951)	101551	32.8126	1270
30 Naphthalene	128	5.009	5.014	(1.003)	677228	32.8132	1270
31 4-Chloroaniline	127	5.019	5.020	(1.005)	339243	41.9979	1620
32 Hexachlorobutadiene	225	5.073	5.073	(1.016)	106022	37.4725	1450
34 2-Methylnaphthalene	142	5.495	5.496	(1.101)	466856	38.9393	1500
36 Hexachlorocyclopentadiene	237	5.597	5.597	(0.896)	84927	44.1420	1700
37 2,4,6-Trichlorophenol	196	5.683	5.683	(0.910)	143894	43.6653	1690
38 2,4,5-Trichlorophenol	196	5.715	5.710	(0.915)	159264	41.8096	1620
40 2-Chloronaphthalene	162	5.854	5.849	(0.937)	439053	40.1807	1550
42 o-Nitroaniline	65	5.902	5.902	(0.945)	145602	43.7719	1690
41 m-Nitroaniline	138	6.191	6.191	(0.991)	123274	46.3352	1790
43 Dimethylphthalate	163	6.004	6.009	(0.961)	509182	40.1584	1550
44 2,6-Dinitrotoluene	165	6.062	6.063	(0.971)	124034	40.4177	1560
45 Acenaphthylene	152	6.148	6.153	(0.985)	722972	40.8355	1580
48 2,4-Dinitrophenol	184	6.260	6.255	(1.003)	29492	31.7876	1230(Q)
49 Dibenzofuran	168	6.383	6.383	(1.022)	623847	41.4087	1600
51 Diethylphthalate	149	6.480	6.480	(1.038)	514208	41.5525	1600
53 Fluorene	166	6.613	6.613	(1.059)	484969	38.3943	1480
54 4-Chlorophenylphenylether	204	6.587	6.587	(1.055)	236559	40.8970	1580
55 2-Methyl-4,6-dinitrophenol	198	6.624	6.619	(0.917)	50508	31.0902	1200

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/ul)	FINAL (ug/Kg)
56 p-Nitroaniline	138	6.608	6.608	(1.058)	112913	50.2085	1940
133 Diphenylamine	169	6.661	6.662	(0.922)	449218	44.2852	1710
58 1,2-Diphenylhydrazine	77	6.694	6.694	(0.927)	564554	42.8387	1650
61 4-Bromophenylphenylether	248	6.913	6.913	(0.957)	134103	42.3805	1640
63 Hexachlorobenzene	284	6.972	6.972	(0.965)	142768	40.8840	1580
68 Phenanthrene	178	7.239	7.239	(1.002)	730472	40.3890	1560
69 Anthracene	178	7.266	7.266	(1.006)	745396	42.7334	1650
72 Di-n-butylphthalate	149	7.496	7.496	(1.038)	867727	43.0964	1660
76 Fluoranthene	202	7.950	7.956	(1.101)	718144	43.1640	1670
85 Butylbenzylphthalate	149	8.427	8.437	(0.938)	340452	52.2397	2020
89 Benzo(a)anthracene	228	8.972	8.978	(0.999)	545688	42.8001	1650
90 3,3'-Dichlorobenzidine	252	8.897	8.892	(0.990)	161031	47.5274	1840
92 Chrysene	228	9.004	9.015	(1.002)	510987	41.5293	1600
93 bis(2-Ethylhexyl)phthalate	149	8.828	8.833	(0.983)	446705	46.4690	1790
94 Di-n-octylphthalate	149	9.432	9.438	(0.885)	591412	59.8780	2310
95 Benzo(b)fluoranthene	252	10.117	10.122	(0.949)	365847	50.1767	1940
96 Benzo(k)fluoranthene	252	10.154	10.160	(0.953)	373976	48.6127	1880
97 Benzo(a)pyrene	252	10.582	10.587	(0.993)	291608	45.7759	1770
99 Indeno(1,2,3-cd)pyrene	276	12.561	12.572	(1.179)	209860	34.2941	1320
100 Dibenzo(a,h)anthracene	278	12.566	12.577	(1.179)	177277	36.1021	1390
101 Benzo(ghi)perylene	276	13.155	13.166	(1.234)	159415	30.0031	1160
1 N-Methyl-N-nitrosomethylamine	74	2.623	2.597	(0.637)	128906	34.5033	1330

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: /chem/MSD2.i/s070709.b/s2g0716.d
Date : 07-JUL-2009 19:33
Client ID: CAMD-09-7145MSD
Sample Info: 1120187489818827321111SVMF11MSD
Volume Injected (uL): 0.5
Column phase: J&W DB-5MS

Instrument: MSD2.i
Operator: ACS1
Column diameter: 0.20

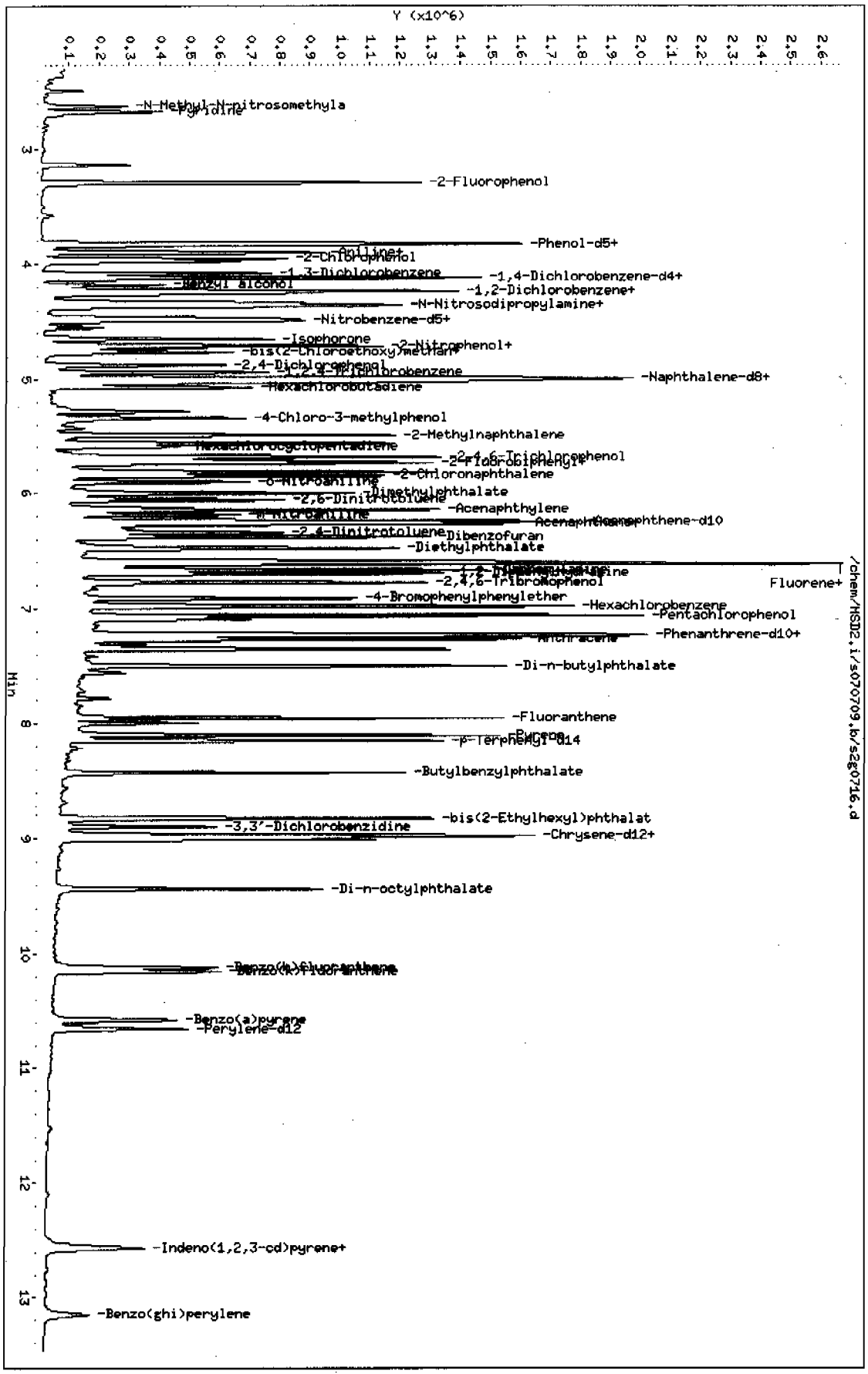

Page 1

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2536

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	882499
Prep Batch Number:	882498

Sample Analysis

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201874312	Interference Check Sample (ICS)
1201874308	Method Blank (MB)
1201874309	Laboratory Control Sample (LCS)
1201874310	232760001(CAMO-09-9962) Matrix Spike (MS)
1201874311	232760001(CAMO-09-9962) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

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Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232760001 (CAMO-09-9962) from SDG 09-2542-1 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

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Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
Comments pertaining to Perchlorate-101 and/or the Perchlorate Isotope Ratio are applicable only when the client requests Perchlorate-101 and/or the Perchlorate Isotope Ratio be reported. Due to software constraints, Perchlorate, Perchlorate-101 and/or the Perchlorate Isotope Ratio may appear on raw data and comments referring to them may appear on certain Forms whether or not the client has requested one or all of them be reported.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Heather K. Moore **Date:** 07/13/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6615

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536

GEL Sample ID: 232754001

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 92.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.539	2.16	1.01	ug/kg	J	1	09-JUL-09 21:31	per0709052a
	Perchlorate-O(18)			5.31	ug/kg		1	09-JUL-09 21:31	per0709052a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6614

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536

GEL Sample ID: 232754002

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90.2

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.576	ug/kg	J	1	09-JUL-09 21:43	per0709053a
	Perchlorate-O(18)			5.70	ug/kg		1	09-JUL-09 21:43	per0709053a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6613

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536

GEL Sample ID: 232754003

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90.3

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.554	ug/kg	U	1	09-JUL-09 21:55	per0709054a
	Perchlorate-O(18)			5.60	ug/kg		1	09-JUL-09 21:55	per0709054a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Soli}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2536

Extract Batch Code: 882498

Date Filtered: 07–JUL–09

Matrix: SOIL

Sample ID: 1201874309

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.01	ug/kg	101		70 – 130
Perchlorate–O(18)		3.86	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2536

Extract Batch Code: 882498

Date Filtered: 07–JUL–09

Matrix: SOIL

Sample ID: 1201874312

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.2	ug/kg	110		70 – 130
Perchlorate–O(18)		3.8	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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ıantify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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1201874312
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LANL | 882499 | 50020 | 2G | 1 | 07.10.09

rchlorate

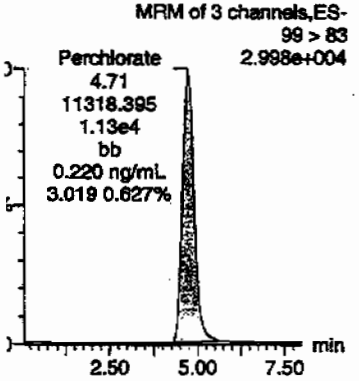

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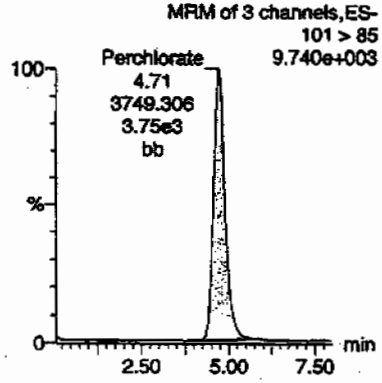

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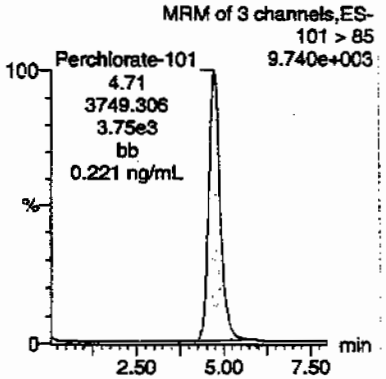

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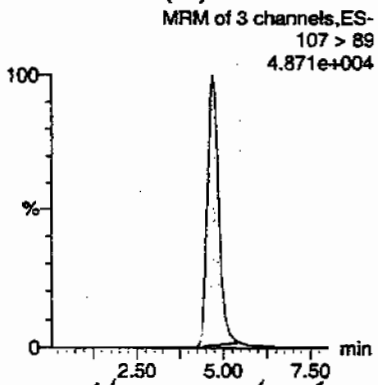

HMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1874312	Perchlorate	99 > 83	4.71	11318.395	11318.395	bb			0.2204	110.19	10.19	1076.4...	3.02
1874312	Perchlorate-101	101 > 85	4.71	3749.306	3749.306	bb			0.2210	110.49	10.49	1207.6...	
1874312	Perchlorate-O(18)	107 > 89	4.69	18192.236	18192.236	bb			0.3797	75.94	-24.06	3335.3...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09-2536

Extract Batch Code: 882498

Date Extracted: 07-JUL-09

GEL MS/PS ID: 1201874310

Client ID: CAMO-09-9962

GEL MSD/PSD ID: 1201874311

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.36	0.174	ug/kg	2.53	99.6	2.49	97.8	1.71	30	75 – 125
Perchlorate-O(18)	0	5.79	ug/kg	5.75		5.88		2.15		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2536

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	09-JUL-09	per0709001a	IPB001
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709001a	IPB001
Perchlorate	0.00	0	NA	09-JUL-09	per0709002a	IPB001
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709002a	IPB001

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uantify Sample Report MassLynx 4.0 SP4
ne GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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alibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070909a.cdb 10 Jul 2009 12:34:11

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CWW 07-10-09

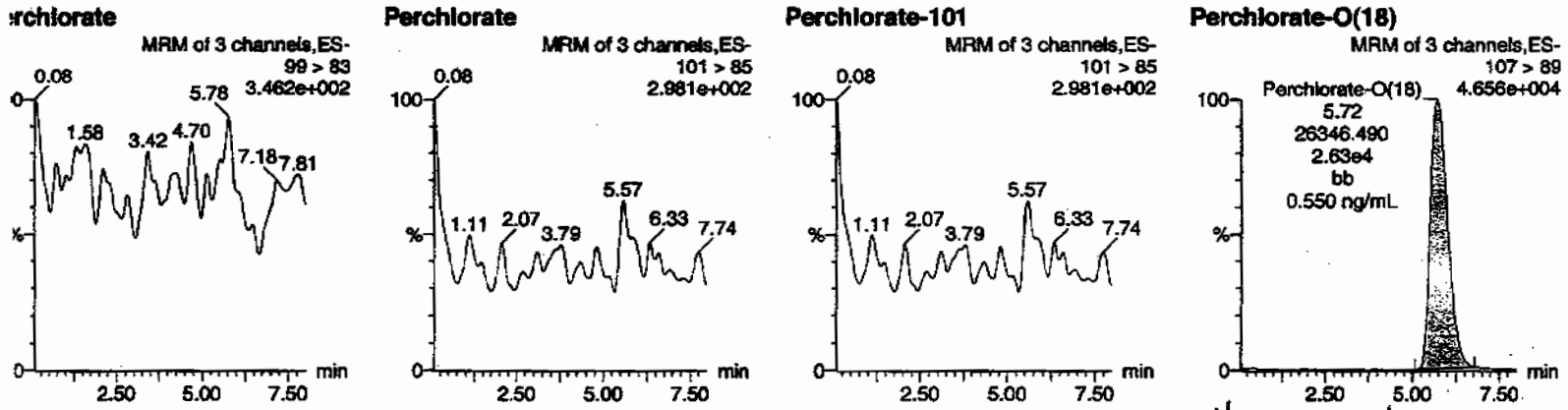

HMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
001	Perchlorate	99 > 83											0.00
001	Perchlorate-101	101 > 85											
001	Perchlorate-O(18)	107 > 89	5.72	26346.490	26346.490	bb			0.5499	109.97	9.97	2381.6...	

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uantify Sample Report MassLynx 4.0 SP4
ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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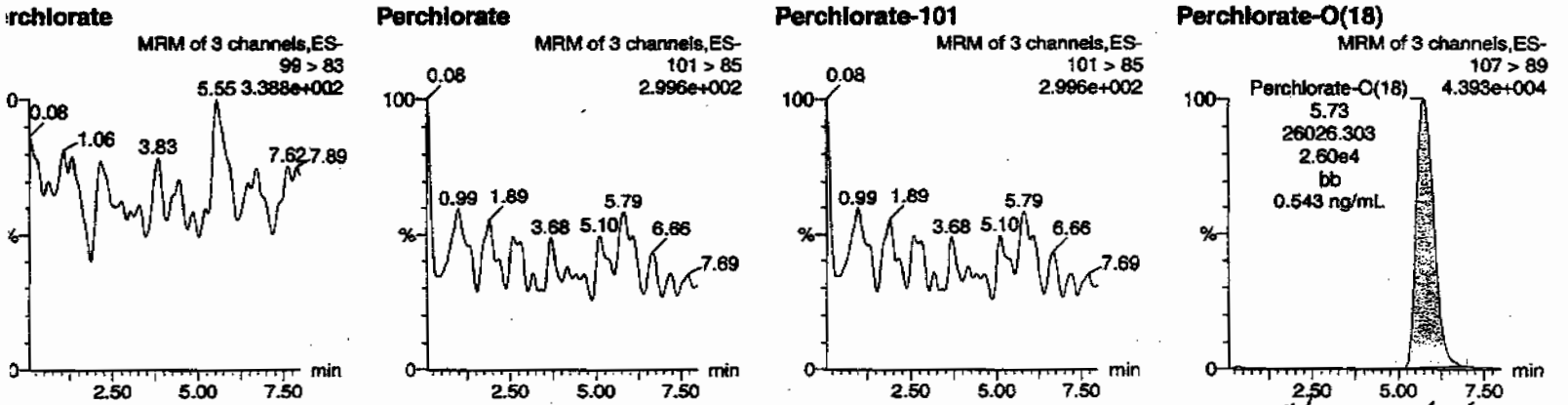

Atme 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
001	Perchlorate	99 > 83											0.00
001	Perchlorate-101	101 > 85											
001	Perchlorate-O(18)	107 > 89	5.73	26026.303	26026.303	bb			0.5432	108.64	8.64	1104.9...	

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2536

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	09-JUL-09	per0709008a	IPB002
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709008a	IPB002
Perchlorate	0.00	0	NA	09-JUL-09	per0709010a	IPB003
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709010a	IPB003
Perchlorate	0.00	0	NA	09-JUL-09	per0709018a	IPB004
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709018a	IPB004
Perchlorate	0.00	0	NA	09-JUL-09	per0709031a	IPB005
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709031a	IPB005
Perchlorate	0.00	0	NA	09-JUL-09	per0709044a	IPB006
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709044a	IPB006
Perchlorate	0.00	0	NA	09-JUL-09	per0709056a	IPB007
Perchlorate-101	0.00	0	NA	09-JUL-09	per0709056a	IPB007

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uantify Sample Report **MassLynx 4.0 SP4**
ıe GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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ate: 09-Jul-2009
me: 12:52:54
: IPB002
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07-10-09

erchlorate

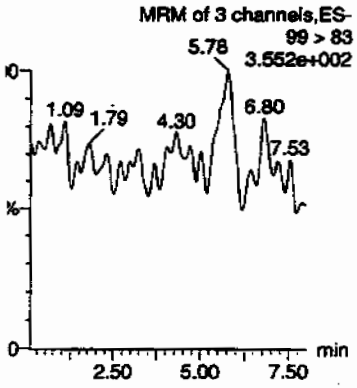

Perchlorate

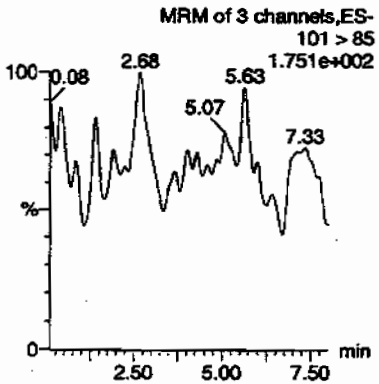

Perchlorate-101

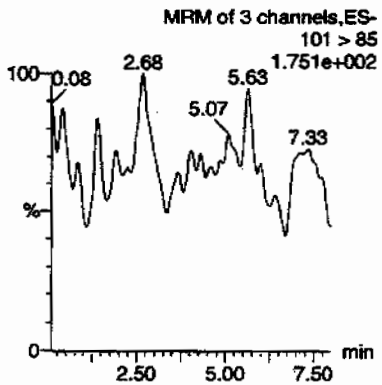

Perchlorate-O(18)

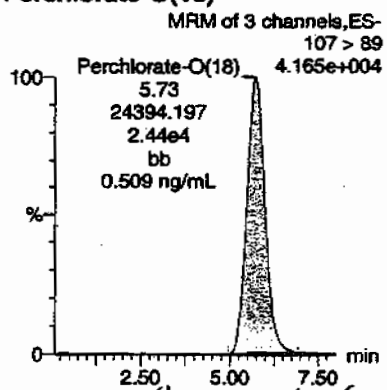

Amm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3002	Perchlorate	99 > 83											0.00
3002	Perchlorate-101	101 > 85											
3002	Perchlorate-O(18)	107 > 89	5.73	24394.197	24394.197	bb			0.5091	101.83	1.83	268.656	

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

401

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uantify Sample Report **MassLynx 4.0 SP4**
ıe GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ıst Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ame: per0709010a
ate: 09-Jul-2009
me: 13:16:22
: IPB003
al: 1:1,A

CMW 07-10-09

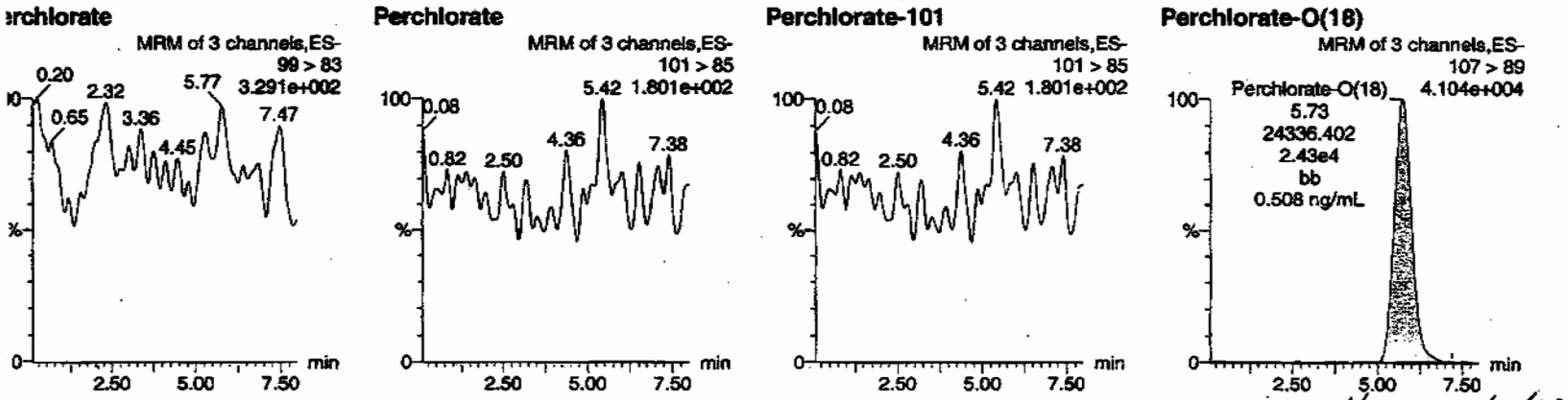

Ann 07-10-09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N Ion Ratio
3003	Perchlorate	99 > 83										0.00
3003	Perchlorate-101	101 > 85										
3003	Perchlorate-O(18)	107 > 89	5.73	24336.402	24336.402	bb			0.5079	101.58	1.58	1846.7...

:L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

402

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uantify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709018a
te: 09-Jul-2009
ne: 14:51:37
: IPB004
al: 1:1,A

CWW 07-10-09

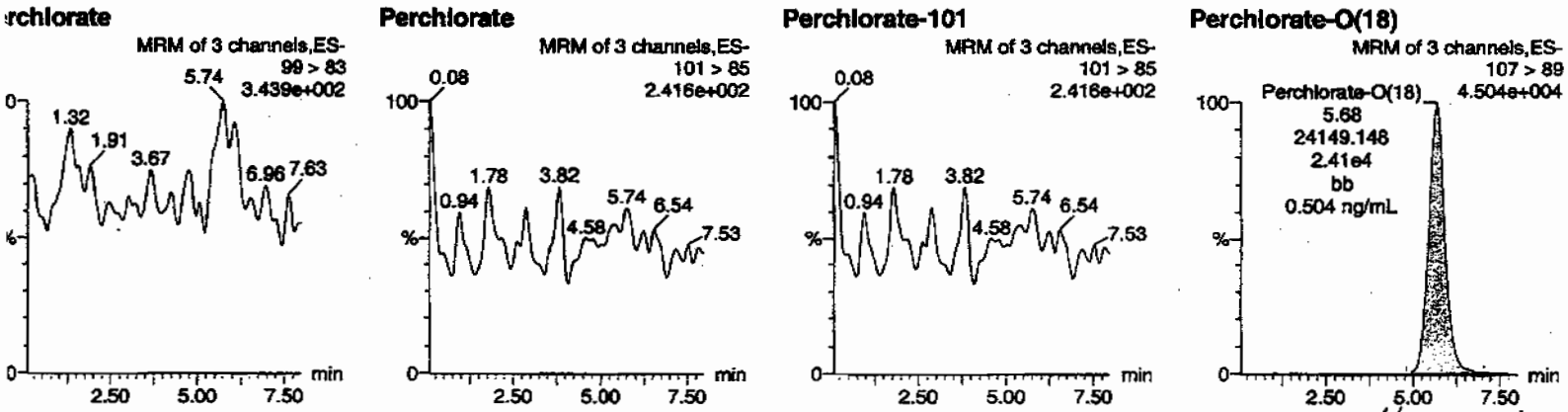

Hume 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3004	Perchlorate	99 > 83											0.00
3004	Perchlorate-101	101 > 85											
3004	Perchlorate-O(18)	107 > 89	5.68	24149.148	24149.148	bb			0.5040	100.80	0.80	2223.6...	

403

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ast Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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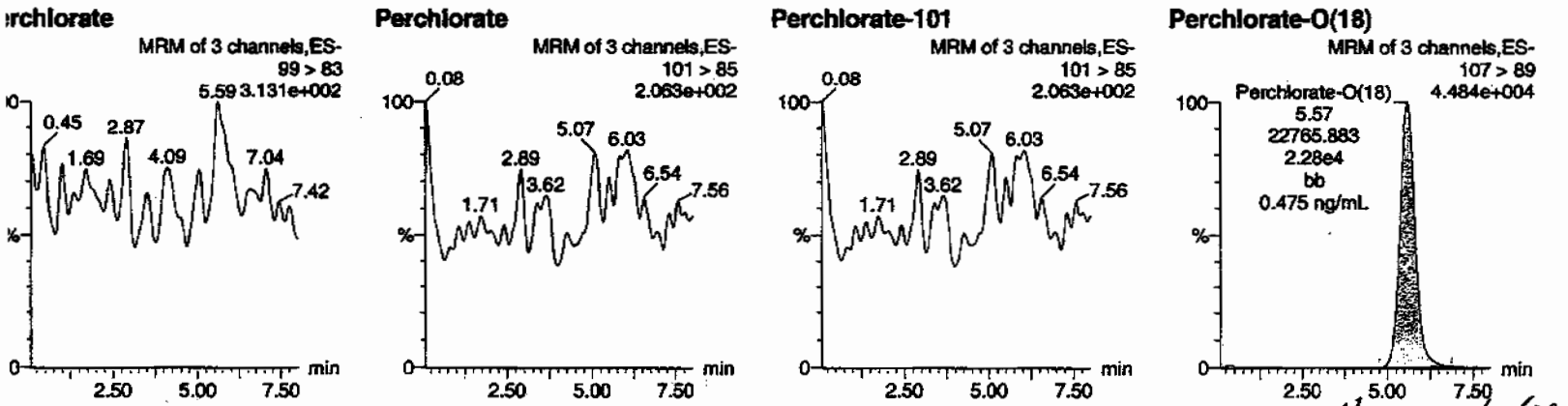

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3005	Perchlorate	99 > 83											0.00
3005	Perchlorate-101	101 > 85											
3005	Perchlorate-O(18)	107 > 89	5.57	22765.883	22765.883	bb			0.4751	95.03	-4.97	2248.5...	

404

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uantify Sample Report MassLynx 4.0 SP4
ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ıst Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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CWW 07-10-09

erchlorate

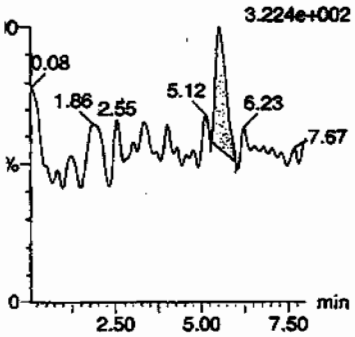

Perchlorate

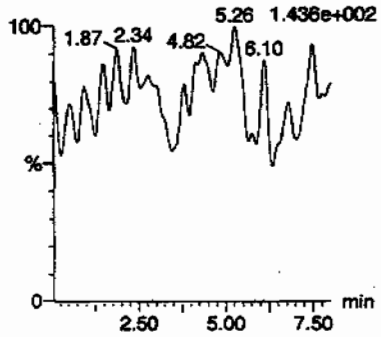

Perchlorate-101

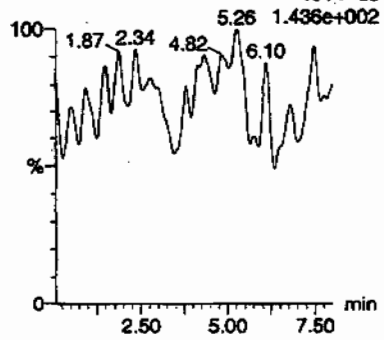

Perchlorate-O(18)

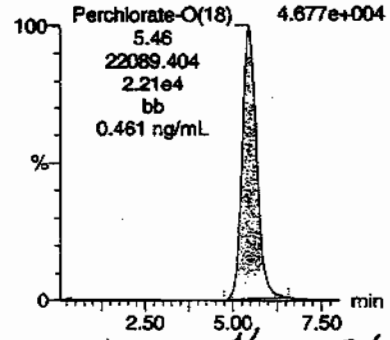

AMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
006	Perchlorate	99 > 83	5.52	53.416	53.416	bb			0.0010			9.009	0.00
006	Perchlorate-101	101 > 85											
006	Perchlorate-O(18)	107 > 89	5.46	22089.404	22089.404	bb			0.4610	92.20	-7.80	1789.0...	

405

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ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ast Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
rinted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ame: per0709056a
ate: 09-Jul-2009
me: 22:18:46
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al: 1:1,A

CWW 07-10-09

erchlorate
MRM of 3 channels,ES-
99 > 83
3.700e+002

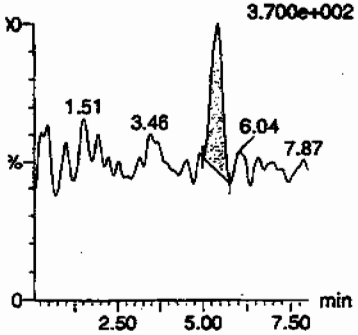

Perchlorate
MRM of 3 channels,ES-
101 > 85
1.977e+002

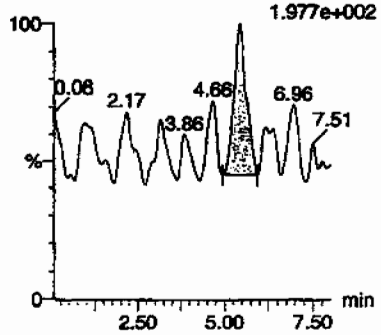

Perchlorate-101
MRM of 3 channels,ES-
101 > 85
1.977e+002

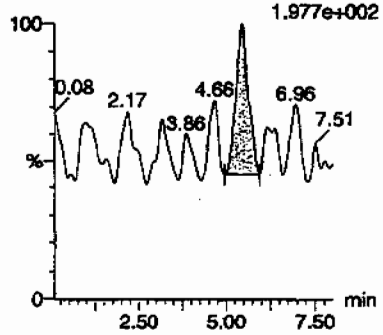

Perchlorate-O(18)
MRM of 3 channels,ES-
107 > 89
4.917e+004

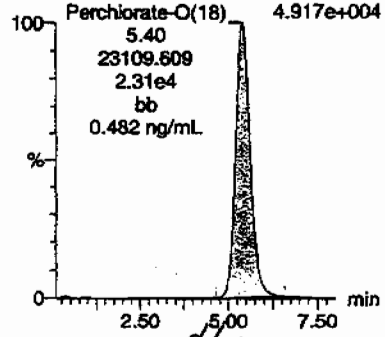

HMW 07-10-09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3007	Perchlorate	99 > 83	5.43	78.972	78.972	bb			0.0015			7.111	1.73
3007	Perchlorate-101	101 > 85	5.45	45.758	45.758	bb			0.0027			12.789	
3007	Perchlorate-O(18)	107 > 89	5.40	23109.609	23109.609	bb			0.4823	96.46	-3.54	2984.5...	

only LOQSD

406

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

POINTS HIGHLIGHTED BY CWW 01-09-08

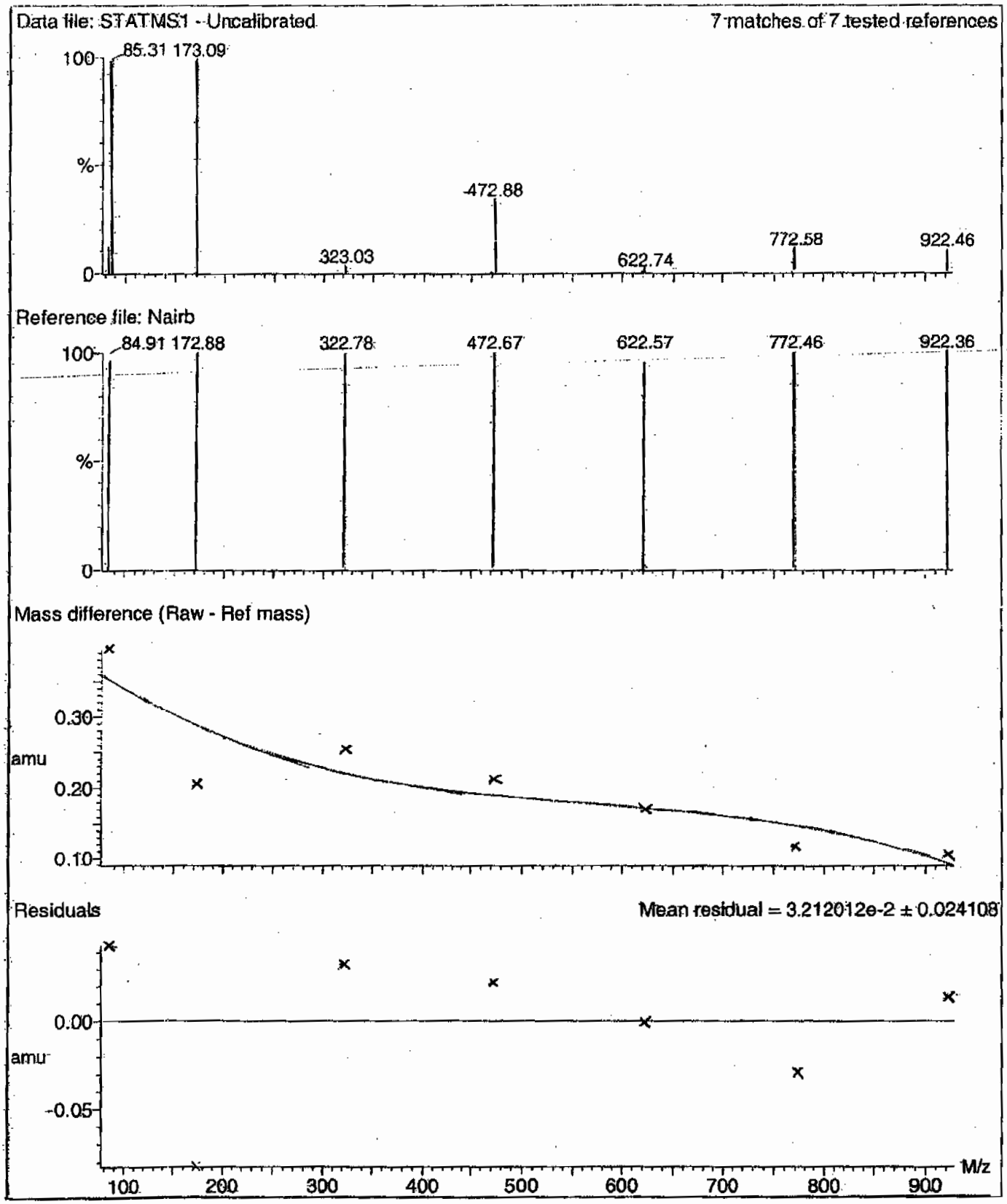

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

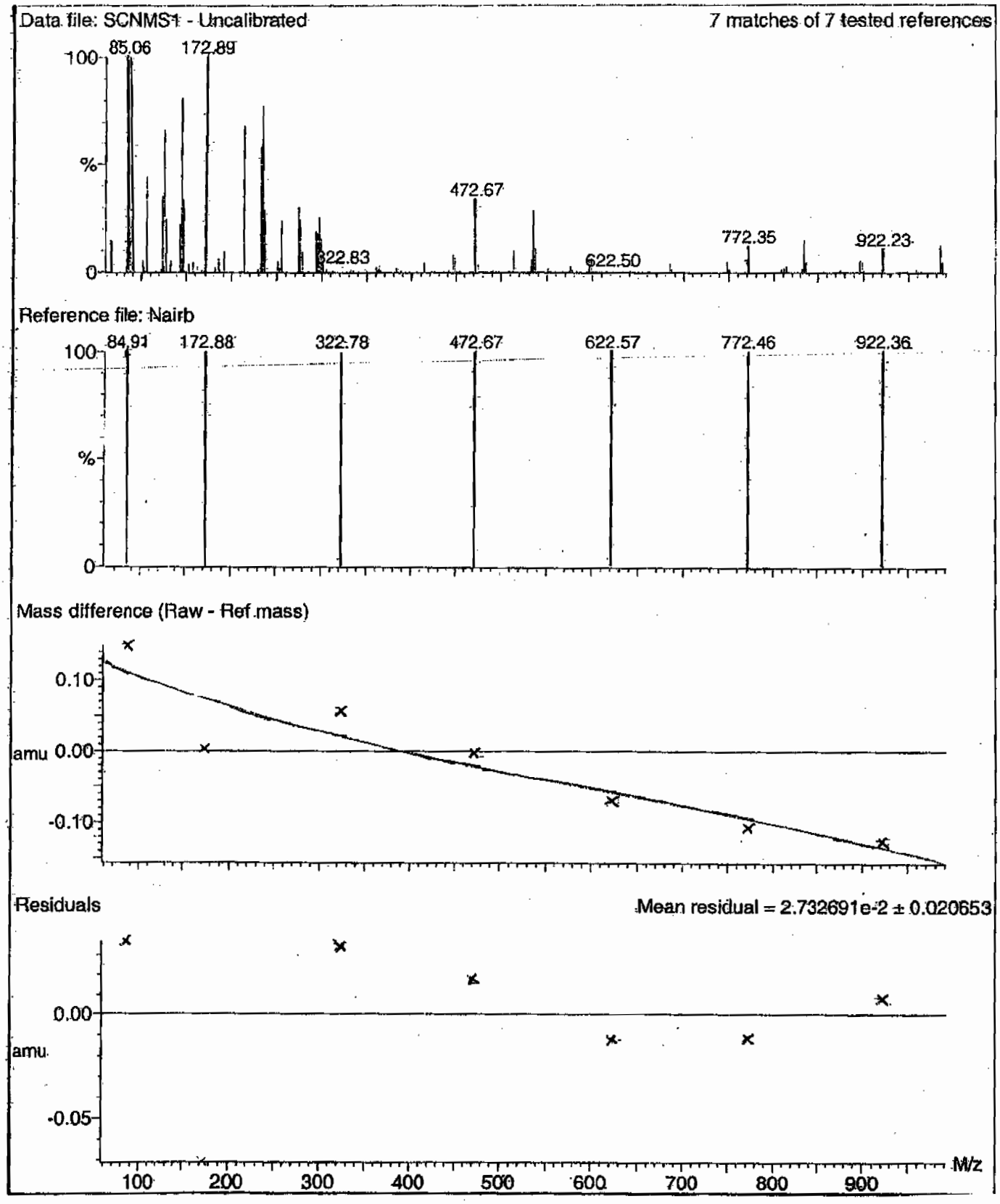

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Calibration Report - MSI Scan Speed Compensation

Printed: Tue Jan 08 12:21:04 2008

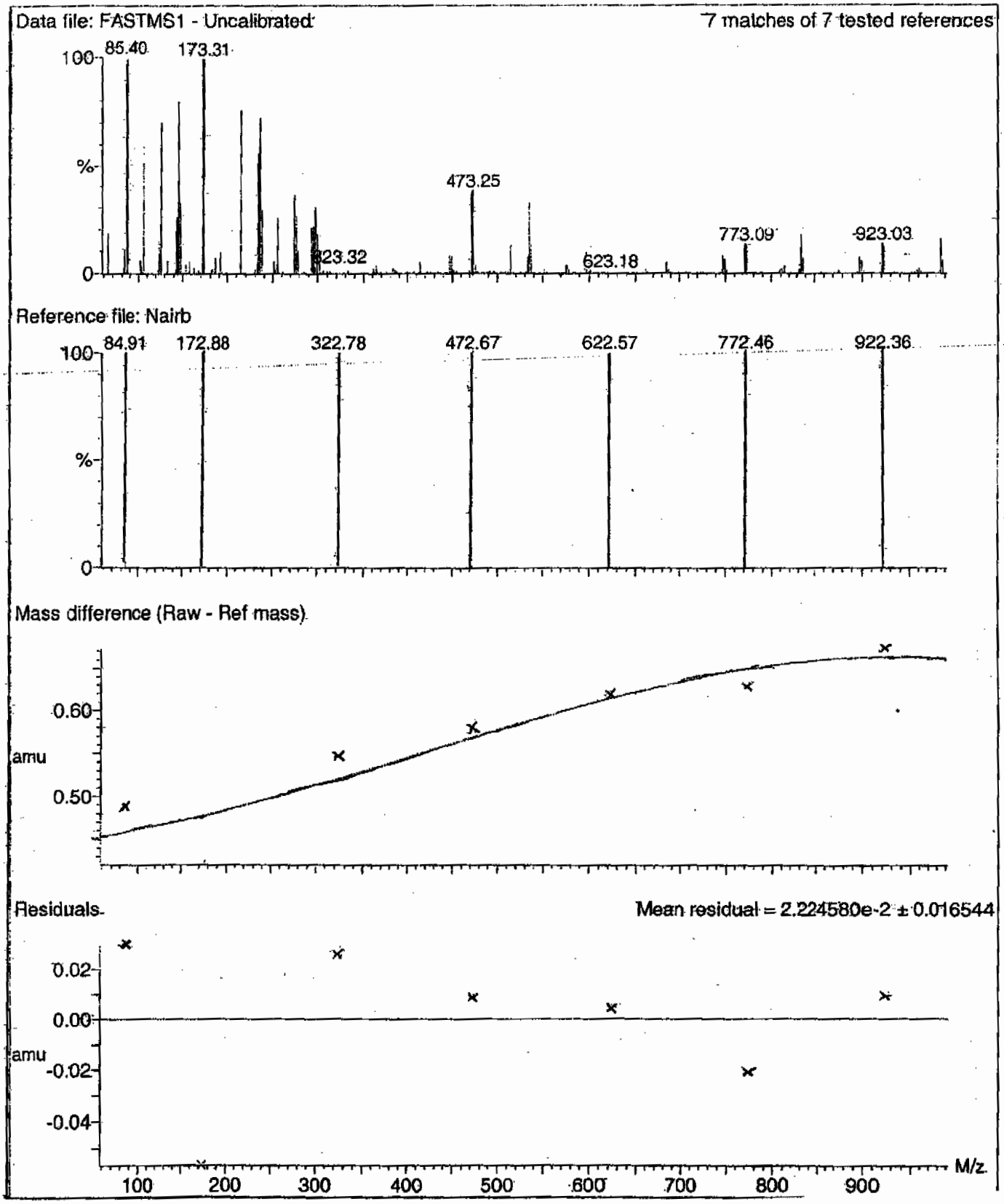

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Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

7 matches of 7 tested references

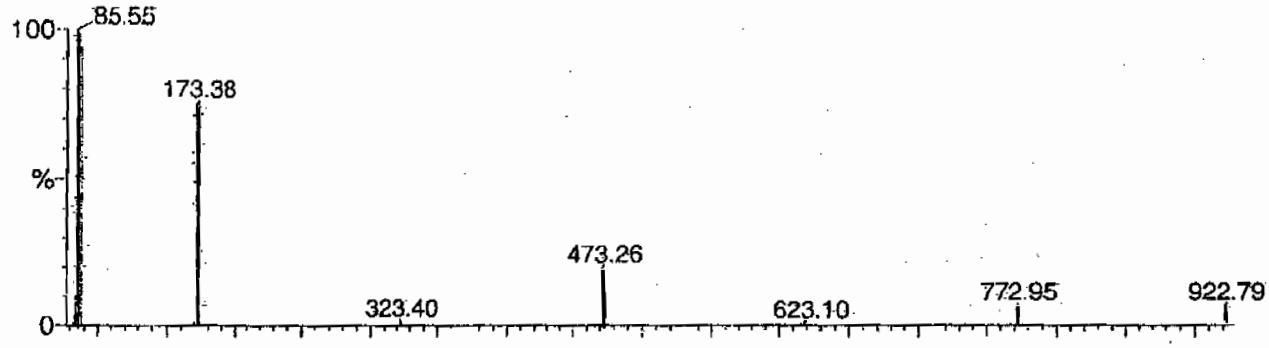

Reference file: Nairb

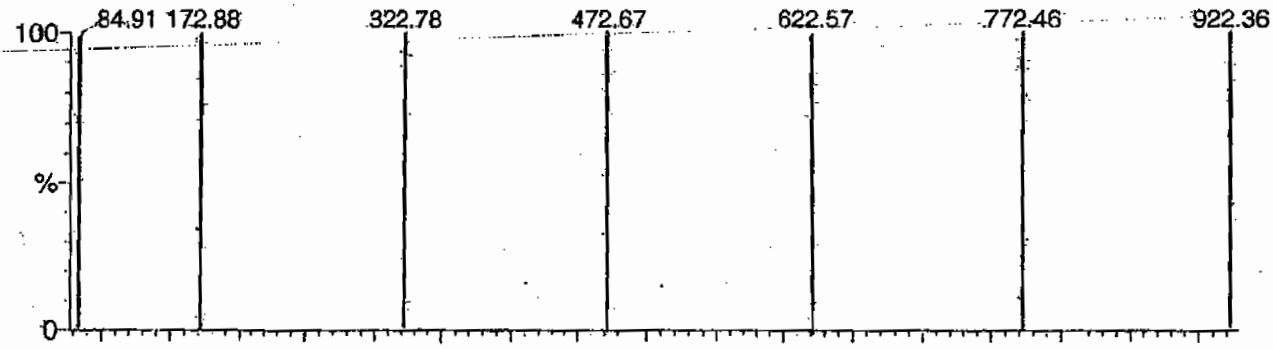

Mass difference (Raw - Ref mass)

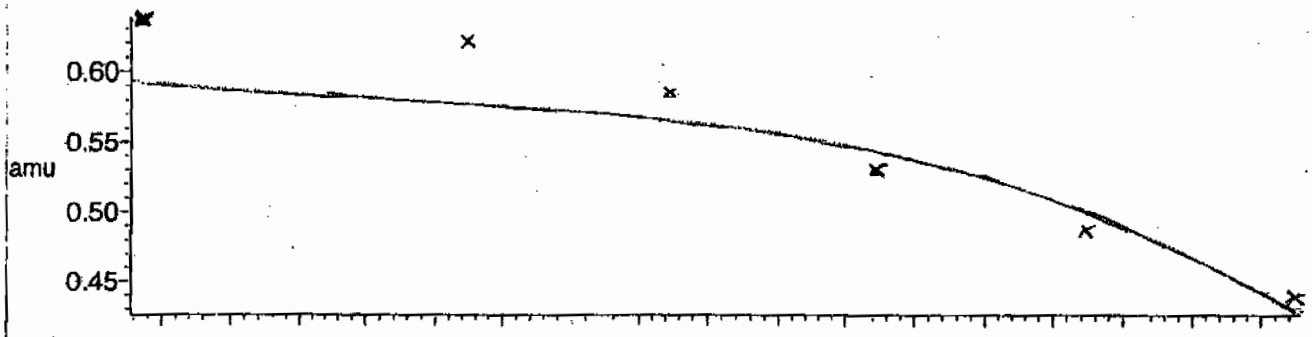

Residuals

Mean residual = 3.295980e-2 ± 0.025603

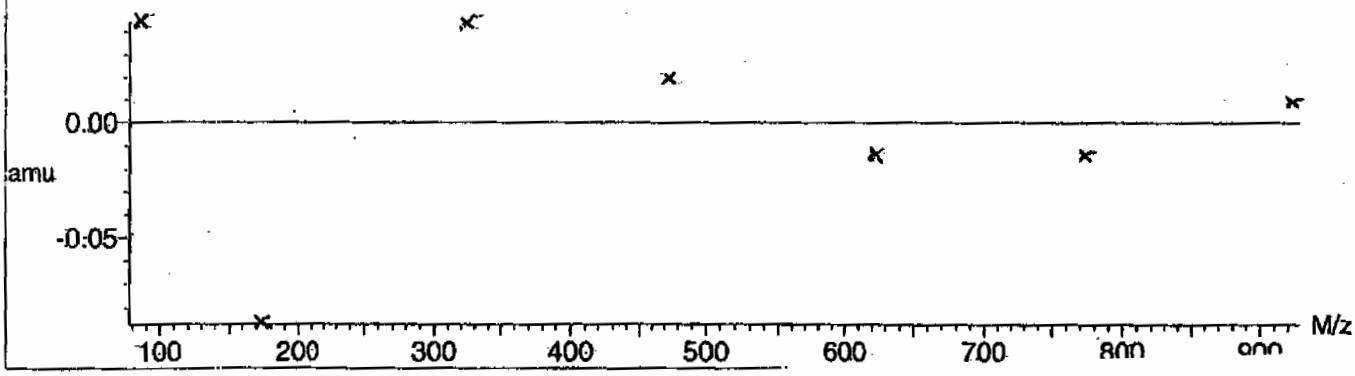

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Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

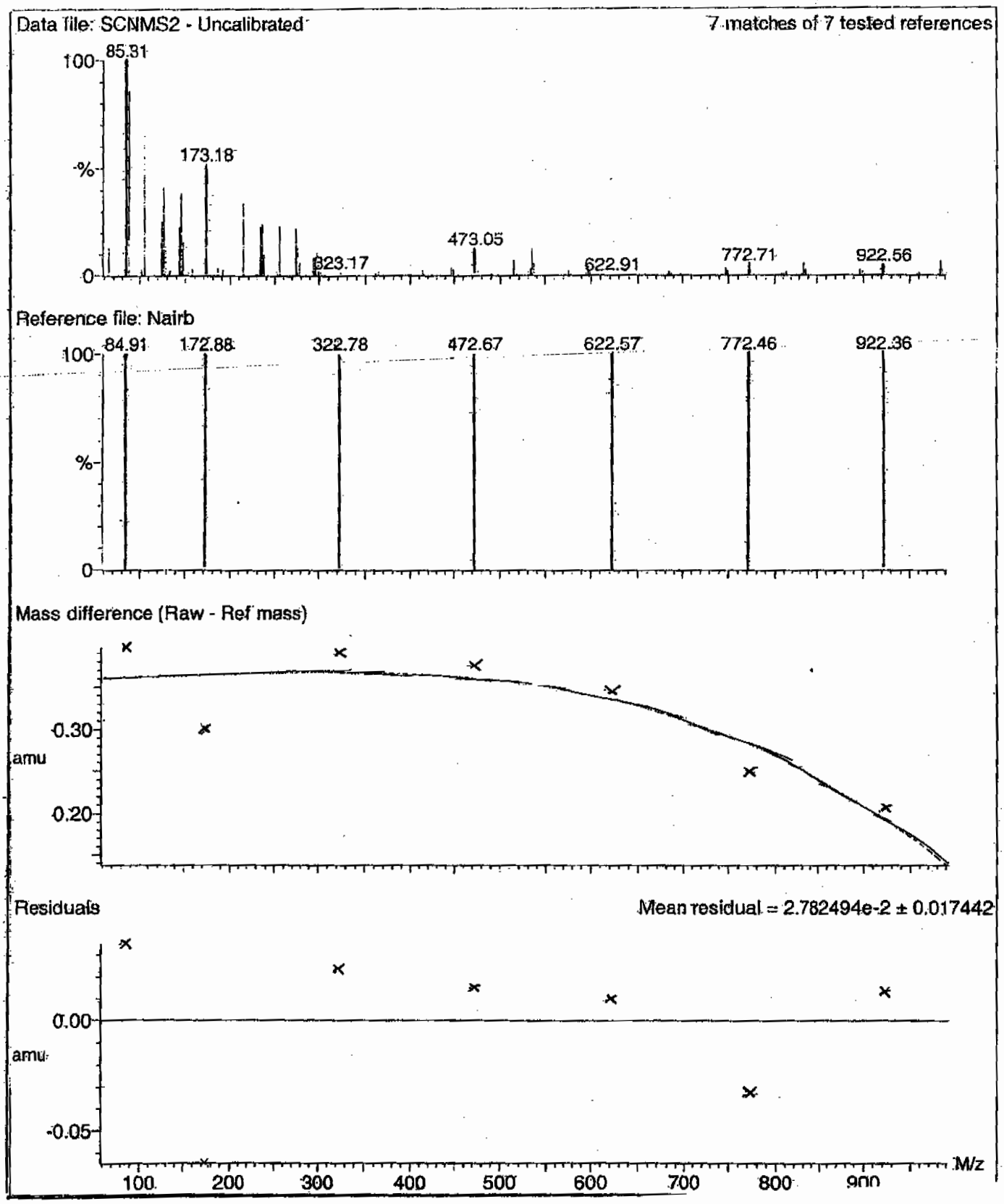

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Calibration Report -- MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

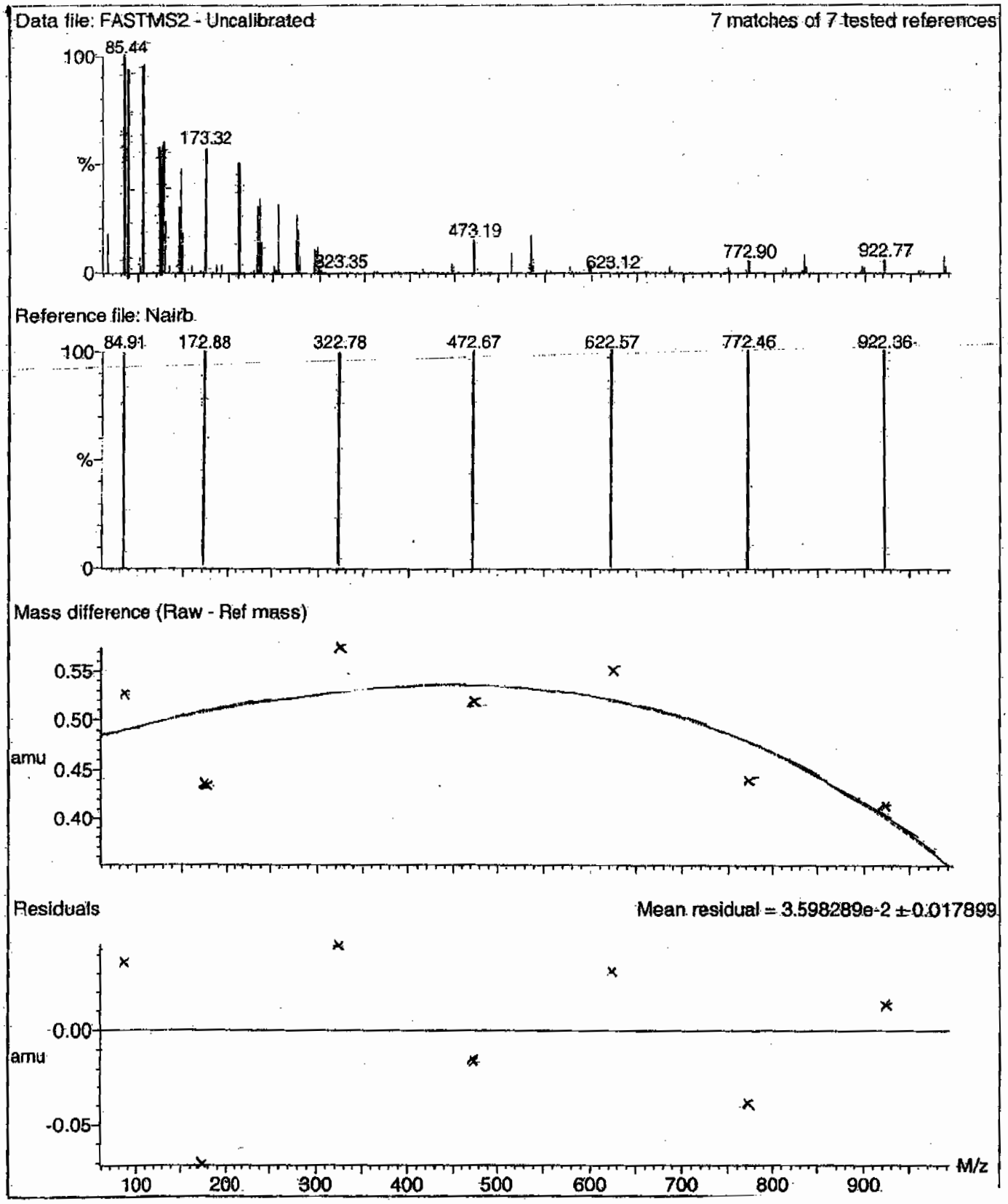

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Thursday, July 09, 2009 10:52:59 Eastern Daylight Time

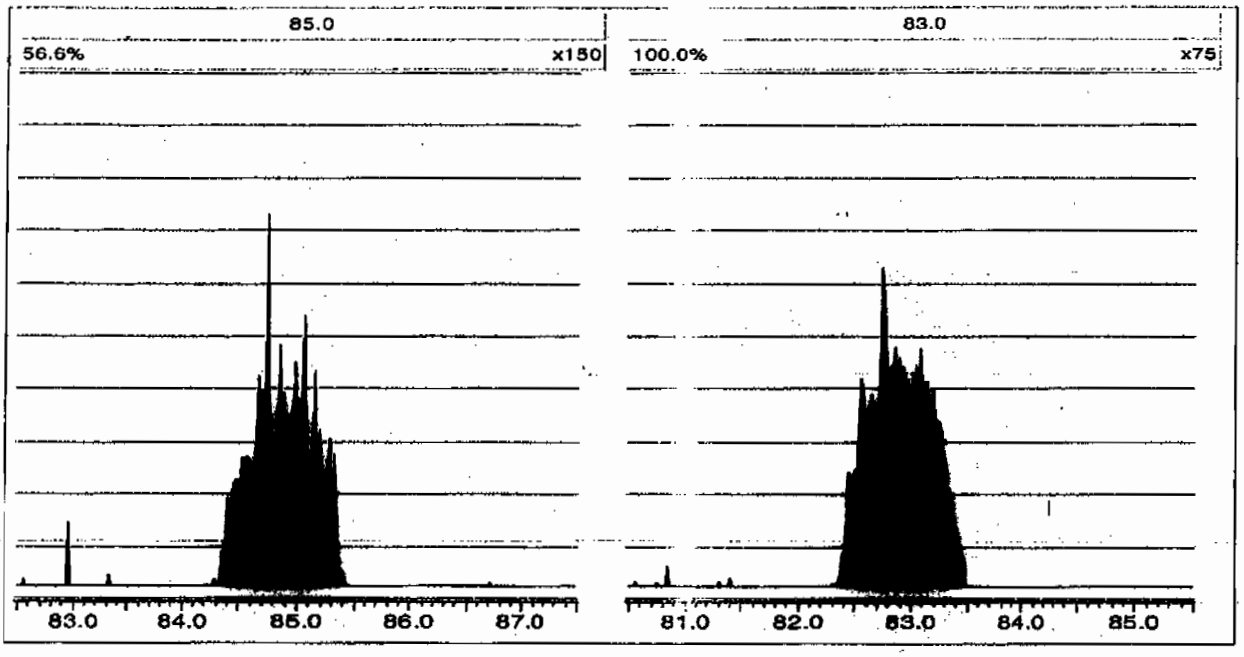

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2536

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.(
MidLevel Standard Area	**per0709006a**	**09-JUL-09**	**23518.3**				
Lower Area Limit			**11759.15**				
Upper Area Limit			**47036.6**				
1201874308	per0709033a	09-JUL-09 17:48	22060.5	5.56			
1201874309	per0709034a	09-JUL-09 17:59	18493.9	5.56	5.58243	1.004	
1201874312	per0709035a	09-JUL-09 18:11	18192.2	4.69	4.7127	1.005	
232754001	per0709052a	09-JUL-09 21:31	23614.4	5.41	5.4333	1.004	
232754002	per0709053a	09-JUL-09 21:43	24631.8	5.41	5.42078	1.002	
232754003	per0709054a	09-JUL-09 21:55	24205	5.42	5.44568	1.005	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6615

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536

GEL Sample ID: 232754001

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 92.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.539	2.16	1.01	ug/kg	J	1	09-JUL-09 21:31	per0709052a
	Perchlorate-O(18)			5.31	ug/kg		1	09-JUL-09 21:31	per0709052a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solid}}$$

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antify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

t Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
ted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709052a
te: 09-Jul-2009
ne: 21:31:35
232754001
l: 2:3,E

ILANL | 882499 | SOZO | 1 |

Ana 07-10 JT

chlorate

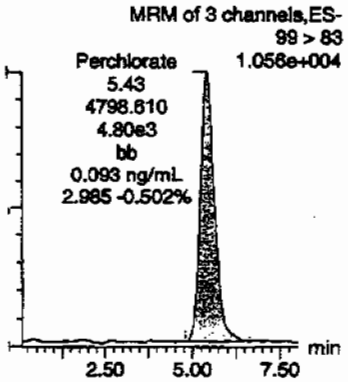

Perchlorate

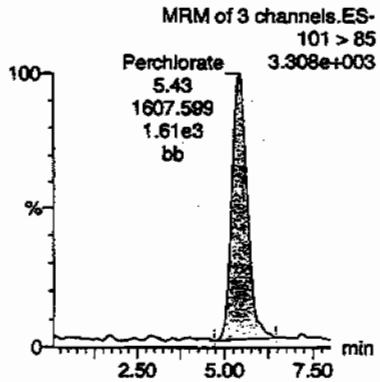

Perchlorate-101

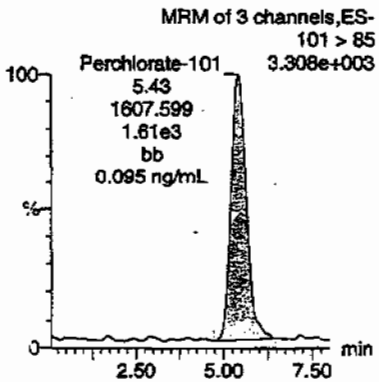

Perchlorate-O(18)

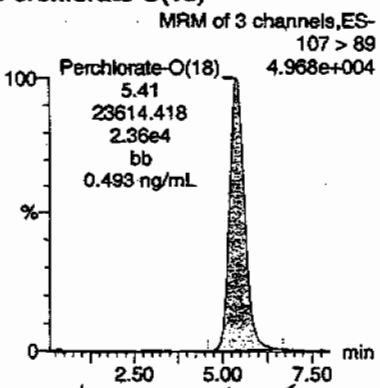

Hum 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
754001	Perchlorate	99 > 83	5.43	4798.610	4798.610	bb			0.0934			659.646	2.98
754001	Perchlorate-101	101 > 85	5.43	1607.599	1607.599	bb			0.0947			56.755	
754001	Perchlorate-O(18)	107 > 89	5.41	23614.418	23614.418	bb			0.4929	98.57	-1.43	706.255	

418

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6614

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536

GEL Sample ID: 232754002

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90.2

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.576	ug/kg	J	1	09-JUL-09 21:43	per0709053a
	Perchlorate-O(18)			5.70	ug/kg		1	09-JUL-09 21:43	per0709053a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solid}}$$

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ıantify Sample Report **MassLynx 4.0 SP4**
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709053a
te: 09-Jul-2009
ne: 21:43:18
232754002
ıl: 2:3,F

|LANL|882499|5020|1|

07-10-09

rchlorate

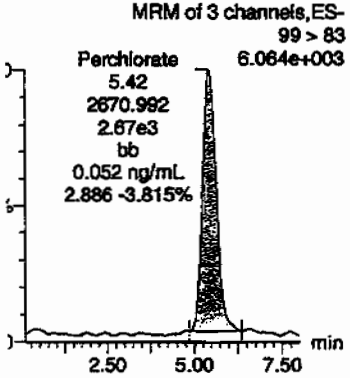

Perchlorate

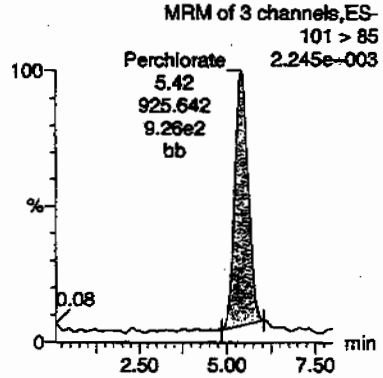

Perchlorate-101

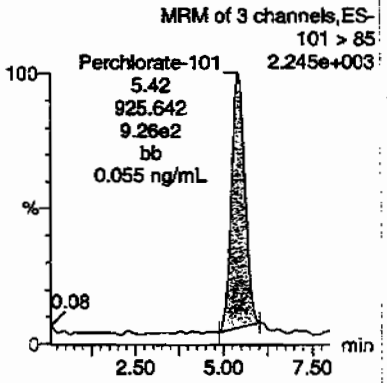

Perchlorate-O(18)

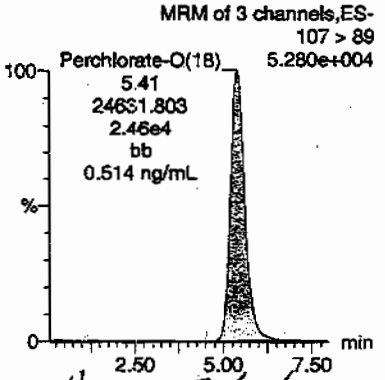

hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
754002	Perchlorate	99 > 83	5.42	2670.992	2670.992	bb			0.0520			135.749	2.89
754002	Perchlorate-101	101 > 85	5.42	925.642	925.642	bb			0.0546			65.765	
754002	Perchlorate-O(18)	107 > 89	5.41	24631.803	24631.803	bb			0.5141	102.82	2.82	2424.4...	

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

420

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
CAMO-09-6613

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536

GEL Sample ID: 232754003

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 90.3

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.554	ug/kg	U	1	09-JUL-09 21:55	per0709054a
	Perchlorate-O(18)			5.60	ug/kg		1	09-JUL-09 21:55	per0709054a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solic}}$$

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antify Sample Report **MassLynx 4.0 SP4**
e GEL Group, LLC Analyst: Charles W. Wilson

aset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

t Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
ted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709054a
te: 09-Jul-2009
ne: 21:55:01
232754003
l: 2:4,A

|LANL|882499|50120|1|

CWW 07-10-09

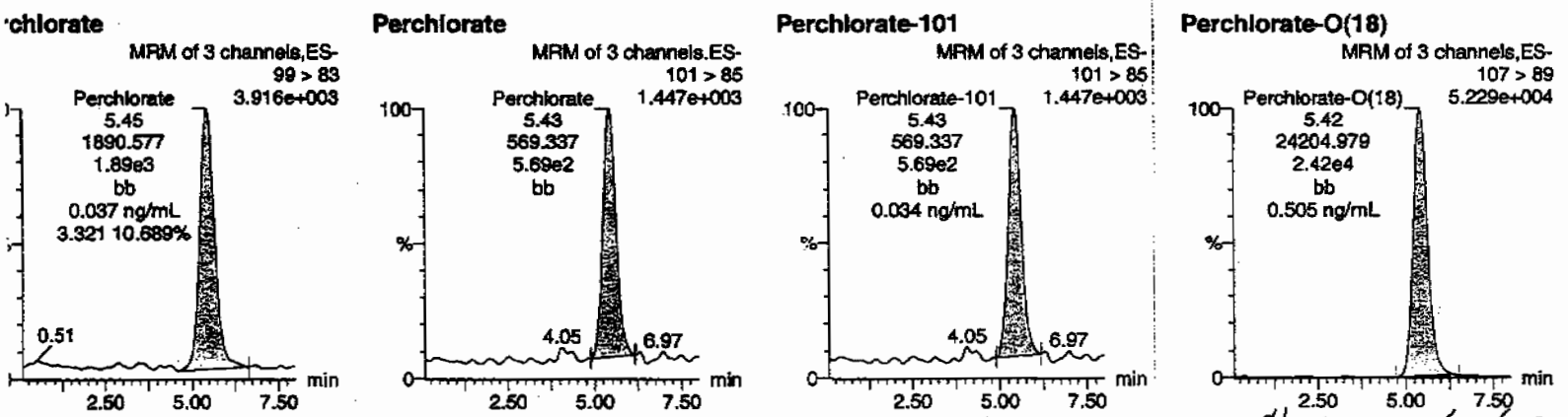

Hnm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
754003	Perchlorate	99 > 83	5.45	1890.577	1890.577	bb			0.0368	—		103.294	3.32
754003	Perchlorate-101	101 > 85	5.43	569.337	569.337	bb			0.0336			136.442	
754003	Perchlorate-O(18)	107 > 89	5.42	24204.979	24204.979	bb			0.5052	101.04	1.04	5849.2...	

422

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09-2536

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 09-JUL-09

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 51358.26

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2536

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 09–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 16966.94

Response Type: External Standard

Curve Type: RF

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uantify Calibration Report **MassLynx 4.0 SP4**
ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ıst Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ethod: C:\MassLynx\Perchlorate.PRO\MethDB\per070909a.mdb 09 Jul 2009 12:57:10
ılibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070909a.cdb 10 Jul 2009 12:34:11

ompound name: Perchlorate
esponse Factor: 51358.3
RF SD: 1527.39, % Relative SD: 2.97399
esponse type: External Std, Area
ırve type: RF

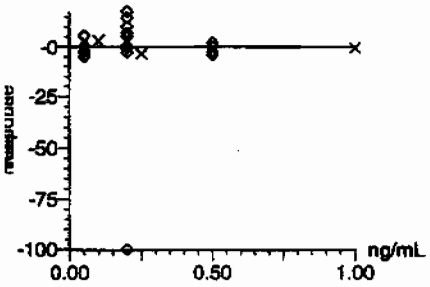

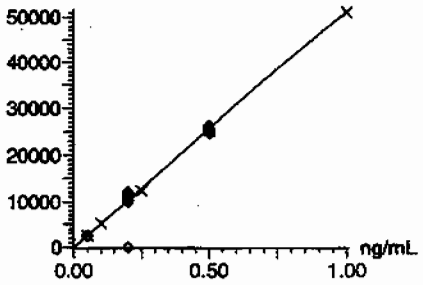

CWW
07-10-09

mpound name: Perchlorate-101
sponse Factor: 16966.9
IF SD: 317.037, % Relative SD: 1.86856
sponse type: External Std, Area
rve type: RF

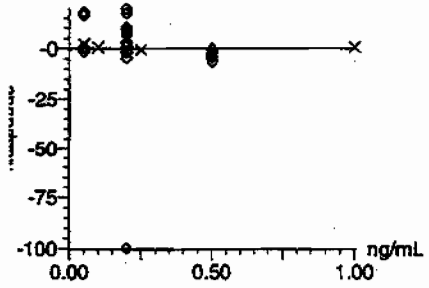

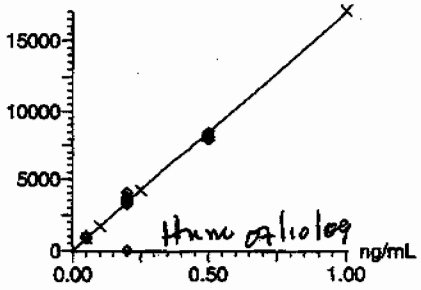

Hmw 07/10/09

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

426

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ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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ısponse Factor: 47913.7
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ısponse type: External Std, Area
ırve type: RF

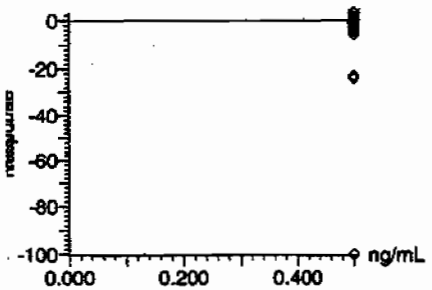

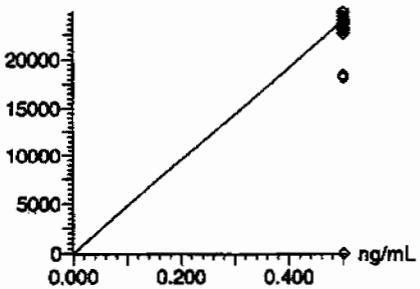

427

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2536

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	97.75	09–JUL–09 13:04	per0709009a
Perchlorate Isotope Ratio		2.96		09–JUL–09 13:04	per0709009a
Perchlorate–101	.5	.5	99.96	09–JUL–09 13:04	per0709009a

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he GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ast Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
rinted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ame: per0709009a
ate: 09-Jul-2009
me: 13:04:38
: WCL090706-06ICV
al: 1:2,A

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07-10-09

erchlorate

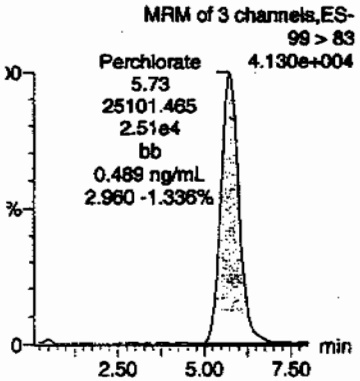

Perchlorate

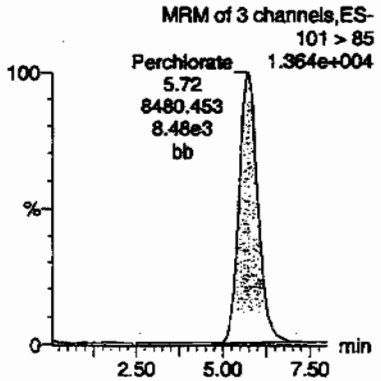

Perchlorate-101

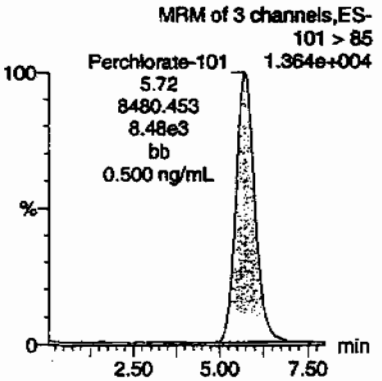

Perchlorate-O(18)

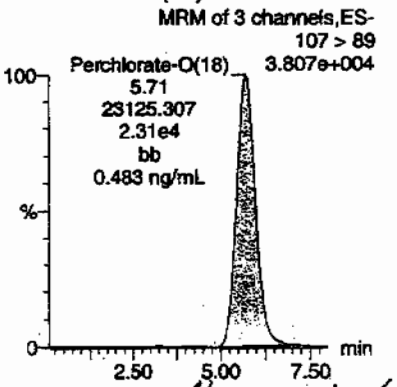

Hmc 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-06ICV	Perchlorate	99 > 83	5.73	25101.465	25101.465	bb			0.4888	97.75	-2.25	1414.1...	2.96
CL090706-06ICV	Perchlorate-101	101 > 85	5.72	8480.453	8480.453	bb			0.4998	99.96	-0.04	260.261	
CL090706-06ICV	Perchlorate-O(18)	107 > 89	5.71	23125.307	23125.307	bb			0.4826	96.53	-3.47	1799.4...	

429

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2536

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	100.03	09-JUL-09 14:39	per0709017a
Perchlorate Isotope Ratio		3.13		09-JUL-09 14:39	per0709017a
Perchlorate-101	.5	.48	96.77	09-JUL-09 14:39	per0709017a
Perchlorate	.5	.51	102.19	09-JUL-09 17:12	per0709030a
Perchlorate Isotope Ratio		3.16		09-JUL-09 17:12	per0709030a
Perchlorate-101	.5	.49	97.8	09-JUL-09 17:12	per0709030a
Perchlorate	.5	.48	95.64	09-JUL-09 19:45	per0709043a
Perchlorate Isotope Ratio		3.09		09-JUL-09 19:45	per0709043a
Perchlorate-101	.5	.47	93.69	09-JUL-09 19:45	per0709043a
Perchlorate	.5	.49	97.28	09-JUL-09 22:06	per0709055a
Perchlorate Isotope Ratio		3.05		09-JUL-09 22:06	per0709055a
Perchlorate-101	.5	.48	96.52	09-JUL-09 22:06	per0709055a

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ıe GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ame: per0709017a
ate: 09-Jul-2009
me: 14:39:53
: WCL090706-06CCV
al: 1:2,A

Pwo
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07-1005

erchlorate

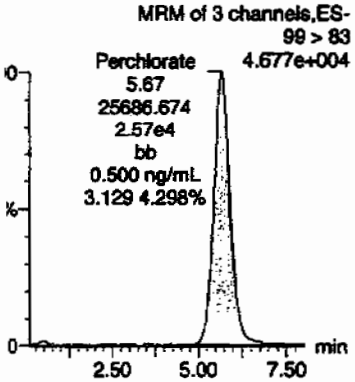

Perchlorate

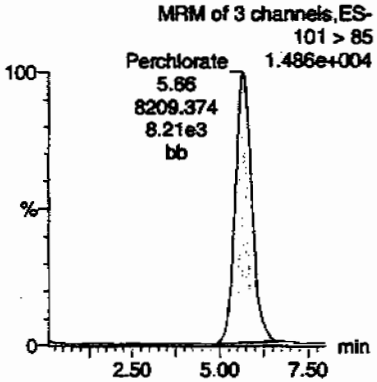

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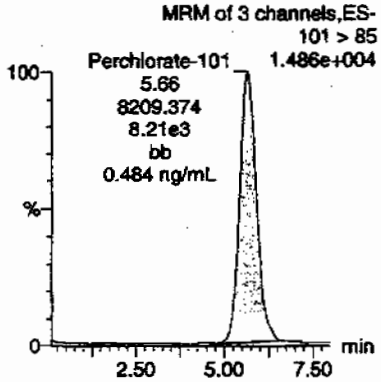

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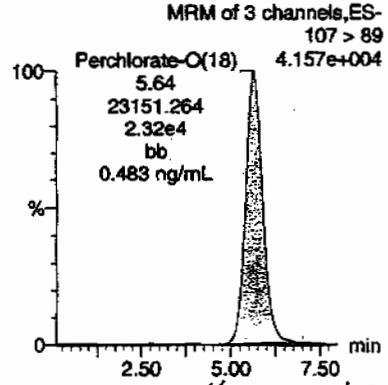

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-06CCV	Perchlorate	99 > 83	5.67	25686.674	25686.674	bb			0.5001	100.03	0.03	1875.1...	3.13
CL090706-06CCV	Perchlorate-101	101 > 85	5.66	8209.374	8209.374	bb			0.4838	96.77	-3.23	1077.0...	
CL090706-06CCV	Perchlorate-O(18)	107 > 89	5.64	23151.264	23151.264	bb			0.4832	96.64	-3.36	1990.8...	

431

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taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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te: 09-Jul-2009
me: 17:12:35
: WCL090706-06CCV
al: 1:2,A

Pass
aw
07 10.09

rchlorate

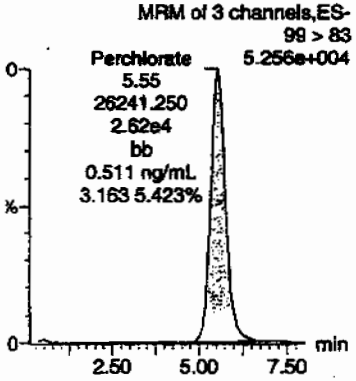

Perchlorate

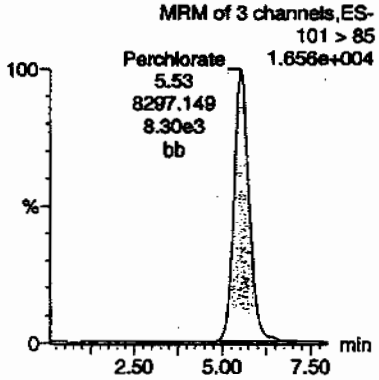

Perchlorate-101

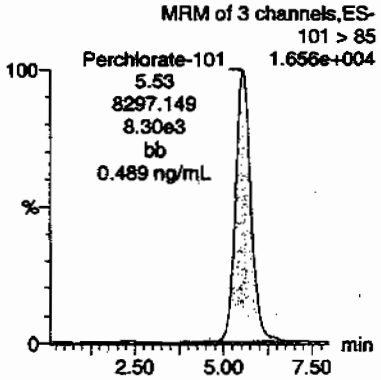

Perchlorate-O(18)

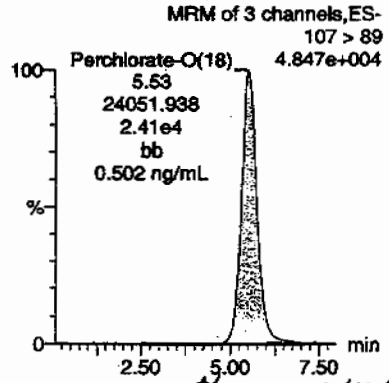

AM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev.	S/N	Ion Ratio
CL090706-06CCV	Perchlorate	99 > 83	5.55	26241.250	26241.250	bb			0.5109	102.19	2.19	1631.9...	3.16
CL090706-06CCV	Perchlorate-101	101 > 85	5.53	8297.149	8297.149	bb			0.4890	97.80	-2.20	1241.6...	
CL090706-06CCV	Perchlorate-O(18)	107 > 89	5.53	24051.938	24051.938	bb			0.5020	100.40	0.40	2903.7...	

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uantify Sample Report MassLynx 4.0 SP4
ne GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ast Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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al: 1:2,A

Pass
07-10-09

erchlorate

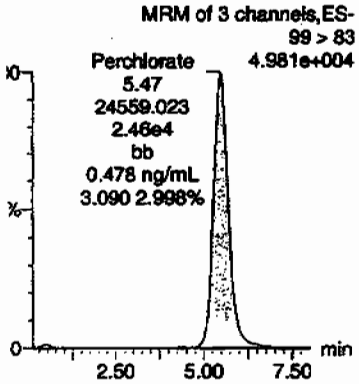

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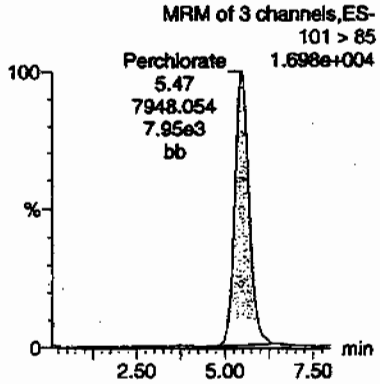

Perchlorate-101

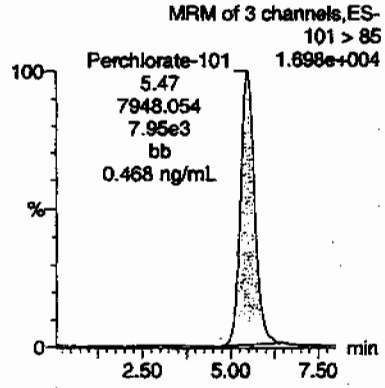

Perchlorate-O(18)

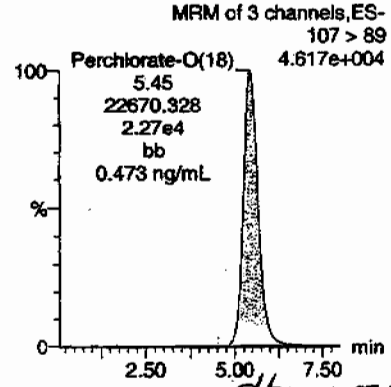

HM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-06CCV	Perchlorate	99 > 83	5.47	24559.023	24559.023	bb			0.4782	95.64	-4.36	2112.9...	3.09
CL090706-06CCV	Perchlorate-101	101 > 85	5.47	7948.054	7948.054	bb			0.4684	93.69	-6.31	549.712	
CL090706-06CCV	Perchlorate-O(18)	107 > 89	5.45	22670.328	22670.328	bb			0.4731	94.63	-5.37	2273.7...	

L SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

433

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uantify Sample Report MassLynx 4.0 SP4
ie GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709055a
te: 09-Jul-2009
me: 22:06:46
: WCL090706-06CCV
al: 1:2,A

Pass
aw
07-10-09

rchlorate

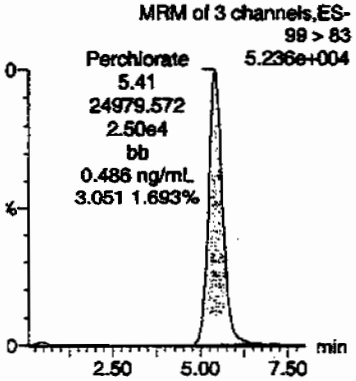

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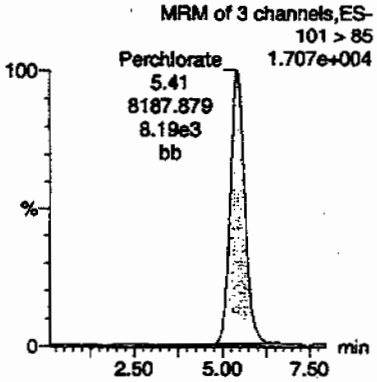

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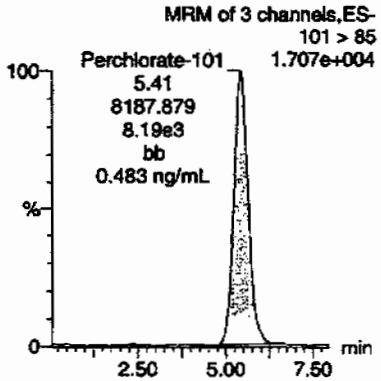

Perchlorate-O(18)

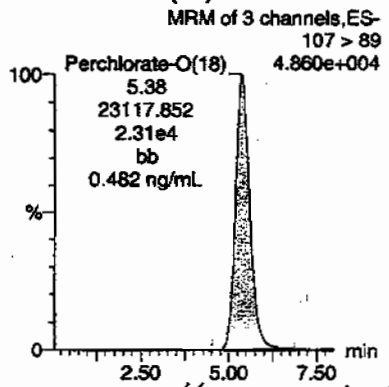

HMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-06CCV	Perchlorate	99 > 83	5.41	24979.572	24979.572	bb			0.4864	97.28	-2.72	1967.2...	3.05
CL090706-06CCV	Perchlorate-101	101 > 85	5.41	8187.879	8187.879	bb			0.4826	96.52	-3.48	1191.5...	
CL090706-06CCV	Perchlorate-O(18)	107 > 89	5.38	23117.852	23117.852	bb			0.4825	96.50	-3.50	775.965	

434

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2536

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	95.54	09-JUL-09 13:28	per0709011a
Perchlorate Isotope Ratio		2.45		09-JUL-09 13:28	per0709011a
Perchlorate-101	.05	.06	117.82	09-JUL-09 13:28	per0709011a
Perchlorate	.05	.05	97.29	09-JUL-09 15:03	per0709019a
Perchlorate Isotope Ratio		2.99		09-JUL-09 15:03	per0709019a
Perchlorate-101	.05	.05	98.62	09-JUL-09 15:03	per0709019a
Perchlorate	.05	.05	105.04	09-JUL-09 17:36	per0709032a
Perchlorate Isotope Ratio		3.15		09-JUL-09 17:36	per0709032a
Perchlorate-101	.05	.05	100.81	09-JUL-09 17:36	per0709032a
Perchlorate	.05	.05	100.48	09-JUL-09 20:09	per0709045a
Perchlorate Isotope Ratio		3.03		09-JUL-09 20:09	per0709045a

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2536

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate–101	.05	.05	100.26	09–JUL–09 20:09	per0709045a
Perchlorate	.05	.05	105.95	09–JUL–09 22:30	per0709057a
Perchlorate Isotope Ratio		2.76		09–JUL–09 22:30	per0709057a
Perchlorate–101	.05	.06	116.22	09–JUL–09 22:30	per0709057a

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uantify Sample Report MassLynx 4.0 SP4
ıe GEL Group, LLC Analyst: Charles W. Wilson

ıtaset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ıst Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ıme: per0709011a
ıte: 09-Jul-2009
me: 13:28:07
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al: 1:2,B

Pass
07-10-09

ırchlorate

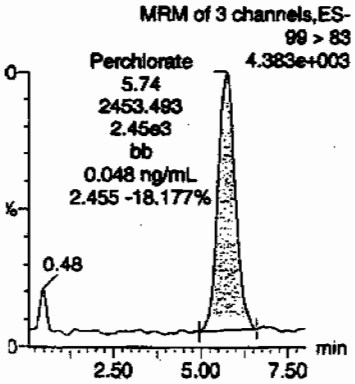

Perchlorate

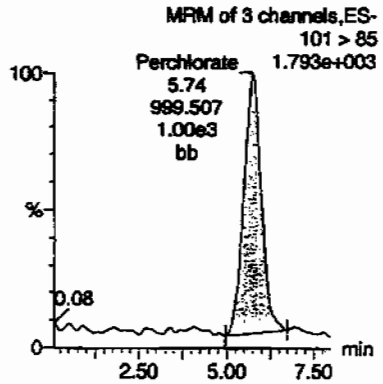

Perchlorate-101

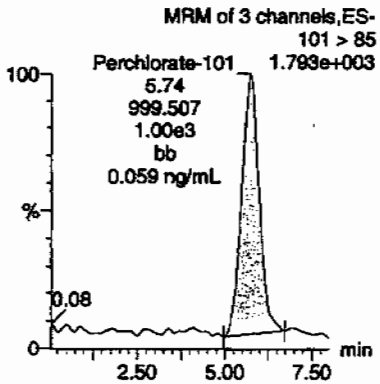

Perchlorate-O(18)

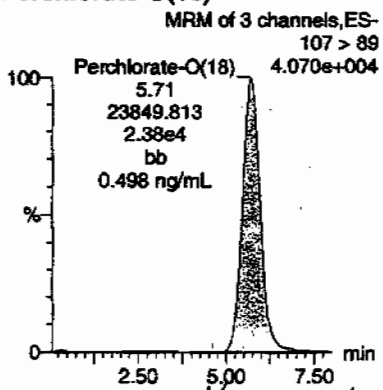

Hmm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-07CRI	Perchlorate	99 > 83	5.74	2453.493	2453.493	bb			0.0478	95.54	-4.46	80.551	2.45
CL090706-07CRI	Perchlorate-101	101 > 85	5.74	999.507	999.507	bb			0.0589	117.82	17.82	103.947	
CL090706-07CRI	Perchlorate-O(18)	107 > 89	5.71	23849.813	23849.813	bb			0.4978	99.55	-0.45	504.934	

437

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uantify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709019a
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ne: 15:03:21
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al: 1:2,B

Pass
amc
07-10-09

rchlorate

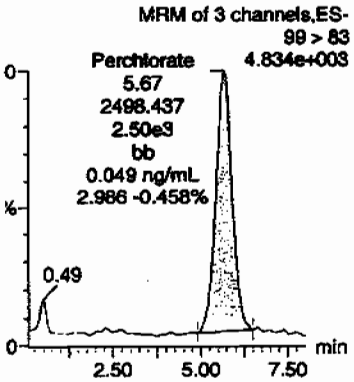

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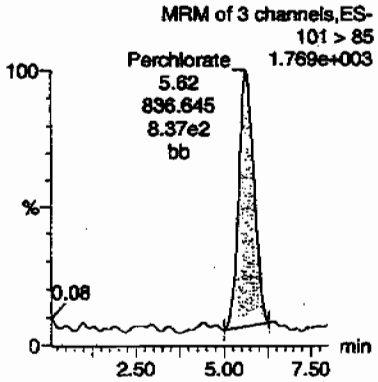

Perchlorate-101

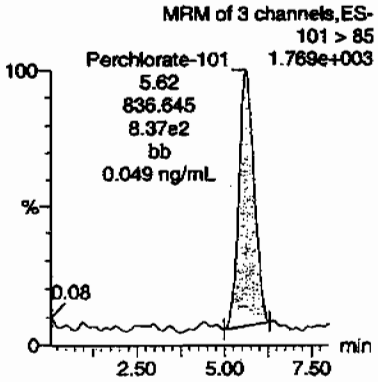

Perchlorate-O(18)

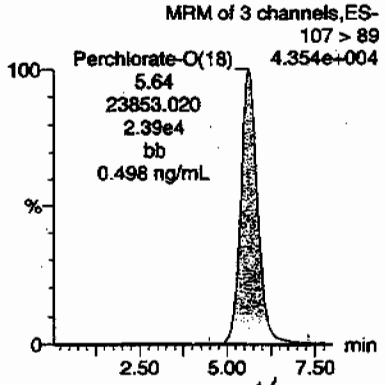

Ptmc 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-07CRI	Perchlorate	99 > 83	5.67	2498.437	2498.437	bb			0.0486	97.29	-2.71	7.903	2.99
CL090706-07CRI	Perchlorate-101	101 > 85	5.62	836.645	836.645	bb			0.0493	98.62	-1.38	72.784	
CL090706-07CRI	Perchlorate-O(18)	107 > 89	5.64	23853.020	23853.020	bb			0.4978	99.57	-0.43	928.339	

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ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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rinted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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ano
07-10-09

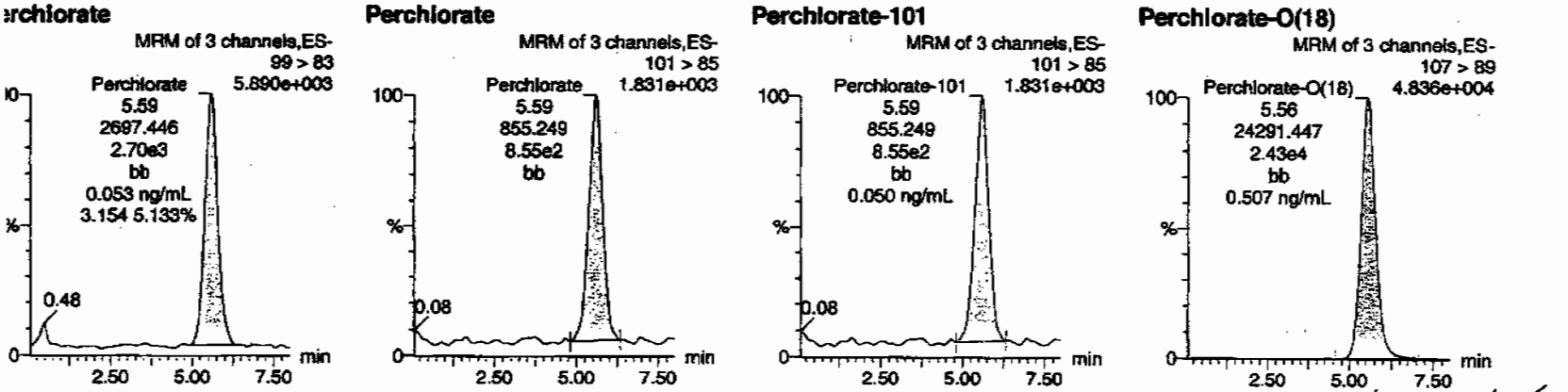

ftm 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-07CRI	Perchlorate	99 > 83	5.59	2697.446	2697.446	bb			0.0525	105.04	5.04	312.338	3.15
CL090706-07CRI	Perchlorate-101	101 > 85	5.59	855.249	855.249	bb			0.0504	100.81	0.81	86.922	
CL090706-07CRI	Perchlorate-O(18)	107 > 89	5.56	24291.447	24291.447	bb			0.5070	101.40	1.40	2640.5...	

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ıtaset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

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inted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

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: WCL090706-07CRI
al: 1:2,B

Pass
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07-10-09

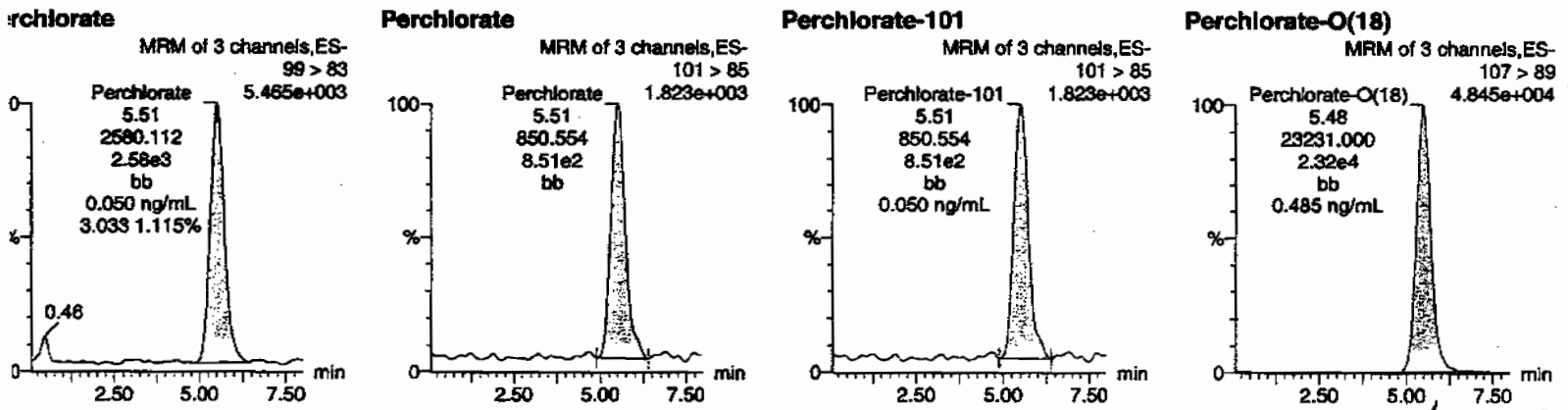

ATM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-07CRI	Perchlorate	99 > 83	5.51	2580.112	2580.112	bb			0.0502	100.48	0.48	131.501	3.03
CL090706-07CRI	Perchlorate-101	101 > 85	5.51	850.554	850.554	bb			0.0501	100.26	0.26	75.482	
CL090706-07CRI	Perchlorate-O(18)	107 > 89	5.48	23231.000	23231.000	bb			0.4849	96.97	-3.03	2084.5...	

440

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luantify Sample Report MassLynx 4.0 SP4
he GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

ast Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
rinted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

ame: per0709057a
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): WCL090706-07CRI
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Pass
and
07-10-5

erchlorate

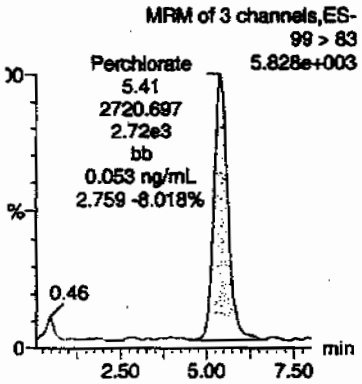

Perchlorate

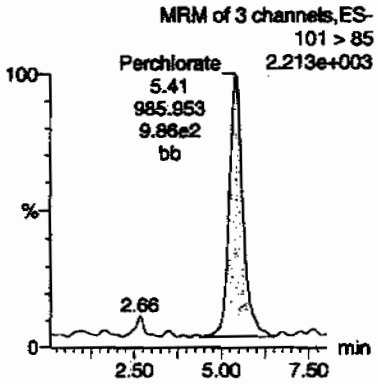

Perchlorate-101

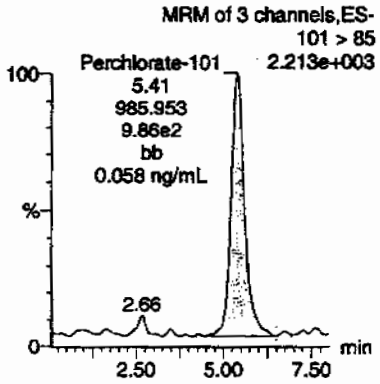

Perchlorate-O(18)

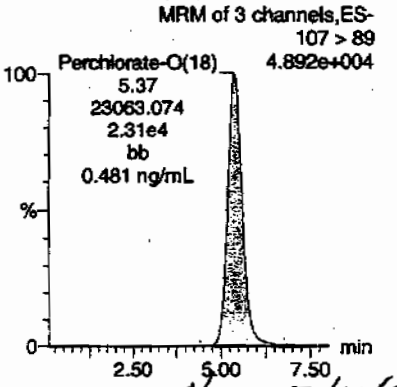

AnM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL090706-07CRI	Perchlorate	99 > 83	5.41	2720.697	2720.697	bb			0.0530	105.95	5.95	194.612	2.76
CL090706-07CRI	Perchlorate-101	101 > 85	5.41	985.953	985.953	bb			0.0581	116.22	16.22	92.416	
CL090706-07CRI	Perchlorate-O(18)	107 > 89	5.37	23063.074	23063.074	bb			0.4813	96.27	-3.73	2755.2...	

441

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 07-JUL-09

GEL Job No (SDG): 09-2536

GEL Sample ID: 1201874308

Date Filtered: 07-JUL-09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	09-JUL-09 17:48	per0709033a
	Perchlorate-O(18)			4.60	ug/kg		1	09-JUL-09 17:48	per0709033a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solid}}$$

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ıantify Sample Report **MassLynx 4.0 SP4**
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709033a
te: 09-Jul-2009
ne: 17:48:02
1201874308
ıl: 2:1,A

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07-10-09

rchlorate

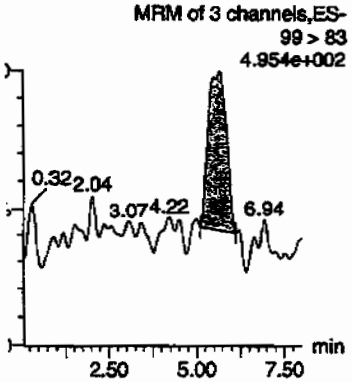

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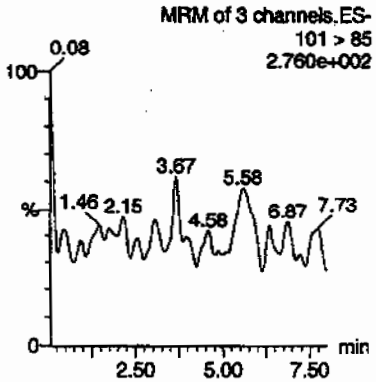

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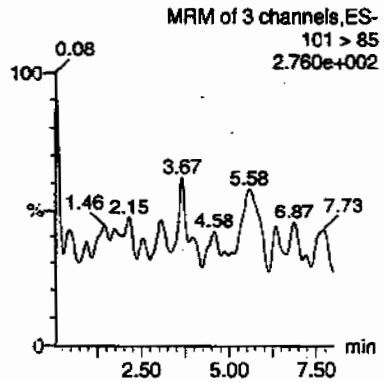

Perchlorate-O(18)

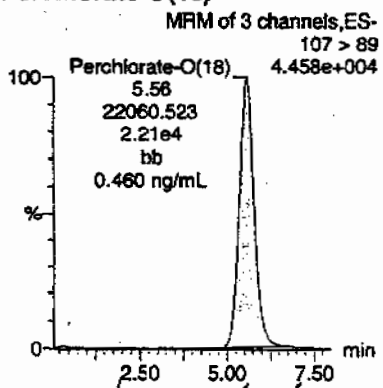

HMM 07/10/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1874308	Perchlorate	99 > 83	5.68	171.936	171.936	bb			0.0033			15.977	0.00
1874308	Perchlorate-101	101 > 85											
1874308	Perchlorate-O(18)	107 > 89	5.56	22060.523	22060.523	bb			0.4604	92.08	-7.92	495.394	

. SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

444

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 882498

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 07–JUL–09

GEL Job No (SDG): 09–2536

GEL Sample ID: 1201874309

Date Filtered: 07–JUL–09

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.5	2	2.01	ug/kg		1	09–JUL–09 17:59	per0709034a
	Perchlorate–O(18)			3.86	ug/kg		1	09–JUL–09 17:59	per0709034a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solic}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

Last Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
Printed: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

Name: per0709034a
Date: 09-Jul-2009
Time: 17:59:57
ID: 1201874309
Vial: 2:1,B

|LANL|882499|50120|LCS|1|

CWW 07-10-09

Perchlorate

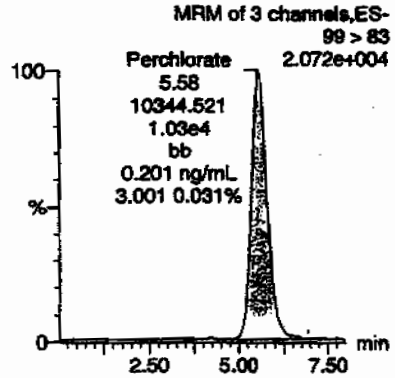

Perchlorate

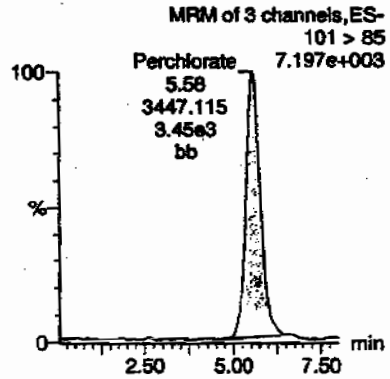

Perchlorate-101

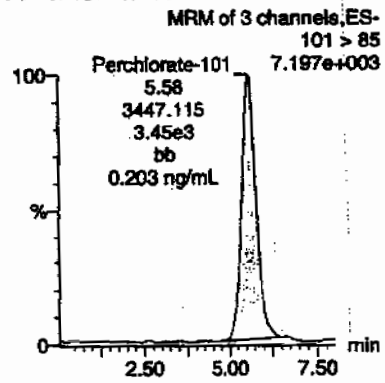

Perchlorate-O(18)

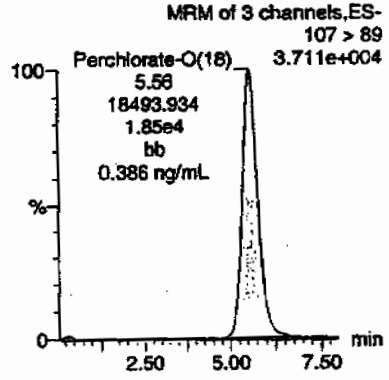

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
201874309	Perchlorate	99 > 83	5.58	10344.521	10344.521	bb			0.2014	100.71	0.71	401.471	3.00
201874309	Perchlorate-101	101 > 85	5.58	3447.115	3447.115	bb			0.2032	101.58	1.58	386.302	
201874309	Perchlorate-O(18)	107 > 89	5.56	18493.934	18493.934	bb			0.3860	77.20	-22.80	1449.8...	

$\frac{10344.521}{51358.3} = 0.2014$

HMM 07/10/09

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 882498 Verified by: _____

Analyst: Jareth Shirley

Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6

Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1201874308 MB	07-JUL-2009 09:53:45	2	20	10
1201874309 LCS	07-JUL-2009 09:53:45	2	20	10
232663001	07-JUL-2009 09:53:45	2	20	10
232663002	07-JUL-2009 09:53:45	2	20	10
232663003	07-JUL-2009 09:53:45	2	20	10
232663004	07-JUL-2009 09:53:45	2	20	10
232663005	07-JUL-2009 09:53:45	2	20	10
232744001	07-JUL-2009 09:53:45	2	20	10
232744002	07-JUL-2009 09:53:45	2	20	10
232744003	07-JUL-2009 09:53:45	2	20	10
232744004	07-JUL-2009 09:53:45	2	20	10
232744005	07-JUL-2009 09:53:45	2	20	10
232744006	07-JUL-2009 09:53:45	2	20	10
232744007	07-JUL-2009 09:53:45	2	20	10
232744008	07-JUL-2009 09:53:45	2	20	10
232754001	07-JUL-2009 09:53:45	2	20	10
232754002	07-JUL-2009 09:53:45	2	20	10
232754003	07-JUL-2009 09:53:45	2	20	10
232760001	07-JUL-2009 09:53:45	2	20	10
1201874310 MS (232760001)	07-JUL-2009 09:53:45	2	20	10
1201874311 MSD (232760001)	07-JUL-2009 09:53:45	2	20	10
232760002	07-JUL-2009 09:53:45	2	20	10
232760003	07-JUL-2009 09:53:45	2	20	10
232760004	07-JUL-2009 09:53:45	2	20	10
1201874312 ICS	07-JUL-2009 09:53:45	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201874312	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL
LCS	1201874309	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL
MS	1201874310	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL
MSD	1201874311	10 ug/L CCV Second Source	UCL090527-01.3	.4	mL

Comments:

Desalting cartridges used: 090408-1-Ba & 090608-1-H

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 07/09/09
Extr. Injection Volume: 20uL
Sequence Number: per070909a
Initial Calibration Date: 07/09/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1152119, 1141273
Standard-Samp Reagent Lot#:: 1141273

Reviewed BY: Hyne
Date: 07/10/08
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0709001a	IPB001	CWW	7/9/2009 11:30			1		USE	B
per0709002a	IPB001	CWW	7/9/2009 11:42			1		USE	B
per0709003a	WCLICAL-01	CWW	7/9/2009 11:54			1		USE	I
per0709004a	WCLICAL-02	CWW	7/9/2009 12:05			1		USE	I
per0709005a	WCLICAL-03	CWW	7/9/2009 12:17			1		USE	I
per0709006a	WCLICAL-04	CWW	7/9/2009 12:29			1		USE	I
per0709007a	WCLICAL-05	CWW	7/9/2009 12:41			1		USE	I
per0709008a	IPB002	CWW	7/9/2009 12:52			1		USE	B
per0709009a	WCLICV	CWW	7/9/2009 13:04			1		USE	C
per0709010a	IPB003	CWW	7/9/2009 13:16			1		USE	B
per0709011a	WCLCRI	CWW	7/9/2009 13:28			1		USE	C
per0709012a	232509001	CWW	7/9/2009 13:41	881646	09-2500	100	LANL	USE	S
per0709013a	232509002	CWW	7/9/2009 13:52	881646	09-2500	1	LANL	USE	S
per0709014a	232509004	CWW	7/9/2009 14:04	881646	09-2500	100	LANL	USE	S
per0709015a	232509005	CWW	7/9/2009 14:16	881646	09-2500	100	LANL	USE	S
per0709016a	232509006	CWW	7/9/2009 14:28	881646	09-2500	1	LANL	USE	S
per0709017a	WCLCCV	CWW	7/9/2009 14:39			1		USE	C
per0709018a	IPB004	CWW	7/9/2009 14:51			1		USE	B
per0709019a	WCLCRI	CWW	7/9/2009 15:03			1		USE	C
per0709020a	1201872358	CWW	7/9/2009 15:15	881654	09-2512	1	LANL	USE	S
per0709021a	1201872359	CWW	7/9/2009 15:26	881654	09-2512	1	LANL	USE	S
per0709022a	1201872362	CWW	7/9/2009 15:38	881654	09-2512	1	LANL	DUSE-RA	S
per0709023a	232594001	CWW	7/9/2009 15:50	881654	09-2512	1	LANL	USE	S
per0709024a	1201872360	CWW	7/9/2009 16:02	881654	09-2512	1	LANL	USE	S
per0709025a	1201872361	CWW	7/9/2009 16:13	881654	09-2512	1	LANL	USE	S
per0709026a	232594002	CWW	7/9/2009 16:25	881654	09-2512	1	LANL	USE	S
per0709027a	232594003	CWW	7/9/2009 16:37	881654	09-2512	1	LANL	USE	S
per0709028a	232594004	CWW	7/9/2009 16:49	881654	09-2512	1	LANL	USE	S
per0709029a	232594005	CWW	7/9/2009 17:00	881654	09-2512	1	LANL	USE	S

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per0709030a	WCLCCV	CWW	7/9/2009 17:12			1		USE	C
per0709031a	IPB005	CWW	7/9/2009 17:24			1		USE	B
per0709032a	WCLCRI	CWW	7/9/2009 17:36			1		USE	C
per0709033a	1201874308	CWW	7/9/2009 17:48	882499	VARIOUS	1	LANL	USE	S
per0709034a	1201874309	CWW	7/9/2009 17:59	882499	VARIOUS	1	LANL	USE	S
per0709035a	1201874312	CWW	7/9/2009 18:11	882499	VARIOUS	1	LANL	USE	S
per0709036a	232663001	CWW	7/9/2009 18:23	882499	09-2516-1	1	LANL	USE	S
per0709037a	232663002	CWW	7/9/2009 18:35	882499	09-2516-1	1	LANL	USE	S
per0709038a	232663003	CWW	7/9/2009 18:46	882499	09-2516-1	1	LANL	USE	S
per0709039a	232663004	CWW	7/9/2009 18:58	882499	09-2516-1	1	LANL	USE	S
per0709040a	232663005	CWW	7/9/2009 19:10	882499	09-2516-1	1	LANL	USE	S
per0709041a	232744001	CWW	7/9/2009 19:22	882499	09-2525-1	1	LANL	USE	S
per0709042a	232744002	CWW	7/9/2009 19:33	882499	09-2525-1	1	LANL	USE	S
per0709043a	WCLCCV	CWW	7/9/2009 19:45			1		USE	C
per0709044a	IPB006	CWW	7/9/2009 19:57			1		USE	B
per0709045a	WCLCRI	CWW	7/9/2009 20:09			1		USE	C
per0709046a	232744003	CWW	7/9/2009 20:20	882499	09-2525-1	1	LANL	USE	S
per0709047a	232744004	CWW	7/9/2009 20:32	882499	09-2525-1	1	LANL	USE	S
per0709048a	232744005	CWW	7/9/2009 20:44	882499	09-2525-1	1	LANL	USE	S
per0709049a	232744006	CWW	7/9/2009 20:56	882499	09-2525-1	1	LANL	USE	S
per0709050a	232744007	CWW	7/9/2009 21:08	882499	09-2525-1	1	LANL	USE	S
per0709051a	232744008	CWW	7/9/2009 21:19	882499	09-2525-1	1	LANL	USE	S
per0709052a	232754001	CWW	7/9/2009 21:31	882499	09-2536	1	LANL	USE	S
per0709053a	232754002	CWW	7/9/2009 21:43	882499	09-2536	1	LANL	USE	S
per0709054a	232754003	CWW	7/9/2009 21:55	882499	09-2536	1	LANL	USE	S
per0709055a	WCLCCV	CWW	7/9/2009 22:06			1		USE	C
per0709056a	IPB007	CWW	7/9/2009 22:18			1		USE	B
per0709057a	WCLCRI	CWW	7/9/2009 22:30			1		USE	C
per0709058a	232760001	CWW	7/9/2009 22:42	882499	09-2542-1	1	LANL	USE	S
per0709059a	1201874310	CWW	7/9/2009 22:54	882499	09-2542-1	1	LANL	USE	S
per0709060a	1201874311	CWW	7/9/2009 23:05	882499	09-2542-1	1	LANL	USE	S
per0709061a	232760002	CWW	7/9/2009 23:17	882499	09-2542-1	1	LANL	USE	S
per0709062a	232760003	CWW	7/9/2009 23:29	882499	09-2542-1	1	LANL	USE	S
per0709063a	232760004	CWW	7/9/2009 23:41	882499	09-2542-1	1	LANL	USE	S
per0709064a	WCLCCV	CWW	7/9/2009 23:52			1		USE	C
per0709065a	IPB008	CWW	7/10/2009 0:04			1		USE	B
per0709066a	WCLCRI	CWW	7/10/2009 0:16			1		USE	C

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per0709067a	1201877137	CWW	7/10/2009 0:28	883633	09-2547	1	LANL	USE	S
per0709068a	1201877138	CWW	7/10/2009 0:40	883633	09-2547	1	LANL	USE	S
per0709069a	1201877142	CWW	7/10/2009 0:52	883633	09-2547	1	LANL	USE	S
per0709070a	232851001	CWW	7/10/2009 1:03	883633	09-2547	1	LANL	USE	S
per0709071a	1201877139	CWW	7/10/2009 1:15	883633	09-2547	1	LANL	USE	S
per0709072a	1201877140	CWW	7/10/2009 1:27	883633	09-2547	1	LANL	USE	S
per0709073a	232851002	CWW	7/10/2009 1:39	883633	09-2547	1	LANL	USE	S
per0709074a	IPB009	CWW	7/10/2009 1:50			1		USE	B
per0709075a	1201872362	CWW	7/10/2009 2:02	881654	09-2512	1	LANL	USE	S
per0709076a	WCLCCV	CWW	7/10/2009 2:14			1		USE	C
per0709077a	IPB010	CWW	7/10/2009 2:26			1		USE	B
per0709078a	WCLCRI	CWW	7/10/2009 2:38			1		USE	C

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ıantify Sample Report **MassLynx 4.0 SP4**
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

me: per0709059a
te: 09-Jul-2009
ne: 22:54:11
1201874310
ıl: 2:4,C

|LANL|882499|5020|MS|1|

Cmm 07-10-09

rchlorate

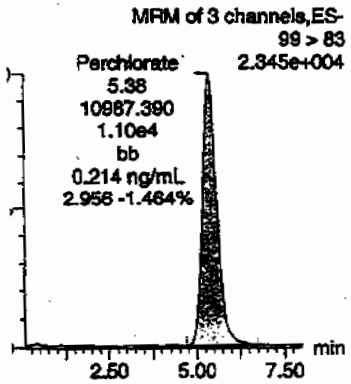

Perchlorate

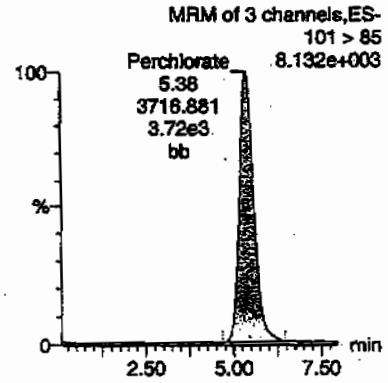

Perchlorate-101

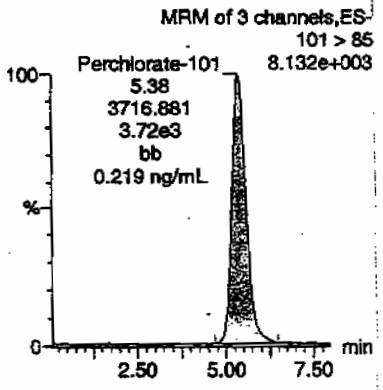

Perchlorate-O(18)

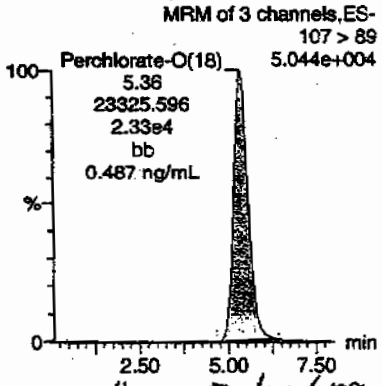

Hnm 07/10/09

1874310	Perchlorate	99 > 83	5.38	10987.390	10987.390	bb		0.2139	106.97	6.97	710.014	2.96
1874310	Perchlorate-101	101 > 85	5.38	3716.881	3716.881	bb		0.2191	109.53	9.53	185.266	
1874310	Perchlorate-O(18)	107 > 89	5.36	23325.596	23325.596	bb		0.4868	97.37	-2.63	3244.9...	

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. SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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ıantify Sample Report **MassLynx 4.0 SP4**
e GEL Group, LLC Analyst: Charles W. Wilson

taset: C:\MassLynx\Perchlorate.PRO\per070909a.qld

st Altered: Friday, July 10, 2009 12:34:12 PM Eastern Daylight Time
nted: Friday, July 10, 2009 12:45:49 PM Eastern Daylight Time

:me: per0709060a
.te: 09-Jul-2009
ne: 23:05:57
: 1201874311
ıl: 2:4,D

|LANL|882499|SO620|MSD|1|

Cmo 07-10-09

rchlorate

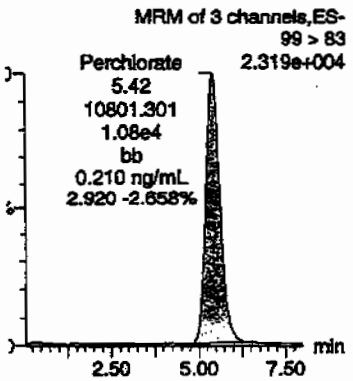

Perchlorate

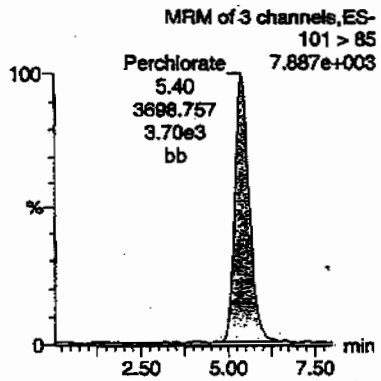

Perchlorate-101

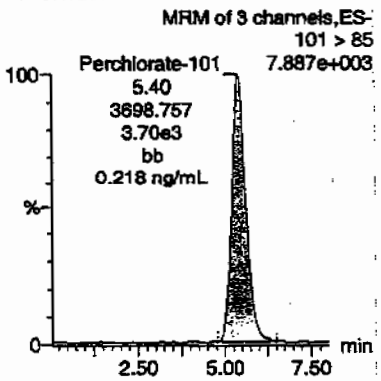

Perchlorate-O(18)

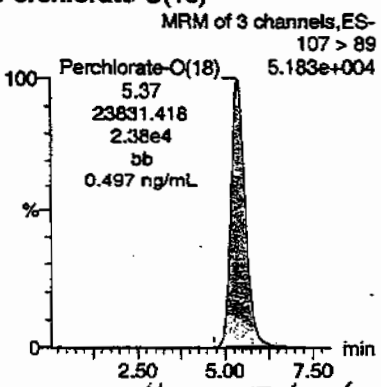

Hmm 07/10/09

	Name		RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1874311	Perchlorate	99 > 83	5.42	10801.301	10801.301	bb			0.2103	105.16	5.16	777.858	2.92
1874311	Perchlorate-101	101 > 85	5.40	3698.757	3698.757	bb			0.2180	109.00	9.00	330.142	
1874311	Perchlorate-O(18)	107 > 89	5.37	23831.418	23831.418	bb			0.4974	99.48	-0.52	2318.5...	

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 09-2536-1

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	882496
Prep Batch Number:	882495

Sample Analysis

Sample ID	Client ID
232755001	CAMO-09-6636
1201874307	Interference Check Sample (ICS)
1201874299	Method Blank (MB)
1201874300	Laboratory Control Sample (LCS)
1201874303	232662001(CAMO-09-10024) Matrix Spike (MS)
1201874305	232662001(CAMO-09-10024) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

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CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 232662001 (CAMO-09-10024) from SDG 09-2516 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

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Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The sample in this SDG was not originally analyzed using EPA Method 314.0.

Additional Comments
The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

Perchlorate Isotope Ratio
The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

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Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Heather M. Macer **Date:** 07/13/09

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-6636

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536-1

GEL Sample ID: 232755001

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:57	per0708027a
	Perchlorate Isotope Ratio						1	08-JUL-09 15:57	per0708027a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:57	per0708027a
	Perchlorate-O(18)			0.479	ug/L		1	08-JUL-09 15:57	per0708027a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09–2536–1

Extract Batch Code: 882495

Date Filtered: 06–JUL–09

Matrix: WASTE WATER

Sample ID: 1201874300

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.185	ug/L	92.3		85 – 115
Perchlorate Isotope Ratio		2.96				–
Perchlorate–101	0.200	.193	ug/L	96.7		85 – 115
Perchlorate–O(18)		.466	ug/L			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 09-2536-1

Extract Batch Code: 882495

Date Filtered: 06-JUL-09

Matrix: WATER

Sample ID: 1201874307

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.216	ug/L	108		70 – 130
Perchlorate Isotope Ratio		2.88				
Perchlorate–101	0.200	.232	ug/L	116		70 – 130
Perchlorate–O(18)		.526	ug/L			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708014a
Date: 08-Jul-2009
Time: 14:16:31
ID: 1201874307
Vial: 1:3,C

|LANL| 882496 |L2a| IC3 |1|

CWW 07-09-09

Perchlorate

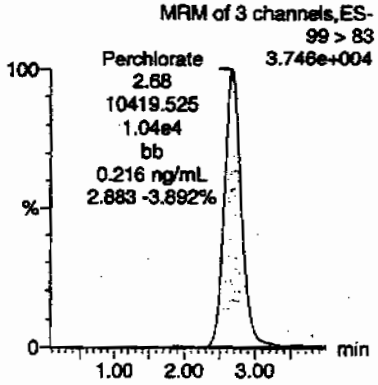

Perchlorate

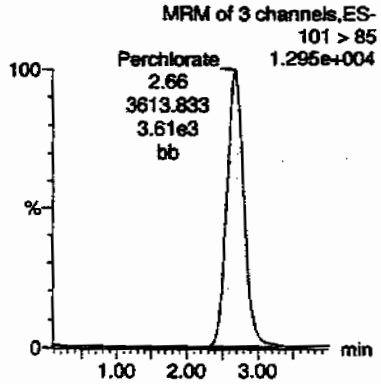

Perchlorate-101

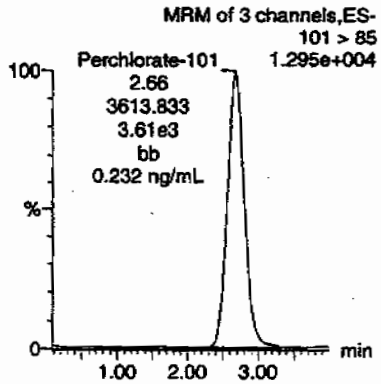

Perchlorate-O(18)

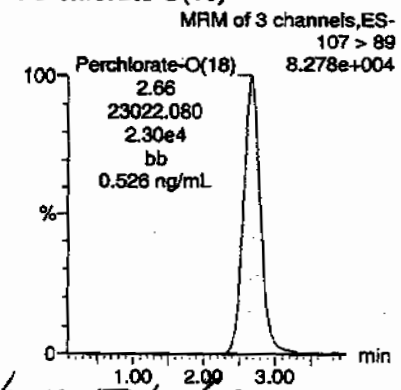

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874307	Perchlorate	99 > 83	2.68	10419.525	10419.525	bb			0.2156	107.79	7.79	1619.5...	2.88
1201874307	Perchlorate-101	101 > 85	2.66	3613.833	3613.833	bb			0.2321	116.05	16.05	2232.0...	
1201874307	Perchlorate-O(18)	107 > 89	2.66	23022.080	23022.080	bb			0.5259	105.19	5.19	10284....	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 09–2536–1

Extract Batch Code: 882495

Date Extracted: 06–JUL–09

GEL MS/PS ID: 1201874303

Client ID: CAMO–09–10024

GEL MSD/PSD ID: 1201874305

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	0.200	0.00358	ug/L	0.200	98.4	.184	90.4	8.3	30	75 – 125
Perchlorate Isotope Ratio	0	0.00		3.15		3.02		0		–
Perchlorate–101	0.200	0.00558	ug/L	0.198	96.1	.19	92.2	4.08	30	75 – 125
Perchlorate–O(18)	0	0.477	ug/L	0.482		.47		2.48		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2536-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08-JUL-09	per0708001a	IPB001
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708001a	IPB001
Perchlorate	0.00	0	NA	08-JUL-09	per0708002a	IPB001
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708002a	IPB001

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Name: per0708001a
Date: 08-Jul-2009
Time: 12:35:59
ID: IPB001
Vial: 1:1,A

cwd
07-09-09

Perchlorate

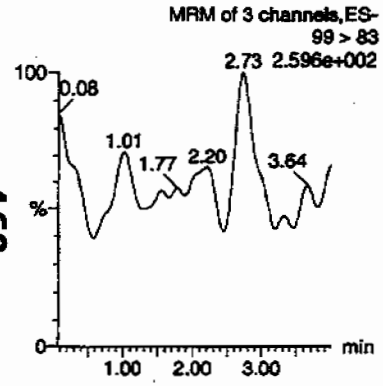

Perchlorate

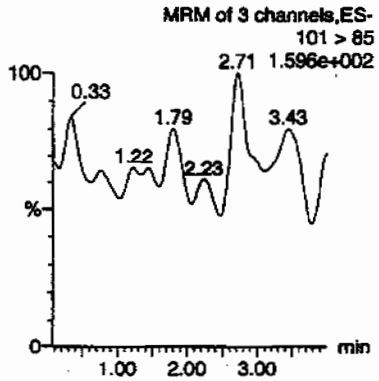

Perchlorate-101

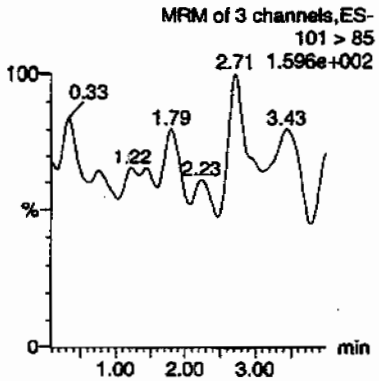

Perchlorate-O(18)

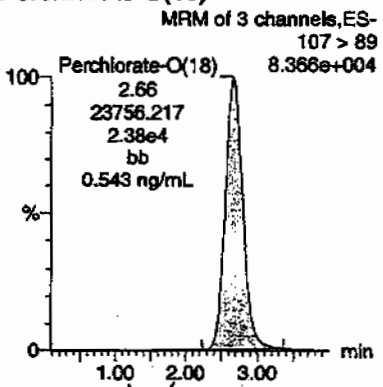

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ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.66	23756.217	23756.217	bb			0.5427	108.54	8.54	2563.6...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708002a
Date: 08-Jul-2009
Time: 12:43:43
ID: IPB001
Vial: 1:1,A

CWW
07-01-09

Perchlorate

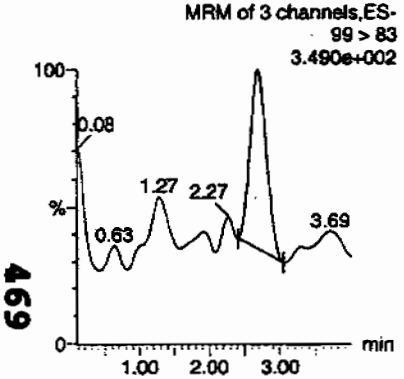

Perchlorate

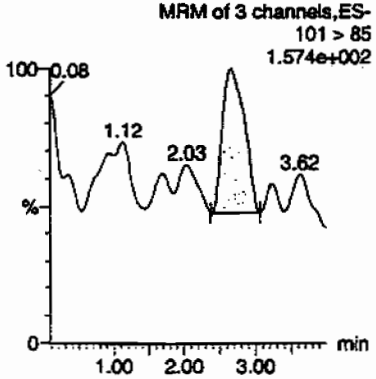

Perchlorate-101

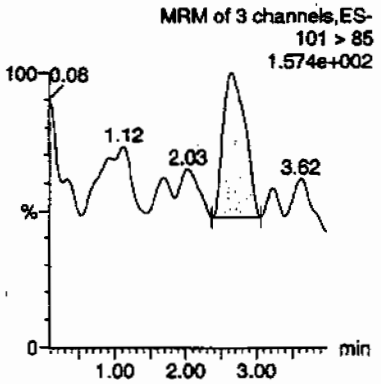

Perchlorate-O(18)

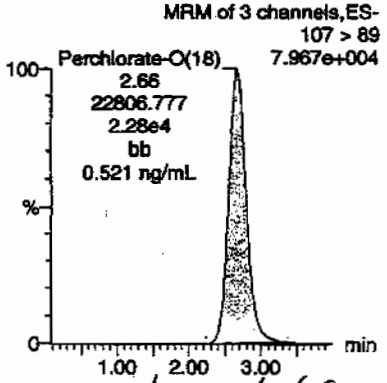

hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	2.68	62.756	62.756	bb			0.0013			9.964	2.10
IPB001	Perchlorate-101	101 > 85	2.64	29.952	29.952	bb			0.0019			7.781	
IPB001	Perchlorate-O(18)	107 > 89	2.66	22806.777	22806.777	bb			0.5210	104.21	4.21	7277.3...	

DWM
LO.0500

469

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2536-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	08-JUL-09	per0708008a	IPB002
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708008a	IPB002
Perchlorate	0.00	0	NA	08-JUL-09	per0708010a	IPB003
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708010a	IPB003
Perchlorate	0.00	0	NA	08-JUL-09	per0708023a	IPB004
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708023a	IPB004
Perchlorate	0.00	0	NA	08-JUL-09	per0708034a	IPB005
Perchlorate-101	0.00	0	NA	08-JUL-09	per0708034a	IPB005

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708008a
Date: 08-Jul-2009
Time: 13:30:03
ID: IPB002
Vial: 1:1,A

CWW 07-09-09

Perchlorate

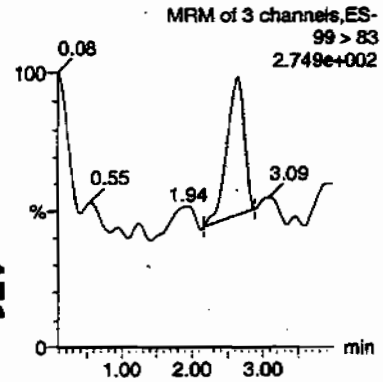

Perchlorate

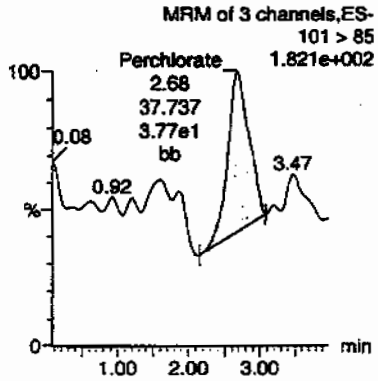

Perchlorate-101

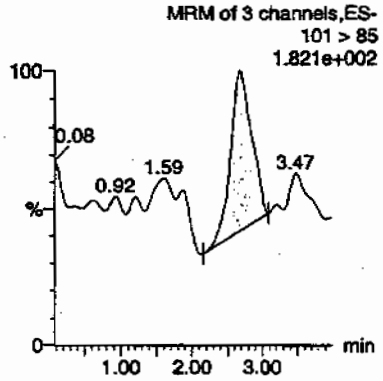

Perchlorate-O(18)

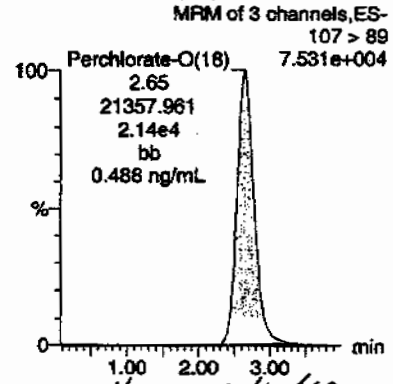

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	2.64	40.789	40.789	bb			0.0008			16.642	1.08
IPB002	Perchlorate-101	101 > 85	2.68	37.737	37.737	bb			0.0024			9.640	
IPB002	Perchlorate-O(18)	107 > 89	2.65	21357.961	21357.961	bb			0.4879	97.59	-2.41	8484.7...	

OKAY LO-0500

471

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qid

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708010a
Date: 08-Jul-2009
Time: 13:45:31
ID: IPB003
Vial: 1:1,A

GWO
07-09-09

Perchlorate

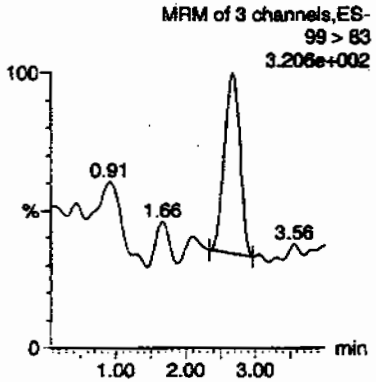

Perchlorate

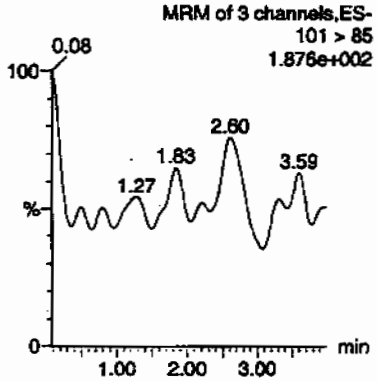

Perchlorate-101

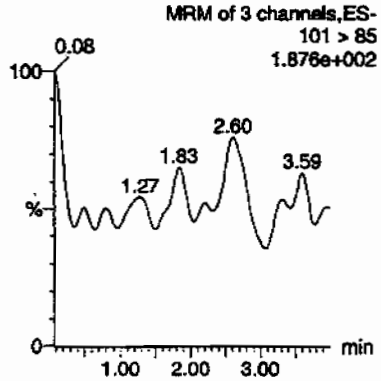

Perchlorate-O(18)

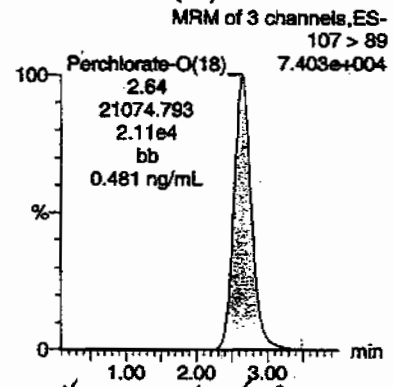

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ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	2.66	56.577	56.577	bb			0.0012			14.377	0.00
IPB003	Perchlorate-101	101 > 85											
IPB003	Perchlorate-O(18)	107 > 89	2.64	21074.793	21074.793	bb			0.4815	96.29	-3.71	1018.8...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708023a
Date: 08-Jul-2009
Time: 15:26:24
ID: IPB004
Vial: 1:1,A

CWW 07-09-09

Perchlorate

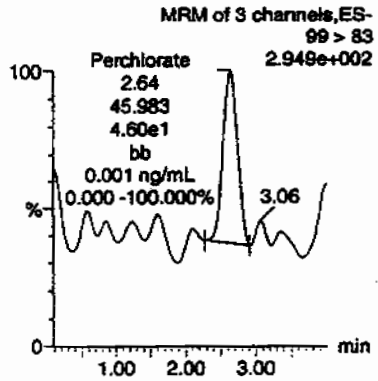

Perchlorate

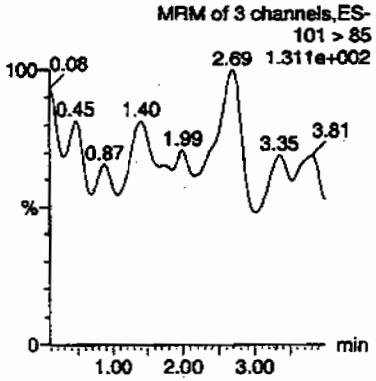

Perchlorate-101

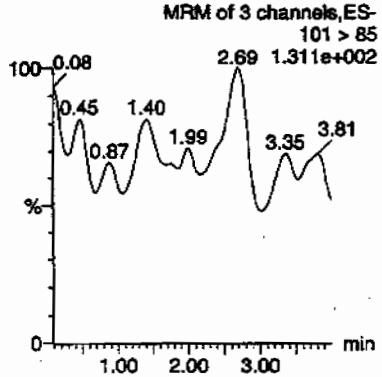

Perchlorate-O(18)

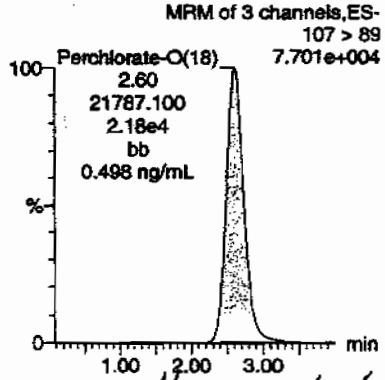

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	2.64	45.983	45.983	bb			0.0010			14.762	0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	2.60	21787.100	21787.100	bb			0.4977	99.55	-0.45	5673.5...	

473

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708034a
Date: 08-Jul-2009
Time: 16:51:46
ID: IPB005
Vial: 1:1,A

CWW 07-09-09

Perchlorate

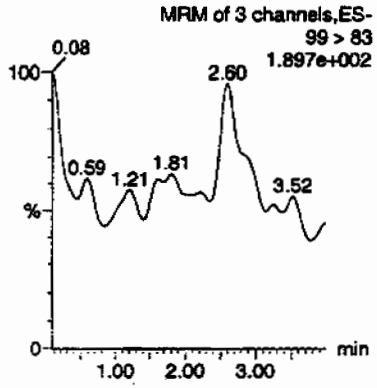

Perchlorate

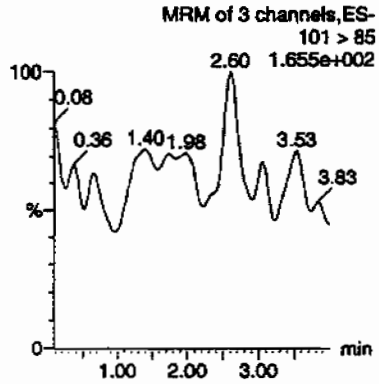

Perchlorate-101

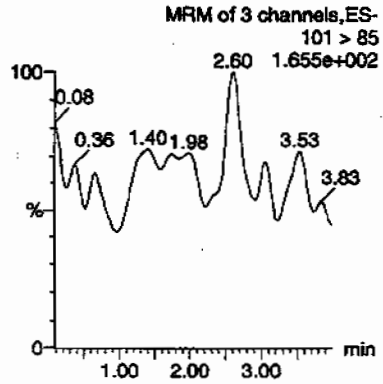

Perchlorate-O(18)

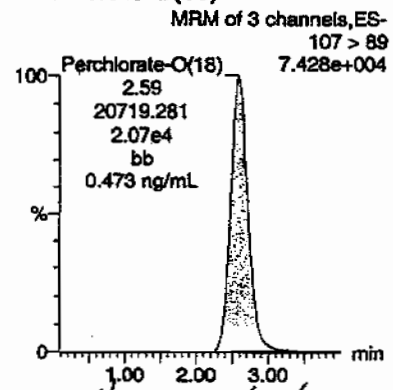

HMK 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.59	20719.281	20719.281	bb			0.4733	94.67	-5.33	6050.7...	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/Rbi (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CURSOR 01-07-08

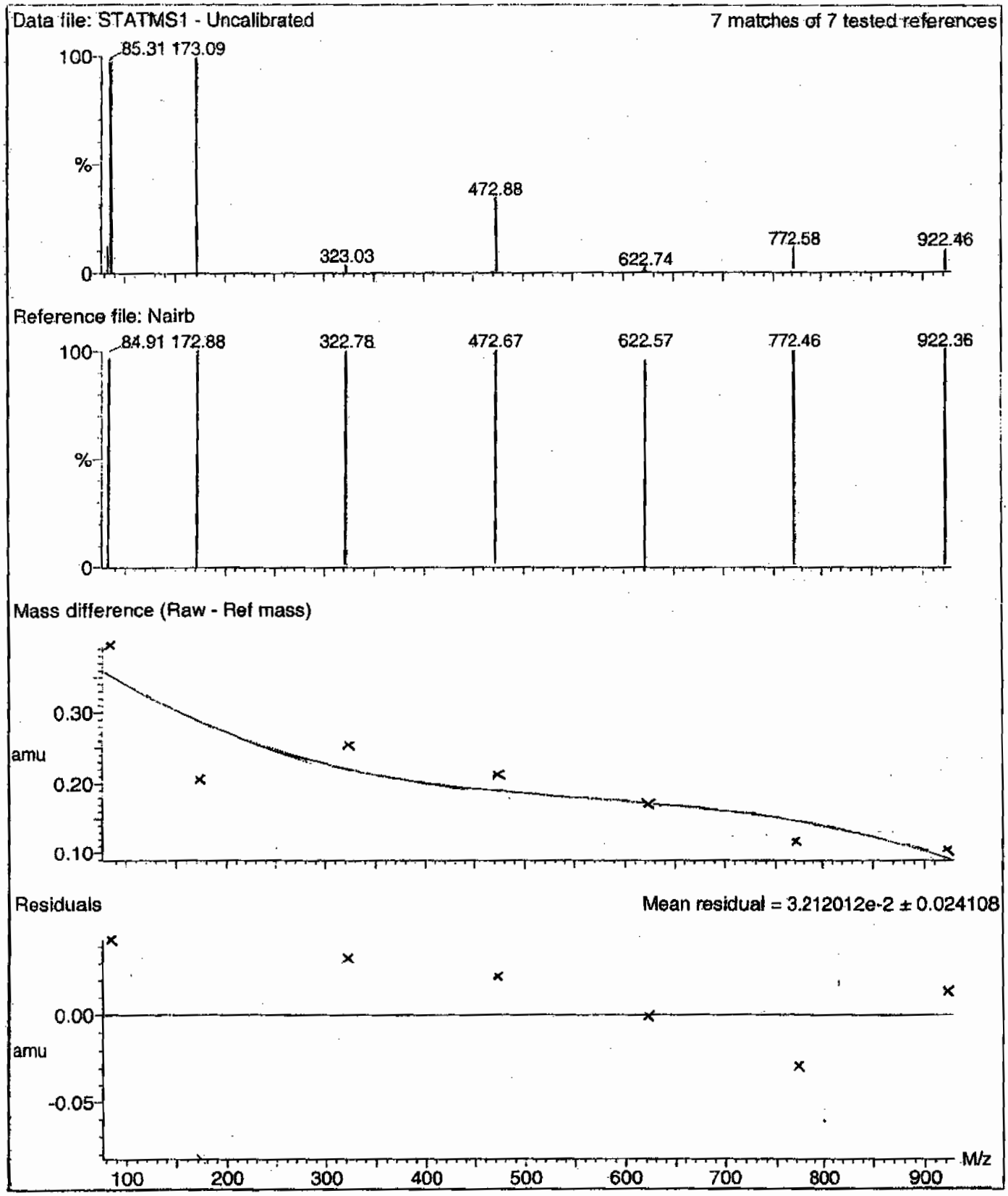

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Calibration Report - MS1 Scanning

Printed: Tue Jan 08 12:20:09 2008

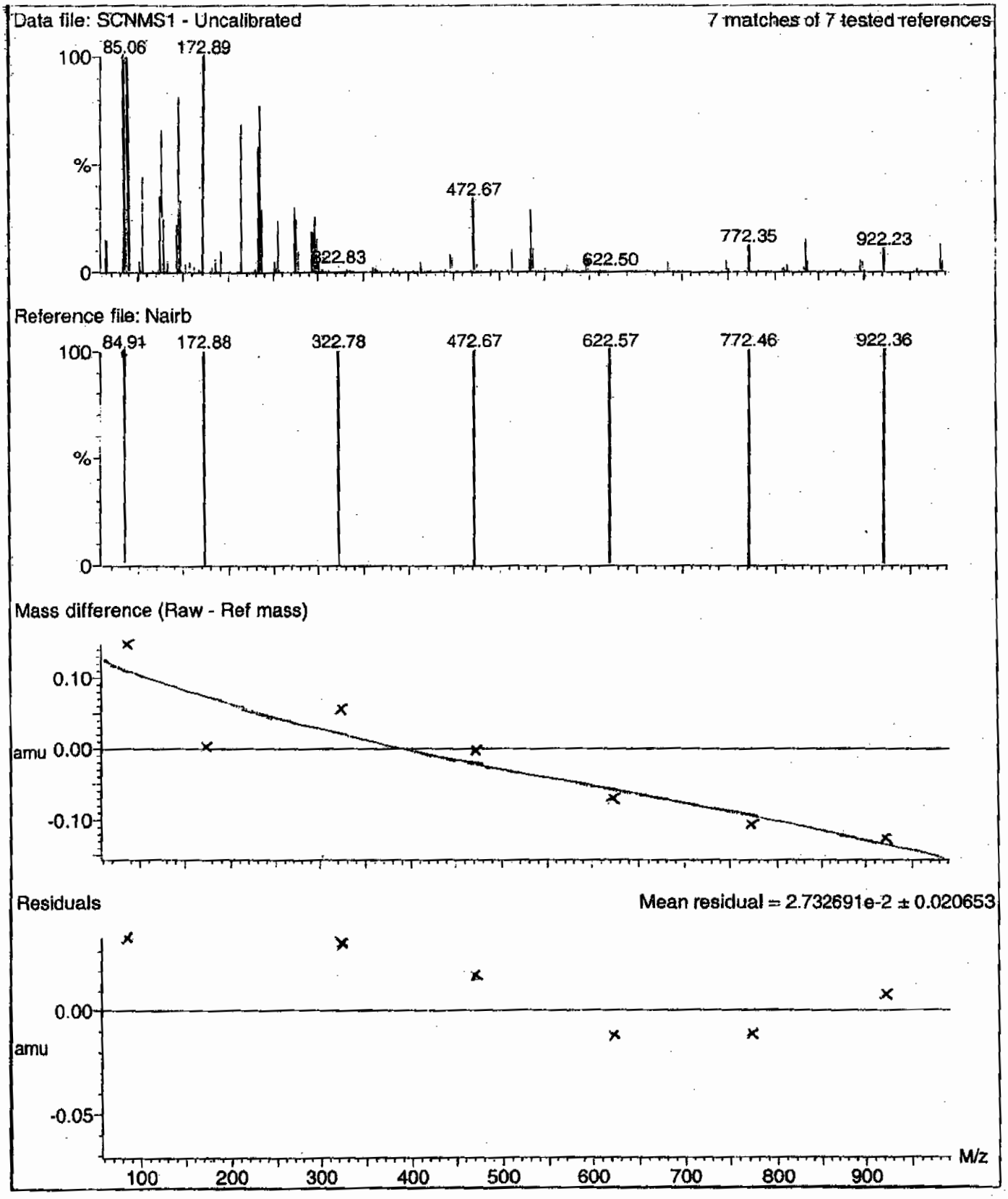

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Printed: Tue Jan 08 12:21:04 2008

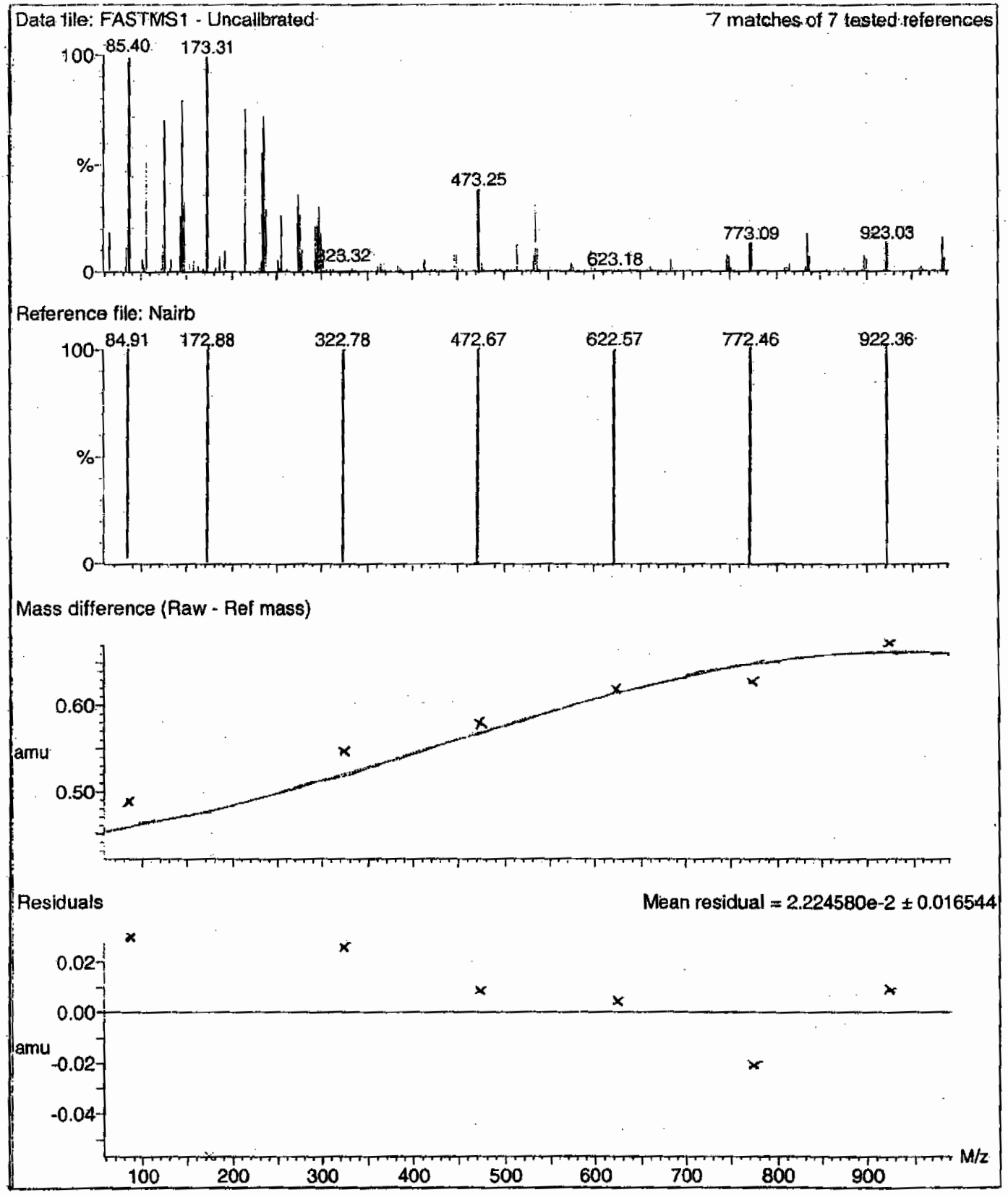

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

Printed: Tue Jan 08 12:21:59 2008

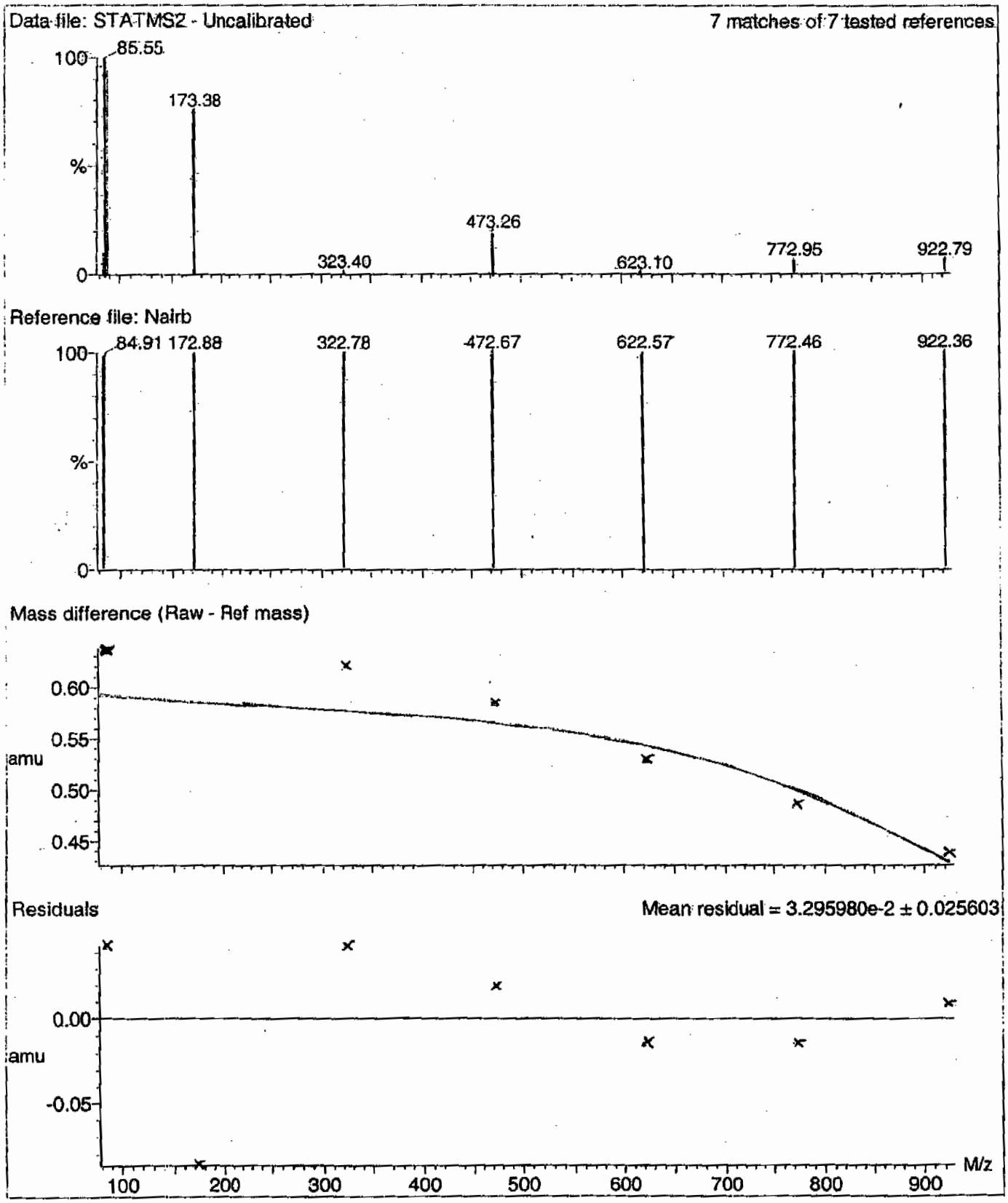

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Calibration Report - MS2 Scanning

Printed: Tue Jan 08 12:22:56 2008

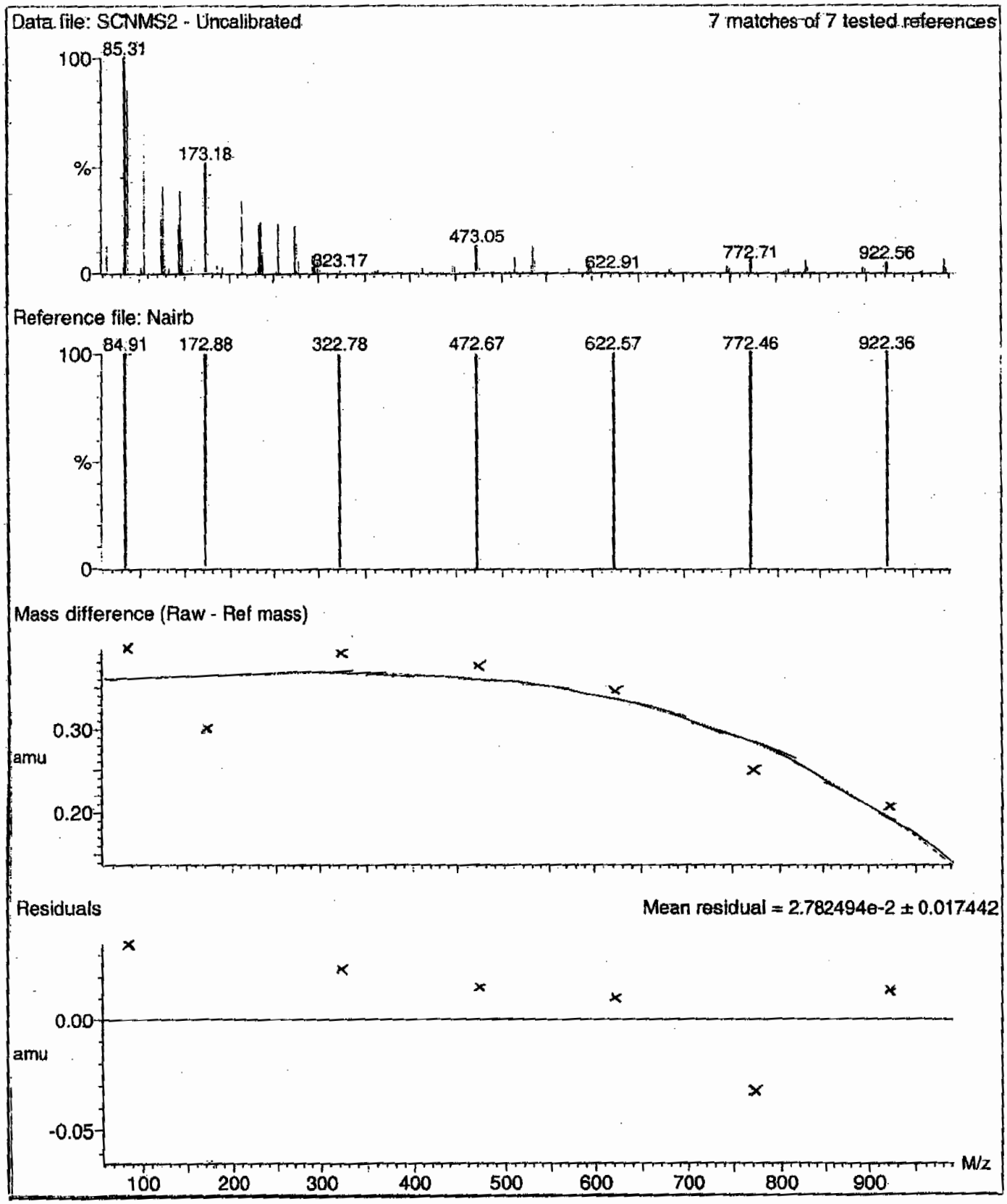

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008

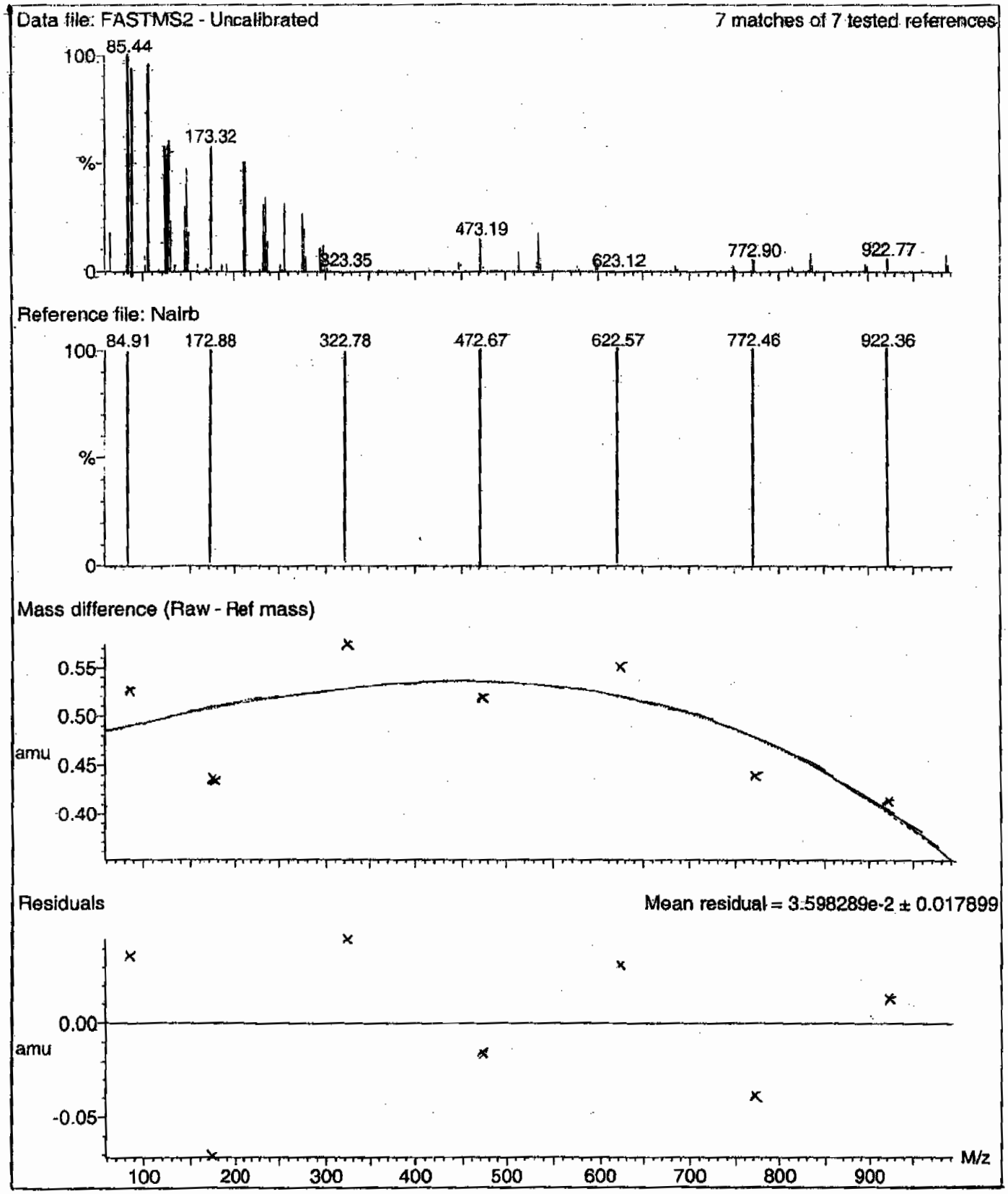

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File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Wednesday, July 08, 2009 11:04:53 Eastern Daylight Time

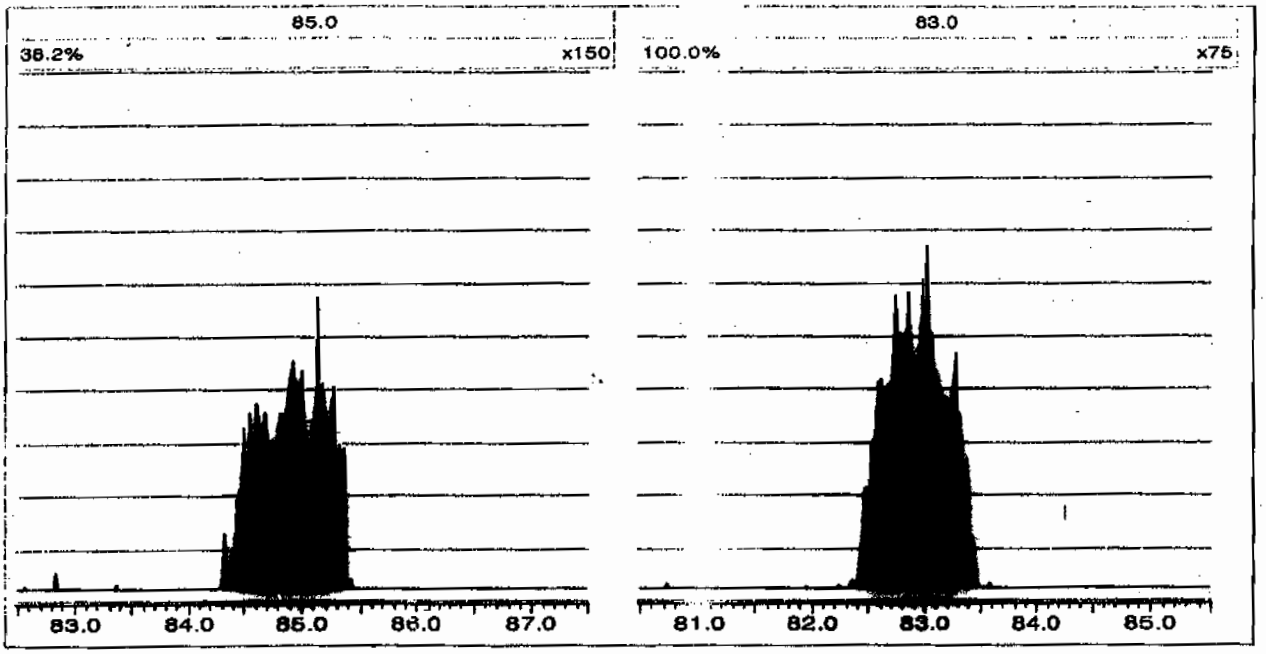

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2536–1

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0708006a**	**08–JUL–09**	**20767.2**				
Lower Area Limit			**10383.6**				
Upper Area Limit			**41534.4**				
1201874299	per0708012a	08–JUL–09 14:01	20440.2	2.64	2.66292	1.009	
1201874300	per0708013a	08–JUL–09 14:08	20419.3	2.64	2.65063	1.004	
1201874307	per0708014a	08–JUL–09 14:16	23022.1	2.66	2.67547	1.006	
232755001	per0708027a	08–JUL–09 15:57	20956.3	2.6	2.61337	1.005	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
CAMO-09-6636

Date Received: 02-JUL-09

GEL Job No (SDG): 09-2536-1

GEL Sample ID: 232755001

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:57	per0708027a
	Perchlorate Isotope Ratio						1	08-JUL-09 15:57	per0708027a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	08-JUL-09 15:57	per0708027a
	Perchlorate-O(18)			0.479	ug/L		1	08-JUL-09 15:57	per0708027a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708027a
Date: 08-Jul-2009
Time: 15:57:23
ID: 232755001
Vial: 1:5,A

|LANL| 882496 |LZQ|1|

CWW 07-09-09

Perchlorate

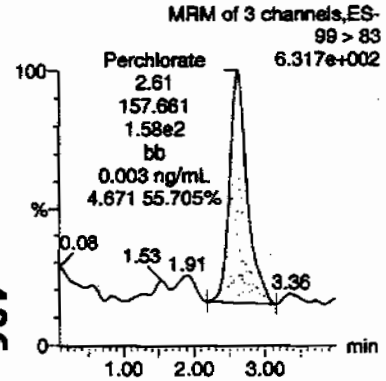

Perchlorate

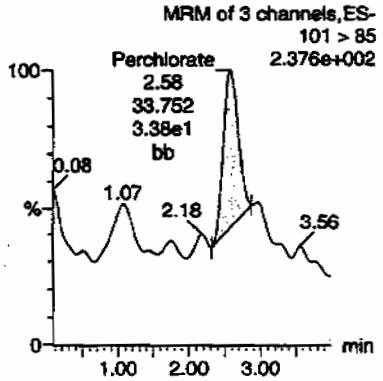

Perchlorate-101

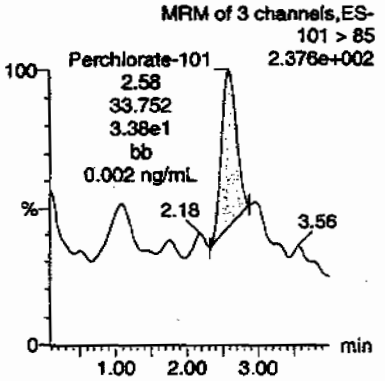

Perchlorate-O(18)

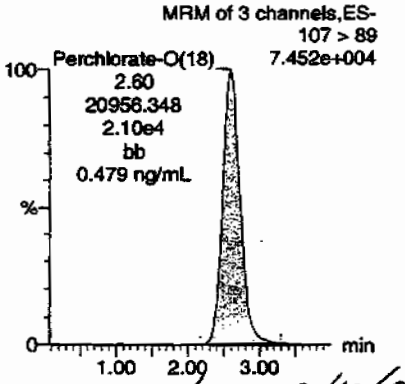

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
232755001	Perchlorate	99 > 83	2.61	157.661	157.661	bb			0.0033			30.268	4.67
232755001	Perchlorate-101	101 > 85	2.58	33.752	33.752	bb			0.0022			17.788	
232755001	Perchlorate-O(18)	107 > 89	2.60	20956.348	20956.348	bb			0.4788	95.75	-4.25	366.246	

GRAY
LA 0502

486

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2536–1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 48333.4

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 09–2536–1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 08–JUL–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 15570.4

Response Type: External Standard

Curve Type: RF

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Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per070809a.mdb 08 Jul 2009 14:18:38
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per070809a.cdb 09 Jul 2009 08:50:21

Compound name; Perchlorate
Response Factor: 48333.4
RRF SD: 3128.21, % Relative SD: 6.47216
Response type: External Std, Area
Curve type: RF

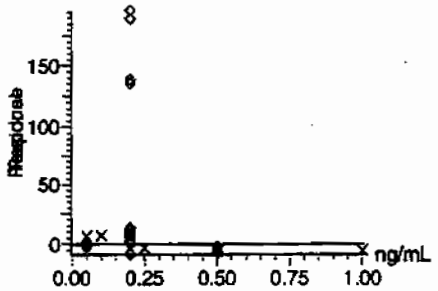

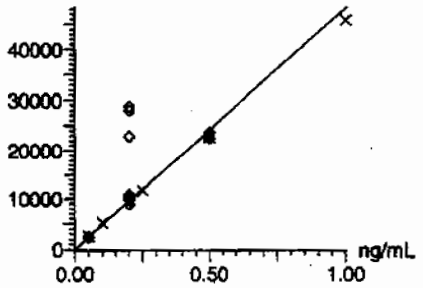

AWJ
07-09-09

490

Compound name: Perchlorate-101
Response Factor: 15570.4
RRF SD: 1259.19, % Relative SD: 8.08705
Response type: External Std, Area
Curve type: RF

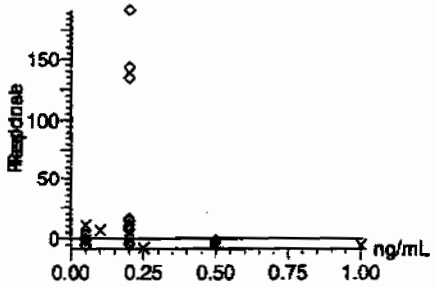

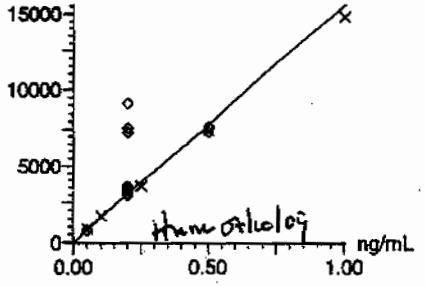

Hum Ortho log

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Compound name: Perchlorate-O(18)
Response Factor: 43772.6
RRF SD: 1463.7, % Relative SD: 3.34387
Response type: External Std, Area
Curve type: RF

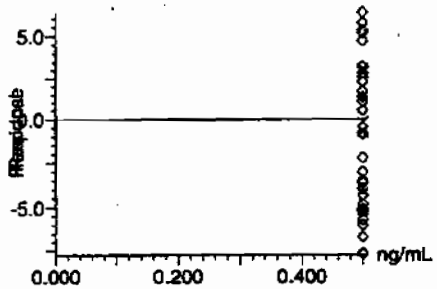

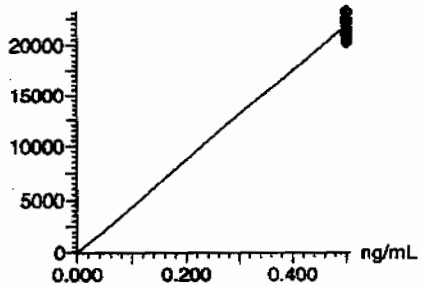

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Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2536–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	93.91	08–JUL–09 13:37	per0708009a
Perchlorate Isotope Ratio		2.99		08–JUL–09 13:37	per0708009a
Perchlorate–101	.5	.49	97.64	08–JUL–09 13:37	per0708009a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708009a
Date: 08-Jul-2009
Time: 13:37:46
ID: WCL090706-06ICV
Vial: 1:2,A

Pass
CWW
07-01-09

Perchlorate

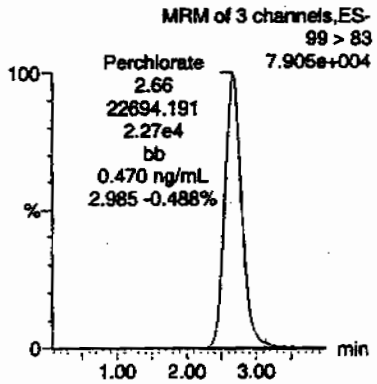

Perchlorate

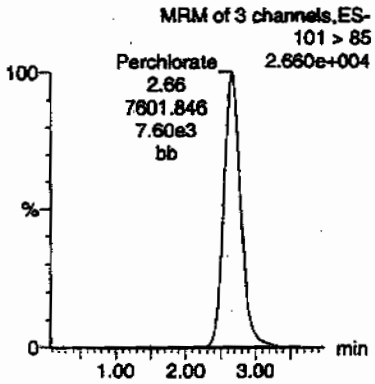

Perchlorate-101

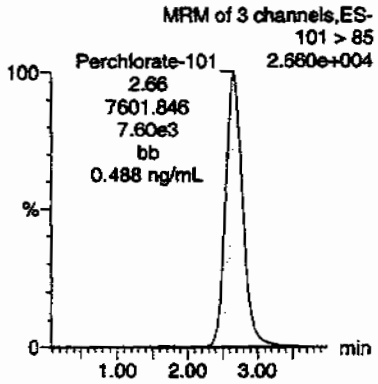

Perchlorate-O(18)

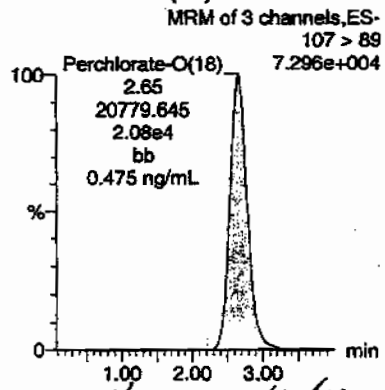

dpm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06ICV	Perchlorate	99 > 83	2.66	22694.191	22694.191	bb			0.4695	93.91	-6.09	2453.8...	2.99
WCL090706-06ICV	Perchlorate-101	101 > 85	2.66	7601.846	7601.846	bb			0.4882	97.64	-2.36	2701.9...	
WCL090706-06ICV	Perchlorate-O(18)	107 > 89	2.65	20779.645	20779.645	bb			0.4747	94.94	-5.06	3233.6...	

493

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09–2536–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.46	92.96	08–JUL–09 15:18	per0708022a
Perchlorate Isotope Ratio		3.07		08–JUL–09 15:18	per0708022a
Perchlorate–101	.5	.47	94.1	08–JUL–09 15:18	per0708022a
Perchlorate	.5	.49	97.48	08–JUL–09 16:44	per0708033a
Perchlorate Isotope Ratio		3.09		08–JUL–09 16:44	per0708033a
Perchlorate–101	.5	.49	97.78	08–JUL–09 16:44	per0708033a

PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708022a
Date: 08-Jul-2009
Time: 15:18:39
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
ans
07-09-09

Perchlorate

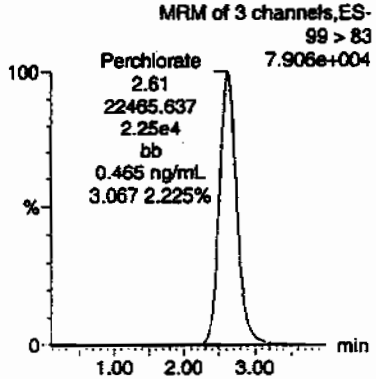

Perchlorate

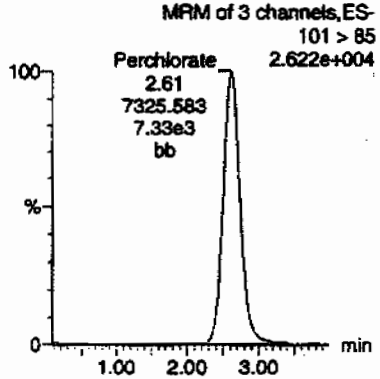

Perchlorate-101

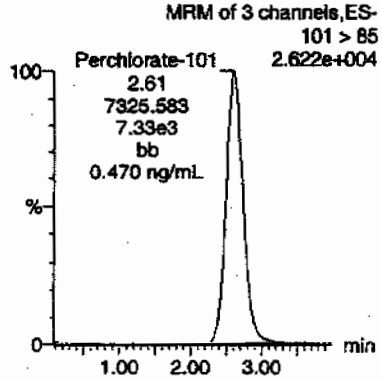

Perchlorate-O(18)

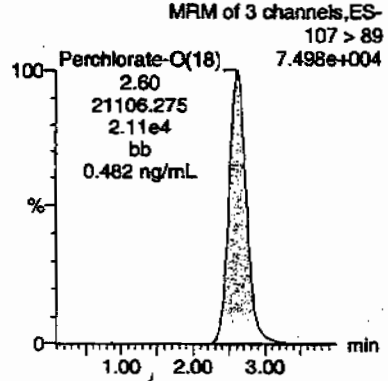

Hmk 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.61	22465.637	22465.637	bb			0.4648	92.96	-7.04	5659.4...	3.07
WCL090706-06CCV	Perchlorate-101	101 > 85	2.61	7325.583	7325.583	bb			0.4705	94.10	-5.90	675.146	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.60	21106.275	21106.275	bb			0.4822	96.44	-3.56	2111.2...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708033a
Date: 08-Jul-2009
Time: 16:44:02
ID: WCL090706-06CCV
Vial: 1:2,A

Pass
and
07-09-09

Perchlorate

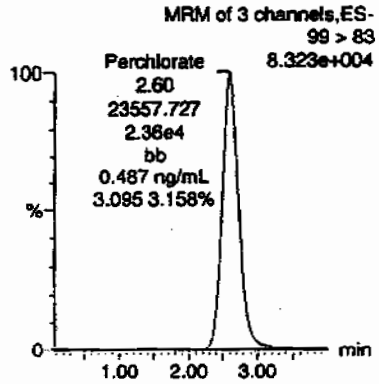

Perchlorate

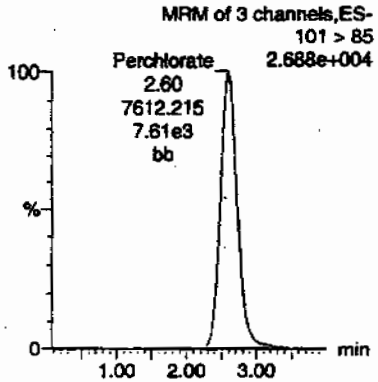

Perchlorate-101

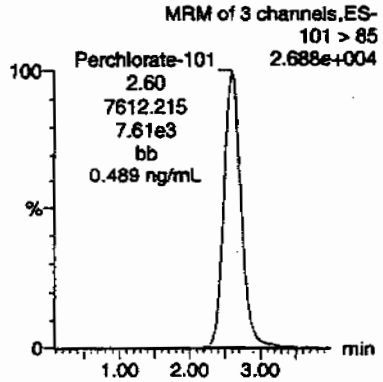

Perchlorate-O(18)

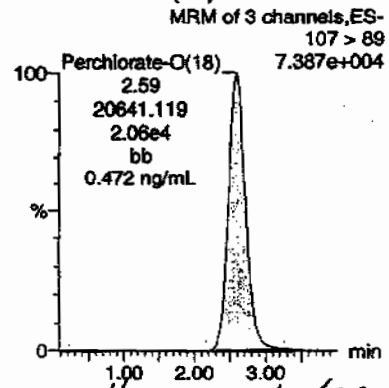

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-06CCV	Perchlorate	99 > 83	2.60	23557.727	23557.727	bb			0.4874	97.48	-2.52	5212.1...	3.09
WCL090706-06CCV	Perchlorate-101	101 > 85	2.60	7612.215	7612.215	bb			0.4889	97.78	-2.22	3842.9...	
WCL090706-06CCV	Perchlorate-O(18)	107 > 89	2.59	20641.119	20641.119	bb			0.4716	94.31	-5.69	4254.1...	

496

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Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 09-2536-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	102.31	08-JUL-09 13:53	per0708011a
Perchlorate Isotope Ratio		3.35		08-JUL-09 13:53	per0708011a
Perchlorate-101	.05	.05	94.69	08-JUL-09 13:53	per0708011a
Perchlorate	.05	.05	97.69	08-JUL-09 15:34	per0708024a
Perchlorate Isotope Ratio		3.08		08-JUL-09 15:34	per0708024a
Perchlorate-101	.05	.05	98.51	08-JUL-09 15:34	per0708024a
Perchlorate	.05	.05	99.89	08-JUL-09 16:59	per0708035a
Perchlorate Isotope Ratio		3.25		08-JUL-09 16:59	per0708035a
Perchlorate-101	.05	.05	95.4	08-JUL-09 16:59	per0708035a

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708011a
Date: 06-Jul-2009
Time: 13:53:16
ID: WCL090706-07CRI
Vial: 1:2,B

CWW
07-09-09

Perchlorate

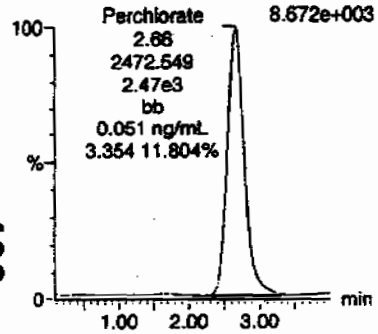

Perchlorate

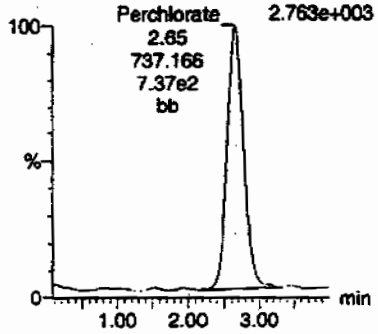

Perchlorate-101

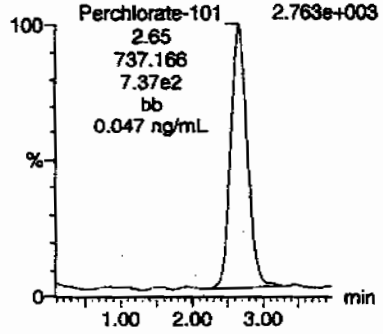

Perchlorate-O(18)

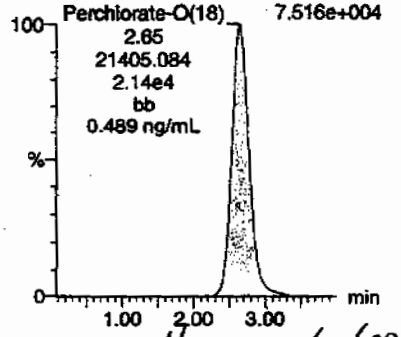

498

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.66	2472.549	2472.549	bb			0.0512	102.31	2.31	911.588	3.35
WCL090706-07CRI	Perchlorate-101	101 > 85	2.65	737.166	737.166	bb			0.0473	94.69	-5.31	141.523	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.65	21405.084	21405.084	bb			0.4890	97.80	-2.20	1236.3...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708024a
Date: 08-Jul-2009
Time: 15:34:09
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
07-09-09

Perchlorate

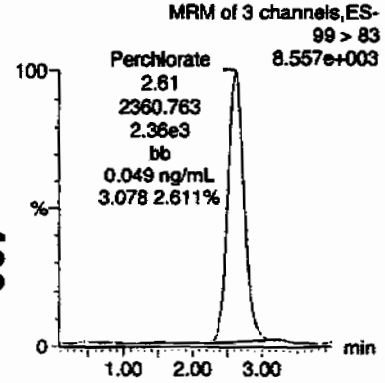

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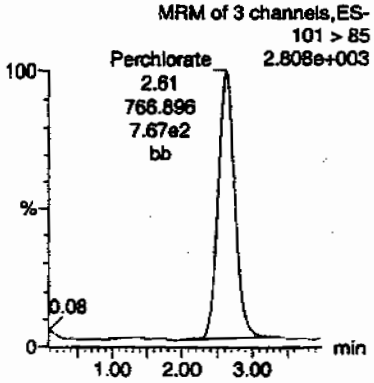

Perchlorate-101

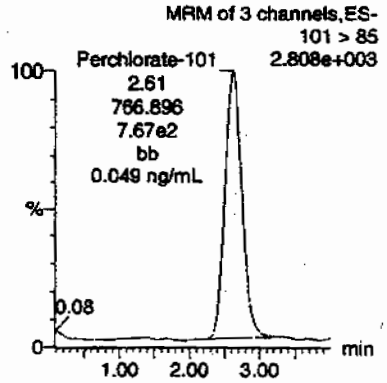

Perchlorate-O(18)

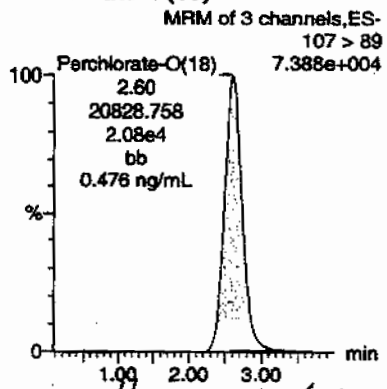

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.61	2360.763	2360.763	bb			0.0488	97.69	-2.31	448.651	3.08
WCL090706-07CRI	Perchlorate-101	101 > 85	2.61	766.896	766.896	bb			0.0493	98.51	-1.49	215.016	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.60	20828.758	20828.758	bb			0.4758	95.17	-4.83	12080....	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708035a
Date: 08-Jul-2009
Time: 16:59:31
ID: WCL090706-07CRI
Vial: 1:2,B

Pass
ang
07-09-09

Perchlorate

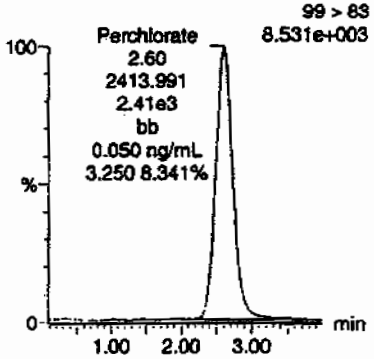

Perchlorate

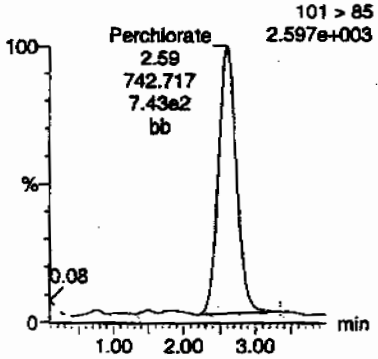

Perchlorate-101

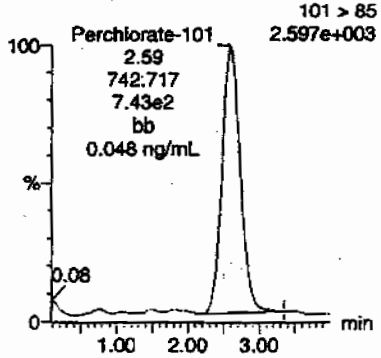

Perchlorate-O(18)

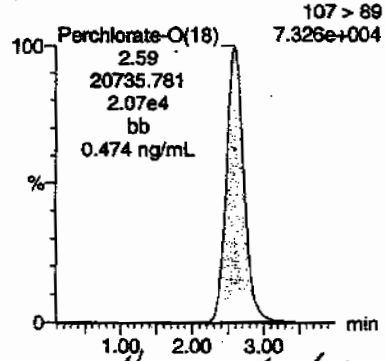

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL090706-07CRI	Perchlorate	99 > 83	2.60	2413.991	2413.991	bb			0.0499	99.89	-0.11	1123.0...	3.25
WCL090706-07CRI	Perchlorate-101	101 > 85	2.59	742.717	742.717	bb			0.0477	95.40	-4.60	195.036	
WCL090706-07CRI	Perchlorate-O(18)	107 > 89	2.59	20735.781	20735.781	bb			0.4737	94.74	-5.26	10141....	

500

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WASTE WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
MB

Date Received: 06-JUL-09

GEL Job No (SDG): 09-2536-1

GEL Sample ID: 1201874299

Date Filtered: 06-JUL-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	08-JUL-09 14:01	per0708012a
	Perchlorate Isotope Ratio						1	08-JUL-09 14:01	per0708012a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	08-JUL-09 14:01	per0708012a
	Perchlorate-O(18)			0.467	ug/L		1	08-JUL-09 14:01	per0708012a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708012a
Date: 08-Jul-2009
Time: 14:01:01
ID: 1201874299
Vial: 1:3,A

ILANL | 882496 | LCQ | MB | 1 |

CWW 07-09-09

Perchlorate

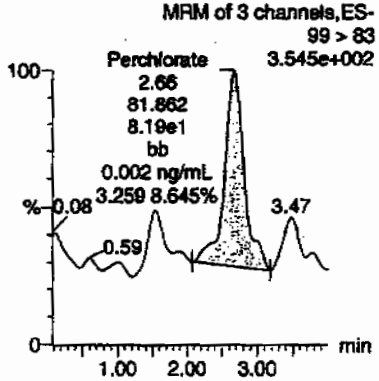

Perchlorate

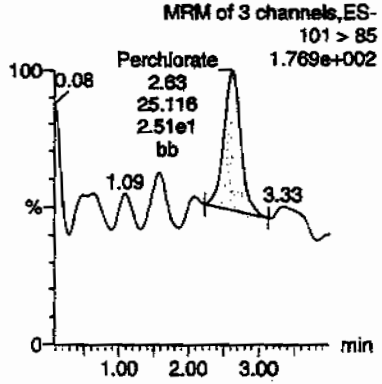

Perchlorate-101

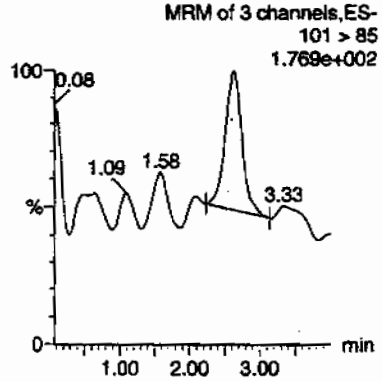

Perchlorate-O(18)

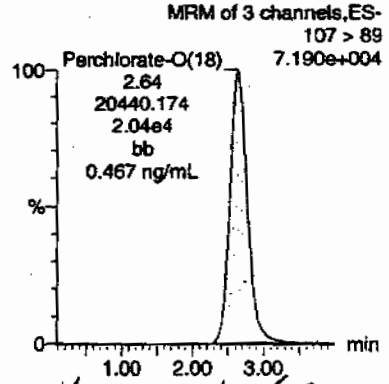

HMM 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874299	Perchlorate	99 > 83	2.66	81.862	81.862	bb			0.0017			13.523	3.26
1201874299	Perchlorate-101	101 > 85	2.63	25.116	25.116	bb			0.0016			21.942	
1201874299	Perchlorate-O(18)	107 > 89	2.64	20440.174	20440.174	bb			0.4670	93.39	-6.61	5747.7...	

503

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WASTE WATER

Extraction Batch ID: 882495

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
LCS

Date Received: 06–JUL–09

GEL Job No (SDG): 09–2536–1

GEL Sample ID: 1201874300

Date Filtered: 06–JUL–09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797–73–0	Perchlorate	.05	.2	0.185	ug/L	J	1	08–JUL–09 14:08	per0708013a
	Perchlorate Isotope Ratio			2.96			1	08–JUL–09 14:08	per0708013a
14797–73–0	Perchlorate–101	.05	.2	0.193	ug/L	J	1	08–JUL–09 14:08	per0708013a
	Perchlorate–O(18)			0.466	ug/L		1	08–JUL–09 14:08	per0708013a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708013a
Date: 08-Jul-2009
Time: 14:08:46
ID: 1201874300
Vial: 1:3,B

|LANL|882496|LZQ|LCS|1|

AWD 07-09-09

Perchlorate

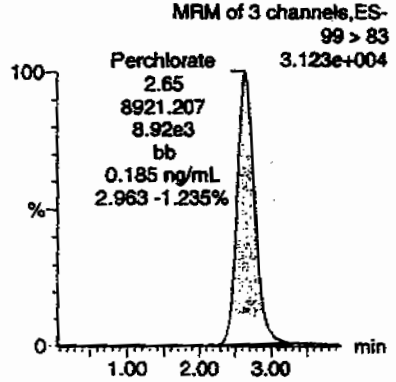

Perchlorate

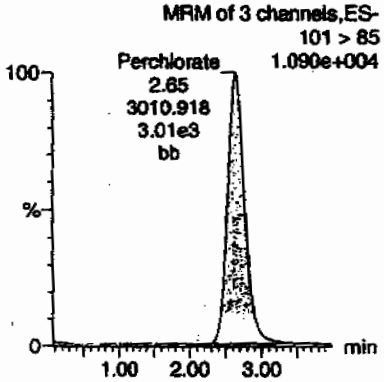

Perchlorate-101

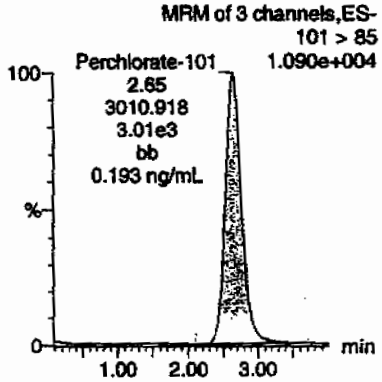

Perchlorate-O(18)

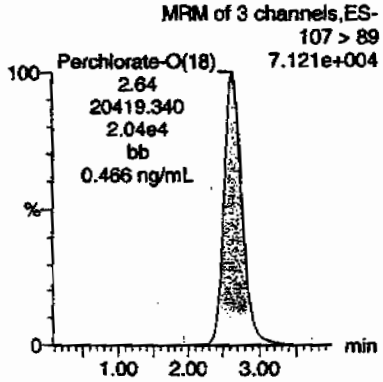

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874300	Perchlorate	99 > 83	2.65	8921.207	8921.207	bb			0.1846	92.29	-7.71	2813.9...	2.96
1201874300	Perchlorate-101	101 > 85	2.65	3010.918	3010.918	bb			0.1934	96.69	-3.31	536.716	
1201874300	Perchlorate-O(18)	107 > 89	2.64	20419.340	20419.340	bb			0.4665	93.30	-6.70	2153.2...	

$\frac{8921.207}{48333.4} = 0.1846$

Hume 07/10/09

505

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 882495 **Verified by:**
Analyst: Jareth Shirley
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1201874299 MB	06-JUL-2009 10:36:36	10	10	1
1201874300 LCS	06-JUL-2009 10:36:36	10	10	1
232662001	06-JUL-2009 10:36:36	10	10	1
1201874303 MS (232662001)	06-JUL-2009 10:36:36	10	10	1
1201874305 MSD (232662001)	06-JUL-2009 10:36:36	10	10	1
232674001	06-JUL-2009 10:36:36	10	10	1
232675001	06-JUL-2009 10:36:36	10	10	1
1201874304 MS (232675001)	06-JUL-2009 10:36:36	10	10	1
1201874306 MSD (232675001)	06-JUL-2009 10:36:36	10	10	1
232742001	06-JUL-2009 10:36:36	10	10	1
232750001	06-JUL-2009 10:36:36	10	10	1
232755001	06-JUL-2009 10:36:36	10	10	1
232757001	06-JUL-2009 10:36:36	10	10	1
232759001	06-JUL-2009 10:36:36	10	10	1
232761001	06-JUL-2009 10:36:36	10	10	1
1201874301 MS (232761001)	06-JUL-2009 10:36:36	10	10	1
1201874302 MSD (232761001)	06-JUL-2009 10:36:36	10	10	1
1201874307 ICS	06-JUL-2009 10:36:36	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1201874307	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
LCS	1201874300	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MS	1201874301	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MS	1201874303	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MS	1201874304	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MSD	1201874302	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MSD	1201874305	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
MSD	1201874306	10 ug/L CCV Second Source	UCL090527-01.3	.2	mL
RGNT	All	500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1133543	10	mL
RGNT	All	O2SI HPLC Grade Water	1141273	10	mL

Comments:

Desalting cartridges used: 090408-1-Ba & 090608-1-H

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 07/08/09
Extr. Injection Volume: 20uL
Sequence Number: per070809a
Initial Calibration Date: 07/08/09

Method: EPA 6850-Modified
Int. Std.: UCL090612-01.1
Mobile Phase Lot#: 1135383, 1141273
Standard-Samp Reagent Lot#:: 1128740

Reviewed BY: Hmm
Date: 07/10/09
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL090706-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0708001a	IPB001	CWW	7/8/2009 12:35			1		USE	B
per0708002a	IPB001	CWW	7/8/2009 12:43			1		USE	B
per0708003a	WCLICAL-01	CWW	7/8/2009 12:51			1		USE	I
per0708004a	WCLICAL-02	CWW	7/8/2009 12:59			1		USE	I
per0708005a	WCLICAL-03	CWW	7/8/2009 13:06			1		USE	I
per0708006a	WCLICAL-04	CWW	7/8/2009 13:14			1		USE	I
per0708007a	WCLICAL-05	CWW	7/8/2009 13:22			1		USE	I
per0708008a	IPB002	CWW	7/8/2009 13:30			1		USE	B
per0708009a	WCLICV	CWW	7/8/2009 13:37			1		USE	C
per0708010a	IPB003	CWW	7/8/2009 13:45			1		USE	B
per0708011a	WCLCRI	CWW	7/8/2009 13:53			1		USE	C
per0708012a	1201874299	CWW	7/8/2009 14:01	882496	VARIOUS	1	LANL	USE	S
per0708013a	1201874300	CWW	7/8/2009 14:08	882496	VARIOUS	1	LANL	USE	S
per0708014a	1201874307	CWW	7/8/2009 14:16	882496	VARIOUS	1	LANL	USE	S
per0708015a	232662001	CWW	7/8/2009 14:24	882496	09-2516	1	LANL	USE	S
per0708016a	1201874303	CWW	7/8/2009 14:32	882496	09-2516	1	LANL	USE	S
per0708017a	1201874305	CWW	7/8/2009 14:39	882496	09-2516	1	LANL	USE	S
per0708018a	232674001	CWW	7/8/2009 14:47	882496	09-2519	1	LANL	USE	S
per0708019a	232675001	CWW	7/8/2009 14:55	882496	09-2522	1	LANL	USE	S
per0708020a	1201874304	CWW	7/8/2009 15:03	882496	09-2522	1	LANL	USE	S
per0708021a	1201874306	CWW	7/8/2009 15:10	882496	09-2522	1	LANL	USE	S
per0708022a	WCLCCV	CWW	7/8/2009 15:18			1		USE	C
per0708023a	IPB004	CWW	7/8/2009 15:26			1		USE	B
per0708024a	WCLCRI	CWW	7/8/2009 15:34			1		USE	C
per0708025a	232742001	CWW	7/8/2009 15:41	882496	09-2525	1	LANL	USE	S
per0708026a	232750001	CWW	7/8/2009 15:49	882496	09-2528	1	LANL	USE	S
per0708027a	232755001	CWW	7/8/2009 15:57	882496	09-2536-1	1	LANL	USE	S
per0708028a	232757001	CWW	7/8/2009 16:05	882496	09-2539	1	LANL	USE	S
per0708029a	232759001	CWW	7/8/2009 16:13	882496	09-2542	1	LANL	USE	S

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per0708030a	232761001	CWW	7/8/2009 16:20	882496	09-2543	1	LANL	USE	S
per0708031a	1201874301	CWW	7/8/2009 16:28	882496	09-2543	1	LANL	USE	S
per0708032a	1201874302	CWW	7/8/2009 16:36	882496	09-2543	1	LANL	USE	S
per0708033a	WCLCCV	CWW	7/8/2009 16:44			1		USE	C
per0708034a	IPB005	CWW	7/8/2009 16:51			1		USE	B
per0708035a	WCLCRI	CWW	7/8/2009 16:59			1		USE	C
per0708036a	1201876313	CWW	7/8/2009 17:07	883299	09-2549	1	LANL	USE	S
per0708037a	1201876314	CWW	7/8/2009 17:15	883299	09-2549	1	LANL	USE	S
per0708038a	1201876317	CWW	7/8/2009 17:22	883299	09-2549	1	LANL	USE	S
per0708039a	232855001	CWW	7/8/2009 17:30	883299	09-2549	1	LANL	USE	S
per0708040a	1201876315	CWW	7/8/2009 17:38	883299	09-2549	1	LANL	USE	S
per0708041a	1201876316	CWW	7/8/2009 17:46	883299	09-2549	1	LANL	USE	S
per0708042a	WCLCCV	CWW	7/8/2009 17:53			1		USE	C
per0708043a	IPB006	CWW	7/8/2009 18:01			1		USE	B
per0708044a	WCLCRI	CWW	7/8/2009 18:09			1		USE	C
per0708045a	1201872342	CWW	7/8/2009 18:17	881646	VARIOUS	1	LANL	USE	S
per0708046a	1201872343	CWW	7/8/2009 18:25	881646	VARIOUS	1	LANL	USE	S
per0708047a	1201872346	CWW	7/8/2009 18:32	881646	VARIOUS	1	LANL	USE	S
per0708048a	232509001	CWW	7/8/2009 18:40	881646	09-2500	1	LANL	DUSE-DL	S
per0708049a	232509002	CWW	7/8/2009 18:48	881646	09-2500	1	LANL	DUSE-RA	S
per0708050a	232509003	CWW	7/8/2009 18:55	881646	09-2500	1	LANL	USE	S
per0708051a	232509004	CWW	7/8/2009 19:03	881646	09-2500	1	LANL	DUSE-DL	S
per0708052a	232509005	CWW	7/8/2009 19:11	881646	09-2500	1	LANL	DUSE-DL	S
per0708053a	232509006	CWW	7/8/2009 19:19	881646	09-2500	1	LANL	DUSE-RA	S
per0708054a	WCLCCV	CWW	7/8/2009 19:26			1		USE	C
per0708055a	IPB007	CWW	7/8/2009 19:34			1		USE	B
per0708056a	WCLCRI	CWW	7/8/2009 19:42			1		USE	C
per0708057a	232582001	CWW	7/8/2009 19:50	881646	09-2508	1	LANL	USE	S
per0708058a	232582002	CWW	7/8/2009 19:58	881646	09-2508	1	LANL	USE	S
per0708059a	232585001	CWW	7/8/2009 20:05	881646	09-2506	1	LANL	USE	S
per0708060a	232585002	CWW	7/8/2009 20:13	881646	09-2506	1	LANL	USE	S
per0708061a	232585003	CWW	7/8/2009 20:21	881646	09-2506	1	LANL	USE	S
per0708062a	232591001	CWW	7/8/2009 20:29	881646	09-2510	1	LANL	USE	S
per0708063a	1201872344	CWW	7/8/2009 20:36	881646	09-2510	1	LANL	USE	S
per0708064a	1201872345	CWW	7/8/2009 20:44	881646	09-2510	1	LANL	USE	S
per0708065a	WCLCCV	CWW	7/8/2009 20:52			1		USE	C
per0708066a	IPB008	CWW	7/8/2009 21:00			1		USE	B

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per0708067a	WCLCRI	CWW	7/8/2009 21:08	1	USE	C

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708016a
Date: 08-Jul-2009
Time: 14:32:00
ID: 1201874303
Vial: 1:3,E

|LANL|882496|LCQ|MS|1|

CWW 07-09-09

Perchlorate

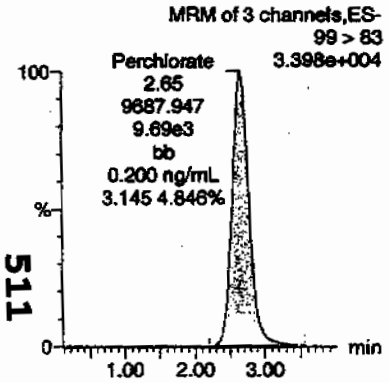

Perchlorate

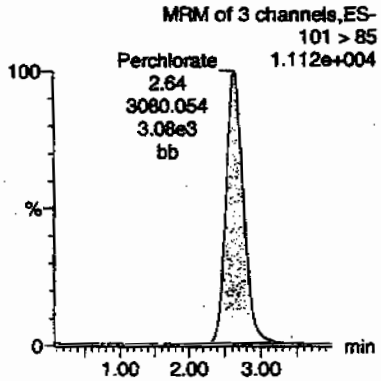

Perchlorate-101

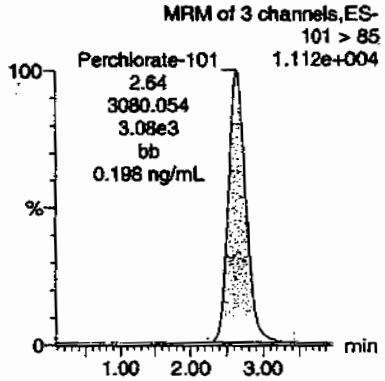

Perchlorate-O(18)

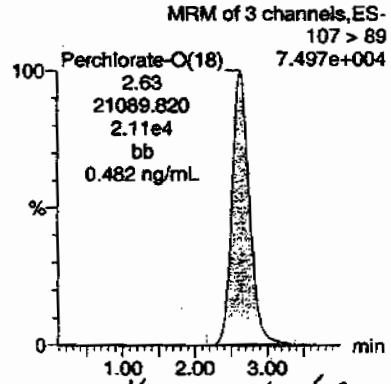

Hmm 07/10/09

511

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874303	Perchlorate	99 > 83	2.65	9687.947	9687.947	bb			0.2004	100.22	0.22	5837.9...	3.15
1201874303	Perchlorate-101	101 > 85	2.64	3080.054	3080.054	bb			0.1978	98.91	-1.09	564.807	
1201874303	Perchlorate-O(18)	107 > 89	2.63	21089.820	21089.820	bb			0.4818	96.36	-3.64	2493.2...	

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per070809a.qld

Last Altered: Thursday, July 09, 2009 8:50:22 AM Eastern Daylight Time
Printed: Thursday, July 09, 2009 9:07:19 AM Eastern Daylight Time

Name: per0708017a
Date: 08-Jul-2009
Time: 14:39:43
ID: 1201874305
Vial: 1:3,F

|LANL| 882496|LZQ|MSD|1|

512

Perchlorate

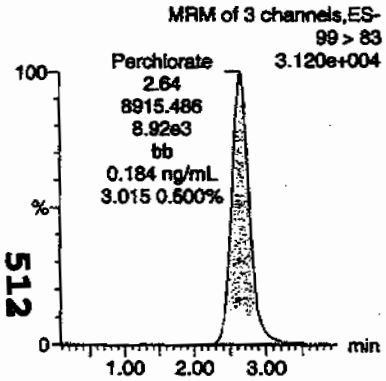

Perchlorate

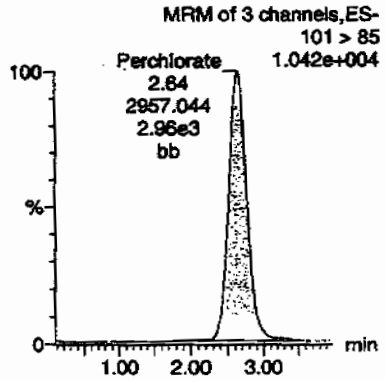

Perchlorate-101

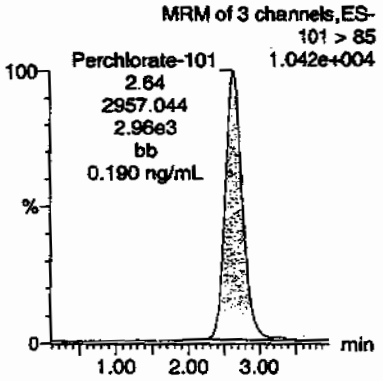

Perchlorate-O(18)

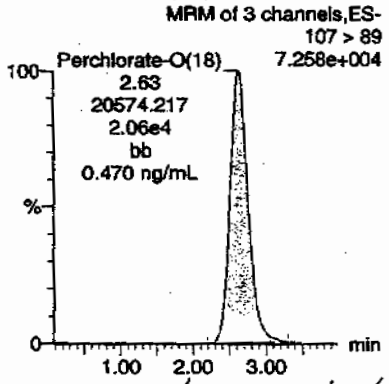

Hmm 07/10/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1201874305	Perchlorate	99 > 83	2.64	8915.486	8915.486	bb			0.1845	92.23	-7.77	1312.3...	3.01
1201874305	Perchlorate-101	101 > 85	2.64	2957.044	2957.044	bb			0.1899	94.96	-5.04	1041.4...	
1201874305	Perchlorate-O(18)	107 > 89	2.63	20574.217	20574.217	bb			0.4700	94.00	-6.00	4647.0...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2536

Sample Analysis

Sample ID	**Client ID**
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201873955	Method Blank (MB) **ICP**
1201873956	Laboratory Control Sample (LCS)
1201873959	232754001(CAMO-09-6615L) Serial Dilution (SD)
1201873957	232754001(CAMO-09-6615D) Sample Duplicate (DUP)
1201873958	232754001(CAMO-09-6615S) Matrix Spike (MS)
1201873960	232754001(CAMO-09-6615SD) Matrix Spike Duplicate (MSD)
1201873991	Method Blank (MB) **ICP-MS**
1201873992	Laboratory Control Sample (LCS)
1201873995	232754001(CAMO-09-6615L) Serial Dilution (SD)
1201873993	232754001(CAMO-09-6615D) Sample Duplicate (DUP)
1201873994	232754001(CAMO-09-6615S) Matrix Spike (MS)
1201873996	232754001(CAMO-09-6615SD) Matrix Spike Duplicate (MSD)
1201875311	Method Blank (MB) **CVAA**
1201875312	Laboratory Control Sample (LCS)
1201875322	232851001(CAMO-09-7145L) Serial Dilution (SD)
1201875313	232851001(CAMO-09-7145D) Sample Duplicate (DUP)
1201875314	232851001(CAMO-09-7145S) Matrix Spike (MS)
1201875323	232851001(CAMO-09-7145SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	882348, 882366 and 882932
Prep Batch :	882347, 882365 and 882926
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232754001 (CAMO-09-6615)-ICP and ICP-MS and 232851001 (CAMO-09-7145)-CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. All applicable elements met the acceptance criteria.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of selenium, as indicated by the "N" qualifier.

MS/MSD Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated matrix spike duplicate (MSD) is evaluated based on acceptance criteria of 20%. The RPD between qualifying elements results in the MS and MSD were within the acceptance limits of 20% with the exception of selenium, as indicated by the "*" qualifier.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements with the exceptions of beryllium and nickel, as indicated by the "*" qualifiers.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: 711505. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Parson **Date:** 7/21/09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2536 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232754001 **BASIS:** Dry Weight **DATE COLLECTED** 30-JUN-09

CLIENT ID: CAMO-09-6615 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 92.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2400000	ug/Kg		7240	21300	21300	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-36-0	Antimony	1070	ug/Kg	U	352	1070	1070	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-38-2	Arsenic	924	ug/kg	J	216	1080	1080	2	MS	RMJ	07/14/09 10:30	090713-2	882366
7440-39-3	Barium	22100	ug/Kg		107	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-41-7	Beryllium	641	ug/kg	*	21.6	108	108	2	MS	RMJ	07/14/09 10:30	090713-2	882366
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-70-2	Calcium	515000	ug/Kg		8520	26600	26600	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-47-3	Chromium	29300	ug/Kg		160	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-48-4	Cobalt	996	ug/Kg		160	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-50-8	Copper	2160	ug/Kg		320	1070	1070	1	P	HSC	07/08/09 23:32	070809A-1	882348
7439-89-6	Iron	8250000	ug/Kg		8520	26600	26600	1	P	HSC	07/08/09 23:32	070809A-1	882348
7439-92-1	Lead	4930	ug/Kg		266	1070	1070	1	P	HSC	07/08/09 23:32	070809A-1	882348
7439-95-4	Magnesium	331000	ug/Kg		9050	32000	32000	1	P	HSC	07/08/09 23:32	070809A-1	882348
7439-96-5	Manganese	276000	ug/Kg		213	1070	1070	1	P	HSC	07/08/09 23:32	070809A-1	882348
7439-97-6	Mercury	12.9	ug/kg	U	4.4	12.9	12.9	1	AV	JXL1	07/16/09 10:40	071609S1-4	882932
7440-02-0	Nickel	2150	ug/kg	*	108	431	431	2	MS	RMJ	07/15/09 00:16	090714-3	882366
7440-09-7	Potassium	294000	ug/Kg		6820	26600	26600	1	P	HSC	07/08/09 23:32	070809A-1	882348
7782-49-2	Selenium	1080	ug/kg	U*N	539	1080	1080	2	MS	RMJ	07/14/09 10:30	090713-2	882366
7440-22-4	Silver	341	ug/Kg	J	107	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-23-5	Sodium	121000	ug/Kg		7460	26600	26600	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-28-0	Thallium	113	ug/kg	J	64.7	216	216	2	MS	RMJ	07/14/09 10:30	090713-2	882366
7440-62-2	Vanadium	4300	ug/Kg		107	533	533	1	P	HSC	07/08/09 23:32	070809A-1	882348
7440-66-6	Zinc	45000	ug/Kg		352	1070	1070	1	P	HSC	07/08/09 23:32	070809A-1	882348

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882348	882347	SW846 3050B	0.506	g	50	mL	07/07/09	BXA1
882366	882365	SW846 3050B	0.5	g	50	mL	07/07/09	BXA1
882932	882926	SW846 7471A Prep	0.5	g	30	mL	07/15/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2536 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232754002 **BASIS:** Dry Weight **DATE COLLECTED** 30-JUN-09

CLIENT ID: CAMO-09-6614 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3100000	ug/Kg		7400	21800	21800	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-36-0	Antimony	1090	ug/Kg	U	359	1090	1090	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-38-2	Arsenic	982	ug/kg	J	217	1090	1090	2	MS	RMJ	07/14/09 11:00	090713-2	882366
7440-39-3	Barium	19900	ug/Kg		109	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-41-7	Beryllium	834	ug/kg	*	21.7	109	109	2	MS	RMJ	07/14/09 11:00	090713-2	882366
7440-43-9	Cadmium	544	ug/Kg	U	109	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-70-2	Calcium	540000	ug/Kg		8710	27200	27200	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-47-3	Chromium	27300	ug/Kg		163	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-48-4	Cobalt	1070	ug/Kg		163	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-50-8	Copper	2690	ug/Kg		327	1090	1090	1	P	HSC	07/09/09 00:08	070809A-1	882348
7439-89-6	Iron	8970000	ug/Kg		8710	27200	27200	1	P	HSC	07/09/09 00:08	070809A-1	882348
7439-92-1	Lead	5500	ug/Kg		272	1090	1090	1	P	HSC	07/09/09 00:08	070809A-1	882348
7439-95-4	Magnesium	495000	ug/Kg		9250	32700	32700	1	P	HSC	07/09/09 00:08	070809A-1	882348
7439-96-5	Manganese	247000	ug/Kg		218	1090	1090	1	P	HSC	07/09/09 00:08	070809A-1	882348
7439-97-6	Mercury	12.9	ug/kg	U	4.37	12.9	12.9	1	AV	JXL1	07/16/09 10:42	071609S1-4	882932
7440-02-0	Nickel	2660	ug/kg	*	109	435	435	2	MS	RMJ	07/15/09 00:36	090714-3	882366
7440-09-7	Potassium	346000	ug/Kg		6970	27200	27200	1	P	HSC	07/09/09 00:08	070809A-1	882348
7782-49-2	Selenium	1090	ug/kg	U*N	543	1090	1090	2	MS	RMJ	07/14/09 11:00	090713-2	882366
7440-22-4	Silver	291	ug/Kg	J	109	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-23-5	Sodium	106000	ug/Kg		7620	27200	27200	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-28-0	Thallium	73.7	ug/kg	J	65.2	217	217	2	MS	RMJ	07/14/09 11:00	090713-2	882366
7440-62-2	Vanadium	5720	ug/Kg		109	544	544	1	P	HSC	07/09/09 00:08	070809A-1	882348
7440-66-6	Zinc	46800	ug/Kg		359	1090	1090	1	P	HSC	07/09/09 00:08	070809A-1	882348

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882348	882347	SW846 3050B	0.509	g	50	mL	07/07/09	BXA1
882366	882365	SW846 3050B	0.51	g	50	mL	07/07/09	BXA1
882932	882926	SW846 7471A Prep	0.517	g	30	mL	07/15/09	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2536 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232754003 **BASIS:** Dry Weight **DATE COLLECTED** 30-JUN-09

CLIENT ID: CAMO-09-6613 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: SOIL **%SOLIDS:** 90.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1600000	ug/Kg		7420	21800	21800	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-36-0	Antimony	1090	ug/Kg	U	360	1090	1090	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-38-2	Arsenic	822	ug/kg	J	219	1100	1100	2	MS	RMJ	07/14/09 11:06	090713-2	882366
7440-39-3	Barium	19600	ug/Kg		109	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-41-7	Beryllium	658	ug/kg	*	21.9	110	110	2	MS	RMJ	07/14/09 11:06	090713-2	882366
7440-43-9	Cadmium	545	ug/Kg	U	109	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-70-2	Calcium	269000	ug/Kg		8720	27300	27300	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-47-3	Chromium	19100	ug/Kg		164	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-48-4	Cobalt	836	ug/Kg		164	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-50-8	Copper	2200	ug/Kg		327	1090	1090	1	P	HSC	07/09/09 00:15	070809A-1	882348
7439-89-6	Iron	8470000	ug/Kg		8720	27300	27300	1	P	HSC	07/09/09 00:15	070809A-1	882348
7439-92-1	Lead	6590	ug/Kg		273	1090	1090	1	P	HSC	07/09/09 00:15	070809A-1	882348
7439-95-4	Magnesium	174000	ug/Kg		9270	32700	32700	1	P	HSC	07/09/09 00:15	070809A-1	882348
7439-96-5	Manganese	411000	ug/Kg		218	1090	1090	1	P	HSC	07/09/09 00:15	070809A-1	882348
7439-97-6	Mercury	12.9	ug/kg	U	4.39	12.9	12.9	1	AV	JXL1	07/16/09 10:48	071609S1-4	882932
7440-02-0	Nickel	1910	ug/kg	*	110	439	439	2	MS	RMJ	07/15/09 00:40	090714-3	882366
7440-09-7	Potassium	227000	ug/Kg		6980	27300	27300	1	P	HSC	07/09/09 00:15	070809A-1	882348
7782-49-2	Selenium	1100	ug/kg	U*N	548	1100	1100	2	MS	RMJ	07/14/09 11:06	090713-2	882366
7440-22-4	Silver	343	ug/Kg	J	109	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-23-5	Sodium	129000	ug/Kg		7630	27300	27300	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-28-0	Thallium	219	ug/kg	U	65.8	219	219	2	MS	RMJ	07/14/09 11:06	090713-2	882366
7440-62-2	Vanadium	4880	ug/Kg		109	545	545	1	P	HSC	07/09/09 00:15	070809A-1	882348
7440-66-6	Zinc	51000	ug/Kg		360	1090	1090	1	P	HSC	07/09/09 00:15	070809A-1	882348

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882348	882347	SW846 3050B	0.508	g	50	mL	07/07/09	BXA1
882366	882365	SW846 3050B	0.505	g	50	mL	07/07/09	BXA1
882932	882926	SW846 7471A Prep	0.515	g	30	mL	07/15/09	TXB3

Quality Control Summary

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Antimony	535	ug/L	500	ug/L	107.1	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Barium	539	ug/L	500	ug/L	107.8	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Cadmium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Chromium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Cobalt	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Copper	527	ug/L	500	ug/L	105.3	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Iron	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Lead	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Magnesium	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Manganese	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Potassium	2510	ug/L	2500	ug/L	100.4	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Silver	256	ug/L	250	ug/L	102.4	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Sodium	2550	ug/L	2500	ug/L	101.9	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	08–JUL–09 10:01	070809A–1
	Arsenic	48.5	ug/L	50	ug/L	96.9	90.0 – 110.0	MS	14–JUL–09 08:14	090713–2
	Beryllium	54.3	ug/L	50	ug/L	108.5	90.0 – 110.0	MS	14–JUL–09 08:14	090713–2
	Selenium	50.6	ug/L	50	ug/L	101.2	90.0 – 110.0	MS	14–JUL–09 08:14	090713–2
	Thallium	50.2	ug/L	50	ug/L	100.5	90.0 – 110.0	MS	14–JUL–09 08:14	090713–2
	Nickel	53.6	ug/L	50	ug/L	107.3	90.0 – 110.0	MS	14–JUL–09 22:36	090714–3
	Mercury	5.1	ug/L	5	ug/L	102.1	90.0 – 110.0	AV	16–JUL–09 09:50	071609S1–4
CCV01										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Antimony	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Barium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Cadmium	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08–JUL–09 11:03	070809A–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Lead	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Manganese	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Potassium	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Sodium	9980	ug/L	10000	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Arsenic	48.5	ug/L	50	ug/L	97	90.0 – 110.0	MS	14-JUL-09 08:44	090713-2
	Beryllium	52.2	ug/L	50	ug/L	104.3	90.0 – 110.0	MS	14-JUL-09 08:44	090713-2
	Selenium	51.7	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	14-JUL-09 08:44	090713-2
	Thallium	50.2	ug/L	50	ug/L	100.5	90.0 – 110.0	MS	14-JUL-09 08:44	090713-2
	Nickel	53.5	ug/L	50	ug/L	106.9	90.0 – 110.0	MS	14-JUL-09 22:56	090714-3
	Mercury	5.23	ug/L	5	ug/L	104.7	80.0 – 120.0	AV	16-JUL-09 09:56	071609S1-4
CCV02										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Antimony	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Cadmium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Chromium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Cobalt	485	ug/L	500	ug/L	97	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Copper	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Lead	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Magnesium	5200	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Manganese	495	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	08–JUL–09 11:24	070809A–1
	Silver	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08–JUL–09 11:24	070809A–1
	Sodium	9940	ug/L	10000	ug/L	99.4	90.0 – 110.0	P	08–JUL–09 11:24	070809A–1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08–JUL–09 11:24	070809A–1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08–JUL–09 11:24	070809A–1
	Arsenic	50.2	ug/L	50	ug/L	100.4	90.0 – 110.0	MS	14–JUL–09 09:37	090713–2
	Beryllium	49.7	ug/L	50	ug/L	99.4	90.0 – 110.0	MS	14–JUL–09 09:37	090713–2
	Selenium	50.9	ug/L	50	ug/L	101.7	90.0 – 110.0	MS	14–JUL–09 09:37	090713–2
	Thallium	48.9	ug/L	50	ug/L	97.7	90.0 – 110.0	MS	14–JUL–09 09:37	090713–2
	Nickel	51	ug/L	50	ug/L	101.9	90.0 – 110.0	MS	14–JUL–09 23:32	090714–3
	Mercury	5.25	ug/L	5	ug/L	105.1	80.0 – 120.0	AV	16–JUL–09 10:20	071609S1–4
CCV03										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Antimony	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Cobalt	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Iron	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Lead	505	ug/L	500	ug/L	101	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Potassium	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Sodium	10300	ug/L	10000	ug/L	102.9	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08–JUL–09 12:37	070809A–1
	Arsenic	49.4	ug/L	50	ug/L	98.8	90.0 – 110.0	MS	14–JUL–09 10:06	090713–2

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Beryllium	49.9	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	14-JUL-09 10:06	090713-2
	Selenium	49.8	ug/L	50	ug/L	99.7	90.0 – 110.0	MS	14-JUL-09 10:06	090713-2
	Thallium	48.7	ug/L	50	ug/L	97.4	90.0 – 110.0	MS	14-JUL-09 10:06	090713-2
	Nickel	48.5	ug/L	50	ug/L	97	90.0 – 110.0	MS	15-JUL-09 00:00	090714-3
	Mercury	5.09	ug/L	5	ug/L	101.8	80.0 – 120.0	AV	16-JUL-09 10:44	071609S1-4
CCV04										
	Aluminum	4910	ug/L	5000	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Antimony	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Iron	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Lead	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Magnesium	5130	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Manganese	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Potassium	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Sodium	10700	ug/L	10000	ug/L	106.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Arsenic	48.1	ug/L	50	ug/L	96.1	90.0 – 110.0	MS	14-JUL-09 11:12	090713-2
	Beryllium	50.2	ug/L	50	ug/L	100.3	90.0 – 110.0	MS	14-JUL-09 11:12	090713-2
	Selenium	49.2	ug/L	50	ug/L	98.3	90.0 – 110.0	MS	14-JUL-09 11:12	090713-2
	Thallium	48.3	ug/L	50	ug/L	96.6	90.0 – 110.0	MS	14-JUL-09 11:12	090713-2
	Nickel	50.6	ug/L	50	ug/L	101.3	90.0 – 110.0	MS	15-JUL-09 00:44	090714-3
	Mercury	5.11	ug/L	5	ug/L	102.2	80.0 – 120.0	AV	16-JUL-09 11:08	071609S1-4

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV05										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Antimony	498	ug/L	500	ug/L	99.7	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Calcium	4900	ug/L	5000	ug/L	98.1	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Iron	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Lead	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	08-JUL-09 13:50	070809A-1
CCV06										
	Aluminum	4900	ug/L	5000	ug/L	97.9	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Antimony	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 14:46	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Silver	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
CCV07										
	Aluminum	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Antimony	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.3	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Lead	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Manganese	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Potassium	5110	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
CCV08										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Antimony	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Iron	4940	ug/L	5000	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Lead	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Silver	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Sodium	9800	ug/L	10000	ug/L	98	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
CCV09										
	Aluminum	4880	ug/L	5000	ug/L	97.5	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Antimony	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Iron	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Lead	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Magnesium	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Manganese	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Silver	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Sodium	9570	ug/L	10000	ug/L	95.8	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Zinc	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV10										
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Antimony	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Barium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Cadmium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Calcium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Chromium	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Cobalt	482	ug/L	500	ug/L	96.4	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Copper	492	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Lead	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Magnesium	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Manganese	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Potassium	5090	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Sodium	10000	ug/L	10000	ug/L	100	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Vanadium	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
CCV11										
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Antimony	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Barium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Calcium	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Iron	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Lead	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Magnesium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Manganese	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Potassium	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Silver	503	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Sodium	9640	ug/L	10000	ug/L	96.5	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Zinc	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
CCV12										
	Aluminum	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Antimony	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Barium	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Cadmium	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Calcium	5000	ug/L	5000	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Chromium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Copper	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Iron	5100	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Lead	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Manganese	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Potassium	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Silver	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Sodium	10300	ug/L	10000	ug/L	102.6	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Vanadium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Zinc	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
CCV13										
	Aluminum	5030	ug/L	5000	ug/L	100.6	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Antimony	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Barium	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Cadmium	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Calcium	5060	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Chromium	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Copper	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Iron	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Lead	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Magnesium	5130	ug/L	5000	ug/L	102.6	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Manganese	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Potassium	5220	ug/L	5000	ug/L	104.4	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Silver	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Sodium	10500	ug/L	10000	ug/L	105.3	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Vanadium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
	Zinc	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 21:42	070809A-1
CCV14										
	Aluminum	4990	ug/L	5000	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Antimony	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Barium	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Cadmium	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Calcium	4870	ug/L	5000	ug/L	97.5	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Chromium	500	ug/L	500	ug/L	100	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Cobalt	491	ug/L	500	ug/L	98.3	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Copper	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Iron	4790	ug/L	5000	ug/L	95.9	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Lead	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Magnesium	4880	ug/L	5000	ug/L	97.5	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Manganese	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Potassium	5160	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Silver	510	ug/L	500	ug/L	102	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Sodium	9110	ug/L	10000	ug/L	91.1	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Vanadium	505	ug/L	500	ug/L	101	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1
	Zinc	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 23:04	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV15										
	Aluminum	5030	ug/L	5000	ug/L	100.6	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Antimony	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Barium	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Cadmium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Calcium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Chromium	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Cobalt	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Copper	505	ug/L	500	ug/L	101	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Iron	5050	ug/L	5000	ug/L	101	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Lead	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Magnesium	5170	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Manganese	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Potassium	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Silver	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Sodium	9700	ug/L	10000	ug/L	97	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Vanadium	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1
	Zinc	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	09-JUL-09 00:22	070809A-1

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 09–2536

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS6,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Arsenic	5.56	ug/L	5	ug/L	111.2	70.0 – 130.0	MS	14–JUL–09 08:26	090713–2
	Beryllium	.506	ug/L	.5	ug/L	101.2	70.0 – 130.0	MS	14–JUL–09 08:26	090713–2
	Selenium	5.37	ug/L	5	ug/L	107.4	70.0 – 130.0	MS	14–JUL–09 08:26	090713–2
	Thallium	.902	ug/L	1	ug/L	90.2	70.0 – 130.0	MS	14–JUL–09 08:26	090713–2
	Nickel	1.94	ug/L	2	ug/L	96.8	70.0 – 130.0	MS	14–JUL–09 22:44	090714–3
	Mercury	.16	ug/L	.2	ug/L	80.2	70.0 – 130.0	AV	16–JUL–09 09:54	071609S1–4
PQL01										
	Potassium	172	ug/L	150	ug/L	114.5	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Barium	5.03	ug/L	5	ug/L	100.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Calcium	198	ug/L	200	ug/L	99	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Manganese	10.4	ug/L	10	ug/L	104.4	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Magnesium	326	ug/L	300	ug/L	108.5	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Lead	11.3	ug/L	10	ug/L	113.1	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Iron	102	ug/L	100	ug/L	102.1	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Copper	9.77	ug/L	10	ug/L	97.7	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Cobalt	5	ug/L	5	ug/L	100	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Chromium	4.84	ug/L	5	ug/L	96.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Cadmium	4.87	ug/L	5	ug/L	97.4	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Antimony	11.1	ug/L	10	ug/L	111.2	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Silver	5.23	ug/L	5	ug/L	104.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Sodium	281	ug/L	300	ug/L	93.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Aluminum	200	ug/L	200	ug/L	99.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Vanadium	5.27	ug/L	5	ug/L	105.3	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Zinc	9.6	ug/L	10	ug/L	96	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 10:08	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 10:08	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 10:08	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 10:08	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 10:08	070809A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 08:20	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 08:20	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 08:20	090713-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 08:20	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 22:40	090714-3
	Mercury	-0.094	+/-.2	J	0.068	0.2	SOL	AV	16-JUL-09 09:52	071609S1-4
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 11:10	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:10	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:10	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Potassium	146.16	+/-250	J	64.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 11:10	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:10	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:10	070809A-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	14-JUL-09 08:49	090713-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	14-JUL-09 08:49	090713-2
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	14-JUL-09 08:49	090713-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-JUL-09 08:49	090713-2
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-JUL-09 23:00	090714-3
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	16-JUL-09 09:58	071609S1-4
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 11:31	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 11:31	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 11:31	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 11:31	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 11:31	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 11:31	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 11:31	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 11:31	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 11:31	070809A–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	14–JUL–09 09:43	090713–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	14–JUL–09 09:43	090713–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	14–JUL–09 09:43	090713–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	14–JUL–09 09:43	090713–2
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	14–JUL–09 23:36	090714–3
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	16–JUL–09 10:22	071609S1–4
CCB03										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 12:44	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 12:44	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 12:44	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 12:44	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 12:44	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 12:44	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 12:44	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 12:44	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 12:44	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 12:44	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 12:44	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 12:44	070809A–1
	Potassium	65.21	+/–250	J	64.0	250	SOL	P	08–JUL–09 12:44	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 12:44	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 12:44	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 12:44	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 12:44	070809A–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	14–JUL–09 10:12	090713–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	14–JUL–09 10:12	090713–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	14–JUL–09 10:12	090713–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	14–JUL–09 10:12	090713–2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	15–JUL–09 00:04	090714–3
	Mercury	–0.076	+/–.2	J	0.068	0.2	SOL	AV	16–JUL–09 10:46	071609S1–4
CCB04										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 13:37	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 13:37	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 13:37	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 13:37	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 13:37	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 13:37	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 13:37	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 13:37	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 13:37	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 13:37	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:37	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 13:37	070809A–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	14–JUL–09 11:17	090713–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	14–JUL–09 11:17	090713–2
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	14–JUL–09 11:17	090713–2
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	14–JUL–09 11:17	090713–2
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	15–JUL–09 00:48	090714–3
	Mercury	–0.101	+/–.2	J	0.068	0.2	SOL	AV	16–JUL–09 11:10	071609S1–4
CCB05										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 13:57	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 13:57	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 13:57	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 13:57	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 13:57	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 13:57	070809A–1
CCB06										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	08–JUL–09 14:53	070809A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 14:53	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 14:53	070809A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	08–JUL–09 14:53	070809A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	08–JUL–09 14:53	070809A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	08–JUL–09 14:53	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	08–JUL–09 14:53	070809A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	08–JUL–09 14:53	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	08–JUL–09 14:53	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	08–JUL–09 14:53	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	08–JUL–09 14:53	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	08–JUL–09 14:53	070809A–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 15:48	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 15:48	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 15:48	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 15:48	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 15:48	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 15:48	070809A-1
CCB08										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 16:50	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 16:50	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 16:50	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 16:50	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 16:50	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 16:50	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 16:50	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 16:50	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 16:50	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 16:50	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 16:50	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 16:50	070809A-1
CCB09										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 17:32	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 17:32	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 17:32	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 17:32	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 17:32	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 17:32	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 17:32	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 17:32	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 17:32	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 17:32	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 17:32	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 17:32	070809A-1
CCB10										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 18:33	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 18:33	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 18:33	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 18:33	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 18:33	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 18:33	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 18:33	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 18:33	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 18:33	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Sodium	-76.61	+/-250	J	70.0	250	SOL	P	08-JUL-09 18:33	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 18:33	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 18:33	070809A-1
CCB11										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 19:36	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 19:36	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 19:36	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 19:36	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 19:36	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 19:36	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 19:36	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 19:36	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 19:36	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 19:36	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 19:36	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 19:36	070809A-1
CCB12										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 20:53	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 20:53	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 20:53	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 20:53	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 20:53	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 20:53	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 20:53	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 20:53	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 20:53	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 20:53	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 20:53	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 20:53	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 20:53	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 20:53	070809A-1
	Sodium	-96.25	+/-250	J	70.0	250	SOL	P	08-JUL-09 20:53	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 20:53	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 20:53	070809A-1
CCB13										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 21:49	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 21:49	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 21:49	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 21:49	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 21:49	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 21:49	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 21:49	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 21:49	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 21:49	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 21:49	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 21:49	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 21:49	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 21:49	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 21:49	070809A-1
	Sodium	-137.0	+/-250	J	70.0	250	SOL	P	08-JUL-09 21:49	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 21:49	070809A-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 21:49	070809A-1
CCB14										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	08-JUL-09 23:11	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 23:11	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 23:11	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 23:11	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 23:11	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 23:11	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	08-JUL-09 23:11	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	08-JUL-09 23:11	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	08-JUL-09 23:11	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	08-JUL-09 23:11	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	08-JUL-09 23:11	070809A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	08-JUL-09 23:11	070809A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	08-JUL-09 23:11	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 23:11	070809A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	08-JUL-09 23:11	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	08-JUL-09 23:11	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	08-JUL-09 23:11	070809A-1
CCB15										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	09-JUL-09 00:29	070809A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	09-JUL-09 00:29	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	09-JUL-09 00:29	070809A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	09-JUL-09 00:29	070809A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	09-JUL-09 00:29	070809A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	09-JUL-09 00:29	070809A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	09-JUL-09 00:29	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	09-JUL-09 00:29	070809A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	09-JUL-09 00:29	070809A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	09-JUL-09 00:29	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	09-JUL-09 00:29	070809A-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2536

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	09–JUL–09 00:29	070809A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	09–JUL–09 00:29	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	09–JUL–09 00:29	070809A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	09–JUL–09 00:29	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	09–JUL–09 00:29	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	09–JUL–09 00:29	070809A–1

METALS
–3b–
PREPARATION BLANK SUMMARY

SDG NO. 09–2536

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201873955								
	Aluminum	6670	ug/Kg	+/–19607.843	U	P	6670	19600
	Antimony	324	ug/Kg	+/–980.392	U	P	324	980
	Barium	98	ug/Kg	+/–490.196	U	P	98	490
	Cadmium	98	ug/Kg	+/–490.196	U	P	98	490
	Calcium	7840	ug/Kg	+/–24509.804	U	P	7840	24500
	Chromium	147	ug/Kg	+/–490.196	U	P	147	490
	Cobalt	147	ug/Kg	+/–490.196	U	P	147	490
	Copper	294	ug/Kg	+/–980.392	U	P	294	980
	Iron	7840	ug/Kg	+/–24509.804	U	P	7840	24500
	Lead	245	ug/Kg	+/–980.392	U	P	245	980
	Magnesium	8330	ug/Kg	+/–29411.765	U	P	8330	29400
	Manganese	196	ug/Kg	+/–980.392	U	P	196	980
	Potassium	6270	ug/Kg	+/–24509.804	U	P	6270	24500
	Silver	98	ug/Kg	+/–490.196	U	P	98	490
	Sodium	6860	ug/Kg	+/–24509.804	U	P	6860	24500
	Vanadium	98	ug/Kg	+/–490.196	U	P	98	490
	Zinc	324	ug/Kg	+/–980.392	U	P	324	980
1201873991								
	Arsenic	195	ug/kg	+/–974.659	U	MS	195	975
	Beryllium	19.5	ug/kg	+/–97.466	U	MS	19.5	97.5
	Nickel	97.5	ug/kg	+/–389.864	U	MS	97.5	390
	Selenium	487	ug/kg	+/–974.659	U	MS	487	975
	Thallium	58.5	ug/kg	+/–194.932	U	MS	58.5	195
1201875311								
	Mercury	–5.8	ug/kg	+/–11.45	J	AV	3.89	11.5

METALS
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Interference Check Sample

SDG No: 09-2536

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Antimony	0.994	ug/L					08-JUL-09 10:22	070809A-1
	Barium	1.28	ug/L					08-JUL-09 10:22	070809A-1
	Cadmium	-1.01	ug/L					08-JUL-09 10:22	070809A-1
	Calcium	470000	ug/L	500000	ug/L	93.9	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Chromium	0.679	ug/L					08-JUL-09 10:22	070809A-1
	Cobalt	-1.77	ug/L					08-JUL-09 10:22	070809A-1
	Copper	4.61	ug/L					08-JUL-09 10:22	070809A-1
	Iron	185000	ug/L	200000	ug/L	92.3	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Lead	-1.9	ug/L					08-JUL-09 10:22	070809A-1
	Magnesium	493000	ug/L	500000	ug/L	98.6	80.0 - 120.0	08-JUL-09 10:22	070809A-1
	Manganese	11.9	ug/L					08-JUL-09 10:22	070809A-1
	Potassium	0.032	ug/L					08-JUL-09 10:22	070809A-1
	Silver	1.27	ug/L					08-JUL-09 10:22	070809A-1
	Sodium	-23.6	ug/L					08-JUL-09 10:22	070809A-1
	Vanadium	-2.21	ug/L					08-JUL-09 10:22	070809A-1
	Zinc	-8.84	ug/L					08-JUL-09 10:22	070809A-1
ICSAB01									
	Aluminum	513000	ug/L	500000	ug/L	103	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Antimony	568	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Barium	500	ug/L	500	ug/L	100	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cadmium	462	ug/L	500	ug/L	92.4	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Calcium	471000	ug/L	500000	ug/L	94.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Chromium	483	ug/L	500	ug/L	96.5	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Cobalt	456	ug/L	500	ug/L	91.3	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Copper	571	ug/L	500	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Iron	184000	ug/L	200000	ug/L	91.9	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Lead	475	ug/L	500	ug/L	95	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Magnesium	494000	ug/L	500000	ug/L	98.8	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
–4–
Interference Check Sample

SDG No: 09–2536

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	494	ug/L	500	ug/L	98.7	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Potassium	5890	ug/L	5000	ug/L	118	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Silver	284	ug/L	250	ug/L	114	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Sodium	5600	ug/L	5000	ug/L	112	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Vanadium	523	ug/L	500	ug/L	105	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Zinc	491	ug/L	500	ug/L	98.2	80.0 – 120.0	08–JUL–09 10:29	070809A–1

METALS
–4–
Interference Check Sample

SDG No: 09–2536

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	0.087	ug/L					14–JUL–09 08:32	090713–2
	Beryllium	0.078	ug/L					14–JUL–09 08:32	090713–2
	Selenium	–0.59	ug/L					14–JUL–09 08:32	090713–2
	Thallium	–0.048	ug/L					14–JUL–09 08:32	090713–2
ICSAB01									
	Arsenic	21.0	ug/L	20	ug/L	105	80.0 – 120.0	14–JUL–09 08:38	090713–2
	Beryllium	21.1	ug/L	20	ug/L	106	80.0 – 120.0	14–JUL–09 08:38	090713–2
	Selenium	21.1	ug/L	20	ug/L	105	80.0 – 120.0	14–JUL–09 08:38	090713–2
	Thallium	17.9	ug/L	20	ug/L	89.5	80.0 – 120.0	14–JUL–09 08:38	090713–2

METALS
–4–
Interference Check Sample

SDG No: 09–2536

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Nickel	4.25	ug/L					14–JUL–09 22:48	090714–3
ICSAB01									
	Nickel	22.7	ug/L	22.1	ug/L	103	80.0 – 120.0	14–JUL–09 22:52	090714–3

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2536 **Client ID** CAMO-09-6615S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 92.8

Sample ID: 232754001 **Spike ID:** 1201873958

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		3850000		2400000		529000	274	N/A	P
Antimony	ug/Kg	75-125	51500		352	U	52900	97.3		P
Barium	ug/Kg	75-125	70900		22100		52900	92.2		P
Cadmium	ug/Kg	75-125	49600		107	U	52900	93.6		P
Calcium	ug/Kg	75-125	980000		515000		529000	87.8		P
Chromium	ug/Kg	75-125	79600		29300		52900	95.1		P
Cobalt	ug/Kg	75-125	48100		996		52900	88.9		P
Copper	ug/Kg	75-125	54600		2160		52900	99.1		P
Iron	ug/Kg		9260000		8250000		529000	191	N/A	P
Lead	ug/Kg	75-125	55600		4930		52900	95.8		P
Magnesium	ug/Kg	75-125	903000		331000		529000	108		P
Manganese	ug/Kg		332000		276000		52900	107	N/A	P
Potassium	ug/Kg	75-125	880000		294000		529000	111		P
Silver	ug/Kg	75-125	50800		341	J	52900	95.3		P
Sodium	ug/Kg	75-125	622000		121000		529000	94.6		P
Vanadium	ug/Kg	75-125	54100		4300		52900	94		P
Zinc	ug/Kg	75-125	95600		45000		52900	95.5		P

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2536 **Client ID** CAMO-09-6615SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 92.8

Sample ID: 232754001 **Spike ID:** 1201873960

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Sodium	ug/Kg	75-125	632000		121000		528000	96.6		P
Vanadium	ug/Kg	75-125	55100		4300		52800	96.1		P
Zinc	ug/Kg	75-125	100000		45000		52800	104		P
Aluminum	ug/Kg		3900000		2400000		528000	285	N/A	P
Antimony	ug/Kg	75-125	51700		352	U	52800	97.9		P
Barium	ug/Kg	75-125	73600		22100		52800	97.6		P
Cadmium	ug/Kg	75-125	50600		107	U	52800	95.7		P
Calcium	ug/Kg	75-125	972000		515000		528000	86.5		P
Chromium	ug/Kg	75-125	79400		29300		52800	94.8		P
Cobalt	ug/Kg	75-125	48800		996		52800	90.5		P
Copper	ug/Kg	75-125	56100		2160		52800	102		P
Iron	ug/Kg		8980000		8250000		528000	139	N/A	P
Lead	ug/Kg	75-125	57300		4930		52800	99		P
Magnesium	ug/Kg	75-125	905000		331000		528000	109		P
Manganese	ug/Kg		357000		276000		52800	154	N/A	P
Potassium	ug/Kg	75-125	898000		294000		528000	114		P
Silver	ug/Kg	75-125	51800		341	J	52800	97.4		P

METALS
–5a–
Matrix Spike Summary

SDG NO. 09–2536 **Client ID** CAMO–09–6615S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 92.8

Sample ID: 232754001 **Spike ID:** 1201873994

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75–125	8940		924	J	8620	93		MS
Beryllium	ug/kg	75–125	5760		641		5390	95		MS
Nickel	ug/kg	75–125	7290		2150		5390	95.3		MS
Selenium	ug/kg	75–125	2280		539	U	2160	91.9		MS
Thallium	ug/kg	75–125	9520		113	J	10800	87.3		MS

METALS
–5a–
Matrix Spike Duplicate Summary

SDG NO. 09–2536 **Client ID** CAMO–09–6615SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 92.8

Sample ID: 232754001 **Spike ID:** 1201873996

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/kg	75–125	7980		924	J	8500	83		MS
Beryllium	ug/kg	75–125	5230		641		5320	86.3		MS
Nickel	ug/kg	75–125	6570		2150		5320	83.2		MS
Selenium	ug/kg	75–125	1740		539	U	2130	67.9	N	MS
Thallium	ug/kg	75–125	8800		113	J	10600	81.7		MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2536 **Client ID** CAMO-09-7145S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 86

Sample ID: 232851001 **Spike ID:** 1201875314

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	155		4.16	U	128	118		AV

METALS
-5a-
Matrix Spike Duplicate Summary

SDG NO. 09-2536 **Client ID** CAMO-09-7145SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 86

Sample ID: 232851001 **Spike ID:** 1201875323

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	139		4.16	U	119	113		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2536

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–6615D

Sample ID: 232754001 **Duplicate ID:** 1201873957 **Percent Solids for Dup:** 92.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	2400000		2430000		1.54		P
Antimony	ug/Kg		352	U	347	U			P
Barium	ug/Kg	+/–20%	22100		20200		9.02		P
Cadmium	ug/Kg		107	U	105	U			P
Calcium	ug/Kg	+/–20%	515000		486000		5.92		P
Chromium	ug/Kg	+/–20%	29300		27200		7.14		P
Cobalt	ug/Kg	+/–526	996		977		1.9		P
Copper	ug/Kg	+/–1050	2160		2370		9.57		P
Iron	ug/Kg	+/–20%	8250000		8120000		1.54		P
Lead	ug/Kg	+/–1050	4930		5260		6.42		P
Magnesium	ug/Kg	+/–20%	331000		330000		.282		P
Manganese	ug/Kg	+/–20%	276000		270000		1.84		P
Potassium	ug/Kg	+/–20%	294000		288000		1.97		P
Silver	ug/Kg	+/–526	341	J	343	J	.493		P
Sodium	ug/Kg	+/–26300	121000		127000		4.57		P
Vanadium	ug/Kg	+/–20%	4300		4120		4.1		P
Zinc	ug/Kg	+/–20%	45000		45400		.916		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2536

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–6615SD

Sample ID: 1201873958 **Duplicate ID:** 1201873960 **Percent Solids for Dup:** 92.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	3850000		3900000		1.37		P
Antimony	ug/Kg	+/–20	51500		51700		.392		P
Barium	ug/Kg	+/–20	70900		73600		3.82		P
Cadmium	ug/Kg	+/–20	49600		50600		1.99		P
Calcium	ug/Kg	+/–20	980000		972000		.789		P
Chromium	ug/Kg	+/–20	79600		79400		.301		P
Cobalt	ug/Kg	+/–20	48100		48800		1.5		P
Copper	ug/Kg	+/–20	54600		56100		2.62		P
Iron	ug/Kg	+/–20	9260000		8980000		3.02		P
Lead	ug/Kg	+/–20	55600		57300		2.89		P
Magnesium	ug/Kg	+/–20	903000		905000		.183		P
Manganese	ug/Kg	+/–20	332000		357000		7.19		P
Potassium	ug/Kg	+/–20	880000		898000		2.03		P
Silver	ug/Kg	+/–20	50800		51800		1.99		P
Sodium	ug/Kg	+/–20	622000		632000		1.48		P
Vanadium	ug/Kg	+/–20	54100		55100		1.81		P
Zinc	ug/Kg	+/–20	95600		100000		4.67		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2536

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–6615D

Sample ID: 232754001 **Duplicate ID:** 1201873993 **Percent Solids for Dup:** 92.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/–1040	924	J	1520		48.5		MS
Beryllium	ug/kg	+/–20%	641		1210		61.6	*	MS
Nickel	ug/kg	+/–20%	2150		4360		67.8	*	MS
Selenium	ug/kg		539	U	547	J	200		MS
Thallium	ug/kg	+/–209	113	J	106	J	6.45		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2536

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–6615SD

Sample ID: 1201873994 **Duplicate ID:** 1201873996 **Percent Solids for Dup:** 92.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/kg	+/–20	8940		7980		11.4		MS
Beryllium	ug/kg	+/–20	5760		5230		9.65		MS
Nickel	ug/kg	+/–20	7290		6570		10.4		MS
Selenium	ug/kg	+/–20	2280		1740		26.8	*	MS
Thallium	ug/kg	+/–20	9520		8800		7.85		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2536

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–7145D

Sample ID: 232851001 **Duplicate ID:** 1201875313 **Percent Solids for Dup:** 86

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg		4.16	U	4.9	J	200		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2536

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** CAMO–09–7145SD

Sample ID: 1201875314 **Duplicate ID:** 1201875323 **Percent Solids for Dup:** 86

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/–20	155		139		10.9		AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2536

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873956								
	Chromium	ug/Kg	84000	70200		83.6	66.6-116.5	P
	Cobalt	ug/Kg	83000	72300		87.1	79-113.9	P
	Copper	ug/Kg	105000	94600		90.1	77.6-112	P
	Iron	ug/Kg	20000000	17000000		85.1	51.5-145.5	P
	Lead	ug/Kg	161000	147000		91.2	83.1-114.7	P
	Magnesium	ug/Kg	2980000	2570000		86.2	81-114.3	P
	Manganese	ug/Kg	398000	330000		82.8	76.6-106.6	P
	Potassium	ug/Kg	2390000	2140000		89.7	72.2-111.1	P
	Silver	ug/Kg	133000	118000		88.6	81.7-115.7	P
	Sodium	ug/Kg	614000	479000		78	71.5-109.3	P
	Vanadium	ug/Kg	166000	137000		82.3	65-118.6	P
	Zinc	ug/Kg	195000	177000		90.7	82.8-111.9	P
	Aluminum	ug/Kg	7290000	6600000		90.4	63.5-118	P
	Antimony	ug/Kg	121000	116000		95.5	39.1-132.1	P
	Barium	ug/Kg	475000	415000		87.3	82-110.6	P
	Cadmium	ug/Kg	116000	106000		91.1	77.9-115.2	P
	Calcium	ug/Kg	3720000	3060000		82.2	77.4-111.7	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2536

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873992								
	Beryllium	ug/kg	86400	90400		105	81.2-126.8	MS
	Nickel	ug/kg	101000	109000		108	83.3-121.4	MS
	Selenium	ug/kg	171000	191000		111	80.2-125.9	MS
	Thallium	ug/kg	203000	224000		111	78-123.2	MS
	Arsenic	ug/kg	255000	264000		104	83-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09--2536

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201875312								
	Mercury	ug/kg	5150	5460		106	71.6-128.3	AV

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2536 **Client ID** CAMO-09-6615L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232754001 **Serial Dilution ID:** 1201873959

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	22500		22900		1.56		10	P
Antimony	3.3	U	16.5	U				P
Barium	207		218		5.31		10	P
Cadmium	1	U	5	U				P
Calcium	4840		5250		8.47		10	P
Chromium	275		290		5.27		10	P
Cobalt	9.35		10.3	J	10.2			P
Copper	20.2		19.8	J	2.23			P
Iron	77400		83000		7.24		10	P
Lead	46.3		54.5		17.7			P
Magnesium	3110		3380		8.68			P
Manganese	2590		2790		7.53		10	P
Potassium	2760		2910		5.25			P
Silver	3.2	J	5	U	100			P
Sodium	1140		1060	J	7.02			P
Vanadium	40.3		42.5		5.46			P
Zinc	423		451		6.62		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2536 **Client ID** CAMO-09-6615L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232754001 **Serial Dilution ID:** 1201873995

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	4.29	J	8.2	J	91.1			MS
Beryllium	2.97		2.67		10.3			MS
Nickel	9.99		10.3		2.6			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.523	J	1.5	U	100			MS

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 09–2536 **Client ID** CAMO–09–7145L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 232851001 **Serial Dilution ID:** 1201875322

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.068	U	.34	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2536 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882347						
1201873955	MB for batch 882347	MB	S	07-JUL-09	.51g	50mL	
1201873956	LCS for batch 882347	LCS	S	07-JUL-09	.524g	50mL	
1201873958	CAMO-09-6615S	MS	S	07-JUL-09	.509g	50mL	
1201873960	CAMO-09-6615SD	MSD	S	07-JUL-09	.51g	50mL	
1201873957	CAMO-09-6615D	DUP	S	07-JUL-09	.512g	50mL	
232754001	CAMO-09-6615	SAMPLE	S	07-JUL-09	.506g	50mL	
232754002	CAMO-09-6614	SAMPLE	S	07-JUL-09	.509g	50mL	
232754003	CAMO-09-6613	SAMPLE	S	07-JUL-09	.508g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2536 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882365						
1201873991	MB for batch 882365	MB	S	07-JUL-09	.513g	50mL	
1201873992	LCS for batch 882365	LCS	S	07-JUL-09	.525g	50mL	
1201873994	CAMO-09-6615S	MS	S	07-JUL-09	.5g	50mL	
1201873996	CAMO-09-6615SD	MSD	S	07-JUL-09	.507g	50mL	
1201873993	CAMO-09-6615D	DUP	S	07-JUL-09	.516g	50mL	
232754001	CAMO-09-6615	SAMPLE	S	07-JUL-09	.5g	50mL	
232754002	CAMO-09-6614	SAMPLE	S	07-JUL-09	.51g	50mL	
232754003	CAMO-09-6613	SAMPLE	S	07-JUL-09	.505g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2536 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882926						
1201875311	MB for batch 882926	MB	S	15-JUL-09	.524g	30mL	
1201875312	LCS for batch 882926	LCS	S	15-JUL-09	.206g	30mL	
1201875314	CAMO-09-7145S	MS	S	15-JUL-09	.545g	30mL	
1201875323	CAMO-09-7145SD	MSD	S	15-JUL-09	.586g	30mL	
1201875313	CAMO-09-7145D	DUP	S	15-JUL-09	.536g	30mL	
232754001	CAMO-09-6615	SAMPLE	S	15-JUL-09	.5g	30mL	
232754002	CAMO-09-6614	SAMPLE	S	15-JUL-09	.517g	30mL	
232754003	CAMO-09-6613	SAMPLE	S	15-JUL-09	.515g	30mL	

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 14-JUL-09 **End Date:** 14-JUL-09

Client Sdg: 09-2536
Method MS
Data File: 090713-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	07:56			X		X													X			X		
S10	1	08:02			X		X													X			X		
S100	1	08:08			X		X													X			X		
ICV01	1	08:14			X		X													X			X		
ICB01	1	08:20			X		X													X			X		
CRDL01	1	08:26			X		X													X			X		
ICSA01	1	08:32			X		X													X			X		
ICSAB01	1	08:38			X		X													X			X		
CCV01	1	08:44			X		X													X			X		
CCB01	1	08:49			X		X													X			X		
ZZZZZZ	2	08:55																							
ZZZZZZ	40	09:01																							
ZZZZZZ	2	09:07																							
ZZZZZZ	2	09:13																							
ZZZZZZ	2	09:19																							
ZZZZZZ	2	09:25																							
ZZZZZZ	10	09:31																							
CCV02	1	09:37			X		X													X			X		
CCB02	1	09:43			X		X													X			X		
ZZZZZZ	2	09:49																							
ZZZZZZ	2	09:54																							
ZZZZZZ	2	10:00																							
CCV03	1	10:06			X		X													X			X		
CCB03	1	10:12			X		X													X			X		
1201873991	2	10:18			X		X													X			X		
1201873992	40	10:24			X		X													X			X		
232754001	2	10:30			X		X													X			X		
1201873993	2	10:36			X		X													X			X		
1201873994	2	10:42			X		X													X			X		
1201873996	2	10:48			X		X													X			X		
1201873995	10	10:54			X		X													X			X		
232754002	2	11:00			X		X													X			X		
232754003	2	11:06			X		X													X			X		
CCV04	1	11:12			X		X													X			X		
CCB04	1	11:17			X		X													X			X		

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 14-JUL-09 **End Date:** 15-JUL-09

Client Sdg: 09-2536
Method MS
Data File: 090714-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	22:24																X							
S10	1	22:28																X							
S100	1	22:32																X							
ICV01	1	22:36																X							
ICB01	1	22:40																X							
CRDL01	1	22:44																X							
ICSA01	1	22:48																X							
ICSAB01	1	22:52																X							
CCV01	1	22:56																X							
CCB01	1	23:00																X							
ZZZZZZ	2	23:04																							
ZZZZZZ	40	23:08																							
ZZZZZZ	2	23:12																							
ZZZZZZ	2	23:16																							
ZZZZZZ	2	23:20																							
ZZZZZZ	2	23:24																							
ZZZZZZ	2	23:28																							
CCV02	1	23:32																X							
CCB02	1	23:36																X							
ZZZZZZ	2	23:40																							
ZZZZZZ	2	23:44																							
ZZZZZZ	2	23:48																							
ZZZZZZ	2	23:52																							
ZZZZZZ	10	23:56																							
CCV03	1	00:00																X							
CCB03	1	00:04																X							
1201873991	2	00:08																X							
1201873992	40	00:12																X							
232754001	2	00:16																X							
1201873993	2	00:20																X							
1201873994	2	00:24																X							
1201873996	2	00:28																X							
1201873995	10	00:32																X							
232754002	2	00:36																X							
232754003	2	00:40																X							
CCV04	1	00:44																X							
CCB04	1	00:48																X							

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 08–JUL–09 **End Date:** 09–JUL–09

Client Sdg: 09–2536
Method P
Data File: 070809A–1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S0.1	1	09:35		X		X		X		X	X	X		X		X			X		X			X	X
S0.5	1	09:41	X	X		X		X	X	X	X	X		X	X	X			X		X			X	X
SCAL	1	09:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
S10	1	09:55	X						X				X		X							X			
ICV01	1	10:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICB01	1	10:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
PQL01	1	10:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSA01	1	10:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ICSAB01	1	10:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR01	1	10:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR02	1	10:40	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	10:47																							
ZZZZZZ	1	10:54																							
CCV01	1	11:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB01	1	11:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
LR03	1	11:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV02	1	11:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB02	1	11:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	11:42																							
ZZZZZZ	2	11:49																							
ZZZZZZ	1	11:56																							
ZZZZZZ	1	12:03																							
ZZZZZZ	1	12:10																							
ZZZZZZ	1	12:17																							
ZZZZZZ	5	12:23																							
ZZZZZZ	1	12:30																							
CCV03	1	12:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB03	1	12:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	5	12:49																							
ZZZZZZ	5	12:56																							
ZZZZZZ	5	13:03																							
ZZZZZZ	5	13:10																							
ZZZZZZ	25	13:16																							
ZZZZZZ	5	13:23																							
CCV04	1	13:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB04	1	13:37	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV05	1	13:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB05	1	13:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	14:04																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	2	14:11																							
ZZZZZZ	1	14:18																							
ZZZZZZ	1	14:25																							
ZZZZZZ	1	14:32																							
ZZZZZZ	1	14:39																							
CCV06	1	14:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB06	1	14:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	15:00																							
ZZZZZZ	1	15:07																							
ZZZZZZ	1	15:14																							
ZZZZZZ	1	15:22																							
ZZZZZZ	1	15:28																							
ZZZZZZ	5	15:34																							
CCV07	1	15:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB07	1	15:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	15:55																							
ZZZZZZ	2	16:02																							
ZZZZZZ	1	16:09																							
ZZZZZZ	1	16:16																							
ZZZZZZ	1	16:23																							
ZZZZZZ	1	16:29																							
ZZZZZZ	5	16:36																							
CCV08	1	16:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB08	1	16:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	16:57																							
ZZZZZZ	1	17:04																							
ZZZZZZ	1	17:11																							
ZZZZZZ	1	17:18																							
CCV09	1	17:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB09	1	17:32	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	17:39																							
ZZZZZZ	2	17:46																							
ZZZZZZ	1	17:53																							
ZZZZZZ	1	18:00																							
ZZZZZZ	1	18:07																							
ZZZZZZ	1	18:13																							
ZZZZZZ	5	18:20																							
CCV10	1	18:26	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB10	1	18:33	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	18:40																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	18:47																							
ZZZZZZ	1	18:54																							
ZZZZZZ	1	19:01																							
ZZZZZZ	1	19:08																							
ZZZZZZ	1	19:16																							
ZZZZZZ	1	19:22																							
CCV11	1	19:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB11	1	19:36	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	19:43																							
ZZZZZZ	1	19:50																							
ZZZZZZ	1	19:57																							
ZZZZZZ	1	20:04																							
ZZZZZZ	1	20:11																							
ZZZZZZ	1	20:18																							
ZZZZZZ	1	20:25																							
ZZZZZZ	5	20:32																							
ZZZZZZ	5	20:39																							
CCV12	1	20:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB12	1	20:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	21:00																							
ZZZZZZ	1	21:07																							
ZZZZZZ	1	21:14																							
ZZZZZZ	1	21:21																							
ZZZZZZ	1	21:28																							
ZZZZZZ	5	21:35																							
CCV13	1	21:42	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB13	1	21:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
ZZZZZZ	1	21:56																							
ZZZZZZ	2	22:03																							
ZZZZZZ	1	22:09																							
ZZZZZZ	1	22:17																							
ZZZZZZ	1	22:24																							
ZZZZZZ	1	22:30																							
ZZZZZZ	5	22:36																							
ZZZZZZ	1	22:43																							
ZZZZZZ	1	22:50																							
ZZZZZZ	1	22:57																							
CCV14	1	23:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB14	1	23:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873955	1	23:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
1201873956	2	23:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232754001	1	23:32	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873957	1	23:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873958	1	23:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873960	1	23:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
1201873959	5	00:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232754002	1	00:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
232754003	1	00:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCV15	1	00:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X
CCB15	1	00:29	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X		X	X

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: MER536
Start Date: 16–JUL–09 **End Date:** 16–JUL–09

Client Sdg: 09–2536
Method AV
Data File: 071609S1–4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:38															X								
S0.2	1	09:40															X								
S0.5	1	09:42															X								
S2.0	1	09:44															X								
S5.0	1	09:46															X								
S10	1	09:48															X								
ICV01	1	09:50															X								
ICB01	1	09:52															X								
CRDL01	1	09:54															X								
CCV01	1	09:56															X								
CCB01	1	09:58															X								
ZZZZZZ	1	10:00																							
ZZZZZZ	10	10:02																							
ZZZZZZ	1	10:04																							
ZZZZZZ	1	10:06																							
ZZZZZZ	1	10:09																							
ZZZZZZ	1	10:11																							
ZZZZZZ	5	10:12																							
1201875311	1	10:14															X								
1201875312	10	10:16															X								
ZZZZZZ	1	10:18																							
CCV02	1	10:20															X								
CCB02	1	10:22															X								
ZZZZZZ	1	10:24																							
ZZZZZZ	1	10:26																							
ZZZZZZ	1	10:28																							
ZZZZZZ	1	10:30																							
ZZZZZZ	1	10:32																							
ZZZZZZ	1	10:34																							
ZZZZZZ	1	10:36																							
ZZZZZZ	1	10:38																							
232754001	1	10:40															X								
232754002	1	10:42															X								
CCV03	1	10:44															X								
CCB03	1	10:46															X								
232754003	1	10:48															X								
ZZZZZZ	1	10:50																							
ZZZZZZ	1	10:52																							
ZZZZZZ	1	10:54																							
ZZZZZZ	1	10:56																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	10:58																							
1201875313	1	11:00														X									
1201875314	1	11:02														X									
1201875323	1	11:04														X									
1201875322	5	11:06														X									
CCV04	1	11:08														X									
CCB04	1	11:10														X									

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2536

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	2
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2536

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15-JUN-09

	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
MERCURY				
SOLID	Mercury		0.068	.2

METALS
–10–
Instrument Detection Limits

SDG NO. 09–2536

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01–JUL–09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536
Effective Dates: 01-MAY-09

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2536

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS6

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01-MAY-09
Antimony	20	250	ug/L	01-MAY-09
Arsenic	20	1000	ug/L	01-MAY-09
Barium	20	2500	ug/L	01-MAY-09
Beryllium	20	1000	ug/L	01-MAY-09
Cadmium	20	1000	ug/L	01-MAY-09
Calcium	20	50000	ug/L	01-MAY-09
Chromium	20	1000	ug/L	01-MAY-09
Cobalt	20	1000	ug/L	01-MAY-09
Copper	20	1000	ug/L	01-MAY-09
Iron	20	50000	ug/L	01-MAY-09
Lead	20	5000	ug/L	01-MAY-09
Magnesium	20	50000	ug/L	01-MAY-09
Manganese	20	1000	ug/L	01-MAY-09
Nickel	20	1000	ug/L	01-MAY-09
Potassium	20	50000	ug/L	01-MAY-09
Selenium	20	500	ug/L	01-MAY-09
Silver	20	250	ug/L	01-MAY-09
Sodium	20	50000	ug/L	01-MAY-09
Thallium	20	500	ug/L	01-MAY-09
Vanadium	20	100	ug/L	01-MAY-09
Zinc	20	2500	ug/L	01-MAY-09

METALS
–12–
Linear Ranges

SDG NO. 09–2536

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01–MAY–09
Antimony	20	10000	ug/L	01–MAY–09
Arsenic	20	10000	ug/L	01–MAY–09
Barium	20	15000	ug/L	01–MAY–09
Beryllium	20	3000	ug/L	01–MAY–09
Cadmium	20	10000	ug/L	01–MAY–09
Calcium	20	500000	ug/L	01–MAY–09
Chromium	20	25000	ug/L	01–MAY–09
Cobalt	20	10000	ug/L	01–MAY–09
Copper	20	20000	ug/L	01–MAY–09
Iron	20	500000	ug/L	01–MAY–09
Lead	20	25000	ug/L	01–MAY–09
Magnesium	20	500000	ug/L	01–MAY–09
Manganese	20	10000	ug/L	01–MAY–09
Nickel	20	10000	ug/L	01–MAY–09
Potassium	20	300000	ug/L	01–MAY–09
Selenium	20	10000	ug/L	01–MAY–09
Silver	20	1000	ug/L	01–MAY–09
Sodium	20	500000	ug/L	01–MAY–09
Thallium	20	10000	ug/L	01–MAY–09
Vanadium	20	10000	ug/L	01–MAY–09
Zinc	20	15000	ug/L	01–MAY–09

Raw Data

Method: Hg_ReAlign
Result: 071709

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1

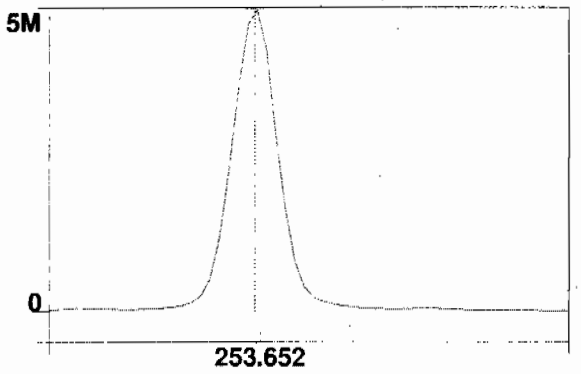

Intensity: 5068618.5 cps
Conc:

1

Reprocessing Begun
Logged In Analyst: Optima3 Technique: ICP Continuous

Results Data Set (original): 070809
Results Library (original): C:\pe\Optima3\Results\Results.mdb
Results Data Set (reprocessed): 070809A
Results Library (reprocessed): C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX Method Last Saved: 7/8/2009 11:38:58
IEC File: 070309.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 8
Sample ID: S0 Date Collected: 7/8/2009 09:28:56
Analyst: Data Type: Reprocessed on 7/8/2009 11:40:03
Logged In Analyst (Original) : Optima3
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1059810.6	1059810.6	99.899	%	09:32:05
1	Sc Radial	5668.6	5668.6	102	%	09:30:49
1	Y 371.029	851543.7	851543.7	99.804	%	09:32:05
1	Y RADIAL	4889.8	4889.8	101.5	%	09:30:49
1	Ag 328.068†	593.9	594.5	[0.00]	ug/L	09:32:10

1	Al 396.153Radial†	-88.0	-86.4	[0.00]	ug/L	09:30:49
1	As 188.979†	-33.0	-33.0	[0.00]	ug/L	09:32:31
1	B 249.677†	-395.5	-395.9	[0.00]	ug/L	09:32:31
1	Ba 233.527†	22.7	22.7	[0.00]	ug/L	09:32:31
1	Be 313.107†	-7253.6	-7260.9	[0.00]	ug/L	09:32:10
1	Ca 317.933Radial†	19.9	19.6	[0.00]	ug/L	09:31:09
1	Cd 226.502†	-262.6	-262.9	[0.00]	ug/L	09:32:31
1	Co 228.616†	-86.2	-86.3	[0.00]	ug/L	09:32:31
1	Cr 267.716†	-35.2	-35.2	[0.00]	ug/L	09:32:31
1	Cu 324.752†	10171.2	10181.5	[0.00]	ug/L	09:32:10
1	Fe 238.204 Radial†	0.0	0.0	[0.00]	ug/L	09:31:09
1	K 766.490 Radial†	1428.1	1402.0	[0.00]	ug/L	09:30:49
1	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:09
1	Mn 257.610†	823.1	823.9	[0.00]	ug/L	09:32:31
1	Mo 202.031†	40.3	40.4	[0.00]	ug/L	09:32:31
1	Na 589.592 Radial†	-169.9	-166.8	[0.00]	ug/L	09:31:09
1	Ni 231.604†	160.5	160.7	[0.00]	ug/L	09:32:31
1	P 214.914†	340.8	341.2	[0.00]	ug/L	09:32:31
1	Pb 220.353†	-23.8	-23.8	[0.00]	ug/L	09:32:31
1	S 181.975 Axial†	74.8	74.8	[0.00]	ug/L	09:32:31
1	Sb 206.836†	39.3	39.4	[0.00]	ug/L	09:32:31
1	Se 196.026†	-21.9	-21.9	[0.00]	ug/L	09:32:31
1	Si 251.611†	569.0	569.6	[0.00]	ug/L	09:32:31
1	Sn 189.927†	4.8	4.8	[0.00]	ug/L	09:32:31
1	Sr 421.552†	-1.3	-1.3	[0.00]	ug/L	09:31:09
1	Ti 334.940†	-1079.9	-1081.0	[0.00]	ug/L	09:32:10
1	Tl 190.801†	-58.7	-58.8	[0.00]	ug/L	09:32:31
1	U 409.014†	-3815.0	-3818.9	[0.00]	ug/L	09:32:05
1	V 292.402†	-1684.3	-1686.1	[0.00]	ug/L	09:32:10
1	Zn 213.857†	1110.4	1111.5	[0.00]	ug/L	09:32:31
1	SiO2†	589.5	590.1	[0.00]	ug/L	09:33:36
2	Sc 361.383	1062041.1	1062041.1	100.11	%	09:32:36
2	Sc Radial	5550.5	5550.5	99.7	%	09:31:14
2	Y 371.029	854666.6	854666.6	100.17	%	09:32:36
2	Y RADIAL	4806.6	4806.6	99.81	%	09:31:14
2	Ag 328.068†	684.5	683.8	[0.00]	ug/L	09:32:41
2	Al 396.153Radial†	-103.1	-103.4	[0.00]	ug/L	09:31:14
2	As 188.979†	-37.3	-37.3	[0.00]	ug/L	09:33:01
2	B 249.677†	-376.8	-376.4	[0.00]	ug/L	09:33:01
2	Ba 233.527†	27.0	27.0	[0.00]	ug/L	09:33:01
2	Be 313.107†	-7342.2	-7334.2	[0.00]	ug/L	09:32:41
2	Ca 317.933Radial†	15.3	15.3	[0.00]	ug/L	09:31:34
2	Cd 226.502†	-297.3	-297.0	[0.00]	ug/L	09:33:01
2	Co 228.616†	-91.0	-90.9	[0.00]	ug/L	09:33:01
2	Cr 267.716†	-33.4	-33.4	[0.00]	ug/L	09:33:01
2	Cu 324.752†	10260.8	10249.6	[0.00]	ug/L	09:32:41
2	Fe 238.204 Radial†	0.2	0.2	[0.00]	ug/L	09:31:34
2	K 766.490 Radial†	1490.1	1493.9	[0.00]	ug/L	09:31:14
2	Mg 279.077 IEC†	-0.2	-0.2	[0.00]	ug/L	09:31:34
2	Mn 257.610†	833.3	832.3	[0.00]	ug/L	09:33:01
2	Mo 202.031†	24.6	24.6	[0.00]	ug/L	09:33:01
2	Na 589.592 Radial†	-169.2	-169.6	[0.00]	ug/L	09:31:34
2	Ni 231.604†	145.4	145.2	[0.00]	ug/L	09:33:01
2	P 214.914†	336.1	335.8	[0.00]	ug/L	09:33:01
2	Pb 220.353†	-39.7	-39.7	[0.00]	ug/L	09:33:01
2	S 181.975 Axial†	63.8	63.7	[0.00]	ug/L	09:33:01
2	Sb 206.836†	49.0	48.9	[0.00]	ug/L	09:33:01
2	Se 196.026†	-25.3	-25.3	[0.00]	ug/L	09:33:01
2	Si 251.611†	569.7	569.1	[0.00]	ug/L	09:33:01
2	Sn 189.927†	5.1	5.0	[0.00]	ug/L	09:33:01
2	Sr 421.552†	11.5	11.5	[0.00]	ug/L	09:31:34
2	Ti 334.940†	-1116.4	-1115.1	[0.00]	ug/L	09:32:41
2	Tl 190.801†	-57.5	-57.4	[0.00]	ug/L	09:33:01
2	U 409.014†	-3873.4	-3869.2	[0.00]	ug/L	09:32:36
2	V 292.402†	-1699.0	-1697.1	[0.00]	ug/L	09:32:41
2	Zn 213.857†	1115.6	1114.3	[0.00]	ug/L	09:33:01
2	SiO2†	600.0	599.4	[0.00]	ug/L	09:33:42
3	Sc 361.383	1060796.0	1060796.0	99.992	%	09:33:06
3	Sc Radial	5475.5	5475.5	98.4	%	09:31:39
3	Y 371.029	853433.0	853433.0	100.03	%	09:33:06
3	Y RADIAL	4750.8	4750.8	98.65	%	09:31:39

3	Ag 328.068†	637.4	637.5	[0.00]	ug/L	09:33:11
3	Al 396.153Radial†	-85.4	-86.8	[0.00]	ug/L	09:31:39
3	As 188.979†	-40.4	-40.4	[0.00]	ug/L	09:33:31
3	B 249.677†	-372.3	-372.3	[0.00]	ug/L	09:33:31
3	Ba 233.527†	23.1	23.1	[0.00]	ug/L	09:33:31
3	Be 313.107†	-7353.0	-7353.6	[0.00]	ug/L	09:33:11
3	Ca 317.933Radial†	15.7	15.9	[0.00]	ug/L	09:31:59
3	Cd 226.502†	-273.1	-273.1	[0.00]	ug/L	09:33:31
3	Co 228.616†	-94.1	-94.1	[0.00]	ug/L	09:33:31
3	Cr 267.716†	-17.2	-17.2	[0.00]	ug/L	09:33:31
3	Cu 324.752†	10141.9	10142.7	[0.00]	ug/L	09:33:11
3	Fe 238.204 Radial†	0.8	0.8	[0.00]	ug/L	09:31:59
3	K 766.490 Radial†	1498.9	1523.4	[0.00]	ug/L	09:31:39
3	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:59
3	Mn 257.610†	824.8	824.9	[0.00]	ug/L	09:33:31
3	Mo 202.031†	30.4	30.4	[0.00]	ug/L	09:33:31
3	Na 589.592 Radial†	-172.0	-174.9	[0.00]	ug/L	09:31:59
3	Ni 231.604†	138.9	138.9	[0.00]	ug/L	09:33:31
3	P 214.914†	333.9	333.9	[0.00]	ug/L	09:33:31
3	Pb 220.353†	-23.7	-23.8	[0.00]	ug/L	09:33:31
3	S 181.975 Axial†	64.9	64.9	[0.00]	ug/L	09:33:31
3	Sb 206.836†	48.0	48.0	[0.00]	ug/L	09:33:31
3	Se 196.026†	-17.7	-17.7	[0.00]	ug/L	09:33:31
3	Si 251.611†	541.6	541.6	[0.00]	ug/L	09:33:31
3	Sn 189.927†	6.6	6.6	[0.00]	ug/L	09:33:31
3	Sr 421.552†	6.1	6.2	[0.00]	ug/L	09:31:59
3	Ti 334.940†	-1131.5	-1131.6	[0.00]	ug/L	09:33:11
3	Tl 190.801†	-67.9	-67.9	[0.00]	ug/L	09:33:31
3	U 409.014†	-3815.9	-3816.2	[0.00]	ug/L	09:33:06
3	V 292.402†	-1575.1	-1575.2	[0.00]	ug/L	09:33:11
3	Zn 213.857†	1141.3	1141.4	[0.00]	ug/L	09:33:31
3	SiO2†	617.5	617.6	[0.00]	ug/L	09:33:47

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1060882.6	1117.80	0.11%	100.00	%
Sc Radial	5564.8	97.34	1.75%	100	%
Y 371.029	853214.5	1572.88	0.18%	100.000	%
Y RADIAL	4815.7	69.94	1.45%	100.0	%
Ag 328.068†	638.6	44.64	6.99%	[0.00]	ug/L
Al 396.153Radial†	-92.2	9.68	10.50%	[0.00]	ug/L
As 188.979†	-36.9	3.70	10.03%	[0.00]	ug/L
B 249.677†	-381.5	12.62	3.31%	[0.00]	ug/L
Ba 233.527†	24.3	2.36	9.74%	[0.00]	ug/L
Be 313.107†	-7316.2	48.87	0.67%	[0.00]	ug/L
Ca 317.933Radial†	16.9	2.30	13.61%	[0.00]	ug/L
Cd 226.502†	-277.6	17.49	6.30%	[0.00]	ug/L
Co 228.616†	-90.4	3.95	4.37%	[0.00]	ug/L
Cr 267.716†	-28.6	9.91	34.66%	[0.00]	ug/L
Cu 324.752†	10191.3	54.11	0.53%	[0.00]	ug/L
Fe 238.204 Radial†	0.3	0.40	120.31%	[0.00]	ug/L
K 766.490 Radial†	1473.1	63.31	4.30%	[0.00]	ug/L
Mg 279.077 IEC†	0.2	0.34	192.62%	[0.00]	ug/L
Mn 257.610†	827.0	4.63	0.56%	[0.00]	ug/L
Mo 202.031†	31.8	8.00	25.18%	[0.00]	ug/L
Na 589.592 Radial†	-170.4	4.09	2.40%	[0.00]	ug/L
Ni 231.604†	148.3	11.22	7.57%	[0.00]	ug/L
P 214.914†	336.9	3.77	1.12%	[0.00]	ug/L
Pb 220.353†	-29.1	9.17	31.52%	[0.00]	ug/L
S 181.975 Axial†	67.8	6.10	8.99%	[0.00]	ug/L
Sb 206.836†	45.4	5.28	11.62%	[0.00]	ug/L
Se 196.026†	-21.6	3.82	17.66%	[0.00]	ug/L
Si 251.611†	560.1	16.01	2.86%	[0.00]	ug/L
Sn 189.927†	5.5	0.95	17.40%	[0.00]	ug/L
Sr 421.552†	5.5	6.43	117.38%	[0.00]	ug/L
Ti 334.940†	-1109.3	25.82	2.33%	[0.00]	ug/L
Tl 190.801†	-61.4	5.70	9.29%	[0.00]	ug/L
U 409.014†	-3834.7	29.86	0.78%	[0.00]	ug/L
V 292.402†	-1652.8	67.41	4.08%	[0.00]	ug/L

Zn 213.857†	1122.4	16.48	1.47%	[0.00]	ug/L
SiO2†	602.4	13.95	2.32%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/8/2009 09:35:57
Data Type: Reprocessed on 7/8/2009 11:40:04

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1043904.5	1043904.5	98.400	%	09:38:07
1	Sc Radial	5586.9	5586.9	100	%	09:37:49
1	Y 371.029	838768.8	838768.8	98.307	%	09:38:07
1	Y RADIAL	4867.7	4867.7	101.1	%	09:37:49
1	Ag 328.068†	25884.2	25666.6	[100]	ug/L	09:38:07
1	As 188.979†	393.4	436.7	[100]	ug/L	09:38:27
1	B 249.677†	5686.4	6160.4	[100]	ug/L	09:38:07
1	Ba 233.527†	20371.1	20678.1	[100]	ug/L	09:38:07
1	Be 313.107†	314654.5	327088.3	[100]	ug/L	09:38:07
1	Cd 226.502†	13132.5	13623.8	[100]	ug/L	09:38:27
1	Co 228.616†	8083.3	8305.1	[100]	ug/L	09:38:27
1	Cr 267.716†	11753.9	11973.6	[100]	ug/L	09:38:07
1	Cu 324.752†	50132.0	40756.1	[100]	ug/L	09:38:07
1	K 766.490 Radial†	3887.5	2399.0	[1000]	ug/L	09:37:49
1	Mn 257.610†	129366.8	130643.8	[100]	ug/L	09:38:07
1	Mo 202.031†	2580.5	2590.7	[100]	ug/L	09:38:27
1	Ni 231.604†	6525.4	6483.3	[100]	ug/L	09:38:27
1	P 214.914†	1779.1	1471.1	[500]	ug/L	09:38:27
1	Pb 220.353†	1342.2	1393.1	[100]	ug/L	09:38:27
1	S 181.975 Axial†	300.2	237.3	[200]	ug/L	09:38:27
1	Sb 206.836†	547.4	510.9	[100]	ug/L	09:38:27
1	Se 196.026†	295.6	322.0	[100]	ug/L	09:38:27
1	Si 251.611†	24511.6	24350.2	[500]	ug/L	09:38:07
1	Sn 189.927†	971.4	981.7	[100]	ug/L	09:38:27
1	Sr 421.552†	6665.1	6633.3	[100]	ug/L	09:37:49
1	Ti 334.940†	74671.4	76995.2	[100]	ug/L	09:38:07
1	Tl 190.801†	543.4	613.6	[100]	ug/L	09:38:27
1	U 409.014†	237.6	4076.2	[100]	ug/L	09:38:07
1	V 292.402†	15937.1	17849.1	[100]	ug/L	09:38:07
1	Zn 213.857†	19207.8	18397.8	[100]	ug/L	09:38:07
1	SiO2†	24699.0	24498.4	[1069.5]	ug/L	09:39:24
2	Sc 361.383	1055210.6	1055210.6	99.465	%	09:38:33
2	Sc Radial	5609.2	5609.2	101	%	09:37:55
2	Y 371.029	845639.6	845639.6	99.112	%	09:38:33
2	Y RADIAL	4877.8	4877.8	101.3	%	09:37:55
2	Ag 328.068†	26093.0	25594.7	[100]	ug/L	09:38:33
2	As 188.979†	391.5	430.5	[100]	ug/L	09:38:53
2	B 249.677†	5785.4	6198.0	[100]	ug/L	09:38:33
2	Ba 233.527†	20469.8	20555.5	[100]	ug/L	09:38:33
2	Be 313.107†	317338.9	326360.9	[100]	ug/L	09:38:33
2	Cd 226.502†	13157.8	13506.1	[100]	ug/L	09:38:53
2	Co 228.616†	8095.3	8229.3	[100]	ug/L	09:38:53
2	Cr 267.716†	11903.1	11995.7	[100]	ug/L	09:38:33
2	Cu 324.752†	50854.5	40936.6	[100]	ug/L	09:38:33
2	K 766.490 Radial†	3819.2	2315.9	[1000]	ug/L	09:37:55
2	Mn 257.610†	130782.0	130658.0	[100]	ug/L	09:38:33
2	Mo 202.031†	2603.2	2585.4	[100]	ug/L	09:38:53
2	Ni 231.604†	6538.1	6425.0	[100]	ug/L	09:38:53
2	P 214.914†	1796.1	1468.9	[500]	ug/L	09:38:53
2	Pb 220.353†	1350.1	1386.4	[100]	ug/L	09:38:53
2	S 181.975 Axial†	299.5	233.3	[200]	ug/L	09:38:53
2	Sb 206.836†	557.9	515.5	[100]	ug/L	09:38:53
2	Se 196.026†	303.1	326.3	[100]	ug/L	09:38:53
2	Si 251.611†	24790.1	24363.3	[500]	ug/L	09:38:33
2	Sn 189.927†	961.1	960.8	[100]	ug/L	09:38:53
2	Sr 421.552†	6653.8	6595.7	[100]	ug/L	09:37:55
2	Ti 334.940†	75608.5	77124.2	[100]	ug/L	09:38:33
2	Tl 190.801†	543.4	607.7	[100]	ug/L	09:38:53

2	U 409.014†	413.3	4250.3	[100]	ug/L	09:38:33
2	V 292.402†	16008.2	17747.0	[100]	ug/L	09:38:33
2	Zn 213.857†	19396.4	18378.2	[100]	ug/L	09:38:33
2	SiO2†	24456.8	23985.9	[1069.5]	ug/L	09:39:29
3	Sc 361.383	1055128.5	1055128.5	99.458	%	09:38:59
3	Sc Radial	5546.9	5546.9	99.7	%	09:38:00
3	Y 371.029	846188.4	846188.4	99.177	%	09:38:59
3	Y RADIAL	4841.3	4841.3	100.5	%	09:38:00
3	Ag 328.068†	26072.8	25576.4	[100]	ug/L	09:38:59
3	As 188.979†	395.1	434.2	[100]	ug/L	09:39:19
3	B 249.677†	5816.4	6229.6	[100]	ug/L	09:38:59
3	Ba 233.527†	20495.9	20583.4	[100]	ug/L	09:38:59
3	Be 313.107†	317444.7	326492.1	[100]	ug/L	09:38:59
3	Cd 226.502†	13125.5	13474.7	[100]	ug/L	09:39:19
3	Co 228.616†	8079.1	8213.6	[100]	ug/L	09:39:19
3	Cr 267.716†	11888.0	11981.4	[100]	ug/L	09:38:59
3	Cu 324.752†	50658.9	40743.9	[100]	ug/L	09:38:59
3	K 766.490 Radial†	3845.0	2384.3	[1000]	ug/L	09:38:00
3	Mn 257.610†	131078.2	130966.0	[100]	ug/L	09:38:59
3	Mo 202.031†	2603.9	2586.4	[100]	ug/L	09:39:19
3	Ni 231.604†	6537.8	6425.2	[100]	ug/L	09:39:19
3	P 214.914†	1782.9	1455.7	[500]	ug/L	09:39:19
3	Pb 220.353†	1365.6	1402.1	[100]	ug/L	09:39:19
3	S 181.975 Axial†	309.0	242.8	[200]	ug/L	09:39:19
3	Sb 206.836†	556.1	513.7	[100]	ug/L	09:39:19
3	Se 196.026†	279.5	302.7	[100]	ug/L	09:39:19
3	Si 251.611†	24805.8	24381.0	[500]	ug/L	09:38:59
3	Sn 189.927†	963.2	962.9	[100]	ug/L	09:39:19
3	Sr 421.552†	6580.5	6596.3	[100]	ug/L	09:38:00
3	Ti 334.940†	75559.4	77080.7	[100]	ug/L	09:38:59
3	Tl 190.801†	539.9	604.2	[100]	ug/L	09:39:19
3	U 409.014†	236.8	4072.8	[100]	ug/L	09:38:59
3	V 292.402†	16050.8	17791.1	[100]	ug/L	09:38:59
3	Zn 213.857†	19356.9	18340.1	[100]	ug/L	09:38:59
3	SiO2†	24872.7	24406.0	[1069.5]	ug/L	09:39:34

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051414.5	6504.03	0.62%	99.108	%
Sc Radial	5581.0	31.57	0.57%	100	%
Y 371.029	843532.3	4134.44	0.49%	98.865	%
Y RADIAL	4862.3	18.86	0.39%	101.0	%
Ag 328.068†	25612.5	47.66	0.19%	[100]	ug/L
As 188.979†	433.8	3.14	0.72%	[100]	ug/L
B 249.677†	6196.0	34.67	0.56%	[100]	ug/L
Ba 233.527†	20605.7	64.24	0.31%	[100]	ug/L
Be 313.107†	326647.1	387.66	0.12%	[100]	ug/L
Cd 226.502†	13534.9	78.59	0.58%	[100]	ug/L
Co 228.616†	8249.3	48.95	0.59%	[100]	ug/L
Cr 267.716†	11983.6	11.20	0.09%	[100]	ug/L
Cu 324.752†	40812.2	107.89	0.26%	[100]	ug/L
K 766.490 Radial†	2366.4	44.37	1.88%	[1000]	ug/L
Mn 257.610†	130755.9	182.06	0.14%	[100]	ug/L
Mo 202.031†	2587.5	2.81	0.11%	[100]	ug/L
Ni 231.604†	6444.5	33.62	0.52%	[100]	ug/L
P 214.914†	1465.2	8.32	0.57%	[500]	ug/L
Pb 220.353†	1393.9	7.86	0.56%	[100]	ug/L
S 181.975 Axial†	237.8	4.79	2.02%	[200]	ug/L
Sb 206.836†	513.3	2.30	0.45%	[100]	ug/L
Se 196.026†	317.0	12.62	3.98%	[100]	ug/L
Si 251.611†	24364.8	15.45	0.06%	[500]	ug/L
Sn 189.927†	968.5	11.51	1.19%	[100]	ug/L
Sr 421.552†	6608.4	21.50	0.33%	[100]	ug/L
Ti 334.940†	77066.7	65.66	0.09%	[100]	ug/L
Tl 190.801†	608.5	4.73	0.78%	[100]	ug/L
U 409.014†	4133.1	101.47	2.46%	[100]	ug/L
V 292.402†	17795.7	51.23	0.29%	[100]	ug/L
Zn 213.857†	18372.0	29.33	0.16%	[100]	ug/L
SiO2†	24296.8	273.12	1.12%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/8/2009 09:41:45
Data Type: Reprocessed on 7/8/2009 11:40:06

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1064607.4	1064607.4	100.35	%	09:44:57
1	Sc Radial	5461.3	5461.3	98.1	%	09:43:38
1	Y 371.029	846628.0	846628.0	99.228	%	09:44:57
1	Y RADIAL	4696.9	4696.9	97.53	%	09:43:38
1	Ag 328.068†	126803.5	125721.3	[500]	ug/L	09:44:57
1	Al 396.153Radial†	5174.4	5364.7	[5000]	ug/L	09:43:38
1	As 188.979†	2072.9	2102.5	[500]	ug/L	09:45:17
1	B 249.677†	31257.3	31529.4	[500]	ug/L	09:44:57
1	Ba 233.527†	98225.0	97857.1	[500]	ug/L	09:44:57
1	Be 313.107†	1595363.0	1597097.3	[500]	ug/L	09:44:57
1	Ca 317.933Radial†	1956.1	1976.3	[5000]	ug/L	09:43:58
1	Cd 226.502†	66327.4	66373.0	[500]	ug/L	09:44:57
1	Co 228.616†	39082.0	39035.6	[500]	ug/L	09:45:17
1	Cr 267.716†	58209.2	58034.2	[500]	ug/L	09:44:57
1	Cu 324.752†	212770.9	201835.2	[500]	ug/L	09:44:57
1	K 766.490 Radial†	12752.1	11520.9	[5000]	ug/L	09:43:38
1	Mg 279.077 IEC†	62.9	63.9	[5000]	ug/L	09:43:58
1	Mn 257.610†	630898.9	627864.5	[500]	ug/L	09:44:57
1	Mo 202.031†	12608.3	12532.4	[500]	ug/L	09:45:17
1	Ni 231.604†	30724.5	30468.8	[500]	ug/L	09:45:17
1	P 214.914†	7382.5	7019.8	[2500]	ug/L	09:45:17
1	Pb 220.353†	6649.1	6654.9	[500]	ug/L	09:45:17
1	S 181.975 Axial†	1242.8	1170.6	[1000]	ug/L	09:45:17
1	Sb 206.836†	2606.1	2551.6	[500]	ug/L	09:45:17
1	Se 196.026†	1514.2	1530.5	[500]	ug/L	09:45:17
1	Si 251.611†	122499.0	121510.3	[2500]	ug/L	09:44:57
1	Sn 189.927†	4778.2	4756.0	[500]	ug/L	09:45:17
1	Sr 421.552†	28452.4	28986.5	[500]	ug/L	09:43:38
1	Ti 334.940†	380085.1	379864.5	[500]	ug/L	09:44:57
1	Tl 190.801†	2870.2	2921.5	[500]	ug/L	09:45:17
1	U 409.014†	15794.5	19574.0	[500]	ug/L	09:44:57
1	V 292.402†	85607.5	86960.7	[500]	ug/L	09:44:57
1	Zn 213.857†	90358.1	88919.6	[500]	ug/L	09:44:57
1	SiO2†	122852.3	121820.1	[5347.5]	ug/L	09:46:17
2	Sc 361.383	1044221.1	1044221.1	98.429	%	09:45:24
2	Sc Radial	5389.0	5389.0	96.8	%	09:44:03
2	Y 371.029	829032.4	829032.4	97.166	%	09:45:24
2	Y RADIAL	4652.3	4652.3	96.61	%	09:44:03
2	Ag 328.068†	124967.2	126322.6	[500]	ug/L	09:45:24
2	Al 396.153Radial†	5096.7	5355.2	[5000]	ug/L	09:44:03
2	As 188.979†	2073.2	2143.2	[500]	ug/L	09:45:44
2	B 249.677†	30724.1	31595.8	[500]	ug/L	09:45:24
2	Ba 233.527†	97214.1	98740.9	[500]	ug/L	09:45:24
2	Be 313.107†	1569041.1	1601392.7	[500]	ug/L	09:45:24
2	Ca 317.933Radial†	1923.3	1969.1	[5000]	ug/L	09:44:23
2	Cd 226.502†	65506.0	66828.8	[500]	ug/L	09:45:24
2	Co 228.616†	39155.7	39870.9	[500]	ug/L	09:45:44
2	Cr 267.716†	57418.9	58363.7	[500]	ug/L	09:45:24
2	Cu 324.752†	208685.4	201823.9	[500]	ug/L	09:45:24
2	K 766.490 Radial†	12541.0	11477.1	[5000]	ug/L	09:44:03
2	Mg 279.077 IEC†	61.0	62.8	[5000]	ug/L	09:44:23
2	Mn 257.610†	623183.7	632300.1	[500]	ug/L	09:45:24
2	Mo 202.031†	12645.3	12815.3	[500]	ug/L	09:45:44
2	Ni 231.604†	30816.1	31159.5	[500]	ug/L	09:45:44
2	P 214.914†	7382.7	7163.6	[2500]	ug/L	09:45:44
2	Pb 220.353†	6652.5	6787.7	[500]	ug/L	09:45:44
2	S 181.975 Axial†	1248.0	1200.1	[1000]	ug/L	09:45:44
2	Sb 206.836†	2600.7	2596.7	[500]	ug/L	09:45:44

2	Se 196.026†	1507.7	1553.3	[500]	ug/L	09:45:44
2	Si 251.611†	120777.2	122144.2	[2500]	ug/L	09:45:24
2	Sn 189.927†	4796.7	4867.8	[500]	ug/L	09:45:44
2	Sr 421.552†	27876.2	28780.3	[500]	ug/L	09:44:03
2	Ti 334.940†	374439.3	381523.0	[500]	ug/L	09:45:24
2	Tl 190.801†	2885.2	2992.7	[500]	ug/L	09:45:44
2	U 409.014†	15437.6	19518.7	[500]	ug/L	09:45:24
2	V 292.402†	84337.2	87335.7	[500]	ug/L	09:45:24
2	Zn 213.857†	89070.9	89369.7	[500]	ug/L	09:45:24
2	SiO2†	121800.6	123141.7	[5347.5]	ug/L	09:46:22
3	Sc 361.383	1046590.0	1046590.0	98.653	%	09:45:52
3	Sc Radial	5352.8	5352.8	96.2	%	09:44:28
3	Y 371.029	832934.3	832934.3	97.623	%	09:45:52
3	Y RADIAL	4634.7	4634.7	96.24	%	09:44:28
3	Ag 328.068†	125631.5	126708.6	[500]	ug/L	09:45:52
3	Al 396.153Radial†	5102.6	5396.9	[5000]	ug/L	09:44:28
3	As 188.979†	2098.8	2164.3	[500]	ug/L	09:46:12
3	B 249.677†	30976.6	31781.2	[500]	ug/L	09:45:52
3	Ba 233.527†	97581.9	98890.3	[500]	ug/L	09:45:52
3	Be 313.107†	1579797.0	1608687.5	[500]	ug/L	09:45:52
3	Ca 317.933Radial†	1928.2	1987.6	[5000]	ug/L	09:44:48
3	Cd 226.502†	65857.4	67034.4	[500]	ug/L	09:45:52
3	Co 228.616†	39345.8	39973.6	[500]	ug/L	09:46:12
3	Cr 267.716†	57872.1	58691.1	[500]	ug/L	09:45:52
3	Cu 324.752†	210164.3	202843.1	[500]	ug/L	09:45:52
3	K 766.490 Radial†	12562.3	11586.7	[5000]	ug/L	09:44:28
3	Mg 279.077 IEC†	60.6	62.8	[5000]	ug/L	09:44:48
3	Mn 257.610†	626191.1	633915.6	[500]	ug/L	09:45:52
3	Mo 202.031†	12686.5	12828.0	[500]	ug/L	09:46:12
3	Ni 231.604†	31017.8	31293.1	[500]	ug/L	09:46:12
3	P 214.914†	7417.6	7182.0	[2500]	ug/L	09:46:12
3	Pb 220.353†	6707.4	6828.1	[500]	ug/L	09:46:12
3	S 181.975 Axial†	1249.2	1198.4	[1000]	ug/L	09:46:12
3	Sb 206.836†	2624.9	2615.3	[500]	ug/L	09:46:12
3	Se 196.026†	1511.8	1554.0	[500]	ug/L	09:46:12
3	Si 251.611†	121349.2	122446.3	[2500]	ug/L	09:45:52
3	Sn 189.927†	4809.3	4869.5	[500]	ug/L	09:46:12
3	Sr 421.552†	27833.2	28930.1	[500]	ug/L	09:44:28
3	Ti 334.940†	376623.4	382875.9	[500]	ug/L	09:45:52
3	Tl 190.801†	2901.3	3002.3	[500]	ug/L	09:46:12
3	U 409.014†	15617.2	19665.2	[500]	ug/L	09:45:52
3	V 292.402†	84908.9	87721.2	[500]	ug/L	09:45:52
3	Zn 213.857†	89582.5	89683.5	[500]	ug/L	09:45:52
3	SiO2†	122195.3	123261.7	[5347.5]	ug/L	09:46:27

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051806.2	11149.30	1.06%	99.144	%
Sc Radial	5401.0	55.21	1.02%	97.1	%
Y 371.029	836198.2	9240.74	1.11%	98.006	%
Y RADIAL	4661.3	32.06	0.69%	96.79	%
Ag 328.068†	126250.8	497.54	0.39%	[500]	ug/L
Al 396.153Radial†	5372.3	21.86	0.41%	[5000]	ug/L
As 188.979†	2136.7	31.42	1.47%	[500]	ug/L
B 249.677†	31635.5	130.46	0.41%	[500]	ug/L
Ba 233.527†	98496.1	558.43	0.57%	[500]	ug/L
Be 313.107†	1602392.5	5859.39	0.37%	[500]	ug/L
Ca 317.933Radial†	1977.7	9.33	0.47%	[5000]	ug/L
Cd 226.502†	66745.4	338.47	0.51%	[500]	ug/L
Co 228.616†	39626.7	514.43	1.30%	[500]	ug/L
Cr 267.716†	58363.0	328.45	0.56%	[500]	ug/L
Cu 324.752†	202167.4	585.22	0.29%	[500]	ug/L
K 766.490 Radial†	11528.2	55.20	0.48%	[5000]	ug/L
Mg 279.077 IEC†	63.2	0.61	0.97%	[5000]	ug/L
Mn 257.610†	631360.0	3133.16	0.50%	[500]	ug/L
Mo 202.031†	12725.2	167.14	1.31%	[500]	ug/L
Ni 231.604†	30973.8	442.43	1.43%	[500]	ug/L
P 214.914†	7121.8	88.83	1.25%	[2500]	ug/L
Pb 220.353†	6756.9	90.64	1.34%	[500]	ug/L

S 181.975 Axial†	1189.7	16.55	1.39%	[1000]	ug/L
Sb 206.836†	2587.9	32.79	1.27%	[500]	ug/L
Se 196.026†	1546.0	13.38	0.87%	[500]	ug/L
Si 251.611†	122033.6	477.69	0.39%	[2500]	ug/L
Sn 189.927†	4831.1	65.06	1.35%	[500]	ug/L
Sr 421.552†	28899.0	106.56	0.37%	[500]	ug/L
Ti 334.940†	381421.2	1508.28	0.40%	[500]	ug/L
Tl 190.801†	2972.2	44.12	1.48%	[500]	ug/L
U 409.014†	19586.0	73.99	0.38%	[500]	ug/L
V 292.402†	87339.2	380.24	0.44%	[500]	ug/L
Zn 213.857†	89324.3	383.98	0.43%	[500]	ug/L
SiO2†	122741.2	799.91	0.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/8/2009 09:48:38
Data Type: Reprocessed on 7/8/2009 11:40:07

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1052663.5	1052663.5	99.225	%	09:51:50
1	Sc Radial	5805.9	5805.9	104	%	09:50:31
1	Y 371.029	835045.6	835045.6	97.871	%	09:51:50
1	Y RADIAL	5007.7	5007.7	104.0	%	09:50:31
1	Ag 328.068†	252879.2	254215.1	[1000]	ug/L	09:51:55
1	Al 396.153Radial†	10753.9	10399.5	[10000]	ug/L	09:50:31
1	As 188.979†	4213.7	4283.5	[1000]	ug/L	09:52:15
1	B 249.677†	63888.7	64769.0	[1000]	ug/L	09:51:55
1	Ba 233.527†	197687.1	199206.4	[1000]	ug/L	09:51:55
1	Be 313.107†	3194923.7	3227185.7	[1000]	ug/L	09:51:50
1	Ca 317.933Radial†	4055.7	3870.4	[10000]	ug/L	09:50:31
1	Cd 226.502†	133744.7	135066.6	[1000]	ug/L	09:51:55
1	Co 228.616†	80516.0	81235.0	[1000]	ug/L	09:51:55
1	Cr 267.716†	117606.8	118553.7	[1000]	ug/L	09:51:55
1	Cu 324.752†	414400.4	407444.8	[1000]	ug/L	09:51:55
1	Fe 238.204 Radial†	287.2	275.0	[10000]	ug/L	09:50:51
1	K 766.490 Radial†	24918.9	22410.9	[10000]	ug/L	09:50:31
1	Mg 279.077 IEC†	131.8	126.2	[10000]	ug/L	09:50:51
1	Mn 257.610†	1260730.8	1269747.4	[1000]	ug/L	09:51:50
1	Mo 202.031†	24798.5	24960.4	[1000]	ug/L	09:52:15
1	Na 589.592 Radial†	3522.0	3546.2	[10000]	ug/L	09:50:31
1	Ni 231.604†	62750.5	63092.2	[1000]	ug/L	09:51:55
1	P 214.914†	14401.2	14176.7	[5000]	ug/L	09:52:15
1	Pb 220.353†	13201.7	13333.9	[1000]	ug/L	09:52:15
1	S 181.975 Axial†	2419.1	2370.2	[2000]	ug/L	09:52:15
1	Sb 206.836†	5119.1	5113.6	[1000]	ug/L	09:52:15
1	Se 196.026†	3047.7	3093.1	[1000]	ug/L	09:52:15
1	Si 251.611†	242154.4	243485.1	[5000]	ug/L	09:51:55
1	Sn 189.927†	9581.3	9650.6	[1000]	ug/L	09:52:15
1	Sr 421.552†	68083.4	65250.5	[1000]	ug/L	09:50:31
1	Ti 334.940†	758941.9	765976.9	[1000]	ug/L	09:51:50
1	Tl 190.801†	5824.9	5931.8	[1000]	ug/L	09:52:15
1	U 409.014†	36638.9	40759.8	[1000]	ug/L	09:51:55
1	V 292.402†	175178.4	178199.0	[1000]	ug/L	09:51:55
1	Zn 213.857†	180211.9	180496.5	[1000]	ug/L	09:51:55
1	SiO2†	241738.8	243023.9	[10695]	ug/L	09:53:25
2	Sc 361.383	1058804.9	1058804.9	99.804	%	09:52:22
2	Sc Radial	5593.3	5593.3	101	%	09:50:56
2	Y 371.029	839441.5	839441.5	98.386	%	09:52:22
2	Y RADIAL	4835.2	4835.2	100.4	%	09:50:56
2	Ag 328.068†	252282.7	252139.2	[1000]	ug/L	09:52:27
2	Al 396.153Radial†	10627.1	10665.3	[10000]	ug/L	09:50:56
2	As 188.979†	4198.8	4244.0	[1000]	ug/L	09:52:48
2	B 249.677†	63795.4	64302.1	[1000]	ug/L	09:52:27
2	Ba 233.527†	196404.5	196765.7	[1000]	ug/L	09:52:27
2	Be 313.107†	3201165.9	3214763.8	[1000]	ug/L	09:52:22
2	Ca 317.933Radial†	4012.0	3974.7	[10000]	ug/L	09:50:56
2	Cd 226.502†	132496.4	133034.0	[1000]	ug/L	09:52:27
2	Co 228.616†	79902.6	80149.8	[1000]	ug/L	09:52:27
2	Cr 267.716†	116813.2	117071.0	[1000]	ug/L	09:52:27
2	Cu 324.752†	414708.3	405330.8	[1000]	ug/L	09:52:27
2	Fe 238.204 Radial†	289.6	287.8	[10000]	ug/L	09:51:16
2	K 766.490 Radial†	24624.2	23025.9	[10000]	ug/L	09:50:56
2	Mg 279.077 IEC†	127.7	126.9	[10000]	ug/L	09:51:16
2	Mn 257.610†	1263110.3	1264761.9	[1000]	ug/L	09:52:22
2	Mo 202.031†	24699.2	24715.9	[1000]	ug/L	09:52:48
2	Na 589.592 Radial†	3465.5	3618.3	[10000]	ug/L	09:50:56
2	Ni 231.604†	62172.3	62146.1	[1000]	ug/L	09:52:27

2	P 214.914†	14342.8	14034.0	[5000]	ug/L	09:52:48
2	Pb 220.353†	13188.3	13243.2	[1000]	ug/L	09:52:48
2	S 181.975 Axial†	2410.9	2347.8	[2000]	ug/L	09:52:48
2	Sb 206.836†	5080.8	5045.3	[1000]	ug/L	09:52:48
2	Se 196.026†	3016.0	3043.5	[1000]	ug/L	09:52:48
2	Si 251.611†	241232.5	241145.8	[5000]	ug/L	09:52:27
2	Sn 189.927†	9534.0	9547.2	[1000]	ug/L	09:52:48
2	Sr 421.552†	66922.4	66576.7	[1000]	ug/L	09:50:56
2	Ti 334.940†	761509.7	764113.3	[1000]	ug/L	09:52:22
2	Tl 190.801†	5811.7	5884.5	[1000]	ug/L	09:52:48
2	U 409.014†	36579.5	40486.0	[1000]	ug/L	09:52:27
2	V 292.402†	173954.8	175949.0	[1000]	ug/L	09:52:27
2	Zn 213.857†	179274.3	178503.7	[1000]	ug/L	09:52:27
2	SiO2†	237359.4	237222.8	[10695]	ug/L	09:53:31
3	Sc 361.383	1057400.6	1057400.6	99.672	%	09:52:54
3	Sc Radial	5464.1	5464.1	98.2	%	09:51:21
3	Y 371.029	838883.9	838883.9	98.320	%	09:52:54
3	Y RADIAL	4771.4	4771.4	99.08	%	09:51:21
3	Ag 328.068†	251287.3	251476.2	[1000]	ug/L	09:53:00
3	Al 396.153Radial†	10656.6	10945.2	[10000]	ug/L	09:51:21
3	As 188.979†	4194.8	4245.6	[1000]	ug/L	09:53:20
3	B 249.677†	63568.3	64159.1	[1000]	ug/L	09:53:00
3	Ba 233.527†	196293.8	196915.9	[1000]	ug/L	09:53:00
3	Be 313.107†	3195458.9	3213297.7	[1000]	ug/L	09:52:54
3	Ca 317.933Radial†	4035.9	4093.3	[10000]	ug/L	09:51:21
3	Cd 226.502†	132396.2	133109.8	[1000]	ug/L	09:53:00
3	Co 228.616†	79823.3	80176.5	[1000]	ug/L	09:53:00
3	Cr 267.716†	116636.7	117049.4	[1000]	ug/L	09:53:00
3	Cu 324.752†	412621.4	403788.9	[1000]	ug/L	09:53:00
3	Fe 238.204 Radial†	285.3	290.2	[10000]	ug/L	09:51:41
3	K 766.490 Radial†	24699.5	23681.6	[10000]	ug/L	09:51:21
3	Mg 279.077 IEC†	125.8	127.9	[10000]	ug/L	09:51:41
3	Mn 257.610†	1259027.5	1262346.4	[1000]	ug/L	09:52:54
3	Mo 202.031†	24845.2	24895.3	[1000]	ug/L	09:53:20
3	Na 589.592 Radial†	3441.7	3675.5	[10000]	ug/L	09:51:21
3	Ni 231.604†	62152.7	62209.1	[1000]	ug/L	09:53:00
3	P 214.914†	14439.3	14149.9	[5000]	ug/L	09:53:20
3	Pb 220.353†	13219.9	13292.5	[1000]	ug/L	09:53:20
3	S 181.975 Axial†	2417.3	2357.4	[2000]	ug/L	09:53:20
3	Sb 206.836†	5111.4	5082.8	[1000]	ug/L	09:53:20
3	Se 196.026†	3040.7	3072.3	[1000]	ug/L	09:53:20
3	Si 251.611†	240711.3	240943.9	[5000]	ug/L	09:53:00
3	Sn 189.927†	9583.2	9609.3	[1000]	ug/L	09:53:20
3	Sr 421.552†	66963.1	68191.7	[1000]	ug/L	09:51:21
3	Ti 334.940†	758629.2	762236.6	[1000]	ug/L	09:52:54
3	Tl 190.801†	5861.7	5942.4	[1000]	ug/L	09:53:20
3	U 409.014†	36527.5	40482.6	[1000]	ug/L	09:53:00
3	V 292.402†	173694.3	175919.0	[1000]	ug/L	09:53:00
3	Zn 213.857†	178849.9	178316.4	[1000]	ug/L	09:53:00
3	SiO2†	243076.9	243275.0	[10695]	ug/L	09:53:36

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1056289.6	3217.89	0.30%	99.567	%
Sc Radial	5621.1	172.60	3.07%	101	%
Y 371.029	837790.3	2393.27	0.29%	98.192	%
Y RADIAL	4871.4	122.27	2.51%	101.2	%
Ag 328.068†	252610.2	1428.92	0.57%	[1000]	ug/L
Al 396.153Radial†	10670.0	272.89	2.56%	[10000]	ug/L
As 188.979†	4257.7	22.40	0.53%	[1000]	ug/L
B 249.677†	64410.1	318.97	0.50%	[1000]	ug/L
Ba 233.527†	197629.3	1367.84	0.69%	[1000]	ug/L
Be 313.107†	3218415.7	7630.29	0.24%	[1000]	ug/L
Ca 317.933Radial†	3979.5	111.54	2.80%	[10000]	ug/L
Cd 226.502†	133736.8	1152.25	0.86%	[1000]	ug/L
Co 228.616†	80520.5	618.97	0.77%	[1000]	ug/L
Cr 267.716†	117558.0	862.30	0.73%	[1000]	ug/L
Cu 324.752†	405521.5	1835.38	0.45%	[1000]	ug/L
Fe 238.204 Radial†	284.3	8.19	2.88%	[10000]	ug/L

K 766.490 Radial†	23039.5	635.42	2.76%	[10000]	ug/L
Mg 279.077 IEC†	127.0	0.88	0.69%	[10000]	ug/L
Mn 257.610†	1265618.6	3774.16	0.30%	[1000]	ug/L
Mo 202.031†	24857.2	126.63	0.51%	[1000]	ug/L
Na 589.592 Radial†	3613.3	64.84	1.79%	[10000]	ug/L
Ni 231.604†	62482.4	529.00	0.85%	[1000]	ug/L
P 214.914†	14120.2	75.84	0.54%	[5000]	ug/L
Pb 220.353†	13289.9	45.38	0.34%	[1000]	ug/L
S 181.975 Axial†	2358.5	11.23	0.48%	[2000]	ug/L
Sb 206.836†	5080.6	34.22	0.67%	[1000]	ug/L
Se 196.026†	3069.7	24.93	0.81%	[1000]	ug/L
Si 251.611†	241858.2	1412.48	0.58%	[5000]	ug/L
Sn 189.927†	9602.4	52.05	0.54%	[1000]	ug/L
Sr 421.552†	66673.0	1472.96	2.21%	[1000]	ug/L
Ti 334.940†	764108.9	1870.18	0.24%	[1000]	ug/L
Tl 190.801†	5919.6	30.81	0.52%	[1000]	ug/L
U 409.014†	40576.1	159.04	0.39%	[1000]	ug/L
V 292.402†	176689.0	1307.77	0.74%	[1000]	ug/L
Zn 213.857†	179105.5	1208.27	0.67%	[1000]	ug/L
SiO2†	241173.9	3424.04	1.42%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/8/2009 09:55:46
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1045205.1	1045205.1	98.522	%	09:58:57
1	Sc Radial	5445.4	5445.4	97.9	%	09:58:00
1	Y 371.029	824719.2	824719.2	96.660	%	09:58:57
1	Y RADIAL	4697.0	4697.0	97.54	%	09:58:00
1	Al 396.153Radial†	53617.0	54885.6	[50000]	ug/L	09:57:40
1	Ca 317.933Radial†	19630.1	20043.9	[50000]	ug/L	09:57:40
1	Fe 238.204 Radial†	559.3	571.2	[20000]	ug/L	09:58:00
1	Mg 279.077 IEC†	611.6	624.9	[50000]	ug/L	09:58:00
1	Na 589.592 Radial†	7093.1	7419.2	[20000]	ug/L	09:57:40
2	Sc 361.383	1039938.4	1039938.4	98.026	%	09:59:03
2	Sc Radial	5322.6	5322.6	95.6	%	09:58:25
2	Y 371.029	821364.5	821364.5	96.267	%	09:59:03
2	Y RADIAL	4573.5	4573.5	94.97	%	09:58:25
2	Al 396.153Radial†	52922.6	55423.3	[50000]	ug/L	09:58:05
2	Ca 317.933Radial†	19349.8	20213.5	[50000]	ug/L	09:58:05
2	Fe 238.204 Radial†	548.4	573.0	[20000]	ug/L	09:58:25
2	Mg 279.077 IEC†	611.0	638.7	[50000]	ug/L	09:58:25
2	Na 589.592 Radial†	6990.6	7479.1	[20000]	ug/L	09:58:05
3	Sc 361.383	1037774.1	1037774.1	97.822	%	09:59:09
3	Sc Radial	5437.5	5437.5	97.7	%	09:58:50
3	Y 371.029	819757.6	819757.6	96.079	%	09:59:09
3	Y RADIAL	4679.6	4679.6	97.17	%	09:58:50
3	Al 396.153Radial†	53368.0	54709.6	[50000]	ug/L	09:58:30
3	Ca 317.933Radial†	19552.5	19993.3	[50000]	ug/L	09:58:30
3	Fe 238.204 Radial†	554.5	567.2	[20000]	ug/L	09:58:50
3	Mg 279.077 IEC†	615.8	630.0	[50000]	ug/L	09:58:50
3	Na 589.592 Radial†	7083.3	7419.6	[20000]	ug/L	09:58:30

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1040972.5	3821.89	0.37%	98.123	%
Sc Radial	5401.8	68.73	1.27%	97.1	%
Y 371.029	821947.1	2531.58	0.31%	96.335	%
Y RADIAL	4650.1	66.85	1.44%	96.56	%
Al 396.153Radial†	55006.2	371.83	0.68%	[50000]	ug/L
Ca 317.933Radial†	20083.6	115.30	0.57%	[50000]	ug/L
Fe 238.204 Radial†	570.5	2.97	0.52%	[20000]	ug/L
Mg 279.077 IEC†	631.2	6.96	1.10%	[50000]	ug/L
Na 589.592 Radial†	7439.3	34.51	0.46%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	252.6	0.00000	0.999999	
Al 396.153Radial	3	Lin Thru 0	0.0	1.099	0.00000	0.999981	
As 188.979	3	Lin Thru 0	0.0	4.261	0.00000	0.999998	
B 249.677	3	Lin Thru 0	0.0	64.16	0.00000	0.999970	
Ba 233.527	3	Lin Thru 0	0.0	197.6	0.00000	0.999992	
Be 313.107	3	Lin Thru 0	0.0	3216	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.4015	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	133.7	0.00000	0.999999	
Co 228.616	3	Lin Thru 0	0.0	80.28	0.00000	0.999977	
Cr 267.716	3	Lin Thru 0	0.0	117.4	0.00000	0.999994	
Cu 324.752	3	Lin Thru 0	0.0	405.3	0.00000	0.999999	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0285	0.00000	0.999999	

K 766.490 Radial	3	Lin Thru 0	0.0	2.305	0.00000	0.999997
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0126	0.00000	0.999999
Mn 257.610	3	Lin Thru 0	0.0	1265	0.00000	0.999995
Mo 202.031	3	Lin Thru 0	0.0	24.98	0.00000	0.999950
Na 589.592 Radia	2	Lin Thru 0	0.0	0.3698	0.00000	0.999934
Ni 231.604	3	Lin Thru 0	0.0	62.39	0.00000	0.999990
P 214.914	3	Lin Thru 0	0.0	2.830	0.00000	0.999989
Pb 220.353	3	Lin Thru 0	0.0	13.34	0.00000	0.999970
S 181.975 Axial	3	Lin Thru 0	0.0	1.181	0.00000	0.999994
Sb 206.836	3	Lin Thru 0	0.0	5.100	0.00000	0.999972
Se 196.026	3	Lin Thru 0	0.0	3.075	0.00000	0.999992
Si 251.611	3	Lin Thru 0	0.0	48.46	0.00000	0.999993
Sn 189.927	3	Lin Thru 0	0.0	9.615	0.00000	0.999997
Sr 421.552	3	Lin Thru 0	0.0	64.91	0.00000	0.998518
Ti 334.940	3	Lin Thru 0	0.0	763.9	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	5.926	0.00000	0.999996
U 409.014	3	Lin Thru 0	0.0	40.30	0.00000	0.999901
V 292.402	3	Lin Thru 0	0.0	176.3	0.00000	0.999989
Zn 213.857	3	Lin Thru 0	0.0	179.1	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	22.63	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/8/2009 10:01:20
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1055963.1	1055963.1	99.536	%			10:04:31
1	Sc Radial	5613.9	5613.9	101	%			10:03:13
1	Y 371.029	843980.3	843980.3	98.918	%			10:04:31
1	Y RADIAL	4850.5	4850.5	100.7	%			10:03:13
1	Ag 328.068†	64392.7	64054.1	256.65	ug/L	256.65	ppb	10:04:31
1	Al 396.153Radial†	5477.4	5521.7	5003.5	ug/L	5003.5	ppb	10:03:13
1	As 188.979†	2018.5	2064.8	487.93	ug/L	487.93	ppb	10:04:51
1	B 249.677†	32013.9	32544.6	505.32	ug/L	505.32	ppb	10:04:31
1	Ba 233.527†	105864.5	106333.4	539.45	ug/L	539.45	ppb	10:04:31
1	Be 313.107†	824616.8	835774.7	261.06	ug/L	261.06	ppb	10:04:31
1	Ca 317.933Radial†	1980.0	1945.8	4846.6	ug/L	4846.6	ppb	10:03:33
1	Cd 226.502†	67172.4	67763.0	506.57	ug/L	506.57	ppb	10:04:31
1	Co 228.616†	37965.2	38232.5	476.49	ug/L	476.49	ppb	10:04:51
1	Cr 267.716†	59214.9	59519.4	507.63	ug/L	507.63	ppb	10:04:31
1	Cu 324.752†	223133.1	213981.3	528.24	ug/L	528.24	ppb	10:04:31
1	Fe 238.204 Radial†	145.6	144.0	5067.1	ug/L	5067.1	ppb	10:03:33
1	K 766.490 Radial†	7308.0	5771.0	2501.1	ug/L	2501.1	ppb	10:03:13
1	Mg 279.077 IEC†	65.6	64.8	5140.2	ug/L	5140.2	ppb	10:03:33
1	Mn 257.610†	657421.5	659657.3	521.87	ug/L	521.87	ppb	10:04:31
1	Mo 202.031†	13087.3	13116.5	525.36	ug/L	525.36	ppb	10:04:51
1	Na 589.592 Radial†	775.6	939.2	2539.6	ug/L	2539.6	ppb	10:03:33
1	Ni 231.604†	33519.4	33527.3	537.06	ug/L	537.06	ppb	10:04:31
1	P 214.914†	7515.0	7213.0	2469.3	ug/L	2469.3	ppb	10:04:51
1	Pb 220.353†	6757.4	6817.9	512.49	ug/L	512.49	ppb	10:04:51
1	S 181.975 Axial†	3135.7	3082.5	2608.2	ug/L	2608.2	ppb	10:04:51
1	Sb 206.836†	2711.8	2679.0	533.63	ug/L	533.63	ppb	10:04:51
1	Se 196.026†	7950.7	8009.4	2624.5	ug/L	2624.5	ppb	10:04:51
1	Si 251.611†	241856.0	242422.6	4990.7	ug/L	4990.7	ppb	10:04:31
1	Sn 189.927†	5102.2	5120.5	533.02	ug/L	533.02	ppb	10:04:51
1	Sr 421.552†	33892.8	33591.0	517.48	ug/L	517.48	ppb	10:03:13
1	Ti 334.940†	386933.6	389845.5	510.25	ug/L	510.25	ppb	10:04:31
1	Tl 190.801†	2870.1	2944.9	498.92	ug/L	498.92	ppb	10:04:51
1	U 409.014†	16738.6	20651.3	510.79	ug/L	510.79	ppb	10:04:31
1	V 292.402†	86386.8	88442.0	507.92	ug/L	507.92	ppb	10:04:31
1	Zn 213.857†	92798.7	92108.6	509.43	ug/L	509.43	ppb	10:04:31
1	SiO2†	240647.4	241166.2	10631	ug/L	10631	ppb	10:05:48
2	Sc 361.383	1061154.8	1061154.8	100.03	%			10:04:57
2	Sc Radial	5574.6	5574.6	100	%			10:03:38
2	Y 371.029	847082.8	847082.8	99.281	%			10:04:57
2	Y RADIAL	4828.4	4828.4	100.3	%			10:03:38
2	Ag 328.068†	64498.9	63843.8	255.81	ug/L	255.81	ppb	10:04:57
2	Al 396.153Radial†	5433.4	5516.1	4998.6	ug/L	4998.6	ppb	10:03:38
2	As 188.979†	2002.8	2039.2	481.91	ug/L	481.91	ppb	10:05:17
2	B 249.677†	32167.6	32540.8	505.28	ug/L	505.28	ppb	10:04:57
2	Ba 233.527†	106144.9	106093.4	538.23	ug/L	538.23	ppb	10:04:57
2	Be 313.107†	824477.0	831581.7	259.75	ug/L	259.75	ppb	10:04:57
2	Ca 317.933Radial†	1968.2	1947.8	4851.6	ug/L	4851.6	ppb	10:03:58
2	Cd 226.502†	67276.9	67537.3	504.89	ug/L	504.89	ppb	10:04:57
2	Co 228.616†	37893.6	37974.3	473.26	ug/L	473.26	ppb	10:05:17
2	Cr 267.716†	59208.0	59221.4	505.09	ug/L	505.09	ppb	10:04:57
2	Cu 324.752†	224086.8	213838.1	527.89	ug/L	527.89	ppb	10:04:57
2	Fe 238.204 Radial†	144.3	143.7	5055.6	ug/L	5055.6	ppb	10:03:58
2	K 766.490 Radial†	7330.2	5844.2	2532.9	ug/L	2532.9	ppb	10:03:38
2	Mg 279.077 IEC†	68.0	67.7	5365.3	ug/L	5365.3	ppb	10:03:58
2	Mn 257.610†	658788.7	657792.7	520.39	ug/L	520.39	ppb	10:04:57
2	Mo 202.031†	13056.1	13020.9	521.54	ug/L	521.54	ppb	10:05:17
2	Na 589.592 Radial†	764.6	933.7	2524.5	ug/L	2524.5	ppb	10:03:58
2	Ni 231.604†	33627.1	33470.2	536.15	ug/L	536.15	ppb	10:04:57

2	P 214.914†	7509.3	7170.5	2454.3 ug/L	2454.3 ppb	10:05:17
2	Pb 220.353†	6755.8	6783.1	509.87 ug/L	509.87 ppb	10:05:17
2	S 181.975 Axial†	3111.7	3043.1	2574.9 ug/L	2574.9 ppb	10:05:17
2	Sb 206.836†	2721.3	2675.2	532.82 ug/L	532.82 ppb	10:05:17
2	Se 196.026†	7952.2	7971.8	2612.2 ug/L	2612.2 ppb	10:05:17
2	Si 251.611†	242445.6	241823.3	4978.4 ug/L	4978.4 ppb	10:04:57
2	Sn 189.927†	5103.9	5097.1	530.59 ug/L	530.59 ppb	10:05:17
2	Sr 421.552†	33672.4	33607.8	517.74 ug/L	517.74 ppb	10:03:38
2	Ti 334.940†	387671.3	388681.1	508.73 ug/L	508.73 ppb	10:04:57
2	Tl 190.801†	2874.3	2934.9	497.25 ug/L	497.25 ppb	10:05:17
2	U 409.014†	16726.6	20557.1	508.46 ug/L	508.46 ppb	10:04:57
2	V 292.402†	86445.6	88076.2	505.80 ug/L	505.80 ppb	10:04:57
2	Zn 213.857†	92897.2	91751.0	507.43 ug/L	507.43 ppb	10:04:57
2	SiO2†	237580.2	236916.9	10443 ug/L	10443 ppb	10:05:54
3	Sc 361.383	1046189.2	1046189.2	98.615 %		10:05:23
3	Sc Radial	5513.6	5513.6	99.1 %		10:04:03
3	Y 371.029	834847.1	834847.1	97.847 %		10:05:23
3	Y RADIAL	4760.8	4760.8	98.86 %		10:04:03
3	Ag 328.068†	63545.9	63799.7	255.72 ug/L	255.72 ppb	10:05:23
3	Al 396.153Radial†	5377.5	5519.7	5001.6 ug/L	5001.6 ppb	10:04:03
3	As 188.979†	2001.8	2066.8	488.43 ug/L	488.43 ppb	10:05:43
3	B 249.677†	31566.1	32390.9	502.89 ug/L	502.89 ppb	10:05:23
3	Ba 233.527†	104823.4	106271.3	539.14 ug/L	539.14 ppb	10:05:23
3	Be 313.107†	812519.1	831246.8	259.64 ug/L	259.64 ppb	10:05:23
3	Ca 317.933Radial†	1993.1	1994.7	4968.4 ug/L	4968.4 ppb	10:04:23
3	Cd 226.502†	66540.9	67753.1	506.47 ug/L	506.47 ppb	10:05:23
3	Co 228.616†	37778.7	38399.7	478.58 ug/L	478.58 ppb	10:05:43
3	Cr 267.716†	58457.7	59307.3	505.83 ug/L	505.83 ppb	10:05:23
3	Cu 324.752†	219384.3	212274.2	524.04 ug/L	524.04 ppb	10:05:23
3	Fe 238.204 Radial†	150.5	151.5	5330.8 ug/L	5330.8 ppb	10:04:23
3	K 766.490 Radial†	7160.3	5753.8	2493.9 ug/L	2493.9 ppb	10:04:03
3	Mg 279.077 IEC†	66.6	67.1	5318.0 ug/L	5318.0 ppb	10:04:23
3	Mn 257.610†	650091.5	658394.7	520.91 ug/L	520.91 ppb	10:05:23
3	Mo 202.031†	13030.1	13181.3	527.98 ug/L	527.98 ppb	10:05:43
3	Na 589.592 Radial†	777.1	954.8	2581.6 ug/L	2581.6 ppb	10:04:23
3	Ni 231.604†	33207.7	33525.8	537.04 ug/L	537.04 ppb	10:05:23
3	P 214.914†	7486.1	7254.4	2484.4 ug/L	2484.4 ppb	10:05:43
3	Pb 220.353†	6694.0	6817.1	512.41 ug/L	512.41 ppb	10:05:43
3	S 181.975 Axial†	3113.7	3089.6	2614.2 ug/L	2614.2 ppb	10:05:43
3	Sb 206.836†	2715.5	2708.2	539.48 ug/L	539.48 ppb	10:05:43
3	Se 196.026†	7890.8	8023.3	2629.9 ug/L	2629.9 ppb	10:05:43
3	Si 251.611†	238657.3	241449.0	4970.5 ug/L	4970.5 ppb	10:05:23
3	Sn 189.927†	5067.2	5132.9	534.33 ug/L	534.33 ppb	10:05:43
3	Sr 421.552†	33182.0	33485.1	515.84 ug/L	515.84 ppb	10:04:03
3	Ti 334.940†	381414.1	387880.2	507.69 ug/L	507.69 ppb	10:05:23
3	Tl 190.801†	2873.4	2975.2	504.01 ug/L	504.01 ppb	10:05:43
3	U 409.014†	16428.1	20493.6	506.85 ug/L	506.85 ppb	10:05:23
3	V 292.402†	84994.3	87840.8	504.50 ug/L	504.50 ppb	10:05:23
3	Zn 213.857†	91642.8	91807.5	507.72 ug/L	507.72 ppb	10:05:23
3	SiO2†	239859.9	242626.3	10695 ug/L	10695 ppb	10:05:59

Mean Data: ICV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054435.7	99.392	%	0.7163				0.72%
Sc Radial	5567.4	100	%	0.9				0.91%
Y 371.029	841970.1	98.682	%	0.7455				0.76%
Y RADIAL	4813.2	99.95	%	0.971				0.97%
Ag 328.068†	63899.2	256.06	ug/L	0.515	256.06	ppb	0.515	0.20%
QC value within limits for Ag 328.068 Recovery = 102.42%								
Al 396.153Radial†	5519.1	5001.2	ug/L	2.50	5001.2	ppb	2.50	0.05%
QC value within limits for Al 396.153Radial Recovery = 100.02%								
As 188.979†	2056.9	486.09	ug/L	3.628	486.09	ppb	3.628	0.75%
QC value within limits for As 188.979 Recovery = 97.22%								
B 249.677†	32492.1	504.50	ug/L	1.392	504.50	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.90%								
Ba 233.527†	106232.7	538.94	ug/L	0.633	538.94	ppb	0.633	0.12%
QC value within limits for Ba 233.527 Recovery = 107.79%								
Be 313.107†	832867.8	260.15	ug/L	0.787	260.15	ppb	0.787	0.30%
QC value within limits for Be 313.107 Recovery = 104.06%								

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Ca 317.933Radial†        1962.7      4888.9 ug/L        68.91      4888.9 ppb        68.91   1.41%
   QC value within limits for Ca 317.933Radial  Recovery = 97.78%
Cd 226.502†             67684.5       505.98 ug/L       0.945       505.98 ppb        0.945   0.19%
   QC value within limits for Cd 226.502  Recovery = 101.20%
Co 228.616†             38202.2       476.11 ug/L       2.677       476.11 ppb        2.677   0.56%
   QC value within limits for Co 228.616  Recovery = 95.22%
Cr 267.716†             59349.4       506.19 ug/L       1.307       506.19 ppb        1.307   0.26%
   QC value within limits for Cr 267.716  Recovery = 101.24%
Cu 324.752†            213364.5       526.72 ug/L       2.327       526.72 ppb        2.327   0.44%
   QC value within limits for Cu 324.752  Recovery = 105.34%
Fe 238.204 Radial†       146.4       5151.2 ug/L      155.66      5151.2 ppb       155.66   3.02%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.02%
K 766.490 Radial†        5789.7       2509.3 ug/L      20.76      2509.3 ppb        20.76   0.83%
   QC value within limits for K 766.490 Radial  Recovery = 100.37%
Mg 279.077 IEC†            66.5       5274.5 ug/L     118.66      5274.5 ppb       118.66   2.25%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.49%
Mn 257.610†            658614.9       521.06 ug/L       0.751       521.06 ppb        0.751   0.14%
   QC value within limits for Mn 257.610  Recovery = 104.21%
Mo 202.031†             13106.2       524.96 ug/L       3.238       524.96 ppb        3.238   0.62%
   QC value within limits for Mo 202.031  Recovery = 104.99%
Na 589.592 Radial†       942.6       2548.6 ug/L      29.60      2548.6 ppb        29.60   1.16%
   QC value within limits for Na 589.592 Radial  Recovery = 101.94%
Ni 231.604†             33507.8       536.75 ug/L       0.520       536.75 ppb        0.520   0.10%
   QC value within limits for Ni 231.604  Recovery = 107.35%
P 214.914†               7212.6       2469.3 ug/L      15.04      2469.3 ppb        15.04   0.61%
   QC value within limits for P 214.914  Recovery = 98.77%
Pb 220.353†              6806.1       511.59 ug/L       1.490       511.59 ppb        1.490   0.29%
   QC value within limits for Pb 220.353  Recovery = 102.32%
S 181.975 Axial†         3071.7       2599.1 ug/L      21.20      2599.1 ppb        21.20   0.82%
   QC value within limits for S 181.975 Axial  Recovery = 103.96%
Sb 206.836†              2687.5       535.31 ug/L       3.632       535.31 ppb        3.632   0.68%
   QC value within limits for Sb 206.836  Recovery = 107.06%
Se 196.026†              8001.5       2622.2 ug/L       9.08      2622.2 ppb         9.08   0.35%
   QC value within limits for Se 196.026  Recovery = 104.89%
Si 251.611†            241898.3       4979.9 ug/L      10.15      4979.9 ppb        10.15   0.20%
   QC value within limits for Si 251.611  Recovery = 99.60%
Sn 189.927†              5116.8       532.64 ug/L       1.897       532.64 ppb        1.897   0.36%
   QC value within limits for Sn 189.927  Recovery = 106.53%
Sr 421.552†             33561.3       517.02 ug/L       1.026       517.02 ppb        1.026   0.20%
   QC value within limits for Sr 421.552  Recovery = 103.40%
Ti 334.940†            388802.3       508.89 ug/L       1.289       508.89 ppb        1.289   0.25%
   QC value within limits for Ti 334.940  Recovery = 101.78%
Tl 190.801†              2951.7       500.06 ug/L       3.524       500.06 ppb        3.524   0.70%
   QC value within limits for Tl 190.801  Recovery = 100.01%
U 409.014†              20567.3       508.70 ug/L       1.982       508.70 ppb        1.982   0.39%
   QC value within limits for U 409.014  Recovery = 101.74%
V 292.402†              88119.7       506.07 ug/L       1.724       506.07 ppb        1.724   0.34%
   QC value within limits for V 292.402  Recovery = 101.21%
Zn 213.857†             91889.0       508.19 ug/L       1.080       508.19 ppb        1.080   0.21%
   QC value within limits for Zn 213.857  Recovery = 101.64%
SiO2†                  240236.5        10590 ug/L       130.9        10590 ppb        130.9   1.24%
   QC value within limits for SiO2  Recovery = 99.02%
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: ICB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/8/2009 10:08:09
Data Type: Reprocessed on 7/8/2009 11:40:09

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1062518.9	1062518.9	100.15	%			10:11:19
1	Sc Radial	5619.2	5619.2	101	%			10:10:02
1	Y 371.029	855063.0	855063.0	100.22	%			10:11:19
1	Y RADIAL	4891.2	4891.2	101.6	%			10:10:02
1	Ag 328.068†	686.9	47.3	0.1796	ug/L	0.1796	ppb	10:11:24
1	Al 396.153Radial†	-95.5	-2.4	-2.1842	ug/L	-2.1842	ppb	10:10:02
1	As 188.979†	-51.6	-14.6	-3.4416	ug/L	-3.4416	ppb	10:11:44
1	B 249.677†	-113.0	268.7	4.1899	ug/L	4.1899	ppb	10:11:24
1	Ba 233.527†	27.7	3.4	0.0163	ug/L	0.0163	ppb	10:11:44
1	Be 313.107†	-7419.2	-91.5	-0.0284	ug/L	-0.0284	ppb	10:11:24
1	Ca 317.933Radial†	20.0	2.8	7.0382	ug/L	7.0382	ppb	10:10:22
1	Cd 226.502†	-268.6	9.5	0.0735	ug/L	0.0735	ppb	10:11:44
1	Co 228.616†	-84.2	6.3	0.0795	ug/L	0.0795	ppb	10:11:44
1	Cr 267.716†	-63.7	-35.0	-0.2989	ug/L	-0.2989	ppb	10:11:24
1	Cu 324.752†	10404.8	197.5	0.4861	ug/L	0.4861	ppb	10:11:24
1	Fe 238.204 Radial†	-0.3	-0.6	-22.095	ug/L	-22.095	ppb	10:10:22
1	K 766.490 Radial†	1537.8	49.9	21.622	ug/L	21.622	ppb	10:10:02
1	Mg 279.077 IEC†	-0.3	-0.5	-40.804	ug/L	-40.804	ppb	10:10:22
1	Mn 257.610†	863.6	35.2	0.0257	ug/L	0.0257	ppb	10:11:44
1	Mo 202.031†	34.2	2.4	0.0952	ug/L	0.0952	ppb	10:11:44
1	Na 589.592 Radial†	-172.2	-0.1	-0.2094	ug/L	-0.2094	ppb	10:10:22
1	Ni 231.604†	165.5	17.0	0.2724	ug/L	0.2724	ppb	10:11:44
1	P 214.914†	359.3	21.8	7.6434	ug/L	7.6434	ppb	10:11:44
1	Pb 220.353†	-14.3	14.8	1.1103	ug/L	1.1103	ppb	10:11:44
1	S 181.975 Axial†	61.3	-6.6	-5.6162	ug/L	-5.6162	ppb	10:11:44
1	Sb 206.836†	50.7	5.2	1.0374	ug/L	1.0374	ppb	10:11:44
1	Se 196.026†	-15.1	6.5	2.0343	ug/L	2.0343	ppb	10:11:44
1	Si 251.611†	605.7	44.7	0.9121	ug/L	0.9121	ppb	10:11:44
1	Sn 189.927†	10.2	4.7	0.4889	ug/L	0.4889	ppb	10:11:44
1	Sr 421.552†	8.2	2.6	0.0401	ug/L	0.0401	ppb	10:10:22
1	Ti 334.940†	-1098.3	12.6	0.0172	ug/L	0.0172	ppb	10:11:24
1	Tl 190.801†	-61.2	0.3	0.0480	ug/L	0.0480	ppb	10:11:44
1	U 409.014†	-3850.0	-9.3	-0.2275	ug/L	-0.2275	ppb	10:11:19
1	V 292.402†	-1677.0	-21.6	-0.1194	ug/L	-0.1194	ppb	10:11:24
1	Zn 213.857†	1258.4	134.0	0.7499	ug/L	0.7499	ppb	10:11:44
1	SiO2†	620.8	17.5	0.7492	ug/L	0.7492	ppb	10:12:50
2	Sc 361.383	1069316.7	1069316.7	100.80	%			10:11:49
2	Sc Radial	5629.3	5629.3	101	%			10:10:27
2	Y 371.029	858517.5	858517.5	100.62	%			10:11:49
2	Y RADIAL	4855.9	4855.9	100.8	%			10:10:27
2	Ag 328.068†	676.2	32.3	0.1208	ug/L	0.1208	ppb	10:11:54
2	Al 396.153Radial†	-91.2	2.0	1.8521	ug/L	1.8521	ppb	10:10:27
2	As 188.979†	-44.8	-7.5	-1.7654	ug/L	-1.7654	ppb	10:12:14
2	B 249.677†	-123.3	259.2	4.0408	ug/L	4.0408	ppb	10:11:54
2	Ba 233.527†	23.9	-0.6	-0.0030	ug/L	-0.0030	ppb	10:12:14
2	Be 313.107†	-7510.8	-135.4	-0.0419	ug/L	-0.0419	ppb	10:11:54
2	Ca 317.933Radial†	16.0	-1.1	-2.7930	ug/L	-2.7930	ppb	10:10:47
2	Cd 226.502†	-288.6	-8.6	-0.0630	ug/L	-0.0630	ppb	10:12:14
2	Co 228.616†	-88.3	2.8	0.0352	ug/L	0.0352	ppb	10:12:14
2	Cr 267.716†	-28.7	0.1	0.0000	ug/L	0.0000	ppb	10:11:54
2	Cu 324.752†	10297.6	25.1	0.0611	ug/L	0.0611	ppb	10:11:54
2	Fe 238.204 Radial†	-0.0	-0.4	-13.229	ug/L	-13.229	ppb	10:10:47
2	K 766.490 Radial†	1552.5	61.7	26.759	ug/L	26.759	ppb	10:10:27
2	Mg 279.077 IEC†	2.2	2.0	160.02	ug/L	160.02	ppb	10:10:47
2	Mn 257.610†	868.0	34.2	0.0222	ug/L	0.0222	ppb	10:12:14
2	Mo 202.031†	38.9	6.8	0.2725	ug/L	0.2725	ppb	10:12:14
2	Na 589.592 Radial†	-186.1	-13.6	-36.706	ug/L	-36.706	ppb	10:10:47
2	Ni 231.604†	162.3	12.7	0.2043	ug/L	0.2043	ppb	10:12:14

2	P 214.914†	334.4	-5.1	-1.8065	ug/L	-1.8065	ppb	10:12:14
2	Pb 220.353†	-20.2	9.0	0.6783	ug/L	0.6783	ppb	10:12:14
2	S 181.975 Axial†	69.9	1.5	1.2588	ug/L	1.2588	ppb	10:12:14
2	Sb 206.836†	55.1	9.2	1.8205	ug/L	1.8205	ppb	10:12:14
2	Se 196.026†	-16.1	5.6	1.7877	ug/L	1.7877	ppb	10:12:14
2	Si 251.611†	597.5	32.7	0.6587	ug/L	0.6587	ppb	10:12:14
2	Sn 189.927†	12.0	6.5	0.6728	ug/L	0.6728	ppb	10:12:14
2	Sr 421.552†	-0.3	-5.8	-0.0892	ug/L	-0.0892	ppb	10:10:47
2	Ti 334.940†	-1058.2	59.4	0.0757	ug/L	0.0757	ppb	10:11:54
2	Tl 190.801†	-64.4	-2.5	-0.4195	ug/L	-0.4195	ppb	10:12:14
2	U 409.014†	-3694.3	169.6	4.2087	ug/L	4.2087	ppb	10:11:49
2	V 292.402†	-1628.9	36.7	0.2243	ug/L	0.2243	ppb	10:11:54
2	Zn 213.857†	1236.8	104.6	0.5788	ug/L	0.5788	ppb	10:12:14
2	SiO2†	605.7	-1.5	-0.0994	ug/L	-0.0994	ppb	10:12:55
3	Sc 361.383	1062135.4	1062135.4	100.12	%			10:12:20
3	Sc Radial	5726.3	5726.3	103	%			10:10:52
3	Y 371.029	854170.1	854170.1	100.11	%			10:12:20
3	Y RADIAL	4978.7	4978.7	103.4	%			10:10:52
3	Ag 328.068†	596.6	-42.7	-0.1739	ug/L	-0.1739	ppb	10:12:25
3	Al 396.153Radial†	-64.8	29.2	26.595	ug/L	26.595	ppb	10:10:52
3	As 188.979†	-48.3	-11.4	-2.6739	ug/L	-2.6739	ppb	10:12:45
3	B 249.677†	-137.5	244.2	3.8077	ug/L	3.8077	ppb	10:12:25
3	Ba 233.527†	32.8	8.5	0.0434	ug/L	0.0434	ppb	10:12:45
3	Be 313.107†	-7462.3	-137.3	-0.0426	ug/L	-0.0426	ppb	10:12:25
3	Ca 317.933Radial†	21.3	3.8	9.4766	ug/L	9.4766	ppb	10:11:12
3	Cd 226.502†	-293.9	-15.9	-0.1159	ug/L	-0.1159	ppb	10:12:45
3	Co 228.616†	-77.2	13.3	0.1659	ug/L	0.1659	ppb	10:12:45
3	Cr 267.716†	9.4	38.0	0.3245	ug/L	0.3245	ppb	10:12:25
3	Cu 324.752†	10285.9	82.5	0.2022	ug/L	0.2022	ppb	10:12:25
3	Fe 238.204 Radial†	-0.3	-0.6	-22.364	ug/L	-22.364	ppb	10:11:12
3	K 766.490 Radial†	1501.0	-14.5	-6.2704	ug/L	-6.2704	ppb	10:10:52
3	Mg 279.077 IEC†	-1.8	-1.9	-151.32	ug/L	-151.32	ppb	10:11:12
3	Mn 257.610†	857.0	29.0	0.0229	ug/L	0.0229	ppb	10:12:45
3	Mo 202.031†	36.6	4.8	0.1888	ug/L	0.1888	ppb	10:12:45
3	Na 589.592 Radial†	-183.0	-7.4	-20.091	ug/L	-20.091	ppb	10:11:12
3	Ni 231.604†	155.8	7.4	0.1180	ug/L	0.1180	ppb	10:12:45
3	P 214.914†	337.7	0.4	0.1410	ug/L	0.1410	ppb	10:12:45
3	Pb 220.353†	-5.3	23.7	1.7877	ug/L	1.7877	ppb	10:12:45
3	S 181.975 Axial†	71.0	3.0	2.5743	ug/L	2.5743	ppb	10:12:45
3	Sb 206.836†	52.0	6.6	1.2846	ug/L	1.2846	ppb	10:12:45
3	Se 196.026†	-12.9	8.7	2.7668	ug/L	2.7668	ppb	10:12:45
3	Si 251.611†	618.9	58.0	1.1952	ug/L	1.1952	ppb	10:12:45
3	Sn 189.927†	7.7	2.3	0.2347	ug/L	0.2347	ppb	10:12:45
3	Sr 421.552†	-1.2	-6.6	-0.1023	ug/L	-0.1023	ppb	10:11:12
3	Ti 334.940†	-1088.2	22.3	0.0301	ug/L	0.0301	ppb	10:12:25
3	Tl 190.801†	-57.0	4.4	0.7456	ug/L	0.7456	ppb	10:12:45
3	U 409.014†	-3872.6	-33.3	-0.8247	ug/L	-0.8247	ppb	10:12:20
3	V 292.402†	-1572.8	81.8	0.4653	ug/L	0.4653	ppb	10:12:25
3	Zn 213.857†	1256.5	132.6	0.7473	ug/L	0.7473	ppb	10:12:45
3	SiO2†	684.3	81.2	3.5825	ug/L	3.5825	ppb	10:13:00

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1064657.0	100.36	%	0.381				0.38%
Sc Radial	5658.3	102	%	1.1				1.05%
Y 371.029	855916.8	100.32	%	0.269				0.27%
Y RADIAL	4908.6	101.9	%	1.31				1.29%
Ag 328.068†	12.3	0.0422	ug/L	0.18942	0.0422	ppb	0.18942	448.85%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.6	8.7543	ug/L	15.58188	8.7543	ppb	15.58188	177.99%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.2	-2.6270	ug/L	0.83913	-2.6270	ppb	0.83913	31.94%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	257.3	4.0128	ug/L	0.19262	4.0128	ppb	0.19262	4.80%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.7	0.0189	ug/L	0.02328	0.0189	ppb	0.02328	123.18%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.4	-0.0376	ug/L	0.00800	-0.0376	ppb	0.00800	21.25%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          1.8      4.5739 ug/L       6.49541      4.5739 ppb        6.49541 142.01%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -5.0     -0.0351 ug/L       0.09773     -0.0351 ppb        0.09773 278.26%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                7.5      0.0936 ug/L       0.06649      0.0936 ppb        0.06649  71.07%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                1.1      0.0085 ug/L       0.31178      0.0085 ppb        0.31178 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              101.7      0.2498 ug/L       0.21648      0.2498 ppb        0.21648  86.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5     -19.229 ug/L        5.1983     -19.229 ppb         5.1983  27.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         32.4      14.037 ug/L       17.7734      14.037 ppb       17.7734 126.62%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.1     -10.703 ug/L      157.8385     -10.703 ppb      157.8385 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               32.8      0.0236 ug/L       0.00188      0.0236 ppb        0.00188   7.96%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.7      0.1855 ug/L       0.08870      0.1855 ppb        0.08870  47.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -7.0     -19.002 ug/L       18.2728     -19.002 ppb       18.2728  96.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               12.4      0.1983 ug/L       0.07739      0.1983 ppb        0.07739  39.03%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 5.7      1.9926 ug/L       4.98968      1.9926 ppb        4.98968 250.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               15.9      1.1921 ug/L       0.55921      1.1921 ppb        0.55921  46.91%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.7     -0.5944 ug/L       4.39850     -0.5944 ppb        4.39850 740.05%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.0      1.3808 ug/L       0.40029      1.3808 ppb        0.40029  28.99%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                7.0      2.1962 ug/L       0.50925      2.1962 ppb        0.50925  23.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               45.1      0.9220 ug/L       0.26841      0.9220 ppb        0.26841  29.11%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.5      0.4655 ug/L       0.22000      0.4655 ppb        0.22000  47.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -3.3     -0.0505 ug/L       0.07870     -0.0505 ppb        0.07870 155.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               31.5      0.0410 ug/L       0.03074      0.0410 ppb        0.03074  74.91%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.7      0.1247 ug/L       0.58632      0.1247 ppb        0.58632 470.17%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                42.3      1.0522 ug/L       2.74987      1.0522 ppb        2.74987 261.36%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                32.3      0.1900 ug/L       0.29386      0.1900 ppb        0.29386 154.62%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              123.8      0.6920 ug/L       0.09801      0.6920 ppb        0.09801  14.16%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     32.4      1.4108 ug/L       1.92802      1.4108 ppb        1.92802 136.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 8
Sample ID: PQL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/8/2009 10:15:11
Data Type: Reprocessed on 7/8/2009 11:40:11

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1047868.8	1047868.8	98.773	%			10:18:21
1	Sc Radial	5489.2	5489.2	98.6	%			10:17:05
1	Y 371.029	843324.4	843324.4	98.841	%			10:18:21
1	Y RADIAL	4749.6	4749.6	98.63	%			10:17:05
1	Ag 328.068†	1908.9	1294.0	5.1281	ug/L	5.1281	ppb	10:18:26
1	Al 396.153Radial†	137.4	231.5	210.24	ug/L	210.24	ppb	10:17:05
1	As 188.979†	70.2	108.0	25.354	ug/L	25.354	ppb	10:18:47
1	B 249.677†	2924.9	3342.8	52.070	ug/L	52.070	ppb	10:18:26
1	Ba 233.527†	1019.6	1008.0	5.1161	ug/L	5.1161	ppb	10:18:47
1	Be 313.107†	8654.4	16078.1	5.0107	ug/L	5.0107	ppb	10:18:26
1	Ca 317.933Radial†	95.1	79.5	197.91	ug/L	197.91	ppb	10:17:25
1	Cd 226.502†	377.6	659.9	4.9265	ug/L	4.9265	ppb	10:18:47
1	Co 228.616†	298.6	392.8	4.9073	ug/L	4.9073	ppb	10:18:47
1	Cr 267.716†	559.7	595.3	5.0626	ug/L	5.0626	ppb	10:18:47
1	Cu 324.752†	13982.0	3964.4	9.7874	ug/L	9.7874	ppb	10:18:26
1	Fe 238.204 Radial†	3.4	3.1	108.63	ug/L	108.63	ppb	10:17:25
1	K 766.490 Radial†	1881.1	433.9	188.09	ug/L	188.09	ppb	10:17:05
1	Mg 279.077 IEC†	3.4	3.3	260.55	ug/L	260.55	ppb	10:17:25
1	Mn 257.610†	13937.0	13283.1	10.506	ug/L	10.506	ppb	10:18:26
1	Mo 202.031†	283.1	254.8	10.207	ug/L	10.207	ppb	10:18:47
1	Na 589.592 Radial†	-73.9	95.5	258.17	ug/L	258.17	ppb	10:17:25
1	Ni 231.604†	470.7	328.3	5.2585	ug/L	5.2585	ppb	10:18:47
1	P 214.914†	747.0	419.3	146.74	ug/L	146.74	ppb	10:18:47
1	Pb 220.353†	129.9	160.5	12.084	ug/L	12.084	ppb	10:18:47
1	S 181.975 Axial†	177.5	111.8	94.633	ug/L	94.633	ppb	10:18:47
1	Sb 206.836†	107.1	63.0	12.627	ug/L	12.627	ppb	10:18:47
1	Se 196.026†	79.0	101.6	33.458	ug/L	33.458	ppb	10:18:47
1	Si 251.611†	5379.4	4886.1	100.55	ug/L	100.55	ppb	10:18:26
1	Sn 189.927†	102.0	97.8	10.192	ug/L	10.192	ppb	10:18:47
1	Sr 421.552†	343.2	342.5	5.2744	ug/L	5.2744	ppb	10:17:25
1	Ti 334.940†	2629.6	3771.5	4.9245	ug/L	4.9245	ppb	10:18:26
1	Tl 190.801†	45.6	107.5	18.194	ug/L	18.194	ppb	10:18:47
1	U 409.014†	-1614.8	2199.9	54.559	ug/L	54.559	ppb	10:18:21
1	V 292.402†	-733.6	910.1	5.3790	ug/L	5.3790	ppb	10:18:26
1	Zn 213.857†	2833.5	1746.3	9.6832	ug/L	9.6832	ppb	10:18:47
1	SiO2†	5363.4	4827.7	212.72	ug/L	212.72	ppb	10:19:53
2	Sc 361.383	1047486.5	1047486.5	98.737	%			10:18:52
2	Sc Radial	5556.3	5556.3	99.8	%			10:17:30
2	Y 371.029	843422.2	843422.2	98.852	%			10:18:52
2	Y RADIAL	4839.9	4839.9	100.5	%			10:17:30
2	Ag 328.068†	1979.1	1365.8	5.4057	ug/L	5.4057	ppb	10:18:57
2	Al 396.153Radial†	131.7	224.1	203.50	ug/L	203.50	ppb	10:17:30
2	As 188.979†	79.1	117.0	27.460	ug/L	27.460	ppb	10:19:17
2	B 249.677†	2837.5	3255.3	50.709	ug/L	50.709	ppb	10:18:57
2	Ba 233.527†	999.5	988.0	5.0149	ug/L	5.0149	ppb	10:19:17
2	Be 313.107†	8590.8	16016.9	4.9918	ug/L	4.9918	ppb	10:18:57
2	Ca 317.933Radial†	97.2	80.4	200.20	ug/L	200.20	ppb	10:17:50
2	Cd 226.502†	375.2	657.6	4.9119	ug/L	4.9119	ppb	10:19:17
2	Co 228.616†	313.3	407.7	5.0943	ug/L	5.0943	ppb	10:19:17
2	Cr 267.716†	522.4	557.7	4.7420	ug/L	4.7420	ppb	10:19:17
2	Cu 324.752†	14012.6	4000.6	9.8754	ug/L	9.8754	ppb	10:18:57
2	Fe 238.204 Radial†	2.8	2.4	85.690	ug/L	85.690	ppb	10:17:50
2	K 766.490 Radial†	1891.7	421.5	182.69	ug/L	182.69	ppb	10:17:30
2	Mg 279.077 IEC†	3.4	3.3	259.03	ug/L	259.03	ppb	10:17:50
2	Mn 257.610†	13825.0	13174.8	10.418	ug/L	10.418	ppb	10:18:57
2	Mo 202.031†	288.8	260.7	10.442	ug/L	10.442	ppb	10:19:17
2	Na 589.592 Radial†	-60.0	110.3	298.35	ug/L	298.35	ppb	10:17:50
2	Ni 231.604†	467.6	325.3	5.2109	ug/L	5.2109	ppb	10:19:17

2	P 214.914†	747.1	419.7	146.89 ug/L	146.89 ppb	10:19:17
2	Pb 220.353†	109.3	139.8	10.531 ug/L	10.531 ppb	10:19:17
2	S 181.975 Axial†	174.7	109.1	92.292 ug/L	92.292 ppb	10:19:17
2	Sb 206.836†	103.9	59.8	12.037 ug/L	12.037 ppb	10:19:17
2	Se 196.026†	78.5	101.1	33.226 ug/L	33.226 ppb	10:19:17
2	Si 251.611†	5425.5	4934.8	101.55 ug/L	101.55 ppb	10:18:57
2	Sn 189.927†	110.5	106.5	11.091 ug/L	11.091 ppb	10:19:17
2	Sr 421.552†	350.2	345.2	5.3169 ug/L	5.3169 ppb	10:17:50
2	Ti 334.940†	2664.9	3808.2	4.9728 ug/L	4.9728 ppb	10:18:57
2	Tl 190.801†	64.2	126.4	21.375 ug/L	21.375 ppb	10:19:17
2	U 409.014†	-1616.1	2197.9	54.515 ug/L	54.515 ppb	10:18:52
2	V 292.402†	-696.6	947.3	5.5964 ug/L	5.5964 ppb	10:18:57
2	Zn 213.857†	2826.6	1740.4	9.6528 ug/L	9.6528 ppb	10:19:17
2	SiO2†	5326.0	4791.8	211.13 ug/L	211.13 ppb	10:19:58
3	Sc 361.383	1064715.9	1064715.9	100.36 %		10:19:22
3	Sc Radial	5636.0	5636.0	101 %		10:17:55
3	Y 371.029	857151.8	857151.8	100.46 %		10:19:22
3	Y RADIAL	4900.5	4900.5	101.8 %		10:17:55
3	Ag 328.068†	1947.8	1302.2	5.1615 ug/L	5.1615 ppb	10:19:27
3	Al 396.153Radial†	113.0	203.8	185.06 ug/L	185.06 ppb	10:17:55
3	As 188.979†	78.8	115.4	27.092 ug/L	27.092 ppb	10:19:47
3	B 249.677†	2917.2	3288.2	51.219 ug/L	51.219 ppb	10:19:27
3	Ba 233.527†	1004.9	977.0	4.9582 ug/L	4.9582 ppb	10:19:47
3	Be 313.107†	8767.1	16051.7	5.0025 ug/L	5.0025 ppb	10:19:27
3	Ca 317.933Radial†	96.9	78.7	196.13 ug/L	196.13 ppb	10:18:15
3	Cd 226.502†	363.6	640.0	4.7768 ug/L	4.7768 ppb	10:19:47
3	Co 228.616†	310.3	399.6	4.9919 ug/L	4.9919 ppb	10:19:47
3	Cr 267.716†	528.2	554.9	4.7188 ug/L	4.7188 ppb	10:19:47
3	Cu 324.752†	14146.2	3904.0	9.6387 ug/L	9.6387 ppb	10:19:27
3	Fe 238.204 Radial†	3.6	3.2	111.85 ug/L	111.85 ppb	10:18:15
3	K 766.490 Radial†	1829.8	333.6	144.57 ug/L	144.57 ppb	10:17:55
3	Mg 279.077 IEC†	6.0	5.8	456.93 ug/L	456.93 ppb	10:18:15
3	Mn 257.610†	14031.0	13153.4	10.401 ug/L	10.401 ppb	10:19:27
3	Mo 202.031†	277.9	245.2	9.8210 ug/L	9.8210 ppb	10:19:47
3	Na 589.592 Radial†	-65.4	105.8	286.15 ug/L	286.15 ppb	10:18:15
3	Ni 231.604†	473.1	323.1	5.1761 ug/L	5.1761 ppb	10:19:47
3	P 214.914†	766.3	426.6	149.31 ug/L	149.31 ppb	10:19:47
3	Pb 220.353†	121.9	150.5	11.326 ug/L	11.326 ppb	10:19:47
3	S 181.975 Axial†	173.4	104.9	88.788 ug/L	88.788 ppb	10:19:47
3	Sb 206.836†	88.6	42.9	8.6819 ug/L	8.6819 ppb	10:19:47
3	Se 196.026†	79.8	101.1	33.313 ug/L	33.313 ppb	10:19:47
3	Si 251.611†	5402.9	4823.3	99.277 ug/L	99.277 ppb	10:19:27
3	Sn 189.927†	103.1	97.3	10.137 ug/L	10.137 ppb	10:19:47
3	Sr 421.552†	361.1	351.1	5.4073 ug/L	5.4073 ppb	10:18:15
3	Ti 334.940†	2655.9	3755.6	4.9047 ug/L	4.9047 ppb	10:19:27
3	Tl 190.801†	61.2	122.4	20.700 ug/L	20.700 ppb	10:19:47
3	U 409.014†	-1729.9	2111.1	52.358 ug/L	52.358 ppb	10:19:22
3	V 292.402†	-842.5	813.3	4.8240 ug/L	4.8240 ppb	10:19:27
3	Zn 213.857†	2842.9	1710.3	9.4754 ug/L	9.4754 ppb	10:19:47
3	SiO2†	5379.4	4757.6	209.68 ug/L	209.68 ppb	10:20:03

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1053357.1	99.291	%	0.9274				0.93%
Sc Radial	5560.5	99.9	%	1.32				1.32%
Y 371.029	847966.2	99.385	%	0.9324				0.94%
Y RADIAL	4830.0	100.3	%	1.58				1.57%
Ag 328.068†	1320.7	5.2318	ug/L	0.15157	5.2318	ppb	0.15157	2.90%
QC value within limits for Ag 328.068 Recovery = 104.64%								
Al 396.153Radial†	219.8	199.60	ug/L	13.038	199.60	ppb	13.038	6.53%
QC value within limits for Al 396.153Radial Recovery = 99.80%								
As 188.979†	113.5	26.635	ug/L	1.1249	26.635	ppb	1.1249	4.22%
QC value within limits for As 188.979 Recovery = 88.78%								
B 249.677†	3295.4	51.333	ug/L	0.6874	51.333	ppb	0.6874	1.34%
QC value within limits for B 249.677 Recovery = 102.67%								
Ba 233.527†	991.0	5.0297	ug/L	0.08000	5.0297	ppb	0.08000	1.59%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	16048.9	5.0017	ug/L	0.00949	5.0017	ppb	0.00949	0.19%
QC value within limits for Be 313.107 Recovery = 100.03%								

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Ca 317.933Radial†          79.5      198.08 ug/L        2.042      198.08 ppb        2.042   1.03%
   QC value within limits for Ca 317.933Radial  Recovery = 99.04%
Cd 226.502†               652.5      4.8717 ug/L      0.08254      4.8717 ppb      0.08254   1.69%
   QC value within limits for Cd 226.502  Recovery = 97.43%
Co 228.616†               400.0      4.9978 ug/L      0.09363      4.9978 ppb      0.09363   1.87%
   QC value within limits for Co 228.616  Recovery = 99.96%
Cr 267.716†               569.3      4.8411 ug/L      0.19215      4.8411 ppb      0.19215   3.97%
   QC value within limits for Cr 267.716  Recovery = 96.82%
Cu 324.752†              3956.3      9.7672 ug/L      0.11961      9.7672 ppb      0.11961   1.22%
   QC value within limits for Cu 324.752  Recovery = 97.67%
Fe 238.204 Radial†          2.9      102.06 ug/L       14.266      102.06 ppb       14.266  13.98%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.06%
K 766.490 Radial†         396.3      171.78 ug/L       23.724      171.78 ppb       23.724  13.81%
   QC value within limits for K 766.490 Radial  Recovery = 114.52%
Mg 279.077 IEC†             4.1      325.50 ug/L      113.822      325.50 ppb      113.822  34.97%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.50%
Mn 257.610†             13203.8      10.442 ug/L       0.0568      10.442 ppb       0.0568   0.54%
   QC value within limits for Mn 257.610  Recovery = 104.42%
Mo 202.031†               253.6      10.157 ug/L       0.3133      10.157 ppb       0.3133   3.09%
   QC value within limits for Mo 202.031  Recovery = 101.57%
Na 589.592 Radial†        103.9      280.89 ug/L       20.599      280.89 ppb       20.599   7.33%
   QC value within limits for Na 589.592 Radial  Recovery = 93.63%
Ni 231.604†               325.6      5.2152 ug/L      0.04137      5.2152 ppb      0.04137   0.79%
   QC value within limits for Ni 231.604  Recovery = 104.30%
P 214.914†                421.9      147.65 ug/L        1.445      147.65 ppb        1.445   0.98%
   QC value within limits for P 214.914  Recovery = 98.43%
Pb 220.353†               150.3      11.314 ug/L       0.7766      11.314 ppb       0.7766   6.86%
   QC value within limits for Pb 220.353  Recovery = 113.14%
S 181.975 Axial†          108.6      91.904 ug/L       2.9414      91.904 ppb       2.9414   3.20%
   QC value within limits for S 181.975 Axial  Recovery = 91.90%
Sb 206.836†                55.2      11.115 ug/L       2.1279      11.115 ppb       2.1279  19.14%
   QC value within limits for Sb 206.836  Recovery = 111.15%
Se 196.026†               101.3      33.332 ug/L       0.1173      33.332 ppb       0.1173   0.35%
   QC value within limits for Se 196.026  Recovery = 111.11%
Si 251.611†              4881.4      100.46 ug/L        1.140      100.46 ppb        1.140   1.13%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†               100.5      10.473 ug/L       0.5359      10.473 ppb       0.5359   5.12%
   QC value within limits for Sn 189.927  Recovery = 104.73%
Sr 421.552†               346.3      5.3328 ug/L      0.06788      5.3328 ppb      0.06788   1.27%
   QC value within limits for Sr 421.552  Recovery = 106.66%
Ti 334.940†              3778.5      4.9340 ug/L      0.03506      4.9340 ppb      0.03506   0.71%
   QC value within limits for Ti 334.940  Recovery = 98.68%
Tl 190.801†               118.8      20.090 ug/L       1.6764      20.090 ppb       1.6764   8.34%
   QC value within limits for Tl 190.801  Recovery = 100.45%
U 409.014†               2169.6      53.811 ug/L       1.2585      53.811 ppb       1.2585   2.34%
   QC value within limits for U 409.014  Recovery = 107.62%
V 292.402†                890.2      5.2665 ug/L      0.39826      5.2665 ppb      0.39826   7.56%
   QC value within limits for V 292.402  Recovery = 105.33%
Zn 213.857†              1732.3      9.6038 ug/L      0.11224      9.6038 ppb      0.11224   1.17%
   QC value within limits for Zn 213.857  Recovery = 96.04%
SiO2†                    4792.4      211.18 ug/L        1.524      211.18 ppb        1.524   0.72%
   QC value within limits for SiO2  Recovery = 99.14%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: ICSA
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/8/2009 10:22:14
Data Type: Reprocessed on 7/8/2009 11:40:12

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	895501.5	895501.5	84.411	%			10:25:25
1	Sc Radial	5081.7	5081.7	91.3	%			10:24:27
1	Y 371.029	714523.0	714523.0	83.745	%			10:25:25
1	Y RADIAL	4391.8	4391.8	91.20	%			10:24:27
1	Ag 328.068†	-10393.0	-12951.0	1.0699	ug/L	1.0699	ppb	10:25:25
1	Al 396.153Radial†	511366.0	560078.8	509800	ug/L	509800	ppb	10:24:07
1	As 188.979†	-139.2	-128.0	6.5707	ug/L	6.5707	ppb	10:25:45
1	B 249.677†	908.6	1457.9	-1.6992	ug/L	-1.6992	ppb	10:25:25
1	Ba 233.527†	-495.8	-611.7	1.2025	ug/L	1.2025	ppb	10:25:45
1	Be 313.107†	-7530.9	-1605.5	-0.5734	ug/L	-0.5734	ppb	10:25:25
1	Ca 317.933Radial†	172461.7	188842.4	470380	ug/L	470380	ppb	10:24:07
1	Cd 226.502†	2108.2	2775.1	-0.9878	ug/L	-0.9878	ppb	10:25:45
1	Co 228.616†	-24.7	61.1	-1.8391	ug/L	-1.8391	ppb	10:25:45
1	Cr 267.716†	-320.2	-350.7	0.5961	ug/L	0.5961	ppb	10:25:45
1	Cu 324.752†	6421.7	-2583.6	4.2681	ug/L	4.2681	ppb	10:25:25
1	Fe 238.204 Radial†	4791.8	5247.1	184080	ug/L	184080	ppb	10:24:27
1	K 766.490 Radial†	1268.1	-84.4	17.211	ug/L	17.211	ppb	10:24:07
1	Mg 279.077 IEC†	5667.1	6205.7	491320	ug/L	491320	ppb	10:24:27
1	Mn 257.610†	-1965.4	-3155.4	12.011	ug/L	12.011	ppb	10:25:25
1	Mo 202.031†	-328.7	-421.2	-4.2268	ug/L	-4.2268	ppb	10:25:45
1	Na 589.592 Radial†	-173.4	-19.4	-52.528	ug/L	-52.528	ppb	10:24:27
1	Ni 231.604†	337.4	251.5	4.0300	ug/L	4.0300	ppb	10:25:45
1	P 214.914†	293.5	10.8	28.559	ug/L	28.559	ppb	10:25:45
1	Pb 220.353†	-942.6	-1087.6	0.6717	ug/L	0.6717	ppb	10:25:45
1	S 181.975 Axial†	128.7	84.6	-28.638	ug/L	-28.638	ppb	10:25:45
1	Sb 206.836†	101.4	74.7	-0.8382	ug/L	-0.8382	ppb	10:25:45
1	Se 196.026†	-1802.9	-2114.3	-13.357	ug/L	-13.357	ppb	10:25:45
1	Si 251.611†	614.8	168.2	3.9128	ug/L	3.9128	ppb	10:25:45
1	Sn 189.927†	-348.4	-418.3	-4.5225	ug/L	-4.5225	ppb	10:25:45
1	Sr 421.552†	258.7	277.9	-0.0791	ug/L	-0.0791	ppb	10:24:27
1	Ti 334.940†	-21523.1	-24388.8	-0.4475	ug/L	-0.4475	ppb	10:25:25
1	Tl 190.801†	-123.2	-84.6	-11.647	ug/L	-11.647	ppb	10:25:45
1	U 409.014†	-2645.4	700.7	-5.2282	ug/L	-5.2282	ppb	10:25:25
1	V 292.402†	867.3	2680.3	-1.8957	ug/L	-1.8957	ppb	10:25:45
1	Zn 213.857†	5199.0	5036.8	-8.7856	ug/L	-8.7856	ppb	10:25:45
1	SiO2†	554.5	54.6	3.3717	ug/L	3.3717	ppb	10:26:41
2	Sc 361.383	894719.3	894719.3	84.337	%			10:25:50
2	Sc Radial	5092.9	5092.9	91.5	%			10:24:53
2	Y 371.029	715579.1	715579.1	83.869	%			10:25:50
2	Y RADIAL	4406.9	4406.9	91.51	%			10:24:53
2	Ag 328.068†	-10345.8	-12905.8	1.4483	ug/L	1.4483	ppb	10:25:50
2	Al 396.153Radial†	515497.0	563358.3	512790	ug/L	512790	ppb	10:24:33
2	As 188.979†	-138.6	-127.5	6.8312	ug/L	6.8312	ppb	10:26:10
2	B 249.677†	761.2	1284.1	-4.5082	ug/L	-4.5082	ppb	10:25:50
2	Ba 233.527†	-460.6	-570.4	1.4270	ug/L	1.4270	ppb	10:26:10
2	Be 313.107†	-7458.7	-1527.7	-0.5517	ug/L	-0.5517	ppb	10:25:50
2	Ca 317.933Radial†	173876.6	189972.1	473190	ug/L	473190	ppb	10:24:33
2	Cd 226.502†	2120.9	2792.4	-0.9470	ug/L	-0.9470	ppb	10:26:10
2	Co 228.616†	-11.2	77.1	-1.6492	ug/L	-1.6492	ppb	10:26:10
2	Cr 267.716†	-331.2	-364.1	0.4968	ug/L	0.4968	ppb	10:26:10
2	Cu 324.752†	6524.1	-2455.6	4.6269	ug/L	4.6269	ppb	10:25:50
2	Fe 238.204 Radial†	4821.9	5268.4	184820	ug/L	184820	ppb	10:24:53
2	K 766.490 Radial†	1216.4	-143.9	-8.5744	ug/L	-8.5744	ppb	10:24:33
2	Mg 279.077 IEC†	5711.8	6240.9	494110	ug/L	494110	ppb	10:24:53
2	Mn 257.610†	-2242.7	-3486.2	11.793	ug/L	11.793	ppb	10:25:50
2	Mo 202.031†	-331.9	-425.4	-4.3417	ug/L	-4.3417	ppb	10:26:10
2	Na 589.592 Radial†	-158.9	-3.3	-8.8064	ug/L	-8.8064	ppb	10:24:53
2	Ni 231.604†	322.8	234.5	3.7578	ug/L	3.7578	ppb	10:26:10

2	P 214.914†	282.3	-2.2	24.298	ug/L	24.298 ppb	10:26:10
2	Pb 220.353†	-980.2	-1133.2	-2.2283	ug/L	-2.2283 ppb	10:26:10
2	S 181.975 Axial†	133.9	90.9	-23.927	ug/L	-23.927 ppb	10:26:10
2	Sb 206.836†	107.1	81.5	0.3983	ug/L	0.3983 ppb	10:26:10
2	Se 196.026†	-1828.8	-2146.8	-21.144	ug/L	-21.144 ppb	10:26:10
2	Si 251.611†	621.0	176.2	4.0917	ug/L	4.0917 ppb	10:26:10
2	Sn 189.927†	-354.8	-426.2	-5.1179	ug/L	-5.1179 ppb	10:26:10
2	Sr 421.552†	253.4	271.4	-0.2039	ug/L	-0.2039 ppb	10:24:53
2	Ti 334.940†	-22184.0	-25194.7	-1.3121	ug/L	-1.3121 ppb	10:25:50
2	Tl 190.801†	-105.2	-63.3	-8.0480	ug/L	-8.0480 ppb	10:26:10
2	U 409.014†	-2792.9	523.2	-9.7248	ug/L	-9.7248 ppb	10:25:50
2	V 292.402†	765.0	2559.9	-2.6434	ug/L	-2.6434 ppb	10:26:10
2	Zn 213.857†	5183.7	5024.0	-9.0326	ug/L	-9.0326 ppb	10:26:10
2	SiO2†	499.4	-10.2	0.5414	ug/L	0.5414 ppb	10:26:46
3	Sc 361.383	893780.1	893780.1	84.249	%		10:26:15
3	Sc Radial	5118.7	5118.7	92.0	%		10:25:18
3	Y 371.029	713970.1	713970.1	83.680	%		10:26:15
3	Y RADIAL	4426.1	4426.1	91.91	%		10:25:18
3	Ag 328.068†	-10409.3	-12994.0	1.2796	ug/L	1.2796 ppb	10:26:15
3	Al 396.153Radial†	508361.4	552762.3	503140	ug/L	503140 ppb	10:24:58
3	As 188.979†	-128.5	-115.7	9.6416	ug/L	9.6416 ppb	10:26:36
3	B 249.677†	835.5	1373.2	-3.1464	ug/L	-3.1464 ppb	10:26:15
3	Ba 233.527†	-496.7	-613.9	1.2131	ug/L	1.2131 ppb	10:26:36
3	Be 313.107†	-7571.9	-1671.3	-0.5963	ug/L	-0.5963 ppb	10:26:15
3	Ca 317.933Radial†	171828.3	186787.9	465260	ug/L	465260 ppb	10:24:58
3	Cd 226.502†	2103.7	2774.7	-1.1037	ug/L	-1.1037 ppb	10:26:36
3	Co 228.616†	-21.9	64.4	-1.8116	ug/L	-1.8116 ppb	10:26:36
3	Cr 267.716†	-287.1	-312.1	0.9428	ug/L	0.9428 ppb	10:26:36
3	Cu 324.752†	6618.2	-2335.7	4.9347	ug/L	4.9347 ppb	10:26:15
3	Fe 238.204 Radial†	4851.7	5274.3	185030	ug/L	185030 ppb	10:25:18
3	K 766.490 Radial†	1220.8	-145.9	-8.5400	ug/L	-8.5400 ppb	10:24:58
3	Mg 279.077 IEC†	5734.1	6233.7	493540	ug/L	493540 ppb	10:25:18
3	Mn 257.610†	-2195.1	-3432.5	11.873	ug/L	11.873 ppb	10:26:15
3	Mo 202.031†	-345.3	-441.6	-4.9774	ug/L	-4.9774 ppb	10:26:36
3	Na 589.592 Radial†	-160.0	-3.5	-9.5568	ug/L	-9.5568 ppb	10:25:18
3	Ni 231.604†	344.5	260.6	4.1763	ug/L	4.1763 ppb	10:26:36
3	P 214.914†	258.2	-30.4	10.851	ug/L	10.851 ppb	10:26:36
3	Pb 220.353†	-979.4	-1133.4	-4.1545	ug/L	-4.1545 ppb	10:26:36
3	S 181.975 Axial†	130.4	86.9	-25.395	ug/L	-25.395 ppb	10:26:36
3	Sb 206.836†	118.6	95.4	3.4218	ug/L	3.4218 ppb	10:26:36
3	Se 196.026†	-1802.6	-2118.0	-11.599	ug/L	-11.599 ppb	10:26:36
3	Si 251.611†	555.6	99.4	2.5199	ug/L	2.5199 ppb	10:26:36
3	Sn 189.927†	-358.0	-430.4	-6.1399	ug/L	-6.1399 ppb	10:26:36
3	Sr 421.552†	264.5	282.1	0.0330	ug/L	0.0330 ppb	10:25:18
3	Ti 334.940†	-22156.0	-25189.1	-1.8382	ug/L	-1.8382 ppb	10:26:15
3	Tl 190.801†	-115.0	-75.1	-10.083	ug/L	-10.083 ppb	10:26:36
3	U 409.014†	-2610.1	736.7	-4.4537	ug/L	-4.4537 ppb	10:26:15
3	V 292.402†	851.7	2663.7	-2.0904	ug/L	-2.0904 ppb	10:26:36
3	Zn 213.857†	5227.2	5082.1	-8.7142	ug/L	-8.7142 ppb	10:26:36
3	SiO2†	573.2	78.0	4.4641	ug/L	4.4641 ppb	10:26:51

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	894667.0	84.332	%	0.0812				0.10%
Sc Radial	5097.8	91.6	%	0.34				0.37%
Y 371.029	714690.7	83.764	%	0.0958				0.11%
Y RADIAL	4408.3	91.54	%	0.357				0.39%
Ag 328.068†	-12950.3	1.2659	ug/L	0.18957	1.2659	ppb	0.18957	14.97%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	558733.1	508580	ug/L	4937.7	508580	ppb	4937.7	0.97%
QC value within limits for Al 396.153Radial Recovery = 101.72%								
As 188.979†	-123.7	7.6812	ug/L	1.70280	7.6812	ppb	1.70280	22.17%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1371.7	-3.1179	ug/L	1.40468	-3.1179	ppb	1.40468	45.05%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-598.7	1.2809	ug/L	0.12664	1.2809	ppb	0.12664	9.89%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1601.5	-0.5738	ug/L	0.02233	-0.5738	ppb	0.02233	3.89%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†     188534.1      469610 ug/L        4021.0      469610 ppb        4021.0   0.86%
   QC value within limits for Ca 317.933Radial  Recovery = 93.92%
Cd 226.502†             2780.7     -1.0128 ug/L       0.08129     -1.0128 ppb       0.08129   8.03%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               67.6     -1.7666 ug/L       0.10262     -1.7666 ppb       0.10262   5.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -342.3      0.6786 ug/L       0.23414      0.6786 ppb       0.23414  34.51%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -2458.3      4.6099 ug/L       0.33361      4.6099 ppb       0.33361   7.24%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†      5263.2      184640 ug/L         500.8      184640 ppb         500.8   0.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 92.32%
K 766.490 Radial†       -124.8      0.0323 ug/L      14.87743      0.0323 ppb      14.87743 >999.9%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†         6226.8      492990 ug/L        1472.2      492990 ppb        1472.2   0.30%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.60%
Mn 257.610†            -3358.1      11.893 ug/L        0.1103      11.893 ppb        0.1103   0.93%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†             -429.4     -4.5153 ug/L       0.40430     -4.5153 ppb       0.40430   8.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.630 ug/L       25.0287     -23.630 ppb       25.0287 105.92%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              248.9      3.9880 ug/L       0.21242      3.9880 ppb       0.21242   5.33%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                -7.3      21.236 ug/L        9.2429      21.236 ppb        9.2429  43.52%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -1118.1     -1.9037 ug/L       2.42937     -1.9037 ppb       2.42937 127.61%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          87.5     -25.987 ug/L        2.4107     -25.987 ppb        2.4107   9.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               83.9      0.9940 ug/L       2.19156      0.9940 ppb       2.19156 220.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†            -2126.4     -15.367 ug/L        5.0800     -15.367 ppb        5.0800  33.06%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              148.0      3.5081 ug/L       0.86048      3.5081 ppb       0.86048  24.53%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†             -424.9     -5.2601 ug/L       0.81802     -5.2601 ppb       0.81802  15.55%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              277.1     -0.0833 ug/L       0.11853     -0.0833 ppb       0.11853 142.24%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†           -24924.2     -1.1993 ug/L       0.70220     -1.1993 ppb       0.70220  58.55%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -74.3     -9.9258 ug/L       1.80446     -9.9258 ppb       1.80446  18.18%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               653.6     -6.4689 ug/L       2.84611     -6.4689 ppb       2.84611  44.00%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              2634.7     -2.2098 ug/L       0.38789     -2.2098 ppb       0.38789  17.55%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             5047.6     -8.8442 ug/L       0.16704     -8.8442 ppb       0.16704   1.89%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    40.8      2.7924 ug/L       2.02453      2.7924 ppb       2.02453  72.50%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/8/2009 10:29:02
Data Type: Reprocessed on 7/8/2009 11:40:13

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	922949.8	922949.8	86.998	%			10:31:27
1	Sc Radial	5088.8	5088.8	91.4	%			10:30:59
1	Y 371.029	724486.5	724486.5	84.913	%			10:31:27
1	Y RADIAL	4396.5	4396.5	91.29	%			10:30:59
1	Ag 328.068†	51134.8	58138.2	284.08	ug/L	284.08	ppb	10:31:27
1	Al 396.153Radial†	511214.8	559124.8	508910	ug/L	508910	ppb	10:30:54
1	As 188.979†	1778.1	2080.7	527.29	ug/L	527.29	ppb	10:31:32
1	B 249.677†	30305.4	35216.0	523.28	ug/L	523.28	ppb	10:31:27
1	Ba 233.527†	84926.5	97594.3	499.43	ug/L	499.43	ppb	10:31:27
1	Be 313.107†	685114.1	794819.0	248.28	ug/L	248.28	ppb	10:31:27
1	Ca 317.933Radial†	171487.2	187510.8	467060	ug/L	467060	ppb	10:30:54
1	Cd 226.502†	56191.8	64867.2	463.74	ug/L	463.74	ppb	10:31:32
1	Co 228.616†	32068.4	36951.4	457.93	ug/L	457.93	ppb	10:31:32
1	Cr 267.716†	48976.1	56324.0	483.93	ug/L	483.93	ppb	10:31:32
1	Cu 324.752†	206474.7	227140.6	571.05	ug/L	571.05	ppb	10:31:27
1	Fe 238.204 Radial†	4792.9	5240.9	183870	ug/L	183870	ppb	10:30:59
1	K 766.490 Radial†	13633.7	13435.9	5876.8	ug/L	5876.8	ppb	10:30:59
1	Mg 279.077 IEC†	5720.0	6254.8	495220	ug/L	495220	ppb	10:30:59
1	Mn 257.610†	527932.1	606003.4	493.31	ug/L	493.31	ppb	10:31:27
1	Mo 202.031†	10741.5	12315.0	505.56	ug/L	505.56	ppb	10:31:32
1	Na 589.592 Radial†	1742.5	2075.9	5612.9	ug/L	5612.9	ppb	10:30:59
1	Ni 231.604†	24947.6	28527.7	456.94	ug/L	456.94	ppb	10:31:32
1	P 214.914†	6681.5	7343.1	2535.6	ug/L	2535.6	ppb	10:31:32
1	Pb 220.353†	4555.0	5264.8	477.54	ug/L	477.54	ppb	10:31:32
1	S 181.975 Axial†	2933.7	3304.3	2696.9	ug/L	2696.9	ppb	10:31:32
1	Sb 206.836†	2595.0	2937.4	568.65	ug/L	568.65	ppb	10:31:32
1	Se 196.026†	4971.6	5736.2	2540.6	ug/L	2540.6	ppb	10:31:32
1	Si 251.611†	227538.2	260983.1	5373.3	ug/L	5373.3	ppb	10:31:27
1	Sn 189.927†	3829.4	4396.2	495.92	ug/L	495.92	ppb	10:31:32
1	Sr 421.552†	32732.9	35789.2	547.06	ug/L	547.06	ppb	10:30:59
1	Ti 334.940†	325076.1	374767.2	521.46	ug/L	521.46	ppb	10:31:27
1	Tl 190.801†	2320.9	2729.1	464.98	ug/L	464.98	ppb	10:31:32
1	U 409.014†	14389.0	20374.2	482.00	ug/L	482.00	ppb	10:31:27
1	V 292.402†	80410.6	94080.6	523.26	ug/L	523.26	ppb	10:31:27
1	Zn 213.857†	83783.0	95181.8	490.76	ug/L	490.76	ppb	10:31:27
1	SiO2†	225071.9	258106.1	11379	ug/L	11379	ppb	10:31:59
2	Sc 361.383	922512.9	922512.9	86.957	%			10:31:38
2	Sc Radial	5114.2	5114.2	91.9	%			10:31:09
2	Y 371.029	723615.1	723615.1	84.810	%			10:31:38
2	Y RADIAL	4434.0	4434.0	92.07	%			10:31:09
2	Ag 328.068†	51203.8	58245.4	284.11	ug/L	284.11	ppb	10:31:38
2	Al 396.153Radial†	516287.7	561868.9	511410	ug/L	511410	ppb	10:31:04
2	As 188.979†	1781.2	2085.2	528.14	ug/L	528.14	ppb	10:31:43
2	B 249.677†	30212.2	35125.3	522.01	ug/L	522.01	ppb	10:31:38
2	Ba 233.527†	84896.2	97605.7	499.46	ug/L	499.46	ppb	10:31:38
2	Be 313.107†	684415.6	794388.8	248.15	ug/L	248.15	ppb	10:31:38
2	Ca 317.933Radial†	173685.3	188971.4	470700	ug/L	470700	ppb	10:31:04
2	Cd 226.502†	56169.1	64871.7	463.90	ug/L	463.90	ppb	10:31:43
2	Co 228.616†	32009.7	36901.3	457.33	ug/L	457.33	ppb	10:31:43
2	Cr 267.716†	48984.7	56360.6	484.22	ug/L	484.22	ppb	10:31:43
2	Cu 324.752†	206739.8	227557.9	572.02	ug/L	572.02	ppb	10:31:38
2	Fe 238.204 Radial†	4789.5	5211.1	182830	ug/L	182830	ppb	10:31:09
2	K 766.490 Radial†	13696.8	13430.5	5873.6	ug/L	5873.6	ppb	10:31:09
2	Mg 279.077 IEC†	5700.6	6202.7	491090	ug/L	491090	ppb	10:31:09
2	Mn 257.610†	527491.9	605784.5	493.08	ug/L	493.08	ppb	10:31:38
2	Mo 202.031†	10795.6	12383.1	508.21	ug/L	508.21	ppb	10:31:43
2	Na 589.592 Radial†	1739.5	2063.2	5578.5	ug/L	5578.5	ppb	10:31:09
2	Ni 231.604†	25007.5	28610.2	458.26	ug/L	458.26	ppb	10:31:43

2	P 214.914†	6657.3	7318.9	2528.5 ug/L	2528.5 ppb	10:31:43
2	Pb 220.353†	4521.9	5229.2	475.47 ug/L	475.47 ppb	10:31:43
2	S 181.975 Axial†	2966.6	3343.8	2729.8 ug/L	2729.8 ppb	10:31:43
2	Sb 206.836†	2571.5	2911.7	563.53 ug/L	563.53 ppb	10:31:43
2	Se 196.026†	5128.9	5919.8	2596.7 ug/L	2596.7 ppb	10:31:43
2	Si 251.611†	227663.7	261251.4	5378.8 ug/L	5378.8 ppb	10:31:38
2	Sn 189.927†	3812.8	4379.2	494.42 ug/L	494.42 ppb	10:31:43
2	Sr 421.552†	32971.9	35871.6	548.29 ug/L	548.29 ppb	10:31:09
2	Ti 334.940†	325093.7	374964.5	521.96 ug/L	521.96 ppb	10:31:38
2	Tl 190.801†	2278.3	2681.4	456.94 ug/L	456.94 ppb	10:31:43
2	U 409.014†	14518.6	20531.0	486.02 ug/L	486.02 ppb	10:31:38
2	V 292.402†	80202.9	93885.5	522.26 ug/L	522.26 ppb	10:31:38
2	Zn 213.857†	83836.4	95288.9	491.61 ug/L	491.61 ppb	10:31:38
2	SiO2†	226952.2	260390.9	11480 ug/L	11480 ppb	10:32:04
3	Sc 361.383	916394.6	916394.6	86.380 %		10:31:49
3	Sc Radial	5092.1	5092.1	91.5 %		10:31:20
3	Y 371.029	718336.1	718336.1	84.192 %		10:31:49
3	Y RADIAL	4424.4	4424.4	91.87 %		10:31:20
3	Ag 328.068†	50974.6	58373.2	285.14 ug/L	285.14 ppb	10:31:49
3	Al 396.153Radial†	519866.9	568222.7	517200 ug/L	517200 ppb	10:31:15
3	As 188.979†	1750.1	2062.9	523.28 ug/L	523.28 ppb	10:31:54
3	B 249.677†	30095.4	35222.0	523.28 ug/L	523.28 ppb	10:31:49
3	Ba 233.527†	84510.6	97811.1	500.55 ug/L	500.55 ppb	10:31:49
3	Be 313.107†	680536.4	795152.9	248.38 ug/L	248.38 ppb	10:31:49
3	Ca 317.933Radial†	174798.8	191009.9	475780 ug/L	475780 ppb	10:31:15
3	Cd 226.502†	55239.4	64226.6	458.85 ug/L	458.85 ppb	10:31:54
3	Co 228.616†	31559.8	36626.3	453.86 ug/L	453.86 ppb	10:31:54
3	Cr 267.716†	48208.5	55838.2	479.81 ug/L	479.81 ppb	10:31:54
3	Cu 324.752†	204835.2	226940.4	570.60 ug/L	570.60 ppb	10:31:49
3	Fe 238.204 Radial†	4816.3	5263.1	184650 ug/L	184650 ppb	10:31:20
3	K 766.490 Radial†	13730.6	13532.3	5918.2 ug/L	5918.2 ppb	10:31:20
3	Mg 279.077 IEC†	5726.3	6257.7	495450 ug/L	495450 ppb	10:31:20
3	Mn 257.610†	525190.6	607170.3	494.33 ug/L	494.33 ppb	10:31:49
3	Mo 202.031†	10571.3	12206.3	501.26 ug/L	501.26 ppb	10:31:54
3	Na 589.592 Radial†	1746.4	2079.0	5621.3 ug/L	5621.3 ppb	10:31:20
3	Ni 231.604†	24590.8	28319.8	453.61 ug/L	453.61 ppb	10:31:54
3	P 214.914†	6490.6	7177.1	2479.1 ug/L	2479.1 ppb	10:31:54
3	Pb 220.353†	4444.7	5174.6	472.31 ug/L	472.31 ppb	10:31:54
3	S 181.975 Axial†	2922.3	3315.2	2704.5 ug/L	2704.5 ppb	10:31:54
3	Sb 206.836†	2597.2	2961.2	572.95 ug/L	572.95 ppb	10:31:54
3	Se 196.026†	4938.2	5738.4	2544.4 ug/L	2544.4 ppb	10:31:54
3	Si 251.611†	226292.7	261412.2	5382.3 ug/L	5382.3 ppb	10:31:49
3	Sn 189.927†	3753.4	4339.7	490.73 ug/L	490.73 ppb	10:31:54
3	Sr 421.552†	32971.1	36026.6	550.64 ug/L	550.64 ppb	10:31:20
3	Ti 334.940†	322933.2	374959.4	522.30 ug/L	522.30 ppb	10:31:49
3	Tl 190.801†	2336.1	2765.8	471.25 ug/L	471.25 ppb	10:31:54
3	U 409.014†	14229.3	20307.5	480.26 ug/L	480.26 ppb	10:31:49
3	V 292.402†	79923.8	94178.2	523.65 ug/L	523.65 ppb	10:31:49
3	Zn 213.857†	83231.3	95232.0	490.97 ug/L	490.97 ppb	10:31:49
3	SiO2†	228890.9	264377.8	11656 ug/L	11656 ppb	10:32:10

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	920619.1	86.779	%	0.3455				0.40%
Sc Radial	5098.4	91.6	%	0.25				0.27%
Y 371.029	722145.9	84.638	%	0.3901				0.46%
Y RADIAL	4418.3	91.75	%	0.405				0.44%
Ag 328.068†	58252.3	284.44	ug/L	0.602	284.44	ppb	0.602	0.21%
QC value within limits for Ag 328.068 Recovery = 113.78%								
Al 396.153Radial†	563072.2	512510	ug/L	4248.0	512510	ppb	4248.0	0.83%
QC value within limits for Al 396.153Radial Recovery = 102.50%								
As 188.979†	2076.3	526.24	ug/L	2.594	526.24	ppb	2.594	0.49%
QC value within limits for As 188.979 Recovery = 105.25%								
B 249.677†	35187.8	522.85	ug/L	0.735	522.85	ppb	0.735	0.14%
QC value within limits for B 249.677 Recovery = 104.57%								
Ba 233.527†	97670.4	499.82	ug/L	0.636	499.82	ppb	0.636	0.13%
QC value within limits for Ba 233.527 Recovery = 99.96%								
Be 313.107†	794786.9	248.27	ug/L	0.119	248.27	ppb	0.119	0.05%
QC value within limits for Be 313.107 Recovery = 99.31%								

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Ca 317.933Radial†     189164.0      471180 ug/L        4377.5      471180 ppb        4377.5   0.93%
   QC value within limits for Ca 317.933Radial  Recovery = 94.24%
Cd 226.502†            64655.2      462.16 ug/L         2.867      462.16 ppb         2.867   0.62%
   QC value within limits for Cd 226.502  Recovery = 92.43%
Co 228.616†            36826.3      456.37 ug/L         2.197      456.37 ppb         2.197   0.48%
   QC value within limits for Co 228.616  Recovery = 91.27%
Cr 267.716†            56174.3      482.66 ug/L         2.467      482.66 ppb         2.467   0.51%
   QC value within limits for Cr 267.716  Recovery = 96.53%
Cu 324.752†           227213.0      571.22 ug/L         0.725      571.22 ppb         0.725   0.13%
   QC value within limits for Cu 324.752  Recovery = 114.24%
Fe 238.204 Radial†      5238.4      183780 ug/L         913.9      183780 ppb         913.9   0.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.89%
K 766.490 Radial†      13466.2      5889.5 ug/L         24.91      5889.5 ppb         24.91   0.42%
   QC value within limits for K 766.490 Radial  Recovery = 117.79%
Mg 279.077 IEC†         6238.4      493920 ug/L        2453.5      493920 ppb        2453.5   0.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.78%
Mn 257.610†           606319.4      493.58 ug/L         0.664      493.58 ppb         0.664   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.72%
Mo 202.031†            12301.5      505.01 ug/L         3.509      505.01 ppb         3.509   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.00%
Na 589.592 Radial†      2072.7      5604.3 ug/L         22.66      5604.3 ppb         22.66   0.40%
   QC value within limits for Na 589.592 Radial  Recovery = 112.09%
Ni 231.604†            28485.9      456.27 ug/L         2.398      456.27 ppb         2.398   0.53%
   QC value within limits for Ni 231.604  Recovery = 91.25%
P 214.914†              7279.7      2514.4 ug/L         30.79      2514.4 ppb         30.79   1.22%
   QC value within limits for P 214.914  Recovery = 100.58%
Pb 220.353†             5222.9      475.11 ug/L         2.633      475.11 ppb         2.633   0.55%
   QC value within limits for Pb 220.353  Recovery = 95.02%
S 181.975 Axial†        3321.1      2710.4 ug/L         17.23      2710.4 ppb         17.23   0.64%
   QC value within limits for S 181.975 Axial  Recovery = 108.42%
Sb 206.836†             2936.8      568.38 ug/L         4.717      568.38 ppb         4.717   0.83%
   QC value within limits for Sb 206.836  Recovery = 113.68%
Se 196.026†             5798.1      2560.6 ug/L         31.38      2560.6 ppb         31.38   1.23%
   QC value within limits for Se 196.026  Recovery = 102.42%
Si 251.611†           261215.6      5378.2 ug/L          4.51      5378.2 ppb          4.51   0.08%
   QC value within limits for Si 251.611  Recovery = 107.56%
Sn 189.927†             4371.7      493.69 ug/L         2.669      493.69 ppb         2.669   0.54%
   QC value within limits for Sn 189.927  Recovery = 98.74%
Sr 421.552†            35895.8      548.66 ug/L         1.817      548.66 ppb         1.817   0.33%
   QC value within limits for Sr 421.552  Recovery = 109.73%
Ti 334.940†           374897.0      521.91 ug/L         0.421      521.91 ppb         0.421   0.08%
   QC value within limits for Ti 334.940  Recovery = 104.38%
Tl 190.801†             2725.5      464.39 ug/L         7.171      464.39 ppb         7.171   1.54%
   QC value within limits for Tl 190.801  Recovery = 92.88%
U 409.014†             20404.2      482.76 ug/L         2.954      482.76 ppb         2.954   0.61%
   QC value within limits for U 409.014  Recovery = 96.55%
V 292.402†             94048.1      523.06 ug/L         0.714      523.06 ppb         0.714   0.14%
   QC value within limits for V 292.402  Recovery = 104.61%
Zn 213.857†            95234.2      491.11 ug/L         0.439      491.11 ppb         0.439   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.22%
SiO2†                 260958.2       11505 ug/L         140.4       11505 ppb         140.4   1.22%
   QC value within limits for SiO2  Recovery = 107.57%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/8/2009 10:34:19
Data Type: Reprocessed on 7/8/2009 11:40:14

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	903068.1	903068.1	85.124	%			10:37:30
1	Sc Radial	4907.1	4907.1	88.2	%			10:36:32
1	Y 371.029	711048.9	711048.9	83.338	%			10:37:30
1	Y RADIAL	4267.0	4267.0	88.60	%			10:36:32
1	Ag 328.068†	-24652.6	-29599.4	5.2180	ug/L	5.2180	ppb	10:37:30
1	Al 396.153Radial†	501001.0	568251.7	517240	ug/L	517240	ppb	10:36:12
1	As 188.979†	-286.0	-299.1	17.474	ug/L	17.474	ppb	10:37:35
1	B 249.677†	2112.7	2863.4	-13.637	ug/L	-13.637	ppb	10:37:30
1	Ba 233.527†	-1436.5	-1711.8	1.5622	ug/L	1.5622	ppb	10:37:35
1	Be 313.107†	-14446.8	-9655.2	-3.0542	ug/L	-3.0542	ppb	10:37:35
1	Ca 317.933Radial†	166917.5	189275.7	471460	ug/L	471460	ppb	10:36:12
1	Cd 226.502†	5594.5	6849.8	-0.6386	ug/L	-0.6386	ppb	10:37:35
1	Co 228.616†	294.3	436.1	-0.8830	ug/L	-0.8830	ppb	10:37:35
1	Cr 267.716†	-12.1	14.4	4.1493	ug/L	4.1493	ppb	10:37:35
1	Cu 324.752†	3503.0	-6076.1	10.395	ug/L	10.395	ppb	10:37:30
1	Fe 238.204 Radial†	11037.4	12516.6	439100	ug/L	439100	ppb	10:36:32
1	K 766.490 Radial†	1318.5	22.1	26.226	ug/L	26.226	ppb	10:36:12
1	Mg 279.077 IEC†	5521.4	6261.4	495510	ug/L	495510	ppb	10:36:32
1	Mn 257.610†	-38315.8	-45838.6	11.430	ug/L	11.430	ppb	10:37:30
1	Mo 202.031†	-778.9	-946.7	-7.7594	ug/L	-7.7594	ppb	10:37:35
1	Na 589.592 Radial†	171624.9	194801.4	526720	ug/L	526720	ppb	10:36:12
1	Ni 231.604†	465.6	398.7	6.3863	ug/L	6.3863	ppb	10:37:35
1	P 214.914†	838.8	648.5	52.119	ug/L	52.119	ppb	10:37:35
1	Pb 220.353†	-640.5	-723.3	5.3786	ug/L	5.3786	ppb	10:37:35
1	S 181.975 Axial†	149.8	108.1	-10.229	ug/L	-10.229	ppb	10:37:35
1	Sb 206.836†	146.8	127.0	13.157	ug/L	13.157	ppb	10:37:35
1	Se 196.026†	-4401.3	-5148.9	-103.95	ug/L	-103.95	ppb	10:37:35
1	Si 251.611†	-979.0	-1710.1	-34.481	ug/L	-34.481	ppb	10:37:35
1	Sn 189.927†	-388.8	-462.3	-4.5333	ug/L	-4.5333	ppb	10:37:35
1	Sr 421.552†	319.3	356.6	1.1243	ug/L	1.1243	ppb	10:36:32
1	Ti 334.940†	-15490.5	-17088.2	2.9945	ug/L	2.9945	ppb	10:37:35
1	Tl 190.801†	-133.6	-95.5	-13.648	ug/L	-13.648	ppb	10:37:35
1	U 409.014†	478080.9	565462.0	13976	ug/L	13976	ppb	10:37:30
1	V 292.402†	2200.9	4238.3	-0.8487	ug/L	-0.8487	ppb	10:37:35
1	Zn 213.857†	10091.7	10732.9	-4.6503	ug/L	-4.6503	ppb	10:37:35
1	SiO2†	-858.7	-1611.1	-69.439	ug/L	-69.439	ppb	10:38:03
2	Sc 361.383	901598.6	901598.6	84.986	%			10:37:41
2	Sc Radial	4913.8	4913.8	88.3	%			10:36:57
2	Y 371.029	709120.5	709120.5	83.112	%			10:37:41
2	Y RADIAL	4292.7	4292.7	89.14	%			10:36:57
2	Ag 328.068†	-24814.9	-29837.5	4.1617	ug/L	4.1617	ppb	10:37:41
2	Al 396.153Radial†	499453.7	565720.2	514940	ug/L	514940	ppb	10:36:37
2	As 188.979†	-323.1	-343.3	7.0255	ug/L	7.0255	ppb	10:37:46
2	B 249.677†	2057.8	2802.9	-14.529	ug/L	-14.529	ppb	10:37:41
2	Ba 233.527†	-1538.0	-1834.0	0.9343	ug/L	0.9343	ppb	10:37:46
2	Be 313.107†	-14278.5	-9484.8	-2.9994	ug/L	-2.9994	ppb	10:37:46
2	Ca 317.933Radial†	166575.3	188628.5	469840	ug/L	469840	ppb	10:36:37
2	Cd 226.502†	5560.2	6820.2	-0.8124	ug/L	-0.8124	ppb	10:37:46
2	Co 228.616†	329.8	478.5	-0.3494	ug/L	-0.3494	ppb	10:37:46
2	Cr 267.716†	64.5	104.5	4.9068	ug/L	4.9068	ppb	10:37:46
2	Cu 324.752†	3384.0	-6209.4	10.043	ug/L	10.043	ppb	10:37:41
2	Fe 238.204 Radial†	11042.3	12505.0	438690	ug/L	438690	ppb	10:36:57
2	K 766.490 Radial†	1363.1	70.6	47.960	ug/L	47.960	ppb	10:36:37
2	Mg 279.077 IEC†	5523.4	6255.1	495010	ug/L	495010	ppb	10:36:57
2	Mn 257.610†	-38665.9	-46324.0	11.003	ug/L	11.003	ppb	10:37:41
2	Mo 202.031†	-762.0	-928.4	-7.0553	ug/L	-7.0553	ppb	10:37:46
2	Na 589.592 Radial†	171230.3	194087.6	524790	ug/L	524790	ppb	10:36:37
2	Ni 231.604†	460.5	393.6	6.3048	ug/L	6.3048	ppb	10:37:46

2	P 214.914†	942.4	772.0	95.294	ug/L	95.294 ppb	10:37:46
2	Pb 220.353†	-620.4	-700.9	6.6499	ug/L	6.6499 ppb	10:37:46
2	S 181.975 Axial†	185.9	150.9	26.429	ug/L	26.429 ppb	10:37:46
2	Sb 206.836†	108.8	82.6	4.4435	ug/L	4.4435 ppb	10:37:46
2	Se 196.026†	-4291.9	-5028.5	-66.360	ug/L	-66.360 ppb	10:37:46
2	Si 251.611†	-923.9	-1647.3	-33.191	ug/L	-33.191 ppb	10:37:46
2	Sn 189.927†	-421.4	-501.3	-8.7146	ug/L	-8.7146 ppb	10:37:46
2	Sr 421.552†	322.3	359.5	1.1835	ug/L	1.1835 ppb	10:36:57
2	Ti 334.940†	-14961.4	-16495.3	3.6589	ug/L	3.6589 ppb	10:37:46
2	Tl 190.801†	-157.6	-124.0	-18.471	ug/L	-18.471 ppb	10:37:46
2	U 409.014†	477587.6	565796.9	13984	ug/L	13984 ppb	10:37:41
2	V 292.402†	2214.6	4258.6	-0.6621	ug/L	-0.6621 ppb	10:37:46
2	Zn 213.857†	9931.6	10563.8	-5.5320	ug/L	-5.5320 ppb	10:37:46
2	SiO2†	-947.4	-1717.2	-74.141	ug/L	-74.141 ppb	10:38:08
3	Sc 361.383	901333.6	901333.6	84.961	%		10:37:52
3	Sc Radial	4898.6	4898.6	88.0	%		10:37:23
3	Y 371.029	709314.8	709314.8	83.134	%		10:37:52
3	Y RADIAL	4273.7	4273.7	88.74	%		10:37:23
3	Ag 328.068†	-24785.9	-29811.9	3.2059	ug/L	3.2059 ppb	10:37:52
3	Al 396.153Radial†	500210.2	568328.0	517310	ug/L	517310 ppb	10:37:02
3	As 188.979†	-299.6	-315.7	12.839	ug/L	12.839 ppb	10:37:57
3	B 249.677†	2166.2	2931.2	-12.096	ug/L	-12.096 ppb	10:37:52
3	Ba 233.527†	-1531.2	-1826.5	0.8994	ug/L	0.8994 ppb	10:37:57
3	Be 313.107†	-14414.9	-9650.3	-3.0517	ug/L	-3.0517 ppb	10:37:57
3	Ca 317.933Radial†	166348.8	188954.3	470650	ug/L	470650 ppb	10:37:02
3	Cd 226.502†	5540.8	6799.3	-0.5842	ug/L	-0.5842 ppb	10:37:57
3	Co 228.616†	326.0	474.1	-0.3588	ug/L	-0.3588 ppb	10:37:57
3	Cr 267.716†	-19.8	5.3	3.9998	ug/L	3.9998 ppb	10:37:57
3	Cu 324.752†	3399.1	-6190.5	9.9012	ug/L	9.9012 ppb	10:37:52
3	Fe 238.204 Radial†	10926.4	12412.0	435430	ug/L	435430 ppb	10:37:23
3	K 766.490 Radial†	1311.1	16.4	22.386	ug/L	22.386 ppb	10:37:02
3	Mg 279.077 IEC†	5483.5	6229.0	492950	ug/L	492950 ppb	10:37:23
3	Mn 257.610†	-38504.0	-46146.8	10.758	ug/L	10.758 ppb	10:37:52
3	Mo 202.031†	-779.9	-949.7	-8.1288	ug/L	-8.1288 ppb	10:37:57
3	Na 589.592 Radial†	170529.0	193890.3	524260	ug/L	524260 ppb	10:37:02
3	Ni 231.604†	397.1	319.1	5.1105	ug/L	5.1105 ppb	10:37:57
3	P 214.914†	880.7	699.7	73.222	ug/L	73.222 ppb	10:37:57
3	Pb 220.353†	-643.4	-728.2	5.3697	ug/L	5.3697 ppb	10:37:57
3	S 181.975 Axial†	158.0	118.1	-1.7772	ug/L	-1.7772 ppb	10:37:57
3	Sb 206.836†	116.9	92.2	6.2449	ug/L	6.2449 ppb	10:37:57
3	Se 196.026†	-4293.9	-5032.4	-78.955	ug/L	-78.955 ppb	10:37:57
3	Si 251.611†	-893.4	-1611.7	-32.442	ug/L	-32.442 ppb	10:37:57
3	Sn 189.927†	-398.8	-474.9	-5.9803	ug/L	-5.9803 ppb	10:37:57
3	Sr 421.552†	302.5	338.2	0.8478	ug/L	0.8478 ppb	10:37:23
3	Ti 334.940†	-15207.4	-16790.1	3.3272	ug/L	3.3272 ppb	10:37:57
3	Tl 190.801†	-172.7	-141.9	-21.477	ug/L	-21.477 ppb	10:37:57
3	U 409.014†	477482.3	565838.3	13986	ug/L	13986 ppb	10:37:52
3	V 292.402†	2380.5	4454.7	0.8529	ug/L	0.8529 ppb	10:37:57
3	Zn 213.857†	9939.8	10576.9	-5.0280	ug/L	-5.0280 ppb	10:37:57
3	SiO2†	-939.4	-1708.1	-73.708	ug/L	-73.708 ppb	10:38:13

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	902000.1	85.024	%	0.0881				0.10%
Sc Radial	4906.5	88.2	%	0.14				0.15%
Y 371.029	709828.1	83.195	%	0.1244				0.15%
Y RADIAL	4277.8	88.83	%	0.277				0.31%
Ag 328.068†	-29749.6	4.1952	ug/L	1.00645	4.1952	ppb	1.00645	23.99%
Al 396.153Radial†	567433.3	516500	ug/L	1350.9	516500	ppb	1350.9	0.26%
QC value within limits for Al 396.153Radial Recovery = 103.30%								
As 188.979†	-319.4	12.446	ug/L	5.2351	12.446	ppb	5.2351	42.06%
B 249.677†	2865.8	-13.421	ug/L	1.2309	-13.421	ppb	1.2309	9.17%
Ba 233.527†	-1790.8	1.1320	ug/L	0.37301	1.1320	ppb	0.37301	32.95%
Be 313.107†	-9596.8	-3.0351	ug/L	0.03096	-3.0351	ppb	0.03096	1.02%
Ca 317.933Radial†	188952.8	470650	ug/L	805.9	470650	ppb	805.9	0.17%
QC value within limits for Ca 317.933Radial Recovery = 94.13%								
Cd 226.502†	6823.1	-0.6784	ug/L	0.11915	-0.6784	ppb	0.11915	17.56%
Co 228.616†	462.9	-0.5304	ug/L	0.30543	-0.5304	ppb	0.30543	57.59%
Cr 267.716†	41.4	4.3520	ug/L	0.48630	4.3520	ppb	0.48630	11.17%

Cu 324.752†	-6158.7	10.113	ug/L	0.2544	10.113	ppb	0.2544	2.52%
Fe 238.204 Radial†	12477.9	437740	ug/L	2010.7	437740	ppb	2010.7	0.46%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.55%								
K 766.490 Radial†	36.3	32.190	ug/L	13.7909	32.190	ppb	13.7909	42.84%
Mg 279.077 IEC†	6248.5	494490	ug/L	1357.9	494490	ppb	1357.9	0.27%
QC value within limits for Mg 279.077 IEC Recovery = 98.90%								
Mn 257.610†	-46103.1	11.063	ug/L	0.3401	11.063	ppb	0.3401	3.07%
Mo 202.031†	-941.6	-7.6478	ug/L	0.54541	-7.6478	ppb	0.54541	7.13%
Na 589.592 Radial†	194259.8	525260	ug/L	1296.0	525260	ppb	1296.0	0.25%
QC value within limits for Na 589.592 Radial Recovery = 105.05%								
Ni 231.604†	370.5	5.9339	ug/L	0.71420	5.9339	ppb	0.71420	12.04%
P 214.914†	706.7	73.545	ug/L	21.5891	73.545	ppb	21.5891	29.35%
Pb 220.353†	-717.5	5.7994	ug/L	0.73655	5.7994	ppb	0.73655	12.70%
S 181.975 Axial†	125.7	4.8073	ug/L	19.19563	4.8073	ppb	19.19563	399.30%
Sb 206.836†	100.6	7.9483	ug/L	4.59954	7.9483	ppb	4.59954	57.87%
Se 196.026†	-5069.9	-83.089	ug/L	19.1336	-83.089	ppb	19.1336	23.03%
Si 251.611†	-1656.4	-33.371	ug/L	1.0313	-33.371	ppb	1.0313	3.09%
Sn 189.927†	-479.5	-6.4094	ug/L	2.12342	-6.4094	ppb	2.12342	33.13%
Sr 421.552†	351.4	1.0519	ug/L	0.17919	1.0519	ppb	0.17919	17.04%
Ti 334.940†	-16791.2	3.3269	ug/L	0.33215	3.3269	ppb	0.33215	9.98%
Tl 190.801†	-120.5	-17.865	ug/L	3.9499	-17.865	ppb	3.9499	22.11%
U 409.014†	565699.1	13982	ug/L	5.3	13982	ppb	5.3	0.04%
QC value within limits for U 409.014 Recovery = 93.21%								
V 292.402†	4317.2	-0.2193	ug/L	0.93321	-0.2193	ppb	0.93321	425.48%
Zn 213.857†	10624.5	-5.0701	ug/L	0.44239	-5.0701	ppb	0.44239	8.73%
SiO2†	-1678.8	-72.429	ug/L	2.5989	-72.429	ppb	2.5989	3.59%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/8/2009 10:40:22
Data Type: Reprocessed on 7/8/2009 11:40:15

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1014953.4	1014953.4	95.671	%			10:43:57
1	Sc Radial	5417.4	5417.4	97.3	%			10:42:20
1	Y 371.029	800941.5	800941.5	93.873	%			10:43:57
1	Y RADIAL	4706.4	4706.4	97.73	%			10:42:20
1	Ag 328.068†	-7110.5	-8070.8	7.1415	ug/L	7.1415	ppb	10:44:02
1	Al 396.153Radial†	449.0	553.4	87.615	ug/L	87.615	ppb	10:42:20
1	As 188.979†	40482.4	42351.3	9989.0	ug/L	9989.0	ppb	10:44:02
1	B 249.677†	309866.7	324270.4	5029.0	ug/L	5029.0	ppb	10:43:57
1	Ba 233.527†	2664318.6	2784861.5	14118	ug/L	14118	ppb	10:43:57
1	Be 313.107†	8856992.8	9265110.5	2903.5	ug/L	2903.5	ppb	10:43:50
1	Ca 317.933Radial†	25.7	9.5	23.698	ug/L	23.698	ppb	10:42:40
1	Cd 226.502†	1280128.2	1338334.9	10016	ug/L	10016	ppb	10:43:57
1	Co 228.616†	749635.6	783648.9	9762.7	ug/L	9762.7	ppb	10:43:57
1	Cr 267.716†	2711737.5	2834479.1	24157	ug/L	24157	ppb	10:43:57
1	Cu 324.752†	7865610.7	8211358.3	20260	ug/L	20260	ppb	10:43:50
1	Fe 238.204 Radial†	-7.6	-8.1	23.148	ug/L	23.148	ppb	10:42:40
1	K 766.490 Radial†	684372.6	701529.4	304300	ug/L	304300	ppb	10:42:15
1	Mg 279.077 IEC†	-2.9	-3.1	-51.980	ug/L	-51.980	ppb	10:42:40
1	Mn 257.610†	11427294.3	11943581.3	9438.7	ug/L	9438.7	ppb	10:43:50
1	Mo 202.031†	232338.7	242820.8	9719.4	ug/L	9719.4	ppb	10:44:02
1	Na 589.592 Radial†	-122.5	44.6	120.62	ug/L	120.62	ppb	10:42:40
1	Ni 231.604†	591314.2	617924.4	9897.7	ug/L	9897.7	ppb	10:43:57
1	P 214.914†	48706.9	50574.1	14767	ug/L	14767	ppb	10:44:02
1	Pb 220.353†	309384.9	323414.5	24253	ug/L	24253	ppb	10:44:02
1	S 181.975 Axial†	58295.0	60865.2	51520	ug/L	51520	ppb	10:44:02
1	Sb 206.836†	53440.0	55812.8	10745	ug/L	10745	ppb	10:44:02
1	Se 196.026†	29668.4	31032.6	10122	ug/L	10122	ppb	10:44:02
1	Si 251.611†	2155853.2	2252850.9	46184	ug/L	46184	ppb	10:43:57
1	Sn 189.927†	95946.9	100283.2	10430	ug/L	10430	ppb	10:44:02
1	Sr 421.552†	646073.6	663655.5	10225	ug/L	10225	ppb	10:42:15
1	Ti 334.940†	7127693.7	7451349.2	9745.7	ug/L	9745.7	ppb	10:43:50
1	Tl 190.801†	55066.4	57619.7	9753.1	ug/L	9753.1	ppb	10:44:02
1	U 409.014†	-2611.3	1105.2	-19.174	ug/L	-19.174	ppb	10:44:02
1	V 292.402†	1681684.2	1759437.4	10082	ug/L	10082	ppb	10:43:57
1	Zn 213.857†	2418310.9	2526623.2	14016	ug/L	14016	ppb	10:43:57
1	SiO2†	2181096.5	2279194.3	100050	ug/L	100050	ppb	10:44:49
2	Sc 361.383	1029870.2	1029870.2	97.077	%			10:44:17
2	Sc Radial	5497.9	5497.9	98.8	%			10:42:50
2	Y 371.029	811966.1	811966.1	95.166	%			10:44:17
2	Y RADIAL	4740.4	4740.4	98.44	%			10:42:50
2	Ag 328.068†	-7088.1	-7940.1	6.7301	ug/L	6.7301	ppb	10:44:22
2	Al 396.153Radial†	473.1	571.1	109.77	ug/L	109.77	ppb	10:42:50
2	As 188.979†	40474.1	41729.8	9842.3	ug/L	9842.3	ppb	10:44:22
2	B 249.677†	307090.3	316719.2	4911.8	ug/L	4911.8	ppb	10:44:17
2	Ba 233.527†	2644634.7	2724248.1	13811	ug/L	13811	ppb	10:44:17
2	Be 313.107†	8832006.5	9105280.2	2853.4	ug/L	2853.4	ppb	10:44:10
2	Ca 317.933Radial†	28.1	11.5	28.754	ug/L	28.754	ppb	10:43:10
2	Cd 226.502†	1271277.6	1309837.1	9803.0	ug/L	9803.0	ppb	10:44:17
2	Co 228.616†	743954.7	766447.7	9548.5	ug/L	9548.5	ppb	10:44:17
2	Cr 267.716†	2688484.5	2769471.3	23603	ug/L	23603	ppb	10:44:17
2	Cu 324.752†	7842993.7	8068977.9	19908	ug/L	19908	ppb	10:44:10
2	Fe 238.204 Radial†	-5.8	-6.2	84.443	ug/L	84.443	ppb	10:43:10
2	K 766.490 Radial†	684716.9	691584.4	299980	ug/L	299980	ppb	10:42:45
2	Mg 279.077 IEC†	-2.0	-2.2	19.126	ug/L	19.126	ppb	10:43:10
2	Mn 257.610†	11404692.0	11747293.6	9283.6	ug/L	9283.6	ppb	10:44:10
2	Mo 202.031†	232311.4	239275.2	9577.5	ug/L	9577.5	ppb	10:44:22
2	Na 589.592 Radial†	-129.4	39.4	106.58	ug/L	106.58	ppb	10:43:10
2	Ni 231.604†	586038.5	603537.6	9667.2	ug/L	9667.2	ppb	10:44:17

2	P 214.914†	48755.1	49886.4	14579 ug/L	14579 ppb	10:44:22
2	Pb 220.353†	309441.3	318788.5	23906 ug/L	23906 ppb	10:44:22
2	S 181.975 Axial†	58411.2	60102.3	50874 ug/L	50874 ppb	10:44:22
2	Sb 206.836†	53362.1	54923.6	10578 ug/L	10578 ppb	10:44:22
2	Se 196.026†	29761.5	30679.3	10007 ug/L	10007 ppb	10:44:22
2	Si 251.611†	2138710.2	2202552.9	45150 ug/L	45150 ppb	10:44:17
2	Sn 189.927†	95957.5	98841.5	10280 ug/L	10280 ppb	10:44:22
2	Sr 421.552†	646581.7	654452.3	10083 ug/L	10083 ppb	10:42:45
2	Ti 334.940†	7109976.4	7325187.8	9580.8 ug/L	9580.8 ppb	10:44:10
2	Tl 190.801†	55268.7	56994.4	9647.5 ug/L	9647.5 ppb	10:44:22
2	U 409.014†	-2581.0	1176.0	-16.357 ug/L	-16.357 ppb	10:44:22
2	V 292.402†	1665056.2	1716848.7	9839.4 ug/L	9839.4 ppb	10:44:17
2	Zn 213.857†	2400720.5	2471890.8	13712 ug/L	13712 ppb	10:44:17
2	SiO2†	2194108.9	2259577.6	99188 ug/L	99188 ppb	10:44:57
3	Sc 361.383	1027984.8	1027984.8	96.899 %		10:44:37
3	Sc Radial	5311.1	5311.1	95.4 %		10:43:20
3	Y 371.029	810508.3	810508.3	94.995 %		10:44:37
3	Y RADIAL	4586.5	4586.5	95.24 %		10:43:20
3	Ag 328.068†	-7268.9	-8140.1	6.0153 ug/L	6.0153 ppb	10:44:42
3	Al 396.153Radial†	472.0	586.8	121.54 ug/L	121.54 ppb	10:43:20
3	As 188.979†	40697.9	42037.3	9914.2 ug/L	9914.2 ppb	10:44:42
3	B 249.677†	308195.5	318440.0	4938.5 ug/L	4938.5 ppb	10:44:37
3	Ba 233.527†	2647831.5	2732543.7	13853 ug/L	13853 ppb	10:44:37
3	Be 313.107†	8792922.6	9081631.8	2846.1 ug/L	2846.1 ppb	10:44:30
3	Ca 317.933Radial†	29.0	13.4	33.386 ug/L	33.386 ppb	10:43:40
3	Cd 226.502†	1272287.1	1313280.7	9828.8 ug/L	9828.8 ppb	10:44:37
3	Co 228.616†	745426.9	769372.6	9585.2 ug/L	9585.2 ppb	10:44:37
3	Cr 267.716†	2688412.8	2774476.6	23645 ug/L	23645 ppb	10:44:37
3	Cu 324.752†	7782720.1	8021593.1	19791 ug/L	19791 ppb	10:44:30
3	Fe 238.204 Radial†	-6.7	-7.3	44.771 ug/L	44.771 ppb	10:43:40
3	K 766.490 Radial†	683971.3	715172.9	310220 ug/L	310220 ppb	10:43:15
3	Mg 279.077 IEC†	-3.7	-4.1	-128.19 ug/L	-128.19 ppb	10:43:40
3	Mn 257.610†	11381446.6	11744851.0	9281.7 ug/L	9281.7 ppb	10:44:30
3	Mo 202.031†	233312.1	240746.8	9636.4 ug/L	9636.4 ppb	10:44:42
3	Na 589.592 Radial†	-122.9	41.6	112.55 ug/L	112.55 ppb	10:43:40
3	Ni 231.604†	587015.1	605652.6	9701.1 ug/L	9701.1 ppb	10:44:37
3	P 214.914†	49152.9	50388.9	14776 ug/L	14776 ppb	10:44:42
3	Pb 220.353†	310539.8	320506.8	24035 ug/L	24035 ppb	10:44:42
3	S 181.975 Axial†	58718.6	60529.9	51236 ug/L	51236 ppb	10:44:42
3	Sb 206.836†	53615.8	55286.2	10651 ug/L	10651 ppb	10:44:42
3	Se 196.026†	29842.3	30818.9	10053 ug/L	10053 ppb	10:44:42
3	Si 251.611†	2145121.2	2213209.7	45366 ug/L	45366 ppb	10:44:37
3	Sn 189.927†	96345.6	99423.4	10341 ug/L	10341 ppb	10:44:42
3	Sr 421.552†	646025.5	676882.0	10428 ug/L	10428 ppb	10:43:15
3	Ti 334.940†	7084549.3	7312379.8	9564.0 ug/L	9564.0 ppb	10:44:30
3	Tl 190.801†	55398.8	57233.1	9687.5 ug/L	9687.5 ppb	10:44:42
3	U 409.014†	-2499.7	1255.0	-14.474 ug/L	-14.474 ppb	10:44:42
3	V 292.402†	1665986.8	1720954.9	9863.5 ug/L	9863.5 ppb	10:44:37
3	Zn 213.857†	2405918.3	2481790.6	13767 ug/L	13767 ppb	10:44:37
3	SiO2†	2167381.8	2236140.5	98142 ug/L	98142 ppb	10:45:04

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1024269.4	96.549	%	0.7657				0.79%
Sc Radial	5408.8	97.2	%	1.68				1.73%
Y 371.029	807805.3	94.678	%	0.7019				0.74%
Y RADIAL	4677.8	97.14	%	1.679				1.73%
Ag 328.068†	-8050.3	6.6290	ug/L	0.56988	6.6290	ppb	0.56988	8.60%
Al 396.153Radial†	570.4	106.31	ug/L	17.224	106.31	ppb	17.224	16.20%
As 188.979†	42039.5	9915.2	ug/L	73.36	9915.2	ppb	73.36	0.74%
QC value within limits for As 188.979 Recovery = 99.15%								
B 249.677†	319809.9	4959.8	ug/L	61.39	4959.8	ppb	61.39	1.24%
QC value within limits for B 249.677 Recovery = 99.20%								
Ba 233.527†	2747217.8	13927	ug/L	166.6	13927	ppb	166.6	1.20%
QC value within limits for Ba 233.527 Recovery = 92.85%								
Be 313.107†	9150674.2	2867.7	ug/L	31.27	2867.7	ppb	31.27	1.09%
QC value within limits for Be 313.107 Recovery = 95.59%								
Ca 317.933Radial†	11.5	28.613	ug/L	4.8452	28.613	ppb	4.8452	16.93%
Cd 226.502†	1320484.3	9882.7	ug/L	116.42	9882.7	ppb	116.42	1.18%

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   QC value within limits for Cd 226.502  Recovery = 98.83%
Co 228.616†          773156.4      9632.2 ug/L        114.57      9632.2 ppb        114.57   1.19%
   QC value within limits for Co 228.616  Recovery = 96.32%
Cr 267.716†         2792809.0       23802 ug/L         308.3       23802 ppb         308.3   1.30%
   QC value within limits for Cr 267.716  Recovery = 95.21%
Cu 324.752†         8100643.1       19986 ug/L         243.7       19986 ppb         243.7   1.22%
   QC value within limits for Cu 324.752  Recovery = 99.93%
Fe 238.204 Radial†        -7.2      50.787 ug/L       31.0875      50.787 ppb       31.0875  61.21%
K 766.490 Radial†     702762.2      304830 ug/L        5138.4      304830 ppb        5138.4   1.69%
   QC value within limits for K 766.490 Radial  Recovery = 101.61%
Mg 279.077 IEC†           -3.1     -53.681 ug/L       73.6715     -53.681 ppb       73.6715 137.24%
Mn 257.610†         11811908.6      9334.7 ug/L         90.12      9334.7 ppb         90.12   0.97%
   QC value within limits for Mn 257.610  Recovery = 93.35%
Mo 202.031†          240947.6      9644.5 ug/L         71.30      9644.5 ppb         71.30   0.74%
   QC value within limits for Mo 202.031  Recovery = 96.44%
Na 589.592 Radial†        41.9      113.25 ug/L         7.046      113.25 ppb         7.046   6.22%
Ni 231.604†          609038.2      9755.3 ug/L        124.43      9755.3 ppb        124.43   1.28%
   QC value within limits for Ni 231.604  Recovery = 97.55%
P 214.914†            50283.1       14707 ug/L         111.5       14707 ppb         111.5   0.76%
   QC value within limits for P 214.914  Recovery = 98.05%
Pb 220.353†          320903.3       24065 ug/L         175.3       24065 ppb         175.3   0.73%
   QC value within limits for Pb 220.353  Recovery = 96.26%
S 181.975 Axial†      60499.1       51210 ug/L         323.6       51210 ppb         323.6   0.63%
   QC value within limits for S 181.975 Axial  Recovery = 102.42%
Sb 206.836†           55340.9       10658 ug/L          83.6       10658 ppb          83.6   0.78%
   QC value within limits for Sb 206.836  Recovery = 106.58%
Se 196.026†           30843.6       10061 ug/L          58.0       10061 ppb          58.0   0.58%
   QC value within limits for Se 196.026  Recovery = 100.61%
Si 251.611†         2222871.2       45567 ug/L         545.3       45567 ppb         545.3   1.20%
   QC value within limits for Si 251.611  Recovery = 91.13%
Sn 189.927†           99516.1       10350 ug/L          75.4       10350 ppb          75.4   0.73%
   QC value within limits for Sn 189.927  Recovery = 103.50%
Sr 421.552†          664996.6       10245 ug/L         173.7       10245 ppb         173.7   1.70%
   QC value within limits for Sr 421.552  Recovery = 102.45%
Ti 334.940†         7362972.3      9630.2 ug/L        100.43      9630.2 ppb        100.43   1.04%
   QC value within limits for Ti 334.940  Recovery = 96.30%
Tl 190.801†           57282.4      9696.0 ug/L         53.30      9696.0 ppb         53.30   0.55%
   QC value within limits for Tl 190.801  Recovery = 96.96%
U 409.014†             1178.7     -16.669 ug/L        2.3653     -16.669 ppb        2.3653  14.19%
V 292.402†          1732413.7      9928.4 ug/L        133.88      9928.4 ppb        133.88   1.35%
   QC value within limits for V 292.402  Recovery = 99.28%
Zn 213.857†         2493434.9       13832 ug/L         161.7       13832 ppb         161.7   1.17%
   QC value within limits for Zn 213.857  Recovery = 92.21%
SiO2†               2258304.1       99125 ug/L         953.1       99125 ppb         953.1   0.96%
   QC value within limits for SiO2  Recovery = 92.64%
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:03:37
Data Type: Reprocessed on 7/8/2009 11:40:18

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1067409.9	1067409.9	100.62	%			11:06:48
1	Sc Radial	5545.0	5545.0	99.6	%			11:05:29
1	Y 371.029	849738.5	849738.5	99.593	%			11:06:48
1	Y RADIAL	4788.0	4788.0	99.42	%			11:05:29
1	Ag 328.068†	127524.3	126105.9	502.25	ug/L	502.25	ppb	11:06:48
1	Al 396.153Radial†	5299.4	5410.6	4903.4	ug/L	4903.4	ppb	11:05:29
1	As 188.979†	2078.4	2102.6	496.72	ug/L	496.72	ppb	11:07:08
1	B 249.677†	31751.6	31939.0	495.88	ug/L	495.88	ppb	11:06:48
1	Ba 233.527†	98259.2	97634.0	495.40	ug/L	495.40	ppb	11:06:48
1	Be 313.107†	1589957.2	1587550.7	494.78	ug/L	494.78	ppb	11:06:48
1	Ca 317.933Radial†	2000.8	1991.0	4959.2	ug/L	4959.2	ppb	11:05:49
1	Cd 226.502†	66514.3	66385.2	496.24	ug/L	496.24	ppb	11:06:48
1	Co 228.616†	38913.1	38765.6	483.08	ug/L	483.08	ppb	11:07:08
1	Cr 267.716†	58344.9	58016.7	494.83	ug/L	494.83	ppb	11:06:48
1	Cu 324.752†	211137.7	199655.3	492.89	ug/L	492.89	ppb	11:06:48
1	Fe 238.204 Radial†	142.3	142.5	5015.0	ug/L	5015.0	ppb	11:05:49
1	K 766.490 Radial†	13511.2	12086.4	5238.2	ug/L	5238.2	ppb	11:05:29
1	Mg 279.077 IEC†	62.2	62.2	4932.1	ug/L	4932.1	ppb	11:05:49
1	Mn 257.610†	629929.2	625250.1	494.68	ug/L	494.68	ppb	11:06:48
1	Mo 202.031†	12643.5	12534.4	502.06	ug/L	502.06	ppb	11:07:08
1	Na 589.592 Radial†	3490.6	3673.5	9932.6	ug/L	9932.6	ppb	11:05:29
1	Ni 231.604†	30743.5	30407.2	487.05	ug/L	487.05	ppb	11:07:08
1	P 214.914†	7354.4	6972.5	2389.5	ug/L	2389.5	ppb	11:07:08
1	Pb 220.353†	6693.1	6681.2	502.20	ug/L	502.20	ppb	11:07:08
1	S 181.975 Axial†	1258.3	1182.8	1000.2	ug/L	1000.2	ppb	11:07:08
1	Sb 206.836†	2588.5	2527.3	503.10	ug/L	503.10	ppb	11:07:08
1	Se 196.026†	1499.7	1512.2	511.22	ug/L	511.22	ppb	11:07:08
1	Si 251.611†	122687.2	121376.8	2492.5	ug/L	2492.5	ppb	11:06:48
1	Sn 189.927†	4831.3	4796.3	499.31	ug/L	499.31	ppb	11:07:08
1	Sr 421.552†	33822.5	33937.9	522.82	ug/L	522.82	ppb	11:05:29
1	Ti 334.940†	380487.1	379269.6	496.43	ug/L	496.43	ppb	11:06:48
1	Tl 190.801†	2880.1	2923.9	495.14	ug/L	495.14	ppb	11:07:08
1	U 409.014†	15659.6	19398.6	479.74	ug/L	479.74	ppb	11:06:48
1	V 292.402†	85512.2	86642.1	497.38	ug/L	497.38	ppb	11:06:48
1	Zn 213.857†	90296.7	88622.2	490.34	ug/L	490.34	ppb	11:06:48
1	SiO2†	123097.1	121742.0	5353.1	ug/L	5353.1	ppb	11:08:09
2	Sc 361.383	1057828.3	1057828.3	99.712	%			11:07:16
2	Sc Radial	5453.0	5453.0	98.0	%			11:05:54
2	Y 371.029	842848.9	842848.9	98.785	%			11:07:16
2	Y RADIAL	4734.2	4734.2	98.31	%			11:05:54
2	Ag 328.068†	126253.5	125979.4	501.76	ug/L	501.76	ppb	11:07:16
2	Al 396.153Radial†	5204.3	5403.2	4896.6	ug/L	4896.6	ppb	11:05:54
2	As 188.979†	2077.1	2120.0	500.82	ug/L	500.82	ppb	11:07:36
2	B 249.677†	31594.9	32067.6	497.87	ug/L	497.87	ppb	11:07:16
2	Ba 233.527†	97420.0	97677.0	495.62	ug/L	495.62	ppb	11:07:16
2	Be 313.107†	1578761.2	1590635.7	495.74	ug/L	495.74	ppb	11:07:16
2	Ca 317.933Radial†	1973.0	1996.5	4973.1	ug/L	4973.1	ppb	11:06:14
2	Cd 226.502†	65741.0	66208.5	494.92	ug/L	494.92	ppb	11:07:16
2	Co 228.616†	38917.3	39120.1	487.50	ug/L	487.50	ppb	11:07:36
2	Cr 267.716†	57810.8	58006.3	494.74	ug/L	494.74	ppb	11:07:16
2	Cu 324.752†	209446.8	199860.3	493.40	ug/L	493.40	ppb	11:07:16
2	Fe 238.204 Radial†	140.5	143.1	5035.0	ug/L	5035.0	ppb	11:06:14
2	K 766.490 Radial†	13401.9	12203.6	5289.1	ug/L	5289.1	ppb	11:05:54
2	Mg 279.077 IEC†	61.6	62.7	4968.4	ug/L	4968.4	ppb	11:06:14
2	Mn 257.610†	623982.1	624956.7	494.45	ug/L	494.45	ppb	11:07:16
2	Mo 202.031†	12615.6	12620.3	505.50	ug/L	505.50	ppb	11:07:36
2	Na 589.592 Radial†	3446.1	3687.2	9969.7	ug/L	9969.7	ppb	11:05:54
2	Ni 231.604†	30735.8	30676.3	491.36	ug/L	491.36	ppb	11:07:36

2	P 214.914†	7337.1	7021.4	2406.8	ug/L	2406.8 ppb	11:07:36
2	Pb 220.353†	6673.6	6722.0	505.26	ug/L	505.26 ppb	11:07:36
2	S 181.975 Axial†	1264.2	1200.1	1014.8	ug/L	1014.8 ppb	11:07:36
2	Sb 206.836†	2593.9	2556.0	508.91	ug/L	508.91 ppb	11:07:36
2	Se 196.026†	1503.2	1529.2	516.82	ug/L	516.82 ppb	11:07:36
2	Si 251.611†	121455.1	121245.6	2489.7	ug/L	2489.7 ppb	11:07:16
2	Sn 189.927†	4839.5	4848.0	504.69	ug/L	504.69 ppb	11:07:36
2	Sr 421.552†	33228.1	33904.0	522.30	ug/L	522.30 ppb	11:05:54
2	Ti 334.940†	377267.8	379466.3	496.69	ug/L	496.69 ppb	11:07:16
2	Tl 190.801†	2881.9	2951.6	499.79	ug/L	499.79 ppb	11:07:36
2	U 409.014†	15609.8	19489.6	482.00	ug/L	482.00 ppb	11:07:16
2	V 292.402†	84902.2	86800.1	498.32	ug/L	498.32 ppb	11:07:16
2	Zn 213.857†	89406.2	88541.9	489.86	ug/L	489.86 ppb	11:07:16
2	SiO2†	122640.5	122392.2	5381.6	ug/L	5381.6 ppb	11:08:14
3	Sc 361.383	1055071.7	1055071.7	99.452	%		11:07:43
3	Sc Radial	5432.7	5432.7	97.6	%		11:06:19
3	Y 371.029	840276.0	840276.0	98.484	%		11:07:43
3	Y RADIAL	4696.8	4696.8	97.53	%		11:06:19
3	Ag 328.068†	126120.7	126176.7	502.55	ug/L	502.55 ppb	11:07:43
3	Al 396.153Radial†	5181.8	5400.1	4893.7	ug/L	4893.7 ppb	11:06:19
3	As 188.979†	2085.4	2133.8	504.06	ug/L	504.06 ppb	11:08:03
3	B 249.677†	31427.7	31982.3	496.53	ug/L	496.53 ppb	11:07:43
3	Ba 233.527†	97457.1	97969.6	497.10	ug/L	497.10 ppb	11:07:43
3	Be 313.107†	1576182.4	1592179.6	496.22	ug/L	496.22 ppb	11:07:43
3	Ca 317.933Radial†	1975.0	2006.1	4996.9	ug/L	4996.9 ppb	11:06:39
3	Cd 226.502†	65930.8	66571.6	497.63	ug/L	497.63 ppb	11:07:43
3	Co 228.616†	38836.3	39140.6	487.76	ug/L	487.76 ppb	11:08:03
3	Cr 267.716†	57863.2	58210.5	496.48	ug/L	496.48 ppb	11:07:43
3	Cu 324.752†	208532.5	199489.8	492.49	ug/L	492.49 ppb	11:07:43
3	Fe 238.204 Radial†	141.4	144.5	5084.1	ug/L	5084.1 ppb	11:06:39
3	K 766.490 Radial†	13356.4	12208.3	5291.1	ug/L	5291.1 ppb	11:06:19
3	Mg 279.077 IEC†	60.3	61.6	4883.3	ug/L	4883.3 ppb	11:06:39
3	Mn 257.610†	623827.7	626436.5	495.63	ug/L	495.63 ppb	11:07:43
3	Mo 202.031†	12607.0	12644.6	506.48	ug/L	506.48 ppb	11:08:03
3	Na 589.592 Radial†	3459.6	3714.2	10043	ug/L	10043 ppb	11:06:19
3	Ni 231.604†	30656.7	30677.3	491.38	ug/L	491.38 ppb	11:08:03
3	P 214.914†	7338.8	7042.2	2414.3	ug/L	2414.3 ppb	11:08:03
3	Pb 220.353†	6655.9	6721.6	505.23	ug/L	505.23 ppb	11:08:03
3	S 181.975 Axial†	1273.7	1212.9	1025.7	ug/L	1025.7 ppb	11:08:03
3	Sb 206.836†	2578.9	2547.6	507.27	ug/L	507.27 ppb	11:08:03
3	Se 196.026†	1491.2	1521.0	514.35	ug/L	514.35 ppb	11:08:03
3	Si 251.611†	121268.2	121376.0	2492.4	ug/L	2492.4 ppb	11:07:43
3	Sn 189.927†	4839.7	4860.9	506.04	ug/L	506.04 ppb	11:08:03
3	Sr 421.552†	33109.5	33909.5	522.38	ug/L	522.38 ppb	11:06:19
3	Ti 334.940†	376709.4	379893.4	497.25	ug/L	497.25 ppb	11:07:43
3	Tl 190.801†	2882.8	2960.1	501.23	ug/L	501.23 ppb	11:08:03
3	U 409.014†	15694.8	19616.0	485.13	ug/L	485.13 ppb	11:07:43
3	V 292.402†	84699.0	86818.3	498.43	ug/L	498.43 ppb	11:07:43
3	Zn 213.857†	89588.7	88959.8	492.20	ug/L	492.20 ppb	11:07:43
3	SiO2†	121565.4	121632.6	5348.0	ug/L	5348.0 ppb	11:08:19

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060103.3	99.927	%	0.6104				0.61%
Sc Radial	5476.9	98.4	%	1.08				1.09%
Y 371.029	844287.8	98.954	%	0.5734				0.58%
Y RADIAL	4739.7	98.42	%	0.952				0.97%
Ag 328.068†	126087.3	502.19	ug/L	0.401	502.19	ppb	0.401	0.08%
QC value within limits for Ag 328.068 Recovery = 100.44%								
Al 396.153Radial†	5404.6	4897.9	ug/L	5.00	4897.9	ppb	5.00	0.10%
QC value within limits for Al 396.153Radial Recovery = 97.96%								
As 188.979†	2118.8	500.53	ug/L	3.674	500.53	ppb	3.674	0.73%
QC value within limits for As 188.979 Recovery = 100.11%								
B 249.677†	31996.3	496.76	ug/L	1.015	496.76	ppb	1.015	0.20%
QC value within limits for B 249.677 Recovery = 99.35%								
Ba 233.527†	97760.2	496.04	ug/L	0.926	496.04	ppb	0.926	0.19%
QC value within limits for Ba 233.527 Recovery = 99.21%								
Be 313.107†	1590122.0	495.58	ug/L	0.734	495.58	ppb	0.734	0.15%
QC value within limits for Be 313.107 Recovery = 99.12%								

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Ca 317.933Radial†        1997.9      4976.4 ug/L        19.05      4976.4 ppb        19.05   0.38%
   QC value within limits for Ca 317.933Radial  Recovery = 99.53%
Cd 226.502†             66388.4      496.27 ug/L        1.355      496.27 ppb        1.355   0.27%
   QC value within limits for Cd 226.502  Recovery = 99.25%
Co 228.616†             39008.8      486.11 ug/L        2.631      486.11 ppb        2.631   0.54%
   QC value within limits for Co 228.616  Recovery = 97.22%
Cr 267.716†             58077.8      495.35 ug/L        0.980      495.35 ppb        0.980   0.20%
   QC value within limits for Cr 267.716  Recovery = 99.07%
Cu 324.752†            199668.4      492.93 ug/L        0.457      492.93 ppb        0.457   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†        143.4      5044.7 ug/L        35.56      5044.7 ppb        35.56   0.70%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.89%
K 766.490 Radial†       12166.1      5272.8 ug/L        29.98      5272.8 ppb        29.98   0.57%
   QC value within limits for K 766.490 Radial  Recovery = 105.46%
Mg 279.077 IEC†            62.1      4927.9 ug/L        42.66      4927.9 ppb        42.66   0.87%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.56%
Mn 257.610†            625547.8      494.92 ug/L        0.624      494.92 ppb        0.624   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.98%
Mo 202.031†             12599.8      504.68 ug/L        2.320      504.68 ppb        2.320   0.46%
   QC value within limits for Mo 202.031  Recovery = 100.94%
Na 589.592 Radial†       3691.6      9981.7 ug/L        56.08      9981.7 ppb        56.08   0.56%
   QC value within limits for Na 589.592 Radial  Recovery = 99.82%
Ni 231.604†             30586.9      489.93 ug/L        2.493      489.93 ppb        2.493   0.51%
   QC value within limits for Ni 231.604  Recovery = 97.99%
P 214.914†               7012.0      2403.5 ug/L        12.69      2403.5 ppb        12.69   0.53%
   QC value within limits for P 214.914  Recovery = 96.14%
Pb 220.353†              6708.3      504.23 ug/L        1.758      504.23 ppb        1.758   0.35%
   QC value within limits for Pb 220.353  Recovery = 100.85%
S 181.975 Axial†         1198.6      1013.6 ug/L        12.78      1013.6 ppb        12.78   1.26%
   QC value within limits for S 181.975 Axial  Recovery = 101.36%
Sb 206.836†              2543.6      506.43 ug/L        2.994      506.43 ppb        2.994   0.59%
   QC value within limits for Sb 206.836  Recovery = 101.29%
Se 196.026†              1520.8      514.13 ug/L        2.806      514.13 ppb        2.806   0.55%
   QC value within limits for Se 196.026  Recovery = 102.83%
Si 251.611†            121332.8      2491.6 ug/L         1.58      2491.6 ppb         1.58   0.06%
   QC value within limits for Si 251.611  Recovery = 99.66%
Sn 189.927†              4835.1      503.35 ug/L        3.557      503.35 ppb        3.557   0.71%
   QC value within limits for Sn 189.927  Recovery = 100.67%
Sr 421.552†             33917.1      522.50 ug/L        0.280      522.50 ppb        0.280   0.05%
   QC value within limits for Sr 421.552  Recovery = 104.50%
Ti 334.940†            379543.1      496.79 ug/L        0.417      496.79 ppb        0.417   0.08%
   QC value within limits for Ti 334.940  Recovery = 99.36%
Tl 190.801†              2945.2      498.72 ug/L        3.184      498.72 ppb        3.184   0.64%
   QC value within limits for Tl 190.801  Recovery = 99.74%
U 409.014†              19501.4      482.29 ug/L        2.703      482.29 ppb        2.703   0.56%
   QC value within limits for U 409.014  Recovery = 96.46%
V 292.402†              86753.5      498.04 ug/L        0.579      498.04 ppb        0.579   0.12%
   QC value within limits for V 292.402  Recovery = 99.61%
Zn 213.857†             88708.0      490.80 ug/L        1.232      490.80 ppb        1.232   0.25%
   QC value within limits for Zn 213.857  Recovery = 98.16%
SiO2†                  121922.3      5360.9 ug/L        18.12      5360.9 ppb        18.12   0.34%
   QC value within limits for SiO2  Recovery = 100.25%
All analyte(s) passed QC.
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Sequence No.: 16
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:10:29
Data Type: Reprocessed on 7/8/2009 11:40:19

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1056286.1	1056286.1	99.567	%			11:13:38
1	Sc Radial	5577.8	5577.8	100	%			11:12:21
1	Y 371.029	851747.2	851747.2	99.828	%			11:13:38
1	Y RADIAL	4867.5	4867.5	101.1	%			11:12:21
1	Ag 328.068†	792.7	157.6	0.6291	ug/L	0.6291	ppb	11:13:43
1	Al 396.153Radial†	-60.0	32.4	29.446	ug/L	29.446	ppb	11:12:21
1	As 188.979†	-47.8	-11.1	-2.5990	ug/L	-2.5990	ppb	11:14:03
1	B 249.677†	436.8	820.2	12.780	ug/L	12.780	ppb	11:13:43
1	Ba 233.527†	31.5	7.4	0.0373	ug/L	0.0373	ppb	11:14:03
1	Be 313.107†	-7422.8	-138.9	-0.0432	ug/L	-0.0432	ppb	11:13:43
1	Ca 317.933Radial†	33.6	16.5	41.209	ug/L	41.209	ppb	11:12:41
1	Cd 226.502†	-287.1	-10.7	-0.0827	ug/L	-0.0827	ppb	11:14:03
1	Co 228.616†	-82.2	7.8	0.0972	ug/L	0.0972	ppb	11:14:03
1	Cr 267.716†	-32.4	-4.0	-0.0341	ug/L	-0.0341	ppb	11:14:03
1	Cu 324.752†	10356.0	209.8	0.5189	ug/L	0.5189	ppb	11:13:43
1	Fe 238.204 Radial†	1.0	0.7	23.570	ug/L	23.570	ppb	11:12:41
1	K 766.490 Radial†	1855.2	377.8	163.93	ug/L	163.93	ppb	11:12:21
1	Mg 279.077 IEC†	1.4	1.2	93.519	ug/L	93.519	ppb	11:12:41
1	Mn 257.610†	821.4	-2.0	-0.0003	ug/L	-0.0003	ppb	11:14:03
1	Mo 202.031†	33.3	1.7	0.0702	ug/L	0.0702	ppb	11:14:03
1	Na 589.592 Radial†	-185.2	-14.4	-38.901	ug/L	-38.901	ppb	11:12:41
1	Ni 231.604†	168.8	21.3	0.3412	ug/L	0.3412	ppb	11:14:03
1	P 214.914†	333.0	-2.5	-0.9562	ug/L	-0.9562	ppb	11:14:03
1	Pb 220.353†	11.5	40.6	3.0505	ug/L	3.0505	ppb	11:14:03
1	S 181.975 Axial†	72.5	5.0	4.2399	ug/L	4.2399	ppb	11:14:03
1	Sb 206.836†	55.9	10.7	2.1229	ug/L	2.1229	ppb	11:14:03
1	Se 196.026†	-17.3	4.3	1.4749	ug/L	1.4749	ppb	11:14:03
1	Si 251.611†	665.9	108.7	2.1852	ug/L	2.1852	ppb	11:14:03
1	Sn 189.927†	14.7	9.3	0.9689	ug/L	0.9689	ppb	11:14:03
1	Sr 421.552†	24.7	19.1	0.2942	ug/L	0.2942	ppb	11:12:41
1	Ti 334.940†	-1110.3	-5.8	-0.0052	ug/L	-0.0052	ppb	11:13:43
1	Tl 190.801†	-57.1	4.0	0.6835	ug/L	0.6835	ppb	11:14:03
1	U 409.014†	-3785.0	33.2	0.8217	ug/L	0.8217	ppb	11:13:38
1	V 292.402†	-1685.0	-39.6	-0.2237	ug/L	-0.2237	ppb	11:13:43
1	Zn 213.857†	1105.7	-11.9	-0.0751	ug/L	-0.0751	ppb	11:14:03
1	SiO2†	681.4	82.0	3.4918	ug/L	3.4918	ppb	11:15:09
2	Sc 361.383	1055939.4	1055939.4	99.534	%			11:14:08
2	Sc Radial	5379.7	5379.7	96.7	%			11:12:46
2	Y 371.029	851096.0	851096.0	99.752	%			11:14:08
2	Y RADIAL	4702.4	4702.4	97.65	%			11:12:46
2	Ag 328.068†	776.8	141.8	0.5427	ug/L	0.5427	ppb	11:14:13
2	Al 396.153Radial†	-76.7	12.9	11.716	ug/L	11.716	ppb	11:12:46
2	As 188.979†	-40.2	-3.5	-0.8491	ug/L	-0.8491	ppb	11:14:33
2	B 249.677†	486.5	870.3	13.572	ug/L	13.572	ppb	11:14:13
2	Ba 233.527†	62.3	38.3	0.1924	ug/L	0.1924	ppb	11:14:33
2	Be 313.107†	-7290.4	-8.3	-0.0025	ug/L	-0.0025	ppb	11:14:13
2	Ca 317.933Radial†	28.6	12.6	31.463	ug/L	31.463	ppb	11:13:06
2	Cd 226.502†	-289.0	-12.7	-0.0867	ug/L	-0.0867	ppb	11:14:33
2	Co 228.616†	-77.8	12.3	0.1535	ug/L	0.1535	ppb	11:14:33
2	Cr 267.716†	-16.8	11.7	0.0997	ug/L	0.0997	ppb	11:14:33
2	Cu 324.752†	10238.9	95.6	0.2319	ug/L	0.2319	ppb	11:14:13
2	Fe 238.204 Radial†	-1.5	-1.9	-67.871	ug/L	-67.871	ppb	11:13:06
2	K 766.490 Radial†	1812.4	401.6	174.21	ug/L	174.21	ppb	11:12:46
2	Mg 279.077 IEC†	1.0	0.8	66.268	ug/L	66.268	ppb	11:13:06
2	Mn 257.610†	855.6	32.6	0.0157	ug/L	0.0157	ppb	11:14:33
2	Mo 202.031†	30.0	-1.6	-0.0706	ug/L	-0.0706	ppb	11:14:33
2	Na 589.592 Radial†	-174.9	-10.5	-28.379	ug/L	-28.379	ppb	11:13:06
2	Ni 231.604†	168.3	20.8	0.3332	ug/L	0.3332	ppb	11:14:33

2	P 214.914†	337.1	1.8	0.6504	ug/L	0.6504 ppb	11:14:33
2	Pb 220.353†	-5.9	23.2	1.7452	ug/L	1.7452 ppb	11:14:33
2	S 181.975 Axial†	79.7	12.3	10.368	ug/L	10.368 ppb	11:14:33
2	Sb 206.836†	62.7	17.5	3.4466	ug/L	3.4466 ppb	11:14:33
2	Se 196.026†	-10.1	11.5	3.4915	ug/L	3.4915 ppb	11:14:33
2	Si 251.611†	654.2	97.1	1.9448	ug/L	1.9448 ppb	11:14:33
2	Sn 189.927†	12.6	7.2	0.7527	ug/L	0.7527 ppb	11:14:33
2	Sr 421.552†	34.7	30.4	0.4675	ug/L	0.4675 ppb	11:13:06
2	Ti 334.940†	-1082.3	21.9	0.0326	ug/L	0.0326 ppb	11:14:13
2	Tl 190.801†	-39.2	22.0	3.7138	ug/L	3.7138 ppb	11:14:33
2	U 409.014†	-3991.4	-175.3	-4.3425	ug/L	-4.3425 ppb	11:14:08
2	V 292.402†	-1651.7	-6.6	-0.0367	ug/L	-0.0367 ppb	11:14:13
2	Zn 213.857†	1118.7	1.5	0.0109	ug/L	0.0109 ppb	11:14:33
2	SiO2†	678.0	78.8	3.3488	ug/L	3.3488 ppb	11:15:14
3	Sc 361.383	1066175.5	1066175.5	100.50	%		11:14:39
3	Sc Radial	5571.9	5571.9	100	%		11:13:11
3	Y 371.029	858182.7	858182.7	100.58	%		11:14:39
3	Y RADIAL	4847.5	4847.5	100.7	%		11:13:11
3	Ag 328.068†	733.0	90.7	0.3451	ug/L	0.3451 ppb	11:14:44
3	Al 396.153Radial†	-63.8	28.4	25.885	ug/L	25.885 ppb	11:13:11
3	As 188.979†	-36.2	0.9	0.1978	ug/L	0.1978 ppb	11:15:04
3	B 249.677†	438.0	817.4	12.743	ug/L	12.743 ppb	11:14:44
3	Ba 233.527†	45.2	20.7	0.1045	ug/L	0.1045 ppb	11:15:04
3	Be 313.107†	-7375.6	-22.8	-0.0070	ug/L	-0.0070 ppb	11:14:44
3	Ca 317.933Radial†	31.4	14.4	35.975	ug/L	35.975 ppb	11:13:31
3	Cd 226.502†	-275.1	4.0	0.0342	ug/L	0.0342 ppb	11:15:04
3	Co 228.616†	-85.2	5.6	0.0709	ug/L	0.0709 ppb	11:15:04
3	Cr 267.716†	-11.4	17.3	0.1457	ug/L	0.1457 ppb	11:15:04
3	Cu 324.752†	10202.8	-39.1	-0.0986	ug/L	-0.0986 ppb	11:14:44
3	Fe 238.204 Radial†	-0.7	-1.1	-36.971	ug/L	-36.971 ppb	11:13:31
3	K 766.490 Radial†	1706.6	231.3	100.35	ug/L	100.35 ppb	11:13:11
3	Mg 279.077 IEC†	0.4	0.2	14.946	ug/L	14.946 ppb	11:13:31
3	Mn 257.610†	832.1	0.9	-0.0044	ug/L	-0.0044 ppb	11:15:04
3	Mo 202.031†	38.5	6.5	0.2593	ug/L	0.2593 ppb	11:15:04
3	Na 589.592 Radial†	-180.8	-10.1	-27.397	ug/L	-27.397 ppb	11:13:31
3	Ni 231.604†	170.2	21.1	0.3376	ug/L	0.3376 ppb	11:15:04
3	P 214.914†	362.2	23.5	8.3827	ug/L	8.3827 ppb	11:15:04
3	Pb 220.353†	-20.1	9.1	0.6925	ug/L	0.6925 ppb	11:15:04
3	S 181.975 Axial†	80.7	12.5	10.586	ug/L	10.586 ppb	11:15:04
3	Sb 206.836†	62.0	16.3	3.2114	ug/L	3.2114 ppb	11:15:04
3	Se 196.026†	-17.5	4.2	1.2231	ug/L	1.2231 ppb	11:15:04
3	Si 251.611†	661.8	98.4	1.9887	ug/L	1.9887 ppb	11:15:04
3	Sn 189.927†	17.9	12.4	1.2868	ug/L	1.2868 ppb	11:15:04
3	Sr 421.552†	29.8	24.3	0.3745	ug/L	0.3745 ppb	11:13:31
3	Ti 334.940†	-1085.5	29.2	0.0391	ug/L	0.0391 ppb	11:14:44
3	Tl 190.801†	-66.9	-5.2	-0.8818	ug/L	-0.8818 ppb	11:15:04
3	U 409.014†	-3721.1	132.1	3.2823	ug/L	3.2823 ppb	11:14:39
3	V 292.402†	-1611.3	49.5	0.2955	ug/L	0.2955 ppb	11:14:44
3	Zn 213.857†	1113.1	-14.8	-0.0813	ug/L	-0.0813 ppb	11:15:04
3	SiO2†	689.8	84.0	3.6182	ug/L	3.6182 ppb	11:15:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1059467.0	99.867	%	0.5479				0.55%
Sc Radial	5509.8	99.0	%	2.03				2.05%
Y 371.029	853675.3	100.05	%	0.459				0.46%
Y RADIAL	4805.8	99.79	%	1.872				1.88%
Ag 328.068†	130.0	0.5056	ug/L	0.14559	0.5056	ppb	0.14559	28.79%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	24.6	22.349	ug/L	9.3789	22.349	ppb	9.3789	41.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.6	-1.0834	ug/L	1.41306	-1.0834	ppb	1.41306	130.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	836.0	13.032	ug/L	0.4684	13.032	ppb	0.4684	3.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.1	0.1114	ug/L	0.07778	0.1114	ppb	0.07778	69.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-56.7	-0.0176	ug/L	0.02232	-0.0176	ppb	0.02232	127.00%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          14.5      36.216 ug/L        4.8774      36.216 ppb        4.8774  13.47%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.5     -0.0451 ug/L        0.06867     -0.0451 ppb       0.06867 152.40%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 8.6      0.1072 ug/L        0.04222      0.1072 ppb       0.04222  39.39%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 8.3      0.0704 ug/L        0.09343      0.0704 ppb       0.09343 132.64%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                88.8      0.2174 ug/L        0.30899      0.2174 ppb       0.30899 142.11%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.8     -27.091 ug/L       46.5144     -27.091 ppb      46.5144 171.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         336.9      146.16 ug/L        40.010      146.16 ppb        40.010  27.37%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.7      58.244 ug/L       39.8965      58.244 ppb       39.8965  68.50%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                10.5      0.0036 ug/L       0.01059      0.0036 ppb       0.01059 290.42%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.2      0.0863 ug/L       0.16552      0.0863 ppb       0.16552 191.79%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -11.7     -31.559 ug/L        6.3772     -31.559 ppb        6.3772  20.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.1      0.3373 ug/L       0.00401      0.3373 ppb       0.00401   1.19%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  7.6      2.6923 ug/L       4.99307      2.6923 ppb       4.99307 185.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                24.3      1.8294 ug/L       1.18127      1.8294 ppb       1.18127  64.57%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            9.9      8.3978 ug/L       3.60254      8.3978 ppb       3.60254  42.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                14.8      2.9269 ug/L       0.70621      2.9269 ppb       0.70621  24.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 6.6      2.0632 ug/L       1.24335      2.0632 ppb       1.24335  60.26%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               101.4      2.0396 ug/L       0.12804      2.0396 ppb       0.12804   6.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.6      1.0028 ug/L       0.26867      1.0028 ppb       0.26867  26.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                24.6      0.3787 ug/L       0.08674      0.3787 ppb       0.08674  22.90%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                15.1      0.0222 ug/L       0.02395      0.0222 ppb       0.02395 107.99%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.1719 ug/L       2.33641      1.1719 ppb       2.33641 199.38%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 -3.3     -0.0795 ug/L       3.89151     -0.0795 ppb       3.89151 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  1.1      0.0117 ug/L       0.26296      0.0117 ppb       0.26296 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                -8.4     -0.0485 ug/L       0.05156     -0.0485 ppb       0.05156 106.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      81.6      3.4863 ug/L       0.13480      3.4863 ppb       0.13480   3.87%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: LR1
Analyst: HSC
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/8/2009 11:17:30
Data Type: Reprocessed on 7/8/2009 11:40:20

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1046705.1	1046705.1	98.664	%			11:20:42
1	Sc Radial	5285.9	5285.9	95.0	%			11:19:24
1	Y 371.029	838520.8	838520.8	98.278	%			11:20:42
1	Y RADIAL	4594.7	4594.7	95.41	%			11:19:24
1	Ag 328.068†	-28259.2	-29280.5	9.7367	ug/L	9.7367	ppb	11:20:42
1	Al 396.153Radial†	-104.1	-17.4	-14.625	ug/L	-14.625	ppb	11:19:24
1	As 188.979†	-375.6	-343.8	-2.6523	ug/L	-2.6523	ppb	11:21:02
1	B 249.677†	2868.7	3289.1	-0.5237	ug/L	-0.5237	ppb	11:20:42
1	Ba 233.527†	-1751.7	-1799.7	0.0492	ug/L	0.0492	ppb	11:21:02
1	Be 313.107†	-7239.6	-21.4	-0.0064	ug/L	-0.0064	ppb	11:20:42
1	Ca 317.933Radial†	22.3	6.5	16.305	ug/L	16.305	ppb	11:19:44
1	Cd 226.502†	5204.4	5552.6	-4.5755	ug/L	-4.5755	ppb	11:21:02
1	Co 228.616†	250.1	343.9	-1.3538	ug/L	-1.3538	ppb	11:21:02
1	Cr 267.716†	-824.6	-807.2	0.7505	ug/L	0.7505	ppb	11:21:02
1	Cu 324.752†	802.5	-9377.9	-0.5740	ug/L	-0.5740	ppb	11:20:42
1	Fe 238.204 Radial†	10567.5	11124.8	390270	ug/L	390270	ppb	11:19:24
1	K 766.490 Radial†	1599.4	210.8	389.48	ug/L	389.48	ppb	11:19:24
1	Mg 279.077 IEC†	6.2	6.3	166.70	ug/L	166.70	ppb	11:19:44
1	Mn 257.610†	-57355.3	-58959.2	4.2573	ug/L	4.2573	ppb	11:20:42
1	Mo 202.031†	-642.9	-683.4	-0.5684	ug/L	-0.5684	ppb	11:20:42
1	Na 589.592 Radial†	-176.8	-15.7	-42.375	ug/L	-42.375	ppb	11:19:44
1	Ni 231.604†	294.0	149.8	2.3977	ug/L	2.3977	ppb	11:21:02
1	P 214.914†	1226.8	906.5	9.2980	ug/L	9.2980	ppb	11:21:02
1	Pb 220.353†	427.8	462.7	-2.1099	ug/L	-2.1099	ppb	11:21:02
1	S 181.975 Axial†	88.8	22.2	18.788	ug/L	18.788	ppb	11:21:02
1	Sb 206.836†	15.9	-29.3	0.9649	ug/L	0.9649	ppb	11:21:02
1	Se 196.026†	-3818.0	-3848.1	119.57	ug/L	119.57	ppb	11:21:02
1	Si 251.611†	-912.5	-1484.9	-30.180	ug/L	-30.180	ppb	11:21:02
1	Sn 189.927†	-36.6	-42.6	2.5556	ug/L	2.5556	ppb	11:21:02
1	Sr 421.552†	22.5	18.2	0.2804	ug/L	0.2804	ppb	11:19:44
1	Ti 334.940†	-991.5	104.3	0.1206	ug/L	0.1206	ppb	11:21:02
1	Tl 190.801†	-76.4	-16.1	-3.1221	ug/L	-3.1221	ppb	11:21:02
1	U 409.014†	-2034.4	1772.8	-3.9602	ug/L	-3.9602	ppb	11:20:42
1	V 292.402†	7424.0	9177.3	-1.4441	ug/L	-1.4441	ppb	11:21:02
1	Zn 213.857†	8001.3	6987.3	-3.0916	ug/L	-3.0916	ppb	11:21:02
1	SiO2†	-992.8	-1608.6	-70.084	ug/L	-70.084	ppb	11:22:00
2	Sc 361.383	1052226.2	1052226.2	99.184	%			11:21:08
2	Sc Radial	5401.8	5401.8	97.1	%			11:19:49
2	Y 371.029	842665.3	842665.3	98.764	%			11:21:08
2	Y RADIAL	4714.0	4714.0	97.89	%			11:19:49
2	Ag 328.068†	-28377.9	-29249.9	9.3733	ug/L	9.3733	ppb	11:21:08
2	Al 396.153Radial†	-122.8	-34.3	-30.134	ug/L	-30.134	ppb	11:19:49
2	As 188.979†	-364.1	-330.2	0.2438	ug/L	0.2438	ppb	11:21:28
2	B 249.677†	3058.2	3464.9	2.4165	ug/L	2.4165	ppb	11:21:08
2	Ba 233.527†	-1739.0	-1777.6	0.1263	ug/L	0.1263	ppb	11:21:28
2	Be 313.107†	-7287.8	-31.5	-0.0094	ug/L	-0.0094	ppb	11:21:08
2	Ca 317.933Radial†	23.0	6.7	16.789	ug/L	16.789	ppb	11:20:09
2	Cd 226.502†	5255.4	5576.3	-4.2206	ug/L	-4.2206	ppb	11:21:28
2	Co 228.616†	235.9	328.3	-1.5227	ug/L	-1.5227	ppb	11:21:28
2	Cr 267.716†	-795.1	-773.0	1.0118	ug/L	1.0118	ppb	11:21:28
2	Cu 324.752†	938.3	-9245.3	-0.3338	ug/L	-0.3338	ppb	11:21:08
2	Fe 238.204 Radial†	10757.5	11081.9	388770	ug/L	388770	ppb	11:19:49
2	K 766.490 Radial†	1494.6	66.6	325.81	ug/L	325.81	ppb	11:19:49
2	Mg 279.077 IEC†	5.9	5.9	130.42	ug/L	130.42	ppb	11:20:09
2	Mn 257.610†	-57434.3	-58733.8	4.2400	ug/L	4.2400	ppb	11:21:08
2	Mo 202.031†	-612.5	-649.3	0.6913	ug/L	0.6913	ppb	11:21:08
2	Na 589.592 Radial†	-180.6	-15.6	-42.212	ug/L	-42.212	ppb	11:20:09
2	Ni 231.604†	278.0	132.1	2.1139	ug/L	2.1139	ppb	11:21:28

2	P 214.914†	1227.8	901.0	8.4921	ug/L	8.4921 ppb	11:21:28
2	Pb 220.353†	449.1	481.9	-0.5307	ug/L	-0.5307 ppb	11:21:28
2	S 181.975 Axial†	80.8	13.6	11.530	ug/L	11.530 ppb	11:21:28
2	Sb 206.836†	33.2	-12.0	4.3505	ug/L	4.3505 ppb	11:21:28
2	Se 196.026†	-3813.6	-3823.4	122.34	ug/L	122.34 ppb	11:21:28
2	Si 251.611†	-923.6	-1491.3	-30.313	ug/L	-30.313 ppb	11:21:28
2	Sn 189.927†	-40.9	-46.7	2.1032	ug/L	2.1032 ppb	11:21:28
2	Sr 421.552†	35.7	31.3	0.4814	ug/L	0.4814 ppb	11:20:09
2	Ti 334.940†	-974.5	126.7	0.1495	ug/L	0.1495 ppb	11:21:28
2	Tl 190.801†	-70.5	-9.6	-2.0337	ug/L	-2.0337 ppb	11:21:28
2	U 409.014†	-2005.9	1812.3	-2.7948	ug/L	-2.7948 ppb	11:21:08
2	V 292.402†	7472.6	9186.8	-1.1665	ug/L	-1.1665 ppb	11:21:28
2	Zn 213.857†	8017.0	6960.5	-3.0760	ug/L	-3.0760 ppb	11:21:28
2	SiO2†	-1024.5	-1635.3	-71.266	ug/L	-71.266 ppb	11:22:05
3	Sc 361.383	1038864.2	1038864.2	97.925	%		11:21:35
3	Sc Radial	5569.7	5569.7	100	%		11:20:14
3	Y 371.029	832242.4	832242.4	97.542	%		11:21:35
3	Y RADIAL	4850.2	4850.2	100.7	%		11:20:14
3	Ag 328.068†	-28102.1	-29336.3	7.7693	ug/L	7.7693 ppb	11:21:35
3	Al 396.153Radial†	-102.4	-10.1	-8.1423	ug/L	-8.1423 ppb	11:20:14
3	As 188.979†	-361.3	-332.1	-0.9980	ug/L	-0.9980 ppb	11:21:55
3	B 249.677†	2847.5	3289.3	0.2032	ug/L	0.2032 ppb	11:21:35
3	Ba 233.527†	-1784.8	-1846.9	-0.3157	ug/L	-0.3157 ppb	11:21:55
3	Be 313.107†	-7215.4	-52.1	-0.0159	ug/L	-0.0159 ppb	11:21:35
3	Ca 317.933Radial†	20.5	3.5	8.8182	ug/L	8.8182 ppb	11:20:34
3	Cd 226.502†	5264.7	5654.0	-3.1736	ug/L	-3.1736 ppb	11:21:55
3	Co 228.616†	244.1	339.7	-1.3213	ug/L	-1.3213 ppb	11:21:55
3	Cr 267.716†	-801.4	-789.8	0.7943	ug/L	0.7943 ppb	11:21:55
3	Cu 324.752†	902.1	-9270.0	-0.6227	ug/L	-0.6227 ppb	11:21:35
3	Fe 238.204 Radial†	10979.5	10969.5	384830	ug/L	384830 ppb	11:20:14
3	K 766.490 Radial†	1427.0	-47.3	273.35	ug/L	273.35 ppb	11:20:14
3	Mg 279.077 IEC†	6.1	5.9	137.86	ug/L	137.86 ppb	11:20:34
3	Mn 257.610†	-56773.9	-58804.2	3.6706	ug/L	3.6706 ppb	11:21:35
3	Mo 202.031†	-575.4	-619.4	1.6175	ug/L	1.6175 ppb	11:21:35
3	Na 589.592 Radial†	-177.6	-7.0	-19.058	ug/L	-19.058 ppb	11:20:34
3	Ni 231.604†	287.7	145.5	2.3298	ug/L	2.3298 ppb	11:21:55
3	P 214.914†	1224.2	913.2	16.013	ug/L	16.013 ppb	11:21:55
3	Pb 220.353†	422.9	460.9	-1.7263	ug/L	-1.7263 ppb	11:21:55
3	S 181.975 Axial†	81.7	15.6	13.165	ug/L	13.165 ppb	11:21:55
3	Sb 206.836†	38.2	-6.4	5.3941	ug/L	5.3941 ppb	11:21:55
3	Se 196.026†	-3850.1	-3910.1	80.299	ug/L	80.299 ppb	11:21:55
3	Si 251.611†	-924.9	-1504.6	-30.592	ug/L	-30.592 ppb	11:21:55
3	Sn 189.927†	-42.3	-48.7	1.8220	ug/L	1.8220 ppb	11:21:55
3	Sr 421.552†	28.6	23.1	0.3559	ug/L	0.3559 ppb	11:20:34
3	Ti 334.940†	-986.5	101.9	0.1187	ug/L	0.1187 ppb	11:21:55
3	Tl 190.801†	-94.3	-34.9	-6.3034	ug/L	-6.3034 ppb	11:21:55
3	U 409.014†	-2185.9	1602.5	-7.5175	ug/L	-7.5175 ppb	11:21:35
3	V 292.402†	7401.4	9211.1	-0.4859	ug/L	-0.4859 ppb	11:21:55
3	Zn 213.857†	8037.4	7085.4	-1.9547	ug/L	-1.9547 ppb	11:21:55
3	SiO2†	-936.7	-1558.9	-67.898	ug/L	-67.898 ppb	11:22:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1045931.8	98.591	%	0.6329				0.64%
Sc Radial	5419.1	97.4	%	2.56				2.63%
Y 371.029	837809.5	98.194	%	0.6151				0.63%
Y RADIAL	4719.6	98.00	%	2.655				2.71%
Ag 328.068†	-29288.9	8.9598	ug/L	1.04683	8.9598	ppb	1.04683	11.68%
Al 396.153Radial†	-20.6	-17.634	ug/L	11.3004	-17.634	ppb	11.3004	64.08%
As 188.979†	-335.4	-1.1355	ug/L	1.45294	-1.1355	ppb	1.45294	127.95%
B 249.677†	3347.8	0.6987	ug/L	1.53142	0.6987	ppb	1.53142	219.19%
Ba 233.527†	-1808.0	-0.0467	ug/L	0.23610	-0.0467	ppb	0.23610	505.55%
Be 313.107†	-35.0	-0.0105	ug/L	0.00487	-0.0105	ppb	0.00487	46.13%
Ca 317.933Radial†	5.6	13.971	ug/L	4.4688	13.971	ppb	4.4688	31.99%
Cd 226.502†	5594.3	-3.9899	ug/L	0.72889	-3.9899	ppb	0.72889	18.27%
Co 228.616†	337.3	-1.3993	ug/L	0.10812	-1.3993	ppb	0.10812	7.73%
Cr 267.716†	-790.0	0.8522	ug/L	0.13996	0.8522	ppb	0.13996	16.42%
Cu 324.752†	-9297.7	-0.5102	ug/L	0.15464	-0.5102	ppb	0.15464	30.31%
Fe 238.204 Radial†	11058.7	387960	ug/L	2812.7	387960	ppb	2812.7	0.72%

K 766.490 Radial†	76.7	329.55	ug/L	58.152	329.55	ppb	58.152	17.65%
Mg 279.077 IEC†	6.0	144.99	ug/L	19.161	144.99	ppb	19.161	13.21%
Mn 257.610†	-58832.4	4.0559	ug/L	0.33383	4.0559	ppb	0.33383	8.23%
Mo 202.031†	-650.7	0.5801	ug/L	1.09717	0.5801	ppb	1.09717	189.12%
Na 589.592 Radial†	-12.8	-34.548	ug/L	13.4155	-34.548	ppb	13.4155	38.83%
Ni 231.604†	142.4	2.2805	ug/L	0.14816	2.2805	ppb	0.14816	6.50%
P 214.914†	906.9	11.268	ug/L	4.1293	11.268	ppb	4.1293	36.65%
Pb 220.353†	468.5	-1.4556	ug/L	0.82364	-1.4556	ppb	0.82364	56.58%
S 181.975 Axial†	17.1	14.494	ug/L	3.8072	14.494	ppb	3.8072	26.27%
Sb 206.836†	-15.9	3.5699	ug/L	2.31548	3.5699	ppb	2.31548	64.86%
Se 196.026†	-3860.5	107.40	ug/L	23.512	107.40	ppb	23.512	21.89%
Si 251.611†	-1493.6	-30.362	ug/L	0.2100	-30.362	ppb	0.2100	0.69%
Sn 189.927†	-46.0	2.1603	ug/L	0.37012	2.1603	ppb	0.37012	17.13%
Sr 421.552†	24.2	0.3726	ug/L	0.10154	0.3726	ppb	0.10154	27.25%
Ti 334.940†	111.0	0.1296	ug/L	0.01724	0.1296	ppb	0.01724	13.30%
Tl 190.801†	-20.2	-3.8197	ug/L	2.21870	-3.8197	ppb	2.21870	58.09%
U 409.014†	1729.2	-4.7575	ug/L	2.46022	-4.7575	ppb	2.46022	51.71%
V 292.402†	9191.8	-1.0321	ug/L	0.49303	-1.0321	ppb	0.49303	47.77%
Zn 213.857†	7011.0	-2.7074	ug/L	0.65195	-2.7074	ppb	0.65195	24.08%
SiO2†	-1600.9	-69.749	ug/L	1.7089	-69.749	ppb	1.7089	2.45%

Sequence No.: 18
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:24:21
Data Type: Reprocessed on 7/8/2009 11:40:21

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1059944.6	1059944.6	99.912	%			11:27:33
1	Sc Radial	5479.4	5479.4	98.5	%			11:26:14
1	Y 371.029	844640.7	844640.7	98.995	%			11:27:33
1	Y RADIAL	4754.7	4754.7	98.73	%			11:26:14
1	Ag 328.068†	125630.8	125103.4	498.29	ug/L	498.29	ppb	11:27:33
1	Al 396.153Radial†	5189.1	5362.2	4859.2	ug/L	4859.2	ppb	11:26:14
1	As 188.979†	2086.1	2124.9	501.95	ug/L	501.95	ppb	11:27:53
1	B 249.677†	31012.2	31421.1	487.79	ug/L	487.79	ppb	11:27:33
1	Ba 233.527†	97648.8	97711.0	495.79	ug/L	495.79	ppb	11:27:33
1	Be 313.107†	1580190.1	1588904.8	495.20	ug/L	495.20	ppb	11:27:33
1	Ca 317.933Radial†	1996.6	2010.8	5008.6	ug/L	5008.6	ppb	11:26:34
1	Cd 226.502†	66244.6	66580.8	497.71	ug/L	497.71	ppb	11:27:33
1	Co 228.616†	39192.8	39317.9	489.98	ug/L	489.98	ppb	11:27:53
1	Cr 267.716†	57869.2	57949.0	494.25	ug/L	494.25	ppb	11:27:33
1	Cu 324.752†	208005.6	197998.5	488.80	ug/L	488.80	ppb	11:27:33
1	Fe 238.204 Radial†	141.0	142.8	5026.5	ug/L	5026.5	ppb	11:26:34
1	K 766.490 Radial†	13180.0	11912.5	5162.7	ug/L	5162.7	ppb	11:26:14
1	Mg 279.077 IEC†	65.0	65.8	5216.9	ug/L	5216.9	ppb	11:26:34
1	Mn 257.610†	624970.8	624696.8	494.24	ug/L	494.24	ppb	11:27:33
1	Mo 202.031†	12690.5	12670.0	507.49	ug/L	507.49	ppb	11:27:53
1	Na 589.592 Radial†	3480.4	3705.1	10018	ug/L	10018	ppb	11:26:14
1	Ni 231.604†	30935.7	30814.9	493.58	ug/L	493.58	ppb	11:27:53
1	P 214.914†	7423.2	7092.8	2432.7	ug/L	2432.7	ppb	11:27:53
1	Pb 220.353†	6700.4	6735.4	506.26	ug/L	506.26	ppb	11:27:53
1	S 181.975 Axial†	1257.4	1190.7	1006.9	ug/L	1006.9	ppb	11:27:53
1	Sb 206.836†	2570.6	2527.4	503.36	ug/L	503.36	ppb	11:27:53
1	Se 196.026†	1498.7	1521.6	514.33	ug/L	514.33	ppb	11:27:53
1	Si 251.611†	121332.8	120880.1	2482.2	ug/L	2482.2	ppb	11:27:33
1	Sn 189.927†	4849.4	4848.2	504.72	ug/L	504.72	ppb	11:27:53
1	Sr 421.552†	33394.2	33909.5	522.38	ug/L	522.38	ppb	11:26:14
1	Ti 334.940†	376930.4	378373.2	495.26	ug/L	495.26	ppb	11:27:33
1	Tl 190.801†	2903.5	2967.5	502.45	ug/L	502.45	ppb	11:27:53
1	U 409.014†	15423.9	19272.3	476.61	ug/L	476.61	ppb	11:27:33
1	V 292.402†	84907.4	86635.3	497.41	ug/L	497.41	ppb	11:27:33
1	Zn 213.857†	89673.2	88630.1	490.34	ug/L	490.34	ppb	11:27:33
1	SiO2†	121738.4	121243.8	5330.9	ug/L	5330.9	ppb	11:28:53
2	Sc 361.383	1066729.6	1066729.6	100.55	%			11:28:00
2	Sc Radial	5456.8	5456.8	98.1	%			11:26:39
2	Y 371.029	848088.2	848088.2	99.399	%			11:28:00
2	Y RADIAL	4734.1	4734.1	98.31	%			11:26:39
2	Ag 328.068†	126873.6	125539.5	500.03	ug/L	500.03	ppb	11:28:00
2	Al 396.153Radial†	5194.2	5389.3	4884.0	ug/L	4884.0	ppb	11:26:39
2	As 188.979†	2073.2	2098.8	495.85	ug/L	495.85	ppb	11:28:20
2	B 249.677†	31532.7	31741.4	492.78	ug/L	492.78	ppb	11:28:00
2	Ba 233.527†	98315.7	97752.5	496.00	ug/L	496.00	ppb	11:28:00
2	Be 313.107†	1590346.7	1588945.7	495.21	ug/L	495.21	ppb	11:28:00
2	Ca 317.933Radial†	1979.2	2001.5	4985.4	ug/L	4985.4	ppb	11:26:59
2	Cd 226.502†	66641.4	66553.8	497.50	ug/L	497.50	ppb	11:28:00
2	Co 228.616†	39043.6	38920.0	485.00	ug/L	485.00	ppb	11:28:20
2	Cr 267.716†	58361.0	58069.7	495.28	ug/L	495.28	ppb	11:28:00
2	Cu 324.752†	210274.7	198930.9	491.11	ug/L	491.11	ppb	11:28:00
2	Fe 238.204 Radial†	141.8	144.2	5075.0	ug/L	5075.0	ppb	11:26:59
2	K 766.490 Radial†	13045.1	11830.3	5127.1	ug/L	5127.1	ppb	11:26:39
2	Mg 279.077 IEC†	64.4	65.5	5190.8	ug/L	5190.8	ppb	11:26:59
2	Mn 257.610†	630407.8	626125.3	495.37	ug/L	495.37	ppb	11:28:00
2	Mo 202.031†	12642.8	12541.7	502.36	ug/L	502.36	ppb	11:28:20
2	Na 589.592 Radial†	3436.0	3674.5	9935.3	ug/L	9935.3	ppb	11:26:39
2	Ni 231.604†	30760.2	30443.3	487.63	ug/L	487.63	ppb	11:28:20

2	P 214.914†	7393.8	7016.4	2405.2 ug/L	2405.2 ppb	11:28:20
2	Pb 220.353†	6660.2	6652.8	500.06 ug/L	500.06 ppb	11:28:20
2	S 181.975 Axial†	1241.1	1166.5	986.41 ug/L	986.41 ppb	11:28:20
2	Sb 206.836†	2563.0	2503.6	498.42 ug/L	498.42 ppb	11:28:20
2	Se 196.026†	1509.3	1522.7	514.83 ug/L	514.83 ppb	11:28:20
2	Si 251.611†	122522.7	121291.0	2490.8 ug/L	2490.8 ppb	11:28:00
2	Sn 189.927†	4810.7	4778.9	497.51 ug/L	497.51 ppb	11:28:20
2	Sr 421.552†	33200.1	33852.0	521.50 ug/L	521.50 ppb	11:26:39
2	Ti 334.940†	380050.3	379076.4	496.18 ug/L	496.18 ppb	11:28:00
2	Tl 190.801†	2886.0	2931.6	496.43 ug/L	496.43 ppb	11:28:20
2	U 409.014†	15484.1	19233.9	475.65 ug/L	475.65 ppb	11:28:00
2	V 292.402†	85441.7	86626.2	497.28 ug/L	497.28 ppb	11:28:00
2	Zn 213.857†	90424.6	88806.6	491.36 ug/L	491.36 ppb	11:28:00
2	SiO2†	122259.9	120987.4	5319.9 ug/L	5319.9 ppb	11:28:58
3	Sc 361.383	1082048.6	1082048.6	102.00 %		11:28:28
3	Sc Radial	5526.8	5526.8	99.3 %		11:27:04
3	Y 371.029	860676.7	860676.7	100.87 %		11:28:28
3	Y RADIAL	4799.7	4799.7	99.67 %		11:27:04
3	Ag 328.068†	128584.5	125430.6	499.55 ug/L	499.55 ppb	11:28:28
3	Al 396.153Radial†	5214.3	5342.4	4841.4 ug/L	4841.4 ppb	11:27:04
3	As 188.979†	2101.0	2096.8	495.36 ug/L	495.36 ppb	11:28:48
3	B 249.677†	31978.4	31734.4	492.71 ug/L	492.71 ppb	11:28:28
3	Ba 233.527†	99589.5	97617.2	495.31 ug/L	495.31 ppb	11:28:28
3	Be 313.107†	1612564.5	1588337.3	495.03 ug/L	495.03 ppb	11:28:28
3	Ca 317.933Radial†	1986.9	1983.6	4940.9 ug/L	4940.9 ppb	11:27:24
3	Cd 226.502†	67416.7	66375.6	496.18 ug/L	496.18 ppb	11:28:28
3	Co 228.616†	39220.9	38544.1	480.32 ug/L	480.32 ppb	11:28:48
3	Cr 267.716†	58998.1	57872.6	493.60 ug/L	493.60 ppb	11:28:28
3	Cu 324.752†	213337.9	198973.6	491.20 ug/L	491.20 ppb	11:28:28
3	Fe 238.204 Radial†	139.2	139.9	4921.4 ug/L	4921.4 ppb	11:27:24
3	K 766.490 Radial†	13032.9	11649.4	5048.6 ug/L	5048.6 ppb	11:27:04
3	Mg 279.077 IEC†	65.0	65.3	5178.3 ug/L	5178.3 ppb	11:27:24
3	Mn 257.610†	638129.7	624820.2	494.32 ug/L	494.32 ppb	11:28:28
3	Mo 202.031†	12745.8	12464.7	499.27 ug/L	499.27 ppb	11:28:48
3	Na 589.592 Radial†	3456.2	3650.4	9870.2 ug/L	9870.2 ppb	11:27:04
3	Ni 231.604†	30951.5	30197.8	483.70 ug/L	483.70 ppb	11:28:48
3	P 214.914†	7425.2	6943.1	2379.4 ug/L	2379.4 ppb	11:28:48
3	Pb 220.353†	6701.0	6599.0	496.02 ug/L	496.02 ppb	11:28:48
3	S 181.975 Axial†	1257.6	1165.2	985.32 ug/L	985.32 ppb	11:28:48
3	Sb 206.836†	2594.2	2498.0	497.25 ug/L	497.25 ppb	11:28:48
3	Se 196.026†	1502.3	1494.6	505.14 ug/L	505.14 ppb	11:28:48
3	Si 251.611†	124261.8	121271.0	2490.5 ug/L	2490.5 ppb	11:28:28
3	Sn 189.927†	4852.5	4752.1	494.71 ug/L	494.71 ppb	11:28:48
3	Sr 421.552†	33364.0	33587.9	517.43 ug/L	517.43 ppb	11:27:04
3	Ti 334.940†	385685.4	379250.3	496.41 ug/L	496.41 ppb	11:28:28
3	Tl 190.801†	2899.8	2904.5	491.88 ug/L	491.88 ppb	11:28:48
3	U 409.014†	15696.4	19224.1	475.43 ug/L	475.43 ppb	11:28:28
3	V 292.402†	86520.6	86480.9	496.44 ug/L	496.44 ppb	11:28:28
3	Zn 213.857†	91402.4	88492.1	489.64 ug/L	489.64 ppb	11:28:28
3	SiO2†	123096.2	120085.9	5280.2 ug/L	5280.2 ppb	11:29:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1069574.3	100.82	%	1.067				1.06%
Sc Radial	5487.7	98.6	%	0.64				0.65%
Y 371.029	851135.2	99.756	%	0.9893				0.99%
Y RADIAL	4762.9	98.90	%	0.696				0.70%
Ag 328.068†	125357.9	499.29	ug/L	0.900	499.29	ppb	0.900	0.18%
QC value within limits for Ag 328.068 Recovery = 99.86%								
Al 396.153Radial†	5364.6	4861.5	ug/L	21.38	4861.5	ppb	21.38	0.44%
QC value within limits for Al 396.153Radial Recovery = 97.23%								
As 188.979†	2106.8	497.72	ug/L	3.671	497.72	ppb	3.671	0.74%
QC value within limits for As 188.979 Recovery = 99.54%								
B 249.677†	31632.3	491.09	ug/L	2.863	491.09	ppb	2.863	0.58%
QC value within limits for B 249.677 Recovery = 98.22%								
Ba 233.527†	97693.6	495.70	ug/L	0.354	495.70	ppb	0.354	0.07%
QC value within limits for Ba 233.527 Recovery = 99.14%								
Be 313.107†	1588729.2	495.15	ug/L	0.105	495.15	ppb	0.105	0.02%
QC value within limits for Be 313.107 Recovery = 99.03%								

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Ca 317.933Radial†        1998.7      4978.3 ug/L        34.43      4978.3 ppb        34.43   0.69%
   QC value within limits for Ca 317.933Radial  Recovery = 99.57%
Cd 226.502†             66503.4      497.13 ug/L        0.828      497.13 ppb        0.828   0.17%
   QC value within limits for Cd 226.502  Recovery = 99.43%
Co 228.616†             38927.4      485.10 ug/L        4.831      485.10 ppb        4.831   1.00%
   QC value within limits for Co 228.616  Recovery = 97.02%
Cr 267.716†             57963.8      494.38 ug/L        0.848      494.38 ppb        0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 98.88%
Cu 324.752†            198634.3      490.37 ug/L        1.359      490.37 ppb        1.359   0.28%
   QC value within limits for Cu 324.752  Recovery = 98.07%
Fe 238.204 Radial†        142.3      5007.6 ug/L        78.49      5007.6 ppb        78.49   1.57%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.15%
K 766.490 Radial†       11797.4      5112.8 ug/L        58.43      5112.8 ppb        58.43   1.14%
   QC value within limits for K 766.490 Radial  Recovery = 102.26%
Mg 279.077 IEC†            65.5      5195.3 ug/L        19.71      5195.3 ppb        19.71   0.38%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.91%
Mn 257.610†            625214.1      494.64 ug/L        0.633      494.64 ppb        0.633   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.93%
Mo 202.031†             12558.8      503.04 ug/L        4.154      503.04 ppb        4.154   0.83%
   QC value within limits for Mo 202.031  Recovery = 100.61%
Na 589.592 Radial†       3676.6      9941.2 ug/L        74.10      9941.2 ppb        74.10   0.75%
   QC value within limits for Na 589.592 Radial  Recovery = 99.41%
Ni 231.604†             30485.3      488.30 ug/L        4.976      488.30 ppb        4.976   1.02%
   QC value within limits for Ni 231.604  Recovery = 97.66%
P 214.914†               7017.4      2405.8 ug/L        26.68      2405.8 ppb        26.68   1.11%
   QC value within limits for P 214.914  Recovery = 96.23%
Pb 220.353†              6662.4      500.78 ug/L        5.161      500.78 ppb        5.161   1.03%
   QC value within limits for Pb 220.353  Recovery = 100.16%
S 181.975 Axial†         1174.1      992.89 ug/L        12.183     992.89 ppb        12.183  1.23%
   QC value within limits for S 181.975 Axial  Recovery = 99.29%
Sb 206.836†              2509.7      499.68 ug/L        3.243      499.68 ppb        3.243   0.65%
   QC value within limits for Sb 206.836  Recovery = 99.94%
Se 196.026†              1512.9      511.43 ug/L        5.455      511.43 ppb        5.455   1.07%
   QC value within limits for Se 196.026  Recovery = 102.29%
Si 251.611†            121147.3      2487.8 ug/L         4.88      2487.8 ppb         4.88   0.20%
   QC value within limits for Si 251.611  Recovery = 99.51%
Sn 189.927†              4793.1      498.98 ug/L        5.163      498.98 ppb        5.163   1.03%
   QC value within limits for Sn 189.927  Recovery = 99.80%
Sr 421.552†             33783.1      520.44 ug/L        2.642      520.44 ppb        2.642   0.51%
   QC value within limits for Sr 421.552  Recovery = 104.09%
Ti 334.940†            378899.9      495.95 ug/L        0.606      495.95 ppb        0.606   0.12%
   QC value within limits for Ti 334.940  Recovery = 99.19%
Tl 190.801†              2934.5      496.92 ug/L        5.303      496.92 ppb        5.303   1.07%
   QC value within limits for Tl 190.801  Recovery = 99.38%
U 409.014†              19243.5      475.90 ug/L        0.628      475.90 ppb        0.628   0.13%
   QC value within limits for U 409.014  Recovery = 95.18%
V 292.402†              86580.8      497.04 ug/L        0.527      497.04 ppb        0.527   0.11%
   QC value within limits for V 292.402  Recovery = 99.41%
Zn 213.857†             88642.9      490.45 ug/L        0.862      490.45 ppb        0.862   0.18%
   QC value within limits for Zn 213.857  Recovery = 98.09%
SiO2†                  120772.4      5310.3 ug/L        26.66      5310.3 ppb        26.66   0.50%
   QC value within limits for SiO2  Recovery = 99.30%
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:31:14
Data Type: Reprocessed on 7/8/2009 11:40:22

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1063802.9	1063802.9	100.28	%			11:34:23
1	Sc Radial	5561.9	5561.9	99.9	%			11:33:06
1	Y 371.029	855860.4	855860.4	100.31	%			11:34:23
1	Y RADIAL	4822.6	4822.6	100.1	%			11:33:06
1	Ag 328.068†	690.4	49.9	0.1978	ug/L	0.1978	ppb	11:34:28
1	Al 396.153Radial†	-87.8	4.4	3.9546	ug/L	3.9546	ppb	11:33:06
1	As 188.979†	-50.4	-13.3	-3.1357	ug/L	-3.1357	ppb	11:34:48
1	B 249.677†	268.9	649.6	10.124	ug/L	10.124	ppb	11:34:28
1	Ba 233.527†	37.8	13.4	0.0677	ug/L	0.0677	ppb	11:34:48
1	Be 313.107†	-7293.5	42.7	0.0128	ug/L	0.0128	ppb	11:34:28
1	Ca 317.933Radial†	28.8	11.8	29.483	ug/L	29.483	ppb	11:33:26
1	Cd 226.502†	-277.0	1.4	0.0100	ug/L	0.0100	ppb	11:34:48
1	Co 228.616†	-86.2	4.5	0.0585	ug/L	0.0585	ppb	11:34:48
1	Cr 267.716†	-5.4	23.2	0.1973	ug/L	0.1973	ppb	11:34:48
1	Cu 324.752†	10006.5	-212.2	-0.5235	ug/L	-0.5235	ppb	11:34:28
1	Fe 238.204 Radial†	0.4	0.1	3.2855	ug/L	3.2855	ppb	11:33:26
1	K 766.490 Radial†	1523.7	51.4	22.290	ug/L	22.290	ppb	11:33:06
1	Mg 279.077 IEC†	-1.0	-1.1	-89.992	ug/L	-89.992	ppb	11:33:26
1	Mn 257.610†	795.0	-34.2	-0.0249	ug/L	-0.0249	ppb	11:34:48
1	Mo 202.031†	53.0	21.1	0.8462	ug/L	0.8462	ppb	11:34:48
1	Na 589.592 Radial†	-162.4	7.9	21.478	ug/L	21.478	ppb	11:33:26
1	Ni 231.604†	144.6	-4.1	-0.0650	ug/L	-0.0650	ppb	11:34:48
1	P 214.914†	355.6	17.7	6.3689	ug/L	6.3689	ppb	11:34:48
1	Pb 220.353†	-11.4	17.7	1.3309	ug/L	1.3309	ppb	11:34:48
1	S 181.975 Axial†	60.0	-8.0	-6.7972	ug/L	-6.7972	ppb	11:34:48
1	Sb 206.836†	53.2	7.6	1.5394	ug/L	1.5394	ppb	11:34:48
1	Se 196.026†	-14.3	7.3	2.4023	ug/L	2.4023	ppb	11:34:48
1	Si 251.611†	618.5	56.7	1.1410	ug/L	1.1410	ppb	11:34:48
1	Sn 189.927†	25.8	20.2	2.1070	ug/L	2.1070	ppb	11:34:48
1	Sr 421.552†	21.5	16.0	0.2468	ug/L	0.2468	ppb	11:33:26
1	Ti 334.940†	-1262.3	-149.6	-0.1941	ug/L	-0.1941	ppb	11:34:28
1	Tl 190.801†	-62.7	-1.1	-0.1937	ug/L	-0.1937	ppb	11:34:48
1	U 409.014†	-3836.3	9.0	0.2216	ug/L	0.2216	ppb	11:34:23
1	V 292.402†	-1663.5	-6.2	-0.0256	ug/L	-0.0256	ppb	11:34:28
1	Zn 213.857†	1135.7	10.2	0.0608	ug/L	0.0608	ppb	11:34:48
1	SiO2†	634.2	30.1	1.2681	ug/L	1.2681	ppb	11:35:54
2	Sc 361.383	1062791.4	1062791.4	100.18	%			11:34:53
2	Sc Radial	5538.6	5538.6	99.5	%			11:33:31
2	Y 371.029	855845.5	855845.5	100.31	%			11:34:53
2	Y RADIAL	4808.4	4808.4	99.85	%			11:33:31
2	Ag 328.068†	769.1	129.1	0.5079	ug/L	0.5079	ppb	11:34:58
2	Al 396.153Radial†	-67.1	24.8	22.522	ug/L	22.522	ppb	11:33:31
2	As 188.979†	-45.9	-8.9	-2.0961	ug/L	-2.0961	ppb	11:35:18
2	B 249.677†	275.1	656.1	10.227	ug/L	10.227	ppb	11:34:58
2	Ba 233.527†	41.5	17.1	0.0865	ug/L	0.0865	ppb	11:35:18
2	Be 313.107†	-7364.6	-35.1	-0.0111	ug/L	-0.0111	ppb	11:34:58
2	Ca 317.933Radial†	27.0	10.2	25.462	ug/L	25.462	ppb	11:33:51
2	Cd 226.502†	-277.0	1.1	0.0093	ug/L	0.0093	ppb	11:35:18
2	Co 228.616†	-96.9	-6.3	-0.0770	ug/L	-0.0770	ppb	11:35:18
2	Cr 267.716†	3.5	32.1	0.2730	ug/L	0.2730	ppb	11:35:18
2	Cu 324.752†	10207.0	-2.6	-0.0068	ug/L	-0.0068	ppb	11:34:58
2	Fe 238.204 Radial†	0.1	-0.2	-6.6396	ug/L	-6.6396	ppb	11:33:51
2	K 766.490 Radial†	1591.7	126.2	54.709	ug/L	54.709	ppb	11:33:31
2	Mg 279.077 IEC†	3.9	3.7	294.15	ug/L	294.15	ppb	11:33:51
2	Mn 257.610†	810.3	-18.2	-0.0209	ug/L	-0.0209	ppb	11:35:18
2	Mo 202.031†	40.3	8.4	0.3367	ug/L	0.3367	ppb	11:35:18
2	Na 589.592 Radial†	-165.4	4.2	11.404	ug/L	11.404	ppb	11:33:51
2	Ni 231.604†	155.5	7.0	0.1119	ug/L	0.1119	ppb	11:35:18

2	P 214.914†	350.7	13.1	4.6724	ug/L	4.6724 ppb	11:35:18
2	Pb 220.353†	1.3	30.4	2.2862	ug/L	2.2862 ppb	11:35:18
2	S 181.975 Axial†	62.4	-5.5	-4.6975	ug/L	-4.6975 ppb	11:35:18
2	Sb 206.836†	46.9	1.4	0.3030	ug/L	0.3030 ppb	11:35:18
2	Se 196.026†	-24.0	-2.3	-0.7802	ug/L	-0.7802 ppb	11:35:18
2	Si 251.611†	641.1	79.9	1.6204	ug/L	1.6204 ppb	11:35:18
2	Sn 189.927†	17.4	11.9	1.2429	ug/L	1.2429 ppb	11:35:18
2	Sr 421.552†	27.5	22.2	0.3413	ug/L	0.3413 ppb	11:33:51
2	Ti 334.940†	-1173.5	-62.1	-0.0801	ug/L	-0.0801 ppb	11:34:58
2	Tl 190.801†	-57.3	4.2	0.7097	ug/L	0.7097 ppb	11:35:18
2	U 409.014†	-3809.4	32.2	0.7987	ug/L	0.7987 ppb	11:34:53
2	V 292.402†	-1655.4	0.3	0.0135	ug/L	0.0135 ppb	11:34:58
2	Zn 213.857†	1139.0	14.5	0.0708	ug/L	0.0708 ppb	11:35:18
2	SiO2†	668.5	65.0	2.8084	ug/L	2.8084 ppb	11:35:59
3	Sc 361.383	1063088.1	1063088.1	100.21	%		11:35:23
3	Sc Radial	5440.7	5440.7	97.8	%		11:33:56
3	Y 371.029	856947.0	856947.0	100.44	%		11:35:23
3	Y RADIAL	4756.3	4756.3	98.77	%		11:33:56
3	Ag 328.068†	752.9	112.7	0.4282	ug/L	0.4282 ppb	11:35:29
3	Al 396.153Radial†	-61.7	29.0	26.426	ug/L	26.426 ppb	11:33:56
3	As 188.979†	-51.0	-14.0	-3.3000	ug/L	-3.3000 ppb	11:35:49
3	B 249.677†	248.8	629.8	9.8225	ug/L	9.8225 ppb	11:35:29
3	Ba 233.527†	49.3	24.9	0.1240	ug/L	0.1240 ppb	11:35:49
3	Be 313.107†	-7424.6	-93.0	-0.0288	ug/L	-0.0288 ppb	11:35:29
3	Ca 317.933Radial†	29.0	12.8	31.771	ug/L	31.771 ppb	11:34:16
3	Cd 226.502†	-284.9	-6.6	-0.0439	ug/L	-0.0439 ppb	11:35:49
3	Co 228.616†	-101.2	-10.6	-0.1306	ug/L	-0.1306 ppb	11:35:49
3	Cr 267.716†	-30.9	-2.2	-0.0206	ug/L	-0.0206 ppb	11:35:49
3	Cu 324.752†	10236.2	23.7	0.0558	ug/L	0.0558 ppb	11:35:29
3	Fe 238.204 Radial†	-1.0	-1.4	-48.298	ug/L	-48.298 ppb	11:34:16
3	K 766.490 Radial†	1505.5	66.8	28.927	ug/L	28.927 ppb	11:33:56
3	Mg 279.077 IEC†	0.6	0.4	33.239	ug/L	33.239 ppb	11:34:16
3	Mn 257.610†	805.7	-23.0	-0.0251	ug/L	-0.0251 ppb	11:35:49
3	Mo 202.031†	36.0	4.1	0.1614	ug/L	0.1614 ppb	11:35:49
3	Na 589.592 Radial†	-166.0	0.6	1.7302	ug/L	1.7302 ppb	11:34:16
3	Ni 231.604†	154.3	5.8	0.0925	ug/L	0.0925 ppb	11:35:49
3	P 214.914†	333.2	-4.4	-1.5177	ug/L	-1.5177 ppb	11:35:49
3	Pb 220.353†	8.6	37.6	2.8325	ug/L	2.8325 ppb	11:35:49
3	S 181.975 Axial†	65.9	-2.0	-1.7280	ug/L	-1.7280 ppb	11:35:49
3	Sb 206.836†	54.2	8.7	1.7131	ug/L	1.7131 ppb	11:35:49
3	Se 196.026†	-34.5	-12.8	-4.3231	ug/L	-4.3231 ppb	11:35:49
3	Si 251.611†	617.8	56.4	1.1483	ug/L	1.1483 ppb	11:35:49
3	Sn 189.927†	12.9	7.4	0.7752	ug/L	0.7752 ppb	11:35:49
3	Sr 421.552†	24.1	19.1	0.2946	ug/L	0.2946 ppb	11:34:16
3	Ti 334.940†	-1056.8	54.6	0.0735	ug/L	0.0735 ppb	11:35:29
3	Tl 190.801†	-54.8	6.7	1.1352	ug/L	1.1352 ppb	11:35:49
3	U 409.014†	-3836.0	6.7	0.1717	ug/L	0.1717 ppb	11:35:23
3	V 292.402†	-1740.9	-84.5	-0.4699	ug/L	-0.4699 ppb	11:35:29
3	Zn 213.857†	1112.0	-12.7	-0.0677	ug/L	-0.0677 ppb	11:35:49
3	SiO2†	666.7	63.0	2.7492	ug/L	2.7492 ppb	11:36:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1063227.5	100.22	%	0.049				0.05%
Sc Radial	5513.8	99.1	%	1.16				1.17%
Y 371.029	856217.6	100.35	%	0.074				0.07%
Y RADIAL	4795.8	99.59	%	0.725				0.73%
Ag 328.068†	97.2	0.3779	ug/L	0.16103	0.3779	ppb	0.16103	42.61%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.4	17.634	ug/L	12.0065	17.634	ppb	12.0065	68.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.1	-2.8439	ug/L	0.65284	-2.8439	ppb	0.65284	22.96%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	645.2	10.058	ug/L	0.2102	10.058	ppb	0.2102	2.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	18.5	0.0927	ug/L	0.02864	0.0927	ppb	0.02864	30.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-28.5	-0.0090	ug/L	0.02087	-0.0090	ppb	0.02087	231.41%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          11.6      28.906 ug/L        3.1943      28.906 ppb        3.1943  11.05%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -1.4      -0.0082 ug/L       0.03088     -0.0082 ppb       0.03088 375.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -4.1      -0.0497 ug/L       0.09746     -0.0497 ppb       0.09746 196.02%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               17.7       0.1499 ug/L       0.15243      0.1499 ppb       0.15243 101.68%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -63.7      -0.1582 ug/L       0.31790     -0.1582 ppb       0.31790 200.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5      -17.217 ug/L       27.3704     -17.217 ppb       27.3704 158.97%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         81.4       35.309 ug/L       17.1254      35.309 ppb       17.1254  48.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            1.0       79.132 ug/L      196.1394      79.132 ppb      196.1394 247.86%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -25.1      -0.0236 ug/L       0.00236     -0.0236 ppb       0.00236   9.98%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               11.2       0.4481 ug/L       0.35572      0.4481 ppb       0.35572  79.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         4.3       11.538 ug/L        9.8746      11.538 ppb        9.8746  85.59%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                2.9       0.0465 ug/L       0.09700      0.0465 ppb       0.09700 208.67%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 8.8       3.1745 ug/L       4.15119      3.1745 ppb       4.15119 130.77%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               28.6       2.1499 ug/L       0.76002      2.1499 ppb       0.76002  35.35%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -5.2      -4.4076 ug/L       2.54698     -4.4076 ppb       2.54698  57.79%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                5.9       1.1852 ug/L       0.76889      1.1852 ppb       0.76889  64.88%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -2.6      -0.9003 ug/L       3.36431     -0.9003 ppb       3.36431 373.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               64.3       1.3033 ug/L       0.27467      1.3033 ppb       0.27467  21.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               13.2       1.3751 ug/L       0.67567      1.3751 ppb       0.67567  49.14%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               19.1       0.2942 ug/L       0.04727      0.2942 ppb       0.04727  16.07%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -52.4      -0.0669 ug/L       0.13429     -0.0669 ppb       0.13429 200.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                3.3       0.5504 ug/L       0.67863      0.5504 ppb       0.67863 123.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                15.9       0.3973 ug/L       0.34848      0.3973 ppb       0.34848  87.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -30.1      -0.1607 ug/L       0.26848     -0.1607 ppb       0.26848 167.11%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                4.0       0.0213 ug/L       0.07726      0.0213 ppb       0.07726 362.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     52.7       2.2752 ug/L       0.87275      2.2752 ppb       0.87275  38.36%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 12:37:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5606.1	5606.1	101	%			12:39:25
1	Y RADIAL	4851.1	4851.1	100.7	%			12:39:25
1	Al 396.153Radial†	5378.2	5430.8	4921.6	ug/L	4921.6	ppb	12:39:25
1	Ca 317.933Radial†	2021.2	1989.4	4955.2	ug/L	4955.2	ppb	12:39:45
1	Fe 238.204 Radial†	140.8	139.5	4908.3	ug/L	4908.3	ppb	12:39:45
1	K 766.490 Radial†	13453.7	11881.6	5149.1	ug/L	5149.1	ppb	12:39:25
1	Mg 279.077 IEC†	63.3	62.7	4971.3	ug/L	4971.3	ppb	12:39:45
1	Na 589.592 Radial†	3647.9	3791.5	10252	ug/L	10252	ppb	12:39:25
1	Sr 421.552†	35108.7	34844.6	536.79	ug/L	536.79	ppb	12:39:25
1	Sc 361.383	1058412.2	1058412.2	99.767	%			12:40:44
1	Y 371.029	842280.3	842280.3	98.718	%			12:40:44
1	Ag 328.068†	126383.3	126039.7	501.96	ug/L	501.96	ppb	12:40:44
1	As 188.979†	2067.2	2108.9	498.21	ug/L	498.21	ppb	12:41:04
1	B 249.677†	31249.4	31703.9	492.21	ug/L	492.21	ppb	12:40:44
1	Ba 233.527†	97896.4	98100.6	497.76	ug/L	497.76	ppb	12:40:44
1	Be 313.107†	1582299.5	1593308.9	496.58	ug/L	496.58	ppb	12:40:44
1	Cd 226.502†	66319.2	66751.6	499.00	ug/L	499.00	ppb	12:40:44
1	Co 228.616†	39106.2	39287.9	489.60	ug/L	489.60	ppb	12:41:04
1	Cr 267.716†	58017.2	58181.2	496.23	ug/L	496.23	ppb	12:40:44
1	Cu 324.752†	209452.1	199749.8	493.12	ug/L	493.12	ppb	12:40:44
1	Mn 257.610†	627242.3	627879.2	496.74	ug/L	496.74	ppb	12:40:44
1	Mo 202.031†	12652.8	12650.6	506.70	ug/L	506.70	ppb	12:41:04
1	Ni 231.604†	30863.4	30787.2	493.14	ug/L	493.14	ppb	12:41:04
1	P 214.914†	7409.4	7089.8	2431.0	ug/L	2431.0	ppb	12:41:04
1	Pb 220.353†	6655.3	6699.9	503.62	ug/L	503.62	ppb	12:41:04
1	S 181.975 Axial†	1267.1	1202.2	1016.6	ug/L	1016.6	ppb	12:41:04
1	Sb 206.836†	2567.2	2527.8	503.31	ug/L	503.31	ppb	12:41:04
1	Se 196.026†	1499.0	1524.1	514.74	ug/L	514.74	ppb	12:41:04
1	Si 251.611†	123740.7	123469.4	2535.6	ug/L	2535.6	ppb	12:40:44
1	Sn 189.927†	4813.6	4819.3	501.70	ug/L	501.70	ppb	12:41:04
1	Ti 334.940†	379065.1	381059.1	498.77	ug/L	498.77	ppb	12:40:44
1	Tl 190.801†	2892.3	2960.4	501.29	ug/L	501.29	ppb	12:41:04
1	U 409.014†	15455.7	19326.6	477.97	ug/L	477.97	ppb	12:40:44
1	V 292.402†	85007.9	86859.1	498.67	ug/L	498.67	ppb	12:40:44
1	Zn 213.857†	90043.3	89131.1	493.16	ug/L	493.16	ppb	12:40:44
1	SiO2†	124276.3	123964.1	5451.2	ug/L	5451.2	ppb	12:42:04
2	Sc Radial	5585.7	5585.7	100	%			12:39:50
2	Y RADIAL	4837.6	4837.6	100.5	%			12:39:50
2	Al 396.153Radial†	5301.2	5373.6	4869.5	ug/L	4869.5	ppb	12:39:50
2	Ca 317.933Radial†	2018.6	1994.2	4967.2	ug/L	4967.2	ppb	12:40:10
2	Fe 238.204 Radial†	146.6	145.8	5129.1	ug/L	5129.1	ppb	12:40:10
2	K 766.490 Radial†	13445.7	11922.5	5167.1	ug/L	5167.1	ppb	12:39:50
2	Mg 279.077 IEC†	62.9	62.5	4955.1	ug/L	4955.1	ppb	12:40:10
2	Na 589.592 Radial†	3631.8	3788.6	10244	ug/L	10244	ppb	12:39:50
2	Sr 421.552†	34927.0	34791.2	535.97	ug/L	535.97	ppb	12:39:50
2	Sc 361.383	1052564.2	1052564.2	99.216	%			12:41:12
2	Y 371.029	837846.1	837846.1	98.199	%			12:41:12
2	Ag 328.068†	125844.2	126200.1	502.67	ug/L	502.67	ppb	12:41:12
2	As 188.979†	2073.2	2126.5	502.37	ug/L	502.37	ppb	12:41:32
2	B 249.677†	31117.5	31744.9	492.82	ug/L	492.82	ppb	12:41:12
2	Ba 233.527†	97205.3	97949.3	496.99	ug/L	496.99	ppb	12:41:12
2	Be 313.107†	1572088.7	1591829.1	496.11	ug/L	496.11	ppb	12:41:12
2	Cd 226.502†	65885.5	66683.9	498.47	ug/L	498.47	ppb	12:41:12
2	Co 228.616†	38903.8	39301.7	489.77	ug/L	489.77	ppb	12:41:32
2	Cr 267.716†	57670.9	58155.3	496.01	ug/L	496.01	ppb	12:41:12
2	Cu 324.752†	208260.2	199714.8	493.05	ug/L	493.05	ppb	12:41:12
2	Mn 257.610†	622713.6	626807.8	495.92	ug/L	495.92	ppb	12:41:12
2	Mo 202.031†	12649.0	12717.2	509.38	ug/L	509.38	ppb	12:41:32
2	Ni 231.604†	30707.2	30801.6	493.37	ug/L	493.37	ppb	12:41:32

2	P 214.914†	7360.8	7082.0	2428.1 ug/L	2428.1 ppb	12:41:32
2	Pb 220.353†	6668.7	6750.4	507.38 ug/L	507.38 ppb	12:41:32
2	S 181.975 Axial†	1268.3	1210.5	1023.7 ug/L	1023.7 ppb	12:41:32
2	Sb 206.836†	2554.2	2529.0	503.61 ug/L	503.61 ppb	12:41:32
2	Se 196.026†	1489.9	1523.3	515.24 ug/L	515.24 ppb	12:41:32
2	Si 251.611†	122736.1	123146.0	2528.9 ug/L	2528.9 ppb	12:41:12
2	Sn 189.927†	4784.8	4817.1	501.48 ug/L	501.48 ppb	12:41:32
2	Ti 334.940†	376326.4	380409.8	497.92 ug/L	497.92 ppb	12:41:12
2	Tl 190.801†	2869.4	2953.4	500.11 ug/L	500.11 ppb	12:41:32
2	U 409.014†	15348.9	19304.9	477.40 ug/L	477.40 ppb	12:41:12
2	V 292.402†	84354.4	86673.8	497.63 ug/L	497.63 ppb	12:41:12
2	Zn 213.857†	89243.2	88826.1	491.43 ug/L	491.43 ppb	12:41:12
2	SiO2†	123446.6	123819.8	5444.7 ug/L	5444.7 ppb	12:42:10
3	Sc Radial	5622.4	5622.4	101 %		12:40:15
3	Y RADIAL	4895.1	4895.1	101.6 %		12:40:15
3	Al 396.153Radial†	5385.6	5422.7	4914.2 ug/L	4914.2 ppb	12:40:15
3	Ca 317.933Radial†	2021.8	1984.1	4942.2 ug/L	4942.2 ppb	12:40:35
3	Fe 238.204 Radial†	143.1	141.3	4973.4 ug/L	4973.4 ppb	12:40:35
3	K 766.490 Radial†	13475.9	11864.8	5141.9 ug/L	5141.9 ppb	12:40:15
3	Mg 279.077 IEC†	64.9	64.0	5076.8 ug/L	5076.8 ppb	12:40:35
3	Na 589.592 Radial†	3704.4	3836.9	10375 ug/L	10375 ppb	12:40:15
3	Sr 421.552†	35367.4	34999.8	539.18 ug/L	539.18 ppb	12:40:15
3	Sc 361.383	1055266.8	1055266.8	99.471 %		12:41:39
3	Y 371.029	840466.9	840466.9	98.506 %		12:41:39
3	Ag 328.068†	125875.6	125906.9	501.45 ug/L	501.45 ppb	12:41:39
3	As 188.979†	2070.2	2118.1	500.36 ug/L	500.36 ppb	12:41:59
3	B 249.677†	31096.7	31643.7	491.26 ug/L	491.26 ppb	12:41:39
3	Ba 233.527†	97326.4	97820.1	496.34 ug/L	496.34 ppb	12:41:39
3	Be 313.107†	1575608.3	1591309.3	495.95 ug/L	495.95 ppb	12:41:39
3	Cd 226.502†	65831.5	66459.5	496.81 ug/L	496.81 ppb	12:41:39
3	Co 228.616†	38937.8	39235.4	488.94 ug/L	488.94 ppb	12:41:59
3	Cr 267.716†	57725.3	58061.1	495.21 ug/L	495.21 ppb	12:41:39
3	Cu 324.752†	208650.8	199569.9	492.68 ug/L	492.68 ppb	12:41:39
3	Mn 257.610†	623476.5	625967.4	495.24 ug/L	495.24 ppb	12:41:39
3	Mo 202.031†	12620.8	12656.2	506.93 ug/L	506.93 ppb	12:41:59
3	Ni 231.604†	30715.0	30730.2	492.22 ug/L	492.22 ppb	12:41:59
3	P 214.914†	7373.4	7075.7	2426.1 ug/L	2426.1 ppb	12:41:59
3	Pb 220.353†	6643.3	6707.8	504.20 ug/L	504.20 ppb	12:41:59
3	S 181.975 Axial†	1267.5	1206.4	1020.2 ug/L	1020.2 ppb	12:41:59
3	Sb 206.836†	2557.1	2525.3	502.87 ug/L	502.87 ppb	12:41:59
3	Se 196.026†	1494.6	1524.2	514.98 ug/L	514.98 ppb	12:41:59
3	Si 251.611†	122713.6	122806.5	2522.0 ug/L	2522.0 ppb	12:41:39
3	Sn 189.927†	4806.5	4826.6	502.46 ug/L	502.46 ppb	12:41:59
3	Ti 334.940†	376677.4	379791.2	497.11 ug/L	497.11 ppb	12:41:39
3	Tl 190.801†	2887.1	2963.8	501.86 ug/L	501.86 ppb	12:41:59
3	U 409.014†	15446.1	19363.0	478.87 ug/L	478.87 ppb	12:41:39
3	V 292.402†	84553.0	86655.7	497.52 ug/L	497.52 ppb	12:41:39
3	Zn 213.857†	89401.2	88754.6	491.05 ug/L	491.05 ppb	12:41:39
3	SiO2†	122933.1	122984.9	5407.9 ug/L	5407.9 ppb	12:42:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055414.4	99.485	%	0.2759				0.28%
Sc Radial	5604.7	101	%	0.3				0.33%
Y 371.029	840197.8	98.474	%	0.2613				0.27%
Y RADIAL	4861.2	100.9	%	0.62				0.62%
Ag 328.068†	126048.9	502.03	ug/L	0.609	502.03	ppb	0.609	0.12%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5409.0	4901.8	ug/L	28.21	4901.8	ppb	28.21	0.58%
QC value within limits for Al 396.153Radial Recovery = 98.04%								
As 188.979†	2117.9	500.31	ug/L	2.082	500.31	ppb	2.082	0.42%
QC value within limits for As 188.979 Recovery = 100.06%								
B 249.677†	31697.5	492.10	ug/L	0.784	492.10	ppb	0.784	0.16%
QC value within limits for B 249.677 Recovery = 98.42%								
Ba 233.527†	97956.7	497.03	ug/L	0.711	497.03	ppb	0.711	0.14%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1592149.1	496.21	ug/L	0.324	496.21	ppb	0.324	0.07%
QC value within limits for Be 313.107 Recovery = 99.24%								
Ca 317.933Radial†	1989.2	4954.9	ug/L	12.52	4954.9	ppb	12.52	0.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.10%
Cd 226.502†          66631.7      498.09 ug/L        1.144      498.09 ppb        1.144   0.23%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†          39275.0      489.44 ug/L        0.436      489.44 ppb        0.436   0.09%
   QC value within limits for Co 228.616  Recovery = 97.89%
Cr 267.716†          58132.5      495.82 ug/L        0.539      495.82 ppb        0.539   0.11%
   QC value within limits for Cr 267.716  Recovery = 99.16%
Cu 324.752†         199678.2      492.95 ug/L        0.236      492.95 ppb        0.236   0.05%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†     142.2      5003.6 ug/L       113.48      5003.6 ppb       113.48   2.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.07%
K 766.490 Radial†    11889.6      5152.7 ug/L        12.97      5152.7 ppb        12.97   0.25%
   QC value within limits for K 766.490 Radial  Recovery = 103.05%
Mg 279.077 IEC†         63.1      5001.1 ug/L        66.09      5001.1 ppb        66.09   1.32%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.02%
Mn 257.610†         626884.8      495.97 ug/L        0.753      495.97 ppb        0.753   0.15%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†          12674.6      507.67 ug/L        1.485      507.67 ppb        1.485   0.29%
   QC value within limits for Mo 202.031  Recovery = 101.53%
Na 589.592 Radial†    3805.7       10290 ug/L         73.3       10290 ppb         73.3   0.71%
   QC value within limits for Na 589.592 Radial  Recovery = 102.90%
Ni 231.604†          30773.0      492.91 ug/L        0.605      492.91 ppb        0.605   0.12%
   QC value within limits for Ni 231.604  Recovery = 98.58%
P 214.914†            7082.5      2428.4 ug/L         2.49      2428.4 ppb         2.49   0.10%
   QC value within limits for P 214.914  Recovery = 97.14%
Pb 220.353†           6719.4      505.07 ug/L        2.026      505.07 ppb        2.026   0.40%
   QC value within limits for Pb 220.353  Recovery = 101.01%
S 181.975 Axial†      1206.4      1020.2 ug/L         3.51      1020.2 ppb         3.51   0.34%
   QC value within limits for S 181.975 Axial  Recovery = 102.02%
Sb 206.836†           2527.4      503.26 ug/L        0.369      503.26 ppb        0.369   0.07%
   QC value within limits for Sb 206.836  Recovery = 100.65%
Se 196.026†           1523.9      514.99 ug/L        0.251      514.99 ppb        0.251   0.05%
   QC value within limits for Se 196.026  Recovery = 103.00%
Si 251.611†         123140.6      2528.8 ug/L         6.84      2528.8 ppb         6.84   0.27%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†           4821.0      501.88 ug/L        0.511      501.88 ppb        0.511   0.10%
   QC value within limits for Sn 189.927  Recovery = 100.38%
Sr 421.552†          34878.5      537.31 ug/L        1.669      537.31 ppb        1.669   0.31%
   QC value within limits for Sr 421.552  Recovery = 107.46%
Ti 334.940†         380420.0      497.94 ug/L        0.830      497.94 ppb        0.830   0.17%
   QC value within limits for Ti 334.940  Recovery = 99.59%
Tl 190.801†           2959.2      501.08 ug/L        0.893      501.08 ppb        0.893   0.18%
   QC value within limits for Tl 190.801  Recovery = 100.22%
U 409.014†           19331.5      478.08 ug/L        0.738      478.08 ppb        0.738   0.15%
   QC value within limits for U 409.014  Recovery = 95.62%
V 292.402†           86729.6      497.94 ug/L        0.638      497.94 ppb        0.638   0.13%
   QC value within limits for V 292.402  Recovery = 99.59%
Zn 213.857†          88903.9      491.88 ug/L        1.123      491.88 ppb        1.123   0.23%
   QC value within limits for Zn 213.857  Recovery = 98.38%
SiO2†               123589.6      5434.6 ug/L        23.34      5434.6 ppb        23.34   0.43%
   QC value within limits for SiO2  Recovery = 101.63%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 12:44:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5518.3	5518.3	99.2	%			12:46:17
1	Y RADIAL	4806.7	4806.7	99.81	%			12:46:17
1	Al 396.153Radial†	-80.6	10.9	9.9589	ug/L	9.9589	ppb	12:46:17
1	Ca 317.933Radial†	44.1	27.5	68.573	ug/L	68.573	ppb	12:46:37
1	Fe 238.204 Radial†	0.0	-0.3	-9.9293	ug/L	-9.9293	ppb	12:46:37
1	K 766.490 Radial†	1698.7	239.9	104.08	ug/L	104.08	ppb	12:46:17
1	Mg 279.077 IEC†	-1.8	-2.0	-155.04	ug/L	-155.04	ppb	12:46:37
1	Na 589.592 Radial†	-174.1	-5.2	-13.943	ug/L	-13.943	ppb	12:46:37
1	Sr 421.552†	32.4	27.2	0.4180	ug/L	0.4180	ppb	12:46:37
1	Sc 361.383	1052130.1	1052130.1	99.175	%			12:47:34
1	Y 371.029	846654.6	846654.6	99.231	%			12:47:34
1	Ag 328.068†	745.4	113.0	0.4445	ug/L	0.4445	ppb	12:47:39
1	As 188.979†	-50.6	-14.1	-3.3222	ug/L	-3.3222	ppb	12:47:59
1	B 249.677†	375.6	760.3	11.850	ug/L	11.850	ppb	12:47:39
1	Ba 233.527†	45.5	21.6	0.1076	ug/L	0.1076	ppb	12:47:59
1	Be 313.107†	-7407.1	-152.6	-0.0474	ug/L	-0.0474	ppb	12:47:39
1	Cd 226.502†	-302.4	-27.3	-0.2026	ug/L	-0.2026	ppb	12:47:59
1	Co 228.616†	-78.2	11.6	0.1438	ug/L	0.1438	ppb	12:47:59
1	Cr 267.716†	-24.3	4.1	0.0351	ug/L	0.0351	ppb	12:47:59
1	Cu 324.752†	10111.8	4.6	0.0108	ug/L	0.0108	ppb	12:47:39
1	Mn 257.610†	869.1	49.3	0.0406	ug/L	0.0406	ppb	12:47:59
1	Mo 202.031†	26.7	-4.8	-0.1934	ug/L	-0.1934	ppb	12:47:59
1	Ni 231.604†	157.5	10.6	0.1698	ug/L	0.1698	ppb	12:47:59
1	P 214.914†	363.5	29.6	10.483	ug/L	10.483	ppb	12:47:59
1	Pb 220.353†	-2.2	26.8	2.0130	ug/L	2.0130	ppb	12:47:59
1	S 181.975 Axial†	74.3	7.1	5.9751	ug/L	5.9751	ppb	12:47:59
1	Sb 206.836†	39.2	-5.9	-1.1554	ug/L	-1.1554	ppb	12:47:59
1	Se 196.026†	-23.4	-2.0	-0.6703	ug/L	-0.6703	ppb	12:47:59
1	Si 251.611†	1253.7	704.0	14.495	ug/L	14.495	ppb	12:47:59
1	Sn 189.927†	8.5	3.1	0.3237	ug/L	0.3237	ppb	12:47:59
1	Ti 334.940†	-1083.2	17.0	0.0287	ug/L	0.0287	ppb	12:47:39
1	Tl 190.801†	-53.7	7.3	1.2282	ug/L	1.2282	ppb	12:47:59
1	U 409.014†	-3965.4	-163.6	-4.0586	ug/L	-4.0586	ppb	12:47:34
1	V 292.402†	-1733.9	-95.6	-0.5536	ug/L	-0.5536	ppb	12:47:39
1	Zn 213.857†	1100.4	-12.8	-0.0663	ug/L	-0.0663	ppb	12:47:59
1	SiO2†	1196.6	604.2	26.624	ug/L	26.624	ppb	12:49:05
2	Sc Radial	5530.0	5530.0	99.4	%			12:46:42
2	Y RADIAL	4804.0	4804.0	99.76	%			12:46:42
2	Al 396.153Radial†	-46.8	45.1	41.028	ug/L	41.028	ppb	12:46:42
2	Ca 317.933Radial†	43.2	26.6	66.161	ug/L	66.161	ppb	12:47:02
2	Fe 238.204 Radial†	0.2	-0.1	-3.2086	ug/L	-3.2086	ppb	12:47:02
2	K 766.490 Radial†	1500.2	36.5	15.864	ug/L	15.864	ppb	12:46:42
2	Mg 279.077 IEC†	0.1	-0.0	-2.9802	ug/L	-2.9802	ppb	12:47:02
2	Na 589.592 Radial†	-185.3	-16.0	-43.367	ug/L	-43.367	ppb	12:47:02
2	Sr 421.552†	24.3	19.0	0.2916	ug/L	0.2916	ppb	12:47:02
2	Sc 361.383	1055228.2	1055228.2	99.467	%			12:48:04
2	Y 371.029	850024.5	850024.5	99.626	%			12:48:04
2	Ag 328.068†	646.4	11.3	0.0443	ug/L	0.0443	ppb	12:48:09
2	As 188.979†	-42.6	-5.9	-1.4010	ug/L	-1.4010	ppb	12:48:29
2	B 249.677†	320.9	704.1	10.974	ug/L	10.974	ppb	12:48:09
2	Ba 233.527†	61.0	37.0	0.1867	ug/L	0.1867	ppb	12:48:29
2	Be 313.107†	-7402.9	-126.4	-0.0393	ug/L	-0.0393	ppb	12:48:09
2	Cd 226.502†	-287.6	-11.5	-0.0851	ug/L	-0.0851	ppb	12:48:29
2	Co 228.616†	-95.0	-5.1	-0.0621	ug/L	-0.0621	ppb	12:48:29
2	Cr 267.716†	-27.2	1.3	0.0113	ug/L	0.0113	ppb	12:48:29
2	Cu 324.752†	10074.9	-62.4	-0.1541	ug/L	-0.1541	ppb	12:48:09
2	Mn 257.610†	873.6	51.3	0.0402	ug/L	0.0402	ppb	12:48:29
2	Mo 202.031†	40.5	8.9	0.3563	ug/L	0.3563	ppb	12:48:29
2	Ni 231.604†	174.4	27.0	0.4336	ug/L	0.4336	ppb	12:48:29

2	P 214.914†	361.0	26.0	9.2291 ug/L	9.2291 ppb	12:48:29
2	Pb 220.353†	-10.0	19.1	1.4379 ug/L	1.4379 ppb	12:48:29
2	S 181.975 Axial†	81.6	14.2	11.973 ug/L	11.973 ppb	12:48:29
2	Sb 206.836†	42.3	-2.9	-0.5447 ug/L	-0.5447 ppb	12:48:29
2	Se 196.026†	-24.2	-2.7	-0.8785 ug/L	-0.8785 ppb	12:48:29
2	Si 251.611†	1175.1	621.2	12.805 ug/L	12.805 ppb	12:48:29
2	Sn 189.927†	14.8	9.4	0.9833 ug/L	0.9833 ppb	12:48:29
2	Ti 334.940†	-1119.7	-16.5	-0.0158 ug/L	-0.0158 ppb	12:48:09
2	Tl 190.801†	-65.4	-4.3	-0.7287 ug/L	-0.7287 ppb	12:48:29
2	U 409.014†	-3934.1	-120.4	-2.9874 ug/L	-2.9874 ppb	12:48:04
2	V 292.402†	-1688.4	-44.7	-0.2542 ug/L	-0.2542 ppb	12:48:09
2	Zn 213.857†	1094.3	-22.2	-0.1261 ug/L	-0.1261 ppb	12:48:29
2	SiO2†	1154.6	558.4	24.643 ug/L	24.643 ppb	12:49:10
3	Sc Radial	5536.9	5536.9	99.5 %		12:47:07
3	Y RADIAL	4795.3	4795.3	99.58 %		12:47:07
3	Al 396.153Radial†	-88.7	3.1	2.7784 ug/L	2.7784 ppb	12:47:07
3	Ca 317.933Radial†	38.0	21.3	52.934 ug/L	52.934 ppb	12:47:27
3	Fe 238.204 Radial†	0.3	-0.0	-1.5937 ug/L	-1.5937 ppb	12:47:27
3	K 766.490 Radial†	1639.2	174.4	75.680 ug/L	75.680 ppb	12:47:07
3	Mg 279.077 IEC†	-0.9	-1.1	-89.124 ug/L	-89.124 ppb	12:47:27
3	Na 589.592 Radial†	-174.5	-4.9	-13.365 ug/L	-13.365 ppb	12:47:27
3	Sr 421.552†	25.1	19.8	0.3045 ug/L	0.3045 ppb	12:47:27
3	Sc 361.383	1057181.0	1057181.0	99.651 %		12:48:34
3	Y 371.029	851270.4	851270.4	99.772 %		12:48:34
3	Ag 328.068†	674.9	38.7	0.1554 ug/L	0.1554 ppb	12:48:39
3	As 188.979†	-44.5	-7.8	-1.8396 ug/L	-1.8396 ppb	12:48:59
3	B 249.677†	378.7	761.6	11.869 ug/L	11.869 ppb	12:48:39
3	Ba 233.527†	63.9	39.8	0.2017 ug/L	0.2017 ppb	12:48:59
3	Be 313.107†	-7375.2	-84.8	-0.0266 ug/L	-0.0266 ppb	12:48:39
3	Cd 226.502†	-299.1	-22.5	-0.1676 ug/L	-0.1676 ppb	12:48:59
3	Co 228.616†	-94.7	-4.6	-0.0558 ug/L	-0.0558 ppb	12:48:59
3	Cr 267.716†	-31.6	-3.1	-0.0251 ug/L	-0.0251 ppb	12:48:59
3	Cu 324.752†	10184.5	28.9	0.0711 ug/L	0.0711 ppb	12:48:39
3	Mn 257.610†	910.4	86.5	0.0699 ug/L	0.0699 ppb	12:48:59
3	Mo 202.031†	44.9	13.3	0.5325 ug/L	0.5325 ppb	12:48:59
3	Ni 231.604†	167.2	19.5	0.3133 ug/L	0.3133 ppb	12:48:59
3	P 214.914†	336.4	0.6	0.2154 ug/L	0.2154 ppb	12:48:59
3	Pb 220.353†	-22.4	6.6	0.4997 ug/L	0.4997 ppb	12:48:59
3	S 181.975 Axial†	69.3	1.8	1.4809 ug/L	1.4809 ppb	12:48:59
3	Sb 206.836†	57.9	12.6	2.5004 ug/L	2.5004 ppb	12:48:59
3	Se 196.026†	-30.6	-9.1	-2.9626 ug/L	-2.9626 ppb	12:48:59
3	Si 251.611†	1139.2	583.1	11.995 ug/L	11.995 ppb	12:48:59
3	Sn 189.927†	11.6	6.1	0.6428 ug/L	0.6428 ppb	12:48:59
3	Ti 334.940†	-1167.7	-62.5	-0.0766 ug/L	-0.0766 ppb	12:48:39
3	Tl 190.801†	-61.2	0.0	0.0020 ug/L	0.0020 ppb	12:48:59
3	U 409.014†	-3975.3	-154.5	-3.8330 ug/L	-3.8330 ppb	12:48:34
3	V 292.402†	-1637.3	9.7	0.0534 ug/L	0.0534 ppb	12:48:39
3	Zn 213.857†	1125.6	7.1	0.0408 ug/L	0.0408 ppb	12:48:59
3	SiO2†	1173.0	574.8	25.317 ug/L	25.317 ppb	12:49:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054846.5	99.431	%	0.2401				0.24%
Sc Radial	5528.4	99.3	%	0.17				0.17%
Y 371.029	849316.5	99.543	%	0.2799				0.28%
Y RADIAL	4802.0	99.72	%	0.125				0.12%
Ag 328.068†	54.3	0.2147	ug/L	0.20658	0.2147	ppb	0.20658	96.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.7	17.922	ug/L	20.3303	17.922	ppb	20.3303	113.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-9.3	-2.1876	ug/L	1.00674	-2.1876	ppb	1.00674	46.02%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	742.0	11.565	ug/L	0.5111	11.565	ppb	0.5111	4.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.8	0.1653	ug/L	0.05052	0.1653	ppb	0.05052	30.56%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.3	-0.0378	ug/L	0.01050	-0.0378	ppb	0.01050	27.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	25.1	62.556	ug/L	8.4198	62.556	ppb	8.4198	13.46%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -20.4     -0.1518 ug/L       0.06032     -0.1518 ppb        0.06032  39.74%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                0.6      0.0086 ug/L       0.11710      0.0086 ppb        0.11710 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                0.8      0.0071 ug/L       0.03031      0.0071 ppb        0.03031 424.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -9.6     -0.0240 ug/L       0.11658     -0.0240 ppb        0.11658 485.05%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.1     -4.9105 ug/L       4.42071     -4.9105 ppb        4.42071  90.02%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        150.3      65.208 ug/L      45.0299      65.208 ppb        45.0299  69.06%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.0     -82.381 ug/L      76.2536     -82.381 ppb        76.2536  92.56%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               62.3      0.0502 ug/L       0.01702      0.0502 ppb        0.01702  33.90%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                5.8      0.2318 ug/L       0.37863      0.2318 ppb        0.37863 163.36%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.558 ug/L      17.1571     -23.558 ppb        17.1571  72.83%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               19.1      0.3055 ug/L       0.13208      0.3055 ppb        0.13208  43.23%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                18.7      6.6426 ug/L       5.60129      6.6426 ppb        5.60129  84.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               17.5      1.3169 ug/L       0.76385      1.3169 ppb        0.76385  58.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           7.7      6.4762 ug/L       5.26375      6.4762 ppb        5.26375  81.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                1.3      0.2668 ug/L       1.95832      0.2668 ppb        1.95832 734.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.6     -1.5038 ug/L       1.26762     -1.5038 ppb        1.26762  84.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              636.1      13.098 ug/L        1.2757      13.098 ppb         1.2757   9.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.2      0.6499 ug/L       0.32985      0.6499 ppb        0.32985  50.75%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               22.0      0.3380 ug/L       0.06959      0.3380 ppb        0.06959  20.59%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -20.6     -0.0212 ug/L       0.05284     -0.0212 ppb        0.05284 248.77%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.0      0.1672 ug/L       0.98883      0.1672 ppb        0.98883 591.54%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -146.2     -3.6263 ug/L       0.56469     -3.6263 ppb        0.56469  15.57%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -43.5     -0.2515 ug/L       0.30350     -0.2515 ppb        0.30350 120.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -9.3     -0.0505 ug/L       0.08455     -0.0505 ppb        0.08455 167.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    579.1      25.528 ug/L        1.0068      25.528 ppb         1.0068   3.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 13:30:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5593.8	5593.8	101	%			13:32:15
1	Y RADIAL	4842.5	4842.5	100.6	%			13:32:15
1	Al 396.153Radial†	5375.4	5439.8	4930.0	ug/L	4930.0	ppb	13:32:15
1	Ca 317.933Radial†	2030.0	2002.6	4988.1	ug/L	4988.1	ppb	13:32:35
1	Fe 238.204 Radial†	143.1	142.0	4997.8	ug/L	4997.8	ppb	13:32:35
1	K 766.490 Radial†	13576.3	12032.8	5214.6	ug/L	5214.6	ppb	13:32:15
1	Mg 279.077 IEC†	64.5	64.0	5074.9	ug/L	5074.9	ppb	13:32:35
1	Na 589.592 Radial†	3820.6	3971.3	10738	ug/L	10738	ppb	13:32:15
1	Sr 421.552†	36184.6	35991.7	554.46	ug/L	554.46	ppb	13:32:15
1	Sc 361.383	1067935.1	1067935.1	100.66	%			13:33:34
1	Y 371.029	850350.6	850350.6	99.664	%			13:33:34
1	Ag 328.068†	127384.2	125904.4	501.45	ug/L	501.45	ppb	13:33:34
1	As 188.979†	2071.9	2095.1	494.98	ug/L	494.98	ppb	13:33:49
1	B 249.677†	31471.2	31644.9	491.29	ug/L	491.29	ppb	13:33:34
1	Ba 233.527†	98516.8	97841.9	496.45	ug/L	496.45	ppb	13:33:34
1	Be 313.107†	1595916.3	1592693.3	496.38	ug/L	496.38	ppb	13:33:34
1	Cd 226.502†	66618.5	66456.2	496.78	ug/L	496.78	ppb	13:33:34
1	Co 228.616†	39113.3	38945.4	485.32	ug/L	485.32	ppb	13:33:49
1	Cr 267.716†	58357.9	58001.1	494.70	ug/L	494.70	ppb	13:33:34
1	Cu 324.752†	211740.1	200150.5	494.11	ug/L	494.11	ppb	13:33:34
1	Mn 257.610†	631157.2	626162.1	495.39	ug/L	495.39	ppb	13:33:34
1	Mo 202.031†	12651.2	12535.9	502.12	ug/L	502.12	ppb	13:33:49
1	Ni 231.604†	30868.2	30516.1	488.79	ug/L	488.79	ppb	13:33:49
1	P 214.914†	7390.5	7004.7	2400.7	ug/L	2400.7	ppb	13:33:49
1	Pb 220.353†	6658.3	6643.4	499.37	ug/L	499.37	ppb	13:33:49
1	S 181.975 Axial†	1261.6	1185.4	1002.5	ug/L	1002.5	ppb	13:33:49
1	Sb 206.836†	2570.5	2508.1	499.32	ug/L	499.32	ppb	13:33:49
1	Se 196.026†	1503.6	1515.3	512.16	ug/L	512.16	ppb	13:33:49
1	Si 251.611†	123414.2	122039.0	2506.2	ug/L	2506.2	ppb	13:33:34
1	Sn 189.927†	4826.6	4789.2	498.58	ug/L	498.58	ppb	13:33:49
1	Ti 334.940†	381885.1	380472.4	498.01	ug/L	498.01	ppb	13:33:34
1	Tl 190.801†	2890.2	2932.5	496.60	ug/L	496.60	ppb	13:33:49
1	U 409.014†	15716.9	19447.9	480.97	ug/L	480.97	ppb	13:33:34
1	V 292.402†	85492.2	86580.4	497.03	ug/L	497.03	ppb	13:33:34
1	Zn 213.857†	90459.6	88739.9	490.98	ug/L	490.98	ppb	13:33:34
1	SiO2†	121080.0	119678.0	5261.9	ug/L	5261.9	ppb	13:34:50
2	Sc Radial	5672.4	5672.4	102	%			13:32:40
2	Y RADIAL	4945.5	4945.5	102.7	%			13:32:40
2	Al 396.153Radial†	5436.6	5425.7	4917.2	ug/L	4917.2	ppb	13:32:40
2	Ca 317.933Radial†	2037.9	1982.3	4937.6	ug/L	4937.6	ppb	13:33:00
2	Fe 238.204 Radial†	144.7	141.6	4983.6	ug/L	4983.6	ppb	13:33:00
2	K 766.490 Radial†	13656.0	11923.8	5167.3	ug/L	5167.3	ppb	13:32:40
2	Mg 279.077 IEC†	65.5	64.0	5077.9	ug/L	5077.9	ppb	13:33:00
2	Na 589.592 Radial†	3830.1	3927.9	10620	ug/L	10620	ppb	13:32:40
2	Sr 421.552†	36620.5	35920.3	553.36	ug/L	553.36	ppb	13:32:40
2	Sc 361.383	1070653.1	1070653.1	100.92	%			13:33:57
2	Y 371.029	851300.7	851300.7	99.776	%			13:33:57
2	Ag 328.068†	127724.7	125920.6	501.52	ug/L	501.52	ppb	13:33:57
2	As 188.979†	2076.5	2094.5	494.83	ug/L	494.83	ppb	13:34:17
2	B 249.677†	31609.9	31703.0	492.20	ug/L	492.20	ppb	13:33:57
2	Ba 233.527†	98878.2	97951.6	497.00	ug/L	497.00	ppb	13:33:57
2	Be 313.107†	1599999.7	1592714.8	496.39	ug/L	496.39	ppb	13:33:57
2	Cd 226.502†	67082.9	66748.4	498.96	ug/L	498.96	ppb	13:33:57
2	Co 228.616†	39157.1	38890.2	484.63	ug/L	484.63	ppb	13:34:17
2	Cr 267.716†	58566.4	58060.5	495.20	ug/L	495.20	ppb	13:33:57
2	Cu 324.752†	211700.3	199577.1	492.70	ug/L	492.70	ppb	13:33:57
2	Mn 257.610†	634065.3	627452.0	496.41	ug/L	496.41	ppb	13:33:57
2	Mo 202.031†	12650.3	12503.1	500.81	ug/L	500.81	ppb	13:34:17
2	Ni 231.604†	30868.0	30438.0	487.54	ug/L	487.54	ppb	13:34:17

2	P 214.914†	7401.9	6997.4	2398.4 ug/L	2398.4 ppb	13:34:17
2	Pb 220.353†	6676.9	6645.0	499.48 ug/L	499.48 ppb	13:34:17
2	S 181.975 Axial†	1250.3	1171.1	990.32 ug/L	990.32 ppb	13:34:17
2	Sb 206.836†	2582.9	2513.9	500.41 ug/L	500.41 ppb	13:34:17
2	Se 196.026†	1510.6	1518.4	513.14 ug/L	513.14 ppb	13:34:17
2	Si 251.611†	123797.7	122107.8	2507.7 ug/L	2507.7 ppb	13:33:57
2	Sn 189.927†	4829.4	4779.9	497.60 ug/L	497.60 ppb	13:34:17
2	Ti 334.940†	383068.5	380682.0	498.28 ug/L	498.28 ppb	13:33:57
2	Tl 190.801†	2883.4	2918.5	494.24 ug/L	494.24 ppb	13:34:17
2	U 409.014†	15572.6	19265.3	476.44 ug/L	476.44 ppb	13:33:57
2	V 292.402†	85872.5	86741.7	497.92 ug/L	497.92 ppb	13:33:57
2	Zn 213.857†	90799.4	88848.4	491.60 ug/L	491.60 ppb	13:33:57
2	SiO2†	123201.1	121474.4	5341.4 ug/L	5341.4 ppb	13:34:55
3	Sc Radial	5530.2	5530.2	99.4 %		13:33:05
3	Y RADIAL	4824.8	4824.8	100.2 %		13:33:05
3	Al 396.153Radial†	5269.6	5394.8	4888.9 ug/L	4888.9 ppb	13:33:05
3	Ca 317.933Radial†	2016.5	2012.2	5012.0 ug/L	5012.0 ppb	13:33:25
3	Fe 238.204 Radial†	142.0	142.6	5017.8 ug/L	5017.8 ppb	13:33:25
3	K 766.490 Radial†	13240.5	11850.4	5135.5 ug/L	5135.5 ppb	13:33:05
3	Mg 279.077 IEC†	66.0	66.2	5249.4 ug/L	5249.4 ppb	13:33:25
3	Na 589.592 Radial†	3727.2	3921.0	10602 ug/L	10602 ppb	13:33:05
3	Sr 421.552†	35503.6	35720.6	550.29 ug/L	550.29 ppb	13:33:05
3	Sc 361.383	1058446.8	1058446.8	99.770 %		13:34:24
3	Y 371.029	840681.7	840681.7	98.531 %		13:34:24
3	Ag 328.068†	126248.3	125900.3	501.44 ug/L	501.44 ppb	13:34:24
3	As 188.979†	2075.8	2117.5	500.23 ug/L	500.23 ppb	13:34:44
3	B 249.677†	31241.6	31695.0	492.06 ug/L	492.06 ppb	13:34:24
3	Ba 233.527†	97802.6	98003.4	497.27 ug/L	497.27 ppb	13:34:24
3	Be 313.107†	1580830.6	1591784.7	496.10 ug/L	496.10 ppb	13:34:24
3	Cd 226.502†	66147.2	66577.1	497.68 ug/L	497.68 ppb	13:34:24
3	Co 228.616†	38965.8	39145.9	487.83 ug/L	487.83 ppb	13:34:44
3	Cr 267.716†	57808.5	57970.1	494.43 ug/L	494.43 ppb	13:34:24
3	Cu 324.752†	209941.6	200233.4	494.32 ug/L	494.32 ppb	13:34:24
3	Mn 257.610†	627495.4	628112.4	496.93 ug/L	496.93 ppb	13:34:24
3	Mo 202.031†	12657.7	12655.1	506.89 ug/L	506.89 ppb	13:34:44
3	Ni 231.604†	30736.2	30658.7	491.08 ug/L	491.08 ppb	13:34:44
3	P 214.914†	7364.3	7044.3	2414.7 ug/L	2414.7 ppb	13:34:44
3	Pb 220.353†	6650.9	6695.3	503.26 ug/L	503.26 ppb	13:34:44
3	S 181.975 Axial†	1250.1	1185.1	1002.2 ug/L	1002.2 ppb	13:34:44
3	Sb 206.836†	2580.3	2540.8	505.92 ug/L	505.92 ppb	13:34:44
3	Se 196.026†	1500.2	1525.3	515.51 ug/L	515.51 ppb	13:34:44
3	Si 251.611†	122421.6	122143.2	2508.3 ug/L	2508.3 ppb	13:34:24
3	Sn 189.927†	4816.0	4821.6	501.94 ug/L	501.94 ppb	13:34:44
3	Ti 334.940†	378995.5	380976.9	498.67 ug/L	498.67 ppb	13:34:24
3	Tl 190.801†	2891.6	2959.6	501.16 ug/L	501.16 ppb	13:34:44
3	U 409.014†	15388.1	19258.2	476.26 ug/L	476.26 ppb	13:34:24
3	V 292.402†	84860.2	86708.3	497.81 ug/L	497.81 ppb	13:34:24
3	Zn 213.857†	89990.4	89075.1	492.83 ug/L	492.83 ppb	13:34:24
3	SiO2†	121574.6	121252.0	5331.3 ug/L	5331.3 ppb	13:35:00

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065678.3	100.45	%	0.604				0.60%
Sc Radial	5598.8	101	%	1.3				1.27%
Y 371.029	847444.4	99.324	%	0.6887				0.69%
Y RADIAL	4870.9	101.1	%	1.35				1.34%
Ag 328.068†	125908.4	501.47	ug/L	0.040	501.47	ppb	0.040	0.01%
QC value within limits for Ag 328.068 Recovery = 100.29%								
Al 396.153Radial†	5420.1	4912.0	ug/L	21.04	4912.0	ppb	21.04	0.43%
QC value within limits for Al 396.153Radial Recovery = 98.24%								
As 188.979†	2102.3	496.68	ug/L	3.073	496.68	ppb	3.073	0.62%
QC value within limits for As 188.979 Recovery = 99.34%								
B 249.677†	31681.0	491.85	ug/L	0.490	491.85	ppb	0.490	0.10%
QC value within limits for B 249.677 Recovery = 98.37%								
Ba 233.527†	97932.3	496.91	ug/L	0.418	496.91	ppb	0.418	0.08%
QC value within limits for Ba 233.527 Recovery = 99.38%								
Be 313.107†	1592397.6	496.29	ug/L	0.164	496.29	ppb	0.164	0.03%
QC value within limits for Be 313.107 Recovery = 99.26%								
Ca 317.933Radial†	1999.0	4979.2	ug/L	37.99	4979.2	ppb	37.99	0.76%

```
   QC value within limits for Ca 317.933Radial  Recovery = 99.58%
Cd 226.502†            66593.9      497.81 ug/L        1.099      497.81 ppb        1.099   0.22%
   QC value within limits for Cd 226.502  Recovery = 99.56%
Co 228.616†            38993.8      485.92 ug/L        1.684      485.92 ppb        1.684   0.35%
   QC value within limits for Co 228.616  Recovery = 97.18%
Cr 267.716†            58010.6      494.78 ug/L        0.391      494.78 ppb        0.391   0.08%
   QC value within limits for Cr 267.716  Recovery = 98.96%
Cu 324.752†           199987.0      493.71 ug/L        0.883      493.71 ppb        0.883   0.18%
   QC value within limits for Cu 324.752  Recovery = 98.74%
Fe 238.204 Radial†       142.1      4999.7 ug/L        17.21      4999.7 ppb        17.21   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.99%
K 766.490 Radial†      11935.7      5172.5 ug/L        39.80      5172.5 ppb        39.80   0.77%
   QC value within limits for K 766.490 Radial  Recovery = 103.45%
Mg 279.077 IEC†           64.8      5134.0 ug/L        99.90      5134.0 ppb        99.90   1.95%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.68%
Mn 257.610†           627242.2      496.25 ug/L        0.783      496.25 ppb        0.783   0.16%
   QC value within limits for Mn 257.610  Recovery = 99.25%
Mo 202.031†            12564.7      503.27 ug/L        3.202      503.27 ppb        3.202   0.64%
   QC value within limits for Mo 202.031  Recovery = 100.65%
Na 589.592 Radial†      3940.0       10653 ug/L         73.7       10653 ppb         73.7   0.69%
   QC value within limits for Na 589.592 Radial  Recovery = 106.53%
Ni 231.604†            30537.6      489.14 ug/L        1.792      489.14 ppb        1.792   0.37%
   QC value within limits for Ni 231.604  Recovery = 97.83%
P 214.914†              7015.5      2404.6 ug/L        8.82       2404.6 ppb         8.82   0.37%
   QC value within limits for P 214.914  Recovery = 96.18%
Pb 220.353†             6661.2      500.70 ug/L        2.213      500.70 ppb        2.213   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.14%
S 181.975 Axial†        1180.6      998.33 ug/L        6.940      998.33 ppb        6.940   0.70%
   QC value within limits for S 181.975 Axial  Recovery = 99.83%
Sb 206.836†             2520.9      501.88 ug/L        3.538      501.88 ppb        3.538   0.70%
   QC value within limits for Sb 206.836  Recovery = 100.38%
Se 196.026†             1519.7      513.60 ug/L        1.722      513.60 ppb        1.722   0.34%
   QC value within limits for Se 196.026  Recovery = 102.72%
Si 251.611†           122096.7      2507.4 ug/L         1.07      2507.4 ppb         1.07   0.04%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4796.9      499.37 ug/L        2.279      499.37 ppb        2.279   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.87%
Sr 421.552†            35877.5      552.70 ug/L        2.165      552.70 ppb        2.165   0.39%
   QC value greater than the upper limit for Sr 421.552  Recovery = 110.54%
Ti 334.940†           380710.4      498.32 ug/L        0.334      498.32 ppb        0.334   0.07%
   QC value within limits for Ti 334.940  Recovery = 99.66%
Tl 190.801†             2936.9      497.33 ug/L        3.520      497.33 ppb        3.520   0.71%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19323.8      477.89 ug/L        2.668      477.89 ppb        2.668   0.56%
   QC value within limits for U 409.014  Recovery = 95.58%
V 292.402†             86676.8      497.59 ug/L        0.485      497.59 ppb        0.485   0.10%
   QC value within limits for V 292.402  Recovery = 99.52%
Zn 213.857†            88887.8      491.81 ug/L        0.941      491.81 ppb        0.941   0.19%
   QC value within limits for Zn 213.857  Recovery = 98.36%
SiO2†                 120801.5      5311.6 ug/L        43.27      5311.6 ppb        43.27   0.81%
   QC value within limits for SiO2  Recovery = 99.33%
QC Failed.  Continue with analysis.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:37:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5413.7	5413.7	97.3	%			13:39:02
1	Y RADIAL	4722.7	4722.7	98.07	%			13:39:02
1	Al 396.153Radial†	-76.0	14.1	12.785	ug/L	12.785	ppb	13:39:02
1	Ca 317.933Radial†	35.2	19.2	47.934	ug/L	47.934	ppb	13:39:22
1	Fe 238.204 Radial†	1.2	0.9	31.911	ug/L	31.911	ppb	13:39:22
1	K 766.490 Radial†	1580.2	151.2	65.626	ug/L	65.626	ppb	13:39:02
1	Mg 279.077 IEC†	-0.2	-0.4	-31.882	ug/L	-31.882	ppb	13:39:22
1	Na 589.592 Radial†	-172.1	-6.5	-17.590	ug/L	-17.590	ppb	13:39:22
1	Sr 421.552†	25.9	21.2	0.3255	ug/L	0.3255	ppb	13:39:22
1	Sc 361.383	1053963.2	1053963.2	99.348	%			13:40:19
1	Y 371.029	848397.9	848397.9	99.435	%			13:40:19
1	Ag 328.068†	697.3	63.3	0.2597	ug/L	0.2597	ppb	13:40:24
1	As 188.979†	-43.2	-6.6	-1.5430	ug/L	-1.5430	ppb	13:40:44
1	B 249.677†	186.7	569.4	8.8696	ug/L	8.8696	ppb	13:40:24
1	Ba 233.527†	25.2	1.1	0.0062	ug/L	0.0062	ppb	13:40:44
1	Be 313.107†	-7423.5	-156.0	-0.0488	ug/L	-0.0488	ppb	13:40:24
1	Cd 226.502†	-280.8	-5.0	-0.0412	ug/L	-0.0412	ppb	13:40:44
1	Co 228.616†	-84.6	5.2	0.0655	ug/L	0.0655	ppb	13:40:44
1	Cr 267.716†	-15.0	13.5	0.1154	ug/L	0.1154	ppb	13:40:44
1	Cu 324.752†	10214.2	90.0	0.2240	ug/L	0.2240	ppb	13:40:24
1	Mn 257.610†	861.8	40.4	0.0367	ug/L	0.0367	ppb	13:40:44
1	Mo 202.031†	34.4	2.9	0.1183	ug/L	0.1183	ppb	13:40:44
1	Ni 231.604†	156.3	9.1	0.1453	ug/L	0.1453	ppb	13:40:44
1	P 214.914†	354.0	19.4	6.7924	ug/L	6.7924	ppb	13:40:44
1	Pb 220.353†	-16.7	12.3	0.9181	ug/L	0.9181	ppb	13:40:44
1	S 181.975 Axial†	70.6	3.2	2.7071	ug/L	2.7071	ppb	13:40:44
1	Sb 206.836†	39.9	-5.3	-1.0467	ug/L	-1.0467	ppb	13:40:44
1	Se 196.026†	-22.9	-1.5	-0.3668	ug/L	-0.3668	ppb	13:40:44
1	Si 251.611†	869.2	314.8	6.4745	ug/L	6.4745	ppb	13:40:44
1	Sn 189.927†	0.9	-4.6	-0.4731	ug/L	-0.4731	ppb	13:40:44
1	Ti 334.940†	-1211.1	-109.8	-0.1404	ug/L	-0.1404	ppb	13:40:24
1	Tl 190.801†	-59.9	1.1	0.1786	ug/L	0.1786	ppb	13:40:44
1	U 409.014†	-3817.1	-7.5	-0.1890	ug/L	-0.1890	ppb	13:40:19
1	V 292.402†	-1664.4	-22.5	-0.1316	ug/L	-0.1316	ppb	13:40:24
1	Zn 213.857†	1133.9	18.9	0.1021	ug/L	0.1021	ppb	13:40:44
1	SiO2†	854.9	258.2	11.358	ug/L	11.358	ppb	13:41:50
2	Sc Radial	5529.6	5529.6	99.4	%			13:39:27
2	Y RADIAL	4800.3	4800.3	99.68	%			13:39:27
2	Al 396.153Radial†	-66.9	24.8	22.617	ug/L	22.617	ppb	13:39:27
2	Ca 317.933Radial†	32.0	15.3	38.110	ug/L	38.110	ppb	13:39:47
2	Fe 238.204 Radial†	-0.4	-0.7	-24.391	ug/L	-24.391	ppb	13:39:47
2	K 766.490 Radial†	1456.8	-7.0	-3.0184	ug/L	-3.0184	ppb	13:39:27
2	Mg 279.077 IEC†	-1.1	-1.3	-105.28	ug/L	-105.28	ppb	13:39:47
2	Na 589.592 Radial†	-182.7	-13.4	-36.229	ug/L	-36.229	ppb	13:39:47
2	Sr 421.552†	13.5	8.1	0.1251	ug/L	0.1251	ppb	13:39:47
2	Sc 361.383	1050298.1	1050298.1	99.002	%			13:40:49
2	Y 371.029	845092.6	845092.6	99.048	%			13:40:49
2	Ag 328.068†	722.6	91.3	0.3522	ug/L	0.3522	ppb	13:40:54
2	As 188.979†	-47.8	-11.4	-2.6790	ug/L	-2.6790	ppb	13:41:14
2	B 249.677†	113.4	496.1	7.7347	ug/L	7.7347	ppb	13:40:54
2	Ba 233.527†	39.8	15.9	0.0791	ug/L	0.0791	ppb	13:41:14
2	Be 313.107†	-7481.4	-240.6	-0.0748	ug/L	-0.0748	ppb	13:40:54
2	Cd 226.502†	-281.1	-6.3	-0.0443	ug/L	-0.0443	ppb	13:41:14
2	Co 228.616†	-106.2	-16.8	-0.2105	ug/L	-0.2105	ppb	13:41:14
2	Cr 267.716†	-17.2	11.3	0.0951	ug/L	0.0951	ppb	13:41:14
2	Cu 324.752†	10211.9	123.5	0.3033	ug/L	0.3033	ppb	13:40:54
2	Mn 257.610†	849.4	30.9	0.0233	ug/L	0.0233	ppb	13:41:14
2	Mo 202.031†	18.3	-13.3	-0.5352	ug/L	-0.5352	ppb	13:41:14
2	Ni 231.604†	164.4	17.8	0.2854	ug/L	0.2854	ppb	13:41:14

2	P 214.914†	350.8	17.5	6.1379	ug/L	6.1379 ppb	13:41:14
2	Pb 220.353†	-10.6	18.4	1.3861	ug/L	1.3861 ppb	13:41:14
2	S 181.975 Axial†	62.6	-4.6	-3.8702	ug/L	-3.8702 ppb	13:41:14
2	Sb 206.836†	45.8	0.8	0.1341	ug/L	0.1341 ppb	13:41:14
2	Se 196.026†	-24.4	-3.1	-1.0828	ug/L	-1.0828 ppb	13:41:14
2	Si 251.611†	863.1	311.7	6.4431	ug/L	6.4431 ppb	13:41:14
2	Sn 189.927†	0.2	-5.3	-0.5453	ug/L	-0.5453 ppb	13:41:14
2	Ti 334.940†	-1096.8	1.4	0.0048	ug/L	0.0048 ppb	13:40:54
2	Tl 190.801†	-63.6	-2.9	-0.4817	ug/L	-0.4817 ppb	13:41:14
2	U 409.014†	-3840.4	-44.4	-1.0988	ug/L	-1.0988 ppb	13:40:49
2	V 292.402†	-1708.7	-73.1	-0.4221	ug/L	-0.4221 ppb	13:40:54
2	Zn 213.857†	1132.6	21.6	0.1245	ug/L	0.1245 ppb	13:41:14
2	SiO2†	832.1	238.2	10.549	ug/L	10.549 ppb	13:41:55
3	Sc Radial	5577.9	5577.9	100	%		13:39:52
3	Y RADIAL	4835.1	4835.1	100.4	%		13:39:52
3	Al 396.153Radial†	-70.3	22.1	20.104	ug/L	20.104 ppb	13:39:52
3	Ca 317.933Radial†	35.5	18.5	45.957	ug/L	45.957 ppb	13:40:12
3	Fe 238.204 Radial†	0.8	0.4	15.248	ug/L	15.248 ppb	13:40:12
3	K 766.490 Radial†	1595.4	118.6	51.472	ug/L	51.472 ppb	13:39:52
3	Mg 279.077 IEC†	1.1	0.9	72.486	ug/L	72.486 ppb	13:40:12
3	Na 589.592 Radial†	-180.7	-9.9	-26.682	ug/L	-26.682 ppb	13:40:12
3	Sr 421.552†	20.5	15.0	0.2301	ug/L	0.2301 ppb	13:40:12
3	Sc 361.383	1059808.1	1059808.1	99.899	%		13:41:19
3	Y 371.029	852835.7	852835.7	99.956	%		13:41:19
3	Ag 328.068†	652.2	14.3	0.0614	ug/L	0.0614 ppb	13:41:24
3	As 188.979†	-45.4	-8.6	-2.0185	ug/L	-2.0185 ppb	13:41:44
3	B 249.677†	65.4	446.9	6.9635	ug/L	6.9635 ppb	13:41:24
3	Ba 233.527†	22.1	-2.1	-0.0105	ug/L	-0.0105 ppb	13:41:44
3	Be 313.107†	-7445.6	-136.9	-0.0427	ug/L	-0.0427 ppb	13:41:24
3	Cd 226.502†	-289.9	-12.6	-0.0960	ug/L	-0.0960 ppb	13:41:44
3	Co 228.616†	-93.1	-2.8	-0.0344	ug/L	-0.0344 ppb	13:41:44
3	Cr 267.716†	-11.2	17.4	0.1485	ug/L	0.1485 ppb	13:41:44
3	Cu 324.752†	10243.7	62.8	0.1558	ug/L	0.1558 ppb	13:41:24
3	Mn 257.610†	848.9	22.8	0.0186	ug/L	0.0186 ppb	13:41:44
3	Mo 202.031†	37.0	5.3	0.2126	ug/L	0.2126 ppb	13:41:44
3	Ni 231.604†	140.9	-7.2	-0.1159	ug/L	-0.1159 ppb	13:41:44
3	P 214.914†	339.1	2.5	0.8606	ug/L	0.8606 ppb	13:41:44
3	Pb 220.353†	-19.1	9.9	0.7469	ug/L	0.7469 ppb	13:41:44
3	S 181.975 Axial†	72.1	4.4	3.7018	ug/L	3.7018 ppb	13:41:44
3	Sb 206.836†	45.8	0.4	0.0909	ug/L	0.0909 ppb	13:41:44
3	Se 196.026†	-18.5	3.1	1.0727	ug/L	1.0727 ppb	13:41:44
3	Si 251.611†	817.6	258.4	5.3084	ug/L	5.3084 ppb	13:41:44
3	Sn 189.927†	11.2	5.7	0.5975	ug/L	0.5975 ppb	13:41:44
3	Ti 334.940†	-1138.5	-30.4	-0.0364	ug/L	-0.0364 ppb	13:41:24
3	Tl 190.801†	-59.9	1.4	0.2410	ug/L	0.2410 ppb	13:41:44
3	U 409.014†	-3866.5	-35.7	-0.8885	ug/L	-0.8885 ppb	13:41:19
3	V 292.402†	-1658.7	-7.6	-0.0432	ug/L	-0.0432 ppb	13:41:24
3	Zn 213.857†	1144.7	23.5	0.1274	ug/L	0.1274 ppb	13:41:44
3	SiO2†	856.3	254.8	11.208	ug/L	11.208 ppb	13:42:00

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054689.8	99.416	%	0.4521				0.45%
Sc Radial	5507.0	99.0	%	1.52				1.53%
Y 371.029	848775.4	99.480	%	0.4554				0.46%
Y RADIAL	4786.0	99.38	%	1.195				1.20%
Ag 328.068†	56.3	0.2244	ug/L	0.14858	0.2244	ppb	0.14858	66.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.3	18.502	ug/L	5.1080	18.502	ppb	5.1080	27.61%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-8.9	-2.0802	ug/L	0.57051	-2.0802	ppb	0.57051	27.43%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	504.1	7.8559	ug/L	0.95880	7.8559	ppb	0.95880	12.20%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.0	0.0249	ug/L	0.04766	0.0249	ppb	0.04766	191.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-177.8	-0.0554	ug/L	0.01705	-0.0554	ppb	0.01705	30.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	17.7	44.000	ug/L	5.1960	44.000	ppb	5.1960	11.81%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -8.0     -0.0605 ug/L       0.03078     -0.0605 ppb        0.03078  50.88%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -4.8     -0.0598 ug/L       0.13974     -0.0598 ppb        0.13974 233.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              14.0      0.1197 ug/L       0.02695      0.1197 ppb        0.02695  22.52%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              92.1      0.2277 ug/L       0.07381      0.2277 ppb        0.07381  32.42%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.2      7.5897 ug/L      28.92162      7.5897 ppb       28.92162 381.07%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        87.6      38.027 ug/L       36.2437      38.027 ppb        36.2437  95.31%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.3     -21.559 ug/L       89.3317     -21.559 ppb        89.3317 414.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              31.4      0.0262 ug/L       0.00940      0.0262 ppb        0.00940  35.89%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -1.7     -0.0681 ug/L       0.40727     -0.0681 ppb        0.40727 597.93%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -9.9     -26.834 ug/L        9.3203     -26.834 ppb         9.3203  34.73%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               6.5      0.1049 ug/L       0.20368      0.1049 ppb        0.20368 194.15%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               13.1      4.5970 ug/L       3.25230      4.5970 ppb        3.25230  70.75%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              13.5      1.0170 ug/L       0.33087      1.0170 ppb        0.33087  32.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          1.0      0.8462 ug/L       4.11469      0.8462 ppb        4.11469 486.24%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              -1.4     -0.2739 ug/L       0.66961     -0.2739 ppb        0.66961 244.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.5     -0.1256 ug/L       1.09782     -0.1256 ppb        1.09782 873.95%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             295.0      6.0753 ug/L       0.66436      6.0753 ppb        0.66436  10.94%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -1.4     -0.1403 ug/L       0.63995     -0.1403 ppb        0.63995 456.09%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              14.8      0.2269 ug/L       0.10024      0.2269 ppb        0.10024  44.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -46.3     -0.0574 ug/L       0.07484     -0.0574 ppb        0.07484 130.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -0.1     -0.0207 ug/L       0.40044     -0.0207 ppb        0.40044 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -29.2     -0.7254 ug/L       0.47631     -0.7254 ppb        0.47631  65.66%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -34.4     -0.1990 ug/L       0.19822     -0.1990 ppb        0.19822  99.63%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              21.3      0.1180 ug/L       0.01386      0.1180 ppb        0.01386  11.75%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   250.4      11.038 ug/L        0.4304      11.038 ppb         0.4304   3.90%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/8/2009 13:50:46 Plasma On Time: 00:00:00
Logged In Analyst: Optima3 Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070809A.sif
Batch ID:
Results Data Set: 070809A
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1 Autosampler Location: 7
Sample ID: CCV Date Collected: 7/8/2009 13:50:47
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5532.4	5532.4	99.4	%			13:52:39
1	Y RADIAL	4797.0	4797.0	99.61	%			13:52:39
1	Al 396.153Radial†	5229.0	5351.8	4849.9	ug/L	4849.9	ppb	13:52:39
1	Ca 317.933Radial†	1958.2	1952.7	4863.9	ug/L	4863.9	ppb	13:52:59
1	Fe 238.204 Radial†	138.6	139.1	4894.2	ug/L	4894.2	ppb	13:52:59
1	K 766.490 Radial†	13095.3	11698.9	5070.2	ug/L	5070.2	ppb	13:52:39
1	Mg 279.077 IEC†	62.6	62.8	4978.5	ug/L	4978.5	ppb	13:52:59
1	Na 589.592 Radial†	3365.0	3555.1	9612.7	ug/L	9612.7	ppb	13:52:39
1	Sr 421.552†	32629.9	32815.6	505.53	ug/L	505.53	ppb	13:52:39
1	Sc 361.383	1065706.7	1065706.7	100.45	%			13:53:58
1	Y 371.029	846819.9	846819.9	99.251	%			13:53:58
1	Ag 328.068†	126960.9	125747.6	500.80	ug/L	500.80	ppb	13:53:58
1	As 188.979†	2061.4	2089.0	493.53	ug/L	493.53	ppb	13:54:18
1	B 249.677†	31314.7	31554.4	489.90	ug/L	489.90	ppb	13:53:58
1	Ba 233.527†	98387.1	97917.5	496.83	ug/L	496.83	ppb	13:53:58
1	Be 313.107†	1590293.1	1590410.5	495.67	ug/L	495.67	ppb	13:53:58
1	Cd 226.502†	66680.2	66656.0	498.28	ug/L	498.28	ppb	13:53:58
1	Co 228.616†	38914.5	38828.7	483.86	ug/L	483.86	ppb	13:54:18
1	Cr 267.716†	58123.4	57888.9	493.74	ug/L	493.74	ppb	13:53:58
1	Cu 324.752†	211262.3	200114.7	494.02	ug/L	494.02	ppb	13:53:58
1	Mn 257.610†	631066.9	627383.2	496.35	ug/L	496.35	ppb	13:53:58
1	Mo 202.031†	12608.8	12520.0	501.47	ug/L	501.47	ppb	13:54:18
1	Ni 231.604†	30720.7	30433.4	487.47	ug/L	487.47	ppb	13:54:18
1	P 214.914†	7349.3	6979.1	2391.7	ug/L	2391.7	ppb	13:54:18
1	Pb 220.353†	6619.8	6619.0	497.53	ug/L	497.53	ppb	13:54:18
1	S 181.975 Axial†	1249.9	1176.4	994.81	ug/L	994.81	ppb	13:54:18
1	Sb 206.836†	2566.6	2509.6	499.57	ug/L	499.57	ppb	13:54:18
1	Se 196.026†	1498.0	1512.8	511.00	ug/L	511.00	ppb	13:54:18
1	Si 251.611†	122865.0	121748.7	2500.3	ug/L	2500.3	ppb	13:53:58
1	Sn 189.927†	4783.6	4756.4	495.16	ug/L	495.16	ppb	13:54:18
1	Ti 334.940†	381207.0	380590.6	498.15	ug/L	498.15	ppb	13:53:58
1	Tl 190.801†	2869.1	2917.5	494.08	ug/L	494.08	ppb	13:54:18
1	U 409.014†	15602.1	19366.2	478.96	ug/L	478.96	ppb	13:53:58
1	V 292.402†	85431.5	86697.6	497.70	ug/L	497.70	ppb	13:53:58
1	Zn 213.857†	90487.4	88955.4	492.21	ug/L	492.21	ppb	13:53:58
1	SiO2†	122908.9	121750.2	5353.7	ug/L	5353.7	ppb	13:55:18
2	Sc Radial	5478.6	5478.6	98.5	%			13:53:04
2	Y RADIAL	4737.8	4737.8	98.38	%			13:53:04
2	Al 396.153Radial†	5218.1	5392.4	4886.9	ug/L	4886.9	ppb	13:53:04
2	Ca 317.933Radial†	1985.5	1999.9	4981.3	ug/L	4981.3	ppb	13:53:24
2	Fe 238.204 Radial†	138.0	139.8	4919.3	ug/L	4919.3	ppb	13:53:24
2	K 766.490 Radial†	13047.9	11780.2	5105.5	ug/L	5105.5	ppb	13:53:04
2	Mg 279.077 IEC†	63.8	64.6	5122.0	ug/L	5122.0	ppb	13:53:24
2	Na 589.592 Radial†	3309.4	3531.9	9549.8	ug/L	9549.8	ppb	13:53:04
2	Sr 421.552†	32384.5	32888.7	506.66	ug/L	506.66	ppb	13:53:04
2	Sc 361.383	1063461.6	1063461.6	100.24	%			13:54:25
2	Y 371.029	846126.2	846126.2	99.169	%			13:54:25

2	Ag 328.068†	126811.5	125865.3	501.27 ug/L	501.27 ppb	13:54:25
2	As 188.979†	2058.4	2090.4	493.85 ug/L	493.85 ppb	13:54:45
2	B 249.677†	31323.3	31628.9	491.05 ug/L	491.05 ppb	13:54:25
2	Ba 233.527†	98085.9	97823.8	496.36 ug/L	496.36 ppb	13:54:25
2	Be 313.107†	1587952.8	1591418.1	495.99 ug/L	495.99 ppb	13:54:25
2	Cd 226.502†	66376.1	66492.8	497.06 ug/L	497.06 ppb	13:54:25
2	Co 228.616†	38816.9	38813.2	483.67 ug/L	483.67 ppb	13:54:45
2	Cr 267.716†	58135.0	58022.7	494.88 ug/L	494.88 ppb	13:54:25
2	Cu 324.752†	210177.7	199476.8	492.45 ug/L	492.45 ppb	13:54:25
2	Mn 257.610†	628370.5	626019.6	495.27 ug/L	495.27 ppb	13:54:25
2	Mo 202.031†	12579.9	12517.6	501.38 ug/L	501.38 ppb	13:54:45
2	Ni 231.604†	30677.7	30455.1	487.82 ug/L	487.82 ppb	13:54:45
2	P 214.914†	7338.8	6984.1	2393.7 ug/L	2393.7 ppb	13:54:45
2	Pb 220.353†	6619.2	6632.2	498.52 ug/L	498.52 ppb	13:54:45
2	S 181.975 Axial†	1248.9	1178.1	996.23 ug/L	996.23 ppb	13:54:45
2	Sb 206.836†	2544.9	2493.3	496.34 ug/L	496.34 ppb	13:54:45
2	Se 196.026†	1498.5	1516.5	512.27 ug/L	512.27 ppb	13:54:45
2	Si 251.611†	122326.0	121469.2	2494.5 ug/L	2494.5 ppb	13:54:25
2	Sn 189.927†	4769.0	4752.0	494.70 ug/L	494.70 ppb	13:54:45
2	Ti 334.940†	380132.8	380320.2	497.81 ug/L	497.81 ppb	13:54:25
2	Tl 190.801†	2870.3	2924.7	495.28 ug/L	495.28 ppb	13:54:45
2	U 409.014†	15658.2	19455.0	481.15 ug/L	481.15 ppb	13:54:25
2	V 292.402†	85307.7	86753.6	498.02 ug/L	498.02 ppb	13:54:25
2	Zn 213.857†	90245.0	88903.8	491.92 ug/L	491.92 ppb	13:54:25
2	SiO2†	123285.6	122384.3	5381.7 ug/L	5381.7 ppb	13:55:23
3	Sc Radial	5573.7	5573.7	100 %		13:53:29
3	Y RADIAL	4812.9	4812.9	99.94 %		13:53:29
3	Al 396.153Radial†	5255.8	5339.6	4838.8 ug/L	4838.8 ppb	13:53:29
3	Ca 317.933Radial†	1973.1	1953.0	4864.6 ug/L	4864.6 ppb	13:53:49
3	Fe 238.204 Radial†	139.2	138.6	4878.6 ug/L	4878.6 ppb	13:53:49
3	K 766.490 Radial†	13120.0	11626.0	5038.5 ug/L	5038.5 ppb	13:53:29
3	Mg 279.077 IEC†	64.1	63.8	5056.8 ug/L	5056.8 ppb	13:53:49
3	Na 589.592 Radial†	3353.7	3518.8	9514.4 ug/L	9514.4 ppb	13:53:29
3	Sr 421.552†	32719.5	32661.7	503.16 ug/L	503.16 ppb	13:53:29
3	Sc 361.383	1058179.3	1058179.3	99.745 %		13:54:53
3	Y 371.029	842497.6	842497.6	98.744 %		13:54:53
3	Ag 328.068†	126330.4	126014.5	501.86 ug/L	501.86 ppb	13:54:53
3	As 188.979†	2057.5	2099.7	496.03 ug/L	496.03 ppb	13:55:13
3	B 249.677†	31210.0	31671.2	491.71 ug/L	491.71 ppb	13:54:53
3	Ba 233.527†	97758.5	97984.0	497.17 ug/L	497.17 ppb	13:54:53
3	Be 313.107†	1583127.1	1594487.7	496.94 ug/L	496.94 ppb	13:54:53
3	Cd 226.502†	66127.5	66574.1	497.67 ug/L	497.67 ppb	13:54:53
3	Co 228.616†	38831.5	39021.1	486.27 ug/L	486.27 ppb	13:55:13
3	Cr 267.716†	57986.8	58163.5	496.08 ug/L	496.08 ppb	13:54:53
3	Cu 324.752†	209484.3	199828.2	493.31 ug/L	493.31 ppb	13:54:53
3	Mn 257.610†	626333.1	627106.1	496.12 ug/L	496.12 ppb	13:54:53
3	Mo 202.031†	12578.2	12578.6	503.82 ug/L	503.82 ppb	13:55:13
3	Ni 231.604†	30631.5	30561.5	489.52 ug/L	489.52 ppb	13:55:13
3	P 214.914†	7330.3	7012.1	2403.5 ug/L	2403.5 ppb	13:55:13
3	Pb 220.353†	6608.7	6654.6	500.21 ug/L	500.21 ppb	13:55:13
3	S 181.975 Axial†	1242.9	1178.2	996.34 ug/L	996.34 ppb	13:55:13
3	Sb 206.836†	2548.0	2509.1	499.55 ug/L	499.55 ppb	13:55:13
3	Se 196.026†	1496.7	1522.2	513.99 ug/L	513.99 ppb	13:55:13
3	Si 251.611†	122075.1	121826.8	2501.8 ug/L	2501.8 ppb	13:54:53
3	Sn 189.927†	4792.6	4799.3	499.62 ug/L	499.62 ppb	13:55:13
3	Ti 334.940†	378543.4	380619.7	498.19 ug/L	498.19 ppb	13:54:53
3	Tl 190.801†	2875.5	2944.2	498.57 ug/L	498.57 ppb	13:55:13
3	U 409.014†	15463.5	19337.7	478.25 ug/L	478.25 ppb	13:54:53
3	V 292.402†	84999.2	86869.1	498.70 ug/L	498.70 ppb	13:54:53
3	Zn 213.857†	89816.3	88923.4	492.02 ug/L	492.02 ppb	13:54:53
3	SiO2†	121842.0	121550.9	5344.7 ug/L	5344.7 ppb	13:55:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1062449.2	100.15	%	0.364				0.36%
Sc Radial	5528.3	99.3	%	0.86				0.86%
Y 371.029	845147.9	99.055	%	0.2721				0.27%
Y RADIAL	4782.6	99.31	%	0.822				0.83%
Ag 328.068†	125875.8	501.31	ug/L	0.529	501.31	ppb	0.529	0.11%

```
   QC value within limits for Ag 328.068  Recovery = 100.26%
Al 396.153Radial†        5361.3      4858.5 ug/L        25.19      4858.5 ppb        25.19   0.52%
   QC value within limits for Al 396.153Radial  Recovery = 97.17%
As 188.979†              2093.0      494.47 ug/L        1.360      494.47 ppb        1.360   0.27%
   QC value within limits for As 188.979  Recovery = 98.89%
B 249.677†              31618.2      490.89 ug/L        0.920      490.89 ppb        0.920   0.19%
   QC value within limits for B 249.677  Recovery = 98.18%
Ba 233.527†             97908.4      496.78 ug/L        0.408      496.78 ppb        0.408   0.08%
   QC value within limits for Ba 233.527  Recovery = 99.36%
Be 313.107†           1592105.4      496.20 ug/L        0.661      496.20 ppb        0.661   0.13%
   QC value within limits for Be 313.107  Recovery = 99.24%
Ca 317.933Radial†        1968.5      4903.3 ug/L        67.61      4903.3 ppb        67.61   1.38%
   QC value within limits for Ca 317.933Radial  Recovery = 98.07%
Cd 226.502†             66574.3      497.67 ug/L        0.612      497.67 ppb        0.612   0.12%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†             38887.7      484.60 ug/L        1.446      484.60 ppb        1.446   0.30%
   QC value within limits for Co 228.616  Recovery = 96.92%
Cr 267.716†             58025.0      494.90 ug/L        1.170      494.90 ppb        1.170   0.24%
   QC value within limits for Cr 267.716  Recovery = 98.98%
Cu 324.752†            199806.6      493.26 ug/L        0.788      493.26 ppb        0.788   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.65%
Fe 238.204 Radial†       139.2      4897.4 ug/L        20.54      4897.4 ppb        20.54   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.95%
K 766.490 Radial†       11701.7      5071.4 ug/L        33.47      5071.4 ppb        33.47   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 101.43%
Mg 279.077 IEC†            63.7      5052.4 ug/L        71.88      5052.4 ppb        71.88   1.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.05%
Mn 257.610†            626836.3      495.91 ug/L        0.569      495.91 ppb        0.569   0.11%
   QC value within limits for Mn 257.610  Recovery = 99.18%
Mo 202.031†             12538.7      502.23 ug/L        1.381      502.23 ppb        1.381   0.27%
   QC value within limits for Mo 202.031  Recovery = 100.45%
Na 589.592 Radial†       3535.3      9559.0 ug/L        49.77      9559.0 ppb        49.77   0.52%
   QC value within limits for Na 589.592 Radial  Recovery = 95.59%
Ni 231.604†             30483.3      488.27 ug/L        1.098      488.27 ppb        1.098   0.22%
   QC value within limits for Ni 231.604  Recovery = 97.65%
P 214.914†               6991.7      2396.3 ug/L         6.34      2396.3 ppb         6.34   0.26%
   QC value within limits for P 214.914  Recovery = 95.85%
Pb 220.353†              6635.3      498.75 ug/L        1.354      498.75 ppb        1.354   0.27%
   QC value within limits for Pb 220.353  Recovery = 99.75%
S 181.975 Axial†         1177.6      995.80 ug/L        0.853      995.80 ppb        0.853   0.09%
   QC value within limits for S 181.975 Axial  Recovery = 99.58%
Sb 206.836†              2504.0      498.48 ug/L        1.857      498.48 ppb        1.857   0.37%
   QC value within limits for Sb 206.836  Recovery = 99.70%
Se 196.026†              1517.2      512.42 ug/L        1.501      512.42 ppb        1.501   0.29%
   QC value within limits for Se 196.026  Recovery = 102.48%
Si 251.611†            121681.6      2498.9 ug/L         3.87      2498.9 ppb         3.87   0.15%
   QC value within limits for Si 251.611  Recovery = 99.96%
Sn 189.927†              4769.3      496.49 ug/L        2.717      496.49 ppb        2.717   0.55%
   QC value within limits for Sn 189.927  Recovery = 99.30%
Sr 421.552†             32788.7      505.12 ug/L        1.785      505.12 ppb        1.785   0.35%
   QC value within limits for Sr 421.552  Recovery = 101.02%
Ti 334.940†            380510.2      498.05 ug/L        0.212      498.05 ppb        0.212   0.04%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†              2928.8      495.98 ug/L        2.322      495.98 ppb        2.322   0.47%
   QC value within limits for Tl 190.801  Recovery = 99.20%
U 409.014†              19386.3      479.45 ug/L        1.515      479.45 ppb        1.515   0.32%
   QC value within limits for U 409.014  Recovery = 95.89%
V 292.402†              86773.4      498.14 ug/L        0.513      498.14 ppb        0.513   0.10%
   QC value within limits for V 292.402  Recovery = 99.63%
Zn 213.857†             88927.5      492.05 ug/L        0.150      492.05 ppb        0.150   0.03%
   QC value within limits for Zn 213.857  Recovery = 98.41%
SiO2†                  121895.1      5360.0 ug/L        19.26      5360.0 ppb        19.26   0.36%
   QC value within limits for SiO2  Recovery = 100.23%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:57:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5512.4	5512.4	99.1	%			13:59:32
1	Y RADIAL	4836.2	4836.2	100.4	%			13:59:32
1	Al 396.153Radial†	-55.4	36.2	32.965	ug/L	32.965	ppb	13:59:32
1	Ca 317.933Radial†	28.9	12.2	30.392	ug/L	30.392	ppb	13:59:52
1	Fe 238.204 Radial†	1.4	1.1	39.203	ug/L	39.203	ppb	13:59:52
1	K 766.490 Radial†	1556.0	97.7	42.443	ug/L	42.443	ppb	13:59:32
1	Mg 279.077 IEC†	-0.5	-0.7	-54.448	ug/L	-54.448	ppb	13:59:52
1	Na 589.592 Radial†	-170.4	-1.6	-4.3331	ug/L	-4.3331	ppb	13:59:52
1	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431	ppb	13:59:52
1	Sc 361.383	1045095.6	1045095.6	98.512	%			14:00:48
1	Y 371.029	840297.9	840297.9	98.486	%			14:00:48
1	Ag 328.068†	669.1	40.6	0.1714	ug/L	0.1714	ppb	14:00:53
1	As 188.979†	-47.0	-10.8	-2.5308	ug/L	-2.5308	ppb	14:01:14
1	B 249.677†	41.0	423.1	6.5884	ug/L	6.5884	ppb	14:00:53
1	Ba 233.527†	26.8	2.9	0.0152	ug/L	0.0152	ppb	14:01:14
1	Be 313.107†	-7456.8	-253.3	-0.0788	ug/L	-0.0788	ppb	14:00:53
1	Cd 226.502†	-287.1	-13.8	-0.1077	ug/L	-0.1077	ppb	14:01:14
1	Co 228.616†	-82.7	6.5	0.0810	ug/L	0.0810	ppb	14:01:14
1	Cr 267.716†	-22.8	5.4	0.0463	ug/L	0.0463	ppb	14:01:14
1	Cu 324.752†	10117.6	79.2	0.1976	ug/L	0.1976	ppb	14:00:53
1	Mn 257.610†	832.3	17.8	0.0203	ug/L	0.0203	ppb	14:01:14
1	Mo 202.031†	36.8	5.6	0.2251	ug/L	0.2251	ppb	14:01:14
1	Ni 231.604†	175.4	29.8	0.4780	ug/L	0.4780	ppb	14:01:14
1	P 214.914†	347.7	16.0	5.6120	ug/L	5.6120	ppb	14:01:14
1	Pb 220.353†	-10.0	18.9	1.4202	ug/L	1.4202	ppb	14:01:14
1	S 181.975 Axial†	68.0	1.2	0.9994	ug/L	0.9994	ppb	14:01:14
1	Sb 206.836†	66.3	21.9	4.3017	ug/L	4.3017	ppb	14:01:14
1	Se 196.026†	-16.7	4.6	1.6497	ug/L	1.6497	ppb	14:01:14
1	Si 251.611†	727.7	178.6	3.6667	ug/L	3.6667	ppb	14:01:14
1	Sn 189.927†	7.0	1.6	0.1723	ug/L	0.1723	ppb	14:01:14
1	Ti 334.940†	-1108.8	-16.3	-0.0199	ug/L	-0.0199	ppb	14:00:53
1	Tl 190.801†	-63.4	-2.9	-0.4929	ug/L	-0.4929	ppb	14:01:14
1	U 409.014†	-3726.3	52.2	1.2899	ug/L	1.2899	ppb	14:00:48
1	V 292.402†	-1652.5	-24.6	-0.1406	ug/L	-0.1406	ppb	14:00:53
1	Zn 213.857†	1130.3	25.0	0.1340	ug/L	0.1340	ppb	14:01:14
1	SiO2†	726.7	135.3	5.9362	ug/L	5.9362	ppb	14:02:19
2	Sc Radial	5511.5	5511.5	99.0	%			13:59:57
2	Y RADIAL	4786.2	4786.2	99.39	%			13:59:57
2	Al 396.153Radial†	-72.0	19.5	17.796	ug/L	17.796	ppb	13:59:57
2	Ca 317.933Radial†	29.7	13.1	32.554	ug/L	32.554	ppb	14:00:17
2	Fe 238.204 Radial†	-0.3	-0.7	-23.581	ug/L	-23.581	ppb	14:00:17
2	K 766.490 Radial†	1595.9	138.3	59.989	ug/L	59.989	ppb	13:59:57
2	Mg 279.077 IEC†	-0.0	-0.2	-16.582	ug/L	-16.582	ppb	14:00:17
2	Na 589.592 Radial†	-181.5	-12.8	-34.604	ug/L	-34.604	ppb	14:00:17
2	Sr 421.552†	12.3	7.0	0.1070	ug/L	0.1070	ppb	14:00:17
2	Sc 361.383	1050518.5	1050518.5	99.023	%			14:01:19
2	Y 371.029	845673.2	845673.2	99.116	%			14:01:19
2	Ag 328.068†	645.1	12.9	0.0438	ug/L	0.0438	ppb	14:01:24
2	As 188.979†	-49.5	-13.1	-3.0770	ug/L	-3.0770	ppb	14:01:44
2	B 249.677†	118.8	501.5	7.8188	ug/L	7.8188	ppb	14:01:24
2	Ba 233.527†	40.4	16.5	0.0832	ug/L	0.0832	ppb	14:01:44
2	Be 313.107†	-7364.0	-120.4	-0.0373	ug/L	-0.0373	ppb	14:01:24
2	Cd 226.502†	-300.7	-26.0	-0.1917	ug/L	-0.1917	ppb	14:01:44
2	Co 228.616†	-75.1	14.6	0.1807	ug/L	0.1807	ppb	14:01:44
2	Cr 267.716†	-8.5	20.0	0.1703	ug/L	0.1703	ppb	14:01:44
2	Cu 324.752†	10243.6	153.4	0.3772	ug/L	0.3772	ppb	14:01:24
2	Mn 257.610†	843.7	25.0	0.0170	ug/L	0.0170	ppb	14:01:44
2	Mo 202.031†	21.8	-9.8	-0.3926	ug/L	-0.3926	ppb	14:01:44
2	Ni 231.604†	171.6	25.1	0.4014	ug/L	0.4014	ppb	14:01:44

2	P 214.914†	348.3	14.8	5.2050 ug/L	5.2050 ppb	14:01:44
2	Pb 220.353†	-12.7	16.3	1.2244 ug/L	1.2244 ppb	14:01:44
2	S 181.975 Axial†	60.3	-6.9	-5.8538 ug/L	-5.8538 ppb	14:01:44
2	Sb 206.836†	37.3	-7.8	-1.5329 ug/L	-1.5329 ppb	14:01:44
2	Se 196.026†	-18.7	2.7	0.8056 ug/L	0.8056 ppb	14:01:44
2	Si 251.611†	723.3	170.4	3.5003 ug/L	3.5003 ppb	14:01:44
2	Sn 189.927†	11.3	6.0	0.6230 ug/L	0.6230 ppb	14:01:44
2	Ti 334.940†	-1056.9	41.9	0.0571 ug/L	0.0571 ppb	14:01:24
2	Tl 190.801†	-56.2	4.7	0.7874 ug/L	0.7874 ppb	14:01:44
2	U 409.014†	-3810.6	-13.5	-0.3320 ug/L	-0.3320 ppb	14:01:19
2	V 292.402†	-1611.2	25.7	0.1429 ug/L	0.1429 ppb	14:01:24
2	Zn 213.857†	1136.7	25.5	0.1424 ug/L	0.1424 ppb	14:01:44
2	SiO2†	739.3	144.2	6.3394 ug/L	6.3394 ppb	14:02:24
3	Sc Radial	5518.7	5518.7	99.2 %		14:00:22
3	Y RADIAL	4792.7	4792.7	99.52 %		14:00:22
3	Al 396.153Radial†	-86.9	4.6	4.1447 ug/L	4.1447 ppb	14:00:22
3	Ca 317.933Radial†	25.9	9.2	22.974 ug/L	22.974 ppb	14:00:42
3	Fe 238.204 Radial†	-0.1	-0.4	-15.497 ug/L	-15.497 ppb	14:00:42
3	K 766.490 Radial†	1555.4	95.3	41.343 ug/L	41.343 ppb	14:00:22
3	Mg 279.077 IEC†	-0.0	-0.2	-17.227 ug/L	-17.227 ppb	14:00:42
3	Na 589.592 Radial†	-174.6	-5.6	-15.194 ug/L	-15.194 ppb	14:00:42
3	Sr 421.552†	23.6	18.4	0.2827 ug/L	0.2827 ppb	14:00:42
3	Sc 361.383	1057245.8	1057245.8	99.657 %		14:01:49
3	Y 371.029	850037.2	850037.2	99.628 %		14:01:49
3	Ag 328.068†	694.9	58.7	0.2256 ug/L	0.2256 ppb	14:01:54
3	As 188.979†	-47.5	-10.8	-2.5338 ug/L	-2.5338 ppb	14:02:14
3	B 249.677†	68.0	449.8	7.0124 ug/L	7.0124 ppb	14:01:54
3	Ba 233.527†	35.7	11.5	0.0574 ug/L	0.0574 ppb	14:02:14
3	Be 313.107†	-7483.5	-193.0	-0.0600 ug/L	-0.0600 ppb	14:01:54
3	Cd 226.502†	-289.4	-12.7	-0.0931 ug/L	-0.0931 ppb	14:02:14
3	Co 228.616†	-98.9	-8.8	-0.1094 ug/L	-0.1094 ppb	14:02:14
3	Cr 267.716†	5.9	34.5	0.2927 ug/L	0.2927 ppb	14:02:14
3	Cu 324.752†	10251.7	95.7	0.2352 ug/L	0.2352 ppb	14:01:54
3	Mn 257.610†	869.3	45.2	0.0341 ug/L	0.0341 ppb	14:02:14
3	Mo 202.031†	34.7	3.0	0.1197 ug/L	0.1197 ppb	14:02:14
3	Ni 231.604†	157.2	9.4	0.1515 ug/L	0.1515 ppb	14:02:14
3	P 214.914†	335.6	-0.2	-0.0906 ug/L	-0.0906 ppb	14:02:14
3	Pb 220.353†	2.8	31.9	2.3909 ug/L	2.3909 ppb	14:02:14
3	S 181.975 Axial†	65.8	-1.8	-1.5179 ug/L	-1.5179 ppb	14:02:14
3	Sb 206.836†	43.4	-1.9	-0.3829 ug/L	-0.3829 ppb	14:02:14
3	Se 196.026†	-16.8	4.8	1.5002 ug/L	1.5002 ppb	14:02:14
3	Si 251.611†	726.0	168.4	3.4599 ug/L	3.4599 ppb	14:02:14
3	Sn 189.927†	2.6	-2.9	-0.3010 ug/L	-0.3010 ppb	14:02:14
3	Ti 334.940†	-1099.9	5.6	0.0087 ug/L	0.0087 ppb	14:01:54
3	Tl 190.801†	-56.6	4.6	0.7834 ug/L	0.7834 ppb	14:02:14
3	U 409.014†	-3812.4	9.3	0.2316 ug/L	0.2316 ppb	14:01:49
3	V 292.402†	-1702.0	-55.1	-0.3086 ug/L	-0.3086 ppb	14:01:54
3	Zn 213.857†	1134.7	16.2	0.0914 ug/L	0.0914 ppb	14:02:14
3	SiO2†	754.5	154.7	6.8042 ug/L	6.8042 ppb	14:02:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1050953.3	99.064	%	0.5737				0.58%
Sc Radial	5514.2	99.1	%	0.07				0.07%
Y 371.029	845336.1	99.077	%	0.5718				0.58%
Y RADIAL	4805.0	99.78	%	0.565				0.57%
Ag 328.068†	37.4	0.1469	ug/L	0.09332	0.1469	ppb	0.09332	63.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.1	18.302	ug/L	14.4166	18.302	ppb	14.4166	78.77%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.5	-2.7138	ug/L	0.31447	-2.7138	ppb	0.31447	11.59%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	458.1	7.1399	ug/L	0.62502	7.1399	ppb	0.62502	8.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.3	0.0519	ug/L	0.03434	0.0519	ppb	0.03434	66.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-188.9	-0.0587	ug/L	0.02078	-0.0587	ppb	0.02078	35.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.5	28.640	ug/L	5.0242	28.640	ppb	5.0242	17.54%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -17.5     -0.1308 ug/L       0.05322     -0.1308 ppb        0.05322  40.67%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.1      0.0508 ug/L       0.14740      0.0508 ppb        0.14740 290.21%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               20.0      0.1698 ug/L       0.12323      0.1698 ppb        0.12323  72.58%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              109.4      0.2700 ug/L       0.09473      0.2700 ppb        0.09473  35.09%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.0      0.0417 ug/L      34.15450      0.0417 ppb       34.15450 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.4      47.925 ug/L       10.4622      47.925 ppb        10.4622  21.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4     -29.419 ug/L       21.6782     -29.419 ppb        21.6782  73.69%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               29.4      0.0238 ug/L       0.00904      0.0238 ppb        0.00904  38.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.4     -0.0160 ug/L       0.33043     -0.0160 ppb        0.33043 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -6.7     -18.043 ug/L       15.3353     -18.043 ppb        15.3353  84.99%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.4      0.3436 ug/L       0.17075      0.3436 ppb        0.17075  49.69%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                10.2      3.5755 ug/L       3.18145      3.5755 ppb        3.18145  88.98%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               22.3      1.6785 ug/L       0.62466      1.6785 ppb        0.62466  37.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -2.5     -2.1241 ug/L       3.46659     -2.1241 ppb        3.46659 163.20%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.1      0.7953 ug/L       3.09058      0.7953 ppb        3.09058 388.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.1      1.3185 ug/L       0.45042      1.3185 ppb        0.45042  34.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              172.4      3.5423 ug/L       0.10965      3.5423 ppb        0.10965   3.10%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.6      0.1647 ug/L       0.46206      0.1647 ppb        0.46206 280.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               15.9      0.2443 ug/L       0.12268      0.2443 ppb        0.12268  50.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               10.4      0.0153 ug/L       0.03894      0.0153 ppb        0.03894 254.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                2.1      0.3593 ug/L       0.73803      0.3593 ppb        0.73803 205.41%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                16.0      0.3965 ug/L       0.82342      0.3965 ppb        0.82342 207.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -18.0     -0.1021 ug/L       0.22820     -0.1021 ppb        0.22820 223.47%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               22.2      0.1226 ug/L       0.02735      0.1226 ppb        0.02735  22.32%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    144.8      6.3599 ug/L       0.43437      6.3599 ppb        0.43437   6.83%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 14:46:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5663.2	5663.2	102	%			14:48:38
1	Y RADIAL	4921.9	4921.9	102.2	%			14:48:38
1	Al 396.153Radial†	5410.9	5409.1	4902.2	ug/L	4902.2	ppb	14:48:38
1	Ca 317.933Radial†	1995.4	1943.8	4841.7	ug/L	4841.7	ppb	14:48:58
1	Fe 238.204 Radial†	141.6	138.8	4883.9	ug/L	4883.9	ppb	14:48:58
1	K 766.490 Radial†	13474.7	11767.5	5099.6	ug/L	5099.6	ppb	14:48:38
1	Mg 279.077 IEC†	63.7	62.4	4947.6	ug/L	4947.6	ppb	14:48:58
1	Na 589.592 Radial†	3686.9	3793.3	10257	ug/L	10257	ppb	14:48:38
1	Sr 421.552†	35305.4	34686.6	534.36	ug/L	534.36	ppb	14:48:38
1	Sc 361.383	1067499.7	1067499.7	100.62	%			14:49:57
1	Y 371.029	849118.5	849118.5	99.520	%			14:49:57
1	Ag 328.068†	127285.3	125857.7	501.23	ug/L	501.23	ppb	14:49:57
1	As 188.979†	2071.6	2095.7	495.11	ug/L	495.11	ppb	14:50:17
1	B 249.677†	31156.7	31345.1	486.64	ug/L	486.64	ppb	14:49:57
1	Ba 233.527†	98393.7	97759.6	496.03	ug/L	496.03	ppb	14:49:57
1	Be 313.107†	1596893.7	1594311.3	496.89	ug/L	496.89	ppb	14:49:57
1	Cd 226.502†	66558.7	66423.8	496.55	ug/L	496.55	ppb	14:49:57
1	Co 228.616†	38907.9	38757.1	482.97	ug/L	482.97	ppb	14:50:17
1	Cr 267.716†	58242.4	57910.0	493.92	ug/L	493.92	ppb	14:49:57
1	Cu 324.752†	211606.8	200103.9	493.99	ug/L	493.99	ppb	14:49:57
1	Mn 257.610†	631676.1	626933.6	495.99	ug/L	495.99	ppb	14:49:57
1	Mo 202.031†	12587.0	12477.2	499.76	ug/L	499.76	ppb	14:50:17
1	Ni 231.604†	30647.6	30309.4	485.48	ug/L	485.48	ppb	14:50:17
1	P 214.914†	7375.2	6992.6	2396.5	ug/L	2396.5	ppb	14:50:17
1	Pb 220.353†	6646.8	6634.7	498.71	ug/L	498.71	ppb	14:50:17
1	S 181.975 Axial†	1245.2	1169.7	989.10	ug/L	989.10	ppb	14:50:17
1	Sb 206.836†	2573.9	2512.6	500.11	ug/L	500.11	ppb	14:50:17
1	Se 196.026†	1503.7	1516.0	511.99	ug/L	511.99	ppb	14:50:17
1	Si 251.611†	123652.9	122326.3	2512.2	ug/L	2512.2	ppb	14:49:57
1	Sn 189.927†	4790.4	4755.2	495.03	ug/L	495.03	ppb	14:50:17
1	Ti 334.940†	382199.7	380939.8	498.61	ug/L	498.61	ppb	14:49:57
1	Tl 190.801†	2862.4	2906.0	492.14	ug/L	492.14	ppb	14:50:17
1	U 409.014†	15590.1	19328.2	478.01	ug/L	478.01	ppb	14:49:57
1	V 292.402†	85513.5	86636.2	497.33	ug/L	497.33	ppb	14:49:57
1	Zn 213.857†	90612.3	88928.3	492.08	ug/L	492.08	ppb	14:49:57
1	SiO2†	124200.5	122828.2	5401.3	ug/L	5401.3	ppb	14:51:17
2	Sc Radial	5446.9	5446.9	97.9	%			14:49:03
2	Y RADIAL	4712.8	4712.8	97.86	%			14:49:03
2	Al 396.153Radial†	5213.9	5419.0	4910.9	ug/L	4910.9	ppb	14:49:03
2	Ca 317.933Radial†	1989.6	2015.7	5020.8	ug/L	5020.8	ppb	14:49:23
2	Fe 238.204 Radial†	140.2	142.9	5030.3	ug/L	5030.3	ppb	14:49:23
2	K 766.490 Radial†	13037.0	11846.3	5133.9	ug/L	5133.9	ppb	14:49:03
2	Mg 279.077 IEC†	62.1	63.2	5014.8	ug/L	5014.8	ppb	14:49:23
2	Na 589.592 Radial†	3542.3	3789.5	10246	ug/L	10246	ppb	14:49:03
2	Sr 421.552†	33787.9	34514.2	531.70	ug/L	531.70	ppb	14:49:03
2	Sc 361.383	1055183.8	1055183.8	99.463	%			14:50:24
2	Y 371.029	838651.5	838651.5	98.293	%			14:50:24
2	Ag 328.068†	126214.7	126257.7	502.87	ug/L	502.87	ppb	14:50:24
2	As 188.979†	2075.2	2123.3	501.61	ug/L	501.61	ppb	14:50:44
2	B 249.677†	30917.9	31466.4	488.49	ug/L	488.49	ppb	14:50:24
2	Ba 233.527†	97565.5	98068.1	497.60	ug/L	497.60	ppb	14:50:24
2	Be 313.107†	1577953.1	1593791.5	496.73	ug/L	496.73	ppb	14:50:24
2	Cd 226.502†	66051.4	66685.8	498.49	ug/L	498.49	ppb	14:50:24
2	Co 228.616†	39043.3	39344.5	490.30	ug/L	490.30	ppb	14:50:44
2	Cr 267.716†	57589.2	57928.8	494.08	ug/L	494.08	ppb	14:50:24
2	Cu 324.752†	209513.9	200454.2	494.86	ug/L	494.86	ppb	14:50:24
2	Mn 257.610†	625453.1	628004.0	496.86	ug/L	496.86	ppb	14:50:24
2	Mo 202.031†	12625.4	12661.8	507.16	ug/L	507.16	ppb	14:50:44
2	Ni 231.604†	30744.2	30762.0	492.73	ug/L	492.73	ppb	14:50:44

2	P 214.914†	7400.3	7103.3	2435.4 ug/L	2435.4 ppb	14:50:44
2	Pb 220.353†	6622.3	6687.2	502.65 ug/L	502.65 ppb	14:50:44
2	S 181.975 Axial†	1258.3	1197.3	1012.5 ug/L	1012.5 ppb	14:50:44
2	Sb 206.836†	2580.0	2548.5	507.42 ug/L	507.42 ppb	14:50:44
2	Se 196.026†	1502.6	1532.3	517.83 ug/L	517.83 ppb	14:50:44
2	Si 251.611†	122528.7	122630.3	2518.3 ug/L	2518.3 ppb	14:50:24
2	Sn 189.927†	4790.5	4810.9	500.83 ug/L	500.83 ppb	14:50:44
2	Ti 334.940†	378341.9	381494.5	499.35 ug/L	499.35 ppb	14:50:24
2	Tl 190.801†	2870.9	2947.8	499.17 ug/L	499.17 ppb	14:50:44
2	U 409.014†	15257.4	19174.6	474.18 ug/L	474.18 ppb	14:50:24
2	V 292.402†	84668.4	86778.5	498.20 ug/L	498.20 ppb	14:50:24
2	Zn 213.857†	89929.9	89293.2	494.05 ug/L	494.05 ppb	14:50:24
2	SiO2†	124500.2	124570.2	5478.0 ug/L	5478.0 ppb	14:51:22
3	Sc Radial	5449.0	5449.0	97.9 %		14:49:28
3	Y RADIAL	4751.1	4751.1	98.66 %		14:49:28
3	Al 396.153Radial†	5174.8	5377.0	4872.7 ug/L	4872.7 ppb	14:49:28
3	Ca 317.933Radial†	2014.0	2039.9	5081.0 ug/L	5081.0 ppb	14:49:48
3	Fe 238.204 Radial†	143.3	146.0	5137.0 ug/L	5137.0 ppb	14:49:48
3	K 766.490 Radial†	13008.8	11812.4	5119.3 ug/L	5119.3 ppb	14:49:28
3	Mg 279.077 IEC†	65.2	66.4	5266.1 ug/L	5266.1 ppb	14:49:48
3	Na 589.592 Radial†	3500.5	3745.4	10127 ug/L	10127 ppb	14:49:28
3	Sr 421.552†	33740.1	34452.0	530.74 ug/L	530.74 ppb	14:49:28
3	Sc 361.383	1058649.0	1058649.0	99.789 %		14:50:52
3	Y 371.029	841526.8	841526.8	98.630 %		14:50:52
3	Ag 328.068†	126556.5	126184.9	502.61 ug/L	502.61 ppb	14:50:52
3	As 188.979†	2067.1	2108.3	498.11 ug/L	498.11 ppb	14:51:12
3	B 249.677†	31071.1	31518.1	489.29 ug/L	489.29 ppb	14:50:52
3	Ba 233.527†	97563.9	97745.5	495.96 ug/L	495.96 ppb	14:50:52
3	Be 313.107†	1581052.4	1591704.4	496.08 ug/L	496.08 ppb	14:50:52
3	Cd 226.502†	66155.8	66573.0	497.64 ug/L	497.64 ppb	14:50:52
3	Co 228.616†	38962.9	39135.5	487.69 ug/L	487.69 ppb	14:51:12
3	Cr 267.716†	57794.8	57945.3	494.22 ug/L	494.22 ppb	14:50:52
3	Cu 324.752†	210072.8	200324.8	494.55 ug/L	494.55 ppb	14:50:52
3	Mn 257.610†	626128.3	626622.3	495.77 ug/L	495.77 ppb	14:50:52
3	Mo 202.031†	12621.3	12616.2	505.34 ug/L	505.34 ppb	14:51:12
3	Ni 231.604†	30683.7	30600.2	490.14 ug/L	490.14 ppb	14:51:12
3	P 214.914†	7387.7	7066.4	2422.3 ug/L	2422.3 ppb	14:51:12
3	Pb 220.353†	6644.7	6687.8	502.68 ug/L	502.68 ppb	14:51:12
3	S 181.975 Axial†	1254.7	1189.5	1005.9 ug/L	1005.9 ppb	14:51:12
3	Sb 206.836†	2576.1	2536.1	504.89 ug/L	504.89 ppb	14:51:12
3	Se 196.026†	1509.7	1534.5	518.90 ug/L	518.90 ppb	14:51:12
3	Si 251.611†	122635.6	122334.2	2512.3 ug/L	2512.3 ppb	14:50:52
3	Sn 189.927†	4780.2	4784.8	498.13 ug/L	498.13 ppb	14:51:12
3	Ti 334.940†	379019.7	380928.6	498.61 ug/L	498.61 ppb	14:50:52
3	Tl 190.801†	2889.3	2956.8	500.68 ug/L	500.68 ppb	14:51:12
3	U 409.014†	15553.0	19420.5	480.27 ug/L	480.27 ppb	14:50:52
3	V 292.402†	84924.5	86756.4	498.05 ug/L	498.05 ppb	14:50:52
3	Zn 213.857†	89838.3	88905.4	491.88 ug/L	491.88 ppb	14:50:52
3	SiO2†	123331.7	122989.5	5408.2 ug/L	5408.2 ppb	14:51:27

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060444.2	99.959	%	0.5987				0.60%
Sc Radial	5519.7	99.2	%	2.23				2.25%
Y 371.029	843098.9	98.814	%	0.6338				0.64%
Y RADIAL	4795.3	99.58	%	2.312				2.32%
Ag 328.068†	126100.1	502.23	ug/L	0.878	502.23	ppb	0.878	0.17%
QC value within limits for Ag 328.068 Recovery = 100.45%								
Al 396.153Radial†	5401.7	4895.3	ug/L	19.99	4895.3	ppb	19.99	0.41%
QC value within limits for Al 396.153Radial Recovery = 97.91%								
As 188.979†	2109.1	498.28	ug/L	3.254	498.28	ppb	3.254	0.65%
QC value within limits for As 188.979 Recovery = 99.66%								
B 249.677†	31443.2	488.14	ug/L	1.360	488.14	ppb	1.360	0.28%
QC value within limits for B 249.677 Recovery = 97.63%								
Ba 233.527†	97857.7	496.53	ug/L	0.924	496.53	ppb	0.924	0.19%
QC value within limits for Ba 233.527 Recovery = 99.31%								
Be 313.107†	1593269.0	496.56	ug/L	0.429	496.56	ppb	0.429	0.09%
QC value within limits for Be 313.107 Recovery = 99.31%								
Ca 317.933Radial†	1999.8	4981.2	ug/L	124.51	4981.2	ppb	124.51	2.50%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.62%
Cd 226.502†            66560.8      497.56 ug/L        0.976      497.56 ppb        0.976   0.20%
   QC value within limits for Cd 226.502  Recovery = 99.51%
Co 228.616†            39079.1      486.99 ug/L        3.717      486.99 ppb        3.717   0.76%
   QC value within limits for Co 228.616  Recovery = 97.40%
Cr 267.716†            57928.0      494.08 ug/L        0.153      494.08 ppb        0.153   0.03%
   QC value within limits for Cr 267.716  Recovery = 98.82%
Cu 324.752†           200294.3      494.47 ug/L        0.442      494.47 ppb        0.442   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.89%
Fe 238.204 Radial†       142.6      5017.1 ug/L      127.10      5017.1 ppb       127.10   2.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.34%
K 766.490 Radial†      11808.7      5117.6 ug/L       17.20      5117.6 ppb        17.20   0.34%
   QC value within limits for K 766.490 Radial  Recovery = 102.35%
Mg 279.077 IEC†           64.0      5076.2 ug/L      167.87      5076.2 ppb       167.87   3.31%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.52%
Mn 257.610†           627186.6      496.21 ug/L        0.573      496.21 ppb        0.573   0.12%
   QC value within limits for Mn 257.610  Recovery = 99.24%
Mo 202.031†            12585.1      504.09 ug/L        3.856      504.09 ppb        3.856   0.76%
   QC value within limits for Mo 202.031  Recovery = 100.82%
Na 589.592 Radial†      3776.0       10210 ug/L         71.9       10210 ppb         71.9   0.70%
   QC value within limits for Na 589.592 Radial  Recovery = 102.10%
Ni 231.604†            30557.2      489.45 ug/L        3.673      489.45 ppb        3.673   0.75%
   QC value within limits for Ni 231.604  Recovery = 97.89%
P 214.914†              7054.1      2418.1 ug/L       19.82      2418.1 ppb        19.82   0.82%
   QC value within limits for P 214.914  Recovery = 96.72%
Pb 220.353†             6669.9      501.35 ug/L        2.283      501.35 ppb        2.283   0.46%
   QC value within limits for Pb 220.353  Recovery = 100.27%
S 181.975 Axial†        1185.5      1002.5 ug/L       12.05      1002.5 ppb        12.05   1.20%
   QC value within limits for S 181.975 Axial  Recovery = 100.25%
Sb 206.836†             2532.4      504.14 ug/L        3.715      504.14 ppb        3.715   0.74%
   QC value within limits for Sb 206.836  Recovery = 100.83%
Se 196.026†             1527.6      516.24 ug/L        3.717      516.24 ppb        3.717   0.72%
   QC value within limits for Se 196.026  Recovery = 103.25%
Si 251.611†           122430.3      2514.3 ug/L         3.52      2514.3 ppb         3.52   0.14%
   QC value within limits for Si 251.611  Recovery = 100.57%
Sn 189.927†             4783.6      498.00 ug/L        2.905      498.00 ppb        2.905   0.58%
   QC value within limits for Sn 189.927  Recovery = 99.60%
Sr 421.552†            34550.9      532.27 ug/L        1.873      532.27 ppb        1.873   0.35%
   QC value within limits for Sr 421.552  Recovery = 106.45%
Ti 334.940†           381121.0      498.86 ug/L        0.427      498.86 ppb        0.427   0.09%
   QC value within limits for Ti 334.940  Recovery = 99.77%
Tl 190.801†             2936.9      497.33 ug/L        4.557      497.33 ppb        4.557   0.92%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19307.8      477.49 ug/L        3.078      477.49 ppb        3.078   0.64%
   QC value within limits for U 409.014  Recovery = 95.50%
V 292.402†             86723.7      497.86 ug/L        0.468      497.86 ppb        0.468   0.09%
   QC value within limits for V 292.402  Recovery = 99.57%
Zn 213.857†            89042.3      492.67 ug/L        1.200      492.67 ppb        1.200   0.24%
   QC value within limits for Zn 213.857  Recovery = 98.53%
SiO2†                 123462.7      5429.2 ug/L        42.40      5429.2 ppb        42.40   0.78%
   QC value within limits for SiO2  Recovery = 101.53%
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 14:53:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5472.3	5472.3	98.3	%			14:55:30
1	Y RADIAL	4760.3	4760.3	98.85	%			14:55:30
1	Al 396.153Radial†	-81.1	9.7	8.8083	ug/L	8.8083	ppb	14:55:30
1	Ca 317.933Radial†	30.8	14.4	35.761	ug/L	35.761	ppb	14:55:50
1	Fe 238.204 Radial†	0.5	0.2	5.6899	ug/L	5.6899	ppb	14:55:50
1	K 766.490 Radial†	1569.9	123.4	53.550	ug/L	53.550	ppb	14:55:30
1	Mg 279.077 IEC†	-0.7	-0.9	-68.768	ug/L	-68.768	ppb	14:55:50
1	Na 589.592 Radial†	-177.5	-10.1	-27.266	ug/L	-27.266	ppb	14:55:50
1	Sr 421.552†	35.3	30.4	0.4686	ug/L	0.4686	ppb	14:55:50
1	Sc 361.383	1053868.2	1053868.2	99.339	%			14:56:47
1	Y 371.029	847547.6	847547.6	99.336	%			14:56:47
1	Ag 328.068†	611.0	-23.5	-0.0912	ug/L	-0.0912	ppb	14:56:52
1	As 188.979†	-59.7	-23.1	-5.4331	ug/L	-5.4331	ppb	14:57:12
1	B 249.677†	-115.7	265.0	4.1295	ug/L	4.1295	ppb	14:56:52
1	Ba 233.527†	39.3	15.3	0.0772	ug/L	0.0772	ppb	14:57:12
1	Be 313.107†	-7467.3	-200.8	-0.0623	ug/L	-0.0623	ppb	14:56:52
1	Cd 226.502†	-282.8	-7.0	-0.0528	ug/L	-0.0528	ppb	14:57:12
1	Co 228.616†	-98.5	-8.7	-0.1082	ug/L	-0.1082	ppb	14:57:12
1	Cr 267.716†	-17.9	10.6	0.0901	ug/L	0.0901	ppb	14:57:12
1	Cu 324.752†	10191.0	67.6	0.1671	ug/L	0.1671	ppb	14:56:52
1	Mn 257.610†	957.5	136.8	0.1102	ug/L	0.1102	ppb	14:57:12
1	Mo 202.031†	35.6	4.1	0.1634	ug/L	0.1634	ppb	14:57:12
1	Ni 231.604†	164.1	16.9	0.2714	ug/L	0.2714	ppb	14:57:12
1	P 214.914†	332.8	-1.9	-0.6902	ug/L	-0.6902	ppb	14:57:12
1	Pb 220.353†	-0.7	28.4	2.1276	ug/L	2.1276	ppb	14:57:12
1	S 181.975 Axial†	64.3	-3.1	-2.6380	ug/L	-2.6380	ppb	14:57:12
1	Sb 206.836†	50.1	5.0	0.9831	ug/L	0.9831	ppb	14:57:12
1	Se 196.026†	-20.4	1.0	0.3567	ug/L	0.3567	ppb	14:57:12
1	Si 251.611†	771.9	216.9	4.4555	ug/L	4.4555	ppb	14:57:12
1	Sn 189.927†	3.4	-2.0	-0.2090	ug/L	-0.2090	ppb	14:57:12
1	Ti 334.940†	-1048.8	53.5	0.0729	ug/L	0.0729	ppb	14:56:52
1	Tl 190.801†	-48.9	12.2	2.0617	ug/L	2.0617	ppb	14:57:12
1	U 409.014†	-3860.6	-51.6	-1.2803	ug/L	-1.2803	ppb	14:56:47
1	V 292.402†	-1672.4	-30.8	-0.1770	ug/L	-0.1770	ppb	14:56:52
1	Zn 213.857†	1170.2	55.5	0.3100	ug/L	0.3100	ppb	14:57:12
1	SiO2†	796.6	199.5	8.7725	ug/L	8.7725	ppb	14:58:18
2	Sc Radial	5640.5	5640.5	101	%			14:55:55
2	Y RADIAL	4909.7	4909.7	102.0	%			14:55:55
2	Al 396.153Radial†	-62.3	30.8	28.013	ug/L	28.013	ppb	14:55:55
2	Ca 317.933Radial†	30.3	12.9	32.245	ug/L	32.245	ppb	14:56:15
2	Fe 238.204 Radial†	-0.5	-0.8	-29.760	ug/L	-29.760	ppb	14:56:15
2	K 766.490 Radial†	1516.6	23.1	10.017	ug/L	10.017	ppb	14:55:55
2	Mg 279.077 IEC†	0.3	0.1	8.2285	ug/L	8.2285	ppb	14:56:15
2	Na 589.592 Radial†	-177.1	-4.3	-11.518	ug/L	-11.518	ppb	14:56:15
2	Sr 421.552†	6.1	0.6	0.0086	ug/L	0.0086	ppb	14:56:15
2	Sc 361.383	1063342.1	1063342.1	100.23	%			14:57:17
2	Y 371.029	854778.4	854778.4	100.18	%			14:57:17
2	Ag 328.068†	643.4	3.4	0.0032	ug/L	0.0032	ppb	14:57:22
2	As 188.979†	-51.2	-14.2	-3.3303	ug/L	-3.3303	ppb	14:57:42
2	B 249.677†	-29.0	352.6	5.4981	ug/L	5.4981	ppb	14:57:22
2	Ba 233.527†	26.1	1.8	0.0085	ug/L	0.0085	ppb	14:57:42
2	Be 313.107†	-7456.4	-123.0	-0.0382	ug/L	-0.0382	ppb	14:57:22
2	Cd 226.502†	-288.4	-10.1	-0.0717	ug/L	-0.0717	ppb	14:57:42
2	Co 228.616†	-70.3	20.3	0.2517	ug/L	0.2517	ppb	14:57:42
2	Cr 267.716†	-12.6	16.0	0.1359	ug/L	0.1359	ppb	14:57:42
2	Cu 324.752†	10255.5	40.5	0.0983	ug/L	0.0983	ppb	14:57:22
2	Mn 257.610†	981.3	152.0	0.1161	ug/L	0.1161	ppb	14:57:42
2	Mo 202.031†	22.2	-9.6	-0.3874	ug/L	-0.3874	ppb	14:57:42
2	Ni 231.604†	156.9	8.2	0.1321	ug/L	0.1321	ppb	14:57:42

2	P 214.914†	349.2	11.4	4.0629 ug/L	4.0629 ppb	14:57:42
2	Pb 220.353†	-26.9	2.3	0.1761 ug/L	0.1761 ppb	14:57:42
2	S 181.975 Axial†	69.4	1.4	1.1802 ug/L	1.1802 ppb	14:57:42
2	Sb 206.836†	51.9	6.4	1.2457 ug/L	1.2457 ppb	14:57:42
2	Se 196.026†	-27.8	-6.2	-2.1074 ug/L	-2.1074 ppb	14:57:42
2	Si 251.611†	798.7	236.8	4.8879 ug/L	4.8879 ppb	14:57:42
2	Sn 189.927†	9.7	4.2	0.4366 ug/L	0.4366 ppb	14:57:42
2	Ti 334.940†	-1103.0	8.8	0.0133 ug/L	0.0133 ppb	14:57:22
2	Tl 190.801†	-47.5	14.0	2.3645 ug/L	2.3645 ppb	14:57:42
2	U 409.014†	-3819.8	23.8	0.5932 ug/L	0.5932 ppb	14:57:17
2	V 292.402†	-1637.6	19.0	0.1084 ug/L	0.1084 ppb	14:57:22
2	Zn 213.857†	1144.2	19.2	0.1089 ug/L	0.1089 ppb	14:57:42
2	SiO2†	764.0	159.9	7.0706 ug/L	7.0706 ppb	14:58:23
3	Sc Radial	5502.0	5502.0	98.9 %		14:56:20
3	Y RADIAL	4784.6	4784.6	99.35 %		14:56:20
3	Al 396.153Radial†	-79.0	12.3	11.188 ug/L	11.188 ppb	14:56:20
3	Ca 317.933Radial†	25.1	8.5	21.069 ug/L	21.069 ppb	14:56:40
3	Fe 238.204 Radial†	1.2	0.9	30.106 ug/L	30.106 ppb	14:56:40
3	K 766.490 Radial†	1574.7	119.6	51.922 ug/L	51.922 ppb	14:56:20
3	Mg 279.077 IEC†	2.6	2.5	197.62 ug/L	197.62 ppb	14:56:40
3	Na 589.592 Radial†	-180.3	-11.9	-32.235 ug/L	-32.235 ppb	14:56:40
3	Sr 421.552†	15.5	10.2	0.1562 ug/L	0.1562 ppb	14:56:40
3	Sc 361.383	1051449.5	1051449.5	99.111 %		14:57:47
3	Y 371.029	846638.2	846638.2	99.229 %		14:57:47
3	Ag 328.068†	588.3	-45.1	-0.1673 ug/L	-0.1673 ppb	14:57:52
3	As 188.979†	-54.8	-18.3	-4.3026 ug/L	-4.3026 ppb	14:58:13
3	B 249.677†	-85.6	295.2	4.5964 ug/L	4.5964 ppb	14:57:52
3	Ba 233.527†	31.6	7.6	0.0395 ug/L	0.0395 ppb	14:58:13
3	Be 313.107†	-7461.5	-212.2	-0.0661 ug/L	-0.0661 ppb	14:57:52
3	Cd 226.502†	-273.8	1.4	0.0072 ug/L	0.0072 ppb	14:58:13
3	Co 228.616†	-94.2	-4.7	-0.0576 ug/L	-0.0576 ppb	14:58:13
3	Cr 267.716†	-11.6	16.9	0.1449 ug/L	0.1449 ppb	14:58:13
3	Cu 324.752†	10178.7	78.7	0.1959 ug/L	0.1959 ppb	14:57:52
3	Mn 257.610†	987.9	169.8	0.1343 ug/L	0.1343 ppb	14:58:13
3	Mo 202.031†	39.6	8.2	0.3293 ug/L	0.3293 ppb	14:58:13
3	Ni 231.604†	164.9	18.1	0.2903 ug/L	0.2903 ppb	14:58:13
3	P 214.914†	362.0	28.3	9.9383 ug/L	9.9383 ppb	14:58:13
3	Pb 220.353†	-9.5	19.5	1.4654 ug/L	1.4654 ppb	14:58:13
3	S 181.975 Axial†	64.0	-3.2	-2.7432 ug/L	-2.7432 ppb	14:58:13
3	Sb 206.836†	52.1	7.2	1.4070 ug/L	1.4070 ppb	14:58:13
3	Se 196.026†	-24.8	-3.4	-0.9905 ug/L	-0.9905 ppb	14:58:13
3	Si 251.611†	779.4	226.3	4.6478 ug/L	4.6478 ppb	14:58:13
3	Sn 189.927†	2.2	-3.2	-0.3355 ug/L	-0.3355 ppb	14:58:13
3	Ti 334.940†	-1145.5	-46.5	-0.0588 ug/L	-0.0588 ppb	14:57:52
3	Tl 190.801†	-50.5	10.5	1.7647 ug/L	1.7647 ppb	14:58:13
3	U 409.014†	-3862.5	-62.4	-1.5531 ug/L	-1.5531 ppb	14:57:47
3	V 292.402†	-1624.6	13.6	0.0773 ug/L	0.0773 ppb	14:57:52
3	Zn 213.857†	1159.9	47.9	0.2551 ug/L	0.2551 ppb	14:58:13
3	SiO2†	806.9	211.8	9.3098 ug/L	9.3098 ppb	14:58:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056219.9	99.560	%	0.5925				0.60%
Sc Radial	5538.3	99.5	%	1.61				1.62%
Y 371.029	849654.7	99.583	%	0.5228				0.52%
Y RADIAL	4818.2	100.1	%	1.66				1.66%
Ag 328.068†	-21.7	-0.0851	ug/L	0.08542	-0.0851	ppb	0.08542	100.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.6	16.003	ug/L	10.4684	16.003	ppb	10.4684	65.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-18.6	-4.3553	ug/L	1.05239	-4.3553	ppb	1.05239	24.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	304.2	4.7413	ug/L	0.69569	4.7413	ppb	0.69569	14.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.2	0.0417	ug/L	0.03442	0.0417	ppb	0.03442	82.50%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-178.7	-0.0555	ug/L	0.01513	-0.0555	ppb	0.01513	27.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.9	29.692	ug/L	7.6715	29.692	ppb	7.6715	25.84%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -5.2     -0.0391 ug/L      0.04120     -0.0391 ppb      0.04120 105.48%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               2.3      0.0286 ug/L      0.19481      0.0286 ppb      0.19481 680.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              14.5      0.1236 ug/L      0.02938      0.1236 ppb      0.02938  23.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              62.3      0.1538 ug/L      0.05016      0.1538 ppb      0.05016  32.62%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.1      2.0121 ug/L     30.10210      2.0121 ppb     30.10210 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        88.7     38.496 ug/L      24.6777     38.496 ppb      24.6777  64.10%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.6     45.694 ug/L     137.0902     45.694 ppb     137.0902 300.02%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             152.9      0.1202 ug/L      0.01255      0.1202 ppb      0.01255  10.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               0.9      0.0351 ug/L      0.37516      0.0351 ppb      0.37516 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -8.8    -23.673 ug/L      10.8153    -23.673 ppb      10.8153  45.69%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              14.4      0.2313 ug/L      0.08644      0.2313 ppb      0.08644  37.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               12.6      4.4370 ug/L      5.32411      4.4370 ppb      5.32411 119.99%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              16.7      1.2563 ug/L      0.99239      1.2563 ppb      0.99239  78.99%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -1.7    -1.4003 ug/L      2.23542     -1.4003 ppb      2.23542 159.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               6.2      1.2119 ug/L      0.21396      1.2119 ppb      0.21396  17.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -2.8     -0.9137 ug/L      1.23385     -0.9137 ppb      1.23385 135.04%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             226.7      4.6637 ug/L      0.21666      4.6637 ppb      0.21666   4.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -0.4     -0.0360 ug/L      0.41410     -0.0360 ppb      0.41410 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              13.7      0.2112 ug/L      0.23488      0.2112 ppb      0.23488 111.23%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               5.2      0.0091 ug/L      0.06596      0.0091 ppb      0.06596 721.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              12.2      2.0636 ug/L      0.29992      2.0636 ppb      0.29992  14.53%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -30.1     -0.7468 ug/L      1.16839     -0.7468 ppb      1.16839 156.46%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                0.6      0.0029 ug/L      0.15653      0.0029 ppb      0.15653 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              40.9      0.2247 ug/L      0.10391      0.2247 ppb      0.10391  46.25%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   190.4      8.3843 ug/L      1.16902      8.3843 ppb      1.16902  13.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 15:41:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5550.0	5550.0	99.7	%			15:43:35
1	Y RADIAL	4798.2	4798.2	99.64	%			15:43:35
1	Al 396.153Radial†	5250.4	5356.7	4854.3	ug/L	4854.3	ppb	15:43:35
1	Ca 317.933Radial†	1970.4	1958.7	4878.8	ug/L	4878.8	ppb	15:43:55
1	Fe 238.204 Radial†	137.3	137.4	4834.0	ug/L	4834.0	ppb	15:43:55
1	K 766.490 Radial†	13208.1	11770.2	5101.0	ug/L	5101.0	ppb	15:43:35
1	Mg 279.077 IEC†	62.7	62.7	4968.1	ug/L	4968.1	ppb	15:43:55
1	Na 589.592 Radial†	3392.0	3571.5	9656.9	ug/L	9656.9	ppb	15:43:35
1	Sr 421.552†	32852.9	32935.1	507.37	ug/L	507.37	ppb	15:43:35
1	Sc 361.383	1064992.1	1064992.1	100.39	%			15:44:54
1	Y 371.029	848241.6	848241.6	99.417	%			15:44:54
1	Ag 328.068†	127421.5	126291.3	502.94	ug/L	502.94	ppb	15:44:54
1	As 188.979†	2061.8	2090.8	493.94	ug/L	493.94	ppb	15:45:14
1	B 249.677†	31095.4	31357.0	486.83	ug/L	486.83	ppb	15:44:54
1	Ba 233.527†	98115.4	97712.5	495.79	ug/L	495.79	ppb	15:44:54
1	Be 313.107†	1594280.0	1595444.2	497.24	ug/L	497.24	ppb	15:44:54
1	Cd 226.502†	66508.1	66529.1	497.34	ug/L	497.34	ppb	15:44:54
1	Co 228.616†	38950.3	38890.4	484.63	ug/L	484.63	ppb	15:45:14
1	Cr 267.716†	58229.3	58033.2	494.97	ug/L	494.97	ppb	15:44:54
1	Cu 324.752†	211193.1	200186.9	494.19	ug/L	494.19	ppb	15:44:54
1	Mn 257.610†	629952.0	626694.1	495.80	ug/L	495.80	ppb	15:44:54
1	Mo 202.031†	12627.7	12547.2	502.56	ug/L	502.56	ppb	15:45:14
1	Ni 231.604†	30770.4	30503.4	488.59	ug/L	488.59	ppb	15:45:14
1	P 214.914†	7365.6	7000.2	2399.2	ug/L	2399.2	ppb	15:45:14
1	Pb 220.353†	6628.4	6631.9	498.51	ug/L	498.51	ppb	15:45:14
1	S 181.975 Axial†	1254.4	1181.7	999.29	ug/L	999.29	ppb	15:45:14
1	Sb 206.836†	2567.0	2511.7	499.99	ug/L	499.99	ppb	15:45:14
1	Se 196.026†	1506.6	1522.4	513.89	ug/L	513.89	ppb	15:45:14
1	Si 251.611†	123069.6	122034.6	2506.1	ug/L	2506.1	ppb	15:44:54
1	Sn 189.927†	4784.8	4760.9	495.62	ug/L	495.62	ppb	15:45:14
1	Ti 334.940†	381087.6	380726.3	498.33	ug/L	498.33	ppb	15:44:54
1	Tl 190.801†	2886.0	2936.3	497.24	ug/L	497.24	ppb	15:45:14
1	U 409.014†	15577.1	19351.8	478.60	ug/L	478.60	ppb	15:44:54
1	V 292.402†	85505.0	86827.9	498.46	ug/L	498.46	ppb	15:44:54
1	Zn 213.857†	90597.9	89125.9	493.16	ug/L	493.16	ppb	15:44:54
1	SiO2†	122068.2	120994.8	5320.2	ug/L	5320.2	ppb	15:46:14
2	Sc Radial	5447.3	5447.3	97.9	%			15:44:00
2	Y RADIAL	4711.7	4711.7	97.84	%			15:44:00
2	Al 396.153Radial†	5172.6	5376.3	4872.0	ug/L	4872.0	ppb	15:44:00
2	Ca 317.933Radial†	1978.6	2004.4	4992.5	ug/L	4992.5	ppb	15:44:20
2	Fe 238.204 Radial†	139.0	141.6	4983.9	ug/L	4983.9	ppb	15:44:20
2	K 766.490 Radial†	12957.8	11764.2	5098.5	ug/L	5098.5	ppb	15:44:00
2	Mg 279.077 IEC†	62.4	63.6	5042.1	ug/L	5042.1	ppb	15:44:20
2	Na 589.592 Radial†	3337.3	3579.7	9679.1	ug/L	9679.1	ppb	15:44:00
2	Sr 421.552†	32178.4	32867.1	506.32	ug/L	506.32	ppb	15:44:00
2	Sc 361.383	1051068.9	1051068.9	99.075	%			15:45:22
2	Y 371.029	835857.7	835857.7	97.966	%			15:45:22
2	Ag 328.068†	126172.9	126712.4	504.65	ug/L	504.65	ppb	15:45:22
2	As 188.979†	2053.8	2109.9	498.46	ug/L	498.46	ppb	15:45:42
2	B 249.677†	30728.4	31396.9	487.41	ug/L	487.41	ppb	15:45:22
2	Ba 233.527†	97233.2	98116.8	497.84	ug/L	497.84	ppb	15:45:22
2	Be 313.107†	1574216.1	1596230.6	497.49	ug/L	497.49	ppb	15:45:22
2	Cd 226.502†	65742.7	66634.2	498.11	ug/L	498.11	ppb	15:45:22
2	Co 228.616†	38877.4	39330.9	490.13	ug/L	490.13	ppb	15:45:42
2	Cr 267.716†	57664.8	58231.8	496.66	ug/L	496.66	ppb	15:45:22
2	Cu 324.752†	208926.4	200685.8	495.43	ug/L	495.43	ppb	15:45:22
2	Mn 257.610†	623851.7	628849.5	497.52	ug/L	497.52	ppb	15:45:22
2	Mo 202.031†	12603.0	12688.9	508.24	ug/L	508.24	ppb	15:45:42
2	Ni 231.604†	30731.8	30870.5	494.47	ug/L	494.47	ppb	15:45:42

2	P 214.914†	7351.1	7082.8	2428.1	ug/L	2428.1 ppb	15:45:42
2	Pb 220.353†	6620.8	6711.7	504.49	ug/L	504.49 ppb	15:45:42
2	S 181.975 Axial†	1262.4	1206.4	1020.2	ug/L	1020.2 ppb	15:45:42
2	Sb 206.836†	2541.1	2519.4	501.67	ug/L	501.67 ppb	15:45:42
2	Se 196.026†	1500.7	1536.3	518.98	ug/L	518.98 ppb	15:45:42
2	Si 251.611†	121951.6	122530.2	2516.3	ug/L	2516.3 ppb	15:45:22
2	Sn 189.927†	4769.9	4808.9	500.63	ug/L	500.63 ppb	15:45:42
2	Ti 334.940†	377304.3	381936.4	499.92	ug/L	499.92 ppb	15:45:22
2	Tl 190.801†	2878.0	2966.2	502.28	ug/L	502.28 ppb	15:45:42
2	U 409.014†	15599.1	19579.5	484.23	ug/L	484.23 ppb	15:45:22
2	V 292.402†	84556.2	86998.4	499.49	ug/L	499.49 ppb	15:45:22
2	Zn 213.857†	89634.5	89349.0	494.35	ug/L	494.35 ppb	15:45:22
2	SiO2†	124157.3	124714.2	5484.3	ug/L	5484.3 ppb	15:46:20
3	Sc Radial	5536.4	5536.4	99.5	%		15:44:25
3	Y RADIAL	4822.5	4822.5	100.1	%		15:44:25
3	Al 396.153Radial†	5265.5	5384.7	4879.5	ug/L	4879.5 ppb	15:44:25
3	Ca 317.933Radial†	1962.2	1955.4	4870.5	ug/L	4870.5 ppb	15:44:45
3	Fe 238.204 Radial†	137.2	137.6	4842.9	ug/L	4842.9 ppb	15:44:45
3	K 766.490 Radial†	13216.2	11810.9	5118.7	ug/L	5118.7 ppb	15:44:25
3	Mg 279.077 IEC†	62.7	62.8	4983.0	ug/L	4983.0 ppb	15:44:45
3	Na 589.592 Radial†	3349.3	3536.8	9563.2	ug/L	9563.2 ppb	15:44:25
3	Sr 421.552†	32669.2	32831.2	505.77	ug/L	505.77 ppb	15:44:25
3	Sc 361.383	1057782.7	1057782.7	99.708	%		15:45:49
3	Y 371.029	842128.4	842128.4	98.701	%		15:45:49
3	Ag 328.068†	126824.6	126557.6	504.00	ug/L	504.00 ppb	15:45:49
3	As 188.979†	2088.9	2131.9	503.59	ug/L	503.59 ppb	15:46:09
3	B 249.677†	31037.4	31509.9	489.19	ug/L	489.19 ppb	15:45:49
3	Ba 233.527†	97777.3	98039.6	497.45	ug/L	497.45 ppb	15:45:49
3	Be 313.107†	1585103.6	1597065.1	497.75	ug/L	497.75 ppb	15:45:49
3	Cd 226.502†	66249.3	66721.1	498.78	ug/L	498.78 ppb	15:45:49
3	Co 228.616†	39095.7	39300.7	489.76	ug/L	489.76 ppb	15:46:09
3	Cr 267.716†	57940.4	58138.8	495.87	ug/L	495.87 ppb	15:45:49
3	Cu 324.752†	210463.9	200889.4	495.93	ug/L	495.93 ppb	15:45:49
3	Mn 257.610†	627057.2	628067.8	496.88	ug/L	496.88 ppb	15:45:49
3	Mo 202.031†	12692.2	12697.7	508.58	ug/L	508.58 ppb	15:46:09
3	Ni 231.604†	30844.9	30787.0	493.13	ug/L	493.13 ppb	15:46:09
3	P 214.914†	7405.1	7089.9	2430.6	ug/L	2430.6 ppb	15:46:09
3	Pb 220.353†	6652.2	6700.8	503.69	ug/L	503.69 ppb	15:46:09
3	S 181.975 Axial†	1250.4	1186.2	1003.1	ug/L	1003.1 ppb	15:46:09
3	Sb 206.836†	2566.7	2528.8	503.51	ug/L	503.51 ppb	15:46:09
3	Se 196.026†	1528.1	1554.1	524.28	ug/L	524.28 ppb	15:46:09
3	Si 251.611†	122522.5	122321.5	2511.9	ug/L	2511.9 ppb	15:45:49
3	Sn 189.927†	4781.4	4789.9	498.63	ug/L	498.63 ppb	15:46:09
3	Ti 334.940†	379146.9	381367.2	499.17	ug/L	499.17 ppb	15:45:49
3	Tl 190.801†	2882.7	2952.6	499.96	ug/L	499.96 ppb	15:46:09
3	U 409.014†	15482.2	19362.3	478.86	ug/L	478.86 ppb	15:45:49
3	V 292.402†	85105.0	87007.2	499.55	ug/L	499.55 ppb	15:45:49
3	Zn 213.857†	90130.2	89272.0	493.95	ug/L	493.95 ppb	15:45:49
3	SiO2†	121770.0	121524.5	5343.3	ug/L	5343.3 ppb	15:46:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1057947.9	99.723	%	0.6563				0.66%
Sc Radial	5511.3	99.0	%	1.00				1.01%
Y 371.029	842075.9	98.695	%	0.7257				0.74%
Y RADIAL	4777.5	99.21	%	1.210				1.22%
Ag 328.068†	126520.4	503.86	ug/L	0.864	503.86	ppb	0.864	0.17%
QC value within limits for Ag 328.068 Recovery = 100.77%								
Al 396.153Radial†	5372.6	4868.6	ug/L	12.94	4868.6	ppb	12.94	0.27%
QC value within limits for Al 396.153Radial Recovery = 97.37%								
As 188.979†	2110.9	498.66	ug/L	4.828	498.66	ppb	4.828	0.97%
QC value within limits for As 188.979 Recovery = 99.73%								
B 249.677†	31421.2	487.81	ug/L	1.234	487.81	ppb	1.234	0.25%
QC value within limits for B 249.677 Recovery = 97.56%								
Ba 233.527†	97956.3	497.03	ug/L	1.089	497.03	ppb	1.089	0.22%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1596246.7	497.49	ug/L	0.253	497.49	ppb	0.253	0.05%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	1972.8	4913.9	ug/L	68.18	4913.9	ppb	68.18	1.39%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.28%
Cd 226.502†            66628.1      498.08 ug/L          0.720      498.08 ppb          0.720   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39174.0      488.17 ug/L          3.072      488.17 ppb          3.072   0.63%
   QC value within limits for Co 228.616  Recovery = 97.63%
Cr 267.716†            58134.6      495.83 ug/L          0.848      495.83 ppb          0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 99.17%
Cu 324.752†           200587.4      495.18 ug/L          0.893      495.18 ppb          0.893   0.18%
   QC value within limits for Cu 324.752  Recovery = 99.04%
Fe 238.204 Radial†       138.9      4886.9 ug/L         84.13      4886.9 ppb         84.13   1.72%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.74%
K 766.490 Radial†      11781.8      5106.1 ug/L         11.02      5106.1 ppb         11.02   0.22%
   QC value within limits for K 766.490 Radial  Recovery = 102.12%
Mg 279.077 IEC†           63.0      4997.8 ug/L         39.10      4997.8 ppb         39.10   0.78%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.96%
Mn 257.610†           627870.5      496.73 ug/L          0.871      496.73 ppb          0.871   0.18%
   QC value within limits for Mn 257.610  Recovery = 99.35%
Mo 202.031†            12644.6      506.46 ug/L          3.383      506.46 ppb          3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.29%
Na 589.592 Radial†      3562.7      9633.1 ug/L         61.49      9633.1 ppb         61.49   0.64%
   QC value within limits for Na 589.592 Radial  Recovery = 96.33%
Ni 231.604†            30720.3      492.07 ug/L          3.082      492.07 ppb          3.082   0.63%
   QC value within limits for Ni 231.604  Recovery = 98.41%
P 214.914†              7057.6      2419.3 ug/L         17.48      2419.3 ppb         17.48   0.72%
   QC value within limits for P 214.914  Recovery = 96.77%
Pb 220.353†             6681.5      502.23 ug/L          3.248      502.23 ppb          3.248   0.65%
   QC value within limits for Pb 220.353  Recovery = 100.45%
S 181.975 Axial†        1191.4      1007.5 ug/L         11.14      1007.5 ppb         11.14   1.11%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             2520.0      501.72 ug/L          1.761      501.72 ppb          1.761   0.35%
   QC value within limits for Sb 206.836  Recovery = 100.34%
Se 196.026†             1537.6      519.05 ug/L          5.195      519.05 ppb          5.195   1.00%
   QC value within limits for Se 196.026  Recovery = 103.81%
Si 251.611†           122295.4      2511.5 ug/L          5.07      2511.5 ppb          5.07   0.20%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†             4786.6      498.30 ug/L          2.522      498.30 ppb          2.522   0.51%
   QC value within limits for Sn 189.927  Recovery = 99.66%
Sr 421.552†            32877.8      506.49 ug/L          0.813      506.49 ppb          0.813   0.16%
   QC value within limits for Sr 421.552  Recovery = 101.30%
Ti 334.940†           381343.3      499.14 ug/L          0.795      499.14 ppb          0.795   0.16%
   QC value within limits for Ti 334.940  Recovery = 99.83%
Tl 190.801†             2951.7      499.83 ug/L          2.522      499.83 ppb          2.522   0.50%
   QC value within limits for Tl 190.801  Recovery = 99.97%
U 409.014†             19431.2      480.57 ug/L          3.177      480.57 ppb          3.177   0.66%
   QC value within limits for U 409.014  Recovery = 96.11%
V 292.402†             86944.5      499.16 ug/L          0.613      499.16 ppb          0.613   0.12%
   QC value within limits for V 292.402  Recovery = 99.83%
Zn 213.857†            89249.0      493.82 ug/L          0.604      493.82 ppb          0.604   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.76%
SiO2†                 122411.2      5382.6 ug/L         88.82      5382.6 ppb         88.82   1.65%
   QC value within limits for SiO2  Recovery = 100.66%
All analyte(s) passed QC.
```

Sequence No.: 18
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 15:48:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5444.7	5444.7	97.8	%			15:50:26
1	Y RADIAL	4754.6	4754.6	98.73	%			15:50:26
1	Al 396.153Radial†	-89.0	1.3	1.1300	ug/L	1.1300	ppb	15:50:26
1	Ca 317.933Radial†	24.6	8.2	20.486	ug/L	20.486	ppb	15:50:46
1	Fe 238.204 Radial†	1.6	1.3	45.016	ug/L	45.016	ppb	15:50:46
1	K 766.490 Radial†	1541.6	102.5	44.484	ug/L	44.484	ppb	15:50:26
1	Mg 279.077 IEC†	0.2	0.0	0.5452	ug/L	0.5452	ppb	15:50:46
1	Na 589.592 Radial†	-165.9	0.9	2.3237	ug/L	2.3237	ppb	15:50:46
1	Sr 421.552†	27.6	22.8	0.3506	ug/L	0.3506	ppb	15:50:46
1	Sc 361.383	1056924.6	1056924.6	99.627	%			15:51:43
1	Y 371.029	852084.4	852084.4	99.868	%			15:51:43
1	Ag 328.068†	677.5	41.4	0.1786	ug/L	0.1786	ppb	15:51:48
1	As 188.979†	-48.7	-12.0	-2.7987	ug/L	-2.7987	ppb	15:52:08
1	B 249.677†	-15.3	366.2	5.7014	ug/L	5.7014	ppb	15:51:48
1	Ba 233.527†	58.9	34.8	0.1773	ug/L	0.1773	ppb	15:52:08
1	Be 313.107†	-7518.0	-229.9	-0.0713	ug/L	-0.0713	ppb	15:51:48
1	Cd 226.502†	-272.1	4.5	0.0287	ug/L	0.0287	ppb	15:52:08
1	Co 228.616†	-101.3	-11.3	-0.1398	ug/L	-0.1398	ppb	15:52:08
1	Cr 267.716†	-33.1	-4.6	-0.0380	ug/L	-0.0380	ppb	15:51:48
1	Cu 324.752†	10167.5	14.3	0.0379	ug/L	0.0379	ppb	15:51:48
1	Mn 257.610†	919.8	96.2	0.0819	ug/L	0.0819	ppb	15:52:08
1	Mo 202.031†	42.0	10.4	0.4188	ug/L	0.4188	ppb	15:52:08
1	Ni 231.604†	169.3	21.7	0.3482	ug/L	0.3482	ppb	15:52:08
1	P 214.914†	354.3	18.7	6.5814	ug/L	6.5814	ppb	15:52:08
1	Pb 220.353†	-16.7	12.4	0.9234	ug/L	0.9234	ppb	15:52:08
1	S 181.975 Axial†	61.6	-6.0	-5.0843	ug/L	-5.0843	ppb	15:52:08
1	Sb 206.836†	53.3	8.1	1.6077	ug/L	1.6077	ppb	15:52:08
1	Se 196.026†	-12.1	9.5	3.2413	ug/L	3.2413	ppb	15:52:08
1	Si 251.611†	756.7	199.4	4.0905	ug/L	4.0905	ppb	15:52:08
1	Sn 189.927†	12.1	6.6	0.6931	ug/L	0.6931	ppb	15:52:08
1	Ti 334.940†	-1028.7	76.7	0.1021	ug/L	0.1021	ppb	15:51:48
1	Tl 190.801†	-51.6	9.6	1.6197	ug/L	1.6197	ppb	15:52:08
1	U 409.014†	-3848.7	-28.4	-0.7103	ug/L	-0.7103	ppb	15:51:43
1	V 292.402†	-1650.6	-3.9	-0.0247	ug/L	-0.0247	ppb	15:51:48
1	Zn 213.857†	1092.3	-26.1	-0.1527	ug/L	-0.1527	ppb	15:52:08
1	SiO2†	812.7	213.4	9.3760	ug/L	9.3760	ppb	15:53:14
2	Sc Radial	5363.3	5363.3	96.4	%			15:50:52
2	Y RADIAL	4689.7	4689.7	97.38	%			15:50:52
2	Al 396.153Radial†	-93.9	-5.3	-4.8063	ug/L	-4.8063	ppb	15:50:52
2	Ca 317.933Radial†	33.6	17.9	44.640	ug/L	44.640	ppb	15:51:12
2	Fe 238.204 Radial†	-0.5	-0.8	-29.258	ug/L	-29.258	ppb	15:51:12
2	K 766.490 Radial†	1469.5	51.7	22.381	ug/L	22.381	ppb	15:50:52
2	Mg 279.077 IEC†	0.5	0.4	29.965	ug/L	29.965	ppb	15:51:12
2	Na 589.592 Radial†	-167.6	-3.4	-9.2756	ug/L	-9.2756	ppb	15:51:12
2	Sr 421.552†	18.3	13.5	0.2083	ug/L	0.2083	ppb	15:51:12
2	Sc 361.383	1064727.6	1064727.6	100.36	%			15:52:14
2	Y 371.029	856448.2	856448.2	100.38	%			15:52:14
2	Ag 328.068†	654.6	13.6	0.0456	ug/L	0.0456	ppb	15:52:19
2	As 188.979†	-55.1	-18.0	-4.2429	ug/L	-4.2429	ppb	15:52:39
2	B 249.677†	-27.0	354.6	5.5302	ug/L	5.5302	ppb	15:52:19
2	Ba 233.527†	26.3	1.9	0.0090	ug/L	0.0090	ppb	15:52:39
2	Be 313.107†	-7608.1	-264.4	-0.0820	ug/L	-0.0820	ppb	15:52:19
2	Cd 226.502†	-292.9	-14.2	-0.1025	ug/L	-0.1025	ppb	15:52:39
2	Co 228.616†	-105.7	-14.9	-0.1859	ug/L	-0.1859	ppb	15:52:39
2	Cr 267.716†	-9.5	19.1	0.1627	ug/L	0.1627	ppb	15:52:19
2	Cu 324.752†	10209.3	-18.8	-0.0481	ug/L	-0.0481	ppb	15:52:19
2	Mn 257.610†	890.8	60.5	0.0435	ug/L	0.0435	ppb	15:52:39
2	Mo 202.031†	30.8	-1.1	-0.0470	ug/L	-0.0470	ppb	15:52:39
2	Ni 231.604†	166.7	17.8	0.2862	ug/L	0.2862	ppb	15:52:39

2	P 214.914†	351.3	13.1	4.6814	ug/L	4.6814 ppb	15:52:39
2	Pb 220.353†	0.4	29.5	2.2147	ug/L	2.2147 ppb	15:52:39
2	S 181.975 Axial†	58.3	-9.7	-8.2376	ug/L	-8.2376 ppb	15:52:39
2	Sb 206.836†	44.7	-0.9	-0.1791	ug/L	-0.1791 ppb	15:52:39
2	Se 196.026†	-22.7	-1.0	-0.4269	ug/L	-0.4269 ppb	15:52:39
2	Si 251.611†	732.9	170.1	3.5028	ug/L	3.5028 ppb	15:52:39
2	Sn 189.927†	9.3	3.8	0.3997	ug/L	0.3997 ppb	15:52:39
2	Ti 334.940†	-1052.4	60.6	0.0833	ug/L	0.0833 ppb	15:52:19
2	Tl 190.801†	-73.7	-12.1	-2.0323	ug/L	-2.0323 ppb	15:52:39
2	U 409.014†	-3937.4	-88.5	-2.1916	ug/L	-2.1916 ppb	15:52:14
2	V 292.402†	-1664.6	-5.8	-0.0333	ug/L	-0.0333 ppb	15:52:19
2	Zn 213.857†	1086.7	-39.7	-0.2212	ug/L	-0.2212 ppb	15:52:39
2	SiO2†	810.0	204.8	9.0296	ug/L	9.0296 ppb	15:53:19
3	Sc Radial	5503.9	5503.9	98.9	%		15:51:17
3	Y RADIAL	4786.1	4786.1	99.38	%		15:51:17
3	Al 396.153Radial†	-55.5	36.1	32.846	ug/L	32.846 ppb	15:51:17
3	Ca 317.933Radial†	29.6	13.0	32.437	ug/L	32.437 ppb	15:51:37
3	Fe 238.204 Radial†	1.1	0.8	28.650	ug/L	28.650 ppb	15:51:37
3	K 766.490 Radial†	1444.0	-13.2	-5.6858	ug/L	-5.6858 ppb	15:51:17
3	Mg 279.077 IEC†	-0.3	-0.5	-38.345	ug/L	-38.345 ppb	15:51:37
3	Na 589.592 Radial†	-167.4	1.1	3.0210	ug/L	3.0210 ppb	15:51:37
3	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431 ppb	15:51:37
3	Sc 361.383	1059763.4	1059763.4	99.895	%		15:52:44
3	Y 371.029	853150.8	853150.8	99.993	%		15:52:44
3	Ag 328.068†	638.8	0.9	0.0116	ug/L	0.0116 ppb	15:52:49
3	As 188.979†	-47.8	-11.0	-2.5746	ug/L	-2.5746 ppb	15:53:09
3	B 249.677†	-68.1	313.4	4.8798	ug/L	4.8798 ppb	15:52:49
3	Ba 233.527†	39.3	15.1	0.0771	ug/L	0.0771 ppb	15:53:09
3	Be 313.107†	-7522.3	-214.0	-0.0666	ug/L	-0.0666 ppb	15:52:49
3	Cd 226.502†	-285.9	-8.6	-0.0673	ug/L	-0.0673 ppb	15:53:09
3	Co 228.616†	-84.6	5.7	0.0719	ug/L	0.0719 ppb	15:53:09
3	Cr 267.716†	-51.0	-22.5	-0.1911	ug/L	-0.1911 ppb	15:52:49
3	Cu 324.752†	9963.6	-217.1	-0.5340	ug/L	-0.5340 ppb	15:52:49
3	Mn 257.610†	951.3	125.3	0.1035	ug/L	0.1035 ppb	15:53:09
3	Mo 202.031†	38.3	6.6	0.2645	ug/L	0.2645 ppb	15:53:09
3	Ni 231.604†	159.8	11.7	0.1876	ug/L	0.1876 ppb	15:53:09
3	P 214.914†	347.1	10.6	3.7978	ug/L	3.7978 ppb	15:53:09
3	Pb 220.353†	-25.4	3.7	0.2791	ug/L	0.2791 ppb	15:53:09
3	S 181.975 Axial†	64.7	-3.1	-2.6014	ug/L	-2.6014 ppb	15:53:09
3	Sb 206.836†	43.5	-1.9	-0.3719	ug/L	-0.3719 ppb	15:53:09
3	Se 196.026†	-24.2	-2.6	-0.7417	ug/L	-0.7417 ppb	15:53:09
3	Si 251.611†	723.7	164.4	3.3914	ug/L	3.3914 ppb	15:53:09
3	Sn 189.927†	-1.8	-7.3	-0.7591	ug/L	-0.7591 ppb	15:53:09
3	Ti 334.940†	-1125.7	-17.7	-0.0213	ug/L	-0.0213 ppb	15:52:49
3	Tl 190.801†	-47.4	13.9	2.3508	ug/L	2.3508 ppb	15:53:09
3	U 409.014†	-3791.5	39.2	0.9702	ug/L	0.9702 ppb	15:52:44
3	V 292.402†	-1640.9	10.2	0.0584	ug/L	0.0584 ppb	15:52:49
3	Zn 213.857†	1086.8	-34.5	-0.1947	ug/L	-0.1947 ppb	15:53:09
3	SiO2†	778.6	177.1	7.8246	ug/L	7.8246 ppb	15:53:24

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060471.9	99.961	%	0.3723				0.37%
Sc Radial	5437.3	97.7	%	1.27				1.30%
Y 371.029	853894.4	100.08	%	0.267				0.27%
Y RADIAL	4743.4	98.50	%	1.020				1.04%
Ag 328.068†	18.6	0.0786	ug/L	0.08825	0.0786	ppb	0.08825	112.24%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	10.7	9.7234	ug/L	20.24395	9.7234	ppb	20.24395	208.20%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-13.7	-3.2054	ug/L	0.90543	-3.2054	ppb	0.90543	28.25%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	344.7	5.3705	ug/L	0.43345	5.3705	ppb	0.43345	8.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	17.3	0.0878	ug/L	0.08464	0.0878	ppb	0.08464	96.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-236.1	-0.0733	ug/L	0.00791	-0.0733	ppb	0.00791	10.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.1	32.521	ug/L	12.0776	32.521	ppb	12.0776	37.14%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -6.1     -0.0470 ug/L       0.06789     -0.0470 ppb        0.06789 144.30%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -6.8     -0.0846 ug/L       0.13746     -0.0846 ppb        0.13746 162.45%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -2.7     -0.0221 ug/L       0.17746     -0.0221 ppb        0.17746 801.61%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -73.9     -0.1814 ug/L       0.30837     -0.1814 ppb        0.30837 170.01%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       0.4      14.803 ug/L       39.0249      14.803 ppb        39.0249 263.64%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       47.0      20.393 ug/L       25.1438      20.393 ppb        25.1438 123.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.0      -2.6115 ug/L      34.26394     -2.6115 ppb       34.26394 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              94.0       0.0763 ug/L       0.03041      0.0763 ppb        0.03041  39.87%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.3       0.2121 ug/L       0.23732      0.2121 ppb        0.23732 111.89%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -0.5      -1.3103 ug/L       6.90696     -1.3103 ppb        6.90696 527.13%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              17.1       0.2740 ug/L       0.08098      0.2740 ppb        0.08098  29.55%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               14.1       5.0202 ug/L       1.42236      5.0202 ppb        1.42236  28.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              15.2       1.1391 ug/L       0.98566      1.1391 ppb        0.98566  86.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -6.3      -5.3078 ug/L       2.82471     -5.3078 ppb        2.82471  53.22%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               1.8       0.3522 ug/L       1.09156      0.3522 ppb        1.09156 309.89%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se I96.026†               2.0       0.6909 ug/L       2.21432      0.6909 ppb        2.21432 320.50%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             178.0       3.6616 ug/L       0.37560      3.6616 ppb        0.37560  10.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.0       0.1112 ug/L       0.76790      0.1112 ppb        0.76790 690.45%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              19.5       0.3006 ug/L       0.08009      0.3006 ppb        0.08009  26.64%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              39.9       0.0547 ug/L       0.06651      0.0547 ppb        0.06651 121.59%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               3.8       0.6461 ug/L       2.34820      0.6461 ppb        2.34820 363.46%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -25.9      -0.6439 ug/L       1.58194     -0.6439 ppb        1.58194 245.69%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                0.1       0.0001 ug/L       0.05062      0.0001 ppb        0.05062 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -33.4      -0.1895 ug/L       0.03453     -0.1895 ppb        0.03453  18.22%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   198.4       8.7434 ug/L       0.81433      8.7434 ppb        0.81433   9.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 26
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 16:43:44
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5597.1	5597.1	101	%			16:45:36
1	Y RADIAL	4814.6	4814.6	99.98	%			16:45:36
1	Al 396.153Radial†	5291.4	5353.1	4850.9	ug/L	4850.9	ppb	16:45:36
1	Ca 317.933Radial†	1969.7	1941.4	4835.8	ug/L	4835.8	ppb	16:45:56
1	Fe 238.204 Radial†	141.1	139.9	4923.6	ug/L	4923.6	ppb	16:45:56
1	K 766.490 Radial†	13282.0	11732.5	5084.7	ug/L	5084.7	ppb	16:45:36
1	Mg 279.077 IEC†	64.2	63.7	5049.0	ug/L	5049.0	ppb	16:45:56
1	Na 589.592 Radial†	3478.7	3629.0	9812.5	ug/L	9812.5	ppb	16:45:36
1	Sr 421.552†	33699.4	33499.9	516.07	ug/L	516.07	ppb	16:45:36
1	Sc 361.383	1055693.0	1055693.0	99.511	%			16:46:55
1	Y 371.029	841824.0	841824.0	98.665	%			16:46:55
1	Ag 328.068†	126236.5	126218.5	502.68	ug/L	502.68	ppb	16:46:55
1	As 188.979†	2073.2	2120.3	500.88	ug/L	500.88	ppb	16:47:15
1	B 249.677†	30744.7	31277.4	485.56	ug/L	485.56	ppb	16:46:55
1	Ba 233.527†	97307.6	97761.7	496.04	ug/L	496.04	ppb	16:46:55
1	Be 313.107†	1578588.0	1593664.1	496.68	ug/L	496.68	ppb	16:46:55
1	Cd 226.502†	65945.7	66547.5	497.47	ug/L	497.47	ppb	16:46:55
1	Co 228.616†	38927.4	39209.2	488.62	ug/L	488.62	ppb	16:47:15
1	Cr 267.716†	57770.3	58082.9	495.39	ug/L	495.39	ppb	16:46:55
1	Cu 324.752†	208599.2	199433.4	492.34	ug/L	492.34	ppb	16:46:55
1	Mn 257.610†	623792.7	626032.1	495.28	ug/L	495.28	ppb	16:46:55
1	Mo 202.031†	12621.7	12652.0	506.76	ug/L	506.76	ppb	16:47:15
1	Ni 231.604†	30738.4	30741.2	492.40	ug/L	492.40	ppb	16:47:15
1	P 214.914†	7365.8	7065.1	2422.4	ug/L	2422.4	ppb	16:47:15
1	Pb 220.353†	6645.4	6707.2	504.15	ug/L	504.15	ppb	16:47:15
1	S 181.975 Axial†	1239.8	1178.0	996.19	ug/L	996.19	ppb	16:47:15
1	Sb 206.836†	2557.9	2525.1	502.76	ug/L	502.76	ppb	16:47:15
1	Se 196.026†	1503.3	1532.3	517.44	ug/L	517.44	ppb	16:47:15
1	Si 251.611†	121982.3	122021.8	2505.8	ug/L	2505.8	ppb	16:46:55
1	Sn 189.927†	4773.2	4791.1	498.76	ug/L	498.76	ppb	16:47:15
1	Ti 334.940†	377055.7	380018.4	497.40	ug/L	497.40	ppb	16:46:55
1	Tl 190.801†	2878.5	2954.1	500.21	ug/L	500.21	ppb	16:47:15
1	U 409.014†	15585.6	19497.0	482.20	ug/L	482.20	ppb	16:46:55
1	V 292.402†	84900.3	86970.4	499.32	ug/L	499.32	ppb	16:46:55
1	Zn 213.857†	89663.2	88981.5	492.32	ug/L	492.32	ppb	16:46:55
1	SiO2†	122414.8	122414.2	5382.8	ug/L	5382.8	ppb	16:48:15
2	Sc Radial	5519.9	5519.9	99.2	%			16:46:01
2	Y RADIAL	4754.7	4754.7	98.73	%			16:46:01
2	Al 396.153Radial†	5239.1	5374.0	4870.0	ug/L	4870.0	ppb	16:46:01
2	Ca 317.933Radial†	1981.4	1980.6	4933.4	ug/L	4933.4	ppb	16:46:21
2	Fe 238.204 Radial†	139.0	139.8	4918.1	ug/L	4918.1	ppb	16:46:21
2	K 766.490 Radial†	13106.1	11739.7	5087.8	ug/L	5087.8	ppb	16:46:01
2	Mg 279.077 IEC†	59.9	60.2	4773.1	ug/L	4773.1	ppb	16:46:21
2	Na 589.592 Radial†	3431.2	3629.6	9813.9	ug/L	9813.9	ppb	16:46:01
2	Sr 421.552†	33035.5	33298.9	512.98	ug/L	512.98	ppb	16:46:01
2	Sc 361.383	1059556.7	1059556.7	99.875	%			16:47:22
2	Y 371.029	842609.2	842609.2	98.757	%			16:47:22
2	Ag 328.068†	126889.4	126409.6	503.43	ug/L	503.43	ppb	16:47:22
2	As 188.979†	2080.2	2119.7	500.75	ug/L	500.75	ppb	16:47:42
2	B 249.677†	30878.4	31298.5	485.90	ug/L	485.90	ppb	16:47:22
2	Ba 233.527†	97940.4	98038.7	497.45	ug/L	497.45	ppb	16:47:22
2	Be 313.107†	1583527.7	1592825.4	496.43	ug/L	496.43	ppb	16:47:22
2	Cd 226.502†	66320.9	66681.6	498.47	ug/L	498.47	ppb	16:47:22
2	Co 228.616†	38932.4	39071.6	486.89	ug/L	486.89	ppb	16:47:42
2	Cr 267.716†	58077.3	58178.5	496.21	ug/L	496.21	ppb	16:47:22
2	Cu 324.752†	209952.3	200023.8	493.80	ug/L	493.80	ppb	16:47:22
2	Mn 257.610†	627659.1	627617.4	496.54	ug/L	496.54	ppb	16:47:22
2	Mo 202.031†	12605.9	12589.9	504.27	ug/L	504.27	ppb	16:47:42
2	Ni 231.604†	30761.6	30651.8	490.97	ug/L	490.97	ppb	16:47:42

2	P 214.914†	7365.8	7038.1	2412.6 ug/L	2412.6 ppb	16:47:42
2	Pb 220.353†	6639.4	6676.8	501.87 ug/L	501.87 ppb	16:47:42
2	S 181.975 Axial†	1247.6	1181.3	998.95 ug/L	998.95 ppb	16:47:42
2	Sb 206.836†	2570.2	2528.0	503.22 ug/L	503.22 ppb	16:47:42
2	Se 196.026†	1493.9	1517.4	512.58 ug/L	512.58 ppb	16:47:42
2	Si 251.611†	122683.6	122277.0	2511.1 ug/L	2511.1 ppb	16:47:22
2	Sn 189.927†	4775.2	4775.7	497.17 ug/L	497.17 ppb	16:47:42
2	Ti 334.940†	379382.3	380966.3	498.65 ug/L	498.65 ppb	16:47:22
2	Tl 190.801†	2885.6	2950.6	499.65 ug/L	499.65 ppb	16:47:42
2	U 409.014†	15590.0	19444.3	480.89 ug/L	480.89 ppb	16:47:22
2	V 292.402†	85139.3	86898.7	498.87 ug/L	498.87 ppb	16:47:22
2	Zn 213.857†	90179.2	89169.6	493.39 ug/L	493.39 ppb	16:47:22
2	SiO2†	123659.1	123211.5	5418.1 ug/L	5418.1 ppb	16:48:20
3	Sc Radial	5473.4	5473.4	98.4 %		16:46:26
3	Y RADIAL	4752.6	4752.6	98.69 %		16:46:26
3	Al 396.153Radial†	5183.0	5361.8	4859.1 ug/L	4859.1 ppb	16:46:26
3	Ca 317.933Radial†	1970.6	1986.6	4948.3 ug/L	4948.3 ppb	16:46:46
3	Fe 238.204 Radial†	139.1	141.1	4963.8 ug/L	4963.8 ppb	16:46:46
3	K 766.490 Radial†	12871.7	11613.8	5033.2 ug/L	5033.2 ppb	16:46:26
3	Mg 279.077 IEC†	64.4	65.3	5176.9 ug/L	5176.9 ppb	16:46:46
3	Na 589.592 Radial†	3390.1	3617.1	9780.3 ug/L	9780.3 ppb	16:46:26
3	Sr 421.552†	32728.5	33270.0	512.53 ug/L	512.53 ppb	16:46:26
3	Sc 361.383	1060641.0	1060641.0	99.977 %		16:47:50
3	Y 371.029	844977.1	844977.1	99.035 %		16:47:50
3	Ag 328.068†	126897.6	126287.9	502.96 ug/L	502.96 ppb	16:47:50
3	As 188.979†	2059.7	2097.1	495.44 ug/L	495.44 ppb	16:48:10
3	B 249.677†	31014.3	31402.9	487.53 ug/L	487.53 ppb	16:47:50
3	Ba 233.527†	97758.4	97756.4	496.02 ug/L	496.02 ppb	16:47:50
3	Be 313.107†	1584935.6	1592612.9	496.36 ug/L	496.36 ppb	16:47:50
3	Cd 226.502†	66218.9	66511.6	497.19 ug/L	497.19 ppb	16:47:50
3	Co 228.616†	38515.7	38614.9	481.20 ug/L	481.20 ppb	16:48:10
3	Cr 267.716†	57895.8	57937.6	494.15 ug/L	494.15 ppb	16:47:50
3	Cu 324.752†	210307.1	200163.8	494.14 ug/L	494.14 ppb	16:47:50
3	Mn 257.610†	626815.7	626131.5	495.36 ug/L	495.36 ppb	16:47:50
3	Mo 202.031†	12523.0	12494.1	500.44 ug/L	500.44 ppb	16:48:10
3	Ni 231.604†	30451.6	30310.3	485.50 ug/L	485.50 ppb	16:48:10
3	P 214.914†	7303.3	6968.0	2387.6 ug/L	2387.6 ppb	16:48:10
3	Pb 220.353†	6596.2	6626.8	498.11 ug/L	498.11 ppb	16:48:10
3	S 181.975 Axial†	1228.8	1161.2	981.95 ug/L	981.95 ppb	16:48:10
3	Sb 206.836†	2537.6	2492.7	496.19 ug/L	496.19 ppb	16:48:10
3	Se 196.026†	1501.2	1523.2	514.61 ug/L	514.61 ppb	16:48:10
3	Si 251.611†	122882.0	122349.9	2512.7 ug/L	2512.7 ppb	16:47:50
3	Sn 189.927†	4732.3	4727.9	492.20 ug/L	492.20 ppb	16:48:10
3	Ti 334.940†	379321.6	380517.2	498.06 ug/L	498.06 ppb	16:47:50
3	Tl 190.801†	2851.7	2913.7	493.44 ug/L	493.44 ppb	16:48:10
3	U 409.014†	15623.2	19461.5	481.31 ug/L	481.31 ppb	16:47:50
3	V 292.402†	85069.4	86741.5	497.93 ug/L	497.93 ppb	16:47:50
3	Zn 213.857†	90087.4	88985.6	492.38 ug/L	492.38 ppb	16:47:50
3	SiO2†	121377.6	120802.9	5311.9 ug/L	5311.9 ppb	16:48:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1058630.2	99.788	%	0.2452				0.25%
Sc Radial	5530.1	99.4	%	1.12				1.13%
Y 371.029	843136.8	98.819	%	0.1924				0.19%
Y RADIAL	4774.0	99.13	%	0.731				0.74%
Ag 328.068†	126305.3	503.02	ug/L	0.380	503.02	ppb	0.380	0.08%
QC value within limits for Ag 328.068 Recovery = 100.60%								
Al 396.153Radial†	5363.0	4860.0	ug/L	9.59	4860.0	ppb	9.59	0.20%
QC value within limits for Al 396.153Radial Recovery = 97.20%								
As 188.979†	2112.4	499.02	ug/L	3.104	499.02	ppb	3.104	0.62%
QC value within limits for As 188.979 Recovery = 99.80%								
B 249.677†	31326.3	486.33	ug/L	1.054	486.33	ppb	1.054	0.22%
QC value within limits for B 249.677 Recovery = 97.27%								
Ba 233.527†	97852.3	496.50	ug/L	0.817	496.50	ppb	0.817	0.16%
QC value within limits for Ba 233.527 Recovery = 99.30%								
Be 313.107†	1593034.2	496.49	ug/L	0.172	496.49	ppb	0.172	0.03%
QC value within limits for Be 313.107 Recovery = 99.30%								
Ca 317.933Radial†	1969.5	4905.8	ug/L	61.11	4905.8	ppb	61.11	1.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.12%
Cd 226.502†            66580.2      497.71 ug/L        0.673      497.71 ppb        0.673   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.54%
Co 228.616†            38965.2      485.57 ug/L        3.884      485.57 ppb        3.884   0.80%
   QC value within limits for Co 228.616  Recovery = 97.11%
Cr 267.716†            58066.3      495.25 ug/L        1.034      495.25 ppb        1.034   0.21%
   QC value within limits for Cr 267.716  Recovery = 99.05%
Cu 324.752†           199873.6      493.43 ug/L        0.957      493.43 ppb        0.957   0.19%
   QC value within limits for Cu 324.752  Recovery = 98.69%
Fe 238.204 Radial†       140.2      4935.2 ug/L       24.97      4935.2 ppb       24.97   0.51%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.70%
K 766.490 Radial†      11695.3      5068.6 ug/L       30.68      5068.6 ppb       30.68   0.61%
   QC value within limits for K 766.490 Radial  Recovery = 101.37%
Mg 279.077 IEC†           63.1      4999.6 ug/L      206.36      4999.6 ppb      206.36   4.13%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.99%
Mn 257.610†           626593.7      495.73 ug/L        0.704      495.73 ppb        0.704   0.14%
   QC value within limits for Mn 257.610  Recovery = 99.15%
Mo 202.031†            12578.6      503.83 ug/L        3.182      503.83 ppb        3.182   0.63%
   QC value within limits for Mo 202.031  Recovery = 100.77%
Na 589.592 Radial†      3625.2      9802.2 ug/L       19.00      9802.2 ppb       19.00   0.19%
   QC value within limits for Na 589.592 Radial  Recovery = 98.02%
Ni 231.604†            30567.8      489.62 ug/L        3.643      489.62 ppb        3.643   0.74%
   QC value within limits for Ni 231.604  Recovery = 97.92%
P 214.914†              7023.7      2407.5 ug/L       17.90      2407.5 ppb       17.90   0.74%
   QC value within limits for P 214.914  Recovery = 96.30%
Pb 220.353†             6670.3      501.38 ug/L        3.053      501.38 ppb        3.053   0.61%
   QC value within limits for Pb 220.353  Recovery = 100.28%
S 181.975 Axial†        1173.5      992.36 ug/L        9.120      992.36 ppb        9.120   0.92%
   QC value within limits for S 181.975 Axial  Recovery = 99.24%
Sb 206.836†             2515.3      500.72 ug/L        3.933      500.72 ppb        3.933   0.79%
   QC value within limits for Sb 206.836  Recovery = 100.14%
Se 196.026†             1524.3      514.87 ug/L        2.440      514.87 ppb        2.440   0.47%
   QC value within limits for Se 196.026  Recovery = 102.97%
Si 251.611†           122216.2      2509.9 ug/L         3.62      2509.9 ppb         3.62   0.14%
   QC value within limits for Si 251.611  Recovery = 100.40%
Sn 189.927†             4764.9      496.04 ug/L        3.424      496.04 ppb        3.424   0.69%
   QC value within limits for Sn 189.927  Recovery = 99.21%
Sr 421.552†            33356.3      513.86 ug/L        1.930      513.86 ppb        1.930   0.38%
   QC value within limits for Sr 421.552  Recovery = 102.77%
Ti 334.940†           380500.7      498.04 ug/L        0.624      498.04 ppb        0.624   0.13%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2939.5      497.77 ug/L        3.754      497.77 ppb        3.754   0.75%
   QC value within limits for Tl 190.801  Recovery = 99.55%
U 409.014†             19467.6      481.46 ug/L        0.668      481.46 ppb        0.668   0.14%
   QC value within limits for U 409.014  Recovery = 96.29%
V 292.402†             86870.2      498.71 ug/L        0.706      498.71 ppb        0.706   0.14%
   QC value within limits for V 292.402  Recovery = 99.74%
Zn 213.857†            89045.6      492.70 ug/L        0.601      492.70 ppb        0.601   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.54%
SiO2†                 122142.9      5370.9 ug/L       54.09      5370.9 ppb       54.09   1.01%
   QC value within limits for SiO2  Recovery = 100.44%
All analyte(s) passed QC.
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Sequence No.: 27
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 16:50:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5637.8	5637.8	101	%			16:52:27
1	Y RADIAL	4889.3	4889.3	101.5	%			16:52:27
1	Al 396.153Radial†	-89.7	3.7	3.3326	ug/L	3.3326	ppb	16:52:27
1	Ca 317.933Radial†	30.9	13.6	33.800	ug/L	33.800	ppb	16:52:47
1	Fe 238.204 Radial†	-0.2	-0.5	-18.635	ug/L	-18.635	ppb	16:52:47
1	K 766.490 Radial†	1458.1	-33.9	-14.718	ug/L	-14.718	ppb	16:52:27
1	Mg 279.077 IEC†	0.7	0.5	40.762	ug/L	40.762	ppb	16:52:47
1	Na 589.592 Radial†	-176.3	-3.6	-9.6025	ug/L	-9.6025	ppb	16:52:47
1	Sr 421.552†	22.0	16.3	0.2505	ug/L	0.2505	ppb	16:52:47
1	Sc 361.383	1052646.6	1052646.6	99.224	%			16:53:44
1	Y 371.029	847796.7	847796.7	99.365	%			16:53:44
1	Ag 328.068†	563.6	-70.6	-0.2853	ug/L	-0.2853	ppb	16:53:49
1	As 188.979†	-58.2	-21.7	-5.1093	ug/L	-5.1093	ppb	16:54:09
1	B 249.677†	-76.7	304.2	4.7431	ug/L	4.7431	ppb	16:53:49
1	Ba 233.527†	31.3	7.3	0.0361	ug/L	0.0361	ppb	16:54:09
1	Be 313.107†	-7536.0	-278.7	-0.0865	ug/L	-0.0865	ppb	16:53:49
1	Cd 226.502†	-287.5	-12.1	-0.0884	ug/L	-0.0884	ppb	16:54:09
1	Co 228.616†	-75.7	14.1	0.1761	ug/L	0.1761	ppb	16:54:09
1	Cr 267.716†	-16.5	12.0	0.1017	ug/L	0.1017	ppb	16:54:09
1	Cu 324.752†	10011.6	-101.3	-0.2511	ug/L	-0.2511	ppb	16:53:49
1	Mn 257.610†	915.0	95.2	0.0720	ug/L	0.0720	ppb	16:54:09
1	Mo 202.031†	37.5	6.0	0.2405	ug/L	0.2405	ppb	16:54:09
1	Ni 231.604†	163.3	16.3	0.2617	ug/L	0.2617	ppb	16:54:09
1	P 214.914†	335.5	1.2	0.4897	ug/L	0.4897	ppb	16:54:09
1	Pb 220.353†	-27.9	1.0	0.0777	ug/L	0.0777	ppb	16:54:09
1	S 181.975 Axial†	66.8	-0.5	-0.4272	ug/L	-0.4272	ppb	16:54:09
1	Sb 206.836†	51.9	6.9	1.3833	ug/L	1.3833	ppb	16:54:09
1	Se 196.026†	-20.7	0.8	0.1817	ug/L	0.1817	ppb	16:54:09
1	Si 251.611†	822.0	268.4	5.5329	ug/L	5.5329	ppb	16:54:09
1	Sn 189.927†	21.2	15.9	1.6590	ug/L	1.6590	ppb	16:54:09
1	Ti 334.940†	-1030.0	71.2	0.0958	ug/L	0.0958	ppb	16:53:49
1	Tl 190.801†	-46.8	14.3	2.4065	ug/L	2.4065	ppb	16:54:09
1	U 409.014†	-3844.2	-39.5	-0.9782	ug/L	-0.9782	ppb	16:53:44
1	V 292.402†	-1655.2	-15.3	-0.0826	ug/L	-0.0826	ppb	16:53:49
1	Zn 213.857†	1103.5	-10.2	-0.0578	ug/L	-0.0578	ppb	16:54:09
1	SiO2†	826.3	230.4	10.170	ug/L	10.170	ppb	16:55:15
2	Sc Radial	5525.3	5525.3	99.3	%			16:52:52
2	Y RADIAL	4806.4	4806.4	99.81	%			16:52:52
2	Al 396.153Radial†	-79.8	11.8	10.725	ug/L	10.725	ppb	16:52:52
2	Ca 317.933Radial†	28.6	11.9	29.523	ug/L	29.523	ppb	16:53:12
2	Fe 238.204 Radial†	0.5	0.2	7.1114	ug/L	7.1114	ppb	16:53:12
2	K 766.490 Radial†	1519.6	57.3	24.898	ug/L	24.898	ppb	16:52:52
2	Mg 279.077 IEC†	0.1	-0.1	-7.6474	ug/L	-7.6474	ppb	16:53:12
2	Na 589.592 Radial†	-180.6	-11.5	-30.978	ug/L	-30.978	ppb	16:53:12
2	Sr 421.552†	28.8	23.5	0.3617	ug/L	0.3617	ppb	16:53:12
2	Sc 361.383	1065998.9	1065998.9	100.48	%			16:54:14
2	Y 371.029	857217.7	857217.7	100.47	%			16:54:14
2	Ag 328.068†	636.1	-5.5	-0.0199	ug/L	-0.0199	ppb	16:54:19
2	As 188.979†	-46.4	-9.3	-2.1871	ug/L	-2.1871	ppb	16:54:39
2	B 249.677†	-25.5	356.1	5.5488	ug/L	5.5488	ppb	16:54:19
2	Ba 233.527†	44.3	19.8	0.1010	ug/L	0.1010	ppb	16:54:39
2	Be 313.107†	-7582.2	-229.6	-0.0713	ug/L	-0.0713	ppb	16:54:19
2	Cd 226.502†	-281.0	-2.0	-0.0154	ug/L	-0.0154	ppb	16:54:39
2	Co 228.616†	-87.2	3.6	0.0458	ug/L	0.0458	ppb	16:54:39
2	Cr 267.716†	-4.9	23.8	0.2025	ug/L	0.2025	ppb	16:54:39
2	Cu 324.752†	10193.3	-46.9	-0.1154	ug/L	-0.1154	ppb	16:54:19
2	Mn 257.610†	912.6	81.2	0.0653	ug/L	0.0653	ppb	16:54:39
2	Mo 202.031†	39.5	7.5	0.3018	ug/L	0.3018	ppb	16:54:39
2	Ni 231.604†	159.8	10.8	0.1729	ug/L	0.1729	ppb	16:54:39

2	P 214.914†	333.9	-4.6	-1.6265	ug/L	-1.6265 ppb	16:54:39
2	Pb 220.353†	-17.2	11.9	0.8971	ug/L	0.8971 ppb	16:54:39
2	S 181.975 Axial†	56.6	-11.5	-9.7195	ug/L	-9.7195 ppb	16:54:39
2	Sb 206.836†	42.2	-3.4	-0.6744	ug/L	-0.6744 ppb	16:54:39
2	Se 196.026†	-21.2	0.5	0.1913	ug/L	0.1913 ppb	16:54:39
2	Si 251.611†	796.3	232.3	4.7815	ug/L	4.7815 ppb	16:54:39
2	Sn 189.927†	2.5	-3.0	-0.3049	ug/L	-0.3049 ppb	16:54:39
2	Ti 334.940†	-1074.6	39.8	0.0534	ug/L	0.0534 ppb	16:54:19
2	Tl 190.801†	-64.5	-2.8	-0.4750	ug/L	-0.4750 ppb	16:54:39
2	U 409.014†	-3795.8	57.2	1.4168	ug/L	1.4168 ppb	16:54:14
2	V 292.402†	-1607.8	52.7	0.3041	ug/L	0.3041 ppb	16:54:19
2	Zn 213.857†	1078.2	-49.4	-0.2772	ug/L	-0.2772 ppb	16:54:39
2	SiO2†	798.6	192.4	8.4742	ug/L	8.4742 ppb	16:55:20
3	Sc Radial	5418.8	5418.8	97.4	%		16:53:17
3	Y RADIAL	4718.6	4718.6	97.98	%		16:53:17
3	Al 396.153Radial†	-92.6	-2.9	-2.6166	ug/L	-2.6166 ppb	16:53:17
3	Ca 317.933Radial†	27.6	11.4	28.350	ug/L	28.350 ppb	16:53:37
3	Fe 238.204 Radial†	-1.0	-1.3	-45.979	ug/L	-45.979 ppb	16:53:37
3	K 766.490 Radial†	1489.0	56.1	24.297	ug/L	24.297 ppb	16:53:17
3	Mg 279.077 IEC†	-1.0	-1.2	-94.823	ug/L	-94.823 ppb	16:53:37
3	Na 589.592 Radial†	-169.9	-4.0	-10.940	ug/L	-10.940 ppb	16:53:37
3	Sr 421.552†	29.6	24.9	0.3833	ug/L	0.3833 ppb	16:53:37
3	Sc 361.383	1048913.1	1048913.1	98.872	%		16:54:44
3	Y 371.029	844446.0	844446.0	98.972	%		16:54:44
3	Ag 328.068†	724.6	94.3	0.3605	ug/L	0.3605 ppb	16:54:49
3	As 188.979†	-43.9	-7.5	-1.7627	ug/L	-1.7627 ppb	16:55:09
3	B 249.677†	-81.0	299.6	4.6757	ug/L	4.6757 ppb	16:54:49
3	Ba 233.527†	22.9	-1.1	-0.0069	ug/L	-0.0069 ppb	16:55:09
3	Be 313.107†	-7424.8	-193.3	-0.0604	ug/L	-0.0604 ppb	16:54:49
3	Cd 226.502†	-281.1	-6.7	-0.0443	ug/L	-0.0443 ppb	16:55:09
3	Co 228.616†	-89.7	-0.3	-0.0020	ug/L	-0.0020 ppb	16:55:09
3	Cr 267.716†	-10.7	17.8	0.1514	ug/L	0.1514 ppb	16:55:09
3	Cu 324.752†	10087.7	11.6	0.0258	ug/L	0.0258 ppb	16:54:49
3	Mn 257.610†	912.8	96.2	0.0718	ug/L	0.0718 ppb	16:55:09
3	Mo 202.031†	35.1	3.7	0.1462	ug/L	0.1462 ppb	16:55:09
3	Ni 231.604†	166.7	20.4	0.3263	ug/L	0.3263 ppb	16:55:09
3	P 214.914†	344.7	11.7	4.1662	ug/L	4.1662 ppb	16:55:09
3	Pb 220.353†	-8.6	20.3	1.5296	ug/L	1.5296 ppb	16:55:09
3	S 181.975 Axial†	63.9	-3.2	-2.6879	ug/L	-2.6879 ppb	16:55:09
3	Sb 206.836†	50.5	5.6	1.1035	ug/L	1.1035 ppb	16:55:09
3	Se 196.026†	-25.9	-4.6	-1.6417	ug/L	-1.6417 ppb	16:55:09
3	Si 251.611†	799.8	248.9	5.1246	ug/L	5.1246 ppb	16:55:09
3	Sn 189.927†	4.6	-0.8	-0.0793	ug/L	-0.0793 ppb	16:55:09
3	Ti 334.940†	-1198.8	-103.2	-0.1319	ug/L	-0.1319 ppb	16:54:49
3	Tl 190.801†	-54.4	6.4	1.0751	ug/L	1.0751 ppb	16:55:09
3	U 409.014†	-3918.3	-128.2	-3.1763	ug/L	-3.1763 ppb	16:54:44
3	V 292.402†	-1643.2	-9.2	-0.0517	ug/L	-0.0517 ppb	16:54:49
3	Zn 213.857†	1094.4	-15.5	-0.0806	ug/L	-0.0806 ppb	16:55:09
3	SiO2†	790.9	197.6	8.7080	ug/L	8.7080 ppb	16:55:25

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055852.9	99.526	%	0.8467				0.85%
Sc Radial	5527.3	99.3	%	1.97				1.98%
Y 371.029	849820.2	99.602	%	0.7761				0.78%
Y RADIAL	4804.8	99.77	%	1.772				1.78%
Ag 328.068†	6.1	0.0184	ug/L	0.32461	0.0184	ppb	0.32461	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	4.2	3.8136	ug/L	6.68379	3.8136	ppb	6.68379	175.26%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.8	-3.0197	ug/L	1.82201	-3.0197	ppb	1.82201	60.34%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	320.0	4.9892	ug/L	0.48577	4.9892	ppb	0.48577	9.74%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.6	0.0434	ug/L	0.05433	0.0434	ppb	0.05433	125.26%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-233.9	-0.0727	ug/L	0.01307	-0.0727	ppb	0.01307	17.98%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	12.3	30.557	ug/L	2.8686	30.557	ppb	2.8686	9.39%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -6.9     -0.0494 ug/L       0.03675     -0.0494 ppb        0.03675  74.46%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               5.8      0.0733 ug/L       0.09218      0.0733 ppb        0.09218 125.81%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              17.8      0.1519 ug/L       0.05038      0.1519 ppb        0.05038  33.17%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -45.6     -0.1135 ug/L       0.13847     -0.1135 ppb        0.13847 121.95%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       -0.5     -19.167 ug/L       26.5490     -19.167 ppb        26.5490 138.51%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        26.5      11.492 ug/L       22.7011      11.492 ppb        22.7011 197.53%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.3     -20.569 ug/L       68.7102     -20.569 ppb        68.7102 334.04%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              90.9      0.0697 ug/L       0.00384      0.0697 ppb        0.00384   5.51%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               5.8      0.2295 ug/L       0.07837      0.2295 ppb        0.07837  34.15%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -6.4     -17.174 ug/L       11.9739     -17.174 ppb        11.9739  69.72%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              15.8      0.2536 ug/L       0.07702      0.2536 ppb        0.07702  30.37%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                2.7      1.0098 ug/L       2.93118      1.0098 ppb        2.93118 290.27%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              11.1      0.8348 ug/L       0.72795      0.8348 ppb        0.72795  87.20%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -5.1     -4.2782 ug/L       4.84597     -4.2782 ppb        4.84597 113.27%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               3.0      0.6042 ug/L       1.11604      0.6042 ppb        1.11604 184.72%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -1.1     -0.4229 ug/L       1.05551     -0.4229 ppb        1.05551 249.59%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             249.8      5.1463 ug/L       0.37613      5.1463 ppb        0.37613   7.31%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               4.1      0.4249 ug/L       1.07467      0.4249 ppb        1.07467 252.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              21.6      0.3318 ug/L       0.07124      0.3318 ppb        0.07124  21.47%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               2.6      0.0058 ug/L       0.12109      0.0058 ppb        0.12109 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               5.9      1.0022 ug/L       1.44215      1.0022 ppb        1.44215 143.90%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -36.9     -0.9126 ug/L       2.29725     -0.9126 ppb        2.29725 251.73%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                9.4      0.0566 ug/L       0.21490      0.0566 ppb        0.21490 379.82%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -25.0     -0.1385 ug/L       0.12064     -0.1385 ppb        0.12064  87.09%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   206.8      9.1173 ug/L       0.91882      9.1173 ppb        0.91882  10.08%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 32
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 17:25:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5539.4	5539.4	99.5	%			17:27:39
1	Y RADIAL	4807.5	4807.5	99.83	%			17:27:39
1	Al 396.153Radial†	5253.1	5369.4	4865.4	ug/L	4865.4	ppb	17:27:39
1	Ca 317.933Radial†	1951.8	1943.8	4841.6	ug/L	4841.6	ppb	17:27:59
1	Fe 238.204 Radial†	137.8	138.1	4860.6	ug/L	4860.6	ppb	17:27:59
1	K 766.490 Radial†	13071.3	11658.2	5052.5	ug/L	5052.5	ppb	17:27:39
1	Mg 279.077 IEC†	64.6	64.7	5131.4	ug/L	5131.4	ppb	17:27:59
1	Na 589.592 Radial†	3360.6	3546.4	9589.2	ug/L	9589.2	ppb	17:27:39
1	Sr 421.552†	32599.6	32743.8	504.42	ug/L	504.42	ppb	17:27:39
1	Sc 361.383	1049901.1	1049901.1	98.965	%			17:28:58
1	Y 371.029	835003.9	835003.9	97.866	%			17:28:58
1	Ag 328.068†	125920.8	126599.3	504.17	ug/L	504.17	ppb	17:28:58
1	As 188.979†	2090.3	2149.0	507.62	ug/L	507.62	ppb	17:29:18
1	B 249.677†	30513.8	31214.5	484.57	ug/L	484.57	ppb	17:28:58
1	Ba 233.527†	97512.1	98507.8	499.82	ug/L	499.82	ppb	17:28:58
1	Be 313.107†	1576169.0	1599971.3	498.65	ug/L	498.65	ppb	17:28:58
1	Cd 226.502†	66064.4	67033.1	501.11	ug/L	501.11	ppb	17:28:58
1	Co 228.616†	39231.6	39732.4	495.15	ug/L	495.15	ppb	17:29:18
1	Cr 267.716†	57815.1	58448.4	498.51	ug/L	498.51	ppb	17:28:58
1	Cu 324.752†	208555.4	200545.5	495.08	ug/L	495.08	ppb	17:28:58
1	Mn 257.610†	625103.5	630814.8	499.05	ug/L	499.05	ppb	17:28:58
1	Mo 202.031†	12722.0	12823.3	513.61	ug/L	513.61	ppb	17:29:18
1	Ni 231.604†	30913.5	31088.6	497.96	ug/L	497.96	ppb	17:29:18
1	P 214.914†	7419.6	7160.2	2455.7	ug/L	2455.7	ppb	17:29:18
1	Pb 220.353†	6688.7	6787.7	510.21	ug/L	510.21	ppb	17:29:18
1	S 181.975 Axial†	1250.0	1195.2	1010.7	ug/L	1010.7	ppb	17:29:18
1	Sb 206.836†	2601.6	2583.4	514.35	ug/L	514.35	ppb	17:29:18
1	Se 196.026†	1504.4	1541.7	520.31	ug/L	520.31	ppb	17:29:18
1	Si 251.611†	121912.3	122627.4	2518.2	ug/L	2518.2	ppb	17:28:58
1	Sn 189.927†	4798.2	4842.9	504.15	ug/L	504.15	ppb	17:29:18
1	Ti 334.940†	377727.5	382787.6	501.03	ug/L	501.03	ppb	17:28:58
1	Tl 190.801†	2906.4	2998.2	507.65	ug/L	507.65	ppb	17:29:18
1	U 409.014†	15367.9	19363.4	478.88	ug/L	478.88	ppb	17:28:58
1	V 292.402†	84597.3	87135.0	500.33	ug/L	500.33	ppb	17:28:58
1	Zn 213.857†	89790.9	89607.7	495.78	ug/L	495.78	ppb	17:28:58
1	SiO2†	122218.8	122894.8	5403.7	ug/L	5403.7	ppb	17:30:18
2	Sc Radial	5629.9	5629.9	101	%			17:28:04
2	Y RADIAL	4857.3	4857.3	100.9	%			17:28:04
2	Al 396.153Radial†	5366.1	5396.3	4890.4	ug/L	4890.4	ppb	17:28:04
2	Ca 317.933Radial†	1971.8	1932.1	4812.5	ug/L	4812.5	ppb	17:28:24
2	Fe 238.204 Radial†	137.6	135.7	4776.2	ug/L	4776.2	ppb	17:28:24
2	K 766.490 Radial†	13341.0	11713.7	5076.5	ug/L	5076.5	ppb	17:28:04
2	Mg 279.077 IEC†	61.6	60.7	4814.0	ug/L	4814.0	ppb	17:28:24
2	Na 589.592 Radial†	3421.8	3552.7	9606.1	ug/L	9606.1	ppb	17:28:04
2	Sr 421.552†	33077.1	32689.3	503.59	ug/L	503.59	ppb	17:28:04
2	Sc 361.383	1063568.3	1063568.3	100.25	%			17:29:25
2	Y 371.029	845239.1	845239.1	99.065	%			17:29:25
2	Ag 328.068†	127204.2	126244.4	502.73	ug/L	502.73	ppb	17:29:25
2	As 188.979†	2061.8	2093.4	494.56	ug/L	494.56	ppb	17:29:45
2	B 249.677†	30965.4	31268.8	485.46	ug/L	485.46	ppb	17:29:25
2	Ba 233.527†	97922.6	97651.1	495.48	ug/L	495.48	ppb	17:29:25
2	Be 313.107†	1583977.6	1587293.9	494.71	ug/L	494.71	ppb	17:29:25
2	Cd 226.502†	66312.1	66422.3	496.55	ug/L	496.55	ppb	17:29:25
2	Co 228.616†	38852.8	38845.1	484.07	ug/L	484.07	ppb	17:29:45
2	Cr 267.716†	58017.2	57899.3	493.82	ug/L	493.82	ppb	17:29:25
2	Cu 324.752†	211181.4	200456.9	494.86	ug/L	494.86	ppb	17:29:25
2	Mn 257.610†	628518.3	626104.1	495.32	ug/L	495.32	ppb	17:29:25
2	Mo 202.031†	12594.6	12531.1	501.91	ug/L	501.91	ppb	17:29:45
2	Ni 231.604†	30580.0	30354.6	486.21	ug/L	486.21	ppb	17:29:45

2	P 214.914†	7357.2	7001.7	2399.6 ug/L	2399.6 ppb		17:29:45
2	Pb 220.353†	6615.9	6628.3	498.24 ug/L	498.24 ppb		17:29:45
2	S 181.975 Axial†	1245.1	1174.1	992.88 ug/L	992.88 ppb		17:29:45
2	Sb 206.836†	2576.2	2524.3	502.40 ug/L	502.40 ppb		17:29:45
2	Se 196.026†	1488.5	1506.3	508.47 ug/L	508.47 ppb		17:29:45
2	Si 251.611†	122813.3	121943.1	2504.3 ug/L	2504.3 ppb		17:29:25
2	Sn 189.927†	4739.9	4722.4	491.61 ug/L	491.61 ppb		17:29:45
2	Ti 334.940†	380922.6	381070.0	498.78 ug/L	498.78 ppb		17:29:25
2	Tl 190.801†	2872.9	2927.1	495.68 ug/L	495.68 ppb		17:29:45
2	U 409.014†	15705.5	19500.6	482.31 ug/L	482.31 ppb		17:29:25
2	V 292.402†	85226.8	86664.4	497.53 ug/L	497.53 ppb		17:29:25
2	Zn 213.857†	90283.4	88933.0	492.11 ug/L	492.11 ppb		17:29:25
2	SiO2†	121642.5	120733.0	5308.7 ug/L	5308.7 ppb		17:30:23
3	Sc Radial	5511.7	5511.7	99.0 %			17:28:29
3	Y RADIAL	4751.0	4751.0	98.66 %			17:28:29
3	Al 396.153Radial†	5237.8	5380.5	4875.9 ug/L	4875.9 ppb		17:28:29
3	Ca 317.933Radial†	2008.0	2010.5	5007.8 ug/L	5007.8 ppb		17:28:49
3	Fe 238.204 Radial†	140.3	141.3	4973.5 ug/L	4973.5 ppb		17:28:49
3	K 766.490 Radial†	13077.8	11730.9	5084.1 ug/L	5084.1 ppb		17:28:29
3	Mg 279.077 IEC†	63.6	64.1	5080.5 ug/L	5080.5 ppb		17:28:49
3	Na 589.592 Radial†	3321.6	3524.0	9528.6 ug/L	9528.6 ppb		17:28:29
3	Sr 421.552†	32347.5	32654.1	503.04 ug/L	503.04 ppb		17:28:29
3	Sc 361.383	1061197.1	1061197.1	100.03 %			17:29:52
3	Y 371.029	845321.1	845321.1	99.075 %			17:29:52
3	Ag 328.068†	126943.7	126267.5	502.89 ug/L	502.89 ppb		17:29:52
3	As 188.979†	2071.6	2107.9	497.99 ug/L	497.99 ppb		17:30:12
3	B 249.677†	30895.5	31267.8	485.42 ug/L	485.42 ppb		17:29:52
3	Ba 233.527†	97861.2	97807.9	496.28 ug/L	496.28 ppb		17:29:52
3	Be 313.107†	1587603.5	1594449.2	496.93 ug/L	496.93 ppb		17:29:52
3	Cd 226.502†	66310.3	66568.3	497.62 ug/L	497.62 ppb		17:29:52
3	Co 228.616†	38901.6	38980.5	485.76 ug/L	485.76 ppb		17:30:12
3	Cr 267.716†	58079.5	58090.9	495.46 ug/L	495.46 ppb		17:29:52
3	Cu 324.752†	210546.0	200292.3	494.46 ug/L	494.46 ppb		17:29:52
3	Mn 257.610†	627659.6	626646.5	495.77 ug/L	495.77 ppb		17:29:52
3	Mo 202.031†	12635.4	12599.9	504.68 ug/L	504.68 ppb		17:30:12
3	Ni 231.604†	30693.6	30536.2	489.12 ug/L	489.12 ppb		17:30:12
3	P 214.914†	7347.5	7008.4	2401.9 ug/L	2401.9 ppb		17:30:12
3	Pb 220.353†	6654.8	6681.9	502.25 ug/L	502.25 ppb		17:30:12
3	S 181.975 Axial†	1249.6	1181.4	999.01 ug/L	999.01 ppb		17:30:12
3	Sb 206.836†	2580.4	2534.2	504.45 ug/L	504.45 ppb		17:30:12
3	Se 196.026†	1488.1	1509.3	510.13 ug/L	510.13 ppb		17:30:12
3	Si 251.611†	122353.4	121757.1	2500.4 ug/L	2500.4 ppb		17:29:52
3	Sn 189.927†	4767.3	4760.4	495.58 ug/L	495.58 ppb		17:30:12
3	Ti 334.940†	380073.7	381070.3	498.79 ug/L	498.79 ppb		17:29:52
3	Tl 190.801†	2879.5	2940.1	497.87 ug/L	497.87 ppb		17:30:12
3	U 409.014†	15472.5	19302.7	477.37 ug/L	477.37 ppb		17:29:52
3	V 292.402†	85270.4	86897.9	498.86 ug/L	498.86 ppb		17:29:52
3	Zn 213.857†	90239.3	89090.2	492.94 ug/L	492.94 ppb		17:29:52
3	SiO2†	123260.9	122622.0	5392.0 ug/L	5392.0 ppb		17:30:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1058222.2	99.749	%	0.6884				0.69%
Sc Radial	5560.3	99.9	%	1.11				1.11%
Y 371.029	841854.7	98.669	%	0.6954				0.70%
Y RADIAL	4805.3	99.78	%	1.105				1.11%
Ag 328.068†	126370.4	503.26	ug/L	0.792	503.26	ppb	0.792	0.16%
QC value within limits for Ag 328.068 Recovery = 100.65%								
Al 396.153Radial†	5382.0	4877.2	ug/L	12.53	4877.2	ppb	12.53	0.26%
QC value within limits for Al 396.153Radial Recovery = 97.54%								
As 188.979†	2116.8	500.06	ug/L	6.771	500.06	ppb	6.771	1.35%
QC value within limits for As 188.979 Recovery = 100.01%								
B 249.677†	31250.3	485.15	ug/L	0.499	485.15	ppb	0.499	0.10%
QC value within limits for B 249.677 Recovery = 97.03%								
Ba 233.527†	97988.9	497.19	ug/L	2.312	497.19	ppb	2.312	0.46%
QC value within limits for Ba 233.527 Recovery = 99.44%								
Be 313.107†	1593904.8	496.76	ug/L	1.979	496.76	ppb	1.979	0.40%
QC value within limits for Be 313.107 Recovery = 99.35%								
Ca 317.933Radial†	1962.1	4887.3	ug/L	105.33	4887.3	ppb	105.33	2.16%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.75%
Cd 226.502†            66674.6      498.43 ug/L          2.388      498.43 ppb          2.388   0.48%
   QC value within limits for Cd 226.502  Recovery = 99.69%
Co 228.616†            39186.0      488.32 ug/L          5.967      488.32 ppb          5.967   1.22%
   QC value within limits for Co 228.616  Recovery = 97.66%
Cr 267.716†            58146.2      495.93 ug/L          2.377      495.93 ppb          2.377   0.48%
   QC value within limits for Cr 267.716  Recovery = 99.19%
Cu 324.752†           200431.6      494.80 ug/L          0.313      494.80 ppb          0.313   0.06%
   QC value within limits for Cu 324.752  Recovery = 98.96%
Fe 238.204 Radial†       138.4      4870.1 ug/L         98.98      4870.1 ppb         98.98   2.03%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.40%
K 766.490 Radial†      11700.9      5071.0 ug/L         16.50      5071.0 ppb         16.50   0.33%
   QC value within limits for K 766.490 Radial  Recovery = 101.42%
Mg 279.077 IEC†           63.2      5008.6 ug/L        170.47      5008.6 ppb        170.47   3.40%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.17%
Mn 257.610†           627855.1      496.72 ug/L          2.035      496.72 ppb          2.035   0.41%
   QC value within limits for Mn 257.610  Recovery = 99.34%
Mo 202.031†            12651.4      506.73 ug/L          6.117      506.73 ppb          6.117   1.21%
   QC value within limits for Mo 202.031  Recovery = 101.35%
Na 589.592 Radial†      3541.1      9574.6 ug/L         40.77      9574.6 ppb         40.77   0.43%
   QC value within limits for Na 589.592 Radial  Recovery = 95.75%
Ni 231.604†            30659.8      491.10 ug/L          6.124      491.10 ppb          6.124   1.25%
   QC value within limits for Ni 231.604  Recovery = 98.22%
P 214.914†              7056.8      2419.1 ug/L         31.74      2419.1 ppb         31.74   1.31%
   QC value within limits for P 214.914  Recovery = 96.76%
Pb 220.353†             6699.3      503.57 ug/L          6.094      503.57 ppb          6.094   1.21%
   QC value within limits for Pb 220.353  Recovery = 100.71%
S 181.975 Axial†        1183.6      1000.9 ug/L          9.08      1000.9 ppb          9.08   0.91%
   QC value within limits for S 181.975 Axial  Recovery = 100.09%
Sb 206.836†             2547.3      507.06 ug/L          6.391      507.06 ppb          6.391   1.26%
   QC value within limits for Sb 206.836  Recovery = 101.41%
Se 196.026†             1519.1      512.97 ug/L          6.409      512.97 ppb          6.409   1.25%
   QC value within limits for Se 196.026  Recovery = 102.59%
Si 251.611†           122109.2      2507.6 ug/L          9.35      2507.6 ppb          9.35   0.37%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4775.2      497.11 ug/L          6.406      497.11 ppb          6.406   1.29%
   QC value within limits for Sn 189.927  Recovery = 99.42%
Sr 421.552†            32695.7      503.68 ug/L          0.697      503.68 ppb          0.697   0.14%
   QC value within limits for Sr 421.552  Recovery = 100.74%
Ti 334.940†           381642.6      499.53 ug/L          1.295      499.53 ppb          1.295   0.26%
   QC value within limits for Ti 334.940  Recovery = 99.91%
Tl 190.801†             2955.1      500.40 ug/L          6.373      500.40 ppb          6.373   1.27%
   QC value within limits for Tl 190.801  Recovery = 100.08%
U 409.014†             19388.9      479.52 ug/L          2.530      479.52 ppb          2.530   0.53%
   QC value within limits for U 409.014  Recovery = 95.90%
V 292.402†             86899.1      498.91 ug/L          1.401      498.91 ppb          1.401   0.28%
   QC value within limits for V 292.402  Recovery = 99.78%
Zn 213.857†            89210.3      493.61 ug/L          1.926      493.61 ppb          1.926   0.39%
   QC value within limits for Zn 213.857  Recovery = 98.72%
SiO2†                 122083.2      5368.2 ug/L         51.81      5368.2 ppb         51.81   0.97%
   QC value within limits for SiO2  Recovery = 100.39%
All analyte(s) passed QC.
```

Sequence No.: 33
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 17:32:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5490.0	5490.0	98.7	%			17:34:30
1	Y RADIAL	4741.3	4741.3	98.46	%			17:34:30
1	Al 396.153Radial†	-82.2	8.9	8.0672	ug/L	8.0672	ppb	17:34:30
1	Ca 317.933Radial†	29.1	12.5	31.210	ug/L	31.210	ppb	17:34:50
1	Fe 238.204 Radial†	0.2	-0.1	-3.5649	ug/L	-3.5649	ppb	17:34:50
1	K 766.490 Radial†	1409.6	-44.3	-19.236	ug/L	-19.236	ppb	17:34:30
1	Mg 279.077 IEC†	-0.1	-0.3	-22.440	ug/L	-22.440	ppb	17:34:50
1	Na 589.592 Radial†	-171.9	-3.9	-10.476	ug/L	-10.476	ppb	17:34:50
1	Sr 421.552†	14.4	9.1	0.1405	ug/L	0.1405	ppb	17:34:50
1	Sc 361.383	1052333.1	1052333.1	99.194	%			17:35:46
1	Y 371.029	846567.3	846567.3	99.221	%			17:35:46
1	Ag 328.068†	700.7	67.8	0.2703	ug/L	0.2703	ppb	17:35:52
1	As 188.979†	-56.9	-20.4	-4.8012	ug/L	-4.8012	ppb	17:36:12
1	B 249.677†	-83.7	297.1	4.6311	ug/L	4.6311	ppb	17:35:52
1	Ba 233.527†	37.5	13.5	0.0689	ug/L	0.0689	ppb	17:36:12
1	Be 313.107†	-7492.9	-237.6	-0.0739	ug/L	-0.0739	ppb	17:35:52
1	Cd 226.502†	-287.7	-12.4	-0.0922	ug/L	-0.0922	ppb	17:36:12
1	Co 228.616†	-83.5	6.3	0.0779	ug/L	0.0779	ppb	17:36:12
1	Cr 267.716†	-16.0	12.5	0.1079	ug/L	0.1079	ppb	17:36:12
1	Cu 324.752†	10095.6	-13.7	-0.0339	ug/L	-0.0339	ppb	17:35:52
1	Mn 257.610†	935.4	116.0	0.0917	ug/L	0.0917	ppb	17:36:12
1	Mo 202.031†	29.0	-2.5	-0.1006	ug/L	-0.1006	ppb	17:36:12
1	Ni 231.604†	147.3	0.2	0.0037	ug/L	0.0037	ppb	17:36:12
1	P 214.914†	352.0	17.9	6.3333	ug/L	6.3333	ppb	17:36:12
1	Pb 220.353†	-24.4	4.4	0.3349	ug/L	0.3349	ppb	17:36:12
1	S 181.975 Axial†	63.1	-4.2	-3.5764	ug/L	-3.5764	ppb	17:36:12
1	Sb 206.836†	58.3	13.3	2.6045	ug/L	2.6045	ppb	17:36:12
1	Se 196.026†	-13.4	8.1	2.6090	ug/L	2.6090	ppb	17:36:12
1	Si 251.611†	709.7	155.4	3.2163	ug/L	3.2163	ppb	17:36:12
1	Sn 189.927†	1.0	-4.4	-0.4598	ug/L	-0.4598	ppb	17:36:12
1	Ti 334.940†	-1111.3	-11.0	-0.0110	ug/L	-0.0110	ppb	17:35:52
1	Tl 190.801†	-55.2	5.7	0.9641	ug/L	0.9641	ppb	17:36:12
1	U 409.014†	-3930.0	-127.2	-3.1558	ug/L	-3.1558	ppb	17:35:46
1	V 292.402†	-1594.3	45.5	0.2510	ug/L	0.2510	ppb	17:35:52
1	Zn 213.857†	1093.9	-19.7	-0.1086	ug/L	-0.1086	ppb	17:36:12
1	SiO2†	708.1	111.5	4.9498	ug/L	4.9498	ppb	17:37:18
2	Sc Radial	5463.6	5463.6	98.2	%			17:34:55
2	Y RADIAL	4760.8	4760.8	98.86	%			17:34:55
2	Al 396.153Radial†	-66.9	24.1	21.917	ug/L	21.917	ppb	17:34:55
2	Ca 317.933Radial†	30.2	13.8	34.350	ug/L	34.350	ppb	17:35:15
2	Fe 238.204 Radial†	-0.5	-0.9	-30.858	ug/L	-30.858	ppb	17:35:15
2	K 766.490 Radial†	1480.7	35.0	15.177	ug/L	15.177	ppb	17:34:55
2	Mg 279.077 IEC†	-0.3	-0.5	-37.640	ug/L	-37.640	ppb	17:35:15
2	Na 589.592 Radial†	-174.4	-7.2	-19.603	ug/L	-19.603	ppb	17:35:15
2	Sr 421.552†	22.0	17.0	0.2613	ug/L	0.2613	ppb	17:35:15
2	Sc 361.383	1054664.8	1054664.8	99.414	%			17:36:17
2	Y 371.029	849471.0	849471.0	99.561	%			17:36:17
2	Ag 328.068†	636.0	1.2	-0.0053	ug/L	-0.0053	ppb	17:36:22
2	As 188.979†	-41.2	-4.6	-1.0850	ug/L	-1.0850	ppb	17:36:42
2	B 249.677†	-129.1	251.7	3.9268	ug/L	3.9268	ppb	17:36:22
2	Ba 233.527†	58.7	34.8	0.1755	ug/L	0.1755	ppb	17:36:42
2	Be 313.107†	-7492.3	-220.2	-0.0683	ug/L	-0.0683	ppb	17:36:22
2	Cd 226.502†	-289.0	-13.1	-0.0941	ug/L	-0.0941	ppb	17:36:42
2	Co 228.616†	-101.5	-11.7	-0.1447	ug/L	-0.1447	ppb	17:36:42
2	Cr 267.716†	7.6	36.2	0.3079	ug/L	0.3079	ppb	17:36:42
2	Cu 324.752†	10005.9	-126.4	-0.3136	ug/L	-0.3136	ppb	17:36:22
2	Mn 257.610†	926.3	104.7	0.0794	ug/L	0.0794	ppb	17:36:42
2	Mo 202.031†	39.4	7.9	0.3125	ug/L	0.3125	ppb	17:36:42
2	Ni 231.604†	160.5	13.2	0.2113	ug/L	0.2113	ppb	17:36:42

2	P 214.914†	348.7	13.8	4.9695	ug/L	4.9695 ppb	17:36:42
2	Pb 220.353†	-13.8	15.2	1.1514	ug/L	1.1514 ppb	17:36:42
2	S 181.975 Axial†	69.8	2.4	2.0331	ug/L	2.0331 ppb	17:36:42
2	Sb 206.836†	39.5	-5.7	-1.1067	ug/L	-1.1067 ppb	17:36:42
2	Se 196.026†	-4.7	16.9	5.3908	ug/L	5.3908 ppb	17:36:42
2	Si 251.611†	691.5	135.5	2.7848	ug/L	2.7848 ppb	17:36:42
2	Sn 189.927†	8.2	2.8	0.2919	ug/L	0.2919 ppb	17:36:42
2	Ti 334.940†	-1031.6	71.6	0.0960	ug/L	0.0960 ppb	17:36:22
2	Tl 190.801†	-63.5	-2.5	-0.4257	ug/L	-0.4257 ppb	17:36:42
2	U 409.014†	-3824.1	-11.9	-0.2911	ug/L	-0.2911 ppb	17:36:17
2	V 292.402†	-1634.2	9.0	0.0575	ug/L	0.0575 ppb	17:36:22
2	Zn 213.857†	1102.1	-13.8	-0.0730	ug/L	-0.0730 ppb	17:36:42
2	SiO2†	713.1	114.9	5.0540	ug/L	5.0540 ppb	17:37:23
3	Sc Radial	5371.8	5371.8	96.5	%		17:35:20
3	Y RADIAL	4656.4	4656.4	96.69	%		17:35:20
3	Al 396.153Radial†	-47.5	43.0	39.121	ug/L	39.121 ppb	17:35:20
3	Ca 317.933Radial†	28.5	12.6	31.325	ug/L	31.325 ppb	17:35:40
3	Fe 238.204 Radial†	-1.6	-2.0	-69.949	ug/L	-69.949 ppb	17:35:40
3	K 766.490 Radial†	1509.0	90.1	39.047	ug/L	39.047 ppb	17:35:20
3	Mg 279.077 IEC†	1.1	0.9	73.109	ug/L	73.109 ppb	17:35:40
3	Na 589.592 Radial†	-173.4	-9.2	-24.998	ug/L	-24.998 ppb	17:35:40
3	Sr 421.552†	26.4	21.9	0.3366	ug/L	0.3366 ppb	17:35:40
3	Sc 361.383	1050946.8	1050946.8	99.063	%		17:36:47
3	Y 371.029	846133.3	846133.3	99.170	%		17:36:47
3	Ag 328.068†	637.6	5.0	-0.0063	ug/L	-0.0063 ppb	17:36:52
3	As 188.979†	-45.7	-9.2	-2.1868	ug/L	-2.1868 ppb	17:37:12
3	B 249.677†	-129.1	251.2	3.9248	ug/L	3.9248 ppb	17:36:52
3	Ba 233.527†	54.3	30.5	0.1524	ug/L	0.1524 ppb	17:37:12
3	Be 313.107†	-7441.9	-196.1	-0.0612	ug/L	-0.0612 ppb	17:36:52
3	Cd 226.502†	-273.5	1.6	0.0201	ug/L	0.0201 ppb	17:37:12
3	Co 228.616†	-94.7	-5.1	-0.0633	ug/L	-0.0633 ppb	17:37:12
3	Cr 267.716†	-24.7	3.7	0.0290	ug/L	0.0290 ppb	17:37:12
3	Cu 324.752†	10095.2	-0.6	-0.0056	ug/L	-0.0056 ppb	17:36:52
3	Mn 257.610†	958.1	140.2	0.1002	ug/L	0.1002 ppb	17:37:12
3	Mo 202.031†	26.9	-4.6	-0.1879	ug/L	-0.1879 ppb	17:37:12
3	Ni 231.604†	162.9	16.2	0.2601	ug/L	0.2601 ppb	17:37:12
3	P 214.914†	329.6	-4.2	-1.3934	ug/L	-1.3934 ppb	17:37:12
3	Pb 220.353†	-4.5	24.6	1.8558	ug/L	1.8558 ppb	17:37:12
3	S 181.975 Axial†	59.5	-7.8	-6.6180	ug/L	-6.6180 ppb	17:37:12
3	Sb 206.836†	58.7	13.8	2.7186	ug/L	2.7186 ppb	17:37:12
3	Se 196.026†	-29.2	-7.9	-2.8017	ug/L	-2.8017 ppb	17:37:12
3	Si 251.611†	692.2	138.6	2.8475	ug/L	2.8475 ppb	17:37:12
3	Sn 189.927†	16.1	10.7	1.1174	ug/L	1.1174 ppb	17:37:12
3	Ti 334.940†	-1170.3	-72.1	-0.0937	ug/L	-0.0937 ppb	17:36:52
3	Tl 190.801†	-56.9	4.0	0.6686	ug/L	0.6686 ppb	17:37:12
3	U 409.014†	-3679.4	120.5	2.9987	ug/L	2.9987 ppb	17:36:47
3	V 292.402†	-1672.2	-35.2	-0.1855	ug/L	-0.1855 ppb	17:36:52
3	Zn 213.857†	1090.3	-21.8	-0.1184	ug/L	-0.1184 ppb	17:37:12
3	SiO2†	671.7	75.7	3.3133	ug/L	3.3133 ppb	17:37:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1052648.3	99.224	%	0.1771				0.18%
Sc Radial	5441.8	97.8	%	1.11				1.14%
Y 371.029	847390.6	99.317	%	0.2127				0.21%
Y RADIAL	4719.5	98.00	%	1.153				1.18%
Ag 328.068†	24.7	0.0862	ug/L	0.15943	0.0862	ppb	0.15943	184.88%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	25.3	23.035	ug/L	15.5573	23.035	ppb	15.5573	67.54%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.4	-2.6910	ug/L	1.90870	-2.6910	ppb	1.90870	70.93%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	266.7	4.1609	ug/L	0.40719	4.1609	ppb	0.40719	9.79%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.3	0.1323	ug/L	0.05607	0.1323	ppb	0.05607	42.39%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-217.9	-0.0678	ug/L	0.00637	-0.0678	ppb	0.00637	9.40%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.0	32.295	ug/L	1.7810	32.295	ppb	1.7810	5.51%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -8.0     -0.0554 ug/L       0.06535     -0.0554 ppb        0.06535 117.98%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -3.5     -0.0434 ug/L       0.11262     -0.0434 ppb        0.11262 259.50%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              17.5      0.1483 ug/L       0.14376      0.1483 ppb        0.14376  96.96%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -46.9     -0.1177 ug/L       0.17025     -0.1177 ppb        0.17025 144.65%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       -1.0     -34.790 ug/L       33.3662     -34.790 ppb        33.3662  95.91%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        26.9      11.663 ug/L       29.3000      11.663 ppb        29.3000 251.23%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.1      4.3431 ug/L      60.03582      4.3431 ppb       60.03582 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             120.3      0.0904 ug/L       0.01045      0.0904 ppb        0.01045  11.56%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               0.3      0.0080 ug/L       0.26733      0.0080 ppb        0.26733 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -6.8     -18.359 ug/L        7.3401     -18.359 ppb         7.3401  39.98%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               9.9      0.1584 ug/L       0.13612      0.1584 ppb        0.13612  85.96%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                9.2      3.3031 ug/L       4.12410      3.3031 ppb        4.12410 124.85%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              14.8      1.1140 ug/L       0.76116      1.1140 ppb        0.76116  68.33%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -3.2     -2.7204 ug/L       4.38863     -2.7204 ppb        4.38863 161.32%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               7.2      1.4055 ug/L       2.17635      1.4055 ppb        2.17635 154.85%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               5.7      1.7327 ug/L       4.16593      1.7327 ppb        4.16593 240.43%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             143.2      2.9495 ug/L       0.23314      2.9495 ppb        0.23314   7.90%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               3.0      0.3165 ug/L       0.78890      0.3165 ppb        0.78890 249.25%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              16.0      0.2461 ug/L       0.09894      0.2461 ppb        0.09894  40.20%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -3.9     -0.0029 ug/L       0.09509     -0.0029 ppb        0.09509 >999.9%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               2.4      0.4023 ug/L       0.73219      0.4023 ppb        0.73219 181.98%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -6.2     -0.1494 ug/L       3.07967     -0.1494 ppb        3.07967 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                6.4      0.0410 ug/L       0.21872      0.0410 ppb        0.21872 533.08%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -18.4     -0.1000 ug/L       0.02387     -0.1000 ppb        0.02387  23.86%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   100.7      4.4390 ug/L       0.97632      4.4390 ppb        0.97632  21.99%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 41
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 18:26:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5588.9	5588.9	100	%			18:28:46
1	Y RADIAL	4827.1	4827.1	100.2	%			18:28:46
1	Al 396.153Radial†	5257.9	5327.5	4828.0	ug/L	4828.0	ppb	18:28:46
1	Ca 317.933Radial†	1950.6	1925.2	4795.5	ug/L	4795.5	ppb	18:29:06
1	Fe 238.204 Radial†	138.4	137.5	4837.6	ug/L	4837.6	ppb	18:29:06
1	K 766.490 Radial†	13215.6	11685.6	5064.2	ug/L	5064.2	ppb	18:28:46
1	Mg 279.077 IEC†	63.1	62.7	4968.3	ug/L	4968.3	ppb	18:29:06
1	Na 589.592 Radial†	3554.9	3710.1	10032	ug/L	10032	ppb	18:28:46
1	Sr 421.552†	33983.5	33831.9	521.19	ug/L	521.19	ppb	18:28:46
1	Sc 361.383	1068303.1	1068303.1	100.70	%			18:30:05
1	Y 371.029	852058.0	852058.0	99.864	%			18:30:05
1	Ag 328.068†	127441.9	125918.1	501.45	ug/L	501.45	ppb	18:30:05
1	As 188.979†	2040.3	2063.0	487.43	ug/L	487.43	ppb	18:30:25
1	B 249.677†	31022.1	31188.1	484.21	ug/L	484.21	ppb	18:30:05
1	Ba 233.527†	98059.6	97354.2	493.97	ug/L	493.97	ppb	18:30:05
1	Be 313.107†	1587928.2	1584214.5	493.74	ug/L	493.74	ppb	18:30:05
1	Cd 226.502†	66395.2	66211.6	494.96	ug/L	494.96	ppb	18:30:05
1	Co 228.616†	38552.9	38375.5	478.21	ug/L	478.21	ppb	18:30:25
1	Cr 267.716†	58170.9	57795.4	492.94	ug/L	492.94	ppb	18:30:05
1	Cu 324.752†	211050.8	199393.6	492.24	ug/L	492.24	ppb	18:30:05
1	Mn 257.610†	628414.5	623222.5	493.05	ug/L	493.05	ppb	18:30:05
1	Mo 202.031†	12515.0	12396.3	496.52	ug/L	496.52	ppb	18:30:25
1	Ni 231.604†	30426.7	30067.1	481.60	ug/L	481.60	ppb	18:30:25
1	P 214.914†	7311.2	6923.4	2372.2	ug/L	2372.2	ppb	18:30:25
1	Pb 220.353†	6579.0	6562.4	493.27	ug/L	493.27	ppb	18:30:25
1	S 181.975 Axial†	1239.0	1162.6	983.12	ug/L	983.12	ppb	18:30:25
1	Sb 206.836†	2522.4	2459.5	489.52	ug/L	489.52	ppb	18:30:25
1	Se 196.026†	1503.5	1514.7	511.38	ug/L	511.38	ppb	18:30:25
1	Si 251.611†	122852.3	121438.8	2494.0	ug/L	2494.0	ppb	18:30:05
1	Sn 189.927†	4717.2	4679.0	487.10	ug/L	487.10	ppb	18:30:25
1	Ti 334.940†	380813.1	379277.2	496.43	ug/L	496.43	ppb	18:30:05
1	Tl 190.801†	2851.3	2892.9	489.92	ug/L	489.92	ppb	18:30:25
1	U 409.014†	15937.4	19661.4	486.29	ug/L	486.29	ppb	18:30:05
1	V 292.402†	85502.0	86560.8	496.88	ug/L	496.88	ppb	18:30:05
1	Zn 213.857†	90262.5	88513.1	489.79	ug/L	489.79	ppb	18:30:05
1	SiO2†	122486.8	121033.6	5322.2	ug/L	5322.2	ppb	18:31:25
2	Sc Radial	5417.1	5417.1	97.3	%			18:29:11
2	Y RADIAL	4690.9	4690.9	97.41	%			18:29:11
2	Al 396.153Radial†	5158.4	5391.3	4885.9	ug/L	4885.9	ppb	18:29:11
2	Ca 317.933Radial†	1945.7	1981.8	4936.5	ug/L	4936.5	ppb	18:29:31
2	Fe 238.204 Radial†	138.5	142.0	4996.1	ug/L	4996.1	ppb	18:29:31
2	K 766.490 Radial†	13023.9	11906.1	5159.9	ug/L	5159.9	ppb	18:29:11
2	Mg 279.077 IEC†	63.2	64.7	5131.2	ug/L	5131.2	ppb	18:29:31
2	Na 589.592 Radial†	3451.7	3716.2	10048	ug/L	10048	ppb	18:29:11
2	Sr 421.552†	33010.3	33905.2	522.32	ug/L	522.32	ppb	18:29:11
2	Sc 361.383	1062936.5	1062936.5	100.19	%			18:30:33
2	Y 371.029	847024.2	847024.2	99.274	%			18:30:33
2	Ag 328.068†	127152.6	126268.3	502.89	ug/L	502.89	ppb	18:30:33
2	As 188.979†	2046.3	2079.2	491.25	ug/L	491.25	ppb	18:30:53
2	B 249.677†	30951.3	31273.0	485.50	ug/L	485.50	ppb	18:30:33
2	Ba 233.527†	97627.6	97414.7	494.29	ug/L	494.29	ppb	18:30:33
2	Be 313.107†	1578732.8	1582998.5	493.37	ug/L	493.37	ppb	18:30:33
2	Cd 226.502†	66044.5	66194.5	494.82	ug/L	494.82	ppb	18:30:33
2	Co 228.616†	38671.0	38686.7	482.09	ug/L	482.09	ppb	18:30:53
2	Cr 267.716†	57957.9	57874.6	493.62	ug/L	493.62	ppb	18:30:33
2	Cu 324.752†	210487.3	199889.3	493.47	ug/L	493.47	ppb	18:30:33
2	Mn 257.610†	625861.3	623824.9	493.55	ug/L	493.55	ppb	18:30:33
2	Mo 202.031†	12553.9	12497.9	500.60	ug/L	500.60	ppb	18:30:53
2	Ni 231.604†	30528.4	30321.1	485.67	ug/L	485.67	ppb	18:30:53

2	P 214.914†	7329.1	6978.0	2391.3 ug/L	2391.3 ppb	18:30:53
2	Pb 220.353†	6568.6	6585.0	494.98 ug/L	494.98 ppb	18:30:53
2	S 181.975 Axial†	1245.6	1175.3	993.91 ug/L	993.91 ppb	18:30:53
2	Sb 206.836†	2546.9	2496.6	496.94 ug/L	496.94 ppb	18:30:53
2	Se 196.026†	1492.9	1511.7	510.97 ug/L	510.97 ppb	18:30:53
2	Si 251.611†	122554.7	121757.8	2500.5 ug/L	2500.5 ppb	18:30:33
2	Sn 189.927†	4730.7	4716.1	490.97 ug/L	490.97 ppb	18:30:53
2	Ti 334.940†	379257.3	379633.7	496.91 ug/L	496.91 ppb	18:30:33
2	Tl 190.801†	2867.7	2923.6	495.08 ug/L	495.08 ppb	18:30:53
2	U 409.014†	15634.2	19438.8	480.75 ug/L	480.75 ppb	18:30:33
2	V 292.402†	85223.8	86711.9	497.76 ug/L	497.76 ppb	18:30:33
2	Zn 213.857†	89962.6	88666.4	490.59 ug/L	490.59 ppb	18:30:33
2	SiO2†	122549.6	121710.4	5351.9 ug/L	5351.9 ppb	18:31:31
3	Sc Radial	5484.7	5484.7	98.6 %		18:29:36
3	Y RADIAL	4730.2	4730.2	98.22 %		18:29:36
3	Al 396.153Radial†	5169.3	5337.0	4836.3 ug/L	4836.3 ppb	18:29:36
3	Ca 317.933Radial†	1938.5	1949.8	4856.8 ug/L	4856.8 ppb	18:29:56
3	Fe 238.204 Radial†	136.0	137.6	4843.0 ug/L	4843.0 ppb	18:29:56
3	K 766.490 Radial†	12946.2	11662.2	5054.1 ug/L	5054.1 ppb	18:29:36
3	Mg 279.077 IEC†	60.7	61.4	4870.0 ug/L	4870.0 ppb	18:29:56
3	Na 589.592 Radial†	3449.0	3669.8	9922.7 ug/L	9922.7 ppb	18:29:36
3	Sr 421.552†	33301.1	33781.9	520.42 ug/L	520.42 ppb	18:29:36
3	Sc 361.383	1054506.0	1054506.0	99.399 %		18:31:00
3	Y 371.029	840120.6	840120.6	98.465 %		18:31:00
3	Ag 328.068†	125880.9	126003.5	501.80 ug/L	501.80 ppb	18:31:00
3	As 188.979†	2037.3	2086.5	492.92 ug/L	492.92 ppb	18:31:20
3	B 249.677†	30577.2	31143.6	483.50 ug/L	483.50 ppb	18:31:00
3	Ba 233.527†	96914.0	97475.7	494.59 ug/L	494.59 ppb	18:31:00
3	Be 313.107†	1568704.5	1585506.7	494.15 ug/L	494.15 ppb	18:31:00
3	Cd 226.502†	65630.3	66304.8	495.66 ug/L	495.66 ppb	18:31:00
3	Co 228.616†	38602.1	38926.0	485.09 ug/L	485.09 ppb	18:31:20
3	Cr 267.716†	57510.6	57887.0	493.72 ug/L	493.72 ppb	18:31:00
3	Cu 324.752†	207975.8	199042.2	491.37 ug/L	491.37 ppb	18:31:00
3	Mn 257.610†	621419.5	624350.2	493.95 ug/L	493.95 ppb	18:31:00
3	Mo 202.031†	12556.7	12600.8	504.71 ug/L	504.71 ppb	18:31:20
3	Ni 231.604†	30510.1	30546.3	489.28 ug/L	489.28 ppb	18:31:20
3	P 214.914†	7318.1	7025.4	2408.5 ug/L	2408.5 ppb	18:31:20
3	Pb 220.353†	6612.4	6681.5	502.23 ug/L	502.23 ppb	18:31:20
3	S 181.975 Axial†	1242.2	1181.9	999.50 ug/L	999.50 ppb	18:31:20
3	Sb 206.836†	2533.3	2503.2	498.38 ug/L	498.38 ppb	18:31:20
3	Se 196.026†	1473.8	1504.3	508.05 ug/L	508.05 ppb	18:31:20
3	Si 251.611†	121258.9	121432.1	2493.7 ug/L	2493.7 ppb	18:31:00
3	Sn 189.927†	4728.0	4751.1	494.60 ug/L	494.60 ppb	18:31:20
3	Ti 334.940†	376088.3	379471.8	496.69 ug/L	496.69 ppb	18:31:00
3	Tl 190.801†	2855.1	2933.7	496.79 ug/L	496.79 ppb	18:31:20
3	U 409.014†	15414.6	19342.5	478.38 ug/L	478.38 ppb	18:31:00
3	V 292.402†	84460.7	86624.2	497.33 ug/L	497.33 ppb	18:31:00
3	Zn 213.857†	89241.2	88658.5	490.56 ug/L	490.56 ppb	18:31:00
3	SiO2†	122201.2	122337.8	5379.5 ug/L	5379.5 ppb	18:31:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1061915.2	100.10	%	0.656				0.65%
Sc Radial	5496.9	98.8	%	1.56				1.57%
Y 371.029	846400.9	99.201	%	0.7024				0.71%
Y RADIAL	4749.4	98.62	%	1.455				1.48%
Ag 328.068†	126063.3	502.04	ug/L	0.753	502.04	ppb	0.753	0.15%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5351.9	4850.1	ug/L	31.28	4850.1	ppb	31.28	0.64%
QC value within limits for Al 396.153Radial Recovery = 97.00%								
As 188.979†	2076.3	490.53	ug/L	2.816	490.53	ppb	2.816	0.57%
QC value within limits for As 188.979 Recovery = 98.11%								
B 249.677†	31201.6	484.40	ug/L	1.016	484.40	ppb	1.016	0.21%
QC value within limits for B 249.677 Recovery = 96.88%								
Ba 233.527†	97414.9	494.28	ug/L	0.308	494.28	ppb	0.308	0.06%
QC value within limits for Ba 233.527 Recovery = 98.86%								
Be 313.107†	1584239.9	493.75	ug/L	0.390	493.75	ppb	0.390	0.08%
QC value within limits for Be 313.107 Recovery = 98.75%								
Ca 317.933Radial†	1952.3	4862.9	ug/L	70.70	4862.9	ppb	70.70	1.45%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.26%
Cd 226.502†            66237.0      495.15 ug/L        0.452      495.15 ppb        0.452   0.09%
   QC value within limits for Cd 226.502  Recovery = 99.03%
Co 228.616†            38662.7      481.80 ug/L        3.448      481.80 ppb        3.448   0.72%
   QC value within limits for Co 228.616  Recovery = 96.36%
Cr 267.716†            57852.3      493.43 ug/L        0.426      493.43 ppb        0.426   0.09%
   QC value within limits for Cr 267.716  Recovery = 98.69%
Cu 324.752†           199441.7      492.36 ug/L        1.055      492.36 ppb        1.055   0.21%
   QC value within limits for Cu 324.752  Recovery = 98.47%
Fe 238.204 Radial†       139.0      4892.2 ug/L       89.98      4892.2 ppb       89.98   1.84%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.84%
K 766.490 Radial†      11751.3      5092.7 ug/L       58.41      5092.7 ppb       58.41   1.15%
   QC value within limits for K 766.490 Radial  Recovery = 101.85%
Mg 279.077 IEC†           62.9      4989.9 ug/L      131.93      4989.9 ppb      131.93   2.64%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.80%
Mn 257.610†           623799.2      493.51 ug/L        0.448      493.51 ppb        0.448   0.09%
   QC value within limits for Mn 257.610  Recovery = 98.70%
Mo 202.031†            12498.3      500.61 ug/L        4.094      500.61 ppb        4.094   0.82%
   QC value within limits for Mo 202.031  Recovery = 100.12%
Na 589.592 Radial†      3698.7       10001 ug/L         68.2       10001 ppb         68.2   0.68%
   QC value within limits for Na 589.592 Radial  Recovery = 100.01%
Ni 231.604†            30311.5      485.52 ug/L        3.841      485.52 ppb        3.841   0.79%
   QC value within limits for Ni 231.604  Recovery = 97.10%
P 214.914†              6975.6      2390.7 ug/L       18.15      2390.7 ppb       18.15   0.76%
   QC value within limits for P 214.914  Recovery = 95.63%
Pb 220.353†             6609.6      496.83 ug/L        4.755      496.83 ppb        4.755   0.96%
   QC value within limits for Pb 220.353  Recovery = 99.37%
S 181.975 Axial†        1173.3      992.18 ug/L        8.322      992.18 ppb        8.322   0.84%
   QC value within limits for S 181.975 Axial  Recovery = 99.22%
Sb 206.836†             2486.4      494.95 ug/L        4.754      494.95 ppb        4.754   0.96%
   QC value within limits for Sb 206.836  Recovery = 98.99%
Se 196.026†             1510.2      510.13 ug/L        1.814      510.13 ppb        1.814   0.36%
   QC value within limits for Se 196.026  Recovery = 102.03%
Si 251.611†           121542.9      2496.1 ug/L         3.82      2496.1 ppb         3.82   0.15%
   QC value within limits for Si 251.611  Recovery = 99.84%
Sn 189.927†             4715.4      490.89 ug/L        3.754      490.89 ppb        3.754   0.76%
   QC value within limits for Sn 189.927  Recovery = 98.18%
Sr 421.552†            33839.7      521.31 ug/L        0.955      521.31 ppb        0.955   0.18%
   QC value within limits for Sr 421.552  Recovery = 104.26%
Ti 334.940†           379460.9      496.67 ug/L        0.240      496.67 ppb        0.240   0.05%
   QC value within limits for Ti 334.940  Recovery = 99.33%
Tl 190.801†             2916.7      493.93 ug/L        3.574      493.93 ppb        3.574   0.72%
   QC value within limits for Tl 190.801  Recovery = 98.79%
U 409.014†             19480.9      481.80 ug/L        4.062      481.80 ppb        4.062   0.84%
   QC value within limits for U 409.014  Recovery = 96.36%
V 292.402†             86632.3      497.32 ug/L        0.439      497.32 ppb        0.439   0.09%
   QC value within limits for V 292.402  Recovery = 99.46%
Zn 213.857†            88612.7      490.31 ug/L        0.454      490.31 ppb        0.454   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.06%
SiO2†                 121694.0      5351.2 ug/L       28.64      5351.2 ppb       28.64   0.54%
   QC value within limits for SiO2  Recovery = 100.07%
All analyte(s) passed QC.
```

Sequence No.: 42
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 18:33:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5570.5	5570.5	100	%			18:35:37
1	Y RADIAL	4845.4	4845.4	100.6	%			18:35:37
1	Al 396.153Radial†	-90.2	2.1	1.9202	ug/L	1.9202	ppb	18:35:37
1	Ca 317.933Radial†	28.8	11.8	29.428	ug/L	29.428	ppb	18:35:57
1	Fe 238.204 Radial†	0.0	-0.3	-11.611	ug/L	-11.611	ppb	18:35:57
1	K 766.490 Radial†	1494.6	20.0	8.6702	ug/L	8.6702	ppb	18:35:37
1	Mg 279.077 IEC†	1.5	1.3	105.73	ug/L	105.73	ppb	18:35:57
1	Na 589.592 Radial†	-191.2	-20.5	-55.558	ug/L	-55.558	ppb	18:35:57
1	Sr 421.552†	31.9	26.3	0.4057	ug/L	0.4057	ppb	18:35:57
1	Sc 361.383	1057788.8	1057788.8	99.708	%			18:36:54
1	Y 371.029	852989.6	852989.6	99.974	%			18:36:54
1	Ag 328.068†	633.6	-3.1	-0.0162	ug/L	-0.0162	ppb	18:36:59
1	As 188.979†	-50.9	-14.1	-3.3143	ug/L	-3.3143	ppb	18:37:19
1	B 249.677†	-3.1	378.4	5.8995	ug/L	5.8995	ppb	18:36:59
1	Ba 233.527†	39.1	14.9	0.0761	ug/L	0.0761	ppb	18:37:19
1	Be 313.107†	-7409.3	-114.8	-0.0356	ug/L	-0.0356	ppb	18:36:59
1	Cd 226.502†	-282.3	-5.5	-0.0396	ug/L	-0.0396	ppb	18:37:19
1	Co 228.616†	-88.1	2.1	0.0260	ug/L	0.0260	ppb	18:37:19
1	Cr 267.716†	-19.8	8.8	0.0745	ug/L	0.0745	ppb	18:37:19
1	Cu 324.752†	10081.3	-80.5	-0.1992	ug/L	-0.1992	ppb	18:36:59
1	Mn 257.610†	942.5	118.3	0.0899	ug/L	0.0899	ppb	18:37:19
1	Mo 202.031†	34.1	2.4	0.0971	ug/L	0.0971	ppb	18:37:19
1	Ni 231.604†	157.1	9.3	0.1495	ug/L	0.1495	ppb	18:37:19
1	P 214.914†	334.7	-1.2	-0.3908	ug/L	-0.3908	ppb	18:37:19
1	Pb 220.353†	-21.1	7.9	0.5954	ug/L	0.5954	ppb	18:37:19
1	S 181.975 Axial†	62.2	-5.4	-4.6035	ug/L	-4.6035	ppb	18:37:19
1	Sb 206.836†	45.1	-0.2	-0.0397	ug/L	-0.0397	ppb	18:37:19
1	Se 196.026†	-25.1	-3.5	-1.1824	ug/L	-1.1824	ppb	18:37:19
1	Si 251.611†	729.4	171.4	3.5345	ug/L	3.5345	ppb	18:37:19
1	Sn 189.927†	-0.2	-5.7	-0.5853	ug/L	-0.5853	ppb	18:37:19
1	Ti 334.940†	-1072.0	34.1	0.0461	ug/L	0.0461	ppb	18:36:59
1	Tl 190.801†	-44.0	17.2	2.9062	ug/L	2.9062	ppb	18:37:19
1	U 409.014†	-3773.0	50.8	1.2605	ug/L	1.2605	ppb	18:36:54
1	V 292.402†	-1587.4	60.7	0.3514	ug/L	0.3514	ppb	18:36:59
1	Zn 213.857†	1108.9	-10.2	-0.0601	ug/L	-0.0601	ppb	18:37:19
1	SiO2†	763.8	163.7	7.2275	ug/L	7.2275	ppb	18:38:25
2	Sc Radial	5380.9	5380.9	96.7	%			18:36:02
2	Y RADIAL	4671.6	4671.6	97.01	%			18:36:02
2	Al 396.153Radial†	-54.2	36.1	32.856	ug/L	32.856	ppb	18:36:02
2	Ca 317.933Radial†	33.1	17.3	43.141	ug/L	43.141	ppb	18:36:22
2	Fe 238.204 Radial†	0.2	-0.1	-4.2925	ug/L	-4.2925	ppb	18:36:22
2	K 766.490 Radial†	1508.4	86.9	37.731	ug/L	37.731	ppb	18:36:02
2	Mg 279.077 IEC†	-0.2	-0.4	-28.964	ug/L	-28.964	ppb	18:36:22
2	Na 589.592 Radial†	-195.5	-31.7	-85.785	ug/L	-85.785	ppb	18:36:22
2	Sr 421.552†	19.6	14.8	0.2281	ug/L	0.2281	ppb	18:36:22
2	Sc 361.383	1057995.8	1057995.8	99.728	%			18:37:24
2	Y 371.029	851628.4	851628.4	99.814	%			18:37:24
2	Ag 328.068†	708.9	72.2	0.2877	ug/L	0.2877	ppb	18:37:30
2	As 188.979†	-43.6	-6.8	-1.6049	ug/L	-1.6049	ppb	18:37:50
2	B 249.677†	-45.1	336.3	5.2404	ug/L	5.2404	ppb	18:37:30
2	Ba 233.527†	28.3	4.1	0.0213	ug/L	0.0213	ppb	18:37:50
2	Be 313.107†	-7323.1	-26.8	-0.0085	ug/L	-0.0085	ppb	18:37:30
2	Cd 226.502†	-289.4	-12.5	-0.0930	ug/L	-0.0930	ppb	18:37:50
2	Co 228.616†	-71.2	19.1	0.2376	ug/L	0.2376	ppb	18:37:50
2	Cr 267.716†	-45.1	-16.6	-0.1401	ug/L	-0.1401	ppb	18:37:50
2	Cu 324.752†	10091.4	-72.3	-0.1787	ug/L	-0.1787	ppb	18:37:30
2	Mn 257.610†	950.0	125.6	0.0993	ug/L	0.0993	ppb	18:37:50
2	Mo 202.031†	31.6	-0.1	-0.0040	ug/L	-0.0040	ppb	18:37:50
2	Ni 231.604†	150.8	3.0	0.0474	ug/L	0.0474	ppb	18:37:50

2	P 214.914†	336.3	0.3	0.1546	ug/L	0.1546 ppb	18:37:50
2	Pb 220.353†	-18.5	10.5	0.7931	ug/L	0.7931 ppb	18:37:50
2	S 181.975 Axial†	61.9	-5.8	-4.9273	ug/L	-4.9273 ppb	18:37:50
2	Sb 206.836†	55.1	9.8	1.9219	ug/L	1.9219 ppb	18:37:50
2	Se 196.026†	-31.6	-10.1	-3.2895	ug/L	-3.2895 ppb	18:37:50
2	Si 251.611†	1046.2	489.0	10.078	ug/L	10.078 ppb	18:37:50
2	Sn 189.927†	4.7	-0.7	-0.0741	ug/L	-0.0741 ppb	18:37:50
2	Ti 334.940†	-1151.0	-44.9	-0.0545	ug/L	-0.0545 ppb	18:37:30
2	Tl 190.801†	-54.3	7.0	1.1759	ug/L	1.1759 ppb	18:37:50
2	U 409.014†	-3948.4	-124.5	-3.0876	ug/L	-3.0876 ppb	18:37:24
2	V 292.402†	-1593.8	54.7	0.3042	ug/L	0.3042 ppb	18:37:30
2	Zn 213.857†	1096.4	-23.0	-0.1272	ug/L	-0.1272 ppb	18:37:50
2	SiO2†	1314.7	716.0	31.608	ug/L	31.608 ppb	18:38:30
3	Sc Radial	5576.5	5576.5	100	%		18:36:28
3	Y RADIAL	4832.1	4832.1	100.3	%		18:36:28
3	Al 396.153Radial†	-65.7	26.6	24.197	ug/L	24.197 ppb	18:36:28
3	Ca 317.933Radial†	27.5	10.5	26.260	ug/L	26.260 ppb	18:36:48
3	Fe 238.204 Radial†	-0.3	-0.6	-21.053	ug/L	-21.053 ppb	18:36:48
3	K 766.490 Radial†	1529.4	53.1	23.067	ug/L	23.067 ppb	18:36:28
3	Mg 279.077 IEC†	0.2	0.0	2.2903	ug/L	2.2903 ppb	18:36:48
3	Na 589.592 Radial†	-203.6	-32.7	-88.486	ug/L	-88.486 ppb	18:36:48
3	Sr 421.552†	22.8	17.3	0.2660	ug/L	0.2660 ppb	18:36:48
3	Sc 361.383	1061241.3	1061241.3	100.03	%		18:37:55
3	Y 371.029	855632.2	855632.2	100.28	%		18:37:55
3	Ag 328.068†	663.9	25.1	0.0953	ug/L	0.0953 ppb	18:38:00
3	As 188.979†	-38.9	-2.0	-0.4789	ug/L	-0.4789 ppb	18:38:20
3	B 249.677†	-82.5	299.0	4.6630	ug/L	4.6630 ppb	18:38:00
3	Ba 233.527†	44.2	19.9	0.1007	ug/L	0.1007 ppb	18:38:20
3	Be 313.107†	-7409.1	-90.4	-0.0282	ug/L	-0.0282 ppb	18:38:00
3	Cd 226.502†	-286.4	-8.6	-0.0619	ug/L	-0.0619 ppb	18:38:20
3	Co 228.616†	-83.6	6.8	0.0856	ug/L	0.0856 ppb	18:38:20
3	Cr 267.716†	-29.6	-1.0	-0.0079	ug/L	-0.0079 ppb	18:38:20
3	Cu 324.752†	10175.1	-19.6	-0.0495	ug/L	-0.0495 ppb	18:38:00
3	Mn 257.610†	934.9	107.5	0.0822	ug/L	0.0822 ppb	18:38:20
3	Mo 202.031†	33.3	1.5	0.0593	ug/L	0.0593 ppb	18:38:20
3	Ni 231.604†	159.3	11.0	0.1761	ug/L	0.1761 ppb	18:38:20
3	P 214.914†	339.4	2.4	0.8687	ug/L	0.8687 ppb	18:38:20
3	Pb 220.353†	-25.3	3.8	0.2912	ug/L	0.2912 ppb	18:38:20
3	S 181.975 Axial†	65.0	-2.8	-2.4133	ug/L	-2.4133 ppb	18:38:20
3	Sb 206.836†	58.1	12.6	2.4795	ug/L	2.4795 ppb	18:38:20
3	Se 196.026†	-19.4	2.2	0.6547	ug/L	0.6547 ppb	18:38:20
3	Si 251.611†	711.7	151.3	3.1134	ug/L	3.1134 ppb	18:38:20
3	Sn 189.927†	7.2	1.8	0.1856	ug/L	0.1856 ppb	18:38:20
3	Ti 334.940†	-1125.2	-15.6	-0.0177	ug/L	-0.0177 ppb	18:38:00
3	Tl 190.801†	-56.0	5.4	0.9103	ug/L	0.9103 ppb	18:38:20
3	U 409.014†	-3924.0	-87.9	-2.1781	ug/L	-2.1781 ppb	18:37:55
3	V 292.402†	-1605.8	47.6	0.2693	ug/L	0.2693 ppb	18:38:00
3	Zn 213.857†	1097.5	-25.3	-0.1400	ug/L	-0.1400 ppb	18:38:20
3	SiO2†	776.7	174.1	7.6706	ug/L	7.6706 ppb	18:38:35

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1059008.7	99.823	%	0.1825				0.18%
Sc Radial	5509.3	99.0	%	2.00				2.02%
Y 371.029	853416.8	100.02	%	0.239				0.24%
Y RADIAL	4783.0	99.32	%	2.009				2.02%
Ag 328.068†	31.4	0.1223	ug/L	0.15374	0.1223	ppb	0.15374	125.74%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	21.6	19.658	ug/L	15.9596	19.658	ppb	15.9596	81.19%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-7.6	-1.7994	ug/L	1.42769	-1.7994	ppb	1.42769	79.34%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	337.9	5.2677	ug/L	0.61871	5.2677	ppb	0.61871	11.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	13.0	0.0660	ug/L	0.04066	0.0660	ppb	0.04066	61.59%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-77.3	-0.0241	ug/L	0.01400	-0.0241	ppb	0.01400	58.17%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.2	32.943	ug/L	8.9724	32.943	ppb	8.9724	27.24%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -8.9     -0.0648 ug/L      0.02679     -0.0648 ppb      0.02679  41.33%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               9.3      0.1164 ug/L      0.10914      0.1164 ppb      0.10914  93.77%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -3.0     -0.0245 ug/L      0.10825     -0.0245 ppb      0.10825 441.83%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -57.5     -0.1425 ug/L      0.08116     -0.1425 ppb      0.08116  56.96%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       -0.4     -12.319 ug/L       8.4025     -12.319 ppb       8.4025  68.21%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        53.3      23.156 ug/L      14.5306      23.156 ppb      14.5306  62.75%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.3      26.353 ug/L      70.4982      26.353 ppb      70.4982 267.51%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             117.1      0.0904 ug/L      0.00855      0.0904 ppb      0.00855   9.45%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               1.3      0.0508 ug/L      0.05107      0.0508 ppb      0.05107 100.51%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      -28.3     -76.610 ug/L      18.2813     -76.610 ppb      18.2813  23.86%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               7.8      0.1243 ug/L      0.06794      0.1243 ppb      0.06794  54.65%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                0.5      0.2108 ug/L      0.63163      0.2108 ppb      0.63163 299.59%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               7.4      0.5599 ug/L      0.25287      0.5599 ppb      0.25287  45.16%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -4.7     -3.9814 ug/L      1.36763     -3.9814 ppb      1.36763  34.35%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               7.4      1.4539 ug/L      1.32321      1.4539 ppb      1.32321  91.01%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -3.8     -1.2724 ug/L      1.97364     -1.2724 ppb      1.97364 155.11%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             270.6      5.5752 ug/L      3.90485      5.5752 ppb      3.90485  70.04%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -1.5     -0.1580 ug/L      0.39223     -0.1580 ppb      0.39223 248.32%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              19.5      0.2999 ug/L      0.09352      0.2999 ppb      0.09352  31.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -8.8     -0.0087 ug/L      0.05087     -0.0087 ppb      0.05087 584.35%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               9.9      1.6641 ug/L      1.08383      1.6641 ppb      1.08383  65.13%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -53.9     -1.3351 ug/L      2.29339     -1.3351 ppb      2.29339 171.78%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               54.3      0.3083 ug/L      0.04121      0.3083 ppb      0.04121  13.37%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -19.5     -0.1091 ug/L      0.04293     -0.1091 ppb      0.04293  39.36%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   351.2      15.502 ug/L      13.9501      15.502 ppb      13.9501  89.99%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 50
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 19:29:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5579.6	5579.6	100	%			19:31:38
1	Y RADIAL	4874.6	4874.6	101.2	%			19:31:38
1	Al 396.153Radial†	5236.9	5315.2	4816.5	ug/L	4816.5	ppb	19:31:38
1	Ca 317.933Radial†	1954.9	1932.8	4814.2	ug/L	4814.2	ppb	19:31:58
1	Fe 238.204 Radial†	136.8	136.1	4788.5	ug/L	4788.5	ppb	19:31:58
1	K 766.490 Radial†	13099.3	11591.4	5023.5	ug/L	5023.5	ppb	19:31:38
1	Mg 279.077 IEC†	62.3	62.0	4913.8	ug/L	4913.8	ppb	19:31:58
1	Na 589.592 Radial†	3359.6	3521.1	9520.6	ug/L	9520.6	ppb	19:31:38
1	Sr 421.552†	32770.4	32677.9	503.41	ug/L	503.41	ppb	19:31:38
1	Sc 361.383	1070146.9	1070146.9	100.87	%			19:32:57
1	Y 371.029	852484.1	852484.1	99.914	%			19:32:57
1	Ag 328.068†	127666.5	125922.7	501.45	ug/L	501.45	ppb	19:32:57
1	As 188.979†	2076.4	2095.4	495.00	ug/L	495.00	ppb	19:33:17
1	B 249.677†	31028.7	31141.6	483.48	ug/L	483.48	ppb	19:32:57
1	Ba 233.527†	98321.4	97446.0	494.44	ug/L	494.44	ppb	19:32:57
1	Be 313.107†	1595760.9	1589262.6	495.32	ug/L	495.32	ppb	19:32:57
1	Cd 226.502†	66557.9	66259.4	495.33	ug/L	495.33	ppb	19:32:57
1	Co 228.616†	39092.0	38843.9	484.06	ug/L	484.06	ppb	19:33:17
1	Cr 267.716†	58269.9	57794.0	492.93	ug/L	492.93	ppb	19:32:57
1	Cu 324.752†	212056.8	200029.7	493.80	ug/L	493.80	ppb	19:32:57
1	Mn 257.610†	630775.5	624487.8	494.05	ug/L	494.05	ppb	19:32:57
1	Mo 202.031†	12701.7	12559.9	503.07	ug/L	503.07	ppb	19:33:17
1	Ni 231.604†	30808.3	30393.3	486.83	ug/L	486.83	ppb	19:33:17
1	P 214.914†	7433.8	7032.5	2410.6	ug/L	2410.6	ppb	19:33:17
1	Pb 220.353†	6663.5	6634.9	498.73	ug/L	498.73	ppb	19:33:17
1	S 181.975 Axial†	1255.5	1176.8	995.15	ug/L	995.15	ppb	19:33:17
1	Sb 206.836†	2574.6	2506.9	499.06	ug/L	499.06	ppb	19:33:17
1	Se 196.026†	1512.4	1521.0	513.27	ug/L	513.27	ppb	19:33:17
1	Si 251.611†	123290.6	121663.1	2498.5	ug/L	2498.5	ppb	19:32:57
1	Sn 189.927†	4787.8	4740.9	493.53	ug/L	493.53	ppb	19:33:17
1	Ti 334.940†	382228.6	380028.9	497.41	ug/L	497.41	ppb	19:32:57
1	Tl 190.801†	2883.4	2919.8	494.45	ug/L	494.45	ppb	19:33:17
1	U 409.014†	16048.9	19744.7	488.36	ug/L	488.36	ppb	19:32:57
1	V 292.402†	85739.2	86649.8	497.48	ug/L	497.48	ppb	19:32:57
1	Zn 213.857†	90657.7	88750.4	491.09	ug/L	491.09	ppb	19:32:57
1	SiO2†	121360.9	119707.9	5263.4	ug/L	5263.4	ppb	19:34:18
2	Sc Radial	5526.7	5526.7	99.3	%			19:32:03
2	Y RADIAL	4806.2	4806.2	99.80	%			19:32:03
2	Al 396.153Radial†	5220.4	5348.7	4846.9	ug/L	4846.9	ppb	19:32:03
2	Ca 317.933Radial†	1960.2	1956.8	4874.2	ug/L	4874.2	ppb	19:32:23
2	Fe 238.204 Radial†	138.1	138.7	4882.5	ug/L	4882.5	ppb	19:32:23
2	K 766.490 Radial†	13206.6	11824.7	5124.6	ug/L	5124.6	ppb	19:32:03
2	Mg 279.077 IEC†	63.5	63.8	5057.3	ug/L	5057.3	ppb	19:32:23
2	Na 589.592 Radial†	3425.4	3619.5	9786.7	ug/L	9786.7	ppb	19:32:03
2	Sr 421.552†	32787.4	33008.3	508.50	ug/L	508.50	ppb	19:32:03
2	Sc 361.383	1069421.6	1069421.6	100.80	%			19:33:25
2	Y 371.029	850767.2	850767.2	99.713	%			19:33:25
2	Ag 328.068†	127828.6	126169.4	502.47	ug/L	502.47	ppb	19:33:25
2	As 188.979†	2100.4	2120.5	500.93	ug/L	500.93	ppb	19:33:45
2	B 249.677†	31177.1	31309.7	486.08	ug/L	486.08	ppb	19:33:25
2	Ba 233.527†	98701.0	97888.6	496.69	ug/L	496.69	ppb	19:33:25
2	Be 313.107†	1601692.5	1596219.7	497.48	ug/L	497.48	ppb	19:33:25
2	Cd 226.502†	67042.3	66784.7	499.25	ug/L	499.25	ppb	19:33:25
2	Co 228.616†	39304.2	39080.8	487.01	ug/L	487.01	ppb	19:33:45
2	Cr 267.716†	58492.3	58053.8	495.14	ug/L	495.14	ppb	19:33:25
2	Cu 324.752†	212098.8	200214.0	494.26	ug/L	494.26	ppb	19:33:25
2	Mn 257.610†	634292.6	628401.0	497.15	ug/L	497.15	ppb	19:33:25
2	Mo 202.031†	12730.1	12596.7	504.55	ug/L	504.55	ppb	19:33:45
2	Ni 231.604†	30997.1	30601.3	490.16	ug/L	490.16	ppb	19:33:45

2	P 214.914†	7458.6	7062.1	2421.0 ug/L	2421.0 ppb	19:33:45
2	Pb 220.353†	6713.3	6688.8	502.77 ug/L	502.77 ppb	19:33:45
2	S 181.975 Axial†	1263.2	1185.3	1002.4 ug/L	1002.4 ppb	19:33:45
2	Sb 206.836†	2588.4	2522.4	502.15 ug/L	502.15 ppb	19:33:45
2	Se 196.026†	1517.5	1527.0	515.57 ug/L	515.57 ppb	19:33:45
2	Si 251.611†	123622.5	122075.3	2506.9 ug/L	2506.9 ppb	19:33:25
2	Sn 189.927†	4824.8	4780.8	497.69 ug/L	497.69 ppb	19:33:45
2	Ti 334.940†	383706.0	381751.4	499.67 ug/L	499.67 ppb	19:33:25
2	Tl 190.801†	2906.9	2945.1	498.72 ug/L	498.72 ppb	19:33:45
2	U 409.014†	15864.7	19572.8	484.08 ug/L	484.08 ppb	19:33:25
2	V 292.402†	86026.6	86992.5	499.42 ug/L	499.42 ppb	19:33:25
2	Zn 213.857†	91066.7	89217.1	493.65 ug/L	493.65 ppb	19:33:25
2	SiO2†	122592.3	121011.1	5320.8 ug/L	5320.8 ppb	19:34:23
3	Sc Radial	5491.9	5491.9	98.7 %		19:32:28
3	Y RADIAL	4742.0	4742.0	98.47 %		19:32:28
3	Al 396.153Radial†	5225.2	5386.7	4881.6 ug/L	4881.6 ppb	19:32:28
3	Ca 317.933Radial†	1954.3	1963.3	4890.2 ug/L	4890.2 ppb	19:32:48
3	Fe 238.204 Radial†	139.0	140.5	4943.8 ug/L	4943.8 ppb	19:32:48
3	K 766.490 Radial†	13129.4	11830.6	5127.3 ug/L	5127.3 ppb	19:32:28
3	Mg 279.077 IEC†	64.2	64.8	5141.9 ug/L	5141.9 ppb	19:32:48
3	Na 589.592 Radial†	3345.3	3560.1	9626.2 ug/L	9626.2 ppb	19:32:28
3	Sr 421.552†	32544.5	32971.0	507.93 ug/L	507.93 ppb	19:32:28
3	Sc 361.383	1067389.8	1067389.8	100.61 %		19:33:52
3	Y 371.029	849890.2	849890.2	99.610 %		19:33:52
3	Ag 328.068†	127915.7	126497.3	503.79 ug/L	503.79 ppb	19:33:52
3	As 188.979†	2089.0	2113.1	499.21 ug/L	499.21 ppb	19:34:12
3	B 249.677†	31139.2	31330.8	486.40 ug/L	486.40 ppb	19:33:52
3	Ba 233.527†	98481.1	97856.4	496.53 ug/L	496.53 ppb	19:33:52
3	Be 313.107†	1597578.3	1595155.0	497.15 ug/L	497.15 ppb	19:33:52
3	Cd 226.502†	66805.2	66675.6	498.43 ug/L	498.43 ppb	19:33:52
3	Co 228.616†	39252.6	39103.7	487.29 ug/L	487.29 ppb	19:34:12
3	Cr 267.716†	58510.6	58182.5	496.24 ug/L	496.24 ppb	19:33:52
3	Cu 324.752†	212145.6	200661.0	495.37 ug/L	495.37 ppb	19:33:52
3	Mn 257.610†	632379.1	627696.8	496.60 ug/L	496.60 ppb	19:33:52
3	Mo 202.031†	12734.3	12624.9	505.68 ug/L	505.68 ppb	19:34:12
3	Ni 231.604†	30995.1	30657.9	491.06 ug/L	491.06 ppb	19:34:12
3	P 214.914†	7454.6	7072.2	2424.4 ug/L	2424.4 ppb	19:34:12
3	Pb 220.353†	6705.0	6693.2	503.10 ug/L	503.10 ppb	19:34:12
3	S 181.975 Axial†	1263.4	1187.9	1004.6 ug/L	1004.6 ppb	19:34:12
3	Sb 206.836†	2589.4	2528.2	503.29 ug/L	503.29 ppb	19:34:12
3	Se 196.026†	1521.2	1533.6	517.94 ug/L	517.94 ppb	19:34:12
3	Si 251.611†	123412.2	122099.7	2507.4 ug/L	2507.4 ppb	19:33:52
3	Sn 189.927†	4810.8	4776.0	497.19 ug/L	497.19 ppb	19:34:12
3	Ti 334.940†	383009.9	381784.1	499.72 ug/L	499.72 ppb	19:33:52
3	Tl 190.801†	2888.0	2931.8	496.47 ug/L	496.47 ppb	19:34:12
3	U 409.014†	15804.6	19543.0	483.33 ug/L	483.33 ppb	19:33:52
3	V 292.402†	85924.5	87053.4	499.77 ug/L	499.77 ppb	19:33:52
3	Zn 213.857†	90916.1	89239.5	493.76 ug/L	493.76 ppb	19:33:52
3	SiO2†	123444.6	122089.7	5368.4 ug/L	5368.4 ppb	19:34:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1068986.1	100.76	%	0.135				0.13%
Sc Radial	5532.8	99.4	%	0.79				0.80%
Y 371.029	851047.2	99.746	%	0.1546				0.16%
Y RADIAL	4807.6	99.83	%	1.377				1.38%
Ag 328.068†	126196.4	502.57	ug/L	1.172	502.57	ppb	1.172	0.23%
QC value within limits for Ag 328.068 Recovery = 100.51%								
Al 396.153Radial†	5350.2	4848.3	ug/L	32.53	4848.3	ppb	32.53	0.67%
QC value within limits for Al 396.153Radial Recovery = 96.97%								
As 188.979†	2109.7	498.38	ug/L	3.053	498.38	ppb	3.053	0.61%
QC value within limits for As 188.979 Recovery = 99.68%								
B 249.677†	31260.7	485.32	ug/L	1.601	485.32	ppb	1.601	0.33%
QC value within limits for B 249.677 Recovery = 97.06%								
Ba 233.527†	97730.3	495.88	ug/L	1.254	495.88	ppb	1.254	0.25%
QC value within limits for Ba 233.527 Recovery = 99.18%								
Be 313.107†	1593545.8	496.65	ug/L	1.168	496.65	ppb	1.168	0.24%
QC value within limits for Be 313.107 Recovery = 99.33%								
Ca 317.933Radial†	1951.0	4859.5	ug/L	40.06	4859.5	ppb	40.06	0.82%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.19%
Cd 226.502†            66573.2      497.67 ug/L         2.067      497.67 ppb          2.067   0.42%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            39009.5      486.12 ug/L         1.790      486.12 ppb          1.790   0.37%
   QC value within limits for Co 228.616  Recovery = 97.22%
Cr 267.716†            58010.1      494.77 ug/L         1.690      494.77 ppb          1.690   0.34%
   QC value within limits for Cr 267.716  Recovery = 98.95%
Cu 324.752†           200301.6      494.48 ug/L         0.805      494.48 ppb          0.805   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.90%
Fe 238.204 Radial†       138.4      4871.6 ug/L         78.24      4871.6 ppb          78.24   1.61%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.43%
K 766.490 Radial†      11748.9      5091.8 ug/L         59.16      5091.8 ppb          59.16   1.16%
   QC value within limits for K 766.490 Radial  Recovery = 101.84%
Mg 279.077 IEC†           63.5      5037.7 ug/L        115.33      5037.7 ppb         115.33   2.29%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.75%
Mn 257.610†           626861.9      495.93 ug/L         1.655      495.93 ppb          1.655   0.33%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†            12593.9      504.43 ug/L         1.310      504.43 ppb          1.310   0.26%
   QC value within limits for Mo 202.031  Recovery = 100.89%
Na 589.592 Radial†      3566.9      9644.5 ug/L        133.99      9644.5 ppb         133.99   1.39%
   QC value within limits for Na 589.592 Radial  Recovery = 96.45%
Ni 231.604†            30550.8      489.35 ug/L         2.232      489.35 ppb          2.232   0.46%
   QC value within limits for Ni 231.604  Recovery = 97.87%
P 214.914†              7055.6      2418.7 ug/L          7.17      2418.7 ppb           7.17   0.30%
   QC value within limits for P 214.914  Recovery = 96.75%
Pb 220.353†             6672.3      501.53 ug/L         2.434      501.53 ppb          2.434   0.49%
   QC value within limits for Pb 220.353  Recovery = 100.31%
S 181.975 Axial†        1183.3      1000.7 ug/L          4.92      1000.7 ppb           4.92   0.49%
   QC value within limits for S 181.975 Axial  Recovery = 100.07%
Sb 206.836†             2519.1      501.50 ug/L         2.187      501.50 ppb          2.187   0.44%
   QC value within limits for Sb 206.836  Recovery = 100.30%
Se 196.026†             1527.2      515.59 ug/L         2.333      515.59 ppb          2.333   0.45%
   QC value within limits for Se 196.026  Recovery = 103.12%
Si 251.611†           121946.1      2504.3 ug/L          5.01      2504.3 ppb           5.01   0.20%
   QC value within limits for Si 251.611  Recovery = 100.17%
Sn 189.927†             4765.9      496.14 ug/L         2.269      496.14 ppb          2.269   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.23%
Sr 421.552†            32885.7      506.61 ug/L         2.787      506.61 ppb          2.787   0.55%
   QC value within limits for Sr 421.552  Recovery = 101.32%
Ti 334.940†           381188.1      498.93 ug/L         1.318      498.93 ppb          1.318   0.26%
   QC value within limits for Ti 334.940  Recovery = 99.79%
Tl 190.801†             2932.2      496.55 ug/L         2.133      496.55 ppb          2.133   0.43%
   QC value within limits for Tl 190.801  Recovery = 99.31%
U 409.014†             19620.1      485.26 ug/L         2.714      485.26 ppb          2.714   0.56%
   QC value within limits for U 409.014  Recovery = 97.05%
V 292.402†             86898.6      498.89 ug/L         1.234      498.89 ppb          1.234   0.25%
   QC value within limits for V 292.402  Recovery = 99.78%
Zn 213.857†            89069.0      492.83 ug/L         1.515      492.83 ppb          1.515   0.31%
   QC value within limits for Zn 213.857  Recovery = 98.57%
SiO2†                 120936.2      5317.6 ug/L        52.60      5317.6 ppb          52.60   0.99%
   QC value within limits for SiO2  Recovery = 99.44%
All analyte(s) passed QC.
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Sequence No.: 51
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 19:36:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5374.1	5374.1	96.6	%			19:38:29
1	Y RADIAL	4696.5	4696.5	97.52	%			19:38:29
1	Al 396.153Radial†	-58.5	31.7	28.784	ug/L	28.784	ppb	19:38:29
1	Ca 317.933Radial†	28.1	12.1	30.235	ug/L	30.235	ppb	19:38:49
1	Fe 238.204 Radial†	1.4	1.1	37.794	ug/L	37.794	ppb	19:38:49
1	K 766.490 Radial†	1525.7	106.7	46.357	ug/L	46.357	ppb	19:38:29
1	Mg 279.077 IEC†	1.1	0.9	73.550	ug/L	73.550	ppb	19:38:49
1	Na 589.592 Radial†	-181.6	-17.6	-47.695	ug/L	-47.695	ppb	19:38:49
1	Sr 421.552†	39.3	35.2	0.5419	ug/L	0.5419	ppb	19:38:49
1	Sc 361.383	1070703.4	1070703.4	100.93	%			19:39:46
1	Y 371.029	863600.0	863600.0	101.22	%			19:39:46
1	Ag 328.068†	615.9	-28.3	-0.0998	ug/L	-0.0998	ppb	19:39:51
1	As 188.979†	-59.5	-22.0	-5.1613	ug/L	-5.1613	ppb	19:40:11
1	B 249.677†	-175.6	207.6	3.2294	ug/L	3.2294	ppb	19:39:51
1	Ba 233.527†	31.3	6.7	0.0356	ug/L	0.0356	ppb	19:40:11
1	Be 313.107†	-7397.7	-13.6	-0.0039	ug/L	-0.0039	ppb	19:39:51
1	Cd 226.502†	-271.4	8.7	0.0606	ug/L	0.0606	ppb	19:40:11
1	Co 228.616†	-76.0	15.1	0.1890	ug/L	0.1890	ppb	19:40:11
1	Cr 267.716†	-20.4	8.4	0.0722	ug/L	0.0722	ppb	19:40:11
1	Cu 324.752†	10058.8	-224.8	-0.5524	ug/L	-0.5524	ppb	19:39:51
1	Mn 257.610†	974.5	138.5	0.1130	ug/L	0.1130	ppb	19:40:11
1	Mo 202.031†	47.7	15.5	0.6235	ug/L	0.6235	ppb	19:40:11
1	Ni 231.604†	138.4	-11.1	-0.1785	ug/L	-0.1785	ppb	19:40:11
1	P 214.914†	356.6	16.4	5.8768	ug/L	5.8768	ppb	19:40:11
1	Pb 220.353†	-19.3	10.0	0.7539	ug/L	0.7539	ppb	19:40:11
1	S 181.975 Axial†	61.8	-6.6	-5.6015	ug/L	-5.6015	ppb	19:40:11
1	Sb 206.836†	49.2	3.3	0.6754	ug/L	0.6754	ppb	19:40:11
1	Se 196.026†	-22.7	-0.8	-0.1363	ug/L	-0.1363	ppb	19:40:11
1	Si 251.611†	743.2	176.3	3.6097	ug/L	3.6097	ppb	19:40:11
1	Sn 189.927†	11.1	5.5	0.5729	ug/L	0.5729	ppb	19:40:11
1	Ti 334.940†	-1014.5	104.0	0.1377	ug/L	0.1377	ppb	19:39:51
1	Tl 190.801†	-49.9	11.9	2.0115	ug/L	2.0115	ppb	19:40:11
1	U 409.014†	-3829.8	40.1	0.9907	ug/L	0.9907	ppb	19:39:46
1	V 292.402†	-1605.8	61.7	0.3556	ug/L	0.3556	ppb	19:39:51
1	Zn 213.857†	1100.7	-31.8	-0.1819	ug/L	-0.1819	ppb	19:40:11
1	SiO2†	681.3	72.7	3.1504	ug/L	3.1504	ppb	19:41:17
2	Sc Radial	5423.6	5423.6	97.5	%			19:38:54
2	Y RADIAL	4709.7	4709.7	97.80	%			19:38:54
2	Al 396.153Radial†	-79.7	10.4	9.4611	ug/L	9.4611	ppb	19:38:54
2	Ca 317.933Radial†	30.9	14.8	36.864	ug/L	36.864	ppb	19:39:14
2	Fe 238.204 Radial†	1.1	0.8	29.567	ug/L	29.567	ppb	19:39:14
2	K 766.490 Radial†	1541.0	108.0	46.903	ug/L	46.903	ppb	19:38:54
2	Mg 279.077 IEC†	0.8	0.6	46.926	ug/L	46.926	ppb	19:39:14
2	Na 589.592 Radial†	-185.5	-19.9	-53.728	ug/L	-53.728	ppb	19:39:14
2	Sr 421.552†	24.1	19.3	0.2965	ug/L	0.2965	ppb	19:39:14
2	Sc 361.383	1074631.2	1074631.2	101.30	%			19:40:16
2	Y 371.029	865252.1	865252.1	101.41	%			19:40:16
2	Ag 328.068†	551.5	-94.1	-0.3683	ug/L	-0.3683	ppb	19:40:21
2	As 188.979†	-48.7	-11.2	-2.6132	ug/L	-2.6132	ppb	19:40:41
2	B 249.677†	-122.2	260.9	4.0624	ug/L	4.0624	ppb	19:40:21
2	Ba 233.527†	52.1	27.2	0.1381	ug/L	0.1381	ppb	19:40:41
2	Be 313.107†	-7362.3	48.1	0.0150	ug/L	0.0150	ppb	19:40:21
2	Cd 226.502†	-288.2	-6.8	-0.0544	ug/L	-0.0544	ppb	19:40:41
2	Co 228.616†	-94.2	-2.6	-0.0316	ug/L	-0.0316	ppb	19:40:41
2	Cr 267.716†	-13.7	15.1	0.1275	ug/L	0.1275	ppb	19:40:41
2	Cu 324.752†	10086.9	-233.4	-0.5741	ug/L	-0.5741	ppb	19:40:21
2	Mn 257.610†	988.6	148.9	0.1206	ug/L	0.1206	ppb	19:40:41
2	Mo 202.031†	41.7	9.4	0.3771	ug/L	0.3771	ppb	19:40:41
2	Ni 231.604†	169.3	18.9	0.3029	ug/L	0.3029	ppb	19:40:41

2	P 214.914†	338.5	-2.8	-0.9079 ug/L	-0.9079 ppb	19:40:41
2	Pb 220.353†	-33.2	-3.7	-0.2794 ug/L	-0.2794 ppb	19:40:41
2	S 181.975 Axial†	63.4	-5.3	-4.4472 ug/L	-4.4472 ppb	19:40:41
2	Sb 206.836†	33.8	-12.0	-2.3537 ug/L	-2.3537 ppb	19:40:41
2	Se 196.026†	-15.5	6.3	2.1636 ug/L	2.1636 ppb	19:40:41
2	Si 251.611†	674.3	105.6	2.1573 ug/L	2.1573 ppb	19:40:41
2	Sn 189.927†	4.1	-1.4	-0.1410 ug/L	-0.1410 ppb	19:40:41
2	Ti 334.940†	-1094.9	28.3	0.0371 ug/L	0.0371 ppb	19:40:21
2	Tl 190.801†	-63.2	-1.0	-0.1596 ug/L	-0.1596 ppb	19:40:41
2	U 409.014†	-3665.5	216.1	5.3590 ug/L	5.3590 ppb	19:40:16
2	V 292.402†	-1684.0	-9.7	-0.0432 ug/L	-0.0432 ppb	19:40:21
2	Zn 213.857†	1112.4	-24.2	-0.1411 ug/L	-0.1411 ppb	19:40:41
2	SiO2†	685.1	74.0	3.2229 ug/L	3.2229 ppb	19:41:22
3	Sc Radial	5472.8	5472.8	98.3 %		19:39:19
3	Y RADIAL	4805.3	4805.3	99.78 %		19:39:19
3	Al 396.153Radial†	-82.7	8.1	7.3936 ug/L	7.3936 ppb	19:39:19
3	Ca 317.933Radial†	29.5	13.1	32.614 ug/L	32.614 ppb	19:39:39
3	Fe 238.204 Radial†	-0.6	-1.0	-34.431 ug/L	-34.431 ppb	19:39:39
3	K 766.490 Radial†	1517.6	70.0	30.359 ug/L	30.359 ppb	19:39:19
3	Mg 279.077 IEC†	-0.5	-0.7	-53.396 ug/L	-53.396 ppb	19:39:39
3	Na 589.592 Radial†	-188.0	-20.8	-56.149 ug/L	-56.149 ppb	19:39:39
3	Sr 421.552†	24.7	19.7	0.3029 ug/L	0.3029 ppb	19:39:39
3	Sc 361.383	1050032.4	1050032.4	98.977 %		19:40:46
3	Y 371.029	846356.4	846356.4	99.196 %		19:40:46
3	Ag 328.068†	648.8	17.0	0.0573 ug/L	0.0573 ppb	19:40:51
3	As 188.979†	-45.5	-9.1	-2.1476 ug/L	-2.1476 ppb	19:41:11
3	B 249.677†	-163.9	216.0	3.3702 ug/L	3.3702 ppb	19:40:51
3	Ba 233.527†	33.2	9.3	0.0462 ug/L	0.0462 ppb	19:41:11
3	Be 313.107†	-7496.7	-258.0	-0.0799 ug/L	-0.0799 ppb	19:40:51
3	Cd 226.502†	-285.6	-10.9	-0.0773 ug/L	-0.0773 ppb	19:41:11
3	Co 228.616†	-89.6	-0.1	-0.0005 ug/L	-0.0005 ppb	19:41:11
3	Cr 267.716†	-31.3	-3.1	-0.0260 ug/L	-0.0260 ppb	19:41:11
3	Cu 324.752†	10126.5	39.9	0.0964 ug/L	0.0964 ppb	19:40:51
3	Mn 257.610†	978.4	161.5	0.1242 ug/L	0.1242 ppb	19:41:11
3	Mo 202.031†	32.0	0.6	0.0197 ug/L	0.0197 ppb	19:41:11
3	Ni 231.604†	150.5	3.8	0.0609 ug/L	0.0609 ppb	19:41:11
3	P 214.914†	349.5	16.2	5.7279 ug/L	5.7279 ppb	19:41:11
3	Pb 220.353†	-26.3	2.5	0.1954 ug/L	0.1954 ppb	19:41:11
3	S 181.975 Axial†	63.6	-3.6	-3.0286 ug/L	-3.0286 ppb	19:41:11
3	Sb 206.836†	47.3	2.4	0.4608 ug/L	0.4608 ppb	19:41:11
3	Se 196.026†	-17.3	4.1	1.2209 ug/L	1.2209 ppb	19:41:11
3	Si 251.611†	660.3	107.0	2.1991 ug/L	2.1991 ppb	19:41:11
3	Sn 189.927†	0.7	-4.8	-0.4980 ug/L	-0.4980 ppb	19:41:11
3	Ti 334.940†	-979.6	119.5	0.1597 ug/L	0.1597 ppb	19:40:51
3	Tl 190.801†	-61.0	-0.2	-0.0316 ug/L	-0.0316 ppb	19:41:11
3	U 409.014†	-3884.6	-90.0	-2.2277 ug/L	-2.2277 ppb	19:40:46
3	V 292.402†	-1644.0	-8.2	-0.0469 ug/L	-0.0469 ppb	19:40:51
3	Zn 213.857†	1096.8	-14.3	-0.0748 ug/L	-0.0748 ppb	19:41:11
3	SiO2†	729.4	134.6	5.9274 ug/L	5.9274 ppb	19:41:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065122.3	100.40	%	1.246				1.24%
Sc Radial	5423.5	97.5	%	0.89				0.91%
Y 371.029	858402.8	100.61	%	1.227				1.22%
Y RADIAL	4737.2	98.37	%	1.233				1.25%
Ag 328.068†	-35.1	-0.1369	ug/L	0.21524	-0.1369	ppb	0.21524	157.17%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	16.7	15.213	ug/L	11.7984	15.213	ppb	11.7984	77.55%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-14.1	-3.3074	ug/L	1.62235	-3.3074	ppb	1.62235	49.05%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	228.1	3.5540	ug/L	0.44587	3.5540	ppb	0.44587	12.55%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	14.4	0.0733	ug/L	0.05633	0.0733	ppb	0.05633	76.84%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-74.5	-0.0229	ug/L	0.05021	-0.0229	ppb	0.05021	219.13%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	13.3	33.238	ug/L	3.3585	33.238	ppb	3.3585	10.10%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -3.0     -0.0237 ug/L       0.07387     -0.0237 ppb        0.07387 311.98%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 4.2      0.0523 ug/L       0.11944      0.0523 ppb        0.11944 228.36%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 6.8      0.0579 ug/L       0.07775      0.0579 ppb        0.07775 134.32%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -139.4     -0.3434 ug/L       0.38102     -0.3434 ppb        0.38102 110.97%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.3      10.977 ug/L       39.5386      10.977 ppb        39.5386 360.20%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          94.9      41.206 ug/L        9.3984      41.206 ppb         9.3984  22.81%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.3      22.360 ug/L       66.9431      22.360 ppb        66.9431 299.39%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               149.6      0.1193 ug/L       0.00572      0.1193 ppb        0.00572   4.80%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 8.5      0.3401 ug/L       0.30361      0.3401 ppb        0.30361  89.27%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -19.4     -52.524 ug/L        4.3540     -52.524 ppb         4.3540   8.29%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 3.9      0.0617 ug/L       0.24068      0.0617 ppb        0.24068 389.81%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  9.9      3.5656 ug/L       3.87493      3.5656 ppb        3.87493 108.68%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 2.9      0.2233 ug/L       0.51724      0.2233 ppb        0.51724 231.64%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.1     -4.3591 ug/L       1.28871     -4.3591 ppb        1.28871  29.56%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -2.1     -0.4058 ug/L       1.69035     -0.4058 ppb        1.69035 416.51%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 3.2      1.0827 ug/L       1.15619      1.0827 ppb        1.15619 106.78%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               129.6      2.6554 ug/L       0.82677      2.6554 ppb        0.82677  31.14%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -0.2     -0.0220 ug/L       0.54526     -0.0220 ppb        0.54526 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                24.7      0.3804 ug/L       0.13988      0.3804 ppb        0.13988  36.77%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                84.0      0.1115 ug/L       0.06534      0.1115 ppb        0.06534  58.60%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.6      0.6068 ug/L       1.21821      0.6068 ppb        1.21821 200.76%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 55.4      1.3740 ug/L       3.80781      1.3740 ppb        3.80781 277.13%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 14.6      0.0885 ug/L       0.23133      0.0885 ppb        0.23133 261.26%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -23.4     -0.1326 ug/L       0.05408     -0.1326 ppb        0.05408  40.79%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      93.8      4.1002 ug/L       1.58276      4.1002 ppb        1.58276  38.60%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 61
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 20:46:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5535.3	5535.3	99.5	%			20:48:12
1	Y RADIAL	4794.6	4794.6	99.56	%			20:48:12
1	Al 396.153Radial†	5347.8	5468.6	4955.5	ug/L	4955.5	ppb	20:48:12
1	Ca 317.933Radial†	2001.8	1995.5	4970.5	ug/L	4970.5	ppb	20:48:32
1	Fe 238.204 Radial†	143.4	143.9	5063.0	ug/L	5063.0	ppb	20:48:32
1	K 766.490 Radial†	13314.6	11912.6	5162.6	ug/L	5162.6	ppb	20:48:12
1	Mg 279.077 IEC†	62.9	63.0	4997.2	ug/L	4997.2	ppb	20:48:32
1	Na 589.592 Radial†	3561.3	3750.8	10142	ug/L	10142	ppb	20:48:12
1	Sr 421.552†	34423.4	34601.8	533.05	ug/L	533.05	ppb	20:48:12
1	Sc 361.383	1025665.0	1025665.0	96.680	%			20:49:31
1	Y 371.029	818784.4	818784.4	95.965	%			20:49:31
1	Ag 328.068†	128065.9	131824.6	524.98	ug/L	524.98	ppb	20:49:31
1	As 188.979†	2049.0	2156.3	509.47	ug/L	509.47	ppb	20:49:51
1	B 249.677†	30933.1	32376.7	502.65	ug/L	502.65	ppb	20:49:31
1	Ba 233.527†	98662.4	102025.9	517.68	ug/L	517.68	ppb	20:49:31
1	Be 313.107†	1604891.7	1667314.0	519.64	ug/L	519.64	ppb	20:49:31
1	Cd 226.502†	66828.4	69400.7	518.80	ug/L	518.80	ppb	20:49:31
1	Co 228.616†	38635.5	40052.5	499.10	ug/L	499.10	ppb	20:49:51
1	Cr 267.716†	58852.4	60901.8	519.43	ug/L	519.43	ppb	20:49:31
1	Cu 324.752†	211988.3	209075.9	516.14	ug/L	516.14	ppb	20:49:31
1	Mn 257.610†	632456.2	653345.3	516.89	ug/L	516.89	ppb	20:49:31
1	Mo 202.031†	12533.7	12932.3	517.99	ug/L	517.99	ppb	20:49:51
1	Ni 231.604†	30500.1	31399.2	502.94	ug/L	502.94	ppb	20:49:51
1	P 214.914†	7326.2	7240.8	2480.8	ug/L	2480.8	ppb	20:49:51
1	Pb 220.353†	6598.6	6854.2	515.19	ug/L	515.19	ppb	20:49:51
1	S 181.975 Axial†	1249.8	1224.9	1035.8	ug/L	1035.8	ppb	20:49:51
1	Sb 206.836†	2568.6	2611.4	519.59	ug/L	519.59	ppb	20:49:51
1	Se 196.026†	1481.3	1553.7	524.95	ug/L	524.95	ppb	20:49:51
1	Si 251.611†	123269.0	126941.5	2607.1	ug/L	2607.1	ppb	20:49:31
1	Sn 189.927†	4773.6	4932.1	513.43	ug/L	513.43	ppb	20:49:51
1	Ti 334.940†	382960.8	397219.5	519.91	ug/L	519.91	ppb	20:49:31
1	Tl 190.801†	2829.7	2988.3	506.11	ug/L	506.11	ppb	20:49:51
1	U 409.014†	15896.4	20277.0	501.49	ug/L	501.49	ppb	20:49:31
1	V 292.402†	86236.6	90850.4	521.45	ug/L	521.45	ppb	20:49:31
1	Zn 213.857†	90948.7	92949.1	514.36	ug/L	514.36	ppb	20:49:31
1	SiO2†	124240.6	127904.2	5624.8	ug/L	5624.8	ppb	20:50:51
2	Sc Radial	5426.5	5426.5	97.5	%			20:48:37
2	Y RADIAL	4700.3	4700.3	97.60	%			20:48:37
2	Al 396.153Radial†	5383.1	5612.5	5087.1	ug/L	5087.1	ppb	20:48:37
2	Ca 317.933Radial†	1980.7	2014.2	5017.1	ug/L	5017.1	ppb	20:48:57
2	Fe 238.204 Radial†	141.2	144.5	5083.5	ug/L	5083.5	ppb	20:48:57
2	K 766.490 Radial†	13353.8	12221.2	5296.6	ug/L	5296.6	ppb	20:48:37
2	Mg 279.077 IEC†	64.6	66.1	5237.7	ug/L	5237.7	ppb	20:48:57
2	Na 589.592 Radial†	3577.3	3838.9	10380	ug/L	10380	ppb	20:48:37
2	Sr 421.552†	34585.0	35461.4	546.29	ug/L	546.29	ppb	20:48:37
2	Sc 361.383	1064775.9	1064775.9	100.37	%			20:49:58
2	Y 371.029	848878.6	848878.6	99.492	%			20:49:58
2	Ag 328.068†	127193.0	126089.4	502.22	ug/L	502.22	ppb	20:49:58
2	As 188.979†	2081.6	2110.9	498.70	ug/L	498.70	ppb	20:50:18
2	B 249.677†	30809.2	31078.1	482.44	ug/L	482.44	ppb	20:49:58
2	Ba 233.527†	97940.4	97558.0	495.02	ug/L	495.02	ppb	20:49:58
2	Be 313.107†	1590583.6	1592083.9	496.19	ug/L	496.19	ppb	20:49:58
2	Cd 226.502†	66381.1	66416.0	496.47	ug/L	496.47	ppb	20:49:58
2	Co 228.616†	39030.2	38977.9	485.73	ug/L	485.73	ppb	20:50:18
2	Cr 267.716†	58269.3	58084.8	495.41	ug/L	495.41	ppb	20:49:58
2	Cu 324.752†	210779.8	199817.8	493.30	ug/L	493.30	ppb	20:49:58
2	Mn 257.610†	628062.6	624939.1	494.44	ug/L	494.44	ppb	20:49:58
2	Mo 202.031†	12704.1	12625.8	505.73	ug/L	505.73	ppb	20:50:18
2	Ni 231.604†	30841.4	30580.4	489.82	ug/L	489.82	ppb	20:50:18

2	P 214.914†	7382.8	7018.9	2405.9 ug/L	2405.9 ppb	20:50:18
2	Pb 220.353†	6678.1	6682.8	502.35 ug/L	502.35 ppb	20:50:18
2	S 181.975 Axial†	1258.1	1185.7	1002.7 ug/L	1002.7 ppb	20:50:18
2	Sb 206.836†	2585.0	2530.2	503.77 ug/L	503.77 ppb	20:50:18
2	Se 196.026†	1496.9	1513.0	511.76 ug/L	511.76 ppb	20:50:18
2	Si 251.611†	122563.5	121555.2	2496.1 ug/L	2496.1 ppb	20:49:58
2	Sn 189.927†	4837.3	4814.1	501.17 ug/L	501.17 ppb	20:50:18
2	Ti 334.940†	379976.3	379696.2	496.99 ug/L	496.99 ppb	20:49:58
2	Tl 190.801†	2860.6	2911.6	493.05 ug/L	493.05 ppb	20:50:18
2	U 409.014†	15503.9	19281.9	476.84 ug/L	476.84 ppb	20:49:58
2	V 292.402†	85495.4	86835.6	498.51 ug/L	498.51 ppb	20:49:58
2	Zn 213.857†	90415.3	88962.3	492.21 ug/L	492.21 ppb	20:49:58
2	SiO2†	122909.9	121858.2	5358.1 ug/L	5358.1 ppb	20:50:56
3	Sc Radial	5486.7	5486.7	98.6 %		20:49:02
3	Y RADIAL	4746.1	4746.1	98.55 %		20:49:02
3	Al 396.153Radial†	5315.6	5483.5	4970.0 ug/L	4970.0 ppb	20:49:02
3	Ca 317.933Radial†	1995.9	2007.4	5000.2 ug/L	5000.2 ppb	20:49:22
3	Fe 238.204 Radial†	144.5	146.2	5144.8 ug/L	5144.8 ppb	20:49:22
3	K 766.490 Radial†	13332.5	12049.3	5222.1 ug/L	5222.1 ppb	20:49:02
3	Mg 279.077 IEC†	65.8	66.5	5275.5 ug/L	5275.5 ppb	20:49:22
3	Na 589.592 Radial†	3572.4	3793.7	10258 ug/L	10258 ppb	20:49:02
3	Sr 421.552†	34482.5	34968.3	538.69 ug/L	538.69 ppb	20:49:02
3	Sc 361.383	1080518.2	1080518.2	101.85 %		20:50:25
3	Y 371.029	860737.1	860737.1	100.88 %		20:50:25
3	Ag 328.068†	128854.2	125874.0	501.37 ug/L	501.37 ppb	20:50:25
3	As 188.979†	2072.7	2072.0	489.58 ug/L	489.58 ppb	20:50:46
3	B 249.677†	31363.4	31175.0	483.97 ug/L	483.97 ppb	20:50:25
3	Ba 233.527†	99234.2	97406.6	494.25 ug/L	494.25 ppb	20:50:25
3	Be 313.107†	1608315.1	1586404.4	494.42 ug/L	494.42 ppb	20:50:25
3	Cd 226.502†	67140.8	66198.4	494.83 ug/L	494.83 ppb	20:50:25
3	Co 228.616†	38868.2	38252.2	476.67 ug/L	476.67 ppb	20:50:46
3	Cr 267.716†	58896.1	57854.5	493.45 ug/L	493.45 ppb	20:50:25
3	Cu 324.752†	213796.3	199719.8	493.06 ug/L	493.06 ppb	20:50:25
3	Mn 257.610†	636221.4	623832.7	493.57 ug/L	493.57 ppb	20:50:25
3	Mo 202.031†	12642.9	12381.4	495.94 ug/L	495.94 ppb	20:50:46
3	Ni 231.604†	30697.1	29991.0	480.38 ug/L	480.38 ppb	20:50:46
3	P 214.914†	7346.2	6875.8	2355.1 ug/L	2355.1 ppb	20:50:46
3	Pb 220.353†	6648.4	6556.7	492.84 ug/L	492.84 ppb	20:50:46
3	S 181.975 Axial†	1251.2	1160.7	981.48 ug/L	981.48 ppb	20:50:46
3	Sb 206.836†	2582.7	2490.4	495.64 ug/L	495.64 ppb	20:50:46
3	Se 196.026†	1493.6	1488.1	503.83 ug/L	503.83 ppb	20:50:46
3	Si 251.611†	124196.9	121379.9	2492.7 ug/L	2492.7 ppb	20:50:25
3	Sn 189.927†	4820.6	4727.5	492.16 ug/L	492.16 ppb	20:50:46
3	Ti 334.940†	385244.9	379353.3	496.54 ug/L	496.54 ppb	20:50:25
3	Tl 190.801†	2845.2	2854.9	483.53 ug/L	483.53 ppb	20:50:46
3	U 409.014†	15833.0	19380.0	479.27 ug/L	479.27 ppb	20:50:25
3	V 292.402†	86424.6	86506.8	496.52 ug/L	496.52 ppb	20:50:25
3	Zn 213.857†	91421.4	88637.6	490.45 ug/L	490.45 ppb	20:50:25
3	SiO2†	122152.7	119330.5	5246.9 ug/L	5246.9 ppb	20:51:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056986.4	99.633	%	2.6623				2.67%
Sc Radial	5482.8	98.5	%	0.98				0.99%
Y 371.029	842800.0	98.779	%	2.5347				2.57%
Y RADIAL	4747.0	98.57	%	0.980				0.99%
Ag 328.068†	127929.3	509.52	ug/L	13.393	509.52	ppb	13.393	2.63%
QC value within limits for Ag 328.068 Recovery = 101.90%								
Al 396.153Radial†	5521.5	5004.2	ug/L	72.15	5004.2	ppb	72.15	1.44%
QC value within limits for Al 396.153Radial Recovery = 100.08%								
As 188.979†	2113.1	499.25	ug/L	9.953	499.25	ppb	9.953	1.99%
QC value within limits for As 188.979 Recovery = 99.85%								
B 249.677†	31543.2	489.69	ug/L	11.253	489.69	ppb	11.253	2.30%
QC value within limits for B 249.677 Recovery = 97.94%								
Ba 233.527†	98996.8	502.31	ug/L	13.313	502.31	ppb	13.313	2.65%
QC value within limits for Ba 233.527 Recovery = 100.46%								
Be 313.107†	1615267.4	503.42	ug/L	14.074	503.42	ppb	14.074	2.80%
QC value within limits for Be 313.107 Recovery = 100.68%								
Ca 317.933Radial†	2005.7	4995.9	ug/L	23.61	4995.9	ppb	23.61	0.47%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.92%
Cd 226.502†          67338.4      503.37 ug/L        13.394      503.37 ppb        13.394   2.66%
   QC value within limits for Cd 226.502  Recovery = 100.67%
Co 228.616†          39094.2      487.17 ug/L        11.285      487.17 ppb        11.285   2.32%
   QC value within limits for Co 228.616  Recovery = 97.43%
Cr 267.716†          58947.0      502.76 ug/L        14.468      502.76 ppb        14.468   2.88%
   QC value within limits for Cr 267.716  Recovery = 100.55%
Cu 324.752†         202871.2      500.83 ug/L        13.257      500.83 ppb        13.257   2.65%
   QC value within limits for Cu 324.752  Recovery = 100.17%
Fe 238.204 Radial†     144.9      5097.1 ug/L         42.57      5097.1 ppb         42.57   0.84%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.94%
K 766.490 Radial†    12061.0      5227.1 ug/L         67.14      5227.1 ppb         67.14   1.28%
   QC value within limits for K 766.490 Radial  Recovery = 104.54%
Mg 279.077 IEC†         65.2      5170.1 ug/L        150.96      5170.1 ppb        150.96   2.92%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.40%
Mn 257.610†         634039.0      501.63 ug/L        13.219      501.63 ppb        13.219   2.64%
   QC value within limits for Mn 257.610  Recovery = 100.33%
Mo 202.031†          12646.5      506.55 ug/L        11.047      506.55 ppb        11.047   2.18%
   QC value within limits for Mo 202.031  Recovery = 101.31%
Na 589.592 Radial†    3794.4       10260 ug/L         119.2       10260 ppb         119.2   1.16%
   QC value within limits for Na 589.592 Radial  Recovery = 102.60%
Ni 231.604†          30656.8      491.05 ug/L        11.327      491.05 ppb        11.327   2.31%
   QC value within limits for Ni 231.604  Recovery = 98.21%
P 214.914†            7045.2      2413.9 ug/L         63.20      2413.9 ppb         63.20   2.62%
   QC value within limits for P 214.914  Recovery = 96.56%
Pb 220.353†           6697.9      503.46 ug/L        11.216      503.46 ppb        11.216   2.23%
   QC value within limits for Pb 220.353  Recovery = 100.69%
S 181.975 Axial†      1190.4      1006.7 ug/L         27.39      1006.7 ppb         27.39   2.72%
   QC value within limits for S 181.975 Axial  Recovery = 100.67%
Sb 206.836†           2544.0      506.33 ug/L        12.179      506.33 ppb        12.179   2.41%
   QC value within limits for Sb 206.836  Recovery = 101.27%
Se 196.026†           1518.3      513.51 ug/L        10.671      513.51 ppb        10.671   2.08%
   QC value within limits for Se 196.026  Recovery = 102.70%
Si 251.611†         123292.2      2532.0 ug/L         65.05      2532.0 ppb         65.05   2.57%
   QC value within limits for Si 251.611  Recovery = 101.28%
Sn 189.927†           4824.6      502.26 ug/L        10.677      502.26 ppb        10.677   2.13%
   QC value within limits for Sn 189.927  Recovery = 100.45%
Sr 421.552†          35010.5      539.35 ug/L         6.645      539.35 ppb         6.645   1.23%
   QC value within limits for Sr 421.552  Recovery = 107.87%
Ti 334.940†         385423.0      504.48 ug/L        13.363      504.48 ppb        13.363   2.65%
   QC value within limits for Ti 334.940  Recovery = 100.90%
Tl 190.801†           2918.3      494.23 ug/L        11.335      494.23 ppb        11.335   2.29%
   QC value within limits for Tl 190.801  Recovery = 98.85%
U 409.014†           19646.3      485.87 ug/L        13.582      485.87 ppb        13.582   2.80%
   QC value within limits for U 409.014  Recovery = 97.17%
V 292.402†           88064.3      505.49 ug/L        13.854      505.49 ppb        13.854   2.74%
   QC value within limits for V 292.402  Recovery = 101.10%
Zn 213.857†          90183.0      499.01 ug/L        13.329      499.01 ppb        13.329   2.67%
   QC value within limits for Zn 213.857  Recovery = 99.80%
SiO2†               123031.0      5409.9 ug/L        194.21      5409.9 ppb        194.21   3.59%
   QC value within limits for SiO2  Recovery = 101.17%
All analyte(s) passed QC.
```

Sequence No.: 62
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 20:53:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5461.6	5461.6	98.1	%			20:55:03
1	Y RADIAL	4759.2	4759.2	98.83	%			20:55:03
1	Al 396.153Radial†	-79.6	11.0	10.043	ug/L	10.043	ppb	20:55:03
1	Ca 317.933Radial†	35.0	18.7	46.643	ug/L	46.643	ppb	20:55:23
1	Fe 238.204 Radial†	0.0	-0.3	-10.794	ug/L	-10.794	ppb	20:55:23
1	K 766.490 Radial†	1576.9	133.6	57.982	ug/L	57.982	ppb	20:55:03
1	Mg 279.077 IEC†	0.1	-0.0	-2.9190	ug/L	-2.9190	ppb	20:55:23
1	Na 589.592 Radial†	-197.7	-31.0	-83.824	ug/L	-83.824	ppb	20:55:23
1	Sr 421.552†	18.1	12.9	0.1990	ug/L	0.1990	ppb	20:55:23
1	Sc 361.383	1065964.9	1065964.9	100.48	%			20:56:20
1	Y 371.029	859534.3	859534.3	100.74	%			20:56:20
1	Ag 328.068†	779.9	137.6	0.5411	ug/L	0.5411	ppb	20:56:25
1	As 188.979†	-52.6	-15.5	-3.6393	ug/L	-3.6393	ppb	20:56:45
1	B 249.677†	-154.8	227.4	3.5459	ug/L	3.5459	ppb	20:56:25
1	Ba 233.527†	34.5	10.1	0.0511	ug/L	0.0511	ppb	20:56:45
1	Be 313.107†	-7301.5	49.6	0.0155	ug/L	0.0155	ppb	20:56:25
1	Cd 226.502†	-300.5	-21.4	-0.1588	ug/L	-0.1588	ppb	20:56:45
1	Co 228.616†	-83.1	7.7	0.0966	ug/L	0.0966	ppb	20:56:45
1	Cr 267.716†	0.5	29.1	0.2477	ug/L	0.2477	ppb	20:56:25
1	Cu 324.752†	9976.1	-262.7	-0.6487	ug/L	-0.6487	ppb	20:56:25
1	Mn 257.610†	906.6	75.2	0.0581	ug/L	0.0581	ppb	20:56:45
1	Mo 202.031†	37.5	5.6	0.2231	ug/L	0.2231	ppb	20:56:45
1	Ni 231.604†	167.6	18.5	0.2970	ug/L	0.2970	ppb	20:56:45
1	P 214.914†	327.0	-11.5	-3.9329	ug/L	-3.9329	ppb	20:56:45
1	Pb 220.353†	-4.7	24.4	1.8301	ug/L	1.8301	ppb	20:56:45
1	S 181.975 Axial†	62.0	-6.2	-5.2228	ug/L	-5.2228	ppb	20:56:45
1	Sb 206.836†	59.3	13.6	2.6834	ug/L	2.6834	ppb	20:56:45
1	Se 196.026†	-26.2	-4.4	-1.4775	ug/L	-1.4775	ppb	20:56:45
1	Si 251.611†	690.4	127.0	2.5933	ug/L	2.5933	ppb	20:56:45
1	Sn 189.927†	15.8	10.2	1.0667	ug/L	1.0667	ppb	20:56:45
1	Ti 334.940†	-1097.5	17.0	0.0253	ug/L	0.0253	ppb	20:56:25
1	Tl 190.801†	-39.8	21.8	3.6732	ug/L	3.6732	ppb	20:56:45
1	U 409.014†	-3860.4	-7.3	-0.1798	ug/L	-0.1798	ppb	20:56:20
1	V 292.402†	-1635.7	24.9	0.1448	ug/L	0.1448	ppb	20:56:25
1	Zn 213.857†	1105.7	-22.0	-0.1224	ug/L	-0.1224	ppb	20:56:45
1	SiO2†	696.0	90.3	3.9306	ug/L	3.9306	ppb	20:57:51
2	Sc Radial	5132.0	5132.0	92.2	%			20:55:28
2	Y RADIAL	4482.5	4482.5	93.08	%			20:55:28
2	Al 396.153Radial†	-72.9	13.2	11.973	ug/L	11.973	ppb	20:55:28
2	Ca 317.933Radial†	37.0	23.2	57.689	ug/L	57.689	ppb	20:55:48
2	Fe 238.204 Radial†	0.0	-0.3	-11.376	ug/L	-11.376	ppb	20:55:48
2	K 766.490 Radial†	1538.2	194.9	84.591	ug/L	84.591	ppb	20:55:28
2	Mg 279.077 IEC†	0.7	0.6	44.487	ug/L	44.487	ppb	20:55:48
2	Na 589.592 Radial†	-205.6	-52.5	-141.98	ug/L	-141.98	ppb	20:55:48
2	Sr 421.552†	30.1	27.1	0.4174	ug/L	0.4174	ppb	20:55:48
2	Sc 361.383	1057874.4	1057874.4	99.716	%			20:56:50
2	Y 371.029	852924.8	852924.8	99.966	%			20:56:50
2	Ag 328.068†	706.6	70.0	0.2753	ug/L	0.2753	ppb	20:56:55
2	As 188.979†	-41.6	-4.8	-1.1246	ug/L	-1.1246	ppb	20:57:15
2	B 249.677†	-176.0	205.0	3.1970	ug/L	3.1970	ppb	20:56:55
2	Ba 233.527†	56.6	32.5	0.1646	ug/L	0.1646	ppb	20:57:15
2	Be 313.107†	-7265.9	29.7	0.0093	ug/L	0.0093	ppb	20:56:55
2	Cd 226.502†	-283.6	-6.7	-0.0488	ug/L	-0.0488	ppb	20:57:15
2	Co 228.616†	-91.8	-1.7	-0.0205	ug/L	-0.0205	ppb	20:57:15
2	Cr 267.716†	-31.4	-2.9	-0.0240	ug/L	-0.0240	ppb	20:56:55
2	Cu 324.752†	9998.9	-163.9	-0.4050	ug/L	-0.4050	ppb	20:56:55
2	Mn 257.610†	927.6	103.2	0.0792	ug/L	0.0792	ppb	20:57:15
2	Mo 202.031†	34.3	2.6	0.1047	ug/L	0.1047	ppb	20:57:15
2	Ni 231.604†	164.3	16.5	0.2643	ug/L	0.2643	ppb	20:57:15

2	P 214.914†	339.3	3.4	1.2737	ug/L	1.2737 ppb	20:57:15
2	Pb 220.353†	-14.7	14.4	1.0810	ug/L	1.0810 ppb	20:57:15
2	S 181.975 Axial†	64.5	-3.2	-2.6922	ug/L	-2.6922 ppb	20:57:15
2	Sb 206.836†	53.9	8.7	1.7075	ug/L	1.7075 ppb	20:57:15
2	Se 196.026†	-13.7	7.9	2.5363	ug/L	2.5363 ppb	20:57:15
2	Si 251.611†	669.5	111.3	2.2656	ug/L	2.2656 ppb	20:57:15
2	Sn 189.927†	7.5	2.1	0.2194	ug/L	0.2194 ppb	20:57:15
2	Ti 334.940†	-1099.1	7.1	0.0141	ug/L	0.0141 ppb	20:56:55
2	Tl 190.801†	-47.9	13.4	2.2544	ug/L	2.2544 ppb	20:57:15
2	U 409.014†	-3908.6	-85.0	-2.1078	ug/L	-2.1078 ppb	20:56:50
2	V 292.402†	-1613.6	34.6	0.1957	ug/L	0.1957 ppb	20:56:55
2	Zn 213.857†	1103.5	-15.8	-0.0896	ug/L	-0.0896 ppb	20:57:15
2	SiO2†	699.8	99.4	4.3258	ug/L	4.3258 ppb	20:57:56
3	Sc Radial	5546.4	5546.4	99.7	%		20:55:53
3	Y RADIAL	4848.5	4848.5	100.7	%		20:55:53
3	Al 396.153Radial†	-53.9	38.1	34.658	ug/L	34.658 ppb	20:55:53
3	Ca 317.933Radial†	33.4	16.6	41.320	ug/L	41.320 ppb	20:56:13
3	Fe 238.204 Radial†	-1.5	-1.8	-64.565	ug/L	-64.565 ppb	20:56:13
3	K 766.490 Radial†	1470.4	2.2	0.9378	ug/L	0.9378 ppb	20:55:53
3	Mg 279.077 IEC†	-0.6	-0.8	-65.218	ug/L	-65.218 ppb	20:56:13
3	Na 589.592 Radial†	-193.1	-23.3	-62.943	ug/L	-62.943 ppb	20:56:13
3	Sr 421.552†	31.4	26.0	0.4005	ug/L	0.4005 ppb	20:56:13
3	Sc 361.383	1051046.9	1051046.9	99.073	%		20:57:20
3	Y 371.029	847930.3	847930.3	99.381	%		20:57:20
3	Ag 328.068†	703.3	71.3	0.2629	ug/L	0.2629 ppb	20:57:25
3	As 188.979†	-53.8	-17.5	-4.1088	ug/L	-4.1088 ppb	20:57:46
3	B 249.677†	-219.2	160.2	2.5054	ug/L	2.5054 ppb	20:57:25
3	Ba 233.527†	59.4	35.7	0.1796	ug/L	0.1796 ppb	20:57:46
3	Be 313.107†	-7257.8	-9.5	-0.0027	ug/L	-0.0027 ppb	20:57:25
3	Cd 226.502†	-285.1	-10.2	-0.0681	ug/L	-0.0681 ppb	20:57:46
3	Co 228.616†	-87.0	2.6	0.0341	ug/L	0.0341 ppb	20:57:46
3	Cr 267.716†	-40.8	-12.6	-0.1079	ug/L	-0.1079 ppb	20:57:25
3	Cu 324.752†	9996.9	-100.8	-0.2525	ug/L	-0.2525 ppb	20:57:25
3	Mn 257.610†	918.6	100.2	0.0720	ug/L	0.0720 ppb	20:57:46
3	Mo 202.031†	37.1	5.7	0.2240	ug/L	0.2240 ppb	20:57:46
3	Ni 231.604†	171.8	25.2	0.4033	ug/L	0.4033 ppb	20:57:46
3	P 214.914†	347.5	13.9	4.9970	ug/L	4.9970 ppb	20:57:46
3	Pb 220.353†	-7.9	21.1	1.5935	ug/L	1.5935 ppb	20:57:46
3	S 181.975 Axial†	58.6	-8.7	-7.3461	ug/L	-7.3461 ppb	20:57:46
3	Sb 206.836†	45.7	0.7	0.1374	ug/L	0.1374 ppb	20:57:46
3	Se 196.026†	-24.5	-3.1	-1.2347	ug/L	-1.2347 ppb	20:57:46
3	Si 251.611†	659.8	105.9	2.1819	ug/L	2.1819 ppb	20:57:46
3	Sn 189.927†	2.6	-2.8	-0.2924	ug/L	-0.2924 ppb	20:57:46
3	Ti 334.940†	-1019.6	80.1	0.1084	ug/L	0.1084 ppb	20:57:25
3	Tl 190.801†	-35.2	25.9	4.3658	ug/L	4.3658 ppb	20:57:46
3	U 409.014†	-3870.2	-71.7	-1.7699	ug/L	-1.7699 ppb	20:57:20
3	V 292.402†	-1607.9	29.9	0.1766	ug/L	0.1766 ppb	20:57:25
3	Zn 213.857†	1120.5	8.6	0.0549	ug/L	0.0549 ppb	20:57:46
3	SiO2†	704.8	109.1	4.8114	ug/L	4.8114 ppb	20:58:01

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1058295.4	99.756	%	0.7039				0.71%
Sc Radial	5380.0	96.7	%	3.93				4.07%
Y 371.029	853463.1	100.03	%	0.682				0.68%
Y RADIAL	4696.8	97.53	%	3.962				4.06%
Ag 328.068†	93.0	0.3598	ug/L	0.15715	0.3598	ppb	0.15715	43.68%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.8	18.891	ug/L	13.6884	18.891	ppb	13.6884	72.46%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.6	-2.9576	ug/L	1.60469	-2.9576	ppb	1.60469	54.26%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	197.6	3.0828	ug/L	0.52955	3.0828	ppb	0.52955	17.18%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.1	0.1318	ug/L	0.07025	0.1318	ppb	0.07025	53.31%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	23.3	0.0073	ug/L	0.00924	0.0073	ppb	0.00924	125.93%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	19.5	48.551	ug/L	8.3497	48.551	ppb	8.3497	17.20%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -12.8     -0.0919 ug/L       0.05875     -0.0919 ppb        0.05875  63.93%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                2.9      0.0367 ug/L       0.05855      0.0367 ppb        0.05855 159.38%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                4.5      0.0386 ug/L       0.18591      0.0386 ppb        0.18591 481.71%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -175.8     -0.4354 ug/L       0.19988     -0.4354 ppb        0.19988  45.91%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.8     -28.911 ug/L       30.8782     -28.911 ppb        30.8782 106.80%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.2      47.837 ug/L       42.7393      47.837 ppb        42.7393  89.34%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.1     -7.8834 ug/L      55.02102     -7.8834 ppb       55.02102 697.94%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               92.9      0.0698 ug/L       0.01074      0.0698 ppb        0.01074  15.39%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.6      0.1839 ug/L       0.06862      0.1839 ppb        0.06862  37.31%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -35.6     -96.248 ug/L       40.9553     -96.248 ppb        40.9553  42.55%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               20.1      0.3215 ug/L       0.07267      0.3215 ppb        0.07267  22.60%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 1.9      0.7793 ug/L       4.48544      0.7793 ppb        4.48544 575.59%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               19.9      1.5015 ug/L       0.38291      1.5015 ppb        0.38291  25.50%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -6.0     -5.0870 ug/L       2.32993     -5.0870 ppb        2.32993  45.80%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.7      1.5094 ug/L       1.28450      1.5094 ppb        1.28450  85.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                0.1     -0.0586 ug/L       2.25056     -0.0586 ppb        2.25056 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              114.7      2.3469 ug/L       0.21742      2.3469 ppb        0.21742   9.26%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                3.2      0.3312 ug/L       0.68641      0.3312 ppb        0.68641 207.22%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               22.0      0.3390 ug/L       0.12150      0.3390 ppb        0.12150  35.84%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               34.7      0.0493 ug/L       0.05154      0.0493 ppb        0.05154 104.61%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               20.3      3.4312 ug/L       1.07631      3.4312 ppb        1.07631  31.37%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -54.7     -1.3525 ug/L       1.02950     -1.3525 ppb        1.02950  76.12%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                29.8      0.1724 ug/L       0.02570      0.1724 ppb        0.02570  14.91%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -9.7     -0.0524 ug/L       0.09434     -0.0524 ppb        0.09434 180.18%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     99.6      4.3560 ug/L       0.44114      4.3560 ppb        0.44114  10.13%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 69
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 21:42:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5441.7	5441.7	97.8	%			21:44:01
1	Y RADIAL	4737.4	4737.4	98.37	%			21:44:01
1	Al 396.153Radial†	5324.6	5537.2	5018.6	ug/L	5018.6	ppb	21:44:01
1	Ca 317.933Radial†	2027.7	2056.6	5122.7	ug/L	5122.7	ppb	21:44:21
1	Fe 238.204 Radial†	146.3	149.3	5252.4	ug/L	5252.4	ppb	21:44:21
1	K 766.490 Radial†	13213.4	12039.3	5217.6	ug/L	5217.6	ppb	21:44:01
1	Mg 279.077 IEC†	64.7	66.0	5229.7	ug/L	5229.7	ppb	21:44:21
1	Na 589.592 Radial†	3621.0	3873.4	10473	ug/L	10473	ppb	21:44:01
1	Sr 421.552†	35105.4	35894.3	552.96	ug/L	552.96	ppb	21:44:01
1	Sc 361.383	1086886.8	1086886.8	102.45	%			21:45:20
1	Y 371.029	865959.1	865959.1	101.49	%			21:45:20
1	Ag 328.068†	131150.2	127373.7	507.37	ug/L	507.37	ppb	21:45:20
1	As 188.979†	2128.8	2114.8	499.68	ug/L	499.68	ppb	21:45:40
1	B 249.677†	31844.0	31463.6	488.44	ug/L	488.44	ppb	21:45:20
1	Ba 233.527†	101019.6	98578.4	500.20	ug/L	500.20	ppb	21:45:20
1	Be 313.107†	1638651.2	1606762.0	500.77	ug/L	500.77	ppb	21:45:20
1	Cd 226.502†	68327.0	66969.9	500.59	ug/L	500.59	ppb	21:45:20
1	Co 228.616†	39628.6	38770.8	483.13	ug/L	483.13	ppb	21:45:40
1	Cr 267.716†	60048.1	58640.0	500.15	ug/L	500.15	ppb	21:45:20
1	Cu 324.752†	217621.8	202223.8	499.24	ug/L	499.24	ppb	21:45:20
1	Mn 257.610†	647478.9	631160.7	499.37	ug/L	499.37	ppb	21:45:20
1	Mo 202.031†	12915.3	12574.6	503.68	ug/L	503.68	ppb	21:45:40
1	Ni 231.604†	31406.5	30506.8	488.65	ug/L	488.65	ppb	21:45:40
1	P 214.914†	7520.1	7003.2	2399.2	ug/L	2399.2	ppb	21:45:40
1	Pb 220.353†	6823.5	6689.3	502.80	ug/L	502.80	ppb	21:45:40
1	S 181.975 Axial†	1277.5	1179.1	997.06	ug/L	997.06	ppb	21:45:40
1	Sb 206.836†	2627.1	2518.8	501.35	ug/L	501.35	ppb	21:45:40
1	Se 196.026†	1542.1	1526.8	516.82	ug/L	516.82	ppb	21:45:40
1	Si 251.611†	126314.7	122732.4	2520.5	ug/L	2520.5	ppb	21:45:20
1	Sn 189.927†	4921.0	4797.8	499.48	ug/L	499.48	ppb	21:45:40
1	Ti 334.940†	392293.3	384016.8	502.65	ug/L	502.65	ppb	21:45:20
1	Tl 190.801†	2907.9	2899.8	491.11	ug/L	491.11	ppb	21:45:40
1	U 409.014†	16224.8	19671.3	486.47	ug/L	486.47	ppb	21:45:20
1	V 292.402†	88311.9	87851.8	504.24	ug/L	504.24	ppb	21:45:20
1	Zn 213.857†	92868.0	89523.7	495.32	ug/L	495.32	ppb	21:45:20
1	SiO2†	124385.4	120807.1	5311.8	ug/L	5311.8	ppb	21:46:40
2	Sc Radial	5554.5	5554.5	99.8	%			21:44:26
2	Y RADIAL	4826.3	4826.3	100.2	%			21:44:26
2	Al 396.153Radial†	5433.7	5536.0	5017.5	ug/L	5017.5	ppb	21:44:26
2	Ca 317.933Radial†	2041.5	2028.3	5052.3	ug/L	5052.3	ppb	21:44:46
2	Fe 238.204 Radial†	146.8	146.7	5161.4	ug/L	5161.4	ppb	21:44:46
2	K 766.490 Radial†	13463.0	12015.0	5207.0	ug/L	5207.0	ppb	21:44:26
2	Mg 279.077 IEC†	64.2	64.1	5082.0	ug/L	5082.0	ppb	21:44:46
2	Na 589.592 Radial†	3718.6	3895.9	10534	ug/L	10534	ppb	21:44:26
2	Sr 421.552†	36147.9	36210.0	557.82	ug/L	557.82	ppb	21:44:26
2	Sc 361.383	1081234.6	1081234.6	101.92	%			21:45:47
2	Y 371.029	862925.3	862925.3	101.14	%			21:45:47
2	Ag 328.068†	130257.4	127167.0	506.52	ug/L	506.52	ppb	21:45:47
2	As 188.979†	2112.5	2109.6	498.45	ug/L	498.45	ppb	21:46:07
2	B 249.677†	31697.4	31482.3	488.74	ug/L	488.74	ppb	21:45:47
2	Ba 233.527†	100580.1	98662.6	500.62	ug/L	500.62	ppb	21:45:47
2	Be 313.107†	1633346.9	1609918.7	501.75	ug/L	501.75	ppb	21:45:47
2	Cd 226.502†	67946.0	66944.7	500.41	ug/L	500.41	ppb	21:45:47
2	Co 228.616†	39480.5	38827.8	483.85	ug/L	483.85	ppb	21:46:07
2	Cr 267.716†	59922.7	58823.4	501.71	ug/L	501.71	ppb	21:45:47
2	Cu 324.752†	215186.2	200944.5	496.08	ug/L	496.08	ppb	21:45:47
2	Mn 257.610†	644242.0	631288.4	499.47	ug/L	499.47	ppb	21:45:47
2	Mo 202.031†	12870.5	12596.5	504.55	ug/L	504.55	ppb	21:46:07
2	Ni 231.604†	31301.0	30563.6	489.56	ug/L	489.56	ppb	21:46:07

2	P 214.914†	7489.0	7011.1	2402.6 ug/L	2402.6 ppb	21:46:07
2	Pb 220.353†	6755.3	6657.3	500.41 ug/L	500.41 ppb	21:46:07
2	S 181.975 Axial†	1273.2	1181.4	999.04 ug/L	999.04 ppb	21:46:07
2	Sb 206.836†	2608.4	2513.9	500.37 ug/L	500.37 ppb	21:46:07
2	Se 196.026†	1510.7	1503.9	509.05 ug/L	509.05 ppb	21:46:07
2	Si 251.611†	125489.7	122567.5	2517.1 ug/L	2517.1 ppb	21:45:47
2	Sn 189.927†	4895.5	4797.9	499.49 ug/L	499.49 ppb	21:46:07
2	Ti 334.940†	389490.4	383268.3	501.67 ug/L	501.67 ppb	21:45:47
2	Tl 190.801†	2898.3	2905.1	492.00 ug/L	492.00 ppb	21:46:07
2	U 409.014†	16022.0	19555.1	483.60 ug/L	483.60 ppb	21:45:47
2	V 292.402†	87839.0	87838.4	504.18 ug/L	504.18 ppb	21:45:47
2	Zn 213.857†	92265.3	89406.2	494.68 ug/L	494.68 ppb	21:45:47
2	SiO2†	125075.8	122119.2	5369.7 ug/L	5369.7 ppb	21:46:45
3	Sc Radial	5520.9	5520.9	99.2 %		21:44:51
3	Y RADIAL	4797.6	4797.6	99.62 %		21:44:51
3	Al 396.153Radial†	5436.8	5572.2	5050.3 ug/L	5050.3 ppb	21:44:51
3	Ca 317.933Radial†	2014.6	2013.7	5015.8 ug/L	5015.8 ppb	21:45:11
3	Fe 238.204 Radial†	144.7	145.6	5121.9 ug/L	5121.9 ppb	21:45:11
3	K 766.490 Radial†	13443.2	12077.0	5233.9 ug/L	5233.9 ppb	21:44:51
3	Mg 279.077 IEC†	63.7	64.1	5079.5 ug/L	5079.5 ppb	21:45:11
3	Na 589.592 Radial†	3713.4	3913.3	10581 ug/L	10581 ppb	21:44:51
3	Sr 421.552†	35974.1	36254.7	558.51 ug/L	558.51 ppb	21:44:51
3	Sc 361.383	1075662.4	1075662.4	101.39 %		21:46:14
3	Y 371.029	858785.4	858785.4	100.65 %		21:46:14
3	Ag 328.068†	130254.8	127826.5	509.11 ug/L	509.11 ppb	21:46:14
3	As 188.979†	2108.4	2116.3	499.99 ug/L	499.99 ppb	21:46:35
3	B 249.677†	31631.1	31578.0	490.23 ug/L	490.23 ppb	21:46:14
3	Ba 233.527†	99982.8	98584.8	500.22 ug/L	500.22 ppb	21:46:14
3	Be 313.107†	1625667.7	1610646.9	501.97 ug/L	501.97 ppb	21:46:14
3	Cd 226.502†	67552.5	66902.0	500.10 ug/L	500.10 ppb	21:46:14
3	Co 228.616†	39548.4	39095.4	487.19 ug/L	487.19 ppb	21:46:35
3	Cr 267.716†	59382.8	58595.5	499.77 ug/L	499.77 ppb	21:46:14
3	Cu 324.752†	215586.0	202432.5	499.75 ug/L	499.75 ppb	21:46:14
3	Mn 257.610†	640406.8	630780.5	499.06 ug/L	499.06 ppb	21:46:14
3	Mo 202.031†	12891.4	12682.5	508.00 ug/L	508.00 ppb	21:46:35
3	Ni 231.604†	31325.5	30746.9	492.49 ug/L	492.49 ppb	21:46:35
3	P 214.914†	7502.5	7062.5	2420.2 ug/L	2420.2 ppb	21:46:35
3	Pb 220.353†	6804.3	6739.8	506.62 ug/L	506.62 ppb	21:46:35
3	S 181.975 Axial†	1285.4	1199.9	1014.7 ug/L	1014.7 ppb	21:46:35
3	Sb 206.836†	2611.3	2530.0	503.71 ug/L	503.71 ppb	21:46:35
3	Se 196.026†	1525.1	1525.7	516.03 ug/L	516.03 ppb	21:46:35
3	Si 251.611†	125284.4	123002.9	2526.0 ug/L	2526.0 ppb	21:46:14
3	Sn 189.927†	4909.0	4836.1	503.46 ug/L	503.46 ppb	21:46:35
3	Ti 334.940†	387519.8	383304.4	501.71 ug/L	501.71 ppb	21:46:14
3	Tl 190.801†	2910.0	2931.4	496.42 ug/L	496.42 ppb	21:46:35
3	U 409.014†	16155.8	19768.5	488.90 ug/L	488.90 ppb	21:46:14
3	V 292.402†	87225.2	87679.5	503.33 ug/L	503.33 ppb	21:46:14
3	Zn 213.857†	91968.6	89582.6	495.65 ug/L	495.65 ppb	21:46:14
3	SiO2†	125602.0	123273.9	5420.6 ug/L	5420.6 ppb	21:46:50

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1081261.3	101.92	%	0.529				0.52%
Sc Radial	5505.7	98.9	%	1.04				1.05%
Y 371.029	862556.6	101.09	%	0.422				0.42%
Y RADIAL	4787.1	99.41	%	0.943				0.95%
Ag 328.068†	127455.8	507.67	ug/L	1.321	507.67	ppb	1.321	0.26%
QC value within limits for Ag 328.068 Recovery = 101.53%								
Al 396.153Radial†	5548.5	5028.8	ug/L	18.61	5028.8	ppb	18.61	0.37%
QC value within limits for Al 396.153Radial Recovery = 100.58%								
As 188.979†	2113.6	499.37	ug/L	0.817	499.37	ppb	0.817	0.16%
QC value within limits for As 188.979 Recovery = 99.87%								
B 249.677†	31507.9	489.13	ug/L	0.958	489.13	ppb	0.958	0.20%
QC value within limits for B 249.677 Recovery = 97.83%								
Ba 233.527†	98608.6	500.35	ug/L	0.237	500.35	ppb	0.237	0.05%
QC value within limits for Ba 233.527 Recovery = 100.07%								
Be 313.107†	1609109.2	501.50	ug/L	0.641	501.50	ppb	0.641	0.13%
QC value within limits for Be 313.107 Recovery = 100.30%								
Ca 317.933Radial†	2032.9	5063.6	ug/L	54.34	5063.6	ppb	54.34	1.07%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.27%
Cd 226.502†            66938.9      500.37 ug/L         0.248      500.37 ppb          0.248   0.05%
   QC value within limits for Cd 226.502  Recovery = 100.07%
Co 228.616†            38898.0      484.72 ug/L         2.166      484.72 ppb          2.166   0.45%
   QC value within limits for Co 228.616  Recovery = 96.94%
Cr 267.716†            58686.3      500.54 ug/L         1.030      500.54 ppb          1.030   0.21%
   QC value within limits for Cr 267.716  Recovery = 100.11%
Cu 324.752†           201866.9      498.36 ug/L         1.988      498.36 ppb          1.988   0.40%
   QC value within limits for Cu 324.752  Recovery = 99.67%
Fe 238.204 Radial†       147.2      5178.6 ug/L        66.90      5178.6 ppb         66.90   1.29%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.57%
K 766.490 Radial†      12043.8      5219.5 ug/L        13.53      5219.5 ppb         13.53   0.26%
   QC value within limits for K 766.490 Radial  Recovery = 104.39%
Mg 279.077 IEC†           64.7      5130.4 ug/L        86.03      5130.4 ppb         86.03   1.68%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.61%
Mn 257.610†           631076.5      499.30 ug/L         0.213      499.30 ppb          0.213   0.04%
   QC value within limits for Mn 257.610  Recovery = 99.86%
Mo 202.031†            12617.9      505.41 ug/L         2.281      505.41 ppb          2.281   0.45%
   QC value within limits for Mo 202.031  Recovery = 101.08%
Na 589.592 Radial†      3894.2       10530 ug/L         54.2       10530 ppb          54.2   0.51%
   QC value within limits for Na 589.592 Radial  Recovery = 105.30%
Ni 231.604†            30605.7      490.23 ug/L         2.010      490.23 ppb          2.010   0.41%
   QC value within limits for Ni 231.604  Recovery = 98.05%
P 214.914†              7025.6      2407.3 ug/L        11.29      2407.3 ppb         11.29   0.47%
   QC value within limits for P 214.914  Recovery = 96.29%
Pb 220.353†             6695.5      503.28 ug/L         3.131      503.28 ppb          3.131   0.62%
   QC value within limits for Pb 220.353  Recovery = 100.66%
S 181.975 Axial†        1186.8      1003.6 ug/L         9.65      1003.6 ppb          9.65   0.96%
   QC value within limits for S 181.975 Axial  Recovery = 100.36%
Sb 206.836†             2520.9      501.81 ug/L         1.720      501.81 ppb          1.720   0.34%
   QC value within limits for Sb 206.836  Recovery = 100.36%
Se 196.026†             1518.8      513.96 ug/L         4.274      513.96 ppb          4.274   0.83%
   QC value within limits for Se 196.026  Recovery = 102.79%
Si 251.611†           122767.6      2521.2 ug/L         4.49      2521.2 ppb          4.49   0.18%
   QC value within limits for Si 251.611  Recovery = 100.85%
Sn 189.927†             4810.6      500.81 ug/L         2.293      500.81 ppb          2.293   0.46%
   QC value within limits for Sn 189.927  Recovery = 100.16%
Sr 421.552†            36119.7      556.43 ug/L         3.027      556.43 ppb          3.027   0.54%
   QC value greater than the upper limit for Sr 421.552  Recovery = 111.29%
Ti 334.940†           383529.8      502.01 ug/L         0.556      502.01 ppb          0.556   0.11%
   QC value within limits for Ti 334.940  Recovery = 100.40%
Tl 190.801†             2912.1      493.18 ug/L         2.842      493.18 ppb          2.842   0.58%
   QC value within limits for Tl 190.801  Recovery = 98.64%
U 409.014†             19665.0      486.32 ug/L         2.655      486.32 ppb          2.655   0.55%
   QC value within limits for U 409.014  Recovery = 97.26%
V 292.402†             87789.9      503.91 ug/L         0.504      503.91 ppb          0.504   0.10%
   QC value within limits for V 292.402  Recovery = 100.78%
Zn 213.857†            89504.1      495.22 ug/L         0.491      495.22 ppb          0.491   0.10%
   QC value within limits for Zn 213.857  Recovery = 99.04%
SiO2†                 122066.7      5367.3 ug/L        54.44      5367.3 ppb         54.44   1.01%
   QC value within limits for SiO2  Recovery = 100.37%
QC Failed.  Continue with analysis.
```

Sequence No.: 70
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 21:49:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5467.5	5467.5	98.3	%			21:50:53
1	Y RADIAL	4768.1	4768.1	99.01	%			21:50:53
1	Al 396.153Radial†	-75.3	15.6	14.157	ug/L	14.157	ppb	21:50:53
1	Ca 317.933Radial†	23.0	6.5	16.235	ug/L	16.235	ppb	21:51:13
1	Fe 238.204 Radial†	1.3	1.0	35.999	ug/L	35.999	ppb	21:51:13
1	K 766.490 Radial†	1537.8	92.1	40.039	ug/L	40.039	ppb	21:50:53
1	Mg 279.077 IEC†	1.0	0.8	62.522	ug/L	62.522	ppb	21:51:13
1	Na 589.592 Radial†	-215.4	-48.8	-131.87	ug/L	-131.87	ppb	21:51:13
1	Sr 421.552†	4.8	-0.6	-0.0090	ug/L	-0.0090	ppb	21:51:13
1	Sc 361.383	1069317.4	1069317.4	100.80	%			21:52:10
1	Y 371.029	862266.3	862266.3	101.06	%			21:52:10
1	Ag 328.068†	626.3	-17.3	-0.0571	ug/L	-0.0571	ppb	21:52:15
1	As 188.979†	-48.5	-11.2	-2.6303	ug/L	-2.6303	ppb	21:52:35
1	B 249.677†	-234.3	149.1	2.3185	ug/L	2.3185	ppb	21:52:15
1	Ba 233.527†	44.9	20.3	0.1041	ug/L	0.1041	ppb	21:52:35
1	Be 313.107†	-7211.0	162.1	0.0504	ug/L	0.0504	ppb	21:52:15
1	Cd 226.502†	-291.5	-11.6	-0.0906	ug/L	-0.0906	ppb	21:52:35
1	Co 228.616†	-101.2	-10.0	-0.1245	ug/L	-0.1245	ppb	21:52:35
1	Cr 267.716†	-16.8	12.0	0.1026	ug/L	0.1026	ppb	21:52:35
1	Cu 324.752†	10237.6	-34.4	-0.0828	ug/L	-0.0828	ppb	21:52:15
1	Mn 257.610†	946.9	112.4	0.0923	ug/L	0.0923	ppb	21:52:35
1	Mo 202.031†	34.5	2.4	0.0998	ug/L	0.0998	ppb	21:52:35
1	Ni 231.604†	170.6	21.0	0.3362	ug/L	0.3362	ppb	21:52:35
1	P 214.914†	345.0	5.3	1.8939	ug/L	1.8939	ppb	21:52:35
1	Pb 220.353†	-24.6	4.7	0.3485	ug/L	0.3485	ppb	21:52:35
1	S 181.975 Axial†	62.1	-6.2	-5.2877	ug/L	-5.2877	ppb	21:52:35
1	Sb 206.836†	55.5	9.6	1.9108	ug/L	1.9108	ppb	21:52:35
1	Se 196.026†	-30.0	-8.2	-2.5329	ug/L	-2.5329	ppb	21:52:35
1	Si 251.611†	660.7	95.3	1.9490	ug/L	1.9490	ppb	21:52:35
1	Sn 189.927†	15.9	10.3	1.0734	ug/L	1.0734	ppb	21:52:35
1	Ti 334.940†	-1127.0	-8.8	-0.0111	ug/L	-0.0111	ppb	21:52:15
1	Tl 190.801†	-24.7	36.9	6.2301	ug/L	6.2301	ppb	21:52:35
1	U 409.014†	-3815.7	49.2	1.2152	ug/L	1.2152	ppb	21:52:10
1	V 292.402†	-1623.7	41.9	0.2372	ug/L	0.2372	ppb	21:52:15
1	Zn 213.857†	1207.2	75.3	0.4126	ug/L	0.4126	ppb	21:52:35
1	SiO2†	661.4	53.8	2.3366	ug/L	2.3366	ppb	21:53:41
2	Sc Radial	5534.1	5534.1	99.4	%			21:51:18
2	Y RADIAL	4810.6	4810.6	99.89	%			21:51:18
2	Al 396.153Radial†	-92.0	-0.4	-0.3457	ug/L	-0.3457	ppb	21:51:18
2	Ca 317.933Radial†	24.8	8.0	19.815	ug/L	19.815	ppb	21:51:38
2	Fe 238.204 Radial†	-0.3	-0.6	-22.613	ug/L	-22.613	ppb	21:51:38
2	K 766.490 Radial†	1609.0	144.9	62.895	ug/L	62.895	ppb	21:51:18
2	Mg 279.077 IEC†	0.6	0.4	34.964	ug/L	34.964	ppb	21:51:38
2	Na 589.592 Radial†	-225.9	-56.8	-153.46	ug/L	-153.46	ppb	21:51:38
2	Sr 421.552†	-0.9	-6.3	-0.0978	ug/L	-0.0978	ppb	21:51:38
2	Sc 361.383	1073624.9	1073624.9	101.20	%			21:52:40
2	Y 371.029	866346.3	866346.3	101.54	%			21:52:40
2	Ag 328.068†	629.9	-16.2	-0.0696	ug/L	-0.0696	ppb	21:52:45
2	As 188.979†	-49.6	-12.1	-2.8439	ug/L	-2.8439	ppb	21:53:05
2	B 249.677†	-257.4	127.2	1.9847	ug/L	1.9847	ppb	21:52:45
2	Ba 233.527†	42.1	17.3	0.0874	ug/L	0.0874	ppb	21:53:05
2	Be 313.107†	-7087.6	312.7	0.0975	ug/L	0.0975	ppb	21:52:45
2	Cd 226.502†	-303.1	-21.9	-0.1608	ug/L	-0.1608	ppb	21:53:05
2	Co 228.616†	-81.9	9.4	0.1187	ug/L	0.1187	ppb	21:53:05
2	Cr 267.716†	-34.4	-5.4	-0.0455	ug/L	-0.0455	ppb	21:53:05
2	Cu 324.752†	10046.3	-264.2	-0.6532	ug/L	-0.6532	ppb	21:52:45
2	Mn 257.610†	929.6	91.5	0.0687	ug/L	0.0687	ppb	21:53:05
2	Mo 202.031†	40.3	8.1	0.3219	ug/L	0.3219	ppb	21:53:05
2	Ni 231.604†	171.6	21.3	0.3418	ug/L	0.3418	ppb	21:53:05

2	P 214.914†	343.2	2.2	0.9218	ug/L	0.9218 ppb	21:53:05
2	Pb 220.353†	-55.8	-26.1	-1.9532	ug/L	-1.9532 ppb	21:53:05
2	S 181.975 Axial†	71.7	3.1	2.5845	ug/L	2.5845 ppb	21:53:05
2	Sb 206.836†	58.5	12.3	2.4499	ug/L	2.4499 ppb	21:53:05
2	Se 196.026†	-30.4	-8.5	-2.8278	ug/L	-2.8278 ppb	21:53:05
2	Si 251.611†	674.3	106.2	2.1599	ug/L	2.1599 ppb	21:53:05
2	Sn 189.927†	18.5	12.8	1.3360	ug/L	1.3360 ppb	21:53:05
2	Ti 334.940†	-1041.7	79.9	0.1068	ug/L	0.1068 ppb	21:52:45
2	Tl 190.801†	-32.4	29.4	4.9557	ug/L	4.9557 ppb	21:53:05
2	U 409.014†	-3965.0	-83.2	-2.0616	ug/L	-2.0616 ppb	21:52:40
2	V 292.402†	-1656.7	15.7	0.0928	ug/L	0.0928 ppb	21:52:45
2	Zn 213.857†	1222.3	85.4	0.4773	ug/L	0.4773 ppb	21:53:05
2	SiO2†	692.9	82.3	3.5687	ug/L	3.5687 ppb	21:53:46
3	Sc Radial	5471.3	5471.3	98.3	%		21:51:43
3	Y RADIAL	4767.4	4767.4	99.00	%		21:51:43
3	Al 396.153Radial†	-77.7	13.2	11.967	ug/L	11.967 ppb	21:51:43
3	Ca 317.933Radial†	24.1	7.6	18.952	ug/L	18.952 ppb	21:52:03
3	Fe 238.204 Radial†	0.6	0.3	11.539	ug/L	11.539 ppb	21:52:03
3	K 766.490 Radial†	1543.1	96.4	41.888	ug/L	41.888 ppb	21:51:43
3	Mg 279.077 IEC†	1.2	1.1	86.378	ug/L	86.378 ppb	21:52:03
3	Na 589.592 Radial†	-213.2	-46.5	-125.66	ug/L	-125.66 ppb	21:52:03
3	Sr 421.552†	12.4	7.1	0.1096	ug/L	0.1096 ppb	21:52:03
3	Sc 361.383	1061357.3	1061357.3	100.04	%		21:53:10
3	Y 371.029	855792.0	855792.0	100.30	%		21:53:10
3	Ag 328.068†	685.7	46.8	0.1918	ug/L	0.1918 ppb	21:53:15
3	As 188.979†	-46.2	-9.3	-2.1873	ug/L	-2.1873 ppb	21:53:35
3	B 249.677†	-297.1	84.5	1.3160	ug/L	1.3160 ppb	21:53:15
3	Ba 233.527†	45.8	21.5	0.1095	ug/L	0.1095 ppb	21:53:35
3	Be 313.107†	-7219.9	99.5	0.0311	ug/L	0.0311 ppb	21:53:15
3	Cd 226.502†	-289.6	-11.8	-0.0897	ug/L	-0.0897 ppb	21:53:35
3	Co 228.616†	-88.0	2.4	0.0313	ug/L	0.0313 ppb	21:53:35
3	Cr 267.716†	-45.5	-16.9	-0.1424	ug/L	-0.1424 ppb	21:53:35
3	Cu 324.752†	10258.6	62.7	0.1554	ug/L	0.1554 ppb	21:53:15
3	Mn 257.610†	941.6	114.1	0.0900	ug/L	0.0900 ppb	21:53:35
3	Mo 202.031†	44.2	12.4	0.4988	ug/L	0.4988 ppb	21:53:35
3	Ni 231.604†	162.9	14.6	0.2337	ug/L	0.2337 ppb	21:53:35
3	P 214.914†	353.6	16.5	5.7895	ug/L	5.7895 ppb	21:53:35
3	Pb 220.353†	-14.7	14.4	1.0817	ug/L	1.0817 ppb	21:53:35
3	S 181.975 Axial†	65.3	-2.6	-2.1627	ug/L	-2.1627 ppb	21:53:35
3	Sb 206.836†	48.1	2.7	0.5346	ug/L	0.5346 ppb	21:53:35
3	Se 196.026†	-7.5	14.1	4.6308	ug/L	4.6308 ppb	21:53:35
3	Si 251.611†	640.3	79.9	1.6279	ug/L	1.6279 ppb	21:53:35
3	Sn 189.927†	1.8	-3.7	-0.3819	ug/L	-0.3819 ppb	21:53:35
3	Ti 334.940†	-1056.6	53.1	0.0720	ug/L	0.0720 ppb	21:53:15
3	Tl 190.801†	-38.1	23.3	3.9339	ug/L	3.9339 ppb	21:53:35
3	U 409.014†	-3946.2	-109.7	-2.7228	ug/L	-2.7228 ppb	21:53:10
3	V 292.402†	-1620.7	32.8	0.1871	ug/L	0.1871 ppb	21:53:15
3	Zn 213.857†	1195.3	72.4	0.3984	ug/L	0.3984 ppb	21:53:35
3	SiO2†	675.8	73.1	3.1835	ug/L	3.1835 ppb	21:53:51

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1068099.9	100.68	%	0.587				0.58%
Sc Radial	5491.0	98.7	%	0.67				0.68%
Y 371.029	861468.2	100.97	%	0.624				0.62%
Y RADIAL	4782.0	99.30	%	0.514				0.52%
Ag 328.068†	4.4	0.0217	ug/L	0.14746	0.0217	ppb	0.14746	679.78%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.5	8.5927	ug/L	7.81795	8.5927	ppb	7.81795	90.98%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-10.9	-2.5538	ug/L	0.33494	-2.5538	ppb	0.33494	13.12%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	120.3	1.8730	ug/L	0.51051	1.8730	ppb	0.51051	27.26%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	19.7	0.1004	ug/L	0.01152	0.1004	ppb	0.01152	11.48%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	191.4	0.0597	ug/L	0.03415	0.0597	ppb	0.03415	57.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	7.4	18.334	ug/L	1.8684	18.334	ppb	1.8684	10.19%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -15.1     -0.1137 ug/L       0.04081     -0.1137 ppb        0.04081  35.90%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                0.6      0.0085 ug/L       0.12315      0.0085 ppb        0.12315 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               -3.4     -0.0284 ug/L       0.12339     -0.0284 ppb        0.12339 433.88%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -78.6     -0.1935 ug/L       0.41553     -0.1935 ppb        0.41553 214.74%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.2      8.3084 ug/L      29.43910      8.3084 ppb       29.43910 354.33%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        111.1      48.274 ug/L       12.6960      48.274 ppb        12.6960  26.30%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.8      61.288 ug/L       25.7291      61.288 ppb        25.7291  41.98%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              106.0      0.0837 ug/L       0.01301      0.0837 ppb        0.01301  15.55%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                7.7      0.3068 ug/L       0.19992      0.3068 ppb        0.19992  65.16%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -50.7     -137.00 ug/L        14.590     -137.00 ppb         14.590  10.65%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               19.0      0.3039 ug/L       0.06085      0.3039 ppb        0.06085  20.02%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 8.0      2.8684 ug/L       2.57602      2.8684 ppb        2.57602  89.81%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               -2.3     -0.1743 ug/L       1.58357     -0.1743 ppb        1.58357 908.48%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -1.9     -1.6220 ug/L       3.96387     -1.6220 ppb        3.96387 244.39%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                8.2      1.6318 ug/L       0.98767      1.6318 ppb        0.98767  60.53%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -0.8     -0.2433 ug/L       4.22364     -0.2433 ppb        4.22364 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               93.8      1.9123 ug/L       0.26789      1.9123 ppb        0.26789  14.01%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.5      0.6758 ug/L       0.92537      0.6758 ppb        0.92537 136.92%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                0.1      0.0009 ug/L       0.10403      0.0009 ppb        0.10403 >999.9%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               41.4      0.0559 ug/L       0.06058      0.0559 ppb        0.06058 108.32%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               29.9      5.0399 ug/L       1.15041      5.0399 ppb        1.15041  22.83%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -47.9     -1.1897 ug/L       2.10877     -1.1897 ppb        2.10877 177.25%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                30.1      0.1724 ug/L       0.07334      0.1724 ppb        0.07334  42.55%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               77.7      0.4294 ug/L       0.04204      0.4294 ppb        0.04204   9.79%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     69.7      3.0296 ug/L       0.63033      3.0296 ppb        0.63033  20.81%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 81
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 23:04:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5578.8	5578.8	100	%			23:06:26
1	Y RADIAL	4865.6	4865.6	101.0	%			23:06:26
1	Al 396.153Radial†	5404.6	5483.3	4969.4	ug/L	4969.4	ppb	23:06:26
1	Ca 317.933Radial†	1992.7	1970.8	4909.0	ug/L	4909.0	ppb	23:06:46
1	Fe 238.204 Radial†	137.4	136.7	4812.3	ug/L	4812.3	ppb	23:06:46
1	K 766.490 Radial†	13464.9	11958.2	5182.8	ug/L	5182.8	ppb	23:06:26
1	Mg 279.077 IEC†	63.8	63.4	5030.3	ug/L	5030.3	ppb	23:06:46
1	Na 589.592 Radial†	3174.9	3337.4	9024.0	ug/L	9024.0	ppb	23:06:26
1	Sr 421.552†	31845.6	31760.6	489.28	ug/L	489.28	ppb	23:06:26
1	Sc 361.383	1070016.0	1070016.0	100.86	%			23:07:45
1	Y 371.029	850374.4	850374.4	99.667	%			23:07:45
1	Ag 328.068†	129690.8	127945.2	509.49	ug/L	509.49	ppb	23:07:45
1	As 188.979†	2114.0	2132.9	503.84	ug/L	503.84	ppb	23:08:05
1	B 249.677†	31660.2	31771.5	493.27	ug/L	493.27	ppb	23:07:45
1	Ba 233.527†	99722.3	98846.8	501.55	ug/L	501.55	ppb	23:07:45
1	Be 313.107†	1622183.1	1615652.8	503.54	ug/L	503.54	ppb	23:07:45
1	Cd 226.502†	67391.6	67094.0	501.57	ug/L	501.57	ppb	23:07:45
1	Co 228.616†	39590.6	39343.1	490.27	ug/L	490.27	ppb	23:08:05
1	Cr 267.716†	59070.8	58595.2	499.76	ug/L	499.76	ppb	23:07:45
1	Cu 324.752†	215350.2	203320.7	501.92	ug/L	501.92	ppb	23:07:45
1	Mn 257.610†	641028.1	634729.5	502.14	ug/L	502.14	ppb	23:07:45
1	Mo 202.031†	12831.7	12690.4	508.29	ug/L	508.29	ppb	23:08:05
1	Ni 231.604†	31234.8	30820.0	493.66	ug/L	493.66	ppb	23:08:05
1	P 214.914†	7467.5	7066.8	2421.6	ug/L	2421.6	ppb	23:08:05
1	Pb 220.353†	6756.4	6727.8	505.73	ug/L	505.73	ppb	23:08:05
1	S 181.975 Axial†	1289.9	1211.1	1024.1	ug/L	1024.1	ppb	23:08:05
1	Sb 206.836†	2624.0	2556.2	508.80	ug/L	508.80	ppb	23:08:05
1	Se 196.026†	1529.1	1537.7	518.81	ug/L	518.81	ppb	23:08:05
1	Si 251.611†	125585.7	123953.6	2545.6	ug/L	2545.6	ppb	23:07:45
1	Sn 189.927†	4856.4	4809.5	500.67	ug/L	500.67	ppb	23:08:05
1	Ti 334.940†	388500.2	386293.4	505.62	ug/L	505.62	ppb	23:07:45
1	Tl 190.801†	2915.2	2951.7	499.86	ug/L	499.86	ppb	23:08:05
1	U 409.014†	15793.4	19493.4	482.11	ug/L	482.11	ppb	23:07:45
1	V 292.402†	86941.2	87851.9	504.34	ug/L	504.34	ppb	23:07:45
1	Zn 213.857†	91907.7	90000.8	498.01	ug/L	498.01	ppb	23:07:45
1	SiO2†	125462.7	123789.5	5443.4	ug/L	5443.4	ppb	23:09:05
2	Sc Radial	5598.3	5598.3	101	%			23:06:51
2	Y RADIAL	4877.8	4877.8	101.3	%			23:06:51
2	Al 396.153Radial†	5482.6	5542.0	5022.6	ug/L	5022.6	ppb	23:06:51
2	Ca 317.933Radial†	1970.9	1942.2	4837.7	ug/L	4837.7	ppb	23:07:11
2	Fe 238.204 Radial†	137.5	136.3	4798.4	ug/L	4798.4	ppb	23:07:11
2	K 766.490 Radial†	13506.7	11952.9	5180.5	ug/L	5180.5	ppb	23:06:51
2	Mg 279.077 IEC†	60.8	60.2	4776.7	ug/L	4776.7	ppb	23:07:11
2	Na 589.592 Radial†	3225.2	3376.4	9129.3	ug/L	9129.3	ppb	23:06:51
2	Sr 421.552†	32004.2	31807.6	490.00	ug/L	490.00	ppb	23:06:51
2	Sc 361.383	1071033.3	1071033.3	100.96	%			23:08:12
2	Y 371.029	852280.3	852280.3	99.891	%			23:08:12
2	Ag 328.068†	129929.8	128059.8	509.94	ug/L	509.94	ppb	23:08:12
2	As 188.979†	2128.0	2144.7	506.61	ug/L	506.61	ppb	23:08:32
2	B 249.677†	31820.5	31900.4	495.28	ug/L	495.28	ppb	23:08:12
2	Ba 233.527†	99761.7	98791.9	501.27	ug/L	501.27	ppb	23:08:12
2	Be 313.107†	1624833.9	1616750.7	503.88	ug/L	503.88	ppb	23:08:12
2	Cd 226.502†	67429.0	67067.5	501.38	ug/L	501.38	ppb	23:08:12
2	Co 228.616†	39920.9	39633.0	493.89	ug/L	493.89	ppb	23:08:32
2	Cr 267.716†	59147.3	58615.4	499.93	ug/L	499.93	ppb	23:08:12
2	Cu 324.752†	216639.5	204395.0	504.57	ug/L	504.57	ppb	23:08:12
2	Mn 257.610†	640887.9	633986.9	501.56	ug/L	501.56	ppb	23:08:12
2	Mo 202.031†	12939.6	12785.2	512.08	ug/L	512.08	ppb	23:08:32
2	Ni 231.604†	31486.8	31040.1	497.19	ug/L	497.19	ppb	23:08:32

2	P 214.914†	7574.1	7165.4	2456.1 ug/L	2456.1 ppb	23:08:32
2	Pb 220.353†	6814.2	6778.7	509.56 ug/L	509.56 ppb	23:08:32
2	S 181.975 Axial†	1290.2	1210.2	1023.4 ug/L	1023.4 ppb	23:08:32
2	Sb 206.836†	2627.6	2557.3	509.19 ug/L	509.19 ppb	23:08:32
2	Se 196.026†	1544.0	1551.0	523.11 ug/L	523.11 ppb	23:08:32
2	Si 251.611†	125811.7	124059.2	2547.7 ug/L	2547.7 ppb	23:08:12
2	Sn 189.927†	4910.4	4858.3	505.75 ug/L	505.75 ppb	23:08:32
2	Ti 334.940†	388932.4	386355.6	505.69 ug/L	505.69 ppb	23:08:12
2	Tl 190.801†	2938.1	2971.6	503.21 ug/L	503.21 ppb	23:08:32
2	U 409.014†	15999.7	19682.8	486.81 ug/L	486.81 ppb	23:08:12
2	V 292.402†	87002.4	87830.6	504.27 ug/L	504.27 ppb	23:08:12
2	Zn 213.857†	91924.3	89930.7	497.60 ug/L	497.60 ppb	23:08:12
2	SiO2†	125608.9	123816.1	5444.4 ug/L	5444.4 ppb	23:09:10
3	Sc Radial	5569.8	5569.8	100 %		23:07:16
3	Y RADIAL	4813.0	4813.0	99.94 %		23:07:16
3	Al 396.153Radial†	5392.6	5480.0	4966.4 ug/L	4966.4 ppb	23:07:16
3	Ca 317.933Radial†	1977.1	1958.4	4878.1 ug/L	4878.1 ppb	23:07:36
3	Fe 238.204 Radial†	136.1	135.6	4773.6 ug/L	4773.6 ppb	23:07:36
3	K 766.490 Radial†	13318.4	11833.4	5128.6 ug/L	5128.6 ppb	23:07:16
3	Mg 279.077 IEC†	61.1	60.8	4823.6 ug/L	4823.6 ppb	23:07:36
3	Na 589.592 Radial†	3226.5	3394.0	9177.1 ug/L	9177.1 ppb	23:07:16
3	Sr 421.552†	31638.7	31605.0	486.88 ug/L	486.88 ppb	23:07:16
3	Sc 361.383	1076537.6	1076537.6	101.48 %		23:08:40
3	Y 371.029	854717.3	854717.3	100.18 %		23:08:40
3	Ag 328.068†	130589.5	128051.9	509.91 ug/L	509.91 ppb	23:08:40
3	As 188.979†	2114.4	2120.5	500.95 ug/L	500.95 ppb	23:09:00
3	B 249.677†	32003.9	31920.0	495.59 ug/L	495.59 ppb	23:08:40
3	Ba 233.527†	100654.4	99166.4	503.16 ug/L	503.16 ppb	23:08:40
3	Be 313.107†	1636918.2	1620430.3	505.03 ug/L	505.03 ppb	23:08:40
3	Cd 226.502†	68037.0	67325.3	503.31 ug/L	503.31 ppb	23:08:40
3	Co 228.616†	39811.5	39323.0	490.02 ug/L	490.02 ppb	23:09:00
3	Cr 267.716†	59507.5	58670.7	500.40 ug/L	500.40 ppb	23:08:40
3	Cu 324.752†	217626.6	204270.6	504.27 ug/L	504.27 ppb	23:08:40
3	Mn 257.610†	647010.2	636774.4	503.76 ug/L	503.76 ppb	23:08:40
3	Mo 202.031†	12901.2	12681.9	507.95 ug/L	507.95 ppb	23:09:00
3	Ni 231.604†	31365.6	30761.2	492.72 ug/L	492.72 ppb	23:09:00
3	P 214.914†	7527.9	7081.5	2426.4 ug/L	2426.4 ppb	23:09:00
3	Pb 220.353†	6796.8	6727.0	505.67 ug/L	505.67 ppb	23:09:00
3	S 181.975 Axial†	1291.8	1205.2	1019.2 ug/L	1019.2 ppb	23:09:00
3	Sb 206.836†	2632.7	2549.0	507.35 ug/L	507.35 ppb	23:09:00
3	Se 196.026†	1537.8	1537.0	518.47 ug/L	518.47 ppb	23:09:00
3	Si 251.611†	126709.4	124306.7	2552.9 ug/L	2552.9 ppb	23:08:40
3	Sn 189.927†	4883.6	4807.1	500.43 ug/L	500.43 ppb	23:09:00
3	Ti 334.940†	391916.2	387326.3	506.97 ug/L	506.97 ppb	23:08:40
3	Tl 190.801†	2924.5	2943.3	498.47 ug/L	498.47 ppb	23:09:00
3	U 409.014†	16050.8	19652.1	486.05 ug/L	486.05 ppb	23:08:40
3	V 292.402†	87691.2	88068.7	505.57 ug/L	505.57 ppb	23:08:40
3	Zn 213.857†	92772.9	90301.4	499.70 ug/L	499.70 ppb	23:08:40
3	SiO2†	125922.4	123488.9	5430.2 ug/L	5430.2 ppb	23:09:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1072529.0	101.10	%	0.331				0.33%
Sc Radial	5582.3	100	%	0.3				0.26%
Y 371.029	852457.3	99.911	%	0.2551				0.26%
Y RADIAL	4852.1	100.8	%	0.72				0.71%
Ag 328.068†	128019.0	509.78	ug/L	0.248	509.78	ppb	0.248	0.05%
QC value within limits for Ag 328.068 Recovery = 101.96%								
Al 396.153Radial†	5501.8	4986.1	ug/L	31.64	4986.1	ppb	31.64	0.63%
QC value within limits for Al 396.153Radial Recovery = 99.72%								
As 188.979†	2132.7	503.80	ug/L	2.835	503.80	ppb	2.835	0.56%
QC value within limits for As 188.979 Recovery = 100.76%								
B 249.677†	31864.0	494.72	ug/L	1.258	494.72	ppb	1.258	0.25%
QC value within limits for B 249.677 Recovery = 98.94%								
Ba 233.527†	98935.1	501.99	ug/L	1.025	501.99	ppb	1.025	0.20%
QC value within limits for Ba 233.527 Recovery = 100.40%								
Be 313.107†	1617611.3	504.15	ug/L	0.780	504.15	ppb	0.780	0.15%
QC value within limits for Be 313.107 Recovery = 100.83%								
Ca 317.933Radial†	1957.1	4874.9	ug/L	35.76	4874.9	ppb	35.76	0.73%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.50%
Cd 226.502†            67162.3      502.09 ug/L        1.061      502.09 ppb        1.061   0.21%
   QC value within limits for Cd 226.502  Recovery = 100.42%
Co 228.616†            39433.0      491.40 ug/L        2.167      491.40 ppb        2.167   0.44%
   QC value within limits for Co 228.616  Recovery = 98.28%
Cr 267.716†            58627.1      500.03 ug/L        0.333      500.03 ppb        0.333   0.07%
   QC value within limits for Cr 267.716  Recovery = 100.01%
Cu 324.752†           203995.4      503.59 ug/L        1.449      503.59 ppb        1.449   0.29%
   QC value within limits for Cu 324.752  Recovery = 100.72%
Fe 238.204 Radial†       136.2      4794.8 ug/L       19.58      4794.8 ppb        19.58   0.41%
   QC value within limits for Fe 238.204 Radial  Recovery = 95.90%
K 766.490 Radial†      11914.8      5164.0 ug/L       30.68      5164.0 ppb        30.68   0.59%
   QC value within limits for K 766.490 Radial  Recovery = 103.28%
Mg 279.077 IEC†           61.5      4876.9 ug/L      134.94      4876.9 ppb       134.94   2.77%
   QC value within limits for Mg 279.077 IEC  Recovery = 97.54%
Mn 257.610†           635163.6      502.49 ug/L        1.139      502.49 ppb        1.139   0.23%
   QC value within limits for Mn 257.610  Recovery = 100.50%
Mo 202.031†            12719.1      509.44 ug/L        2.295      509.44 ppb        2.295   0.45%
   QC value within limits for Mo 202.031  Recovery = 101.89%
Na 589.592 Radial†      3369.3      9110.2 ug/L       78.32      9110.2 ppb        78.32   0.86%
   QC value within limits for Na 589.592 Radial  Recovery = 91.10%
Ni 231.604†            30873.8      494.52 ug/L        2.355      494.52 ppb        2.355   0.48%
   QC value within limits for Ni 231.604  Recovery = 98.90%
P 214.914†              7104.6      2434.7 ug/L       18.68      2434.7 ppb        18.68   0.77%
   QC value within limits for P 214.914  Recovery = 97.39%
Pb 220.353†             6744.5      506.99 ug/L        2.233      506.99 ppb        2.233   0.44%
   QC value within limits for Pb 220.353  Recovery = 101.40%
S 181.975 Axial†        1208.8      1022.2 ug/L        2.68      1022.2 ppb         2.68   0.26%
   QC value within limits for S 181.975 Axial  Recovery = 102.22%
Sb 206.836†             2554.1      508.45 ug/L        0.966      508.45 ppb        0.966   0.19%
   QC value within limits for Sb 206.836  Recovery = 101.69%
Se 196.026†             1541.9      520.13 ug/L        2.584      520.13 ppb        2.584   0.50%
   QC value within limits for Se 196.026  Recovery = 104.03%
Si 251.611†           124106.5      2548.7 ug/L        3.76      2548.7 ppb         3.76   0.15%
   QC value within limits for Si 251.611  Recovery = 101.95%
Sn 189.927†             4825.0      502.28 ug/L        3.004      502.28 ppb        3.004   0.60%
   QC value within limits for Sn 189.927  Recovery = 100.46%
Sr 421.552†            31724.4      488.72 ug/L        1.634      488.72 ppb        1.634   0.33%
   QC value within limits for Sr 421.552  Recovery = 97.74%
Ti 334.940†           386658.4      506.09 ug/L        0.758      506.09 ppb        0.758   0.15%
   QC value within limits for Ti 334.940  Recovery = 101.22%
Tl 190.801†             2955.5      500.51 ug/L        2.437      500.51 ppb        2.437   0.49%
   QC value within limits for Tl 190.801  Recovery = 100.10%
U 409.014†             19609.4      484.99 ug/L        2.524      484.99 ppb        2.524   0.52%
   QC value within limits for U 409.014  Recovery = 97.00%
V 292.402†             87917.1      504.73 ug/L        0.732      504.73 ppb        0.732   0.15%
   QC value within limits for V 292.402  Recovery = 100.95%
Zn 213.857†            90077.6      498.43 ug/L        1.114      498.43 ppb        1.114   0.22%
   QC value within limits for Zn 213.857  Recovery = 99.69%
SiO2†                 123698.1      5439.3 ug/L        7.94      5439.3 ppb         7.94   0.15%
   QC value within limits for SiO2  Recovery = 101.72%
All analyte(s) passed QC.
```

Sequence No.: 82
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 23:11:26
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5545.5	5545.5	99.7	%			23:13:18
1	Y RADIAL	4866.2	4866.2	101.0	%			23:13:18
1	Al 396.153Radial†	-68.5	23.4	21.321	ug/L	21.321	ppb	23:13:18
1	Ca 317.933Radial†	22.9	6.1	15.139	ug/L	15.139	ppb	23:13:38
1	Fe 238.204 Radial†	0.2	-0.1	-3.3915	ug/L	-3.3915	ppb	23:13:38
1	K 766.490 Radial†	1443.3	-24.8	-10.720	ug/L	-10.720	ppb	23:13:18
1	Mg 279.077 IEC†	0.2	0.0	1.1543	ug/L	1.1543	ppb	23:13:38
1	Na 589.592 Radial†	-195.8	-26.1	-70.550	ug/L	-70.550	ppb	23:13:38
1	Sr 421.552†	13.1	7.7	0.1179	ug/L	0.1179	ppb	23:13:38
1	Sc 361.383	1056203.8	1056203.8	99.559	%			23:14:35
1	Y 371.029	848408.3	848408.3	99.437	%			23:14:35
1	Ag 328.068†	659.9	24.2	0.0957	ug/L	0.0957	ppb	23:14:40
1	As 188.979†	-46.5	-9.8	-2.2993	ug/L	-2.2993	ppb	23:15:00
1	B 249.677†	-113.3	267.7	4.1727	ug/L	4.1727	ppb	23:14:40
1	Ba 233.527†	40.0	15.8	0.0804	ug/L	0.0804	ppb	23:15:00
1	Be 313.107†	-7413.8	-130.5	-0.0403	ug/L	-0.0403	ppb	23:14:40
1	Cd 226.502†	-277.9	-1.4	-0.0102	ug/L	-0.0102	ppb	23:15:00
1	Co 228.616†	-89.5	0.5	0.0067	ug/L	0.0067	ppb	23:15:00
1	Cr 267.716†	-11.3	17.2	0.1471	ug/L	0.1471	ppb	23:15:00
1	Cu 324.752†	10377.6	232.4	0.5731	ug/L	0.5731	ppb	23:14:40
1	Mn 257.610†	987.6	164.9	0.1299	ug/L	0.1299	ppb	23:15:00
1	Mo 202.031†	36.7	5.1	0.2033	ug/L	0.2033	ppb	23:15:00
1	Ni 231.604†	171.2	23.7	0.3804	ug/L	0.3804	ppb	23:15:00
1	P 214.914†	346.1	10.8	3.7072	ug/L	3.7072	ppb	23:15:00
1	Pb 220.353†	-20.2	8.8	0.6667	ug/L	0.6667	ppb	23:15:00
1	S 181.975 Axial†	62.3	-5.3	-4.4515	ug/L	-4.4515	ppb	23:15:00
1	Sb 206.836†	48.0	2.8	0.5286	ug/L	0.5286	ppb	23:15:00
1	Se 196.026†	-21.1	0.4	0.1146	ug/L	0.1146	ppb	23:15:00
1	Si 251.611†	966.5	410.7	8.4765	ug/L	8.4765	ppb	23:15:00
1	Sn 189.927†	-1.8	-7.3	-0.7608	ug/L	-0.7608	ppb	23:15:00
1	Ti 334.940†	-1016.5	88.3	0.1169	ug/L	0.1169	ppb	23:14:40
1	Tl 190.801†	-51.5	9.7	1.6341	ug/L	1.6341	ppb	23:15:00
1	U 409.014†	-3850.3	-32.6	-0.8091	ug/L	-0.8091	ppb	23:14:35
1	V 292.402†	-1624.8	20.8	0.1193	ug/L	0.1193	ppb	23:14:40
1	Zn 213.857†	1210.6	93.5	0.5195	ug/L	0.5195	ppb	23:15:00
1	SiO2†	968.4	370.4	16.371	ug/L	16.371	ppb	23:16:06
2	Sc Radial	5509.6	5509.6	99.0	%			23:13:43
2	Y RADIAL	4815.2	4815.2	99.99	%			23:13:43
2	Al 396.153Radial†	-79.7	11.7	10.594	ug/L	10.594	ppb	23:13:43
2	Ca 317.933Radial†	22.5	5.8	14.397	ug/L	14.397	ppb	23:14:03
2	Fe 238.204 Radial†	-1.0	-1.3	-46.116	ug/L	-46.116	ppb	23:14:03
2	K 766.490 Radial†	1497.3	39.2	16.985	ug/L	16.985	ppb	23:13:43
2	Mg 279.077 IEC†	-0.1	-0.3	-25.994	ug/L	-25.994	ppb	23:14:03
2	Na 589.592 Radial†	-179.5	-10.9	-29.473	ug/L	-29.473	ppb	23:14:03
2	Sr 421.552†	7.7	2.3	0.0355	ug/L	0.0355	ppb	23:14:03
2	Sc 361.383	1060196.5	1060196.5	99.935	%			23:15:05
2	Y 371.029	851597.1	851597.1	99.810	%			23:15:05
2	Ag 328.068†	704.9	66.8	0.2482	ug/L	0.2482	ppb	23:15:10
2	As 188.979†	-40.7	-3.8	-0.9010	ug/L	-0.9010	ppb	23:15:30
2	B 249.677†	-98.6	282.8	4.4143	ug/L	4.4143	ppb	23:15:10
2	Ba 233.527†	41.5	17.2	0.0860	ug/L	0.0860	ppb	23:15:30
2	Be 313.107†	-7399.1	-87.7	-0.0270	ug/L	-0.0270	ppb	23:15:10
2	Cd 226.502†	-296.5	-19.1	-0.1369	ug/L	-0.1369	ppb	23:15:30
2	Co 228.616†	-91.0	-0.6	-0.0057	ug/L	-0.0057	ppb	23:15:30
2	Cr 267.716†	-25.3	3.3	0.0267	ug/L	0.0267	ppb	23:15:30
2	Cu 324.752†	10448.0	263.5	0.6475	ug/L	0.6475	ppb	23:15:10
2	Mn 257.610†	971.7	145.3	0.1093	ug/L	0.1093	ppb	23:15:30
2	Mo 202.031†	47.0	15.3	0.6074	ug/L	0.6074	ppb	23:15:30
2	Ni 231.604†	167.2	19.1	0.3058	ug/L	0.3058	ppb	23:15:30

2	P 214.914†	366.6	29.9	10.493 ug/L	10.493 ppb	23:15:30
2	Pb 220.353†	-27.0	2.0	0.1592 ug/L	0.1592 ppb	23:15:30
2	S 181.975 Axial†	63.6	-4.2	-3.5717 ug/L	-3.5717 ppb	23:15:30
2	Sb 206.836†	55.5	10.2	1.9926 ug/L	1.9926 ppb	23:15:30
2	Se 196.026†	-23.3	-1.7	-0.7188 ug/L	-0.7188 ppb	23:15:30
2	Si 251.611†	930.0	370.5	7.6316 ug/L	7.6316 ppb	23:15:30
2	Sn 189.927†	-0.3	-5.8	-0.6006 ug/L	-0.6006 ppb	23:15:30
2	Ti 334.940†	-1030.4	78.2	0.1028 ug/L	0.1028 ppb	23:15:10
2	Tl 190.801†	-41.1	20.3	3.4194 ug/L	3.4194 ppb	23:15:30
2	U 409.014†	-3782.2	50.1	1.2497 ug/L	1.2497 ppb	23:15:05
2	V 292.402†	-1654.4	-2.7	0.0005 ug/L	0.0005 ppb	23:15:10
2	Zn 213.857†	1207.2	85.6	0.4809 ug/L	0.4809 ppb	23:15:30
2	SiO2†	958.0	356.3	15.711 ug/L	15.711 ppb	23:16:11
3	Sc Radial	5438.6	5438.6	97.7 %		23:14:08
3	Y RADIAL	4721.8	4721.8	98.05 %		23:14:08
3	Al 396.153Radial†	-102.8	-13.0	-11.865 ug/L	-11.865 ppb	23:14:08
3	Ca 317.933Radial†	24.5	8.1	20.187 ug/L	20.187 ppb	23:14:28
3	Fe 238.204 Radial†	-0.4	-0.7	-25.920 ug/L	-25.920 ppb	23:14:28
3	K 766.490 Radial†	1497.6	59.2	25.697 ug/L	25.697 ppb	23:14:08
3	Mg 279.077 IEC†	0.6	0.4	33.522 ug/L	33.522 ppb	23:14:28
3	Na 589.592 Radial†	-182.8	-16.6	-44.843 ug/L	-44.843 ppb	23:14:28
3	Sr 421.552†	13.4	8.2	0.1262 ug/L	0.1262 ppb	23:14:28
3	Sc 361.383	1053908.2	1053908.2	99.343 %		23:15:35
3	Y 371.029	846052.2	846052.2	99.161 %		23:15:35
3	Ag 328.068†	608.3	-26.3	-0.1119 ug/L	-0.1119 ppb	23:15:40
3	As 188.979†	-51.8	-15.2	-3.5792 ug/L	-3.5792 ppb	23:16:00
3	B 249.677†	-183.1	197.2	3.0761 ug/L	3.0761 ppb	23:15:40
3	Ba 233.527†	29.1	5.0	0.0252 ug/L	0.0252 ppb	23:16:00
3	Be 313.107†	-7539.0	-272.7	-0.0846 ug/L	-0.0846 ppb	23:15:40
3	Cd 226.502†	-290.8	-15.1	-0.1093 ug/L	-0.1093 ppb	23:16:00
3	Co 228.616†	-92.5	-2.7	-0.0330 ug/L	-0.0330 ppb	23:16:00
3	Cr 267.716†	-27.0	1.5	0.0122 ug/L	0.0122 ppb	23:16:00
3	Cu 324.752†	10323.5	200.6	0.4934 ug/L	0.4934 ppb	23:15:40
3	Mn 257.610†	967.3	146.6	0.1119 ug/L	0.1119 ppb	23:16:00
3	Mo 202.031†	36.3	4.8	0.1911 ug/L	0.1911 ppb	23:16:00
3	Ni 231.604†	172.3	25.2	0.4033 ug/L	0.4033 ppb	23:16:00
3	P 214.914†	336.6	1.9	0.6199 ug/L	0.6199 ppb	23:16:00
3	Pb 220.353†	-16.4	12.6	0.9445 ug/L	0.9445 ppb	23:16:00
3	S 181.975 Axial†	69.2	1.8	1.5140 ug/L	1.5140 ppb	23:16:00
3	Sb 206.836†	48.1	3.0	0.5824 ug/L	0.5824 ppb	23:16:00
3	Se 196.026†	-13.1	8.5	2.6580 ug/L	2.6580 ppb	23:16:00
3	Si 251.611†	906.8	352.7	7.2669 ug/L	7.2669 ppb	23:16:00
3	Sn 189.927†	1.1	-4.3	-0.4484 ug/L	-0.4484 ppb	23:16:00
3	Ti 334.940†	-1037.1	65.3	0.0868 ug/L	0.0868 ppb	23:15:40
3	Tl 190.801†	-54.6	6.5	1.0930 ug/L	1.0930 ppb	23:16:00
3	U 409.014†	-3805.8	3.7	0.0957 ug/L	0.0957 ppb	23:15:35
3	V 292.402†	-1608.2	34.0	0.1994 ug/L	0.1994 ppb	23:15:40
3	Zn 213.857†	1210.5	96.1	0.5353 ug/L	0.5353 ppb	23:16:00
3	SiO2†	967.4	371.4	16.388 ug/L	16.388 ppb	23:16:16

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056769.5	99.612	%	0.2999				0.30%
Sc Radial	5497.9	98.8	%	0.98				0.99%
Y 371.029	848685.9	99.469	%	0.3262				0.33%
Y RADIAL	4801.1	99.70	%	1.521				1.53%
Ag 328.068†	21.6	0.0773	ug/L	0.18073	0.0773	ppb	0.18073	233.73%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	7.4	6.6832	ug/L	16.93492	6.6832	ppb	16.93492	253.40%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-9.6	-2.2598	ug/L	1.33952	-2.2598	ppb	1.33952	59.28%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	249.2	3.8877	ug/L	0.71315	3.8877	ppb	0.71315	18.34%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	12.7	0.0639	ug/L	0.03358	0.0639	ppb	0.03358	52.58%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-163.6	-0.0506	ug/L	0.03014	-0.0506	ppb	0.03014	59.51%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	6.7	16.575	ug/L	3.1506	16.575	ppb	3.1506	19.01%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -11.9     -0.0854 ug/L       0.06665     -0.0854 ppb        0.06665  78.00%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -0.9     -0.0107 ug/L       0.02030     -0.0107 ppb        0.02030 189.67%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                7.3      0.0620 ug/L       0.07408      0.0620 ppb        0.07408 119.45%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              232.1      0.5713 ug/L       0.07709      0.5713 ppb        0.07709  13.49%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.7     -25.143 ug/L      21.3731     -25.143 ppb       21.3731  85.01%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         24.6      10.654 ug/L      19.0161      10.654 ppb       19.0161 178.49%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.0      2.8942 ug/L      29.79599      2.8942 ppb      29.79599 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              152.3      0.1170 ug/L       0.01119      0.1170 ppb        0.01119   9.56%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                8.4      0.3340 ug/L       0.23690      0.3340 ppb        0.23690  70.94%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -17.9     -48.289 ug/L      20.7537     -48.289 ppb       20.7537  42.98%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               22.7      0.3632 ug/L       0.05101      0.3632 ppb        0.05101  14.04%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                14.2      4.9400 ug/L       5.05068      4.9400 ppb        5.05068 102.24%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                7.8      0.5901 ug/L       0.39820      0.5901 ppb        0.39820  67.48%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -2.6     -2.1697 ug/L       3.22041     -2.1697 ppb       3.22041 148.43%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                5.3      1.0345 ug/L       0.83015      1.0345 ppb        0.83015  80.24%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                2.4      0.6846 ug/L       1.75908      0.6846 ppb        1.75908 256.95%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              378.0      7.7917 ug/L       0.62047      7.7917 ppb        0.62047   7.96%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -5.8     -0.6032 ug/L       0.15624     -0.6032 ppb        0.15624  25.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                6.1      0.0932 ug/L       0.05010      0.0932 ppb        0.05010  53.76%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               77.3      0.1022 ug/L       0.01507      0.1022 ppb        0.01507  14.75%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               12.1      2.0489 ug/L       1.21738      2.0489 ppb        1.21738  59.42%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 7.1      0.1788 ug/L       1.03193      0.1788 ppb        1.03193 577.29%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                17.4      0.1064 ug/L       0.10007      0.1064 ppb        0.10007  94.05%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               91.8      0.5119 ug/L       0.02795      0.5119 ppb        0.02795   5.46%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    366.0     16.157 ug/L        0.3863     16.157 ppb         0.3863   2.39%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 83
Sample ID: 1201873955|882348|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 100
Date Collected: 7/8/2009 23:18:26
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873955|882348|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5325.4	5325.4	95.7	%			23:20:20
1	Y RADIAL	4634.4	4634.4	96.23	%			23:20:20
1	Al 396.153Radial†	-60.2	29.3	26.645	ug/L	26.645	ppb	23:20:20
1	Ca 317.933Radial†	19.7	3.6	9.0263	ug/L	9.0263	ppb	23:20:40
1	Fe 238.204 Radial†	-0.1	-0.5	-15.986	ug/L	-15.986	ppb	23:20:40
1	K 766.490 Radial†	1477.2	70.5	30.600	ug/L	30.600	ppb	23:20:20
1	Mg 279.077 IEC†	-0.8	-1.1	-83.673	ug/L	-83.673	ppb	23:20:40
1	Na 589.592 Radial†	-174.6	-12.1	-32.662	ug/L	-32.662	ppb	23:20:40
1	Sr 421.552†	0.5	-4.9	-0.0759	ug/L	-0.0759	ppb	23:20:40
1	Sc 361.383	1046309.2	1046309.2	98.626	%			23:21:37
1	Y 371.029	841367.1	841367.1	98.611	%			23:21:37
1	Ag 328.068†	681.1	52.0	0.1992	ug/L	0.1992	ppb	23:21:42
1	As 188.979†	-45.3	-9.1	-2.1334	ug/L	-2.1334	ppb	23:22:02
1	B 249.677†	-173.5	205.6	3.2062	ug/L	3.2062	ppb	23:21:42
1	Ba 233.527†	39.4	15.7	0.0783	ug/L	0.0783	ppb	23:22:02
1	Be 313.107†	-7319.6	-105.4	-0.0318	ug/L	-0.0318	ppb	23:21:42
1	Cd 226.502†	-287.9	-14.3	-0.1043	ug/L	-0.1043	ppb	23:22:02
1	Co 228.616†	-91.1	-2.0	-0.0253	ug/L	-0.0253	ppb	23:22:02
1	Cr 267.716†	6.2	34.9	0.2962	ug/L	0.2962	ppb	23:22:02
1	Cu 324.752†	9999.1	-52.9	-0.1315	ug/L	-0.1315	ppb	23:21:42
1	Mn 257.610†	2535.6	1743.8	1.3776	ug/L	1.3776	ppb	23:21:42
1	Mo 202.031†	31.3	-0.0	-0.0013	ug/L	-0.0013	ppb	23:22:02
1	Ni 231.604†	195.1	49.6	0.7951	ug/L	0.7951	ppb	23:22:02
1	P 214.914†	371.2	39.5	14.005	ug/L	14.005	ppb	23:22:02
1	Pb 220.353†	-37.3	-8.8	-0.6494	ug/L	-0.6494	ppb	23:22:02
1	S 181.975 Axial†	69.4	2.5	2.1416	ug/L	2.1416	ppb	23:22:02
1	Sb 206.836†	56.5	11.9	2.3319	ug/L	2.3319	ppb	23:22:02
1	Se 196.026†	-24.6	-3.4	-1.1464	ug/L	-1.1464	ppb	23:22:02
1	Si 251.611†	1691.1	1154.5	23.810	ug/L	23.810	ppb	23:22:02
1	Sn 189.927†	14.4	9.1	0.9473	ug/L	0.9473	ppb	23:22:02
1	Ti 334.940†	-780.6	317.8	0.4163	ug/L	0.4163	ppb	23:21:42
1	Tl 190.801†	-58.4	2.2	0.3764	ug/L	0.3764	ppb	23:22:02
1	U 409.014†	-3768.2	14.1	0.3504	ug/L	0.3504	ppb	23:21:37
1	V 292.402†	-1684.9	-55.6	-0.3143	ug/L	-0.3143	ppb	23:21:42
1	Zn 213.857†	1218.8	113.3	0.6327	ug/L	0.6327	ppb	23:22:02
1	SiO2†	1738.5	1160.4	51.243	ug/L	51.243	ppb	23:23:08
2	Sc Radial	5429.2	5429.2	97.6	%			23:20:45
2	Y RADIAL	4706.2	4706.2	97.73	%			23:20:45
2	Al 396.153Radial†	-91.9	-2.0	-1.7850	ug/L	-1.7850	ppb	23:20:45
2	Ca 317.933Radial†	18.6	2.2	5.4012	ug/L	5.4012	ppb	23:21:05
2	Fe 238.204 Radial†	0.5	0.2	7.3191	ug/L	7.3191	ppb	23:21:05
2	K 766.490 Radial†	1484.9	48.9	21.252	ug/L	21.252	ppb	23:20:45
2	Mg 279.077 IEC†	-0.0	-0.2	-15.220	ug/L	-15.220	ppb	23:21:05
2	Na 589.592 Radial†	-193.9	-28.4	-76.686	ug/L	-76.686	ppb	23:21:05
2	Sr 421.552†	8.5	3.2	0.0492	ug/L	0.0492	ppb	23:21:05
2	Sc 361.383	1034914.0	1034914.0	97.552	%			23:22:07
2	Y 371.029	831037.7	831037.7	97.401	%			23:22:07
2	Ag 328.068†	631.1	8.4	0.0332	ug/L	0.0332	ppb	23:22:13
2	As 188.979†	-45.1	-9.3	-2.1780	ug/L	-2.1780	ppb	23:22:33
2	B 249.677†	-243.4	132.0	2.0560	ug/L	2.0560	ppb	23:22:13
2	Ba 233.527†	28.0	4.4	0.0227	ug/L	0.0227	ppb	23:22:33
2	Be 313.107†	-7356.9	-225.3	-0.0686	ug/L	-0.0686	ppb	23:22:13
2	Cd 226.502†	-290.0	-19.6	-0.1477	ug/L	-0.1477	ppb	23:22:33
2	Co 228.616†	-89.7	-1.5	-0.0199	ug/L	-0.0199	ppb	23:22:33
2	Cr 267.716†	30.3	59.6	0.5071	ug/L	0.5071	ppb	23:22:33
2	Cu 324.752†	10003.5	63.3	0.1565	ug/L	0.1565	ppb	23:22:13
2	Mn 257.610†	2527.8	1764.2	1.3954	ug/L	1.3954	ppb	23:22:13
2	Mo 202.031†	34.6	3.7	0.1478	ug/L	0.1478	ppb	23:22:33
2	Ni 231.604†	148.5	4.0	0.0639	ug/L	0.0639	ppb	23:22:33

2	P 214.914†	367.6	39.9	14.116 ug/L	14.116 ppb	23:22:33
2	Pb 220.353†	-22.8	5.8	0.4309 ug/L	0.4309 ppb	23:22:33
2	S 181.975 Axial†	68.1	2.0	1.6633 ug/L	1.6633 ppb	23:22:33
2	Sb 206.836†	48.0	3.8	0.7817 ug/L	0.7817 ppb	23:22:33
2	Se 196.026†	-12.4	8.9	2.9233 ug/L	2.9233 ppb	23:22:33
2	Si 251.611†	1694.7	1177.1	24.271 ug/L	24.271 ppb	23:22:33
2	Sn 189.927†	27.8	23.0	2.3971 ug/L	2.3971 ppb	23:22:33
2	Ti 334.940†	-622.4	471.2	0.6156 ug/L	0.6156 ppb	23:22:13
2	Tl 190.801†	-61.5	-1.6	-0.2651 ug/L	-0.2651 ppb	23:22:33
2	U 409.014†	-3612.1	132.0	3.2736 ug/L	3.2736 ppb	23:22:07
2	V 292.402†	-1585.5	27.5	0.1623 ug/L	0.1623 ppb	23:22:13
2	Zn 213.857†	1214.1	122.2	0.6813 ug/L	0.6813 ppb	23:22:33
2	SiO2†	1784.2	1226.6	54.160 ug/L	54.160 ppb	23:23:13
3	Sc Radial	5298.9	5298.9	95.2 %		23:21:10
3	Y RADIAL	4608.5	4608.5	95.70 %		23:21:10
3	Al 396.153Radial†	-50.4	39.3	35.721 ug/L	35.721 ppb	23:21:10
3	Ca 317.933Radial†	18.4	2.4	6.0447 ug/L	6.0447 ppb	23:21:30
3	Fe 238.204 Radial†	-0.6	-1.0	-33.488 ug/L	-33.488 ppb	23:21:30
3	K 766.490 Radial†	1493.2	95.1	41.234 ug/L	41.234 ppb	23:21:10
3	Mg 279.077 IEC†	-0.0	-0.2	-14.704 ug/L	-14.704 ppb	23:21:30
3	Na 589.592 Radial†	-184.9	-23.8	-64.320 ug/L	-64.320 ppb	23:21:30
3	Sr 421.552†	8.9	3.9	0.0601 ug/L	0.0601 ppb	23:21:30
3	Sc 361.383	1044255.3	1044255.3	98.433 %		23:22:38
3	Y 371.029	840098.8	840098.8	98.463 %		23:22:38
3	Ag 328.068†	644.1	15.8	0.0505 ug/L	0.0505 ppb	23:22:43
3	As 188.979†	-49.7	-13.6	-3.2012 ug/L	-3.2012 ppb	23:23:03
3	B 249.677†	-227.3	150.6	2.3518 ug/L	2.3518 ppb	23:22:43
3	Ba 233.527†	35.9	12.2	0.0602 ug/L	0.0602 ppb	23:23:03
3	Be 313.107†	-7297.8	-97.8	-0.0289 ug/L	-0.0289 ppb	23:22:43
3	Cd 226.502†	-302.7	-29.9	-0.2191 ug/L	-0.2191 ppb	23:23:03
3	Co 228.616†	-87.1	1.9	0.0249 ug/L	0.0249 ppb	23:23:03
3	Cr 267.716†	8.6	37.4	0.3170 ug/L	0.3170 ppb	23:23:03
3	Cu 324.752†	9862.1	-172.1	-0.4267 ug/L	-0.4267 ppb	23:22:43
3	Mn 257.610†	2542.4	1755.9	1.3835 ug/L	1.3835 ppb	23:22:43
3	Mo 202.031†	46.4	15.4	0.6124 ug/L	0.6124 ppb	23:23:03
3	Ni 231.604†	176.5	31.0	0.4972 ug/L	0.4972 ppb	23:23:03
3	P 214.914†	354.6	23.4	8.3916 ug/L	8.3916 ppb	23:23:03
3	Pb 220.353†	-9.5	19.5	1.4704 ug/L	1.4704 ppb	23:23:03
3	S 181.975 Axial†	64.5	-2.3	-1.9357 ug/L	-1.9357 ppb	23:23:03
3	Sb 206.836†	46.9	2.2	0.4715 ug/L	0.4715 ppb	23:23:03
3	Se 196.026†	-14.8	6.6	2.0414 ug/L	2.0414 ppb	23:23:03
3	Si 251.611†	1682.5	1149.2	23.681 ug/L	23.681 ppb	23:23:03
3	Sn 189.927†	25.9	20.9	2.1709 ug/L	2.1709 ppb	23:23:03
3	Ti 334.940†	-623.6	475.8	0.6231 ug/L	0.6231 ppb	23:22:43
3	Tl 190.801†	-53.4	7.1	1.2102 ug/L	1.2102 ppb	23:23:03
3	U 409.014†	-3778.3	-3.7	-0.0876 ug/L	-0.0876 ppb	23:22:38
3	V 292.402†	-1686.4	-60.5	-0.3320 ug/L	-0.3320 ppb	23:22:43
3	Zn 213.857†	1213.0	109.9	0.6156 ug/L	0.6156 ppb	23:23:03
3	SiO2†	1713.6	1138.5	50.238 ug/L	50.238 ppb	23:23:18

Mean Data: 1201873955|882348|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1041826.2	98.204	%	0.5725				0.58%
Sc Radial	5351.1	96.2	%	1.24				1.29%
Y 371.029	837501.2	98.158	%	0.6602				0.67%
Y RADIAL	4649.7	96.55	%	1.052				1.09%
Ag 328.068†	25.4	0.0943	ug/L	0.09126	0.0943	ppb	0.09126	96.77%
Al 396.153Radial†	22.2	20.194	ug/L	19.5676	20.194	ppb	19.5676	96.90%
As 188.979†	-10.7	-2.5042	ug/L	0.60405	-2.5042	ppb	0.60405	24.12%
B 249.677†	162.7	2.5380	ug/L	0.59732	2.5380	ppb	0.59732	23.54%
Ba 233.527†	10.8	0.0538	ug/L	0.02840	0.0538	ppb	0.02840	52.82%
Be 313.107†	-142.8	-0.0431	ug/L	0.02213	-0.0431	ppb	0.02213	51.33%
Ca 317.933Radial†	2.7	6.8241	ug/L	1.93415	6.8241	ppb	1.93415	28.34%
Cd 226.502†	-21.3	-0.1570	ug/L	0.05800	-0.1570	ppb	0.05800	36.94%
Co 228.616†	-0.5	-0.0068	ug/L	0.02757	-0.0068	ppb	0.02757	406.03%
Cr 267.716†	44.0	0.3735	ug/L	0.11623	0.3735	ppb	0.11623	31.12%
Cu 324.752†	-53.9	-0.1339	ug/L	0.29158	-0.1339	ppb	0.29158	217.78%
Fe 238.204 Radial†	-0.4	-14.052	ug/L	20.4721	-14.052	ppb	20.4721	145.69%
K 766.490 Radial†	71.5	31.029	ug/L	9.9981	31.029	ppb	9.9981	32.22%

Mg 279.077 IEC†	-0.5	-37.866	ug/L	39.6706	-37.866	ppb	39.6706	104.77%
Mn 257.610†	1754.6	1.3855	ug/L	0.00905	1.3855	ppb	0.00905	0.65%
Mo 202.031†	6.3	0.2530	ug/L	0.32010	0.2530	ppb	0.32010	126.53%
Na 589.592 Radial†	-21.4	-57.889	ug/L	22.7057	-57.889	ppb	22.7057	39.22%
Ni 231.604†	28.2	0.4520	ug/L	0.36769	0.4520	ppb	0.36769	81.34%
P 214.914†	34.3	12.171	ug/L	3.2734	12.171	ppb	3.2734	26.90%
Pb 220.353†	5.5	0.4173	ug/L	1.05997	0.4173	ppb	1.05997	254.01%
S 181.975 Axial†	0.7	0.6231	ug/L	2.22881	0.6231	ppb	2.22881	357.71%
Sb 206.836†	6.0	1.1950	ug/L	0.99670	1.1950	ppb	0.99670	83.40%
Se 196.026†	4.1	1.2728	ug/L	2.14092	1.2728	ppb	2.14092	168.21%
Si 251.611†	1160.3	23.921	ug/L	0.3103	23.921	ppb	0.3103	1.30%
Sn 189.927†	17.7	1.8384	ug/L	0.77996	1.8384	ppb	0.77996	42.43%
Sr 421.552†	0.7	0.0112	ug/L	0.07558	0.0112	ppb	0.07558	677.62%
Ti 334.940†	421.6	0.5517	ug/L	0.11729	0.5517	ppb	0.11729	21.26%
Tl 190.801†	2.5	0.4405	ug/L	0.73978	0.4405	ppb	0.73978	167.94%
U 409.014†	47.5	1.1788	ug/L	1.82730	1.1788	ppb	1.82730	155.02%
V 292.402†	-29.5	-0.1613	ug/L	0.28040	-0.1613	ppb	0.28040	173.81%
Zn 213.857†	115.1	0.6432	ug/L	0.03410	0.6432	ppb	0.03410	5.30%
SiO2†	1175.1	51.880	ug/L	2.0374	51.880	ppb	2.0374	3.93%

Sequence No.: 84
Sample ID: 1201873956|882348|2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 101
Date Collected: 7/8/2009 23:25:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873956|882348|2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5583.0	5583.0	100	%			23:27:24
1	Y RADIAL	5154.4	5154.4	107.0	%			23:27:24
1	Al 396.153Radial†	38219.3	38186.8	34742	ug/L	34742	ppb	23:27:24
1	Ca 317.933Radial†	6527.3	6489.0	16163	ug/L	16163	ppb	23:27:24
1	Fe 238.204 Radial†	2550.2	2541.6	89174	ug/L	89174	ppb	23:27:44
1	K 766.490 Radial†	27470.6	25907.9	11286	ug/L	11286	ppb	23:27:24
1	Mg 279.077 IEC†	171.8	171.0	13477	ug/L	13477	ppb	23:27:44
1	Na 589.592 Radial†	770.6	938.5	2537.6	ug/L	2537.6	ppb	23:27:44
1	Sr 421.552†	49715.1	49547.5	763.21	ug/L	763.21	ppb	23:27:24
1	Sc 361.383	1074766.3	1074766.3	101.31	%			23:28:43
1	Y 371.029	903316.5	903316.5	105.87	%			23:28:43
1	Ag 328.068†	150731.9	148146.1	617.84	ug/L	617.84	ppb	23:28:43
1	As 188.979†	5034.2	5006.0	1203.0	ug/L	1203.0	ppb	23:29:03
1	B 249.677†	41633.5	41477.2	633.62	ug/L	633.62	ppb	23:28:43
1	Ba 233.527†	434427.7	428791.5	2174.0	ug/L	2174.0	ppb	23:28:43
1	Be 313.107†	1352156.8	1342006.0	421.37	ug/L	421.37	ppb	23:28:43
1	Cd 226.502†	76292.0	75584.1	555.10	ug/L	555.10	ppb	23:28:43
1	Co 228.616†	30955.2	30645.8	378.57	ug/L	378.57	ppb	23:29:03
1	Cr 267.716†	43397.0	42865.0	367.97	ug/L	367.97	ppb	23:28:43
1	Cu 324.752†	211731.0	198804.6	495.66	ug/L	495.66	ppb	23:28:43
1	Mn 257.610†	2202452.8	2173174.7	1728.8	ug/L	1728.8	ppb	23:28:43
1	Mo 202.031†	10000.1	9839.2	399.96	ug/L	399.96	ppb	23:29:03
1	Ni 231.604†	30641.2	30097.1	482.14	ug/L	482.14	ppb	23:28:43
1	P 214.914†	9907.5	9442.6	3205.1	ug/L	3205.1	ppb	23:29:03
1	Pb 220.353†	10370.5	10265.6	768.54	ug/L	768.54	ppb	23:29:03
1	S 181.975 Axial†	1250.8	1166.9	980.86	ug/L	980.86	ppb	23:29:03
1	Sb 206.836†	3141.3	3055.3	605.13	ug/L	605.13	ppb	23:29:03
1	Se 196.026†	1714.4	1713.9	873.76	ug/L	873.76	ppb	23:29:03
1	Si 251.611†	210414.6	207136.3	4262.0	ug/L	4262.0	ppb	23:28:43
1	Sn 189.927†	4916.8	4847.8	506.80	ug/L	506.80	ppb	23:29:03
1	Ti 334.940†	1361962.6	1345478.2	1762.3	ug/L	1762.3	ppb	23:28:43
1	Tl 190.801†	5478.4	5469.1	938.11	ug/L	938.11	ppb	23:29:03
1	U 409.014†	-9353.2	-5397.6	-145.59	ug/L	-145.59	ppb	23:28:43
1	V 292.402†	127775.6	127777.8	715.46	ug/L	715.46	ppb	23:28:43
1	Zn 213.857†	171924.1	168580.8	927.56	ug/L	927.56	ppb	23:28:43
1	SiO2†	212630.1	209281.0	9220.7	ug/L	9220.7	ppb	23:30:03
2	Sc Radial	5575.7	5575.7	100	%			23:27:49
2	Y RADIAL	5109.7	5109.7	106.1	%			23:27:49
2	Al 396.153Radial†	37846.6	37865.0	34449	ug/L	34449	ppb	23:27:49
2	Ca 317.933Radial†	6440.8	6411.3	15970	ug/L	15970	ppb	23:27:49
2	Fe 238.204 Radial†	2536.2	2531.0	88802	ug/L	88802	ppb	23:28:09
2	K 766.490 Radial†	27154.9	25628.8	11165	ug/L	11165	ppb	23:27:49
2	Mg 279.077 IEC†	169.5	169.0	13318	ug/L	13318	ppb	23:28:09
2	Na 589.592 Radial†	750.1	919.0	2485.0	ug/L	2485.0	ppb	23:28:09
2	Sr 421.552†	49259.2	49157.6	757.20	ug/L	757.20	ppb	23:27:49
2	Sc 361.383	1071695.1	1071695.1	101.02	%			23:29:10
2	Y 371.029	900783.8	900783.8	105.58	%			23:29:10
2	Ag 328.068†	150027.6	147875.4	616.66	ug/L	616.66	ppb	23:29:10
2	As 188.979†	5018.8	5005.1	1202.7	ug/L	1202.7	ppb	23:29:30
2	B 249.677†	41406.9	41370.6	632.01	ug/L	632.01	ppb	23:29:10
2	Ba 233.527†	433386.2	428989.4	2175.0	ug/L	2175.0	ppb	23:29:10
2	Be 313.107†	1349620.3	1343320.0	421.78	ug/L	421.78	ppb	23:29:10
2	Cd 226.502†	75961.7	75473.0	554.31	ug/L	554.31	ppb	23:29:10
2	Co 228.616†	30918.8	30697.2	379.22	ug/L	379.22	ppb	23:29:30
2	Cr 267.716†	43279.2	42871.1	368.01	ug/L	368.01	ppb	23:29:10
2	Cu 324.752†	210648.3	198331.8	494.47	ug/L	494.47	ppb	23:29:10
2	Mn 257.610†	2194808.8	2171838.0	1727.7	ug/L	1727.7	ppb	23:29:10
2	Mo 202.031†	9997.5	9864.9	400.96	ug/L	400.96	ppb	23:29:30
2	Ni 231.604†	30507.3	30051.3	481.41	ug/L	481.41	ppb	23:29:10

2	P 214.914†	9897.8	9461.0	3212.0	ug/L	3212.0	ppb	23:29:30
2	Pb 220.353†	10378.9	10303.3	771.35	ug/L	771.35	ppb	23:29:30
2	S 181.975 Axial†	1242.3	1161.9	976.71	ug/L	976.71	ppb	23:29:30
2	Sb 206.836†	3137.1	3060.0	606.09	ug/L	606.09	ppb	23:29:30
2	Se 196.026†	1710.0	1714.3	872.59	ug/L	872.59	ppb	23:29:30
2	Si 251.611†	209593.8	206919.1	4257.6	ug/L	4257.6	ppb	23:29:10
2	Sn 189.927†	4910.4	4855.4	507.57	ug/L	507.57	ppb	23:29:30
2	Ti 334.940†	1357639.6	1345051.5	1761.7	ug/L	1761.7	ppb	23:29:10
2	Tl 190.801†	5487.3	5493.3	942.18	ug/L	942.18	ppb	23:29:30
2	U 409.014†	-9590.1	-5658.6	-152.02	ug/L	-152.02	ppb	23:29:10
2	V 292.402†	127521.9	127888.1	716.14	ug/L	716.14	ppb	23:29:10
2	Zn 213.857†	171132.2	168283.2	925.96	ug/L	925.96	ppb	23:29:10
2	SiO2†	212045.4	209303.7	9221.8	ug/L	9221.8	ppb	23:30:09
3	Sc Radial	5623.2	5623.2	101	%			23:28:14
3	Y RADIAL	5160.6	5160.6	107.2	%			23:28:14
3	Al 396.153Radial†	38244.5	37939.6	34517	ug/L	34517	ppb	23:28:14
3	Ca 317.933Radial†	6483.3	6399.1	15939	ug/L	15939	ppb	23:28:14
3	Fe 238.204 Radial†	2564.5	2537.5	89033	ug/L	89033	ppb	23:28:34
3	K 766.490 Radial†	27452.0	25693.8	11194	ug/L	11194	ppb	23:28:14
3	Mg 279.077 IEC†	174.5	172.5	13595	ug/L	13595	ppb	23:28:34
3	Na 589.592 Radial†	764.1	926.6	2505.3	ug/L	2505.3	ppb	23:28:34
3	Sr 421.552†	49791.8	49269.2	758.92	ug/L	758.92	ppb	23:28:14
3	Sc 361.383	1078719.7	1078719.7	101.68	%			23:29:38
3	Y 371.029	908108.1	908108.1	106.43	%			23:29:38
3	Ag 328.068†	151270.5	148130.6	617.74	ug/L	617.74	ppb	23:29:38
3	As 188.979†	5023.9	4977.7	1196.4	ug/L	1196.4	ppb	23:29:58
3	B 249.677†	41746.2	41437.4	633.02	ug/L	633.02	ppb	23:29:38
3	Ba 233.527†	435202.7	427982.1	2169.9	ug/L	2169.9	ppb	23:29:38
3	Be 313.107†	1357878.3	1342741.4	421.60	ug/L	421.60	ppb	23:29:38
3	Cd 226.502†	76215.7	75233.1	552.49	ug/L	552.49	ppb	23:29:38
3	Co 228.616†	31050.4	30627.4	378.35	ug/L	378.35	ppb	23:29:58
3	Cr 267.716†	43500.8	42810.1	367.50	ug/L	367.50	ppb	23:29:38
3	Cu 324.752†	212793.3	199083.4	496.34	ug/L	496.34	ppb	23:29:38
3	Mn 257.610†	2204464.0	2167185.2	1724.0	ug/L	1724.0	ppb	23:29:38
3	Mo 202.031†	10048.7	9850.8	400.41	ug/L	400.41	ppb	23:29:58
3	Ni 231.604†	30709.2	30053.1	481.44	ug/L	481.44	ppb	23:29:38
3	P 214.914†	9926.2	9425.2	3198.8	ug/L	3198.8	ppb	23:29:58
3	Pb 220.353†	10407.9	10264.9	768.46	ug/L	768.46	ppb	23:29:58
3	S 181.975 Axial†	1248.9	1160.5	975.50	ug/L	975.50	ppb	23:29:58
3	Sb 206.836†	3153.9	3056.3	605.32	ug/L	605.32	ppb	23:29:58
3	Se 196.026†	1709.6	1703.0	869.71	ug/L	869.71	ppb	23:29:58
3	Si 251.611†	211054.9	207004.9	4259.3	ug/L	4259.3	ppb	23:29:38
3	Sn 189.927†	4923.1	4836.2	505.57	ug/L	505.57	ppb	23:29:58
3	Ti 334.940†	1365957.3	1344479.8	1761.0	ug/L	1761.0	ppb	23:29:38
3	Tl 190.801†	5514.2	5484.4	940.67	ug/L	940.67	ppb	23:29:58
3	U 409.014†	-9496.6	-5504.9	-148.23	ug/L	-148.23	ppb	23:29:38
3	V 292.402†	128185.1	127718.3	715.15	ug/L	715.15	ppb	23:29:38
3	Zn 213.857†	172172.0	168202.7	925.47	ug/L	925.47	ppb	23:29:38
3	SiO2†	213844.2	209705.8	9239.6	ug/L	9239.6	ppb	23:30:14

Mean Data: 1201873956|882348|2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1075060.4	101.34	%	0.332				0.33%
Sc Radial	5594.0	101	%	0.5				0.46%
Y 371.029	904069.4	105.96	%	0.436				0.41%
Y RADIAL	5141.6	106.8	%	0.58				0.54%
Ag 328.068†	148050.7	617.41	ug/L	0.654	617.41	ppb	0.654	0.11%
Al 396.153Radial†	37997.1	34569	ug/L	153.4	34569	ppb	153.4	0.44%
As 188.979†	4996.3	1200.7	ug/L	3.77	1200.7	ppb	3.77	0.31%
B 249.677†	41428.4	632.88	ug/L	0.815	632.88	ppb	0.815	0.13%
Ba 233.527†	428587.7	2173.0	ug/L	2.70	2173.0	ppb	2.70	0.12%
Be 313.107†	1342689.2	421.58	ug/L	0.204	421.58	ppb	0.204	0.05%
Ca 317.933Radial†	6433.1	16024	ug/L	121.5	16024	ppb	121.5	0.76%
Cd 226.502†	75430.1	553.97	ug/L	1.339	553.97	ppb	1.339	0.24%
Co 228.616†	30656.8	378.71	ug/L	0.455	378.71	ppb	0.455	0.12%
Cr 267.716†	42848.8	367.83	ug/L	0.286	367.83	ppb	0.286	0.08%
Cu 324.752†	198739.9	495.49	ug/L	0.945	495.49	ppb	0.945	0.19%
Fe 238.204 Radial†	2536.7	89003	ug/L	187.8	89003	ppb	187.8	0.21%
K 766.490 Radial†	25743.5	11215	ug/L	63.4	11215	ppb	63.4	0.57%

Mg 279.077 IEC†	170.9	13463	ug/L	139.0	13463	ppb	139.0	1.03%
Mn 257.610†	2170732.6	1726.8	ug/L	2.49	1726.8	ppb	2.49	0.14%
Mo 202.031†	9851.6	400.44	ug/L	0.502	400.44	ppb	0.502	0.13%
Na 589.592 Radial†	928.0	2509.3	ug/L	26.52	2509.3	ppb	26.52	1.06%
Ni 231.604†	30067.2	481.66	ug/L	0.416	481.66	ppb	0.416	0.09%
P 214.914†	9442.9	3205.3	ug/L	6.59	3205.3	ppb	6.59	0.21%
Pb 220.353†	10277.9	769.45	ug/L	1.646	769.45	ppb	1.646	0.21%
S 181.975 Axial†	1163.1	977.69	ug/L	2.813	977.69	ppb	2.813	0.29%
Sb 206.836†	3057.2	605.51	ug/L	0.510	605.51	ppb	0.510	0.08%
Se 196.026†	1710.4	872.02	ug/L	2.085	872.02	ppb	2.085	0.24%
Si 251.611†	207020.1	4259.6	ug/L	2.25	4259.6	ppb	2.25	0.05%
Sn 189.927†	4846.5	506.65	ug/L	1.004	506.65	ppb	1.004	0.20%
Sr 421.552†	49324.8	759.78	ug/L	3.093	759.78	ppb	3.093	0.41%
Ti 334.940†	1345003.2	1761.7	ug/L	0.66	1761.7	ppb	0.66	0.04%
Tl 190.801†	5482.3	940.32	ug/L	2.059	940.32	ppb	2.059	0.22%
U 409.014†	-5520.4	-148.61	ug/L	3.232	-148.61	ppb	3.232	2.17%
V 292.402†	127794.7	715.58	ug/L	0.505	715.58	ppb	0.505	0.07%
Zn 213.857†	168355.6	926.33	ug/L	1.098	926.33	ppb	1.098	0.12%
SiO2†	209430.2	9227.4	ug/L	10.58	9227.4	ppb	10.58	0.11%

Sequence No.: 85
Sample ID: 232754001|882348|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 102
Date Collected: 7/8/2009 23:32:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232754001|882348|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5699.0	5699.0	102	%			23:34:18
1	Y RADIAL	6410.8	6410.8	133.1	%			23:34:18
1	Al 396.153Radial†	25064.4	24566.4	22361	ug/L	22361	ppb	23:34:18
1	Ca 317.933Radial†	1992.2	1928.4	4803.3	ug/L	4803.3	ppb	23:34:38
1	Fe 238.204 Radial†	2246.3	2193.1	76937	ug/L	76937	ppb	23:34:38
1	K 766.490 Radial†	7964.9	6304.2	2762.0	ug/L	2762.0	ppb	23:34:18
1	Mg 279.077 IEC†	41.6	40.5	3140.8	ug/L	3140.8	ppb	23:34:38
1	Na 589.592 Radial†	254.2	418.6	1131.9	ug/L	1131.9	ppb	23:34:38
1	Sr 421.552†	2962.3	2887.1	44.436	ug/L	44.436	ppb	23:34:18
1	Sc 361.383	1087381.9	1087381.9	102.50	%			23:35:36
1	Y 371.029	1117193.1	1117193.1	130.94	%			23:35:36
1	Ag 328.068†	-5078.4	-5593.2	2.9946	ug/L	2.9946	ppb	23:35:41
1	As 188.979†	-61.3	-23.0	22.408	ug/L	22.408	ppb	23:36:01
1	B 249.677†	786.4	1148.8	7.6606	ug/L	7.6606	ppb	23:35:41
1	Ba 233.527†	41758.3	40716.4	207.99	ug/L	207.99	ppb	23:35:41
1	Be 313.107†	-8537.7	-1013.4	4.1713	ug/L	4.1713	ppb	23:35:41
1	Cd 226.502†	865.3	1121.9	-0.6222	ug/L	-0.6222	ppb	23:36:01
1	Co 228.616†	1095.7	1159.4	9.2503	ug/L	9.2503	ppb	23:36:01
1	Cr 267.716†	32951.6	32177.1	275.73	ug/L	275.73	ppb	23:35:41
1	Cu 324.752†	17091.5	6483.7	20.445	ug/L	20.445	ppb	23:35:41
1	Mn 257.610†	3345393.0	3263039.2	2588.7	ug/L	2588.7	ppb	23:35:36
1	Mo 202.031†	268.7	230.4	14.502	ug/L	14.502	ppb	23:36:01
1	Ni 231.604†	7745.0	7408.0	118.72	ug/L	118.72	ppb	23:36:01
1	P 214.914†	2041.8	1655.1	527.93	ug/L	527.93	ppb	23:36:01
1	Pb 220.353†	650.6	663.8	46.898	ug/L	46.898	ppb	23:36:01
1	S 181.975 Axial†	212.1	139.1	113.36	ug/L	113.36	ppb	23:36:01
1	Sb 206.836†	99.3	51.5	-1.1362	ug/L	-1.1362	ppb	23:36:01
1	Se 196.026†	-800.1	-759.0	24.714	ug/L	24.714	ppb	23:36:01
1	Si 251.611†	366279.0	356792.7	7361.2	ug/L	7361.2	ppb	23:35:41
1	Sn 189.927†	45.2	38.6	5.5405	ug/L	5.5405	ppb	23:36:01
1	Ti 334.940†	1510262.7	1474567.1	1930.6	ug/L	1930.6	ppb	23:35:36
1	Tl 190.801†	-226.4	-159.5	-2.5515	ug/L	-2.5515	ppb	23:36:01
1	U 409.014†	-16444.6	-12209.1	-312.91	ug/L	-312.91	ppb	23:35:36
1	V 292.402†	8013.9	9471.4	40.573	ug/L	40.573	ppb	23:35:41
1	Zn 213.857†	80722.4	77632.8	424.38	ug/L	424.38	ppb	23:35:41
1	SiO2†	373323.6	363623.4	16065	ug/L	16065	ppb	23:37:08
2	Sc Radial	5606.9	5606.9	101	%			23:34:43
2	Y RADIAL	6314.0	6314.0	131.1	%			23:34:43
2	Al 396.153Radial†	24945.2	24850.3	22619	ug/L	22619	ppb	23:34:43
2	Ca 317.933Radial†	1982.0	1950.2	4857.7	ug/L	4857.7	ppb	23:35:03
2	Fe 238.204 Radial†	2235.7	2218.6	77833	ug/L	77833	ppb	23:35:03
2	K 766.490 Radial†	7831.8	6299.9	2760.9	ug/L	2760.9	ppb	23:34:43
2	Mg 279.077 IEC†	39.9	39.4	3055.0	ug/L	3055.0	ppb	23:35:03
2	Na 589.592 Radial†	253.9	422.4	1142.2	ug/L	1142.2	ppb	23:35:03
2	Sr 421.552†	2986.5	2958.6	45.537	ug/L	45.537	ppb	23:34:43
2	Sc 361.383	1101790.7	1101790.7	103.86	%			23:36:07
2	Y 371.029	1135393.2	1135393.2	133.07	%			23:36:07
2	Ag 328.068†	-5054.7	-5505.6	3.6225	ug/L	3.6225	ppb	23:36:12
2	As 188.979†	-58.6	-19.6	23.374	ug/L	23.374	ppb	23:36:32
2	B 249.677†	854.1	1203.9	8.4015	ug/L	8.4015	ppb	23:36:12
2	Ba 233.527†	41351.3	39791.7	203.33	ug/L	203.33	ppb	23:36:12
2	Be 313.107†	-8712.4	-1072.7	4.1499	ug/L	4.1499	ppb	23:36:12
2	Cd 226.502†	879.7	1124.7	-0.7077	ug/L	-0.7077	ppb	23:36:32
2	Co 228.616†	1105.5	1154.8	9.1840	ug/L	9.1840	ppb	23:36:32
2	Cr 267.716†	32706.0	31520.3	270.15	ug/L	270.15	ppb	23:36:12
2	Cu 324.752†	17002.2	6179.6	19.747	ug/L	19.747	ppb	23:36:12
2	Mn 257.610†	3379570.1	3253263.8	2581.1	ug/L	2581.1	ppb	23:36:07
2	Mo 202.031†	276.5	234.5	14.727	ug/L	14.727	ppb	23:36:32
2	Ni 231.604†	7752.3	7316.2	117.25	ug/L	117.25	ppb	23:36:32

2	P 214.914†	2066.9	1653.3	526.74	ug/L	526.74 ppb	23:36:32
2	Pb 220.353†	640.4	645.7	45.507	ug/L	45.507 ppb	23:36:32
2	S 181.975 Axial†	211.9	136.2	110.81	ug/L	110.81 ppb	23:36:32
2	Sb 206.836†	101.8	52.6	-0.7852	ug/L	-0.7852 ppb	23:36:32
2	Se 196.026†	-801.9	-750.5	30.625	ug/L	30.625 ppb	23:36:32
2	Si 251.611†	365006.0	350893.7	7239.5	ug/L	7239.5 ppb	23:36:12
2	Sn 189.927†	37.6	30.7	4.7377	ug/L	4.7377 ppb	23:36:32
2	Ti 334.940†	1529259.0	1473588.8	1929.4	ug/L	1929.4 ppb	23:36:07
2	Tl 190.801†	-240.9	-170.6	-4.4701	ug/L	-4.4701 ppb	23:36:32
2	U 409.014†	-16490.4	-12043.4	-308.90	ug/L	-308.90 ppb	23:36:07
2	V 292.402†	7998.3	9354.1	39.798	ug/L	39.798 ppb	23:36:12
2	Zn 213.857†	80140.7	76042.7	415.42	ug/L	415.42 ppb	23:36:12
2	SiO2†	373067.9	358614.0	15843	ug/L	15843 ppb	23:37:14
3	Sc Radial	5668.0	5668.0	102	%		23:35:08
3	Y RADIAL	6363.1	6363.1	132.1	%		23:35:08
3	Al 396.153Radial†	25101.8	24737.2	22516	ug/L	22516 ppb	23:35:08
3	Ca 317.933Radial†	2001.4	1948.1	4852.4	ug/L	4852.4 ppb	23:35:28
3	Fe 238.204 Radial†	2252.0	2210.7	77554	ug/L	77554 ppb	23:35:28
3	K 766.490 Radial†	7899.3	6282.5	2753.0	ug/L	2753.0 ppb	23:35:08
3	Mg 279.077 IEC†	41.2	40.3	3127.2	ug/L	3127.2 ppb	23:35:28
3	Na 589.592 Radial†	255.3	421.0	1138.4	ug/L	1138.4 ppb	23:35:28
3	Sr 421.552†	2973.8	2914.2	44.853	ug/L	44.853 ppb	23:35:08
3	Sc 361.383	1085187.1	1085187.1	102.29	%		23:36:38
3	Y 371.029	1117679.1	1117679.1	131.00	%		23:36:38
3	Ag 328.068†	-5118.7	-5642.7	2.9917	ug/L	2.9917 ppb	23:36:43
3	As 188.979†	-70.1	-31.6	20.501	ug/L	20.501 ppb	23:37:03
3	B 249.677†	778.7	1142.8	7.4851	ug/L	7.4851 ppb	23:36:43
3	Ba 233.527†	42159.9	41191.4	210.41	ug/L	210.41 ppb	23:36:43
3	Be 313.107†	-8630.2	-1120.7	4.1375	ug/L	4.1375 ppb	23:36:43
3	Cd 226.502†	863.4	1121.7	-0.6958	ug/L	-0.6958 ppb	23:37:03
3	Co 228.616†	1123.8	1189.1	9.6114	ug/L	9.6114 ppb	23:37:03
3	Cr 267.716†	33180.3	32465.7	278.19	ug/L	278.19 ppb	23:36:43
3	Cu 324.752†	17083.1	6509.2	20.544	ug/L	20.544 ppb	23:36:43
3	Mn 257.610†	3339707.9	3264082.7	2589.6	ug/L	2589.6 ppb	23:36:38
3	Mo 202.031†	265.4	227.7	14.437	ug/L	14.437 ppb	23:37:03
3	Ni 231.604†	7732.5	7411.0	118.77	ug/L	118.77 ppb	23:37:03
3	P 214.914†	2067.9	1684.7	537.91	ug/L	537.91 ppb	23:37:03
3	Pb 220.353†	643.1	657.8	46.415	ug/L	46.415 ppb	23:37:03
3	S 181.975 Axial†	217.0	144.3	117.69	ug/L	117.69 ppb	23:37:03
3	Sb 206.836†	109.9	62.0	0.8850	ug/L	0.8850 ppb	23:37:03
3	Se 196.026†	-801.5	-761.9	25.914	ug/L	25.914 ppb	23:37:03
3	Si 251.611†	369341.3	360509.2	7437.9	ug/L	7437.9 ppb	23:36:43
3	Sn 189.927†	48.0	41.5	5.8478	ug/L	5.8478 ppb	23:37:03
3	Ti 334.940†	1507041.7	1474398.3	1930.4	ug/L	1930.4 ppb	23:36:38
3	Tl 190.801†	-239.2	-172.5	-4.7346	ug/L	-4.7346 ppb	23:37:03
3	U 409.014†	-16177.6	-11980.5	-307.32	ug/L	-307.32 ppb	23:36:38
3	V 292.402†	8015.1	9488.4	40.594	ug/L	40.594 ppb	23:36:43
3	Zn 213.857†	81293.3	78350.2	428.32	ug/L	428.32 ppb	23:36:43
3	SiO2†	371493.6	362571.0	16018	ug/L	16018 ppb	23:37:19

Mean Data: 232754001|882348|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1091453.2	102.88	%	0.850				0.83%
Sc Radial	5658.0	102	%	0.8				0.83%
Y 371.029	1123421.8	131.67	%	1.215				0.92%
Y RADIAL	6362.6	132.1	%	1.01				0.76%
Ag 328.068†	-5580.5	3.2029	ug/L	0.36334	3.2029	ppb	0.36334	11.34%
Al 396.153Radial†	24717.9	22499	ug/L	130.1	22499	ppb	130.1	0.58%
As 188.979†	-24.7	22.094	ug/L	1.4619	22.094	ppb	1.4619	6.62%
B 249.677†	1165.2	7.8491	ug/L	0.48642	7.8491	ppb	0.48642	6.20%
Ba 233.527†	40566.5	207.24	ug/L	3.599	207.24	ppb	3.599	1.74%
Be 313.107†	-1068.9	4.1529	ug/L	0.01712	4.1529	ppb	0.01712	0.41%
Ca 317.933Radial†	1942.2	4837.8	ug/L	30.00	4837.8	ppb	30.00	0.62%
Cd 226.502†	1122.8	-0.6752	ug/L	0.04629	-0.6752	ppb	0.04629	6.86%
Co 228.616†	1167.8	9.3486	ug/L	0.23005	9.3486	ppb	0.23005	2.46%
Cr 267.716†	32054.4	274.69	ug/L	4.123	274.69	ppb	4.123	1.50%
Cu 324.752†	6390.8	20.245	ug/L	0.4345	20.245	ppb	0.4345	2.15%
Fe 238.204 Radial†	2207.5	77441	ug/L	458.3	77441	ppb	458.3	0.59%
K 766.490 Radial†	6295.6	2758.6	ug/L	4.90	2758.6	ppb	4.90	0.18%

Mg 279.077 IEC†	40.1	3107.7	ug/L	46.11	3107.7	ppb	46.11	1.48%
Mn 257.610†	3260128.6	2586.4	ug/L	4.68	2586.4	ppb	4.68	0.18%
Mo 202.031†	230.9	14.555	ug/L	0.1527	14.555	ppb	0.1527	1.05%
Na 589.592 Radial†	420.7	1137.5	ug/L	5.19	1137.5	ppb	5.19	0.46%
Ni 231.604†	7378.4	118.25	ug/L	0.864	118.25	ppb	0.864	0.73%
P 214.914†	1664.3	530.86	ug/L	6.134	530.86	ppb	6.134	1.16%
Pb 220.353†	655.8	46.273	ug/L	0.7059	46.273	ppb	0.7059	1.53%
S 181.975 Axial†	139.9	113.95	ug/L	3.480	113.95	ppb	3.480	3.05%
Sb 206.836†	55.4	-0.3455	ug/L	1.07999	-0.3455	ppb	1.07999	312.60%
Se 196.026†	-757.1	27.084	ug/L	3.1246	27.084	ppb	3.1246	11.54%
Si 251.611†	356065.2	7346.2	ug/L	100.06	7346.2	ppb	100.06	1.36%
Sn 189.927†	37.0	5.3753	ug/L	0.57322	5.3753	ppb	0.57322	10.66%
Sr 421.552†	2920.0	44.942	ug/L	0.5560	44.942	ppb	0.5560	1.24%
Ti 334.940†	1474184.7	1930.1	ug/L	0.68	1930.1	ppb	0.68	0.04%
Tl 190.801†	-167.5	-3.9188	ug/L	1.19144	-3.9188	ppb	1.19144	30.40%
U 409.014†	-12077.7	-309.71	ug/L	2.882	-309.71	ppb	2.882	0.93%
V 292.402†	9438.0	40.322	ug/L	0.4536	40.322	ppb	0.4536	1.13%
Zn 213.857†	77341.9	422.71	ug/L	6.613	422.71	ppb	6.613	1.56%
SiO2†	361602.8	15976	ug/L	116.7	15976	ppb	116.7	0.73%

Sequence No.: 86
Sample ID: 1201873957|882348|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 103
Date Collected: 7/8/2009 23:39:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873957|882348|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5718.2	5718.2	103	%			23:41:24
1	Y RADIAL	6470.2	6470.2	134.4	%			23:41:24
1	Al 396.153Radial†	25990.4	25385.7	23106	ug/L	23106	ppb	23:41:24
1	Ca 317.933Radial†	1904.0	1836.0	4573.1	ug/L	4573.1	ppb	23:41:44
1	Fe 238.204 Radial†	2240.5	2180.1	76482	ug/L	76482	ppb	23:41:44
1	K 766.490 Radial†	7844.5	6161.1	2699.7	ug/L	2699.7	ppb	23:41:24
1	Mg 279.077 IEC†	40.9	39.6	3072.9	ug/L	3072.9	ppb	23:41:44
1	Na 589.592 Radial†	269.3	432.5	1169.4	ug/L	1169.4	ppb	23:41:44
1	Sr 421.552†	2928.7	2844.7	43.784	ug/L	43.784	ppb	23:41:24
1	Sc 361.383	1081785.0	1081785.0	101.97	%			23:42:41
1	Y 371.029	1125064.0	1125064.0	131.86	%			23:42:41
1	Ag 328.068†	-5005.7	-5547.6	3.0320	ug/L	3.0320	ppb	23:42:46
1	As 188.979†	-59.5	-21.5	22.819	ug/L	22.819	ppb	23:43:06
1	B 249.677†	626.4	995.8	5.3367	ug/L	5.3367	ppb	23:42:46
1	Ba 233.527†	38477.2	37709.5	192.76	ug/L	192.76	ppb	23:42:46
1	Be 313.107†	-10975.2	-3446.9	3.4727	ug/L	3.4727	ppb	23:42:46
1	Cd 226.502†	822.1	1083.8	-0.8566	ug/L	-0.8566	ppb	23:43:06
1	Co 228.616†	1104.9	1174.0	9.3901	ug/L	9.3901	ppb	23:43:06
1	Cr 267.716†	30938.9	30369.7	260.32	ug/L	260.32	ppb	23:42:46
1	Cu 324.752†	17964.1	7425.8	22.743	ug/L	22.743	ppb	23:42:46
1	Mn 257.610†	3317269.9	3252346.1	2580.2	ug/L	2580.2	ppb	23:42:41
1	Mo 202.031†	320.7	282.7	16.566	ug/L	16.566	ppb	23:43:06
1	Ni 231.604†	7324.1	7034.3	112.74	ug/L	112.74	ppb	23:43:06
1	P 214.914†	1927.2	1553.1	492.11	ug/L	492.11	ppb	23:43:06
1	Pb 220.353†	707.9	723.3	51.545	ug/L	51.545	ppb	23:43:06
1	S 181.975 Axial†	194.8	123.2	99.732	ug/L	99.732	ppb	23:43:06
1	Sb 206.836†	99.0	51.6	-0.7730	ug/L	-0.7730	ppb	23:43:06
1	Se 196.026†	-812.1	-774.8	18.013	ug/L	18.013	ppb	23:43:06
1	Si 251.611†	276027.1	270133.6	5573.0	ug/L	5573.0	ppb	23:42:46
1	Sn 189.927†	50.4	43.9	6.0525	ug/L	6.0525	ppb	23:43:06
1	Ti 334.940†	1521955.7	1493657.5	1955.6	ug/L	1955.6	ppb	23:42:41
1	Tl 190.801†	-240.0	-173.9	-4.9096	ug/L	-4.9096	ppb	23:43:06
1	U 409.014†	-16593.1	-12437.7	-318.50	ug/L	-318.50	ppb	23:42:41
1	V 292.402†	7735.9	9239.2	39.311	ug/L	39.311	ppb	23:42:46
1	Zn 213.857†	81904.6	79199.7	433.22	ug/L	433.22	ppb	23:42:46
1	SiO2†	281577.3	275534.2	12172	ug/L	12172	ppb	23:44:14
2	Sc Radial	5608.7	5608.7	101	%			23:41:49
2	Y RADIAL	6383.1	6383.1	132.5	%			23:41:49
2	Al 396.153Radial†	25406.0	25299.5	23028	ug/L	23028	ppb	23:41:49
2	Ca 317.933Radial†	1889.5	1857.8	4627.4	ug/L	4627.4	ppb	23:42:09
2	Fe 238.204 Radial†	2226.9	2209.1	77499	ug/L	77499	ppb	23:42:09
2	K 766.490 Radial†	7799.1	6265.0	2745.6	ug/L	2745.6	ppb	23:41:49
2	Mg 279.077 IEC†	40.6	40.1	3109.4	ug/L	3109.4	ppb	23:42:09
2	Na 589.592 Radial†	289.5	457.7	1237.5	ug/L	1237.5	ppb	23:42:09
2	Sr 421.552†	2857.3	2829.4	43.549	ug/L	43.549	ppb	23:41:49
2	Sc 361.383	1093201.4	1093201.4	103.05	%			23:43:12
2	Y 371.029	1136263.0	1136263.0	133.17	%			23:43:12
2	Ag 328.068†	-5071.9	-5560.5	3.3063	ug/L	3.3063	ppb	23:43:17
2	As 188.979†	-60.2	-21.5	22.999	ug/L	22.999	ppb	23:43:37
2	B 249.677†	548.1	913.4	3.9176	ug/L	3.9176	ppb	23:43:17
2	Ba 233.527†	38654.1	37487.0	191.65	ug/L	191.65	ppb	23:43:17
2	Be 313.107†	-10981.3	-3340.5	3.4999	ug/L	3.4999	ppb	23:43:17
2	Cd 226.502†	823.5	1076.8	-1.0309	ug/L	-1.0309	ppb	23:43:37
2	Co 228.616†	1102.8	1160.6	9.2154	ug/L	9.2154	ppb	23:43:37
2	Cr 267.716†	31094.1	30203.5	258.93	ug/L	258.93	ppb	23:43:17
2	Cu 324.752†	18087.7	7361.7	22.644	ug/L	22.644	ppb	23:43:17
2	Mn 257.610†	3347174.0	3247392.9	2576.4	ug/L	2576.4	ppb	23:43:12
2	Mo 202.031†	330.1	288.6	16.870	ug/L	16.870	ppb	23:43:37
2	Ni 231.604†	7232.1	6870.0	110.10	ug/L	110.10	ppb	23:43:37

2	P 214.914†	1931.0	1537.0	485.61	ug/L	485.61 ppb	23:43:37
2	Pb 220.353†	686.9	695.7	49.365	ug/L	49.365 ppb	23:43:37
2	S 181.975 Axial†	193.6	120.1	97.103	ug/L	97.103 ppb	23:43:37
2	Sb 206.836†	94.7	46.4	-1.7181	ug/L	-1.7181 ppb	23:43:37
2	Se 196.026†	-788.3	-743.4	31.783	ug/L	31.783 ppb	23:43:37
2	Si 251.611†	278167.0	269383.3	5557.5	ug/L	5557.5 ppb	23:43:17
2	Sn 189.927†	53.7	46.6	6.3574	ug/L	6.3574 ppb	23:43:37
2	Ti 334.940†	1536017.7	1491717.0	1953.1	ug/L	1953.1 ppb	23:43:12
2	Tl 190.801†	-239.7	-171.3	-4.4940	ug/L	-4.4940 ppb	23:43:37
2	U 409.014†	-16701.8	-12373.3	-317.02	ug/L	-317.02 ppb	23:43:12
2	V 292.402†	7855.7	9276.2	39.393	ug/L	39.393 ppb	23:43:17
2	Zn 213.857†	82525.4	78963.3	431.80	ug/L	431.80 ppb	23:43:17
2	SiO2†	274965.1	266233.8	11761	ug/L	11761 ppb	23:44:19
3	Sc Radial	5581.4	5581.4	100	%		23:42:14
3	Y RADIAL	6350.9	6350.9	131.9	%		23:42:14
3	Al 396.153Radial†	25493.1	25509.7	23219	ug/L	23219 ppb	23:42:14
3	Ca 317.933Radial†	1885.8	1863.3	4641.2	ug/L	4641.2 ppb	23:42:34
3	Fe 238.204 Radial†	2215.9	2209.0	77494	ug/L	77494 ppb	23:42:34
3	K 766.490 Radial†	7805.6	6309.4	2765.1	ug/L	2765.1 ppb	23:42:14
3	Mg 279.077 IEC†	41.9	41.6	3224.7	ug/L	3224.7 ppb	23:42:34
3	Na 589.592 Radial†	277.0	446.6	1207.5	ug/L	1207.5 ppb	23:42:34
3	Sr 421.552†	2869.9	2855.9	43.957	ug/L	43.957 ppb	23:42:14
3	Sc 361.383	1089823.2	1089823.2	102.73	%		23:43:43
3	Y 371.029	1128362.4	1128362.4	132.25	%		23:43:43
3	Ag 328.068†	-5022.4	-5527.6	3.4325	ug/L	3.4325 ppb	23:43:48
3	As 188.979†	-58.0	-19.6	23.311	ug/L	23.311 ppb	23:44:08
3	B 249.677†	524.5	892.1	3.5868	ug/L	3.5868 ppb	23:43:48
3	Ba 233.527†	38274.2	37233.5	190.37	ug/L	190.37 ppb	23:43:48
3	Be 313.107†	-10933.4	-3326.8	3.4543	ug/L	3.4543 ppb	23:43:48
3	Cd 226.502†	844.4	1099.6	-0.8589	ug/L	-0.8589 ppb	23:44:08
3	Co 228.616†	1097.7	1159.0	9.2385	ug/L	9.2385 ppb	23:44:08
3	Cr 267.716†	30778.2	29989.5	257.10	ug/L	257.10 ppb	23:43:48
3	Cu 324.752†	17865.5	7199.8	22.244	ug/L	22.244 ppb	23:43:48
3	Mn 257.610†	3304811.9	3216224.5	2551.7	ug/L	2551.7 ppb	23:43:43
3	Mo 202.031†	310.3	270.3	16.138	ug/L	16.138 ppb	23:44:08
3	Ni 231.604†	7316.4	6973.8	111.77	ug/L	111.77 ppb	23:44:08
3	P 214.914†	1931.3	1543.1	487.88	ug/L	487.88 ppb	23:44:08
3	Pb 220.353†	677.5	688.6	48.876	ug/L	48.876 ppb	23:44:08
3	S 181.975 Axial†	193.6	120.7	97.573	ug/L	97.573 ppb	23:44:08
3	Sb 206.836†	98.1	50.1	-0.9349	ug/L	-0.9349 ppb	23:44:08
3	Se 196.026†	-812.2	-769.0	23.457	ug/L	23.457 ppb	23:44:08
3	Si 251.611†	276029.0	268138.8	5531.8	ug/L	5531.8 ppb	23:43:48
3	Sn 189.927†	44.4	37.8	5.4335	ug/L	5.4335 ppb	23:44:08
3	Ti 334.940†	1514440.4	1475333.2	1931.6	ug/L	1931.6 ppb	23:43:43
3	Tl 190.801†	-236.5	-168.8	-4.3213	ug/L	-4.3213 ppb	23:44:08
3	U 409.014†	-16659.2	-12382.0	-317.24	ug/L	-317.24 ppb	23:43:43
3	V 292.402†	7717.3	9165.1	38.780	ug/L	38.780 ppb	23:43:48
3	Zn 213.857†	81936.4	78638.1	429.97	ug/L	429.97 ppb	23:43:48
3	SiO2†	279273.2	271254.7	11983	ug/L	11983 ppb	23:44:24

Mean Data: 1201873957|882348|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1088269.9	102.58	%	0.553				0.54%
Sc Radial	5636.1	101	%	1.3				1.28%
Y 371.029	1129896.5	132.43	%	0.675				0.51%
Y RADIAL	6401.4	132.9	%	1.28				0.96%
Ag 328.068†	-5545.2	3.2569	ug/L	0.20474	3.2569	ppb	0.20474	6.29%
Al 396.153Radial†	25398.3	23118	ug/L	96.2	23118	ppb	96.2	0.42%
As 188.979†	-20.9	23.043	ug/L	0.2491	23.043	ppb	0.2491	1.08%
B 249.677†	933.8	4.2804	ug/L	0.92965	4.2804	ppb	0.92965	21.72%
Ba 233.527†	37476.7	191.59	ug/L	1.194	191.59	ppb	1.194	0.62%
Be 313.107†	-3371.4	3.4757	ug/L	0.02294	3.4757	ppb	0.02294	0.66%
Ca 317.933Radial†	1852.4	4613.9	ug/L	35.98	4613.9	ppb	35.98	0.78%
Cd 226.502†	1086.8	-0.9154	ug/L	0.09997	-0.9154	ppb	0.09997	10.92%
Co 228.616†	1164.5	9.2813	ug/L	0.09493	9.2813	ppb	0.09493	1.02%
Cr 267.716†	30187.6	258.78	ug/L	1.615	258.78	ppb	1.615	0.62%
Cu 324.752†	7329.1	22.544	ug/L	0.2641	22.544	ppb	0.2641	1.17%
Fe 238.204 Radial†	2199.4	77159	ug/L	585.5	77159	ppb	585.5	0.76%
K 766.490 Radial†	6245.1	2736.8	ug/L	33.58	2736.8	ppb	33.58	1.23%

Mg 279.077 IEC†	40.4	3135.7	ug/L	79.24	3135.7	ppb	79.24	2.53%
Mn 257.610†	3238654.5	2569.4	ug/L	15.43	2569.4	ppb	15.43	0.60%
Mo 202.031†	280.5	16.525	ug/L	0.3679	16.525	ppb	0.3679	2.23%
Na 589.592 Radial†	445.6	1204.8	ug/L	34.11	1204.8	ppb	34.11	2.83%
Ni 231.604†	6959.4	111.53	ug/L	1.332	111.53	ppb	1.332	1.19%
P 214.914†	1544.4	488.53	ug/L	3.299	488.53	ppb	3.299	0.68%
Pb 220.353†	702.5	49.929	ug/L	1.4210	49.929	ppb	1.4210	2.85%
S 181.975 Axial†	121.3	98.136	ug/L	1.4022	98.136	ppb	1.4022	1.43%
Sb 206.836†	49.4	-1.1420	ug/L	0.50544	-1.1420	ppb	0.50544	44.26%
Se 196.026†	-762.4	24.418	ug/L	6.9351	24.418	ppb	6.9351	28.40%
Si 251.611†	269218.6	5554.1	ug/L	20.79	5554.1	ppb	20.79	0.37%
Sn 189.927†	42.8	5.9478	ug/L	0.47077	5.9478	ppb	0.47077	7.92%
Sr 421.552†	2843.3	43.763	ug/L	0.2048	43.763	ppb	0.2048	0.47%
Ti 334.940†	1486902.6	1946.8	ug/L	13.18	1946.8	ppb	13.18	0.68%
Tl 190.801†	-171.3	-4.5750	ug/L	0.30238	-4.5750	ppb	0.30238	6.61%
U 409.014†	-12397.7	-317.59	ug/L	0.798	-317.59	ppb	0.798	0.25%
V 292.402†	9226.8	39.161	ug/L	0.3328	39.161	ppb	0.3328	0.85%
Zn 213.857†	78933.7	431.66	ug/L	1.626	431.66	ppb	1.626	0.38%
SiO2†	271007.6	11972	ug/L	205.7	11972	ppb	205.7	1.72%

Sequence No.: 87
Sample ID: 1201873958|882348|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 104
Date Collected: 7/8/2009 23:46:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873958|882348|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5611.6	5611.6	101	%			23:48:29
1	Y RADIAL	6765.6	6765.6	140.5	%			23:48:29
1	Al 396.153Radial†	40220.6	39977.5	36369	ug/L	36369	ppb	23:48:29
1	Ca 317.933Radial†	3789.2	3740.7	9317.4	ug/L	9317.4	ppb	23:48:29
1	Fe 238.204 Radial†	2545.0	2523.5	88541	ug/L	88541	ppb	23:48:49
1	K 766.490 Radial†	20863.7	19216.6	8365.8	ug/L	8365.8	ppb	23:48:29
1	Mg 279.077 IEC†	109.2	108.1	8499.0	ug/L	8499.0	ppb	23:48:49
1	Na 589.592 Radial†	2045.1	2198.5	5944.5	ug/L	5944.5	ppb	23:48:29
1	Sr 421.552†	34754.3	34459.1	530.81	ug/L	530.81	ppb	23:48:29
1	Sc 361.383	1090949.0	1090949.0	102.83	%			23:49:48
1	Y 371.029	1196026.6	1196026.6	140.18	%			23:49:48
1	Ag 328.068†	117229.3	113359.8	478.98	ug/L	478.98	ppb	23:49:53
1	As 188.979†	1946.5	1929.8	486.81	ug/L	486.81	ppb	23:50:13
1	B 249.677†	31409.4	30925.3	469.05	ug/L	469.05	ppb	23:49:53
1	Ba 233.527†	134978.5	131234.3	667.46	ug/L	667.46	ppb	23:49:53
1	Be 313.107†	1586688.5	1550275.7	488.21	ug/L	488.21	ppb	23:49:48
1	Cd 226.502†	65256.8	63736.0	466.63	ug/L	466.63	ppb	23:49:53
1	Co 228.616†	37994.8	37038.0	455.69	ug/L	455.69	ppb	23:50:13
1	Cr 267.716†	90098.4	87643.9	748.93	ug/L	748.93	ppb	23:49:53
1	Cu 324.752†	222598.5	206272.5	514.05	ug/L	514.05	ppb	23:49:53
1	Mn 257.610†	4073243.5	3960158.3	3141.0	ug/L	3141.0	ppb	23:49:48
1	Mo 202.031†	12228.8	11860.0	480.80	ug/L	480.80	ppb	23:50:13
1	Ni 231.604†	37977.5	36782.6	589.25	ug/L	589.25	ppb	23:49:53
1	P 214.914†	3673.6	3235.4	1009.2	ug/L	1009.2	ppb	23:50:13
1	Pb 220.353†	7207.9	7038.3	527.17	ug/L	527.17	ppb	23:50:13
1	S 181.975 Axial†	5957.0	5725.0	4838.8	ug/L	4838.8	ppb	23:50:13
1	Sb 206.836†	2642.7	2524.4	489.63	ug/L	489.63	ppb	23:50:13
1	Se 196.026†	574.5	580.3	503.21	ug/L	503.21	ppb	23:50:13
1	Si 251.611†	437469.3	424852.6	8754.2	ug/L	8754.2	ppb	23:49:53
1	Sn 189.927†	4700.0	4565.0	476.74	ug/L	476.74	ppb	23:50:13
1	Ti 334.940†	2084640.3	2028297.0	2655.5	ug/L	2655.5	ppb	23:49:48
1	Tl 190.801†	2516.2	2508.2	451.09	ug/L	451.09	ppb	23:50:13
1	U 409.014†	1930.1	5711.6	129.39	ug/L	129.39	ppb	23:49:48
1	V 292.402†	92118.8	91232.9	508.60	ug/L	508.60	ppb	23:49:53
1	Zn 213.857†	169486.3	163692.9	899.79	ug/L	899.79	ppb	23:49:53
1	SiO2†	452999.9	439912.9	19411	ug/L	19411	ppb	23:51:24
2	Sc Radial	5661.6	5661.6	102	%			23:48:54
2	Y RADIAL	6775.7	6775.7	140.7	%			23:48:54
2	Al 396.153Radial†	40484.4	39884.6	36284	ug/L	36284	ppb	23:48:54
2	Ca 317.933Radial†	3792.0	3710.2	9241.6	ug/L	9241.6	ppb	23:48:54
2	Fe 238.204 Radial†	2516.7	2473.3	86783	ug/L	86783	ppb	23:49:14
2	K 766.490 Radial†	20800.9	18972.2	8258.4	ug/L	8258.4	ppb	23:48:54
2	Mg 279.077 IEC†	110.8	108.7	8546.7	ug/L	8546.7	ppb	23:49:14
2	Na 589.592 Radial†	2020.9	2156.8	5831.8	ug/L	5831.8	ppb	23:48:54
2	Sr 421.552†	34708.9	34110.2	525.43	ug/L	525.43	ppb	23:48:54
2	Sc 361.383	1095037.9	1095037.9	103.22	%			23:50:20
2	Y 371.029	1199833.1	1199833.1	140.63	%			23:50:20
2	Ag 328.068†	117576.2	113270.3	478.07	ug/L	478.07	ppb	23:50:26
2	As 188.979†	1942.6	1918.9	483.94	ug/L	483.94	ppb	23:50:46
2	B 249.677†	31501.9	30900.8	468.91	ug/L	468.91	ppb	23:50:26
2	Ba 233.527†	135979.1	131713.5	669.85	ug/L	669.85	ppb	23:50:26
2	Be 313.107†	1591748.7	1549416.6	487.95	ug/L	487.95	ppb	23:50:20
2	Cd 226.502†	65707.3	63935.5	468.33	ug/L	468.33	ppb	23:50:26
2	Co 228.616†	37955.8	36862.4	453.51	ug/L	453.51	ppb	23:50:46
2	Cr 267.716†	90780.6	87977.6	751.74	ug/L	751.74	ppb	23:50:26
2	Cu 324.752†	223250.6	206095.9	513.51	ug/L	513.51	ppb	23:50:26
2	Mn 257.610†	4086762.4	3958465.1	3139.4	ug/L	3139.4	ppb	23:50:20
2	Mo 202.031†	12215.9	11803.1	478.40	ug/L	478.40	ppb	23:50:46
2	Ni 231.604†	38125.2	36787.8	589.33	ug/L	589.33	ppb	23:50:26

2	P 214.914†	3653.6	3202.7	999.08	ug/L	999.08 ppb	23:50:46
2	Pb 220.353†	7201.8	7006.3	524.91	ug/L	524.91 ppb	23:50:46
2	S 181.975 Axial†	5928.3	5675.6	4797.0	ug/L	4797.0 ppb	23:50:46
2	Sb 206.836†	2648.7	2520.6	488.65	ug/L	488.65 ppb	23:50:46
2	Se 196.026†	564.1	568.1	493.07	ug/L	493.07 ppb	23:50:46
2	Si 251.611†	440488.1	426188.7	8781.8	ug/L	8781.8 ppb	23:50:26
2	Sn 189.927†	4666.5	4515.5	471.55	ug/L	471.55 ppb	23:50:46
2	Ti 334.940†	2094468.9	2030249.5	2658.0	ug/L	2658.0 ppb	23:50:20
2	Tl 190.801†	2517.8	2500.7	449.83	ug/L	449.83 ppb	23:50:46
2	U 409.014†	1862.3	5638.9	127.80	ug/L	127.80 ppb	23:50:20
2	V 292.402†	92735.9	91496.2	510.30	ug/L	510.30 ppb	23:50:26
2	Zn 213.857†	170603.3	164159.6	902.59	ug/L	902.59 ppb	23:50:26
2	SiO2†	452506.0	437789.5	19317	ug/L	19317 ppb	23:51:29
3	Sc Radial	5695.3	5695.3	102	%		23:49:20
3	Y RADIAL	6830.4	6830.4	141.8	%		23:49:20
3	Al 396.153Radial†	40857.7	40013.7	36402	ug/L	36402 ppb	23:49:20
3	Ca 317.933Radial†	3800.5	3696.5	9207.4	ug/L	9207.4 ppb	23:49:20
3	Fe 238.204 Radial†	2536.6	2478.2	86953	ug/L	86953 ppb	23:49:40
3	K 766.490 Radial†	21044.3	19089.0	8309.3	ug/L	8309.3 ppb	23:49:20
3	Mg 279.077 IEC†	111.4	108.7	8542.8	ug/L	8542.8 ppb	23:49:40
3	Na 589.592 Radial†	2041.1	2164.8	5853.3	ug/L	5853.3 ppb	23:49:20
3	Sr 421.552†	35099.8	34290.1	528.21	ug/L	528.21 ppb	23:49:20
3	Sc 361.383	1093388.8	1093388.8	103.06	%		23:50:53
3	Y 371.029	1200579.6	1200579.6	140.71	%		23:50:53
3	Ag 328.068†	118533.3	114370.8	482.49	ug/L	482.49 ppb	23:50:58
3	As 188.979†	1948.1	1927.0	485.86	ug/L	485.86 ppb	23:51:18
3	B 249.677†	31967.5	31398.7	476.65	ug/L	476.65 ppb	23:50:58
3	Ba 233.527†	135965.0	131898.5	670.79	ug/L	670.79 ppb	23:50:58
3	Be 313.107†	1593341.9	1553288.5	489.15	ug/L	489.15 ppb	23:50:53
3	Cd 226.502†	65754.4	64077.2	469.37	ug/L	469.37 ppb	23:50:58
3	Co 228.616†	37821.4	36787.4	452.58	ug/L	452.58 ppb	23:51:18
3	Cr 267.716†	90989.9	88313.4	754.61	ug/L	754.61 ppb	23:50:58
3	Cu 324.752†	225766.7	208863.4	520.35	ug/L	520.35 ppb	23:50:58
3	Mn 257.610†	4075158.9	3953178.3	3135.3	ug/L	3135.3 ppb	23:50:53
3	Mo 202.031†	12174.2	11780.5	477.51	ug/L	477.51 ppb	23:51:18
3	Ni 231.604†	38310.4	37023.2	593.10	ug/L	593.10 ppb	23:50:58
3	P 214.914†	3622.5	3177.9	989.07	ug/L	989.07 ppb	23:51:18
3	Pb 220.353†	7178.5	6994.2	524.00	ug/L	524.00 ppb	23:51:18
3	S 181.975 Axial†	5923.2	5679.3	4800.1	ug/L	4800.1 ppb	23:51:18
3	Sb 206.836†	2609.3	2486.3	481.79	ug/L	481.79 ppb	23:51:18
3	Se 196.026†	552.5	557.6	490.26	ug/L	490.26 ppb	23:51:18
3	Si 251.611†	443594.8	429846.8	8857.3	ug/L	8857.3 ppb	23:50:58
3	Sn 189.927†	4636.0	4492.7	469.18	ug/L	469.18 ppb	23:51:18
3	Ti 334.940†	2090068.2	2029040.2	2656.4	ug/L	2656.4 ppb	23:50:53
3	Tl 190.801†	2543.9	2529.7	454.69	ug/L	454.69 ppb	23:51:18
3	U 409.014†	2107.1	5879.2	133.74	ug/L	133.74 ppb	23:50:53
3	V 292.402†	93120.4	92004.7	513.16	ug/L	513.16 ppb	23:50:58
3	Zn 213.857†	170951.2	164746.5	905.81	ug/L	905.81 ppb	23:50:58
3	SiO2†	451066.4	437054.0	19285	ug/L	19285 ppb	23:51:35

Mean Data: 1201873958|882348|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1093125.3	103.04	%	0.194				0.19%
Sc Radial	5656.2	102	%	0.8				0.74%
Y 371.029	1198813.1	140.51	%	0.286				0.20%
Y RADIAL	6790.6	141.0	%	0.72				0.51%
Ag 328.068†	113667.0	479.85	ug/L	2.332	479.85	ppb	2.332	0.49%
Al 396.153Radial†	39958.6	36351	ug/L	60.6	36351	ppb	60.6	0.17%
As 188.979†	1925.2	485.54	ug/L	1.464	485.54	ppb	1.464	0.30%
B 249.677†	31074.9	471.54	ug/L	4.427	471.54	ppb	4.427	0.94%
Ba 233.527†	131615.4	669.36	ug/L	1.719	669.36	ppb	1.719	0.26%
Be 313.107†	1550993.6	488.43	ug/L	0.631	488.43	ppb	0.631	0.13%
Ca 317.933Radial†	3715.8	9255.5	ug/L	56.30	9255.5	ppb	56.30	0.61%
Cd 226.502†	63916.2	468.11	ug/L	1.384	468.11	ppb	1.384	0.30%
Co 228.616†	36895.9	453.93	ug/L	1.596	453.93	ppb	1.596	0.35%
Cr 267.716†	87978.3	751.76	ug/L	2.839	751.76	ppb	2.839	0.38%
Cu 324.752†	207077.3	515.97	ug/L	3.802	515.97	ppb	3.802	0.74%
Fe 238.204 Radial†	2491.7	87426	ug/L	970.1	87426	ppb	970.1	1.11%
K 766.490 Radial†	19092.6	8311.2	ug/L	53.69	8311.2	ppb	53.69	0.65%

Mg 279.077 IEC†	108.5	8529.5	ug/L	26.51	8529.5	ppb	26.51	0.31%
Mn 257.610†	3957267.2	3138.6	ug/L	2.96	3138.6	ppb	2.96	0.09%
Mo 202.031†	11814.5	478.90	ug/L	1.702	478.90	ppb	1.702	0.36%
Na 589.592 Radial†	2173.4	5876.5	ug/L	59.84	5876.5	ppb	59.84	1.02%
Ni 231.604†	36864.5	590.56	ug/L	2.203	590.56	ppb	2.203	0.37%
P 214.914†	3205.3	999.13	ug/L	10.085	999.13	ppb	10.085	1.01%
Pb 220.353†	7012.9	525.36	ug/L	1.630	525.36	ppb	1.630	0.31%
S 181.975 Axial†	5693.3	4812.0	ug/L	23.29	4812.0	ppb	23.29	0.48%
Sb 206.836†	2510.4	486.69	ug/L	4.274	486.69	ppb	4.274	0.88%
Se 196.026†	568.7	495.51	ug/L	6.810	495.51	ppb	6.810	1.37%
Si 251.611†	426962.7	8797.8	ug/L	53.39	8797.8	ppb	53.39	0.61%
Sn 189.927†	4524.4	472.49	ug/L	3.867	472.49	ppb	3.867	0.82%
Sr 421.552†	34286.5	528.15	ug/L	2.688	528.15	ppb	2.688	0.51%
Ti 334.940†	2029195.6	2656.6	ug/L	1.29	2656.6	ppb	1.29	0.05%
Tl 190.801†	2512.8	451.87	ug/L	2.522	451.87	ppb	2.522	0.56%
U 409.014†	5743.2	130.31	ug/L	3.072	130.31	ppb	3.072	2.36%
V 292.402†	91577.9	510.69	ug/L	2.305	510.69	ppb	2.305	0.45%
Zn 213.857†	164199.7	902.73	ug/L	3.012	902.73	ppb	3.012	0.33%
SiO2†	438252.1	19338	ug/L	65.5	19338	ppb	65.5	0.34%

Sequence No.: 88
Sample ID: 1201873960|882348|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 105
Date Collected: 7/8/2009 23:53:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873960|882348|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5629.8	5629.8	101	%			23:55:39
1	Y RADIAL	6854.3	6854.3	142.3	%			23:55:39
1	Al 396.153Radial†	40953.9	40573.3	36911	ug/L	36911	ppb	23:55:39
1	Ca 317.933Radial†	3756.9	3696.6	9207.6	ug/L	9207.6	ppb	23:55:39
1	Fe 238.204 Radial†	2449.5	2420.9	84943	ug/L	84943	ppb	23:55:59
1	K 766.490 Radial†	21224.8	19506.7	8485.9	ug/L	8485.9	ppb	23:55:39
1	Mg 279.077 IEC†	109.8	108.3	8515.9	ug/L	8515.9	ppb	23:55:59
1	Na 589.592 Radial†	2069.1	2215.6	5990.8	ug/L	5990.8	ppb	23:55:39
1	Sr 421.552†	34862.9	34454.9	530.75	ug/L	530.75	ppb	23:55:39
1	Sc 361.383	1073110.1	1073110.1	101.15	%			23:56:58
1	Y 371.029	1194824.6	1194824.6	140.04	%			23:56:58
1	Ag 328.068†	119464.3	117464.5	494.15	ug/L	494.15	ppb	23:57:03
1	As 188.979†	1961.2	1975.8	496.55	ug/L	496.55	ppb	23:57:23
1	B 249.677†	32348.7	32361.7	491.89	ug/L	491.89	ppb	23:57:03
1	Ba 233.527†	139633.3	138018.0	701.74	ug/L	701.74	ppb	23:57:03
1	Be 313.107†	1565373.1	1554852.8	489.51	ug/L	489.51	ppb	23:56:58
1	Cd 226.502†	66182.4	65706.0	481.79	ug/L	481.79	ppb	23:57:03
1	Co 228.616†	38138.4	37794.3	465.29	ug/L	465.29	ppb	23:57:23
1	Cr 267.716†	89325.2	88336.0	754.79	ug/L	754.79	ppb	23:57:03
1	Cu 324.752†	227871.8	215084.1	535.58	ug/L	535.58	ppb	23:57:03
1	Mn 257.610†	4314718.4	4264727.6	3381.2	ug/L	3381.2	ppb	23:56:58
1	Mo 202.031†	12101.0	11931.3	483.41	ug/L	483.41	ppb	23:57:23
1	Ni 231.604†	38105.9	37523.4	601.11	ug/L	601.11	ppb	23:57:03
1	P 214.914†	3598.9	3221.0	1003.8	ug/L	1003.8	ppb	23:57:23
1	Pb 220.353†	7337.9	7283.4	545.97	ug/L	545.97	ppb	23:57:23
1	S 181.975 Axial†	5971.4	5835.6	4932.3	ug/L	4932.3	ppb	23:57:23
1	Sb 206.836†	2622.0	2546.7	494.14	ug/L	494.14	ppb	23:57:23
1	Se 196.026†	611.8	626.5	505.63	ug/L	505.63	ppb	23:57:23
1	Si 251.611†	600993.5	593585.4	12236	ug/L	12236	ppb	23:57:03
1	Sn 189.927†	4682.6	4623.7	482.77	ug/L	482.77	ppb	23:57:23
1	Ti 334.940†	2010511.9	1988712.5	2603.6	ug/L	2603.6	ppb	23:56:58
1	Tl 190.801†	2530.6	2563.1	461.44	ug/L	461.44	ppb	23:57:23
1	U 409.014†	1290.7	5110.8	114.92	ug/L	114.92	ppb	23:56:58
1	V 292.402†	93387.8	93976.5	524.72	ug/L	524.72	ppb	23:57:03
1	Zn 213.857†	176664.2	173528.8	955.00	ug/L	955.00	ppb	23:57:03
1	SiO2†	605431.6	597930.6	26393	ug/L	26393	ppb	23:58:34
2	Sc Radial	5619.0	5619.0	101	%			23:56:04
2	Y RADIAL	6845.6	6845.6	142.2	%			23:56:04
2	Al 396.153Radial†	40875.7	40573.8	36912	ug/L	36912	ppb	23:56:04
2	Ca 317.933Radial†	3745.4	3692.4	9197.1	ug/L	9197.1	ppb	23:56:04
2	Fe 238.204 Radial†	2453.3	2429.3	85238	ug/L	85238	ppb	23:56:25
2	K 766.490 Radial†	21243.7	19565.8	8511.8	ug/L	8511.8	ppb	23:56:04
2	Mg 279.077 IEC†	112.2	110.9	8722.5	ug/L	8722.5	ppb	23:56:25
2	Na 589.592 Radial†	2075.0	2225.4	6017.2	ug/L	6017.2	ppb	23:56:04
2	Sr 421.552†	34621.7	34282.4	528.09	ug/L	528.09	ppb	23:56:04
2	Sc 361.383	1088909.4	1088909.4	102.64	%			23:57:30
2	Y 371.029	1211277.5	1211277.5	141.97	%			23:57:30
2	Ag 328.068†	119834.1	116111.2	488.86	ug/L	488.86	ppb	23:57:36
2	As 188.979†	1967.0	1953.2	491.33	ug/L	491.33	ppb	23:57:56
2	B 249.677†	32366.4	31914.8	484.91	ug/L	484.91	ppb	23:57:36
2	Ba 233.527†	139971.8	136344.9	693.27	ug/L	693.27	ppb	23:57:36
2	Be 313.107†	1590518.0	1556896.7	490.15	ug/L	490.15	ppb	23:57:30
2	Cd 226.502†	66379.9	64949.0	476.09	ug/L	476.09	ppb	23:57:36
2	Co 228.616†	38057.7	37168.6	457.47	ug/L	457.47	ppb	23:57:56
2	Cr 267.716†	89918.5	87632.7	748.79	ug/L	748.79	ppb	23:57:36
2	Cu 324.752†	228316.3	212248.5	528.60	ug/L	528.60	ppb	23:57:36
2	Mn 257.610†	4369864.1	4256563.5	3374.8	ug/L	3374.8	ppb	23:57:30
2	Mo 202.031†	12083.4	11740.6	475.79	ug/L	475.79	ppb	23:57:56
2	Ni 231.604†	38267.1	37133.9	594.88	ug/L	594.88	ppb	23:57:36

2	P 214.914†	3602.0	3172.3	987.42 ug/L	987.42 ppb	23:57:56
2	Pb 220.353†	7326.9	7167.4	537.24 ug/L	537.24 ppb	23:57:56
2	S 181.975 Axial†	5947.3	5726.4	4839.9 ug/L	4839.9 ppb	23:57:56
2	Sb 206.836†	2610.6	2498.0	484.44 ug/L	484.44 ppb	23:57:56
2	Se 196.026†	616.3	622.1	505.22 ug/L	505.22 ppb	23:57:56
2	Si 251.611†	604884.0	588755.1	12136 ug/L	12136 ppb	23:57:36
2	Sn 189.927†	4684.5	4558.5	475.99 ug/L	475.99 ppb	23:57:56
2	Ti 334.940†	2039868.6	1988474.7	2603.3 ug/L	2603.3 ppb	23:57:30
2	Tl 190.801†	2530.6	2526.8	455.33 ug/L	455.33 ppb	23:57:56
2	U 409.014†	1596.9	5390.6	121.83 ug/L	121.83 ppb	23:57:30
2	V 292.402†	93803.1	93041.5	519.30 ug/L	519.30 ppb	23:57:36
2	Zn 213.857†	177062.3	171382.5	943.03 ug/L	943.03 ppb	23:57:36
2	SiO2†	600769.3	584704.1	25809 ug/L	25809 ppb	23:58:39
3	Sc Radial	5608.4	5608.4	101 %		23:56:30
3	Y RADIAL	6851.5	6851.5	142.3 %		23:56:30
3	Al 396.153Radial†	40843.7	40618.8	36952 ug/L	36952 ppb	23:56:30
3	Ca 317.933Radial†	3738.5	3692.6	9197.6 ug/L	9197.6 ppb	23:56:30
3	Fe 238.204 Radial†	2435.7	2416.4	84787 ug/L	84787 ppb	23:56:50
3	K 766.490 Radial†	21169.7	19532.2	8496.9 ug/L	8496.9 ppb	23:56:30
3	Mg 279.077 IEC†	108.5	107.5	8447.4 ug/L	8447.4 ppb	23:56:50
3	Na 589.592 Radial†	2034.5	2189.1	5919.0 ug/L	5919.0 ppb	23:56:30
3	Sr 421.552†	34415.5	34142.8	525.94 ug/L	525.94 ppb	23:56:30
3	Sc 361.383	1082186.9	1082186.9	102.01 %		23:58:03
3	Y 371.029	1204863.9	1204863.9	141.21 %		23:58:03
3	Ag 328.068†	119013.8	116032.3	488.40 ug/L	488.40 ppb	23:58:08
3	As 188.979†	1990.0	1987.8	499.33 ug/L	499.33 ppb	23:58:28
3	B 249.677†	32314.2	32059.6	487.21 ug/L	487.21 ppb	23:58:08
3	Ba 233.527†	139546.3	136774.9	695.44 ug/L	695.44 ppb	23:58:08
3	Be 313.107†	1581183.6	1557372.1	490.29 ug/L	490.29 ppb	23:58:03
3	Cd 226.502†	66156.0	65131.3	477.51 ug/L	477.51 ppb	23:58:08
3	Co 228.616†	38216.3	37554.3	462.29 ug/L	462.29 ppb	23:58:28
3	Cr 267.716†	89428.5	87696.6	749.33 ug/L	749.33 ppb	23:58:08
3	Cu 324.752†	226639.1	211986.2	527.93 ug/L	527.93 ppb	23:58:08
3	Mn 257.610†	4352189.0	4265683.3	3382.0 ug/L	3382.0 ppb	23:58:03
3	Mo 202.031†	12110.5	11840.4	479.75 ug/L	479.75 ppb	23:58:28
3	Ni 231.604†	38206.7	37306.3	597.64 ug/L	597.64 ppb	23:58:08
3	P 214.914†	3604.2	3196.3	996.48 ug/L	996.48 ppb	23:58:28
3	Pb 220.353†	7349.8	7234.2	542.31 ug/L	542.31 ppb	23:58:28
3	S 181.975 Axial†	5938.5	5753.7	4863.0 ug/L	4863.0 ppb	23:58:28
3	Sb 206.836†	2623.0	2525.9	490.11 ug/L	490.11 ppb	23:58:28
3	Se 196.026†	619.4	628.8	505.83 ug/L	505.83 ppb	23:58:28
3	Si 251.611†	600690.9	588305.4	12127 ug/L	12127 ppb	23:58:08
3	Sn 189.927†	4735.8	4637.0	484.15 ug/L	484.15 ppb	23:58:28
3	Ti 334.940†	2027306.1	1988505.1	2603.4 ug/L	2603.4 ppb	23:58:03
3	Tl 190.801†	2547.4	2558.7	460.72 ug/L	460.72 ppb	23:58:28
3	U 409.014†	1456.3	5262.4	118.71 ug/L	118.71 ppb	23:58:03
3	V 292.402†	93170.5	92989.1	519.10 ug/L	519.10 ppb	23:58:08
3	Zn 213.857†	176374.5	171780.0	945.29 ug/L	945.29 ppb	23:58:08
3	SiO2†	602906.9	590435.5	26062 ug/L	26062 ppb	23:58:45

Mean Data: 1201873960|882348|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1081402.1	101.93	%	0.747				0.73%
Sc Radial	5619.1	101	%	0.2				0.19%
Y 371.029	1203655.3	141.07	%	0.972				0.69%
Y RADIAL	6850.5	142.3	%	0.09				0.06%
Ag 328.068†	116536.0	490.47	ug/L	3.193	490.47	ppb	3.193	0.65%
Al 396.153Radial†	40588.6	36925	ug/L	23.8	36925	ppb	23.8	0.06%
As 188.979†	1972.3	495.73	ug/L	4.064	495.73	ppb	4.064	0.82%
B 249.677†	32112.0	488.00	ug/L	3.558	488.00	ppb	3.558	0.73%
Ba 233.527†	137045.9	696.82	ug/L	4.402	696.82	ppb	4.402	0.63%
Be 313.107†	1556373.8	489.98	ug/L	0.416	489.98	ppb	0.416	0.08%
Ca 317.933Radial†	3693.8	9200.8	ug/L	5.91	9200.8	ppb	5.91	0.06%
Cd 226.502†	65262.1	478.47	ug/L	2.968	478.47	ppb	2.968	0.62%
Co 228.616†	37505.7	461.68	ug/L	3.945	461.68	ppb	3.945	0.85%
Cr 267.716†	87888.4	750.97	ug/L	3.317	750.97	ppb	3.317	0.44%
Cu 324.752†	213106.2	530.70	ug/L	4.237	530.70	ppb	4.237	0.80%
Fe 238.204 Radial†	2422.2	84989	ug/L	229.1	84989	ppb	229.1	0.27%
K 766.490 Radial†	19534.9	8498.2	ug/L	13.01	8498.2	ppb	13.01	0.15%

Mg 279.077 IEC†	108.9	8561.9	ug/L	143.22	8561.9	ppb	143.22	1.67%
Mn 257.610†	4262324.8	3379.3	ug/L	3.93	3379.3	ppb	3.93	0.12%
Mo 202.031†	11837.4	479.65	ug/L	3.808	479.65	ppb	3.808	0.79%
Na 589.592 Radial†	2210.0	5975.7	ug/L	50.81	5975.7	ppb	50.81	0.85%
Ni 231.604†	37321.2	597.88	ug/L	3.126	597.88	ppb	3.126	0.52%
P 214.914†	3196.5	995.91	ug/L	8.223	995.91	ppb	8.223	0.83%
Pb 220.353†	7228.3	541.84	ug/L	4.388	541.84	ppb	4.388	0.81%
S 181.975 Axial†	5771.9	4878.4	ug/L	48.09	4878.4	ppb	48.09	0.99%
Sb 206.836†	2523.5	489.56	ug/L	4.871	489.56	ppb	4.871	0.99%
Se 196.026†	625.8	505.56	ug/L	0.311	505.56	ppb	0.311	0.06%
Si 251.611†	590215.3	12166	ug/L	60.3	12166	ppb	60.3	0.50%
Sn 189.927†	4606.4	480.97	ug/L	4.368	480.97	ppb	4.368	0.91%
Sr 421.552†	34293.4	528.26	ug/L	2.409	528.26	ppb	2.409	0.46%
Ti 334.940†	1988564.1	2603.4	ug/L	0.17	2603.4	ppb	0.17	0.01%
Tl 190.801†	2549.5	459.16	ug/L	3.340	459.16	ppb	3.340	0.73%
U 409.014†	5254.6	118.49	ug/L	3.464	118.49	ppb	3.464	2.92%
V 292.402†	93335.7	521.04	ug/L	3.188	521.04	ppb	3.188	0.61%
Zn 213.857†	172230.4	947.77	ug/L	6.362	947.77	ppb	6.362	0.67%
SiO2†	591023.4	26088	ug/L	292.9	26088	ppb	292.9	1.12%

Sequence No.: 89
Sample ID: 1201873959|882348|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 106
Date Collected: 7/9/2009 00:00:56
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1201873959|882348|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5565.0	5565.0	100	%			00:02:50
1	Y RADIAL	5160.5	5160.5	107.2	%			00:02:50
1	Al 396.153Radial†	4928.1	5020.2	4569.5	ug/L	4569.5	ppb	00:02:50
1	Ca 317.933Radial†	433.6	416.7	1037.8	ug/L	1037.8	ppb	00:03:10
1	Fe 238.204 Radial†	472.3	471.9	16556	ug/L	16556	ppb	00:03:10
1	K 766.490 Radial†	2810.9	1337.7	586.15	ug/L	586.15	ppb	00:02:50
1	Mg 279.077 IEC†	9.6	9.5	734.80	ug/L	734.80	ppb	00:03:10
1	Na 589.592 Radial†	-89.5	80.9	218.77	ug/L	218.77	ppb	00:03:10
1	Sr 421.552†	615.5	610.0	9.3879	ug/L	9.3879	ppb	00:03:10
1	Sc 361.383	1069440.3	1069440.3	100.81	%			00:04:07
1	Y 371.029	907987.6	907987.6	106.42	%			00:04:07
1	Ag 328.068†	-510.6	-1145.1	0.8667	ug/L	0.8667	ppb	00:04:12
1	As 188.979†	-47.4	-10.2	3.5156	ug/L	3.5156	ppb	00:04:32
1	B 249.677†	87.6	468.4	5.0952	ug/L	5.0952	ppb	00:04:12
1	Ba 233.527†	8533.9	8441.3	43.134	ug/L	43.134	ppb	00:04:12
1	Be 313.107†	-7913.6	-534.1	0.7701	ug/L	0.7701	ppb	00:04:12
1	Cd 226.502†	-53.6	224.5	-0.2607	ug/L	-0.2607	ppb	00:04:32
1	Co 228.616†	169.6	258.7	2.1325	ug/L	2.1325	ppb	00:04:32
1	Cr 267.716†	6743.1	6717.7	57.571	ug/L	57.571	ppb	00:04:12
1	Cu 324.752†	11492.0	1208.8	3.9396	ug/L	3.9396	ppb	00:04:12
1	Mn 257.610†	707597.0	701107.8	556.21	ug/L	556.21	ppb	00:04:07
1	Mo 202.031†	86.9	54.5	3.3161	ug/L	3.3161	ppb	00:04:32
1	Ni 231.604†	1723.6	1561.6	25.027	ug/L	25.027	ppb	00:04:32
1	P 214.914†	693.4	350.9	111.73	ug/L	111.73	ppb	00:04:32
1	Pb 220.353†	126.9	155.0	10.953	ug/L	10.953	ppb	00:04:32
1	S 181.975 Axial†	93.9	25.3	20.523	ug/L	20.523	ppb	00:04:32
1	Sb 206.836†	63.6	17.6	1.1191	ug/L	1.1191	ppb	00:04:32
1	Se 196.026†	-184.2	-161.1	6.0149	ug/L	6.0149	ppb	00:04:32
1	Si 251.611†	76495.0	75322.8	1554.0	ug/L	1554.0	ppb	00:04:12
1	Sn 189.927†	7.0	1.5	0.4875	ug/L	0.4875	ppb	00:04:32
1	Ti 334.940†	309060.2	307696.3	402.87	ug/L	402.87	ppb	00:04:07
1	Tl 190.801†	-71.4	-9.4	3.5862	ug/L	3.5862	ppb	00:04:32
1	U 409.014†	-6171.8	-2287.7	-58.906	ug/L	-58.906	ppb	00:04:07
1	V 292.402†	287.7	1938.2	8.1984	ug/L	8.1984	ppb	00:04:12
1	Zn 213.857†	17623.9	16360.5	89.396	ug/L	89.396	ppb	00:04:12
1	SiO2†	76685.5	75469.5	3334.2	ug/L	3334.2	ppb	00:05:39
2	Sc Radial	5516.3	5516.3	99.1	%			00:03:15
2	Y RADIAL	5108.5	5108.5	106.1	%			00:03:15
2	Al 396.153Radial†	4893.8	5029.1	4577.6	ug/L	4577.6	ppb	00:03:15
2	Ca 317.933Radial†	437.8	424.7	1057.8	ug/L	1057.8	ppb	00:03:35
2	Fe 238.204 Radial†	470.5	474.3	16639	ug/L	16639	ppb	00:03:35
2	K 766.490 Radial†	2793.8	1345.3	589.52	ug/L	589.52	ppb	00:03:15
2	Mg 279.077 IEC†	7.4	7.2	559.51	ug/L	559.51	ppb	00:03:35
2	Na 589.592 Radial†	-95.7	73.8	199.66	ug/L	199.66	ppb	00:03:35
2	Sr 421.552†	618.4	618.4	9.5173	ug/L	9.5173	ppb	00:03:35
2	Sc 361.383	1068375.9	1068375.9	100.71	%			00:04:38
2	Y 371.029	906364.5	906364.5	106.23	%			00:04:38
2	Ag 328.068†	-511.1	-1146.1	0.8958	ug/L	0.8958	ppb	00:04:43
2	As 188.979†	-54.3	-17.0	1.9245	ug/L	1.9245	ppb	00:05:03
2	B 249.677†	64.4	445.5	4.7272	ug/L	4.7272	ppb	00:04:43
2	Ba 233.527†	8655.9	8570.9	43.793	ug/L	43.793	ppb	00:04:43
2	Be 313.107†	-7861.8	-490.4	0.7845	ug/L	0.7845	ppb	00:04:43
2	Cd 226.502†	-55.2	222.9	-0.2827	ug/L	-0.2827	ppb	00:05:03
2	Co 228.616†	159.4	248.7	2.0055	ug/L	2.0055	ppb	00:05:03
2	Cr 267.716†	6740.1	6721.5	57.607	ug/L	57.607	ppb	00:04:43
2	Cu 324.752†	11479.9	1208.1	3.9427	ug/L	3.9427	ppb	00:04:43
2	Mn 257.610†	707964.8	702172.3	557.07	ug/L	557.07	ppb	00:04:38
2	Mo 202.031†	82.4	50.0	3.1448	ug/L	3.1448	ppb	00:05:03
2	Ni 231.604†	1722.6	1562.3	25.038	ug/L	25.038	ppb	00:05:03

2	P 214.914†	693.8	352.0	112.06	ug/L	112.06 ppb	00:05:03
2	Pb 220.353†	122.7	151.0	10.647	ug/L	10.647 ppb	00:05:03
2	S 181.975 Axial†	95.9	27.4	22.273	ug/L	22.273 ppb	00:05:03
2	Sb 206.836†	54.5	8.7	-0.6227	ug/L	-0.6227 ppb	00:05:03
2	Se 196.026†	-181.5	-158.6	7.1389	ug/L	7.1389 ppb	00:05:03
2	Si 251.611†	76754.2	75655.8	1560.9	ug/L	1560.9 ppb	00:04:43
2	Sn 189.927†	12.7	7.2	1.0787	ug/L	1.0787 ppb	00:05:03
2	Ti 334.940†	309032.2	307974.0	403.23	ug/L	403.23 ppb	00:04:38
2	Tl 190.801†	-86.0	-24.0	1.1334	ug/L	1.1334 ppb	00:05:03
2	U 409.014†	-6389.1	-2509.6	-64.422	ug/L	-64.422 ppb	00:04:38
2	V 292.402†	380.2	2030.4	8.6937	ug/L	8.6937 ppb	00:04:43
2	Zn 213.857†	17800.4	16553.1	90.469	ug/L	90.469 ppb	00:04:43
2	SiO2†	75875.4	74740.9	3302.0	ug/L	3302.0 ppb	00:05:44
3	Sc Radial	5583.0	5583.0	100	%		00:03:40
3	Y RADIAL	5159.2	5159.2	107.1	%		00:03:40
3	Al 396.153Radial†	4935.6	5011.7	4561.8	ug/L	4561.8 ppb	00:03:40
3	Ca 317.933Radial†	437.9	419.5	1044.9	ug/L	1044.9 ppb	00:04:00
3	Fe 238.204 Radial†	471.4	469.6	16474	ug/L	16474 ppb	00:04:00
3	K 766.490 Radial†	2775.2	1293.1	566.70	ug/L	566.70 ppb	00:03:40
3	Mg 279.077 IEC†	9.6	9.4	732.39	ug/L	732.39 ppb	00:04:00
3	Na 589.592 Radial†	-90.6	80.1	216.57	ug/L	216.57 ppb	00:04:00
3	Sr 421.552†	610.3	602.8	9.2776	ug/L	9.2776 ppb	00:04:00
3	Sc 361.383	1064655.2	1064655.2	100.36	%		00:05:08
3	Y 371.029	901953.5	901953.5	105.71	%		00:05:08
3	Ag 328.068†	-524.2	-1161.0	0.7831	ug/L	0.7831 ppb	00:05:13
3	As 188.979†	-43.6	-6.5	4.3537	ug/L	4.3537 ppb	00:05:33
3	B 249.677†	31.6	413.0	4.2427	ug/L	4.2427 ppb	00:05:13
3	Ba 233.527†	8652.0	8597.0	43.921	ug/L	43.921 ppb	00:05:13
3	Be 313.107†	-7894.3	-550.1	0.7642	ug/L	0.7642 ppb	00:05:13
3	Cd 226.502†	-44.6	233.2	-0.1859	ug/L	-0.1859 ppb	00:05:33
3	Co 228.616†	161.5	251.3	2.0409	ug/L	2.0409 ppb	00:05:33
3	Cr 267.716†	6813.3	6817.7	58.424	ug/L	58.424 ppb	00:05:13
3	Cu 324.752†	11451.3	1219.5	3.9612	ug/L	3.9612 ppb	00:05:13
3	Mn 257.610†	705462.7	702135.8	557.02	ug/L	557.02 ppb	00:05:08
3	Mo 202.031†	73.0	40.9	2.7690	ug/L	2.7690 ppb	00:05:33
3	Ni 231.604†	1726.5	1572.1	25.195	ug/L	25.195 ppb	00:05:33
3	P 214.914†	702.1	362.7	115.97	ug/L	115.97 ppb	00:05:33
3	Pb 220.353†	126.3	154.9	10.955	ug/L	10.955 ppb	00:05:33
3	S 181.975 Axial†	93.3	25.2	20.402	ug/L	20.402 ppb	00:05:33
3	Sb 206.836†	56.2	10.6	-0.2911	ug/L	-0.2911 ppb	00:05:33
3	Se 196.026†	-178.9	-156.7	7.1715	ug/L	7.1715 ppb	00:05:33
3	Si 251.611†	76660.6	75828.9	1564.5	ug/L	1564.5 ppb	00:05:13
3	Sn 189.927†	12.2	6.7	1.0292	ug/L	1.0292 ppb	00:05:33
3	Ti 334.940†	307382.3	307402.3	402.48	ug/L	402.48 ppb	00:05:08
3	Tl 190.801†	-89.2	-27.5	0.5395	ug/L	0.5395 ppb	00:05:33
3	U 409.014†	-6353.5	-2496.2	-64.072	ug/L	-64.072 ppb	00:05:08
3	V 292.402†	358.9	2010.4	8.6026	ug/L	8.6026 ppb	00:05:13
3	Zn 213.857†	17762.6	16577.3	90.615	ug/L	90.615 ppb	00:05:13
3	SiO2†	76416.2	75543.0	3337.5	ug/L	3337.5 ppb	00:05:49

Mean Data: 1201873959|882348|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1067490.5	100.62	%	0.237				0.24%
Sc Radial	5554.8	99.8	%	0.62				0.62%
Y 371.029	905435.2	106.12	%	0.366				0.34%
Y RADIAL	5142.7	106.8	%	0.62				0.58%
Ag 328.068†	-1150.7	0.8485	ug/L	0.05851	0.8485	ppb	0.05851	6.90%
Al 396.153Radial†	5020.3	4569.6	ug/L	7.91	4569.6	ppb	7.91	0.17%
As 188.979†	-11.2	3.2646	ug/L	1.23387	3.2646	ppb	1.23387	37.80%
B 249.677†	442.3	4.6884	ug/L	0.42759	4.6884	ppb	0.42759	9.12%
Ba 233.527†	8536.4	43.616	ug/L	0.4224	43.616	ppb	0.4224	0.97%
Be 313.107†	-524.9	0.7730	ug/L	0.01044	0.7730	ppb	0.01044	1.35%
Ca 317.933Radial†	420.3	1046.9	ug/L	10.13	1046.9	ppb	10.13	0.97%
Cd 226.502†	226.9	-0.2431	ug/L	0.05072	-0.2431	ppb	0.05072	20.86%
Co 228.616†	252.9	2.0597	ug/L	0.06556	2.0597	ppb	0.06556	3.18%
Cr 267.716†	6752.3	57.867	ug/L	0.4822	57.867	ppb	0.4822	0.83%
Cu 324.752†	1212.1	3.9478	ug/L	0.01167	3.9478	ppb	0.01167	0.30%
Fe 238.204 Radial†	471.9	16556	ug/L	82.8	16556	ppb	82.8	0.50%
K 766.490 Radial†	1325.4	580.79	ug/L	12.318	580.79	ppb	12.318	2.12%

Mg 279.077 IEC†	8.7	675.57	ug/L	100.514	675.57	ppb	100.514	14.88%
Mn 257.610†	701805.3	556.77	ug/L	0.479	556.77	ppb	0.479	0.09%
Mo 202.031†	48.5	3.0766	ug/L	0.27984	3.0766	ppb	0.27984	9.10%
Na 589.592 Radial†	78.3	211.67	ug/L	10.457	211.67	ppb	10.457	4.94%
Ni 231.604†	1565.3	25.086	ug/L	0.0942	25.086	ppb	0.0942	0.38%
P 214.914†	355.2	113.25	ug/L	2.359	113.25	ppb	2.359	2.08%
Pb 220.353†	153.6	10.852	ug/L	0.1774	10.852	ppb	0.1774	1.63%
S 181.975 Axial†	25.9	21.066	ug/L	1.0470	21.066	ppb	1.0470	4.97%
Sb 206.836†	12.3	0.0684	ug/L	0.92484	0.0684	ppb	0.92484	>999.9%
Se 196.026†	-158.8	6.7751	ug/L	0.65855	6.7751	ppb	0.65855	9.72%
Si 251.611†	75602.5	1559.8	ug/L	5.31	1559.8	ppb	5.31	0.34%
Sn 189.927†	5.1	0.8652	ug/L	0.32798	0.8652	ppb	0.32798	37.91%
Sr 421.552†	610.4	9.3943	ug/L	0.11994	9.3943	ppb	0.11994	1.28%
Ti 334.940†	307690.9	402.86	ug/L	0.375	402.86	ppb	0.375	0.09%
Tl 190.801†	-20.3	1.7530	ug/L	1.61509	1.7530	ppb	1.61509	92.13%
U 409.014†	-2431.2	-62.467	ug/L	3.0889	-62.467	ppb	3.0889	4.94%
V 292.402†	1993.0	8.4982	ug/L	0.26364	8.4982	ppb	0.26364	3.10%
Zn 213.857†	16497.0	90.160	ug/L	0.6656	90.160	ppb	0.6656	0.74%
SiO2†	75251.1	3324.6	ug/L	19.60	3324.6	ppb	19.60	0.59%

Sequence No.: 90
Sample ID: 232754002|882348|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 107
Date Collected: 7/9/2009 00:08:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232754002|882348|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5743.0	5743.0	103	%			00:09:54
1	Y RADIAL	6680.6	6680.6	138.7	%			00:09:54
1	Al 396.153Radial†	32258.3	31349.8	28535	ug/L	28535	ppb	00:09:54
1	Ca 317.933Radial†	2059.7	1978.8	4929.0	ug/L	4929.0	ppb	00:10:14
1	Fe 238.204 Radial†	2412.5	2337.4	81998	ug/L	81998	ppb	00:10:14
1	K 766.490 Radial†	9097.0	7341.7	3220.3	ug/L	3220.3	ppb	00:09:54
1	Mg 279.077 IEC†	59.9	57.9	4513.6	ug/L	4513.6	ppb	00:10:14
1	Na 589.592 Radial†	188.5	353.0	954.54	ug/L	954.54	ppb	00:10:14
1	Sr 421.552†	3443.8	3331.5	51.282	ug/L	51.282	ppb	00:09:54
1	Sc 361.383	1093413.2	1093413.2	103.07	%			00:11:12
1	Y 371.029	1162657.7	1162657.7	136.27	%			00:11:12
1	Ag 328.068†	-5735.1	-6203.1	2.2804	ug/L	2.2804	ppb	00:11:17
1	As 188.979†	-44.5	-6.3	26.695	ug/L	26.695	ppb	00:11:37
1	B 249.677†	756.7	1115.7	6.4721	ug/L	6.4721	ppb	00:11:17
1	Ba 233.527†	37108.6	35980.3	184.16	ug/L	184.16	ppb	00:11:17
1	Be 313.107†	1258.8	8537.5	6.9117	ug/L	6.9117	ppb	00:11:17
1	Cd 226.502†	948.8	1198.2	-0.6528	ug/L	-0.6528	ppb	00:11:37
1	Co 228.616†	1145.8	1202.2	9.9086	ug/L	9.9086	ppb	00:11:37
1	Cr 267.716†	30298.5	29425.7	252.42	ug/L	252.42	ppb	00:11:17
1	Cu 324.752†	19026.4	8269.0	25.143	ug/L	25.143	ppb	00:11:17
1	Mn 257.610†	2951429.4	2862793.1	2273.0	ug/L	2273.0	ppb	00:11:12
1	Mo 202.031†	166.7	130.0	10.832	ug/L	10.832	ppb	00:11:37
1	Ni 231.604†	7410.0	7041.3	112.85	ug/L	112.85	ppb	00:11:37
1	P 214.914†	2294.0	1888.8	607.77	ug/L	607.77	ppb	00:11:37
1	Pb 220.353†	698.2	706.6	50.817	ug/L	50.817	ppb	00:11:37
1	S 181.975 Axial†	141.6	69.6	53.298	ug/L	53.298	ppb	00:11:37
1	Sb 206.836†	97.1	48.8	-1.0082	ug/L	-1.0082	ppb	00:11:37
1	Se 196.026†	-869.4	-821.9	22.353	ug/L	22.353	ppb	00:11:37
1	Si 251.611†	487751.9	472680.5	9752.4	ug/L	9752.4	ppb	00:11:12
1	Sn 189.927†	24.2	18.0	3.4148	ug/L	3.4148	ppb	00:11:37
1	Ti 334.940†	1440927.3	1399166.8	1832.0	ug/L	1832.0	ppb	00:11:12
1	Tl 190.801†	-228.0	-159.8	-4.9351	ug/L	-4.9351	ppb	00:11:37
1	U 409.014†	-17692.6	-13331.5	-341.34	ug/L	-341.34	ppb	00:11:12
1	V 292.402†	10412.3	11755.3	52.874	ug/L	52.874	ppb	00:11:17
1	Zn 213.857†	82992.5	79401.0	433.69	ug/L	433.69	ppb	00:11:17
1	SiO2†	485139.2	470103.2	20770	ug/L	20770	ppb	00:12:45
2	Sc Radial	5666.4	5666.4	102	%			00:10:19
2	Y RADIAL	6564.8	6564.8	136.3	%			00:10:19
2	Al 396.153Radial†	31710.8	31234.4	28430	ug/L	28430	ppb	00:10:19
2	Ca 317.933Radial†	2062.3	2008.4	5002.7	ug/L	5002.7	ppb	00:10:39
2	Fe 238.204 Radial†	2412.0	2368.4	83086	ug/L	83086	ppb	00:10:39
2	K 766.490 Radial†	8843.1	7211.5	3164.6	ug/L	3164.6	ppb	00:10:19
2	Mg 279.077 IEC†	59.9	58.7	4574.9	ug/L	4574.9	ppb	00:10:39
2	Na 589.592 Radial†	195.7	362.6	980.52	ug/L	980.52	ppb	00:10:39
2	Sr 421.552†	3363.1	3297.3	50.754	ug/L	50.754	ppb	00:10:19
2	Sc 361.383	1088146.5	1088146.5	102.57	%			00:11:43
2	Y 371.029	1156211.5	1156211.5	135.51	%			00:11:43
2	Ag 328.068†	-5564.7	-6063.9	3.1757	ug/L	3.1757	ppb	00:11:48
2	As 188.979†	-43.0	-5.0	27.233	ug/L	27.233	ppb	00:12:08
2	B 249.677†	761.4	1123.8	6.4547	ug/L	6.4547	ppb	00:11:48
2	Ba 233.527†	36654.0	35711.3	182.83	ug/L	182.83	ppb	00:11:48
2	Be 313.107†	1316.5	8599.7	6.9365	ug/L	6.9365	ppb	00:11:48
2	Cd 226.502†	930.4	1184.7	-0.8821	ug/L	-0.8821	ppb	00:12:08
2	Co 228.616†	1128.1	1190.3	9.7431	ug/L	9.7431	ppb	00:12:08
2	Cr 267.716†	29786.5	29068.8	249.40	ug/L	249.40	ppb	00:11:48
2	Cu 324.752†	18683.9	8024.5	24.602	ug/L	24.602	ppb	00:11:48
2	Mn 257.610†	2939644.4	2865163.5	2275.0	ug/L	2275.0	ppb	00:11:43
2	Mo 202.031†	189.8	153.3	11.839	ug/L	11.839	ppb	00:12:08
2	Ni 231.604†	7404.0	7070.2	113.31	ug/L	113.31	ppb	00:12:08

2	P 214.914†	2282.7	1888.5	606.88	ug/L	606.88 ppb	00:12:08
2	Pb 220.353†	691.2	703.0	50.427	ug/L	50.427 ppb	00:12:08
2	S 181.975 Axial†	138.2	66.9	51.003	ug/L	51.003 ppb	00:12:08
2	Sb 206.836†	105.9	57.9	0.8908	ug/L	0.8908 ppb	00:12:08
2	Se 196.026†	-867.5	-824.1	25.444	ug/L	25.444 ppb	00:12:08
2	Si 251.611†	485584.3	472857.7	9756.1	ug/L	9756.1 ppb	00:11:43
2	Sn 189.927†	32.4	26.1	4.2885	ug/L	4.2885 ppb	00:12:08
2	Ti 334.940†	1435847.6	1400981.1	1834.4	ug/L	1834.4 ppb	00:11:43
2	Tl 190.801†	-241.9	-174.4	-7.3685	ug/L	-7.3685 ppb	00:12:08
2	U 409.014†	-17459.1	-13186.9	-337.88	ug/L	-337.88 ppb	00:11:43
2	V 292.402†	10296.4	11691.2	52.380	ug/L	52.380 ppb	00:11:48
2	Zn 213.857†	81704.5	78535.0	428.73	ug/L	428.73 ppb	00:11:48
2	SiO2†	491567.3	478648.5	21147	ug/L	21147 ppb	00:12:50
3	Sc Radial	5749.0	5749.0	103	%		00:10:44
3	Y RADIAL	6676.3	6676.3	138.6	%		00:10:44
3	Al 396.153Radial†	32155.8	31217.7	28415	ug/L	28415 ppb	00:10:44
3	Ca 317.933Radial†	2068.0	1984.8	4943.9	ug/L	4943.9 ppb	00:11:04
3	Fe 238.204 Radial†	2417.4	2339.6	82079	ug/L	82079 ppb	00:11:04
3	K 766.490 Radial†	8966.7	7206.3	3161.6	ug/L	3161.6 ppb	00:10:44
3	Mg 279.077 IEC†	60.3	58.2	4537.8	ug/L	4537.8 ppb	00:11:04
3	Na 589.592 Radial†	200.5	364.5	985.49	ug/L	985.49 ppb	00:11:04
3	Sr 421.552†	3394.7	3280.4	50.494	ug/L	50.494 ppb	00:10:44
3	Sc 361.383	1087254.5	1087254.5	102.49	%		00:12:14
3	Y 371.029	1155965.3	1155965.3	135.48	%		00:12:14
3	Ag 328.068†	-5634.7	-6136.6	2.5634	ug/L	2.5634 ppb	00:12:19
3	As 188.979†	-42.7	-4.8	27.070	ug/L	27.070 ppb	00:12:39
3	B 249.677†	682.3	1047.3	5.3964	ug/L	5.3964 ppb	00:12:19
3	Ba 233.527†	36502.1	35592.5	182.20	ug/L	182.20 ppb	00:12:19
3	Be 313.107†	1264.4	8549.9	6.9137	ug/L	6.9137 ppb	00:12:19
3	Cd 226.502†	955.1	1209.6	-0.5775	ug/L	-0.5775 ppb	00:12:39
3	Co 228.616†	1121.9	1185.1	9.6975	ug/L	9.6975 ppb	00:12:39
3	Cr 267.716†	29862.6	29166.9	250.21	ug/L	250.21 ppb	00:12:19
3	Cu 324.752†	18593.6	7951.3	24.363	ug/L	24.363 ppb	00:12:19
3	Mn 257.610†	2931243.0	2859317.2	2270.3	ug/L	2270.3 ppb	00:12:14
3	Mo 202.031†	175.5	139.5	11.217	ug/L	11.217 ppb	00:12:39
3	Ni 231.604†	7360.2	7033.4	112.72	ug/L	112.72 ppb	00:12:39
3	P 214.914†	2307.6	1914.7	616.95	ug/L	616.95 ppb	00:12:39
3	Pb 220.353†	689.0	701.4	50.398	ug/L	50.398 ppb	00:12:39
3	S 181.975 Axial†	140.1	68.9	52.696	ug/L	52.696 ppb	00:12:39
3	Sb 206.836†	99.3	51.5	-0.4058	ug/L	-0.4058 ppb	00:12:39
3	Se 196.026†	-873.6	-830.8	19.743	ug/L	19.743 ppb	00:12:39
3	Si 251.611†	483170.6	470891.0	9715.5	ug/L	9715.5 ppb	00:12:14
3	Sn 189.927†	27.0	20.9	3.7193	ug/L	3.7193 ppb	00:12:39
3	Ti 334.940†	1432195.4	1398566.0	1831.2	ug/L	1831.2 ppb	00:12:14
3	Tl 190.801†	-240.9	-173.7	-7.2870	ug/L	-7.2870 ppb	00:12:39
3	U 409.014†	-17422.6	-13165.3	-337.22	ug/L	-337.22 ppb	00:12:14
3	V 292.402†	10259.1	11663.1	52.354	ug/L	52.354 ppb	00:12:19
3	Zn 213.857†	81463.0	78364.6	427.90	ug/L	427.90 ppb	00:12:19
3	SiO2†	485691.1	473308.0	20911	ug/L	20911 ppb	00:12:56

Mean Data: 232754002|882348|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1089604.7	102.71	%	0.314				0.31%
Sc Radial	5719.5	103	%	0.8				0.81%
Y 371.029	1158278.1	135.75	%	0.445				0.33%
Y RADIAL	6640.6	137.9	%	1.36				0.99%
Ag 328.068†	-6134.5	2.6732	ug/L	0.45765	2.6732	ppb	0.45765	17.12%
Al 396.153Radial†	31267.3	28460	ug/L	65.5	28460	ppb	65.5	0.23%
As 188.979†	-5.4	26.999	ug/L	0.2760	26.999	ppb	0.2760	1.02%
B 249.677†	1095.6	6.1077	ug/L	0.61613	6.1077	ppb	0.61613	10.09%
Ba 233.527†	35761.4	183.06	ug/L	1.003	183.06	ppb	1.003	0.55%
Be 313.107†	8562.4	6.9206	ug/L	0.01381	6.9206	ppb	0.01381	0.20%
Ca 317.933Radial†	1990.7	4958.5	ug/L	38.95	4958.5	ppb	38.95	0.79%
Cd 226.502†	1197.5	-0.7041	ug/L	0.15865	-0.7041	ppb	0.15865	22.53%
Co 228.616†	1192.5	9.7831	ug/L	0.11109	9.7831	ppb	0.11109	1.14%
Cr 267.716†	29220.5	250.68	ug/L	1.563	250.68	ppb	1.563	0.62%
Cu 324.752†	8081.6	24.703	ug/L	0.3992	24.703	ppb	0.3992	1.62%
Fe 238.204 Radial†	2348.5	82388	ug/L	606.4	82388	ppb	606.4	0.74%
K 766.490 Radial†	7253.2	3182.2	ug/L	33.06	3182.2	ppb	33.06	1.04%

Mg 279.077 IEC†	58.2	4542.1	ug/L	30.88	4542.1	ppb	30.88	0.68%
Mn 257.610†	2862424.6	2272.8	ug/L	2.38	2272.8	ppb	2.38	0.10%
Mo 202.031†	140.9	11.296	ug/L	0.5080	11.296	ppb	0.5080	4.50%
Na 589.592 Radial†	360.0	973.51	ug/L	16.623	973.51	ppb	16.623	1.71%
Ni 231.604†	7048.3	112.96	ug/L	0.311	112.96	ppb	0.311	0.28%
P 214.914†	1897.3	610.53	ug/L	5.572	610.53	ppb	5.572	0.91%
Pb 220.353†	703.6	50.547	ug/L	0.2341	50.547	ppb	0.2341	0.46%
S 181.975 Axial†	68.4	52.332	ug/L	1.1898	52.332	ppb	1.1898	2.27%
Sb 206.836†	52.7	-0.1744	ug/L	0.97044	-0.1744	ppb	0.97044	556.36%
Se 196.026†	-825.6	22.513	ug/L	2.8541	22.513	ppb	2.8541	12.68%
Si 251.611†	472143.0	9741.4	ug/L	22.44	9741.4	ppb	22.44	0.23%
Sn 189.927†	21.7	3.8075	ug/L	0.44350	3.8075	ppb	0.44350	11.65%
Sr 421.552†	3303.1	50.843	ug/L	0.4012	50.843	ppb	0.4012	0.79%
Ti 334.940†	1399571.3	1832.5	ug/L	1.65	1832.5	ppb	1.65	0.09%
Tl 190.801†	-169.3	-6.5302	ug/L	1.38200	-6.5302	ppb	1.38200	21.16%
U 409.014†	-13227.9	-338.81	ug/L	2.212	-338.81	ppb	2.212	0.65%
V 292.402†	11703.2	52.536	ug/L	0.2928	52.536	ppb	0.2928	0.56%
Zn 213.857†	78766.9	430.11	ug/L	3.132	430.11	ppb	3.132	0.73%
SiO2†	474019.9	20943	ug/L	190.7	20943	ppb	190.7	0.91%

Sequence No.: 91
Sample ID: 232754003|882348|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 108
Date Collected: 7/9/2009 00:15:07
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 232754003|882348|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5695.6	5695.6	102	%			00:17:01
1	Y RADIAL	6868.7	6868.7	142.6	%			00:17:01
1	Al 396.153Radial†	16300.3	16018.2	14580	ug/L	14580	ppb	00:17:01
1	Ca 317.933Radial†	1023.5	983.0	2448.6	ug/L	2448.6	ppb	00:17:21
1	Fe 238.204 Radial†	2263.4	2211.1	77569	ug/L	77569	ppb	00:17:21
1	K 766.490 Radial†	6332.7	4714.2	2057.9	ug/L	2057.9	ppb	00:17:01
1	Mg 279.077 IEC†	21.9	21.3	1617.1	ug/L	1617.1	ppb	00:17:21
1	Na 589.592 Radial†	280.7	444.6	1202.2	ug/L	1202.2	ppb	00:17:21
1	Sr 421.552†	1588.6	1546.6	23.806	ug/L	23.806	ppb	00:17:01
1	Sc 361.383	1086946.2	1086946.2	102.46	%			00:18:19
1	Y 371.029	1211881.7	1211881.7	142.04	%			00:18:19
1	Ag 328.068†	-5131.5	-5647.0	3.0603	ug/L	3.0603	ppb	00:18:24
1	As 188.979†	-52.3	-14.2	25.307	ug/L	25.307	ppb	00:18:44
1	B 249.677†	574.7	942.4	4.3642	ug/L	4.3642	ppb	00:18:24
1	Ba 233.527†	35925.5	35039.8	179.28	ug/L	179.28	ppb	00:18:24
1	Be 313.107†	-10229.9	-2668.4	3.9181	ug/L	3.9181	ppb	00:18:24
1	Cd 226.502†	885.5	1141.9	-0.5712	ug/L	-0.5712	ppb	00:18:44
1	Co 228.616†	981.6	1048.5	7.6402	ug/L	7.6402	ppb	00:18:44
1	Cr 267.716†	20775.4	20305.9	174.65	ug/L	174.65	ppb	00:18:24
1	Cu 324.752†	16959.6	6361.7	20.181	ug/L	20.181	ppb	00:18:24
1	Mn 257.610†	4869911.2	4752309.6	3765.7	ug/L	3765.7	ppb	00:18:19
1	Mo 202.031†	195.5	159.1	11.691	ug/L	11.691	ppb	00:18:44
1	Ni 231.604†	5347.3	5070.8	81.265	ug/L	81.265	ppb	00:18:44
1	P 214.914†	2112.1	1724.5	549.35	ug/L	549.35	ppb	00:18:44
1	Pb 220.353†	862.6	871.0	60.844	ug/L	60.844	ppb	00:18:44
1	S 181.975 Axial†	154.3	82.7	67.163	ug/L	67.163	ppb	00:18:44
1	Sb 206.836†	80.9	33.6	-2.2036	ug/L	-2.2036	ppb	00:18:44
1	Se 196.026†	-805.7	-764.8	24.604	ug/L	24.604	ppb	00:18:44
1	Si 251.611†	342922.7	334139.8	6894.1	ug/L	6894.1	ppb	00:18:24
1	Sn 189.927†	54.8	48.0	6.4179	ug/L	6.4179	ppb	00:18:44
1	Ti 334.940†	1597653.8	1560453.3	2043.0	ug/L	2043.0	ppb	00:18:19
1	Tl 190.801†	-275.8	-207.8	-3.3026	ug/L	-3.3026	ppb	00:18:44
1	U 409.014†	-17579.5	-13323.3	-340.44	ug/L	-340.44	ppb	00:18:19
1	V 292.402†	8813.4	10254.8	44.732	ug/L	44.732	ppb	00:18:24
1	Zn 213.857†	88431.2	85188.3	466.80	ug/L	466.80	ppb	00:18:24
1	SiO2†	347756.5	338815.3	14969	ug/L	14969	ppb	00:19:53
2	Sc Radial	5577.5	5577.5	100	%			00:17:26
2	Y RADIAL	6759.3	6759.3	140.4	%			00:17:26
2	Al 396.153Radial†	16042.0	16097.6	14652	ug/L	14652	ppb	00:17:26
2	Ca 317.933Radial†	1019.3	1000.0	2490.9	ug/L	2490.9	ppb	00:17:46
2	Fe 238.204 Radial†	2235.2	2229.8	78223	ug/L	78223	ppb	00:17:46
2	K 766.490 Radial†	6292.9	4805.4	2098.0	ug/L	2098.0	ppb	00:17:26
2	Mg 279.077 IEC†	22.7	22.5	1712.3	ug/L	1712.3	ppb	00:17:46
2	Na 589.592 Radial†	265.0	434.8	1175.7	ug/L	1175.7	ppb	00:17:46
2	Sr 421.552†	1535.0	1526.0	23.487	ug/L	23.487	ppb	00:17:26
2	Sc 361.383	1083181.8	1083181.8	102.10	%			00:18:50
2	Y 371.029	1210185.3	1210185.3	141.84	%			00:18:50
2	Ag 328.068†	-5064.6	-5599.0	3.4568	ug/L	3.4568	ppb	00:18:56
2	As 188.979†	-53.8	-15.8	25.043	ug/L	25.043	ppb	00:19:16
2	B 249.677†	583.1	952.6	4.4361	ug/L	4.4361	ppb	00:18:56
2	Ba 233.527†	35767.0	35006.3	179.13	ug/L	179.13	ppb	00:18:56
2	Be 313.107†	-10507.8	-2975.3	3.8202	ug/L	3.8202	ppb	00:18:56
2	Cd 226.502†	877.6	1137.2	-0.6838	ug/L	-0.6838	ppb	00:19:16
2	Co 228.616†	977.6	1047.9	7.6246	ug/L	7.6246	ppb	00:19:16
2	Cr 267.716†	20760.5	20361.7	175.13	ug/L	175.13	ppb	00:18:56
2	Cu 324.752†	16892.8	6353.8	20.199	ug/L	20.199	ppb	00:18:56
2	Mn 257.610†	4847169.0	4746554.4	3761.3	ug/L	3761.3	ppb	00:18:50
2	Mo 202.031†	190.1	154.4	11.548	ug/L	11.548	ppb	00:19:16
2	Ni 231.604†	5311.4	5053.8	80.993	ug/L	80.993	ppb	00:19:16

2	P 214.914†	2090.8	1710.9	544.05	ug/L	544.05 ppb	00:19:16
2	Pb 220.353†	849.1	860.7	60.023	ug/L	60.023 ppb	00:19:16
2	S 181.975 Axial†	144.3	73.5	59.326	ug/L	59.326 ppb	00:19:16
2	Sb 206.836†	85.7	38.5	-1.2276	ug/L	-1.2276 ppb	00:19:16
2	Se 196.026†	-799.1	-761.0	28.131	ug/L	28.131 ppb	00:19:16
2	Si 251.611†	342143.0	334539.3	6902.3	ug/L	6902.3 ppb	00:18:56
2	Sn 189.927†	64.8	57.9	7.4631	ug/L	7.4631 ppb	00:19:16
2	Ti 334.940†	1591311.5	1559660.7	2041.9	ug/L	2041.9 ppb	00:18:50
2	Tl 190.801†	-307.5	-239.8	-8.7412	ug/L	-8.7412 ppb	00:19:16
2	U 409.014†	-17383.8	-13191.2	-337.24	ug/L	-337.24 ppb	00:18:50
2	V 292.402†	8748.9	10221.5	44.460	ug/L	44.460 ppb	00:18:56
2	Zn 213.857†	88169.0	85231.5	466.97	ug/L	466.97 ppb	00:18:56
2	SiO2†	349718.5	341916.6	15106	ug/L	15106 ppb	00:19:58
3	Sc Radial	5600.7	5600.7	101	%		00:17:51
3	Y RADIAL	6780.9	6780.9	140.8	%		00:17:51
3	Al 396.153Radial†	16161.6	16150.4	14700	ug/L	14700 ppb	00:17:51
3	Ca 317.933Radial†	1008.6	985.2	2453.9	ug/L	2453.9 ppb	00:18:11
3	Fe 238.204 Radial†	2219.1	2204.5	77338	ug/L	77338 ppb	00:18:11
3	K 766.490 Radial†	6301.4	4788.0	2089.7	ug/L	2089.7 ppb	00:17:51
3	Mg 279.077 IEC†	19.5	19.2	1454.1	ug/L	1454.1 ppb	00:18:11
3	Na 589.592 Radial†	268.3	437.0	1181.6	ug/L	1181.6 ppb	00:18:11
3	Sr 421.552†	1537.5	1522.2	23.429	ug/L	23.429 ppb	00:17:51
3	Sc 361.383	1076154.6	1076154.6	101.44	%		00:19:22
3	Y 371.029	1201121.6	1201121.6	140.78	%		00:19:22
3	Ag 328.068†	-5100.2	-5666.4	2.9114	ug/L	2.9114 ppb	00:19:27
3	As 188.979†	-50.6	-12.9	25.546	ug/L	25.546 ppb	00:19:47
3	B 249.677†	520.9	895.1	3.6565	ug/L	3.6565 ppb	00:19:27
3	Ba 233.527†	36013.1	35477.8	181.49	ug/L	181.49 ppb	00:19:27
3	Be 313.107†	-10328.1	-2865.3	3.8561	ug/L	3.8561 ppb	00:19:27
3	Cd 226.502†	889.1	1154.1	-0.4518	ug/L	-0.4518 ppb	00:19:47
3	Co 228.616†	979.5	1056.0	7.7365	ug/L	7.7365 ppb	00:19:47
3	Cr 267.716†	20814.4	20547.7	176.70	ug/L	176.70 ppb	00:19:27
3	Cu 324.752†	16744.9	6316.0	20.055	ug/L	20.055 ppb	00:19:27
3	Mn 257.610†	4828427.0	4759078.1	3771.0	ug/L	3771.0 ppb	00:19:22
3	Mo 202.031†	186.7	152.3	11.403	ug/L	11.403 ppb	00:19:47
3	Ni 231.604†	5344.2	5120.1	82.055	ug/L	82.055 ppb	00:19:47
3	P 214.914†	2141.8	1774.5	567.28	ug/L	567.28 ppb	00:19:47
3	Pb 220.353†	848.0	865.1	60.444	ug/L	60.444 ppb	00:19:47
3	S 181.975 Axial†	154.2	84.1	68.325	ug/L	68.325 ppb	00:19:47
3	Sb 206.836†	90.3	43.6	-0.2953	ug/L	-0.2953 ppb	00:19:47
3	Se 196.026†	-814.8	-781.7	18.318	ug/L	18.318 ppb	00:19:47
3	Si 251.611†	343253.1	337821.8	6970.0	ug/L	6970.0 ppb	00:19:27
3	Sn 189.927†	58.2	51.9	6.8144	ug/L	6.8144 ppb	00:19:47
3	Ti 334.940†	1581544.8	1560209.8	2042.7	ug/L	2042.7 ppb	00:19:22
3	Tl 190.801†	-296.8	-231.2	-7.2262	ug/L	-7.2262 ppb	00:19:47
3	U 409.014†	-17467.9	-13385.2	-341.95	ug/L	-341.95 ppb	00:19:22
3	V 292.402†	8755.9	10284.5	44.922	ug/L	44.922 ppb	00:19:27
3	Zn 213.857†	88220.4	85846.0	470.50	ug/L	470.50 ppb	00:19:27
3	SiO2†	348302.4	342757.2	15143	ug/L	15143 ppb	00:20:03

Mean Data: 232754003|882348|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1082094.2	102.00	%	0.516				0.51%
Sc Radial	5624.6	101	%	1.1				1.11%
Y 371.029	1207729.5	141.55	%	0.678				0.48%
Y RADIAL	6803.0	141.3	%	1.20				0.85%
Ag 328.068†	-5637.4	3.1428	ug/L	0.28189	3.1428	ppb	0.28189	8.97%
Al 396.153Radial†	16088.8	14644	ug/L	60.6	14644	ppb	60.6	0.41%
As 188.979†	-14.3	25.299	ug/L	0.2517	25.299	ppb	0.2517	0.99%
B 249.677†	930.0	4.1522	ug/L	0.43086	4.1522	ppb	0.43086	10.38%
Ba 233.527†	35174.6	179.97	ug/L	1.324	179.97	ppb	1.324	0.74%
Be 313.107†	-2836.3	3.8648	ug/L	0.04950	3.8648	ppb	0.04950	1.28%
Ca 317.933Radial†	989.4	2464.5	ug/L	23.08	2464.5	ppb	23.08	0.94%
Cd 226.502†	1144.4	-0.5689	ug/L	0.11605	-0.5689	ppb	0.11605	20.40%
Co 228.616†	1050.8	7.6671	ug/L	0.06060	7.6671	ppb	0.06060	0.79%
Cr 267.716†	20405.1	175.49	ug/L	1.074	175.49	ppb	1.074	0.61%
Cu 324.752†	6343.8	20.145	ug/L	0.0785	20.145	ppb	0.0785	0.39%
Fe 238.204 Radial†	2215.1	77710	ug/L	459.1	77710	ppb	459.1	0.59%
K 766.490 Radial†	4769.2	2081.9	ug/L	21.18	2081.9	ppb	21.18	1.02%

Mg 279.077 IEC†	21.0	1594.5	ug/L	130.58	1594.5	ppb	130.58	8.19%
Mn 257.610†	4752647.4	3766.0	ug/L	4.90	3766.0	ppb	4.90	0.13%
Mo 202.031†	155.2	11.547	ug/L	0.1440	11.547	ppb	0.1440	1.25%
Na 589.592 Radial†	438.8	1186.5	ug/L	13.91	1186.5	ppb	13.91	1.17%
Ni 231.604†	5081.6	81.437	ug/L	0.5518	81.437	ppb	0.5518	0.68%
P 214.914†	1736.6	553.56	ug/L	12.171	553.56	ppb	12.171	2.20%
Pb 220.353†	865.6	60.437	ug/L	0.4103	60.437	ppb	0.4103	0.68%
S 181.975 Axial†	80.1	64.938	ug/L	4.8944	64.938	ppb	4.8944	7.54%
Sb 206.836†	38.6	-1.2421	ug/L	0.95422	-1.2421	ppb	0.95422	76.82%
Se 196.026†	-769.2	23.684	ug/L	4.9707	23.684	ppb	4.9707	20.99%
Si 251.611†	335500.3	6922.1	ug/L	41.69	6922.1	ppb	41.69	0.60%
Sn 189.927†	52.6	6.8984	ug/L	0.52763	6.8984	ppb	0.52763	7.65%
Sr 421.552†	1531.6	23.574	ug/L	0.2026	23.574	ppb	0.2026	0.86%
Ti 334.940†	1560108.0	2042.5	ug/L	0.53	2042.5	ppb	0.53	0.03%
Tl 190.801†	-226.3	-6.4233	ug/L	2.80681	-6.4233	ppb	2.80681	43.70%
U 409.014†	-13299.9	-339.88	ug/L	2.404	-339.88	ppb	2.404	0.71%
V 292.402†	10253.6	44.705	ug/L	0.2320	44.705	ppb	0.2320	0.52%
Zn 213.857†	85421.9	468.09	ug/L	2.089	468.09	ppb	2.089	0.45%
SiO2†	341163.0	15073	ug/L	91.7	15073	ppb	91.7	0.61%

Sequence No.: 92
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/9/2009 00:22:15
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5380.9	5380.9	96.7	%			00:24:07
1	Y RADIAL	4647.9	4647.9	96.52	%			00:24:07
1	Al 396.153Radial†	5318.2	5592.2	5068.4	ug/L	5068.4	ppb	00:24:07
1	Ca 317.933Radial†	2010.7	2062.5	5137.2	ug/L	5137.2	ppb	00:24:27
1	Fe 238.204 Radial†	142.0	146.6	5157.3	ug/L	5157.3	ppb	00:24:27
1	K 766.490 Radial†	13239.3	12218.8	5295.8	ug/L	5295.8	ppb	00:24:07
1	Mg 279.077 IEC†	64.5	66.5	5273.0	ug/L	5273.0	ppb	00:24:27
1	Na 589.592 Radial†	3303.0	3586.3	9697.0	ug/L	9697.0	ppb	00:24:07
1	Sr 421.552†	32303.9	33402.7	514.57	ug/L	514.57	ppb	00:24:07
1	Sc 361.383	1062634.8	1062634.8	100.17	%			00:25:26
1	Y 371.029	845808.8	845808.8	99.132	%			00:25:26
1	Ag 328.068†	129420.4	128568.4	512.07	ug/L	512.07	ppb	00:25:26
1	As 188.979†	2095.4	2128.8	502.97	ug/L	502.97	ppb	00:25:46
1	B 249.677†	31472.1	31801.7	493.70	ug/L	493.70	ppb	00:25:26
1	Ba 233.527†	99400.4	99212.2	503.41	ug/L	503.41	ppb	00:25:26
1	Be 313.107†	1612794.5	1617451.4	504.10	ug/L	504.10	ppb	00:25:26
1	Cd 226.502†	66999.1	67166.3	502.07	ug/L	502.07	ppb	00:25:26
1	Co 228.616†	39438.8	39464.2	491.78	ug/L	491.78	ppb	00:25:46
1	Cr 267.716†	58897.6	58829.1	501.76	ug/L	501.76	ppb	00:25:26
1	Cu 324.752†	215012.7	204466.9	504.77	ug/L	504.77	ppb	00:25:26
1	Mn 257.610†	637040.6	635163.1	502.52	ug/L	502.52	ppb	00:25:26
1	Mo 202.031†	12814.1	12761.2	511.15	ug/L	511.15	ppb	00:25:46
1	Ni 231.604†	31170.3	30970.6	496.07	ug/L	496.07	ppb	00:25:46
1	P 214.914†	7439.4	7090.2	2429.2	ug/L	2429.2	ppb	00:25:46
1	Pb 220.353†	6734.4	6752.4	507.56	ug/L	507.56	ppb	00:25:46
1	S 181.975 Axial†	1267.2	1197.2	1012.4	ug/L	1012.4	ppb	00:25:46
1	Sb 206.836†	2586.3	2536.6	505.02	ug/L	505.02	ppb	00:25:46
1	Se 196.026†	1506.3	1525.5	516.07	ug/L	516.07	ppb	00:25:46
1	Si 251.611†	125244.5	124477.9	2556.3	ug/L	2556.3	ppb	00:25:26
1	Sn 189.927†	4845.8	4832.3	503.07	ug/L	503.07	ppb	00:25:46
1	Ti 334.940†	386710.2	387181.8	506.79	ug/L	506.79	ppb	00:25:26
1	Tl 190.801†	2912.3	2968.8	502.76	ug/L	502.76	ppb	00:25:46
1	U 409.014†	16007.5	19815.8	490.07	ug/L	490.07	ppb	00:25:26
1	V 292.402†	86629.3	88139.3	505.98	ug/L	505.98	ppb	00:25:26
1	Zn 213.857†	91277.8	90004.8	497.96	ug/L	497.96	ppb	00:25:26
1	SiO2†	123754.8	122948.4	5406.0	ug/L	5406.0	ppb	00:26:47
2	Sc Radial	5519.7	5519.7	99.2	%			00:24:32
2	Y RADIAL	4790.5	4790.5	99.48	%			00:24:32
2	Al 396.153Radial†	5384.9	5521.1	5003.6	ug/L	5003.6	ppb	00:24:32
2	Ca 317.933Radial†	1994.5	1993.8	4966.3	ug/L	4966.3	ppb	00:24:52
2	Fe 238.204 Radial†	139.7	140.5	4943.0	ug/L	4943.0	ppb	00:24:52
2	K 766.490 Radial†	13358.4	11994.5	5198.4	ug/L	5198.4	ppb	00:24:32
2	Mg 279.077 IEC†	63.8	64.1	5084.2	ug/L	5084.2	ppb	00:24:52
2	Na 589.592 Radial†	3379.9	3577.9	9674.3	ug/L	9674.3	ppb	00:24:32
2	Sr 421.552†	33044.0	33308.6	513.13	ug/L	513.13	ppb	00:24:32
2	Sc 361.383	1063285.6	1063285.6	100.23	%			00:25:54
2	Y 371.029	846116.1	846116.1	99.168	%			00:25:54
2	Ag 328.068†	129249.0	128318.3	511.01	ug/L	511.01	ppb	00:25:54
2	As 188.979†	2098.1	2130.2	503.26	ug/L	503.26	ppb	00:26:14
2	B 249.677†	31589.2	31899.3	495.25	ug/L	495.25	ppb	00:25:54
2	Ba 233.527†	99482.6	99233.4	503.51	ug/L	503.51	ppb	00:25:54
2	Be 313.107†	1616390.1	1620053.2	504.91	ug/L	504.91	ppb	00:25:54
2	Cd 226.502†	67134.5	67260.4	502.80	ug/L	502.80	ppb	00:25:54
2	Co 228.616†	39411.1	39412.5	491.14	ug/L	491.14	ppb	00:26:14
2	Cr 267.716†	58921.9	58817.3	501.66	ug/L	501.66	ppb	00:25:54
2	Cu 324.752†	215107.6	204430.1	504.67	ug/L	504.67	ppb	00:25:54
2	Mn 257.610†	638450.6	636180.6	503.30	ug/L	503.30	ppb	00:25:54
2	Mo 202.031†	12817.2	12756.5	510.94	ug/L	510.94	ppb	00:26:14
2	Ni 231.604†	31154.3	30935.6	495.51	ug/L	495.51	ppb	00:26:14

2	P 214.914†	7451.6	7097.8	2432.0 ug/L	2432.0 ppb	00:26:14
2	Pb 220.353†	6737.5	6751.4	507.49 ug/L	507.49 ppb	00:26:14
2	S 181.975 Axial†	1273.5	1202.8	1017.1 ug/L	1017.1 ppb	00:26:14
2	Sb 206.836†	2595.7	2544.5	506.53 ug/L	506.53 ppb	00:26:14
2	Se 196.026†	1521.9	1540.1	520.07 ug/L	520.07 ppb	00:26:14
2	Si 251.611†	125456.4	124612.8	2559.2 ug/L	2559.2 ppb	00:25:54
2	Sn 189.927†	4834.6	4818.2	501.59 ug/L	501.59 ppb	00:26:14
2	Ti 334.940†	387278.7	387512.7	507.22 ug/L	507.22 ppb	00:25:54
2	Tl 190.801†	2903.9	2958.7	501.05 ug/L	501.05 ppb	00:26:14
2	U 409.014†	15940.1	19738.8	488.18 ug/L	488.18 ppb	00:25:54
2	V 292.402†	86681.1	88138.0	505.99 ug/L	505.99 ppb	00:25:54
2	Zn 213.857†	91497.2	90168.0	498.91 ug/L	498.91 ppb	00:25:54
2	SiO2†	125545.8	124659.7	5481.7 ug/L	5481.7 ppb	00:26:52
3	Sc Radial	5507.0	5507.0	99.0 %		00:24:57
3	Y RADIAL	4808.2	4808.2	99.84 %		00:24:57
3	Al 396.153Radial†	5388.6	5537.3	5018.2 ug/L	5018.2 ppb	00:24:57
3	Ca 317.933Radial†	2007.5	2011.6	5010.5 ug/L	5010.5 ppb	00:25:17
3	Fe 238.204 Radial†	142.2	143.4	5045.2 ug/L	5045.2 ppb	00:25:17
3	K 766.490 Radial†	13325.2	11992.0	5197.3 ug/L	5197.3 ppb	00:24:57
3	Mg 279.077 IEC†	64.4	64.9	5143.1 ug/L	5143.1 ppb	00:25:17
3	Na 589.592 Radial†	3389.5	3595.5	9721.9 ug/L	9721.9 ppb	00:24:57
3	Sr 421.552†	32961.5	33302.0	513.02 ug/L	513.02 ppb	00:24:57
3	Sc 361.383	1060105.7	1060105.7	99.927 %		00:26:21
3	Y 371.029	842850.4	842850.4	98.785 %		00:26:21
3	Ag 328.068†	129393.5	128849.8	513.15 ug/L	513.15 ppb	00:26:21
3	As 188.979†	2120.3	2158.7	509.97 ug/L	509.97 ppb	00:26:41
3	B 249.677†	31513.6	31918.2	495.52 ug/L	495.52 ppb	00:26:21
3	Ba 233.527†	99308.1	99356.6	504.14 ug/L	504.14 ppb	00:26:21
3	Be 313.107†	1610189.1	1618685.3	504.49 ug/L	504.49 ppb	00:26:21
3	Cd 226.502†	67044.8	67371.5	503.62 ug/L	503.62 ppb	00:26:21
3	Co 228.616†	39657.4	39776.9	495.69 ug/L	495.69 ppb	00:26:41
3	Cr 267.716†	58930.3	59002.1	503.23 ug/L	503.23 ppb	00:26:21
3	Cu 324.752†	214612.5	204578.5	505.04 ug/L	505.04 ppb	00:26:21
3	Mn 257.610†	637720.8	637361.2	504.25 ug/L	504.25 ppb	00:26:21
3	Mo 202.031†	12898.6	12876.3	515.75 ug/L	515.75 ppb	00:26:41
3	Ni 231.604†	31311.5	31186.2	499.53 ug/L	499.53 ppb	00:26:41
3	P 214.914†	7487.7	7156.2	2452.6 ug/L	2452.6 ppb	00:26:41
3	Pb 220.353†	6773.0	6807.1	511.67 ug/L	511.67 ppb	00:26:41
3	S 181.975 Axial†	1291.5	1224.6	1035.6 ug/L	1035.6 ppb	00:26:41
3	Sb 206.836†	2610.7	2567.1	511.11 ug/L	511.11 ppb	00:26:41
3	Se 196.026†	1537.8	1560.5	527.09 ug/L	527.09 ppb	00:26:41
3	Si 251.611†	125108.1	124639.7	2559.6 ug/L	2559.6 ppb	00:26:21
3	Sn 189.927†	4852.0	4850.0	504.90 ug/L	504.90 ppb	00:26:41
3	Ti 334.940†	386617.9	388010.5	507.87 ug/L	507.87 ppb	00:26:21
3	Tl 190.801†	2927.4	2990.9	506.48 ug/L	506.48 ppb	00:26:41
3	U 409.014†	16116.4	19963.0	493.73 ug/L	493.73 ppb	00:26:21
3	V 292.402†	86571.9	88288.1	506.90 ug/L	506.90 ppb	00:26:21
3	Zn 213.857†	91430.9	90375.5	500.03 ug/L	500.03 ppb	00:26:21
3	SiO2†	125049.8	124539.1	5476.2 ug/L	5476.2 ppb	00:26:57

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1062008.7	100.11	%	0.158				0.16%
Sc Radial	5469.2	98.3	%	1.38				1.40%
Y 371.029	844925.1	99.028	%	0.2114				0.21%
Y RADIAL	4748.9	98.61	%	1.824				1.85%
Ag 328.068†	128578.8	512.08	ug/L	1.067	512.08	ppb	1.067	0.21%
QC value within limits for Ag 328.068 Recovery = 102.42%								
Al 396.153Radial†	5550.2	5030.1	ug/L	33.97	5030.1	ppb	33.97	0.68%
QC value within limits for Al 396.153Radial Recovery = 100.60%								
As 188.979†	2139.3	505.40	ug/L	3.958	505.40	ppb	3.958	0.78%
QC value within limits for As 188.979 Recovery = 101.08%								
B 249.677†	31873.1	494.82	ug/L	0.983	494.82	ppb	0.983	0.20%
QC value within limits for B 249.677 Recovery = 98.96%								
Ba 233.527†	99267.4	503.68	ug/L	0.395	503.68	ppb	0.395	0.08%
QC value within limits for Ba 233.527 Recovery = 100.74%								
Be 313.107†	1618730.0	504.50	ug/L	0.405	504.50	ppb	0.405	0.08%
QC value within limits for Be 313.107 Recovery = 100.90%								
Ca 317.933Radial†	2022.6	5038.0	ug/L	88.73	5038.0	ppb	88.73	1.76%

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   QC value within limits for Ca 317.933Radial  Recovery = 100.76%
Cd 226.502†            67266.1      502.83 ug/L         0.776      502.83 ppb          0.776   0.15%
   QC value within limits for Cd 226.502  Recovery = 100.57%
Co 228.616†            39551.2      492.87 ug/L         2.462      492.87 ppb          2.462   0.50%
   QC value within limits for Co 228.616  Recovery = 98.57%
Cr 267.716†            58882.8      502.22 ug/L         0.881      502.22 ppb          0.881   0.18%
   QC value within limits for Cr 267.716  Recovery = 100.44%
Cu 324.752†           204491.9      504.83 ug/L         0.192      504.83 ppb          0.192   0.04%
   QC value within limits for Cu 324.752  Recovery = 100.97%
Fe 238.204 Radial†       143.5      5048.5 ug/L        107.18      5048.5 ppb        107.18   2.12%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.97%
K 766.490 Radial†      12068.4      5230.5 ug/L         56.56      5230.5 ppb          56.56   1.08%
   QC value within limits for K 766.490 Radial  Recovery = 104.61%
Mg 279.077 IEC†           65.2      5166.7 ug/L         96.60      5166.7 ppb          96.60   1.87%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.33%
Mn 257.610†           636235.0      503.36 ug/L         0.864      503.36 ppb          0.864   0.17%
   QC value within limits for Mn 257.610  Recovery = 100.67%
Mo 202.031†            12798.0      512.61 ug/L         2.717      512.61 ppb          2.717   0.53%
   QC value within limits for Mo 202.031  Recovery = 102.52%
Na 589.592 Radial†      3586.6      9697.8 ug/L         23.78      9697.8 ppb          23.78   0.25%
   QC value within limits for Na 589.592 Radial  Recovery = 96.98%
Ni 231.604†            31030.8      497.04 ug/L         2.173      497.04 ppb          2.173   0.44%
   QC value within limits for Ni 231.604  Recovery = 99.41%
P 214.914†              7114.8      2437.9 ug/L         12.77      2437.9 ppb          12.77   0.52%
   QC value within limits for P 214.914  Recovery = 97.52%
Pb 220.353†             6770.3      508.91 ug/L         2.394      508.91 ppb          2.394   0.47%
   QC value within limits for Pb 220.353  Recovery = 101.78%
S 181.975 Axial†        1208.2      1021.7 ug/L         12.24      1021.7 ppb          12.24   1.20%
   QC value within limits for S 181.975 Axial  Recovery = 102.17%
Sb 206.836†             2549.4      507.55 ug/L         3.169      507.55 ppb          3.169   0.62%
   QC value within limits for Sb 206.836  Recovery = 101.51%
Se 196.026†             1542.0      521.08 ug/L         5.580      521.08 ppb          5.580   1.07%
   QC value within limits for Se 196.026  Recovery = 104.22%
Si 251.611†           124576.8      2558.4 ug/L          1.78      2558.4 ppb           1.78   0.07%
   QC value within limits for Si 251.611  Recovery = 102.33%
Sn 189.927†             4833.5      503.19 ug/L         1.661      503.19 ppb          1.661   0.33%
   QC value within limits for Sn 189.927  Recovery = 100.64%
Sr 421.552†            33337.8      513.57 ug/L         0.867      513.57 ppb          0.867   0.17%
   QC value within limits for Sr 421.552  Recovery = 102.71%
Ti 334.940†           387568.3      507.29 ug/L         0.541      507.29 ppb          0.541   0.11%
   QC value within limits for Ti 334.940  Recovery = 101.46%
Tl 190.801†             2972.8      503.43 ug/L         2.774      503.43 ppb          2.774   0.55%
   QC value within limits for Tl 190.801  Recovery = 100.69%
U 409.014†             19839.2      490.66 ug/L         2.821      490.66 ppb          2.821   0.57%
   QC value within limits for U 409.014  Recovery = 98.13%
V 292.402†             88188.5      506.29 ug/L         0.528      506.29 ppb          0.528   0.10%
   QC value within limits for V 292.402  Recovery = 101.26%
Zn 213.857†            90182.8      498.97 ug/L         1.033      498.97 ppb          1.033   0.21%
   QC value within limits for Zn 213.857  Recovery = 99.79%
SiO2†                 124049.1      5454.6 ug/L         42.20      5454.6 ppb          42.20   0.77%
   QC value within limits for SiO2  Recovery = 102.00%
All analyte(s) passed QC.
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Sequence No.: 93
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/9/2009 00:29:06
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5388.9	5388.9	96.8	%			00:30:59
1	Y RADIAL	4702.4	4702.4	97.65	%			00:30:59
1	Al 396.153Radial†	-76.3	13.4	12.223	ug/L	12.223	ppb	00:30:59
1	Ca 317.933Radial†	23.2	7.0	17.469	ug/L	17.469	ppb	00:31:19
1	Fe 238.204 Radial†	-0.9	-1.2	-42.688	ug/L	-42.688	ppb	00:31:19
1	K 766.490 Radial†	1451.0	25.3	10.939	ug/L	10.939	ppb	00:30:59
1	Mg 279.077 IEC†	1.1	0.9	74.737	ug/L	74.737	ppb	00:31:19
1	Na 589.592 Radial†	-171.7	-6.9	-18.650	ug/L	-18.650	ppb	00:31:19
1	Sr 421.552†	13.2	8.2	0.1255	ug/L	0.1255	ppb	00:31:19
1	Sc 361.383	1051370.9	1051370.9	99.103	%			00:32:16
1	Y 371.029	846278.3	846278.3	99.187	%			00:32:16
1	Ag 328.068†	640.6	7.8	0.0175	ug/L	0.0175	ppb	00:32:21
1	As 188.979†	-44.5	-8.0	-1.8986	ug/L	-1.8986	ppb	00:32:41
1	B 249.677†	-142.1	238.1	3.7170	ug/L	3.7170	ppb	00:32:21
1	Ba 233.527†	32.8	8.9	0.0430	ug/L	0.0430	ppb	00:32:41
1	Be 313.107†	-7347.8	-98.1	-0.0302	ug/L	-0.0302	ppb	00:32:21
1	Cd 226.502†	-286.6	-11.6	-0.0811	ug/L	-0.0811	ppb	00:32:41
1	Co 228.616†	-90.9	-1.3	-0.0150	ug/L	-0.0150	ppb	00:32:41
1	Cr 267.716†	12.4	41.1	0.3493	ug/L	0.3493	ppb	00:32:41
1	Cu 324.752†	10252.8	154.3	0.3782	ug/L	0.3782	ppb	00:32:21
1	Mn 257.610†	975.7	157.5	0.1175	ug/L	0.1175	ppb	00:32:41
1	Mo 202.031†	42.6	11.2	0.4442	ug/L	0.4442	ppb	00:32:41
1	Ni 231.604†	185.1	38.6	0.6181	ug/L	0.6181	ppb	00:32:41
1	P 214.914†	353.7	20.0	7.0288	ug/L	7.0288	ppb	00:32:41
1	Pb 220.353†	-17.1	11.9	0.8969	ug/L	0.8969	ppb	00:32:41
1	S 181.975 Axial†	57.2	-10.2	-8.6036	ug/L	-8.6036	ppb	00:32:41
1	Sb 206.836†	45.2	0.2	0.0227	ug/L	0.0227	ppb	00:32:41
1	Se 196.026†	-12.9	8.6	2.6367	ug/L	2.6367	ppb	00:32:41
1	Si 251.611†	1042.1	491.5	10.132	ug/L	10.132	ppb	00:32:41
1	Sn 189.927†	-1.0	-6.5	-0.6706	ug/L	-0.6706	ppb	00:32:41
1	Ti 334.940†	-1006.3	93.9	0.1251	ug/L	0.1251	ppb	00:32:21
1	Tl 190.801†	-55.6	5.2	0.8864	ug/L	0.8864	ppb	00:32:41
1	U 409.014†	-3906.1	-106.7	-2.6419	ug/L	-2.6419	ppb	00:32:16
1	V 292.402†	-1703.5	-66.2	-0.3679	ug/L	-0.3679	ppb	00:32:21
1	Zn 213.857†	1202.1	90.6	0.5033	ug/L	0.5033	ppb	00:32:41
1	SiO2†	1030.4	437.3	19.303	ug/L	19.303	ppb	00:33:47
2	Sc Radial	5460.8	5460.8	98.1	%			00:31:24
2	Y RADIAL	4736.7	4736.7	98.36	%			00:31:24
2	Al 396.153Radial†	-75.0	15.7	14.317	ug/L	14.317	ppb	00:31:24
2	Ca 317.933Radial†	25.2	8.8	21.841	ug/L	21.841	ppb	00:31:44
2	Fe 238.204 Radial†	0.5	0.1	5.1159	ug/L	5.1159	ppb	00:31:44
2	K 766.490 Radial†	1482.7	37.8	16.434	ug/L	16.434	ppb	00:31:24
2	Mg 279.077 IEC†	-0.0	-0.2	-17.471	ug/L	-17.471	ppb	00:31:44
2	Na 589.592 Radial†	-184.8	-17.9	-48.371	ug/L	-48.371	ppb	00:31:44
2	Sr 421.552†	1.8	-3.7	-0.0569	ug/L	-0.0569	ppb	00:31:44
2	Sc 361.383	1037157.2	1037157.2	97.764	%			00:32:46
2	Y 371.029	834431.9	834431.9	97.799	%			00:32:46
2	Ag 328.068†	639.8	15.8	0.0648	ug/L	0.0648	ppb	00:32:51
2	As 188.979†	-36.2	-0.2	-0.0415	ug/L	-0.0415	ppb	00:33:11
2	B 249.677†	-81.8	297.8	4.6407	ug/L	4.6407	ppb	00:32:51
2	Ba 233.527†	35.4	12.0	0.0596	ug/L	0.0596	ppb	00:33:11
2	Be 313.107†	-7462.2	-316.7	-0.0984	ug/L	-0.0984	ppb	00:32:51
2	Cd 226.502†	-300.8	-30.1	-0.2251	ug/L	-0.2251	ppb	00:33:11
2	Co 228.616†	-83.6	4.9	0.0619	ug/L	0.0619	ppb	00:33:11
2	Cr 267.716†	-54.0	-26.6	-0.2264	ug/L	-0.2264	ppb	00:33:11
2	Cu 324.752†	10314.9	359.6	0.8874	ug/L	0.8874	ppb	00:32:51
2	Mn 257.610†	986.6	182.1	0.1449	ug/L	0.1449	ppb	00:33:11
2	Mo 202.031†	40.5	9.6	0.3865	ug/L	0.3865	ppb	00:33:11
2	Ni 231.604†	172.5	28.2	0.4524	ug/L	0.4524	ppb	00:33:11

2	P 214.914†	335.8	6.5	2.1654 ug/L	2.1654 ppb	00:33:11
2	Pb 220.353†	-28.1	0.4	0.0304 ug/L	0.0304 ppb	00:33:11
2	S 181.975 Axial†	72.2	6.0	5.0728 ug/L	5.0728 ppb	00:33:11
2	Sb 206.836†	57.7	13.6	2.6810 ug/L	2.6810 ppb	00:33:11
2	Se 196.026†	-18.7	2.5	0.8404 ug/L	0.8404 ppb	00:33:11
2	Si 251.611†	1016.8	479.9	9.8905 ug/L	9.8905 ppb	00:33:11
2	Sn 189.927†	6.8	1.5	0.1592 ug/L	0.1592 ppb	00:33:11
2	Ti 334.940†	-1058.8	26.3	0.0373 ug/L	0.0373 ppb	00:32:51
2	Tl 190.801†	-50.5	9.8	1.6472 ug/L	1.6472 ppb	00:33:11
2	U 409.014†	-3874.2	-128.1	-3.1774 ug/L	-3.1774 ppb	00:32:46
2	V 292.402†	-1700.9	-87.0	-0.4956 ug/L	-0.4956 ppb	00:32:51
2	Zn 213.857†	1212.7	118.1	0.6551 ug/L	0.6551 ppb	00:33:11
2	SiO2†	1033.1	454.3	20.048 ug/L	20.048 ppb	00:33:52
3	Sc Radial	5388.6	5388.6	96.8 %		00:31:49
3	Y RADIAL	4709.5	4709.5	97.79 %		00:31:49
3	Al 396.153Radial†	-69.5	20.4	18.564 ug/L	18.564 ppb	00:31:49
3	Ca 317.933Radial†	23.9	7.8	19.347 ug/L	19.347 ppb	00:32:09
3	Fe 238.204 Radial†	0.4	0.0	1.4327 ug/L	1.4327 ppb	00:32:09
3	K 766.490 Radial†	1450.0	24.3	10.544 ug/L	10.544 ppb	00:31:49
3	Mg 279.077 IEC†	1.0	0.9	68.407 ug/L	68.407 ppb	00:32:09
3	Na 589.592 Radial†	-180.7	-16.2	-43.761 ug/L	-43.761 ppb	00:32:09
3	Sr 421.552†	0.5	-4.9	-0.0762 ug/L	-0.0762 ppb	00:32:09
3	Sc 361.383	1058565.1	1058565.1	99.782 %		00:33:16
3	Y 371.029	851137.4	851137.4	99.757 %		00:33:16
3	Ag 328.068†	667.6	30.5	0.1202 ug/L	0.1202 ppb	00:33:21
3	As 188.979†	-52.3	-15.5	-3.6434 ug/L	-3.6434 ppb	00:33:41
3	B 249.677†	-164.7	216.5	3.3739 ug/L	3.3739 ppb	00:33:21
3	Ba 233.527†	46.3	22.1	0.1124 ug/L	0.1124 ppb	00:33:41
3	Be 313.107†	-7407.3	-107.3	-0.0331 ug/L	-0.0331 ppb	00:33:21
3	Cd 226.502†	-283.3	-6.3	-0.0474 ug/L	-0.0474 ppb	00:33:41
3	Co 228.616†	-89.1	1.2	0.0156 ug/L	0.0156 ppb	00:33:41
3	Cr 267.716†	-18.8	9.8	0.0833 ug/L	0.0833 ppb	00:33:41
3	Cu 324.752†	10279.6	110.8	0.2736 ug/L	0.2736 ppb	00:33:21
3	Mn 257.610†	974.6	149.7	0.1172 ug/L	0.1172 ppb	00:33:41
3	Mo 202.031†	44.2	12.6	0.5027 ug/L	0.5027 ppb	00:33:41
3	Ni 231.604†	156.1	8.1	0.1305 ug/L	0.1305 ppb	00:33:41
3	P 214.914†	340.7	4.5	1.5475 ug/L	1.5475 ppb	00:33:41
3	Pb 220.353†	-14.2	14.9	1.1215 ug/L	1.1215 ppb	00:33:41
3	S 181.975 Axial†	69.9	2.2	1.8536 ug/L	1.8536 ppb	00:33:41
3	Sb 206.836†	42.8	-2.5	-0.4993 ug/L	-0.4993 ppb	00:33:41
3	Se 196.026†	-28.1	-6.6	-2.1259 ug/L	-2.1259 ppb	00:33:41
3	Si 251.611†	999.6	441.7	9.1035 ug/L	9.1035 ppb	00:33:41
3	Sn 189.927†	-0.2	-5.7	-0.5919 ug/L	-0.5919 ppb	00:33:41
3	Ti 334.940†	-1031.5	75.5	0.0994 ug/L	0.0994 ppb	00:33:21
3	Tl 190.801†	-57.6	3.7	0.6260 ug/L	0.6260 ppb	00:33:41
3	U 409.014†	-3755.9	70.6	1.7525 ug/L	1.7525 ppb	00:33:16
3	V 292.402†	-1616.2	33.1	0.1982 ug/L	0.1982 ppb	00:33:21
3	Zn 213.857†	1217.3	97.6	0.5413 ug/L	0.5413 ppb	00:33:41
3	SiO2†	1055.6	455.5	20.106 ug/L	20.106 ppb	00:33:57

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1049031.1	98.883	%	1.0269				1.04%
Sc Radial	5412.8	97.3	%	0.75				0.77%
Y 371.029	843949.2	98.914	%	1.0071				1.02%
Y RADIAL	4716.2	97.93	%	0.376				0.38%
Ag 328.068†	18.0	0.0675	ug/L	0.05141	0.0675	ppb	0.05141	76.15%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	16.5	15.035	ug/L	3.2305	15.035	ppb	3.2305	21.49%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-7.9	-1.8612	ug/L	1.80128	-1.8612	ppb	1.80128	96.78%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	250.8	3.9105	ug/L	0.65520	3.9105	ppb	0.65520	16.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	14.3	0.0717	ug/L	0.03626	0.0717	ppb	0.03626	50.58%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-174.0	-0.0539	ug/L	0.03856	-0.0539	ppb	0.03856	71.52%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	7.8	19.552	ug/L	2.1935	19.552	ppb	2.1935	11.22%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -16.0     -0.1179 ug/L       0.09442     -0.1179 ppb        0.09442  80.11%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                1.6      0.0209 ug/L       0.03869      0.0209 ppb        0.03869 185.47%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                8.1      0.0687 ug/L       0.28815      0.0687 ppb        0.28815 419.26%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              208.2      0.5131 ug/L       0.32840      0.5131 ppb        0.32840  64.01%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.3     -12.046 ug/L      26.5999     -12.046 ppb       26.5999 220.81%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         29.1      12.639 ug/L       3.2925      12.639 ppb        3.2925  26.05%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.5      41.891 ug/L      51.5061      41.891 ppb       51.5061 122.95%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              163.1      0.1265 ug/L       0.01594      0.1265 ppb        0.01594  12.60%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               11.1      0.4444 ug/L       0.05808      0.4444 ppb        0.05808  13.07%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -13.7     -36.927 ug/L      15.9956     -36.927 ppb       15.9956  43.32%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               25.0      0.4003 ug/L       0.24794      0.4003 ppb        0.24794  61.93%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                10.3      3.5806 ug/L       3.00220      3.5806 ppb        3.00220  83.85%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                9.0      0.6829 ug/L       0.57617      0.6829 ppb        0.57617  84.37%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.7     -0.5591 ug/L       7.15030     -0.5591 ppb        7.15030 >999.9%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                3.7      0.7348 ug/L       1.70552      0.7348 ppb        1.70552 232.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                1.5      0.4504 ug/L       2.40516      0.4504 ppb        2.40516 533.98%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              471.0      9.7085 ug/L       0.53765      9.7085 ppb        0.53765   5.54%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               -3.5     -0.3678 ug/L       0.45806     -0.3678 ppb        0.45806 124.55%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -0.2     -0.0025 ug/L       0.11128     -0.0025 ppb        0.11128 >999.9%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               65.2      0.0873 ug/L       0.04511      0.0873 ppb        0.04511  51.70%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                6.2      1.0532 ug/L       0.53067      1.0532 ppb        0.53067  50.39%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -54.7     -1.3556 ug/L       2.70499     -1.3556 ppb        2.70499 199.54%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -40.0     -0.2218 ug/L       0.36927     -0.2218 ppb        0.36927 166.50%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              102.1      0.5666 ug/L       0.07899      0.5666 ppb        0.07899  13.94%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    449.1      19.819 ug/L        0.4478      19.819 ppb         0.4478   2.26%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Monday, July 13, 2009 21:52:36
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090704\Sample.060
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 35
Current Dead Time (ns): 35
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	813.4	813.423	35.566	4.4
	Mg	24.0	13233.5	13233.528	231.778	1.8
	Co	58.9	16639.5	16639.489	380.771	2.3
	Rh	102.9	26958.8	26958.823	586.949	2.2
	In	114.9	28207.6	28207.626	441.465	1.6
	Pb	208.0	15069.1	15069.144	161.587	1.1
⌈>	Ba	137.9	23069.3	23069.340	298.488	1.3
⌊	Ba++	69.0	787.2	0.034	0.001	2.6
⌈>	Ce	139.9	31217.7	31217.679	499.349	1.6
⌊	CeO	155.9	652.0	0.021	0.000	1.8
	Bkgd	220.0	2.5	2.500	0.612	24.5

Current Optimization File Data

Current Value	Description
0.89	Nebulizer Gas Flow
6.50	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	9.0	2062.8
Co	59	25	10.3	23764.8
In	115	25	11.8	35194.3

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	585	2080	0.631
Be	9.0	9.1	2051	2080	0.639
Mg	24.0	24.0	5690	2120	0.584
Mg	25.0	24.9	5912	2080	0.665
Mg	26.0	25.9	6145	2120	0.658
Co	58.9	58.9	14169	2170	0.632
Rh	102.9	103.0	24867	2230	0.697
In	114.9	115.0	27803	2260	0.687
Ce	139.9	140.0	33869	2280	0.763
Pb	206.0	206.0	49936	2420	0.663
Pb	207.0	206.9	50183	2385	0.775
Pb	208.0	208.0	50427	2430	0.720
U	238.1	238.0	57732	2470	0.709

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 07:56:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Blank.103

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		103	
	Be	9		ug/L		4	
	B	11		ug/L		1141	
	Na	23		ug/L		38720	
	Mg	24		ug/L		1000	
	Al	27		ug/L		1333	
	P	31		ug/L		3269	
	K	39		ug/L		266486	
	Ca	43		ug/L		199	
>	Sc	45		ug/L		644372	
	V	51		ug/L		3401	
	Cr	52		ug/L		1089	
	Cr	53		ug/L		35271	
	Mn	55		ug/L		549	
	Fe	57		ug/L		2043	
	Co	59		ug/L		115	
	Ni	60		ug/L		81	
	Cu	63		ug/L		282	
	Cu	65		ug/L		47	
	Zn	66		ug/L		272	
	Zn	67		ug/L		4052	
	Zn	68		ug/L		418	
>	Ge	74		ug/L		73278	
	As	75		ug/L		-8	
	Se	77		ug/L		1329	
	Se	82		ug/L		-15	
	Kr	83		ug/L		35	
	Sr	88		ug/L		52	
	Y	89		ug/L		12	
	Ag	107		ug/L		12	
	Cd	111		ug/L		8	
	Cd	114		ug/L		13	
>	In	115		ug/L		33936	
	Sn	120		ug/L		263	
	Sb	121		ug/L		205	
	Sb	123		ug/L		156	
	Ba	135		ug/L		5	
	Ba	137		ug/L		14	
	Ho	165		ug/L		7	
>	Lu	175		ug/L		39088	
	Tl	205		ug/L		483	
	Pb	208		ug/L		1376	
	Bi	209		ug/L		84	
	U	238		ug/L		37	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	0.9999
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 08:02:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Standard 1.104

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	5.209	3991	0.006
	Be	9	**10.000**	**ug/L**	3.663	1357	0.002
	B	11	**20.000**	**ug/L**	5.098	3275	0.003
	Na	23	**1000.000**	**ug/L**	2.529	1352572	2.018
	Mg	24	**1000.000**	**ug/L**	9.694	914657	1.401
	Al	27	**1000.000**	**ug/L**	2.543	1226914	1.883
	P	31	**1000.000**	**ug/L**	0.826	75363	0.111
	K	39	**1000.000**	**ug/L**	2.893	1518372	1.920
	Ca	43	**1000.000**	**ug/L**	4.798	3028	0.004
>	Sc	45		**ug/L**		650716	650716.326
	V	51	**10.000**	**ug/L**	5.191	16890	0.021
	Cr	52	**10.000**	**ug/L**	0.440	12911	0.018
	Cr	53		**ug/L**		36833	0.002
	Mn	55	**10.000**	**ug/L**	1.968	17377	0.026
	Fe	57	**1000.000**	**ug/L**	1.353	35364	0.051
	Co	59	**10.000**	**ug/L**	1.912	12379	0.019
	Ni	60	**10.000**	**ug/L**	2.229	2642	0.004
	Cu	63		**ug/L**		6031	0.009
	Cu	65	**10.000**	**ug/L**	3.684	2753	0.004
	Zn	66	**10.000**	**ug/L**	0.736	1909	0.022
	Zn	67		**ug/L**		4322	0.004
	Zn	68		**ug/L**		1629	0.017
>	Ge	74		**ug/L**		73335	73335.177
	As	75	**10.000**	**ug/L**	6.003	1985	0.027
	Se	77		**ug/L**		1518	0.003
	Se	82	**10.000**	**ug/L**	7.271	164	0.002
	Kr	83		**ug/L**		39	0.000
	Sr	88	**10.000**	**ug/L**	1.140	21034	0.603
	Y	89		**ug/L**		12	-0.000
	Ag	107	**10.000**	**ug/L**	2.133	8017	0.230
	Cd	111	**10.000**	**ug/L**	2.535	1813	0.052
	Cd	114		**ug/L**		4188	0.120
>	In	115		**ug/L**		34807	34806.722
	Sn	120	**10.000**	**ug/L**	0.844	7866	0.218
	Sb	121	**10.000**	**ug/L**	4.825	6209	0.172
	Sb	123		**ug/L**		4753	0.132
	Ba	135		**ug/L**		1616	0.041
	Ba	137	**10.000**	**ug/L**	3.428	2829	0.072
	Ho	165		**ug/L**		4	-0.000
>	Lu	175		**ug/L**		39255	39254.926
	Tl	205	**10.000**	**ug/L**	2.775	12984	0.318
	Pb	208	**10.000**	**ug/L**	2.241	19597	0.464
	Bi	209		**ug/L**		89	0.000
	U	238	**10.000**	**ug/L**	1.823	18276	0.465

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 08:08:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\Standard 2.105

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**99.978**	ug/L	4.927	38118	0.059
	Be	9	**99.986**	ug/L	3.896	13338	0.021
	B	11	**200.163**	ug/L	1.207	24275	0.036
	Na	23	**9997.512**	ug/L	2.124	12836107	19.682
	Mg	24	**9997.432**	ug/L	6.138	8876066	13.658
	Al	27	**10007.692**	ug/L	3.520	13270627	20.416
	P	31	**9994.814**	ug/L	0.487	687447	1.052
	K	39	**10009.589**	ug/L	5.536	14091601	21.252
	Ca	43	**10000.261**	ug/L	2.539	28491	0.044
>	Sc	45		ug/L		650224	650224.474
	V	51	**100.056**	ug/L	1.512	145943	0.219
	Cr	52	**99.980**	ug/L	0.515	116821	0.178
	Cr	53		ug/L		47758	0.019
	Mn	55	**99.975**	ug/L	0.598	164617	0.252
	Fe	57	**9996.193**	ug/L	0.982	322617	0.493
	Co	59	**99.978**	ug/L	0.325	120038	0.184
	Ni	60	**99.965**	ug/L	0.714	24795	0.038
	Cu	63		ug/L		54576	0.084
	Cu	65	**99.969**	ug/L	0.958	26263	0.040
	Zn	66	**100.017**	ug/L	0.770	16585	0.227
	Zn	67		ug/L		6668	0.037
	Zn	68		ug/L		12496	0.168
>	Ge	74		ug/L		71867	71867.037
	As	75	**100.006**	ug/L	1.712	19660	0.274
	Se	77		ug/L		2708	0.020
	Se	82	**100.005**	ug/L	3.452	1745	0.024
	Kr	83		ug/L		38	0.000
	Sr	88	**100.000**	ug/L	1.178	202668	6.030
	Y	89		ug/L		24	0.000
	Ag	107	**100.003**	ug/L	0.819	77521	2.307
	Cd	111	**100.012**	ug/L	1.364	17645	0.525
	Cd	114		ug/L		40797	1.214
>	In	115		ug/L		33603	33603.193
	Sn	120	**100.005**	ug/L	0.512	74004	2.195
	Sb	121	**100.074**	ug/L	3.778	62782	1.862
	Sb	123		ug/L		48112	1.427
	Ba	135		ug/L		15757	0.402
	Ba	137	**99.988**	ug/L	0.897	27812	0.709
	Ho	165		ug/L		5	-0.000
>	Lu	175		ug/L		39206	39206.117
	Tl	205	**99.979**	ug/L	0.904	122792	3.120
	Pb	208	**99.958**	ug/L	0.996	176010	4.454
	Bi	209		ug/L		145	0.002
	U	238	**99.956**	ug/L	0.982	174426	4.448

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 08:14:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 1.106

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.495**	ug/L	4.795	20606	0.032
	Be	9	**54.263**	ug/L	5.629	7033	0.011
	B	11	**107.135**	ug/L	7.915	13129	0.019
	Na	23	**5431.440**	ug/L	10.028	6778175	10.693
	Mg	24	**5331.511**	ug/L	6.436	4598948	7.284
	Al	27	**5202.612**	ug/L	7.781	6699219	10.614
	P	31	**5328.803**	ug/L	7.429	357158	0.561
	K	39	**5176.544**	ug/L	9.629	7190916	10.990
	Ca	43	**5198.414**	ug/L	8.422	14463	0.023
>	Sc	45		ug/L		632499	632499.375
	V	51	**52.274**	ug/L	5.880	75616	0.114
	Cr	52	**54.613**	ug/L	7.362	62411	0.097
	Cr	53		ug/L		41613	0.011
	Mn	55	**51.692**	ug/L	5.697	82896	0.130
	Fe	57	**5281.528**	ug/L	5.997	166407	0.260
	Co	59	**54.112**	ug/L	5.907	63134	0.100
	Ni	60	**55.483**	ug/L	5.780	13397	0.021
	Cu	63		ug/L		28152	0.044
	Cu	65	**52.149**	ug/L	5.623	13325	0.021
	Zn	66	**52.217**	ug/L	0.507	8843	0.119
	Zn	67		ug/L		5287	0.018
	Zn	68		ug/L		6737	0.087
>	Ge	74		ug/L		72326	72326.046
	As	75	**48.471**	ug/L	1.833	9584	0.133
	Se	77		ug/L		2152	0.012
	Se	82	**50.613**	ug/L	3.332	881	0.012
	Kr	83		ug/L		39	0.000
	Sr	88	**52.048**	ug/L	0.405	105393	3.138
	Y	89		ug/L		21	0.000
	Ag	107	**51.243**	ug/L	0.393	39685	1.182
	Cd	111	**54.279**	ug/L	1.951	9569	0.285
	Cd	114		ug/L		22025	0.656
>	In	115		ug/L		33566	33565.625
	Sn	120	**50.462**	ug/L	0.931	37430	1.107
	Sb	121	**48.409**	ug/L	5.677	30443	0.901
	Sb	123		ug/L		23350	0.691
	Ba	135		ug/L		8129	0.209
	Ba	137	**51.732**	ug/L	0.704	14260	0.367
	Ho	165		ug/L		11	0.000
>	Lu	175		ug/L		38835	38835.438
	Tl	205	**50.234**	ug/L	0.953	61353	1.567
	Pb	208	**52.572**	ug/L	0.357	92342	2.343
	Bi	209		ug/L		87	0.000
	U	238	**55.290**	ug/L	0.794	95582	2.460

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	110.990				
	Be	9	108.526				
	B	11	107.135				
	Na	23	108.629				
	Mg	24	106.630				
	Al	27	103.022				
	P	31	106.576				
	K	39	103.531				
	Ca	43	103.968				
>	Sc	45		98.2			
	V	51	104.547				
	Cr	52	109.226				
	Cr	53					
	Mn	55	103.384				
	Fe	57	105.631				
	Co	59	108.224				
	Ni	60	110.966				
	Cu	63					
	Cu	65	104.299				
	Zn	66	104.435				
	Zn	67					
	Zn	68					
>	Ge	74		98.7			
	As	75	96.942				
	Se	77					
	Se	82	101.226				
	Kr	83					
	Sr	88	104.095				
	Y	89					
	Ag	107	102.486				
	Cd	111	108.557				
	Cd	114					
>	In	115		98.9			
	Sn	120	100.924				
	Sb	121	96.818				
	Sb	123					
	Ba	135					
	Ba	137	103.465				
	Ho	165					
>	Lu	175		99.4			
	Tl	205	100.468				
	Pb	208	105.144				
	Bi	209					
	U	238	110.580				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Li	7	ICV is out of limits (+/- 10%)
QC Std 1	Ni	60	ICV is out of limits (+/- 10%)
QC Std 1	U	238	ICV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 08:20:25
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 2.107

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.041**	ug/L	10.234	89	-0.000
	Be	9	**-0.001**	ug/L	543.492	4	-0.000
	B	11	**-0.972**	ug/L	68.122	1050	-0.000
	Na	23	**-15.813**	ug/L	18.424	19013	-0.031
	Mg	24	**-0.024**	ug/L	4515.310	1000	-0.000
	Al	27	**1.222**	ug/L	60.392	3000	0.002
	P	31	**-2.008**	ug/L	44.229	3199	-0.000
	K	39	**-9.157**	ug/L	171.828	259345	-0.019
	Ca	43	**-8.619**	ug/L	53.989	179	-0.000
>	Sc	45		ug/L		658208	658207.589
	V	51	**-0.278**	ug/L	44.446	3076	-0.001
	Cr	52	**0.035**	ug/L	405.209	1157	0.000
	Cr	53		ug/L		35121	-0.001
	Mn	55	**0.009**	ug/L	219.441	577	0.000
	Fe	57	**-3.640**	ug/L	60.343	1969	-0.000
	Co	59	**0.007**	ug/L	2.310	126	0.000
	Ni	60	**-0.023**	ug/L	26.921	77	-0.000
	Cu	63		ug/L		248	-0.000
	Cu	65	**-0.004**	ug/L	24.345	47	-0.000
	Zn	66	**-0.191**	ug/L	38.308	241	-0.000
	Zn	67		ug/L		3779	-0.004
	Zn	68		ug/L		360	-0.001
>	Ge	74		ug/L		73492	73491.666
	As	75	**0.608**	ug/L	67.873	114	0.002
	Se	77		ug/L		1414	0.001
	Se	82	**0.523**	ug/L	21.022	-5	0.000
	Kr	83		ug/L		32	-0.000
	Sr	88	**0.001**	ug/L	304.802	54	0.000
	Y	89		ug/L		10	-0.000
	Ag	107	**0.005**	ug/L	109.866	16	0.000
	Cd	111	**-0.004**	ug/L	673.421	7	-0.000
	Cd	114		ug/L		22	0.000
>	In	115		ug/L		34047	34047.123
	Sn	120	**0.247**	ug/L	12.136	449	0.005
	Sb	121	**1.027**	ug/L	24.184	855	0.019
	Sb	123		ug/L		695	0.016
	Ba	135		ug/L		7	0.000
	Ba	137	**-0.016**	ug/L	45.039	9	-0.000
	Ho	165		ug/L		8	0.000
>	Lu	175		ug/L		38681	38681.352
	Tl	205	**0.074**	ug/L	60.347	567	0.002
	Pb	208	**-0.012**	ug/L	91.931	1341	-0.001
	Bi	209		ug/L		71	-0.000
	U	238	**0.035**	ug/L	12.903	96	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		102.1			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.0			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 08:26:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 3.108

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.012**	**ug/L**	6.663	4035	0.006
	Be	9	**0.506**	**ug/L**	11.704	74	0.000
	B	11	**11.567**	**ug/L**	5.030	2567	0.002
	Na	23	**251.995**	**ug/L**	7.518	373509	0.496
	Mg	24	**25.529**	**ug/L**	44.383	24356	0.035
	Al	27	**36.148**	**ug/L**	21.015	50759	0.074
	P	31	**55.763**	**ug/L**	3.098	7346	0.006
	K	39	**275.209**	**ug/L**	0.294	669678	0.584
	Ca	43	**199.803**	**ug/L**	3.086	791	0.001
>	Sc	45		**ug/L**		671132	671131.521
	V	51	**9.374**	**ug/L**	8.936	17344	0.021
	Cr	52	**9.696**	**ug/L**	0.639	12718	0.017
	Cr	53		**ug/L**		36540	-0.000
	Mn	55	**5.185**	**ug/L**	0.853	9354	0.013
	Fe	57	**101.379**	**ug/L**	1.531	5484	0.005
	Co	59	**1.008**	**ug/L**	6.166	1366	0.002
	Ni	60	**1.902**	**ug/L**	4.419	569	0.001
	Cu	63		**ug/L**		909	0.001
	Cu	65	**1.084**	**ug/L**	3.573	342	0.000
	Zn	66	**10.255**	**ug/L**	1.706	1966	0.023
	Zn	67		**ug/L**		4068	0.001
	Zn	68		**ug/L**		1654	0.017
>	Ge	74		**ug/L**		72842	72841.681
	As	75	**5.562**	**ug/L**	10.411	1099	0.015
	Se	77		**ug/L**		1503	0.002
	Se	82	**5.369**	**ug/L**	15.942	81	0.001
	Kr	83		**ug/L**		30	-0.000
	Sr	88	**10.023**	**ug/L**	0.596	20870	0.604
	Y	89		**ug/L**		13	0.000
	Ag	107	**1.000**	**ug/L**	0.711	807	0.023
	Cd	111	**0.989**	**ug/L**	3.513	187	0.005
	Cd	114		**ug/L**		441	0.012
>	In	115		**ug/L**		34446	34446.078
	Sn	120	**4.754**	**ug/L**	1.092	3861	0.104
	Sb	121	**2.743**	**ug/L**	9.224	1968	0.051
	Sb	123		**ug/L**		1522	0.040
	Ba	135		**ug/L**		333	0.008
	Ba	137	**1.992**	**ug/L**	4.274	570	0.014
	Ho	165		**ug/L**		4	-0.000
>	Lu	175		**ug/L**		39414	39414.025
	Tl	205	**0.902**	**ug/L**	5.186	1596	0.028
	Pb	208	**1.961**	**ug/L**	2.185	4831	0.087
	Bi	209		**ug/L**		88	0.000
	U	238	**0.209**	**ug/L**	2.874	403	0.009

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	100.117				
	Be	9	101.145				
	B	11	77.111				
	Na	23	100.798				
	Mg	24	170.197				
	Al	27	120.493				
	P	31	111.526				
	K	39	91.736				
	Ca	43	99.902				
>	Sc	45		104.2			
	V	51	93.740				
	Cr	52	96.965				
	Cr	53					
	Mn	55	103.692				
	Fe	57	101.379				
	Co	59	100.765				
	Ni	60	95.106				
	Cu	63					
	Cu	65	108.415				
	Zn	66	102.555				
	Zn	67					
	Zn	68					
>	Ge	74		99.4			
	As	75	111.249				
	Se	77					
	Se	82	107.387				
	Kr	83					
	Sr	88	100.225				
	Y	89					
	Ag	107	100.005				
	Cd	111	98.889				
	Cd	114					
>	In	115		101.5			
	Sn	120	95.074				
	Sb	121	91.446				
	Sb	123					
	Ba	135					
	Ba	137	99.588				
	Ho	165					
>	Lu	175		100.8			
	Tl	205	90.161				
	Pb	208	98.064				
	Bi	209					
	U	238	104.459				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Mg	24	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 08:32:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 4.109

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.226**	ug/L	28.363	180	0.000
	Be	9	**0.078**	ug/L	38.318	14	0.000
	B	11	**-3.157**	ug/L	13.631	744	-0.001
	Na	23	**102809.674**	ug/L	5.491	124605286	202.401
	Mg	24	**100028.039**	ug/L	4.211	84036197	136.656
	Al	27	**95569.206**	ug/L	3.511	119906364	194.967
	P	31	**98278.627**	ug/L	1.457	6370228	10.346
	K	39	**92212.443**	ug/L	0.777	120735752	195.779
	Ca	43	**94557.829**	ug/L	0.865	253332	0.411
>	Sc	45		ug/L		615324	615323.941
	V	51	**0.160**	ug/L	467.223	3460	0.000
	Cr	52	**4.507**	ug/L	3.477	5974	0.008
	Cr	53		ug/L		31165	-0.004
	Mn	55	**5.855**	ug/L	1.515	9615	0.015
	Fe	57	**94650.426**	ug/L	1.467	2873416	4.667
	Co	59	**0.385**	ug/L	2.287	547	0.001
	Ni	60	**4.264**	ug/L	0.456	1075	0.002
	Cu	63		ug/L		1443	0.002
	Cu	65	**4.884**	ug/L	8.084	1257	0.002
	Zn	66	**5.268**	ug/L	2.431	1042	0.012
	Zn	67		ug/L		3871	0.003
	Zn	68		ug/L		455	0.001
>	Ge	74		ug/L		66481	66480.999
	As	75	**0.087**	ug/L	585.358	8	0.000
	Se	77		ug/L		1672	0.007
	Se	82	**-0.590**	ug/L	163.061	-23	-0.000
	Kr	83		ug/L		64	0.000
	Sr	88	**1.151**	ug/L	1.612	2217	0.069
	Y	89		ug/L		76	0.002
	Ag	107	**0.429**	ug/L	59.783	320	0.010
	Cd	111	**1.249**	ug/L	69.281	212	0.007
	Cd	114		ug/L		1306	0.041
>	In	115		ug/L		31271	31271.120
	Sn	120	**0.200**	ug/L	4.517	379	0.004
	Sb	121	**0.311**	ug/L	13.436	369	0.006
	Sb	123		ug/L		271	0.004
	Ba	135		ug/L		115	0.003
	Ba	137	**0.611**	ug/L	3.683	169	0.004
	Ho	165		ug/L		86	0.002
>	Lu	175		ug/L		36108	36107.605
	Tl	205	**-0.048**	ug/L	47.380	392	-0.002
	Pb	208	**1.355**	ug/L	5.345	3450	0.060
	Bi	209		ug/L		97	0.001
	U	238	**-0.004**	ug/L	57.138	28	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	102.810				
	Mg	24	100.028				
	Al	27	95.569				
	P	31	98.279				
	K	39	92.212				
	Ca	43	94.558				
>	Sc	45			95.5		
	V	51					
	Cr	52	121.806				
	Cr	53					
	Mn	55	100.951				
	Fe	57	94.650				
	Co	59	154.188				
	Ni	60	157.915				
	Cu	63					
	Cu	65	168.426				
	Zn	66	146.328				
	Zn	67					
	Zn	68					
>	Ge	74			90.7		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	95.880				
	Y	89					
	Ag	107					
	Cd	111	312.167				
	Cd	114					
>	In	115			92.1		
	Sn	120					
	Sb	121	310.587				
	Sb	123					
	Ba	135					
	Ba	137	91.134				
	Ho	165					
>	Lu	175			92.4		
	Tl	205					
	Pb	208	677.374				
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 08:38:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 5.110

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.348**	**ug/L**	4.117	7448	0.012
	Be	9	**21.118**	**ug/L**	1.738	2556	0.004
	B	11	**17.053**	**ug/L**	3.137	2828	0.003
	Na	23	**105823.191**	**ug/L**	3.376	122710949	208.334
	Mg	24	**102619.644**	**ug/L**	2.064	82594400	140.197
	Al	27	**93326.012**	**ug/L**	2.793	112125419	190.391
	P	31	**99921.635**	**ug/L**	1.617	6198783	10.518
	K	39	**97167.212**	**ug/L**	3.679	121723770	206.299
	Ca	43	**95262.398**	**ug/L**	1.057	244288	0.414
>	Sc	45		**ug/L**		589090	589090.038
	V	51	**18.278**	**ug/L**	7.028	26708	0.040
	Cr	52	**24.175**	**ug/L**	1.583	26349	0.043
	Cr	53		**ug/L**		32779	0.001
	Mn	55	**25.753**	**ug/L**	1.497	38781	0.065
	Fe	57	**95499.121**	**ug/L**	2.195	2775791	4.709
	Co	59	**20.071**	**ug/L**	1.785	21913	0.037
	Ni	60	**22.618**	**ug/L**	0.611	5140	0.009
	Cu	63		**ug/L**		10682	0.018
	Cu	65	**23.794**	**ug/L**	1.701	5695	0.010
	Zn	66	**24.593**	**ug/L**	1.643	3791	0.056
	Zn	67		**ug/L**		4216	0.011
	Zn	68		**ug/L**		2468	0.033
>	Ge	74		**ug/L**		63671	63670.546
	As	75	**20.986**	**ug/L**	3.321	3650	0.057
	Se	77		**ug/L**		1925	0.012
	Se	82	**21.053**	**ug/L**	5.566	315	0.005
	Kr	83		**ug/L**		64	0.001
	Sr	88	**21.602**	**ug/L**	2.171	39730	1.303
	Y	89		**ug/L**		70	0.002
	Ag	107	**18.893**	**ug/L**	0.268	13288	0.436
	Cd	111	**20.007**	**ug/L**	2.493	3206	0.105
	Cd	114		**ug/L**		8506	0.279
>	In	115		**ug/L**		30468	30467.816
	Sn	120	**19.494**	**ug/L**	1.013	13270	0.428
	Sb	121	**21.318**	**ug/L**	1.410	12270	0.397
	Sb	123		**ug/L**		9427	0.305
	Ba	135		**ug/L**		2933	0.084
	Ba	137	**20.359**	**ug/L**	2.267	5068	0.144
	Ho	165		**ug/L**		85	0.002
>	Lu	175		**ug/L**		35017	35016.548
	Tl	205	**17.892**	**ug/L**	2.615	19980	0.558
	Pb	208	**20.553**	**ug/L**	0.817	33301	0.916
	Bi	209		**ug/L**		111	0.001
	U	238	**20.795**	**ug/L**	0.217	32437	0.925

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	106.738				
	Be	9	105.590				
	B	11	85.265				
	Na	23	105.823				
	Mg	24	102.620				
	Al	27	93.326				
	P	31	99.922				
	K	39	97.167				
	Ca	43	95.262				
>	Sc	45		91.4			
	V	51	91.391				
	Cr	52	102.003				
	Cr	53					
	Mn	55	99.819				
	Fe	57	95.499				
	Co	59	99.115				
	Ni	60	99.640				
	Cu	63					
	Cu	65	103.905				
	Zn	66	104.208				
	Zn	67					
	Zn	68					
>	Ge	74		86.9			
	As	75	104.931				
	Se	77					
	Se	82	105.267				
	Kr	83					
	Sr	88	101.896				
	Y	89					
	Ag	107	94.465				
	Cd	111	98.075				
	Cd	114					
>	In	115		89.8			
	Sn	120	97.471				
	Sb	121	106.060				
	Sb	123					
	Ba	135					
	Ba	137	98.495				
	Ho	165					
>	Lu	175		89.6			
	Tl	205	89.462				
	Pb	208	101.748				
	Bi	209					
	U	238	103.977				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 08:44:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.111

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.500**	**ug/L**	4.952	19463	0.031
	Be	9	**52.168**	**ug/L**	3.413	6627	0.011
	B	11	**101.084**	**ug/L**	1.190	12215	0.018
	Na	23	**5329.601**	**ug/L**	1.763	6531517	10.492
	Mg	24	**5086.990**	**ug/L**	5.295	4299646	6.950
	Al	27	**4707.638**	**ug/L**	1.425	5947934	9.604
	P	31	**5067.530**	**ug/L**	0.338	333407	0.533
	K	39	**4895.138**	**ug/L**	1.314	6690732	10.393
	Ca	43	**4986.252**	**ug/L**	1.227	13618	0.022
>	Sc	45		**ug/L**		619086	619085.768
	V	51	**49.539**	**ug/L**	1.506	70452	0.108
	Cr	52	**51.262**	**ug/L**	1.237	57546	0.091
	Cr	53		**ug/L**		39550	0.009
	Mn	55	**48.911**	**ug/L**	1.130	76941	0.123
	Fe	57	**5006.556**	**ug/L**	1.293	154793	0.247
	Co	59	**50.963**	**ug/L**	0.984	58311	0.094
	Ni	60	**52.106**	**ug/L**	0.919	12342	0.020
	Cu	63		**ug/L**		25925	0.041
	Cu	65	**49.232**	**ug/L**	0.927	12340	0.020
	Zn	66	**51.682**	**ug/L**	2.430	8165	0.117
	Zn	67		**ug/L**		4821	0.016
	Zn	68		**ug/L**		6144	0.085
>	Ge	74		**ug/L**		67444	67443.513
	As	75	**48.506**	**ug/L**	2.767	8946	0.133
	Se	77		**ug/L**		2037	0.012
	Se	82	**51.736**	**ug/L**	4.173	841	0.013
	Kr	83		**ug/L**		26	-0.000
	Sr	88	**51.835**	**ug/L**	0.313	98413	3.126
	Y	89		**ug/L**		14	0.000
	Ag	107	**51.072**	**ug/L**	1.063	37082	1.178
	Cd	111	**53.397**	**ug/L**	1.644	8826	0.280
	Cd	114		**ug/L**		20560	0.653
>	In	115		**ug/L**		31472	31471.845
	Sn	120	**49.153**	**ug/L**	1.099	34191	1.079
	Sb	121	**46.611**	**ug/L**	5.770	27501	0.867
	Sb	123		**ug/L**		20841	0.657
	Ba	135		**ug/L**		7571	0.212
	Ba	137	**52.287**	**ug/L**	0.641	13224	0.371
	Ho	165		**ug/L**		9	0.000
>	Lu	175		**ug/L**		35632	35632.407
	Tl	205	**50.234**	**ug/L**	1.501	56290	1.567
	Pb	208	**52.721**	**ug/L**	1.106	84958	2.349
	Bi	209		**ug/L**		77	0.000
	U	238	**55.252**	**ug/L**	1.623	87636	2.459

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	107.001				
	Be	9	104.337				
	B	11	101.084				
	Na	23	106.592				
	Mg	24	101.740				
	Al	27	93.221				
	P	31	101.351				
	K	39	97.903				
	Ca	43	99.725				
>	Sc	45		96.1			
	V	51	99.079				
	Cr	52	102.524				
	Cr	53					
	Mn	55	97.821				
	Fe	57	100.131				
	Co	59	101.926				
	Ni	60	104.211				
	Cu	63					
	Cu	65	98.465				
	Zn	66	103.365				
	Zn	67					
	Zn	68					
>	Ge	74		92.0			
	As	75	97.013				
	Se	77					
	Se	82	103.473				
	Kr	83					
	Sr	88	103.671				
	Y	89					
	Ag	107	102.144				
	Cd	111	106.794				
	Cd	114					
>	In	115		92.7			
	Sn	120	98.306				
	Sb	121	93.222				
	Sb	123					
	Ba	135					
	Ba	137	104.575				
	Ho	165					
>	Lu	175		91.2			
	Tl	205	100.468				
	Pb	208	105.441				
	Bi	209					
	U	238	110.505				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 08:49:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.112

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.030**	ug/L	109.814	111	0.000
	Be	9	**-0.007**	ug/L	158.884	3	-0.000
	B	11	**-3.503**	ug/L	19.660	718	-0.001
	Na	23	**-10.964**	ug/L	39.413	24021	-0.022
	Mg	24	**0.841**	ug/L	170.569	1667	0.001
	Al	27	**1.584**	ug/L	111.921	3334	0.003
	P	31	**-4.819**	ug/L	21.146	2860	-0.001
	K	39	**-22.968**	ug/L	58.737	228144	-0.049
	Ca	43	**-11.152**	ug/L	61.063	163	-0.000
>	Sc	45		ug/L		626361	626361.121
	V	51	**0.055**	ug/L	1486.855	3395	0.000
	Cr	52	**0.025**	ug/L	251.603	1086	0.000
	Cr	53		ug/L		33809	-0.001
	Mn	55	**-0.023**	ug/L	49.718	498	-0.000
	Fe	57	**-0.362**	ug/L	428.878	1976	-0.000
	Co	59	**0.008**	ug/L	185.915	121	0.000
	Ni	60	**-0.083**	ug/L	43.075	59	-0.000
	Cu	63		ug/L		110	-0.000
	Cu	65	**-0.002**	ug/L	1306.881	45	-0.000
	Zn	66	**-0.398**	ug/L	9.315	194	-0.001
	Zn	67		ug/L		3442	-0.005
	Zn	68		ug/L		344	-0.001
>	Ge	74		ug/L		69057	69057.251
	As	75	**0.106**	ug/L	120.667	12	0.000
	Se	77		ug/L		1466	0.003
	Se	82	**0.467**	ug/L	30.793	-6	0.000
	Kr	83		ug/L		29	-0.000
	Sr	88	**-0.002**	ug/L	234.736	45	-0.000
	Y	89		ug/L		12	0.000
	Ag	107	**0.002**	ug/L	172.328	13	0.000
	Cd	111	**-0.010**	ug/L	206.774	6	-0.000
	Cd	114		ug/L		15	0.000
>	In	115		ug/L		31930	31930.121
	Sn	120	**-0.001**	ug/L	3135.635	247	-0.000
	Sb	121	**0.745**	ug/L	24.144	635	0.014
	Sb	123		ug/L		510	0.011
	Ba	135		ug/L		6	0.000
	Ba	137	**-0.014**	ug/L	75.698	9	-0.000
	Ho	165		ug/L		7	0.000
>	Lu	175		ug/L		36030	36029.739
	Tl	205	**0.021**	ug/L	280.300	469	0.001
	Pb	208	**-0.084**	ug/L	40.270	1133	-0.004
	Bi	209		ug/L		54	-0.001
	U	238	**0.028**	ug/L	34.133	79	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		97.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		92.2			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 09:37:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.120

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.635**	**ug/L**	4.154	19183	0.031
	Be	9	**49.709**	**ug/L**	2.670	6325	0.010
	B	11	**94.041**	**ug/L**	0.534	11458	0.017
	Na	23	**5045.268**	**ug/L**	3.828	6192772	9.933
	Mg	24	**4723.933**	**ug/L**	11.724	4003563	6.454
	Al	27	**5088.142**	**ug/L**	4.972	6440478	10.380
	P	31	**5012.546**	**ug/L**	1.284	330323	0.528
	K	39	**4819.814**	**ug/L**	3.178	6598105	10.233
	Ca	43	**4847.939**	**ug/L**	2.026	13267	0.021
>	Sc	45		**ug/L**		619955	619955.078
	V	51	**51.781**	**ug/L**	1.966	73585	0.113
	Cr	52	**51.859**	**ug/L**	0.663	58283	0.092
	Cr	53		**ug/L**		38902	0.008
	Mn	55	**48.608**	**ug/L**	0.541	76578	0.123
	Fe	57	**5026.566**	**ug/L**	0.294	155637	0.248
	Co	59	**51.293**	**ug/L**	1.104	58772	0.095
	Ni	60	**52.639**	**ug/L**	0.393	12486	0.020
	Cu	63		**ug/L**		25720	0.041
	Cu	65	**49.324**	**ug/L**	0.627	12379	0.020
	Zn	66	**50.936**	**ug/L**	3.113	8134	0.116
	Zn	67		**ug/L**		4584	0.012
	Zn	68		**ug/L**		6196	0.085
>	Ge	74		**ug/L**		68185	68184.758
	As	75	**50.181**	**ug/L**	3.459	9354	0.137
	Se	77		**ug/L**		2113	0.013
	Se	82	**50.872**	**ug/L**	1.977	835	0.012
	Kr	83		**ug/L**		31	-0.000
	Sr	88	**51.960**	**ug/L**	1.101	99377	3.133
	Y	89		**ug/L**		29	0.001
	Ag	107	**50.285**	**ug/L**	1.403	36779	1.160
	Cd	111	**53.778**	**ug/L**	1.126	8954	0.282
	Cd	114		**ug/L**		20468	0.645
>	In	115		**ug/L**		31704	31703.533
	Sn	120	**49.834**	**ug/L**	0.782	34914	1.094
	Sb	121	**48.403**	**ug/L**	4.354	28758	0.901
	Sb	123		**ug/L**		21777	0.682
	Ba	135		**ug/L**		7617	0.211
	Ba	137	**52.012**	**ug/L**	0.365	13342	0.369
	Ho	165		**ug/L**		9	0.000
>	Lu	175		**ug/L**		36140	36140.018
	Tl	205	**48.853**	**ug/L**	2.899	55532	1.524
	Pb	208	**51.476**	**ug/L**	0.293	84167	2.294
	Bi	209		**ug/L**		79	0.000
	U	238	**53.887**	**ug/L**	0.853	86692	2.398

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	105.270				
	Be	9	99.418				
	B	11	94.041				
	Na	23	100.905				
	Mg	24	94.479				
	Al	27	100.755				
	P	31	100.251				
	K	39	96.396				
	Ca	43	96.959				
>	Sc	45		96.2			
	V	51	103.561				
	Cr	52	103.717				
	Cr	53					
	Mn	55	97.216				
	Fe	57	100.531				
	Co	59	102.587				
	Ni	60	105.277				
	Cu	63					
	Cu	65	98.648				
	Zn	66	101.872				
	Zn	67					
	Zn	68					
>	Ge	74		93.0			
	As	75	100.361				
	Se	77					
	Se	82	101.743				
	Kr	83					
	Sr	88	103.920				
	Y	89					
	Ag	107	100.570				
	Cd	111	107.556				
	Cd	114					
>	In	115		93.4			
	Sn	120	99.668				
	Sb	121	96.807				
	Sb	123					
	Ba	135					
	Ba	137	104.024				
	Ho	165					
>	Lu	175		92.5			
	Tl	205	97.707				
	Pb	208	102.951				
	Bi	209					
	U	238	107.773				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 09:43:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.121

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.108**	ug/L	17.055	59	-0.000
	Be	9	**-0.006**	ug/L	143.579	3	-0.000
	B	11	**-4.093**	ug/L	12.777	644	-0.001
	Na	23	**-23.065**	ug/L	11.733	9003	-0.045
	Mg	24	**2.411**	ug/L	46.776	3000	0.003
	Al	27	**0.313**	ug/L	524.022	1667	0.001
	P	31	**-3.867**	ug/L	40.349	2881	-0.000
	K	39	**-13.980**	ug/L	53.529	237293	-0.030
	Ca	43	**-18.284**	ug/L	9.748	142	-0.000
>	Sc	45		ug/L		617823	617823.393
	V	51	**0.470**	ug/L	229.119	3926	0.001
	Cr	52	**0.329**	ug/L	17.143	1405	0.001
	Cr	53		ug/L		33475	-0.001
	Mn	55	**0.055**	ug/L	46.478	612	0.000
	Fe	57	**6.809**	ug/L	29.662	2165	0.000
	Co	59	**0.006**	ug/L	171.391	117	0.000
	Ni	60	**-0.112**	ug/L	18.275	51	-0.000
	Cu	63		ug/L		121	-0.000
	Cu	65	**-0.018**	ug/L	125.708	40	-0.000
	Zn	66	**-0.269**	ug/L	24.914	215	-0.001
	Zn	67		ug/L		3279	-0.008
	Zn	68		ug/L		326	-0.001
>	Ge	74		ug/L		69081	69080.713
	As	75	**0.225**	ug/L	175.455	35	0.001
	Se	77		ug/L		1476	0.003
	Se	82	**0.920**	ug/L	12.727	2	0.000
	Kr	83		ug/L		25	-0.000
	Sr	88	**0.001**	ug/L	347.841	51	0.000
	Y	89		ug/L		12	0.000
	Ag	107	**0.004**	ug/L	128.212	14	0.000
	Cd	111	**-0.007**	ug/L	324.101	6	-0.000
	Cd	114		ug/L		14	0.000
>	In	115		ug/L		32114	32114.355
	Sn	120	**0.038**	ug/L	116.264	276	0.001
	Sb	121	**0.474**	ug/L	30.588	476	0.009
	Sb	123		ug/L		391	0.008
	Ba	135		ug/L		7	0.000
	Ba	137	**-0.014**	ug/L	174.088	9	-0.000
	Ho	165		ug/L		6	-0.000
>	Lu	175		ug/L		36068	36067.502
	Tl	205	**0.114**	ug/L	77.355	574	0.004
	Pb	208	**-0.136**	ug/L	26.169	1051	-0.006
	Bi	209		ug/L		58	-0.001
	U	238	**0.023**	ug/L	14.592	71	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			95.9		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			94.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			92.3		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 10:06:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.125

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.257**	ug/L	3.647	18386	0.031
	Be	9	**49.943**	ug/L	2.339	6135	0.010
	B	11	**94.927**	ug/L	2.163	11155	0.017
	Na	23	**4946.568**	ug/L	8.731	5857317	9.738
	Mg	24	**5312.331**	ug/L	1.153	4344702	7.258
	Al	27	**4783.931**	ug/L	4.717	5845061	9.760
	P	31	**5102.196**	ug/L	1.037	324509	0.537
	K	39	**5363.645**	ug/L	2.964	7061238	11.388
	Ca	43	**4921.831**	ug/L	2.381	13004	0.021
>	Sc	45		ug/L		598477	598477.197
	V	51	**51.304**	ug/L	1.409	70414	0.112
	Cr	52	**52.877**	ug/L	1.137	57352	0.094
	Cr	53		ug/L		37409	0.008
	Mn	55	**49.631**	ug/L	0.839	75477	0.125
	Fe	57	**5062.253**	ug/L	0.676	151310	0.250
	Co	59	**51.758**	ug/L	1.250	57261	0.095
	Ni	60	**53.079**	ug/L	1.109	12156	0.020
	Cu	63		ug/L		25445	0.042
	Cu	65	**50.319**	ug/L	0.555	12190	0.020
	Zn	66	**51.547**	ug/L	1.530	8027	0.117
	Zn	67		ug/L		4296	0.009
	Zn	68		ug/L		6048	0.085
>	Ge	74		ug/L		66484	66484.036
	As	75	**49.392**	ug/L	2.071	8976	0.135
	Se	77		ug/L		2062	0.013
	Se	82	**49.843**	ug/L	7.592	797	0.012
	Kr	83		ug/L		26	-0.000
	Sr	88	**51.070**	ug/L	1.866	96774	3.079
	Y	89		ug/L		26	0.000
	Ag	107	**49.299**	ug/L	1.012	35728	1.137
	Cd	111	**53.073**	ug/L	1.445	8756	0.279
	Cd	114		ug/L		20078	0.639
>	In	115		ug/L		31410	31410.222
	Sn	120	**48.939**	ug/L	1.519	33976	1.074
	Sb	121	**47.716**	ug/L	5.639	28081	0.888
	Sb	123		ug/L		21349	0.675
	Ba	135		ug/L		7459	0.212
	Ba	137	**52.419**	ug/L	1.073	13101	0.372
	Ho	165		ug/L		8	0.000
>	Lu	175		ug/L		35213	35213.031
	Tl	205	**48.680**	ug/L	2.486	53919	1.519
	Pb	208	**51.467**	ug/L	0.789	81993	2.293
	Bi	209		ug/L		63	-0.000
	U	238	**54.366**	ug/L	0.198	85223	2.419

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	104.513				
	Be	9	99.886				
	B	11	94.927				
	Na	23	98.931				
	Mg	24	106.247				
	Al	27	94.731				
	P	31	102.044				
	K	39	107.273				
	Ca	43	98.437				
>	Sc	45		92.9			
	V	51	102.607				
	Cr	52	105.753				
	Cr	53					
	Mn	55	99.262				
	Fe	57	101.245				
	Co	59	103.516				
	Ni	60	106.157				
	Cu	63					
	Cu	65	100.638				
	Zn	66	103.095				
	Zn	67					
	Zn	68					
>	Ge	74		90.7			
	As	75	98.783				
	Se	77					
	Se	82	99.686				
	Kr	83					
	Sr	88	102.140				
	Y	89					
	Ag	107	98.599				
	Cd	111	106.147				
	Cd	114					
>	In	115		92.6			
	Sn	120	97.877				
	Sb	121	95.432				
	Sb	123					
	Ba	135					
	Ba	137	104.837				
	Ho	165					
>	Lu	175		90.1			
	Tl	205	97.360				
	Pb	208	102.935				
	Bi	209					
	U	238	108.733				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 10:12:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.126

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.077**	ug/L	27.728	69	-0.000
	Be	9	**-0.017**	ug/L	80.989	2	-0.000
	B	11	**-4.313**	ug/L	15.714	607	-0.001
	Na	23	**-21.007**	ug/L	5.046	11338	-0.041
	Mg	24	**0.073**	ug/L	49.380	1000	0.000
	Al	27	**4.139**	ug/L	33.864	6335	0.008
	P	31	**-3.771**	ug/L	32.985	2834	-0.000
	K	39	**-27.471**	ug/L	40.163	215283	-0.058
	Ca	43	**-1.245**	ug/L	2394.143	183	-0.000
>	Sc	45		ug/L		605841	605840.710
	V	51	**-0.117**	ug/L	445.647	3042	-0.000
	Cr	52	**0.390**	ug/L	6.025	1444	0.001
	Cr	53		ug/L		32671	-0.001
	Mn	55	**0.105**	ug/L	20.385	676	0.000
	Fe	57	**6.814**	ug/L	19.168	2124	0.000
	Co	59	**0.010**	ug/L	110.113	120	0.000
	Ni	60	**-0.124**	ug/L	13.753	47	-0.000
	Cu	63		ug/L		124	-0.000
	Cu	65	**-0.040**	ug/L	56.997	34	-0.000
	Zn	66	**-0.339**	ug/L	26.741	200	-0.001
	Zn	67		ug/L		3147	-0.009
	Zn	68		ug/L		305	-0.001
>	Ge	74		ug/L		67830	67830.357
	As	75	**0.504**	ug/L	118.411	85	0.001
	Se	77		ug/L		1422	0.003
	Se	82	**0.380**	ug/L	57.202	-7	0.000
	Kr	83		ug/L		26	-0.000
	Sr	88	**0.006**	ug/L	84.424	59	0.000
	Y	89		ug/L		13	0.000
	Ag	107	**0.011**	ug/L	12.392	19	0.000
	Cd	111	**0.013**	ug/L	87.075	10	0.000
	Cd	114		ug/L		17	0.000
>	In	115		ug/L		31782	31781.578
	Sn	120	**0.080**	ug/L	33.941	302	0.002
	Sb	121	**0.536**	ug/L	28.474	509	0.010
	Sb	123		ug/L		384	0.008
	Ba	135		ug/L		13	0.000
	Ba	137	**0.009**	ug/L	202.814	15	0.000
	Ho	165		ug/L		6	-0.000
>	Lu	175		ug/L		35459	35459.315
	Tl	205	**0.024**	ug/L	259.018	464	0.001
	Pb	208	**-0.124**	ug/L	19.387	1051	-0.006
	Bi	209		ug/L		55	-0.001
	U	238	**0.029**	ug/L	37.534	79	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			94.0		
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74			92.6		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Ag	107					
Cd	111					
Cd	114					
> In	115			93.7		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			90.7		
Tl	205					
Pb	208					
Bi	209					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873991
Sample Date/Time: Tuesday, July 14, 2009 10:18:40
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201873991.127

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.146**	ug/L	12.727	42	-0.000
	Be	9	**-0.007**	ug/L	14.383	3	-0.000
	B	11	**-5.234**	ug/L	13.270	480	-0.001
	Na	23	**-21.922**	ug/L	6.344	9670	-0.043
	Mg	24	**0.200**	ug/L	1155.415	1000	0.000
	Al	27	**2.971**	ug/L	31.821	4667	0.006
	P	31	**30.884**	ug/L	10.238	4775	0.003
	K	39	**-9.587**	ug/L	145.349	225439	-0.020
	Ca	43	**-9.091**	ug/L	128.900	154	-0.000
>	Sc	45		ug/L		573575	573574.612
	V	51	**-0.961**	ug/L	44.683	1822	-0.002
	Cr	52	**0.469**	ug/L	18.731	1445	0.001
	Cr	53		ug/L		24871	-0.011
	Mn	55	**0.427**	ug/L	1.129	1106	0.001
	Fe	57	**16.279**	ug/L	25.354	2278	0.001
	Co	59	**0.122**	ug/L	38.616	232	0.000
	Ni	60	**0.053**	ug/L	40.985	83	0.000
	Cu	63		ug/L		143	-0.000
	Cu	65	**0.020**	ug/L	111.303	46	0.000
	Zn	66	**0.361**	ug/L	41.020	292	0.001
	Zn	67		ug/L		2528	-0.016
	Zn	68		ug/L		356	-0.000
>	Ge	74		ug/L		64243	64243.490
	As	75	**-0.173**	ug/L	349.649	-36	-0.000
	Se	77		ug/L		1014	-0.002
	Se	82	**0.294**	ug/L	74.993	-8	0.000
	Kr	83		ug/L		28	-0.000
	Sr	88	**0.050**	ug/L	15.646	139	0.003
	Y	89		ug/L		23	0.000
	Ag	107	**0.010**	ug/L	32.110	18	0.000
	Cd	111	**0.040**	ug/L	157.673	14	0.000
	Cd	114		ug/L		13	0.000
>	In	115		ug/L		30704	30704.466
	Sn	120	**0.051**	ug/L	118.197	272	0.001
	Sb	121	**-0.008**	ug/L	574.551	180	-0.000
	Sb	123		ug/L		141	-0.000
	Ba	135		ug/L		10	0.000
	Ba	137	**0.071**	ug/L	47.478	30	0.001
	Ho	165		ug/L		5	-0.000
>	Lu	175		ug/L		34793	34793.002
	Tl	205	**0.096**	ug/L	30.648	535	0.003
	Pb	208	**0.174**	ug/L	38.922	1495	0.008
	Bi	209		ug/L		59	-0.000
	U	238	**-0.007**	ug/L	21.658	22	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			89.0		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			87.7		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			90.5		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			89.0		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873992
Sample Date/Time: Tuesday, July 14, 2009 10:24:35
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 882366|40|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201873992.128

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.069**	ug/L	10.392	831	0.001
	Be	9	**23.727**	ug/L	2.250	2957	0.005
	B	11	**31.485**	ug/L	1.368	4469	0.006
	Na	23	**140.833**	ug/L	9.843	204799	0.277
	Mg	24	**867.742**	ug/L	3.323	720040	1.185
	Al	27	**2538.984**	ug/L	4.481	3145422	5.180
	P	31	**216.592**	ug/L	2.727	16915	0.023
	K	39	**619.535**	ug/L	3.252	1048812	1.315
	Ca	43	**1020.267**	ug/L	3.102	2881	0.004
>	Sc	45		ug/L		606739	606738.881
	V	51	**38.353**	ug/L	2.775	54152	0.084
	Cr	52	**19.986**	ug/L	1.353	22613	0.036
	Cr	53		ug/L		34208	0.002
	Mn	55	**102.955**	ug/L	0.759	158170	0.260
	Fe	57	**3128.591**	ug/L	1.549	95546	0.154
	Co	59	**23.776**	ug/L	1.355	26725	0.044
	Ni	60	**29.313**	ug/L	1.526	6840	0.011
	Cu	63		ug/L		14521	0.023
	Cu	65	**28.035**	ug/L	2.071	6906	0.011
	Zn	66	**55.674**	ug/L	0.973	8890	0.126
	Zn	67		ug/L		4550	0.011
	Zn	68		ug/L		6946	0.096
>	Ge	74		ug/L		68319	68318.691
	As	75	**69.310**	ug/L	3.339	12944	0.190
	Se	77		ug/L		2100	0.013
	Se	82	**50.032**	ug/L	3.781	823	0.012
	Kr	83		ug/L		29	-0.000
	Sr	88	**45.713**	ug/L	2.009	88439	2.756
	Y	89		ug/L		8294	0.258
	Ag	107	**5.339**	ug/L	1.884	3961	0.123
	Cd	111	**35.451**	ug/L	1.169	5974	0.186
	Cd	114		ug/L		13808	0.430
>	In	115		ug/L		32070	32070.105
	Sn	120	**15.362**	ug/L	1.667	11059	0.337
	Sb	121	**5.574**	ug/L	1.596	3519	0.104
	Sb	123		ug/L		2605	0.077
	Ba	135		ug/L		19566	0.543
	Ba	137	**135.326**	ug/L	0.737	34557	0.960
	Ho	165		ug/L		317	0.009
>	Lu	175		ug/L		35999	35998.995
	Tl	205	**58.905**	ug/L	3.078	66609	1.838
	Pb	208	**47.437**	ug/L	0.399	77362	2.114
	Bi	209		ug/L		170	0.003
	U	238	**0.462**	ug/L	3.406	774	0.021

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			94.2		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			93.2		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.5		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			92.1		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232754001
Sample Date/Time: Tuesday, July 14, 2009 10:30:31
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\232754001.129

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**26.539**	ug/L	4.249	9189	0.016
	Be	9	**2.972**	ug/L	7.444	361	0.001
	B	11	**-1.829**	ug/L	13.801	847	-0.000
	Na	23	**933.031**	ug/L	3.263	1111274	1.837
	Mg	24	**2567.637**	ug/L	5.669	2056414	3.508
	Al	27	**17155.235**	ug/L	3.291	20502916	34.998
	P	31	**287.068**	ug/L	0.612	20685	0.030
	K	39	**2293.260**	ug/L	1.879	3096818	4.869
	Ca	43	**2562.997**	ug/L	0.802	6717	0.011
>	Sc	45		ug/L		586096	586095.519
	V	51	**15.909**	ug/L	3.402	23525	0.035
	Cr	52	**22.778**	ug/L	0.534	24757	0.041
	Cr	53		ug/L		26170	-0.010
	Mn	55	**936.517**	ug/L	0.078	1385680	2.363
	Fe	57	**19737.920**	ug/L	0.191	572334	0.973
	Co	59	**4.857**	ug/L	1.305	5357	0.009
	Ni	60	**10.781**	ug/L	2.061	2475	0.004
	Cu	63		ug/L		5055	0.008
	Cu	65	**10.386**	ug/L	1.742	2499	0.004
	Zn	66	**158.259**	ug/L	1.459	23290	0.359
	Zn	67		ug/L		5971	0.038
	Zn	68		ug/L		17073	0.260
>	Ge	74		ug/L		64156	64155.726
	As	75	**4.287**	ug/L	6.646	745	0.012
	Se	77		ug/L		996	-0.003
	Se	82	**1.364**	ug/L	37.970	9	0.000
	Kr	83		ug/L		53	0.000
	Sr	88	**25.432**	ug/L	1.343	47611	1.533
	Y	89		ug/L		226866	7.314
	Ag	107	**0.236**	ug/L	15.139	180	0.005
	Cd	111	**1.201**	ug/L	18.229	203	0.006
	Cd	114		ug/L		52	0.001
>	In	115		ug/L		31018	31018.179
	Sn	120	**1.622**	ug/L	5.098	1344	0.036
	Sb	121	**-0.022**	ug/L	73.331	174	-0.000
	Sb	123		ug/L		129	-0.000
	Ba	135		ug/L		14725	0.397
	Ba	137	**98.649**	ug/L	0.889	25968	0.700
	Ho	165		ug/L		8139	0.219
>	Lu	175		ug/L		37103	37103.492
	Tl	205	**0.523**	ug/L	18.548	1065	0.016
	Pb	208	**17.342**	ug/L	0.467	29977	0.773
	Bi	209		ug/L		1253	0.032
	U	238	**2.541**	ug/L	2.379	4230	0.113

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		91.0			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		87.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		94.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873993
Sample Date/Time: Tuesday, July 14, 2009 10:36:26
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201873993.130

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**31.047**	ug/L	5.987	10745	0.018
	Be	9	**5.800**	ug/L	4.863	702	0.001
	B	11	**0.767**	ug/L	16.945	1119	0.000
	Na	23	**1433.728**	ug/L	3.040	1692462	2.823
	Mg	24	**4183.528**	ug/L	2.909	3356685	5.715
	Al	27	**32301.741**	ug/L	9.529	38705216	65.897
	P	31	**517.378**	ug/L	2.839	34953	0.054
	K	39	**3737.683**	ug/L	3.775	4899950	7.936
	Ca	43	**4985.427**	ug/L	1.584	12914	0.022
>	Sc	45		ug/L		586888	586888.028
	V	51	**30.108**	ug/L	1.345	41796	0.066
	Cr	52	**53.865**	ug/L	0.732	57269	0.096
	Cr	53		ug/L		28517	-0.006
	Mn	55	**1725.963**	ug/L	1.371	2557336	4.356
	Fe	57	**34505.316**	ug/L	0.479	1000495	1.702
	Co	59	**9.501**	ug/L	0.954	10392	0.018
	Ni	60	**23.251**	ug/L	1.207	5261	0.009
	Cu	63		ug/L		9314	0.015
	Cu	65	**19.339**	ug/L	2.335	4619	0.008
	Zn	66	**297.519**	ug/L	0.284	42529	0.675
	Zn	67		ug/L		9031	0.089
	Zn	68		ug/L		31445	0.496
>	Ge	74		ug/L		62623	62622.939
	As	75	**7.254**	ug/L	1.360	1236	0.020
	Se	77		ug/L		939	-0.003
	Se	82	**2.620**	ug/L	3.576	28	0.001
	Kr	83		ug/L		79	0.001
	Sr	88	**46.358**	ug/L	1.180	85821	2.795
	Y	89		ug/L		410544	13.379
	Ag	107	**0.440**	ug/L	4.480	322	0.010
	Cd	111	**2.277**	ug/L	3.255	374	0.012
	Cd	114		ug/L		70	0.002
>	In	115		ug/L		30685	30684.832
	Sn	120	**2.222**	ug/L	2.510	1734	0.049
	Sb	121	**0.010**	ug/L	508.616	191	0.000
	Sb	123		ug/L		147	0.000
	Ba	135		ug/L		27631	0.716
	Ba	137	**175.838**	ug/L	1.800	48108	1.247
	Ho	165		ug/L		14917	0.387
>	Lu	175		ug/L		38576	38575.734
	Tl	205	**0.506**	ug/L	4.801	1086	0.016
	Pb	208	**30.029**	ug/L	1.320	52971	1.338
	Bi	209		ug/L		2973	0.075
	U	238	**3.968**	ug/L	1.018	6848	0.177

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			91.1		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			85.5		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			90.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			98.7		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1201873994
Sample Date/Time: Tuesday, July 14, 2009 10:42:22
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201873994.131

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**43.906**	ug/L	5.223	15004	0.026
	Be	9	**26.712**	ug/L	3.862	3186	0.005
	B	11	**45.306**	ug/L	4.272	5703	0.008
	Na	23	**1883.267**	ug/L	10.253	2193809	3.708
	Mg	24	**3135.746**	ug/L	4.541	2487744	4.284
	Al	27	**18103.074**	ug/L	9.153	21447478	36.931
	P	31	**1244.777**	ug/L	0.452	79080	0.131
	K	39	**3363.035**	ug/L	2.860	4387416	7.140
	Ca	43	**3508.142**	ug/L	1.008	9048	0.015
>	Sc	45		ug/L		581067	581067.214
	V	51	**41.102**	ug/L	1.614	55355	0.090
	Cr	52	**53.432**	ug/L	1.188	56235	0.095
	Cr	53		ug/L		27834	-0.007
	Mn	55	**999.390**	ug/L	0.780	1465911	2.522
	Fe	57	**20028.043**	ug/L	0.928	575770	0.988
	Co	59	**30.203**	ug/L	0.724	32481	0.056
	Ni	60	**37.049**	ug/L	2.261	8255	0.014
	Cu	63		ug/L		17126	0.029
	Cu	65	**34.911**	ug/L	2.153	8221	0.014
	Zn	66	**235.946**	ug/L	1.087	33925	0.536
	Zn	67		ug/L		7579	0.065
	Zn	68		ug/L		24747	0.388
>	Ge	74		ug/L		62893	62892.776
	As	75	**41.482**	ug/L	1.210	7132	0.114
	Se	77		ug/L		988	-0.002
	Se	82	**10.557**	ug/L	5.664	150	0.003
	Kr	83		ug/L		53	0.000
	Sr	88	**49.681**	ug/L	1.286	90725	2.996
	Y	89		ug/L		247563	8.178
	Ag	107	**25.937**	ug/L	0.819	18120	0.598
	Cd	111	**7.758**	ug/L	3.587	1239	0.041
	Cd	114		ug/L		1811	0.059
>	In	115		ug/L		30269	30269.444
	Sn	120	**24.023**	ug/L	0.648	16192	0.527
	Sb	121	**65.235**	ug/L	1.471	36929	1.214
	Sb	123		ug/L		28137	0.925
	Ba	135		ug/L		18577	0.504
	Ba	137	**122.540**	ug/L	1.666	32061	0.869
	Ho	165		ug/L		9070	0.246
>	Lu	175		ug/L		36884	36884.258
	Tl	205	**44.149**	ug/L	1.165	51264	1.378
	Pb	208	**108.412**	ug/L	0.473	179476	4.831
	Bi	209		ug/L		1185	0.030
	U	238	**27.636**	ug/L	0.806	45394	1.230

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		90.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		85.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		89.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		94.4			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873996
Sample Date/Time: Tuesday, July 14, 2009 10:48:18
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201873996.132

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**40.655**	ug/L	5.111	13960	0.024
	Be	9	**24.593**	ug/L	4.240	2946	0.005
	B	11	**42.706**	ug/L	4.345	5458	0.008
	Na	23	**1821.242**	ug/L	15.306	2128061	3.585
	Mg	24	**3116.353**	ug/L	7.879	2484526	4.257
	Al	27	**16537.967**	ug/L	2.944	19695518	33.738
	P	31	**1145.392**	ug/L	1.207	73320	0.121
	K	39	**3174.764**	ug/L	2.013	4174374	6.740
	Ca	43	**3479.582**	ug/L	2.061	9014	0.015
>	Sc	45		ug/L		583532	583531.701
	V	51	**37.681**	ug/L	1.700	51252	0.083
	Cr	52	**49.961**	ug/L	0.306	52886	0.089
	Cr	53		ug/L		28162	-0.006
	Mn	55	**818.277**	ug/L	0.714	1205428	2.065
	Fe	57	**18322.546**	ug/L	0.556	529051	0.904
	Co	59	**27.316**	ug/L	0.331	29507	0.050
	Ni	60	**33.512**	ug/L	1.209	7509	0.013
	Cu	63		ug/L		15991	0.027
	Cu	65	**32.365**	ug/L	2.080	7658	0.013
	Zn	66	**171.959**	ug/L	1.764	24790	0.390
	Zn	67		ug/L		6180	0.043
	Zn	68		ug/L		18370	0.286
>	Ge	74		ug/L		62896	62895.795
	As	75	**37.537**	ug/L	1.910	6452	0.103
	Se	77		ug/L		1014	-0.002
	Se	82	**8.175**	ug/L	10.047	113	0.002
	Kr	83		ug/L		53	0.000
	Sr	88	**47.752**	ug/L	0.053	87618	2.879
	Y	89		ug/L		231145	7.600
	Ag	107	**23.170**	ug/L	0.728	16263	0.534
	Cd	111	**6.440**	ug/L	3.934	1035	0.034
	Cd	114		ug/L		1648	0.054
>	In	115		ug/L		30413	30413.383
	Sn	120	**21.712**	ug/L	1.343	14728	0.476
	Sb	121	**57.972**	ug/L	1.511	32993	1.079
	Sb	123		ug/L		25440	0.832
	Ba	135		ug/L		17467	0.478
	Ba	137	**118.280**	ug/L	0.945	30654	0.839
	Ho	165		ug/L		8395	0.230
>	Lu	175		ug/L		36533	36532.685
	Tl	205	**41.386**	ug/L	0.832	47627	1.291
	Pb	208	**99.357**	ug/L	0.211	163028	4.427
	Bi	209		ug/L		1160	0.030
	U	238	**25.404**	ug/L	0.564	41333	1.130

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			90.6		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			85.8		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			89.6		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			93.5		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873995
Sample Date/Time: Tuesday, July 14, 2009 10:54:13
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 882366|10|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\1201873995.133

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**4.944**	ug/L	3.237	1860	0.003
	Be	9	**0.533**	ug/L	19.111	71	0.000
	B	11	**-4.972**	ug/L	1.089	541	-0.001
	Na	23	**151.885**	ug/L	6.666	218661	0.299
	Mg	24	**517.369**	ug/L	6.230	431779	0.707
	Al	27	**3402.727**	ug/L	1.949	4233383	6.942
	P	31	**50.162**	ug/L	0.554	6313	0.005
	K	39	**419.267**	ug/L	10.728	796062	0.890
	Ca	43	**473.261**	ug/L	2.721	1443	0.002
>	Sc	45		ug/L		609832	609832.077
	V	51	**1.994**	ug/L	40.609	5911	0.004
	Cr	52	**4.426**	ug/L	0.623	5834	0.008
	Cr	53		ug/L		28795	-0.007
	Mn	55	**195.787**	ug/L	1.246	301730	0.494
	Fe	57	**3904.249**	ug/L	0.912	119315	0.193
	Co	59	**0.930**	ug/L	3.548	1154	0.002
	Ni	60	**1.904**	ug/L	1.444	518	0.001
	Cu	63		ug/L		1139	0.001
	Cu	65	**2.006**	ug/L	5.633	537	0.001
	Zn	66	**30.773**	ug/L	3.055	4961	0.070
	Zn	67		ug/L		3578	-0.002
	Zn	68		ug/L		3761	0.050
>	Ge	74		ug/L		67424	67424.099
	As	75	**1.638**	ug/L	42.386	293	0.004
	Se	77		ug/L		1131	-0.001
	Se	82	**0.780**	ug/L	25.742	-1	0.000
	Kr	83		ug/L		29	-0.000
	Sr	88	**4.971**	ug/L	0.263	9474	0.300
	Y	89		ug/L		44713	1.421
	Ag	107	**0.022**	ug/L	16.956	27	0.001
	Cd	111	**0.194**	ug/L	20.321	39	0.001
	Cd	114		ug/L		15	0.000
>	In	115		ug/L		31448	31448.420
	Sn	120	**0.307**	ug/L	4.331	456	0.007
	Sb	121	**-0.067**	ug/L	13.298	150	-0.001
	Sb	123		ug/L		118	-0.001
	Ba	135		ug/L		2831	0.079
	Ba	137	**19.768**	ug/L	3.598	4999	0.140
	Ho	165		ug/L		1587	0.044
>	Lu	175		ug/L		35579	35579.274
	Tl	205	**0.046**	ug/L	32.853	491	0.001
	Pb	208	**3.394**	ug/L	1.335	6633	0.151
	Bi	209		ug/L		308	0.006
	U	238	**0.506**	ug/L	1.375	835	0.023

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			94.6		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			92.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			92.7		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			91.0		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232754002
Sample Date/Time: Tuesday, July 14, 2009 11:00:10
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\232754002.134

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**17.138**	**ug/L**	4.690	6013	0.010
	Be	9	**3.837**	**ug/L**	2.604	469	0.001
	B	11	**-1.323**	**ug/L**	27.535	908	-0.000
	Na	23	**710.873**	**ug/L**	2.688	862662	1.399
	Mg	24	**2757.145**	**ug/L**	16.095	2222983	3.767
	Al	27	**19113.512**	**ug/L**	6.794	23046686	38.993
	P	31	**277.378**	**ug/L**	1.582	20252	0.029
	K	39	**2338.309**	**ug/L**	12.210	3183269	4.965
	Ca	43	**2403.467**	**ug/L**	2.416	6359	0.010
>	Sc	45		**ug/L**		590778	590777.951
	V	51	**20.725**	**ug/L**	5.477	29941	0.045
	Cr	52	**25.164**	**ug/L**	2.178	27453	0.045
	Cr	53		**ug/L**		25502	-0.012
	Mn	55	**727.617**	**ug/L**	0.277	1085248	1.836
	Fe	57	**21226.157**	**ug/L**	0.663	620223	1.047
	Co	59	**4.296**	**ug/L**	1.499	4786	0.008
	Ni	60	**13.274**	**ug/L**	0.832	3056	0.005
	Cu	63		**ug/L**		5461	0.009
	Cu	65	**10.828**	**ug/L**	2.854	2622	0.004
	Zn	66	**149.592**	**ug/L**	0.866	21868	0.340
	Zn	67		**ug/L**		5835	0.036
	Zn	68		**ug/L**		16272	0.250
>	Ge	74		**ug/L**		63697	63696.681
	As	75	**4.519**	**ug/L**	17.150	782	0.012
	Se	77		**ug/L**		899	-0.004
	Se	82	**1.989**	**ug/L**	27.799	18	0.000
	Kr	83		**ug/L**		48	0.000
	Sr	88	**26.167**	**ug/L**	0.183	48754	1.578
	Y	89		**ug/L**		244416	7.917
	Ag	107	**0.234**	**ug/L**	2.608	177	0.005
	Cd	111	**1.347**	**ug/L**	11.976	226	0.007
	Cd	114		**ug/L**		42	0.001
>	In	115		**ug/L**		30870	30869.911
	Sn	120	**1.129**	**ug/L**	6.029	1004	0.025
	Sb	121	**-0.056**	**ug/L**	40.564	154	-0.001
	Sb	123		**ug/L**		124	-0.001
	Ba	135		**ug/L**		13219	0.361
	Ba	137	**89.330**	**ug/L**	1.365	23179	0.633
	Ho	165		**ug/L**		8661	0.237
>	Lu	175		**ug/L**		36575	36574.797
	Tl	205	**0.339**	**ug/L**	6.416	839	0.011
	Pb	208	**18.312**	**ug/L**	1.952	31127	0.816
	Bi	209		**ug/L**		1621	0.042
	U	238	**2.707**	**ug/L**	1.080	4440	0.120

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		91.7			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		86.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		91.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		93.6			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232754003
Sample Date/Time: Tuesday, July 14, 2009 11:06:06
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\232754003.135

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**11.352**	ug/L	6.215	3946	0.007
	Be	9	**3.000**	ug/L	9.851	361	0.001
	B	11	**-3.857**	ug/L	6.222	630	-0.001
	Na	23	**1083.302**	ug/L	4.058	1272994	2.133
	Mg	24	**1069.693**	ug/L	5.068	849201	1.461
	Al	27	**9856.247**	ug/L	1.887	11677653	20.107
	P	31	**283.346**	ug/L	1.167	20270	0.030
	K	39	**1808.326**	ug/L	3.911	2470044	3.839
	Ca	43	**1195.567**	ug/L	2.438	3200	0.005
>	Sc	45		ug/L		580959	580958.820
	V	51	**13.932**	ug/L	2.888	20792	0.031
	Cr	52	**15.055**	ug/L	1.798	16545	0.027
	Cr	53		ug/L		23019	-0.015
	Mn	55	**1063.838**	ug/L	1.351	1559699	2.685
	Fe	57	**15969.987**	ug/L	1.360	459225	0.788
	Co	59	**3.030**	ug/L	1.010	3350	0.006
	Ni	60	**9.270**	ug/L	2.910	2119	0.004
	Cu	63		ug/L		4420	0.007
	Cu	65	**9.189**	ug/L	1.880	2196	0.004
	Zn	66	**165.432**	ug/L	0.047	23694	0.376
	Zn	67		ug/L		5990	0.041
	Zn	68		ug/L		17571	0.276
>	Ge	74		ug/L		62469	62469.271
	As	75	**3.747**	ug/L	13.620	633	0.010
	Se	77		ug/L		797	-0.005
	Se	82	**1.400**	ug/L	38.835	9	0.000
	Kr	83		ug/L		57	0.000
	Sr	88	**13.607**	ug/L	0.807	24929	0.820
	Y	89		ug/L		268649	8.858
	Ag	107	**0.238**	ug/L	10.623	177	0.005
	Cd	111	**1.394**	ug/L	13.899	229	0.007
	Cd	114		ug/L		63	0.002
>	In	115		ug/L		30326	30325.922
	Sn	120	**1.711**	ug/L	0.904	1374	0.038
	Sb	121	**-0.019**	ug/L	190.792	172	-0.000
	Sb	123		ug/L		140	0.000
	Ba	135		ug/L		11246	0.303
	Ba	137	**75.390**	ug/L	0.827	19832	0.535
	Ho	165		ug/L		9703	0.262
>	Lu	175		ug/L		37072	37072.411
	Tl	205	**0.230**	ug/L	6.786	725	0.007
	Pb	208	**17.090**	ug/L	0.701	29536	0.762
	Bi	209		ug/L		320	0.006
	U	238	**2.688**	ug/L	2.288	4469	0.120

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		90.2			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		85.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		89.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		94.8			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 11:12:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 6.136

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.105**	ug/L	4.228	18770	0.030
	Be	9	**50.152**	ug/L	1.168	6310	0.010
	B	11	**90.064**	ug/L	2.002	10892	0.016
	Na	23	**4992.668**	ug/L	3.383	6057932	9.829
	Mg	24	**4745.065**	ug/L	1.047	3974598	6.483
	Al	27	**4558.585**	ug/L	1.351	5701662	9.300
	P	31	**4934.038**	ug/L	1.451	321515	0.519
	K	39	**4855.177**	ug/L	5.575	6567230	10.308
	Ca	43	**4950.340**	ug/L	1.985	13394	0.022
>	Sc	45		ug/L		612883	612883.299
	V	51	**49.993**	ug/L	0.390	70343	0.109
	Cr	52	**51.512**	ug/L	0.213	57234	0.092
	Cr	53		ug/L		36121	0.004
	Mn	55	**49.117**	ug/L	0.578	76483	0.124
	Fe	57	**5015.470**	ug/L	1.020	153547	0.247
	Co	59	**50.954**	ug/L	0.909	57722	0.094
	Ni	60	**51.534**	ug/L	1.267	12084	0.020
	Cu	63		ug/L		25628	0.041
	Cu	65	**48.988**	ug/L	2.286	12150	0.020
	Zn	66	**51.304**	ug/L	2.217	8135	0.116
	Zn	67		ug/L		4291	0.008
	Zn	68		ug/L		6094	0.084
>	Ge	74		ug/L		67700	67699.759
	As	75	**48.065**	ug/L	1.914	8895	0.132
	Se	77		ug/L		1887	0.010
	Se	82	**49.152**	ug/L	2.124	801	0.012
	Kr	83		ug/L		35	0.000
	Sr	88	**50.778**	ug/L	2.633	96243	3.062
	Y	89		ug/L		44	0.001
	Ag	107	**49.586**	ug/L	2.498	35943	1.144
	Cd	111	**53.543**	ug/L	1.622	8836	0.281
	Cd	114		ug/L		19973	0.635
>	In	115		ug/L		31422	31421.803
	Sn	120	**48.638**	ug/L	1.839	33779	1.067
	Sb	121	**47.692**	ug/L	6.962	28068	0.888
	Sb	123		ug/L		21501	0.680
	Ba	135		ug/L		7435	0.214
	Ba	137	**52.758**	ug/L	1.785	13022	0.374
	Ho	165		ug/L		8	0.000
>	Lu	175		ug/L		34777	34776.961
	Tl	205	**48.321**	ug/L	2.434	52866	1.508
	Pb	208	**51.787**	ug/L	0.450	81474	2.308
	Bi	209		ug/L		59	-0.000
	U	238	**53.964**	ug/L	0.555	83547	2.401

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	104.209				
	Be	9	100.304				
	B	11	90.064				
	Na	23	99.853				
	Mg	24	94.901				
	Al	27	90.269				
	P	31	98.681				
	K	39	97.104				
	Ca	43	99.007				
>	Sc	45		95.1			
	V	51	99.986				
	Cr	52	103.025				
	Cr	53					
	Mn	55	98.234				
	Fe	57	100.309				
	Co	59	101.907				
	Ni	60	103.068				
	Cu	63					
	Cu	65	97.977				
	Zn	66	102.609				
	Zn	67					
	Zn	68					
>	Ge	74		92.4			
	As	75	96.131				
	Se	77					
	Se	82	98.303				
	Kr	83					
	Sr	88	101.557				
	Y	89					
	Ag	107	99.171				
	Cd	111	107.086				
	Cd	114					
>	In	115		92.6			
	Sn	120	97.277				
	Sb	121	95.384				
	Sb	123					
	Ba	135					
	Ba	137	105.516				
	Ho	165					
>	Lu	175		89.0			
	Tl	205	96.642				
	Pb	208	103.574				
	Bi	209					
	U	238	107.929				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 11:17:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\090713\QC Std 7.137

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.133**	ug/L	4.593	50	-0.000
	Be	9	**-0.006**	ug/L	156.653	3	-0.000
	B	11	**-4.896**	ug/L	9.672	548	-0.001
	Na	23	**-21.341**	ug/L	10.492	11004	-0.042
	Mg	24	**0.893**	ug/L	164.279	1667	0.001
	Al	27	**1.957**	ug/L	66.618	3667	0.004
	P	31	**-4.017**	ug/L	17.830	2834	-0.000
	K	39	**2.907**	ug/L	690.616	256303	0.006
	Ca	43	**-12.585**	ug/L	69.028	155	-0.000
>	Sc	45		ug/L		609509	609508.820
	V	51	**-0.737**	ug/L	76.224	2242	-0.002
	Cr	52	**0.138**	ug/L	43.576	1178	0.000
	Cr	53		ug/L		31596	-0.003
	Mn	55	**0.115**	ug/L	33.085	696	0.000
	Fe	57	**2.489**	ug/L	56.295	2007	0.000
	Co	59	**0.005**	ug/L	235.701	114	0.000
	Ni	60	**-0.134**	ug/L	27.939	45	-0.000
	Cu	63		ug/L		141	-0.000
	Cu	65	**-0.048**	ug/L	43.763	33	-0.000
	Zn	66	**-0.157**	ug/L	83.301	229	-0.000
	Zn	67		ug/L		3121	-0.010
	Zn	68		ug/L		320	-0.001
>	Ge	74		ug/L		68216	68215.516
	As	75	**0.086**	ug/L	600.710	8	0.000
	Se	77		ug/L		1308	0.001
	Se	82	**0.622**	ug/L	10.076	-3	0.000
	Kr	83		ug/L		27	-0.000
	Sr	88	**0.007**	ug/L	35.414	62	0.000
	Y	89		ug/L		26	0.000
	Ag	107	**0.006**	ug/L	93.721	16	0.000
	Cd	111	**0.002**	ug/L	525.506	8	0.000
	Cd	114		ug/L		19	0.000
>	In	115		ug/L		31612	31612.474
	Sn	120	**0.068**	ug/L	11.253	292	0.001
	Sb	121	**0.467**	ug/L	27.061	465	0.009
	Sb	123		ug/L		360	0.007
	Ba	135		ug/L		6	0.000
	Ba	137	**-0.012**	ug/L	106.400	9	-0.000
	Ho	165		ug/L		10	0.000
>	Lu	175		ug/L		35080	35080.040
	Tl	205	**0.052**	ug/L	93.873	491	0.002
	Pb	208	**-0.173**	ug/L	15.958	963	-0.008
	Bi	209		ug/L		56	-0.001
	U	238	**0.025**	ug/L	29.164	71	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		94.6			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		93.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		89.7			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, July 14, 2009 19:53:01
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\090704\Sample.062
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 35
Current Dead Time (ns): 35
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	820.4	820.424	38.923	4.7
	Mg	24.0	13528.4	13528.403	144.156	1.1
	Co	58.9	20541.2	20541.160	298.001	1.5
	Rh	102.9	32961.2	32961.187	455.921	1.4
	In	114.9	36375.7	36375.658	432.887	1.2
	Pb	208.0	16323.7	16323.722	232.178	1.4
⌈>	Ba	137.9	31346.3	31346.326	459.318	1.5
⌊	Ba++	69.0	1245.3	0.040	0.000	1.2
⌈>	Ce	139.9	42282.1	42282.081	197.657	0.5
⌊	CeO	155.9	884.0	0.021	0.000	2.0
	Bkgd	220.0	4.3	4.300	1.441	33.5

Current Optimization File Data

Current Value	Description
0.86	Nebulizer Gas Flow
6.50	Lens Voltage
1450.00	ICP RF Power
-1634.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
35.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	9.3	2341.9
Co	59	25	10.5	32482.6
In	115	25	12.5	43915.1

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	587	2080	0.616
Be	9.0	9.0	2043	2080	0.614
Mg	24.0	24.0	5700	2120	0.603
Mg	25.0	25.0	5922	2080	0.689
Mg	26.0	26.1	6167	2120	0.663
Co	58.9	58.9	14167	2170	0.630
Rh	102.9	102.9	24872	2230	0.697
In	114.9	114.8	27784	2260	0.707
Ce	139.9	139.9	33862	2280	0.775
Pb	206.0	206.0	49936	2420	0.660
Pb	207.0	207.0	50183	2385	0.734
Pb	208.0	208.0	50439	2430	0.738
U	238.1	238.1	57737	2470	0.720

Report Date/Time: Tuesday, July 14, 2009 19:50:13

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, July 14, 2009 22:24:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Blank.098

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		ug/L		657008	
	Ni	60		ug/L		199	
>	Ge	74		ug/L		139642	
	As	75		ug/L		433	
	Se	77		ug/L		4579	
	Se	82		ug/L		-30	
	Kr	83		ug/L		75	
>	Lu	175		ug/L		62258	
	Tl	205		ug/L		612	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45					
⌊	Ni	60					
⌈>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175					
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, July 14, 2009 22:28:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Standard 1.099

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		625204	625203.538
⌊	Ni	60	10.000	ug/L	2.103	5180	0.008
⌈>	Ge	74		ug/L		138863	138862.562
|	As	75	10.000	ug/L	7.356	4250	0.028
|	Se	77		ug/L		4993	0.003
|	Se	82	10.000	ug/L	2.294	273	0.002
⌊	Kr	83		ug/L		89	0.000
⌈>	Lu	175		ug/L		62108	62108.009
⌊	Tl	205	10.000	ug/L	1.705	21724	0.340

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45					
⌊	Ni	60					
⌈>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175					
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, July 14, 2009 22:32:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\Standard 2.100

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		625395	625394.863
⌊	Ni	60	**99.981**	**ug/L**	6.692	49086	0.078
⌈>	Ge	74		**ug/L**		138384	138383.549
|	As	75	**100.050**	**ug/L**	2.493	40530	0.290
|	Se	77		**ug/L**		7887	0.024
|	Se	82	**100.049**	**ug/L**	2.656	3149	0.023
⌊	Kr	83		**ug/L**		84	0.000
⌈>	Lu	175		**ug/L**		61801	61800.677
⌊	Tl	205	**99.992**	**ug/L**	1.819	209020	3.372

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, July 14, 2009 22:36:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 1.101

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		621903	621902.817
⌊	Ni	60	**53.641**	**ug/L**	6.065	26280	0.042
⌈>	Ge	74		**ug/L**		137728	137727.518
|	As	75	**49.430**	**ug/L**	2.066	20142	0.143
|	Se	77		**ug/L**		6835	0.017
|	Se	82	**49.144**	**ug/L**	2.595	1524	0.011
⌊	Kr	83		**ug/L**		86	0.000
⌈>	Lu	175		**ug/L**		62219	62218.898
⌊	Tl	205	**50.970**	**ug/L**	2.434	107526	1.719

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		94.7			
⌊	Ni	60	107.283				
⌈>	Ge	74		98.6			
|	As	75	98.859				
|	Se	77					
|	Se	82	98.288				
⌊	Kr	83					
⌈>	Lu	175		99.9			
⌊	Tl	205	101.940				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, July 14, 2009 22:40:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 2.102

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		ug/L		638028	638028.154
	Ni	60	0.021	ug/L	15.899	204	0.000
>	Ge	74		ug/L		138914	138913.830
	As	75	0.514	ug/L	100.192	640	0.001
	Se	77		ug/L		5620	0.008
	Se	82	0.081	ug/L	231.553	-27	0.000
	Kr	83		ug/L		79	0.000
>	Lu	175		ug/L		61573	61572.703
	Tl	205	0.030	ug/L	26.830	668	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		97.1			
⌊	Ni	60					
⌈>	Ge	74		99.5			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		98.9			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, July 14, 2009 22:44:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 3.103

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		672410	672409.502
|	Ni	60	**1.935**	**ug/L**	3.900	1222	0.002
⌈>	Ge	74		**ug/L**		139193	139192.553
|	As	75	**6.170**	**ug/L**	9.997	2919	0.018
|	Se	77		**ug/L**		5443	0.006
|	Se	82	**5.039**	**ug/L**	10.843	131	0.001
|	Kr	83		**ug/L**		71	-0.000
⌈>	Lu	175		**ug/L**		62075	62074.939
|	Tl	205	**1.043**	**ug/L**	4.211	2792	0.035

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		102.3			
⌊	Ni	60	96.758				
⌈>	Ge	74		99.7			
|	As	75	123.408				
|	Se	77					
|	Se	82	100.772				
⌊	Kr	83					
⌈>	Lu	175		99.7			
⌊	Tl	205	104.270				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, July 14, 2009 22:48:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnlsetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 4.104

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		593709	593709.396
	Ni	60	**4.248**	**ug/L**	0.888	2155	0.003
>	Ge	74		**ug/L**		126707	126706.888
	As	75	**2.085**	**ug/L**	32.591	1155	0.006
	Se	77		**ug/L**		6543	0.019
	Se	82	**-1.091**	**ug/L**	36.458	-59	-0.000
	Kr	83		**ug/L**		137	0.001
>	Lu	175		**ug/L**		59433	59432.644
	Tl	205	**-0.000**	**ug/L**	2029.393	584	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		90.4			
⌊	Ni	60	157.343				
⌈>	Ge	74		90.7			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		95.5			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, July 14, 2009 22:52:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 5.105

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		581319	581319.085
⌊	Ni	60	**22.668**	**ug/L**	1.325	10497	0.018
⌈>	Ge	74		**ug/L**		125137	125136.997
|	As	75	**22.580**	**ug/L**	4.145	8572	0.065
|	Se	77		**ug/L**		6637	0.020
|	Se	82	**20.745**	**ug/L**	2.965	569	0.005
⌊	Kr	83		**ug/L**		129	0.000
⌈>	Lu	175		**ug/L**		59386	59385.775
⌊	Tl	205	**17.962**	**ug/L**	0.466	36559	0.606

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		88.5			
⌊	Ni	60	99.860				
⌈>	Ge	74		89.6			
|	As	75	112.901				
|	Se	77					
|	Se	82	103.726				
⌊	Kr	83					
⌈>	Lu	175		95.4			
⌊	Tl	205	89.811				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 22:56:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.106

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		623646	623645.642
	Ni	60	**53.457**	**ug/L**	2.546	26291	0.042
>	Ge	74		**ug/L**		135006	135006.379
	As	75	**48.647**	**ug/L**	1.214	19448	0.141
	Se	77		**ug/L**		7079	0.020
	Se	82	**50.626**	**ug/L**	1.623	1540	0.012
	Kr	83		**ug/L**		74	0.000
>	Lu	175		**ug/L**		60927	60926.599
	Tl	205	**49.647**	**ug/L**	2.083	102595	1.674

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		94.9			
⌊	Ni	60	106.914				
⌈>	Ge	74		96.7			
|	As	75	97.294				
|	Se	77					
|	Se	82	101.253				
⌊	Kr	83					
⌈>	Lu	175		97.9			
⌊	Tl	205	99.294				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 23:00:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.107

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		623407	623407.475
⌊	Ni	60	-0.024	ug/L	223.586	177	-0.000
⌈>	Ge	74		ug/L		137165	137164.983
|	As	75	0.403	ug/L	199.518	587	0.001
|	Se	77		ug/L		6289	0.013
|	Se	82	-0.087	ug/L	570.190	-32	-0.000
⌊	Kr	83		ug/L		80	0.000
⌈>	Lu	175		ug/L		61198	61198.427
⌊	Tl	205	0.007	ug/L	188.729	616	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		94.9			
	Ni	60					
>	Ge	74		98.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		98.3			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 23:32:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.115

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		639620	639619.673
	Ni	60	**50.965**	**ug/L**	1.773	25729	0.040
>	Ge	74		**ug/L**		132949	132948.783
	As	75	**49.172**	**ug/L**	2.618	19350	0.142
	Se	77		**ug/L**		6005	0.012
	Se	82	**51.118**	**ug/L**	2.412	1531	0.012
	Kr	83		**ug/L**		78	0.000
>	Lu	175		**ug/L**		61428	61428.114
	Tl	205	**47.386**	**ug/L**	1.524	98782	1.598

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		97.4			
⌊	Ni	60	101.929				
⌈>	Ge	74		95.2			
|	As	75	98.344				
|	Se	77					
|	Se	82	102.235				
⌊	Kr	83					
⌈>	Lu	175		98.7			
⌊	Tl	205	94.771				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 23:36:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.116

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		665749	665749.038
⌊	Ni	60	**0.040**	ug/L	50.394	222	0.000
⌈>	Ge	74		ug/L		137288	137288.069
|	As	75	**0.679**	ug/L	215.234	695	0.002
|	Se	77		ug/L		4997	0.004
|	Se	82	**0.132**	ug/L	389.412	-25	0.000
⌊	Kr	83		ug/L		74	0.000
⌈>	Lu	175		ug/L		61419	61418.742
⌊	Tl	205	**0.127**	ug/L	11.783	867	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		101.3			
	Ni	60					
>	Ge	74		98.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		98.7			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 15, 2009 00:00:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.122

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		664694	664694.302
	Ni	60	**48.496**	**ug/L**	3.407	25441	0.038
>	Ge	74		**ug/L**		129524	129523.731
	As	75	**48.978**	**ug/L**	2.888	18775	0.142
	Se	77		**ug/L**		5593	0.010
	Se	82	**52.232**	**ug/L**	1.816	1525	0.012
	Kr	83		**ug/L**		79	0.000
>	Lu	175		**ug/L**		60100	60099.823
	Tl	205	**48.249**	**ug/L**	1.863	98382	1.627

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		101.2			
	Ni	60	96.992				
>	Ge	74		92.8			
	As	75	97.955				
	Se	77					
	Se	82	104.465				
	Kr	83					
>	Lu	175		96.5			
	Tl	205	96.498				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 15, 2009 00:04:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.123

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		657563	657563.488
⌊	Ni	60	**0.065**	**ug/L**	158.866	232	0.000
⌈>	Ge	74		**ug/L**		134753	134752.611
|	As	75	**0.709**	**ug/L**	53.863	695	0.002
|	Se	77		**ug/L**		4604	0.001
|	Se	82	**-0.277**	**ug/L**	244.659	-37	-0.000
⌊	Kr	83		**ug/L**		86	0.000
⌈>	Lu	175		**ug/L**		60276	60275.942
⌊	Tl	205	**0.133**	**ug/L**	7.473	863	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		100.1			
⌊	Ni	60					
⌈>	Ge	74		96.5			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		96.8			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873991
Sample Date/Time: Wednesday, July 15, 2009 00:08:29
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201873991.124

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		683081	683080.532
⌊	Ni	60	**0.124**	**ug/L**	37.178	272	0.000
⌈>	Ge	74		**ug/L**		138946	138946.211
|	As	75	**0.003**	**ug/L**	21391.400	430	0.000
|	Se	77		**ug/L**		3383	-0.008
|	Se	82	**0.138**	**ug/L**	162.778	-25	0.000
⌊	Kr	83		**ug/L**		78	0.000
⌈>	Lu	175		**ug/L**		63541	63540.976
⌊	Tl	205	**0.199**	**ug/L**	6.958	1051	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		104.0			
⌊	Ni	60					
⌈>	Ge	74		99.5			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		102.1			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873992
Sample Date/Time: Wednesday, July 15, 2009 00:12:30
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 882366|40|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201873992.125

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		ug/L		647126	647126.150
	Ni	60	**28.712**	ug/L	4.682	14737	0.022
>	Ge	74		ug/L		138325	138325.419
	As	75	**70.627**	ug/L	1.005	28730	0.205
	Se	77		ug/L		5784	0.009
	Se	82	**50.432**	ug/L	2.666	1571	0.012
	Kr	83		ug/L		79	0.000
>	Lu	175		ug/L		62593	62593.138
	Tl	205	**55.831**	ug/L	3.582	118481	1.883

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		98.5			
	Ni	60					
>	Ge	74		99.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.5			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232754001
Sample Date/Time: Wednesday, July 15, 2009 00:16:31
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\232754001.126

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		689954	689954.259
⌊	Ni	60	**9.990**	**ug/L**	1.939	5607	0.008
⌈>	Ge	74		**ug/L**		134930	134929.609
|	As	75	**4.612**	**ug/L**	8.184	2223	0.013
|	Se	77		**ug/L**		3182	-0.009
|	Se	82	**1.397**	**ug/L**	41.189	14	0.000
⌊	Kr	83		**ug/L**		151	0.001
⌈>	Lu	175		**ug/L**		68338	68337.775
⌊	Tl	205	**0.658**	**ug/L**	0.518	2189	0.022

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		105.0			
	Ni	60					
>	Ge	74		96.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		109.8			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873993
Sample Date/Time: Wednesday, July 15, 2009 00:20:32
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201873993.127

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		717875	717875.352
⌊	Ni	60	**20.873**	ug/L	5.623	11934	0.016
⌈>	Ge	74		ug/L		134645	134645.266
|	As	75	**7.164**	ug/L	5.898	3212	0.021
|	Se	77		ug/L		3226	-0.009
|	Se	82	**2.929**	ug/L	9.617	62	0.001
⌊	Kr	83		ug/L		195	0.001
⌈>	Lu	175		ug/L		73411	73410.921
⌊	Tl	205	**0.564**	ug/L	3.504	2119	0.019

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		109.3			
⌊	Ni	60					
⌈>	Ge	74		96.4			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		117.9			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873994
Sample Date/Time: Wednesday, July 15, 2009 00:24:33
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201873994.128

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		689111	689110.866
	Ni	60	**33.825**	**ug/L**	0.715	18470	0.026
>	Ge	74		**ug/L**		134889	134888.873
	As	75	**41.796**	**ug/L**	0.930	16753	0.121
	Se	77		**ug/L**		3153	-0.009
	Se	82	**10.204**	**ug/L**	5.693	287	0.002
	Kr	83		**ug/L**		147	0.001
>	Lu	175		**ug/L**		69317	69316.789
	Tl	205	**42.325**	**ug/L**	1.900	99626	1.427

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		104.9			
⌊	Ni	60					
⌈>	Ge	74		96.6			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		111.3			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873996
Sample Date/Time: Wednesday, July 15, 2009 00:28:34
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201873996.129

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		ug/L		688354	688354.335
	Ni	60	**30.922**	ug/L	2.062	16881	0.024
>	Ge	74		ug/L		133530	133529.848
	As	75	**37.852**	ug/L	3.933	15055	0.110
	Se	77		ug/L		3112	-0.009
	Se	82	**9.297**	ug/L	11.281	256	0.002
	Kr	83		ug/L		139	0.001
>	Lu	175		ug/L		68774	68774.180
	Tl	205	**39.703**	ug/L	1.764	92776	1.339

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		104.8			
⌊	Ni	60					
⌈>	Ge	74		95.6			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		110.5			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1201873995
Sample Date/Time: Wednesday, July 15, 2009 00:32:36
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 882366|10|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\1201873995.130

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		658948	658947.661
|	Ni	60	**2.054**	**ug/L**	6.649	1259	0.002
⌈>	Ge	74		**ug/L**		136245	136245.280
|	As	75	**0.958**	**ug/L**	133.836	801	0.003
|	Se	77		**ug/L**		3534	-0.007
|	Se	82	**0.449**	**ug/L**	54.183	-15	0.000
|	Kr	83		**ug/L**		88	0.000
⌈>	Lu	175		**ug/L**		64097	64096.788
|	Tl	205	**0.201**	**ug/L**	7.282	1064	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		100.3			
	Ni	60					
>	Ge	74		97.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		103.0			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232754002
Sample Date/Time: Wednesday, July 15, 2009 00:36:37
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\232754002.131

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		**ug/L**		692804	692803.863
⌊	Ni	60	**12.232**	**ug/L**	2.244	6848	0.010
⌈>	Ge	74		**ug/L**		133847	133847.275
|	As	75	**4.725**	**ug/L**	8.714	2248	0.014
|	Se	77		**ug/L**		2889	-0.011
|	Se	82	**1.965**	**ug/L**	16.527	32	0.000
⌊	Kr	83		**ug/L**		142	0.001
⌈>	Lu	175		**ug/L**		68610	68610.068
⌊	Tl	205	**0.442**	**ug/L**	6.937	1697	0.015

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈>	Sc	45		105.4			
⌊	Ni	60					
⌈>	Ge	74		95.9			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		110.2			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 232754003
Sample Date/Time: Wednesday, July 15, 2009 00:40:39
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882366|2|rmj
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\232754003.132

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Sc	45		ug/L		692836	692835.914
⌊	Ni	60	**8.699**	ug/L	3.713	4930	0.007
⌈>	Ge	74		ug/L		131572	131571.883
|	As	75	**3.753**	ug/L	20.739	1837	0.011
|	Se	77		ug/L		2661	-0.013
|	Se	82	**1.700**	ug/L	18.725	23	0.000
⌊	Kr	83		ug/L		147	0.001
⌈>	Lu	175		ug/L		68929	68928.620
⌊	Tl	205	**0.359**	ug/L	4.113	1513	0.012

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈>	Sc	45		105.5			
⌊	Ni	60					
⌈>	Ge	74		94.2			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		110.7			
⌊	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 15, 2009 00:44:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 6.133

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		656555	656554.779
	Ni	60	**50.631**	**ug/L**	0.739	26244	0.040
>	Ge	74		**ug/L**		133218	133217.696
	As	75	**49.705**	**ug/L**	0.952	19596	0.144
	Se	77		**ug/L**		5298	0.007
	Se	82	**52.515**	**ug/L**	4.582	1577	0.012
	Kr	83		**ug/L**		82	0.000
>	Lu	175		**ug/L**		61866	61866.388
	Tl	205	**48.610**	**ug/L**	2.255	101996	1.639

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Sc	45		99.9			
	Ni	60	101.262				
>	Ge	74		95.4			
	As	75	99.411				
	Se	77					
	Se	82	105.030				
	Kr	83					
>	Lu	175		99.4			
	Tl	205	97.220				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 15, 2009 00:48:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\asnisetl.mth
Dataset File: c:\elandata\Dataset\090704\QC Std 7.134

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		**ug/L**		662080	662080.263
	Ni	60	**-0.015**	**ug/L**	125.030	192	-0.000
>	Ge	74		**ug/L**		136684	136684.326
	As	75	**0.651**	**ug/L**	25.406	683	0.002
	Se	77		**ug/L**		4319	-0.001
	Se	82	**-0.242**	**ug/L**	241.805	-37	-0.000
	Kr	83		**ug/L**		88	0.000
>	Lu	175		**ug/L**		62402	62401.983
	Tl	205	**0.136**	**ug/L**	10.415	900	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Sc	45		100.8			
	Ni	60					
>	Ge	74		97.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.2			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

==========

Method Name: SOIL
Method Description: 7471A, ILM04 ANALYST JXL1
Element: Hg

Date: 07/16/2009
Technique:FI-MHS
Calibration Type:
Hg, Calc. Intercept : Linear
Wavelength: 253.7 nm
Sample Info Name: 071609S1.SIF Results Data Set Name: 071609S1

==========

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 07/16/2009
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0046	0.0046	09:38:24	No
2			0.0045	0.0045	09:38:59	No
Mean:			0.0045			
SD :			0.0000			
%RSD:			0.8966			

Auto-zero performed.

==========

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 07/16/2009
Sample ID: S0.2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0028	0.0073	09:40:21	No
2			0.0026	0.0072	09:40:56	No
Mean:			0.0027			
SD :			0.0001			
%RSD:			4.5737			

[Hg] Standard number 1 applied. [0.200]
Correlation Coefficient: 1.00000 Slope: 0.01350
Intercept : 0.00000

==========

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 07/16/2009
Sample ID: S0.5

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0067	0.0112	09:42:19	No
2			0.0067	0.0112	09:42:53	No
Mean:			0.0067			
SD :			0.0000			
%RSD:			0.1996			

[Hg] Standard number 2 applied. [0.500]
Correlation Coefficient: 0.99999 Slope: 0.01335
Intercept : 0.00001

==========

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 07/16/2009
Sample ID: S2.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0270	0.0316	09:44:18	No
2			0.0260	0.0306	09:44:52	No
Mean:			0.0265			
SD :			0.0007			
%RSD:			2.5901			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 1.00000 Slope: 0.01325
Intercept : 0.00003

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 07/16/2009
Sample ID: S5.0

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0632	0.0678	09:46:17	No
2			0.0632	0.0677	09:46:52	No
Mean:			0.0632			
SD :			0.0001			
%RSD:			0.1093			

[Hg] Standard number 4 applied. [5.000]
Correlation Coefficient: 0.99980 Slope: 0.01264
Intercept : 0.00036

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 07/16/2009
Sample ID: S10

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1255	0.1301	09:48:18	No
2			0.1196	0.1241	09:48:53	No
Mean:			0.1226			
SD :			0.0042			
%RSD:			3.4318			

[Hg] Standard number 5 applied. [10.00]
Correlation Coefficient: 0.99981 Slope: 0.01226
Intercept : 0.00079

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0045	---	----	----	----
S0.2	0.0027	0.200	0.156	0.0001	4.6
S0.5	0.0067	0.500	0.480	0.0000	0.2
S2.0	0.0265	2.000	2.100	0.0007	2.6
S5.0	0.0632	5.000	5.092	0.0001	0.1
S10	0.1226	10.000	9.936	0.0042	3.4

Correlation Coefficient: 0.99981 Slope: 0.01226 Intercept: 0.0008

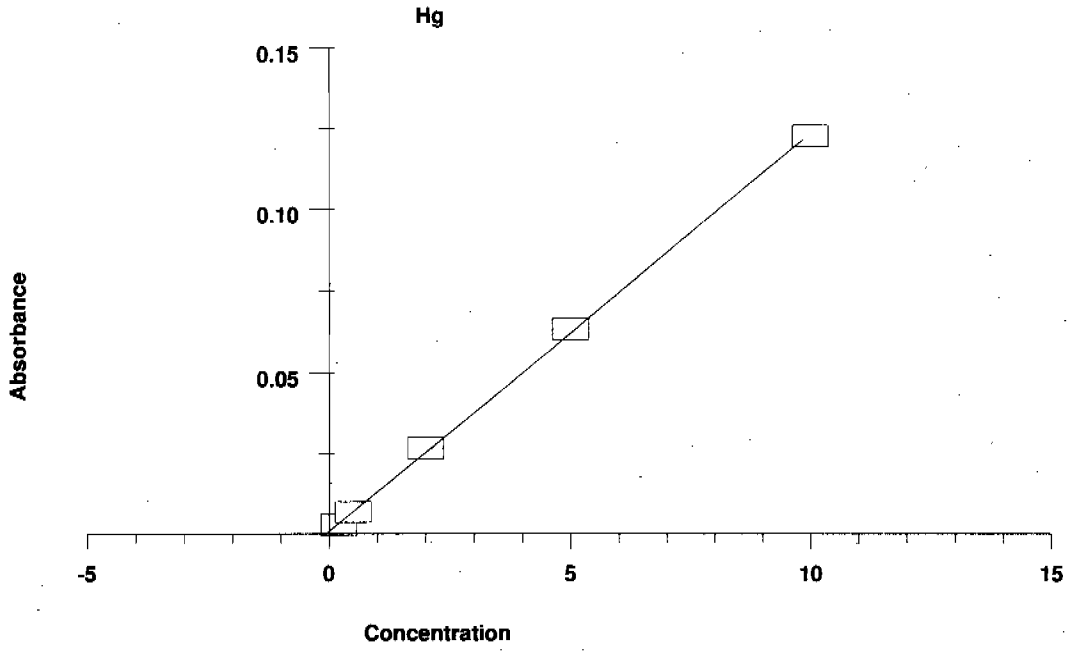

Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 07/16/2009
Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.190	5.190	0.0644	0.0689	09:50:21	No
2	5.020	5.020	0.0623	0.0669	09:50:56	No
Mean:	5.105	5.105	0.0634			
SD :	0.1200	0.1200	0.0015			
%RSD:	2.4	2.4	2.3216			

QC value within specified limits.

Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 07/16/2009
Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.086	-0.086	-0.0003	0.0043	09:52:18	No
2	-0.101	-0.101	-0.0005	0.0041	09:52:53	No
Mean:	-0.094	-0.094	-0.0004			
SD :	0.0108	0.0108	0.0001			
%RSD:	11.5	11.5	37.0270			

QC value within specified limits.

Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 07/16/2009
Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.169	0.169	0.0029	0.0074	09:54:17	No
2	0.151	0.151	0.0026	0.0072	09:54:52	No
Mean:	0.160	0.160	0.0028			
SD :	0.0129	0.0129	0.0002			
%RSD:	8.0	8.0	5.7181			

QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 07/16/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.183	5.183	0.0643	0.0688	09:56:17	No
2	5.284	5.284	0.0656	0.0701	09:56:52	No
Mean:	5.234	5.234	0.0649			
SD :	0.0720	0.0720	0.0009			
%RSD:	1.4	1.4	1.3591			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 07/16/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.051	-0.051	0.0002	0.0047	09:58:20	No
2	-0.049	-0.049	0.0002	0.0047	09:58:55	No
Mean:	-0.050	-0.050	0.0002			
SD :	0.0009	0.0009	0.0000			
%RSD:	1.9	1.9	6.5516			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 07/16/2009
Sample ID: 1201878822|i||884396|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.089	-0.089	-0.0003	0.0042	10:00:21	No
2	-0.101	-0.101	-0.0004	0.0041	10:00:56	No
Mean:	-0.095	-0.095	-0.0004			
SD :	0.0083	0.0083	0.0001			
%RSD:	8.7	8.7	27.3563			

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 07/16/2009
Sample ID: 1201878823|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.786	3.786	0.0472	0.0517	10:02:20	No
2	3.657	3.657	0.0456	0.0501	10:02:55	No
Mean:	3.722	3.722	0.0464			
SD :	0.0912	0.0912	0.0011			
%RSD:	2.5	2.5	2.4102			

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 07/16/2009
Sample ID: 233255001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.045	0.045	0.0013	0.0059	10:04:21	No
2	0.032	0.032	0.0012	0.0057	10:04:56	No
Mean:	0.039	0.039	0.0013			
SD :	0.0094	0.0094	0.0001			
%RSD:	24.4	24.4	9.1304			

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 07/16/2009
Sample ID: 1201878824|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.034	0.034	0.0012	0.0057	10:06:23	No
2	0.029	0.029	0.0011	0.0057	10:06:58	No
Mean:	0.031	0.031	0.0012			
SD :	0.0034	0.0034	0.0000			
%RSD:	11.0	11.0	3.5997			

Element: Hg Seq. No.: 16 AS Loc.: 16 Date: 07/16/2009
Sample ID: 1201878825|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.208	2.208	0.0278	0.0324	10:08:26	No
2	2.147	2.147	0.0271	0.0316	10:09:01	No
Mean:	2.178	2.178	0.0275			
SD :	0.0428	0.0428	0.0005			
%RSD:	2.0	2.0	1.9079			

Element: Hg Seq. No.: 17 AS Loc.: 17 Date: 07/16/2009
Sample ID: 1201878826|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.150	2.150	0.0271	0.0317	10:10:25	No
2	2.104	2.104	0.0266	0.0311	10:11:00	No
Mean:	2.127	2.127	0.0269			
SD :	0.0323	0.0323	0.0004			
%RSD:	1.5	1.5	1.4749			

Element: Hg Seq. No.: 18 AS Loc.: 18 Date: 07/16/2009
Sample ID: 1201878827|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.100	-0.100	-0.0004	0.0041	10:12:21	No
2	-0.123	-0.123	-0.0007	0.0038	10:12:56	No
Mean:	-0.111	-0.111	-0.0006			
SD :	0.0158	0.0158	0.0002			
%RSD:	14.2	14.2	33.5631			

Element: Hg Seq. No.: 19 AS Loc.: 19 Date: 07/16/2009
Sample ID: 1201875311|i||882932|MB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.096	-0.096	-0.0004	0.0042	10:14:17	No
2	-0.107	-0.107	-0.0005	0.0040	10:14:52	No
Mean:	-0.101	-0.101	-0.0005			
SD :	0.0077	0.0077	0.0001			
%RSD:	7.6	7.6	20.7939			

Element: Hg Seq. No.: 20 AS Loc.: 20 Date: 07/16/2009
Sample ID: 1201875312|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.769	3.769	0.0470	0.0515	10:16:14	No
2	3.732	3.732	0.0465	0.0511	10:16:48	No
Mean:	3.751	3.751	0.0468			
SD :	0.0260	0.0260	0.0003			

%RSD: 0.7 0.7 0.6803

==========

Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 07/16/2009
Sample ID: 232744001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.210	0.210	0.0034	0.0079	10:18:11	No
2	0.202	0.202	0.0033	0.0078	10:18:45	No
Mean:	0.206	0.206	0.0033			
SD :	0.0063	0.0063	0.0001			
%RSD:	3.1	3.1	2.3452			

==========

Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 07/16/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.168	5.168	0.0641	0.0687	10:20:10	No
2	5.339	5.339	0.0662	0.0708	10:20:45	No
Mean:	5.253	5.253	0.0652			
SD :	0.1203	0.1203	0.0015			
%RSD:	2.3	2.3	2.2629			

QC value within specified limits.

==========

Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 07/16/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.060	-0.060	0.0001	0.0046	10:22:12	No
2	-0.067	-0.067	0.0000	0.0045	10:22:47	No
Mean:	-0.063	-0.063	0.0000			
SD :	0.0048	0.0048	0.0001			
%RSD:	7.6	7.6	423.5287			

QC value within specified limits.

==========

Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 07/16/2009
Sample ID: 232744002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.403	1.403	0.0180	0.0225	10:24:12	No
2	1.394	1.394	0.0179	0.0224	10:24:47	No
Mean:	1.398	1.398	0.0179			
SD :	0.0058	0.0058	0.0001			
%RSD:	0.4	0.4	0.3955			

==========

Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 07/16/2009
Sample ID: 232744003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.039	0.039	0.0013	0.0058	10:26:10	No
2	0.029	0.029	0.0011	0.0057	10:26:45	No
Mean:	0.034	0.034	0.0012			
SD :	0.0069	0.0069	0.0001			
%RSD:	20.2	20.2	6.9693			

==========

Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 07/16/2009
Sample ID: 232744004|i|||

%RSD: 5.6 5.6 3.7541

==========

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 07/16/2009
Sample ID: 232754001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	0.0005	0.0051	10:40:10	No
2	-0.025	-0.025	0.0005	0.0050	10:40:45	No
Mean:	-0.023	-0.023	0.0005			
SD :	0.0038	0.0038	0.0000			
%RSD:	16.8	16.8	9.1651			

==========

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 07/16/2009
Sample ID: 232754002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.020	0.020	0.0010	0.0056	10:42:12	No
2	0.006	0.006	0.0009	0.0054	10:42:48	No
Mean:	0.013	0.013	0.0009			
SD :	0.0098	0.0098	0.0001			
%RSD:	75.5	75.5	12.6078			

==========

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 07/16/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.097	5.097	0.0633	0.0678	10:44:15	No
2	5.080	5.080	0.0631	0.0676	10:44:50	No
Mean:	5.089	5.089	0.0632			
SD :	0.0123	0.0123	0.0002			
%RSD:	0.2	0.2	0.2390			

QC value within specified limits.

==========

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 07/16/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.078	-0.078	-0.0002	0.0044	10:46:18	No
2	-0.075	-0.075	-0.0001	0.0044	10:46:53	No
Mean:	-0.076	-0.076	-0.0001			
SD :	0.0019	0.0019	0.0000			
%RSD:	2.5	2.5	16.2332			

QC value within specified limits.

==========

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 07/16/2009
Sample ID: 232754003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.032	-0.032	0.0004	0.0049	10:48:17	No
2	-0.048	-0.048	0.0002	0.0047	10:48:51	No
Mean:	-0.040	-0.040	0.0003			
SD :	0.0115	0.0115	0.0001			
%RSD:	28.8	28.8	46.6114			

==========

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 07/16/2009
Sample ID: 232760001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.122	0.122	0.0023	0.0068	10:50:11	No
2	0.122	0.122	0.0023	0.0068	10:50:46	No
Mean:	0.122	0.122	0.0023			
SD :	0.0002	0.0002	0.0000			
%RSD:	0.2	0.2	0.1040			

Element: Hg Seq. No.: 38 AS Loc.: 34 Date: 07/16/2009
Sample ID: 232760002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.120	0.120	0.0023	0.0068	10:52:06	No
2	0.111	0.111	0.0021	0.0067	10:52:40	No
Mean:	0.116	0.116	0.0022			
SD :	0.0067	0.0067	0.0001			
%RSD:	5.8	5.8	3.7418			

Element: Hg Seq. No.: 39 AS Loc.: 35 Date: 07/16/2009
Sample ID: 232760003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.016	0.016	0.0010	0.0055	10:54:02	No
2	0.021	0.021	0.0010	0.0056	10:54:37	No
Mean:	0.019	0.019	0.0010			
SD :	0.0033	0.0033	0.0000			
%RSD:	18.0	18.0	4.0271			

Element: Hg Seq. No.: 40 AS Loc.: 36 Date: 07/16/2009
Sample ID: 232760004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.305	0.305	0.0045	0.0091	10:55:59	No
2	0.294	0.294	0.0044	0.0089	10:56:34	No
Mean:	0.300	0.300	0.0045			
SD :	0.0078	0.0078	0.0001			
%RSD:	2.6	2.6	2.1376			

Element: Hg Seq. No.: 41 AS Loc.: 37 Date: 07/16/2009
Sample ID: 232851001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.063	0.063	0.0016	0.0061	10:57:56	No
2	0.051	0.051	0.0014	0.0060	10:58:31	No
Mean:	0.057	0.057	0.0015			
SD :	0.0083	0.0083	0.0001			
%RSD:	14.6	14.6	6.8536			

Element: Hg Seq. No.: 42 AS Loc.: 38 Date: 07/16/2009
Sample ID: 1201875313|i|||DUP

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.077	0.077	0.0017	0.0063	10:59:53	No
2	0.073	0.073	0.0017	0.0062	11:00:28	No
Mean:	0.075	0.075	0.0017			
SD :	0.0026	0.0026	0.0000			

%RSD:	3.5	3.5	1.8870

Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 07/16/2009
Sample ID: 1201875314|i|||MS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.423	2.423	0.0305	0.0350	11:01:51	No
2	2.405	2.405	0.0303	0.0348	11:02:26	No
Mean:	2.414	2.414	0.0304			
SD :	0.0126	0.0126	0.0002			
%RSD:	0.5	0.5	0.5092			

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 07/16/2009
Sample ID: 1201875323|i|||MSD

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.329	2.329	0.0293	0.0339	11:03:50	No
2	2.328	2.328	0.0293	0.0339	11:04:25	No
Mean:	2.328	2.328	0.0293			
SD :	0.0006	0.0006	0.0000			
%RSD:						

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 07/16/2009
Sample ID: 1201875322|i|5||SDILT

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.128	-0.128	-0.0008	0.0038	11:05:49	No
2	-0.135	-0.135	-0.0009	0.0037	11:06:24	No
Mean:	-0.131	-0.131	-0.0008			
SD :	0.0049	0.0049	0.0001			
%RSD:	3.7	3.7	7.3235			

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 07/16/2009
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	5.138	5.138	0.0638	0.0683	11:07:50	No
2	5.078	5.078	0.0630	0.0676	11:08:24	No
Mean:	5.108	5.108	0.0634			
SD :	0.0431	0.0431	0.0005			
%RSD:	0.8	0.8	0.8325			

QC value within specified limits.

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 07/16/2009
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.100	-0.100	-0.0004	0.0041	11:09:52	No
2	-0.102	-0.102	-0.0005	0.0041	11:10:26	No
Mean:	-0.101	-0.101	-0.0004			
SD :	0.0011	0.0011	0.0000			
%RSD:	1.1	1.1	3.1398			

QC value within specified limits.

Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 07/16/2009
Sample ID: 232851002|i|||

Miscellaneous

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 882365

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873992	UI647733-01	.525	g
MS	1201873994	UI042709-A	.5	mL
MS	1201873994	UI042709-B	.5	mL
MSD	1201873996	UI042709-A	.5	mL
MSD	1201873996	UI042709-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873991		SW846 3050B	07-JUL-2009 14:37	0.513 g	50 mL	97.46589	SOIL
LCS	1201873992		SW846 3050B	07-JUL-2009 14:37	0.525 g	50 mL	95.2381	SOIL
SAMPLE	232754001		SW846 3050B	07-JUL-2009 14:37	0.5 g	50 mL	100	SOIL
DUP	1201873993	232754001	SW846 3050B	07-JUL-2009 14:37	0.516 g	50 mL	96.89922	SOIL
MS	1201873994	232754001	SW846 3050B	07-JUL-2009 14:37	0.5 g	50 mL	100	SOIL
MSD	1201873996	232754001	SW846 3050B	07-JUL-2009 14:37	0.507 g	50 mL	98.61933	SOIL
SDILT	1201873995	232754001	SW846 3050B	07-JUL-2009 14:37	0.5 g	50 mL	100	SOIL
SAMPLE	232754002		SW846 3050B	07-JUL-2009 14:37	0.51 g	50 mL	98.03922	SOIL
SAMPLE	232754003		SW846 3050B	07-JUL-2009 14:37	0.505 g	50 mL	99.0099	SOIL

Reagent/Solvent Lot ID	Amount	Description
1117401-02	1.5 mL	Hydrogen Peroxide 30%
1120667	5 mL	Nitric Acid CONC.

Comments sample#232754001 is a brown, soft soil.

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 882347

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873956	UI652380	.524	g
MS	1201873958	UI090622-01	.25	mL
MS	1201873958	UI090622-06	.25	mL
MSD	1201873960	UI090622-01	.25	mL
MSD	1201873960	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873955		SW846 3050B	07-JUL-2009 14:46	0.51 g	50 mL	98.03922	SOIL
LCS	1201873956		SW846 3050B	07-JUL-2009 14:46	0.524 g	50 mL	95.41985	SOIL
SAMPLE	232754001		SW846 3050B	07-JUL-2009 14:46	0.506 g	50 mL	98.81423	SOIL
DUP	1201873957	232754001	SW846 3050B	07-JUL-2009 14:46	0.512 g	50 mL	97.65625	SOIL
MS	1201873958	232754001	SW846 3050B	07-JUL-2009 14:46	0.509 g	50 mL	98.23183	SOIL
MSD	1201873960	232754001	SW846 3050B	07-JUL-2009 14:46	0.51 g	50 mL	98.03922	SOIL
SDILT	1201873959	232754001	SW846 3050B	07-JUL-2009 14:46	0.506 g	50 mL	98.81423	SOIL
SAMPLE	232754002		SW846 3050B	07-JUL-2009 14:46	0.509 g	50 mL	98.23183	SOIL
SAMPLE	232754003		SW846 3050B	07-JUL-2009 14:46	0.508 g	50 mL	98.4252	SOIL

Reagent/Solvent Lot ID	Amount	Description
1143073	10 mL	HYDROCHLORIC ACID
1120667	1.25 mL	Nitric Acid CONC.

Comments sample#232754001 is a brown, soft soil.

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 882926

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201875312	UI031809A	.206	g
MS	1201875314	WHG090715-14	.3	mL
MSD	1201875323	WHG090715-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201875311		SW846 7471A Prep	15-JUL-2009 14:15	0.524 g	30 mL	57.25191	SOIL
LCS	1201875312		SW846 7471A Prep	15-JUL-2009 14:15	0.206 g	30 mL	145.63107	SOIL
SAMPLE	232744001		SW846 7471A Prep	15-JUL-2009 14:15	0.534 g	30 mL	56.17978	SOIL
SAMPLE	232744002		SW846 7471A Prep	15-JUL-2009 14:15	0.538 g	30 mL	55.76208	SOIL
SAMPLE	232744003		SW846 7471A Prep	15-JUL-2009 14:15	0.534 g	30 mL	56.17978	SOIL
SAMPLE	232744004		SW846 7471A Prep	15-JUL-2009 14:15	0.503 g	30 mL	59.64215	SOIL
SAMPLE	232744005		SW846 7471A Prep	15-JUL-2009 14:15	0.515 g	30 mL	58.25243	SOIL
SAMPLE	232744006		SW846 7471A Prep	15-JUL-2009 14:15	0.545 g	30 mL	55.04587	SOIL
SAMPLE	232744007		SW846 7471A Prep	15-JUL-2009 14:15	0.599 g	30 mL	50.08347	SOIL
SAMPLE	232744008		SW846 7471A Prep	15-JUL-2009 14:15	0.563 g	30 mL	53.28597	SOIL
SAMPLE	232751001		SW846 7471A Prep	15-JUL-2009 14:15	0.529 g	30 mL	56.71078	SOIL
SAMPLE	232754001		SW846 7471A Prep	15-JUL-2009 14:15	0.5 g	30 mL	60	SOIL
SAMPLE	232754002		SW846 7471A Prep	15-JUL-2009 14:15	0.517 g	30 mL	58.02708	SOIL
SAMPLE	232754003		SW846 7471A Prep	15-JUL-2009 14:15	0.515 g	30 mL	58.25243	SOIL
SAMPLE	232760001		SW846 7471A Prep	15-JUL-2009 14:15	0.531 g	30 mL	56.49718	SOIL
SAMPLE	232760002		SW846 7471A Prep	15-JUL-2009 14:15	0.509 g	30 mL	58.9391	SOIL
SAMPLE	232760003		SW846 7471A Prep	15-JUL-2009 14:15	0.539 g	30 mL	55.65863	SOIL
SAMPLE	232760004		SW846 7471A Prep	15-JUL-2009 14:15	0.541 g	30 mL	55.45287	SOIL
SAMPLE	232851001		SW846 7471A Prep	15-JUL-2009 14:15	0.571 g	30 mL	52.5394	SOIL
DUP	1201875313	232851001	SW846 7471A Prep	15-JUL-2009 14:15	0.536 g	30 mL	55.97015	SOIL
MS	1201875314	232851001	SW846 7471A Prep	15-JUL-2009 14:15	0.545 g	30 mL	55.04587	SOIL
MSD	1201875323	232851001	SW846 7471A Prep	15-JUL-2009 14:15	0.586 g	30 mL	51.19454	SOIL
SDILT	1201875322	232851001	SW846 7471A Prep	15-JUL-2009 14:15	0.571 g	30 mL	52.5394	SOIL
SAMPLE	232851002		SW846 7471A Prep	15-JUL-2009 14:15	0.567 g	30 mL	52.91005	SOIL

Reagent/Solvent Lot ID	Amount	Description
1127736-A	1.125 mL	Hydrochloric Acid Conc.
1136798-1	.375 mL	NITRIC ACID
1144332-C	7.5 mL	5% KMnO4 solution
1144356-C	2 mL	Hg reducing agent
WHG090715-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG090715-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5

Comments Sample 232851001 is a rocky brown soil.
Digestion Start Date: 15-JUL-09 14:15
Digestion End Date: 15-JUL-09 14:45

Prep LogBook

WHG090715-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG090715-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG090715-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG090715-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
15-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3050B/6020	Solid	LANL
Batch ID:	**Sample Numbers:**		
882366	See Below		

Potentially affected work order(s)(SDG): 232754(09-2536)

Application Issues:

Failed RPD for MS/MSD, or PS/PSD

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed RPD for DUP: QC 1201873993DUP 2. Failed RPD for MS/MSD, or PS/PSD: QC 1201873996MSD 3. Failed Recovery for MSD/PSD: QC 1201873996MSD	The sample and sample duplicate % RPD failed outside the control limits for Be and Ni due to possible sample homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. The matrix spike duplicate failed outside of the control limits for Se due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. The matrix spike and matrix spike duplicate % RPD failed outside of the control limits for Se due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Rose Jenkins 17-JUL-09

Data Validator/Group Leader:

Samantha Jacobs 17-JUL-09

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI042709-A **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI042709-B **Opened:** 27-APR-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 27-APR-09 **Lot Number :** 1015749
Type: Source Material **Expires:** 27-APR-10
Employee: Bryan Davis
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.18 **Opened:** 08-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 09-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Standard Logbook

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L

Analyte	Concentration	Analyte	Concentration
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI647733-01 **Opened:** 02-APR-07 **Amount :** 80 g
Name: ICPMSSOILSRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis
Supplier: ERA
Description: ICPMS Soil LCS (Reference)
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	8270 mg/kg	Antimony	55.8 mg/kg
Arsenic	255 mg/kg	Barium	469 mg/kg
Beryllium	86.4 mg/kg	Boron	138 mg/kg
Cadmium	119 mg/kg	Calcium	3760 mg/kg
Chromium	71.2 mg/kg	Cobalt	79.6 mg/kg
Copper	96.2 mg/kg	Iron	13200 mg/kg
Lead	169 mg/kg	Lithium	8.01 mg/kg
Magnesium	2990 mg/kg	Manganese	364 mg/kg
Mercury	4.18 mg/kg	Molybdenum	79.6 mg/kg
Nickel	101 mg/kg	Phosphorous	752 mg/kg
Potassium	2420 mg/kg	Selenium	171 mg/kg

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Silver	116 mg/kg	Sodium	575 mg/kg
Strontium	144 mg/kg	Thallium	203 mg/kg
Thorium	17.2 mg/kg	Titanium	255 mg/kg
Uranium	2.12 mg/kg	Uranium-235	.0153 mg/kg
Uranium-238	2.105 mg/kg	Vanadium	134 mg/kg
Zinc	202 mg/kg	Zirconium	6.83 mg/kg

Serial ID: UI652380 **Opened:** 02-APR-07 **Amount :** 80 g
Name: METALSOIL7.5SRM **Received:** 02-APR-07 **Lot Number :** D049-540
Type: Source Material **Expires:** 01-APR-10
Employee: Bryan Davis **Verified:** 24-AUG-07
Supplier: ERA
Description: Metals Soil LCS (Reference) 7.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	7294 mg/kg	Antimony	121 mg/kg
Arsenic	257 mg/kg	Barium	475 mg/kg
Beryllium	90 mg/kg	Boron	139 mg/kg
Cadmium	116 mg/kg	Calcium	3720 mg/kg
Chromium	84 mg/kg	Cobalt	83 mg/kg
Copper	105 mg/kg	Iron	19956 mg/kg
Lead	161 mg/kg	Magnesium	2980 mg/kg
Manganese	398 mg/kg	Mercury	4.18 mg/kg
Molybdenum	86 mg/kg	Nickel	101 mg/kg
Phosphorous	743 mg/kg	Potassium	2387 mg/kg
Selenium	173 mg/kg	Silica	2201 mg/kg
Silicon	1029 mg/kg	Silver	133 mg/kg
Sodium	614 mg/kg	Strontium	169 mg/kg
Sulfur	206 mg/kg	Thallium	202 mg/kg
Tin	105 mg/kg	Titanium	382 mg/kg
Vanadium	166 mg/kg	Zinc	195 mg/kg

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090715-01 **Opened:** 15-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 15-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 16-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: IHG090715-02 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 15-JUL-09
Type: Intermediate **Expires:** 16-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090715-07 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1118290
Name: MHGWORKCALS0.2CRA **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG090715-08 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS0.5 **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG090715-09 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS2.0 **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Standard Logbook

Serial ID: WHG090715-10 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS5.0CCV **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090715-11 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCALS10.0 **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG090715-12 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKS5.0ICV **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090715-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG090715-14 **Opened:** 15-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGSOILMSSPIKE **Received:** 15-JUL-09
Type: Working **Expires:** 21-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: WI090708-42 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090708-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090708-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090708-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Serial ID: WI090708-43 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Standard Logbook

Serial ID: WI090708-44 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1150990
Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Serial ID: WI090708-45 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1150990
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090708-46 **Opened:** 08-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1150990
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090708-47 **Opened:** 08-JUL-09 **Solvent :** 3%HCL &1%HNO3-1150990
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090713-04AB **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS Cal Standard 10 **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090713-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090713-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090713-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090713-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090713-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090713-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090713-04B **Opened:** 13-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090713-05B **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS090713-06B **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS090713-07B **Opened:** 13-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090713-08B **Opened:** 13-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 13-JUL-09
Type: Working **Expires:** 14-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-04AB **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705

Name: ICPMS Cal Standard 10 **Received:** 14-JUL-09

Type: Working **Expires:** 15-JUL-09

Employee: Rose Jenkins

Supplier: GEL

Description: ICPMS Calibration Standard (10 ppb)

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090714-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090714-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090714-04B **Opened:** 14-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl- 1143705
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS090714-05B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICV **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS090714-06B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS CRDL **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS090714-07B **Opened:** 14-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-08B **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1143705
Name: ICPMS ICSAB **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Standard Logbook

Serial ID: 1117401-02 **Opened:** 01-MAY-09 **Lot Number :** ZU74080998 mL
Name: B-H2O2 **Received:** 01-MAY-09
Type: Reagent/Solvent **Expires:** 01-MAY-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1127736-A **Opened:** 26-MAY-09 **Lot Number :** 200831101
Name: B-HCl-MER **Received:** 26-MAY-09
Type: Reagent/Solvent **Expires:** 26-MAY-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl,NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1150990 **Opened:** 06-JUL-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 06-JUL-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 13-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Louise Smith
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1153776 **Opened:** 13-JUL-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 13-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Standard Logbook

Serial ID:	908024-A	**Opened:**	22-DEC-08	**Lot Number :**	48053817
Name:	B-NH2OH.HCl-MER	**Received:**	22-DEC-08		
Type:	Reagent/Solvent	**Expires:**	22-DEC-09		
Employee:	Tara Griffin				
Supplier:	Fisher Scientific				
Description:	Hydroxlyamine Hydrochloride				
Comments:	None				

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2536-1

Sample Analysis

Sample ID	Client ID
232755001	CAMO-09-6636
1201873934	Method Blank (MB) **ICP**
1201873935	Laboratory Control Sample (LCS)
1201873938	232759001(CAMO-09-10026L) Serial Dilution (SD)
1201873936	232759001(CAMO-09-10026D) Sample Duplicate (DUP)
1201873937	232759001(CAMO-09-10026S) Matrix Spike (MS)
1201873972	Method Blank (MB) **ICP-MS**
1201873973	Laboratory Control Sample (LCS)
1201873976	232755001(CAMO-09-6636L) Serial Dilution (SD)
1201873974	232755001(CAMO-09-6636D) Sample Duplicate (DUP)
1201873975	232755001(CAMO-09-6636S) Matrix Spike (MS)
1201878713	Method Blank (MB) **CVAA**
1201878714	Laboratory Control Sample (LCS)
1201878717	232759001(CAMO-09-10026L) Serial Dilution (SD)
1201878715	232759001(CAMO-09-10026D) Sample Duplicate (DUP)
1201878716	232759001(CAMO-09-10026S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Method/Analysis Information

Analytical Batch:	882339, 882357 and 884332
Prep Batch :	882338, 882356 and 884331
Standard Operating Procedures:	GL-MA-E-013 REV# 19, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 19 and GL-MA-E-010 REV# 22
Analytical Method:	SW846 3005/6010B, SW846 3005/6020 and SW846 7470A
Prep Method :	SW846 3005A and SW846 7470A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria for all applicable analytes.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 232759001 (CAMO-09-10026)-ICP and CVAA and 232755001 (CAMO-09-6636)-ICP-MS.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of thallium as indicated by the "N" qualifier. I

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Nonconformance Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: NCR ID 711567. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Nick Robert Elmore **Date:** 7-21-09

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 09-2536-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 232755001 **BASIS:** As Received **DATE COLLECTED** 30-JUN-09

CLIENT ID: CAMO-09-6636 **LEVEL:** Low **DATE RECEIVED** 02-JUL-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	PRB	07/15/09 04:08	090714-4	882357
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	PRB	07/14/09 18:42	090714-2	882357
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	PRB	07/14/09 18:42	090714-2	882357
7440-70-2	Calcium	200	ug/L	U	50	200	200	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	07/08/09 20:04	070809A-1	882339
7439-89-6	Iron	100	ug/L	U	30	100	100	1	P	HSC	07/08/09 20:04	070809A-1	882339
7439-92-1	Lead	2	ug/L	U	0.5	2	2	1	MS	PRB	07/14/09 18:42	090714-2	882357
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	07/08/09 20:04	070809A-1	882339
7439-96-5	Manganese	1.21	ug/L	J	1	5	5	1	MS	PRB	07/14/09 18:42	090714-2	882357
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	07/15/09 10:45	071509W2-5	884332
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-09-7	Potassium	234	ug/L		50	150	150	1	P	HSC	07/08/09 20:04	070809A-1	882339
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-23-5	Sodium	182	ug/L	J	100	300	300	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-28-0	Thallium	1	ug/L	UN	0.3	1	1	1	MS	PRB	07/14/09 18:42	090714-2	882357
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	07/08/09 20:04	070809A-1	882339
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	07/08/09 20:04	070809A-1	882339

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
882339	882338	SW846 3005A	50	mL	50	mL	07/07/09	BXA1
882357	882356	SW846 3005A	50	mL	50	mL	07/07/09	BXA1
884332	884331	SW846 7470A Prep	20	mL	20	mL	07/14/09	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Aluminum	5000	ug/L	5000	ug/L	100	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Arsenic	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Barium	539	ug/L	500	ug/L	107.8	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Chromium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Cobalt	476	ug/L	500	ug/L	95.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Copper	527	ug/L	500	ug/L	105.3	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Iron	5150	ug/L	5000	ug/L	103	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Magnesium	5270	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Nickel	537	ug/L	500	ug/L	107.4	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Potassium	2510	ug/L	2500	ug/L	100.4	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Selenium	2620	ug/L	2500	ug/L	104.9	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Silver	256	ug/L	250	ug/L	102.4	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Sodium	2550	ug/L	2500	ug/L	101.9	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Vanadium	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 - 110.0	P	08-JUL-09 10:01	070809A-1
	Beryllium	49.7	ug/L	50	ug/L	99.4	90.0 - 110.0	MS	14-JUL-09 17:28	090714-2
	Cadmium	52.4	ug/L	50	ug/L	104.8	90.0 - 110.0	MS	14-JUL-09 17:28	090714-2
	Lead	50.2	ug/L	50	ug/L	100.4	90.0 - 110.0	MS	14-JUL-09 17:28	090714-2
	Manganese	48.3	ug/L	50	ug/L	96.5	90.0 - 110.0	MS	14-JUL-09 17:28	090714-2
	Thallium	49.7	ug/L	50	ug/L	99.4	90.0 - 110.0	MS	14-JUL-09 17:28	090714-2
	Antimony	52	ug/L	50	ug/L	103.9	90.0 - 110.0	MS	15-JUL-09 03:27	090714-4
	Mercury	5.02	ug/L	5	ug/L	100.4	90.0 - 110.0	AV	15-JUL-09 10:18	071509W2-5
CCV01										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Arsenic	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Barium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	08-JUL-09 11:03	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Iron	5040	ug/L	5000	ug/L	100.9	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Magnesium	4930	ug/L	5000	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Nickel	490	ug/L	500	ug/L	98	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Potassium	5270	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Selenium	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Sodium	9980	ug/L	10000	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 11:03	070809A-1
	Beryllium	49.9	ug/L	50	ug/L	99.8	90.0 – 110.0	MS	14-JUL-09 17:56	090714-2
	Cadmium	52.3	ug/L	50	ug/L	104.7	90.0 – 110.0	MS	14-JUL-09 17:56	090714-2
	Lead	50.5	ug/L	50	ug/L	101.1	90.0 – 110.0	MS	14-JUL-09 17:56	090714-2
	Manganese	48.2	ug/L	50	ug/L	96.4	90.0 – 110.0	MS	14-JUL-09 17:56	090714-2
	Thallium	49.8	ug/L	50	ug/L	99.6	90.0 – 110.0	MS	14-JUL-09 17:56	090714-2
	Antimony	52.6	ug/L	50	ug/L	105.3	90.0 – 110.0	MS	15-JUL-09 03:47	090714-4
	Mercury	4.87	ug/L	5	ug/L	97.3	80.0 – 120.0	AV	15-JUL-09 10:24	071509W2-5
CCV02										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Arsenic	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Barium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Chromium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Cobalt	485	ug/L	500	ug/L	97	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Copper	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Magnesium	5200	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Nickel	488	ug/L	500	ug/L	97.7	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Selenium	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Sodium	9940	ug/L	10000	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 11:24	070809A-1
	Beryllium	48.5	ug/L	50	ug/L	97	90.0 – 110.0	MS	14-JUL-09 18:14	090714-2
	Cadmium	51.6	ug/L	50	ug/L	103.1	90.0 – 110.0	MS	14-JUL-09 18:14	090714-2
	Lead	50.5	ug/L	50	ug/L	101	90.0 – 110.0	MS	14-JUL-09 18:14	090714-2
	Manganese	48.3	ug/L	50	ug/L	96.6	90.0 – 110.0	MS	14-JUL-09 18:14	090714-2
	Thallium	50	ug/L	50	ug/L	100	90.0 – 110.0	MS	14-JUL-09 18:14	090714-2
	Antimony	53	ug/L	50	ug/L	106	90.0 – 110.0	MS	15-JUL-09 04:28	090714-4
	Mercury	4.64	ug/L	5	ug/L	92.8	80.0 – 120.0	AV	15-JUL-09 10:47	071509W2-5
CCV03										
	Aluminum	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Arsenic	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Cobalt	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Iron	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Nickel	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Potassium	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Selenium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Sodium	10300	ug/L	10000	ug/L	102.9	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 12:37	070809A-1
	Beryllium	50.4	ug/L	50	ug/L	100.7	90.0 – 110.0	MS	14-JUL-09 19:11	090714-2
	Cadmium	51.9	ug/L	50	ug/L	103.8	90.0 – 110.0	MS	14-JUL-09 19:11	090714-2

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Lead	50.3	ug/L	50	ug/L	100.6	90.0 – 110.0	MS	14-JUL-09 19:11	090714-2
	Manganese	49.2	ug/L	50	ug/L	98.5	90.0 – 110.0	MS	14-JUL-09 19:11	090714-2
	Thallium	45.5	ug/L	50	ug/L	91	90.0 – 110.0	MS	14-JUL-09 19:11	090714-2
	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 – 120.0	AV	15-JUL-09 11:06	071509W2-5
CCV04										
	Aluminum	4910	ug/L	5000	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Arsenic	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Copper	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Iron	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Magnesium	5130	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Nickel	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Potassium	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Selenium	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Sodium	10700	ug/L	10000	ug/L	106.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 13:30	070809A-1
CCV05										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Arsenic	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Calcium	4900	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Cobalt	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Iron	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Magnesium	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Nickel	488	ug/L	500	ug/L	97.7	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Selenium	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Silver	501	ug/L	500	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 13:50	070809A-1
CCV06										
	Aluminum	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Arsenic	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Calcium	4980	ug/L	5000	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Magnesium	5080	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Nickel	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Selenium	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Silver	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08-JUL-09 14:46	070809A-1
CCV07										
	Aluminum	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Arsenic	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.3	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Nickel	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Potassium	5110	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Selenium	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Silver	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	08-JUL-09 15:41	070809A-1
CCV08										
	Aluminum	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Arsenic	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Barium	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Calcium	4910	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Copper	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Iron	4940	ug/L	5000	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Magnesium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Nickel	490	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Selenium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Silver	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Sodium	9800	ug/L	10000	ug/L	98	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08-JUL-09 16:43	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV09										
	Aluminum	4880	ug/L	5000	ug/L	97.5	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Arsenic	500	ug/L	500	ug/L	100	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Chromium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Cobalt	488	ug/L	500	ug/L	97.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Copper	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Iron	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Magnesium	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Nickel	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Potassium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Selenium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Silver	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Sodium	9570	ug/L	10000	ug/L	95.8	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
	Zinc	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 17:25	070809A-1
CCV10										
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Arsenic	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Barium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Calcium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Chromium	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Cobalt	482	ug/L	500	ug/L	96.4	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Copper	492	ug/L	500	ug/L	98.5	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Iron	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Magnesium	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Nickel	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Potassium	5090	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Selenium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Silver	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 09-2536-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Sodium	10000	ug/L	10000	ug/L	100	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Vanadium	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
	Zinc	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08-JUL-09 18:26	070809A-1
CCV11										
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Arsenic	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Barium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Calcium	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Iron	4870	ug/L	5000	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Magnesium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Nickel	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Potassium	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Selenium	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Silver	503	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Sodium	9640	ug/L	10000	ug/L	96.5	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
	Zinc	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	08-JUL-09 19:29	070809A-1
CCV12										
	Aluminum	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Arsenic	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Barium	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Calcium	5000	ug/L	5000	ug/L	99.9	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Chromium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Copper	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Iron	5100	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1
	Magnesium	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	08-JUL-09 20:46	070809A-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 09–2536–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Nickel	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Potassium	5230	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Selenium	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Silver	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Sodium	10300	ug/L	10000	ug/L	102.6	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Vanadium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1
	Zinc	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	08–JUL–09 20:46	070809A–1

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 09–2536–1

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS3,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Beryllium	.571	ug/L	.5	ug/L	114.2	70.0 – 130.0	MS	14–JUL–09 17:39	090714–2
	Cadmium	1.03	ug/L	1	ug/L	102.5	70.0 – 130.0	MS	14–JUL–09 17:39	090714–2
	Lead	2.02	ug/L	2	ug/L	101.2	70.0 – 130.0	MS	14–JUL–09 17:39	090714–2
	Manganese	5.28	ug/L	5	ug/L	105.6	70.0 – 130.0	MS	14–JUL–09 17:39	090714–2
	Thallium	1.04	ug/L	1	ug/L	103.7	70.0 – 130.0	MS	14–JUL–09 17:39	090714–2
	Antimony	3	ug/L	3	ug/L	100	70.0 – 130.0	MS	15–JUL–09 03:35	090714–4
	Mercury	.191	ug/L	.2	ug/L	95.5	70.0 – 130.0	AV	15–JUL–09 10:22	071509W2–5
PQL01										
	Aluminum	200	ug/L	200	ug/L	99.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Arsenic	26.6	ug/L	30	ug/L	88.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Barium	5.03	ug/L	5	ug/L	100.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Calcium	198	ug/L	200	ug/L	99	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Chromium	4.84	ug/L	5	ug/L	96.8	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Cobalt	5	ug/L	5	ug/L	100	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Copper	9.77	ug/L	10	ug/L	97.7	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Iron	102	ug/L	100	ug/L	102.1	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Magnesium	326	ug/L	300	ug/L	108.5	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Nickel	5.22	ug/L	5	ug/L	104.3	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Potassium	172	ug/L	150	ug/L	114.5	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Selenium	33.3	ug/L	30	ug/L	111.1	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Silver	5.23	ug/L	5	ug/L	104.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Sodium	281	ug/L	300	ug/L	93.6	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Vanadium	5.27	ug/L	5	ug/L	105.3	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1
	Zinc	9.6	ug/L	10	ug/L	96	70.0 – 130.0	P	08–JUL–09 10:15	070809A–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 09-2536-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 10:08	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 10:08	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 10:08	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 10:08	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 10:08	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 10:08	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 10:08	070809A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	14-JUL-09 17:34	090714-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	14-JUL-09 17:34	090714-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	14-JUL-09 17:34	090714-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	14-JUL-09 17:34	090714-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	14-JUL-09 17:34	090714-2
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	15-JUL-09 03:31	090714-4
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	15-JUL-09 10:20	071509W2-5
CCB01										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 11:10	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 11:10	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 11:10	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2536-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 11:10	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 11:10	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Potassium	146.16	+/-150	J	50.0	150	LIQ	P	08-JUL-09 11:10	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 11:10	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 11:10	070809A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	14-JUL-09 18:02	090714-2
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	14-JUL-09 18:02	090714-2
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	14-JUL-09 18:02	090714-2
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	14-JUL-09 18:02	090714-2
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	14-JUL-09 18:02	090714-2
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	15-JUL-09 03:52	090714-4
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	15-JUL-09 10:26	071509W2-5
CCB02										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 11:31	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 11:31	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 11:31	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 11:31	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 11:31	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 11:31	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 11:31	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2536–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 11:31	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 11:31	070809A–1
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	14–JUL–09 18:19	090714–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	14–JUL–09 18:19	090714–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	14–JUL–09 18:19	090714–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	14–JUL–09 18:19	090714–2
	Thallium	0.3	+/–1	U	0.3	1.0	LIQ	MS	14–JUL–09 18:19	090714–2
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	15–JUL–09 04:32	090714–4
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	15–JUL–09 10:49	071509W2–5
CCB03										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 12:44	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Calcium	62.56	+/–200	J	50.0	200	LIQ	P	08–JUL–09 12:44	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 12:44	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 12:44	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Potassium	65.21	+/–150	J	50.0	150	LIQ	P	08–JUL–09 12:44	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 12:44	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 12:44	070809A–1
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	14–JUL–09 19:17	090714–2
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	14–JUL–09 19:17	090714–2
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	14–JUL–09 19:17	090714–2
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	14–JUL–09 19:17	090714–2
	Thallium	1.03	+/–1		0.3	1.0	LIQ	MS	14–JUL–09 19:17	090714–2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2536–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	15–JUL–09 11:08	071509W2–5
CCB04										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 13:37	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 13:37	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 13:37	070809A–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 13:37	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 13:37	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 13:37	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 13:37	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 13:37	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 13:37	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 13:37	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 13:37	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 13:37	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 13:37	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 13:37	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 13:37	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 13:37	070809A–1
CCB05										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 13:57	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 13:57	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 13:57	070809A–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 13:57	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 13:57	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 13:57	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 13:57	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 13:57	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 13:57	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 13:57	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 13:57	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 13:57	070809A–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2536–1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 13:57	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 13:57	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 13:57	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 13:57	070809A–1
CCB06										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 14:53	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 14:53	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 14:53	070809A–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 14:53	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 14:53	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 14:53	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 14:53	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 14:53	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 14:53	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 14:53	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 14:53	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 14:53	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 14:53	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 14:53	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 14:53	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 14:53	070809A–1
CCB07										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 15:48	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 15:48	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 15:48	070809A–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 15:48	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 15:48	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 15:48	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 15:48	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 15:48	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 15:48	070809A–1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09-2536-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 15:48	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 15:48	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 15:48	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 15:48	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 15:48	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 15:48	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 15:48	070809A-1
CCB08										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 16:50	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 16:50	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 16:50	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 16:50	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 16:50	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 16:50	070809A-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JUL-09 16:50	070809A-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JUL-09 16:50	070809A-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	08-JUL-09 16:50	070809A-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JUL-09 16:50	070809A-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	08-JUL-09 16:50	070809A-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 16:50	070809A-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 16:50	070809A-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JUL-09 16:50	070809A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 16:50	070809A-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JUL-09 16:50	070809A-1
CCB09										
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JUL-09 17:32	070809A-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JUL-09 17:32	070809A-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 17:32	070809A-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JUL-09 17:32	070809A-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 17:32	070809A-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JUL-09 17:32	070809A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 09–2536–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 17:32	070809A–1
	Iron	–34.79	+/–100	J	30.0	100	LIQ	P	08–JUL–09 17:32	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 17:32	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 17:32	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 17:32	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 17:32	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 17:32	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 17:32	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 17:32	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 17:32	070809A–1
CCB10										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 18:33	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 18:33	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 18:33	070809A–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 18:33	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 18:33	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 18:33	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 18:33	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 18:33	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 18:33	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 18:33	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 18:33	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 18:33	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 18:33	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 18:33	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 18:33	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 18:33	070809A–1
CCB11										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 19:36	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 19:36	070809A–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 09–2536–1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 19:36	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 19:36	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 19:36	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 19:36	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 19:36	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 19:36	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 19:36	070809A–1
CCB12										
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JUL–09 20:53	070809A–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JUL–09 20:53	070809A–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JUL–09 20:53	070809A–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JUL–09 20:53	070809A–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JUL–09 20:53	070809A–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JUL–09 20:53	070809A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JUL–09 20:53	070809A–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JUL–09 20:53	070809A–1

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 09-2536-1

Contract: LANL01004

Matrix: WATER

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1201873934								
	Aluminum	68	ug/L	+/-200	U	P	68	200
	Arsenic	5	ug/L	+/-30.0	U	P	5	30
	Barium	1	ug/L	+/-5.0	U	P	1	5
	Calcium	50	ug/L	+/-200	U	P	50	200
	Chromium	1	ug/L	+/-5.0	U	P	1	5
	Cobalt	1	ug/L	+/-5.0	U	P	1	5
	Copper	3	ug/L	+/-10.0	U	P	3	10
	Iron	30	ug/L	+/-100	U	P	30	100
	Magnesium	85	ug/L	+/-300	U	P	85	300
	Nickel	1.5	ug/L	+/-5.0	U	P	1.5	5
	Potassium	50	ug/L	+/-150	U	P	50	150
	Selenium	5	ug/L	+/-30.0	U	P	5	30
	Silver	1	ug/L	+/-5.0	U	P	1	5
	Sodium	100	ug/L	+/-300	U	P	100	300
	Vanadium	1	ug/L	+/-5.0	U	P	1	5
	Zinc	3.3	ug/L	+/-10.0	U	P	3.3	10
1201873972								
	Antimony	0.5	ug/L	+/-2.0	U	MS	0.5	2
	Beryllium	0.1	ug/L	+/-0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/-1.0	U	MS	0.11	1
	Lead	0.5	ug/L	+/-2.0	U	MS	0.5	2
	Manganese	1	ug/L	+/-5.0	U	MS	1	5
	Thallium	0.3	ug/L	+/-1.0	U	MS	0.3	1
1201878713								
	Mercury	0.066	ug/L	+/-0.2	U	AV	0.066	0.2

METALS
–4–
Interference Check Sample

SDG No: 09–2536–1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 – 120.0	08–JUL–09 10:22	070809A–1
	Arsenic	7.68	ug/L					08–JUL–09 10:22	070809A–1
	Barium	1.28	ug/L					08–JUL–09 10:22	070809A–1
	Calcium	470000	ug/L	500000	ug/L	93.9	80.0 – 120.0	08–JUL–09 10:22	070809A–1
	Chromium	0.679	ug/L					08–JUL–09 10:22	070809A–1
	Cobalt	–1.77	ug/L					08–JUL–09 10:22	070809A–1
	Copper	4.61	ug/L					08–JUL–09 10:22	070809A–1
	Iron	185000	ug/L	200000	ug/L	92.3	80.0 – 120.0	08–JUL–09 10:22	070809A–1
	Magnesium	493000	ug/L	500000	ug/L	98.6	80.0 – 120.0	08–JUL–09 10:22	070809A–1
	Nickel	3.99	ug/L					08–JUL–09 10:22	070809A–1
	Potassium	0.032	ug/L					08–JUL–09 10:22	070809A–1
	Selenium	–15.4	ug/L					08–JUL–09 10:22	070809A–1
	Silver	1.27	ug/L					08–JUL–09 10:22	070809A–1
	Sodium	–23.6	ug/L					08–JUL–09 10:22	070809A–1
	Vanadium	–2.21	ug/L					08–JUL–09 10:22	070809A–1
	Zinc	–8.84	ug/L					08–JUL–09 10:22	070809A–1
ICSAB01									
	Aluminum	513000	ug/L	500000	ug/L	103	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Arsenic	526	ug/L	500	ug/L	105	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Barium	500	ug/L	500	ug/L	100	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Calcium	471000	ug/L	500000	ug/L	94.2	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Chromium	483	ug/L	500	ug/L	96.5	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Cobalt	456	ug/L	500	ug/L	91.3	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Copper	571	ug/L	500	ug/L	114	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Iron	184000	ug/L	200000	ug/L	91.9	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Magnesium	494000	ug/L	500000	ug/L	98.8	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Nickel	456	ug/L	500	ug/L	91.3	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Potassium	5890	ug/L	5000	ug/L	118	80.0 – 120.0	08–JUL–09 10:29	070809A–1
	Selenium	2560	ug/L	2500	ug/L	102	80.0 – 120.0	08–JUL–09 10:29	070809A–1

METALS
-4-
Interference Check Sample

SDG No: 09-2536-1

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silver	284	ug/L	250	ug/L	114	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Sodium	5600	ug/L	5000	ug/L	112	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Vanadium	523	ug/L	500	ug/L	105	80.0 - 120.0	08-JUL-09 10:29	070809A-1
	Zinc	491	ug/L	500	ug/L	98.2	80.0 - 120.0	08-JUL-09 10:29	070809A-1

METALS
–4–
Interference Check Sample

SDG No: 09–2536–1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.122	ug/L					14–JUL–09 17:45	090714–2
	Cadmium	0.218	ug/L					14–JUL–09 17:45	090714–2
	Lead	0.159	ug/L					14–JUL–09 17:45	090714–2
	Manganese	6.11	ug/L					14–JUL–09 17:45	090714–2
	Thallium	0.026	ug/L					14–JUL–09 17:45	090714–2
ICSAB01									
	Beryllium	21.2	ug/L	20	ug/L	106	80.0 – 120.0	14–JUL–09 17:51	090714–2
	Cadmium	20.4	ug/L	20.4	ug/L	100	80.0 – 120.0	14–JUL–09 17:51	090714–2
	Lead	19.8	ug/L	20.5	ug/L	96.7	80.0 – 120.0	14–JUL–09 17:51	090714–2
	Manganese	26.2	ug/L	25.8	ug/L	102	80.0 – 120.0	14–JUL–09 17:51	090714–2
	Thallium	18.9	ug/L	20	ug/L	94.6	80.0 – 120.0	14–JUL–09 17:51	090714–2

METALS
-4-
Interference Check Sample

SDG No: 09--2536-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.281	ug/L					15-JUL-09 03:39	090714-4
ICSAB01									
	Antimony	22.1	ug/L	20.1	ug/L	110	80.0 - 120.0	15-JUL-09 03:43	090714-4

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2536-1 **Client ID** CAMO-09-10026S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232759001 **Spike ID:** 1201873937

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75-125	4910		68	U	5000	97.8		P
Arsenic	ug/L	75-125	484		5	U	500	96.8		P
Barium	ug/L	75-125	496		1	U	500	99.2		P
Calcium	ug/L	75-125	4930		50	U	5000	97.9		P
Chromium	ug/L	75-125	486		1	U	500	97.1		P
Cobalt	ug/L	75-125	470		1	U	500	94		P
Copper	ug/L	75-125	496		3	U	500	99.1		P
Iron	ug/L	75-125	5060		30	U	5000	101		P
Magnesium	ug/L	75-125	4900		124	J	5000	95.4		P
Nickel	ug/L	75-125	482		1.5	U	500	96.3		P
Potassium	ug/L	75-125	5300		211		5000	102		P
Selenium	ug/L	75-125	486		5	U	500	96.8		P
Silver	ug/L	75-125	489		1	U	500	97.8		P
Sodium	ug/L	75-125	5460		202	J	5000	105		P
Vanadium	ug/L	75-125	494		1	U	500	98.8		P
Zinc	ug/L	75-125	473		3.3	U	500	94.5		P

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2536-1 **Client ID** CAMO-09-6636S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232755001 **Spike ID:** 1201873975

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	75-125	109		1	U	100	109		MS
Beryllium	ug/L	75-125	51.1		0.1	U	50	102		MS
Cadmium	ug/L	75-125	5.28		0.11	U	5	106		MS
Lead	ug/L	75-125	20.5		0.5	U	20	102		MS
Manganese	ug/L	75-125	53.2		1.21	J	50	104		MS
Thallium	ug/L	75-125	25.3		0.3	U	50	50.4	N	MS

METALS
-5a-
Matrix Spike Summary

SDG NO. 09-2536-1 **Client ID** CAMO-09-10026S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 232759001 **Spike ID:** 1201878716

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75-125	1.61		0.066	U	2	80.4		AV

Metals
-6-
Duplicate Sample Summary

SDG No.: 09-2536-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO-09-10026D

Sample ID: 232759001 **Duplicate ID:** 1201873936 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68	U	68	U			P
Arsenic	ug/L		5	U	5	U			P
Barium	ug/L		1	U	1	U			P
Calcium	ug/L		50	U	50	U			P
Chromium	ug/L		1	U	1	U			P
Cobalt	ug/L		1	U	1	U			P
Copper	ug/L		3	U	3	U			P
Iron	ug/L		30	U	30	U			P
Magnesium	ug/L		124	J	85	U	200		P
Nickel	ug/L		1.5	U	1.5	U			P
Potassium	ug/L	+/-150	211		197		6.49		P
Selenium	ug/L		5	U	5	U			P
Silver	ug/L		1	U	1	U			P
Sodium	ug/L	+/-300	202	J	212	J	4.9		P
Vanadium	ug/L		1	U	1	U			P
Zinc	ug/L		3.3	U	3.3	U			P

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2536–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO–09–6636D

Sample ID: 232755001 **Duplicate ID:** 1201873974 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		1	U	1	U			MS
Beryllium	ug/L		0.1	U	0.1	U			MS
Cadmium	ug/L		0.11	U	0.11	U			MS
Lead	ug/L		0.5	U	0.5	U			MS
Manganese	ug/L	+/–5	1.21	J	1.25	J	3.74		MS
Thallium	ug/L		0.3	U	0.3	U			MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 09–2536–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** CAMO–09–10026D

Sample ID: 232759001 **Duplicate ID:** 1201878715 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066	U	0.066	U			AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2536-1

Contract: LANL01004

Aqueous LCS Source: OS2I **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873935								
	Aluminum	ug/L	5000	4760		95.2	80-120	P
	Arsenic	ug/L	500	473		94.6	80-120	P
	Barium	ug/L	500	485		96.9	80-120	P
	Calcium	ug/L	5000	4740		94.7	80-120	P
	Chromium	ug/L	500	474		94.7	80-120	P
	Cobalt	ug/L	500	459		91.8	80-120	P
	Copper	ug/L	500	481		96.2	80-120	P
	Iron	ug/L	5000	4780		95.6	80-120	P
	Magnesium	ug/L	5000	4820		96.4	80-120	P
	Nickel	ug/L	500	471		94.2	80-120	P
	Potassium	ug/L	5000	5020		100	80-120	P
	Selenium	ug/L	500	481		96.2	80-120	P
	Silver	ug/L	500	477		95.4	80-120	P
	Sodium	ug/L	5000	4780		95.7	80-120	P
	Vanadium	ug/L	500	483		96.5	80-120	P
	Zinc	ug/L	500	465		93	80-120	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2536-1

Contract: LANL01004

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201873973								
	Antimony	ug/L	50	54		108	80-120	MS
	Beryllium	ug/L	50	50.4		101	80-120	MS
	Cadmium	ug/L	50	51.6		103	80-120	MS
	Lead	ug/L	50	50.5		101	80-120	MS
	Manganese	ug/L	50	51.8		104	80-120	MS
	Thallium	ug/L	50	47.7		95.4	80-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 09-2536-1

Contract: LANL01004

Aqueous LCS Source: GEL **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1201878714								
	Mercury	ug/L	2	1.87		93.3	80-120	AV

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 09–2536–1 **Client ID** CAMO–09–10026L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232759001 **Serial Dilution ID:** 1201873938

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Arsenic	5	U	25	U				P
Barium	1	U	5	U				P
Calcium	50	U	250	U				P
Chromium	1	U	5	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	30	U	150	U				P
Magnesium	124	J	428	J	245			P
Nickel	1.5	U	7.5	U				P
Potassium	211		285	J	35.1			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	202	J	500	U	100			P
Vanadium	1	U	5	U				P
Zinc	3.3	U	16.5	U				P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 09-2536-1 **Client ID** CAMO-09-6636L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232755001 **Serial Dilution ID:** 1201873976

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	1	U	5	U				MS
Beryllium	.1	U	.5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	.5	U	2.5	U				MS
Manganese	1.21	J	5	U	100			MS
Thallium	.3	U	15.7					MS

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 09–2536–1 **Client ID** CAMO–09–10026L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 232759001 **Serial Dilution ID:** 1201878717

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2536-1 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882338						
1201873934	MB for batch 882338	MB	W	07-JUL-09	50mL	50mL	
1201873935	LCS for batch 882338	LCS	W	07-JUL-09	50mL	50mL	
1201873937	CAMO-09-10026S	MS	W	07-JUL-09	50mL	50mL	
1201873936	CAMO-09-10026D	DUP	W	07-JUL-09	50mL	50mL	
232755001	CAMO-09-6636	SAMPLE	W	07-JUL-09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2536-1 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	882356						
1201873972	MB for batch 882356	MB	W	07-JUL-09	50mL	50mL	
1201873973	LCS for batch 882356	LCS	W	07-JUL-09	50mL	50mL	
1201873975	CAMO-09-6636S	MS	W	07-JUL-09	50mL	50mL	
1201873974	CAMO-09-6636D	DUP	W	07-JUL-09	50mL	50mL	
232755001	CAMO-09-6636	SAMPLE	W	07-JUL-09	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 09-2536-1 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number	884331						
1201878713	MB for batch 884331	MB	W	14-JUL-09	20mL	20mL	
1201878714	LCS for batch 884331	LCS	W	14-JUL-09	20mL	20mL	
1201878716	CAMO-09-10026S	MS	W	14-JUL-09	20mL	20mL	
1201878715	CAMO-09-10026D	DUP	W	14-JUL-09	20mL	20mL	
232755001	CAMO-09-6636	SAMPLE	W	14-JUL-09	20mL	20mL	

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 08-JUL-09 **End Date:** 08-JUL-09

Client Sdg: 09-2536-1
Method P
Data File: 070809A-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	09:28	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S0.1	1	09:35			X	X				X	X	X						X	X	X	X			X	X
S0.5	1	09:41	X		X	X			X	X	X	X			X			X	X	X	X			X	X
SCAL	1	09:48	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
S10	1	09:55	X						X				X		X							X			
ICV01	1	10:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICB01	1	10:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
PQL01	1	10:15	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSA01	1	10:22	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ICSAB01	1	10:29	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR01	1	10:34	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR02	1	10:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	10:47																							
ZZZZZZ	1	10:54																							
CCV01	1	11:03	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB01	1	11:10	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
LR03	1	11:17	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV02	1	11:24	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB02	1	11:31	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	11:42																							
ZZZZZZ	2	11:49																							
ZZZZZZ	1	11:56																							
ZZZZZZ	1	12:03																							
ZZZZZZ	1	12:10																							
ZZZZZZ	1	12:17																							
ZZZZZZ	5	12:23																							
ZZZZZZ	1	12:30																							
CCV03	1	12:37	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB03	1	12:44	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	5	12:49																							
ZZZZZZ	5	12:56																							
ZZZZZZ	5	13:03																							
ZZZZZZ	5	13:10																							
ZZZZZZ	25	13:16																							
ZZZZZZ	5	13:23																							
CCV04	1	13:30	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB04	1	13:37	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCV05	1	13:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB05	1	13:57	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	14:04																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	2	14:11																							
ZZZZZZ	1	14:18																							
ZZZZZZ	1	14:25																							
ZZZZZZ	1	14:32																							
ZZZZZZ	1	14:39																							
CCV06	1	14:46	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB06	1	14:53	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	15:00																							
ZZZZZZ	1	15:07																							
ZZZZZZ	1	15:14																							
ZZZZZZ	1	15:22																							
ZZZZZZ	1	15:28																							
ZZZZZZ	5	15:34																							
CCV07	1	15:41	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB07	1	15:48	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	15:55																							
ZZZZZZ	2	16:02																							
ZZZZZZ	1	16:09																							
ZZZZZZ	1	16:16																							
ZZZZZZ	1	16:23																							
ZZZZZZ	1	16:29																							
ZZZZZZ	5	16:36																							
CCV08	1	16:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB08	1	16:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	16:57																							
ZZZZZZ	1	17:04																							
ZZZZZZ	1	17:11																							
ZZZZZZ	1	17:18																							
CCV09	1	17:25	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB09	1	17:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	17:39																							
ZZZZZZ	2	17:46																							
ZZZZZZ	1	17:53																							
ZZZZZZ	1	18:00																							
ZZZZZZ	1	18:07																							
ZZZZZZ	1	18:13																							
ZZZZZZ	5	18:20																							
CCV10	1	18:26	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB10	1	18:33	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	18:40																							

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	18:47																							
ZZZZZZ	1	18:54																							
ZZZZZZ	1	19:01																							
ZZZZZZ	1	19:08																							
ZZZZZZ	1	19:16																							
ZZZZZZ	1	19:22																							
CCV11	1	19:29	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB11	1	19:36	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873934	1	19:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873935	1	19:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	19:57																							
232755001	1	20:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	1	20:11																							
1201873936	1	20:18	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873937	1	20:25	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
1201873938	5	20:32	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
ZZZZZZ	5	20:39																							
CCV12	1	20:46	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X
CCB12	1	20:53	X		X	X			X	X	X	X	X		X			X	X	X	X	X		X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: HG3
Start Date: 15-JUL-09 **End Date:** 15-JUL-09

Client Sdg: 09-2536-1
Method AV
Data File: 071509W2-5

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	10:06															X								
S0.2	1	10:08															X								
S0.5	1	10:10															X								
S2.0	1	10:12															X								
S5.0	1	10:14															X								
S10.0	1	10:16															X								
ICV01	1	10:18															X								
ICB01	1	10:20															X								
CRDL01	1	10:22															X								
CCV01	1	10:24															X								
CCB01	1	10:26															X								
ZZZZZZ	1	10:27																							
ZZZZZZ	1	10:29																							
ZZZZZZ	1	10:31																							
ZZZZZZ	1	10:33																							
ZZZZZZ	1	10:35																							
ZZZZZZ	5	10:37																							
ZZZZZZ	1	10:39																							
1201878713	1	10:41															X								
1201878714	1	10:43															X								
232755001	1	10:45															X								
CCV02	1	10:47															X								
CCB02	1	10:49															X								
ZZZZZZ	1	10:50																							
1201878715	1	10:52															X								
1201878716	1	10:54															X								
1201878717	5	10:56															X								
CCV03	1	11:06															X								
CCB03	1	11:08															X								

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 14–JUL–09 **End Date:** 15–JUL–09

Client Sdg: 09–2536–1
Method MS
Data File: 090714–2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	17:11					X	X						X		X							X		
S10	1	17:16					X	X						X		X							X		
S100	1	17:22					X	X						X		X							X		
ICV01	1	17:28					X	X						X		X							X		
ICB01	1	17:34					X	X						X		X							X		
CRDL01	1	17:39					X	X						X		X							X		
ICSA01	1	17:45					X	X						X		X							X		
ICSAB01	1	17:51					X	X						X		X							X		
CCV01	1	17:56					X	X						X		X							X		
CCB01	1	18:02					X	X						X		X							X		
LR01	1	18:08					X	X						X		X							X		
CCV02	1	18:14					X	X						X		X							X		
CCB02	1	18:19					X	X						X		X							X		
1201873972	1	18:25					X	X						X		X							X		
1201873973	1	18:31					X	X						X		X							X		
ZZZZZZ	1	18:37																							
232755001	1	18:42					X	X						X		X							X		
1201873974	1	18:48					X	X						X		X							X		
1201873975	1	18:54					X	X						X		X							X		
1201873976	5	19:00					X	X						X		X							X		
ZZZZZZ	1	19:05																							
CCV03	1	19:11					X	X						X		X							X		
CCB03	1	19:17					X	X						X		X							X		

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 14-JUL-09 **End Date:** 15-JUL-09

Client Sdg: 09-2536-1
Method MS
Data File: 090714-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	03:15		X																					
S10	1	03:19		X																					
S100	1	03:23		X																					
ICV01	1	03:27		X																					
ICB01	1	03:31		X																					
CRDL01	1	03:35		X																					
ICSA01	1	03:39		X																					
ICSAB01	1	03:43		X																					
CCV01	1	03:47		X																					
CCB01	1	03:52		X																					
1201873972	1	03:56		X																					
1201873973	1	04:00		X																					
ZZZZZZ	1	04:04																							
232755001	1	04:08		X																					
1201873974	1	04:12		X																					
1201873975	1	04:16		X																					
1201873976	5	04:20		X																					
ZZZZZZ	1	04:24																							
CCV02	1	04:28		X																					
CCB02	1	04:32		X																					

Standards

METALS
–10–
Instrument Detection Limits

SDG NO. 09–2536–1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01–JUL–09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Vanadium		3.0	10
	Zinc		3.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2536-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Mercury		0.066	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 09-2536-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	50.0	200
	Chromium	267.716	1.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	30.0	100
	Lead	220.353	3.3	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	100	300
	Thallium	190.801	5.0	20
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02397	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.19469	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.12355	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.10991	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02450	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.6001	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.98646	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	5.12071	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.45500
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	199.36
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.33459

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3

GEL Job No: 09-2536-1
Effective Dates: 01-MAY-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01812	0.00000	0.00000	0.00000	-20.8769
Arsenic	188.979	-0.19991	0.00000	0.00000	0.00000	1.34645
Barium	233.527	0.00464	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.06827	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.11657	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.02050	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05782	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09445	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.12573	0.00000	0.01930	0.00000	0.00000
Molybdenum	202.031	-0.06525	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.21880	0.00000	0.00228	12.4291	11.5866
Selenium	196.026	-3.41808	0.00000	0.00000	0.00000	-1.55242
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31989	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-4.64362	0.00000
Tin	189.927	-0.01397	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12289	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.13942	0.00000	-0.01660	0.00000	-12.6298
Zinc	213.857	0.10429	0.00000	0.03466	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3819
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	13.4210
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 09-2536-1
Effective Dates: 01-MAY-09

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.83685	0.00000	-2.97302	0.00000
Arsenic	188.979	-4.61098	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-2.32423	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.53369	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.97628	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-8.67156	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 09-2536-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-MAY-09
Antimony	20	10000	ug/L	01-MAY-09
Arsenic	20	10000	ug/L	01-MAY-09
Barium	20	15000	ug/L	01-MAY-09
Beryllium	20	3000	ug/L	01-MAY-09
Cadmium	20	10000	ug/L	01-MAY-09
Calcium	20	500000	ug/L	01-MAY-09
Chromium	20	25000	ug/L	01-MAY-09
Cobalt	20	10000	ug/L	01-MAY-09
Copper	20	20000	ug/L	01-MAY-09
Iron	20	500000	ug/L	01-MAY-09
Lead	20	25000	ug/L	01-MAY-09
Magnesium	20	500000	ug/L	01-MAY-09
Manganese	20	10000	ug/L	01-MAY-09
Nickel	20	10000	ug/L	01-MAY-09
Potassium	20	300000	ug/L	01-MAY-09
Selenium	20	10000	ug/L	01-MAY-09
Silver	20	1000	ug/L	01-MAY-09
Sodium	20	500000	ug/L	01-MAY-09
Thallium	20	10000	ug/L	01-MAY-09
Vanadium	20	10000	ug/L	01-MAY-09
Zinc	20	15000	ug/L	01-MAY-09

METALS
–12–
Linear Ranges

SDG NO. 09–2536–1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	50000	ug/L	01–MAY–09
Antimony	20	250	ug/L	01–MAY–09
Arsenic	20	1000	ug/L	01–MAY–09
Barium	20	2500	ug/L	01–MAY–09
Beryllium	20	1000	ug/L	01–MAY–09
Cadmium	20	1000	ug/L	01–MAY–09
Calcium	20	50000	ug/L	01–MAY–09
Chromium	20	1000	ug/L	01–MAY–09
Cobalt	20	1000	ug/L	01–MAY–09
Copper	20	1000	ug/L	01–MAY–09
Iron	20	50000	ug/L	01–MAY–09
Lead	20	5000	ug/L	01–MAY–09
Magnesium	20	50000	ug/L	01–MAY–09
Manganese	20	1000	ug/L	01–MAY–09
Nickel	20	1000	ug/L	01–MAY–09
Potassium	20	50000	ug/L	01–MAY–09
Selenium	20	500	ug/L	01–MAY–09
Silver	20	250	ug/L	01–MAY–09
Sodium	20	50000	ug/L	01–MAY–09
Thallium	20	500	ug/L	01–MAY–09
Vanadium	20	100	ug/L	01–MAY–09
Zinc	20	2500	ug/L	01–MAY–09

Raw Data

Reprocessing Begun
Logged In Analyst: Optima3 Technique: ICP Continuous

Results Data Set (original): 070809
Results Library (original): C:\pe\Optima3\Results\Results.mdb
Results Data Set (reprocessed): 070809A
Results Library (reprocessed): C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX Method Last Saved: 7/8/2009 11:38:58
IEC File: 070309.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 8
Sample ID: S0 Date Collected: 7/8/2009 09:28:56
Analyst: Data Type: Reprocessed on 7/8/2009 11:40:03
Logged In Analyst (Original) : Optima3
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1059810.6	1059810.6	99.899	%	09:32:05
1	Sc Radial	5668.6	5668.6	102	%	09:30:49
1	Y 371.029	851543.7	851543.7	99.804	%	09:32:05
1	Y RADIAL	4889.8	4889.8	101.5	%	09:30:49
1	Ag 328.068†	593.9	594.5	[0.00]	ug/L	09:32:10

1	Al 396.153Radial†	-88.0	-86.4	[0.00]	ug/L	09:30:49
1	As 188.979†	-33.0	-33.0	[0.00]	ug/L	09:32:31
1	B 249.677†	-395.5	-395.9	[0.00]	ug/L	09:32:31
1	Ba 233.527†	22.7	22.7	[0.00]	ug/L	09:32:31
1	Be 313.107†	-7253.6	-7260.9	[0.00]	ug/L	09:32:10
1	Ca 317.933Radial†	19.9	19.6	[0.00]	ug/L	09:31:09
1	Cd 226.502†	-262.6	-262.9	[0.00]	ug/L	09:32:31
1	Co 228.616†	-86.2	-86.3	[0.00]	ug/L	09:32:31
1	Cr 267.716†	-35.2	-35.2	[0.00]	ug/L	09:32:31
1	Cu 324.752†	10171.2	10181.5	[0.00]	ug/L	09:32:10
1	Fe 238.204 Radial†	0.0	0.0	[0.00]	ug/L	09:31:09
1	K 766.490 Radial†	1428.1	1402.0	[0.00]	ug/L	09:30:49
1	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:09
1	Mn 257.610†	823.1	823.9	[0.00]	ug/L	09:32:31
1	Mo 202.031†	40.3	40.4	[0.00]	ug/L	09:32:31
1	Na 589.592 Radial†	-169.9	-166.8	[0.00]	ug/L	09:31:09
1	Ni 231.604†	160.5	160.7	[0.00]	ug/L	09:32:31
1	P 214.914†	340.8	341.2	[0.00]	ug/L	09:32:31
1	Pb 220.353†	-23.8	-23.8	[0.00]	ug/L	09:32:31
1	S 181.975 Axial†	74.8	74.8	[0.00]	ug/L	09:32:31
1	Sb 206.836†	39.3	39.4	[0.00]	ug/L	09:32:31
1	Se 196.026†	-21.9	-21.9	[0.00]	ug/L	09:32:31
1	Si 251.611†	569.0	569.6	[0.00]	ug/L	09:32:31
1	Sn 189.927†	4.8	4.8	[0.00]	ug/L	09:32:31
1	Sr 421.552†	-1.3	-1.3	[0.00]	ug/L	09:31:09
1	Ti 334.940†	-1079.9	-1081.0	[0.00]	ug/L	09:32:10
1	Tl 190.801†	-58.7	-58.8	[0.00]	ug/L	09:32:31
1	U 409.014†	-3815.0	-3818.9	[0.00]	ug/L	09:32:05
1	V 292.402†	-1684.3	-1686.1	[0.00]	ug/L	09:32:10
1	Zn 213.857†	1110.4	1111.5	[0.00]	ug/L	09:32:31
1	SiO2†	589.5	590.1	[0.00]	ug/L	09:33:36
2	Sc 361.383	1062041.1	1062041.1	100.11	%	09:32:36
2	Sc Radial	5550.5	5550.5	99.7	%	09:31:14
2	Y 371.029	854666.6	854666.6	100.17	%	09:32:36
2	Y RADIAL	4806.6	4806.6	99.81	%	09:31:14
2	Ag 328.068†	684.5	683.8	[0.00]	ug/L	09:32:41
2	Al 396.153Radial†	-103.1	-103.4	[0.00]	ug/L	09:31:14
2	As 188.979†	-37.3	-37.3	[0.00]	ug/L	09:33:01
2	B 249.677†	-376.8	-376.4	[0.00]	ug/L	09:33:01
2	Ba 233.527†	27.0	27.0	[0.00]	ug/L	09:33:01
2	Be 313.107†	-7342.2	-7334.2	[0.00]	ug/L	09:32:41
2	Ca 317.933Radial†	15.3	15.3	[0.00]	ug/L	09:31:34
2	Cd 226.502†	-297.3	-297.0	[0.00]	ug/L	09:33:01
2	Co 228.616†	-91.0	-90.9	[0.00]	ug/L	09:33:01
2	Cr 267.716†	-33.4	-33.4	[0.00]	ug/L	09:33:01
2	Cu 324.752†	10260.8	10249.6	[0.00]	ug/L	09:32:41
2	Fe 238.204 Radial†	0.2	0.2	[0.00]	ug/L	09:31:34
2	K 766.490 Radial†	1490.1	1493.9	[0.00]	ug/L	09:31:14
2	Mg 279.077 IEC†	-0.2	-0.2	[0.00]	ug/L	09:31:34
2	Mn 257.610†	833.3	832.3	[0.00]	ug/L	09:33:01
2	Mo 202.031†	24.6	24.6	[0.00]	ug/L	09:33:01
2	Na 589.592 Radial†	-169.2	-169.6	[0.00]	ug/L	09:31:34
2	Ni 231.604†	145.4	145.2	[0.00]	ug/L	09:33:01
2	P 214.914†	336.1	335.8	[0.00]	ug/L	09:33:01
2	Pb 220.353†	-39.7	-39.7	[0.00]	ug/L	09:33:01
2	S 181.975 Axial†	63.8	63.7	[0.00]	ug/L	09:33:01
2	Sb 206.836†	49.0	48.9	[0.00]	ug/L	09:33:01
2	Se 196.026†	-25.3	-25.3	[0.00]	ug/L	09:33:01
2	Si 251.611†	569.7	569.1	[0.00]	ug/L	09:33:01
2	Sn 189.927†	5.1	5.0	[0.00]	ug/L	09:33:01
2	Sr 421.552†	11.5	11.5	[0.00]	ug/L	09:31:34
2	Ti 334.940†	-1116.4	-1115.1	[0.00]	ug/L	09:32:41
2	Tl 190.801†	-57.5	-57.4	[0.00]	ug/L	09:33:01
2	U 409.014†	-3873.4	-3869.2	[0.00]	ug/L	09:32:36
2	V 292.402†	-1699.0	-1697.1	[0.00]	ug/L	09:32:41
2	Zn 213.857†	1115.6	1114.3	[0.00]	ug/L	09:33:01
2	SiO2†	600.0	599.4	[0.00]	ug/L	09:33:42
3	Sc 361.383	1060796.0	1060796.0	99.992	%	09:33:06
3	Sc Radial	5475.5	5475.5	98.4	%	09:31:39
3	Y 371.029	853433.0	853433.0	100.03	%	09:33:06
3	Y RADIAL	4750.8	4750.8	98.65	%	09:31:39

3	Ag 328.068†	637.4	637.5	[0.00]	ug/L	09:33:11
3	Al 396.153Radial†	-85.4	-86.8	[0.00]	ug/L	09:31:39
3	As 188.979†	-40.4	-40.4	[0.00]	ug/L	09:33:31
3	B 249.677†	-372.3	-372.3	[0.00]	ug/L	09:33:31
3	Ba 233.527†	23.1	23.1	[0.00]	ug/L	09:33:31
3	Be 313.107†	-7353.0	-7353.6	[0.00]	ug/L	09:33:11
3	Ca 317.933Radial†	15.7	15.9	[0.00]	ug/L	09:31:59
3	Cd 226.502†	-273.1	-273.1	[0.00]	ug/L	09:33:31
3	Co 228.616†	-94.1	-94.1	[0.00]	ug/L	09:33:31
3	Cr 267.716†	-17.2	-17.2	[0.00]	ug/L	09:33:31
3	Cu 324.752†	10141.9	10142.7	[0.00]	ug/L	09:33:11
3	Fe 238.204 Radial†	0.8	0.8	[0.00]	ug/L	09:31:59
3	K 766.490 Radial†	1498.9	1523.4	[0.00]	ug/L	09:31:39
3	Mg 279.077 IEC†	0.4	0.4	[0.00]	ug/L	09:31:59
3	Mn 257.610†	824.8	824.9	[0.00]	ug/L	09:33:31
3	Mo 202.031†	30.4	30.4	[0.00]	ug/L	09:33:31
3	Na 589.592 Radial†	-172.0	-174.9	[0.00]	ug/L	09:31:59
3	Ni 231.604†	138.9	138.9	[0.00]	ug/L	09:33:31
3	P 214.914†	333.9	333.9	[0.00]	ug/L	09:33:31
3	Pb 220.353†	-23.7	-23.8	[0.00]	ug/L	09:33:31
3	S 181.975 Axial†	64.9	64.9	[0.00]	ug/L	09:33:31
3	Sb 206.836†	48.0	48.0	[0.00]	ug/L	09:33:31
3	Se 196.026†	-17.7	-17.7	[0.00]	ug/L	09:33:31
3	Si 251.611†	541.6	541.6	[0.00]	ug/L	09:33:31
3	Sn 189.927†	6.6	6.6	[0.00]	ug/L	09:33:31
3	Sr 421.552†	6.1	6.2	[0.00]	ug/L	09:31:59
3	Ti 334.940†	-1131.5	-1131.6	[0.00]	ug/L	09:33:11
3	Tl 190.801†	-67.9	-67.9	[0.00]	ug/L	09:33:31
3	U 409.014†	-3815.9	-3816.2	[0.00]	ug/L	09:33:06
3	V 292.402†	-1575.1	-1575.2	[0.00]	ug/L	09:33:11
3	Zn 213.857†	1141.3	1141.4	[0.00]	ug/L	09:33:31
3	SiO2†	617.5	617.6	[0.00]	ug/L	09:33:47

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1060882.6	1117.80	0.11%	100.00	%
Sc Radial	5564.8	97.34	1.75%	100	%
Y 371.029	853214.5	1572.88	0.18%	100.000	%
Y RADIAL	4815.7	69.94	1.45%	100.0	%
Ag 328.068†	638.6	44.64	6.99%	[0.00]	ug/L
Al 396.153Radial†	-92.2	9.68	10.50%	[0.00]	ug/L
As 188.979†	-36.9	3.70	10.03%	[0.00]	ug/L
B 249.677†	-381.5	12.62	3.31%	[0.00]	ug/L
Ba 233.527†	24.3	2.36	9.74%	[0.00]	ug/L
Be 313.107†	-7316.2	48.87	0.67%	[0.00]	ug/L
Ca 317.933Radial†	16.9	2.30	13.61%	[0.00]	ug/L
Cd 226.502†	-277.6	17.49	6.30%	[0.00]	ug/L
Co 228.616†	-90.4	3.95	4.37%	[0.00]	ug/L
Cr 267.716†	-28.6	9.91	34.66%	[0.00]	ug/L
Cu 324.752†	10191.3	54.11	0.53%	[0.00]	ug/L
Fe 238.204 Radial†	0.3	0.40	120.31%	[0.00]	ug/L
K 766.490 Radial†	1473.1	63.31	4.30%	[0.00]	ug/L
Mg 279.077 IEC†	0.2	0.34	192.62%	[0.00]	ug/L
Mn 257.610†	827.0	4.63	0.56%	[0.00]	ug/L
Mo 202.031†	31.8	8.00	25.18%	[0.00]	ug/L
Na 589.592 Radial†	-170.4	4.09	2.40%	[0.00]	ug/L
Ni 231.604†	148.3	11.22	7.57%	[0.00]	ug/L
P 214.914†	336.9	3.77	1.12%	[0.00]	ug/L
Pb 220.353†	-29.1	9.17	31.52%	[0.00]	ug/L
S 181.975 Axial†	67.8	6.10	8.99%	[0.00]	ug/L
Sb 206.836†	45.4	5.28	11.62%	[0.00]	ug/L
Se 196.026†	-21.6	3.82	17.66%	[0.00]	ug/L
Si 251.611†	560.1	16.01	2.86%	[0.00]	ug/L
Sn 189.927†	5.5	0.95	17.40%	[0.00]	ug/L
Sr 421.552†	5.5	6.43	117.38%	[0.00]	ug/L
Ti 334.940†	-1109.3	25.82	2.33%	[0.00]	ug/L
Tl 190.801†	-61.4	5.70	9.29%	[0.00]	ug/L
U 409.014†	-3834.7	29.86	0.78%	[0.00]	ug/L
V 292.402†	-1652.8	67.41	4.08%	[0.00]	ug/L

Zn 213.857†	1122.4	16.48	1.47%	[0.00] ug/L
SiO2†	602.4	13.95	2.32%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 7/8/2009 09:35:57
Data Type: Reprocessed on 7/8/2009 11:40:04

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1043904.5	1043904.5	98.400	%	09:38:07
1	Sc Radial	5586.9	5586.9	100	%	09:37:49
1	Y 371.029	838768.8	838768.8	98.307	%	09:38:07
1	Y RADIAL	4867.7	4867.7	101.1	%	09:37:49
1	Ag 328.068†	25884.2	25666.6	[100]	ug/L	09:38:07
1	As 188.979†	393.4	436.7	[100]	ug/L	09:38:27
1	B 249.677†	5686.4	6160.4	[100]	ug/L	09:38:07
1	Ba 233.527†	20371.1	20678.1	[100]	ug/L	09:38:07
1	Be 313.107†	314654.5	327088.3	[100]	ug/L	09:38:07
1	Cd 226.502†	13132.5	13623.8	[100]	ug/L	09:38:27
1	Co 228.616†	8083.3	8305.1	[100]	ug/L	09:38:27
1	Cr 267.716†	11753.9	11973.6	[100]	ug/L	09:38:07
1	Cu 324.752†	50132.0	40756.1	[100]	ug/L	09:38:07
1	K 766.490 Radial†	3887.5	2399.0	[1000]	ug/L	09:37:49
1	Mn 257.610†	129366.8	130643.8	[100]	ug/L	09:38:07
1	Mo 202.031†	2580.5	2590.7	[100]	ug/L	09:38:27
1	Ni 231.604†	6525.4	6483.3	[100]	ug/L	09:38:27
1	P 214.914†	1779.1	1471.1	[500]	ug/L	09:38:27
1	Pb 220.353†	1342.2	1393.1	[100]	ug/L	09:38:27
1	S 181.975 Axial†	300.2	237.3	[200]	ug/L	09:38:27
1	Sb 206.836†	547.4	510.9	[100]	ug/L	09:38:27
1	Se 196.026†	295.6	322.0	[100]	ug/L	09:38:27
1	Si 251.611†	24511.6	24350.2	[500]	ug/L	09:38:07
1	Sn 189.927†	971.4	981.7	[100]	ug/L	09:38:27
1	Sr 421.552†	6665.1	6633.3	[100]	ug/L	09:37:49
1	Ti 334.940†	74671.4	76995.2	[100]	ug/L	09:38:07
1	Tl 190.801†	543.4	613.6	[100]	ug/L	09:38:27
1	U 409.014†	237.6	4076.2	[100]	ug/L	09:38:07
1	V 292.402†	15937.1	17849.1	[100]	ug/L	09:38:07
1	Zn 213.857†	19207.8	18397.8	[100]	ug/L	09:38:07
1	SiO2†	24699.0	24498.4	[1069.5]	ug/L	09:39:24
2	Sc 361.383	1055210.6	1055210.6	99.465	%	09:38:33
2	Sc Radial	5609.2	5609.2	101	%	09:37:55
2	Y 371.029	845639.6	845639.6	99.112	%	09:38:33
2	Y RADIAL	4877.8	4877.8	101.3	%	09:37:55
2	Ag 328.068†	26093.0	25594.7	[100]	ug/L	09:38:33
2	As 188.979†	391.5	430.5	[100]	ug/L	09:38:53
2	B 249.677†	5785.4	6198.0	[100]	ug/L	09:38:33
2	Ba 233.527†	20469.8	20555.5	[100]	ug/L	09:38:33
2	Be 313.107†	317338.9	326360.9	[100]	ug/L	09:38:33
2	Cd 226.502†	13157.8	13506.1	[100]	ug/L	09:38:53
2	Co 228.616†	8095.3	8229.3	[100]	ug/L	09:38:53
2	Cr 267.716†	11903.1	11995.7	[100]	ug/L	09:38:33
2	Cu 324.752†	50854.5	40936.6	[100]	ug/L	09:38:33
2	K 766.490 Radial†	3819.2	2315.9	[1000]	ug/L	09:37:55
2	Mn 257.610†	130782.0	130658.0	[100]	ug/L	09:38:33
2	Mo 202.031†	2603.2	2585.4	[100]	ug/L	09:38:53
2	Ni 231.604†	6538.1	6425.0	[100]	ug/L	09:38:53
2	P 214.914†	1796.1	1468.9	[500]	ug/L	09:38:53
2	Pb 220.353†	1350.1	1386.4	[100]	ug/L	09:38:53
2	S 181.975 Axial†	299.5	233.3	[200]	ug/L	09:38:53
2	Sb 206.836†	557.9	515.5	[100]	ug/L	09:38:53
2	Se 196.026†	303.1	326.3	[100]	ug/L	09:38:53
2	Si 251.611†	24790.1	24363.3	[500]	ug/L	09:38:33
2	Sn 189.927†	961.1	960.8	[100]	ug/L	09:38:53
2	Sr 421.552†	6653.8	6595.7	[100]	ug/L	09:37:55
2	Ti 334.940†	75608.5	77124.2	[100]	ug/L	09:38:33
2	Tl 190.801†	543.4	607.7	[100]	ug/L	09:38:53

2	U 409.014†	413.3	4250.3	[100]	ug/L	09:38:33
2	V 292.402†	16008.2	17747.0	[100]	ug/L	09:38:33
2	Zn 213.857†	19396.4	18378.2	[100]	ug/L	09:38:33
2	SiO2†	24456.8	23985.9	[1069.5]	ug/L	09:39:29
3	Sc 361.383	1055128.5	1055128.5	99.458	%	09:38:59
3	Sc Radial	5546.9	5546.9	99.7	%	09:38:00
3	Y 371.029	846188.4	846188.4	99.177	%	09:38:59
3	Y RADIAL	4841.3	4841.3	100.5	%	09:38:00
3	Ag 328.068†	26072.8	25576.4	[100]	ug/L	09:38:59
3	As 188.979†	395.1	434.2	[100]	ug/L	09:39:19
3	B 249.677†	5816.4	6229.6	[100]	ug/L	09:38:59
3	Ba 233.527†	20495.9	20583.4	[100]	ug/L	09:38:59
3	Be 313.107†	317444.7	326492.1	[100]	ug/L	09:38:59
3	Cd 226.502†	13125.5	13474.7	[100]	ug/L	09:39:19
3	Co 228.616†	8079.1	8213.6	[100]	ug/L	09:39:19
3	Cr 267.716†	11888.0	11981.4	[100]	ug/L	09:38:59
3	Cu 324.752†	50658.9	40743.9	[100]	ug/L	09:38:59
3	K 766.490 Radial†	3845.0	2384.3	[1000]	ug/L	09:38:00
3	Mn 257.610†	131078.2	130966.0	[100]	ug/L	09:38:59
3	Mo 202.031†	2603.9	2586.4	[100]	ug/L	09:39:19
3	Ni 231.604†	6537.8	6425.2	[100]	ug/L	09:39:19
3	P 214.914†	1782.9	1455.7	[500]	ug/L	09:39:19
3	Pb 220.353†	1365.6	1402.1	[100]	ug/L	09:39:19
3	S 181.975 Axial†	309.0	242.8	[200]	ug/L	09:39:19
3	Sb 206.836†	556.1	513.7	[100]	ug/L	09:39:19
3	Se 196.026†	279.5	302.7	[100]	ug/L	09:39:19
3	Si 251.611†	24805.8	24381.0	[500]	ug/L	09:38:59
3	Sn 189.927†	963.2	962.9	[100]	ug/L	09:39:19
3	Sr 421.552†	6580.5	6596.3	[100]	ug/L	09:38:00
3	Ti 334.940†	75559.4	77080.7	[100]	ug/L	09:38:59
3	Tl 190.801†	539.9	604.2	[100]	ug/L	09:39:19
3	U 409.014†	236.8	4072.8	[100]	ug/L	09:38:59
3	V 292.402†	16050.8	17791.1	[100]	ug/L	09:38:59
3	Zn 213.857†	19356.9	18340.1	[100]	ug/L	09:38:59
3	SiO2†	24872.7	24406.0	[1069.5]	ug/L	09:39:34

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051414.5	6504.03	0.62%	99.108	%
Sc Radial	5581.0	31.57	0.57%	100	%
Y 371.029	843532.3	4134.44	0.49%	98.865	%
Y RADIAL	4862.3	18.86	0.39%	101.0	%
Ag 328.068†	25612.5	47.66	0.19%	[100]	ug/L
As 188.979†	433.8	3.14	0.72%	[100]	ug/L
B 249.677†	6196.0	34.67	0.56%	[100]	ug/L
Ba 233.527†	20605.7	64.24	0.31%	[100]	ug/L
Be 313.107†	326647.1	387.66	0.12%	[100]	ug/L
Cd 226.502†	13534.9	78.59	0.58%	[100]	ug/L
Co 228.616†	8249.3	48.95	0.59%	[100]	ug/L
Cr 267.716†	11983.6	11.20	0.09%	[100]	ug/L
Cu 324.752†	40812.2	107.89	0.26%	[100]	ug/L
K 766.490 Radial†	2366.4	44.37	1.88%	[1000]	ug/L
Mn 257.610†	130755.9	182.06	0.14%	[100]	ug/L
Mo 202.031†	2587.5	2.81	0.11%	[100]	ug/L
Ni 231.604†	6444.5	33.62	0.52%	[100]	ug/L
P 214.914†	1465.2	8.32	0.57%	[500]	ug/L
Pb 220.353†	1393.9	7.86	0.56%	[100]	ug/L
S 181.975 Axial†	237.8	4.79	2.02%	[200]	ug/L
Sb 206.836†	513.3	2.30	0.45%	[100]	ug/L
Se 196.026†	317.0	12.62	3.98%	[100]	ug/L
Si 251.611†	24364.8	15.45	0.06%	[500]	ug/L
Sn 189.927†	968.5	11.51	1.19%	[100]	ug/L
Sr 421.552†	6608.4	21.50	0.33%	[100]	ug/L
Ti 334.940†	77066.7	65.66	0.09%	[100]	ug/L
Tl 190.801†	608.5	4.73	0.78%	[100]	ug/L
U 409.014†	4133.1	101.47	2.46%	[100]	ug/L
V 292.402†	17795.7	51.23	0.29%	[100]	ug/L
Zn 213.857†	18372.0	29.33	0.16%	[100]	ug/L
SiO2†	24296.8	273.12	1.12%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 7/8/2009 09:41:45
Data Type: Reprocessed on 7/8/2009 11:40:06

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1064607.4	1064607.4	100.35	%	09:44:57
1	Sc Radial	5461.3	5461.3	98.1	%	09:43:38
1	Y 371.029	846628.0	846628.0	99.228	%	09:44:57
1	Y RADIAL	4696.9	4696.9	97.53	%	09:43:38
1	Ag 328.068†	126803.5	125721.3	[500]	ug/L	09:44:57
1	Al 396.153Radial†	5174.4	5364.7	[5000]	ug/L	09:43:38
1	As 188.979†	2072.9	2102.5	[500]	ug/L	09:45:17
1	B 249.677†	31257.3	31529.4	[500]	ug/L	09:44:57
1	Ba 233.527†	98225.0	97857.1	[500]	ug/L	09:44:57
1	Be 313.107†	1595363.0	1597097.3	[500]	ug/L	09:44:57
1	Ca 317.933Radial†	1956.1	1976.3	[5000]	ug/L	09:43:58
1	Cd 226.502†	66327.4	66373.0	[500]	ug/L	09:44:57
1	Co 228.616†	39082.0	39035.6	[500]	ug/L	09:45:17
1	Cr 267.716†	58209.2	58034.2	[500]	ug/L	09:44:57
1	Cu 324.752†	212770.9	201835.2	[500]	ug/L	09:44:57
1	K 766.490 Radial†	12752.1	11520.9	[5000]	ug/L	09:43:38
1	Mg 279.077 IEC†	62.9	63.9	[5000]	ug/L	09:43:58
1	Mn 257.610†	630898.9	627864.5	[500]	ug/L	09:44:57
1	Mo 202.031†	12608.3	12532.4	[500]	ug/L	09:45:17
1	Ni 231.604†	30724.5	30468.8	[500]	ug/L	09:45:17
1	P 214.914†	7382.5	7019.8	[2500]	ug/L	09:45:17
1	Pb 220.353†	6649.1	6654.9	[500]	ug/L	09:45:17
1	S 181.975 Axial†	1242.8	1170.6	[1000]	ug/L	09:45:17
1	Sb 206.836†	2606.1	2551.6	[500]	ug/L	09:45:17
1	Se 196.026†	1514.2	1530.5	[500]	ug/L	09:45:17
1	Si 251.611†	122499.0	121510.3	[2500]	ug/L	09:44:57
1	Sn 189.927†	4778.2	4756.0	[500]	ug/L	09:45:17
1	Sr 421.552†	28452.4	28986.5	[500]	ug/L	09:43:38
1	Ti 334.940†	380085.1	379864.5	[500]	ug/L	09:44:57
1	Tl 190.801†	2870.2	2921.5	[500]	ug/L	09:45:17
1	U 409.014†	15794.5	19574.0	[500]	ug/L	09:44:57
1	V 292.402†	85607.5	86960.7	[500]	ug/L	09:44:57
1	Zn 213.857†	90358.1	88919.6	[500]	ug/L	09:44:57
1	SiO2†	122852.3	121820.1	[5347.5]	ug/L	09:46:17
2	Sc 361.383	1044221.1	1044221.1	98.429	%	09:45:24
2	Sc Radial	5389.0	5389.0	96.8	%	09:44:03
2	Y 371.029	829032.4	829032.4	97.166	%	09:45:24
2	Y RADIAL	4652.3	4652.3	96.61	%	09:44:03
2	Ag 328.068†	124967.2	126322.6	[500]	ug/L	09:45:24
2	Al 396.153Radial†	5096.7	5355.2	[5000]	ug/L	09:44:03
2	As 188.979†	2073.2	2143.2	[500]	ug/L	09:45:44
2	B 249.677†	30724.1	31595.8	[500]	ug/L	09:45:24
2	Ba 233.527†	97214.1	98740.9	[500]	ug/L	09:45:24
2	Be 313.107†	1569041.1	1601392.7	[500]	ug/L	09:45:24
2	Ca 317.933Radial†	1923.3	1969.1	[5000]	ug/L	09:44:23
2	Cd 226.502†	65506.0	66828.8	[500]	ug/L	09:45:24
2	Co 228.616†	39155.7	39870.9	[500]	ug/L	09:45:44
2	Cr 267.716†	57418.9	58363.7	[500]	ug/L	09:45:24
2	Cu 324.752†	208685.4	201823.9	[500]	ug/L	09:45:24
2	K 766.490 Radial†	12541.0	11477.1	[5000]	ug/L	09:44:03
2	Mg 279.077 IEC†	61.0	62.8	[5000]	ug/L	09:44:23
2	Mn 257.610†	623183.7	632300.1	[500]	ug/L	09:45:24
2	Mo 202.031†	12645.3	12815.3	[500]	ug/L	09:45:44
2	Ni 231.604†	30816.1	31159.5	[500]	ug/L	09:45:44
2	P 214.914†	7382.7	7163.6	[2500]	ug/L	09:45:44
2	Pb 220.353†	6652.5	6787.7	[500]	ug/L	09:45:44
2	S 181.975 Axial†	1248.0	1200.1	[1000]	ug/L	09:45:44
2	Sb 206.836†	2600.7	2596.7	[500]	ug/L	09:45:44

2	Se 196.026†	1507.7	1553.3	[500]	ug/L	09:45:44
2	Si 251.611†	120777.2	122144.2	[2500]	ug/L	09:45:24
2	Sn 189.927†	4796.7	4867.8	[500]	ug/L	09:45:44
2	Sr 421.552†	27876.2	28780.3	[500]	ug/L	09:44:03
2	Ti 334.940†	374439.3	381523.0	[500]	ug/L	09:45:24
2	Tl 190.801†	2885.2	2992.7	[500]	ug/L	09:45:44
2	U 409.014†	15437.6	19518.7	[500]	ug/L	09:45:24
2	V 292.402†	84337.2	87335.7	[500]	ug/L	09:45:24
2	Zn 213.857†	89070.9	89369.7	[500]	ug/L	09:45:24
2	SiO2†	121800.6	123141.7	[5347.5]	ug/L	09:46:22
3	Sc 361.383	1046590.0	1046590.0	98.653	%	09:45:52
3	Sc Radial	5352.8	5352.8	96.2	%	09:44:28
3	Y 371.029	832934.3	832934.3	97.623	%	09:45:52
3	Y RADIAL	4634.7	4634.7	96.24	%	09:44:28
3	Ag 328.068†	125631.5	126708.6	[500]	ug/L	09:45:52
3	Al 396.153Radial†	5102.6	5396.9	[5000]	ug/L	09:44:28
3	As 188.979†	2098.8	2164.3	[500]	ug/L	09:46:12
3	B 249.677†	30976.6	31781.2	[500]	ug/L	09:45:52
3	Ba 233.527†	97581.9	98890.3	[500]	ug/L	09:45:52
3	Be 313.107†	1579797.0	1608687.5	[500]	ug/L	09:45:52
3	Ca 317.933Radial†	1928.2	1987.6	[5000]	ug/L	09:44:48
3	Cd 226.502†	65857.4	67034.4	[500]	ug/L	09:45:52
3	Co 228.616†	39345.8	39973.6	[500]	ug/L	09:46:12
3	Cr 267.716†	57872.1	58691.1	[500]	ug/L	09:45:52
3	Cu 324.752†	210164.3	202843.1	[500]	ug/L	09:45:52
3	K 766.490 Radial†	12562.3	11586.7	[5000]	ug/L	09:44:28
3	Mg 279.077 IEC†	60.6	62.8	[5000]	ug/L	09:44:48
3	Mn 257.610†	626191.1	633915.6	[500]	ug/L	09:45:52
3	Mo 202.031†	12686.5	12828.0	[500]	ug/L	09:46:12
3	Ni 231.604†	31017.8	31293.1	[500]	ug/L	09:46:12
3	P 214.914†	7417.6	7182.0	[2500]	ug/L	09:46:12
3	Pb 220.353†	6707.4	6828.1	[500]	ug/L	09:46:12
3	S 181.975 Axial†	1249.2	1198.4	[1000]	ug/L	09:46:12
3	Sb 206.836†	2624.9	2615.3	[500]	ug/L	09:46:12
3	Se 196.026†	1511.8	1554.0	[500]	ug/L	09:46:12
3	Si 251.611†	121349.2	122446.3	[2500]	ug/L	09:45:52
3	Sn 189.927†	4809.3	4869.5	[500]	ug/L	09:46:12
3	Sr 421.552†	27833.2	28930.1	[500]	ug/L	09:44:28
3	Ti 334.940†	376623.4	382875.9	[500]	ug/L	09:45:52
3	Tl 190.801†	2901.3	3002.3	[500]	ug/L	09:46:12
3	U 409.014†	15617.2	19665.2	[500]	ug/L	09:45:52
3	V 292.402†	84908.9	87721.2	[500]	ug/L	09:45:52
3	Zn 213.857†	89582.5	89683.5	[500]	ug/L	09:45:52
3	SiO2†	122195.3	123261.7	[5347.5]	ug/L	09:46:27

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1051806.2	11149.30	1.06%	99.144	%
Sc Radial	5401.0	55.21	1.02%	97.1	%
Y 371.029	836198.2	9240.74	1.11%	98.006	%
Y RADIAL	4661.3	32.06	0.69%	96.79	%
Ag 328.068†	126250.8	497.54	0.39%	[500]	ug/L
Al 396.153Radial†	5372.3	21.86	0.41%	[5000]	ug/L
As 188.979†	2136.7	31.42	1.47%	[500]	ug/L
B 249.677†	31635.5	130.46	0.41%	[500]	ug/L
Ba 233.527†	98496.1	558.43	0.57%	[500]	ug/L
Be 313.107†	1602392.5	5859.39	0.37%	[500]	ug/L
Ca 317.933Radial†	1977.7	9.33	0.47%	[5000]	ug/L
Cd 226.502†	66745.4	338.47	0.51%	[500]	ug/L
Co 228.616†	39626.7	514.43	1.30%	[500]	ug/L
Cr 267.716†	58363.0	328.45	0.56%	[500]	ug/L
Cu 324.752†	202167.4	585.22	0.29%	[500]	ug/L
K 766.490 Radial†	11528.2	55.20	0.48%	[5000]	ug/L
Mg 279.077 IEC†	63.2	0.61	0.97%	[5000]	ug/L
Mn 257.610†	631360.0	3133.16	0.50%	[500]	ug/L
Mo 202.031†	12725.2	167.14	1.31%	[500]	ug/L
Ni 231.604†	30973.8	442.43	1.43%	[500]	ug/L
P 214.914†	7121.8	88.83	1.25%	[2500]	ug/L
Pb 220.353†	6756.9	90.64	1.34%	[500]	ug/L

S 181.975 Axial†	1189.7	16.55	1.39%	[1000]	ug/L
Sb 206.836†	2587.9	32.79	1.27%	[500]	ug/L
Se 196.026†	1546.0	13.38	0.87%	[500]	ug/L
Si 251.611†	122033.6	477.69	0.39%	[2500]	ug/L
Sn 189.927†	4831.1	65.06	1.35%	[500]	ug/L
Sr 421.552†	28899.0	106.56	0.37%	[500]	ug/L
Ti 334.940†	381421.2	1508.28	0.40%	[500]	ug/L
Tl 190.801†	2972.2	44.12	1.48%	[500]	ug/L
U 409.014†	19586.0	73.99	0.38%	[500]	ug/L
V 292.402†	87339.2	380.24	0.44%	[500]	ug/L
Zn 213.857†	89324.3	383.98	0.43%	[500]	ug/L
SiO2†	122741.2	799.91	0.65%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 7/8/2009 09:48:38
Data Type: Reprocessed on 7/8/2009 11:40:07

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1052663.5	1052663.5	99.225	%	09:51:50
1	Sc Radial	5805.9	5805.9	104	%	09:50:31
1	Y 371.029	835045.6	835045.6	97.871	%	09:51:50
1	Y RADIAL	5007.7	5007.7	104.0	%	09:50:31
1	Ag 328.068†	252879.2	254215.1	[1000]	ug/L	09:51:55
1	Al 396.153Radial†	10753.9	10399.5	[10000]	ug/L	09:50:31
1	As 188.979†	4213.7	4283.5	[1000]	ug/L	09:52:15
1	B 249.677†	63888.7	64769.0	[1000]	ug/L	09:51:55
1	Ba 233.527†	197687.1	199206.4	[1000]	ug/L	09:51:55
1	Be 313.107†	3194923.7	3227185.7	[1000]	ug/L	09:51:50
1	Ca 317.933Radial†	4055.7	3870.4	[10000]	ug/L	09:50:31
1	Cd 226.502†	133744.7	135066.6	[1000]	ug/L	09:51:55
1	Co 228.616†	80516.0	81235.0	[1000]	ug/L	09:51:55
1	Cr 267.716†	117606.8	118553.7	[1000]	ug/L	09:51:55
1	Cu 324.752†	414400.4	407444.8	[1000]	ug/L	09:51:55
1	Fe 238.204 Radial†	287.2	275.0	[10000]	ug/L	09:50:51
1	K 766.490 Radial†	24918.9	22410.9	[10000]	ug/L	09:50:31
1	Mg 279.077 IEC†	131.8	126.2	[10000]	ug/L	09:50:51
1	Mn 257.610†	1260730.8	1269747.4	[1000]	ug/L	09:51:50
1	Mo 202.031†	24798.5	24960.4	[1000]	ug/L	09:52:15
1	Na 589.592 Radial†	3522.0	3546.2	[10000]	ug/L	09:50:31
1	Ni 231.604†	62750.5	63092.2	[1000]	ug/L	09:51:55
1	P 214.914†	14401.2	14176.7	[5000]	ug/L	09:52:15
1	Pb 220.353†	13201.7	13333.9	[1000]	ug/L	09:52:15
1	S 181.975 Axial†	2419.1	2370.2	[2000]	ug/L	09:52:15
1	Sb 206.836†	5119.1	5113.6	[1000]	ug/L	09:52:15
1	Se 196.026†	3047.7	3093.1	[1000]	ug/L	09:52:15
1	Si 251.611†	242154.4	243485.1	[5000]	ug/L	09:51:55
1	Sn 189.927†	9581.3	9650.6	[1000]	ug/L	09:52:15
1	Sr 421.552†	68083.4	65250.5	[1000]	ug/L	09:50:31
1	Ti 334.940†	758941.9	765976.9	[1000]	ug/L	09:51:50
1	Tl 190.801†	5824.9	5931.8	[1000]	ug/L	09:52:15
1	U 409.014†	36638.9	40759.8	[1000]	ug/L	09:51:55
1	V 292.402†	175178.4	178199.0	[1000]	ug/L	09:51:55
1	Zn 213.857†	180211.9	180496.5	[1000]	ug/L	09:51:55
1	SiO2†	241738.8	243023.9	[10695]	ug/L	09:53:25
2	Sc 361.383	1058804.9	1058804.9	99.804	%	09:52:22
2	Sc Radial	5593.3	5593.3	101	%	09:50:56
2	Y 371.029	839441.5	839441.5	98.386	%	09:52:22
2	Y RADIAL	4835.2	4835.2	100.4	%	09:50:56
2	Ag 328.068†	252282.7	252139.2	[1000]	ug/L	09:52:27
2	Al 396.153Radial†	10627.1	10665.3	[10000]	ug/L	09:50:56
2	As 188.979†	4198.8	4244.0	[1000]	ug/L	09:52:48
2	B 249.677†	63795.4	64302.1	[1000]	ug/L	09:52:27
2	Ba 233.527†	196404.5	196765.7	[1000]	ug/L	09:52:27
2	Be 313.107†	3201165.9	3214763.8	[1000]	ug/L	09:52:22
2	Ca 317.933Radial†	4012.0	3974.7	[10000]	ug/L	09:50:56
2	Cd 226.502†	132496.4	133034.0	[1000]	ug/L	09:52:27
2	Co 228.616†	79902.6	80149.8	[1000]	ug/L	09:52:27
2	Cr 267.716†	116813.2	117071.0	[1000]	ug/L	09:52:27
2	Cu 324.752†	414708.3	405330.8	[1000]	ug/L	09:52:27
2	Fe 238.204 Radial†	289.6	287.8	[10000]	ug/L	09:51:16
2	K 766.490 Radial†	24624.2	23025.9	[10000]	ug/L	09:50:56
2	Mg 279.077 IEC†	127.7	126.9	[10000]	ug/L	09:51:16
2	Mn 257.610†	1263110.3	1264761.9	[1000]	ug/L	09:52:22
2	Mo 202.031†	24699.2	24715.9	[1000]	ug/L	09:52:48
2	Na 589.592 Radial†	3465.5	3618.3	[10000]	ug/L	09:50:56
2	Ni 231.604†	62172.3	62146.1	[1000]	ug/L	09:52:27

2	P 214.914†	14342.8	14034.0	[5000]	ug/L	09:52:48
2	Pb 220.353†	13188.3	13243.2	[1000]	ug/L	09:52:48
2	S 181.975 Axial†	2410.9	2347.8	[2000]	ug/L	09:52:48
2	Sb 206.836†	5080.8	5045.3	[1000]	ug/L	09:52:48
2	Se 196.026†	3016.0	3043.5	[1000]	ug/L	09:52:48
2	Si 251.611†	241232.5	241145.8	[5000]	ug/L	09:52:27
2	Sn 189.927†	9534.0	9547.2	[1000]	ug/L	09:52:48
2	Sr 421.552†	66922.4	66576.7	[1000]	ug/L	09:50:56
2	Ti 334.940†	761509.7	764113.3	[1000]	ug/L	09:52:22
2	Tl 190.801†	5811.7	5884.5	[1000]	ug/L	09:52:48
2	U 409.014†	36579.5	40486.0	[1000]	ug/L	09:52:27
2	V 292.402†	173954.8	175949.0	[1000]	ug/L	09:52:27
2	Zn 213.857†	179274.3	178503.7	[1000]	ug/L	09:52:27
2	SiO2†	237359.4	237222.8	[10695]	ug/L	09:53:31
3	Sc 361.383	1057400.6	1057400.6	99.672	%	09:52:54
3	Sc Radial	5464.1	5464.1	98.2	%	09:51:21
3	Y 371.029	838883.9	838883.9	98.320	%	09:52:54
3	Y RADIAL	4771.4	4771.4	99.08	%	09:51:21
3	Ag 328.068†	251287.3	251476.2	[1000]	ug/L	09:53:00
3	Al 396.153Radial†	10656.6	10945.2	[10000]	ug/L	09:51:21
3	As 188.979†	4194.8	4245.6	[1000]	ug/L	09:53:20
3	B 249.677†	63568.3	64159.1	[1000]	ug/L	09:53:00
3	Ba 233.527†	196293.8	196915.9	[1000]	ug/L	09:53:00
3	Be 313.107†	3195458.9	3213297.7	[1000]	ug/L	09:52:54
3	Ca 317.933Radial†	4035.9	4093.3	[10000]	ug/L	09:51:21
3	Cd 226.502†	132396.2	133109.8	[1000]	ug/L	09:53:00
3	Co 228.616†	79823.3	80176.5	[1000]	ug/L	09:53:00
3	Cr 267.716†	116636.7	117049.4	[1000]	ug/L	09:53:00
3	Cu 324.752†	412621.4	403788.9	[1000]	ug/L	09:53:00
3	Fe 238.204 Radial†	285.3	290.2	[10000]	ug/L	09:51:41
3	K 766.490 Radial†	24699.5	23681.6	[10000]	ug/L	09:51:21
3	Mg 279.077 IEC†	125.8	127.9	[10000]	ug/L	09:51:41
3	Mn 257.610†	1259027.5	1262346.4	[1000]	ug/L	09:52:54
3	Mo 202.031†	24845.2	24895.3	[1000]	ug/L	09:53:20
3	Na 589.592 Radial†	3441.7	3675.5	[10000]	ug/L	09:51:21
3	Ni 231.604†	62152.7	62209.1	[1000]	ug/L	09:53:00
3	P 214.914†	14439.3	14149.9	[5000]	ug/L	09:53:20
3	Pb 220.353†	13219.9	13292.5	[1000]	ug/L	09:53:20
3	S 181.975 Axial†	2417.3	2357.4	[2000]	ug/L	09:53:20
3	Sb 206.836†	5111.4	5082.8	[1000]	ug/L	09:53:20
3	Se 196.026†	3040.7	3072.3	[1000]	ug/L	09:53:20
3	Si 251.611†	240711.3	240943.9	[5000]	ug/L	09:53:00
3	Sn 189.927†	9583.2	9609.3	[1000]	ug/L	09:53:20
3	Sr 421.552†	66963.1	68191.7	[1000]	ug/L	09:51:21
3	Ti 334.940†	758629.2	762236.6	[1000]	ug/L	09:52:54
3	Tl 190.801†	5861.7	5942.4	[1000]	ug/L	09:53:20
3	U 409.014†	36527.5	40482.6	[1000]	ug/L	09:53:00
3	V 292.402†	173694.3	175919.0	[1000]	ug/L	09:53:00
3	Zn 213.857†	178849.9	178316.4	[1000]	ug/L	09:53:00
3	SiO2†	243076.9	243275.0	[10695]	ug/L	09:53:36

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1056289.6	3217.89	0.30%	99.567	%
Sc Radial	5621.1	172.60	3.07%	101	%
Y 371.029	837790.3	2393.27	0.29%	98.192	%
Y RADIAL	4871.4	122.27	2.51%	101.2	%
Ag 328.068†	252610.2	1428.92	0.57%	[1000]	ug/L
Al 396.153Radial†	10670.0	272.89	2.56%	[10000]	ug/L
As 188.979†	4257.7	22.40	0.53%	[1000]	ug/L
B 249.677†	64410.1	318.97	0.50%	[1000]	ug/L
Ba 233.527†	197629.3	1367.84	0.69%	[1000]	ug/L
Be 313.107†	3218415.7	7630.29	0.24%	[1000]	ug/L
Ca 317.933Radial†	3979.5	111.54	2.80%	[10000]	ug/L
Cd 226.502†	133736.8	1152.25	0.86%	[1000]	ug/L
Co 228.616†	80520.5	618.97	0.77%	[1000]	ug/L
Cr 267.716†	117558.0	862.30	0.73%	[1000]	ug/L
Cu 324.752†	405521.5	1835.38	0.45%	[1000]	ug/L
Fe 238.204 Radial†	284.3	8.19	2.88%	[10000]	ug/L

K 766.490 Radial†	23039.5	635.42	2.76%	[10000]	ug/L
Mg 279.077 IEC†	127.0	0.88	0.69%	[10000]	ug/L
Mn 257.610†	1265618.6	3774.16	0.30%	[1000]	ug/L
Mo 202.031†	24857.2	126.63	0.51%	[1000]	ug/L
Na 589.592 Radial†	3613.3	64.84	1.79%	[10000]	ug/L
Ni 231.604†	62482.4	529.00	0.85%	[1000]	ug/L
P 214.914†	14120.2	75.84	0.54%	[5000]	ug/L
Pb 220.353†	13289.9	45.38	0.34%	[1000]	ug/L
S 181.975 Axial†	2358.5	11.23	0.48%	[2000]	ug/L
Sb 206.836†	5080.6	34.22	0.67%	[1000]	ug/L
Se 196.026†	3069.7	24.93	0.81%	[1000]	ug/L
Si 251.611†	241858.2	1412.48	0.58%	[5000]	ug/L
Sn 189.927†	9602.4	52.05	0.54%	[1000]	ug/L
Sr 421.552†	66673.0	1472.96	2.21%	[1000]	ug/L
Ti 334.940†	764108.9	1870.18	0.24%	[1000]	ug/L
Tl 190.801†	5919.6	30.81	0.52%	[1000]	ug/L
U 409.014†	40576.1	159.04	0.39%	[1000]	ug/L
V 292.402†	176689.0	1307.77	0.74%	[1000]	ug/L
Zn 213.857†	179105.5	1208.27	0.67%	[1000]	ug/L
SiO2†	241173.9	3424.04	1.42%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 7/8/2009 09:55:46
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc 361.383	1045205.1	1045205.1	98.522	%	09:58:57
1	Sc Radial	5445.4	5445.4	97.9	%	09:58:00
1	Y 371.029	824719.2	824719.2	96.660	%	09:58:57
1	Y RADIAL	4697.0	4697.0	97.54	%	09:58:00
1	Al 396.153Radial†	53617.0	54885.6	[50000]	ug/L	09:57:40
1	Ca 317.933Radial†	19630.1	20043.9	[50000]	ug/L	09:57:40
1	Fe 238.204 Radial†	559.3	571.2	[20000]	ug/L	09:58:00
1	Mg 279.077 IEC†	611.6	624.9	[50000]	ug/L	09:58:00
1	Na 589.592 Radial†	7093.1	7419.2	[20000]	ug/L	09:57:40
2	Sc 361.383	1039938.4	1039938.4	98.026	%	09:59:03
2	Sc Radial	5322.6	5322.6	95.6	%	09:58:25
2	Y 371.029	821364.5	821364.5	96.267	%	09:59:03
2	Y RADIAL	4573.5	4573.5	94.97	%	09:58:25
2	Al 396.153Radial†	52922.6	55423.3	[50000]	ug/L	09:58:05
2	Ca 317.933Radial†	19349.8	20213.5	[50000]	ug/L	09:58:05
2	Fe 238.204 Radial†	548.4	573.0	[20000]	ug/L	09:58:25
2	Mg 279.077 IEC†	611.0	638.7	[50000]	ug/L	09:58:25
2	Na 589.592 Radial†	6990.6	7479.1	[20000]	ug/L	09:58:05
3	Sc 361.383	1037774.1	1037774.1	97.822	%	09:59:09
3	Sc Radial	5437.5	5437.5	97.7	%	09:58:50
3	Y 371.029	819757.6	819757.6	96.079	%	09:59:09
3	Y RADIAL	4679.6	4679.6	97.17	%	09:58:50
3	Al 396.153Radial†	53368.0	54709.6	[50000]	ug/L	09:58:30
3	Ca 317.933Radial†	19552.5	19993.3	[50000]	ug/L	09:58:30
3	Fe 238.204 Radial†	554.5	567.2	[20000]	ug/L	09:58:50
3	Mg 279.077 IEC†	615.8	630.0	[50000]	ug/L	09:58:50
3	Na 589.592 Radial†	7083.3	7419.6	[20000]	ug/L	09:58:30

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1040972.5	3821.89	0.37%	98.123	%
Sc Radial	5401.8	68.73	1.27%	97.1	%
Y 371.029	821947.1	2531.58	0.31%	96.335	%
Y RADIAL	4650.1	66.85	1.44%	96.56	%
Al 396.153Radial†	55006.2	371.83	0.68%	[50000]	ug/L
Ca 317.933Radial†	20083.6	115.30	0.57%	[50000]	ug/L
Fe 238.204 Radial†	570.5	2.97	0.52%	[20000]	ug/L
Mg 279.077 IEC†	631.2	6.96	1.10%	[50000]	ug/L
Na 589.592 Radial†	7439.3	34.51	0.46%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	252.6	0.00000	0.999999	
Al 396.153Radial	3	Lin Thru 0	0.0	1.099	0.00000	0.999981	
As 188.979	3	Lin Thru 0	0.0	4.261	0.00000	0.999998	
B 249.677	3	Lin Thru 0	0.0	64.16	0.00000	0.999970	
Ba 233.527	3	Lin Thru 0	0.0	197.6	0.00000	0.999992	
Be 313.107	3	Lin Thru 0	0.0	3216	0.00000	0.999998	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.4015	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	133.7	0.00000	0.999999	
Co 228.616	3	Lin Thru 0	0.0	80.28	0.00000	0.999977	
Cr 267.716	3	Lin Thru 0	0.0	117.4	0.00000	0.999994	
Cu 324.752	3	Lin Thru 0	0.0	405.3	0.00000	0.999999	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0285	0.00000	0.999999	

K 766.490 Radial	3	Lin Thru 0	0.0	2.305	0.00000	0.999997
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0126	0.00000	0.999999
Mn 257.610	3	Lin Thru 0	0.0	1265	0.00000	0.999995
Mo 202.031	3	Lin Thru 0	0.0	24.98	0.00000	0.999950
Na 589.592 Radia	2	Lin Thru 0	0.0	0.3698	0.00000	0.999934
Ni 231.604	3	Lin Thru 0	0.0	62.39	0.00000	0.999990
P 214.914	3	Lin Thru 0	0.0	2.830	0.00000	0.999989
Pb 220.353	3	Lin Thru 0	0.0	13.34	0.00000	0.999970
S 181.975 Axial	3	Lin Thru 0	0.0	1.181	0.00000	0.999994
Sb 206.836	3	Lin Thru 0	0.0	5.100	0.00000	0.999972
Se 196.026	3	Lin Thru 0	0.0	3.075	0.00000	0.999992
Si 251.611	3	Lin Thru 0	0.0	48.46	0.00000	0.999993
Sn 189.927	3	Lin Thru 0	0.0	9.615	0.00000	0.999997
Sr 421.552	3	Lin Thru 0	0.0	64.91	0.00000	0.998518
Ti 334.940	3	Lin Thru 0	0.0	763.9	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	5.926	0.00000	0.999996
U 409.014	3	Lin Thru 0	0.0	40.30	0.00000	0.999901
V 292.402	3	Lin Thru 0	0.0	176.3	0.00000	0.999989
Zn 213.857	3	Lin Thru 0	0.0	179.1	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	22.63	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 7/8/2009 10:01:20
Data Type: Reprocessed on 7/8/2009 11:40:08

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1055963.1	1055963.1	99.536	%			10:04:31
1	Sc Radial	5613.9	5613.9	101	%			10:03:13
1	Y 371.029	843980.3	843980.3	98.918	%			10:04:31
1	Y RADIAL	4850.5	4850.5	100.7	%			10:03:13
1	Ag 328.068†	64392.7	64054.1	256.65	ug/L	256.65	ppb	10:04:31
1	Al 396.153Radial†	5477.4	5521.7	5003.5	ug/L	5003.5	ppb	10:03:13
1	As 188.979†	2018.5	2064.8	487.93	ug/L	487.93	ppb	10:04:51
1	B 249.677†	32013.9	32544.6	505.32	ug/L	505.32	ppb	10:04:31
1	Ba 233.527†	105864.5	106333.4	539.45	ug/L	539.45	ppb	10:04:31
1	Be 313.107†	824616.8	835774.7	261.06	ug/L	261.06	ppb	10:04:31
1	Ca 317.933Radial†	1980.0	1945.8	4846.6	ug/L	4846.6	ppb	10:03:33
1	Cd 226.502†	67172.4	67763.0	506.57	ug/L	506.57	ppb	10:04:31
1	Co 228.616†	37965.2	38232.5	476.49	ug/L	476.49	ppb	10:04:51
1	Cr 267.716†	59214.9	59519.4	507.63	ug/L	507.63	ppb	10:04:31
1	Cu 324.752†	223133.1	213981.3	528.24	ug/L	528.24	ppb	10:04:31
1	Fe 238.204 Radial†	145.6	144.0	5067.1	ug/L	5067.1	ppb	10:03:33
1	K 766.490 Radial†	7308.0	5771.0	2501.1	ug/L	2501.1	ppb	10:03:13
1	Mg 279.077 IEC†	65.6	64.8	5140.2	ug/L	5140.2	ppb	10:03:33
1	Mn 257.610†	657421.5	659657.3	521.87	ug/L	521.87	ppb	10:04:31
1	Mo 202.031†	13087.3	13116.5	525.36	ug/L	525.36	ppb	10:04:51
1	Na 589.592 Radial†	775.6	939.2	2539.6	ug/L	2539.6	ppb	10:03:33
1	Ni 231.604†	33519.4	33527.3	537.06	ug/L	537.06	ppb	10:04:31
1	P 214.914†	7515.0	7213.0	2469.3	ug/L	2469.3	ppb	10:04:51
1	Pb 220.353†	6757.4	6817.9	512.49	ug/L	512.49	ppb	10:04:51
1	S 181.975 Axial†	3135.7	3082.5	2608.2	ug/L	2608.2	ppb	10:04:51
1	Sb 206.836†	2711.8	2679.0	533.63	ug/L	533.63	ppb	10:04:51
1	Se 196.026†	7950.7	8009.4	2624.5	ug/L	2624.5	ppb	10:04:51
1	Si 251.611†	241856.0	242422.6	4990.7	ug/L	4990.7	ppb	10:04:31
1	Sn 189.927†	5102.2	5120.5	533.02	ug/L	533.02	ppb	10:04:51
1	Sr 421.552†	33892.8	33591.0	517.48	ug/L	517.48	ppb	10:03:13
1	Ti 334.940†	386933.6	389845.5	510.25	ug/L	510.25	ppb	10:04:31
1	Tl 190.801†	2870.1	2944.9	498.92	ug/L	498.92	ppb	10:04:51
1	U 409.014†	16738.6	20651.3	510.79	ug/L	510.79	ppb	10:04:31
1	V 292.402†	86386.8	88442.0	507.92	ug/L	507.92	ppb	10:04:31
1	Zn 213.857†	92798.7	92108.6	509.43	ug/L	509.43	ppb	10:04:31
1	SiO2†	240647.4	241166.2	10631	ug/L	10631	ppb	10:05:48
2	Sc 361.383	1061154.8	1061154.8	100.03	%			10:04:57
2	Sc Radial	5574.6	5574.6	100	%			10:03:38
2	Y 371.029	847082.8	847082.8	99.281	%			10:04:57
2	Y RADIAL	4828.4	4828.4	100.3	%			10:03:38
2	Ag 328.068†	64498.9	63843.8	255.81	ug/L	255.81	ppb	10:04:57
2	Al 396.153Radial†	5433.4	5516.1	4998.6	ug/L	4998.6	ppb	10:03:38
2	As 188.979†	2002.8	2039.2	481.91	ug/L	481.91	ppb	10:05:17
2	B 249.677†	32167.6	32540.8	505.28	ug/L	505.28	ppb	10:04:57
2	Ba 233.527†	106144.9	106093.4	538.23	ug/L	538.23	ppb	10:04:57
2	Be 313.107†	824477.0	831581.7	259.75	ug/L	259.75	ppb	10:04:57
2	Ca 317.933Radial†	1968.2	1947.8	4851.6	ug/L	4851.6	ppb	10:03:58
2	Cd 226.502†	67276.9	67537.3	504.89	ug/L	504.89	ppb	10:04:57
2	Co 228.616†	37893.6	37974.3	473.26	ug/L	473.26	ppb	10:05:17
2	Cr 267.716†	59208.0	59221.4	505.09	ug/L	505.09	ppb	10:04:57
2	Cu 324.752†	224086.8	213838.1	527.89	ug/L	527.89	ppb	10:04:57
2	Fe 238.204 Radial†	144.3	143.7	5055.6	ug/L	5055.6	ppb	10:03:58
2	K 766.490 Radial†	7330.2	5844.2	2532.9	ug/L	2532.9	ppb	10:03:38
2	Mg 279.077 IEC†	68.0	67.7	5365.3	ug/L	5365.3	ppb	10:03:58
2	Mn 257.610†	658788.7	657792.7	520.39	ug/L	520.39	ppb	10:04:57
2	Mo 202.031†	13056.1	13020.9	521.54	ug/L	521.54	ppb	10:05:17
2	Na 589.592 Radial†	764.6	933.7	2524.5	ug/L	2524.5	ppb	10:03:58
2	Ni 231.604†	33627.1	33470.2	536.15	ug/L	536.15	ppb	10:04:57

2	P 214.914†	7509.3	7170.5	2454.3	ug/L	2454.3 ppb	10:05:17
2	Pb 220.353†	6755.8	6783.1	509.87	ug/L	509.87 ppb	10:05:17
2	S 181.975 Axial†	3111.7	3043.1	2574.9	ug/L	2574.9 ppb	10:05:17
2	Sb 206.836†	2721.3	2675.2	532.82	ug/L	532.82 ppb	10:05:17
2	Se 196.026†	7952.2	7971.8	2612.2	ug/L	2612.2 ppb	10:05:17
2	Si 251.611†	242445.6	241823.3	4978.4	ug/L	4978.4 ppb	10:04:57
2	Sn 189.927†	5103.9	5097.1	530.59	ug/L	530.59 ppb	10:05:17
2	Sr 421.552†	33672.4	33607.8	517.74	ug/L	517.74 ppb	10:03:38
2	Ti 334.940†	387671.3	388681.1	508.73	ug/L	508.73 ppb	10:04:57
2	Tl 190.801†	2874.3	2934.9	497.25	ug/L	497.25 ppb	10:05:17
2	U 409.014†	16726.6	20557.1	508.46	ug/L	508.46 ppb	10:04:57
2	V 292.402†	86445.6	88076.2	505.80	ug/L	505.80 ppb	10:04:57
2	Zn 213.857†	92897.2	91751.0	507.43	ug/L	507.43 ppb	10:04:57
2	SiO2†	237580.2	236916.9	10443	ug/L	10443 ppb	10:05:54
3	Sc 361.383	1046189.2	1046189.2	98.615	%		10:05:23
3	Sc Radial	5513.6	5513.6	99.1	%		10:04:03
3	Y 371.029	834847.1	834847.1	97.847	%		10:05:23
3	Y RADIAL	4760.8	4760.8	98.86	%		10:04:03
3	Ag 328.068†	63545.9	63799.7	255.72	ug/L	255.72 ppb	10:05:23
3	Al 396.153Radial†	5377.5	5519.7	5001.6	ug/L	5001.6 ppb	10:04:03
3	As 188.979†	2001.8	2066.8	488.43	ug/L	488.43 ppb	10:05:43
3	B 249.677†	31566.1	32390.9	502.89	ug/L	502.89 ppb	10:05:23
3	Ba 233.527†	104823.4	106271.3	539.14	ug/L	539.14 ppb	10:05:23
3	Be 313.107†	812519.1	831246.8	259.64	ug/L	259.64 ppb	10:05:23
3	Ca 317.933Radial†	1993.1	1994.7	4968.4	ug/L	4968.4 ppb	10:04:23
3	Cd 226.502†	66540.9	67753.1	506.47	ug/L	506.47 ppb	10:05:23
3	Co 228.616†	37778.7	38399.7	478.58	ug/L	478.58 ppb	10:05:43
3	Cr 267.716†	58457.7	59307.3	505.83	ug/L	505.83 ppb	10:05:23
3	Cu 324.752†	219384.3	212274.2	524.04	ug/L	524.04 ppb	10:05:23
3	Fe 238.204 Radial†	150.5	151.5	5330.8	ug/L	5330.8 ppb	10:04:23
3	K 766.490 Radial†	7160.3	5753.8	2493.9	ug/L	2493.9 ppb	10:04:03
3	Mg 279.077 IEC†	66.6	67.1	5318.0	ug/L	5318.0 ppb	10:04:23
3	Mn 257.610†	650091.5	658394.7	520.91	ug/L	520.91 ppb	10:05:23
3	Mo 202.031†	13030.1	13181.3	527.98	ug/L	527.98 ppb	10:05:43
3	Na 589.592 Radial†	777.1	954.8	2581.6	ug/L	2581.6 ppb	10:04:23
3	Ni 231.604†	33207.7	33525.8	537.04	ug/L	537.04 ppb	10:05:23
3	P 214.914†	7486.1	7254.4	2484.4	ug/L	2484.4 ppb	10:05:43
3	Pb 220.353†	6694.0	6817.1	512.41	ug/L	512.41 ppb	10:05:43
3	S 181.975 Axial†	3113.7	3089.6	2614.2	ug/L	2614.2 ppb	10:05:43
3	Sb 206.836†	2715.5	2708.2	539.48	ug/L	539.48 ppb	10:05:43
3	Se 196.026†	7890.8	8023.3	2629.9	ug/L	2629.9 ppb	10:05:43
3	Si 251.611†	238657.3	241449.0	4970.5	ug/L	4970.5 ppb	10:05:23
3	Sn 189.927†	5067.2	5132.9	534.33	ug/L	534.33 ppb	10:05:43
3	Sr 421.552†	33182.0	33485.1	515.84	ug/L	515.84 ppb	10:04:03
3	Ti 334.940†	381414.1	387880.2	507.69	ug/L	507.69 ppb	10:05:23
3	Tl 190.801†	2873.4	2975.2	504.01	ug/L	504.01 ppb	10:05:43
3	U 409.014†	16428.1	20493.6	506.85	ug/L	506.85 ppb	10:05:23
3	V 292.402†	84994.3	87840.8	504.50	ug/L	504.50 ppb	10:05:23
3	Zn 213.857†	91642.8	91807.5	507.72	ug/L	507.72 ppb	10:05:23
3	SiO2†	239859.9	242626.3	10695	ug/L	10695 ppb	10:05:59

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054435.7	99.392	%	0.7163				0.72%
Sc Radial	5567.4	100	%	0.9				0.91%
Y 371.029	841970.1	98.682	%	0.7455				0.76%
Y RADIAL	4813.2	99.95	%	0.971				0.97%
Ag 328.068†	63899.2	256.06	ug/L	0.515	256.06	ppb	0.515	0.20%
QC value within limits for Ag 328.068 Recovery = 102.42%								
Al 396.153Radial†	5519.1	5001.2	ug/L	2.50	5001.2	ppb	2.50	0.05%
QC value within limits for Al 396.153Radial Recovery = 100.02%								
As 188.979†	2056.9	486.09	ug/L	3.628	486.09	ppb	3.628	0.75%
QC value within limits for As 188.979 Recovery = 97.22%								
B 249.677†	32492.1	504.50	ug/L	1.392	504.50	ppb	1.392	0.28%
QC value within limits for B 249.677 Recovery = 100.90%								
Ba 233.527†	106232.7	538.94	ug/L	0.633	538.94	ppb	0.633	0.12%
QC value within limits for Ba 233.527 Recovery = 107.79%								
Be 313.107†	832867.8	260.15	ug/L	0.787	260.15	ppb	0.787	0.30%
QC value within limits for Be 313.107 Recovery = 104.06%								

Ca 317.933Radial†	1962.7	4888.9 ug/L	68.91	4888.9 ppb	68.91	1.41%
QC value within limits for Ca 317.933Radial Recovery = 97.78%						
Cd 226.502†	67684.5	505.98 ug/L	0.945	505.98 ppb	0.945	0.19%
QC value within limits for Cd 226.502 Recovery = 101.20%						
Co 228.616†	38202.2	476.11 ug/L	2.677	476.11 ppb	2.677	0.56%
QC value within limits for Co 228.616 Recovery = 95.22%						
Cr 267.716†	59349.4	506.19 ug/L	1.307	506.19 ppb	1.307	0.26%
QC value within limits for Cr 267.716 Recovery = 101.24%						
Cu 324.752†	213364.5	526.72 ug/L	2.327	526.72 ppb	2.327	0.44%
QC value within limits for Cu 324.752 Recovery = 105.34%						
Fe 238.204 Radial†	146.4	5151.2 ug/L	155.66	5151.2 ppb	155.66	3.02%
QC value within limits for Fe 238.204 Radial Recovery = 103.02%						
K 766.490 Radial†	5789.7	2509.3 ug/L	20.76	2509.3 ppb	20.76	0.83%
QC value within limits for K 766.490 Radial Recovery = 100.37%						
Mg 279.077 IEC†	66.5	5274.5 ug/L	118.66	5274.5 ppb	118.66	2.25%
QC value within limits for Mg 279.077 IEC Recovery = 105.49%						
Mn 257.610†	658614.9	521.06 ug/L	0.751	521.06 ppb	0.751	0.14%
QC value within limits for Mn 257.610 Recovery = 104.21%						
Mo 202.031†	13106.2	524.96 ug/L	3.238	524.96 ppb	3.238	0.62%
QC value within limits for Mo 202.031 Recovery = 104.99%						
Na 589.592 Radial†	942.6	2548.6 ug/L	29.60	2548.6 ppb	29.60	1.16%
QC value within limits for Na 589.592 Radial Recovery = 101.94%						
Ni 231.604†	33507.8	536.75 ug/L	0.520	536.75 ppb	0.520	0.10%
QC value within limits for Ni 231.604 Recovery = 107.35%						
P 214.914†	7212.6	2469.3 ug/L	15.04	2469.3 ppb	15.04	0.61%
QC value within limits for P 214.914 Recovery = 98.77%						
Pb 220.353†	6806.1	511.59 ug/L	1.490	511.59 ppb	1.490	0.29%
QC value within limits for Pb 220.353 Recovery = 102.32%						
S 181.975 Axial†	3071.7	2599.1 ug/L	21.20	2599.1 ppb	21.20	0.82%
QC value within limits for S 181.975 Axial Recovery = 103.96%						
Sb 206.836†	2687.5	535.31 ug/L	3.632	535.31 ppb	3.632	0.68%
QC value within limits for Sb 206.836 Recovery = 107.06%						
Se 196.026†	8001.5	2622.2 ug/L	9.08	2622.2 ppb	9.08	0.35%
QC value within limits for Se 196.026 Recovery = 104.89%						
Si 251.611†	241898.3	4979.9 ug/L	10.15	4979.9 ppb	10.15	0.20%
QC value within limits for Si 251.611 Recovery = 99.60%						
Sn 189.927†	5116.8	532.64 ug/L	1.897	532.64 ppb	1.897	0.36%
QC value within limits for Sn 189.927 Recovery = 106.53%						
Sr 421.552†	33561.3	517.02 ug/L	1.026	517.02 ppb	1.026	0.20%
QC value within limits for Sr 421.552 Recovery = 103.40%						
Ti 334.940†	388802.3	508.89 ug/L	1.289	508.89 ppb	1.289	0.25%
QC value within limits for Ti 334.940 Recovery = 101.78%						
Tl 190.801†	2951.7	500.06 ug/L	3.524	500.06 ppb	3.524	0.70%
QC value within limits for Tl 190.801 Recovery = 100.01%						
U 409.014†	20567.3	508.70 ug/L	1.982	508.70 ppb	1.982	0.39%
QC value within limits for U 409.014 Recovery = 101.74%						
V 292.402†	88119.7	506.07 ug/L	1.724	506.07 ppb	1.724	0.34%
QC value within limits for V 292.402 Recovery = 101.21%						
Zn 213.857†	91889.0	508.19 ug/L	1.080	508.19 ppb	1.080	0.21%
QC value within limits for Zn 213.857 Recovery = 101.64%						
SiO2†	240236.5	10590 ug/L	130.9	10590 ppb	130.9	1.24%
QC value within limits for SiO2 Recovery = 99.02%						

All analyte(s) passed QC.

Sequence No.: 7
Sample ID: ICB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 7/8/2009 10:08:09
Data Type: Reprocessed on 7/8/2009 11:40:09

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1062518.9	1062518.9	100.15	%			10:11:19
1	Sc Radial	5619.2	5619.2	101	%			10:10:02
1	Y 371.029	855063.0	855063.0	100.22	%			10:11:19
1	Y RADIAL	4891.2	4891.2	101.6	%			10:10:02
1	Ag 328.068†	686.9	47.3	0.1796	ug/L	0.1796	ppb	10:11:24
1	Al 396.153Radial†	-95.5	-2.4	-2.1842	ug/L	-2.1842	ppb	10:10:02
1	As 188.979†	-51.6	-14.6	-3.4416	ug/L	-3.4416	ppb	10:11:44
1	B 249.677†	-113.0	268.7	4.1899	ug/L	4.1899	ppb	10:11:24
1	Ba 233.527†	27.7	3.4	0.0163	ug/L	0.0163	ppb	10:11:44
1	Be 313.107†	-7419.2	-91.5	-0.0284	ug/L	-0.0284	ppb	10:11:24
1	Ca 317.933Radial†	20.0	2.8	7.0382	ug/L	7.0382	ppb	10:10:22
1	Cd 226.502†	-268.6	9.5	0.0735	ug/L	0.0735	ppb	10:11:44
1	Co 228.616†	-84.2	6.3	0.0795	ug/L	0.0795	ppb	10:11:44
1	Cr 267.716†	-63.7	-35.0	-0.2989	ug/L	-0.2989	ppb	10:11:24
1	Cu 324.752†	10404.8	197.5	0.4861	ug/L	0.4861	ppb	10:11:24
1	Fe 238.204 Radial†	-0.3	-0.6	-22.095	ug/L	-22.095	ppb	10:10:22
1	K 766.490 Radial†	1537.8	49.9	21.622	ug/L	21.622	ppb	10:10:02
1	Mg 279.077 IEC†	-0.3	-0.5	-40.804	ug/L	-40.804	ppb	10:10:22
1	Mn 257.610†	863.6	35.2	0.0257	ug/L	0.0257	ppb	10:11:44
1	Mo 202.031†	34.2	2.4	0.0952	ug/L	0.0952	ppb	10:11:44
1	Na 589.592 Radial†	-172.2	-0.1	-0.2094	ug/L	-0.2094	ppb	10:10:22
1	Ni 231.604†	165.5	17.0	0.2724	ug/L	0.2724	ppb	10:11:44
1	P 214.914†	359.3	21.8	7.6434	ug/L	7.6434	ppb	10:11:44
1	Pb 220.353†	-14.3	14.8	1.1103	ug/L	1.1103	ppb	10:11:44
1	S 181.975 Axial†	61.3	-6.6	-5.6162	ug/L	-5.6162	ppb	10:11:44
1	Sb 206.836†	50.7	5.2	1.0374	ug/L	1.0374	ppb	10:11:44
1	Se 196.026†	-15.1	6.5	2.0343	ug/L	2.0343	ppb	10:11:44
1	Si 251.611†	605.7	44.7	0.9121	ug/L	0.9121	ppb	10:11:44
1	Sn 189.927†	10.2	4.7	0.4889	ug/L	0.4889	ppb	10:11:44
1	Sr 421.552†	8.2	2.6	0.0401	ug/L	0.0401	ppb	10:10:22
1	Ti 334.940†	-1098.3	12.6	0.0172	ug/L	0.0172	ppb	10:11:24
1	Tl 190.801†	-61.2	0.3	0.0480	ug/L	0.0480	ppb	10:11:44
1	U 409.014†	-3850.0	-9.3	-0.2275	ug/L	-0.2275	ppb	10:11:19
1	V 292.402†	-1677.0	-21.6	-0.1194	ug/L	-0.1194	ppb	10:11:24
1	Zn 213.857†	1258.4	134.0	0.7499	ug/L	0.7499	ppb	10:11:44
1	SiO2†	620.8	17.5	0.7492	ug/L	0.7492	ppb	10:12:50
2	Sc 361.383	1069316.7	1069316.7	100.80	%			10:11:49
2	Sc Radial	5629.3	5629.3	101	%			10:10:27
2	Y 371.029	858517.5	858517.5	100.62	%			10:11:49
2	Y RADIAL	4855.9	4855.9	100.8	%			10:10:27
2	Ag 328.068†	676.2	32.3	0.1208	ug/L	0.1208	ppb	10:11:54
2	Al 396.153Radial†	-91.2	2.0	1.8521	ug/L	1.8521	ppb	10:10:27
2	As 188.979†	-44.8	-7.5	-1.7654	ug/L	-1.7654	ppb	10:12:14
2	B 249.677†	-123.3	259.2	4.0408	ug/L	4.0408	ppb	10:11:54
2	Ba 233.527†	23.9	-0.6	-0.0030	ug/L	-0.0030	ppb	10:12:14
2	Be 313.107†	-7510.8	-135.4	-0.0419	ug/L	-0.0419	ppb	10:11:54
2	Ca 317.933Radial†	16.0	-1.1	-2.7930	ug/L	-2.7930	ppb	10:10:47
2	Cd 226.502†	-288.6	-8.6	-0.0630	ug/L	-0.0630	ppb	10:12:14
2	Co 228.616†	-88.3	2.8	0.0352	ug/L	0.0352	ppb	10:12:14
2	Cr 267.716†	-28.7	0.1	0.0000	ug/L	0.0000	ppb	10:11:54
2	Cu 324.752†	10297.6	25.1	0.0611	ug/L	0.0611	ppb	10:11:54
2	Fe 238.204 Radial†	-0.0	-0.4	-13.229	ug/L	-13.229	ppb	10:10:47
2	K 766.490 Radial†	1552.5	61.7	26.759	ug/L	26.759	ppb	10:10:27
2	Mg 279.077 IEC†	2.2	2.0	160.02	ug/L	160.02	ppb	10:10:47
2	Mn 257.610†	868.0	34.2	0.0222	ug/L	0.0222	ppb	10:12:14
2	Mo 202.031†	38.9	6.8	0.2725	ug/L	0.2725	ppb	10:12:14
2	Na 589.592 Radial†	-186.1	-13.6	-36.706	ug/L	-36.706	ppb	10:10:47
2	Ni 231.604†	162.3	12.7	0.2043	ug/L	0.2043	ppb	10:12:14

2	P 214.914†	334.4	-5.1	-1.8065 ug/L	-1.8065 ppb	10:12:14
2	Pb 220.353†	-20.2	9.0	0.6783 ug/L	0.6783 ppb	10:12:14
2	S 181.975 Axial†	69.9	1.5	1.2588 ug/L	1.2588 ppb	10:12:14
2	Sb 206.836†	55.1	9.2	1.8205 ug/L	1.8205 ppb	10:12:14
2	Se 196.026†	-16.1	5.6	1.7877 ug/L	1.7877 ppb	10:12:14
2	Si 251.611†	597.5	32.7	0.6587 ug/L	0.6587 ppb	10:12:14
2	Sn 189.927†	12.0	6.5	0.6728 ug/L	0.6728 ppb	10:12:14
2	Sr 421.552†	-0.3	-5.8	-0.0892 ug/L	-0.0892 ppb	10:10:47
2	Ti 334.940†	-1058.2	59.4	0.0757 ug/L	0.0757 ppb	10:11:54
2	Tl 190.801†	-64.4	-2.5	-0.4195 ug/L	-0.4195 ppb	10:12:14
2	U 409.014†	-3694.3	169.6	4.2087 ug/L	4.2087 ppb	10:11:49
2	V 292.402†	-1628.9	36.7	0.2243 ug/L	0.2243 ppb	10:11:54
2	Zn 213.857†	1236.8	104.6	0.5788 ug/L	0.5788 ppb	10:12:14
2	SiO2†	605.7	-1.5	-0.0994 ug/L	-0.0994 ppb	10:12:55
3	Sc 361.383	1062135.4	1062135.4	100.12 %		10:12:20
3	Sc Radial	5726.3	5726.3	103 %		10:10:52
3	Y 371.029	854170.1	854170.1	100.11 %		10:12:20
3	Y RADIAL	4978.7	4978.7	103.4 %		10:10:52
3	Ag 328.068†	596.6	-42.7	-0.1739 ug/L	-0.1739 ppb	10:12:25
3	Al 396.153Radial†	-64.8	29.2	26.595 ug/L	26.595 ppb	10:10:52
3	As 188.979†	-48.3	-11.4	-2.6739 ug/L	-2.6739 ppb	10:12:45
3	B 249.677†	-137.5	244.2	3.8077 ug/L	3.8077 ppb	10:12:25
3	Ba 233.527†	32.8	8.5	0.0434 ug/L	0.0434 ppb	10:12:45
3	Be 313.107†	-7462.3	-137.3	-0.0426 ug/L	-0.0426 ppb	10:12:25
3	Ca 317.933Radial†	21.3	3.8	9.4766 ug/L	9.4766 ppb	10:11:12
3	Cd 226.502†	-293.9	-15.9	-0.1159 ug/L	-0.1159 ppb	10:12:45
3	Co 228.616†	-77.2	13.3	0.1659 ug/L	0.1659 ppb	10:12:45
3	Cr 267.716†	9.4	38.0	0.3245 ug/L	0.3245 ppb	10:12:25
3	Cu 324.752†	10285.9	82.5	0.2022 ug/L	0.2022 ppb	10:12:25
3	Fe 238.204 Radial†	-0.3	-0.6	-22.364 ug/L	-22.364 ppb	10:11:12
3	K 766.490 Radial†	1501.0	-14.5	-6.2704 ug/L	-6.2704 ppb	10:10:52
3	Mg 279.077 IEC†	-1.8	-1.9	-151.32 ug/L	-151.32 ppb	10:11:12
3	Mn 257.610†	857.0	29.0	0.0229 ug/L	0.0229 ppb	10:12:45
3	Mo 202.031†	36.6	4.8	0.1888 ug/L	0.1888 ppb	10:12:45
3	Na 589.592 Radial†	-183.0	-7.4	-20.091 ug/L	-20.091 ppb	10:11:12
3	Ni 231.604†	155.8	7.4	0.1180 ug/L	0.1180 ppb	10:12:45
3	P 214.914†	337.7	0.4	0.1410 ug/L	0.1410 ppb	10:12:45
3	Pb 220.353†	-5.3	23.7	1.7877 ug/L	1.7877 ppb	10:12:45
3	S 181.975 Axial†	71.0	3.0	2.5743 ug/L	2.5743 ppb	10:12:45
3	Sb 206.836†	52.0	6.6	1.2846 ug/L	1.2846 ppb	10:12:45
3	Se 196.026†	-12.9	8.7	2.7668 ug/L	2.7668 ppb	10:12:45
3	Si 251.611†	618.9	58.0	1.1952 ug/L	1.1952 ppb	10:12:45
3	Sn 189.927†	7.7	2.3	0.2347 ug/L	0.2347 ppb	10:12:45
3	Sr 421.552†	-1.2	-6.6	-0.1023 ug/L	-0.1023 ppb	10:11:12
3	Ti 334.940†	-1088.2	22.3	0.0301 ug/L	0.0301 ppb	10:12:25
3	Tl 190.801†	-57.0	4.4	0.7456 ug/L	0.7456 ppb	10:12:45
3	U 409.014†	-3872.6	-33.3	-0.8247 ug/L	-0.8247 ppb	10:12:20
3	V 292.402†	-1572.8	81.8	0.4653 ug/L	0.4653 ppb	10:12:25
3	Zn 213.857†	1256.5	132.6	0.7473 ug/L	0.7473 ppb	10:12:45
3	SiO2†	684.3	81.2	3.5825 ug/L	3.5825 ppb	10:13:00

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1064657.0	100.36	%	0.381				0.38%
Sc Radial	5658.3	102	%	1.1				1.05%
Y 371.029	855916.8	100.32	%	0.269				0.27%
Y RADIAL	4908.6	101.9	%	1.31				1.29%
Ag 328.068†	12.3	0.0422	ug/L	0.18942	0.0422	ppb	0.18942	448.85%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	9.6	8.7543	ug/L	15.58188	8.7543	ppb	15.58188	177.99%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.2	-2.6270	ug/L	0.83913	-2.6270	ppb	0.83913	31.94%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	257.3	4.0128	ug/L	0.19262	4.0128	ppb	0.19262	4.80%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.7	0.0189	ug/L	0.02328	0.0189	ppb	0.02328	123.18%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.4	-0.0376	ug/L	0.00800	-0.0376	ppb	0.00800	21.25%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          1.8      4.5739 ug/L       6.49541      4.5739 ppb        6.49541 142.01%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†               -5.0     -0.0351 ug/L       0.09773     -0.0351 ppb        0.09773 278.26%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                7.5      0.0936 ug/L       0.06649      0.0936 ppb        0.06649  71.07%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                1.1      0.0085 ug/L       0.31178      0.0085 ppb        0.31178 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              101.7      0.2498 ug/L       0.21648      0.2498 ppb        0.21648  86.67%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5     -19.229 ug/L        5.1983     -19.229 ppb         5.1983  27.03%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         32.4      14.037 ug/L       17.7734      14.037 ppb        17.7734 126.62%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.1     -10.703 ug/L      157.8385     -10.703 ppb       157.8385 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               32.8      0.0236 ug/L       0.00188      0.0236 ppb        0.00188   7.96%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                4.7      0.1855 ug/L       0.08870      0.1855 ppb        0.08870  47.82%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -7.0     -19.002 ug/L       18.2728     -19.002 ppb        18.2728  96.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               12.4      0.1983 ug/L       0.07739      0.1983 ppb        0.07739  39.03%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 5.7      1.9926 ug/L       4.98968      1.9926 ppb        4.98968 250.41%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               15.9      1.1921 ug/L       0.55921      1.1921 ppb        0.55921  46.91%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.7     -0.5944 ug/L       4.39850     -0.5944 ppb        4.39850 740.05%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.0      1.3808 ug/L       0.40029      1.3808 ppb        0.40029  28.99%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                7.0      2.1962 ug/L       0.50925      2.1962 ppb        0.50925  23.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               45.1      0.9220 ug/L       0.26841      0.9220 ppb        0.26841  29.11%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.5      0.4655 ug/L       0.22000      0.4655 ppb        0.22000  47.27%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -3.3     -0.0505 ug/L       0.07870     -0.0505 ppb        0.07870 155.88%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               31.5      0.0410 ug/L       0.03074      0.0410 ppb        0.03074  74.91%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.7      0.1247 ug/L       0.58632      0.1247 ppb        0.58632 470.17%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                42.3      1.0522 ug/L       2.74987      1.0522 ppb        2.74987 261.36%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                32.3      0.1900 ug/L       0.29386      0.1900 ppb        0.29386 154.62%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              123.8      0.6920 ug/L       0.09801      0.6920 ppb        0.09801  14.16%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     32.4      1.4108 ug/L       1.92802      1.4108 ppb        1.92802 136.66%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 7/8/2009 10:15:11
Data Type: Reprocessed on 7/8/2009 11:40:11

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1047868.8	1047868.8	98.773	%			10:18:21
1	Sc Radial	5489.2	5489.2	98.6	%			10:17:05
1	Y 371.029	843324.4	843324.4	98.841	%			10:18:21
1	Y RADIAL	4749.6	4749.6	98.63	%			10:17:05
1	Ag 328.068†	1908.9	1294.0	5.1281	ug/L	5.1281	ppb	10:18:26
1	Al 396.153Radial†	137.4	231.5	210.24	ug/L	210.24	ppb	10:17:05
1	As 188.979†	70.2	108.0	25.354	ug/L	25.354	ppb	10:18:47
1	B 249.677†	2924.9	3342.8	52.070	ug/L	52.070	ppb	10:18:26
1	Ba 233.527†	1019.6	1008.0	5.1161	ug/L	5.1161	ppb	10:18:47
1	Be 313.107†	8654.4	16078.1	5.0107	ug/L	5.0107	ppb	10:18:26
1	Ca 317.933Radial†	95.1	79.5	197.91	ug/L	197.91	ppb	10:17:25
1	Cd 226.502†	377.6	659.9	4.9265	ug/L	4.9265	ppb	10:18:47
1	Co 228.616†	298.6	392.8	4.9073	ug/L	4.9073	ppb	10:18:47
1	Cr 267.716†	559.7	595.3	5.0626	ug/L	5.0626	ppb	10:18:47
1	Cu 324.752†	13982.0	3964.4	9.7874	ug/L	9.7874	ppb	10:18:26
1	Fe 238.204 Radial†	3.4	3.1	108.63	ug/L	108.63	ppb	10:17:25
1	K 766.490 Radial†	1881.1	433.9	188.09	ug/L	188.09	ppb	10:17:05
1	Mg 279.077 IEC†	3.4	3.3	260.55	ug/L	260.55	ppb	10:17:25
1	Mn 257.610†	13937.0	13283.1	10.506	ug/L	10.506	ppb	10:18:26
1	Mo 202.031†	283.1	254.8	10.207	ug/L	10.207	ppb	10:18:47
1	Na 589.592 Radial†	-73.9	95.5	258.17	ug/L	258.17	ppb	10:17:25
1	Ni 231.604†	470.7	328.3	5.2585	ug/L	5.2585	ppb	10:18:47
1	P 214.914†	747.0	419.3	146.74	ug/L	146.74	ppb	10:18:47
1	Pb 220.353†	129.9	160.5	12.084	ug/L	12.084	ppb	10:18:47
1	S 181.975 Axial†	177.5	111.8	94.633	ug/L	94.633	ppb	10:18:47
1	Sb 206.836†	107.1	63.0	12.627	ug/L	12.627	ppb	10:18:47
1	Se 196.026†	79.0	101.6	33.458	ug/L	33.458	ppb	10:18:47
1	Si 251.611†	5379.4	4886.1	100.55	ug/L	100.55	ppb	10:18:26
1	Sn 189.927†	102.0	97.8	10.192	ug/L	10.192	ppb	10:18:47
1	Sr 421.552†	343.2	342.5	5.2744	ug/L	5.2744	ppb	10:17:25
1	Ti 334.940†	2629.6	3771.5	4.9245	ug/L	4.9245	ppb	10:18:26
1	Tl 190.801†	45.6	107.5	18.194	ug/L	18.194	ppb	10:18:47
1	U 409.014†	-1614.8	2199.9	54.559	ug/L	54.559	ppb	10:18:21
1	V 292.402†	-733.6	910.1	5.3790	ug/L	5.3790	ppb	10:18:26
1	Zn 213.857†	2833.5	1746.3	9.6832	ug/L	9.6832	ppb	10:18:47
1	SiO2†	5363.4	4827.7	212.72	ug/L	212.72	ppb	10:19:53
2	Sc 361.383	1047486.5	1047486.5	98.737	%			10:18:52
2	Sc Radial	5556.3	5556.3	99.8	%			10:17:30
2	Y 371.029	843422.2	843422.2	98.852	%			10:18:52
2	Y RADIAL	4839.9	4839.9	100.5	%			10:17:30
2	Ag 328.068†	1979.1	1365.8	5.4057	ug/L	5.4057	ppb	10:18:57
2	Al 396.153Radial†	131.7	224.1	203.50	ug/L	203.50	ppb	10:17:30
2	As 188.979†	79.1	117.0	27.460	ug/L	27.460	ppb	10:19:17
2	B 249.677†	2837.5	3255.3	50.709	ug/L	50.709	ppb	10:18:57
2	Ba 233.527†	999.5	988.0	5.0149	ug/L	5.0149	ppb	10:19:17
2	Be 313.107†	8590.8	16016.9	4.9918	ug/L	4.9918	ppb	10:18:57
2	Ca 317.933Radial†	97.2	80.4	200.20	ug/L	200.20	ppb	10:17:50
2	Cd 226.502†	375.2	657.6	4.9119	ug/L	4.9119	ppb	10:19:17
2	Co 228.616†	313.3	407.7	5.0943	ug/L	5.0943	ppb	10:19:17
2	Cr 267.716†	522.4	557.7	4.7420	ug/L	4.7420	ppb	10:19:17
2	Cu 324.752†	14012.6	4000.6	9.8754	ug/L	9.8754	ppb	10:18:57
2	Fe 238.204 Radial†	2.8	2.4	85.690	ug/L	85.690	ppb	10:17:50
2	K 766.490 Radial†	1891.7	421.5	182.69	ug/L	182.69	ppb	10:17:30
2	Mg 279.077 IEC†	3.4	3.3	259.03	ug/L	259.03	ppb	10:17:50
2	Mn 257.610†	13825.0	13174.8	10.418	ug/L	10.418	ppb	10:18:57
2	Mo 202.031†	288.8	260.7	10.442	ug/L	10.442	ppb	10:19:17
2	Na 589.592 Radial†	-60.0	110.3	298.35	ug/L	298.35	ppb	10:17:50
2	Ni 231.604†	467.6	325.3	5.2109	ug/L	5.2109	ppb	10:19:17

2	P 214.914†	747.1	419.7	146.89 ug/L	146.89 ppb	10:19:17
2	Pb 220.353†	109.3	139.8	10.531 ug/L	10.531 ppb	10:19:17
2	S 181.975 Axial†	174.7	109.1	92.292 ug/L	92.292 ppb	10:19:17
2	Sb 206.836†	103.9	59.8	12.037 ug/L	12.037 ppb	10:19:17
2	Se 196.026†	78.5	101.1	33.226 ug/L	33.226 ppb	10:19:17
2	Si 251.611†	5425.5	4934.8	101.55 ug/L	101.55 ppb	10:18:57
2	Sn 189.927†	110.5	106.5	11.091 ug/L	11.091 ppb	10:19:17
2	Sr 421.552†	350.2	345.2	5.3169 ug/L	5.3169 ppb	10:17:50
2	Ti 334.940†	2664.9	3808.2	4.9728 ug/L	4.9728 ppb	10:18:57
2	Tl 190.801†	64.2	126.4	21.375 ug/L	21.375 ppb	10:19:17
2	U 409.014†	-1616.1	2197.9	54.515 ug/L	54.515 ppb	10:18:52
2	V 292.402†	-696.6	947.3	5.5964 ug/L	5.5964 ppb	10:18:57
2	Zn 213.857†	2826.6	1740.4	9.6528 ug/L	9.6528 ppb	10:19:17
2	SiO2†	5326.0	4791.8	211.13 ug/L	211.13 ppb	10:19:58
3	Sc 361.383	1064715.9	1064715.9	100.36 %		10:19:22
3	Sc Radial	5636.0	5636.0	101 %		10:17:55
3	Y 371.029	857151.8	857151.8	100.46 %		10:19:22
3	Y RADIAL	4900.5	4900.5	101.8 %		10:17:55
3	Ag 328.068†	1947.8	1302.2	5.1615 ug/L	5.1615 ppb	10:19:27
3	Al 396.153Radial†	113.0	203.8	185.06 ug/L	185.06 ppb	10:17:55
3	As 188.979†	78.8	115.4	27.092 ug/L	27.092 ppb	10:19:47
3	B 249.677†	2917.2	3288.2	51.219 ug/L	51.219 ppb	10:19:27
3	Ba 233.527†	1004.9	977.0	4.9582 ug/L	4.9582 ppb	10:19:47
3	Be 313.107†	8767.1	16051.7	5.0025 ug/L	5.0025 ppb	10:19:27
3	Ca 317.933Radial†	96.9	78.7	196.13 ug/L	196.13 ppb	10:18:15
3	Cd 226.502†	363.6	640.0	4.7768 ug/L	4.7768 ppb	10:19:47
3	Co 228.616†	310.3	399.6	4.9919 ug/L	4.9919 ppb	10:19:47
3	Cr 267.716†	528.2	554.9	4.7188 ug/L	4.7188 ppb	10:19:47
3	Cu 324.752†	14146.2	3904.0	9.6387 ug/L	9.6387 ppb	10:19:27
3	Fe 238.204 Radial†	3.6	3.2	111.85 ug/L	111.85 ppb	10:18:15
3	K 766.490 Radial†	1829.8	333.6	144.57 ug/L	144.57 ppb	10:17:55
3	Mg 279.077 IEC†	6.0	5.8	456.93 ug/L	456.93 ppb	10:18:15
3	Mn 257.610†	14031.0	13153.4	10.401 ug/L	10.401 ppb	10:19:27
3	Mo 202.031†	277.9	245.2	9.8210 ug/L	9.8210 ppb	10:19:47
3	Na 589.592 Radial†	-65.4	105.8	286.15 ug/L	286.15 ppb	10:18:15
3	Ni 231.604†	473.1	323.1	5.1761 ug/L	5.1761 ppb	10:19:47
3	P 214.914†	766.3	426.6	149.31 ug/L	149.31 ppb	10:19:47
3	Pb 220.353†	121.9	150.5	11.326 ug/L	11.326 ppb	10:19:47
3	S 181.975 Axial†	173.4	104.9	88.788 ug/L	88.788 ppb	10:19:47
3	Sb 206.836†	88.6	42.9	8.6819 ug/L	8.6819 ppb	10:19:47
3	Se 196.026†	79.8	101.1	33.313 ug/L	33.313 ppb	10:19:47
3	Si 251.611†	5402.9	4823.3	99.277 ug/L	99.277 ppb	10:19:27
3	Sn 189.927†	103.1	97.3	10.137 ug/L	10.137 ppb	10:19:47
3	Sr 421.552†	361.1	351.1	5.4073 ug/L	5.4073 ppb	10:18:15
3	Ti 334.940†	2655.9	3755.6	4.9047 ug/L	4.9047 ppb	10:19:27
3	Tl 190.801†	61.2	122.4	20.700 ug/L	20.700 ppb	10:19:47
3	U 409.014†	-1729.9	2111.1	52.358 ug/L	52.358 ppb	10:19:22
3	V 292.402†	-842.5	813.3	4.8240 ug/L	4.8240 ppb	10:19:27
3	Zn 213.857†	2842.9	1710.3	9.4754 ug/L	9.4754 ppb	10:19:47
3	SiO2†	5379.4	4757.6	209.68 ug/L	209.68 ppb	10:20:03

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1053357.1	99.291	%	0.9274				0.93%
Sc Radial	5560.5	99.9	%	1.32				1.32%
Y 371.029	847966.2	99.385	%	0.9324				0.94%
Y RADIAL	4830.0	100.3	%	1.58				1.57%
Ag 328.068†	1320.7	5.2318	ug/L	0.15157	5.2318	ppb	0.15157	2.90%
QC value within limits for Ag 328.068 Recovery = 104.64%								
Al 396.153Radial†	219.8	199.60	ug/L	13.038	199.60	ppb	13.038	6.53%
QC value within limits for Al 396.153Radial Recovery = 99.80%								
As 188.979†	113.5	26.635	ug/L	1.1249	26.635	ppb	1.1249	4.22%
QC value within limits for As 188.979 Recovery = 88.78%								
B 249.677†	3295.4	51.333	ug/L	0.6874	51.333	ppb	0.6874	1.34%
QC value within limits for B 249.677 Recovery = 102.67%								
Ba 233.527†	991.0	5.0297	ug/L	0.08000	5.0297	ppb	0.08000	1.59%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	16048.9	5.0017	ug/L	0.00949	5.0017	ppb	0.00949	0.19%
QC value within limits for Be 313.107 Recovery = 100.03%								

Ca 317.933Radial†	79.5	198.08 ug/L	2.042	198.08 ppb	2.042	1.03%
QC value within limits for Ca 317.933Radial Recovery = 99.04%						
Cd 226.502†	652.5	4.8717 ug/L	0.08254	4.8717 ppb	0.08254	1.69%
QC value within limits for Cd 226.502 Recovery = 97.43%						
Co 228.616†	400.0	4.9978 ug/L	0.09363	4.9978 ppb	0.09363	1.87%
QC value within limits for Co 228.616 Recovery = 99.96%						
Cr 267.716†	569.3	4.8411 ug/L	0.19215	4.8411 ppb	0.19215	3.97%
QC value within limits for Cr 267.716 Recovery = 96.82%						
Cu 324.752†	3956.3	9.7672 ug/L	0.11961	9.7672 ppb	0.11961	1.22%
QC value within limits for Cu 324.752 Recovery = 97.67%						
Fe 238.204 Radial†	2.9	102.06 ug/L	14.266	102.06 ppb	14.266	13.98%
QC value within limits for Fe 238.204 Radial Recovery = 102.06%						
K 766.490 Radial†	396.3	171.78 ug/L	23.724	171.78 ppb	23.724	13.81%
QC value within limits for K 766.490 Radial Recovery = 114.52%						
Mg 279.077 IEC†	4.1	325.50 ug/L	113.822	325.50 ppb	113.822	34.97%
QC value within limits for Mg 279.077 IEC Recovery = 108.50%						
Mn 257.610†	13203.8	10.442 ug/L	0.0568	10.442 ppb	0.0568	0.54%
QC value within limits for Mn 257.610 Recovery = 104.42%						
Mo 202.031†	253.6	10.157 ug/L	0.3133	10.157 ppb	0.3133	3.09%
QC value within limits for Mo 202.031 Recovery = 101.57%						
Na 589.592 Radial†	103.9	280.89 ug/L	20.599	280.89 ppb	20.599	7.33%
QC value within limits for Na 589.592 Radial Recovery = 93.63%						
Ni 231.604†	325.6	5.2152 ug/L	0.04137	5.2152 ppb	0.04137	0.79%
QC value within limits for Ni 231.604 Recovery = 104.30%						
P 214.914†	421.9	147.65 ug/L	1.445	147.65 ppb	1.445	0.98%
QC value within limits for P 214.914 Recovery = 98.43%						
Pb 220.353†	150.3	11.314 ug/L	0.7766	11.314 ppb	0.7766	6.86%
QC value within limits for Pb 220.353 Recovery = 113.14%						
S 181.975 Axial†	108.6	91.904 ug/L	2.9414	91.904 ppb	2.9414	3.20%
QC value within limits for S 181.975 Axial Recovery = 91.90%						
Sb 206.836†	55.2	11.115 ug/L	2.1279	11.115 ppb	2.1279	19.14%
QC value within limits for Sb 206.836 Recovery = 111.15%						
Se 196.026†	101.3	33.332 ug/L	0.1173	33.332 ppb	0.1173	0.35%
QC value within limits for Se 196.026 Recovery = 111.11%						
Si 251.611†	4881.4	100.46 ug/L	1.140	100.46 ppb	1.140	1.13%
QC value within limits for Si 251.611 Recovery = 100.46%						
Sn 189.927†	100.5	10.473 ug/L	0.5359	10.473 ppb	0.5359	5.12%
QC value within limits for Sn 189.927 Recovery = 104.73%						
Sr 421.552†	346.3	5.3328 ug/L	0.06788	5.3328 ppb	0.06788	1.27%
QC value within limits for Sr 421.552 Recovery = 106.66%						
Ti 334.940†	3778.5	4.9340 ug/L	0.03506	4.9340 ppb	0.03506	0.71%
QC value within limits for Ti 334.940 Recovery = 98.68%						
Tl 190.801†	118.8	20.090 ug/L	1.6764	20.090 ppb	1.6764	8.34%
QC value within limits for Tl 190.801 Recovery = 100.45%						
U 409.014†	2169.6	53.811 ug/L	1.2585	53.811 ppb	1.2585	2.34%
QC value within limits for U 409.014 Recovery = 107.62%						
V 292.402†	890.2	5.2665 ug/L	0.39826	5.2665 ppb	0.39826	7.56%
QC value within limits for V 292.402 Recovery = 105.33%						
Zn 213.857†	1732.3	9.6038 ug/L	0.11224	9.6038 ppb	0.11224	1.17%
QC value within limits for Zn 213.857 Recovery = 96.04%						
SiO2†	4792.4	211.18 ug/L	1.524	211.18 ppb	1.524	0.72%
QC value within limits for SiO2 Recovery = 99.14%						

All analyte(s) passed QC.

Sequence No.: 9
Sample ID: ICSA
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 7/8/2009 10:22:14
Data Type: Reprocessed on 7/8/2009 11:40:12

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	895501.5	895501.5	84.411	%			10:25:25
1	Sc Radial	5081.7	5081.7	91.3	%			10:24:27
1	Y 371.029	714523.0	714523.0	83.745	%			10:25:25
1	Y RADIAL	4391.8	4391.8	91.20	%			10:24:27
1	Ag 328.068†	-10393.0	-12951.0	1.0699	ug/L	1.0699	ppb	10:25:25
1	Al 396.153Radial†	511366.0	560078.8	509800	ug/L	509800	ppb	10:24:07
1	As 188.979†	-139.2	-128.0	6.5707	ug/L	6.5707	ppb	10:25:45
1	B 249.677†	908.6	1457.9	-1.6992	ug/L	-1.6992	ppb	10:25:25
1	Ba 233.527†	-495.8	-611.7	1.2025	ug/L	1.2025	ppb	10:25:45
1	Be 313.107†	-7530.9	-1605.5	-0.5734	ug/L	-0.5734	ppb	10:25:25
1	Ca 317.933Radial†	172461.7	188842.4	470380	ug/L	470380	ppb	10:24:07
1	Cd 226.502†	2108.2	2775.1	-0.9878	ug/L	-0.9878	ppb	10:25:45
1	Co 228.616†	-24.7	61.1	-1.8391	ug/L	-1.8391	ppb	10:25:45
1	Cr 267.716†	-320.2	-350.7	0.5961	ug/L	0.5961	ppb	10:25:45
1	Cu 324.752†	6421.7	-2583.6	4.2681	ug/L	4.2681	ppb	10:25:25
1	Fe 238.204 Radial†	4791.8	5247.1	184080	ug/L	184080	ppb	10:24:27
1	K 766.490 Radial†	1268.1	-84.4	17.211	ug/L	17.211	ppb	10:24:07
1	Mg 279.077 IEC†	5667.1	6205.7	491320	ug/L	491320	ppb	10:24:27
1	Mn 257.610†	-1965.4	-3155.4	12.011	ug/L	12.011	ppb	10:25:25
1	Mo 202.031†	-328.7	-421.2	-4.2268	ug/L	-4.2268	ppb	10:25:45
1	Na 589.592 Radial†	-173.4	-19.4	-52.528	ug/L	-52.528	ppb	10:24:27
1	Ni 231.604†	337.4	251.5	4.0300	ug/L	4.0300	ppb	10:25:45
1	P 214.914†	293.5	10.8	28.559	ug/L	28.559	ppb	10:25:45
1	Pb 220.353†	-942.6	-1087.6	0.6717	ug/L	0.6717	ppb	10:25:45
1	S 181.975 Axial†	128.7	84.6	-28.638	ug/L	-28.638	ppb	10:25:45
1	Sb 206.836†	101.4	74.7	-0.8382	ug/L	-0.8382	ppb	10:25:45
1	Se 196.026†	-1802.9	-2114.3	-13.357	ug/L	-13.357	ppb	10:25:45
1	Si 251.611†	614.8	168.2	3.9128	ug/L	3.9128	ppb	10:25:45
1	Sn 189.927†	-348.4	-418.3	-4.5225	ug/L	-4.5225	ppb	10:25:45
1	Sr 421.552†	258.7	277.9	-0.0791	ug/L	-0.0791	ppb	10:24:27
1	Ti 334.940†	-21523.1	-24388.8	-0.4475	ug/L	-0.4475	ppb	10:25:25
1	Tl 190.801†	-123.2	-84.6	-11.647	ug/L	-11.647	ppb	10:25:45
1	U 409.014†	-2645.4	700.7	-5.2282	ug/L	-5.2282	ppb	10:25:25
1	V 292.402†	867.3	2680.3	-1.8957	ug/L	-1.8957	ppb	10:25:45
1	Zn 213.857†	5199.0	5036.8	-8.7856	ug/L	-8.7856	ppb	10:25:45
1	SiO2†	554.5	54.6	3.3717	ug/L	3.3717	ppb	10:26:41
2	Sc 361.383	894719.3	894719.3	84.337	%			10:25:50
2	Sc Radial	5092.9	5092.9	91.5	%			10:24:53
2	Y 371.029	715579.1	715579.1	83.869	%			10:25:50
2	Y RADIAL	4406.9	4406.9	91.51	%			10:24:53
2	Ag 328.068†	-10345.8	-12905.8	1.4483	ug/L	1.4483	ppb	10:25:50
2	Al 396.153Radial†	515497.0	563358.3	512790	ug/L	512790	ppb	10:24:33
2	As 188.979†	-138.6	-127.5	6.8312	ug/L	6.8312	ppb	10:26:10
2	B 249.677†	761.2	1284.1	-4.5082	ug/L	-4.5082	ppb	10:25:50
2	Ba 233.527†	-460.6	-570.4	1.4270	ug/L	1.4270	ppb	10:26:10
2	Be 313.107†	-7458.7	-1527.7	-0.5517	ug/L	-0.5517	ppb	10:25:50
2	Ca 317.933Radial†	173876.6	189972.1	473190	ug/L	473190	ppb	10:24:33
2	Cd 226.502†	2120.9	2792.4	-0.9470	ug/L	-0.9470	ppb	10:26:10
2	Co 228.616†	-11.2	77.1	-1.6492	ug/L	-1.6492	ppb	10:26:10
2	Cr 267.716†	-331.2	-364.1	0.4968	ug/L	0.4968	ppb	10:26:10
2	Cu 324.752†	6524.1	-2455.6	4.6269	ug/L	4.6269	ppb	10:25:50
2	Fe 238.204 Radial†	4821.9	5268.4	184820	ug/L	184820	ppb	10:24:53
2	K 766.490 Radial†	1216.4	-143.9	-8.5744	ug/L	-8.5744	ppb	10:24:33
2	Mg 279.077 IEC†	5711.8	6240.9	494110	ug/L	494110	ppb	10:24:53
2	Mn 257.610†	-2242.7	-3486.2	11.793	ug/L	11.793	ppb	10:25:50
2	Mo 202.031†	-331.9	-425.4	-4.3417	ug/L	-4.3417	ppb	10:26:10
2	Na 589.592 Radial†	-158.9	-3.3	-8.8064	ug/L	-8.8064	ppb	10:24:53
2	Ni 231.604†	322.8	234.5	3.7578	ug/L	3.7578	ppb	10:26:10

2	P 214.914†	282.3	-2.2	24.298 ug/L	24.298 ppb	10:26:10
2	Pb 220.353†	-980.2	-1133.2	-2.2283 ug/L	-2.2283 ppb	10:26:10
2	S 181.975 Axial†	133.9	90.9	-23.927 ug/L	-23.927 ppb	10:26:10
2	Sb 206.836†	107.1	81.5	0.3983 ug/L	0.3983 ppb	10:26:10
2	Se 196.026†	-1828.8	-2146.8	-21.144 ug/L	-21.144 ppb	10:26:10
2	Si 251.611†	621.0	176.2	4.0917 ug/L	4.0917 ppb	10:26:10
2	Sn 189.927†	-354.8	-426.2	-5.1179 ug/L	-5.1179 ppb	10:26:10
2	Sr 421.552†	253.4	271.4	-0.2039 ug/L	-0.2039 ppb	10:24:53
2	Ti 334.940†	-22184.0	-25194.7	-1.3121 ug/L	-1.3121 ppb	10:25:50
2	Tl 190.801†	-105.2	-63.3	-8.0480 ug/L	-8.0480 ppb	10:26:10
2	U 409.014†	-2792.9	523.2	-9.7248 ug/L	-9.7248 ppb	10:25:50
2	V 292.402†	765.0	2559.9	-2.6434 ug/L	-2.6434 ppb	10:26:10
2	Zn 213.857†	5183.7	5024.0	-9.0326 ug/L	-9.0326 ppb	10:26:10
2	SiO2†	499.4	-10.2	0.5414 ug/L	0.5414 ppb	10:26:46
3	Sc 361.383	893780.1	893780.1	84.249 %		10:26:15
3	Sc Radial	5118.7	5118.7	92.0 %		10:25:18
3	Y 371.029	713970.1	713970.1	83.680 %		10:26:15
3	Y RADIAL	4426.1	4426.1	91.91 %		10:25:18
3	Ag 328.068†	-10409.3	-12994.0	1.2796 ug/L	1.2796 ppb	10:26:15
3	Al 396.153Radial†	508361.4	552762.3	503140 ug/L	503140 ppb	10:24:58
3	As 188.979†	-128.5	-115.7	9.6416 ug/L	9.6416 ppb	10:26:36
3	B 249.677†	835.5	1373.2	-3.1464 ug/L	-3.1464 ppb	10:26:15
3	Ba 233.527†	-496.7	-613.9	1.2131 ug/L	1.2131 ppb	10:26:36
3	Be 313.107†	-7571.9	-1671.3	-0.5963 ug/L	-0.5963 ppb	10:26:15
3	Ca 317.933Radial†	171828.3	186787.9	465260 ug/L	465260 ppb	10:24:58
3	Cd 226.502†	2103.7	2774.7	-1.1037 ug/L	-1.1037 ppb	10:26:36
3	Co 228.616†	-21.9	64.4	-1.8116 ug/L	-1.8116 ppb	10:26:36
3	Cr 267.716†	-287.1	-312.1	0.9428 ug/L	0.9428 ppb	10:26:36
3	Cu 324.752†	6618.2	-2335.7	4.9347 ug/L	4.9347 ppb	10:26:15
3	Fe 238.204 Radial†	4851.7	5274.3	185030 ug/L	185030 ppb	10:25:18
3	K 766.490 Radial†	1220.8	-145.9	-8.5400 ug/L	-8.5400 ppb	10:24:58
3	Mg 279.077 IEC†	5734.1	6233.7	493540 ug/L	493540 ppb	10:25:18
3	Mn 257.610†	-2195.1	-3432.5	11.873 ug/L	11.873 ppb	10:26:15
3	Mo 202.031†	-345.3	-441.6	-4.9774 ug/L	-4.9774 ppb	10:26:36
3	Na 589.592 Radial†	-160.0	-3.5	-9.5568 ug/L	-9.5568 ppb	10:25:18
3	Ni 231.604†	344.5	260.6	4.1763 ug/L	4.1763 ppb	10:26:36
3	P 214.914†	258.2	-30.4	10.851 ug/L	10.851 ppb	10:26:36
3	Pb 220.353†	-979.4	-1133.4	-4.1545 ug/L	-4.1545 ppb	10:26:36
3	S 181.975 Axial†	130.4	86.9	-25.395 ug/L	-25.395 ppb	10:26:36
3	Sb 206.836†	118.6	95.4	3.4218 ug/L	3.4218 ppb	10:26:36
3	Se 196.026†	-1802.6	-2118.0	-11.599 ug/L	-11.599 ppb	10:26:36
3	Si 251.611†	555.6	99.4	2.5199 ug/L	2.5199 ppb	10:26:36
3	Sn 189.927†	-358.0	-430.4	-6.1399 ug/L	-6.1399 ppb	10:26:36
3	Sr 421.552†	264.5	282.1	0.0330 ug/L	0.0330 ppb	10:25:18
3	Ti 334.940†	-22156.0	-25189.1	-1.8382 ug/L	-1.8382 ppb	10:26:15
3	Tl 190.801†	-115.0	-75.1	-10.083 ug/L	-10.083 ppb	10:26:36
3	U 409.014†	-2610.1	736.7	-4.4537 ug/L	-4.4537 ppb	10:26:15
3	V 292.402†	851.7	2663.7	-2.0904 ug/L	-2.0904 ppb	10:26:36
3	Zn 213.857†	5227.2	5082.1	-8.7142 ug/L	-8.7142 ppb	10:26:36
3	SiO2†	573.2	78.0	4.4641 ug/L	4.4641 ppb	10:26:51

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	894667.0	84.332	%	0.0812				0.10%
Sc Radial	5097.8	91.6	%	0.34				0.37%
Y 371.029	714690.7	83.764	%	0.0958				0.11%
Y RADIAL	4408.3	91.54	%	0.357				0.39%
Ag 328.068†	-12950.3	1.2659	ug/L	0.18957	1.2659	ppb	0.18957	14.97%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	558733.1	508580	ug/L	4937.7	508580	ppb	4937.7	0.97%
QC value within limits for Al 396.153Radial Recovery = 101.72%								
As 188.979†	-123.7	7.6812	ug/L	1.70280	7.6812	ppb	1.70280	22.17%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1371.7	-3.1179	ug/L	1.40468	-3.1179	ppb	1.40468	45.05%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-598.7	1.2809	ug/L	0.12664	1.2809	ppb	0.12664	9.89%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1601.5	-0.5738	ug/L	0.02233	-0.5738	ppb	0.02233	3.89%
QC value within limits for Be 313.107 Recovery = Not calculated								

Ca 317.933Radial†	188534.1	469610 ug/L	4021.0	469610 ppb	4021.0	0.86%
QC value within limits for Ca 317.933Radial Recovery = 93.92%						
Cd 226.502†	2780.7	-1.0128 ug/L	0.08129	-1.0128 ppb	0.08129	8.03%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	67.6	-1.7666 ug/L	0.10262	-1.7666 ppb	0.10262	5.81%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-342.3	0.6786 ug/L	0.23414	0.6786 ppb	0.23414	34.51%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-2458.3	4.6099 ug/L	0.33361	4.6099 ppb	0.33361	7.24%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	5263.2	184640 ug/L	500.8	184640 ppb	500.8	0.27%
QC value within limits for Fe 238.204 Radial Recovery = 92.32%						
K 766.490 Radial†	-124.8	0.0323 ug/L	14.87743	0.0323 ppb	14.87743	>999.9%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	6226.8	492990 ug/L	1472.2	492990 ppb	1472.2	0.30%
QC value within limits for Mg 279.077 IEC Recovery = 98.60%						
Mn 257.610†	-3358.1	11.893 ug/L	0.1103	11.893 ppb	0.1103	0.93%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-429.4	-4.5153 ug/L	0.40430	-4.5153 ppb	0.40430	8.95%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-8.7	-23.630 ug/L	25.0287	-23.630 ppb	25.0287	105.92%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	248.9	3.9880 ug/L	0.21242	3.9880 ppb	0.21242	5.33%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-7.3	21.236 ug/L	9.2429	21.236 ppb	9.2429	43.52%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-1118.1	-1.9037 ug/L	2.42937	-1.9037 ppb	2.42937	127.61%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	87.5	-25.987 ug/L	2.4107	-25.987 ppb	2.4107	9.28%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	83.9	0.9940 ug/L	2.19156	0.9940 ppb	2.19156	220.49%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-2126.4	-15.367 ug/L	5.0800	-15.367 ppb	5.0800	33.06%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	148.0	3.5081 ug/L	0.86048	3.5081 ppb	0.86048	24.53%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-424.9	-5.2601 ug/L	0.81802	-5.2601 ppb	0.81802	15.55%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	277.1	-0.0833 ug/L	0.11853	-0.0833 ppb	0.11853	142.24%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-24924.2	-1.1993 ug/L	0.70220	-1.1993 ppb	0.70220	58.55%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-74.3	-9.9258 ug/L	1.80446	-9.9258 ppb	1.80446	18.18%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	653.6	-6.4689 ug/L	2.84611	-6.4689 ppb	2.84611	44.00%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	2634.7	-2.2098 ug/L	0.38789	-2.2098 ppb	0.38789	17.55%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	5047.6	-8.8442 ug/L	0.16704	-8.8442 ppb	0.16704	1.89%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	40.8	2.7924 ug/L	2.02453	2.7924 ppb	2.02453	72.50%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 7/8/2009 10:29:02
Data Type: Reprocessed on 7/8/2009 11:40:13

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	922949.8	922949.8	86.998	%			10:31:27
1	Sc Radial	5088.8	5088.8	91.4	%			10:30:59
1	Y 371.029	724486.5	724486.5	84.913	%			10:31:27
1	Y RADIAL	4396.5	4396.5	91.29	%			10:30:59
1	Ag 328.068†	51134.8	58138.2	284.08	ug/L	284.08	ppb	10:31:27
1	Al 396.153Radial†	511214.8	559124.8	508910	ug/L	508910	ppb	10:30:54
1	As 188.979†	1778.1	2080.7	527.29	ug/L	527.29	ppb	10:31:32
1	B 249.677†	30305.4	35216.0	523.28	ug/L	523.28	ppb	10:31:27
1	Ba 233.527†	84926.5	97594.3	499.43	ug/L	499.43	ppb	10:31:27
1	Be 313.107†	685114.1	794819.0	248.28	ug/L	248.28	ppb	10:31:27
1	Ca 317.933Radial†	171487.2	187510.8	467060	ug/L	467060	ppb	10:30:54
1	Cd 226.502†	56191.8	64867.2	463.74	ug/L	463.74	ppb	10:31:32
1	Co 228.616†	32068.4	36951.4	457.93	ug/L	457.93	ppb	10:31:32
1	Cr 267.716†	48976.1	56324.0	483.93	ug/L	483.93	ppb	10:31:32
1	Cu 324.752†	206474.7	227140.6	571.05	ug/L	571.05	ppb	10:31:27
1	Fe 238.204 Radial†	4792.9	5240.9	183870	ug/L	183870	ppb	10:30:59
1	K 766.490 Radial†	13633.7	13435.9	5876.8	ug/L	5876.8	ppb	10:30:59
1	Mg 279.077 IEC†	5720.0	6254.8	495220	ug/L	495220	ppb	10:30:59
1	Mn 257.610†	527932.1	606003.4	493.31	ug/L	493.31	ppb	10:31:27
1	Mo 202.031†	10741.5	12315.0	505.56	ug/L	505.56	ppb	10:31:32
1	Na 589.592 Radial†	1742.5	2075.9	5612.9	ug/L	5612.9	ppb	10:30:59
1	Ni 231.604†	24947.6	28527.7	456.94	ug/L	456.94	ppb	10:31:32
1	P 214.914†	6681.5	7343.1	2535.6	ug/L	2535.6	ppb	10:31:32
1	Pb 220.353†	4555.0	5264.8	477.54	ug/L	477.54	ppb	10:31:32
1	S 181.975 Axial†	2933.7	3304.3	2696.9	ug/L	2696.9	ppb	10:31:32
1	Sb 206.836†	2595.0	2937.4	568.65	ug/L	568.65	ppb	10:31:32
1	Se 196.026†	4971.6	5736.2	2540.6	ug/L	2540.6	ppb	10:31:32
1	Si 251.611†	227538.2	260983.1	5373.3	ug/L	5373.3	ppb	10:31:27
1	Sn 189.927†	3829.4	4396.2	495.92	ug/L	495.92	ppb	10:31:32
1	Sr 421.552†	32732.9	35789.2	547.06	ug/L	547.06	ppb	10:30:59
1	Ti 334.940†	325076.1	374767.2	521.46	ug/L	521.46	ppb	10:31:27
1	Tl 190.801†	2320.9	2729.1	464.98	ug/L	464.98	ppb	10:31:32
1	U 409.014†	14389.0	20374.2	482.00	ug/L	482.00	ppb	10:31:27
1	V 292.402†	80410.6	94080.6	523.26	ug/L	523.26	ppb	10:31:27
1	Zn 213.857†	83783.0	95181.8	490.76	ug/L	490.76	ppb	10:31:27
1	SiO2†	225071.9	258106.1	11379	ug/L	11379	ppb	10:31:59
2	Sc 361.383	922512.9	922512.9	86.957	%			10:31:38
2	Sc Radial	5114.2	5114.2	91.9	%			10:31:09
2	Y 371.029	723615.1	723615.1	84.810	%			10:31:38
2	Y RADIAL	4434.0	4434.0	92.07	%			10:31:09
2	Ag 328.068†	51203.8	58245.4	284.11	ug/L	284.11	ppb	10:31:38
2	Al 396.153Radial†	516287.7	561868.9	511410	ug/L	511410	ppb	10:31:04
2	As 188.979†	1781.2	2085.2	528.14	ug/L	528.14	ppb	10:31:43
2	B 249.677†	30212.2	35125.3	522.01	ug/L	522.01	ppb	10:31:38
2	Ba 233.527†	84896.2	97605.7	499.46	ug/L	499.46	ppb	10:31:38
2	Be 313.107†	684415.6	794388.8	248.15	ug/L	248.15	ppb	10:31:38
2	Ca 317.933Radial†	173685.3	188971.4	470700	ug/L	470700	ppb	10:31:04
2	Cd 226.502†	56169.1	64871.7	463.90	ug/L	463.90	ppb	10:31:43
2	Co 228.616†	32009.7	36901.3	457.33	ug/L	457.33	ppb	10:31:43
2	Cr 267.716†	48984.7	56360.6	484.22	ug/L	484.22	ppb	10:31:43
2	Cu 324.752†	206739.8	227557.9	572.02	ug/L	572.02	ppb	10:31:38
2	Fe 238.204 Radial†	4789.5	5211.1	182830	ug/L	182830	ppb	10:31:09
2	K 766.490 Radial†	13696.8	13430.5	5873.6	ug/L	5873.6	ppb	10:31:09
2	Mg 279.077 IEC†	5700.6	6202.7	491090	ug/L	491090	ppb	10:31:09
2	Mn 257.610†	527491.9	605784.5	493.08	ug/L	493.08	ppb	10:31:38
2	Mo 202.031†	10795.6	12383.1	508.21	ug/L	508.21	ppb	10:31:43
2	Na 589.592 Radial†	1739.5	2063.2	5578.5	ug/L	5578.5	ppb	10:31:09
2	Ni 231.604†	25007.5	28610.2	458.26	ug/L	458.26	ppb	10:31:43

2	P 214.914†	6657.3	7318.9	2528.5	ug/L	2528.5 ppb	10:31:43
2	Pb 220.353†	4521.9	5229.2	475.47	ug/L	475.47 ppb	10:31:43
2	S 181.975 Axial†	2966.6	3343.8	2729.8	ug/L	2729.8 ppb	10:31:43
2	Sb 206.836†	2571.5	2911.7	563.53	ug/L	563.53 ppb	10:31:43
2	Se 196.026†	5128.9	5919.8	2596.7	ug/L	2596.7 ppb	10:31:43
2	Si 251.611†	227663.7	261251.4	5378.8	ug/L	5378.8 ppb	10:31:38
2	Sn 189.927†	3812.8	4379.2	494.42	ug/L	494.42 ppb	10:31:43
2	Sr 421.552†	32971.9	35871.6	548.29	ug/L	548.29 ppb	10:31:09
2	Ti 334.940†	325093.7	374964.5	521.96	ug/L	521.96 ppb	10:31:38
2	Tl 190.801†	2278.3	2681.4	456.94	ug/L	456.94 ppb	10:31:43
2	U 409.014†	14518.6	20531.0	486.02	ug/L	486.02 ppb	10:31:38
2	V 292.402†	80202.9	93885.5	522.26	ug/L	522.26 ppb	10:31:38
2	Zn 213.857†	83836.4	95288.9	491.61	ug/L	491.61 ppb	10:31:38
2	SiO2†	226952.2	260390.9	11480	ug/L	11480 ppb	10:32:04
3	Sc 361.383	916394.6	916394.6	86.380	%		10:31:49
3	Sc Radial	5092.1	5092.1	91.5	%		10:31:20
3	Y 371.029	718336.1	718336.1	84.192	%		10:31:49
3	Y RADIAL	4424.4	4424.4	91.87	%		10:31:20
3	Ag 328.068†	50974.6	58373.2	285.14	ug/L	285.14 ppb	10:31:49
3	Al 396.153Radial†	519866.9	568222.7	517200	ug/L	517200 ppb	10:31:15
3	As 188.979†	1750.1	2062.9	523.28	ug/L	523.28 ppb	10:31:54
3	B 249.677†	30095.4	35222.0	523.28	ug/L	523.28 ppb	10:31:49
3	Ba 233.527†	84510.6	97811.1	500.55	ug/L	500.55 ppb	10:31:49
3	Be 313.107†	680536.4	795152.9	248.38	ug/L	248.38 ppb	10:31:49
3	Ca 317.933Radial†	174798.8	191009.9	475780	ug/L	475780 ppb	10:31:15
3	Cd 226.502†	55239.4	64226.6	458.85	ug/L	458.85 ppb	10:31:54
3	Co 228.616†	31559.8	36626.3	453.86	ug/L	453.86 ppb	10:31:54
3	Cr 267.716†	48208.5	55838.2	479.81	ug/L	479.81 ppb	10:31:54
3	Cu 324.752†	204835.2	226940.4	570.60	ug/L	570.60 ppb	10:31:49
3	Fe 238.204 Radial†	4816.3	5263.1	184650	ug/L	184650 ppb	10:31:20
3	K 766.490 Radial†	13730.6	13532.3	5918.2	ug/L	5918.2 ppb	10:31:20
3	Mg 279.077 IEC†	5726.3	6257.7	495450	ug/L	495450 ppb	10:31:20
3	Mn 257.610†	525190.6	607170.3	494.33	ug/L	494.33 ppb	10:31:49
3	Mo 202.031†	10571.3	12206.3	501.26	ug/L	501.26 ppb	10:31:54
3	Na 589.592 Radial†	1746.4	2079.0	5621.3	ug/L	5621.3 ppb	10:31:20
3	Ni 231.604†	24590.8	28319.8	453.61	ug/L	453.61 ppb	10:31:54
3	P 214.914†	6490.6	7177.1	2479.1	ug/L	2479.1 ppb	10:31:54
3	Pb 220.353†	4444.7	5174.6	472.31	ug/L	472.31 ppb	10:31:54
3	S 181.975 Axial†	2922.3	3315.2	2704.5	ug/L	2704.5 ppb	10:31:54
3	Sb 206.836†	2597.2	2961.2	572.95	ug/L	572.95 ppb	10:31:54
3	Se 196.026†	4938.2	5738.4	2544.4	ug/L	2544.4 ppb	10:31:54
3	Si 251.611†	226292.7	261412.2	5382.3	ug/L	5382.3 ppb	10:31:49
3	Sn 189.927†	3753.4	4339.7	490.73	ug/L	490.73 ppb	10:31:54
3	Sr 421.552†	32971.1	36026.6	550.64	ug/L	550.64 ppb	10:31:20
3	Ti 334.940†	322933.2	374959.4	522.30	ug/L	522.30 ppb	10:31:49
3	Tl 190.801†	2336.1	2765.8	471.25	ug/L	471.25 ppb	10:31:54
3	U 409.014†	14229.3	20307.5	480.26	ug/L	480.26 ppb	10:31:49
3	V 292.402†	79923.8	94178.2	523.65	ug/L	523.65 ppb	10:31:49
3	Zn 213.857†	83231.3	95232.0	490.97	ug/L	490.97 ppb	10:31:49
3	SiO2†	228890.9	264377.8	11656	ug/L	11656 ppb	10:32:10

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	920619.1	86.779	%	0.3455				0.40%
Sc Radial	5098.4	91.6	%	0.25				0.27%
Y 371.029	722145.9	84.638	%	0.3901				0.46%
Y RADIAL	4418.3	91.75	%	0.405				0.44%
Ag 328.068†	58252.3	284.44	ug/L	0.602	284.44	ppb	0.602	0.21%
QC value within limits for Ag 328.068 Recovery = 113.78%								
Al 396.153Radial†	563072.2	512510	ug/L	4248.0	512510	ppb	4248.0	0.83%
QC value within limits for Al 396.153Radial Recovery = 102.50%								
As 188.979†	2076.3	526.24	ug/L	2.594	526.24	ppb	2.594	0.49%
QC value within limits for As 188.979 Recovery = 105.25%								
B 249.677†	35187.8	522.85	ug/L	0.735	522.85	ppb	0.735	0.14%
QC value within limits for B 249.677 Recovery = 104.57%								
Ba 233.527†	97670.4	499.82	ug/L	0.636	499.82	ppb	0.636	0.13%
QC value within limits for Ba 233.527 Recovery = 99.96%								
Be 313.107†	794786.9	248.27	ug/L	0.119	248.27	ppb	0.119	0.05%
QC value within limits for Be 313.107 Recovery = 99.31%								

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Ca 317.933Radial†     189164.0      471180 ug/L        4377.5      471180 ppb         4377.5   0.93%
   QC value within limits for Ca 317.933Radial  Recovery = 94.24%
Cd 226.502†            64655.2      462.16 ug/L         2.867      462.16 ppb          2.867   0.62%
   QC value within limits for Cd 226.502  Recovery = 92.43%
Co 228.616†            36826.3      456.37 ug/L         2.197      456.37 ppb          2.197   0.48%
   QC value within limits for Co 228.616  Recovery = 91.27%
Cr 267.716†            56174.3      482.66 ug/L         2.467      482.66 ppb          2.467   0.51%
   QC value within limits for Cr 267.716  Recovery = 96.53%
Cu 324.752†           227213.0      571.22 ug/L         0.725      571.22 ppb          0.725   0.13%
   QC value within limits for Cu 324.752  Recovery = 114.24%
Fe 238.204 Radial†      5238.4      183780 ug/L         913.9      183780 ppb          913.9   0.50%
   QC value within limits for Fe 238.204 Radial  Recovery = 91.89%
K 766.490 Radial†      13466.2      5889.5 ug/L         24.91      5889.5 ppb          24.91   0.42%
   QC value within limits for K 766.490 Radial  Recovery = 117.79%
Mg 279.077 IEC†         6238.4      493920 ug/L        2453.5      493920 ppb         2453.5   0.50%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.78%
Mn 257.610†           606319.4      493.58 ug/L         0.664      493.58 ppb          0.664   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.72%
Mo 202.031†            12301.5      505.01 ug/L         3.509      505.01 ppb          3.509   0.69%
   QC value within limits for Mo 202.031  Recovery = 101.00%
Na 589.592 Radial†      2072.7      5604.3 ug/L         22.66      5604.3 ppb          22.66   0.40%
   QC value within limits for Na 589.592 Radial  Recovery = 112.09%
Ni 231.604†            28485.9      456.27 ug/L         2.398      456.27 ppb          2.398   0.53%
   QC value within limits for Ni 231.604  Recovery = 91.25%
P 214.914†              7279.7      2514.4 ug/L         30.79      2514.4 ppb          30.79   1.22%
   QC value within limits for P 214.914  Recovery = 100.58%
Pb 220.353†             5222.9      475.11 ug/L         2.633      475.11 ppb          2.633   0.55%
   QC value within limits for Pb 220.353  Recovery = 95.02%
S 181.975 Axial†        3321.1      2710.4 ug/L         17.23      2710.4 ppb          17.23   0.64%
   QC value within limits for S 181.975 Axial  Recovery = 108.42%
Sb 206.836†             2936.8      568.38 ug/L         4.717      568.38 ppb          4.717   0.83%
   QC value within limits for Sb 206.836  Recovery = 113.68%
Se 196.026†             5798.1      2560.6 ug/L         31.38      2560.6 ppb          31.38   1.23%
   QC value within limits for Se 196.026  Recovery = 102.42%
Si 251.611†           261215.6      5378.2 ug/L          4.51      5378.2 ppb           4.51   0.08%
   QC value within limits for Si 251.611  Recovery = 107.56%
Sn 189.927†             4371.7      493.69 ug/L         2.669      493.69 ppb          2.669   0.54%
   QC value within limits for Sn 189.927  Recovery = 98.74%
Sr 421.552†            35895.8      548.66 ug/L         1.817      548.66 ppb          1.817   0.33%
   QC value within limits for Sr 421.552  Recovery = 109.73%
Ti 334.940†           374897.0      521.91 ug/L         0.421      521.91 ppb          0.421   0.08%
   QC value within limits for Ti 334.940  Recovery = 104.38%
Tl 190.801†             2725.5      464.39 ug/L         7.171      464.39 ppb          7.171   1.54%
   QC value within limits for Tl 190.801  Recovery = 92.88%
U 409.014†             20404.2      482.76 ug/L         2.954      482.76 ppb          2.954   0.61%
   QC value within limits for U 409.014  Recovery = 96.55%
V 292.402†             94048.1      523.06 ug/L         0.714      523.06 ppb          0.714   0.14%
   QC value within limits for V 292.402  Recovery = 104.61%
Zn 213.857†            95234.2      491.11 ug/L         0.439      491.11 ppb          0.439   0.09%
   QC value within limits for Zn 213.857  Recovery = 98.22%
SiO2†                 260958.2       11505 ug/L         140.4       11505 ppb          140.4   1.22%
   QC value within limits for SiO2  Recovery = 107.57%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: LR1
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 7/8/2009 10:34:19
Data Type: Reprocessed on 7/8/2009 11:40:14

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	903068.1	903068.1	85.124	%			10:37:30
1	Sc Radial	4907.1	4907.1	88.2	%			10:36:32
1	Y 371.029	711048.9	711048.9	83.338	%			10:37:30
1	Y RADIAL	4267.0	4267.0	88.60	%			10:36:32
1	Ag 328.068†	-24652.6	-29599.4	5.2180	ug/L	5.2180	ppb	10:37:30
1	Al 396.153Radial†	501001.0	568251.7	517240	ug/L	517240	ppb	10:36:12
1	As 188.979†	-286.0	-299.1	17.474	ug/L	17.474	ppb	10:37:35
1	B 249.677†	2112.7	2863.4	-13.637	ug/L	-13.637	ppb	10:37:30
1	Ba 233.527†	-1436.5	-1711.8	1.5622	ug/L	1.5622	ppb	10:37:35
1	Be 313.107†	-14446.8	-9655.2	-3.0542	ug/L	-3.0542	ppb	10:37:35
1	Ca 317.933Radial†	166917.5	189275.7	471460	ug/L	471460	ppb	10:36:12
1	Cd 226.502†	5594.5	6849.8	-0.6386	ug/L	-0.6386	ppb	10:37:35
1	Co 228.616†	294.3	436.1	-0.8830	ug/L	-0.8830	ppb	10:37:35
1	Cr 267.716†	-12.1	14.4	4.1493	ug/L	4.1493	ppb	10:37:35
1	Cu 324.752†	3503.0	-6076.1	10.395	ug/L	10.395	ppb	10:37:30
1	Fe 238.204 Radial†	11037.4	12516.6	439100	ug/L	439100	ppb	10:36:32
1	K 766.490 Radial†	1318.5	22.1	26.226	ug/L	26.226	ppb	10:36:12
1	Mg 279.077 IEC†	5521.4	6261.4	495510	ug/L	495510	ppb	10:36:32
1	Mn 257.610†	-38315.8	-45838.6	11.430	ug/L	11.430	ppb	10:37:30
1	Mo 202.031†	-778.9	-946.7	-7.7594	ug/L	-7.7594	ppb	10:37:35
1	Na 589.592 Radial†	171624.9	194801.4	526720	ug/L	526720	ppb	10:36:12
1	Ni 231.604†	465.6	398.7	6.3863	ug/L	6.3863	ppb	10:37:35
1	P 214.914†	838.8	648.5	52.119	ug/L	52.119	ppb	10:37:35
1	Pb 220.353†	-640.5	-723.3	5.3786	ug/L	5.3786	ppb	10:37:35
1	S 181.975 Axial†	149.8	108.1	-10.229	ug/L	-10.229	ppb	10:37:35
1	Sb 206.836†	146.8	127.0	13.157	ug/L	13.157	ppb	10:37:35
1	Se 196.026†	-4401.3	-5148.9	-103.95	ug/L	-103.95	ppb	10:37:35
1	Si 251.611†	-979.0	-1710.1	-34.481	ug/L	-34.481	ppb	10:37:35
1	Sn 189.927†	-388.8	-462.3	-4.5333	ug/L	-4.5333	ppb	10:37:35
1	Sr 421.552†	319.3	356.6	1.1243	ug/L	1.1243	ppb	10:36:32
1	Ti 334.940†	-15490.5	-17088.2	2.9945	ug/L	2.9945	ppb	10:37:35
1	Tl 190.801†	-133.6	-95.5	-13.648	ug/L	-13.648	ppb	10:37:35
1	U 409.014†	478080.9	565462.0	13976	ug/L	13976	ppb	10:37:30
1	V 292.402†	2200.9	4238.3	-0.8487	ug/L	-0.8487	ppb	10:37:35
1	Zn 213.857†	10091.7	10732.9	-4.6503	ug/L	-4.6503	ppb	10:37:35
1	SiO2†	-858.7	-1611.1	-69.439	ug/L	-69.439	ppb	10:38:03
2	Sc 361.383	901598.6	901598.6	84.986	%			10:37:41
2	Sc Radial	4913.8	4913.8	88.3	%			10:36:57
2	Y 371.029	709120.5	709120.5	83.112	%			10:37:41
2	Y RADIAL	4292.7	4292.7	89.14	%			10:36:57
2	Ag 328.068†	-24814.9	-29837.5	4.1617	ug/L	4.1617	ppb	10:37:41
2	Al 396.153Radial†	499453.7	565720.2	514940	ug/L	514940	ppb	10:36:37
2	As 188.979†	-323.1	-343.3	7.0255	ug/L	7.0255	ppb	10:37:46
2	B 249.677†	2057.8	2802.9	-14.529	ug/L	-14.529	ppb	10:37:41
2	Ba 233.527†	-1538.0	-1834.0	0.9343	ug/L	0.9343	ppb	10:37:46
2	Be 313.107†	-14278.5	-9484.8	-2.9994	ug/L	-2.9994	ppb	10:37:46
2	Ca 317.933Radial†	166575.3	188628.5	469840	ug/L	469840	ppb	10:36:37
2	Cd 226.502†	5560.2	6820.2	-0.8124	ug/L	-0.8124	ppb	10:37:46
2	Co 228.616†	329.8	478.5	-0.3494	ug/L	-0.3494	ppb	10:37:46
2	Cr 267.716†	64.5	104.5	4.9068	ug/L	4.9068	ppb	10:37:46
2	Cu 324.752†	3384.0	-6209.4	10.043	ug/L	10.043	ppb	10:37:41
2	Fe 238.204 Radial†	11042.3	12505.0	438690	ug/L	438690	ppb	10:36:57
2	K 766.490 Radial†	1363.1	70.6	47.960	ug/L	47.960	ppb	10:36:37
2	Mg 279.077 IEC†	5523.4	6255.1	495010	ug/L	495010	ppb	10:36:57
2	Mn 257.610†	-38665.9	-46324.0	11.003	ug/L	11.003	ppb	10:37:41
2	Mo 202.031†	-762.0	-928.4	-7.0553	ug/L	-7.0553	ppb	10:37:46
2	Na 589.592 Radial†	171230.3	194087.6	524790	ug/L	524790	ppb	10:36:37
2	Ni 231.604†	460.5	393.6	6.3048	ug/L	6.3048	ppb	10:37:46

2	P 214.914†	942.4	772.0	95.294	ug/L	95.294 ppb	10:37:46
2	Pb 220.353†	-620.4	-700.9	6.6499	ug/L	6.6499 ppb	10:37:46
2	S 181.975 Axial†	185.9	150.9	26.429	ug/L	26.429 ppb	10:37:46
2	Sb 206.836†	108.8	82.6	4.4435	ug/L	4.4435 ppb	10:37:46
2	Se 196.026†	-4291.9	-5028.5	-66.360	ug/L	-66.360 ppb	10:37:46
2	Si 251.611†	-923.9	-1647.3	-33.191	ug/L	-33.191 ppb	10:37:46
2	Sn 189.927†	-421.4	-501.3	-8.7146	ug/L	-8.7146 ppb	10:37:46
2	Sr 421.552†	322.3	359.5	1.1835	ug/L	1.1835 ppb	10:36:57
2	Ti 334.940†	-14961.4	-16495.3	3.6589	ug/L	3.6589 ppb	10:37:46
2	Tl 190.801†	-157.6	-124.0	-18.471	ug/L	-18.471 ppb	10:37:46
2	U 409.014†	477587.6	565796.9	13984	ug/L	13984 ppb	10:37:41
2	V 292.402†	2214.6	4258.6	-0.6621	ug/L	-0.6621 ppb	10:37:46
2	Zn 213.857†	9931.6	10563.8	-5.5320	ug/L	-5.5320 ppb	10:37:46
2	SiO2†	-947.4	-1717.2	-74.141	ug/L	-74.141 ppb	10:38:08
3	Sc 361.383	901333.6	901333.6	84.961	%		10:37:52
3	Sc Radial	4898.6	4898.6	88.0	%		10:37:23
3	Y 371.029	709314.8	709314.8	83.134	%		10:37:52
3	Y RADIAL	4273.7	4273.7	88.74	%		10:37:23
3	Ag 328.068†	-24785.9	-29811.9	3.2059	ug/L	3.2059 ppb	10:37:52
3	Al 396.153Radial†	500210.2	568328.0	517310	ug/L	517310 ppb	10:37:02
3	As 188.979†	-299.6	-315.7	12.839	ug/L	12.839 ppb	10:37:57
3	B 249.677†	2166.2	2931.2	-12.096	ug/L	-12.096 ppb	10:37:52
3	Ba 233.527†	-1531.2	-1826.5	0.8994	ug/L	0.8994 ppb	10:37:57
3	Be 313.107†	-14414.9	-9650.3	-3.0517	ug/L	-3.0517 ppb	10:37:57
3	Ca 317.933Radial†	166348.8	188954.3	470650	ug/L	470650 ppb	10:37:02
3	Cd 226.502†	5540.8	6799.3	-0.5842	ug/L	-0.5842 ppb	10:37:57
3	Co 228.616†	326.0	474.1	-0.3588	ug/L	-0.3588 ppb	10:37:57
3	Cr 267.716†	-19.8	5.3	3.9998	ug/L	3.9998 ppb	10:37:57
3	Cu 324.752†	3399.1	-6190.5	9.9012	ug/L	9.9012 ppb	10:37:52
3	Fe 238.204 Radial†	10926.4	12412.0	435430	ug/L	435430 ppb	10:37:23
3	K 766.490 Radial†	1311.1	16.4	22.386	ug/L	22.386 ppb	10:37:02
3	Mg 279.077 IEC†	5483.5	6229.0	492950	ug/L	492950 ppb	10:37:23
3	Mn 257.610†	-38504.0	-46146.8	10.758	ug/L	10.758 ppb	10:37:52
3	Mo 202.031†	-779.9	-949.7	-8.1288	ug/L	-8.1288 ppb	10:37:57
3	Na 589.592 Radial†	170529.0	193890.3	524260	ug/L	524260 ppb	10:37:02
3	Ni 231.604†	397.1	319.1	5.1105	ug/L	5.1105 ppb	10:37:57
3	P 214.914†	880.7	699.7	73.222	ug/L	73.222 ppb	10:37:57
3	Pb 220.353†	-643.4	-728.2	5.3697	ug/L	5.3697 ppb	10:37:57
3	S 181.975 Axial†	158.0	118.1	-1.7772	ug/L	-1.7772 ppb	10:37:57
3	Sb 206.836†	116.9	92.2	6.2449	ug/L	6.2449 ppb	10:37:57
3	Se 196.026†	-4293.9	-5032.4	-78.955	ug/L	-78.955 ppb	10:37:57
3	Si 251.611†	-893.4	-1611.7	-32.442	ug/L	-32.442 ppb	10:37:57
3	Sn 189.927†	-398.8	-474.9	-5.9803	ug/L	-5.9803 ppb	10:37:57
3	Sr 421.552†	302.5	338.2	0.8478	ug/L	0.8478 ppb	10:37:23
3	Ti 334.940†	-15207.4	-16790.1	3.3272	ug/L	3.3272 ppb	10:37:57
3	Tl 190.801†	-172.7	-141.9	-21.477	ug/L	-21.477 ppb	10:37:57
3	U 409.014†	477482.3	565838.3	13986	ug/L	13986 ppb	10:37:52
3	V 292.402†	2380.5	4454.7	0.8529	ug/L	0.8529 ppb	10:37:57
3	Zn 213.857†	9939.8	10576.9	-5.0280	ug/L	-5.0280 ppb	10:37:57
3	SiO2†	-939.4	-1708.1	-73.708	ug/L	-73.708 ppb	10:38:13

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	902000.1	85.024	%	0.0881				0.10%
Sc Radial	4906.5	88.2	%	0.14				0.15%
Y 371.029	709828.1	83.195	%	0.1244				0.15%
Y RADIAL	4277.8	88.83	%	0.277				0.31%
Ag 328.068†	-29749.6	4.1952	ug/L	1.00645	4.1952	ppb	1.00645	23.99%
Al 396.153Radial†	567433.3	516500	ug/L	1350.9	516500	ppb	1350.9	0.26%
QC value within limits for Al 396.153Radial Recovery = 103.30%								
As 188.979†	-319.4	12.446	ug/L	5.2351	12.446	ppb	5.2351	42.06%
B 249.677†	2865.8	-13.421	ug/L	1.2309	-13.421	ppb	1.2309	9.17%
Ba 233.527†	-1790.8	1.1320	ug/L	0.37301	1.1320	ppb	0.37301	32.95%
Be 313.107†	-9596.8	-3.0351	ug/L	0.03096	-3.0351	ppb	0.03096	1.02%
Ca 317.933Radial†	188952.8	470650	ug/L	805.9	470650	ppb	805.9	0.17%
QC value within limits for Ca 317.933Radial Recovery = 94.13%								
Cd 226.502†	6823.1	-0.6784	ug/L	0.11915	-0.6784	ppb	0.11915	17.56%
Co 228.616†	462.9	-0.5304	ug/L	0.30543	-0.5304	ppb	0.30543	57.59%
Cr 267.716†	41.4	4.3520	ug/L	0.48630	4.3520	ppb	0.48630	11.17%

Cu 324.752†	-6158.7	10.113 ug/L	0.2544	10.113 ppb	0.2544	2.52%
Fe 238.204 Radial†	12477.9	437740 ug/L	2010.7	437740 ppb	2010.7	0.46%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.55%						
K 766.490 Radial†	36.3	32.190 ug/L	13.7909	32.190 ppb	13.7909	42.84%
Mg 279.077 IEC†	6248.5	494490 ug/L	1357.9	494490 ppb	1357.9	0.27%
QC value within limits for Mg 279.077 IEC Recovery = 98.90%						
Mn 257.610†	-46103.1	11.063 ug/L	0.3401	11.063 ppb	0.3401	3.07%
Mo 202.031†	-941.6	-7.6478 ug/L	0.54541	-7.6478 ppb	0.54541	7.13%
Na 589.592 Radial†	194259.8	525260 ug/L	1296.0	525260 ppb	1296.0	0.25%
QC value within limits for Na 589.592 Radial Recovery = 105.05%						
Ni 231.604†	370.5	5.9339 ug/L	0.71420	5.9339 ppb	0.71420	12.04%
P 214.914†	706.7	73.545 ug/L	21.5891	73.545 ppb	21.5891	29.35%
Pb 220.353†	-717.5	5.7994 ug/L	0.73655	5.7994 ppb	0.73655	12.70%
S 181.975 Axial†	125.7	4.8073 ug/L	19.19563	4.8073 ppb	19.19563	399.30%
Sb 206.836†	100.6	7.9483 ug/L	4.59954	7.9483 ppb	4.59954	57.87%
Se 196.026†	-5069.9	-83.089 ug/L	19.1336	-83.089 ppb	19.1336	23.03%
Si 251.611†	-1656.4	-33.371 ug/L	1.0313	-33.371 ppb	1.0313	3.09%
Sn 189.927†	-479.5	-6.4094 ug/L	2.12342	-6.4094 ppb	2.12342	33.13%
Sr 421.552†	351.4	1.0519 ug/L	0.17919	1.0519 ppb	0.17919	17.04%
Ti 334.940†	-16791.2	3.3269 ug/L	0.33215	3.3269 ppb	0.33215	9.98%
Tl 190.801†	-120.5	-17.865 ug/L	3.9499	-17.865 ppb	3.9499	22.11%
U 409.014†	565699.1	13982 ug/L	5.3	13982 ppb	5.3	0.04%
QC value within limits for U 409.014 Recovery = 93.21%						
V 292.402†	4317.2	-0.2193 ug/L	0.93321	-0.2193 ppb	0.93321	425.48%
Zn 213.857†	10624.5	-5.0701 ug/L	0.44239	-5.0701 ppb	0.44239	8.73%
SiO2†	-1678.8	-72.429 ug/L	2.5989	-72.429 ppb	2.5989	3.59%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 7/8/2009 10:40:22
Data Type: Reprocessed on 7/8/2009 11:40:15

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1014953.4	1014953.4	95.671	%			10:43:57
1	Sc Radial	5417.4	5417.4	97.3	%			10:42:20
1	Y 371.029	800941.5	800941.5	93.873	%			10:43:57
1	Y RADIAL	4706.4	4706.4	97.73	%			10:42:20
1	Ag 328.068†	-7110.5	-8070.8	7.1415	ug/L	7.1415	ppb	10:44:02
1	Al 396.153Radial†	449.0	553.4	87.615	ug/L	87.615	ppb	10:42:20
1	As 188.979†	40482.4	42351.3	9989.0	ug/L	9989.0	ppb	10:44:02
1	B 249.677†	309866.7	324270.4	5029.0	ug/L	5029.0	ppb	10:43:57
1	Ba 233.527†	2664318.6	2784861.5	14118	ug/L	14118	ppb	10:43:57
1	Be 313.107†	8856992.8	9265110.5	2903.5	ug/L	2903.5	ppb	10:43:50
1	Ca 317.933Radial†	25.7	9.5	23.698	ug/L	23.698	ppb	10:42:40
1	Cd 226.502†	1280128.2	1338334.9	10016	ug/L	10016	ppb	10:43:57
1	Co 228.616†	749635.6	783648.9	9762.7	ug/L	9762.7	ppb	10:43:57
1	Cr 267.716†	2711737.5	2834479.1	24157	ug/L	24157	ppb	10:43:57
1	Cu 324.752†	7865610.7	8211358.3	20260	ug/L	20260	ppb	10:43:50
1	Fe 238.204 Radial†	-7.6	-8.1	23.148	ug/L	23.148	ppb	10:42:40
1	K 766.490 Radial†	684372.6	701529.4	304300	ug/L	304300	ppb	10:42:15
1	Mg 279.077 IEC†	-2.9	-3.1	-51.980	ug/L	-51.980	ppb	10:42:40
1	Mn 257.610†	11427294.3	11943581.3	9438.7	ug/L	9438.7	ppb	10:43:50
1	Mo 202.031†	232338.7	242820.8	9719.4	ug/L	9719.4	ppb	10:44:02
1	Na 589.592 Radial†	-122.5	44.6	120.62	ug/L	120.62	ppb	10:42:40
1	Ni 231.604†	591314.2	617924.4	9897.7	ug/L	9897.7	ppb	10:43:57
1	P 214.914†	48706.9	50574.1	14767	ug/L	14767	ppb	10:44:02
1	Pb 220.353†	309384.9	323414.5	24253	ug/L	24253	ppb	10:44:02
1	S 181.975 Axial†	58295.0	60865.2	51520	ug/L	51520	ppb	10:44:02
1	Sb 206.836†	53440.0	55812.8	10745	ug/L	10745	ppb	10:44:02
1	Se 196.026†	29668.4	31032.6	10122	ug/L	10122	ppb	10:44:02
1	Si 251.611†	2155853.2	2252850.9	46184	ug/L	46184	ppb	10:43:57
1	Sn 189.927†	95946.9	100283.2	10430	ug/L	10430	ppb	10:44:02
1	Sr 421.552†	646073.6	663655.5	10225	ug/L	10225	ppb	10:42:15
1	Ti 334.940†	7127693.7	7451349.2	9745.7	ug/L	9745.7	ppb	10:43:50
1	Tl 190.801†	55066.4	57619.7	9753.1	ug/L	9753.1	ppb	10:44:02
1	U 409.014†	-2611.3	1105.2	-19.174	ug/L	-19.174	ppb	10:44:02
1	V 292.402†	1681684.2	1759437.4	10082	ug/L	10082	ppb	10:43:57
1	Zn 213.857†	2418310.9	2526623.2	14016	ug/L	14016	ppb	10:43:57
1	SiO2†	2181096.5	2279194.3	100050	ug/L	100050	ppb	10:44:49
2	Sc 361.383	1029870.2	1029870.2	97.077	%			10:44:17
2	Sc Radial	5497.9	5497.9	98.8	%			10:42:50
2	Y 371.029	811966.1	811966.1	95.166	%			10:44:17
2	Y RADIAL	4740.4	4740.4	98.44	%			10:42:50
2	Ag 328.068†	-7088.1	-7940.1	6.7301	ug/L	6.7301	ppb	10:44:22
2	Al 396.153Radial†	473.1	571.1	109.77	ug/L	109.77	ppb	10:42:50
2	As 188.979†	40474.1	41729.8	9842.3	ug/L	9842.3	ppb	10:44:22
2	B 249.677†	307090.3	316719.2	4911.8	ug/L	4911.8	ppb	10:44:17
2	Ba 233.527†	2644634.7	2724248.1	13811	ug/L	13811	ppb	10:44:17
2	Be 313.107†	8832006.5	9105280.2	2853.4	ug/L	2853.4	ppb	10:44:10
2	Ca 317.933Radial†	28.1	11.5	28.754	ug/L	28.754	ppb	10:43:10
2	Cd 226.502†	1271277.6	1309837.1	9803.0	ug/L	9803.0	ppb	10:44:17
2	Co 228.616†	743954.7	766447.7	9548.5	ug/L	9548.5	ppb	10:44:17
2	Cr 267.716†	2688484.5	2769471.3	23603	ug/L	23603	ppb	10:44:17
2	Cu 324.752†	7842993.7	8068977.9	19908	ug/L	19908	ppb	10:44:10
2	Fe 238.204 Radial†	-5.8	-6.2	84.443	ug/L	84.443	ppb	10:43:10
2	K 766.490 Radial†	684716.9	691584.4	299980	ug/L	299980	ppb	10:42:45
2	Mg 279.077 IEC†	-2.0	-2.2	19.126	ug/L	19.126	ppb	10:43:10
2	Mn 257.610†	11404692.0	11747293.6	9283.6	ug/L	9283.6	ppb	10:44:10
2	Mo 202.031†	232311.4	239275.2	9577.5	ug/L	9577.5	ppb	10:44:22
2	Na 589.592 Radial†	-129.4	39.4	106.58	ug/L	106.58	ppb	10:43:10
2	Ni 231.604†	586038.5	603537.6	9667.2	ug/L	9667.2	ppb	10:44:17

2	P 214.914†	48755.1	49886.4	14579	ug/L	14579 ppb	10:44:22
2	Pb 220.353†	309441.3	318788.5	23906	ug/L	23906 ppb	10:44:22
2	S 181.975 Axial†	58411.2	60102.3	50874	ug/L	50874 ppb	10:44:22
2	Sb 206.836†	53362.1	54923.6	10578	ug/L	10578 ppb	10:44:22
2	Se 196.026†	29761.5	30679.3	10007	ug/L	10007 ppb	10:44:22
2	Si 251.611†	2138710.2	2202552.9	45150	ug/L	45150 ppb	10:44:17
2	Sn 189.927†	95957.5	98841.5	10280	ug/L	10280 ppb	10:44:22
2	Sr 421.552†	646581.7	654452.3	10083	ug/L	10083 ppb	10:42:45
2	Ti 334.940†	7109976.4	7325187.8	9580.8	ug/L	9580.8 ppb	10:44:10
2	Tl 190.801†	55268.7	56994.4	9647.5	ug/L	9647.5 ppb	10:44:22
2	U 409.014†	-2581.0	1176.0	-16.357	ug/L	-16.357 ppb	10:44:22
2	V 292.402†	1665056.2	1716848.7	9839.4	ug/L	9839.4 ppb	10:44:17
2	Zn 213.857†	2400720.5	2471890.8	13712	ug/L	13712 ppb	10:44:17
2	SiO2†	2194108.9	2259577.6	99188	ug/L	99188 ppb	10:44:57
3	Sc 361.383	1027984.8	1027984.8	96.899	%		10:44:37
3	Sc Radial	5311.1	5311.1	95.4	%		10:43:20
3	Y 371.029	810508.3	810508.3	94.995	%		10:44:37
3	Y RADIAL	4586.5	4586.5	95.24	%		10:43:20
3	Ag 328.068†	-7268.9	-8140.1	6.0153	ug/L	6.0153 ppb	10:44:42
3	Al 396.153Radial†	472.0	586.8	121.54	ug/L	121.54 ppb	10:43:20
3	As 188.979†	40697.9	42037.3	9914.2	ug/L	9914.2 ppb	10:44:42
3	B 249.677†	308195.5	318440.0	4938.5	ug/L	4938.5 ppb	10:44:37
3	Ba 233.527†	2647831.5	2732543.7	13853	ug/L	13853 ppb	10:44:37
3	Be 313.107†	8792922.6	9081631.8	2846.1	ug/L	2846.1 ppb	10:44:30
3	Ca 317.933Radial†	29.0	13.4	33.386	ug/L	33.386 ppb	10:43:40
3	Cd 226.502†	1272287.1	1313280.7	9828.8	ug/L	9828.8 ppb	10:44:37
3	Co 228.616†	745426.9	769372.6	9585.2	ug/L	9585.2 ppb	10:44:37
3	Cr 267.716†	2688412.8	2774476.6	23645	ug/L	23645 ppb	10:44:37
3	Cu 324.752†	7782720.1	8021593.1	19791	ug/L	19791 ppb	10:44:30
3	Fe 238.204 Radial†	-6.7	-7.3	44.771	ug/L	44.771 ppb	10:43:40
3	K 766.490 Radial†	683971.3	715172.9	310220	ug/L	310220 ppb	10:43:15
3	Mg 279.077 IEC†	-3.7	-4.1	-128.19	ug/L	-128.19 ppb	10:43:40
3	Mn 257.610†	11381446.6	11744851.0	9281.7	ug/L	9281.7 ppb	10:44:30
3	Mo 202.031†	233312.1	240746.8	9636.4	ug/L	9636.4 ppb	10:44:42
3	Na 589.592 Radial†	-122.9	41.6	112.55	ug/L	112.55 ppb	10:43:40
3	Ni 231.604†	587015.1	605652.6	9701.1	ug/L	9701.1 ppb	10:44:37
3	P 214.914†	49152.9	50388.9	14776	ug/L	14776 ppb	10:44:42
3	Pb 220.353†	310539.8	320506.8	24035	ug/L	24035 ppb	10:44:42
3	S 181.975 Axial†	58718.6	60529.9	51236	ug/L	51236 ppb	10:44:42
3	Sb 206.836†	53615.8	55286.2	10651	ug/L	10651 ppb	10:44:42
3	Se 196.026†	29842.3	30818.9	10053	ug/L	10053 ppb	10:44:42
3	Si 251.611†	2145121.2	2213209.7	45366	ug/L	45366 ppb	10:44:37
3	Sn 189.927†	96345.6	99423.4	10341	ug/L	10341 ppb	10:44:42
3	Sr 421.552†	646025.5	676882.0	10428	ug/L	10428 ppb	10:43:15
3	Ti 334.940†	7084549.3	7312379.8	9564.0	ug/L	9564.0 ppb	10:44:30
3	Tl 190.801†	55398.8	57233.1	9687.5	ug/L	9687.5 ppb	10:44:42
3	U 409.014†	-2499.7	1255.0	-14.474	ug/L	-14.474 ppb	10:44:42
3	V 292.402†	1665986.8	1720954.9	9863.5	ug/L	9863.5 ppb	10:44:37
3	Zn 213.857†	2405918.3	2481790.6	13767	ug/L	13767 ppb	10:44:37
3	SiO2†	2167381.8	2236140.5	98142	ug/L	98142 ppb	10:45:04

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1024269.4	96.549	%	0.7657				0.79%
Sc Radial	5408.8	97.2	%	1.68				1.73%
Y 371.029	807805.3	94.678	%	0.7019				0.74%
Y RADIAL	4677.8	97.14	%	1.679				1.73%
Ag 328.068†	-8050.3	6.6290	ug/L	0.56988	6.6290	ppb	0.56988	8.60%
Al 396.153Radial†	570.4	106.31	ug/L	17.224	106.31	ppb	17.224	16.20%
As 188.979†	42039.5	9915.2	ug/L	73.36	9915.2	ppb	73.36	0.74%
QC value within limits for As 188.979 Recovery = 99.15%								
B 249.677†	319809.9	4959.8	ug/L	61.39	4959.8	ppb	61.39	1.24%
QC value within limits for B 249.677 Recovery = 99.20%								
Ba 233.527†	2747217.8	13927	ug/L	166.6	13927	ppb	166.6	1.20%
QC value within limits for Ba 233.527 Recovery = 92.85%								
Be 313.107†	9150674.2	2867.7	ug/L	31.27	2867.7	ppb	31.27	1.09%
QC value within limits for Be 313.107 Recovery = 95.59%								
Ca 317.933Radial†	11.5	28.613	ug/L	4.8452	28.613	ppb	4.8452	16.93%
Cd 226.502†	1320484.3	9882.7	ug/L	116.42	9882.7	ppb	116.42	1.18%

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   QC value within limits for Cd 226.502  Recovery = 98.83%
Co 228.616†          773156.4      9632.2 ug/L        114.57      9632.2 ppb        114.57   1.19%
   QC value within limits for Co 228.616  Recovery = 96.32%
Cr 267.716†         2792809.0       23802 ug/L        308.3       23802 ppb         308.3   1.30%
   QC value within limits for Cr 267.716  Recovery = 95.21%
Cu 324.752†         8100643.1       19986 ug/L        243.7       19986 ppb         243.7   1.22%
   QC value within limits for Cu 324.752  Recovery = 99.93%
Fe 238.204 Radial†        -7.2      50.787 ug/L      31.0875      50.787 ppb       31.0875  61.21%
K 766.490 Radial†     702762.2      304830 ug/L       5138.4      304830 ppb        5138.4   1.69%
   QC value within limits for K 766.490 Radial  Recovery = 101.61%
Mg 279.077 IEC†           -3.1     -53.681 ug/L      73.6715     -53.681 ppb       73.6715 137.24%
Mn 257.610†         11811908.6      9334.7 ug/L        90.12      9334.7 ppb         90.12   0.97%
   QC value within limits for Mn 257.610  Recovery = 93.35%
Mo 202.031†          240947.6      9644.5 ug/L        71.30      9644.5 ppb         71.30   0.74%
   QC value within limits for Mo 202.031  Recovery = 96.44%
Na 589.592 Radial†        41.9     113.25 ug/L        7.046     113.25 ppb         7.046   6.22%
Ni 231.604†          609038.2      9755.3 ug/L       124.43      9755.3 ppb        124.43   1.28%
   QC value within limits for Ni 231.604  Recovery = 97.55%
P 214.914†            50283.1      14707 ug/L        111.5       14707 ppb         111.5   0.76%
   QC value within limits for P 214.914  Recovery = 98.05%
Pb 220.353†          320903.3      24065 ug/L        175.3       24065 ppb         175.3   0.73%
   QC value within limits for Pb 220.353  Recovery = 96.26%
S 181.975 Axial†      60499.1      51210 ug/L        323.6       51210 ppb         323.6   0.63%
   QC value within limits for S 181.975 Axial  Recovery = 102.42%
Sb 206.836†           55340.9      10658 ug/L         83.6       10658 ppb          83.6   0.78%
   QC value within limits for Sb 206.836  Recovery = 106.58%
Se 196.026†           30843.6      10061 ug/L         58.0       10061 ppb          58.0   0.58%
   QC value within limits for Se 196.026  Recovery = 100.61%
Si 251.611†         2222871.2      45567 ug/L        545.3       45567 ppb         545.3   1.20%
   QC value within limits for Si 251.611  Recovery = 91.13%
Sn 189.927†           99516.1      10350 ug/L         75.4       10350 ppb          75.4   0.73%
   QC value within limits for Sn 189.927  Recovery = 103.50%
Sr 421.552†          664996.6      10245 ug/L        173.7       10245 ppb         173.7   1.70%
   QC value within limits for Sr 421.552  Recovery = 102.45%
Ti 334.940†         7362972.3      9630.2 ug/L       100.43      9630.2 ppb        100.43   1.04%
   QC value within limits for Ti 334.940  Recovery = 96.30%
Tl 190.801†           57282.4      9696.0 ug/L        53.30      9696.0 ppb         53.30   0.55%
   QC value within limits for Tl 190.801  Recovery = 96.96%
U 409.014†             1178.7     -16.669 ug/L       2.3653     -16.669 ppb        2.3653  14.19%
V 292.402†          1732413.7      9928.4 ug/L       133.88      9928.4 ppb        133.88   1.35%
   QC value within limits for V 292.402  Recovery = 99.28%
Zn 213.857†         2493434.9      13832 ug/L        161.7       13832 ppb         161.7   1.17%
   QC value within limits for Zn 213.857  Recovery = 92.21%
SiO2†               2258304.1      99125 ug/L        953.1       99125 ppb         953.1   0.96%
   QC value within limits for SiO2  Recovery = 92.64%
All analyte(s) passed QC.
```

Sequence No.: 15
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:03:37
Data Type: Reprocessed on 7/8/2009 11:40:18

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1067409.9	1067409.9	100.62	%			11:06:48
1	Sc Radial	5545.0	5545.0	99.6	%			11:05:29
1	Y 371.029	849738.5	849738.5	99.593	%			11:06:48
1	Y RADIAL	4788.0	4788.0	99.42	%			11:05:29
1	Ag 328.068†	127524.3	126105.9	502.25	ug/L	502.25	ppb	11:06:48
1	Al 396.153Radial†	5299.4	5410.6	4903.4	ug/L	4903.4	ppb	11:05:29
1	As 188.979†	2078.4	2102.6	496.72	ug/L	496.72	ppb	11:07:08
1	B 249.677†	31751.6	31939.0	495.88	ug/L	495.88	ppb	11:06:48
1	Ba 233.527†	98259.2	97634.0	495.40	ug/L	495.40	ppb	11:06:48
1	Be 313.107†	1589957.2	1587550.7	494.78	ug/L	494.78	ppb	11:06:48
1	Ca 317.933Radial†	2000.8	1991.0	4959.2	ug/L	4959.2	ppb	11:05:49
1	Cd 226.502†	66514.3	66385.2	496.24	ug/L	496.24	ppb	11:06:48
1	Co 228.616†	38913.1	38765.6	483.08	ug/L	483.08	ppb	11:07:08
1	Cr 267.716†	58344.9	58016.7	494.83	ug/L	494.83	ppb	11:06:48
1	Cu 324.752†	211137.7	199655.3	492.89	ug/L	492.89	ppb	11:06:48
1	Fe 238.204 Radial†	142.3	142.5	5015.0	ug/L	5015.0	ppb	11:05:49
1	K 766.490 Radial†	13511.2	12086.4	5238.2	ug/L	5238.2	ppb	11:05:29
1	Mg 279.077 IEC†	62.2	62.2	4932.1	ug/L	4932.1	ppb	11:05:49
1	Mn 257.610†	629929.2	625250.1	494.68	ug/L	494.68	ppb	11:06:48
1	Mo 202.031†	12643.5	12534.4	502.06	ug/L	502.06	ppb	11:07:08
1	Na 589.592 Radial†	3490.6	3673.5	9932.6	ug/L	9932.6	ppb	11:05:29
1	Ni 231.604†	30743.5	30407.2	487.05	ug/L	487.05	ppb	11:07:08
1	P 214.914†	7354.4	6972.5	2389.5	ug/L	2389.5	ppb	11:07:08
1	Pb 220.353†	6693.1	6681.2	502.20	ug/L	502.20	ppb	11:07:08
1	S 181.975 Axial†	1258.3	1182.8	1000.2	ug/L	1000.2	ppb	11:07:08
1	Sb 206.836†	2588.5	2527.3	503.10	ug/L	503.10	ppb	11:07:08
1	Se 196.026†	1499.7	1512.2	511.22	ug/L	511.22	ppb	11:07:08
1	Si 251.611†	122687.2	121376.8	2492.5	ug/L	2492.5	ppb	11:06:48
1	Sn 189.927†	4831.3	4796.3	499.31	ug/L	499.31	ppb	11:07:08
1	Sr 421.552†	33822.5	33937.9	522.82	ug/L	522.82	ppb	11:05:29
1	Ti 334.940†	380487.1	379269.6	496.43	ug/L	496.43	ppb	11:06:48
1	Tl 190.801†	2880.1	2923.9	495.14	ug/L	495.14	ppb	11:07:08
1	U 409.014†	15659.6	19398.6	479.74	ug/L	479.74	ppb	11:06:48
1	V 292.402†	85512.2	86642.1	497.38	ug/L	497.38	ppb	11:06:48
1	Zn 213.857†	90296.7	88622.2	490.34	ug/L	490.34	ppb	11:06:48
1	SiO2†	123097.1	121742.0	5353.1	ug/L	5353.1	ppb	11:08:09
2	Sc 361.383	1057828.3	1057828.3	99.712	%			11:07:16
2	Sc Radial	5453.0	5453.0	98.0	%			11:05:54
2	Y 371.029	842848.9	842848.9	98.785	%			11:07:16
2	Y RADIAL	4734.2	4734.2	98.31	%			11:05:54
2	Ag 328.068†	126253.5	125979.4	501.76	ug/L	501.76	ppb	11:07:16
2	Al 396.153Radial†	5204.3	5403.2	4896.6	ug/L	4896.6	ppb	11:05:54
2	As 188.979†	2077.1	2120.0	500.82	ug/L	500.82	ppb	11:07:36
2	B 249.677†	31594.9	32067.6	497.87	ug/L	497.87	ppb	11:07:16
2	Ba 233.527†	97420.0	97677.0	495.62	ug/L	495.62	ppb	11:07:16
2	Be 313.107†	1578761.2	1590635.7	495.74	ug/L	495.74	ppb	11:07:16
2	Ca 317.933Radial†	1973.0	1996.5	4973.1	ug/L	4973.1	ppb	11:06:14
2	Cd 226.502†	65741.0	66208.5	494.92	ug/L	494.92	ppb	11:07:16
2	Co 228.616†	38917.3	39120.1	487.50	ug/L	487.50	ppb	11:07:36
2	Cr 267.716†	57810.8	58006.3	494.74	ug/L	494.74	ppb	11:07:16
2	Cu 324.752†	209446.8	199860.3	493.40	ug/L	493.40	ppb	11:07:16
2	Fe 238.204 Radial†	140.5	143.1	5035.0	ug/L	5035.0	ppb	11:06:14
2	K 766.490 Radial†	13401.9	12203.6	5289.1	ug/L	5289.1	ppb	11:05:54
2	Mg 279.077 IEC†	61.6	62.7	4968.4	ug/L	4968.4	ppb	11:06:14
2	Mn 257.610†	623982.1	624956.7	494.45	ug/L	494.45	ppb	11:07:16
2	Mo 202.031†	12615.6	12620.3	505.50	ug/L	505.50	ppb	11:07:36
2	Na 589.592 Radial†	3446.1	3687.2	9969.7	ug/L	9969.7	ppb	11:05:54
2	Ni 231.604†	30735.8	30676.3	491.36	ug/L	491.36	ppb	11:07:36

2	P 214.914†	7337.1	7021.4	2406.8 ug/L	2406.8 ppb	11:07:36
2	Pb 220.353†	6673.6	6722.0	505.26 ug/L	505.26 ppb	11:07:36
2	S 181.975 Axial†	1264.2	1200.1	1014.8 ug/L	1014.8 ppb	11:07:36
2	Sb 206.836†	2593.9	2556.0	508.91 ug/L	508.91 ppb	11:07:36
2	Se 196.026†	1503.2	1529.2	516.82 ug/L	516.82 ppb	11:07:36
2	Si 251.611†	121455.1	121245.6	2489.7 ug/L	2489.7 ppb	11:07:16
2	Sn 189.927†	4839.5	4848.0	504.69 ug/L	504.69 ppb	11:07:36
2	Sr 421.552†	33228.1	33904.0	522.30 ug/L	522.30 ppb	11:05:54
2	Ti 334.940†	377267.8	379466.3	496.69 ug/L	496.69 ppb	11:07:16
2	Tl 190.801†	2881.9	2951.6	499.79 ug/L	499.79 ppb	11:07:36
2	U 409.014†	15609.8	19489.6	482.00 ug/L	482.00 ppb	11:07:16
2	V 292.402†	84902.2	86800.1	498.32 ug/L	498.32 ppb	11:07:16
2	Zn 213.857†	89406.2	88541.9	489.86 ug/L	489.86 ppb	11:07:16
2	SiO2†	122640.5	122392.2	5381.6 ug/L	5381.6 ppb	11:08:14
3	Sc 361.383	1055071.7	1055071.7	99.452 %		11:07:43
3	Sc Radial	5432.7	5432.7	97.6 %		11:06:19
3	Y 371.029	840276.0	840276.0	98.484 %		11:07:43
3	Y RADIAL	4696.8	4696.8	97.53 %		11:06:19
3	Ag 328.068†	126120.7	126176.7	502.55 ug/L	502.55 ppb	11:07:43
3	Al 396.153Radial†	5181.8	5400.1	4893.7 ug/L	4893.7 ppb	11:06:19
3	As 188.979†	2085.4	2133.8	504.06 ug/L	504.06 ppb	11:08:03
3	B 249.677†	31427.7	31982.3	496.53 ug/L	496.53 ppb	11:07:43
3	Ba 233.527†	97457.1	97969.6	497.10 ug/L	497.10 ppb	11:07:43
3	Be 313.107†	1576182.4	1592179.6	496.22 ug/L	496.22 ppb	11:07:43
3	Ca 317.933Radial†	1975.0	2006.1	4996.9 ug/L	4996.9 ppb	11:06:39
3	Cd 226.502†	65930.8	66571.6	497.63 ug/L	497.63 ppb	11:07:43
3	Co 228.616†	38836.3	39140.6	487.76 ug/L	487.76 ppb	11:08:03
3	Cr 267.716†	57863.2	58210.5	496.48 ug/L	496.48 ppb	11:07:43
3	Cu 324.752†	208532.5	199489.8	492.49 ug/L	492.49 ppb	11:07:43
3	Fe 238.204 Radial†	141.4	144.5	5084.1 ug/L	5084.1 ppb	11:06:39
3	K 766.490 Radial†	13356.4	12208.3	5291.1 ug/L	5291.1 ppb	11:06:19
3	Mg 279.077 IEC†	60.3	61.6	4883.3 ug/L	4883.3 ppb	11:06:39
3	Mn 257.610†	623827.7	626436.5	495.63 ug/L	495.63 ppb	11:07:43
3	Mo 202.031†	12607.0	12644.6	506.48 ug/L	506.48 ppb	11:08:03
3	Na 589.592 Radial†	3459.6	3714.2	10043 ug/L	10043 ppb	11:06:19
3	Ni 231.604†	30656.7	30677.3	491.38 ug/L	491.38 ppb	11:08:03
3	P 214.914†	7338.8	7042.2	2414.3 ug/L	2414.3 ppb	11:08:03
3	Pb 220.353†	6655.9	6721.6	505.23 ug/L	505.23 ppb	11:08:03
3	S 181.975 Axial†	1273.7	1212.9	1025.7 ug/L	1025.7 ppb	11:08:03
3	Sb 206.836†	2578.9	2547.6	507.27 ug/L	507.27 ppb	11:08:03
3	Se 196.026†	1491.2	1521.0	514.35 ug/L	514.35 ppb	11:08:03
3	Si 251.611†	121268.2	121376.0	2492.4 ug/L	2492.4 ppb	11:07:43
3	Sn 189.927†	4839.7	4860.9	506.04 ug/L	506.04 ppb	11:08:03
3	Sr 421.552†	33109.5	33909.5	522.38 ug/L	522.38 ppb	11:06:19
3	Ti 334.940†	376709.4	379893.4	497.25 ug/L	497.25 ppb	11:07:43
3	Tl 190.801†	2882.8	2960.1	501.23 ug/L	501.23 ppb	11:08:03
3	U 409.014†	15694.8	19616.0	485.13 ug/L	485.13 ppb	11:07:43
3	V 292.402†	84699.0	86818.3	498.43 ug/L	498.43 ppb	11:07:43
3	Zn 213.857†	89588.7	88959.8	492.20 ug/L	492.20 ppb	11:07:43
3	SiO2†	121565.4	121632.6	5348.0 ug/L	5348.0 ppb	11:08:19

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060103.3	99.927	%	0.6104				0.61%
Sc Radial	5476.9	98.4	%	1.08				1.09%
Y 371.029	844287.8	98.954	%	0.5734				0.58%
Y RADIAL	4739.7	98.42	%	0.952				0.97%
Ag 328.068†	126087.3	502.19	ug/L	0.401	502.19	ppb	0.401	0.08%
QC value within limits for Ag 328.068 Recovery = 100.44%								
Al 396.153Radial†	5404.6	4897.9	ug/L	5.00	4897.9	ppb	5.00	0.10%
QC value within limits for Al 396.153Radial Recovery = 97.96%								
As 188.979†	2118.8	500.53	ug/L	3.674	500.53	ppb	3.674	0.73%
QC value within limits for As 188.979 Recovery = 100.11%								
B 249.677†	31996.3	496.76	ug/L	1.015	496.76	ppb	1.015	0.20%
QC value within limits for B 249.677 Recovery = 99.35%								
Ba 233.527†	97760.2	496.04	ug/L	0.926	496.04	ppb	0.926	0.19%
QC value within limits for Ba 233.527 Recovery = 99.21%								
Be 313.107†	1590122.0	495.58	ug/L	0.734	495.58	ppb	0.734	0.15%
QC value within limits for Be 313.107 Recovery = 99.12%								

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Ca 317.933Radial†        1997.9      4976.4 ug/L        19.05      4976.4 ppb        19.05   0.38%
   QC value within limits for Ca 317.933Radial  Recovery = 99.53%
Cd 226.502†             66388.4      496.27 ug/L        1.355      496.27 ppb        1.355   0.27%
   QC value within limits for Cd 226.502  Recovery = 99.25%
Co 228.616†             39008.8      486.11 ug/L        2.631      486.11 ppb        2.631   0.54%
   QC value within limits for Co 228.616  Recovery = 97.22%
Cr 267.716†             58077.8      495.35 ug/L        0.980      495.35 ppb        0.980   0.20%
   QC value within limits for Cr 267.716  Recovery = 99.07%
Cu 324.752†            199668.4      492.93 ug/L        0.457      492.93 ppb        0.457   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†        143.4      5044.7 ug/L        35.56      5044.7 ppb        35.56   0.70%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.89%
K 766.490 Radial†       12166.1      5272.8 ug/L        29.98      5272.8 ppb        29.98   0.57%
   QC value within limits for K 766.490 Radial  Recovery = 105.46%
Mg 279.077 IEC†            62.1      4927.9 ug/L        42.66      4927.9 ppb        42.66   0.87%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.56%
Mn 257.610†            625547.8      494.92 ug/L        0.624      494.92 ppb        0.624   0.13%
   QC value within limits for Mn 257.610  Recovery = 98.98%
Mo 202.031†             12599.8      504.68 ug/L        2.320      504.68 ppb        2.320   0.46%
   QC value within limits for Mo 202.031  Recovery = 100.94%
Na 589.592 Radial†       3691.6      9981.7 ug/L        56.08      9981.7 ppb        56.08   0.56%
   QC value within limits for Na 589.592 Radial  Recovery = 99.82%
Ni 231.604†             30586.9      489.93 ug/L        2.493      489.93 ppb        2.493   0.51%
   QC value within limits for Ni 231.604  Recovery = 97.99%
P 214.914†               7012.0      2403.5 ug/L        12.69      2403.5 ppb        12.69   0.53%
   QC value within limits for P 214.914  Recovery = 96.14%
Pb 220.353†              6708.3      504.23 ug/L        1.758      504.23 ppb        1.758   0.35%
   QC value within limits for Pb 220.353  Recovery = 100.85%
S 181.975 Axial†         1198.6      1013.6 ug/L        12.78      1013.6 ppb        12.78   1.26%
   QC value within limits for S 181.975 Axial  Recovery = 101.36%
Sb 206.836†              2543.6      506.43 ug/L        2.994      506.43 ppb        2.994   0.59%
   QC value within limits for Sb 206.836  Recovery = 101.29%
Se 196.026†              1520.8      514.13 ug/L        2.806      514.13 ppb        2.806   0.55%
   QC value within limits for Se 196.026  Recovery = 102.83%
Si 251.611†            121332.8      2491.6 ug/L         1.58      2491.6 ppb         1.58   0.06%
   QC value within limits for Si 251.611  Recovery = 99.66%
Sn 189.927†              4835.1      503.35 ug/L        3.557      503.35 ppb        3.557   0.71%
   QC value within limits for Sn 189.927  Recovery = 100.67%
Sr 421.552†             33917.1      522.50 ug/L        0.280      522.50 ppb        0.280   0.05%
   QC value within limits for Sr 421.552  Recovery = 104.50%
Ti 334.940†            379543.1      496.79 ug/L        0.417      496.79 ppb        0.417   0.08%
   QC value within limits for Ti 334.940  Recovery = 99.36%
Tl 190.801†              2945.2      498.72 ug/L        3.184      498.72 ppb        3.184   0.64%
   QC value within limits for Tl 190.801  Recovery = 99.74%
U 409.014†              19501.4      482.29 ug/L        2.703      482.29 ppb        2.703   0.56%
   QC value within limits for U 409.014  Recovery = 96.46%
V 292.402†              86753.5      498.04 ug/L        0.579      498.04 ppb        0.579   0.12%
   QC value within limits for V 292.402  Recovery = 99.61%
Zn 213.857†             88708.0      490.80 ug/L        1.232      490.80 ppb        1.232   0.25%
   QC value within limits for Zn 213.857  Recovery = 98.16%
SiO2†                  121922.3      5360.9 ug/L        18.12      5360.9 ppb        18.12   0.34%
   QC value within limits for SiO2  Recovery = 100.25%
All analyte(s) passed QC.
```

Sequence No.: 16
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:10:29
Data Type: Reprocessed on 7/8/2009 11:40:19

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1056286.1	1056286.1	99.567	%			11:13:38
1	Sc Radial	5577.8	5577.8	100	%			11:12:21
1	Y 371.029	851747.2	851747.2	99.828	%			11:13:38
1	Y RADIAL	4867.5	4867.5	101.1	%			11:12:21
1	Ag 328.068†	792.7	157.6	0.6291	ug/L	0.6291	ppb	11:13:43
1	Al 396.153Radial†	-60.0	32.4	29.446	ug/L	29.446	ppb	11:12:21
1	As 188.979†	-47.8	-11.1	-2.5990	ug/L	-2.5990	ppb	11:14:03
1	B 249.677†	436.8	820.2	12.780	ug/L	12.780	ppb	11:13:43
1	Ba 233.527†	31.5	7.4	0.0373	ug/L	0.0373	ppb	11:14:03
1	Be 313.107†	-7422.8	-138.9	-0.0432	ug/L	-0.0432	ppb	11:13:43
1	Ca 317.933Radial†	33.6	16.5	41.209	ug/L	41.209	ppb	11:12:41
1	Cd 226.502†	-287.1	-10.7	-0.0827	ug/L	-0.0827	ppb	11:14:03
1	Co 228.616†	-82.2	7.8	0.0972	ug/L	0.0972	ppb	11:14:03
1	Cr 267.716†	-32.4	-4.0	-0.0341	ug/L	-0.0341	ppb	11:14:03
1	Cu 324.752†	10356.0	209.8	0.5189	ug/L	0.5189	ppb	11:13:43
1	Fe 238.204 Radial†	1.0	0.7	23.570	ug/L	23.570	ppb	11:12:41
1	K 766.490 Radial†	1855.2	377.8	163.93	ug/L	163.93	ppb	11:12:21
1	Mg 279.077 IEC†	1.4	1.2	93.519	ug/L	93.519	ppb	11:12:41
1	Mn 257.610†	821.4	-2.0	-0.0003	ug/L	-0.0003	ppb	11:14:03
1	Mo 202.031†	33.3	1.7	0.0702	ug/L	0.0702	ppb	11:14:03
1	Na 589.592 Radial†	-185.2	-14.4	-38.901	ug/L	-38.901	ppb	11:12:41
1	Ni 231.604†	168.8	21.3	0.3412	ug/L	0.3412	ppb	11:14:03
1	P 214.914†	333.0	-2.5	-0.9562	ug/L	-0.9562	ppb	11:14:03
1	Pb 220.353†	11.5	40.6	3.0505	ug/L	3.0505	ppb	11:14:03
1	S 181.975 Axial†	72.5	5.0	4.2399	ug/L	4.2399	ppb	11:14:03
1	Sb 206.836†	55.9	10.7	2.1229	ug/L	2.1229	ppb	11:14:03
1	Se 196.026†	-17.3	4.3	1.4749	ug/L	1.4749	ppb	11:14:03
1	Si 251.611†	665.9	108.7	2.1852	ug/L	2.1852	ppb	11:14:03
1	Sn 189.927†	14.7	9.3	0.9689	ug/L	0.9689	ppb	11:14:03
1	Sr 421.552†	24.7	19.1	0.2942	ug/L	0.2942	ppb	11:12:41
1	Ti 334.940†	-1110.3	-5.8	-0.0052	ug/L	-0.0052	ppb	11:13:43
1	Tl 190.801†	-57.1	4.0	0.6835	ug/L	0.6835	ppb	11:14:03
1	U 409.014†	-3785.0	33.2	0.8217	ug/L	0.8217	ppb	11:13:38
1	V 292.402†	-1685.0	-39.6	-0.2237	ug/L	-0.2237	ppb	11:13:43
1	Zn 213.857†	1105.7	-11.9	-0.0751	ug/L	-0.0751	ppb	11:14:03
1	SiO2†	681.4	82.0	3.4918	ug/L	3.4918	ppb	11:15:09
2	Sc 361.383	1055939.4	1055939.4	99.534	%			11:14:08
2	Sc Radial	5379.7	5379.7	96.7	%			11:12:46
2	Y 371.029	851096.0	851096.0	99.752	%			11:14:08
2	Y RADIAL	4702.4	4702.4	97.65	%			11:12:46
2	Ag 328.068†	776.8	141.8	0.5427	ug/L	0.5427	ppb	11:14:13
2	Al 396.153Radial†	-76.7	12.9	11.716	ug/L	11.716	ppb	11:12:46
2	As 188.979†	-40.2	-3.5	-0.8491	ug/L	-0.8491	ppb	11:14:33
2	B 249.677†	486.5	870.3	13.572	ug/L	13.572	ppb	11:14:13
2	Ba 233.527†	62.3	38.3	0.1924	ug/L	0.1924	ppb	11:14:33
2	Be 313.107†	-7290.4	-8.3	-0.0025	ug/L	-0.0025	ppb	11:14:13
2	Ca 317.933Radial†	28.6	12.6	31.463	ug/L	31.463	ppb	11:13:06
2	Cd 226.502†	-289.0	-12.7	-0.0867	ug/L	-0.0867	ppb	11:14:33
2	Co 228.616†	-77.8	12.3	0.1535	ug/L	0.1535	ppb	11:14:33
2	Cr 267.716†	-16.8	11.7	0.0997	ug/L	0.0997	ppb	11:14:33
2	Cu 324.752†	10238.9	95.6	0.2319	ug/L	0.2319	ppb	11:14:13
2	Fe 238.204 Radial†	-1.5	-1.9	-67.871	ug/L	-67.871	ppb	11:13:06
2	K 766.490 Radial†	1812.4	401.6	174.21	ug/L	174.21	ppb	11:12:46
2	Mg 279.077 IEC†	1.0	0.8	66.268	ug/L	66.268	ppb	11:13:06
2	Mn 257.610†	855.6	32.6	0.0157	ug/L	0.0157	ppb	11:14:33
2	Mo 202.031†	30.0	-1.6	-0.0706	ug/L	-0.0706	ppb	11:14:33
2	Na 589.592 Radial†	-174.9	-10.5	-28.379	ug/L	-28.379	ppb	11:13:06
2	Ni 231.604†	168.3	20.8	0.3332	ug/L	0.3332	ppb	11:14:33

2	P 214.914†	337.1	1.8	0.6504	ug/L	0.6504 ppb	11:14:33
2	Pb 220.353†	-5.9	23.2	1.7452	ug/L	1.7452 ppb	11:14:33
2	S 181.975 Axial†	79.7	12.3	10.368	ug/L	10.368 ppb	11:14:33
2	Sb 206.836†	62.7	17.5	3.4466	ug/L	3.4466 ppb	11:14:33
2	Se 196.026†	-10.1	11.5	3.4915	ug/L	3.4915 ppb	11:14:33
2	Si 251.611†	654.2	97.1	1.9448	ug/L	1.9448 ppb	11:14:33
2	Sn 189.927†	12.6	7.2	0.7527	ug/L	0.7527 ppb	11:14:33
2	Sr 421.552†	34.7	30.4	0.4675	ug/L	0.4675 ppb	11:13:06
2	Ti 334.940†	-1082.3	21.9	0.0326	ug/L	0.0326 ppb	11:14:13
2	Tl 190.801†	-39.2	22.0	3.7138	ug/L	3.7138 ppb	11:14:33
2	U 409.014†	-3991.4	-175.3	-4.3425	ug/L	-4.3425 ppb	11:14:08
2	V 292.402†	-1651.7	-6.6	-0.0367	ug/L	-0.0367 ppb	11:14:13
2	Zn 213.857†	1118.7	1.5	0.0109	ug/L	0.0109 ppb	11:14:33
2	SiO2†	678.0	78.8	3.3488	ug/L	3.3488 ppb	11:15:14
3	Sc 361.383	1066175.5	1066175.5	100.50	%		11:14:39
3	Sc Radial	5571.9	5571.9	100	%		11:13:11
3	Y 371.029	858182.7	858182.7	100.58	%		11:14:39
3	Y RADIAL	4847.5	4847.5	100.7	%		11:13:11
3	Ag 328.068†	733.0	90.7	0.3451	ug/L	0.3451 ppb	11:14:44
3	Al 396.153Radial†	-63.8	28.4	25.885	ug/L	25.885 ppb	11:13:11
3	As 188.979†	-36.2	0.9	0.1978	ug/L	0.1978 ppb	11:15:04
3	B 249.677†	438.0	817.4	12.743	ug/L	12.743 ppb	11:14:44
3	Ba 233.527†	45.2	20.7	0.1045	ug/L	0.1045 ppb	11:15:04
3	Be 313.107†	-7375.6	-22.8	-0.0070	ug/L	-0.0070 ppb	11:14:44
3	Ca 317.933Radial†	31.4	14.4	35.975	ug/L	35.975 ppb	11:13:31
3	Cd 226.502†	-275.1	4.0	0.0342	ug/L	0.0342 ppb	11:15:04
3	Co 228.616†	-85.2	5.6	0.0709	ug/L	0.0709 ppb	11:15:04
3	Cr 267.716†	-11.4	17.3	0.1457	ug/L	0.1457 ppb	11:15:04
3	Cu 324.752†	10202.8	-39.1	-0.0986	ug/L	-0.0986 ppb	11:14:44
3	Fe 238.204 Radial†	-0.7	-1.1	-36.971	ug/L	-36.971 ppb	11:13:31
3	K 766.490 Radial†	1706.6	231.3	100.35	ug/L	100.35 ppb	11:13:11
3	Mg 279.077 IEC†	0.4	0.2	14.946	ug/L	14.946 ppb	11:13:31
3	Mn 257.610†	832.1	0.9	-0.0044	ug/L	-0.0044 ppb	11:15:04
3	Mo 202.031†	38.5	6.5	0.2593	ug/L	0.2593 ppb	11:15:04
3	Na 589.592 Radial†	-180.8	-10.1	-27.397	ug/L	-27.397 ppb	11:13:31
3	Ni 231.604†	170.2	21.1	0.3376	ug/L	0.3376 ppb	11:15:04
3	P 214.914†	362.2	23.5	8.3827	ug/L	8.3827 ppb	11:15:04
3	Pb 220.353†	-20.1	9.1	0.6925	ug/L	0.6925 ppb	11:15:04
3	S 181.975 Axial†	80.7	12.5	10.586	ug/L	10.586 ppb	11:15:04
3	Sb 206.836†	62.0	16.3	3.2114	ug/L	3.2114 ppb	11:15:04
3	Se 196.026†	-17.5	4.2	1.2231	ug/L	1.2231 ppb	11:15:04
3	Si 251.611†	661.8	98.4	1.9887	ug/L	1.9887 ppb	11:15:04
3	Sn 189.927†	17.9	12.4	1.2868	ug/L	1.2868 ppb	11:15:04
3	Sr 421.552†	29.8	24.3	0.3745	ug/L	0.3745 ppb	11:13:31
3	Ti 334.940†	-1085.5	29.2	0.0391	ug/L	0.0391 ppb	11:14:44
3	Tl 190.801†	-66.9	-5.2	-0.8818	ug/L	-0.8818 ppb	11:15:04
3	U 409.014†	-3721.1	132.1	3.2823	ug/L	3.2823 ppb	11:14:39
3	V 292.402†	-1611.3	49.5	0.2955	ug/L	0.2955 ppb	11:14:44
3	Zn 213.857†	1113.1	-14.8	-0.0813	ug/L	-0.0813 ppb	11:15:04
3	SiO2†	689.8	84.0	3.6182	ug/L	3.6182 ppb	11:15:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1059467.0	99.867	%	0.5479				0.55%
Sc Radial	5509.8	99.0	%	2.03				2.05%
Y 371.029	853675.3	100.05	%	0.459				0.46%
Y RADIAL	4805.8	99.79	%	1.872				1.88%
Ag 328.068†	130.0	0.5056	ug/L	0.14559	0.5056	ppb	0.14559	28.79%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	24.6	22.349	ug/L	9.3789	22.349	ppb	9.3789	41.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.6	-1.0834	ug/L	1.41306	-1.0834	ppb	1.41306	130.42%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	836.0	13.032	ug/L	0.4684	13.032	ppb	0.4684	3.59%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	22.1	0.1114	ug/L	0.07778	0.1114	ppb	0.07778	69.79%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-56.7	-0.0176	ug/L	0.02232	-0.0176	ppb	0.02232	127.00%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          14.5      36.216 ug/L        4.8774      36.216 ppb        4.8774  13.47%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -6.5     -0.0451 ug/L       0.06867     -0.0451 ppb       0.06867 152.40%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 8.6      0.1072 ug/L       0.04222      0.1072 ppb       0.04222  39.39%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 8.3      0.0704 ug/L       0.09343      0.0704 ppb       0.09343 132.64%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                88.8      0.2174 ug/L       0.30899      0.2174 ppb       0.30899 142.11%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.8     -27.091 ug/L       46.5144     -27.091 ppb       46.5144 171.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         336.9      146.16 ug/L        40.010      146.16 ppb        40.010  27.37%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.7      58.244 ug/L       39.8965      58.244 ppb       39.8965  68.50%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                10.5      0.0036 ug/L       0.01059      0.0036 ppb       0.01059 290.42%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.2      0.0863 ug/L       0.16552      0.0863 ppb       0.16552 191.79%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -11.7     -31.559 ug/L        6.3772     -31.559 ppb        6.3772  20.21%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                21.1      0.3373 ug/L       0.00401      0.3373 ppb       0.00401   1.19%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  7.6      2.6923 ug/L       4.99307      2.6923 ppb       4.99307 185.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                24.3      1.8294 ug/L       1.18127      1.8294 ppb       1.18127  64.57%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            9.9      8.3978 ug/L       3.60254      8.3978 ppb       3.60254  42.90%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                14.8      2.9269 ug/L       0.70621      2.9269 ppb       0.70621  24.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 6.6      2.0632 ug/L       1.24335      2.0632 ppb       1.24335  60.26%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               101.4      2.0396 ug/L       0.12804      2.0396 ppb       0.12804   6.28%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.6      1.0028 ug/L       0.26867      1.0028 ppb       0.26867  26.79%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                24.6      0.3787 ug/L       0.08674      0.3787 ppb       0.08674  22.90%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                15.1      0.0222 ug/L       0.02395      0.0222 ppb       0.02395 107.99%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 6.9      1.1719 ug/L       2.33641      1.1719 ppb       2.33641 199.38%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 -3.3     -0.0795 ug/L       3.89151     -0.0795 ppb       3.89151 >999.9%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  1.1      0.0117 ug/L       0.26296      0.0117 ppb       0.26296 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                -8.4     -0.0485 ug/L       0.05156     -0.0485 ppb       0.05156 106.31%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      81.6      3.4863 ug/L       0.13480      3.4863 ppb       0.13480   3.87%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Sequence No.: 17
Sample ID: LR1
Analyst: HSC
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 7/8/2009 11:17:30
Data Type: Reprocessed on 7/8/2009 11:40:20

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1046705.1	1046705.1	98.664	%			11:20:42
1	Sc Radial	5285.9	5285.9	95.0	%			11:19:24
1	Y 371.029	838520.8	838520.8	98.278	%			11:20:42
1	Y RADIAL	4594.7	4594.7	95.41	%			11:19:24
1	Ag 328.068†	-28259.2	-29280.5	9.7367	ug/L	9.7367	ppb	11:20:42
1	Al 396.153Radial†	-104.1	-17.4	-14.625	ug/L	-14.625	ppb	11:19:24
1	As 188.979†	-375.6	-343.8	-2.6523	ug/L	-2.6523	ppb	11:21:02
1	B 249.677†	2868.7	3289.1	-0.5237	ug/L	-0.5237	ppb	11:20:42
1	Ba 233.527†	-1751.7	-1799.7	0.0492	ug/L	0.0492	ppb	11:21:02
1	Be 313.107†	-7239.6	-21.4	-0.0064	ug/L	-0.0064	ppb	11:20:42
1	Ca 317.933Radial†	22.3	6.5	16.305	ug/L	16.305	ppb	11:19:44
1	Cd 226.502†	5204.4	5552.6	-4.5755	ug/L	-4.5755	ppb	11:21:02
1	Co 228.616†	250.1	343.9	-1.3538	ug/L	-1.3538	ppb	11:21:02
1	Cr 267.716†	-824.6	-807.2	0.7505	ug/L	0.7505	ppb	11:21:02
1	Cu 324.752†	802.5	-9377.9	-0.5740	ug/L	-0.5740	ppb	11:20:42
1	Fe 238.204 Radial†	10567.5	11124.8	390270	ug/L	390270	ppb	11:19:24
1	K 766.490 Radial†	1599.4	210.8	389.48	ug/L	389.48	ppb	11:19:24
1	Mg 279.077 IEC†	6.2	6.3	166.70	ug/L	166.70	ppb	11:19:44
1	Mn 257.610†	-57355.3	-58959.2	4.2573	ug/L	4.2573	ppb	11:20:42
1	Mo 202.031†	-642.9	-683.4	-0.5684	ug/L	-0.5684	ppb	11:20:42
1	Na 589.592 Radial†	-176.8	-15.7	-42.375	ug/L	-42.375	ppb	11:19:44
1	Ni 231.604†	294.0	149.8	2.3977	ug/L	2.3977	ppb	11:21:02
1	P 214.914†	1226.8	906.5	9.2980	ug/L	9.2980	ppb	11:21:02
1	Pb 220.353†	427.8	462.7	-2.1099	ug/L	-2.1099	ppb	11:21:02
1	S 181.975 Axial†	88.8	22.2	18.788	ug/L	18.788	ppb	11:21:02
1	Sb 206.836†	15.9	-29.3	0.9649	ug/L	0.9649	ppb	11:21:02
1	Se 196.026†	-3818.0	-3848.1	119.57	ug/L	119.57	ppb	11:21:02
1	Si 251.611†	-912.5	-1484.9	-30.180	ug/L	-30.180	ppb	11:21:02
1	Sn 189.927†	-36.6	-42.6	2.5556	ug/L	2.5556	ppb	11:21:02
1	Sr 421.552†	22.5	18.2	0.2804	ug/L	0.2804	ppb	11:19:44
1	Ti 334.940†	-991.5	104.3	0.1206	ug/L	0.1206	ppb	11:21:02
1	Tl 190.801†	-76.4	-16.1	-3.1221	ug/L	-3.1221	ppb	11:21:02
1	U 409.014†	-2034.4	1772.8	-3.9602	ug/L	-3.9602	ppb	11:20:42
1	V 292.402†	7424.0	9177.3	-1.4441	ug/L	-1.4441	ppb	11:21:02
1	Zn 213.857†	8001.3	6987.3	-3.0916	ug/L	-3.0916	ppb	11:21:02
1	SiO2†	-992.8	-1608.6	-70.084	ug/L	-70.084	ppb	11:22:00
2	Sc 361.383	1052226.2	1052226.2	99.184	%			11:21:08
2	Sc Radial	5401.8	5401.8	97.1	%			11:19:49
2	Y 371.029	842665.3	842665.3	98.764	%			11:21:08
2	Y RADIAL	4714.0	4714.0	97.89	%			11:19:49
2	Ag 328.068†	-28377.9	-29249.9	9.3733	ug/L	9.3733	ppb	11:21:08
2	Al 396.153Radial†	-122.8	-34.3	-30.134	ug/L	-30.134	ppb	11:19:49
2	As 188.979†	-364.1	-330.2	0.2438	ug/L	0.2438	ppb	11:21:28
2	B 249.677†	3058.2	3464.9	2.4165	ug/L	2.4165	ppb	11:21:08
2	Ba 233.527†	-1739.0	-1777.6	0.1263	ug/L	0.1263	ppb	11:21:28
2	Be 313.107†	-7287.8	-31.5	-0.0094	ug/L	-0.0094	ppb	11:21:08
2	Ca 317.933Radial†	23.0	6.7	16.789	ug/L	16.789	ppb	11:20:09
2	Cd 226.502†	5255.4	5576.3	-4.2206	ug/L	-4.2206	ppb	11:21:28
2	Co 228.616†	235.9	328.3	-1.5227	ug/L	-1.5227	ppb	11:21:28
2	Cr 267.716†	-795.1	-773.0	1.0118	ug/L	1.0118	ppb	11:21:28
2	Cu 324.752†	938.3	-9245.3	-0.3338	ug/L	-0.3338	ppb	11:21:08
2	Fe 238.204 Radial†	10757.5	11081.9	388770	ug/L	388770	ppb	11:19:49
2	K 766.490 Radial†	1494.6	66.6	325.81	ug/L	325.81	ppb	11:19:49
2	Mg 279.077 IEC†	5.9	5.9	130.42	ug/L	130.42	ppb	11:20:09
2	Mn 257.610†	-57434.3	-58733.8	4.2400	ug/L	4.2400	ppb	11:21:08
2	Mo 202.031†	-612.5	-649.3	0.6913	ug/L	0.6913	ppb	11:21:08
2	Na 589.592 Radial†	-180.6	-15.6	-42.212	ug/L	-42.212	ppb	11:20:09
2	Ni 231.604†	278.0	132.1	2.1139	ug/L	2.1139	ppb	11:21:28

2	P 214.914†	1227.8	901.0	8.4921	ug/L	8.4921 ppb	11:21:28
2	Pb 220.353†	449.1	481.9	-0.5307	ug/L	-0.5307 ppb	11:21:28
2	S 181.975 Axial†	80.8	13.6	11.530	ug/L	11.530 ppb	11:21:28
2	Sb 206.836†	33.2	-12.0	4.3505	ug/L	4.3505 ppb	11:21:28
2	Se 196.026†	-3813.6	-3823.4	122.34	ug/L	122.34 ppb	11:21:28
2	Si 251.611†	-923.6	-1491.3	-30.313	ug/L	-30.313 ppb	11:21:28
2	Sn 189.927†	-40.9	-46.7	2.1032	ug/L	2.1032 ppb	11:21:28
2	Sr 421.552†	35.7	31.3	0.4814	ug/L	0.4814 ppb	11:20:09
2	Ti 334.940†	-974.5	126.7	0.1495	ug/L	0.1495 ppb	11:21:28
2	Tl 190.801†	-70.5	-9.6	-2.0337	ug/L	-2.0337 ppb	11:21:28
2	U 409.014†	-2005.9	1812.3	-2.7948	ug/L	-2.7948 ppb	11:21:08
2	V 292.402†	7472.6	9186.8	-1.1665	ug/L	-1.1665 ppb	11:21:28
2	Zn 213.857†	8017.0	6960.5	-3.0760	ug/L	-3.0760 ppb	11:21:28
2	SiO2†	-1024.5	-1635.3	-71.266	ug/L	-71.266 ppb	11:22:05
3	Sc 361.383	1038864.2	1038864.2	97.925	%		11:21:35
3	Sc Radial	5569.7	5569.7	100	%		11:20:14
3	Y 371.029	832242.4	832242.4	97.542	%		11:21:35
3	Y RADIAL	4850.2	4850.2	100.7	%		11:20:14
3	Ag 328.068†	-28102.1	-29336.3	7.7693	ug/L	7.7693 ppb	11:21:35
3	Al 396.153Radial†	-102.4	-10.1	-8.1423	ug/L	-8.1423 ppb	11:20:14
3	As 188.979†	-361.3	-332.1	-0.9980	ug/L	-0.9980 ppb	11:21:55
3	B 249.677†	2847.5	3289.3	0.2032	ug/L	0.2032 ppb	11:21:35
3	Ba 233.527†	-1784.8	-1846.9	-0.3157	ug/L	-0.3157 ppb	11:21:55
3	Be 313.107†	-7215.4	-52.1	-0.0159	ug/L	-0.0159 ppb	11:21:35
3	Ca 317.933Radial†	20.5	3.5	8.8182	ug/L	8.8182 ppb	11:20:34
3	Cd 226.502†	5264.7	5654.0	-3.1736	ug/L	-3.1736 ppb	11:21:55
3	Co 228.616†	244.1	339.7	-1.3213	ug/L	-1.3213 ppb	11:21:55
3	Cr 267.716†	-801.4	-789.8	0.7943	ug/L	0.7943 ppb	11:21:55
3	Cu 324.752†	902.1	-9270.0	-0.6227	ug/L	-0.6227 ppb	11:21:35
3	Fe 238.204 Radial†	10979.5	10969.5	384830	ug/L	384830 ppb	11:20:14
3	K 766.490 Radial†	1427.0	-47.3	273.35	ug/L	273.35 ppb	11:20:14
3	Mg 279.077 IEC†	6.1	5.9	137.86	ug/L	137.86 ppb	11:20:34
3	Mn 257.610†	-56773.9	-58804.2	3.6706	ug/L	3.6706 ppb	11:21:35
3	Mo 202.031†	-575.4	-619.4	1.6175	ug/L	1.6175 ppb	11:21:35
3	Na 589.592 Radial†	-177.6	-7.0	-19.058	ug/L	-19.058 ppb	11:20:34
3	Ni 231.604†	287.7	145.5	2.3298	ug/L	2.3298 ppb	11:21:55
3	P 214.914†	1224.2	913.2	16.013	ug/L	16.013 ppb	11:21:55
3	Pb 220.353†	422.9	460.9	-1.7263	ug/L	-1.7263 ppb	11:21:55
3	S 181.975 Axial†	81.7	15.6	13.165	ug/L	13.165 ppb	11:21:55
3	Sb 206.836†	38.2	-6.4	5.3941	ug/L	5.3941 ppb	11:21:55
3	Se 196.026†	-3850.1	-3910.1	80.299	ug/L	80.299 ppb	11:21:55
3	Si 251.611†	-924.9	-1504.6	-30.592	ug/L	-30.592 ppb	11:21:55
3	Sn 189.927†	-42.3	-48.7	1.8220	ug/L	1.8220 ppb	11:21:55
3	Sr 421.552†	28.6	23.1	0.3559	ug/L	0.3559 ppb	11:20:34
3	Ti 334.940†	-986.5	101.9	0.1187	ug/L	0.1187 ppb	11:21:55
3	Tl 190.801†	-94.3	-34.9	-6.3034	ug/L	-6.3034 ppb	11:21:55
3	U 409.014†	-2185.9	1602.5	-7.5175	ug/L	-7.5175 ppb	11:21:35
3	V 292.402†	7401.4	9211.1	-0.4859	ug/L	-0.4859 ppb	11:21:55
3	Zn 213.857†	8037.4	7085.4	-1.9547	ug/L	-1.9547 ppb	11:21:55
3	SiO2†	-936.7	-1558.9	-67.898	ug/L	-67.898 ppb	11:22:10

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1045931.8	98.591	%	0.6329				0.64%
Sc Radial	5419.1	97.4	%	2.56				2.63%
Y 371.029	837809.5	98.194	%	0.6151				0.63%
Y RADIAL	4719.6	98.00	%	2.655				2.71%
Ag 328.068†	-29288.9	8.9598	ug/L	1.04683	8.9598	ppb	1.04683	11.68%
Al 396.153Radial†	-20.6	-17.634	ug/L	11.3004	-17.634	ppb	11.3004	64.08%
As 188.979†	-335.4	-1.1355	ug/L	1.45294	-1.1355	ppb	1.45294	127.95%
B 249.677†	3347.8	0.6987	ug/L	1.53142	0.6987	ppb	1.53142	219.19%
Ba 233.527†	-1808.0	-0.0467	ug/L	0.23610	-0.0467	ppb	0.23610	505.55%
Be 313.107†	-35.0	-0.0105	ug/L	0.00487	-0.0105	ppb	0.00487	46.13%
Ca 317.933Radial†	5.6	13.971	ug/L	4.4688	13.971	ppb	4.4688	31.99%
Cd 226.502†	5594.3	-3.9899	ug/L	0.72889	-3.9899	ppb	0.72889	18.27%
Co 228.616†	337.3	-1.3993	ug/L	0.10812	-1.3993	ppb	0.10812	7.73%
Cr 267.716†	-790.0	0.8522	ug/L	0.13996	0.8522	ppb	0.13996	16.42%
Cu 324.752†	-9297.7	-0.5102	ug/L	0.15464	-0.5102	ppb	0.15464	30.31%
Fe 238.204 Radial†	11058.7	387960	ug/L	2812.7	387960	ppb	2812.7	0.72%

K 766.490 Radial†	76.7	329.55	ug/L	58.152	329.55	ppb	58.152	17.65%
Mg 279.077 IEC†	6.0	144.99	ug/L	19.161	144.99	ppb	19.161	13.21%
Mn 257.610†	-58832.4	4.0559	ug/L	0.33383	4.0559	ppb	0.33383	8.23%
Mo 202.031†	-650.7	0.5801	ug/L	1.09717	0.5801	ppb	1.09717	189.12%
Na 589.592 Radial†	-12.8	-34.548	ug/L	13.4155	-34.548	ppb	13.4155	38.83%
Ni 231.604†	142.4	2.2805	ug/L	0.14816	2.2805	ppb	0.14816	6.50%
P 214.914†	906.9	11.268	ug/L	4.1293	11.268	ppb	4.1293	36.65%
Pb 220.353†	468.5	-1.4556	ug/L	0.82364	-1.4556	ppb	0.82364	56.58%
S 181.975 Axial†	17.1	14.494	ug/L	3.8072	14.494	ppb	3.8072	26.27%
Sb 206.836†	-15.9	3.5699	ug/L	2.31548	3.5699	ppb	2.31548	64.86%
Se 196.026†	-3860.5	107.40	ug/L	23.512	107.40	ppb	23.512	21.89%
Si 251.611†	-1493.6	-30.362	ug/L	0.2100	-30.362	ppb	0.2100	0.69%
Sn 189.927†	-46.0	2.1603	ug/L	0.37012	2.1603	ppb	0.37012	17.13%
Sr 421.552†	24.2	0.3726	ug/L	0.10154	0.3726	ppb	0.10154	27.25%
Ti 334.940†	111.0	0.1296	ug/L	0.01724	0.1296	ppb	0.01724	13.30%
Tl 190.801†	-20.2	-3.8197	ug/L	2.21870	-3.8197	ppb	2.21870	58.09%
U 409.014†	1729.2	-4.7575	ug/L	2.46022	-4.7575	ppb	2.46022	51.71%
V 292.402†	9191.8	-1.0321	ug/L	0.49303	-1.0321	ppb	0.49303	47.77%
Zn 213.857†	7011.0	-2.7074	ug/L	0.65195	-2.7074	ppb	0.65195	24.08%
SiO2†	-1600.9	-69.749	ug/L	1.7089	-69.749	ppb	1.7089	2.45%

Sequence No.: 18
Sample ID: CCV
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 11:24:21
Data Type: Reprocessed on 7/8/2009 11:40:21

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1059944.6	1059944.6	99.912	%			11:27:33
1	Sc Radial	5479.4	5479.4	98.5	%			11:26:14
1	Y 371.029	844640.7	844640.7	98.995	%			11:27:33
1	Y RADIAL	4754.7	4754.7	98.73	%			11:26:14
1	Ag 328.068†	125630.8	125103.4	498.29	ug/L	498.29	ppb	11:27:33
1	Al 396.153Radial†	5189.1	5362.2	4859.2	ug/L	4859.2	ppb	11:26:14
1	As 188.979†	2086.1	2124.9	501.95	ug/L	501.95	ppb	11:27:53
1	B 249.677†	31012.2	31421.1	487.79	ug/L	487.79	ppb	11:27:33
1	Ba 233.527†	97648.8	97711.0	495.79	ug/L	495.79	ppb	11:27:33
1	Be 313.107†	1580190.1	1588904.8	495.20	ug/L	495.20	ppb	11:27:33
1	Ca 317.933Radial†	1996.6	2010.8	5008.6	ug/L	5008.6	ppb	11:26:34
1	Cd 226.502†	66244.6	66580.8	497.71	ug/L	497.71	ppb	11:27:33
1	Co 228.616†	39192.8	39317.9	489.98	ug/L	489.98	ppb	11:27:53
1	Cr 267.716†	57869.2	57949.0	494.25	ug/L	494.25	ppb	11:27:33
1	Cu 324.752†	208005.6	197998.5	488.80	ug/L	488.80	ppb	11:27:33
1	Fe 238.204 Radial†	141.0	142.8	5026.5	ug/L	5026.5	ppb	11:26:34
1	K 766.490 Radial†	13180.0	11912.5	5162.7	ug/L	5162.7	ppb	11:26:14
1	Mg 279.077 IEC†	65.0	65.8	5216.9	ug/L	5216.9	ppb	11:26:34
1	Mn 257.610†	624970.8	624696.8	494.24	ug/L	494.24	ppb	11:27:33
1	Mo 202.031†	12690.5	12670.0	507.49	ug/L	507.49	ppb	11:27:53
1	Na 589.592 Radial†	3480.4	3705.1	10018	ug/L	10018	ppb	11:26:14
1	Ni 231.604†	30935.7	30814.9	493.58	ug/L	493.58	ppb	11:27:53
1	P 214.914†	7423.2	7092.8	2432.7	ug/L	2432.7	ppb	11:27:53
1	Pb 220.353†	6700.4	6735.4	506.26	ug/L	506.26	ppb	11:27:53
1	S 181.975 Axial†	1257.4	1190.7	1006.9	ug/L	1006.9	ppb	11:27:53
1	Sb 206.836†	2570.6	2527.4	503.36	ug/L	503.36	ppb	11:27:53
1	Se 196.026†	1498.7	1521.6	514.33	ug/L	514.33	ppb	11:27:53
1	Si 251.611†	121332.8	120880.1	2482.2	ug/L	2482.2	ppb	11:27:33
1	Sn 189.927†	4849.4	4848.2	504.72	ug/L	504.72	ppb	11:27:53
1	Sr 421.552†	33394.2	33909.5	522.38	ug/L	522.38	ppb	11:26:14
1	Ti 334.940†	376930.4	378373.2	495.26	ug/L	495.26	ppb	11:27:33
1	Tl 190.801†	2903.5	2967.5	502.45	ug/L	502.45	ppb	11:27:53
1	U 409.014†	15423.9	19272.3	476.61	ug/L	476.61	ppb	11:27:33
1	V 292.402†	84907.4	86635.3	497.41	ug/L	497.41	ppb	11:27:33
1	Zn 213.857†	89673.2	88630.1	490.34	ug/L	490.34	ppb	11:27:33
1	SiO2†	121738.4	121243.8	5330.9	ug/L	5330.9	ppb	11:28:53
2	Sc 361.383	1066729.6	1066729.6	100.55	%			11:28:00
2	Sc Radial	5456.8	5456.8	98.1	%			11:26:39
2	Y 371.029	848088.2	848088.2	99.399	%			11:28:00
2	Y RADIAL	4734.1	4734.1	98.31	%			11:26:39
2	Ag 328.068†	126873.6	125539.5	500.03	ug/L	500.03	ppb	11:28:00
2	Al 396.153Radial†	5194.2	5389.3	4884.0	ug/L	4884.0	ppb	11:26:39
2	As 188.979†	2073.2	2098.8	495.85	ug/L	495.85	ppb	11:28:20
2	B 249.677†	31532.7	31741.4	492.78	ug/L	492.78	ppb	11:28:00
2	Ba 233.527†	98315.7	97752.5	496.00	ug/L	496.00	ppb	11:28:00
2	Be 313.107†	1590346.7	1588945.7	495.21	ug/L	495.21	ppb	11:28:00
2	Ca 317.933Radial†	1979.2	2001.5	4985.4	ug/L	4985.4	ppb	11:26:59
2	Cd 226.502†	66641.4	66553.8	497.50	ug/L	497.50	ppb	11:28:00
2	Co 228.616†	39043.6	38920.0	485.00	ug/L	485.00	ppb	11:28:20
2	Cr 267.716†	58361.0	58069.7	495.28	ug/L	495.28	ppb	11:28:00
2	Cu 324.752†	210274.7	198930.9	491.11	ug/L	491.11	ppb	11:28:00
2	Fe 238.204 Radial†	141.8	144.2	5075.0	ug/L	5075.0	ppb	11:26:59
2	K 766.490 Radial†	13045.1	11830.3	5127.1	ug/L	5127.1	ppb	11:26:39
2	Mg 279.077 IEC†	64.4	65.5	5190.8	ug/L	5190.8	ppb	11:26:59
2	Mn 257.610†	630407.8	626125.3	495.37	ug/L	495.37	ppb	11:28:00
2	Mo 202.031†	12642.8	12541.7	502.36	ug/L	502.36	ppb	11:28:20
2	Na 589.592 Radial†	3436.0	3674.5	9935.3	ug/L	9935.3	ppb	11:26:39
2	Ni 231.604†	30760.2	30443.3	487.63	ug/L	487.63	ppb	11:28:20

2	P 214.914†	7393.8	7016.4	2405.2	ug/L	2405.2 ppb	11:28:20
2	Pb 220.353†	6660.2	6652.8	500.06	ug/L	500.06 ppb	11:28:20
2	S 181.975 Axial†	1241.1	1166.5	986.41	ug/L	986.41 ppb	11:28:20
2	Sb 206.836†	2563.0	2503.6	498.42	ug/L	498.42 ppb	11:28:20
2	Se 196.026†	1509.3	1522.7	514.83	ug/L	514.83 ppb	11:28:20
2	Si 251.611†	122522.7	121291.0	2490.8	ug/L	2490.8 ppb	11:28:00
2	Sn 189.927†	4810.7	4778.9	497.51	ug/L	497.51 ppb	11:28:20
2	Sr 421.552†	33200.1	33852.0	521.50	ug/L	521.50 ppb	11:26:39
2	Ti 334.940†	380050.3	379076.4	496.18	ug/L	496.18 ppb	11:28:00
2	Tl 190.801†	2886.0	2931.6	496.43	ug/L	496.43 ppb	11:28:20
2	U 409.014†	15484.1	19233.9	475.65	ug/L	475.65 ppb	11:28:00
2	V 292.402†	85441.7	86626.2	497.28	ug/L	497.28 ppb	11:28:00
2	Zn 213.857†	90424.6	88806.6	491.36	ug/L	491.36 ppb	11:28:00
2	SiO2†	122259.9	120987.4	5319.9	ug/L	5319.9 ppb	11:28:58
3	Sc 361.383	1082048.6	1082048.6	102.00	%		11:28:28
3	Sc Radial	5526.8	5526.8	99.3	%		11:27:04
3	Y 371.029	860676.7	860676.7	100.87	%		11:28:28
3	Y RADIAL	4799.7	4799.7	99.67	%		11:27:04
3	Ag 328.068†	128584.5	125430.6	499.55	ug/L	499.55 ppb	11:28:28
3	Al 396.153Radial†	5214.3	5342.4	4841.4	ug/L	4841.4 ppb	11:27:04
3	As 188.979†	2101.0	2096.8	495.36	ug/L	495.36 ppb	11:28:48
3	B 249.677†	31978.4	31734.4	492.71	ug/L	492.71 ppb	11:28:28
3	Ba 233.527†	99589.5	97617.2	495.31	ug/L	495.31 ppb	11:28:28
3	Be 313.107†	1612564.5	1588337.3	495.03	ug/L	495.03 ppb	11:28:28
3	Ca 317.933Radial†	1986.9	1983.6	4940.9	ug/L	4940.9 ppb	11:27:24
3	Cd 226.502†	67416.7	66375.6	496.18	ug/L	496.18 ppb	11:28:28
3	Co 228.616†	39220.9	38544.1	480.32	ug/L	480.32 ppb	11:28:48
3	Cr 267.716†	58998.1	57872.6	493.60	ug/L	493.60 ppb	11:28:28
3	Cu 324.752†	213337.9	198973.6	491.20	ug/L	491.20 ppb	11:28:28
3	Fe 238.204 Radial†	139.2	139.9	4921.4	ug/L	4921.4 ppb	11:27:24
3	K 766.490 Radial†	13032.9	11649.4	5048.6	ug/L	5048.6 ppb	11:27:04
3	Mg 279.077 IEC†	65.0	65.3	5178.3	ug/L	5178.3 ppb	11:27:24
3	Mn 257.610†	638129.7	624820.2	494.32	ug/L	494.32 ppb	11:28:28
3	Mo 202.031†	12745.8	12464.7	499.27	ug/L	499.27 ppb	11:28:48
3	Na 589.592 Radial†	3456.2	3650.4	9870.2	ug/L	9870.2 ppb	11:27:04
3	Ni 231.604†	30951.5	30197.8	483.70	ug/L	483.70 ppb	11:28:48
3	P 214.914†	7425.2	6943.1	2379.4	ug/L	2379.4 ppb	11:28:48
3	Pb 220.353†	6701.0	6599.0	496.02	ug/L	496.02 ppb	11:28:48
3	S 181.975 Axial†	1257.6	1165.2	985.32	ug/L	985.32 ppb	11:28:48
3	Sb 206.836†	2594.2	2498.0	497.25	ug/L	497.25 ppb	11:28:48
3	Se 196.026†	1502.3	1494.6	505.14	ug/L	505.14 ppb	11:28:48
3	Si 251.611†	124261.8	121271.0	2490.5	ug/L	2490.5 ppb	11:28:28
3	Sn 189.927†	4852.5	4752.1	494.71	ug/L	494.71 ppb	11:28:48
3	Sr 421.552†	33364.0	33587.9	517.43	ug/L	517.43 ppb	11:27:04
3	Ti 334.940†	385685.4	379250.3	496.41	ug/L	496.41 ppb	11:28:28
3	Tl 190.801†	2899.8	2904.5	491.88	ug/L	491.88 ppb	11:28:48
3	U 409.014†	15696.4	19224.1	475.43	ug/L	475.43 ppb	11:28:28
3	V 292.402†	86520.6	86480.9	496.44	ug/L	496.44 ppb	11:28:28
3	Zn 213.857†	91402.4	88492.1	489.64	ug/L	489.64 ppb	11:28:28
3	SiO2†	123096.2	120085.9	5280.2	ug/L	5280.2 ppb	11:29:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1069574.3	100.82	%	1.067				1.06%
Sc Radial	5487.7	98.6	%	0.64				0.65%
Y 371.029	851135.2	99.756	%	0.9893				0.99%
Y RADIAL	4762.9	98.90	%	0.696				0.70%
Ag 328.068†	125357.9	499.29	ug/L	0.900	499.29	ppb	0.900	0.18%
QC value within limits for Ag 328.068 Recovery = 99.86%								
Al 396.153Radial†	5364.6	4861.5	ug/L	21.38	4861.5	ppb	21.38	0.44%
QC value within limits for Al 396.153Radial Recovery = 97.23%								
As 188.979†	2106.8	497.72	ug/L	3.671	497.72	ppb	3.671	0.74%
QC value within limits for As 188.979 Recovery = 99.54%								
B 249.677†	31632.3	491.09	ug/L	2.863	491.09	ppb	2.863	0.58%
QC value within limits for B 249.677 Recovery = 98.22%								
Ba 233.527†	97693.6	495.70	ug/L	0.354	495.70	ppb	0.354	0.07%
QC value within limits for Ba 233.527 Recovery = 99.14%								
Be 313.107†	1588729.2	495.15	ug/L	0.105	495.15	ppb	0.105	0.02%
QC value within limits for Be 313.107 Recovery = 99.03%								

Ca 317.933Radial†	1998.7	4978.3 ug/L	34.43	4978.3 ppb	34.43	0.69%
QC value within limits for Ca 317.933Radial Recovery = 99.57%						
Cd 226.502†	66503.4	497.13 ug/L	0.828	497.13 ppb	0.828	0.17%
QC value within limits for Cd 226.502 Recovery = 99.43%						
Co 228.616†	38927.4	485.10 ug/L	4.831	485.10 ppb	4.831	1.00%
QC value within limits for Co 228.616 Recovery = 97.02%						
Cr 267.716†	57963.8	494.38 ug/L	0.848	494.38 ppb	0.848	0.17%
QC value within limits for Cr 267.716 Recovery = 98.88%						
Cu 324.752†	198634.3	490.37 ug/L	1.359	490.37 ppb	1.359	0.28%
QC value within limits for Cu 324.752 Recovery = 98.07%						
Fe 238.204 Radial†	142.3	5007.6 ug/L	78.49	5007.6 ppb	78.49	1.57%
QC value within limits for Fe 238.204 Radial Recovery = 100.15%						
K 766.490 Radial†	11797.4	5112.8 ug/L	58.43	5112.8 ppb	58.43	1.14%
QC value within limits for K 766.490 Radial Recovery = 102.26%						
Mg 279.077 IEC†	65.5	5195.3 ug/L	19.71	5195.3 ppb	19.71	0.38%
QC value within limits for Mg 279.077 IEC Recovery = 103.91%						
Mn 257.610†	625214.1	494.64 ug/L	0.633	494.64 ppb	0.633	0.13%
QC value within limits for Mn 257.610 Recovery = 98.93%						
Mo 202.031†	12558.8	503.04 ug/L	4.154	503.04 ppb	4.154	0.83%
QC value within limits for Mo 202.031 Recovery = 100.61%						
Na 589.592 Radial†	3676.6	9941.2 ug/L	74.10	9941.2 ppb	74.10	0.75%
QC value within limits for Na 589.592 Radial Recovery = 99.41%						
Ni 231.604†	30485.3	488.30 ug/L	4.976	488.30 ppb	4.976	1.02%
QC value within limits for Ni 231.604 Recovery = 97.66%						
P 214.914†	7017.4	2405.8 ug/L	26.68	2405.8 ppb	26.68	1.11%
QC value within limits for P 214.914 Recovery = 96.23%						
Pb 220.353†	6662.4	500.78 ug/L	5.161	500.78 ppb	5.161	1.03%
QC value within limits for Pb 220.353 Recovery = 100.16%						
S 181.975 Axial†	1174.1	992.89 ug/L	12.183	992.89 ppb	12.183	1.23%
QC value within limits for S 181.975 Axial Recovery = 99.29%						
Sb 206.836†	2509.7	499.68 ug/L	3.243	499.68 ppb	3.243	0.65%
QC value within limits for Sb 206.836 Recovery = 99.94%						
Se 196.026†	1512.9	511.43 ug/L	5.455	511.43 ppb	5.455	1.07%
QC value within limits for Se 196.026 Recovery = 102.29%						
Si 251.611†	121147.3	2487.8 ug/L	4.88	2487.8 ppb	4.88	0.20%
QC value within limits for Si 251.611 Recovery = 99.51%						
Sn 189.927†	4793.1	498.98 ug/L	5.163	498.98 ppb	5.163	1.03%
QC value within limits for Sn 189.927 Recovery = 99.80%						
Sr 421.552†	33783.1	520.44 ug/L	2.642	520.44 ppb	2.642	0.51%
QC value within limits for Sr 421.552 Recovery = 104.09%						
Ti 334.940†	378899.9	495.95 ug/L	0.606	495.95 ppb	0.606	0.12%
QC value within limits for Ti 334.940 Recovery = 99.19%						
Tl 190.801†	2934.5	496.92 ug/L	5.303	496.92 ppb	5.303	1.07%
QC value within limits for Tl 190.801 Recovery = 99.38%						
U 409.014†	19243.5	475.90 ug/L	0.628	475.90 ppb	0.628	0.13%
QC value within limits for U 409.014 Recovery = 95.18%						
V 292.402†	86580.8	497.04 ug/L	0.527	497.04 ppb	0.527	0.11%
QC value within limits for V 292.402 Recovery = 99.41%						
Zn 213.857†	88642.9	490.45 ug/L	0.862	490.45 ppb	0.862	0.18%
QC value within limits for Zn 213.857 Recovery = 98.09%						
SiO2†	120772.4	5310.3 ug/L	26.66	5310.3 ppb	26.66	0.50%
QC value within limits for SiO2 Recovery = 99.30%						

All analyte(s) passed QC.

Sequence No.: 19
Sample ID: CCB
Analyst:
Logged In Analyst (Original) : Optima3
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 11:31:14
Data Type: Reprocessed on 7/8/2009 11:40:22

Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc 361.383	1063802.9	1063802.9	100.28	%			11:34:23
1	Sc Radial	5561.9	5561.9	99.9	%			11:33:06
1	Y 371.029	855860.4	855860.4	100.31	%			11:34:23
1	Y RADIAL	4822.6	4822.6	100.1	%			11:33:06
1	Ag 328.068†	690.4	49.9	0.1978	ug/L	0.1978	ppb	11:34:28
1	Al 396.153Radial†	-87.8	4.4	3.9546	ug/L	3.9546	ppb	11:33:06
1	As 188.979†	-50.4	-13.3	-3.1357	ug/L	-3.1357	ppb	11:34:48
1	B 249.677†	268.9	649.6	10.124	ug/L	10.124	ppb	11:34:28
1	Ba 233.527†	37.8	13.4	0.0677	ug/L	0.0677	ppb	11:34:48
1	Be 313.107†	-7293.5	42.7	0.0128	ug/L	0.0128	ppb	11:34:28
1	Ca 317.933Radial†	28.8	11.8	29.483	ug/L	29.483	ppb	11:33:26
1	Cd 226.502†	-277.0	1.4	0.0100	ug/L	0.0100	ppb	11:34:48
1	Co 228.616†	-86.2	4.5	0.0585	ug/L	0.0585	ppb	11:34:48
1	Cr 267.716†	-5.4	23.2	0.1973	ug/L	0.1973	ppb	11:34:48
1	Cu 324.752†	10006.5	-212.2	-0.5235	ug/L	-0.5235	ppb	11:34:28
1	Fe 238.204 Radial†	0.4	0.1	3.2855	ug/L	3.2855	ppb	11:33:26
1	K 766.490 Radial†	1523.7	51.4	22.290	ug/L	22.290	ppb	11:33:06
1	Mg 279.077 IEC†	-1.0	-1.1	-89.992	ug/L	-89.992	ppb	11:33:26
1	Mn 257.610†	795.0	-34.2	-0.0249	ug/L	-0.0249	ppb	11:34:48
1	Mo 202.031†	53.0	21.1	0.8462	ug/L	0.8462	ppb	11:34:48
1	Na 589.592 Radial†	-162.4	7.9	21.478	ug/L	21.478	ppb	11:33:26
1	Ni 231.604†	144.6	-4.1	-0.0650	ug/L	-0.0650	ppb	11:34:48
1	P 214.914†	355.6	17.7	6.3689	ug/L	6.3689	ppb	11:34:48
1	Pb 220.353†	-11.4	17.7	1.3309	ug/L	1.3309	ppb	11:34:48
1	S 181.975 Axial†	60.0	-8.0	-6.7972	ug/L	-6.7972	ppb	11:34:48
1	Sb 206.836†	53.2	7.6	1.5394	ug/L	1.5394	ppb	11:34:48
1	Se 196.026†	-14.3	7.3	2.4023	ug/L	2.4023	ppb	11:34:48
1	Si 251.611†	618.5	56.7	1.1410	ug/L	1.1410	ppb	11:34:48
1	Sn 189.927†	25.8	20.2	2.1070	ug/L	2.1070	ppb	11:34:48
1	Sr 421.552†	21.5	16.0	0.2468	ug/L	0.2468	ppb	11:33:26
1	Ti 334.940†	-1262.3	-149.6	-0.1941	ug/L	-0.1941	ppb	11:34:28
1	Tl 190.801†	-62.7	-1.1	-0.1937	ug/L	-0.1937	ppb	11:34:48
1	U 409.014†	-3836.3	9.0	0.2216	ug/L	0.2216	ppb	11:34:23
1	V 292.402†	-1663.5	-6.2	-0.0256	ug/L	-0.0256	ppb	11:34:28
1	Zn 213.857†	1135.7	10.2	0.0608	ug/L	0.0608	ppb	11:34:48
1	SiO2†	634.2	30.1	1.2681	ug/L	1.2681	ppb	11:35:54
2	Sc 361.383	1062791.4	1062791.4	100.18	%			11:34:53
2	Sc Radial	5538.6	5538.6	99.5	%			11:33:31
2	Y 371.029	855845.5	855845.5	100.31	%			11:34:53
2	Y RADIAL	4808.4	4808.4	99.85	%			11:33:31
2	Ag 328.068†	769.1	129.1	0.5079	ug/L	0.5079	ppb	11:34:58
2	Al 396.153Radial†	-67.1	24.8	22.522	ug/L	22.522	ppb	11:33:31
2	As 188.979†	-45.9	-8.9	-2.0961	ug/L	-2.0961	ppb	11:35:18
2	B 249.677†	275.1	656.1	10.227	ug/L	10.227	ppb	11:34:58
2	Ba 233.527†	41.5	17.1	0.0865	ug/L	0.0865	ppb	11:35:18
2	Be 313.107†	-7364.6	-35.1	-0.0111	ug/L	-0.0111	ppb	11:34:58
2	Ca 317.933Radial†	27.0	10.2	25.462	ug/L	25.462	ppb	11:33:51
2	Cd 226.502†	-277.0	1.1	0.0093	ug/L	0.0093	ppb	11:35:18
2	Co 228.616†	-96.9	-6.3	-0.0770	ug/L	-0.0770	ppb	11:35:18
2	Cr 267.716†	3.5	32.1	0.2730	ug/L	0.2730	ppb	11:35:18
2	Cu 324.752†	10207.0	-2.6	-0.0068	ug/L	-0.0068	ppb	11:34:58
2	Fe 238.204 Radial†	0.1	-0.2	-6.6396	ug/L	-6.6396	ppb	11:33:51
2	K 766.490 Radial†	1591.7	126.2	54.709	ug/L	54.709	ppb	11:33:31
2	Mg 279.077 IEC†	3.9	3.7	294.15	ug/L	294.15	ppb	11:33:51
2	Mn 257.610†	810.3	-18.2	-0.0209	ug/L	-0.0209	ppb	11:35:18
2	Mo 202.031†	40.3	8.4	0.3367	ug/L	0.3367	ppb	11:35:18
2	Na 589.592 Radial†	-165.4	4.2	11.404	ug/L	11.404	ppb	11:33:51
2	Ni 231.604†	155.5	7.0	0.1119	ug/L	0.1119	ppb	11:35:18

2	P 214.914†	350.7	13.1	4.6724	ug/L	4.6724 ppb	11:35:18
2	Pb 220.353†	1.3	30.4	2.2862	ug/L	2.2862 ppb	11:35:18
2	S 181.975 Axial†	62.4	-5.5	-4.6975	ug/L	-4.6975 ppb	11:35:18
2	Sb 206.836†	46.9	1.4	0.3030	ug/L	0.3030 ppb	11:35:18
2	Se 196.026†	-24.0	-2.3	-0.7802	ug/L	-0.7802 ppb	11:35:18
2	Si 251.611†	641.1	79.9	1.6204	ug/L	1.6204 ppb	11:35:18
2	Sn 189.927†	17.4	11.9	1.2429	ug/L	1.2429 ppb	11:35:18
2	Sr 421.552†	27.5	22.2	0.3413	ug/L	0.3413 ppb	11:33:51
2	Ti 334.940†	-1173.5	-62.1	-0.0801	ug/L	-0.0801 ppb	11:34:58
2	Tl 190.801†	-57.3	4.2	0.7097	ug/L	0.7097 ppb	11:35:18
2	U 409.014†	-3809.4	32.2	0.7987	ug/L	0.7987 ppb	11:34:53
2	V 292.402†	-1655.4	0.3	0.0135	ug/L	0.0135 ppb	11:34:58
2	Zn 213.857†	1139.0	14.5	0.0708	ug/L	0.0708 ppb	11:35:18
2	SiO2†	668.5	65.0	2.8084	ug/L	2.8084 ppb	11:35:59
3	Sc 361.383	1063088.1	1063088.1	100.21	%		11:35:23
3	Sc Radial	5440.7	5440.7	97.8	%		11:33:56
3	Y 371.029	856947.0	856947.0	100.44	%		11:35:23
3	Y RADIAL	4756.3	4756.3	98.77	%		11:33:56
3	Ag 328.068†	752.9	112.7	0.4282	ug/L	0.4282 ppb	11:35:29
3	Al 396.153Radial†	-61.7	29.0	26.426	ug/L	26.426 ppb	11:33:56
3	As 188.979†	-51.0	-14.0	-3.3000	ug/L	-3.3000 ppb	11:35:49
3	B 249.677†	248.8	629.8	9.8225	ug/L	9.8225 ppb	11:35:29
3	Ba 233.527†	49.3	24.9	0.1240	ug/L	0.1240 ppb	11:35:49
3	Be 313.107†	-7424.6	-93.0	-0.0288	ug/L	-0.0288 ppb	11:35:29
3	Ca 317.933Radial†	29.0	12.8	31.771	ug/L	31.771 ppb	11:34:16
3	Cd 226.502†	-284.9	-6.6	-0.0439	ug/L	-0.0439 ppb	11:35:49
3	Co 228.616†	-101.2	-10.6	-0.1306	ug/L	-0.1306 ppb	11:35:49
3	Cr 267.716†	-30.9	-2.2	-0.0206	ug/L	-0.0206 ppb	11:35:49
3	Cu 324.752†	10236.2	23.7	0.0558	ug/L	0.0558 ppb	11:35:29
3	Fe 238.204 Radial†	-1.0	-1.4	-48.298	ug/L	-48.298 ppb	11:34:16
3	K 766.490 Radial†	1505.5	66.8	28.927	ug/L	28.927 ppb	11:33:56
3	Mg 279.077 IEC†	0.6	0.4	33.239	ug/L	33.239 ppb	11:34:16
3	Mn 257.610†	805.7	-23.0	-0.0251	ug/L	-0.0251 ppb	11:35:49
3	Mo 202.031†	36.0	4.1	0.1614	ug/L	0.1614 ppb	11:35:49
3	Na 589.592 Radial†	-166.0	0.6	1.7302	ug/L	1.7302 ppb	11:34:16
3	Ni 231.604†	154.3	5.8	0.0925	ug/L	0.0925 ppb	11:35:49
3	P 214.914†	333.2	-4.4	-1.5177	ug/L	-1.5177 ppb	11:35:49
3	Pb 220.353†	8.6	37.6	2.8325	ug/L	2.8325 ppb	11:35:49
3	S 181.975 Axial†	65.9	-2.0	-1.7280	ug/L	-1.7280 ppb	11:35:49
3	Sb 206.836†	54.2	8.7	1.7131	ug/L	1.7131 ppb	11:35:49
3	Se 196.026†	-34.5	-12.8	-4.3231	ug/L	-4.3231 ppb	11:35:49
3	Si 251.611†	617.8	56.4	1.1483	ug/L	1.1483 ppb	11:35:49
3	Sn 189.927†	12.9	7.4	0.7752	ug/L	0.7752 ppb	11:35:49
3	Sr 421.552†	24.1	19.1	0.2946	ug/L	0.2946 ppb	11:34:16
3	Ti 334.940†	-1056.8	54.6	0.0735	ug/L	0.0735 ppb	11:35:29
3	Tl 190.801†	-54.8	6.7	1.1352	ug/L	1.1352 ppb	11:35:49
3	U 409.014†	-3836.0	6.7	0.1717	ug/L	0.1717 ppb	11:35:23
3	V 292.402†	-1740.9	-84.5	-0.4699	ug/L	-0.4699 ppb	11:35:29
3	Zn 213.857†	1112.0	-12.7	-0.0677	ug/L	-0.0677 ppb	11:35:49
3	SiO2†	666.7	63.0	2.7492	ug/L	2.7492 ppb	11:36:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1063227.5	100.22	%	0.049				0.05%
Sc Radial	5513.8	99.1	%	1.16				1.17%
Y 371.029	856217.6	100.35	%	0.074				0.07%
Y RADIAL	4795.8	99.59	%	0.725				0.73%
Ag 328.068†	97.2	0.3779	ug/L	0.16103	0.3779	ppb	0.16103	42.61%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.4	17.634	ug/L	12.0065	17.634	ppb	12.0065	68.09%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-12.1	-2.8439	ug/L	0.65284	-2.8439	ppb	0.65284	22.96%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	645.2	10.058	ug/L	0.2102	10.058	ppb	0.2102	2.09%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	18.5	0.0927	ug/L	0.02864	0.0927	ppb	0.02864	30.88%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-28.5	-0.0090	ug/L	0.02087	-0.0090	ppb	0.02087	231.41%
QC value within limits for Be 313.107 Recovery = Not calculated								

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Ca 317.933Radial†          11.6      28.906 ug/L        3.1943      28.906 ppb        3.1943  11.05%
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -1.4      -0.0082 ug/L       0.03088     -0.0082 ppb       0.03088 375.41%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -4.1      -0.0497 ug/L       0.09746     -0.0497 ppb       0.09746 196.02%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                17.7       0.1499 ug/L       0.15243      0.1499 ppb       0.15243 101.68%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -63.7      -0.1582 ug/L       0.31790     -0.1582 ppb       0.31790 200.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.5      -17.217 ug/L       27.3704     -17.217 ppb       27.3704 158.97%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          81.4       35.309 ug/L       17.1254      35.309 ppb       17.1254  48.50%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.0       79.132 ug/L      196.1394      79.132 ppb      196.1394 247.86%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -25.1      -0.0236 ug/L       0.00236     -0.0236 ppb       0.00236   9.98%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                11.2       0.4481 ug/L       0.35572      0.4481 ppb       0.35572  79.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†          4.3       11.538 ug/L        9.8746      11.538 ppb        9.8746  85.59%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 2.9       0.0465 ug/L       0.09700      0.0465 ppb       0.09700 208.67%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  8.8       3.1745 ug/L       4.15119      3.1745 ppb       4.15119 130.77%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                28.6       2.1499 ug/L       0.76002      2.1499 ppb       0.76002  35.35%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -5.2      -4.4076 ug/L       2.54698     -4.4076 ppb       2.54698  57.79%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 5.9       1.1852 ug/L       0.76889      1.1852 ppb       0.76889  64.88%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.6      -0.9003 ug/L       3.36431     -0.9003 ppb       3.36431 373.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                64.3       1.3033 ug/L       0.27467      1.3033 ppb       0.27467  21.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                13.2       1.3751 ug/L       0.67567      1.3751 ppb       0.67567  49.14%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                19.1       0.2942 ug/L       0.04727      0.2942 ppb       0.04727  16.07%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -52.4      -0.0669 ug/L       0.13429     -0.0669 ppb       0.13429 200.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.3       0.5504 ug/L       0.67863      0.5504 ppb       0.67863 123.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 15.9       0.3973 ug/L       0.34848      0.3973 ppb       0.34848  87.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -30.1      -0.1607 ug/L       0.26848     -0.1607 ppb       0.26848 167.11%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                 4.0       0.0213 ug/L       0.07726      0.0213 ppb       0.07726 362.88%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      52.7       2.2752 ug/L       0.87275      2.2752 ppb       0.87275  38.36%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 12:37:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5606.1	5606.1	101	%			12:39:25
1	Y RADIAL	4851.1	4851.1	100.7	%			12:39:25
1	Al 396.153Radial†	5378.2	5430.8	4921.6	ug/L	4921.6	ppb	12:39:25
1	Ca 317.933Radial†	2021.2	1989.4	4955.2	ug/L	4955.2	ppb	12:39:45
1	Fe 238.204 Radial†	140.8	139.5	4908.3	ug/L	4908.3	ppb	12:39:45
1	K 766.490 Radial†	13453.7	11881.6	5149.1	ug/L	5149.1	ppb	12:39:25
1	Mg 279.077 IEC†	63.3	62.7	4971.3	ug/L	4971.3	ppb	12:39:45
1	Na 589.592 Radial†	3647.9	3791.5	10252	ug/L	10252	ppb	12:39:25
1	Sr 421.552†	35108.7	34844.6	536.79	ug/L	536.79	ppb	12:39:25
1	Sc 361.383	1058412.2	1058412.2	99.767	%			12:40:44
1	Y 371.029	842280.3	842280.3	98.718	%			12:40:44
1	Ag 328.068†	126383.3	126039.7	501.96	ug/L	501.96	ppb	12:40:44
1	As 188.979†	2067.2	2108.9	498.21	ug/L	498.21	ppb	12:41:04
1	B 249.677†	31249.4	31703.9	492.21	ug/L	492.21	ppb	12:40:44
1	Ba 233.527†	97896.4	98100.6	497.76	ug/L	497.76	ppb	12:40:44
1	Be 313.107†	1582299.5	1593308.9	496.58	ug/L	496.58	ppb	12:40:44
1	Cd 226.502†	66319.2	66751.6	499.00	ug/L	499.00	ppb	12:40:44
1	Co 228.616†	39106.2	39287.9	489.60	ug/L	489.60	ppb	12:41:04
1	Cr 267.716†	58017.2	58181.2	496.23	ug/L	496.23	ppb	12:40:44
1	Cu 324.752†	209452.1	199749.8	493.12	ug/L	493.12	ppb	12:40:44
1	Mn 257.610†	627242.3	627879.2	496.74	ug/L	496.74	ppb	12:40:44
1	Mo 202.031†	12652.8	12650.6	506.70	ug/L	506.70	ppb	12:41:04
1	Ni 231.604†	30863.4	30787.2	493.14	ug/L	493.14	ppb	12:41:04
1	P 214.914†	7409.4	7089.8	2431.0	ug/L	2431.0	ppb	12:41:04
1	Pb 220.353†	6655.3	6699.9	503.62	ug/L	503.62	ppb	12:41:04
1	S 181.975 Axial†	1267.1	1202.2	1016.6	ug/L	1016.6	ppb	12:41:04
1	Sb 206.836†	2567.2	2527.8	503.31	ug/L	503.31	ppb	12:41:04
1	Se 196.026†	1499.0	1524.1	514.74	ug/L	514.74	ppb	12:41:04
1	Si 251.611†	123740.7	123469.4	2535.6	ug/L	2535.6	ppb	12:40:44
1	Sn 189.927†	4813.6	4819.3	501.70	ug/L	501.70	ppb	12:41:04
1	Ti 334.940†	379065.1	381059.1	498.77	ug/L	498.77	ppb	12:40:44
1	Tl 190.801†	2892.3	2960.4	501.29	ug/L	501.29	ppb	12:41:04
1	U 409.014†	15455.7	19326.6	477.97	ug/L	477.97	ppb	12:40:44
1	V 292.402†	85007.9	86859.1	498.67	ug/L	498.67	ppb	12:40:44
1	Zn 213.857†	90043.3	89131.1	493.16	ug/L	493.16	ppb	12:40:44
1	SiO2†	124276.3	123964.1	5451.2	ug/L	5451.2	ppb	12:42:04
2	Sc Radial	5585.7	5585.7	100	%			12:39:50
2	Y RADIAL	4837.6	4837.6	100.5	%			12:39:50
2	Al 396.153Radial†	5301.2	5373.6	4869.5	ug/L	4869.5	ppb	12:39:50
2	Ca 317.933Radial†	2018.6	1994.2	4967.2	ug/L	4967.2	ppb	12:40:10
2	Fe 238.204 Radial†	146.6	145.8	5129.1	ug/L	5129.1	ppb	12:40:10
2	K 766.490 Radial†	13445.7	11922.5	5167.1	ug/L	5167.1	ppb	12:39:50
2	Mg 279.077 IEC†	62.9	62.5	4955.1	ug/L	4955.1	ppb	12:40:10
2	Na 589.592 Radial†	3631.8	3788.6	10244	ug/L	10244	ppb	12:39:50
2	Sr 421.552†	34927.0	34791.2	535.97	ug/L	535.97	ppb	12:39:50
2	Sc 361.383	1052564.2	1052564.2	99.216	%			12:41:12
2	Y 371.029	837846.1	837846.1	98.199	%			12:41:12
2	Ag 328.068†	125844.2	126200.1	502.67	ug/L	502.67	ppb	12:41:12
2	As 188.979†	2073.2	2126.5	502.37	ug/L	502.37	ppb	12:41:32
2	B 249.677†	31117.5	31744.9	492.82	ug/L	492.82	ppb	12:41:12
2	Ba 233.527†	97205.3	97949.3	496.99	ug/L	496.99	ppb	12:41:12
2	Be 313.107†	1572088.7	1591829.1	496.11	ug/L	496.11	ppb	12:41:12
2	Cd 226.502†	65885.5	66683.9	498.47	ug/L	498.47	ppb	12:41:12
2	Co 228.616†	38903.8	39301.7	489.77	ug/L	489.77	ppb	12:41:32
2	Cr 267.716†	57670.9	58155.3	496.01	ug/L	496.01	ppb	12:41:12
2	Cu 324.752†	208260.2	199714.8	493.05	ug/L	493.05	ppb	12:41:12
2	Mn 257.610†	622713.6	626807.8	495.92	ug/L	495.92	ppb	12:41:12
2	Mo 202.031†	12649.0	12717.2	509.38	ug/L	509.38	ppb	12:41:32
2	Ni 231.604†	30707.2	30801.6	493.37	ug/L	493.37	ppb	12:41:32

2	P 214.914†	7360.8	7082.0	2428.1 ug/L	2428.1 ppb	12:41:32
2	Pb 220.353†	6668.7	6750.4	507.38 ug/L	507.38 ppb	12:41:32
2	S 181.975 Axial†	1268.3	1210.5	1023.7 ug/L	1023.7 ppb	12:41:32
2	Sb 206.836†	2554.2	2529.0	503.61 ug/L	503.61 ppb	12:41:32
2	Se 196.026†	1489.9	1523.3	515.24 ug/L	515.24 ppb	12:41:32
2	Si 251.611†	122736.1	123146.0	2528.9 ug/L	2528.9 ppb	12:41:12
2	Sn 189.927†	4784.8	4817.1	501.48 ug/L	501.48 ppb	12:41:32
2	Ti 334.940†	376326.4	380409.8	497.92 ug/L	497.92 ppb	12:41:12
2	Tl 190.801†	2869.4	2953.4	500.11 ug/L	500.11 ppb	12:41:32
2	U 409.014†	15348.9	19304.9	477.40 ug/L	477.40 ppb	12:41:12
2	V 292.402†	84354.4	86673.8	497.63 ug/L	497.63 ppb	12:41:12
2	Zn 213.857†	89243.2	88826.1	491.43 ug/L	491.43 ppb	12:41:12
2	SiO2†	123446.6	123819.8	5444.7 ug/L	5444.7 ppb	12:42:10
3	Sc Radial	5622.4	5622.4	101 %		12:40:15
3	Y RADIAL	4895.1	4895.1	101.6 %		12:40:15
3	Al 396.153Radial†	5385.6	5422.7	4914.2 ug/L	4914.2 ppb	12:40:15
3	Ca 317.933Radial†	2021.8	1984.1	4942.2 ug/L	4942.2 ppb	12:40:35
3	Fe 238.204 Radial†	143.1	141.3	4973.4 ug/L	4973.4 ppb	12:40:35
3	K 766.490 Radial†	13475.9	11864.8	5141.9 ug/L	5141.9 ppb	12:40:15
3	Mg 279.077 IEC†	64.9	64.0	5076.8 ug/L	5076.8 ppb	12:40:35
3	Na 589.592 Radial†	3704.4	3836.9	10375 ug/L	10375 ppb	12:40:15
3	Sr 421.552†	35367.4	34999.8	539.18 ug/L	539.18 ppb	12:40:15
3	Sc 361.383	1055266.8	1055266.8	99.471 %		12:41:39
3	Y 371.029	840466.9	840466.9	98.506 %		12:41:39
3	Ag 328.068†	125875.6	125906.9	501.45 ug/L	501.45 ppb	12:41:39
3	As 188.979†	2070.2	2118.1	500.36 ug/L	500.36 ppb	12:41:59
3	B 249.677†	31096.7	31643.7	491.26 ug/L	491.26 ppb	12:41:39
3	Ba 233.527†	97326.4	97820.1	496.34 ug/L	496.34 ppb	12:41:39
3	Be 313.107†	1575608.3	1591309.3	495.95 ug/L	495.95 ppb	12:41:39
3	Cd 226.502†	65831.5	66459.5	496.81 ug/L	496.81 ppb	12:41:39
3	Co 228.616†	38937.8	39235.4	488.94 ug/L	488.94 ppb	12:41:59
3	Cr 267.716†	57725.3	58061.1	495.21 ug/L	495.21 ppb	12:41:39
3	Cu 324.752†	208650.8	199569.9	492.68 ug/L	492.68 ppb	12:41:39
3	Mn 257.610†	623476.5	625967.4	495.24 ug/L	495.24 ppb	12:41:39
3	Mo 202.031†	12620.8	12656.2	506.93 ug/L	506.93 ppb	12:41:59
3	Ni 231.604†	30715.0	30730.2	492.22 ug/L	492.22 ppb	12:41:59
3	P 214.914†	7373.4	7075.7	2426.1 ug/L	2426.1 ppb	12:41:59
3	Pb 220.353†	6643.3	6707.8	504.20 ug/L	504.20 ppb	12:41:59
3	S 181.975 Axial†	1267.5	1206.4	1020.2 ug/L	1020.2 ppb	12:41:59
3	Sb 206.836†	2557.1	2525.3	502.87 ug/L	502.87 ppb	12:41:59
3	Se 196.026†	1494.6	1524.2	514.98 ug/L	514.98 ppb	12:41:59
3	Si 251.611†	122713.6	122806.5	2522.0 ug/L	2522.0 ppb	12:41:39
3	Sn 189.927†	4806.5	4826.6	502.46 ug/L	502.46 ppb	12:41:59
3	Ti 334.940†	376677.4	379791.2	497.11 ug/L	497.11 ppb	12:41:39
3	Tl 190.801†	2887.1	2963.8	501.86 ug/L	501.86 ppb	12:41:59
3	U 409.014†	15446.1	19363.0	478.87 ug/L	478.87 ppb	12:41:39
3	V 292.402†	84553.0	86655.7	497.52 ug/L	497.52 ppb	12:41:39
3	Zn 213.857†	89401.2	88754.6	491.05 ug/L	491.05 ppb	12:41:39
3	SiO2†	122933.1	122984.9	5407.9 ug/L	5407.9 ppb	12:42:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1055414.4	99.485	%	0.2759				0.28%
Sc Radial	5604.7	101	%	0.3				0.33%
Y 371.029	840197.8	98.474	%	0.2613				0.27%
Y RADIAL	4861.2	100.9	%	0.62				0.62%
Ag 328.068†	126048.9	502.03	ug/L	0.609	502.03	ppb	0.609	0.12%
QC value within limits for Ag 328.068 Recovery = 100.41%								
Al 396.153Radial†	5409.0	4901.8	ug/L	28.21	4901.8	ppb	28.21	0.58%
QC value within limits for Al 396.153Radial Recovery = 98.04%								
As 188.979†	2117.9	500.31	ug/L	2.082	500.31	ppb	2.082	0.42%
QC value within limits for As 188.979 Recovery = 100.06%								
B 249.677†	31697.5	492.10	ug/L	0.784	492.10	ppb	0.784	0.16%
QC value within limits for B 249.677 Recovery = 98.42%								
Ba 233.527†	97956.7	497.03	ug/L	0.711	497.03	ppb	0.711	0.14%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1592149.1	496.21	ug/L	0.324	496.21	ppb	0.324	0.07%
QC value within limits for Be 313.107 Recovery = 99.24%								
Ca 317.933Radial†	1989.2	4954.9	ug/L	12.52	4954.9	ppb	12.52	0.25%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.10%
Cd 226.502†            66631.7      498.09 ug/L         1.144      498.09 ppb          1.144   0.23%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39275.0      489.44 ug/L         0.436      489.44 ppb          0.436   0.09%
   QC value within limits for Co 228.616  Recovery = 97.89%
Cr 267.716†            58132.5      495.82 ug/L         0.539      495.82 ppb          0.539   0.11%
   QC value within limits for Cr 267.716  Recovery = 99.16%
Cu 324.752†           199678.2      492.95 ug/L         0.236      492.95 ppb          0.236   0.05%
   QC value within limits for Cu 324.752  Recovery = 98.59%
Fe 238.204 Radial†       142.2      5003.6 ug/L        113.48      5003.6 ppb         113.48   2.27%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.07%
K 766.490 Radial†      11889.6      5152.7 ug/L         12.97      5152.7 ppb          12.97   0.25%
   QC value within limits for K 766.490 Radial  Recovery = 103.05%
Mg 279.077 IEC†           63.1      5001.1 ug/L         66.09      5001.1 ppb          66.09   1.32%
   QC value within limits for Mg 279.077 IEC  Recovery = 100.02%
Mn 257.610†           626884.8      495.97 ug/L         0.753      495.97 ppb          0.753   0.15%
   QC value within limits for Mn 257.610  Recovery = 99.19%
Mo 202.031†            12674.6      507.67 ug/L         1.485      507.67 ppb          1.485   0.29%
   QC value within limits for Mo 202.031  Recovery = 101.53%
Na 589.592 Radial†      3805.7       10290 ug/L          73.3       10290 ppb           73.3   0.71%
   QC value within limits for Na 589.592 Radial  Recovery = 102.90%
Ni 231.604†            30773.0      492.91 ug/L         0.605      492.91 ppb          0.605   0.12%
   QC value within limits for Ni 231.604  Recovery = 98.58%
P 214.914†              7082.5      2428.4 ug/L          2.49      2428.4 ppb           2.49   0.10%
   QC value within limits for P 214.914  Recovery = 97.14%
Pb 220.353†             6719.4      505.07 ug/L         2.026      505.07 ppb          2.026   0.40%
   QC value within limits for Pb 220.353  Recovery = 101.01%
S 181.975 Axial†        1206.4      1020.2 ug/L          3.51      1020.2 ppb           3.51   0.34%
   QC value within limits for S 181.975 Axial  Recovery = 102.02%
Sb 206.836†             2527.4      503.26 ug/L         0.369      503.26 ppb          0.369   0.07%
   QC value within limits for Sb 206.836  Recovery = 100.65%
Se 196.026†             1523.9      514.99 ug/L         0.251      514.99 ppb          0.251   0.05%
   QC value within limits for Se 196.026  Recovery = 103.00%
Si 251.611†           123140.6      2528.8 ug/L          6.84      2528.8 ppb           6.84   0.27%
   QC value within limits for Si 251.611  Recovery = 101.15%
Sn 189.927†             4821.0      501.88 ug/L         0.511      501.88 ppb          0.511   0.10%
   QC value within limits for Sn 189.927  Recovery = 100.38%
Sr 421.552†            34878.5      537.31 ug/L         1.669      537.31 ppb          1.669   0.31%
   QC value within limits for Sr 421.552  Recovery = 107.46%
Ti 334.940†           380420.0      497.94 ug/L         0.830      497.94 ppb          0.830   0.17%
   QC value within limits for Ti 334.940  Recovery = 99.59%
Tl 190.801†             2959.2      501.08 ug/L         0.893      501.08 ppb          0.893   0.18%
   QC value within limits for Tl 190.801  Recovery = 100.22%
U 409.014†             19331.5      478.08 ug/L         0.738      478.08 ppb          0.738   0.15%
   QC value within limits for U 409.014  Recovery = 95.62%
V 292.402†             86729.6      497.94 ug/L         0.638      497.94 ppb          0.638   0.13%
   QC value within limits for V 292.402  Recovery = 99.59%
Zn 213.857†            88903.9      491.88 ug/L         1.123      491.88 ppb          1.123   0.23%
   QC value within limits for Zn 213.857  Recovery = 98.38%
SiO2†                 123589.6      5434.6 ug/L         23.34      5434.6 ppb          23.34   0.43%
   QC value within limits for SiO2  Recovery = 101.63%
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 12:44:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5518.3	5518.3	99.2	%			12:46:17
1	Y RADIAL	4806.7	4806.7	99.81	%			12:46:17
1	Al 396.153Radial†	-80.6	10.9	9.9589	ug/L	9.9589	ppb	12:46:17
1	Ca 317.933Radial†	44.1	27.5	68.573	ug/L	68.573	ppb	12:46:37
1	Fe 238.204 Radial†	0.0	-0.3	-9.9293	ug/L	-9.9293	ppb	12:46:37
1	K 766.490 Radial†	1698.7	239.9	104.08	ug/L	104.08	ppb	12:46:17
1	Mg 279.077 IEC†	-1.8	-2.0	-155.04	ug/L	-155.04	ppb	12:46:37
1	Na 589.592 Radial†	-174.1	-5.2	-13.943	ug/L	-13.943	ppb	12:46:37
1	Sr 421.552†	32.4	27.2	0.4180	ug/L	0.4180	ppb	12:46:37
1	Sc 361.383	1052130.1	1052130.1	99.175	%			12:47:34
1	Y 371.029	846654.6	846654.6	99.231	%			12:47:34
1	Ag 328.068†	745.4	113.0	0.4445	ug/L	0.4445	ppb	12:47:39
1	As 188.979†	-50.6	-14.1	-3.3222	ug/L	-3.3222	ppb	12:47:59
1	B 249.677†	375.6	760.3	11.850	ug/L	11.850	ppb	12:47:39
1	Ba 233.527†	45.5	21.6	0.1076	ug/L	0.1076	ppb	12:47:59
1	Be 313.107†	-7407.1	-152.6	-0.0474	ug/L	-0.0474	ppb	12:47:39
1	Cd 226.502†	-302.4	-27.3	-0.2026	ug/L	-0.2026	ppb	12:47:59
1	Co 228.616†	-78.2	11.6	0.1438	ug/L	0.1438	ppb	12:47:59
1	Cr 267.716†	-24.3	4.1	0.0351	ug/L	0.0351	ppb	12:47:59
1	Cu 324.752†	10111.8	4.6	0.0108	ug/L	0.0108	ppb	12:47:39
1	Mn 257.610†	869.1	49.3	0.0406	ug/L	0.0406	ppb	12:47:59
1	Mo 202.031†	26.7	-4.8	-0.1934	ug/L	-0.1934	ppb	12:47:59
1	Ni 231.604†	157.5	10.6	0.1698	ug/L	0.1698	ppb	12:47:59
1	P 214.914†	363.5	29.6	10.483	ug/L	10.483	ppb	12:47:59
1	Pb 220.353†	-2.2	26.8	2.0130	ug/L	2.0130	ppb	12:47:59
1	S 181.975 Axial†	74.3	7.1	5.9751	ug/L	5.9751	ppb	12:47:59
1	Sb 206.836†	39.2	-5.9	-1.1554	ug/L	-1.1554	ppb	12:47:59
1	Se 196.026†	-23.4	-2.0	-0.6703	ug/L	-0.6703	ppb	12:47:59
1	Si 251.611†	1253.7	704.0	14.495	ug/L	14.495	ppb	12:47:59
1	Sn 189.927†	8.5	3.1	0.3237	ug/L	0.3237	ppb	12:47:59
1	Ti 334.940†	-1083.2	17.0	0.0287	ug/L	0.0287	ppb	12:47:39
1	Tl 190.801†	-53.7	7.3	1.2282	ug/L	1.2282	ppb	12:47:59
1	U 409.014†	-3965.4	-163.6	-4.0586	ug/L	-4.0586	ppb	12:47:34
1	V 292.402†	-1733.9	-95.6	-0.5536	ug/L	-0.5536	ppb	12:47:39
1	Zn 213.857†	1100.4	-12.8	-0.0663	ug/L	-0.0663	ppb	12:47:59
1	SiO2†	1196.6	604.2	26.624	ug/L	26.624	ppb	12:49:05
2	Sc Radial	5530.0	5530.0	99.4	%			12:46:42
2	Y RADIAL	4804.0	4804.0	99.76	%			12:46:42
2	Al 396.153Radial†	-46.8	45.1	41.028	ug/L	41.028	ppb	12:46:42
2	Ca 317.933Radial†	43.2	26.6	66.161	ug/L	66.161	ppb	12:47:02
2	Fe 238.204 Radial†	0.2	-0.1	-3.2086	ug/L	-3.2086	ppb	12:47:02
2	K 766.490 Radial†	1500.2	36.5	15.864	ug/L	15.864	ppb	12:46:42
2	Mg 279.077 IEC†	0.1	-0.0	-2.9802	ug/L	-2.9802	ppb	12:47:02
2	Na 589.592 Radial†	-185.3	-16.0	-43.367	ug/L	-43.367	ppb	12:47:02
2	Sr 421.552†	24.3	19.0	0.2916	ug/L	0.2916	ppb	12:47:02
2	Sc 361.383	1055228.2	1055228.2	99.467	%			12:48:04
2	Y 371.029	850024.5	850024.5	99.626	%			12:48:04
2	Ag 328.068†	646.4	11.3	0.0443	ug/L	0.0443	ppb	12:48:09
2	As 188.979†	-42.6	-5.9	-1.4010	ug/L	-1.4010	ppb	12:48:29
2	B 249.677†	320.9	704.1	10.974	ug/L	10.974	ppb	12:48:09
2	Ba 233.527†	61.0	37.0	0.1867	ug/L	0.1867	ppb	12:48:29
2	Be 313.107†	-7402.9	-126.4	-0.0393	ug/L	-0.0393	ppb	12:48:09
2	Cd 226.502†	-287.6	-11.5	-0.0851	ug/L	-0.0851	ppb	12:48:29
2	Co 228.616†	-95.0	-5.1	-0.0621	ug/L	-0.0621	ppb	12:48:29
2	Cr 267.716†	-27.2	1.3	0.0113	ug/L	0.0113	ppb	12:48:29
2	Cu 324.752†	10074.9	-62.4	-0.1541	ug/L	-0.1541	ppb	12:48:09
2	Mn 257.610†	873.6	51.3	0.0402	ug/L	0.0402	ppb	12:48:29
2	Mo 202.031†	40.5	8.9	0.3563	ug/L	0.3563	ppb	12:48:29
2	Ni 231.604†	174.4	27.0	0.4336	ug/L	0.4336	ppb	12:48:29

2	P 214.914†	361.0	26.0	9.2291	ug/L	9.2291 ppb	12:48:29
2	Pb 220.353†	-10.0	19.1	1.4379	ug/L	1.4379 ppb	12:48:29
2	S 181.975 Axial†	81.6	14.2	11.973	ug/L	11.973 ppb	12:48:29
2	Sb 206.836†	42.3	-2.9	-0.5447	ug/L	-0.5447 ppb	12:48:29
2	Se 196.026†	-24.2	-2.7	-0.8785	ug/L	-0.8785 ppb	12:48:29
2	Si 251.611†	1175.1	621.2	12.805	ug/L	12.805 ppb	12:48:29
2	Sn 189.927†	14.8	9.4	0.9833	ug/L	0.9833 ppb	12:48:29
2	Ti 334.940†	-1119.7	-16.5	-0.0158	ug/L	-0.0158 ppb	12:48:09
2	Tl 190.801†	-65.4	-4.3	-0.7287	ug/L	-0.7287 ppb	12:48:29
2	U 409.014†	-3934.1	-120.4	-2.9874	ug/L	-2.9874 ppb	12:48:04
2	V 292.402†	-1688.4	-44.7	-0.2542	ug/L	-0.2542 ppb	12:48:09
2	Zn 213.857†	1094.3	-22.2	-0.1261	ug/L	-0.1261 ppb	12:48:29
2	SiO2†	1154.6	558.4	24.643	ug/L	24.643 ppb	12:49:10
3	Sc Radial	5536.9	5536.9	99.5	%		12:47:07
3	Y RADIAL	4795.3	4795.3	99.58	%		12:47:07
3	Al 396.153Radial†	-88.7	3.1	2.7784	ug/L	2.7784 ppb	12:47:07
3	Ca 317.933Radial†	38.0	21.3	52.934	ug/L	52.934 ppb	12:47:27
3	Fe 238.204 Radial†	0.3	-0.0	-1.5937	ug/L	-1.5937 ppb	12:47:27
3	K 766.490 Radial†	1639.2	174.4	75.680	ug/L	75.680 ppb	12:47:07
3	Mg 279.077 IEC†	-0.9	-1.1	-89.124	ug/L	-89.124 ppb	12:47:27
3	Na 589.592 Radial†	-174.5	-4.9	-13.365	ug/L	-13.365 ppb	12:47:27
3	Sr 421.552†	25.1	19.8	0.3045	ug/L	0.3045 ppb	12:47:27
3	Sc 361.383	1057181.0	1057181.0	99.651	%		12:48:34
3	Y 371.029	851270.4	851270.4	99.772	%		12:48:34
3	Ag 328.068†	674.9	38.7	0.1554	ug/L	0.1554 ppb	12:48:39
3	As 188.979†	-44.5	-7.8	-1.8396	ug/L	-1.8396 ppb	12:48:59
3	B 249.677†	378.7	761.6	11.869	ug/L	11.869 ppb	12:48:39
3	Ba 233.527†	63.9	39.8	0.2017	ug/L	0.2017 ppb	12:48:59
3	Be 313.107†	-7375.2	-84.8	-0.0266	ug/L	-0.0266 ppb	12:48:39
3	Cd 226.502†	-299.1	-22.5	-0.1676	ug/L	-0.1676 ppb	12:48:59
3	Co 228.616†	-94.7	-4.6	-0.0558	ug/L	-0.0558 ppb	12:48:59
3	Cr 267.716†	-31.6	-3.1	-0.0251	ug/L	-0.0251 ppb	12:48:59
3	Cu 324.752†	10184.5	28.9	0.0711	ug/L	0.0711 ppb	12:48:39
3	Mn 257.610†	910.4	86.5	0.0699	ug/L	0.0699 ppb	12:48:59
3	Mo 202.031†	44.9	13.3	0.5325	ug/L	0.5325 ppb	12:48:59
3	Ni 231.604†	167.2	19.5	0.3133	ug/L	0.3133 ppb	12:48:59
3	P 214.914†	336.4	0.6	0.2154	ug/L	0.2154 ppb	12:48:59
3	Pb 220.353†	-22.4	6.6	0.4997	ug/L	0.4997 ppb	12:48:59
3	S 181.975 Axial†	69.3	1.8	1.4809	ug/L	1.4809 ppb	12:48:59
3	Sb 206.836†	57.9	12.6	2.5004	ug/L	2.5004 ppb	12:48:59
3	Se 196.026†	-30.6	-9.1	-2.9626	ug/L	-2.9626 ppb	12:48:59
3	Si 251.611†	1139.2	583.1	11.995	ug/L	11.995 ppb	12:48:59
3	Sn 189.927†	11.6	6.1	0.6428	ug/L	0.6428 ppb	12:48:59
3	Ti 334.940†	-1167.7	-62.5	-0.0766	ug/L	-0.0766 ppb	12:48:39
3	Tl 190.801†	-61.2	0.0	0.0020	ug/L	0.0020 ppb	12:48:59
3	U 409.014†	-3975.3	-154.5	-3.8330	ug/L	-3.8330 ppb	12:48:34
3	V 292.402†	-1637.3	9.7	0.0534	ug/L	0.0534 ppb	12:48:39
3	Zn 213.857†	1125.6	7.1	0.0408	ug/L	0.0408 ppb	12:48:59
3	SiO2†	1173.0	574.8	25.317	ug/L	25.317 ppb	12:49:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054846.5	99.431	%	0.2401				0.24%
Sc Radial	5528.4	99.3	%	0.17				0.17%
Y 371.029	849316.5	99.543	%	0.2799				0.28%
Y RADIAL	4802.0	99.72	%	0.125				0.12%
Ag 328.068†	54.3	0.2147	ug/L	0.20658	0.2147	ppb	0.20658	96.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	19.7	17.922	ug/L	20.3303	17.922	ppb	20.3303	113.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-9.3	-2.1876	ug/L	1.00674	-2.1876	ppb	1.00674	46.02%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	742.0	11.565	ug/L	0.5111	11.565	ppb	0.5111	4.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	32.8	0.1653	ug/L	0.05052	0.1653	ppb	0.05052	30.56%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-121.3	-0.0378	ug/L	0.01050	-0.0378	ppb	0.01050	27.79%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	25.1	62.556	ug/L	8.4198	62.556	ppb	8.4198	13.46%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -20.4     -0.1518 ug/L       0.06032     -0.1518 ppb       0.06032  39.74%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                0.6      0.0086 ug/L       0.11710      0.0086 ppb       0.11710 >999.9%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                0.8      0.0071 ug/L       0.03031      0.0071 ppb       0.03031 424.84%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               -9.6     -0.0240 ug/L       0.11658     -0.0240 ppb       0.11658 485.05%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.1     -4.9105 ug/L       4.42071     -4.9105 ppb       4.42071  90.02%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        150.3      65.208 ug/L       45.0299      65.208 ppb       45.0299  69.06%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -1.0     -82.381 ug/L       76.2536     -82.381 ppb       76.2536  92.56%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               62.3      0.0502 ug/L       0.01702      0.0502 ppb       0.01702  33.90%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                5.8      0.2318 ug/L       0.37863      0.2318 ppb       0.37863 163.36%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -8.7     -23.558 ug/L       17.1571     -23.558 ppb       17.1571  72.83%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               19.1      0.3055 ug/L       0.13208      0.3055 ppb       0.13208  43.23%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                18.7      6.6426 ug/L       5.60129      6.6426 ppb       5.60129  84.32%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               17.5      1.3169 ug/L       0.76385      1.3169 ppb       0.76385  58.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           7.7      6.4762 ug/L       5.26375      6.4762 ppb       5.26375  81.28%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                1.3      0.2668 ug/L       1.95832      0.2668 ppb       1.95832 734.10%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.6     -1.5038 ug/L       1.26762     -1.5038 ppb       1.26762  84.29%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              636.1      13.098 ug/L        1.2757      13.098 ppb        1.2757   9.74%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.2      0.6499 ug/L       0.32985      0.6499 ppb       0.32985  50.75%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               22.0      0.3380 ug/L       0.06959      0.3380 ppb       0.06959  20.59%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -20.6     -0.0212 ug/L       0.05284     -0.0212 ppb       0.05284 248.77%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                1.0      0.1672 ug/L       0.98883      0.1672 ppb       0.98883 591.54%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               -146.2     -3.6263 ug/L       0.56469     -3.6263 ppb       0.56469  15.57%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -43.5     -0.2515 ug/L       0.30350     -0.2515 ppb       0.30350 120.69%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               -9.3     -0.0505 ug/L       0.08455     -0.0505 ppb       0.08455 167.30%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    579.1      25.528 ug/L        1.0068      25.528 ppb        1.0068   3.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 13:30:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5593.8	5593.8	101	%			13:32:15
1	Y RADIAL	4842.5	4842.5	100.6	%			13:32:15
1	Al 396.153Radial†	5375.4	5439.8	4930.0	ug/L	4930.0	ppb	13:32:15
1	Ca 317.933Radial†	2030.0	2002.6	4988.1	ug/L	4988.1	ppb	13:32:35
1	Fe 238.204 Radial†	143.1	142.0	4997.8	ug/L	4997.8	ppb	13:32:35
1	K 766.490 Radial†	13576.3	12032.8	5214.6	ug/L	5214.6	ppb	13:32:15
1	Mg 279.077 IEC†	64.5	64.0	5074.9	ug/L	5074.9	ppb	13:32:35
1	Na 589.592 Radial†	3820.6	3971.3	10738	ug/L	10738	ppb	13:32:15
1	Sr 421.552†	36184.6	35991.7	554.46	ug/L	554.46	ppb	13:32:15
1	Sc 361.383	1067935.1	1067935.1	100.66	%			13:33:34
1	Y 371.029	850350.6	850350.6	99.664	%			13:33:34
1	Ag 328.068†	127384.2	125904.4	501.45	ug/L	501.45	ppb	13:33:34
1	As 188.979†	2071.9	2095.1	494.98	ug/L	494.98	ppb	13:33:49
1	B 249.677†	31471.2	31644.9	491.29	ug/L	491.29	ppb	13:33:34
1	Ba 233.527†	98516.8	97841.9	496.45	ug/L	496.45	ppb	13:33:34
1	Be 313.107†	1595916.3	1592693.3	496.38	ug/L	496.38	ppb	13:33:34
1	Cd 226.502†	66618.5	66456.2	496.78	ug/L	496.78	ppb	13:33:34
1	Co 228.616†	39113.3	38945.4	485.32	ug/L	485.32	ppb	13:33:49
1	Cr 267.716†	58357.9	58001.1	494.70	ug/L	494.70	ppb	13:33:34
1	Cu 324.752†	211740.1	200150.5	494.11	ug/L	494.11	ppb	13:33:34
1	Mn 257.610†	631157.2	626162.1	495.39	ug/L	495.39	ppb	13:33:34
1	Mo 202.031†	12651.2	12535.9	502.12	ug/L	502.12	ppb	13:33:49
1	Ni 231.604†	30868.2	30516.1	488.79	ug/L	488.79	ppb	13:33:49
1	P 214.914†	7390.5	7004.7	2400.7	ug/L	2400.7	ppb	13:33:49
1	Pb 220.353†	6658.3	6643.4	499.37	ug/L	499.37	ppb	13:33:49
1	S 181.975 Axial†	1261.6	1185.4	1002.5	ug/L	1002.5	ppb	13:33:49
1	Sb 206.836†	2570.5	2508.1	499.32	ug/L	499.32	ppb	13:33:49
1	Se 196.026†	1503.6	1515.3	512.16	ug/L	512.16	ppb	13:33:49
1	Si 251.611†	123414.2	122039.0	2506.2	ug/L	2506.2	ppb	13:33:34
1	Sn 189.927†	4826.6	4789.2	498.58	ug/L	498.58	ppb	13:33:49
1	Ti 334.940†	381885.1	380472.4	498.01	ug/L	498.01	ppb	13:33:34
1	Tl 190.801†	2890.2	2932.5	496.60	ug/L	496.60	ppb	13:33:49
1	U 409.014†	15716.9	19447.9	480.97	ug/L	480.97	ppb	13:33:34
1	V 292.402†	85492.2	86580.4	497.03	ug/L	497.03	ppb	13:33:34
1	Zn 213.857†	90459.6	88739.9	490.98	ug/L	490.98	ppb	13:33:34
1	SiO2†	121080.0	119678.0	5261.9	ug/L	5261.9	ppb	13:34:50
2	Sc Radial	5672.4	5672.4	102	%			13:32:40
2	Y RADIAL	4945.5	4945.5	102.7	%			13:32:40
2	Al 396.153Radial†	5436.6	5425.7	4917.2	ug/L	4917.2	ppb	13:32:40
2	Ca 317.933Radial†	2037.9	1982.3	4937.6	ug/L	4937.6	ppb	13:33:00
2	Fe 238.204 Radial†	144.7	141.6	4983.6	ug/L	4983.6	ppb	13:33:00
2	K 766.490 Radial†	13656.0	11923.8	5167.3	ug/L	5167.3	ppb	13:32:40
2	Mg 279.077 IEC†	65.5	64.0	5077.9	ug/L	5077.9	ppb	13:33:00
2	Na 589.592 Radial†	3830.1	3927.9	10620	ug/L	10620	ppb	13:32:40
2	Sr 421.552†	36620.5	35920.3	553.36	ug/L	553.36	ppb	13:32:40
2	Sc 361.383	1070653.1	1070653.1	100.92	%			13:33:57
2	Y 371.029	851300.7	851300.7	99.776	%			13:33:57
2	Ag 328.068†	127724.7	125920.6	501.52	ug/L	501.52	ppb	13:33:57
2	As 188.979†	2076.5	2094.5	494.83	ug/L	494.83	ppb	13:34:17
2	B 249.677†	31609.9	31703.0	492.20	ug/L	492.20	ppb	13:33:57
2	Ba 233.527†	98878.2	97951.6	497.00	ug/L	497.00	ppb	13:33:57
2	Be 313.107†	1599999.7	1592714.8	496.39	ug/L	496.39	ppb	13:33:57
2	Cd 226.502†	67082.9	66748.4	498.96	ug/L	498.96	ppb	13:33:57
2	Co 228.616†	39157.1	38890.2	484.63	ug/L	484.63	ppb	13:34:17
2	Cr 267.716†	58566.4	58060.5	495.20	ug/L	495.20	ppb	13:33:57
2	Cu 324.752†	211700.3	199577.1	492.70	ug/L	492.70	ppb	13:33:57
2	Mn 257.610†	634065.3	627452.0	496.41	ug/L	496.41	ppb	13:33:57
2	Mo 202.031†	12650.3	12503.1	500.81	ug/L	500.81	ppb	13:34:17
2	Ni 231.604†	30868.0	30438.0	487.54	ug/L	487.54	ppb	13:34:17

2	P 214.914†	7401.9	6997.4	2398.4 ug/L	2398.4 ppb	13:34:17
2	Pb 220.353†	6676.9	6645.0	499.48 ug/L	499.48 ppb	13:34:17
2	S 181.975 Axial†	1250.3	1171.1	990.32 ug/L	990.32 ppb	13:34:17
2	Sb 206.836†	2582.9	2513.9	500.41 ug/L	500.41 ppb	13:34:17
2	Se 196.026†	1510.6	1518.4	513.14 ug/L	513.14 ppb	13:34:17
2	Si 251.611†	123797.7	122107.8	2507.7 ug/L	2507.7 ppb	13:33:57
2	Sn 189.927†	4829.4	4779.9	497.60 ug/L	497.60 ppb	13:34:17
2	Ti 334.940†	383068.5	380682.0	498.28 ug/L	498.28 ppb	13:33:57
2	Tl 190.801†	2883.4	2918.5	494.24 ug/L	494.24 ppb	13:34:17
2	U 409.014†	15572.6	19265.3	476.44 ug/L	476.44 ppb	13:33:57
2	V 292.402†	85872.5	86741.7	497.92 ug/L	497.92 ppb	13:33:57
2	Zn 213.857†	90799.4	88848.4	491.60 ug/L	491.60 ppb	13:33:57
2	SiO2†	123201.1	121474.4	5341.4 ug/L	5341.4 ppb	13:34:55
3	Sc Radial	5530.2	5530.2	99.4 %		13:33:05
3	Y RADIAL	4824.8	4824.8	100.2 %		13:33:05
3	Al 396.153Radial†	5269.6	5394.8	4888.9 ug/L	4888.9 ppb	13:33:05
3	Ca 317.933Radial†	2016.5	2012.2	5012.0 ug/L	5012.0 ppb	13:33:25
3	Fe 238.204 Radial†	142.0	142.6	5017.8 ug/L	5017.8 ppb	13:33:25
3	K 766.490 Radial†	13240.5	11850.4	5135.5 ug/L	5135.5 ppb	13:33:05
3	Mg 279.077 IEC†	66.0	66.2	5249.4 ug/L	5249.4 ppb	13:33:25
3	Na 589.592 Radial†	3727.2	3921.0	10602 ug/L	10602 ppb	13:33:05
3	Sr 421.552†	35503.6	35720.6	550.29 ug/L	550.29 ppb	13:33:05
3	Sc 361.383	1058446.8	1058446.8	99.770 %		13:34:24
3	Y 371.029	840681.7	840681.7	98.531 %		13:34:24
3	Ag 328.068†	126248.3	125900.3	501.44 ug/L	501.44 ppb	13:34:24
3	As 188.979†	2075.8	2117.5	500.23 ug/L	500.23 ppb	13:34:44
3	B 249.677†	31241.6	31695.0	492.06 ug/L	492.06 ppb	13:34:24
3	Ba 233.527†	97802.6	98003.4	497.27 ug/L	497.27 ppb	13:34:24
3	Be 313.107†	1580830.6	1591784.7	496.10 ug/L	496.10 ppb	13:34:24
3	Cd 226.502†	66147.2	66577.1	497.68 ug/L	497.68 ppb	13:34:24
3	Co 228.616†	38965.8	39145.9	487.83 ug/L	487.83 ppb	13:34:44
3	Cr 267.716†	57808.5	57970.1	494.43 ug/L	494.43 ppb	13:34:24
3	Cu 324.752†	209941.6	200233.4	494.32 ug/L	494.32 ppb	13:34:24
3	Mn 257.610†	627495.4	628112.4	496.93 ug/L	496.93 ppb	13:34:24
3	Mo 202.031†	12657.7	12655.1	506.89 ug/L	506.89 ppb	13:34:44
3	Ni 231.604†	30736.2	30658.7	491.08 ug/L	491.08 ppb	13:34:44
3	P 214.914†	7364.3	7044.3	2414.7 ug/L	2414.7 ppb	13:34:44
3	Pb 220.353†	6650.9	6695.3	503.26 ug/L	503.26 ppb	13:34:44
3	S 181.975 Axial†	1250.1	1185.1	1002.2 ug/L	1002.2 ppb	13:34:44
3	Sb 206.836†	2580.3	2540.8	505.92 ug/L	505.92 ppb	13:34:44
3	Se 196.026†	1500.2	1525.3	515.51 ug/L	515.51 ppb	13:34:44
3	Si 251.611†	122421.6	122143.2	2508.3 ug/L	2508.3 ppb	13:34:24
3	Sn 189.927†	4816.0	4821.6	501.94 ug/L	501.94 ppb	13:34:44
3	Ti 334.940†	378995.5	380976.9	498.67 ug/L	498.67 ppb	13:34:24
3	Tl 190.801†	2891.6	2959.6	501.16 ug/L	501.16 ppb	13:34:44
3	U 409.014†	15388.1	19258.2	476.26 ug/L	476.26 ppb	13:34:24
3	V 292.402†	84860.2	86708.3	497.81 ug/L	497.81 ppb	13:34:24
3	Zn 213.857†	89990.4	89075.1	492.83 ug/L	492.83 ppb	13:34:24
3	SiO2†	121574.6	121252.0	5331.3 ug/L	5331.3 ppb	13:35:00

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1065678.3	100.45	%	0.604				0.60%
Sc Radial	5598.8	101	%	1.3				1.27%
Y 371.029	847444.4	99.324	%	0.6887				0.69%
Y RADIAL	4870.9	101.1	%	1.35				1.34%
Ag 328.068†	125908.4	501.47	ug/L	0.040	501.47	ppb	0.040	0.01%
QC value within limits for Ag 328.068 Recovery = 100.29%								
Al 396.153Radial†	5420.1	4912.0	ug/L	21.04	4912.0	ppb	21.04	0.43%
QC value within limits for Al 396.153Radial Recovery = 98.24%								
As 188.979†	2102.3	496.68	ug/L	3.073	496.68	ppb	3.073	0.62%
QC value within limits for As 188.979 Recovery = 99.34%								
B 249.677†	31681.0	491.85	ug/L	0.490	491.85	ppb	0.490	0.10%
QC value within limits for B 249.677 Recovery = 98.37%								
Ba 233.527†	97932.3	496.91	ug/L	0.418	496.91	ppb	0.418	0.08%
QC value within limits for Ba 233.527 Recovery = 99.38%								
Be 313.107†	1592397.6	496.29	ug/L	0.164	496.29	ppb	0.164	0.03%
QC value within limits for Be 313.107 Recovery = 99.26%								
Ca 317.933Radial†	1999.0	4979.2	ug/L	37.99	4979.2	ppb	37.99	0.76%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.58%
Cd 226.502†            66593.9      497.81 ug/L         1.099      497.81 ppb          1.099   0.22%
   QC value within limits for Cd 226.502  Recovery = 99.56%
Co 228.616†            38993.8      485.92 ug/L         1.684      485.92 ppb          1.684   0.35%
   QC value within limits for Co 228.616  Recovery = 97.18%
Cr 267.716†            58010.6      494.78 ug/L         0.391      494.78 ppb          0.391   0.08%
   QC value within limits for Cr 267.716  Recovery = 98.96%
Cu 324.752†           199987.0      493.71 ug/L         0.883      493.71 ppb          0.883   0.18%
   QC value within limits for Cu 324.752  Recovery = 98.74%
Fe 238.204 Radial†       142.1      4999.7 ug/L         17.21      4999.7 ppb          17.21   0.34%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.99%
K 766.490 Radial†      11935.7      5172.5 ug/L         39.80      5172.5 ppb          39.80   0.77%
   QC value within limits for K 766.490 Radial  Recovery = 103.45%
Mg 279.077 IEC†           64.8      5134.0 ug/L         99.90      5134.0 ppb          99.90   1.95%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.68%
Mn 257.610†           627242.2      496.25 ug/L         0.783      496.25 ppb          0.783   0.16%
   QC value within limits for Mn 257.610  Recovery = 99.25%
Mo 202.031†            12564.7      503.27 ug/L         3.202      503.27 ppb          3.202   0.64%
   QC value within limits for Mo 202.031  Recovery = 100.65%
Na 589.592 Radial†      3940.0       10653 ug/L          73.7       10653 ppb           73.7   0.69%
   QC value within limits for Na 589.592 Radial  Recovery = 106.53%
Ni 231.604†            30537.6      489.14 ug/L         1.792      489.14 ppb          1.792   0.37%
   QC value within limits for Ni 231.604  Recovery = 97.83%
P 214.914†              7015.5      2404.6 ug/L          8.82      2404.6 ppb           8.82   0.37%
   QC value within limits for P 214.914  Recovery = 96.18%
Pb 220.353†             6661.2      500.70 ug/L         2.213      500.70 ppb          2.213   0.44%
   QC value within limits for Pb 220.353  Recovery = 100.14%
S 181.975 Axial†        1180.6      998.33 ug/L         6.940      998.33 ppb          6.940   0.70%
   QC value within limits for S 181.975 Axial  Recovery = 99.83%
Sb 206.836†             2520.9      501.88 ug/L         3.538      501.88 ppb          3.538   0.70%
   QC value within limits for Sb 206.836  Recovery = 100.38%
Se 196.026†             1519.7      513.60 ug/L         1.722      513.60 ppb          1.722   0.34%
   QC value within limits for Se 196.026  Recovery = 102.72%
Si 251.611†           122096.7      2507.4 ug/L          1.07      2507.4 ppb           1.07   0.04%
   QC value within limits for Si 251.611  Recovery = 100.30%
Sn 189.927†             4796.9      499.37 ug/L         2.279      499.37 ppb          2.279   0.46%
   QC value within limits for Sn 189.927  Recovery = 99.87%
Sr 421.552†            35877.5      552.70 ug/L         2.165      552.70 ppb          2.165   0.39%
   QC value greater than the upper limit for Sr 421.552  Recovery = 110.54%
Ti 334.940†           380710.4      498.32 ug/L         0.334      498.32 ppb          0.334   0.07%
   QC value within limits for Ti 334.940  Recovery = 99.66%
Tl 190.801†             2936.9      497.33 ug/L         3.520      497.33 ppb          3.520   0.71%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19323.8      477.89 ug/L         2.668      477.89 ppb          2.668   0.56%
   QC value within limits for U 409.014  Recovery = 95.58%
V 292.402†             86676.8      497.59 ug/L         0.485      497.59 ppb          0.485   0.10%
   QC value within limits for V 292.402  Recovery = 99.52%
Zn 213.857†            88887.8      491.81 ug/L         0.941      491.81 ppb          0.941   0.19%
   QC value within limits for Zn 213.857  Recovery = 98.36%
SiO2†                 120801.5      5311.6 ug/L         43.27      5311.6 ppb          43.27   0.81%
   QC value within limits for SiO2  Recovery = 99.33%
QC Failed.  Continue with analysis.
```

Sequence No.: 8
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:37:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5413.7	5413.7	97.3	%			13:39:02
1	Y RADIAL	4722.7	4722.7	98.07	%			13:39:02
1	Al 396.153Radial†	-76.0	14.1	12.785	ug/L	12.785	ppb	13:39:02
1	Ca 317.933Radial†	35.2	19.2	47.934	ug/L	47.934	ppb	13:39:22
1	Fe 238.204 Radial†	1.2	0.9	31.911	ug/L	31.911	ppb	13:39:22
1	K 766.490 Radial†	1580.2	151.2	65.626	ug/L	65.626	ppb	13:39:02
1	Mg 279.077 IEC†	-0.2	-0.4	-31.882	ug/L	-31.882	ppb	13:39:22
1	Na 589.592 Radial†	-172.1	-6.5	-17.590	ug/L	-17.590	ppb	13:39:22
1	Sr 421.552†	25.9	21.2	0.3255	ug/L	0.3255	ppb	13:39:22
1	Sc 361.383	1053963.2	1053963.2	99.348	%			13:40:19
1	Y 371.029	848397.9	848397.9	99.435	%			13:40:19
1	Ag 328.068†	697.3	63.3	0.2597	ug/L	0.2597	ppb	13:40:24
1	As 188.979†	-43.2	-6.6	-1.5430	ug/L	-1.5430	ppb	13:40:44
1	B 249.677†	186.7	569.4	8.8696	ug/L	8.8696	ppb	13:40:24
1	Ba 233.527†	25.2	1.1	0.0062	ug/L	0.0062	ppb	13:40:44
1	Be 313.107†	-7423.5	-156.0	-0.0488	ug/L	-0.0488	ppb	13:40:24
1	Cd 226.502†	-280.8	-5.0	-0.0412	ug/L	-0.0412	ppb	13:40:44
1	Co 228.616†	-84.6	5.2	0.0655	ug/L	0.0655	ppb	13:40:44
1	Cr 267.716†	-15.0	13.5	0.1154	ug/L	0.1154	ppb	13:40:44
1	Cu 324.752†	10214.2	90.0	0.2240	ug/L	0.2240	ppb	13:40:24
1	Mn 257.610†	861.8	40.4	0.0367	ug/L	0.0367	ppb	13:40:44
1	Mo 202.031†	34.4	2.9	0.1183	ug/L	0.1183	ppb	13:40:44
1	Ni 231.604†	156.3	9.1	0.1453	ug/L	0.1453	ppb	13:40:44
1	P 214.914†	354.0	19.4	6.7924	ug/L	6.7924	ppb	13:40:44
1	Pb 220.353†	-16.7	12.3	0.9181	ug/L	0.9181	ppb	13:40:44
1	S 181.975 Axial†	70.6	3.2	2.7071	ug/L	2.7071	ppb	13:40:44
1	Sb 206.836†	39.9	-5.3	-1.0467	ug/L	-1.0467	ppb	13:40:44
1	Se 196.026†	-22.9	-1.5	-0.3668	ug/L	-0.3668	ppb	13:40:44
1	Si 251.611†	869.2	314.8	6.4745	ug/L	6.4745	ppb	13:40:44
1	Sn 189.927†	0.9	-4.6	-0.4731	ug/L	-0.4731	ppb	13:40:44
1	Ti 334.940†	-1211.1	-109.8	-0.1404	ug/L	-0.1404	ppb	13:40:24
1	Tl 190.801†	-59.9	1.1	0.1786	ug/L	0.1786	ppb	13:40:44
1	U 409.014†	-3817.1	-7.5	-0.1890	ug/L	-0.1890	ppb	13:40:19
1	V 292.402†	-1664.4	-22.5	-0.1316	ug/L	-0.1316	ppb	13:40:24
1	Zn 213.857†	1133.9	18.9	0.1021	ug/L	0.1021	ppb	13:40:44
1	SiO2†	854.9	258.2	11.358	ug/L	11.358	ppb	13:41:50
2	Sc Radial	5529.6	5529.6	99.4	%			13:39:27
2	Y RADIAL	4800.3	4800.3	99.68	%			13:39:27
2	Al 396.153Radial†	-66.9	24.8	22.617	ug/L	22.617	ppb	13:39:27
2	Ca 317.933Radial†	32.0	15.3	38.110	ug/L	38.110	ppb	13:39:47
2	Fe 238.204 Radial†	-0.4	-0.7	-24.391	ug/L	-24.391	ppb	13:39:47
2	K 766.490 Radial†	1456.8	-7.0	-3.0184	ug/L	-3.0184	ppb	13:39:27
2	Mg 279.077 IEC†	-1.1	-1.3	-105.28	ug/L	-105.28	ppb	13:39:47
2	Na 589.592 Radial†	-182.7	-13.4	-36.229	ug/L	-36.229	ppb	13:39:47
2	Sr 421.552†	13.5	8.1	0.1251	ug/L	0.1251	ppb	13:39:47
2	Sc 361.383	1050298.1	1050298.1	99.002	%			13:40:49
2	Y 371.029	845092.6	845092.6	99.048	%			13:40:49
2	Ag 328.068†	722.6	91.3	0.3522	ug/L	0.3522	ppb	13:40:54
2	As 188.979†	-47.8	-11.4	-2.6790	ug/L	-2.6790	ppb	13:41:14
2	B 249.677†	113.4	496.1	7.7347	ug/L	7.7347	ppb	13:40:54
2	Ba 233.527†	39.8	15.9	0.0791	ug/L	0.0791	ppb	13:41:14
2	Be 313.107†	-7481.4	-240.6	-0.0748	ug/L	-0.0748	ppb	13:40:54
2	Cd 226.502†	-281.1	-6.3	-0.0443	ug/L	-0.0443	ppb	13:41:14
2	Co 228.616†	-106.2	-16.8	-0.2105	ug/L	-0.2105	ppb	13:41:14
2	Cr 267.716†	-17.2	11.3	0.0951	ug/L	0.0951	ppb	13:41:14
2	Cu 324.752†	10211.9	123.5	0.3033	ug/L	0.3033	ppb	13:40:54
2	Mn 257.610†	849.4	30.9	0.0233	ug/L	0.0233	ppb	13:41:14
2	Mo 202.031†	18.3	-13.3	-0.5352	ug/L	-0.5352	ppb	13:41:14
2	Ni 231.604†	164.4	17.8	0.2854	ug/L	0.2854	ppb	13:41:14

2	P 214.914†	350.8	17.5	6.1379	ug/L	6.1379 ppb	13:41:14
2	Pb 220.353†	-10.6	18.4	1.3861	ug/L	1.3861 ppb	13:41:14
2	S 181.975 Axial†	62.6	-4.6	-3.8702	ug/L	-3.8702 ppb	13:41:14
2	Sb 206.836†	45.8	0.8	0.1341	ug/L	0.1341 ppb	13:41:14
2	Se 196.026†	-24.4	-3.1	-1.0828	ug/L	-1.0828 ppb	13:41:14
2	Si 251.611†	863.1	311.7	6.4431	ug/L	6.4431 ppb	13:41:14
2	Sn 189.927†	0.2	-5.3	-0.5453	ug/L	-0.5453 ppb	13:41:14
2	Ti 334.940†	-1096.8	1.4	0.0048	ug/L	0.0048 ppb	13:40:54
2	Tl 190.801†	-63.6	-2.9	-0.4817	ug/L	-0.4817 ppb	13:41:14
2	U 409.014†	-3840.4	-44.4	-1.0988	ug/L	-1.0988 ppb	13:40:49
2	V 292.402†	-1708.7	-73.1	-0.4221	ug/L	-0.4221 ppb	13:40:54
2	Zn 213.857†	1132.6	21.6	0.1245	ug/L	0.1245 ppb	13:41:14
2	SiO2†	832.1	238.2	10.549	ug/L	10.549 ppb	13:41:55
3	Sc Radial	5577.9	5577.9	100	%		13:39:52
3	Y RADIAL	4835.1	4835.1	100.4	%		13:39:52
3	Al 396.153Radial†	-70.3	22.1	20.104	ug/L	20.104 ppb	13:39:52
3	Ca 317.933Radial†	35.5	18.5	45.957	ug/L	45.957 ppb	13:40:12
3	Fe 238.204 Radial†	0.8	0.4	15.248	ug/L	15.248 ppb	13:40:12
3	K 766.490 Radial†	1595.4	118.6	51.472	ug/L	51.472 ppb	13:39:52
3	Mg 279.077 IEC†	1.1	0.9	72.486	ug/L	72.486 ppb	13:40:12
3	Na 589.592 Radial†	-180.7	-9.9	-26.682	ug/L	-26.682 ppb	13:40:12
3	Sr 421.552†	20.5	15.0	0.2301	ug/L	0.2301 ppb	13:40:12
3	Sc 361.383	1059808.1	1059808.1	99.899	%		13:41:19
3	Y 371.029	852835.7	852835.7	99.956	%		13:41:19
3	Ag 328.068†	652.2	14.3	0.0614	ug/L	0.0614 ppb	13:41:24
3	As 188.979†	-45.4	-8.6	-2.0185	ug/L	-2.0185 ppb	13:41:44
3	B 249.677†	65.4	446.9	6.9635	ug/L	6.9635 ppb	13:41:24
3	Ba 233.527†	22.1	-2.1	-0.0105	ug/L	-0.0105 ppb	13:41:44
3	Be 313.107†	-7445.6	-136.9	-0.0427	ug/L	-0.0427 ppb	13:41:24
3	Cd 226.502†	-289.9	-12.6	-0.0960	ug/L	-0.0960 ppb	13:41:44
3	Co 228.616†	-93.1	-2.8	-0.0344	ug/L	-0.0344 ppb	13:41:44
3	Cr 267.716†	-11.2	17.4	0.1485	ug/L	0.1485 ppb	13:41:44
3	Cu 324.752†	10243.7	62.8	0.1558	ug/L	0.1558 ppb	13:41:24
3	Mn 257.610†	848.9	22.8	0.0186	ug/L	0.0186 ppb	13:41:44
3	Mo 202.031†	37.0	5.3	0.2126	ug/L	0.2126 ppb	13:41:44
3	Ni 231.604†	140.9	-7.2	-0.1159	ug/L	-0.1159 ppb	13:41:44
3	P 214.914†	339.1	2.5	0.8606	ug/L	0.8606 ppb	13:41:44
3	Pb 220.353†	-19.1	9.9	0.7469	ug/L	0.7469 ppb	13:41:44
3	S 181.975 Axial†	72.1	4.4	3.7018	ug/L	3.7018 ppb	13:41:44
3	Sb 206.836†	45.8	0.4	0.0909	ug/L	0.0909 ppb	13:41:44
3	Se 196.026†	-18.5	3.1	1.0727	ug/L	1.0727 ppb	13:41:44
3	Si 251.611†	817.6	258.4	5.3084	ug/L	5.3084 ppb	13:41:44
3	Sn 189.927†	11.2	5.7	0.5975	ug/L	0.5975 ppb	13:41:44
3	Ti 334.940†	-1138.5	-30.4	-0.0364	ug/L	-0.0364 ppb	13:41:24
3	Tl 190.801†	-59.9	1.4	0.2410	ug/L	0.2410 ppb	13:41:44
3	U 409.014†	-3866.5	-35.7	-0.8885	ug/L	-0.8885 ppb	13:41:19
3	V 292.402†	-1658.7	-7.6	-0.0432	ug/L	-0.0432 ppb	13:41:24
3	Zn 213.857†	1144.7	23.5	0.1274	ug/L	0.1274 ppb	13:41:44
3	SiO2†	856.3	254.8	11.208	ug/L	11.208 ppb	13:42:00

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1054689.8	99.416	%	0.4521				0.45%
Sc Radial	5507.0	99.0	%	1.52				1.53%
Y 371.029	848775.4	99.480	%	0.4554				0.46%
Y RADIAL	4786.0	99.38	%	1.195				1.20%
Ag 328.068†	56.3	0.2244	ug/L	0.14858	0.2244	ppb	0.14858	66.20%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.3	18.502	ug/L	5.1080	18.502	ppb	5.1080	27.61%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-8.9	-2.0802	ug/L	0.57051	-2.0802	ppb	0.57051	27.43%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	504.1	7.8559	ug/L	0.95880	7.8559	ppb	0.95880	12.20%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.0	0.0249	ug/L	0.04766	0.0249	ppb	0.04766	191.03%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-177.8	-0.0554	ug/L	0.01705	-0.0554	ppb	0.01705	30.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	17.7	44.000	ug/L	5.1960	44.000	ppb	5.1960	11.81%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -8.0     -0.0605 ug/L       0.03078     -0.0605 ppb        0.03078  50.88%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -4.8     -0.0598 ug/L       0.13974     -0.0598 ppb        0.13974 233.51%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.0      0.1197 ug/L       0.02695      0.1197 ppb        0.02695  22.52%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                92.1      0.2277 ug/L       0.07381      0.2277 ppb        0.07381  32.42%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.2      7.5897 ug/L      28.92162      7.5897 ppb       28.92162 381.07%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          87.6      38.027 ug/L       36.2437      38.027 ppb        36.2437  95.31%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            -0.3     -21.559 ug/L       89.3317     -21.559 ppb        89.3317 414.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                31.4      0.0262 ug/L       0.00940      0.0262 ppb        0.00940  35.89%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -1.7     -0.0681 ug/L       0.40727     -0.0681 ppb        0.40727 597.93%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -9.9     -26.834 ug/L        9.3203     -26.834 ppb         9.3203  34.73%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 6.5      0.1049 ug/L       0.20368      0.1049 ppb        0.20368 194.15%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 13.1      4.5970 ug/L       3.25230      4.5970 ppb        3.25230  70.75%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                13.5      1.0170 ug/L       0.33087      1.0170 ppb        0.33087  32.53%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            1.0      0.8462 ug/L       4.11469      0.8462 ppb        4.11469 486.24%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                -1.4     -0.2739 ug/L       0.66961     -0.2739 ppb        0.66961 244.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -0.5     -0.1256 ug/L       1.09782     -0.1256 ppb        1.09782 873.95%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               295.0      6.0753 ug/L       0.66436      6.0753 ppb        0.66436  10.94%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -1.4     -0.1403 ug/L       0.63995     -0.1403 ppb        0.63995 456.09%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                14.8      0.2269 ug/L       0.10024      0.2269 ppb        0.10024  44.18%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -46.3     -0.0574 ug/L       0.07484     -0.0574 ppb        0.07484 130.49%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -0.1     -0.0207 ug/L       0.40044     -0.0207 ppb        0.40044 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -29.2     -0.7254 ug/L       0.47631     -0.7254 ppb        0.47631  65.66%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -34.4     -0.1990 ug/L       0.19822     -0.1990 ppb        0.19822  99.63%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                21.3      0.1180 ug/L       0.01386      0.1180 ppb        0.01386  11.75%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     250.4      11.038 ug/L        0.4304      11.038 ppb         0.4304   3.90%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 7/8/2009 13:50:46
Logged In Analyst: Optima3
Spectrometer Model: Optima 5300 DV, S/N 077C7090601
Plasma On Time: 00:00:00
Technique: ICP Continuous
Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\070809A.sif
Batch ID:
Results Data Set: 070809A
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:
Autosampler Location: 7
Date Collected: 7/8/2009 13:50:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5532.4	5532.4	99.4	%			13:52:39
1	Y RADIAL	4797.0	4797.0	99.61	%			13:52:39
1	Al 396.153Radial†	5229.0	5351.8	4849.9	ug/L	4849.9	ppb	13:52:39
1	Ca 317.933Radial†	1958.2	1952.7	4863.9	ug/L	4863.9	ppb	13:52:59
1	Fe 238.204 Radial†	138.6	139.1	4894.2	ug/L	4894.2	ppb	13:52:59
1	K 766.490 Radial†	13095.3	11698.9	5070.2	ug/L	5070.2	ppb	13:52:39
1	Mg 279.077 IEC†	62.6	62.8	4978.5	ug/L	4978.5	ppb	13:52:59
1	Na 589.592 Radial†	3365.0	3555.1	9612.7	ug/L	9612.7	ppb	13:52:39
1	Sr 421.552†	32629.9	32815.6	505.53	ug/L	505.53	ppb	13:52:39
1	Sc 361.383	1065706.7	1065706.7	100.45	%			13:53:58
1	Y 371.029	846819.9	846819.9	99.251	%			13:53:58
1	Ag 328.068†	126960.9	125747.6	500.80	ug/L	500.80	ppb	13:53:58
1	As 188.979†	2061.4	2089.0	493.53	ug/L	493.53	ppb	13:54:18
1	B 249.677†	31314.7	31554.4	489.90	ug/L	489.90	ppb	13:53:58
1	Ba 233.527†	98387.1	97917.5	496.83	ug/L	496.83	ppb	13:53:58
1	Be 313.107†	1590293.1	1590410.5	495.67	ug/L	495.67	ppb	13:53:58
1	Cd 226.502†	66680.2	66656.0	498.28	ug/L	498.28	ppb	13:53:58
1	Co 228.616†	38914.5	38828.7	483.86	ug/L	483.86	ppb	13:54:18
1	Cr 267.716†	58123.4	57888.9	493.74	ug/L	493.74	ppb	13:53:58
1	Cu 324.752†	211262.3	200114.7	494.02	ug/L	494.02	ppb	13:53:58
1	Mn 257.610†	631066.9	627383.2	496.35	ug/L	496.35	ppb	13:53:58
1	Mo 202.031†	12608.8	12520.0	501.47	ug/L	501.47	ppb	13:54:18
1	Ni 231.604†	30720.7	30433.4	487.47	ug/L	487.47	ppb	13:54:18
1	P 214.914†	7349.3	6979.1	2391.7	ug/L	2391.7	ppb	13:54:18
1	Pb 220.353†	6619.8	6619.0	497.53	ug/L	497.53	ppb	13:54:18
1	S 181.975 Axial†	1249.9	1176.4	994.81	ug/L	994.81	ppb	13:54:18
1	Sb 206.836†	2566.6	2509.6	499.57	ug/L	499.57	ppb	13:54:18
1	Se 196.026†	1498.0	1512.8	511.00	ug/L	511.00	ppb	13:54:18
1	Si 251.611†	122865.0	121748.7	2500.3	ug/L	2500.3	ppb	13:53:58
1	Sn 189.927†	4783.6	4756.4	495.16	ug/L	495.16	ppb	13:54:18
1	Ti 334.940†	381207.0	380590.6	498.15	ug/L	498.15	ppb	13:53:58
1	Tl 190.801†	2869.1	2917.5	494.08	ug/L	494.08	ppb	13:54:18
1	U 409.014†	15602.1	19366.2	478.96	ug/L	478.96	ppb	13:53:58
1	V 292.402†	85431.5	86697.6	497.70	ug/L	497.70	ppb	13:53:58
1	Zn 213.857†	90487.4	88955.4	492.21	ug/L	492.21	ppb	13:53:58
1	SiO2†	122908.9	121750.2	5353.7	ug/L	5353.7	ppb	13:55:18
2	Sc Radial	5478.6	5478.6	98.5	%			13:53:04
2	Y RADIAL	4737.8	4737.8	98.38	%			13:53:04
2	Al 396.153Radial†	5218.1	5392.4	4886.9	ug/L	4886.9	ppb	13:53:04
2	Ca 317.933Radial†	1985.5	1999.9	4981.3	ug/L	4981.3	ppb	13:53:24
2	Fe 238.204 Radial†	138.0	139.8	4919.3	ug/L	4919.3	ppb	13:53:24
2	K 766.490 Radial†	13047.9	11780.2	5105.5	ug/L	5105.5	ppb	13:53:04
2	Mg 279.077 IEC†	63.8	64.6	5122.0	ug/L	5122.0	ppb	13:53:24
2	Na 589.592 Radial†	3309.4	3531.9	9549.8	ug/L	9549.8	ppb	13:53:04
2	Sr 421.552†	32384.5	32888.7	506.66	ug/L	506.66	ppb	13:53:04
2	Sc 361.383	1063461.6	1063461.6	100.24	%			13:54:25
2	Y 371.029	846126.2	846126.2	99.169	%			13:54:25

2	Ag 328.068†	126811.5	125865.3	501.27 ug/L	501.27 ppb	13:54:25
2	As 188.979†	2058.4	2090.4	493.85 ug/L	493.85 ppb	13:54:45
2	B 249.677†	31323.3	31628.9	491.05 ug/L	491.05 ppb	13:54:25
2	Ba 233.527†	98085.9	97823.8	496.36 ug/L	496.36 ppb	13:54:25
2	Be 313.107†	1587952.8	1591418.1	495.99 ug/L	495.99 ppb	13:54:25
2	Cd 226.502†	66376.1	66492.8	497.06 ug/L	497.06 ppb	13:54:25
2	Co 228.616†	38816.9	38813.2	483.67 ug/L	483.67 ppb	13:54:45
2	Cr 267.716†	58135.0	58022.7	494.88 ug/L	494.88 ppb	13:54:25
2	Cu 324.752†	210177.7	199476.8	492.45 ug/L	492.45 ppb	13:54:25
2	Mn 257.610†	628370.5	626019.6	495.27 ug/L	495.27 ppb	13:54:25
2	Mo 202.031†	12579.9	12517.6	501.38 ug/L	501.38 ppb	13:54:45
2	Ni 231.604†	30677.7	30455.1	487.82 ug/L	487.82 ppb	13:54:45
2	P 214.914†	7338.8	6984.1	2393.7 ug/L	2393.7 ppb	13:54:45
2	Pb 220.353†	6619.2	6632.2	498.52 ug/L	498.52 ppb	13:54:45
2	S 181.975 Axial†	1248.9	1178.1	996.23 ug/L	996.23 ppb	13:54:45
2	Sb 206.836†	2544.9	2493.3	496.34 ug/L	496.34 ppb	13:54:45
2	Se 196.026†	1498.5	1516.5	512.27 ug/L	512.27 ppb	13:54:45
2	Si 251.611†	122326.0	121469.2	2494.5 ug/L	2494.5 ppb	13:54:25
2	Sn 189.927†	4769.0	4752.0	494.70 ug/L	494.70 ppb	13:54:45
2	Ti 334.940†	380132.8	380320.2	497.81 ug/L	497.81 ppb	13:54:25
2	Tl 190.801†	2870.3	2924.7	495.28 ug/L	495.28 ppb	13:54:45
2	U 409.014†	15658.2	19455.0	481.15 ug/L	481.15 ppb	13:54:25
2	V 292.402†	85307.7	86753.6	498.02 ug/L	498.02 ppb	13:54:25
2	Zn 213.857†	90245.0	88903.8	491.92 ug/L	491.92 ppb	13:54:25
2	SiO2†	123285.6	122384.3	5381.7 ug/L	5381.7 ppb	13:55:23
3	Sc Radial	5573.7	5573.7	100 %		13:53:29
3	Y RADIAL	4812.9	4812.9	99.94 %		13:53:29
3	Al 396.153Radial†	5255.8	5339.6	4838.8 ug/L	4838.8 ppb	13:53:29
3	Ca 317.933Radial†	1973.1	1953.0	4864.6 ug/L	4864.6 ppb	13:53:49
3	Fe 238.204 Radial†	139.2	138.6	4878.6 ug/L	4878.6 ppb	13:53:49
3	K 766.490 Radial†	13120.0	11626.0	5038.5 ug/L	5038.5 ppb	13:53:29
3	Mg 279.077 IEC†	64.1	63.8	5056.8 ug/L	5056.8 ppb	13:53:49
3	Na 589.592 Radial†	3353.7	3518.8	9514.4 ug/L	9514.4 ppb	13:53:29
3	Sr 421.552†	32719.5	32661.7	503.16 ug/L	503.16 ppb	13:53:29
3	Sc 361.383	1058179.3	1058179.3	99.745 %		13:54:53
3	Y 371.029	842497.6	842497.6	98.744 %		13:54:53
3	Ag 328.068†	126330.4	126014.5	501.86 ug/L	501.86 ppb	13:54:53
3	As 188.979†	2057.5	2099.7	496.03 ug/L	496.03 ppb	13:55:13
3	B 249.677†	31210.0	31671.2	491.71 ug/L	491.71 ppb	13:54:53
3	Ba 233.527†	97758.5	97984.0	497.17 ug/L	497.17 ppb	13:54:53
3	Be 313.107†	1583127.1	1594487.7	496.94 ug/L	496.94 ppb	13:54:53
3	Cd 226.502†	66127.5	66574.1	497.67 ug/L	497.67 ppb	13:54:53
3	Co 228.616†	38831.5	39021.1	486.27 ug/L	486.27 ppb	13:55:13
3	Cr 267.716†	57986.8	58163.5	496.08 ug/L	496.08 ppb	13:54:53
3	Cu 324.752†	209484.3	199828.2	493.31 ug/L	493.31 ppb	13:54:53
3	Mn 257.610†	626333.1	627106.1	496.12 ug/L	496.12 ppb	13:54:53
3	Mo 202.031†	12578.2	12578.6	503.82 ug/L	503.82 ppb	13:55:13
3	Ni 231.604†	30631.5	30561.5	489.52 ug/L	489.52 ppb	13:55:13
3	P 214.914†	7330.3	7012.1	2403.5 ug/L	2403.5 ppb	13:55:13
3	Pb 220.353†	6608.7	6654.6	500.21 ug/L	500.21 ppb	13:55:13
3	S 181.975 Axial†	1242.9	1178.2	996.34 ug/L	996.34 ppb	13:55:13
3	Sb 206.836†	2548.0	2509.1	499.55 ug/L	499.55 ppb	13:55:13
3	Se 196.026†	1496.7	1522.2	513.99 ug/L	513.99 ppb	13:55:13
3	Si 251.611†	122075.1	121826.8	2501.8 ug/L	2501.8 ppb	13:54:53
3	Sn 189.927†	4792.6	4799.3	499.62 ug/L	499.62 ppb	13:55:13
3	Ti 334.940†	378543.4	380619.7	498.19 ug/L	498.19 ppb	13:54:53
3	Tl 190.801†	2875.5	2944.2	498.57 ug/L	498.57 ppb	13:55:13
3	U 409.014†	15463.5	19337.7	478.25 ug/L	478.25 ppb	13:54:53
3	V 292.402†	84999.2	86869.1	498.70 ug/L	498.70 ppb	13:54:53
3	Zn 213.857†	89816.3	88923.4	492.02 ug/L	492.02 ppb	13:54:53
3	SiO2†	121842.0	121550.9	5344.7 ug/L	5344.7 ppb	13:55:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1062449.2	100.15	%	0.364				0.36%
Sc Radial	5528.3	99.3	%	0.86				0.86%
Y 371.029	845147.9	99.055	%	0.2721				0.27%
Y RADIAL	4782.6	99.31	%	0.822				0.83%
Ag 328.068†	125875.8	501.31	ug/L	0.529	501.31	ppb	0.529	0.11%

```
   QC value within limits for Ag 328.068  Recovery = 100.26%
Al 396.153Radial†       5361.3      4858.5 ug/L        25.19      4858.5 ppb        25.19   0.52%
   QC value within limits for Al 396.153Radial  Recovery = 97.17%
As 188.979†             2093.0      494.47 ug/L        1.360      494.47 ppb        1.360   0.27%
   QC value within limits for As 188.979  Recovery = 98.89%
B 249.677†             31618.2      490.89 ug/L        0.920      490.89 ppb        0.920   0.19%
   QC value within limits for B 249.677  Recovery = 98.18%
Ba 233.527†            97908.4      496.78 ug/L        0.408      496.78 ppb        0.408   0.08%
   QC value within limits for Ba 233.527  Recovery = 99.36%
Be 313.107†          1592105.4      496.20 ug/L        0.661      496.20 ppb        0.661   0.13%
   QC value within limits for Be 313.107  Recovery = 99.24%
Ca 317.933Radial†       1968.5      4903.3 ug/L        67.61      4903.3 ppb        67.61   1.38%
   QC value within limits for Ca 317.933Radial  Recovery = 98.07%
Cd 226.502†            66574.3      497.67 ug/L        0.612      497.67 ppb        0.612   0.12%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            38887.7      484.60 ug/L        1.446      484.60 ppb        1.446   0.30%
   QC value within limits for Co 228.616  Recovery = 96.92%
Cr 267.716†            58025.0      494.90 ug/L        1.170      494.90 ppb        1.170   0.24%
   QC value within limits for Cr 267.716  Recovery = 98.98%
Cu 324.752†           199806.6      493.26 ug/L        0.788      493.26 ppb        0.788   0.16%
   QC value within limits for Cu 324.752  Recovery = 98.65%
Fe 238.204 Radial†       139.2      4897.4 ug/L        20.54      4897.4 ppb        20.54   0.42%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.95%
K 766.490 Radial†      11701.7      5071.4 ug/L        33.47      5071.4 ppb        33.47   0.66%
   QC value within limits for K 766.490 Radial  Recovery = 101.43%
Mg 279.077 IEC†           63.7      5052.4 ug/L        71.88      5052.4 ppb        71.88   1.42%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.05%
Mn 257.610†           626836.3      495.91 ug/L        0.569      495.91 ppb        0.569   0.11%
   QC value within limits for Mn 257.610  Recovery = 99.18%
Mo 202.031†            12538.7      502.23 ug/L        1.381      502.23 ppb        1.381   0.27%
   QC value within limits for Mo 202.031  Recovery = 100.45%
Na 589.592 Radial†      3535.3      9559.0 ug/L        49.77      9559.0 ppb        49.77   0.52%
   QC value within limits for Na 589.592 Radial  Recovery = 95.59%
Ni 231.604†            30483.3      488.27 ug/L        1.098      488.27 ppb        1.098   0.22%
   QC value within limits for Ni 231.604  Recovery = 97.65%
P 214.914†              6991.7      2396.3 ug/L         6.34      2396.3 ppb         6.34   0.26%
   QC value within limits for P 214.914  Recovery = 95.85%
Pb 220.353†             6635.3      498.75 ug/L        1.354      498.75 ppb        1.354   0.27%
   QC value within limits for Pb 220.353  Recovery = 99.75%
S 181.975 Axial†        1177.6      995.80 ug/L        0.853      995.80 ppb        0.853   0.09%
   QC value within limits for S 181.975 Axial  Recovery = 99.58%
Sb 206.836†             2504.0      498.48 ug/L        1.857      498.48 ppb        1.857   0.37%
   QC value within limits for Sb 206.836  Recovery = 99.70%
Se 196.026†             1517.2      512.42 ug/L        1.501      512.42 ppb        1.501   0.29%
   QC value within limits for Se 196.026  Recovery = 102.48%
Si 251.611†           121681.6      2498.9 ug/L         3.87      2498.9 ppb         3.87   0.15%
   QC value within limits for Si 251.611  Recovery = 99.96%
Sn 189.927†             4769.3      496.49 ug/L        2.717      496.49 ppb        2.717   0.55%
   QC value within limits for Sn 189.927  Recovery = 99.30%
Sr 421.552†            32788.7      505.12 ug/L        1.785      505.12 ppb        1.785   0.35%
   QC value within limits for Sr 421.552  Recovery = 101.02%
Ti 334.940†           380510.2      498.05 ug/L        0.212      498.05 ppb        0.212   0.04%
   QC value within limits for Ti 334.940  Recovery = 99.61%
Tl 190.801†             2928.8      495.98 ug/L        2.322      495.98 ppb        2.322   0.47%
   QC value within limits for Tl 190.801  Recovery = 99.20%
U 409.014†             19386.3      479.45 ug/L        1.515      479.45 ppb        1.515   0.32%
   QC value within limits for U 409.014  Recovery = 95.89%
V 292.402†             86773.4      498.14 ug/L        0.513      498.14 ppb        0.513   0.10%
   QC value within limits for V 292.402  Recovery = 99.63%
Zn 213.857†            88927.5      492.05 ug/L        0.150      492.05 ppb        0.150   0.03%
   QC value within limits for Zn 213.857  Recovery = 98.41%
SiO2†                 121895.1      5360.0 ug/L        19.26      5360.0 ppb        19.26   0.36%
   QC value within limits for SiO2  Recovery = 100.23%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 13:57:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5512.4	5512.4	99.1	%			13:59:32
1	Y RADIAL	4836.2	4836.2	100.4	%			13:59:32
1	Al 396.153Radial†	-55.4	36.2	32.965	ug/L	32.965	ppb	13:59:32
1	Ca 317.933Radial†	28.9	12.2	30.392	ug/L	30.392	ppb	13:59:52
1	Fe 238.204 Radial†	1.4	1.1	39.203	ug/L	39.203	ppb	13:59:52
1	K 766.490 Radial†	1556.0	97.7	42.443	ug/L	42.443	ppb	13:59:32
1	Mg 279.077 IEC†	-0.5	-0.7	-54.448	ug/L	-54.448	ppb	13:59:52
1	Na 589.592 Radial†	-170.4	-1.6	-4.3331	ug/L	-4.3331	ppb	13:59:52
1	Sr 421.552†	27.5	22.3	0.3431	ug/L	0.3431	ppb	13:59:52
1	Sc 361.383	1045095.6	1045095.6	98.512	%			14:00:48
1	Y 371.029	840297.9	840297.9	98.486	%			14:00:48
1	Ag 328.068†	669.1	40.6	0.1714	ug/L	0.1714	ppb	14:00:53
1	As 188.979†	-47.0	-10.8	-2.5308	ug/L	-2.5308	ppb	14:01:14
1	B 249.677†	41.0	423.1	6.5884	ug/L	6.5884	ppb	14:00:53
1	Ba 233.527†	26.8	2.9	0.0152	ug/L	0.0152	ppb	14:01:14
1	Be 313.107†	-7456.8	-253.3	-0.0788	ug/L	-0.0788	ppb	14:00:53
1	Cd 226.502†	-287.1	-13.8	-0.1077	ug/L	-0.1077	ppb	14:01:14
1	Co 228.616†	-82.7	6.5	0.0810	ug/L	0.0810	ppb	14:01:14
1	Cr 267.716†	-22.8	5.4	0.0463	ug/L	0.0463	ppb	14:01:14
1	Cu 324.752†	10117.6	79.2	0.1976	ug/L	0.1976	ppb	14:00:53
1	Mn 257.610†	832.3	17.8	0.0203	ug/L	0.0203	ppb	14:01:14
1	Mo 202.031†	36.8	5.6	0.2251	ug/L	0.2251	ppb	14:01:14
1	Ni 231.604†	175.4	29.8	0.4780	ug/L	0.4780	ppb	14:01:14
1	P 214.914†	347.7	16.0	5.6120	ug/L	5.6120	ppb	14:01:14
1	Pb 220.353†	-10.0	18.9	1.4202	ug/L	1.4202	ppb	14:01:14
1	S 181.975 Axial†	68.0	1.2	0.9994	ug/L	0.9994	ppb	14:01:14
1	Sb 206.836†	66.3	21.9	4.3017	ug/L	4.3017	ppb	14:01:14
1	Se 196.026†	-16.7	4.6	1.6497	ug/L	1.6497	ppb	14:01:14
1	Si 251.611†	727.7	178.6	3.6667	ug/L	3.6667	ppb	14:01:14
1	Sn 189.927†	7.0	1.6	0.1723	ug/L	0.1723	ppb	14:01:14
1	Ti 334.940†	-1108.8	-16.3	-0.0199	ug/L	-0.0199	ppb	14:00:53
1	Tl 190.801†	-63.4	-2.9	-0.4929	ug/L	-0.4929	ppb	14:01:14
1	U 409.014†	-3726.3	52.2	1.2899	ug/L	1.2899	ppb	14:00:48
1	V 292.402†	-1652.5	-24.6	-0.1406	ug/L	-0.1406	ppb	14:00:53
1	Zn 213.857†	1130.3	25.0	0.1340	ug/L	0.1340	ppb	14:01:14
1	SiO2†	726.7	135.3	5.9362	ug/L	5.9362	ppb	14:02:19
2	Sc Radial	5511.5	5511.5	99.0	%			13:59:57
2	Y RADIAL	4786.2	4786.2	99.39	%			13:59:57
2	Al 396.153Radial†	-72.0	19.5	17.796	ug/L	17.796	ppb	13:59:57
2	Ca 317.933Radial†	29.7	13.1	32.554	ug/L	32.554	ppb	14:00:17
2	Fe 238.204 Radial†	-0.3	-0.7	-23.581	ug/L	-23.581	ppb	14:00:17
2	K 766.490 Radial†	1595.9	138.3	59.989	ug/L	59.989	ppb	13:59:57
2	Mg 279.077 IEC†	-0.0	-0.2	-16.582	ug/L	-16.582	ppb	14:00:17
2	Na 589.592 Radial†	-181.5	-12.8	-34.604	ug/L	-34.604	ppb	14:00:17
2	Sr 421.552†	12.3	7.0	0.1070	ug/L	0.1070	ppb	14:00:17
2	Sc 361.383	1050518.5	1050518.5	99.023	%			14:01:19
2	Y 371.029	845673.2	845673.2	99.116	%			14:01:19
2	Ag 328.068†	645.1	12.9	0.0438	ug/L	0.0438	ppb	14:01:24
2	As 188.979†	-49.5	-13.1	-3.0770	ug/L	-3.0770	ppb	14:01:44
2	B 249.677†	118.8	501.5	7.8188	ug/L	7.8188	ppb	14:01:24
2	Ba 233.527†	40.4	16.5	0.0832	ug/L	0.0832	ppb	14:01:44
2	Be 313.107†	-7364.0	-120.4	-0.0373	ug/L	-0.0373	ppb	14:01:24
2	Cd 226.502†	-300.7	-26.0	-0.1917	ug/L	-0.1917	ppb	14:01:44
2	Co 228.616†	-75.1	14.6	0.1807	ug/L	0.1807	ppb	14:01:44
2	Cr 267.716†	-8.5	20.0	0.1703	ug/L	0.1703	ppb	14:01:44
2	Cu 324.752†	10243.6	153.4	0.3772	ug/L	0.3772	ppb	14:01:24
2	Mn 257.610†	843.7	25.0	0.0170	ug/L	0.0170	ppb	14:01:44
2	Mo 202.031†	21.8	-9.8	-0.3926	ug/L	-0.3926	ppb	14:01:44
2	Ni 231.604†	171.6	25.1	0.4014	ug/L	0.4014	ppb	14:01:44

2	P 214.914†	348.3	14.8	5.2050	ug/L	5.2050 ppb	14:01:44
2	Pb 220.353†	-12.7	16.3	1.2244	ug/L	1.2244 ppb	14:01:44
2	S 181.975 Axial†	60.3	-6.9	-5.8538	ug/L	-5.8538 ppb	14:01:44
2	Sb 206.836†	37.3	-7.8	-1.5329	ug/L	-1.5329 ppb	14:01:44
2	Se 196.026†	-18.7	2.7	0.8056	ug/L	0.8056 ppb	14:01:44
2	Si 251.611†	723.3	170.4	3.5003	ug/L	3.5003 ppb	14:01:44
2	Sn 189.927†	11.3	6.0	0.6230	ug/L	0.6230 ppb	14:01:44
2	Ti 334.940†	-1056.9	41.9	0.0571	ug/L	0.0571 ppb	14:01:24
2	Tl 190.801†	-56.2	4.7	0.7874	ug/L	0.7874 ppb	14:01:44
2	U 409.014†	-3810.6	-13.5	-0.3320	ug/L	-0.3320 ppb	14:01:19
2	V 292.402†	-1611.2	25.7	0.1429	ug/L	0.1429 ppb	14:01:24
2	Zn 213.857†	1136.7	25.5	0.1424	ug/L	0.1424 ppb	14:01:44
2	SiO2†	739.3	144.2	6.3394	ug/L	6.3394 ppb	14:02:24
3	Sc Radial	5518.7	5518.7	99.2	%		14:00:22
3	Y RADIAL	4792.7	4792.7	99.52	%		14:00:22
3	Al 396.153Radial†	-86.9	4.6	4.1447	ug/L	4.1447 ppb	14:00:22
3	Ca 317.933Radial†	25.9	9.2	22.974	ug/L	22.974 ppb	14:00:42
3	Fe 238.204 Radial†	-0.1	-0.4	-15.497	ug/L	-15.497 ppb	14:00:42
3	K 766.490 Radial†	1555.4	95.3	41.343	ug/L	41.343 ppb	14:00:22
3	Mg 279.077 IEC†	-0.0	-0.2	-17.227	ug/L	-17.227 ppb	14:00:42
3	Na 589.592 Radial†	-174.6	-5.6	-15.194	ug/L	-15.194 ppb	14:00:42
3	Sr 421.552†	23.6	18.4	0.2827	ug/L	0.2827 ppb	14:00:42
3	Sc 361.383	1057245.8	1057245.8	99.657	%		14:01:49
3	Y 371.029	850037.2	850037.2	99.628	%		14:01:49
3	Ag 328.068†	694.9	58.7	0.2256	ug/L	0.2256 ppb	14:01:54
3	As 188.979†	-47.5	-10.8	-2.5338	ug/L	-2.5338 ppb	14:02:14
3	B 249.677†	68.0	449.8	7.0124	ug/L	7.0124 ppb	14:01:54
3	Ba 233.527†	35.7	11.5	0.0574	ug/L	0.0574 ppb	14:02:14
3	Be 313.107†	-7483.5	-193.0	-0.0600	ug/L	-0.0600 ppb	14:01:54
3	Cd 226.502†	-289.4	-12.7	-0.0931	ug/L	-0.0931 ppb	14:02:14
3	Co 228.616†	-98.9	-8.8	-0.1094	ug/L	-0.1094 ppb	14:02:14
3	Cr 267.716†	5.9	34.5	0.2927	ug/L	0.2927 ppb	14:02:14
3	Cu 324.752†	10251.7	95.7	0.2352	ug/L	0.2352 ppb	14:01:54
3	Mn 257.610†	869.3	45.2	0.0341	ug/L	0.0341 ppb	14:02:14
3	Mo 202.031†	34.7	3.0	0.1197	ug/L	0.1197 ppb	14:02:14
3	Ni 231.604†	157.2	9.4	0.1515	ug/L	0.1515 ppb	14:02:14
3	P 214.914†	335.6	-0.2	-0.0906	ug/L	-0.0906 ppb	14:02:14
3	Pb 220.353†	2.8	31.9	2.3909	ug/L	2.3909 ppb	14:02:14
3	S 181.975 Axial†	65.8	-1.8	-1.5179	ug/L	-1.5179 ppb	14:02:14
3	Sb 206.836†	43.4	-1.9	-0.3829	ug/L	-0.3829 ppb	14:02:14
3	Se 196.026†	-16.8	4.8	1.5002	ug/L	1.5002 ppb	14:02:14
3	Si 251.611†	726.0	168.4	3.4599	ug/L	3.4599 ppb	14:02:14
3	Sn 189.927†	2.6	-2.9	-0.3010	ug/L	-0.3010 ppb	14:02:14
3	Ti 334.940†	-1099.9	5.6	0.0087	ug/L	0.0087 ppb	14:01:54
3	Tl 190.801†	-56.6	4.6	0.7834	ug/L	0.7834 ppb	14:02:14
3	U 409.014†	-3812.4	9.3	0.2316	ug/L	0.2316 ppb	14:01:49
3	V 292.402†	-1702.0	-55.1	-0.3086	ug/L	-0.3086 ppb	14:01:54
3	Zn 213.857†	1134.7	16.2	0.0914	ug/L	0.0914 ppb	14:02:14
3	SiO2†	754.5	154.7	6.8042	ug/L	6.8042 ppb	14:02:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1050953.3	99.064	%	0.5737				0.58%
Sc Radial	5514.2	99.1	%	0.07				0.07%
Y 371.029	845336.1	99.077	%	0.5718				0.58%
Y RADIAL	4805.0	99.78	%	0.565				0.57%
Ag 328.068†	37.4	0.1469	ug/L	0.09332	0.1469	ppb	0.09332	63.51%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	20.1	18.302	ug/L	14.4166	18.302	ppb	14.4166	78.77%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.5	-2.7138	ug/L	0.31447	-2.7138	ppb	0.31447	11.59%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	458.1	7.1399	ug/L	0.62502	7.1399	ppb	0.62502	8.75%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.3	0.0519	ug/L	0.03434	0.0519	ppb	0.03434	66.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-188.9	-0.0587	ug/L	0.02078	-0.0587	ppb	0.02078	35.39%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.5	28.640	ug/L	5.0242	28.640	ppb	5.0242	17.54%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -17.5     -0.1308 ug/L       0.05322     -0.1308 ppb        0.05322  40.67%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                4.1      0.0508 ug/L       0.14740      0.0508 ppb        0.14740 290.21%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               20.0      0.1698 ug/L       0.12323      0.1698 ppb        0.12323  72.58%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              109.4      0.2700 ug/L       0.09473      0.2700 ppb        0.09473  35.09%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.0      0.0417 ug/L      34.15450      0.0417 ppb       34.15450 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        110.4     47.925 ug/L       10.4622     47.925 ppb        10.4622  21.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           -0.4    -29.419 ug/L       21.6782    -29.419 ppb        21.6782  73.69%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               29.4      0.0238 ug/L       0.00904      0.0238 ppb        0.00904  38.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               -0.4     -0.0160 ug/L       0.33043     -0.0160 ppb        0.33043 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -6.7    -18.043 ug/L       15.3353    -18.043 ppb        15.3353  84.99%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               21.4      0.3436 ug/L       0.17075      0.3436 ppb        0.17075  49.69%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                10.2      3.5755 ug/L       3.18145      3.5755 ppb        3.18145  88.98%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               22.3      1.6785 ug/L       0.62466      1.6785 ppb        0.62466  37.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -2.5     -2.1241 ug/L       3.46659     -2.1241 ppb        3.46659 163.20%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                4.1      0.7953 ug/L       3.09058      0.7953 ppb        3.09058 388.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                4.1      1.3185 ug/L       0.45042      1.3185 ppb        0.45042  34.16%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              172.4      3.5423 ug/L       0.10965      3.5423 ppb        0.10965   3.10%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.6      0.1647 ug/L       0.46206      0.1647 ppb        0.46206 280.47%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               15.9      0.2443 ug/L       0.12268      0.2443 ppb        0.12268  50.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               10.4      0.0153 ug/L       0.03894      0.0153 ppb        0.03894 254.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                2.1      0.3593 ug/L       0.73803      0.3593 ppb        0.73803 205.41%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                16.0      0.3965 ug/L       0.82342      0.3965 ppb        0.82342 207.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -18.0     -0.1021 ug/L       0.22820     -0.1021 ppb        0.22820 223.47%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               22.2      0.1226 ug/L       0.02735      0.1226 ppb        0.02735  22.32%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    144.8      6.3599 ug/L       0.43437      6.3599 ppb        0.43437   6.83%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 7/8/2009 14:46:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5663.2	5663.2	102	%			14:48:38
1	Y RADIAL	4921.9	4921.9	102.2	%			14:48:38
1	Al 396.153Radial†	5410.9	5409.1	4902.2	ug/L	4902.2	ppb	14:48:38
1	Ca 317.933Radial†	1995.4	1943.8	4841.7	ug/L	4841.7	ppb	14:48:58
1	Fe 238.204 Radial†	141.6	138.8	4883.9	ug/L	4883.9	ppb	14:48:58
1	K 766.490 Radial†	13474.7	11767.5	5099.6	ug/L	5099.6	ppb	14:48:38
1	Mg 279.077 IEC†	63.7	62.4	4947.6	ug/L	4947.6	ppb	14:48:58
1	Na 589.592 Radial†	3686.9	3793.3	10257	ug/L	10257	ppb	14:48:38
1	Sr 421.552†	35305.4	34686.6	534.36	ug/L	534.36	ppb	14:48:38
1	Sc 361.383	1067499.7	1067499.7	100.62	%			14:49:57
1	Y 371.029	849118.5	849118.5	99.520	%			14:49:57
1	Ag 328.068†	127285.3	125857.7	501.23	ug/L	501.23	ppb	14:49:57
1	As 188.979†	2071.6	2095.7	495.11	ug/L	495.11	ppb	14:50:17
1	B 249.677†	31156.7	31345.1	486.64	ug/L	486.64	ppb	14:49:57
1	Ba 233.527†	98393.7	97759.6	496.03	ug/L	496.03	ppb	14:49:57
1	Be 313.107†	1596893.7	1594311.3	496.89	ug/L	496.89	ppb	14:49:57
1	Cd 226.502†	66558.7	66423.8	496.55	ug/L	496.55	ppb	14:49:57
1	Co 228.616†	38907.9	38757.1	482.97	ug/L	482.97	ppb	14:50:17
1	Cr 267.716†	58242.4	57910.0	493.92	ug/L	493.92	ppb	14:49:57
1	Cu 324.752†	211606.8	200103.9	493.99	ug/L	493.99	ppb	14:49:57
1	Mn 257.610†	631676.1	626933.6	495.99	ug/L	495.99	ppb	14:49:57
1	Mo 202.031†	12587.0	12477.2	499.76	ug/L	499.76	ppb	14:50:17
1	Ni 231.604†	30647.6	30309.4	485.48	ug/L	485.48	ppb	14:50:17
1	P 214.914†	7375.2	6992.6	2396.5	ug/L	2396.5	ppb	14:50:17
1	Pb 220.353†	6646.8	6634.7	498.71	ug/L	498.71	ppb	14:50:17
1	S 181.975 Axial†	1245.2	1169.7	989.10	ug/L	989.10	ppb	14:50:17
1	Sb 206.836†	2573.9	2512.6	500.11	ug/L	500.11	ppb	14:50:17
1	Se 196.026†	1503.7	1516.0	511.99	ug/L	511.99	ppb	14:50:17
1	Si 251.611†	123652.9	122326.3	2512.2	ug/L	2512.2	ppb	14:49:57
1	Sn 189.927†	4790.4	4755.2	495.03	ug/L	495.03	ppb	14:50:17
1	Ti 334.940†	382199.7	380939.8	498.61	ug/L	498.61	ppb	14:49:57
1	Tl 190.801†	2862.4	2906.0	492.14	ug/L	492.14	ppb	14:50:17
1	U 409.014†	15590.1	19328.2	478.01	ug/L	478.01	ppb	14:49:57
1	V 292.402†	85513.5	86636.2	497.33	ug/L	497.33	ppb	14:49:57
1	Zn 213.857†	90612.3	88928.3	492.08	ug/L	492.08	ppb	14:49:57
1	SiO2†	124200.5	122828.2	5401.3	ug/L	5401.3	ppb	14:51:17
2	Sc Radial	5446.9	5446.9	97.9	%			14:49:03
2	Y RADIAL	4712.8	4712.8	97.86	%			14:49:03
2	Al 396.153Radial†	5213.9	5419.0	4910.9	ug/L	4910.9	ppb	14:49:03
2	Ca 317.933Radial†	1989.6	2015.7	5020.8	ug/L	5020.8	ppb	14:49:23
2	Fe 238.204 Radial†	140.2	142.9	5030.3	ug/L	5030.3	ppb	14:49:23
2	K 766.490 Radial†	13037.0	11846.3	5133.9	ug/L	5133.9	ppb	14:49:03
2	Mg 279.077 IEC†	62.1	63.2	5014.8	ug/L	5014.8	ppb	14:49:23
2	Na 589.592 Radial†	3542.3	3789.5	10246	ug/L	10246	ppb	14:49:03
2	Sr 421.552†	33787.9	34514.2	531.70	ug/L	531.70	ppb	14:49:03
2	Sc 361.383	1055183.8	1055183.8	99.463	%			14:50:24
2	Y 371.029	838651.5	838651.5	98.293	%			14:50:24
2	Ag 328.068†	126214.7	126257.7	502.87	ug/L	502.87	ppb	14:50:24
2	As 188.979†	2075.2	2123.3	501.61	ug/L	501.61	ppb	14:50:44
2	B 249.677†	30917.9	31466.4	488.49	ug/L	488.49	ppb	14:50:24
2	Ba 233.527†	97565.5	98068.1	497.60	ug/L	497.60	ppb	14:50:24
2	Be 313.107†	1577953.1	1593791.5	496.73	ug/L	496.73	ppb	14:50:24
2	Cd 226.502†	66051.4	66685.8	498.49	ug/L	498.49	ppb	14:50:24
2	Co 228.616†	39043.3	39344.5	490.30	ug/L	490.30	ppb	14:50:44
2	Cr 267.716†	57589.2	57928.8	494.08	ug/L	494.08	ppb	14:50:24
2	Cu 324.752†	209513.9	200454.2	494.86	ug/L	494.86	ppb	14:50:24
2	Mn 257.610†	625453.1	628004.0	496.86	ug/L	496.86	ppb	14:50:24
2	Mo 202.031†	12625.4	12661.8	507.16	ug/L	507.16	ppb	14:50:44
2	Ni 231.604†	30744.2	30762.0	492.73	ug/L	492.73	ppb	14:50:44

2	P 214.914†	7400.3	7103.3	2435.4	ug/L	2435.4 ppb	14:50:44
2	Pb 220.353†	6622.3	6687.2	502.65	ug/L	502.65 ppb	14:50:44
2	S 181.975 Axial†	1258.3	1197.3	1012.5	ug/L	1012.5 ppb	14:50:44
2	Sb 206.836†	2580.0	2548.5	507.42	ug/L	507.42 ppb	14:50:44
2	Se 196.026†	1502.6	1532.3	517.83	ug/L	517.83 ppb	14:50:44
2	Si 251.611†	122528.7	122630.3	2518.3	ug/L	2518.3 ppb	14:50:24
2	Sn 189.927†	4790.5	4810.9	500.83	ug/L	500.83 ppb	14:50:44
2	Ti 334.940†	378341.9	381494.5	499.35	ug/L	499.35 ppb	14:50:24
2	Tl 190.801†	2870.9	2947.8	499.17	ug/L	499.17 ppb	14:50:44
2	U 409.014†	15257.4	19174.6	474.18	ug/L	474.18 ppb	14:50:24
2	V 292.402†	84668.4	86778.5	498.20	ug/L	498.20 ppb	14:50:24
2	Zn 213.857†	89929.9	89293.2	494.05	ug/L	494.05 ppb	14:50:24
2	SiO2†	124500.2	124570.2	5478.0	ug/L	5478.0 ppb	14:51:22
3	Sc Radial	5449.0	5449.0	97.9	%		14:49:28
3	Y RADIAL	4751.1	4751.1	98.66	%		14:49:28
3	Al 396.153Radial†	5174.8	5377.0	4872.7	ug/L	4872.7 ppb	14:49:28
3	Ca 317.933Radial†	2014.0	2039.9	5081.0	ug/L	5081.0 ppb	14:49:48
3	Fe 238.204 Radial†	143.3	146.0	5137.0	ug/L	5137.0 ppb	14:49:48
3	K 766.490 Radial†	13008.8	11812.4	5119.3	ug/L	5119.3 ppb	14:49:28
3	Mg 279.077 IEC†	65.2	66.4	5266.1	ug/L	5266.1 ppb	14:49:48
3	Na 589.592 Radial†	3500.5	3745.4	10127	ug/L	10127 ppb	14:49:28
3	Sr 421.552†	33740.1	34452.0	530.74	ug/L	530.74 ppb	14:49:28
3	Sc 361.383	1058649.0	1058649.0	99.789	%		14:50:52
3	Y 371.029	841526.8	841526.8	98.630	%		14:50:52
3	Ag 328.068†	126556.5	126184.9	502.61	ug/L	502.61 ppb	14:50:52
3	As 188.979†	2067.1	2108.3	498.11	ug/L	498.11 ppb	14:51:12
3	B 249.677†	31071.1	31518.1	489.29	ug/L	489.29 ppb	14:50:52
3	Ba 233.527†	97563.9	97745.5	495.96	ug/L	495.96 ppb	14:50:52
3	Be 313.107†	1581052.4	1591704.4	496.08	ug/L	496.08 ppb	14:50:52
3	Cd 226.502†	66155.8	66573.0	497.64	ug/L	497.64 ppb	14:50:52
3	Co 228.616†	38962.9	39135.5	487.69	ug/L	487.69 ppb	14:51:12
3	Cr 267.716†	57794.8	57945.3	494.22	ug/L	494.22 ppb	14:50:52
3	Cu 324.752†	210072.8	200324.8	494.55	ug/L	494.55 ppb	14:50:52
3	Mn 257.610†	626128.3	626622.3	495.77	ug/L	495.77 ppb	14:50:52
3	Mo 202.031†	12621.3	12616.2	505.34	ug/L	505.34 ppb	14:51:12
3	Ni 231.604†	30683.7	30600.2	490.14	ug/L	490.14 ppb	14:51:12
3	P 214.914†	7387.7	7066.4	2422.3	ug/L	2422.3 ppb	14:51:12
3	Pb 220.353†	6644.7	6687.8	502.68	ug/L	502.68 ppb	14:51:12
3	S 181.975 Axial†	1254.7	1189.5	1005.9	ug/L	1005.9 ppb	14:51:12
3	Sb 206.836†	2576.1	2536.1	504.89	ug/L	504.89 ppb	14:51:12
3	Se 196.026†	1509.7	1534.5	518.90	ug/L	518.90 ppb	14:51:12
3	Si 251.611†	122635.6	122334.2	2512.3	ug/L	2512.3 ppb	14:50:52
3	Sn 189.927†	4780.2	4784.8	498.13	ug/L	498.13 ppb	14:51:12
3	Ti 334.940†	379019.7	380928.6	498.61	ug/L	498.61 ppb	14:50:52
3	Tl 190.801†	2889.3	2956.8	500.68	ug/L	500.68 ppb	14:51:12
3	U 409.014†	15553.0	19420.5	480.27	ug/L	480.27 ppb	14:50:52
3	V 292.402†	84924.5	86756.4	498.05	ug/L	498.05 ppb	14:50:52
3	Zn 213.857†	89838.3	88905.4	491.88	ug/L	491.88 ppb	14:50:52
3	SiO2†	123331.7	122989.5	5408.2	ug/L	5408.2 ppb	14:51:27

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1060444.2	99.959	%	0.5987				0.60%
Sc Radial	5519.7	99.2	%	2.23				2.25%
Y 371.029	843098.9	98.814	%	0.6338				0.64%
Y RADIAL	4795.3	99.58	%	2.312				2.32%
Ag 328.068†	126100.1	502.23	ug/L	0.878	502.23	ppb	0.878	0.17%
QC value within limits for Ag 328.068 Recovery = 100.45%								
Al 396.153Radial†	5401.7	4895.3	ug/L	19.99	4895.3	ppb	19.99	0.41%
QC value within limits for Al 396.153Radial Recovery = 97.91%								
As 188.979†	2109.1	498.28	ug/L	3.254	498.28	ppb	3.254	0.65%
QC value within limits for As 188.979 Recovery = 99.66%								
B 249.677†	31443.2	488.14	ug/L	1.360	488.14	ppb	1.360	0.28%
QC value within limits for B 249.677 Recovery = 97.63%								
Ba 233.527†	97857.7	496.53	ug/L	0.924	496.53	ppb	0.924	0.19%
QC value within limits for Ba 233.527 Recovery = 99.31%								
Be 313.107†	1593269.0	496.56	ug/L	0.429	496.56	ppb	0.429	0.09%
QC value within limits for Be 313.107 Recovery = 99.31%								
Ca 317.933Radial†	1999.8	4981.2	ug/L	124.51	4981.2	ppb	124.51	2.50%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.62%
Cd 226.502†            66560.8      497.56 ug/L        0.976      497.56 ppb        0.976   0.20%
   QC value within limits for Cd 226.502  Recovery = 99.51%
Co 228.616†            39079.1      486.99 ug/L        3.717      486.99 ppb        3.717   0.76%
   QC value within limits for Co 228.616  Recovery = 97.40%
Cr 267.716†            57928.0      494.08 ug/L        0.153      494.08 ppb        0.153   0.03%
   QC value within limits for Cr 267.716  Recovery = 98.82%
Cu 324.752†           200294.3      494.47 ug/L        0.442      494.47 ppb        0.442   0.09%
   QC value within limits for Cu 324.752  Recovery = 98.89%
Fe 238.204 Radial†       142.6      5017.1 ug/L      127.10      5017.1 ppb      127.10   2.53%
   QC value within limits for Fe 238.204 Radial  Recovery = 100.34%
K 766.490 Radial†      11808.7      5117.6 ug/L       17.20      5117.6 ppb       17.20   0.34%
   QC value within limits for K 766.490 Radial  Recovery = 102.35%
Mg 279.077 IEC†           64.0      5076.2 ug/L      167.87      5076.2 ppb      167.87   3.31%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.52%
Mn 257.610†           627186.6      496.21 ug/L        0.573      496.21 ppb        0.573   0.12%
   QC value within limits for Mn 257.610  Recovery = 99.24%
Mo 202.031†            12585.1      504.09 ug/L        3.856      504.09 ppb        3.856   0.76%
   QC value within limits for Mo 202.031  Recovery = 100.82%
Na 589.592 Radial†      3776.0       10210 ug/L         71.9       10210 ppb         71.9   0.70%
   QC value within limits for Na 589.592 Radial  Recovery = 102.10%
Ni 231.604†            30557.2      489.45 ug/L        3.673      489.45 ppb        3.673   0.75%
   QC value within limits for Ni 231.604  Recovery = 97.89%
P 214.914†              7054.1      2418.1 ug/L       19.82      2418.1 ppb       19.82   0.82%
   QC value within limits for P 214.914  Recovery = 96.72%
Pb 220.353†             6669.9      501.35 ug/L        2.283      501.35 ppb        2.283   0.46%
   QC value within limits for Pb 220.353  Recovery = 100.27%
S 181.975 Axial†        1185.5      1002.5 ug/L       12.05      1002.5 ppb       12.05   1.20%
   QC value within limits for S 181.975 Axial  Recovery = 100.25%
Sb 206.836†             2532.4      504.14 ug/L        3.715      504.14 ppb        3.715   0.74%
   QC value within limits for Sb 206.836  Recovery = 100.83%
Se 196.026†             1527.6      516.24 ug/L        3.717      516.24 ppb        3.717   0.72%
   QC value within limits for Se 196.026  Recovery = 103.25%
Si 251.611†           122430.3      2514.3 ug/L         3.52      2514.3 ppb         3.52   0.14%
   QC value within limits for Si 251.611  Recovery = 100.57%
Sn 189.927†             4783.6      498.00 ug/L        2.905      498.00 ppb        2.905   0.58%
   QC value within limits for Sn 189.927  Recovery = 99.60%
Sr 421.552†            34550.9      532.27 ug/L        1.873      532.27 ppb        1.873   0.35%
   QC value within limits for Sr 421.552  Recovery = 106.45%
Ti 334.940†           381121.0      498.86 ug/L        0.427      498.86 ppb        0.427   0.09%
   QC value within limits for Ti 334.940  Recovery = 99.77%
Tl 190.801†             2936.9      497.33 ug/L        4.557      497.33 ppb        4.557   0.92%
   QC value within limits for Tl 190.801  Recovery = 99.47%
U 409.014†             19307.8      477.49 ug/L        3.078      477.49 ppb        3.078   0.64%
   QC value within limits for U 409.014  Recovery = 95.50%
V 292.402†             86723.7      497.86 ug/L        0.468      497.86 ppb        0.468   0.09%
   QC value within limits for V 292.402  Recovery = 99.57%
Zn 213.857†            89042.3      492.67 ug/L        1.200      492.67 ppb        1.200   0.24%
   QC value within limits for Zn 213.857  Recovery = 98.53%
SiO2†                 123462.7      5429.2 ug/L       42.40      5429.2 ppb       42.40   0.78%
   QC value within limits for SiO2  Recovery = 101.53%
All analyte(s) passed QC.
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Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 7/8/2009 14:53:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5472.3	5472.3	98.3	%			14:55:30
1	Y RADIAL	4760.3	4760.3	98.85	%			14:55:30
1	Al 396.153Radial†	-81.1	9.7	8.8083	ug/L	8.8083	ppb	14:55:30
1	Ca 317.933Radial†	30.8	14.4	35.761	ug/L	35.761	ppb	14:55:50
1	Fe 238.204 Radial†	0.5	0.2	5.6899	ug/L	5.6899	ppb	14:55:50
1	K 766.490 Radial†	1569.9	123.4	53.550	ug/L	53.550	ppb	14:55:30
1	Mg 279.077 IEC†	-0.7	-0.9	-68.768	ug/L	-68.768	ppb	14:55:50
1	Na 589.592 Radial†	-177.5	-10.1	-27.266	ug/L	-27.266	ppb	14:55:50
1	Sr 421.552†	35.3	30.4	0.4686	ug/L	0.4686	ppb	14:55:50
1	Sc 361.383	1053868.2	1053868.2	99.339	%			14:56:47
1	Y 371.029	847547.6	847547.6	99.336	%			14:56:47
1	Ag 328.068†	611.0	-23.5	-0.0912	ug/L	-0.0912	ppb	14:56:52
1	As 188.979†	-59.7	-23.1	-5.4331	ug/L	-5.4331	ppb	14:57:12
1	B 249.677†	-115.7	265.0	4.1295	ug/L	4.1295	ppb	14:56:52
1	Ba 233.527†	39.3	15.3	0.0772	ug/L	0.0772	ppb	14:57:12
1	Be 313.107†	-7467.3	-200.8	-0.0623	ug/L	-0.0623	ppb	14:56:52
1	Cd 226.502†	-282.8	-7.0	-0.0528	ug/L	-0.0528	ppb	14:57:12
1	Co 228.616†	-98.5	-8.7	-0.1082	ug/L	-0.1082	ppb	14:57:12
1	Cr 267.716†	-17.9	10.6	0.0901	ug/L	0.0901	ppb	14:57:12
1	Cu 324.752†	10191.0	67.6	0.1671	ug/L	0.1671	ppb	14:56:52
1	Mn 257.610†	957.5	136.8	0.1102	ug/L	0.1102	ppb	14:57:12
1	Mo 202.031†	35.6	4.1	0.1634	ug/L	0.1634	ppb	14:57:12
1	Ni 231.604†	164.1	16.9	0.2714	ug/L	0.2714	ppb	14:57:12
1	P 214.914†	332.8	-1.9	-0.6902	ug/L	-0.6902	ppb	14:57:12
1	Pb 220.353†	-0.7	28.4	2.1276	ug/L	2.1276	ppb	14:57:12
1	S 181.975 Axial†	64.3	-3.1	-2.6380	ug/L	-2.6380	ppb	14:57:12
1	Sb 206.836†	50.1	5.0	0.9831	ug/L	0.9831	ppb	14:57:12
1	Se 196.026†	-20.4	1.0	0.3567	ug/L	0.3567	ppb	14:57:12
1	Si 251.611†	771.9	216.9	4.4555	ug/L	4.4555	ppb	14:57:12
1	Sn 189.927†	3.4	-2.0	-0.2090	ug/L	-0.2090	ppb	14:57:12
1	Ti 334.940†	-1048.8	53.5	0.0729	ug/L	0.0729	ppb	14:56:52
1	Tl 190.801†	-48.9	12.2	2.0617	ug/L	2.0617	ppb	14:57:12
1	U 409.014†	-3860.6	-51.6	-1.2803	ug/L	-1.2803	ppb	14:56:47
1	V 292.402†	-1672.4	-30.8	-0.1770	ug/L	-0.1770	ppb	14:56:52
1	Zn 213.857†	1170.2	55.5	0.3100	ug/L	0.3100	ppb	14:57:12
1	SiO2†	796.6	199.5	8.7725	ug/L	8.7725	ppb	14:58:18
2	Sc Radial	5640.5	5640.5	101	%			14:55:55
2	Y RADIAL	4909.7	4909.7	102.0	%			14:55:55
2	Al 396.153Radial†	-62.3	30.8	28.013	ug/L	28.013	ppb	14:55:55
2	Ca 317.933Radial†	30.3	12.9	32.245	ug/L	32.245	ppb	14:56:15
2	Fe 238.204 Radial†	-0.5	-0.8	-29.760	ug/L	-29.760	ppb	14:56:15
2	K 766.490 Radial†	1516.6	23.1	10.017	ug/L	10.017	ppb	14:55:55
2	Mg 279.077 IEC†	0.3	0.1	8.2285	ug/L	8.2285	ppb	14:56:15
2	Na 589.592 Radial†	-177.1	-4.3	-11.518	ug/L	-11.518	ppb	14:56:15
2	Sr 421.552†	6.1	0.6	0.0086	ug/L	0.0086	ppb	14:56:15
2	Sc 361.383	1063342.1	1063342.1	100.23	%			14:57:17
2	Y 371.029	854778.4	854778.4	100.18	%			14:57:17
2	Ag 328.068†	643.4	3.4	0.0032	ug/L	0.0032	ppb	14:57:22
2	As 188.979†	-51.2	-14.2	-3.3303	ug/L	-3.3303	ppb	14:57:42
2	B 249.677†	-29.0	352.6	5.4981	ug/L	5.4981	ppb	14:57:22
2	Ba 233.527†	26.1	1.8	0.0085	ug/L	0.0085	ppb	14:57:42
2	Be 313.107†	-7456.4	-123.0	-0.0382	ug/L	-0.0382	ppb	14:57:22
2	Cd 226.502†	-288.4	-10.1	-0.0717	ug/L	-0.0717	ppb	14:57:42
2	Co 228.616†	-70.3	20.3	0.2517	ug/L	0.2517	ppb	14:57:42
2	Cr 267.716†	-12.6	16.0	0.1359	ug/L	0.1359	ppb	14:57:42
2	Cu 324.752†	10255.5	40.5	0.0983	ug/L	0.0983	ppb	14:57:22
2	Mn 257.610†	981.3	152.0	0.1161	ug/L	0.1161	ppb	14:57:42
2	Mo 202.031†	22.2	-9.6	-0.3874	ug/L	-0.3874	ppb	14:57:42
2	Ni 231.604†	156.9	8.2	0.1321	ug/L	0.1321	ppb	14:57:42

2	P 214.914†	349.2	11.4	4.0629	ug/L	4.0629 ppb	14:57:42
2	Pb 220.353†	-26.9	2.3	0.1761	ug/L	0.1761 ppb	14:57:42
2	S 181.975 Axial†	69.4	1.4	1.1802	ug/L	1.1802 ppb	14:57:42
2	Sb 206.836†	51.9	6.4	1.2457	ug/L	1.2457 ppb	14:57:42
2	Se 196.026†	-27.8	-6.2	-2.1074	ug/L	-2.1074 ppb	14:57:42
2	Si 251.611†	798.7	236.8	4.8879	ug/L	4.8879 ppb	14:57:42
2	Sn 189.927†	9.7	4.2	0.4366	ug/L	0.4366 ppb	14:57:42
2	Ti 334.940†	-1103.0	8.8	0.0133	ug/L	0.0133 ppb	14:57:22
2	Tl 190.801†	-47.5	14.0	2.3645	ug/L	2.3645 ppb	14:57:42
2	U 409.014†	-3819.8	23.8	0.5932	ug/L	0.5932 ppb	14:57:17
2	V 292.402†	-1637.6	19.0	0.1084	ug/L	0.1084 ppb	14:57:22
2	Zn 213.857†	1144.2	19.2	0.1089	ug/L	0.1089 ppb	14:57:42
2	SiO2†	764.0	159.9	7.0706	ug/L	7.0706 ppb	14:58:23
3	Sc Radial	5502.0	5502.0	98.9	%		14:56:20
3	Y RADIAL	4784.6	4784.6	99.35	%		14:56:20
3	Al 396.153Radial†	-79.0	12.3	11.188	ug/L	11.188 ppb	14:56:20
3	Ca 317.933Radial†	25.1	8.5	21.069	ug/L	21.069 ppb	14:56:40
3	Fe 238.204 Radial†	1.2	0.9	30.106	ug/L	30.106 ppb	14:56:40
3	K 766.490 Radial†	1574.7	119.6	51.922	ug/L	51.922 ppb	14:56:20
3	Mg 279.077 IEC†	2.6	2.5	197.62	ug/L	197.62 ppb	14:56:40
3	Na 589.592 Radial†	-180.3	-11.9	-32.235	ug/L	-32.235 ppb	14:56:40
3	Sr 421.552†	15.5	10.2	0.1562	ug/L	0.1562 ppb	14:56:40
3	Sc 361.383	1051449.5	1051449.5	99.111	%		14:57:47
3	Y 371.029	846638.2	846638.2	99.229	%		14:57:47
3	Ag 328.068†	588.3	-45.1	-0.1673	ug/L	-0.1673 ppb	14:57:52
3	As 188.979†	-54.8	-18.3	-4.3026	ug/L	-4.3026 ppb	14:58:13
3	B 249.677†	-85.6	295.2	4.5964	ug/L	4.5964 ppb	14:57:52
3	Ba 233.527†	31.6	7.6	0.0395	ug/L	0.0395 ppb	14:58:13
3	Be 313.107†	-7461.5	-212.2	-0.0661	ug/L	-0.0661 ppb	14:57:52
3	Cd 226.502†	-273.8	1.4	0.0072	ug/L	0.0072 ppb	14:58:13
3	Co 228.616†	-94.2	-4.7	-0.0576	ug/L	-0.0576 ppb	14:58:13
3	Cr 267.716†	-11.6	16.9	0.1449	ug/L	0.1449 ppb	14:58:13
3	Cu 324.752†	10178.7	78.7	0.1959	ug/L	0.1959 ppb	14:57:52
3	Mn 257.610†	987.9	169.8	0.1343	ug/L	0.1343 ppb	14:58:13
3	Mo 202.031†	39.6	8.2	0.3293	ug/L	0.3293 ppb	14:58:13
3	Ni 231.604†	164.9	18.1	0.2903	ug/L	0.2903 ppb	14:58:13
3	P 214.914†	362.0	28.3	9.9383	ug/L	9.9383 ppb	14:58:13
3	Pb 220.353†	-9.5	19.5	1.4654	ug/L	1.4654 ppb	14:58:13
3	S 181.975 Axial†	64.0	-3.2	-2.7432	ug/L	-2.7432 ppb	14:58:13
3	Sb 206.836†	52.1	7.2	1.4070	ug/L	1.4070 ppb	14:58:13
3	Se 196.026†	-24.8	-3.4	-0.9905	ug/L	-0.9905 ppb	14:58:13
3	Si 251.611†	779.4	226.3	4.6478	ug/L	4.6478 ppb	14:58:13
3	Sn 189.927†	2.2	-3.2	-0.3355	ug/L	-0.3355 ppb	14:58:13
3	Ti 334.940†	-1145.5	-46.5	-0.0588	ug/L	-0.0588 ppb	14:57:52
3	Tl 190.801†	-50.5	10.5	1.7647	ug/L	1.7647 ppb	14:58:13
3	U 409.014†	-3862.5	-62.4	-1.5531	ug/L	-1.5531 ppb	14:57:47
3	V 292.402†	-1624.6	13.6	0.0773	ug/L	0.0773 ppb	14:57:52
3	Zn 213.857†	1159.9	47.9	0.2551	ug/L	0.2551 ppb	14:58:13
3	SiO2†	806.9	211.8	9.3098	ug/L	9.3098 ppb	14:58:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	1056219.9	99.560	%	0.5925				0.60%
Sc Radial	5538.3	99.5	%	1.61				1.62%
Y 371.029	849654.7	99.583	%	0.5228				0.52%
Y RADIAL	4818.2	100.1	%	1.66				1.66%
Ag 328.068†	-21.7	-0.0851	ug/L	0.08542	-0.0851	ppb	0.08542	100.34%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	17.6	16.003	ug/L	10.4684	16.003	ppb	10.4684	65.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-18.6	-4.3553	ug/L	1.05239	-4.3553	ppb	1.05239	24.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	304.2	4.7413	ug/L	0.69569	4.7413	ppb	0.69569	14.67%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.2	0.0417	ug/L	0.03442	0.0417	ppb	0.03442	82.50%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-178.7	-0.0555	ug/L	0.01513	-0.0555	ppb	0.01513	27.25%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	11.9	29.692	ug/L	7.6715	29.692	ppb	7.6715	25.84%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -5.2     -0.0391 ug/L       0.04120     -0.0391 ppb        0.04120 105.48%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 2.3      0.0286 ug/L       0.19481      0.0286 ppb        0.19481 680.64%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                14.5      0.1236 ug/L       0.02938      0.1236 ppb        0.02938  23.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†                62.3      0.1538 ug/L       0.05016      0.1538 ppb        0.05016  32.62%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.1      2.0121 ug/L      30.10210      2.0121 ppb       30.10210 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          88.7     38.496 ug/L       24.6777     38.496 ppb        24.6777  64.10%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.6     45.694 ug/L      137.0902     45.694 ppb       137.0902 300.02%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               152.9      0.1202 ug/L       0.01255      0.1202 ppb        0.01255  10.44%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 0.9      0.0351 ug/L       0.37516      0.0351 ppb        0.37516 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         -8.8    -23.673 ug/L       10.8153    -23.673 ppb        10.8153  45.69%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                14.4      0.2313 ug/L       0.08644      0.2313 ppb        0.08644  37.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 12.6      4.4370 ug/L       5.32411      4.4370 ppb        5.32411 119.99%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                16.7      1.2563 ug/L       0.99239      1.2563 ppb        0.99239  78.99%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -1.7    -1.4003 ug/L       2.23542     -1.4003 ppb        2.23542 159.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.2      1.2119 ug/L       0.21396      1.2119 ppb        0.21396  17.65%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -2.8     -0.9137 ug/L       1.23385     -0.9137 ppb        1.23385 135.04%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               226.7      4.6637 ug/L       0.21666      4.6637 ppb        0.21666   4.65%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                -0.4     -0.0360 ug/L       0.41410     -0.0360 ppb        0.41410 >999.9%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                13.7      0.2112 ug/L       0.23488      0.2112 ppb        0.23488 111.23%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                 5.2      0.0091 ug/L       0.06596      0.0091 ppb        0.06596 721.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                12.2      2.0636 ug/L       0.29992      2.0636 ppb        0.29992  14.53%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                -30.1     -0.7468 ug/L       1.16839     -0.7468 ppb        1.16839 156.46%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                  0.6      0.0029 ug/L       0.15653      0.0029 ppb        0.15653 >999.9%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                40.9      0.2247 ug/L       0.10391      0.2247 ppb        0.10391  46.25%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     190.4      8.3843 ug/L       1.16902      8.3843 ppb        1.16902  13.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 17
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 7/8/2009 15:41:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5550.0	5550.0	99.7	%			15:43:35
1	Y RADIAL	4798.2	4798.2	99.64	%			15:43:35
1	Al 396.153Radial†	5250.4	5356.7	4854.3	ug/L	4854.3	ppb	15:43:35
1	Ca 317.933Radial†	1970.4	1958.7	4878.8	ug/L	4878.8	ppb	15:43:55
1	Fe 238.204 Radial†	137.3	137.4	4834.0	ug/L	4834.0	ppb	15:43:55
1	K 766.490 Radial†	13208.1	11770.2	5101.0	ug/L	5101.0	ppb	15:43:35
1	Mg 279.077 IEC†	62.7	62.7	4968.1	ug/L	4968.1	ppb	15:43:55
1	Na 589.592 Radial†	3392.0	3571.5	9656.9	ug/L	9656.9	ppb	15:43:35
1	Sr 421.552†	32852.9	32935.1	507.37	ug/L	507.37	ppb	15:43:35
1	Sc 361.383	1064992.1	1064992.1	100.39	%			15:44:54
1	Y 371.029	848241.6	848241.6	99.417	%			15:44:54
1	Ag 328.068†	127421.5	126291.3	502.94	ug/L	502.94	ppb	15:44:54
1	As 188.979†	2061.8	2090.8	493.94	ug/L	493.94	ppb	15:45:14
1	B 249.677†	31095.4	31357.0	486.83	ug/L	486.83	ppb	15:44:54
1	Ba 233.527†	98115.4	97712.5	495.79	ug/L	495.79	ppb	15:44:54
1	Be 313.107†	1594280.0	1595444.2	497.24	ug/L	497.24	ppb	15:44:54
1	Cd 226.502†	66508.1	66529.1	497.34	ug/L	497.34	ppb	15:44:54
1	Co 228.616†	38950.3	38890.4	484.63	ug/L	484.63	ppb	15:45:14
1	Cr 267.716†	58229.3	58033.2	494.97	ug/L	494.97	ppb	15:44:54
1	Cu 324.752†	211193.1	200186.9	494.19	ug/L	494.19	ppb	15:44:54
1	Mn 257.610†	629952.0	626694.1	495.80	ug/L	495.80	ppb	15:44:54
1	Mo 202.031†	12627.7	12547.2	502.56	ug/L	502.56	ppb	15:45:14
1	Ni 231.604†	30770.4	30503.4	488.59	ug/L	488.59	ppb	15:45:14
1	P 214.914†	7365.6	7000.2	2399.2	ug/L	2399.2	ppb	15:45:14
1	Pb 220.353†	6628.4	6631.9	498.51	ug/L	498.51	ppb	15:45:14
1	S 181.975 Axial†	1254.4	1181.7	999.29	ug/L	999.29	ppb	15:45:14
1	Sb 206.836†	2567.0	2511.7	499.99	ug/L	499.99	ppb	15:45:14
1	Se 196.026†	1506.6	1522.4	513.89	ug/L	513.89	ppb	15:45:14
1	Si 251.611†	123069.6	122034.6	2506.1	ug/L	2506.1	ppb	15:44:54
1	Sn 189.927†	4784.8	4760.9	495.62	ug/L	495.62	ppb	15:45:14
1	Ti 334.940†	381087.6	380726.3	498.33	ug/L	498.33	ppb	15:44:54
1	Tl 190.801†	2886.0	2936.3	497.24	ug/L	497.24	ppb	15:45:14
1	U 409.014†	15577.1	19351.8	478.60	ug/L	478.60	ppb	15:44:54
1	V 292.402†	85505.0	86827.9	498.46	ug/L	498.46	ppb	15:44:54
1	Zn 213.857†	90597.9	89125.9	493.16	ug/L	493.16	ppb	15:44:54
1	SiO2†	122068.2	120994.8	5320.2	ug/L	5320.2	ppb	15:46:14
2	Sc Radial	5447.3	5447.3	97.9	%			15:44:00
2	Y RADIAL	4711.7	4711.7	97.84	%			15:44:00
2	Al 396.153Radial†	5172.6	5376.3	4872.0	ug/L	4872.0	ppb	15:44:00
2	Ca 317.933Radial†	1978.6	2004.4	4992.5	ug/L	4992.5	ppb	15:44:20
2	Fe 238.204 Radial†	139.0	141.6	4983.9	ug/L	4983.9	ppb	15:44:20
2	K 766.490 Radial†	12957.8	11764.2	5098.5	ug/L	5098.5	ppb	15:44:00
2	Mg 279.077 IEC†	62.4	63.6	5042.1	ug/L	5042.1	ppb	15:44:20
2	Na 589.592 Radial†	3337.3	3579.7	9679.1	ug/L	9679.1	ppb	15:44:00
2	Sr 421.552†	32178.4	32867.1	506.32	ug/L	506.32	ppb	15:44:00
2	Sc 361.383	1051068.9	1051068.9	99.075	%			15:45:22
2	Y 371.029	835857.7	835857.7	97.966	%			15:45:22
2	Ag 328.068†	126172.9	126712.4	504.65	ug/L	504.65	ppb	15:45:22
2	As 188.979†	2053.8	2109.9	498.46	ug/L	498.46	ppb	15:45:42
2	B 249.677†	30728.4	31396.9	487.41	ug/L	487.41	ppb	15:45:22
2	Ba 233.527†	97233.2	98116.8	497.84	ug/L	497.84	ppb	15:45:22
2	Be 313.107†	1574216.1	1596230.6	497.49	ug/L	497.49	ppb	15:45:22
2	Cd 226.502†	65742.7	66634.2	498.11	ug/L	498.11	ppb	15:45:22
2	Co 228.616†	38877.4	39330.9	490.13	ug/L	490.13	ppb	15:45:42
2	Cr 267.716†	57664.8	58231.8	496.66	ug/L	496.66	ppb	15:45:22
2	Cu 324.752†	208926.4	200685.8	495.43	ug/L	495.43	ppb	15:45:22
2	Mn 257.610†	623851.7	628849.5	497.52	ug/L	497.52	ppb	15:45:22
2	Mo 202.031†	12603.0	12688.9	508.24	ug/L	508.24	ppb	15:45:42
2	Ni 231.604†	30731.8	30870.5	494.47	ug/L	494.47	ppb	15:45:42

2	P 214.914†	7351.1	7082.8	2428.1 ug/L	2428.1 ppb	15:45:42
2	Pb 220.353†	6620.8	6711.7	504.49 ug/L	504.49 ppb	15:45:42
2	S 181.975 Axial†	1262.4	1206.4	1020.2 ug/L	1020.2 ppb	15:45:42
2	Sb 206.836†	2541.1	2519.4	501.67 ug/L	501.67 ppb	15:45:42
2	Se 196.026†	1500.7	1536.3	518.98 ug/L	518.98 ppb	15:45:42
2	Si 251.611†	121951.6	122530.2	2516.3 ug/L	2516.3 ppb	15:45:22
2	Sn 189.927†	4769.9	4808.9	500.63 ug/L	500.63 ppb	15:45:42
2	Ti 334.940†	377304.3	381936.4	499.92 ug/L	499.92 ppb	15:45:22
2	Tl 190.801†	2878.0	2966.2	502.28 ug/L	502.28 ppb	15:45:42
2	U 409.014†	15599.1	19579.5	484.23 ug/L	484.23 ppb	15:45:22
2	V 292.402†	84556.2	86998.4	499.49 ug/L	499.49 ppb	15:45:22
2	Zn 213.857†	89634.5	89349.0	494.35 ug/L	494.35 ppb	15:45:22
2	SiO2†	124157.3	124714.2	5484.3 ug/L	5484.3 ppb	15:46:20
3	Sc Radial	5536.4	5536.4	99.5 %		15:44:25
3	Y RADIAL	4822.5	4822.5	100.1 %		15:44:25
3	Al 396.153Radial†	5265.5	5384.7	4879.5 ug/L	4879.5 ppb	15:44:25
3	Ca 317.933Radial†	1962.2	1955.4	4870.5 ug/L	4870.5 ppb	15:44:45
3	Fe 238.204 Radial†	137.2	137.6	4842.9 ug/L	4842.9 ppb	15:44:45
3	K 766.490 Radial†	13216.2	11810.9	5118.7 ug/L	5118.7 ppb	15:44:25
3	Mg 279.077 IEC†	62.7	62.8	4983.0 ug/L	4983.0 ppb	15:44:45
3	Na 589.592 Radial†	3349.3	3536.8	9563.2 ug/L	9563.2 ppb	15:44:25
3	Sr 421.552†	32669.2	32831.2	505.77 ug/L	505.77 ppb	15:44:25
3	Sc 361.383	1057782.7	1057782.7	99.708 %		15:45:49
3	Y 371.029	842128.4	842128.4	98.701 %		15:45:49
3	Ag 328.068†	126824.6	126557.6	504.00 ug/L	504.00 ppb	15:45:49
3	As 188.979†	2088.9	2131.9	503.59 ug/L	503.59 ppb	15:46:09
3	B 249.677†	31037.4	31509.9	489.19 ug/L	489.19 ppb	15:45:49
3	Ba 233.527†	97777.3	98039.6	497.45 ug/L	497.45 ppb	15:45:49
3	Be 313.107†	1585103.6	1597065.1	497.75 ug/L	497.75 ppb	15:45:49
3	Cd 226.502†	66249.3	66721.1	498.78 ug/L	498.78 ppb	15:45:49
3	Co 228.616†	39095.7	39300.7	489.76 ug/L	489.76 ppb	15:46:09
3	Cr 267.716†	57940.4	58138.8	495.87 ug/L	495.87 ppb	15:45:49
3	Cu 324.752†	210463.9	200889.4	495.93 ug/L	495.93 ppb	15:45:49
3	Mn 257.610†	627057.2	628067.8	496.88 ug/L	496.88 ppb	15:45:49
3	Mo 202.031†	12692.2	12697.7	508.58 ug/L	508.58 ppb	15:46:09
3	Ni 231.604†	30844.9	30787.0	493.13 ug/L	493.13 ppb	15:46:09
3	P 214.914†	7405.1	7089.9	2430.6 ug/L	2430.6 ppb	15:46:09
3	Pb 220.353†	6652.2	6700.8	503.69 ug/L	503.69 ppb	15:46:09
3	S 181.975 Axial†	1250.4	1186.2	1003.1 ug/L	1003.1 ppb	15:46:09
3	Sb 206.836†	2566.7	2528.8	503.51 ug/L	503.51 ppb	15:46:09
3	Se 196.026†	1528.1	1554.1	524.28 ug/L	524.28 ppb	15:46:09
3	Si 251.611†	122522.5	122321.5	2511.9 ug/L	2511.9 ppb	15:45:49
3	Sn 189.927†	4781.4	4789.9	498.63 ug/L	498.63 ppb	15:46:09
3	Ti 334.940†	379146.9	381367.2	499.17 ug/L	499.17 ppb	15:45:49
3	Tl 190.801†	2882.7	2952.6	499.96 ug/L	499.96 ppb	15:46:09
3	U 409.014†	15482.2	19362.3	478.86 ug/L	478.86 ppb	15:45:49
3	V 292.402†	85105.0	87007.2	499.55 ug/L	499.55 ppb	15:45:49
3	Zn 213.857†	90130.2	89272.0	493.95 ug/L	493.95 ppb	15:45:49
3	SiO2†	121770.0	121524.5	5343.3 ug/L	5343.3 ppb	15:46:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	1057947.9	99.723	%	0.6563				0.66%
Sc Radial	5511.3	99.0	%	1.00				1.01%
Y 371.029	842075.9	98.695	%	0.7257				0.74%
Y RADIAL	4777.5	99.21	%	1.210				1.22%
Ag 328.068†	126520.4	503.86	ug/L	0.864	503.86	ppb	0.864	0.17%
QC value within limits for Ag 328.068 Recovery = 100.77%								
Al 396.153Radial†	5372.6	4868.6	ug/L	12.94	4868.6	ppb	12.94	0.27%
QC value within limits for Al 396.153Radial Recovery = 97.37%								
As 188.979†	2110.9	498.66	ug/L	4.828	498.66	ppb	4.828	0.97%
QC value within limits for As 188.979 Recovery = 99.73%								
B 249.677†	31421.2	487.81	ug/L	1.234	487.81	ppb	1.234	0.25%
QC value within limits for B 249.677 Recovery = 97.56%								
Ba 233.527†	97956.3	497.03	ug/L	1.089	497.03	ppb	1.089	0.22%
QC value within limits for Ba 233.527 Recovery = 99.41%								
Be 313.107†	1596246.7	497.49	ug/L	0.253	497.49	ppb	0.253	0.05%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	1972.8	4913.9	ug/L	68.18	4913.9	ppb	68.18	1.39%

```
   QC value within limits for Ca 317.933Radial  Recovery = 98.28%
Cd 226.502†            66628.1      498.08 ug/L         0.720      498.08 ppb          0.720   0.14%
   QC value within limits for Cd 226.502  Recovery = 99.62%
Co 228.616†            39174.0      488.17 ug/L         3.072      488.17 ppb          3.072   0.63%
   QC value within limits for Co 228.616  Recovery = 97.63%
Cr 267.716†            58134.6      495.83 ug/L         0.848      495.83 ppb          0.848   0.17%
   QC value within limits for Cr 267.716  Recovery = 99.17%
Cu 324.752†           200587.4      495.18 ug/L         0.893      495.18 ppb          0.893   0.18%
   QC value within limits for Cu 324.752  Recovery = 99.04%
Fe 238.204 Radial†       138.9      4886.9 ug/L         84.13      4886.9 ppb          84.13   1.72%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.74%
K 766.490 Radial†      11781.8      5106.1 ug/L         11.02      5106.1 ppb          11.02   0.22%
   QC value within limits for K 766.490 Radial  Recovery = 102.12%
Mg 279.077 IEC†           63.0      4997.8 ug/L         39.10      4997.8 ppb          39.10   0.78%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.96%
Mn 257.610†           627870.5      496.73 ug/L         0.871      496.73 ppb          0.871   0.18%
   QC value within limits for Mn 257.610  Recovery = 99.35%
Mo 202.031†            12644.6      506.46 ug/L         3.383      506.46 ppb          3.383   0.67%
   QC value within limits for Mo 202.031  Recovery = 101.29%
Na 589.592 Radial†      3562.7      9633.1 ug/L         61.49      9633.1 ppb          61.49   0.64%
   QC value within limits for Na 589.592 Radial  Recovery = 96.33%
Ni 231.604†            30720.3      492.07 ug/L         3.082      492.07 ppb          3.082   0.63%
   QC value within limits for Ni 231.604  Recovery = 98.41%
P 214.914†              7057.6      2419.3 ug/L         17.48      2419.3 ppb          17.48   0.72%
   QC value within limits for P 214.914  Recovery = 96.77%
Pb 220.353†             6681.5      502.23 ug/L         3.248      502.23 ppb          3.248   0.65%
   QC value within limits for Pb 220.353  Recovery = 100.45%
S 181.975 Axial†        1191.4      1007.5 ug/L         11.14      1007.5 ppb          11.14   1.11%
   QC value within limits for S 181.975 Axial  Recovery = 100.75%
Sb 206.836†             2520.0      501.72 ug/L         1.761      501.72 ppb          1.761   0.35%
   QC value within limits for Sb 206.836  Recovery = 100.34%
Se 196.026†             1537.6      519.05 ug/L         5.195      519.05 ppb          5.195   1.00%
   QC value within limits for Se 196.026  Recovery = 103.81%
Si 251.611†           122295.4      2511.5 ug/L          5.07      2511.5 ppb           5.07   0.20%
   QC value within limits for Si 251.611  Recovery = 100.46%
Sn 189.927†             4786.6      498.30 ug/L         2.522      498.30 ppb          2.522   0.51%
   QC value within limits for Sn 189.927  Recovery = 99.66%
Sr 421.552†            32877.8      506.49 ug/L         0.813      506.49 ppb          0.813   0.16%
   QC value within limits for Sr 421.552  Recovery = 101.30%
Ti 334.940†           381343.3      499.14 ug/L         0.795      499.14 ppb          0.795   0.16%
   QC value within limits for Ti 334.940  Recovery = 99.83%
Tl 190.801†             2951.7      499.83 ug/L         2.522      499.83 ppb          2.522   0.50%
   QC value within limits for Tl 190.801  Recovery = 99.97%
U 409.014†             19431.2      480.57 ug/L         3.177      480.57 ppb          3.177   0.66%
   QC value within limits for U 409.014  Recovery = 96.11%
V 292.402†             86944.5      499.16 ug/L         0.613      499.16 ppb          0.613   0.12%
   QC value within limits for V 292.402  Recovery = 99.83%
Zn 213.857†            89249.0      493.82 ug/L         0.604      493.82 ppb          0.604   0.12%
   QC value within limits for Zn 213.857  Recovery = 98.76%
SiO2†                 122411.2      5382.6 ug/L         88.82      5382.6 ppb          88.82   1.65%
   QC value within limits for SiO2  Recovery = 100.66%
All analyte(s) passed QC.
```

Sequence No.: 18
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 7/8/2009 15:48:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5444.7	5444.7	97.8	%			15:50:26
1	Y RADIAL	4754.6	4754.6	98.73	%			15:50:26
1	Al 396.153Radial†	-89.0	1.3	1.1300	ug/L	1.1300	ppb	15:50:26
1	Ca 317.933Radial†	24.6	8.2	20.486	ug/L	20.486	ppb	15:50:46
1	Fe 238.204 Radial†	1.6	1.3	45.016	ug/L	45.016	ppb	15:50:46
1	K 766.490 Radial†	1541.6	102.5	44.484	ug/L	44.484	ppb	15:50:26
1	Mg 279.077 IEC†	0.2	0.0	0.5452	ug/L	0.5452	ppb	15:50:46
1	Na 589.592 Radial†	-165.9	0.9	2.3237	ug/L	2.3237	ppb	15:50:46
1	Sr 421.552†	27.6	22.8	0.3506	ug/L	0.3506	ppb	15:50:46
1	Sc 361.383	1056924.6	1056924.6	99.627	%			15:51:43
1	Y 371.029	852084.4	852084.4	99.868	%			15:51:43
1	Ag 328.068†	677.5	41.4	0.1786	ug/L	0.1786	ppb	15:51:48
1	As 188.979†	-48.7	-12.0	-2.7987	ug/L	-2.7987	ppb	15:52:08
1	B 249.677†	-15.3	366.2	5.7014	ug/L	5.7014	ppb	15:51:48
1	Ba 233.527†	58.9	34.8	0.1773	ug/L	0.1773	ppb	15:52:08
1	Be 313.107†	-7518.0	-229.9	-0.0713	ug/L	-0.0713	ppb	15:51:48
1	Cd 226.502†	-272.1	4.5	0.0287	ug/L	0.0287	ppb	15:52:08
1	Co 228.616†	-101.3	-11.3	-0.1398	ug/L	-0.1398	ppb	15:52:08
1	Cr 267.716†	-33.1	-4.6	-0.0380	ug/L	-0.0380	ppb	15:51:48
1	Cu 324.752†	10167.5	14.3	0.0379	ug/L	0.0379	ppb	15:51:48
1	Mn 257.610†	919.8	96.2	0.0819	ug/L	0.0819	ppb	15:52:08
1	Mo 202.031†	42.0	10.4	0.4188	ug/L	0.4188	ppb	15:52:08
1	Ni 231.604†	169.3	21.7	0.3482	ug/L	0.3482	ppb	15:52:08
1	P 214.914†	354.3	18.7	6.5814	ug/L	6.5814	ppb	15:52:08
1	Pb 220.353†	-16.7	12.4	0.9234	ug/L	0.9234	ppb	15:52:08
1	S 181.975 Axial†	61.6	-6.0	-5.0843	ug/L	-5.0843	ppb	15:52:08
1	Sb 206.836†	53.3	8.1	1.6077	ug/L	1.6077	ppb	15:52:08
1	Se 196.026†	-12.1	9.5	3.2413	ug/L	3.2413	ppb	15:52:08
1	Si 251.611†	756.7	199.4	4.0905	ug/L	4.0905	ppb	15:52:08
1	Sn 189.927†	12.1	6.6	0.6931	ug/L	0.6931	ppb	15:52:08
1	Ti 334.940†	-1028.7	76.7	0.1021	ug/L	0.1021	ppb	15:51:48
1	Tl 190.801†	-51.6	9.6	1.6197	ug/L	1.6197	ppb	15:52:08
1	U 409.014†	-3848.7	-28.4	-0.7103	ug/L	-0.7103	ppb	15:51:43
1	V 292.402†	-1650.6	-3.9	-0.0247	ug/L	-0.0247	ppb	15:51:48
1	Zn 213.857†	1092.3	-26.1	-0.1527	ug/L	-0.1527	ppb	15:52:08
1	SiO2†	812.7	213.4	9.3760	ug/L	9.3760	ppb	15:53:14
2	Sc Radial	5363.3	5363.3	96.4	%			15:50:52
2	Y RADIAL	4689.7	4689.7	97.38	%			15:50:52
2	Al 396.153Radial†	-93.9	-5.3	-4.8063	ug/L	-4.8063	ppb	15:50:52
2	Ca 317.933Radial†	33.6	17.9	44.640	ug/L	44.640	ppb	15:51:12
2	Fe 238.204 Radial†	-0.5	-0.8	-29.258	ug/L	-29.258	ppb	15:51:12
2	K 766.490 Radial†	1469.5	51.7	22.381	ug/L	22.381	ppb	15:50:52
2	Mg 279.077 IEC†	0.5	0.4	29.965	ug/L	29.965	ppb	15:51:12
2	Na 589.592 Radial†	-167.6	-3.4	-9.2756	ug/L	-9.2756	ppb	15:51:12
2	Sr 421.552†	18.3	13.5	0.2083	ug/L	0.2083	ppb	15:51:12
2	Sc 361.383	1064727.6	1064727.6	100.36	%			15:52:14
2	Y 371.029	856448.2	856448.2	100.38	%			15:52:14
2	Ag 328.068†	654.6	13.6	0.0456	ug/L	0.0456	ppb	15:52:19
2	As 188.979†	-55.1	-18.0	-4.2429	ug/L	-4.2429	ppb	15:52:39
2	B 249.677†	-27.0	354.6	5.5302	ug/L	5.5302	ppb	15:52:19
2	Ba 233.527†	26.3	1.9	0.0090	ug/L	0.0090	ppb	15:52:39
2	Be 313.107†	-7608.1	-264.4	-0.0820	ug/L	-0.0820	ppb	15:52:19
2	Cd 226.502†	-292.9	-14.2	-0.1025	ug/L	-0.1025	ppb	15:52:39
2	Co 228.616†	-105.7	-14.9	-0.1859	ug/L	-0.1859	ppb	15:52:39
2	Cr 267.716†	-9.5	19.1	0.1627	ug/L	0.1627	ppb	15:52:19
2	Cu 324.752†	10209.3	-18.8	-0.0481	ug/L	-0.0481	ppb	15:52:19
2	Mn 257.610†	890.8	60.5	0.0435	ug/L	0.0435	ppb	15:52:39
2	Mo 202.031†	30.8	-1.1	-0.0470	ug/L	-0.0470	ppb	15:52:39
2	Ni 231.604†	166.7	17.8	0.2862	ug/L	0.2862	ppb	15:52:39

ICPMS#3 - Summary Report

Sample ID: 1201873974
Sample Date/Time: Tuesday, July 14, 2009 18:48:32
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 882357|1|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\dataset\090714\1201873974.082

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.239**	ug/L	25.120	82	0.000
	Be	9	**0.021**	ug/L	108.115	22	0.000
	B	11	**19.917**	ug/L	5.589	2756	0.004
	Na	23	**170.240**	ug/L	12.655	214613	0.403
	Mg	24	**7.854**	ug/L	16.436	8669	0.015
	Al	27	**17.658**	ug/L	33.371	31370	0.053
	P	31	**-0.164**	ug/L	925.937	2957	-0.000
	K	39	**191.988**	ug/L	9.075	1088669	1.041
	Ca	43	**33.504**	ug/L	13.093	1193	0.000
>	Sc	45		ug/L		518910	518910.165
	Ti	47	**0.668**	ug/L	5.754	497	0.000
	V	51	**-18.966**	ug/L	7.312	-63772	-0.107
	Cr	52	**0.200**	ug/L	37.189	-413	0.001
	Cr	53		ug/L		510869	0.693
	Mn	55	**1.254**	ug/L	4.340	7461	0.012
	Fe	57	**27.928**	ug/L	4.724	9924	0.005
	Co	59	**0.013**	ug/L	9.474	254	0.000
	Ni	60	**0.206**	ug/L	17.787	275	0.000
	Cu	63		ug/L		2111	0.004
	Cu	65	**0.827**	ug/L	8.160	983	0.002
	Zn	66	**1.534**	ug/L	4.052	1350	0.003
	Zn	67		ug/L		20110	0.044
	Zn	68		ug/L		1776	0.003
>	Ge	74		ug/L		323819	323819.472
	As	75	**0.708**	ug/L	281.842	899	0.002
	Se	77		ug/L		33497	0.083
	Se	82	**0.010**	ug/L	4465.085	-9	0.000
	Kr	83		ug/L		135	-0.000
	Sr	88	**0.107**	ug/L	8.142	1662	0.004
	Y	89		ug/L		435	0.002
	Zr	90	**0.041**	ug/L	1.791	524	0.001
	Mo	98	**0.015**	ug/L	46.137	145	0.000
	Ag	107	**-0.001**	ug/L	242.138	54	-0.000
	Cd	111	**0.011**	ug/L	82.900	41	0.000
	Cd	114		ug/L		64	-0.000
>	In	115		ug/L		247657	247656.694
	Sn	120	**0.040**	ug/L	20.903	572	0.001
	Sb	121	**-2.100**	ug/L	2.547	3753	-0.037
	Sb	123		ug/L		2885	-0.029
	Ba	135		ug/L		344	0.001
	Ba	137	**0.237**	ug/L	3.648	586	0.001
	Ho	165		ug/L		89	0.000
>	Lu	175		ug/L		344244	344244.334
	Tl	205	**0.023**	ug/L	21.373	1323	0.001
	Pb	208	**0.023**	ug/L	12.717	904	0.001
	Th	232	**-0.027**	ug/L	4.267	544	-0.001
	U	238	**-0.012**	ug/L	2.293	139	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9998
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			91.8		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			101.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			99.4		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.5		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Zn 67 Lower	V	51	Sample is out of limits (<-PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: 1201873975
Sample Date/Time: Tuesday, July 14, 2009 18:54:16
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 882357|1|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\dataset\090714\1201873975.083

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.569**	ug/L	1.391	8757	0.017
	Be	9	**51.109**	ug/L	1.031	7973	0.015
	B	11	**119.306**	ug/L	1.445	13280	0.024
	Na	23	**1963.106**	ug/L	5.265	2408910	4.651
	Mg	24	**1828.604**	ug/L	3.531	1800091	3.483
	Al	27	**2121.399**	ug/L	5.467	3274700	6.329
	P	31	**1976.283**	ug/L	1.050	229722	0.439
	K	39	**2145.182**	ug/L	0.087	6555780	11.632
	Ca	43	**2087.631**	ug/L	1.214	12140	0.022
>	Sc	45		ug/L		516627	516627.487
	Ti	47	**48.000**	ug/L	1.068	13469	0.025
	V	51	**26.347**	ug/L	13.169	68758	0.149
	Cr	52	**52.009**	ug/L	2.029	166076	0.324
	Cr	53		ug/L		501374	0.679
	Mn	55	**53.167**	ug/L	0.678	266321	0.513
	Fe	57	**2210.942**	ug/L	0.173	228684	0.429
	Co	59	**52.698**	ug/L	1.357	212772	0.412
	Ni	60	**53.211**	ug/L	1.309	47033	0.091
	Cu	63		ug/L		117095	0.226
	Cu	65	**54.491**	ug/L	1.846	54712	0.106
	Zn	66	**50.188**	ug/L	2.067	35127	0.109
	Zn	67		ug/L		25001	0.060
	Zn	68		ug/L		24485	0.074
>	Ge	74		ug/L		320279	320279.497
	As	75	**38.360**	ug/L	3.333	34449	0.107
	Se	77		ug/L		30173	0.074
	Se	82	**9.829**	ug/L	2.595	629	0.002
	Kr	83		ug/L		129	-0.000
	Sr	88	**50.870**	ug/L	1.050	449561	1.843
	Y	89		ug/L		475	0.002
	Zr	90	**50.528**	ug/L	1.130	256749	1.053
	Mo	98	**49.461**	ug/L	2.341	120576	0.495
	Ag	107	**51.392**	ug/L	0.892	228196	0.937
	Cd	111	**5.280**	ug/L	2.289	5512	0.023
	Cd	114		ug/L		12999	0.053
>	In	115		ug/L		243522	243521.708
	Sn	120	**50.980**	ug/L	0.456	233054	0.955
	Sb	121	**105.750**	ug/L	0.527	470717	1.880
	Sb	123		ug/L		365469	1.460
	Ba	135		ug/L		61214	0.179
	Ba	137	**52.272**	ug/L	1.077	107992	0.316
	Ho	165		ug/L		103	0.000
>	Lu	175		ug/L		341730	341730.494
	Tl	205	**25.288**	ug/L	6.674	305369	0.890
	Pb	208	**20.516**	ug/L	0.106	273544	0.799
	Th	232	**50.332**	ug/L	0.785	694479	2.030
	U	238	**52.366**	ug/L	0.749	712804	2.085

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9998
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			91.4		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			100.8		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			97.8		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			96.8		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873976
Sample Date/Time: Tuesday, July 14, 2009 19:00:02
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 882357|5|prb
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\dataset\090714\1201873976.084

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.004**	ug/L	1107.421	40	0.000
	Be	9	**0.029**	ug/L	165.880	22	0.000
	B	11	**3.670**	ug/L	14.633	1009	0.001
	Na	23	**36.469**	ug/L	8.265	49419	0.086
	Mg	24	**1.136**	ug/L	90.857	2000	0.002
	Al	27	**4.468**	ug/L	62.402	10671	0.013
	P	31	**1.417**	ug/L	46.619	3084	0.000
	K	39	**7.931**	ug/L	31.079	560796	0.043
	Ca	43	**-31.462**	ug/L	22.324	831	-0.000
>	Sc	45		ug/L		509761	509761.020
	Ti	47	**0.010**	ug/L	248.743	310	0.000
	V	51	**-7.412**	ug/L	33.658	-29391	-0.042
	Cr	52	**0.138**	ug/L	101.658	-605	0.001
	Cr	53		ug/L		287891	0.273
	Mn	55	**0.306**	ug/L	4.469	2665	0.003
	Fe	57	**6.609**	ug/L	25.586	7641	0.001
	Co	59	**0.002**	ug/L	83.265	209	0.000
	Ni	60	**0.021**	ug/L	46.059	110	0.000
	Cu	63		ug/L		522	0.000
	Cu	65	**0.140**	ug/L	8.728	287	0.000
	Zn	66	**0.247**	ug/L	15.137	423	0.001
	Zn	67		ug/L		9718	0.014
	Zn	68		ug/L		830	0.001
>	Ge	74		ug/L		306834	306833.694
	As	75	**0.733**	ug/L	103.396	868	0.002
	Se	77		ug/L		16491	0.033
	Se	82	**0.092**	ug/L	239.901	-3	0.000
	Kr	83		ug/L		128	-0.000
	Sr	88	**0.025**	ug/L	12.837	890	0.001
	Y	89		ug/L		116	0.000
	Zr	90	**-0.002**	ug/L	316.646	292	-0.000
	Mo	98	**0.008**	ug/L	41.605	122	0.000
	Ag	107	**0.001**	ug/L	234.996	59	0.000
	Cd	111	**-0.013**	ug/L	75.027	16	-0.000
	Cd	114		ug/L		51	-0.000
>	In	115		ug/L		237382	237382.439
	Sn	120	**-0.024**	ug/L	26.842	266	-0.000
	Sb	121	**-2.404**	ug/L	0.674	2318	-0.043
	Sb	123		ug/L		1801	-0.033
	Ba	135		ug/L		121	0.000
	Ba	137	**0.046**	ug/L	19.971	182	0.000
	Ho	165		ug/L		53	-0.000
>	Lu	175		ug/L		334606	334606.412
	Tl	205	**3.136**	ug/L	12.806	37945	0.110
	Pb	208	**-0.010**	ug/L	34.521	458	-0.000
	Th	232	**0.002**	ug/L	781.484	914	0.000
	U	238	**-0.011**	ug/L	16.561	148	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9998
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			90.2		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			96.6		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			95.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			94.8		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, July 14, 2009 19:11:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\dataset\090714\QC Std 6.086

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**48.967**	ug/L	2.019	8575	0.017
	Be	9	**50.349**	ug/L	3.606	7786	0.015
	B	11	**96.824**	ug/L	4.028	10802	0.020
	Na	23	**5007.099**	ug/L	19.471	6090068	11.863
	Mg	24	**4782.455**	ug/L	5.664	4665197	9.109
	Al	27	**4977.985**	ug/L	1.519	7610549	14.852
	P	31	**4916.830**	ug/L	2.015	562167	1.092
	K	39	**4637.378**	ug/L	3.316	13423367	25.146
	Ca	43	**4837.283**	ug/L	1.511	26570	0.050
>	Sc	45		ug/L		512172	512171.570
	Ti	47	**48.714**	ug/L	0.861	13548	0.026
	V	51	**45.854**	ug/L	4.863	124635	0.259
	Cr	52	**50.965**	ug/L	1.476	161329	0.317
	Cr	53		ug/L		242333	0.181
	Mn	55	**49.230**	ug/L	1.138	244552	0.475
	Fe	57	**5115.552**	ug/L	2.453	515246	0.992
	Co	59	**51.527**	ug/L	0.771	206267	0.402
	Ni	60	**52.457**	ug/L	0.791	45971	0.090
	Cu	63		ug/L		104793	0.204
	Cu	65	**49.554**	ug/L	1.153	49340	0.096
	Zn	66	**49.369**	ug/L	1.835	32840	0.107
	Zn	67		ug/L		12931	0.025
	Zn	68		ug/L		22858	0.073
>	Ge	74		ug/L		304329	304329.156
	As	75	**48.557**	ug/L	2.440	41365	0.135
	Se	77		ug/L		12586	0.021
	Se	82	**49.505**	ug/L	2.606	3042	0.010
	Kr	83		ug/L		116	-0.000
	Sr	88	**49.595**	ug/L	0.479	424805	1.797
	Y	89		ug/L		76	0.000
	Zr	90	**47.828**	ug/L	2.444	235513	0.997
	Mo	98	**47.467**	ug/L	1.386	112145	0.475
	Ag	107	**49.785**	ug/L	1.562	214231	0.908
	Cd	111	**51.879**	ug/L	1.309	52226	0.221
	Cd	114		ug/L		125598	0.532
>	In	115		ug/L		236012	236011.621
	Sn	120	**48.946**	ug/L	2.016	216842	0.917
	Sb	121	**46.029**	ug/L	1.827	205554	0.818
	Sb	123		ug/L		160387	0.639
	Ba	135		ug/L		56812	0.168
	Ba	137	**48.881**	ug/L	1.353	100035	0.295
	Ho	165		ug/L		102	0.000
>	Lu	175		ug/L		338514	338513.720
	Tl	205	**45.491**	ug/L	2.419	543160	1.602
	Pb	208	**50.276**	ug/L	0.637	663142	1.957
	Th	232	**50.803**	ug/L	1.302	694318	2.049
	U	238	**52.327**	ug/L	1.891	705485	2.083

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9998
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	97.935				
	Be	9	100.699				
	B	11	96.824				
	Na	23	100.142				
	Mg	24	95.649				
	Al	27	98.574				
	P	31	98.337				
	K	39	92.748				
	Ca	43	96.746				
>	Sc	45		90.6			
	Ti	47	97.429				
	V	51	91.707				
	Cr	52	101.929				
	Cr	53					
	Mn	55	98.460				
	Fe	57	102.311				
	Co	59	103.054				
	Ni	60	104.913				
	Cu	63					
	Cu	65	99.108				
	Zn	66	98.739				
	Zn	67					
	Zn	68					
>	Ge	74		95.8			
	As	75	97.114				
	Se	77					
	Se	82	99.010				
	Kr	83					
	Sr	88	99.191				
	Y	89					
	Zr	90	95.656				
	Mo	98	94.934				
	Ag	107	99.570				
	Cd	111	103.757				
	Cd	114					
>	In	115		94.8			
	Sn	120	97.891				
	Sb	121	92.058				
	Sb	123					
	Ba	135					
	Ba	137	97.762				
	Ho	165					
>	Lu	175		95.9			
	Tl	205	90.981				
	Pb	208	100.553				
	Th	232	101.607				
	U	238	104.653				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, July 14, 2009 19:17:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: c:\elandata\dataset\090714\QC Std 7.087

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.034**	ug/L	54.566	34	-0.000
	Be	9	**0.047**	ug/L	82.407	25	0.000
	B	11	**-0.872**	ug/L	45.513	536	-0.000
	Na	23	**-1.456**	ug/L	87.328	3667	-0.003
	Mg	24	**0.774**	ug/L	274.064	1667	0.001
	Al	27	**2.892**	ug/L	80.362	8336	0.009
	P	31	**-3.179**	ug/L	41.916	2575	-0.001
	K	39	**-6.428**	ug/L	146.744	523781	-0.035
	Ca	43	**-49.636**	ug/L	19.228	739	-0.001
>	Sc	45		ug/L		512223	512222.783
	Ti	47	**-0.225**	ug/L	32.101	248	-0.000
	V	51	**-2.141**	ug/L	43.165	-14228	-0.012
	Cr	52	**-0.071**	ug/L	192.838	-1268	-0.000
	Cr	53		ug/L		203878	0.107
	Mn	55	**0.021**	ug/L	49.738	1269	0.000
	Fe	57	**1.075**	ug/L	155.980	7128	0.000
	Co	59	**0.010**	ug/L	5.533	239	0.000
	Ni	60	**0.009**	ug/L	129.069	100	0.000
	Cu	63		ug/L		209	-0.000
	Cu	65	**-0.016**	ug/L	91.760	133	-0.000
	Zn	66	**0.019**	ug/L	54.458	270	0.000
	Zn	67		ug/L		6949	0.005
	Zn	68		ug/L		609	-0.000
>	Ge	74		ug/L		304912	304912.180
	As	75	**0.930**	ug/L	82.015	1023	0.003
	Se	77		ug/L		9790	0.012
	Se	82	**-0.101**	ug/L	191.578	-15	-0.000
	Kr	83		ug/L		126	-0.000
	Sr	88	**0.009**	ug/L	35.792	743	0.000
	Y	89		ug/L		44	-0.000
	Zr	90	**0.026**	ug/L	21.296	428	0.001
	Mo	98	**0.016**	ug/L	23.503	141	0.000
	Ag	107	**0.006**	ug/L	29.386	81	0.000
	Cd	111	**0.004**	ug/L	228.846	33	0.000
	Cd	114		ug/L		72	0.000
>	In	115		ug/L		234973	234973.180
	Sn	120	**-0.016**	ug/L	16.103	298	-0.000
	Sb	121	**-2.352**	ug/L	1.699	2511	-0.042
	Sb	123		ug/L		1974	-0.033
	Ba	135		ug/L		76	0.000
	Ba	137	**-0.004**	ug/L	169.626	84	-0.000
	Ho	165		ug/L		66	0.000
>	Lu	175		ug/L		340635	340635.413
	Tl	205	**1.025**	ug/L	5.069	13331	0.036
	Pb	208	**0.007**	ug/L	36.951	694	0.000
	Th	232	**0.017**	ug/L	39.339	1143	0.001
	U	238	**0.009**	ug/L	17.428	426	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	0.9999
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9998
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			90.6		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			96.0		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			94.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			96.5		
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, July 15, 2009 03:15:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\Blank.170

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9		ug/L		21	
	Al	27		ug/L		5001	
>	Sc	45		ug/L		448181	
	Cr	52		ug/L		-1370	
	Cr	53		ug/L		166964	
	Mn	55		ug/L		1064	
	Co	59		ug/L		237	
	Ni	60		ug/L		88	
	Cu	63		ug/L		176	
	Cu	65		ug/L		117	
	Zn	66		ug/L		226	
	Zn	67		ug/L		6264	
	Zn	68		ug/L		573	
>	Ge	74		ug/L		285787	
	As	75		ug/L		738	
	Se	77		ug/L		6785	
	Se	82		ug/L		5	
	Mo	98		ug/L		102	
	Ag	107		ug/L		60	
	Cd	111		ug/L		31	
	Cd	114		ug/L		69	
>	In	115		ug/L		216448	
	Sb	121		ug/L		556	
	Sb	123		ug/L		431	
	Ba	135		ug/L		63	
	Ba	137		ug/L		94	
>	Lu	175		ug/L		320869	
	Tl	205		ug/L		2017	
	Pb	208		ug/L		686	
	U	238		ug/L		465	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, July 15, 2009 03:19:35
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\Standard 1.171

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	10.000	ug/L	7.789	1472	0.003
	Al	27	1000.000	ug/L	11.261	1133012	2.570
>	Sc	45		ug/L		438382	438382.096
	Cr	52	10.000	ug/L	4.598	25630	0.062
	Cr	53		ug/L		164520	0.003
	Mn	55	10.000	ug/L	1.684	44035	0.098
	Co	59	10.000	ug/L	4.923	35624	0.081
	Ni	60	10.000	ug/L	4.062	7784	0.018
	Cu	63		ug/L		18781	0.042
	Cu	65	10.000	ug/L	1.749	8778	0.020
	Zn	66	10.000	ug/L	2.258	5809	0.020
	Zn	67		ug/L		6884	0.003
	Zn	68		ug/L		4454	0.014
>	Ge	74		ug/L		279552	279552.095
	As	75	10.000	ug/L	3.224	7682	0.025
	Se	77		ug/L		7038	0.001
	Se	82	10.000	ug/L	2.579	511	0.002
	Mo	98	10.000	ug/L	1.853	19848	0.094
	Ag	107	10.000	ug/L	4.607	36618	0.174
	Cd	111	10.000	ug/L	1.504	8551	0.041
	Cd	114		ug/L		20739	0.099
>	In	115		ug/L		209776	209776.113
	Sb	121	10.000	ug/L	2.112	36224	0.170
	Sb	123		ug/L		28252	0.133
	Ba	135		ug/L		9848	0.032
	Ba	137	10.000	ug/L	5.669	17351	0.056
>	Lu	175		ug/L		310575	310575.212
	Tl	205	10.000	ug/L	3.915	109555	0.347
	Pb	208	10.000	ug/L	5.026	119475	0.383
	U	238	10.000	ug/L	2.672	126162	0.405

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits	Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, July 15, 2009 03:23:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\Standard 2.172

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**99.946**	ug/L	2.035	14124	0.031
	Al	27	**10004.423**	ug/L	1.920	12089796	26.897
>	Sc	45		ug/L		449314	449313.777
	Cr	52	**99.951**	ug/L	1.697	262043	0.586
	Cr	53		ug/L		186291	0.042
	Mn	55	**99.958**	ug/L	2.362	423743	0.941
	Co	59	**99.955**	ug/L	1.995	347401	0.773
	Ni	60	**99.955**	ug/L	0.072	75585	0.168
	Cu	63		ug/L		182041	0.405
	Cu	65	**99.952**	ug/L	2.214	84809	0.189
	Zn	66	**99.958**	ug/L	2.378	55203	0.192
	Zn	67		ug/L		14582	0.029
	Zn	68		ug/L		38500	0.132
>	Ge	74		ug/L		286675	286674.810
	As	75	**100.031**	ug/L	1.904	74433	0.257
	Se	77		ug/L		10019	0.011
	Se	82	**100.024**	ug/L	3.377	5323	0.019
	Mo	98	**99.951**	ug/L	4.431	195964	0.897
	Ag	107	**99.941**	ug/L	2.208	359395	1.646
	Cd	111	**99.962**	ug/L	3.534	85455	0.391
	Cd	114		ug/L		206287	0.945
>	In	115		ug/L		218393	218393.442
	Sb	121	**99.973**	ug/L	3.663	362067	1.656
	Sb	123		ug/L		282509	1.292
	Ba	135		ug/L		97022	0.303
	Ba	137	**99.960**	ug/L	1.164	171430	0.535
>	Lu	175		ug/L		320246	320246.265
	Tl	205	**99.931**	ug/L	1.678	1039640	3.240
	Pb	208	**99.948**	ug/L	2.566	1165946	3.640
	U	238	**99.935**	ug/L	1.716	1216927	3.799

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45					
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175					
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, July 15, 2009 03:27:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\QC Std 1.173

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**51.426**	ug/L	1.356	7317	0.016
	Al	27	**5274.968**	ug/L	3.076	6411216	14.182
>	Sc	45		ug/L		451615	451614.722
	Cr	52	**52.123**	ug/L	1.390	136678	0.306
	Cr	53		ug/L		173807	0.013
	Mn	55	**49.170**	ug/L	1.948	210045	0.463
	Co	59	**51.714**	ug/L	0.293	180797	0.400
	Ni	60	**53.177**	ug/L	2.024	40455	0.089
	Cu	63		ug/L		91073	0.201
	Cu	65	**49.861**	ug/L	2.936	42576	0.094
	Zn	66	**51.158**	ug/L	2.889	28664	0.098
	Zn	67		ug/L		10454	0.014
	Zn	68		ug/L		20245	0.068
>	Ge	74		ug/L		289773	289772.640
	As	75	**49.016**	ug/L	1.559	37249	0.126
	Se	77		ug/L		8243	0.005
	Se	82	**48.433**	ug/L	2.749	2608	0.009
	Mo	98	**49.798**	ug/L	1.088	97346	0.447
	Ag	107	**51.328**	ug/L	1.762	183886	0.845
	Cd	111	**53.364**	ug/L	3.058	45462	0.209
	Cd	114		ug/L		110145	0.506
>	In	115		ug/L		217482	217481.939
	Sb	121	**51.967**	ug/L	1.618	187771	0.861
	Sb	123		ug/L		146676	0.672
	Ba	135		ug/L		48721	0.152
	Ba	137	**50.367**	ug/L	1.211	86638	0.270
>	Lu	175		ug/L		321041	321041.094
	Tl	205	**49.329**	ug/L	2.131	515478	1.600
	Pb	208	**51.321**	ug/L	1.420	600651	1.869
	U	238	**52.810**	ug/L	0.610	645009	2.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	102.851				
	Al	27	104.455				
>	Sc	45		100.8			
	Cr	52	104.245				
	Cr	53					
	Mn	55	98.340				
	Co	59	103.429				
	Ni	60	106.354				
	Cu	63					
	Cu	65	99.722				
	Zn	66	102.317				
	Zn	67					
	Zn	68					
>	Ge	74		101.4			
	As	75	98.033				
	Se	77					
	Se	82	96.865				
	Mo	98	99.596				
	Ag	107	102.656				
	Cd	111	106.728				
	Cd	114					
>	In	115		100.5			
	Sb	121	103.933				
	Sb	123					
	Ba	135					
	Ba	137	100.733				
>	Lu	175		100.1			
	Tl	205	98.658				
	Pb	208	102.641				
	U	238	105.619				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, July 15, 2009 03:31:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\QC Std 2.174

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.023**	ug/L	225.333	25	0.000
	Al	27	**2.103**	ug/L	57.840	7669	0.006
>	Sc	45		ug/L		455895	455894.922
	Cr	52	**0.108**	ug/L	57.024	-1105	0.001
	Cr	53		ug/L		158390	-0.025
	Mn	55	**-0.003**	ug/L	262.605	1067	-0.000
	Co	59	**0.006**	ug/L	44.033	264	0.000
	Ni	60	**-0.001**	ug/L	1882.062	88	-0.000
	Cu	63		ug/L		211	0.000
	Cu	65	**0.016**	ug/L	80.963	132	0.000
	Zn	66	**-0.025**	ug/L	117.591	216	-0.000
	Zn	67		ug/L		5810	-0.002
	Zn	68		ug/L		549	-0.000
>	Ge	74		ug/L		290893	290893.334
	As	75	**0.263**	ug/L	63.437	948	0.001
	Se	77		ug/L		6631	-0.001
	Se	82	**-0.275**	ug/L	99.208	-9	-0.000
	Mo	98	**0.058**	ug/L	7.263	219	0.001
	Ag	107	**0.013**	ug/L	32.810	109	0.000
	Cd	111	**-0.002**	ug/L	370.892	29	-0.000
	Cd	114		ug/L		83	0.000
>	In	115		ug/L		220939	220939.090
	Sb	121	**0.534**	ug/L	7.240	2524	0.009
	Sb	123		ug/L		2098	0.007
	Ba	135		ug/L		72	0.000
	Ba	137	**0.014**	ug/L	17.741	118	0.000
>	Lu	175		ug/L		323896	323895.919
	Tl	205	**0.450**	ug/L	17.208	6765	0.015
	Pb	208	**0.012**	ug/L	22.452	836	0.000
	U	238	**0.013**	ug/L	19.429	629	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45		101.7			
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.8			
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.1			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		100.9			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, July 15, 2009 03:35:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\QC Std 3.175

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.579**	ug/L	9.690	105	0.000
	Al	27	**31.106**	ug/L	13.874	43400	0.084
>	Sc	45		ug/L		457695	457695.040
	Cr	52	**10.232**	ug/L	1.738	26074	0.060
	Cr	53		ug/L		164220	-0.014
	Mn	55	**5.285**	ug/L	1.882	23851	0.050
	Co	59	**0.986**	ug/L	1.696	3730	0.008
	Ni	60	**2.022**	ug/L	0.914	1645	0.003
	Cu	63		ug/L		2083	0.004
	Cu	65	**1.079**	ug/L	0.701	1050	0.002
	Zn	66	**10.176**	ug/L	2.076	5881	0.020
	Zn	67		ug/L		6838	0.002
	Zn	68		ug/L		4505	0.014
>	Ge	74		ug/L		289528	289528.463
	As	75	**4.724**	ug/L	7.272	4264	0.012
	Se	77		ug/L		7102	0.001
	Se	82	**4.716**	ug/L	4.017	259	0.001
	Mo	98	**0.516**	ug/L	6.140	1120	0.005
	Ag	107	**1.047**	ug/L	1.820	3846	0.017
	Cd	111	**0.982**	ug/L	5.690	874	0.004
	Cd	114		ug/L		2140	0.009
>	In	115		ug/L		219563	219563.144
	Sb	121	**2.999**	ug/L	5.903	11462	0.050
	Sb	123		ug/L		8965	0.039
	Ba	135		ug/L		1995	0.006
	Ba	137	**1.968**	ug/L	2.914	3491	0.011
>	Lu	175		ug/L		322598	322598.026
	Tl	205	**1.098**	ug/L	0.693	13510	0.036
	Pb	208	**2.002**	ug/L	1.844	24209	0.073
	U	238	**0.185**	ug/L	2.021	2743	0.007

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	115.779				
	Al	27	103.686				
>	Sc	45		102.1			
	Cr	52	102.324				
	Cr	53					
	Mn	55	105.699				
	Co	59	98.585				
	Ni	60	101.085				
	Cu	63					
	Cu	65	107.877				
	Zn	66	101.760				
	Zn	67					
	Zn	68					
>	Ge	74		101.3			
	As	75	94.489				
	Se	77					
	Se	82	94.314				
	Mo	98	103.202				
	Ag	107	104.725				
	Cd	111	98.182				
	Cd	114					
>	In	115		101.4			
	Sb	121	99.969				
	Sb	123					
	Ba	135					
	Ba	137	98.379				
>	Lu	175		100.5			
	Tl	205	109.752				
	Pb	208	100.109				
	U	238	92.722				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, July 15, 2009 03:39:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\QC Std 4.176

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.079**	**ug/L**	61.145	31	0.000
	Al	27	**102243.929**	**ug/L**	2.690	119140680	274.879
>	Sc	45		**ug/L**		433323	433322.983
	Cr	52	**3.365**	**ug/L**	3.387	7228	0.020
	Cr	53		**ug/L**		146764	-0.034
	Mn	55	**6.157**	**ug/L**	1.501	26139	0.058
	Co	59	**0.203**	**ug/L**	4.326	910	0.002
	Ni	60	**2.217**	**ug/L**	3.201	1699	0.004
	Cu	63		**ug/L**		3341	0.007
	Cu	65	**1.787**	**ug/L**	3.331	1573	0.003
	Zn	66	**2.289**	**ug/L**	5.541	1445	0.004
	Zn	67		**ug/L**		6030	-0.000
	Zn	68		**ug/L**		915	0.001
>	Ge	74		**ug/L**		278734	278734.467
	As	75	**0.157**	**ug/L**	245.654	833	0.000
	Se	77		**ug/L**		6385	-0.001
	Se	82	**-0.333**	**ug/L**	103.541	-12	-0.000
	Mo	98	**2166.812**	**ug/L**	2.827	3974773	19.456
	Ag	107	**0.044**	**ug/L**	6.934	203	0.001
	Cd	111	**0.180**	**ug/L**	42.174	173	0.001
	Cd	114		**ug/L**		3450	0.017
>	In	115		**ug/L**		204322	204322.381
	Sb	121	**0.281**	**ug/L**	22.451	1475	0.005
	Sb	123		**ug/L**		1144	0.004
	Ba	135		**ug/L**		655	0.002
	Ba	137	**0.616**	**ug/L**	7.074	1129	0.003
>	Lu	175		**ug/L**		314842	314842.092
	Tl	205	**0.053**	**ug/L**	15.604	2517	0.002
	Pb	208	**0.152**	**ug/L**	2.560	2419	0.006
	U	238	**-0.030**	**ug/L**	0.328	96	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Be	9					
Al	27	102.244				
> Sc	45			96.7		
Cr	52	90.934				
Cr	53					
Mn	55	106.159				
Co	59	81.302				
Ni	60	82.118				
Cu	63	-				
Cu	65	61.627				
Zn	66	63.596				
Zn	67					
Zn	68					
> Ge	74			97.5		
As	75					
Se	77					
Se	82					
Mo	98	108.341				
Ag	107					
Cd	111	45.069				
Cd	114					
> In	115			94.4		
Sb	121	280.787				
Sb	123					
Ba	135					
Ba	137	91.874				
> Lu	175			98.1		
Tl	205					
Pb	208	76.126				
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, July 15, 2009 03:43:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\QC Std 5.177

Concentration Results

	Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**21.572**	**ug/L**	6.440	2906	0.007
	Al	27	**105677.563**	**ug/L**	10.560	120809317	284.110
>	Sc	45		**ug/L**		426911	426911.126
	Cr	52	**23.976**	**ug/L**	5.584	58593	0.141
	Cr	53		**ug/L**		154590	-0.009
	Mn	55	**27.008**	**ug/L**	8.372	109157	0.254
	Co	59	**20.443**	**ug/L**	5.103	67553	0.158
	Ni	60	**21.753**	**ug/L**	7.259	15648	0.037
	Cu	63		**ug/L**		37843	0.089
	Cu	65	**21.828**	**ug/L**	8.764	17623	0.041
	Zn	66	**22.454**	**ug/L**	2.359	11973	0.043
	Zn	67		**ug/L**		7775	0.007
	Zn	68		**ug/L**		8155	0.028
>	Ge	74		**ug/L**		272953	272952.672
	As	75	**20.590**	**ug/L**	7.215	15139	0.053
	Se	77		**ug/L**		7233	0.003
	Se	82	**20.749**	**ug/L**	1.953	1055	0.004
	Mo	98	**2175.853**	**ug/L**	4.992	3988679	19.537
	Ag	107	**20.369**	**ug/L**	5.684	68527	0.335
	Cd	111	**20.424**	**ug/L**	5.621	16352	0.080
	Cd	114		**ug/L**		42770	0.209
>	In	115		**ug/L**		204438	204438.394
	Sb	121	**22.135**	**ug/L**	4.593	75395	0.367
	Sb	123		**ug/L**		58961	0.287
	Ba	135		**ug/L**		19090	0.061
	Ba	137	**20.772**	**ug/L**	4.853	34480	0.111
>	Lu	175		**ug/L**		309570	309570.029
	Tl	205	**18.819**	**ug/L**	1.533	190810	0.610
	Pb	208	**20.201**	**ug/L**	3.905	228238	0.736
	U	238	**21.413**	**ug/L**	3.630	252307	0.814

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	107.860				
	Al	27	105.678				
>	Sc	45		95.3			
	Cr	52	101.163				
	Cr	53					
	Mn	55	104.681				
	Co	59	100.955				
	Ni	60	95.830				
	Cu	63					
	Cu	65	95.320				
	Zn	66	95.144				
	Zn	67					
	Zn	68					
>	Ge	74		95.5			
	As	75	102.948				
	Se	77					
	Se	82	103.745				
	Mo	98	108.793				
	Ag	107	101.843				
	Cd	111	100.119				
	Cd	114					
>	In	115		94.5			
	Sb	121	110.123				
	Sb	123					
	Ba	135					
	Ba	137	100.495				
>	Lu	175		96.5			
	Tl	205	94.094				
	Pb	208	100.004				
	U	238	107.066				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 15, 2009 03:47:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\QC Std 6.178

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**51.055**	**ug/L**	1.114	7418	0.016
	Al	27	**5326.712**	**ug/L**	6.658	6611974	14.321
>	Sc	45		**ug/L**		461258	461258.150
	Cr	52	**50.162**	**ug/L**	0.368	134307	0.294
	Cr	53		**ug/L**		177291	0.012
	Mn	55	**50.310**	**ug/L**	3.055	219472	0.474
	Co	59	**49.690**	**ug/L**	2.388	177408	0.384
	Ni	60	**49.433**	**ug/L**	1.130	38419	0.083
	Cu	63		**ug/L**		93257	0.202
	Cu	65	**50.065**	**ug/L**	2.463	43675	0.094
	Zn	66	**51.215**	**ug/L**	1.860	28453	0.098
	Zn	67		**ug/L**		10501	0.015
	Zn	68		**ug/L**		19731	0.067
>	Ge	74		**ug/L**		287250	287250.214
	As	75	**49.346**	**ug/L**	2.322	37169	0.127
	Se	77		**ug/L**		8188	0.005
	Se	82	**49.418**	**ug/L**	0.943	2638	0.009
	Mo	98	**50.262**	**ug/L**	1.816	100513	0.451
	Ag	107	**50.483**	**ug/L**	0.412	185047	0.831
	Cd	111	**49.429**	**ug/L**	2.766	43084	0.194
	Cd	114		**ug/L**		105530	0.474
>	In	115		**ug/L**		222508	222508.391
	Sb	121	**52.631**	**ug/L**	2.085	194563	0.872
	Sb	123		**ug/L**		151682	0.680
	Ba	135		**ug/L**		49286	0.153
	Ba	137	**50.866**	**ug/L**	0.654	87502	0.272
>	Lu	175		**ug/L**		321043	321043.270
	Tl	205	**50.453**	**ug/L**	0.518	527266	1.636
	Pb	208	**51.004**	**ug/L**	0.852	596996	1.857
	U	238	**51.478**	**ug/L**	1.554	628809	1.957

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	102.111				
	Al	27	105.479				
>	Sc	45		102.9			
	Cr	52	100.323				
	Cr	53					
	Mn	55	100.620				
	Co	59	99.380				
	Ni	60	98.866				
	Cu	63					
	Cu	65	100.130				
	Zn	66	102.431				
	Zn	67					
	Zn	68					
>	Ge	74		100.5			
	As	75	98.693				
	Se	77					
	Se	82	98.836				
	Mo	98	100.524				
	Ag	107	100.965				
	Cd	111	98.859				
	Cd	114					
>	In	115		102.8			
	Sb	121	105.262				
	Sb	123					
	Ba	135					
	Ba	137	101.733				
>	Lu	175		100.1			
	Tl	205	100.906				
	Pb	208	102.008				
	U	238	102.955				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 15, 2009 03:52:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\QC Std 7.179

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.070**	**ug/L**	114.464	33	0.000
	Al	27	**4.640**	**ug/L**	21.941	11004	0.012
>	Sc	45		**ug/L**		466546	466546.021
	Cr	52	**-0.028**	**ug/L**	210.327	-1501	-0.000
	Cr	53		**ug/L**		161047	-0.027
	Mn	55	**0.017**	**ug/L**	48.938	1182	0.000
	Co	59	**0.006**	**ug/L**	149.188	267	0.000
	Ni	60	**0.013**	**ug/L**	118.928	102	0.000
	Cu	63		**ug/L**		190	0.000
	Cu	65	**0.014**	**ug/L**	80.958	134	0.000
	Zn	66	**-0.034**	**ug/L**	161.869	213	-0.000
	Zn	67		**ug/L**		5920	-0.002
	Zn	68		**ug/L**		526	-0.000
>	Ge	74		**ug/L**		293830	293830.232
	As	75	**-0.100**	**ug/L**	295.199	685	-0.000
	Se	77		**ug/L**		6404	-0.002
	Se	82	**-0.355**	**ug/L**	55.837	-14	-0.000
	Mo	98	**0.131**	**ug/L**	21.480	365	0.001
	Ag	107	**0.010**	**ug/L**	9.468	99	0.000
	Cd	111	**0.007**	**ug/L**	184.595	38	0.000
	Cd	114		**ug/L**		89	0.000
>	In	115		**ug/L**		221538	221537.898
	Sb	121	**0.119**	**ug/L**	19.500	1006	0.002
	Sb	123		**ug/L**		808	0.002
	Ba	135		**ug/L**		80	0.000
	Ba	137	**0.009**	**ug/L**	83.253	110	0.000
>	Lu	175		**ug/L**		323471	323470.506
	Tl	205	**0.442**	**ug/L**	16.174	6670	0.014
	Pb	208	**0.012**	**ug/L**	16.973	833	0.000
	U	238	**0.009**	**ug/L**	37.777	577	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45			104.1		
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			102.8		
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			102.4		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			100.8		
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873972
Sample Date/Time: Wednesday, July 15, 2009 03:56:04
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 882357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\1201873972.180

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.027**	**ug/L**	120.905	25	0.000
	Al	27	**-0.866**	**ug/L**	1.800	4001	-0.002
>	Sc	45		**ug/L**		453117	453117.073
	Cr	52	**-0.531**	**ug/L**	17.921	-2796	-0.003
	Cr	53		**ug/L**		327021	0.349
	Mn	55	**0.199**	**ug/L**	4.965	1923	0.002
	Co	59	**-0.005**	**ug/L**	40.347	220	-0.000
	Ni	60	**0.031**	**ug/L**	17.042	112	0.000
	Cu	63		**ug/L**		219	0.000
	Cu	65	**0.020**	**ug/L**	25.329	135	0.000
	Zn	66	**0.438**	**ug/L**	18.489	480	0.001
	Zn	67		**ug/L**		14038	0.026
	Zn	68		**ug/L**		983	0.001
>	Ge	74		**ug/L**		294715	294715.434
	As	75	**-0.377**	**ug/L**	415.272	-489	-0.001
	Se	77		**ug/L**		17333	0.035
	Se	82	**-0.074**	**ug/L**	439.850	1	-0.000
	Mo	98	**0.037**	**ug/L**	25.867	176	0.000
	Ag	107	**-0.002**	**ug/L**	32.171	51	-0.000
	Cd	111	**-0.013**	**ug/L**	66.869	20	-0.000
	Cd	114		**ug/L**		36	-0.000
>	In	115		**ug/L**		218809	218809.446
	Sb	121	**0.211**	**ug/L**	8.538	1327	0.003
	Sb	123		**ug/L**		1029	0.003
	Ba	135		**ug/L**		59	-0.000
	Ba	137	**-0.007**	**ug/L**	53.022	81	-0.000
>	Lu	175		**ug/L**		317826	317825.737
	Tl	205	**0.088**	**ug/L**	4.203	2905	0.003
	Pb	208	**-0.020**	**ug/L**	17.102	443	-0.001
	U	238	**-0.020**	**ug/L**	6.009	224	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45		101.1			
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.1			
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		101.1			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.1			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873973
Sample Date/Time: Wednesday, July 15, 2009 04:00:07
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 882357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\1201873973.181

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**52.577**	**ug/L**	2.971	7436	0.017
	Al	27	**1978.707**	**ug/L**	3.028	2393451	5.320
>	Sc	45		**ug/L**		449043	449042.855
	Cr	52	**50.304**	**ug/L**	2.628	131122	0.295
	Cr	53		**ug/L**		370029	0.452
	Mn	55	**52.363**	**ug/L**	1.407	222367	0.493
	Co	59	**52.179**	**ug/L**	0.835	181377	0.403
	Ni	60	**52.437**	**ug/L**	0.159	39670	0.088
	Cu	63		**ug/L**		97022	0.216
	Cu	65	**53.651**	**ug/L**	2.687	45550	0.101
	Zn	66	**51.275**	**ug/L**	2.114	29684	0.098
	Zn	67		**ug/L**		20131	0.045
	Zn	68		**ug/L**		20835	0.068
>	Ge	74		**ug/L**		299332	299332.218
	As	75	**48.859**	**ug/L**	0.687	38359	0.126
	Se	77		**ug/L**		20181	0.044
	Se	82	**48.512**	**ug/L**	3.166	2699	0.009
	Mo	98	**50.207**	**ug/L**	4.173	99168	0.451
	Ag	107	**52.676**	**ug/L**	1.174	190770	0.868
	Cd	111	**51.630**	**ug/L**	3.427	44450	0.202
	Cd	114		**ug/L**		107357	0.488
>	In	115		**ug/L**		219853	219852.694
	Sb	121	**53.990**	**ug/L**	3.016	197127	0.894
	Sb	123		**ug/L**		154225	0.700
	Ba	135		**ug/L**		49894	0.155
	Ba	137	**50.961**	**ug/L**	2.225	87738	0.273
>	Lu	175		**ug/L**		321390	321389.978
	Tl	205	**47.287**	**ug/L**	1.046	494881	1.533
	Pb	208	**50.971**	**ug/L**	2.081	597124	1.856
	U	238	**52.228**	**ug/L**	1.138	638549	1.986

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45			100.2		
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			104.7		
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			101.6		
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175			100.2		
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 232755001
Sample Date/Time: Wednesday, July 15, 2009 04:08:14
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 882357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\232755001.183

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.043**	ug/L	88.244	27	0.000
	Al	27	**18.901**	ug/L	18.505	27026	0.051
>	Sc	45		ug/L		436215	436214.730
	Cr	52	**0.598**	ug/L	15.499	198	0.004
	Cr	53		ug/L		378978	0.496
	Mn	55	**1.226**	ug/L	4.473	6066	0.012
	Co	59	**0.004**	ug/L	56.753	245	0.000
	Ni	60	**0.189**	ug/L	6.113	224	0.000
	Cu	63		ug/L		1687	0.003
	Cu	65	**0.942**	ug/L	5.496	888	0.002
	Zn	66	**1.415**	ug/L	0.950	1062	0.003
	Zn	67		ug/L		15959	0.031
	Zn	68		ug/L		1397	0.003
>	Ge	74		ug/L		303009	303009.142
	As	75	**0.373**	ug/L	237.565	1073	0.001
	Se	77		ug/L		24740	0.058
	Se	82	**0.006**	ug/L	5467.527	6	0.000
	Mo	98	**0.027**	ug/L	13.187	159	0.000
	Ag	107	**-0.003**	ug/L	64.944	49	-0.000
	Cd	111	**-0.011**	ug/L	76.499	22	-0.000
	Cd	114		ug/L		55	-0.000
>	In	115		ug/L		222765	222765.468
	Sb	121	**0.109**	ug/L	4.211	973	0.002
	Sb	123		ug/L		806	0.002
	Ba	135		ug/L		277	0.001
	Ba	137	**0.228**	ug/L	2.892	483	0.001
>	Lu	175		ug/L		319330	319329.609
	Tl	205	**0.055**	ug/L	16.023	2580	0.002
	Pb	208	**0.009**	ug/L	46.964	791	0.000
	U	238	**-0.027**	ug/L	2.369	136	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45		97.3			
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		106.0			
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.9			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.5			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873974
Sample Date/Time: Wednesday, July 15, 2009 04:12:19
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 882357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\1201873974.184

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.052**	ug/L	45.597	28	0.000
	Al	27	**19.370**	ug/L	27.667	27694	0.052
>	Sc	45		ug/L		437318	437317.932
	Cr	52	**0.719**	ug/L	23.406	514	0.004
	Cr	53		ug/L		390558	0.521
	Mn	55	**1.212**	ug/L	5.219	6024	0.011
	Co	59	**0.006**	ug/L	52.625	251	0.000
	Ni	60	**0.210**	ug/L	9.343	240	0.000
	Cu	63		ug/L		1767	0.004
	Cu	65	**0.903**	ug/L	5.296	858	0.002
	Zn	66	**1.653**	ug/L	1.881	1202	0.003
	Zn	67		ug/L		16204	0.032
	Zn	68		ug/L		1511	0.003
>	Ge	74		ug/L		303341	303340.743
	As	75	**1.721**	ug/L	56.496	2133	0.004
	Se	77		ug/L		26303	0.063
	Se	82	**-0.247**	ug/L	118.325	-8	-0.000
	Mo	98	**0.009**	ug/L	50.318	120	0.000
	Ag	107	**-0.002**	ug/L	40.857	51	-0.000
	Cd	111	**-0.004**	ug/L	272.217	27	-0.000
	Cd	114		ug/L		56	-0.000
>	In	115		ug/L		218170	218170.149
	Sb	121	**0.098**	ug/L	9.945	915	0.002
	Sb	123		ug/L		730	0.001
	Ba	135		ug/L		294	0.001
	Ba	137	**0.237**	ug/L	12.370	497	0.001
>	Lu	175		ug/L		318464	318463.596
	Tl	205	**-0.025**	ug/L	29.668	1743	-0.001
	Pb	208	**0.011**	ug/L	47.187	808	0.000
	U	238	**-0.030**	ug/L	1.923	103	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45		97.6			
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		106.1			
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.8			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		99.3			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873975
Sample Date/Time: Wednesday, July 15, 2009 04:16:24
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 882357|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\1201873975.185

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**51.287**	**ug/L**	3.144	7101	0.016
	Al	27	**1924.037**	**ug/L**	2.711	2278732	5.173
>	Sc	45		**ug/L**		439570	439569.603
	Cr	52	**53.600**	**ug/L**	2.391	136841	0.314
	Cr	53		**ug/L**		380011	0.492
	Mn	55	**53.781**	**ug/L**	1.402	223557	0.506
	Co	59	**52.578**	**ug/L**	0.403	178903	0.406
	Ni	60	**53.871**	**ug/L**	1.629	39890	0.091
	Cu	63		**ug/L**		98185	0.223
	Cu	65	**54.836**	**ug/L**	3.335	45569	0.103
	Zn	66	**50.872**	**ug/L**	2.392	29550	0.098
	Zn	67		**ug/L**		20211	0.045
	Zn	68		**ug/L**		20794	0.067
>	Ge	74		**ug/L**		300368	300368.030
	As	75	**39.625**	**ug/L**	7.489	31387	0.102
	Se	77		**ug/L**		23448	0.054
	Se	82	**9.389**	**ug/L**	3.510	529	0.002
	Mo	98	**51.572**	**ug/L**	2.411	99935	0.463
	Ag	107	**53.291**	**ug/L**	0.773	189317	0.878
	Cd	111	**5.307**	**ug/L**	2.987	4510	0.021
	Cd	114		**ug/L**		10646	0.049
>	In	115		**ug/L**		215644	215643.927
	Sb	121	**109.298**	**ug/L**	2.611	390907	1.811
	Sb	123		**ug/L**		304796	1.412
	Ba	135		**ug/L**		50614	0.160
	Ba	137	**52.887**	**ug/L**	2.530	89531	0.283
>	Lu	175		**ug/L**		316030	316030.087
	Tl	205	**24.621**	**ug/L**	7.431	254269	0.798
	Pb	208	**20.773**	**ug/L**	1.996	239711	0.757
	U	238	**53.795**	**ug/L**	1.374	646720	2.045

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45		98.1			
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		105.1			
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.6			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		98.5			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1201873976
Sample Date/Time: Wednesday, July 15, 2009 04:20:29
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 882357|5|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\1201873976.186

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.056**	**ug/L**	64.053	28	0.000
	Al	27	**4.769**	**ug/L**	11.252	10337	0.013
>	Sc	45		**ug/L**		431207	431207.449
	Cr	52	**0.422**	**ug/L**	42.785	-244	0.002
	Cr	53		**ug/L**		242610	0.191
	Mn	55	**0.284**	**ug/L**	4.100	2175	0.003
	Co	59	**-0.000**	**ug/L**	650.941	227	-0.000
	Ni	60	**0.042**	**ug/L**	56.869	115	0.000
	Cu	63		**ug/L**		438	0.001
	Cu	65	**0.157**	**ug/L**	10.912	239	0.000
	Zn	66	**0.222**	**ug/L**	16.238	350	0.000
	Zn	67		**ug/L**		8690	0.008
	Zn	68		**ug/L**		731	0.001
>	Ge	74		**ug/L**		288453	288453.367
	As	75	**0.213**	**ug/L**	800.859	907	0.001
	Se	77		**ug/L**		13969	0.025
	Se	82	**-0.080**	**ug/L**	324.747	1	-0.000
	Mo	98	**0.022**	**ug/L**	40.239	140	0.000
	Ag	107	**0.003**	**ug/L**	177.585	67	0.000
	Cd	111	**-0.026**	**ug/L**	11.081	9	-0.000
	Cd	114		**ug/L**		41	-0.000
>	In	115		**ug/L**		210612	210612.368
	Sb	121	**0.108**	**ug/L**	4.587	919	0.002
	Sb	123		**ug/L**		765	0.002
	Ba	135		**ug/L**		100	0.000
	Ba	137	**0.047**	**ug/L**	7.274	170	0.000
>	Lu	175		**ug/L**		313132	313132.417
	Tl	205	**3.922**	**ug/L**	11.714	41870	0.127
	Pb	208	**-0.016**	**ug/L**	8.379	487	-0.001
	U	238	**-0.023**	**ug/L**	7.007	185	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45		96.2			
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.9			
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.3			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		97.6			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, July 15, 2009 04:28:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\QC Std 6.188

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**50.730**	**ug/L**	1.253	7066	0.016
	Al	27	**4825.993**	**ug/L**	4.903	5741154	12.975
>	Sc	45		**ug/L**		442179	442178.768
	Cr	52	**50.868**	**ug/L**	1.286	130593	0.298
	Cr	53		**ug/L**		209074	0.101
	Mn	55	**50.622**	**ug/L**	2.243	211699	0.476
	Co	59	**51.245**	**ug/L**	1.115	175400	0.396
	Ni	60	**50.978**	**ug/L**	1.288	37975	0.086
	Cu	63		**ug/L**		90961	0.205
	Cu	65	**50.814**	**ug/L**	3.038	42483	0.096
	Zn	66	**49.424**	**ug/L**	2.922	27473	0.095
	Zn	67		**ug/L**		11394	0.018
	Zn	68		**ug/L**		19285	0.065
>	Ge	74		**ug/L**		287388	287387.816
	As	75	**48.744**	**ug/L**	1.733	36752	0.125
	Se	77		**ug/L**		10531	0.013
	Se	82	**49.076**	**ug/L**	1.765	2621	0.009
	Mo	98	**50.542**	**ug/L**	2.717	96607	0.454
	Ag	107	**50.882**	**ug/L**	1.145	178268	0.838
	Cd	111	**50.764**	**ug/L**	3.541	42288	0.199
	Cd	114		**ug/L**		101349	0.476
>	In	115		**ug/L**		212699	212699.022
	Sb	121	**52.979**	**ug/L**	1.822	187193	0.878
	Sb	123		**ug/L**		147941	0.694
	Ba	135		**ug/L**		48032	0.151
	Ba	137	**49.678**	**ug/L**	0.918	84849	0.266
>	Lu	175		**ug/L**		318747	318747.395
	Tl	205	**37.001**	**ug/L**	6.128	384341	1.200
	Pb	208	**50.637**	**ug/L**	0.943	588458	1.844
	U	238	**51.482**	**ug/L**	1.599	624334	1.957

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9	101.461				
	Al	27	95.564				
>	Sc	45		98.7			
	Cr	52	101.735				
	Cr	53					
	Mn	55	101.243				
	Co	59	102.490				
	Ni	60	101.955				
	Cu	63					
	Cu	65	101.628				
	Zn	66	98.848				
	Zn	67					
	Zn	68					
>	Ge	74		100.6			
	As	75	97.489				
	Se	77					
	Se	82	98.152				
	Mo	98	101.083				
	Ag	107	101.763				
	Cd	111	101.529				
	Cd	114					
>	In	115		98.3			
	Sb	121	105.957				
	Sb	123					
	Ba	135					
	Ba	137	99.356				
>	Lu	175		99.3			
	Tl	205	74.002				
	Pb	208	101.273				
	U	238	102.964				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Tl	205CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, July 15, 2009 04:32:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: c:\elandata\dataset\090714\QC Std 7.189

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	**0.051**	**ug/L**	118.010	29	0.000
	Al	27	**4.411**	**ug/L**	9.472	10337	0.012
>	Sc	45		**ug/L**		449104	449104.492
	Cr	52	**0.126**	**ug/L**	106.969	-1041	0.001
	Cr	53		**ug/L**		170762	0.008
	Mn	55	**0.009**	**ug/L**	92.681	1105	0.000
	Co	59	**0.009**	**ug/L**	37.428	267	0.000
	Ni	60	**0.024**	**ug/L**	84.183	105	0.000
	Cu	63		**ug/L**		204	0.000
	Cu	65	**0.014**	**ug/L**	46.997	129	0.000
	Zn	66	**-0.002**	**ug/L**	1474.967	226	-0.000
	Zn	67		**ug/L**		6060	-0.001
	Zn	68		**ug/L**		556	-0.000
>	Ge	74		**ug/L**		288129	288129.213
	As	75	**-0.199**	**ug/L**	47.072	596	-0.001
	Se	77		**ug/L**		7773	0.003
	Se	82	**-0.133**	**ug/L**	229.628	-2	-0.000
	Mo	98	**0.047**	**ug/L**	19.857	194	0.000
	Ag	107	**0.010**	**ug/L**	19.206	97	0.000
	Cd	111	**-0.003**	**ug/L**	177.821	28	-0.000
	Cd	114		**ug/L**		83	0.000
>	In	115		**ug/L**		216232	216231.768
	Sb	121	**0.098**	**ug/L**	22.454	905	0.002
	Sb	123		**ug/L**		688	0.001
	Ba	135		**ug/L**		70	0.000
	Ba	137	**0.006**	**ug/L**	82.547	104	0.000
>	Lu	175		**ug/L**		320782	320782.211
	Tl	205	**2.364**	**ug/L**	10.353	26600	0.077
	Pb	208	**0.010**	**ug/L**	28.941	798	0.000
	U	238	**0.010**	**ug/L**	36.190	592	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Be	9					
	Al	27					
>	Sc	45		100.2			
	Cr	52					
	Cr	53					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.8			
	As	75					
	Se	77					
	Se	82					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.9			
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		100.0			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 7	Tl	205CCB is out of limts (+/- PQL)

QC Action

QC Action Line: Continue

Analysis Begun

Logged In Analyst: Administrator
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: S10

Sample Information File: C:\data-AA\Administrator\Sample Information\071509W1.SIF
Batch ID:
Results Data Set: 071509W2
Results Library: C:\data-AA\Administrator\Results\Results.mdb

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib Blank
Date Collected: 7/15/2009 10:05:14
Analyst:
Data Type: Original

Replicate Data: Calib Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0000	-0.0001	0.0000	10:06:15	Yes
2		[0.00]	0.0001	-0.0009	0.0001	10:06:50	Yes
Mean:		[0.00]	0.0001				
SD:		0.00	0.0000				
%RSD:		0.00	20.36				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: S0.2
Date Collected: 7/15/2009 10:07:08
Analyst:
Data Type: Original

Replicate Data: S0.2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0026	0.0137	0.0026	10:08:09	Yes
2		[0.2]	0.0027	0.0149	0.0027	10:08:44	Yes
Mean:		[0.2]	0.0026				
SD:		0.0	0.0001				
%RSD:		0.0	2.61				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.01305 Intercept: 0.00000

Sequence No.: 3
Autosampler Location: 3
Sample ID: S0.5
Date Collected: 7/15/2009 10:09:03
Analyst:
Data Type: Original

Replicate Data: S0.5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0066	0.0363	0.0066	10:10:04	Yes
2		[0.5]	0.0064	0.0352	0.0064	10:10:38	Yes
Mean:		[0.5]	0.0065				
SD:		0.0	0.0001				
%RSD:		0.0	2.04				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999994 Slope: 0.01295 Intercept: 0.00001

Sequence No.: 4
Autosampler Location: 4
Sample ID: S2.0
Date Collected: 7/15/2009 10:10:58
Analyst:
Data Type: Original

Replicate Data: S2.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	[2.0]	0.0260	0.1430	0.0261	10:11:59	Yes
2	[2.0]	0.0261	0.1415	0.0261	10:12:34	Yes
Mean:	[2.0]	0.0260				
SD:	0.0	0.0000				
%RSD:	0.0	0.13				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999999 Slope: 0.01302 Intercept: -0.00001

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S5.0 **Date Collected: 7/15/2009 10:12:54**
Analyst: **Data Type: Original**

Replicate Data: S5.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0626	0.3377	0.0626	10:13:56	Yes
2		[5.0]	0.0612	0.3279	0.0613	10:14:31	Yes
Mean:		[5.0]	0.0619				
SD:		0.0	0.0010				
%RSD:		0.0	1.55				

Standard number 4 applied. [5.0]
Correlation Coef.: 0.999785 Slope: 0.01239 Intercept: 0.00033

Sequence No.: 6 **Autosampler Location: 6**
Sample ID: S10.0 **Date Collected: 7/15/2009 10:14:51**
Analyst: **Data Type: Original**

Replicate Data: S10.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1242	0.6749	0.1243	10:15:51	Yes
2		[10.0]	0.1229	0.6665	0.1230	10:16:26	Yes
Mean:		[10.0]	0.1236				
SD:		0.0	0.0009				
%RSD:		0.0	0.74				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999948 Slope: 0.01233 Intercept: 0.00040

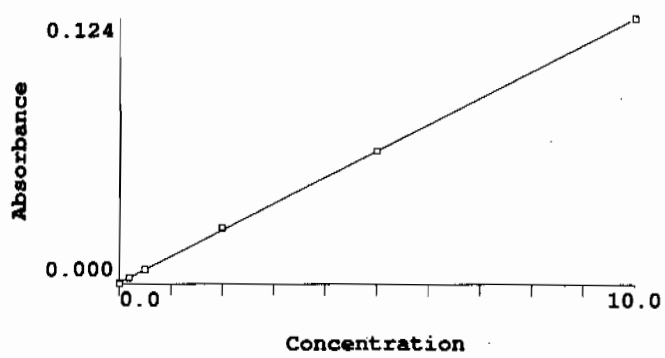

Calibration data for Hg 253.7 **Equation: Linear, Calculated Intercept**

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	-0.032	0.00	20.4
S0.2	0.0026	0.2	0.180	0.00	2.6
S0.5	0.0065	0.5	0.493	0.00	2.0
S2.0	0.0260	2.0	2.080	0.00	0.1
S5.0	0.0619	5.0	4.989	0.00	1.6
S10.0	0.1236	10.0	9.990	0.00	0.7

Correlation Coef.: 0.999948 Slope: 0.01233 Intercept: 0.00040

Sequence No.: 7 **Autosampler Location: 9**
Sample ID: ICV **Date Collected: 7/15/2009 10:16:45**
Analyst: **Data Type: Original**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.079	5.079	0.0630	0.3426	0.0631	10:17:46	Yes
2	4.960	4.960	0.0616	0.3279	0.0616	10:18:21	Yes
Mean:	5.020	5.020	0.0623				
SD:	0.084	0.084	0.0010				
%RSD:	1.676	1.676	1.66				

QC value within limits for Hg 253.7 Recovery = 100.39%
All analyte(s) passed QC.

Sequence No.: 8 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 7/15/2009 10:18:41**
Analyst: **Data Type: Original**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.021	-0.021	0.0001	0.0006	0.0002	10:19:42	Yes
2	-0.009	-0.009	0.0003	0.0024	0.0003	10:20:17	Yes
Mean:	-0.015	-0.015	0.0002				
SD:	0.008	0.008	0.0001				
%RSD:	56.64	56.64	48.57				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 9 **Autosampler Location: 11**
Sample ID: CRDL **Date Collected: 7/15/2009 10:20:36**
Analyst: **Data Type: Original**

Replicate Data: CRDL

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.192	0.192	0.0028	0.0151	0.0028	10:21:38	Yes
2	0.189	0.189	0.0027	0.0151	0.0028	10:22:13	Yes
Mean:	0.191	0.191	0.0027				
SD:	0.002	0.002	0.0000				
%RSD:	1.267	1.267	1.08				

QC value within limits for Hg 253.7 Recovery = 95.31%
All analyte(s) passed QC.

Sequence No.: 10 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/15/2009 10:22:33**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.951	4.951	0.0614	0.3377	0.0615	10:23:33	Yes
2	4.782	4.782	0.0594	0.3236	0.0594	10:24:08	Yes
Mean:	4.867	4.867	0.0604				
SD:	0.120	0.120	0.0015				
%RSD:	2.468	2.468	2.45				

QC value within limits for Hg 253.7 Recovery = 97.33%
All analyte(s) passed QC.

Sequence No.: 11 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/15/2009 10:24:27**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.032	-0.032	-0.0000	-0.0000	0.0000	10:25:28	Yes
2	-0.029	-0.029	0.0000	0.0004	0.0001	10:26:02	Yes
Mean:	-0.031	-0.031	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	7.748	7.748	152.62				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12 Autosampler Location: 12
Sample ID: 1201873049|881922|1 Date Collected: 7/15/2009 10:26:22
Analyst: JXL Data Type: Original

Replicate Data: 1201873049|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.027	-0.027	0.0001	0.0005	0.0001	10:27:23	Yes
2	-0.023	-0.023	0.0001	0.0011	0.0002	10:27:59	Yes
Mean:	-0.025	-0.025	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	11.07	11.07	41.85				

Sequence No.: 13 Autosampler Location: 13
Sample ID: 1201873050|881922|1 Date Collected: 7/15/2009 10:28:19
Analyst: JXL Data Type: Original

Replicate Data: 1201873050|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.028	2.028	0.0254	0.1426	0.0254	10:29:21	Yes
2	1.964	1.964	0.0246	0.1342	0.0247	10:29:56	Yes
Mean:	1.996	1.996	0.0250				
SD:	0.045	0.045	0.0006				
%RSD:	2.270	2.270	2.23				

Sequence No.: 14 Autosampler Location: 14
Sample ID: 232435001|881922|1 Date Collected: 7/15/2009 10:30:16
Analyst: JXL Data Type: Original

Replicate Data: 232435001|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.030	-0.030	0.0000	0.0002	0.0001	10:31:17	Yes
2	-0.028	-0.028	0.0000	0.0005	0.0001	10:31:51	Yes
Mean:	-0.029	-0.029	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	3.264	3.264	31.25				

Sequence No.: 15 Autosampler Location: 15
Sample ID: 1201873051|881922|1 Date Collected: 7/15/2009 10:32:10
Analyst: JXL Data Type: Original

Replicate Data: 1201873051|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	-0.0010	0.0001	10:33:11	Yes
2	-0.032	-0.032	0.0000	0.0002	0.0001	10:33:46	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.002	0.002	0.0000				

%RSD:	7.620	7.620	120.12

Sequence No.: 16
Sample ID: 1201873052|881922|1
Analyst: JXL
Autosampler Location: 16
Date Collected: 7/15/2009 10:34:05
Data Type: Original

Replicate Data: 1201873052|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.297	1.297	0.0164	0.0919	0.0164	10:35:05	Yes
2	1.870	1.870	0.0235	0.1280	0.0235	10:35:40	Yes
Mean:	1.583	1.583	0.0199				
SD:	0.405	0.405	0.0050				
%RSD:	25.57	25.57	25.06				

Sequence No.: 17
Sample ID: 1201873053|881922|5
Analyst: JXL
Autosampler Location: 17
Date Collected: 7/15/2009 10:35:59
Data Type: Original

Replicate Data: 1201873053|881922|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.033	-0.033	-0.0000	-0.0001	0.0000	10:36:59	Yes
2	0.064	0.064	0.0012	0.0144	0.0012	10:37:34	Yes
Mean:	0.015	0.015	0.0006				
SD:	0.069	0.069	0.0009				
%RSD:	447.5	447.5	145.52				

Sequence No.: 18
Sample ID: 232435002|881922|1
Analyst: JXL
Autosampler Location: 18
Date Collected: 7/15/2009 10:37:53
Data Type: Original

Replicate Data: 232435002|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0005	0.0001	10:38:54	Yes
2	-0.031	-0.031	0.0000	0.0002	0.0001	10:39:29	Yes
Mean:	-0.030	-0.030	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	4.122	4.122	60.10				

Sequence No.: 19
Sample ID: 1201878713|884332|1
Analyst: JXL
Autosampler Location: 19
Date Collected: 7/15/2009 10:39:48
Data Type: Original

Replicate Data: 1201878713|884332|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0003	0.0001	10:40:48	Yes
2	-0.034	-0.034	-0.0000	-0.0035	0.0000	10:41:23	Yes
Mean:	-0.031	-0.031	0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	9.985	9.985	428.37				

Sequence No.: 20
Sample ID: 1201878714|884332|1
Analyst: JXL
Autosampler Location: 20
Date Collected: 7/15/2009 10:41:42
Data Type: Original

Replicate Data: 1201878714|884332|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	1.880	1.880	0.0236	0.1288	0.0236	10:42:43	Yes
2	1.850	1.850	0.0232	0.1273	0.0233	10:43:18	Yes
Mean:	1.865	1.865	0.0234				
SD:	0.021	0.021	0.0003				
%RSD:	1.143	1.143	1.12				

Sequence No.: 21 **Autosampler Location: 21**
Sample ID: 232755001|884332|1 **Date Collected: 7/15/2009 10:43:38**
Analyst: JXL **Data Type: Original**

Replicate Data: 232755001|884332|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.030	-0.030	0.0000	0.0002	0.0001	10:44:39	Yes
2	0.004	0.004	0.0004	-0.0037	0.0005	10:45:14	Yes
Mean:	-0.013	-0.013	0.0002				
SD:	0.024	0.024	0.0003				
%RSD:	181.7	181.7	127.93				

Sequence No.: 22 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/15/2009 10:45:33**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.553	4.553	0.0565	0.3129	0.0566	10:46:34	Yes
2	4.722	4.722	0.0586	0.3211	0.0587	10:47:08	Yes
Mean:	4.638	4.638	0.0576				
SD:	0.119	0.119	0.0015				
%RSD:	2.576	2.576	2.56				

QC value within limits for Hg 253.7 Recovery = 92.75%
All analyte(s) passed QC.

Sequence No.: 23 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/15/2009 10:47:27**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.038	-0.038	-0.0001	-0.0011	-0.0000	10:48:28	Yes
2	-0.025	-0.025	0.0001	-0.0000	0.0001	10:49:03	Yes
Mean:	-0.031	-0.031	0.0000				
SD:	0.009	0.009	0.0001				
%RSD:	29.64	29.64	985.28				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 24 **Autosampler Location: 22**
Sample ID: 232759001|884332|1 **Date Collected: 7/15/2009 10:49:22**
Analyst: JXL **Data Type: Original**

Replicate Data: 232759001|884332|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.031	-0.031	0.0000	0.0002	0.0001	10:50:24	Yes
2	-0.030	-0.030	0.0000	0.0001	0.0001	10:50:59	Yes
Mean:	-0.031	-0.031	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	1.624	1.624	38.65				

Sequence No.: 25
Sample ID: 1201878715|884332|1
Analyst: JXL

Autosampler Location: 23
Date Collected: 7/15/2009 10:51:18
Data Type: Original

Replicate Data: 1201878715|884332|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.084	0.084	0.0014	0.0143	0.0015	10:52:20	Yes
2	-0.033	-0.033	-0.0000	-0.0000	0.0000	10:52:55	Yes
Mean:	0.026	0.026	0.0007				
SD:	0.083	0.083	0.0010				
%RSD:	323.8	323.8	143.68				

Sequence No.: 26
Sample ID: 1201878716|884332|1
Analyst: JXL

Autosampler Location: 24
Date Collected: 7/15/2009 10:53:15
Data Type: Original

Replicate Data: 1201878716|884332|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.419	1.419	0.0179	0.1070	0.0179	10:54:16	Yes
2	1.798	1.798	0.0226	0.1262	0.0226	10:54:51	Yes
Mean:	1.608	1.608	0.0202				
SD:	0.268	0.268	0.0033				
%RSD:	16.67	16.67	16.34				

Sequence No.: 27
Sample ID: 1201878717|884332|5
Analyst: JXL

Autosampler Location: 25
Date Collected: 7/15/2009 10:55:11
Data Type: Original

Replicate Data: 1201878717|884332|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.032	-0.032	-0.0000	-0.0005	0.0001	10:56:13	Yes
2	-0.029	-0.029	0.0000	0.0001	0.0001	10:56:48	Yes
Mean:	-0.031	-0.031	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	6.744	6.744	150.13				

User canceled analysis.

Analysis Begun

Logged In Analyst: Administrator
Spectrometer Model: FIMS-100, S/N B050-9550
Technique: AA FIMS-MHS
Autosampler Model: S10

Sample Information File: C:\data-AA\Administrator\Sample Information\071509W1.SIF
Batch ID:
Results Data Set: 071509W2
Results Library: C:\data-AA\Administrator\Results\Results.mdb

Sequence No.: 1
Sample ID: CCV
Analyst:
Autosampler Location: 7
Date Collected: 7/15/2009 11:05:10
Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.051	5.051	0.0627	0.3254	0.0627	11:06:10	Yes
2	5.026	5.026	0.0624	0.3226	0.0624	11:06:45	Yes
Mean:	5.038	5.038	0.0625				
SD:	0.018	0.018	0.0002				
%RSD:	0.353	0.353	0.35				

QC value within limits for Hg 253.7 Recovery = 100.77%
All analyte(s) passed QC.

Sequence No.: 2
Sample ID: CCB
Analyst:
Autosampler Location: 8
Date Collected: 7/15/2009 11:07:04
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0003	0.0001	11:08:05	Yes
2	-0.027	-0.027	0.0001	0.0006	0.0001	11:08:40	Yes
Mean:	-0.028	-0.028	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	4.570	4.570	30.86				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 3
Sample ID: 1201873052|881922|1
Analyst: JXL
Autosampler Location: 16
Date Collected: 7/15/2009 11:08:59
Data Type: Original

Replicate Data: 1201873052|881922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.024	2.024	0.0253	0.1320	0.0254	11:09:59	Yes
2	2.029	2.029	0.0254	0.1320	0.0255	11:10:34	Yes
Mean:	2.026	2.026	0.0254				
SD:	0.003	0.003	0.0000				
%RSD:	0.170	0.170	0.17				

Sequence No.: 4
Sample ID: 1201878686|884316|1
Analyst: JXL
Autosampler Location: 26
Date Collected: 7/15/2009 11:10:53
Data Type: Original

Replicate Data: 1201878686|884316|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.029	-0.029	0.0000	0.0005	0.0001	11:11:54	Yes

Miscellaneous

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 882338

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873935	UI090622-01	.25	mL
LCS	1201873935	UI090622-06	.25	mL
MS	1201873937	UI090622-01	.25	mL
MS	1201873937	UI090622-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873934		SW846 3005A	07-JUL-2009 14:33	50 mL	50 mL	1	WATER
LCS	1201873935		SW846 3005A	07-JUL-2009 14:33	50 mL	50 mL	1	WATER
SAMPLE	232753001		SW846 3005A	07-JUL-2009 14:33	50 mL	50 mL	1	WATER
SAMPLE	232755001		SW846 3005A	07-JUL-2009 14:33	50 mL	50 mL	1	WATER
SAMPLE	232759001		SW846 3005A	07-JUL-2009 14:33	50 mL	50 mL	1	WATER
DUP	1201873936	232759001	SW846 3005A	07-JUL-2009 14:33	50 mL	50 mL	1	WATER
MS	1201873937	232759001	SW846 3005A	07-JUL-2009 14:33	50 mL	50 mL	1	WATER
SDILT	1201873938	232759001	SW846 3005A	07-JUL-2009 14:33	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 882356

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873973	UI090622-A	.5	mL
LCS	1201873973	UI090622-B	.5	mL
MS	1201873975	UI090612-A	.5	mL
MS	1201873975	UI090612-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873972		SW846 3005A	07-JUL-2009 14:35	50 mL	50 mL	1	WATER
LCS	1201873973		SW846 3005A	07-JUL-2009 14:35	50 mL	50 mL	1	WATER
SAMPLE	232753001		SW846 3005A	07-JUL-2009 14:35	50 mL	50 mL	1	WATER
SAMPLE	232755001		SW846 3005A	07-JUL-2009 14:35	50 mL	50 mL	1	WATER
DUP	1201873974	232755001	SW846 3005A	07-JUL-2009 14:35	50 mL	50 mL	1	WATER
MS	1201873975	232755001	SW846 3005A	07-JUL-2009 14:35	50 mL	50 mL	1	WATER
SDILT	1201873976	232755001	SW846 3005A	07-JUL-2009 14:35	50 mL	50 mL	1	WATER
SAMPLE	232759001		SW846 3005A	07-JUL-2009 14:35	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143073	2.5 mL	HYDROCHLORIC ACID
1120667	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 884331

Lab SOP: GL-MA-E-010 REV# 22

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201878714	WHG090714-13	.2	mL
MS	1201878716	WHG090714-13	.2	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201878713		SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
LCS	1201878714		SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
SAMPLE	232755001		SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
SAMPLE	232759001		SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
DUP	1201878715	232759001	SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
MS	1201878716	232759001	SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER
SDILT	1201878717	232759001	SW846 7470A Prep	14-JUL-2009 12:10	20 mL	20 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1143839	1 mL	Sulfuric Acid, Concentrated
1136798-1	.5 mL	NITRIC ACID
1125381-C	1.5 mL	5% Potassium Persulfate
1144332-C	3 mL	5% KMnO4 solution
1144356-C	1 mL	Hg reducing agent
WHG090714-06	500 uL	Mercury Working 2nd Source 5.0/ICV
WHG090714-01	20 uL	Mercury Working 1st Source CAL 0.2/CRA
WHG090714-02	50 uL	Mercury Working 1st Source CAL 0.5
WHG090714-05	1 mL	Mercury Working 1st Source CAL 10.0
WHG090714-03	200 uL	Mercury Working 1st Source CAL 2.0
WHG090714-04	500 uL	Mercury Working 1st Source CAL 5.0/CCV

Comments Digestion Start Date: 14-JUL-09 12:10
Digestion End Date: 14-JUL-09 14:10

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 711567
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
15-JUL-09	Federal	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3005/6020	Liquid	ESHL, LANL
Batch ID:	**Sample Numbers:**		
882357	See Below		

Potentially affected work order(s)(SDG): 232753(09-2531),232755(09-2536-1),232759(09-2542)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed Recovery for MS/PS: QC 1201873975MS	The matrix spike recovery failed outside of the control limits for Tl due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Paul Boyd 16-JUL-09

Data Validator/Group Leader:

Paul Boyd

Standard Logbook

Serial ID: UHG910621-01 **Opened:** 02-SEP-08 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 29-AUG-08 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 30-AUG-09 **Lot Number :** 14-04HG
Employee: Tara Griffin **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG910623-02 **Opened:** 02-SEP-08 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 29-AUG-08 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 02-SEP-09 **Lot Number :** 4801240
Employee: Tara Griffin **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI081025-40 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810406
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: RICCA
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI081025-41 **Opened:** 08-JAN-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-OCT-08 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 31-OCT-09 **Lot Number :** 4810407
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: RICCA
Description: SECOND SOURCE STD #1B

Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI090209-42 **Opened:** 27-FEB-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 09-FEB-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 1014829
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090320-40 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907202
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Standard Logbook

Serial ID: UI090320-41 **Opened:** 20-APR-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 20-MAR-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 20-APR-10 **Lot Number :** 0907201
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI090320-42 **Opened:** 04-MAY-09 **Amount :** 200 mL
Name: SILICON **Received:** 16-APR-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 0901403
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI090413-12 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 13-APR-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1015648
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Standard Logbook

Serial ID: UI090413-13 **Opened:** 13-APR-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 13-APR-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 13-APR-10 **Lot Number :** 1013684
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090422-42 **Opened:** 26-MAY-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 22-APR-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-MAY-10 **Lot Number :** 1015739
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090605-06 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 05-JUN-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016037
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI090605-07 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 05-JUN-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016038
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI090605-08 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 05-JUN-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1016039
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI090605-60 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A

Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI090605-61 **Opened:** 05-JUN-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 05-JUN-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 01-JUN-10 **Lot Number :** 1014819
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090610-48 **Opened:** 23-JUN-09 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 12-JUN-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 23-JUN-10 **Lot Number :** 1016367
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si

Standard Logbook

Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI090610-49.18 **Opened:** 08-JUL-09 **Amount :** 100 ml
Name: Trace ICP ICSAB **Received:** 12-JUN-09 **Catalog Number :** 160066-04
Type: Source Material **Expires:** 09-JUL-09 **Lot Number :** 1016368
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Inteferent Check Standard AB
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

Serial ID: UI090612-A **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE liquid Spike Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	4 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	.5 mg/L
Calcium	200 mg/L	Chromium	5 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	2 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	1 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	5 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090612-B **Opened:** 12-JUN-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 12-JUN-09 **Lot Number :** 1015748
Type: Source Material **Expires:** 12-JUN-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE Liquid Spike Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI090619-40 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI090619-41 **Opened:** 22-JUN-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 19-JUN-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 22-JUN-10 **Lot Number :** 1016446
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI090622-01 **Opened:** 22-JUN-09 **Lot Number :** 1016405
Name: METALSPIKE-1 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI090622-06 **Opened:** 22-JUN-09 **Lot Number :** 1016406
Name: METALSPIKE-2 **Received:** 22-JUN-09
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI090622-A **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI090622-B **Opened:** 22-JUN-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 22-JUN-09 **Lot Number :** 1016459
Type: Source Material **Expires:** 22-JUN-10
Employee: Francena Armstrong
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Standard Logbook

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090703-11 **Opened:** 03-JUL-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 03-JUL-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 03-JUL-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UMS090605-01 **Opened:** 05-JUN-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 05-JUN-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-42JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090605-02 **Opened:** 05-JUN-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 05-JUN-09 **Lot Number :** 17-44JB
Type: Source Material **Expires:** 30-MAY-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090605-03 **Opened:** 05-JUN-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 05-JUN-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-10 **Lot Number :** 17-43JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Serial ID: IHG090714-01 **Opened:** 14-JUL-09 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 14-JUL-09 **Solvent :** 1mL HNO3 + Typel H2O
Type: Intermediate **Expires:** 15-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: IHG090714-02 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGINTER2 **Received:** 14-JUL-09
Type: Intermediate **Expires:** 15-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910623-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG090714-01 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.2CRA **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

Serial ID: WHG090714-02 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL0.5 **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG090714-03 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL2.0 **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Standard Logbook

Serial ID: WHG090714-04 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL5.0CCV **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090714-05 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORKCAL10.0 **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG090714-06 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGWORK5.0ICV **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG090714-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG090714-13 **Opened:** 14-JUL-09 **Solvent :** 2% HNO3-1136798
Name: MHGLIQLCSMSSPIKE **Received:** 14-JUL-09
Type: Working **Expires:** 20-JUL-09
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury working intermediate standard for LCS/MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG910621-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Standard Logbook

Serial ID: WI090708-42 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.1 PPM STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI090708-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI090708-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI090708-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI090708-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI090708-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI090708-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Serial ID: WI090708-43 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 - 1150990
Name: TRACE ICP 0.5/CCV STD. **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP O.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI090320-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI090320-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090320-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI090422-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Standard Logbook

Serial ID: WI090708-44 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1 %HNO3 -1150990
Name: TRACE ICP SCAL 1.0 **Received:** 20-MAR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090209-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI090209-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090320-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI090320-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI090320-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI090320-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Serial ID: WI090708-45 **Opened:** 08-JUL-09 **Solvent :** 3%HCL and 1%HNO3 -1150990
Name: TRACE ICP S-10 STD **Received:** 22-APR-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI090708-46 **Opened:** 08-JUL-09 **Solvent :** 3%HCL AND 1%HNO3 -1150990
Name: ICP TRACE ICV **Received:** 31-OCT-08
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI081025-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI081025-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI081025-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI081025-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI081025-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090320-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI090320-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI090708-47 **Opened:** 08-JUL-09 **Solvent :** 3%HCL &1%HNO3-1150990
Name: PQL Working Standard **Received:** 30-JUN-09
Type: Working **Expires:** 09-JUL-09
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS090714-04 **Opened:** 14-JUL-09 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl-1153776
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090605-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090605-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090605-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090605-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090605-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS090714-04A **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776

Name: ICPMS Cal Standard 10 **Received:** 14-JUL-09

Type: Working **Expires:** 15-JUL-09

Employee: Paul Boyd

Supplier: GEL

Description: ICPMS Calibration Standard (10 ppb)

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS090714-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS090714-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS090714-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS090714-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS090714-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS090714-05 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICV **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI090605-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI090605-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI090605-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI090605-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS090714-06 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS CRDL **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS090714-07 **Opened:** 14-JUL-09 **Lot Number :** 1010773
Name: ICPMS ICSA **Received:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-08 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS ICSAB **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI090413-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI090413-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI090413-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI090413-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI090413-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI090413-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090413-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI090413-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI090413-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI090413-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI090703-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI090703-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI090703-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI090703-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS090714-70 **Opened:** 14-JUL-09 **Solvent :** 2%HNO3/1%HCl - 1153776
Name: ICPMS LINEAR RANGE ST **Received:** 14-JUL-09
Type: Working **Expires:** 15-JUL-09
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI090605-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090605-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI090605-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI090605-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI090605-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI090605-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI090605-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI090605-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1090957-A **Opened:** 09-MAR-09 **Lot Number :** 48162839
Name: B-KMnO4(VWR)-MER **Received:** 09-MAR-09
Type: Reagent/Solvent **Expires:** 09-MAR-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1116812 **Opened:** 29-APR-09 **Lot Number :** E45475
Name: B-K2S2O8S-MER **Received:** 29-APR-09
Type: Reagent/Solvent **Expires:** 29-APR-10
Employee: Tara Griffin
Supplier: J.T BAKER
Description: Potassium Persulfate Concentrate.
Comments: None

Serial ID: 1120667 **Opened:** 15-JUN-09 **Lot Number :** H12022 L
Name: I-HNO3 **Received:** 15-JUN-09
Type: Reagent/Solvent **Expires:** 11-MAY-10
Employee: Anthony Green
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Standard Logbook

Serial ID: 1125381-C **Opened:** 21-MAY-09
Name: B-K2S2O8-MER **Received:** 21-MAY-09
Type: Reagent/Solvent **Expires:** 21-NOV-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% Potassium Persulfate
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1116812	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1136798-1 **Opened:** 12-JUN-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 12-JUN-09 **Lot Number :** H12022
Type: Reagent/Solvent **Expires:** 12-JUN-10
Employee: Tara Griffin
Supplier: J.T. BAKER
Description: NITRIC ACID
Comments: None

Serial ID: 1143073 **Opened:** 25-JUN-09 **Lot Number :** G51040
Name: I-HCL **Received:** 25-JUN-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 25-JUN-10
Employee: Lamanuel Hightower
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1143839 **Opened:** 29-JUN-09 **Lot Number :** G45010
Name: B-H2SO4-MER **Received:** 29-JUN-09
Type: Reagent/Solvent **Expires:** 29-JUN-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Sulfuric Acid, Concentrated
Comments: None

Serial ID: 1144332-C **Opened:** 30-JUN-09
Name: B-KMnO4-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 30-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1090957-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1144356-C **Opened:** 30-JUN-09
Name: B-NaCl.NH2OH.HCl-MER **Received:** 30-JUN-09
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
908024-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1150990 **Opened:** 06-JUL-09 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 06-JUL-09 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 13-JUL-09 **Solvent :** 3%HCL+1%HNO3
Employee: Louise Smith
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1153776 **Opened:** 13-JUL-09 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 13-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-09
Employee: Samantha Jacobs
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1120667	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1143073	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 908024-A **Opened:** 22-DEC-08 **Lot Number :** 48053817
Name: B-NH2OH.HCl-MER **Received:** 22-DEC-08
Type: Reagent/Solvent **Expires:** 22-DEC-09
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2536

Method/Analysis Information

Product: pH

Analytical Batch: 882616 **Method:** SW846 9045C/9045D

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9045C/9045D:

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201874570	232744001(CAMO-09-9956) Sample Duplicate (DUP)
1201874571	232760004(CAMO-09-10032) Sample Duplicate (DUP)
1201874572	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-008 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Electrode analysis was performed on a PerpHecT LogR pH/ISE.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Quality Control (QC) Information

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232744001 (CAMO-09-9956) and 232760004 (CAMO-09-10032).

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples from this sample group were received by the lab outside of the method specified holding time: 232754001 (CAMO-09-6615), 232754002 (CAMO-09-6614) and 232754003 (CAMO-09-6613).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	882479	**Method:**	SW846 9012A
Prep Batch :	882478	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201874274	Method Blank (MB)
1201874275	232744001(CAMO-09-9956) Sample Duplicate (DUP)
1201874276	232744002(CAMO-09-9950) Sample Duplicate (DUP)
1201874277	232744001(CAMO-09-9956) Matrix Spike (MS)
1201874278	232744002(CAMO-09-9950) Matrix Spike (MS)
1201874279	232744001(CAMO-09-9956) Matrix Spike Duplicate (MSD)
1201874280	232744002(CAMO-09-9950) Matrix Spike Duplicate (MSD)
1201874281	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232744001 (CAMO-09-9956) and 232744002 (CAMO-09-9950).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201874276 (CAMO-09-9950).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1201874281 (LCS).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product:	**Ion Chromatography**		
Analytical Batch:	882333	**Method:**	EPA 300.0
Prep Batch :	882332	**Method:**	EPA 300.0 PREP

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 300.0:

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201873912	Method Blank (MB)
1201873913	232744001(CAMO-09-9956) Sample Duplicate (DUP)
1201873914	232760004(CAMO-09-10032) Sample Duplicate (DUP)
1201873915	232744001(CAMO-09-9956) Matrix Spike (MS)
1201873916	232760004(CAMO-09-10032) Matrix Spike (MS)
1201873917	232744001(CAMO-09-9956) Matrix Spike Duplicate (MSD)
1201873918	232760004(CAMO-09-10032) Matrix Spike Duplicate (MSD)
1201873919	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-086 REV# 17.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Ion Chromatography analysis was performed on a Dionex ICS-3000 Ion Chromatograph.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232744001 (CAMO-09-9956) and 232760004 (CAMO-09-10032).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
The following samples were received with insufficient time to prep and/or analyze within the remaining method-specified holding time. The samples were analyzed as soon as possible by the analyst. 232754001 (CAMO-09-6615), 232754002 (CAMO-09-6614) and 232754003 (CAMO-09-6613).

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
The following NCR was generated for this SDG: 712375 232754001 (CAMO-09-6615), 232754002 (CAMO-09-6614) and 232754003 (CAMO-09-6613).

Manual Integrations
Manual integrations were not required for the samples in this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 22July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2536 GEL Work Order: 232754

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2536

Client Sample ID:	CAMO-09-6615	Project:	LANL01004
Sample ID:	232754001	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	7.23%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.2C	H	8.40	0.010	0.100	SU	1	RXG2 07/06/09	1226	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	64.3	236	ug/kg	1	AXC2 07/08/09	1251	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.323	1.08	mg/kg	1	VH1 07/15/09	1237	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2536

Client Sample ID:	CAMO-09-6614	Project:	LANL01004
Sample ID:	232754002	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	9.78%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal										
SW9045C pH Federal "As Received"										
pH at Temp 20.3C	H	7.38	0.010	0.100	SU	1	RXG2 07/06/09	1226	882616	1
Flow Injection Analysis Federal										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.1	261	ug/kg	1	AXC2 07/08/09	1252	882479	2
Ion Chromatography Federal										
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"										
Nitrate-N	HUh	ND	0.333	1.11	mg/kg	1	VH1 07/15/09	1257	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 17, 2009

Client SDG: 09-2536

Client Sample ID:	CAMO-09-6613	Project:	LANL01004
Sample ID:	232754003	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	9.74%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Electrode Analysis Federal											
SW9045C pH Federal "As Received"											
pH at Temp 20.0C	H	7.45	0.010	0.100	SU	1	RXG2	07/06/09	1230	882616	1
Flow Injection Analysis Federal											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND	71.1	261	ug/kg	1	AXC2	07/08/09	1253	882479	2
Ion Chromatography Federal											
EPA 300.0 Nitrate in Soil "Dry Weight Corrected"											
Nitrate-N	HUh	ND	0.332	1.11	mg/kg	1	VH1	07/15/09	1317	882333	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
EPA 300.0 PREP	EPA 300.0 Total Anions in Soil	VH1	07/13/09	1910	882332
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/08/09	0830	882478

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9045C/9045D	
2	SW846 9012A	
3	EPA 300.0	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 17, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232754

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Electrode Analysis											
Batch 882616											
QC1201874570 232744001 DUP											
pH		H	8.03	H	8.06	SU	0.373		(0%-10%)	RXG2	07/06/09 12:10
QC1201874571 232760004 DUP											
pH		H	8.18	H	8.23	SU	0.609		(0%-10%)		07/06/09 12:40
QC1201874572 LCS											
pH	7.00				7.05	SU		101	(95%-105%)		07/06/09 12:05
Flow Injection Analysis											
Batch 882479											
QC1201874275 232744001 DUP											
Cyanide, Total		J	110	J	110	ug/kg	N/A ^		(+/-285)	AXC2	07/08/09 12:36
QC1201874276 232744002 DUP											
Cyanide, Total		J	98.3	U	ND	ug/kg	N/A ^		(+/-254)		07/08/09 12:40
QC1201874281 LCS											
Cyanide, Total	174000				165000	ug/kg		94.8	(46%-145%)		07/08/09 12:34
QC1201874274 MB											
Cyanide, Total				U	250	ug/kg					07/08/09 12:34
QC1201874277 232744001 MS											
Cyanide, Total	5290	J	110		4940	ug/kg		91.3	(50%-130%)		07/08/09 12:37
QC1201874278 232744002 MS											
Cyanide, Total	5380	J	98.3		5200	ug/kg		95	(50%-130%)		07/08/09 12:41
QC1201874279 232744001 MSD											
Cyanide, Total	5820	J	110		5510	ug/kg	10.9	92.8	(0%-30%)		07/08/09 12:38
QC1201874280 232744002 MSD											
Cyanide, Total	5480	J	98.3		5200	ug/kg	0.0405	93.1	(0%-30%)		07/08/09 12:41
Ion Chromatography											
Batch 882333											
QC1201873913 232744001 DUP											
Nitrate-N		Hh	12.8	Hh	12.5	mg/kg	2.24		(0%-20%)	VH1	07/15/09 08:36
QC1201873914 232760004 DUP											
Nitrate-N		Hh	1.21	Hh	1.33	mg/kg	9.36 ^		(+/-1.18)		07/15/09 15:37
QC1201873919 LCS											
Nitrate-N	50.0				47.7	mg/kg		95.5	(90%-110%)		07/15/09 07:55
QC1201873912 MB											
Nitrate-N				U	1.00	mg/kg					07/15/09 07:35
QC1201873915 232744001 MS											
Nitrate-N	58.2	Hh	12.8	Hh	73.4	mg/kg		104	(90%-110%)		07/15/09 08:56
QC1201873916 232760004 MS											
Nitrate-N	58.8	Hh	1.21	Hh	60.8	mg/kg		101	(90%-110%)		07/15/09 15:58
QC1201873917 232744001 MSD											
Nitrate-N	58.2	Hh	12.8	Hh	73.2	mg/kg	0.246	104	(0%-20%)		07/15/09 09:16
QC1201873918 232760004 MSD											
Nitrate-N	58.8	Hh	1.21	Hh	60.8	mg/kg	0.089	101	(0%-20%)		07/15/09 16:18

QC Summary

Workorder: 232754

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

QC Summary

Workorder: 232754

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 17-JUL-2009 16:00

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2536**

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

ICV	**08-JUL-2009 12:28:31**	**OM_7-8-2009_12-20-35**	**148**	**150**	**99**	**(90%-110%)**	**Yes**
CCV	08-JUL-2009 12:42:48	OM_7-8-2009_12-20-35	105	100	105	(90%-110%)	Yes
CCV	08-JUL-2009 12:55:14	OM_7-8-2009_12-20-35	104	100	104	(90%-110%)	Yes

ICB	**08-JUL-2009 12:30:21**	**OM_7-8-2009_12-20-35**	**-0.666**	**5**	**Yes**
CCB	08-JUL-2009 12:44:38	OM_7-8-2009_12-20-35	-0.647	5	Yes
CCB	08-JUL-2009 12:57:05	OM_7-8-2009_12-20-35	-2.21	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 17-JUL-2009 16:00

GEL Laboratories LLC
Contract: LANL01004
SDG #: 09-2536

Ion Chromatography
Method: EPA 300.0 Concentration Units:mg/L
Instrument: Dionex ICS-3000 Ion Chromatograph

Parmname: Nitrate-N

ICV	**14-JUL-2009 18:52:00**	**090714**	**4.7547**	**5**	**95**	**(90%-110%)**	**Yes**
CCV	15-JUL-2009 06:55:00	090714	4.7576	5	95	(90%-110%)	Yes
CCV	15-JUL-2009 10:56:00	090714	7.3682	7.5	98	(90%-110%)	Yes
CCV	15-JUL-2009 14:57:00	090714	4.7521	5	95	(90%-110%)	Yes
CCV	15-JUL-2009 16:38:00	090714	7.4003	7.5	99	(90%-110%)	Yes

ICB	**14-JUL-2009 19:12:00**	**090714**	**0**	**0.1**	**Yes**
CCB	15-JUL-2009 07:15:00	090714	0	0.1	Yes
CCB	15-JUL-2009 11:16:00	090714	0	0.1	Yes
CCB	15-JUL-2009 15:17:00	090714	0	0.1	Yes
CCB	15-JUL-2009 16:58:00	090714	0	0.1	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 882478

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201874281	URF071009-01	.25	g
MS	1201874277	URF1091135-02	.025	mL
MS	1201874278	URF1091135-02	.025	mL
MSD	1201874279	URF1091135-02	.025	mL
MSD	1201874280	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201874274		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.5 g	25 mL	50	SOIL
LCS	1201874281		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.25 g	25 mL	100	SOIL
SAMPLE	232744001		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.51 g	25 mL	49.01961	SOIL
DUP	1201874275	232744001	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.51 g	25 mL	49.01961	SOIL
MS	1201874277	232744001	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.55 g	25 mL	45.45455	SOIL
MSD	1201874279	232744001	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232744002		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.56 g	25 mL	44.64286	SOIL
DUP	1201874276	232744002	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.55 g	25 mL	45.45455	SOIL
MS	1201874278	232744002	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.52 g	25 mL	48.07692	SOIL
MSD	1201874280	232744002	SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	232744003		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232744004		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232744005		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232744006		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	232744007		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232744008		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	232754001		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	232754002		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232754003		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232760001		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	232760002		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.5 g	25 mL	50	SOIL
SAMPLE	232760003		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	232760004		SW846 9010B Prep	08-JUL-2009 08:30	> 12	0.57 g	25 mL	43.85965	SOIL

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090707-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep

Comments

Prep LogBook

1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/8/2009 12:21:21	OM_7-8-2009_12-20-35
150 ppb		1	axc2	7/8/2009 12:22:13	OM_7-8-2009_12-20-35
100 ppb		1	axc2	7/8/2009 12:23:05	OM_7-8-2009_12-20-35
50 ppb		1	axc2	7/8/2009 12:23:58	OM_7-8-2009_12-20-35
10 ppb		1	axc2	7/8/2009 12:24:52	OM_7-8-2009_12-20-35
CRDL 5.0 ppb		1	axc2	7/8/2009 12:25:45	OM_7-8-2009_12-20-35
ICAL-00		1	axc2	7/8/2009 12:26:40	OM_7-8-2009_12-20-35
ICV		1	axc2	7/8/2009 12:28:31	OM_7-8-2009_12-20-35
ICB		1	axc2	7/8/2009 12:30:21	OM_7-8-2009_12-20-35
CRDL		1	axc2	7/8/2009 12:32:11	OM_7-8-2009_12-20-35
1201874274	882479	1	axc2	7/8/2009 12:34:01	OM_7-8-2009_12-20-35
1201874281	882479	50	axc2	7/8/2009 12:34:54	OM_7-8-2009_12-20-35
232744001	882479	1	axc2	7/8/2009 12:35:47	OM_7-8-2009_12-20-35
1201874275	882479	1	axc2	7/8/2009 12:36:40	OM_7-8-2009_12-20-35
1201874277	882479	1	axc2	7/8/2009 12:37:33	OM_7-8-2009_12-20-35
1201874279	882479	1	axc2	7/8/2009 12:38:25	OM_7-8-2009_12-20-35
232744002	882479	1	axc2	7/8/2009 12:39:19	OM_7-8-2009_12-20-35
1201874276	882479	1	axc2	7/8/2009 12:40:11	OM_7-8-2009_12-20-35
1201874278	882479	1	axc2	7/8/2009 12:41:03	OM_7-8-2009_12-20-35
1201874280	882479	1	axc2	7/8/2009 12:41:56	OM_7-8-2009_12-20-35
CCV		1	axc2	7/8/2009 12:42:48	OM_7-8-2009_12-20-35
CCB		1	axc2	7/8/2009 12:44:38	OM_7-8-2009_12-20-35
232744003	882479	1	axc2	7/8/2009 12:46:27	OM_7-8-2009_12-20-35
232744004	882479	1	axc2	7/8/2009 12:47:19	OM_7-8-2009_12-20-35
232744005	882479	1	axc2	7/8/2009 12:48:11	OM_7-8-2009_12-20-35
232744006	882479	1	axc2	7/8/2009 12:49:02	OM_7-8-2009_12-20-35
232744007	882479	1	axc2	7/8/2009 12:49:54	OM_7-8-2009_12-20-35
232744008	882479	1	axc2	7/8/2009 12:50:48	OM_7-8-2009_12-20-35
232754001	882479	1	axc2	7/8/2009 12:51:41	OM_7-8-2009_12-20-35
232754002	882479	1	axc2	7/8/2009 12:52:35	OM_7-8-2009_12-20-35
232754003	882479	1	axc2	7/8/2009 12:53:28	OM_7-8-2009_12-20-35
232760001	882479	1	axc2	7/8/2009 12:54:21	OM_7-8-2009_12-20-35
CCV		1	axc2	7/8/2009 12:55:14	OM_7-8-2009_12-20-35
CCB		1	axc2	7/8/2009 12:57:05	OM_7-8-2009_12-20-35
232760002	882479	1	axc2	7/8/2009 12:58:54	OM_7-8-2009_12-20-35
232760003	882479	1	axc2	7/8/2009 12:59:46	OM_7-8-2009_12-20-35
232760004	882479	1	axc2	7/8/2009 13:00:39	OM_7-8-2009_12-20-35
CCV		1	axc2	7/8/2009 13:01:32	OM_7-8-2009_12-20-35
CCB		1	axc2	7/8/2009 13:03:22	OM_7-8-2009_12-20-35

Author: axc2 Date : 7/8/2009

Original Run Filename: OM_7-8-2009_12-20-35.OMN created 7/8/2009 12:20:35
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-8-2009_12-20-35.OMN last modified 7/8/2009 13:04:26
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090708-01	1	S1	200	9.02	7/8/2009@12:21:21			200 ppb
WCN090708-02	1	S2	150	6.78	7/8/2009@12:22:13			150 ppb
WCN090708-03	1	S3	100	4.55	7/8/2009@12:23:05			100 ppb
WCN090708-04	1	S4	50.0	2.29	7/8/2009@12:23:58			50 ppb
WCN090708-05	1	S5	10.0	0.523	7/8/2009@12:24:52			10 ppb
WCN090708-06	1	S6	5.00	0.323	7/8/2009@12:25:45			CRDL 5.0 ppb
WCN090708-08	1	S7	0.00	0.0495	7/8/2009@12:26:40			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99999 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090708-07	1	S8	148	6.70	7/8/2009@12:28:31			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	-1.2 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-1.2 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090708-08	1	S7	-0.666	0.0411	7/8/2009@12:30:21			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-0.666 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-0.666 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090708-06	1	S6	5.68	0.325	7/8/2009@12:32:11			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	5.68 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	5.68 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201874274|882479|MB	1	1	0.115	0.0761	7/8/2009@12:34:01			
1201874281||LCS	1	2	33.0	1.55	7/8/2009@12:34:54		50.00	
232744001	1	3	1.93	0.157	7/8/2009@12:35:47			
1201874275||DUP	1	4	1.92	0.157	7/8/2009@12:36:40			
1201874277||MS	1	5	93.4	4.25	7/8/2009@12:37:33			
1201874279||MSD	1	6	94.7	4.31	7/8/2009@12:38:25			
232744002	1	7	1.97	0.159	7/8/2009@12:39:19			
1201874276||DUP	1	8	0.574	0.0966	7/8/2009@12:40:11			
1201874278||MS	1	9	96.8	4.40	7/8/2009@12:41:03			
1201874280||MSD	1	10	94.9	4.32	7/8/2009@12:41:56			
WCN090708-03	1	S3	105	4.76	7/8/2009@12:42:48			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	4.7 < 10.0					

		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090708-08	1	S7	-0.647	0.0420	7/8/2009@12:44:38			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.647 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.647 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232744003	1	11	0.229	0.0812	7/8/2009@12:46:27			
232744004	1	12	1.72	0.148	7/8/2009@12:47:19			
232744005	1	13	0.877	0.110	7/8/2009@12:48:11			
232744006	1	14	0.365	0.0873	7/8/2009@12:49:02			
232744007	1	15	0.876	0.110	7/8/2009@12:49:54			
232744008	1	16	3.94	0.247	7/8/2009@12:50:48			
232754001	1	17	0.817	0.108	7/8/2009@12:51:41			
232754002	1	18	0.626	0.0990	7/8/2009@12:52:35			
232754003	1	19	-2.27	-0.0305	7/8/2009@12:53:28			
232760001	1	20	71.2	3.26	7/8/2009@12:54:21			
WCN090708-03	1	S3	104	4.74	7/8/2009@12:55:14			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	4.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	4.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090708-08	1	S7	-2.21	-0.0279	7/8/2009@12:57:05			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-2.21 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-2.21 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232760002	1	21	0.499	0.0932	7/8/2009@12:58:54			
232760003	1	22	1.92	0.157	7/8/2009@12:59:46			
232760004	1	23	0.972	0.114	7/8/2009@13:00:39			
WCN090708-03	1	S3	104	4.71	7/8/2009@13:01:32			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	3.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	3.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090708-08	1	S7	-0.810	0.0347	7/8/2009@13:03:22			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.810 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.810 > -5.00					
		Message	CCB Passed					

Author: axc2

Date : 7/8/2009

Action	Continue					

Analyte Properties Table for OM_7-8-2009_12-20-35.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

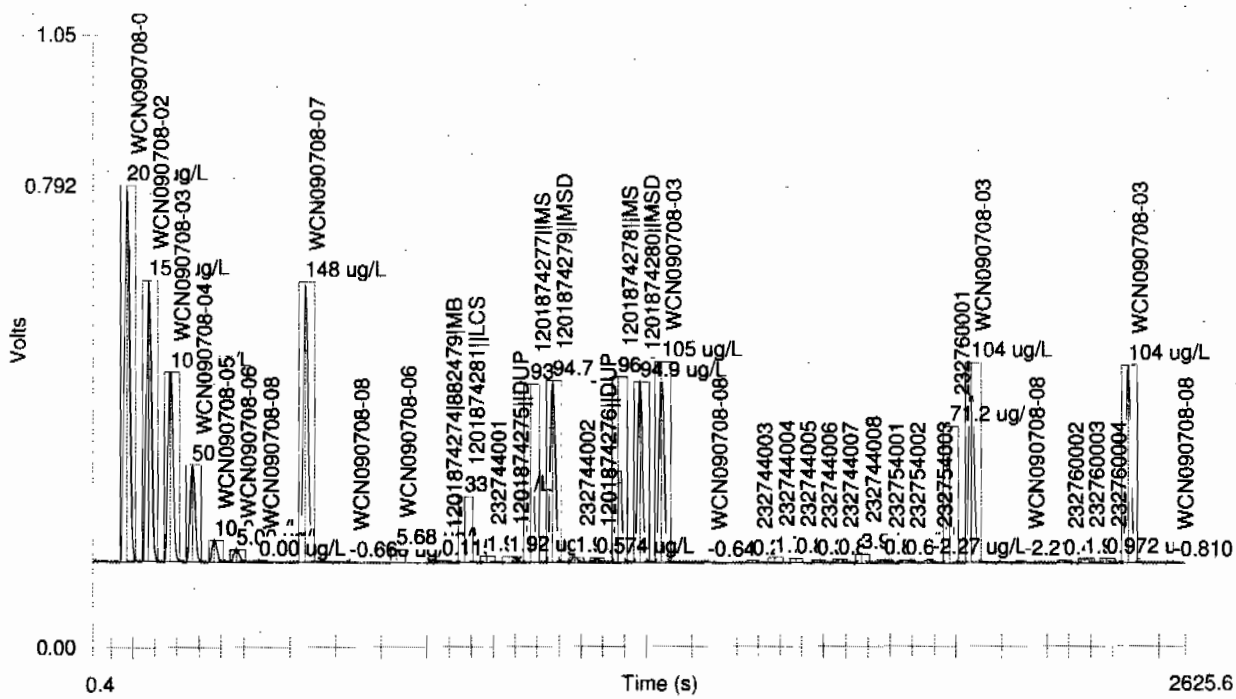

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	9.02	0.644	-0.1	7/8/2009	12:22:23
2	150	1	6.78	0.482	0.1	7/8/2009	12:23:16
3	100	1	4.55	0.324	-0.1	7/8/2009	12:24:08
4	50.0	1	2.29	0.164	0.6	7/8/2009	12:25:01
5	10.0	1	0.523	0.0360	-0.9	7/8/2009	12:25:55
6	5.00	1	0.323	0.0207	-9.6	7/8/2009	12:26:48
7	0.00	1	0.0495	0.00251		7/8/2009	12:27:43

Author: axc2

Date : 7/8/2009

Figure 1: TCYANIDE

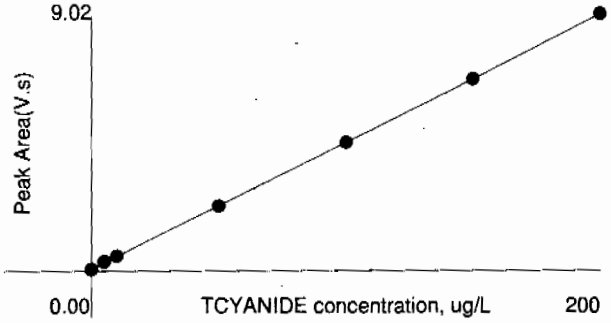

Area = 0.0447 * Conc + 0.0710
Conc = 22.4 * Area - 1.59
Correlation Coefficient (r) = 0.99999

No Weighting

Ion Chromatography

Prep LogBook

Analyst: VH1 Verified by:_____

Batch: 882332

Lab SOP: GL-GC-E-086 REV# 17

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873919	UIC090627SPK	.8	mL
MS	1201873915	UIC090627SPK	.8	mL
MS	1201873916	UIC090627SPK	.8	mL
MSD	1201873917	UIC090627SPK	.8	mL
MSD	1201873918	UIC090627SPK	.8	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873912		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
LCS	1201873919		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744001		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
DUP	1201873913	232744001	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
MS	1201873915	232744001	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
MSD	1201873917	232744001	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744002		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744003		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744004		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744005		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744006		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744007		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232744008		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232754001		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232754002		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232754003		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232760001		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232760002		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232760003		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
SAMPLE	232760004		EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
DUP	1201873914	232760004	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
MS	1201873916	232760004	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL
MSD	1201873918	232760004	EPA 300.0 PREP	13-JUL-2009 19:10	4 g	40 mL	10	SOIL

Comments

This is runlog for Sequence 090715.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
ICAL-07	06/30/09 19:42		1	090715	VXP1
ICAL-06	06/30/09 20:02		1	090715	VXP1
ICAL-05	06/30/09 20:22		1	090715	VXP1
ICAL-04	06/30/09 20:42		1	090715	VXP1
ICAL-03	06/30/09 21:02		1	090715	VXP1
ICAL-02	06/30/09 21:22		1	090715	VXP1
ICAL-01	06/30/09 21:42		1	090715	VXP1

1 AUTOCAL7

Sample Name:	AUTOCAL7	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 19:42	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

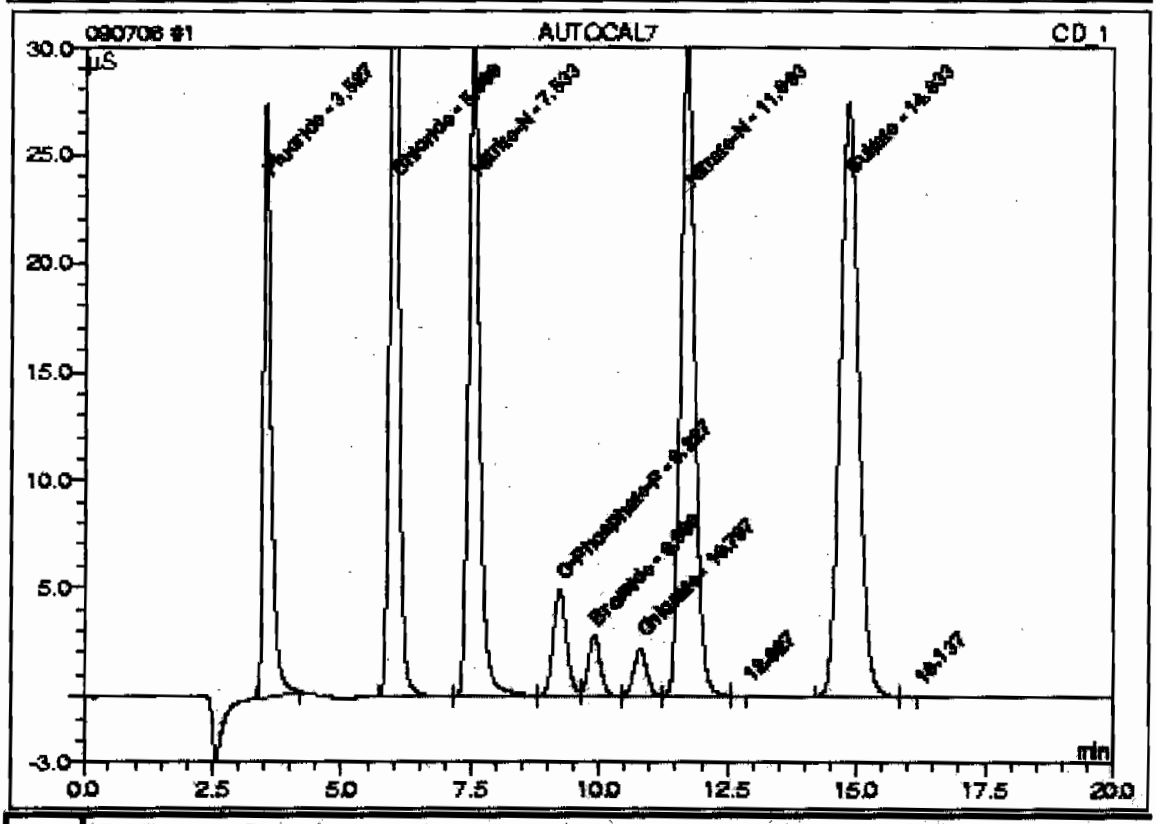

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	10.0000	10.0290		4.70541	10.63
2	5.99	Chloride	20.0000	20.2274		8.18440	18.48
3	7.53	Nitrite-N	10.0000	10.0334		7.46332	16.85
4	9.23	O-Phosphate-P	5.0000	5.0371		1.46230	3.30
5	9.90	Bromide	5.0000	4.9955		0.77503	1.75
6	10.80	Chlorate	5.0000	4.9979		0.66949	1.51
7	11.69	Nitrate-N	10.0000	10.0918		9.57545	21.62
9	14.83	Sulfate	40.0000	40.3984		11.43839	25.83
Total:				105.7205	0.000	44.274	99.99

2 AUTOCAL6

Sample Name:	AUTOCAL6	*Injection Volume:*	50.0
Vial Number:	10	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 20:02	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

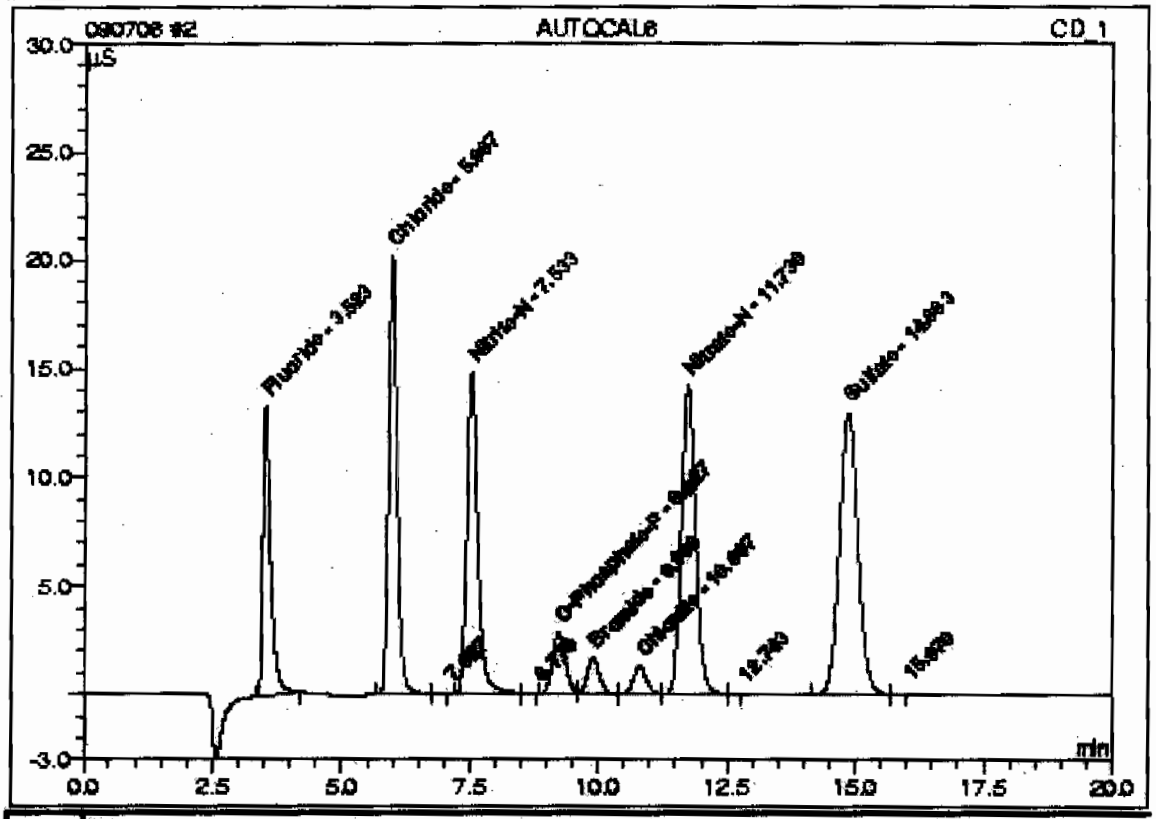

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.52	Fluoride	5.0000	4.9461		2.31918	10.74
2	5.99	Chloride	10.0000	9.5640		3.85172	17.84
4	7.53	Nitrite-N	5.0000	4.9418		3.65982	16.95
6	9.23	O-Phosphate-P	3.0000	2.9818		0.85705	3.97
7	9.90	Bromide	3.0000	3.0006		0.46409	2.15
8	10.81	Chlorate	3.0000	2.9896		0.39862	1.85
9	11.73	Nitrate-N	5.0000	4.8266		4.54600	21.06
11	14.86	Sulfate	20.0000	19.4192		5.47675	25.37
Total:				52.8598	0.000	21.572	99.93

3 AUTOCAL5

Sample Name:	AUTOCAL5	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 20:22	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

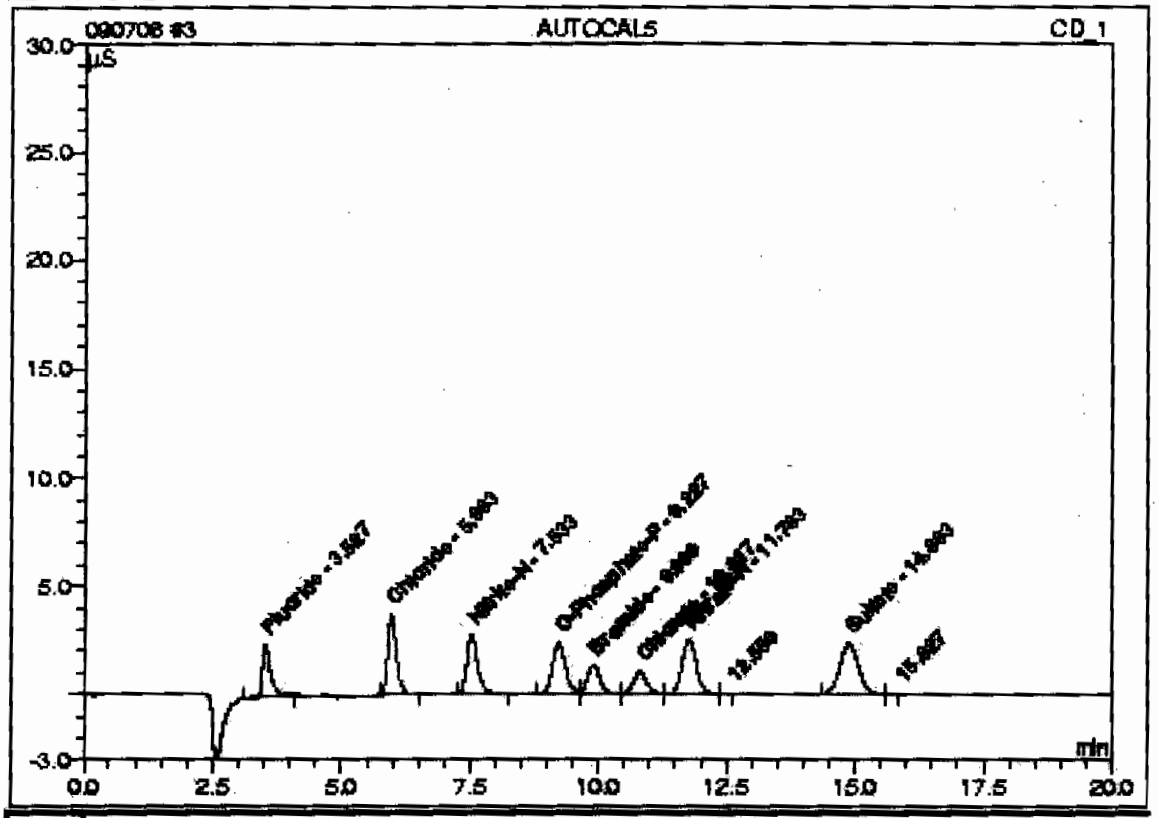

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	1.0000	0.9787		0.45662	8.88
2	5.98	Chloride	2.0000	1.8626		0.72253	14.04
3	7.53	Nitrite-N	1.0000	0.9576		0.68352	13.29
4	9.23	O-Phosphate-P	2.5000	2.4714		0.70675	13.74
5	9.90	Bromide	2.5000	2.5192		0.38906	7.56
6	10.82	Chlorate	2.5000	2.5356		0.33738	6.56
7	11.76	Nitrate-N	1.0000	0.9396		0.83307	16.19
9	14.89	Sulfate	4.0000	3.7893		1.01432	19.72
Total:				16.0533	0.000	5.143	99.97

4 AUTOCAL4

Sample Name:	AUTOCAL4	*Injection Volume:*	50.0
Vial Number:	12	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 20:42	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

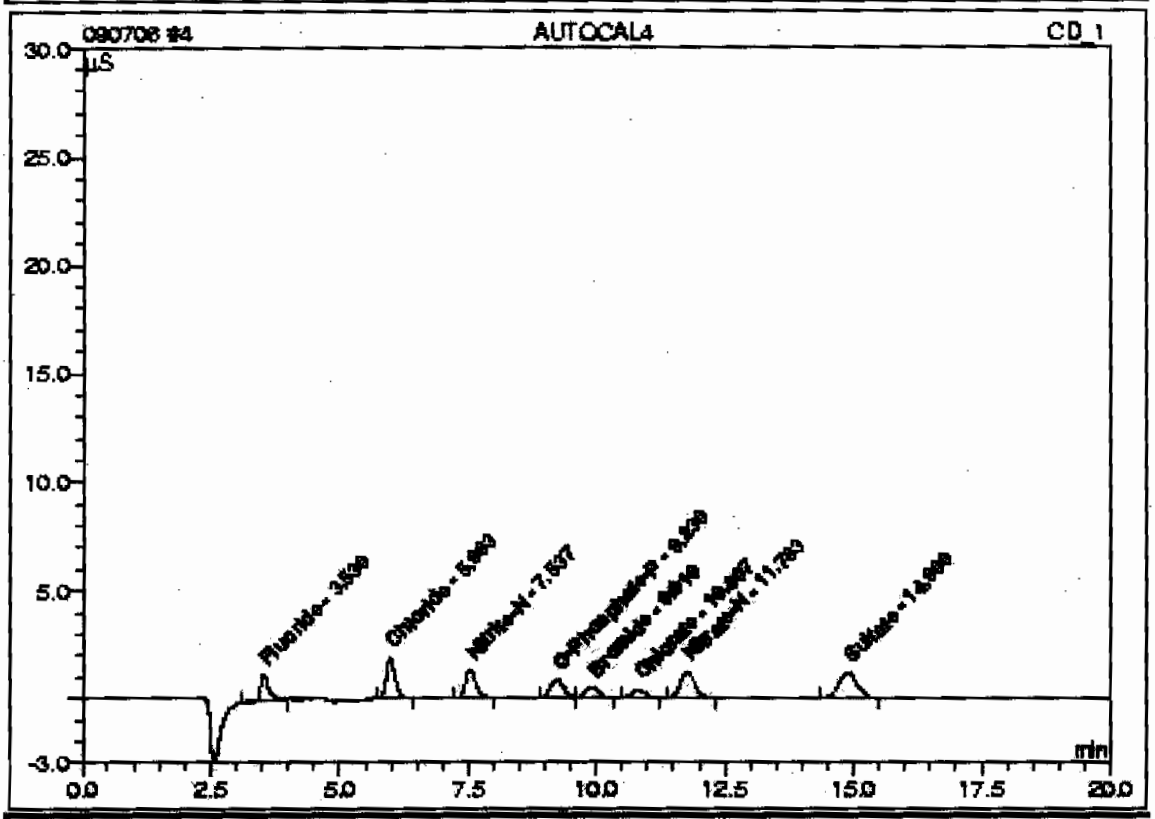

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	0.5000	0.4955		0.22978	9.69
2	5.98	Chloride	1.0000	1.0095		0.37591	15.86
3	7.54	Nitrite-N	0.5000	0.4974		0.33229	14.02
4	9.23	O-Phosphate-P	1.0000	0.9461		0.25757	10.87
5	9.91	Bromide	1.0000	0.9755		0.14843	6.26
6	10.81	Chlorate	1.0000	0.9637		0.12536	5.29
7	11.76	Nitrate-N	0.5000	0.4932		0.40672	17.16
8	14.90	Sulfate	2.0000	1.9884		0.49456	20.86
Total:				7.3392	0.000	2.371	100.00

5 AUTOCAL3

Sample Name:	AUTOCAL3	*Injection Volume:*	50.0
Vial Number:	13	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	063009AN	*Sample Amount:*	1.0000
Recording Time:	6/30/09 21:02	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

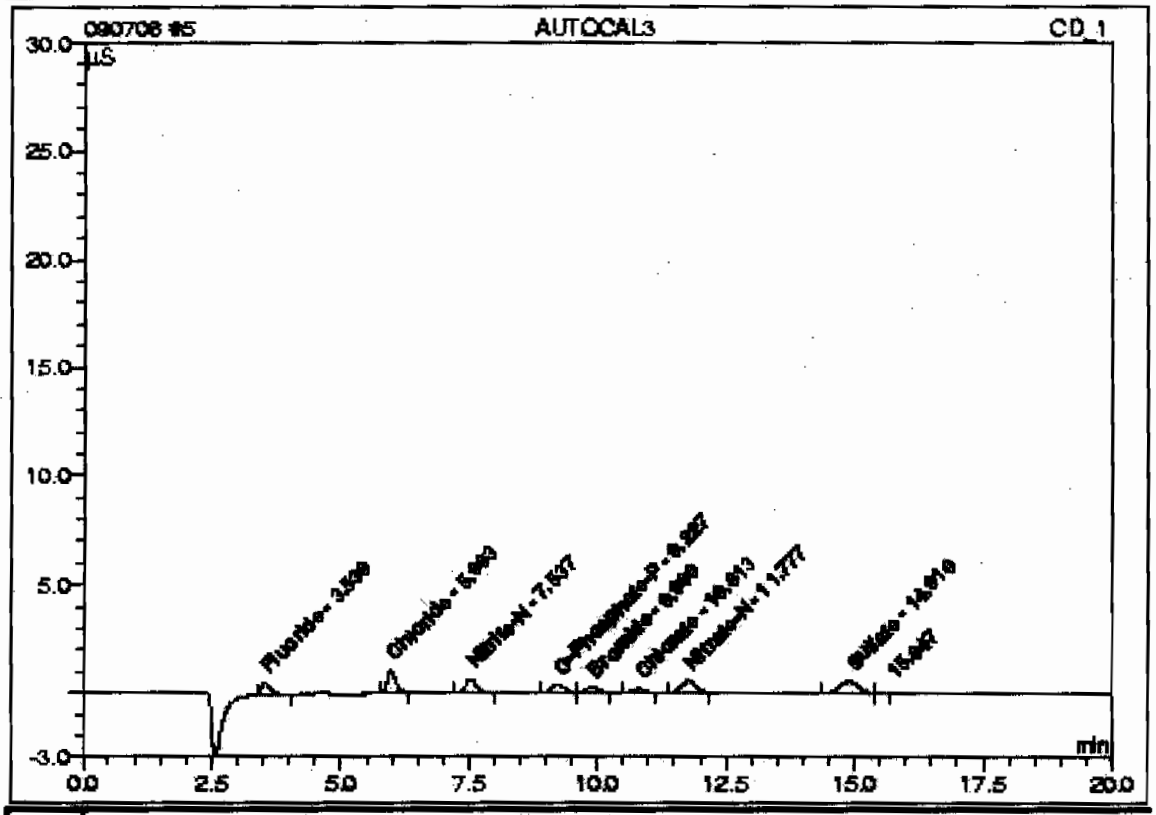

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	0.2500	0.2433		0.11138	9.33
2	5.98	Chloride	0.5000	0.5957		0.20375	17.06
3	7.54	Nitrite-N	0.2500	0.2628		0.16454	13.78
4	9.23	O-Phosphate-P	0.5000	0.4857		0.12199	10.21
5	9.90	Bromide	0.5000	0.5002		0.07435	6.23
6	10.81	Chlorate	0.5000	0.4782		0.05988	5.01
7	11.78	Nitrate-N	0.2500	0.2812		0.20417	17.09
8	14.91	Sulfate	1.0000	1.1205		0.25254	21.14
Total:				3.9576	0.000	1.193	99.85

6 AUTOCAL2

Sample Name:	AUTOCAL2	*Injection Volume:*	50.0
Vial Number:	14	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	063009AN	*Sample Amount:*	1.0000
Recording Time:	6/30/09 21:22	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

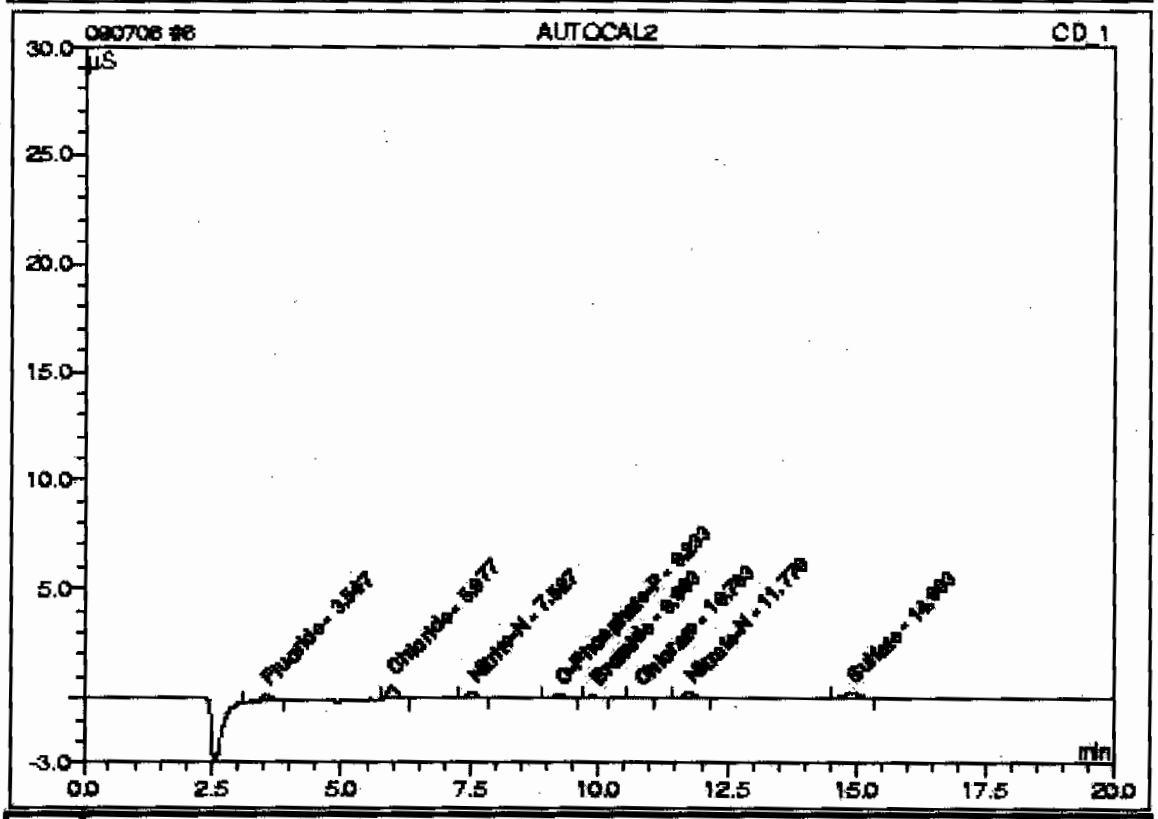

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.55	Fluoride	0.1000	0.1514		0.06822	13.57
2	5.98	Chloride	0.2000	0.3665		0.11464	22.81
3	7.53	Nitrite-N	0.1000	0.1244		0.06109	12.15
4	9.23	O-Phosphate-P	0.2000	0.2064		0.03974	7.91
5	9.90	Bromide	0.2000	0.1857		0.02533	5.04
6	10.78	Chlorate	0.2000	0.2009		0.02249	4.47
7	11.77	Nitrate-N	0.1000	0.1502		0.07904	15.72
8	14.90	Sulfate	0.4000	0.5585		0.09213	18.33
Total:				1.9439	0.000	0.503	100.00

7 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 21:42	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

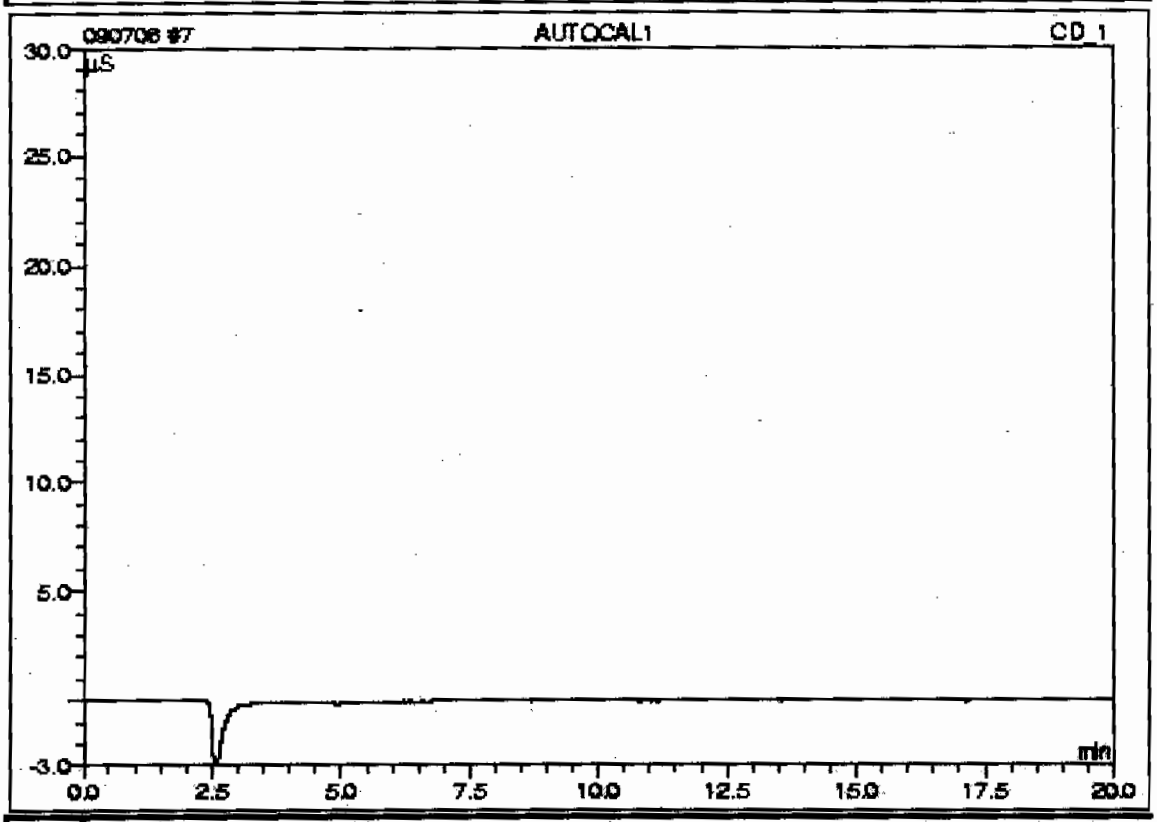

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	0.0000	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	0.0000	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

7 AUTOCAL1

Sample Name:	AUTOCAL1	*Injection Volume:*	50.0
Vial Number:	11	*Channel:*	CD_1
Sample Type:	standard	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	063009AN	*Sample Amount:*	1.0000
Recording Time:	6/30/2009 21:42	Analyst:	VXP1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

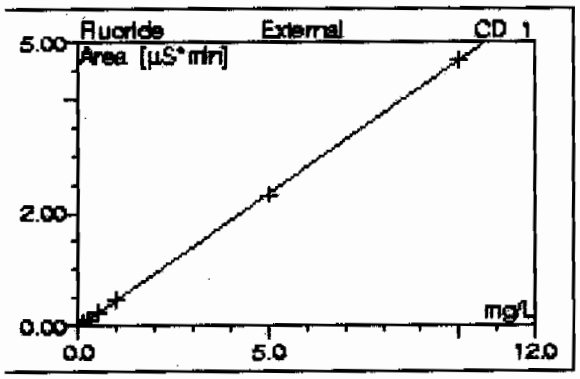

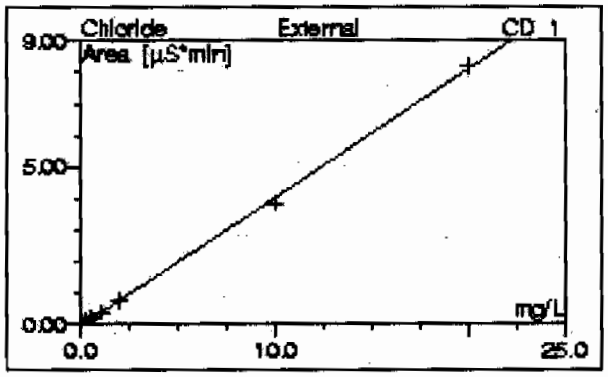

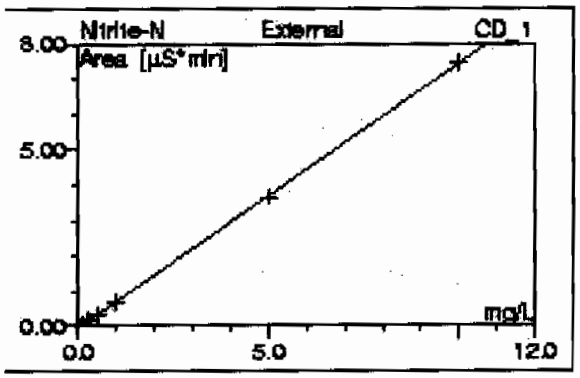

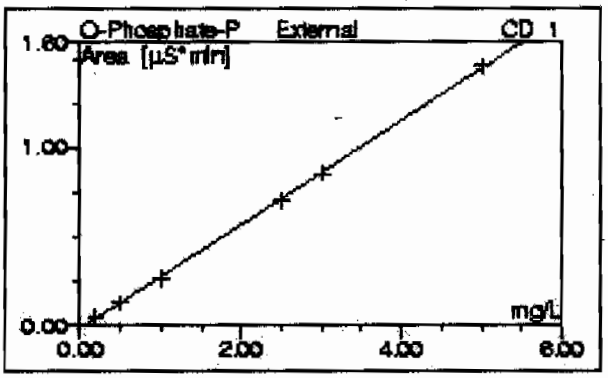

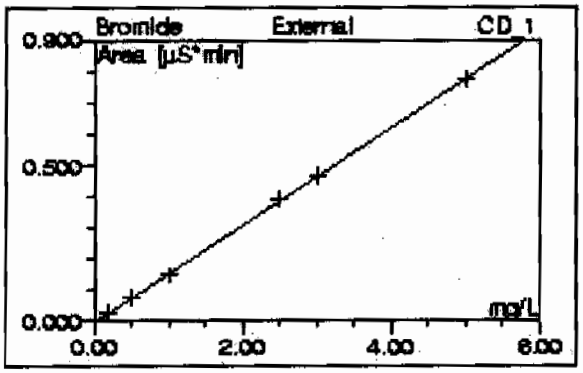

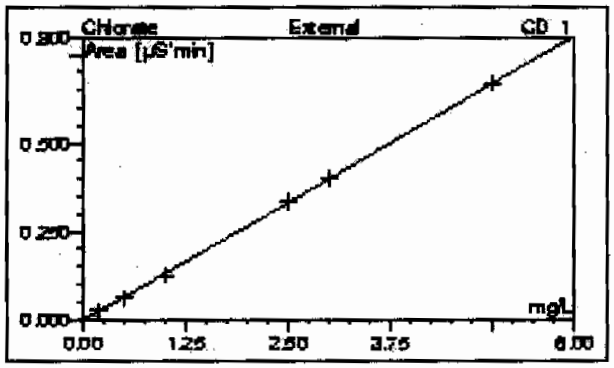

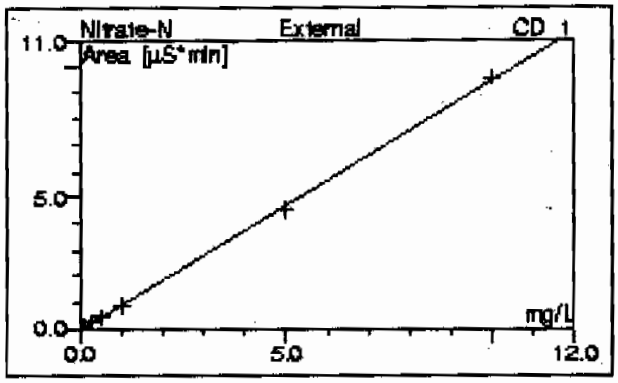

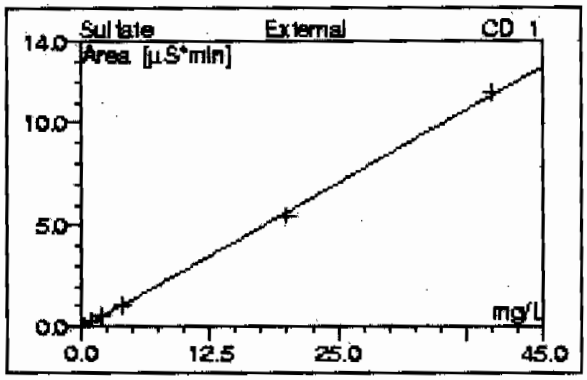

No. CD_1	Ret.Time CD_1 min	Peak Name CD_1	Cal.Type CD_1	Coeff.Det. CD_1 %	Offset CD_1	Slope CD_1	Curve CD_1
n.a.	n.a.	Fluoride	0LOff	99.9913	-0.0028	0.4695	0.0000
n.a.	n.a.	Chloride	0LOff	99.9067	-0.0343	0.4063	0.0000
n.a.	n.a.	Nitrite-N	0LOff	99.9909	-0.0318	0.7470	0.0000
n.a.	n.a.	O-Phosphate-P	0LOff	99.9867	-0.0210	0.2945	0.0000
n.a.	n.a.	Bromide	0LOff	99.9929	-0.0036	0.1559	0.0000
n.a.	n.a.	Chlorate	0LOff	99.9812	-0.0046	0.1349	0.0000
n.a.	n.a.	Nitrate-N	0LOff	99.9425	-0.0644	0.9552	0.0000
n.a.	n.a.	Sulfate	0LOff	99.9592	-0.0673	0.2854	0.0000
Average:				99.9664	-0.0287	0.4311	0.0000

This is runlog for Sequence 090630.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	06/30/09 18:41		1	090630	VH1
BLK	06/30/09 19:22		1	090630	VH1
ICAL-07	06/30/09 19:42		1	090630	VXP1
ICAL-06	06/30/09 20:02		1	090630	VXP1
ICAL-05	06/30/09 20:22		1	090630	VXP1
ICAL-04	06/30/09 20:42		1	090630	VXP1
ICAL-03	06/30/09 21:02		1	090630	VXP1
ICAL-02	06/30/09 21:22		1	090630	VXP1
ICAL-01	06/30/09 21:42		1	090630	VXP1
ICV	06/30/09 22:02		1	090630	VH1
ICB	06/30/09 22:22		1	090630	VH1
1201856494	06/30/09 22:42	874844	1	090630	VH1
1201856495	06/30/09 23:03	874844	1	090630	VH1
229136009	06/30/09 23:23	874844	1	090630	VH1
229136010	06/30/09 23:43	874844	1	090630	VH1

11 WIC090630-02ICV

Sample Name:	WIC090630-02ICV	*Injection Volume:*	50.0
Vial Number:	44	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	063009AN	*Sample Amount:*	1.0000
Recording Time:	6/30/09 22:02	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE088;300;9058	

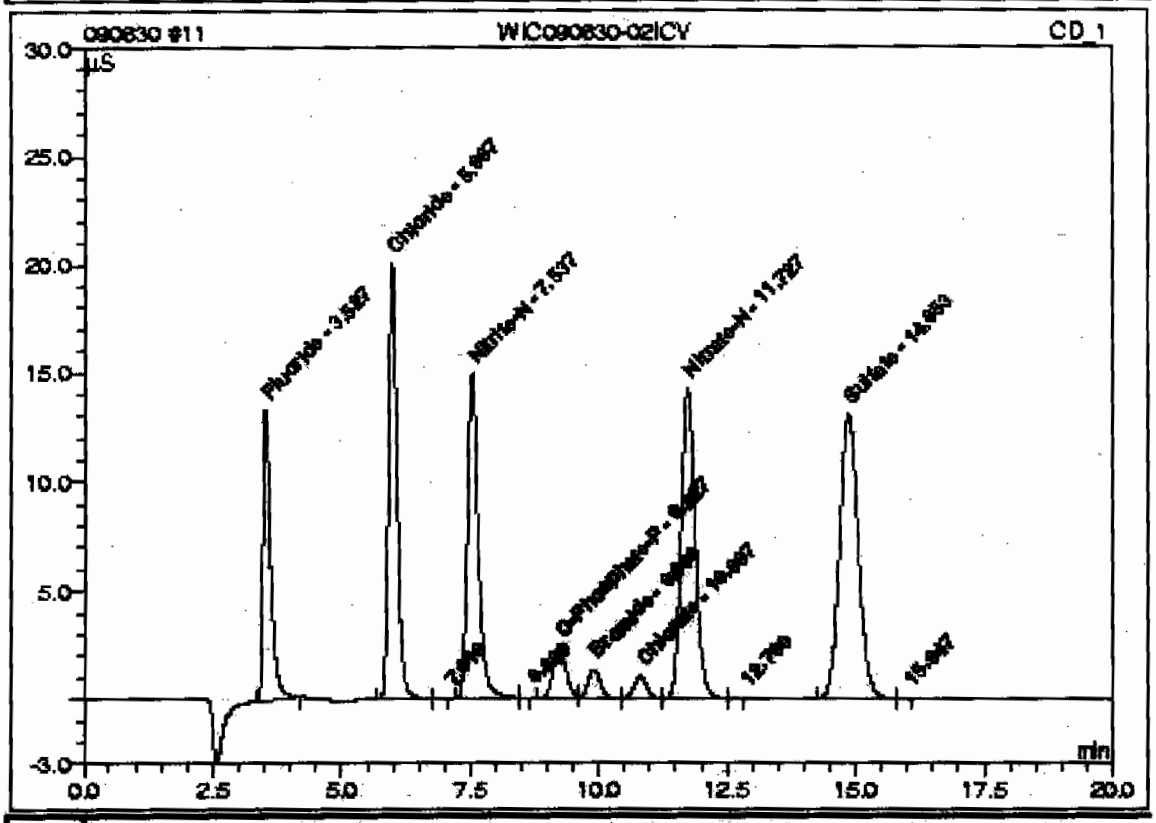

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.9400		2.31634	10.88
2	5.99	Chloride	n.a.	9.4454		3.80353	17.86
4	7.54	Nitrite-N	n.a.	4.9528		3.66803	17.22
6	9.23	O-Phosphate-P	n.a.	2.5036		0.71623	3.36
7	9.90	Bromide	n.a.	2.4864		0.38393	1.80
8	10.81	Chlorate	n.a.	2.4886		0.33105	1.55
9	11.73	Nitrate-N	n.a.	4.8499		4.56825	21.45
11	14.85	Sulfate	n.a.	19.4984		5.49836	25.82
Total:				51.1682	0.000	21.296	99.95

12 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	43	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	5/30/09 22:22	Analyst:	WH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

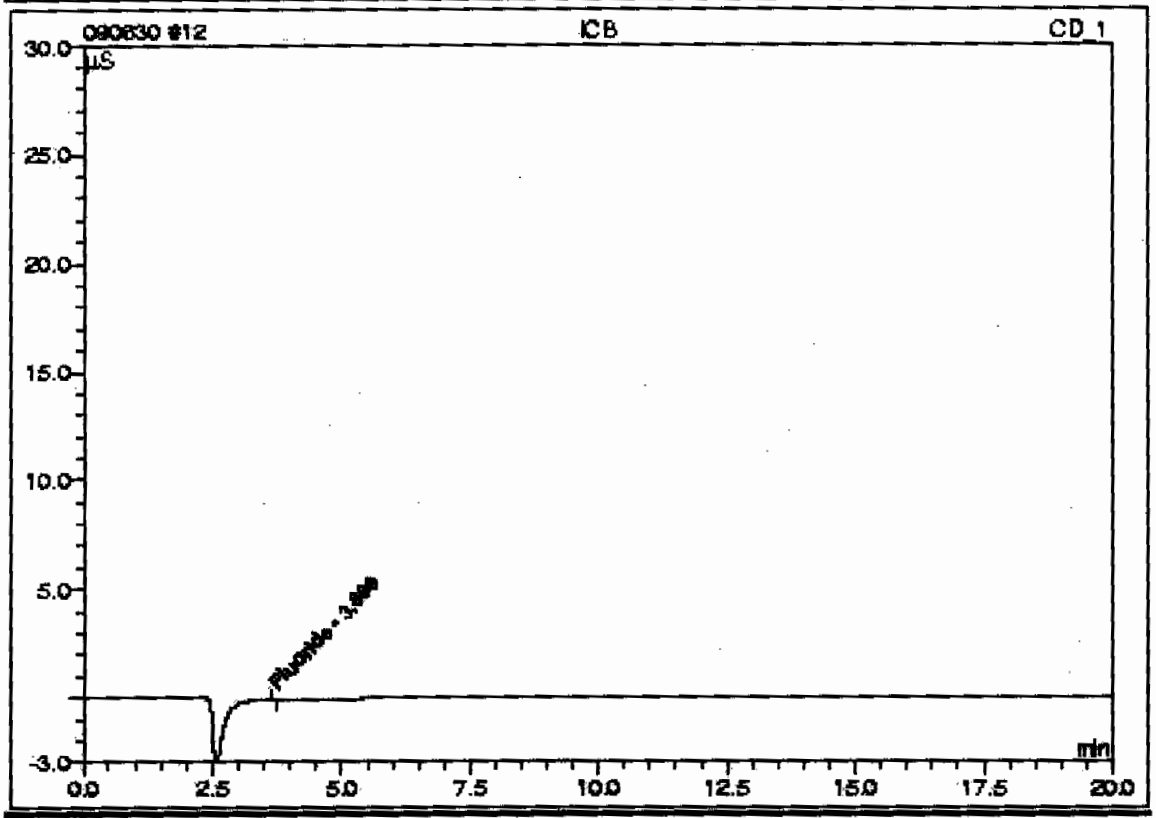

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.68	Fluoride	n.a.	0.0068		0.00036	100.00
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0068	0.000	0.000	100.00

This is runlog for Sequence 090714.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
BLK	07/14/09 17:51		1	090714	VH1
BLK	07/14/09 18:12		1	090714	VH1
BLK	07/14/09 18:32		1	090714	VH1
ICV	07/14/09 18:52		1	090714	VH1
ICB	07/14/09 19:12		1	090714	VH1
233300002	07/14/09 19:32	884471	2	090714	VH1
1201879009	07/14/09 19:52	884471	2	090714	VH1
1201879010	07/14/09 20:12	884471	2	090714	VH1
233300003	07/14/09 20:32	884471	10	090714	VH1
233300004	07/14/09 20:52	884471	10	090714	VH1
CVH	07/14/09 21:12		1	090714	VH1
CCB	07/14/09 21:33		1	090714	VH1
233301001	07/14/09 21:53	884472	5	090714	VH1
1201879013	07/14/09 22:13	884472	5	090714	VH1
1201879014	07/14/09 22:33	884472	5	090714	VH1
233301002	07/14/09 22:53	884472	5	090714	VH1
233301003	07/14/09 23:13	884472	5	090714	VH1
233301004	07/14/09 23:33	884472	5	090714	VH1
233301005	07/14/09 23:53	884472	10	090714	VH1

11 WIC090714-02ICV

Sample Name:	WIC090714-02ICV	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/14/09 18:52	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

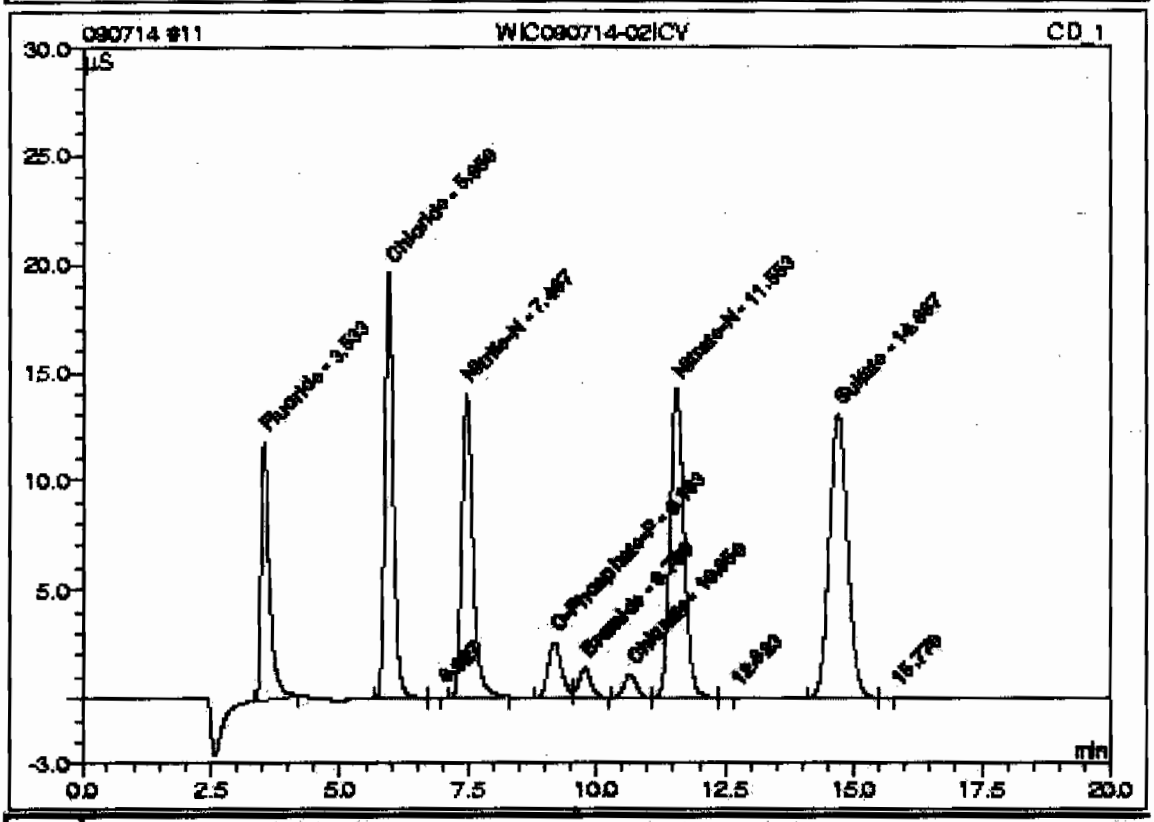

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.6836		2.19593	10.56
2	5.95	Chloride	n.a.	9.2826		3.73738	17.98
4	7.47	Nitrite-N	n.a.	4.7075		3.48480	16.76
5	9.18	O-Phosphate-P	n.a.	2.7259		0.78170	3.76
6	9.78	Bromide	n.a.	2.5763		0.39796	1.91
7	10.65	Chlorate	n.a.	2.4337		0.32364	1.56
8	11.55	Nitrate-N	n.a.	4.7547		4.47737	21.54
10	14.69	Sulfate	n.a.	19.0999		5.38461	25.90
Total:				50.2843	0.000	20.783	99.98

12 ICB

Sample Name:	ICB	*Injection Volume:*	50.0
Vial Number:	43	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/14/09 19:12	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

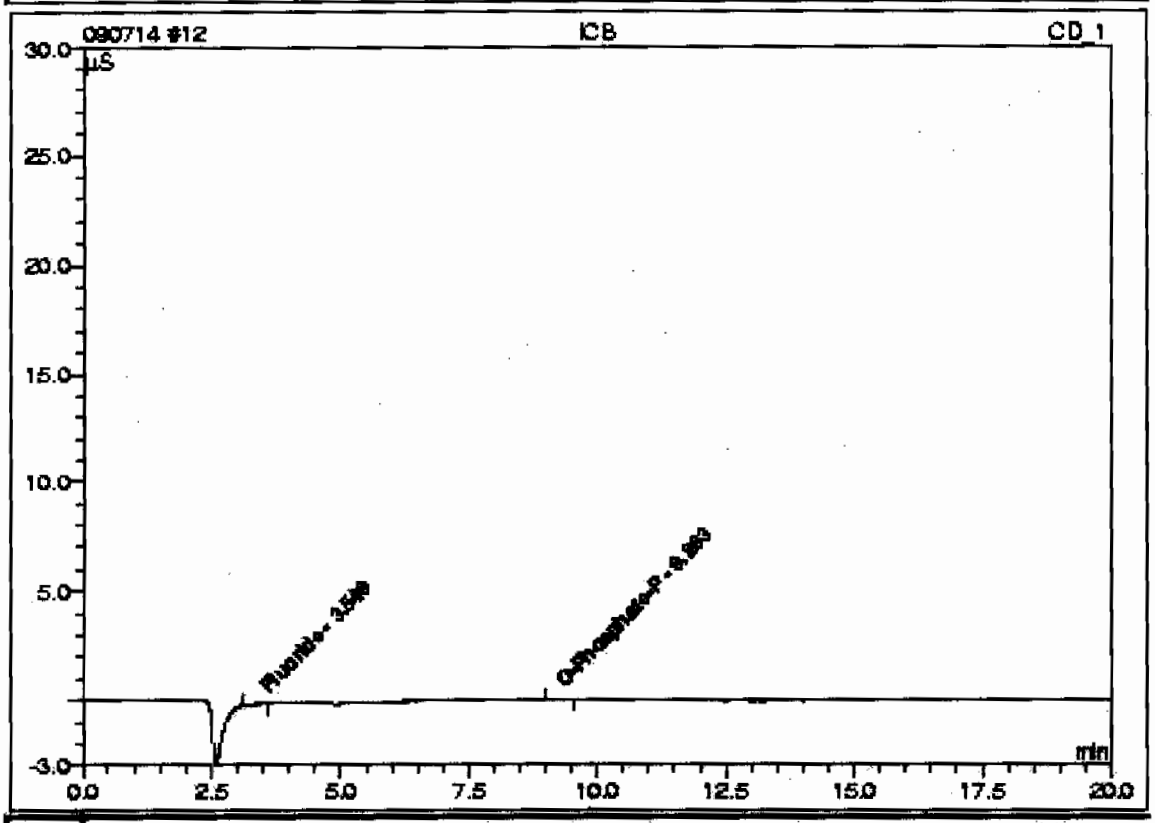

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.0258		0.00925	32.88
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
2	9.26	O-Phosphate-P	n.a.	0.1356		0.01889	67.12
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.1613	0.000	0.028	100.00

This is runlog for Sequence 090714.seq for IC5

Sample ID	Run Time	Batch	Dilution	Dataset	Analyst
233301006	07/15/09 00:13	884472	10	090714	VH1
CCV	07/15/09 00:33		1	090714	VH1
CCB	07/15/09 00:53		1	090714	VH1
CCB	07/15/09 01:14		1	090714	VH1
CCV	07/15/09 01:34		1	090714	VH1
1201878617	07/15/09 01:54	884282	1	090714	VH1
1201878620	07/15/09 02:14	884282	1	090714	VH1
233293001	07/15/09 02:34	884282	1	090714	VH1
1201878618	07/15/09 02:54	884282	1	090714	VH1
1201878619	07/15/09 03:14	884282	1	090714	VH1
233293002	07/15/09 03:34	884282	1	090714	VH1
233293003	07/15/09 03:54	884282	1	090714	VH1
233293004	07/15/09 04:14	884282	1	090714	VH1
233293005	07/15/09 04:34	884282	1	090714	VH1
233293006	07/15/09 04:55	884282	1	090714	VH1
CVH	07/15/09 05:15		1	090714	VH1
CCB	07/15/09 05:35		1	090714	VH1
233293007	07/15/09 05:55	884282	1	090714	VH1
233293008	07/15/09 06:15	884282	1	090714	VH1
233293009	07/15/09 06:35	884282	1	090714	VH1
CCV	07/15/09 06:55		1	090714	VH1
CCB	07/15/09 07:15		1	090714	VH1
1201873912	07/15/09 07:35	882333	1	090714	VH1
1201873919	07/15/09 07:55	882333	1	090714	VH1
232744001	07/15/09 08:15	882333	1	090714	VH1
1201873913	07/15/09 08:36	882333	1	090714	VH1
1201873915	07/15/09 08:56	882333	1	090714	VH1
1201873917	07/15/09 09:16	882333	1	090714	VH1

232744002	07/15/09	09:36	882333	1	090714	VH1
232744003	07/15/09	09:56	882333	1	090714	VH1
232744004	07/15/09	10:16	882333	1	090714	VH1
232744005	07/15/09	10:36	882333	1	090714	VH1
CVH	07/15/09	10:56		1	090714	VH1
CCB	07/15/09	11:16		1	090714	VH1
232744006	07/15/09	11:36	882333	1	090714	VH1
232744007	07/15/09	11:56	882333	1	090714	VH1
232744008	07/15/09	12:17	882333	1	090714	VH1
232754001	07/15/09	12:37	882333	1	090714	VH1
232754002	07/15/09	12:57	882333	1	090714	VH1
232754003	07/15/09	13:17	882333	1	090714	VH1
232760001	07/15/09	13:37	882333	1	090714	VH1
232760002	07/15/09	13:57	882333	1	090714	VH1
232760003	07/15/09	14:17	882333	1	090714	VH1
232760004	07/15/09	14:37	882333	1	090714	VH1
CCV	07/15/09	14:57		1	090714	VH1
CCB	07/15/09	15:17		1	090714	VH1
1201873914	07/15/09	15:37	882333	1	090714	VH1
1201873916	07/15/09	15:58	882333	1	090714	VH1
1201873918	07/15/09	16:18	882333	1	090714	VH1
WIC090714-02VH	07/15/09	16:38		1	090714	VH1
WIC090714-02VH	07/15/09	16:38		1	090714	VH1
CCB	07/15/09	16:58		1	090714	VH1

47 WIC090714-02CCV

Sample Name:	WIC090714-02CCV	*Injection Volume:*	50.0
Vial Number:	46	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 8:55	Analyst:	WH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

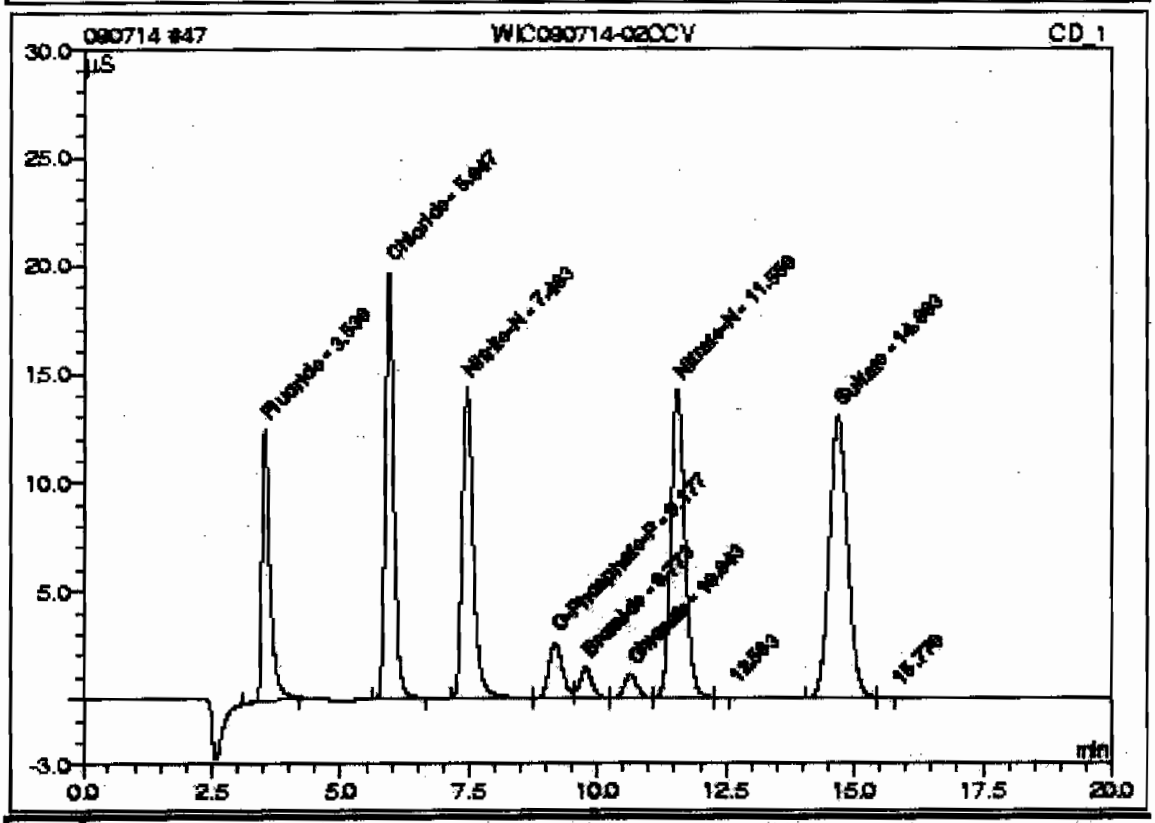

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.8085		2.25457	10.74
2	5.95	Chloride	n.a.	9.2801		3.73636	17.80
3	7.46	Nitrite-N	n.a.	4.8485		3.59008	17.11
4	9.18	O-Phosphate-P	n.a.	2.7520		0.78938	3.76
5	9.77	Bromide	n.a.	2.6239		0.40536	1.93
6	10.64	Chlorate	n.a.	2.4989		0.33244	1.58
7	11.55	Nitrate-N	n.a.	4.7576		4.48010	21.35
9	14.69	Sulfate	n.a.	19.1167		5.39912	25.68
Total:				50.6851	0.000	20.977	99.98

48 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 7:15	Analyst:	WH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

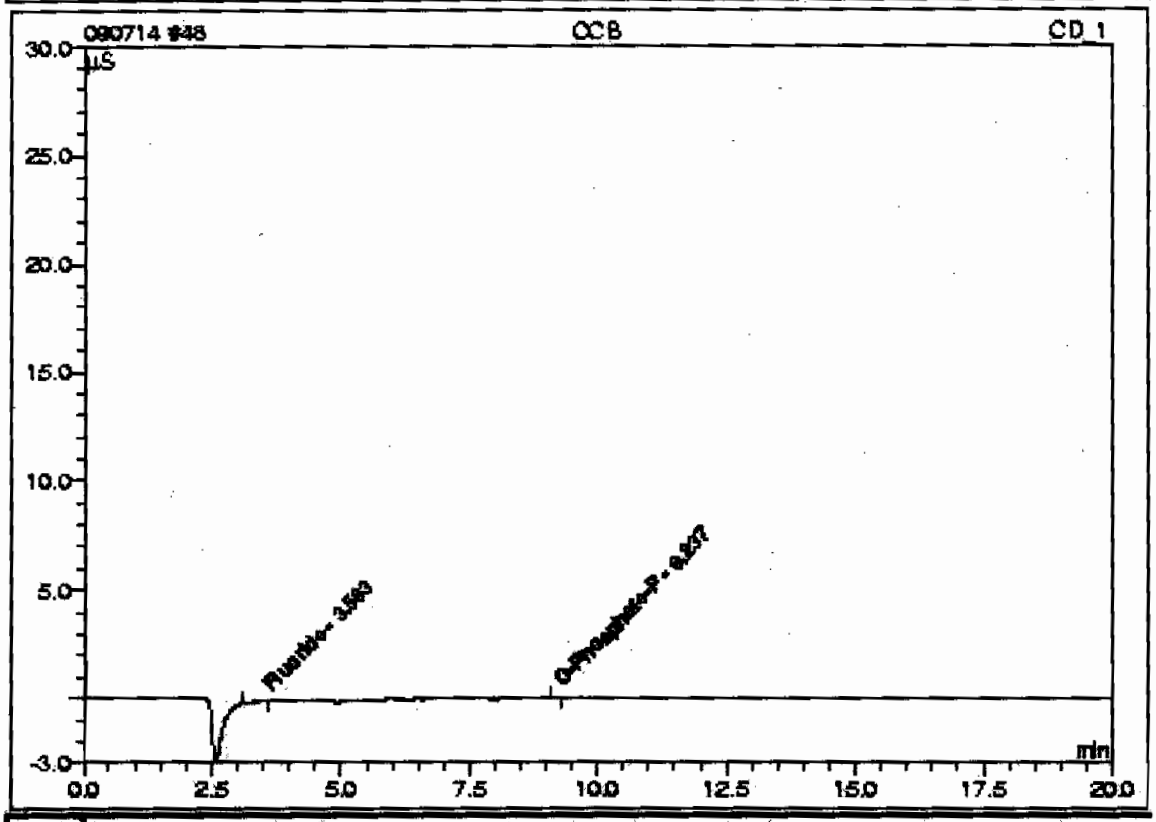

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?		Area µS*min	Rel.Area %
1	3.58	Fluoride	n.a.	0.0306			0.01150	83.79
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.		n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.		n.a.
2	9.24	O-Phosphate-P	n.a.	0.0790			0.00223	16.21
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.		n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.		n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.		n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.		n.a.
Total:				0.1095	0.000		0.014	100.00

49 1201873912/882333/1/1/MB

Sample Name:	1201873912/882333/1/1/MB	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantit. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 7:35	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

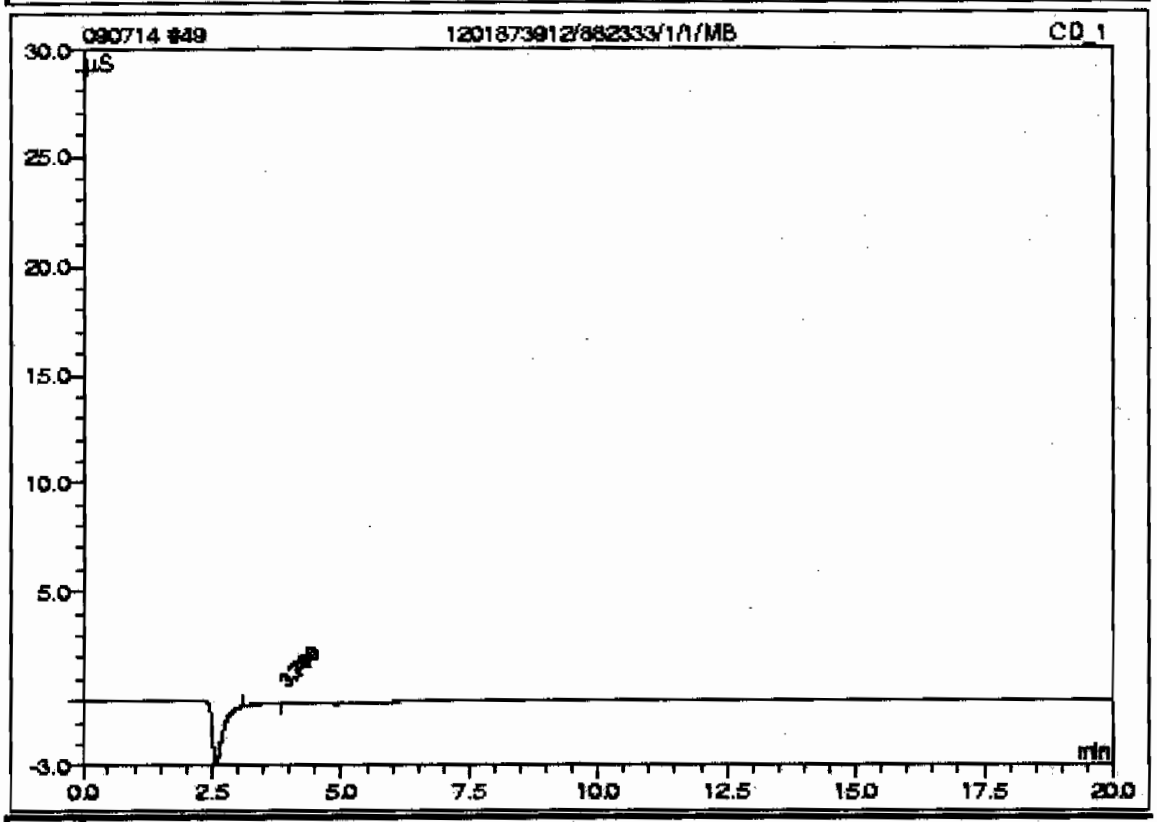

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.0000	0.000	0.000	0.00

50 1201873919/882333/1/1/LCS

Sample Name:	1201873919/882333/1/1/LCS	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 7:55	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

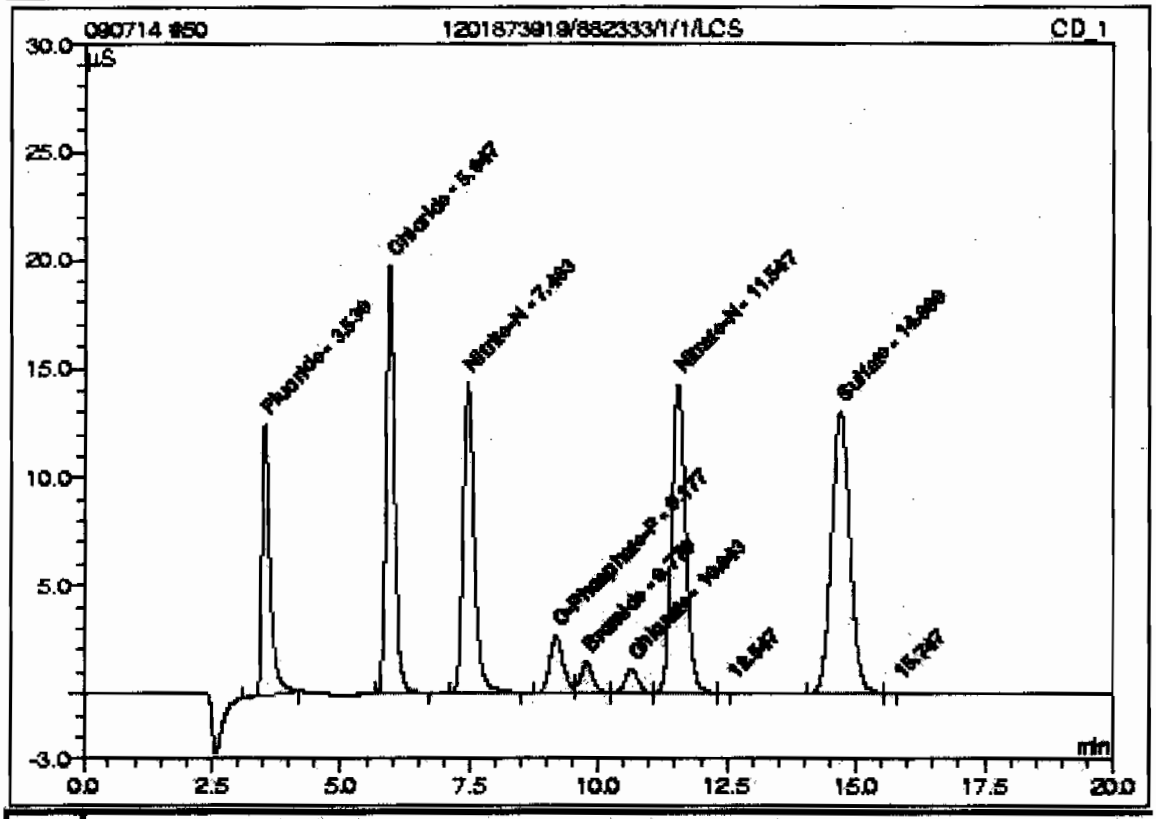

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.8223		2.26105	10.75
2	5.95	Chloride	n.a.	9.3129		3.74966	17.83
3	7.46	Nitrite-N	n.a.	4.8212		3.56969	16.98
4	9.18	O-Phosphate-P	n.a.	2.7782		0.79708	3.79
5	9.77	Bromide	n.a.	2.6199		0.40474	1.92
6	10.64	Chlorate	n.a.	2.4825		0.33022	1.57
7	11.55	Nitrate-N	n.a.	4.7736		4.49545	21.38
9	14.69	Sulfate	n.a.	19.2014		5.41356	25.75
Total:				50.8118	0.000	21.021	99.99

51 232744001/882333/1/1/

Sample Name:	232744001/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 8:15	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9058

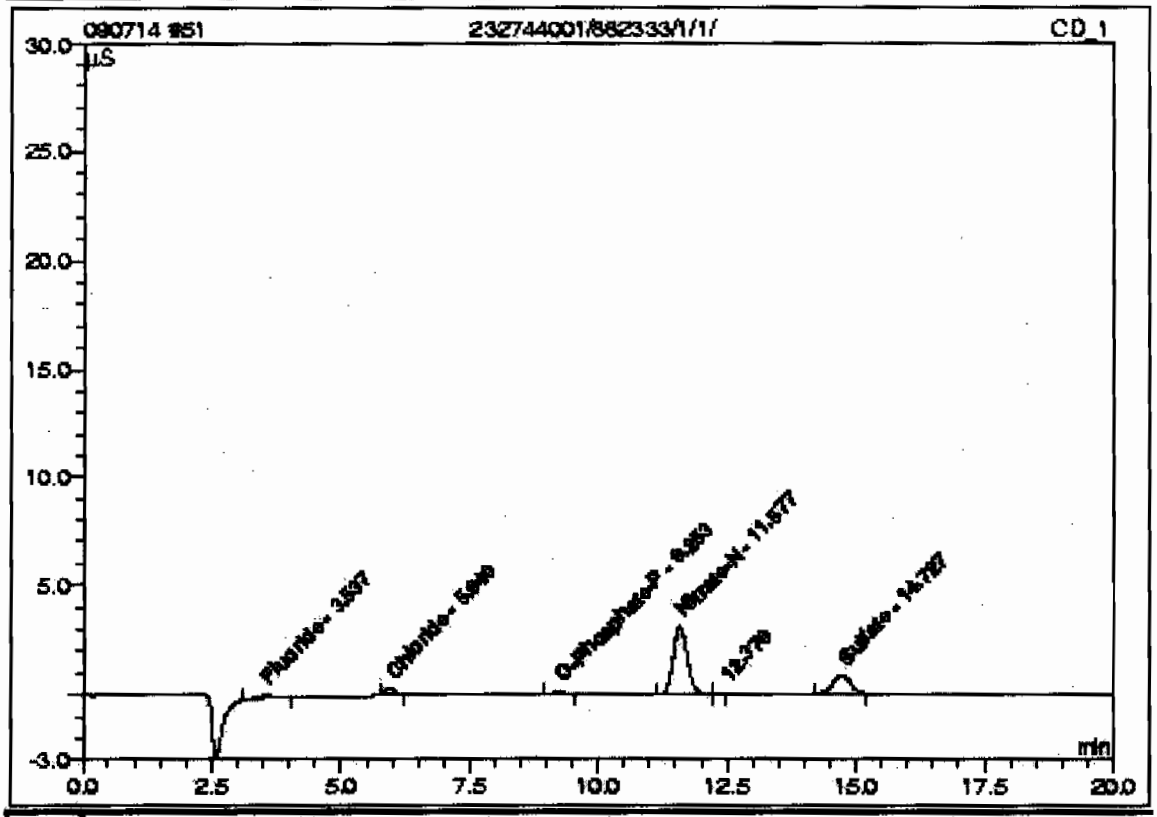

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.1183		0.05269	3.58
2	5.94	Chloride	n.a.	0.2285		0.05860	3.98
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	9.25	O-Phosphate-P	n.a.	0.1562		0.02467	1.68
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	11.58	Nitrate-N	n.a.	1.0967		0.98312	66.81
6	14.73	Sulfate	n.a.	1.4675		0.35159	23.89
Total:				3.0661	0.000	1.471	99.94

52 1201873913/882333/1/1/DUP

Sample Name:	1201873913/882333/1/1/**DUP**	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 8:36	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

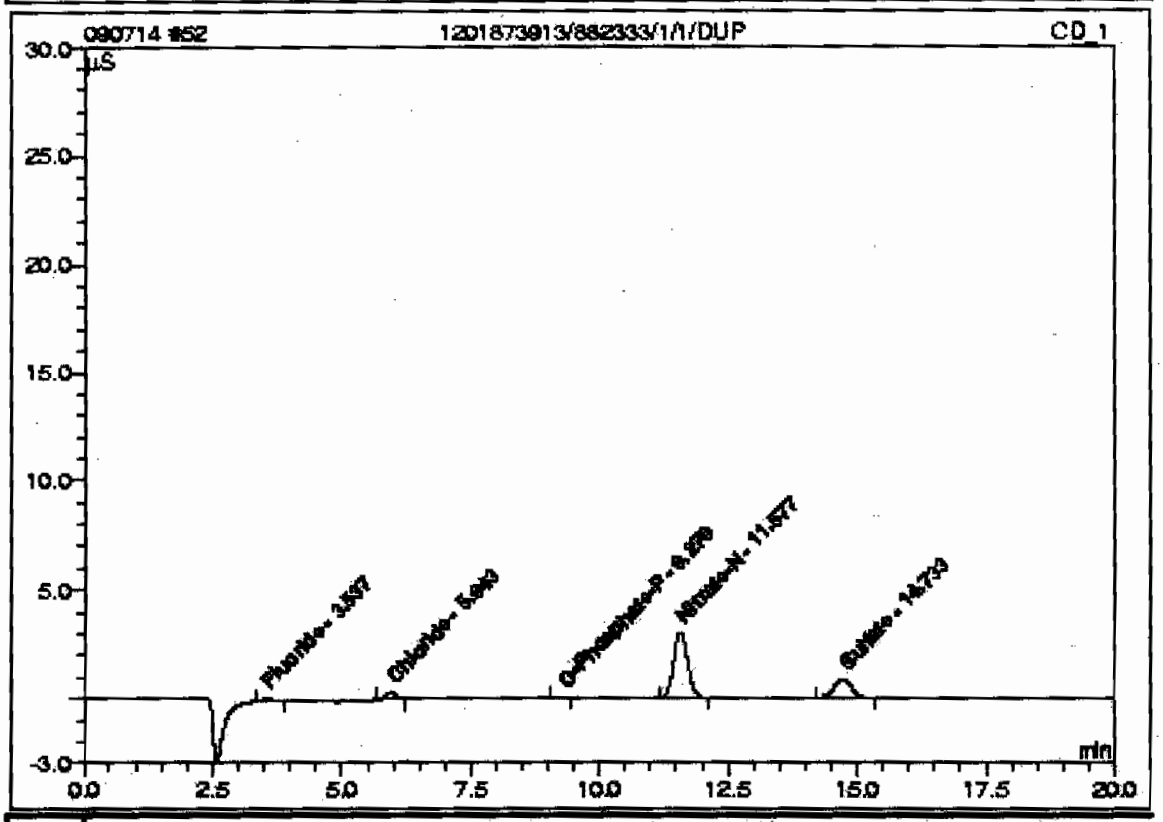

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.0674		0.02879	2.03
2	5.94	Chloride	n.a.	0.2294		0.05897	4.16
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	9.27	O-Phosphate-P	n.a.	0.1022		0.00906	0.64
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
4	11.58	Nitrate-N	n.a.	1.0724		0.95997	67.68
5	14.73	Sulfate	n.a.	1.5925		0.36180	25.49
Total:				2.9740	0.000	1.418	100.00

53 1201873915/882333/1/1/MS

Sample Name:	1201873915/882333/1/1/MS	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	083009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 8:55	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

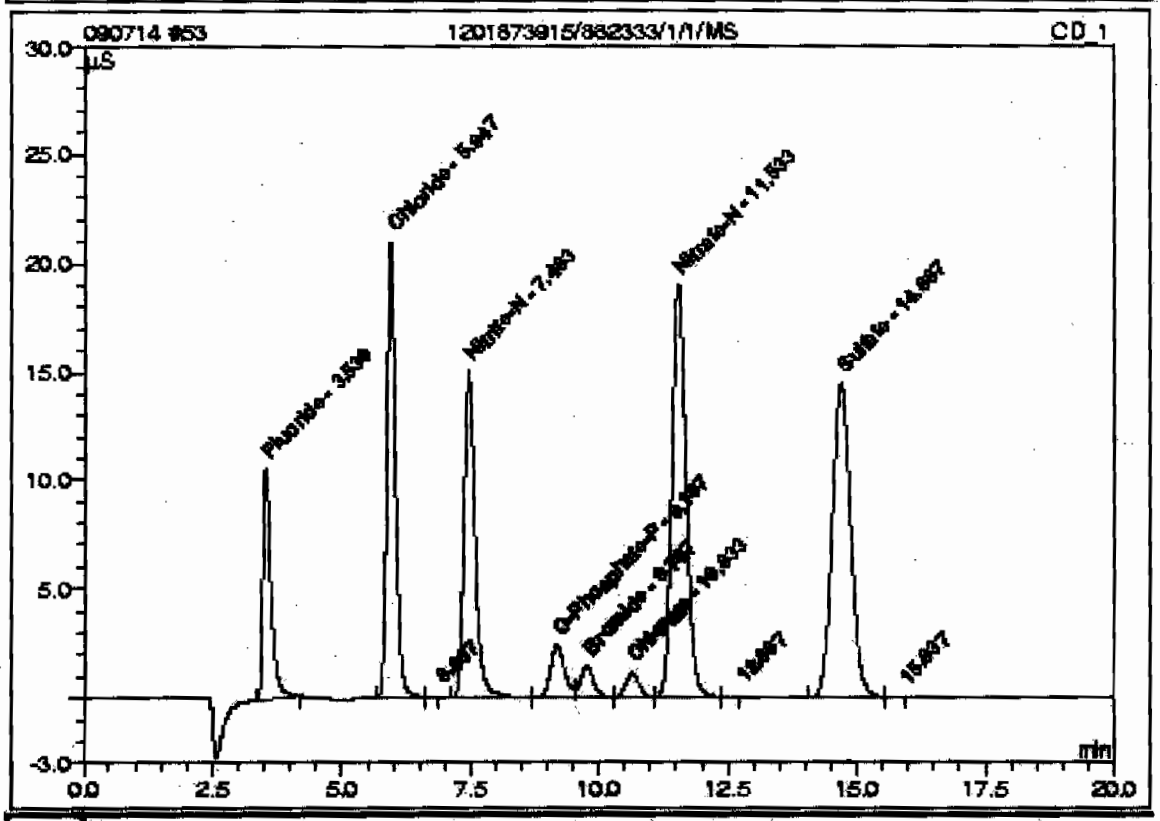

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.0880		1.91633	8.29
2	5.95	Chloride	n.a.	9.8764		3.97866	17.21
4	7.46	Nitrite-N	n.a.	5.0481		3.73925	16.17
5	9.19	O-Phosphate-P	n.a.	2.6465		0.75831	3.28
6	9.77	Bromide	n.a.	2.7792		0.42958	1.86
7	10.63	Chlorate	n.a.	2.5954		0.34545	1.49
8	11.53	Nitrate-N	n.a.	6.3038		5.95706	25.77
10	14.69	Sulfate	n.a.	21.2011		5.98438	25.89
Total:				54.5386	0.000	23.109	99.96

54 1201873917/882333/1/1/MSD

Sample Name:	1201873917/882333/1/1/MSD	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 9:15	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE085;300;9055	

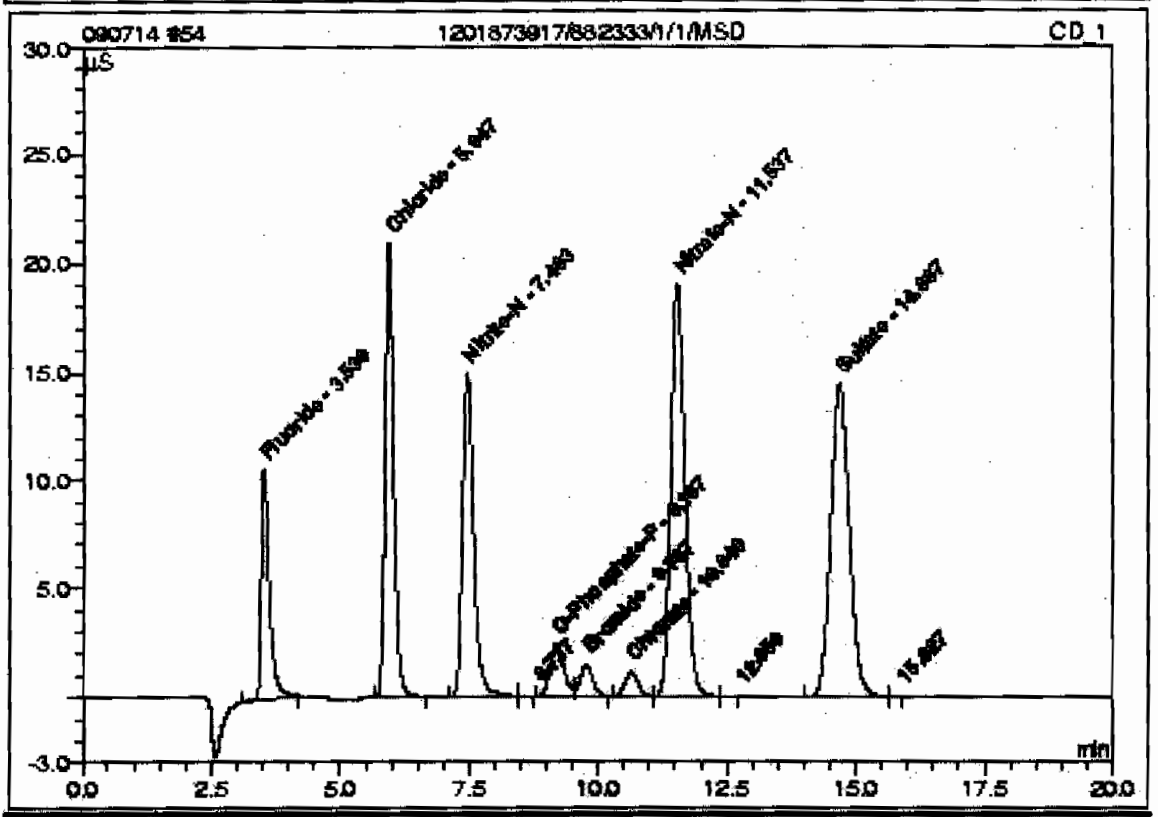

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.1041		1.92391	8.33
2	5.95	Chloride	n.a.	9.8503		3.96805	17.19
3	7.46	Nitrite-N	n.a.	5.0482		3.73779	16.19
5	9.19	O-Phosphate-P	n.a.	2.6595		0.76214	3.30
6	9.77	Bromide	n.a.	2.7216		0.42059	1.82
7	10.64	Chlorate	n.a.	2.5244		0.33587	1.45
8	11.54	Nitrate-N	n.a.	6.2883		5.94230	25.74
10	14.69	Sulfate	n.a.	21.2057		5.99588	25.93
Total:				54.4002	0.000	23.076	99.95

59 WIC090714-02CVH

Sample Name:	WIC090714-02CVH	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 10:58	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

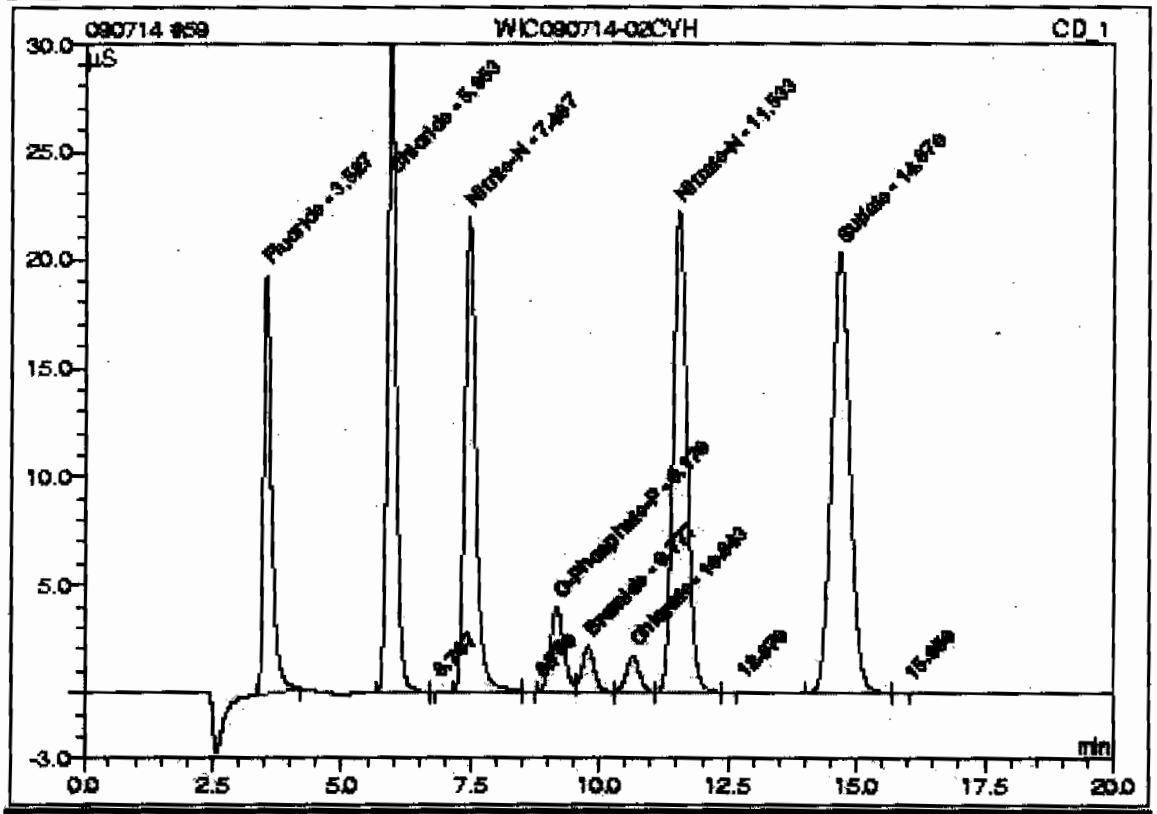

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	7.3356		3.44097	10.64
2	5.95	Chloride	n.a.	14.4300		5.82883	18.03
4	7.47	Nitrite-N	n.a.	7.3551		5.46262	16.89
6	9.17	O-Phosphate-P	n.a.	4.0520		1.17219	3.63
7	9.78	Bromide	n.a.	3.8176		0.59143	1.83
8	10.64	Chlorate	n.a.	3.7356		0.49924	1.54
9	11.53	Nitrate-N	n.a.	7.3682		6.97379	21.57
11	14.67	Sulfate	n.a.	29.5137		8.35711	25.84
Total:				77.8977	0.000	32.326	99.97

60 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 11:18	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

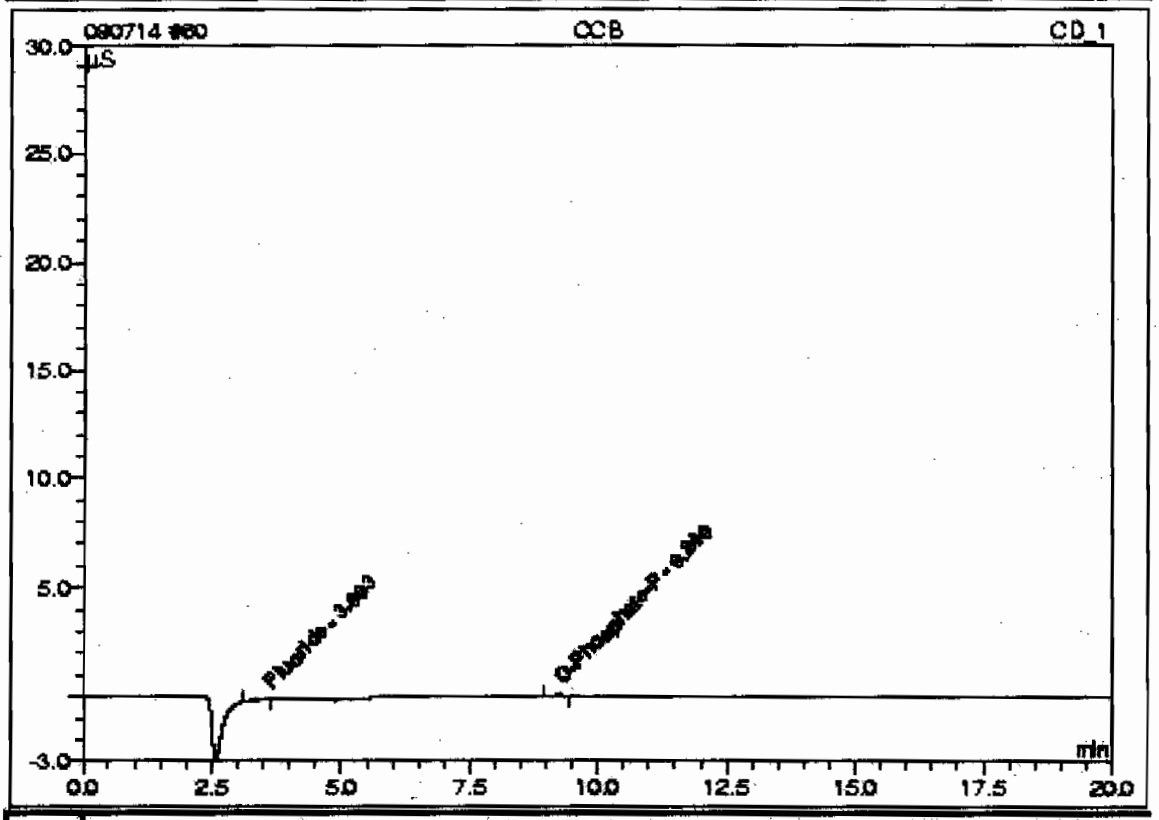

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.60	Fluoride	n.a.	0.0281		0.01035	33.64
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
2	9.24	O-Phosphate-P	n.a.	0.1407		0.02040	66.36
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.1688	0.000	0.031	100.00

64 232754001/882333/1/1/

Sample Name:	232754001/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	49	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 12:37	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

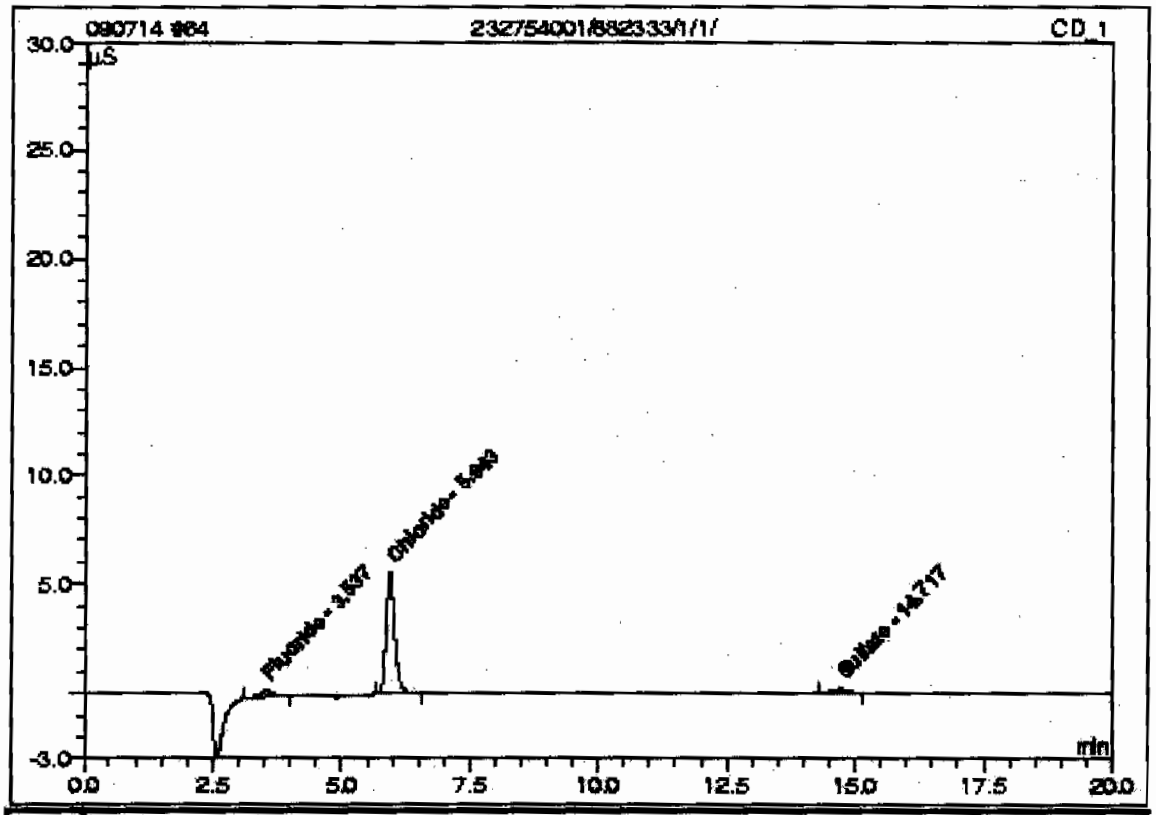

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.1699		0.07693	6.20
2	5.94	Chloride	n.a.	2.7558		1.08545	87.50
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.72	Sulfate	n.a.	0.5098		0.07817	6.30
Total:				3.4325	0.000	1.241	100.00

65 232754002/882333/1/1/

Sample Name:	232754002/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	49	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 12:57	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

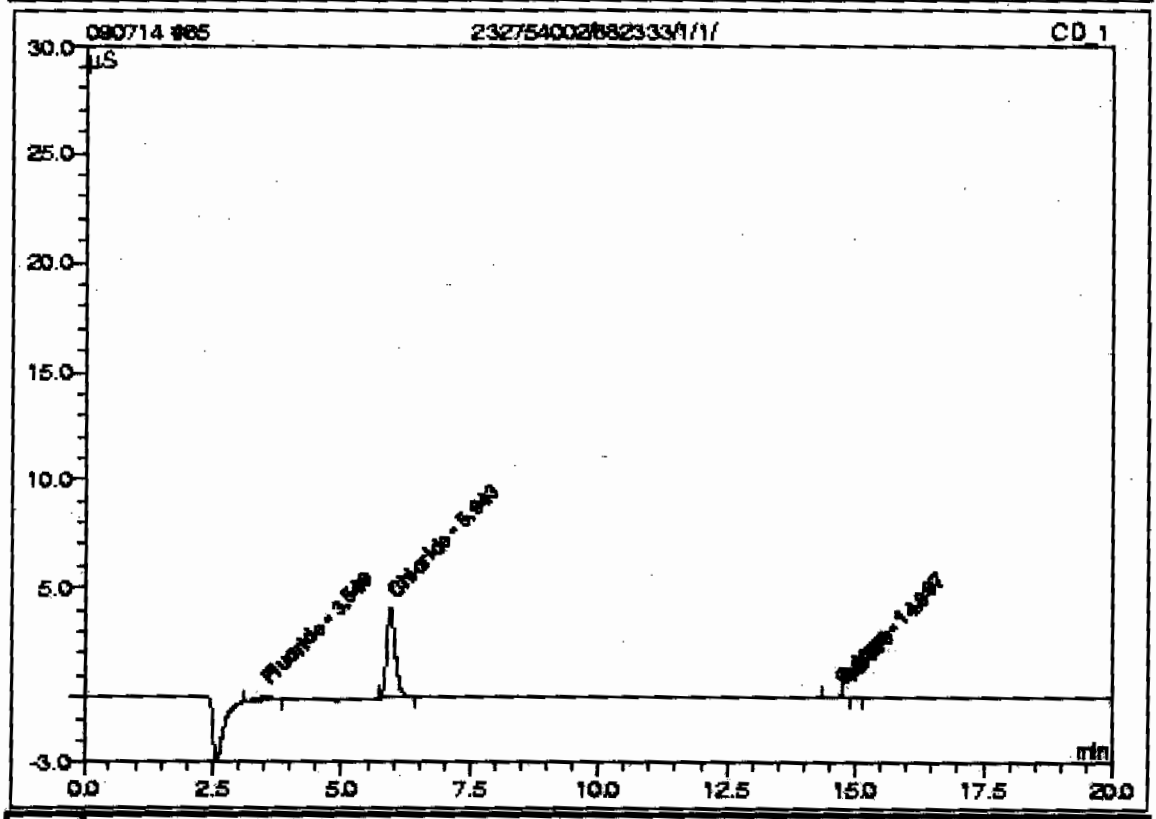

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.1123		0.04989	5.66
2	5.94	Chloride	n.a.	2.0501		0.79871	90.55
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
3	14.70	Sulfate	n.a.	0.3498		0.03257	3.69
Total:				2.5122	0.000	0.881	99.90

66 232754003/882333/1/1/

Sample Name:	232754003/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	50	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 13:17	Analyst:	MH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

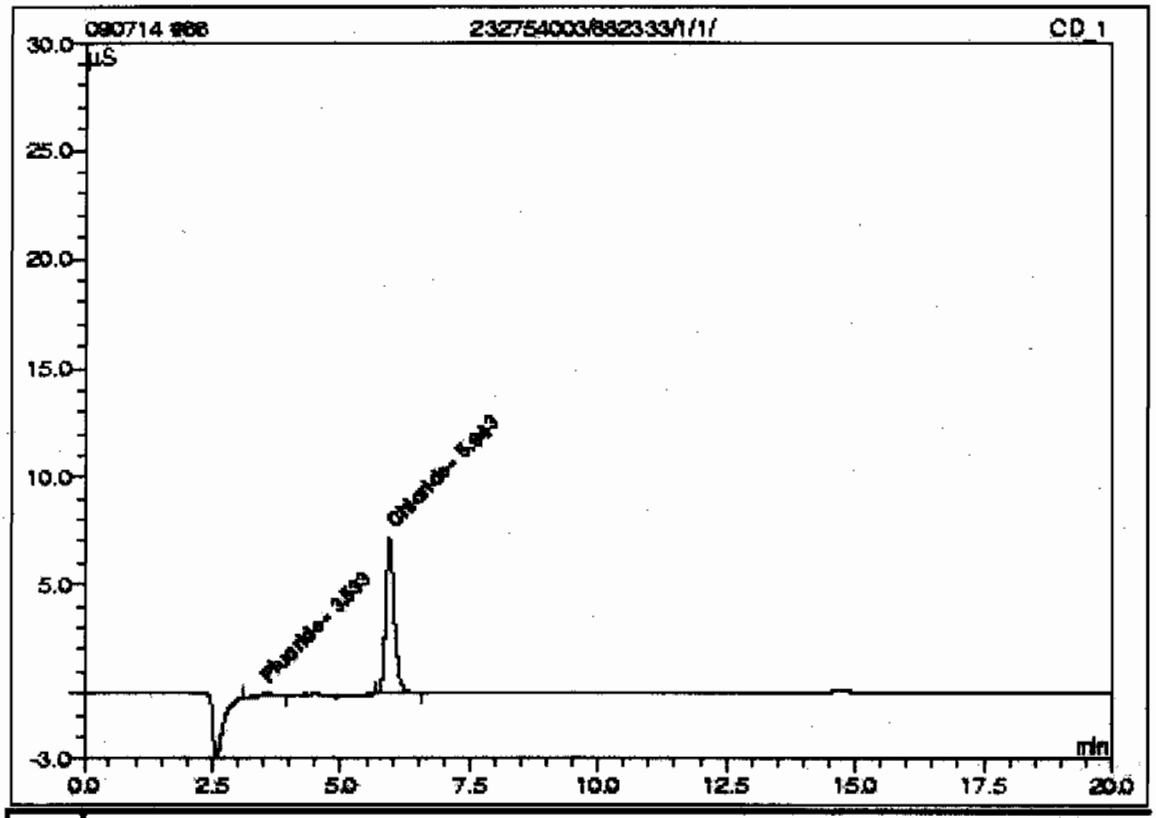

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	0.1061		0.04696	3.27
2	5.94	Chloride	n.a.	3.5052		1.39996	96.73
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				3.6113	0.000	1.437	100.00

70 232760004/882333/1/1/

Sample Name:	232760004/882333/1/1/	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 14:37	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE085;300;9055	

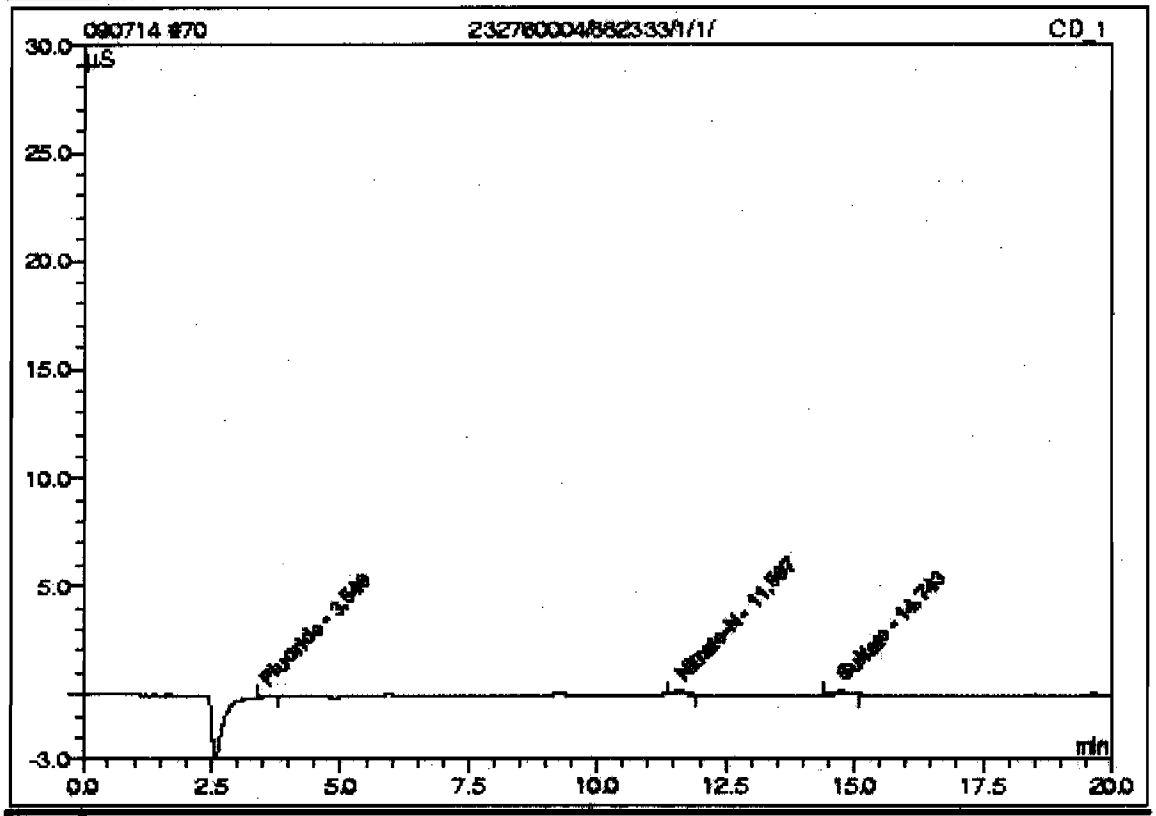

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.54	Fluoride	n.a.	0.0371		0.01456	16.21
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
2	11.60	Nitrate-N	n.a.	0.1028		0.03374	37.57
3	14.74	Sulfate	n.a.	0.3811		0.04150	46.22
Total:				0.5209	0.000	0.090	100.00

71 WIC090714-02CCV

Sample Name:	WIC090714-02CCV	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 14:57	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

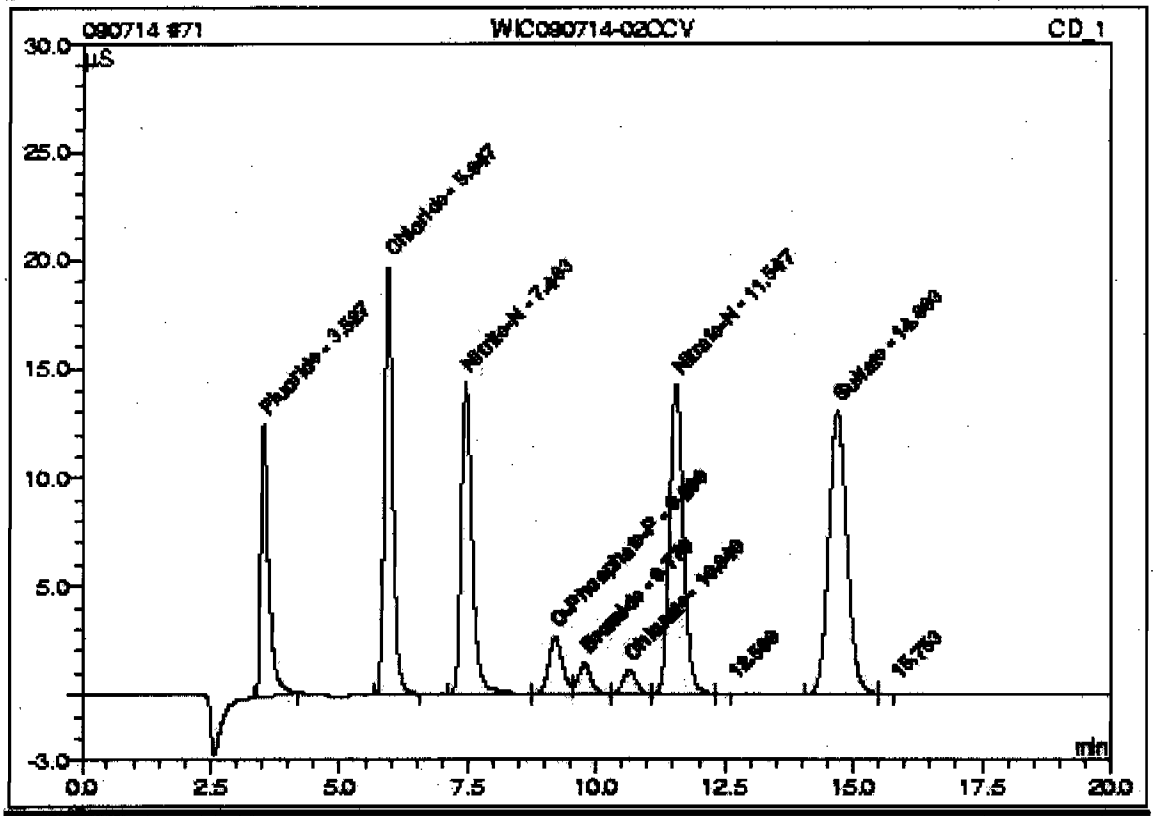

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.7963		2.24887	10.73
2	5.95	Chloride	n.a.	9.2209		3.71231	17.72
3	7.46	Nitrite-N	n.a.	4.8347		3.57981	17.09
4	9.20	O-Phosphate-P	n.a.	2.8144		0.80775	3.85
5	9.77	Bromide	n.a.	2.6397		0.40783	1.95
6	10.84	Chlorate	n.a.	2.4810		0.33002	1.57
7	11.55	Nitrate-N	n.a.	4.7521		4.47487	21.35
9	14.69	Sulfate	n.a.	19.1057		5.38827	25.70
Total:				50.6449	0.000	20.948	99.97

72 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	47	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 15:17	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

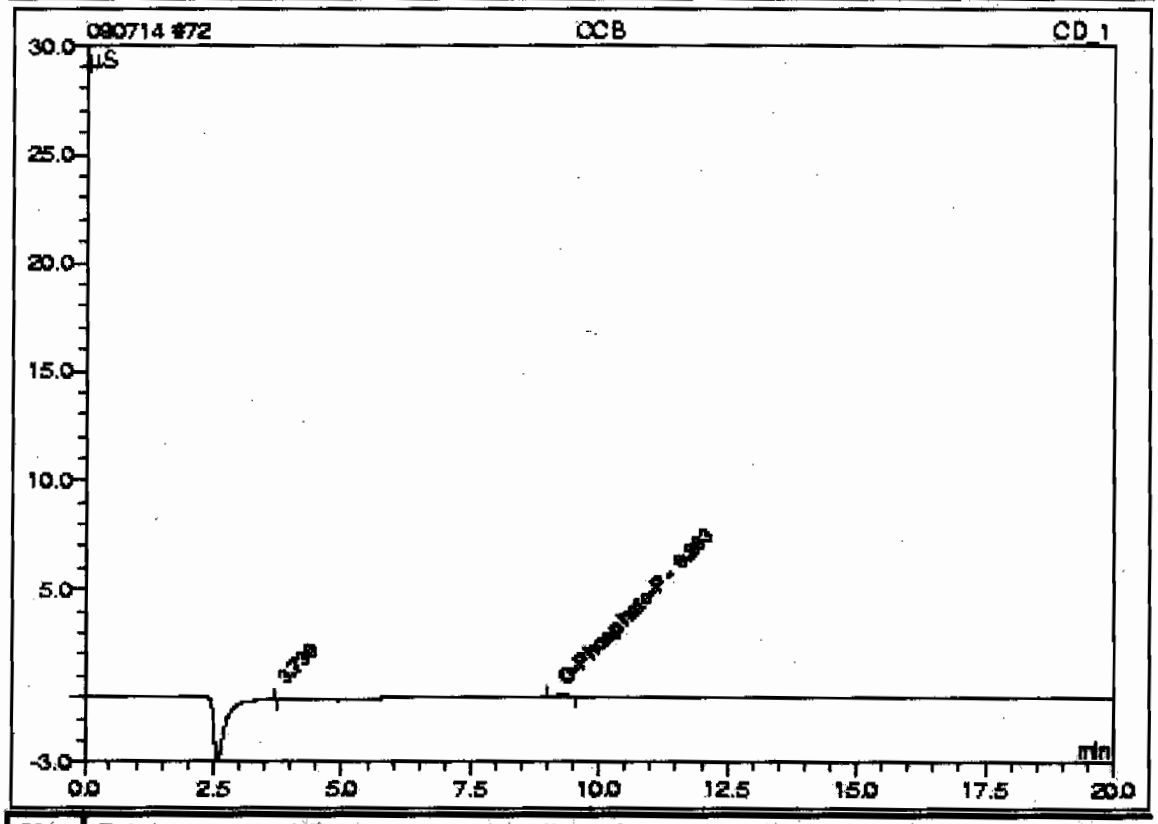

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
2	9.28	O-Phosphate-P	n.a.	0.1588		0.02573	99.14
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.1588	0.000	0.026	99.14

73 1201873914/882333/1/1/DUP

Sample Name:	1201873914/882333/1/1/DUP	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 15:37	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9055

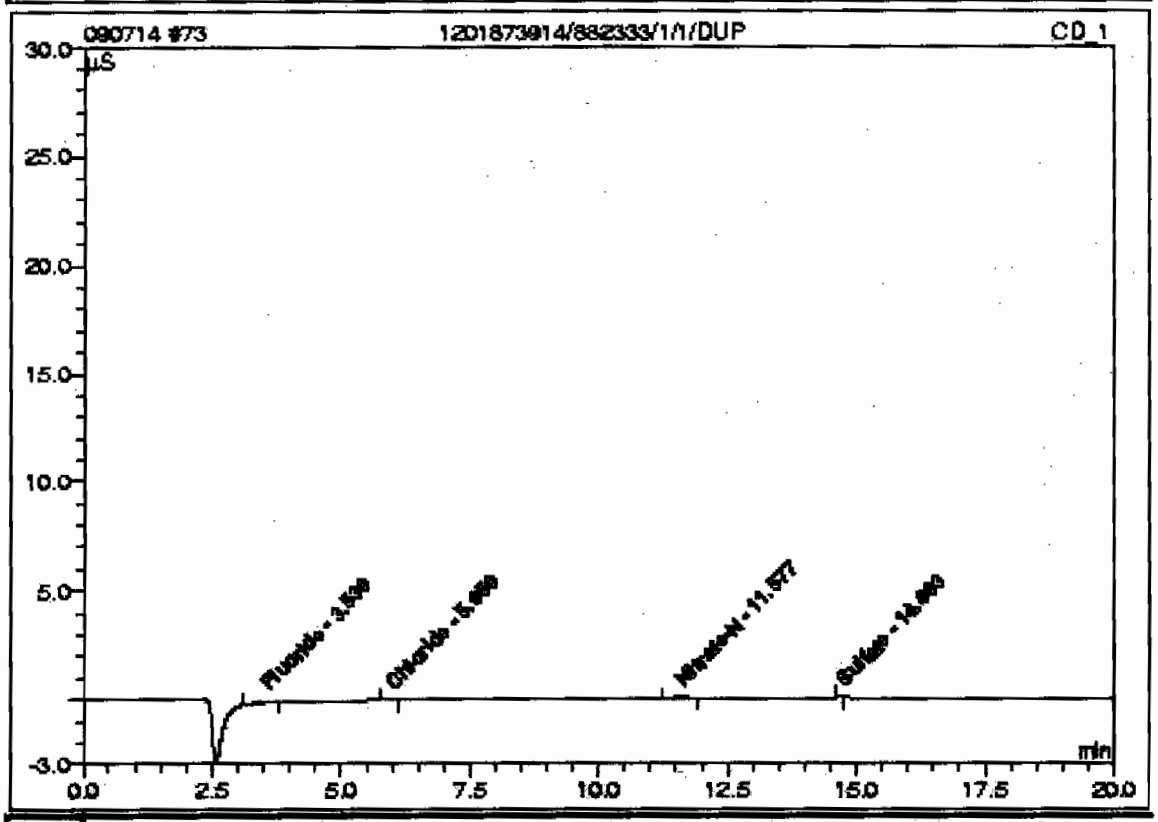

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	0.0864		0.02832	34.36
2	5.95	Chloride	n.a.	0.1087		0.00990	12.01
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	O-Phosphate-P	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
3	11.58	Nitrate-N	n.a.	0.1129		0.04340	52.66
4	14.69	Sulfate	n.a.	0.2385		0.00800	0.97
Total:				0.6265	0.000	0.082	100.00

74 1201873916/882333/1/1/MS

Sample Name:	1201873916/882333/1/1/MS	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 15:58	Analyst:	WH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9056

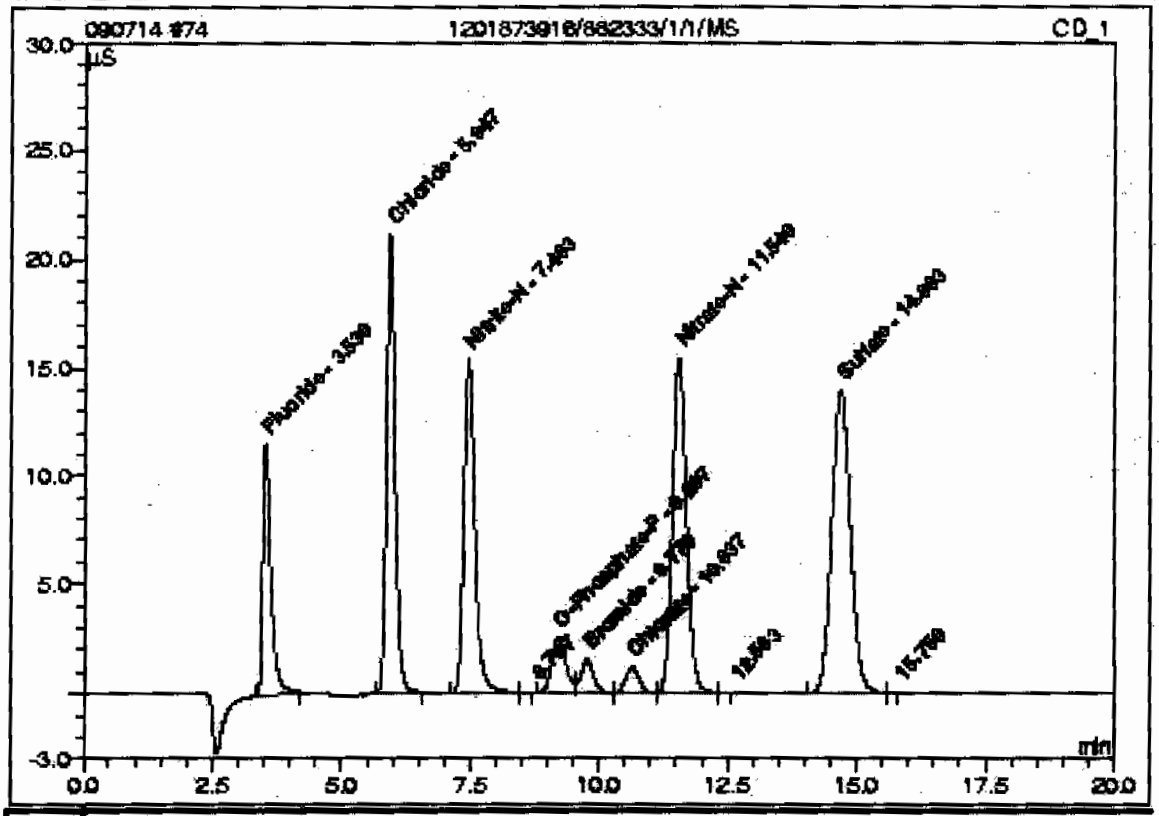

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.4653		2.09346	9.42
2	5.95	Chloride	n.a.	9.9071		3.99112	17.96
3	7.46	Nitrite-N	n.a.	5.1719		3.83166	17.25
5	9.21	O-Phosphate-P	n.a.	2.8202		0.80947	3.64
6	9.77	Bromide	n.a.	2.9265		0.45253	2.04
7	10.64	Chlorate	n.a.	2.7151		0.36159	1.63
8	11.54	Nitrate-N	n.a.	5.1648		4.86905	21.92
10	14.69	Sulfate	n.a.	20.5477		5.79787	26.10
Total:				53.7185	0.000	22.207	99.98

75 1201873918/882333/1/1/MSD

Sample Name:	1201873918/882333/1/1/MSD	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 16:18	Analyst:	VH1
Run Time (min):	20.00 Column:	AS9HC-014108;GLGCE085;300;9055	

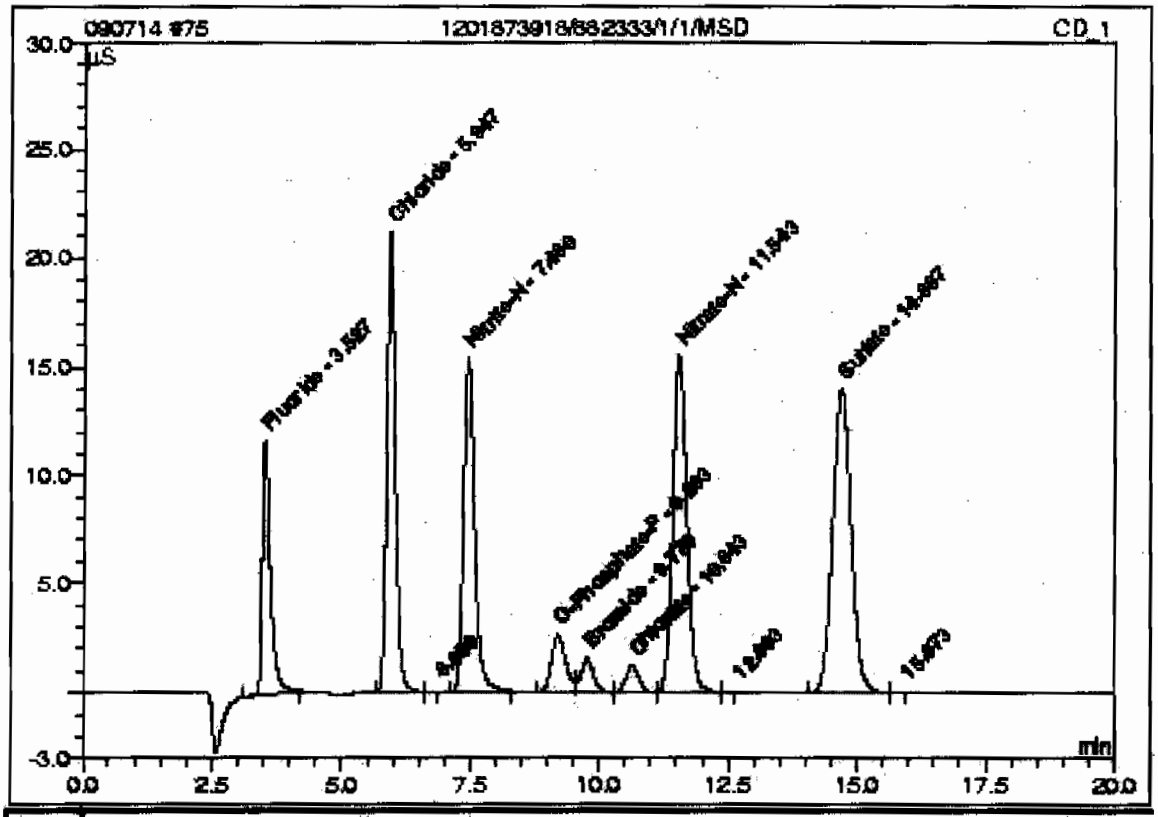

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	4.4878		2.10403	9.47
2	5.95	Chloride	n.a.	9.9544		4.01033	18.05
4	7.46	Nitrite-N	n.a.	5.1117		3.78670	17.05
5	9.20	O-Phosphate-P	n.a.	2.8317		0.81283	3.66
6	9.77	Bromide	n.a.	2.9092		0.44985	2.02
7	10.64	Chlorate	n.a.	2.6702		0.35553	1.60
8	11.54	Nitrate-N	n.a.	5.1694		4.87344	21.94
10	14.69	Sulfate	n.a.	20.8091		5.81540	26.18
Total:				53.7434	0.000	22.208	99.97

76 WIC090714-02CVH

Sample Name:	WIC090714-02CVH	*Injection Volume:*	50.0
Vial Number:	45	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	053009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 15:38	Analyst:	WH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE085;300;9055

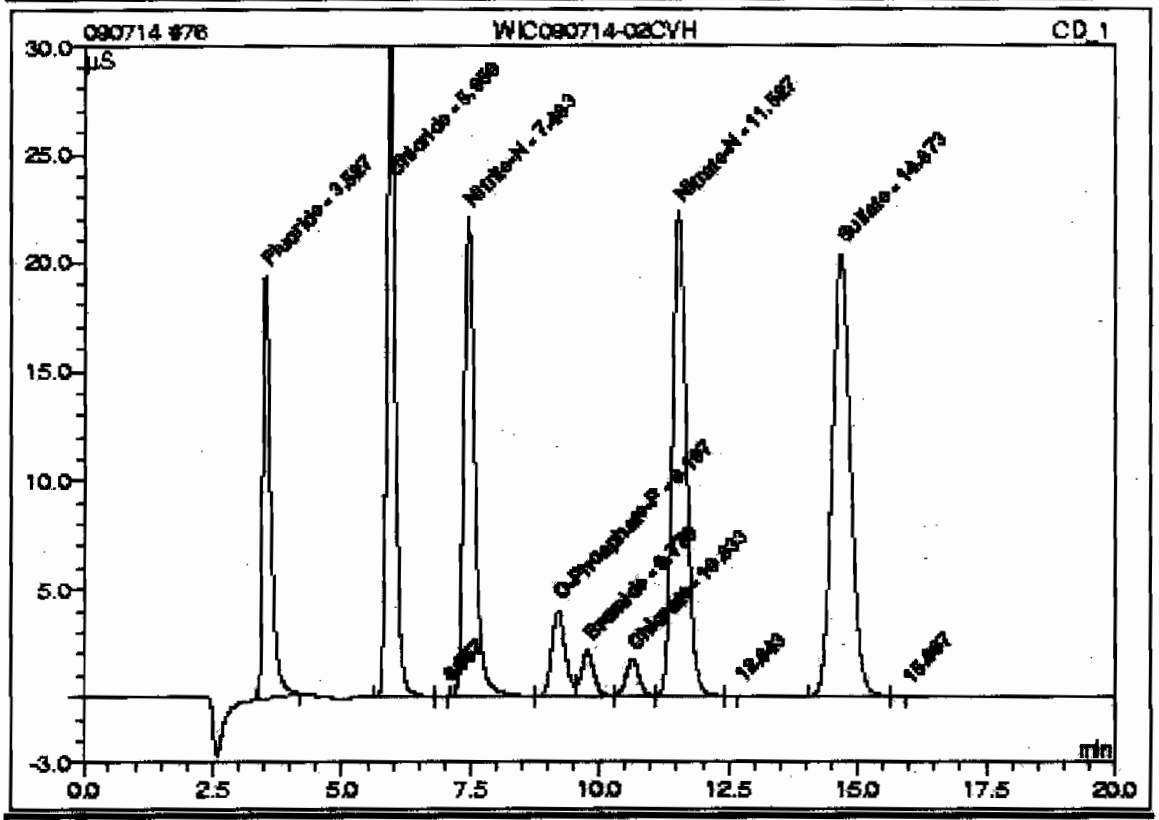

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
1	3.53	Fluoride	n.a.	7.3572		3.45111	10.60
2	5.95	Chloride	n.a.	14.5334		5.87094	18.03
4	7.46	Nitrite-N	n.a.	7.4170		5.50882	16.92
5	9.20	O-Phosphate-P	n.a.	4.2091		1.21844	3.74
6	9.77	Bromide	n.a.	3.9812		0.61694	1.89
7	10.63	Chlorate	n.a.	3.8014		0.50811	1.56
8	11.53	Nitrate-N	n.a.	7.4003		7.00449	21.51
10	14.67	Sulfate	n.a.	29.5881		8.37836	25.73
Total:				78.2877	0.000	32.567	99.98

77 CCB

Sample Name:	CCB	*Injection Volume:*	50.0
Vial Number:	48	*Channel:*	CD_1
Sample Type:	unknown	*Dilution Factor:*	1.0000
Control Program:	AS9_HC	*Sample Weight:*	1.0000
Quantif. Method:	083009AN	*Sample Amount:*	1.0000
Recording Time:	7/15/09 15:58	Analyst:	VH1
Run Time (min):	20.00	Column:	AS9HC-014108;GLGCE088;300;9058

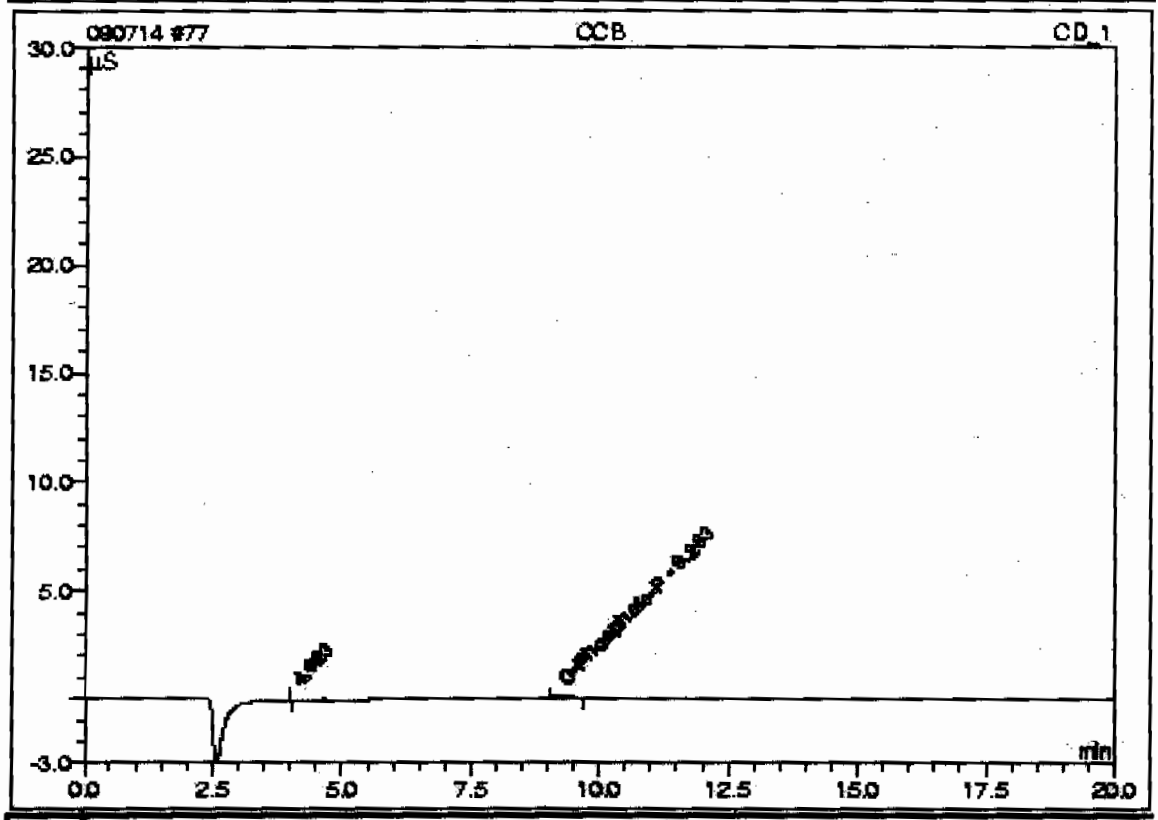

No.	Ret.Time min	Peak Name	Concentration mg/L	Amount mg/L	Modified?	Area µS*min	Rel.Area %
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrite-N	n.a.	n.a.	n.a.	n.a.	n.a.
2	9.26	O-Phosphate-P	n.a.	0.2188		0.04340	99.68
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Nitrate-N	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	n.a.
Total:				0.2188	0.000	0.043	99.68

pH

pH / Corrosivity LogBook

Analyst: RXG2
Batch: 882616
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201874572	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
1201874572 LCS		Soil	11:00	11:05	06-JUL-09 12:05	pH	20	20	7.05	21.2'C	7	100.714	
1201874572 LCS		Soil	11:00	11:05	06-JUL-09 12:05	pH 2	20	20	7.04	21.2'C	7	100.571	
232744001		Soil	11:00	11:05	06-JUL-09 12:07	pH	20	20	8.03	20.4'C			
232744001		Soil	11:00	11:05	06-JUL-09 12:07	pH 2	20	20	8.03	20.4'C			
1201874570 DUP	232744001	Soil	11:00	11:05	06-JUL-09 12:10	pH	20	20	8.06	20.3'C			.373
1201874570 DUP	232744001	Soil	11:00	11:05	06-JUL-09 12:10	pH 2	20	20	8.06	20.3'C			.373
232744002		Soil	11:00	11:05	06-JUL-09 12:12	pH	20	20	9.77	20.1'C			
232744002		Soil	11:00	11:05	06-JUL-09 12:12	pH 2	20	20	9.78	20.1'C			
232744003		Soil	11:00	11:05	06-JUL-09 12:13	pH	20	20	9.11	20.2'C			
232744003		Soil	11:00	11:05	06-JUL-09 12:13	pH 2	20	20	9.11	20.2'C			
CCV			11:00	11:05	06-JUL-09 12:14	pH	20	20	7.04	21.3'C	7	100.571	
CCV			11:00	11:05	06-JUL-09 12:14	pH 2	20	20	7.04	21.3'C	7	100.571	
232744004		Soil	11:00	11:05	06-JUL-09 12:17	pH	20	20	8.6	20.3'C			
232744004		Soil	11:00	11:05	06-JUL-09 12:17	pH 2	20	20	8.6	20.3'C			
232744005		Soil	11:00	11:05	06-JUL-09 12:17	pH	20	20	8.57	20.2'C			
232744005		Soil	11:00	11:05	06-JUL-09 12:17	pH 2	20	20	8.57	20.2'C			
232744006		Soil	11:00	11:05	06-JUL-09 12:19	pH	20	20	9.44	20.3'C			
232744006		Soil	11:00	11:05	06-JUL-09 12:19	pH 2	20	20	9.44	20.3'C			
232744007		Soil	11:00	11:05	06-JUL-09 12:20	pH	20	20	9.89	20.3'C			
232744007		Soil	11:00	11:05	06-JUL-09 12:20	pH 2	20	20	9.89	20.3'C			
232744008		Soil	11:00	11:05	06-JUL-09 12:21	pH	20	20	6.62	20.1'C			
232744008		Soil	11:00	11:05	06-JUL-09 12:21	pH 2	20	20	6.62	20.1'C			
CCV			11:00	11:05	06-JUL-09 12:24	pH	20	20	7.04	21.2'C	7	100.571	
CCV			11:00	11:05	06-JUL-09 12:24	pH 2	20	20	7.04	21.3'C	7	100.571	
232754001		Soil	11:00	11:05	06-JUL-09 12:26	pH	20	20	8.4	20.2'C			
232754001		Soil	11:00	11:05	06-JUL-09 12:26	pH 2	20	20	8.41	20.2'C			
232754002		Soil	11:00	11:05	06-JUL-09 12:26	pH	20	20	7.38	20.3'C			
232754002		Soil	11:00	11:05	06-JUL-09 12:26	pH 2	20	20	7.39	20.3'C			

pH / Corrosivity LogBook

Analyst: RXG2
Batch: 882616
Lab SOP: GL-GC-E-008 REV# 17
Description: pH
Method: SW846 9045C/9045D

Type	Sample Id	Serial Number	Description
CCV	240	IMM090401-PH	PH 7 BUFFER FOR PH
LCS	1201874572	IMM090115-01	LCS BUFFER SOLUTION

Sample id	Parent Sample Id	Matrix	Start Time	Stop Time	Run Date	Parmname	Initial Wt(g)	Final Vol(mL)	Ph	Temp	Nc(mg/L)	Recovery(%)	Rpd(%)
232754003		Soil	11:00	11:05	06-JUL-09 12:30	pH	20	20	7.45	20.0'C			
232754003		Soil	11:00	11:05	06-JUL-09 12:30	pH 2	20	20	7.45	20.0'C			
232760001		Soil	11:00	11:05	06-JUL-09 12:32	pH	20	20	8.06	20.3'C			
232760001		Soil	11:00	11:05	06-JUL-09 12:32	pH 2	20	20	8.06	20.3'C			
232760002		Soil	11:00	11:05	06-JUL-09 12:34	pH	20	20	8.73	20.1'C			
232760002		Soil	11:00	11:05	06-JUL-09 12:34	pH 2	20	20	8.73	20.1'C			
CCV			11:00	11:05	06-JUL-09 12:36	pH	20	20	7.03	21.3'C	7	100.429	
CCV			11:00	11:05	06-JUL-09 12:36	pH 2	20	20	7.04	21.3'C	7	100.571	
232760003		Soil	11:00	11:05	06-JUL-09 12:38	pH	20	20	8.09	20.4'C			
232760003		Soil	11:00	11:05	06-JUL-09 12:38	pH 2	20	20	8.09	20.4'C			
232760004		Soil	11:00	11:05	06-JUL-09 12:38	pH	20	20	8.18	20.5'C			
232760004		Soil	11:00	11:05	06-JUL-09 12:38	pH 2	20	20	8.16	20.4'C			
1201874571 DUP	232760004	Soil	11:00	11:05	06-JUL-09 12:40	pH	20	20	8.23	20.6'C			.609
1201874571 DUP	232760004	Soil	11:00	11:05	06-JUL-09 12:40	pH 2	20	20	8.23	20.5'C			.854
232847001		Solid	11:00	11:05	06-JUL-09 12:41	pH	20	20	7.78	20.3'C			
232847001		Solid	11:00	11:05	06-JUL-09 12:41	pH 2	20	20	7.79	20.3'C			
CCV			11:00	11:05	06-JUL-09 12:42	pH	20	20	7.05	21.2'C	7	100.714	
CCV			11:00	11:05	06-JUL-09 12:42	pH 2	20	20	7.05	21.2'C	7	100.714	

Calibration Information:
Run Date: 06-JUL-09 12:03
Instrument: PHX742
Analyst: RXG2

Standard	Observed	Theoretical		C	%Recovery
IMM090706-PH1	4.01	4	SU	21.6	100.25
IMM090706-PH-	7.01	7	SU	21.6	100.14
UPH090706b3-1	10.02	10	SU	21.6	100.2
UPH090706-03e-	2.08	2	SU	21.6	104
090706F30-1	11.94	12	SU	21.6	99.5
IMM090706g3-1	7.01	7	SU	21.6	100.14

Comments:

Miscellaneous

GEL Laboratories LLC
Form GEL-NCR

NCR Report No.: 712375
Revision No.: 2

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
16-JUL-09	Federal	Specifications	Process
Instrument Type: IC	**Test / Method:** EPA 300.0	**Matrix Type:** Solid	**Client Code:** LANL
Batch ID: 882333	**Sample Numbers:** See Below		

Potentially affected work order(s)(SDG): 232744(09-2525-1),232754(09-2536),232760(09-2542-1)

Application Issues:

Sample Analyzed out of Holding

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Sample Analyzed out of Holding: 232754 001,002,003 232760 001,002,003,004	1. Samples were received with insufficient time to prep and analyze within the remaining method-specified holding time. The samples were analyzed as soon as possible by the analyst.

Originator's Name:
Virginia Wininger 16-JUL-09

Data Validator/Group Leader:
Julia Hamilton 17-JUL-09

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2536-1

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	882142	**Method:**	SW846 9012A
Prep Batch :	882141	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
232755001	CAMO-09-6636
1201873558	Method Blank (MB)
1201873559	232662001(CAMO-09-10024) Sample Duplicate (DUP)
1201873560	232677001(NPDES03A130-09-8922) Sample Duplicate (DUP)
1201873561	232662001(CAMO-09-10024) Matrix Spike (MS)
1201873562	232677001(NPDES03A130-09-8922) Matrix Spike (MS)
1201873563	232662001(CAMO-09-10024) Matrix Spike Duplicate (MSD)
1201873564	232677001(NPDES03A130-09-8922) Matrix Spike Duplicate (MSD)
1201873565	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 11.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within

acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232662001 (CAMO-09-10024) and 232677001 (NPDES03A130-09-8922).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1201873559 (CAMO-09-10024) and 1201873560 (NPDES03A130-09-8922).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Negative Bias
No Chlorinated Cyanide results exceed the Total Cyanide results by more than three times the PQL

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Method/Analysis Information

Product: **Nitrate Nitrite by Cadmium Reduction**

Analytical Batch: 882466 **Method:** EPA 353.2

Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA 353.2:

Sample ID	Client ID
232755001	CAMO-09-6636
1201874237	Method Blank (MB)
1201874238	232761001(50FWC-09-2820) Sample Duplicate (DUP)
1201874239	232742001(CAMO-09-10025) Sample Duplicate (DUP)
1201874240	232761001(50FWC-09-2820) Post Spike (PS)
1201874241	232742001(CAMO-09-10025) Post Spike (PS)
1201874242	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-128 REV# 5.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Nutrient analysis was performed on a Lachat QuickChem FIA+ 8500 Series.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 232742001 (CAMO-09-10025) and 232761001 (50FWC-09-2820).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following samples in this sample group were diluted due to high concentration: 1201874238 (50FWC-09-2820) and 1201874240 (50FWC-09-2820). The following samples in this sample group were diluted due to matrix interference: 1201874239 (CAMO-09-10025) and 1201874241 (CAMO-09-10025).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 22July09

Sample Data Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2536-1 GEL Work Order: 232755

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: July 9, 2009

Client SDG: 09-2536-1

Client Sample ID:	CAMO-09-6636	Project:	LANL01004
Sample ID:	232755001	Client ID:	LANL010
Matrix:	W		
Collect Date:	30-JUN-09 12:00		
Receive Date:	02-JUL-09		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis Federal										
SW9012A Cyanide, Total "As Received"										
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2 07/07/09	1239	882142	1
Nutrient Analysis										
EPA 353.2 Nitrogen, Nitrate/Nitrite "As Received"										
Nitrogen, Nitrate/Nitrite	U	ND	0.010	0.050	mg/L	1	AXH3 07/07/09	0903	882466	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	07/07/09	0854	882141

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	
2	EPA 353.2	

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 9, 2009

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232755

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Flow Injection Analysis											
Batch 882142											
QC1201873559 232662001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)	AXC2	07/07/09 12:23
QC1201873560 232677001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A		(+/-5.00)		07/07/09 12:32
QC1201873565 LCS											
Cyanide, Total	50.0				52.4	ug/L		105	(90%-110%)		07/07/09 12:21
QC1201873558 MB											
Cyanide, Total				U	5.00	ug/L					07/07/09 12:20
QC1201873561 232662001 MS											
Cyanide, Total	100	U	ND		106	ug/L		106	(60%-127%)		07/07/09 12:24
QC1201873562 232677001 MS											
Cyanide, Total	100	U	ND		104	ug/L		104	(60%-127%)		07/07/09 12:33
QC1201873563 232662001 MSD											
Cyanide, Total	100	U	ND		107	ug/L	0.939	107	(0%-20%)		07/07/09 12:25
QC1201873564 232677001 MSD											
Cyanide, Total	100	U	ND		105	ug/L	0.957	105	(0%-20%)		07/07/09 12:34
Nutrient Analysis											
Batch 882466											
QC1201874238 232761001 DUP											
Nitrogen, Nitrate/Nitrite			11.8		11.6	mg/L	1.28		(0%-20%)	AXH3	07/07/09 09:07
QC1201874239 232742001 DUP											
Nitrogen, Nitrate/Nitrite		U	ND	U	ND	mg/L	N/A		(+/-0.250)		07/07/09 09:00
QC1201874242 LCS											
Nitrogen, Nitrate/Nitrite	1.00				1.04	mg/L		104	(90%-110%)		07/07/09 08:57
QC1201874237 MB											
Nitrogen, Nitrate/Nitrite				J	0.0112	mg/L					07/07/09 08:51
QC1201874240 232761001 PS											
Nitrogen, Nitrate/Nitrite	1.00		0.471		1.44	mg/L		96.9	(90%-110%)		07/07/09 09:08
QC1201874241 232742001 PS											
Nitrogen, Nitrate/Nitrite	1.00	U	ND		0.994	mg/L		98.5	(90%-110%)		07/07/09 09:01

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample

GEL LABORATORIES LLC

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QC Summary

Workorder: 232755

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 09-JUL-2009 13:21

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2536-1**

Flow Injection Analysis

Method: SW846 9012A Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

ICV	**07-JUL-2009 10:47:46**	**OM_7-7-2009_10-38-00**	**151**	**150**	**101**	**(90%-110%)**	**Yes**
CCV	07-JUL-2009 12:16:26	OM_7-7-2009_11-38-18	103	100	103	(90%-110%)	Yes
CCV	07-JUL-2009 12:28:55	OM_7-7-2009_11-38-18	105	100	105	(90%-110%)	Yes
CCV	07-JUL-2009 12:41:21	OM_7-7-2009_11-38-18	101	100	101	(90%-110%)	Yes

ICB	**07-JUL-2009 10:49:36**	**OM_7-7-2009_10-38-00**	**-1.33**	**5**	**Yes**
CCB	07-JUL-2009 12:18:16	OM_7-7-2009_11-38-18	-1.19	5	Yes
CCB	07-JUL-2009 12:30:45	OM_7-7-2009_11-38-18	4.02	5	Yes
CCB	07-JUL-2009 12:43:12	OM_7-7-2009_11-38-18	-0.381	5	Yes

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 09-JUL-2009 13:21

GEL Laboratories LLC

Contract: **LANL01004**

SDG #: **09-2536-1**

Nutrient Analysis

Method: EPA 353.2 Concentration Units:mg/L

Instrument: Lachat Quickchem FIA+ 8500 Series

Parmname: Nitrogen, Nitrate/Nitrite

ICV	**07-JUL-2009 07:57:54**	**OM_7-7-2009_07-47-40**	**1.02**	**1**	**102**	**(90%-110%)**	**Yes**
CCV	07-JUL-2009 08:36:09	OM_7-7-2009_07-47-40	1.02	1	102	(90%-110%)	Yes
CCV	07-JUL-2009 08:52:54	OM_7-7-2009_07-47-40	1.01	1	101	(90%-110%)	Yes
CCV	07-JUL-2009 09:09:42	OM_7-7-2009_07-47-40	1.02	1	102	(90%-110%)	Yes

ICB	**07-JUL-2009 08:00:16**	**OM_7-7-2009_07-47-40**	**0.00372**	**0.05**	**Yes**
CCB	07-JUL-2009 08:38:31	OM_7-7-2009_07-47-40	0.0026	0.05	Yes
CCB	07-JUL-2009 08:55:16	OM_7-7-2009_07-47-40	0.00293	0.05	Yes
CCB	07-JUL-2009 09:12:04	OM_7-7-2009_07-47-40	0.00372	0.05	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 882141

Lab SOP: GL-GC-E-067 REV# 12

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1201873565	URF1091135-02	.0125	mL
MS	1201873561	URF1091135-02	.025	mL
MS	1201873562	URF1091135-02	.025	mL
MSD	1201873563	URF1091135-02	.025	mL
MSD	1201873564	URF1091135-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1201873558		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
LCS	1201873565		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232662001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
DUP	1201873559	232662001	SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
MS	1201873561	232662001	SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
MSD	1201873563	232662001	SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232674001		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232674002		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232677001		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
DUP	1201873560	232677001	EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
MS	1201873562	232677001	EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
MSD	1201873564	232677001	EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232703001		EPA 335.4	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232728001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232728003		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	232742001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232753001		EPA 335.3	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232755001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER
SAMPLE	232759001		SW846 9010B Prep	07-JUL-2009 08:54	>12	25 mL	25 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
090615-C	25 mL	0.25N Sodium Hydroxide Solution
WCN090707-07	.0375 mL	150 ppb CN Distilled ICV Standard
1113815-C	1.25 mL	0.8N H3NO3S
1095846-C	2.5 mL	50% H2SO4 CN Prep
1095854-C	1 mL	51% MgCl2 Soln
1091828-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	7/7/2009 10:40:37	OM_7-7-2009_10-38-00
150 ppb		1	axc2	7/7/2009 10:41:29	OM_7-7-2009_10-38-00
100 ppb		1	axc2	7/7/2009 10:42:22	OM_7-7-2009_10-38-00
50 ppb		1	axc2	7/7/2009 10:43:14	OM_7-7-2009_10-38-00
10 ppb		1	axc2	7/7/2009 10:44:07	OM_7-7-2009_10-38-00
CRDL 5.0 ppb		1	axc2	7/7/2009 10:45:01	OM_7-7-2009_10-38-00
ICAL-00		1	axc2	7/7/2009 10:45:55	OM_7-7-2009_10-38-00
ICV		1	axc2	7/7/2009 10:47:46	OM_7-7-2009_10-38-00
ICB		1	axc2	7/7/2009 10:49:36	OM_7-7-2009_10-38-00
CRDL		1	axc2	7/7/2009 10:51:26	OM_7-7-2009_10-38-00
1201870890	881039	1	axc2	7/7/2009 10:53:16	OM_7-7-2009_10-38-00
1201870897	881039	50	axc2	7/7/2009 10:54:09	OM_7-7-2009_10-38-00
232429001	881039	1	axc2	7/7/2009 10:55:02	OM_7-7-2009_10-38-00
1201870891	881039	1	axc2	7/7/2009 10:55:55	OM_7-7-2009_10-38-00
1201870893	881039	1	axc2	7/7/2009 10:56:48	OM_7-7-2009_10-38-00
1201870895	881039	1	axc2	7/7/2009 10:57:41	OM_7-7-2009_10-38-00
232429002	881039	1	axc2	7/7/2009 10:58:34	OM_7-7-2009_10-38-00
1201870892	881039	1	axc2	7/7/2009 10:59:26	OM_7-7-2009_10-38-00
1201870894	881039	1	axc2	7/7/2009 11:00:19	OM_7-7-2009_10-38-00
1201870896	881039	1	axc2	7/7/2009 11:01:11	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:02:04	OM_7-7-2009_10-38-00
CCB		1	axc2	7/7/2009 11:03:54	OM_7-7-2009_10-38-00
232429003*	881039	1	axc2	7/7/2009 11:05:42	OM_7-7-2009_10-38-00
232429004*	881039	1	axc2	7/7/2009 11:06:34	OM_7-7-2009_10-38-00
232429005*	881039	1	axc2	7/7/2009 11:07:26	OM_7-7-2009_10-38-00
232429006*	881039	1	axc2	7/7/2009 11:08:18	OM_7-7-2009_10-38-00
232429007*	881039	1	axc2	7/7/2009 11:09:09	OM_7-7-2009_10-38-00
232429008*	881039	1	axc2	7/7/2009 11:10:03	OM_7-7-2009_10-38-00
232429009*	881039	1	axc2	7/7/2009 11:10:57	OM_7-7-2009_10-38-00
232429010*	881039	1	axc2	7/7/2009 11:11:50	OM_7-7-2009_10-38-00
232429011*	881039	1	axc2	7/7/2009 11:12:43	OM_7-7-2009_10-38-00
232429012*	881039	1	axc2	7/7/2009 11:13:36	OM_7-7-2009_10-38-00
CCV		1	axc2	7/7/2009 11:14:28	OM_7-7-2009_10-38-00

Author: axc2

Date : 7/7/2009

Original Run Filename: OM_7-7-2009_10-38-00.OMN created 7/7/2009 10:38:00
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_10-38-00.OMN last modified 7/7/2009 11:15:33
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-01	1	S1	200	8.66	7/7/2009@10:40:37			200 ppb
WCN090707-02	1	S2	150	6.58	7/7/2009@10:41:29			150 ppb
WCN090707-03	1	S3	100	4.25	7/7/2009@10:42:22			100 ppb
WCN090707-04	1	S4	50.0	2.32	7/7/2009@10:43:14			50 ppb
WCN090707-05	1	S5	10.0	0.530	7/7/2009@10:44:07			10 ppb
WCN090707-06	1	S6	5.00	0.393	7/7/2009@10:45:01			CRDL 5.0 ppb
WCN090707-08	1	S7	0.00	-0.00192	7/7/2009@10:45:55			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99969 > 0.99500					
		Message	Pass					
		Action	Continue					
WCN090707-07	1	S8	151	6.56	7/7/2009@10:47:46			ICV
		Known Conc:	150					
DQM Test: > + Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	0.6 < 10.0					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
WCN090707-08	1	S7	-1.33	0.0378	7/7/2009@10:49:36			ICB/CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.33 < 5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.33 > -5.01					
		Message	ICB/CCB Passed					
		Action	Continue					
WCN090707-06	1	S6	6.83	0.387	7/7/2009@10:51:26			CRDL
		Known Conc:	5.00					
DQM Test: > + Concentration Limit								
		Result:	6.83 < 7.50					
		Message	CRDL Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	6.83 > 2.50					
		Message	CRDL Passed					
		Action	Continue					
1201870890|881039|MB	1	1	0.258	0.106	7/7/2009@10:53:16			
1201870897||LCS	1	2	33.3	1.52	7/7/2009@10:54:09		50.00	
232429001	1	3	2.24	0.191	7/7/2009@10:55:02			
1201870891||DUP	1	4	1.10	0.142	7/7/2009@10:55:55			
1201870893||MS	1	5	89.8	3.94	7/7/2009@10:56:48			
1201870895||MSD	1	6	92.5	4.06	7/7/2009@10:57:41			
232429002	1	7	4.27	0.278	7/7/2009@10:58:34			
1201870892||DUP	1	8	2.79	0.214	7/7/2009@10:59:26			
1201870894||MS	1	9	93.8	4.12	7/7/2009@11:00:19			
1201870896||MSD	1	10	90.6	3.98	7/7/2009@11:01:11			
WCN090707-03	1	S3	90.0	3.95	7/7/2009@11:02:04			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-10.0 < 10.0					

		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-10.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-2.73	-0.0223	7/7/2009@11:03:54			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.73 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.73 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232429003	1	11	1.07	0.141	7/7/2009@11:05:42			
232429004	1	12	-2.99	-0.0332	7/7/2009@11:06:34			
232429005	1	13	2.06	0.183	7/7/2009@11:07:26			
232429006	1	14	-3.41	-0.0512	7/7/2009@11:08:18			
232429007	1	15	-3.40	-0.0507	7/7/2009@11:09:09			
232429008	1	16	1.30	0.151	7/7/2009@11:10:03			
232429009	1	17	3.29	0.236	7/7/2009@11:10:57			
232429010	1	18	2.25	0.191	7/7/2009@11:11:50			
232429011	1	19	-3.42	-0.0518	7/7/2009@11:12:43			
232429012	1	20	-4.64	-0.104	7/7/2009@11:13:36			
WCN090707-03	1	S3	40.7	1.84	7/7/2009@11:14:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-59.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-59.3 < 10.0					
		Message	CCV Failed					
		Action	Stop Run					

Analyte Properties Table for OM_7-7-2009_10-38-00.OMN

Property	Channel 1 TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 7/7/2009

Channel 1: Current View

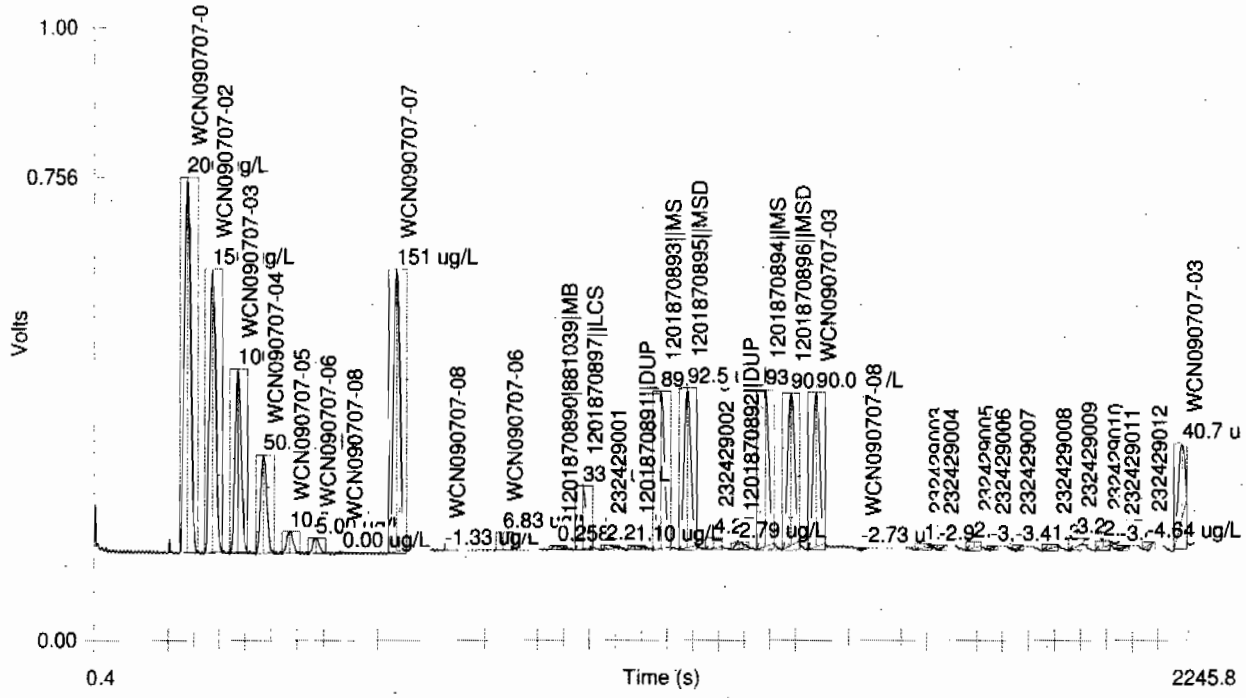

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

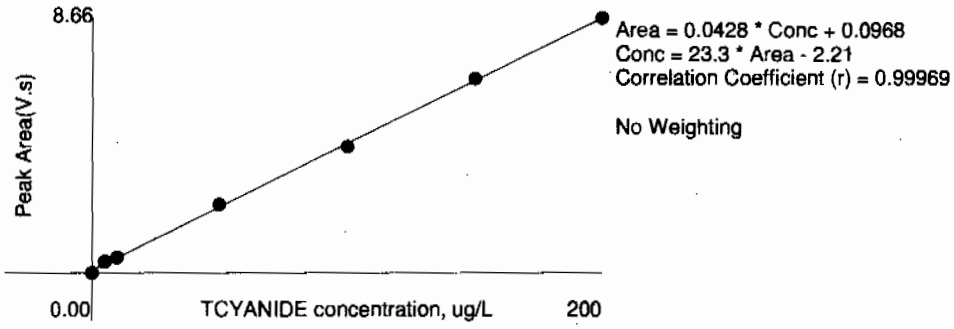

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	7/7/2009 11:39:05	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:40:56	OM_7-7-2009_11-38-18
232429003	881039	1	axc2	7/7/2009 11:42:44	OM_7-7-2009_11-38-18
232429004	881039	1	axc2	7/7/2009 11:43:36	OM_7-7-2009_11-38-18
232429005	881039	1	axc2	7/7/2009 11:44:28	OM_7-7-2009_11-38-18
232429006	881039	1	axc2	7/7/2009 11:45:20	OM_7-7-2009_11-38-18
232429007	881039	1	axc2	7/7/2009 11:46:12	OM_7-7-2009_11-38-18
232429008	881039	1	axc2	7/7/2009 11:47:05	OM_7-7-2009_11-38-18
232429009	881039	1	axc2	7/7/2009 11:47:59	OM_7-7-2009_11-38-18
232429010	881039	1	axc2	7/7/2009 11:48:53	OM_7-7-2009_11-38-18
232429011	881039	1	axc2	7/7/2009 11:49:46	OM_7-7-2009_11-38-18
232429012	881039	1	axc2	7/7/2009 11:50:39	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 11:51:31	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 11:53:21	OM_7-7-2009_11-38-18
232429013	881039	1	axc2	7/7/2009 11:55:10	OM_7-7-2009_11-38-18
232429014	881039	1	axc2	7/7/2009 11:56:03	OM_7-7-2009_11-38-18
232429015	881039	1	axc2	7/7/2009 11:56:56	OM_7-7-2009_11-38-18
232509001	881039	1	axc2	7/7/2009 11:57:49	OM_7-7-2009_11-38-18
232509002	881039	1	axc2	7/7/2009 11:58:41	OM_7-7-2009_11-38-18
232509003	881039	1	axc2	7/7/2009 11:59:34	OM_7-7-2009_11-38-18
232509004	881039	1	axc2	7/7/2009 12:00:25	OM_7-7-2009_11-38-18
232509005	881039	1	axc2	7/7/2009 12:01:18	OM_7-7-2009_11-38-18
1201873553	882139	1	axc2	7/7/2009 12:02:10	OM_7-7-2009_11-38-18
1201873557	882139	50	axc2	7/7/2009 12:03:01	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:03:53	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:05:44	OM_7-7-2009_11-38-18
232494013	882139	1	axc2	7/7/2009 12:07:35	OM_7-7-2009_11-38-18
232494014	882139	1	axc2	7/7/2009 12:08:28	OM_7-7-2009_11-38-18
232494015	882139	1	axc2	7/7/2009 12:09:22	OM_7-7-2009_11-38-18
232663001	882139	1	axc2	7/7/2009 12:10:15	OM_7-7-2009_11-38-18
1201873554	882139	1	axc2	7/7/2009 12:11:08	OM_7-7-2009_11-38-18
1201873555	882139	1	axc2	7/7/2009 12:12:02	OM_7-7-2009_11-38-18
1201873556	882139	1	axc2	7/7/2009 12:12:55	OM_7-7-2009_11-38-18
232663002	882139	1	axc2	7/7/2009 12:13:47	OM_7-7-2009_11-38-18
232663003	882139	1	axc2	7/7/2009 12:14:40	OM_7-7-2009_11-38-18
232663004	882139	1	axc2	7/7/2009 12:15:33	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:16:26	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:18:16	OM_7-7-2009_11-38-18
232663005	882139	1	axc2	7/7/2009 12:20:04	OM_7-7-2009_11-38-18
1201873558	882142	1	axc2	7/7/2009 12:20:57	OM_7-7-2009_11-38-18
1201873565	882142	1	axc2	7/7/2009 12:21:49	OM_7-7-2009_11-38-18
232662001	882142	1	axc2	7/7/2009 12:22:42	OM_7-7-2009_11-38-18
1201873559	882142	1	axc2	7/7/2009 12:23:33	OM_7-7-2009_11-38-18
1201873561	882142	1	axc2	7/7/2009 12:24:27	OM_7-7-2009_11-38-18
1201873563	882142	1	axc2	7/7/2009 12:25:22	OM_7-7-2009_11-38-18
232674001	882142	1	axc2	7/7/2009 12:26:16	OM_7-7-2009_11-38-18
232674002	882142	1	axc2	7/7/2009 12:27:10	OM_7-7-2009_11-38-18
232677001	882142	1	axc2	7/7/2009 12:28:03	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009 12:28:55	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009 12:30:45	OM_7-7-2009_11-38-18
1201873560	882142	1	axc2	7/7/2009 12:32:35	OM_7-7-2009_11-38-18
1201873562	882142	1	axc2	7/7/2009 12:33:29	OM_7-7-2009_11-38-18
1201873564	882142	1	axc2	7/7/2009 12:34:21	OM_7-7-2009_11-38-18
232703001	882142	1	axc2	7/7/2009 12:35:14	OM_7-7-2009_11-38-18
232728001	882142	1	axc2	7/7/2009 12:36:07	OM_7-7-2009_11-38-18
232728003	882142	1	axc2	7/7/2009 12:36:59	OM_7-7-2009_11-38-18
232742001	882142	1	axc2	7/7/2009 12:37:52	OM_7-7-2009_11-38-18
232753001	882142	1	axc2	7/7/2009 12:38:44	OM_7-7-2009_11-38-18

232755001	882142	1	axc2	7/7/2009	12:39:36	OM_7-7-2009_11-38-18
232759001	882142	1	axc2	7/7/2009	12:40:28	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:41:21	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:43:12	OM_7-7-2009_11-38-18
1201873547	882134	1	axc2	7/7/2009	12:45:02	OM_7-7-2009_11-38-18
1201873548	882134	1	axc2	7/7/2009	12:45:57	OM_7-7-2009_11-38-18
1201873549	882134	1	axc2	7/7/2009	12:46:51	OM_7-7-2009_11-38-18
232494013	882134	1	axc2	7/7/2009	12:47:44	OM_7-7-2009_11-38-18
232494014	882134	1	axc2	7/7/2009	12:48:38	OM_7-7-2009_11-38-18
232494015	882134	1	axc2	7/7/2009	12:49:31	OM_7-7-2009_11-38-18
1201873566	882146	1	axc2	7/7/2009	12:50:26	OM_7-7-2009_11-38-18
1201873568	882146	250	axc2	7/7/2009	12:51:18	OM_7-7-2009_11-38-18
232653001	882146	1	axc2	7/7/2009	12:52:11	OM_7-7-2009_11-38-18
1201873567	882146	1	axc2	7/7/2009	12:53:04	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:53:58	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	12:55:47	OM_7-7-2009_11-38-18
232657001	882146	1	axc2	7/7/2009	12:57:36	OM_7-7-2009_11-38-18
CCV		1	axc2	7/7/2009	12:58:28	OM_7-7-2009_11-38-18
CCB		1	axc2	7/7/2009	13:00:19	OM_7-7-2009_11-38-18

Author: axc2 Date : 7/7/2009

Original Run Filename: OM_7-7-2009_11-38-18.OMN created 7/7/2009 11:38:18
Original Run Author's Signature: [axc2]
Current Run Filename: OM_7-7-2009_11-38-18.OMN last modified 7/7/2009 13:01:23
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN090707-03	1	S3	98.3	4.31	7/7/2009@11:39:05			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	-1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	-1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.68	0.0229	7/7/2009@11:40:56			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.68 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.68 > -5.00					
		Message	CCB Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
232429003|881039|	1	11	0.101	0.0991	7/7/2009@11:42:44			
232429004	1	12	-0.0267	0.0937	7/7/2009@11:43:36			
232429005	1	13	3.58	0.248	7/7/2009@11:44:28			
232429006	1	14	-0.107	0.0902	7/7/2009@11:45:20			
232429007	1	15	-0.282	0.0827	7/7/2009@11:46:12			
232429008	1	16	0.519	0.117	7/7/2009@11:47:05			
232429009	1	17	4.44	0.285	7/7/2009@11:47:59			
232429010	1	18	2.86	0.217	7/7/2009@11:48:53			
232429011	1	19	-0.0810	0.0913	7/7/2009@11:49:46			
232429012	1	20	2.81	0.215	7/7/2009@11:50:39			
WCN090707-03	1	S3	99.9	4.38	7/7/2009@11:51:31			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	-0.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	-0.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-2.22	-3.66e-4	7/7/2009@11:53:21			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-2.22 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-2.22 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232429013	1	21	0.103	0.0992	7/7/2009@11:55:10			
232429014	1	22	2.62	0.207	7/7/2009@11:56:03			
232429015	1	23	1.61	0.164	7/7/2009@11:56:56			
232509001	1	24	2.95	0.221	7/7/2009@11:57:49			
232509002	1	25	2.61	0.207	7/7/2009@11:58:41			

232509003	1	26	2.35	0.195	7/7/2009@11:59:34			
232509004	1	27	0.637	0.122	7/7/2009@12:00:25			
232509005	1	28	1.34	0.152	7/7/2009@12:01:18			
1201873553|882139|MB	1	29	0.978	0.137	7/7/2009@12:02:10			
1201873557||LCS	1	30	34.2	1.56	7/7/2009@12:03:01		50.00	
WCN090707-03	1	S3	102	4.45	7/7/2009@12:03:53			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	1.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.41	0.0343	7/7/2009@12:05:44			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.41 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.41 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232494013	1	31	12.4	0.627	7/7/2009@12:07:35			
232494014	1	32	16.5	0.800	7/7/2009@12:08:28			
232494015	1	33	8.15	0.444	7/7/2009@12:09:22			
232663001	1	34	0.469	0.115	7/7/2009@12:10:15			
1201873554||DUP	1	35	0.919	0.134	7/7/2009@12:11:08			
1201873555||MS	1	36	100	4.39	7/7/2009@12:12:02			
1201873556||MSD	1	37	99.9	4.38	7/7/2009@12:12:55			
232663002	1	38	2.87	0.218	7/7/2009@12:13:47			
232663003	1	39	0.612	0.121	7/7/2009@12:14:40			
232663004	1	40	1.78	0.171	7/7/2009@12:15:33			
WCN090707-03	1	S3	103	4.51	7/7/2009@12:16:26			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	3.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	3.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.19	0.0436	7/7/2009@12:18:16			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.19 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.19 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232663005	1	41	3.51	0.245	7/7/2009@12:20:04			
1201873558|882142|MB	1	42	0.654	0.123	7/7/2009@12:20:57			
1201873565||LCS	1	43	52.4	2.34	7/7/2009@12:21:49			
232662001	1	44	-0.601	0.0690	7/7/2009@12:22:42			
1201873559||DUP	1	45	-0.744	0.0629	7/7/2009@12:23:33			
1201873561||MS	1	46	106	4.66	7/7/2009@12:24:27			
1201873563||MSD	1	47	107	4.68	7/7/2009@12:25:22			
232674001	1	48	2.16	0.187	7/7/2009@12:26:16			
232674002	1	49	0.310	0.108	7/7/2009@12:27:10			
232677001	1	50	-0.639	0.0674	7/7/2009@12:28:03			
WCN090707-03	1	S3	105	4.58	7/7/2009@12:28:55			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					

		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	4.02	0.267	7/7/2009@12:30:45			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	4.02 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	4.02 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873560||DUP	1	51	-0.895	0.0565	7/7/2009@12:32:35			
1201873562||MS	1	52	104	4.54	7/7/2009@12:33:29			
1201873564||MSD	1	53	105	4.61	7/7/2009@12:34:21			
232703001	1	54	5.73	0.340	7/7/2009@12:35:14			
232728001	1	55	-1.14	0.0458	7/7/2009@12:36:07			
232728003	1	56	-1.16	0.0449	7/7/2009@12:36:59			
232742001	1	57	-0.968	0.0533	7/7/2009@12:37:52			
232753001	1	58	0.512	0.117	7/7/2009@12:38:44			
232755001	1	59	-1.02	0.0510	7/7/2009@12:39:36			
232759001	1	60	-0.784	0.0612	7/7/2009@12:40:28			
WCN090707-03	1	S3	101	4.40	7/7/2009@12:41:21			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	0.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.381	0.0785	7/7/2009@12:43:12			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.381 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.381 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1201873547|882134|MB	1	61	-0.997	0.0521	7/7/2009@12:45:02			
1201873548||LCS	1	62	-1.28	0.0400	7/7/2009@12:45:57			
1201873549||LCSD	1	63	-0.406	0.0774	7/7/2009@12:46:51			
232494013	1	64	16.1	0.786	7/7/2009@12:47:44			
232494014	1	65	16.8	0.815	7/7/2009@12:48:38			
232494015	1	66	7.54	0.418	7/7/2009@12:49:31			
1201873566|882146|MB	1	67	-0.184	0.0869	7/7/2009@12:50:26			
1201873568||LCS	1	68	52.2	2.33	7/7/2009@12:51:18		250.00	
232653001	1	69	-0.792	0.0609	7/7/2009@12:52:11			
1201873567||DUP	1	70	-0.809	0.0602	7/7/2009@12:53:04			
WCN090707-03	1	S3	108	4.72	7/7/2009@12:53:58			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	7.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-1.41	0.0344	7/7/2009@12:55:47			CCB

		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.41 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.41 > -5.00					
		Message	CCB Passed					
		Action	Continue					
232657001	1	71	2.86	0.217	7/7/2009@12:57:36			
WCN090707-03	1	S3	101	4.43	7/7/2009@12:58:28			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	1.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	1.2 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN090707-08	1	S7	-0.0967	0.0907	7/7/2009@13:00:19			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-0.0967 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-0.0967 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_7-7-2009_11-38-18.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2

Date : 7/7/2009

Channel 1: Current View

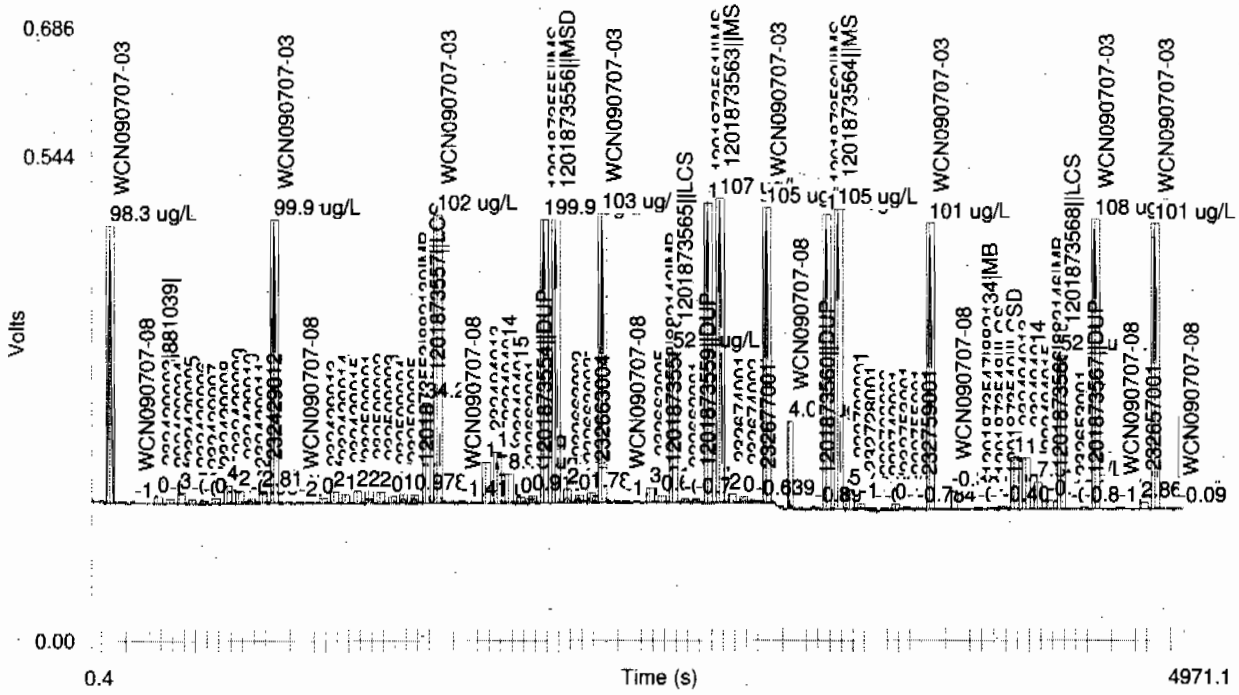

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.66	0.613	0.1	7/7/2009	10:41:40
2	150	1	6.58	0.463	-0.9	7/7/2009	10:42:32
3	100	1	4.25	0.301	2.8	7/7/2009	10:43:25
4	50.0	1	2.32	0.161	-3.6	7/7/2009	10:44:17
5	10.0	1	0.530	0.0349	-1.0	7/7/2009	10:45:11
6	5.00	1	0.393	0.0247	-26.4	7/7/2009	10:46:04
7	0.00	1	-0.00192	-0.00217		7/7/2009	10:46:59

Figure 1: TCYANIDE

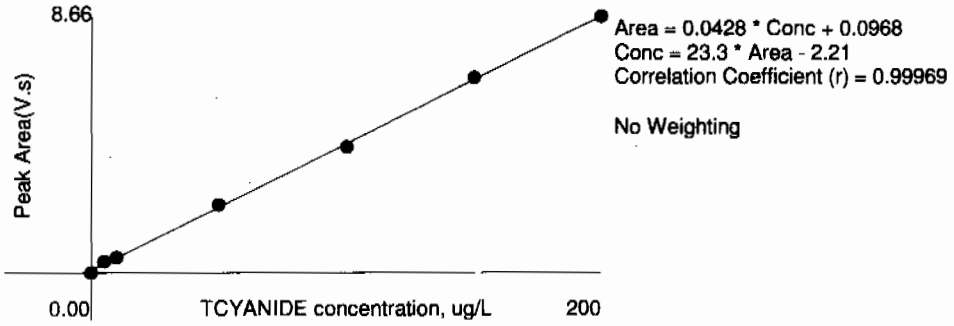

Nitrate Nitrite by Cadmium Reduction

This is runlog lachat3

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
		1	axh3	7/7/2009 7:49:27	OM_7-7-2009_07-47-40
1.0 PPM		1	axh3	7/7/2009 7:50:38	OM_7-7-2009_07-47-40
0.5 ppm		1	axh3	7/7/2009 7:51:51	OM_7-7-2009_07-47-40
0.1 ppm		1	axh3	7/7/2009 7:53:05	OM_7-7-2009_07-47-40
0.05 ppm		1	axh3	7/7/2009 7:54:18	OM_7-7-2009_07-47-40
ICAL-00		1	axh3	7/7/2009 7:55:32	OM_7-7-2009_07-47-40
1.0 ppm ICV		1	axh3	7/7/2009 7:57:54	OM_7-7-2009_07-47-40
ICB		1	axh3	7/7/2009 8:00:16	OM_7-7-2009_07-47-40
Nitrate 1.0 ppm		1	axh3	7/7/2009 8:02:35	OM_7-7-2009_07-47-40
Nitrite 1.0 ppm		1	axh3	7/7/2009 8:04:55	OM_7-7-2009_07-47-40
1201872211	881592	1	axh3	7/7/2009 8:07:16	OM_7-7-2009_07-47-40
1201872214	881592	1	axh3	7/7/2009 8:08:30	OM_7-7-2009_07-47-40
231823002	881592	10	axh3	7/7/2009 8:09:43	OM_7-7-2009_07-47-40
1201873539	881592	10	axh3	7/7/2009 8:10:56	OM_7-7-2009_07-47-40
1201873541	881592	10	axh3	7/7/2009 8:12:09	OM_7-7-2009_07-47-40
231823004	881592	25	axh3	7/7/2009 8:13:21	OM_7-7-2009_07-47-40
231823006	881592	50	axh3	7/7/2009 8:14:34	OM_7-7-2009_07-47-40
231823008*	881592	100	axh3	7/7/2009 8:15:47	OM_7-7-2009_07-47-40
231823010	881592	50	axh3	7/7/2009 8:16:58	OM_7-7-2009_07-47-40
231823012	881592	1	axh3	7/7/2009 8:18:11	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 8:19:23	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 8:21:45	OM_7-7-2009_07-47-40
231823008	881592	100	axh3	7/7/2009 8:24:05	OM_7-7-2009_07-47-40
231823014	881592	100	axh3	7/7/2009 8:25:17	OM_7-7-2009_07-47-40
231823016	881592	50	axh3	7/7/2009 8:26:30	OM_7-7-2009_07-47-40
231917002	881592	100	axh3	7/7/2009 8:27:42	OM_7-7-2009_07-47-40
231917004	881592	100	axh3	7/7/2009 8:28:53	OM_7-7-2009_07-47-40
232015002	881592	50	axh3	7/7/2009 8:30:04	OM_7-7-2009_07-47-40
232609001	881592	100	axh3	7/7/2009 8:31:18	OM_7-7-2009_07-47-40
232609002	881592	5	axh3	7/7/2009 8:32:31	OM_7-7-2009_07-47-40
1201872212	881592	5	axh3	7/7/2009 8:33:44	OM_7-7-2009_07-47-40
1201872213	881592	5	axh3	7/7/2009 8:34:57	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 8:36:09	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 8:38:31	OM_7-7-2009_07-47-40
232674001	881592	1	axh3	7/7/2009 8:40:51	OM_7-7-2009_07-47-40
232609003	881592	5	axh3	7/7/2009 8:42:03	OM_7-7-2009_07-47-40
232609004	881592	5	axh3	7/7/2009 8:43:16	OM_7-7-2009_07-47-40
232609005	881592	5	axh3	7/7/2009 8:44:29	OM_7-7-2009_07-47-40
232609006	881592	10	axh3	7/7/2009 8:45:41	OM_7-7-2009_07-47-40
232609007	881592	5	axh3	7/7/2009 8:46:54	OM_7-7-2009_07-47-40
232662001	881592	5	axh3	7/7/2009 8:48:06	OM_7-7-2009_07-47-40
1201873538	881592	5	axh3	7/7/2009 8:49:17	OM_7-7-2009_07-47-40
1201873540	881592	5	axh3	7/7/2009 8:50:30	OM_7-7-2009_07-47-40
1201874237	882466	1	axh3	7/7/2009 8:51:41	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 8:52:54	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 8:55:16	OM_7-7-2009_07-47-40
1201874242	882466	1	axh3	7/7/2009 8:57:35	OM_7-7-2009_07-47-40
232742001	882466	5	axh3	7/7/2009 8:58:48	OM_7-7-2009_07-47-40
1201874239	882466	5	axh3	7/7/2009 9:00:01	OM_7-7-2009_07-47-40
1201874241	882466	5	axh3	7/7/2009 9:01:14	OM_7-7-2009_07-47-40
232750002	882466	1	axh3	7/7/2009 9:02:27	OM_7-7-2009_07-47-40
232755001	882466	1	axh3	7/7/2009 9:03:40	OM_7-7-2009_07-47-40
232759001	882466	1	axh3	7/7/2009 9:04:52	OM_7-7-2009_07-47-40
232761001	882466	25	axh3	7/7/2009 9:06:05	OM_7-7-2009_07-47-40
1201874238	882466	25	axh3	7/7/2009 9:07:18	OM_7-7-2009_07-47-40
1201874240	882466	25	axh3	7/7/2009 9:08:30	OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009 9:09:42	OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009 9:12:04	OM_7-7-2009_07-47-40

232855002	882466	1	axh3	7/7/2009	9:14:24 OM_7-7-2009_07-47-40
232869003	882466	5	axh3	7/7/2009	9:15:36 OM_7-7-2009_07-47-40
232750002	882466	5	axh3	7/7/2009	9:16:49 OM_7-7-2009_07-47-40
232855002	882466	5	axh3	7/7/2009	9:18:01 OM_7-7-2009_07-47-40
1.0 ppm CCV		1	axh3	7/7/2009	9:20:21 OM_7-7-2009_07-47-40
CCB		1	axh3	7/7/2009	9:22:43 OM_7-7-2009_07-47-40

Author: lachat

Date : 7/7/2009

Original Run Filename: OM_7-7-2009_07-47-40.OMN created 7/7/2009 07:47:40
Original Run Author's Signature: [lachat]
Current Run Filename: OM_7-7-2009_07-47-40.OMN last modified 7/7/2009 09:24:04
Current Run Author's Signature: [lachat]
Description: EPA 353.2
Cadmium Colum 9056CAJ
LCS nominal 1.0 mg/L

Sample	Rep.	Cup No.	Channel 1 NO3 + NO2 Conc. (mg/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WTR090707-26	1	S9	1.50	16.0	7/7/2009@07:49:27			
WTR090707-25	1	S10	1.00	10.9	7/7/2009@07:50:38			1.0 PPM
WTR090707-24	1	S11	0.500	5.44	7/7/2009@07:51:51			0.5 ppm
WTR090707-23	1	S12	0.100	1.07	7/7/2009@07:53:05			0.1 ppm
WTR090707-21	1	S13	0.0500	0.324	7/7/2009@07:54:18			0.05 ppm
0.0ppm	1	S15	0.00	1.22e-4	7/7/2009@07:55:32			0.0 ppm
DQM Test: Minimum Correlation Coefficient								
		Result:	0.99982 > 0.99500					
		Message	Calibration Passed					
		Action	Continue					
WTR090707-27 ICV	1	S16	1.02	11.0	7/7/2009@07:57:54			1.0 ppm ICV
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	1.02 < 1.10					
		Message	ICV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.02 > 0.894					
		Message	ICV Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
ICB	1	S15	0.00372	-5.58e-5	7/7/2009@08:00:16			ICB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00372 < 0.0500					
		Message	ICB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00372 > -0.0500					
		Message	ICB Passed					
		Action	Continue					
WTR090707-22	1	S1	1.00	10.7	7/7/2009@08:02:35			Nitrate 1.0 ppm
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	1.00 < 1.10					
		Message	Nitrate Standard Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.00 > 0.894					
		Message	Nitrate Standard Passed					
		Action	Continue					
WTR090707-28	1	S2	0.980	10.5	7/7/2009@08:04:55			Nitrite 1.0 ppm
		Known Conc:	1.00					
DQM Test: > + Concentration Limit								
		Result:	0.980 < 1.10					
		Message	Nitrite Standard Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.980 > 0.894					
		Message	Nitrite Standard Passed					
		Action	Continue					
1201872211|881592|MB	1	1	0.0122	0.0918	7/7/2009@08:07:16			
1201872214||LCS	1	2	1.04	11.1	7/7/2009@08:08:30			
231823002	1	3	0.516	5.52	7/7/2009@08:09:43		10.00	
1201873539||DUP	1	4	0.560	6.00	7/7/2009@08:10:56		10.00	
1201873541||PS	1	5	1.50	16.2	7/7/2009@08:12:09		10.00	

231823004	1	6	0.389	4.16	7/7/2009@08:13:21		25.00	
231823006	1	7	0.321	3.42	7/7/2009@08:14:34		50.00	
231823008	1	8	6.33	68.2	7/7/2009@08:15:47		100.00	
231823010	1	9	0.341	3.64	7/7/2009@08:16:58		50.00	
231823012	1	10	-0.0182	-0.237	7/7/2009@08:18:11			
WTR090707-25 CCV	1	S10	1.01	10.8	7/7/2009@08:19:23			1.0 ppm CCV
	Known Conc:		1.00					
DQM Test: > + Concentration Limit								
		Result:	1.01 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.01 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00372	-6.33e-5	7/7/2009@08:21:45			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00372 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00372 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
231823008	1	8	0.270	2.87	7/7/2009@08:24:05		100.00	
231823014	1	11	0.313	3.34	7/7/2009@08:25:17		100.00	
231823016	1	12	0.370	3.95	7/7/2009@08:26:30		50.00	
231917002	1	13	0.291	3.10	7/7/2009@08:27:42		100.00	
231917004	1	14	0.231	2.45	7/7/2009@08:28:53		100.00	
232015002	1	15	0.327	3.49	7/7/2009@08:30:04		50.00	
232609001	1	16	0.458	4.90	7/7/2009@08:31:18		100.00	
232609002	1	17	0.555	5.95	7/7/2009@08:32:31		5.00	
1201872212||DUP	1	18	0.536	5.75	7/7/2009@08:33:44		5.00	
1201872213||PS	1	19	1.51	16.3	7/7/2009@08:34:57		5.00	
WTR090707-25 CCV	1	S10	1.02	10.9	7/7/2009@08:36:09			1.0 ppm CCV
	Known Conc:		1.00					
DQM Test: > + Concentration Limit								
		Result:	1.02 < 1.10					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	1.02 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00260	-0.0121	7/7/2009@08:38:31			CCB
	Known Conc:		0.00					
DQM Test: > + Concentration Limit								
		Result:	0.00260 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.00260 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
232674001	1	28	-0.0140	-0.191	7/7/2009@08:40:51			
232609003	1	20	0.344	3.68	7/7/2009@08:42:03		5.00	
232609004	1	21	0.435	4.66	7/7/2009@08:43:16		5.00	
232609005	1	22	0.434	4.64	7/7/2009@08:44:29		5.00	
232609006	1	23	0.892	9.59	7/7/2009@08:45:41		10.00	
232609007	1	24	0.387	4.13	7/7/2009@08:46:54		5.00	
232662001	1	25	0.0127	0.0963	7/7/2009@08:48:06		5.00	
1201873538||DUP	1	26	0.0127	0.0965	7/7/2009@08:49:17		5.00	
1201873540||PS	1	27	1.22	13.2	7/7/2009@08:50:30		5.00	
1201874237|882466|MB	1	29	0.0112	0.0812	7/7/2009@08:51:41			
WTR090707-25 CCV	1	S10	1.01	10.9	7/7/2009@08:52:54			1.0 ppm CCV
	Known Conc:		1.00					
DQM Test: > + Concentration Limit								

		Result:	1.01 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.01 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00293	-0.00858	7/7/2009@08:55:16			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00293 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.00293 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
1201874242||LCS	1	30	1.04	11.2	7/7/2009@08:57:35			
232742001	1	31	0.00934	0.0606	7/7/2009@08:58:48		5.00	
1201874239||DUP	1	32	0.00881	0.0549	7/7/2009@09:00:01		5.00	
1201874241||PS	1	33	0.994	10.7	7/7/2009@09:01:14		5.00	
232750002	1	34	0.102	1.06	7/7/2009@09:02:27			
232755001	1	35	-0.0144	-0.195	7/7/2009@09:03:40			
232759001	1	36	-0.0169	-0.223	7/7/2009@09:04:52			
232761001	1	37	0.471	5.04	7/7/2009@09:06:05		25.00	
1201874238||DUP	1	38	0.465	4.98	7/7/2009@09:07:18		25.00	
1201874240||PS	1	39	1.44	15.5	7/7/2009@09:08:30		25.00	
WTR090707-25 CCV	1	S10	1.02	10.9	7/7/2009@09:09:42			1.0 ppm CCV
		Known Conc:	1.00					
			DQM Test: > + Concentration Limit					
		Result:	1.02 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.02 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00372	-8.31e-5	7/7/2009@09:12:04			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00372 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	0.00372 > -0.0500					
		Message	CCB Passed					
		Action	Continue					
232855002	1	40	0.134	1.40	7/7/2009@09:14:24			
232869003	1	42	0.774	8.31	7/7/2009@09:15:36		5.00	
232750002	1	34	0.0852	0.879	7/7/2009@09:16:49		5.00	
232855002	1	40	0.123	1.29	7/7/2009@09:18:01		5.00	
WTR090707-25 CCV	1	S10	1.02	10.9	7/7/2009@09:20:21			1.0 ppm CCV
		Known Conc:	1.00					
			DQM Test: > + Concentration Limit					
		Result:	1.02 < 1.10					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	1.02 > 0.894					
		Message	CCV Passed					
		Action	Continue					
CCB	1	S15	0.00262	-0.0119	7/7/2009@09:22:43			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	0.00262 < 0.0500					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					

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Result:	0.00262 > -0.0500					
Message	CCB Passed					
Action	Continue					

Channel 1 (NO3 + NO2) : Current View

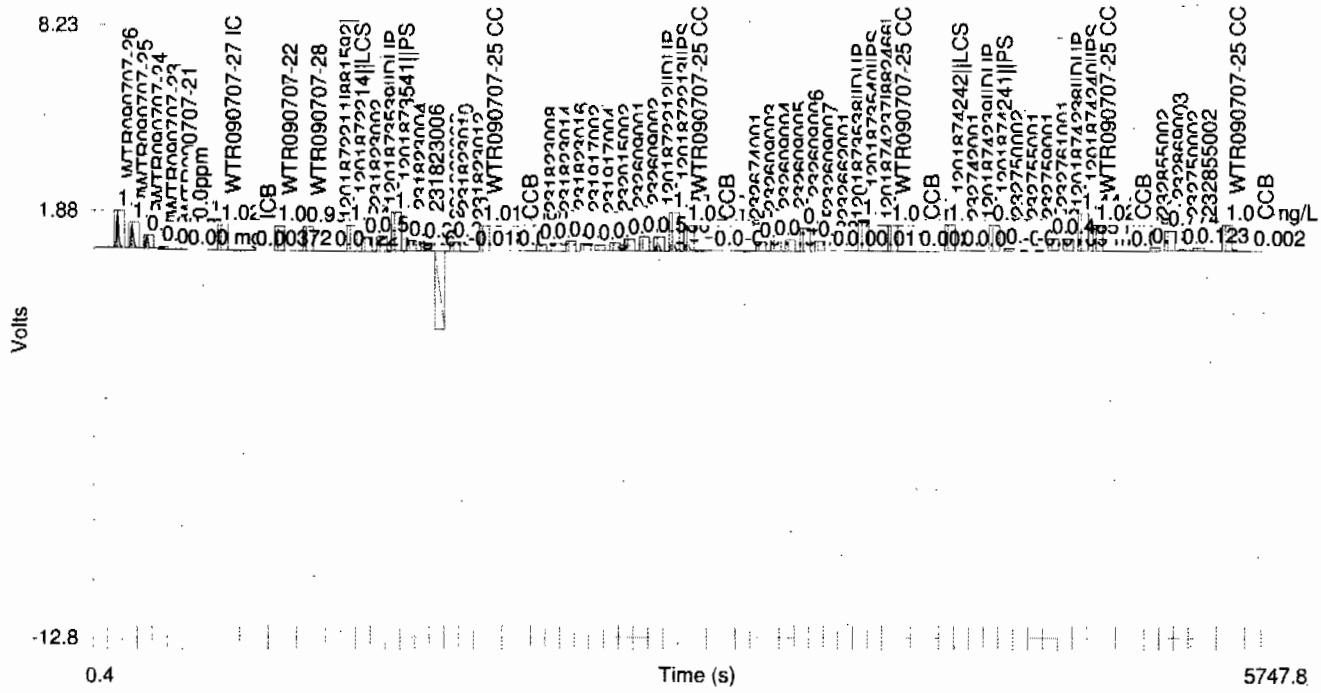

Table 1: NO3 + NO2

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	1.50	1	16.0	1.27	0.8	7/7/2009	07:50:46
2	1.00	1	10.9	0.866	-1.4	7/7/2009	07:51:58
3	0.500	1	5.44	0.431	-1.5	7/7/2009	07:53:11
4	0.100	1	1.07	0.0852	-2.9	7/7/2009	07:54:24
5	0.0500	1	0.324	0.0253	35.4	7/7/2009	07:55:38
6	0.00	1	1.22e-4	4.40e-4		7/7/2009	07:56:52

Author: lachat

Date : 7/7/2009

Figure 1: NO3 + NO2

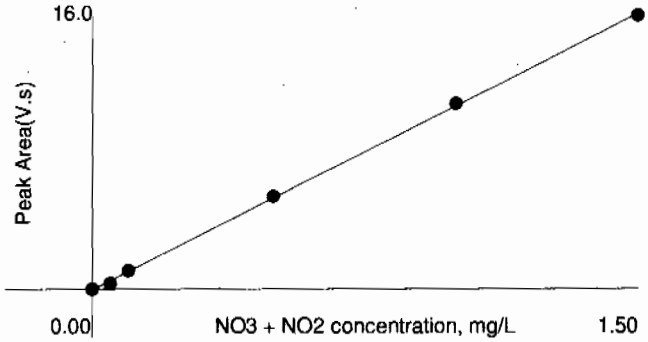

Area = 10.8 * Conc - 0.0381
Conc = 0.0927 * Area + 0.00372
Correlation Coefficient (r) = 0.99982

No Weighting

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 09-2536

Method/Analysis Information

Procedure:	**Dry Weight-Percent Moisture**
Analytical Method:	
Analytical Batch Number:	882644

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201874646	232754001(CAMO-09-6615) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-020 REV# 9.

Calibration Information:

Quality Control (QC) Information:

Designated QC
The following sample was used for QC: 232754001 (CAMO-09-6615). The QC was from LANL work order 232754.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU. Not Applicable.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
Not Applicable. The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882703
Prep Batch Number:	882658

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201874791	Method Blank (MB)
1201874792	232754002(CAMO-09-6614) Sample Duplicate (DUP)
1201874793	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874791 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232754002 (CAMO-09-6614). The QC was from LANL work order 232754.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
Samples were recounted due to high relative percent difference/relative error ratio.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882704
Prep Batch Number:	882658

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201874794	Method Blank (MB)
1201874795	232851002(CAMO-09-7146) Sample Duplicate (DUP)
1201874796	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1201874794 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 232851002 (CAMO-09-7146). The QC was from LANL work order 232851.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The U-238 blank result is greater than 1.65 times the CSU but less than the MDC.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	882713
Prep Batch Number:	882658

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201874832	Method Blank (MB)
1201874833	232754001(CAMO-09-6615) Sample Duplicate (DUP)
1201874834	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in July 2008, November 2008, February 2009, April 2009 and June 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232754001 (CAMO-09-6615). The QC was from LANL work order 232754.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result for the following is greater than 1.65 times the CSU, but less than the minimum detectable activity: Ra-224.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result for the following is greater than the decision level in the method blank, but less than the minimum detectable activity: Ra-224.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	232754001	CAMO-09-6615
			232754002	CAMO-09-6614
			232754003	CAMO-09-6613
			1201874833	CAMO-09-6615(232754001DUP)
		Cadmium-109	232754001	CAMO-09-6615
			232754002	CAMO-09-6614
			232754003	CAMO-09-6613
			1201874833	CAMO-09-6615(232754001DUP)
		Radium-224	232754001	CAMO-09-6615
			232754002	CAMO-09-6614
			232754003	CAMO-09-6613
			1201874833	CAMO-09-6615(232754001DUP)
UI	Data rejected due to low abundance.	Cesium-134	232754001	CAMO-09-6615
			232754002	CAMO-09-6614
			232754003	CAMO-09-6613
		Strontium-85	232754001	CAMO-09-6615
			232754002	CAMO-09-6614
			232754003	CAMO-09-6613

Method/Analysis Information

Product:	**H3**
Analytical Method:	GL-RAD-A-002
Analytical Batch Number:	883039

Sample ID	Client ID
232754001	CAMO-09-6615
232754002	CAMO-09-6614
232754003	CAMO-09-6613
1201875658	Method Blank (MB)
1201875659	232851001(CAMO-09-7145) Sample Duplicate (DUP)
1201875660	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 17.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2008.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 232851001 (CAMO-09-7145). The QC was from LANL work order 232851.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 6/20/07

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 09-2536 GEL Work Order: 232754

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

7/20/09

Reviewed by

GEL LABORATORIES LLC

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-6615	Project:	LANL01004
Sample ID:	232754001	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	7.23%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	-0.0064	0.0229	+/-0.00665	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240		0.147	0.0279	+/-0.0159	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.764	0.160	+/-0.0747	0.100	pCi/g		CXM2	07/14/09	2123	882704	4
Uranium-235/236	U	0.0435	0.0734	+/-0.0154	0.100	pCi/g						
Uranium-238		0.637	0.0623	+/-0.0656	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0982	0.290	+/-0.0904	0.200	pCi/g		MXR1	07/14/09	1044	882713	5
Bismuth-211	UI	4.13	0.308	+/-0.249		pCi/g						
Bismuth-214		1.15	0.116	+/-0.084	0.200	pCi/g						
Cadmium-109	UI	3.36	1.55	+/-0.523		pCi/g						
Cerium-139	U	-0.0138	0.0515	+/-0.0154	0.050	pCi/g						
Cesium-134	UI	0.132	0.0936	+/-0.0333	0.100	pCi/g						
Cesium-137	U	-0.0224	0.0623	+/-0.0203	0.100	pCi/g						
Cobalt-60	U	-0.00278	0.0673	+/-0.0208	0.100	pCi/g						
Europium-152	U	0.103	0.155	+/-0.0539	0.200	pCi/g						
Lanthanum-140	U	0.0618	0.116	+/-0.0333		pCi/g						
Lead-212		1.82	0.0934	+/-0.0831	0.100	pCi/g						
Lead-214		1.44	0.107	+/-0.0945	0.100	pCi/g						
Mercury-203	U	0.0321	0.0709	+/-0.0227	0.100	pCi/g						
Potassium-40		35.5	0.522	+/-1.78	1.00	pCi/g						
Radium-223	U	0.338	1.10	+/-0.355		pCi/g						
Radium-224	UI	5.23	1.06	+/-0.541		pCi/g						
Radium-226		1.15	0.116	+/-0.084		pCi/g						
Radium-228		1.70	0.237	+/-0.172	0.500	pCi/g						
Ruthenium-106	U	0.020	0.520	+/-0.156	0.800	pCi/g						
Sodium-22	U	-0.00479	0.0736	+/-0.0227	0.080	pCi/g						
Strontium-85	UI	0.122	0.0743	+/-0.0213		pCi/g						
Thallium-208		0.574	0.0599	+/-0.0414	0.080	pCi/g						
Thorium-227	U	-0.202	0.641	+/-0.199		pCi/g						
Thorium-231	U	0.338	1.10	+/-0.355		pCi/g						
Thorium-234	U	1.49	2.38	+/-0.960	2.00	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-6615
Sample ID: 232754001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Tin-113	U	-0.00589	0.074	+/-0.0218	0.100	pCi/g						
Uranium-235	U	-0.161	0.362	+/-0.111	0.500	pCi/g						
Yttrium-88	U	-0.00583	0.0463	+/-0.0146	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	79.3	243	+/-72.8	250	pCi/L		KXK2	07/16/09	1200	883039	6

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	88.8	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	94.2	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded

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Report Date: July 20, 2009

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Sample ID: 232754001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst Date	Time	Batch	Mtd.

J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-6614	Project:	LANL01004
Sample ID:	232754002	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	9.78%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.0153	0.021	+/-0.00719	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240		0.0376	0.0256	+/-0.00882	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.933	0.170	+/-0.0886	0.100	pCi/g		CXM2	07/14/09	2123	882704	4
Uranium-235/236	U	0.0509	0.078	+/-0.0183	0.100	pCi/g						
Uranium-238		0.816	0.0662	+/-0.0798	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.0349	0.299	+/-0.0849	0.200	pCi/g		MXR1	07/14/09	1045	882713	5
Bismuth-211	UI	4.05	0.247	+/-0.233		pCi/g						
Bismuth-214		1.20	0.0922	+/-0.0835	0.200	pCi/g						
Cadmium-109	UI	2.32	1.33	+/-0.510		pCi/g						
Cerium-139	U	-0.00089	0.0433	+/-0.0123	0.050	pCi/g						
Cesium-134	UI	0.0857	0.073	+/-0.0246	0.100	pCi/g						
Cesium-137	U	-0.0117	0.0485	+/-0.0146	0.100	pCi/g						
Cobalt-60	U	0.00146	0.0527	+/-0.016	0.100	pCi/g						
Europium-152	U	-0.0259	0.125	+/-0.0536	0.200	pCi/g						
Lanthanum-140	U	0.0375	0.103	+/-0.0333		pCi/g						
Lead-212		1.71	0.0798	+/-0.0779	0.100	pCi/g						
Lead-214		1.41	0.0862	+/-0.0889	0.100	pCi/g						
Mercury-203	U	0.0359	0.0598	+/-0.0171	0.100	pCi/g						
Potassium-40		36.7	0.433	+/-1.59	1.00	pCi/g						
Radium-223	U	-0.549	0.899	+/-0.333		pCi/g						
Radium-224	UI	4.97	0.906	+/-0.585		pCi/g						
Radium-226		1.20	0.0922	+/-0.0835		pCi/g						
Radium-228		1.75	0.168	+/-0.164	0.500	pCi/g						
Ruthenium-106	U	-0.279	0.411	+/-0.135	0.800	pCi/g						
Sodium-22	U	-0.021	0.0581	+/-0.0184	0.080	pCi/g						
Strontium-85	UI	0.126	0.0625	+/-0.0179		pCi/g						
Thallium-208		0.512	0.0474	+/-0.0417	0.080	pCi/g						
Thorium-227	U	-0.246	0.516	+/-0.159		pCi/g						
Thorium-231	U	-0.549	0.899	+/-0.333		pCi/g						
Thorium-234	U	1.36	2.58	+/-0.735	2.00	pCi/g						
Tin-113	U	-0.0277	0.0594	+/-0.018	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-6614
Sample ID: 232754002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Uranium-235	U	0.0756	0.316	+/-0.0963	0.500	pCi/g						
Yttrium-88	U	-0.000297	0.0451	+/-0.0138	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	3.35	236	+/-69.0	250	pCi/L		KXK2	07/16/09	1258	883039	6

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	96.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	97.2	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-6614
Sample ID: 232754002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID:	CAMO-09-6613	Project:	LANL01004
Sample ID:	232754003	Client ID:	LANL010
Matrix:	R		
Collect Date:	30-JUN-09		
Receive Date:	02-JUL-09		
Collector:	Client		
Moisture:	9.74%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.0143	0.0233	+/-0.00817	0.050	pCi/g		CXM2	07/16/09	1010	882703	2
Plutonium-239/240		0.0912	0.0285	+/-0.0121	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.803	0.173	+/-0.0793	0.100	pCi/g		CXM2	07/14/09	2123	882704	4
Uranium-235/236	U	0.0564	0.0792	+/-0.018	0.100	pCi/g						
Uranium-238		0.874	0.0673	+/-0.084	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.158	0.221	+/-0.0697	0.200	pCi/g		MXR1	07/14/09	1048	882713	5
Bismuth-211	UI	4.26	0.279	+/-0.226		pCi/g						
Bismuth-214		1.41	0.0918	+/-0.0954	0.200	pCi/g						
Cadmium-109	UI	3.96	1.07	+/-0.480		pCi/g						
Cerium-139	U	-0.00987	0.0445	+/-0.0132	0.050	pCi/g						
Cesium-134	UI	0.0912	0.073	+/-0.0293	0.100	pCi/g						
Cesium-137	U	0.0101	0.0541	+/-0.016	0.100	pCi/g						
Cobalt-60	U	0.0153	0.0531	+/-0.0153	0.100	pCi/g						
Europium-152	U	0.0101	0.138	+/-0.0534	0.200	pCi/g						
Lanthanum-140	U	-0.112	0.102	+/-0.0369		pCi/g						
Lead-212		1.86	0.0806	+/-0.0818	0.100	pCi/g						
Lead-214		1.48	0.0946	+/-0.0874	0.100	pCi/g						
Mercury-203	U	0.056	0.0625	+/-0.0172	0.100	pCi/g						
Potassium-40		39.5	0.427	+/-1.56	1.00	pCi/g						
Radium-223	U	-0.0481	0.890	+/-0.302		pCi/g						
Radium-224	UI	4.67	0.915	+/-0.573		pCi/g						
Radium-226		1.41	0.0918	+/-0.0954		pCi/g						
Radium-228		1.85	0.180	+/-0.167	0.500	pCi/g						
Ruthenium-106	U	-0.0215	0.425	+/-0.127	0.800	pCi/g						
Sodium-22	U	-0.00953	0.0595	+/-0.0181	0.080	pCi/g						
Strontium-85	UI	0.151	0.0623	+/-0.0173		pCi/g						
Thallium-208		0.577	0.0471	+/-0.0386	0.080	pCi/g						
Thorium-227	U	0.206	0.562	+/-0.159		pCi/g						
Thorium-231	U	-0.0481	0.890	+/-0.302		pCi/g						
Thorium-234		2.23	1.83	+/-0.842	2.00	pCi/g						
Tin-113	U	-0.00808	0.0586	+/-0.0177	0.100	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-6613
Sample ID: 232754003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Uranium-235	U	0.0349	0.323	+/-0.0942	0.500	pCi/g						
Yttrium-88	U	-0.00314	0.0327	+/-0.0101	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
H3 "As Received"												
Tritium	U	12.0	242	+/-70.9	250	pCi/L		KXK2	07/16/09	1355	883039	6

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	EML HASL 300, 4.5.2.3
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	88.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	91.2	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: July 20, 2009

Client Sample ID: CAMO-09-6613
Sample ID: 232754003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GEL LABORATORIES LLC

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QC Summary

Report Date: July 20, 2009

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 232754

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882703										
QC1201874792 232754002 DUP										
Plutonium-238	U	0.0153	U	0.00373	pCi/g	0.551		(0-1)	CXM2	07/16/0910:10
	TPU:	+/-0.00719		+/-0.00329						
	Yield:	96.6		95.9						
Plutonium-239/240		0.0376		0.0671	pCi/g	0.776		(0-1)		
	TPU:	+/-0.00882		+/-0.0102						
	Yield:	96.6		95.9						
QC1201874793 LCS										
Plutonium-238				6.26	pCi/g			(75%-125%)		
	TPU:			+/-0.457						
	Yield:			103						
Plutonium-239/240	41.8			38.3	pCi/g		91.6	(75%-125%)		
	TPU:			+/-2.29						
	Yield:			103						
QC1201874791 MB										
Plutonium-238			U	0.00829	pCi/g					
	TPU:			+/-0.00619						
	Yield:			101						
Plutonium-239/240			U	0.00553	pCi/g					
	TPU:			+/-0.00339						
	Yield:			101						
Batch 882704										
QC1201874795 232851002 DUP										
Uranium-233/234		0.491		0.486	pCi/g	0.0259		(0-1)	CXM2	07/14/0921:23
	TPU:	+/-0.0554		+/-0.0547						
	Yield:	97.4		99.6						
Uranium-235/236	U	0.0319	U	0.00445	pCi/g	0.637		(0-1)		
	TPU:	+/-0.0139		+/-0.00771						
	Yield:	97.4		99.6						
Uranium-238		0.731		0.647	pCi/g	0.297		(0-1)		
	TPU:	+/-0.074		+/-0.0662						
	Yield:	97.4		99.6						
QC1201874796 LCS										
Uranium-233/234				6.34	pCi/g			(75%-125%)		07/14/0921:23
	TPU:			+/-0.577						
	Yield:			104						
Uranium-235/236				0.343	pCi/g			(75%-125%)		
	TPU:			+/-0.093						
	Yield:			104						
Uranium-238	5.75			5.11	pCi/g		88.9	(75%-125%)		
	TPU:			+/-0.480						
	Yield:			104						
QC1201874794 MB										
Uranium-233/234			U	-0.00897	pCi/g					07/14/0921:23

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QC Summary

Workorder: 232754

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 882704										
	TPU:			+/-0.0047						
	Yield:			102						
Uranium-235/236			U	0.00	pCi/g					
	TPU:			+/-0.00311						
	Yield:			102						
Uranium-238			U	0.0124	pCi/g					
	TPU:			+/-0.00478						
	Yield:			102						
Rad Gamma Spec										
Batch 882713										
QC1201874833 232754001 DUP										
Americium-241	U	0.0982	U	0.0474	pCi/g	0.201		(0-1)	MXR1	07/14/09 11:23
	TPU:	+/-0.0904		+/-0.0358						
Bismuth-211	UI	4.13	UI	4.10	pCi/g	0.036		(0-1)		
	TPU:	+/-0.249		+/-0.279						
Bismuth-214		1.15		1.28	pCi/g	0.353		(0-1)		
	TPU:	+/-0.084		+/-0.104						
Cadmium-109	UI	3.36	UI	3.73	pCi/g	0.191		(0-1)		
	TPU:	+/-0.523		+/-0.441						
Cerium-139	U	-0.0138	U	-0.0152	pCi/g	0.0233		(0-1)		
	TPU:	+/-0.0154		+/-0.0163						
Cesium-134	UI	0.132	U	0.0783	pCi/g	0.403		(0-1)		
	TPU:	+/-0.0333		+/-0.0331						
Cesium-137	U	-0.0224	U	-0.051	pCi/g	0.315		(0-1)		
	TPU:	+/-0.0203		+/-0.025						
Cobalt-60	U	-0.00278	U	0.0309	pCi/g	0.385		(0-1)		
	TPU:	+/-0.0208		+/-0.023						
Europium-152	U	0.103	U	0.0576	pCi/g	0.193		(0-1)		
	TPU:	+/-0.0539		+/-0.0641						
Lanthanum-140	U	0.0618	U	-0.0273	pCi/g	0.521		(0-1)		
	TPU:	+/-0.0333		+/-0.0523						
Lead-212		1.82		1.86	pCi/g	0.112		(0-1)		
	TPU:	+/-0.0831		+/-0.117						
Lead-214		1.44		1.43	pCi/g	0.0328		(0-1)		
	TPU:	+/-0.0945		+/-0.104						
Mercury-203	U	0.0321	U	0.0433	pCi/g	0.125		(0-1)		
	TPU:	+/-0.0227		+/-0.0225						
Potassium-40		35.5		33.6	pCi/g	0.297		(0-1)		
	TPU:	+/-1.78		+/-1.48						
Radium-223	U	0.338	U	-0.286	pCi/g	0.417		(0-1)		
	TPU:	+/-0.355		+/-0.392						
Radium-224	UI	5.23	UI	4.72	pCi/g	0.228		(0-1)		
	TPU:	+/-0.541		+/-0.567						
Radium-226		1.15		1.28	pCi/g	0.353		(0-1)		
	TPU:	+/-0.084		+/-0.104						
Radium-228		1.70		1.93	pCi/g	0.286		(0-1)		
	TPU:	+/-0.172		+/-0.227						
Ruthenium-106	U	0.020	U	0.128	pCi/g	0.156		(0-1)		
	TPU:	+/-0.156		+/-0.190						
Sodium-22	U	-0.00479	U	-0.0124	pCi/g	0.0731		(0-1)		

QC Summary

Workorder: 232754

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 882713										
	TPU:	+/-0.0227		+/-0.0296						
Strontium-85	UI	0.122	U	0.0871	pCi/g	0.352		(0-1)		
	TPU:	+/-0.0213		+/-0.0276						
Thallium-208		0.574		0.537	pCi/g	0.204		(0-1)		
	TPU:	+/-0.0414		+/-0.0494						
Thorium-227	U	-0.202	U	-0.26	pCi/g	0.0717		(0-1)		
	TPU:	+/-0.199		+/-0.210						
Thorium-231	U	0.338	U	-0.286	pCi/g	0.417		(0-1)		
	TPU:	+/-0.355		+/-0.392						
Thorium-234	U	1.49		1.70	pCi/g	0.0686		(0-1)		
	TPU:	+/-0.960		+/-0.614						
Tin-113	U	-0.00589	U	-0.0244	pCi/g	0.196		(0-1)		
	TPU:	+/-0.0218		+/-0.0254						
Uranium-235	U	-0.161	U	0.0263	pCi/g	0.418		(0-1)		
	TPU:	+/-0.111		+/-0.114						
Yttrium-88	U	-0.00583	U	-0.00724	pCi/g	0.0208		(0-1)		
	TPU:	+/-0.0146		+/-0.0193						
QC1201874834 LCS										
Americium-241	15.9			13.7	pCi/g		86	(75%-125%)		07/14/0912:33
	TPU:			+/-0.723						
Bismuth-211				2.38	pCi/g					
	TPU:			+/-0.348						
Bismuth-214				0.914	pCi/g					
	TPU:			+/-0.172						
Cadmium-109				47.5	pCi/g					
	TPU:			+/-2.30						
Cerium-139			U	0.0156	pCi/g					
	TPU:			+/-0.0246						
Cesium-134			U	0.0305	pCi/g					
	TPU:			+/-0.0546						
Cesium-137	5.64			6.01	pCi/g		107	(75%-125%)		
	TPU:			+/-0.288						
Cobalt-60	6.91			6.85	pCi/g		99	(75%-125%)		
	TPU:			+/-0.264						
Europium-152			U	0.0303	pCi/g					
	TPU:			+/-0.105						
Lanthanum-140			U	0.028	pCi/g					
	TPU:			+/-0.0495						
Lead-212				0.811	pCi/g					
	TPU:			+/-0.121						
Lead-214				0.827	pCi/g					
	TPU:			+/-0.123						
Mercury-203			U	0.0406	pCi/g					
	TPU:			+/-0.0332						
Potassium-40			U	0.849	pCi/g					
	TPU:			+/-0.362						
Radium-223			U	-0.332	pCi/g					
	TPU:			+/-0.638						
Radium-224			U	0.865	pCi/g					
	TPU:			+/-0.654						
Radium-226				0.914	pCi/g					

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QC Summary

Workorder: 232754

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 882713										
	TPU:			+/-0.172						
Radium-228				1.12	pCi/g					
	TPU:			+/-0.332						
Ruthenium-106			U	-0.398	pCi/g					
	TPU:			+/-0.334						
Sodium-22			U	-0.0645	pCi/g					
	TPU:			+/-0.0318						
Strontium-85			U	0.125	pCi/g					
	TPU:			+/-0.0407						
Thallium-208				0.233	pCi/g					
	TPU:			+/-0.0613						
Thorium-227			U	-0.532	pCi/g					
	TPU:			+/-0.354						
Thorium-231			U	-0.332	pCi/g					
	TPU:			+/-0.638						
Thorium-234			U	0.239	pCi/g					
	TPU:			+/-0.615						
Tin-113			U	0.0872	pCi/g					
	TPU:			+/-0.0467						
Uranium-235			U	-0.0991	pCi/g					
	TPU:			+/-0.175						
Yttrium-88			U	0.0654	pCi/g					
	TPU:			+/-0.0267						
QC1201874832 MB										
Americium-241			U	0.00208	pCi/g					07/14/0911:22
	TPU:			+/-0.00896						
Bismuth-211			U	-0.011	pCi/g					
	TPU:			+/-0.068						
Bismuth-214			U	0.0233	pCi/g					
	TPU:			+/-0.0213						
Cadmium-109			U	0.0421	pCi/g					
	TPU:			+/-0.0927						
Cerium-139			U	-0.00105	pCi/g					
	TPU:			+/-0.00585						
Cesium-134			U	0.00345	pCi/g					
	TPU:			+/-0.0144						
Cesium-137			U	-0.0101	pCi/g					
	TPU:			+/-0.0108						
Cobalt-60			U	0.0066	pCi/g					
	TPU:			+/-0.0136						
Europium-152			U	-0.014	pCi/g					
	TPU:			+/-0.0279						
Lanthanum-140			U	-0.0442	pCi/g					
	TPU:			+/-0.025						
Lead-212			U	0.015	pCi/g					
	TPU:			+/-0.0151						
Lead-214			U	0.00197	pCi/g					
	TPU:			+/-0.0238						
Mercury-203			U	-0.00599	pCi/g					
	TPU:			+/-0.00826						
Potassium-40			U	0.140	pCi/g					

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QC Summary

Workorder: 232754

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 882713										
	TPU:			+/-0.158						
Radium-223			U	-0.0565	pCi/g					
	TPU:			+/-0.173						
Radium-224			U	0.297	pCi/g					
	TPU:			+/-0.153						
Radium-226			U	0.0233	pCi/g					
	TPU:			+/-0.0213						
Radium-228			U	0.0178	pCi/g					
	TPU:			+/-0.0469						
Ruthenium-106			U	-0.196	pCi/g					
	TPU:			+/-0.109						
Sodium-22			U	-0.00124	pCi/g					
	TPU:			+/-0.0129						
Strontium-85			U	-0.00426	pCi/g					
	TPU:			+/-0.0172						
Thallium-208			U	0.00523	pCi/g					
	TPU:			+/-0.0132						
Thorium-227			U	-0.0396	pCi/g					
	TPU:			+/-0.0949						
Thorium-231			U	-0.0565	pCi/g					
	TPU:			+/-0.173						
Thorium-234			U	-0.0849	pCi/g					
	TPU:			+/-0.0979						
Tin-113			U	0.00405	pCi/g					
	TPU:			+/-0.0123						
Uranium-235			U	-0.0494	pCi/g					
	TPU:			+/-0.0428						
Yttrium-88			U	0.0147	pCi/g					
	TPU:			+/-0.018						
Rad Liquid Scintillation										
Batch 883039										
QC1201875659 232851001 DUP										
Tritium		687		999	pCi/L	0.744		(0-1)	KXK2	07/16/0921:33
	TPU:	+/-96.5		+/-113						
QC1201875660 LCS										
Tritium	5730			7000	pCi/L		122	(75%-125%)		07/16/0907:54
	TPU:			+/-573						
QC1201875658 MB										
Tritium			U	-22.1	pCi/L					07/16/0920:36
	TPU:			+/-69.5						

Notes:
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product

QC Summary

Workorder: 232754

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time

B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 882703 Product: Pu Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 100% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client required RPD acceptance criteria.	✓		
Tracer yield is 10-125%. Carrier yield 25-125%. Or meets the client contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad contam, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client contract acceptance criteria.	✓		
No data qualifier flags. All line outs initialed and dated. No transcriptive errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformance completed, if applicable.			N/A
Batch non-conformance correctly reviewed and disposition verified to be correct.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If RRMP, results above MDC have been verified by historical results, present or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: E. [illegible] 7/17/09

Secondary Review Performed By: [illegible] 7/18/09

LANL
7/12- 7/23

P new

Plutonium Que Sheet

06-JUL-09

Batch #: 882703 **Analyst:** CXM2 **First Client Due Date:** 23-JUL-09 **Internal Due Date:** 12-JUL-09

Tracer Isotope(s): [redacted]Pu-238 **Tracer Code:** 1262-A **Expiration Date:** 3/11/10 **Vol:** 0.1mL

LCS Isotope(s): [redacted]u-238 **LCS Code:** 0244-B **Expiration Date:** 4/30/20 **Vol:** 0.106g

Spike Isotope(s): Pu-239/Pu-238 **Spike Code:** — **Expiration Date:** — **Vol:** —

Prep Date: 7/9/09 **Initials:** CMM **Pipet ID:** 2971058 **Balance ID:** 50410272 **Witness:** MOE 7/9/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g)	Pu Det #
232347001-1	CAMO-09-10462	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	1	1	1.256	31 ~~12~~
232347002-1	CAMO-09-10460	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	2	2	1.250	32 14
232347003-1	CAMO-09-10461	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	3	3	1.267	33 15
232347004-1	CAMO-09-10467	SAMPLE		.05 pCi/g	SOIL	LANL010	22-JUN-09	4	4	1.251	34 16
232664001-1	CAMO-09-9942	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	5	5	1.252	35 17
232664002-1	CAMO-09-9941	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	6	6	1.260	36 18
232664003-1	CAMO-09-9943	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	7	7	1.253	37 20
232664004-1	CAMO-09-10830	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	8	8	1.266	38 21
232664005-1	CAMO-09-9989	SAMPLE		.05 pCi/g	SOIL	LANL010	26-JUN-09	9	9	1.254	39 22
232746001-1	CAMO-09-9986	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	10	10	1.253	40 23
232746002-1	CAMO-09-9990	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	11	11	1.252	41 24
232746003-1	CAMO-09-9982	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	12	12	1.251	42 ~~25~~
232746004-1	CAMO-09-9988	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	13	13	1.256	43 ~~26~~
232746005-1	CAMO-09-9987	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	14	14	1.252	44 ~~27~~
232746006-1	CAMO-09-9981	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	15	15	1.257	45 ~~28~~
232746007-1	CAMO-09-10831	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	16	16	1.253	46 ~~29~~
232746008-1	CAMO-09-9990	SAMPLE		.05 pCi/g	SOIL	LANL010	29-JUN-09	17	17	1.253	47 ~~30~~
232754001-1	CAMO-09-6615	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	18	18	1.250	48 ~~31~~
232754002-1	CAMO-09-6614	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	19	19	1.255	65 ~~32~~
232754003-1	CAMO-09-6613	SAMPLE		.05 pCi/g	SOIL	LANL010	30-JUN-09	20	20	1.260	66 ~~33~~
1201874791-1	MB for batch 882703	MB		.05 pCi/g	SOIL	QC ACCOUNT		21	21	~~1.267~~ 1.0	17 ~~34~~
1201874792-1	CAMO-09-6614(232754002DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	30-JUN-09	22	22	1.254	68 ~~35~~
1201874793-1	LCS for batch 882703	LCS		.05 pCi/g	SOIL	QC ACCOUNT		23	23	0.106	69 ~~36~~

SEB 7/20/09

dailies

trans

Choose SOP Used: GL-RAD-A-011 / GL-RAD-A-045 / GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: [signature] 7/17/09

1456

Blank Correction Report

Batch ID 882703

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874792	DUP	Plutonium-238	1.25 g	0.00373	0.00329	0.0222	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.0671	0.0102	0.0271	.004424	pCi/g	NO
1201874793	LCS	Plutonium-238	0.106 g	6.26	0.457	0.233	.078207547	pCi/g	NO
		Plutonium-239/240	0.106 g	38.3	2.29	0.285	.052169811	pCi/g	NO
1201874791	MB	Plutonium-238	1.00 g	0.00829	0.00619	0.0247	.00829	pCi/g	YES
		Plutonium-239/240	1.00 g	0.00553	0.00339	0.0302	.00553	pCi/g	YES
232347001	CAMO-09-10462	Plutonium-238	1.25 g	0.0025	0.00729	0.0223	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00375	0.00545	0.0273	.004424	pCi/g	YES
232347002	CAMO-09-10460	Plutonium-238	1.25 g	0.0101	0.00807	0.0258	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00	0.00457	0.0316	.004424	pCi/g	YES
232347003	CAMO-09-10461	Plutonium-238	1.27 g	-0.00236	0.00237	0.0211	.006527559	pCi/g	YES
		Plutonium-239/240	1.27 g	-0.00118	0.00264	0.0258	.004354331	pCi/g	YES
232347004	CAMO-09-10467	Plutonium-238	1.25 g	0.00984	0.00579	0.022	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00737	0.00325	0.0268	.004424	pCi/g	YES
232664001	CAMO-09-9942	Plutonium-238	1.25 g	0.130	0.0153	0.0233	.006632	pCi/g	NO
		Plutonium-239/240	1.25 g	0.483	0.0353	0.0284	.004424	pCi/g	NO
232664002	CAMO-09-9941	Plutonium-238	1.26 g	0.0424	0.00809	0.0211	.006579365	pCi/g	NO
		Plutonium-239/240	1.26 g	3.49	0.182	0.0257	.004388889	pCi/g	NO
232664003	CAMO-09-9943	Plutonium-238	1.25 g	0.0283	0.00702	0.0194	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.406	0.0293	0.0238	.004424	pCi/g	NO
232664004	CAMO-09-10030	Plutonium-238	1.27 g	0.0343	0.00808	0.0198	.006527559	pCi/g	NO
		Plutonium-239/240	1.27 g	2.95	0.153	0.0242	.004354331	pCi/g	NO
232664005	CAMO-09-9989	Plutonium-238	1.25 g	7.75	0.374	0.0169	.006632	pCi/g	NO
		Plutonium-239/240	1.25 g	3.13	0.157	0.0206	.004424	pCi/g	NO
232746001	CAMO-09-9956	Plutonium-238	1.25 g	0.00649	0.00432	0.0232	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.026	0.00674	0.0284	.004424	pCi/g	NO
232746002	CAMO-09-9950	Plutonium-238	1.25 g	0.0121	0.00543	0.0216	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.134	0.0149	0.0263	.004424	pCi/g	NO
232746003	CAMO-09-9952	Plutonium-238	1.25 g	0.0107	0.00398	0.0212	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	-0.00713	0.00376	0.026	.004424	pCi/g	YES
232746004	CAMO-09-9958	Plutonium-238	1.26 g	0.00891	0.00366	0.0206	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0265	0.0059	0.0251	.004388889	pCi/g	NO
232746005	CAMO-09-9957	Plutonium-238	1.25 g	0.00768	0.00427	0.0196	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.00768	0.00454	0.024	.004424	pCi/g	YES
232746006	CAMO-09-9951	Plutonium-238	1.26 g	0.0065	0.00345	0.0232	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0182	0.00693	0.0284	.004388889	pCi/g	YES
232746007	CAMO-09-10031	Plutonium-238	1.25 g	0.011	0.00416	0.0197	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.180	0.0168	0.0241	.004424	pCi/g	NO
232746008	CAMO-09-9990	Plutonium-238	1.25 g	1.58	0.0885	0.0212	.006632	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232746008	CAMO-09-9990	Plutonium-239/240	1.25 g	0.380	0.0283	0.026	.004424	pCi/g	NO
232754001	CAMO-09-6615	Plutonium-238	1.25 g	-0.0064	0.00665	0.0229	.006632	pCi/g	YES
		Plutonium-239/240	1.25 g	0.147	0.0159	0.0279	.004424	pCi/g	NO
232754002	CAMO-09-6614	Plutonium-238	1.26 g	0.0153	0.00719	0.021	.006579365	pCi/g	YES
		Plutonium-239/240	1.26 g	0.0376	0.00882	0.0256	.004388889	pCi/g	NO
232754003	CAMO-09-6613	Plutonium-238	1.27 g	0.0143	0.00817	0.0233	.006527559	pCi/g	YES
		Plutonium-239/240	1.27 g	0.0912	0.0121	0.0285	.004354331	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S0232754001_PU SAMPLE QTY: 1.250 G
DETECTOR NUMBER :42483 AVERAGE %EFFICIENCY :31.7809 % YIELD : 88.772	COUNT DATE:16-JUL-2009 10:10:45 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B048.CNF;1042
PCI/G : 1.477E+00	PCI/G : 1.477E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 3.73494 dpm	EFF FILE : W048.CNF;301
			CAL DATE : 6-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	119.000	115.000	4.000	4.1106	99.90000	1.47E-01	1.59E-02	1.22E-02	2.79E-02	1.42E-02
PU-236	5749.000	21.000	2.000	19.000	2.7154	100.0000	2.58E-03	8.17E-03	8.07E-03	1.96E-02	8.17E-03
PU-238	5499.000	11.000	-5.000	16.000	3.2589	99.90000	-6.40E-03	6.65E-03	9.69E-03	2.29E-02	6.65E-03
PU242	4890.000	1199.000	1187.000	12.000	3.4641	100.0000	1.52E+00	8.72E-02	1.03E-02	2.40E-02	4.44E-02
PU-244	4589.000	4.000	3.000	1.000	4.8319	99.90000	3.84E-03	2.87E-03	1.44E-02	3.22E-02	2.86E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

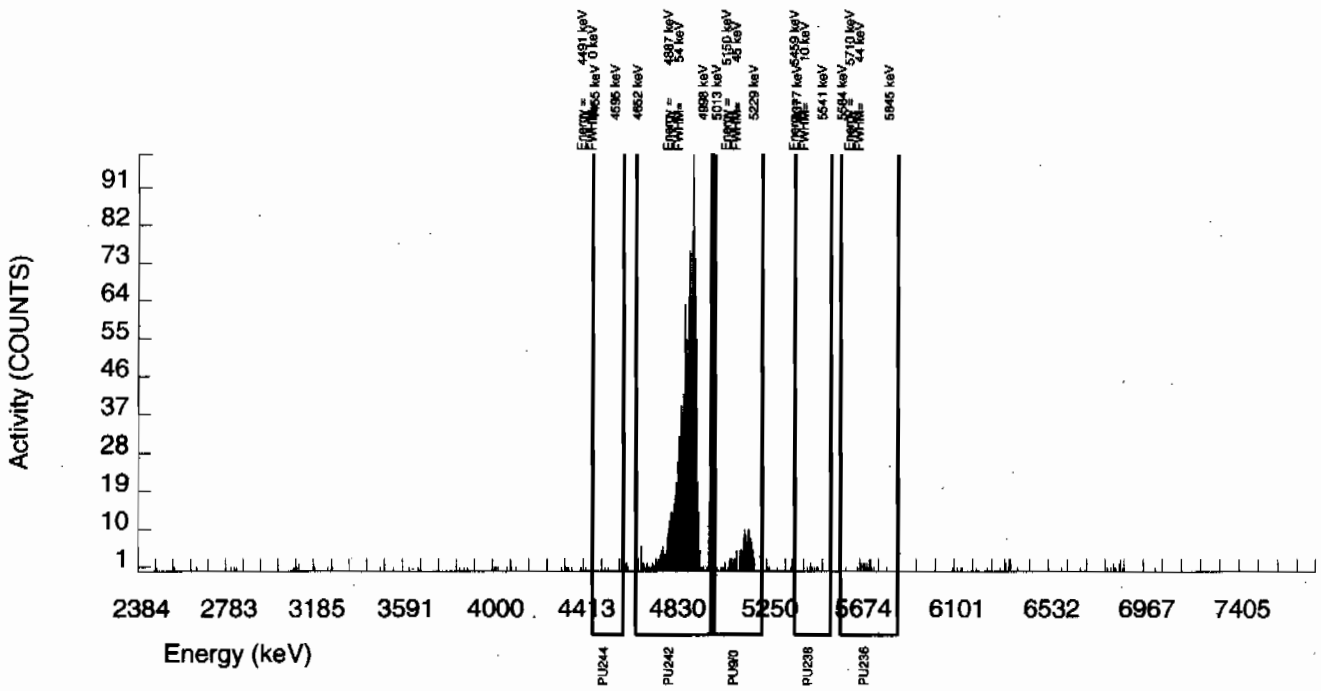

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S0232754002_PU SAMPLE QTY: 1.255 G
DETECTOR NUMBER :68551 AVERAGE %EFFICIENCY :31.6730 % YIELD : 96.579	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.471E+00	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.471E+00	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.06340 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B065.CNF;1879 BKG DATE : 12-JUL-2009 EFF FILE : W065.CNF;293 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	43.000	32.000	11.000	4.1106	99.90000	3.76E-02	8.82E-03	1.12E-02	2.56E-02	8.63E-03
PU-236	5749.000	29.000	17.000	12.000	2.7154	100.0000	2.02E-02	7.66E-03	7.41E-03	1.80E-02	7.60E-03
PU-238	5499.000	25.000	13.000	12.000	3.2589	99.90000	1.53E-02	7.19E-03	8.90E-03	2.10E-02	7.15E-03
PU242	4890.000	1294.000	1287.000	7.000	2.6458	100.0000	1.51E+00	8.48E-02	7.22E-03	1.76E-02	4.23E-02
PU-244	4589.000	9.000	6.000	3.000	4.8319	99.90000	7.05E-03	4.08E-03	1.32E-02	2.96E-02	4.07E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

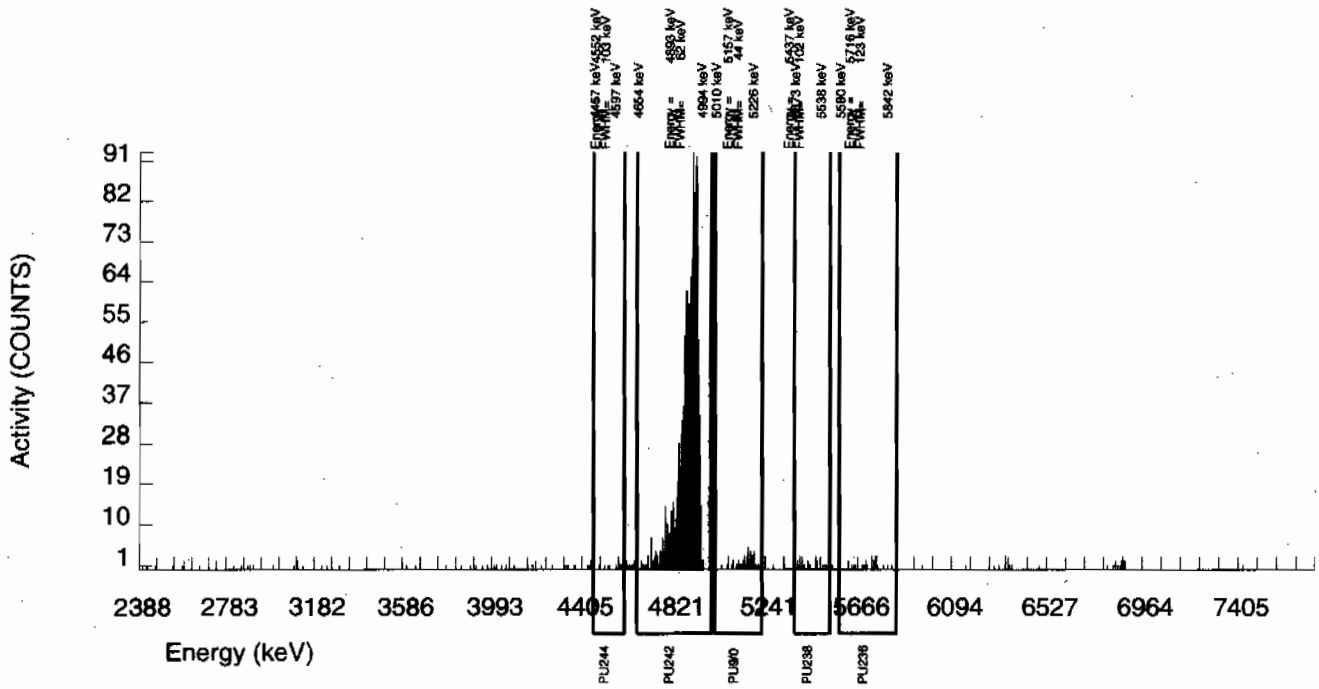

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S0232754003_PU SAMPLE QTY: 1.266 G
DETECTOR NUMBER :46-089C1 AVERAGE %EFFICIENCY :31.0410 % YIELD : 88.055	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B066.CNF;1040
PCI/G : 1.458E+00	PCI/G : 1.458E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 3.70477 dpm	EFF FILE : W066.CNF;294
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	72.000	70.000	2.000	4.1106	99.90000	9.12E-02	1.21E-02	1.25E-02	2.85E-02	1.12E-02
PU-236	5749.000	16.000	8.000	8.000	2.7154	100.0000	1.05E-02	6.47E-03	8.22E-03	2.00E-02	6.45E-03
PU-238	5499.000	25.000	11.000	14.000	3.2589	99.90000	1.43E-02	8.17E-03	9.88E-03	2.33E-02	8.14E-03
PU242	4890.000	1158.000	1150.000	8.000	2.8284	100.0000	1.50E+00	8.65E-02	8.57E-03	2.07E-02	4.44E-02
PU-244	4589.000	5.000	5.000	0.000	4.8319	99.90000	6.52E-03	2.93E-03	1.46E-02	3.28E-02	2.91E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

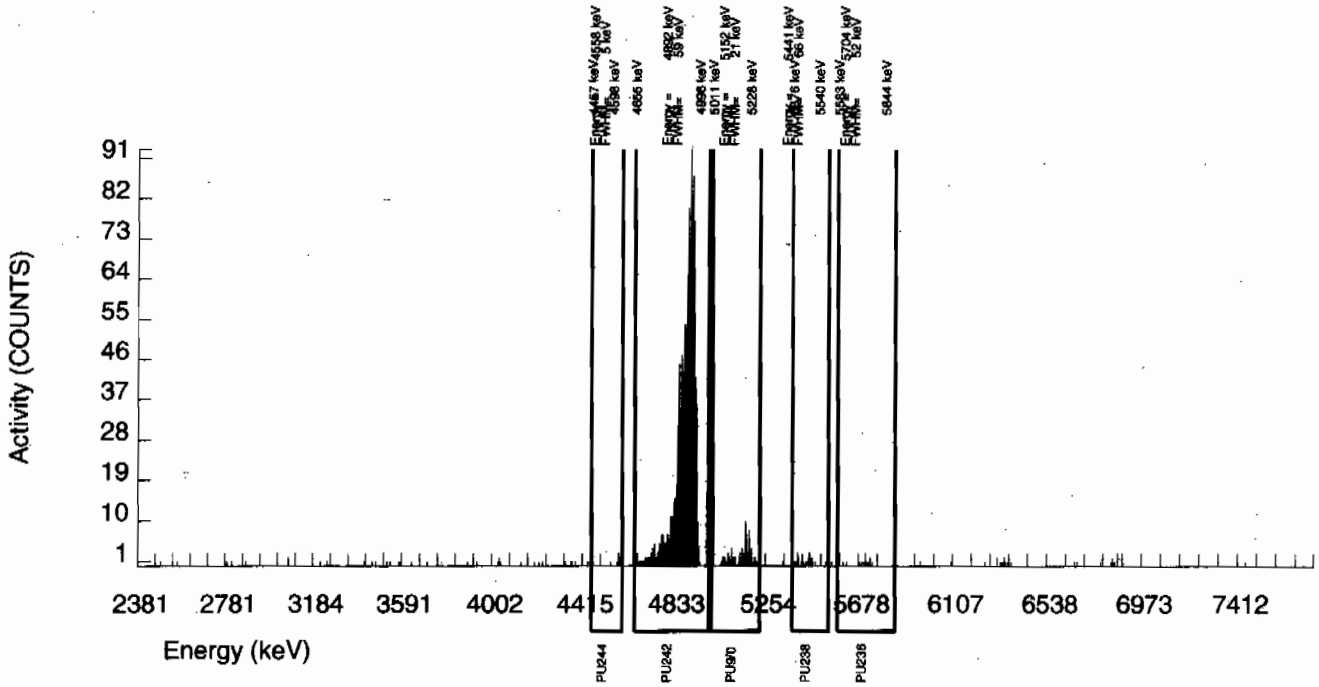

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874791_PU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :46-089B4 AVERAGE %EFFICIENCY :32.2511 % YIELD : 101.186	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B067.CNF;1038
PCI/G : 1.846E+00	PCI/G : 1.846E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.25722 dpm	EFF FILE : W067.CNF;275
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	5.000	4.000	1.000	4.1106	99.90000	5.53E-03	3.39E-03	1.32E-02	3.02E-02	3.38E-03
PU-236	5749.000	7.000	3.000	4.000	2.7154	100.0000	4.16E-03	4.61E-03	8.72E-03	2.12E-02	4.60E-03
PU-238	5499.000	13.000	6.000	7.000	3.2589	99.90000	8.29E-03	6.19E-03	1.05E-02	2.47E-02	6.18E-03
PU242	4890.000	1378.000	1373.000	5.000	2.2361	100.0000	1.90E+00	1.05E-01	7.18E-03	1.81E-02	5.13E-02
PU-244	4589.000	9.000	7.000	2.000	4.8319	99.90000	9.67E-03	4.61E-03	1.55E-02	3.48E-02	4.58E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

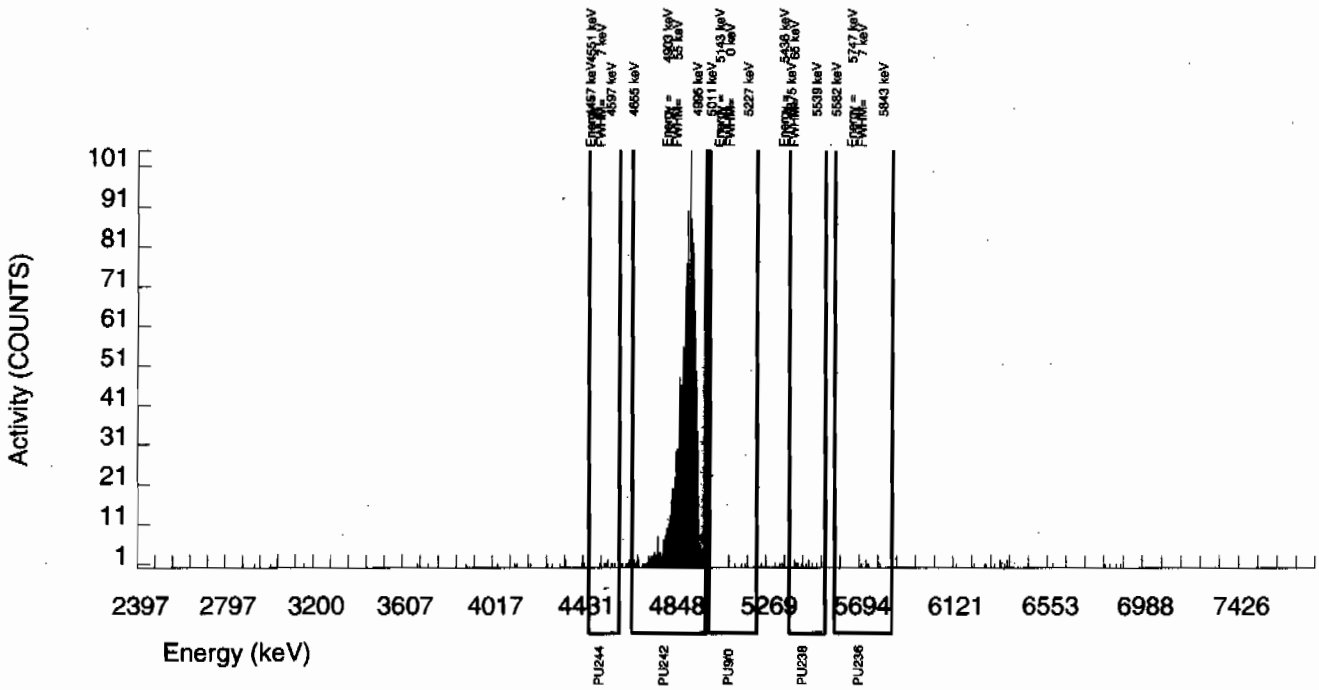

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703
SAMPLE DATE : 30-JUN-2009 00:00:00

SAMPLE ID : S1201874792_PU
SAMPLE QTY: 1.254 G

DETECTOR NUMBER :78794
AVERAGE %EFFICIENCY :30.1861
% YIELD : 95.904

COUNT DATE:16-JUL-2009 10:10:47
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1262-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B068.CNF;1031
PCI/G : 1.472E+00	PCI/G : 1.472E+00	NOMINAL : 4.20732 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 4.03497 dpm	EFF FILE : W068.CNF;266
			CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	57.000	54.000	3.000	4.1106	99.90000	6.71E-02	1.02E-02	1.19E-02	2.71E-02	9.62E-03
PU-236	5749.000	6.000	0.000	6.000	2.7154	100.0000	0.00E+00	4.35E-03	7.84E-03	1.90E-02	4.35E-03
PU-238	5499.000	5.000	3.000	2.000	3.2589	99.90000	3.73E-03	3.29E-03	9.42E-03	2.22E-02	3.29E-03
PU242	4890.000	1226.000	1218.000	8.000	2.8284	100.0000	1.51E+00	8.61E-02	8.16E-03	1.97E-02	4.36E-02
PU-244	4589.000	6.000	4.000	2.000	4.8319	99.90000	4.97E-03	3.52E-03	1.40E-02	3.13E-02	3.51E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

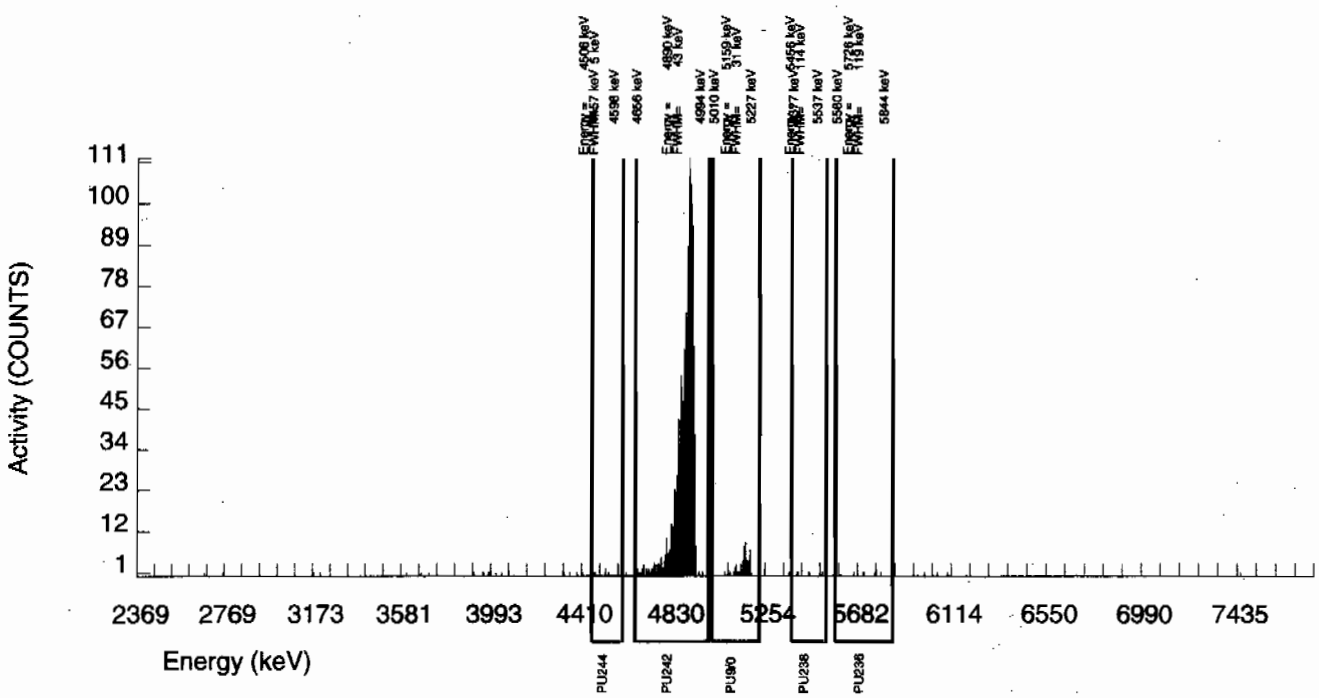

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882703 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874793_PU SAMPLE QTY: 0.106 G
DETECTOR NUMBER :78795 AVERAGE %EFFICIENCY :31.5901 % YIELD : 103.077	COUNT DATE:16-JUL-2009 10:10:47 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.742E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 1.742E+01	ID : 1262-A ISOTOPE : PU242 NOMINAL : 4.20732 dpm RESULTS : 4.33680 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B069.CNF;1033 BKG DATE : 12-JUL-2009 EFF FILE : W069.CNF;273 CAL DATE : 9-JUL-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2934.000	2933.000	1.000	4.1106	99.90000	3.83E+01	2.29E+00	1.25E-01	2.85E-01	7.08E-01
PU-236	5749.000	1.000	-5.000	6.000	2.7154	100.0000	-6.56E-02	3.47E-02	8.24E-02	2.00E-01	3.47E-02
PU-238	5499.000	480.000	479.000	1.000	3.2589	99.90000	6.26E+00	4.57E-01	9.90E-02	2.33E-01	2.87E-01
PU242	4890.000	1377.000	1370.000	7.000	2.6458	100.0000	1.79E+01	1.13E+00	8.03E-02	1.96E-01	4.86E-01
PU-244	4589.000	5.000	3.000	2.000	4.8319	99.90000	3.92E-02	3.46E-02	1.47E-01	3.29E-01	3.46E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)

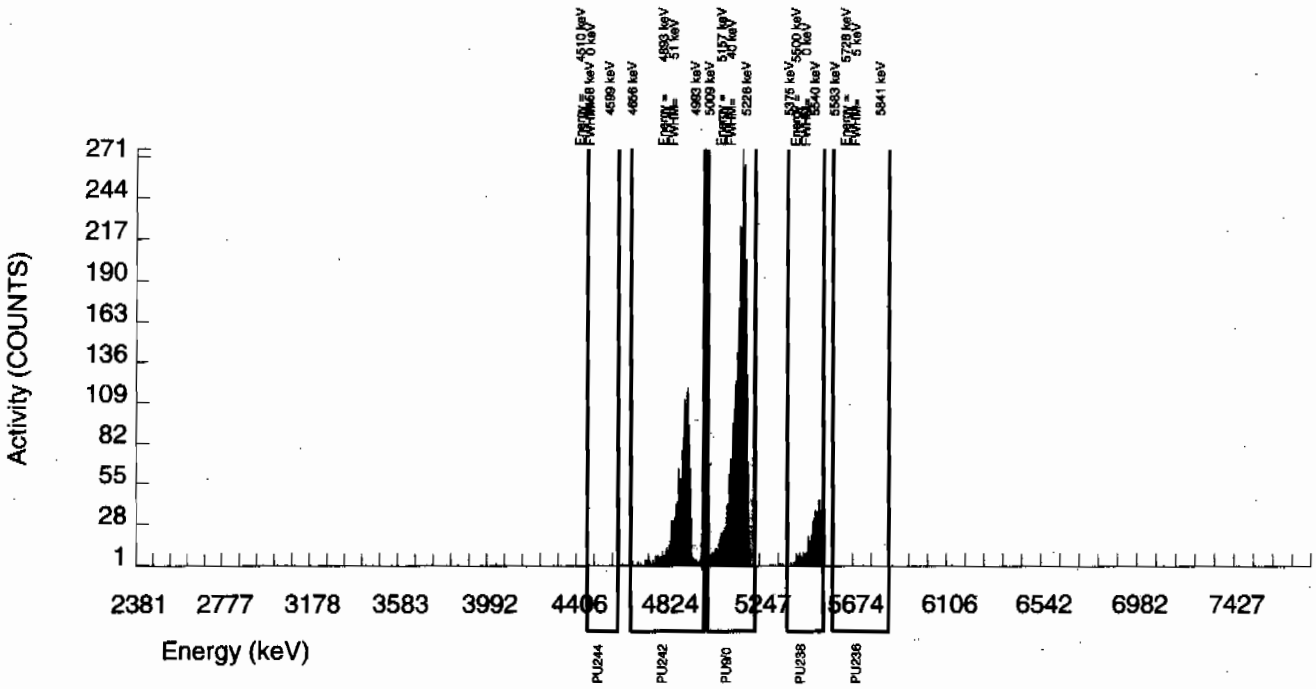

Radiochemistry Batch Checklist, Rev 9

Batch# 882704 Product: U Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 100% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's contract acceptance criteria.	✓		
Tracer yields 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If not complies, < 5% of lowest activity)	✓		case narrative
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No [illegible] on data forms. All line-outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformance completed, if applicable.			N/A
Batch non-conformance control reviewed and disposition verified to be acceptable.			N/A
Allegro Correction completed if required.			N/A
Review sample historical results if available (If RBRP, results above MDC have been verified for tritium, iodine, cement or neoprene.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: 7/17/09

Secondary Review Performed By: 7/18/09

LANL

7/12 - 7/23

Uranium Que Sheet

06-JUL-09

Batch #: 882704 **Analyst:** CXM2 **First Client Due Date:** 23-JUL-09 **Internal Due Date:** 12-JUL-09

Tracer Isotope: U-232/U-236 **Tracer Code:** 1283-B **Expiration Date:** 12/16/09 **Vol:** 0.1mL

FSEM **LCS Isotope:** U-238 **LCS Code:** 0244-A **Expiration Date:** 10/31/20 **Vol:** 0.114g

Spike Isotope: U-238 **Spike Code:** — **Expiration Date:** — **Vol:** —

Prep Date: 7/9/09 **Initials:** CXM **Pipet ID:** 2971068 **Balance ID:** 50410272 **Witness:** MAL 7/9/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g 1/f)	U Det #
232746001-1	CAMO-09-9956	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	1	1	0.505	127
232746002-1	CAMO-09-9950	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	2	2	0.504	157
232746003-1	CAMO-09-9952	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	3	3	0.501	~~156~~ 158
232746004-1	CAMO-09-9958	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	4	4	0.507	122
232746005-1	CAMO-09-9957	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	5	5	0.502	123
232746006-1	CAMO-09-9951	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	6	6	0.513	124
232746007-1	CAMO-09-10031	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	7	7	0.504	125 114
232746008-1	CAMO-09-9990	SAMPLE		.1 pCi/g	SOIL	LANL010	29-JUN-09	8	8	0.507	126 117
232754001-1	CAMO-09-6615	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	9	9	0.515	129 118
232754002-1	CAMO-09-6614	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	10	10	0.502	130
232754003-1	CAMO-09-6613	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	11	11	0.511	131
232758002-1	CAMO-09-9962	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	12	12	0.506	~~132~~ 170
232758003-1	CAMO-09-9964	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	13	13	0.507	139
232758004-1	CAMO-09-9963	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	14	14	0.515	140
232758005-1	CAMO-09-10032	SAMPLE		.1 pCi/g	SOIL	LANL010	30-JUN-09	15	15	0.505	141
232851001-1	CAMO-09-7145	SAMPLE		.1 pCi/g	SOIL	LANL010	01-JUL-09	16	16	0.502	142
232851002-1	CAMO-09-7146	SAMPLE		.1 pCi/g	SOIL	LANL010	01-JUL-09	17	17	0.506	144
1201874794-1	MB for batch 882704	MB		.1 pCi/g	SOIL	QC ACCOUNT		18	18	1.0	145
1201874795-1	CAMO-09-7146(232851002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	01-JUL-09	19	19	0.503	146
1201874796-1	LCS for batch 882704	LCS		.1 pCi/g	SOIL	QC ACCOUNT		20	20	0.114	147

1466

7-14-09

HANS

Choose SOP used: GL-RAD-A-011
~~GL-RAD-A-036~~
GL-RAD-A-045
GL-RAD-A-043

Solid Sample Dissolution by: **LEACH or DIGESTION** (Circle One)

Data Reviewed By: 7/17/09

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 882704

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1201874795	DUP	Uranium-233/234	0.503 g	0.486	0.0547	0.164	-.01783300	pCi/g	NO
		Uranium-235/236	0.503 g	0.00445	0.00771	0.0749	0	pCi/g	NO
		Uranium-238	0.503 g	0.647	0.0662	0.0637	.024652087	pCi/g	NO
1201874796	LCS	Uranium-233/234	0.114 g	6.34	0.577	0.700	-.07868421	pCi/g	NO
		Uranium-235/236	0.114 g	0.343	0.093	0.321	0	pCi/g	NO
		Uranium-238	0.114 g	5.11	0.480	0.273	.108771930	pCi/g	NO
1201874794	MB	Uranium-233/234	1.00 g	-0.00897	0.0047	0.0608	-.00897	pCi/g	NO
		Uranium-235/236	1.00 g	0.00	0.00311	0.037	0	pCi/g	NO
		Uranium-238	1.00 g	0.0124	0.00478	0.0314	.0124	pCi/g	YES
232746001	CAMO-09-9956	Uranium-233/234	0.505 g	0.944	0.0899	0.174	-.01776238	pCi/g	NO
		Uranium-235/236	0.505 g	0.0521	0.0161	0.0799	0	pCi/g	NO
		Uranium-238	0.505 g	0.973	0.0915	0.0678	.024554455	pCi/g	NO
232746002	CAMO-09-9950	Uranium-233/234	0.504 g	0.712	0.0721	0.167	-.01779762	pCi/g	NO
		Uranium-235/236	0.504 g	0.0272	0.013	0.0764	0	pCi/g	NO
		Uranium-238	0.504 g	0.675	0.0686	0.0649	.024603175	pCi/g	NO
232746003	CAMO-09-9952	Uranium-233/234	0.501 g	0.822	0.0854	0.164	-.01790419	pCi/g	NO
		Uranium-235/236	0.501 g	0.0313	0.0186	0.0754	0	pCi/g	NO
		Uranium-238	0.501 g	0.684	0.0688	0.064	.024750499	pCi/g	NO
232746004	CAMO-09-9958	Uranium-233/234	0.507 g	0.751	0.0745	0.165	-.01769231	pCi/g	NO
		Uranium-235/236	0.507 g	0.0269	0.0128	0.0756	0	pCi/g	NO
		Uranium-238	0.507 g	0.769	0.0759	0.0642	.024457594	pCi/g	NO
232746005	CAMO-09-9957	Uranium-233/234	0.502 g	0.661	0.0677	0.168	-.01786853	pCi/g	NO
		Uranium-235/236	0.502 g	0.041	0.014	0.0768	0	pCi/g	NO
		Uranium-238	0.502 g	0.797	0.0779	0.0653	.024701195	pCi/g	NO
232746006	CAMO-09-9951	Uranium-233/234	0.513 g	0.716	0.0708	0.159	-.01748538	pCi/g	NO
		Uranium-235/236	0.513 g	0.0259	0.0163	0.0728	0	pCi/g	NO
		Uranium-238	0.513 g	0.788	0.0743	0.0618	.024171540	pCi/g	NO
232746007	CAMO-09-10031	Uranium-233/234	0.504 g	0.769	0.0766	0.172	-.01779762	pCi/g	NO
		Uranium-235/236	0.504 g	0.0515	0.0159	0.0789	0	pCi/g	NO
		Uranium-238	0.504 g	0.893	0.0856	0.067	.024603175	pCi/g	NO
232746008	CAMO-09-9990	Uranium-233/234	0.507 g	0.713	0.0705	0.154	-.01769231	pCi/g	NO
		Uranium-235/236	0.507 g	0.0376	0.0184	0.0705	0	pCi/g	NO
		Uranium-238	0.507 g	0.856	0.0802	0.0599	.024457594	pCi/g	NO
232754001	CAMO-09-8615	Uranium-233/234	0.515 g	0.764	0.0747	0.160	-.01741748	pCi/g	NO
		Uranium-235/236	0.515 g	0.0435	0.0154	0.0734	0	pCi/g	NO
		Uranium-238	0.515 g	0.837	0.0856	0.0623	.024077670	pCi/g	NO
232754002	CAMO-09-8614	Uranium-233/234	0.502 g	0.933	0.0886	0.170	-.01786853	pCi/g	NO
		Uranium-235/236	0.502 g	0.0609	0.0183	0.078	0	pCi/g	NO
		Uranium-238	0.502 g	0.816	0.0796	0.0662	.024701195	pCi/g	NO
232754003	CAMO-09-8613	Uranium-233/234	0.511 g	0.803	0.0793	0.173	-.01755382	pCi/g	NO
		Uranium-235/236	0.511 g	0.0564	0.018	0.0792	0	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
232754003	CAMO-09-8613	Uranium-238	0.511 g	0.874	0.084	0.0673	.024266145	pCi/g	NO
232758002	CAMO-09-9962	Uranium-233/234	0.506 g	0.777	0.0684	0.110	-.01772727	pCi/g	NO
		Uranium-235/236	0.506 g	0.0686	0.0167	0.0503	0	pCi/g	NO
		Uranium-238	0.506 g	0.989	0.0829	0.0427	.024505929	pCi/g	NO
232758003	CAMO-09-9964	Uranium-233/234	0.507 g	0.705	0.0716	0.163	-.01769231	pCi/g	NO
		Uranium-235/236	0.507 g	0.0398	0.0162	0.0746	0	pCi/g	NO
		Uranium-238	0.507 g	0.741	0.075	0.0633	.024457594	pCi/g	NO
232758004	CAMO-09-9963	Uranium-233/234	0.515 g	0.778	0.0765	0.161	-.01741748	pCi/g	NO
		Uranium-235/236	0.515 g	0.0568	0.0174	0.0737	0	pCi/g	NO
		Uranium-238	0.515 g	0.718	0.0716	0.0626	.024077670	pCi/g	NO
232758005	CAMO-09-10032	Uranium-233/234	0.505 g	0.891	0.0885	0.179	-.01776238	pCi/g	NO
		Uranium-235/236	0.505 g	0.0632	0.0194	0.082	0	pCi/g	NO
		Uranium-238	0.505 g	0.980	0.0937	0.0696	.024554455	pCi/g	NO
232851001	CAMO-09-7145	Uranium-233/234	0.502 g	0.621	0.0662	0.160	-.01786853	pCi/g	NO
		Uranium-235/236	0.502 g	0.0217	0.0116	0.0731	0	pCi/g	NO
		Uranium-238	0.502 g	0.526	0.0568	0.0621	.024701195	pCi/g	NO
232851002	CAMO-09-7146	Uranium-233/234	0.506 g	0.491	0.0554	0.168	-.01772727	pCi/g	NO
		Uranium-235/236	0.506 g	0.0319	0.0139	0.0769	0	pCi/g	NO
		Uranium-238	0.506 g	0.731	0.074	0.0653	.024505929	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S0232754001_UU SAMPLE QTY: 0.515 G
DETECTOR NUMBER :76227 AVERAGE %EFFICIENCY :26.3822 % YIELD : 94.167	COUNT DATE:14-JUL-2009 21:23:02 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 2.283E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.283E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29531 dpm RESULTS : 4.98641 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B129.CNF;379 BKG DATE : 12-JUL-2009 EFF FILE : W129.CNF;113 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	224.000	217.032	3.000	9.1924	100.0000	7.64E-01	7.47E-02	7.53E-02	1.60E-01	5.26E-02
U232	5302.100	1317.000	1315.000	2.000	1.4142	100.0000	4.63E+00	3.46E-01	1.16E-02	3.27E-02	1.28E-01
U-235	4391.000	11.000	10.000	1.000	3.0409	80.90000	4.35E-02	1.54E-02	3.08E-02	7.34E-02	1.51E-02
U-238	4184.730	185.000	181.000	4.000	3.2215	100.0000	6.37E-01	6.56E-02	2.64E-02	6.23E-02	4.84E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

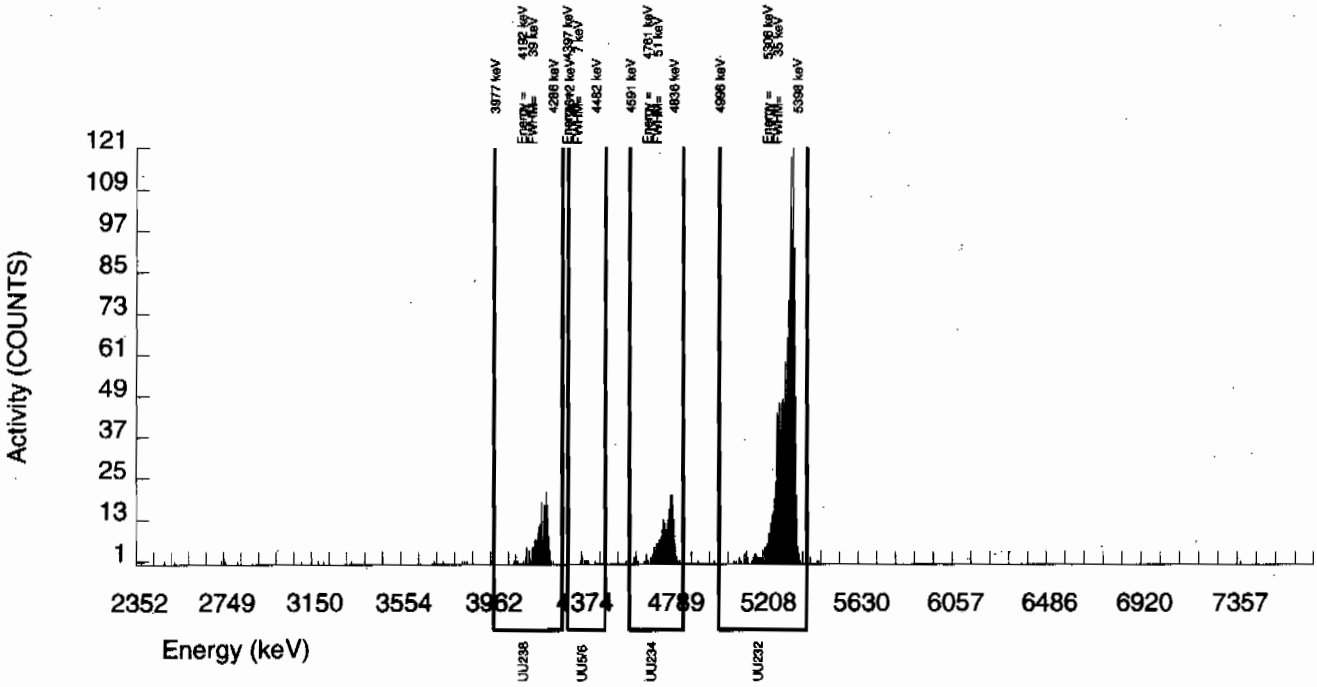

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S0232754002_UU SAMPLE QTY: 0.502 G
DETECTOR NUMBER :76228 AVERAGE %EFFICIENCY :24.6764 % YIELD : 97.154	COUNT DATE:14-JUL-2009 21:23:05 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 2.343E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.343E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29532 dpm RESULTS : 5.14462 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B130.CNF;379 BKG DATE : 12-JUL-2009 EFF FILE : W130.CNF;115 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	258.000	249.171	5.000	9.1924	100.0000	9.33E-01	8.86E-02	8.00E-02	1.70E-01	6.03E-02
U232	5302.100	1276.000	1269.000	7.000	2.6458	100.0000	4.75E+00	3.57E-01	2.30E-02	5.62E-02	1.34E-01
U-235	4391.000	13.000	11.000	2.000	3.0409	80.90000	5.09E-02	1.83E-02	3.27E-02	7.80E-02	1.79E-02
U-238	4184.730	221.000	218.000	3.000	3.2215	100.0000	8.16E-01	7.98E-02	2.81E-02	6.62E-02	5.60E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

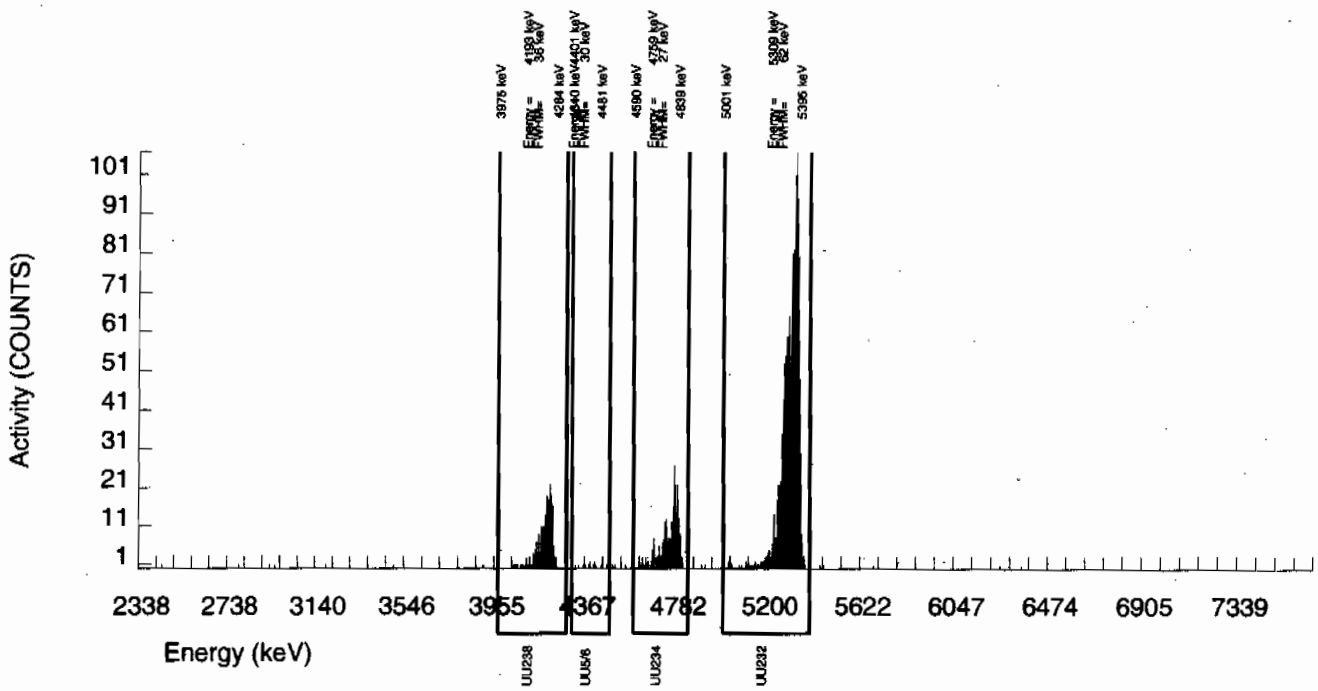

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 30-JUN-2009 00:00:00	SAMPLE ID : S0232754003_UU SAMPLE QTY: 0.511 G
DETECTOR NUMBER :33448 AVERAGE %EFFICIENCY :25.4349 % YIELD : 91.212	COUNT DATE:14-JUL-2009 21:23:07 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 2.301E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.301E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29532 dpm RESULTS : 4.82995 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B131.CNF;375 BKG DATE : 12-JUL-2009 EFF FILE : W131.CNF;112 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	218.000	211.295	3.000	9.1924	100.0000	8.03E-01	7.93E-02	8.13E-02	1.73E-01	5.60E-02
U232	5302.100	1236.000	1228.000	8.000	2.8284	100.0000	4.67E+00	3.53E-01	2.50E-02	6.03E-02	1.34E-01
U-235	4391.000	13.000	12.000	1.000	3.0409	80.90000	5.64E-02	1.80E-02	3.32E-02	7.92E-02	1.76E-02
U-238	4184.730	230.000	230.000	0.000	3.2215	100.0000	8.74E-01	8.40E-02	2.85E-02	6.72E-02	5.76E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

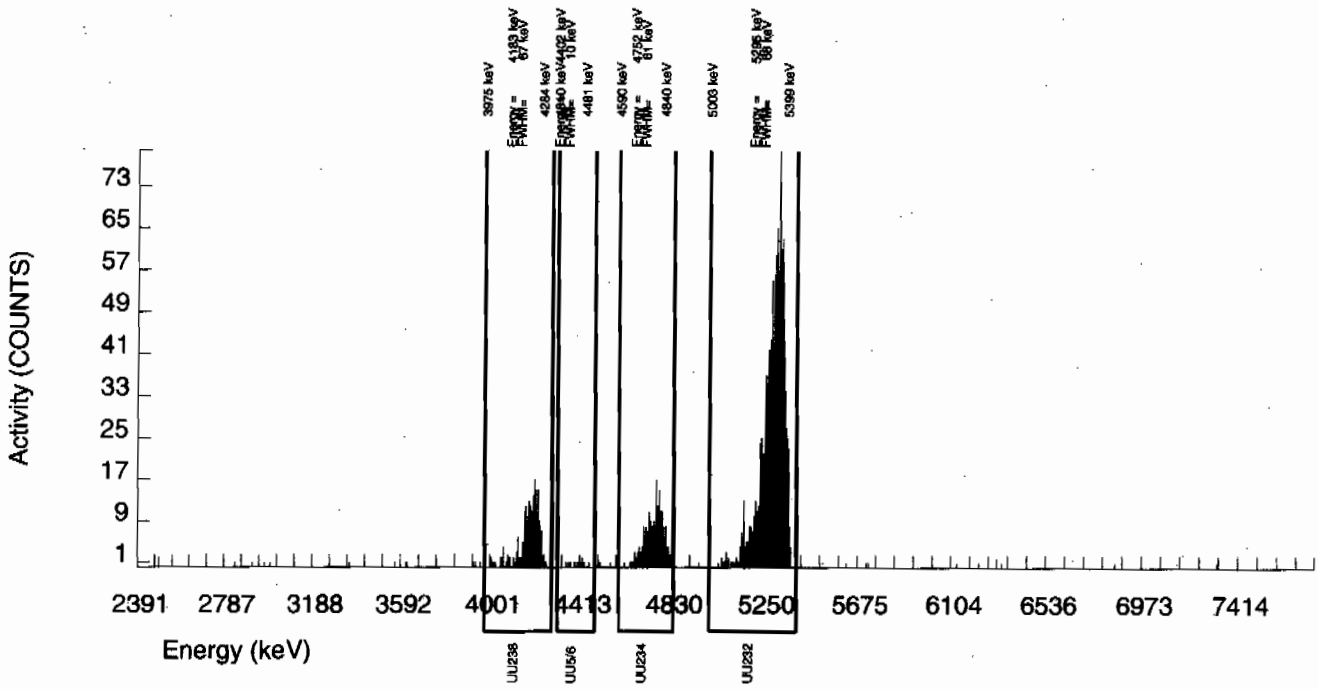

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 1-JUL-2009 00:00:00.	SAMPLE ID : S0232851002_UU SAMPLE QTY: 0.506 G
DETECTOR NUMBER :75551 AVERAGE %EFFICIENCY :24.7777 % YIELD : 97.367	COUNT DATE:14-JUL-2009 21:23:21 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B144.CNF;329
PCI/G : 2.324E+01	PCI/G : 2.324E+01	NOMINAL : 5.29518 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.15577 dpm	EFF FILE : W144.CNF;92
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	140.000	133.147	3.000	9.1924	100.0000	4.91E-01	5.54E-02	7.89E-02	1.68E-01	4.35E-02
U232	5302.100	1286.000	1277.000	9.000	3.0000	100.0000	4.71E+00	3.55E-01	2.58E-02	6.15E-02	1.33E-01
U-235	4391.000	8.000	7.000	1.000	3.0409	80.90000	3.19E-02	1.39E-02	3.23E-02	7.69E-02	1.37E-02
U-238	4184.730	205.000	198.000	7.000	3.2215	100.0000	7.31E-01	7.40E-02	2.77E-02	6.53E-02	5.37E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

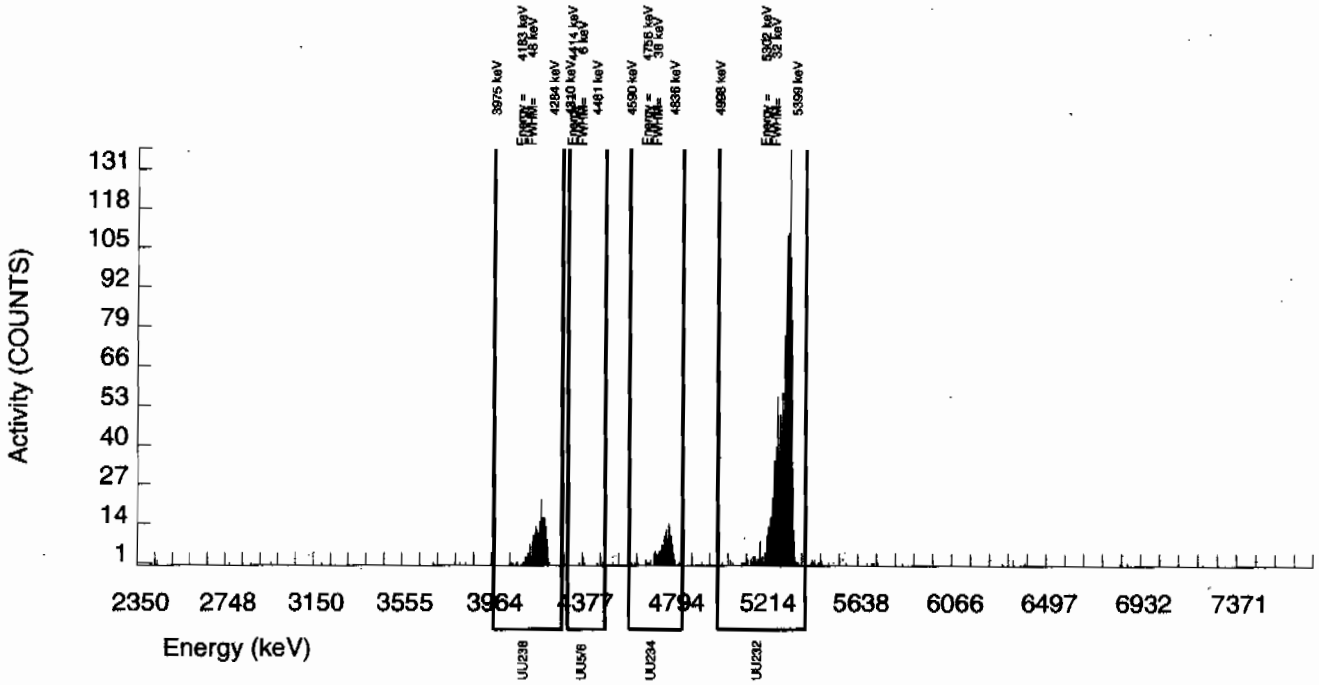

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874794_UU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :72526 AVERAGE %EFFICIENCY :24.8445 % YIELD : 102.048	COUNT DATE:14-JUL-2009 21:23:23 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 1.176E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29405 dpm RESULTS : 5.40249 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B145.CNF;327 BKG DATE : 12-JUL-2009 EFF FILE : W145.CNF;97 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	5.000	-5.049	6.000	9.1924	100.0000	-8.97E-03	4.70E-03	3.80E-02	8.08E-02	4.70E-03
U232	5302.100	1343.000	1342.000	1.000	1.0000	100.0000	2.38E+00	1.80E-01	4.13E-03	1.31E-02	6.51E-02
U-235	4391.000	1.000	0.000	1.000	3.0409	80.90000	0.00E+00	3.11E-03	1.55E-02	3.70E-02	3.11E-03
U-238	4184.730	7.000	7.000	0.000	3.2215	100.0000	1.24E-02	4.78E-03	1.33E-02	3.14E-02	4.70E-03

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

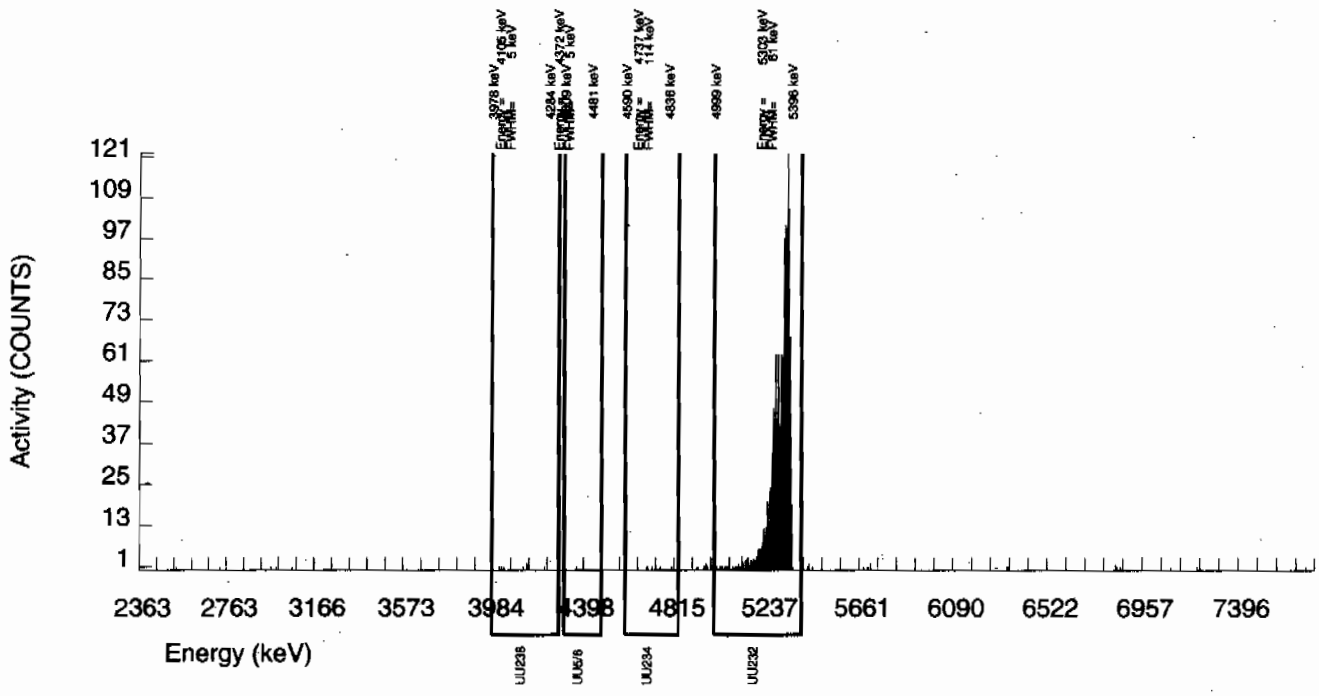

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 1-JUL-2009 00:00:00.	SAMPLE ID : S1201874795_UU SAMPLE QTY: 0.503 G
DETECTOR NUMBER :72527 AVERAGE %EFFICIENCY :24.9899 % YIELD : 99.640	COUNT DATE:14-JUL-2009 21:23:25 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 2.338E+01	ID : 0244-A ISOTOPE : U-238 PCI/G : 2.338E+01	ID : 1283-B ISOTOPE : U232 NOMINAL : 5.29518 dpm RESULTS : 5.27611 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B146.CNF;332 BKG DATE : 12-JUL-2009 EFF FILE : W146.CNF;99 CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	143.000	135.023	4.000	9.1924	100.0000	4.86E-01	5.47E-02	7.69E-02	1.64E-01	4.30E-02
U232	5302.100	1324.000	1318.000	6.000	2.4495	100.0000	4.74E+00	3.55E-01	2.05E-02	5.07E-02	1.31E-01
U-235	4391.000	2.000	1.000	1.000	3.0409	80.90000	4.45E-03	7.71E-03	3.14E-02	7.49E-02	7.70E-03
U-238	4184.730	181.000	180.000	1.000	3.2215	100.0000	6.47E-01	6.62E-02	2.70E-02	6.37E-02	4.85E-02

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

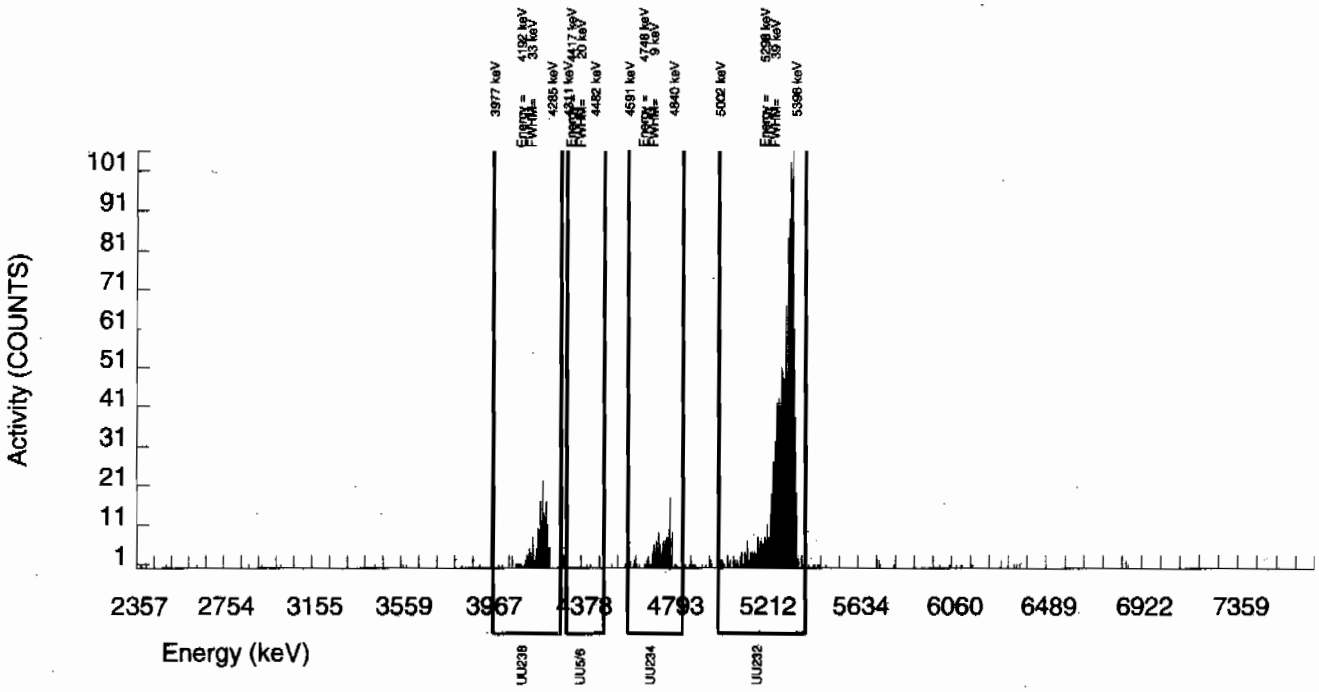

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 882704 SAMPLE DATE : 9-JUL-2009 00:00:00.	SAMPLE ID : S1201874796_UU SAMPLE QTY: 0.114 G
DETECTOR NUMBER :75550 AVERAGE %EFFICIENCY :24.6626 % YIELD : 104.026	COUNT DATE:14-JUL-2009 21:23:28 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :CXM2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-B	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B147.CNF;332
PCI/G : 1.032E+02	PCI/G : 1.032E+02	NOMINAL : 5.29406 dpm	BKG DATE : 12-JUL-2009
		RESULTS : 5.50721 dpm	EFF FILE : W147.CNF;98
			CAL DATE : 16-JUN-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	422.000	411.902	6.000	9.1924	100.0000	6.34E+00	5.77E-01	3.29E-01	7.00E-01	3.17E-01
U232	5302.100	1362.000	1358.000	4.000	2.0000	100.0000	2.09E+01	1.69E+00	7.17E-02	1.85E-01	5.69E-01
U-235	4391.000	20.000	18.000	2.000	3.0409	80.90000	3.43E-01	9.30E-02	1.35E-01	3.21E-01	8.93E-02
U-238	4184.730	334.000	332.000	2.000	3.2215	100.0000	5.11E+00	4.80E-01	1.15E-01	2.73E-01	2.82E-01

NOTE: Sg calculated via blank population (updated 12-JUL-2009)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity

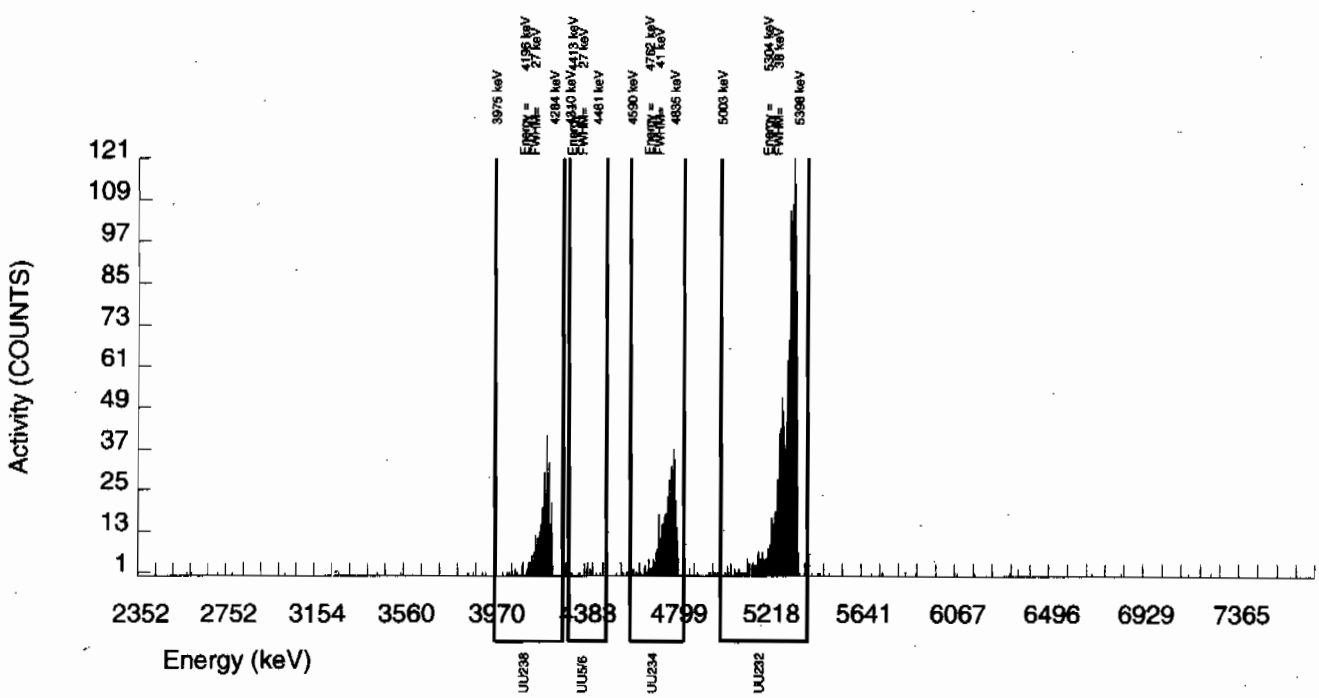

Radiochemistry Batch Checklist, Rev 9

Batch# 882713 Product: Y/LANL Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			n/a
Samples have been blank corrected (if required)			n/a
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			n/a
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			n/a
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			n/a
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			n/a
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			n/a
Batch non-conformances second reviewed and disposition verified to be completed.			n/a
Aliquot Correction completed if required.			n/a
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Maggie Stamps 7/17/09

Secondary Review Performed By: [illegible] 7/17/09

Gamma Spec Que Sheet

I.G. - 7/14/09

07/07/2009

Batch #: 882713 **Analyst:** MXR1 **First Client DueDate** 07/23/2009 **Internal Due Date:** 07/12/2009

Gamma Spike Isotope: Mixed Gamma **Spike Code:** n/a **Expiration Date:** n/a **Vol:** n/a **Nominal Concentration:** n/a

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/4/09 **Vol:** 1.0mL **Nominal Concentration:** Cs137-5.636 Co60-6.914 Am241-15.92

Initials: MS **Prep Date:** 7/7/09 **Witness:** n/a

Sample ID	Client Description / Container ID	Type	Hazard Code	RDL	Client	Matrix	Collect Date	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
232664001-1	CAMO-09-9942	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	104.07	16	7/2/09
232664002-1	CAMO-09-9941	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	105.14	18	
232664003-1	CAMO-09-9943	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	111.20	22	
232664004-1	CAMO-09-10030	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	101.93	23	
232664005-1	CAMO-09-9989	SAMPLE		.05 pCi/g	LANL010	SOIL	26-JUN-09 12:00:00	125.24	20	
232746001-1	CAMO-09-9956	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	130.35	2	7/7/09
232746002-1	CAMO-09-9950	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	127.35	9	
232746003-1	CAMO-09-9952	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	137.08	12	
232746004-1	CAMO-09-9958	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	137.82	5	
232746005-1	CAMO-09-9957	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	131.80	21	
232746006-1	CAMO-09-9951	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	131.37	14	
232746007-1	CAMO-09-10031	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	130.70	17	
232746008-1	CAMO-09-9990	SAMPLE		.05 pCi/g	LANL010	SOIL	29-JUN-09 12:00:00	144.47	13	
232754001-1	CAMO-09-6615	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	135.03	16	
232754002-1	CAMO-09-6614	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	133.25	18	
232754003-1	CAMO-09-6613	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	137.02	22	
232758002-1	CAMO-09-9962	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	121.73	2	
232758003-1	CAMO-09-9964	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	116.04	12	
232758004-1	CAMO-09-9963	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	116.48	9	
232758005-1	CAMO-09-10032	SAMPLE		.05 pCi/g	LANL010	SOIL	30-JUN-09 12:00:00	125.33	20	
1201874832-1	MB	MB		.05 pCi/g	QC ACCOUNT	SOIL	7/7/09	144.47	21 ~~10~~	
1201874833-1	DUP CAMO-09-6615(232754001)	DUP		.05 pCi/g	QC ACCOUNT	SOIL	30-JUN-09 12:00:00	133.07	5	
1201874834-1	LCS	LCS		.05 pCi/g	QC ACCOUNT	SOIL	7/7/09	155.44	13	

1477

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: Maggie Stamps 7/17/09

7/17/09

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
882713	232664001	SAMPLE	14-JUL-09	Americium-241	0.298	0.3346	0.200
				Cerium-139	0.02451	0.06158	0.050
				Cesium-134	0.1115	0.1127	0.100
				Sodium-22	-0.00262	0.08357	0.080
				Thorium-234	2.212	2.712	2.00
882713	232664002	SAMPLE	14-JUL-09	Thorium-234	1.878	2.754	2.00
882713	232664003	SAMPLE	14-JUL-09	Americium-241	0.01167	0.2363	0.200
				Thorium-234	0.8017	2.045	2.00
882713	232664004	SAMPLE	14-JUL-09	Sodium-22	-0.01878	0.09959	0.080
				Thorium-234	1.654	2.394	2.00
882713	232664005	SAMPLE	14-JUL-09				
882713	232746001	SAMPLE	14-JUL-09	Americium-241	0.07321	0.3081	0.200
				Thorium-234	0.8008	2.375	2.00
882713	232746002	SAMPLE	14-JUL-09	Americium-241	-0.04631	0.2681	0.200
				Thorium-234	0.7057	2.449	2.00
882713	232746003	SAMPLE	14-JUL-09	Americium-241	0.02808	0.2475	0.200
				Thorium-234	0.692	2.007	2.00
882713	232746004	SAMPLE	14-JUL-09	Cerium-139	-0.00508	0.05139	0.050
				Sodium-22	-0.03144	0.08283	0.080
882713	232746005	SAMPLE	14-JUL-09	Cerium-139	0.00744	0.05605	0.050
				Cobalt-60	0.04706	0.107	0.100
				Europium-152	0.01525	0.2005	0.200
				Sodium-22	-0.02711	0.1192	0.080
882713	232746006	SAMPLE	14-JUL-09	Americium-241	0.1301	0.2201	0.200
				Cerium-139	0.01688	0.0524	0.050
882713	232746007	SAMPLE	14-JUL-09	Cerium-139	0.01118	0.05925	0.050
				Cesium-134	0.02656	0.112	0.100
				Sodium-22	-0.00346	0.09341	0.080
882713	232746008	SAMPLE	14-JUL-09	Cerium-139	-0.02121	0.05246	0.050
				Sodium-22	0.01578	0.0925	0.080
882713	232754001	SAMPLE	14-JUL-09	Americium-241	0.09817	0.2899	0.200
				Cerium-139	-0.01375	0.05154	0.050
				Thorium-234	1.486	2.378	2.00
882713	232754002	SAMPLE	14-JUL-09	Americium-241	-0.0349	0.2985	0.200
				Thorium-234	1.363	2.58	2.00
882713	232754003	SAMPLE	14-JUL-09	Americium-241	0.1579	0.2213	0.200
882713	232758002	SAMPLE	14-JUL-09	Americium-241	-0.1085	0.329	0.200
				Cerium-139	-0.02087	0.0523	0.050
				Cesium-134	0.06978	0.1015	0.100
				Sodium-22	0.03599	0.08858	0.080
				Thorium-234	0.5268	2.612	2.00
882713	232758003	SAMPLE	14-JUL-09	Americium-241	-0.00355	0.2809	0.200
				Cerium-139	-0.00348	0.05194	0.050

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	Parmname	Result	MDA	RDL
882713	232758003	SAMPLE	14-JUL-09	Sodium-22	-0.01567	0.09152	0.080
882713	232758004	SAMPLE	14-JUL-09	Americium-241	-0.06326	0.3138	0.200
				Cerium-139	-0.01329	0.05188	0.050
				Sodium-22	0.03741	0.08039	0.080
				Thorium-234	1.156	2.801	2.00
882713	232758005	SAMPLE	14-JUL-09				
882713	1201874832	MB	14-JUL-09				
882713	1201874833	DUP	14-JUL-09	Cerium-139	-0.01523	0.05411	0.050
				Cesium-134	0.07826	0.1097	0.100
				Sodium-22	-0.01244	0.09425	0.080
882713	1201874834	LCS	14-JUL-09	Cerium-139	0.01555	0.08511	0.050
				Cesium-134	0.03051	0.1905	0.100
				Europium-152	0.03026	0.3345	0.200
				Mercury-203	0.04059	0.1189	0.100
				Potassium-40	0.8487	1.261	1.00
				Ruthenium-106	-0.3975	1.078	0.800
				Sodium-22	-0.06454	0.09224	0.080
				Tin-113	0.08723	0.1647	0.100
				Uranium-235	-0.09912	0.5983	0.500
				Yttrium-88	0.06542	0.1092	0.100

Gamma Review Report based on Result > MDA for Batch:882713

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664001	26-JUN-09 12:00	14-JUL-09 08:26	17.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.809	0.2002	pCi/g	0.2344	N	911.6	3	1.648	IDENTIFIED	9.345	☐	
Americium-243 INT	0.4869	0.04549	pCi/g	0.1144	N	75.07	1	0.9184	IDENTIFIED	8.514	☐	
Annihilation Rad.	0.1513	0.04074	pCi/g	0.05033	N	511.1	2	1.653	IDENTIFIED	26.77	☐	
Pb214 Bismuth-211 INT	4.501	0.2829	pCi/g	0.3616	Y	352.1	4	1.054	IDENTIFIED	5.466	☑ UI	
Bismuth-212 ✓	1.494	0.2557	pCi/g	0.5626	N	727.7	1	1.336	IDENTIFIED	16.56	☐	
Bismuth-214 ✓	1.425	0.1093	pCi/g	0.1294	0.200	609.6	4	1.378	IDENTIFIED	6.55	☐	
Pb-214 Cadmium-109 INT	3.631	0.6229	pCi/g	1.749	Y	87.31	5	1.048	IDENTIFIED	16.61	☑ UI	
Cadmium-115	38.19	14.21	pCi/g	0	N	87.31	5	1.048	NOT_IDENTI	16.61	☐	
Cerium-143	3189	525.9	pCi/g	0	N	328.2	1	1.222	NOT_IDENTI	40.42	☐	
Gross Gamma	11.05	1.894	pCi/g	5.542	N		0				☐	
Iodine-123 HE	4.22E+07	1.12E+08	pCi/g	0	N	87.31	5	1.048	NOT_IDENTI	16.61	☐	
Iodine-133 HE	16030	30210	pCi/g	0	N	511.1	2	1.653	FAIL_DECAY	26.77	☐	
Krypton-85 LA	30.91	5.244	pCi/g	18.04	N	238.8	7	1.001	NOT_IDENTI	3.218	☐	
Lead-212 ✓	1.94	0.09261	pCi/g	0.1119	0.100	238.8	7	1.001	IDENTIFIED	3.218	☐	
Lead-214 ✓	1.566	0.1066	pCi/g	0.129	0.100	352.1	4	1.054	IDENTIFIED	5.466	☐	
Lutetium-177 HE	4.13	1.185	pCi/g	3.142	N	209.2	1	0.9456	FAIL_ABUND	28.57	☐	
Neptunium-237 INT	1.044	0.2089	pCi/g	0.4652	N	87.31	5	1.048	IDENTIFIED	16.61	☐	
Polonium-212 NV	1.94	0.09261	pCi/g	0.1119	N	238.8	7	1.001	IDENTIFIED	3.218	☐	
Polonium-214 NV	1.566	0.1066	pCi/g	0.129	N	352.1	4	1.054	IDENTIFIED	5.466	☐	
Polonium-216 NV	1.94	0.09261	pCi/g	0.1119	N	238.8	7	1.001	IDENTIFIED	3.218	☐	
Polonium-218 NV	1.566	0.1066	pCi/g	0.129	N	352.1	4	1.054	IDENTIFIED	5.466	☐	
Potassium-40 ✓	34.8	1.792	pCi/g	0.6581	1.00	1461	1	1.821	IDENTIFIED	2.964	☐	
Pb214 Radium-224 INT	5.566	0.5106	pCi/g	1.272	Y	241.8	1	1.705	IDENTIFIED	8.76	☑ UI	
Radium-226 ✓	1.425	0.1093	pCi/g	0.1294	Y	609.6	4	1.378	IDENTIFIED	6.55	☐	
Radium-228 ✓	1.809	0.2002	pCi/g	0.2344	0.500	911.6	3	1.648	IDENTIFIED	9.345	☐	
Strontium-85 LA	0.1631	0.02767	pCi/g	0.09522	Y	238.8	7	1.001	NOT_IDENTI	3.218	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.4851	0.04839	pCi/g	0.06862	0.080	583.6	1	1.17	IDENTIFIED	9.362	☐	
Thorium-228 ✓	1.94	0.09261	pCi/g	0.1118	N	238.8	7	1.001	IDENTIFIED	3.218	☐	
Thorium-230 ✓	1.425	0.1093	pCi/g	0.1294	N	609.6	4	1.378	IDENTIFIED	6.55	☐	
Thorium-232 ✓	1.809	0.2002	pCi/g	0.2344	N	911.6	3	1.648	IDENTIFIED	9.345	☐	
Tin-126 INT	0.3555	0.06098	pCi/g	0.1751	N	87.31	5	1.048	IDENTIFIED	16.61	☐	
Titanium-44 LA	0.457	0.03334	pCi/g	0.1065	N	77.37	1	0.9237	FAIL_ABUND	6.157	☐	
Total Uranium	6.5797	2.47E-06	ug/g	4.0372	N		0				☐	
Uranium-234 ✓	1.425	0.1093	pCi/g	0.1294	N	609.6	4	1.378	IDENTIFIED	6.55	☐	
Zirconium-97 HE	8.31E+06	1.70E+07	pCi/g	0	N	238.8	7	1.001	NOT_IDENTI	3.218	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664002	26-JUN-09 12:00	14-JUL-09 08:27	17.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.852	0.1735	pCi/g	0.2099	N	911.4	3	1.617	IDENTIFIED	6.622	☐	
Americium-241 ✓	0.382	0.1069	pCi/g	0.3424	0.200	59.45	1	0.8876	IDENTIFIED	27.67	☐	
Americium-243 INT	0.3481	0.0468	pCi/g	0.1001	N	74.87	2	1.139	IDENTIFIED	12.78	☐	
Annihilation Rad.	0.1157	0.03126	pCi/g	0.04269	N	511.2	2	1.873	IDENTIFIED	26.82	☐	
Pb214 Bismuth-211 INT	4.564	0.2609	pCi/g	0.3061	Y	352	4	1.194	IDENTIFIED	4.73	☑ UI	
Bismuth-212 LA	1.492	0.2098	pCi/g	0.6223	N	727.2	1	1.622	FAIL_ABUND	13.15	☐	
Bismuth-214 ✓	1.432	0.1004	pCi/g	0.1028	0.200	609.5	4	1.701	IDENTIFIED	5.405	☐	
Pb214 Cadmium-109 INT	4.467	0.5829	pCi/g	1.288	Y	87.29	4	1.23	IDENTIFIED	12.21	☑ UI	
Cadmium-115 HE	0.5475	11.3	pCi/g	0	N	87.29	4	1.23	NOT_IDENTI	12.21	☐	
Cerium-143	3281	484.4	pCi/g	0	N	328.4	1	0.7934	FAIL_DECAY	87.08	☐	
Cesium-134 LA	0.08514	0.02159	pCi/g	0.07897	0.100	511.2	2	1.873	NOT_IDENTI	26.82	☑ UI	Data rejected due to low abundance.

	Cesium-135 mp	0.5888	0.131	pCi/g	0.223	N	269.6	2	1.525	IDENTIFIED	21.93	☐	
	Gross Gamma	10.11	1.52	pCi/g	2.771	N		0				☐	
	Iodine-135	1.58E+18	0	pCi/g	0	N	269.6	2	1.525	NOT_IDENTI	21.93	☐	
	Krypton-85 LA	27.28	4.178	pCi/g	14.29	N	238.7	8	1.277	NOT_IDENTI	3.025	☐	
	Lead-212 ✓	1.905	0.08916	pCi/g	0.08398	0.100	238.7	8	1.277	IDENTIFIED	3.025	☐	
	Lead-214 ✓	1.588	0.09977	pCi/g	0.1067	0.100	352	4	1.194	IDENTIFIED	4.73	☐	
	Lutetium-177 HE	3.18	1.155	pCi/g	2.671	N	208.9	1	1.057	FAIL_ABUND	36.21	☐	
	Neptunium-237 INT	1.284	0.2136	pCi/g	0.3785	N	87.29	4	1.23	IDENTIFIED	12.21	☐	
	Niobium-95m HE	0.2172	0.06484	pCi/g	0.2053	N	238.7	8	1.277	NOT_IDENTI	3.025	☐	
	Polonium-212 nr	1.905	0.08916	pCi/g	0.08398	N	238.7	8	1.277	IDENTIFIED	3.025	☐	
	Polonium-214 nr	1.588	0.09977	pCi/g	0.1067	N	352	4	1.194	IDENTIFIED	4.73	☐	
	Polonium-216 nr	1.905	0.08916	pCi/g	0.08398	N	238.7	8	1.277	IDENTIFIED	3.025	☐	
	Polonium-218 nr	1.588	0.09977	pCi/g	0.1067	N	352	4	1.194	IDENTIFIED	4.73	☐	
	Potassium-40 ✓	28.13	1.306	pCi/g	0.4898	1.00	1461	1	2.4	IDENTIFIED	2.678	☐	
	Promethium-149 HE	129.9	100.6	pCi/g	0	N	90.08	1	1.05	NOT_IDENTI	17.18	☐	
Pb214	Radium-224 INT	5.041	0.6758	pCi/g	0.9544	Y	241.7	1	1.944	IDENTIFIED	13.11	☑ UI	
	Radium-226 ✓	1.432	0.1004	pCi/g	0.1028	Y	609.5	4	1.701	IDENTIFIED	5.405	☐	
	Radium-228 ✓	1.852	0.1735	pCi/g	0.2099	0.500	911.4	3	1.617	IDENTIFIED	6.622	☐	
	Strontium-85 LA	0.144	0.02204	pCi/g	0.07543	Y	238.7	8	1.277	NOT_IDENTI	3.025	☑ UI	Data rejected due to low abundance.
	Thallium-200 HE	302.5	1163	pCi/g	0	N	74.87	2	1.139	NOT_IDENTI	12.78	☐	
	Thallium-208 ✓	0.5055	0.04241	pCi/g	0.0563	0.080	583.4	1	1.356	IDENTIFIED	7.416	☐	
	Thorium-228 ✓	1.905	0.08916	pCi/g	0.08397	N	238.7	8	1.277	IDENTIFIED	3.025	☐	
	Thorium-230 ✓	1.432	0.1004	pCi/g	0.1028	N	609.5	4	1.701	IDENTIFIED	5.405	☐	
	Thorium-232 ✓	1.852	0.1735	pCi/g	0.2099	N	911.4	3	1.617	IDENTIFIED	6.622	☐	
	Tin-126 INT	0.4373	0.05706	pCi/g	0.1269	N	87.29	4	1.23	IDENTIFIED	12.21	☐	
	Titanium-44 LA	0.4527	0.0364	pCi/g	0.09055	N	77.13	1	1.12	FAIL_ABUND	6.832	☐	
	Total Uranium	5.5855	2.55E-06	ug/g	4.1004	N		0				☐	
	Uranium-234 ✓	1.432	0.1004	pCi/g	0.1028	N	609.5	4	1.701	IDENTIFIED	5.405	☐	
	Zirconium-97	5.65E+07	1.36E+07	pCi/g	0	N	238.7	8	1.277	NOT_IDENTI	3.025	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664003	26-JUN-09 12:00	14-JUL-09 08:37	17.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.835	0.1844	pCi/g	0.1879	N	911.4	3	2.341	IDENTIFIED	7.864	☐	
	Americium-243 INT	0.5195	0.04425	pCi/g	0.08951	N	74.85	2	1.354	IDENTIFIED	7.576	☐	
	Annihilation Rad.	0.145	0.03015	pCi/g	0.04015	N	511.2	2	2.037	IDENTIFIED	20.55	☐	
Pb214	Bismuth-211 INT	4.361	0.2495	pCi/g	0.3143	Y	352	4	1.507	IDENTIFIED	4.762	☑ UI	
	Bismuth-212 LA	1.253	0.2427	pCi/g	0.6079	N	727.3	1	1.664	FAIL_ABUND	18.76	☐	
	Bismuth-214 ✓	1.254	0.09352	pCi/g	0.102	0.200	609.5	4	1.743	IDENTIFIED	6.027	☐	
Pb214	Cadmium-109 INT	4.616	0.5852	pCi/g	1.179	Y	87.29	5	1.526	IDENTIFIED	11.88	☐	
	Cadmium-115 HE	10.67	10.92	pCi/g	0	N	87.29	5	1.526	NOT_IDENTI	11.88	☐	
	Cerium-143	3414	507.3	pCi/g	0	N	328	1	0.938	FAIL_DECAY	26.6	☐	
	Cesium-134 LA	0.1559	0.04611	pCi/g	0.08663	0.100	796.4	1	4.365	FAIL_ABUND	29.22	☑ UI	Data rejected due to low abundance.
	Gross Gamma	10.84	1.462	pCi/g	2.636	N		0				☐	
	Iodine-123 HE	4.64E+07	9.10E+07	pCi/g	0	N	87.29	5	1.526	NOT_IDENTI	11.88	☐	
	Iodine-133 HE	5161	23940	pCi/g	0	N	511.2	2	2.037	FAIL_DECAY	20.55	☐	
	Krypton-85 LA	32.44	4.072	pCi/g	14.3	N	238.7	8	1.299	NOT_IDENTI	2.857	☐	
	Lead-212 ✓	1.908	0.08671	pCi/g	0.08726	0.100	238.7	8	1.299	IDENTIFIED	2.857	☐	
	Lead-214 ✓	1.517	0.09538	pCi/g	0.1053	0.100	352	4	1.507	IDENTIFIED	4.762	☐	
	Lutetium-177 HE	3.1	0.7568	pCi/g	2.617	N	209.2	1	0.9849	FAIL_ABUND	24.26	☐	
	Neptunium-237 INT	1.327	0.2169	pCi/g	0.3436	N	87.29	5	1.526	IDENTIFIED	11.88	☐	
	Niobium-95m LA	0.4326	0.07395	pCi/g	0.2345	N	238.7	8	1.299	NOT_IDENTI	2.857	☐	
	Polonium-212 nr	1.908	0.08671	pCi/g	0.08726	N	238.7	8	1.299	IDENTIFIED	2.857	☐	
	Polonium-214 nr	1.517	0.09538	pCi/g	0.1053	N	352	4	1.507	IDENTIFIED	4.762	☐	
	Polonium-216 nr	1.908	0.08671	pCi/g	0.08726	N	238.7	8	1.299	IDENTIFIED	2.857	☐	
	Polonium-218 nr	1.517	0.09538	pCi/g	0.1053	N	352	4	1.507	IDENTIFIED	4.762	☐	
	Potassium-40 ✓	35.76	1.522	pCi/g	0.5119	1.00	1461	1	2.989	IDENTIFIED	2.449	☐	
Pb214	Radium-224 INT	5.145	0.6659	pCi/g	0.9915	Y	241.6	1	2.006	IDENTIFIED	12.65	☑ UI	

Radium-226 ✓		1.254	0.09352	pCi/g	0.102	Y	609.5	4	1.743	IDENTIFIED	6.027	☐	
Radium-228 ✓		1.835	0.1844	pCi/g	0.1879	0.500	911.4	3	2.341	IDENTIFIED	7.864	☐	
Strontium-85 LA		0.1712	0.02149	pCi/g	0.07544	Y	238.7	8	1.299	NOT_IDENTI	2.857	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	73.2	1247	pCi/g	0	N	74.85	2	1.354	NOT_IDENTI	7.576	☐	
Thallium-208 ✓		0.5983	0.03952	pCi/g	0.05238	0.080	583.3	1	1.902	IDENTIFIED	5.367	☐	
Thorium-228 ✓		1.908	0.08671	pCi/g	0.08725	N	238.7	8	1.299	IDENTIFIED	2.857	☐	
Thorium-230 ✓		1.253	0.09352	pCi/g	0.102	N	609.5	4	1.743	IDENTIFIED	6.027	☐	
Thorium-232 ✓		1.835	0.1844	pCi/g	0.1879	N	911.4	3	2.341	IDENTIFIED	7.864	☐	
Tin-126 INT		0.4519	0.05728	pCi/g	0.1159	N	87.29	5	1.526	IDENTIFIED	11.88	☐	
Titanium-44 LA		0.4151	0.03008	pCi/g	0.08223	N	77.18	1	1.135	FAIL_ABUND	6.055	☐	
Uranium-234 ✓		1.253	0.09352	pCi/g	0.102	N	609.5	4	1.743	IDENTIFIED	6.027	☐	
Zirconium-97		8.55E+07	1.44E+07	pCi/g	0	N	238.7	8	1.299	NOT_IDENTI	2.857	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664004	26-JUN-09 12:00	14-JUL-09 08:38	17.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.849	0.227	pCi/g	0.2781	N	911.5	3	2.117	IDENTIFIED	10.83	☐	
Americium-241 ✓		0.6932	0.1339	pCi/g	0.3054	0.200	59.4	1	0.9642	IDENTIFIED	18.75	☐	
Americium-243 INT		0.3872	0.04478	pCi/g	0.09869	N	74.94	2	0.8271	IDENTIFIED	10.67	☐	
Annihilation Rad.		0.1627	0.04393	pCi/g	0.05327	N	511.3	1	1.464	IDENTIFIED	26.85	☐	
Pb214 Bismuth-211 INT		4.545	0.3259	pCi/g	0.3555	Y	351.9	4	1.221	IDENTIFIED	6.389	☑ UI	
Bismuth-212 LA		1.897	0.3528	pCi/g	0.9735	N	727.4	1	1.248	FAIL_ABUND	18.17	☐	
Bismuth-214 ✓		1.47	0.1169	pCi/g	0.1545	0.200	609.6	4	1.354	IDENTIFIED	7.008	☐	
Pb214 Cadmium-109 INT		4.354	0.6509	pCi/g	1.36	Y	87.13	4	1.173	IDENTIFIED	14.14	☑ UI	
Cerium-143		1144	380.4	pCi/g	0	N	328.4	1	1.321	FAIL_DECAY	35.01	☐	
Cesium-134 LA		0.1942	0.04997	pCi/g	0.123	0.100	794.7	1	1.341	FAIL_ABUND	25.48	☑ UI	Data rejected due to low abundance.
Gross Gamma		10.64	1.76	pCi/g	3.904	N		0				☐	
Iodine-123	HE	1.31E+08	9.77E+07	pCi/g	0	N	87.13	4	1.173	NOT_IDENTI	14.14	☐	
Krypton-85	HE	25.71	4.927	pCi/g	17.37	N	238.8	7	1.048	NOT_IDENTI	4.154	☐	
Lead-212 ✓		1.84	0.1011	pCi/g	0.1172	0.100	238.8	7	1.048	IDENTIFIED	4.154	☐	
Lead-214 ✓		1.581	0.1206	pCi/g	0.124	0.100	351.9	4	1.221	IDENTIFIED	6.389	☐	
Lutetium-177	HE	4.056	1.037	pCi/g	2.895	N	209.4	1	0.7712	FAIL_ABUND	25.43	☐	
Neptunium-237 INT		1.252	0.2273	pCi/g	0.3186	N	87.13	4	1.173	IDENTIFIED	14.14	☐	
Polonium-212 nr		1.84	0.1011	pCi/g	0.1172	N	238.8	7	1.048	IDENTIFIED	4.154	☐	
Polonium-214 nr		1.581	0.1206	pCi/g	0.124	N	351.9	4	1.221	IDENTIFIED	6.389	☐	
Polonium-216 nr		1.84	0.1011	pCi/g	0.1172	N	238.8	7	1.048	IDENTIFIED	4.154	☐	
Polonium-218 nr		1.581	0.1206	pCi/g	0.124	N	351.9	4	1.221	IDENTIFIED	6.389	☐	
Potassium-40 ✓		29.39	1.522	pCi/g	0.7072	1.00	1461	1	2.226	IDENTIFIED	3.581	☐	
Pb-214 Radium-224 INT		3.913	0.5347	pCi/g	1.535	Y	242	1	1.367	IDENTIFIED	13.37	☑ UI	
Radium-226 ✓		1.47	0.1169	pCi/g	0.1545	Y	609.6	4	1.354	IDENTIFIED	7.008	☐	
Radium-228 ✓		1.849	0.227	pCi/g	0.2781	0.500	911.5	3	2.117	IDENTIFIED	10.83	☐	
Strontium-85 LA		0.1357	0.026	pCi/g	0.09165	Y	238.8	7	1.048	NOT_IDENTI	4.154	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	296	1521	pCi/g	0	N	74.94	2	0.8271	NOT_IDENTI	10.67	☐	
Thallium-208 ✓		0.5745	0.05297	pCi/g	0.07089	0.080	583.5	1	1.243	IDENTIFIED	8.631	☐	
Thorium-228 ✓		1.84	0.1011	pCi/g	0.1172	N	238.8	7	1.048	IDENTIFIED	4.154	☐	
Thorium-230 ✓		1.47	0.1169	pCi/g	0.1545	N	609.6	4	1.354	IDENTIFIED	7.008	☐	
Thorium-232 ✓		1.849	0.227	pCi/g	0.2781	N	911.5	3	2.117	IDENTIFIED	10.83	☐	
Tin-126 INT		0.4262	0.06371	pCi/g	0.1216	N	87.13	4	1.173	IDENTIFIED	14.14	☐	
Titanium-44 LA		0.42	0.03442	pCi/g	0.07962	N	77.13	1	0.8674	FAIL_ABUND	6.849	☐	
Total Uranium		4.9944	3.43E-06	ug/g	3.5636	N		0				☐	
Uranium-234 ✓		1.47	0.1169	pCi/g	0.1545	N	609.6	4	1.354	IDENTIFIED	7.008	☐	
Zirconium-97	HE	1.38E+07	1.82E+07	pCi/g	0	N	238.8	7	1.048	NOT_IDENTI	4.154	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232664005	26-JUN-09 12:00	14-JUL-09 08:57	17.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.517	0.1587	pCi/g	0.1684	N	911.3	3	1.628	IDENTIFIED	8.475	☐	
Americium-241 ✓	1.519	0.1275	pCi/g	0.203	0.200	59.64	1	1.005	IDENTIFIED	7.504	☐	
Americium-243 INT	0.285	0.03149	pCi/g	0.07834	N	74.87	2	1.016	IDENTIFIED	10.44	☐	
Annihilation Rad.	0.1142	0.03247	pCi/g	0.04101	N	511	1	1.674	IDENTIFIED	28.15	☐	
Barium-137m NR	1.186	0.07105	pCi/g	0.05201	N	661.5	3	1.44	IDENTIFIED	4.296	☐	
Beryllium-7 ✓	2.889	0.3296	pCi/g	0.5915	N	477.5	1	1.174	IDENTIFIED	10.62	☐	
Pb-214 Bismuth-211 INT	3.444	0.2589	pCi/g	0.2906	Y	351.8	4	1.357	IDENTIFIED	5.775	☑ UI	
Bismuth-212 ✓	0.9065	0.1841	pCi/g	0.4302	N	727.3	1	1.047	IDENTIFIED	19.65	☐	
Bismuth-214 ✓	0.9258	0.08665	pCi/g	0.1012	0.200	609.3	4	1.38	IDENTIFIED	8.003	☐	
Pb-214 Cadmium-109 INT	3.201	0.3781	pCi/g	1.184	Y	87.37	4	1.247	IDENTIFIED	11.09	☑ UI	
Cerium-143	2239	403.9	pCi/g	0	N	661.5	3	1.44	FAIL_DECAY	4.296	☐	
Cesium-134 LA	0.1109	0.0246	pCi/g	0.0744	0.100	794.4	1	3.221	FAIL_ABUND	21.68	☑ UI	Data rejected due to low abundance.
Cesium-135 NVP	0.4721	0.1174	pCi/g	0.2219	N	269.7	2	1.347	IDENTIFIED	24.08	☐	
Cesium-137 ✓	1.253	0.07518	pCi/g	0.05498	0.100	661.5	3	1.44	IDENTIFIED	4.296	☐	
Gross Gamma	9.599	1.342	pCi/g	3.654	N		0				☐	
Iodine-123 HE	2.67E+07	8.52E+07	pCi/g	0	N	87.37	4	1.247	NOT_IDENTI	11.09	☐	
Iodine-135	1.45E+18	0	pCi/g	0	N	269.7	2	1.347	NOT_IDENTI	24.08	☐	
Lead-212 ✓	1.368	0.08586	pCi/g	0.0825	0.100	238.6	8	1.065	IDENTIFIED	3.523	☐	
Lead-214 ✓	1.198	0.09533	pCi/g	0.1013	0.100	351.8	4	1.357	IDENTIFIED	5.775	☐	
Neptunium-237 INT	0.9202	0.1443	pCi/g	0.3795	N	87.37	4	1.247	IDENTIFIED	11.09	☐	
Niobium-97 HE	4.47E+05	7.47E+05	pCi/g	0	N	238.6	8	1.065	NOT_IDENTI	3.523	☐	
Polonium-212 NR	1.368	0.08586	pCi/g	0.0825	N	238.6	8	1.065	IDENTIFIED	3.523	☐	
Polonium-214 NR	1.198	0.09533	pCi/g	0.1013	N	351.8	4	1.357	IDENTIFIED	5.775	☐	
Polonium-216 NR	1.368	0.08586	pCi/g	0.0825	N	238.6	8	1.065	IDENTIFIED	3.523	☐	
Polonium-218 NR	1.198	0.09533	pCi/g	0.1013	N	351.8	4	1.357	IDENTIFIED	5.775	☐	
Potassium-40 ✓	23.7	1.078	pCi/g	0.4504	1.00	1461	1	1.67	IDENTIFIED	3.225	☐	
Promethium-149 HE	13.75	93.31	pCi/g	0	N	89.9	1	1.037	NOT_IDENTI	18.39	☐	
Pb214 Radium-224 INT	4.194	0.6635	pCi/g	0.9384	Y	241.5	1	1.972	IDENTIFIED	15.08	☑ UI	
Radium-226 ✓	0.9258	0.08665	pCi/g	0.1012	Y	609.3	4	1.38	IDENTIFIED	8.003	☐	
Radium-228 ✓	1.517	0.1587	pCi/g	0.1684	0.500	911.3	3	1.628	IDENTIFIED	8.475	☐	
Rhodium-102 HE	0.08465	0.017	pCi/g	0.05878	N	238.6	8	1.065	NOT_IDENTI	3.523	☐	
Technetium-99m	5.16E+18	0	pCi/g	0	N	238.6	8	1.065	NOT_IDENTI	3.523	☐	
Thallium-200 HE	107.1	1170	pCi/g	0	N	74.87	2	1.016	NOT_IDENTI	10.44	☐	
Thallium-208 ✓	0.4197	0.04044	pCi/g	0.05558	0.080	583.2	1	1.151	IDENTIFIED	8.581	☐	
Thorium-228 ✓	1.368	0.08586	pCi/g	0.08249	N	238.6	8	1.065	IDENTIFIED	3.523	☐	
Thorium-230 ✓	0.9258	0.08665	pCi/g	0.1012	N	609.3	4	1.38	IDENTIFIED	8.003	☐	
Thorium-232 ✓	1.517	0.1587	pCi/g	0.1684	N	911.3	3	1.628	IDENTIFIED	8.475	☐	
Thorium-234 ✓	1.745	0.6948	pCi/g	1.66	2.00	63.31	2	1.333	IDENTIFIED	38.88	☐	
Tin-126 INT	0.3134	0.03701	pCi/g	0.1162	N	87.37	4	1.247	IDENTIFIED	11.09	☐	
Titanium-44 LA	0.3171	0.02404	pCi/g	0.06974	N	77.19	1	1.012	FAIL_ABUND	6.628	☐	
Total Uranium	5.2024	2.07E-06	ug/g	2.4712	N		0				☐	
Uranium-234 ✓	0.9258	0.08665	pCi/g	0.1012	N	609.3	4	1.38	IDENTIFIED	8.003	☐	
Uranium-238 HE	1.745	0.6948	pCi/g	1.66	N	63.31	2	1.333	IDENTIFIED	38.88	☐	
Zirconium-97	3.64E+07	1.33E+07	pCi/g	0	N	238.6	8	1.065	NOT_IDENTI	3.523	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746001	29-JUN-09 12:00	14-JUL-09 08:58	14.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.343	0.1676	pCi/g	0.2356	N	911.4	3	1.911	IDENTIFIED	11.03	☐	
Americium-243 INT	0.3126	0.04099	pCi/g	0.09878	N	74.87	1	0.9929	IDENTIFIED	12.06	☐	
Annihilation Rad. HE	0.09362	0.03543	pCi/g	0.05451	N	510.7	1	1.524	IDENTIFIED	37.7	☐	
Pb-214 Bismuth-211 INT	4.281	0.2933	pCi/g	0.333	Y	352	4	1.22	IDENTIFIED	5.536	☑ UI	
Bismuth-212 HE	0.9188	0.2927	pCi/g	0.7075	N	727.8	1	1.505	FAIL_ABUND	31.55	☐	
Bismuth-214 ✓	1.03	0.0985	pCi/g	0.1103	0.200	609.5	4	1.231	IDENTIFIED	8.61	☐	
Cadmium-109 INT	3.643	0.5667	pCi/g	1.23	Y	87.29	4	1.119	IDENTIFIED	14.41	☑ UI	
Cerium-143	444.9	90.81	pCi/g	0	N	328.5	1	0.86	FAIL_DECAY	27.36	☐	

Cesium-134 LA		0.1055	0.03728	pCi/g	0.103	0.100	795.7	2	1.74	FAIL_ABUND	35.1	☑ UI	Data rejected due to low abundance.
Gross Gamma		8.584	1.542	pCi/g	3.112	N		0				☐	
Iodine-123	HE	3.87E+06	2.15E+06	pCi/g	0	N	87.29	4	1.119	NOT_IDENTI	14.41	☐	
Iodine-135	HE	5.21E+14	1.65E+15	pCi/g	0	N	795.7	2	1.74	NOT_IDENTI	35.1	☐	
Lead-212 ✓		1.646	0.0961	pCi/g	0.09114	0.100	238.7	4	1.058	IDENTIFIED	3.414	☐	
Lead-214 ✓		1.489	0.1092	pCi/g	0.1161	0.100	352	4	1.22	IDENTIFIED	5.536	☐	
Lutetium-177	HE	2.368	0.6521	pCi/g	2.033	N	209.4	1	1.735	FAIL_ABUND	27.26	☐	
Neptunium-237 INT		1.052	0.1963	pCi/g	0.3623	N	87.29	4	1.119	IDENTIFIED	14.41	☐	
Polonium-212 nr		1.646	0.0961	pCi/g	0.09114	N	238.7	4	1.058	IDENTIFIED	3.414	☐	
Polonium-214 nr		1.489	0.1092	pCi/g	0.1161	N	352	4	1.22	IDENTIFIED	5.536	☐	
Polonium-216 nr		1.646	0.0961	pCi/g	0.09114	N	238.7	4	1.058	IDENTIFIED	3.414	☐	
Polonium-218 nr		1.489	0.1092	pCi/g	0.1161	N	352	4	1.22	IDENTIFIED	5.536	☐	
Potassium-40 ✓		23.57	1.226	pCi/g	0.536	1.00	1461	1	2.052	IDENTIFIED	3.652	☐	
Pb214 Radium-224 INT		4.137	0.7012	pCi/g	1.038	Y	241.5	1	1.723	IDENTIFIED	16.42	☑ UI	
Radium-226 ✓		1.03	0.0985	pCi/g	0.1103	Y	609.5	4	1.231	IDENTIFIED	8.61	☐	
Radium-228 ✓		1.343	0.1676	pCi/g	0.2356	0.500	911.4	3	1.911	IDENTIFIED	11.03	☐	
Sodium-24	HE	93220	2.88E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Thallium-208 ✓		0.4934	0.04293	pCi/g	0.06875	0.080	583.3	1	1.435	IDENTIFIED	7.888	☐	
Thorium-228 ✓		1.646	0.0961	pCi/g	0.09113	N	238.7	4	1.058	IDENTIFIED	3.414	☐	
Thorium-230 ✓		1.03	0.0985	pCi/g	0.1103	N	609.5	4	1.231	IDENTIFIED	8.61	☐	
Thorium-232 ✓		1.343	0.1676	pCi/g	0.2356	N	911.4	3	1.911	IDENTIFIED	11.03	☐	
Tin-126 INT		0.3582	0.05572	pCi/g	0.1216	N	87.29	4	1.119	IDENTIFIED	14.41	☐	
Titanium-44 LA		0.3819	0.0314	pCi/g	0.08093	N	77.07	1	0.8837	FAIL_ABUND	6.319	☐	
Uranium-234 ✓		1.03	0.0985	pCi/g	0.1103	N	609.5	4	1.231	IDENTIFIED	8.61	☐	
Zirconium-97	HE	1.08E+06	8.08E+05	pCi/g	0	N	303	1	1.667	NOT_IDENTI	53.39	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746002	29-JUN-09 12:00	14-JUL-09 08:58	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.67	0.1778	pCi/g	0.2073	N	911.4	3	1.627	IDENTIFIED	8.897	☐	
Americium-243 INT		0.3275	0.04602	pCi/g	0.09018	N	74.97	2	1.33	IDENTIFIED	13.55	☐	
Annihilation Rad.	HE	0.1076	0.03585	pCi/g	0.04149	N	511.3	3	1.655	IDENTIFIED	33.17	☐	
Pb214 Bismuth-211 INT		3.401	0.2301	pCi/g	0.302	Y	352	4	1.301	IDENTIFIED	5.973	☑ UI	
Bismuth-212 ✓		0.8768	0.2039	pCi/g	0.4619	N	727.5	1	1.378	IDENTIFIED	22.84	☐	
Bismuth-214 ✓		1.285	0.09998	pCi/g	0.1129	0.200	609.4	4	1.565	IDENTIFIED	6.629	☐	
Pb214 Cadmium-109 INT		3.1	0.4257	pCi/g	1.322	Y	87.38	4	1.127	IDENTIFIED	13.1	☑ UI	
Cerium-143		285.6	68.9	pCi/g	0	N	87.38	4	1.127	FAIL_DECAY	13.1	☐	
Gross Gamma		8.799	1.253	pCi/g	2.694	N		0				☐	
Iodine-133	HE	206	2235	pCi/g	0	N	511.3	3	1.655	FAIL_DECAY	33.17	☐	
Iodine-135	HE	2.85E+15	1.50E+15	pCi/g	0	N	511.3	3	1.655	NOT_IDENTI	33.17	☐	
Krypton-85	HE	13.22	3.626	pCi/g	12.49	N	238.8	8	1.232	NOT_IDENTI	3.529	☐	
Lead-212 ✓		1.576	0.07947	pCi/g	0.08331	0.100	238.8	8	1.232	IDENTIFIED	3.529	☐	
Lead-214 ✓		1.183	0.08578	pCi/g	0.1053	0.100	352	4	1.301	IDENTIFIED	5.973	☐	
Lutetium-177	HE	3.039	0.7763	pCi/g	1.822	N	209.7	1	1.148	FAIL_ABUND	25.4	☐	
Neptunium-237 INT		0.8951	0.1537	pCi/g	0.4029	N	87.38	4	1.127	IDENTIFIED	13.1	☐	
Polonium-212 nr		1.576	0.07947	pCi/g	0.08331	N	238.8	8	1.232	IDENTIFIED	3.529	☐	
Polonium-214 nr		1.183	0.08578	pCi/g	0.1053	N	352	4	1.301	IDENTIFIED	5.973	☐	
Polonium-216 nr		1.576	0.07947	pCi/g	0.08331	N	238.8	8	1.232	IDENTIFIED	3.529	☐	
Polonium-218 nr		1.183	0.08578	pCi/g	0.1053	N	352	4	1.301	IDENTIFIED	5.973	☐	
Potassium-40 ✓		29.13	1.401	pCi/g	0.4321	1.00	1461	1	2.068	IDENTIFIED	3.007	☐	
Pb214 Radium-224 INT		3.973	0.5657	pCi/g	0.948	Y	241.8	1	1.648	IDENTIFIED	13.95	☑ UI	
Radium-226 ✓		1.285	0.09998	pCi/g	0.1129	Y	609.4	4	1.565	IDENTIFIED	6.629	☐	
Radium-228 ✓		1.67	0.1778	pCi/g	0.2073	0.500	911.4	3	1.627	IDENTIFIED	8.897	☐	
Strontium-85 LA		0.06761	0.01855	pCi/g	0.06386	Y	238.8	8	1.232	NOT_IDENTI	3.529	☑ UI	Data rejected due to low abundance.
Technetium-99m	HE	1.32E+16	8.94E+15	pCi/g	0	N	238.8	8	1.232	NOT_IDENTI	3.529	☐	
Thallium-200	HE	73.18	172	pCi/g	0	N	74.97	2	1.33	NOT_IDENTI	13.55	☐	
Thallium-208 ✓		0.5284	0.04461	pCi/g	0.05499	0.080	583.3	1	1.365	IDENTIFIED	7.665	☐	
Thorium-228 ✓		1.576	0.07947	pCi/g	0.0833	N	238.8	8	1.232	IDENTIFIED	3.529	☐	

Thorium-230 ✓		1.285	0.09998	pCi/g	0.1129	N	609.4	4	1.565	IDENTIFIED	6.629	☐
Thorium-232 ✓		1.67	0.1778	pCi/g	0.2073	N	911.4	3	1.627	IDENTIFIED	8.897	☐
Tin-126 INT		0.3048	0.04185	pCi/g	0.1308	N	87.38	4	1.127	IDENTIFIED	13.1	☐
Titanium-44 LA		0.3605	0.03065	pCi/g	0.07734	N	77.27	1	1.178	FAIL_ABUND	7.612	☐
Uranium-234 ✓		1.285	0.09998	pCi/g	0.1129	N	609.4	4	1.565	IDENTIFIED	6.629	☐
Zirconium-97	HE	7.62E+05	7.09E+05	pCi/g	0	N	238.8	8	1.232	NOT_IDENTI	3.529	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746003	29-JUN-09 12:00	14-JUL-09 08:59	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.816	0.1702	pCi/g	0.2494	N	911.7	3	1.582	IDENTIFIED	7.593	☐	
Americium-243 INT		0.3749	0.03873	pCi/g	0.0918	N	74.84	1	1.011	IDENTIFIED	9.753	☐	
Annihilation Rad.	HE	0.1129	0.03753	pCi/g	0.04449	N	510.9	2	1.86	IDENTIFIED	33.11	☐	
Pb214 Bismuth-211 INT		3.782	0.2567	pCi/g	0.3241	Y	352	4	1.143	IDENTIFIED	6.017	☑ UI	
Bismuth-212	HE	0.885	0.229	pCi/g	0.6702	N	727.9	1	1.959	FAIL_ABUND	25.51	☐	
Bismuth-214 ✓		1.104	0.09375	pCi/g	0.1125	0.200	609.4	4	1.189	IDENTIFIED	7.43	☐	
Pb214 Cadmium-109 INT		2.353	0.6031	pCi/g	1.496	Y	87.34	5	1.017	IDENTIFIED	25.34	☑ UI	
Cerium-143		486.5	83.47	pCi/g	0	N	87.34	5	1.017	FAIL_DECAY	25.34	☐	
Gross Gamma		9.881	1.669	pCi/g	2.692	N		0				☐	
Iodine-123	HE	1.80E+06	1.99E+06	pCi/g	0	N	87.34	5	1.017	NOT_IDENTI	25.34	☐	
Iodine-133	HE	1567	2446	pCi/g	0	N	510.9	2	1.86	FAIL_DECAY	33.11	☐	
Iodine-135	HE	4.07E+14	1.67E+15	pCi/g	0	N	795.5	1	1.883	NOT_IDENTI	45.82	☐	
Krypton-85	HE	20.19	4.332	pCi/g	14.72	N	238.7	7	1.052	NOT_IDENTI	3.212	☐	
Lead-212 ✓		1.651	0.07907	pCi/g	0.08945	0.100	238.7	7	1.052	IDENTIFIED	3.212	☐	
Lead-214 ✓		1.316	0.09566	pCi/g	0.113	0.100	352	4	1.143	IDENTIFIED	6.017	☐	
Neptunium-237	HE	0.6795	0.1877	pCi/g	0.4489	N	87.34	5	1.017	IDENTIFIED	25.34	☐	
Polonium-212 nr		1.651	0.07907	pCi/g	0.08945	N	238.7	7	1.052	IDENTIFIED	3.212	☐	
Polonium-214 nr		1.316	0.09566	pCi/g	0.113	N	352	4	1.143	IDENTIFIED	6.017	☐	
Polonium-216 nr		1.651	0.07907	pCi/g	0.08945	N	238.7	7	1.052	IDENTIFIED	3.212	☐	
Polonium-218 nr		1.316	0.09566	pCi/g	0.113	N	352	4	1.143	IDENTIFIED	6.017	☐	
Potassium-40 ✓		35.66	1.574	pCi/g	0.4578	1.00	1461	1	2.239	IDENTIFIED	2.602	☐	
Pb214 Radium-224 INT		4.501	0.5787	pCi/g	1.018	Y	241.8	1	1.572	IDENTIFIED	12.56	☑ UI	
Radium-226 ✓		1.104	0.09375	pCi/g	0.1125	Y	609.4	4	1.189	IDENTIFIED	7.43	☐	
Radium-228 ✓		1.816	0.1702	pCi/g	0.2494	0.500	911.7	3	1.582	IDENTIFIED	7.593	☐	
Sodium-24	HE	4.70E+05	2.84E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1033	0.02216	pCi/g	0.07528	Y	238.7	7	1.052	NOT_IDENTI	3.212	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5957	0.04328	pCi/g	0.0613	0.080	583.5	1	1.257	IDENTIFIED	6.324	☐	
Thorium-228 ✓		1.651	0.07907	pCi/g	0.08944	N	238.7	7	1.052	IDENTIFIED	3.212	☐	
Thorium-230 ✓		1.104	0.09375	pCi/g	0.1125	N	609.4	4	1.189	IDENTIFIED	7.43	☐	
Thorium-232 ✓		1.816	0.1702	pCi/g	0.2494	N	911.7	3	1.582	IDENTIFIED	7.593	☐	
Tin-126	HE	0.2314	0.0593	pCi/g	0.1511	N	87.34	5	1.017	IDENTIFIED	25.34	☐	
Titanium-44 LA		0.4116	0.02879	pCi/g	0.08224	N	77.16	1	0.9704	FAIL_ABUND	6.078	☐	
Uranium-234 ✓		1.104	0.09375	pCi/g	0.1125	N	609.4	4	1.189	IDENTIFIED	7.43	☐	
Zirconium-97		2.72E+06	6.95E+05	pCi/g	0	N	238.7	7	1.052	NOT_IDENTI	3.212	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746004	29-JUN-09 12:00	14-JUL-09 09:13	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.651	0.1936	pCi/g	0.2641	N	911.2	3	1.557	IDENTIFIED	9.966	☐	
Americium-243 INT		0.3986	0.03208	pCi/g	0.06458	N	74.74	2	1.339	IDENTIFIED	7.031	☐	
Annihilation Rad.	HE	0.1169	0.03434	pCi/g	0.05759	N	511	2	2.324	IDENTIFIED	29.2	☐	
Pb214 Bismuth-211 INT		4.115	0.2833	pCi/g	0.3903	Y	352	4	1.4	IDENTIFIED	5.641	☑ UI	
Bismuth-212	HE	1.277	0.2884	pCi/g	0.7481	N	727.4	1	1.755	FAIL_ABUND	22.13	☐	
Bismuth-214 LA		1.323	0.09841	pCi/g	0.3012	0.200	609.1	4	1.484	FAIL_ABUND	6.147	☑ UI	Data rejected due to low abundance.
Pb214 Cadmium-109 INT		3.766	0.4367	pCi/g	0.963	Y	87.2	4	1.4	IDENTIFIED	10.95	☑ UI	
Cerium-143		635.4	109.2	pCi/g	0	N	327.9	1	1.095	FAIL_DECAY	38.81	☐	
Cesium-134 LA		0.16	0.03872	pCi/g	0.1061	0.100	794.8	1	1.927	FAIL_ABUND	23.82	☑ UI	Data rejected due to low abundance.

	Gross Gamma		10.26	1.626	pCi/g	4.011	N		0				☐	
	Iodine-123	HE	8.51E+05	2.26E+06	pCi/g	0	N	87.2	4	1.4	NOT_IDENTI	10.95	☐	
	Iodine-133	HE	1807	2781	pCi/g	0	N	511	2	2.324	FAIL_DECAY	29.2	☐	
	Krypton-85	HE	24.63	4.672	pCi/g	16.29	N	238.7	8	1.298	NOT_IDENTI	3.262	☐	
	Lead-212 ✓		1.794	0.1131	pCi/g	0.09337	0.100	238.7	8	1.298	IDENTIFIED	3.262	☐	
	Lead-214 ✓		1.431	0.1054	pCi/g	0.1258	0.100	352	4	1.4	IDENTIFIED	5.641	☐	
	Lutetium-177	HE	2.541	0.8582	pCi/g	2.134	N	209.1	1	1.384	FAIL_ABUND	33.41	☐	
	Neptunium-237 INT		1.087	0.1688	pCi/g	0.2768	N	87.2	4	1.4	IDENTIFIED	10.95	☐	
	Niobium-95m LA		0.4146	0.07792	pCi/g	0.2523	N	238.7	8	1.298	NOT_IDENTI	3.262	☐	
	Polonium-212 nr		1.794	0.1131	pCi/g	0.09337	N	238.7	8	1.298	IDENTIFIED	3.262	☐	
	Polonium-214 nr		1.431	0.1054	pCi/g	0.1258	N	352	4	1.4	IDENTIFIED	5.641	☐	
	Polonium-216 nr		1.794	0.1131	pCi/g	0.09337	N	238.7	8	1.298	IDENTIFIED	3.262	☐	
	Polonium-218 nr		1.431	0.1054	pCi/g	0.1258	N	352	4	1.4	IDENTIFIED	5.641	☐	
	Potassium-40 ✓		33.21	1.443	pCi/g	0.5177	1.00	1461	1	2.18	IDENTIFIED	3.037	☐	
Pb214	Radium-224 INT		4.703	0.6989	pCi/g	1.063	Y	241.7	1	1.773	IDENTIFIED	14.03	☑ UI	
	Radium-226 LA		1.323	0.09841	pCi/g	0.3012	Y	609.1	4	1.484	FAIL_ABUND	6.147	☑ UI	Data rejected due to low abundance.
	Radium-228 ✓		1.651	0.1936	pCi/g	0.2641	0.500	911.2	3	1.557	IDENTIFIED	9.966	☐	
	Strontium-85 LA		0.126	0.02389	pCi/g	0.08334	Y	238.7	8	1.298	NOT_IDENTI	3.262	☑ UI	Data rejected due to low abundance.
	Thallium-200	HE	192.2	220.6	pCi/g	0	N	74.74	2	1.339	NOT_IDENTI	7.031	☐	
	Thallium-208 ✓		0.5708	0.04552	pCi/g	0.06491	0.080	583	1	1.556	IDENTIFIED	7.076	☐	
	Thorium-228 ✓		1.794	0.1131	pCi/g	0.09336	N	238.7	8	1.298	IDENTIFIED	3.262	☐	
	Thorium-230 ✓		1.323	0.09841	pCi/g	0.3012	N	609.1	4	1.484	FAIL_ABUND	6.147	☐	
	Thorium-232 ✓		1.651	0.1936	pCi/g	0.2641	N	911.2	3	1.557	IDENTIFIED	9.966	☐	
	Thorium-234 ✓		1.32	0.4617	pCi/g	1.085	2.00	63.32	2	1.124	IDENTIFIED	33.84	☐	
	Tin-126 INT		0.3703	0.04294	pCi/g	0.09456	N	87.2	4	1.4	IDENTIFIED	10.95	☐	
	Titanium-44 LA		0.4207	0.02486	pCi/g	0.06807	N	77.02	1	1.222	FAIL_ABUND	4.447	☐	
	Total Uranium		3.9352	1.37E-06	ug/g	1.6174	N		0				☐	
	Uranium-234 LA		1.323	0.09841	pCi/g	0.3012	N	609.1	4	1.484	FAIL_ABUND	6.147	☐	
	Uranium-238	HE	1.32	0.4617	pCi/g	1.085	N	63.32	2	1.124	IDENTIFIED	33.84	☐	
	Zirconium-97		5.03E+06	9.47E+05	pCi/g	0	N	238.7	8	1.298	NOT_IDENTI	3.262	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746005	29-JUN-09 12:00	14-JUL-09 09:16	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓		2.08	0.2099	pCi/g	0.3103	N	911.6	3	1.615	IDENTIFIED	8.723	☐	
	Americium-243 INT		0.5131	0.04177	pCi/g	0.06751	N	75.01	1	1.861	IDENTIFIED	7.207	☐	
	Annihilation Rad.		0.1511	0.0426	pCi/g	0.06298	N	510.9	1	2.272	IDENTIFIED	28.01	☐	
	Bismuth-210	HE	1.324	0.3864	pCi/g	1	N	46.38	3	1.195	IDENTIFIED	28.94	☐	
Pb214	Bismuth-211 INT		4.555	0.2995	pCi/g	0.4215	Y	352	4	1.574	IDENTIFIED	5.757	☑ UI	
	Bismuth-212	HE	1.277	0.3236	pCi/g	0.9456	N	727.4	1	2.301	FAIL_ABUND	24.96	☐	
	Bismuth-214 ✓		1.475	0.131	pCi/g	0.1461	0.200	609.6	4	1.575	IDENTIFIED	7.748	☐	
Pb214	Cadmium-109 INT		3.703	0.3928	pCi/g	1.298	Y	87.27	5	1.385	IDENTIFIED	9.773	☑ UI	
	Cerium-143		830.2	133.2	pCi/g	0	N	327.7	1	1.397	FAIL_DECAY	30.69	☐	
	Cesium-134 LA		0.1432	0.04461	pCi/g	0.131	0.100	795.3	2	1.682	FAIL_ABUND	30.94	☑ UI	Data rejected due to low abundance.
	Gross Gamma		10.73	1.615	pCi/g	4.841	N		0				☐	
	Iodine-123	HE	1.70E+06	2.55E+06	pCi/g	0	N	87.27	5	1.385	NOT_IDENTI	9.773	☐	
	Iodine-135	HE	2.87E+15	2.59E+15	pCi/g	0	N	795.3	2	1.682	NOT_IDENTI	30.94	☐	
	Krypton-85	HE	26.28	5.654	pCi/g	19.34	N	238.6	8	1.464	NOT_IDENTI	3.426	☐	
	Lead-210	HE	1.324	0.3864	pCi/g	1	N	46.38	3	1.195	IDENTIFIED	28.94	☐	
	Lead-212 ✓		1.918	0.09825	pCi/g	0.1059	0.100	238.6	8	1.464	IDENTIFIED	3.426	☐	
	Lead-214 ✓		1.584	0.1121	pCi/g	0.1478	0.100	352	4	1.574	IDENTIFIED	5.757	☐	
	Lutetium-177	HE	2.997	0.6479	pCi/g	2.394	N	87.27	5	1.385	NOT_IDENTI	9.773	☐	
	Neptunium-237 INT		1.069	0.1582	pCi/g	0.354	N	87.27	5	1.385	IDENTIFIED	9.773	☐	
	Niobium-95m LA		0.7299	0.09405	pCi/g	0.3197	N	238.6	8	1.464	NOT_IDENTI	3.426	☐	
	Polonium-210	HE	1.324	0.3855	pCi/g	1	N	46.38	3	1.195	IDENTIFIED	28.94	☐	
	Polonium-212 nr		1.918	0.09825	pCi/g	0.1059	N	238.6	8	1.464	IDENTIFIED	3.426	☐	
	Polonium-214 nr		1.584	0.1121	pCi/g	0.1478	N	352	4	1.574	IDENTIFIED	5.757	☐	
	Polonium-216 nr		1.918	0.09825	pCi/g	0.1059	N	238.6	8	1.464	IDENTIFIED	3.426	☐	

	Polonium-218 m	1.584	0.1121	pCi/g	0.1478	N	352	4	1.574	IDENTIFIED	5.757	☐	
	Potassium-40 ✓	35.75	1.658	pCi/g	0.7099	1.00	1461	1	2.315	IDENTIFIED	3.372	☐	
Pb214	Radium-224 INT	5.289	0.8808	pCi/g	1.207	Y	241.6	1	2.112	IDENTIFIED	16.37	☑ UI	
	Radium-226 ✓	1.475	0.131	pCi/g	0.1461	Y	609.6	4	1.575	IDENTIFIED	7.748	☐	
	Radium-228 ✓	2.08	0.2099	pCi/g	0.3103	0.500	911.6	3	1.615	IDENTIFIED	8.723	☐	
	Strontium-85 LA	0.1344	0.02892	pCi/g	0.0989	Y	238.6	8	1.464	NOT_IDENTI	3.426	☑ UI	Data rejected due to low abundance.
	Thallium-208 ✓	0.5943	0.06808	pCi/g	0.08477	0.080	583.5	1	1.677	IDENTIFIED	10.81	☐	
	Thorium-228 ✓	1.918	0.09825	pCi/g	0.1059	N	238.6	8	1.464	IDENTIFIED	3.426	☐	
	Thorium-230 ✓	1.475	0.131	pCi/g	0.1461	N	609.6	4	1.575	IDENTIFIED	7.748	☐	
	Thorium-232 ✓	2.08	0.2099	pCi/g	0.3103	N	911.6	3	1.615	IDENTIFIED	8.723	☐	
	Tin-126 INT	0.3641	0.03862	pCi/g	0.1274	N	87.27	5	1.385	IDENTIFIED	9.773	☐	
	Titanium-44 LA	0.4238	0.02592	pCi/g	0.07234	N	77.24	1	1.256	FAIL_ABUND	4.762	☐	
	Total Uranium	2.5576	1.25E-06	ug/g	1.7688	N		0				☐	
	Uranium-234 ✓	1.475	0.131	pCi/g	0.1461	N	609.6	4	1.575	IDENTIFIED	7.748	☐	
	Zirconium-97	4.99E+06	1.04E+06	pCi/g	0	N	238.6	8	1.464	NOT_IDENTI	3.426	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746006	29-JUN-09 12:00	14-JUL-09 10:20	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.876	0.1825	pCi/g	0.2314	N	911.3	3	1.497	IDENTIFIED	7.753	☐	
	Americium-243 INT	0.4552	0.0501	pCi/g	0.08713	N	74.88	1	1.916	IDENTIFIED	10.34	☐	
	Annihilation Rad.	0.1415	0.03727	pCi/g	0.04525	N	510.7	2	2.283	IDENTIFIED	26.18	☐	
Pb214	Bismuth-211 INT	3.832	0.2785	pCi/g	0.3168	Y	351.6	4	1.456	IDENTIFIED	6.541	☑ UI	
	Bismuth-212 ✓	1.425	0.2417	pCi/g	0.4896	N	727.7	1	1.364	IDENTIFIED	16.41	☐	
	Bismuth-214 ✓	1.276	0.09083	pCi/g	0.1061	0.200	609.1	4	1.45	IDENTIFIED	5.918	☐	
Pb214	Cadmium-109 INT	2.285	0.6088	pCi/g	1.52	Y	87.44	3	1.173	IDENTIFIED	26.29	☑ UI	
	Cerium-143	941.8	130.3	pCi/g	0	N	328.1	1	1.751	FAIL_DECAY	32.06	☐	
	Cesium-134 LA	0.1187	0.03124	pCi/g	0.09086	0.100	794.7	2	1.144	FAIL_ABUND	26.04	☑ UI	Data rejected due to low abundance.
	Cesium-135 HE	0.3181	0.08959	pCi/g	0.2955	N	794.7	2	1.144	NOT_IDENTI	26.04	☐	
	Gross Gamma	10.85	1.654	pCi/g	4.584	N		0				☐	
	Iodine-133 HE	1299	2511	pCi/g	0	N	510.7	2	2.283	FAIL_DECAY	26.18	☐	
	Lead-212 ✓	1.757	0.08498	pCi/g	0.09051	0.100	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Lead-214 ✓	1.333	0.1029	pCi/g	0.1104	0.100	351.6	4	1.456	IDENTIFIED	6.541	☐	
	Lutetium-177 HE	2.993	0.7705	pCi/g	2.107	N	209.2	1	1.649	FAIL_ABUND	25.59	☐	
	Neptunium-237 HE	0.6596	0.1885	pCi/g	0.4364	N	87.44	3	1.173	IDENTIFIED	26.29	☐	
	Niobium-95 HE	0.09913	0.02619	pCi/g	0.08646	N	238.4	7	1.375	NOT_IDENTI	3.183	☐	
	Niobium-95m LA	0.8223	0.08681	pCi/g	0.2893	N	238.4	7	1.375	NOT_IDENTI	3.183	☐	
	Polonium-212 m	1.757	0.08498	pCi/g	0.09051	N	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Polonium-214 m	1.333	0.1029	pCi/g	0.1104	N	351.6	4	1.456	IDENTIFIED	6.541	☐	
	Polonium-216 m	1.757	0.08498	pCi/g	0.09051	N	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Polonium-218 m	1.333	0.1029	pCi/g	0.1104	N	351.6	4	1.456	IDENTIFIED	6.541	☐	
	Potassium-40 ✓	34.87	1.565	pCi/g	0.5357	1.00	1461	1	1.873	IDENTIFIED	2.636	☐	
Pb214	Radium-224 INT	4.691	0.7796	pCi/g	1.029	Y	241.3	1	2.182	IDENTIFIED	16.37	☑ UI	
	Radium-226 ✓	1.276	0.09083	pCi/g	0.1061	Y	609.1	4	1.45	IDENTIFIED	5.918	☐	
	Radium-228 ✓	1.876	0.1825	pCi/g	0.2314	0.500	911.3	3	1.497	IDENTIFIED	7.753	☐	
	Thallium-208 ✓	0.4948	0.04496	pCi/g	0.06075	0.080	583	1	1.322	IDENTIFIED	8.418	☐	
	Thorium-228 ✓	1.757	0.08498	pCi/g	0.0905	N	238.4	7	1.375	IDENTIFIED	3.183	☐	
	Thorium-230 ✓	1.276	0.09083	pCi/g	0.1061	N	609.1	4	1.45	IDENTIFIED	5.918	☐	
	Thorium-232 ✓	1.876	0.1825	pCi/g	0.2314	N	911.3	3	1.497	IDENTIFIED	7.753	☐	
	Tin-126 HE	0.2246	0.05985	pCi/g	0.1511	N	87.44	3	1.173	IDENTIFIED	26.29	☐	
	Titanium-44 LA	0.4319	0.03051	pCi/g	0.08398	N	77.2	1	1.26	FAIL_ABUND	5.919	☐	
	Total Uranium	4.1924	2.06E-06	ug/g	2.8044	N		0				☐	
	Uranium-234 ✓	1.276	0.09083	pCi/g	0.1061	N	609.1	4	1.45	IDENTIFIED	5.918	☐	
	Zirconium-97	5.81E+06	8.77E+05	pCi/g	0	N	238.4	7	1.375	NOT_IDENTI	3.183	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746007	29-JUN-09 12:00	14-JUL-09 10:27	14.9	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.723	0.184	pCi/g	0.2732	N	911	3	1.639	IDENTIFIED	9.374	☐	
Americium-243 INT	0.3667	0.03208	pCi/g	0.07127	N	75.03	1	1.178	IDENTIFIED	7.656	☐	
Pb214 Bismuth-211 INT	3.567	0.2541	pCi/g	0.3894	Y	352	4	1.07	IDENTIFIED	6.158	☑ UI	
Bismuth-212 HE	1.073	0.3407	pCi/g	0.8203	N	727.9	1	1.335	FAIL_ABUND	31.43	☐	
Bismuth-214 ✓	1.188	0.1067	pCi/g	0.1421	0.200	609.3	4	1.213	IDENTIFIED	7.782	☐	
Pb214 Cadmium-109 INT	3.563	0.4201	pCi/g	1.178	Y	87.52	3	1.037	IDENTIFIED	11.08	☑ UI	
Cerium-143	740.1	122.1	pCi/g	0	N	328	1	1.054	FAIL_DECAY	39.43	☐	
Gross Gamma	8.516	1.415	pCi/g	3.876	N		0				☐	
Iodine-133 HE	5818	3404	pCi/g	0	N	510.9	2	2.025	FAIL_DECAY	76.72	☐	
Iodine-135 HE	3.55E+15	2.28E+15	pCi/g	0	N	510.9	2	2.025	NOT_IDENTI	76.72	☐	
Krypton-85 HE	20.95	5.572	pCi/g	18.73	N	238.8	7	1.003	NOT_IDENTI	3.494	☐	
Lead-212 ✓	1.656	0.09286	pCi/g	0.0996	0.100	238.8	7	1.003	IDENTIFIED	3.494	☐	
Lead-214 ✓	1.241	0.09414	pCi/g	0.14	0.100	352	4	1.07	IDENTIFIED	6.158	☐	
Lutetium-177 HE	3.553	0.8847	pCi/g	2.24	N	208.8	1	1.314	FAIL_ABUND	24.62	☐	
Neptunium-237 INT	1.029	0.1612	pCi/g	0.3391	N	87.52	3	1.037	IDENTIFIED	11.08	☐	
Polonium-212 nv	1.656	0.09286	pCi/g	0.0996	N	238.8	7	1.003	IDENTIFIED	3.494	☐	
Polonium-214 nv	1.241	0.09414	pCi/g	0.14	N	352	4	1.07	IDENTIFIED	6.158	☐	
Polonium-216 nv	1.656	0.09286	pCi/g	0.0996	N	238.8	7	1.003	IDENTIFIED	3.494	☐	
Polonium-218 nv	1.241	0.09414	pCi/g	0.14	N	352	4	1.07	IDENTIFIED	6.158	☐	
Potassium-40 ✓	26.15	1.294	pCi/g	0.6702	1.00	1460	1	1.997	IDENTIFIED	3.878	☐	
Pb214 Radium-224 INT	5.245	0.7396	pCi/g	1.134	Y	241.8	1	1.965	IDENTIFIED	13.59	☑ UI	
Radium-226 ✓	1.188	0.1067	pCi/g	0.1421	Y	609.3	4	1.213	IDENTIFIED	7.782	☐	
Radium-228 ✓	1.723	0.184	pCi/g	0.2732	0.500	911	3	1.639	IDENTIFIED	9.374	☐	
Strontium-85 LA	0.1072	0.02851	pCi/g	0.09583	Y	238.8	7	1.003	NOT_IDENTI	3.494	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.4748	0.05056	pCi/g	0.07678	0.080	583.3	1	1.532	IDENTIFIED	9.882	☐	
Thorium-228 ✓	1.656	0.09286	pCi/g	0.09959	N	238.8	7	1.003	IDENTIFIED	3.494	☐	
Thorium-230 ✓	1.188	0.1067	pCi/g	0.1421	N	609.3	4	1.213	IDENTIFIED	7.782	☐	
Thorium-232 ✓	1.723	0.184	pCi/g	0.2732	N	911	3	1.639	IDENTIFIED	9.374	☐	
Tin-126 INT	0.3503	0.0413	pCi/g	0.1157	N	87.52	3	1.037	IDENTIFIED	11.08	☐	
Titanium-44 LA	0.3534	0.02309	pCi/g	0.07791	N	77.37	1	0.8566	FAIL_ABUND	5.011	☐	
Total Uranium	2.9726	1.47E-06	ug/g	1.8694	N		0				☐	
Uranium-234 ✓	1.188	0.1067	pCi/g	0.1421	N	609.3	4	1.213	IDENTIFIED	7.782	☐	
Zirconium-97 HE	1.05E+06	1.08E+06	pCi/g	0	N	238.8	7	1.003	NOT_IDENTI	3.494	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232746008	29-JUN-09 12:00	14-JUL-09 10:28	14.9	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.857	0.1877	pCi/g	0.271	N	912	3	1.624	IDENTIFIED	8.673	☐	
Americium-243 INT	0.4006	0.03239	pCi/g	0.06333	N	75.1	1	1.22	IDENTIFIED	6.845	☐	
Annihilation Rad. HE	0.09404	0.03683	pCi/g	0.05855	N	511.3	2	1.865	IDENTIFIED	39.01	☐	
Bismuth-210 HE	1.642	0.4583	pCi/g	0.8324	N	46.58	3	1.199	IDENTIFIED	27.61	☐	
Pb214 Bismuth-211 INT	3.754	0.2722	pCi/g	0.3484	Y	352.3	4	1.364	IDENTIFIED	6.274	☑ UI	
Bismuth-212 HE	1.206	0.296	pCi/g	0.7929	N	728	1	1.644	FAIL_ABUND	24.07	☐	
Bismuth-214 ✓	1.15	0.1031	pCi/g	0.1396	0.200	609.7	4	1.582	IDENTIFIED	7.649	☐	
Pb214 Cadmium-109 INT	3.487	0.4584	pCi/g	1.288	Y	87.4	4	1.321	IDENTIFIED	12.53	☑ UI	
Cerium-143	314.9	79.69	pCi/g	0	N	328.6	1	1.301	FAIL_DECAY	24.9	☐	
Cesium-134 LA	0.1049	0.03538	pCi/g	0.1043	0.100	795.4	1	1.457	FAIL_ABUND	33.49	☑ UI	Data rejected due to low abundance.
Europium-155 HE	0.2353	0.07419	pCi/g	0.1645	N	105.8	1	1.801	IDENTIFIED	31.1	☐	
Gross Gamma	9.646	1.685	pCi/g	3.776	N		0				☐	
Iodine-123 HE	8.68E+05	2.50E+06	pCi/g	0	N	87.4	4	1.321	NOT_IDENTI	12.53	☐	
Iodine-133 HE	1630	3058	pCi/g	0	N	511.3	2	1.865	FAIL_DECAY	39.01	☐	
Krypton-85 LA	28.81	5.186	pCi/g	18.02	N	239	7	1.183	NOT_IDENTI	3.352	☐	
Lead-210 HE	1.642	0.4583	pCi/g	0.8324	N	46.58	3	1.199	IDENTIFIED	27.61	☐	
Lead-212 ✓	1.703	0.09611	pCi/g	0.09646	0.100	239	7	1.183	IDENTIFIED	3.352	☐	
Lead-214 ✓	1.306	0.1006	pCi/g	0.1318	0.100	352.3	4	1.364	IDENTIFIED	6.274	☐	
Lutetium-177 HE	3.643	0.9098	pCi/g	2.065	N	209.8	1	1.3	FAIL_ABUND	24.65	☐	
Neptunium-237 INT	1.007	0.1683	pCi/g	0.2919	N	87.4	4	1.321	IDENTIFIED	12.53	☐	

Polonium-210	HE	1.642	0.4571	pCi/g	0.8324	N	46.58	3	1.199	IDENTIFIED	27.61	☐	
Polonium-212 nr		1.703	0.09611	pCi/g	0.09646	N	239	7	1.183	IDENTIFIED	3.352	☐	
Polonium-214 nr		1.306	0.1006	pCi/g	0.1318	N	352.3	4	1.364	IDENTIFIED	6.274	☐	
Polonium-216 nr		1.703	0.09611	pCi/g	0.09646	N	239	7	1.183	IDENTIFIED	3.352	☐	
Polonium-218 nr		1.306	0.1006	pCi/g	0.1318	N	352.3	4	1.364	IDENTIFIED	6.274	☐	
Potassium-40 ✓		29.66	1.288	pCi/g	0.7954	1.00	1461	1	1.944	IDENTIFIED	3.083	☐	
Pb214 Radium-224 INT		4.187	0.6591	pCi/g	1.098	Y	242.1	1	1.832	IDENTIFIED	15.24	☑ UI	
Radium-226 ✓		1.15	0.1031	pCi/g	0.1396	Y	609.7	4	1.582	IDENTIFIED	7.649	☐	
Radium-228 ✓		1.857	0.1877	pCi/g	0.271	0.500	912	3	1.624	IDENTIFIED	8.673	☐	
Sodium-24	HE	6.35E+05	3.82E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1475	0.02654	pCi/g	0.09224	Y	239	7	1.183	NOT_IDENTI	3.352	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5137	0.04933	pCi/g	0.07254	0.080	583.6	1	1.385	IDENTIFIED	8.666	☐	
Thorium-228 ✓		1.703	0.09611	pCi/g	0.09645	N	239	7	1.183	IDENTIFIED	3.352	☐	
Thorium-230 ✓		1.15	0.1031	pCi/g	0.1396	N	609.7	4	1.582	IDENTIFIED	7.649	☐	
Thorium-232 ✓		1.857	0.1877	pCi/g	0.271	N	912	3	1.624	IDENTIFIED	8.673	☐	
Tin-126 INT		0.3429	0.04507	pCi/g	0.1251	N	87.4	4	1.321	IDENTIFIED	12.53	☐	
Titanium-44 LA		0.3786	0.02439	pCi/g	0.06775	N	77.43	1	1.008	FAIL_ABUND	4.851	☐	
Total Uranium		1.7923	1.61E-06	ug/g	1.5784	N		0				☐	
Uranium-234 ✓		1.15	0.1031	pCi/g	0.1396	N	609.7	4	1.582	IDENTIFIED	7.649	☐	
Zirconium-97	HE	1.39E+06	9.16E+05	pCi/g	0	N	239	7	1.183	NOT_IDENTI	3.352	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232754001	30-JUN-09 12:00	14-JUL-09 10:44	13.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.698	0.1715	pCi/g	0.2371	N	911.8	3	1.678	IDENTIFIED	8.176	☐	
Americium-243 INT		0.5143	0.04818	pCi/g	0.09721	N	74.93	1	1.524	IDENTIFIED	8.542	☐	
Annihilation Rad.	HE	0.08906	0.03096	pCi/g	0.04642	N	511.2	2	1.375	IDENTIFIED	34.64	☐	
Pb214 Bismuth-211 INT		4.134	0.2492	pCi/g	0.3081	Y	352.1	4	1.151	IDENTIFIED	5.167	☑ UI	
Bismuth-212	HE	0.8962	0.2433	pCi/g	0.6497	N	728.1	1	1.57	FAIL_ABUND	26.8	☐	
Bismuth-214 ✓		1.15	0.08395	pCi/g	0.116	0.200	609.8	4	1.285	IDENTIFIED	6.112	☐	
Pb214 Cadmium-109 INT		3.362	0.5232	pCi/g	1.554	Y	87.42	3	1.114	IDENTIFIED	14.96	☑ UI	
Cerium-143		401.1	62.61	pCi/g	0	N	328.3	1	1.273	NOT_IDENTI	34.06	☐	
Cesium-134 LA		0.1317	0.03326	pCi/g	0.09357	0.100	795.1	1	1.232	FAIL_ABUND	24.92	☑ UI	Data rejected due to low abundance.
Gross Gamma		10.62	1.6	pCi/g	4.298	N		0				☐	
Iodine-133	HE	942.1	1145	pCi/g	0	N	511.2	2	1.375	FAIL_DECAY	34.64	☐	
Krypton-85 LA		23.98	4.207	pCi/g	14.66	N	238.9	7	0.9798	NOT_IDENTI	2.907	☐	
Lead-212 ✓		1.819	0.08313	pCi/g	0.09341	0.100	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Lead-214 ✓		1.438	0.09445	pCi/g	0.1074	0.100	352.1	4	1.151	IDENTIFIED	5.167	☐	
Neptunium-237 INT		0.9719	0.1815	pCi/g	0.4362	N	87.42	3	1.114	IDENTIFIED	14.96	☐	
Polonium-212 nr		1.819	0.08313	pCi/g	0.09341	N	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Polonium-214 nr		1.438	0.09445	pCi/g	0.1074	N	352.1	4	1.151	IDENTIFIED	5.167	☐	
Polonium-216 nr		1.819	0.08313	pCi/g	0.09341	N	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Polonium-218 nr		1.438	0.09445	pCi/g	0.1074	N	352.1	4	1.151	IDENTIFIED	5.167	☐	
Potassium-40 ✓		35.49	1.784	pCi/g	0.5223	1.00	1461	1	2.005	IDENTIFIED	2.751	☐	
Pb214 Radium-224 INT		5.23	0.5408	pCi/g	1.062	Y	241.9	1	1.709	IDENTIFIED	9.975	☑ UI	
Radium-226 ✓		1.15	0.08395	pCi/g	0.116	Y	609.8	4	1.285	IDENTIFIED	6.112	☐	
Radium-228 ✓		1.698	0.1715	pCi/g	0.2371	0.500	911.8	3	1.678	IDENTIFIED	8.176	☐	
Sodium-24	HE	1.14E+05	1.00E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA		0.1215	0.02131	pCi/g	0.07425	Y	238.9	7	0.9798	NOT_IDENTI	2.907	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓		0.5743	0.04144	pCi/g	0.05993	0.080	583.6	1	1.23	IDENTIFIED	6.341	☐	
Thorium-228 ✓		1.819	0.08313	pCi/g	0.0934	N	238.9	7	0.9798	IDENTIFIED	2.907	☐	
Thorium-230 ✓		1.15	0.08395	pCi/g	0.116	N	609.8	4	1.285	IDENTIFIED	6.112	☐	
Thorium-232 ✓		1.698	0.1715	pCi/g	0.2371	N	911.8	3	1.678	IDENTIFIED	8.176	☐	
Tin-126 INT		0.331	0.05152	pCi/g	0.1555	N	87.42	3	1.114	IDENTIFIED	14.96	☐	
Titanium-44 LA		0.4569	0.02942	pCi/g	0.09348	N	77.37	1	1.024	FAIL_ABUND	5.113	☐	
Total Uranium		4.3464	2.86E-06	ug/g	3.5402	N		0				☐	
Uranium-234 ✓		1.15	0.08395	pCi/g	0.116	N	609.8	4	1.285	IDENTIFIED	6.112	☐	
Zirconium-97	HE	4.73E+05	3.01E+05	pCi/g	0	N	238.9	7	0.9798	NOT_IDENTI	2.907	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232754002	30-JUN-09 12:00	14-JUL-09 10:45	13.9	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.753	0.1635	pCi/g	0.1676	N	911.5	3	1.964	IDENTIFIED	6.562	☐	
Americium-243 INT	0.4169	0.04288	pCi/g	0.09238	N	74.91	1	1.147	IDENTIFIED	9.397	☐	
Annihilation Rad. HE	0.0501	0.02514	pCi/g	0.0392	N	511.1	1	1.715	IDENTIFIED	50.08	☐	
Pb214 Bismuth-211 INT	4.048	0.2328	pCi/g	0.2473	Y	352	4	1.415	IDENTIFIED	4.774	☑ ✓ UI	
Bismuth-212 LA	1.187	0.1895	pCi/g	0.5431	N	727.8	1	0.899	FAIL_ABUND	15.17	☐	
Bismuth-214 ✓	1.197	0.08347	pCi/g	0.09223	0.200	609.5	4	1.55	IDENTIFIED	5.359	☐	
Pb214 Cadmium-109 INT	2.323	0.5103	pCi/g	1.328	Y	87.22	4	1.079	IDENTIFIED	21.48	☑ ✓ UI	
Cerium-143	399.5	56.18	pCi/g	0	N	327.9	1	1.072	FAIL_DECAY	43.43	☐	
Cesium-134 LA	0.08569	0.02459	pCi/g	0.07298	0.100	795.4	1	2.414	FAIL_ABUND	28.28	☑ UI	Data rejected due to low abundance.
Gross Gamma	10.23	1.415	pCi/g	2.553	N		0				☐	
Iodine-123	1.26E+06	5.49E+05	pCi/g	0	N	87.22	4	1.079	NOT_IDENTI	21.48	☐	
Krypton-85 LA	24.85	3.531	pCi/g	12.33	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	
Lead-212 ✓	1.713	0.07789	pCi/g	0.07976	0.100	238.7	9	1.228	IDENTIFIED	2.813	☐	
Lead-214 ✓	1.408	0.08894	pCi/g	0.08618	0.100	352	4	1.415	IDENTIFIED	4.774	☐	
Lutetium-177 LA	3.431	0.5821	pCi/g	1.585	N	209.4	1	1.209	FAIL_ABUND	16.75	☐	
Neptunium-237 INT	0.6717	0.163	pCi/g	0.3195	N	87.22	4	1.079	IDENTIFIED	21.48	☐	
Niobium-95 HE	0.06956	0.01982	pCi/g	0.06466	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	
Niobium-97 HE	10270	11750	pCi/g	0	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	
Polonium-212 NV	1.713	0.07789	pCi/g	0.07976	N	238.7	9	1.228	IDENTIFIED	2.813	☐	
Polonium-214 NV	1.408	0.08894	pCi/g	0.08618	N	352	4	1.415	IDENTIFIED	4.774	☐	
Polonium-216 NV	1.713	0.07789	pCi/g	0.07976	N	238.7	9	1.228	IDENTIFIED	2.813	☐	
Polonium-218 NV	1.408	0.08894	pCi/g	0.08618	N	352	4	1.415	IDENTIFIED	4.774	☐	
Potassium-40 ✓	36.73	1.594	pCi/g	0.4334	1.00	1461	1	2.166	IDENTIFIED	2.108	☐	
Pb214 Radium-224 INT	4.971	0.5853	pCi/g	0.9064	Y	241.7	1	1.767	IDENTIFIED	11.44	☑ ✓ UI	
Radium-226 ✓	1.197	0.08347	pCi/g	0.09223	Y	609.5	4	1.55	IDENTIFIED	5.359	☐	
Radium-228 ✓	1.753	0.1635	pCi/g	0.1676	0.500	911.5	3	1.964	IDENTIFIED	6.562	☐	
Sodium-24 HE	43990	78100	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
Strontium-85 LA	0.1259	0.01788	pCi/g	0.06246	Y	238.7	9	1.228	NOT_IDENTI	2.813	☑ UI	Data rejected due to low abundance.
Thallium-208 ✓	0.5118	0.04171	pCi/g	0.04738	0.080	583.5	1	1.425	IDENTIFIED	7.145	☐	
Thorium-228 ✓	1.713	0.07789	pCi/g	0.07975	N	238.7	9	1.228	IDENTIFIED	2.813	☐	
Thorium-230 ✓	1.196	0.08347	pCi/g	0.09223	N	609.5	4	1.55	IDENTIFIED	5.359	☐	
Thorium-232 ✓	1.753	0.1635	pCi/g	0.1676	N	911.5	3	1.964	IDENTIFIED	6.562	☐	
Tin-126 HE	0.2287	0.05025	pCi/g	0.132	N	87.22	4	1.079	IDENTIFIED	21.48	☐	
Titanium-44 LA	0.3748	0.03096	pCi/g	0.0794	N	77.15	1	1.192	FAIL_ABUND	7.09	☐	
Total Uranium	4.0891	2.19E-06	ug/g	3.8403	N		0				☐	
Uranium-234 ✓	1.196	0.08347	pCi/g	0.09223	N	609.5	4	1.55	IDENTIFIED	5.359	☐	
Zirconium-97	5.27E+05	2.61E+05	pCi/g	0	N	238.7	9	1.228	NOT_IDENTI	2.813	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232754003	30-JUN-09 12:00	14-JUL-09 10:48	14	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.853	0.167	pCi/g	0.1797	N	911.5	3	2.493	IDENTIFIED	6.491	☐	
Americium-243 INT	0.428	0.03882	pCi/g	0.08113	N	74.73	2	1.259	IDENTIFIED	8.195	☐	
Annihilation Rad.	0.1014	0.02572	pCi/g	0.03647	N	510.9	1	2.083	IDENTIFIED	25.17	☐	
Pb214 Bismuth-211 INT	4.258	0.2255	pCi/g	0.2786	Y	352	4	1.472	IDENTIFIED	4.241	☑ ✓ UI	
Bismuth-212 HE	1.031	0.2502	pCi/g	0.5604	N	727.1	1	1.956	FAIL_ABUND	23.79	☐	
Bismuth-214 ✓	1.407	0.09537	pCi/g	0.09179	0.200	609.3	4	1.841	IDENTIFIED	5.155	☐	
Pb214 Cadmium-109 INT	3.959	0.4801	pCi/g	1.071	Y	87.32	3	1.299	IDENTIFIED	11.29	☑ ✓ UI	
Cerium-143	610.7	77.36	pCi/g	0	N	328.6	1	1.96	FAIL_DECAY	25.69	☐	
Cesium-134 LA	0.09124	0.02929	pCi/g	0.07301	0.100	795.4	2	1.9	FAIL_ABUND	31.78	☑ UI	Data rejected due to low abundance.
Cesium-135 HE	0.3031	0.07474	pCi/g	0.2461	N	795.4	2	1.9	NOT_IDENTI	31.78	☐	
Gross Gamma	11	1.217	pCi/g	2.22	N		0				☐	
Krypton-85 LA	29.87	3.408	pCi/g	12.3	N	238.7	8	1.36	NOT_IDENTI	2.609	☐	
Lead-212 ✓	1.862	0.08182	pCi/g	0.08056	0.100	238.7	8	1.36	IDENTIFIED	2.609	☐	

	Lead-214 ✓	1.481	0.08743	pCi/g	0.0946	0.100	352	4	1.472	IDENTIFIED	4.241	☐	
	Lutetium-177 HE	2.659	0.5889	pCi/g	1.599	N	209.3	1	1.443	FAIL_ABUND	21.98	☐	
	Neptunium-237 INT	1.145	0.1822	pCi/g	0.314	N	87.32	3	1.299	IDENTIFIED	11.29	☐	
	Niobium-95m LA	0.5005	0.06922	pCi/g	0.2246	N	238.7	8	1.36	NOT_IDENTI	2.609	☐	
	Polonium-212 nr	1.862	0.08182	pCi/g	0.08056	N	238.7	8	1.36	IDENTIFIED	2.609	☐	
	Polonium-214 nr	1.481	0.08743	pCi/g	0.0946	N	352	4	1.472	IDENTIFIED	4.241	☐	
	Polonium-216 nr	1.862	0.08182	pCi/g	0.08056	N	238.7	8	1.36	IDENTIFIED	2.609	☐	
	Polonium-218 nr	1.481	0.08743	pCi/g	0.0946	N	352	4	1.472	IDENTIFIED	4.241	☐	
	Potassium-40 ✓	39.45	1.564	pCi/g	0.4274	1.00	1461	1	3.306	IDENTIFIED	1.898	☑ UI ~~Data rejected due to high peak width.~~ OK MS 7/17/09	
Pb214	Radium-224 INT	4.665	0.5732	pCi/g	0.9153	Y	241.7	1	1.823	IDENTIFIED	11.98	☑ UI	
	Radium-226 ✓	1.407	0.09537	pCi/g	0.09179	Y	609.3	4	1.841	IDENTIFIED	5.155	☐	
	Radium-228 ✓	1.853	0.167	pCi/g	0.1797	0.500	911.5	3	2.493	IDENTIFIED	6.491	☐	
	Sodium-24 HE	7404	91140	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Strontium-85 LA	0.1513	0.01726	pCi/g	0.06229	Y	238.7	8	1.36	NOT_IDENTI	2.609	☑ UI	Data rejected due to low abundance.
	Thallium-200 HE	137.5	90.34	pCi/g	0	N	74.73	2	1.259	NOT_IDENTI	8.195	☐	
	Thallium-208 ✓	0.5768	0.03862	pCi/g	0.0471	0.080	583.1	1	1.858	IDENTIFIED	5.479	☐	
	Thorium-228 ✓	1.862	0.08182	pCi/g	0.08055	N	238.7	8	1.36	IDENTIFIED	2.609	☐	
	Thorium-230 ✓	1.407	0.09536	pCi/g	0.09179	N	609.3	4	1.841	IDENTIFIED	5.155	☐	
	Thorium-232 ✓	1.853	0.167	pCi/g	0.1797	N	911.5	3	2.493	IDENTIFIED	6.491	☐	
	Thorium-234 ✓	2.228	0.8423	pCi/g	1.833	2.00	62.92	2	1.265	IDENTIFIED	36.79	☐	
	Tin-126 INT	0.3898	0.04727	pCi/g	0.1059	N	87.32	3	1.299	IDENTIFIED	11.29	☐	
	Titanium-44 LA	0.4175	0.0278	pCi/g	0.0752	N	77.06	1	1.133	FAIL_ABUND	5.342	☐	
	Total Uranium	6.6453	2.51E-06	ug/g	2.7298	N		0				☐	
	Uranium-234 ✓	1.407	0.09536	pCi/g	0.09179	N	609.3	4	1.841	IDENTIFIED	5.155	☐	
	Uranium-238 HE	2.228	0.8423	pCi/g	1.833	N	62.92	2	1.265	IDENTIFIED	36.79	☐	
	Zirconium-97	1.80E+06	2.71E+05	pCi/g	0	N	238.7	8	1.36	NOT_IDENTI	2.609	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758002	30-JUN-09 12:00	14-JUL-09 11:02	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

	Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
	Actinium-228 ✓	1.884	0.2003	pCi/g	0.2489	N	911.1	3	1.556	IDENTIFIED	8.874	☐	
	Americium-243 INT	0.3821	0.04885	pCi/g	0.09958	N	74.72	2	1.085	IDENTIFIED	11.7	☐	
	Annihilation Rad.	0.1574	0.04343	pCi/g	0.05113	N	511.1	1	2.157	IDENTIFIED	27.41	☐	
Pb214	Bismuth-211 INT	4.232	0.2917	pCi/g	0.4026	Y	352	4	1.171	IDENTIFIED	5.587	☑ UI	
	Bismuth-212 HE	0.8514	0.2519	pCi/g	0.7138	N	727.2	1	1.55	FAIL_ABUND	29.26	☐	
	Bismuth-214 ✓	1.307	0.1014	pCi/g	0.1196	0.200	609.3	4	1.377	IDENTIFIED	6.548	☐	
Pb214	Cadmium-109 INT	4.2	0.6624	pCi/g	1.262	Y	87.14	3	1.256	IDENTIFIED	14.64	☑ UI	
	Cerium-143	294.4	60.39	pCi/g	0	N	327.8	1	0.9544	FAIL_DECAY	34.87	☐	
	Cesium-135 mp	0.6762	0.1378	pCi/g	0.268	N	269.7	2	1.239	IDENTIFIED	19.7	☐	
	Gross Gamma	9.479	1.897	pCi/g	3.638	N		0				☐	
	Iodine-135 HE	1.28E+14	1.78E+14	pCi/g	0	N	269.7	2	1.239	NOT_IDENTI	19.7	☐	
	Lead-212 ✓	1.665	0.1003	pCi/g	0.09985	0.100	238.7	7	1.086	IDENTIFIED	3.727	☐	
	Lead-214 ✓	1.472	0.1085	pCi/g	0.1345	0.100	352	4	1.171	IDENTIFIED	5.587	☐	
	Lutetium-177 HE	2.467	0.7176	pCi/g	2.039	N	209.1	1	1.078	FAIL_ABUND	28.84	☐	
	Neptunium-237 INT	1.214	0.2289	pCi/g	0.3723	N	87.14	3	1.256	IDENTIFIED	14.64	☐	
	Niobium-97 HE	28530	16890	pCi/g	0	N	238.7	7	1.086	NOT_IDENTI	3.727	☐	
	Polonium-212 nr	1.665	0.1003	pCi/g	0.09985	N	238.7	7	1.086	IDENTIFIED	3.727	☐	
	Polonium-214 nr	1.472	0.1085	pCi/g	0.1345	N	352	4	1.171	IDENTIFIED	5.587	☐	
	Polonium-216 nr	1.665	0.1003	pCi/g	0.09985	N	238.7	7	1.086	IDENTIFIED	3.727	☐	
	Polonium-218 nr	1.472	0.1085	pCi/g	0.1345	N	352	4	1.171	IDENTIFIED	5.587	☐	
	Potassium-40 ✓	26.33	1.334	pCi/g	0.5086	1.00	1461	1	2.501	IDENTIFIED	3.457	☐	
Pb214	Radium-224 INT	5.532	0.5747	pCi/g	1.137	Y	241.7	1	1.705	IDENTIFIED	9.5	☑ UI	
	Radium-226 ✓	1.307	0.1014	pCi/g	0.1196	Y	609.3	4	1.377	IDENTIFIED	6.548	☐	
	Radium-228 ✓	1.884	0.2003	pCi/g	0.2489	0.500	911.1	3	1.556	IDENTIFIED	8.874	☐	
	Rhenium-188 HE	0.3443	0.09311	pCi/g	0.3328	N	1121	1	1.542	NOT_IDENTI	18.15	☐	
	Technetium-99m HE	1.37E+15	8.21E+14	pCi/g	0	N	238.7	7	1.086	NOT_IDENTI	3.727	☐	
	Thallium-200 HE	81.03	124.3	pCi/g	0	N	74.72	2	1.085	NOT_IDENTI	11.7	☐	
	Thallium-208 ✓	0.5591	0.04784	pCi/g	0.06229	0.080	583.3	1	1.485	IDENTIFIED	7.729	☐	

Thorium-228 ✓		1.665	0.1003	pCi/g	0.09984	N	238.7	7	1.086	IDENTIFIED	3.727	☐
Thorium-230 ✓		1.307	0.1014	pCi/g	0.1196	N	609.3	4	1.377	IDENTIFIED	6.548	☐
Thorium-232 ✓		1.884	0.2003	pCi/g	0.2489	N	911.1	3	1.556	IDENTIFIED	8.874	☐
Tin-126 INT		0.4136	0.06522	pCi/g	0.125	N	87.14	3	1.256	IDENTIFIED	14.64	☐
Titanium-44 LA		0.4063	0.03334	pCi/g	0.08283	N	77.03	1	0.8932	FAIL_ABUND	6.296	☐
Uranium-234 ✓		1.307	0.1014	pCi/g	0.1196	N	609.3	4	1.377	IDENTIFIED	6.548	☐
Zirconium-97	HE	3.56E+05	3.64E+05	pCi/g	0	N	238.7	7	1.086	NOT_IDENTI	3.727	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758003	30-JUN-09 12:00	14-JUL-09 11:03	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		1.783	0.1863	pCi/g	0.2367	N	911.8	3	1.531	IDENTIFIED	8.887	☐	
Americium-243 INT		0.4427	0.04487	pCi/g	0.09457	N	74.83	2	1.085	IDENTIFIED	9.548	☐	
Annihilation Rad.	HE	0.109	0.04225	pCi/g	0.05264	N	511	1	2.431	IDENTIFIED	38.64	☐	
Pb214 Bismuth-211 INT		3.975	0.2748	pCi/g	0.3582	Y	352.1	4	1.08	IDENTIFIED	6.157	☑ UI	
Bismuth-212	HE	1.167	0.2714	pCi/g	0.7605	N	727.9	1	1.449	FAIL_ABUND	22.84	☐	
Bismuth-214 ✓		1.211	0.1005	pCi/g	0.1289	0.200	609.7	4	1.313	IDENTIFIED	7.203	☐	
Pb214 Cadmium-109 INT		3.988	0.6074	pCi/g	1.377	Y	87.15	4	1.092	IDENTIFIED	14.75	☑ UI	
Cerium-143		239.8	53.35	pCi/g	0	N	327.9	1	1.181	NOT_IDENTI	24.04	☐	
Cesium-134 LA		0.1727	0.0322	pCi/g	0.1079	0.100	795.7	1	2.639	FAIL_ABUND	18.25	☑ UI	Data rejected due to low abundance.
Gross Gamma		11.18	1.675	pCi/g	3.647	N		0				☐	
Iodine-123	HE	6.03E+05	6.93E+05	pCi/g	0	N	87.15	4	1.092	NOT_IDENTI	14.75	☐	
Krypton-85	HE	23.19	4.772	pCi/g	16.23	N	238.8	7	1.085	NOT_IDENTI	3.341	☐	
Lead-212 ✓		1.87	0.09118	pCi/g	0.09439	0.100	238.8	7	1.085	IDENTIFIED	3.341	☐	
Lead-214 ✓		1.383	0.1022	pCi/g	0.1249	0.100	352.1	4	1.08	IDENTIFIED	6.157	☐	
Lutetium-177	HE	2.982	0.8026	pCi/g	1.967	N	209.4	1	1.267	FAIL_ABUND	26.79	☐	
Neptunium-237 INT		1.153	0.2121	pCi/g	0.4631	N	87.15	4	1.092	IDENTIFIED	14.75	☐	
Polonium-212 nr		1.87	0.09118	pCi/g	0.09439	N	238.8	7	1.085	IDENTIFIED	3.341	☐	
Polonium-214 nr		1.383	0.1022	pCi/g	0.1249	N	352.1	4	1.08	IDENTIFIED	6.157	☐	
Polonium-216 nr		1.87	0.09118	pCi/g	0.09439	N	238.8	7	1.085	IDENTIFIED	3.341	☐	
Polonium-218 nr		1.383	0.1022	pCi/g	0.1249	N	352.1	4	1.08	IDENTIFIED	6.157	☐	
Potassium-40 ✓		37.45	1.693	pCi/g	0.5243	1.00	1462	1	2.195	IDENTIFIED	2.781	☐	
Pb214 Radium-224 INT		5.068	0.6865	pCi/g	1.074	Y	241.7	1	1.676	IDENTIFIED	13.26	☑ UI	
Radium-226 ✓		1.211	0.1005	pCi/g	0.1289	Y	609.7	4	1.313	IDENTIFIED	7.203	☐	
Radium-228 ✓		1.783	0.1863	pCi/g	0.2367	0.500	911.8	3	1.531	IDENTIFIED	8.887	☐	
Strontium-85 LA		0.1175	0.02417	pCi/g	0.08219	Y	238.8	7	1.085	NOT_IDENTI	3.341	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	178.9	120.1	pCi/g	0	N	74.83	2	1.085	NOT_IDENTI	9.548	☐	
Thallium-208 ✓		0.5342	0.05168	pCi/g	0.06755	0.080	583.5	1	1.387	IDENTIFIED	8.988	☐	
Thorium-228 ✓		1.87	0.09118	pCi/g	0.09438	N	238.8	7	1.085	IDENTIFIED	3.341	☐	
Thorium-230 ✓		1.211	0.1005	pCi/g	0.1289	N	609.7	4	1.313	IDENTIFIED	7.203	☐	
Thorium-232 ✓		1.783	0.1863	pCi/g	0.2367	N	911.8	3	1.531	IDENTIFIED	8.887	☐	
Thorium-234 ✓		3.508	1.161	pCi/g	2.21	2.00	63.27	2	1.481	IDENTIFIED	31.99	☐	
Tin-126 INT		0.3926	0.0598	pCi/g	0.1529	N	87.15	4	1.092	IDENTIFIED	14.75	☐	
Titanium-44 LA		0.5098	0.03273	pCi/g	0.08984	N	77.15	1	1.014	FAIL_ABUND	5.406	☐	
Total Uranium		10.461	3.45E-06	ug/g	3.2909	N		0				☐	
Uranium-234 ✓		1.211	0.1005	pCi/g	0.1289	N	609.7	4	1.313	IDENTIFIED	7.203	☐	
Uranium-238	HE	3.508	1.161	pCi/g	2.21	N	63.27	2	1.481	IDENTIFIED	31.99	☐	
Zirconium-97	HE	3.48E+05	3.62E+05	pCi/g	0	N	238.8	7	1.085	NOT_IDENTI	3.341	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758004	30-JUN-09 12:00	14-JUL-09 11:04	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓		2.014	0.2049	pCi/g	0.2212	N	911.5	3	1.776	IDENTIFIED	8.323	☐	
Americium-243 INT		0.4223	0.04971	pCi/g	0.1037	N	74.84	2	1.121	IDENTIFIED	11.16	☐	
Annihilation Rad.	HE	0.1079	0.03689	pCi/g	0.04887	N	511	1	1.626	IDENTIFIED	34.06	☐	
Pb214 Bismuth-211 INT		3.957	0.306	pCi/g	0.3567	Y	352.1	4	1.409	IDENTIFIED	7.051	☑ UI	
Bismuth-212	HE	0.9668	0.2764	pCi/g	0.702	N	727.5	1	1.051	FAIL_ABUND	28.25	☐	

Bismuth-214 ✓	1.277	0.1094	pCi/g	0.109	0.200	609.4	4	1.478	IDENTIFIED	7.534	☐	
Pb214 Cadmium-109 INT	3.596	0.6302	pCi/g	1.361	Y	87.11	3	1.082	IDENTIFIED	17.04	☑ UI	
Cerium-143	195.5	49.15	pCi/g	0	N	327.7	1	1.748	FAIL_DECAY	36.49	☐	
Cesium-134 LA	0.2453	0.04267	pCi/g	0.1125	0.100	796	1	3.84	FAIL_ABUND	16.92	☑ UI	Data rejected due to low abundance.
Gross Gamma	10.9	1.648	pCi/g	3.207	N		0				☐	
Lead-212 ✓	2.058	0.0995	pCi/g	0.09847	0.100	238.7	5	1.181	IDENTIFIED	3.223	☐	
Lead-214 ✓	1.376	0.1123	pCi/g	0.1244	0.100	352.1	4	1.409	IDENTIFIED	7.051	☐	
Lutetium-177 HE	3.195	0.8855	pCi/g	1.896	N	209	1	1.425	FAIL_ABUND	27.58	☐	
Mercury-203 nvp	0.1223	0.03928	pCi/g	0.06338	0.100	277.9	1	1.347	IDENTIFIED	31.97	☑ UI	
Neptunium-237 INT	1.04	0.2114	pCi/g	0.4309	N	87.11	3	1.082	IDENTIFIED	17.04	☐	
Polonium-212 nr	2.058	0.0995	pCi/g	0.09847	N	238.7	5	1.181	IDENTIFIED	3.223	☐	
Polonium-214 nr	1.376	0.1123	pCi/g	0.1244	N	352.1	4	1.409	IDENTIFIED	7.051	☐	
Polonium-216 nr	2.058	0.0995	pCi/g	0.09847	N	238.7	5	1.181	IDENTIFIED	3.223	☐	
Polonium-218 nr	1.376	0.1123	pCi/g	0.1244	N	352.1	4	1.409	IDENTIFIED	7.051	☐	
Potassium-40 ✓	33.26	1.614	pCi/g	0.6447	1.00	1461	1	2.122	IDENTIFIED	3.076	☐	
Pb214 Radium-224 INT	4.827	0.7403	pCi/g	1.121	Y	241.8	1	1.734	IDENTIFIED	15.08	☑ UI	
Radium-226 ✓	1.277	0.1094	pCi/g	0.109	Y	609.4	4	1.478	IDENTIFIED	7.534	☐	
Radium-228 ✓	2.014	0.2049	pCi/g	0.2212	0.500	911.5	3	1.776	IDENTIFIED	8.323	☐	
Thallium-200 HE	5.886	109.7	pCi/g	0	N	74.84	2	1.121	NOT_IDENTI	11.16	☐	
Thallium-208 ✓	0.6306	0.05175	pCi/g	0.06456	0.080	583.4	1	1.188	IDENTIFIED	7.404	☐	
Thorium-228 ✓	2.058	0.0995	pCi/g	0.09846	N	238.7	5	1.181	IDENTIFIED	3.223	☐	
Thorium-230 ✓	1.277	0.1094	pCi/g	0.109	N	609.4	4	1.478	IDENTIFIED	7.534	☐	
Thorium-232 ✓	2.014	0.2049	pCi/g	0.2212	N	911.5	3	1.776	IDENTIFIED	8.323	☐	
Tin-126 INT	0.354	0.06205	pCi/g	0.1348	N	87.11	3	1.082	IDENTIFIED	17.04	☐	
Titanium-44 LA	0.5158	0.03614	pCi/g	0.08868	N	77.11	1	1.064	FAIL_ABUND	5.896	☐	
Uranium-234 ✓	1.277	0.1094	pCi/g	0.109	N	609.4	4	1.478	IDENTIFIED	7.534	☐	
Zirconium-97 HE	3.89E+05	3.20E+05	pCi/g	0	N	238.7	5	1.181	NOT_IDENTI	3.223	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
232758005	30-JUN-09 12:00	14-JUL-09 11:05	14	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228 ✓	1.682	0.1688	pCi/g	0.1977	N	911.3	3	1.834	IDENTIFIED	7.935	☐	
Americium-243 INT	0.342	0.03296	pCi/g	0.07883	N	74.91	1	0.928	IDENTIFIED	8.935	☐	
Annihilation Rad.	0.1348	0.03086	pCi/g	0.04177	N	510.8	1	1.978	IDENTIFIED	22.56	☐	
Pb214 Bismuth-211 INT	4.37	0.3076	pCi/g	0.276	Y	351.9	4	1.171	IDENTIFIED	5.14	☑ UI	
Bismuth-212 ✓	1.047	0.2052	pCi/g	0.4355	N	727.3	1	1.745	IDENTIFIED	18.93	☐	
Bismuth-214 ✓	1.288	0.09591	pCi/g	0.1078	0.200	609.4	4	1.523	IDENTIFIED	5.65	☐	
Pb214 Cadmium-109 INT	2.624	0.4885	pCi/g	1.159	Y	87.19	3	1.131	IDENTIFIED	18.17	☑ UI	
Cerium-143	421.5	65.89	pCi/g	0	N	327.8	1	1.488	FAIL_DECAY	51.49	☐	
Cesium-135 nvp	0.4749	0.1281	pCi/g	0.2171	N	269.7	2	1.568	IDENTIFIED	26.24	☐	
Gross Gamma	9.19	1.433	pCi/g	3.542	N		0				☐	
Iodine-135 HE	2.22E+14	1.38E+14	pCi/g	0	N	269.7	2	1.568	NOT_IDENTI	26.24	☐	
Lead-212 ✓	1.723	0.1047	pCi/g	0.08207	0.100	238.6	5	1.151	IDENTIFIED	3.148	☐	
Lead-214 ✓	1.52	0.1141	pCi/g	0.09622	0.100	351.9	4	1.171	IDENTIFIED	5.14	☐	
Lutetium-177 HE	2.372	0.6309	pCi/g	1.74	N	209.2	1	1.041	FAIL_ABUND	26.32	☐	
Neptunium-237 INT	0.7588	0.1615	pCi/g	0.3388	N	87.19	3	1.131	IDENTIFIED	18.17	☐	
Polonium-212 nr	1.723	0.1047	pCi/g	0.08207	N	238.6	5	1.151	IDENTIFIED	3.148	☐	
Polonium-214 nr	1.52	0.1141	pCi/g	0.09622	N	351.9	4	1.171	IDENTIFIED	5.14	☐	
Polonium-216 nr	1.723	0.1047	pCi/g	0.08207	N	238.6	5	1.151	IDENTIFIED	3.148	☐	
Polonium-218 nr	1.52	0.1141	pCi/g	0.09622	N	351.9	4	1.171	IDENTIFIED	5.14	☐	
Potassium-40 ✓	25.21	1.122	pCi/g	0.471	1.00	1461	1	2.006	IDENTIFIED	3.084	☐	
Pb214 Radium-224 INT	4.989	0.6877	pCi/g	0.9335	Y	241.5	1	1.836	IDENTIFIED	12.93	☑ UI	
Radium-226 ✓	1.288	0.09591	pCi/g	0.1078	Y	609.4	4	1.523	IDENTIFIED	5.65	☐	
Radium-228 ✓	1.682	0.1688	pCi/g	0.1977	0.500	911.3	3	1.834	IDENTIFIED	7.935	☐	
Thallium-208 ✓	0.5121	0.04695	pCi/g	0.05229	0.080	583.2	1	1.235	IDENTIFIED	8.053	☐	
Thorium-228 ✓	1.723	0.1047	pCi/g	0.08206	N	238.6	5	1.151	IDENTIFIED	3.148	☐	
Thorium-230 ✓	1.288	0.09591	pCi/g	0.1078	N	609.4	4	1.523	IDENTIFIED	5.65	☐	
Thorium-232 ✓	1.682	0.1688	pCi/g	0.1977	N	911.3	3	1.834	IDENTIFIED	7.935	☐	

Thorium-234 ✓		2.375	0.7794	pCi/g	1.682	2.00	63.21	2	1.171	IDENTIFIED	31.67	☐
Tin-126 INT		0.2584	0.0481	pCi/g	0.1145	N	87.19	3	1.131	IDENTIFIED	18.17	☐
Titanium-44 LA		0.377	0.02598	pCi/g	0.07497	N	77.14	1	1.019	FAIL_ABUND	5.829	☐
Total Uranium		7.0923	2.32E-06	ug/g	2.5043	N		0				☐
Uranium-234 ✓		1.288	0.09591	pCi/g	0.1078	N	609.4	4	1.523	IDENTIFIED	5.65	☐
Uranium-238	HE	2.375	0.7794	pCi/g	1.682	N	63.21	2	1.171	IDENTIFIED	31.67	☐
Zirconium-97	HE	5.39E+05	2.93E+05	pCi/g	0	N	238.6	5	1.151	NOT_IDENTI	3.148	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201874832		14-JUL-09 11:22	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Iodine-123	HE	108.5	78.03	pCi/g	0	N	1076	2	0.576	NOT_IDENTI	71.2	☐	
Niobium-97	HE	8.596	14.24	pCi/g	0	N	1076	2	0.576	NOT_IDENTI	71.2	☐	
Sodium-24	HE	23.35	53.92	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201874833	30-JUN-09 12:00	14-JUL-09 11:23	14	DUP	LOAD	1		LANL01004GEL	N	RGSP

	Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
	Actinium-228 ✓		1.926	0.2272	pCi/g	0.2851	N	911.5	3	1.893	IDENTIFIED	10.04	☐	
	Americium-243 INT		0.3905	0.03003	pCi/g	0.06405	N	74.71	2	1.204	IDENTIFIED	6.618	☐	
	Annihilation Rad.	HE	0.09893	0.0381	pCi/g	0.05919	N	510.7	2	1.823	IDENTIFIED	38.38	☐	
	Bismuth-210	HE	1.139	0.5032	pCi/g	0.9172	N	46.69	3	1.169	IDENTIFIED	44.02	☐	
pb214	Bismuth-211 INT		4.096	0.2787	pCi/g	0.3667	Y	352	4	1.554	IDENTIFIED	5.543	☑ U1	
	Bismuth-212	HE	1.405	0.3011	pCi/g	0.8102	N	727.4	1	1.525	FAIL_ABUND	20.95	☐	
	Bismuth-214 ✓		1.283	0.1044	pCi/g	0.1374	0.200	609.4	4	1.547	IDENTIFIED	6.972	☐	
pb214	Cadmium-109 INT		3.731	0.441	pCi/g	1.055	Y	87.23	3	1.33	IDENTIFIED	11.19	☑ U1	
	Cerium-143		445.4	72.21	pCi/g	0	N	328.4	1	1.865	FAIL_DECAY	45.63	☐	
	Gross Gamma		10.19	1.464	pCi/g	4.075	N		0				☐	
	Iodine-133	HE	345.5	1288	pCi/g	0	N	510.7	2	1.823	FAIL_DECAY	38.38	☐	
	Lead-210	HE	1.139	0.5032	pCi/g	0.9172	N	46.69	3	1.169	IDENTIFIED	44.02	☐	
	Lead-212 ✓		1.864	0.1171	pCi/g	0.1012	0.100	238.6	7	1.35	IDENTIFIED	3.226	☐	
	Lead-214 ✓		1.425	0.1038	pCi/g	0.1233	0.100	352	4	1.554	IDENTIFIED	5.543	☐	
	Lutetium-177 LA		3.447	0.6811	pCi/g	2.006	N	209	1	1.025	FAIL_ABUND	19.12	☐	
	Neptunium-237 INT		1.079	0.1693	pCi/g	0.3037	N	87.23	3	1.33	IDENTIFIED	11.19	☐	
	Niobium-95m	HE	0.3735	0.08482	pCi/g	0.2683	N	238.6	7	1.35	NOT_IDENTI	3.226	☐	
	Niobium-97	HE	25570	19640	pCi/g	0	N	238.6	7	1.35	NOT_IDENTI	3.226	☐	
	Polonium-210	HE	1.139	0.5027	pCi/g	0.9172	N	46.69	3	1.169	IDENTIFIED	44.02	☐	
	Polonium-212 nr		1.864	0.1171	pCi/g	0.1012	N	238.6	7	1.35	IDENTIFIED	3.226	☐	
	Polonium-214 nr		1.425	0.1038	pCi/g	0.1233	N	352	4	1.554	IDENTIFIED	5.543	☐	
	Polonium-216 nr		1.864	0.1171	pCi/g	0.1012	N	238.6	7	1.35	IDENTIFIED	3.226	☐	
	Polonium-218 nr		1.425	0.1038	pCi/g	0.1233	N	352	4	1.554	IDENTIFIED	5.543	☐	
	Potassium-40 ✓		33.55	1.479	pCi/g	0.785	1.00	1461	1	2.046	IDENTIFIED	3.124	☐	
pb214	Radium-224 INT		4.724	0.5671	pCi/g	1.151	Y	241.7	1	1.773	IDENTIFIED	10.97	☑ U1	
	Radium-226 ✓		1.283	0.1044	pCi/g	0.1374	Y	609.4	4	1.547	IDENTIFIED	6.972	☐	
	Radium-228 ✓		1.926	0.2272	pCi/g	0.2851	0.500	911.5	3	1.893	IDENTIFIED	10.04	☐	
	Sodium-24		2.54E+05	1.24E+05	pCi/g	0	N	0	1	0	NOT_IDENTI	0	☐	
	Thallium-200	HE	45.6	112.6	pCi/g	0	N	74.71	2	1.204	NOT_IDENTI	6.618	☐	
	Thallium-208 ✓		0.5373	0.0494	pCi/g	0.06903	0.080	583.3	1	1.542	IDENTIFIED	8.426	☐	
	Thorium-228 ✓		1.864	0.1171	pCi/g	0.1012	N	238.6	7	1.35	IDENTIFIED	3.226	☐	
	Thorium-230 ✓		1.283	0.1044	pCi/g	0.1374	N	609.4	4	1.547	IDENTIFIED	6.972	☐	
	Thorium-232 ✓		1.926	0.2272	pCi/g	0.2851	N	911.5	3	1.893	IDENTIFIED	10.04	☐	
	Thorium-234 ✓		1.702	0.6136	pCi/g	1.102	2.00	62.92	2	1.407	IDENTIFIED	34.95	☐	
	Tin-126 INT		0.3674	0.04342	pCi/g	0.1037	N	87.23	3	1.33	IDENTIFIED	11.19	☐	
	Titanium-44 LA		0.3745	0.02373	pCi/g	0.0661	N	76.95	1	1.103	FAIL_ABUND	5	☐	
	Total Uranium		5.0744	1.83E-06	ug/g	1.6427	N		0				☐	
	Uranium-234 ✓		1.283	0.1044	pCi/g	0.1374	N	609.4	4	1.547	IDENTIFIED	6.972	☐	
	Uranium-238	HE	1.702	0.6136	pCi/g	1.102	N	62.92	2	1.407	IDENTIFIED	34.95	☐	

Zirconium-97		1.29E+06	3.73E+05	pCi/g	0	N	238.6	7	1.35	NOT_IDENTI	3.226

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1201874834		14-JUL-09 12:33	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	HE	1.119	0.332	pCi/g	0.8422	N	910.9	3	0.8815	FAIL_ABUND	29.21		
Americium-241		13.66	0.7233	pCi/g	0.2687	0.200	59.87	1	1.118	IDENTIFIED	1.511	86%	
Americium-243		0.2676	0.0413	pCi/g	0.1027	N	75.15	1	1.22	IDENTIFIED	14.82		
Annihilation Rad.	HE	0.1742	0.0613	pCi/g	0.1075	N	511.1	1	1.71	IDENTIFIED	35.02		
Barium-137m		5.687	0.2724	pCi/g	0.1388	N	662.1	2	1.623	IDENTIFIED	2.511		
Bismuth-211		2.377	0.3478	pCi/g	0.6746	Y	352.4	4	1.1	IDENTIFIED	14.17		
Bismuth-214		0.9137	0.1717	pCi/g	0.3939	0.200	610.1	4	1.769	FAIL_ABUND	18.2		
Cadmium-109		47.45	2.3	pCi/g	1.93	Y	88.4	2	1.137	IDENTIFIED	2.782		
Cesium-137		6.012	0.2884	pCi/g	0.1467	0.100	662.1	2	1.623	IDENTIFIED	2.511	107%	
Cobalt-57		0.4118	0.05003	pCi/g	0.06721	N	122.4	1	1.207	IDENTIFIED	10.38		
Cobalt-60		6.848	0.2639	pCi/g	0.09409	0.100	1333	1	1.999	IDENTIFIED	2.6	99%	
Gross Gamma		29.1	3.529	pCi/g	5.954	N		0					
Lead-212		0.8114	0.1211	pCi/g	0.1851	0.100	238.8	4	1.05	IDENTIFIED	14.21		
Lead-214		0.8268	0.1229	pCi/g	0.2563	0.100	352.4	4	1.1	IDENTIFIED	14.17		
Neptunium-237		1.973	0.3021	pCi/g	0.785	N	93.07	1	1.113	NOT_IDENTI	98.72		
Niobium-97	HE	117.9	75.78	pCi/g	0	N	295.8	3	1.674	NOT_IDENTI	19.01		
Polonium-212		0.8114	0.1211	pCi/g	0.1851	N	238.8	4	1.05	IDENTIFIED	14.21		
Polonium-214		0.8268	0.1229	pCi/g	0.2563	N	352.4	4	1.1	IDENTIFIED	14.17		
Polonium-216		0.8114	0.1211	pCi/g	0.1851	N	238.8	4	1.05	IDENTIFIED	14.21		
Polonium-218		0.8268	0.1229	pCi/g	0.2563	N	352.4	4	1.1	IDENTIFIED	14.17		
Radium-226		0.9137	0.1717	pCi/g	0.3939	Y	610.1	4	1.769	FAIL_ABUND	18.2		
Radium-228		1.119	0.332	pCi/g	0.8422	0.500	910.9	3	0.8815	FAIL_ABUND	29.21		
Technetium-99m	HE	5.78E+06	2.16E+07	pCi/g	0	N	295.8	3	1.674	NOT_IDENTI	19.01		
Thallium-208		0.2333	0.06125	pCi/g	0.1443	0.080	583.5	1	1.363	IDENTIFIED	25.92		
Thorium-228		0.8114	0.1211	pCi/g	0.1851	N	238.8	4	1.05	IDENTIFIED	14.21		
Thorium-230		0.9137	0.1717	pCi/g	0.3939	N	610.1	4	1.769	FAIL_ABUND	18.2		
Thorium-232	HE	1.119	0.332	pCi/g	0.8422	N	910.9	3	0.8815	FAIL_ABUND	29.21		
Tin-126		4.718	0.2286	pCi/g	0.1917	N	88.4	2	1.137	IDENTIFIED	2.782		
Titanium-44		0.3032	0.03135	pCi/g	0.08929	N	77.34	1	1.228	FAIL_ABUND	9.428		
Uranium-234		0.9137	0.1717	pCi/g	0.3939	N	610.1	4	1.769	FAIL_ABUND	18.2		
Zirconium-97	HE	1020	1163	pCi/g	0	N	295.8	3	1.674	NOT_IDENTI	19.01		

*** = Number of isotopes identified with a keyline at this energy.

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232664001-1 14-JUL-2009 08:26	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.501			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.631			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.566			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1631			
232664002-1 14-JUL-2009 08:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.564			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.467			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08514		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.041			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.144			
232664003-1 14-JUL-2009 08:37	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.361			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1559		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.145			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1712			
232664004-1 14-JUL-2009 08:38	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.545			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.354			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1942		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.913			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1357			
232664005-1 14-JUL-2009 08:57	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.444			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.201			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232664005-1 14-JUL-2009 08:57	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1109		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.194			
232746001-1 14-JUL-2009 08:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.281			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.643			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1055		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.137			
232746002-1 14-JUL-2009 08:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.401			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.1			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.973			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.06761			
232746003-1 14-JUL-2009 08:59	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.782			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.353			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.501			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1033			
232746004-1 14-JUL-2009 09:13	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.115			
	Bismuth-214	UI	UI	UI	Data rejected due to low abundance.		1.323		.2	.2
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.766			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.16		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.703			
	Radium-226	UI	UI	UI	Data rejected due to low abundance.		1.323			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232746004-1 14-JUL-2009 09:13	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.126			
232746005-1 14-JUL-2009 09:16	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.555			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.703			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1432		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.289			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1344			
232746006-1 14-JUL-2009 10:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.832			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.285			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1187		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.691			
232746007-1 14-JUL-2009 10:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.567			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.563			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.245			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1072			
232746008-1 14-JUL-2009 10:28	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.754			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.487			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1049		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.187			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1475			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232754001-1 14-JUL-2009 10:44	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.134			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.362			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1317		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.23			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1215			
232754002-1 14-JUL-2009 10:45	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.048			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.323			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08569		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.971			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1259			
232754003-1 14-JUL-2009 10:48	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.258			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.959			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09124		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.665			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1513			
232758002-1 14-JUL-2009 11:02	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.232			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.2			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.532			
232758003-1 14-JUL-2009 11:03	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.975			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.988			

GEL QUALS

Batch ID: 882713

Report run on: July 17, 2009 1:05 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
232758003-1 14-JUL-2009 11:03	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1727		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.068			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1175			
232758004-1 14-JUL-2009 11:04	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.957			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.596			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.2453		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to no valid peak.		.1223		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.827			
232758005-1 14-JUL-2009 11:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.37			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.624			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.989			
1201874833-1 DUP 14-JUL-2009 11:23	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.096			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.731			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.724			

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertanty	Units	DL	RDL
882713	232758004	SAMPLE	14-JUL-09	Thallium-200	5.886	109.7	pCi/g	0	N
				Thallium-208	0.6306	0.05175	pCi/g	0.0323	0.080
				Zirconium-97	3.89E+05	3.20E+05	pCi/g	0	N
882713	232758005	SAMPLE	14-JUL-09	Bismuth-211	4.37	0.3076	pCi/g	0.1381	Y
				Bismuth-214	1.288	0.09591	pCi/g	0.05393	0.200
				Cadmium-109	2.624	0.4885	pCi/g	0.5799	Y
				Cerium-143	421.5	65.89	pCi/g	0	N
				Cesium-134	0.08474	0.02718	pCi/g	0.04534	0.100
				Cesium-137	0.05751	0.0187	pCi/g	0.03473	0.100
				Gross Gamma	9.19	1.433	pCi/g	1.718	N
				Iodine-135	2.22E+14	1.38E+14	pCi/g	0	N
				Lead-212	1.723	0.1047	pCi/g	0.04106	0.100
				Lead-214	1.52	0.1141	pCi/g	0.04814	0.100
				Potassium-40	25.21	1.122	pCi/g	0.2356	1.00
				Radium-224	4.989	0.6877	pCi/g	0.467	Y
				Radium-226	1.288	0.09591	pCi/g	0.05393	Y
				Radium-228	1.682	0.1688	pCi/g	0.09892	0.500
				Thallium-208	0.5121	0.04695	pCi/g	0.02616	0.080
				Thorium-234	2.375	0.7794	pCi/g	0.8413	2.00
				Zirconium-97	5.39E+05	2.93E+05	pCi/g	0	N
882713	1201874832	MB	14-JUL-09	Iodine-123	108.5	78.03	pCi/g	0	N
				Niobium-97	8.596	14.24	pCi/g	0	N
				Radium-224	0.2972	0.1533	pCi/g	0.2897	Y
				Sodium-24	23.35	53.92	pCi/g	0	N
882713	1201874833	DUP	14-JUL-09	Bismuth-211	4.096	0.2787	pCi/g	0.1835	Y
				Bismuth-214	1.283	0.1044	pCi/g	0.06876	0.200
				Cadmium-109	3.731	0.441	pCi/g	0.5278	Y
				Cerium-143	445.4	72.21	pCi/g	0	N
				Cesium-134	0.07826	0.03305	pCi/g	0.05489	0.100
				Gross Gamma	10.19	1.464	pCi/g	1.988	N
				Iodine-133	345.5	1288	pCi/g	0	N
				Krypton-85	17.19	5.453	pCi/g	8.781	N
				Lead-212	1.864	0.1171	pCi/g	0.05061	0.100
				Lead-214	1.425	0.1038	pCi/g	0.06171	0.100
				Mercury-203	0.04331	0.02248	pCi/g	0.04052	0.100
				Niobium-97	25570	19640	pCi/g	0	N
				Potassium-40	33.55	1.479	pCi/g	0.3928	1.00

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:00.92

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:44:32
Sample ID         : G232754001           Sample quantity  : 1.35030E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.21  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.74*	71	598	1.08	127.48	123	9	9.90E-03	64.0	
2	2	74.93*	617	669	1.52	149.87	143	19	8.58E-02	8.5	1.01E+01
3	2	77.37*	856	424	1.02	154.75	143	19	1.19E-01	5.1	
4	0	87.42*	276	505	1.11	174.85	172	7	3.83E-02	15.0	
5	0	90.13	120	413	0.96	180.27	178	6	1.66E-02	28.5	
6	0	93.28*	318	482	1.36	186.57	183	9	4.42E-02	14.5	
7	0	186.18*	238	357	1.02	372.35	368	10	3.31E-02	16.9	
8	0	209.87	124	451	1.13	419.74	414	12	1.72E-02	35.5	
9	5	238.87*	1599	173	0.98	477.73	470	19	2.22E-01	2.9	1.89E+00
10	5	241.88	404	258	1.71	483.77	470	19	5.61E-02	10.0	
11	0	270.47	121	237	1.51	540.94	537	10	1.68E-02	25.5	
12	0	277.65*	36	229	1.19	555.30	552	9	4.98E-03	79.0	
13	0	295.52	446	182	0.99	591.03	587	9	6.19E-02	7.3	
14	0	300.06	113	172	1.18	600.12	596	9	1.56E-02	23.0	
15	0	328.34*	74	162	1.27	656.68	653	9	1.03E-02	34.1	
16	0	338.58	309	228	1.11	677.16	670	13	4.30E-02	11.6	
17	0	352.09*	802	196	1.15	704.18	697	14	1.11E-01	5.2	
18	0	409.75	49	184	0.71	819.50	815	12	6.81E-03	57.0	
19	0	463.54	128	141	0.81	927.08	922	14	1.78E-02	21.5	
20	0	511.17*	100	184	1.37	1022.35	1015	15	1.39E-02	34.6	
21	0	583.61*	488	104	1.23	1167.22	1162	12	6.78E-02	6.3	
22	0	609.76*	518	113	1.29	1219.51	1214	12	7.19E-02	6.1	
23	0	728.07	88	111	1.57	1456.14	1448	13	1.22E-02	26.8	
24	0	768.75	79	78	1.45	1537.50	1531	12	1.10E-02	24.9	
25	0	795.12	77	69	1.23	1590.23	1584	13	1.07E-02	24.9	
26	0	861.70	63	78	1.73	1723.40	1715	13	8.73E-03	31.6	
27	0	911.76*	319	70	1.68	1823.53	1817	16	4.43E-02	8.2	
28	2	965.00	73	52	2.04	1930.00	1925	20	1.02E-02	21.4	1.63E+00
29	2	969.49*	223	50	1.90	1938.97	1925	20	3.10E-02	9.2	
30	0	1121.34*	99	104	2.21	2242.69	2233	16	1.37E-02	25.5	
31	0	1239.37	51	85	1.19	2478.75	2474	12	7.04E-03	38.9	
32	0	1379.31*	35	19	1.40	2758.61	2752	15	4.93E-03	35.4	
33	0	1461.27*	1672	69	2.01	2922.54	2914	20	2.32E-01	2.8	
34	0	1509.98*	25	25	0.59	3019.95	3012	19	3.45E-03	52.6	
35	0	1589.67	29	28	1.50	3179.34	3171	15	4.02E-03	45.0	
36	0	1729.77	23	7	2.63	3459.54	3451	14	3.19E-03	32.1	
37	0	1764.94*	74	8	1.73	3529.87	3524	11	1.02E-02	14.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 12:45:03

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:44:32
Sample ID : G232754001 Sample quantity : 135.03 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.21 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.549E+01	3.568E+00	5.212E-01	4.387E-02	68.092
CD-109	+	88.03	*	3.362E+00	1.046E+00	1.473E+00	1.271E-01	2.282
SN-126	+	64.28		5.882E-01	7.580E-01	8.861E-01	1.283E-01	0.664
	+	86.94		1.376E+00	7.023E-01	6.043E-01	2.498E-01	2.277
	+	87.57	*	3.310E-01	1.030E-01	1.474E-01	1.266E-02	2.245
TL-208	+	277.35		2.966E-01	4.698E-01	5.848E-01	6.103E-02	0.507
	+	510.84		4.123E-01	2.887E-01	2.102E-01	2.143E-02	1.962
	+	583.14	*	5.743E-01	8.289E-02	5.878E-02	4.049E-03	9.770
	+	860.37		7.059E-01	4.511E-01	4.229E-01	4.039E-02	1.669
BI-211		72.87		9.515E+00	3.645E+00	5.758E+00	4.369E-01	1.652
	+	351.07	*	4.134E+00	4.984E-01	2.994E-01	1.859E-02	13.809
PB-212	+	74.81		3.173E+00	6.642E-01	5.652E-01	6.838E-02	5.613
	+	77.11		2.476E+00	3.189E-01	3.196E-01	2.497E-02	7.747
	+	87.30		1.531E+00	5.005E-01	6.802E-01	8.956E-02	2.251
	+	238.63	*	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
	+	300.09		1.962E+00	9.156E-01	1.085E+00	8.798E-02	1.808
PO-212	+	74.81		3.173E+00	6.642E-01	5.652E-01	6.838E-02	5.613
	+	77.11		2.476E+00	3.189E-01	3.196E-01	2.497E-02	7.747
	+	87.30		1.531E+00	5.005E-01	6.802E-01	8.956E-02	2.251
		115.19		3.916E-02	3.780E+00	6.229E+00	3.986E-01	0.006
	+	238.63	*	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
	+	300.09		1.962E+00	9.156E-01	1.085E+00	8.798E-02	1.808
BI-214	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.199E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.486E-01	1.572E-02	4.858
PB-214	+	74.81		5.467E+00	1.101E+00	9.739E-01	1.039E-01	5.613
	+	77.11		4.245E+00	6.351E-01	5.479E-01	5.979E-02	7.747
	+	87.30		2.622E+00	8.410E-01	1.165E+00	1.343E-01	2.251
	+	241.98		2.758E+00	5.911E-01	5.424E-01	4.245E-02	5.085
	+	295.21		1.364E+00	2.288E-01	2.208E-01	1.852E-02	6.178

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-214	+	74.81		5.467E+00	1.101E+00	9.739E-01	1.039E-01	5.613
	+	77.11		4.245E+00	6.351E-01	5.479E-01	5.979E-02	7.747
	+	87.30		2.622E+00	8.410E-01	1.165E+00	1.343E-01	2.251
	+	241.98		2.758E+00	5.911E-01	5.424E-01	4.245E-02	5.085
	+	295.21		1.364E+00	2.288E-01	2.208E-01	1.852E-02	6.178
	+	351.92	*	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-216	+	74.81		3.173E+00	6.642E-01	5.652E-01	6.838E-02	5.613
	+	77.11		2.476E+00	3.189E-01	3.196E-01	2.497E-02	7.747
	+	87.30		1.531E+00	5.005E-01	6.802E-01	8.956E-02	2.251
	+	238.63	*	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
	+	300.09		1.962E+00	9.156E-01	1.085E+00	8.798E-02	1.808
PO-218	+	74.81		5.467E+00	1.101E+00	9.739E-01	1.039E-01	5.613
	+	77.11		4.245E+00	6.351E-01	5.479E-01	5.979E-02	7.747
	+	87.30		2.622E+00	8.410E-01	1.165E+00	1.343E-01	2.251
	+	241.98		2.758E+00	5.911E-01	5.424E-01	4.245E-02	5.085
	+	295.21		1.364E+00	2.288E-01	2.208E-01	1.852E-02	6.178
	+	351.92	*	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
RA-224	+	240.98	*	5.230E+00	1.082E+00	1.025E+00	5.594E-02	5.101
RA-226	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.199E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.486E-01	1.572E-02	4.858
AC-228	+	338.32		1.759E+00	8.238E-01	3.306E-01	1.347E-01	5.321
	+	911.07	*	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
	+	969.11		2.097E+00	6.248E-01	3.219E-01	7.533E-02	6.516
RA-228	+	338.32		1.759E+00	8.238E-01	3.306E-01	1.347E-01	5.321
	+	911.07	*	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
	+	969.11		2.097E+00	6.248E-01	3.219E-01	7.533E-02	6.516
TH-228		84.40		1.620E+00	3.220E+00	4.458E+00	5.772E-01	0.363
	+	238.60	*	1.819E+00	1.663E-01	9.014E-02	6.358E-03	20.176
	+	300.10		1.962E+00	1.466E+00	1.085E+00	6.392E-01	1.808
TH-230	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.198E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.485E-01	1.572E-02	4.858
TH-232	+	338.32		1.759E+00	4.181E-01	3.306E-01	1.844E-02	5.321
	+	911.07	*	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
	+	969.11		2.097E+00	6.248E-01	3.219E-01	7.533E-02	6.516
TH-234	+	63.29	*	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
	+	92.38		2.462E+00	8.376E-01	6.912E-01	1.232E-01	3.561
U-234	+	609.31	*	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
	+	768.36		1.982E+00	1.007E+00	1.272E+00	1.222E-01	1.559

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		2.164E+00	1.194E+00	2.203E+00	2.445E-01	0.982
	+	1120.29		1.173E+00	6.085E-01	4.809E-01	4.477E-02	2.440
	+	1238.11		1.676E+00	1.311E+00	1.368E+00	1.208E-01	1.225
		1377.67		1.005E+00	1.198E+00	1.903E+00	2.010E-01	0.528
	+	1764.49		1.208E+00	3.654E-01	2.485E-01	1.572E-02	4.858
NP-237	+	86.50	*	9.719E-01	3.630E-01	4.135E-01	9.228E-02	2.350
		95.87		-2.170E-01	1.078E+00	1.552E+00	3.776E-01	-0.140
U-238	+	63.29	*	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
	+	92.38		2.462E+00	7.405E-01	6.912E-01	5.574E-02	3.561
AM-243	+	74.67	*	5.143E-01	9.636E-02	9.193E-02	7.057E-03	5.595
	+	86.72		3.645E+01	1.135E+01	1.592E+01	1.355E+00	2.290
		117.66		-2.315E+00	4.018E+00	6.401E+00	4.023E-01	-0.362
		142.18		-7.251E+00	1.775E+01	2.861E+01	1.592E+00	-0.253
ANH-511	+	511.00	*	8.906E-02	6.192E-02	4.542E-02	2.668E-03	1.961

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	9.288E-02	2.806E-01	4.723E-01	3.176E-02	0.197
NA-22		1274.54	*	-4.793E-03	4.537E-02	7.320E-02	5.441E-03	-0.065
NA-24		1368.53	*	1.141E-01	4.537E-02	Half-Life too short		
AL-26		1129.67		1.107E+00	2.007E+00	3.288E+00	2.096E-01	0.337
		1808.65	*	1.860E-02	1.889E-02	3.867E-02	2.309E-03	0.481
TI-44		67.85		-1.010E-02	5.900E-02	8.000E-02	5.918E-03	-0.126
	+	78.38	*	4.569E-01	5.884E-02	8.847E-02	6.980E-03	5.164
SC-46		889.25	*	2.384E-03	3.671E-02	6.149E-02	5.779E-03	0.039
	+	1120.51		1.989E-01	1.023E-01	1.291E-01	8.440E-03	1.541
V-48		944.10		-5.530E-01	8.400E-01	1.314E+00	1.193E-01	-0.421
		983.50	*	-3.724E-02	6.745E-02	1.063E-01	9.165E-03	-0.350
		1312.09		-1.506E-02	7.887E-02	1.257E-01	1.027E-02	-0.120
CR-51		320.08	*	4.986E-02	3.435E-01	5.800E-01	3.645E-02	0.086
MN-52		744.21		1.065E-01	2.070E-01	3.462E-01	2.494E-02	0.308
		848.13		-9.856E-02	5.624E+00	9.383E+00	8.206E-01	-0.011
		935.52		2.209E-01	2.243E-01	3.986E-01	3.656E-02	0.554
		1246.25		7.471E+00	7.324E+00	1.148E+01	7.894E-01	0.651
		1333.61		-1.046E-01	4.744E+00	7.691E+00	6.597E-01	-0.014
		1434.06	*	2.378E-01	1.832E-01	3.467E-01	2.867E-02	0.686
MN-54		834.83	*	-2.570E-02	3.862E-02	6.149E-02	5.251E-03	-0.418
CO-56		846.75	*	-1.565E-02	3.925E-02	6.356E-02	5.545E-03	-0.246
		977.42		-5.496E-01	2.875E+00	4.455E+00	3.875E-01	-0.123
		1037.82		5.647E-02	3.186E-01	5.335E-01	4.474E-02	0.106
		1175.09		-8.730E-01	2.319E+00	3.680E+00	2.051E-01	-0.237
	+	1238.25		1.680E-01	1.312E-01	1.872E-01	1.318E-02	0.898
		1360.21		1.895E-01	9.143E-01	1.523E+00	1.296E-01	0.124
		1771.40		-1.148E+00	3.549E-01	3.170E-01	1.988E-02	-3.620
CO-57		122.06	*	-1.479E-02	2.655E-02	4.249E-02	2.598E-03	-0.348
		136.48		6.007E-02	2.108E-01	3.489E-01	2.314E-02	0.172
CO-58		810.76	*	-7.979E-03	3.718E-02	6.123E-02	5.018E-03	-0.130

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		-1.222E+00	2.699E+00	4.344E+00	2.412E-01	-0.281
		192.34		1.189E-01	9.809E-01	1.476E+00	1.702E-01	0.081
		1099.22	*	2.087E-02	1.022E-01	1.707E-01	1.326E-02	0.122
		1291.56		3.138E-02	1.249E-01	2.082E-01	1.881E-02	0.151
CO-60		1173.22		-4.644E-03	4.881E-02	7.938E-02	4.397E-03	-0.059
		1332.49	*	-2.782E-03	4.155E-02	6.703E-02	5.751E-03	-0.042
ZN-65		1115.52	*	3.442E-02	1.071E-01	1.566E-01	1.040E-02	0.220
GE-68		1077.35	*	-1.327E-01	1.246E+00	2.034E+00	1.480E-01	-0.065
AS-73		53.44	*	3.128E-05	8.870E-01	1.491E+00	1.101E-01	0.000
AS-74		595.88	*	2.807E-02	8.568E-02	1.427E-01	8.630E-03	0.197
		634.78		1.264E-01	3.436E-01	5.721E-01	3.482E-02	0.221
SE-75		66.05		9.294E-01	5.614E+00	8.289E+00	7.802E-01	0.112
		96.73		-1.207E-01	8.584E-01	1.240E+00	1.614E-01	-0.097
		121.11		2.586E-02	1.410E-01	2.317E-01	2.190E-02	0.112
		136.00		1.294E-02	3.935E-02	6.524E-02	3.783E-03	0.198
		198.60		-3.174E-01	1.864E+00	2.936E+00	1.960E-01	-0.108
		264.65	*	-4.835E-03	4.735E-02	6.935E-02	3.885E-03	-0.070
		279.53		9.776E-02	1.208E-01	1.840E-01	1.115E-02	0.531
		303.91		-9.905E-02	2.197E+00	3.206E+00	3.021E-01	-0.031
		400.65		1.997E-01	2.494E-01	4.306E-01	3.824E-02	0.464
BR-77	+	87.88		5.173E+02	1.610E+02	2.538E+02	2.187E+01	2.038
		200.40		3.291E+01	1.173E+02	1.917E+02	1.006E+01	0.172
	+	239.00		2.076E+02	1.654E+01	2.700E+01	1.471E+00	7.691
		249.79		-4.040E+01	4.871E+01	7.486E+01	4.110E+00	-0.540
		281.68		-2.628E+01	7.093E+01	1.018E+02	5.678E+00	-0.258
		297.23		3.555E+02	6.330E+01	9.383E+01	5.253E+00	3.789
		303.76		-8.752E+00	1.339E+02	1.951E+02	1.093E+01	-0.045
		439.47		1.344E+02	9.411E+01	1.684E+02	9.465E+00	0.798
		484.57		-6.950E+01	1.518E+02	2.420E+02	1.402E+01	-0.287
		520.65	*	-2.680E-01	7.201E+00	1.178E+01	6.949E-01	-0.023
		574.64		2.833E+00	1.511E+02	2.468E+02	1.485E+01	0.011
		578.91		-6.413E+01	7.287E+01	9.376E+01	5.649E+00	-0.684
		585.48		1.628E+03	2.221E+02	4.026E+02	2.430E+01	4.045
		755.35		3.102E+01	1.262E+02	2.065E+02	1.520E+01	0.150
		817.79		-3.553E+01	8.837E+01	1.430E+02	1.184E+01	-0.248
SR-82		698.33		-1.490E+01	3.260E+01	5.075E+01	3.336E+00	-0.294
		776.49	*	-3.104E-02	3.825E-01	6.095E-01	4.672E-02	-0.051
		1395.20		1.390E-01	9.869E+00	1.602E+01	1.346E+00	0.009
RB-83		520.41	*	1.743E-03	6.660E-02	1.094E-01	6.454E-03	0.016
		529.64		4.821E-02	1.004E-01	1.697E-01	1.005E-02	0.284
		552.65		-2.352E-02	2.014E-01	3.266E-01	1.952E-02	-0.072
RB-84		881.50	*	2.938E-02	6.280E-02	1.087E-01	1.008E-02	0.270
KR-85		513.99	*	2.398E+01	8.414E+00	1.435E+01	8.439E-01	1.672
SR-85		513.99	*	1.215E-01	4.261E-02	7.266E-02	4.274E-03	1.672
RB-86		1076.63	*	2.569E-01	7.541E-01	1.278E+00	9.315E-02	0.201
Y-88		898.02		5.619E-03	4.038E-02	6.799E-02	6.512E-03	0.083
		1836.01	*	-5.829E-03	2.923E-02	4.638E-02	2.670E-03	-0.126
ZR-88		392.90	*	-1.709E-02	2.993E-02	4.819E-02	2.603E-03	-0.355
Y-91		1204.90	*	7.053E+00	1.942E+01	3.265E+01	1.994E+00	0.216

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	4.245E-03	3.471E-02	5.649E-02	3.746E-03	0.075
		871.10		-7.653E-03	3.109E-02	5.074E-02	4.621E-03	-0.151
NB-95		765.79	*	5.622E-02	5.065E-02	7.757E-02	5.826E-03	0.725
NB-95M		235.69	*	7.605E-02	1.410E-01	2.035E-01	1.475E-02	0.374
ZR-95		724.18		6.694E-02	1.065E-01	1.573E-01	1.232E-02	0.426
		756.15	*	-1.555E-02	7.354E-02	1.162E-01	9.731E-03	-0.134
NB-97		657.90	*	-4.388E-03	7.354E-02	Half-Life too short		
		1024.50		-1.022E+00	7.354E-02	Half-Life too short		
ZR-97		254.15		4.416E-01	7.354E-02	Half-Life too short		
		355.39		1.790E+00	7.354E-02	Half-Life too short		
		507.63	*	4.727E-01	7.354E-02	Half-Life too short		
		602.52		3.698E-01	7.354E-02	Half-Life too short		
		1021.30		-4.839E-01	7.354E-02	Half-Life too short		
		1147.95		-5.369E-01	7.354E-02	Half-Life too short		
		1362.66		-1.712E+00	7.354E-02	Half-Life too short		
		1750.46		-4.716E-01	7.354E-02	Half-Life too short		
MO-99		140.51		-9.321E+00	1.988E+01	3.126E+01	8.411E+00	-0.298
		181.06		6.199E+00	1.447E+01	2.096E+01	3.548E+00	0.296
		366.43		-2.214E+01	5.822E+01	9.498E+01	5.230E+00	-0.233
		739.58	*	-1.213E+00	8.731E+00	1.388E+01	1.998E+00	-0.087
		778.00		-1.378E+01	2.500E+01	4.026E+01	3.095E+00	-0.342
TC-99M		140.51	*	-7.186E+08	2.500E+01	Half-Life too short		
RH-101		127.23		5.751E-03	3.391E-02	5.601E-02	3.328E-03	0.103
		198.01	*	-1.054E-03	3.427E-02	5.429E-02	2.842E-03	-0.019
		325.23		-6.500E-02	2.473E-01	3.542E-01	1.983E-02	-0.184
RH-102		418.52		-4.547E-02	2.732E-01	4.483E-01	2.478E-02	-0.101
		475.06	*	-2.612E-02	2.657E-02	4.073E-02	2.345E-03	-0.641
		631.29		2.053E-02	5.439E-02	9.068E-02	5.517E-03	0.226
		697.49		-2.662E-02	7.531E-02	1.182E-01	7.759E-03	-0.225
		766.84		1.329E-01	1.413E-01	2.119E-01	1.595E-02	0.627
		1046.59		4.941E-02	1.208E-01	2.058E-01	1.596E-02	0.240
		1112.84		2.244E-01	2.649E-01	4.102E-01	2.739E-02	0.547
RU-103		497.08	*	-8.257E-03	3.757E-02	6.081E-02	7.698E-03	-0.136
	+	610.33		1.217E+01	2.404E+00	2.738E+00	4.249E-01	4.444
RH-106	+	511.85		4.439E-01	3.086E-01	4.029E-01	2.368E-02	1.102
		621.84	*	2.002E-02	3.127E-01	5.103E-01	6.061E-02	0.039
		1050.47		1.393E-01	2.514E+00	4.166E+00	3.207E-01	0.033
RU-106	+	511.85		4.439E-01	3.086E-01	4.029E-01	2.368E-02	1.102
		621.84	*	2.002E-02	3.127E-01	5.103E-01	3.101E-02	0.039
		1050.47		1.393E-01	2.514E+00	4.166E+00	3.207E-01	0.033
AG-108M		433.93	*	-2.232E-02	3.182E-02	5.038E-02	3.079E-03	-0.443
		614.37		1.711E-02	4.308E-02	6.286E-02	4.112E-03	0.272
		722.95		-9.103E-04	4.847E-02	6.713E-02	4.917E-03	-0.014
AG-110M		657.75	*	-3.145E-03	3.572E-02	5.746E-02	3.707E-03	-0.055
		677.61		-1.139E-02	3.218E-01	5.189E-01	3.440E-02	-0.022
		706.67		1.012E-01	2.259E-01	3.753E-01	2.623E-02	0.270
		763.93		1.275E-01	1.961E-01	2.893E-01	2.246E-02	0.441
		884.67		2.103E-03	4.545E-02	7.605E-02	7.286E-03	0.028
		937.48		-5.874E-02	1.124E-01	1.786E-01	1.687E-02	-0.329

---- Non-Identified Nuclides ----

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		1384.27		-7.520E-02	1.800E-01	2.290E-01	1.989E-02	-0.328
IN-111		171.28		-2.713E-01	7.934E-01	1.273E+00	6.469E-02	-0.213
		245.39	*	1.996E-01	9.126E-01	1.294E+00	7.084E-02	0.154
IN-113M		391.69	*	-5.894E-03	4.363E-02	7.200E-02	4.185E-03	-0.082
SN-113		391.69	*	-5.894E-03	4.363E-02	7.200E-02	4.185E-03	-0.082
IN-114M		190.27	*	-1.061E-01	2.005E-01	2.750E-01	1.427E-02	-0.386
CD-115		260.90		5.321E+01	9.440E+01	1.549E+02	8.565E+00	0.343
		492.35		-1.764E+01	2.483E+01	3.891E+01	2.263E+00	-0.453
		527.90	*	2.771E+00	7.222E+00	1.214E+01	7.184E-01	0.228
SN-117M		156.02		-1.153E-01	2.215E+00	3.606E+00	1.898E-01	-0.032
		158.56	*	-2.933E-02	5.232E-02	8.345E-02	4.346E-03	-0.351
SB-122		563.90	*	-1.388E-01	1.563E+00	2.537E+00	1.522E-01	-0.055
		692.80		-1.659E+00	3.193E+01	5.135E+01	3.338E+00	-0.032
I-123		159.00	*	-6.777E-01	3.193E+01	Half-Life too short		
		528.96		3.039E+01	3.193E+01	Half-Life too short		
TE-123M		159.00	*	-1.463E-02	2.834E-02	4.527E-02	2.393E-03	-0.323
I-124		602.71	*	1.271E-01	5.850E-01	8.787E-01	5.323E-02	0.145
		722.78		-3.577E-02	4.173E+00	5.786E+00	3.996E-01	-0.006
		1325.50		-1.317E+00	3.123E+01	5.054E+01	4.264E+00	-0.026
		1376.25		3.642E+01	2.899E+01	4.779E+01	4.044E+00	0.762
	+	1509.49		2.017E+01	2.128E+01	2.503E+01	1.989E+00	0.806
		1691.02		2.484E+00	2.627E+00	5.064E+00	3.479E-01	0.491
SB-124		602.71		8.846E-03	4.073E-02	6.117E-02	3.707E-03	0.145
		645.85		2.965E-01	5.180E-01	8.726E-01	5.936E-02	0.340
		709.31		-9.509E-01	3.001E+00	4.730E+00	3.179E-01	-0.201
		713.82		4.342E-01	1.713E+00	2.812E+00	3.036E-01	0.154
		722.78		-3.610E-03	4.211E-01	5.839E-01	4.167E-02	-0.006
	+	968.20		2.130E+01	4.351E+00	7.629E+00	6.719E-01	2.792
		1045.16		1.232E+00	2.496E+00	4.283E+00	3.331E-01	0.288
		1325.50		-1.419E-01	3.365E+00	5.447E+00	4.596E-01	-0.026
		1368.21		5.723E-01	1.715E+00	2.891E+00	3.871E-01	0.198
		1436.60		-8.266E-02	3.478E+00	5.604E+00	4.628E-01	-0.015
		1691.02	*	5.914E-02	6.254E-02	1.205E-01	8.791E-03	0.491
SB-125		427.89	*	-7.543E-02	9.131E-02	1.437E-01	8.374E-03	-0.525
	+	463.38		1.026E+00	4.473E-01	5.567E-01	3.725E-02	1.843
		600.56		-9.259E-02	1.797E-01	2.820E-01	1.954E-02	-0.328
		635.90		-9.537E-04	2.725E-01	4.420E-01	3.111E-02	-0.002
TE-125M		109.28	*	-4.912E+00	9.719E+00	1.575E+01	1.385E+00	-0.312
I-126		388.63		2.482E-01	1.858E-01	3.296E-01	1.784E-02	0.753
		666.33	*	4.560E-02	1.703E-01	2.808E-01	1.728E-02	0.162
		753.82		1.109E-01	1.450E+00	2.344E+00	1.720E-01	0.047
SB-126		223.80		-1.189E+00	3.756E+00	5.960E+00	3.204E-01	-0.199
	+	278.60		1.837E+00	2.905E+00	3.972E+00	2.214E-01	0.462
	+	296.50		1.272E+01	1.981E+00	3.342E+00	1.871E-01	3.806
		414.70		9.702E-03	7.626E-02	1.109E-01	6.110E-03	0.087
		415.30		-9.944E-02	6.421E+00	9.227E+00	5.087E-01	-0.011
		555.20		3.157E+00	3.691E+00	6.367E+00	3.808E-01	0.496
		573.80		2.287E-01	9.826E-01	1.628E+00	9.793E-02	0.141
		593.00		-8.476E-01	8.754E-01	1.324E+00	8.003E-02	-0.640

---- Non-Identified Nuclides ----

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		656.30		-4.609E-01	3.152E+00	5.049E+00	3.077E-01	-0.091
		666.33		1.900E-02	7.096E-02	1.170E-01	7.201E-03	0.162
		675.00		6.925E-01	1.928E+00	3.198E+00	2.004E-01	0.217
		695.00		3.086E-02	7.059E-02	1.177E-01	7.684E-03	0.262
		697.00		-1.068E-01	2.487E-01	3.880E-01	2.544E-02	-0.275
		720.50	*	7.391E-02	1.583E-01	2.307E-01	1.586E-02	0.320
		856.80		5.116E-02	4.464E-01	6.516E-01	5.787E-02	0.079
		989.30		6.747E-01	1.236E+00	2.132E+00	1.822E-01	0.317
		1034.80		2.193E+00	8.900E+00	1.498E+01	1.188E+00	0.146
		1213.00		6.281E-02	4.890E+00	8.002E+00	5.005E-01	0.008
SB-127		61.10		2.782E+01	5.266E+01	7.942E+01	7.757E+00	0.350
		252.40		-1.694E+00	3.604E+00	5.527E+00	2.289E+00	-0.307
		290.80		-7.122E+00	1.955E+01	2.803E+01	2.412E+00	-0.254
		411.60		1.188E+01	1.154E+01	1.770E+01	2.476E+00	0.671
		444.90		-1.037E+00	7.363E+00	1.206E+01	1.248E+00	-0.086
		473.00		-2.847E-01	1.237E+00	2.006E+00	2.168E-01	-0.142
		543.00		-2.026E+00	1.373E+01	2.224E+01	2.821E+00	-0.091
		603.60		2.140E+00	1.043E+01	1.495E+01	1.578E+00	0.143
		685.20	*	-2.785E-01	1.116E+00	1.768E+00	1.666E-01	-0.157
		698.50		-3.432E+00	1.197E+01	1.888E+01	2.746E+00	-0.182
		722.20		-2.175E+00	2.859E+01	3.935E+01	3.741E+00	-0.055
		783.80		1.703E+00	2.720E+00	4.758E+00	5.483E-01	0.358
XE-127		57.60		-1.544E+00	6.521E+00	1.049E+01	7.636E-01	-0.147
		145.22		4.936E-01	7.106E-01	1.177E+00	6.466E-02	0.420
		172.10		-4.935E-02	1.225E-01	1.961E-01	9.971E-03	-0.252
		202.84	*	-5.837E-02	5.013E-02	7.401E-02	3.895E-03	-0.789
		374.96		-3.391E-02	1.846E-01	3.044E-01	1.666E-02	-0.111
I-131		80.18		-4.019E+00	4.913E+00	6.943E+00	5.595E-01	-0.579
		284.30		-1.512E-01	1.385E+00	2.194E+00	1.370E-01	-0.069
		364.48	*	6.332E-02	9.451E-02	1.633E-01	1.014E-02	0.388
		636.97		-5.628E-01	1.414E+00	2.225E+00	1.500E-01	-0.253
		722.89		-1.120E-01	7.382E+00	1.023E+01	7.124E-01	-0.011
TE-132		49.72		-1.366E+01	1.697E+01	2.772E+01	2.643E+00	-0.493
		111.76		1.853E+01	2.471E+01	4.164E+01	3.729E+00	0.445
		116.30		-1.047E+01	2.259E+01	3.659E+01	3.218E+00	-0.286
		228.16	*	7.211E-02	5.598E-01	9.052E-01	1.265E-01	0.080
BA-133		53.15		5.103E-01	3.890E+00	6.566E+00	4.852E-01	0.078
		79.62		1.781E+00	1.559E+00	2.349E+00	3.492E-01	0.758
		81.00		-1.677E-01	1.217E-01	1.644E-01	2.562E-02	-1.020
	+	276.40		2.930E-01	4.646E-01	6.268E-01	8.062E-02	0.467
		302.84		6.808E-02	1.537E-01	2.313E-01	2.674E-02	0.294
		356.01	*	5.033E-02	4.318E-02	6.785E-02	7.756E-03	0.742
		383.85		-1.409E-01	2.858E-01	4.618E-01	4.933E-02	-0.305
I-133	+	510.53		3.556E-01	2.858E-01	Half-Life too short		
		529.87	*	9.421E-04	2.858E-01	Half-Life too short		
		706.58		7.981E-02	2.858E-01	Half-Life too short		
		856.28		-5.990E-02	2.858E-01	Half-Life too short		
		875.33		1.628E-02	2.858E-01	Half-Life too short		
		1236.41		5.923E-01	2.858E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		1298.22		8.017E-03	2.858E-01	Half-Life too short		
CS-134		475.35		-1.148E+00	1.734E+00	2.725E+00	1.569E-01	-0.421
		563.23		5.231E-02	3.664E-01	6.038E-01	3.692E-02	0.087
		569.32		1.479E-02	2.199E-01	3.380E-01	2.087E-02	0.044
		604.70		-4.499E-04	3.781E-02	5.307E-02	3.232E-03	-0.008
	+	795.84	*	1.317E-01	6.651E-02	9.230E-02	7.400E-03	1.427
		801.93		-5.754E-01	4.575E-01	5.633E-01	4.558E-02	-1.022
		1038.57		-1.347E+00	4.055E+00	6.508E+00	5.125E-01	-0.207
		1167.94		1.523E+00	2.626E+00	4.499E+00	2.539E-01	0.338
		1365.15		-4.354E-01	1.245E+00	1.931E+00	1.718E-01	-0.225
CS-135		268.24	*	1.565E-01	1.786E-01	2.627E-01	1.962E-02	0.596
I-135		288.45		-6.554E+07	1.786E-01	Half-Life too short		
		417.63		-2.533E+06	1.786E-01	Half-Life too short		
		546.56		-1.592E+08	1.786E-01	Half-Life too short		
		836.80		3.948E+08	1.786E-01	Half-Life too short		
		1038.76		-4.144E+08	1.786E-01	Half-Life too short		
		1124.00		2.115E+09	1.786E-01	Half-Life too short		
		1131.51		4.571E+08	1.786E-01	Half-Life too short		
		1260.41	*	-2.994E+08	1.786E-01	Half-Life too short		
		1457.56		2.512E+10	1.786E-01	Half-Life too short		
		1678.03		-1.565E+08	1.786E-01	Half-Life too short		
		1706.46		9.366E+08	1.786E-01	Half-Life too short		
		1791.20		1.950E+08	1.786E-01	Half-Life too short		
CS-136		66.91		3.282E-01	8.664E-01	1.288E+00	1.903E-01	0.255
	+	86.29		4.061E+00	1.322E+00	2.038E+00	2.599E-01	1.993
		153.22		2.945E-01	6.532E-01	1.083E+00	7.408E-02	0.272
		163.89		3.124E-01	1.024E+00	1.686E+00	1.130E-01	0.185
		176.55		-1.157E-01	3.567E-01	5.721E-01	3.381E-02	-0.202
		273.65		-1.707E-01	6.717E-01	6.454E-01	4.134E-02	-0.264
		340.57		6.048E-01	1.494E-01	2.585E-01	1.539E-02	2.340
		818.51		-3.183E-02	6.727E-02	1.083E-01	8.988E-03	-0.294
		1048.07	*	-6.774E-02	1.120E-01	1.757E-01	1.430E-02	-0.386
		1235.34		1.078E-01	6.980E-01	9.922E-01	1.043E-01	0.109
BA-137M		661.65	*	-2.116E-02	3.838E-02	5.791E-02	3.529E-03	-0.365
CS-137		661.65	*	-2.237E-02	4.057E-02	6.122E-02	3.745E-03	-0.365
CE-139		165.85	*	-1.375E-02	3.088E-02	4.942E-02	2.500E-03	-0.278
BA-140		162.64		6.718E-01	7.092E-01	1.194E+00	7.082E-02	0.562
		304.84		5.019E-01	1.245E+00	1.862E+00	5.073E-01	0.270
		423.70		4.984E-01	1.712E+00	2.871E+00	9.111E-01	0.174
		537.32	*	6.234E-02	2.466E-01	4.089E-01	1.331E-01	0.152
LA-140	+	328.77		4.873E-01	3.334E-01	4.846E-01	3.059E-02	1.006
		432.53		1.218E+00	1.905E+00	3.265E+00	2.030E-01	0.373
		487.03		6.350E-02	1.241E-01	2.106E-01	1.383E-02	0.301
		751.79		7.427E-01	1.637E+00	2.722E+00	2.280E-01	0.273
		815.85		-4.773E-01	2.815E-01	3.957E-01	3.673E-02	-1.206
		867.82		1.339E-01	1.318E+00	1.996E+00	1.895E-01	0.067
		919.63		-3.640E-01	2.975E+00	4.195E+00	4.713E-01	-0.087
		925.24		1.115E+00	1.086E+00	1.918E+00	1.877E-01	0.582
		1596.49	*	6.182E-02	6.660E-02	1.163E-01	8.698E-03	0.532

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CE-141		145.44	*	5.186E-02	6.450E-02	1.072E-01	6.145E-03	0.484
CE-143		57.37		-2.588E-04	6.450E-02	Half-Life too short		
		231.56		9.742E-05	6.450E-02	Half-Life too short		
		293.26	*	4.011E-04	6.450E-02	Half-Life too short		
		350.59		1.613E-02	6.450E-02	Half-Life too short		
		490.36		-1.113E-03	6.450E-02	Half-Life too short		
		664.57		7.724E-04	6.450E-02	Half-Life too short		
		721.93		-1.210E-05	6.450E-02	Half-Life too short		
CE-144		80.11		-1.821E+00	2.500E+00	3.548E+00	2.839E-01	-0.513
		133.54	*	-2.073E-01	2.149E-01	3.371E-01	4.783E-02	-0.615
PM-144		476.78		-1.288E-03	6.059E-02	9.964E-02	6.888E-03	-0.013
		618.01		-2.167E-02	3.234E-02	4.996E-02	3.201E-03	-0.434
		696.49	*	-6.172E-03	3.387E-02	5.391E-02	3.533E-03	-0.114
		778.57		-9.119E-01	2.221E+00	3.615E+00	2.783E-01	-0.252
PR-144		696.49	*	-4.180E-01	2.294E+00	3.651E+00	2.391E-01	-0.114
		1489.15		2.533E+00	1.221E+01	2.025E+01	1.628E+00	0.125
PM-146		453.90	*	2.814E-02	4.278E-02	7.324E-02	6.256E-03	0.384
		633.02		4.314E-01	1.414E+00	2.330E+00	8.590E-01	0.185
		735.90		-9.421E-02	1.455E-01	2.169E-01	6.113E-02	-0.434
		747.13		-6.083E-03	9.195E-02	1.470E-01	1.946E-02	-0.041
ND-147	+	91.11		4.453E-01	2.568E-01	4.947E-01	4.432E-02	0.900
		319.41		2.146E-01	2.905E+00	4.889E+00	2.740E-01	0.044
		439.89		6.776E+00	5.079E+00	9.036E+00	5.083E-01	0.750
		531.02	*	-2.171E-01	5.169E-01	8.213E-01	1.115E-01	-0.264
PM-149		285.90	*	2.711E+01	6.131E+01	1.051E+02	1.480E+01	0.258
EU-152		121.78		-3.254E-02	7.764E-02	1.249E-01	9.806E-03	-0.261
		244.69		6.836E-01	3.837E-01	5.919E-01	3.238E-02	1.155
		344.27	*	1.031E-01	1.078E-01	1.504E-01	9.529E-03	0.686
		443.98		-9.049E-02	9.014E-01	1.480E+00	8.350E-02	-0.061
		778.89		-9.267E-02	2.579E-01	4.214E-01	3.245E-02	-0.220
		867.32		5.134E-01	8.552E-01	1.319E+00	1.193E-01	0.389
	+	964.01		7.928E-01	3.471E-01	5.814E-01	5.149E-02	1.364
		1085.78		-3.233E-02	3.894E-01	6.364E-01	4.543E-02	-0.051
		1112.02		1.226E-01	3.684E-01	5.609E-01	3.753E-02	0.219
		1407.95		1.113E-01	2.022E-01	3.519E-01	2.943E-02	0.316
GD-153		69.67		1.633E-01	1.927E+00	2.828E+00	2.109E-01	0.058
		83.37		8.685E+00	2.388E+01	2.598E+01	2.141E+00	0.334
		97.43	*	1.574E-02	8.769E-02	1.277E-01	9.643E-03	0.123
		103.18		-8.308E-02	1.083E-01	1.742E-01	1.235E-02	-0.477
EU-154		123.07		-3.471E-02	5.480E-02	8.733E-02	8.362E-03	-0.398
		247.94		3.510E-01	3.914E-01	6.069E-01	5.676E-02	0.578
		591.81		-2.066E-01	6.228E-01	9.607E-01	9.531E-02	-0.215
		723.30		-7.802E-02	2.092E-01	2.786E-01	2.234E-02	-0.280
		756.87		1.128E-01	8.166E-01	1.325E+00	1.474E-01	0.085
		873.19		2.999E-02	2.704E-01	4.552E-01	5.742E-02	0.066
		996.32		-2.802E-01	3.746E-01	5.753E-01	1.018E-01	-0.487
		1004.76		2.539E-02	2.254E-01	3.762E-01	4.303E-02	0.067
		1274.45	*	-1.443E-02	1.267E-01	2.043E-01	2.130E-02	-0.071
EU-155		48.70		-1.631E-01	2.769E+00	4.653E+00	3.375E-01	-0.035

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		60.01		2.995E+00	5.746E+00	8.673E+00	6.276E-01	0.345
	+	86.54		3.984E-01	1.241E-01	1.985E-01	1.705E-02	2.007
		105.31	*	2.625E-02	1.105E-01	1.840E-01	1.302E-02	0.143
TB-160	+	86.79		1.053E+00	3.278E-01	5.220E-01	4.448E-02	2.017
		197.04		-5.408E-01	5.808E-01	8.852E-01	4.629E-02	-0.611
		215.65		2.710E-01	8.877E-01	1.271E+00	6.778E-02	0.213
	+	298.57		2.823E-01	1.307E-01	1.975E-01	1.106E-02	1.429
		879.36	*	-4.083E-02	1.252E-01	2.027E-01	1.872E-02	-0.201
		962.29		3.847E-01	5.839E-01	8.975E-01	7.966E-02	0.429
	+	966.15		5.384E-01	2.357E-01	4.801E-01	4.240E-02	1.121
		1177.93		5.345E-02	3.706E-01	6.141E-01	3.453E-02	0.087
		1271.85		2.363E-01	7.288E-01	1.223E+00	9.011E-02	0.193
HO-166M		80.57		-3.958E-01	3.269E-01	4.535E-01	3.644E-02	-0.873
		184.41		1.008E-01	4.197E-02	6.566E-02	3.385E-03	1.535
		280.46		8.110E-02	9.147E-02	1.416E-01	7.898E-03	0.573
	+	410.95		3.275E-01	3.738E-01	4.349E-01	2.389E-02	0.753
		711.68	*	8.218E-03	6.472E-02	1.053E-01	7.112E-03	0.078
		752.31		5.756E-02	2.874E-01	4.688E-01	3.431E-02	0.123
		810.29		-8.290E-03	5.657E-02	9.368E-02	7.650E-03	-0.088
TM-171		51.35		-1.071E+00	3.347E+01	5.623E+01	4.158E+00	-0.019
		52.39		-4.574E+00	1.723E+01	2.871E+01	2.124E+00	-0.159
		59.40		3.250E+01	3.062E+01	4.722E+01	3.415E+00	0.688
		66.72	*	1.424E+01	3.323E+01	4.955E+01	3.649E+00	0.287
LU-176	+	88.36		7.850E-01	2.444E-01	3.972E-01	3.406E-02	1.977
		201.83		-2.766E-02	2.963E-02	4.603E-02	2.420E-03	-0.601
		306.84	*	-9.748E-04	2.416E-02	3.947E-02	2.212E-03	-0.025
		401.10		-1.438E-01	6.534E+00	1.084E+01	5.900E-01	-0.013
LU-177		112.95		1.052E-01	1.533E+00	2.533E+00	1.649E-01	0.042
		208.36	*	1.497E+00	1.201E+00	1.795E+00	9.501E-02	0.834
LU-177M		52.97		9.744E-02	1.760E+00	2.963E+00	2.191E-01	0.033
		54.07		1.480E-01	9.123E-01	1.541E+00	1.136E-01	0.096
		61.30		4.641E-01	1.700E+00	2.537E+00	1.841E-01	0.183
		121.62		-1.426E-01	3.960E-01	6.385E-01	3.907E-02	-0.223
		147.16		1.426E-01	6.851E-01	1.128E+00	6.149E-02	0.126
		171.86		-2.153E-01	5.018E-01	8.023E-01	4.079E-02	-0.268
		218.09		-4.163E-02	8.922E-01	1.435E+00	7.671E-02	-0.029
		268.79		1.258E+00	9.293E-01	1.401E+00	7.777E-02	0.897
		319.02		-1.277E-02	2.457E-01	4.111E-01	2.303E-02	-0.031
		367.43		-3.276E-01	8.490E-01	1.385E+00	7.619E-02	-0.237
		413.65	*	4.716E-02	1.911E-01	2.806E-01	1.545E-02	0.168
HF-181		56.28		-5.435E-01	9.934E-01	1.636E+00	1.197E-01	-0.332
		57.53		-1.646E-01	5.516E-01	8.857E-01	6.447E-02	-0.186
	+	65.20		1.127E+00	1.445E+00	1.708E+00	1.251E-01	0.660
		133.02		-1.007E-01	6.828E-02	1.058E-01	6.118E-03	-0.952
		136.25		1.620E-01	4.538E-01	7.532E-01	4.295E-02	0.215
		345.85		1.116E-01	1.999E-01	2.877E-01	1.601E-02	0.388
		482.03	*	-7.761E-03	3.857E-02	6.263E-02	3.622E-03	-0.124
W-181		56.28		-2.158E-01	3.937E-01	6.485E-01	4.744E-02	-0.333
		57.53		-6.536E-02	2.188E-01	3.513E-01	2.557E-02	-0.186

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	+	65.20	*	4.434E-01	5.686E-01	6.720E-01	4.924E-02	0.660
TA-182		67.75		-1.795E-02	1.401E-01	1.903E-01	1.407E-02	-0.094
		100.10		1.501E-01	1.800E-01	3.018E-01	2.210E-02	0.497
		152.43		3.445E-01	3.482E-01	5.874E-01	3.136E-02	0.587
		222.10		-1.800E-01	3.454E-01	5.432E-01	2.916E-02	-0.331
		1001.68		1.461E+00	2.041E+00	3.560E+00	2.987E-01	0.410
	+	1121.28		5.508E-01	2.833E-01	3.564E-01	2.326E-02	1.546
		1189.05		1.330E-01	3.473E-01	5.842E-01	3.400E-02	0.228
		1221.42	*	1.570E-01	2.184E-01	3.748E-01	2.402E-02	0.419
		1230.97		-1.222E-02	5.238E-01	8.349E-01	5.501E-02	-0.015
RE-183		57.98		-6.598E-03	2.233E-01	3.473E-01	2.524E-02	-0.019
		59.32		1.306E-01	1.247E-01	1.921E-01	1.390E-02	0.679
		67.20		9.373E-02	2.328E-01	3.468E-01	2.558E-02	0.270
		162.32	*	8.126E-02	1.089E-01	1.822E-01	9.347E-03	0.446
	+	208.81		2.240E+00	1.596E+00	1.784E+00	9.448E-02	1.256
		291.72		-3.678E-02	1.016E+00	1.487E+00	8.316E-02	-0.025
RE-184		57.98		-2.448E-02	8.283E-01	1.289E+00	9.364E-02	-0.019
		59.32		4.840E-01	4.621E-01	7.123E-01	5.152E-02	0.679
		67.20		3.476E-01	8.634E-01	1.286E+00	9.489E-02	0.270
		161.27		-9.475E-02	3.559E-01	5.741E-01	2.957E-02	-0.165
		216.55		1.653E-01	2.829E-01	4.514E-01	2.410E-02	0.366
		252.85	*	-1.824E-01	2.359E-01	3.631E-01	1.998E-02	-0.502
		318.01		-1.281E-01	4.168E-01	6.884E-01	3.857E-02	-0.186
		792.07		-2.476E-01	1.129E+00	1.608E+00	1.269E-01	-0.154
		903.28		7.779E-01	1.076E+00	1.810E+00	1.718E-01	0.430
		920.93		-1.813E-01	4.913E-01	7.290E-01	6.796E-02	-0.249
OS-185		59.72		1.610E-01	3.397E-01	5.119E-01	3.702E-02	0.314
		61.14		3.258E-02	1.861E-01	2.768E-01	2.008E-02	0.118
		69.30		9.922E-02	3.661E-01	5.065E-01	3.770E-02	0.196
		592.07		-7.652E-01	2.460E+00	3.917E+00	2.368E-01	-0.195
		646.12	*	4.332E-02	4.334E-02	7.507E-02	4.573E-03	0.577
		717.42		-5.819E-01	9.475E-01	1.455E+00	9.940E-02	-0.400
		874.81		8.793E-02	5.214E-01	8.821E-01	8.086E-02	0.100
		880.27		-4.989E-02	7.105E-01	1.177E+00	1.089E-01	-0.042
RE-188		155.03	*	5.337E-03	1.760E-01	2.875E-01	1.519E-02	0.019
		477.96		1.095E+00	2.712E+00	4.586E+00	2.646E-01	0.239
		633.10		8.622E-01	2.808E+00	4.656E+00	2.833E-01	0.185
W-188	+	63.58		5.904E+01	7.571E+01	9.619E+01	7.017E+00	0.614
		227.08		5.500E+00	1.285E+01	2.104E+01	1.135E+00	0.261
		290.67	*	-3.140E+00	8.254E+00	1.182E+01	6.610E-01	-0.266
IR-192	+	295.96		1.029E+00	1.605E-01	2.689E-01	1.531E-02	3.825
		308.46		1.019E-02	8.841E-02	1.493E-01	8.470E-03	0.068
		316.51	*	-1.047E-02	3.283E-02	5.261E-02	2.964E-03	-0.199
		468.07		3.997E-03	6.892E-02	9.898E-02	6.562E-03	0.040
		604.41		2.201E-03	5.067E-01	7.123E-01	8.180E-02	0.003
		612.46		5.037E+00	1.066E+00	1.860E+00	1.447E-01	2.708
AU-195	+	65.12		2.053E-01	2.633E-01	3.144E-01	2.303E-02	0.653
		66.83		5.221E-02	1.096E-01	1.637E-01	1.206E-02	0.319
	+	75.70		1.657E+00	3.105E-01	4.929E-01	3.810E-02	3.362

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	3.340E-02	2.458E-01	3.756E-01	2.788E-02	0.089
		129.76		4.204E+00	2.982E+00	5.104E+00	2.997E-01	0.824
TL-200		367.94	*	-6.071E-05	2.982E+00	Half-Life too short		
		579.30		-1.581E-03	2.982E+00	Half-Life too short		
		828.27		7.291E-04	2.982E+00	Half-Life too short		
		1205.75		4.361E-04	2.982E+00	Half-Life too short		
TL-201		68.90		6.837E-01	5.042E+00	6.302E+00	4.683E-01	0.108
		70.82		-1.463E+00	2.425E+00	3.474E+00	2.606E-01	-0.421
		80.30		-3.738E+00	4.535E+00	6.406E+00	5.135E-01	-0.583
		135.34		7.943E+00	1.950E+01	3.242E+01	1.856E+00	0.245
		167.43	*	3.929E-01	5.638E+00	9.199E+00	4.655E-01	0.043
TL-202		68.90		7.510E-02	5.539E-01	6.923E-01	5.144E-02	0.108
		70.82		-1.603E-01	2.657E-01	3.806E-01	2.855E-02	-0.421
		80.30		-4.096E-01	4.969E-01	7.020E-01	5.627E-02	-0.583
		439.56	*	8.667E-02	6.003E-02	1.075E-01	6.042E-03	0.806
HG-203		70.83		-7.301E-01	1.211E+00	1.732E+00	2.238E-01	-0.422
		72.87		1.860E+00	7.363E-01	1.125E+00	1.413E-01	1.652
		82.60		7.293E-01	1.507E+00	1.907E+00	2.569E-01	0.382
		279.20	*	3.206E-02	4.532E-02	6.863E-02	4.081E-03	0.467
BI-207		72.80		5.204E-01	2.115E-01	3.333E-01	2.528E-02	1.561
	+	74.97		9.232E-01	1.730E-01	2.401E-01	1.847E-02	3.845
		84.90		1.336E-01	2.248E-01	3.335E-01	2.789E-02	0.401
		569.67		-1.109E-02	3.464E-02	5.190E-02	3.119E-03	-0.214
		1063.62	*	1.108E-02	5.624E-02	9.416E-02	7.058E-03	0.118
		1770.23		-6.397E-02	3.850E-01	5.140E-01	3.228E-02	-0.124
TL-207		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
PO-209		260.50		3.759E+00	1.000E+01	1.628E+01	8.998E-01	0.231
		262.80		-1.146E+01	2.746E+01	4.299E+01	2.379E+00	-0.267
		896.60	*	-2.964E+00	7.275E+00	1.170E+01	1.114E+00	-0.253
BI-210		46.50	*	2.697E+00	4.096E+00	7.010E+00	5.536E-01	0.385
PB-210		46.50	*	2.697E+00	4.096E+00	7.010E+00	5.536E-01	0.385
PO-210		46.50	*	2.697E+00	4.095E+00	7.010E+00	4.794E-01	0.385
PB-211		404.84	*	-9.671E-01	1.201E+00	1.382E+00	8.610E-01	-0.700
		427.08		-1.782E+00	2.314E+00	3.198E+00	1.976E+00	-0.557
		831.96		-1.289E-01	1.189E+00	1.968E+00	1.233E+00	-0.066
BI-212	+	727.18	*	8.962E-01	4.866E-01	6.398E-01	5.518E-02	1.401
		785.46		6.055E-01	1.690E+00	2.920E+00	2.277E-01	0.207
		1620.62		1.813E+00	1.300E+00	2.518E+00	1.847E-01	0.720
PO-215		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
RN-219	+	271.23		6.295E-01	3.252E-01	4.454E-01	3.533E-02	1.413
		401.81	*	-1.213E-01	4.003E-01	6.531E-01	8.790E-02	-0.186
RN-220		549.76	*	-2.386E+00	2.593E+01	4.213E+01	2.515E+00	-0.057
RA-223		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
AC-227		79.80		1.107E+00	1.933E+00	2.872E+00	6.105E-01	0.385
		236.00		4.312E-01	2.751E-01	4.132E-01	4.237E-02	1.044
		256.20	*	-2.018E-01	3.978E-01	6.197E-01	8.578E-02	-0.326
		286.10		2.169E-01	1.500E+00	2.543E+00	2.913E-01	0.085
	+	299.80		-3.636E+00	1.772E+00	2.534E+00	4.109E-01	1.435
		304.40		2.461E-01	1.976E+00	2.916E+00	5.026E-01	0.084
		334.20		-3.460E-04	2.950E+00	3.389E+00	6.190E-01	0.000
TH-227		79.80		1.107E+00	1.933E+00	2.872E+00	6.185E-01	0.385
	+	94.00		9.513E+00	3.436E+00	4.004E+00	8.609E-01	2.376
		236.00		4.312E-01	2.742E-01	4.132E-01	3.648E-02	1.044
		256.20	*	-2.018E-01	3.983E-01	6.197E-01	1.041E-01	-0.326
		286.10		2.169E-01	1.516E+00	2.543E+00	2.547E+00	0.085
	+	299.80		3.636E+00	1.772E+00	2.534E+00	4.109E-01	1.435
		304.40		2.461E-01	1.976E+00	2.916E+00	5.026E-01	0.084
		334.20		-3.460E-04	2.950E+00	3.389E+00	6.190E-01	0.000
TH-229		85.43		4.927E-01	2.282E-01	3.520E-01	2.959E-02	1.400
	+	88.47		4.519E-01	1.407E-01	2.296E-01	1.965E-02	1.968
		100.00		1.602E-01	1.884E-01	3.159E-01	2.316E-02	0.507
		193.63	*	2.370E-01	4.994E-01	8.237E-01	4.291E-02	0.288
	+	210.97		1.775E+00	1.265E+00	1.397E+00	7.418E-02	1.270
PA-231		283.67	*	-6.139E-01	1.626E+00	2.440E+00	3.340E-01	-0.252
	+	301.29		1.454E+00	6.852E-01	1.026E+00	1.062E-01	1.417
TH-231		81.07		-3.738E-01	2.640E-01	3.624E-01	2.925E-02	-1.032
		83.78		6.548E-02	1.755E-01	2.207E-01	1.826E-02	0.297
		94.90		9.298E-01	2.762E-01	4.423E-01	3.447E-02	2.102
		122.32		-1.835E+00	1.863E+00	2.930E+00	2.039E-01	-0.626
		144.24		1.577E-03	7.195E-01	1.165E+00	8.161E-02	0.001
		154.21		2.401E-01	4.103E-01	6.831E-01	4.512E-02	0.352

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.906E-01	2.521E-01	3.402E-01	1.982E-02	1.442
		323.87	*	3.378E-01	7.099E-01	1.067E+00	1.754E-01	0.317
	+	338.28		7.345E+00	1.861E+00	2.386E+00	2.485E-01	3.078
		445.03		-2.805E-01	2.118E+00	3.471E+00	3.534E-01	-0.081
U-231		84.21		3.027E+00	5.612E+00	7.792E+00	6.473E-01	0.388
	+	92.29		7.745E+00	2.330E+00	3.426E+00	2.766E-01	2.261
		95.87	*	-2.028E-01	1.006E+00	1.450E+00	1.116E-01	-0.140
		108.00		-9.512E-01	1.758E+00	2.847E+00	1.930E-01	-0.334
PA-233	+	75.28		2.694E+01	6.098E+00	7.336E+00	1.090E+00	3.672
	+	86.59		6.480E+00	2.603E+00	3.222E+00	8.629E-01	2.011
	+	300.12		1.014E+00	4.852E-01	7.111E-01	9.495E-02	1.426
		311.98	*	2.406E-02	5.995E-02	1.026E-01	6.128E-03	0.235
		340.50		3.237E+00	1.056E+00	1.347E+00	3.086E-01	2.403
		398.62		1.485E+00	2.113E+00	3.580E+00	9.227E-01	0.415
		415.76		4.699E-01	1.793E+00	2.632E+00	5.397E-01	0.179
PA-234	+	63.00		1.732E+00	2.233E+00	2.850E+00	4.219E-01	0.608
	+	94.67		8.483E-01	2.661E-01	3.317E-01	3.933E-02	2.557
		98.44		4.587E-02	1.075E-01	1.540E-01	8.565E-02	0.298
		99.86		4.172E-01	4.774E-01	8.012E-01	5.882E-02	0.521
		111.00		2.105E-01	1.966E-01	3.334E-01	3.583E-02	0.631
		131.20		8.139E-02	1.098E-01	1.845E-01	1.076E-02	0.441
		152.70		3.254E-01	3.436E-01	5.733E-01	8.967E-02	0.568
	+	186.00		5.190E+00	2.359E+00	2.513E+00	7.649E-01	2.065
		226.40		-5.712E-02	4.052E-01	6.478E-01	7.359E-02	-0.088
		227.20		1.797E-01	4.387E-01	7.179E-01	3.872E-02	0.250
		248.90		-2.838E-01	8.326E-01	1.309E+00	2.802E-01	-0.217
		293.70		5.159E+00	1.220E+00	1.648E+00	2.639E-01	3.130
		369.80		-1.423E-01	8.039E-01	1.326E+00	2.750E-01	-0.107
		568.70		6.109E-01	1.108E+00	1.755E+00	1.055E-01	0.348
		569.50		-8.043E-02	3.084E-01	4.643E-01	2.790E-02	-0.173
		574.00		3.283E-01	1.505E+00	2.491E+00	1.499E-01	0.132
		699.00		-1.081E-01	6.985E-01	1.113E+00	2.032E-01	-0.097
		706.10		9.580E-01	1.180E+00	1.884E+00	8.337E-01	0.509
		733.00		1.268E-01	3.966E-01	5.702E-01	1.234E-01	0.222
		742.81		4.157E-01	1.391E+00	2.245E+00	1.505E+00	0.185
	+	796.30		2.563E+00	1.451E+00	1.791E+00	4.808E-01	1.431
		805.60		8.817E-01	9.935E-01	1.709E+00	5.215E-01	0.516
		819.60		1.484E-01	1.176E+00	1.986E+00	7.540E-01	0.075
		826.30		-1.796E-01	8.201E-01	1.343E+00	6.002E-01	-0.134
		831.60		-1.174E-01	6.211E-01	1.023E+00	3.049E-01	-0.115
		876.40		-6.661E-02	7.600E-01	1.252E+00	1.288E+00	-0.053
		880.51		7.229E-02	2.538E-01	4.333E-01	4.011E-02	0.167
		883.24		6.951E-02	2.693E-01	4.518E-01	3.041E-01	0.154
		899.00		-6.790E-01	9.016E-01	1.326E+00	5.824E-01	-0.512
		925.00		1.412E+00	1.196E+00	2.157E+00	2.002E-01	0.655
		926.50		-4.361E-02	1.846E-01	2.972E-01	7.580E-02	-0.147
		946.00	*	-2.120E-01	3.015E-01	4.664E-01	8.847E-02	-0.454
		949.00		3.708E-01	4.722E-01	8.277E-01	7.471E-02	0.448
		980.50		1.124E-01	6.809E-01	1.145E+00	9.910E-02	0.098

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-4.116E-01	1.118E+00	1.664E+00	1.083E+00	-0.247
PA-234M		766.41		2.803E+01	3.047E+01	3.358E+01	2.571E+01	0.835
		1001.03	*	2.432E+00	6.744E+00	1.146E+01	1.262E+00	0.212
U-235	+	89.95		1.909E+00	1.236E+00	1.965E+00	6.049E-01	0.972
	+	93.35		2.959E+00	1.190E+00	1.267E+00	3.526E-01	2.335
		105.00		6.973E-01	1.086E+00	1.802E+00	5.298E-01	0.387
		143.76	*	-1.614E-01	2.212E-01	3.461E-01	5.611E-02	-0.466
		163.35		3.739E-01	4.819E-01	8.001E-01	1.422E-01	0.467
	+	185.71		1.922E-01	6.562E-02	9.316E-02	4.809E-03	2.063
		205.31		3.458E-01	6.025E-01	8.724E-01	1.555E-01	0.396
NP-236	+	94.67		6.434E-01	1.935E-01	2.517E-01	1.968E-02	2.556
		98.44		3.470E-02	7.902E-02	1.164E-01	8.685E-03	0.298
		111.00		1.592E-01	1.481E-01	2.522E-01	1.667E-02	0.631
		160.31	*	-1.010E-01	8.198E-02	1.271E-01	6.572E-03	-0.795
NP-239		99.55		8.366E-02	1.654E-01	2.664E-01	1.962E-02	0.314
		117.00	*	2.369E-02	1.982E-01	3.277E-01	2.070E-02	0.072
	+	209.75		1.788E+00	1.274E+00	1.427E+00	7.568E-02	1.252
		228.18		2.951E-02	2.348E-01	3.796E-01	2.049E-02	0.078
	+	277.60		1.430E-01	2.262E-01	3.060E-01	1.705E-02	0.467
		334.30		1.247E-02	1.672E+00	1.923E+00	1.074E-01	0.006
AM-241		59.54	*	9.817E-02	1.808E-01	2.731E-01	2.175E-02	0.359
CM-243		99.55		8.608E-02	1.702E-01	2.741E-01	2.019E-02	0.314
		103.76	*	1.908E-03	9.836E-02	1.627E-01	1.147E-02	0.012
		117.00		2.437E-02	2.039E-01	3.372E-01	2.129E-02	0.072
	+	209.75		1.762E+00	1.256E+00	1.407E+00	7.460E-02	1.252
		228.18		2.982E-02	2.372E-01	3.835E-01	2.070E-02	0.078
	+	277.60		1.442E-01	2.280E-01	3.085E-01	1.719E-02	0.467
CM-247	+	278.00		5.932E-01	9.381E-01	1.265E+00	7.047E-02	0.469
		287.40		5.896E-01	1.192E+00	2.049E+00	1.145E-01	0.288
		402.60	*	-2.998E-02	3.735E-02	5.744E-02	3.132E-03	-0.522
CF-249		252.85		-6.878E-01	8.894E-01	1.369E+00	7.531E-02	-0.502
		333.44		2.141E-01	2.283E-01	2.560E-01	1.430E-02	0.836
		387.95	*	5.757E-02	3.877E-02	6.922E-02	3.748E-03	0.832
CF-251		176.60	*	-4.365E-02	1.308E-01	2.097E-01	1.071E-02	-0.208
		227.00		2.321E-01	3.870E-01	6.384E-01	3.442E-02	0.364
		285.00		5.804E-03	1.718E+00	2.822E+00	1.576E-01	0.002

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
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*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001      *
* Acquisition date : 14-JUL-2009 10:44:32 Detector SN#     :               *
* Detector ID        : GAM16                Sensitivity      : 5.000       *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:     0 02:00:00.00      Abundance limit : 75.000       *
* Elapsed real time:     0 02:00:02.21      Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 30-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232754001           Analyst initials: MXR1          *
* Batch Number       : 882713               Sample Quantity : 1.3503E+02 GRAM *
* Recovery           :     1.00000          Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight    :    0.00000                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope       :                *
* MSD DPM            :     0.000           MSD Isotope      :              *
* LCS DPM            :     0.000           LCS Isotope      :              *
* LCSD DPM           :     0.000           LCSD Isotope     :              *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.549E+01	3.497E+00	5.223E-01	0.000E+00
CD-109	3.362E+00	1.026E+00	1.554E+00	0.000E+00
SN-126	3.310E-01	1.010E-01	1.555E-01	0.000E+00
TL-208	5.743E-01	8.123E-02	5.993E-02	0.000E+00
BI-211	4.134E+00	4.884E-01	3.081E-01	0.000E+00
PB-212	1.819E+00	1.629E-01	9.341E-02	0.000E+00
PO-212	1.819E+00	1.629E-01	9.341E-02	0.000E+00
BI-214	1.150E+00	1.645E-01	1.160E-01	0.000E+00
PB-214	1.438E+00	1.851E-01	1.074E-01	0.000E+00
PO-214	1.438E+00	1.851E-01	1.074E-01	0.000E+00
PO-216	1.819E+00	1.629E-01	9.341E-02	0.000E+00
PO-218	1.438E+00	1.851E-01	1.074E-01	0.000E+00
RA-224	5.230E+00	1.060E+00	1.062E+00	0.000E+00
RA-226	1.150E+00	1.645E-01	1.160E-01	0.000E+00
AC-228	1.698E+00	3.361E-01	2.371E-01	0.000E+00
RA-228	1.698E+00	3.361E-01	2.371E-01	0.000E+00
TH-228	1.819E+00	1.629E-01	9.340E-02	0.000E+00
TH-230	1.150E+00	1.645E-01	1.160E-01	0.000E+00
TH-232	1.698E+00	3.361E-01	2.371E-01	0.000E+00
TH-234	1.486E+00	1.882E+00	2.378E+00	0.000E+00
U-234	1.150E+00	1.645E-01	1.160E-01	0.000E+00
NP-237	9.719E-01	3.557E-01	4.362E-01	0.000E+00
U-238	1.486E+00	1.882E+00	2.378E+00	0.000E+00
AM-243	5.143E-01	9.444E-02	9.721E-02	0.000E+00
ANH-511	8.906E-02	6.069E-02	4.642E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	9.288E-02	2.750E-01	4.833E-01	0.000E+00	NOT IDENT.
NA-22	-4.793E-03	4.446E-02	7.355E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	1.962E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.860E-02	1.851E-02	3.860E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.766E-02	9.348E-02	0.000E+00	FAIL ABUN
SC-46	2.384E-03	3.597E-02	6.220E-02	0.000E+00	FAIL ABUN
V-48	-3.724E-02	6.610E-02	1.073E-01	0.000E+00	NOT IDENT.
CR-51	4.986E-02	3.366E-01	5.979E-01	0.000E+00	NOT IDENT.
MN-52	2.378E-01	1.795E-01	3.476E-01	0.000E+00	NOT IDENT.
MN-54	-2.570E-02	3.785E-02	6.228E-02	0.000E+00	NOT IDENT.
CO-56	-1.565E-02	3.847E-02	6.436E-02	0.000E+00	FAIL ABUN
CO-57	-1.479E-02	2.602E-02	4.455E-02	0.000E+00	NOT IDENT.
CO-58	-7.979E-03	3.644E-02	6.206E-02	0.000E+00	NOT IDENT.
FE-59	2.087E-02	1.002E-01	1.720E-01	0.000E+00	NOT IDENT.
CO-60	-2.782E-03	4.072E-02	6.729E-02	0.000E+00	NOT IDENT.
ZN-65	3.442E-02	1.049E-01	1.577E-01	0.000E+00	NOT IDENT.
GE-68	-1.327E-01	1.221E+00	2.050E+00	0.000E+00	NOT IDENT.
AS-73	3.128E-05	8.693E-01	1.585E+00	0.000E+00	NOT IDENT.
AS-74	2.807E-02	8.397E-02	1.454E-01	0.000E+00	NOT IDENT.
SE-75	-4.835E-03	4.640E-02	7.173E-02	0.000E+00	NOT IDENT.
BR-77	-2.680E-01	7.057E+00	1.203E+01	0.000E+00	FAIL ABUN
SR-82	-3.104E-02	3.749E-01	6.182E-01	0.000E+00	NOT IDENT.
RB-83	1.743E-03	6.527E-02	1.118E-01	0.000E+00	NOT IDENT.
RB-84	2.938E-02	6.155E-02	1.100E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	8.246E+00	1.466E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.176E-02	7.425E-02	0.000E+00	NOT IDENT.
RB-86	2.569E-01	7.390E-01	1.288E+00	0.000E+00	NOT IDENT.
Y-88	-5.829E-03	2.864E-02	4.628E-02	0.000E+00	NOT IDENT.
ZR-88	-1.709E-02	2.934E-02	4.949E-02	0.000E+00	NOT IDENT.
Y-91	7.053E+00	1.903E+01	3.284E+01	0.000E+00	NOT IDENT.
NB-94	4.245E-03	3.402E-02	5.739E-02	0.000E+00	NOT IDENT.
NB-95	5.622E-02	4.964E-02	7.869E-02	0.000E+00	NOT IDENT.
NB-95M	7.605E-02	1.381E-01	2.109E-01	0.000E+00	NOT IDENT.
ZR-95	-1.555E-02	7.207E-02	1.179E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.086E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.908E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.213E+00	8.557E+00	1.409E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.501E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.054E-03	3.359E-02	5.644E-02	0.000E+00	NOT IDENT.
RH-102	-2.612E-02	2.604E-02	4.168E-02	0.000E+00	NOT IDENT.
RU-103	-8.257E-03	3.682E-02	6.218E-02	0.000E+00	FAIL ABUN
RH-106	2.002E-02	3.065E-01	5.197E-01	0.000E+00	FAIL ABUN
RU-106	2.002E-02	3.065E-01	5.197E-01	0.000E+00	FAIL ABUN
AG-108M	-2.232E-02	3.119E-02	5.165E-02	0.000E+00	NOT IDENT.
AG-110M	-3.145E-03	3.500E-02	5.846E-02	0.000E+00	NOT IDENT.
IN-111	1.996E-01	8.943E-01	1.341E+00	0.000E+00	NOT IDENT.
IN-113M	-5.894E-03	4.276E-02	7.395E-02	0.000E+00	NOT IDENT.
SN-113	-5.894E-03	4.276E-02	7.395E-02	0.000E+00	NOT IDENT.
IN-114M	-1.061E-01	1.965E-01	2.861E-01	0.000E+00	NOT IDENT.
CD-115	2.771E+00	7.078E+00	1.240E+01	0.000E+00	NOT IDENT.
SN-117M	-2.933E-02	5.127E-02	8.710E-02	0.000E+00	NOT IDENT.
SB-122	-1.388E-01	1.531E+00	2.588E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.286E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.463E-02	2.777E-02	4.725E-02	0.000E+00	NOT IDENT.
I-124	1.271E-01	5.733E-01	8.954E-01	0.000E+00	FAIL ABUN
SB-124	5.914E-02	6.129E-02	1.205E-01	0.000E+00	FAIL ABUN
SB-125	-7.543E-02	8.949E-02	1.474E-01	0.000E+00	FAIL ABUN
TE-125M	-4.912E+00	9.524E+00	1.655E+01	0.000E+00	NOT IDENT.
I-126	4.560E-02	1.668E-01	2.856E-01	0.000E+00	NOT IDENT.
SB-126	7.391E-02	1.552E-01	2.343E-01	0.000E+00	FAIL ABUN
SB-127	-2.785E-01	1.094E+00	1.798E+00	0.000E+00	NOT IDENT.
XE-127	-5.837E-02	4.913E-02	7.692E-02	0.000E+00	NOT IDENT.
I-131	6.332E-02	9.262E-02	1.680E-01	0.000E+00	NOT IDENT.
TE-132	7.211E-02	5.486E-01	9.387E-01	0.000E+00	NOT IDENT.
BA-133	5.033E-02	4.231E-02	6.981E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.245E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.518E-02	9.357E-02	0.000E+00	FAIL ABUN
CS-135	1.565E-01	1.750E-01	2.716E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.328E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-6.774E-02	1.098E-01	1.772E-01	0.000E+00	FAIL ABUN
BA-137M	-2.116E-02	3.762E-02	5.891E-02	0.000E+00	NOT IDENT.
CS-137	-2.237E-02	3.976E-02	6.227E-02	0.000E+00	NOT IDENT.
CE-139	-1.375E-02	3.026E-02	5.154E-02	0.000E+00	NOT IDENT.
BA-140	6.234E-02	2.416E-01	4.175E-01	0.000E+00	NOT IDENT.
LA-140	6.182E-02	6.527E-02	1.163E-01	0.000E+00	FAIL ABUN
CE-141	5.186E-02	6.321E-02	1.120E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.227E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.073E-01	2.106E-01	3.529E-01	0.000E+00	NOT IDENT.
PM-144	-6.172E-03	3.319E-02	5.479E-02	0.000E+00	NOT IDENT.
PR-144	-4.180E-01	2.248E+00	3.710E+00	0.000E+00	NOT IDENT.

PM-146	2.814E-02	4.193E-02	7.502E-02	0.000E+00	NOT IDENT.
ND-147	-2.171E-01	5.066E-01	8.389E-01	0.000E+00	FAIL ABUN
PM-149	2.711E+01	6.009E+01	1.085E+02	0.000E+00	NOT IDENT.
EU-152	1.031E-01	1.056E-01	1.549E-01	0.000E+00	FAIL ABUN
GD-153	1.574E-02	8.594E-02	1.344E-01	0.000E+00	NOT IDENT.
EU-154	-1.443E-02	1.242E-01	2.053E-01	0.000E+00	NOT IDENT.
EU-155	2.625E-02	1.083E-01	1.934E-01	0.000E+00	FAIL ABUN
TB-160	-4.083E-02	1.227E-01	2.051E-01	0.000E+00	FAIL ABUN
HO-166M	8.218E-03	6.343E-02	1.070E-01	0.000E+00	FAIL ABUN
TM-171	1.424E+01	3.256E+01	5.250E+01	0.000E+00	NOT IDENT.
LU-176	-9.748E-04	2.368E-02	4.072E-02	0.000E+00	FAIL ABUN
LU-177	1.497E+00	1.177E+00	1.864E+00	0.000E+00	NOT IDENT.
LU-177M	4.716E-02	1.873E-01	2.879E-01	0.000E+00	NOT IDENT.
HF-181	-7.761E-03	3.780E-02	6.408E-02	0.000E+00	FAIL ABUN
W-181	4.434E-01	5.572E-01	7.123E-01	0.000E+00	FAIL ABUN
TA-182	1.570E-01	2.140E-01	3.769E-01	0.000E+00	FAIL ABUN
RE-183	8.126E-02	1.067E-01	1.901E-01	0.000E+00	FAIL ABUN
RE-184	-1.824E-01	2.312E-01	3.758E-01	0.000E+00	NOT IDENT.
OS-185	4.332E-02	4.247E-02	7.640E-02	0.000E+00	NOT IDENT.
RE-188	5.337E-03	1.725E-01	3.002E-01	0.000E+00	NOT IDENT.
W-188	-3.140E+00	8.089E+00	1.221E+01	0.000E+00	FAIL ABUN
IR-192	-1.047E-02	3.217E-02	5.424E-02	0.000E+00	FAIL ABUN
AU-195	3.340E-02	2.409E-01	3.953E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.018E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.929E-01	5.526E+00	9.593E+00	0.000E+00	NOT IDENT.
TL-202	8.667E-02	5.883E-02	1.102E-01	0.000E+00	NOT IDENT.
HG-203	3.206E-02	4.441E-02	7.091E-02	0.000E+00	NOT IDENT.
BI-207	1.108E-02	5.512E-02	9.494E-02	0.000E+00	FAIL ABUN
TL-207	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
PO-209	-2.964E+00	7.129E+00	1.184E+01	0.000E+00	NOT IDENT.
BI-210	2.697E+00	4.014E+00	7.473E+00	0.000E+00	NOT IDENT.
PB-210	2.697E+00	4.014E+00	7.473E+00	0.000E+00	NOT IDENT.
PO-210	2.697E+00	4.013E+00	7.473E+00	0.000E+00	NOT IDENT.
PB-211	-9.671E-01	1.177E+00	1.418E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.768E-01	6.497E-01	0.000E+00	FAIL ABUN
PO-215	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
RN-219	-1.213E-01	3.923E-01	6.704E-01	0.000E+00	FAIL ABUN
RN-220	-2.386E+00	2.541E+01	4.300E+01	0.000E+00	NOT IDENT.
RA-223	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
AC-227	-2.018E-01	3.898E-01	6.413E-01	0.000E+00	FAIL ABUN
TH-227	-2.018E-01	3.903E-01	6.413E-01	0.000E+00	FAIL ABUN
TH-229	2.370E-01	4.894E-01	8.568E-01	0.000E+00	FAIL ABUN
PA-231	-6.139E-01	1.593E+00	2.521E+00	0.000E+00	FAIL ABUN
TH-231	3.378E-01	6.957E-01	1.099E+00	0.000E+00	FAIL ABUN
U-231	-2.028E-01	9.859E-01	1.527E+00	0.000E+00	FAIL ABUN
PA-233	2.406E-02	5.875E-02	1.058E-01	0.000E+00	FAIL ABUN
PA-234	-2.120E-01	2.955E-01	4.713E-01	0.000E+00	FAIL ABUN
PA-234M	2.432E+00	6.609E+00	1.157E+01	0.000E+00	NOT IDENT.
U-235	-1.614E-01	2.168E-01	3.619E-01	0.000E+00	FAIL ABUN
NP-236	-1.010E-01	8.034E-02	1.326E-01	0.000E+00	FAIL ABUN
NP-239	2.369E-02	1.943E-01	3.439E-01	0.000E+00	FAIL ABUN
AM-241	9.817E-02	1.772E-01	2.899E-01	0.000E+00	NOT IDENT.
CM-243	1.908E-03	9.640E-02	1.710E-01	0.000E+00	FAIL ABUN
CM-247	-2.998E-02	3.660E-02	5.896E-02	0.000E+00	FAIL ABUN
CF-249	5.757E-02	3.800E-02	7.110E-02	0.000E+00	NOT IDENT.
CF-251	-4.365E-02	1.282E-01	2.184E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:01.90

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:44:32
Sample ID         : G232754001           Sample quantity  : 1.35030E+02 GRAM
Detector name     : GAM16                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.21  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1672	10.67*	1.228E+00	3.549E+01	3.549E+01	10.06
CD-109	88.03	276	3.72*	6.263E+00	3.292E+00	3.362E+00	31.13
SN-126	64.28	71	9.60	3.508E+00	5.882E-01	5.882E-01	128.85
	86.94	276	8.90	6.263E+00	1.376E+00	1.376E+00	51.04
	87.57	276	37.00*	6.263E+00	3.310E-01	3.310E-01	31.13
TL-208	277.35	36	6.80	4.944E+00	2.966E-01	2.966E-01	158.39
	510.84	100	21.60	3.128E+00	4.123E-01	4.123E-01	70.03
	583.14	488	84.20*	2.806E+00	5.743E-01	5.743E-01	14.43
	860.37	63	12.46	1.987E+00	7.059E-01	7.059E-01	63.90
BI-211	72.87	------	1.27	4.802E+00	------ Line Not Found		------
	351.07	802	12.94*	4.166E+00	4.134E+00	4.134E+00	12.06
PB-212	74.81	617	10.70	5.057E+00	3.173E+00	3.173E+00	20.94
	77.11	856	18.00	5.338E+00	2.476E+00	2.476E+00	12.88
	87.30	276	8.00	6.263E+00	1.531E+00	1.531E+00	32.70
	238.63	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.09	113	3.41	4.679E+00	1.962E+00	1.962E+00	46.67
PO-212	74.81	617	10.70	5.057E+00	3.173E+00	3.173E+00	20.94
	77.11	856	18.00	5.338E+00	2.476E+00	2.476E+00	12.88
	87.30	276	8.00	6.263E+00	1.531E+00	1.531E+00	32.70
	115.19	------	0.60	7.278E+00	------ Line Not Found		------
	238.63	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.09	113	3.41	4.679E+00	1.962E+00	1.962E+00	46.67
BI-214	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
PB-214	74.81	617	6.21	5.057E+00	5.466E+00	5.467E+00	20.15
	77.11	856	10.50	5.338E+00	4.245E+00	4.245E+00	14.96
	87.30	276	4.67	6.263E+00	2.622E+00	2.622E+00	32.07

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	404	7.49	5.434E+00	2.758E+00	2.758E+00	21.43
	295.21	446	19.20	4.731E+00	1.364E+00	1.364E+00	16.78
	351.92	802	37.20*	4.166E+00	1.438E+00	1.438E+00	13.14
PO-214	74.81	617	6.21	5.057E+00	5.466E+00	5.467E+00	20.15
	77.11	856	10.50	5.338E+00	4.245E+00	4.245E+00	14.96
	87.30	276	4.67	6.263E+00	2.622E+00	2.622E+00	32.07
	241.98	404	7.49	5.434E+00	2.758E+00	2.758E+00	21.43
	295.21	446	19.20	4.731E+00	1.364E+00	1.364E+00	16.78
	351.92	802	37.20*	4.166E+00	1.438E+00	1.438E+00	13.14
PO-216	74.81	617	10.70	5.057E+00	3.173E+00	3.173E+00	20.94
	77.11	856	18.00	5.338E+00	2.476E+00	2.476E+00	12.88
	87.30	276	8.00	6.263E+00	1.531E+00	1.531E+00	32.70
	238.63	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.09	113	3.41	4.679E+00	1.962E+00	1.962E+00	46.67
PO-218	74.81	617	6.21	5.057E+00	5.466E+00	5.467E+00	20.15
	77.11	856	10.50	5.338E+00	4.245E+00	4.245E+00	14.96
	87.30	276	4.67	6.263E+00	2.622E+00	2.622E+00	32.07
	241.98	404	7.49	5.434E+00	2.758E+00	2.758E+00	21.43
	295.21	446	19.20	4.731E+00	1.364E+00	1.364E+00	16.78
	351.92	802	37.20*	4.166E+00	1.438E+00	1.438E+00	13.14
RA-224	240.98	404	3.95*	5.434E+00	5.230E+00	5.230E+00	20.68
RA-226	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
AC-228	338.32	309	11.40	4.288E+00	1.759E+00	1.759E+00	46.83
	911.07	319	27.70*	1.885E+00	1.698E+00	1.698E+00	20.20
	969.11	223	16.60	1.780E+00	2.097E+00	2.097E+00	29.79
RA-228	338.32	309	11.40	4.288E+00	1.759E+00	1.759E+00	46.83
	911.07	319	27.70*	1.885E+00	1.698E+00	1.698E+00	20.20
	969.11	223	16.60	1.780E+00	2.097E+00	2.097E+00	29.79
TH-228	84.40	------	1.21	6.023E+00	------ Line Not Found		------
	238.60	1599	44.60*	5.480E+00	1.819E+00	1.819E+00	9.14
	300.10	113	3.41	4.679E+00	1.962E+00	1.962E+00	74.72
TH-230	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
TH-232	338.32	309	11.40	4.288E+00	1.759E+00	1.759E+00	23.77
	911.07	319	27.70*	1.885E+00	1.698E+00	1.698E+00	20.20
	969.11	223	16.60	1.780E+00	2.097E+00	2.097E+00	29.79
TH-234	63.29	71	3.80*	3.508E+00	1.486E+00	1.486E+00	129.21
	92.38	318	5.41	6.640E+00	2.462E+00	2.462E+00	34.02

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	518	46.30*	2.704E+00	1.150E+00	1.150E+00	14.60
	768.36	79	5.04	2.207E+00	1.982E+00	1.982E+00	50.79
	934.06	------	3.21	1.843E+00	------ Line Not Found		------
	1120.29	99	15.10	1.552E+00	1.173E+00	1.173E+00	51.86
	1238.11	51	5.94	1.415E+00	1.676E+00	1.676E+00	78.23
	1377.67	------	4.11	1.289E+00	------ Line Not Found		------
	1764.49	74	15.80	1.074E+00	1.208E+00	1.208E+00	30.26
NP-237	86.50	276	12.60*	6.263E+00	9.719E-01	9.719E-01	37.35
	95.87	------	2.60	6.774E+00	------ Line Not Found		------
U-238	63.29	71	3.80*	3.508E+00	1.486E+00	1.486E+00	129.21
	92.38	318	5.41	6.640E+00	2.462E+00	2.462E+00	30.08
AM-243	74.67	617	66.00*	5.057E+00	5.143E-01	5.143E-01	18.74
	86.72	276	0.34	6.263E+00	3.645E+01	3.645E+01	31.13
	117.66	------	0.55	7.296E+00	------ Line Not Found		------
	142.18	------	0.13	7.157E+00	------ Line Not Found		------
ANH-511	511.00	100	100.00*	3.128E+00	8.906E-02	8.906E-02	69.53

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

Total number of lines in spectrum 37
Number of unidentified lines 3
Number of lines tentatively identified by NID 34 91.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.549E+01	3.549E+01	0.357E+01	10.06	
CD-109	464.00D	1.02	3.292E+00	3.362E+00	1.046E+00	31.13	
SN-126	1.00E+05Y	1.00	3.310E-01	3.310E-01	1.030E-01	31.13	
TL-208	1.41E+10Y	1.00	5.743E-01	5.743E-01	0.829E-01	14.43	
BI-211	7.04E+08Y	1.00	4.134E+00	4.134E+00	0.498E+00	12.06	
PB-212	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
PO-212	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
BI-214	1600.00Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
PB-214	1600.00Y	1.00	1.438E+00	1.438E+00	0.189E+00	13.14	
PO-214	1600.00Y	1.00	1.438E+00	1.438E+00	0.189E+00	13.14	
PO-216	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
PO-218	1600.00Y	1.00	1.438E+00	1.438E+00	0.189E+00	13.14	
RA-224	1.41E+10Y	1.00	5.230E+00	5.230E+00	1.082E+00	20.68	
RA-226	1600.00Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
AC-228	1.41E+10Y	1.00	1.698E+00	1.698E+00	0.343E+00	20.20	
RA-228	1.41E+10Y	1.00	1.698E+00	1.698E+00	0.343E+00	20.20	
TH-228	1.41E+10Y	1.00	1.819E+00	1.819E+00	0.166E+00	9.14	
TH-230	4.47E+09Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
TH-232	1.41E+10Y	1.00	1.698E+00	1.698E+00	0.343E+00	20.20	
TH-234	4.47E+09Y	1.00	1.486E+00	1.486E+00	1.920E+00	129.21	
U-234	4.47E+09Y	1.00	1.150E+00	1.150E+00	0.168E+00	14.60	
NP-237	2.14E+06Y	1.00	9.719E-01	9.719E-01	3.630E-01	37.35	
U-238	4.47E+09Y	1.00	1.486E+00	1.486E+00	1.920E+00	129.21	
AM-243	7380.00Y	1.00	5.143E-01	5.143E-01	0.964E-01	18.74	
ANH-511	1.00E+09Y	1.00	8.906E-02	8.906E-02	6.192E-02	69.53	
		Total Activity :	7.488E+01	7.495E+01			

Grand Total Activity : 7.488E+01 7.495E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	90.13	120	413	0.96	180.27	178	6	1.66E-02	57.0	6.45E+00	T
0	186.18	238	357	1.02	372.35	368	10	3.31E-02	33.7	6.39E+00	T
0	209.87	124	451	1.13	419.74	414	12	1.72E-02	71.1	5.95E+00	T
0	270.47	121	237	1.51	540.94	537	10	1.68E-02	51.1	5.04E+00	T
0	328.34	74	162	1.27	656.68	653	9	1.03E-02	68.1	4.38E+00	T
0	409.75	49	184	0.71	819.50	815	12	6.81E-03	****	3.72E+00	T
0	463.54	128	141	0.81	927.08	922	14	1.78E-02	43.1	3.38E+00	T
0	728.07	88	111	1.57	1456.14	1448	13	1.22E-02	53.6	2.32E+00	T
0	795.12	77	69	1.23	1590.23	1584	13	1.07E-02	49.8	2.14E+00	T
2	965.00	73	52	2.04	1930.00	1925	20	1.02E-02	42.9	1.79E+00	T
0	1379.31	35	19	1.40	2758.61	2752	15	4.93E-03	70.8	1.29E+00	
0	1509.98	25	25	0.59	3019.95	3012	19	3.45E-03	****	1.20E+00	T
0	1589.67	29	28	1.50	3179.34	3171	15	4.02E-03	90.0	1.15E+00	
0	1729.77	23	7	2.63	3459.54	3451	14	3.19E-03	64.2	1.09E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:06.60

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754001.CNF;1 *
* Acquisition date  : 14-JUL-2009 10:44:32  Detector SN#     :             *
* Detector ID       : GAM16                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:02.21          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232754001            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.35030E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1023-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.549E+01	3.568E+00	5.212E-01	4.387E-02	68.092
CD-109	3.362E+00	1.046E+00	1.473E+00	1.271E-01	2.282
SN-126	3.310E-01	1.030E-01	1.474E-01	1.266E-02	2.245
TL-208	5.743E-01	8.289E-02	5.878E-02	4.049E-03	9.770
BI-211	4.134E+00	4.984E-01	2.994E-01	1.859E-02	13.809
PB-212	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
PO-212	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
BI-214	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
PB-214	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-214	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
PO-216	1.819E+00	1.663E-01	9.014E-02	6.359E-03	20.174
PO-218	1.438E+00	1.889E-01	1.043E-01	8.462E-03	13.782
RA-224	5.230E+00	1.082E+00	1.025E+00	5.594E-02	5.101
RA-226	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
AC-228	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
RA-228	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
TH-228	1.819E+00	1.663E-01	9.014E-02	6.358E-03	20.176
TH-230	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.698E+00	3.430E-01	2.344E-01	2.782E-02	7.242
TH-234	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
U-234	1.150E+00	1.679E-01	1.139E-01	9.088E-03	10.098
NP-237	9.719E-01	3.630E-01	4.135E-01	9.228E-02	2.350
U-238	1.486E+00	1.920E+00	2.242E+00	3.900E-01	0.663
AM-243	5.143E-01	9.636E-02	9.193E-02	7.057E-03	5.595
ANH-511	8.906E-02	6.192E-02	4.542E-02	2.668E-03	1.961

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	9.288E-02		2.806E-01	4.723E-01	3.176E-02	0.197
NA-22	-4.793E-03		4.537E-02	7.320E-02	5.441E-03	-0.065
NA-24	1.141E-01		1.001E-01	Half-Life too short		
AL-26	1.860E-02		1.889E-02	3.867E-02	2.309E-03	0.481
TI-44	4.569E-01	+	5.884E-02	8.847E-02	6.980E-03	5.164
SC-46	2.384E-03		3.671E-02	6.149E-02	5.779E-03	0.039
V-48	-3.724E-02		6.745E-02	1.063E-01	9.165E-03	-0.350
CR-51	4.986E-02		3.435E-01	5.800E-01	3.645E-02	0.086
MN-52	2.378E-01		1.832E-01	3.467E-01	2.867E-02	0.686
MN-54	-2.570E-02		3.862E-02	6.149E-02	5.251E-03	-0.418
CO-56	-1.565E-02		3.925E-02	6.356E-02	5.545E-03	-0.246
CO-57	-1.479E-02		2.655E-02	4.249E-02	2.598E-03	-0.348
CO-58	-7.979E-03		3.718E-02	6.123E-02	5.018E-03	-0.130
FE-59	2.087E-02		1.022E-01	1.707E-01	1.326E-02	0.122
CO-60	-2.782E-03		4.155E-02	6.703E-02	5.751E-03	-0.042
ZN-65	3.442E-02		1.071E-01	1.566E-01	1.040E-02	0.220
GE-68	-1.327E-01		1.246E+00	2.034E+00	1.480E-01	-0.065
AS-73	3.128E-05		8.870E-01	1.491E+00	1.101E-01	0.000
AS-74	2.807E-02		8.568E-02	1.427E-01	8.630E-03	0.197
SE-75	-4.835E-03		4.735E-02	6.935E-02	3.885E-03	-0.070
BR-77	-2.680E-01		7.201E+00	1.178E+01	6.949E-01	-0.023
SR-82	-3.104E-02		3.825E-01	6.095E-01	4.672E-02	-0.051
RB-83	1.743E-03		6.660E-02	1.094E-01	6.454E-03	0.016
RB-84	2.938E-02		6.280E-02	1.087E-01	1.008E-02	0.270
KR-85	2.398E+01		8.414E+00	1.435E+01	8.439E-01	1.672
SR-85	1.215E-01		4.261E-02	7.266E-02	4.274E-03	1.672
RB-86	2.569E-01		7.541E-01	1.278E+00	9.315E-02	0.201
Y-88	-5.829E-03		2.923E-02	4.638E-02	2.670E-03	-0.126
ZR-88	-1.709E-02		2.993E-02	4.819E-02	2.603E-03	-0.355
Y-91	7.053E+00		1.942E+01	3.265E+01	1.994E+00	0.216
NB-94	4.245E-03		3.471E-02	5.649E-02	3.746E-03	0.075
NB-95	5.622E-02		5.065E-02	7.757E-02	5.826E-03	0.725
NB-95M	7.605E-02		1.410E-01	2.035E-01	1.475E-02	0.374
ZR-95	-1.555E-02		7.354E-02	1.162E-01	9.731E-03	-0.134
NB-97	-4.388E-03		1.575E-02	Half-Life too short		
ZR-97	4.727E-01		3.014E-01	Half-Life too short		

Sample ID : G232754001 Acquisition date : 14-JUL-2009 10:44:32

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	-1.213E+00		8.731E+00	1.388E+01	1.998E+00	-0.087
TC-99M	-7.186E+08		7.659E+08	Half-Life too short		
RH-101	-1.054E-03		3.427E-02	5.429E-02	2.842E-03	-0.019
RH-102	-2.612E-02		2.657E-02	4.073E-02	2.345E-03	-0.641
RU-103	-8.257E-03		3.757E-02	6.081E-02	7.698E-03	-0.136
RH-106	2.002E-02		3.127E-01	5.103E-01	6.061E-02	0.039
RU-106	2.002E-02		3.127E-01	5.103E-01	3.101E-02	0.039
AG-108M	-2.232E-02		3.182E-02	5.038E-02	3.079E-03	-0.443
AG-110M	-3.145E-03		3.572E-02	5.746E-02	3.707E-03	-0.055
IN-111	1.996E-01		9.126E-01	1.294E+00	7.084E-02	0.154
IN-113M	-5.894E-03		4.363E-02	7.200E-02	4.185E-03	-0.082
SN-113	-5.894E-03		4.363E-02	7.200E-02	4.185E-03	-0.082
IN-114M	-1.061E-01		2.005E-01	2.750E-01	1.427E-02	-0.386
CD-115	2.771E+00		7.222E+00	1.214E+01	7.184E-01	0.228
SN-117M	-2.933E-02		5.232E-02	8.345E-02	4.346E-03	-0.351
SB-122	-1.388E-01		1.563E+00	2.537E+00	1.522E-01	-0.055
I-123	-6.777E-01		6.564E-01	Half-Life too short		
TE-123M	-1.463E-02		2.834E-02	4.527E-02	2.393E-03	-0.323
I-124	1.271E-01		5.850E-01	8.787E-01	5.323E-02	0.145
SB-124	5.914E-02		6.254E-02	1.205E-01	8.791E-03	0.491
SB-125	-7.543E-02		9.131E-02	1.437E-01	8.374E-03	-0.525
TE-125M	-4.912E+00		9.719E+00	1.575E+01	1.385E+00	-0.312
I-126	4.560E-02		1.703E-01	2.808E-01	1.728E-02	0.162
SB-126	7.391E-02		1.583E-01	2.307E-01	1.586E-02	0.320
SB-127	-2.785E-01		1.116E+00	1.768E+00	1.666E-01	-0.157
XE-127	-5.837E-02		5.013E-02	7.401E-02	3.895E-03	-0.789
I-131	6.332E-02		9.451E-02	1.633E-01	1.014E-02	0.388
TE-132	7.211E-02		5.598E-01	9.052E-01	1.265E-01	0.080
BA-133	5.033E-02		4.318E-02	6.785E-02	7.756E-03	0.742
I-133	9.421E-04		1.145E-03	Half-Life too short		
CS-134	1.317E-01	+	6.651E-02	9.230E-02	7.400E-03	1.427
CS-135	1.565E-01		1.786E-01	2.627E-01	1.962E-02	0.596
I-135	-2.994E+08		1.698E+08	Half-Life too short		
CS-136	-6.774E-02		1.120E-01	1.757E-01	1.430E-02	-0.386
BA-137M	-2.116E-02		3.838E-02	5.791E-02	3.529E-03	-0.365
CS-137	-2.237E-02		4.057E-02	6.122E-02	3.745E-03	-0.365
CE-139	-1.375E-02		3.088E-02	4.942E-02	2.500E-03	-0.278
BA-140	6.234E-02		2.466E-01	4.089E-01	1.331E-01	0.152
LA-140	6.182E-02		6.660E-02	1.163E-01	8.698E-03	0.532
CE-141	5.186E-02		6.450E-02	1.072E-01	6.145E-03	0.484
CE-143	4.011E-04		6.261E-05	Half-Life too short		
CE-144	-2.073E-01		2.149E-01	3.371E-01	4.783E-02	-0.615
PM-144	-6.172E-03		3.387E-02	5.391E-02	3.533E-03	-0.114
PR-144	-4.180E-01		2.294E+00	3.651E+00	2.391E-01	-0.114
PM-146	2.814E-02		4.278E-02	7.324E-02	6.256E-03	0.384
ND-147	-2.171E-01		5.169E-01	8.213E-01	1.115E-01	-0.264
PM-149	2.711E+01		6.131E+01	1.051E+02	1.480E+01	0.258
EU-152	1.031E-01		1.078E-01	1.504E-01	9.529E-03	0.686

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	1.574E-02		8.769E-02	1.277E-01	9.643E-03	0.123
EU-154	-1.443E-02		1.267E-01	2.043E-01	2.130E-02	-0.071
EU-155	2.625E-02		1.105E-01	1.840E-01	1.302E-02	0.143
TB-160	-4.083E-02		1.252E-01	2.027E-01	1.872E-02	-0.201
HO-166M	8.218E-03		6.472E-02	1.053E-01	7.112E-03	0.078
TM-171	1.424E+01		3.323E+01	4.955E+01	3.649E+00	0.287
LU-176	-9.748E-04		2.416E-02	3.947E-02	2.212E-03	-0.025
LU-177	1.497E+00		1.201E+00	1.795E+00	9.501E-02	0.834
LU-177M	4.716E-02		1.911E-01	2.806E-01	1.545E-02	0.168
HF-181	-7.761E-03		3.857E-02	6.263E-02	3.622E-03	-0.124
W-181	4.434E-01	+	5.686E-01	6.720E-01	4.924E-02	0.660
TA-182	1.570E-01		2.184E-01	3.748E-01	2.402E-02	0.419
RE-183	8.126E-02		1.089E-01	1.822E-01	9.347E-03	0.446
RE-184	-1.824E-01		2.359E-01	3.631E-01	1.998E-02	-0.502
OS-185	4.332E-02		4.334E-02	7.507E-02	4.573E-03	0.577
RE-188	5.337E-03		1.760E-01	2.875E-01	1.519E-02	0.019
W-188	-3.140E+00		8.254E+00	1.182E+01	6.610E-01	-0.266
IR-192	-1.047E-02		3.283E-02	5.261E-02	2.964E-03	-0.199
AU-195	3.340E-02		2.458E-01	3.756E-01	2.788E-02	0.089
TL-200	-6.071E-05		1.030E-04	Half-Life too short		
TL-201	3.929E-01		5.638E+00	9.199E+00	4.655E-01	0.043
TL-202	8.667E-02		6.003E-02	1.075E-01	6.042E-03	0.806
HG-203	3.206E-02		4.532E-02	6.863E-02	4.081E-03	0.467
BI-207	1.108E-02		5.624E-02	9.416E-02	7.058E-03	0.118
TL-207	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
PO-209	-2.964E+00		7.275E+00	1.170E+01	1.114E+00	-0.253
BI-210	2.697E+00		4.096E+00	7.010E+00	5.536E-01	0.385
PB-210	2.697E+00		4.096E+00	7.010E+00	5.536E-01	0.385
PO-210	2.697E+00		4.095E+00	7.010E+00	4.794E-01	0.385
PB-211	-9.671E-01		1.201E+00	1.382E+00	8.610E-01	-0.700
BI-212	8.962E-01	+	4.866E-01	6.398E-01	5.518E-02	1.401
PO-215	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
RN-219	-1.213E-01		4.003E-01	6.531E-01	8.790E-02	-0.186
RN-220	-2.386E+00		2.593E+01	4.213E+01	2.515E+00	-0.057
RA-223	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
AC-227	-2.018E-01		3.978E-01	6.197E-01	8.578E-02	-0.326
TH-227	-2.018E-01		3.983E-01	6.197E-01	1.041E-01	-0.326
TH-229	2.370E-01		4.994E-01	8.237E-01	4.291E-02	0.288
PA-231	-6.139E-01		1.626E+00	2.440E+00	3.340E-01	-0.252
TH-231	3.378E-01		7.099E-01	1.067E+00	1.754E-01	0.317
U-231	-2.028E-01		1.006E+00	1.450E+00	1.116E-01	-0.140
PA-233	2.406E-02		5.995E-02	1.026E-01	6.128E-03	0.235
PA-234	-2.120E-01		3.015E-01	4.664E-01	8.847E-02	-0.454
PA-234M	2.432E+00		6.744E+00	1.146E+01	1.262E+00	0.212
U-235	-1.614E-01		2.212E-01	3.461E-01	5.611E-02	-0.466
NP-236	-1.010E-01		8.198E-02	1.271E-01	6.572E-03	-0.795
NP-239	2.369E-02		1.982E-01	3.277E-01	2.070E-02	0.072
AM-241	9.817E-02		1.808E-01	2.731E-01	2.175E-02	0.359

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.908E-03		9.836E-02	1.627E-01	1.147E-02	0.012
CM-247	-2.998E-02		3.735E-02	5.744E-02	3.132E-03	-0.522
CF-249	5.757E-02		3.877E-02	6.922E-02	3.748E-03	0.832
CF-251	-4.365E-02		1.308E-01	2.097E-01	1.071E-02	-0.208

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232754001           *
* Acquisition date  : 14-JUL-2009 10:44:32 Detector SN#     :               *
* Detector ID       : GAM16                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:02.21      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232754001           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.3503E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 12-NOV-2008 16:52:09 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.549E+01	3.497E+00	2.613E-01	1.784E+00
CD-109	3.362E+00	1.026E+00	7.773E-01	5.232E-01
SN-126	3.310E-01	1.010E-01	7.778E-02	5.152E-02
TL-208	5.743E-01	8.123E-02	2.998E-02	4.144E-02
BI-211	4.134E+00	4.884E-01	1.541E-01	2.492E-01
PB-212	1.819E+00	1.629E-01	4.673E-02	8.313E-02
PO-212	1.819E+00	1.629E-01	4.673E-02	8.313E-02
BI-214	1.150E+00	1.645E-01	5.806E-02	8.395E-02
PB-214	1.438E+00	1.851E-01	5.372E-02	9.445E-02
PO-214	1.438E+00	1.851E-01	5.372E-02	9.445E-02
PO-216	1.819E+00	1.629E-01	4.673E-02	8.313E-02
PO-218	1.438E+00	1.851E-01	5.372E-02	9.445E-02
RA-224	5.230E+00	1.060E+00	5.314E-01	5.408E-01
RA-226	1.150E+00	1.645E-01	5.806E-02	8.395E-02
AC-228	1.698E+00	3.361E-01	1.186E-01	1.715E-01
RA-228	1.698E+00	3.361E-01	1.186E-01	1.715E-01
TH-228	1.819E+00	1.629E-01	4.673E-02	8.313E-02
TH-230	1.150E+00	1.645E-01	5.806E-02	8.395E-02
TH-232	1.698E+00	3.361E-01	1.186E-01	1.715E-01
TH-234	1.486E+00	1.882E+00	1.190E+00	9.601E-01
U-234	1.150E+00	1.645E-01	5.806E-02	8.395E-02
NP-237	9.719E-01	3.557E-01	2.182E-01	1.815E-01
U-238	1.486E+00	1.882E+00	1.190E+00	9.601E-01
AM-243	5.143E-01	9.444E-02	4.863E-02	4.818E-02
ANH-511	8.906E-02	6.069E-02	2.322E-02	3.096E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	9.288E-02	2.750E-01	2.418E-01	1.403E-01 NOT IDENT.
NA-22	-4.793E-03	4.446E-02	3.680E-02	2.268E-02 NOT IDENT.

NA-24	1.141E+05	1.962E+05	0.000E+00	1.001E+05	SHORT HLIF
AL-26	1.860E-02	1.851E-02	1.931E-02	9.445E-03	NOT IDENT.
TI-44	4.569E-01	5.766E-02	4.677E-02	2.942E-02	FAIL ABUN
SC-46	2.384E-03	3.597E-02	3.112E-02	1.835E-02	FAIL ABUN
V-48	-3.724E-02	6.610E-02	5.370E-02	3.373E-02	NOT IDENT.
CR-51	4.986E-02	3.366E-01	2.991E-01	1.717E-01	NOT IDENT.
MN-52	2.378E-01	1.795E-01	1.739E-01	9.158E-02	NOT IDENT.
MN-54	-2.570E-02	3.785E-02	3.116E-02	1.931E-02	NOT IDENT.
CO-56	-1.565E-02	3.847E-02	3.220E-02	1.963E-02	FAIL ABUN
CO-57	-1.479E-02	2.602E-02	2.229E-02	1.328E-02	NOT IDENT.
CO-58	-7.979E-03	3.644E-02	3.105E-02	1.859E-02	NOT IDENT.
FE-59	2.087E-02	1.002E-01	8.607E-02	5.111E-02	NOT IDENT.
CO-60	-2.782E-03	4.072E-02	3.367E-02	2.077E-02	NOT IDENT.
ZN-65	3.442E-02	1.049E-01	7.891E-02	5.353E-02	NOT IDENT.
GE-68	-1.327E-01	1.221E+00	1.026E+00	6.231E-01	NOT IDENT.
AS-73	3.128E-05	8.693E-01	7.931E-01	4.435E-01	NOT IDENT.
AS-74	2.807E-02	8.397E-02	7.274E-02	4.284E-02	NOT IDENT.
SE-75	-4.835E-03	4.640E-02	3.589E-02	2.367E-02	NOT IDENT.
BR-77	-2.680E-01	7.057E+00	6.020E+00	3.600E+00	FAIL ABUN
SR-82	-3.104E-02	3.749E-01	3.093E-01	1.913E-01	NOT IDENT.
RB-83	1.743E-03	6.527E-02	5.592E-02	3.330E-02	NOT IDENT.
RB-84	2.938E-02	6.155E-02	5.502E-02	3.140E-02	NOT IDENT.
KR-85	2.398E+01	8.246E+00	7.335E+00	4.207E+00	NOT IDENT.
SR-85	1.215E-01	4.176E-02	3.715E-02	2.131E-02	NOT IDENT.
RB-86	2.569E-01	7.390E-01	6.445E-01	3.770E-01	NOT IDENT.
Y-88	-5.829E-03	2.864E-02	2.315E-02	1.461E-02	NOT IDENT.
ZR-88	-1.709E-02	2.934E-02	2.476E-02	1.497E-02	NOT IDENT.
Y-91	7.053E+00	1.903E+01	1.643E+01	9.708E+00	NOT IDENT.
NB-94	4.245E-03	3.402E-02	2.871E-02	1.736E-02	NOT IDENT.
NB-95	5.622E-02	4.964E-02	3.937E-02	2.533E-02	NOT IDENT.
NB-95M	7.605E-02	1.381E-01	1.055E-01	7.048E-02	NOT IDENT.
ZR-95	-1.555E-02	7.207E-02	5.897E-02	3.677E-02	NOT IDENT.
NB-97	-4.388E+03	3.086E+04	0.000E+00	1.575E+04	SHORT HLIF
ZR-97	4.727E+05	5.908E+05	0.000E+00	3.014E+05	SHORT HLIF
MO-99	-1.213E+00	8.557E+00	7.051E+00	4.366E+00	NOT IDENT.
TC-99M	-7.186E+14	1.501E+15	0.000E+00	7.659E+14	SHORT HLIF
RH-101	-1.054E-03	3.359E-02	2.824E-02	1.714E-02	NOT IDENT.
RH-102	-2.612E-02	2.604E-02	2.085E-02	1.328E-02	NOT IDENT.
RU-103	-8.257E-03	3.682E-02	3.111E-02	1.878E-02	FAIL ABUN
RH-106	2.002E-02	3.065E-01	2.600E-01	1.564E-01	FAIL ABUN
RU-106	2.002E-02	3.065E-01	2.600E-01	1.564E-01	FAIL ABUN
AG-108M	-2.232E-02	3.119E-02	2.584E-02	1.591E-02	NOT IDENT.
AG-110M	-3.145E-03	3.500E-02	2.925E-02	1.786E-02	NOT IDENT.
IN-111	1.996E-01	8.943E-01	6.707E-01	4.563E-01	NOT IDENT.
IN-113M	-5.894E-03	4.276E-02	3.700E-02	2.181E-02	NOT IDENT.
SN-113	-5.894E-03	4.276E-02	3.700E-02	2.181E-02	NOT IDENT.
IN-114M	-1.061E-01	1.965E-01	1.432E-01	1.002E-01	NOT IDENT.
CD-115	2.771E+00	7.078E+00	6.202E+00	3.611E+00	NOT IDENT.
SN-117M	-2.933E-02	5.127E-02	4.358E-02	2.616E-02	NOT IDENT.
SB-122	-1.388E-01	1.531E+00	1.295E+00	7.813E-01	NOT IDENT.
I-123	-6.777E+05	1.286E+06	0.000E+00	6.564E+05	SHORT HLIF
TE-123M	-1.463E-02	2.777E-02	2.364E-02	1.417E-02	NOT IDENT.
I-124	1.271E-01	5.733E-01	4.480E-01	2.925E-01	FAIL ABUN
SB-124	5.914E-02	6.129E-02	6.027E-02	3.127E-02	FAIL ABUN
SB-125	-7.543E-02	8.949E-02	7.374E-02	4.566E-02	FAIL ABUN
TE-125M	-4.912E+00	9.524E+00	8.280E+00	4.859E+00	NOT IDENT.
I-126	4.560E-02	1.668E-01	1.429E-01	8.513E-02	NOT IDENT.
SB-126	7.391E-02	1.552E-01	1.172E-01	7.917E-02	FAIL ABUN
SB-127	-2.785E-01	1.094E+00	8.994E-01	5.581E-01	NOT IDENT.
XE-127	-5.837E-02	4.913E-02	3.848E-02	2.506E-02	NOT IDENT.
I-131	6.332E-02	9.262E-02	8.403E-02	4.726E-02	NOT IDENT.
TE-132	7.211E-02	5.486E-01	4.696E-01	2.799E-01	NOT IDENT.
BA-133	5.033E-02	4.231E-02	3.492E-02	2.159E-02	FAIL ABUN
I-133	9.421E+02	2.245E+03	0.000E+00	1.145E+03	SHORT HLIF
CS-134	1.317E-01	6.518E-02	4.681E-02	3.326E-02	FAIL ABUN
CS-135	1.565E-01	1.750E-01	1.359E-01	8.930E-02	NOT IDENT.
I-135	-2.994E+14	3.328E+14	0.000E+00	1.698E+14	SHORT HLIF
CS-136	-6.774E-02	1.098E-01	8.866E-02	5.601E-02	FAIL ABUN
BA-137M	-2.116E-02	3.762E-02	2.947E-02	1.919E-02	NOT IDENT.
CS-137	-2.237E-02	3.976E-02	3.115E-02	2.029E-02	NOT IDENT.
CE-139	-1.375E-02	3.026E-02	2.579E-02	1.544E-02	NOT IDENT.
BA-140	6.234E-02	2.416E-01	2.089E-01	1.233E-01	NOT IDENT.
LA-140	6.182E-02	6.527E-02	5.819E-02	3.330E-02	FAIL ABUN
CE-141	5.186E-02	6.321E-02	5.604E-02	3.225E-02	NOT IDENT.
CE-143	4.011E+02	1.227E+02	0.000E+00	6.261E+01	SHORT HLIF
CE-144	-2.073E-01	2.106E-01	1.766E-01	1.075E-01	NOT IDENT.
PM-144	-6.172E-03	3.319E-02	2.741E-02	1.694E-02	NOT IDENT.
PR-144	-4.180E-01	2.248E+00	1.856E+00	1.147E+00	NOT IDENT.

PM-146	2.814E-02	4.193E-02	3.753E-02	2.139E-02	NOT IDENT.
ND-147	-2.171E-01	5.066E-01	4.197E-01	2.585E-01	FAIL ABUN
PM-149	2.711E+01	6.009E+01	5.430E+01	3.066E+01	NOT IDENT.
EU-152	1.031E-01	1.056E-01	7.749E-02	5.389E-02	FAIL ABUN
GD-153	1.574E-02	8.594E-02	6.726E-02	4.384E-02	NOT IDENT.
EU-154	-1.443E-02	1.242E-01	1.027E-01	6.335E-02	NOT IDENT.
EU-155	2.625E-02	1.083E-01	9.676E-02	5.525E-02	FAIL ABUN
TB-160	-4.083E-02	1.227E-01	1.026E-01	6.259E-02	FAIL ABUN
HO-166M	8.218E-03	6.343E-02	5.351E-02	3.236E-02	FAIL ABUN
TM-171	1.424E+01	3.256E+01	2.626E+01	1.661E+01	NOT IDENT.
LU-176	-9.748E-04	2.368E-02	2.037E-02	1.208E-02	FAIL ABUN
LU-177	1.497E+00	1.177E+00	9.327E-01	6.005E-01	NOT IDENT.
LU-177M	4.716E-02	1.873E-01	1.440E-01	9.557E-02	NOT IDENT.
HF-181	-7.761E-03	3.780E-02	3.206E-02	1.929E-02	FAIL ABUN
W-181	4.434E-01	5.572E-01	3.563E-01	2.843E-01	FAIL ABUN
TA-182	1.570E-01	2.140E-01	1.885E-01	1.092E-01	FAIL ABUN
RE-183	8.126E-02	1.067E-01	9.512E-02	5.444E-02	FAIL ABUN
RE-184	-1.824E-01	2.312E-01	1.880E-01	1.179E-01	NOT IDENT.
OS-185	4.332E-02	4.247E-02	3.822E-02	2.167E-02	NOT IDENT.
RE-188	5.337E-03	1.725E-01	1.502E-01	8.800E-02	NOT IDENT.
W-188	-3.140E+00	8.089E+00	6.106E+00	4.127E+00	FAIL ABUN
IR-192	-1.047E-02	3.217E-02	2.714E-02	1.641E-02	FAIL ABUN
AU-195	3.340E-02	2.409E-01	1.978E-01	1.229E-01	FAIL ABUN
TL-200	-6.071E+01	2.018E+02	0.000E+00	1.030E+02	SHORT HLIF
TL-201	3.929E-01	5.526E+00	4.799E+00	2.819E+00	NOT IDENT.
TL-202	8.667E-02	5.883E-02	5.511E-02	3.002E-02	NOT IDENT.
HG-203	3.206E-02	4.441E-02	3.548E-02	2.266E-02	NOT IDENT.
BI-207	1.108E-02	5.512E-02	4.750E-02	2.812E-02	FAIL ABUN
TL-207	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
PO-209	-2.964E+00	7.129E+00	5.921E+00	3.637E+00	NOT IDENT.
BI-210	2.697E+00	4.014E+00	3.739E+00	2.048E+00	NOT IDENT.
PB-210	2.697E+00	4.014E+00	3.739E+00	2.048E+00	NOT IDENT.
PO-210	2.697E+00	4.013E+00	3.739E+00	2.047E+00	NOT IDENT.
PB-211	-9.671E-01	1.177E+00	7.096E-01	6.003E-01	NOT IDENT.
BI-212	8.962E-01	4.768E-01	3.250E-01	2.433E-01	FAIL ABUN
PO-215	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
RN-219	-1.213E-01	3.923E-01	3.354E-01	2.002E-01	FAIL ABUN
RN-220	-2.386E+00	2.541E+01	2.151E+01	1.296E+01	NOT IDENT.
RA-223	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
AC-227	-2.018E-01	3.898E-01	3.208E-01	1.989E-01	FAIL ABUN
TH-227	-2.018E-01	3.903E-01	3.208E-01	1.991E-01	FAIL ABUN
TH-229	2.370E-01	4.894E-01	4.286E-01	2.497E-01	FAIL ABUN
PA-231	-6.139E-01	1.593E+00	1.261E+00	8.128E-01	FAIL ABUN
TH-231	3.378E-01	6.957E-01	5.499E-01	3.550E-01	FAIL ABUN
U-231	-2.028E-01	9.859E-01	7.640E-01	5.030E-01	FAIL ABUN
PA-233	2.406E-02	5.875E-02	5.291E-02	2.998E-02	FAIL ABUN
PA-234	-2.120E-01	2.955E-01	2.358E-01	1.508E-01	FAIL ABUN
PA-234M	2.432E+00	6.609E+00	5.790E+00	3.372E+00	NOT IDENT.
U-235	-1.614E-01	2.168E-01	1.811E-01	1.106E-01	FAIL ABUN
NP-236	-1.010E-01	8.034E-02	6.635E-02	4.099E-02	FAIL ABUN
NP-239	2.369E-02	1.943E-01	1.721E-01	9.911E-02	FAIL ABUN
AM-241	9.817E-02	1.772E-01	1.450E-01	9.038E-02	NOT IDENT.
CM-243	1.908E-03	9.640E-02	8.557E-02	4.918E-02	FAIL ABUN
CM-247	-2.998E-02	3.660E-02	2.950E-02	1.867E-02	FAIL ABUN
CF-249	5.757E-02	3.800E-02	3.557E-02	1.939E-02	NOT IDENT.
CF-251	-4.365E-02	1.282E-01	1.093E-01	6.539E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	390.2813
46.50	390.2813
46.50	390.2813
48.70	415.4137
49.72	428.8843
51.35	395.4747
52.39	409.8728
52.97	402.9661
53.15	398.5188
53.44	400.5423
54.07	397.3041
56.28	441.0196
56.28	441.0214
57.37	0.0000
57.53	447.1777
57.53	447.1786
57.60	444.0708
57.98	436.0942
57.98	436.0942
59.32	401.8176
59.32	401.8176
59.40	401.8682
59.54	431.5127
59.72	434.5921
60.01	434.7903
61.10	438.4943
61.14	463.7067
61.30	463.8223
63.00	505.1523
63.29	513.7359
63.29	513.7359
63.58	513.9632
64.28	558.2360
65.12	585.7700
65.20	585.8396
65.20	585.8396
66.05	517.9246
66.72	515.4470
66.83	515.5333
66.91	524.5612
67.20	524.7840
67.20	524.7840
67.75	557.3768
67.85	557.4586
68.90	539.5759
68.90	539.5759
69.30	534.2641
69.67	547.6805
70.82	595.1698
70.82	595.1698
70.83	595.1794
72.80	529.0151
72.87	529.0665
72.87	529.0665
74.67	556.2678
74.81	556.3757
74.81	556.3757
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74.97	556.4969
75.28	556.7352
75.70	557.0542
77.11	558.1237
77.11	558.1237
77.11	558.1237

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77.11	558.1237
77.11	558.1237
78.38	559.0786
79.62	573.5030
79.80	573.6387
79.80	573.6387
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80.18	627.2112
80.30	627.3093
80.30	627.3093
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81.07	685.8627
81.07	685.8627
81.07	685.8627
81.07	685.8627
82.60	577.7850
83.37	580.9055
83.78	583.7632
83.78	583.7632
83.78	583.7632
83.78	583.7632
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84.40	574.0242
84.90	586.6440
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86.54	623.1669
86.59	623.2065
86.72	660.1566
86.79	660.2117
86.94	671.0873
87.30	692.9005
87.30	692.9005
87.30	692.9005
87.30	692.9005
87.30	692.9005
87.30	692.9005
87.57	700.8188
87.88	685.7168
88.03	685.8447
88.36	484.5951
88.47	484.6624
89.95	894.0298
91.11	621.3102
92.29	363.2732
92.38	363.3134
92.38	363.3134
93.35	411.7220
94.00	376.4156
94.67	389.1166
94.67	389.1190
94.90	412.4867
94.90	412.4867
94.90	412.4867
94.90	412.4867
95.87	461.0896
95.87	461.0896
96.73	432.0317
97.43	390.3920
98.44	393.9659
98.44	393.9675
98.88	410.2674
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99.55	398.7076
99.86	382.1381
100.00	382.1994
100.10	382.2458
103.18	456.0043
103.76	417.1353
105.00	395.1643
105.31	420.8044
108.00	455.5113
109.28	471.9140
111.00	419.4975
111.00	419.4975

111.76	438.6106
112.95	455.9863
115.19	445.1770
116.30	443.7124
117.00	414.2369
117.00	414.2369
117.66	427.4460
121.11	384.0806
121.62	410.2333
121.78	412.2958
122.06	412.4139
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122.32	433.4984
122.32	433.4984
122.32	433.4984
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131.20	405.1038
133.02	475.4738
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135.34	373.3383
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136.25	378.7252
136.48	381.8465
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140.51	0.0000
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142.65	422.7730
143.76	430.3452
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144.24	417.2722
144.24	417.2722
144.24	417.2722
145.22	385.9913
145.44	385.0479
147.16	426.5698
152.43	382.3393
152.70	389.6264
153.22	410.3759
154.21	389.1146
154.21	389.1146
154.21	389.1146
154.21	389.1146
155.03	405.8796
156.02	404.1693
158.56	386.4636
159.00	0.0000
159.00	378.3394
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161.27	373.9007
162.32	344.1709
162.64	340.1168
163.35	349.6601
163.89	366.4295
165.85	400.3093
167.43	389.3855
171.28	389.5851
171.86	386.6380
172.10	386.7143
176.55	373.4317
176.60	373.4453
181.06	341.9355
184.41	383.3729
185.71	351.6424
186.00	323.3997
190.27	339.3164
192.34	314.3645
193.63	309.3585
197.04	361.3177
198.01	333.8496
198.60	339.3307
200.40	330.1725
201.83	377.5860
202.84	396.3723
205.31	331.1557
208.36	380.0434
208.81	388.7686

209.75	356.1093
209.75	356.1093
210.97	332.5174
215.65	330.1745
216.55	310.1214
218.09	334.4231
222.10	310.4014
223.80	296.6422
226.40	298.2618
227.00	280.9612
227.08	289.6894
227.20	289.7138
228.16	308.4301
228.18	308.4344
228.18	308.4344
231.56	0.0000
235.69	317.2339
236.00	313.7941
236.00	313.7941
238.60	290.8506
238.63	290.8567
238.63	290.8567
238.63	290.8567
239.00	290.9274
240.98	291.3095
241.98	291.5016
241.98	291.5016
241.98	291.5016
244.69	241.5495
245.39	259.2992
247.94	228.2191
248.90	260.7736
249.79	279.7184
252.40	254.7158
252.85	268.0829
252.85	268.0829
254.15	0.0000
256.20	273.0939
256.20	273.0939
260.50	247.1180
260.90	242.7286
262.80	255.2769
264.65	233.6218
268.24	225.4896
268.79	234.5175
269.46	232.8225
269.46	232.8225
269.46	232.8225
269.46	232.8225
271.23	233.0764
273.65	246.8857
276.40	247.2952
277.35	231.6903
277.60	235.0995
277.60	235.0995
278.00	224.0304
278.60	226.6106
279.20	228.1948
279.53	219.2287
280.46	207.3313
281.68	240.5599
283.67	233.5318
284.30	228.1346
285.00	219.9416
285.90	213.4285
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286.10	226.1139
287.40	213.6157
288.45	0.0000
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290.80	249.4101
291.72	231.3957
293.26	0.0000
293.70	234.6917
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295.21	240.9553
295.21	240.9553
295.96	227.4170

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298.57	154.8739
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299.80	188.4118
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300.09	179.3239
300.09	179.3239
300.10	179.3239
300.12	179.3263
301.29	203.7780
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303.76	197.9728
303.91	197.9887
304.40	193.4740
304.40	193.4740
304.84	179.8064
306.84	199.3337
308.46	185.9760
311.98	178.9968
316.51	184.9656
318.01	188.8042
319.02	192.5928
319.41	185.2601
320.08	187.1728
323.87	180.1679
323.87	180.1679
323.87	180.1679
323.87	180.1679
325.23	212.6602
328.77	195.4660
333.44	125.3727
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334.20	170.3286
334.30	170.3375
338.28	156.4192
338.28	156.4192
338.28	156.4192
338.28	156.4192
338.32	156.4213
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338.32	156.4213
340.50	177.1091
340.57	177.1138
344.27	128.4229
345.85	142.0807
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351.92	156.5910
351.92	156.5910
351.92	156.5910
355.39	0.0000
356.01	123.7172
364.48	133.0533
366.43	156.7983
367.43	162.5455
367.94	0.0000
369.80	158.9520
374.96	162.2016
383.85	163.8577
387.95	134.5903
388.63	136.5430
391.69	168.2979
391.69	168.2979
392.90	174.1353
398.62	152.5406
400.65	146.9245
401.10	161.3637
401.81	164.2994
402.60	177.2824
404.84	173.1907
410.95	154.3828
411.60	152.8210
413.65	143.3032
414.70	140.1501
415.30	145.0232
415.76	136.9958
417.63	0.0000

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423.70	135.8711
427.08	164.2654
427.89	163.3529
432.53	132.5120
433.93	151.1174
439.47	101.6437
439.56	101.6476
439.89	106.5504
443.98	129.2640
444.90	126.3765
445.03	126.3844
445.03	126.3844
445.03	126.3844
445.03	126.3844
453.90	125.8859
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473.00	115.0116
475.06	126.0249
475.35	121.0781
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477.96	100.3453
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511.85	120.8687
511.85	120.8687
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513.99	107.5286
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520.65	114.2111
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528.96	0.0000
529.64	102.4400
529.87	0.0000
531.02	121.7754
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546.56	0.0000
549.76	114.4691
552.65	121.7542
555.20	98.3156
563.23	120.1792
563.90	124.3204
568.70	111.1588
569.32	121.4801
569.50	130.7548
569.67	130.7610
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574.00	113.4375
574.64	118.6218
578.91	137.7441
579.30	0.0000
583.14	115.5379
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591.81	108.4019
592.07	108.9888
593.00	123.5613
595.88	101.8592
600.56	127.0158
602.52	0.0000
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602.71	108.6547
603.60	109.4348
604.41	116.4158
604.70	116.4267
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609.31	121.8363
609.31	121.8363

609.31	121.8363
610.33	127.1025
612.46	101.0610
614.37	101.1295
618.01	118.3658
621.84	98.5921
621.84	98.5921
631.29	93.6521
633.02	97.9179
633.10	97.9202
634.78	95.8699
635.90	100.1211
636.97	106.4840
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646.12	87.7761
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661.65	117.9944
664.57	0.0000
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666.33	99.0123
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695.00	88.1120
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696.49	99.9795
697.00	104.2963
697.49	102.1621
698.33	105.4146
698.50	100.0431
699.00	98.9831
702.63	105.5582
706.10	97.0466
706.58	0.0000
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711.68	104.7794
713.82	100.5245
717.42	112.5414
720.50	90.2629
721.93	0.0000
722.20	102.9542
722.78	99.3585
722.78	99.3585
722.89	99.3630
722.95	99.3652
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752.31	91.8709
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755.35	95.2391
756.15	97.4524
756.87	94.1885
763.93	91.4591
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768.36	119.7856
768.36	119.7856
768.36	119.7856
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778.89	90.9434
783.80	73.5954

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795.84	60.1371
796.30	60.1450
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818.51	80.8350
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826.30	82.8744
828.27	0.0000
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831.96	84.8719
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836.80	0.0000
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867.82	62.1637
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873.19	60.3672
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875.33	0.0000
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879.36	65.1915
880.27	64.2633
880.51	57.6517
881.50	57.6665
883.24	60.5299
884.67	62.4457
889.25	65.3641
896.60	75.9326
898.02	70.2633
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903.28	73.0234
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911.07	89.8315
911.07	89.8315
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926.50	78.4399
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934.06	55.5892
934.06	55.5892
934.06	55.5892
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944.10	76.8717
946.00	78.8319
949.00	70.2331
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964.01	64.5652
966.15	54.1099
968.20	54.1372
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969.11	54.1497
969.11	54.1497
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980.50	57.2115
983.50	74.7222
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996.32	80.7980
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1001.68	61.4081
1004.76	77.0616
1021.30	0.0000
1024.50	0.0000
1034.80	72.7083
1037.82	68.8265
1038.57	76.7051

1038.76	0.0000
1045.16	64.0214
1046.59	68.9689
1048.07	88.7036
1050.47	78.8932
1050.47	78.8932
1063.62	74.1913
1076.63	61.5156
1077.35	67.4798
1085.78	63.6328
1099.22	84.7717
1112.02	72.0146
1112.84	63.4544
1115.52	75.5022
1120.29	76.1577
1120.29	76.1577
1120.29	76.1577
1120.29	76.1577
1120.51	76.1608
1121.28	68.7277
1124.00	0.0000
1129.67	80.7337
1131.51	0.0000
1147.95	0.0000
1167.94	70.8830
1173.22	85.1587
1175.09	82.1503
1177.93	75.0960
1189.05	88.5010
1204.90	77.5710
1205.75	0.0000
1213.00	95.0851
1221.42	87.0614
1230.97	95.1647
1235.34	100.3742
1236.41	0.0000
1238.11	79.2868
1238.11	79.2868
1238.11	79.2868
1238.11	79.2868
1238.25	79.2899
1246.25	58.2426
1260.41	0.0000
1271.85	56.9224
1274.45	62.1289
1274.54	62.1313
1291.56	52.9922
1298.22	0.0000
1312.09	52.1667
1325.50	52.3051
1325.50	52.3051
1332.49	48.1881
1333.61	50.2930
1360.21	30.5435
1362.66	0.0000
1365.15	40.0596
1368.21	32.7004
1368.53	0.0000
1376.25	30.7888
1377.67	32.6087
1377.67	32.6087
1377.67	32.6087
1377.67	32.6087
1384.27	36.2779
1394.10	31.8018
1395.20	29.6885
1407.95	35.0732
1434.06	16.0205
1436.60	27.7816
1457.56	0.0000
1460.81	27.9064
1489.15	26.9714
1509.49	24.9036
1596.49	9.8939
1620.62	14.1922
1678.03	0.0000
1691.02	8.6155
1691.02	8.6155

1706.46	0.0000
1750.46	0.0000
1764.49	10.6551
1764.49	10.6551
1764.49	10.6551
1764.49	10.6551
1770.23	10.1799
1771.40	73.6966
1791.20	0.0000
1808.65	2.9261
1836.01	13.7129

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232754001

Total Uranium Activity	4.3464E+00	ug/g
Total Uranium Counting Unc.	5.5993E+00	ug/g
Total Uranium Tpu	2.8568E-06	ug/g
Total Uranium Mda	3.5402E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID     : 882713                    SAMPLE ID  : G232754001        *
*   ANALYST      : MXR1                      DETECTOR   : GAM16             *
*   SAMPLE DATE  : 30-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 10:44:32.05   SAMPLE ALQT:  135.030 GRAM     *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 1.062E+01
GROSS GAMMA ERROR (pCi/GRAM) : 1.600E+00
GROSS GAMMA MDA (pCi/GRAM) : 4.298E+00
GROSS GAMMA DLC (pCi/GRAM) : 2.094E+00

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:57.71

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754002.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:45:14
Sample ID         : G232754002           Sample quantity  : 1.33250E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.93  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	2	74.91*	481	539	1.15	148.94	143	16	6.68E-02	9.4	1.17E+00
2	2	77.15	680	545	1.19	153.41	143	16	9.44E-02	7.1	
3	0	84.13*	91	605	1.23	167.38	163	9	1.26E-02	50.7	
4	0	87.22	193	566	1.08	173.54	171	7	2.69E-02	21.5	
5	4	90.11	140	323	1.00	179.33	177	12	1.94E-02	19.6	1.65E+00
6	4	92.91*	215	547	1.26	184.93	177	12	2.98E-02	21.3	
7	0	128.90*	103	411	1.60	256.88	254	8	1.43E-02	35.8	
8	0	186.04*	263	442	1.15	371.12	367	10	3.65E-02	16.8	
9	0	209.35	229	350	1.21	417.73	413	10	3.18E-02	16.7	
10	3	238.74*	1842	271	1.23	476.48	469	21	2.56E-01	2.8	1.64E+00
11	3	241.70*	470	342	1.77	482.40	469	21	6.53E-02	11.4	
12	0	270.59	124	301	1.38	540.15	536	9	1.72E-02	27.0	
13	2	295.34*	610	178	1.40	589.65	581	24	8.47E-02	5.7	1.77E+00
14	2	300.22	159	170	1.72	599.40	581	24	2.21E-02	18.9	
15	0	327.90	66	237	1.07	654.75	651	9	9.21E-03	43.4	
16	0	338.33*	421	296	1.44	675.60	669	13	5.84E-02	9.8	
17	0	352.02*	1013	259	1.42	702.97	695	15	1.41E-01	4.8	
18	0	409.35	68	182	1.39	817.60	813	10	9.51E-03	38.6	
19	0	463.01	100	187	1.69	924.88	920	12	1.39E-02	29.4	
20	0	511.13*	77	232	1.72	1021.09	1015	13	1.06E-02	50.1	
21	0	583.47*	601	238	1.43	1165.73	1158	16	8.35E-02	7.1	
22	0	609.50*	749	165	1.55	1217.77	1211	15	1.04E-01	5.4	
23	0	727.82	166	107	0.90	1454.35	1448	13	2.30E-02	15.2	
24	0	769.05	49	193	1.17	1536.81	1530	14	6.85E-03	61.4	
25	0	795.42	72	90	2.41	1589.53	1583	11	9.96E-03	28.3	
26	0	835.60	47	99	1.66	1669.88	1662	12	6.56E-03	44.6	
27	0	861.21	81	106	1.97	1721.08	1714	13	1.13E-02	28.5	
28	0	911.51*	479	91	1.96	1821.67	1812	17	6.65E-02	6.6	
29	2	965.17	77	92	2.55	1928.96	1920	36	1.07E-02	30.4	1.66E+00
30	2	969.47*	287	65	2.08	1937.56	1920	36	3.99E-02	8.4	
31	0	1120.47*	193	80	1.95	2239.51	2232	16	2.68E-02	12.9	
32	0	1378.05	83	24	2.65	2754.60	2747	14	1.15E-02	16.8	
33	0	1461.31*	2633	60	2.17	2921.10	2909	24	3.66E-01	2.1	
34	0	1588.51*	51	39	2.28	3175.49	3166	18	7.14E-03	32.6	
35	0	1665.65	14	23	2.57	3329.77	3316	19	2.01E-03	84.7	
36	0	1765.23*	121	37	2.69	3528.91	3518	19	1.68E-02	15.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 12:46:00

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:45:14
Sample ID : G232754002 Sample quantity : 133.25 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.93 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.673E+01	3.188E+00	4.326E-01	3.283E-02	84.908
MN-54	+	834.83	*	4.598E-02	4.125E-02	4.956E-02	5.076E-03	0.928
CD-109	+	88.03	*	2.323E+00	1.021E+00	1.262E+00	1.167E-01	1.840
SN-126		64.28		1.935E-01	5.624E-01	9.277E-01	1.371E-01	0.209
	+	86.94		9.509E-01	5.679E-01	4.272E-01	1.772E-01	2.226
	+	87.57	*	2.287E-01	1.005E-01	1.255E-01	1.156E-02	1.823
TL-208		277.35		2.535E-01	3.197E-01	5.365E-01	5.634E-02	0.473
	+	510.84		2.319E-01	2.336E-01	1.777E-01	1.890E-02	1.305
	+	583.14	*	5.118E-01	8.342E-02	4.653E-02	3.648E-03	10.998
	+	860.37		6.303E-01	3.662E-01	3.945E-01	4.413E-02	1.598
BI-211		72.87		3.321E+00	3.301E+00	5.082E+00	4.196E-01	0.654
	+	351.07	*	4.048E+00	4.657E-01	2.407E-01	1.545E-02	16.816
PB-212	+	74.81		2.572E+00	5.810E-01	5.382E-01	6.746E-02	4.778
	+	77.11		2.031E+00	3.355E-01	3.011E-01	2.552E-02	6.745
	+	87.30		1.058E+00	4.767E-01	5.825E-01	7.912E-02	1.816
	+	238.63	*	1.713E+00	1.558E-01	7.712E-02	5.509E-03	22.213
	+	300.09		2.199E+00	8.487E-01	9.791E-01	8.039E-02	2.245
PO-212	+	74.81		2.572E+00	5.810E-01	5.382E-01	6.746E-02	4.778
	+	77.11		2.031E+00	3.355E-01	3.011E-01	2.552E-02	6.745
	+	87.30		1.058E+00	4.767E-01	5.825E-01	7.912E-02	1.816
		115.19		2.526E-01	3.184E+00	5.145E+00	3.241E-01	0.049
	+	238.63	*	1.713E+00	1.558E-01	7.712E-02	5.509E-03	22.213
	+	300.09		2.199E+00	8.487E-01	9.791E-01	8.039E-02	2.245
BI-214	+	609.31	*	1.197E+00	1.669E-01	9.064E-02	8.097E-03	13.200
	+	768.36		8.630E-01	1.064E+00	9.782E-01	1.071E-01	0.882
		934.06		1.742E+00	1.003E+00	1.778E+00	2.209E-01	0.980
	+	1120.29		1.540E+00	4.231E-01	3.760E-01	3.600E-02	4.096
		1238.11		9.247E-01	7.554E-01	1.323E+00	1.129E-01	0.699
	+	1377.67		2.867E+00	1.004E+00	1.064E+00	1.043E-01	2.694
	+	1764.49		1.277E+00	4.050E-01	2.678E-01	1.628E-02	4.767
PB-214	+	74.81		4.431E+00	9.687E-01	9.274E-01	1.035E-01	4.778
	+	77.11		3.482E+00	6.334E-01	5.162E-01	5.883E-02	6.745
	+	87.30		1.812E+00	8.084E-01	9.979E-01	1.197E-01	1.816
	+	241.98		2.621E+00	6.347E-01	4.636E-01	3.666E-02	5.655

Sample ID : G232754002 Acquisition date : 14-JUL-2009 10:45:14

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	295.21		1.482E+00	2.099E-01	1.718E-01	1.458E-02	8.624
	+	351.92	*	1.408E+00	1.779E-01	8.389E-02	6.940E-03	16.786
PO-214	+	74.81		4.431E+00	9.687E-01	9.274E-01	1.035E-01	4.778
	+	77.11		3.482E+00	6.334E-01	5.162E-01	5.883E-02	6.745
	+	87.30		1.812E+00	8.084E-01	9.979E-01	1.197E-01	1.816
	+	241.98		2.621E+00	6.347E-01	4.636E-01	3.666E-02	5.655
	+	295.21		1.482E+00	2.099E-01	1.718E-01	1.458E-02	8.624
	+	351.92	*	1.408E+00	1.779E-01	8.389E-02	6.940E-03	16.786
PO-216	+	74.81		2.572E+00	5.810E-01	5.382E-01	6.746E-02	4.778
	+	77.11		2.031E+00	3.355E-01	3.011E-01	2.552E-02	6.745
	+	87.30		1.058E+00	4.767E-01	5.825E-01	7.912E-02	1.816
	+	238.63	*	1.713E+00	1.558E-01	7.712E-02	5.509E-03	22.213
	+	300.09		2.199E+00	8.487E-01	9.791E-01	8.039E-02	2.245
PO-218	+	74.81		4.431E+00	9.687E-01	9.274E-01	1.035E-01	4.778
	+	77.11		3.482E+00	6.334E-01	5.162E-01	5.883E-02	6.745
	+	87.30		1.812E+00	8.084E-01	9.979E-01	1.197E-01	1.816
	+	241.98		2.621E+00	6.347E-01	4.636E-01	3.666E-02	5.655
	+	295.21		1.482E+00	2.099E-01	1.718E-01	1.458E-02	8.624
	+	351.92	*	1.408E+00	1.779E-01	8.389E-02	6.940E-03	16.786
RA-224	+	240.98	*	4.971E+00	1.171E+00	8.766E-01	4.883E-02	5.671
RA-226	+	609.31	*	1.197E+00	1.669E-01	9.064E-02	8.097E-03	13.200
	+	768.36		8.630E-01	1.064E+00	9.782E-01	1.071E-01	0.882
		934.06		1.742E+00	1.003E+00	1.778E+00	2.209E-01	0.980
	+	1120.29		1.540E+00	4.231E-01	3.760E-01	3.600E-02	4.096
		1238.11		9.247E-01	7.554E-01	1.323E+00	1.129E-01	0.699
	+	1377.67		2.867E+00	1.004E+00	1.064E+00	1.043E-01	2.694
	+	1764.49		1.277E+00	4.050E-01	2.678E-01	1.628E-02	4.767
AC-228	+	338.32		1.863E+00	8.433E-01	2.996E-01	1.221E-01	6.219
	+	911.07	*	1.753E+00	3.269E-01	1.659E-01	2.198E-02	10.570
	+	969.11		1.849E+00	5.414E-01	2.933E-01	7.023E-02	6.304
RA-228	+	338.32		1.863E+00	8.433E-01	2.996E-01	1.221E-01	6.219
	+	911.07	*	1.753E+00	3.269E-01	1.659E-01	2.198E-02	10.570
	+	969.11		1.849E+00	5.414E-01	2.933E-01	7.023E-02	6.304
TH-228	+	84.40		3.453E+00	3.530E+00	3.750E+00	5.013E-01	0.921
	+	238.60	*	1.713E+00	1.558E-01	7.711E-02	5.509E-03	22.214
	+	300.10		2.199E+00	1.538E+00	9.791E-01	5.770E-01	2.245
TH-230	+	609.31	*	1.196E+00	1.669E-01	9.064E-02	8.097E-03	13.200
	+	768.36		8.630E-01	1.064E+00	9.782E-01	1.071E-01	0.882
		934.06		1.742E+00	1.003E+00	1.778E+00	2.208E-01	0.980
	+	1120.29		1.540E+00	4.231E-01	3.760E-01	3.600E-02	4.096
		1238.11		9.247E-01	7.554E-01	1.323E+00	1.129E-01	0.699
	+	1377.67		2.867E+00	1.004E+00	1.064E+00	1.043E-01	2.694
	+	1764.49		1.277E+00	4.050E-01	2.678E-01	1.628E-02	4.767
TH-232	+	338.32		1.863E+00	3.819E-01	2.996E-01	1.733E-02	6.219
	+	911.07	*	1.753E+00	3.269E-01	1.659E-01	2.198E-02	10.570
	+	969.11		1.849E+00	5.414E-01	2.933E-01	7.023E-02	6.304
U-234	+	609.31	*	1.196E+00	1.669E-01	9.064E-02	8.097E-03	13.200
	+	768.36		8.630E-01	1.064E+00	9.782E-01	1.071E-01	0.882
		934.06		1.742E+00	1.003E+00	1.778E+00	2.208E-01	0.980

Sample ID : G232754002 Acquisition date : 14-JUL-2009 10:45:14

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1120.29		1.540E+00	4.231E-01	3.760E-01	3.600E-02	4.096
		1238.11		9.247E-01	7.554E-01	1.323E+00	1.129E-01	0.699
	+	1377.67		2.867E+00	1.004E+00	1.064E+00	1.043E-01	2.694
	+	1764.49		1.277E+00	4.050E-01	2.678E-01	1.628E-02	4.767
NP-237	+	86.50	*	6.717E-01	3.260E-01	3.037E-01	6.853E-02	2.211
		95.87		-3.304E-01	9.682E-01	1.380E+00	3.371E-01	-0.239
AM-243	+	74.67	*	4.169E-01	8.576E-02	8.760E-02	7.310E-03	4.760
	+	86.72		2.519E+01	1.107E+01	1.135E+01	1.038E+00	2.219
		117.66		1.839E+00	3.432E+00	5.634E+00	3.465E-01	0.326
		142.18		2.538E-01	1.582E+01	2.513E+01	1.384E+00	0.010
ANH-511	+	511.00	*	5.010E-02	5.029E-02	3.840E-02	2.536E-03	1.305

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.243E-02	2.471E-01	4.054E-01	2.938E-02	-0.055
NA-22		1274.54	*	-2.104E-02	3.683E-02	5.782E-02	3.934E-03	-0.364
NA-24		1368.53	*	4.399E-02	3.683E-02	Half-Life too short		
AL-26		1129.67		1.027E+00	1.532E+00	2.454E+00	1.639E-01	0.418
		1808.65	*	-5.171E-03	2.007E-02	2.963E-02	1.730E-03	-0.175
TI-44		67.85		-1.170E-02	4.798E-02	7.867E-02	6.326E-03	-0.149
	+	78.38	*	3.748E-01	6.191E-02	7.535E-02	6.442E-03	4.974
SC-46		889.25	*	1.860E-02	3.170E-02	5.384E-02	6.005E-03	0.345
	+	1120.51		2.611E-01	6.962E-02	1.031E-01	7.123E-03	2.533
V-48		944.10		-7.513E-01	7.194E-01	1.070E+00	1.133E-01	-0.702
		983.50	*	2.529E-03	5.705E-02	8.570E-02	8.476E-03	0.030
		1312.09		1.787E-02	6.340E-02	1.034E-01	7.529E-03	0.173
CR-51		320.08	*	2.878E-01	3.137E-01	5.265E-01	3.390E-02	0.547
MN-52		744.21		-8.385E-02	1.699E-01	2.732E-01	2.409E-02	-0.307
		848.13		-9.772E-01	4.747E+00	7.679E+00	8.034E-01	-0.127
		935.52		2.525E-01	1.870E-01	3.285E-01	3.524E-02	0.769
		1246.25		-6.249E+00	5.548E+00	8.423E+00	5.416E-01	-0.742
		1333.61		1.348E+00	3.412E+00	5.778E+00	4.365E-01	0.233
		1434.06	*	-1.165E-01	1.660E-01	2.470E-01	1.820E-02	-0.472
CO-56		846.75	*	-2.285E-02	3.317E-02	5.180E-02	5.407E-03	-0.441
		977.42		-8.050E-01	2.719E+00	3.635E+00	3.636E-01	-0.221
		1037.82		1.930E-01	2.566E-01	4.493E-01	4.163E-02	0.429
		1175.09		1.736E+00	1.844E+00	3.230E+00	1.793E-01	0.537
		1238.25		9.025E-02	7.543E-02	1.322E-01	8.813E-03	0.683
		1360.21		-5.505E-01	7.546E-01	1.134E+00	8.525E-02	-0.485
		1771.40		-1.188E-01	2.228E-01	2.766E-01	1.672E-02	-0.429
CO-57		122.06	*	-1.966E-02	2.325E-02	3.600E-02	2.132E-03	-0.546
		136.48		5.495E-02	1.905E-01	3.068E-01	2.008E-02	0.179
CO-58		810.76	*	-1.508E-02	3.320E-02	5.306E-02	5.238E-03	-0.284
FE-59		142.65		5.568E-01	2.423E+00	3.881E+00	2.135E-01	0.143
		192.34		2.037E-02	7.999E-01	1.296E+00	1.502E-01	0.016
		1099.22	*	1.985E-02	7.563E-02	1.281E-01	1.054E-02	0.155
		1291.56		4.972E-02	1.040E-01	1.764E-01	1.483E-02	0.282

Sample ID : G232754002 Acquisition date : 14-JUL-2009 10:45:14

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60		1173.22		2.821E-02	3.890E-02	6.721E-02	3.714E-03	0.420
		1332.49	*	1.455E-03	3.202E-02	5.256E-02	3.971E-03	0.028
ZN-65		1115.52	*	-3.070E-02	8.671E-02	1.191E-01	8.388E-03	-0.258
GE-68		1077.35	*	3.127E-01	1.050E+00	1.785E+00	1.418E-01	0.175
AS-73		53.44	*	4.516E-01	1.037E+00	1.721E+00	1.365E-01	0.262
AS-74		595.88	*	-1.132E-02	7.099E-02	1.137E-01	8.170E-03	-0.100
		634.78		-7.094E-02	2.776E-01	4.388E-01	3.267E-02	-0.162
SE-75		66.05		-2.580E+00	5.172E+00	8.417E+00	8.336E-01	-0.307
		96.73		-8.426E-02	7.876E-01	1.139E+00	1.502E-01	-0.074
		121.11		-4.340E-02	1.236E-01	1.955E-01	1.825E-02	-0.222
		136.00		-4.384E-03	3.567E-02	5.654E-02	3.220E-03	-0.078
		198.60		-1.481E-01	1.522E+00	2.488E+00	1.689E-01	-0.059
		264.65	*	-2.544E-02	3.743E-02	5.703E-02	3.262E-03	-0.446
		279.53		7.600E-02	9.030E-02	1.523E-01	9.407E-03	0.499
		303.91		-6.723E-01	1.860E+00	2.558E+00	2.433E-01	-0.263
		400.65		1.128E-01	2.127E-01	3.641E-01	3.317E-02	0.310
BR-77	+	87.88		3.576E+02	1.571E+02	2.277E+02	2.104E+01	1.570
		200.40		5.497E+01	9.606E+01	1.635E+02	8.806E+00	0.336
	+	239.00		1.956E+02	1.548E+01	2.362E+01	1.314E+00	8.282
		249.79		-1.596E+01	3.821E+01	6.155E+01	3.450E+00	-0.259
		281.68		-7.258E+01	5.489E+01	8.361E+01	4.771E+00	-0.868
		297.23		2.385E+02	4.247E+01	7.666E+01	4.401E+00	3.112
		303.76		-4.244E+01	1.133E+02	1.558E+02	8.962E+00	-0.272
		439.47		6.066E+01	8.263E+01	1.422E+02	8.671E+00	0.426
		484.57		3.936E+01	1.283E+02	2.150E+02	1.380E+01	0.183
		520.65	*	-1.038E+00	5.988E+00	9.702E+00	6.473E-01	-0.107
		574.64		-1.526E+01	1.250E+02	1.958E+02	1.379E+01	-0.078
		578.91		2.144E+01	5.783E+01	8.351E+01	5.904E+00	0.257
		585.48		1.480E+03	1.915E+02	3.245E+02	2.309E+01	4.561
		755.35		-4.020E+01	9.570E+01	1.544E+02	1.388E+01	-0.260
		817.79		-5.029E+01	7.409E+01	1.157E+02	1.153E+01	-0.435
SR-82		698.33		-1.285E+01	2.641E+01	4.283E+01	3.487E+00	-0.300
		776.49	*	9.257E-02	3.369E-01	5.105E-01	4.754E-02	0.181
		1395.20		-4.495E+00	8.909E+00	1.376E+01	1.026E+00	-0.327
RB-83		520.41	*	-1.497E-02	5.483E-02	8.830E-02	5.889E-03	-0.170
		529.64		-3.962E-02	7.934E-02	1.254E-01	8.447E-03	-0.316
		552.65		-2.473E-02	1.605E-01	2.589E-01	1.784E-02	-0.096
RB-84		881.50	*	-7.856E-03	5.360E-02	8.670E-02	9.556E-03	-0.091
KR-85		513.99	*	2.485E+01	7.061E+00	1.208E+01	8.005E-01	2.057
SR-85		513.99	*	1.259E-01	3.576E-02	6.120E-02	4.054E-03	2.057
RB-86		1076.63	*	1.193E-01	6.341E-01	1.071E+00	8.525E-02	0.111
Y-88		898.02		1.023E-02	3.378E-02	5.630E-02	6.382E-03	0.182
		1836.01	*	-2.969E-04	2.762E-02	4.518E-02	2.573E-03	-0.007
ZR-88		392.90	*	4.685E-03	2.409E-02	4.074E-02	2.343E-03	0.115
Y-91		1204.90	*	-8.562E+00	1.585E+01	2.525E+01	1.493E+00	-0.339
NB-94		702.63	*	2.282E-02	2.755E-02	4.797E-02	3.935E-03	0.476
		871.10		-7.880E-03	2.654E-02	4.245E-02	4.604E-03	-0.186
NB-95		765.79	*	6.956E-02	3.964E-02	6.381E-02	5.837E-03	1.090
NB-95M		235.69	*	1.401E-01	1.171E-01	1.791E-01	1.314E-02	0.782

Sample ID : G232754002 Acquisition date : 14-JUL-2009 10:45:14

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95		724.18		1.588E-03	8.805E-02	1.264E-01	1.173E-02	0.013
		756.15	*	4.162E-03	5.577E-02	9.292E-02	9.143E-03	0.045
NB-97		657.90	*	1.027E-02	5.577E-02	Half-Life too short		
		1024.50		1.326E+00	5.577E-02	Half-Life too short		
ZR-97		254.15		-1.228E-02	5.577E-02	Half-Life too short		
		355.39		9.050E-01	5.577E-02	Half-Life too short		
		507.63	*	5.265E-01	5.577E-02	Half-Life too short		
		602.52		-1.817E-01	5.577E-02	Half-Life too short		
		1021.30		1.818E-02	5.577E-02	Half-Life too short		
		1147.95		7.560E-01	5.577E-02	Half-Life too short		
		1362.66		4.430E-01	5.577E-02	Half-Life too short		
		1750.46		8.197E-02	5.577E-02	Half-Life too short		
MO-99		140.51		-1.342E+01	1.887E+01	2.829E+01	7.608E+00	-0.474
		181.06		5.320E-01	1.182E+01	1.755E+01	2.979E+00	0.030
		366.43		-5.233E+00	4.943E+01	8.284E+01	4.785E+00	-0.063
		739.58	*	4.251E+00	6.809E+00	1.171E+01	1.786E+00	0.363
		778.00		-6.807E+00	2.102E+01	3.325E+01	3.105E+00	-0.205
TC-99M		140.51	*	-1.036E+09	2.102E+01	Half-Life too short		
RH-101		127.23		2.985E-02	3.228E-02	4.807E-02	2.777E-03	0.621
		198.01	*	-1.790E-03	2.805E-02	4.593E-02	2.469E-03	-0.039
		325.23		-4.061E-03	2.131E-01	2.988E-01	1.727E-02	-0.014
RH-102		418.52		-2.038E-01	2.216E-01	3.505E-01	2.083E-02	-0.582
		475.06	*	-1.041E-02	2.320E-02	3.729E-02	2.369E-03	-0.279
		631.29		-5.064E-03	4.496E-02	7.183E-02	5.331E-03	-0.071
		697.49		-1.844E-02	6.037E-02	9.899E-02	8.047E-03	-0.186
		766.84		2.442E-01	1.056E-01	1.739E-01	1.594E-02	1.404
		1046.59		-1.765E-03	9.554E-02	1.596E-01	1.377E-02	-0.011
		1112.84		1.814E-01	2.061E-01	3.183E-01	2.260E-02	0.570
RU-103		497.08	*	1.200E-02	3.087E-02	5.186E-02	6.733E-03	0.231
	+	610.33		1.266E+01	2.441E+00	2.337E+00	3.748E-01	5.415
RH-106	+	511.85		2.497E-01	2.506E-01	3.532E-01	2.335E-02	0.707
		621.84	*	-2.789E-01	2.712E-01	4.040E-01	5.083E-02	-0.690
		1050.47		6.704E-01	2.026E+00	3.456E+00	2.953E-01	0.194
RU-106	+	511.85		2.497E-01	2.506E-01	3.532E-01	2.335E-02	0.707
		621.84	*	-2.789E-01	2.697E-01	4.040E-01	2.973E-02	-0.690
		1050.47		6.704E-01	2.026E+00	3.456E+00	2.953E-01	0.194
AG-108M		433.93	*	-6.973E-03	2.645E-02	4.335E-02	2.832E-03	-0.161
		614.37		-8.349E-03	3.520E-02	4.788E-02	3.689E-03	-0.174
		722.95		-5.025E-03	3.786E-02	5.365E-02	4.745E-03	-0.094
AG-110M		657.75	*	1.212E-02	2.657E-02	4.577E-02	3.610E-03	0.265
		677.61		-5.723E-03	2.248E-01	3.758E-01	3.049E-02	-0.015
		706.67		6.804E-02	1.701E-01	2.901E-01	2.469E-02	0.235
		763.93		3.939E-02	1.503E-01	2.192E-01	2.049E-02	0.180
		884.67		-2.792E-02	3.990E-02	6.163E-02	6.959E-03	-0.453
		937.48		-1.480E-02	9.258E-02	1.488E-01	1.629E-02	-0.099
		1384.27		-5.331E-03	1.540E-01	2.123E-01	1.646E-02	-0.025
IN-111		171.28		2.181E-01	6.284E-01	1.072E+00	5.640E-02	0.203
		245.39	*	-7.748E-02	7.142E-01	1.023E+00	5.717E-02	-0.076
IN-113M		391.69	*	-2.774E-02	3.596E-02	5.794E-02	3.554E-03	-0.479

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113		391.69	*	-2.774E-02	3.596E-02	5.794E-02	3.554E-03	-0.479
IN-114M		190.27	*	-6.374E-02	1.680E-01	2.429E-01	1.297E-02	-0.262
CD-115		260.90		2.349E+01	7.501E+01	1.245E+02	7.025E+00	0.189
		492.35		-9.153E+00	1.900E+01	3.031E+01	1.962E+00	-0.302
		527.90	*	1.753E-01	5.837E+00	9.563E+00	6.428E-01	0.018
SN-117M		156.02		-2.215E+00	1.784E+00	2.892E+00	1.544E-01	-0.766
		158.56	*	7.573E-02	4.309E-02	7.692E-02	4.089E-03	0.984
SB-122		563.90	*	1.845E+00	1.267E+00	2.222E+00	1.548E-01	0.830
		692.80		2.022E-01	2.504E+01	4.187E+01	3.375E+00	0.005
I-123		159.00	*	1.256E+00	2.504E+01	Half-Life too short		
		528.96		-3.458E+01	2.504E+01	Half-Life too short		
TE-123M		159.00	*	2.710E-02	2.370E-02	4.159E-02	2.244E-03	0.652
I-124		602.71	*	-1.542E-01	5.532E-01	7.533E-01	5.447E-02	-0.205
		722.78		-1.928E-01	3.271E+00	4.666E+00	3.966E-01	-0.041
		1325.50		1.074E+01	2.387E+01	4.050E+01	3.022E+00	0.265
		1376.25		5.330E+01	2.544E+01	4.334E+01	3.245E+00	1.230
		1509.49		1.350E+01	1.078E+01	1.992E+01	1.427E+00	0.678
		1691.02		7.942E-01	2.650E+00	4.532E+00	2.923E-01	0.175
SB-124		602.71		-1.073E-02	3.851E-02	5.244E-02	3.793E-03	-0.205
		645.85		-1.467E-01	3.910E-01	6.111E-01	4.954E-02	-0.240
		709.31		-8.600E-01	2.150E+00	3.496E+00	2.902E-01	-0.246
		713.82		-9.677E-01	1.247E+00	1.966E+00	2.331E-01	-0.492
		722.78		-1.945E-02	3.300E-01	4.708E-01	4.090E-02	-0.041
	+	968.20		1.878E+01	3.695E+00	6.196E+00	6.300E-01	3.031
		1045.16		-1.834E+00	2.019E+00	3.155E+00	2.732E-01	-0.581
		1325.50		1.158E+00	2.572E+00	4.365E+00	3.257E-01	0.265
		1368.21		4.119E-01	1.312E+00	2.086E+00	2.668E-01	0.198
		1436.60		-1.957E+00	2.892E+00	4.322E+00	3.182E-01	-0.453
		1691.02	*	1.890E-02	6.306E-02	1.079E-01	7.442E-03	0.175
SB-125		427.89	*	1.113E-02	7.127E-02	1.196E-01	7.473E-03	0.093
	+	463.38		5.964E-01	3.537E-01	4.472E-01	3.206E-02	1.334
		600.56		7.814E-02	1.504E-01	2.502E-01	1.993E-02	0.312
		635.90		-1.018E-01	2.186E-01	3.402E-01	2.806E-02	-0.299
TE-125M		109.28	*	4.258E+00	8.245E+00	1.358E+01	1.193E+00	0.314
I-126		388.63		-4.781E-02	1.556E-01	2.571E-01	1.478E-02	-0.186
		666.33	*	7.950E-02	1.297E-01	2.249E-01	1.729E-02	0.353
		753.82		1.884E-01	1.121E+00	1.879E+00	1.685E-01	0.100
SB-126		223.80		1.684E+00	3.033E+00	5.131E+00	2.820E-01	0.328
		278.60		1.888E+00	1.963E+00	3.324E+00	1.894E-01	0.568
	+	296.50		1.382E+01	1.757E+00	2.962E+00	1.700E-01	4.665
		414.70		2.239E-02	6.251E-02	9.305E-02	5.503E-03	0.241
		415.30		1.056E+00	4.961E+00	7.637E+00	4.520E-01	0.138
		555.20		7.931E-01	2.973E+00	4.920E+00	3.399E-01	0.161
		573.80		-4.069E-01	7.996E-01	1.257E+00	8.841E-02	-0.324
		593.00		-2.184E-01	6.947E-01	1.101E+00	7.891E-02	-0.198
		656.30		-1.305E-01	2.411E+00	4.035E+00	3.061E-01	-0.032
		666.33		3.313E-02	5.403E-02	9.374E-02	7.206E-03	0.353
		675.00		-7.734E-01	1.402E+00	2.264E+00	1.768E-01	-0.342
		695.00		5.391E-04	5.684E-02	9.502E-02	7.690E-03	0.006

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		697.00		-3.170E-02	1.958E-01	3.239E-01	2.631E-02	-0.098
		720.50	*	3.334E-02	1.185E-01	1.810E-01	1.533E-02	0.184
		856.80		1.538E-01	4.188E-01	6.098E-01	6.467E-02	0.252
		989.30		-1.450E-01	9.444E-01	1.509E+00	1.476E-01	-0.096
		1034.80		5.682E+00	7.096E+00	1.207E+01	1.072E+00	0.471
		1213.00		-4.521E-01	3.821E+00	6.259E+00	3.763E-01	-0.072
SB-127		61.10		-5.822E+01	5.087E+01	8.109E+01	8.202E+00	-0.718
		252.40		4.483E-01	2.830E+00	4.666E+00	1.933E+00	0.096
		290.80		1.764E+00	1.576E+01	2.253E+01	1.959E+00	0.078
		411.60		7.866E+00	9.382E+00	1.429E+01	2.022E+00	0.551
		444.90		-2.077E-01	6.212E+00	1.029E+01	1.093E+00	-0.020
		473.00		6.984E-01	1.074E+00	1.833E+00	2.040E-01	0.381
		543.00		2.335E-01	1.141E+01	1.863E+01	2.443E+00	0.013
		603.60		1.760E+00	9.043E+00	1.281E+01	1.444E+00	0.137
		685.20	*	-1.192E-01	8.762E-01	1.454E+00	1.532E-01	-0.082
		698.50		-4.994E+00	9.854E+00	1.592E+01	2.440E+00	-0.314
		722.20		-5.414E+00	2.243E+01	3.148E+01	3.374E+00	-0.172
		783.80		2.841E+00	2.200E+00	3.895E+00	4.946E-01	0.730
XE-127		57.60		1.864E+00	6.763E+00	1.144E+01	8.818E-01	0.163
		145.22		-2.856E-01	6.374E-01	9.715E-01	5.310E-02	-0.294
		172.10		-2.032E-02	9.937E-02	1.663E-01	8.754E-03	-0.122
		202.84	*	-1.847E-02	3.803E-02	6.223E-02	3.359E-03	-0.297
		374.96		6.422E-02	1.546E-01	2.649E-01	1.528E-02	0.242
I-131		80.18		-1.098E+00	5.422E+00	6.226E+00	5.422E-01	-0.176
		284.30		-2.216E-01	1.122E+00	1.807E+00	1.149E-01	-0.123
		364.48	*	1.643E-02	8.300E-02	1.412E-01	9.097E-03	0.116
		636.97		-6.565E-01	1.122E+00	1.729E+00	1.384E-01	-0.380
		722.89		-6.155E-01	5.773E+00	8.201E+00	7.010E-01	-0.075
TE-132		49.72		4.949E+00	1.891E+01	3.223E+01	3.185E+00	0.154
		111.76		-9.152E+00	2.074E+01	3.286E+01	2.932E+00	-0.279
		116.30		-6.251E+00	1.957E+01	3.109E+01	2.709E+00	-0.201
		228.16	*	-4.955E-01	4.418E-01	6.872E-01	9.636E-02	-0.721
BA-133		53.15		4.035E-01	4.512E+00	7.399E+00	5.871E-01	0.055
		79.62		4.973E-01	1.712E+00	2.034E+00	3.097E-01	0.245
		81.00		-3.722E-02	1.270E-01	1.446E-01	2.303E-02	-0.257
		276.40		4.439E-01	3.277E-01	5.401E-01	6.976E-02	0.822
		302.84		7.065E-02	1.291E-01	1.891E-01	2.200E-02	0.374
		356.01	*	3.149E-02	3.796E-02	5.606E-02	6.476E-03	0.562
		383.85		-3.145E-02	2.501E-01	4.173E-01	4.526E-02	-0.075
I-133	+	510.53		2.001E-01	2.501E-01	Half-Life too short		
		529.87	*	-1.281E-03	2.501E-01	Half-Life too short		
		706.58		5.802E-02	2.501E-01	Half-Life too short		
		856.28		-1.336E-02	2.501E-01	Half-Life too short		
		875.33		-8.999E-03	2.501E-01	Half-Life too short		
		1236.41		1.764E-01	2.501E-01	Half-Life too short		
		1298.22		1.463E-02	2.501E-01	Half-Life too short		
CS-134		475.35		-7.621E-01	1.517E+00	2.429E+00	1.543E-01	-0.314
		563.23		4.009E-01	2.968E-01	5.179E-01	3.659E-02	0.774
		569.32		-2.270E-02	1.630E-01	2.581E-01	1.845E-02	-0.088

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		604.70		1.900E-02	3.063E-02	4.493E-02	3.267E-03	0.423
	+	795.84	*	8.569E-02	4.917E-02	7.206E-02	6.970E-03	1.189
		801.93		-2.100E-01	3.821E-01	5.592E-01	5.455E-02	-0.376
		1038.57		6.741E-01	3.226E+00	5.473E+00	4.816E-01	0.123
		1167.94		-1.189E+00	2.323E+00	3.727E+00	2.113E-01	-0.319
		1365.15		-4.120E-01	9.358E-01	1.454E+00	1.157E-01	-0.283
CS-135		268.24	*	1.879E-01	1.514E-01	2.312E-01	1.748E-02	0.813
I-135		288.45		3.909E+08	1.514E-01	Half-Life too short		
		417.63		-6.535E+08	1.514E-01	Half-Life too short		
		546.56		-1.301E+08	1.514E-01	Half-Life too short		
	+	836.80		1.303E+09	1.514E-01	Half-Life too short		
		1038.76		1.441E+08	1.514E-01	Half-Life too short		
		1124.00		4.997E+09	1.514E-01	Half-Life too short		
		1131.51		1.325E+08	1.514E-01	Half-Life too short		
		1260.41	*	-1.362E+08	1.514E-01	Half-Life too short		
		1457.56		3.887E+10	1.514E-01	Half-Life too short		
		1678.03		-1.643E+08	1.514E-01	Half-Life too short		
		1706.46		6.058E+08	1.514E-01	Half-Life too short		
		1791.20		6.165E+06	1.514E-01	Half-Life too short		
CS-136		66.91		-2.247E-01	7.675E-01	1.256E+00	1.897E-01	-0.179
	+	86.29		2.807E+00	1.262E+00	1.743E+00	2.297E-01	1.611
		153.22		8.710E-02	5.053E-01	8.629E-01	5.938E-02	0.101
		163.89		6.751E-01	8.232E-01	1.428E+00	9.756E-02	0.473
		176.55		1.175E-01	2.956E-01	5.019E-01	3.040E-02	0.234
		273.65		-1.808E-01	4.090E-01	5.681E-01	3.700E-02	-0.318
		340.57		4.864E-01	1.278E-01	2.117E-01	1.302E-02	2.297
		818.51		-4.040E-02	5.444E-02	8.455E-02	8.441E-03	-0.478
		1048.07	*	-3.019E-03	8.565E-02	1.429E-01	1.281E-02	-0.021
		1235.34		-1.868E-01	4.900E-01	7.890E-01	8.110E-02	-0.237
BA-137M		661.65	*	-1.103E-02	2.758E-02	4.515E-02	3.442E-03	-0.244
CS-137		661.65	*	-1.166E-02	2.915E-02	4.773E-02	3.647E-03	-0.244
CE-139		165.85	*	-8.896E-04	2.463E-02	4.156E-02	2.182E-03	-0.021
BA-140		162.64		-4.246E-01	5.865E-01	9.664E-01	5.858E-02	-0.439
		304.84		-2.783E-01	1.105E+00	1.529E+00	4.172E-01	-0.182
		423.70		1.280E-01	1.381E+00	2.310E+00	7.351E-01	0.055
		537.32	*	-7.805E-03	1.989E-01	3.240E-01	1.060E-01	-0.024
LA-140	+	328.77		3.422E-01	2.981E-01	4.163E-01	2.697E-02	0.822
		432.53		-2.484E-01	1.584E+00	2.573E+00	1.706E-01	-0.097
		487.03		4.263E-02	1.001E-01	1.689E-01	1.205E-02	0.252
		751.79		-3.592E-01	1.335E+00	2.155E+00	2.117E-01	-0.167
		815.85		1.037E-01	2.392E-01	4.053E-01	4.380E-02	0.256
		867.82		1.787E-02	1.140E+00	1.605E+00	1.790E-01	0.011
		919.63		3.591E-01	2.339E+00	3.570E+00	4.511E-01	0.101
		925.24		2.092E-01	8.689E-01	1.439E+00	1.630E-01	0.145
		1596.49	*	3.749E-02	6.662E-02	1.032E-01	7.081E-03	0.363
CE-141		145.44	*	-2.920E-02	5.758E-02	8.751E-02	4.996E-03	-0.334
CE-143		57.37		-8.365E-05	5.758E-02	Half-Life too short		
		231.56		7.852E-04	5.758E-02	Half-Life too short		
		293.26	*	3.995E-04	5.758E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	350.59		1.780E-02	5.758E-02	Half-Life too short		
		490.36		-1.134E-03	5.758E-02	Half-Life too short		
		664.57		5.324E-05	5.758E-02	Half-Life too short		
		721.93		-2.054E-04	5.758E-02	Half-Life too short		
CE-144		80.11		-3.993E-01	2.757E+00	3.180E+00	2.753E-01	-0.126
		133.54	*	-8.081E-03	2.095E-01	2.965E-01	4.193E-02	-0.027
PM-144		476.78		-4.513E-03	5.297E-02	8.695E-02	6.452E-03	-0.052
		618.01		1.397E-02	2.695E-02	4.247E-02	3.233E-03	0.329
		696.49	*	-1.572E-03	2.668E-02	4.441E-02	3.605E-03	-0.035
		778.57		-8.365E-01	1.851E+00	2.969E+00	2.776E-01	-0.282
PR-144		696.49	*	-1.065E-01	1.807E+00	3.008E+00	2.441E-01	-0.035
		1489.15		-7.093E+00	9.263E+00	1.351E+01	9.760E-01	-0.525
PM-146		453.90	*	3.806E-02	3.392E-02	5.932E-02	5.277E-03	0.642
		633.02		-6.297E-01	1.160E+00	1.760E+00	6.531E-01	-0.358
		735.90		-6.633E-02	1.218E-01	1.830E-01	5.238E-02	-0.362
		747.13		-3.797E-02	7.664E-02	1.231E-01	1.746E-02	-0.309
ND-147	+	91.11		5.074E-01	2.044E-01	4.333E-01	4.075E-02	1.171
		319.41		3.544E+00	2.643E+00	4.518E+00	2.609E-01	0.784
		439.89		2.883E+00	4.413E+00	7.567E+00	4.617E-01	0.381
		531.02	*	-2.577E-01	4.001E-01	6.240E-01	8.706E-02	-0.413
PM-149		285.90	*	-1.493E+01	5.241E+01	8.395E+01	1.187E+01	-0.178
EU-152		121.78		-4.742E-02	6.734E-02	1.048E-01	8.080E-03	-0.452
		244.69		-9.785E-02	3.012E-01	4.259E-01	2.379E-02	-0.230
		344.27	*	-2.589E-02	1.071E-01	1.219E-01	7.954E-03	-0.212
		443.98		-3.135E-01	7.633E-01	1.238E+00	7.587E-02	-0.253
		778.89		-8.574E-02	2.130E-01	3.429E-01	3.206E-02	-0.250
		867.32		3.305E-02	7.254E-01	1.024E+00	1.104E-01	0.032
	+	964.01		5.700E-01	3.516E-01	4.693E-01	4.807E-02	1.215
		1085.78		7.138E-02	3.103E-01	5.256E-01	4.073E-02	0.136
		1112.02		9.145E-02	2.960E-01	4.486E-01	3.194E-02	0.204
		1407.95		1.071E-02	1.674E-01	2.738E-01	2.034E-02	0.039
GD-153		69.67		-5.210E-01	1.830E+00	2.686E+00	2.180E-01	-0.194
	+	83.37		1.977E+01	2.011E+01	2.287E+01	2.031E+00	0.864
		97.43	*	-1.247E-02	7.760E-02	1.195E-01	9.344E-03	-0.104
		103.18		-2.524E-02	9.833E-02	1.579E-01	1.139E-02	-0.160
EU-154		123.07		-1.590E-02	4.806E-02	7.604E-02	7.191E-03	-0.209
		247.94		2.997E-02	3.358E-01	4.864E-01	4.582E-02	0.062
		591.81		-6.743E-02	5.219E-01	7.874E-01	8.375E-02	-0.086
		723.30		-5.438E-02	1.605E-01	2.231E-01	2.103E-02	-0.244
		756.87		1.278E-01	6.151E-01	1.033E+00	1.267E-01	0.124
		873.19		1.265E-01	2.276E-01	3.871E-01	5.391E-02	0.327
		996.32		-1.916E-01	3.180E-01	4.883E-01	8.929E-02	-0.392
		1004.76		3.298E-02	1.966E-01	3.211E-01	3.948E-02	0.103
		1274.45	*	-4.067E-02	1.015E-01	1.614E-01	1.612E-02	-0.252
EU-155		48.70		2.964E-02	3.148E+00	5.320E+00	4.036E-01	0.006
		60.01		-3.426E+00	5.395E+00	8.809E+00	6.722E-01	-0.389
	+	86.54		2.754E-01	1.210E-01	1.719E-01	1.584E-02	1.601
		105.31	*	8.164E-03	1.007E-01	1.636E-01	1.170E-02	0.050
TB-160	+	86.79		7.277E-01	3.197E-01	4.555E-01	4.167E-02	1.597

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		197.04		-3.820E-02	4.592E-01	7.646E-01	4.106E-02	-0.050
		215.65		1.477E-01	6.265E-01	1.015E+00	5.541E-02	0.145
		298.57		1.921E-01	9.568E-02	1.671E-01	9.599E-03	1.150
		879.36	*	2.452E-03	1.065E-01	1.745E-01	1.917E-02	0.014
		962.29		5.105E-01	4.942E-01	7.489E-01	7.694E-02	0.682
	+	966.15		3.871E-01	2.388E-01	4.103E-01	4.187E-02	0.943
		1177.93		-1.820E-01	3.009E-01	4.777E-01	2.667E-02	-0.381
		1271.85		-2.584E-01	5.931E-01	9.418E-01	6.364E-02	-0.274
HO-166M		80.57		-9.192E-02	3.521E-01	4.024E-01	3.496E-02	-0.228
		184.41		1.033E-01	3.495E-02	5.730E-02	3.044E-03	1.802
		280.46		-8.212E-02	7.264E-02	1.119E-01	6.382E-03	-0.734
		410.95		2.475E-01	2.350E-01	3.640E-01	2.143E-02	0.680
		711.68	*	-3.487E-02	4.744E-02	7.530E-02	6.277E-03	-0.463
		752.31		-9.645E-02	2.289E-01	3.658E-01	3.270E-02	-0.264
		810.29		-1.681E-02	5.030E-02	8.108E-02	7.983E-03	-0.207
TM-171		51.35		-3.551E+01	3.811E+01	6.173E+01	4.892E+00	-0.575
		52.39		-9.711E+00	1.911E+01	3.152E+01	2.504E+00	-0.308
		59.40		-3.540E+00	2.937E+01	4.893E+01	3.715E+00	-0.072
		66.72	*	-1.055E+01	2.981E+01	4.875E+01	3.898E+00	-0.216
LU-176	+	88.36		5.425E-01	2.383E-01	3.446E-01	3.164E-02	1.574
		201.83		-7.089E-03	2.377E-02	3.920E-02	2.114E-03	-0.181
		306.84	*	1.685E-03	2.105E-02	3.297E-02	1.898E-03	0.051
		401.10		2.246E+00	5.606E+00	9.548E+00	5.550E-01	0.235
LU-177		112.95		4.366E-01	1.261E+00	2.061E+00	1.328E-01	0.212
	+	208.36	*	3.431E+00	1.164E+00	1.529E+00	8.296E-02	2.243
LU-177M		52.97		-1.205E-01	2.029E+00	3.307E+00	2.625E-01	-0.036
		54.07		5.445E-01	1.061E+00	1.765E+00	1.396E-01	0.308
		61.30		-1.735E+00	1.611E+00	2.583E+00	1.996E-01	-0.672
		121.62		-2.163E-01	3.444E-01	5.384E-01	3.194E-02	-0.402
		147.16		-1.913E-01	6.016E-01	9.409E-01	5.120E-02	-0.203
		171.86		-2.520E-02	4.066E-01	6.838E-01	3.599E-02	-0.037
		218.09		9.401E-01	6.967E-01	1.212E+00	6.627E-02	0.776
		268.79		1.623E+00	7.933E-01	1.253E+00	7.107E-02	1.295
		319.02		2.555E-01	2.197E-01	3.731E-01	2.154E-02	0.685
		367.43		1.142E-01	7.195E-01	1.221E+00	7.050E-02	0.094
		413.65	*	1.379E-01	1.531E-01	2.365E-01	1.397E-02	0.583
HF-181		56.28		-6.249E-01	1.090E+00	1.788E+00	1.393E-01	-0.349
		57.53		1.522E-02	5.743E-01	9.634E-01	7.429E-02	0.016
		65.20		-7.345E-01	1.011E+00	1.633E+00	1.295E-01	-0.450
		133.02		2.636E-02	6.504E-02	9.422E-02	5.330E-03	0.280
		136.25		6.255E-02	4.094E-01	6.560E-01	3.673E-02	0.095
		345.85		-1.942E-02	1.677E-01	2.318E-01	1.341E-02	-0.084
		482.03	*	-5.416E-03	3.328E-02	5.434E-02	3.478E-03	-0.100
W-181		56.28		-2.477E-01	4.318E-01	7.087E-01	5.521E-02	-0.350
		57.53		5.616E-03	2.278E-01	3.821E-01	2.946E-02	0.015
		65.20	*	-2.890E-01	3.977E-01	6.426E-01	5.097E-02	-0.450
TA-182		67.75		-2.535E-02	1.140E-01	1.872E-01	1.504E-02	-0.135
		100.10		-8.739E-03	1.650E-01	2.677E-01	2.012E-02	-0.033
		152.43		-3.279E-02	2.948E-01	4.637E-01	2.495E-02	-0.071

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		-1.342E-01	2.831E-01	4.599E-01	2.524E-02	-0.292
		1001.68		1.554E+00	1.849E+00	3.134E+00	2.992E-01	0.496
	+	1121.28		7.231E-01	1.928E-01	2.812E-01	1.937E-02	2.571
		1189.05		-1.904E-01	2.630E-01	4.141E-01	2.368E-02	-0.460
		1221.42	*	-4.655E-03	1.750E-01	2.880E-01	1.762E-02	-0.016
		1230.97		3.084E-02	4.140E-01	6.851E-01	4.273E-02	0.045
RE-183		57.98		1.040E-01	2.213E-01	3.767E-01	2.894E-02	0.276
		59.32		-8.657E-03	1.199E-01	2.002E-01	1.521E-02	-0.043
		67.20		-5.940E-02	2.060E-01	3.375E-01	2.705E-02	-0.176
		162.32	*	-1.140E-01	9.086E-02	1.467E-01	7.744E-03	-0.777
	+	208.81		3.441E+00	1.167E+00	1.550E+00	8.409E-02	2.220
		291.72		-3.759E-01	8.689E-01	1.197E+00	6.861E-02	-0.314
RE-184		57.98		3.859E-01	8.211E-01	1.398E+00	1.074E-01	0.276
		59.32		-3.209E-02	4.445E-01	7.420E-01	5.637E-02	-0.043
		67.20		-2.203E-01	7.642E-01	1.252E+00	1.003E-01	-0.176
		161.27		-3.471E-01	2.951E-01	4.782E-01	2.529E-02	-0.726
		216.55		3.068E-03	2.219E-01	3.684E-01	2.013E-02	0.008
		252.85	*	-2.046E-02	1.861E-01	3.038E-01	1.706E-02	-0.067
		318.01		3.575E-02	3.826E-01	6.193E-01	3.575E-02	0.058
		792.07		2.233E-01	9.460E-01	1.371E+00	1.310E-01	0.163
		903.28		-3.334E-01	9.600E-01	1.292E+00	1.451E-01	-0.258
		920.93		-8.914E-03	3.817E-01	6.069E-01	6.650E-02	-0.015
OS-185		59.72		-9.351E-02	3.173E-01	5.251E-01	3.994E-02	-0.178
		61.14		-1.990E-01	1.765E-01	2.825E-01	2.180E-02	-0.704
		69.30		-2.596E-01	3.337E-01	4.786E-01	3.877E-02	-0.542
		592.07		-3.083E-01	2.029E+00	3.160E+00	2.262E-01	-0.098
		646.12	*	-1.305E-02	3.356E-02	5.240E-02	3.940E-03	-0.249
		717.42		4.424E-01	6.949E-01	1.201E+00	1.011E-01	0.368
		874.81		-1.105E-01	4.588E-01	7.373E-01	8.043E-02	-0.150
		880.27		-2.001E-01	6.001E-01	9.561E-01	1.052E-01	-0.209
RE-188		155.03	*	-7.319E-02	1.397E-01	2.327E-01	1.245E-02	-0.315
		477.96		-1.345E-01	2.373E+00	3.901E+00	2.486E-01	-0.034
		633.10		-7.351E-01	2.235E+00	3.515E+00	2.613E-01	-0.209
W-188		63.58		5.444E+01	5.695E+01	9.558E+01	7.510E+00	0.570
		227.08		-9.297E+00	1.039E+01	1.653E+01	9.111E-01	-0.562
		290.67	*	1.023E+00	6.668E+00	9.562E+00	5.477E-01	0.107
IR-192	+	295.96		1.118E+00	1.426E-01	2.432E-01	1.418E-02	4.596
		308.46		3.830E-02	7.866E-02	1.301E-01	7.579E-03	0.294
		316.51	*	-9.067E-03	2.874E-02	4.559E-02	2.644E-03	-0.199
		468.07		-7.281E-02	5.950E-02	7.604E-02	5.419E-03	-0.958
		604.41		1.937E-01	4.173E-01	6.038E-01	7.337E-02	0.321
		612.46		4.256E+00	8.776E-01	1.469E+00	1.288E-01	2.898
AU-195		65.12		-1.358E-01	1.848E-01	2.986E-01	2.367E-02	-0.455
		66.83		-2.812E-02	9.770E-02	1.601E-01	1.281E-02	-0.176
	+	75.70		1.343E+00	2.763E-01	4.541E-01	3.814E-02	2.958
		98.88	*	2.149E-01	2.076E-01	3.494E-01	2.673E-02	0.615
	+	129.76		4.583E+00	3.296E+00	4.371E+00	2.501E-01	1.049
TL-200		367.94	*	-3.908E-05	3.296E+00	Half-Life too short		
		579.30		6.357E-04	3.296E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		828.27		4.387E-05	3.296E+00	Half-Life too short		
		1205.75		-6.622E-04	3.296E+00	Half-Life too short		
TL-201		68.90		-7.984E-01	3.819E+00	6.004E+00	4.853E-01	-0.133
		70.82		2.123E-01	2.227E+00	3.322E+00	2.712E-01	0.064
		80.30		-1.112E+00	5.001E+00	5.734E+00	4.972E-01	-0.194
		135.34		-1.247E+01	1.805E+01	2.796E+01	1.570E+00	-0.446
		167.43	*	-2.504E+00	4.499E+00	7.447E+00	3.910E-01	-0.336
TL-202		68.90		-8.770E-02	4.195E-01	6.594E-01	5.331E-02	-0.133
		70.82		2.326E-02	2.439E-01	3.639E-01	2.971E-02	0.064
		80.30		-1.219E-01	5.480E-01	6.283E-01	5.447E-02	-0.194
		439.56	*	3.865E-02	5.264E-02	9.062E-02	5.525E-03	0.426
HG-203		70.83		1.123E-01	1.110E+00	1.656E+00	2.206E-01	0.068
		72.87		6.492E-01	6.485E-01	9.934E-01	1.288E-01	0.654
		82.60		-1.554E-01	1.198E+00	1.596E+00	2.215E-01	-0.097
		279.20	*	3.593E-02	3.415E-02	5.800E-02	3.517E-03	0.620
BI-207		72.80		1.499E-01	1.913E-01	2.924E-01	2.413E-02	0.513
	+	74.97		7.484E-01	1.539E-01	2.298E-01	1.921E-02	3.257
	+	84.90		2.565E-01	2.610E-01	2.948E-01	2.653E-02	0.870
		569.67		-2.562E-03	2.540E-02	4.032E-02	2.826E-03	-0.064
		1063.62	*	-7.555E-03	4.332E-02	7.150E-02	5.902E-03	-0.106
		1770.23		5.379E-01	5.255E-01	8.466E-01	5.121E-02	0.635
TL-207		81.07		-8.307E-02	2.799E-01	3.189E-01	2.781E-02	-0.260
	+	83.78		1.691E-01	1.721E-01	1.980E-01	1.765E-02	0.854
		94.90		2.306E-01	2.330E-01	3.536E-01	2.878E-02	0.652
		122.32		-1.109E+00	1.621E+00	2.527E+00	1.716E-01	-0.439
		144.24		9.497E-03	6.316E-01	9.812E-01	6.847E-02	0.010
		154.21		1.346E-02	3.221E-01	5.475E-01	3.643E-02	0.025
	+	269.46		4.040E-01	2.192E-01	3.062E-01	1.819E-02	1.319
		323.87	*	-5.490E-01	6.661E-01	8.737E-01	1.442E-01	-0.628
	+	338.28		7.781E+00	1.735E+00	2.181E+00	2.295E-01	3.568
		445.03		4.183E-01	1.765E+00	2.965E+00	3.102E-01	0.141
PO-209		260.50		3.535E+00	8.022E+00	1.338E+01	7.551E-01	0.264
		262.80		-8.935E+00	2.209E+01	3.547E+01	2.005E+00	-0.252
		896.60	*	2.940E-02	6.143E+00	1.004E+01	1.132E+00	0.003
BI-210		46.50	*	-2.045E-01	4.806E+00	8.123E+00	6.285E-01	-0.025
PB-210		46.50	*	-2.045E-01	4.806E+00	8.123E+00	6.285E-01	-0.025
PO-210		46.50	*	-2.045E-01	4.806E+00	8.123E+00	5.403E-01	-0.025
PB-211		404.84	*	-3.674E-01	9.328E-01	1.278E+00	7.970E-01	-0.287
		427.08		3.930E-01	1.626E+00	2.710E+00	1.676E+00	0.145
		831.96		9.802E-02	1.143E+00	1.624E+00	1.022E+00	0.060
BI-212	+	727.18	*	1.187E+00	3.789E-01	5.354E-01	5.332E-02	2.216
		785.46		5.798E-01	1.340E+00	2.276E+00	2.151E-01	0.255
		1620.62		7.819E-01	1.036E+00	1.851E+00	1.251E-01	0.422
PO-215		81.07		-8.307E-02	2.799E-01	3.189E-01	2.781E-02	-0.260
	+	83.78		1.691E-01	1.721E-01	1.980E-01	1.765E-02	0.854
		94.90		2.306E-01	2.330E-01	3.536E-01	2.878E-02	0.652
		122.32		-1.109E+00	1.621E+00	2.527E+00	1.716E-01	-0.439
		144.24		9.497E-03	6.316E-01	9.812E-01	6.847E-02	0.010
		154.21		1.346E-02	3.221E-01	5.475E-01	3.643E-02	0.025

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		4.040E-01	2.192E-01	3.062E-01	1.819E-02	1.319
		323.87	*	-5.490E-01	6.661E-01	8.737E-01	1.442E-01	-0.628
	+	338.28		7.781E+00	1.735E+00	2.181E+00	2.295E-01	3.568
		445.03		4.183E-01	1.765E+00	2.965E+00	3.102E-01	0.141
RN-219	+	271.23		5.184E-01	2.826E-01	3.870E-01	3.103E-02	1.340
		401.81	*	9.879E-02	3.468E-01	5.872E-01	7.994E-02	0.168
RN-220		549.76	*	1.213E+00	2.168E+01	3.546E+01	2.436E+00	0.034
RA-223		81.07		-8.307E-02	2.799E-01	3.189E-01	2.781E-02	-0.260
	+	83.78		1.691E-01	1.721E-01	1.980E-01	1.765E-02	0.854
		94.90		2.306E-01	2.330E-01	3.536E-01	2.878E-02	0.652
		122.32		-1.109E+00	1.621E+00	2.527E+00	1.716E-01	-0.439
		144.24		9.497E-03	6.316E-01	9.812E-01	6.847E-02	0.010
		154.21		1.346E-02	3.221E-01	5.475E-01	3.643E-02	0.025
	+	269.46		4.040E-01	2.192E-01	3.062E-01	1.819E-02	1.319
		323.87	*	-5.490E-01	6.661E-01	8.737E-01	1.442E-01	-0.628
	+	338.28		7.781E+00	1.735E+00	2.181E+00	2.295E-01	3.568
		445.03		4.183E-01	1.765E+00	2.965E+00	3.102E-01	0.141
AC-227		79.80		2.350E-01	2.159E+00	2.534E+00	5.452E-01	0.093
		236.00		7.232E-01	2.441E-01	3.840E-01	3.961E-02	1.883
		256.20	*	-2.461E-01	3.174E-01	4.992E-01	6.934E-02	-0.493
		286.10		-3.263E-01	1.268E+00	2.035E+00	2.344E-01	-0.160
	+	299.80		4.074E+00	1.674E+00	2.203E+00	3.583E-01	1.850
		304.40		-3.574E-01	1.669E+00	2.321E+00	4.011E-01	-0.154
		334.20		-1.450E+00	2.396E+00	2.941E+00	5.390E-01	-0.493
TH-227		79.80		2.350E-01	2.159E+00	2.534E+00	5.521E-01	0.093
	+	94.00		6.205E+00	2.972E+00	3.344E+00	7.235E-01	1.856
		236.00		7.232E-01	2.411E-01	3.840E-01	3.417E-02	1.883
		256.20	*	-2.461E-01	3.183E-01	4.992E-01	8.407E-02	-0.493
		286.10		-3.263E-01	1.309E+00	2.035E+00	2.038E+00	-0.160
	+	299.80		4.074E+00	1.674E+00	2.203E+00	3.583E-01	1.850
		304.40		-3.574E-01	1.669E+00	2.321E+00	4.011E-01	-0.154
		334.20		-1.450E+00	2.396E+00	2.941E+00	5.390E-01	-0.493
TH-229	+	85.43		2.532E-01	2.576E-01	2.997E-01	2.709E-02	0.845
	+	88.47		3.123E-01	1.372E-01	1.970E-01	1.805E-02	1.585
		100.00		1.646E-03	1.729E-01	2.812E-01	2.117E-02	0.006
		193.63	*	8.791E-02	4.218E-01	7.106E-01	3.805E-02	0.124
		210.97		1.483E+00	6.889E-01	1.110E+00	6.033E-02	1.337
PA-231		283.67	*	-1.182E-01	1.246E+00	2.017E+00	2.772E-01	-0.059
	+	301.29		1.630E+00	6.378E-01	8.456E-01	8.815E-02	1.927
TH-231		81.07		-8.307E-02	2.799E-01	3.189E-01	2.781E-02	-0.260
	+	83.78		1.691E-01	1.721E-01	1.980E-01	1.765E-02	0.854
		94.90		2.306E-01	2.330E-01	3.536E-01	2.878E-02	0.652
		122.32		-1.109E+00	1.621E+00	2.527E+00	1.716E-01	-0.439
		144.24		9.497E-03	6.316E-01	9.812E-01	6.847E-02	0.010
		154.21		1.346E-02	3.221E-01	5.475E-01	3.643E-02	0.025
	+	269.46		4.040E-01	2.192E-01	3.062E-01	1.819E-02	1.319
		323.87	*	-5.490E-01	6.661E-01	8.737E-01	1.442E-01	-0.628
	+	338.28		7.781E+00	1.735E+00	2.181E+00	2.295E-01	3.568
		445.03		4.183E-01	1.765E+00	2.965E+00	3.102E-01	0.141

---- Non-Identified Nuclides ----

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U-231	+	84.21		6.005E+00	6.110E+00	7.021E+00	6.280E-01	0.855
	+	92.29		5.053E+00	2.199E+00	2.951E+00	2.512E-01	1.712
		95.87	*	-3.087E-01	9.019E-01	1.290E+00	1.033E-01	-0.239
		108.00		7.251E-01	1.543E+00	2.539E+00	1.727E-01	0.286
PA-233	+	75.28		2.184E+01	5.279E+00	6.881E+00	1.047E+00	3.174
	+	86.59		4.478E+00	2.272E+00	2.799E+00	7.555E-01	1.600
	+	300.12		1.136E+00	4.548E-01	6.143E-01	8.240E-02	1.849
		311.98	*	-1.281E-02	5.196E-02	8.277E-02	5.070E-03	-0.155
		340.50		2.727E+00	9.017E-01	1.116E+00	2.563E-01	2.443
		398.62		-4.419E-01	1.738E+00	2.867E+00	7.412E-01	-0.154
		415.76		1.224E-01	1.346E+00	2.132E+00	4.396E-01	0.057
PA-234		63.00		1.521E+00	1.728E+00	2.878E+00	4.338E-01	0.528
		94.67		2.609E-01	1.718E-01	2.630E-01	3.181E-02	0.992
		98.44		5.985E-02	9.149E-02	1.422E-01	7.912E-02	0.421
		99.86		4.095E-02	4.393E-01	7.165E-01	5.405E-02	0.057
		111.00		-1.292E-01	1.669E-01	2.603E-01	2.793E-02	-0.496
		131.20		6.394E-02	1.067E-01	1.561E-01	8.887E-03	0.410
		152.70		1.290E-02	2.870E-01	4.543E-01	7.114E-02	0.028
	+	186.00		4.846E+00	2.195E+00	2.215E+00	6.749E-01	2.187
		226.40		-2.231E-01	3.303E-01	5.298E-01	6.048E-02	-0.421
		227.20		-2.670E-01	3.535E-01	5.662E-01	3.121E-02	-0.472
		248.90		-2.405E-02	6.844E-01	1.084E+00	2.324E-01	-0.022
		293.70		5.648E+00	1.159E+00	1.447E+00	2.324E-01	3.903
		369.80		2.596E-01	6.667E-01	1.140E+00	2.372E-01	0.228
		568.70		-1.587E-01	8.327E-01	1.315E+00	9.205E-02	-0.121
		569.50		-2.925E-02	2.251E-01	3.566E-01	2.498E-02	-0.082
		574.00		-4.107E-01	1.220E+00	1.939E+00	1.365E-01	-0.212
		699.00		-3.602E-01	5.807E-01	9.283E-01	1.752E-01	-0.388
		706.10		4.889E-01	8.851E-01	1.477E+00	6.576E-01	0.331
		733.00		-2.035E-01	3.242E-01	4.301E-01	9.551E-02	-0.473
		742.81		3.831E-01	1.142E+00	1.886E+00	1.268E+00	0.203
	+	796.30		1.667E+00	1.048E+00	1.404E+00	3.844E-01	1.188
		805.60		1.338E+00	9.560E-01	1.551E+00	4.807E-01	0.862
		819.60		-6.764E-01	1.003E+00	1.514E+00	5.809E-01	-0.447
		826.30		2.014E-01	7.085E-01	1.112E+00	5.010E-01	0.181
		831.60		-1.001E-01	5.916E-01	8.202E-01	2.488E-01	-0.122
		876.40		-9.443E-02	6.621E-01	1.060E+00	1.092E+00	-0.089
		880.51		-1.060E-01	2.215E-01	3.487E-01	3.837E-02	-0.304
		883.24		-9.292E-02	2.348E-01	3.586E-01	2.423E-01	-0.259
		899.00		1.919E-01	6.870E-01	1.135E+00	5.032E-01	0.169
		925.00		-8.507E-02	9.851E-01	1.594E+00	1.736E-01	-0.053
		926.50		-7.300E-03	1.492E-01	2.420E-01	6.324E-02	-0.030
		946.00	*	2.710E-03	2.606E-01	4.237E-01	8.358E-02	0.006
		949.00		4.586E-01	3.992E-01	6.926E-01	7.273E-02	0.662
		980.50		7.482E-02	6.675E-01	9.363E-01	9.312E-02	0.080
		1394.10		-4.736E-01	1.024E+00	1.512E+00	9.821E-01	-0.313
PA-234M		766.41		3.551E+01	3.193E+01	2.763E+01	2.120E+01	1.285
		1001.03	*	2.416E+00	6.019E+00	9.947E+00	1.186E+00	0.243
TH-234		63.29	*	1.363E+00	1.470E+00	2.440E+00	4.301E-01	0.559

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		1.606E+00	7.440E-01	9.391E-01	1.693E-01	1.710
U-235	+	89.95		2.176E+00	1.085E+00	1.798E+00	5.561E-01	1.210
	+	93.35		1.931E+00	9.853E-01	1.105E+00	3.089E-01	1.747
		105.00		2.678E-01	9.851E-01	1.607E+00	4.730E-01	0.167
		143.76	*	7.562E-02	1.927E-01	3.032E-01	4.910E-02	0.249
		163.35		9.190E-02	3.924E-01	6.683E-01	1.191E-01	0.138
	+	185.71		1.795E-01	6.091E-02	8.174E-02	4.348E-03	2.195
		205.31		1.183E-01	4.777E-01	6.990E-01	1.248E-01	0.169
NP-236		94.67		1.998E-01	1.292E-01	1.997E-01	1.632E-02	1.000
		98.44		4.523E-02	6.451E-02	1.075E-01	8.276E-03	0.421
		111.00		-9.772E-02	1.260E-01	1.969E-01	1.295E-02	-0.496
		160.31	*	-4.125E-03	6.599E-02	1.115E-01	5.907E-03	-0.037
U-238		63.29	*	1.363E+00	1.470E+00	2.440E+00	4.301E-01	0.559
	+	92.38		1.606E+00	6.988E-01	9.391E-01	7.982E-02	1.710
NP-239		99.55		7.236E-02	1.460E-01	2.415E-01	1.830E-02	0.300
		117.00	*	-3.383E-02	1.737E-01	2.774E-01	1.717E-02	-0.122
	+	209.75		2.746E+00	9.317E-01	1.222E+00	6.634E-02	2.248
		228.18		-2.108E-01	1.832E-01	2.878E-01	1.587E-02	-0.733
		277.60		1.159E-01	1.536E-01	2.580E-01	1.470E-02	0.449
		334.30		-7.771E-01	1.352E+00	1.674E+00	9.679E-02	-0.464
AM-241		59.54	*	-3.490E-02	1.698E-01	2.820E-01	2.339E-02	-0.124
CM-243		99.55		7.445E-02	1.502E-01	2.484E-01	1.882E-02	0.300
		103.76	*	5.902E-02	8.932E-02	1.483E-01	1.061E-02	0.398
		117.00		-3.480E-02	1.787E-01	2.853E-01	1.766E-02	-0.122
	+	209.75		2.707E+00	9.184E-01	1.204E+00	6.540E-02	2.248
		228.18		-2.130E-01	1.851E-01	2.908E-01	1.604E-02	-0.733
		277.60		1.169E-01	1.549E-01	2.601E-01	1.482E-02	0.449
CM-247		278.00		5.334E-01	6.343E-01	1.069E+00	6.090E-02	0.499
		287.40		-2.144E-01	1.126E+00	1.672E+00	9.562E-02	-0.128
		402.60	*	1.689E-02	3.274E-02	5.315E-02	3.096E-03	0.318
CF-249		252.85		-7.713E-02	7.017E-01	1.145E+00	6.434E-02	-0.067
		333.44		-1.080E-01	2.344E-01	2.211E-01	1.279E-02	-0.488
		387.95	*	7.353E-03	3.250E-02	5.508E-02	3.166E-03	0.134
CF-251		176.60	*	4.167E-02	1.083E-01	1.839E-01	9.711E-03	0.227
		227.00		-2.875E-01	3.152E-01	5.012E-01	2.762E-02	-0.574
		285.00		-9.973E-02	1.450E+00	2.350E+00	1.343E-01	-0.042

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
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*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754002      *
* Acquisition date : 14-JUL-2009 10:45:14 Detector SN#     :               *
* Detector ID        : GAM18               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.93     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 30-JUN-2009 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G232754002           Analyst initials: MXR1         *
* Batch Number       : 882713               Sample Quantity : 1.3325E+02 GRAM *
* Recovery           :     1.00000          Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight    :    0.00000                                          *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM            :     0.000           MSD Isotope     :               *
* LCS DPM            :     0.000           LCS Isotope     :               *
* LCSD DPM           :     0.000           LCSD Isotope    :               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.673E+01	3.125E+00	4.334E-01	0.000E+00
MN-54	4.598E-02	4.042E-02	5.015E-02	0.000E+00
CD-109	2.323E+00	1.000E+00	1.328E+00	0.000E+00
SN-126	2.287E-01	9.848E-02	1.320E-01	0.000E+00
TL-208	5.118E-01	8.175E-02	4.738E-02	0.000E+00
BI-211	4.048E+00	4.564E-01	2.473E-01	0.000E+00
PB-212	1.713E+00	1.527E-01	7.976E-02	0.000E+00
PO-212	1.713E+00	1.527E-01	7.976E-02	0.000E+00
BI-214	1.197E+00	1.636E-01	9.223E-02	0.000E+00
PB-214	1.408E+00	1.743E-01	8.618E-02	0.000E+00
PO-214	1.408E+00	1.743E-01	8.618E-02	0.000E+00
PO-216	1.713E+00	1.527E-01	7.976E-02	0.000E+00
PO-218	1.408E+00	1.743E-01	8.618E-02	0.000E+00
RA-224	4.971E+00	1.147E+00	9.064E-01	0.000E+00
RA-226	1.197E+00	1.636E-01	9.223E-02	0.000E+00
AC-228	1.753E+00	3.204E-01	1.676E-01	0.000E+00
RA-228	1.753E+00	3.204E-01	1.676E-01	0.000E+00
TH-228	1.713E+00	1.527E-01	7.975E-02	0.000E+00
TH-230	1.196E+00	1.636E-01	9.223E-02	0.000E+00
TH-232	1.753E+00	3.204E-01	1.676E-01	0.000E+00
U-234	1.196E+00	1.636E-01	9.223E-02	0.000E+00
NP-237	6.717E-01	3.195E-01	3.195E-01	0.000E+00
AM-243	4.169E-01	8.404E-02	9.238E-02	0.000E+00
ANH-511	5.010E-02	4.928E-02	3.920E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-2.243E-02	2.422E-01	4.143E-01	0.000E+00	NOT IDENT.
NA-22	-2.104E-02	3.610E-02	5.806E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.531E+05	0.000E+00	0.000E+00	SHORT HLIF

AL-26	-5.171E-03	1.967E-02	2.956E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.068E-02	7.940E-02	0.000E+00	FAIL ABUN
SC-46	1.860E-02	3.106E-02	5.442E-02	0.000E+00	FAIL ABUN
V-48	2.529E-03	5.591E-02	8.646E-02	0.000E+00	NOT IDENT.
CR-51	2.878E-01	3.074E-01	5.417E-01	0.000E+00	NOT IDENT.
MN-52	-1.165E-01	1.627E-01	2.475E-01	0.000E+00	NOT IDENT.
CO-56	-2.285E-02	3.251E-02	5.240E-02	0.000E+00	NOT IDENT.
CO-57	-1.966E-02	2.279E-02	3.765E-02	0.000E+00	NOT IDENT.
CO-58	-1.508E-02	3.253E-02	5.372E-02	0.000E+00	NOT IDENT.
FE-59	1.985E-02	7.412E-02	1.289E-01	0.000E+00	NOT IDENT.
CO-60	1.455E-03	3.138E-02	5.274E-02	0.000E+00	NOT IDENT.
ZN-65	-3.070E-02	8.497E-02	1.199E-01	0.000E+00	NOT IDENT.
GE-68	3.127E-01	1.029E+00	1.798E+00	0.000E+00	NOT IDENT.
AS-73	4.516E-01	1.016E+00	1.825E+00	0.000E+00	NOT IDENT.
AS-74	-1.132E-02	6.957E-02	1.157E-01	0.000E+00	NOT IDENT.
SE-75	-2.544E-02	3.669E-02	5.888E-02	0.000E+00	NOT IDENT.
BR-77	-1.038E+00	5.868E+00	9.900E+00	0.000E+00	FAIL ABUN
SR-82	9.257E-02	3.301E-01	5.172E-01	0.000E+00	NOT IDENT.
RB-83	-1.497E-02	5.374E-02	9.009E-02	0.000E+00	NOT IDENT.
RB-84	-7.856E-03	5.253E-02	8.764E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.920E+00	1.233E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.505E-02	6.246E-02	0.000E+00	NOT IDENT.
RB-86	1.193E-01	6.215E-01	1.079E+00	0.000E+00	NOT IDENT.
Y-88	-2.969E-04	2.707E-02	4.507E-02	0.000E+00	NOT IDENT.
ZR-88	4.685E-03	2.360E-02	4.177E-02	0.000E+00	NOT IDENT.
Y-91	-8.562E+00	1.553E+01	2.538E+01	0.000E+00	NOT IDENT.
NB-94	2.282E-02	2.700E-02	4.869E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	3.885E-02	6.466E-02	0.000E+00	NOT IDENT.
NB-95M	1.401E-01	1.148E-01	1.852E-01	0.000E+00	NOT IDENT.
ZR-95	4.162E-03	5.465E-02	9.419E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.302E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.107E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.251E+00	6.673E+00	1.187E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.426E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.790E-03	2.749E-02	4.765E-02	0.000E+00	NOT IDENT.
RH-102	-1.041E-02	2.274E-02	3.811E-02	0.000E+00	NOT IDENT.
RU-103	1.200E-02	3.026E-02	5.295E-02	0.000E+00	FAIL ABUN
RH-106	-2.789E-01	2.657E-01	4.110E-01	0.000E+00	FAIL ABUN
RU-106	-2.789E-01	2.643E-01	4.110E-01	0.000E+00	FAIL ABUN
AG-108M	-6.973E-03	2.592E-02	4.437E-02	0.000E+00	NOT IDENT.
AG-110M	1.212E-02	2.604E-02	4.651E-02	0.000E+00	NOT IDENT.
IN-111	-7.748E-02	6.999E-01	1.058E+00	0.000E+00	NOT IDENT.
IN-113M	-2.774E-02	3.524E-02	5.941E-02	0.000E+00	NOT IDENT.
SN-113	-2.774E-02	3.524E-02	5.941E-02	0.000E+00	NOT IDENT.
IN-114M	-6.374E-02	1.646E-01	2.522E-01	0.000E+00	NOT IDENT.
CD-115	1.753E-01	5.720E+00	9.755E+00	0.000E+00	NOT IDENT.
SN-117M	7.573E-02	4.223E-02	8.011E-02	0.000E+00	NOT IDENT.
SB-122	1.845E+00	1.242E+00	2.264E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.077E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	2.710E-02	2.323E-02	4.331E-02	0.000E+00	NOT IDENT.
I-124	-1.542E-01	5.421E-01	7.667E-01	0.000E+00	NOT IDENT.
SB-124	1.890E-02	6.180E-02	1.078E-01	0.000E+00	FAIL ABUN
SB-125	1.113E-02	6.985E-02	1.224E-01	0.000E+00	FAIL ABUN
TE-125M	4.258E+00	8.080E+00	1.423E+01	0.000E+00	NOT IDENT.
I-126	7.950E-02	1.271E-01	2.285E-01	0.000E+00	NOT IDENT.
SB-126	3.334E-02	1.162E-01	1.837E-01	0.000E+00	FAIL ABUN
SB-127	-1.192E-01	8.586E-01	1.476E+00	0.000E+00	NOT IDENT.
XE-127	-1.847E-02	3.727E-02	6.454E-02	0.000E+00	NOT IDENT.
I-131	1.643E-02	8.134E-02	1.449E-01	0.000E+00	NOT IDENT.
TE-132	-4.955E-01	4.329E-01	7.112E-01	0.000E+00	NOT IDENT.
BA-133	3.149E-02	3.720E-02	5.758E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.776E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.819E-02	7.298E-02	0.000E+00	FAIL ABUN
CS-135	1.879E-01	1.484E-01	2.387E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.625E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.019E-03	8.394E-02	1.440E-01	0.000E+00	FAIL ABUN
BA-137M	-1.103E-02	2.703E-02	4.588E-02	0.000E+00	NOT IDENT.
CS-137	-1.166E-02	2.857E-02	4.850E-02	0.000E+00	NOT IDENT.
CE-139	-8.896E-04	2.414E-02	4.325E-02	0.000E+00	NOT IDENT.
BA-140	-7.805E-03	1.949E-01	3.304E-01	0.000E+00	NOT IDENT.
LA-140	3.749E-02	6.529E-02	1.032E-01	0.000E+00	FAIL ABUN
CE-141	-2.920E-02	5.642E-02	9.127E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.101E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-8.081E-03	2.053E-01	3.097E-01	0.000E+00	NOT IDENT.
PM-144	-1.572E-03	2.615E-02	4.508E-02	0.000E+00	NOT IDENT.
PR-144	-1.065E-01	1.771E+00	3.053E+00	0.000E+00	NOT IDENT.
PM-146	3.806E-02	3.325E-02	6.067E-02	0.000E+00	NOT IDENT.
ND-147	-2.577E-01	3.921E-01	6.364E-01	0.000E+00	FAIL ABUN

PM-149	-1.493E+01	5.136E+01	8.656E+01	0.000E+00	NOT IDENT.
EU-152	-2.589E-02	1.049E-01	1.253E-01	0.000E+00	FAIL ABUN
GD-153	-1.247E-02	7.604E-02	1.255E-01	0.000E+00	FAIL ABUN
EU-154	-4.067E-02	9.943E-02	1.620E-01	0.000E+00	NOT IDENT.
EU-155	8.164E-03	9.870E-02	1.716E-01	0.000E+00	FAIL ABUN
TB-160	2.452E-03	1.044E-01	1.764E-01	0.000E+00	FAIL ABUN
HO-166M	-3.487E-02	4.649E-02	7.641E-02	0.000E+00	NOT IDENT.
TM-171	-1.055E+01	2.922E+01	5.150E+01	0.000E+00	NOT IDENT.
LU-176	1.685E-03	2.063E-02	3.395E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.141E+00	1.585E+00	0.000E+00	FAIL ABUN
LU-177M	1.379E-01	1.501E-01	2.423E-01	0.000E+00	NOT IDENT.
HF-181	-5.416E-03	3.262E-02	5.552E-02	0.000E+00	NOT IDENT.
W-181	-2.890E-01	3.898E-01	6.792E-01	0.000E+00	NOT IDENT.
TA-182	-4.655E-03	1.715E-01	2.894E-01	0.000E+00	FAIL ABUN
RE-183	-1.140E-01	8.904E-02	1.527E-01	0.000E+00	FAIL ABUN
RE-184	-2.046E-02	1.824E-01	3.139E-01	0.000E+00	NOT IDENT.
OS-185	-1.305E-02	3.289E-02	5.326E-02	0.000E+00	NOT IDENT.
RE-188	-7.319E-02	1.369E-01	2.424E-01	0.000E+00	NOT IDENT.
W-188	1.023E+00	6.535E+00	9.856E+00	0.000E+00	NOT IDENT.
IR-192	-9.067E-03	2.817E-02	4.692E-02	0.000E+00	FAIL ABUN
AU-195	2.149E-01	2.035E-01	3.667E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.708E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.504E+00	4.409E+00	7.749E+00	0.000E+00	NOT IDENT.
TL-202	3.865E-02	5.159E-02	9.274E-02	0.000E+00	NOT IDENT.
HG-203	3.593E-02	3.347E-02	5.982E-02	0.000E+00	NOT IDENT.
BI-207	-7.555E-03	4.245E-02	7.203E-02	0.000E+00	FAIL ABUN
TL-207	-5.490E-01	6.528E-01	8.988E-01	0.000E+00	FAIL ABUN
PO-209	2.940E-02	6.020E+00	1.014E+01	0.000E+00	NOT IDENT.
BI-210	-2.045E-01	4.710E+00	8.633E+00	0.000E+00	NOT IDENT.
PB-210	-2.045E-01	4.710E+00	8.633E+00	0.000E+00	NOT IDENT.
PO-210	-2.045E-01	4.710E+00	8.633E+00	0.000E+00	NOT IDENT.
PB-211	-3.674E-01	9.142E-01	1.310E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.713E-01	5.431E-01	0.000E+00	FAIL ABUN
PO-215	-5.490E-01	6.528E-01	8.988E-01	0.000E+00	FAIL ABUN
RN-219	9.879E-02	3.398E-01	6.018E-01	0.000E+00	FAIL ABUN
RN-220	1.213E+00	2.125E+01	3.614E+01	0.000E+00	NOT IDENT.
RA-223	-5.490E-01	6.528E-01	8.988E-01	0.000E+00	FAIL ABUN
AC-227	-2.461E-01	3.111E-01	5.156E-01	0.000E+00	FAIL ABUN
TH-227	-2.461E-01	3.119E-01	5.156E-01	0.000E+00	FAIL ABUN
TH-229	8.791E-02	4.134E-01	7.375E-01	0.000E+00	FAIL ABUN
PA-231	-1.182E-01	1.221E+00	2.080E+00	0.000E+00	FAIL ABUN
TH-231	-5.490E-01	6.528E-01	8.988E-01	0.000E+00	FAIL ABUN
U-231	-3.087E-01	8.838E-01	1.354E+00	0.000E+00	FAIL ABUN
PA-233	-1.281E-02	5.092E-02	8.521E-02	0.000E+00	FAIL ABUN
PA-234	2.710E-03	2.554E-01	4.278E-01	0.000E+00	FAIL ABUN
PA-234M	2.416E+00	5.898E+00	1.003E+01	0.000E+00	NOT IDENT.
TH-234	1.363E+00	1.440E+00	2.580E+00	0.000E+00	FAIL ABUN
U-235	7.562E-02	1.888E-01	3.162E-01	0.000E+00	FAIL ABUN
NP-236	-4.125E-03	6.467E-02	1.161E-01	0.000E+00	NOT IDENT.
U-238	1.363E+00	1.440E+00	2.580E+00	0.000E+00	FAIL ABUN
NP-239	-3.383E-02	1.703E-01	2.903E-01	0.000E+00	FAIL ABUN
AM-241	-3.490E-02	1.664E-01	2.985E-01	0.000E+00	NOT IDENT.
CM-243	5.902E-02	8.754E-02	1.555E-01	0.000E+00	FAIL ABUN
CM-247	1.689E-02	3.209E-02	5.448E-02	0.000E+00	NOT IDENT.
CF-249	7.353E-03	3.185E-02	5.649E-02	0.000E+00	NOT IDENT.
CF-251	4.167E-02	1.062E-01	1.912E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:45:58.56

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*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754002.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:45:14
Sample ID         : G232754002           Sample quantity  : 1.33250E+02 GRAM
Detector name     : GAM18                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.93  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	2633	10.67*	1.892E+00	3.673E+01	3.673E+01	8.68
MN-54	834.83	47	99.97*	2.986E+00	4.458E-02	4.598E-02	89.70
CD-109	88.03	193	3.72*	6.439E+00	2.275E+00	2.323E+00	43.93
SN-126	64.28	------	9.60	3.245E+00	------ Line Not Found		------
	86.94	193	8.90	6.439E+00	9.509E-01	9.509E-01	59.72
	87.57	193	37.00*	6.439E+00	2.287E-01	2.287E-01	43.93
TL-208	277.35	------	6.80	6.258E+00	------ Line Not Found		------
	510.84	77	21.60	4.308E+00	2.319E-01	2.319E-01	100.73
	583.14	601	84.20*	3.932E+00	5.118E-01	5.118E-01	16.30
	860.37	81	12.46	2.913E+00	6.303E-01	6.303E-01	58.09
BI-211	72.87	------	1.27	4.622E+00	------ Line Not Found		------
	351.07	1013	12.94*	5.450E+00	4.048E+00	4.048E+00	11.50
PB-212	74.81	481	10.70	4.923E+00	2.572E+00	2.572E+00	22.59
	77.11	680	18.00	5.239E+00	2.031E+00	2.031E+00	16.52
	87.30	193	8.00	6.439E+00	1.058E+00	1.058E+00	45.06
	238.63	1842	44.60*	6.792E+00	1.713E+00	1.713E+00	9.09
	300.09	159	3.41	5.983E+00	2.199E+00	2.199E+00	38.60
PO-212	74.81	481	10.70	4.923E+00	2.572E+00	2.572E+00	22.59
	77.11	680	18.00	5.239E+00	2.031E+00	2.031E+00	16.52
	87.30	193	8.00	6.439E+00	1.058E+00	1.058E+00	45.06
	115.19	------	0.60	8.058E+00	------ Line Not Found		------
	238.63	1842	44.60*	6.792E+00	1.713E+00	1.713E+00	9.09
	300.09	159	3.41	5.983E+00	2.199E+00	2.199E+00	38.60
BI-214	609.31	749	46.30*	3.811E+00	1.196E+00	1.197E+00	13.95
	768.36	49	5.04	3.193E+00	8.630E-01	8.630E-01	123.25
	934.06	------	3.21	2.722E+00	------ Line Not Found		------
	1120.29	193	15.10	2.334E+00	1.540E+00	1.540E+00	27.47
	1238.11	------	5.94	2.148E+00	------ Line Not Found		------
	1377.67	83	4.11	1.975E+00	2.867E+00	2.867E+00	35.02
	1764.49	121	15.80	1.694E+00	1.277E+00	1.277E+00	31.72
PB-214	74.81	481	6.21	4.923E+00	4.431E+00	4.431E+00	21.86
	77.11	680	10.50	5.239E+00	3.482E+00	3.482E+00	18.19

Sample ID : G232754002 Acquisition date : 14-JUL-2009 10:45:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	193	4.67	6.439E+00	1.812E+00	1.812E+00	44.61
	241.98	470	7.49	6.748E+00	2.621E+00	2.621E+00	24.21
	295.21	610	19.20	6.039E+00	1.482E+00	1.482E+00	14.17
	351.92	1013	37.20*	5.450E+00	1.408E+00	1.408E+00	12.63
PO-214	74.81	481	6.21	4.923E+00	4.431E+00	4.431E+00	21.86
	77.11	680	10.50	5.239E+00	3.482E+00	3.482E+00	18.19
	87.30	193	4.67	6.439E+00	1.812E+00	1.812E+00	44.61
	241.98	470	7.49	6.748E+00	2.621E+00	2.621E+00	24.21
	295.21	610	19.20	6.039E+00	1.482E+00	1.482E+00	14.17
	351.92	1013	37.20*	5.450E+00	1.408E+00	1.408E+00	12.63
PO-216	74.81	481	10.70	4.923E+00	2.572E+00	2.572E+00	22.59
	77.11	680	18.00	5.239E+00	2.031E+00	2.031E+00	16.52
	87.30	193	8.00	6.439E+00	1.058E+00	1.058E+00	45.06
	238.63	1842	44.60*	6.792E+00	1.713E+00	1.713E+00	9.09
	300.09	159	3.41	5.983E+00	2.199E+00	2.199E+00	38.60
PO-218	74.81	481	6.21	4.923E+00	4.431E+00	4.431E+00	21.86
	77.11	680	10.50	5.239E+00	3.482E+00	3.482E+00	18.19
	87.30	193	4.67	6.439E+00	1.812E+00	1.812E+00	44.61
	241.98	470	7.49	6.748E+00	2.621E+00	2.621E+00	24.21
	295.21	610	19.20	6.039E+00	1.482E+00	1.482E+00	14.17
	351.92	1013	37.20*	5.450E+00	1.408E+00	1.408E+00	12.63
RA-224	240.98	470	3.95*	6.748E+00	4.971E+00	4.971E+00	23.55
RA-226	609.31	749	46.30*	3.811E+00	1.196E+00	1.197E+00	13.95
	768.36	49	5.04	3.193E+00	8.630E-01	8.630E-01	123.25
	934.06	------	3.21	2.722E+00	------	Line Not Found	------
	1120.29	193	15.10	2.334E+00	1.540E+00	1.540E+00	27.47
	1238.11	------	5.94	2.148E+00	------	Line Not Found	------
	1377.67	83	4.11	1.975E+00	2.867E+00	2.867E+00	35.02
	1764.49	121	15.80	1.694E+00	1.277E+00	1.277E+00	31.72
AC-228	338.32	421	11.40	5.580E+00	1.863E+00	1.863E+00	45.26
	911.07	479	27.70*	2.778E+00	1.753E+00	1.753E+00	18.65
	969.11	287	16.60	2.638E+00	1.849E+00	1.849E+00	29.28
RA-228	338.32	421	11.40	5.580E+00	1.863E+00	1.863E+00	45.26
	911.07	479	27.70*	2.778E+00	1.753E+00	1.753E+00	18.65
	969.11	287	16.60	2.638E+00	1.849E+00	1.849E+00	29.28
TH-228	84.40	91	1.21	6.111E+00	3.453E+00	3.453E+00	102.23
	238.60	1842	44.60*	6.792E+00	1.713E+00	1.713E+00	9.09
	300.10	159	3.41	5.983E+00	2.199E+00	2.199E+00	69.97
TH-230	609.31	749	46.30*	3.811E+00	1.196E+00	1.196E+00	13.95
	768.36	49	5.04	3.193E+00	8.630E-01	8.630E-01	123.25
	934.06	------	3.21	2.722E+00	------	Line Not Found	------
	1120.29	193	15.10	2.334E+00	1.540E+00	1.540E+00	27.47
	1238.11	------	5.94	2.148E+00	------	Line Not Found	------
	1377.67	83	4.11	1.975E+00	2.867E+00	2.867E+00	35.02
	1764.49	121	15.80	1.694E+00	1.277E+00	1.277E+00	31.72
TH-232	338.32	421	11.40	5.580E+00	1.863E+00	1.863E+00	20.49
	911.07	479	27.70*	2.778E+00	1.753E+00	1.753E+00	18.65
	969.11	287	16.60	2.638E+00	1.849E+00	1.849E+00	29.28
U-234	609.31	749	46.30*	3.811E+00	1.196E+00	1.196E+00	13.95

Sample ID : G232754002 Acquisition date : 14-JUL-2009 10:45:14

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	768.36	49	5.04	3.193E+00	8.630E-01	8.630E-01	123.25
	934.06	------	3.21	2.722E+00	------	Line Not Found	------
	1120.29	193	15.10	2.334E+00	1.540E+00	1.540E+00	27.47
	1238.11	------	5.94	2.148E+00	------	Line Not Found	------
	1377.67	83	4.11	1.975E+00	2.867E+00	2.867E+00	35.02
	1764.49	121	15.80	1.694E+00	1.277E+00	1.277E+00	31.72
NP-237	86.50	193	12.60*	6.439E+00	6.717E-01	6.717E-01	48.54
	95.87	------	2.60	7.180E+00	------	Line Not Found	------
AM-243	74.67	481	66.00*	4.923E+00	4.169E-01	4.169E-01	20.57
	86.72	193	0.34	6.439E+00	2.519E+01	2.519E+01	43.93
	117.66	------	0.55	8.112E+00	------	Line Not Found	------
	142.18	------	0.13	8.232E+00	------	Line Not Found	------
ANH-511	511.00	77	100.00*	4.308E+00	5.010E-02	5.010E-02	100.39

Flag: "*" = Keyline

Sample ID : G232754002 Acquisition date : 14-JUL-2009 10:45:14

Total number of lines in spectrum	36	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	33	91.67%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.673E+01	3.673E+01	0.319E+01	8.68	
MN-54	312.70D	1.03	4.458E-02	4.598E-02	4.125E-02	89.70	
CD-109	464.00D	1.02	2.275E+00	2.323E+00	1.021E+00	43.93	
SN-126	1.00E+05Y	1.00	2.287E-01	2.287E-01	1.005E-01	43.93	
TL-208	1.41E+10Y	1.00	5.118E-01	5.118E-01	0.834E-01	16.30	
BI-211	7.04E+08Y	1.00	4.048E+00	4.048E+00	0.466E+00	11.50	
PB-212	1.41E+10Y	1.00	1.713E+00	1.713E+00	0.156E+00	9.09	
PO-212	1.41E+10Y	1.00	1.713E+00	1.713E+00	0.156E+00	9.09	
BI-214	1600.00Y	1.00	1.196E+00	1.197E+00	0.167E+00	13.95	
PB-214	1600.00Y	1.00	1.408E+00	1.408E+00	0.178E+00	12.63	
PO-214	1600.00Y	1.00	1.408E+00	1.408E+00	0.178E+00	12.63	
PO-216	1.41E+10Y	1.00	1.713E+00	1.713E+00	0.156E+00	9.09	
PO-218	1600.00Y	1.00	1.408E+00	1.408E+00	0.178E+00	12.63	
RA-224	1.41E+10Y	1.00	4.971E+00	4.971E+00	1.171E+00	23.55	
RA-226	1600.00Y	1.00	1.196E+00	1.197E+00	0.167E+00	13.95	
AC-228	1.41E+10Y	1.00	1.753E+00	1.753E+00	0.327E+00	18.65	
RA-228	1.41E+10Y	1.00	1.753E+00	1.753E+00	0.327E+00	18.65	
TH-228	1.41E+10Y	1.00	1.713E+00	1.713E+00	0.156E+00	9.09	
TH-230	4.47E+09Y	1.00	1.196E+00	1.196E+00	0.167E+00	13.95	
TH-232	1.41E+10Y	1.00	1.753E+00	1.753E+00	0.327E+00	18.65	
U-234	4.47E+09Y	1.00	1.196E+00	1.196E+00	0.167E+00	13.95	
NP-237	2.14E+06Y	1.00	6.717E-01	6.717E-01	3.260E-01	48.54	
AM-243	7380.00Y	1.00	4.169E-01	4.169E-01	0.858E-01	20.57	
ANH-511	1.00E+09Y	1.00	5.010E-02	5.010E-02	5.029E-02	100.39	
		Total Activity :	7.107E+01	7.112E+01			

Grand Total Activity : 7.107E+01 7.112E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232754002 Acquisition date : 14-JUL-2009 10:45:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	90.11	140	323	1.00	179.33	177	12	1.94E-02	39.1	6.72E+00	T
4	92.91	215	547	1.26	184.93	177	12	2.98E-02	42.7	6.96E+00	T
0	128.90	103	411	1.60	256.88	254	8	1.43E-02	71.7	8.25E+00	T
0	186.04	263	442	1.15	371.12	367	10	3.65E-02	33.5	7.65E+00	T
0	209.35	229	350	1.21	417.73	413	10	3.18E-02	33.5	7.26E+00	T
0	270.59	124	301	1.38	540.15	536	9	1.72E-02	53.9	6.35E+00	T
0	327.90	66	237	1.07	654.75	651	9	9.21E-03	86.9	5.68E+00	T
0	409.35	68	182	1.39	817.60	813	10	9.51E-03	77.3	4.97E+00	
0	463.01	100	187	1.69	924.88	920	12	1.39E-02	58.9	4.60E+00	T
0	727.82	166	107	0.90	1454.35	1448	13	2.30E-02	30.3	3.33E+00	T
0	795.42	72	90	2.41	1589.53	1583	11	9.96E-03	56.6	3.11E+00	T
2	965.17	77	92	2.55	1928.96	1920	36	1.07E-02	60.8	2.65E+00	T
0	1588.51	51	39	2.28	3175.49	3166	18	7.14E-03	65.2	1.79E+00	
0	1665.65	14	23	2.57	3329.77	3316	19	2.01E-03	****	1.74E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:46:03.33

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754002.CNF;1 *
* Acquisition date  : 14-JUL-2009 10:45:14  Detector SN#     :             *
* Detector ID       : GAM18                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.93          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232754002            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.33250E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23.2MS Isotope      :                *
* MSD ID           :                      MSD Isotope     :                *
* LCS ID           : 1023-A               LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.673E+01	3.188E+00	4.326E-01	3.283E-02	84.908
MN-54	4.598E-02	4.125E-02	4.956E-02	5.076E-03	0.928
CD-109	2.323E+00	1.021E+00	1.262E+00	1.167E-01	1.840
SN-126	2.287E-01	1.005E-01	1.255E-01	1.156E-02	1.823
TL-208	5.118E-01	8.342E-02	4.653E-02	3.648E-03	10.998
BI-211	4.048E+00	4.657E-01	2.407E-01	1.545E-02	16.816
PB-212	1.713E+00	1.558E-01	7.712E-02	5.509E-03	22.213
PO-212	1.713E+00	1.558E-01	7.712E-02	5.509E-03	22.213
BI-214	1.197E+00	1.669E-01	9.064E-02	8.097E-03	13.200
PB-214	1.408E+00	1.779E-01	8.389E-02	6.940E-03	16.786
PO-214	1.408E+00	1.779E-01	8.389E-02	6.940E-03	16.786
PO-216	1.713E+00	1.558E-01	7.712E-02	5.509E-03	22.213
PO-218	1.408E+00	1.779E-01	8.389E-02	6.940E-03	16.786
RA-224	4.971E+00	1.171E+00	8.766E-01	4.883E-02	5.671
RA-226	1.197E+00	1.669E-01	9.064E-02	8.097E-03	13.200
AC-228	1.753E+00	3.269E-01	1.659E-01	2.198E-02	10.570
RA-228	1.753E+00	3.269E-01	1.659E-01	2.198E-02	10.570
TH-228	1.713E+00	1.558E-01	7.711E-02	5.509E-03	22.214

Sample ID : G232754002 Acquisition date : 14-JUL-2009 10:45:14

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.196E+00	1.669E-01	9.064E-02	8.097E-03	13.200
TH-232	1.753E+00	3.269E-01	1.659E-01	2.198E-02	10.570
U-234	1.196E+00	1.669E-01	9.064E-02	8.097E-03	13.200
NP-237	6.717E-01	3.260E-01	3.037E-01	6.853E-02	2.211
AM-243	4.169E-01	8.576E-02	8.760E-02	7.310E-03	4.760
ANH-511	5.010E-02	5.029E-02	3.840E-02	2.536E-03	1.305

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.243E-02		2.471E-01	4.054E-01	2.938E-02	-0.055
NA-22	-2.104E-02		3.683E-02	5.782E-02	3.934E-03	-0.364
NA-24	4.399E-02		7.810E-02	Half-Life too short		
AL-26	-5.171E-03		2.007E-02	2.963E-02	1.730E-03	-0.175
TI-44	3.748E-01	+	6.191E-02	7.535E-02	6.442E-03	4.974
SC-46	1.860E-02		3.170E-02	5.384E-02	6.005E-03	0.345
V-48	2.529E-03		5.705E-02	8.570E-02	8.476E-03	0.030
CR-51	2.878E-01		3.137E-01	5.265E-01	3.390E-02	0.547
MN-52	-1.165E-01		1.660E-01	2.470E-01	1.820E-02	-0.472
CO-56	-2.285E-02		3.317E-02	5.180E-02	5.407E-03	-0.441
CO-57	-1.966E-02		2.325E-02	3.600E-02	2.132E-03	-0.546
CO-58	-1.508E-02		3.320E-02	5.306E-02	5.238E-03	-0.284
FE-59	1.985E-02		7.563E-02	1.281E-01	1.054E-02	0.155
CO-60	1.455E-03		3.202E-02	5.256E-02	3.971E-03	0.028
ZN-65	-3.070E-02		8.671E-02	1.191E-01	8.388E-03	-0.258
GE-68	3.127E-01		1.050E+00	1.785E+00	1.418E-01	0.175
AS-73	4.516E-01		1.037E+00	1.721E+00	1.365E-01	0.262
AS-74	-1.132E-02		7.099E-02	1.137E-01	8.170E-03	-0.100
SE-75	-2.544E-02		3.743E-02	5.703E-02	3.262E-03	-0.446
BR-77	-1.038E+00		5.988E+00	9.702E+00	6.473E-01	-0.107
SR-82	9.257E-02		3.369E-01	5.105E-01	4.754E-02	0.181
RB-83	-1.497E-02		5.483E-02	8.830E-02	5.889E-03	-0.170
RB-84	-7.856E-03		5.360E-02	8.670E-02	9.556E-03	-0.091
KR-85	2.485E+01		7.061E+00	1.208E+01	8.005E-01	2.057
SR-85	1.259E-01		3.576E-02	6.120E-02	4.054E-03	2.057
RB-86	1.193E-01		6.341E-01	1.071E+00	8.525E-02	0.111
Y-88	-2.969E-04		2.762E-02	4.518E-02	2.573E-03	-0.007
ZR-88	4.685E-03		2.409E-02	4.074E-02	2.343E-03	0.115
Y-91	-8.562E+00		1.585E+01	2.525E+01	1.493E+00	-0.339
NB-94	2.282E-02		2.755E-02	4.797E-02	3.935E-03	0.476
NB-95	6.956E-02		3.964E-02	6.381E-02	5.837E-03	1.090
NB-95M	1.401E-01		1.171E-01	1.791E-01	1.314E-02	0.782
ZR-95	4.162E-03		5.577E-02	9.292E-02	9.143E-03	0.045
NB-97	1.027E-02		1.175E-02	Half-Life too short		
ZR-97	5.265E-01		2.606E-01	Half-Life too short		
MO-99	4.251E+00		6.809E+00	1.171E+01	1.786E+00	0.363
TC-99M	-1.036E+09		7.276E+08	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101	-1.790E-03		2.805E-02	4.593E-02	2.469E-03	-0.039
RH-102	-1.041E-02		2.320E-02	3.729E-02	2.369E-03	-0.279
RU-103	1.200E-02		3.087E-02	5.186E-02	6.733E-03	0.231
RH-106	-2.789E-01		2.712E-01	4.040E-01	5.083E-02	-0.690
RU-106	-2.789E-01		2.697E-01	4.040E-01	2.973E-02	-0.690
AG-108M	-6.973E-03		2.645E-02	4.335E-02	2.832E-03	-0.161
AG-110M	1.212E-02		2.657E-02	4.577E-02	3.610E-03	0.265
IN-111	-7.748E-02		7.142E-01	1.023E+00	5.717E-02	-0.076
IN-113M	-2.774E-02		3.596E-02	5.794E-02	3.554E-03	-0.479
SN-113	-2.774E-02		3.596E-02	5.794E-02	3.554E-03	-0.479
IN-114M	-6.374E-02		1.680E-01	2.429E-01	1.297E-02	-0.262
CD-115	1.753E-01		5.837E+00	9.563E+00	6.428E-01	0.018
SN-117M	7.573E-02		4.309E-02	7.692E-02	4.089E-03	0.984
SB-122	1.845E+00		1.267E+00	2.222E+00	1.548E-01	0.830
I-123	1.256E+00		5.493E-01	Half-Life too short		
TE-123M	2.710E-02		2.370E-02	4.159E-02	2.244E-03	0.652
I-124	-1.542E-01		5.532E-01	7.533E-01	5.447E-02	-0.205
SB-124	1.890E-02		6.306E-02	1.079E-01	7.442E-03	0.175
SB-125	1.113E-02		7.127E-02	1.196E-01	7.473E-03	0.093
TE-125M	4.258E+00		8.245E+00	1.358E+01	1.193E+00	0.314
I-126	7.950E-02		1.297E-01	2.249E-01	1.729E-02	0.353
SB-126	3.334E-02		1.185E-01	1.810E-01	1.533E-02	0.184
SB-127	-1.192E-01		8.762E-01	1.454E+00	1.532E-01	-0.082
XE-127	-1.847E-02		3.803E-02	6.223E-02	3.359E-03	-0.297
I-131	1.643E-02		8.300E-02	1.412E-01	9.097E-03	0.116
TE-132	-4.955E-01		4.418E-01	6.872E-01	9.636E-02	-0.721
BA-133	3.149E-02		3.796E-02	5.606E-02	6.476E-03	0.562
I-133	-1.281E-03		9.060E-04	Half-Life too short		
CS-134	8.569E-02	+	4.917E-02	7.206E-02	6.970E-03	1.189
CS-135	1.879E-01		1.514E-01	2.312E-01	1.748E-02	0.813
I-135	-1.362E+08		1.339E+08	Half-Life too short		
CS-136	-3.019E-03		8.565E-02	1.429E-01	1.281E-02	-0.021
BA-137M	-1.103E-02		2.758E-02	4.515E-02	3.442E-03	-0.244
CS-137	-1.166E-02		2.915E-02	4.773E-02	3.647E-03	-0.244
CE-139	-8.896E-04		2.463E-02	4.156E-02	2.182E-03	-0.021
BA-140	-7.805E-03		1.989E-01	3.240E-01	1.060E-01	-0.024
LA-140	3.749E-02		6.662E-02	1.032E-01	7.081E-03	0.363
CE-141	-2.920E-02		5.758E-02	8.751E-02	4.996E-03	-0.334
CE-143	3.995E-04		5.618E-05	Half-Life too short		
CE-144	-8.081E-03		2.095E-01	2.965E-01	4.193E-02	-0.027
PM-144	-1.572E-03		2.668E-02	4.441E-02	3.605E-03	-0.035
PR-144	-1.065E-01		1.807E+00	3.008E+00	2.441E-01	-0.035
PM-146	3.806E-02		3.392E-02	5.932E-02	5.277E-03	0.642
ND-147	-2.577E-01		4.001E-01	6.240E-01	8.706E-02	-0.413
PM-149	-1.493E+01		5.241E+01	8.395E+01	1.187E+01	-0.178
EU-152	-2.589E-02		1.071E-01	1.219E-01	7.954E-03	-0.212
GD-153	-1.247E-02		7.760E-02	1.195E-01	9.344E-03	-0.104
EU-154	-4.067E-02		1.015E-01	1.614E-01	1.612E-02	-0.252

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	8.164E-03		1.007E-01	1.636E-01	1.170E-02	0.050
TB-160	2.452E-03		1.065E-01	1.745E-01	1.917E-02	0.014
HO-166M	-3.487E-02		4.744E-02	7.530E-02	6.277E-03	-0.463
TM-171	-1.055E+01		2.981E+01	4.875E+01	3.898E+00	-0.216
LU-176	1.685E-03		2.105E-02	3.297E-02	1.898E-03	0.051
LU-177	3.431E+00	+	1.164E+00	1.529E+00	8.296E-02	2.243
LU-177M	1.379E-01		1.531E-01	2.365E-01	1.397E-02	0.583
HF-181	-5.416E-03		3.328E-02	5.434E-02	3.478E-03	-0.100
W-181	-2.890E-01		3.977E-01	6.426E-01	5.097E-02	-0.450
TA-182	-4.655E-03		1.750E-01	2.880E-01	1.762E-02	-0.016
RE-183	-1.140E-01		9.086E-02	1.467E-01	7.744E-03	-0.777
RE-184	-2.046E-02		1.861E-01	3.038E-01	1.706E-02	-0.067
OS-185	-1.305E-02		3.356E-02	5.240E-02	3.940E-03	-0.249
RE-188	-7.319E-02		1.397E-01	2.327E-01	1.245E-02	-0.315
W-188	1.023E+00		6.668E+00	9.562E+00	5.477E-01	0.107
IR-192	-9.067E-03		2.874E-02	4.559E-02	2.644E-03	-0.199
AU-195	2.149E-01		2.076E-01	3.494E-01	2.673E-02	0.615
TL-200	-3.908E-05		8.716E-05	Half-Life too short		
TL-201	-2.504E+00		4.499E+00	7.447E+00	3.910E-01	-0.336
TL-202	3.865E-02		5.264E-02	9.062E-02	5.525E-03	0.426
HG-203	3.593E-02		3.415E-02	5.800E-02	3.517E-03	0.620
BI-207	-7.555E-03		4.332E-02	7.150E-02	5.902E-03	-0.106
TL-207	-5.490E-01		6.661E-01	8.737E-01	1.442E-01	-0.628
PO-209	2.940E-02		6.143E+00	1.004E+01	1.132E+00	0.003
BI-210	-2.045E-01		4.806E+00	8.123E+00	6.285E-01	-0.025
PB-210	-2.045E-01		4.806E+00	8.123E+00	6.285E-01	-0.025
PO-210	-2.045E-01		4.806E+00	8.123E+00	5.403E-01	-0.025
PB-211	-3.674E-01		9.328E-01	1.278E+00	7.970E-01	-0.287
BI-212	1.187E+00	+	3.789E-01	5.354E-01	5.332E-02	2.216
PO-215	-5.490E-01		6.661E-01	8.737E-01	1.442E-01	-0.628
RN-219	9.879E-02		3.468E-01	5.872E-01	7.994E-02	0.168
RN-220	1.213E+00		2.168E+01	3.546E+01	2.436E+00	0.034
RA-223	-5.490E-01		6.661E-01	8.737E-01	1.442E-01	-0.628
AC-227	-2.461E-01		3.174E-01	4.992E-01	6.934E-02	-0.493
TH-227	-2.461E-01		3.183E-01	4.992E-01	8.407E-02	-0.493
TH-229	8.791E-02		4.218E-01	7.106E-01	3.805E-02	0.124
PA-231	-1.182E-01		1.246E+00	2.017E+00	2.772E-01	-0.059
TH-231	-5.490E-01		6.661E-01	8.737E-01	1.442E-01	-0.628
U-231	-3.087E-01		9.019E-01	1.290E+00	1.033E-01	-0.239
PA-233	-1.281E-02		5.196E-02	8.277E-02	5.070E-03	-0.155
PA-234	2.710E-03		2.606E-01	4.237E-01	8.358E-02	0.006
PA-234M	2.416E+00		6.019E+00	9.947E+00	1.186E+00	0.243
TH-234	1.363E+00		1.470E+00	2.440E+00	4.301E-01	0.559
U-235	7.562E-02		1.927E-01	3.032E-01	4.910E-02	0.249
NP-236	-4.125E-03		6.599E-02	1.115E-01	5.907E-03	-0.037
U-238	1.363E+00		1.470E+00	2.440E+00	4.301E-01	0.559
NP-239	-3.383E-02		1.737E-01	2.774E-01	1.717E-02	-0.122
AM-241	-3.490E-02		1.698E-01	2.820E-01	2.339E-02	-0.124

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	5.902E-02		8.932E-02	1.483E-01	1.061E-02	0.398
CM-247	1.689E-02		3.274E-02	5.315E-02	3.096E-03	0.318
CF-249	7.353E-03		3.250E-02	5.508E-02	3.166E-03	0.134
CF-251	4.167E-02		1.083E-01	1.839E-01	9.711E-03	0.227

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232754002           *
* Acquisition date  : 14-JUL-2009 10:45:14 Detector SN#     :               *
* Detector ID       : GAM18                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.93      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232754002           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.3325E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 23-APR-2009 11:59:23 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.673E+01	3.125E+00	2.168E-01	1.594E+00
MN-54	4.598E-02	4.042E-02	2.509E-02	2.062E-02
CD-109	2.323E+00	1.000E+00	6.643E-01	5.103E-01
SN-126	2.287E-01	9.848E-02	6.602E-02	5.025E-02
TL-208	5.118E-01	8.175E-02	2.371E-02	4.171E-02
BI-211	4.048E+00	4.564E-01	1.237E-01	2.328E-01
PB-212	1.713E+00	1.527E-01	3.990E-02	7.789E-02
PO-212	1.713E+00	1.527E-01	3.990E-02	7.789E-02
BI-214	1.197E+00	1.636E-01	4.614E-02	8.347E-02
PB-214	1.408E+00	1.743E-01	4.312E-02	8.894E-02
PO-214	1.408E+00	1.743E-01	4.312E-02	8.894E-02
PO-216	1.713E+00	1.527E-01	3.990E-02	7.789E-02
PO-218	1.408E+00	1.743E-01	4.312E-02	8.894E-02
RA-224	4.971E+00	1.147E+00	4.535E-01	5.853E-01
RA-226	1.197E+00	1.636E-01	4.614E-02	8.347E-02
AC-228	1.753E+00	3.204E-01	8.383E-02	1.635E-01
RA-228	1.753E+00	3.204E-01	8.383E-02	1.635E-01
TH-228	1.713E+00	1.527E-01	3.990E-02	7.789E-02
TH-230	1.196E+00	1.636E-01	4.614E-02	8.347E-02
TH-232	1.753E+00	3.204E-01	8.383E-02	1.635E-01
U-234	1.196E+00	1.636E-01	4.614E-02	8.347E-02
NP-237	6.717E-01	3.195E-01	1.599E-01	1.630E-01
AM-243	4.169E-01	8.404E-02	4.622E-02	4.288E-02
ANH-511	5.010E-02	4.928E-02	1.961E-02	2.514E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-2.243E-02	2.422E-01	2.073E-01	1.236E-01	NOT IDENT.
NA-22	-2.104E-02	3.610E-02	2.905E-02	1.842E-02	NOT IDENT.
NA-24	4.399E+04	1.531E+05	0.000E+00	7.810E+04	SHORT HLIF

AL-26	-5.171E-03	1.967E-02	1.479E-02	1.004E-02	NOT IDENT.
TI-44	3.748E-01	6.068E-02	3.972E-02	3.096E-02	FAIL ABUN
SC-46	1.860E-02	3.106E-02	2.723E-02	1.585E-02	FAIL ABUN
V-48	2.529E-03	5.591E-02	4.326E-02	2.853E-02	NOT IDENT.
CR-51	2.878E-01	3.074E-01	2.710E-01	1.568E-01	NOT IDENT.
MN-52	-1.165E-01	1.627E-01	1.238E-01	8.299E-02	NOT IDENT.
CO-56	-2.285E-02	3.251E-02	2.621E-02	1.658E-02	NOT IDENT.
CO-57	-1.966E-02	2.279E-02	1.884E-02	1.163E-02	NOT IDENT.
CO-58	-1.508E-02	3.253E-02	2.688E-02	1.660E-02	NOT IDENT.
FE-59	1.985E-02	7.412E-02	6.451E-02	3.782E-02	NOT IDENT.
CO-60	1.455E-03	3.138E-02	2.638E-02	1.601E-02	NOT IDENT.
ZN-65	-3.070E-02	8.497E-02	5.997E-02	4.335E-02	NOT IDENT.
GE-68	3.127E-01	1.029E+00	8.996E-01	5.250E-01	NOT IDENT.
AS-73	4.516E-01	1.016E+00	9.131E-01	5.183E-01	NOT IDENT.
AS-74	-1.132E-02	6.957E-02	5.791E-02	3.550E-02	NOT IDENT.
SE-75	-2.544E-02	3.669E-02	2.946E-02	1.872E-02	NOT IDENT.
BR-77	-1.038E+00	5.868E+00	4.953E+00	2.994E+00	FAIL ABUN
SR-82	9.257E-02	3.301E-01	2.588E-01	1.684E-01	NOT IDENT.
RB-83	-1.497E-02	5.374E-02	4.507E-02	2.742E-02	NOT IDENT.
RB-84	-7.856E-03	5.253E-02	4.385E-02	2.680E-02	NOT IDENT.
KR-85	2.485E+01	6.920E+00	6.170E+00	3.531E+00	NOT IDENT.
SR-85	1.259E-01	3.505E-02	3.125E-02	1.788E-02	NOT IDENT.
RB-86	1.193E-01	6.215E-01	5.397E-01	3.171E-01	NOT IDENT.
Y-88	-2.969E-04	2.707E-02	2.255E-02	1.381E-02	NOT IDENT.
ZR-88	4.685E-03	2.360E-02	2.090E-02	1.204E-02	NOT IDENT.
Y-91	-8.562E+00	1.553E+01	1.270E+01	7.923E+00	NOT IDENT.
NB-94	2.282E-02	2.700E-02	2.436E-02	1.377E-02	NOT IDENT.
NB-95	6.956E-02	3.885E-02	3.235E-02	1.982E-02	NOT IDENT.
NB-95M	1.401E-01	1.148E-01	9.267E-02	5.855E-02	NOT IDENT.
ZR-95	4.162E-03	5.465E-02	4.712E-02	2.788E-02	NOT IDENT.
NB-97	1.027E+04	2.302E+04	0.000E+00	1.175E+04	SHORT HLIF
ZR-97	5.265E+05	5.107E+05	0.000E+00	2.606E+05	SHORT HLIF
MO-99	4.251E+00	6.673E+00	5.939E+00	3.404E+00	NOT IDENT.
TC-99M	-1.036E+15	1.426E+15	0.000E+00	7.276E+14	SHORT HLIF
RH-101	-1.790E-03	2.749E-02	2.384E-02	1.402E-02	NOT IDENT.
RH-102	-1.041E-02	2.274E-02	1.907E-02	1.160E-02	NOT IDENT.
RU-103	1.200E-02	3.026E-02	2.649E-02	1.544E-02	FAIL ABUN
RH-106	-2.789E-01	2.657E-01	2.056E-01	1.356E-01	FAIL ABUN
RU-106	-2.789E-01	2.643E-01	2.056E-01	1.348E-01	FAIL ABUN
AG-108M	-6.973E-03	2.592E-02	2.220E-02	1.322E-02	NOT IDENT.
AG-110M	1.212E-02	2.604E-02	2.327E-02	1.329E-02	NOT IDENT.
IN-111	-7.748E-02	6.999E-01	5.291E-01	3.571E-01	NOT IDENT.
IN-113M	-2.774E-02	3.524E-02	2.972E-02	1.798E-02	NOT IDENT.
SN-113	-2.774E-02	3.524E-02	2.972E-02	1.798E-02	NOT IDENT.
IN-114M	-6.374E-02	1.646E-01	1.262E-01	8.399E-02	NOT IDENT.
CD-115	1.753E-01	5.720E+00	4.880E+00	2.918E+00	NOT IDENT.
SN-117M	7.573E-02	4.223E-02	4.008E-02	2.155E-02	NOT IDENT.
SB-122	1.845E+00	1.242E+00	1.133E+00	6.337E-01	NOT IDENT.
I-123	1.256E+06	1.077E+06	0.000E+00	5.493E+05	SHORT HLIF
TE-123M	2.710E-02	2.323E-02	2.167E-02	1.185E-02	NOT IDENT.
I-124	-1.542E-01	5.421E-01	3.836E-01	2.766E-01	NOT IDENT.
SB-124	1.890E-02	6.180E-02	5.391E-02	3.153E-02	FAIL ABUN
SB-125	1.113E-02	6.985E-02	6.126E-02	3.564E-02	FAIL ABUN
TE-125M	4.258E+00	8.080E+00	7.117E+00	4.122E+00	NOT IDENT.
I-126	7.950E-02	1.271E-01	1.143E-01	6.483E-02	NOT IDENT.
SB-126	3.334E-02	1.162E-01	9.189E-02	5.927E-02	FAIL ABUN
SB-127	-1.192E-01	8.586E-01	7.384E-01	4.381E-01	NOT IDENT.
XE-127	-1.847E-02	3.727E-02	3.229E-02	1.901E-02	NOT IDENT.
I-131	1.643E-02	8.134E-02	7.251E-02	4.150E-02	NOT IDENT.
TE-132	-4.955E-01	4.329E-01	3.558E-01	2.209E-01	NOT IDENT.
BA-133	3.149E-02	3.720E-02	2.881E-02	1.898E-02	NOT IDENT.
I-133	-1.281E+03	1.776E+03	0.000E+00	9.060E+02	SHORT HLIF
CS-134	8.569E-02	4.819E-02	3.651E-02	2.459E-02	FAIL ABUN
CS-135	1.879E-01	1.484E-01	1.194E-01	7.571E-02	NOT IDENT.
I-135	-1.362E+14	2.625E+14	0.000E+00	1.339E+14	SHORT HLIF
CS-136	-3.019E-03	8.394E-02	7.205E-02	4.283E-02	FAIL ABUN
BA-137M	-1.103E-02	2.703E-02	2.295E-02	1.379E-02	NOT IDENT.
CS-137	-1.166E-02	2.857E-02	2.426E-02	1.458E-02	NOT IDENT.
CE-139	-8.896E-04	2.414E-02	2.164E-02	1.232E-02	NOT IDENT.
BA-140	-7.805E-03	1.949E-01	1.653E-01	9.945E-02	NOT IDENT.
LA-140	3.749E-02	6.529E-02	5.164E-02	3.331E-02	FAIL ABUN
CE-141	-2.920E-02	5.642E-02	4.566E-02	2.879E-02	NOT IDENT.
CE-143	3.995E+02	1.101E+02	0.000E+00	5.618E+01	SHORT HLIF
CE-144	-8.081E-03	2.053E-01	1.549E-01	1.048E-01	NOT IDENT.
PM-144	-1.572E-03	2.615E-02	2.255E-02	1.334E-02	NOT IDENT.
PR-144	-1.065E-01	1.771E+00	1.527E+00	9.034E-01	NOT IDENT.
PM-146	3.806E-02	3.325E-02	3.035E-02	1.696E-02	NOT IDENT.
ND-147	-2.577E-01	3.921E-01	3.184E-01	2.000E-01	FAIL ABUN

PM-149	-1.493E+01	5.136E+01	4.330E+01	2.621E+01	NOT IDENT.
EU-152	-2.589E-02	1.049E-01	6.267E-02	5.355E-02	FAIL ABUN
GD-153	-1.247E-02	7.604E-02	6.278E-02	3.880E-02	FAIL ABUN
EU-154	-4.067E-02	9.943E-02	8.107E-02	5.073E-02	NOT IDENT.
EU-155	8.164E-03	9.870E-02	8.585E-02	5.036E-02	FAIL ABUN
TB-160	2.452E-03	1.044E-01	8.826E-02	5.324E-02	FAIL ABUN
HO-166M	-3.487E-02	4.649E-02	3.823E-02	2.372E-02	NOT IDENT.
TM-171	-1.055E+01	2.922E+01	2.577E+01	1.491E+01	NOT IDENT.
LU-176	1.685E-03	2.063E-02	1.699E-02	1.052E-02	FAIL ABUN
LU-177	3.431E+00	1.141E+00	7.932E-01	5.821E-01	FAIL ABUN
LU-177M	1.379E-01	1.501E-01	1.212E-01	7.656E-02	NOT IDENT.
HF-181	-5.416E-03	3.262E-02	2.778E-02	1.664E-02	NOT IDENT.
W-181	-2.890E-01	3.898E-01	3.398E-01	1.989E-01	NOT IDENT.
TA-182	-4.655E-03	1.715E-01	1.448E-01	8.748E-02	FAIL ABUN
RE-183	-1.140E-01	8.904E-02	7.641E-02	4.543E-02	FAIL ABUN
RE-184	-2.046E-02	1.824E-01	1.570E-01	9.306E-02	NOT IDENT.
OS-185	-1.305E-02	3.289E-02	2.665E-02	1.678E-02	NOT IDENT.
RE-188	-7.319E-02	1.369E-01	1.213E-01	6.984E-02	NOT IDENT.
W-188	1.023E+00	6.535E+00	4.931E+00	3.334E+00	NOT IDENT.
IR-192	-9.067E-03	2.817E-02	2.347E-02	1.437E-02	FAIL ABUN
AU-195	2.149E-01	2.035E-01	1.835E-01	1.038E-01	FAIL ABUN
TL-200	-3.908E+01	1.708E+02	0.000E+00	8.716E+01	SHORT HLIF
TL-201	-2.504E+00	4.409E+00	3.877E+00	2.250E+00	NOT IDENT.
TL-202	3.865E-02	5.159E-02	4.640E-02	2.632E-02	NOT IDENT.
HG-203	3.593E-02	3.347E-02	2.993E-02	1.707E-02	NOT IDENT.
BI-207	-7.555E-03	4.245E-02	3.604E-02	2.166E-02	FAIL ABUN
TL-207	-5.490E-01	6.528E-01	4.497E-01	3.330E-01	FAIL ABUN
PO-209	2.940E-02	6.020E+00	5.074E+00	3.072E+00	NOT IDENT.
BI-210	-2.045E-01	4.710E+00	4.319E+00	2.403E+00	NOT IDENT.
PB-210	-2.045E-01	4.710E+00	4.319E+00	2.403E+00	NOT IDENT.
PO-210	-2.045E-01	4.710E+00	4.319E+00	2.403E+00	NOT IDENT.
PB-211	-3.674E-01	9.142E-01	6.554E-01	4.664E-01	NOT IDENT.
BI-212	1.187E+00	3.713E-01	2.717E-01	1.895E-01	FAIL ABUN
PO-215	-5.490E-01	6.528E-01	4.497E-01	3.330E-01	FAIL ABUN
RN-219	9.879E-02	3.398E-01	3.011E-01	1.734E-01	FAIL ABUN
RN-220	1.213E+00	2.125E+01	1.808E+01	1.084E+01	NOT IDENT.
RA-223	-5.490E-01	6.528E-01	4.497E-01	3.330E-01	FAIL ABUN
AC-227	-2.461E-01	3.111E-01	2.580E-01	1.587E-01	FAIL ABUN
TH-227	-2.461E-01	3.119E-01	2.580E-01	1.591E-01	FAIL ABUN
TH-229	8.791E-02	4.134E-01	3.690E-01	2.109E-01	FAIL ABUN
PA-231	-1.182E-01	1.221E+00	1.041E+00	6.231E-01	FAIL ABUN
TH-231	-5.490E-01	6.528E-01	4.497E-01	3.330E-01	FAIL ABUN
U-231	-3.087E-01	8.838E-01	6.775E-01	4.509E-01	FAIL ABUN
PA-233	-1.281E-02	5.092E-02	4.263E-02	2.598E-02	FAIL ABUN
PA-234	2.710E-03	2.554E-01	2.140E-01	1.303E-01	FAIL ABUN
PA-234M	2.416E+00	5.898E+00	5.019E+00	3.009E+00	NOT IDENT.
TH-234	1.363E+00	1.440E+00	1.291E+00	7.349E-01	FAIL ABUN
U-235	7.562E-02	1.888E-01	1.582E-01	9.633E-02	FAIL ABUN
NP-236	-4.125E-03	6.467E-02	5.808E-02	3.300E-02	NOT IDENT.
U-238	1.363E+00	1.440E+00	1.291E+00	7.349E-01	FAIL ABUN
NP-239	-3.383E-02	1.703E-01	1.453E-01	8.687E-02	FAIL ABUN
AM-241	-3.490E-02	1.664E-01	1.493E-01	8.491E-02	NOT IDENT.
CM-243	5.902E-02	8.754E-02	7.780E-02	4.466E-02	FAIL ABUN
CM-247	1.689E-02	3.209E-02	2.725E-02	1.637E-02	NOT IDENT.
CF-249	7.353E-03	3.185E-02	2.826E-02	1.625E-02	NOT IDENT.
CF-251	4.167E-02	1.062E-01	9.563E-02	5.417E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	291.5079
46.50	291.5079
46.50	291.5079
48.70	285.2159
49.72	273.8187
51.35	320.7618
52.39	311.1700
52.97	297.3142
53.15	297.5180
53.44	294.2031
54.07	295.8168
56.28	358.0811
56.28	358.0851
57.37	0.0000
57.53	350.4653
57.53	350.4673
57.60	340.3787
57.98	333.4341
57.98	333.4341
59.32	372.2493
59.32	372.2493
59.40	372.3541
59.54	372.5372
59.72	372.7722
60.01	389.0096
61.10	434.4962
61.14	434.5563
61.30	436.6700
63.00	393.9670
63.29	394.3518
63.29	394.3518
63.58	394.7356
64.28	441.0951
65.12	471.7485
65.20	471.8730
65.20	471.8730
66.05	464.6212
66.72	445.5939
66.83	440.0284
66.91	440.1410
67.20	441.5093
67.20	441.5093
67.75	439.4174
67.85	438.6022
68.90	445.0662
68.90	445.0662
69.30	483.4385
69.67	455.1100
70.82	434.9922
70.82	434.9922
70.83	435.0060
72.80	449.3178
72.87	449.4142
72.87	449.4142
74.67	465.5507
74.81	465.7456
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74.81	465.7456
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74.81	465.7456
74.81	465.7456
74.97	465.9671
75.28	466.3981
75.70	466.9791
77.11	468.9160
77.11	468.9160
77.11	468.9160

77.11	468.9160
77.11	468.9160
77.11	468.9160
78.38	455.3214
79.62	458.4329
79.80	458.6679
79.80	458.6679
80.11	459.0721
80.18	459.1637
80.30	459.3188
80.30	459.3188
80.57	459.6713
81.00	460.2282
81.07	460.3199
81.07	460.3199
81.07	460.3199
81.07	460.3199
82.60	444.2800
83.37	451.2405
83.78	451.7555
83.78	451.7555
83.78	451.7555
83.78	451.7555
84.21	452.2888
84.40	452.5223
84.90	344.3866
85.43	344.8824
86.29	345.6843
86.50	345.8791
86.54	345.9156
86.59	345.9626
86.72	346.0826
86.79	346.1452
86.94	346.2861
87.30	526.0112
87.30	526.0112
87.30	526.0112
87.30	526.0112
87.30	526.0112
87.30	526.0112
87.57	526.3887
87.88	523.7764
88.03	523.9864
88.36	524.4431
88.47	524.5953
89.95	526.6371
91.11	420.7373
92.29	422.0167
92.38	422.1150
92.38	422.1150
93.35	389.1819
94.00	385.1833
94.67	396.6738
94.67	396.6797
94.90	396.9082
94.90	396.9082
94.90	396.9082
94.90	396.9082
95.87	408.7504
95.87	408.7504
96.73	398.7246
97.43	409.3954
98.44	371.2027
98.44	371.2027
98.88	355.9437
99.55	376.3879
99.55	376.3879
99.86	392.3645
100.00	392.4980
100.10	392.5953
103.18	398.6488
103.76	359.0624
105.00	379.1678
105.31	390.0417
108.00	364.7318
109.28	354.0276
111.00	389.7568
111.00	389.7568

111.76	379.6606
112.95	341.8398
115.19	358.6894
116.30	378.0186
117.00	373.1482
117.00	373.1482
117.66	344.2621
121.11	372.0210
121.62	383.4033
121.78	383.5311
122.06	391.4519
122.32	391.6619
122.32	391.6619
122.32	391.6619
122.32	391.6619
123.07	387.8646
127.23	356.7192
129.76	400.4124
131.20	364.5915
133.02	362.5205
133.54	383.1387
135.34	413.2690
136.00	385.5259
136.25	375.5297
136.48	374.5636
140.51	429.8776
140.51	0.0000
142.18	388.8951
142.65	394.9580
143.76	365.9395
144.24	386.9275
144.24	386.9275
144.24	386.9275
144.24	386.9275
145.22	408.3237
145.44	408.4898
147.16	416.6865
152.43	367.0161
152.70	366.0235
153.22	357.0249
154.21	356.7647
154.21	356.7647
154.21	356.7647
154.21	356.7647
155.03	380.9751
156.02	408.0072
158.56	310.8735
159.00	0.0000
159.00	334.0838
160.31	360.5126
161.27	395.6978
162.32	400.8392
162.64	382.3782
163.35	356.1218
163.89	327.9269
165.85	360.2809
167.43	378.2456
171.28	340.0225
171.86	362.9078
172.10	368.4644
176.55	343.7853
176.60	343.8112
181.06	354.6251
184.41	375.5896
185.71	367.1036
186.00	367.2646
190.27	359.5821
192.34	347.0515
193.63	339.7087
197.04	352.6434
198.01	340.9246
198.60	342.1526
200.40	327.9545
201.83	354.1145
202.84	358.4007
205.31	315.8010
208.36	332.3861
208.81	327.0606

209.75	327.4819
209.75	327.4819
210.97	275.4294
215.65	311.2733
216.55	330.5070
218.09	278.0815
222.10	322.2658
223.80	279.2027
226.40	320.1649
227.00	327.2507
227.08	327.2839
227.20	321.4723
228.16	322.8472
228.18	322.8548
228.18	322.8548
231.56	0.0000
235.69	330.2823
236.00	328.8289
236.00	328.8289
238.60	318.1959
238.63	318.2081
238.63	318.2081
238.63	318.2081
239.00	318.3526
240.98	319.1289
241.98	319.5208
241.98	319.5208
241.98	319.5208
244.69	282.8262
245.39	260.6766
247.94	259.8744
248.90	255.8138
249.79	265.2729
252.40	244.9300
252.85	252.1191
252.85	252.1191
254.15	0.0000
256.20	282.4749
256.20	282.4749
260.50	253.3618
260.90	251.4436
262.80	265.2567
264.65	269.9055
268.24	256.2231
268.79	262.9570
269.46	263.1523
269.46	263.1523
269.46	263.1523
269.46	263.1523
271.23	273.5636
273.65	299.0875
276.40	248.6169
277.35	265.4688
277.60	265.5391
277.60	265.5391
278.00	260.4677
278.60	256.4864
279.20	250.4177
279.53	244.2693
280.46	296.5460
281.68	296.9373
283.67	235.9730
284.30	246.5800
285.00	242.5847
285.90	244.9116
286.10	244.9616
286.10	244.9616
287.40	254.3897
288.45	0.0000
290.67	230.5854
290.80	230.6189
291.72	257.8028
293.26	0.0000
293.70	231.1102
295.21	231.4778
295.21	231.4778
295.21	231.4778
295.96	231.6583

296.50	231.7886
297.23	231.9624
298.57	232.2865
299.80	232.5806
299.80	232.5806
300.09	232.6507
300.09	232.6507
300.09	232.6507
300.10	232.6507
300.12	232.6574
301.29	194.0060
302.84	206.2465
303.76	216.6782
303.91	216.7092
304.40	211.6961
304.40	211.6961
304.84	225.4570
306.84	217.5987
308.46	211.0680
311.98	213.9639
316.51	228.9669
318.01	228.2249
319.02	203.5481
319.41	201.4593
320.08	216.7633
323.87	262.8196
323.87	262.8196
323.87	262.8196
323.87	262.8196
325.23	233.5349
328.77	248.3197
333.44	250.3039
334.20	243.8897
334.20	243.8897
334.30	243.9134
338.28	211.7402
338.28	211.7402
338.28	211.7402
338.28	211.7402
338.32	211.7490
338.32	211.7490
338.32	211.7490
340.50	212.1797
340.57	212.1943
344.27	198.1347
345.85	183.0211
350.59	0.0000
351.07	168.4949
351.92	168.6262
351.92	168.6262
351.92	168.6262
355.39	0.0000
356.01	156.0201
364.48	187.9135
366.43	188.2359
367.43	189.3067
367.94	0.0000
369.80	176.0825
374.96	184.1623
383.85	209.4416
387.95	194.4924
388.63	203.8261
391.69	211.7411
391.69	211.7411
392.90	181.4101
398.62	207.3720
400.65	195.6035
401.10	199.4050
401.81	203.2480
402.60	197.0798
404.84	219.6355
410.95	189.4047
411.60	184.8047
413.65	152.1624
414.70	163.2787
415.30	164.2545
415.76	164.9875
417.63	0.0000

418.52	182.3511
423.70	162.2204
427.08	160.7419
427.89	158.9395
432.53	170.0104
433.93	176.8859
439.47	158.4258
439.56	158.4359
439.89	161.3575
443.98	171.4858
444.90	159.0703
445.03	150.4090
445.03	150.4090
445.03	150.4090
445.03	150.4090
453.90	133.9284
463.38	145.6024
468.07	174.8546
473.00	140.7028
475.06	162.5850
475.35	163.6048
476.78	152.9168
477.59	150.0425
477.96	149.0941
482.03	155.4610
484.57	142.8398
487.03	135.1351
490.36	0.0000
492.35	140.6162
497.08	133.0666
507.63	0.0000
510.53	0.0000
510.84	159.5468
511.00	159.5632
511.85	171.7795
511.85	171.7795
513.99	129.8592
513.99	129.8592
520.41	148.3597
520.65	148.3846
527.90	131.7242
528.96	0.0000
529.64	134.9391
529.87	0.0000
531.02	138.1278
537.32	146.9067
543.00	155.6819
546.56	0.0000
549.76	147.0269
552.65	145.2158
555.20	130.9003
563.23	126.3292
563.90	125.3350
568.70	143.5122
569.32	140.4219
569.50	139.3870
569.67	139.4032
573.80	154.4613
574.00	150.2757
574.64	147.1812
578.91	144.0439
579.30	0.0000
583.14	138.4199
585.48	118.1551
591.81	131.4300
592.07	129.8283
593.00	136.0375
595.88	141.5918
600.56	149.4473
602.52	0.0000
602.71	176.3558
602.71	176.3558
603.60	156.8395
604.41	142.6497
604.70	135.5389
609.31	149.1298
609.31	149.1298
609.31	149.1298

609.31	149.1298
610.33	149.2180
612.46	128.9766
614.37	138.0836
618.01	119.9496
621.84	157.7556
621.84	157.7556
631.29	131.4368
633.02	136.9973
633.10	129.3922
634.78	130.6025
635.90	130.6816
636.97	130.7607
645.85	122.6367
646.12	123.7510
656.30	125.7171
657.75	116.6311
657.90	0.0000
661.65	136.2026
661.65	136.2026
664.57	0.0000
666.33	116.2434
666.33	116.2434
675.00	123.2642
677.61	108.5830
685.20	128.5804
692.80	127.2122
695.00	130.1654
696.49	130.2644
696.49	130.2644
697.00	133.1105
697.49	138.7711
698.33	147.2705
698.50	147.2833
699.00	152.0134
702.63	129.7316
706.10	132.7842
706.58	0.0000
706.67	133.7664
709.31	132.9993
711.68	134.1015
713.82	129.5190
717.42	109.8639
720.50	120.9398
721.93	0.0000
722.20	138.3325
722.78	131.8623
722.78	131.8623
722.89	131.8680
722.95	131.8708
723.30	138.4096
724.18	146.6141
727.18	120.7275
733.00	112.8927
735.90	119.2775
739.58	104.3630
742.81	117.9526
744.21	133.3837
747.13	137.4170
751.79	126.1653
752.31	130.0507
753.82	120.5037
755.35	129.2754
756.15	116.7781
756.87	114.8866
763.93	122.8825
765.79	111.3567
766.41	116.3770
766.84	111.4104
768.36	144.6317
768.36	144.6317
768.36	144.6317
768.36	144.6317
776.49	118.3878
778.00	123.3890
778.57	124.8411
778.89	122.9084
783.80	85.0583

785.46	102.7356
792.07	126.1806
795.84	111.2300
796.30	102.8247
801.93	131.4426
805.60	103.6819
810.29	126.6589
810.76	129.6567
815.85	95.2305
817.79	108.2216
818.51	108.2549
819.60	109.3018
826.30	93.2820
828.27	0.0000
831.60	116.4457
831.96	113.0393
834.83	120.0391
836.80	0.0000
846.75	127.7002
848.13	108.6614
856.28	0.0000
856.80	107.3345
860.37	119.6358
867.32	86.9472
867.82	86.9664
871.10	95.5051
873.19	80.3356
874.81	97.6895
875.33	0.0000
876.40	94.6991
879.36	89.7188
880.27	95.8723
880.51	99.9619
881.50	94.9016
883.24	99.0544
884.67	107.2879
889.25	91.1131
896.60	102.6835
898.02	97.6073
899.00	96.6181
903.28	111.2014
911.07	95.0285
911.07	95.0285
911.07	95.0285
919.63	98.1200
920.93	100.6860
925.00	102.8329
925.24	93.4937
926.50	106.0134
934.06	86.5242
934.06	86.5242
934.06	86.5242
934.06	86.5242
935.52	88.6610
937.48	107.5201
944.10	117.2204
946.00	108.9279
949.00	98.5707
962.29	104.8013
964.01	95.9821
966.15	96.0617
968.20	96.1358
969.11	96.1710
969.11	96.1710
969.11	96.1710
977.42	92.6901
980.50	83.7007
983.50	85.0098
989.30	90.5218
996.32	115.3191
1001.03	105.8965
1001.68	98.4313
1004.76	119.9684
1021.30	0.0000
1024.50	0.0000
1034.80	87.7236
1037.82	91.0718
1038.57	99.4616

1038.76	0.0000
1045.16	114.6090
1046.59	103.4818
1048.07	106.3343
1050.47	110.1600
1050.47	110.1600
1063.62	104.1090
1076.63	100.8200
1077.35	100.8424
1085.78	86.0171
1099.22	103.5105
1112.02	103.8569
1112.84	86.8201
1115.52	120.3223
1120.29	102.3426
1120.29	102.3426
1120.29	102.3426
1120.29	102.3426
1120.51	102.3501
1121.28	120.5552
1124.00	0.0000
1129.67	96.7184
1131.51	0.0000
1147.95	0.0000
1167.94	146.7289
1173.22	109.0195
1175.09	96.4242
1177.93	123.8108
1189.05	133.0592
1204.90	132.7494
1205.75	0.0000
1213.00	134.0790
1221.42	142.3376
1230.97	139.7902
1235.34	162.8160
1236.41	0.0000
1238.11	124.2022
1238.11	124.2022
1238.11	124.2022
1238.11	124.2022
1238.25	124.2065
1246.25	139.4580
1260.41	0.0000
1271.85	97.3823
1274.45	94.4426
1274.54	99.4696
1291.56	81.7995
1298.22	0.0000
1312.09	64.0107
1325.50	64.2612
1325.50	64.2612
1332.49	64.3931
1333.61	55.2110
1360.21	57.6953
1362.66	0.0000
1365.15	52.6187
1368.21	39.4269
1368.53	0.0000
1376.25	48.9029
1377.67	43.4868
1377.67	43.4868
1377.67	43.4868
1377.67	43.4868
1384.27	56.2745
1394.10	59.2902
1395.20	61.3891
1407.95	68.9142
1434.06	51.5310
1436.60	50.5145
1457.56	0.0000
1460.81	44.4888
1489.15	44.8242
1509.49	39.4301
1596.49	29.0048
1620.62	33.7898
1678.03	0.0000
1691.02	30.4362
1691.02	30.4362

1706.46	0.0000
1750.46	0.0000
1764.49	29.9561
1764.49	29.9561
1764.49	29.9561
1764.49	29.9561
1770.23	33.7716
1771.40	33.7809
1791.20	0.0000
1808.65	16.1348
1836.01	27.3914

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232754002

Total Uranium Activity	4.0891E+00	ug/g
Total Uranium Counting Unc.	4.2861E+00	ug/g
Total Uranium Tpu	2.1868E-06	ug/g
Total Uranium Mda	3.8403E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID   : G232754002      *
*   ANALYST       : MXR1                      DETECTOR    : GAM18           *
*   SAMPLE DATE   : 30-JUN-2009 12:00:00.00   COUNT TIME  :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 10:45:14.60    SAMPLE ALQT:  133.250 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 1.023E+01
GROSS GAMMA ERROR (pCi/GRAM) : 1.415E+00
GROSS GAMMA MDA (pCi/GRAM) : 2.553E+00
GROSS GAMMA DLC (pCi/GRAM) : 1.240E+00

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:49:29.16

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 Savage Road                              *
*                           Charleston, SC 29414                            *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754003.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:48:56
Sample ID         : G232754003           Sample quantity  : 1.37020E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.99  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.92*	147	817	1.26	125.22	121	9	2.04E-02	36.8	
2	3	74.73	684	798	1.26	148.84	143	22	9.50E-02	8.2	1.63E+00
3	3	77.06*	1030	634	1.13	153.48	143	22	1.43E-01	5.3	
4	4	84.37*	228	615	1.73	168.09	164	29	3.17E-02	19.8	2.10E+00
5	4	87.32	418	586	1.30	173.99	164	29	5.81E-02	11.3	
6	4	89.98*	238	489	1.19	179.32	164	29	3.30E-02	17.1	
7	4	92.70*	324	601	1.53	184.75	164	29	4.50E-02	16.2	
8	0	185.89*	279	514	1.45	371.10	367	10	3.87E-02	17.1	
9	0	209.27	193	465	1.44	417.87	414	10	2.69E-02	22.0	
10	2	238.66*	2181	309	1.36	476.63	470	19	3.03E-01	2.6	1.28E+00
11	2	241.71*	481	368	1.82	482.73	470	19	6.68E-02	12.0	
12	0	270.63	248	338	1.50	540.58	536	12	3.45E-02	16.0	
13	0	295.03	689	369	1.46	589.37	581	13	9.57E-02	6.9	
14	0	300.10	114	314	1.54	599.51	596	10	1.59E-02	30.4	
15	0	328.60	206	453	1.96	656.50	648	19	2.86E-02	25.7	
16	0	338.45*	509	339	1.55	676.20	670	13	7.07E-02	8.8	
17	0	352.00*	1162	283	1.47	703.30	697	13	1.61E-01	4.2	
18	0	463.25	160	213	2.19	925.82	918	14	2.23E-02	20.9	
19	0	510.93*	168	247	2.08	1021.18	1013	16	2.33E-02	25.2	
20	0	583.13*	730	162	1.86	1165.61	1157	16	1.01E-01	5.5	
21	0	609.34	948	240	1.84	1218.03	1208	20	1.32E-01	5.2	
22	0	727.08	154	216	1.96	1453.58	1447	18	2.14E-02	23.8	
23	0	795.37	81	124	1.90	1590.20	1581	15	1.13E-02	31.8	
24	0	911.48*	538	125	2.49	1822.52	1815	17	7.47E-02	6.5	
25	2	965.18*	89	149	2.79	1929.97	1919	27	1.24E-02	36.0	9.00E-01
26	2	969.34*	283	110	2.36	1938.30	1919	27	3.93E-02	10.4	
27	0	1120.74*	202	133	2.21	2241.26	2231	18	2.80E-02	15.3	
28	0	1377.89	89	48	2.93	2755.95	2748	16	1.23E-02	20.4	
29	0	1461.05	3045	42	3.31	2922.41	2910	24	4.23E-01	1.9	
30	0	1730.60	50	18	3.77	3462.07	3451	19	6.89E-03	25.4	
31	0	1765.06*	177	29	3.21	3531.08	3521	20	2.46E-02	10.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 12:49:31

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:48:56
Sample ID : G232754003 Sample quantity : 137.02 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.99 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.945E+01	3.128E+00	4.262E-01	2.966E-02	92.570
CD-109	+	88.03	*	3.959E+00	9.601E-01	1.013E+00	9.052E-02	3.908
SN-126	+	64.28		8.820E-01	6.613E-01	6.889E-01	9.935E-02	1.280
	+	86.94		1.621E+00	7.643E-01	4.186E-01	1.733E-01	3.872
	+	87.57	*	3.898E-01	9.453E-02	1.001E-01	8.907E-03	3.893
TL-208		277.35		4.549E-01	3.635E-01	5.570E-01	5.821E-02	0.817
	+	510.84		4.693E-01	2.414E-01	1.649E-01	1.741E-02	2.847
	+	583.14	*	5.768E-01	7.725E-02	4.613E-02	3.551E-03	12.504
		860.37		8.907E-01	2.762E-01	5.060E-01	5.279E-02	1.760
BI-211		72.87		9.413E+00	3.299E+00	4.995E+00	3.823E-01	1.884
	+	351.07	*	4.258E+00	4.509E-01	2.702E-01	1.714E-02	15.757
PB-212	+	74.81		2.640E+00	5.388E-01	4.706E-01	5.724E-02	5.610
	+	77.11		2.262E+00	3.013E-01	2.688E-01	2.138E-02	8.417
	+	87.30		1.803E+00	4.729E-01	4.642E-01	6.204E-02	3.884
	+	238.63	*	1.862E+00	1.636E-01	7.758E-02	5.485E-03	24.004
	+	300.09		1.449E+00	8.885E-01	1.063E+00	8.657E-02	1.363
PO-212	+	74.81		2.640E+00	5.388E-01	4.706E-01	5.724E-02	5.610
	+	77.11		2.262E+00	3.013E-01	2.688E-01	2.138E-02	8.417
	+	87.30		1.803E+00	4.729E-01	4.642E-01	6.204E-02	3.884
		115.19		-1.093E+00	3.148E+00	5.191E+00	3.369E-01	-0.211
	+	238.63	*	1.862E+00	1.636E-01	7.758E-02	5.485E-03	24.004
	+	300.09		1.449E+00	8.885E-01	1.063E+00	8.657E-02	1.363
BI-214	+	609.31	*	1.407E+00	1.907E-01	8.997E-02	7.913E-03	15.644
		768.36		6.627E-01	6.615E-01	1.095E+00	1.154E-01	0.605
		934.06		1.397E+00	9.925E-01	1.753E+00	2.055E-01	0.796
	+	1120.29		1.519E+00	4.880E-01	4.003E-01	3.796E-02	3.795
		1238.11		1.356E+00	8.311E-01	1.477E+00	1.235E-01	0.918
	+	1377.67		2.876E+00	1.204E+00	1.105E+00	1.021E-01	2.603
	+	1764.49		1.695E+00	3.820E-01	2.498E-01	1.463E-02	6.787
PB-214	+	74.81		4.549E+00	8.914E-01	8.108E-01	8.713E-02	5.610
	+	77.11		3.878E+00	5.951E-01	4.608E-01	5.075E-02	8.417
	+	87.30		3.089E+00	7.859E-01	7.952E-01	9.343E-02	3.884
	+	241.98		2.460E+00	6.201E-01	4.662E-01	3.655E-02	5.277
	+	295.21		1.535E+00	2.486E-01	1.866E-01	1.571E-02	8.227

Sample ID : G232754003 Acquisition date : 14-JUL-2009 10:48:56

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.481E+00	1.749E-01	9.176E-02	7.537E-03	16.140
PO-214	+	74.81		4.549E+00	8.914E-01	8.108E-01	8.713E-02	5.610
	+	77.11		3.878E+00	5.951E-01	4.608E-01	5.075E-02	8.417
	+	87.30		3.089E+00	7.859E-01	7.952E-01	9.343E-02	3.884
	+	241.98		2.460E+00	6.201E-01	4.662E-01	3.655E-02	5.277
	+	295.21		1.535E+00	2.486E-01	1.866E-01	1.571E-02	8.227
	+	351.92	*	1.481E+00	1.749E-01	9.176E-02	7.537E-03	16.140
PO-216	+	74.81		2.640E+00	5.388E-01	4.706E-01	5.724E-02	5.610
	+	77.11		2.262E+00	3.013E-01	2.688E-01	2.138E-02	8.417
	+	87.30		1.803E+00	4.729E-01	4.642E-01	6.204E-02	3.884
	+	238.63	*	1.862E+00	1.636E-01	7.758E-02	5.485E-03	24.004
	+	300.09		1.449E+00	8.885E-01	1.063E+00	8.657E-02	1.363
PO-218	+	74.81		4.549E+00	8.914E-01	8.108E-01	8.713E-02	5.610
	+	77.11		3.878E+00	5.951E-01	4.608E-01	5.075E-02	8.417
	+	87.30		3.089E+00	7.859E-01	7.952E-01	9.343E-02	3.884
	+	241.98		2.460E+00	6.201E-01	4.662E-01	3.655E-02	5.277
	+	295.21		1.535E+00	2.486E-01	1.866E-01	1.571E-02	8.227
	+	351.92	*	1.481E+00	1.749E-01	9.176E-02	7.537E-03	16.140
RA-224	+	240.98	*	4.665E+00	1.146E+00	8.816E-01	4.828E-02	5.292
RA-226	+	609.31	*	1.407E+00	1.907E-01	8.997E-02	7.913E-03	15.644
		768.36		6.627E-01	6.615E-01	1.095E+00	1.154E-01	0.605
		934.06		1.397E+00	9.925E-01	1.753E+00	2.055E-01	0.796
	+	1120.29		1.519E+00	4.880E-01	4.003E-01	3.796E-02	3.795
		1238.11		1.356E+00	8.311E-01	1.477E+00	1.235E-01	0.918
	+	1377.67		2.876E+00	1.204E+00	1.105E+00	1.021E-01	2.603
	+	1764.49		1.695E+00	3.820E-01	2.498E-01	1.463E-02	6.787
AC-228	+	338.32		2.067E+00	9.178E-01	3.098E-01	1.262E-01	6.674
	+	911.07	*	1.853E+00	3.341E-01	1.775E-01	2.220E-02	10.443
	+	969.11		1.712E+00	5.404E-01	2.923E-01	6.914E-02	5.858
RA-228	+	338.32		2.067E+00	9.178E-01	3.098E-01	1.262E-01	6.674
	+	911.07	*	1.853E+00	3.341E-01	1.775E-01	2.220E-02	10.443
	+	969.11		1.712E+00	5.404E-01	2.923E-01	6.914E-02	5.858
TH-228	+	84.40		6.715E+00	2.807E+00	3.155E+00	4.138E-01	2.128
	+	238.60	*	1.862E+00	1.636E-01	7.757E-02	5.485E-03	24.006
	+	300.10		1.449E+00	1.226E+00	1.063E+00	6.263E-01	1.363
TH-230	+	609.31	*	1.407E+00	1.907E-01	8.997E-02	7.912E-03	15.644
		768.36		6.627E-01	6.615E-01	1.095E+00	1.154E-01	0.605
		934.06		1.397E+00	9.924E-01	1.753E+00	2.055E-01	0.796
	+	1120.29		1.519E+00	4.880E-01	4.003E-01	3.796E-02	3.795
		1238.11		1.355E+00	8.311E-01	1.477E+00	1.235E-01	0.918
	+	1377.67		2.876E+00	1.204E+00	1.105E+00	1.021E-01	2.603
	+	1764.49		1.695E+00	3.820E-01	2.498E-01	1.463E-02	6.787
TH-232	+	338.32		2.067E+00	3.827E-01	3.098E-01	1.765E-02	6.674
	+	911.07	*	1.853E+00	3.341E-01	1.775E-01	2.220E-02	10.443
	+	969.11		1.712E+00	5.404E-01	2.923E-01	6.914E-02	5.858
TH-234	+	63.29	*	2.228E+00	1.685E+00	1.723E+00	2.987E-01	1.293
	+	92.38		1.974E+00	7.313E-01	6.613E-01	1.188E-01	2.985
U-234	+	609.31	*	1.407E+00	1.907E-01	8.997E-02	7.912E-03	15.644
		768.36		6.627E-01	6.615E-01	1.095E+00	1.154E-01	0.605

Sample ID : G232754003 Acquisition date : 14-JUL-2009 10:48:56

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		934.06		1.397E+00	9.924E-01	1.753E+00	2.055E-01	0.796
	+	1120.29		1.519E+00	4.880E-01	4.003E-01	3.796E-02	3.795
		1238.11		1.355E+00	8.311E-01	1.477E+00	1.235E-01	0.918
	+	1377.67		2.876E+00	1.204E+00	1.105E+00	1.021E-01	2.603
	+	1764.49		1.695E+00	3.820E-01	2.498E-01	1.463E-02	6.787
NP-237	+	86.50	*	1.145E+00	3.645E-01	2.968E-01	6.657E-02	3.857
		95.87		-4.611E-01	9.270E-01	1.339E+00	3.269E-01	-0.344
U-238	+	63.29	*	2.228E+00	1.685E+00	1.723E+00	2.987E-01	1.293
	+	92.38		1.974E+00	6.606E-01	6.613E-01	5.533E-02	2.985
AM-243	+	74.67	*	4.280E-01	7.765E-02	7.649E-02	5.947E-03	5.596
	+	86.72		4.293E+01	1.041E+01	1.111E+01	9.786E-01	3.864
		117.66		-1.713E-01	3.319E+00	5.519E+00	3.502E-01	-0.031
		142.18		2.597E+00	1.575E+01	2.575E+01	1.443E+00	0.101
ANH-511	+	511.00	*	1.014E-01	5.145E-02	3.562E-02	2.310E-03	2.846

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.281E-01	2.677E-01	4.405E-01	3.151E-02	0.291
NA-22		1274.54	*	-9.528E-03	3.621E-02	5.917E-02	3.765E-03	-0.161
NA-24		1368.53	*	7.404E-03	3.621E-02	Half-Life too short		
AL-26		1129.67		5.135E-01	1.682E+00	2.553E+00	1.683E-01	0.201
		1808.65	*	9.190E-04	1.892E-02	3.163E-02	1.800E-03	0.029
TI-44		67.85		2.038E-02	4.292E-02	6.597E-02	4.855E-03	0.309
	+	78.38	*	4.175E-01	5.560E-02	7.096E-02	5.716E-03	5.883
SC-46		889.25	*	-3.753E-02	3.340E-02	5.118E-02	5.247E-03	-0.733
	+	1120.51		2.575E-01	8.097E-02	1.059E-01	7.185E-03	2.431
V-48		944.10		2.268E-01	7.302E-01	1.229E+00	1.204E-01	0.184
		983.50	*	1.441E-02	5.564E-02	9.318E-02	8.604E-03	0.155
		1312.09		-2.993E-02	6.678E-02	1.058E-01	7.005E-03	-0.283
CR-51		320.08	*	-1.978E-01	3.123E-01	4.711E-01	2.994E-02	-0.420
MN-52		744.21		3.189E-02	1.620E-01	2.662E-01	2.236E-02	0.120
		848.13		2.008E+00	4.812E+00	8.217E+00	7.981E-01	0.244
		935.52		1.977E-01	1.937E-01	3.375E-01	3.344E-02	0.586
		1246.25		-7.008E+00	5.884E+00	9.136E+00	5.619E-01	-0.767
		1333.61		-1.476E+00	3.446E+00	5.505E+00	3.723E-01	-0.268
		1434.06	*	1.232E-01	1.382E-01	2.487E-01	1.662E-02	0.495
MN-54		834.83	*	-2.927E-03	3.293E-02	5.473E-02	5.221E-03	-0.053
CO-56		846.75	*	-1.445E-02	3.359E-02	5.458E-02	5.291E-03	-0.265
		977.42		3.822E-02	2.655E+00	3.878E+00	3.616E-01	0.010
		1037.82		-1.702E-01	2.520E-01	3.925E-01	3.465E-02	-0.434
		1175.09		-1.808E-01	2.027E+00	3.267E+00	1.845E-01	-0.055
		1238.25		1.342E-01	8.293E-02	1.478E-01	9.524E-03	0.908
		1360.21		-5.810E-01	7.970E-01	1.190E+00	8.035E-02	-0.488
		1771.40		7.034E-02	1.811E-01	2.752E-01	1.605E-02	0.256
CO-57		122.06	*	-2.395E-02	2.244E-02	3.594E-02	2.198E-03	-0.666
		136.48		-5.152E-02	1.854E-01	3.035E-01	2.021E-02	-0.170
CO-58		810.76	*	-1.845E-02	3.116E-02	5.021E-02	4.644E-03	-0.368

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		9.870E-01	2.376E+00	3.915E+00	2.190E-01	0.252
		192.34		-6.311E-01	8.927E-01	1.352E+00	1.561E-01	-0.467
		1099.22	*	-7.894E-02	7.658E-02	1.156E-01	9.288E-03	-0.683
		1291.56		-2.772E-02	9.801E-02	1.595E-01	1.270E-02	-0.174
CO-60		1173.22		-1.032E-02	4.150E-02	6.625E-02	3.734E-03	-0.156
		1332.49	*	1.534E-02	3.065E-02	5.282E-02	3.572E-03	0.290
ZN-65		1115.52	*	1.374E-02	8.793E-02	1.236E-01	8.525E-03	0.111
GE-68		1077.35	*	9.640E-01	1.054E+00	1.821E+00	1.391E-01	0.529
AS-73		53.44	*	3.862E-02	6.575E-01	1.043E+00	7.249E-02	0.037
AS-74		595.88	*	-2.588E-02	6.978E-02	1.129E-01	7.926E-03	-0.229
		634.78		1.240E-01	2.906E-01	4.886E-01	3.547E-02	0.254
SE-75		66.05		-2.994E+00	4.746E+00	6.540E+00	6.117E-01	-0.458
		96.73		-3.422E-01	7.437E-01	1.081E+00	1.424E-01	-0.317
		121.11		-1.099E-01	1.195E-01	1.921E-01	1.817E-02	-0.572
		136.00		-1.042E-02	3.441E-02	5.629E-02	3.282E-03	-0.185
		198.60		-1.551E+00	1.708E+00	2.617E+00	1.756E-01	-0.593
		264.65	*	2.486E-03	3.931E-02	6.015E-02	3.383E-03	0.041
		279.53		1.501E-01	9.217E-02	1.620E-01	9.867E-03	0.926
		303.91		1.165E+00	1.877E+00	2.801E+00	2.649E-01	0.416
		400.65		-5.327E-02	2.005E-01	3.218E-01	2.917E-02	-0.166
BR-77	+	87.88		6.098E+02	1.479E+02	2.155E+02	1.923E+01	2.830
		200.40		7.368E+01	1.072E+02	1.769E+02	9.358E+00	0.416
	+	239.00		2.128E+02	1.608E+01	2.373E+01	1.298E+00	8.967
		249.79		-4.128E+01	3.792E+01	6.101E+01	3.362E+00	-0.677
		281.68		-6.753E+01	5.498E+01	8.725E+01	4.896E+00	-0.774
		297.23		2.764E+02	6.102E+01	7.921E+01	4.473E+00	3.489
		303.76		7.502E+01	1.146E+02	1.715E+02	9.706E+00	0.437
		439.47		4.956E+01	8.406E+01	1.399E+02	8.402E+00	0.354
		484.57		3.860E+01	1.306E+02	2.223E+02	1.403E+01	0.174
		520.65	*	-7.988E-01	5.702E+00	9.448E+00	6.184E-01	-0.085
		574.64		-2.602E+00	1.283E+02	1.902E+02	1.310E+01	-0.014
		578.91		3.318E+01	5.223E+01	7.820E+01	5.409E+00	0.424
		585.48		1.460E+03	1.905E+02	3.198E+02	2.225E+01	4.566
		755.35		9.337E+01	9.717E+01	1.662E+02	1.419E+01	0.562
		817.79		6.611E+01	7.367E+01	1.296E+02	1.208E+01	0.510
SR-82		698.33		-3.713E-01	2.777E+01	4.525E+01	3.551E+00	-0.008
		776.49	*	-1.270E-01	3.179E-01	5.009E-01	4.407E-02	-0.253
		1395.20		-7.489E+00	8.626E+00	1.307E+01	8.789E-01	-0.573
RB-83		520.41	*	-1.808E-02	5.187E-02	8.493E-02	5.558E-03	-0.213
		529.64		-2.243E-02	7.868E-02	1.291E-01	8.525E-03	-0.174
		552.65		3.424E-02	1.544E-01	2.597E-01	1.753E-02	0.132
RB-84		881.50	*	3.053E-02	5.897E-02	1.009E-01	1.024E-02	0.303
KR-85		513.99	*	2.987E+01	6.817E+00	1.202E+01	7.814E-01	2.486
SR-85		513.99	*	1.513E-01	3.453E-02	6.086E-02	3.958E-03	2.486
RB-86		1076.63	*	3.828E-01	6.390E-01	1.084E+00	8.298E-02	0.353
Y-88		898.02		-8.037E-03	3.385E-02	5.532E-02	5.756E-03	-0.145
		1836.01	*	-3.139E-03	2.028E-02	3.276E-02	1.833E-03	-0.096
ZR-88		392.90	*	4.593E-03	2.446E-02	4.022E-02	2.285E-03	0.114
Y-91		1204.90	*	-6.321E+00	1.712E+01	2.707E+01	1.586E+00	-0.233

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	1.086E-02	2.783E-02	4.634E-02	3.661E-03	0.234
		871.10		4.711E-03	2.897E-02	4.867E-02	4.873E-03	0.097
NB-95		765.79	*	1.980E-02	3.876E-02	6.284E-02	5.445E-03	0.315
NB-95M		235.69	*	5.005E-01	1.384E-01	2.162E-01	1.571E-02	2.315
ZR-95		724.18		1.410E-01	1.024E-01	1.552E-01	1.388E-02	0.909
		756.15	*	4.735E-02	5.813E-02	9.860E-02	9.295E-03	0.480
NB-97		657.90	*	-4.397E-03	5.813E-02	Half-Life too short		
		1024.50		-6.985E-02	5.813E-02	Half-Life too short		
ZR-97		254.15		1.448E+00	5.813E-02	Half-Life too short		
		355.39		1.704E+00	5.813E-02	Half-Life too short		
		507.63	*	1.795E+00	5.813E-02	Half-Life too short		
		602.52		-1.738E-01	5.813E-02	Half-Life too short		
		1021.30		1.659E-01	5.813E-02	Half-Life too short		
		1147.95		-1.261E+00	5.813E-02	Half-Life too short		
		1362.66		9.000E-01	5.813E-02	Half-Life too short		
		1750.46		-1.426E+00	5.813E-02	Half-Life too short		
MO-99		140.51		-1.778E+01	1.860E+01	2.817E+01	7.580E+00	-0.631
		181.06		2.849E+00	1.266E+01	1.816E+01	3.077E+00	0.157
		366.43		-6.822E+00	5.319E+01	8.662E+01	4.935E+00	-0.079
		739.58	*	3.898E+00	6.995E+00	1.171E+01	1.760E+00	0.333
		778.00		-1.325E+00	2.205E+01	3.550E+01	3.131E+00	-0.037
TC-99M		140.51	*	-1.381E+09	2.205E+01	Half-Life too short		
RH-101		127.23		2.167E-02	2.971E-02	5.027E-02	2.994E-03	0.431
		198.01	*	-4.126E-02	3.176E-02	4.800E-02	2.533E-03	-0.860
		325.23		3.181E-01	2.005E-01	3.136E-01	1.784E-02	1.014
RH-102		418.52		1.439E-01	2.391E-01	3.991E-01	2.340E-02	0.360
		475.06	*	9.040E-03	2.345E-02	3.846E-02	2.403E-03	0.235
		631.29		-7.697E-03	4.753E-02	7.479E-02	5.414E-03	-0.103
		697.49		-1.862E-02	6.517E-02	1.046E-01	8.197E-03	-0.178
		766.84		8.388E-02	9.985E-02	1.644E-01	1.427E-02	0.510
		1046.59		8.793E-02	9.818E-02	1.696E-01	1.391E-02	0.518
		1112.84		1.052E-01	2.074E-01	3.022E-01	2.098E-02	0.348
RU-103		497.08	*	-2.073E-03	3.160E-02	5.276E-02	6.821E-03	-0.039
	+	610.33		1.489E+01	2.828E+00	2.365E+00	3.773E-01	6.297
RH-106	+	511.85		5.053E-01	2.564E-01	3.462E-01	2.246E-02	1.460
		621.84	*	-2.145E-02	2.543E-01	4.167E-01	5.200E-02	-0.051
		1050.47		-8.646E-01	2.000E+00	3.179E+00	2.586E-01	-0.272
RU-106	+	511.85		5.053E-01	2.564E-01	3.462E-01	2.246E-02	1.460
		621.84	*	-2.145E-02	2.543E-01	4.167E-01	2.992E-02	-0.051
		1050.47		-8.646E-01	2.000E+00	3.179E+00	2.586E-01	-0.272
AG-108M		433.93	*	8.860E-03	2.688E-02	4.421E-02	2.853E-03	0.200
		614.37		-1.439E-02	3.618E-02	4.955E-02	3.737E-03	-0.290
		722.95		1.560E-02	4.353E-02	6.226E-02	5.291E-03	0.251
AG-110M		657.75	*	-4.473E-03	2.810E-02	4.562E-02	3.510E-03	-0.098
		677.61		9.109E-02	2.619E-01	4.365E-01	3.438E-02	0.209
		706.67		-1.692E-02	1.668E-01	2.700E-01	2.215E-02	-0.063
		763.93		-7.494E-02	1.489E-01	2.340E-01	2.079E-02	-0.320
		884.67		1.513E-02	4.163E-02	7.066E-02	7.368E-03	0.214
		937.48		3.876E-02	9.770E-02	1.652E-01	1.678E-02	0.235

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1384.27		5.160E-03	1.442E-01	2.034E-01	1.432E-02	0.025
IN-111		171.28		-4.255E-01	6.868E-01	1.095E+00	5.633E-02	-0.389
		245.39	*	2.528E-01	7.155E-01	1.069E+00	5.873E-02	0.237
IN-113M		391.69	*	-8.079E-03	3.532E-02	5.691E-02	3.454E-03	-0.142
SN-113		391.69	*	-8.079E-03	3.532E-02	5.691E-02	3.454E-03	-0.142
IN-114M		190.27	*	-5.525E-02	1.875E-01	2.616E-01	1.370E-02	-0.211
CD-115		260.90		-1.885E+01	7.599E+01	1.262E+02	7.007E+00	-0.149
		492.35		-2.236E+00	1.963E+01	3.272E+01	2.081E+00	-0.068
		527.90	*	-5.357E-01	5.757E+00	9.552E+00	6.297E-01	-0.056
SN-117M		156.02		2.278E-01	1.924E+00	3.166E+00	1.684E-01	0.072
		158.56	*	-2.400E-02	4.613E-02	7.420E-02	3.908E-03	-0.323
SB-122		563.90	*	1.650E-01	1.209E+00	2.021E+00	1.379E-01	0.082
		692.80		1.677E+01	2.719E+01	4.585E+01	3.568E+00	0.366
I-123		159.00	*	-1.632E-01	2.719E+01	Half-Life too short		
		528.96		-7.042E+01	2.719E+01	Half-Life too short		
TE-123M		159.00	*	-3.511E-03	2.528E-02	4.120E-02	2.202E-03	-0.085
I-124		602.71	*	-3.573E-02	5.284E-01	7.456E-01	5.267E-02	-0.048
		722.78		1.093E+00	3.736E+00	5.318E+00	4.329E-01	0.206
		1325.50		-1.117E+01	2.318E+01	3.694E+01	2.480E+00	-0.302
		1376.25		6.299E+01	2.636E+01	4.536E+01	3.057E+00	1.389
		1509.49		1.176E+01	1.054E+01	1.897E+01	1.246E+00	0.620
		1691.02		-2.370E+00	2.207E+00	2.966E+00	1.812E-01	-0.799
SB-124		602.71		-2.486E-03	3.677E-02	5.188E-02	3.666E-03	-0.048
		645.85		-3.306E-01	3.919E-01	6.085E-01	4.824E-02	-0.543
		709.31		3.227E-01	2.151E+00	3.536E+00	2.821E-01	0.091
		713.82		-1.475E+00	1.315E+00	1.971E+00	2.291E-01	-0.748
		722.78		1.103E-01	3.768E-01	5.364E-01	4.472E-02	0.206
	+	968.20		1.739E+01	3.988E+00	6.232E+00	5.896E-01	2.790
		1045.16		2.255E+00	2.051E+00	3.585E+00	2.950E-01	0.629
		1325.50		-1.203E+00	2.498E+00	3.980E+00	2.672E-01	-0.302
		1368.21		5.016E-01	1.515E+00	2.348E+00	2.902E-01	0.214
		1436.60		5.636E-01	2.575E+00	4.338E+00	2.898E-01	0.130
		1691.02	*	-5.638E-02	5.253E-02	7.055E-02	4.644E-03	-0.799
SB-125		427.89	*	-2.573E-02	7.341E-02	1.166E-01	7.190E-03	-0.221
	+	463.38		8.831E-01	3.742E-01	4.621E-01	3.272E-02	1.911
		600.56		1.564E-01	1.637E-01	2.486E-01	1.943E-02	0.629
		635.90		8.849E-02	2.353E-01	3.943E-01	3.186E-02	0.224
TE-125M		109.28	*	-7.170E-01	8.352E+00	1.393E+01	1.242E+00	-0.051
I-126		388.63		-5.598E-02	1.516E-01	2.427E-01	1.378E-02	-0.231
		666.33	*	1.211E-01	1.473E-01	2.512E-01	1.877E-02	0.482
		753.82		4.049E-01	1.122E+00	1.859E+00	1.583E-01	0.218
SB-126		223.80		-2.175E+00	3.510E+00	5.490E+00	2.966E-01	-0.396
		278.60		3.279E+00	2.017E+00	3.470E+00	1.944E-01	0.945
	+	296.50		1.432E+01	2.139E+00	2.925E+00	1.651E-01	4.894
		414.70		-6.685E-03	6.073E-02	9.805E-02	5.721E-03	-0.068
		415.30		4.452E+00	4.832E+00	8.185E+00	4.779E-01	0.544
		555.20		-7.623E-01	2.975E+00	4.873E+00	3.298E-01	-0.156
		573.80		-1.490E-01	8.171E-01	1.239E+00	8.532E-02	-0.120
		593.00		-9.273E-01	7.041E-01	1.071E+00	7.504E-02	-0.866

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		656.30		-1.217E+00	2.496E+00	3.969E+00	2.933E-01	-0.307
		666.33		5.048E-02	6.140E-02	1.047E-01	7.823E-03	0.482
		675.00		-7.212E-01	1.584E+00	2.521E+00	1.909E-01	-0.286
		695.00		7.006E-03	6.213E-02	1.020E-01	7.965E-03	0.069
		697.00		-1.063E-01	2.156E-01	3.418E-01	2.677E-02	-0.311
		720.50	*	2.019E-01	1.312E-01	2.044E-01	1.658E-02	0.988
		856.80		-3.094E-01	3.937E-01	6.254E-01	6.144E-02	-0.495
		989.30		1.647E-01	1.026E+00	1.706E+00	1.561E-01	0.096
		1034.80		-1.018E+00	6.753E+00	1.096E+01	9.210E-01	-0.093
		1213.00		7.331E-01	4.129E+00	6.741E+00	3.987E-01	0.109
SB-127		61.10		6.433E+01	4.345E+01	6.498E+01	6.259E+00	0.990
		252.40		-1.361E-01	2.873E+00	4.818E+00	1.996E+00	-0.028
		290.80		-1.217E+00	1.605E+01	2.311E+01	1.996E+00	-0.053
		411.60		1.654E+00	8.406E+00	1.377E+01	1.945E+00	0.120
		444.90		-6.572E+00	6.691E+00	1.017E+01	1.076E+00	-0.646
		473.00		-6.210E-01	1.091E+00	1.691E+00	1.872E-01	-0.367
		543.00		1.743E+00	1.031E+01	1.731E+01	2.258E+00	0.101
		603.60		8.209E-01	9.066E+00	1.294E+01	1.445E+00	0.063
		685.20	*	-3.298E-01	9.498E-01	1.520E+00	1.572E-01	-0.217
		698.50		1.022E+00	1.032E+01	1.693E+01	2.567E+00	0.060
		722.20		2.639E+00	2.515E+01	3.530E+01	3.685E+00	0.075
		783.80		1.990E+00	2.617E+00	4.393E+00	5.406E-01	0.453
XE-127		57.60		5.377E-01	4.979E+00	7.635E+00	5.337E-01	0.070
		145.22		-4.976E-01	6.012E-01	9.622E-01	5.330E-02	-0.517
		172.10		-5.679E-02	1.050E-01	1.678E-01	8.639E-03	-0.338
		202.84	*	1.975E-02	4.169E-02	6.830E-02	3.621E-03	0.289
		374.96		-7.493E-02	1.602E-01	2.561E-01	1.457E-02	-0.293
I-131		80.18		-2.185E+00	3.921E+00	5.762E+00	4.755E-01	-0.379
		284.30		5.369E-02	1.091E+00	1.823E+00	1.144E-01	0.029
		364.48	*	1.330E-02	8.657E-02	1.429E-01	9.105E-03	0.093
		636.97		4.473E-01	1.201E+00	2.013E+00	1.576E-01	0.222
		722.89		2.191E+00	6.622E+00	9.452E+00	7.742E-01	0.232
TE-132		49.72		-2.772E+00	1.119E+01	1.792E+01	1.639E+00	-0.155
		111.76		-5.742E+00	2.105E+01	3.462E+01	3.135E+00	-0.166
		116.30		9.207E-01	1.890E+01	3.155E+01	2.793E+00	0.029
		228.16	*	1.723E-01	4.891E-01	7.917E-01	1.107E-01	0.218
BA-133		53.15		1.202E+00	2.832E+00	4.550E+00	3.159E-01	0.264
		79.62		2.639E-01	1.313E+00	1.854E+00	2.776E-01	0.142
		81.00		1.319E-01	1.146E-01	1.332E-01	2.089E-02	0.990
		276.40		3.857E-01	3.565E-01	5.416E-01	6.973E-02	0.712
		302.84		1.696E-01	1.363E-01	2.081E-01	2.412E-02	0.815
		356.01	*	1.376E-02	3.870E-02	5.629E-02	6.479E-03	0.244
		383.85		-2.494E-01	2.448E-01	3.719E-01	4.020E-02	-0.671
I-133	+	510.53		4.058E-01	2.448E-01	Half-Life too short		
		529.87	*	-1.396E-03	2.448E-01	Half-Life too short		
		706.58		7.289E-03	2.448E-01	Half-Life too short		
		856.28		-3.282E-01	2.448E-01	Half-Life too short		
		875.33		1.054E-02	2.448E-01	Half-Life too short		
		1236.41		2.867E-01	2.448E-01	Half-Life too short		

Sample ID : G232754003 Acquisition date : 14-JUL-2009 10:48:56

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1298.22		-8.756E-02	2.448E-01	Half-Life too short		
CS-134		475.35		1.084E-01	1.550E+00	2.498E+00	1.561E-01	0.043
		563.23		-1.742E-03	2.857E-01	4.740E-01	3.281E-02	-0.004
		569.32		9.424E-02	1.546E-01	2.643E-01	1.851E-02	0.357
		604.70		2.467E-02	3.256E-02	4.861E-02	3.452E-03	0.508
	+	795.84	*	9.124E-02	5.859E-02	7.194E-02	6.547E-03	1.268
		801.93		-1.037E-01	3.932E-01	5.276E-01	4.835E-02	-0.196
		1038.57		-2.206E+00	3.223E+00	5.023E+00	4.190E-01	-0.439
		1167.94		1.620E+00	2.267E+00	3.832E+00	2.205E-01	0.423
		1365.15		1.132E+00	9.850E-01	1.780E+00	1.289E-01	0.636
CS-135		268.24	*	3.031E-01	1.495E-01	2.375E-01	1.778E-02	1.277
I-135		288.45		4.116E+08	1.495E-01	Half-Life too short		
		417.63		-1.124E+08	1.495E-01	Half-Life too short		
		546.56		-5.851E+07	1.495E-01	Half-Life too short		
		836.80		3.972E+08	1.495E-01	Half-Life too short		
		1038.76		-5.412E+08	1.495E-01	Half-Life too short		
		1124.00		8.178E+09	1.495E-01	Half-Life too short		
		1131.51		6.005E+07	1.495E-01	Half-Life too short		
		1260.41	*	-1.541E+08	1.495E-01	Half-Life too short		
		1457.56		5.772E+10	1.495E-01	Half-Life too short		
		1678.03		-4.374E+08	1.495E-01	Half-Life too short		
		1706.46		-4.476E+08	1.495E-01	Half-Life too short		
		1791.20		4.582E+08	1.495E-01	Half-Life too short		
CS-136		66.91		3.890E-01	7.128E-01	1.027E+00	1.514E-01	0.379
	+	86.29		4.784E+00	1.247E+00	1.751E+00	2.268E-01	2.732
		153.22		6.054E-01	5.711E-01	9.650E-01	6.644E-02	0.627
		163.89		-8.251E-01	9.160E-01	1.425E+00	9.620E-02	-0.579
		176.55		-1.774E-02	3.134E-01	5.089E-01	3.033E-02	-0.035
		273.65		-5.369E-01	4.276E-01	5.798E-01	3.727E-02	-0.926
		340.57		6.338E-01	1.382E-01	2.289E-01	1.389E-02	2.769
		818.51		4.454E-02	5.466E-02	9.569E-02	8.933E-03	0.465
		1048.07	*	1.054E-02	8.761E-02	1.446E-01	1.238E-02	0.073
		1235.34		4.363E-01	5.141E-01	8.888E-01	9.019E-02	0.491
BA-137M		661.65	*	9.503E-03	3.017E-02	5.026E-02	3.729E-03	0.189
CS-137		661.65	*	1.005E-02	3.189E-02	5.313E-02	3.952E-03	0.189
CE-139		165.85	*	-9.871E-03	2.639E-02	4.255E-02	2.180E-03	-0.232
BA-140		162.64		-1.421E-02	6.324E-01	1.017E+00	6.082E-02	-0.014
		304.84		-9.175E-02	1.105E+00	1.584E+00	4.317E-01	-0.058
		423.70		-1.259E-01	1.421E+00	2.291E+00	7.286E-01	-0.055
		537.32	*	9.556E-02	1.898E-01	3.203E-01	1.047E-01	0.298
LA-140	+	328.77		9.766E-01	5.057E-01	4.351E-01	2.784E-02	2.245
		432.53		1.098E+00	1.547E+00	2.595E+00	1.700E-01	0.423
		487.03		2.936E-02	1.026E-01	1.746E-01	1.228E-02	0.168
		751.79		-1.007E+00	1.335E+00	2.053E+00	1.935E-01	-0.490
		815.85		-2.824E-02	2.368E-01	3.931E-01	4.019E-02	-0.072
		867.82		-1.991E+00	1.222E+00	1.813E+00	1.880E-01	-1.098
		919.63		1.399E-01	2.524E+00	3.592E+00	4.269E-01	0.039
		925.24		-2.165E-01	8.801E-01	1.433E+00	1.506E-01	-0.151
		1596.49	*	-1.117E-01	7.372E-02	1.016E-01	6.481E-03	-1.100

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-141		145.44	*	-4.767E-02	5.434E-02	8.680E-02	5.014E-03	-0.549
CE-143		57.37		-1.318E-04	5.434E-02	Half-Life too short		
		231.56		-8.231E-04	5.434E-02	Half-Life too short		
		293.26	*	6.107E-04	5.434E-02	Half-Life too short		
	+	350.59		1.875E-02	5.434E-02	Half-Life too short		
		490.36		-4.557E-04	5.434E-02	Half-Life too short		
		664.57		5.327E-04	5.434E-02	Half-Life too short		
		721.93		6.535E-04	5.434E-02	Half-Life too short		
CE-144		80.11		-1.058E+00	1.991E+00	2.929E+00	2.401E-01	-0.361
		133.54	*	-1.547E-01	1.814E-01	2.896E-01	4.112E-02	-0.534
PM-144		476.78		3.904E-02	5.548E-02	9.238E-02	6.771E-03	0.423
		618.01		1.955E-02	2.895E-02	4.320E-02	3.215E-03	0.452
		696.49	*	-1.152E-02	2.930E-02	4.673E-02	3.658E-03	-0.247
		778.57		-2.309E-01	1.967E+00	3.155E+00	2.785E-01	-0.073
PR-144		696.49	*	-7.802E-01	1.984E+00	3.164E+00	2.476E-01	-0.247
		1489.15		-5.254E+00	8.647E+00	1.317E+01	8.696E-01	-0.399
PM-146		453.90	*	-3.012E-03	3.693E-02	5.760E-02	5.086E-03	-0.052
		633.02		7.594E-01	1.249E+00	2.002E+00	7.423E-01	0.379
		735.90		1.233E-02	1.424E-01	1.993E-01	5.682E-02	0.062
		747.13		-1.476E-02	7.165E-02	1.146E-01	1.595E-02	-0.129
ND-147	+	91.11		6.920E-01	2.455E-01	4.289E-01	3.964E-02	1.613
		319.41		-5.349E-01	2.576E+00	4.109E+00	2.335E-01	-0.130
		439.89		2.070E+00	4.500E+00	7.441E+00	4.473E-01	0.278
		531.02	*	-5.325E-02	4.014E-01	6.642E-01	9.226E-02	-0.080
PM-149		285.90	*	-1.498E+01	5.440E+01	8.447E+01	1.191E+01	-0.177
EU-152		121.78		-7.226E-02	6.590E-02	1.053E-01	8.274E-03	-0.686
		244.69		6.891E-01	3.008E-01	4.878E-01	2.678E-02	1.413
		344.27	*	1.012E-02	1.068E-01	1.339E-01	8.634E-03	0.076
		443.98		-4.481E-01	8.033E-01	1.258E+00	7.593E-02	-0.356
		778.89		-8.361E-02	2.286E-01	3.607E-01	3.185E-02	-0.232
		867.32		-1.206E+00	7.606E-01	1.133E+00	1.128E-01	-1.065
	+	964.01		6.232E-01	4.529E-01	5.027E-01	4.786E-02	1.240
		1085.78		-1.384E-01	3.345E-01	5.303E-01	3.965E-02	-0.261
		1112.02		1.966E-01	2.944E-01	4.352E-01	3.027E-02	0.452
		1407.95		8.173E-02	1.591E-01	2.729E-01	1.832E-02	0.300
GD-153		69.67		7.626E-01	1.627E+00	2.341E+00	1.746E-01	0.326
	+	83.37		3.844E+01	1.561E+01	2.191E+01	1.859E+00	1.755
		97.43	*	-1.520E-02	7.779E-02	1.138E-01	8.903E-03	-0.134
		103.18		-9.184E-02	9.329E-02	1.515E-01	1.108E-02	-0.606
EU-154		123.07		-1.961E-03	4.583E-02	7.604E-02	7.283E-03	-0.026
		247.94		-8.915E-02	3.124E-01	4.720E-01	4.420E-02	-0.189
		591.81		-1.319E-01	5.134E-01	7.958E-01	8.379E-02	-0.166
		723.30		9.989E-02	1.836E-01	2.660E-01	2.421E-02	0.376
		756.87		4.076E-02	6.589E-01	1.071E+00	1.278E-01	0.038
		873.19		7.429E-02	2.537E-01	4.291E-01	5.700E-02	0.173
		996.32		-2.198E-01	3.251E-01	5.080E-01	9.129E-02	-0.433
		1004.76		-7.846E-05	1.786E-01	2.935E-01	3.479E-02	0.000
		1274.45	*	-2.280E-02	1.015E-01	1.663E-01	1.612E-02	-0.137
EU-155		48.70		-1.128E+00	1.788E+00	2.823E+00	1.904E-01	-0.400

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		60.01		5.761E+00	4.501E+00	6.740E+00	4.739E-01	0.855
	+	86.54		4.693E-01	1.140E-01	1.698E-01	1.507E-02	2.764
		105.31	*	5.943E-02	9.701E-02	1.652E-01	1.202E-02	0.360
TB-160	+	86.79		1.240E+00	3.007E-01	4.431E-01	3.907E-02	2.798
		197.04		-5.005E-01	5.256E-01	8.046E-01	4.242E-02	-0.622
		215.65		-4.452E-01	7.243E-01	1.043E+00	5.592E-02	-0.427
		298.57		2.214E-01	1.632E-01	1.787E-01	1.009E-02	1.239
		879.36	*	-1.071E-03	1.209E-01	2.010E-01	2.034E-02	-0.005
		962.29		1.202E+00	5.001E-01	8.241E-01	7.865E-02	1.459
	+	966.15		4.232E-01	3.076E-01	4.439E-01	4.212E-02	0.953
		1177.93		-1.172E-01	3.273E-01	5.187E-01	2.940E-02	-0.226
		1271.85		-6.594E-02	6.005E-01	9.921E-01	6.282E-02	-0.066
HO-166M		80.57		-1.779E-01	2.549E-01	3.723E-01	3.067E-02	-0.478
	+	184.41		1.307E-01	4.523E-02	6.018E-02	3.134E-03	2.172
		280.46		-3.222E-02	7.255E-02	1.190E-01	6.676E-03	-0.271
		410.95		1.385E-01	2.070E-01	3.464E-01	2.012E-02	0.400
		711.68	*	-2.692E-02	4.787E-02	7.510E-02	6.013E-03	-0.359
		752.31		-1.849E-01	2.284E-01	3.502E-01	2.976E-02	-0.528
		810.29		-1.383E-02	4.812E-02	7.915E-02	7.301E-03	-0.175
TM-171		51.35		-8.017E+00	2.346E+01	3.739E+01	2.579E+00	-0.214
		52.39		3.969E+00	1.238E+01	1.984E+01	1.374E+00	0.200
		59.40		2.471E+01	2.387E+01	3.549E+01	2.488E+00	0.696
		66.72	*	-1.096E+01	2.838E+01	3.954E+01	2.887E+00	-0.277
LU-176	+	88.36		9.246E-01	2.242E-01	3.283E-01	2.918E-02	2.816
		201.83		5.476E-03	2.647E-02	4.298E-02	2.276E-03	0.127
		306.84	*	-1.524E-02	2.226E-02	3.226E-02	1.827E-03	-0.472
		401.10		-5.817E-01	5.301E+00	8.577E+00	4.923E-01	-0.068
LU-177		112.95		-3.920E-01	1.301E+00	2.137E+00	1.416E-01	-0.183
	+	208.36	*	2.659E+00	1.178E+00	1.535E+00	8.182E-02	1.732
LU-177M		52.97		5.626E-01	1.275E+00	2.050E+00	1.423E-01	0.274
		54.07		1.587E-01	6.715E-01	1.071E+00	7.452E-02	0.148
		61.30		1.985E+00	1.404E+00	2.102E+00	1.487E-01	0.945
		121.62		-2.942E-01	3.336E-01	5.383E-01	3.297E-02	-0.547
		147.16		-4.955E-01	5.756E-01	9.193E-01	5.055E-02	-0.539
		171.86		-2.244E-01	4.313E-01	6.899E-01	3.550E-02	-0.325
		218.09		5.111E-01	7.637E-01	1.255E+00	6.744E-02	0.407
		268.79		1.960E+00	7.760E-01	1.256E+00	7.003E-02	1.560
		319.02		-5.402E-02	2.092E-01	3.423E-01	1.944E-02	-0.158
		367.43		4.037E-01	7.555E-01	1.267E+00	7.218E-02	0.319
		413.65	*	-1.764E-01	1.526E-01	2.334E-01	1.360E-02	-0.756
HF-181		56.28		-8.172E-01	7.498E-01	1.156E+00	8.068E-02	-0.707
		57.53		3.273E-02	4.199E-01	6.431E-01	4.495E-02	0.051
		65.20		-7.445E-01	9.304E-01	1.275E+00	9.221E-02	-0.584
		133.02		-7.023E-02	5.866E-02	9.316E-02	5.413E-03	-0.754
		136.25		-1.288E-01	3.991E-01	6.524E-01	3.741E-02	-0.197
		345.85		1.018E-02	2.078E-01	2.595E-01	1.479E-02	0.039
		482.03	*	-2.716E-02	3.412E-02	5.500E-02	3.461E-03	-0.494
W-181		56.28		-3.237E-01	2.972E-01	4.582E-01	3.198E-02	-0.706
		57.53		1.283E-02	1.665E-01	2.551E-01	1.783E-02	0.050

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		65.20	*	-2.930E-01	3.661E-01	5.017E-01	3.628E-02	-0.584
TA-182		67.75		1.652E-02	1.098E-01	1.562E-01	1.149E-02	0.106
		100.10		2.066E-01	1.591E-01	2.678E-01	2.029E-02	0.771
		152.43		1.704E-01	3.115E-01	5.196E-01	2.801E-02	0.328
		222.10		-2.600E-01	3.175E-01	4.929E-01	2.659E-02	-0.528
		1001.68		6.300E-01	1.718E+00	2.886E+00	2.584E-01	0.218
	+	1121.28		7.132E-01	2.242E-01	2.953E-01	1.998E-02	2.415
		1189.05		-1.432E-01	2.610E-01	4.072E-01	2.340E-02	-0.352
		1221.42	*	-3.941E-03	1.681E-01	2.803E-01	1.675E-02	-0.014
		1230.97		-1.329E-01	4.371E-01	7.182E-01	4.340E-02	-0.185
RE-183		57.98		8.194E-02	1.760E-01	2.564E-01	1.794E-02	0.320
		59.32		9.744E-02	9.706E-02	1.442E-01	1.011E-02	0.676
		67.20		1.258E-01	1.921E-01	2.784E-01	2.040E-02	0.452
		162.32	*	-6.026E-03	9.795E-02	1.573E-01	8.165E-03	-0.038
	+	208.81		2.666E+00	1.181E+00	1.563E+00	8.331E-02	1.706
		291.72		7.537E-01	8.509E-01	1.290E+00	7.269E-02	0.584
RE-184		57.98		3.040E-01	6.528E-01	9.514E-01	6.654E-02	0.320
		59.32		3.612E-01	3.598E-01	5.344E-01	3.746E-02	0.676
		67.20		4.667E-01	7.124E-01	1.033E+00	7.566E-02	0.452
		161.27		1.709E-01	3.095E-01	5.155E-01	2.687E-02	0.332
		216.55		-1.295E-01	2.366E-01	3.719E-01	1.996E-02	-0.348
		252.85	*	-2.537E-02	1.892E-01	3.163E-01	1.747E-02	-0.080
		318.01		1.492E-01	3.590E-01	6.045E-01	3.433E-02	0.247
		792.07		-5.086E-01	1.036E+00	1.365E+00	1.228E-01	-0.373
		903.28		4.792E-01	8.963E-01	1.335E+00	1.376E-01	0.359
		920.93		-2.566E-02	4.088E-01	6.157E-01	6.214E-02	-0.042
OS-185		59.72		3.322E-01	2.631E-01	3.941E-01	2.767E-02	0.843
		61.14		2.338E-01	1.508E-01	2.270E-01	1.605E-02	1.030
		69.30		-1.678E-02	2.953E-01	4.167E-01	3.099E-02	-0.040
		592.07		-9.446E-01	2.026E+00	3.182E+00	2.227E-01	-0.297
		646.12	*	-2.175E-02	3.290E-02	5.171E-02	3.789E-03	-0.421
		717.42		-4.857E-01	7.703E-01	1.206E+00	9.736E-02	-0.403
		874.81		7.948E-02	5.045E-01	8.469E-01	8.521E-02	0.094
		880.27		-6.909E-02	6.675E-01	1.103E+00	1.117E-01	-0.063
RE-188		155.03	*	1.130E-01	1.555E-01	2.605E-01	1.391E-02	0.434
		477.96		2.004E+00	2.526E+00	4.224E+00	2.647E-01	0.474
		633.10		1.873E+00	2.421E+00	4.006E+00	2.904E-01	0.467
W-188	+	63.58		8.852E+01	6.545E+01	7.819E+01	5.601E+00	1.132
		227.08		5.517E+00	1.144E+01	1.863E+01	1.009E+00	0.296
		290.67	*	-9.263E-01	6.762E+00	9.705E+00	5.466E-01	-0.095
IR-192	+	295.96		1.158E+00	1.734E-01	2.389E-01	1.371E-02	4.846
		308.46		-4.235E-02	7.672E-02	1.241E-01	7.119E-03	-0.341
		316.51	*	2.170E-03	2.804E-02	4.657E-02	2.658E-03	0.047
		468.07		-5.780E-03	5.797E-02	7.961E-02	5.601E-03	-0.073
		604.41		2.441E-01	4.362E-01	6.422E-01	7.739E-02	0.380
		612.46		6.146E+00	1.026E+00	1.667E+00	1.438E-01	3.688
AU-195		65.12		-1.142E-01	1.704E-01	2.349E-01	1.698E-02	-0.486
		66.83		-1.200E-02	9.269E-02	1.305E-01	9.537E-03	-0.092
	+	75.70		1.379E+00	2.502E-01	4.203E-01	3.299E-02	3.281

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.88	*	2.695E-01	2.198E-01	3.384E-01	2.601E-02	0.797
		129.76		4.241E+00	2.600E+00	4.492E+00	2.646E-01	0.944
TL-200		367.94	*	1.375E-04	2.600E+00	Half-Life too short		
		579.30		1.984E-03	2.600E+00	Half-Life too short		
		828.27		1.039E-03	2.600E+00	Half-Life too short		
		1205.75		-7.470E-05	2.600E+00	Half-Life too short		
TL-201		68.90		1.217E+00	3.626E+00	5.194E+00	3.852E-01	0.234
		70.82		-1.364E+00	2.126E+00	2.925E+00	2.201E-01	-0.466
		80.30		-2.179E+00	3.619E+00	5.309E+00	4.360E-01	-0.410
		135.34		-1.709E+01	1.724E+01	2.753E+01	1.585E+00	-0.621
		167.43	*	3.445E+00	4.750E+00	7.935E+00	4.068E-01	0.434
TL-202		68.90		1.336E-01	3.981E-01	5.703E-01	4.229E-02	0.234
		70.82		-1.493E-01	2.328E-01	3.202E-01	2.410E-02	-0.466
		80.30		-2.386E-01	3.964E-01	5.814E-01	4.776E-02	-0.410
		439.56	*	3.155E-02	5.352E-02	8.907E-02	5.350E-03	0.354
HG-203		70.83		-6.732E-01	1.062E+00	1.458E+00	1.886E-01	-0.462
		72.87		1.840E+00	6.707E-01	9.765E-01	1.230E-01	1.884
		82.60		2.466E+00	1.327E+00	1.579E+00	2.149E-01	1.562
		279.20	*	5.602E-02	3.434E-02	6.036E-02	3.606E-03	0.928
BI-207		72.80		4.986E-01	1.908E-01	2.879E-01	2.202E-02	1.732
	+	74.97		7.682E-01	1.394E-01	2.088E-01	1.628E-02	3.680
	+	84.90		4.988E-01	2.026E-01	3.000E-01	2.589E-02	1.663
		569.67		1.855E-02	2.393E-02	4.125E-02	2.829E-03	0.450
		1063.62	*	-7.319E-03	4.449E-02	7.196E-02	5.681E-03	-0.102
		1770.23		9.744E-01	4.570E-01	8.389E-01	4.897E-02	1.161
TL-207		81.07		2.837E-01	2.498E-01	2.932E-01	2.428E-02	0.968
	+	83.78		3.289E-01	1.336E-01	1.882E-01	1.604E-02	1.748
		94.90		3.851E-01	2.243E-01	3.509E-01	2.836E-02	1.097
		122.32		-1.143E+00	1.544E+00	2.501E+00	1.741E-01	-0.457
		144.24		1.335E-01	6.089E-01	9.968E-01	7.019E-02	0.134
		154.21		4.695E-01	3.626E-01	6.163E-01	4.098E-02	0.762
	+	269.46		7.434E-01	2.425E-01	3.037E-01	1.776E-02	2.448
		323.87	*	-4.814E-02	6.042E-01	8.615E-01	1.419E-01	-0.056
	+	338.28		8.633E+00	1.769E+00	2.188E+00	2.292E-01	3.946
		445.03		-1.720E+00	1.919E+00	2.935E+00	3.055E-01	-0.586
PO-209		260.50		-8.390E-01	7.997E+00	1.336E+01	7.412E-01	-0.063
		262.80		-1.707E-01	2.200E+01	3.687E+01	2.048E+00	-0.005
		896.60	*	-1.077E+00	6.206E+00	1.019E+01	1.054E+00	-0.106
BI-210		46.50	*	9.347E-01	2.525E+00	4.143E+00	3.132E-01	0.226
PB-210		46.50	*	9.347E-01	2.525E+00	4.143E+00	3.132E-01	0.226
PO-210		46.50	*	9.347E-01	2.524E+00	4.143E+00	2.670E-01	0.226
PB-211		404.84	*	-1.298E+00	1.130E+00	1.179E+00	7.347E-01	-1.101
		427.08		-3.192E-01	1.657E+00	2.637E+00	1.630E+00	-0.121
		831.96		4.025E-01	1.064E+00	1.762E+00	1.107E+00	0.228
BI-212	+	727.18	*	1.031E+00	5.005E-01	5.512E-01	5.315E-02	1.871
		785.46		2.332E+00	1.644E+00	2.680E+00	2.388E-01	0.870
		1620.62		1.749E+00	1.096E+00	2.044E+00	1.291E-01	0.856
PO-215		81.07		2.837E-01	2.498E-01	2.932E-01	2.428E-02	0.968
	+	83.78		3.289E-01	1.336E-01	1.882E-01	1.604E-02	1.748

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		3.851E-01	2.243E-01	3.509E-01	2.836E-02	1.097
		122.32		-1.143E+00	1.544E+00	2.501E+00	1.741E-01	-0.457
		144.24		1.335E-01	6.089E-01	9.968E-01	7.019E-02	0.134
		154.21		4.695E-01	3.626E-01	6.163E-01	4.098E-02	0.762
	+	269.46		7.434E-01	2.425E-01	3.037E-01	1.776E-02	2.448
		323.87	*	-4.814E-02	6.042E-01	8.615E-01	1.419E-01	-0.056
	+	338.28		8.633E+00	1.769E+00	2.188E+00	2.292E-01	3.946
		445.03		-1.720E+00	1.919E+00	2.935E+00	3.055E-01	-0.586
RN-219	+	271.23		9.538E-01	3.153E-01	4.042E-01	3.213E-02	2.360
		401.81	*	-5.731E-02	3.233E-01	5.210E-01	7.077E-02	-0.110
RN-220		549.76	*	-1.598E+00	2.067E+01	3.422E+01	2.304E+00	-0.047
RA-223		81.07		2.837E-01	2.498E-01	2.932E-01	2.428E-02	0.968
	+	83.78		3.289E-01	1.336E-01	1.882E-01	1.604E-02	1.748
		94.90		3.851E-01	2.243E-01	3.509E-01	2.836E-02	1.097
		122.32		-1.143E+00	1.544E+00	2.501E+00	1.741E-01	-0.457
		144.24		1.335E-01	6.089E-01	9.968E-01	7.019E-02	0.134
		154.21		4.695E-01	3.626E-01	6.163E-01	4.098E-02	0.762
	+	269.46		7.434E-01	2.425E-01	3.037E-01	1.776E-02	2.448
		323.87	*	-4.814E-02	6.042E-01	8.615E-01	1.419E-01	-0.056
	+	338.28		8.633E+00	1.769E+00	2.188E+00	2.292E-01	3.946
		445.03		-1.720E+00	1.919E+00	2.935E+00	3.055E-01	-0.586
AC-227		79.80		-5.863E-01	1.555E+00	2.295E+00	4.896E-01	-0.255
		236.00		1.906E+00	3.352E-01	4.800E-01	4.927E-02	3.972
		256.20	*	2.056E-01	3.167E-01	5.419E-01	7.507E-02	0.379
		286.10		-4.554E-01	1.319E+00	2.042E+00	2.343E-01	-0.223
	+	299.80		2.685E+00	1.689E+00	2.255E+00	3.660E-01	1.191
		304.40		5.096E-01	1.699E+00	2.489E+00	4.294E-01	0.205
		334.20		2.113E+00	3.171E+00	3.245E+00	5.939E-01	0.651
TH-227		79.80		-5.863E-01	1.555E+00	2.295E+00	4.959E-01	-0.255
	+	94.00		7.629E+00	2.974E+00	3.317E+00	7.167E-01	2.300
		236.00		1.906E+00	3.201E-01	4.800E-01	4.243E-02	3.972
		256.20	*	2.056E-01	3.173E-01	5.419E-01	9.110E-02	0.379
		286.10		-4.554E-01	1.395E+00	2.042E+00	2.046E+00	-0.223
	+	299.80		2.685E+00	1.689E+00	2.255E+00	3.660E-01	1.191
		304.40		5.096E-01	1.699E+00	2.489E+00	4.294E-01	0.205
		334.20		2.113E+00	3.171E+00	3.245E+00	5.939E-01	0.651
TH-229	+	85.43		4.924E-01	2.000E-01	3.067E-01	2.663E-02	1.605
	+	88.47		5.322E-01	1.291E-01	1.884E-01	1.672E-02	2.825
		100.00		2.260E-01	1.667E-01	2.810E-01	2.131E-02	0.804
		193.63	*	1.337E-01	4.645E-01	7.586E-01	3.986E-02	0.176
		210.97		1.884E+00	7.916E-01	1.224E+00	6.538E-02	1.539
PA-231		283.67	*	-9.115E-01	1.265E+00	2.038E+00	2.793E-01	-0.447
	+	301.29		1.074E+00	6.622E-01	9.016E-01	9.352E-02	1.191
TH-231		81.07		2.837E-01	2.498E-01	2.932E-01	2.428E-02	0.968
	+	83.78		3.289E-01	1.336E-01	1.882E-01	1.604E-02	1.748
		94.90		3.851E-01	2.243E-01	3.509E-01	2.836E-02	1.097
		122.32		-1.143E+00	1.544E+00	2.501E+00	1.741E-01	-0.457
		144.24		1.335E-01	6.089E-01	9.968E-01	7.019E-02	0.134
		154.21		4.695E-01	3.626E-01	6.163E-01	4.098E-02	0.762

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		7.434E-01	2.425E-01	3.037E-01	1.776E-02	2.448
		323.87	*	-4.814E-02	6.042E-01	8.615E-01	1.419E-01	-0.056
	+	338.28		8.633E+00	1.769E+00	2.188E+00	2.292E-01	3.946
		445.03		-1.720E+00	1.919E+00	2.935E+00	3.055E-01	-0.586
U-231	+	84.21		1.168E+01	4.745E+00	6.751E+00	5.782E-01	1.731
	+	92.29		6.215E+00	2.080E+00	2.878E+00	2.411E-01	2.159
		95.87	*	-4.310E-01	8.608E-01	1.251E+00	9.986E-02	-0.344
		108.00		-6.960E-01	1.532E+00	2.527E+00	1.758E-01	-0.275
PA-233	+	75.28		2.242E+01	4.964E+00	6.464E+00	9.639E-01	3.468
	+	86.59		7.631E+00	2.680E+00	2.754E+00	7.402E-01	2.771
	+	300.12		7.484E-01	4.659E-01	6.236E-01	8.340E-02	1.200
		311.98	*	1.171E-02	5.196E-02	8.692E-02	5.248E-03	0.135
		340.50		3.414E+00	1.043E+00	1.194E+00	2.739E-01	2.859
		398.62		-1.532E-01	1.671E+00	2.707E+00	6.994E-01	-0.057
		415.76		9.218E-01	1.394E+00	2.314E+00	4.766E-01	0.398
PA-234	+	63.00		2.597E+00	1.949E+00	2.356E+00	3.470E-01	1.103
		94.67		4.064E-01	1.694E-01	2.623E-01	3.162E-02	1.549
		98.44		8.401E-02	1.015E-01	1.377E-01	7.666E-02	0.610
		99.86		6.678E-01	4.371E-01	7.141E-01	5.426E-02	0.935
		111.00		8.659E-02	1.654E-01	2.801E-01	3.035E-02	0.309
		131.20		-1.997E-02	9.680E-02	1.593E-01	9.324E-03	-0.125
		152.70		3.318E-01	3.029E-01	5.065E-01	7.932E-02	0.655
	+	186.00		4.705E+00	2.155E+00	2.264E+00	6.893E-01	2.079
		226.40		2.176E-01	3.631E-01	5.928E-01	6.741E-02	0.367
		227.20		1.885E-01	3.909E-01	6.365E-01	3.448E-02	0.296
		248.90		-5.992E-01	6.867E-01	1.066E+00	2.281E-01	-0.562
	+	293.70		7.368E+00	1.560E+00	1.494E+00	2.394E-01	4.931
		369.80		-1.582E-01	7.212E-01	1.167E+00	2.428E-01	-0.135
		568.70		9.934E-02	7.943E-01	1.326E+00	9.085E-02	0.075
		569.50		1.667E-01	2.125E-01	3.664E-01	2.513E-02	0.455
		574.00		-6.155E-02	1.246E+00	1.907E+00	1.313E-01	-0.032
		699.00		3.495E-02	6.060E-01	9.914E-01	1.858E-01	0.035
		706.10		-9.284E-02	8.533E-01	1.380E+00	6.136E-01	-0.067
		733.00		-1.550E-01	3.632E-01	4.829E-01	1.065E-01	-0.321
		742.81		-4.164E-01	1.133E+00	1.738E+00	1.168E+00	-0.240
	+	796.30		1.775E+00	1.227E+00	1.418E+00	3.855E-01	1.252
		805.60		8.724E-01	8.783E-01	1.436E+00	4.425E-01	0.607
		819.60		8.587E-01	1.027E+00	1.714E+00	6.546E-01	0.501
		826.30		-3.421E-01	6.949E-01	1.098E+00	4.931E-01	-0.312
		831.60		8.967E-02	5.352E-01	9.010E-01	2.713E-01	0.100
		876.40		3.204E-01	7.957E-01	1.235E+00	1.272E+00	0.259
		880.51		1.465E-02	2.433E-01	4.059E-01	4.114E-02	0.036
		883.24		9.996E-02	2.526E-01	4.145E-01	2.795E-01	0.241
		899.00		-9.625E-01	8.181E-01	1.057E+00	4.662E-01	-0.910
		925.00		-6.359E-02	9.649E-01	1.591E+00	1.597E-01	-0.040
		926.50		-1.753E-02	1.449E-01	2.379E-01	6.136E-02	-0.074
		946.00	*	-1.290E-01	2.638E-01	4.207E-01	8.127E-02	-0.307
		949.00		4.003E-01	3.733E-01	6.542E-01	6.364E-02	0.612
		980.50		-2.066E-01	5.934E-01	9.536E-01	8.848E-02	-0.217

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-6.371E-01	1.041E+00	1.480E+00	9.603E-01	-0.430
PA-234M		766.41		1.560E+01	1.983E+01	2.630E+01	2.017E+01	0.593
		1001.03	*	2.942E+00	5.650E+00	9.567E+00	1.095E+00	0.307
U-235	+	89.95		2.967E+00	1.367E+00	1.645E+00	5.079E-01	1.803
	+	93.35		2.373E+00	1.016E+00	1.086E+00	3.031E-01	2.186
		105.00		8.175E-01	9.734E-01	1.619E+00	4.771E-01	0.505
		143.76	*	3.488E-02	1.884E-01	3.081E-01	4.999E-02	0.113
		163.35		-3.822E-01	4.339E-01	6.685E-01	1.189E-01	-0.572
	+	185.71		1.743E-01	6.031E-02	8.357E-02	4.358E-03	2.085
		205.31		-5.330E-01	5.482E-01	7.200E-01	1.284E-01	-0.740
NP-236		94.67		3.106E-01	1.256E-01	1.992E-01	1.615E-02	1.559
		98.44		6.351E-02	6.828E-02	1.041E-01	8.047E-03	0.610
		111.00		6.549E-02	1.250E-01	2.119E-01	1.431E-02	0.309
		160.31	*	-4.269E-06	7.034E-02	1.151E-01	6.022E-03	0.000
NP-239		99.55		2.105E-01	1.475E-01	2.385E-01	1.819E-02	0.882
		117.00	*	6.833E-02	1.665E-01	2.808E-01	1.793E-02	0.243
	+	209.75		2.128E+00	9.423E-01	1.261E+00	6.726E-02	1.688
		228.18		7.071E-02	2.048E-01	3.317E-01	1.798E-02	0.213
		277.60		2.181E-01	1.674E-01	2.689E-01	1.506E-02	0.811
		334.30		1.283E+00	1.787E+00	1.850E+00	1.054E-01	0.694
AM-241		59.54	*	1.579E-01	1.394E-01	2.078E-01	1.614E-02	0.760
CM-243		99.55		2.166E-01	1.518E-01	2.454E-01	1.872E-02	0.882
		103.76	*	1.285E-02	8.541E-02	1.438E-01	1.046E-02	0.089
		117.00		7.029E-02	1.713E-01	2.889E-01	1.844E-02	0.243
	+	209.75		2.097E+00	9.288E-01	1.243E+00	6.630E-02	1.688
		228.18		7.145E-02	2.069E-01	3.352E-01	1.817E-02	0.213
		277.60		2.199E-01	1.687E-01	2.711E-01	1.518E-02	0.811
CM-247		278.00		1.169E+00	6.665E-01	1.123E+00	6.288E-02	1.041
		287.40		-3.764E-02	1.165E+00	1.648E+00	9.268E-02	-0.023
		402.60	*	-7.840E-03	2.930E-02	4.700E-02	2.703E-03	-0.167
CF-249		252.85		-9.565E-02	7.134E-01	1.193E+00	6.586E-02	-0.080
		333.44		1.237E-01	2.323E-01	2.360E-01	1.344E-02	0.524
		387.95	*	1.026E-02	3.072E-02	5.096E-02	2.894E-03	0.201
CF-251		176.60	*	-6.883E-03	1.149E-01	1.865E-01	9.643E-03	-0.037
		227.00		1.675E-01	3.472E-01	5.655E-01	3.063E-02	0.296
		285.00		-3.690E-01	1.478E+00	2.359E+00	1.326E-01	-0.156

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754003      *
* Acquisition date : 14-JUL-2009 10:48:56 Detector SN#     :               *
* Detector ID        : GAM22               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.99     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 30-JUN-2009 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G232754003           Analyst initials: MXR1          *
* Batch Number       : 882713               Sample Quantity : 1.3702E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope      :               *
* LCS DPM          :     0.000            LCS Isotope      :               *
* LCSD DPM         :     0.000            LCSD Isotope     :               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.945E+01	3.065E+00	4.274E-01	0.000E+00
CD-109	3.959E+00	9.409E-01	1.071E+00	0.000E+00
SN-126	3.898E-01	9.264E-02	1.059E-01	0.000E+00
TL-208	5.768E-01	7.570E-02	4.710E-02	0.000E+00
BI-211	4.258E+00	4.419E-01	2.786E-01	0.000E+00
PB-212	1.862E+00	1.604E-01	8.056E-02	0.000E+00
PO-212	1.862E+00	1.604E-01	8.056E-02	0.000E+00
BI-214	1.407E+00	1.869E-01	9.179E-02	0.000E+00
PB-214	1.481E+00	1.714E-01	9.460E-02	0.000E+00
PO-214	1.481E+00	1.714E-01	9.460E-02	0.000E+00
PO-216	1.862E+00	1.604E-01	8.056E-02	0.000E+00
PO-218	1.481E+00	1.714E-01	9.460E-02	0.000E+00
RA-224	4.665E+00	1.123E+00	9.153E-01	0.000E+00
RA-226	1.407E+00	1.869E-01	9.179E-02	0.000E+00
AC-228	1.853E+00	3.274E-01	1.797E-01	0.000E+00
RA-228	1.853E+00	3.274E-01	1.797E-01	0.000E+00
TH-228	1.862E+00	1.604E-01	8.055E-02	0.000E+00
TH-230	1.407E+00	1.869E-01	9.179E-02	0.000E+00
TH-232	1.853E+00	3.274E-01	1.797E-01	0.000E+00
TH-234	2.228E+00	1.651E+00	1.833E+00	0.000E+00
U-234	1.407E+00	1.869E-01	9.179E-02	0.000E+00
NP-237	1.145E+00	3.572E-01	3.140E-01	0.000E+00
U-238	2.228E+00	1.651E+00	1.833E+00	0.000E+00
AM-243	4.280E-01	7.609E-02	8.113E-02	0.000E+00
ANH-511	1.014E-01	5.042E-02	3.647E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.281E-01	2.623E-01	4.515E-01	0.000E+00	NOT IDENT.
NA-22	-9.528E-03	3.548E-02	5.950E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	1.786E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	9.190E-04	1.854E-02	3.159E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.449E-02	7.520E-02	0.000E+00	FAIL ABUN
SC-46	-3.753E-02	3.273E-02	5.184E-02	0.000E+00	FAIL ABUN
V-48	1.441E-02	5.453E-02	9.418E-02	0.000E+00	NOT IDENT.
CR-51	-1.978E-01	3.061E-01	4.865E-01	0.000E+00	NOT IDENT.
MN-52	1.232E-01	1.354E-01	2.495E-01	0.000E+00	NOT IDENT.
MN-54	-2.927E-03	3.227E-02	5.549E-02	0.000E+00	NOT IDENT.
CO-56	-1.445E-02	3.292E-02	5.533E-02	0.000E+00	NOT IDENT.
CO-57	-2.395E-02	2.199E-02	3.779E-02	0.000E+00	NOT IDENT.
CO-58	-1.845E-02	3.054E-02	5.094E-02	0.000E+00	NOT IDENT.
FE-59	-7.894E-02	7.505E-02	1.166E-01	0.000E+00	NOT IDENT.
CO-60	1.534E-02	3.004E-02	5.307E-02	0.000E+00	NOT IDENT.
ZN-65	1.374E-02	8.617E-02	1.246E-01	0.000E+00	NOT IDENT.
GE-68	9.640E-01	1.033E+00	1.837E+00	0.000E+00	NOT IDENT.
AS-73	3.862E-02	6.443E-01	1.113E+00	0.000E+00	NOT IDENT.
AS-74	-2.588E-02	6.838E-02	1.152E-01	0.000E+00	NOT IDENT.
SE-75	2.486E-03	3.852E-02	6.235E-02	0.000E+00	NOT IDENT.
BR-77	-7.988E-01	5.588E+00	9.668E+00	0.000E+00	FAIL ABUN
SR-82	-1.270E-01	3.116E-01	5.086E-01	0.000E+00	NOT IDENT.
RB-83	-1.808E-02	5.084E-02	8.691E-02	0.000E+00	NOT IDENT.
RB-84	3.053E-02	5.779E-02	1.022E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.681E+00	1.230E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.384E-02	6.229E-02	0.000E+00	NOT IDENT.
RB-86	3.828E-01	6.262E-01	1.094E+00	0.000E+00	NOT IDENT.
Y-88	-3.139E-03	1.988E-02	3.271E-02	0.000E+00	NOT IDENT.
ZR-88	4.593E-03	2.397E-02	4.138E-02	0.000E+00	NOT IDENT.
Y-91	-6.321E+00	1.678E+01	2.725E+01	0.000E+00	NOT IDENT.
NB-94	1.086E-02	2.727E-02	4.715E-02	0.000E+00	NOT IDENT.
NB-95	1.980E-02	3.798E-02	6.382E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.357E-01	2.246E-01	0.000E+00	NOT IDENT.
ZR-95	4.735E-02	5.697E-02	1.002E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.441E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	5.314E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	3.898E+00	6.855E+00	1.191E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.414E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-4.126E-02	3.113E-02	5.002E-02	0.000E+00	NOT IDENT.
RH-102	9.040E-03	2.298E-02	3.943E-02	0.000E+00	NOT IDENT.
RU-103	-2.073E-03	3.097E-02	5.404E-02	0.000E+00	FAIL ABUN
RH-106	-2.145E-02	2.492E-01	4.250E-01	0.000E+00	FAIL ABUN
RU-106	-2.145E-02	2.492E-01	4.250E-01	0.000E+00	FAIL ABUN
AG-108M	8.860E-03	2.634E-02	4.540E-02	0.000E+00	NOT IDENT.
AG-110M	-4.473E-03	2.754E-02	4.648E-02	0.000E+00	NOT IDENT.
IN-111	2.528E-01	7.012E-01	1.110E+00	0.000E+00	NOT IDENT.
IN-113M	-8.079E-03	3.461E-02	5.855E-02	0.000E+00	NOT IDENT.
SN-113	-8.079E-03	3.461E-02	5.855E-02	0.000E+00	NOT IDENT.
IN-114M	-5.525E-02	1.838E-01	2.728E-01	0.000E+00	NOT IDENT.
CD-115	-5.357E-01	5.642E+00	9.772E+00	0.000E+00	NOT IDENT.
SN-117M	-2.400E-02	4.521E-02	7.764E-02	0.000E+00	NOT IDENT.
SB-122	1.650E-01	1.185E+00	2.065E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.152E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-3.511E-03	2.478E-02	4.311E-02	0.000E+00	NOT IDENT.
I-124	-3.573E-02	5.178E-01	7.609E-01	0.000E+00	NOT IDENT.
SB-124	-5.638E-02	5.148E-02	7.055E-02	0.000E+00	FAIL ABUN
SB-125	-2.573E-02	7.194E-02	1.197E-01	0.000E+00	FAIL ABUN
TE-125M	-7.170E-01	8.184E+00	1.467E+01	0.000E+00	NOT IDENT.
I-126	1.211E-01	1.444E-01	2.558E-01	0.000E+00	NOT IDENT.
SB-126	2.019E-01	1.286E-01	2.078E-01	0.000E+00	FAIL ABUN
SB-127	-3.298E-01	9.308E-01	1.547E+00	0.000E+00	NOT IDENT.
XE-127	1.975E-02	4.086E-02	7.114E-02	0.000E+00	NOT IDENT.
I-131	1.330E-02	8.484E-02	1.472E-01	0.000E+00	NOT IDENT.
TE-132	1.723E-01	4.793E-01	8.229E-01	0.000E+00	NOT IDENT.
BA-133	1.376E-02	3.793E-02	5.802E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.803E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.741E-02	7.301E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.465E-01	2.461E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.509E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.054E-02	8.585E-02	1.460E-01	0.000E+00	FAIL ABUN
BA-137M	9.503E-03	2.957E-02	5.119E-02	0.000E+00	NOT IDENT.
CS-137	1.005E-02	3.126E-02	5.412E-02	0.000E+00	NOT IDENT.
CE-139	-9.871E-03	2.587E-02	4.448E-02	0.000E+00	NOT IDENT.
BA-140	9.556E-02	1.860E-01	3.276E-01	0.000E+00	NOT IDENT.
LA-140	-1.117E-01	7.225E-02	1.017E-01	0.000E+00	FAIL ABUN
CE-141	-4.767E-02	5.326E-02	9.097E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.516E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.547E-01	1.778E-01	3.040E-01	0.000E+00	NOT IDENT.
PM-144	-1.152E-02	2.872E-02	4.755E-02	0.000E+00	NOT IDENT.
PR-144	-7.802E-01	1.945E+00	3.220E+00	0.000E+00	NOT IDENT.

PM-146	-3.012E-03	3.620E-02	5.910E-02	0.000E+00	NOT IDENT.
ND-147	-5.325E-02	3.934E-01	6.794E-01	0.000E+00	FAIL ABUN
PM-149	-1.498E+01	5.332E+01	8.742E+01	0.000E+00	NOT IDENT.
EU-152	1.012E-02	1.046E-01	1.381E-01	0.000E+00	FAIL ABUN
GD-153	-1.520E-02	7.623E-02	1.201E-01	0.000E+00	FAIL ABUN
EU-154	-2.280E-02	9.944E-02	1.672E-01	0.000E+00	NOT IDENT.
EU-155	5.943E-02	9.507E-02	1.741E-01	0.000E+00	FAIL ABUN
TB-160	-1.071E-03	1.185E-01	2.036E-01	0.000E+00	FAIL ABUN
HO-166M	-2.692E-02	4.692E-02	7.638E-02	0.000E+00	FAIL ABUN
TM-171	-1.096E+01	2.781E+01	4.202E+01	0.000E+00	NOT IDENT.
LU-176	-1.524E-02	2.181E-02	3.335E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.154E+00	1.599E+00	0.000E+00	FAIL ABUN
LU-177M	-1.764E-01	1.496E-01	2.399E-01	0.000E+00	NOT IDENT.
HF-181	-2.716E-02	3.343E-02	5.637E-02	0.000E+00	NOT IDENT.
W-181	-2.930E-01	3.588E-01	5.334E-01	0.000E+00	NOT IDENT.
TA-182	-3.941E-03	1.647E-01	2.821E-01	0.000E+00	FAIL ABUN
RE-183	-6.026E-03	9.599E-02	1.645E-01	0.000E+00	FAIL ABUN
RE-184	-2.537E-02	1.854E-01	3.282E-01	0.000E+00	NOT IDENT.
OS-185	-2.175E-02	3.224E-02	5.270E-02	0.000E+00	NOT IDENT.
RE-188	1.130E-01	1.524E-01	2.727E-01	0.000E+00	NOT IDENT.
W-188	-9.263E-01	6.627E+00	1.004E+01	0.000E+00	FAIL ABUN
IR-192	2.170E-03	2.748E-02	4.810E-02	0.000E+00	FAIL ABUN
AU-195	2.695E-01	2.154E-01	3.571E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.771E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.445E+00	4.655E+00	8.294E+00	0.000E+00	NOT IDENT.
TL-202	3.155E-02	5.245E-02	9.143E-02	0.000E+00	NOT IDENT.
HG-203	5.602E-02	3.365E-02	6.250E-02	0.000E+00	NOT IDENT.
BI-207	-7.319E-03	4.360E-02	7.262E-02	0.000E+00	FAIL ABUN
TL-207	-4.814E-02	5.921E-01	8.895E-01	0.000E+00	FAIL ABUN
PO-209	-1.077E+00	6.082E+00	1.032E+01	0.000E+00	NOT IDENT.
BI-210	9.347E-01	2.474E+00	4.431E+00	0.000E+00	NOT IDENT.
PB-210	9.347E-01	2.474E+00	4.431E+00	0.000E+00	NOT IDENT.
PO-210	9.347E-01	2.474E+00	4.431E+00	0.000E+00	NOT IDENT.
PB-211	-1.298E+00	1.107E+00	1.212E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.904E-01	5.604E-01	0.000E+00	FAIL ABUN
PO-215	-4.814E-02	5.921E-01	8.895E-01	0.000E+00	FAIL ABUN
RN-219	-5.731E-02	3.168E-01	5.358E-01	0.000E+00	FAIL ABUN
RN-220	-1.598E+00	2.026E+01	3.498E+01	0.000E+00	NOT IDENT.
RA-223	-4.814E-02	5.921E-01	8.895E-01	0.000E+00	FAIL ABUN
AC-227	2.056E-01	3.103E-01	5.621E-01	0.000E+00	FAIL ABUN
TH-227	2.056E-01	3.109E-01	5.621E-01	0.000E+00	FAIL ABUN
TH-229	1.337E-01	4.553E-01	7.908E-01	0.000E+00	FAIL ABUN
PA-231	-9.115E-01	1.239E+00	2.110E+00	0.000E+00	FAIL ABUN
TH-231	-4.814E-02	5.921E-01	8.895E-01	0.000E+00	FAIL ABUN
U-231	-4.310E-01	8.436E-01	1.321E+00	0.000E+00	FAIL ABUN
PA-233	1.171E-02	5.092E-02	8.981E-02	0.000E+00	FAIL ABUN
PA-234	-1.290E-01	2.585E-01	4.255E-01	0.000E+00	FAIL ABUN
PA-234M	2.942E+00	5.537E+00	9.666E+00	0.000E+00	NOT IDENT.
U-235	3.488E-02	1.847E-01	3.230E-01	0.000E+00	FAIL ABUN
NP-236	-4.269E-06	6.893E-02	1.204E-01	0.000E+00	NOT IDENT.
NP-239	6.833E-02	1.632E-01	2.955E-01	0.000E+00	FAIL ABUN
AM-241	1.579E-01	1.366E-01	2.213E-01	0.000E+00	NOT IDENT.
CM-243	1.285E-02	8.370E-02	1.516E-01	0.000E+00	FAIL ABUN
CM-247	-7.840E-03	2.871E-02	4.834E-02	0.000E+00	NOT IDENT.
CF-249	1.026E-02	3.011E-02	5.244E-02	0.000E+00	NOT IDENT.
CF-251	-6.883E-03	1.126E-01	1.948E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:49:30.09

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754003.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 10:48:56
Sample ID         : G232754003           Sample quantity  : 1.37020E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.99  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	3045	10.67*	1.981E+00	3.945E+01	3.945E+01	7.93
CD-109	88.03	418	3.72*	7.944E+00	3.877E+00	3.959E+00	24.25
SN-126	64.28	147	9.60	4.754E+00	8.820E-01	8.820E-01	74.98
	86.94	418	8.90	7.944E+00	1.621E+00	1.621E+00	47.16
	87.57	418	37.00*	7.944E+00	3.898E-01	3.898E-01	24.25
TL-208	277.35	------	6.80	6.634E+00	------ Line Not Found		------
	510.84	168	21.60	4.533E+00	4.693E-01	4.693E-01	51.43
	583.14	730	84.20*	4.119E+00	5.768E-01	5.768E-01	13.39
	860.37	------	12.46	3.015E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	6.380E+00	------ Line Not Found		------
	351.07	1162	12.94*	5.776E+00	4.258E+00	4.258E+00	10.59
PB-212	74.81	684	10.70	6.635E+00	2.640E+00	2.640E+00	20.41
	77.11	1030	18.00	6.930E+00	2.262E+00	2.262E+00	13.32
	87.30	418	8.00	7.944E+00	1.803E+00	1.803E+00	26.23
	238.63	2181	44.60*	7.195E+00	1.862E+00	1.862E+00	8.79
	300.09	114	3.41	6.345E+00	1.449E+00	1.449E+00	61.34
PO-212	74.81	684	10.70	6.635E+00	2.640E+00	2.640E+00	20.41
	77.11	1030	18.00	6.930E+00	2.262E+00	2.262E+00	13.32
	87.30	418	8.00	7.944E+00	1.803E+00	1.803E+00	26.23
	115.19	------	0.60	8.992E+00	------ Line Not Found		------
	238.63	2181	44.60*	7.195E+00	1.862E+00	1.862E+00	8.79
	300.09	114	3.41	6.345E+00	1.449E+00	1.449E+00	61.34
BI-214	609.31	948	46.30*	3.985E+00	1.407E+00	1.407E+00	13.55
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	202	15.10	2.411E+00	1.519E+00	1.519E+00	32.13
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	89	4.11	2.059E+00	2.876E+00	2.876E+00	41.87
	1764.49	177	15.80	1.811E+00	1.695E+00	1.695E+00	22.53
PB-214	74.81	684	6.21	6.635E+00	4.549E+00	4.549E+00	19.60
	77.11	1030	10.50	6.930E+00	3.878E+00	3.878E+00	15.34
	87.30	418	4.67	7.944E+00	3.088E+00	3.089E+00	25.45

Sample ID : G232754003 Acquisition date : 14-JUL-2009 10:48:56

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	481	7.49	7.147E+00	2.460E+00	2.460E+00	25.21
	295.21	689	19.20	6.407E+00	1.535E+00	1.535E+00	16.19
	351.92	1162	37.20*	5.776E+00	1.481E+00	1.481E+00	11.81
PO-214	74.81	684	6.21	6.635E+00	4.549E+00	4.549E+00	19.60
	77.11	1030	10.50	6.930E+00	3.878E+00	3.878E+00	15.34
	87.30	418	4.67	7.944E+00	3.088E+00	3.089E+00	25.45
	241.98	481	7.49	7.147E+00	2.460E+00	2.460E+00	25.21
	295.21	689	19.20	6.407E+00	1.535E+00	1.535E+00	16.19
	351.92	1162	37.20*	5.776E+00	1.481E+00	1.481E+00	11.81
PO-216	74.81	684	10.70	6.635E+00	2.640E+00	2.640E+00	20.41
	77.11	1030	18.00	6.930E+00	2.262E+00	2.262E+00	13.32
	87.30	418	8.00	7.944E+00	1.803E+00	1.803E+00	26.23
	238.63	2181	44.60*	7.195E+00	1.862E+00	1.862E+00	8.79
	300.09	114	3.41	6.345E+00	1.449E+00	1.449E+00	61.34
PO-218	74.81	684	6.21	6.635E+00	4.549E+00	4.549E+00	19.60
	77.11	1030	10.50	6.930E+00	3.878E+00	3.878E+00	15.34
	87.30	418	4.67	7.944E+00	3.088E+00	3.089E+00	25.45
	241.98	481	7.49	7.147E+00	2.460E+00	2.460E+00	25.21
	295.21	689	19.20	6.407E+00	1.535E+00	1.535E+00	16.19
	351.92	1162	37.20*	5.776E+00	1.481E+00	1.481E+00	11.81
RA-224	240.98	481	3.95*	7.147E+00	4.665E+00	4.665E+00	24.57
RA-226	609.31	948	46.30*	3.985E+00	1.407E+00	1.407E+00	13.55
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	202	15.10	2.411E+00	1.519E+00	1.519E+00	32.13
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	89	4.11	2.059E+00	2.876E+00	2.876E+00	41.87
	1764.49	177	15.80	1.811E+00	1.695E+00	1.695E+00	22.53
AC-228	338.32	509	11.40	5.914E+00	2.067E+00	2.067E+00	44.40
	911.07	538	27.70*	2.871E+00	1.853E+00	1.853E+00	18.02
	969.11	283	16.60	2.724E+00	1.712E+00	1.712E+00	31.56
RA-228	338.32	509	11.40	5.914E+00	2.067E+00	2.067E+00	44.40
	911.07	538	27.70*	2.871E+00	1.853E+00	1.853E+00	18.02
	969.11	283	16.60	2.724E+00	1.712E+00	1.712E+00	31.56
TH-228	84.40	228	1.21	7.698E+00	6.715E+00	6.715E+00	41.81
	238.60	2181	44.60*	7.195E+00	1.862E+00	1.862E+00	8.79
	300.10	114	3.41	6.345E+00	1.449E+00	1.449E+00	84.66
TH-230	609.31	948	46.30*	3.985E+00	1.407E+00	1.407E+00	13.55
	768.36	------	5.04	3.314E+00	------ Line Not Found		------
	934.06	------	3.21	2.811E+00	------ Line Not Found		------
	1120.29	202	15.10	2.411E+00	1.519E+00	1.519E+00	32.13
	1238.11	------	5.94	2.227E+00	------ Line Not Found		------
	1377.67	89	4.11	2.059E+00	2.876E+00	2.876E+00	41.87
	1764.49	177	15.80	1.811E+00	1.695E+00	1.695E+00	22.53
TH-232	338.32	509	11.40	5.914E+00	2.067E+00	2.067E+00	18.51
	911.07	538	27.70*	2.871E+00	1.853E+00	1.853E+00	18.02
	969.11	283	16.60	2.724E+00	1.712E+00	1.712E+00	31.56
TH-234	63.29	147	3.80*	4.754E+00	2.228E+00	2.228E+00	75.60
	92.38	324	5.41	8.310E+00	1.974E+00	1.974E+00	37.05

Sample ID : G232754003 Acquisition date : 14-JUL-2009 10:48:56

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-234	609.31	948	46.30*	3.985E+00	1.407E+00	1.407E+00	13.55
	768.36	------	5.04	3.314E+00	------	Line Not Found	------
	934.06	------	3.21	2.811E+00	------	Line Not Found	------
	1120.29	202	15.10	2.411E+00	1.519E+00	1.519E+00	32.13
	1238.11	------	5.94	2.227E+00	------	Line Not Found	------
	1377.67	89	4.11	2.059E+00	2.876E+00	2.876E+00	41.87
	1764.49	177	15.80	1.811E+00	1.695E+00	1.695E+00	22.53
NP-237	86.50	418	12.60*	7.944E+00	1.145E+00	1.145E+00	31.84
	95.87	------	2.60	8.481E+00	------	Line Not Found	------
U-238	63.29	147	3.80*	4.754E+00	2.228E+00	2.228E+00	75.60
	92.38	324	5.41	8.310E+00	1.974E+00	1.974E+00	33.46
AM-243	74.67	684	66.00*	6.635E+00	4.280E-01	4.280E-01	18.14
	86.72	418	0.34	7.944E+00	4.293E+01	4.293E+01	24.25
	117.66	------	0.55	9.009E+00	------	Line Not Found	------
	142.18	------	0.13	8.872E+00	------	Line Not Found	------
ANH-511	511.00	168	100.00*	4.533E+00	1.014E-01	1.014E-01	50.75

Flag: "*" = Keyline

Sample ID : G232754003 Acquisition date : 14-JUL-2009 10:48:56

Total number of lines in spectrum 31
Number of unidentified lines 1
Number of lines tentatively identified by NID 30 96.77%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.945E+01	3.945E+01	0.313E+01	7.93	
CD-109	464.00D	1.02	3.877E+00	3.959E+00	0.960E+00	24.25	
SN-126	1.00E+05Y	1.00	3.898E-01	3.898E-01	0.945E-01	24.25	
TL-208	1.41E+10Y	1.00	5.768E-01	5.768E-01	0.772E-01	13.39	
BI-211	7.04E+08Y	1.00	4.258E+00	4.258E+00	0.451E+00	10.59	
PB-212	1.41E+10Y	1.00	1.862E+00	1.862E+00	0.164E+00	8.79	
PO-212	1.41E+10Y	1.00	1.862E+00	1.862E+00	0.164E+00	8.79	
BI-214	1600.00Y	1.00	1.407E+00	1.407E+00	0.191E+00	13.55	
PB-214	1600.00Y	1.00	1.481E+00	1.481E+00	0.175E+00	11.81	
PO-214	1600.00Y	1.00	1.481E+00	1.481E+00	0.175E+00	11.81	
PO-216	1.41E+10Y	1.00	1.862E+00	1.862E+00	0.164E+00	8.79	
PO-218	1600.00Y	1.00	1.481E+00	1.481E+00	0.175E+00	11.81	
RA-224	1.41E+10Y	1.00	4.665E+00	4.665E+00	1.146E+00	24.57	
RA-226	1600.00Y	1.00	1.407E+00	1.407E+00	0.191E+00	13.55	
AC-228	1.41E+10Y	1.00	1.853E+00	1.853E+00	0.334E+00	18.02	
RA-228	1.41E+10Y	1.00	1.853E+00	1.853E+00	0.334E+00	18.02	
TH-228	1.41E+10Y	1.00	1.862E+00	1.862E+00	0.164E+00	8.79	
TH-230	4.47E+09Y	1.00	1.407E+00	1.407E+00	0.191E+00	13.55	
TH-232	1.41E+10Y	1.00	1.853E+00	1.853E+00	0.334E+00	18.02	
TH-234	4.47E+09Y	1.00	2.228E+00	2.228E+00	1.685E+00	75.60	
U-234	4.47E+09Y	1.00	1.407E+00	1.407E+00	0.191E+00	13.55	
NP-237	2.14E+06Y	1.00	1.145E+00	1.145E+00	0.364E+00	31.84	
U-238	4.47E+09Y	1.00	2.228E+00	2.228E+00	1.685E+00	75.60	
AM-243	7380.00Y	1.00	4.280E-01	4.280E-01	0.776E-01	18.14	
ANH-511	1.00E+09Y	1.00	1.014E-01	1.014E-01	0.514E-01	50.75	
	Total Activity :		8.243E+01	8.251E+01			

Grand Total Activity : 8.243E+01 8.251E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G232754003 Acquisition date : 14-JUL-2009 10:48:56

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	89.98	238	489	1.19	179.32	164	29	3.30E-02	34.2	8.14E+00	T
0	185.89	279	514	1.45	371.10	367	10	3.87E-02	34.2	8.11E+00	T
0	209.27	193	465	1.44	417.87	414	10	2.69E-02	44.0	7.69E+00	T
0	270.63	248	338	1.50	540.58	536	12	3.45E-02	32.1	6.72E+00	T
0	328.60	206	453	1.96	656.50	648	19	2.86E-02	51.4	6.02E+00	T
0	463.25	160	213	2.19	925.82	918	14	2.23E-02	41.8	4.85E+00	T
0	727.08	154	216	1.96	1453.58	1447	18	2.14E-02	47.6	3.47E+00	T
0	795.37	81	124	1.90	1590.20	1581	15	1.13E-02	63.6	3.22E+00	T
2	965.18	89	149	2.79	1929.97	1919	27	1.24E-02	72.1	2.73E+00	T
0	1730.60	50	18	3.77	3462.07	3451	19	6.89E-03	50.7	1.82E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 12:49:34.74

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G232754003.CNF;1 *
* Acquisition date  : 14-JUL-2009 10:48:56  Detector SN#     :             *
* Detector ID       : GAM22                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.99          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G232754003            Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.37020E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45.3MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1023-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.945E+01	3.128E+00	4.262E-01	2.966E-02	92.570
CD-109	3.959E+00	9.601E-01	1.013E+00	9.052E-02	3.908
SN-126	3.898E-01	9.453E-02	1.001E-01	8.907E-03	3.893
TL-208	5.768E-01	7.725E-02	4.613E-02	3.551E-03	12.504
BI-211	4.258E+00	4.509E-01	2.702E-01	1.714E-02	15.757
PB-212	1.862E+00	1.636E-01	7.758E-02	5.485E-03	24.004
PO-212	1.862E+00	1.636E-01	7.758E-02	5.485E-03	24.004
BI-214	1.407E+00	1.907E-01	8.997E-02	7.913E-03	15.644
PB-214	1.481E+00	1.749E-01	9.176E-02	7.537E-03	16.140
PO-214	1.481E+00	1.749E-01	9.176E-02	7.537E-03	16.140
PO-216	1.862E+00	1.636E-01	7.758E-02	5.485E-03	24.004
PO-218	1.481E+00	1.749E-01	9.176E-02	7.537E-03	16.140
RA-224	4.665E+00	1.146E+00	8.816E-01	4.828E-02	5.292
RA-226	1.407E+00	1.907E-01	8.997E-02	7.913E-03	15.644
AC-228	1.853E+00	3.341E-01	1.775E-01	2.220E-02	10.443
RA-228	1.853E+00	3.341E-01	1.775E-01	2.220E-02	10.443
TH-228	1.862E+00	1.636E-01	7.757E-02	5.485E-03	24.006
TH-230	1.407E+00	1.907E-01	8.997E-02	7.912E-03	15.644

Sample ID : G232754003 Acquisition date : 14-JUL-2009 10:48:56

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.853E+00	3.341E-01	1.775E-01	2.220E-02	10.443
TH-234	2.228E+00	1.685E+00	1.723E+00	2.987E-01	1.293
U-234	1.407E+00	1.907E-01	8.997E-02	7.912E-03	15.644
NP-237	1.145E+00	3.645E-01	2.968E-01	6.657E-02	3.857
U-238	2.228E+00	1.685E+00	1.723E+00	2.987E-01	1.293
AM-243	4.280E-01	7.765E-02	7.649E-02	5.947E-03	5.596
ANH-511	1.014E-01	5.145E-02	3.562E-02	2.310E-03	2.846

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.281E-01		2.677E-01	4.405E-01	3.151E-02	0.291
NA-22	-9.528E-03		3.621E-02	5.917E-02	3.765E-03	-0.161
NA-24	7.404E-03		9.114E-02	Half-Life too short		
AL-26	9.190E-04		1.892E-02	3.163E-02	1.800E-03	0.029
TI-44	4.175E-01	+	5.560E-02	7.096E-02	5.716E-03	5.883
SC-46	-3.753E-02		3.340E-02	5.118E-02	5.247E-03	-0.733
V-48	1.441E-02		5.564E-02	9.318E-02	8.604E-03	0.155
CR-51	-1.978E-01		3.123E-01	4.711E-01	2.994E-02	-0.420
MN-52	1.232E-01		1.382E-01	2.487E-01	1.662E-02	0.495
MN-54	-2.927E-03		3.293E-02	5.473E-02	5.221E-03	-0.053
CO-56	-1.445E-02		3.359E-02	5.458E-02	5.291E-03	-0.265
CO-57	-2.395E-02		2.244E-02	3.594E-02	2.198E-03	-0.666
CO-58	-1.845E-02		3.116E-02	5.021E-02	4.644E-03	-0.368
FE-59	-7.894E-02		7.658E-02	1.156E-01	9.288E-03	-0.683
CO-60	1.534E-02		3.065E-02	5.282E-02	3.572E-03	0.290
ZN-65	1.374E-02		8.793E-02	1.236E-01	8.525E-03	0.111
GE-68	9.640E-01		1.054E+00	1.821E+00	1.391E-01	0.529
AS-73	3.862E-02		6.575E-01	1.043E+00	7.249E-02	0.037
AS-74	-2.588E-02		6.978E-02	1.129E-01	7.926E-03	-0.229
SE-75	2.486E-03		3.931E-02	6.015E-02	3.383E-03	0.041
BR-77	-7.988E-01		5.702E+00	9.448E+00	6.184E-01	-0.085
SR-82	-1.270E-01		3.179E-01	5.009E-01	4.407E-02	-0.253
RB-83	-1.808E-02		5.187E-02	8.493E-02	5.558E-03	-0.213
RB-84	3.053E-02		5.897E-02	1.009E-01	1.024E-02	0.303
KR-85	2.987E+01		6.817E+00	1.202E+01	7.814E-01	2.486
SR-85	1.513E-01		3.453E-02	6.086E-02	3.958E-03	2.486
RB-86	3.828E-01		6.390E-01	1.084E+00	8.298E-02	0.353
Y-88	-3.139E-03		2.028E-02	3.276E-02	1.833E-03	-0.096
ZR-88	4.593E-03		2.446E-02	4.022E-02	2.285E-03	0.114
Y-91	-6.321E+00		1.712E+01	2.707E+01	1.586E+00	-0.233
NB-94	1.086E-02		2.783E-02	4.634E-02	3.661E-03	0.234
NB-95	1.980E-02		3.876E-02	6.284E-02	5.445E-03	0.315
NB-95M	5.005E-01		1.384E-01	2.162E-01	1.571E-02	2.315
ZR-95	4.735E-02		5.813E-02	9.860E-02	9.295E-03	0.480
NB-97	-4.397E-03		1.246E-02	Half-Life too short		
ZR-97	1.795E+00		2.711E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	3.898E+00		6.995E+00	1.171E+01	1.760E+00	0.333
TC-99M	-1.381E+09		7.214E+08	Half-Life too short		
RH-101	-4.126E-02		3.176E-02	4.800E-02	2.533E-03	-0.860
RH-102	9.040E-03		2.345E-02	3.846E-02	2.403E-03	0.235
RU-103	-2.073E-03		3.160E-02	5.276E-02	6.821E-03	-0.039
RH-106	-2.145E-02		2.543E-01	4.167E-01	5.200E-02	-0.051
RU-106	-2.145E-02		2.543E-01	4.167E-01	2.992E-02	-0.051
AG-108M	8.860E-03		2.688E-02	4.421E-02	2.853E-03	0.200
AG-110M	-4.473E-03		2.810E-02	4.562E-02	3.510E-03	-0.098
IN-111	2.528E-01		7.155E-01	1.069E+00	5.873E-02	0.237
IN-113M	-8.079E-03		3.532E-02	5.691E-02	3.454E-03	-0.142
SN-113	-8.079E-03		3.532E-02	5.691E-02	3.454E-03	-0.142
IN-114M	-5.525E-02		1.875E-01	2.616E-01	1.370E-02	-0.211
CD-115	-5.357E-01		5.757E+00	9.552E+00	6.297E-01	-0.056
SN-117M	-2.400E-02		4.613E-02	7.420E-02	3.908E-03	-0.323
SB-122	1.650E-01		1.209E+00	2.021E+00	1.379E-01	0.082
I-123	-1.632E-01		5.878E-01	Half-Life too short		
TE-123M	-3.511E-03		2.528E-02	4.120E-02	2.202E-03	-0.085
I-124	-3.573E-02		5.284E-01	7.456E-01	5.267E-02	-0.048
SB-124	-5.638E-02		5.253E-02	7.055E-02	4.644E-03	-0.799
SB-125	-2.573E-02		7.341E-02	1.166E-01	7.190E-03	-0.221
TE-125M	-7.170E-01		8.352E+00	1.393E+01	1.242E+00	-0.051
I-126	1.211E-01		1.473E-01	2.512E-01	1.877E-02	0.482
SB-126	2.019E-01		1.312E-01	2.044E-01	1.658E-02	0.988
SB-127	-3.298E-01		9.498E-01	1.520E+00	1.572E-01	-0.217
XE-127	1.975E-02		4.169E-02	6.830E-02	3.621E-03	0.289
I-131	1.330E-02		8.657E-02	1.429E-01	9.105E-03	0.093
TE-132	1.723E-01		4.891E-01	7.917E-01	1.107E-01	0.218
BA-133	1.376E-02		3.870E-02	5.629E-02	6.479E-03	0.244
I-133	-1.396E-03		9.200E-04	Half-Life too short		
CS-134	9.124E-02	+	5.859E-02	7.194E-02	6.547E-03	1.268
CS-135	3.031E-01		1.495E-01	2.375E-01	1.778E-02	1.277
I-135	-1.541E+08		1.280E+08	Half-Life too short		
CS-136	1.054E-02		8.761E-02	1.446E-01	1.238E-02	0.073
BA-137M	9.503E-03		3.017E-02	5.026E-02	3.729E-03	0.189
CS-137	1.005E-02		3.189E-02	5.313E-02	3.952E-03	0.189
CE-139	-9.871E-03		2.639E-02	4.255E-02	2.180E-03	-0.232
BA-140	9.556E-02		1.898E-01	3.203E-01	1.047E-01	0.298
LA-140	-1.117E-01		7.372E-02	1.016E-01	6.481E-03	-1.100
CE-141	-4.767E-02		5.434E-02	8.680E-02	5.014E-03	-0.549
CE-143	6.107E-04		7.736E-05	Half-Life too short		
CE-144	-1.547E-01		1.814E-01	2.896E-01	4.112E-02	-0.534
PM-144	-1.152E-02		2.930E-02	4.673E-02	3.658E-03	-0.247
PR-144	-7.802E-01		1.984E+00	3.164E+00	2.476E-01	-0.247
PM-146	-3.012E-03		3.693E-02	5.760E-02	5.086E-03	-0.052
ND-147	-5.325E-02		4.014E-01	6.642E-01	9.226E-02	-0.080
PM-149	-1.498E+01		5.440E+01	8.447E+01	1.191E+01	-0.177
EU-152	1.012E-02		1.068E-01	1.339E-01	8.634E-03	0.076

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-1.520E-02		7.779E-02	1.138E-01	8.903E-03	-0.134
EU-154	-2.280E-02		1.015E-01	1.663E-01	1.612E-02	-0.137
EU-155	5.943E-02		9.701E-02	1.652E-01	1.202E-02	0.360
TB-160	-1.071E-03		1.209E-01	2.010E-01	2.034E-02	-0.005
HO-166M	-2.692E-02		4.787E-02	7.510E-02	6.013E-03	-0.359
TM-171	-1.096E+01		2.838E+01	3.954E+01	2.887E+00	-0.277
LU-176	-1.524E-02		2.226E-02	3.226E-02	1.827E-03	-0.472
LU-177	2.659E+00	+	1.178E+00	1.535E+00	8.182E-02	1.732
LU-177M	-1.764E-01		1.526E-01	2.334E-01	1.360E-02	-0.756
HF-181	-2.716E-02		3.412E-02	5.500E-02	3.461E-03	-0.494
W-181	-2.930E-01		3.661E-01	5.017E-01	3.628E-02	-0.584
TA-182	-3.941E-03		1.681E-01	2.803E-01	1.675E-02	-0.014
RE-183	-6.026E-03		9.795E-02	1.573E-01	8.165E-03	-0.038
RE-184	-2.537E-02		1.892E-01	3.163E-01	1.747E-02	-0.080
OS-185	-2.175E-02		3.290E-02	5.171E-02	3.789E-03	-0.421
RE-188	1.130E-01		1.555E-01	2.605E-01	1.391E-02	0.434
W-188	-9.263E-01		6.762E+00	9.705E+00	5.466E-01	-0.095
IR-192	2.170E-03		2.804E-02	4.657E-02	2.658E-03	0.047
AU-195	2.695E-01		2.198E-01	3.384E-01	2.601E-02	0.797
TL-200	1.375E-04		9.034E-05	Half-Life too short		
TL-201	3.445E+00		4.750E+00	7.935E+00	4.068E-01	0.434
TL-202	3.155E-02		5.352E-02	8.907E-02	5.350E-03	0.354
HG-203	5.602E-02		3.434E-02	6.036E-02	3.606E-03	0.928
BI-207	-7.319E-03		4.449E-02	7.196E-02	5.681E-03	-0.102
TL-207	-4.814E-02		6.042E-01	8.615E-01	1.419E-01	-0.056
PO-209	-1.077E+00		6.206E+00	1.019E+01	1.054E+00	-0.106
BI-210	9.347E-01		2.525E+00	4.143E+00	3.132E-01	0.226
PB-210	9.347E-01		2.525E+00	4.143E+00	3.132E-01	0.226
PO-210	9.347E-01		2.524E+00	4.143E+00	2.670E-01	0.226
PB-211	-1.298E+00		1.130E+00	1.179E+00	7.347E-01	-1.101
BI-212	1.031E+00	+	5.005E-01	5.512E-01	5.315E-02	1.871
PO-215	-4.814E-02		6.042E-01	8.615E-01	1.419E-01	-0.056
RN-219	-5.731E-02		3.233E-01	5.210E-01	7.077E-02	-0.110
RN-220	-1.598E+00		2.067E+01	3.422E+01	2.304E+00	-0.047
RA-223	-4.814E-02		6.042E-01	8.615E-01	1.419E-01	-0.056
AC-227	2.056E-01		3.167E-01	5.419E-01	7.507E-02	0.379
TH-227	2.056E-01		3.173E-01	5.419E-01	9.110E-02	0.379
TH-229	1.337E-01		4.645E-01	7.586E-01	3.986E-02	0.176
PA-231	-9.115E-01		1.265E+00	2.038E+00	2.793E-01	-0.447
TH-231	-4.814E-02		6.042E-01	8.615E-01	1.419E-01	-0.056
U-231	-4.310E-01		8.608E-01	1.251E+00	9.986E-02	-0.344
PA-233	1.171E-02		5.196E-02	8.692E-02	5.248E-03	0.135
PA-234	-1.290E-01		2.638E-01	4.207E-01	8.127E-02	-0.307
PA-234M	2.942E+00		5.650E+00	9.567E+00	1.095E+00	0.307
U-235	3.488E-02		1.884E-01	3.081E-01	4.999E-02	0.113
NP-236	-4.269E-06		7.034E-02	1.151E-01	6.022E-03	0.000
NP-239	6.833E-02		1.665E-01	2.808E-01	1.793E-02	0.243
AM-241	1.579E-01		1.394E-01	2.078E-01	1.614E-02	0.760

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.285E-02		8.541E-02	1.438E-01	1.046E-02	0.089
CM-247	-7.840E-03		2.930E-02	4.700E-02	2.703E-03	-0.167
CF-249	1.026E-02		3.072E-02	5.096E-02	2.894E-03	0.201
CF-251	-6.883E-03		1.149E-01	1.865E-01	9.643E-03	-0.037

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G232754003           *
* Acquisition date  : 14-JUL-2009 10:48:56 Detector SN#     :               *
* Detector ID       : GAM22                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.99      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G232754003           Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.3702E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 18-FEB-2009 15:11:45 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.945E+01	3.065E+00	2.138E-01	1.564E+00
CD-109	3.959E+00	9.409E-01	5.360E-01	4.801E-01
SN-126	3.898E-01	9.264E-02	5.298E-02	4.727E-02
TL-208	5.768E-01	7.570E-02	2.356E-02	3.862E-02
BI-211	4.258E+00	4.419E-01	1.394E-01	2.255E-01
PB-212	1.862E+00	1.604E-01	4.030E-02	8.182E-02
PO-212	1.862E+00	1.604E-01	4.030E-02	8.182E-02
BI-214	1.407E+00	1.869E-01	4.592E-02	9.537E-02
PB-214	1.481E+00	1.714E-01	4.733E-02	8.743E-02
PO-214	1.481E+00	1.714E-01	4.733E-02	8.743E-02
PO-216	1.862E+00	1.604E-01	4.030E-02	8.182E-02
PO-218	1.481E+00	1.714E-01	4.733E-02	8.743E-02
RA-224	4.665E+00	1.123E+00	4.579E-01	5.732E-01
RA-226	1.407E+00	1.869E-01	4.592E-02	9.537E-02
AC-228	1.853E+00	3.274E-01	8.989E-02	1.670E-01
RA-228	1.853E+00	3.274E-01	8.989E-02	1.670E-01
TH-228	1.862E+00	1.604E-01	4.030E-02	8.182E-02
TH-230	1.407E+00	1.869E-01	4.592E-02	9.536E-02
TH-232	1.853E+00	3.274E-01	8.989E-02	1.670E-01
TH-234	2.228E+00	1.651E+00	9.173E-01	8.423E-01
U-234	1.407E+00	1.869E-01	4.592E-02	9.536E-02
NP-237	1.145E+00	3.572E-01	1.571E-01	1.822E-01
U-238	2.228E+00	1.651E+00	9.173E-01	8.423E-01
AM-243	4.280E-01	7.609E-02	4.059E-02	3.882E-02
ANH-511	1.014E-01	5.042E-02	1.824E-02	2.572E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	1.281E-01	2.623E-01	2.259E-01	1.338E-01	NOT IDENT.
NA-22	-9.528E-03	3.548E-02	2.977E-02	1.810E-02	NOT IDENT.

NA-24	7.404E+03	1.786E+05	0.000E+00	9.114E+04	SHORT HLIF
AL-26	9.190E-04	1.854E-02	1.580E-02	9.461E-03	NOT IDENT.
TI-44	4.175E-01	5.449E-02	3.762E-02	2.780E-02	FAIL ABUN
SC-46	-3.753E-02	3.273E-02	2.593E-02	1.670E-02	FAIL ABUN
V-48	1.441E-02	5.453E-02	4.712E-02	2.782E-02	NOT IDENT.
CR-51	-1.978E-01	3.061E-01	2.434E-01	1.562E-01	NOT IDENT.
MN-52	1.232E-01	1.354E-01	1.248E-01	6.910E-02	NOT IDENT.
MN-54	-2.927E-03	3.227E-02	2.776E-02	1.647E-02	NOT IDENT.
CO-56	-1.445E-02	3.292E-02	2.768E-02	1.679E-02	NOT IDENT.
CO-57	-2.395E-02	2.199E-02	1.891E-02	1.122E-02	NOT IDENT.
CO-58	-1.845E-02	3.054E-02	2.548E-02	1.558E-02	NOT IDENT.
FE-59	-7.894E-02	7.505E-02	5.831E-02	3.829E-02	NOT IDENT.
CO-60	1.534E-02	3.004E-02	2.655E-02	1.532E-02	NOT IDENT.
ZN-65	1.374E-02	8.617E-02	6.235E-02	4.396E-02	NOT IDENT.
GE-68	9.640E-01	1.033E+00	9.192E-01	5.271E-01	NOT IDENT.
AS-73	3.862E-02	6.443E-01	5.570E-01	3.287E-01	NOT IDENT.
AS-74	-2.588E-02	6.838E-02	5.764E-02	3.489E-02	NOT IDENT.
SE-75	2.486E-03	3.852E-02	3.119E-02	1.965E-02	NOT IDENT.
BR-77	-7.988E-01	5.588E+00	4.837E+00	2.851E+00	FAIL ABUN
SR-82	-1.270E-01	3.116E-01	2.544E-01	1.590E-01	NOT IDENT.
RB-83	-1.808E-02	5.084E-02	4.348E-02	2.594E-02	NOT IDENT.
RB-84	3.053E-02	5.779E-02	5.112E-02	2.948E-02	NOT IDENT.
KR-85	2.987E+01	6.681E+00	6.153E+00	3.408E+00	NOT IDENT.
SR-85	1.513E-01	3.384E-02	3.117E-02	1.726E-02	NOT IDENT.
RB-86	3.828E-01	6.262E-01	5.473E-01	3.195E-01	NOT IDENT.
Y-88	-3.139E-03	1.988E-02	1.636E-02	1.014E-02	NOT IDENT.
ZR-88	4.593E-03	2.397E-02	2.070E-02	1.223E-02	NOT IDENT.
Y-91	-6.321E+00	1.678E+01	1.364E+01	8.561E+00	NOT IDENT.
NB-94	1.086E-02	2.727E-02	2.359E-02	1.391E-02	NOT IDENT.
NB-95	1.980E-02	3.798E-02	3.193E-02	1.938E-02	NOT IDENT.
NB-95M	5.005E-01	1.357E-01	1.123E-01	6.922E-02	NOT IDENT.
ZR-95	4.735E-02	5.697E-02	5.011E-02	2.907E-02	NOT IDENT.
NB-97	-4.397E+03	2.441E+04	0.000E+00	1.246E+04	SHORT HLIF
ZR-97	1.795E+06	5.314E+05	0.000E+00	2.711E+05	SHORT HLIF
MO-99	3.898E+00	6.855E+00	5.956E+00	3.498E+00	NOT IDENT.
TC-99M	-1.381E+15	1.414E+15	0.000E+00	7.214E+14	SHORT HLIF
RH-101	-4.126E-02	3.113E-02	2.502E-02	1.588E-02	NOT IDENT.
RH-102	9.040E-03	2.298E-02	1.973E-02	1.172E-02	NOT IDENT.
RU-103	-2.073E-03	3.097E-02	2.704E-02	1.580E-02	FAIL ABUN
RH-106	-2.145E-02	2.492E-01	2.126E-01	1.272E-01	FAIL ABUN
RU-106	-2.145E-02	2.492E-01	2.126E-01	1.272E-01	FAIL ABUN
AG-108M	8.860E-03	2.634E-02	2.271E-02	1.344E-02	NOT IDENT.
AG-110M	-4.473E-03	2.754E-02	2.325E-02	1.405E-02	NOT IDENT.
IN-111	2.528E-01	7.012E-01	5.551E-01	3.578E-01	NOT IDENT.
IN-113M	-8.079E-03	3.461E-02	2.929E-02	1.766E-02	NOT IDENT.
SN-113	-8.079E-03	3.461E-02	2.929E-02	1.766E-02	NOT IDENT.
IN-114M	-5.525E-02	1.838E-01	1.365E-01	9.377E-02	NOT IDENT.
CD-115	-5.357E-01	5.642E+00	4.889E+00	2.878E+00	NOT IDENT.
SN-117M	-2.400E-02	4.521E-02	3.884E-02	2.307E-02	NOT IDENT.
SB-122	1.650E-01	1.185E+00	1.033E+00	6.047E-01	NOT IDENT.
I-123	-1.632E+05	1.152E+06	0.000E+00	5.878E+05	SHORT HLIF
TE-123M	-3.511E-03	2.478E-02	2.157E-02	1.264E-02	NOT IDENT.
I-124	-3.573E-02	5.178E-01	3.807E-01	2.642E-01	NOT IDENT.
SB-124	-5.638E-02	5.148E-02	3.529E-02	2.626E-02	FAIL ABUN
SB-125	-2.573E-02	7.194E-02	5.991E-02	3.670E-02	FAIL ABUN
TE-125M	-7.170E-01	8.184E+00	7.341E+00	4.176E+00	NOT IDENT.
I-126	1.211E-01	1.444E-01	1.280E-01	7.366E-02	NOT IDENT.
SB-126	2.019E-01	1.286E-01	1.040E-01	6.559E-02	FAIL ABUN
SB-127	-3.298E-01	9.308E-01	7.739E-01	4.749E-01	NOT IDENT.
XE-127	1.975E-02	4.086E-02	3.559E-02	2.085E-02	NOT IDENT.
I-131	1.330E-02	8.484E-02	7.364E-02	4.328E-02	NOT IDENT.
TE-132	1.723E-01	4.793E-01	4.117E-01	2.445E-01	NOT IDENT.
BA-133	1.376E-02	3.793E-02	2.903E-02	1.935E-02	NOT IDENT.
I-133	-1.396E+03	1.803E+03	0.000E+00	9.200E+02	SHORT HLIF
CS-134	9.124E-02	5.741E-02	3.653E-02	2.929E-02	FAIL ABUN
CS-135	3.031E-01	1.465E-01	1.231E-01	7.474E-02	NOT IDENT.
I-135	-1.541E+14	2.509E+14	0.000E+00	1.280E+14	SHORT HLIF
CS-136	1.054E-02	8.585E-02	7.302E-02	4.380E-02	FAIL ABUN
BA-137M	9.503E-03	2.957E-02	2.561E-02	1.509E-02	NOT IDENT.
CS-137	1.005E-02	3.126E-02	2.707E-02	1.595E-02	NOT IDENT.
CE-139	-9.871E-03	2.587E-02	2.226E-02	1.320E-02	NOT IDENT.
BA-140	9.556E-02	1.860E-01	1.639E-01	9.491E-02	NOT IDENT.
LA-140	-1.117E-01	7.225E-02	5.087E-02	3.686E-02	FAIL ABUN
CE-141	-4.767E-02	5.326E-02	4.551E-02	2.717E-02	NOT IDENT.
CE-143	6.107E+02	1.516E+02	0.000E+00	7.736E+01	SHORT HLIF
CE-144	-1.547E-01	1.778E-01	1.521E-01	9.071E-02	NOT IDENT.
PM-144	-1.152E-02	2.872E-02	2.379E-02	1.465E-02	NOT IDENT.
PR-144	-7.802E-01	1.945E+00	1.611E+00	9.922E-01	NOT IDENT.

PM-146	-3.012E-03	3.620E-02	2.957E-02	1.847E-02	NOT IDENT.
ND-147	-5.325E-02	3.934E-01	3.399E-01	2.007E-01	FAIL ABUN
PM-149	-1.498E+01	5.332E+01	4.374E+01	2.720E+01	NOT IDENT.
EU-152	1.012E-02	1.046E-01	6.908E-02	5.338E-02	FAIL ABUN
GD-153	-1.520E-02	7.623E-02	6.009E-02	3.889E-02	FAIL ABUN
EU-154	-2.280E-02	9.944E-02	8.364E-02	5.074E-02	NOT IDENT.
EU-155	5.943E-02	9.507E-02	8.712E-02	4.851E-02	FAIL ABUN
TB-160	-1.071E-03	1.185E-01	1.019E-01	6.047E-02	FAIL ABUN
HO-166M	-2.692E-02	4.692E-02	3.821E-02	2.394E-02	FAIL ABUN
TM-171	-1.096E+01	2.781E+01	2.102E+01	1.419E+01	NOT IDENT.
LU-176	-1.524E-02	2.181E-02	1.668E-02	1.113E-02	FAIL ABUN
LU-177	2.659E+00	1.154E+00	7.997E-01	5.889E-01	FAIL ABUN
LU-177M	-1.764E-01	1.496E-01	1.200E-01	7.631E-02	NOT IDENT.
HF-181	-2.716E-02	3.343E-02	2.820E-02	1.706E-02	NOT IDENT.
W-181	-2.930E-01	3.588E-01	2.668E-01	1.830E-01	NOT IDENT.
TA-182	-3.941E-03	1.647E-01	1.412E-01	8.404E-02	FAIL ABUN
RE-183	-6.026E-03	9.599E-02	8.229E-02	4.897E-02	FAIL ABUN
RE-184	-2.537E-02	1.854E-01	1.642E-01	9.461E-02	NOT IDENT.
OS-185	-2.175E-02	3.224E-02	2.637E-02	1.645E-02	NOT IDENT.
RE-188	1.130E-01	1.524E-01	1.364E-01	7.775E-02	NOT IDENT.
W-188	-9.263E-01	6.627E+00	5.024E+00	3.381E+00	FAIL ABUN
IR-192	2.170E-03	2.748E-02	2.407E-02	1.402E-02	FAIL ABUN
AU-195	2.695E-01	2.154E-01	1.786E-01	1.099E-01	FAIL ABUN
TL-200	1.375E+02	1.771E+02	0.000E+00	9.034E+01	SHORT HLIF
TL-201	3.445E+00	4.655E+00	4.150E+00	2.375E+00	NOT IDENT.
TL-202	3.155E-02	5.245E-02	4.574E-02	2.676E-02	NOT IDENT.
HG-203	5.602E-02	3.365E-02	3.127E-02	1.717E-02	NOT IDENT.
BI-207	-7.319E-03	4.360E-02	3.633E-02	2.225E-02	FAIL ABUN
TL-207	-4.814E-02	5.921E-01	4.450E-01	3.021E-01	FAIL ABUN
PO-209	-1.077E+00	6.082E+00	5.161E+00	3.103E+00	NOT IDENT.
BI-210	9.347E-01	2.474E+00	2.217E+00	1.262E+00	NOT IDENT.
PB-210	9.347E-01	2.474E+00	2.217E+00	1.262E+00	NOT IDENT.
PO-210	9.347E-01	2.474E+00	2.217E+00	1.262E+00	NOT IDENT.
PB-211	-1.298E+00	1.107E+00	6.063E-01	5.649E-01	NOT IDENT.
BI-212	1.031E+00	4.904E-01	2.804E-01	2.502E-01	FAIL ABUN
PO-215	-4.814E-02	5.921E-01	4.450E-01	3.021E-01	FAIL ABUN
RN-219	-5.731E-02	3.168E-01	2.681E-01	1.616E-01	FAIL ABUN
RN-220	-1.598E+00	2.026E+01	1.750E+01	1.034E+01	NOT IDENT.
RA-223	-4.814E-02	5.921E-01	4.450E-01	3.021E-01	FAIL ABUN
AC-227	2.056E-01	3.103E-01	2.812E-01	1.583E-01	FAIL ABUN
TH-227	2.056E-01	3.109E-01	2.812E-01	1.586E-01	FAIL ABUN
TH-229	1.337E-01	4.553E-01	3.956E-01	2.323E-01	FAIL ABUN
PA-231	-9.115E-01	1.239E+00	1.056E+00	6.323E-01	FAIL ABUN
TH-231	-4.814E-02	5.921E-01	4.450E-01	3.021E-01	FAIL ABUN
U-231	-4.310E-01	8.436E-01	6.611E-01	4.304E-01	FAIL ABUN
PA-233	1.171E-02	5.092E-02	4.493E-02	2.598E-02	FAIL ABUN
PA-234	-1.290E-01	2.585E-01	2.129E-01	1.319E-01	FAIL ABUN
PA-234M	2.942E+00	5.537E+00	4.836E+00	2.825E+00	NOT IDENT.
U-235	3.488E-02	1.847E-01	1.616E-01	9.422E-02	FAIL ABUN
NP-236	-4.269E-06	6.893E-02	6.024E-02	3.517E-02	NOT IDENT.
NP-239	6.833E-02	1.632E-01	1.478E-01	8.326E-02	FAIL ABUN
AM-241	1.579E-01	1.366E-01	1.107E-01	6.969E-02	NOT IDENT.
CM-243	1.285E-02	8.370E-02	7.586E-02	4.270E-02	FAIL ABUN
CM-247	-7.840E-03	2.871E-02	2.418E-02	1.465E-02	NOT IDENT.
CF-249	1.026E-02	3.011E-02	2.624E-02	1.536E-02	NOT IDENT.
CF-251	-6.883E-03	1.126E-01	9.746E-02	5.746E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	403.3819
46.50	403.3819
46.50	403.3819
48.70	454.5090
49.72	442.1788
51.35	465.0612
52.39	440.7352
52.97	440.4887
53.15	440.7469
53.44	463.9236
54.07	446.4029
56.28	537.0344
56.28	537.0400
57.37	0.0000
57.53	498.0595
57.53	498.0630
57.60	498.1668
57.98	488.1927
57.98	488.1927
59.32	495.1526
59.32	495.1526
59.40	495.2724
59.54	495.4811
59.72	495.7491
60.01	506.1371
61.10	544.4067
61.14	544.4715
61.30	574.7136
63.00	613.8475
63.29	614.3622
63.29	614.3622
63.58	638.9123
64.28	673.8010
65.12	727.6256
65.20	727.7904
65.20	727.7904
66.05	699.1367
66.72	708.9006
66.83	688.8123
66.91	633.1053
67.20	633.6132
67.20	633.6132
67.75	685.4765
67.85	674.8055
68.90	684.2361
68.90	684.2361
69.30	719.0601
69.67	677.1432
70.82	778.4661
70.82	778.4661
70.83	778.4870
72.80	730.9584
72.87	731.0945
72.87	731.0945
74.67	689.5834
74.81	689.8330
74.81	689.8330
74.81	689.8330
74.81	689.8330
74.81	689.8330
74.81	689.8330
74.97	690.1161
75.28	690.6641
75.70	691.4068
77.11	693.8817
77.11	693.8817
77.11	693.8817

77.11	693.8817
77.11	693.8817
77.11	693.8817
78.38	696.0917
79.62	698.2348
79.80	712.8983
79.80	712.8983
80.11	713.4420
80.18	713.5646
80.30	713.7744
80.30	713.7744
80.57	714.2466
81.00	526.7647
81.07	526.8539
81.07	526.8539
81.07	526.8539
81.07	526.8539
82.60	528.8063
83.37	529.7768
83.78	530.2986
83.78	530.2986
83.78	530.2986
83.78	530.2986
84.21	533.6722
84.40	532.4953
84.90	533.1241
85.43	533.7874
86.29	534.8613
86.50	535.1230
86.54	535.1735
86.59	535.2354
86.72	535.3961
86.79	535.4810
86.94	535.6692
87.30	536.1167
87.30	536.1167
87.30	536.1167
87.30	536.1167
87.30	536.1167
87.30	536.1167
87.57	536.4495
87.88	536.8327
88.03	537.0186
88.36	537.4248
88.47	537.5602
89.95	539.3732
91.11	540.7845
92.29	542.2097
92.38	542.3176
92.38	542.3176
93.35	543.4811
94.00	544.2590
94.67	545.0508
94.67	545.0577
94.90	543.8805
94.90	543.8805
94.90	543.8805
94.90	543.8805
95.87	574.0953
95.87	574.0953
96.73	550.4094
97.43	527.8983
98.44	476.4248
98.44	476.4248
98.88	457.8523
99.55	454.1053
99.55	454.1053
99.86	461.7315
100.00	472.3412
100.10	472.4435
103.18	557.1719
103.76	509.8099
105.00	499.0609
105.31	516.0511
108.00	556.1006
109.28	550.0395
111.00	505.0452
111.00	505.0452

111.76	536.7584
112.95	526.7068
115.19	508.1861
116.30	482.7495
117.00	460.6381
117.00	460.6381
117.66	470.6971
121.11	494.7206
121.62	501.8727
121.78	514.4498
122.06	506.1021
122.32	489.1112
122.32	489.1112
122.32	489.1112
122.32	489.1112
123.07	475.4008
127.23	527.2296
129.76	486.8956
131.20	538.6741
133.02	550.1143
133.54	505.6974
135.34	510.1803
136.00	484.2800
136.25	491.3486
136.48	491.5397
140.51	541.2604
140.51	0.0000
142.18	471.4315
142.65	462.8706
143.76	472.6408
144.24	468.0390
144.24	468.0390
144.24	468.0390
144.24	468.0390
145.22	521.5254
145.44	521.7093
147.16	517.1543
152.43	513.3890
152.70	483.3911
153.22	485.7950
154.21	467.3555
154.21	467.3555
154.21	467.3555
154.21	467.3555
155.03	489.1697
156.02	487.8838
158.56	483.6663
159.00	0.0000
159.00	474.8313
160.31	458.4457
161.27	433.5926
162.32	449.5941
162.64	442.6529
163.35	482.0031
163.89	482.3840
165.85	473.4964
167.43	430.3163
171.28	484.4496
171.86	469.3094
172.10	468.4320
176.55	465.1062
176.60	465.1368
181.06	439.8766
184.41	455.3646
185.71	478.3333
186.00	478.5200
190.27	486.1197
192.34	496.6879
193.63	456.6700
197.04	475.8251
198.01	505.3857
198.60	484.2869
200.40	453.1069
201.83	470.0958
202.84	446.9407
205.31	483.4036
208.36	452.1785
208.81	405.4462

209.75	410.4857
209.75	410.4857
210.97	404.7709
215.65	444.4868
216.55	432.5247
218.09	399.2219
222.10	456.3601
223.80	452.8326
226.40	390.8975
227.00	397.8364
227.08	397.8719
227.20	397.9265
228.16	400.5890
228.18	400.6000
228.18	400.6000
231.56	0.0000
235.69	412.9921
236.00	404.1541
236.00	404.1541
238.60	381.9028
238.63	381.9157
238.63	381.9157
238.63	381.9157
239.00	382.0710
240.98	382.9069
241.98	383.3261
241.98	383.3261
241.98	383.3261
244.69	279.5795
245.39	310.0379
247.94	310.6762
248.90	336.0077
249.79	340.0757
252.40	320.9066
252.85	324.7197
252.85	324.7197
254.15	0.0000
256.20	312.0980
256.20	312.0980
260.50	329.1704
260.90	336.6849
262.80	317.0112
264.65	310.8677
268.24	286.5558
268.79	299.1162
269.46	307.0708
269.46	307.0708
269.46	307.0708
269.46	307.0708
271.23	316.9404
273.65	418.9333
276.40	313.8867
277.35	314.1811
277.60	314.9289
277.60	314.9289
278.00	297.9624
278.60	304.6577
279.20	301.5997
279.53	296.9984
280.46	349.9488
281.68	366.3780
283.67	316.1276
284.30	285.1600
285.00	289.1312
285.90	282.6602
286.10	286.9151
286.10	286.9151
287.40	274.6469
288.45	0.0000
290.67	299.2577
290.80	299.2923
291.72	275.7797
293.26	0.0000
293.70	279.0186
295.21	324.3945
295.21	324.3945
295.21	324.3945
295.96	324.6228

296.50	324.7847
297.23	325.0088
298.57	325.4155
299.80	277.8754
299.80	277.8754
300.09	325.8721
300.09	325.8721
300.09	325.8721
300.10	325.8762
300.12	325.8845
301.29	283.0588
302.84	265.8459
303.76	251.6465
303.91	251.6785
304.40	259.8124
304.40	259.8124
304.84	275.9622
306.84	286.5695
308.46	276.2281
311.98	256.7608
316.51	263.6395
318.01	244.5075
319.02	266.1783
319.41	265.5097
320.08	275.6961
323.87	257.8494
323.87	257.8494
323.87	257.8494
323.87	257.8494
325.23	222.2091
328.77	254.4386
333.44	251.7596
334.20	251.9214
334.20	251.9214
334.30	251.9432
338.28	268.9057
338.28	268.9057
338.28	268.9057
338.28	268.9057
338.32	268.9123
338.32	268.9123
338.32	268.9123
340.50	274.7889
340.57	274.8024
344.27	259.0479
345.85	261.8848
350.59	0.0000
351.07	252.1582
351.92	239.6331
351.92	239.6331
351.92	239.6331
355.39	0.0000
356.01	212.9353
364.48	230.9335
366.43	244.4773
367.43	226.3973
367.94	0.0000
369.80	247.1617
374.96	242.0340
383.85	229.3045
387.95	192.8871
388.63	217.7534
391.69	217.2226
391.69	217.2226
392.90	210.1714
398.62	212.1107
400.65	211.3881
401.10	210.4158
401.81	207.4002
402.60	213.7773
404.84	274.7117
410.95	225.5742
411.60	236.1786
413.65	270.1669
414.70	238.8100
415.30	195.7609
415.76	206.3527
417.63	0.0000

418.52	203.5971
423.70	195.8760
427.08	197.4025
427.89	198.5779
432.53	174.7185
433.93	191.9487
439.47	187.3325
439.56	187.3431
439.89	192.7397
443.98	213.6796
444.90	222.4088
445.03	220.2799
445.03	220.2799
445.03	220.2799
445.03	220.2799
453.90	195.7755
463.38	177.6709
468.07	165.4874
473.00	184.9902
475.06	168.7966
475.35	178.6931
476.78	171.1772
477.59	184.4411
477.96	171.3067
482.03	211.0205
484.57	181.0362
487.03	176.7168
490.36	0.0000
492.35	174.5381
497.08	179.6844
507.63	0.0000
510.53	0.0000
510.84	160.6586
511.00	160.6735
511.85	163.4279
511.85	163.4279
513.99	126.7404
513.99	126.7404
520.41	162.5289
520.65	162.5500
527.90	157.5920
528.96	0.0000
529.64	156.8070
529.87	0.0000
531.02	159.7716
537.32	148.0273
543.00	151.3722
546.56	0.0000
549.76	164.3854
552.65	156.0425
555.20	168.7311
563.23	169.4974
563.90	164.7448
568.70	167.1186
569.32	153.6463
569.50	147.8639
569.67	147.8795
573.80	161.4549
574.00	157.5999
574.64	157.0100
578.91	136.5618
579.30	0.0000
583.14	157.7417
585.48	167.1352
591.81	159.6606
592.07	163.3096
593.00	185.0164
595.88	168.6371
600.56	151.6459
602.52	0.0000
602.71	188.9336
602.71	188.9336
603.60	190.7072
604.41	185.7247
604.70	182.3781
609.31	169.8444
609.31	169.8444
609.31	169.8444

609.31	169.8444
610.33	169.9354
612.46	174.6459
614.37	176.5156
618.01	137.7412
621.84	153.0663
621.84	153.0663
631.29	159.8047
633.02	147.9488
633.10	142.9564
634.78	159.0873
635.90	165.1846
636.97	161.2686
645.85	154.9493
646.12	146.9208
656.30	154.7463
657.75	154.8583
657.90	0.0000
661.65	164.2808
661.65	164.2808
664.57	0.0000
666.33	162.6270
666.33	162.6270
675.00	168.4174
677.61	154.3209
685.20	168.2175
692.80	152.3570
695.00	167.9710
696.49	177.3715
696.49	177.3715
697.00	181.5394
697.49	175.3921
698.33	168.2363
698.50	165.1530
699.00	169.3219
702.63	154.0958
706.10	155.3833
706.58	0.0000
706.67	149.2061
709.31	135.9040
711.68	145.4004
713.82	160.0971
717.42	171.8179
720.50	126.9219
721.93	0.0000
722.20	180.6918
722.78	178.9516
722.78	178.9516
722.89	178.9586
722.95	178.9655
723.30	178.9934
724.18	186.2294
727.18	175.7246
733.00	149.2188
735.90	135.0141
739.58	122.0134
742.81	136.9375
744.21	121.2118
747.13	126.6479
751.79	151.2334
752.31	153.3840
753.82	128.0825
755.35	120.7539
756.15	125.0341
756.87	146.2740
763.93	191.3818
765.79	170.2539
766.41	160.7201
766.84	167.1383
768.36	158.7278
768.36	158.7278
768.36	158.7278
768.36	158.7278
776.49	153.9404
778.00	148.6914
778.57	146.5882
778.89	151.9584
783.80	149.0619

785.46	127.3460
792.07	173.4174
795.84	107.1721
796.30	121.9775
801.93	140.7930
805.60	114.7233
810.29	134.7769
810.76	135.7344
815.85	118.3184
817.79	99.7658
818.51	102.5936
819.60	103.5728
826.30	137.5408
828.27	0.0000
831.60	145.3395
831.96	141.6099
834.83	169.0043
836.80	0.0000
846.75	148.1184
848.13	119.8797
856.28	0.0000
856.80	170.4984
860.37	100.5451
867.32	176.9115
867.82	183.6065
871.10	124.7840
873.19	122.9801
874.81	130.6880
875.33	0.0000
876.40	125.0421
879.36	135.6979
880.27	133.8330
880.51	130.9795
881.50	122.4219
883.24	119.6333
884.67	118.7411
889.25	145.8107
896.60	125.0579
898.02	123.2009
899.00	145.3912
903.28	101.2646
911.07	122.8430
911.07	122.8430
911.07	122.8430
919.63	115.4742
920.93	118.2486
925.00	114.7343
925.24	119.6067
926.50	117.7167
934.06	108.2900
934.06	108.2900
934.06	108.2900
934.06	108.2900
935.52	120.0614
937.48	129.9153
944.10	119.4598
946.00	137.1802
949.00	102.0177
962.29	100.0450
964.01	107.5041
966.15	107.5858
968.20	107.6656
969.11	107.6998
969.11	107.6998
969.11	107.6998
977.42	106.3675
980.50	112.1054
983.50	107.2580
989.30	119.4203
996.32	140.6631
1001.03	106.9198
1001.68	106.9440
1004.76	118.0638
1021.30	0.0000
1024.50	0.0000
1034.80	107.1535
1037.82	116.3717
1038.57	120.4485

1038.76	0.0000
1045.16	96.3684
1046.59	103.5190
1048.07	117.7882
1050.47	128.0435
1050.47	128.0435
1063.62	118.3951
1076.63	104.5543
1077.35	100.4780
1085.78	118.2288
1099.22	134.2303
1112.02	97.9772
1112.84	99.8151
1115.52	125.3320
1120.29	130.9790
1120.29	130.9790
1120.29	130.9790
1120.29	130.9790
1120.51	130.9878
1121.28	152.8550
1124.00	0.0000
1129.67	132.8253
1131.51	0.0000
1147.95	0.0000
1167.94	130.8202
1173.22	153.2179
1175.09	146.9603
1177.93	153.4405
1189.05	139.0870
1204.90	164.2856
1205.75	0.0000
1213.00	164.6777
1221.42	152.8921
1230.97	189.0632
1235.34	181.7680
1236.41	0.0000
1238.11	169.6619
1238.11	169.6619
1238.11	169.6619
1238.11	169.6619
1238.25	169.6674
1246.25	181.4004
1260.41	0.0000
1271.85	111.3514
1274.45	107.6238
1274.54	107.6273
1291.56	95.7031
1298.22	0.0000
1312.09	98.1744
1325.50	83.0789
1325.50	83.0789
1332.49	63.8811
1333.61	76.4854
1360.21	62.4102
1362.66	0.0000
1365.15	49.7985
1368.21	58.2787
1368.53	0.0000
1376.25	60.9348
1377.67	53.8821
1377.67	53.8821
1377.67	53.8821
1377.67	53.8821
1384.27	57.5745
1394.10	68.8763
1395.20	71.8482
1407.95	68.1367
1434.06	31.8125
1436.60	39.7913
1457.56	0.0000
1460.81	50.0458
1489.15	45.3598
1509.49	44.5747
1596.49	79.6412
1620.62	35.3624
1678.03	0.0000
1691.02	33.8145
1691.02	33.8145

1706.46	0.0000
1750.46	0.0000
1764.49	31.4952
1764.49	31.4952
1764.49	31.4952
1764.49	31.4952
1770.23	22.3603
1771.40	22.3660
1791.20	0.0000
1808.65	19.2665
1836.01	19.3761

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G232754003

Total Uranium Activity	6.6453E+00	ug/g
Total Uranium Counting Unc.	4.9120E+00	ug/g
Total Uranium Tpu	2.5061E-06	ug/g
Total Uranium Mda	2.7298E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G232754003       *
*   ANALYST       : MXR1                      DETECTOR   : GAM22            *
*   SAMPLE DATE   : 30-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 10:48:56.99    SAMPLE ALQT:  137.020 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 1.100E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.217E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 2.220E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.082E+00
```

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:23:39.22

```
*****************************************************************************
*                            GEL Laboratories LLC                           *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1
Sample date       : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 11:22:57
Sample ID         : G1201874832          Sample quantity  : 1.44470E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.64  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	1075.81	10	9	0.58	2150.38	2141	13	1.39E-03	71.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 13:23:41

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1		
Analyses by	: PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8		
Sample title	: MXR1		
Sample date	: 7-JUL-2009 00:00:00	Acquisition date	: 14-JUL-2009 11:22:57
Sample ID	: G1201874832	Sample quantity	: 144.47 GRAM
Sample type	: SOLID	Sample geometry	:
Detector name	: GAMMA21	Detector geometry	: CAN
Elapsed live time	: 0 02:00:00.00	Elapsed real time	: 0 02:00:08.64 0.1%
Peak Width (FWHM)	: 3.00	Confidence level	: 5.00 %
Energy tolerance	: 1.50 keV	Half life ratio	: 8.00
Errors propagated	: Yes	Systematic Error	: 0.00 %
Efficiency type	: Empirical	Efficiencies at	: Peak Energy
Abundance limit	: 75.00	WTM error limit	: 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86	+	1076.63	*	4.005E-01	5.708E-01	5.488E-01	3.505E-02	0.730

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.503E-02	1.536E-01	2.457E-01	1.730E-02	-0.061
NA-22		1274.54	*	-1.239E-03	2.584E-02	4.145E-02	2.451E-03	-0.030
NA-24		1368.53	*	2.335E-05	2.584E-02	Half-Life too short		
AL-26		1129.67		9.437E-02	8.731E-01	1.467E+00	8.829E-02	0.064
		1808.65	*	6.492E-04	2.998E-02	4.991E-02	2.779E-03	0.013
K-40		1460.81	*	1.401E-01	3.153E-01	5.572E-01	3.546E-02	0.251
TI-44		67.85		1.017E-03	7.397E-03	1.220E-02	8.875E-04	0.083
		78.38	*	-2.974E-03	7.341E-03	1.147E-02	8.868E-04	-0.259
SC-46		889.25	*	-2.258E-02	2.347E-02	3.062E-02	2.199E-03	-0.738
		1120.51		1.502E-02	2.604E-02	4.791E-02	2.916E-03	0.314
V-48		944.10		3.811E-01	4.165E-01	8.009E-01	5.628E-02	0.476
		983.50	*	1.966E-02	3.794E-02	6.792E-02	4.673E-03	0.289
		1312.09		2.155E-02	4.086E-02	7.404E-02	4.425E-03	0.291
CR-51		320.08	*	-4.493E-02	1.646E-01	2.635E-01	1.714E-02	-0.171
MN-52		744.21		-7.946E-04	5.039E-02	8.386E-02	6.133E-03	-0.009
		848.13		1.814E-01	2.007E+00	3.376E+00	2.455E-01	0.054
		935.52		4.924E-02	6.976E-02	1.285E-01	9.069E-03	0.383
		1246.25		-8.047E-01	1.320E+00	1.720E+00	1.004E-01	-0.468
		1333.61		1.047E+00	1.364E+00	2.605E+00	1.567E-01	0.402
		1434.06	*	-6.918E-02	6.816E-02	7.168E-02	4.321E-03	-0.965
MN-54		834.83	*	-1.473E-02	2.603E-02	3.920E-02	2.859E-03	-0.376
CO-56		846.75	*	1.631E-02	2.819E-02	5.071E-02	3.690E-03	0.322
		977.42		-1.085E+00	1.916E+00	2.796E+00	1.931E-01	-0.388
		1037.82		-5.171E-02	2.333E-01	3.686E-01	2.655E-02	-0.140
		1175.09		8.375E-02	1.260E+00	2.087E+00	1.183E-01	0.040
		1238.25		2.999E-03	4.322E-02	7.145E-02	4.419E-03	0.042
		1360.21		2.122E-01	7.452E-01	1.284E+00	7.739E-02	0.165
		1771.40		3.738E-02	2.537E-01	4.340E-01	2.451E-02	0.086

Sample ID : G1201874832 Acquisition date : 14-JUL-2009 11:22:57

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	3.780E-03	9.064E-03	1.515E-02	1.744E-03	0.249
		136.48		-1.493E-02	8.079E-02	1.270E-01	1.337E-02	-0.118
CO-58		810.76	*	-9.316E-03	2.202E-02	3.354E-02	2.463E-03	-0.278
FE-59		142.65		-3.296E-02	9.658E-01	1.540E+00	1.422E-01	-0.021
		192.34		1.877E-03	3.576E-01	6.005E-01	7.205E-02	0.003
		1099.22	*	-2.196E-02	5.792E-02	8.772E-02	6.291E-03	-0.250
		1291.56		-7.813E-02	7.144E-02	7.877E-02	5.930E-03	-0.992
CO-60		1173.22		-9.686E-04	2.763E-02	4.474E-02	2.535E-03	-0.022
		1332.49	*	6.596E-03	2.726E-02	4.680E-02	2.815E-03	0.141
ZN-65		1115.52	*	-2.489E-03	5.225E-02	8.460E-02	5.190E-03	-0.029
GE-68		1077.35	*	5.249E-01	9.049E-01	1.487E+00	9.488E-02	0.353
AS-73		53.44	*	2.123E-02	7.102E-02	1.194E-01	8.027E-03	0.178
AS-74		595.88	*	-2.515E-02	4.570E-02	6.699E-02	4.610E-03	-0.375
		634.78		1.712E-02	1.821E-01	2.970E-01	2.094E-02	0.058
SE-75		66.05		4.599E-01	6.947E-01	1.198E+00	1.116E-01	0.384
		96.73		-1.781E-01	2.117E-01	3.097E-01	4.295E-02	-0.575
		121.11		1.773E-02	4.526E-02	7.560E-02	1.018E-02	0.235
		136.00		-2.257E-03	1.483E-02	2.340E-02	2.355E-03	-0.096
		198.60		4.348E-01	7.218E-01	1.273E+00	9.480E-02	0.341
		264.65	*	-2.727E-03	2.091E-02	3.430E-02	2.075E-03	-0.079
		279.53		7.256E-03	4.595E-02	7.764E-02	4.897E-03	0.093
		303.91		2.088E-01	1.079E+00	1.821E+00	1.745E-01	0.115
		400.65		7.829E-02	1.392E-01	2.436E-01	2.167E-02	0.321
BR-77		87.88		8.704E-01	4.350E+00	7.181E+00	5.944E-01	0.121
		200.40		-2.364E+00	7.621E+00	1.242E+01	7.692E-01	-0.190
		239.00		3.035E-01	5.198E-01	8.784E-01	5.410E-02	0.346
		249.79		2.157E-01	3.203E+00	5.372E+00	3.279E-01	0.040
		281.68		2.510E+00	4.529E+00	7.963E+00	4.655E-01	0.315
		297.23		5.622E-01	2.927E+00	4.941E+00	2.898E-01	0.114
		303.76		1.507E+00	1.029E+01	1.728E+01	1.014E+00	0.087
		439.47		5.211E+00	1.043E+01	1.802E+01	1.048E+00	0.289
		484.57		1.325E+01	1.410E+01	2.604E+01	1.611E+00	0.509
		520.65	*	1.850E-01	7.128E-01	1.199E+00	7.730E-02	0.154
		574.64		-8.874E+00	1.460E+01	2.119E+01	1.435E+00	-0.419
		578.91		-1.925E+00	5.742E+00	8.745E+00	5.943E-01	-0.220
		585.48		6.678E+00	1.142E+01	1.999E+01	1.365E+00	0.334
		755.35		-1.155E+01	9.699E+00	1.177E+01	8.616E-01	-0.981
		817.79		7.923E+00	1.038E+01	1.922E+01	1.406E+00	0.412
SR-82		698.33		-1.175E+01	2.157E+01	3.360E+01	2.433E+00	-0.350
		776.49	*	1.080E-01	2.041E-01	3.680E-01	2.698E-02	0.293
		1395.20		6.442E+00	6.747E+00	1.334E+01	8.042E-01	0.483
RB-83		520.41	*	1.301E-02	4.058E-02	6.890E-02	4.440E-03	0.189
		529.64		-4.785E-03	5.445E-02	8.679E-02	5.646E-03	-0.055
		552.65		-3.615E-02	1.197E-01	1.840E-01	1.223E-02	-0.196
RB-84		881.50	*	-6.888E-03	4.191E-02	6.737E-02	4.851E-03	-0.102
KR-85		513.99	*	-9.011E-01	7.249E+00	1.163E+01	7.444E-01	-0.077
SR-85		513.99	*	-4.263E-03	3.430E-02	5.503E-02	3.522E-03	-0.077
Y-88		898.02		3.189E-03	2.659E-02	4.494E-02	3.238E-03	0.071
		1836.01	*	1.465E-02	3.600E-02	6.536E-02	3.607E-03	0.224

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-88		392.90	*	2.467E-03	1.722E-02	2.871E-02	1.548E-03	0.086
Y-91		1204.90	*	1.042E+00	1.153E+01	1.911E+01	1.098E+00	0.055
NB-94		702.63	*	-1.940E-03	2.341E-02	3.873E-02	2.808E-03	-0.050
		871.10		-2.650E-03	2.259E-02	3.661E-02	2.646E-03	-0.072
NB-95		765.79	*	5.445E-03	2.462E-02	4.245E-02	3.111E-03	0.128
NB-95M		235.69	*	-6.197E-02	5.205E-02	7.664E-02	5.991E-03	-0.809
ZR-95		724.18		-3.569E-02	4.723E-02	6.746E-02	5.503E-03	-0.529
		756.15	*	-3.389E-02	3.721E-02	5.025E-02	4.188E-03	-0.674
NB-97		657.90	*	8.596E-06	3.721E-02	Half-Life too short		
		1024.50		-3.458E-03	3.721E-02	Half-Life too short		
ZR-97		254.15		1.302E-03	3.721E-02	Half-Life too short		
		355.39		-7.717E-04	3.721E-02	Half-Life too short		
		507.63	*	-1.327E-03	3.721E-02	Half-Life too short		
		602.52		3.845E-04	3.721E-02	Half-Life too short		
		1021.30		1.798E-03	3.721E-02	Half-Life too short		
		1147.95		6.996E-04	3.721E-02	Half-Life too short		
		1362.66		2.933E-03	3.721E-02	Half-Life too short		
		1750.46		7.977E-04	3.721E-02	Half-Life too short		
MO-99		140.51		-9.759E-04	1.509E+00	2.415E+00	6.757E-01	0.000
		181.06		4.673E-01	1.075E+00	1.867E+00	3.222E-01	0.250
		366.43		1.701E+00	7.331E+00	1.237E+01	6.951E-01	0.138
		739.58	*	9.682E-01	1.053E+00	2.000E+00	2.896E-01	0.484
		778.00		-6.022E-02	3.358E+00	5.578E+00	4.090E-01	-0.011
TC-99M		140.51	*	-6.548E-03	3.358E+00	Half-Life too short		
RH-101		127.23		-1.674E-03	1.254E-02	1.988E-02	2.182E-03	-0.084
		198.01	*	1.010E-02	1.393E-02	2.479E-02	1.534E-03	0.407
		325.23		1.290E-02	1.168E-01	1.952E-01	1.139E-02	0.066
RH-102		418.52		-6.970E-02	1.749E-01	2.712E-01	1.528E-02	-0.257
		475.06	*	-2.232E-03	1.673E-02	2.666E-02	1.630E-03	-0.084
		631.29		8.312E-03	3.509E-02	5.865E-02	4.127E-03	0.142
		697.49		-1.878E-02	5.986E-02	9.628E-02	6.970E-03	-0.195
		766.84		1.086E-02	6.281E-02	1.077E-01	7.894E-03	0.101
		1046.59		-3.301E-02	9.189E-02	1.414E-01	9.290E-03	-0.233
		1112.84		-1.427E-02	1.353E-01	2.162E-01	1.328E-02	-0.066
RU-103		497.08	*	3.455E-03	2.321E-02	3.846E-02	4.950E-03	0.090
		610.33		-2.458E-02	3.976E-01	6.332E-01	1.006E-01	-0.039
RH-106		511.85		-4.932E-02	1.712E-01	3.241E-01	2.069E-02	-0.152
		621.84	*	-1.957E-01	2.181E-01	2.942E-01	3.641E-02	-0.665
		1050.47		3.675E-02	1.843E+00	3.035E+00	1.987E-01	0.012
RU-106		511.85		-4.932E-02	1.712E-01	3.241E-01	2.069E-02	-0.152
		621.84	*	-1.957E-01	2.172E-01	2.942E-01	2.059E-02	-0.665
		1050.47		3.675E-02	1.843E+00	3.035E+00	1.987E-01	0.012
AG-108M		433.93	*	7.511E-05	2.065E-02	3.374E-02	2.115E-03	0.002
		614.37		-5.196E-03	2.274E-02	3.506E-02	2.588E-03	-0.148
		722.95		-3.563E-03	2.349E-02	3.821E-02	2.936E-03	-0.093
CD-109		88.03	*	4.211E-02	1.855E-01	3.069E-01	2.543E-02	0.137
AG-110M		657.75	*	5.583E-03	1.851E-02	3.264E-02	2.428E-03	0.171
		677.61		7.378E-02	1.980E-01	3.498E-01	2.616E-02	0.211
		706.67		-5.741E-02	1.344E-01	2.101E-01	1.584E-02	-0.273

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		1.677E-03	1.053E-01	1.760E-01	1.340E-02	0.010
		884.67		2.853E-02	3.182E-02	6.083E-02	4.576E-03	0.469
		937.48		-1.921E-02	8.122E-02	1.286E-01	9.554E-03	-0.149
		1384.27		1.139E-01	1.247E-01	2.421E-01	1.543E-02	0.470
IN-111		171.28		2.600E-02	6.692E-02	1.162E-01	7.064E-03	0.224
		245.39	*	-3.361E-02	7.082E-02	1.119E-01	6.855E-03	-0.300
IN-113M		391.69	*	4.047E-03	2.459E-02	4.113E-02	2.385E-03	0.098
SN-113		391.69	*	4.047E-03	2.459E-02	4.113E-02	2.385E-03	0.098
IN-114M		190.27	*	-8.922E-03	7.250E-02	1.205E-01	7.427E-03	-0.074
CD-115		260.90		-7.978E-02	5.948E+00	9.879E+00	5.951E-01	-0.008
		492.35		1.040E+00	1.976E+00	3.460E+00	2.161E-01	0.301
		527.90	*	-3.885E-01	5.618E-01	7.924E-01	5.146E-02	-0.490
SN-117M		156.02		-4.330E-01	6.692E-01	9.991E-01	7.482E-02	-0.433
		158.56	*	1.236E-02	1.610E-02	2.751E-02	1.962E-03	0.449
SB-122		563.90	*	-2.962E-02	1.703E-01	2.668E-01	1.791E-02	-0.111
		692.80		9.346E-01	4.554E+00	7.826E+00	5.657E-01	0.119
I-123		159.00	*	1.085E-04	4.554E+00	Half-Life too short		
		528.96		-5.883E-03	4.554E+00	Half-Life too short		
TE-123M		159.00	*	8.229E-03	1.183E-02	2.010E-02	1.433E-03	0.409
I-124		602.71	*	1.931E-02	1.311E-01	2.155E-01	1.490E-02	0.090
		722.78		-4.824E-02	7.013E-01	1.158E+00	8.441E-02	-0.042
		1325.50		-3.657E+00	7.884E+00	1.141E+01	6.851E-01	-0.320
		1376.25		-4.564E+00	6.851E+00	9.256E+00	5.579E-01	-0.493
		1509.49		1.622E+00	3.748E+00	6.832E+00	4.098E-01	0.237
		1691.02		-5.019E-01	1.169E+00	1.736E+00	1.006E-01	-0.289
SB-124		602.71		3.650E-03	2.478E-02	4.074E-02	2.818E-03	0.090
		645.85		1.210E-02	2.829E-01	4.576E-01	3.529E-02	0.026
		709.31		-4.866E-01	1.692E+00	2.707E+00	1.967E-01	-0.180
		713.82		6.294E-01	1.004E+00	1.827E+00	2.030E-01	0.345
		722.78		-1.322E-02	1.922E-01	3.174E-01	2.382E-02	-0.042
		968.20		-1.925E-01	1.589E+00	2.565E+00	1.780E-01	-0.075
		1045.16		-1.072E+00	1.902E+00	2.824E+00	1.857E-01	-0.380
		1325.50		-1.070E+00	2.307E+00	3.340E+00	2.005E-01	-0.320
		1368.21		4.301E-01	1.172E+00	2.070E+00	2.481E-01	0.208
		1436.60		4.234E-01	2.371E+00	4.027E+00	2.427E-01	0.105
		1691.02	*	-3.244E-02	7.554E-02	1.122E-01	7.061E-03	-0.289
SB-125		427.89	*	-3.660E-02	5.493E-02	8.140E-02	4.857E-03	-0.450
		463.38		1.102E-01	1.732E-01	3.043E-01	2.116E-02	0.362
		600.56		1.392E-01	1.241E-01	2.295E-01	1.763E-02	0.607
		635.90		4.372E-02	1.853E-01	3.089E-01	2.437E-02	0.142
TE-125M		109.28	*	-1.841E+00	2.927E+00	4.084E+00	4.748E-01	-0.451
I-126		388.63		-4.479E-03	7.303E-02	1.188E-01	6.432E-03	-0.038
		666.33	*	6.899E-02	7.533E-02	1.424E-01	1.019E-02	0.485
		753.82		-2.128E-01	5.102E-01	7.757E-01	5.679E-02	-0.274
SB-126		223.80		-5.339E-01	1.188E+00	1.898E+00	1.177E-01	-0.281
		278.60		-2.942E-01	7.098E-01	1.120E+00	6.550E-02	-0.263
		296.50		-1.845E-01	5.162E-01	7.507E-01	4.403E-02	-0.246
		414.70		-6.993E-03	2.924E-02	4.634E-02	2.594E-03	-0.151
		415.30		5.935E-01	2.469E+00	4.158E+00	2.330E-01	0.143

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		4.408E-01	1.571E+00	2.654E+00	1.768E-01	0.166
		573.80		-3.524E-01	4.385E-01	6.109E-01	4.135E-02	-0.577
		593.00		-1.301E-01	3.551E-01	5.329E-01	3.660E-02	-0.244
		656.30		4.503E-01	1.240E+00	2.203E+00	1.570E-01	0.204
		666.33		2.833E-02	3.093E-02	5.847E-02	4.185E-03	0.485
		675.00		9.942E-01	8.813E-01	1.696E+00	1.218E-01	0.586
		695.00		3.411E-02	3.802E-02	7.048E-02	5.098E-03	0.484
		697.00		-9.229E-03	1.289E-01	2.137E-01	1.547E-02	-0.043
		720.50	*	-3.045E-03	5.691E-02	9.430E-02	6.868E-03	-0.032
		856.80		5.824E-02	2.187E-01	3.779E-01	2.743E-02	0.154
		989.30		1.468E-01	5.393E-01	9.597E-01	6.579E-02	0.153
		1034.80		-1.586E+00	4.815E+00	7.473E+00	4.957E-01	-0.212
		1213.00		9.963E-01	1.792E+00	3.255E+00	1.876E-01	0.306
SN-126		64.28		3.885E-02	7.487E-02	1.228E-01	1.769E-02	0.316
		86.94		1.890E-03	7.353E-02	1.194E-01	4.929E-02	0.016
		87.57	*	2.990E-03	1.796E-02	2.957E-02	2.441E-03	0.101
SB-127		61.10		2.584E-01	1.836E+00	3.035E+00	2.400E-01	0.085
		252.40		-3.776E-03	5.323E-01	8.857E-01	3.643E-01	-0.004
		290.80		-4.496E-01	2.779E+00	4.527E+00	3.094E-01	-0.099
		411.60		1.802E+00	1.737E+00	3.184E+00	4.103E-01	0.566
		444.90		-1.671E+00	1.519E+00	2.066E+00	1.839E-01	-0.809
		473.00		1.511E-01	2.320E-01	4.141E-01	3.939E-02	0.365
		543.00		-1.195E+00	3.173E+00	4.869E+00	5.728E-01	-0.246
		603.60		-1.686E+00	2.172E+00	3.099E+00	2.974E-01	-0.544
		685.20	*	-1.750E-01	2.060E-01	2.919E-01	2.431E-02	-0.599
		698.50		-9.522E-01	2.903E+00	4.650E+00	6.417E-01	-0.205
		722.20		-7.257E-01	4.500E+00	7.320E+00	5.922E-01	-0.099
		783.80		-2.129E-01	5.857E-01	9.141E-01	8.944E-02	-0.233
XE-127		57.60		1.957E-02	5.881E-01	9.638E-01	6.688E-02	0.020
		145.22		4.588E-02	2.379E-01	3.876E-01	3.454E-02	0.118
		172.10		2.512E-02	4.531E-02	7.963E-02	4.844E-03	0.315
		202.84	*	-6.565E-03	1.726E-02	2.790E-02	1.729E-03	-0.235
		374.96		-3.454E-02	1.003E-01	1.577E-01	8.751E-03	-0.219
I-131		80.18		-2.971E-01	5.088E-01	7.786E-01	6.106E-02	-0.382
		284.30		-1.251E-01	4.009E-01	6.429E-01	4.140E-02	-0.195
		364.48	*	5.277E-02	3.684E-02	6.937E-02	4.349E-03	0.761
		636.97		1.264E-01	5.501E-01	9.160E-01	6.955E-02	0.138
		722.89		-2.422E-01	2.060E+00	3.372E+00	2.463E-01	-0.072
TE-132		49.72		4.528E-02	2.521E-01	4.203E-01	3.082E-02	0.108
		111.76		1.046E-01	1.851E+00	2.998E+00	3.270E-01	0.035
		116.30		-4.251E-01	1.847E+00	2.899E+00	3.292E-01	-0.147
		228.16	*	4.611E-03	6.199E-02	1.043E-01	1.392E-02	0.044
BA-133		53.15		1.168E-01	3.292E-01	5.560E-01	3.729E-02	0.210
		79.62		-1.966E-01	2.692E-01	4.028E-01	5.951E-02	-0.488
		81.00		-4.161E-03	1.990E-02	3.159E-02	4.891E-03	-0.132
		276.40		-2.239E-02	1.532E-01	2.497E-01	3.245E-02	-0.090
		302.84		-6.611E-03	7.411E-02	1.215E-01	1.420E-02	-0.054
		356.01	*	-8.596E-03	2.662E-02	4.224E-02	4.861E-03	-0.203
		383.85		-9.660E-02	1.642E-01	2.473E-01	2.645E-02	-0.391

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I-133		510.53		-8.616E-04	1.642E-01	Half-Life too short		
		529.87	*	-1.488E-06	1.642E-01	Half-Life too short		
		706.58		-2.481E-04	1.642E-01	Half-Life too short		
		856.28		6.860E-05	1.642E-01	Half-Life too short		
		875.33		5.330E-05	1.642E-01	Half-Life too short		
		1236.41		4.492E-04	1.642E-01	Half-Life too short		
		1298.22		4.774E-04	1.642E-01	Half-Life too short		
CS-134		475.35		9.417E-02	1.077E+00	1.776E+00	1.086E-01	0.053
		563.23		-6.412E-02	2.051E-01	3.128E-01	2.132E-02	-0.205
		569.32		4.941E-02	1.480E-01	2.412E-01	1.663E-02	0.205
		604.70		-4.880E-03	2.377E-02	3.715E-02	2.582E-03	-0.131
		795.84	*	3.451E-03	2.878E-02	4.886E-02	3.617E-03	0.071
		801.93		1.551E-01	2.917E-01	4.867E-01	3.593E-02	0.319
		1038.57		-1.475E+00	3.130E+00	4.719E+00	3.121E-01	-0.313
		1167.94		-1.762E+00	1.667E+00	2.065E+00	1.179E-01	-0.853
		1365.15		-1.038E+00	1.079E+00	1.324E+00	8.709E-02	-0.784
CS-135		268.24	*	1.644E-02	7.632E-02	1.295E-01	1.007E-02	0.127
I-135		288.45		2.157E+01	7.632E-02	Half-Life too short		
		417.63		-1.542E+01	7.632E-02	Half-Life too short		
		546.56		1.061E+01	7.632E-02	Half-Life too short		
		836.80		6.514E+01	7.632E-02	Half-Life too short		
		1038.76		-2.835E+01	7.632E-02	Half-Life too short		
		1124.00		-2.222E+01	7.632E-02	Half-Life too short		
		1131.51		2.260E+00	7.632E-02	Half-Life too short		
		1260.41	*	-4.293E+00	7.632E-02	Half-Life too short		
		1457.56		-2.473E+01	7.632E-02	Half-Life too short		
		1678.03		7.786E+00	7.632E-02	Half-Life too short		
		1706.46		-9.837E+01	7.632E-02	Half-Life too short		
		1791.20		4.459E+01	7.632E-02	Half-Life too short		
CS-136		66.91		-1.113E-02	8.232E-02	1.324E-01	1.947E-02	-0.084
		86.29		4.376E-02	1.518E-01	2.529E-01	3.176E-02	0.173
		153.22		6.076E-02	1.732E-01	2.863E-01	2.567E-02	0.212
		163.89		-5.846E-02	2.946E-01	4.883E-01	3.758E-02	-0.120
		176.55		-7.981E-02	1.083E-01	1.705E-01	1.157E-02	-0.468
		273.65		-4.473E-02	1.606E-01	2.119E-01	1.419E-02	-0.211
		340.57		1.544E-02	4.601E-02	7.849E-02	4.818E-03	0.197
		818.51		2.167E-02	3.686E-02	6.662E-02	4.874E-03	0.325
		1048.07	*	-8.120E-03	6.019E-02	9.663E-02	6.790E-03	-0.084
		1235.34		2.071E-01	1.932E-01	3.874E-01	3.870E-02	0.535
BA-137M		661.65	*	-9.564E-03	2.045E-02	3.158E-02	2.256E-03	-0.303
CS-137		661.65	*	-1.011E-02	2.162E-02	3.338E-02	2.391E-03	-0.303
CE-139		165.85	*	-1.049E-03	1.170E-02	1.957E-02	1.186E-03	-0.054
BA-140		162.64		-8.486E-02	2.072E-01	3.372E-01	2.424E-02	-0.252
		304.84		-2.062E-02	4.554E-01	7.498E-01	2.047E-01	-0.027
		423.70		4.087E-01	7.434E-01	1.283E+00	4.075E-01	0.319
		537.32	*	1.035E-01	1.193E-01	2.083E-01	6.803E-02	0.497
LA-140		328.77		7.164E-02	9.589E-02	1.715E-01	1.118E-02	0.418
		432.53		-7.302E-02	8.194E-01	1.322E+00	8.421E-02	-0.055
		487.03		-1.279E-02	5.539E-02	8.689E-02	6.018E-03	-0.147

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		751.79		-1.589E-04	5.696E-01	9.503E-01	7.969E-02	0.000
		815.85		-1.869E-03	1.454E-01	2.412E-01	2.042E-02	-0.008
		867.82		2.040E-01	5.461E-01	9.711E-01	7.548E-02	0.210
		919.63		5.218E-01	1.252E+00	2.222E+00	2.102E-01	0.235
		925.24		-1.811E-01	4.710E-01	7.146E-01	5.528E-02	-0.253
		1596.49	*	-4.419E-02	5.002E-02	6.396E-02	3.790E-03	-0.691
CE-141		145.44	*	2.435E-03	2.107E-02	3.409E-02	3.080E-03	0.071
CE-143		57.37		-4.083E-01	2.457E+00	3.946E+00	3.279E-01	-0.103
		231.56		1.904E+01	2.490E+01	4.333E+01	1.342E+01	0.439
		293.26	*	-3.681E-01	1.390E+00	2.235E+00	4.572E-01	-0.165
		350.59		-3.819E+00	2.246E+01	3.476E+01	1.054E+01	-0.110
		490.36		-2.540E+01	3.742E+01	5.285E+01	1.637E+01	-0.481
		664.57		-4.237E+00	1.752E+01	2.825E+01	9.018E+00	-0.150
		721.93		-5.123E+00	1.778E+01	2.819E+01	8.111E+00	-0.182
CE-144		80.11		-1.849E-01	4.351E-01	6.765E-01	5.293E-02	-0.273
		133.54	*	2.288E-02	7.861E-02	1.294E-01	2.142E-02	0.177
PM-144		476.78		-2.793E-03	3.603E-02	5.787E-02	4.176E-03	-0.048
		618.01		-4.032E-03	1.937E-02	2.999E-02	2.181E-03	-0.134
		696.49	*	1.133E-02	2.510E-02	4.440E-02	3.214E-03	0.255
		778.57		7.123E-02	1.546E+00	2.594E+00	1.902E-01	0.027
PR-144		696.49	*	7.648E-01	1.694E+00	2.997E+00	2.169E-01	0.255
		1489.15		3.816E+00	9.196E+00	1.690E+01	1.015E+00	0.226
PM-146		453.90	*	3.145E-03	2.540E-02	4.212E-02	3.672E-03	0.075
		633.02		-1.111E-01	9.695E-01	1.527E+00	5.657E-01	-0.073
		735.90		1.184E-02	9.949E-02	1.691E-01	4.775E-02	0.070
		747.13		-1.310E-02	4.925E-02	7.774E-02	1.032E-02	-0.168
ND-147		91.11		4.760E-03	4.252E-02	6.974E-02	6.447E-03	0.068
		319.41		-5.064E-01	1.115E+00	1.747E+00	1.022E-01	-0.290
		439.89		1.276E+00	2.445E+00	4.230E+00	2.464E-01	0.302
		531.02	*	-6.510E-02	2.004E-01	3.059E-01	4.235E-02	-0.213
PM-149		285.90	*	1.198E+00	4.519E+00	7.683E+00	1.089E+00	0.156
EU-152		121.78		1.588E-02	2.619E-02	4.453E-02	5.559E-03	0.357
		244.69		-9.597E-02	1.487E-01	2.310E-01	1.416E-02	-0.415
		344.27	*	-1.395E-02	5.580E-02	8.934E-02	5.810E-03	-0.156
		443.98		-1.936E-01	5.914E-01	9.216E-01	5.399E-02	-0.210
		778.89		1.301E-02	1.769E-01	2.982E-01	2.186E-02	0.044
		867.32		1.034E-01	5.158E-01	8.875E-01	6.421E-02	0.117
		964.01		9.723E-02	1.925E-01	3.349E-01	2.330E-02	0.290
		1085.78		3.601E-03	2.040E-01	3.359E-01	2.125E-02	0.011
		1112.02		7.689E-04	1.877E-01	3.074E-01	1.890E-02	0.003
		1407.95		4.243E-03	1.656E-01	2.689E-01	1.622E-02	0.016
GD-153		69.67		-2.746E-01	2.756E-01	4.038E-01	2.965E-02	-0.680
		83.37		-1.981E-01	3.014E+00	4.854E+00	3.886E-01	-0.041
		97.43	*	1.013E-04	2.118E-02	3.424E-02	3.100E-03	0.003
		103.18		-3.198E-04	3.243E-02	5.228E-02	5.003E-03	-0.006
EU-154		123.07		-5.766E-03	1.982E-02	3.092E-02	4.205E-03	-0.187
		247.94		-7.936E-02	1.637E-01	2.582E-01	2.514E-02	-0.307
		591.81		-2.344E-01	3.453E-01	4.784E-01	4.994E-02	-0.490
		723.30		-4.469E-02	9.869E-02	1.514E-01	1.263E-02	-0.295

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		756.87		-2.772E-01	4.319E-01	6.249E-01	6.924E-02	-0.444
		873.19		1.300E-01	1.927E-01	3.569E-01	4.035E-02	0.364
		996.32		-2.619E-01	2.432E-01	2.951E-01	5.008E-02	-0.887
		1004.76		-1.250E-01	1.552E-01	2.143E-01	2.219E-02	-0.583
		1274.45	*	-3.475E-03	7.246E-02	1.162E-01	1.093E-02	-0.030
EU-155		48.70		-8.254E-02	1.494E-01	2.308E-01	1.506E-02	-0.358
		60.01		-2.850E-01	6.092E-01	9.482E-01	6.696E-02	-0.301
		86.54		5.761E-03	2.087E-02	3.475E-02	2.879E-03	0.166
		105.31	*	3.584E-02	3.332E-02	5.914E-02	5.832E-03	0.606
TB-160		86.79		1.222E-02	5.178E-02	8.590E-02	7.051E-03	0.142
		197.04		5.385E-02	2.215E-01	3.794E-01	2.347E-02	0.142
		215.65		5.530E-02	3.267E-01	5.544E-01	3.442E-02	0.100
		298.57		1.562E-02	5.305E-02	9.046E-02	5.307E-03	0.173
		879.36	*	-1.175E-01	9.279E-02	1.146E-01	8.262E-03	-1.025
		962.29		3.078E-02	3.055E-01	4.960E-01	3.455E-02	0.062
		966.15		5.188E-02	1.174E-01	2.082E-01	1.447E-02	0.249
		1177.93		-1.253E-01	2.009E-01	2.783E-01	1.580E-02	-0.450
		1271.85		-9.401E-02	4.002E-01	6.104E-01	3.598E-02	-0.154
HO-166M		80.57		-1.656E-02	5.632E-02	8.873E-02	6.964E-03	-0.187
		184.41		9.731E-03	1.436E-02	2.540E-02	1.560E-03	0.383
		280.46		8.330E-03	3.870E-02	6.575E-02	3.842E-03	0.127
		410.95		1.194E-01	1.356E-01	2.462E-01	1.370E-02	0.485
		711.68	*	-3.624E-03	4.306E-02	7.116E-02	5.172E-03	-0.051
		752.31		2.807E-02	1.315E-01	2.295E-01	1.680E-02	0.122
		810.29		9.164E-03	3.254E-02	5.717E-02	4.185E-03	0.160
TM-171		51.35		1.496E+00	2.331E+00	4.049E+00	2.683E-01	0.369
		52.39		1.133E+00	1.309E+00	2.314E+00	1.544E-01	0.490
		59.40		3.952E-01	3.048E+00	5.040E+00	3.551E-01	0.078
		66.72	*	-3.809E-02	4.392E+00	7.148E+00	5.172E-01	-0.005
LU-176		88.36		1.165E-02	4.354E-02	7.231E-02	6.010E-03	0.161
		201.83		1.484E-04	1.232E-02	2.068E-02	1.281E-03	0.007
		306.84	*	4.576E-03	1.338E-02	2.293E-02	1.345E-03	0.200
		401.10		1.652E+00	3.800E+00	6.561E+00	3.590E-01	0.252
LU-177		112.95		-2.457E-02	2.476E-01	3.946E-01	4.153E-02	-0.062
		208.36	*	5.930E-02	2.075E-01	3.563E-01	2.211E-02	0.166
LU-177M		52.97		7.579E-02	1.400E-01	2.405E-01	1.611E-02	0.315
		54.07		-1.153E-02	7.726E-02	1.245E-01	8.402E-03	-0.093
		61.30		-4.569E-03	1.835E-01	2.987E-01	2.117E-02	-0.015
		121.62		7.687E-02	1.297E-01	2.205E-01	2.525E-02	0.349
		147.16		2.386E-02	2.462E-01	3.975E-01	3.445E-02	0.060
		171.86		1.257E-01	2.025E-01	3.578E-01	2.176E-02	0.351
		218.09		2.651E-01	3.805E-01	6.744E-01	4.186E-02	0.393
		268.79		2.841E-01	3.546E-01	6.365E-01	3.789E-02	0.446
		319.02		-8.280E-02	1.389E-01	2.140E-01	1.252E-02	-0.387
		367.43		-3.921E-01	5.470E-01	8.236E-01	4.621E-02	-0.476
		413.65	*	-2.588E-02	1.050E-01	1.665E-01	9.306E-03	-0.155
HF-181		56.28		-4.871E-02	8.671E-02	1.335E-01	9.161E-03	-0.365
		57.53		-1.247E-03	5.007E-02	8.159E-02	5.658E-03	-0.015
		65.20		2.688E-02	1.301E-01	2.081E-01	1.496E-02	0.129

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		133.02		5.480E-03	2.243E-02	3.681E-02	3.809E-03	0.149
		136.25		-2.944E-02	1.592E-01	2.504E-01	2.500E-02	-0.118
		345.85		-3.499E-03	9.511E-02	1.560E-01	8.974E-03	-0.022
		482.03	*	3.124E-03	2.186E-02	3.631E-02	2.239E-03	0.086
W-181		56.28		-2.070E-02	3.682E-02	5.666E-02	3.890E-03	-0.365
		57.53		-5.664E-04	2.127E-02	3.465E-02	2.403E-03	-0.016
		65.20	*	1.133E-02	5.483E-02	8.772E-02	6.306E-03	0.129
TA-182		67.75		5.415E-03	1.666E-02	2.795E-02	2.032E-03	0.194
		100.10		-5.222E-02	5.003E-02	7.114E-02	6.608E-03	-0.734
		152.43		-4.084E-03	1.295E-01	2.062E-01	1.646E-02	-0.020
		222.10		-6.679E-02	1.522E-01	2.439E-01	1.513E-02	-0.274
		1001.68		1.168E+00	1.252E+00	2.407E+00	1.637E-01	0.485
		1121.28		5.976E-02	6.941E-02	1.351E-01	8.216E-03	0.442
		1189.05		3.061E-02	1.616E-01	2.752E-01	1.570E-02	0.111
		1221.42	*	2.828E-02	1.077E-01	1.854E-01	1.072E-02	0.153
		1230.97		-8.044E-02	2.362E-01	3.510E-01	2.037E-02	-0.229
RE-183		57.98		1.086E-02	2.019E-02	3.471E-02	2.416E-03	0.313
		59.32		1.604E-03	1.168E-02	1.933E-02	1.361E-03	0.083
		67.20		3.684E-03	2.867E-02	4.726E-02	3.427E-03	0.078
		162.32	*	-2.612E-03	4.198E-02	7.042E-02	4.638E-03	-0.037
		208.81		1.556E-01	3.766E-01	6.538E-01	4.057E-02	0.238
		291.72		-1.375E-01	4.578E-01	7.352E-01	4.310E-02	-0.187
RE-184		57.98		4.184E-02	7.779E-02	1.337E-01	9.307E-03	0.313
		59.32		6.174E-03	4.495E-02	7.438E-02	5.238E-03	0.083
		67.20		1.418E-02	1.104E-01	1.820E-01	1.320E-02	0.078
		161.27		6.908E-03	1.452E-01	2.458E-01	1.657E-02	0.028
		216.55		4.351E-02	1.219E-01	2.100E-01	1.304E-02	0.207
		252.85	*	1.707E-02	1.102E-01	1.862E-01	1.133E-02	0.092
		318.01		-5.141E-02	2.398E-01	3.869E-01	2.264E-02	-0.133
		792.07		-2.153E-01	6.175E-01	9.664E-01	7.084E-02	-0.223
		903.28		-1.126E+00	7.034E-01	7.803E-01	5.573E-02	-1.443
		920.93		1.992E-02	2.993E-01	5.007E-01	3.554E-02	0.040
OS-185		59.72		-9.069E-03	3.336E-02	5.299E-02	3.739E-03	-0.171
		61.14		1.014E-04	1.985E-02	3.240E-02	2.295E-03	0.003
		69.30		-2.954E-02	4.638E-02	7.073E-02	5.182E-03	-0.418
		592.07		-1.221E+00	1.413E+00	1.891E+00	1.298E-01	-0.646
		646.12	*	-6.696E-03	2.596E-02	3.971E-02	2.816E-03	-0.169
		717.42		-3.106E-03	5.783E-01	9.662E-01	7.032E-02	-0.003
		874.81		9.505E-02	3.549E-01	6.173E-01	4.456E-02	0.154
		880.27		-3.994E-01	4.920E-01	6.808E-01	4.905E-02	-0.587
RE-188		155.03	*	-7.877E-03	6.532E-02	1.030E-01	7.856E-03	-0.076
		477.96		-6.846E-01	1.583E+00	2.390E+00	1.467E-01	-0.286
		633.10		-2.512E-01	1.813E+00	2.846E+00	2.005E-01	-0.088
W-188		63.58		-2.984E+00	7.286E+00	1.101E+01	7.863E-01	-0.271
		227.08		7.075E-01	5.310E+00	8.981E+00	5.564E-01	0.079
		290.67	*	-4.238E-01	3.544E+00	5.801E+00	3.400E-01	-0.073
IR-192		295.96		-2.065E-03	5.658E-02	8.543E-02	5.088E-03	-0.024
		308.46		-1.649E-02	4.840E-02	7.705E-02	4.568E-03	-0.214
		316.51	*	4.161E-03	1.729E-02	2.932E-02	1.725E-03	0.142

---- Non-Identified Nuclides ----

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		468.07		-1.119E-02	3.679E-02	5.721E-02	3.954E-03	-0.196
		604.41		-1.168E-01	3.058E-01	4.652E-01	5.565E-02	-0.251
		612.46		-4.027E-01	4.001E-01	5.237E-01	4.447E-02	-0.769
AU-195		65.12		9.607E-03	2.550E-02	4.139E-02	2.975E-03	0.232
		66.83		-1.735E-03	1.435E-02	2.312E-02	1.674E-03	-0.075
		75.70		3.565E-02	3.558E-02	6.245E-02	4.746E-03	0.571
		98.88	*	1.295E-02	5.735E-02	9.497E-02	8.717E-03	0.136
		129.76		-4.475E-01	1.076E+00	1.656E+00	1.773E-01	-0.270
TL-200		367.94	*	-1.459E+00	2.151E+00	3.250E+00	1.822E-01	-0.449
		579.30		-2.718E+00	1.659E+01	2.604E+01	1.770E+00	-0.104
		828.27		1.083E+01	2.550E+01	4.532E+01	3.310E+00	0.239
		1205.75		-3.017E+00	1.335E+01	2.081E+01	1.196E+00	-0.145
TL-201		68.90		-5.889E-02	1.375E-01	2.145E-01	1.569E-02	-0.275
		70.82		-6.166E-02	8.291E-02	1.251E-01	9.241E-03	-0.493
		80.30		-1.040E-01	1.889E-01	2.901E-01	2.273E-02	-0.359
		135.34		8.893E-01	1.694E+00	2.851E+00	2.876E-01	0.312
		167.43	*	-1.571E-01	5.099E-01	8.364E-01	5.066E-02	-0.188
TL-202		68.90		-1.957E-02	4.570E-02	7.129E-02	5.213E-03	-0.275
		70.82		-2.043E-02	2.748E-02	4.146E-02	3.063E-03	-0.493
		80.30		-3.448E-02	6.262E-02	9.618E-02	7.535E-03	-0.359
		439.56	*	1.776E-02	3.030E-02	5.281E-02	3.074E-03	0.336
HG-203		70.83		-1.212E-01	1.645E-01	2.476E-01	3.184E-02	-0.489
		72.87		-3.484E-02	1.038E-01	1.636E-01	2.042E-02	-0.213
		82.60		2.402E-02	2.036E-01	3.340E-01	4.456E-02	0.072
		279.20	*	-5.990E-03	1.653E-02	2.628E-02	1.628E-03	-0.228
BI-207		72.80		-1.341E-02	3.388E-02	5.315E-02	3.969E-03	-0.252
		74.97		3.637E-02	1.966E-02	3.656E-02	2.767E-03	0.995
		84.90		-1.756E-02	4.056E-02	6.280E-02	5.084E-03	-0.280
		569.67		6.727E-04	2.353E-02	3.685E-02	2.486E-03	0.018
		1063.62	*	2.165E-02	3.011E-02	5.710E-02	3.693E-03	0.379
		1770.23		-5.765E-02	5.055E-01	8.140E-01	4.599E-02	-0.071
TL-207		81.07		-9.786E-03	4.394E-02	6.969E-02	5.489E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		94.90		4.509E-02	6.295E-02	1.084E-01	9.579E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.179
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.258E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192
		445.03		-1.565E+00	1.400E+00	1.893E+00	1.951E-01	-0.827
TL-208		277.35		-1.083E-01	1.593E-01	2.415E-01	2.558E-02	-0.448
		510.84		-1.310E-01	1.623E-01	2.966E-01	3.112E-02	-0.442
		583.14	*	5.226E-03	2.639E-02	4.301E-02	3.263E-03	0.121
		860.37		-3.135E-02	1.889E-01	3.040E-01	2.431E-02	-0.103
PO-209		260.50		-8.924E-01	4.780E+00	7.800E+00	4.701E-01	-0.114
		262.80		7.029E+00	1.303E+01	2.283E+01	1.371E+00	0.308
		896.60	*	2.613E+00	4.889E+00	8.862E+00	6.344E-01	0.295
BI-210		46.50	*	-9.202E-02	1.715E-01	2.654E-01	2.010E-02	-0.347

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-210		46.50	*	-9.202E-02	1.715E-01	2.654E-01	2.010E-02	-0.347
PO-210		46.50	*	-9.202E-02	1.715E-01	2.654E-01	1.715E-02	-0.347
BI-211		72.87		-1.963E-01	5.842E-01	9.215E-01	6.886E-02	-0.213
		351.07	*	-1.104E-02	1.359E-01	2.130E-01	1.355E-02	-0.052
PB-211		404.84	*	-5.992E-01	6.258E-01	6.759E-01	4.212E-01	-0.886
		427.08		-1.124E+00	1.415E+00	1.755E+00	1.085E+00	-0.640
		831.96		-4.658E-01	8.882E-01	1.261E+00	7.884E-01	-0.369
BI-212		727.18	*	2.395E-02	1.581E-01	2.713E-01	2.412E-02	0.088
		785.46		-2.967E-01	1.120E+00	1.780E+00	1.305E-01	-0.167
		1620.62		4.372E-01	1.005E+00	1.860E+00	1.096E-01	0.235
PB-212		74.81		1.232E-01	6.838E-02	1.252E-01	1.505E-02	0.983
		77.11		7.001E-03	4.040E-02	6.662E-02	5.109E-03	0.105
		87.30		9.059E-03	8.174E-02	1.339E-01	1.735E-02	0.068
		238.63	*	1.502E-02	3.021E-02	5.072E-02	3.864E-03	0.296
		300.09		-2.090E-01	3.987E-01	6.230E-01	5.168E-02	-0.336
PO-212		74.81		1.232E-01	6.838E-02	1.252E-01	1.505E-02	0.983
		77.11		7.001E-03	4.040E-02	6.662E-02	5.109E-03	0.105
		87.30		9.059E-03	8.174E-02	1.339E-01	1.735E-02	0.068
		115.19		9.549E-01	1.208E+00	2.088E+00	2.246E-01	0.457
		238.63	*	1.502E-02	3.021E-02	5.072E-02	3.864E-03	0.296
		300.09		-2.090E-01	3.987E-01	6.230E-01	5.168E-02	-0.336
BI-214		609.31	*	2.328E-02	4.268E-02	7.453E-02	6.459E-03	0.312
		768.36		-5.461E-02	4.246E-01	6.922E-01	6.536E-02	-0.079
		934.06		1.018E+00	8.169E-01	1.607E+00	1.513E-01	0.634
		1120.29		5.607E-02	1.704E-01	2.981E-01	2.681E-02	0.188
		1238.11		9.838E-02	4.467E-01	7.639E-01	6.236E-02	0.129
		1377.67		-3.693E-01	6.890E-01	9.487E-01	8.290E-02	-0.389
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.048E-02	-0.033
PB-214		74.81		2.122E-01	1.172E-01	2.158E-01	2.284E-02	0.983
		77.11		1.200E-02	6.927E-02	1.142E-01	1.235E-02	0.105
		87.30		1.552E-02	1.400E-01	2.293E-01	2.588E-02	0.068
		241.98		-1.361E-02	1.607E-01	2.659E-01	2.212E-02	-0.051
		295.21		-6.499E-03	7.981E-02	1.200E-01	1.029E-02	-0.054
		351.92	*	1.965E-03	4.753E-02	7.545E-02	6.207E-03	0.026
PO-214		74.81		2.122E-01	1.172E-01	2.158E-01	2.284E-02	0.983
		77.11		1.200E-02	6.927E-02	1.142E-01	1.235E-02	0.105
		87.30		1.552E-02	1.400E-01	2.293E-01	2.588E-02	0.068
		241.98		-1.361E-02	1.607E-01	2.659E-01	2.212E-02	-0.051
		295.21		-6.499E-03	7.981E-02	1.200E-01	1.029E-02	-0.054
		351.92	*	1.965E-03	4.753E-02	7.545E-02	6.207E-03	0.026
PO-215		81.07		-9.786E-03	4.394E-02	6.969E-02	5.489E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		94.90		4.509E-02	6.295E-02	1.084E-01	9.579E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.179
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.258E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-1.565E+00	1.400E+00	1.893E+00	1.951E-01	-0.827
PO-216		74.81		1.232E-01	6.838E-02	1.252E-01	1.505E-02	0.983
		77.11		7.001E-03	4.040E-02	6.662E-02	5.109E-03	0.105
		87.30		9.059E-03	8.174E-02	1.339E-01	1.735E-02	0.068
		238.63	*	1.502E-02	3.021E-02	5.072E-02	3.864E-03	0.296
		300.09		-2.090E-01	3.987E-01	6.230E-01	5.168E-02	-0.336
PO-218		74.81		2.122E-01	1.172E-01	2.158E-01	2.284E-02	0.983
		77.11		1.200E-02	6.927E-02	1.142E-01	1.235E-02	0.105
		87.30		1.552E-02	1.400E-01	2.293E-01	2.588E-02	0.068
		241.98		-1.361E-02	1.607E-01	2.659E-01	2.212E-02	-0.051
		295.21		-6.499E-03	7.981E-02	1.200E-01	1.029E-02	-0.054
		351.92	*	1.965E-03	4.753E-02	7.545E-02	6.207E-03	0.026
RN-219		271.23		3.876E-02	1.119E-01	1.924E-01	1.577E-02	0.201
		401.81	*	7.473E-02	2.270E-01	3.874E-01	5.219E-02	0.193
RN-220		549.76	*	1.964E+00	1.768E+01	2.905E+01	1.927E+00	0.068
RA-223		81.07		-9.786E-03	4.394E-02	6.969E-02	5.489E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		94.90		4.509E-02	6.295E-02	1.084E-01	9.579E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.179
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.258E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192
		445.03		-1.565E+00	1.400E+00	1.893E+00	1.951E-01	-0.827
RA-224		240.98	*	2.972E-01	3.065E-01	5.533E-01	3.403E-02	0.537
RA-226		609.31	*	2.328E-02	4.268E-02	7.453E-02	6.459E-03	0.312
		768.36		-5.461E-02	4.246E-01	6.922E-01	6.536E-02	-0.079
		934.06		1.018E+00	8.169E-01	1.607E+00	1.513E-01	0.634
		1120.29		5.607E-02	1.704E-01	2.981E-01	2.681E-02	0.188
		1238.11		9.838E-02	4.467E-01	7.639E-01	6.236E-02	0.129
		1377.67		-3.693E-01	6.890E-01	9.487E-01	8.290E-02	-0.389
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.048E-02	-0.033
AC-227		79.80		-2.394E-01	3.456E-01	5.166E-01	1.095E-01	-0.463
		236.00		-1.038E-01	1.048E-01	1.576E-01	1.681E-02	-0.658
		256.20	*	-3.958E-02	1.897E-01	3.091E-01	4.348E-02	-0.128
		286.10		3.987E-01	8.166E-01	1.417E+00	1.642E-01	0.281
		299.80		-2.050E-02	7.127E-01	1.176E+00	1.918E-01	-0.017
		304.40		4.919E-02	1.007E+00	1.675E+00	2.902E-01	0.029
		334.20		-1.474E-01	1.183E+00	1.922E+00	3.523E-01	-0.077
TH-227		79.80		-2.394E-01	3.457E-01	5.166E-01	1.109E-01	-0.463
		94.00		-1.468E-01	5.387E-01	8.512E-01	1.859E-01	-0.172
		236.00		-1.038E-01	1.047E-01	1.576E-01	1.466E-02	-0.658
		256.20	*	-3.958E-02	1.898E-01	3.091E-01	5.251E-02	-0.128
		286.10		3.987E-01	9.079E-01	1.417E+00	1.420E+00	0.281
		299.80		-2.050E-02	7.127E-01	1.176E+00	1.918E-01	-0.017
		304.40		4.919E-02	1.007E+00	1.675E+00	2.902E-01	0.029
		334.20		-1.474E-01	1.183E+00	1.922E+00	3.523E-01	-0.077
AC-228		338.32		4.333E-02	1.304E-01	2.205E-01	8.990E-02	0.196

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		911.07	*	1.781E-02	9.382E-02	1.600E-01	1.623E-02	0.111
		969.11		3.703E-02	1.641E-01	2.806E-01	6.388E-02	0.132
RA-228		338.32		4.333E-02	1.304E-01	2.205E-01	8.990E-02	0.196
		911.07	*	1.781E-02	9.382E-02	1.600E-01	1.623E-02	0.111
		969.11		3.703E-02	1.641E-01	2.806E-01	6.388E-02	0.132
TH-228		84.40		-2.859E-01	5.363E-01	8.190E-01	1.047E-01	-0.349
		238.60	*	1.509E-02	3.022E-02	5.073E-02	3.866E-03	0.298
		300.10		-2.090E-01	4.170E-01	6.230E-01	3.672E-01	-0.336
TH-229		85.43		-8.251E-03	4.018E-02	6.376E-02	5.181E-03	-0.129
		88.47		5.691E-03	2.497E-02	4.133E-02	3.439E-03	0.138
		100.00		-5.563E-02	5.444E-02	7.767E-02	7.207E-03	-0.716
		193.63	*	3.421E-03	2.153E-01	3.619E-01	2.235E-02	0.009
		210.97		-3.653E-02	3.267E-01	5.414E-01	3.360E-02	-0.067
TH-230		609.31	*	2.328E-02	4.268E-02	7.453E-02	6.459E-03	0.312
		768.36		-5.461E-02	4.246E-01	6.922E-01	6.536E-02	-0.079
		934.06		1.018E+00	8.169E-01	1.607E+00	1.513E-01	0.634
		1120.29		5.607E-02	1.704E-01	2.981E-01	2.681E-02	0.188
		1238.11		9.838E-02	4.467E-01	7.639E-01	6.236E-02	0.129
		1377.67		-3.693E-01	6.890E-01	9.487E-01	8.290E-02	-0.389
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.048E-02	-0.033
PA-231		283.67	*	-1.986E-01	7.966E-01	1.286E+00	1.775E-01	-0.154
		301.29		-1.096E-01	2.985E-01	4.749E-01	4.981E-02	-0.231
TH-231		81.07		-9.786E-03	4.394E-02	6.969E-02	5.489E-03	-0.140
		83.78		-9.062E-03	2.586E-02	4.038E-02	3.242E-03	-0.224
		94.90		4.509E-02	6.295E-02	1.084E-01	9.579E-03	0.416
		122.32		1.396E-01	6.523E-01	1.070E+00	1.280E-01	0.130
		144.24		-1.361E-01	2.769E-01	4.210E-01	4.216E-02	-0.323
		154.21		4.672E-02	1.590E-01	2.612E-01	2.269E-02	0.179
		269.46		6.667E-02	8.965E-02	1.596E-01	9.901E-03	0.418
		323.87	*	-5.650E-02	3.458E-01	5.601E-01	9.258E-02	-0.101
		338.28		1.762E-01	5.391E-01	9.191E-01	9.675E-02	0.192
		445.03		-1.565E+00	1.400E+00	1.893E+00	1.951E-01	-0.827
U-231		84.21		-1.803E-01	3.190E-01	4.859E-01	3.914E-02	-0.371
		92.29		4.367E-02	1.509E-01	2.511E-01	2.165E-02	0.174
		95.87	*	-2.913E-02	8.441E-02	1.316E-01	1.173E-02	-0.221
		108.00		1.445E-02	1.983E-01	3.013E-01	3.021E-02	0.048
TH-232		338.32		4.333E-02	1.292E-01	2.205E-01	1.277E-02	0.196
		911.07	*	1.781E-02	9.382E-02	1.600E-01	1.623E-02	0.111
		969.11		3.703E-02	1.641E-01	2.806E-01	6.388E-02	0.132
PA-233		75.28		1.003E+00	5.870E-01	1.060E+00	1.567E-01	0.947
		86.59		9.230E-02	3.409E-01	5.661E-01	1.511E-01	0.163
		300.12		-1.080E-01	2.064E-01	3.219E-01	4.335E-02	-0.336
		311.98	*	-1.932E-02	3.515E-02	5.454E-02	3.391E-03	-0.354
		340.50		1.437E-01	3.309E-01	5.679E-01	1.304E-01	0.253
		398.62		-8.041E-02	1.266E+00	2.058E+00	5.306E-01	-0.039
		415.76		3.104E-01	9.813E-01	1.666E+00	3.421E-01	0.186
PA-234		63.00		-7.251E-02	2.268E-01	3.453E-01	5.085E-02	-0.210
		94.67		3.074E-02	4.442E-02	7.625E-02	9.563E-03	0.403
		98.44		1.307E-02	2.489E-02	4.078E-02	2.278E-02	0.321

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		99.86		-1.309E-01	1.371E-01	1.974E-01	1.829E-02	-0.663
		111.00		-2.528E-02	5.890E-02	9.034E-02	1.207E-02	-0.280
		131.20		-4.844E-03	4.072E-02	6.455E-02	6.809E-03	-0.075
		152.70		2.517E-02	1.283E-01	2.089E-01	3.492E-02	0.120
		186.00		-2.727E-01	6.039E-01	9.081E-01	2.781E-01	-0.300
		226.40		6.101E-02	1.789E-01	3.083E-01	3.626E-02	0.198
		227.20		1.659E-02	1.927E-01	3.245E-01	2.010E-02	0.051
		248.90		-2.479E-01	3.821E-01	5.858E-01	1.264E-01	-0.423
		293.70		-4.013E-02	3.282E-01	5.366E-01	8.642E-02	-0.075
		369.80		-4.003E-01	5.107E-01	7.467E-01	1.551E-01	-0.536
		568.70		2.083E-01	7.747E-01	1.253E+00	8.449E-02	0.166
		569.50		1.889E-02	2.104E-01	3.325E-01	2.242E-02	0.057
		574.00		-7.895E-01	9.862E-01	1.379E+00	9.339E-02	-0.572
		699.00		-2.455E-01	5.245E-01	8.194E-01	1.516E-01	-0.300
		706.10		1.783E-01	6.712E-01	1.160E+00	5.143E-01	0.154
		733.00		2.510E-02	2.398E-01	4.072E-01	8.844E-02	0.062
		742.81		-4.770E-01	8.760E-01	1.213E+00	8.135E-01	-0.393
		796.30		-1.786E-02	5.817E-01	9.631E-01	2.568E-01	-0.019
		805.60		-6.515E-02	6.493E-01	1.061E+00	3.215E-01	-0.061
		819.60		8.703E-01	9.595E-01	1.714E+00	6.469E-01	0.508
		826.30		-1.536E-01	5.904E-01	9.316E-01	4.146E-01	-0.165
		831.60		-1.884E-01	4.351E-01	6.635E-01	1.957E-01	-0.284
		876.40		8.523E-02	4.901E-01	8.284E-01	8.507E-01	0.103
		880.51		-1.433E-01	1.900E-01	2.674E-01	1.927E-02	-0.536
		883.24		1.803E-01	2.195E-01	3.564E-01	2.390E-01	0.506
		899.00		3.037E-01	5.464E-01	9.703E-01	4.216E-01	0.313
		925.00		-2.848E-01	7.404E-01	1.124E+00	7.962E-02	-0.253
		926.50		-1.220E-01	1.202E-01	1.486E-01	3.684E-02	-0.821
		946.00	*	2.306E-02	1.940E-01	3.275E-01	5.922E-02	0.070
		949.00		-2.042E-01	2.952E-01	4.166E-01	2.921E-02	-0.490
		980.50		5.706E-03	5.300E-01	8.747E-01	6.029E-02	0.007
		1394.10		7.026E-01	1.078E+00	1.832E+00	1.187E+00	0.384
PA-234M		766.41		2.104E+00	1.087E+01	1.847E+01	1.414E+01	0.114
		1001.03	*	4.544E+00	4.203E+00	8.240E+00	8.113E-01	0.552
TH-234		63.29	*	-8.490E-02	1.958E-01	2.944E-01	5.100E-02	-0.288
		92.38		3.242E-02	1.401E-01	2.319E-01	4.194E-02	0.140
U-234		609.31	*	2.328E-02	4.268E-02	7.453E-02	6.459E-03	0.312
		768.36		-5.461E-02	4.246E-01	6.922E-01	6.536E-02	-0.079
		934.06		1.018E+00	8.169E-01	1.607E+00	1.513E-01	0.634
		1120.29		5.607E-02	1.704E-01	2.981E-01	2.681E-02	0.188
		1238.11		9.838E-02	4.467E-01	7.639E-01	6.236E-02	0.129
		1377.67		-3.693E-01	6.890E-01	9.487E-01	8.290E-02	-0.389
		1764.49		-1.189E-02	2.211E-01	3.616E-01	2.048E-02	-0.033
U-235		89.95		-1.862E-01	2.792E-01	4.141E-01	1.276E-01	-0.450
		93.35		-3.309E-02	1.695E-01	2.700E-01	7.574E-02	-0.123
		105.00		3.115E-01	3.413E-01	5.786E-01	1.747E-01	0.538
		143.76	*	-4.942E-02	8.567E-02	1.285E-01	2.281E-02	-0.384
		163.35		-1.023E-01	1.946E-01	3.120E-01	5.677E-02	-0.328
		185.71		-1.108E-02	2.206E-02	3.331E-02	2.048E-03	-0.333

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		205.31		4.047E-02	2.201E-01	3.746E-01	6.787E-02	0.108
NP-236		94.67		2.324E-02	3.362E-02	5.781E-02	5.097E-03	0.402
		98.44		9.887E-03	1.801E-02	3.083E-02	2.818E-03	0.321
		111.00		-1.912E-02	4.452E-02	6.833E-02	7.055E-03	-0.280
		160.31	*	1.730E-02	3.475E-02	5.802E-02	3.992E-03	0.298
NP-237		86.50	*	1.428E-02	5.113E-02	8.503E-02	1.888E-02	0.168
		95.87		-9.074E-02	2.638E-01	4.099E-01	1.014E-01	-0.221
U-238		63.29	*	-8.490E-02	1.958E-01	2.944E-01	5.100E-02	-0.288
		92.38		3.242E-02	1.400E-01	2.319E-01	2.001E-02	0.140
NP-239		99.55		-3.699E-02	4.482E-02	6.556E-02	6.057E-03	-0.564
		117.00	*	-2.697E-02	6.572E-02	1.010E-01	1.106E-02	-0.267
		209.75		-5.681E-02	3.253E-01	5.360E-01	3.327E-02	-0.106
		228.18		8.492E-03	1.031E-01	1.736E-01	1.075E-02	0.049
		277.60		-6.092E-02	7.894E-02	1.187E-01	6.955E-03	-0.513
		334.30		-6.785E-02	6.719E-01	1.095E+00	6.357E-02	-0.062
AM-241		59.54	*	2.082E-03	1.792E-02	2.959E-02	2.310E-03	0.070
AM-243		74.67	*	1.823E-02	1.093E-02	2.011E-02	1.519E-03	0.906
		86.72		4.752E-01	1.909E+00	3.171E+00	2.602E-01	0.150
		117.66		-5.049E-02	1.299E+00	2.080E+00	2.292E-01	-0.024
		142.18		2.856E+00	6.901E+00	1.148E+01	1.066E+00	0.249
CM-243		99.55		-3.804E-02	4.609E-02	6.743E-02	6.229E-03	-0.564
		103.76	*	-5.270E-03	3.057E-02	4.845E-02	4.662E-03	-0.109
		117.00		-2.773E-02	6.758E-02	1.039E-01	1.138E-02	-0.267
		209.75		-5.598E-02	3.206E-01	5.281E-01	3.278E-02	-0.106
		228.18		8.576E-03	1.042E-01	1.753E-01	1.086E-02	0.049
		277.60		-6.139E-02	7.955E-02	1.196E-01	7.008E-03	-0.513
CM-247		278.00		-3.090E-01	3.302E-01	4.851E-01	2.840E-02	-0.637
		287.40		9.856E-02	6.458E-01	1.087E+00	6.368E-02	0.091
		402.60	*	6.831E-03	1.927E-02	3.309E-02	1.815E-03	0.206
CF-249		252.85		6.610E-02	4.265E-01	7.209E-01	4.385E-02	0.092
		333.44		2.597E-02	8.711E-02	1.486E-01	8.629E-03	0.175
		387.95	*	2.591E-03	2.046E-02	3.415E-02	1.852E-03	0.076
CF-251		176.60	*	-3.373E-02	5.529E-02	8.813E-02	5.382E-03	-0.383
		227.00		2.576E-02	1.722E-01	2.918E-01	1.808E-02	0.088
		285.00		-1.042E-01	9.080E-01	1.488E+00	8.707E-02	-0.070
ANH-511		511.00	*	-2.552E-02	3.517E-02	6.467E-02	4.125E-03	-0.395

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                               2040 Savage Road                            *
*                             Charleston, SC 29414                          *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832    *
* Acquisition date : 14-JUL-2009 11:22:57 Detector SN#     :               *
* Detector ID        : GAM21               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:08.64     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        :  7-JUL-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201874832         Analyst initials: MXR1          *
* Batch Number       : 882713              Sample Quantity : 1.4447E+02 GRAM *
* Recovery           :    1.00000          Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope       :               *
* MSD DPM          :    0.000             MSD Isotope      :               *
* LCS DPM          :    0.000             LCS Isotope      :               *
* LCSD DPM         :    0.000             LCSD Isotope     :               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
RB-86	4.005E-01	5.594E-01	5.555E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-1.503E-02	1.505E-01	2.534E-01	0.000E+00	NOT IDENT.
NA-22	-1.239E-03	2.532E-02	4.180E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.057E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	6.492E-04	2.938E-02	4.991E-02	0.000E+00	NOT IDENT.
K-40	1.401E-01	3.090E-01	5.601E-01	0.000E+00	NOT IDENT.
TI-44	-2.974E-03	7.194E-03	1.229E-02	0.000E+00	NOT IDENT.
SC-46	-2.258E-02	2.300E-02	3.113E-02	0.000E+00	NOT IDENT.
V-48	1.966E-02	3.718E-02	6.890E-02	0.000E+00	NOT IDENT.
CR-51	-4.493E-02	1.613E-01	2.740E-01	0.000E+00	NOT IDENT.
MN-52	-6.918E-02	6.679E-02	7.208E-02	0.000E+00	NOT IDENT.
MN-54	-1.473E-02	2.551E-02	3.991E-02	0.000E+00	NOT IDENT.
CO-56	1.631E-02	2.762E-02	5.162E-02	0.000E+00	NOT IDENT.
CO-57	3.780E-03	8.882E-03	1.609E-02	0.000E+00	NOT IDENT.
CO-58	-9.316E-03	2.157E-02	3.417E-02	0.000E+00	NOT IDENT.
FE-59	-2.196E-02	5.676E-02	8.875E-02	0.000E+00	NOT IDENT.
CO-60	6.596E-03	2.671E-02	4.714E-02	0.000E+00	NOT IDENT.
ZN-65	-2.489E-03	5.121E-02	8.557E-02	0.000E+00	NOT IDENT.
GE-68	5.249E-01	8.868E-01	1.505E+00	0.000E+00	NOT IDENT.
AS-73	2.123E-02	6.960E-02	1.290E-01	0.000E+00	NOT IDENT.
AS-74	-2.515E-02	4.479E-02	6.873E-02	0.000E+00	NOT IDENT.
SE-75	-2.727E-03	2.050E-02	3.583E-02	0.000E+00	NOT IDENT.
BR-77	1.850E-01	6.985E-01	1.234E+00	0.000E+00	NOT IDENT.
SR-82	1.080E-01	2.001E-01	3.753E-01	0.000E+00	NOT IDENT.
RB-83	1.301E-02	3.977E-02	7.091E-02	0.000E+00	NOT IDENT.
RB-84	-6.888E-03	4.107E-02	6.851E-02	0.000E+00	NOT IDENT.
KR-85	-9.011E-01	7.104E+00	1.197E+01	0.000E+00	NOT IDENT.

SR-85	-4.263E-03	3.361E-02	5.664E-02	0.000E+00	NOT IDENT.
Y-88	1.465E-02	3.528E-02	6.535E-02	0.000E+00	NOT IDENT.
ZR-88	2.467E-03	1.687E-02	2.973E-02	0.000E+00	NOT IDENT.
Y-91	1.042E+00	1.130E+01	1.929E+01	0.000E+00	NOT IDENT.
NB-94	-1.940E-03	2.294E-02	3.959E-02	0.000E+00	NOT IDENT.
NB-95	5.445E-03	2.413E-02	4.331E-02	0.000E+00	NOT IDENT.
NB-95M	-6.197E-02	5.101E-02	8.024E-02	0.000E+00	NOT IDENT.
ZR-95	-3.389E-02	3.646E-02	5.128E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.792E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	8.946E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	9.682E-01	1.032E+00	2.042E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	9.921E+06	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.010E-02	1.365E-02	2.606E-02	0.000E+00	NOT IDENT.
RH-102	-2.232E-03	1.640E-02	2.749E-02	0.000E+00	NOT IDENT.
RU-103	3.455E-03	2.274E-02	3.962E-02	0.000E+00	NOT IDENT.
RH-106	-1.957E-01	2.138E-01	3.016E-01	0.000E+00	NOT IDENT.
RU-106	-1.957E-01	2.129E-01	3.016E-01	0.000E+00	NOT IDENT.
AG-108M	7.511E-05	2.024E-02	3.486E-02	0.000E+00	NOT IDENT.
CD-109	4.211E-02	1.818E-01	3.281E-01	0.000E+00	NOT IDENT.
AG-110M	5.583E-03	1.814E-02	3.342E-02	0.000E+00	NOT IDENT.
IN-111	-3.361E-02	6.940E-02	1.170E-01	0.000E+00	NOT IDENT.
IN-113M	4.047E-03	2.410E-02	4.260E-02	0.000E+00	NOT IDENT.
SN-113	4.047E-03	2.410E-02	4.260E-02	0.000E+00	NOT IDENT.
IN-114M	-8.922E-03	7.105E-02	1.267E-01	0.000E+00	NOT IDENT.
CD-115	-3.885E-01	5.506E-01	8.152E-01	0.000E+00	NOT IDENT.
SN-117M	1.236E-02	1.578E-02	2.905E-02	0.000E+00	NOT IDENT.
SB-122	-2.962E-02	1.669E-01	2.741E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.529E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	8.229E-03	1.160E-02	2.122E-02	0.000E+00	NOT IDENT.
I-124	1.931E-02	1.285E-01	2.211E-01	0.000E+00	NOT IDENT.
SB-124	-3.244E-02	7.403E-02	1.124E-01	0.000E+00	NOT IDENT.
SB-125	-3.660E-02	5.383E-02	8.413E-02	0.000E+00	NOT IDENT.
TE-125M	-1.841E+00	2.869E+00	4.347E+00	0.000E+00	NOT IDENT.
I-126	6.899E-02	7.383E-02	1.457E-01	0.000E+00	NOT IDENT.
SB-126	-3.045E-03	5.577E-02	9.633E-02	0.000E+00	NOT IDENT.
SN-126	2.990E-03	1.760E-02	3.161E-02	0.000E+00	NOT IDENT.
SB-127	-1.750E-01	2.019E-01	2.985E-01	0.000E+00	NOT IDENT.
XE-127	-6.565E-03	1.691E-02	2.931E-02	0.000E+00	NOT IDENT.
I-131	5.277E-02	3.611E-02	7.195E-02	0.000E+00	NOT IDENT.
TE-132	4.611E-03	6.075E-02	1.092E-01	0.000E+00	NOT IDENT.
BA-133	-8.596E-03	2.609E-02	4.384E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.059E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.451E-03	2.820E-02	4.981E-02	0.000E+00	NOT IDENT.
CS-135	1.644E-02	7.479E-02	1.352E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.428E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-8.120E-03	5.899E-02	9.788E-02	0.000E+00	NOT IDENT.
BA-137M	-9.564E-03	2.004E-02	3.232E-02	0.000E+00	NOT IDENT.
CS-137	-1.011E-02	2.119E-02	3.417E-02	0.000E+00	NOT IDENT.
CE-139	-1.049E-03	1.147E-02	2.064E-02	0.000E+00	NOT IDENT.
BA-140	1.035E-01	1.169E-01	2.142E-01	0.000E+00	NOT IDENT.
LA-140	-4.419E-02	4.902E-02	6.416E-02	0.000E+00	NOT IDENT.
CE-141	2.435E-03	2.065E-02	3.606E-02	0.000E+00	NOT IDENT.
CE-143	-3.681E-01	1.362E+00	2.330E+00	0.000E+00	NOT IDENT.
CE-144	2.288E-02	7.704E-02	1.372E-01	0.000E+00	NOT IDENT.
PM-144	1.133E-02	2.460E-02	4.539E-02	0.000E+00	NOT IDENT.
PR-144	7.648E-01	1.660E+00	3.064E+00	0.000E+00	NOT IDENT.
PM-146	3.145E-03	2.489E-02	4.348E-02	0.000E+00	NOT IDENT.
ND-147	-6.510E-02	1.964E-01	3.147E-01	0.000E+00	NOT IDENT.
PM-149	1.198E+00	4.429E+00	8.012E+00	0.000E+00	NOT IDENT.
EU-152	-1.395E-02	5.469E-02	9.278E-02	0.000E+00	NOT IDENT.
GD-153	1.013E-04	2.076E-02	3.653E-02	0.000E+00	NOT IDENT.
EU-154	-3.475E-03	7.101E-02	1.172E-01	0.000E+00	NOT IDENT.
EU-155	3.584E-02	3.265E-02	6.298E-02	0.000E+00	NOT IDENT.
TB-160	-1.175E-01	9.094E-02	1.166E-01	0.000E+00	NOT IDENT.
HO-166M	-3.624E-03	4.220E-02	7.272E-02	0.000E+00	NOT IDENT.
TM-171	-3.809E-02	4.304E+00	7.685E+00	0.000E+00	NOT IDENT.
LU-176	4.576E-03	1.311E-02	2.387E-02	0.000E+00	NOT IDENT.
LU-177	5.930E-02	2.034E-01	3.741E-01	0.000E+00	NOT IDENT.
LU-177M	-2.588E-02	1.029E-01	1.722E-01	0.000E+00	NOT IDENT.
HF-181	3.124E-03	2.142E-02	3.743E-02	0.000E+00	NOT IDENT.
W-181	1.133E-02	5.373E-02	9.435E-02	0.000E+00	NOT IDENT.
TA-182	2.828E-02	1.056E-01	1.871E-01	0.000E+00	NOT IDENT.
RE-183	-2.612E-03	4.114E-02	7.432E-02	0.000E+00	NOT IDENT.
RE-184	1.707E-02	1.080E-01	1.947E-01	0.000E+00	NOT IDENT.
OS-185	-6.696E-03	2.544E-02	4.066E-02	0.000E+00	NOT IDENT.
RE-188	-7.877E-03	6.402E-02	1.088E-01	0.000E+00	NOT IDENT.
W-188	-4.238E-01	3.473E+00	6.047E+00	0.000E+00	NOT IDENT.
IR-192	4.161E-03	1.694E-02	3.051E-02	0.000E+00	NOT IDENT.

AU-195	1.295E-02	5.620E-02	1.013E-01	0.000E+00	NOT IDENT.
TL-200	-1.459E+00	2.108E+00	3.370E+00	0.000E+00	NOT IDENT.
TL-201	-1.571E-01	4.997E-01	8.822E-01	0.000E+00	NOT IDENT.
TL-202	1.776E-02	2.970E-02	5.455E-02	0.000E+00	NOT IDENT.
HG-203	-5.990E-03	1.620E-02	2.742E-02	0.000E+00	NOT IDENT.
BI-207	2.165E-02	2.951E-02	5.782E-02	0.000E+00	NOT IDENT.
TL-207	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
TL-208	5.226E-03	2.586E-02	4.415E-02	0.000E+00	NOT IDENT.
PO-209	2.613E+00	4.791E+00	9.008E+00	0.000E+00	NOT IDENT.
BI-210	-9.202E-02	1.681E-01	2.874E-01	0.000E+00	NOT IDENT.
PB-210	-9.202E-02	1.681E-01	2.874E-01	0.000E+00	NOT IDENT.
PO-210	-9.202E-02	1.680E-01	2.874E-01	0.000E+00	NOT IDENT.
BI-211	-1.104E-02	1.332E-01	2.211E-01	0.000E+00	NOT IDENT.
PB-211	-5.992E-01	6.132E-01	6.995E-01	0.000E+00	NOT IDENT.
BI-212	2.395E-02	1.549E-01	2.771E-01	0.000E+00	NOT IDENT.
PB-212	1.502E-02	2.961E-02	5.309E-02	0.000E+00	NOT IDENT.
PO-212	1.502E-02	2.961E-02	5.309E-02	0.000E+00	NOT IDENT.
BI-214	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
PB-214	1.965E-03	4.658E-02	7.832E-02	0.000E+00	NOT IDENT.
PO-214	1.965E-03	4.658E-02	7.832E-02	0.000E+00	NOT IDENT.
PO-215	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
PO-216	1.502E-02	2.961E-02	5.309E-02	0.000E+00	NOT IDENT.
PO-218	1.965E-03	4.658E-02	7.832E-02	0.000E+00	NOT IDENT.
RN-219	7.473E-02	2.225E-01	4.010E-01	0.000E+00	NOT IDENT.
RN-220	1.964E+00	1.733E+01	2.986E+01	0.000E+00	NOT IDENT.
RA-223	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
RA-224	2.972E-01	3.004E-01	5.791E-01	0.000E+00	NOT IDENT.
RA-226	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
AC-227	-3.958E-02	1.859E-01	3.230E-01	0.000E+00	NOT IDENT.
TH-227	-3.958E-02	1.860E-01	3.230E-01	0.000E+00	NOT IDENT.
AC-228	1.781E-02	9.195E-02	1.626E-01	0.000E+00	NOT IDENT.
RA-228	1.781E-02	9.195E-02	1.626E-01	0.000E+00	NOT IDENT.
TH-228	1.509E-02	2.961E-02	5.311E-02	0.000E+00	NOT IDENT.
TH-229	3.421E-03	2.110E-01	3.805E-01	0.000E+00	NOT IDENT.
TH-230	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
PA-231	-1.986E-01	7.807E-01	1.341E+00	0.000E+00	NOT IDENT.
TH-231	-5.650E-02	3.389E-01	5.825E-01	0.000E+00	NOT IDENT.
U-231	-2.913E-02	8.272E-02	1.404E-01	0.000E+00	NOT IDENT.
TH-232	1.781E-02	9.195E-02	1.626E-01	0.000E+00	NOT IDENT.
PA-233	-1.932E-02	3.445E-02	5.677E-02	0.000E+00	NOT IDENT.
PA-234	2.306E-02	1.901E-01	3.325E-01	0.000E+00	NOT IDENT.
PA-234M	4.544E+00	4.119E+00	8.355E+00	0.000E+00	NOT IDENT.
TH-234	-8.490E-02	1.919E-01	3.168E-01	0.000E+00	NOT IDENT.
U-234	2.328E-02	4.183E-02	7.643E-02	0.000E+00	NOT IDENT.
U-235	-4.942E-02	8.396E-02	1.360E-01	0.000E+00	NOT IDENT.
NP-236	1.730E-02	3.406E-02	6.126E-02	0.000E+00	NOT IDENT.
NP-237	1.428E-02	5.011E-02	9.093E-02	0.000E+00	NOT IDENT.
U-238	-8.490E-02	1.919E-01	3.168E-01	0.000E+00	NOT IDENT.
NP-239	-2.697E-02	6.441E-02	1.074E-01	0.000E+00	NOT IDENT.
AM-241	2.082E-03	1.756E-02	3.189E-02	0.000E+00	NOT IDENT.
AM-243	1.823E-02	1.071E-02	2.157E-02	0.000E+00	NOT IDENT.
CM-243	-5.270E-03	2.995E-02	5.161E-02	0.000E+00	NOT IDENT.
CM-247	6.831E-03	1.889E-02	3.425E-02	0.000E+00	NOT IDENT.
CF-249	2.591E-03	2.005E-02	3.537E-02	0.000E+00	NOT IDENT.
CF-251	-3.373E-02	5.419E-02	9.285E-02	0.000E+00	NOT IDENT.
ANH-511	-2.552E-02	3.446E-02	6.658E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:23:40.19

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1
Sample date       : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 11:22:57
Sample ID         : G1201874832          Sample quantity  : 1.44470E+02 GRAM
Detector name     : GAM21                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:08.64  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
RB-86	1076.63	10	8.78*	9.769E-01	3.029E-01	4.005E-01	142.53

Flag: "*" = Keyline

Sample ID : G1201874832 Acquisition date : 14-JUL-2009 11:22:57

Total number of lines in spectrum	1	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	1	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RB-86	18.66D	1.32	3.029E-01	4.005E-01	5.708E-01	142.53	
		Total Activity :	3.029E-01	4.005E-01			
		Grand Total Activity :	3.029E-01	4.005E-01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1201874832

Acquisition date : 14-JUL-2009 11:22:57

None

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:23:44.98

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874832.CNF;1 *
* Acquisition date  : 14-JUL-2009 11:22:57  Detector SN#     :             *
* Detector ID       : GAM21                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:08.64          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 7-JUL-2009 00:00:00.  Nuclide Library : SOLID        *
* Sample ID         : G1201874832           Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.44470E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22.0MS Isotope      :               *
* MSD ID           :                      MSD Isotope     :               *
* LCS ID           : 1023-A               LCS Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RB-86	4.005E-01	5.708E-01	5.488E-01	3.505E-02	0.730

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.503E-02		1.536E-01	2.457E-01	1.730E-02	-0.061
NA-22	-1.239E-03		2.584E-02	4.145E-02	2.451E-03	-0.030
NA-24	2.335E-05		5.392E-05	Half-Life too short		
AL-26	6.492E-04		2.998E-02	4.991E-02	2.779E-03	0.013
K-40	1.401E-01		3.153E-01	5.572E-01	3.546E-02	0.251
TI-44	-2.974E-03		7.341E-03	1.147E-02	8.868E-04	-0.259
SC-46	-2.258E-02		2.347E-02	3.062E-02	2.199E-03	-0.738
V-48	1.966E-02		3.794E-02	6.792E-02	4.673E-03	0.289
CR-51	-4.493E-02		1.646E-01	2.635E-01	1.714E-02	-0.171
MN-52	-6.918E-02		6.816E-02	7.168E-02	4.321E-03	-0.965
MN-54	-1.473E-02		2.603E-02	3.920E-02	2.859E-03	-0.376

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-56	1.631E-02		2.819E-02	5.071E-02	3.690E-03	0.322
CO-57	3.780E-03		9.064E-03	1.515E-02	1.744E-03	0.249
CO-58	-9.316E-03		2.202E-02	3.354E-02	2.463E-03	-0.278
FE-59	-2.196E-02		5.792E-02	8.772E-02	6.291E-03	-0.250
CO-60	6.596E-03		2.726E-02	4.680E-02	2.815E-03	0.141
ZN-65	-2.489E-03		5.225E-02	8.460E-02	5.190E-03	-0.029
GE-68	5.249E-01		9.049E-01	1.487E+00	9.488E-02	0.353
AS-73	2.123E-02		7.102E-02	1.194E-01	8.027E-03	0.178
AS-74	-2.515E-02		4.570E-02	6.699E-02	4.610E-03	-0.375
SE-75	-2.727E-03		2.091E-02	3.430E-02	2.075E-03	-0.079
BR-77	1.850E-01		7.128E-01	1.199E+00	7.730E-02	0.154
SR-82	1.080E-01		2.041E-01	3.680E-01	2.698E-02	0.293
RB-83	1.301E-02		4.058E-02	6.890E-02	4.440E-03	0.189
RB-84	-6.888E-03		4.191E-02	6.737E-02	4.851E-03	-0.102
KR-85	-9.011E-01		7.249E+00	1.163E+01	7.444E-01	-0.077
SR-85	-4.263E-03		3.430E-02	5.503E-02	3.522E-03	-0.077
Y-88	1.465E-02		3.600E-02	6.536E-02	3.607E-03	0.224
ZR-88	2.467E-03		1.722E-02	2.871E-02	1.548E-03	0.086
Y-91	1.042E+00		1.153E+01	1.911E+01	1.098E+00	0.055
NB-94	-1.940E-03		2.341E-02	3.873E-02	2.808E-03	-0.050
NB-95	5.445E-03		2.462E-02	4.245E-02	3.111E-03	0.128
NB-95M	-6.197E-02		5.205E-02	7.664E-02	5.991E-03	-0.809
ZR-95	-3.389E-02		3.721E-02	5.025E-02	4.188E-03	-0.674
NB-97	8.596E-06		1.424E-05	Half-Life too short		
ZR-97	-1.327E-03		4.564E-04	Half-Life too short		
MO-99	9.682E-01		1.053E+00	2.000E+00	2.896E-01	0.484
TC-99M	-6.548E-03		5.062E+00	Half-Life too short		
RH-101	1.010E-02		1.393E-02	2.479E-02	1.534E-03	0.407
RH-102	-2.232E-03		1.673E-02	2.666E-02	1.630E-03	-0.084
RU-103	3.455E-03		2.321E-02	3.846E-02	4.950E-03	0.090
RH-106	-1.957E-01		2.181E-01	2.942E-01	3.641E-02	-0.665
RU-106	-1.957E-01		2.172E-01	2.942E-01	2.059E-02	-0.665
AG-108M	7.511E-05		2.065E-02	3.374E-02	2.115E-03	0.002
CD-109	4.211E-02		1.855E-01	3.069E-01	2.543E-02	0.137
AG-110M	5.583E-03		1.851E-02	3.264E-02	2.428E-03	0.171
IN-111	-3.361E-02		7.082E-02	1.119E-01	6.855E-03	-0.300
IN-113M	4.047E-03		2.459E-02	4.113E-02	2.385E-03	0.098
SN-113	4.047E-03		2.459E-02	4.113E-02	2.385E-03	0.098
IN-114M	-8.922E-03		7.250E-02	1.205E-01	7.427E-03	-0.074
CD-115	-3.885E-01		5.618E-01	7.924E-01	5.146E-02	-0.490
SN-117M	1.236E-02		1.610E-02	2.751E-02	1.962E-03	0.449
SB-122	-2.962E-02		1.703E-01	2.668E-01	1.791E-02	-0.111
I-123	1.085E-04		7.803E-05	Half-Life too short		
TE-123M	8.229E-03		1.183E-02	2.010E-02	1.433E-03	0.409
I-124	1.931E-02		1.311E-01	2.155E-01	1.490E-02	0.090
SB-124	-3.244E-02		7.554E-02	1.122E-01	7.061E-03	-0.289
SB-125	-3.660E-02		5.493E-02	8.140E-02	4.857E-03	-0.450
TE-125M	-1.841E+00		2.927E+00	4.084E+00	4.748E-01	-0.451

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-126	6.899E-02		7.533E-02	1.424E-01	1.019E-02	0.485
SB-126	-3.045E-03		5.691E-02	9.430E-02	6.868E-03	-0.032
SN-126	2.990E-03		1.796E-02	2.957E-02	2.441E-03	0.101
SB-127	-1.750E-01		2.060E-01	2.919E-01	2.431E-02	-0.599
XE-127	-6.565E-03		1.726E-02	2.790E-02	1.729E-03	-0.235
I-131	5.277E-02		3.684E-02	6.937E-02	4.349E-03	0.761
TE-132	4.611E-03		6.199E-02	1.043E-01	1.392E-02	0.044
BA-133	-8.596E-03		2.662E-02	4.224E-02	4.861E-03	-0.203
I-133	-1.488E-06		3.602E-06	Half-Life too short		
CS-134	3.451E-03		2.878E-02	4.886E-02	3.617E-03	0.071
CS-135	1.644E-02		7.632E-02	1.295E-01	1.007E-02	0.127
I-135	-4.293E+00		7.288E+00	Half-Life too short		
CS-136	-8.120E-03		6.019E-02	9.663E-02	6.790E-03	-0.084
BA-137M	-9.564E-03		2.045E-02	3.158E-02	2.256E-03	-0.303
CS-137	-1.011E-02		2.162E-02	3.338E-02	2.391E-03	-0.303
CE-139	-1.049E-03		1.170E-02	1.957E-02	1.186E-03	-0.054
BA-140	1.035E-01		1.193E-01	2.083E-01	6.803E-02	0.497
LA-140	-4.419E-02		5.002E-02	6.396E-02	3.790E-03	-0.691
CE-141	2.435E-03		2.107E-02	3.409E-02	3.080E-03	0.071
CE-143	-3.681E-01		1.390E+00	2.235E+00	4.572E-01	-0.165
CE-144	2.288E-02		7.861E-02	1.294E-01	2.142E-02	0.177
PM-144	1.133E-02		2.510E-02	4.440E-02	3.214E-03	0.255
PR-144	7.648E-01		1.694E+00	2.997E+00	2.169E-01	0.255
PM-146	3.145E-03		2.540E-02	4.212E-02	3.672E-03	0.075
ND-147	-6.510E-02		2.004E-01	3.059E-01	4.235E-02	-0.213
PM-149	1.198E+00		4.519E+00	7.683E+00	1.089E+00	0.156
EU-152	-1.395E-02		5.580E-02	8.934E-02	5.810E-03	-0.156
GD-153	1.013E-04		2.118E-02	3.424E-02	3.100E-03	0.003
EU-154	-3.475E-03		7.246E-02	1.162E-01	1.093E-02	-0.030
EU-155	3.584E-02		3.332E-02	5.914E-02	5.832E-03	0.606
TB-160	-1.175E-01		9.279E-02	1.146E-01	8.262E-03	-1.025
HO-166M	-3.624E-03		4.306E-02	7.116E-02	5.172E-03	-0.051
TM-171	-3.809E-02		4.392E+00	7.148E+00	5.172E-01	-0.005
LU-176	4.576E-03		1.338E-02	2.293E-02	1.345E-03	0.200
LU-177	5.930E-02		2.075E-01	3.563E-01	2.211E-02	0.166
LU-177M	-2.588E-02		1.050E-01	1.665E-01	9.306E-03	-0.155
HF-181	3.124E-03		2.186E-02	3.631E-02	2.239E-03	0.086
W-181	1.133E-02		5.483E-02	8.772E-02	6.306E-03	0.129
TA-182	2.828E-02		1.077E-01	1.854E-01	1.072E-02	0.153
RE-183	-2.612E-03		4.198E-02	7.042E-02	4.638E-03	-0.037
RE-184	1.707E-02		1.102E-01	1.862E-01	1.133E-02	0.092
OS-185	-6.696E-03		2.596E-02	3.971E-02	2.816E-03	-0.169
RE-188	-7.877E-03		6.532E-02	1.030E-01	7.856E-03	-0.076
W-188	-4.238E-01		3.544E+00	5.801E+00	3.400E-01	-0.073
IR-192	4.161E-03		1.729E-02	2.932E-02	1.725E-03	0.142
AU-195	1.295E-02		5.735E-02	9.497E-02	8.717E-03	0.136
TL-200	-1.459E+00		2.151E+00	3.250E+00	1.822E-01	-0.449
TL-201	-1.571E-01		5.099E-01	8.364E-01	5.066E-02	-0.188

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202	1.776E-02		3.030E-02	5.281E-02	3.074E-03	0.336
HG-203	-5.990E-03		1.653E-02	2.628E-02	1.628E-03	-0.228
BI-207	2.165E-02		3.011E-02	5.710E-02	3.693E-03	0.379
TL-207	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
TL-208	5.226E-03		2.639E-02	4.301E-02	3.263E-03	0.121
PO-209	2.613E+00		4.889E+00	8.862E+00	6.344E-01	0.295
BI-210	-9.202E-02		1.715E-01	2.654E-01	2.010E-02	-0.347
PB-210	-9.202E-02		1.715E-01	2.654E-01	2.010E-02	-0.347
PO-210	-9.202E-02		1.715E-01	2.654E-01	1.715E-02	-0.347
BI-211	-1.104E-02		1.359E-01	2.130E-01	1.355E-02	-0.052
PB-211	-5.992E-01		6.258E-01	6.759E-01	4.212E-01	-0.886
BI-212	2.395E-02		1.581E-01	2.713E-01	2.412E-02	0.088
PB-212	1.502E-02		3.021E-02	5.072E-02	3.864E-03	0.296
PO-212	1.502E-02		3.021E-02	5.072E-02	3.864E-03	0.296
BI-214	2.328E-02		4.268E-02	7.453E-02	6.459E-03	0.312
PB-214	1.965E-03		4.753E-02	7.545E-02	6.207E-03	0.026
PO-214	1.965E-03		4.753E-02	7.545E-02	6.207E-03	0.026
PO-215	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
PO-216	1.502E-02		3.021E-02	5.072E-02	3.864E-03	0.296
PO-218	1.965E-03		4.753E-02	7.545E-02	6.207E-03	0.026
RN-219	7.473E-02		2.270E-01	3.874E-01	5.219E-02	0.193
RN-220	1.964E+00		1.768E+01	2.905E+01	1.927E+00	0.068
RA-223	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
RA-224	2.972E-01		3.065E-01	5.533E-01	3.403E-02	0.537
RA-226	2.328E-02		4.268E-02	7.453E-02	6.459E-03	0.312
AC-227	-3.958E-02		1.897E-01	3.091E-01	4.348E-02	-0.128
TH-227	-3.958E-02		1.898E-01	3.091E-01	5.251E-02	-0.128
AC-228	1.781E-02		9.382E-02	1.600E-01	1.623E-02	0.111
RA-228	1.781E-02		9.382E-02	1.600E-01	1.623E-02	0.111
TH-228	1.509E-02		3.022E-02	5.073E-02	3.866E-03	0.298
TH-229	3.421E-03		2.153E-01	3.619E-01	2.235E-02	0.009
TH-230	2.328E-02		4.268E-02	7.453E-02	6.459E-03	0.312
PA-231	-1.986E-01		7.966E-01	1.286E+00	1.775E-01	-0.154
TH-231	-5.650E-02		3.458E-01	5.601E-01	9.258E-02	-0.101
U-231	-2.913E-02		8.441E-02	1.316E-01	1.173E-02	-0.221
TH-232	1.781E-02		9.382E-02	1.600E-01	1.623E-02	0.111
PA-233	-1.932E-02		3.515E-02	5.454E-02	3.391E-03	-0.354
PA-234	2.306E-02		1.940E-01	3.275E-01	5.922E-02	0.070
PA-234M	4.544E+00		4.203E+00	8.240E+00	8.113E-01	0.552
TH-234	-8.490E-02		1.958E-01	2.944E-01	5.100E-02	-0.288
U-234	2.328E-02		4.268E-02	7.453E-02	6.459E-03	0.312
U-235	-4.942E-02		8.567E-02	1.285E-01	2.281E-02	-0.384
NP-236	1.730E-02		3.475E-02	5.802E-02	3.992E-03	0.298
NP-237	1.428E-02		5.113E-02	8.503E-02	1.888E-02	0.168
U-238	-8.490E-02		1.958E-01	2.944E-01	5.100E-02	-0.288
NP-239	-2.697E-02		6.572E-02	1.010E-01	1.106E-02	-0.267
AM-241	2.082E-03		1.792E-02	2.959E-02	2.310E-03	0.070
AM-243	1.823E-02		1.093E-02	2.011E-02	1.519E-03	0.906

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-5.270E-03		3.057E-02	4.845E-02	4.662E-03	-0.109
CM-247	6.831E-03		1.927E-02	3.309E-02	1.815E-03	0.206
CF-249	2.591E-03		2.046E-02	3.415E-02	1.852E-03	0.076
CF-251	-3.373E-02		5.529E-02	8.813E-02	5.382E-03	-0.383
ANH-511	-2.552E-02		3.517E-02	6.467E-02	4.125E-03	-0.395

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201874832          *
* Acquisition date  : 14-JUL-2009 11:22:57 Detector SN#     :               *
* Detector ID       : GAM21                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:08.64      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       :  7-JUL-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201874832          Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.4447E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 25-JUL-2008 16:27:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
RB-86	4.005E-01	5.594E-01	2.779E-01	2.854E-01

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.503E-02	1.505E-01	1.268E-01	7.680E-02 NOT IDENT.
NA-22	-1.239E-03	2.532E-02	2.091E-02	1.292E-02 NOT IDENT.
NA-24	2.335E+01	1.057E+02	0.000E+00	5.392E+01 SHORT HLIF
AL-26	6.492E-04	2.938E-02	2.497E-02	1.499E-02 NOT IDENT.
K-40	1.401E-01	3.090E-01	2.802E-01	1.576E-01 NOT IDENT.
TI-44	-2.974E-03	7.194E-03	6.148E-03	3.670E-03 NOT IDENT.
SC-46	-2.258E-02	2.300E-02	1.558E-02	1.174E-02 NOT IDENT.
V-48	1.966E-02	3.718E-02	3.447E-02	1.897E-02 NOT IDENT.
CR-51	-4.493E-02	1.613E-01	1.371E-01	8.232E-02 NOT IDENT.
MN-52	-6.918E-02	6.679E-02	3.606E-02	3.408E-02 NOT IDENT.
MN-54	-1.473E-02	2.551E-02	1.997E-02	1.302E-02 NOT IDENT.
CO-56	1.631E-02	2.762E-02	2.583E-02	1.409E-02 NOT IDENT.
CO-57	3.780E-03	8.882E-03	8.048E-03	4.532E-03 NOT IDENT.
CO-58	-9.316E-03	2.157E-02	1.709E-02	1.101E-02 NOT IDENT.
FE-59	-2.196E-02	5.676E-02	4.440E-02	2.896E-02 NOT IDENT.
CO-60	6.596E-03	2.671E-02	2.358E-02	1.363E-02 NOT IDENT.
ZN-65	-2.489E-03	5.121E-02	4.281E-02	2.613E-02 NOT IDENT.
GE-68	5.249E-01	8.868E-01	7.528E-01	4.524E-01 NOT IDENT.
AS-73	2.123E-02	6.960E-02	6.454E-02	3.551E-02 NOT IDENT.
AS-74	-2.515E-02	4.479E-02	3.439E-02	2.285E-02 NOT IDENT.
SE-75	-2.727E-03	2.050E-02	1.792E-02	1.046E-02 NOT IDENT.
BR-77	1.850E-01	6.985E-01	6.174E-01	3.564E-01 NOT IDENT.
SR-82	1.080E-01	2.001E-01	1.878E-01	1.021E-01 NOT IDENT.
RB-83	1.301E-02	3.977E-02	3.548E-02	2.029E-02 NOT IDENT.
RB-84	-6.888E-03	4.107E-02	3.428E-02	2.095E-02 NOT IDENT.
KR-85	-9.011E-01	7.104E+00	5.989E+00	3.624E+00 NOT IDENT.

SR-85	-4.263E-03	3.361E-02	2.834E-02	1.715E-02	NOT IDENT.
Y-88	1.465E-02	3.528E-02	3.269E-02	1.800E-02	NOT IDENT.
ZR-88	2.467E-03	1.687E-02	1.487E-02	8.609E-03	NOT IDENT.
Y-91	1.042E+00	1.130E+01	9.652E+00	5.763E+00	NOT IDENT.
NB-94	-1.940E-03	2.294E-02	1.981E-02	1.171E-02	NOT IDENT.
NB-95	5.445E-03	2.413E-02	2.167E-02	1.231E-02	NOT IDENT.
NB-95M	-6.197E-02	5.101E-02	4.015E-02	2.603E-02	NOT IDENT.
ZR-95	-3.389E-02	3.646E-02	2.566E-02	1.860E-02	NOT IDENT.
NB-97	8.596E+00	2.792E+01	0.000E+00	1.424E+01	SHORT HLIF
ZR-97	-1.327E+03	8.946E+02	0.000E+00	4.564E+02	SHORT HLIF
MO-99	9.682E-01	1.032E+00	1.022E+00	5.265E-01	NOT IDENT.
TC-99M	-6.548E+03	9.921E+06	0.000E+00	5.062E+06	SHORT HLIF
RH-101	1.010E-02	1.365E-02	1.304E-02	6.963E-03	NOT IDENT.
RH-102	-2.232E-03	1.640E-02	1.375E-02	8.366E-03	NOT IDENT.
RU-103	3.455E-03	2.274E-02	1.982E-02	1.160E-02	NOT IDENT.
RH-106	-1.957E-01	2.138E-01	1.509E-01	1.091E-01	NOT IDENT.
RU-106	-1.957E-01	2.129E-01	1.509E-01	1.086E-01	NOT IDENT.
AG-108M	7.511E-05	2.024E-02	1.744E-02	1.033E-02	NOT IDENT.
CD-109	4.211E-02	1.818E-01	1.641E-01	9.274E-02	NOT IDENT.
AG-110M	5.583E-03	1.814E-02	1.672E-02	9.253E-03	NOT IDENT.
IN-111	-3.361E-02	6.940E-02	5.855E-02	3.541E-02	NOT IDENT.
IN-113M	4.047E-03	2.410E-02	2.131E-02	1.229E-02	NOT IDENT.
SN-113	4.047E-03	2.410E-02	2.131E-02	1.229E-02	NOT IDENT.
IN-114M	-8.922E-03	7.105E-02	6.340E-02	3.625E-02	NOT IDENT.
CD-115	-3.885E-01	5.506E-01	4.079E-01	2.809E-01	NOT IDENT.
SN-117M	1.236E-02	1.578E-02	1.453E-02	8.050E-03	NOT IDENT.
SB-122	-2.962E-02	1.669E-01	1.371E-01	8.516E-02	NOT IDENT.
I-123	1.085E+02	1.529E+02	0.000E+00	7.803E+01	SHORT HLIF
TE-123M	8.229E-03	1.160E-02	1.062E-02	5.917E-03	NOT IDENT.
I-124	1.931E-02	1.285E-01	1.106E-01	6.556E-02	NOT IDENT.
SB-124	-3.244E-02	7.403E-02	5.624E-02	3.777E-02	NOT IDENT.
SB-125	-3.660E-02	5.383E-02	4.209E-02	2.747E-02	NOT IDENT.
TE-125M	-1.841E+00	2.869E+00	2.175E+00	1.464E+00	NOT IDENT.
I-126	6.899E-02	7.383E-02	7.290E-02	3.767E-02	NOT IDENT.
SB-126	-3.045E-03	5.577E-02	4.819E-02	2.845E-02	NOT IDENT.
SN-126	2.990E-03	1.760E-02	1.581E-02	8.980E-03	NOT IDENT.
SB-127	-1.750E-01	2.019E-01	1.494E-01	1.030E-01	NOT IDENT.
XE-127	-6.565E-03	1.691E-02	1.466E-02	8.628E-03	NOT IDENT.
I-131	5.277E-02	3.611E-02	3.600E-02	1.842E-02	NOT IDENT.
TE-132	4.611E-03	6.075E-02	5.465E-02	3.100E-02	NOT IDENT.
BA-133	-8.596E-03	2.609E-02	2.193E-02	1.331E-02	NOT IDENT.
I-133	-1.488E+00	7.059E+00	0.000E+00	3.602E+00	SHORT HLIF
CS-134	3.451E-03	2.820E-02	2.492E-02	1.439E-02	NOT IDENT.
CS-135	1.644E-02	7.479E-02	6.766E-02	3.816E-02	NOT IDENT.
I-135	-4.293E+06	1.428E+07	0.000E+00	7.288E+06	SHORT HLIF
CS-136	-8.120E-03	5.899E-02	4.897E-02	3.010E-02	NOT IDENT.
BA-137M	-9.564E-03	2.004E-02	1.617E-02	1.023E-02	NOT IDENT.
CS-137	-1.011E-02	2.119E-02	1.709E-02	1.081E-02	NOT IDENT.
CE-139	-1.049E-03	1.147E-02	1.033E-02	5.850E-03	NOT IDENT.
BA-140	1.035E-01	1.169E-01	1.071E-01	5.965E-02	NOT IDENT.
LA-140	-4.419E-02	4.902E-02	3.210E-02	2.501E-02	NOT IDENT.
CE-141	2.435E-03	2.065E-02	1.804E-02	1.054E-02	NOT IDENT.
CE-143	-3.681E-01	1.362E+00	1.165E+00	6.949E-01	NOT IDENT.
CE-144	2.288E-02	7.704E-02	6.862E-02	3.931E-02	NOT IDENT.
PM-144	1.133E-02	2.460E-02	2.271E-02	1.255E-02	NOT IDENT.
PR-144	7.648E-01	1.660E+00	1.533E+00	8.471E-01	NOT IDENT.
PM-146	3.145E-03	2.489E-02	2.175E-02	1.270E-02	NOT IDENT.
ND-147	-6.510E-02	1.964E-01	1.574E-01	1.002E-01	NOT IDENT.
PM-149	1.198E+00	4.429E+00	4.008E+00	2.260E+00	NOT IDENT.
EU-152	-1.395E-02	5.469E-02	4.642E-02	2.790E-02	NOT IDENT.
GD-153	1.013E-04	2.076E-02	1.828E-02	1.059E-02	NOT IDENT.
EU-154	-3.475E-03	7.101E-02	5.864E-02	3.623E-02	NOT IDENT.
EU-155	3.584E-02	3.265E-02	3.151E-02	1.666E-02	NOT IDENT.
TB-160	-1.175E-01	9.094E-02	5.833E-02	4.640E-02	NOT IDENT.
HO-166M	-3.624E-03	4.220E-02	3.638E-02	2.153E-02	NOT IDENT.
TM-171	-3.809E-02	4.304E+00	3.845E+00	2.196E+00	NOT IDENT.
LU-176	4.576E-03	1.311E-02	1.194E-02	6.691E-03	NOT IDENT.
LU-177	5.930E-02	2.034E-01	1.871E-01	1.038E-01	NOT IDENT.
LU-177M	-2.588E-02	1.029E-01	8.617E-02	5.250E-02	NOT IDENT.
HF-181	3.124E-03	2.142E-02	1.873E-02	1.093E-02	NOT IDENT.
W-181	1.133E-02	5.373E-02	4.720E-02	2.742E-02	NOT IDENT.
TA-182	2.828E-02	1.056E-01	9.362E-02	5.387E-02	NOT IDENT.
RE-183	-2.612E-03	4.114E-02	3.718E-02	2.099E-02	NOT IDENT.
RE-184	1.707E-02	1.080E-01	9.739E-02	5.508E-02	NOT IDENT.
OS-185	-6.696E-03	2.544E-02	2.034E-02	1.298E-02	NOT IDENT.
RE-188	-7.877E-03	6.402E-02	5.445E-02	3.266E-02	NOT IDENT.
W-188	-4.238E-01	3.473E+00	3.025E+00	1.772E+00	NOT IDENT.
IR-192	4.161E-03	1.694E-02	1.526E-02	8.645E-03	NOT IDENT.

AU-195	1.295E-02	5.620E-02	5.067E-02	2.868E-02	NOT IDENT.
TL-200	-1.459E+00	2.108E+00	1.686E+00	1.076E+00	NOT IDENT.
TL-201	-1.571E-01	4.997E-01	4.414E-01	2.550E-01	NOT IDENT.
TL-202	1.776E-02	2.970E-02	2.729E-02	1.515E-02	NOT IDENT.
HG-203	-5.990E-03	1.620E-02	1.372E-02	8.264E-03	NOT IDENT.
BI-207	2.165E-02	2.951E-02	2.893E-02	1.506E-02	NOT IDENT.
TL-207	-5.650E-02	3.389E-01	2.914E-01	1.729E-01	NOT IDENT.
TL-208	5.226E-03	2.586E-02	2.209E-02	1.320E-02	NOT IDENT.
PO-209	2.613E+00	4.791E+00	4.507E+00	2.445E+00	NOT IDENT.
BI-210	-9.202E-02	1.681E-01	1.438E-01	8.576E-02	NOT IDENT.
PB-210	-9.202E-02	1.681E-01	1.438E-01	8.576E-02	NOT IDENT.
PO-210	-9.202E-02	1.680E-01	1.438E-01	8.574E-02	NOT IDENT.
BI-211	-1.104E-02	1.332E-01	1.106E-01	6.796E-02	NOT IDENT.
PB-211	-5.992E-01	6.132E-01	3.499E-01	3.129E-01	NOT IDENT.
BI-212	2.395E-02	1.549E-01	1.386E-01	7.904E-02	NOT IDENT.
PB-212	1.502E-02	2.961E-02	2.656E-02	1.511E-02	NOT IDENT.
PO-212	1.502E-02	2.961E-02	2.656E-02	1.511E-02	NOT IDENT.
BI-214	2.328E-02	4.183E-02	3.824E-02	2.134E-02	NOT IDENT.
PB-214	1.965E-03	4.658E-02	3.918E-02	2.377E-02	NOT IDENT.
PO-214	1.965E-03	4.658E-02	3.918E-02	2.377E-02	NOT IDENT.
PO-215	-5.650E-02	3.389E-01	2.914E-01	1.729E-01	NOT IDENT.
PO-216	1.502E-02	2.961E-02	2.656E-02	1.511E-02	NOT IDENT.
PO-218	1.965E-03	4.658E-02	3.918E-02	2.377E-02	NOT IDENT.
RN-219	7.473E-02	2.225E-01	2.006E-01	1.135E-01	NOT IDENT.
RN-220	1.964E+00	1.733E+01	1.494E+01	8.841E+00	NOT IDENT.
RA-223	-5.650E-02	3.389E-01	2.914E-01	1.729E-01	NOT IDENT.
RA-224	2.972E-01	3.004E-01	2.897E-01	1.533E-01	NOT IDENT.
RA-226	2.328E-02	4.183E-02	3.824E-02	2.134E-02	NOT IDENT.
AC-227	-3.958E-02	1.859E-01	1.616E-01	9.486E-02	NOT IDENT.
TH-227	-3.958E-02	1.860E-01	1.616E-01	9.488E-02	NOT IDENT.
AC-228	1.781E-02	9.195E-02	8.135E-02	4.691E-02	NOT IDENT.
RA-228	1.781E-02	9.195E-02	8.135E-02	4.691E-02	NOT IDENT.
TH-228	1.509E-02	2.961E-02	2.657E-02	1.511E-02	NOT IDENT.
TH-229	3.421E-03	2.110E-01	1.904E-01	1.077E-01	NOT IDENT.
TH-230	2.328E-02	4.183E-02	3.824E-02	2.134E-02	NOT IDENT.
PA-231	-1.986E-01	7.807E-01	6.711E-01	3.983E-01	NOT IDENT.
TH-231	-5.650E-02	3.389E-01	2.914E-01	1.729E-01	NOT IDENT.
U-231	-2.913E-02	8.272E-02	7.025E-02	4.220E-02	NOT IDENT.
TH-232	1.781E-02	9.195E-02	8.135E-02	4.691E-02	NOT IDENT.
PA-233	-1.932E-02	3.445E-02	2.840E-02	1.758E-02	NOT IDENT.
PA-234	2.306E-02	1.901E-01	1.663E-01	9.698E-02	NOT IDENT.
PA-234M	4.544E+00	4.119E+00	4.180E+00	2.101E+00	NOT IDENT.
TH-234	-8.490E-02	1.919E-01	1.585E-01	9.791E-02	NOT IDENT.
U-234	2.328E-02	4.183E-02	3.824E-02	2.134E-02	NOT IDENT.
U-235	-4.942E-02	8.396E-02	6.805E-02	4.283E-02	NOT IDENT.
NP-236	1.730E-02	3.406E-02	3.065E-02	1.738E-02	NOT IDENT.
NP-237	1.428E-02	5.011E-02	4.549E-02	2.557E-02	NOT IDENT.
U-238	-8.490E-02	1.919E-01	1.585E-01	9.791E-02	NOT IDENT.
NP-239	-2.697E-02	6.441E-02	5.373E-02	3.286E-02	NOT IDENT.
AM-241	2.082E-03	1.756E-02	1.595E-02	8.959E-03	NOT IDENT.
AM-243	1.823E-02	1.071E-02	1.079E-02	5.465E-03	NOT IDENT.
CM-243	-5.270E-03	2.995E-02	2.582E-02	1.528E-02	NOT IDENT.
CM-247	6.831E-03	1.889E-02	1.713E-02	9.635E-03	NOT IDENT.
CF-249	2.591E-03	2.005E-02	1.770E-02	1.023E-02	NOT IDENT.
CF-251	-3.373E-02	5.419E-02	4.645E-02	2.765E-02	NOT IDENT.
ANH-511	-2.552E-02	3.446E-02	3.331E-02	1.758E-02	NOT IDENT.

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                            CHARLESTON ,SC 29417                           *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	55.6060
46.50	55.6060
46.50	55.6060
48.70	56.7909
49.72	47.7304
51.35	44.7821
52.39	43.8248
52.97	49.9781
53.15	54.0706
53.44	52.0500
54.07	55.1570
56.28	58.3862
56.28	58.3864
57.37	54.3638
57.53	54.3747
57.53	54.3748
57.60	54.3795
57.98	45.1666
57.98	45.1666
59.32	50.3827
59.32	50.3827
59.40	50.3877
59.54	50.3964
59.72	57.6086
60.01	61.7453
61.10	55.6446
61.14	58.7387
61.30	57.7193
63.00	61.9683
63.29	64.0559
63.29	64.0559
63.58	64.0779
64.28	48.6153
65.12	50.7339
65.20	53.8450
65.20	53.8450
66.05	51.8251
66.72	61.2007
66.83	63.2835
66.91	63.2893
67.20	57.0832
67.20	57.0832
67.75	55.0420
67.85	58.1642
68.90	64.4727
68.90	64.4727
69.30	66.5825
69.67	72.8551
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70.83	70.8651
72.80	75.1967
72.87	75.2024
72.87	75.2024
74.67	47.0934
74.81	45.0071
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74.81	45.0071
74.81	45.0071
74.81	45.0071
74.81	45.0071
74.97	45.0148
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75.70	59.7175
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77.11	66.1026
77.11	66.1026

77.11	66.1026
77.11	66.1026
77.11	66.1026
78.38	70.3937
79.62	67.3286
79.80	67.3413
79.80	67.3413
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80.18	68.4203
80.30	68.4287
80.30	68.4287
80.57	61.0765
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81.07	56.8936
81.07	56.8936
81.07	56.8936
81.07	56.8936
82.60	51.7064
83.37	53.8587
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83.78	54.9378
83.78	54.9378
83.78	54.9378
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84.40	58.1433
84.90	59.2302
85.43	57.1451
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86.50	48.7308
86.54	48.7327
86.59	48.7351
86.72	48.7415
86.79	48.7446
86.94	52.9913
87.30	51.9500
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87.30	51.9500
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87.57	53.0241
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88.03	55.1701
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88.47	54.1322
89.95	74.4060
91.11	51.0784
92.29	51.1360
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92.38	52.2057
93.35	57.5858
94.00	56.5541
94.67	50.1831
94.67	50.1833
94.90	51.2621
94.90	51.2621
94.90	51.2621
94.90	51.2621
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95.87	58.7910
96.73	64.1872
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98.44	37.5014
98.44	37.5014
98.88	40.7322
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99.55	57.9180
99.86	61.1528
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100.10	62.2395
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103.76	57.0610
105.00	43.1122
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108.00	48.6287
109.28	56.2553
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111.00	55.2550

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112.95	56.4317
115.19	45.6653
116.30	55.5021
117.00	57.7120
117.00	57.7120
117.66	52.2960
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121.62	47.0001
121.78	47.0062
122.06	51.3905
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122.32	55.7758
122.32	55.7758
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123.07	64.5639
127.23	68.0714
129.76	69.3063
131.20	62.7756
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133.54	57.3721
135.34	50.8217
136.00	61.9011
136.25	61.9127
136.48	61.9233
140.51	61.0009
140.51	0.0000
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142.65	63.3192
143.76	70.0413
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144.24	68.9539
144.24	68.9539
144.24	68.9539
145.22	57.8736
145.44	57.8827
147.16	55.7255
152.43	58.1727
152.70	53.7081
153.22	51.4892
154.21	53.7653
154.21	53.7653
154.21	53.7653
154.21	53.7653
155.03	60.5205
156.02	72.8989
158.56	53.9279
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159.00	55.0682
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162.32	63.0778
162.64	68.4993
163.35	67.6305
163.89	64.0469
165.85	60.5184
167.43	64.1990
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171.86	56.2257
172.10	58.0484
176.55	72.7705
176.60	70.0440
181.06	58.3848
184.41	57.5940
185.71	58.5559
186.00	58.5668
190.27	64.2271
192.34	56.0404
193.63	55.1653
197.04	53.4365
198.01	47.9365
198.60	47.9537
200.40	60.0068
201.83	55.4377
202.84	58.2446
205.31	52.7744
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208.81	49.1712

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209.75	56.6242
210.97	56.6644
215.65	57.7481
216.55	55.9138
218.09	48.5012
222.10	58.8937
223.80	56.1423
226.40	45.9157
227.00	48.7430
227.08	48.7452
227.20	48.7484
228.16	50.6501
228.18	50.6507
228.18	50.6507
231.56	41.3475
235.69	69.6948
236.00	67.8226
236.00	67.8226
238.60	43.3914
238.63	43.3923
238.63	43.3923
238.63	43.3923
239.00	41.5137
240.98	45.3354
241.98	55.7547
241.98	55.7547
241.98	55.7547
244.69	52.0489
245.39	45.4412
247.94	46.4501
248.90	49.3187
249.79	39.8528
252.40	46.5578
252.85	45.6182
252.85	45.6182
254.15	0.0000
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256.20	50.4568
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260.90	45.8063
262.80	39.1637
264.65	46.8485
268.24	44.0594
268.79	34.4905
269.46	38.3354
269.46	38.3354
269.46	38.3354
269.46	38.3354
271.23	39.3284
273.65	39.3754
276.40	33.6584
277.35	39.4465
277.60	42.3382
277.60	42.3382
278.00	44.2711
278.60	39.4705
279.20	40.4450
279.53	33.7093
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281.68	32.7802
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284.30	47.3019
285.00	45.3861
285.90	45.4056
286.10	41.5455
286.10	41.5455
287.40	43.5048
288.45	0.0000
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290.80	46.4795
291.72	50.3750
293.26	47.5028
293.70	45.5737
295.21	41.7245
295.21	41.7245
295.21	41.7245
295.96	40.7685

296.50	43.6915
297.23	44.6776
298.57	41.7901
299.80	42.7861
299.80	42.7861
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300.09	50.5724
300.09	50.5724
300.10	50.5724
300.12	50.5730
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302.84	42.8463
303.76	42.8640
303.91	42.8672
304.40	43.8514
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304.84	44.8348
306.84	39.0225
308.46	44.9090
311.98	46.9362
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319.41	44.1491
320.08	41.2181
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323.87	39.3213
323.87	39.3213
323.87	39.3213
325.23	38.3611
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333.44	33.5630
334.20	37.5241
334.20	37.5241
334.30	37.5255
338.28	38.5792
338.28	38.5792
338.28	38.5792
338.28	38.5792
338.32	38.5796
338.32	38.5796
338.32	38.5796
340.50	37.6257
340.57	39.6069
344.27	42.6446
345.85	38.7034
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351.92	34.8227
351.92	34.8227
351.92	34.8227
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356.01	46.8414
364.48	27.0026
366.43	35.0316
367.43	47.0614
367.94	45.0681
369.80	43.0976
374.96	38.1651
383.85	34.2689
387.95	25.2383
388.63	29.2843
391.69	31.3413
391.69	31.3413
392.90	33.3791
398.62	35.4807
400.65	26.3774
401.10	27.3968
401.81	26.3891
402.60	23.3515
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411.60	21.3937
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414.70	33.6582
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439.47	31.9078
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439.89	31.9127
443.98	31.9597
444.90	37.1268
445.03	37.1285
445.03	37.1285
445.03	37.1285
445.03	37.1285
453.90	24.8306
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473.00	16.6643
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475.35	21.8895
476.78	20.8574
477.59	19.8201
477.96	23.9959
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484.57	15.6846
487.03	26.1627
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511.85	24.2688
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513.99	78.1372
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568.70	20.4106
569.32	18.2655
569.50	21.4897
569.67	21.4912
573.80	27.9735
574.00	29.0507
574.64	26.9043
578.91	23.7064
579.30	22.6314
583.14	19.4208
585.48	19.4344
591.81	19.4708
592.07	22.7175
593.00	19.4779
595.88	27.0752
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602.71	26.0443
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604.70	30.4028
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609.31	17.3965
609.31	17.3965

609.31	17.3965
610.33	20.6644
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614.37	19.5996
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621.84	28.3715
631.29	17.5066
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636.97	19.7266
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661.65	19.3107
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666.33	13.8110
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696.49	23.2061
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699.00	29.7233
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713.82	15.8521
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722.89	15.8894
722.95	15.8898
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727.18	13.0999
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747.13	13.1666
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753.82	13.1888
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756.15	17.9099
756.87	16.0274
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766.84	15.1221
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768.36	17.0189
768.36	17.0189
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778.89	17.0632
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873.19	9.6926
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889.25	17.5100
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911.07	15.6400
911.07	15.6400
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934.06	8.8418
934.06	8.8418
934.06	8.8418
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969.11	14.8471
969.11	14.8471
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983.50	12.9064
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1077.35	8.6726
1085.78	7.0940
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1112.84	11.2063
1115.52	11.2122
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1120.29	9.1816
1120.29	9.1816
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1147.95	0.0000
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1236.41	0.0000
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1238.11	8.3398
1238.11	8.3398
1238.11	8.3398
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1274.54	8.3932
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1298.22	0.0000
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1325.50	13.7585
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1368.21	6.3955
1368.53	0.0000
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1377.67	10.6755
1377.67	10.6755
1377.67	10.6755
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1434.06	10.7731
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1460.81	8.6553
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1596.49	12.3067
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1691.02	10.5561
1691.02	10.5561

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1750.46	0.0000
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1764.49	8.7253
1764.49	8.7253
1764.49	8.7253
1770.23	8.7322
1771.40	8.7335
1791.20	0.0000
1808.65	5.8518
1836.01	5.8732

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201874832

Total Uranium Activity	-2.7544E-01	ug/g
Total Uranium Counting Unc.	5.7222E-01	ug/g
Total Uranium Tpu	2.9195E-07	ug/g
Total Uranium Mda	4.7259E-01	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                               GROSS GAMMA REPORT                          *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G1201874832      *
*   ANALYST       : MXR1                      DETECTOR   : GAM21            *
*   SAMPLE DATE   :  7-JUL-2009 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 11:22:57.85    SAMPLE ALQT:  144.470 GRAM    *
*                                                                           *
*****************************************************************************
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GROSS GAMMA ACTIVITY (pCi/GRAM) : 2.660E-02
GROSS GAMMA ERROR (pCi/GRAM) : 1.894E-02
GROSS GAMMA MDA (pCi/GRAM) : 9.943E-02
GROSS GAMMA DLC (pCi/GRAM) : 4.614E-02

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:24:36.71

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 11:23:48
Sample ID         : G1201874833          Sample quantity  : 1.33070E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.87  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.69*	125	678	1.17	94.56	90	11	1.73E-02	44.0	
2	0	62.92*	185	976	1.41	127.00	120	12	2.57E-02	35.0	
3	3	74.71*	734	552	1.20	150.58	143	16	1.02E-01	6.6	1.34E+00
4	3	76.95*	1038	520	1.10	155.05	143	16	1.44E-01	5.0	
5	2	84.33*	168	425	1.52	169.81	166	27	2.33E-02	21.5	2.79E+00
6	2	87.23	379	456	1.33	175.60	166	27	5.26E-02	11.2	
7	2	89.68	287	431	1.29	180.50	166	27	3.99E-02	14.4	
8	2	92.70*	354	454	1.53	186.53	166	27	4.92E-02	13.2	
9	0	185.99*	155	398	1.34	373.03	368	10	2.16E-02	26.3	
10	0	209.00	166	259	1.02	419.03	415	9	2.30E-02	19.1	
11	2	238.60*	1406	193	1.35	478.21	471	18	1.95E-01	3.2	4.62E+00
12	2	241.70	313	209	1.77	484.39	471	18	4.34E-02	11.0	
13	0	270.17	120	311	1.64	541.30	535	14	1.66E-02	32.7	
14	1	295.18	422	140	1.67	591.30	584	34	5.87E-02	7.2	2.86E+00
15	1	299.88	128	148	1.68	600.70	584	34	1.78E-02	20.2	
16	0	328.40	73	241	1.87	657.69	651	13	1.01E-02	45.6	
17	0	338.04	246	213	1.17	676.98	672	12	3.42E-02	13.4	
18	0	351.95*	660	161	1.55	704.78	699	12	9.17E-02	5.5	
19	0	408.72	54	113	2.73	818.23	815	10	7.53E-03	38.8	
20	0	463.16	67	116	1.88	927.04	922	11	9.27E-03	33.5	
21	0	510.66*	89	176	1.82	1021.98	1014	15	1.24E-02	38.4	
22	0	583.29*	362	123	1.54	1167.12	1160	14	5.03E-02	8.4	
23	0	609.38*	457	127	1.55	1219.26	1212	13	6.35E-02	7.0	
24	0	727.43	109	86	1.53	1455.16	1447	15	1.51E-02	21.0	
25	0	795.33	36	60	1.53	1590.83	1587	9	4.99E-03	42.0	
26	0	860.63	50	62	1.33	1721.30	1717	9	7.01E-03	31.6	
27	0	911.52*	286	100	1.89	1822.98	1814	18	3.97E-02	10.0	
28	2	964.51	54	68	2.40	1928.83	1920	43	7.47E-03	33.4	1.59E+00
29	2	969.01*	144	51	2.37	1937.83	1920	43	2.00E-02	14.2	
30	0	1120.21	109	38	1.46	2239.87	2234	11	1.51E-02	14.6	
31	0	1460.92*	1273	52	2.05	2920.37	2912	18	1.77E-01	3.1	
32	0	1729.72	23	3	1.61	3457.12	3450	13	3.20E-03	26.2	
33	0	1764.70	64	8	2.94	3526.94	3519	16	8.90E-03	15.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 13:24:39

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 11:23:48
Sample ID : G1201874833 Sample quantity : 133.07 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.87 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.355E+01	2.958E+00	7.838E-01	4.874E-02	42.808
CD-109	+	88.03	*	3.731E+00	8.820E-01	1.003E+00	7.640E-02	3.719
SN-126	+	64.28		6.735E-01	4.814E-01	4.162E-01	6.203E-02	1.618
	+	86.94		1.527E+00	7.155E-01	4.093E-01	1.685E-01	3.731
	+	87.57	*	3.674E-01	8.684E-02	9.864E-02	7.512E-03	3.724
TL-208		277.35		4.333E-01	4.529E-01	7.273E-01	9.329E-02	0.596
	+	510.84		4.580E-01	3.548E-01	2.684E-01	2.820E-02	1.706
	+	583.14	*	5.373E-01	9.881E-02	6.780E-02	4.989E-03	7.925
	+	860.37		7.189E-01	4.597E-01	5.155E-01	5.231E-02	1.394
BI-210	+	46.50	*	1.139E+00	1.006E+00	8.633E-01	6.735E-02	1.319
PB-210	+	46.50	*	1.139E+00	1.006E+00	8.633E-01	6.735E-02	1.319
PO-210	+	46.50	*	1.139E+00	1.005E+00	8.633E-01	5.807E-02	1.319
BI-211		72.87		1.188E+01	2.389E+00	4.121E+00	3.244E-01	2.882
	+	351.07	*	4.096E+00	5.574E-01	3.570E-01	2.829E-02	11.471
PB-212	+	74.81		2.409E+00	4.335E-01	3.748E-01	4.570E-02	6.427
	+	77.11		2.029E+00	2.572E-01	2.210E-01	1.720E-02	9.183
	+	87.30		1.699E+00	4.361E-01	4.559E-01	5.731E-02	3.727
	+	238.63	*	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
	+	300.09		2.649E+00	1.105E+00	1.256E+00	1.335E-01	2.109
PO-212	+	74.81		2.409E+00	4.335E-01	3.748E-01	4.570E-02	6.427
	+	77.11		2.029E+00	2.572E-01	2.210E-01	1.720E-02	9.183
	+	87.30		1.699E+00	4.361E-01	4.559E-01	5.731E-02	3.727
		115.19		1.904E+00	3.541E+00	5.952E+00	7.574E-01	0.320
	+	238.63	*	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
	+	300.09		2.649E+00	1.105E+00	1.256E+00	1.335E-01	2.109
BI-214	+	609.31	*	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
		768.36		9.582E-02	9.513E-01	1.600E+00	1.612E-01	0.060
		934.06		1.078E+00	1.456E+00	2.535E+00	2.942E-01	0.425
	+	1120.29		1.613E+00	4.968E-01	5.909E-01	5.644E-02	2.730
		1238.11		2.169E+00	1.230E+00	2.210E+00	1.803E-01	0.982
		1377.67		1.166E+00	1.257E+00	2.290E+00	1.969E-01	0.509
	+	1764.49		1.329E+00	4.298E-01	3.057E-01	1.767E-02	4.346
PB-214	+	74.81		4.151E+00	7.085E-01	6.458E-01	6.961E-02	6.427
	+	77.11		3.479E+00	5.144E-01	3.788E-01	4.126E-02	9.183

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.911E+00	7.237E-01	7.809E-01	8.464E-02	3.727
	+	241.98		2.491E+00	6.142E-01	5.625E-01	6.339E-02	4.428
	+	295.21		1.529E+00	2.768E-01	2.198E-01	2.403E-02	6.957
	+	351.92	*	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
PO-214	+	74.81		4.151E+00	7.085E-01	6.458E-01	6.961E-02	6.427
	+	77.11		3.479E+00	5.144E-01	3.788E-01	4.126E-02	9.183
	+	87.30		2.911E+00	7.237E-01	7.809E-01	8.464E-02	3.727
	+	241.98		2.491E+00	6.142E-01	5.625E-01	6.339E-02	4.428
	+	295.21		1.529E+00	2.768E-01	2.198E-01	2.403E-02	6.957
	+	351.92	*	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
PO-216	+	74.81		2.409E+00	4.335E-01	3.748E-01	4.570E-02	6.427
	+	77.11		2.029E+00	2.572E-01	2.210E-01	1.720E-02	9.183
	+	87.30		1.699E+00	4.361E-01	4.559E-01	5.731E-02	3.727
	+	238.63	*	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
	+	300.09		2.649E+00	1.105E+00	1.256E+00	1.335E-01	2.109
PO-218	+	74.81		4.151E+00	7.085E-01	6.458E-01	6.961E-02	6.427
	+	77.11		3.479E+00	5.144E-01	3.788E-01	4.126E-02	9.183
	+	87.30		2.911E+00	7.237E-01	7.809E-01	8.464E-02	3.727
	+	241.98		2.491E+00	6.142E-01	5.625E-01	6.339E-02	4.428
	+	295.21		1.529E+00	2.768E-01	2.198E-01	2.403E-02	6.957
	+	351.92	*	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
RA-224	+	240.98	*	4.724E+00	1.134E+00	1.114E+00	1.090E-01	4.242
RA-226	+	609.31	*	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
		768.36		9.582E-02	9.513E-01	1.600E+00	1.612E-01	0.060
		934.06		1.078E+00	1.456E+00	2.535E+00	2.942E-01	0.425
	+	1120.29		1.613E+00	4.968E-01	5.909E-01	5.644E-02	2.730
		1238.11		2.169E+00	1.230E+00	2.210E+00	1.803E-01	0.982
		1377.67		1.166E+00	1.257E+00	2.290E+00	1.969E-01	0.509
	+	1764.49		1.329E+00	4.298E-01	3.057E-01	1.767E-02	4.346
AC-228	+	338.32		1.674E+00	8.218E-01	4.178E-01	1.718E-01	4.006
	+	911.07	*	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
	+	969.11		1.713E+00	6.340E-01	3.971E-01	9.378E-02	4.315
RA-228	+	338.32		1.674E+00	8.218E-01	4.178E-01	1.718E-01	4.006
	+	911.07	*	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
	+	969.11	-	1.713E+00	6.340E-01	3.971E-01	9.378E-02	4.315
TH-228	+	84.40		4.943E+00	2.212E+00	2.989E+00	3.745E-01	1.654
	+	238.60	*	1.864E+00	2.342E-01	9.782E-02	1.055E-02	19.051
	+	300.10		2.649E+00	1.900E+00	1.256E+00	7.449E-01	2.109
TH-230	+	609.31	*	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
		768.36		9.582E-02	9.513E-01	1.600E+00	1.612E-01	0.060
		934.06		1.078E+00	1.456E+00	2.535E+00	2.942E-01	0.425
	+	1120.29		1.613E+00	4.968E-01	5.909E-01	5.644E-02	2.730
		1238.11		2.169E+00	1.230E+00	2.209E+00	1.803E-01	0.982
		1377.67		1.166E+00	1.257E+00	2.290E+00	1.969E-01	0.509
	+	1764.49		1.329E+00	4.298E-01	3.057E-01	1.767E-02	4.346
TH-232	+	338.32		1.674E+00	4.681E-01	4.178E-01	3.276E-02	4.006
	+	911.07	*	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
	+	969.11		1.713E+00	6.340E-01	3.971E-01	9.378E-02	4.315
TH-234	+	63.29	*	1.702E+00	1.227E+00	1.042E+00	1.852E-01	1.632

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	92.38		2.383E+00	7.606E-01	6.850E-01	1.231E-01	3.479
U-234	+	609.31	*	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
		768.36		9.582E-02	9.513E-01	1.600E+00	1.612E-01	0.060
		934.06		1.078E+00	1.456E+00	2.535E+00	2.942E-01	0.425
	+	1120.29		1.613E+00	4.968E-01	5.909E-01	5.644E-02	2.730
		1238.11		2.169E+00	1.230E+00	2.209E+00	1.803E-01	0.982
		1377.67		1.166E+00	1.257E+00	2.290E+00	1.969E-01	0.509
	+	1764.49		1.329E+00	4.298E-01	3.057E-01	1.767E-02	4.346
NP-237	+	86.50	*	1.079E+00	3.385E-01	2.887E-01	6.352E-02	3.736
		95.87		-5.467E-01	9.376E-01	1.319E+00	3.267E-01	-0.414
U-238	+	63.29	*	1.702E+00	1.227E+00	1.042E+00	1.852E-01	1.632
	+	92.38		2.383E+00	6.596E-01	6.850E-01	5.731E-02	3.479
AM-243	+	74.67	*	3.905E-01	6.006E-02	6.075E-02	4.758E-03	6.428
	+	86.72		4.046E+01	9.562E+00	1.083E+01	8.264E-01	3.734
		117.66		-1.741E+00	3.837E+00	6.221E+00	8.237E-01	-0.280
		142.18		6.602E+00	1.820E+01	3.024E+01	3.757E+00	0.218
ANH-511	+	511.00	*	9.893E-02	7.620E-02	5.800E-02	3.712E-03	1.706

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	7.318E-04	3.628E-01	5.958E-01	4.268E-02	0.001
NA-22		1274.54	*	-1.244E-02	5.921E-02	9.386E-02	5.467E-03	-0.132
NA-24		1368.53	*	2.539E-01	5.921E-02	Half-Life too short		
AL-26		1129.67		8.510E-01	2.153E+00	3.627E+00	2.430E-01	0.235
		1808.65	*	2.370E-02	3.241E-02	6.066E-02	3.480E-03	0.391
TI-44		67.85		2.999E-03	4.103E-02	4.440E-02	3.553E-03	0.068
	+	78.38	*	3.745E-01	4.746E-02	6.274E-02	4.868E-03	5.968
SC-46		889.25	*	-5.056E-03	4.601E-02	7.548E-02	7.582E-03	-0.067
	+	1120.51		2.735E-01	8.228E-02	1.452E-01	9.988E-03	1.884
V-48		944.10		-6.761E-01	1.035E+00	1.604E+00	1.552E-01	-0.421
		983.50	*	-8.271E-02	9.910E-02	1.239E-01	1.135E-02	-0.667
		1312.09		3.732E-02	9.658E-02	1.621E-01	9.400E-03	0.230
CR-51		320.08	*	4.720E-02	3.918E-01	6.439E-01	5.694E-02	0.073
MN-52		744.21		-2.414E-02	2.376E-01	3.948E-01	3.065E-02	-0.061
		848.13		8.665E-01	7.000E+00	1.175E+01	1.101E+00	0.074
		935.52		3.281E-01	2.884E-01	5.143E-01	5.027E-02	0.638
		1246.25		-5.422E+00	8.655E+00	1.327E+01	7.717E-01	-0.409
		1333.61		-6.760E-02	5.252E+00	8.450E+00	4.891E-01	-0.008
		1434.06	*	8.575E-02	2.339E-01	4.075E-01	2.386E-02	0.210
MN-54		834.83	*	-1.838E-02	4.648E-02	7.539E-02	6.906E-03	-0.244
CO-56		846.75	*	-1.413E-02	4.797E-02	7.780E-02	7.275E-03	-0.182
		977.42		1.762E+00	3.390E+00	5.839E+00	5.398E-01	0.302
		1037.82		2.653E-01	3.793E-01	6.590E-01	5.813E-02	0.403
		1175.09		7.117E-01	3.214E+00	5.312E+00	3.082E-01	0.134
		1238.25		2.130E-01	1.225E-01	2.207E-01	1.364E-02	0.965
		1360.21		-7.940E-01	1.089E+00	1.654E+00	9.610E-02	-0.480
		1771.40		-9.057E-02	2.842E-01	3.579E-01	2.067E-02	-0.253

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57		122.06	*	-3.816E-04	2.639E-02	4.351E-02	6.174E-03	-0.009
		136.48		1.290E-01	2.248E-01	3.761E-01	5.037E-02	0.343
CO-58		810.76	*	-1.733E-03	4.584E-02	7.613E-02	6.700E-03	-0.023
FE-59		142.65		8.569E-01	2.788E+00	4.623E+00	5.725E-01	0.185
		192.34		-9.964E-02	1.011E+00	1.633E+00	2.341E-01	-0.061
		1099.22	*	2.663E-02	1.090E-01	1.819E-01	1.473E-02	0.146
		1291.56		8.464E-02	1.603E-01	2.717E-01	2.018E-02	0.312
CO-60		1173.22		3.551E-02	6.437E-02	1.089E-01	6.319E-03	0.326
		1332.49	*	3.091E-02	4.598E-02	7.994E-02	4.626E-03	0.387
ZN-65		1115.52	*	2.034E-02	1.295E-01	1.845E-01	1.289E-02	0.110
GE-68		1077.35	*	1.610E+00	1.658E+00	2.918E+00	2.241E-01	0.552
AS-73		53.44	*	6.769E-02	2.422E-01	3.997E-01	3.009E-02	0.169
AS-74		595.88	*	-3.670E-02	1.006E-01	1.584E-01	1.042E-02	-0.232
		634.78		7.285E-02	3.934E-01	6.450E-01	4.251E-02	0.113
SE-75		66.05		-1.643E+00	2.945E+00	4.256E+00	4.245E-01	-0.386
		96.73		-6.193E-01	7.682E-01	1.073E+00	1.498E-01	-0.577
		121.11		-2.614E-02	1.392E-01	2.281E-01	3.584E-02	-0.115
		136.00		4.046E-02	4.261E-02	7.186E-02	9.371E-03	0.563
		198.60		-5.028E-01	2.013E+00	3.153E+00	3.409E-01	-0.159
		264.65	*	-3.428E-02	5.786E-02	7.698E-02	7.349E-03	-0.445
		279.53		2.879E-02	1.229E-01	2.092E-01	2.003E-02	0.138
		303.91		2.139E+00	2.247E+00	3.920E+00	4.545E-01	0.546
		400.65		2.548E-01	2.963E-01	5.126E-01	4.691E-02	0.497
BR-77	+	87.88		5.788E+02	1.368E+02	2.224E+02	1.693E+01	2.602
		200.40		-8.542E+00	1.273E+02	2.054E+02	2.050E+01	-0.042
	+	239.00		2.145E+02	2.518E+01	2.949E+01	2.890E+00	7.274
		249.79		-6.861E+00	5.162E+01	8.215E+01	7.965E+00	-0.084
		281.68		-5.773E+01	7.405E+01	1.202E+02	1.111E+01	-0.480
		297.23		2.942E+02	5.638E+01	1.004E+02	8.961E+00	2.931
		303.76		1.315E+02	1.378E+02	2.409E+02	2.116E+01	0.546
		439.47		1.406E+02	1.198E+02	2.109E+02	1.285E+01	0.667
		484.57		-5.768E+00	1.817E+02	2.975E+02	1.875E+01	-0.019
		520.65	*	-3.886E+00	8.721E+00	1.379E+01	8.869E-01	-0.282
		574.64		-5.094E+01	1.866E+02	2.886E+02	1.891E+01	-0.176
		578.91		2.732E+01	7.920E+01	1.152E+02	7.556E+00	0.237
		585.48		1.256E+03	2.321E+02	4.180E+02	2.745E+01	3.005
		755.35		4.686E+01	1.478E+02	2.527E+02	2.004E+01	0.185
		817.79		-2.895E+01	1.089E+02	1.771E+02	1.575E+01	-0.163
SR-82		698.33		1.721E+01	4.046E+01	6.707E+01	4.757E+00	0.257
		776.49	*	-4.033E-01	4.715E-01	7.366E-01	6.077E-02	-0.548
		1395.20		-7.407E+00	1.247E+01	1.929E+01	1.126E+00	-0.384
RB-83		520.41	*	-2.095E-02	7.951E-02	1.275E-01	8.197E-03	-0.164
		529.64		6.243E-03	1.118E-01	1.833E-01	1.183E-02	0.034
		552.65		4.995E-02	2.227E-01	3.688E-01	2.402E-02	0.135
RB-84		881.50	*	1.246E-02	8.122E-02	1.363E-01	1.352E-02	0.091
KR-85		513.99	*	1.719E+01	1.091E+01	1.720E+01	1.103E+00	0.999
SR-85		513.99	*	8.709E-02	5.525E-02	8.714E-02	5.586E-03	0.999
RB-86		1076.63	*	9.856E-01	9.896E-01	1.747E+00	1.344E-01	0.564
Y-88		898.02		2.398E-02	5.390E-02	9.218E-02	9.426E-03	0.260

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1836.01	*	-7.236E-03	3.857E-02	6.075E-02	3.476E-03	-0.119
ZR-88		392.90	*	-4.993E-04	3.437E-02	5.696E-02	3.317E-03	-0.009
Y-91		1204.90	*	1.532E+01	2.496E+01	4.241E+01	2.465E+00	0.361
NB-94		702.63	*	2.473E-02	4.218E-02	7.064E-02	5.054E-03	0.350
		871.10		2.118E-03	3.942E-02	6.568E-02	6.402E-03	0.032
NB-95		765.79	*	2.494E-02	5.635E-02	9.669E-02	7.820E-03	0.258
NB-95M		235.69	*	3.735E-01	1.696E-01	2.594E-01	2.838E-02	1.439
ZR-95		724.18		8.821E-02	1.206E-01	1.874E-01	1.558E-02	0.471
		756.15	*	1.462E-02	8.803E-02	1.490E-01	1.323E-02	0.098
NB-97		657.90	*	2.557E-02	8.803E-02	Half-Life too short		
		1024.50		1.576E+00	8.803E-02	Half-Life too short		
ZR-97		254.15		-6.111E-01	8.803E-02	Half-Life too short		
		355.39		8.138E-01	8.803E-02	Half-Life too short		
		507.63	*	1.290E+00	8.803E-02	Half-Life too short		
		602.52		1.272E-01	8.803E-02	Half-Life too short		
		1021.30		1.492E+00	8.803E-02	Half-Life too short		
		1147.95		-1.016E+00	8.803E-02	Half-Life too short		
		1362.66		-4.828E+00	8.803E-02	Half-Life too short		
		1750.46		-4.832E-01	8.803E-02	Half-Life too short		
MO-99		140.51		-2.861E+01	2.259E+01	3.269E+01	9.537E+00	-0.875
		181.06		1.103E+01	1.591E+01	2.331E+01	4.420E+00	0.473
		366.43		-5.212E+01	6.502E+01	1.027E+02	7.045E+00	-0.508
		739.58	*	-2.396E+00	1.029E+01	1.693E+01	2.486E+00	-0.142
		778.00		-9.856E+00	3.178E+01	5.186E+01	4.291E+00	-0.190
TC-99M		140.51	*	-2.362E+09	3.178E+01	Half-Life too short		
RH-101		127.23		4.058E-02	3.536E-02	5.977E-02	8.227E-03	0.679
		198.01	*	-6.277E-03	3.694E-02	5.809E-02	5.801E-03	-0.108
		325.23		1.177E-01	2.684E-01	4.032E-01	3.319E-02	0.292
RH-102		418.52		-1.089E-01	3.507E-01	5.619E-01	3.360E-02	-0.194
		475.06	*	-2.623E-02	3.409E-02	5.305E-02	3.323E-03	-0.495
		631.29		-4.605E-02	6.540E-02	9.950E-02	6.559E-03	-0.463
		697.49		1.211E-02	9.606E-02	1.558E-01	1.103E-02	0.078
		766.84		1.060E-01	1.449E-01	2.525E-01	2.046E-02	0.420
		1046.59		8.640E-04	1.340E-01	2.198E-01	1.804E-02	0.004
		1112.84		3.262E-01	3.122E-01	5.067E-01	3.561E-02	0.644
RU-103		497.08	*	-7.603E-03	4.440E-02	7.183E-02	9.272E-03	-0.106
	+	610.33		1.358E+01	2.855E+00	3.310E+00	5.208E-01	4.103
RH-106	+	511.85		4.931E-01	3.798E-01	5.015E-01	3.211E-02	0.983
		621.84	*	1.283E-01	3.803E-01	6.304E-01	7.659E-02	0.204
		1050.47		1.010E+00	2.760E+00	4.671E+00	3.803E-01	0.216
RU-106	+	511.85		4.931E-01	3.798E-01	5.015E-01	3.211E-02	0.983
		621.84	*	1.283E-01	3.800E-01	6.304E-01	4.156E-02	0.204
		1050.47		1.010E+00	2.760E+00	4.671E+00	3.803E-01	0.216
AG-108M		433.93	*	4.809E-03	3.840E-02	6.385E-02	4.178E-03	0.075
		614.37		-1.087E-02	5.557E-02	7.603E-02	5.342E-03	-0.143
		722.95		1.402E-02	4.942E-02	7.388E-02	5.791E-03	0.190
AG-110M		657.75	*	2.380E-02	4.363E-02	7.313E-02	5.055E-03	0.325
		677.61		2.832E-01	3.491E-01	5.991E-01	4.256E-02	0.473
		706.67		6.737E-03	2.553E-01	4.105E-01	3.077E-02	0.016

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		763.93		4.449E-02	2.193E-01	3.713E-01	3.089E-02	0.120
		884.67		-1.718E-02	6.004E-02	9.702E-02	9.905E-03	-0.177
		937.48		1.015E-01	1.431E-01	2.487E-01	2.494E-02	0.408
		1384.27		-1.231E-01	2.016E-01	3.137E-01	1.939E-02	-0.392
IN-111		171.28		-1.940E-01	8.455E-01	1.364E+00	1.357E-01	-0.142
		245.39	*	-3.467E-01	9.866E-01	1.345E+00	1.310E-01	-0.258
IN-113M		391.69	*	-2.439E-02	5.083E-02	8.202E-02	5.088E-03	-0.297
SN-113		391.69	*	-2.439E-02	5.083E-02	8.202E-02	5.088E-03	-0.297
IN-114M		190.27	*	1.509E-01	2.221E-01	3.266E-01	3.262E-02	0.462
CD-115		260.90		4.745E+01	1.005E+02	1.646E+02	1.573E+01	0.288
		492.35		1.621E+01	2.963E+01	5.031E+01	3.187E+00	0.322
		527.90	*	-1.675E-01	8.409E+00	1.371E+01	8.846E-01	-0.012
SN-117M		156.02		1.050E+00	2.381E+00	3.953E+00	4.359E-01	0.266
		158.56	*	1.308E-04	5.719E-02	9.345E-02	1.005E-02	0.001
SB-122		563.90	*	1.010E+00	1.890E+00	3.185E+00	2.081E-01	0.317
		692.80		-3.423E+01	4.091E+01	6.122E+01	4.294E+00	-0.559
I-123		159.00	*	-6.087E-01	4.091E+01	Half-Life too short		
		528.96		-4.035E+01	4.091E+01	Half-Life too short		
TE-123M		159.00	*	-1.270E-02	3.144E-02	5.052E-02	5.428E-03	-0.251
I-124		602.71	*	-1.478E-01	7.602E-01	1.041E+00	6.855E-02	-0.142
		722.78		-5.346E-02	4.416E+00	6.385E+00	4.755E-01	-0.008
		1325.50		-7.482E+00	3.414E+01	5.357E+01	3.102E+00	-0.140
		1376.25		2.579E+01	3.265E+01	5.893E+01	3.431E+00	0.438
		1509.49		3.484E+00	1.442E+01	2.471E+01	1.453E+00	0.141
		1691.02		5.047E-01	2.822E+00	4.831E+00	2.819E-01	0.104
SB-124		602.71		-1.024E-02	5.270E-02	7.219E-02	4.754E-03	-0.142
		645.85		-3.182E-01	6.204E-01	9.602E-01	6.962E-02	-0.331
		709.31		-2.996E+00	3.314E+00	5.197E+00	3.769E-01	-0.577
		713.82		6.269E-01	1.915E+00	3.286E+00	3.661E-01	0.191
		722.78		-5.372E-03	4.438E-01	6.416E-01	4.916E-02	-0.008
	+	968.20		1.741E+01	5.219E+00	8.342E+00	7.814E-01	2.087
		1045.16		-1.015E+00	2.855E+00	4.518E+00	3.717E-01	-0.225
		1325.50		-8.030E-01	3.664E+00	5.749E+00	3.329E-01	-0.140
		1368.21		2.109E+00	2.063E+00	3.804E+00	4.519E-01	0.555
		1436.60		-2.641E+00	4.659E+00	7.230E+00	4.235E-01	-0.365
		1691.02	*	1.196E-02	6.689E-02	1.145E-01	7.247E-03	0.104
SB-125		427.89	*	6.328E-02	1.093E-01	1.865E-01	1.169E-02	0.339
	+	463.38		6.621E-01	4.462E-01	6.081E-01	4.330E-02	1.089
		600.56		2.046E-01	2.073E-01	3.516E-01	2.600E-02	0.582
		635.90		1.850E-02	3.205E-01	5.200E-01	3.889E-02	0.036
TE-125M		109.28	*	8.096E+00	9.031E+00	1.531E+01	1.968E+00	0.529
I-126		388.63		-7.605E-02	2.242E-01	3.651E-01	2.173E-02	-0.208
		666.33	*	1.461E-01	2.070E-01	3.508E-01	2.329E-02	0.417
		753.82		8.578E-01	1.688E+00	2.923E+00	2.312E-01	0.293
SB-126		223.80		2.246E+00	4.129E+00	6.808E+00	6.746E-01	0.330
		278.60		2.550E+00	2.572E+00	4.498E+00	4.179E-01	0.567
	+	296.50		1.428E+01	2.427E+00	3.712E+00	3.320E-01	3.847
		414.70		8.501E-02	8.931E-02	1.383E-01	8.241E-03	0.615
		415.30		3.733E+00	7.484E+00	1.166E+01	6.950E-01	0.320

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		555.20		-8.026E-02	4.220E+00	6.861E+00	4.472E-01	-0.012
		573.80		-3.025E-01	1.174E+00	1.873E+00	1.227E-01	-0.162
		593.00		-1.210E-01	9.895E-01	1.589E+00	1.045E-01	-0.076
		656.30		2.527E+00	3.867E+00	6.537E+00	4.302E-01	0.387
		666.33		6.091E-02	8.625E-02	1.462E-01	9.709E-03	0.417
		675.00		-7.379E-01	2.159E+00	3.370E+00	2.279E-01	-0.219
		695.00		3.599E-02	9.121E-02	1.470E-01	1.036E-02	0.245
		697.00		-1.114E-01	3.312E-01	5.053E-01	3.575E-02	-0.220
		720.50	*	-7.414E-02	1.739E-01	2.393E-01	1.775E-02	-0.310
		856.80		2.114E-02	5.825E-01	8.360E-01	7.954E-02	0.025
		989.30		8.812E-01	1.572E+00	2.699E+00	2.450E-01	0.327
		1034.80		5.354E+00	1.067E+01	1.822E+01	1.530E+00	0.294
		1213.00		-3.784E+00	6.079E+00	9.376E+00	5.450E-01	-0.404
SB-127		61.10		2.937E+01	2.174E+01	3.751E+01	3.947E+00	0.783
		252.40		3.258E-02	3.816E+00	6.115E+00	2.579E+00	0.005
		290.80		-5.806E+00	1.995E+01	2.862E+01	3.201E+00	-0.203
		411.60		-3.418E+00	1.373E+01	1.932E+01	2.738E+00	-0.177
		444.90		-3.639E+00	9.332E+00	1.499E+01	1.594E+00	-0.243
		473.00		-8.743E-01	1.637E+00	2.592E+00	2.876E-01	-0.337
		543.00		6.088E+00	1.559E+01	2.611E+01	3.382E+00	0.233
		603.60		-4.395E+00	1.301E+01	1.754E+01	1.907E+00	-0.251
		685.20	*	1.004E+00	1.399E+00	2.367E+00	2.316E-01	0.424
		698.50		-1.156E+00	1.556E+01	2.485E+01	3.677E+00	-0.047
		722.20		-1.879E-01	2.922E+01	4.227E+01	4.191E+00	-0.004
		783.80		1.390E+00	3.520E+00	6.040E+00	7.210E-01	0.230
XE-127		57.60		2.064E+00	2.440E+00	3.750E+00	3.019E-01	0.550
		145.22		5.023E-01	7.393E-01	1.219E+00	1.479E-01	0.412
		172.10		8.416E-02	1.277E-01	2.130E-01	2.119E-02	0.395
		202.84	*	-5.371E-03	5.141E-02	7.986E-02	7.971E-03	-0.067
		374.96		9.219E-02	2.216E-01	3.766E-01	2.458E-02	0.245
I-131		80.18		2.524E+00	4.521E+00	5.024E+00	3.909E-01	0.502
		284.30		-1.421E-01	1.534E+00	2.574E+00	2.472E-01	-0.055
		364.48	*	-1.142E-01	1.108E-01	1.724E-01	1.293E-02	-0.662
		636.97		-1.494E-01	1.714E+00	2.749E+00	1.979E-01	-0.054
		722.89		2.241E+00	7.550E+00	1.130E+01	8.482E-01	0.198
TE-132		49.72		-3.233E+00	3.699E+00	5.306E+00	4.961E-01	-0.609
		111.76		-1.976E+01	2.318E+01	3.696E+01	4.982E+00	-0.535
		116.30		6.022E+00	2.162E+01	3.605E+01	5.163E+00	0.167
		228.16	*	-5.910E-01	6.022E-01	9.110E-01	1.480E-01	-0.649
BA-133		53.15		4.798E-01	1.019E+00	1.692E+00	1.268E-01	0.284
		79.62		1.494E+00	1.424E+00	1.617E+00	2.384E-01	0.924
		81.00		7.257E-02	1.058E-01	1.182E-01	1.820E-02	0.614
		276.40		3.772E-01	4.623E-01	7.086E-01	1.054E-01	0.532
		302.84		1.845E-01	1.566E-01	2.740E-01	3.673E-02	0.673
		356.01	*	-1.495E-02	5.213E-02	7.369E-02	9.100E-03	-0.203
		383.85		2.291E-02	3.529E-01	5.882E-01	6.509E-02	0.039
I-133	+	510.53		4.038E-01	3.529E-01	Half-Life too short		
		529.87	*	3.455E-04	3.529E-01	Half-Life too short		
		706.58		2.124E-02	3.529E-01	Half-Life too short		

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		856.28		4.080E-02	3.529E-01	Half-Life too short		
		875.33		2.005E-02	3.529E-01	Half-Life too short		
		1236.41		4.766E-01	3.529E-01	Half-Life too short		
		1298.22		-1.189E-01	3.529E-01	Half-Life too short		
CS-134		475.35		-1.924E+00	2.215E+00	3.419E+00	2.142E-01	-0.563
		563.23		2.082E-01	4.349E-01	7.306E-01	4.852E-02	0.285
		569.32		8.562E-02	2.438E-01	4.057E-01	2.718E-02	0.211
		604.70		-7.293E-03	4.543E-02	6.306E-02	4.170E-03	-0.116
	+	795.84	*	7.826E-02	6.609E-02	1.083E-01	9.330E-03	0.722
		801.93		-5.585E-01	5.435E-01	7.266E-01	6.315E-02	-0.769
		1038.57		1.099E+00	4.715E+00	7.893E+00	6.579E-01	0.139
		1167.94		-2.524E+00	3.482E+00	5.327E+00	3.150E-01	-0.474
		1365.15		-2.106E-01	1.318E+00	2.159E+00	1.378E-01	-0.098
CS-135		268.24	*	3.282E-01	2.149E-01	3.247E-01	3.473E-02	1.011
I-135		288.45		-3.971E+08	2.149E-01	Half-Life too short		
		417.63		-4.809E+08	2.149E-01	Half-Life too short		
		546.56		-7.706E+07	2.149E-01	Half-Life too short		
		836.80		5.607E+07	2.149E-01	Half-Life too short		
		1038.76		1.601E+08	2.149E-01	Half-Life too short		
		1124.00		-5.235E+08	2.149E-01	Half-Life too short		
		1131.51		2.555E+08	2.149E-01	Half-Life too short		
		1260.41	*	-1.488E+08	2.149E-01	Half-Life too short		
		1457.56		4.300E+10	2.149E-01	Half-Life too short		
		1678.03		-2.278E+07	2.149E-01	Half-Life too short		
		1706.46		4.866E+08	2.149E-01	Half-Life too short		
		1791.20		8.008E+08	2.149E-01	Half-Life too short		
CS-136		66.91		-1.155E-01	4.956E-01	6.772E-01	1.024E-01	-0.171
	+	86.29		4.514E+00	1.151E+00	1.635E+00	1.996E-01	2.761
		153.22		-3.156E-02	6.874E-01	1.123E+00	1.360E-01	-0.028
		163.89		-5.543E-01	1.100E+00	1.757E+00	1.940E-01	-0.316
		176.55		-3.479E-01	3.775E-01	5.875E-01	6.106E-02	-0.592
		273.65		-8.134E-01	5.699E-01	7.020E-01	6.948E-02	-1.159
		340.57		3.831E-01	1.632E-01	2.668E-01	2.146E-02	1.436
		818.51		-3.842E-02	8.068E-02	1.287E-01	1.147E-02	-0.298
		1048.07	*	4.139E-02	1.216E-01	2.054E-01	1.760E-02	0.201
		1235.34		4.170E-01	7.869E-01	1.320E+00	1.319E-01	0.316
BA-137M		661.65	*	-4.820E-02	4.737E-02	7.040E-02	4.630E-03	-0.685
CS-137		661.65	*	-5.095E-02	5.008E-02	7.442E-02	4.910E-03	-0.685
CE-139		165.85	*	-1.523E-02	3.252E-02	5.201E-02	5.163E-03	-0.293
BA-140		162.64		3.011E-01	7.622E-01	1.263E+00	1.353E-01	0.239
		304.84		8.164E-01	1.293E+00	2.203E+00	6.183E-01	0.371
		423.70		-2.231E+00	2.227E+00	3.266E+00	1.039E+00	-0.683
		537.32	*	-1.614E-01	2.748E-01	4.195E-01	1.370E-01	-0.385
LA-140	+	328.77		5.728E-01	5.251E-01	5.819E-01	5.028E-02	0.984
		432.53		-7.574E-01	2.296E+00	3.715E+00	2.467E-01	-0.204
		487.03		-4.147E-02	1.477E-01	2.376E-01	1.668E-02	-0.175
		751.79		-1.277E+00	1.951E+00	3.100E+00	2.751E-01	-0.412
		815.85		-2.127E-02	3.558E-01	5.896E-01	5.795E-02	-0.036
		867.82		9.382E-02	1.613E+00	2.568E+00	2.594E-01	0.037

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		919.63		-1.676E+00	3.814E+00	5.111E+00	6.009E-01	-0.328
		925.24		2.546E-01	1.246E+00	2.095E+00	2.173E-01	0.122
		1596.49	*	-2.730E-02	1.046E-01	1.671E-01	9.821E-03	-0.163
CE-141		145.44	*	3.812E-02	6.696E-02	1.101E-01	1.346E-02	0.346
CE-143		57.37		1.394E-04	6.696E-02	Half-Life too short		
		231.56		4.095E-04	6.696E-02	Half-Life too short		
		293.26	*	4.454E-04	6.696E-02	Half-Life too short		
	+	350.59		1.826E-02	6.696E-02	Half-Life too short		
		490.36		-1.531E-04	6.696E-02	Half-Life too short		
		664.57		7.918E-04	6.696E-02	Half-Life too short		
		721.93		-4.367E-05	6.696E-02	Half-Life too short		
CE-144		80.11		1.293E+00	2.288E+00	2.544E+00	1.966E-01	0.508
		133.54	*	-2.777E-01	2.335E-01	3.583E-01	6.634E-02	-0.775
PM-144		476.78		1.086E-02	7.732E-02	1.281E-01	9.407E-03	0.085
		618.01		3.453E-03	3.924E-02	6.390E-02	4.408E-03	0.054
		696.49	*	-1.410E-02	4.440E-02	6.774E-02	4.789E-03	-0.208
		778.57		1.218E+00	2.841E+00	4.887E+00	4.049E-01	0.249
PR-144		696.49	*	-9.549E-01	3.007E+00	4.587E+00	3.242E-01	-0.208
		1489.15		-5.848E+00	1.289E+01	1.994E+01	1.172E+00	-0.293
PM-146		453.90	*	-2.806E-02	4.841E-02	7.651E-02	6.789E-03	-0.367
		633.02		-7.380E-01	1.675E+00	2.573E+00	9.508E-01	-0.287
		735.90		-2.361E-02	1.832E-01	2.972E-01	8.417E-02	-0.079
		747.13		1.407E-02	1.034E-01	1.748E-01	2.370E-02	0.080
ND-147	+	91.11		8.969E-01	2.695E-01	4.457E-01	3.964E-02	2.013
		319.41		1.748E+00	3.206E+00	5.519E+00	4.631E-01	0.317
		439.89		7.514E+00	6.365E+00	1.120E+01	6.833E-01	0.671
		531.02	*	-7.919E-02	5.662E-01	9.141E-01	1.263E-01	-0.087
PM-149		285.90	*	4.045E+00	7.114E+01	1.201E+02	1.903E+01	0.034
EU-152		121.78		-1.135E-02	7.635E-02	1.253E-01	1.874E-02	-0.091
		244.69		2.683E-01	4.163E-01	6.065E-01	5.913E-02	0.442
		344.27	*	5.763E-02	1.282E-01	1.823E-01	1.499E-02	0.316
		443.98		1.214E-01	1.125E+00	1.866E+00	1.142E-01	0.065
		778.89		1.984E-01	3.261E-01	5.677E-01	4.704E-02	0.349
		867.32		-1.508E-04	1.033E+00	1.589E+00	1.538E-01	0.000
	+	964.01		7.352E-01	4.962E-01	6.990E-01	6.586E-02	1.052
		1085.78		4.462E-02	5.184E-01	8.538E-01	6.429E-02	0.052
		1112.02		3.084E-01	4.315E-01	6.986E-01	4.920E-02	0.441
		1407.95		4.800E-02	2.200E-01	3.760E-01	2.197E-02	0.128
GD-153		69.67		3.454E-01	1.108E+00	1.658E+00	1.318E-01	0.208
	+	83.37		2.830E+01	1.235E+01	1.951E+01	1.498E+00	1.450
		97.43	*	-1.234E-02	7.947E-02	1.144E-01	1.061E-02	-0.108
		103.18		3.556E-02	1.011E-01	1.696E-01	1.754E-02	0.210
EU-154		123.07		1.059E-03	5.471E-02	9.030E-02	1.439E-02	0.012
		247.94		-1.333E-01	4.094E-01	6.207E-01	7.647E-02	-0.215
		591.81		6.370E-02	7.009E-01	1.145E+00	1.174E-01	0.056
		723.30		4.242E-02	2.053E-01	3.044E-01	2.585E-02	0.139
		756.87		-3.362E-01	1.007E+00	1.645E+00	1.892E-01	-0.204
		873.19		-3.005E-01	3.583E-01	5.465E-01	7.152E-02	-0.550
		996.32		-9.735E-01	4.952E-01	6.110E-01	1.096E-01	-1.593

---- Non-Identified Nuclides ----

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		1004.76		-3.937E-01	2.644E-01	3.665E-01	4.331E-02	-1.074
		1274.45	*	-1.490E-02	1.631E-01	2.615E-01	2.445E-02	-0.057
EU-155		48.70		7.306E-01	5.251E-01	8.278E-01	5.770E-02	0.883
		60.01		1.358E+00	2.355E+00	3.575E+00	2.960E-01	0.380
	+	86.54		4.423E-01	1.047E-01	1.591E-01	1.229E-02	2.780
		105.31	*	-5.227E-02	1.089E-01	1.740E-01	1.885E-02	-0.300
TB-160	+	86.79		1.169E+00	2.763E-01	4.226E-01	3.223E-02	2.766
		197.04		2.636E-01	6.112E-01	9.849E-01	9.836E-02	0.268
		215.65		3.664E-01	8.117E-01	1.335E+00	1.328E-01	0.275
	+	298.57		3.812E-01	1.574E-01	2.343E-01	2.085E-02	1.627
		879.36	*	-4.167E-03	1.685E-01	2.787E-01	2.754E-02	-0.015
		962.29		1.270E+00	6.945E-01	1.170E+00	1.105E-01	1.085
		966.15		1.406E+00	3.245E-01	6.159E-01	5.786E-02	2.283
		1177.93		5.649E-03	5.079E-01	8.264E-01	4.795E-02	0.007
		1271.85		2.149E-01	9.123E-01	1.508E+00	8.763E-02	0.143
HO-166M		80.57		2.281E-01	2.901E-01	3.274E-01	2.528E-02	0.697
		184.41		6.914E-02	4.802E-02	7.319E-02	7.303E-03	0.945
		280.46		-9.282E-02	9.746E-02	1.569E-01	1.452E-02	-0.592
		410.95		-4.520E-02	3.350E-01	4.758E-01	2.824E-02	-0.095
		711.68	*	1.862E-02	7.104E-02	1.215E-01	8.850E-03	0.153
		752.31		-1.548E-02	3.310E-01	5.520E-01	4.352E-02	-0.028
		810.29		-3.520E-02	7.076E-02	1.130E-01	9.917E-03	-0.311
TM-171		51.35		1.225E+00	8.219E+00	1.236E+01	8.991E-01	0.099
		52.39		3.192E+00	4.638E+00	7.118E+00	5.267E-01	0.448
		59.40		1.280E+01	1.205E+01	1.860E+01	1.541E+00	0.688
		66.72	*	-7.468E+00	1.783E+01	2.593E+01	2.084E+00	-0.288
LU-176	+	88.36		8.714E-01	2.060E-01	3.398E-01	2.607E-02	2.564
		201.83		-2.694E-02	3.180E-02	4.939E-02	4.930E-03	-0.545
		306.84	*	6.190E-03	3.055E-02	4.530E-02	3.945E-03	0.137
		401.10		6.964E+00	7.773E+00	1.349E+01	7.929E-01	0.516
LU-177		112.95		2.557E-01	1.419E+00	2.361E+00	2.896E-01	0.108
	+	208.36	*	3.447E+00	1.362E+00	1.936E+00	1.930E-01	1.781
LU-177M		52.97		1.681E-01	4.518E-01	7.482E-01	5.589E-02	0.225
		54.07		8.353E-02	2.525E-01	4.306E-01	3.275E-02	0.194
		61.30		1.284E+00	7.029E-01	1.225E+00	1.007E-01	1.049
		121.62		-1.027E-01	3.906E-01	6.379E-01	8.986E-02	-0.161
		147.16		-5.655E-01	7.219E-01	1.144E+00	1.366E-01	-0.494
		171.86		3.497E-01	5.234E-01	8.736E-01	8.688E-02	0.400
		218.09		8.130E-01	9.543E-01	1.591E+00	1.581E-01	0.511
	+	268.79		2.429E+00	1.604E+00	1.679E+00	1.587E-01	1.447
		319.02		1.904E-01	2.692E-01	4.668E-01	3.921E-02	0.408
		367.43		-1.838E-01	9.213E-01	1.515E+00	1.033E-01	-0.121
		413.65	*	-2.134E-02	2.339E-01	3.332E-01	1.983E-02	-0.064
HF-181		56.28		-3.104E-01	3.498E-01	5.299E-01	4.176E-02	-0.586
		57.53		1.716E-01	2.052E-01	3.152E-01	2.535E-02	0.544
		65.20		2.282E-01	5.639E-01	8.459E-01	6.838E-02	0.270
		133.02		-8.714E-02	7.271E-02	1.130E-01	1.499E-02	-0.771
		136.25		3.838E-01	4.896E-01	8.231E-01	1.068E-01	0.466
		345.85		-7.416E-02	2.576E-01	3.442E-01	2.614E-02	-0.215

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		482.03	*	-1.297E-02	4.748E-02	7.645E-02	4.811E-03	-0.170
W-181		56.28		-1.226E-01	1.386E-01	2.100E-01	1.655E-02	-0.584
		57.53		6.800E-02	8.134E-02	1.250E-01	1.005E-02	0.544
		65.20	*	8.977E-02	2.218E-01	3.328E-01	2.690E-02	0.270
TA-182		67.75		2.276E-02	8.257E-02	1.050E-01	8.403E-03	0.217
		100.10		1.211E-01	1.670E-01	2.799E-01	2.732E-02	0.433
		152.43		4.152E-02	3.739E-01	6.144E-01	7.008E-02	0.068
		222.10		-9.315E-02	3.847E-01	6.129E-01	6.078E-02	-0.152
		1001.68		2.766E+00	2.396E+00	4.235E+00	3.770E-01	0.653
	+	1121.28		7.573E-01	2.278E-01	3.994E-01	2.741E-02	1.896
		1189.05		-2.335E-01	3.952E-01	6.092E-01	3.537E-02	-0.383
		1221.42	*	-9.711E-02	2.908E-01	4.603E-01	2.676E-02	-0.211
		1230.97		-5.286E-01	6.576E-01	9.992E-01	5.810E-02	-0.529
RE-183		57.98		8.158E-02	8.215E-02	1.268E-01	1.027E-02	0.643
		59.32		5.097E-02	4.883E-02	7.535E-02	6.237E-03	0.676
		67.20		-1.215E-02	1.341E-01	1.845E-01	1.480E-02	-0.066
		162.32	*	6.219E-02	1.178E-01	1.960E-01	2.026E-02	0.317
	+	208.81		3.448E+00	1.362E+00	1.958E+00	1.952E-01	1.761
		291.72		-7.381E-01	1.084E+00	1.509E+00	1.364E-01	-0.489
RE-184		57.98		3.026E-01	3.047E-01	4.705E-01	3.811E-02	0.643
		59.32		1.889E-01	1.810E-01	2.793E-01	2.312E-02	0.676
		67.20		-4.507E-02	4.973E-01	6.841E-01	5.487E-02	-0.066
		161.27		1.908E-01	3.782E-01	6.291E-01	6.574E-02	0.303
		216.55		3.960E-01	2.946E-01	4.989E-01	4.960E-02	0.794
		252.85	*	-2.393E-02	2.479E-01	3.950E-01	3.817E-02	-0.061
		318.01		2.368E-01	4.720E-01	8.108E-01	6.833E-02	0.292
		792.07		6.195E-01	1.401E+00	2.106E+00	1.788E-01	0.294
		903.28		-2.414E-01	1.549E+00	2.166E+00	2.195E-01	-0.111
		920.93		2.663E-02	5.728E-01	9.072E-01	9.021E-02	0.029
OS-185		59.72		9.729E-02	1.360E-01	2.074E-01	1.720E-02	0.469
		61.14		1.095E-01	7.542E-02	1.308E-01	1.077E-02	0.837
		69.30		3.390E-02	1.965E-01	2.927E-01	2.330E-02	0.116
		592.07		9.136E-01	2.836E+00	4.715E+00	3.100E-01	0.194
		646.12	*	-3.028E-02	5.283E-02	8.132E-02	5.357E-03	-0.372
		717.42		-1.940E-01	1.023E+00	1.655E+00	1.219E-01	-0.117
		874.81		-5.656E-03	6.990E-01	1.158E+00	1.136E-01	-0.005
		880.27		-5.654E-02	9.119E-01	1.503E+00	1.488E-01	-0.038
RE-188		155.03	*	1.311E-01	1.899E-01	3.175E-01	3.535E-02	0.413
		477.96		3.116E-01	3.494E+00	5.771E+00	3.622E-01	0.054
		633.10		-1.416E+00	3.309E+00	5.158E+00	3.400E-01	-0.275
W-188	+	63.58		6.762E+01	4.758E+01	4.889E+01	3.980E+00	1.383
		227.08		-1.944E+00	1.368E+01	2.187E+01	2.163E+00	-0.089
		290.67	*	-1.924E+00	8.411E+00	1.213E+01	1.099E+00	-0.159
IR-192	+	295.96		1.154E+00	1.964E-01	3.032E-01	2.733E-02	3.805
		308.46		2.602E-02	1.140E-01	1.693E-01	1.476E-02	0.154
		316.51	*	1.112E-02	3.612E-02	6.149E-02	5.218E-03	0.181
		468.07		7.222E-02	8.820E-02	1.345E-01	9.504E-03	0.537
		604.41		-2.264E-01	6.168E-01	8.367E-01	9.848E-02	-0.271
		612.46		3.454E+00	1.181E+00	1.974E+00	1.617E-01	1.750

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AU-195		65.12		6.043E-02	1.032E-01	1.558E-01	1.260E-02	0.388
		66.83		-2.470E-02	5.896E-02	8.574E-02	6.887E-03	-0.288
	+	75.70		1.258E+00	1.935E-01	3.764E-01	2.940E-02	3.343
		98.88	*	1.890E-01	2.235E-01	3.519E-01	3.356E-02	0.537
		129.76		5.203E+00	3.179E+00	5.389E+00	7.302E-01	0.966
TL-200		367.94	*	4.560E-05	3.179E+00	Half-Life too short		
		579.30		6.659E-04	3.179E+00	Half-Life too short		
		828.27		-4.550E-04	3.179E+00	Half-Life too short		
		1205.75		1.782E-03	3.179E+00	Half-Life too short		
TL-201		68.90		-6.403E-01	2.647E+00	3.617E+00	2.884E-01	-0.177
		70.82		1.086E+00	1.435E+00	2.178E+00	1.726E-01	0.499
		80.30		2.293E+00	4.198E+00	4.662E+00	3.601E-01	0.492
		135.34		1.777E+01	2.094E+01	3.527E+01	4.607E+00	0.504
		167.43	*	2.423E+00	5.887E+00	9.747E+00	9.676E-01	0.249
TL-202		68.90		-7.000E-02	2.894E-01	3.955E-01	3.153E-02	-0.177
		70.82		1.184E-01	1.565E-01	2.375E-01	1.882E-02	0.499
		80.30		2.501E-01	4.579E-01	5.085E-01	3.928E-02	0.492
		439.56	*	8.987E-02	7.591E-02	1.336E-01	8.147E-03	0.672
HG-203		70.83		5.409E-01	7.139E-01	1.080E+00	1.423E-01	0.501
		72.87		2.322E+00	5.217E-01	8.059E-01	1.026E-01	2.882
		82.60		1.085E+00	9.517E-01	1.445E+00	1.905E-01	0.751
		279.20	*	4.331E-02	4.496E-02	7.853E-02	7.467E-03	0.552
BI-207		72.80		6.326E-01	1.361E-01	2.359E-01	1.857E-02	2.682
	+	74.97		7.009E-01	1.078E-01	1.868E-01	1.462E-02	3.753
	+	84.90		3.672E-01	1.602E-01	2.747E-01	2.102E-02	1.337
		569.67		2.253E-02	3.798E-02	6.417E-02	4.200E-03	0.351
		1063.62	*	4.581E-02	6.136E-02	1.072E-01	8.488E-03	0.427
		1770.23		1.122E-01	5.797E-01	8.557E-01	4.942E-02	0.131
TL-207		81.07		8.737E-02	2.379E-01	2.609E-01	2.012E-02	0.335
	+	83.78		2.421E-01	1.057E-01	1.667E-01	1.279E-02	1.453
		94.90		4.060E-01	2.309E-01	3.587E-01	3.161E-02	1.132
		122.32		5.803E-02	1.842E+00	3.042E+00	4.430E-01	0.019
		144.24		2.867E-01	7.353E-01	1.203E+00	1.560E-01	0.238
		154.21		2.616E-01	4.393E-01	7.325E-01	8.712E-02	0.357
	+	269.46		5.715E-01	3.776E-01	4.012E-01	3.853E-02	1.424
		323.87	*	-2.857E-01	7.838E-01	1.108E+00	1.942E-01	-0.258
	+	338.28		6.990E+00	2.049E+00	2.701E+00	3.181E-01	2.588
		445.03		-1.101E+00	2.677E+00	4.295E+00	4.491E-01	-0.256
PO-209		260.50		9.219E+00	1.058E+01	1.764E+01	1.687E+00	0.523
		262.80		-2.750E+01	3.168E+01	4.619E+01	4.404E+00	-0.595
		896.60	*	-6.595E-01	9.531E+00	1.569E+01	1.595E+00	-0.042
PB-211		404.84	*	-4.954E-01	1.257E+00	1.691E+00	1.054E+00	-0.293
		427.08		2.288E+00	2.775E+00	4.163E+00	2.574E+00	0.550
		831.96		5.338E-01	1.460E+00	2.433E+00	1.526E+00	0.219
BI-212	+	727.18	*	1.405E+00	6.022E-01	7.989E-01	7.247E-02	1.758
		785.46		-1.088E+00	2.161E+00	3.471E+00	2.911E-01	-0.314
		1620.62		1.157E+00	1.426E+00	2.593E+00	1.522E-01	0.446
PO-215		81.07		8.737E-02	2.379E-01	2.609E-01	2.012E-02	0.335
	+	83.78		2.421E-01	1.057E-01	1.667E-01	1.279E-02	1.453

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		94.90		4.060E-01	2.309E-01	3.587E-01	3.161E-02	1.132
		122.32		5.803E-02	1.842E+00	3.042E+00	4.430E-01	0.019
		144.24		2.867E-01	7.353E-01	1.203E+00	1.560E-01	0.238
		154.21		2.616E-01	4.393E-01	7.325E-01	8.712E-02	0.357
	+	269.46		5.715E-01	3.776E-01	4.012E-01	3.853E-02	1.424
		323.87	*	-2.857E-01	7.838E-01	1.108E+00	1.942E-01	-0.258
	+	338.28		6.990E+00	2.049E+00	2.701E+00	3.181E-01	2.588
		445.03		-1.101E+00	2.677E+00	4.295E+00	4.491E-01	-0.256
RN-219	+	271.23		7.333E-01	4.860E-01	4.967E-01	5.455E-02	1.476
		401.81	*	2.715E-01	4.754E-01	8.104E-01	1.105E-01	0.335
RN-220		549.76	*	-9.907E+00	3.060E+01	4.865E+01	3.166E+00	-0.204
RA-223		81.07		8.737E-02	2.379E-01	2.609E-01	2.012E-02	0.335
	+	83.78		2.421E-01	1.057E-01	1.667E-01	1.279E-02	1.453
		94.90		4.060E-01	2.309E-01	3.587E-01	3.161E-02	1.132
		122.32		5.803E-02	1.842E+00	3.042E+00	4.430E-01	0.019
		144.24		2.867E-01	7.353E-01	1.203E+00	1.560E-01	0.238
		154.21		2.616E-01	4.393E-01	7.325E-01	8.712E-02	0.357
	+	269.46		5.715E-01	3.776E-01	4.012E-01	3.853E-02	1.424
		323.87	*	-2.857E-01	7.838E-01	1.108E+00	1.942E-01	-0.258
	+	338.28		6.990E+00	2.049E+00	2.701E+00	3.181E-01	2.588
		445.03		-1.101E+00	2.677E+00	4.295E+00	4.491E-01	-0.256
AC-227		79.80		1.546E+00	1.812E+00	2.024E+00	4.284E-01	0.764
		236.00		1.660E+00	3.998E-01	5.809E-01	7.622E-02	2.858
		256.20	*	-2.604E-01	4.189E-01	6.450E-01	1.028E-01	-0.404
		286.10		9.189E-01	1.674E+00	2.882E+00	3.907E-01	0.319
	+	299.80		4.909E+00	2.160E+00	3.005E+00	5.293E-01	1.634
		304.40		1.769E+00	2.035E+00	3.513E+00	6.501E-01	0.504
		334.20		5.376E-01	4.086E+00	4.069E+00	7.784E-01	0.132
TH-227		79.80		1.546E+00	1.813E+00	2.024E+00	4.340E-01	0.764
	+	94.00		9.208E+00	3.145E+00	3.389E+00	7.385E-01	2.717
		236.00		1.660E+00	3.903E-01	5.809E-01	6.993E-02	2.858
		256.20	*	-2.604E-01	4.197E-01	6.450E-01	1.197E-01	-0.404
		286.10		9.189E-01	1.907E+00	2.882E+00	2.894E+00	0.319
	+	299.80		4.909E+00	2.160E+00	3.005E+00	5.293E-01	1.634
		304.40		1.769E+00	2.035E+00	3.513E+00	6.501E-01	0.504
		334.20		5.376E-01	4.086E+00	4.069E+00	7.784E-01	0.132
TH-229	+	85.43		3.625E-01	1.582E-01	2.886E-01	2.206E-02	1.256
	+	88.47		3.825E-01	1.141E-01	1.949E-01	1.499E-02	1.963
		100.00		1.533E-01	1.736E-01	2.921E-01	2.846E-02	0.525
		193.63	*	-3.461E-01	5.560E-01	8.753E-01	8.741E-02	-0.395
		210.97		2.515E+00	9.502E-01	1.497E+00	1.492E-01	1.680
PA-231		283.67	*	1.345E-01	1.719E+00	2.906E+00	4.510E-01	0.046
	+	301.29		1.964E+00	8.287E-01	1.199E+00	1.486E-01	1.638
TH-231		81.07		8.737E-02	2.379E-01	2.609E-01	2.012E-02	0.335
	+	83.78		2.421E-01	1.057E-01	1.667E-01	1.279E-02	1.453
		94.90		4.060E-01	2.309E-01	3.587E-01	3.161E-02	1.132
		122.32		5.803E-02	1.842E+00	3.042E+00	4.430E-01	0.019
		144.24		2.867E-01	7.353E-01	1.203E+00	1.560E-01	0.238
		154.21		2.616E-01	4.393E-01	7.325E-01	8.712E-02	0.357

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		5.715E-01	3.776E-01	4.012E-01	3.853E-02	1.424
		323.87	*	-2.857E-01	7.838E-01	1.108E+00	1.942E-01	-0.258
	+	338.28		6.990E+00	2.049E+00	2.701E+00	3.181E-01	2.588
		445.03		-1.101E+00	2.677E+00	4.295E+00	4.491E-01	-0.256
U-231	+	84.21		8.636E+00	3.768E+00	6.025E+00	4.617E-01	1.433
	+	92.29		7.531E+00	2.085E+00	2.952E+00	2.465E-01	2.552
		95.87	*	-5.131E-01	8.719E-01	1.238E+00	1.113E-01	-0.414
		108.00		6.139E-02	1.679E+00	2.785E+00	3.139E-01	0.022
PA-233	+	75.28		2.046E+01	4.080E+00	5.845E+00	8.717E-01	3.500
	+	86.59		7.192E+00	2.495E+00	2.587E+00	6.861E-01	2.780
	+	300.12		1.369E+00	5.890E-01	8.381E-01	1.259E-01	1.633
		311.98	*	2.334E-02	7.264E-02	1.133E-01	1.001E-02	0.206
		340.50		2.213E+00	9.844E-01	1.406E+00	3.311E-01	1.573
		398.62		-6.879E-01	2.409E+00	3.918E+00	1.014E+00	-0.176
		415.76		5.202E-01	2.187E+00	3.340E+00	6.891E-01	0.156
PA-234	+	63.00		1.983E+00	1.419E+00	1.438E+00	2.193E-01	1.379
		94.67		5.074E-01	1.753E-01	2.695E-01	3.371E-02	1.883
		98.44		5.064E-02	9.868E-02	1.406E-01	7.862E-02	0.360
		99.86		3.814E-01	4.389E-01	7.381E-01	7.171E-02	0.517
		111.00		-1.483E-01	1.854E-01	2.962E-01	4.319E-02	-0.501
		131.20		-4.085E-02	1.175E-01	1.909E-01	2.563E-02	-0.214
		152.70		1.607E-02	3.623E-01	5.938E-01	1.104E-01	0.027
	+	186.00		3.869E+00	2.373E+00	2.721E+00	8.603E-01	1.422
		226.40		-1.062E-01	4.361E-01	6.935E-01	9.755E-02	-0.153
		227.20		-6.878E-02	4.673E-01	7.469E-01	7.386E-02	-0.092
		248.90		-7.002E-02	8.825E-01	1.408E+00	3.218E-01	-0.050
	+	293.70		7.340E+00	1.664E+00	1.807E+00	3.162E-01	4.061
		369.80		1.902E-01	8.932E-01	1.503E+00	3.173E-01	0.127
		568.70		9.786E-01	1.222E+00	2.092E+00	1.369E-01	0.468
		569.50		2.119E-01	3.331E-01	5.646E-01	3.695E-02	0.375
		574.00		-4.950E-01	1.777E+00	2.829E+00	1.853E-01	-0.175
		699.00		-1.797E-01	8.985E-01	1.420E+00	2.618E-01	-0.127
		706.10		6.047E-01	1.324E+00	2.156E+00	9.559E-01	0.280
		733.00		5.132E-02	4.981E-01	7.284E-01	1.589E-01	0.070
		742.81		-1.281E-01	1.588E+00	2.640E+00	1.772E+00	-0.049
	+	796.30		1.523E+00	1.344E+00	2.100E+00	5.677E-01	0.725
		805.60		5.426E-01	1.176E+00	2.011E+00	6.167E-01	0.270
		819.60		4.719E-01	1.414E+00	2.401E+00	9.147E-01	0.197
		826.30		-2.674E-01	9.498E-01	1.530E+00	6.857E-01	-0.175
		831.60		2.846E-01	7.551E-01	1.284E+00	3.852E-01	0.222
		876.40		8.776E-01	1.306E+00	1.691E+00	1.740E+00	0.519
		880.51		-7.543E-02	3.352E-01	5.447E-01	5.393E-02	-0.138
		883.24		-2.790E-01	3.934E-01	5.320E-01	3.586E-01	-0.525
		899.00		8.216E-01	1.146E+00	1.904E+00	8.386E-01	0.432
		925.00		6.813E-01	1.359E+00	2.343E+00	2.319E-01	0.291
		926.50		1.891E-02	1.994E-01	3.321E-01	8.547E-02	0.057
		946.00	*	-2.712E-01	3.624E-01	5.507E-01	1.061E-01	-0.492
		949.00		6.290E-01	5.332E-01	9.613E-01	9.240E-02	0.654
		980.50		-5.017E-01	9.896E-01	1.296E+00	1.193E-01	-0.387

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1394.10		-2.188E-01	1.392E+00	2.269E+00	1.470E+00	-0.096
PA-234M		766.41		1.172E+01	2.472E+01	3.969E+01	3.041E+01	0.295
		1001.03	*	1.091E+01	7.777E+00	1.392E+01	1.588E+00	0.784
U-235	+	89.95		3.840E+00	1.614E+00	1.735E+00	5.323E-01	2.213
	+	93.35		2.865E+00	1.101E+00	1.093E+00	3.060E-01	2.621
		105.00		-2.632E-01	1.062E+00	1.709E+00	5.212E-01	-0.154
		143.76	*	2.632E-02	2.279E-01	3.694E-01	7.228E-02	0.071
		163.35		-2.278E-01	5.185E-01	8.284E-01	1.644E-01	-0.275
	+	185.71		1.433E-01	7.665E-02	1.011E-01	1.009E-02	1.417
		205.31		-2.628E-02	6.226E-01	8.772E-01	1.731E-01	-0.030
NP-236		94.67		3.872E-01	1.286E-01	2.046E-01	1.794E-02	1.892
		98.44		3.824E-02	7.155E-02	1.063E-01	1.005E-02	0.360
		111.00		-1.122E-01	1.399E-01	2.240E-01	2.659E-02	-0.501
		160.31	*	-5.548E-02	8.832E-02	1.404E-01	1.482E-02	-0.395
NP-239		99.55		1.304E-01	1.513E-01	2.471E-01	2.387E-02	0.528
		117.00	*	-2.387E-02	1.907E-01	3.136E-01	4.108E-02	-0.076
	+	209.75		2.751E+00	1.087E+00	1.582E+00	1.576E-01	1.739
		228.18		-2.441E-01	2.492E-01	3.803E-01	3.758E-02	-0.642
		277.60		2.702E-01	2.092E-01	3.524E-01	3.280E-02	0.767
		334.30		3.274E-01	2.316E+00	2.310E+00	1.840E-01	0.142
AM-241		59.54	*	4.742E-02	7.159E-02	1.090E-01	9.755E-03	0.435
CM-243		99.55		1.342E-01	1.557E-01	2.543E-01	2.456E-02	0.528
		103.76	*	5.218E-02	9.643E-02	1.595E-01	1.667E-02	0.327
		117.00		-2.455E-02	1.961E-01	3.226E-01	4.226E-02	-0.076
	+	209.75		2.712E+00	1.072E+00	1.559E+00	1.554E-01	1.739
		228.18		-2.466E-01	2.518E-01	3.842E-01	3.797E-02	-0.642
		277.60		2.724E-01	2.109E-01	3.553E-01	3.307E-02	0.767
CM-247		278.00		1.122E+00	8.687E-01	1.463E+00	1.361E-01	0.767
		287.40		1.957E-01	1.418E+00	2.273E+00	2.075E-01	0.086
		402.60	*	1.075E-02	4.484E-02	7.122E-02	4.191E-03	0.151
CF-249		252.85		-9.020E-02	9.346E-01	1.489E+00	1.439E-01	-0.061
		333.44		5.403E-02	3.029E-01	3.038E-01	2.427E-02	0.178
		387.95	*	-5.836E-03	4.682E-02	7.720E-02	4.617E-03	-0.076
CF-251		176.60	*	-1.280E-01	1.382E-01	2.151E-01	2.142E-02	-0.595
		227.00		-3.658E-02	4.144E-01	6.642E-01	6.569E-02	-0.055
		285.00		9.200E-02	1.974E+00	3.332E+00	3.057E-01	0.028

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833    *
* Acquisition date : 14-JUL-2009 11:23:48 Detector SN#     :               *
* Detector ID      : GAM05                Sensitivity      : 5.000         *
* Geometry         : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.87     Half life ratio :  8.000         *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date      : 30-JUN-2009 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G1201874833          Analyst initials: MXR1            *
* Batch Number     : 882713               Sample Quantity : 1.3307E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.355E+01	2.899E+00	7.850E-01	0.000E+00
CD-109	3.731E+00	8.643E-01	1.055E+00	0.000E+00
SN-126	3.674E-01	8.510E-02	1.037E-01	0.000E+00
TL-208	5.373E-01	9.683E-02	6.903E-02	0.000E+00
BI-210	1.139E+00	9.863E-01	9.172E-01	0.000E+00
PB-210	1.139E+00	9.863E-01	9.172E-01	0.000E+00
PO-210	1.139E+00	9.853E-01	9.172E-01	0.000E+00
BI-211	4.096E+00	5.463E-01	3.667E-01	0.000E+00
PB-212	1.864E+00	2.295E-01	1.012E-01	0.000E+00
PO-212	1.864E+00	2.295E-01	1.012E-01	0.000E+00
BI-214	1.283E+00	2.046E-01	1.374E-01	0.000E+00
PB-214	1.425E+00	2.035E-01	1.233E-01	0.000E+00
PO-214	1.425E+00	2.035E-01	1.233E-01	0.000E+00
PO-216	1.864E+00	2.295E-01	1.012E-01	0.000E+00
PO-218	1.425E+00	2.035E-01	1.233E-01	0.000E+00
RA-224	4.724E+00	1.112E+00	1.151E+00	0.000E+00
RA-226	1.283E+00	2.046E-01	1.374E-01	0.000E+00
AC-228	1.926E+00	4.453E-01	2.851E-01	0.000E+00
RA-228	1.926E+00	4.453E-01	2.851E-01	0.000E+00
TH-228	1.864E+00	2.295E-01	1.012E-01	0.000E+00
TH-230	1.283E+00	2.046E-01	1.374E-01	0.000E+00
TH-232	1.926E+00	4.453E-01	2.851E-01	0.000E+00
TH-234	1.702E+00	1.203E+00	1.102E+00	0.000E+00
U-234	1.283E+00	2.046E-01	1.374E-01	0.000E+00
NP-237	1.079E+00	3.317E-01	3.037E-01	0.000E+00
U-238	1.702E+00	1.203E+00	1.102E+00	0.000E+00
AM-243	3.905E-01	5.886E-02	6.405E-02	0.000E+00
ANH-511	9.893E-02	7.468E-02	5.919E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	7.318E-04	3.555E-01	6.088E-01	0.000E+00	NOT IDENT.
NA-22	-1.244E-02	5.803E-02	9.425E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.429E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.370E-02	3.176E-02	6.052E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.651E-02	6.610E-02	0.000E+00	FAIL ABUN
SC-46	-5.056E-03	4.509E-02	7.628E-02	0.000E+00	FAIL ABUN
V-48	-8.271E-02	9.712E-02	1.250E-01	0.000E+00	NOT IDENT.
CR-51	4.720E-02	3.840E-01	6.625E-01	0.000E+00	NOT IDENT.
MN-52	8.575E-02	2.292E-01	4.083E-01	0.000E+00	NOT IDENT.
MN-54	-1.838E-02	4.555E-02	7.627E-02	0.000E+00	NOT IDENT.
CO-56	-1.413E-02	4.701E-02	7.869E-02	0.000E+00	NOT IDENT.
CO-57	-3.816E-04	2.586E-02	4.550E-02	0.000E+00	NOT IDENT.
CO-58	-1.733E-03	4.492E-02	7.706E-02	0.000E+00	NOT IDENT.
FE-59	2.663E-02	1.068E-01	1.832E-01	0.000E+00	NOT IDENT.
CO-60	3.091E-02	4.506E-02	8.021E-02	0.000E+00	NOT IDENT.
ZN-65	2.034E-02	1.269E-01	1.857E-01	0.000E+00	NOT IDENT.
GE-68	1.610E+00	1.625E+00	2.939E+00	0.000E+00	NOT IDENT.
AS-73	6.769E-02	2.373E-01	4.237E-01	0.000E+00	NOT IDENT.
AS-74	-3.670E-02	9.860E-02	1.613E-01	0.000E+00	NOT IDENT.
SE-75	-3.428E-02	5.671E-02	7.945E-02	0.000E+00	NOT IDENT.
BR-77	-3.886E+00	8.547E+00	1.407E+01	0.000E+00	FAIL ABUN
SR-82	-4.033E-01	4.620E-01	7.462E-01	0.000E+00	NOT IDENT.
RB-83	-2.095E-02	7.792E-02	1.301E-01	0.000E+00	NOT IDENT.
RB-84	1.246E-02	7.959E-02	1.378E-01	0.000E+00	NOT IDENT.
KR-85	1.719E+01	1.069E+01	1.755E+01	0.000E+00	NOT IDENT.
SR-85	8.709E-02	5.415E-02	8.892E-02	0.000E+00	NOT IDENT.
RB-86	9.856E-01	9.698E-01	1.760E+00	0.000E+00	NOT IDENT.
Y-88	-7.236E-03	3.780E-02	6.060E-02	0.000E+00	NOT IDENT.
ZR-88	-4.993E-04	3.368E-02	5.840E-02	0.000E+00	NOT IDENT.
Y-91	1.532E+01	2.446E+01	4.263E+01	0.000E+00	NOT IDENT.
NB-94	2.473E-02	4.134E-02	7.169E-02	0.000E+00	NOT IDENT.
NB-95	2.494E-02	5.523E-02	9.797E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.663E-01	2.683E-01	0.000E+00	NOT IDENT.
ZR-95	1.462E-02	8.627E-02	1.510E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.849E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.301E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.396E+00	1.009E+01	1.717E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.823E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.277E-03	3.621E-02	6.026E-02	0.000E+00	NOT IDENT.
RH-102	-2.623E-02	3.341E-02	5.421E-02	0.000E+00	NOT IDENT.
RU-103	-7.603E-03	4.351E-02	7.334E-02	0.000E+00	FAIL ABUN
RH-106	1.283E-01	3.726E-01	6.412E-01	0.000E+00	FAIL ABUN
RU-106	1.283E-01	3.724E-01	6.412E-01	0.000E+00	FAIL ABUN
AG-108M	4.809E-03	3.763E-02	6.535E-02	0.000E+00	NOT IDENT.
AG-110M	2.380E-02	4.276E-02	7.430E-02	0.000E+00	NOT IDENT.
IN-111	-3.467E-01	9.669E-01	1.390E+00	0.000E+00	NOT IDENT.
IN-113M	-2.439E-02	4.982E-02	8.409E-02	0.000E+00	NOT IDENT.
SN-113	-2.439E-02	4.982E-02	8.409E-02	0.000E+00	NOT IDENT.
IN-114M	1.509E-01	2.176E-01	3.390E-01	0.000E+00	NOT IDENT.
CD-115	-1.675E-01	8.241E+00	1.398E+01	0.000E+00	NOT IDENT.
SN-117M	1.308E-04	5.604E-02	9.730E-02	0.000E+00	NOT IDENT.
SB-122	1.010E+00	1.852E+00	3.245E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.477E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.270E-02	3.081E-02	5.259E-02	0.000E+00	NOT IDENT.
I-124	-1.478E-01	7.450E-01	1.060E+00	0.000E+00	NOT IDENT.
SB-124	1.196E-02	6.555E-02	1.144E-01	0.000E+00	FAIL ABUN
SB-125	6.328E-02	1.071E-01	1.909E-01	0.000E+00	FAIL ABUN
TE-125M	8.096E+00	8.850E+00	1.604E+01	0.000E+00	NOT IDENT.
I-126	1.461E-01	2.028E-01	3.563E-01	0.000E+00	NOT IDENT.
SB-126	-7.414E-02	1.704E-01	2.428E-01	0.000E+00	FAIL ABUN
SB-127	1.004E+00	1.371E+00	2.403E+00	0.000E+00	NOT IDENT.
XE-127	-5.371E-03	5.039E-02	8.281E-02	0.000E+00	NOT IDENT.
I-131	-1.142E-01	1.086E-01	1.770E-01	0.000E+00	NOT IDENT.
TE-132	-5.910E-01	5.901E-01	9.427E-01	0.000E+00	NOT IDENT.
BA-133	-1.495E-02	5.109E-02	7.567E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.524E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.826E-02	6.477E-02	1.097E-01	0.000E+00	FAIL ABUN
CS-135	3.282E-01	2.106E-01	3.350E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.223E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.139E-02	1.192E-01	2.070E-01	0.000E+00	FAIL ABUN
BA-137M	-4.820E-02	4.642E-02	7.153E-02	0.000E+00	NOT IDENT.
CS-137	-5.095E-02	4.908E-02	7.561E-02	0.000E+00	NOT IDENT.
CE-139	-1.523E-02	3.187E-02	5.411E-02	0.000E+00	NOT IDENT.
BA-140	-1.614E-01	2.693E-01	4.278E-01	0.000E+00	NOT IDENT.
LA-140	-2.730E-02	1.025E-01	1.671E-01	0.000E+00	FAIL ABUN
CE-141	3.812E-02	6.562E-02	1.148E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.415E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-2.777E-01	2.288E-01	3.741E-01	0.000E+00	NOT IDENT.
PM-144	-1.410E-02	4.351E-02	6.875E-02	0.000E+00	NOT IDENT.
PR-144	-9.549E-01	2.946E+00	4.656E+00	0.000E+00	NOT IDENT.
PM-146	-2.806E-02	4.744E-02	7.824E-02	0.000E+00	NOT IDENT.
ND-147	-7.919E-02	5.549E-01	9.323E-01	0.000E+00	FAIL ABUN
PM-149	4.045E+00	6.971E+01	1.238E+02	0.000E+00	NOT IDENT.
EU-152	5.763E-02	1.256E-01	1.874E-01	0.000E+00	FAIL ABUN
GD-153	-1.234E-02	7.788E-02	1.201E-01	0.000E+00	FAIL ABUN
EU-154	-1.490E-02	1.599E-01	2.626E-01	0.000E+00	NOT IDENT.
EU-155	-5.227E-02	1.067E-01	1.824E-01	0.000E+00	FAIL ABUN
TB-160	-4.167E-03	1.651E-01	2.817E-01	0.000E+00	FAIL ABUN
HO-166M	1.862E-02	6.962E-02	1.232E-01	0.000E+00	NOT IDENT.
TM-171	-7.468E+00	1.747E+01	2.739E+01	0.000E+00	NOT IDENT.
LU-176	6.190E-03	2.994E-02	4.664E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.335E+00	2.006E+00	0.000E+00	FAIL ABUN
LU-177M	-2.134E-02	2.292E-01	3.413E-01	0.000E+00	FAIL ABUN
HF-181	-1.297E-02	4.653E-02	7.810E-02	0.000E+00	NOT IDENT.
W-181	8.977E-02	2.174E-01	3.516E-01	0.000E+00	NOT IDENT.
TA-182	-9.711E-02	2.850E-01	4.626E-01	0.000E+00	FAIL ABUN
RE-183	6.219E-02	1.155E-01	2.040E-01	0.000E+00	FAIL ABUN
RE-184	-2.393E-02	2.430E-01	4.080E-01	0.000E+00	NOT IDENT.
OS-185	-3.028E-02	5.177E-02	8.265E-02	0.000E+00	NOT IDENT.
RE-188	1.311E-01	1.861E-01	3.307E-01	0.000E+00	NOT IDENT.
W-188	-1.924E+00	8.243E+00	1.250E+01	0.000E+00	FAIL ABUN
IR-192	1.112E-02	3.540E-02	6.327E-02	0.000E+00	FAIL ABUN
AU-195	1.890E-01	2.191E-01	3.693E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	2.207E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.423E+00	5.769E+00	1.014E+01	0.000E+00	NOT IDENT.
TL-202	8.987E-02	7.439E-02	1.368E-01	0.000E+00	NOT IDENT.
HG-203	4.331E-02	4.406E-02	8.099E-02	0.000E+00	NOT IDENT.
BI-207	4.581E-02	6.014E-02	1.080E-01	0.000E+00	FAIL ABUN
TL-207	-2.857E-01	7.681E-01	1.139E+00	0.000E+00	FAIL ABUN
PO-209	-6.595E-01	9.340E+00	1.585E+01	0.000E+00	NOT IDENT.
PB-211	-4.954E-01	1.232E+00	1.732E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.902E-01	8.102E-01	0.000E+00	FAIL ABUN
PO-215	-2.857E-01	7.681E-01	1.139E+00	0.000E+00	FAIL ABUN
RN-219	2.715E-01	4.659E-01	8.305E-01	0.000E+00	FAIL ABUN
RN-220	-9.907E+00	2.999E+01	4.959E+01	0.000E+00	NOT IDENT.
RA-223	-2.857E-01	7.681E-01	1.139E+00	0.000E+00	FAIL ABUN
AC-227	-2.604E-01	4.106E-01	6.661E-01	0.000E+00	FAIL ABUN
TH-227	-2.604E-01	4.113E-01	6.661E-01	0.000E+00	FAIL ABUN
TH-229	-3.461E-01	5.449E-01	9.083E-01	0.000E+00	FAIL ABUN
PA-231	1.345E-01	1.685E+00	2.996E+00	0.000E+00	FAIL ABUN
TH-231	-2.857E-01	7.681E-01	1.139E+00	0.000E+00	FAIL ABUN
U-231	-5.131E-01	8.545E-01	1.300E+00	0.000E+00	FAIL ABUN
PA-233	2.334E-02	7.119E-02	1.167E-01	0.000E+00	FAIL ABUN
PA-234	-2.712E-01	3.552E-01	5.559E-01	0.000E+00	FAIL ABUN
PA-234M	1.091E+01	7.621E+00	1.404E+01	0.000E+00	NOT IDENT.
U-235	2.632E-02	2.233E-01	3.852E-01	0.000E+00	FAIL ABUN
NP-236	-5.548E-02	8.655E-02	1.462E-01	0.000E+00	NOT IDENT.
NP-239	-2.387E-02	1.869E-01	3.281E-01	0.000E+00	FAIL ABUN
AM-241	4.742E-02	7.015E-02	1.154E-01	0.000E+00	NOT IDENT.
CM-243	5.218E-02	9.450E-02	1.673E-01	0.000E+00	FAIL ABUN
CM-247	1.075E-02	4.395E-02	7.299E-02	0.000E+00	NOT IDENT.
CF-249	-5.836E-03	4.589E-02	7.916E-02	0.000E+00	NOT IDENT.
CF-251	-1.280E-01	1.354E-01	2.235E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:24:37.64

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833.CNF;1
Sample date       : 30-JUN-2009 12:00:00 Acquisition date : 14-JUL-2009 11:23:48
Sample ID         : G1201874833          Sample quantity  : 1.33070E+02 GRAM
Detector name     : GAM05                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.87  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1273	10.67*	1.003E+00	3.355E+01	3.355E+01	8.82
CD-109	88.03	379	3.72*	7.859E+00	3.654E+00	3.731E+00	23.64
SN-126	64.28	185	9.60	8.063E+00	6.735E-01	6.735E-01	71.48
	86.94	379	8.90	7.859E+00	1.527E+00	1.527E+00	46.85
	87.57	379	37.00*	7.859E+00	3.674E-01	3.674E-01	23.64
TL-208	277.35	------	6.80	4.261E+00	------ Line Not Found		------
	510.84	89	21.60	2.545E+00	4.580E-01	4.580E-01	77.47
	583.14	362	84.20*	2.259E+00	5.373E-01	5.373E-01	18.39
	860.37	50	12.46	1.589E+00	7.189E-01	7.189E-01	63.94
BI-210	46.50	125	4.05*	7.641E+00	1.137E+00	1.139E+00	88.39
PB-210	46.50	125	4.05*	7.641E+00	1.137E+00	1.139E+00	88.39
PO-210	46.50	125	4.05*	7.641E+00	1.137E+00	1.139E+00	88.30
BI-211	72.87	------	1.27	8.052E+00	------ Line Not Found		------
	351.07	660	12.94*	3.515E+00	4.096E+00	4.096E+00	13.61
PB-212	74.81	734	10.70	8.037E+00	2.409E+00	2.409E+00	18.00
	77.11	1038	18.00	8.014E+00	2.029E+00	2.029E+00	12.67
	87.30	379	8.00	7.859E+00	1.699E+00	1.699E+00	25.66
	238.63	1406	44.60*	4.773E+00	1.864E+00	1.864E+00	12.57
	300.09	128	3.41	4.007E+00	2.649E+00	2.649E+00	41.71
PO-212	74.81	734	10.70	8.037E+00	2.409E+00	2.409E+00	18.00
	77.11	1038	18.00	8.014E+00	2.029E+00	2.029E+00	12.67
	87.30	379	8.00	7.859E+00	1.699E+00	1.699E+00	25.66
	115.19	------	0.60	7.241E+00	------ Line Not Found		------
	238.63	1406	44.60*	4.773E+00	1.864E+00	1.864E+00	12.57
	300.09	128	3.41	4.007E+00	2.649E+00	2.649E+00	41.71
BI-214	609.31	457	46.30*	2.171E+00	1.283E+00	1.283E+00	16.27
	768.36	------	5.04	1.760E+00	------ Line Not Found		------
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	109	15.10	1.258E+00	1.613E+00	1.613E+00	30.80
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	------	4.11	1.054E+00	------ Line Not Found		------
	1764.49	64	15.80	8.611E-01	1.329E+00	1.329E+00	32.35

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	734	6.21	8.037E+00	4.150E+00	4.151E+00	17.07
	77.11	1038	10.50	8.014E+00	3.479E+00	3.479E+00	14.79
	87.30	379	4.67	7.859E+00	2.911E+00	2.911E+00	24.86
	241.98	313	7.49	4.728E+00	2.491E+00	2.491E+00	24.66
	295.21	422	19.20	4.058E+00	1.529E+00	1.529E+00	18.10
	351.92	660	37.20*	3.515E+00	1.425E+00	1.425E+00	14.58
PO-214	74.81	734	6.21	8.037E+00	4.150E+00	4.151E+00	17.07
	77.11	1038	10.50	8.014E+00	3.479E+00	3.479E+00	14.79
	87.30	379	4.67	7.859E+00	2.911E+00	2.911E+00	24.86
	241.98	313	7.49	4.728E+00	2.491E+00	2.491E+00	24.66
	295.21	422	19.20	4.058E+00	1.529E+00	1.529E+00	18.10
	351.92	660	37.20*	3.515E+00	1.425E+00	1.425E+00	14.58
PO-216	74.81	734	10.70	8.037E+00	2.409E+00	2.409E+00	18.00
	77.11	1038	18.00	8.014E+00	2.029E+00	2.029E+00	12.67
	87.30	379	8.00	7.859E+00	1.699E+00	1.699E+00	25.66
	238.63	1406	44.60*	4.773E+00	1.864E+00	1.864E+00	12.57
	300.09	128	3.41	4.007E+00	2.649E+00	2.649E+00	41.71
PO-218	74.81	734	6.21	8.037E+00	4.150E+00	4.151E+00	17.07
	77.11	1038	10.50	8.014E+00	3.479E+00	3.479E+00	14.79
	87.30	379	4.67	7.859E+00	2.911E+00	2.911E+00	24.86
	241.98	313	7.49	4.728E+00	2.491E+00	2.491E+00	24.66
	295.21	422	19.20	4.058E+00	1.529E+00	1.529E+00	18.10
	351.92	660	37.20*	3.515E+00	1.425E+00	1.425E+00	14.58
RA-224	240.98	313	3.95*	4.728E+00	4.724E+00	4.724E+00	24.01
RA-226	609.31	457	46.30*	2.171E+00	1.283E+00	1.283E+00	16.27
	768.36	------	5.04	1.760E+00	------	Line Not Found	------
	934.06	------	3.21	1.477E+00	------	Line Not Found	------
	1120.29	109	15.10	1.258E+00	1.613E+00	1.613E+00	30.80
	1238.11	------	5.94	1.154E+00	------	Line Not Found	------
	1377.67	------	4.11	1.054E+00	------	Line Not Found	------
	1764.49	64	15.80	8.611E-01	1.329E+00	1.329E+00	32.35
AC-228	338.32	246	11.40	3.635E+00	1.674E+00	1.674E+00	49.09
	911.07	286	27.70*	1.509E+00	1.926E+00	1.926E+00	23.59
	969.11	144	16.60	1.429E+00	1.713E+00	1.713E+00	37.00
RA-228	338.32	246	11.40	3.635E+00	1.674E+00	1.674E+00	49.09
	911.07	286	27.70*	1.509E+00	1.926E+00	1.926E+00	23.59
	969.11	144	16.60	1.429E+00	1.713E+00	1.713E+00	37.00
TH-228	84.40	168	1.21	7.909E+00	4.943E+00	4.943E+00	44.75
	238.60	1406	44.60*	4.773E+00	1.864E+00	1.864E+00	12.57
	300.10	128	3.41	4.007E+00	2.649E+00	2.649E+00	71.73
TH-230	609.31	457	46.30*	2.171E+00	1.283E+00	1.283E+00	16.27
	768.36	------	5.04	1.760E+00	------	Line Not Found	------
	934.06	------	3.21	1.477E+00	------	Line Not Found	------
	1120.29	109	15.10	1.258E+00	1.613E+00	1.613E+00	30.80
	1238.11	------	5.94	1.154E+00	------	Line Not Found	------
	1377.67	------	4.11	1.054E+00	------	Line Not Found	------
	1764.49	64	15.80	8.611E-01	1.329E+00	1.329E+00	32.35
TH-232	338.32	246	11.40	3.635E+00	1.674E+00	1.674E+00	27.96
	911.07	286	27.70*	1.509E+00	1.926E+00	1.926E+00	23.59

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	969.11	144	16.60	1.429E+00	1.713E+00	1.713E+00	37.00
TH-234	63.29	185	3.80*	8.063E+00	1.702E+00	1.702E+00	72.12
	92.38	354	5.41	7.754E+00	2.383E+00	2.383E+00	31.92
U-234	609.31	457	46.30*	2.171E+00	1.283E+00	1.283E+00	16.27
	768.36	------	5.04	1.760E+00	------ Line Not Found		------
	934.06	------	3.21	1.477E+00	------ Line Not Found		------
	1120.29	109	15.10	1.258E+00	1.613E+00	1.613E+00	30.80
	1238.11	------	5.94	1.154E+00	------ Line Not Found		------
	1377.67	------	4.11	1.054E+00	------ Line Not Found		------
	1764.49	64	15.80	8.611E-01	1.329E+00	1.329E+00	32.35
NP-237	86.50	379	12.60*	7.859E+00	1.079E+00	1.079E+00	31.38
	95.87	------	2.60	7.687E+00	------ Line Not Found		------
U-238	63.29	185	3.80*	8.063E+00	1.702E+00	1.702E+00	72.12
	92.38	354	5.41	7.754E+00	2.383E+00	2.383E+00	27.68
AM-243	74.67	734	66.00*	8.037E+00	3.905E-01	3.905E-01	15.38
	86.72	379	0.34	7.859E+00	4.046E+01	4.046E+01	23.64
	117.66	------	0.55	7.181E+00	------ Line Not Found		------
	142.18	------	0.13	6.593E+00	------ Line Not Found		------
ANH-511	511.00	89	100.00*	2.545E+00	9.893E-02	9.893E-02	77.02

Flag: "*" = Keyline

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

Total number of lines in spectrum 33
Number of unidentified lines 2
Number of lines tentatively identified by NID 31 93.94%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.355E+01	3.355E+01	0.296E+01	8.82	
CD-109	464.00D	1.02	3.654E+00	3.731E+00	0.882E+00	23.64	
SN-126	1.00E+05Y	1.00	3.674E-01	3.674E-01	0.868E-01	23.64	
TL-208	1.41E+10Y	1.00	5.373E-01	5.373E-01	0.988E-01	18.39	
BI-210	22.26Y	1.00	1.137E+00	1.139E+00	1.006E+00	88.39	
PB-210	22.26Y	1.00	1.137E+00	1.139E+00	1.006E+00	88.39	
PO-210	22.26Y	1.00	1.137E+00	1.139E+00	1.005E+00	88.30	
BI-211	7.04E+08Y	1.00	4.096E+00	4.096E+00	0.557E+00	13.61	
PB-212	1.41E+10Y	1.00	1.864E+00	1.864E+00	0.234E+00	12.57	
PO-212	1.41E+10Y	1.00	1.864E+00	1.864E+00	0.234E+00	12.57	
BI-214	1600.00Y	1.00	1.283E+00	1.283E+00	0.209E+00	16.27	
PB-214	1600.00Y	1.00	1.425E+00	1.425E+00	0.208E+00	14.58	
PO-214	1600.00Y	1.00	1.425E+00	1.425E+00	0.208E+00	14.58	
PO-216	1.41E+10Y	1.00	1.864E+00	1.864E+00	0.234E+00	12.57	
PO-218	1600.00Y	1.00	1.425E+00	1.425E+00	0.208E+00	14.58	
RA-224	1.41E+10Y	1.00	4.724E+00	4.724E+00	1.134E+00	24.01	
RA-226	1600.00Y	1.00	1.283E+00	1.283E+00	0.209E+00	16.27	
AC-228	1.41E+10Y	1.00	1.926E+00	1.926E+00	0.454E+00	23.59	
RA-228	1.41E+10Y	1.00	1.926E+00	1.926E+00	0.454E+00	23.59	
TH-228	1.41E+10Y	1.00	1.864E+00	1.864E+00	0.234E+00	12.57	
TH-230	4.47E+09Y	1.00	1.283E+00	1.283E+00	0.209E+00	16.27	
TH-232	1.41E+10Y	1.00	1.926E+00	1.926E+00	0.454E+00	23.59	
TH-234	4.47E+09Y	1.00	1.702E+00	1.702E+00	1.227E+00	72.12	
U-234	4.47E+09Y	1.00	1.283E+00	1.283E+00	0.209E+00	16.27	
NP-237	2.14E+06Y	1.00	1.079E+00	1.079E+00	0.339E+00	31.38	
U-238	4.47E+09Y	1.00	1.702E+00	1.702E+00	1.227E+00	72.12	
AM-243	7380.00Y	1.00	3.905E-01	3.905E-01	0.601E-01	15.38	
ANH-511	1.00E+09Y	1.00	9.893E-02	9.893E-02	7.620E-02	77.02	
			---	---			
	Total Activity :		7.795E+01	7.804E+01			

Grand Total Activity : 7.795E+01 7.804E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201874833
Acquisition date : 14-JUL-2009 11:23:48

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	89.68	287	431	1.29	180.50	166	27	3.99E-02	28.8	7.81E+00	T
0	185.99	155	398	1.34	373.03	368	10	2.16E-02	52.5	5.66E+00	T
0	209.00	166	259	1.02	419.03	415	9	2.30E-02	38.2	5.24E+00	T
0	270.17	120	311	1.64	541.30	535	14	1.66E-02	65.4	4.35E+00	T
0	328.40	73	241	1.87	657.69	651	13	1.01E-02	91.3	3.72E+00	T
0	408.72	54	113	2.73	818.23	815	10	7.53E-03	77.5	3.10E+00	
0	463.16	67	116	1.88	927.04	922	11	9.27E-03	67.0	2.78E+00	T
0	727.43	109	86	1.53	1455.16	1447	15	1.51E-02	41.9	1.85E+00	T
0	795.33	36	60	1.53	1590.83	1587	9	4.99E-03	84.0	1.71E+00	T
2	964.51	54	68	2.40	1928.83	1920	43	7.47E-03	66.8	1.44E+00	T
0	1729.72	23	3	1.61	3457.12	3450	13	3.20E-03	52.4	8.75E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:24:42.80

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874833.CNF;1 *
* Acquisition date  : 14-JUL-2009 11:23:48  Detector SN#     :             *
* Detector ID       : GAM05                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 02:00:01.87          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1201874833           Analyst initials: MXR1         *
* Batch Number      : 882713                Sample Quantity : 1.33070E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00.5MS Isotope       :             *
* MSD ID           :                      MSD Isotope      :             *
* LCS ID           : 1023-A               LCS Isotope      :             *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.355E+01	2.958E+00	7.838E-01	4.874E-02	42.808
CD-109	3.731E+00	8.820E-01	1.003E+00	7.640E-02	3.719
SN-126	3.674E-01	8.684E-02	9.864E-02	7.512E-03	3.724
TL-208	5.373E-01	9.881E-02	6.780E-02	4.989E-03	7.925
BI-210	1.139E+00	1.006E+00	8.633E-01	6.735E-02	1.319
PB-210	1.139E+00	1.006E+00	8.633E-01	6.735E-02	1.319
PO-210	1.139E+00	1.005E+00	8.633E-01	5.807E-02	1.319
BI-211	4.096E+00	5.574E-01	3.570E-01	2.829E-02	11.471
PB-212	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
PO-212	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
BI-214	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
PB-214	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
PO-214	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
PO-216	1.864E+00	2.342E-01	9.783E-02	1.055E-02	19.049
PO-218	1.425E+00	2.077E-01	1.201E-01	1.137E-02	11.865
RA-224	4.724E+00	1.134E+00	1.114E+00	1.090E-01	4.242
RA-226	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
AC-228	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
TH-228	1.864E+00	2.342E-01	9.782E-02	1.055E-02	19.051
TH-230	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
TH-232	1.926E+00	4.544E-01	2.823E-01	3.493E-02	6.825
TH-234	1.702E+00	1.227E+00	1.042E+00	1.852E-01	1.632
U-234	1.283E+00	2.088E-01	1.351E-01	1.132E-02	9.500
NP-237	1.079E+00	3.385E-01	2.887E-01	6.352E-02	3.736
U-238	1.702E+00	1.227E+00	1.042E+00	1.852E-01	1.632
AM-243	3.905E-01	6.006E-02	6.075E-02	4.758E-03	6.428
ANH-511	9.893E-02	7.620E-02	5.800E-02	3.712E-03	1.706

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	7.318E-04		3.628E-01	5.958E-01	4.268E-02	0.001
NA-22	-1.244E-02		5.921E-02	9.386E-02	5.467E-03	-0.132
NA-24	2.539E-01		1.239E-01	Half-Life too short		
AL-26	2.370E-02		3.241E-02	6.066E-02	3.480E-03	0.391
TI-44	3.745E-01	+	4.746E-02	6.274E-02	4.868E-03	5.968
SC-46	-5.056E-03		4.601E-02	7.548E-02	7.582E-03	-0.067
V-48	-8.271E-02		9.910E-02	1.239E-01	1.135E-02	-0.667
CR-51	4.720E-02		3.918E-01	6.439E-01	5.694E-02	0.073
MN-52	8.575E-02		2.339E-01	4.075E-01	2.386E-02	0.210
MN-54	-1.838E-02		4.648E-02	7.539E-02	6.906E-03	-0.244
CO-56	-1.413E-02		4.797E-02	7.780E-02	7.275E-03	-0.182
CO-57	-3.816E-04		2.639E-02	4.351E-02	6.174E-03	-0.009
CO-58	-1.733E-03		4.584E-02	7.613E-02	6.700E-03	-0.023
FE-59	2.663E-02		1.090E-01	1.819E-01	1.473E-02	0.146
CO-60	3.091E-02		4.598E-02	7.994E-02	4.626E-03	0.387
ZN-65	2.034E-02		1.295E-01	1.845E-01	1.289E-02	0.110
GE-68	1.610E+00		1.658E+00	2.918E+00	2.241E-01	0.552
AS-73	6.769E-02		2.422E-01	3.997E-01	3.009E-02	0.169
AS-74	-3.670E-02		1.006E-01	1.584E-01	1.042E-02	-0.232
SE-75	-3.428E-02		5.786E-02	7.698E-02	7.349E-03	-0.445
BR-77	-3.886E+00		8.721E+00	1.379E+01	8.869E-01	-0.282
SR-82	-4.033E-01		4.715E-01	7.366E-01	6.077E-02	-0.548
RB-83	-2.095E-02		7.951E-02	1.275E-01	8.197E-03	-0.164
RB-84	1.246E-02		8.122E-02	1.363E-01	1.352E-02	0.091
KR-85	1.719E+01		1.091E+01	1.720E+01	1.103E+00	0.999
SR-85	8.709E-02		5.525E-02	8.714E-02	5.586E-03	0.999
RB-86	9.856E-01		9.896E-01	1.747E+00	1.344E-01	0.564
Y-88	-7.236E-03		3.857E-02	6.075E-02	3.476E-03	-0.119
ZR-88	-4.993E-04		3.437E-02	5.696E-02	3.317E-03	-0.009
Y-91	1.532E+01		2.496E+01	4.241E+01	2.465E+00	0.361
NB-94	2.473E-02		4.218E-02	7.064E-02	5.054E-03	0.350
NB-95	2.494E-02		5.635E-02	9.669E-02	7.820E-03	0.258
NB-95M	3.735E-01		1.696E-01	2.594E-01	2.838E-02	1.439

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	1.462E-02		8.803E-02	1.490E-01	1.323E-02	0.098
NB-97	2.557E-02		1.964E-02	Half-Life too short		
ZR-97	1.290E+00		3.725E-01	Half-Life too short		
MO-99	-2.396E+00		1.029E+01	1.693E+01	2.486E+00	-0.142
TC-99M	-2.362E+09		9.303E+08	Half-Life too short		
RH-101	-6.277E-03		3.694E-02	5.809E-02	5.801E-03	-0.108
RH-102	-2.623E-02		3.409E-02	5.305E-02	3.323E-03	-0.495
RU-103	-7.603E-03		4.440E-02	7.183E-02	9.272E-03	-0.106
RH-106	1.283E-01		3.803E-01	6.304E-01	7.659E-02	0.204
RU-106	1.283E-01		3.800E-01	6.304E-01	4.156E-02	0.204
AG-108M	4.809E-03		3.840E-02	6.385E-02	4.178E-03	0.075
AG-110M	2.380E-02		4.363E-02	7.313E-02	5.055E-03	0.325
IN-111	-3.467E-01		9.866E-01	1.345E+00	1.310E-01	-0.258
IN-113M	-2.439E-02		5.083E-02	8.202E-02	5.088E-03	-0.297
SN-113	-2.439E-02		5.083E-02	8.202E-02	5.088E-03	-0.297
IN-114M	1.509E-01		2.221E-01	3.266E-01	3.262E-02	0.462
CD-115	-1.675E-01		8.409E+00	1.371E+01	8.846E-01	-0.012
SN-117M	1.308E-04		5.719E-02	9.345E-02	1.005E-02	0.001
SB-122	1.010E+00		1.890E+00	3.185E+00	2.081E-01	0.317
I-123	-6.087E-01		7.535E-01	Half-Life too short		
TE-123M	-1.270E-02		3.144E-02	5.052E-02	5.428E-03	-0.251
I-124	-1.478E-01		7.602E-01	1.041E+00	6.855E-02	-0.142
SB-124	1.196E-02		6.689E-02	1.145E-01	7.247E-03	0.104
SB-125	6.328E-02		1.093E-01	1.865E-01	1.169E-02	0.339
TE-125M	8.096E+00		9.031E+00	1.531E+01	1.968E+00	0.529
I-126	1.461E-01		2.070E-01	3.508E-01	2.329E-02	0.417
SB-126	-7.414E-02		1.739E-01	2.393E-01	1.775E-02	-0.310
SB-127	1.004E+00		1.399E+00	2.367E+00	2.316E-01	0.424
XE-127	-5.371E-03		5.141E-02	7.986E-02	7.971E-03	-0.067
I-131	-1.142E-01		1.108E-01	1.724E-01	1.293E-02	-0.662
TE-132	-5.910E-01		6.022E-01	9.110E-01	1.480E-01	-0.649
BA-133	-1.495E-02		5.213E-02	7.369E-02	9.100E-03	-0.203
I-133	3.455E-04		1.288E-03	Half-Life too short		
CS-134	7.826E-02	+	6.609E-02	1.083E-01	9.330E-03	0.722
CS-135	3.282E-01		2.149E-01	3.247E-01	3.473E-02	1.011
I-135	-1.488E+08		2.154E+08	Half-Life too short		
CS-136	4.139E-02		1.216E-01	2.054E-01	1.760E-02	0.201
BA-137M	-4.820E-02		4.737E-02	7.040E-02	4.630E-03	-0.685
CS-137	-5.095E-02		5.008E-02	7.442E-02	4.910E-03	-0.685
CE-139	-1.523E-02		3.252E-02	5.201E-02	5.163E-03	-0.293
BA-140	-1.614E-01		2.748E-01	4.195E-01	1.370E-01	-0.385
LA-140	-2.730E-02		1.046E-01	1.671E-01	9.821E-03	-0.163
CE-141	3.812E-02		6.696E-02	1.101E-01	1.346E-02	0.346
CE-143	4.454E-04		7.221E-05	Half-Life too short		
CE-144	-2.777E-01		2.335E-01	3.583E-01	6.634E-02	-0.775
PM-144	-1.410E-02		4.440E-02	6.774E-02	4.789E-03	-0.208
PR-144	-9.549E-01		3.007E+00	4.587E+00	3.242E-01	-0.208
PM-146	-2.806E-02		4.841E-02	7.651E-02	6.789E-03	-0.367

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-7.919E-02		5.662E-01	9.141E-01	1.263E-01	-0.087
PM-149	4.045E+00		7.114E+01	1.201E+02	1.903E+01	0.034
EU-152	5.763E-02		1.282E-01	1.823E-01	1.499E-02	0.316
GD-153	-1.234E-02		7.947E-02	1.144E-01	1.061E-02	-0.108
EU-154	-1.490E-02		1.631E-01	2.615E-01	2.445E-02	-0.057
EU-155	-5.227E-02		1.089E-01	1.740E-01	1.885E-02	-0.300
TB-160	-4.167E-03		1.685E-01	2.787E-01	2.754E-02	-0.015
HO-166M	1.862E-02		7.104E-02	1.215E-01	8.850E-03	0.153
TM-171	-7.468E+00		1.783E+01	2.593E+01	2.084E+00	-0.288
LU-176	6.190E-03		3.055E-02	4.530E-02	3.945E-03	0.137
LU-177	3.447E+00	+	1.362E+00	1.936E+00	1.930E-01	1.781
LU-177M	-2.134E-02		2.339E-01	3.332E-01	1.983E-02	-0.064
HF-181	-1.297E-02		4.748E-02	7.645E-02	4.811E-03	-0.170
W-181	8.977E-02		2.218E-01	3.328E-01	2.690E-02	0.270
TA-182	-9.711E-02		2.908E-01	4.603E-01	2.676E-02	-0.211
RE-183	6.219E-02		1.178E-01	1.960E-01	2.026E-02	0.317
RE-184	-2.393E-02		2.479E-01	3.950E-01	3.817E-02	-0.061
OS-185	-3.028E-02		5.283E-02	8.132E-02	5.357E-03	-0.372
RE-188	1.311E-01		1.899E-01	3.175E-01	3.535E-02	0.413
W-188	-1.924E+00		8.411E+00	1.213E+01	1.099E+00	-0.159
IR-192	1.112E-02		3.612E-02	6.149E-02	5.218E-03	0.181
AU-195	1.890E-01		2.235E-01	3.519E-01	3.356E-02	0.537
TL-200	4.560E-05		1.126E-04	Half-Life too short		
TL-201	2.423E+00		5.887E+00	9.747E+00	9.676E-01	0.249
TL-202	8.987E-02		7.591E-02	1.336E-01	8.147E-03	0.672
HG-203	4.331E-02		4.496E-02	7.853E-02	7.467E-03	0.552
BI-207	4.581E-02		6.136E-02	1.072E-01	8.488E-03	0.427
TL-207	-2.857E-01		7.838E-01	1.108E+00	1.942E-01	-0.258
PO-209	-6.595E-01		9.531E+00	1.569E+01	1.595E+00	-0.042
PB-211	-4.954E-01		1.257E+00	1.691E+00	1.054E+00	-0.293
BI-212	1.405E+00	+	6.022E-01	7.989E-01	7.247E-02	1.758
PO-215	-2.857E-01		7.838E-01	1.108E+00	1.942E-01	-0.258
RN-219	2.715E-01		4.754E-01	8.104E-01	1.105E-01	0.335
RN-220	-9.907E+00		3.060E+01	4.865E+01	3.166E+00	-0.204
RA-223	-2.857E-01		7.838E-01	1.108E+00	1.942E-01	-0.258
AC-227	-2.604E-01		4.189E-01	6.450E-01	1.028E-01	-0.404
TH-227	-2.604E-01		4.197E-01	6.450E-01	1.197E-01	-0.404
TH-229	-3.461E-01		5.560E-01	8.753E-01	8.741E-02	-0.395
PA-231	1.345E-01		1.719E+00	2.906E+00	4.510E-01	0.046
TH-231	-2.857E-01		7.838E-01	1.108E+00	1.942E-01	-0.258
U-231	-5.131E-01		8.719E-01	1.238E+00	1.113E-01	-0.414
PA-233	2.334E-02		7.264E-02	1.133E-01	1.001E-02	0.206
PA-234	-2.712E-01		3.624E-01	5.507E-01	1.061E-01	-0.492
PA-234M	1.091E+01		7.777E+00	1.392E+01	1.588E+00	0.784
U-235	2.632E-02		2.279E-01	3.694E-01	7.228E-02	0.071
NP-236	-5.548E-02		8.832E-02	1.404E-01	1.482E-02	-0.395
NP-239	-2.387E-02		1.907E-01	3.136E-01	4.108E-02	-0.076
AM-241	4.742E-02		7.159E-02	1.090E-01	9.755E-03	0.435

Sample ID : G1201874833 Acquisition date : 14-JUL-2009 11:23:48

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	5.218E-02		9.643E-02	1.595E-01	1.667E-02	0.327
CM-247	1.075E-02		4.484E-02	7.122E-02	4.191E-03	0.151
CF-249	-5.836E-03		4.682E-02	7.720E-02	4.617E-03	-0.076
CF-251	-1.280E-01		1.382E-01	2.151E-01	2.142E-02	-0.595

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201874833          *
* Acquisition date  : 14-JUL-2009 11:23:48 Detector SN#     :               *
* Detector ID       : GAM05                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.87      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 30-JUN-2009 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201874833          Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.3307E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME : 11-JUN-2009 16:41:00 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.355E+01	2.899E+00	3.928E-01	1.479E+00
CD-109	3.731E+00	8.643E-01	5.278E-01	4.410E-01
SN-126	3.674E-01	8.510E-02	5.189E-02	4.342E-02
TL-208	5.373E-01	9.683E-02	3.454E-02	4.940E-02
BI-210	1.139E+00	9.863E-01	4.589E-01	5.032E-01
PB-210	1.139E+00	9.863E-01	4.589E-01	5.032E-01
PO-210	1.139E+00	9.853E-01	4.589E-01	5.027E-01
BI-211	4.096E+00	5.463E-01	1.835E-01	2.787E-01
PB-212	1.864E+00	2.295E-01	5.061E-02	1.171E-01
PO-212	1.864E+00	2.295E-01	5.061E-02	1.171E-01
BI-214	1.283E+00	2.046E-01	6.876E-02	1.044E-01
PB-214	1.425E+00	2.035E-01	6.171E-02	1.038E-01
PO-214	1.425E+00	2.035E-01	6.171E-02	1.038E-01
PO-216	1.864E+00	2.295E-01	5.061E-02	1.171E-01
PO-218	1.425E+00	2.035E-01	6.171E-02	1.038E-01
RA-224	4.724E+00	1.112E+00	5.760E-01	5.671E-01
RA-226	1.283E+00	2.046E-01	6.876E-02	1.044E-01
AC-228	1.926E+00	4.453E-01	1.426E-01	2.272E-01
RA-228	1.926E+00	4.453E-01	1.426E-01	2.272E-01
TH-228	1.864E+00	2.295E-01	5.061E-02	1.171E-01
TH-230	1.283E+00	2.046E-01	6.876E-02	1.044E-01
TH-232	1.926E+00	4.453E-01	1.426E-01	2.272E-01
TH-234	1.702E+00	1.203E+00	5.513E-01	6.136E-01
U-234	1.283E+00	2.046E-01	6.876E-02	1.044E-01
NP-237	1.079E+00	3.317E-01	1.519E-01	1.693E-01
U-238	1.702E+00	1.203E+00	5.513E-01	6.136E-01
AM-243	3.905E-01	5.886E-02	3.204E-02	3.003E-02
ANH-511	9.893E-02	7.468E-02	2.961E-02	3.810E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	7.318E-04	3.555E-01	3.046E-01	1.814E-01	NOT IDENT.
NA-22	-1.244E-02	5.803E-02	4.715E-02	2.961E-02	NOT IDENT.
NA-24	2.539E+05	2.429E+05	0.000E+00	1.239E+05	SHORT HLIF
AL-26	2.370E-02	3.176E-02	3.028E-02	1.621E-02	NOT IDENT.
TI-44	3.745E-01	4.651E-02	3.307E-02	2.373E-02	FAIL ABUN
SC-46	-5.056E-03	4.509E-02	3.816E-02	2.301E-02	FAIL ABUN
V-48	-8.271E-02	9.712E-02	6.254E-02	4.955E-02	NOT IDENT.
CR-51	4.720E-02	3.840E-01	3.314E-01	1.959E-01	NOT IDENT.
MN-52	8.575E-02	2.292E-01	2.043E-01	1.170E-01	NOT IDENT.
MN-54	-1.838E-02	4.555E-02	3.816E-02	2.324E-02	NOT IDENT.
CO-56	-1.413E-02	4.701E-02	3.937E-02	2.399E-02	NOT IDENT.
CO-57	-3.816E-04	2.586E-02	2.277E-02	1.319E-02	NOT IDENT.
CO-58	-1.733E-03	4.492E-02	3.855E-02	2.292E-02	NOT IDENT.
FE-59	2.663E-02	1.068E-01	9.163E-02	5.449E-02	NOT IDENT.
CO-60	3.091E-02	4.506E-02	4.013E-02	2.299E-02	NOT IDENT.
ZN-65	2.034E-02	1.269E-01	9.293E-02	6.474E-02	NOT IDENT.
GE-68	1.610E+00	1.625E+00	1.470E+00	8.292E-01	NOT IDENT.
AS-73	6.769E-02	2.373E-01	2.120E-01	1.211E-01	NOT IDENT.
AS-74	-3.670E-02	9.860E-02	8.068E-02	5.031E-02	NOT IDENT.
SE-75	-3.428E-02	5.671E-02	3.975E-02	2.893E-02	NOT IDENT.
BR-77	-3.886E+00	8.547E+00	7.039E+00	4.361E+00	FAIL ABUN
SR-82	-4.033E-01	4.620E-01	3.733E-01	2.357E-01	NOT IDENT.
RB-83	-2.095E-02	7.792E-02	6.507E-02	3.976E-02	NOT IDENT.
RB-84	1.246E-02	7.959E-02	6.895E-02	4.061E-02	NOT IDENT.
KR-85	1.719E+01	1.069E+01	8.781E+00	5.453E+00	NOT IDENT.
SR-85	8.709E-02	5.415E-02	4.449E-02	2.763E-02	NOT IDENT.
RB-86	9.856E-01	9.698E-01	8.803E-01	4.948E-01	NOT IDENT.
Y-88	-7.236E-03	3.780E-02	3.032E-02	1.928E-02	NOT IDENT.
ZR-88	-4.993E-04	3.368E-02	2.922E-02	1.718E-02	NOT IDENT.
Y-91	1.532E+01	2.446E+01	2.133E+01	1.248E+01	NOT IDENT.
NB-94	2.473E-02	4.134E-02	3.587E-02	2.109E-02	NOT IDENT.
NB-95	2.494E-02	5.523E-02	4.902E-02	2.818E-02	NOT IDENT.
NB-95M	3.735E-01	1.663E-01	1.342E-01	8.482E-02	NOT IDENT.
ZR-95	1.462E-02	8.627E-02	7.554E-02	4.402E-02	NOT IDENT.
NB-97	2.557E+04	3.849E+04	0.000E+00	1.964E+04	SHORT HLIF
ZR-97	1.290E+06	7.301E+05	0.000E+00	3.725E+05	SHORT HLIF
MO-99	-2.396E+00	1.009E+01	8.590E+00	5.147E+00	NOT IDENT.
TC-99M	-2.362E+15	1.823E+15	0.000E+00	9.303E+14	SHORT HLIF
RH-101	-6.277E-03	3.621E-02	3.015E-02	1.847E-02	NOT IDENT.
RH-102	-2.623E-02	3.341E-02	2.712E-02	1.704E-02	NOT IDENT.
RU-103	-7.603E-03	4.351E-02	3.669E-02	2.220E-02	FAIL ABUN
RH-106	1.283E-01	3.726E-01	3.208E-01	1.901E-01	FAIL ABUN
RU-106	1.283E-01	3.724E-01	3.208E-01	1.900E-01	FAIL ABUN
AG-108M	4.809E-03	3.763E-02	3.269E-02	1.920E-02	NOT IDENT.
AG-110M	2.380E-02	4.276E-02	3.717E-02	2.181E-02	NOT IDENT.
IN-111	-3.467E-01	9.669E-01	6.952E-01	4.933E-01	NOT IDENT.
IN-113M	-2.439E-02	4.982E-02	4.207E-02	2.542E-02	NOT IDENT.
SN-113	-2.439E-02	4.982E-02	4.207E-02	2.542E-02	NOT IDENT.
IN-114M	1.509E-01	2.176E-01	1.696E-01	1.110E-01	NOT IDENT.
CD-115	-1.675E-01	8.241E+00	6.996E+00	4.205E+00	NOT IDENT.
SN-117M	1.308E-04	5.604E-02	4.868E-02	2.859E-02	NOT IDENT.
SB-122	1.010E+00	1.852E+00	1.623E+00	9.451E-01	NOT IDENT.
I-123	-6.087E+05	1.477E+06	0.000E+00	7.535E+05	SHORT HLIF
TE-123M	-1.270E-02	3.081E-02	2.631E-02	1.572E-02	NOT IDENT.
I-124	-1.478E-01	7.450E-01	5.301E-01	3.801E-01	NOT IDENT.
SB-124	1.196E-02	6.555E-02	5.723E-02	3.344E-02	FAIL ABUN
SB-125	6.328E-02	1.071E-01	9.550E-02	5.466E-02	FAIL ABUN
TE-125M	8.096E+00	8.850E+00	8.026E+00	4.516E+00	NOT IDENT.
I-126	1.461E-01	2.028E-01	1.783E-01	1.035E-01	NOT IDENT.
SB-126	-7.414E-02	1.704E-01	1.215E-01	8.693E-02	FAIL ABUN
SB-127	1.004E+00	1.371E+00	1.202E+00	6.994E-01	NOT IDENT.
XE-127	-5.371E-03	5.039E-02	4.143E-02	2.571E-02	NOT IDENT.
I-131	-1.142E-01	1.086E-01	8.855E-02	5.539E-02	NOT IDENT.
TE-132	-5.910E-01	5.901E-01	4.716E-01	3.011E-01	NOT IDENT.
BA-133	-1.495E-02	5.109E-02	3.786E-02	2.607E-02	NOT IDENT.
I-133	3.455E+02	2.524E+03	0.000E+00	1.288E+03	SHORT HLIF
CS-134	7.826E-02	6.477E-02	5.489E-02	3.305E-02	FAIL ABUN
CS-135	3.282E-01	2.106E-01	1.676E-01	1.074E-01	NOT IDENT.
I-135	-1.488E+14	4.223E+14	0.000E+00	2.154E+14	SHORT HLIF
CS-136	4.139E-02	1.192E-01	1.036E-01	6.082E-02	FAIL ABUN
BA-137M	-4.820E-02	4.642E-02	3.578E-02	2.369E-02	NOT IDENT.
CS-137	-5.095E-02	4.908E-02	3.783E-02	2.504E-02	NOT IDENT.
CE-139	-1.523E-02	3.187E-02	2.707E-02	1.626E-02	NOT IDENT.
BA-140	-1.614E-01	2.693E-01	2.140E-01	1.374E-01	NOT IDENT.
LA-140	-2.730E-02	1.025E-01	8.360E-02	5.228E-02	FAIL ABUN
CE-141	3.812E-02	6.562E-02	5.743E-02	3.348E-02	NOT IDENT.
CE-143	4.454E+02	1.415E+02	0.000E+00	7.221E+01	SHORT HLIF

CE-144	-2.777E-01	2.288E-01	1.872E-01	1.167E-01	NOT IDENT.
PM-144	-1.410E-02	4.351E-02	3.440E-02	2.220E-02	NOT IDENT.
PR-144	-9.549E-01	2.946E+00	2.329E+00	1.503E+00	NOT IDENT.
PM-146	-2.806E-02	4.744E-02	3.914E-02	2.421E-02	NOT IDENT.
ND-147	-7.919E-02	5.549E-01	4.664E-01	2.831E-01	FAIL ABUN
PM-149	4.045E+00	6.971E+01	6.194E+01	3.557E+01	NOT IDENT.
EU-152	5.763E-02	1.256E-01	9.374E-02	6.410E-02	FAIL ABUN
GD-153	-1.234E-02	7.788E-02	6.010E-02	3.974E-02	FAIL ABUN
EU-154	-1.490E-02	1.599E-01	1.314E-01	8.157E-02	NOT IDENT.
EU-155	-5.227E-02	1.067E-01	9.126E-02	5.443E-02	FAIL ABUN
TB-160	-4.167E-03	1.651E-01	1.409E-01	8.424E-02	FAIL ABUN
HO-166M	1.862E-02	6.962E-02	6.166E-02	3.552E-02	NOT IDENT.
TM-171	-7.468E+00	1.747E+01	1.370E+01	8.916E+00	NOT IDENT.
LU-176	6.190E-03	2.994E-02	2.333E-02	1.528E-02	FAIL ABUN
LU-177	3.447E+00	1.335E+00	1.004E+00	6.811E-01	FAIL ABUN
LU-177M	-2.134E-02	2.292E-01	1.707E-01	1.170E-01	FAIL ABUN
HF-181	-1.297E-02	4.653E-02	3.907E-02	2.374E-02	NOT IDENT.
W-181	8.977E-02	2.174E-01	1.759E-01	1.109E-01	NOT IDENT.
TA-182	-9.711E-02	2.850E-01	2.314E-01	1.454E-01	FAIL ABUN
RE-183	6.219E-02	1.155E-01	1.021E-01	5.891E-02	FAIL ABUN
RE-184	-2.393E-02	2.430E-01	2.041E-01	1.240E-01	NOT IDENT.
OS-185	-3.028E-02	5.177E-02	4.135E-02	2.641E-02	NOT IDENT.
RE-188	1.311E-01	1.861E-01	1.655E-01	9.495E-02	NOT IDENT.
W-188	-1.924E+00	8.243E+00	6.252E+00	4.206E+00	FAIL ABUN
IR-192	1.112E-02	3.540E-02	3.165E-02	1.806E-02	FAIL ABUN
AU-195	1.890E-01	2.191E-01	1.848E-01	1.118E-01	FAIL ABUN
TL-200	4.560E+01	2.207E+02	0.000E+00	1.126E+02	SHORT HLIF
TL-201	2.423E+00	5.769E+00	5.073E+00	2.943E+00	NOT IDENT.
TL-202	8.987E-02	7.439E-02	6.842E-02	3.796E-02	NOT IDENT.
HG-203	4.331E-02	4.406E-02	4.052E-02	2.248E-02	NOT IDENT.
BI-207	4.581E-02	6.014E-02	5.402E-02	3.068E-02	FAIL ABUN
TL-207	-2.857E-01	7.681E-01	5.700E-01	3.919E-01	FAIL ABUN
PO-209	-6.595E-01	9.340E+00	7.932E+00	4.765E+00	NOT IDENT.
PB-211	-4.954E-01	1.232E+00	8.668E-01	6.283E-01	NOT IDENT.
BI-212	1.405E+00	5.902E-01	4.054E-01	3.011E-01	FAIL ABUN
PO-215	-2.857E-01	7.681E-01	5.700E-01	3.919E-01	FAIL ABUN
RN-219	2.715E-01	4.659E-01	4.155E-01	2.377E-01	FAIL ABUN
RN-220	-9.907E+00	2.999E+01	2.481E+01	1.530E+01	NOT IDENT.
RA-223	-2.857E-01	7.681E-01	5.700E-01	3.919E-01	FAIL ABUN
AC-227	-2.604E-01	4.106E-01	3.332E-01	2.095E-01	FAIL ABUN
TH-227	-2.604E-01	4.113E-01	3.332E-01	2.098E-01	FAIL ABUN
TH-229	-3.461E-01	5.449E-01	4.544E-01	2.780E-01	FAIL ABUN
PA-231	1.345E-01	1.685E+00	1.499E+00	8.595E-01	FAIL ABUN
TH-231	-2.857E-01	7.681E-01	5.700E-01	3.919E-01	FAIL ABUN
U-231	-5.131E-01	8.545E-01	6.504E-01	4.360E-01	FAIL ABUN
PA-233	2.334E-02	7.119E-02	5.837E-02	3.632E-02	FAIL ABUN
PA-234	-2.712E-01	3.552E-01	2.781E-01	1.812E-01	FAIL ABUN
PA-234M	1.091E+01	7.621E+00	7.023E+00	3.888E+00	NOT IDENT.
U-235	2.632E-02	2.233E-01	1.927E-01	1.139E-01	FAIL ABUN
NP-236	-5.548E-02	8.655E-02	7.313E-02	4.416E-02	NOT IDENT.
NP-239	-2.387E-02	1.869E-01	1.642E-01	9.533E-02	FAIL ABUN
AM-241	4.742E-02	7.015E-02	5.772E-02	3.579E-02	NOT IDENT.
CM-243	5.218E-02	9.450E-02	8.370E-02	4.821E-02	FAIL ABUN
CM-247	1.075E-02	4.395E-02	3.652E-02	2.242E-02	NOT IDENT.
CF-249	-5.836E-03	4.589E-02	3.961E-02	2.341E-02	NOT IDENT.
CF-251	-1.280E-01	1.354E-01	1.118E-01	6.909E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	412.7643
46.50	412.7643
46.50	412.7643
48.70	407.3845
49.72	496.1032
51.35	436.5606
52.39	434.5980
52.97	444.2557
53.15	444.4092
53.44	466.0742
54.07	465.4864
56.28	545.4742
56.28	545.4777
57.37	0.0000
57.53	467.6041
57.53	467.6060
57.60	467.6636
57.98	462.2290
57.98	462.2290
59.32	495.1089
59.32	495.1089
59.40	495.1801
59.54	525.6295
59.72	525.7994
60.01	541.9693
61.10	590.9866
61.14	591.0290
61.30	591.1959
63.00	592.9564
63.29	593.2540
63.29	593.2540
63.58	609.3664
64.28	604.2760
65.12	634.3071
65.20	634.3927
65.20	634.3927
66.05	638.2270
66.72	638.9418
66.83	639.0618
66.91	627.0809
67.20	620.0693
67.20	620.0693
67.75	605.3804
67.85	622.5716
68.90	649.3304
68.90	649.3304
69.30	619.6528
69.67	609.7466
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70.82	596.1638
70.83	596.1712
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72.87	601.8137
72.87	601.8137
74.67	603.5223
74.81	603.6542
74.81	603.6542
74.81	603.6542
74.81	603.6542
74.81	603.6542
74.81	603.6542
74.97	603.8058
75.28	604.0969
75.70	604.4899
77.11	590.1959
77.11	590.1959
77.11	590.1959

77.11	590.1959
77.11	590.1959
77.11	590.1959
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79.62	518.5776
79.80	518.7176
79.80	518.7176
80.11	515.2258
80.18	515.2785
80.30	515.3712
80.30	515.3712
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81.00	489.7388
81.07	519.7017
81.07	519.7017
81.07	519.7017
81.07	519.7017
82.60	547.1079
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83.78	590.0948
83.78	590.0948
83.78	590.0948
83.78	590.0948
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84.40	475.2822
84.90	475.6258
85.43	475.9887
86.29	476.5755
86.50	476.7183
86.54	476.7453
86.59	476.7801
86.72	476.8689
86.79	476.9152
86.94	477.0175
87.30	477.2607
87.30	477.2607
87.30	477.2607
87.30	477.2607
87.30	477.2607
87.30	477.2607
87.57	477.4441
87.88	477.6526
88.03	477.7549
88.36	477.9768
88.47	478.0502
89.95	479.0423
91.11	479.8125
92.29	480.5923
92.38	480.6521
92.38	480.6521
93.35	481.2891
94.00	371.6621
94.67	400.9626
94.67	400.9658
94.90	433.1156
94.90	433.1156
94.90	433.1156
94.90	433.1156
95.87	442.8430
95.87	442.8430
96.73	441.8239
97.43	402.4474
98.44	386.1288
98.44	386.1288
98.88	383.2855
99.55	381.4306
99.55	381.4306
99.86	378.0202
100.00	378.0894
100.10	387.7379
103.18	410.4774
103.76	396.3172
105.00	421.0860
105.31	432.8447
108.00	413.9445
109.28	374.7915
111.00	428.1248
111.00	428.1248

111.76	422.6775
112.95	380.3729
115.19	361.8362
116.30	365.2510
117.00	371.4328
117.00	371.4328
117.66	380.5492
121.11	371.2489
121.62	380.3339
121.78	375.4771
122.06	375.5977
122.32	378.6680
122.32	378.6680
122.32	378.6680
122.32	378.6680
123.07	382.9410
127.23	388.7110
129.76	374.8888
131.20	434.2470
133.02	448.0819
133.54	445.3399
135.34	345.1579
136.00	353.4120
136.25	357.5121
136.48	357.5992
140.51	412.4430
140.51	0.0000
142.18	341.6174
142.65	352.8732
143.76	361.3541
144.24	348.4060
144.24	348.4060
144.24	348.4060
144.24	348.4060
145.22	341.6799
145.44	345.8017
147.16	410.2220
152.43	378.7988
152.70	379.9181
153.22	377.0572
154.21	354.9854
154.21	354.9854
154.21	354.9854
154.21	354.9854
155.03	357.3139
156.02	357.6611
158.56	351.3766
159.00	0.0000
159.00	365.8738
160.31	367.3630
161.27	313.2654
162.32	321.8046
162.64	321.9025
163.35	352.9965
163.89	351.1177
165.85	348.6734
167.43	318.1960
171.28	336.9614
171.86	298.7600
172.10	298.8259
176.55	334.4183
176.60	334.4330
181.06	302.9276
184.41	365.9324
185.71	348.7023
186.00	348.7910
190.27	290.1891
192.34	302.1119
193.63	316.1910
197.04	263.0156
198.01	289.7646
198.60	294.1540
200.40	296.7249
201.83	325.8254
202.84	293.5170
205.31	280.2014
208.36	270.6194
208.81	284.8533

209.75	245.2035
209.75	245.2035
210.97	224.8460
215.65	264.8791
216.55	245.6733
218.09	262.1531
222.10	280.2896
223.80	245.9813
226.40	258.4168
227.00	253.1034
227.08	255.2921
227.20	255.3154
228.16	279.4212
228.18	279.4271
228.18	279.4271
231.56	0.0000
235.69	281.6674
236.00	274.7328
236.00	274.7328
238.60	252.0310
238.63	252.0363
238.63	252.0363
238.63	252.0363
239.00	252.1065
240.98	252.4732
241.98	230.2487
241.98	230.2487
241.98	230.2487
244.69	228.9425
245.39	229.0583
247.94	223.1761
248.90	210.8706
249.79	214.3203
252.40	205.8641
252.85	204.8237
252.85	204.8237
254.15	0.0000
256.20	223.0649
256.20	223.0649
260.50	189.2319
260.90	197.0778
262.80	236.9956
264.65	233.9802
268.24	218.4443
268.79	214.9424
269.46	218.4020
269.46	218.4020
269.46	218.4020
269.46	218.4020
271.23	218.6639
273.65	269.5642
276.40	213.0491
277.35	213.6109
277.60	202.7087
277.60	202.7087
278.00	202.7609
278.60	212.7601
279.20	212.8437
279.53	236.3437
280.46	260.8620
281.68	252.9434
283.67	217.0928
284.30	223.5151
285.00	218.1856
285.90	211.0681
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286.10	192.0707
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288.45	0.0000
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290.80	183.2651
291.72	198.5282
293.26	0.0000
293.70	170.2540
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295.21	170.4184
295.21	170.4184
295.96	170.5005

296.50	170.5599
297.23	170.6375
298.57	170.7836
299.80	170.9160
299.80	170.9160
300.09	170.9480
300.09	170.9480
300.09	170.9480
300.10	170.9491
300.12	170.9502
301.29	171.0781
302.84	171.2447
303.76	171.3429
303.91	171.3588
304.40	171.4113
304.40	171.4113
304.84	171.4593
306.84	175.9557
308.46	163.8808
311.98	155.2475
316.51	159.7673
318.01	155.2913
319.02	147.9883
319.41	148.9466
320.08	162.4789
323.87	166.9724
323.87	166.9724
323.87	166.9724
323.87	166.9724
325.23	164.0140
328.77	168.3905
333.44	163.2593
334.20	163.3319
334.20	163.3319
334.30	163.3405
338.28	174.0117
338.28	174.0117
338.28	174.0117
338.28	174.0117
338.32	174.0163
338.32	174.0163
338.32	174.0163
340.50	176.4223
340.57	176.4292
344.27	153.9622
345.85	176.6516
350.59	0.0000
351.07	153.9305
351.92	143.3201
351.92	143.3201
351.92	143.3201
355.39	0.0000
356.01	148.0607
364.48	151.9238
366.43	138.7802
367.43	128.3950
367.94	0.0000
369.80	127.6092
374.96	148.0220
383.85	159.2846
387.95	162.5160
388.63	164.4977
391.69	159.9452
391.69	159.9452
392.90	145.5845
398.62	153.7537
400.65	137.4585
401.10	136.5232
401.81	139.4789
402.60	144.1379
404.84	151.9850
410.95	162.1887
411.60	165.4885
413.65	147.7935
414.70	115.3736
415.30	135.1460
415.76	149.1122
417.63	0.0000

418.52	154.3432
423.70	160.6187
427.08	119.6842
427.89	131.5088
432.53	142.6282
433.93	131.8981
439.47	111.5282
439.56	111.5323
439.89	112.5374
443.98	128.5845
444.90	135.5685
445.03	136.5664
445.03	136.5664
445.03	136.5664
445.03	136.5664
453.90	123.2310
463.38	127.7734
468.07	111.7117
473.00	133.3556
475.06	130.4697
475.35	130.4872
476.78	112.4936
477.59	113.5393
477.96	112.5537
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487.03	113.0158
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492.35	103.1704
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507.63	0.0000
510.53	0.0000
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511.00	126.4567
511.85	144.5261
511.85	144.5261
513.99	139.5536
513.99	139.5536
520.41	107.5148
520.65	110.5972
527.90	92.4500
528.96	0.0000
529.64	85.3222
529.87	0.0000
531.02	89.4872
537.32	99.0047
543.00	92.0029
546.56	0.0000
549.76	103.6646
552.65	89.2565
555.20	91.4289
563.23	101.1088
563.90	103.2201
568.70	98.1974
569.32	107.6270
569.50	100.3195
569.67	103.4618
573.80	107.8181
574.00	105.7344
574.64	109.3683
578.91	87.4084
579.30	0.0000
583.14	96.6606
585.48	92.8945
591.81	85.3941
592.07	82.2390
593.00	88.5978
595.88	96.0877
600.56	79.9255
602.52	0.0000
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602.71	107.6361
603.60	111.2010
604.41	107.7056
604.70	102.4204
609.31	107.1991
609.31	107.1991
609.31	107.1991

609.31	107.1991
610.33	111.4882
612.46	108.0382
614.37	111.6599
618.01	97.9701
621.84	86.3809
621.84	86.3809
631.29	97.3896
633.02	93.1682
633.10	93.1703
634.78	79.2989
635.90	84.6916
636.97	92.2316
645.85	101.1418
646.12	101.1510
656.30	84.2461
657.75	89.6931
657.90	0.0000
661.65	125.5298
661.65	125.5298
664.57	0.0000
666.33	83.4649
666.33	83.4649
675.00	82.6370
677.61	65.2998
685.20	81.8427
692.80	107.2234
695.00	81.0278
696.49	97.5024
696.49	97.5024
697.00	101.9027
697.49	95.3432
698.33	87.6973
698.50	99.7623
699.00	100.8766
702.63	88.9260
706.10	86.8325
706.58	0.0000
706.67	90.1479
709.31	106.3687
711.68	82.5934
713.82	82.6538
717.42	80.2468
720.50	82.0516
721.93	0.0000
722.20	71.0470
722.78	74.2194
722.78	74.2194
722.89	66.3267
722.95	66.3281
723.30	66.3354
724.18	77.4136
727.18	75.6471
733.00	77.6426
735.90	85.7923
739.58	83.3698
742.81	78.8228
744.21	77.0036
747.13	71.5060
751.79	93.0074
752.31	84.6497
753.82	79.1082
755.35	84.7349
756.15	88.4827
756.87	102.4760
763.93	109.2471
765.79	111.1824
766.41	110.2697
766.84	108.4149
768.36	114.0796
768.36	114.0796
768.36	114.0796
768.36	114.0796
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778.57	79.7411
778.89	75.9968
783.80	77.9949

785.46	94.0186
792.07	82.3698
795.84	73.5741
796.30	75.4720
801.93	83.6385
805.60	66.2303
810.29	79.5908
810.76	72.0216
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817.79	67.4292
818.51	71.2433
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826.30	68.5562
828.27	0.0000
831.60	71.5286
831.96	68.6748
834.83	87.8279
836.80	0.0000
846.75	78.5616
848.13	68.0503
856.28	0.0000
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867.82	64.7855
871.10	60.7941
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875.33	0.0000
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881.50	62.9145
883.24	75.5355
884.67	70.7232
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896.60	75.8275
898.02	72.9401
899.00	68.0973
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911.07	81.0209
911.07	81.0209
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934.06	65.8250
934.06	65.8250
934.06	65.8250
935.52	63.8852
937.48	66.8711
944.10	71.9188
946.00	70.9702
949.00	49.3256
962.29	50.9195
964.01	51.5091
966.15	51.5387
968.20	51.5673
969.11	51.5800
969.11	51.5800
969.11	51.5800
977.42	51.6953
980.50	61.4042
983.50	75.1094
989.30	66.8201
996.32	93.9216
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1001.68	43.0245
1004.76	82.1134
1021.30	0.0000
1024.50	0.0000
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1037.82	54.5405
1038.57	58.5924

1038.76	0.0000
1045.16	60.7153
1046.59	56.6881
1048.07	55.6960
1050.47	55.7296
1050.47	55.7296
1063.62	48.7988
1076.63	58.1365
1077.35	61.2085
1085.78	68.4913
1099.22	59.4892
1112.02	61.7334
1112.84	57.1147
1115.52	70.6111
1120.29	73.1956
1120.29	73.1956
1120.29	73.1956
1120.29	73.1956
1120.51	74.2324
1121.28	65.4055
1124.00	0.0000
1129.67	65.0969
1131.51	0.0000
1147.95	0.0000
1167.94	95.9269
1173.22	84.5596
1175.09	90.8657
1177.93	90.9259
1189.05	83.8249
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1205.75	0.0000
1213.00	101.1406
1221.42	114.0029
1230.97	110.0176
1235.34	103.7701
1236.41	0.0000
1238.11	80.5243
1238.11	80.5243
1238.11	80.5243
1238.11	80.5243
1238.25	80.5273
1246.25	90.2226
1260.41	0.0000
1271.85	57.6431
1274.45	65.1525
1274.54	68.3594
1291.56	52.5310
1298.22	0.0000
1312.09	44.1481
1325.50	41.0352
1325.50	41.0352
1332.49	31.3624
1333.61	38.9429
1360.21	37.2949
1362.66	0.0000
1365.15	29.8672
1368.21	26.1494
1368.53	0.0000
1376.25	36.4836
1377.67	34.6230
1377.67	34.6230
1377.67	34.6230
1377.67	34.6230
1384.27	44.9766
1394.10	33.8002
1395.20	37.5642
1407.95	33.8956
1434.06	25.5555
1436.60	38.8265
1457.56	0.0000
1460.81	40.9154
1489.15	24.8765
1509.49	24.0138
1596.49	32.2185
1620.62	13.7285
1678.03	0.0000
1691.02	8.9366
1691.02	8.9366

1706.46	0.0000
1750.46	0.0000
1764.49	10.0558
1764.49	10.0558
1764.49	10.0558
1764.49	10.0558
1770.23	12.3303
1771.40	14.0947
1791.20	0.0000
1808.65	8.1044
1836.01	14.2471

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201874833

Total Uranium Activity	5.0744E+00	ug/g
Total Uranium Counting Unc.	3.5796E+00	ug/g
Total Uranium Tpu	1.8263E-06	ug/g
Total Uranium Mda	1.6427E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID  : G1201874833      *
*   ANALYST       : MXR1                      DETECTOR   : GAM05            *
*   SAMPLE DATE   : 30-JUN-2009 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 11:23:48.91    SAMPLE ALQT:  133.070 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 1.019E+01
GROSS GAMMA ERROR (pCi/GRAM) : 1.464E+00
GROSS GAMMA MDA (pCi/GRAM) : 4.075E+00
GROSS GAMMA DLC (pCi/GRAM) : 1.988E+00

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:34:14.89

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834.CNF;1
Sample date       : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 12:33:44
Sample ID         : G1201874834          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.74  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 882713               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	49.99	197	1256	1.62	99.75	96	8	5.48E-02	31.8	
2	0	59.87	7500	1401	1.12	119.50	114	11	2.08E+00	1.5	
3	0	63.59*	14	418	1.19	126.94	125	6	3.86E-03	257.4	
4	3	75.15	269	466	1.22	150.08	143	16	7.47E-02	14.8	1.66E+00
5	3	77.34*	450	436	1.23	154.46	143	16	1.25E-01	9.4	
6	0	88.40	2614	700	1.14	176.58	172	11	7.26E-01	2.8	
7	0	93.07*	46	477	1.11	185.93	183	10	1.27E-02	98.7	
8	0	122.37	479	468	1.21	244.53	238	13	1.33E-01	10.4	
9	0	186.26*	135	363	1.02	372.34	367	11	3.74E-02	29.9	
10	0	238.83*	353	533	1.05	477.51	472	12	9.80E-02	14.2	
11	0	241.73	33	227	1.63	483.32	483	6	9.18E-03	75.5	
12	0	295.80*	178	233	1.67	591.47	585	12	4.93E-02	19.0	
13	0	338.47*	69	178	0.91	676.86	673	9	1.92E-02	37.1	
14	0	352.40*	222	209	1.10	704.72	700	10	6.18E-02	14.2	
15	0	511.13*	91	173	1.71	1022.26	1014	15	2.54E-02	35.0	
16	0	583.52*	92	140	1.36	1167.09	1163	9	2.55E-02	25.9	
17	0	610.12*	190	177	1.77	1220.31	1212	18	5.27E-02	18.2	
18	0	662.13	2136	148	1.62	1324.36	1316	16	5.93E-01	2.5	
19	0	910.94*	98	159	0.88	1822.17	1816	14	2.73E-02	29.2	
20	0	1173.83*	1786	38	1.92	2348.17	2340	17	4.96E-01	2.5	
21	0	1333.11	1582	19	2.00	2666.88	2657	19	4.39E-01	2.6	
22	0	1462.74	36	9	1.78	2926.26	2916	19	9.97E-03	26.5	
23	0	1765.42*	30	3	2.63	3531.94	3525	12	8.22E-03	23.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 14-JUL-2009 13:34:17

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 7-JUL-2009 00:00:00
Sample ID : G1201874834
Sample type : SOLID
Detector name : GAMMA13
Elapsed live time: 0 01:00:00.00
Peak Width (FWHM): 3.00
Energy tolerance : 1.50 keV
Errors propagated: Yes
Efficiency type : Empirical
Abundance limit : 75.00

Acquisition date : 14-JUL-2009 12:33:44
Sample quantity : 155.44 GRAM
Sample geometry :
Detector geometry: CAN
Elapsed real time: 0 01:00:01.74 0.0%
Confidence level : 5.00 %
Half life ratio : 8.00
Systematic Error : 0.00 %
Efficiencies at : Peak Energy
WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	4.118E-01	1.001E-01	6.241E-02	7.893E-03	6.598
		136.48		3.901E-01	3.154E-01	5.353E-01	6.266E-02	0.729
CO-60	+	1173.22		6.982E+00	5.187E-01	1.348E-01	7.409E-03	51.796
	+	1332.49	*	6.848E+00	5.277E-01	9.305E-02	5.293E-03	73.592
CD-109	+	88.03	*	4.745E+01	4.600E+00	1.778E+00	1.403E-01	26.693
SN-126	+	64.28		9.450E-02	4.868E-01	6.371E-01	9.920E-02	0.148
	+	86.94		1.961E+01	8.158E+00	7.658E-01	3.157E-01	25.612
	+	87.57	*	4.718E+00	4.573E-01	1.765E-01	1.396E-02	26.729
BA-137M	+	661.65	*	5.687E+00	5.447E-01	1.346E-01	1.098E-02	42.249
CS-137	+	661.65	*	6.012E+00	5.767E-01	1.423E-01	1.163E-02	42.249
TL-208		277.35		-1.100E-01	6.710E-01	1.100E+00	1.288E-01	-0.100
	+	510.84		8.065E-01	5.716E-01	4.793E-01	5.210E-02	1.683
	+	583.14	*	2.333E-01	1.225E-01	1.395E-01	1.154E-02	1.673
		860.37		2.564E-02	7.712E-01	1.283E+00	1.082E-01	0.020
BI-211		72.87		1.151E+00	2.941E+00	5.005E+00	4.377E-01	0.230
	+	351.07	*	2.377E+00	6.956E-01	6.435E-01	4.690E-02	3.694
PB-212	+	74.81		1.651E+00	5.323E-01	5.812E-01	7.393E-02	2.840
	+	77.11		1.644E+00	3.398E-01	3.474E-01	2.951E-02	4.731
	+	87.30		2.182E+01	3.039E+00	8.156E-01	1.041E-01	26.751
	+	238.63	*	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
		300.09		1.522E+00	1.494E+00	2.305E+00	2.193E-01	0.661
PO-212	+	74.81		1.651E+00	5.323E-01	5.812E-01	7.393E-02	2.840
	+	77.11		1.644E+00	3.398E-01	3.474E-01	2.951E-02	4.731
	+	87.30		2.182E+01	3.039E+00	8.156E-01	1.041E-01	26.751
		115.19		-7.988E-01	5.207E+00	8.462E+00	9.813E-01	-0.094
	+	238.63	*	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
		300.09		1.522E+00	1.494E+00	2.305E+00	2.193E-01	0.661
PB-214	+	74.81		2.844E+00	9.028E-01	1.001E+00	1.139E-01	2.840
	+	77.11		2.818E+00	6.209E-01	5.956E-01	6.796E-02	4.731
	+	87.30		3.738E+01	4.629E+00	1.397E+00	1.545E-01	26.751
	+	241.98		4.562E-01	6.902E-01	1.277E+00	1.236E-01	0.357
	+	295.21		1.111E+00	4.362E-01	3.849E-01	3.770E-02	2.886
	+	351.92	*	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
PO-214	+	74.81		2.844E+00	9.028E-01	1.001E+00	1.139E-01	2.840

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		2.818E+00	6.209E-01	5.956E-01	6.796E-02	4.731
	+	87.30		3.738E+01	4.629E+00	1.397E+00	1.545E-01	26.751
	+	241.98		4.562E-01	6.902E-01	1.277E+00	1.236E-01	0.357
	+	295.21		1.111E+00	4.362E-01	3.849E-01	3.770E-02	2.886
	+	351.92	*	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
PO-216	+	74.81		1.651E+00	5.323E-01	5.812E-01	7.393E-02	2.840
	+	77.11		1.644E+00	3.398E-01	3.474E-01	2.951E-02	4.731
	+	87.30		2.182E+01	3.039E+00	8.156E-01	1.041E-01	26.751
	+	238.63	*	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
		300.09		1.522E+00	1.494E+00	2.305E+00	2.193E-01	0.661
PO-218	+	74.81		2.844E+00	9.028E-01	1.001E+00	1.139E-01	2.840
	+	77.11		2.818E+00	6.209E-01	5.956E-01	6.796E-02	4.731
	+	87.30		3.738E+01	4.629E+00	1.397E+00	1.545E-01	26.751
	+	241.98		4.562E-01	6.902E-01	1.277E+00	1.236E-01	0.357
	+	295.21		1.111E+00	4.362E-01	3.849E-01	3.770E-02	2.886
	+	351.92	*	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
RA-224	+	240.98	*	8.651E-01	1.308E+00	2.467E+00	1.947E-01	0.351
TH-228		84.40		2.074E+00	3.627E+00	5.562E+00	7.116E-01	0.373
	+	238.60	*	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.642
		300.10		1.529E+00	1.741E+00	2.306E+00	1.363E+00	0.663
TH-234	+	63.29	*	2.387E-01	1.230E+00	1.512E+00	2.774E-01	0.158
	+	92.38		5.703E-01	1.131E+00	1.035E+00	1.863E-01	0.551
U-238	+	63.29	*	2.387E-01	1.230E+00	1.512E+00	2.774E-01	0.158
	+	92.38		5.703E-01	1.127E+00	1.035E+00	8.737E-02	0.551
AM-241	+	59.54	*	1.366E+01	1.447E+00	2.452E-01	2.493E-02	55.724
AM-243	+	74.67	*	2.676E-01	8.260E-02	9.419E-02	8.136E-03	2.841
		86.72		1.492E+02	2.113E+01	3.252E+01	2.588E+00	4.588
		117.66		-1.800E+00	6.184E+00	8.856E+00	1.060E+00	-0.203
		142.18		-5.825E+00	2.828E+01	4.519E+01	4.788E+00	-0.129
ANH-511	+	511.00	*	1.742E-01	1.226E-01	1.036E-01	7.228E-03	1.682

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.094E+00	6.997E-01	1.064E+00	8.000E-02	-1.028
NA-22		1274.54	*	-6.454E-02	6.364E-02	9.111E-02	5.142E-03	-0.708
NA-24		1368.53	*	-4.946E-05	6.364E-02	Half-Life too short		
AL-26		1129.67		-2.866E+00	3.840E+00	5.807E+00	3.442E-01	-0.493
		1808.65	*	4.048E-02	4.984E-02	9.586E-02	5.409E-03	0.422
K-40		1460.81	*	8.487E-01	7.231E-01	1.250E+00	7.643E-02	0.679
TI-44		67.85		2.797E-03	4.293E-02	6.945E-02	6.287E-03	0.040
	+	78.38	*	3.032E-01	6.269E-02	8.201E-02	6.907E-03	3.697
SC-46		889.25	*	3.071E-02	1.015E-01	1.712E-01	1.297E-02	0.179
		1120.51		1.307E-01	1.184E-01	2.059E-01	1.238E-02	0.635
V-48		944.10		-2.216E-01	2.060E+00	3.372E+00	2.462E-01	-0.066
		983.50	*	1.313E-01	1.442E-01	2.498E-01	1.767E-02	0.526
		1312.09		-1.085E-02	9.320E-02	1.522E-01	8.630E-03	-0.071
CR-51		320.08	*	4.273E-01	5.837E-01	9.903E-01	7.707E-02	0.431

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MN-52		744.21		-1.461E-01	2.303E-01	3.525E-01	2.862E-02	-0.414
		848.13		3.580E+00	6.759E+00	1.161E+01	9.039E-01	0.308
		935.52		-5.576E-04	3.084E-01	5.082E-01	3.733E-02	-0.001
		1246.25		-1.365E+00	4.254E+00	6.832E+00	3.824E-01	-0.200
	+	1333.61		3.432E+02	2.645E+01	4.011E+01	2.282E+00	8.556
		1434.06	*	-4.232E-02	1.406E-01	2.193E-01	1.260E-02	-0.193
MN-54		834.83	*	2.164E-02	8.508E-02	1.440E-01	1.130E-02	0.150
CO-56		846.75	*	-2.815E-02	9.700E-02	1.583E-01	1.234E-02	-0.178
		977.42		-1.188E+00	7.813E+00	1.269E+01	9.027E-01	-0.094
		1037.82		-2.684E-02	8.048E-01	1.310E+00	9.545E-02	-0.020
	+	1175.09		3.264E+02	2.425E+01	3.591E+01	1.975E+00	9.087
		1238.25		1.004E-01	1.323E-01	2.354E-01	1.404E-02	0.427
		1360.21		1.059E-01	1.507E+00	2.514E+00	1.435E-01	0.042
		1771.40		8.092E-02	4.337E-01	6.469E-01	3.670E-02	0.125
CO-58		810.76	*	2.024E-02	8.750E-02	1.483E-01	1.181E-02	0.136
FE-59		142.65		-6.061E-01	3.892E+00	6.234E+00	6.574E-01	-0.097
		192.34		6.279E-01	1.350E+00	2.263E+00	2.936E-01	0.277
		1099.22	*	-1.190E-02	2.280E-01	3.687E-01	2.634E-02	-0.032
		1291.56		-8.251E-03	1.397E-01	2.300E-01	1.679E-02	-0.036
ZN-65		1115.52	*	-1.820E-01	2.365E-01	3.623E-01	2.199E-02	-0.502
GE-68		1077.35	*	-3.425E-01	3.410E+00	5.506E+00	3.519E-01	-0.062
AS-73		53.44	*	-1.476E-01	6.369E-01	9.739E-01	8.227E-02	-0.152
AS-74		595.88	*	9.234E-02	1.464E-01	2.499E-01	1.919E-02	0.370
		634.78		-1.607E-01	5.974E-01	9.558E-01	7.616E-02	-0.168
SE-75		66.05		-3.411E+00	4.239E+00	6.199E+00	6.753E-01	-0.550
		96.73		-5.872E-01	1.081E+00	1.547E+00	2.147E-01	-0.379
	+	121.11		2.160E+00	5.474E-01	4.843E-01	6.981E-02	4.461
		136.00		2.735E-02	5.826E-02	9.631E-02	1.088E-02	0.284
		198.60		-6.265E-01	2.736E+00	4.541E+00	4.058E-01	-0.138
		264.65	*	-1.751E-03	7.793E-02	1.291E-01	1.012E-02	-0.014
		279.53		9.794E-02	1.889E-01	3.196E-01	2.572E-02	0.306
		303.91		-3.994E+00	3.912E+00	6.011E+00	6.386E-01	-0.665
		400.65		1.524E-01	5.343E-01	8.709E-01	8.004E-02	0.175
BR-77	+	87.88		1.126E+03	1.091E+02	1.073E+02	8.468E+00	10.491
		200.40		2.459E+01	2.893E+01	5.057E+01	4.006E+00	0.486
	+	239.00		1.414E+01	4.172E+00	5.079E+00	4.012E-01	2.784
		249.79		-3.380E+00	1.308E+01	2.152E+01	1.692E+00	-0.157
		281.68		-8.592E+00	1.839E+01	2.965E+01	2.273E+00	-0.290
	+	297.23		4.629E+01	1.794E+01	2.002E+01	1.506E+00	2.312
		303.76		-2.366E+01	3.703E+01	5.838E+01	4.349E+00	-0.405
		439.47		8.605E+00	3.660E+01	6.229E+01	3.935E+00	0.138
		484.57		2.385E+00	5.736E+01	9.599E+01	6.471E+00	0.025
		520.65	*	-6.629E-02	2.506E+00	4.153E+00	2.934E-01	-0.016
		574.64		-3.096E+01	5.004E+01	7.894E+01	5.931E+00	-0.392
		578.91		3.911E+00	2.324E+01	3.361E+01	2.537E+00	0.116
		585.48		1.302E+02	5.479E+01	8.974E+01	6.819E+00	1.451
		755.35		1.403E+01	4.418E+01	7.249E+01	5.870E+00	0.194
		817.79		1.016E+01	3.473E+01	5.907E+01	4.676E+00	0.172
SR-82		698.33		1.446E+01	6.663E+01	1.093E+02	8.920E+00	0.132

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		776.49	*	-3.721E-01	7.961E-01	1.296E+00	1.043E-01	-0.287
		1395.20		-5.922E+00	1.296E+01	1.968E+01	1.128E+00	-0.301
RB-83		520.41	*	-3.598E-02	1.437E-01	2.349E-01	1.658E-02	-0.153
		529.64		-1.953E-01	2.117E-01	3.289E-01	2.349E-02	-0.594
		552.65		3.280E-01	4.080E-01	7.063E-01	5.180E-02	0.464
RB-84		881.50	*	4.753E-02	1.634E-01	2.756E-01	2.099E-02	0.172
KR-85		513.99	*	2.638E+01	1.720E+01	2.764E+01	1.936E+00	0.954
SR-85		513.99	*	1.248E-01	8.143E-02	1.308E-01	9.164E-03	0.954
RB-86		1076.63	*	-6.828E-01	1.688E+00	2.667E+00	1.706E-01	-0.256
Y-88		898.02		7.153E-02	1.185E-01	2.025E-01	1.533E-02	0.353
		1836.01	*	6.542E-02	5.338E-02	1.089E-01	6.135E-03	0.601
ZR-88		392.90	*	-3.649E-03	6.494E-02	1.033E-01	6.053E-03	-0.035
Y-91		1204.90	*	-1.523E+01	2.537E+01	3.957E+01	2.193E+00	-0.385
NB-94		702.63	*	-7.769E-02	8.255E-02	1.245E-01	1.016E-02	-0.624
		871.10		1.052E-02	9.719E-02	1.623E-01	1.245E-02	0.065
NB-95		765.79	*	2.157E-03	9.080E-02	1.526E-01	1.232E-02	0.014
NB-95M		235.69	*	9.631E-02	2.054E-01	3.113E-01	2.879E-02	0.309
ZR-95		724.18		9.033E-03	1.975E-01	3.193E-01	2.851E-02	0.028
		756.15	*	8.311E-02	1.571E-01	2.616E-01	2.360E-02	0.318
NB-97		657.90	*	1.179E-04	1.571E-01	Half-Life too short		
		1024.50		1.803E-04	1.571E-01	Half-Life too short		
ZR-97		254.15		-1.194E-03	1.571E-01	Half-Life too short		
		355.39		-3.400E-04	1.571E-01	Half-Life too short		
		507.63	*	1.020E-03	1.571E-01	Half-Life too short		
		602.52		-6.012E-03	1.571E-01	Half-Life too short		
		1021.30		1.893E-03	1.571E-01	Half-Life too short		
		1147.95		1.640E-03	1.571E-01	Half-Life too short		
		1362.66		-5.269E-05	1.571E-01	Half-Life too short		
		1750.46		2.415E-03	1.571E-01	Half-Life too short		
MO-99		140.51		8.014E-01	5.998E+00	9.744E+00	2.771E+00	0.082
		181.06		1.006E+00	4.648E+00	6.567E+00	1.179E+00	0.153
		366.43		1.684E+01	2.414E+01	4.063E+01	2.613E+00	0.415
		739.58	*	6.274E-01	4.018E+00	6.535E+00	9.743E-01	0.096
		778.00		-3.415E+00	1.250E+01	2.059E+01	1.657E+00	-0.166
TC-99M		140.51	*	5.782E+00	1.250E+01	Half-Life too short		
RH-101		127.23		2.840E-02	5.343E-02	7.996E-02	9.710E-03	0.355
		198.01	*	-3.635E-02	5.281E-02	8.582E-02	6.795E-03	-0.424
		325.23		-3.203E-01	4.280E-01	6.693E-01	4.798E-02	-0.478
RH-102		418.52		1.827E-01	6.079E-01	9.894E-01	6.048E-02	0.185
		475.06	*	1.353E-02	6.826E-02	1.153E-01	7.673E-03	0.117
		631.29		-6.956E-02	1.210E-01	1.891E-01	1.502E-02	-0.368
		697.49		8.914E-02	1.826E-01	3.045E-01	2.486E-02	0.293
		766.84		3.558E-03	2.489E-01	4.180E-01	3.374E-02	0.009
		1046.59		2.182E-01	3.132E-01	5.342E-01	3.546E-02	0.408
		1112.84		1.983E-01	5.959E-01	9.879E-01	6.009E-02	0.201
RU-103		497.08	*	2.705E-02	7.868E-02	1.335E-01	1.757E-02	0.203
	+	610.33		8.628E+00	3.440E+00	3.562E+00	5.795E-01	2.422
RH-106	+	511.85		8.577E-01	6.037E-01	7.088E-01	4.952E-02	1.210
		621.84	*	-3.975E-01	6.699E-01	1.044E+00	1.345E-01	-0.381

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1050.47		-4.860E-01	6.232E+00	1.010E+01	6.674E-01	-0.048
RU-106	+	511.85		8.577E-01	6.037E-01	7.088E-01	4.952E-02	1.210
		621.84	*	-3.975E-01	6.687E-01	1.044E+00	8.219E-02	-0.381
		1050.47		-4.860E-01	6.232E+00	1.010E+01	6.674E-01	-0.048
AG-108M		433.93	*	1.746E-02	7.811E-02	1.330E-01	8.944E-03	0.131
		614.37		3.408E-02	9.208E-02	1.350E-01	1.106E-02	0.252
		722.95		-5.758E-02	9.743E-02	1.502E-01	1.277E-02	-0.383
AG-110M		657.75	*	4.341E-02	9.526E-02	1.393E-01	1.170E-02	0.312
		677.61		-3.659E-01	6.852E-01	1.066E+00	8.979E-02	-0.343
		706.67		3.032E-01	4.856E-01	8.162E-01	6.865E-02	0.371
		763.93		-2.179E-01	3.700E-01	5.972E-01	4.980E-02	-0.365
		884.67		-5.159E-02	1.344E-01	2.171E-01	1.718E-02	-0.238
		937.48		2.107E-01	3.341E-01	5.694E-01	4.384E-02	0.370
		1384.27		-1.391E-01	2.736E-01	4.189E-01	2.548E-02	-0.332
IN-111		171.28		3.654E-02	2.636E-01	4.226E-01	3.318E-02	0.086
		245.39	*	1.475E-01	3.369E-01	5.078E-01	4.001E-02	0.290
IN-113M		391.69	*	8.723E-02	9.330E-02	1.575E-01	9.813E-03	0.554
SN-113		391.69	*	8.723E-02	9.330E-02	1.575E-01	9.813E-03	0.554
IN-114M		190.27	*	-1.099E-01	3.065E-01	4.185E-01	3.308E-02	-0.262
CD-115		260.90		-6.650E+00	2.302E+01	3.770E+01	2.945E+00	-0.176
		492.35		1.190E+00	7.525E+00	1.266E+01	8.624E-01	0.094
		527.90	*	2.723E-01	2.191E+00	3.659E+00	2.608E-01	0.074
SN-117M		156.02		1.795E-01	2.415E+00	3.886E+00	3.511E-01	0.046
		158.56	*	5.098E-03	5.777E-02	9.267E-02	8.092E-03	0.055
SB-122		563.90	*	4.838E-01	6.568E-01	1.129E+00	8.385E-02	0.429
		692.80		-3.116E+00	1.511E+01	2.412E+01	1.969E+00	-0.129
I-123		159.00	*	-6.549E-07	1.511E+01	Half-Life too short		
		528.96		-2.889E-02	1.511E+01	Half-Life too short		
TE-123M		159.00	*	-4.790E-05	4.244E-02	6.775E-02	5.916E-03	-0.001
I-124		602.71	*	-2.230E-01	4.697E-01	6.352E-01	4.911E-02	-0.351
		722.78		-1.768E+00	2.861E+00	4.400E+00	3.585E-01	-0.402
		1325.50		-1.493E+01	2.103E+01	2.583E+01	1.467E+00	-0.578
		1376.25		5.626E+00	1.309E+01	2.289E+01	1.309E+00	0.246
		1509.49		-4.301E+00	6.845E+00	9.915E+00	5.716E-01	-0.434
		1691.02		1.348E+00	1.807E+00	3.350E+00	1.918E-01	0.402
SB-124		602.71		-4.197E-02	8.839E-02	1.195E-01	9.245E-03	-0.351
		645.85		5.521E-02	1.078E+00	1.761E+00	1.514E-01	0.031
		709.31		2.923E+00	6.029E+00	1.005E+01	8.200E-01	0.291
		713.82		-3.745E-01	3.445E+00	5.514E+00	6.457E-01	-0.068
		722.78		-4.824E-01	7.807E-01	1.200E+00	1.002E-01	-0.402
		968.20		3.502E+00	6.678E+00	1.128E+01	8.086E-01	0.310
		1045.16		-6.186E-01	6.218E+00	1.007E+01	6.694E-01	-0.061
		1325.50		-4.350E+00	6.129E+00	7.526E+00	4.276E-01	-0.578
		1368.21		-1.201E-01	2.430E+00	3.982E+00	4.711E-01	-0.030
		1436.60		-8.874E-01	5.406E+00	8.644E+00	4.968E-01	-0.103
		1691.02	*	8.675E-02	1.163E-01	2.156E-01	1.343E-02	0.402
SB-125		427.89	*	2.181E-02	2.125E-01	3.601E-01	2.317E-02	0.061
		463.38		-6.913E-02	6.954E-01	1.160E+00	8.599E-02	-0.060
		600.56		-8.723E-03	3.807E-01	6.231E-01	5.246E-02	-0.014

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		635.90		4.642E-02	5.947E-01	9.753E-01	8.509E-02	0.048
TE-125M		109.28	*	4.579E+00	1.175E+01	1.963E+01	2.382E+00	0.233
I-126		388.63		-1.619E-01	2.998E-01	4.669E-01	2.765E-02	-0.347
		666.33	*	-3.370E-03	3.269E-01	4.579E-01	3.736E-02	-0.007
		753.82		-3.977E-01	2.414E+00	3.829E+00	3.102E-01	-0.104
SB-126		223.80		7.417E-01	4.722E+00	7.980E+00	6.326E-01	0.093
		278.60		1.832E+00	2.895E+00	4.926E+00	3.789E-01	0.372
	+	296.50		7.226E+00	2.801E+00	3.372E+00	2.539E-01	2.143
		414.70		-7.577E-02	1.092E-01	1.672E-01	1.016E-02	-0.453
		415.30		-6.628E+00	8.914E+00	1.358E+01	8.259E-01	-0.488
		555.20		1.384E+00	5.889E+00	9.859E+00	7.252E-01	0.140
		573.80		3.037E-01	1.496E+00	2.494E+00	1.872E-01	0.122
		593.00		-7.083E-01	1.331E+00	2.103E+00	1.610E-01	-0.337
		656.30		-2.214E+00	6.141E+00	8.325E+00	6.759E-01	-0.266
		666.33		-1.384E-03	1.342E-01	1.881E-01	1.534E-02	-0.007
		675.00		-2.175E+00	2.990E+00	4.584E+00	3.742E-01	-0.475
		695.00		-4.005E-02	1.245E-01	1.971E-01	1.609E-02	-0.203
		697.00		4.950E-01	4.160E-01	7.220E-01	5.894E-02	0.686
		720.50	*	-7.722E-02	2.106E-01	3.298E-01	2.688E-02	-0.234
		856.80		1.776E-01	8.258E-01	1.389E+00	1.076E-01	0.128
		989.30		-1.737E+00	2.353E+00	3.662E+00	2.577E-01	-0.474
		1034.80		-4.769E+00	1.637E+01	2.619E+01	1.761E+00	-0.182
		1213.00		-2.038E+00	4.749E+00	7.580E+00	4.210E-01	-0.269
SB-127	+	61.10		1.343E+03	1.431E+02	5.731E+01	5.806E+00	23.441
		252.40		-9.816E-01	2.017E+00	3.210E+00	1.330E+00	-0.306
		290.80		-3.540E+00	1.143E+01	1.614E+01	1.351E+00	-0.219
		411.60		1.062E+01	7.009E+00	1.194E+01	1.564E+00	0.890
		444.90		-3.850E+00	5.652E+00	9.153E+00	8.464E-01	-0.421
		473.00		1.327E+00	1.036E+00	1.828E+00	1.804E-01	0.726
		543.00		-6.172E+00	9.345E+00	1.476E+01	1.794E+00	-0.418
		603.60		-1.051E+00	7.092E+00	9.910E+00	1.012E+00	-0.106
		685.20	*	1.260E-01	8.035E-01	1.316E+00	1.207E-01	0.096
		698.50		2.276E+00	9.325E+00	1.531E+01	2.191E+00	0.149
		722.20		-9.455E+00	1.705E+01	2.631E+01	2.336E+00	-0.359
		783.80		-2.840E-01	2.177E+00	3.616E+00	3.732E-01	-0.079
XE-127		57.60		7.335E+00	5.743E+00	9.039E+00	8.353E-01	0.811
		145.22		7.753E-02	9.935E-01	1.607E+00	1.649E-01	0.048
		172.10		6.596E-02	1.713E-01	2.779E-01	2.182E-02	0.237
		202.84	*	-2.413E-02	6.767E-02	1.127E-01	8.930E-03	-0.214
		374.96		2.687E-02	3.728E-01	6.038E-01	3.770E-02	0.044
I-131		80.18		-9.682E-01	2.918E+00	4.309E+00	3.591E-01	-0.225
		284.30		5.107E-01	1.458E+00	2.446E+00	1.982E-01	0.209
		364.48	*	-8.885E-02	1.182E-01	1.819E-01	1.279E-02	-0.489
		636.97		1.586E+00	1.761E+00	3.044E+00	2.575E-01	0.521
		722.89		-5.130E+00	8.505E+00	1.310E+01	1.069E+00	-0.392
TE-132	+	49.72		4.944E+00	3.170E+00	3.633E+00	3.054E-01	1.361
		111.76		-6.116E-01	8.498E+00	1.381E+01	1.597E+00	-0.044
		116.30		-2.301E+00	8.320E+00	1.277E+01	1.559E+00	-0.180
		228.16	*	8.843E-02	2.489E-01	4.230E-01	6.022E-02	0.209

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BA-133		53.15		-5.247E-01	2.877E+00	4.407E+00	3.699E-01	-0.119
		79.62		5.893E-02	1.589E+00	2.391E+00	3.604E-01	0.025
		81.00		-8.738E-02	1.278E-01	1.846E-01	2.896E-02	-0.473
		276.40		-3.226E-01	6.729E-01	1.084E+00	1.509E-01	-0.298
		302.84		-1.118E-01	2.697E-01	4.303E-01	5.408E-02	-0.260
		356.01	*	4.935E-02	1.007E-01	1.491E-01	1.790E-02	0.331
		383.85		2.015E-01	6.415E-01	1.051E+00	1.156E-01	0.192
I-133	+	510.53		4.016E-03	6.415E-01	Half-Life too short		
		529.87	*	-3.525E-05	6.415E-01	Half-Life too short		
		706.58		1.310E-03	6.415E-01	Half-Life too short		
		856.28		4.566E-05	6.415E-01	Half-Life too short		
		875.33		-5.531E-04	6.415E-01	Half-Life too short		
		1236.41		1.480E-03	6.415E-01	Half-Life too short		
		1298.22		1.387E-03	6.415E-01	Half-Life too short		
CS-134		475.35		-8.386E-01	4.506E+00	7.463E+00	4.968E-01	-0.112
		563.23		7.877E-01	8.032E-01	1.398E+00	1.051E-01	0.563
		569.32		3.433E-02	4.374E-01	7.240E-01	5.506E-02	0.047
		604.70		-1.277E-04	8.020E-02	1.137E-01	8.833E-03	-0.001
		795.84	*	3.051E-02	1.092E-01	1.857E-01	1.497E-02	0.164
		801.93		6.833E-01	1.034E+00	1.789E+00	1.435E-01	0.382
		1038.57		-1.040E+00	1.080E+01	1.751E+01	1.173E+00	-0.059
		1167.94		2.249E+00	5.078E+00	7.468E+00	4.145E-01	0.301
		1365.15		3.410E-01	1.781E+00	3.031E+00	1.906E-01	0.113
CS-135		268.24	*	-1.519E-01	2.913E-01	4.703E-01	4.344E-02	-0.323
I-135		288.45		-1.216E+02	2.913E-01	Half-Life too short		
		417.63		1.170E+02	2.913E-01	Half-Life too short		
		546.56		1.815E+01	2.913E-01	Half-Life too short		
		836.80		-1.003E+02	2.913E-01	Half-Life too short		
		1038.76		1.546E+01	2.913E-01	Half-Life too short		
		1124.00		-1.078E+02	2.913E-01	Half-Life too short		
		1131.51		-2.653E+01	2.913E-01	Half-Life too short		
		1260.41	*	-2.825E+01	2.913E-01	Half-Life too short		
		1457.56		4.735E+01	2.913E-01	Half-Life too short		
		1678.03		1.185E+01	2.913E-01	Half-Life too short		
		1706.46		-9.063E+01	2.913E-01	Half-Life too short		
		1791.20		9.031E+01	2.913E-01	Half-Life too short		
CS-136		66.91		8.743E-02	4.882E-01	7.474E-01	1.174E-01	0.117
		86.29		2.907E+00	1.220E+00	1.901E+00	2.362E-01	1.529
		153.22		6.604E-01	7.012E-01	1.172E+00	1.207E-01	0.564
		163.89		-7.909E-01	1.213E+00	1.867E+00	1.713E-01	-0.424
		176.55		2.665E-01	3.823E-01	6.295E-01	5.290E-02	0.423
		273.65		-1.592E-01	5.484E-01	8.946E-01	7.473E-02	-0.178
		340.57		2.810E-01	1.898E-01	2.962E-01	2.141E-02	0.949
		818.51		2.752E-02	1.179E-01	1.997E-01	1.581E-02	0.138
		1048.07	*	1.205E-02	1.972E-01	3.229E-01	2.288E-02	0.037
		1235.34		1.878E-01	5.841E-01	1.004E+00	9.898E-02	0.187
CE-139		165.85	*	1.555E-02	4.916E-02	7.963E-02	6.243E-03	0.195
BA-140		162.64		-4.696E-01	8.219E-01	1.271E+00	1.113E-01	-0.370
		304.84		-2.567E+00	1.770E+00	2.421E+00	6.703E-01	-1.060

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		423.70		1.587E-01	2.930E+00	4.690E+00	1.494E+00	0.034
		537.32	*	8.597E-02	3.866E-01	6.468E-01	2.121E-01	0.133
LA-140		328.77		1.369E-01	3.810E-01	6.326E-01	4.867E-02	0.216
		432.53		-8.923E-01	3.270E+00	5.439E+00	3.708E-01	-0.164
		487.03		-6.386E-02	2.117E-01	3.475E-01	2.582E-02	-0.184
		751.79		-4.033E-02	2.816E+00	4.516E+00	4.100E-01	-0.009
		815.85		8.110E-03	5.154E-01	8.609E-01	7.743E-02	0.009
		867.82		2.064E+00	2.618E+00	4.535E+00	3.718E-01	0.455
		919.63		-3.017E+00	5.905E+00	8.963E+00	8.698E-01	-0.337
		925.24		3.763E-02	2.324E+00	3.837E+00	3.078E-01	0.010
		1596.49	*	2.804E-02	9.898E-02	1.683E-01	9.699E-03	0.167
CE-141		145.44	*	1.424E-02	8.824E-02	1.432E-01	1.486E-02	0.099
CE-143		57.37		1.288E+01	2.423E+01	3.765E+01	3.873E+00	0.342
		231.56		-9.172E+01	9.769E+01	1.494E+02	4.686E+01	-0.614
		293.26	*	4.962E+00	6.027E+00	9.047E+00	1.901E+00	0.548
		350.59		3.562E+02	1.434E+02	1.630E+02	4.975E+01	2.185
		490.36		-3.700E+01	1.411E+02	2.311E+02	7.187E+01	-0.160
		664.57		2.662E+03	8.720E+02	3.590E+02	1.155E+02	7.417
		721.93		-3.782E+01	6.785E+01	1.034E+02	2.998E+01	-0.366
CE-144		80.11		-8.902E-01	2.538E+00	3.744E+00	3.116E-01	-0.238
		133.54	*	-3.045E-01	3.105E-01	4.714E-01	8.170E-02	-0.646
PM-144		476.78		-1.830E-01	1.557E-01	2.427E-01	1.865E-02	-0.754
		618.01		-3.674E-02	7.749E-02	1.041E-01	8.435E-03	-0.353
		696.49	*	8.487E-02	8.127E-02	1.399E-01	1.142E-02	0.607
		778.57		-9.933E-01	5.645E+00	9.355E+00	7.525E-01	-0.106
PR-144		696.49	*	5.728E+00	5.485E+00	9.442E+00	7.709E-01	0.607
		1489.15		-3.169E+00	2.148E+01	3.438E+01	1.981E+00	-0.092
PM-146		453.90	*	2.190E-02	1.050E-01	1.779E-01	1.615E-02	0.123
		633.02		-1.672E+00	3.089E+00	4.738E+00	1.764E+00	-0.353
		735.90		-4.140E-01	3.828E-01	5.362E-01	1.526E-01	-0.772
		747.13		1.026E-02	2.189E-01	3.529E-01	4.846E-02	0.029
ND-147		91.11		3.849E-01	2.845E-01	3.674E-01	3.312E-02	1.048
		319.41		7.277E-01	3.937E+00	6.500E+00	4.714E-01	0.112
		439.89		5.255E+00	8.406E+00	1.456E+01	9.204E-01	0.361
		531.02	*	-8.500E-01	7.475E-01	1.129E+00	1.598E-01	-0.753
PM-149		285.90	*	2.236E+00	1.591E+01	2.641E+01	3.961E+00	0.085
EU-152	+	121.78		1.217E+00	3.018E-01	3.038E-01	4.110E-02	4.007
		244.69		2.528E-01	6.766E-01	1.016E+00	8.008E-02	0.249
		344.27	*	3.026E-02	2.103E-01	3.189E-01	2.391E-02	0.095
		443.98		-1.220E+00	2.214E+00	3.619E+00	2.302E-01	-0.337
		778.89		-5.258E-02	6.671E-01	1.112E+00	8.946E-02	-0.047
		867.32		1.492E+00	2.373E+00	4.077E+00	3.136E-01	0.366
		964.01		2.034E-01	8.441E-01	1.405E+00	1.010E-01	0.145
		1085.78		-5.145E-01	1.128E+00	1.774E+00	1.121E-01	-0.290
		1112.02		6.172E-01	8.336E-01	1.419E+00	8.644E-02	0.435
		1407.95		-3.580E-02	3.223E-01	5.275E-01	3.025E-02	-0.068
GD-153		69.67		8.824E-01	1.651E+00	2.556E+00	2.285E-01	0.345
		83.37		5.910E+00	1.882E+01	3.037E+01	2.472E+00	0.195
		97.43	*	-1.723E-02	1.148E-01	1.686E-01	1.534E-02	-0.102

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		103.18		-1.059E-01	1.479E-01	2.357E-01	2.328E-02	-0.449
EU-154	+	123.07		8.542E-01	2.170E-01	2.135E-01	3.112E-02	4.001
		247.94		-1.396E-01	6.780E-01	1.081E+00	1.181E-01	-0.129
		591.81		-7.222E-01	1.349E+00	2.130E+00	2.337E-01	-0.339
		723.30		-4.354E-01	4.184E-01	6.215E-01	5.657E-02	-0.701
		756.87		5.344E-01	1.862E+00	3.049E+00	3.538E-01	0.175
		873.19		-7.916E-01	8.520E-01	1.323E+00	1.533E-01	-0.598
		996.32		6.533E-01	1.063E+00	1.798E+00	3.064E-01	0.363
		1004.76		-3.246E-01	6.003E-01	9.458E-01	9.887E-02	-0.343
		1274.45	*	-1.895E-01	1.779E-01	2.512E-01	2.321E-02	-0.754
EU-155	+	48.70		2.837E+00	1.817E+00	1.886E+00	1.423E-01	1.504
	+	60.01		4.431E+02	4.452E+01	2.453E+01	2.348E+00	18.062
		86.54		9.559E-01	1.909E-01	3.071E-01	2.476E-02	3.112
		105.31	*	8.958E-02	1.492E-01	2.517E-01	2.583E-02	0.356
TB-160		86.79		4.731E+00	6.159E-01	9.241E-01	7.349E-02	5.120
		197.04		-7.856E-01	8.216E-01	1.330E+00	1.053E-01	-0.591
		215.65		6.626E-01	1.199E+00	2.064E+00	1.637E-01	0.321
		298.57		-6.754E-02	2.126E-01	2.992E-01	2.247E-02	-0.226
		879.36	*	2.097E-01	3.492E-01	6.001E-01	4.578E-02	0.349
		962.29		1.556E+00	1.400E+00	2.434E+00	1.753E-01	0.639
		966.15		-1.705E-01	5.324E-01	8.587E-01	6.164E-02	-0.199
		1177.93		8.259E+00	1.308E+00	2.497E+00	1.374E-01	3.308
		1271.85		-4.930E-01	9.852E-01	1.533E+00	8.625E-02	-0.322
HO-166M		80.57		-1.836E-01	3.443E-01	5.033E-01	4.176E-02	-0.365
		184.41		1.310E-01	6.605E-02	1.029E-01	8.118E-03	1.273
		280.46		-1.458E-02	1.581E-01	2.598E-01	1.995E-02	-0.056
		410.95		8.377E-01	5.493E-01	9.488E-01	5.729E-02	0.883
		711.68	*	-5.154E-02	1.459E-01	2.295E-01	1.872E-02	-0.225
		752.31		8.461E-02	6.602E-01	1.070E+00	8.670E-02	0.079
		810.29		6.209E-02	1.414E-01	2.428E-01	1.929E-02	0.256
TM-171	+	51.35		4.521E+01	2.895E+01	3.369E+01	2.712E+00	1.342
		52.39		-2.743E+00	1.189E+01	1.822E+01	1.503E+00	-0.151
	+	59.40		2.320E+03	2.331E+02	1.274E+02	1.222E+01	18.203
		66.72	*	2.271E+00	2.605E+01	3.975E+01	3.627E+00	0.057
LU-176	+	88.36		1.119E+01	1.085E+00	1.075E+00	8.523E-02	10.413
		201.83		1.203E-02	4.751E-02	8.118E-02	6.433E-03	0.148
		306.84	*	3.521E-02	4.668E-02	7.946E-02	5.891E-03	0.443
		401.10		-1.966E+00	1.474E+01	2.345E+01	1.393E+00	-0.084
LU-177		112.95		3.812E-01	1.087E+00	1.798E+00	2.025E-01	0.212
		208.36	*	-3.542E-01	8.280E-01	1.372E+00	1.088E-01	-0.258
LU-177M		52.97		-8.924E-01	1.263E+00	1.904E+00	1.591E-01	-0.469
		54.07		-2.291E-01	7.104E-01	1.083E+00	9.276E-02	-0.212
	+	61.30		1.334E+02	1.340E+01	4.942E+00	4.687E-01	26.983
	+	121.62		6.048E+00	1.469E+00	1.486E+00	1.868E-01	4.071
		147.16		-9.387E-02	1.038E+00	1.664E+00	1.672E-01	-0.056
		171.86		1.179E-01	7.848E-01	1.259E+00	9.884E-02	0.094
		218.09		7.665E-01	1.430E+00	2.458E+00	1.949E-01	0.312
		268.79		-5.865E-01	1.435E+00	2.331E+00	1.809E-01	-0.252
		319.02		-9.040E-02	4.875E-01	7.890E-01	5.726E-02	-0.115

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		367.43		-3.268E-01	1.750E+00	2.795E+00	1.791E-01	-0.117
		413.65	*	-1.966E-01	3.867E-01	6.000E-01	3.639E-02	-0.328
HF-181		56.28		5.448E-01	8.146E-01	1.272E+00	1.143E-01	0.428
		57.53		3.872E-01	4.844E-01	7.567E-01	6.983E-02	0.512
		65.20		9.586E-02	7.536E-01	1.153E+00	1.064E-01	0.083
		133.02		-2.540E-02	8.544E-02	1.364E-01	1.576E-02	-0.186
		136.25		3.081E-01	6.281E-01	1.039E+00	1.166E-01	0.297
		345.85		-1.760E-01	3.607E-01	5.484E-01	3.747E-02	-0.321
		482.03	*	6.145E-02	8.688E-02	1.503E-01	1.010E-02	0.409
W-181		56.28		2.314E-01	3.458E-01	5.398E-01	4.852E-02	0.429
		57.53		1.638E-01	2.057E-01	3.213E-01	2.965E-02	0.510
		65.20	*	4.039E-02	3.175E-01	4.859E-01	4.482E-02	0.083
TA-182		67.75		3.750E-03	9.750E-02	1.576E-01	1.428E-02	0.024
		100.10		1.317E-01	2.403E-01	4.036E-01	3.817E-02	0.326
		152.43		-7.512E-02	5.126E-01	8.171E-01	7.724E-02	-0.092
		222.10		-3.005E-01	5.788E-01	9.499E-01	7.532E-02	-0.316
		1001.68		-6.662E+00	5.338E+00	8.035E+00	5.590E-01	-0.829
		1121.28		2.769E-01	3.296E-01	5.647E-01	3.391E-02	0.490
		1189.05		-2.597E-02	5.000E-01	8.327E-01	4.596E-02	-0.031
		1221.42	*	1.161E-01	2.820E-01	4.903E-01	2.729E-02	0.237
		1230.97		-3.483E-01	6.533E-01	1.026E+00	5.721E-02	-0.340
RE-183		57.98		1.385E+00	2.591E-01	3.919E-01	3.651E-02	3.533
	+	59.32		8.882E+00	8.924E-01	4.842E-01	4.635E-02	18.345
		67.20		9.239E-02	1.733E-01	2.690E-01	2.446E-02	0.343
		162.32	*	-6.246E-02	1.661E-01	2.595E-01	2.148E-02	-0.241
		208.81		7.072E-01	1.512E+00	2.597E+00	2.060E-01	0.272
		291.72		-4.167E-01	1.845E+00	2.622E+00	1.987E-01	-0.159
RE-184		57.98		5.333E+00	9.979E-01	1.509E+00	1.406E-01	3.533
	+	59.32		3.418E+01	3.434E+00	1.863E+00	1.784E-01	18.345
		67.20		3.557E-01	6.671E-01	1.036E+00	9.418E-02	0.343
		161.27		1.618E-01	5.495E-01	8.919E-01	7.496E-02	0.181
		216.55		3.410E-01	4.502E-01	7.800E-01	6.187E-02	0.437
		252.85	*	8.001E-03	3.955E-01	6.589E-01	5.173E-02	0.012
		318.01		-5.433E-01	8.634E-01	1.363E+00	9.909E-02	-0.399
		792.07		-1.992E+00	2.215E+00	3.475E+00	2.781E-01	-0.573
		903.28		-3.645E-01	3.201E+00	4.697E+00	3.522E-01	-0.078
		920.93		-1.233E+00	1.328E+00	2.063E+00	1.530E-01	-0.598
OS-185	+	59.72		2.470E+01	2.481E+00	1.375E+00	1.319E-01	17.967
	+	61.14		1.425E+01	1.432E+00	5.933E-01	5.633E-02	24.014
		69.30		1.861E-01	2.828E-01	4.400E-01	3.944E-02	0.423
		592.07		-2.791E+00	5.210E+00	8.231E+00	6.297E-01	-0.339
		646.12	*	-5.014E-03	9.267E-02	1.504E-01	1.210E-02	-0.033
		717.42		-1.857E-01	1.899E+00	3.041E+00	2.479E-01	-0.061
		874.81		-1.597E+00	1.579E+00	2.444E+00	1.871E-01	-0.653
		880.27		8.613E-01	2.039E+00	3.465E+00	2.642E-01	0.249
RE-188		155.03	*	7.196E-02	2.514E-01	4.088E-01	3.741E-02	0.176
		477.96		-7.772E+00	6.661E+00	1.040E+01	6.947E-01	-0.747
		633.10		-3.393E+00	5.672E+00	8.837E+00	7.031E-01	-0.384
W-188	+	63.58		8.893E+00	4.580E+01	7.127E+01	6.650E+00	0.125

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		227.08		1.164E+01	2.146E+01	3.676E+01	2.913E+00	0.316
		290.67	*	9.208E-01	1.415E+01	2.054E+01	1.559E+00	0.045
IR-192	+	295.96		7.888E-01	3.059E-01	3.764E-01	2.862E-02	2.096
		308.46		1.519E-01	1.734E-01	2.965E-01	2.208E-02	0.512
		316.51	*	1.431E-02	6.148E-02	1.018E-01	7.448E-03	0.141
		468.07		-1.019E-01	1.582E-01	2.566E-01	1.894E-02	-0.397
		604.41		-7.352E-02	1.013E+00	1.425E+00	1.776E-01	-0.052
		612.46		3.608E+00	1.768E+00	2.872E+00	2.642E-01	1.256
AU-195		65.12		4.896E-02	1.499E-01	2.311E-01	2.133E-02	0.212
		66.83		1.194E-02	8.477E-02	1.296E-01	1.182E-02	0.092
	+	75.70		8.415E-01	2.597E-01	4.037E-01	3.463E-02	2.084
		98.88	*	-1.089E-01	3.246E-01	5.022E-01	4.667E-02	-0.217
		129.76		-1.904E+00	4.183E+00	6.636E+00	7.891E-01	-0.287
TL-200		367.94	*	-1.486E+00	7.184E+00	1.146E+01	7.334E-01	-0.130
		579.30		3.496E+01	6.726E+01	1.003E+02	7.571E+00	0.349
		828.27		6.188E+01	9.513E+01	1.650E+02	1.299E+01	0.375
		1205.75		-2.351E+01	2.881E+01	4.374E+01	2.425E+00	-0.537
TL-201		68.90		1.754E-01	8.010E-01	1.301E+00	1.170E-01	0.135
		70.82		-1.514E-01	5.022E-01	7.504E-01	6.656E-02	-0.202
		80.30		-2.942E-01	1.087E+00	1.610E+00	1.338E-01	-0.183
		135.34		1.471E+00	6.818E+00	1.115E+01	1.263E+00	0.132
		167.43	*	1.850E+00	2.113E+00	3.504E+00	2.746E-01	0.528
TL-202		68.90		5.801E-02	2.649E-01	4.304E-01	3.868E-02	0.135
		70.82		-4.993E-02	1.656E-01	2.475E-01	2.195E-02	-0.202
		80.30		-9.708E-02	3.586E-01	5.311E-01	4.415E-02	-0.183
		439.56	*	6.004E-02	1.046E-01	1.808E-01	1.142E-02	0.332
HG-203		70.83		-3.000E-01	9.875E-01	1.475E+00	2.030E-01	-0.203
		72.87		2.044E-01	5.227E-01	8.888E-01	1.181E-01	0.230
		82.60		-6.345E-01	1.219E+00	1.986E+00	2.677E-01	-0.319
		279.20	*	4.059E-02	6.637E-02	1.128E-01	8.978E-03	0.360
BI-207		72.80		6.117E-02	1.711E-01	2.910E-01	2.546E-02	0.210
	+	74.97		4.802E-01	1.482E-01	2.147E-01	1.851E-02	2.237
		84.90		2.958E-01	2.651E-01	4.152E-01	3.345E-02	0.713
		569.67		9.901E-03	6.896E-02	1.146E-01	8.562E-03	0.086
		1063.62	*	5.817E-03	1.417E-01	2.313E-01	1.504E-02	0.025
		1770.23		7.803E-01	9.628E-01	1.641E+00	9.313E-02	0.475
TL-207		81.07		-1.933E-01	2.815E-01	4.083E-01	3.376E-02	-0.474
		83.78		1.605E-01	1.729E-01	2.694E-01	2.187E-02	0.596
		94.90		2.688E-01	3.307E-01	5.103E-01	4.474E-02	0.527
	+	122.32		2.902E+01	7.119E+00	7.274E+00	9.505E-01	3.990
		144.24		-1.961E-01	1.132E+00	1.811E+00	2.034E-01	-0.108
		154.21		4.169E-01	6.290E-01	1.040E+00	1.045E-01	0.401
		269.46		1.284E-01	3.429E-01	5.776E-01	4.596E-02	0.222
		323.87	*	-3.317E-01	1.276E+00	2.052E+00	3.499E-01	-0.162
	+	338.28		3.385E+00	2.541E+00	3.503E+00	3.929E-01	0.966
		445.03		-3.958E+00	5.197E+00	8.368E+00	8.872E-01	-0.473
PO-209		260.50		8.332E+00	1.762E+01	2.989E+01	2.335E+00	0.279
		262.80		-2.616E+01	4.953E+01	8.004E+01	6.243E+00	-0.327
		896.60	*	4.631E+00	2.206E+01	3.693E+01	2.781E+00	0.125

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-210		46.50	*	1.595E+00	1.193E+00	1.832E+00	1.493E-01	0.871
PB-210		46.50	*	1.595E+00	1.193E+00	1.832E+00	1.493E-01	0.871
PO-210		46.50	*	1.595E+00	1.191E+00	1.832E+00	1.306E-01	0.871
PB-211		404.84	*	2.507E-01	2.055E+00	3.306E+00	2.062E+00	0.076
		427.08		-1.196E-01	4.983E+00	7.936E+00	4.908E+00	-0.015
		831.96		-1.817E+00	3.189E+00	4.764E+00	2.981E+00	-0.381
BI-212		727.18	*	4.623E-01	7.093E-01	1.189E+00	1.142E-01	0.389
		785.46		2.151E-01	4.084E+00	6.860E+00	5.505E-01	0.031
		1620.62		-1.899E-01	1.974E+00	3.145E+00	1.810E-01	-0.060
BI-214	+	609.31	*	9.137E-01	3.434E-01	3.813E-01	3.565E-02	2.397
		768.36		-6.159E-02	1.748E+00	2.927E+00	2.935E-01	-0.021
		934.06		-1.908E+00	3.577E+00	5.710E+00	5.503E-01	-0.334
		1120.29		9.263E-01	7.433E-01	1.299E+00	1.162E-01	0.713
		1238.11		1.158E+00	1.383E+00	2.475E+00	1.980E-01	0.468
		1377.67		1.257E+00	1.540E+00	2.807E+00	2.394E-01	0.448
	+	1764.49		1.007E+00	4.740E-01	9.750E-01	5.537E-02	1.033
PO-215		81.07		-1.933E-01	2.815E-01	4.083E-01	3.376E-02	-0.474
		83.78		1.605E-01	1.729E-01	2.694E-01	2.187E-02	0.596
		94.90		2.688E-01	3.307E-01	5.103E-01	4.474E-02	0.527
	+	122.32		2.902E+01	7.119E+00	7.274E+00	9.505E-01	3.990
		144.24		-1.961E-01	1.132E+00	1.811E+00	2.034E-01	-0.108
		154.21		4.169E-01	6.290E-01	1.040E+00	1.045E-01	0.401
		269.46		1.284E-01	3.429E-01	5.776E-01	4.596E-02	0.222
		323.87	*	-3.317E-01	1.276E+00	2.052E+00	3.499E-01	-0.162
	+	338.28		3.385E+00	2.541E+00	3.503E+00	3.929E-01	0.966
		445.03		-3.958E+00	5.197E+00	8.368E+00	8.872E-01	-0.473
RN-219		271.23		3.205E-01	4.461E-01	7.611E-01	7.302E-02	0.421
		401.81	*	-1.690E-01	9.180E-01	1.456E+00	1.990E-01	-0.116
RN-220		549.76	*	-5.533E+01	5.830E+01	9.020E+01	6.594E+00	-0.613
RA-223		81.07		-1.933E-01	2.815E-01	4.083E-01	3.376E-02	-0.474
		83.78		1.605E-01	1.729E-01	2.694E-01	2.187E-02	0.596
		94.90		2.688E-01	3.307E-01	5.103E-01	4.474E-02	0.527
	+	122.32		2.902E+01	7.119E+00	7.274E+00	9.505E-01	3.990
		144.24		-1.961E-01	1.132E+00	1.811E+00	2.034E-01	-0.108
		154.21		4.169E-01	6.290E-01	1.040E+00	1.045E-01	0.401
		269.46		1.284E-01	3.429E-01	5.776E-01	4.596E-02	0.222
		323.87	*	-3.317E-01	1.276E+00	2.052E+00	3.499E-01	-0.162
	+	338.28		3.385E+00	2.541E+00	3.503E+00	3.929E-01	0.966
		445.03		-3.958E+00	5.197E+00	8.368E+00	8.872E-01	-0.473
RA-226	+	609.31	*	9.137E-01	3.434E-01	3.813E-01	3.565E-02	2.397
		768.36		-6.159E-02	1.748E+00	2.927E+00	2.935E-01	-0.021
		934.06		-1.908E+00	3.577E+00	5.710E+00	5.503E-01	-0.334
		1120.29		9.263E-01	7.433E-01	1.299E+00	1.162E-01	0.713
		1238.11		1.158E+00	1.383E+00	2.475E+00	1.980E-01	0.468
		1377.67		1.257E+00	1.540E+00	2.807E+00	2.394E-01	0.448
	+	1764.49		1.007E+00	4.740E-01	9.750E-01	5.537E-02	1.033
AC-227		79.80		-1.086E+00	2.034E+00	2.958E+00	6.328E-01	-0.367
		236.00		2.799E-01	4.166E-01	6.374E-01	7.492E-02	0.439
		256.20	*	-5.322E-01	7.052E-01	1.120E+00	1.671E-01	-0.475

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		286.10		2.028E-01	2.889E+00	4.780E+00	6.012E-01	0.042
		299.80		1.109E+00	2.848E+00	4.211E+00	7.143E-01	0.263
		304.40		-5.814E+00	3.816E+00	5.496E+00	9.846E-01	-1.058
		334.20		-1.467E+00	5.016E+00	6.978E+00	1.309E+00	-0.210
TH-227		79.80		-1.086E+00	2.035E+00	2.958E+00	6.409E-01	-0.367
	+	94.00		2.204E+00	4.378E+00	5.140E+00	1.120E+00	0.429
		236.00		2.799E-01	4.163E-01	6.374E-01	6.713E-02	0.439
		256.20	*	-5.322E-01	7.070E-01	1.120E+00	1.983E-01	-0.475
		286.10		2.028E-01	2.896E+00	4.780E+00	4.794E+00	0.042
		299.80		1.109E+00	2.848E+00	4.211E+00	7.143E-01	0.263
		304.40		-5.814E+00	3.816E+00	5.496E+00	9.846E-01	-1.058
		334.20		-1.467E+00	5.016E+00	6.978E+00	1.309E+00	-0.210
AC-228	+	338.32		8.105E-01	6.872E-01	8.403E-01	3.441E-01	0.965
	+	911.07	*	1.119E+00	6.640E-01	8.242E-01	8.558E-02	1.358
		969.11		3.385E-01	6.969E-01	1.169E+00	2.671E-01	0.289
RA-228	+	338.32		8.105E-01	6.872E-01	8.403E-01	3.441E-01	0.965
	+	911.07	*	1.119E+00	6.640E-01	8.242E-01	8.558E-02	1.358
		969.11		3.385E-01	6.969E-01	1.169E+00	2.671E-01	0.289
TH-229		85.43		1.240E-01	2.651E-01	4.054E-01	3.254E-02	0.306
	+	88.47		6.441E+00	6.243E-01	6.181E-01	4.911E-02	10.420
		100.00		1.338E-01	2.605E-01	4.371E-01	4.128E-02	0.306
		193.63	*	6.385E-01	8.031E-01	1.405E+00	1.112E-01	0.454
		210.97		1.011E+00	1.263E+00	2.195E+00	1.741E-01	0.460
TH-230	+	609.31	*	9.137E-01	3.434E-01	3.813E-01	3.565E-02	2.397
		768.36		-6.159E-02	1.748E+00	2.927E+00	2.935E-01	-0.021
		934.06		-1.908E+00	3.577E+00	5.710E+00	5.503E-01	-0.334
		1120.29		9.263E-01	7.432E-01	1.299E+00	1.162E-01	0.713
		1238.11		1.158E+00	1.383E+00	2.475E+00	1.980E-01	0.468
		1377.67		1.257E+00	1.540E+00	2.807E+00	2.394E-01	0.448
	+	1764.49		1.007E+00	4.740E-01	9.750E-01	5.537E-02	1.033
PA-231		283.67	*	5.493E-01	2.904E+00	4.835E+00	7.086E-01	0.114
		301.29		1.813E+00	1.142E+00	1.805E+00	2.070E-01	1.005
TH-231		81.07		-1.933E-01	2.815E-01	4.083E-01	3.376E-02	-0.474
		83.78		1.605E-01	1.729E-01	2.694E-01	2.187E-02	0.596
		94.90		2.688E-01	3.307E-01	5.103E-01	4.474E-02	0.527
	+	122.32		2.902E+01	7.119E+00	7.274E+00	9.505E-01	3.990
		144.24		-1.961E-01	1.132E+00	1.811E+00	2.034E-01	-0.108
		154.21		4.169E-01	6.290E-01	1.040E+00	1.045E-01	0.401
		269.46		1.284E-01	3.429E-01	5.776E-01	4.596E-02	0.222
		323.87	*	-3.317E-01	1.276E+00	2.052E+00	3.499E-01	-0.162
	+	338.28		3.385E+00	2.541E+00	3.503E+00	3.929E-01	0.966
		445.03		-3.958E+00	5.197E+00	8.368E+00	8.872E-01	-0.473
U-231		84.21		1.790E+00	2.150E+00	3.336E+00	2.700E-01	0.537
	+	92.29		6.194E-01	1.224E+00	1.471E+00	1.240E-01	0.421
		95.87	*	-1.505E-01	4.337E-01	6.302E-01	5.605E-02	-0.239
		108.00		-4.323E-01	8.168E-01	1.308E+00	1.380E-01	-0.331
TH-232	+	338.32		8.105E-01	6.044E-01	8.403E-01	5.851E-02	0.965
	+	911.07	*	1.119E+00	6.640E-01	8.242E-01	8.558E-02	1.358
		969.11		3.385E-01	6.969E-01	1.169E+00	2.671E-01	0.289

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	+	75.28		1.402E+01	4.678E+00	6.363E+00	9.760E-01	2.203
		86.59		1.862E+01	5.754E+00	5.234E+00	1.393E+00	3.558
		300.12		7.965E-01	7.772E-01	1.192E+00	1.699E-01	0.668
		311.98	*	-1.095E-01	1.243E-01	1.934E-01	1.477E-02	-0.566
		340.50		2.194E+00	1.465E+00	2.169E+00	5.049E-01	1.011
		398.62		-3.030E-01	4.585E+00	7.319E+00	1.894E+00	-0.041
		415.76		-3.314E+00	3.703E+00	5.490E+00	1.135E+00	-0.604
PA-234	+	63.00		2.783E-01	1.434E+00	2.185E+00	3.481E-01	0.127
		94.67		3.934E-01	2.473E-01	3.887E-01	4.853E-02	1.012
		98.44		-8.216E-02	1.522E-01	2.081E-01	1.163E-01	-0.395
		99.86		3.913E-02	6.683E-01	1.102E+00	1.039E-01	0.036
		111.00		-9.222E-02	2.632E-01	4.244E-01	5.887E-02	-0.217
		131.20		-1.883E-02	1.565E-01	2.525E-01	2.965E-02	-0.075
		152.70		-1.173E-01	5.250E-01	8.332E-01	1.455E-01	-0.141
	+	186.00		5.886E+00	3.960E+00	4.285E+00	1.329E+00	1.374
		226.40		4.576E-01	7.322E-01	1.256E+00	1.603E-01	0.364
		227.20		2.239E-01	7.881E-01	1.337E+00	1.059E-01	0.167
		248.90		-3.848E-01	1.505E+00	2.475E+00	5.478E-01	-0.155
		293.70		2.334E+00	1.494E+00	2.293E+00	3.851E-01	1.018
		369.80		-4.431E-01	1.766E+00	2.805E+00	5.888E-01	-0.158
		568.70		-1.551E+00	2.273E+00	3.580E+00	2.672E-01	-0.433
		569.50		6.844E-02	6.109E-01	1.013E+00	7.569E-02	0.068
		574.00		2.031E-01	3.259E+00	5.385E+00	4.043E-01	0.038
		699.00		2.752E-01	1.721E+00	2.811E+00	5.307E-01	0.098
		706.10		7.009E-01	2.506E+00	4.093E+00	1.822E+00	0.171
		733.00		-4.030E-01	9.225E-01	1.432E+00	3.151E-01	-0.281
		742.81		1.291E+00	3.351E+00	5.355E+00	3.597E+00	0.241
		796.30		-1.615E-01	2.174E+00	3.618E+00	9.717E-01	-0.045
		805.60		-2.224E+00	2.641E+00	4.029E+00	1.228E+00	-0.552
		819.60		1.031E+00	2.966E+00	5.020E+00	1.901E+00	0.205
		826.30		5.661E-01	2.008E+00	3.383E+00	1.509E+00	0.167
		831.60		-6.772E-01	1.540E+00	2.470E+00	7.318E-01	-0.274
		876.40		2.927E-01	2.318E+00	3.841E+00	3.946E+00	0.076
		880.51		3.054E-01	7.785E-01	1.321E+00	1.007E-01	0.231
		883.24		-4.675E-01	8.504E-01	1.260E+00	8.453E-01	-0.371
		899.00		1.674E+00	2.613E+00	4.308E+00	1.874E+00	0.389
		925.00		-4.751E-01	3.666E+00	6.002E+00	4.440E-01	-0.079
		926.50		3.015E-01	5.432E-01	9.159E-01	2.279E-01	0.329
		946.00	*	6.785E-01	9.474E-01	1.609E+00	2.928E-01	0.422
		949.00		-3.700E-01	1.395E+00	2.260E+00	1.644E-01	-0.164
		980.50		1.247E-02	2.113E+00	3.469E+00	2.460E-01	0.004
		1394.10		1.700E-01	1.702E+00	2.846E+00	1.844E+00	0.060
PA-234M		766.41		1.013E+01	4.041E+01	6.756E+01	5.176E+01	0.150
		1001.03	*	-1.812E+01	1.836E+01	2.818E+01	2.805E+00	-0.643
U-234	+	609.31	*	9.137E-01	3.434E-01	3.813E-01	3.565E-02	2.397
		768.36		-6.159E-02	1.748E+00	2.927E+00	2.935E-01	-0.021
		934.06		-1.908E+00	3.577E+00	5.710E+00	5.503E-01	-0.334
		1120.29		9.263E-01	7.432E-01	1.299E+00	1.162E-01	0.713
		1238.11		1.158E+00	1.383E+00	2.475E+00	1.980E-01	0.468

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1377.67		1.257E+00	1.540E+00	2.807E+00	2.394E-01	0.448
	+	1764.49		1.007E+00	4.740E-01	9.750E-01	5.537E-02	1.033
U-235		89.95		2.707E+01	8.656E+00	4.330E+00	1.331E+00	6.252
	+	93.35		6.856E-01	1.367E+00	1.666E+00	4.667E-01	0.411
		105.00		1.063E+00	1.505E+00	2.498E+00	7.571E-01	0.426
		143.76	*	-9.912E-02	3.508E-01	5.578E-01	1.030E-01	-0.178
		163.35		-6.524E-01	8.143E-01	1.232E+00	2.324E-01	-0.530
	+	185.71		2.180E-01	1.313E-01	1.576E-01	1.244E-02	1.383
		205.31		-2.328E-01	8.764E-01	1.450E+00	2.723E-01	-0.161
NP-236		94.67		3.025E-01	1.859E-01	2.953E-01	2.580E-02	1.024
		98.44		-6.213E-02	1.099E-01	1.573E-01	1.452E-02	-0.395
		111.00		-6.976E-02	1.990E-01	3.210E-01	3.526E-02	-0.217
		160.31	*	1.696E-02	1.249E-01	2.013E-01	1.716E-02	0.084
NP-237		86.50	*	1.973E+00	6.043E-01	7.227E-01	1.599E-01	2.730
		95.87		-4.668E-01	1.349E+00	1.954E+00	4.832E-01	-0.239
NP-239		99.55		-5.903E-02	2.230E-01	3.627E-01	3.403E-02	-0.163
		117.00	*	-1.357E-02	3.076E-01	4.482E-01	5.318E-02	-0.030
		209.75		1.378E+00	1.285E+00	2.253E+00	1.786E-01	0.612
		228.18		1.509E-01	4.104E-01	6.984E-01	5.533E-02	0.216
		277.60		3.099E-02	3.233E-01	5.369E-01	4.134E-02	0.058
		334.30		-1.384E+00	2.868E+00	3.933E+00	2.765E-01	-0.352
CM-243		99.55		-6.071E-02	2.293E-01	3.730E-01	3.500E-02	-0.163
		103.76	*	-1.816E-01	1.407E-01	2.169E-01	2.160E-02	-0.837
		117.00		-1.396E-02	3.163E-01	4.608E-01	5.469E-02	-0.030
		209.75		1.357E+00	1.266E+00	2.219E+00	1.760E-01	0.612
		228.18		1.523E-01	4.145E-01	7.054E-01	5.588E-02	0.216
		277.60		3.123E-02	3.258E-01	5.410E-01	4.166E-02	0.058
CM-247		278.00		2.158E-01	1.341E+00	2.233E+00	1.719E-01	0.097
		287.40		-8.708E-01	2.346E+00	3.794E+00	2.890E-01	-0.230
		402.60	*	-1.640E-02	8.228E-02	1.304E-01	7.766E-03	-0.126
CF-249		252.85		3.097E-02	1.531E+00	2.551E+00	2.002E-01	0.012
		333.44		-2.214E-02	3.781E-01	5.367E-01	3.780E-02	-0.041
		387.95	*	-7.953E-02	8.672E-02	1.318E-01	7.825E-03	-0.604
CF-251		176.60	*	1.160E-01	1.986E-01	3.252E-01	2.558E-02	0.357
		227.00		3.896E-01	6.953E-01	1.192E+00	9.446E-02	0.327
		285.00		1.817E+00	3.281E+00	5.555E+00	4.244E-01	0.327

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834    *
* Acquisition date : 14-JUL-2009 12:33:44 Detector SN#     :               *
* Detector ID        : GAM13                Sensitivity      : 5.000       *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:     0 01:00:00.00      Abundance limit : 75.000       *
* Elapsed real time:     0 01:00:01.74      Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        :  7-JUL-2009 00:00:00 Nuclide Library : SOLID         *
* Sample ID          : G1201874834          Analyst initials: MXR1          *
* Batch Number       : 882713               Sample Quantity : 1.5544E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope      :               *
* LCS DPM          :     0.000            LCS Isotope      :               *
* LCSD DPM         :     0.000            LCSD Isotope     :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	4.118E-01	9.806E-02	6.721E-02	0.000E+00
CO-60	6.848E+00	5.172E-01	9.409E-02	0.000E+00
CD-109	4.745E+01	4.508E+00	1.930E+00	0.000E+00
SN-126	4.718E+00	4.481E-01	1.917E-01	0.000E+00
BA-137M	5.687E+00	5.338E-01	1.388E-01	0.000E+00
CS-137	6.012E+00	5.652E-01	1.467E-01	0.000E+00
TL-208	2.333E-01	1.200E-01	1.443E-01	0.000E+00
BI-211	2.377E+00	6.817E-01	6.746E-01	0.000E+00
PB-212	8.114E-01	2.373E-01	1.851E-01	0.000E+00
PO-212	8.114E-01	2.373E-01	1.851E-01	0.000E+00
PB-214	8.268E-01	2.409E-01	2.563E-01	0.000E+00
PO-214	8.268E-01	2.409E-01	2.563E-01	0.000E+00
PO-216	8.114E-01	2.373E-01	1.851E-01	0.000E+00
PO-218	8.268E-01	2.409E-01	2.563E-01	0.000E+00
RA-224	8.651E-01	1.282E+00	2.612E+00	0.000E+00
TH-228	8.114E-01	2.373E-01	1.851E-01	0.000E+00
TH-234	2.387E-01	1.205E+00	1.655E+00	0.000E+00
U-238	2.387E-01	1.205E+00	1.655E+00	0.000E+00
AM-241	1.366E+01	1.418E+00	2.687E-01	0.000E+00
AM-243	2.676E-01	8.095E-02	1.027E-01	0.000E+00
ANH-511	1.742E-01	1.202E-01	1.075E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	-1.094E+00	6.857E-01	1.107E+00	0.000E+00	NOT IDENT.
NA-22	-6.454E-02	6.237E-02	9.224E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.357E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	4.048E-02	4.884E-02	9.609E-02	0.000E+00	NOT IDENT.
K-40	8.487E-01	7.086E-01	1.261E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.144E-02	8.929E-02	0.000E+00	FAIL ABUN

SC-46	3.071E-02	9.950E-02	1.751E-01	0.000E+00	NOT IDENT.
V-48	1.313E-01	1.413E-01	2.547E-01	0.000E+00	NOT IDENT.
CR-51	4.273E-01	5.721E-01	1.041E+00	0.000E+00	NOT IDENT.
MN-52	-4.232E-02	1.378E-01	2.213E-01	0.000E+00	FAIL ABUN
MN-54	2.164E-02	8.338E-02	1.475E-01	0.000E+00	NOT IDENT.
CO-56	-2.815E-02	9.506E-02	1.621E-01	0.000E+00	FAIL ABUN
CO-58	2.024E-02	8.575E-02	1.520E-01	0.000E+00	NOT IDENT.
FE-59	-1.190E-02	2.234E-01	3.748E-01	0.000E+00	NOT IDENT.
ZN-65	-1.820E-01	2.317E-01	3.681E-01	0.000E+00	NOT IDENT.
GE-68	-3.425E-01	3.342E+00	5.601E+00	0.000E+00	NOT IDENT.
AS-73	-1.476E-01	6.241E-01	1.070E+00	0.000E+00	NOT IDENT.
AS-74	9.234E-02	1.435E-01	2.583E-01	0.000E+00	NOT IDENT.
SE-75	-1.751E-03	7.638E-02	1.364E-01	0.000E+00	FAIL ABUN
BR-77	-6.629E-02	2.456E+00	4.309E+00	0.000E+00	FAIL ABUN
SR-82	-3.721E-01	7.802E-01	1.331E+00	0.000E+00	NOT IDENT.
RB-83	-3.598E-02	1.408E-01	2.437E-01	0.000E+00	NOT IDENT.
RB-84	4.753E-02	1.601E-01	2.819E-01	0.000E+00	NOT IDENT.
KR-85	2.638E+01	1.686E+01	2.869E+01	0.000E+00	NOT IDENT.
SR-85	1.248E-01	7.980E-02	1.358E-01	0.000E+00	NOT IDENT.
RB-86	-6.828E-01	1.654E+00	2.713E+00	0.000E+00	NOT IDENT.
Y-88	6.542E-02	5.231E-02	1.092E-01	0.000E+00	NOT IDENT.
ZR-88	-3.649E-03	6.365E-02	1.080E-01	0.000E+00	NOT IDENT.
Y-91	-1.523E+01	2.486E+01	4.012E+01	0.000E+00	NOT IDENT.
NB-94	-7.769E-02	8.090E-02	1.281E-01	0.000E+00	NOT IDENT.
NB-95	2.157E-03	8.898E-02	1.567E-01	0.000E+00	NOT IDENT.
NB-95M	9.631E-02	2.013E-01	3.297E-01	0.000E+00	NOT IDENT.
ZR-95	8.311E-02	1.540E-01	2.687E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.485E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.279E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	6.274E-01	3.937E+00	6.716E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.240E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.635E-02	5.175E-02	9.131E-02	0.000E+00	NOT IDENT.
RH-102	1.353E-02	6.690E-02	1.199E-01	0.000E+00	NOT IDENT.
RU-103	2.705E-02	7.710E-02	1.387E-01	0.000E+00	FAIL ABUN
RH-106	-3.975E-01	6.565E-01	1.078E+00	0.000E+00	FAIL ABUN
RU-106	-3.975E-01	6.553E-01	1.078E+00	0.000E+00	FAIL ABUN
AG-108M	1.746E-02	7.655E-02	1.386E-01	0.000E+00	NOT IDENT.
AG-110M	4.341E-02	9.336E-02	1.436E-01	0.000E+00	NOT IDENT.
IN-111	1.475E-01	3.302E-01	5.373E-01	0.000E+00	NOT IDENT.
IN-113M	8.723E-02	9.143E-02	1.647E-01	0.000E+00	NOT IDENT.
SN-113	8.723E-02	9.143E-02	1.647E-01	0.000E+00	NOT IDENT.
IN-114M	-1.099E-01	3.003E-01	4.458E-01	0.000E+00	NOT IDENT.
CD-115	2.723E-01	2.147E+00	3.795E+00	0.000E+00	NOT IDENT.
SN-117M	5.098E-03	5.662E-02	9.916E-02	0.000E+00	NOT IDENT.
SB-122	4.838E-01	6.436E-01	1.169E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.686E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-4.790E-05	4.159E-02	7.249E-02	0.000E+00	NOT IDENT.
I-124	-2.230E-01	4.603E-01	6.565E-01	0.000E+00	NOT IDENT.
SB-124	8.675E-02	1.139E-01	2.165E-01	0.000E+00	NOT IDENT.
SB-125	2.181E-02	2.082E-01	3.756E-01	0.000E+00	NOT IDENT.
TE-125M	4.579E+00	1.152E+01	2.120E+01	0.000E+00	NOT IDENT.
I-126	-3.370E-03	3.204E-01	4.720E-01	0.000E+00	NOT IDENT.
SB-126	-7.722E-02	2.063E-01	3.392E-01	0.000E+00	FAIL ABUN
SB-127	1.260E-01	7.874E-01	1.355E+00	0.000E+00	FAIL ABUN
XE-127	-2.413E-02	6.632E-02	1.198E-01	0.000E+00	NOT IDENT.
I-131	-8.885E-02	1.158E-01	1.905E-01	0.000E+00	NOT IDENT.
TE-132	8.843E-02	2.439E-01	4.484E-01	0.000E+00	FAIL ABUN
BA-133	4.935E-02	9.868E-02	1.562E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.889E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	3.051E-02	1.070E-01	1.905E-01	0.000E+00	NOT IDENT.
CS-135	-1.519E-01	2.854E-01	4.965E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.022E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.205E-02	1.933E-01	3.287E-01	0.000E+00	NOT IDENT.
CE-139	1.555E-02	4.817E-02	8.511E-02	0.000E+00	NOT IDENT.
BA-140	8.597E-02	3.789E-01	6.705E-01	0.000E+00	NOT IDENT.
LA-140	2.804E-02	9.700E-02	1.693E-01	0.000E+00	NOT IDENT.
CE-141	1.424E-02	8.648E-02	1.536E-01	0.000E+00	NOT IDENT.
CE-143	4.962E+00	5.907E+00	9.530E+00	0.000E+00	NOT IDENT.
CE-144	-3.045E-01	3.043E-01	5.066E-01	0.000E+00	NOT IDENT.
PM-144	8.487E-02	7.965E-02	1.440E-01	0.000E+00	NOT IDENT.
PR-144	5.728E+00	5.375E+00	9.720E+00	0.000E+00	NOT IDENT.
PM-146	2.190E-02	1.029E-01	1.853E-01	0.000E+00	NOT IDENT.
ND-147	-8.500E-01	7.326E-01	1.171E+00	0.000E+00	NOT IDENT.
PM-149	2.236E+00	1.559E+01	2.784E+01	0.000E+00	NOT IDENT.
EU-152	3.026E-02	2.061E-01	3.345E-01	0.000E+00	FAIL ABUN
GD-153	-1.723E-02	1.125E-01	1.826E-01	0.000E+00	NOT IDENT.
EU-154	-1.895E-01	1.743E-01	2.543E-01	0.000E+00	FAIL ABUN
EU-155	8.958E-02	1.462E-01	2.721E-01	0.000E+00	FAIL ABUN

TB-160	2.097E-01	3.422E-01	6.138E-01	0.000E+00	NOT IDENT.
HO-166M	-5.154E-02	1.429E-01	2.361E-01	0.000E+00	NOT IDENT.
TM-171	2.271E+00	2.553E+01	4.345E+01	0.000E+00	FAIL ABUN
LU-176	3.521E-02	4.574E-02	8.360E-02	0.000E+00	FAIL ABUN
LU-177	-3.542E-01	8.114E-01	1.458E+00	0.000E+00	NOT IDENT.
LU-177M	-1.966E-01	3.790E-01	6.263E-01	0.000E+00	FAIL ABUN
HF-181	6.145E-02	8.514E-02	1.563E-01	0.000E+00	NOT IDENT.
W-181	4.039E-02	3.112E-01	5.314E-01	0.000E+00	NOT IDENT.
TA-182	1.161E-01	2.763E-01	4.970E-01	0.000E+00	NOT IDENT.
RE-183	-6.246E-02	1.627E-01	2.775E-01	0.000E+00	FAIL ABUN
RE-184	8.001E-03	3.876E-01	6.968E-01	0.000E+00	FAIL ABUN
OS-185	-5.014E-03	9.082E-02	1.551E-01	0.000E+00	FAIL ABUN
RE-188	7.196E-02	2.464E-01	4.377E-01	0.000E+00	NOT IDENT.
W-188	9.208E-01	1.387E+01	2.164E+01	0.000E+00	FAIL ABUN
IR-192	1.431E-02	6.026E-02	1.071E-01	0.000E+00	FAIL ABUN
AU-195	-1.089E-01	3.181E-01	5.437E-01	0.000E+00	FAIL ABUN
TL-200	-1.486E+00	7.040E+00	1.200E+01	0.000E+00	NOT IDENT.
TL-201	1.850E+00	2.070E+00	3.744E+00	0.000E+00	NOT IDENT.
TL-202	6.004E-02	1.025E-01	1.884E-01	0.000E+00	NOT IDENT.
HG-203	4.059E-02	6.504E-02	1.189E-01	0.000E+00	NOT IDENT.
BI-207	5.817E-03	1.388E-01	2.354E-01	0.000E+00	FAIL ABUN
TL-207	-3.317E-01	1.250E+00	2.156E+00	0.000E+00	FAIL ABUN
PO-209	4.631E+00	2.161E+01	3.776E+01	0.000E+00	NOT IDENT.
BI-210	1.595E+00	1.169E+00	2.019E+00	0.000E+00	NOT IDENT.
PB-210	1.595E+00	1.169E+00	2.019E+00	0.000E+00	NOT IDENT.
PO-210	1.595E+00	1.167E+00	2.019E+00	0.000E+00	NOT IDENT.
PB-211	2.507E-01	2.014E+00	3.454E+00	0.000E+00	NOT IDENT.
BI-212	4.623E-01	6.951E-01	1.223E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	3.365E-01	3.939E-01	0.000E+00	FAIL ABUN
PO-215	-3.317E-01	1.250E+00	2.156E+00	0.000E+00	FAIL ABUN
RN-219	-1.690E-01	8.996E-01	1.521E+00	0.000E+00	NOT IDENT.
RN-220	-5.533E+01	5.713E+01	9.345E+01	0.000E+00	NOT IDENT.
RA-223	-3.317E-01	1.250E+00	2.156E+00	0.000E+00	FAIL ABUN
RA-226	0.000E+00	3.365E-01	3.939E-01	0.000E+00	FAIL ABUN
AC-227	-5.322E-01	6.911E-01	1.184E+00	0.000E+00	NOT IDENT.
TH-227	-5.322E-01	6.929E-01	1.184E+00	0.000E+00	FAIL ABUN
AC-228	0.000E+00	6.507E-01	8.422E-01	0.000E+00	FAIL ABUN
RA-228	0.000E+00	6.507E-01	8.422E-01	0.000E+00	FAIL ABUN
TH-229	6.385E-01	7.871E-01	1.496E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	3.365E-01	3.939E-01	0.000E+00	FAIL ABUN
PA-231	5.493E-01	2.846E+00	5.097E+00	0.000E+00	NOT IDENT.
TH-231	-3.317E-01	1.250E+00	2.156E+00	0.000E+00	FAIL ABUN
U-231	-1.505E-01	4.250E-01	6.828E-01	0.000E+00	FAIL ABUN
TH-232	0.000E+00	6.507E-01	8.422E-01	0.000E+00	FAIL ABUN
PA-233	-1.095E-01	1.218E-01	2.034E-01	0.000E+00	FAIL ABUN
PA-234	6.785E-01	9.285E-01	1.643E+00	0.000E+00	FAIL ABUN
PA-234M	-1.812E+01	1.799E+01	2.872E+01	0.000E+00	NOT IDENT.
U-234	0.000E+00	3.365E-01	3.939E-01	0.000E+00	FAIL ABUN
U-235	-9.912E-02	3.438E-01	5.983E-01	0.000E+00	FAIL ABUN
NP-236	1.696E-02	1.224E-01	2.153E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	5.922E-01	7.850E-01	0.000E+00	NOT IDENT.
NP-239	-1.357E-02	3.015E-01	4.832E-01	0.000E+00	NOT IDENT.
CM-243	-1.816E-01	1.379E-01	2.345E-01	0.000E+00	NOT IDENT.
CM-247	-1.640E-02	8.064E-02	1.362E-01	0.000E+00	NOT IDENT.
CF-249	-7.953E-02	8.499E-02	1.378E-01	0.000E+00	NOT IDENT.
CF-251	1.160E-01	1.946E-01	3.470E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:34:15.90

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834.CNF;1
Sample date       : 7-JUL-2009 00:00:00. Acquisition date : 14-JUL-2009 12:33:44
Sample ID         : G1201874834          Sample quantity  : 1.55440E+02 GRAM
Detector name     : GAM13                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.74  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 882713                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1023-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	479	85.51*	6.693E+00	4.039E-01	4.118E-01	24.30
	136.48	------	10.60	6.430E+00	------ Line Not Found		------
CO-60	1173.22	1786	100.00	1.239E+00	6.963E+00	6.982E+00	7.43
	1332.49	1582	100.00*	1.119E+00	6.829E+00	6.848E+00	7.71
CD-109	88.03	2614	3.72*	7.233E+00	4.692E+01	4.745E+01	9.69
SN-126	64.28	14	9.60	7.391E+00	9.450E-02	9.450E-02	515.12
	86.94	2614	8.90	7.233E+00	1.961E+01	1.961E+01	41.59
	87.57	2614	37.00*	7.233E+00	4.718E+00	4.718E+00	9.69
BA-137M	661.65	2136	89.98*	2.017E+00	5.684E+00	5.687E+00	9.58
CS-137	661.65	2136	85.12*	2.017E+00	6.009E+00	6.012E+00	9.59
TL-208	277.35	------	6.80	4.225E+00	------ Line Not Found		------
	510.84	91	21.60	2.535E+00	8.065E-01	8.065E-01	70.87
	583.14	92	84.20*	2.255E+00	2.333E-01	2.333E-01	52.50
	860.37	------	12.46	1.606E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	7.369E+00	------ Line Not Found		------
	351.07	222	12.94*	3.493E+00	2.377E+00	2.377E+00	29.27
PB-212	74.81	269	10.70	7.356E+00	1.651E+00	1.651E+00	32.25
	77.11	450	18.00	7.341E+00	1.644E+00	1.644E+00	20.68
	87.30	2614	8.00	7.233E+00	2.182E+01	2.182E+01	13.93
	238.63	353	44.60*	4.711E+00	8.114E-01	8.114E-01	29.84
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PO-212	74.81	269	10.70	7.356E+00	1.651E+00	1.651E+00	32.25
	77.11	450	18.00	7.341E+00	1.644E+00	1.644E+00	20.68
	87.30	2614	8.00	7.233E+00	2.182E+01	2.182E+01	13.93
	115.19	------	0.60	6.822E+00	------ Line Not Found		------
	238.63	353	44.60*	4.711E+00	8.114E-01	8.114E-01	29.84
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PB-214	74.81	269	6.21	7.356E+00	2.844E+00	2.844E+00	31.74
	77.11	450	10.50	7.341E+00	2.818E+00	2.818E+00	22.03
	87.30	2614	4.67	7.233E+00	3.738E+01	3.738E+01	12.38
	241.98	33	7.49	4.671E+00	4.562E-01	4.562E-01	151.28
	295.21	178	19.20	4.021E+00	1.111E+00	1.111E+00	39.27

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	222	37.20*	3.493E+00	8.268E-01	8.268E-01	29.73
PO-214	74.81	269	6.21	7.356E+00	2.844E+00	2.844E+00	31.74
	77.11	450	10.50	7.341E+00	2.818E+00	2.818E+00	22.03
	87.30	2614	4.67	7.233E+00	3.738E+01	3.738E+01	12.38
	241.98	33	7.49	4.671E+00	4.562E-01	4.562E-01	151.28
	295.21	178	19.20	4.021E+00	1.111E+00	1.111E+00	39.27
	351.92	222	37.20*	3.493E+00	8.268E-01	8.268E-01	29.73
PO-216	74.81	269	10.70	7.356E+00	1.651E+00	1.651E+00	32.25
	77.11	450	18.00	7.341E+00	1.644E+00	1.644E+00	20.68
	87.30	2614	8.00	7.233E+00	2.182E+01	2.182E+01	13.93
	238.63	353	44.60*	4.711E+00	8.114E-01	8.114E-01	29.84
	300.09	------	3.41	3.976E+00	------ Line Not Found		------
PO-218	74.81	269	6.21	7.356E+00	2.844E+00	2.844E+00	31.74
	77.11	450	10.50	7.341E+00	2.818E+00	2.818E+00	22.03
	87.30	2614	4.67	7.233E+00	3.738E+01	3.738E+01	12.38
	241.98	33	7.49	4.671E+00	4.562E-01	4.562E-01	151.28
	295.21	178	19.20	4.021E+00	1.111E+00	1.111E+00	39.27
	351.92	222	37.20*	3.493E+00	8.268E-01	8.268E-01	29.73
RA-224	240.98	33	3.95*	4.671E+00	8.651E-01	8.651E-01	151.18
TH-228	84.40	------	1.21	7.278E+00	------ Line Not Found		------
	238.60	353	44.60*	4.711E+00	8.114E-01	8.114E-01	29.84
	300.10	------	3.41	3.976E+00	------ Line Not Found		------
TH-234	63.29	14	3.80*	7.391E+00	2.387E-01	2.387E-01	515.21
	92.38	46	5.41	7.174E+00	5.703E-01	5.703E-01	198.27
U-238	63.29	14	3.80*	7.391E+00	2.387E-01	2.387E-01	515.21
	92.38	46	5.41	7.174E+00	5.703E-01	5.703E-01	197.63
AM-241	59.54	7500	35.90*	7.385E+00	1.366E+01	1.366E+01	10.59
AM-243	74.67	269	66.00*	7.356E+00	2.676E-01	2.676E-01	30.86
	86.72	------	0.34	7.252E+00	------ Line Not Found		------
	117.66	------	0.55	6.778E+00	------ Line Not Found		------
	142.18	------	0.13	6.323E+00	------ Line Not Found		------
ANH-511	511.00	91	100.00*	2.535E+00	1.742E-01	1.742E-01	70.38

Flag: "*" = Keyline

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

Total number of lines in spectrum 23
Number of unidentified lines 1
Number of lines tentatively identified by NID 22 95.65%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	4.039E-01	4.118E-01	1.001E-01	24.30	
CO-60	5.27Y	1.00	6.829E+00	6.848E+00	0.528E+00	7.71	
CD-109	464.00D	1.01	4.692E+01	4.745E+01	0.460E+01	9.69	
SN-126	1.00E+05Y	1.00	4.718E+00	4.718E+00	0.457E+00	9.69	
BA-137M	30.17Y	1.00	5.684E+00	5.687E+00	0.545E+00	9.58	
CS-137	30.17Y	1.00	6.009E+00	6.012E+00	0.577E+00	9.59	
TL-208	1.41E+10Y	1.00	2.333E-01	2.333E-01	1.225E-01	52.50	
BI-211	7.04E+08Y	1.00	2.377E+00	2.377E+00	0.696E+00	29.27	
PB-212	1.41E+10Y	1.00	8.114E-01	8.114E-01	2.421E-01	29.84	
PO-212	1.41E+10Y	1.00	8.114E-01	8.114E-01	2.421E-01	29.84	
PB-214	1600.00Y	1.00	8.268E-01	8.268E-01	2.458E-01	29.73	
PO-214	1600.00Y	1.00	8.268E-01	8.268E-01	2.458E-01	29.73	
PO-216	1.41E+10Y	1.00	8.114E-01	8.114E-01	2.421E-01	29.84	
PO-218	1600.00Y	1.00	8.268E-01	8.268E-01	2.458E-01	29.73	
RA-224	1.41E+10Y	1.00	8.651E-01	8.651E-01	13.08E-01	151.18	
TH-228	1.41E+10Y	1.00	8.114E-01	8.114E-01	2.421E-01	29.84	
TH-234	4.47E+09Y	1.00	2.387E-01	2.387E-01	12.30E-01	515.21	
U-238	4.47E+09Y	1.00	2.387E-01	2.387E-01	12.30E-01	515.21	
AM-241	432.20Y	1.00	1.366E+01	1.366E+01	0.145E+01	10.59	
AM-243	7380.00Y	1.00	2.676E-01	2.676E-01	0.826E-01	30.86	
ANH-511	1.00E+09Y	1.00	1.742E-01	1.742E-01	1.226E-01	70.38	
	Total Activity :		9.435E+01	9.491E+01			

Grand Total Activity : 9.435E+01 9.491E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	49.99	197	1256	1.62	99.75	96	8	5.48E-02	63.6	7.33E+00	T
0	186.26	135	363	1.02	372.34	367	11	3.74E-02	59.7	5.52E+00	T
0	338.47	69	178	0.91	676.86	673	9	1.92E-02	74.2	3.61E+00	T
0	610.12	190	177	1.77	1220.31	1212	18	5.27E-02	36.4	2.17E+00	T
0	910.94	98	159	0.88	1822.17	1816	14	2.73E-02	58.4	1.53E+00	T
0	1462.74	36	9	1.78	2926.26	2916	19	9.97E-03	52.9	1.04E+00	
0	1765.42	30	3	2.63	3531.94	3525	12	8.22E-03	46.7	8.98E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 14-JUL-2009 13:34:21.43

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1201874834.CNF;1 *
* Acquisition date  : 14-JUL-2009 12:33:44  Detector SN#     :             *
* Detector ID       : GAM13                 Sensitivity      : 5.00000    *
* Geometry          : CAN                   Energy tolerance: 1.50000     *
* Elapsed live time: 0 01:00:00.00          Abundance limit : 75.00000    *
* Elapsed real time: 0 01:00:01.74          Half life ratio : 8.00000     *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 7-JUL-2009 00:00:00.  Nuclide Library : SOLID       *
* Sample ID         : G1201874834           Analyst initials: MXR1        *
* Batch Number      : 882713                Sample Quantity : 1.55440E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 2-FEB-2009 10:41:22.03MS Isotope      :               *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1023-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	4.118E-01	1.001E-01	6.241E-02	7.893E-03	6.598
CO-60	6.848E+00	5.277E-01	9.305E-02	5.293E-03	73.592
CD-109	4.745E+01	4.600E+00	1.778E+00	1.403E-01	26.693
SN-126	4.718E+00	4.573E-01	1.765E-01	1.396E-02	26.729
BA-137M	5.687E+00	5.447E-01	1.346E-01	1.098E-02	42.249
CS-137	6.012E+00	5.767E-01	1.423E-01	1.163E-02	42.249
TL-208	2.333E-01	1.225E-01	1.395E-01	1.154E-02	1.673
BI-211	2.377E+00	6.956E-01	6.435E-01	4.690E-02	3.694
PB-212	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
PO-212	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
PB-214	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
PO-214	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
PO-216	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.641
PO-218	8.268E-01	2.458E-01	2.445E-01	2.189E-02	3.382
RA-224	8.651E-01	1.308E+00	2.467E+00	1.947E-01	0.351
TH-228	8.114E-01	2.421E-01	1.748E-01	1.588E-02	4.642
TH-234	2.387E-01	1.230E+00	1.512E+00	2.774E-01	0.158
U-238	2.387E-01	1.230E+00	1.512E+00	2.774E-01	0.158

Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-241	1.366E+01	1.447E+00	2.452E-01	2.493E-02	55.724
AM-243	2.676E-01	8.260E-02	9.419E-02	8.136E-03	2.841
ANH-511	1.742E-01	1.226E-01	1.036E-01	7.228E-03	1.682

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.094E+00		6.997E-01	1.064E+00	8.000E-02	-1.028
NA-22	-6.454E-02		6.364E-02	9.111E-02	5.142E-03	-0.708
NA-24	-4.946E-05		1.203E-04	Half-Life too short		
AL-26	4.048E-02		4.984E-02	9.586E-02	5.409E-03	0.422
K-40	8.487E-01		7.231E-01	1.250E+00	7.643E-02	0.679
TI-44	3.032E-01	+	6.269E-02	8.201E-02	6.907E-03	3.697
SC-46	3.071E-02		1.015E-01	1.712E-01	1.297E-02	0.179
V-48	1.313E-01		1.442E-01	2.498E-01	1.767E-02	0.526
CR-51	4.273E-01		5.837E-01	9.903E-01	7.707E-02	0.431
MN-52	-4.232E-02		1.406E-01	2.193E-01	1.260E-02	-0.193
MN-54	2.164E-02		8.508E-02	1.440E-01	1.130E-02	0.150
CO-56	-2.815E-02		9.700E-02	1.583E-01	1.234E-02	-0.178
CO-58	2.024E-02		8.750E-02	1.483E-01	1.181E-02	0.136
FE-59	-1.190E-02		2.280E-01	3.687E-01	2.634E-02	-0.032
ZN-65	-1.820E-01		2.365E-01	3.623E-01	2.199E-02	-0.502
GE-68	-3.425E-01		3.410E+00	5.506E+00	3.519E-01	-0.062
AS-73	-1.476E-01		6.369E-01	9.739E-01	8.227E-02	-0.152
AS-74	9.234E-02		1.464E-01	2.499E-01	1.919E-02	0.370
SE-75	-1.751E-03		7.793E-02	1.291E-01	1.012E-02	-0.014
BR-77	-6.629E-02		2.506E+00	4.153E+00	2.934E-01	-0.016
SR-82	-3.721E-01		7.961E-01	1.296E+00	1.043E-01	-0.287
RB-83	-3.598E-02		1.437E-01	2.349E-01	1.658E-02	-0.153
RB-84	4.753E-02		1.634E-01	2.756E-01	2.099E-02	0.172
KR-85	2.638E+01		1.720E+01	2.764E+01	1.936E+00	0.954
SR-85	1.248E-01		8.143E-02	1.308E-01	9.164E-03	0.954
RB-86	-6.828E-01		1.688E+00	2.667E+00	1.706E-01	-0.256
Y-88	6.542E-02		5.338E-02	1.089E-01	6.135E-03	0.601
ZR-88	-3.649E-03		6.494E-02	1.033E-01	6.053E-03	-0.035
Y-91	-1.523E+01		2.537E+01	3.957E+01	2.193E+00	-0.385
NB-94	-7.769E-02		8.255E-02	1.245E-01	1.016E-02	-0.624
NB-95	2.157E-03		9.080E-02	1.526E-01	1.232E-02	0.014
NB-95M	9.631E-02		2.054E-01	3.113E-01	2.879E-02	0.309
ZR-95	8.311E-02		1.571E-01	2.616E-01	2.360E-02	0.318
NB-97	1.179E-04		7.578E-05	Half-Life too short		
ZR-97	1.020E-03		1.163E-03	Half-Life too short		
MO-99	6.274E-01		4.018E+00	6.535E+00	9.743E-01	0.096
TC-99M	5.782E+00		2.163E+01	Half-Life too short		
RH-101	-3.635E-02		5.281E-02	8.582E-02	6.795E-03	-0.424
RH-102	1.353E-02		6.826E-02	1.153E-01	7.673E-03	0.117
RU-103	2.705E-02		7.868E-02	1.335E-01	1.757E-02	0.203

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-106	-3.975E-01		6.699E-01	1.044E+00	1.345E-01	-0.381
RU-106	-3.975E-01		6.687E-01	1.044E+00	8.219E-02	-0.381
AG-108M	1.746E-02		7.811E-02	1.330E-01	8.944E-03	0.131
AG-110M	4.341E-02		9.526E-02	1.393E-01	1.170E-02	0.312
IN-111	1.475E-01		3.369E-01	5.078E-01	4.001E-02	0.290
IN-113M	8.723E-02		9.330E-02	1.575E-01	9.813E-03	0.554
SN-113	8.723E-02		9.330E-02	1.575E-01	9.813E-03	0.554
IN-114M	-1.099E-01		3.065E-01	4.185E-01	3.308E-02	-0.262
CD-115	2.723E-01		2.191E+00	3.659E+00	2.608E-01	0.074
SN-117M	5.098E-03		5.777E-02	9.267E-02	8.092E-03	0.055
SB-122	4.838E-01		6.568E-01	1.129E+00	8.385E-02	0.429
I-123	-6.549E-07		2.901E-04	Half-Life too short		
TE-123M	-4.790E-05		4.244E-02	6.775E-02	5.916E-03	-0.001
I-124	-2.230E-01		4.697E-01	6.352E-01	4.911E-02	-0.351
SB-124	8.675E-02		1.163E-01	2.156E-01	1.343E-02	0.402
SB-125	2.181E-02		2.125E-01	3.601E-01	2.317E-02	0.061
TE-125M	4.579E+00		1.175E+01	1.963E+01	2.382E+00	0.233
I-126	-3.370E-03		3.269E-01	4.579E-01	3.736E-02	-0.007
SB-126	-7.722E-02		2.106E-01	3.298E-01	2.688E-02	-0.234
SB-127	1.260E-01		8.035E-01	1.316E+00	1.207E-01	0.096
XE-127	-2.413E-02		6.767E-02	1.127E-01	8.930E-03	-0.214
I-131	-8.885E-02		1.182E-01	1.819E-01	1.279E-02	-0.489
TE-132	8.843E-02		2.489E-01	4.230E-01	6.022E-02	0.209
BA-133	4.935E-02		1.007E-01	1.491E-01	1.790E-02	0.331
I-133	-3.525E-05		1.474E-05	Half-Life too short		
CS-134	3.051E-02		1.092E-01	1.857E-01	1.497E-02	0.164
CS-135	-1.519E-01		2.913E-01	4.703E-01	4.344E-02	-0.323
I-135	-2.825E+01		2.052E+01	Half-Life too short		
CS-136	1.205E-02		1.972E-01	3.229E-01	2.288E-02	0.037
CE-139	1.555E-02		4.916E-02	7.963E-02	6.243E-03	0.195
BA-140	8.597E-02		3.866E-01	6.468E-01	2.121E-01	0.133
LA-140	2.804E-02		9.898E-02	1.683E-01	9.699E-03	0.167
CE-141	1.424E-02		8.824E-02	1.432E-01	1.486E-02	0.099
CE-143	4.962E+00		6.027E+00	9.047E+00	1.901E+00	0.548
CE-144	-3.045E-01		3.105E-01	4.714E-01	8.170E-02	-0.646
PM-144	8.487E-02		8.127E-02	1.399E-01	1.142E-02	0.607
PR-144	5.728E+00		5.485E+00	9.442E+00	7.709E-01	0.607
PM-146	2.190E-02		1.050E-01	1.779E-01	1.615E-02	0.123
ND-147	-8.500E-01		7.475E-01	1.129E+00	1.598E-01	-0.753
PM-149	2.236E+00		1.591E+01	2.641E+01	3.961E+00	0.085
EU-152	3.026E-02		2.103E-01	3.189E-01	2.391E-02	0.095
GD-153	-1.723E-02		1.148E-01	1.686E-01	1.534E-02	-0.102
EU-154	-1.895E-01		1.779E-01	2.512E-01	2.321E-02	-0.754
EU-155	8.958E-02		1.492E-01	2.517E-01	2.583E-02	0.356
TB-160	2.097E-01		3.492E-01	6.001E-01	4.578E-02	0.349
HO-166M	-5.154E-02		1.459E-01	2.295E-01	1.872E-02	-0.225
TM-171	2.271E+00		2.605E+01	3.975E+01	3.627E+00	0.057
LU-176	3.521E-02		4.668E-02	7.946E-02	5.891E-03	0.443

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
LU-177	-3.542E-01		8.280E-01	1.372E+00	1.088E-01	-0.258
LU-177M	-1.966E-01		3.867E-01	6.000E-01	3.639E-02	-0.328
HF-181	6.145E-02		8.688E-02	1.503E-01	1.010E-02	0.409
W-181	4.039E-02		3.175E-01	4.859E-01	4.482E-02	0.083
TA-182	1.161E-01		2.820E-01	4.903E-01	2.729E-02	0.237
RE-183	-6.246E-02		1.661E-01	2.595E-01	2.148E-02	-0.241
RE-184	8.001E-03		3.955E-01	6.589E-01	5.173E-02	0.012
OS-185	-5.014E-03		9.267E-02	1.504E-01	1.210E-02	-0.033
RE-188	7.196E-02		2.514E-01	4.088E-01	3.741E-02	0.176
W-188	9.208E-01		1.415E+01	2.054E+01	1.559E+00	0.045
IR-192	1.431E-02		6.148E-02	1.018E-01	7.448E-03	0.141
AU-195	-1.089E-01		3.246E-01	5.022E-01	4.667E-02	-0.217
TL-200	-1.486E+00		7.184E+00	1.146E+01	7.334E-01	-0.130
TL-201	1.850E+00		2.113E+00	3.504E+00	2.746E-01	0.528
TL-202	6.004E-02		1.046E-01	1.808E-01	1.142E-02	0.332
HG-203	4.059E-02		6.637E-02	1.128E-01	8.978E-03	0.360
BI-207	5.817E-03		1.417E-01	2.313E-01	1.504E-02	0.025
TL-207	-3.317E-01		1.276E+00	2.052E+00	3.499E-01	-0.162
PO-209	4.631E+00		2.206E+01	3.693E+01	2.781E+00	0.125
BI-210	1.595E+00		1.193E+00	1.832E+00	1.493E-01	0.871
PB-210	1.595E+00		1.193E+00	1.832E+00	1.493E-01	0.871
PO-210	1.595E+00		1.191E+00	1.832E+00	1.306E-01	0.871
PB-211	2.507E-01		2.055E+00	3.306E+00	2.062E+00	0.076
BI-212	4.623E-01		7.093E-01	1.189E+00	1.142E-01	0.389
BI-214	9.137E-01	+	3.434E-01	3.813E-01	3.565E-02	2.397
PO-215	-3.317E-01		1.276E+00	2.052E+00	3.499E-01	-0.162
RN-219	-1.690E-01		9.180E-01	1.456E+00	1.990E-01	-0.116
RN-220	-5.533E+01		5.830E+01	9.020E+01	6.594E+00	-0.613
RA-223	-3.317E-01		1.276E+00	2.052E+00	3.499E-01	-0.162
RA-226	9.137E-01	+	3.434E-01	3.813E-01	3.565E-02	2.397
AC-227	-5.322E-01		7.052E-01	1.120E+00	1.671E-01	-0.475
TH-227	-5.322E-01		7.070E-01	1.120E+00	1.983E-01	-0.475
AC-228	1.119E+00	+	6.640E-01	8.242E-01	8.558E-02	1.358
RA-228	1.119E+00	+	6.640E-01	8.242E-01	8.558E-02	1.358
TH-229	6.385E-01		8.031E-01	1.405E+00	1.112E-01	0.454
TH-230	9.137E-01	+	3.434E-01	3.813E-01	3.565E-02	2.397
PA-231	5.493E-01		2.904E+00	4.835E+00	7.086E-01	0.114
TH-231	-3.317E-01		1.276E+00	2.052E+00	3.499E-01	-0.162
U-231	-1.505E-01		4.337E-01	6.302E-01	5.605E-02	-0.239
TH-232	1.119E+00	+	6.640E-01	8.242E-01	8.558E-02	1.358
PA-233	-1.095E-01		1.243E-01	1.934E-01	1.477E-02	-0.566
PA-234	6.785E-01		9.474E-01	1.609E+00	2.928E-01	0.422
PA-234M	-1.812E+01		1.836E+01	2.818E+01	2.805E+00	-0.643
U-234	9.137E-01	+	3.434E-01	3.813E-01	3.565E-02	2.397
U-235	-9.912E-02		3.508E-01	5.578E-01	1.030E-01	-0.178
NP-236	1.696E-02		1.249E-01	2.013E-01	1.716E-02	0.084
NP-237	1.973E+00		6.043E-01	7.227E-01	1.599E-01	2.730
NP-239	-1.357E-02		3.076E-01	4.482E-01	5.318E-02	-0.030

Combined Activity-MDA Report (continued)
Sample ID : G1201874834 Acquisition date : 14-JUL-2009 12:33:44

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.816E-01		1.407E-01	2.169E-01	2.160E-02	-0.837
CM-247	-1.640E-02		8.228E-02	1.304E-01	7.766E-03	-0.126
CF-249	-7.953E-02		8.672E-02	1.318E-01	7.825E-03	-0.604
CF-251	1.160E-01		1.986E-01	3.252E-01	2.558E-02	0.357

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1201874834          *
* Acquisition date  : 14-JUL-2009 12:33:44 Detector SN#     :               *
* Detector ID       : GAM13                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 01:00:01.74      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       :  7-JUL-2009 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1201874834          Analyst initials: MXR1           *
* Batch Number      : 882713               Sample Quantity : 1.5544E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  2-FEB-2009 10:41:22 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	4.118E-01	9.806E-02	3.363E-02	5.003E-02
CO-60	6.848E+00	5.172E-01	4.707E-02	2.639E-01
CD-109	4.745E+01	4.508E+00	9.657E-01	2.300E+00
SN-126	4.718E+00	4.481E-01	9.588E-02	2.286E-01
BA-137M	5.687E+00	5.338E-01	6.942E-02	2.724E-01
CS-137	6.012E+00	5.652E-01	7.339E-02	2.884E-01
TL-208	2.333E-01	1.200E-01	7.217E-02	6.125E-02
BI-211	2.377E+00	6.817E-01	3.375E-01	3.478E-01
PB-212	8.114E-01	2.373E-01	9.261E-02	1.211E-01
PO-212	8.114E-01	2.373E-01	9.261E-02	1.211E-01
PB-214	8.268E-01	2.409E-01	1.282E-01	1.229E-01
PO-214	8.268E-01	2.409E-01	1.282E-01	1.229E-01
PO-216	8.114E-01	2.373E-01	9.261E-02	1.211E-01
PO-218	8.268E-01	2.409E-01	1.282E-01	1.229E-01
RA-224	8.651E-01	1.282E+00	1.307E+00	6.539E-01
TH-228	8.114E-01	2.373E-01	9.260E-02	1.211E-01
TH-234	2.387E-01	1.205E+00	8.278E-01	6.150E-01
U-238	2.387E-01	1.205E+00	8.278E-01	6.150E-01
AM-241	1.366E+01	1.418E+00	1.344E-01	7.233E-01
AM-243	2.676E-01	8.095E-02	5.137E-02	4.130E-02
ANH-511	1.742E-01	1.202E-01	5.379E-02	6.130E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-1.094E+00	6.857E-01	5.536E-01	3.499E-01	NOT IDENT.
NA-22	-6.454E-02	6.237E-02	4.615E-02	3.182E-02	NOT IDENT.
NA-24	-4.946E+01	2.357E+02	0.000E+00	1.203E+02	SHORT HLIF
AL-26	4.048E-02	4.884E-02	4.807E-02	2.492E-02	NOT IDENT.
K-40	8.487E-01	7.086E-01	6.308E-01	3.615E-01	NOT IDENT.
TI-44	3.032E-01	6.144E-02	4.467E-02	3.135E-02	FAIL ABUN

SC-46	3.071E-02	9.950E-02	8.760E-02	5.077E-02	NOT IDENT.
V-48	1.313E-01	1.413E-01	1.274E-01	7.211E-02	NOT IDENT.
CR-51	4.273E-01	5.721E-01	5.207E-01	2.919E-01	NOT IDENT.
MN-52	-4.232E-02	1.378E-01	1.107E-01	7.031E-02	FAIL ABUN
MN-54	2.164E-02	8.338E-02	7.381E-02	4.254E-02	NOT IDENT.
CO-56	-2.815E-02	9.506E-02	8.111E-02	4.850E-02	FAIL ABUN
CO-58	2.024E-02	8.575E-02	7.606E-02	4.375E-02	NOT IDENT.
FE-59	-1.190E-02	2.234E-01	1.875E-01	1.140E-01	NOT IDENT.
ZN-65	-1.820E-01	2.317E-01	1.842E-01	1.182E-01	NOT IDENT.
GE-68	-3.425E-01	3.342E+00	2.802E+00	1.705E+00	NOT IDENT.
AS-73	-1.476E-01	6.241E-01	5.354E-01	3.184E-01	NOT IDENT.
AS-74	9.234E-02	1.435E-01	1.292E-01	7.319E-02	NOT IDENT.
SE-75	-1.751E-03	7.638E-02	6.823E-02	3.897E-02	FAIL ABUN
BR-77	-6.629E-02	2.456E+00	2.156E+00	1.253E+00	FAIL ABUN
SR-82	-3.721E-01	7.802E-01	6.657E-01	3.981E-01	NOT IDENT.
RB-83	-3.598E-02	1.408E-01	1.219E-01	7.185E-02	NOT IDENT.
RB-84	4.753E-02	1.601E-01	1.410E-01	8.170E-02	NOT IDENT.
KR-85	2.638E+01	1.686E+01	1.435E+01	8.602E+00	NOT IDENT.
SR-85	1.248E-01	7.980E-02	6.793E-02	4.071E-02	NOT IDENT.
RB-86	-6.828E-01	1.654E+00	1.357E+00	8.438E-01	NOT IDENT.
Y-88	6.542E-02	5.231E-02	5.461E-02	2.669E-02	NOT IDENT.
ZR-88	-3.649E-03	6.365E-02	5.405E-02	3.247E-02	NOT IDENT.
Y-91	-1.523E+01	2.486E+01	2.007E+01	1.269E+01	NOT IDENT.
NB-94	-7.769E-02	8.090E-02	6.411E-02	4.127E-02	NOT IDENT.
NB-95	2.157E-03	8.898E-02	7.838E-02	4.540E-02	NOT IDENT.
NB-95M	9.631E-02	2.013E-01	1.650E-01	1.027E-01	NOT IDENT.
ZR-95	8.311E-02	1.540E-01	1.344E-01	7.857E-02	NOT IDENT.
NB-97	1.179E+02	1.485E+02	0.000E+00	7.578E+01	SHORT HLIF
ZR-97	1.020E+03	2.279E+03	0.000E+00	1.163E+03	SHORT HLIF
MO-99	6.274E-01	3.937E+00	3.360E+00	2.009E+00	NOT IDENT.
TC-99M	5.782E+06	4.240E+07	0.000E+00	2.163E+07	SHORT HLIF
RH-101	-3.635E-02	5.175E-02	4.568E-02	2.641E-02	NOT IDENT.
RH-102	1.353E-02	6.690E-02	6.000E-02	3.413E-02	NOT IDENT.
RU-103	2.705E-02	7.710E-02	6.939E-02	3.934E-02	FAIL ABUN
RH-106	-3.975E-01	6.565E-01	5.392E-01	3.349E-01	FAIL ABUN
RU-106	-3.975E-01	6.553E-01	5.392E-01	3.343E-01	FAIL ABUN
AG-108M	1.746E-02	7.655E-02	6.935E-02	3.906E-02	NOT IDENT.
AG-110M	4.341E-02	9.336E-02	7.185E-02	4.763E-02	NOT IDENT.
IN-111	1.475E-01	3.302E-01	2.688E-01	1.684E-01	NOT IDENT.
IN-113M	8.723E-02	9.143E-02	8.237E-02	4.665E-02	NOT IDENT.
SN-113	8.723E-02	9.143E-02	8.237E-02	4.665E-02	NOT IDENT.
IN-114M	-1.099E-01	3.003E-01	2.230E-01	1.532E-01	NOT IDENT.
CD-115	2.723E-01	2.147E+00	1.899E+00	1.095E+00	NOT IDENT.
SN-117M	5.098E-03	5.662E-02	4.961E-02	2.889E-02	NOT IDENT.
SB-122	4.838E-01	6.436E-01	5.848E-01	3.284E-01	NOT IDENT.
I-123	-6.549E-01	5.686E+02	0.000E+00	2.901E+02	SHORT HLIF
TE-123M	-4.790E-05	4.159E-02	3.627E-02	2.122E-02	NOT IDENT.
I-124	-2.230E-01	4.603E-01	3.284E-01	2.348E-01	NOT IDENT.
SB-124	8.675E-02	1.139E-01	1.083E-01	5.814E-02	NOT IDENT.
SB-125	2.181E-02	2.082E-01	1.879E-01	1.062E-01	NOT IDENT.
TE-125M	4.579E+00	1.152E+01	1.060E+01	5.877E+00	NOT IDENT.
I-126	-3.370E-03	3.204E-01	2.361E-01	1.635E-01	NOT IDENT.
SB-126	-7.722E-02	2.063E-01	1.697E-01	1.053E-01	FAIL ABUN
SB-127	1.260E-01	7.874E-01	6.779E-01	4.017E-01	FAIL ABUN
XE-127	-2.413E-02	6.632E-02	5.995E-02	3.384E-02	NOT IDENT.
I-131	-8.885E-02	1.158E-01	9.530E-02	5.908E-02	NOT IDENT.
TE-132	8.843E-02	2.439E-01	2.244E-01	1.244E-01	FAIL ABUN
BA-133	4.935E-02	9.868E-02	7.816E-02	5.035E-02	NOT IDENT.
I-133	-3.525E+01	2.889E+01	0.000E+00	1.474E+01	SHORT HLIF
CS-134	3.051E-02	1.070E-01	9.529E-02	5.458E-02	NOT IDENT.
CS-135	-1.519E-01	2.854E-01	2.484E-01	1.456E-01	NOT IDENT.
I-135	-2.825E+07	4.022E+07	0.000E+00	2.052E+07	SHORT HLIF
CS-136	1.205E-02	1.933E-01	1.644E-01	9.860E-02	NOT IDENT.
CE-139	1.555E-02	4.817E-02	4.258E-02	2.458E-02	NOT IDENT.
BA-140	8.597E-02	3.789E-01	3.354E-01	1.933E-01	NOT IDENT.
LA-140	2.804E-02	9.700E-02	8.471E-02	4.949E-02	NOT IDENT.
CE-141	1.424E-02	8.648E-02	7.684E-02	4.412E-02	NOT IDENT.
CE-143	4.962E+00	5.907E+00	4.768E+00	3.014E+00	NOT IDENT.
CE-144	-3.045E-01	3.043E-01	2.534E-01	1.552E-01	NOT IDENT.
PM-144	8.487E-02	7.965E-02	7.205E-02	4.064E-02	NOT IDENT.
PR-144	5.728E+00	5.375E+00	4.863E+00	2.743E+00	NOT IDENT.
PM-146	2.190E-02	1.029E-01	9.271E-02	5.249E-02	NOT IDENT.
ND-147	-8.500E-01	7.326E-01	5.859E-01	3.738E-01	NOT IDENT.
PM-149	2.236E+00	1.559E+01	1.393E+01	7.955E+00	NOT IDENT.
EU-152	3.026E-02	2.061E-01	1.674E-01	1.052E-01	FAIL ABUN
GD-153	-1.723E-02	1.125E-01	9.133E-02	5.739E-02	NOT IDENT.
EU-154	-1.895E-01	1.743E-01	1.272E-01	8.895E-02	FAIL ABUN
EU-155	8.958E-02	1.462E-01	1.361E-01	7.461E-02	FAIL ABUN

TB-160	2.097E-01	3.422E-01	3.071E-01	1.746E-01	NOT IDENT.
HO-166M	-5.154E-02	1.429E-01	1.181E-01	7.293E-02	NOT IDENT.
TM-171	2.271E+00	2.553E+01	2.174E+01	1.303E+01	FAIL ABUN
LU-176	3.521E-02	4.574E-02	4.183E-02	2.334E-02	FAIL ABUN
LU-177	-3.542E-01	8.114E-01	7.295E-01	4.140E-01	NOT IDENT.
LU-177M	-1.966E-01	3.790E-01	3.133E-01	1.934E-01	FAIL ABUN
HF-181	6.145E-02	8.514E-02	7.820E-02	4.344E-02	NOT IDENT.
W-181	4.039E-02	3.112E-01	2.659E-01	1.588E-01	NOT IDENT.
TA-182	1.161E-01	2.763E-01	2.486E-01	1.410E-01	NOT IDENT.
RE-183	-6.246E-02	1.627E-01	1.388E-01	8.303E-02	FAIL ABUN
RE-184	8.001E-03	3.876E-01	3.486E-01	1.978E-01	FAIL ABUN
OS-185	-5.014E-03	9.082E-02	7.759E-02	4.634E-02	FAIL ABUN
RE-188	7.196E-02	2.464E-01	2.190E-01	1.257E-01	NOT IDENT.
W-188	9.208E-01	1.387E+01	1.083E+01	7.075E+00	FAIL ABUN
IR-192	1.431E-02	6.026E-02	5.356E-02	3.074E-02	FAIL ABUN
AU-195	-1.089E-01	3.181E-01	2.720E-01	1.623E-01	FAIL ABUN
TL-200	-1.486E+00	7.040E+00	6.004E+00	3.592E+00	NOT IDENT.
TL-201	1.850E+00	2.070E+00	1.873E+00	1.056E+00	NOT IDENT.
TL-202	6.004E-02	1.025E-01	9.427E-02	5.231E-02	NOT IDENT.
HG-203	4.059E-02	6.504E-02	5.950E-02	3.319E-02	NOT IDENT.
BI-207	5.817E-03	1.388E-01	1.177E-01	7.084E-02	FAIL ABUN
TL-207	-3.317E-01	1.250E+00	1.079E+00	6.380E-01	FAIL ABUN
PO-209	4.631E+00	2.161E+01	1.889E+01	1.103E+01	NOT IDENT.
BI-210	1.595E+00	1.169E+00	1.010E+00	5.964E-01	NOT IDENT.
PB-210	1.595E+00	1.169E+00	1.010E+00	5.964E-01	NOT IDENT.
PO-210	1.595E+00	1.167E+00	1.010E+00	5.956E-01	NOT IDENT.
PB-211	2.507E-01	2.014E+00	1.728E+00	1.027E+00	NOT IDENT.
BI-212	4.623E-01	6.951E-01	6.119E-01	3.546E-01	NOT IDENT.
BI-214	9.137E-01	3.365E-01	1.971E-01	1.717E-01	FAIL ABUN
PO-215	-3.317E-01	1.250E+00	1.079E+00	6.380E-01	FAIL ABUN
RN-219	-1.690E-01	8.996E-01	7.610E-01	4.590E-01	NOT IDENT.
RN-220	-5.533E+01	5.713E+01	4.675E+01	2.915E+01	NOT IDENT.
RA-223	-3.317E-01	1.250E+00	1.079E+00	6.380E-01	FAIL ABUN
RA-226	9.137E-01	3.365E-01	1.971E-01	1.717E-01	FAIL ABUN
AC-227	-5.322E-01	6.911E-01	5.924E-01	3.526E-01	NOT IDENT.
TH-227	-5.322E-01	6.929E-01	5.924E-01	3.535E-01	FAIL ABUN
AC-228	1.119E+00	6.507E-01	4.214E-01	3.320E-01	FAIL ABUN
RA-228	1.119E+00	6.507E-01	4.214E-01	3.320E-01	FAIL ABUN
TH-229	6.385E-01	7.871E-01	7.484E-01	4.016E-01	FAIL ABUN
TH-230	9.137E-01	3.365E-01	1.971E-01	1.717E-01	FAIL ABUN
PA-231	5.493E-01	2.846E+00	2.550E+00	1.452E+00	NOT IDENT.
TH-231	-3.317E-01	1.250E+00	1.079E+00	6.380E-01	FAIL ABUN
U-231	-1.505E-01	4.250E-01	3.416E-01	2.168E-01	FAIL ABUN
TH-232	1.119E+00	6.507E-01	4.214E-01	3.320E-01	FAIL ABUN
PA-233	-1.095E-01	1.218E-01	1.017E-01	6.216E-02	FAIL ABUN
PA-234	6.785E-01	9.285E-01	8.220E-01	4.737E-01	FAIL ABUN
PA-234M	-1.812E+01	1.799E+01	1.437E+01	9.178E+00	NOT IDENT.
U-234	9.137E-01	3.365E-01	1.971E-01	1.717E-01	FAIL ABUN
U-235	-9.912E-02	3.438E-01	2.993E-01	1.754E-01	FAIL ABUN
NP-236	1.696E-02	1.224E-01	1.077E-01	6.247E-02	NOT IDENT.
NP-237	1.973E+00	5.922E-01	3.927E-01	3.021E-01	NOT IDENT.
NP-239	-1.357E-02	3.015E-01	2.417E-01	1.538E-01	NOT IDENT.
CM-243	-1.816E-01	1.379E-01	1.173E-01	7.037E-02	NOT IDENT.
CM-247	-1.640E-02	8.064E-02	6.816E-02	4.114E-02	NOT IDENT.
CF-249	-7.953E-02	8.499E-02	6.893E-02	4.336E-02	NOT IDENT.
CF-251	1.160E-01	1.946E-01	1.736E-01	9.928E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	428.6342
46.50	428.6342
46.50	428.6342
48.70	641.4492
49.72	831.1990
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52.97	1001.8633
53.15	956.6517
53.44	957.7360
54.07	974.1633
56.28	943.6683
56.28	943.6794
57.37	1007.1532
57.53	1007.7490
57.53	1007.7578
57.60	1008.0098
57.98	999.0306
57.98	999.0306
59.32	836.8255
59.32	836.8255
59.40	837.0676
59.54	837.4906
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61.14	354.7901
61.30	354.9909
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63.29	357.4695
63.29	357.4695
63.58	401.5625
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65.20	438.4372
65.20	438.4372
66.05	447.7129
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66.83	415.3823
66.91	415.4911
67.20	398.4502
67.20	398.4502
67.75	436.5367
67.85	436.6829
68.90	429.5504
68.90	429.5504
69.30	407.9530
69.67	412.5023
70.82	442.5295
70.82	442.5295
70.83	442.5444
72.80	412.5197
72.87	412.6095
72.87	412.6095
74.67	414.9136
74.81	415.0910
74.81	415.0910
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74.81	415.0910
74.97	415.2961
75.28	415.6878
75.70	416.2200
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77.11	417.9942
77.11	417.9942

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77.11	417.9942
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79.80	392.0348
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80.30	375.8390
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81.07	422.8892
81.07	422.8892
81.07	422.8892
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83.78	386.6588
83.78	386.6588
83.78	386.6588
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84.90	387.8754
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86.50	491.9767
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86.59	492.0981
86.72	492.2723
86.79	483.8266
86.94	484.0289
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87.30	443.1807
87.30	443.1807
87.30	443.1807
87.30	443.1807
87.30	443.1807
87.57	443.5081
87.88	443.8830
88.03	444.0634
88.36	444.4620
88.47	444.5948
89.95	318.6288
91.11	319.6145
92.29	320.6104
92.38	320.6866
92.38	320.6866
93.35	285.2947
94.00	285.7757
94.67	286.2671
94.67	286.2716
94.90	286.4400
94.90	286.4400
94.90	286.4400
94.90	286.4400
95.87	278.4066
95.87	278.4066
96.73	284.8620
97.43	275.1195
98.44	300.7591
98.44	300.7591
98.88	290.2220
99.55	286.3904
99.55	286.3904
99.86	277.7764
100.00	258.2351
100.10	258.3007
103.18	289.9345
103.76	303.2218
105.00	234.5536
105.31	234.7264
108.00	256.2370
109.28	227.8867
111.00	251.9709
111.00	251.9709

111.76	243.3204
112.95	236.8910
115.19	246.2219
116.30	239.8918
117.00	228.3097
117.00	228.3097
117.66	233.2440
121.11	243.2370
121.62	243.5022
121.78	243.5851
122.06	243.7303
122.32	243.8647
122.32	243.8647
122.32	243.8647
122.32	243.8647
123.07	244.2525
127.23	227.0686
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131.20	229.4384
133.02	223.9388
133.54	251.6621
135.34	222.8473
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136.25	224.3077
136.48	199.9470
140.51	239.0245
140.51	0.0000
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142.65	247.5312
143.76	265.3063
144.24	260.1469
144.24	260.1469
144.24	260.1469
144.24	260.1469
145.22	249.8082
145.44	245.5841
147.16	262.6467
152.43	239.9746
152.70	248.8608
153.22	213.9775
154.21	218.7514
154.21	218.7514
154.21	218.7514
154.21	218.7514
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156.02	223.8650
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162.64	239.8366
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163.89	252.6430
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167.43	228.2862
171.28	233.1393
171.86	228.8302
172.10	216.4527
176.55	182.6302
176.60	188.3525
181.06	219.0041
184.41	227.0832
185.71	214.2224
186.00	214.3184
190.27	229.1261
192.34	208.5350
193.63	207.4309
197.04	247.3477
198.01	243.2749
198.60	227.5475
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202.84	256.5637
205.31	251.2132
208.36	272.0509
208.81	248.8630

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209.75	231.1984
210.97	231.5925
215.65	232.1836
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218.09	230.2271
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223.80	247.5838
226.40	241.0755
227.00	241.2654
227.08	241.2914
227.20	251.4594
228.16	246.2425
228.18	245.3263
228.18	245.3263
231.56	244.5533
235.69	208.6021
236.00	208.6841
236.00	208.6841
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238.63	267.7068
238.63	267.7068
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241.98	394.9912
241.98	394.9912
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249.79	218.9259
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252.85	195.9571
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256.20	225.3957
260.50	197.7488
260.90	225.6912
262.80	220.4181
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268.24	232.4634
268.79	235.5212
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269.46	212.4202
269.46	212.4202
269.46	212.4202
271.23	207.9917
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277.60	198.7192
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279.53	187.3745
280.46	206.2285
281.68	214.3709
283.67	197.1039
284.30	189.3486
285.00	183.5734
285.90	194.6193
286.10	194.6613
286.10	194.6613
287.40	207.8018
288.45	0.0000
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290.80	201.8125
291.72	205.1938
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293.70	194.4703
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295.21	175.6240
295.21	175.6240
295.96	175.7637

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299.80	171.6624
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300.09	150.8521
300.09	150.8521
300.10	150.8544
300.12	150.8567
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303.91	213.4848
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304.40	227.7001
304.84	217.7238
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308.46	167.9504
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319.41	170.8402
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323.87	185.9824
323.87	185.9824
323.87	185.9824
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334.20	182.6682
334.30	189.3302
338.28	184.4218
338.28	184.4218
338.28	184.4218
338.28	184.4218
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338.32	184.4299
338.32	184.4299
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340.57	170.4142
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351.07	168.7158
351.92	200.5066
351.92	200.5066
351.92	200.5066
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356.01	157.6187
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369.80	167.2996
374.96	177.7547
383.85	162.8426
387.95	190.6479
388.63	189.6673
391.69	157.3726
391.69	157.3726
392.90	176.1306
398.62	165.9811
400.65	165.1566
401.10	176.2341
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402.60	180.8640
404.84	171.2531
410.95	151.0099
411.60	146.6450
413.65	186.9467
414.70	179.3095
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417.63	0.0000

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427.89	188.1689
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433.93	190.8633
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439.56	171.7058
439.89	171.7496
443.98	188.6929
444.90	184.2634
445.03	186.1052
445.03	186.1052
445.03	186.1052
445.03	186.1052
453.90	186.4294
463.38	220.1064
468.07	222.7178
473.00	153.6643
475.06	165.0840
475.35	176.3108
476.78	187.6990
477.59	202.7567
477.96	185.9868
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484.57	156.8132
487.03	163.6687
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511.85	136.8223
511.85	136.8223
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513.99	121.3685
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520.65	131.8525
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529.64	133.6033
529.87	0.0000
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543.00	135.7388
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549.76	140.2489
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555.20	124.0005
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563.90	117.7478
568.70	143.9026
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569.50	127.0938
569.67	127.1063
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574.00	118.4829
574.64	131.4779
578.91	118.1715
579.30	111.5413
583.14	139.1663
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592.07	119.7786
593.00	120.8525
595.88	101.8926
600.56	117.3481
602.52	0.0000
602.71	126.6113
602.71	126.6113
603.60	116.5442
604.41	114.9077
604.70	114.9271
609.31	108.7973
609.31	108.7973
609.31	108.7973

609.31	108.7973
610.33	108.8626
612.46	108.6563
614.37	100.2779
618.01	109.0026
621.84	108.5594
621.84	108.5594
631.29	114.2899
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633.10	110.2837
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635.90	102.2001
636.97	88.8324
645.85	114.1841
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657.75	118.4134
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661.65	118.3162
664.57	103.1204
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666.33	120.7135
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677.61	111.9366
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696.49	105.5839
697.00	101.3457
697.49	115.2431
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698.50	122.7743
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717.42	99.1740
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721.93	112.3637
722.20	113.4595
722.78	122.1399
722.78	122.1399
722.89	123.2263
722.95	123.2319
723.30	136.2252
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727.18	113.7415
733.00	120.5906
735.90	127.2918
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742.81	97.1569
744.21	121.2572
747.13	103.9248
751.79	112.9329
752.31	104.1869
753.82	114.1410
755.35	105.4383
756.15	97.7892
756.87	102.2183
763.93	124.0714
765.79	122.3415
766.41	117.7786
766.84	124.2444
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768.36	136.3080
768.36	136.3080
768.36	136.3080
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778.57	123.0829
778.89	124.0274
783.80	115.9643

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810.76	99.5669
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828.27	96.5651
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896.60	136.4966
898.02	133.6497
899.00	132.7267
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911.07	151.0454
911.07	151.0454
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925.24	146.9872
926.50	135.2162
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934.06	168.2983
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934.06	168.2983
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969.11	140.5298
969.11	140.5298
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983.50	103.9660
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1001.68	134.1619
1004.76	129.2298
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1024.50	0.0000
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1050.47	110.7312
1063.62	106.0549
1076.63	122.2178
1077.35	113.8876
1085.78	122.6129
1099.22	117.9245
1112.02	96.2395
1112.84	105.7861
1115.52	131.2959
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1120.29	89.0894
1120.51	90.1569
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1124.00	0.0000
1129.67	87.2451
1131.51	0.0000
1147.95	0.0000
1167.94	44.3387
1173.22	55.0570
1175.09	59.2567
1177.93	55.6055
1189.05	51.1558
1204.90	44.8744
1205.75	47.6915
1213.00	48.7391
1221.42	38.5319
1230.97	45.2478
1235.34	43.4218
1236.41	0.0000
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1238.11	43.4587
1238.11	43.4587
1238.11	43.4587
1238.25	45.3516
1246.25	40.7279
1260.41	0.0000
1271.85	34.3677
1274.45	37.2617
1274.54	37.2630
1291.56	21.1291
1298.22	0.0000
1312.09	30.9219
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1325.50	40.7461
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1333.61	21.3946
1360.21	23.5204
1362.66	0.0000
1365.15	17.6654
1368.21	20.6272
1368.53	0.0000
1376.25	20.6748
1377.67	19.6987
1377.67	19.6987
1377.67	19.6987
1377.67	19.6987
1384.27	30.5902
1394.10	16.8215
1395.20	20.7861
1407.95	25.8277
1434.06	20.0112
1436.60	20.0251
1457.56	0.0000
1460.81	15.8741
1489.15	23.3578
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1596.49	17.7477
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1678.03	0.0000
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1691.02	8.5458

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1750.46	0.0000
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1764.49	11.4097
1764.49	11.4097
1764.49	11.4097
1770.23	10.1549
1771.40	11.8509
1791.20	0.0000
1808.65	6.7221
1836.01	4.8306

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1201874834

Total Uranium Activity	6.6438E-01	ug/g
Total Uranium Counting Unc.	3.5896E+00	ug/g
Total Uranium Tpu	1.8314E-06	ug/g
Total Uranium Mda	2.4666E+00	ug/g

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*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 882713                    SAMPLE ID   : G1201874834     *
*   ANALYST       : MXR1                      DETECTOR    : GAM13           *
*   SAMPLE DATE   :  7-JUL-2009 00:00:00.00   COUNT TIME :    0 01:00:00.00 *
*   ANALYSIS DATE: 14-JUL-2009 12:33:44.30    SAMPLE ALQT:  155.440 GRAM    *
*                                                                           *
*****************************************************************************
```

GROSS GAMMA ACTIVITY (pCi/GRAM) : 2.910E+01
GROSS GAMMA ERROR (pCi/GRAM) : 3.529E+00
GROSS GAMMA MDA (pCi/GRAM) : 5.954E+00
GROSS GAMMA DLC (pCi/GRAM) : 2.921E+00

Radiochemistry Batch Checklist, Rev 9

Batch# 883039 Product: H3 Date: 7/17/09

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.	✓		~~N/A~~ NCR 712814
Batch non-conformances second reviewed and disposition verified to be completed.	✓		~~N/A~~ HGM 7/17/09
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Nana Marie Hunt

Secondary Review Performed By: Heather G. McCarty 7/17/09

LANL 7/23/09

Tritium Que Sheet

VACUUM

17-JUL-09

Batch #: 883039 **Analyst:** KXK2 **First Client Due Date** 20-JUL-09 **Internal Due Date:** 09-JUL-09

Spike Isotope: Hydrogen-3 **Spike Code:** NA **Expiration Date:** NA **Vol:** NA

LCS Isotope: Hydrogen-3 **LCS Code:** 0134-K **Expiration Date:** 3/27/10 **Vol:** 0.1

Prep Date: 7/13/09 **Initials:** KXKZ **Pipet ID:** 29709168 **Witness:** CXKZ 7/14/09

Sample ID	Client Samp ID	Type	Hazard Code	Min CRDL	Matrix	Client	Sample Date	Aliquot in vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Aliquot (g/mL)	Final Wt (g)	TOTAL MOISTURE Dist Vol (mL) JAG 7/17/09
232433001-1	CAMO-09-6007	SAMPLE		.25 pCi/mL	SOIL	LANL010	23-JUN-09	10	35-1	21		626.41	600.10	26.31 *
232746001-1	CAMO-09-9956	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-2	1		390.82	336.11	54.71
232746002-1	CAMO-09-9950	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-3	2		479.50	429.15	50.35
232746003-1	CAMO-09-9952	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-4	3		353.54	313.65	39.89
232746004-1	CAMO-09-9958	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-5	4		504.96	453.45	51.51
232746005-1	CAMO-09-9957	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-6	5		395.05	355.15	39.90
232746006-1	CAMO-09-9951	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-7	6		471.75	424.10	47.65
232746007-1	CAMO-09-10031	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-8	7		641.44	569.60	71.84
232746008-1	CAMO-09-9990	SAMPLE		.25 pCi/mL	SOIL	LANL010	29-JUN-09	10	54-9	8		682.54	548.76	133.78
232754001-1	CAMO-09-6615	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	54-10	9		321.59	298.44	23.15
232754002-1	CAMO-09-6614	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	54-11	10		431.06	389.25	41.81
232754003-1	CAMO-09-6613	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	54-12	11		454.58	410.49	44.09
232758002-1	CAMO-09-9962	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	27-1	12		634.14	537.12	97.02
232758003-1	CAMO-09-9964	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	27-2	13		572.53	493.52	79.01
232758004-1	CAMO-09-9963	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	27-3	14		706.07	588.16	117.91
232758005-1	CAMO-09-10032	SAMPLE		.25 pCi/mL	SOIL	LANL010	30-JUN-09	10	27-4	15		646.69	550.33	96.36
232851001-1	CAMO-09-7145	SAMPLE		.25 pCi/mL	SOIL	LANL010	01-JUL-09	10	27-5	16		566.54	487.22	79.32
232851002-1	CAMO-09-7146	SAMPLE		.25 pCi/mL	SOIL	LANL010	01-JUL-09	10	27-6	17		547.42	494.32	53.10
1201875658-1	MB for batch 883039	MB		.25 pCi/mL	SOIL	QC ACCOUNT		10	27-7	18		20	0	20
1201875659-1	CAMO-09-7145(232851001DUP)	DUP		.25 pCi/mL	SOIL	QC ACCOUNT	01-JUL-09	10	27-8	19		566.54	487.22	79.32
1201875660-1	LCS for batch 883039	LCS		.25 pCi/mL	SOIL	QC ACCOUNT		10	28-1	20		20	0	20

JAG 7/17/09 **Bkg Rack #:** 54-1

* 30-1

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Comments:

Bkg prepared with dead water? Yes/No

Instrument Used (circle as appropriate): *LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4040127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656*

Calibration Used : *Ultima Gold LLT (10 mL sample/13 mL LLT) poly vial; Econscint Ultra (10 mL sample/13 mL Econscint Ultra)*

Data Reviewed By: 7/17/09

Alecia G. McCarty 7/17/09

GEL Laboratories LLC, Radiochemistry Division

DATE	7/13/2009	INITIALS	KXK2		BATCH NUMBER	883039

Sample #	Sample Wet (g)	% Moisture of Sample (Balance Interface using % Moisture Batch)	Total Moisture in Sample (mL)	Sample Dry (g)	mLs aliquoted into LSC vial	Collection Tube Number
232433001	626.41	0.042	26.31	600.10	10	82
232746001	390.82	0.140	54.71	336.11	10	912
232746002	479.50	0.105	50.35	429.15	10	706
232746003	383.54	0.104	39.89	343.65	10	801
232746004	504.96	0.102	51.51	453.45	10	98
232746005	395.05	0.101	39.90	355.15	10	102
232746006	471.75	0.101	47.65	424.10	10	610
232746007	641.44	0.112	71.84	569.60	10	151
232746008	682.54	0.196	133.78	548.76	10	206
232754001	321.59	0.072	23.15	298.44	10	306
232754002	431.06	0.097	41.81	389.25	10	701
232754003	454.58	0.097	44.09	410.49	10	48
232758002	634.14	0.153	97.02	537.12	10	1707
232758003	572.53	0.138	79.01	493.52	10	73
232758004	706.07	0.167	117.91	588.16	10	136
232758005	646.69	0.149	96.36	550.33	10	8
232851001	566.54	0.140	79.32	487.22	10	914
232851002	547.42	0.097	53.10	494.32	10	24
MB	20	1	20.00	0.00	10	6101
LCS	20	1	20.00	0.00	10	413

AHW
7/17/09

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.5

Batch : 883039
Analyst : KXK2
Prep Date : 7/13/2009

Spike S/N : N/A
Spike Exp Date : N/A
Spike Activity (dpm/ml): N/A
Spike Volume Added: N/A

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2544.29
LCS Volume Added: 0.10

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL Ecoscint Ultra

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1.0 ml Stdev : +/- 0.005460 ml
Pipet, 5.0 ml Stdev : +/- 0.025729 ml

Procedure Code : LSC_VH3S
Parmname : Tritium
Required MDC : 250 pCi/L
Halflife of Tritium : 12.28 years

Sample Characteristics

Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	232433001.1	626.41	0.0263	0.0100	2.5729E-05	600.10	4.20%	21	6/23/2009 12:00
2	232746001.1	390.82	0.0547	0.0100	2.5729E-05	336.11	14.00%	1	6/29/2009 12:00
3	232746002.1	479.50	0.0504	0.0100	2.5729E-05	429.15	10.50%	2	6/29/2009 12:00
4	232746003.1	383.54	0.0399	0.0100	2.5729E-05	343.65	10.40%	3	6/29/2009 12:00
5	232746004.1	504.96	0.0515	0.0100	2.5729E-05	453.45	10.20%	4	6/29/2009 12:00
6	232746005.1	395.05	0.0399	0.0100	2.5729E-05	355.15	10.10%	5	6/29/2009 12:00
7	232746006.1	471.75	0.0477	0.0100	2.5729E-05	424.10	10.10%	6	6/29/2009 12:00
8	232746007.1	641.44	0.0718	0.0100	2.5729E-05	569.60	11.20%	7	6/29/2009 12:00
9	232746008.1	682.54	0.1338	0.0100	2.5729E-05	548.76	19.60%	8	6/29/2009 12:00
10	232754001.1	321.59	0.0232	0.0100	2.5729E-05	298.44	7.20%	9	6/30/2009 12:00
11	232754002.1	431.06	0.0418	0.0100	2.5729E-05	389.25	9.70%	10	6/30/2009 12:00
12	232754003.1	454.58	0.0441	0.0100	2.5729E-05	410.49	9.70%	11	6/30/2009 12:00
13	232758002.1	634.14	0.0970	0.0100	2.5729E-05	537.12	15.30%	12	6/30/2009 12:00
14	232758003.1	572.53	0.0790	0.0100	2.5729E-05	493.52	13.80%	13	6/30/2009 12:00
15	232758004.1	706.07	0.1179	0.0100	2.5729E-05	588.16	16.70%	14	6/30/2009 12:00
16	232758005.1	646.69	0.0964	0.0100	2.5729E-05	550.33	14.90%	15	6/30/2009 12:00
17	232861001.1	566.54	0.0793	0.0100	2.5729E-05	487.22	14.00%	16	7/1/2009 12:00
18	232861002.1	547.42	0.0531	0.0100	2.5729E-05	494.32	9.70%	17	7/1/2009 12:00
19	1201875658.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	18	7/13/2009 0:00
20	1201875659.1	566.54	0.0793	0.0100	2.5729E-05	487.22	14.00%	19	7/1/2009 12:00
21	1201875660.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	20	7/13/2009 0:00

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Hcw
7/17/09

Count raw Data					Background				Calibration Data					Backgrounds	
Pos.	Rack Position #	Counting Time (min.)	Quench#	Gross cpm	cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack Position #	Count Start Date/Time
1	35-1	35.25	119.5	5.38	3.40	120	7/17/2009 11:56	0.998	LSCBROWN	8/6/2008	8/31/2009	0.2363	0.00792	30-1	7/16/2009 15:30
2	54-2	95	132.6	7.17	5.89	95	7/16/2009 0:24	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2583	0.00792	54-1	7/15/2009 22:46
3	54-3	95	131.3	6.91	5.89	95	7/16/2009 2:03	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2606	0.00792	54-1	7/15/2009 22:46
4	54-4	95	129.5	7.43	5.89	95	7/16/2009 3:41	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2638	0.00792	54-1	7/15/2009 22:46
5	54-5	54.05	130.5	7.92	5.89	95	7/16/2009 6:44	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2621	0.00792	54-1	7/15/2009 22:46
6	54-6	55	127.2	8.55	5.89	95	7/16/2009 8:11	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2679	0.00792	54-1	7/15/2009 22:46
7	54-7	55	126.7	6.15	5.89	95	7/16/2009 9:08	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2687	0.00792	54-1	7/15/2009 22:46
8	54-8	55	127.2	6.67	5.89	95	7/16/2009 10:06	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2679	0.00792	54-1	7/15/2009 22:46
9	54-9	55	127.6	6.55	5.89	95	7/16/2009 11:03	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2672	0.00792	54-1	7/15/2009 22:46
10	54-10	55	130.6	6.35	5.89	95	7/16/2009 12:00	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2619	0.00792	54-1	7/15/2009 22:46
11	54-11	55	126.3	5.91	5.89	95	7/16/2009 12:58	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2694	0.00792	54-1	7/15/2009 22:46
12	54-12	55	130	5.98	5.89	95	7/16/2009 13:55	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2630	0.00792	54-1	7/15/2009 22:46
13	27-1	55	126.1	5.78	5.89	95	7/16/2009 14:52	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2698	0.00792	54-1	7/15/2009 22:46
14	27-2	55	127.1	6.58	5.89	95	7/16/2009 15:50	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2680	0.00792	54-1	7/15/2009 22:46
15	27-3	55	126.2	6.67	5.89	95	7/16/2009 16:47	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2696	0.00792	54-1	7/15/2009 22:46
16	27-4	55	125.6	5.67	5.89	95	7/16/2009 17:44	0.997	LSCSILVER	8/6/2008	8/31/2009	0.2706	0.00792	54-1	7/15/2009 22:46
17	27-5	55	128.6	9.93	5.89	95	7/16/2009 18:42	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2654	0.00792	54-1	7/15/2009 22:46
18	27-6	55	127.5	8.22	5.89	95	7/16/2009 19:39	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2673	0.00792	54-1	7/15/2009 22:46
19	27-7	55	128.9	5.76	5.89	95	7/16/2009 20:36	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2649	0.00792	54-1	7/15/2009 22:46
20	27-8	55	127.6	11.8	5.89	95	7/16/2009 21:33	0.998	LSCSILVER	8/6/2008	8/31/2009	0.2672	0.00792	54-1	7/15/2009 22:46
21	28-1	15	126.7	47.6	5.89	95	7/16/2009 7:54	0.999	LSCSILVER	8/6/2008	8/31/2009	0.2687	0.00792	54-1	7/15/2009 22:46

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AGW
7/17/09

Notes:
1 - Results are decay corrected to Sample Date/Time
2 - Reference date for Spike Activity (dpm/ml) is the batch Prep Date
3 - Spike Nominals are decay corrected to Sample Date/Time

Results Pos.	Decision Level pCi/L	Critical Level pCi/L	Required MDC pCi/L	MDC pCi/L	Sample Act. Conc. pCi/L	Sample Act. Error pCi/L	Net Count Rate CPM	Net Count Rate Error CPM	1 SIGMA Counting Uncertainty pCi/L	1 SIGMA Total Prop. Uncertainty pCi/L	Sample QC	Sample Type	RPD	RER	Nominal pCi/L	Recovery
1	157.4682	111.1725	250	236.6270	374.8780	0.217	1.980	0.425	81.2555	85.3493		SAMPLE				
2	143.4304	101.2831	250	206.0466	228.7611	0.290	1.280	0.371	64.8163	66.6835		SAMPLE				
3	142.1582	100.3649	250	206.2012	176.7279	0.360	1.020	0.367	63.5967	64.7786		SAMPLE				
4	140.4447	99.1552	250	203.7159	263.8885	0.243	1.540	0.374	64.0957	66.6734		SAMPLE				
5	166.0279	117.2171	250	243.9993	348.8801	0.225	2.030	0.457	78.6949	82.3804		SAMPLE				
6	161.5436	114.0611	250	237.2990	446.4886	0.176	2.660	0.466	78.6245	84.6022		SAMPLE				
7	161.0224	113.6832	250	236.5334	43.8882	1.604	0.260	0.417	70.0577	70.1338		SAMPLE				
8	161.5456	114.0626	250	237.3019	131.5145	0.549	0.780	0.428	72.1818	72.7607		SAMPLE				
9	161.9676	114.3806	250	237.9222	111.5723	0.645	0.660	0.426	71.9384	72.3569		SAMPLE				
10	165.2031	116.6346	250	242.6747	79.3158	0.916	0.460	0.421	72.6360	72.8447		SAMPLE				
11	160.5873	113.3780	250	235.8942	3.3622	20.582	0.020	0.412	68.9956	68.9960		SAMPLE				
12	164.5389	116.1659	250	241.6990	12.0213	5.896	0.070	0.413	70.8828	70.8878		SAMPLE				
13	160.3833	113.2880	250	235.5946	-18.4135	3.716	-0.110	0.409	68.4257	68.4261		SAMPLE				
14	161.4218	113.9851	250	237.1201	116.2996	0.618	0.690	0.426	71.8038	72.2568		SAMPLE				
15	160.4881	113.3080	250	235.7486	130.6936	0.549	0.780	0.428	71.7094	72.2844		SAMPLE				
16	159.8747	112.8729	250	234.8475	-36.7102	1.847	-0.220	0.406	67.7993	67.7996		SAMPLE				
17	162.9822	115.0739	250	239.4269	667.2775	0.122	4.040	0.492	83.7813	96.4913		SAMPLE				
18	161.8211	114.2471	250	237.7067	368.6275	0.198	2.330	0.460	77.6654	82.3587		SAMPLE				
19	163.0280	115.0882	250	239.4795	-22.1202	3.141	-0.130	0.408	69.4783	69.4787		MB				
20	161.9267	114.3230	250	237.8647	996.8384	0.069	5.910	0.526	88.8773	112.8658	232851001.1	DUP	37.0%	0.7441		
21	263.4886	186.0254	250	405.5928	6995.1968	0.044	41.710	1.799	301.6611	573.0282		LCS			5730.3738	122.1%

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Atw
7/17/09

Filename: 12:38 PMab

Instrument Type	LS 6000
Data Capture Date	16 Jul 2009 15:25:05
User Filename	C:\LSCCAPTURE\RED\USER07\UN071601.BSF

User Number	7
User Id	TRITIUM
User Comments	BROWN

Scintillator Choice: LIQUID

	Sa	Rack	Time	H#	Raw CPM1	CPM Iso1	%Err1	LumEx	ElTime
BKG	1	30-1	120.00	111.0	8.52	3.40	15.68	10.66	125.14

ID: TRITIUM 17 JUL 2009 12:08

USER: 7 COMMENT:BROWN

PRESET TIME :	120.00						
DATA CALC :	CPM	H#	:YES	SAMPLE REPEATS:	1	PRINTER	: STI
COUNT BLANK :	NO	IC#	: NO	REPLICATES :	1	RS232	:EDIT
TWO PHASE :	NO	AQC	: NO	CYCLE REPEATS :	1	DISK	: OFF
SCINTILLATOR:	LIQUID	LUMEX	:YES	LOW SAMPLE REJ:	0		
LOW LEVEL :	NO	HALF LIFE CORRECTION DATE:				none	

CHAN: 0.0 - 240.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	LUMEX %	ELAPSED TIME
1	35-1	35.25	119.5	**5.36**	30.26	27.26	37.59

ID:TRITIUM 15 JUL 2009 22:36

USER: 4 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
1	54-1	95.00	129.3	5.89	8.92	45.91	3.05	1.51	97.83
2	54-2	95.00	132.6	7.17	8.24	46.59	3.04	2.45	196.37
3	54-3	95.00	131.3	6.91	8.13	44.87	3.08	1.34	294.69
4	54-4	95.00	129.5	7.43	7.73	44.94	3.07	0.99	392.93
~~5~~	~~54-5~~	~~10.72~~	~~134.0~~	~~7.47~~	~~22.91~~	~~47.13~~	~~8.94~~	~~1.17~~	~~484.90~~
6	54-6	SAMPLE TERMINATED:							
7	54-7	SAMPLE TERMINATED:							
8	54-8	SAMPLE TERMINATED:							
9	54-9	SAMPLE TERMINATED:							
10	54-10	SAMPLE TERMINATED:							
11	54-11	SAMPLE TERMINATED:							
12	54-12	SAMPLE TERMINATED:							

HP 7/17/09

QP

INSTRUMENT CALIBRATION: Maxi 16 JUL 2009 05:23
Calibration successful

QP

Calibrating Auto DPM
Counting Standard for 14C
Calibration Complete: 14C
Counting Standard for 3H
Calibration Complete: 3H
Calibration Successful

QPQP

ID:TRITIUM 16 JUL 2002 08:25

USER: 4 COMMENT:SILVER

PRESET TIME : 95.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
5	54-5	54.05	130.5	7.92	9.97	47.31	3.98	1.12	55.87
6	54-6	0.05	126.7	0.00	0.00	80.00	100.00	1.71	56.70
7	54-7	0.05	127.2	20.00	200.00	20.00	200.00	4.95	57.62
8	54-8	0.05	127.4	0.00	0.00	40.00	141.42	3.07	58.50
9	54-9	0.05	127.7	20.00	200.00	80.00	100.00	1.22	59.38
10	54-10	0.05	131.1	20.00	200.00	40.00	141.42	3.22	60.27
11	54-11	0.05	127.6	0.00	0.00	20.00	200.00	5.78	61.18
12	54-12	0.05	131.7	0.00	0.00	80.00	100.00	1.18	62.07
13	27-1	0.05	125.8	0.00	0.00	60.00	115.47	1.99	63.07
14	27-2	0.05	127.4	0.00	0.00	20.00	200.00	7.75	63.97
15	27-3	0.05	125.5	20.00	200.00	80.00	100.00	1.62	64.87
16	27-4	0.05	125.2	0.00	0.00	20.00	200.00	5.49	65.77
17	27-5	0.05	128.6	0.00	0.00	20.00	200.00	9.48	66.68
18	27-6	0.05	128.4	0.00	0.00	20.00	200.00	6.03	67.57
19	27-7	0.05	128.0	40.00	141.42	40.00	141.42	3.70	68.47
~~20~~	~~27-8~~	~~0.05~~	~~127.5~~	~~0.00~~	~~0.00~~	~~40.00~~	~~141.42~~	~~3.90~~	~~69.37~~

QPQP

7/17/09

ID:TRITIUM 18 JUL 2000 00:00

USER: 4 COMMENT:SILVER

PRESET TIME : 55.00

DATA CALC : CPM H# :YES SAMPLE REPEATS: 1 PRINTER : STD

COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 :EDIT

TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF

SCINTILLATOR: LIQUID LUMEX:YES LOW SAMPLE REJ: 0

LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

CHAN: 20.0 - 280.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

CHAN: 0.0 - 1000.0 %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	WIND1 CPM	WIND1 %ERROR	WIND2 CPM	WIND2 %ERROR	LUMEX %	ELAPSED TIME
MISSING SAMPLE									
6	54-6	55.00	127.2	8.55	9.50	47.44	3.94	1.17	56.86
7	54-7	55.00	126.7	6.15	11.23	43.96	4.09	0.99	114.15
8	54-8	55.00	127.2	6.67	10.73	43.38	4.11	1.00	171.43
9	54-9	55.00	127.6	6.55	11.01	44.93	4.05	1.46	228.81
10	54-10	55.00	130.6	6.35	11.24	43.96	4.10	1.57	286.19
11	54-11	55.00	126.3	5.91	11.48	44.00	4.08	1.05	343.48
12	54-12	55.00	130.0	5.96	11.42	43.04	4.13	1.10	400.81
13	27-1	55.00	126.1	5.78	11.56	43.55	4.10	0.93	458.20
14	27-2	55.00	127.1	6.58	10.80	44.07	4.08	0.90	515.46
15	27-3	55.00	126.2	6.67	10.67	46.13	3.98	0.73	572.72
16	27-4	55.00	125.6	5.67	11.61	44.93	4.04	0.74	630.01
17	27-5	55.00	128.6	9.93	8.71	49.38	3.85	0.85	687.31
18	27-6	55.00	127.5	8.22	9.54	47.31	3.93	0.61	744.56
19	27-7	55.00	128.9	5.76	11.43	43.78	4.08	0.53	801.79
20	27-8	55.00	127.6	11.80	7.96	51.96	3.75	0.73	859.08

QPQP

Filename: 3:43 PMab

Instrument Type	LS 6000
Data Capture Date	16 Jul 2009 07:53:15
User Filename	C:\LSCCAPTURE\SILVER\USER03\UN071601.BSF

User Number	3
User Id	TRITIUM
User Comments	SILVER

Scintillator Choice: LIQUID

Sam	Rack	Time	H#	Raw CPM1	Raw CPM2	CPM Iso1	%Err1	CPM Iso2	%Err2	LumEx	ElTime
1	28-1	15.00	126.7	48.00	87.67	47.60	7.52	87.27	5.54	0.62	15.83

Sample Count Start Time:	16 Jul 2009 15:30:13		
Data Capture Date	16 Jul 2009 17:30:21		
User Filename	S07071630-1A.XLS		
	U07071630-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	30-1	120.00
H#, Total Counts:	111.0	4520	
Start, End, X-Axis:	0	990	Channel Number

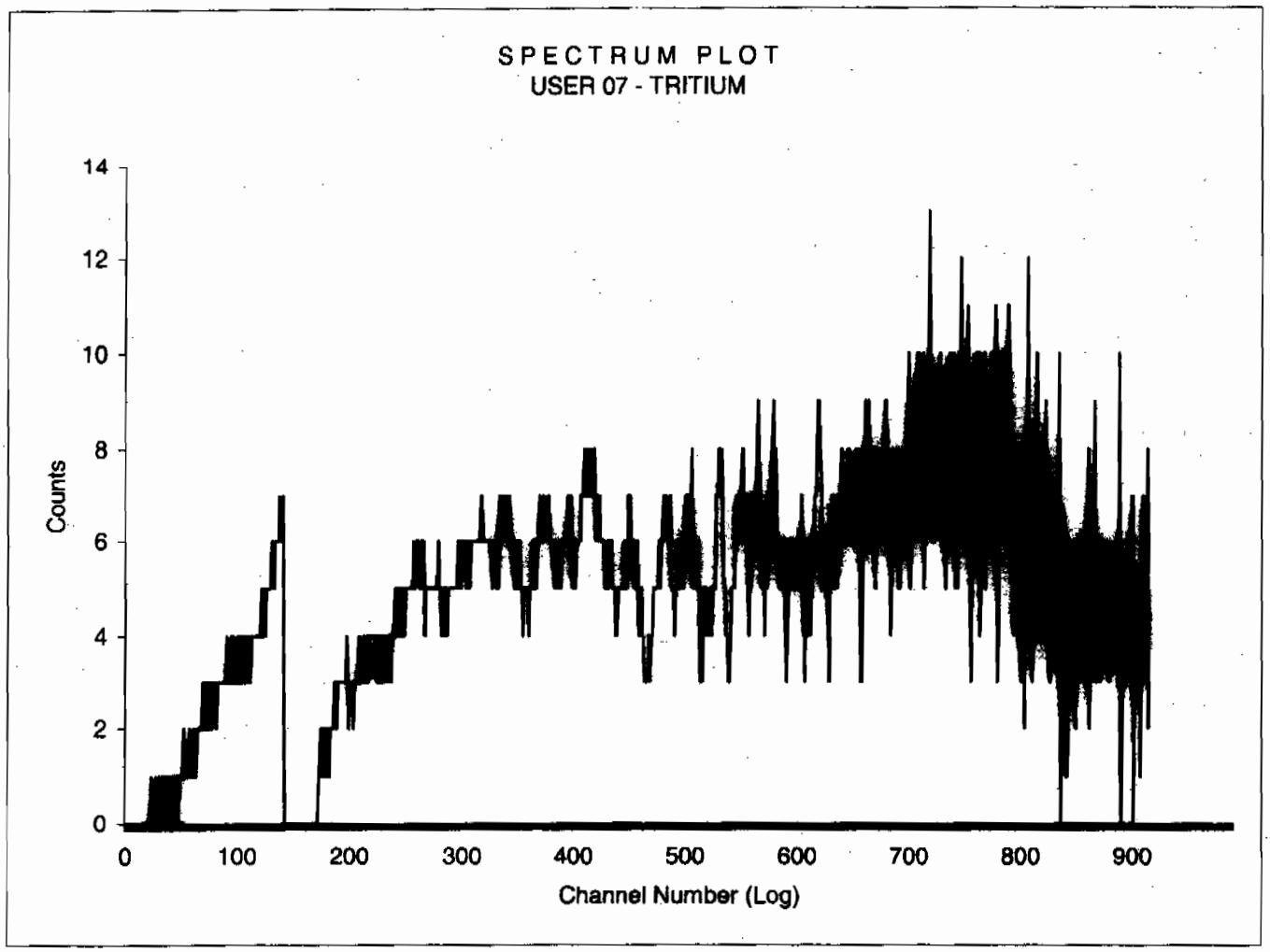

Sample Count Start Time:	15 Jul 2009 22:46:15		
Data Capture Date	16 Jul 2009 00:21:38		
User Filename	S04071654-1A.XLS		
	U04071554-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	54-1	95.00
H#, Total Counts:	129.3	4044	
Start, End, X-Axis:	0	990	Channel Number

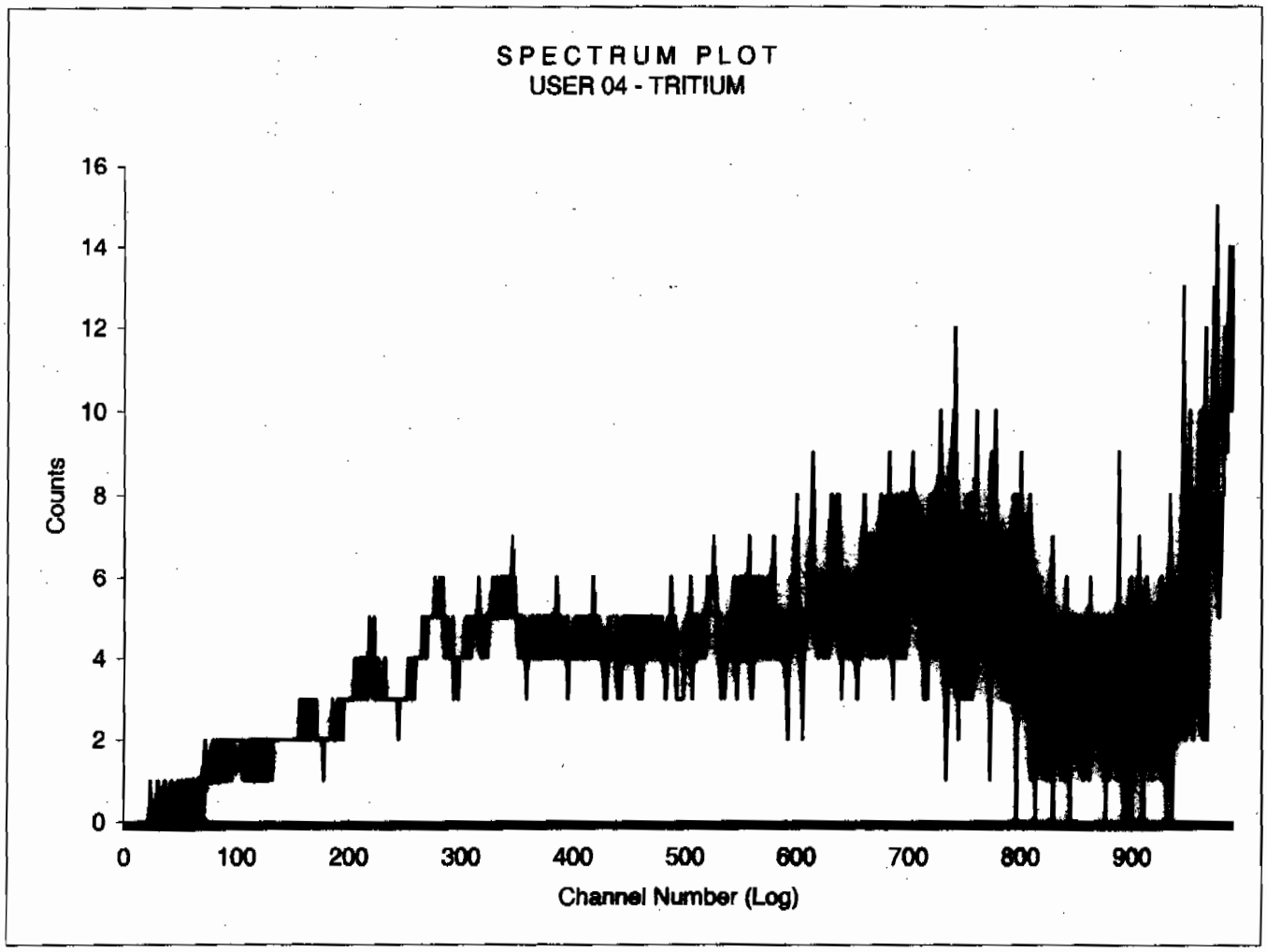

Sample Count Start Time:	17 Jul 2009 11:56:08		
Data Capture Date	17 Jul 2009 12:31:47		
User Filename	S07071735-1A.XLS		
Spectrum Type	Log Counts		
User Number	07		
User Id	TRITIUM		
User Comment	BROWN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	35-1	35.25
H#, Total Counts:	119.5	1521	
Start, End, X-Axis:	0	990	Channel Number

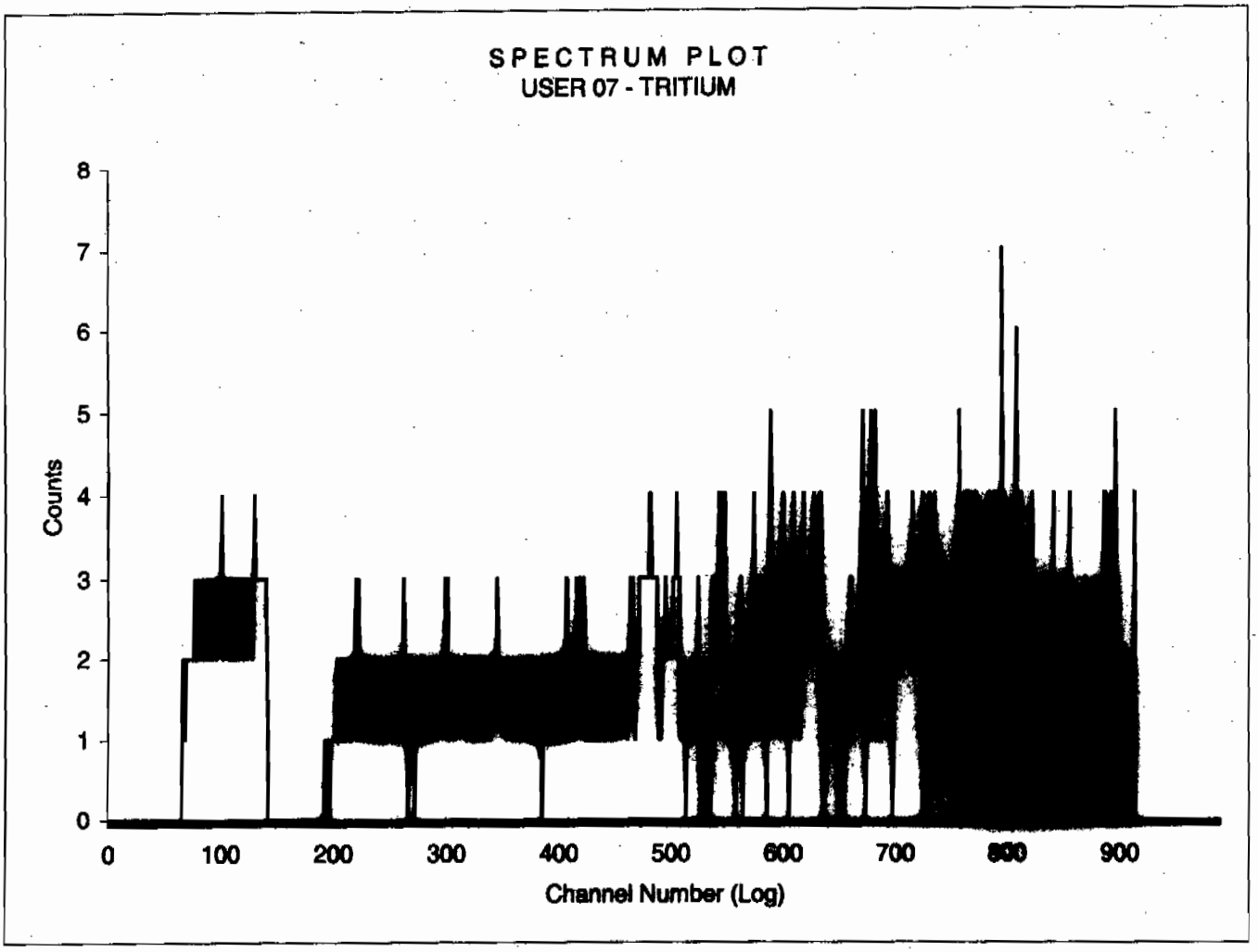

Sample Count Start Time:	16 Jul 2009 00:24:47		
Data Capture Date	16 Jul 2009 02:00:11		
User Filename	S04071654-2A.XLS		
	U04071554-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	54-2	95.00
H#, Total Counts:	132.6	4185	
Start, End, X-Axis:	0	990	Channel Number

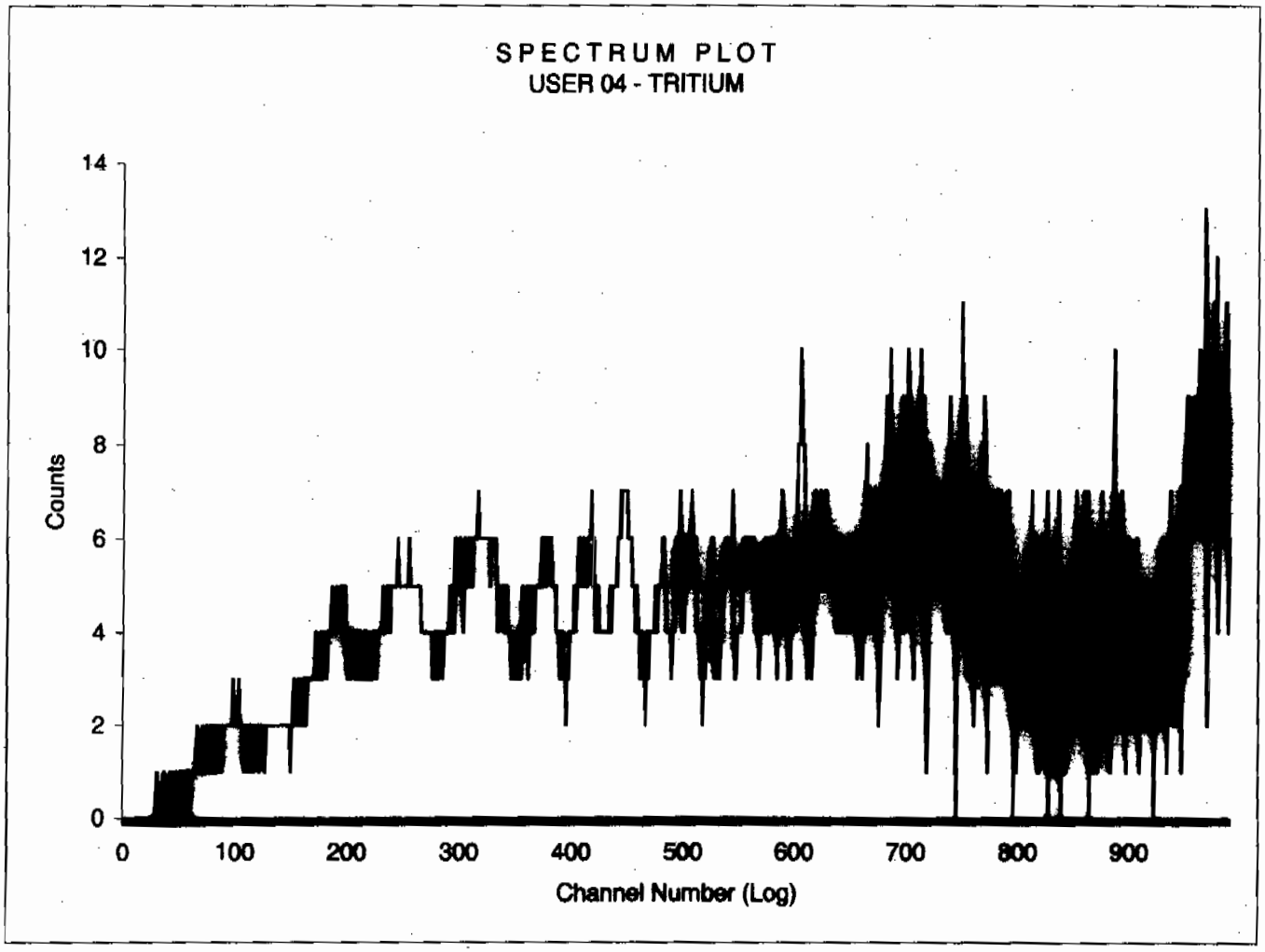

Sample Count Start Time:	16 Jul 2009 02:03:06		
Data Capture Date	16 Jul 2009 03:38:30		
User Filename	S04071654-3A.XLS		
	U04071554-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	54-3	95.00
H#, Total Counts:	131.3	3961	
Start, End, X-Axis:	0	990	Channel Number

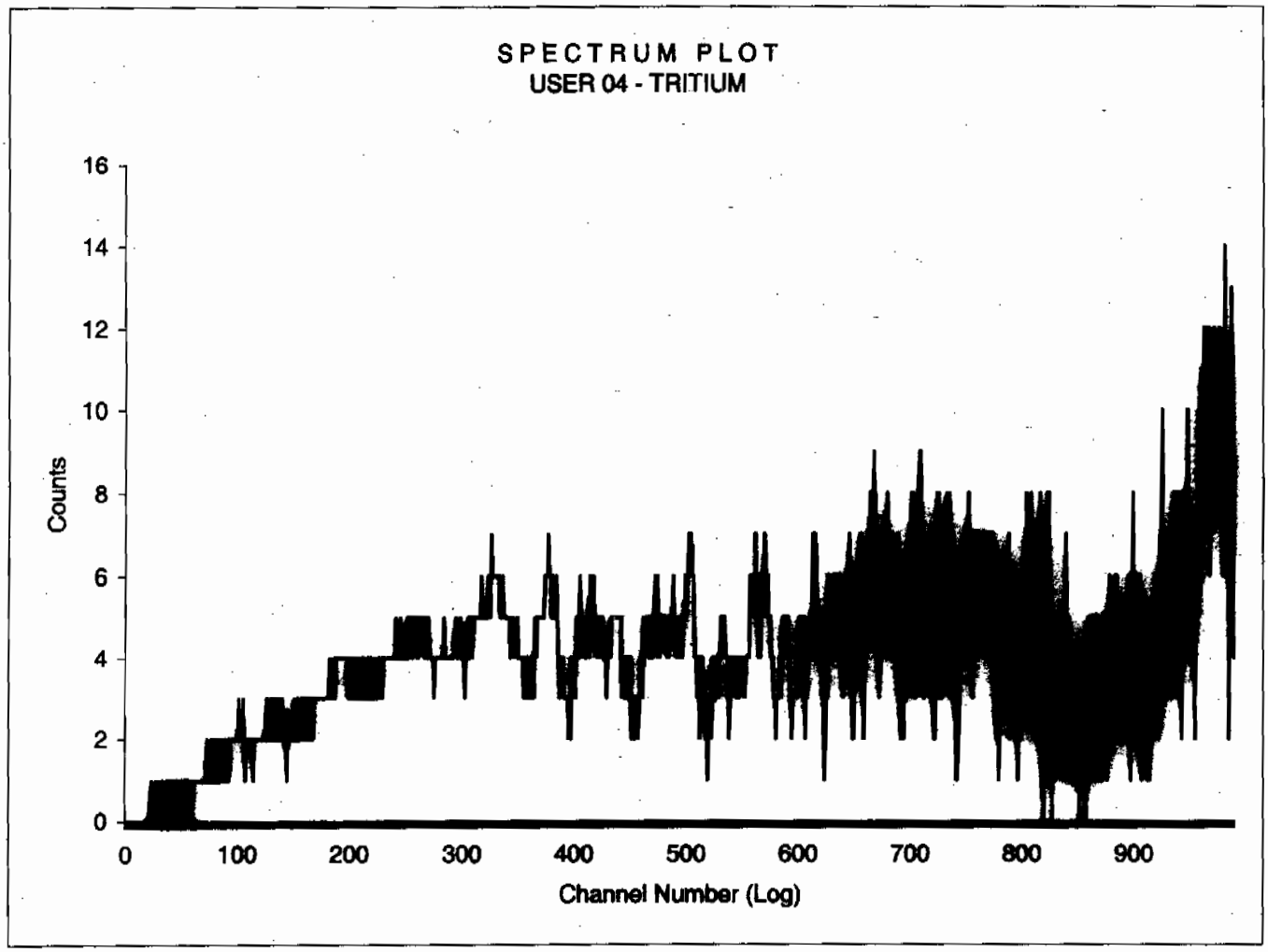

Sample Count Start Time:	16 Jul 2009 03:41:21		
Data Capture Date	16 Jul 2009 05:16:45		
User Filename	S04071654-4A.XLS		
	U04071554-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	54-4	95.00
H#, Total Counts:	129.5	3954	
Start, End, X-Axis:	0	990	Channel Number

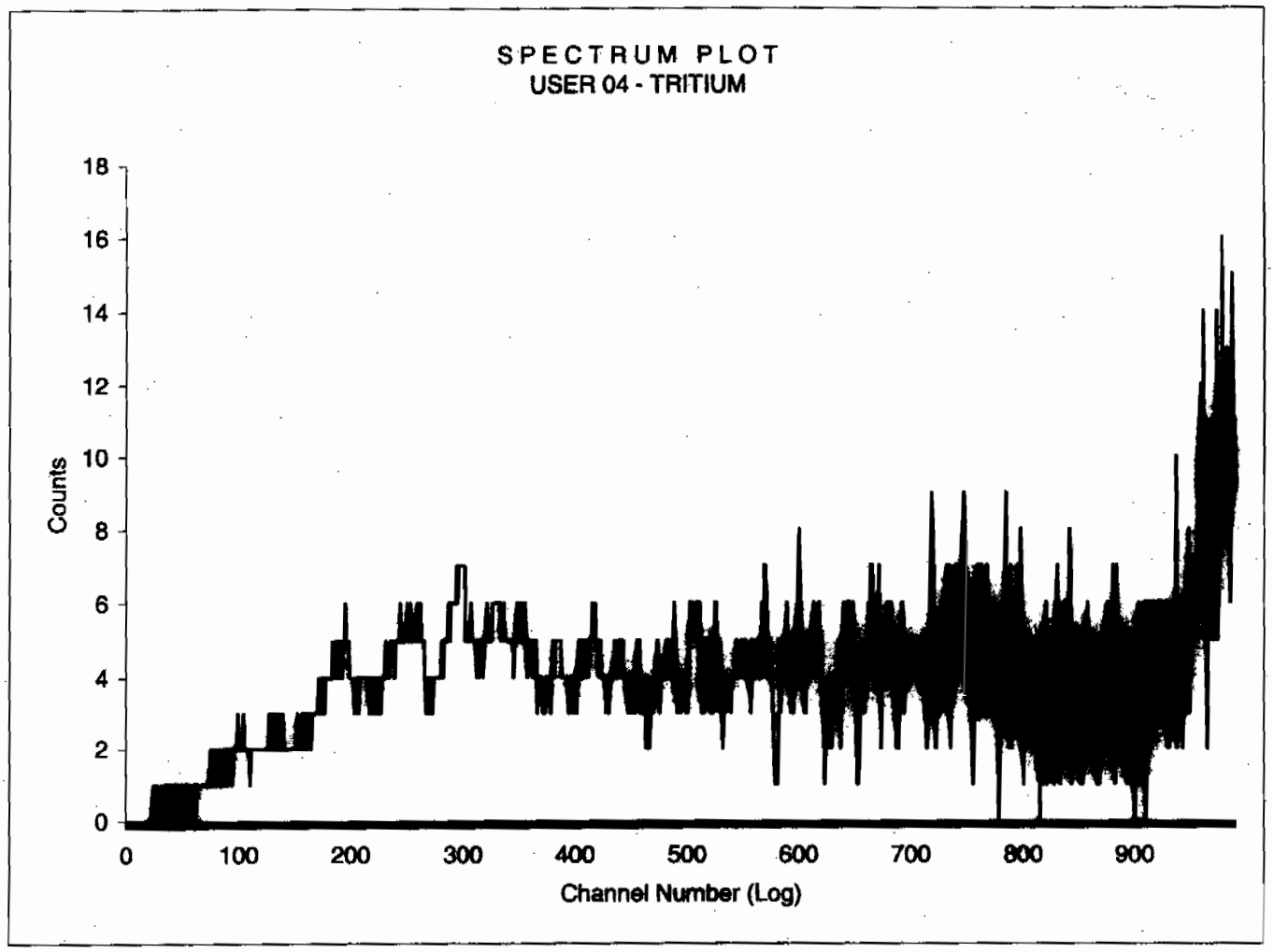

Sample Count Start Time:	16 Jul 2009 06:44:41		
Data Capture Date	16 Jul 2009 07:39:10		
User Filename	S04071654-5B.XLS		
	U04071654-5A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	54-5	54.05
H#, Total Counts:	130.5	2396	
Start, End, X-Axis:	0	990	Channel Number

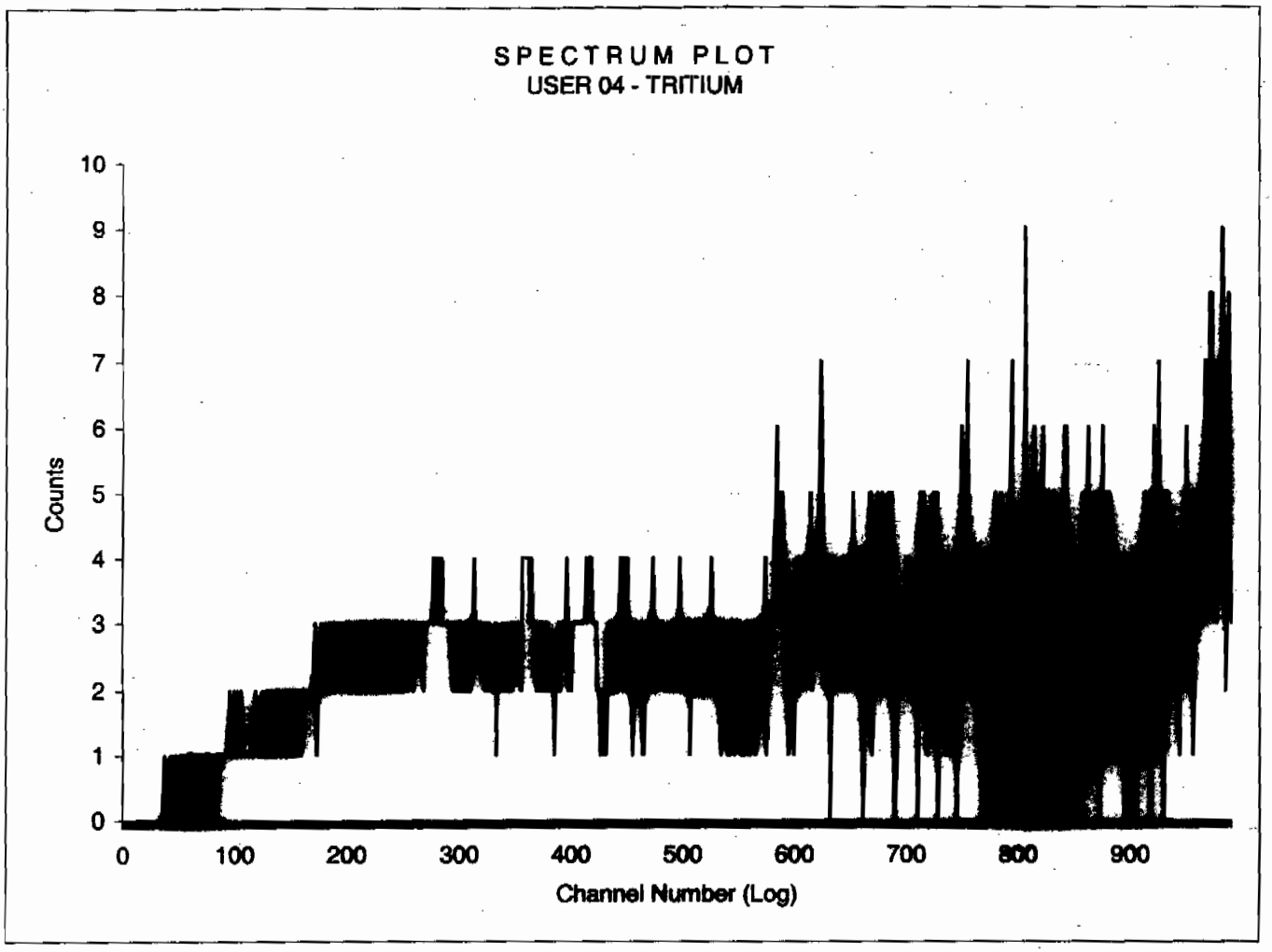

Sample Count Start Time:	16 Jul 2009 08:11:33		
Data Capture Date	16 Jul 2009 09:06:57		
User Filename	S04071654-6B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	54-6	55.00
H#, Total Counts:	127.2	2434	
Start, End, X-Axis:	0	990	Channel Number

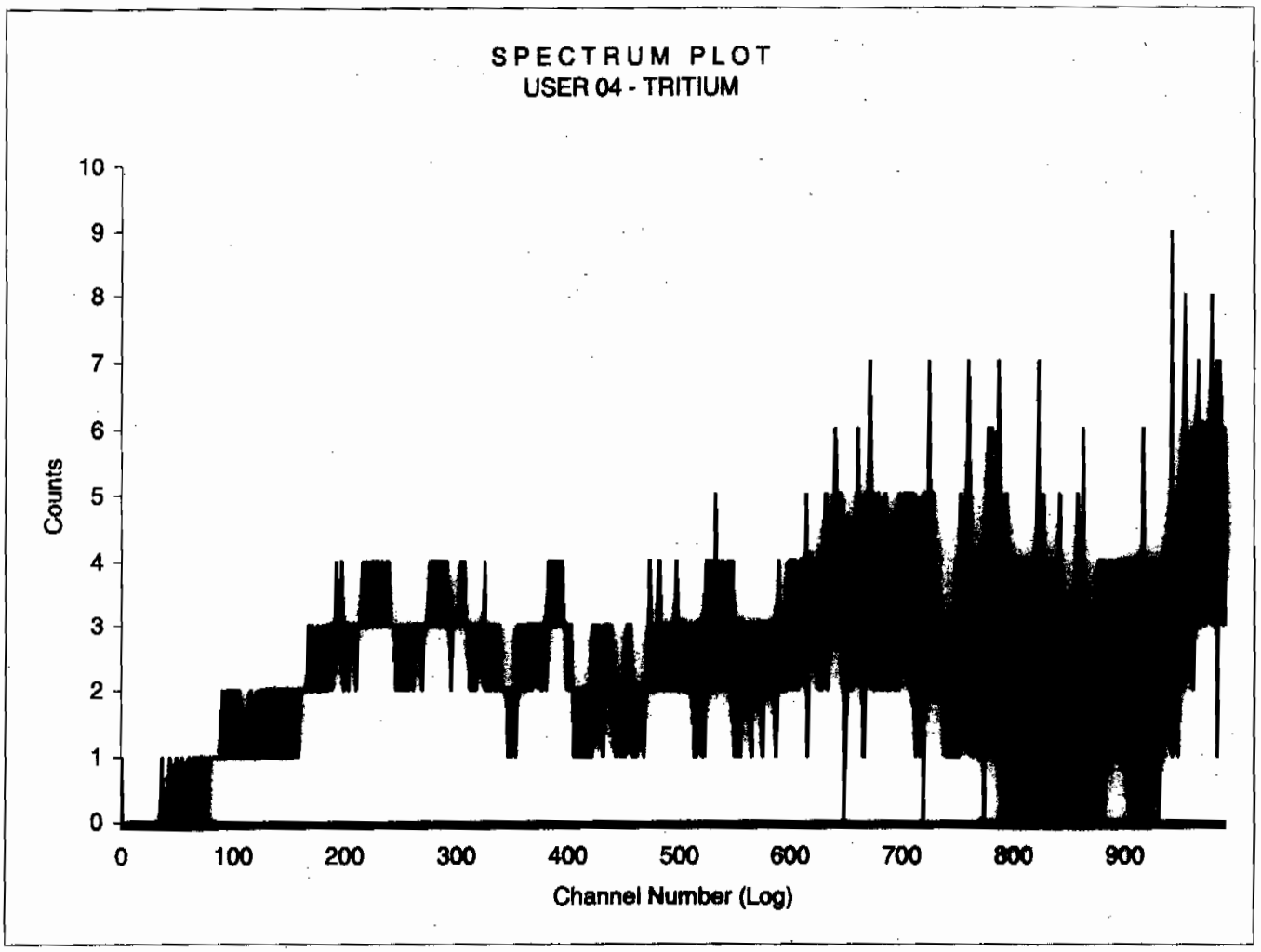

Sample Count Start Time:	16 Jul 2009 09:08:50		
Data Capture Date	16 Jul 2009 10:04:14		
User Filename	S04071654-7B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	54-7	55.00
H#, Total Counts:	126.7	2228	
Start, End, X-Axis:	0	990	Channel Number

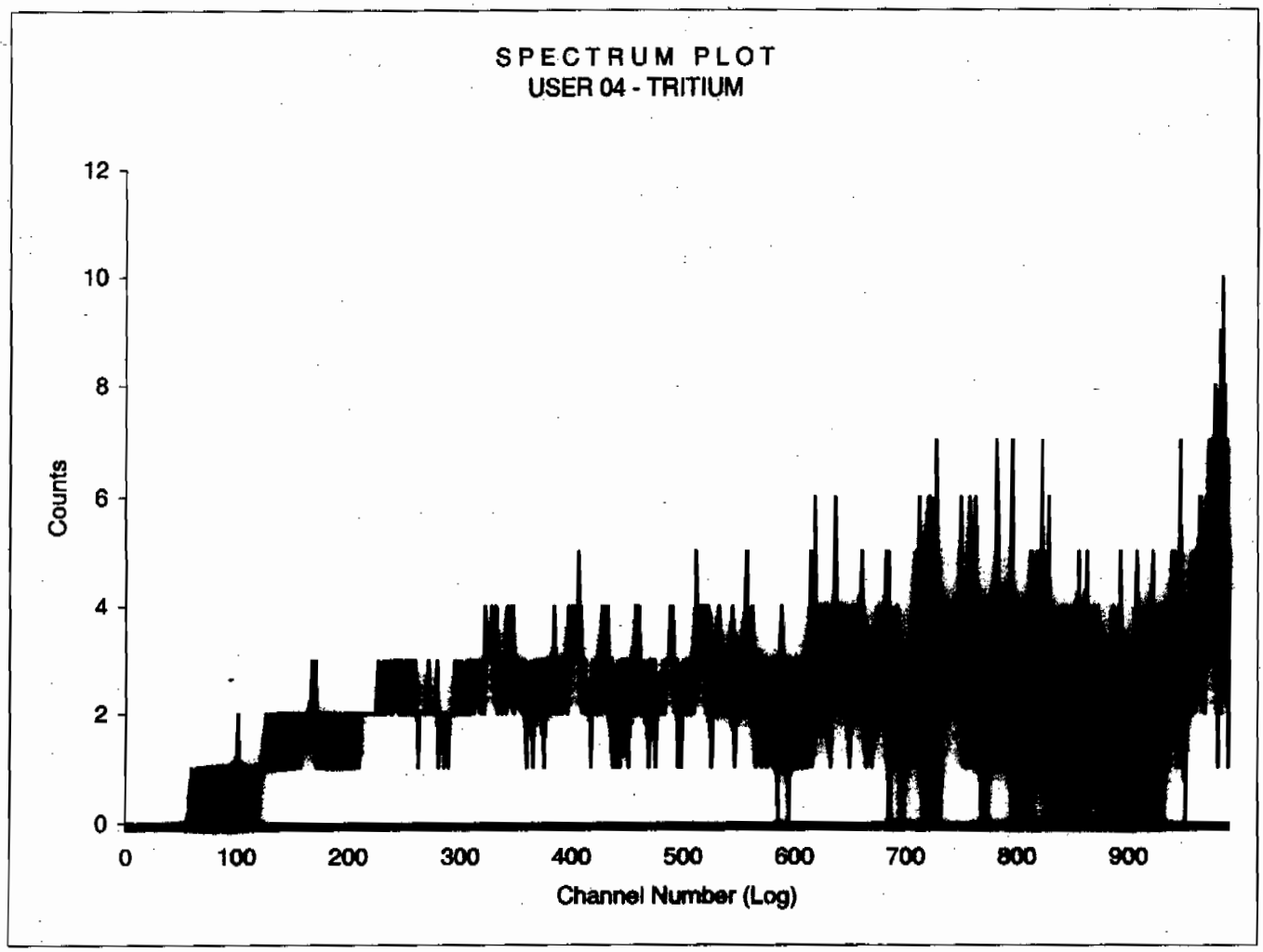

Sample Count Start Time:	16 Jul 2009 10:06:07		
Data Capture Date	16 Jul 2009 11:01:41		
User Filename	S04071654-8B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	8	54-8	55.00
H#, Total Counts:	127.2	2196	
Start, End, X-Axis:	0	990	Channel Number

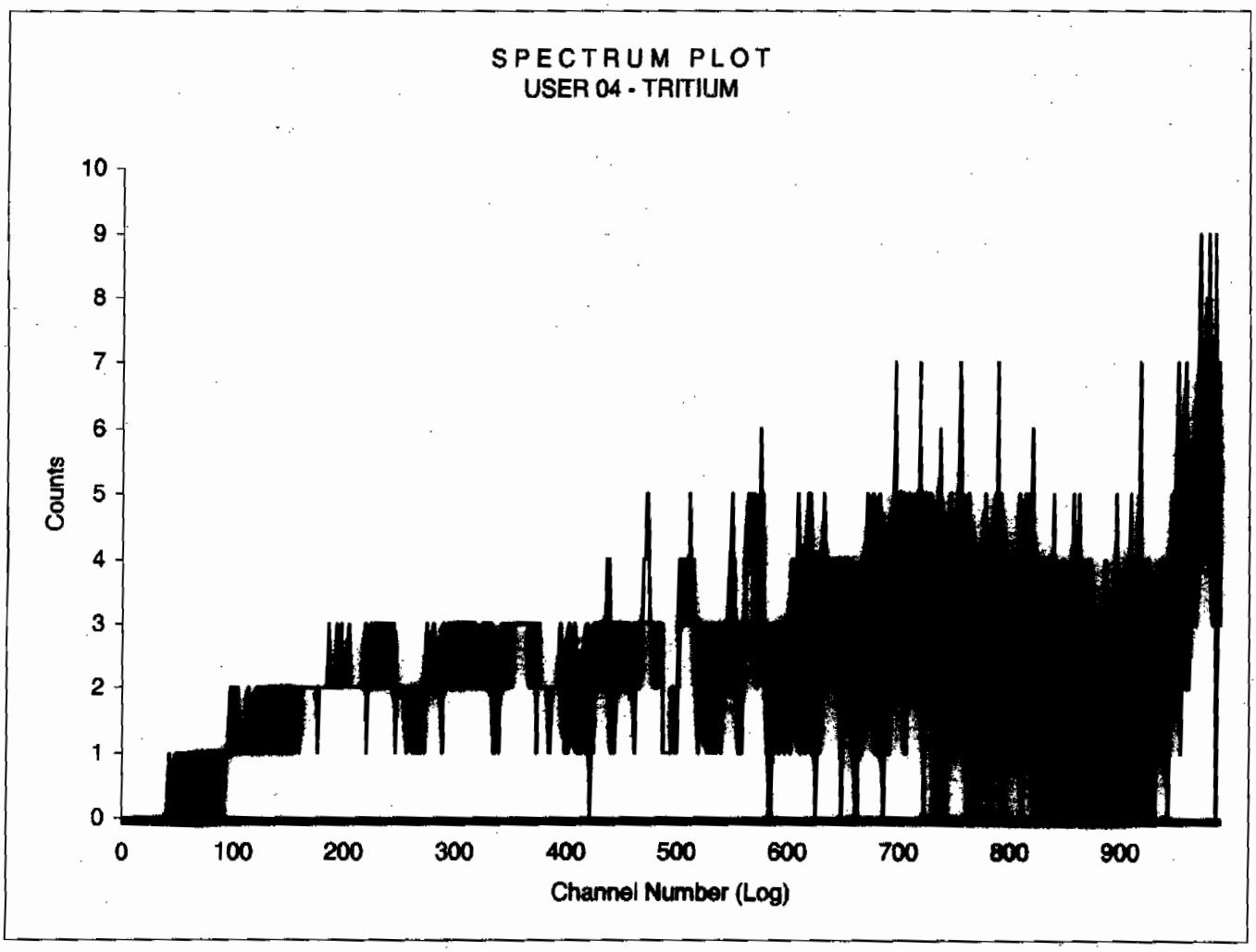

Sample Count Start Time:	16 Jul 2009 11:03:30		
Data Capture Date	16 Jul 2009 11:58:53		
User Filename	S04071654-9B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	9	54-9	55.00
H#, Total Counts:	127.6	2330	
Start, End, X-Axis:	0	990	Channel Number

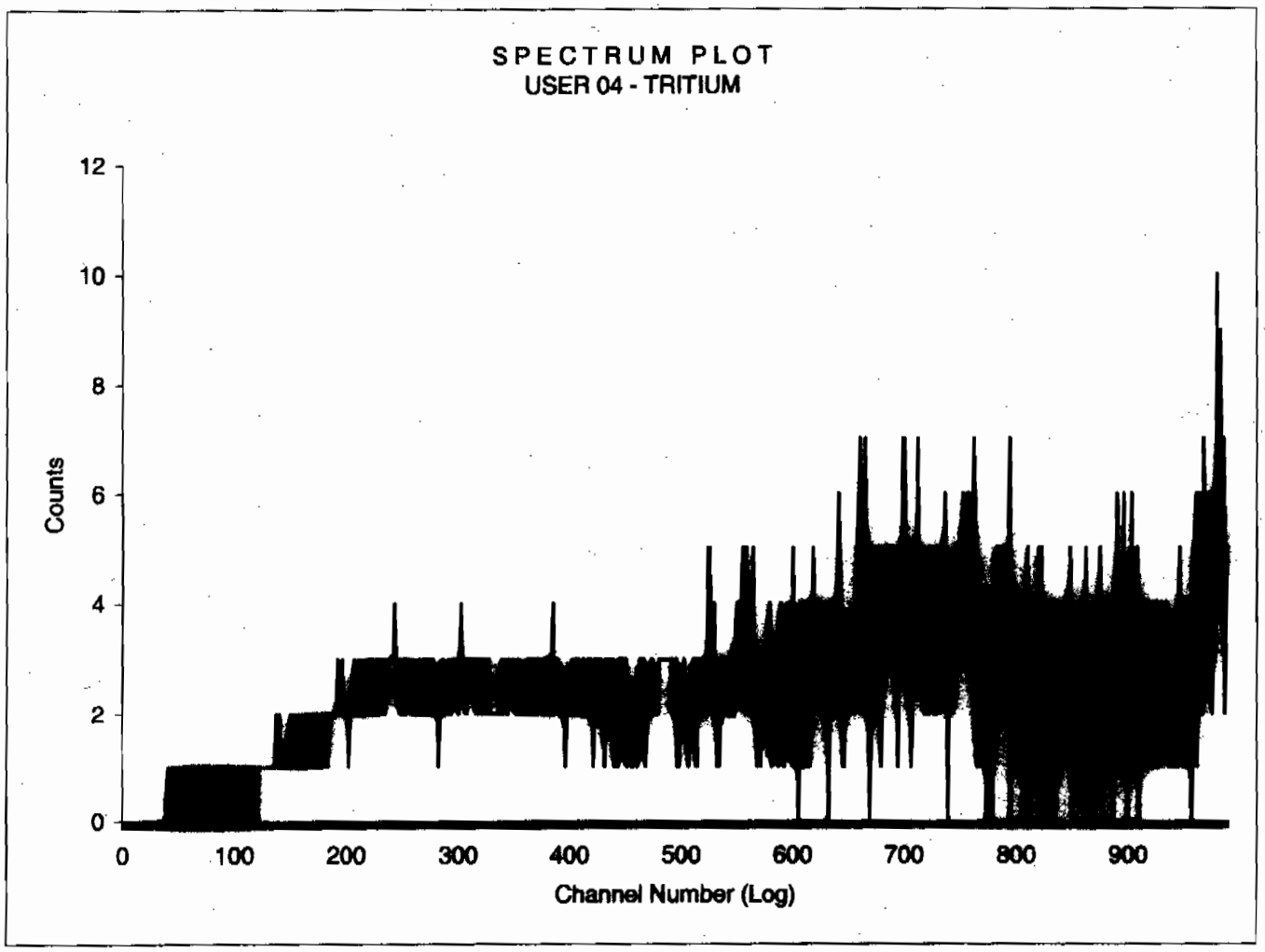

Sample Count Start Time:	16 Jul 2009 12:00:52		
Data Capture Date	16 Jul 2009 12:56:16		
User Filename	S04071654-10B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	10	54-10	55.00
H#, Total Counts:	130.6	2259	
Start, End, X-Axis:	0	990	Channel Number

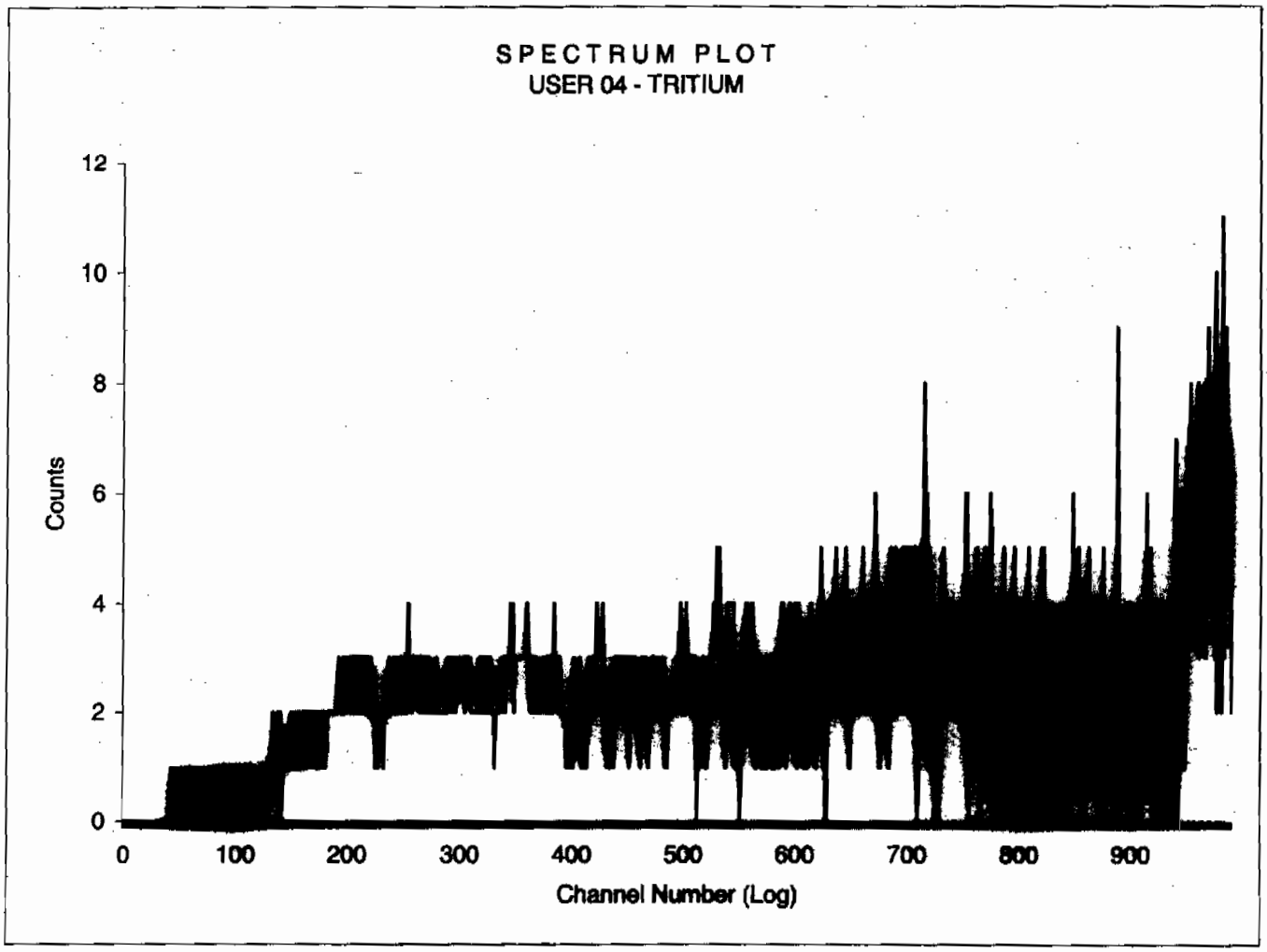

Sample Count Start Time:	16 Jul 2009 12:58:10		
Data Capture Date	16 Jul 2009 13:53:34		
User Filename	S04071654-11B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	11	54-11	55.00
H#, Total Counts:	126.3	2268	
Start, End, X-Axis:	0	990	Channel Number

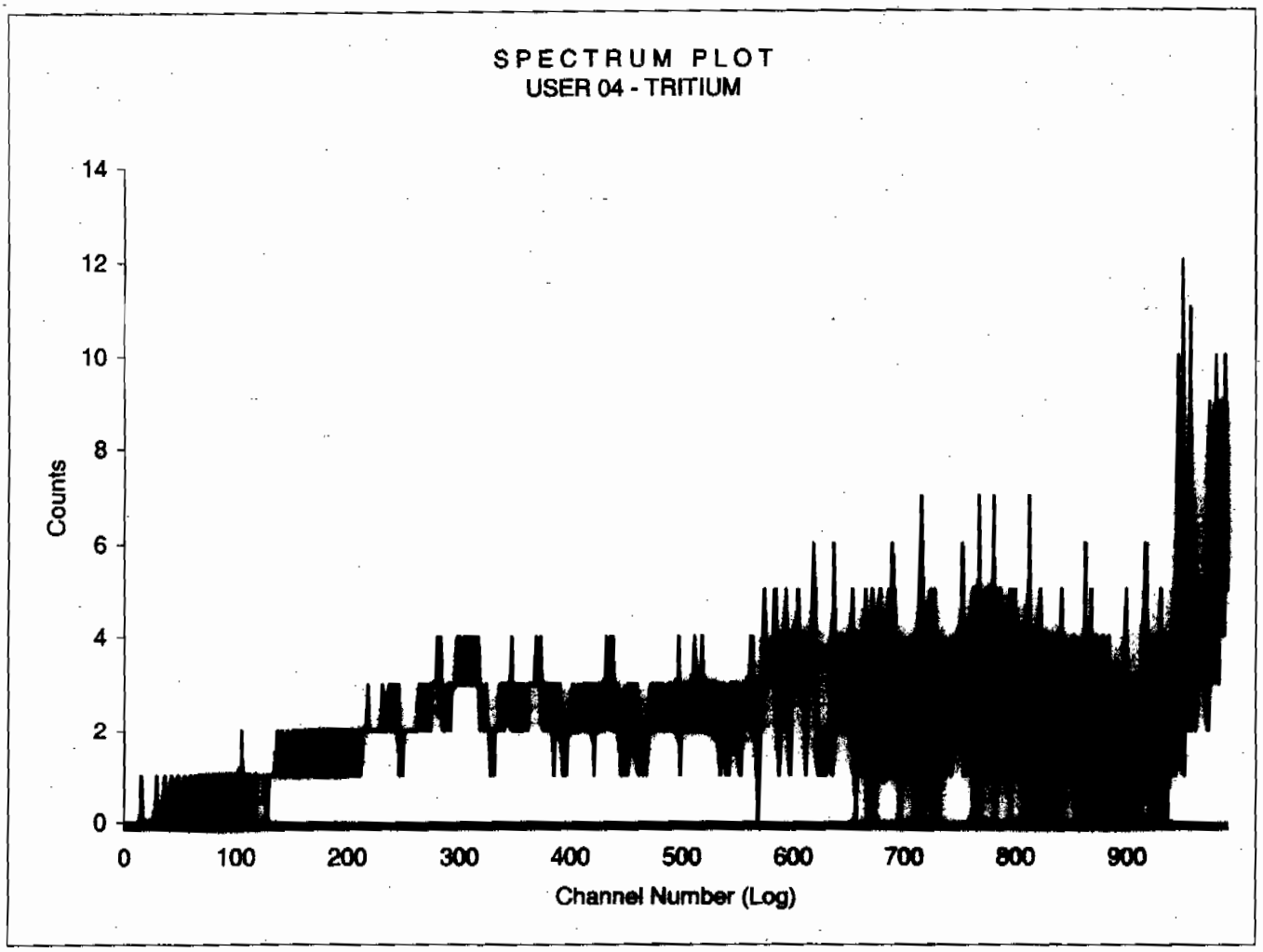

Sample Count Start Time:	16 Jul 2009 13:55:30		
Data Capture Date	16 Jul 2009 14:50:53		
User Filename	S04071654-12B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	12	54-12	55.00
H#, Total Counts:	130.0	2211	
Start, End, X-Axis:	0	990	Channel Number

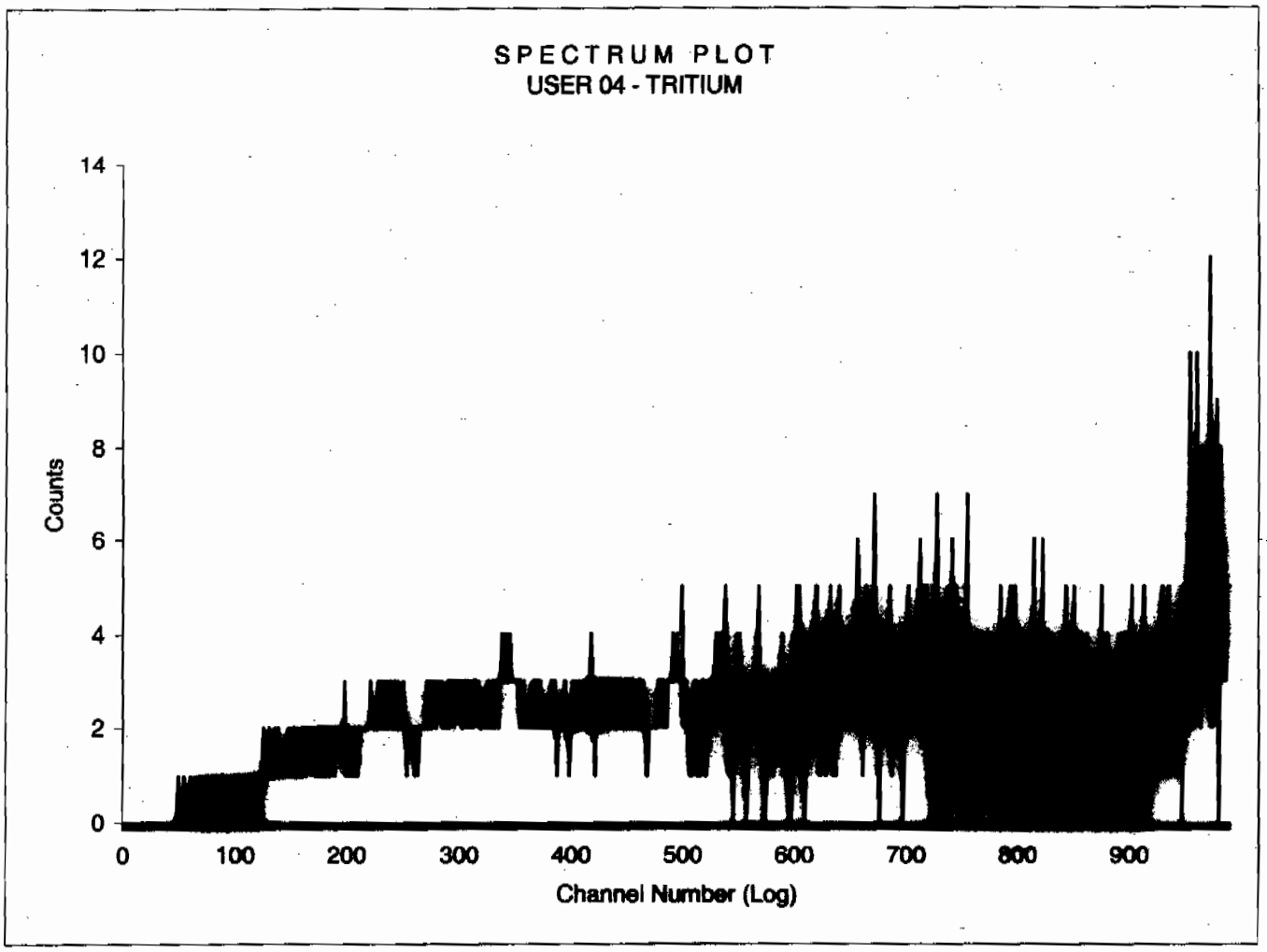

Sample Count Start Time:	16 Jul 2009 14:52:53		
Data Capture Date	16 Jul 2009 15:48:16		
User Filename	S04071627-1B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	13	27-1	55.00
H#, Total Counts:	126.1	2221	
Start, End, X-Axis:	0	990	Channel Number

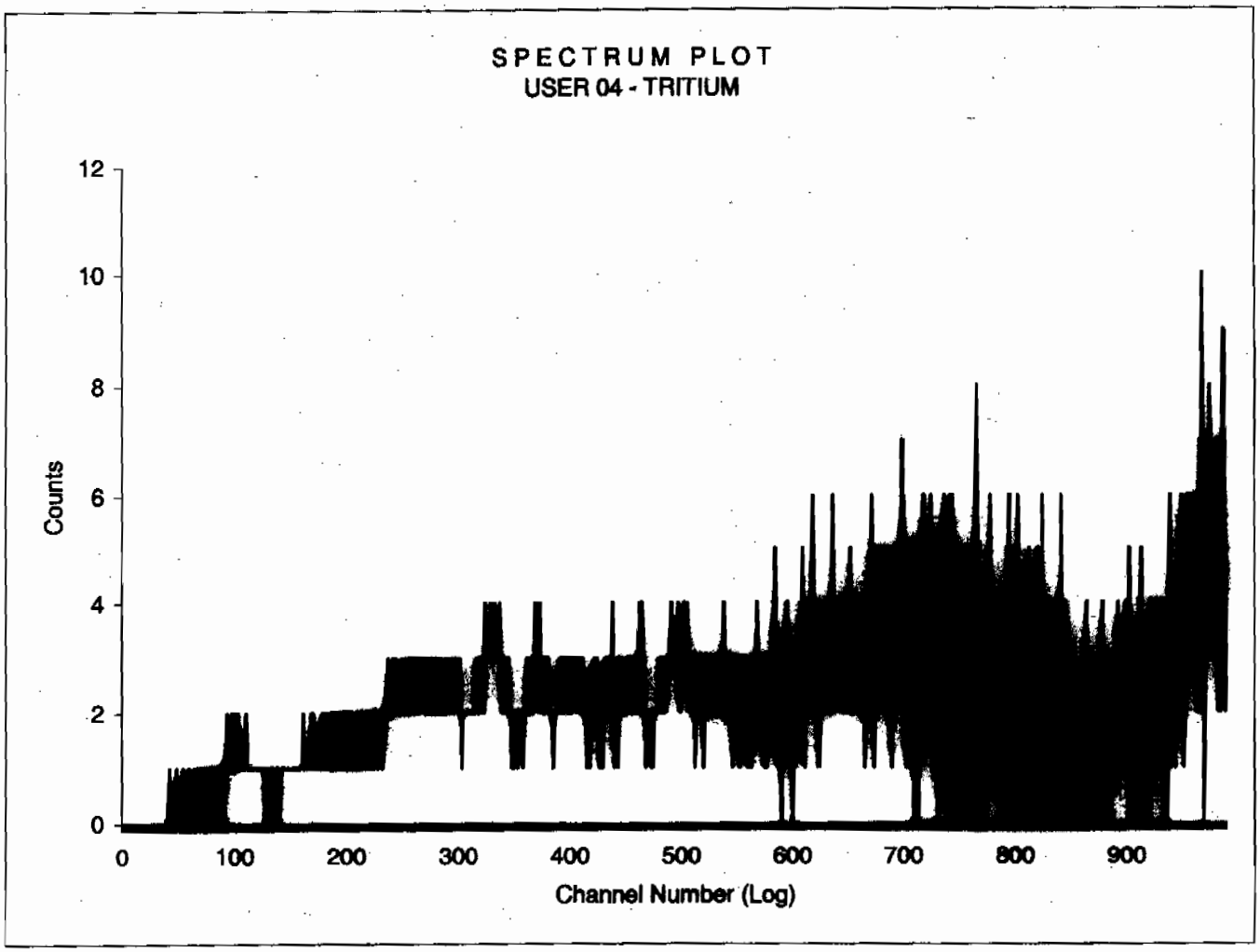

Sample Count Start Time:	16 Jul 2009 15:50:09		
Data Capture Date	16 Jul 2009 16:45:33		
User Filename	S04071627-2B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	14	27-2	55.00
H#, Total Counts:	127.1	2266	
Start, End, X-Axis:	0	990	Channel Number

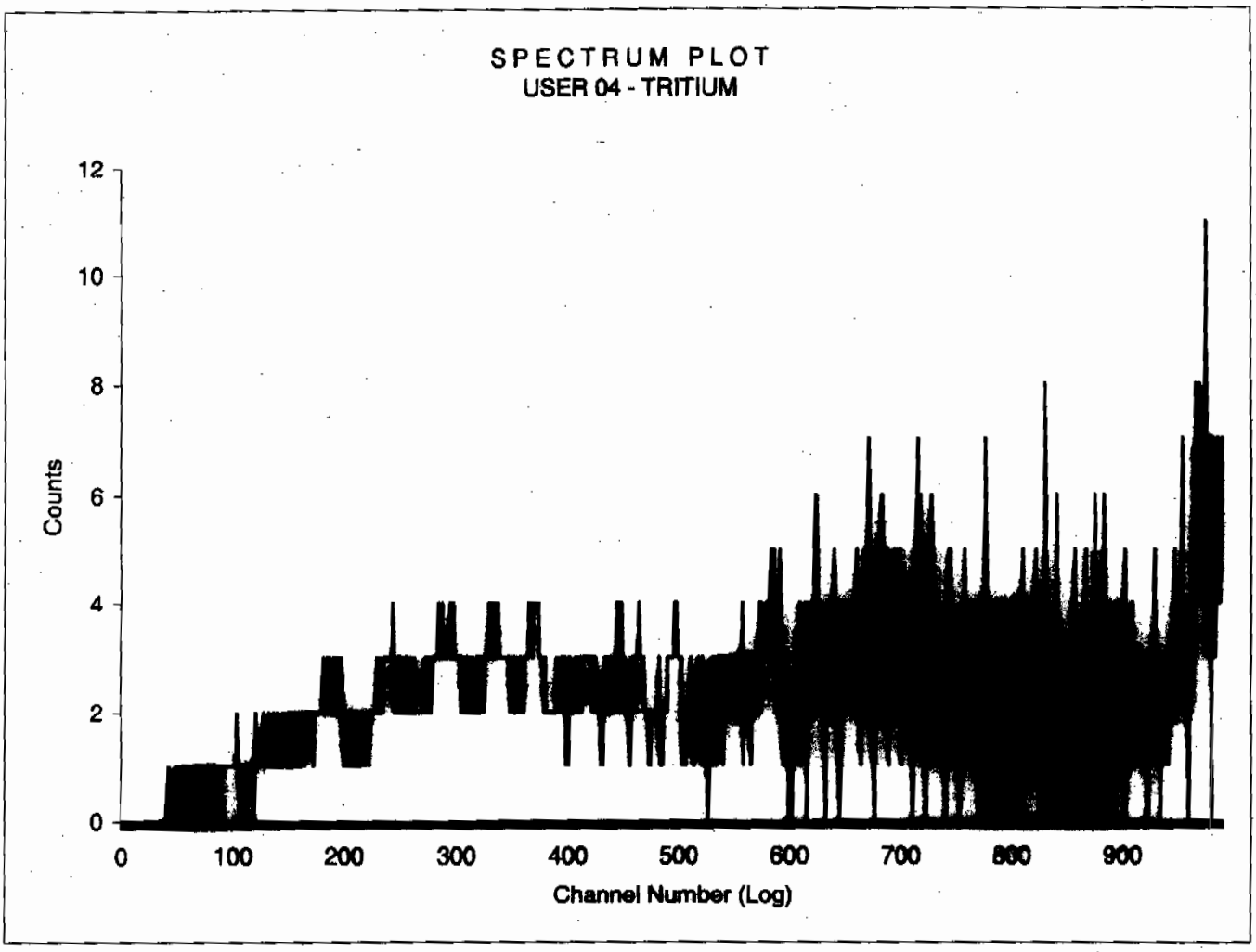

Sample Count Start Time:	16 Jul 2009 16:47:24		
Data Capture Date	16 Jul 2009 17:42:49		
User Filename	S04071627-3B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	15	27-3	55.00
H#, Total Counts:	126.2	2358	
Start, End, X-Axis:	0	990	Channel Number

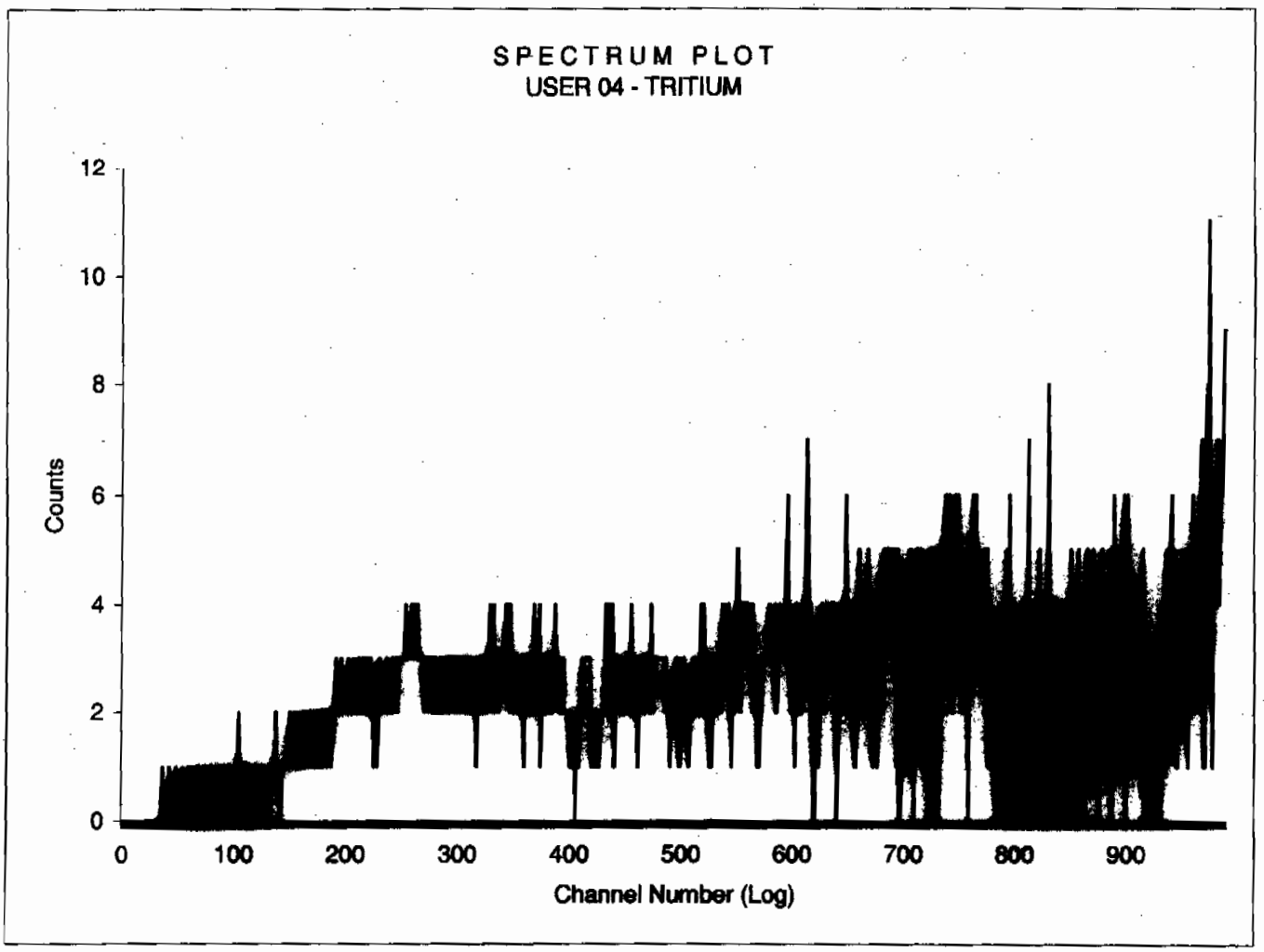

Sample Count Start Time:	16 Jul 2009 17:44:42		
Data Capture Date	16 Jul 2009 18:40:06		
User Filename	S04071627-4B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	16	27-4	55.00
H#, Total Counts:	125.6	2265	
Start, End, X-Axis:	0	990	Channel Number

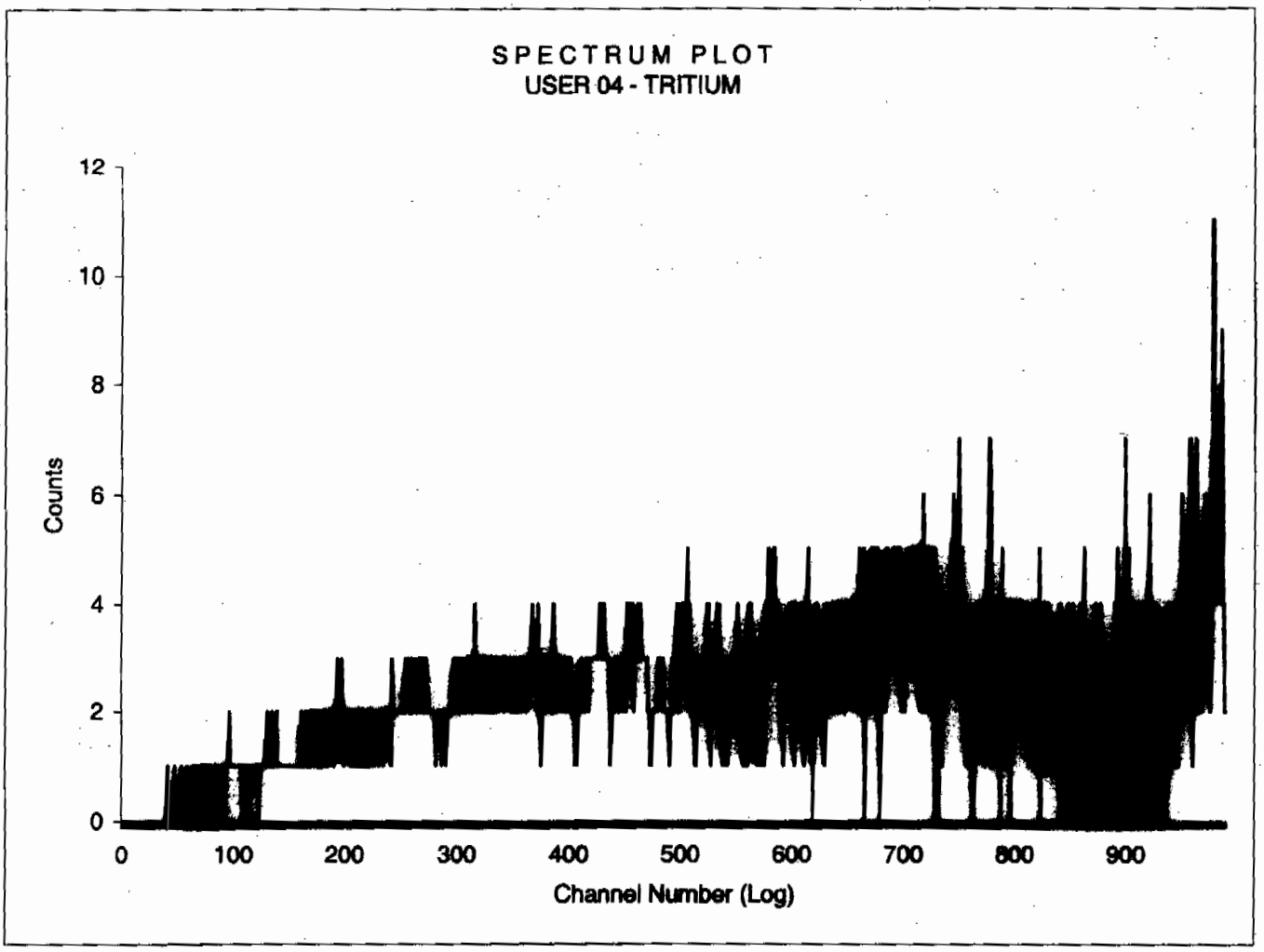

Sample Count Start Time:	16 Jul 2009 18:42:00		
Data Capture Date	16 Jul 2009 19:37:24		
User Filename	S04071627-5B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	17	27-5	55.00
H#, Total Counts:	128.6	2518	
Start, End, X-Axis:	0	990	Channel Number

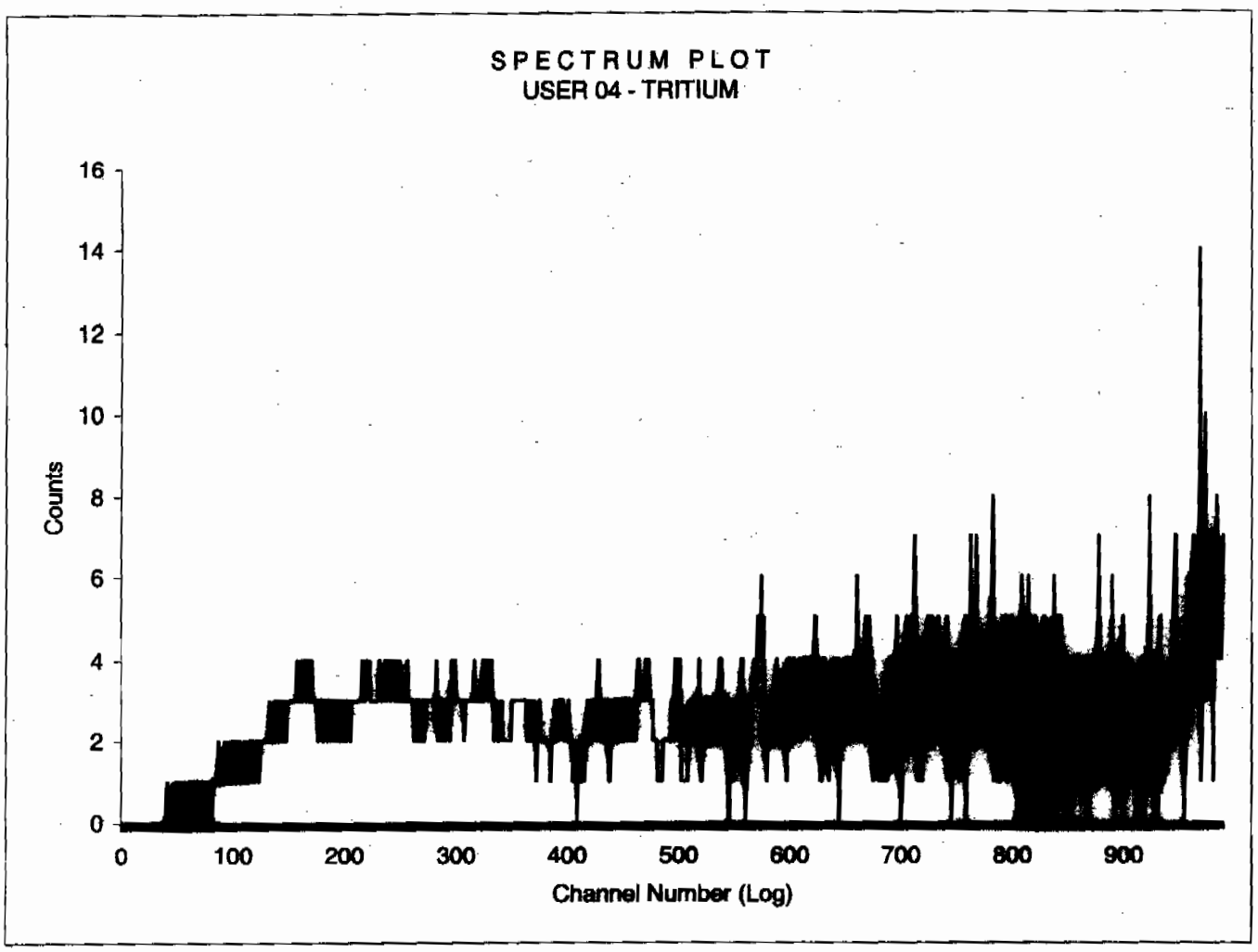

Sample Count Start Time:	16 Jul 2009 19:39:15		
Data Capture Date	16 Jul 2009 20:34:39		
User Filename	S04071627-6B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	18	27-6	55.00
H#, Total Counts:	127.5	2404	
Start, End, X-Axis:	0	990	Channel Number

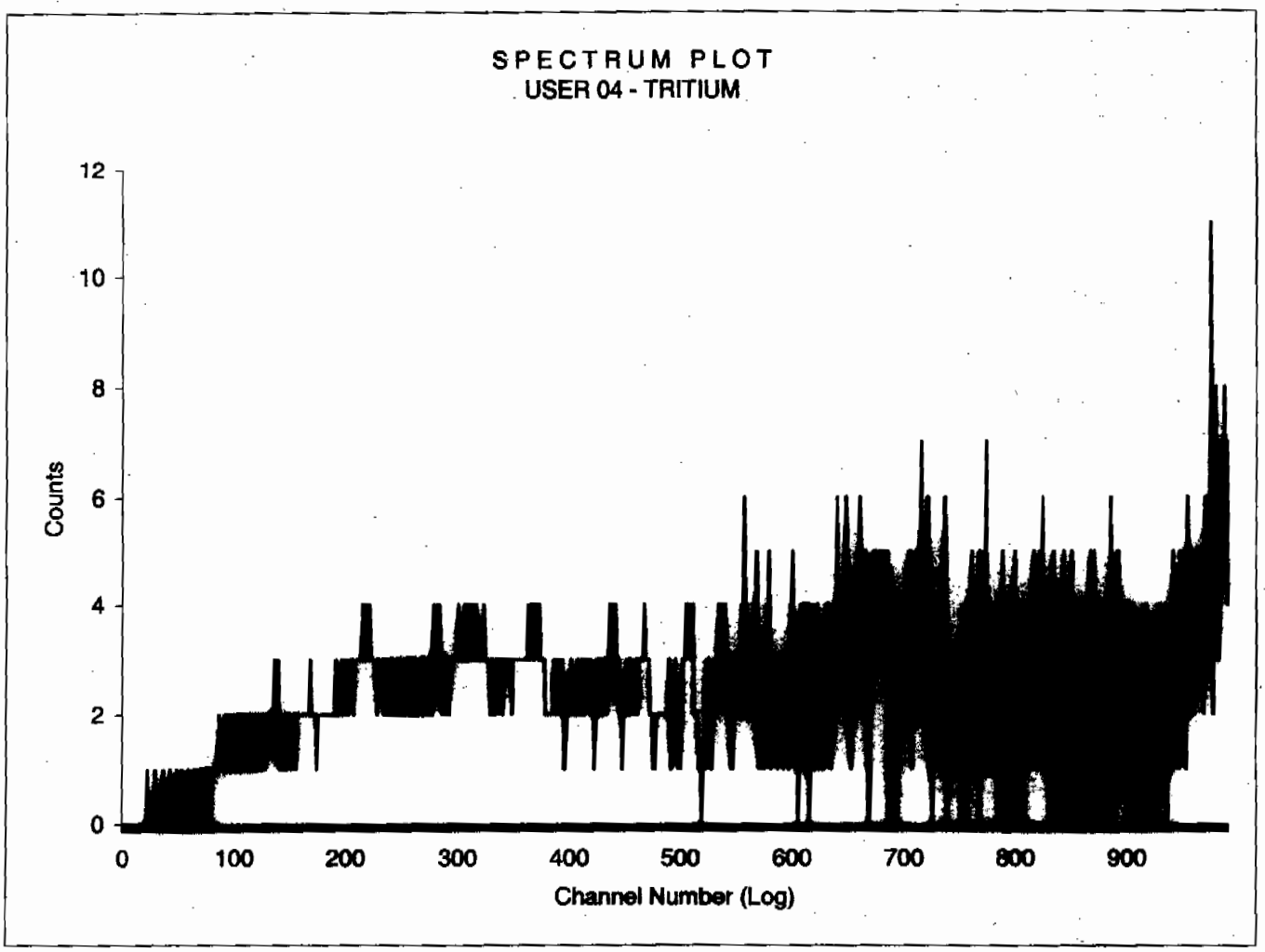

Sample Count Start Time:	16 Jul 2009 20:36:28		
Data Capture Date	16 Jul 2009 21:31:53		
User Filename	S04071627-7B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	19	27-7	55.00
H#, Total Counts:	128.9	2210	
Start, End, X-Axis:	0	990	Channel Number

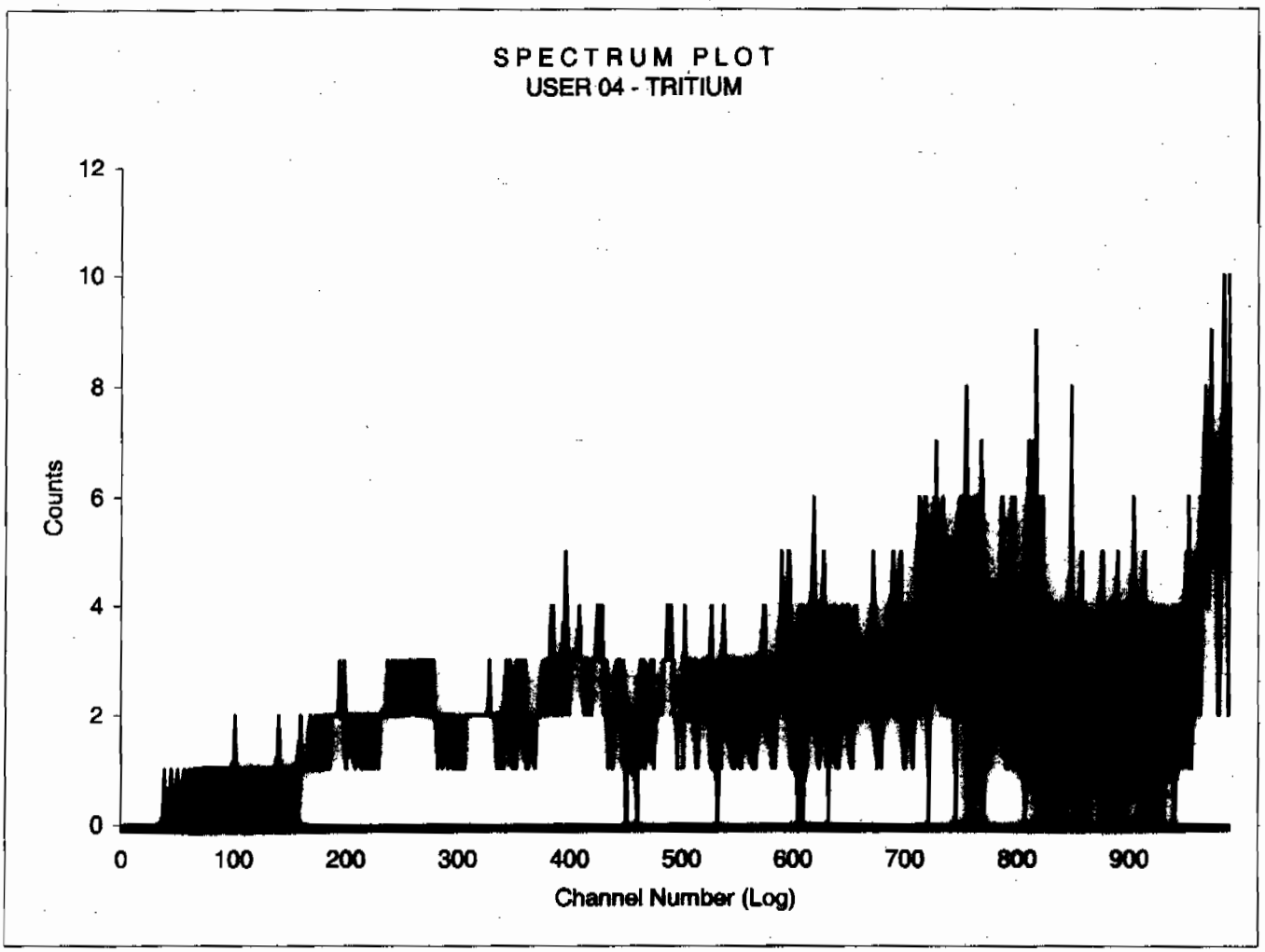

Sample Count Start Time:	16 Jul 2009 21:33:46		
Data Capture Date	16 Jul 2009 22:29:10		
User Filename	S04071627-8B.XLS		
	U04071654-6A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	20	27-8	55.00
H#, Total Counts:	127.6	2671	
Start, End, X-Axis:	0	990	Channel Number

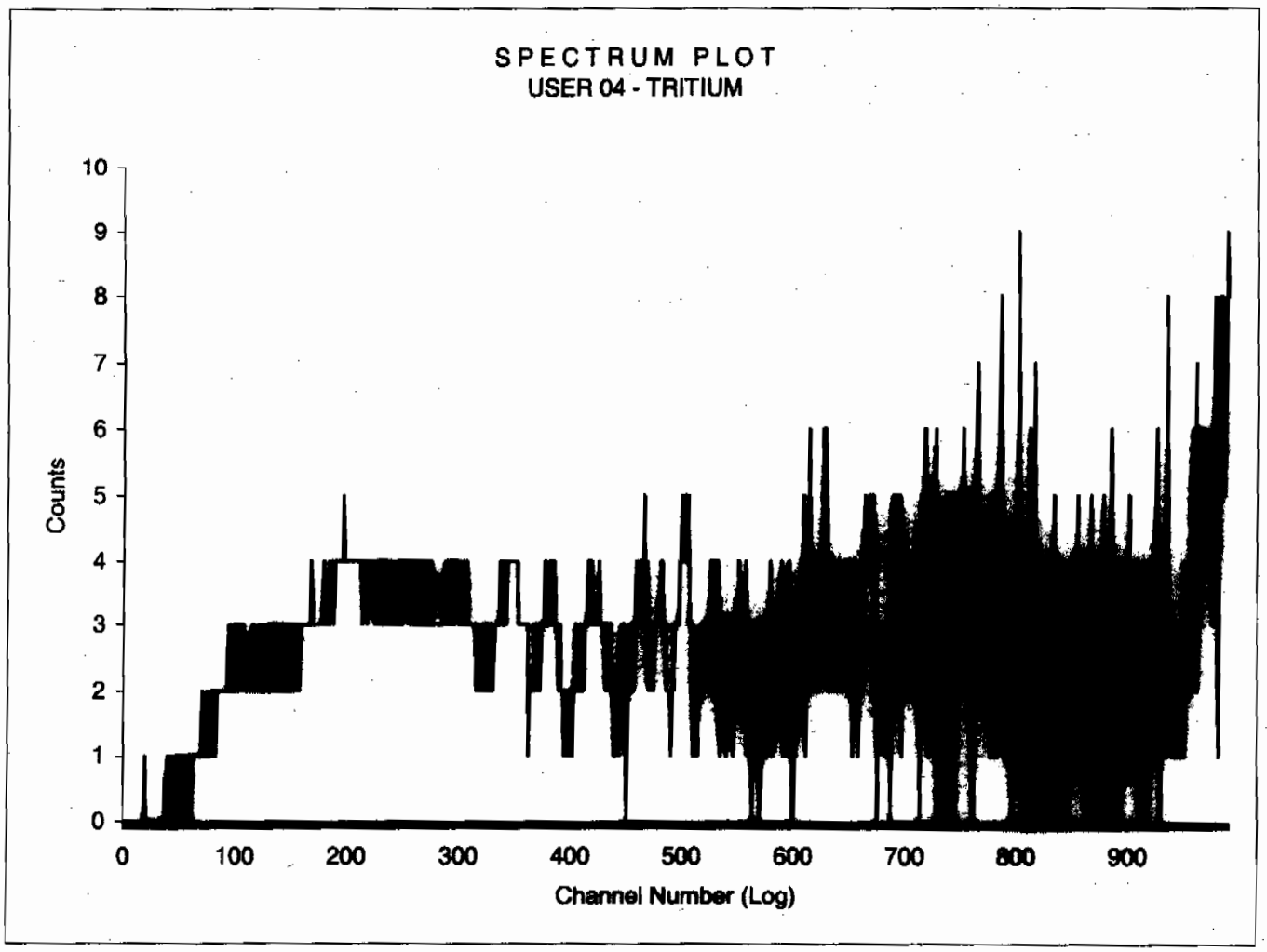

Sample Count Start Time:	16 Jul 2009 07:53:50		
Data Capture Date	16 Jul 2009 08:09:14		
User Filename	S03071628-1A.XLS		
Spectrum Type	Log Counts		
User Number	03		
User Id	TRITIUM		
User Comment	SILVER		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	28-1	15.00
H#, Total Counts:	126.7	1251	
Start, End, X-Axis:	0	990	Channel Number

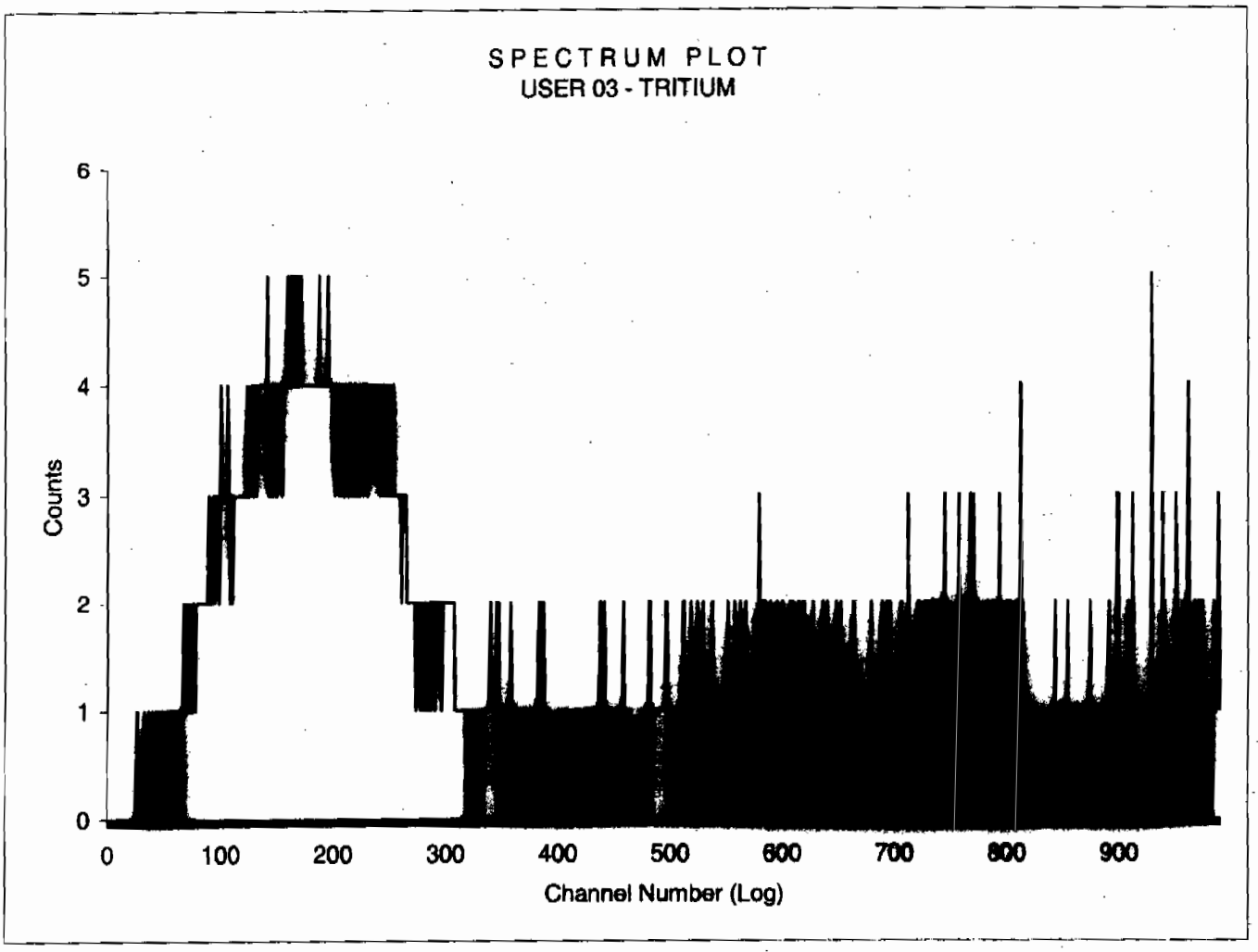

BACKGROUND AND EFFICIENCY DATA

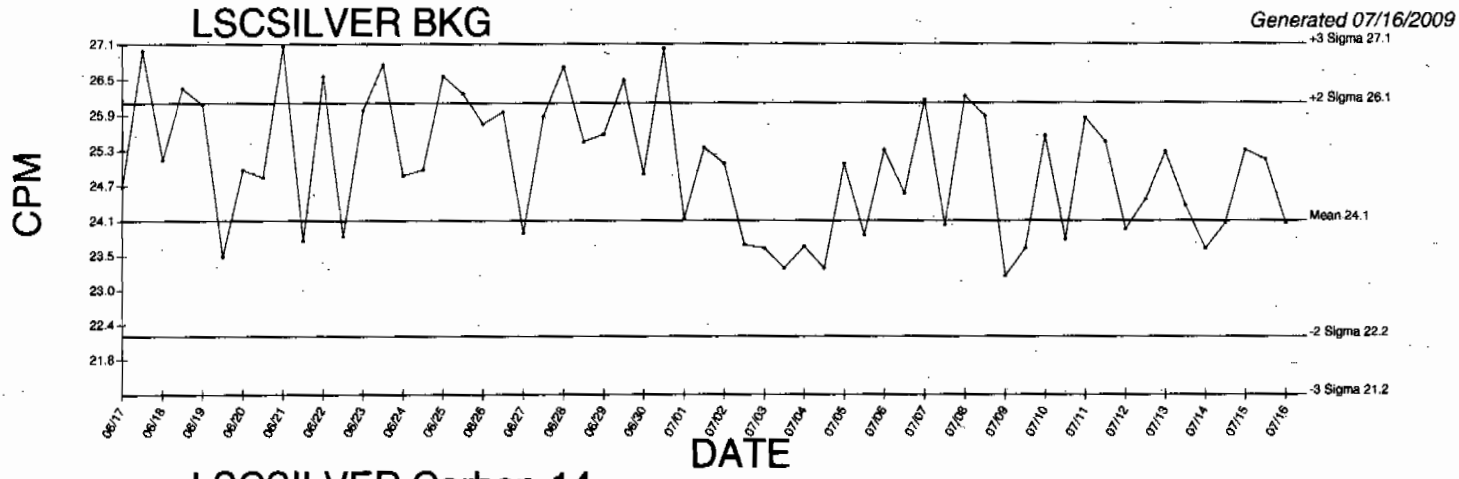

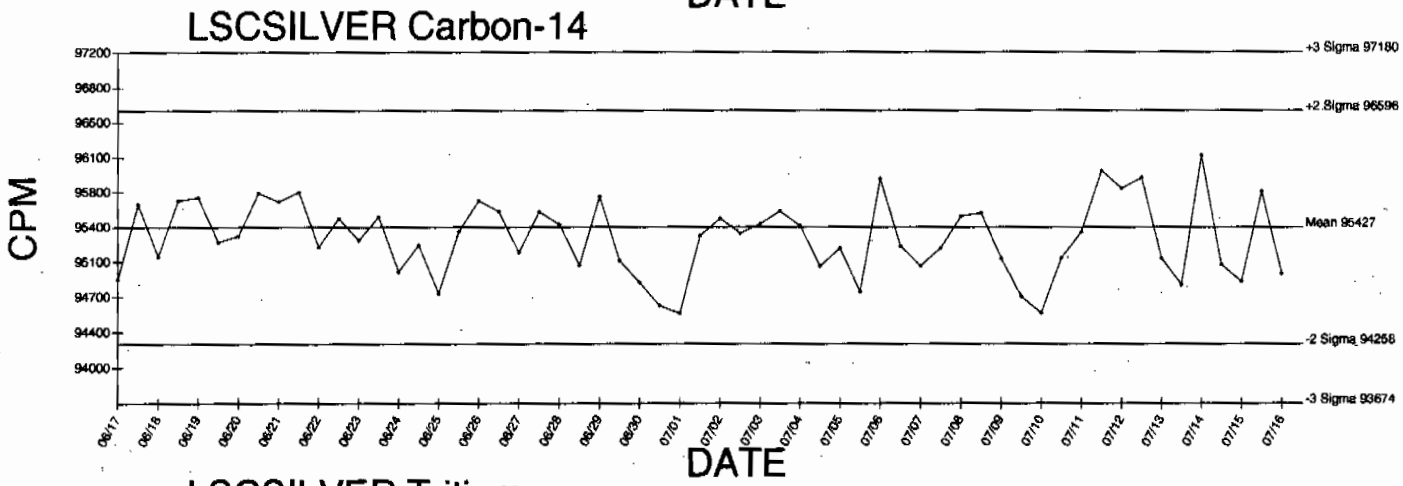

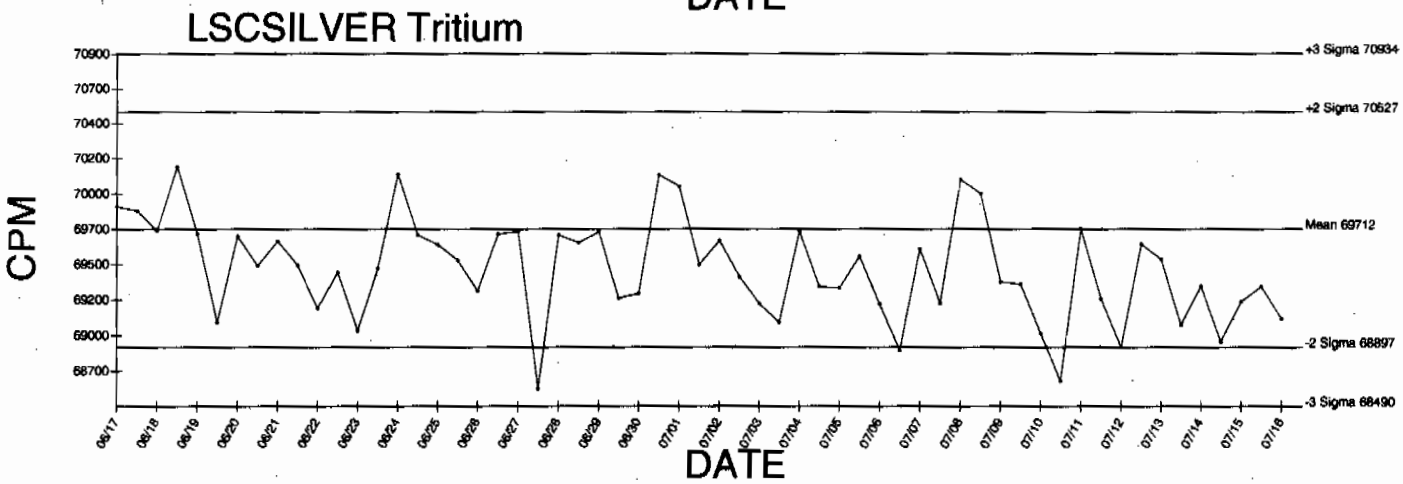

● Denotes Outlier

QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 5-JAN-2009 12:57:04 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000

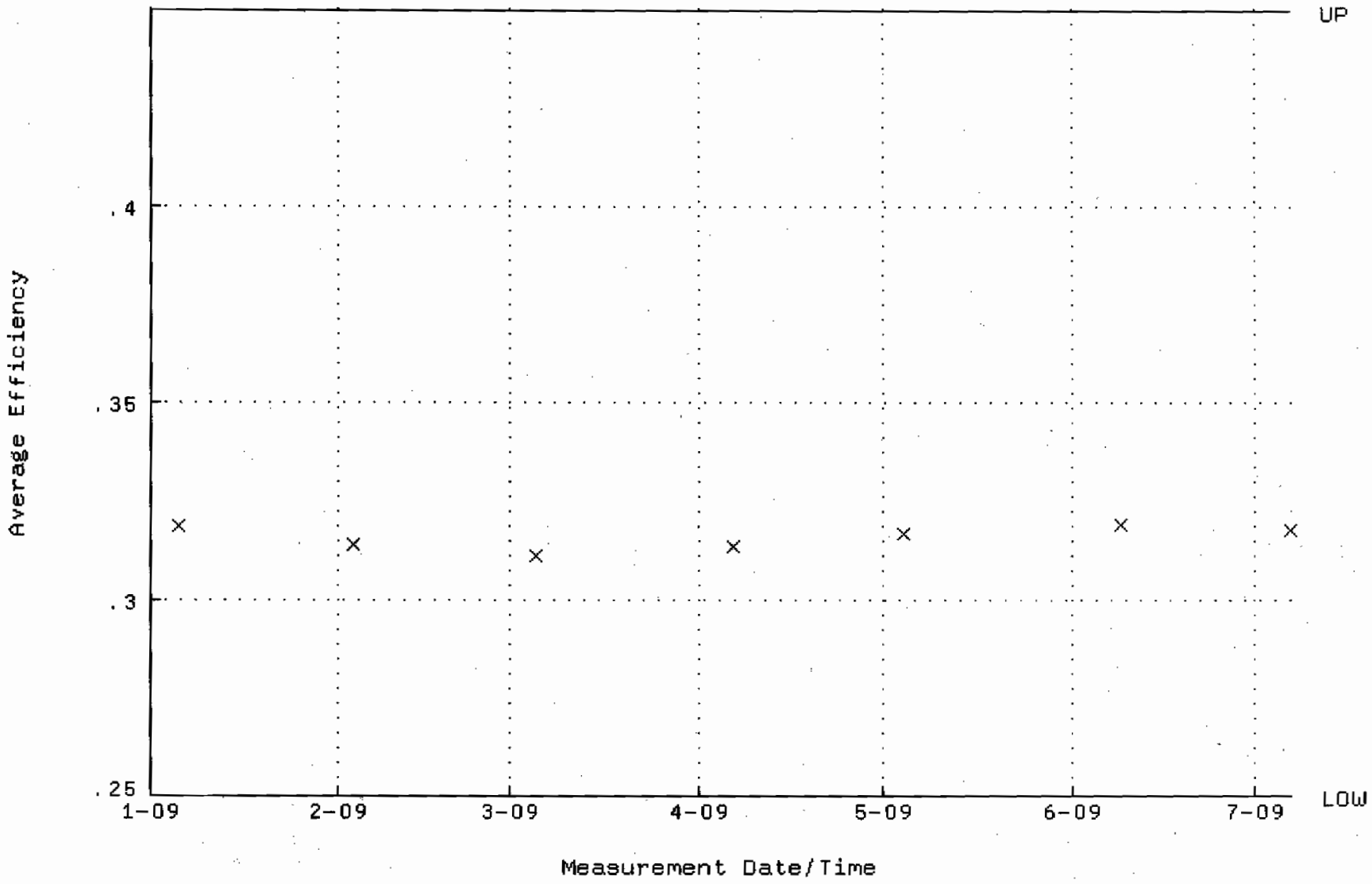

QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 5-JAN-2009 12:57:04 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000

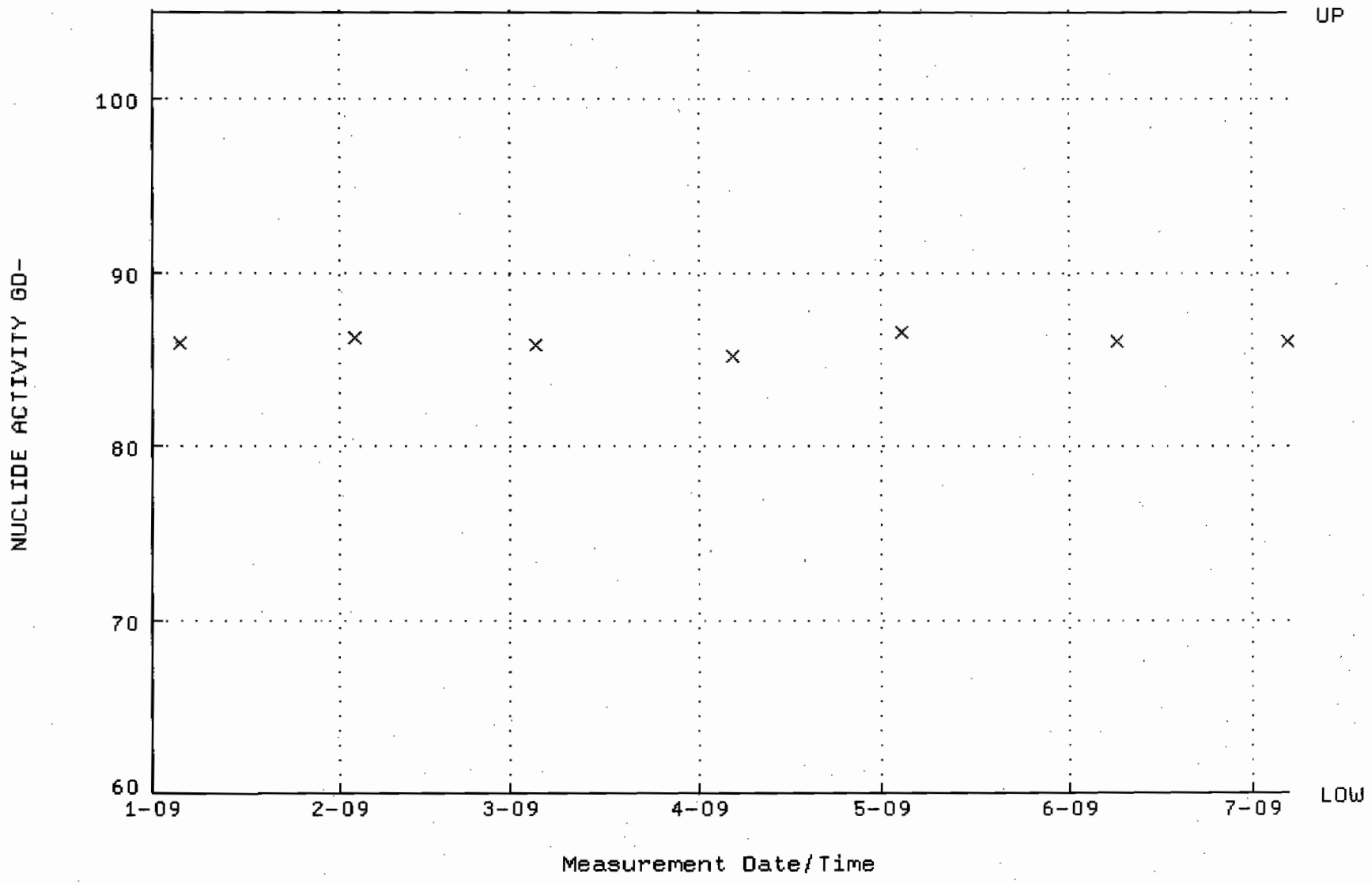

QA filename : DKA100:[ENV_ALPHA.QA.B]B048.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:30 through 6-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

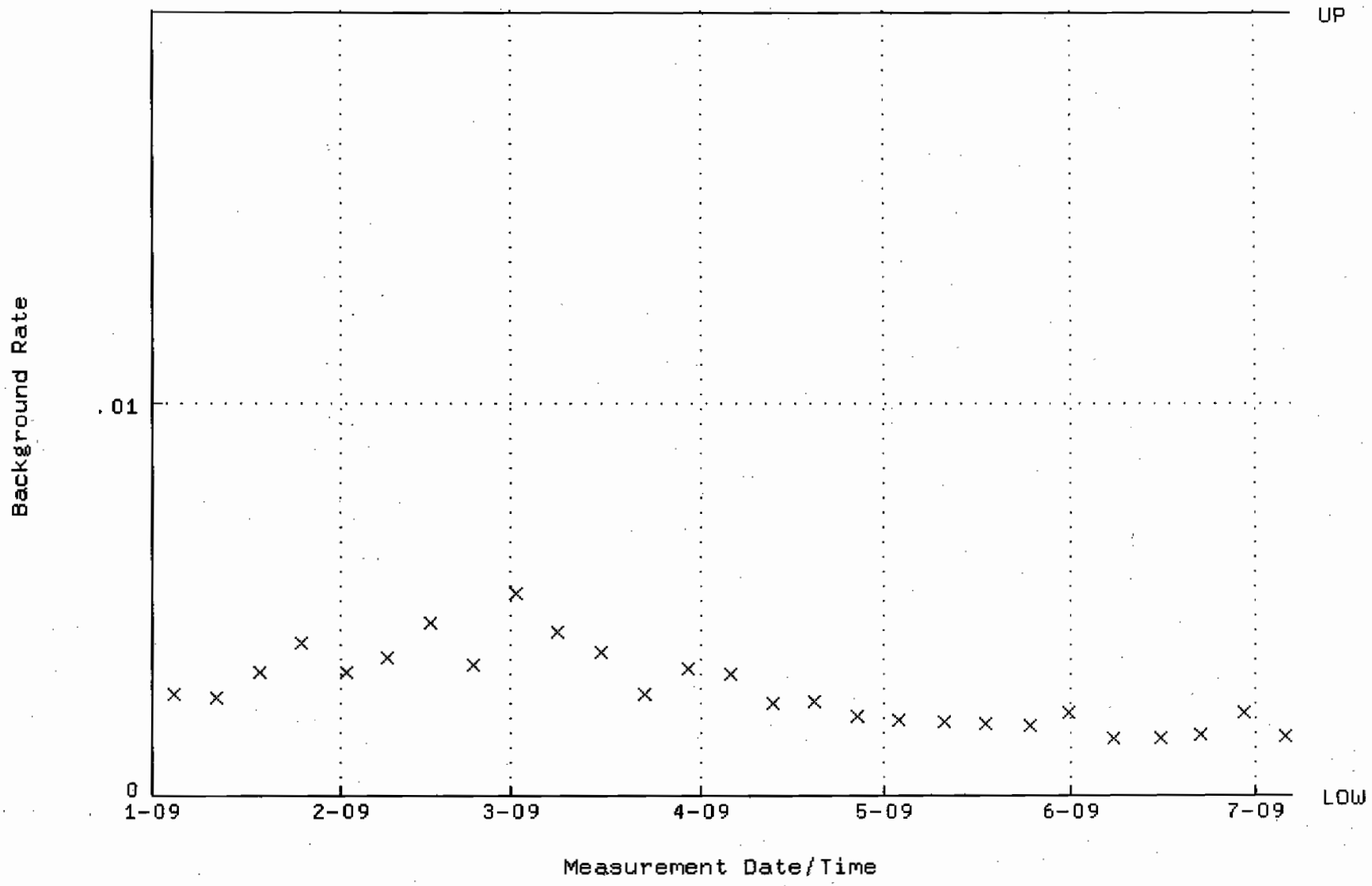

QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.302750 through 0.322750

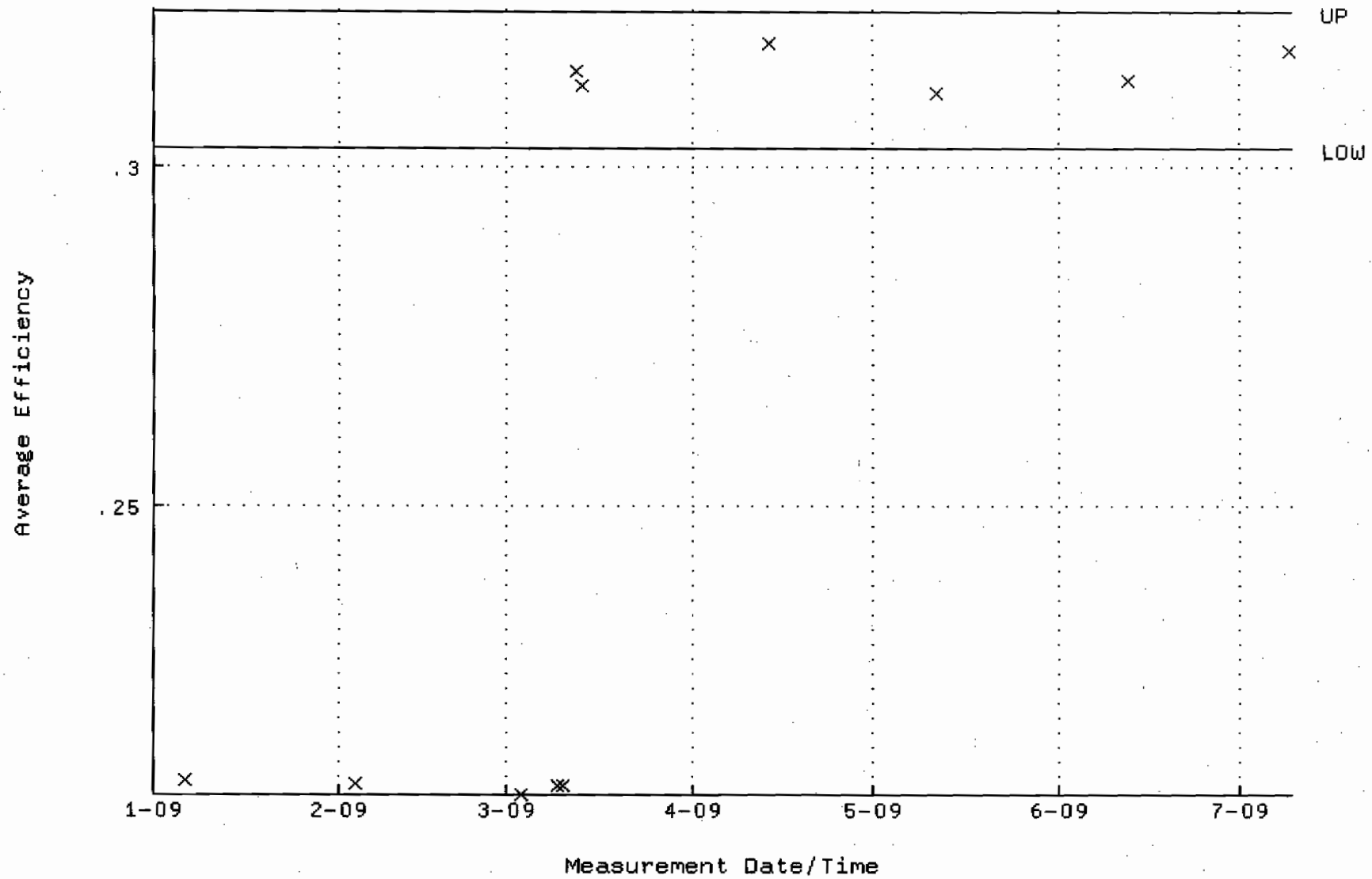

QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 86.8638 through 96.0074

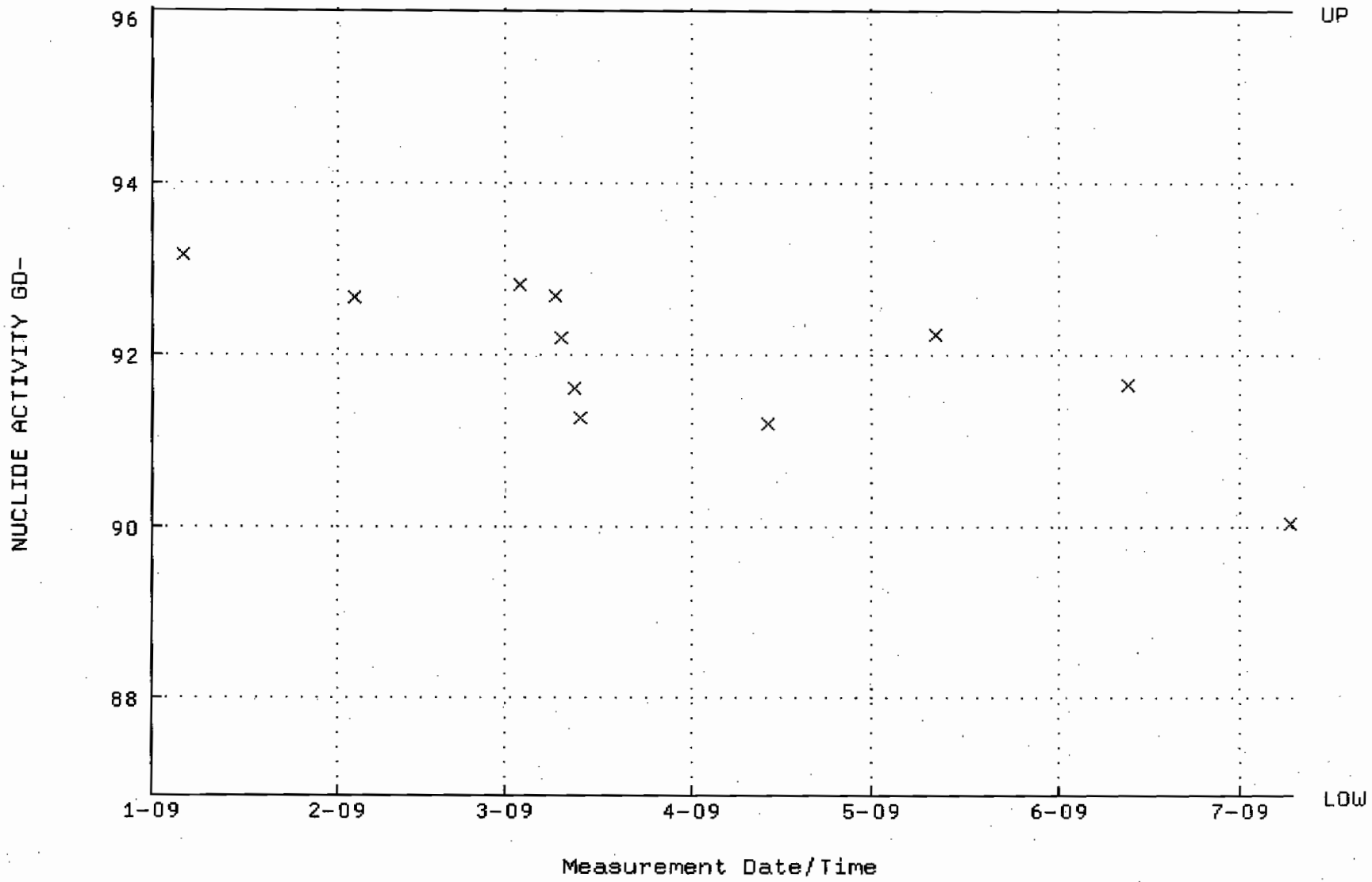

QA filename : DKA100:[ENV_ALPHA.QA.B]B065.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

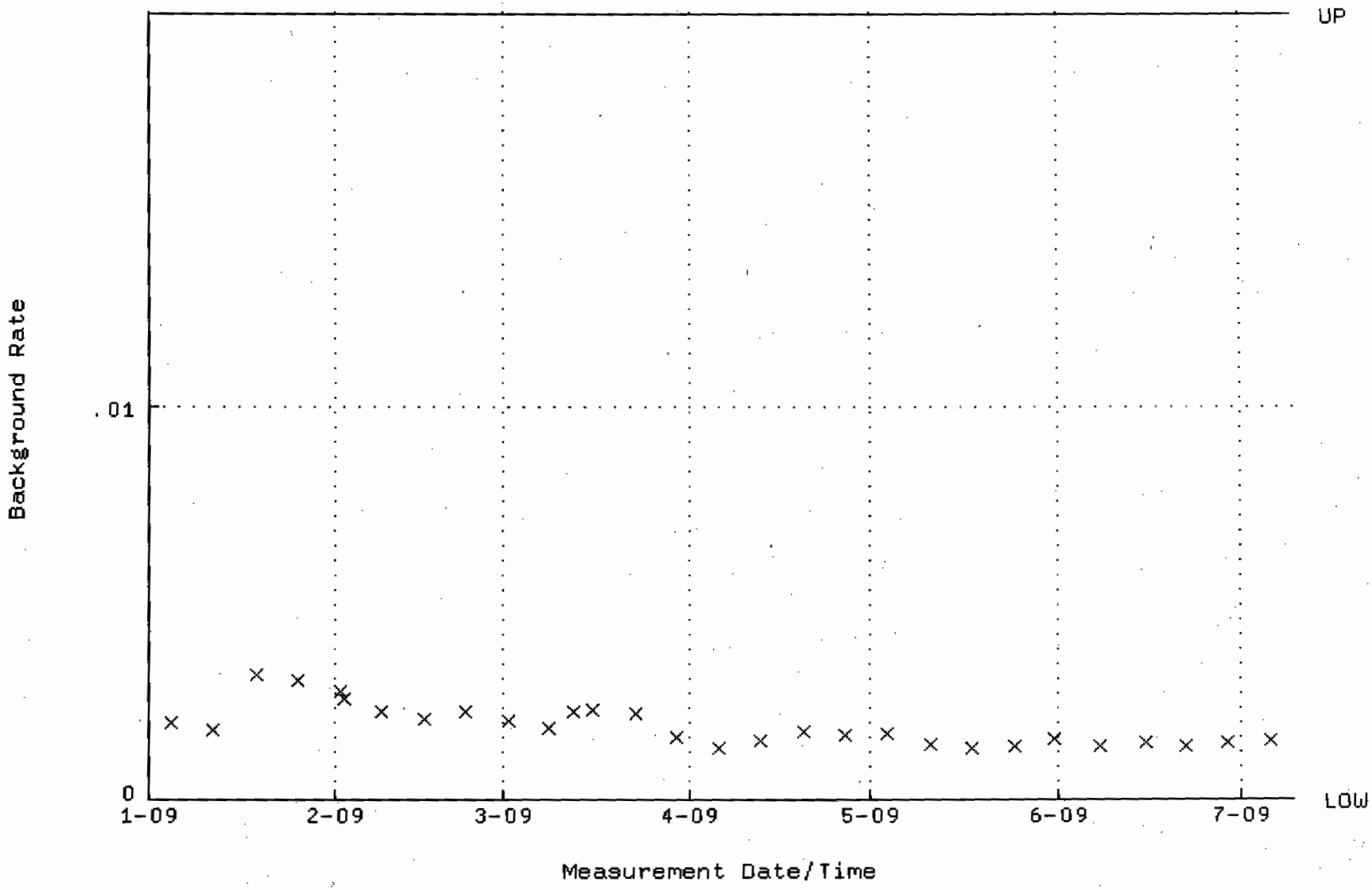

QA filename : DKA100:[ENV_ALPHA.QA.W]W066.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.300416 through 0.320416

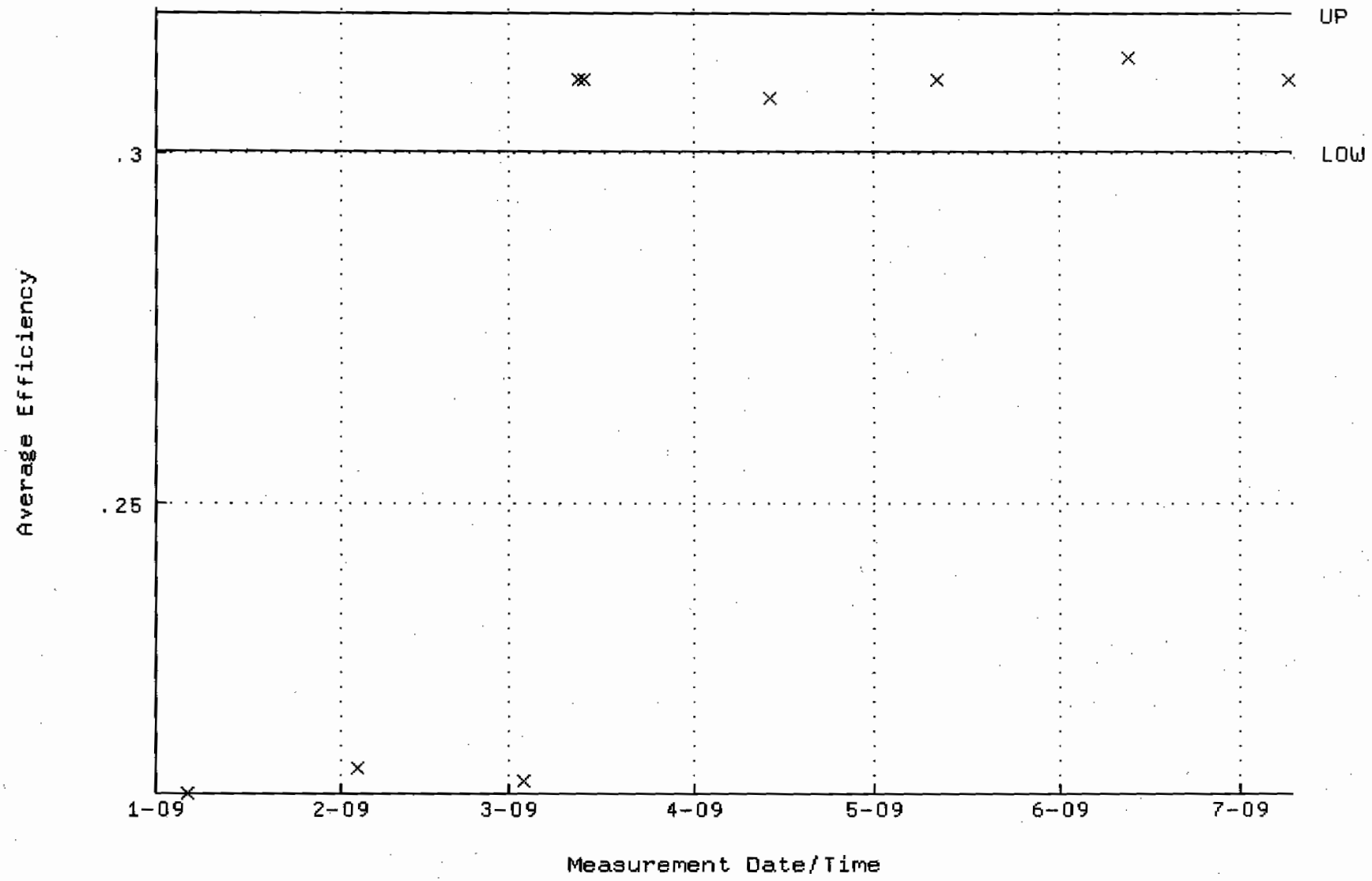

QA filename : DKA100:[ENV_ALPHA.QA.W]W066.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 85.0864 through 94.0428

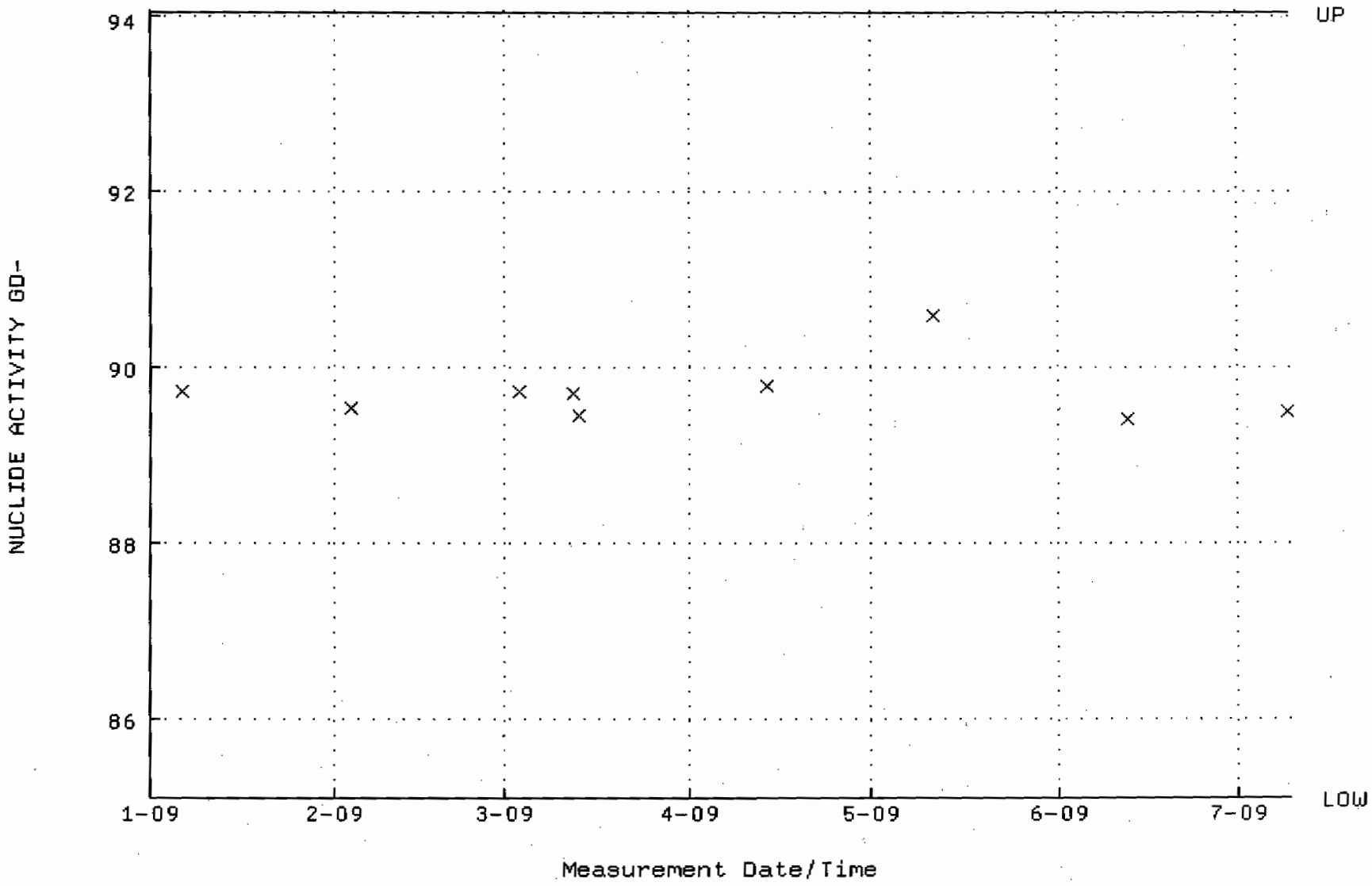

QA filename : DKA100:[ENV_ALPHA.QA.B]B066.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

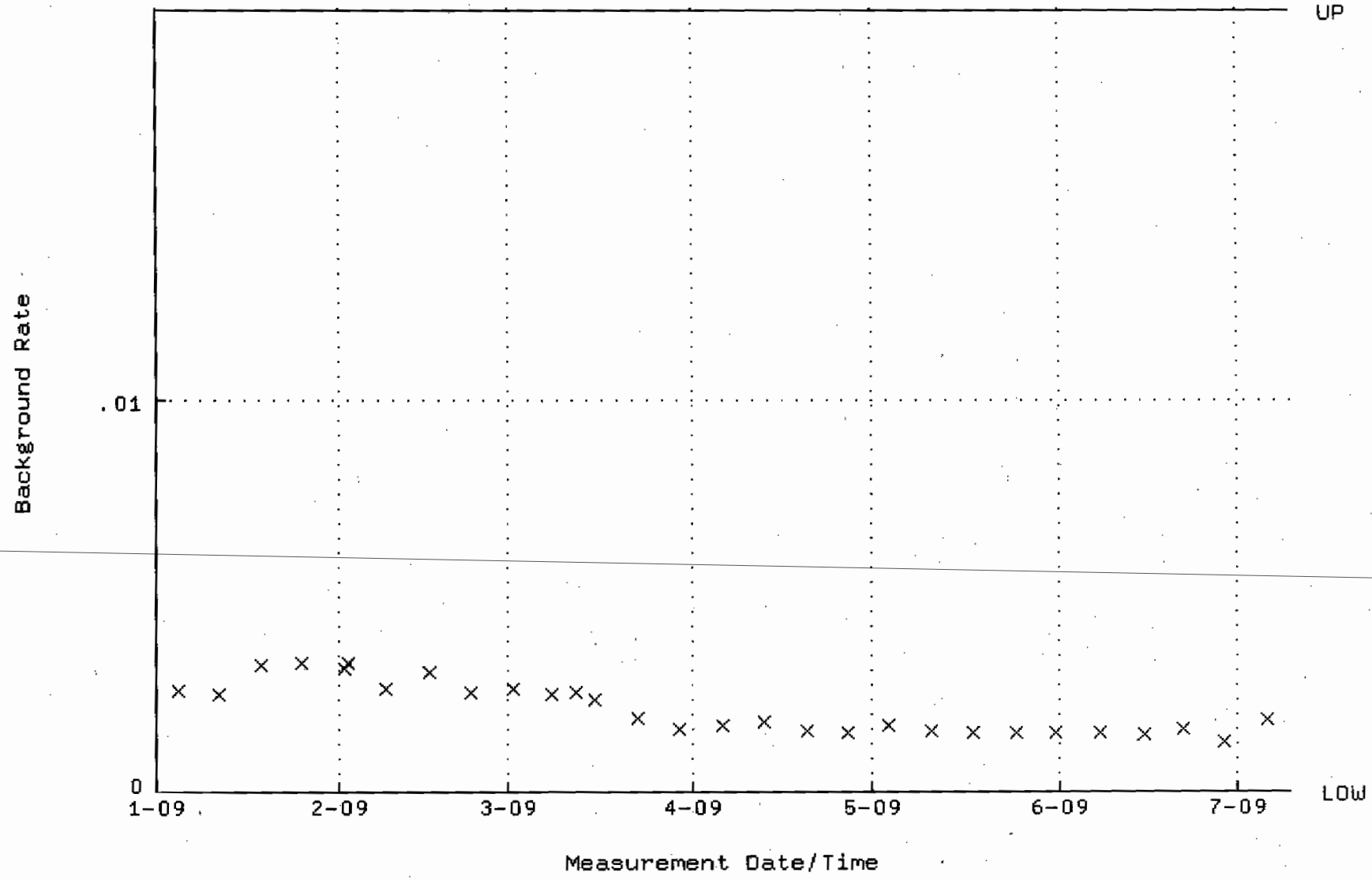

QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.316597 through 0.336597

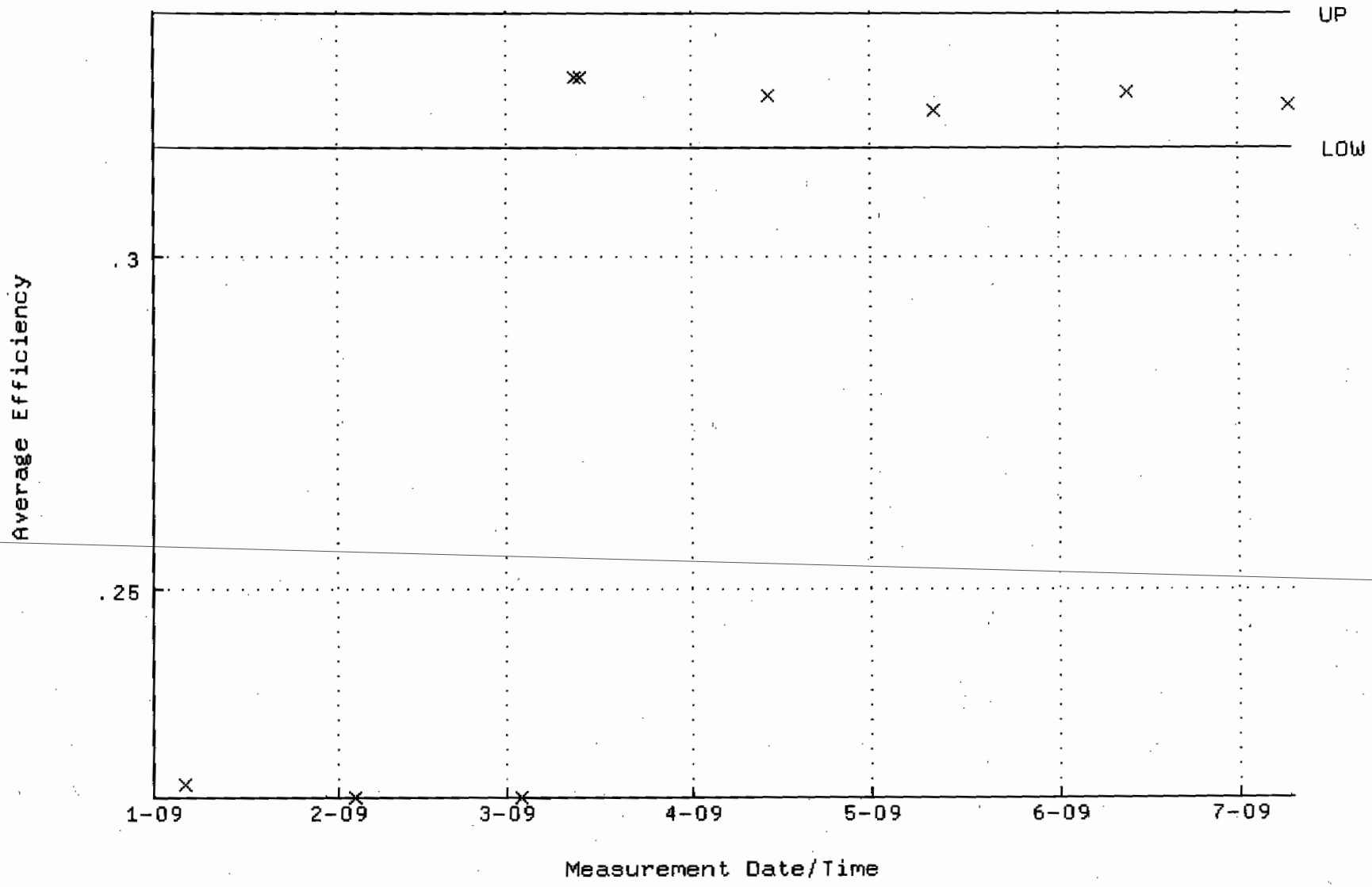

QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 86.2683 through 95.3491

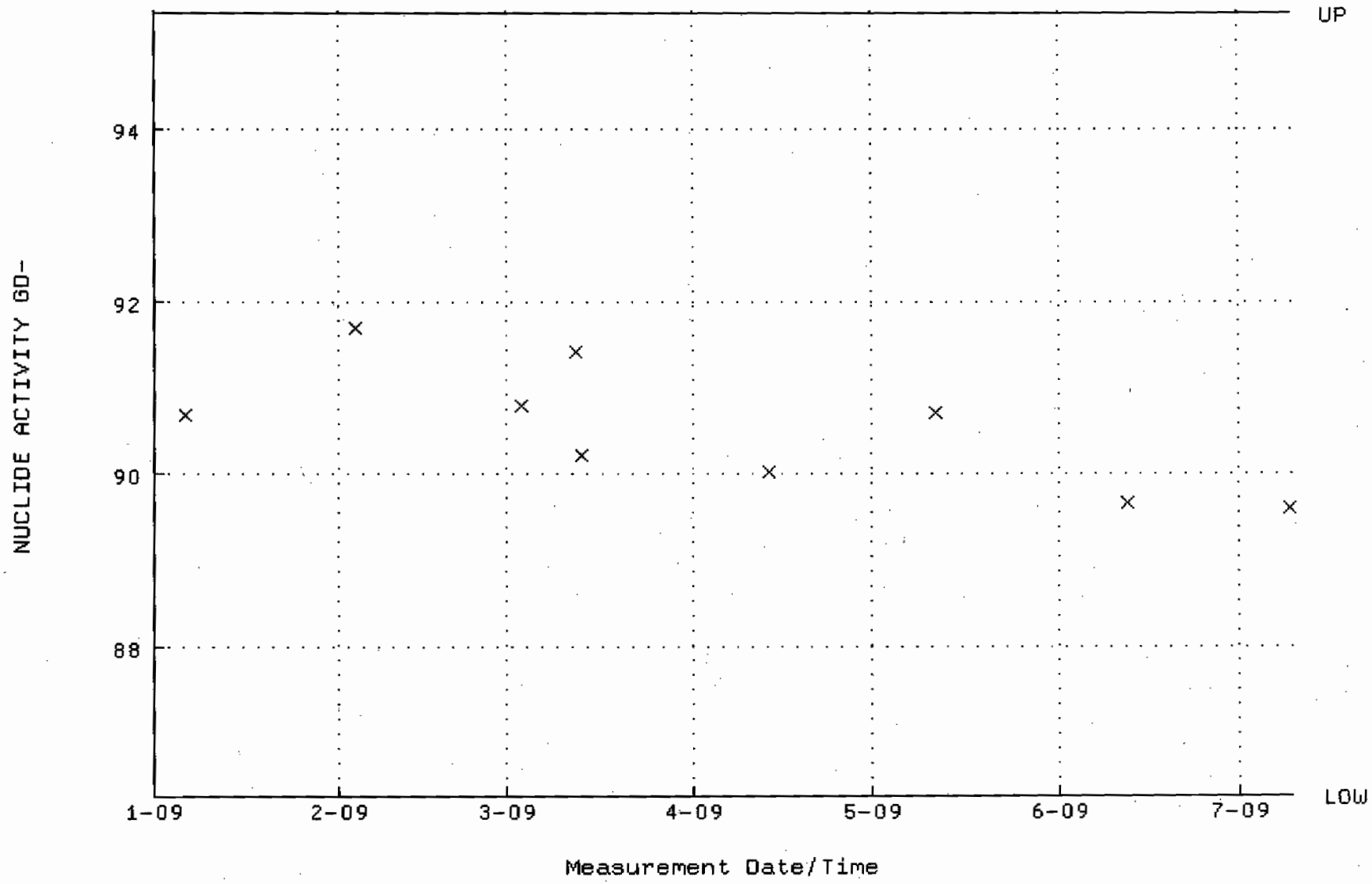

QA filename : DKA100:[ENV_ALPHA.QA.B]B067.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

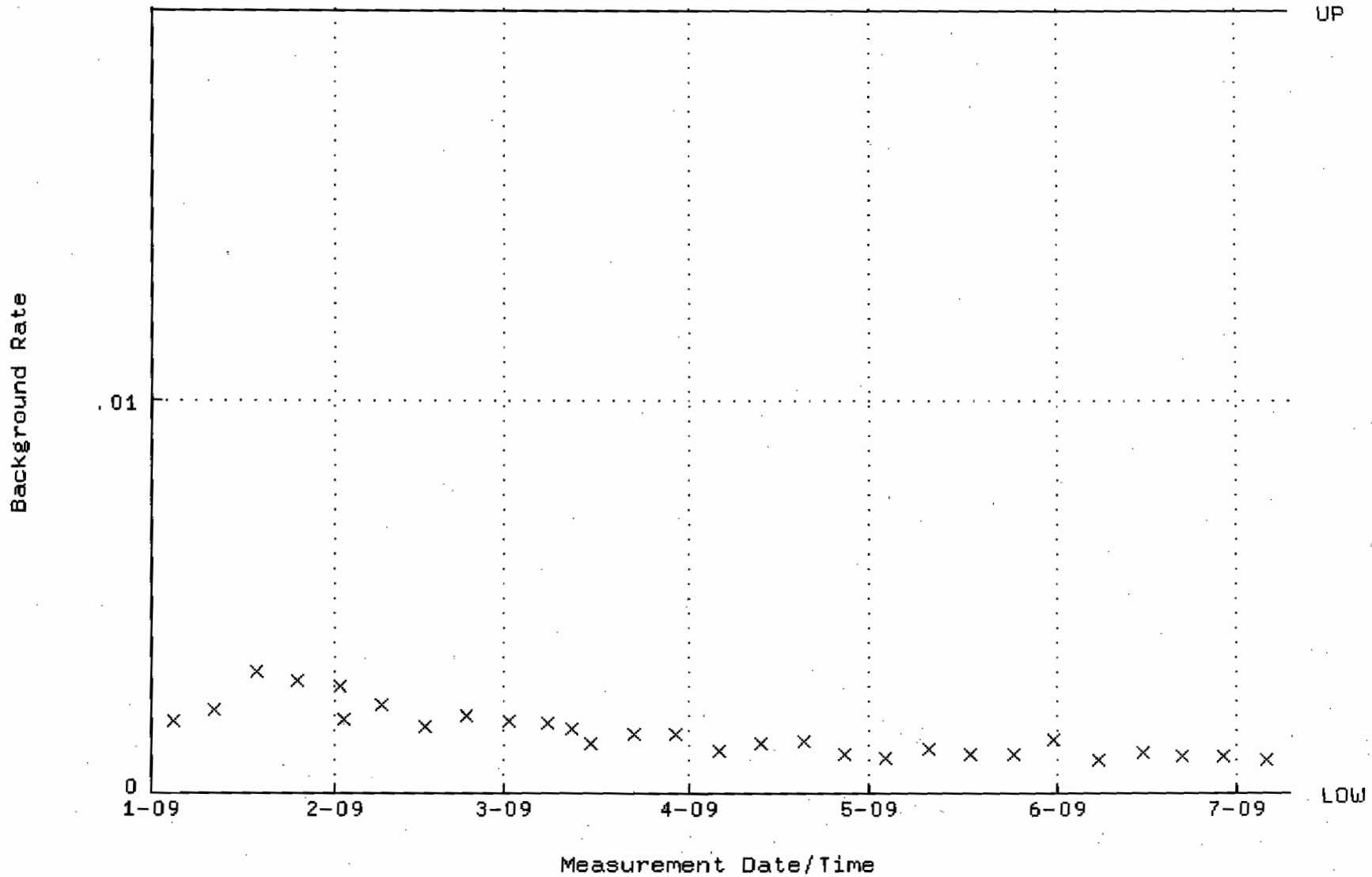

QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 3-FEB-2009 12:12:09 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.289178 through 0.309178

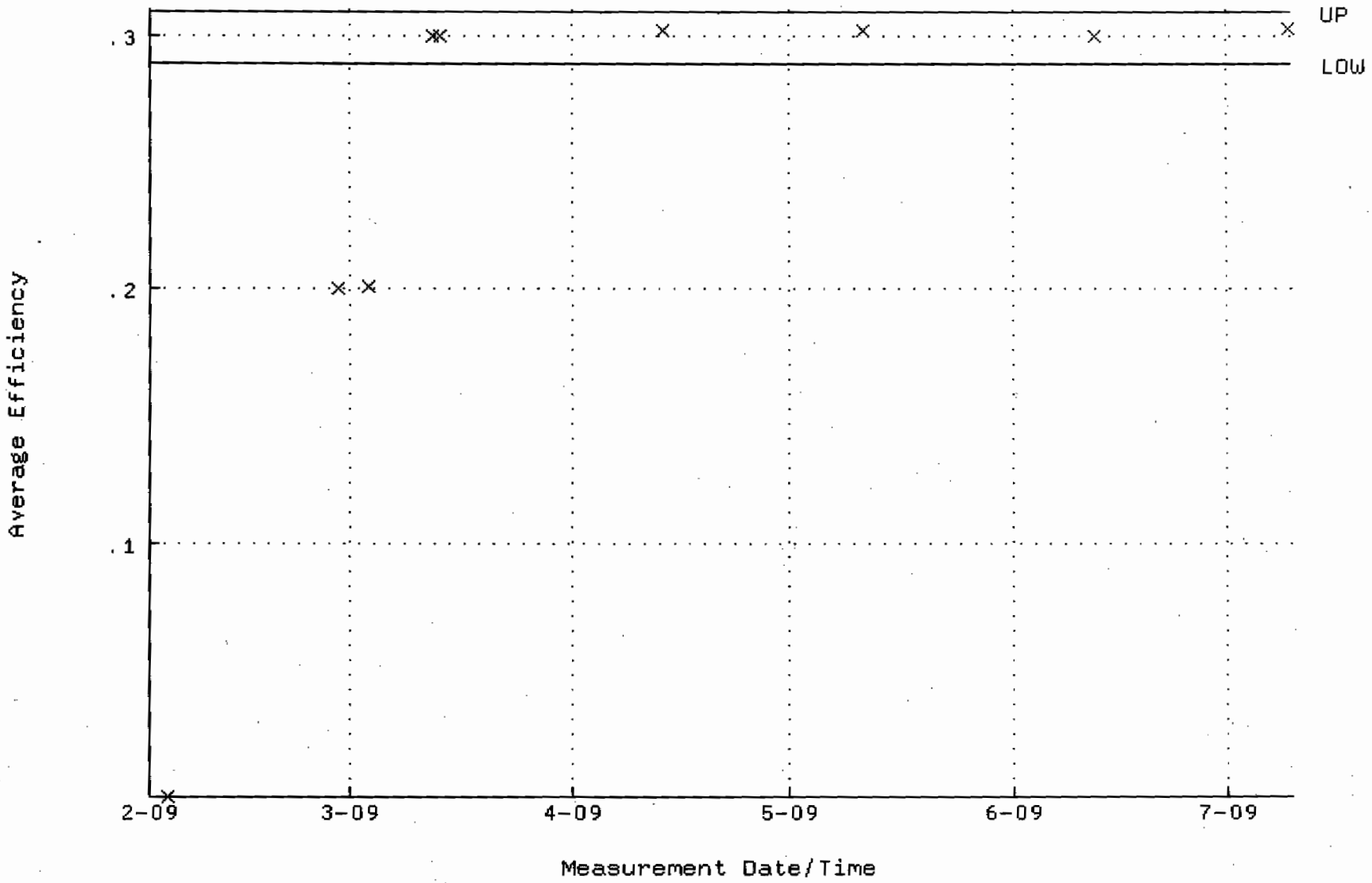

QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 3-FEB-2009 12:12:09 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 87.4419 through 96.6463

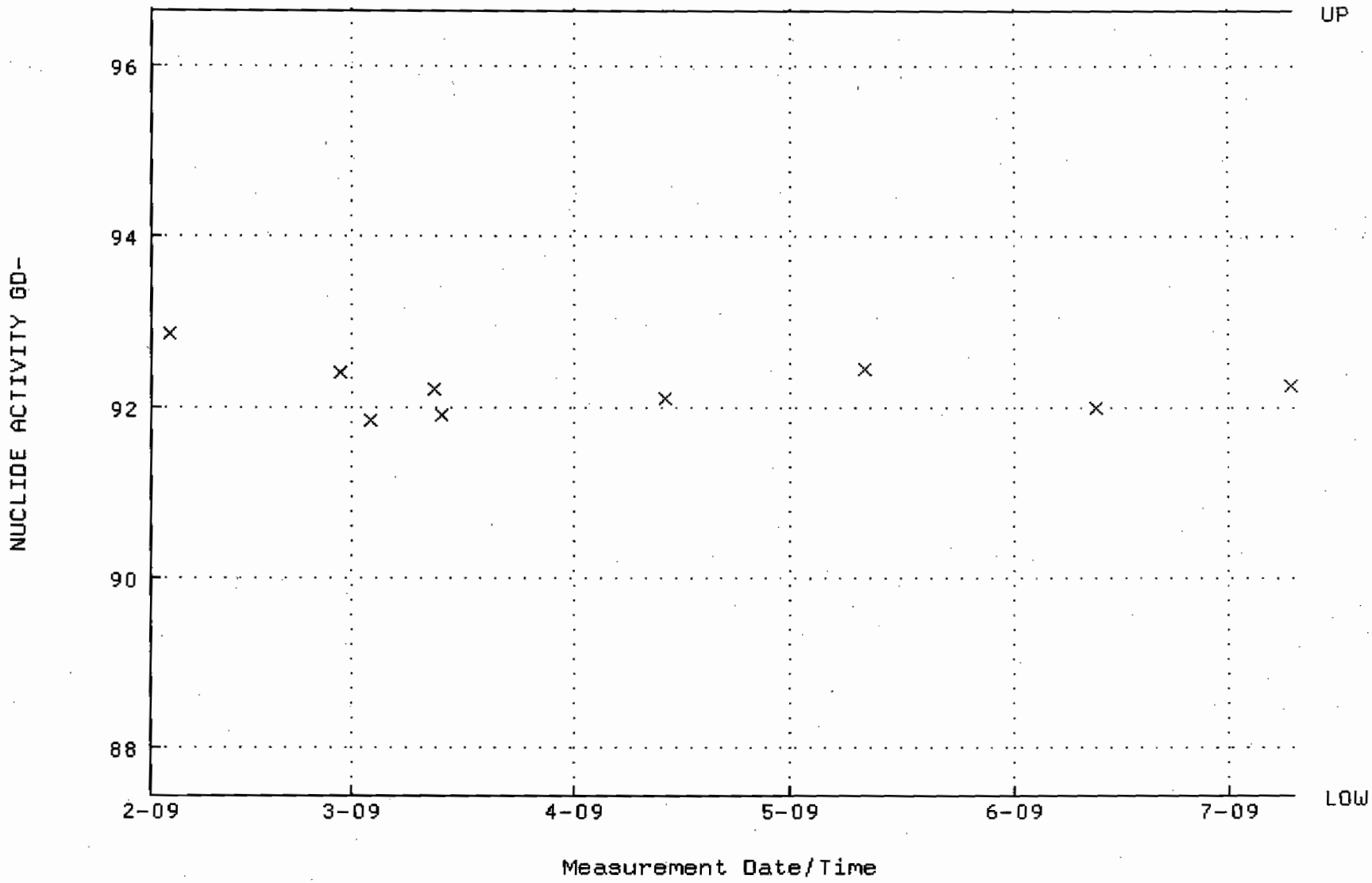

QA filename : DKA100:[ENV_ALPHA.QA.B]B068.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

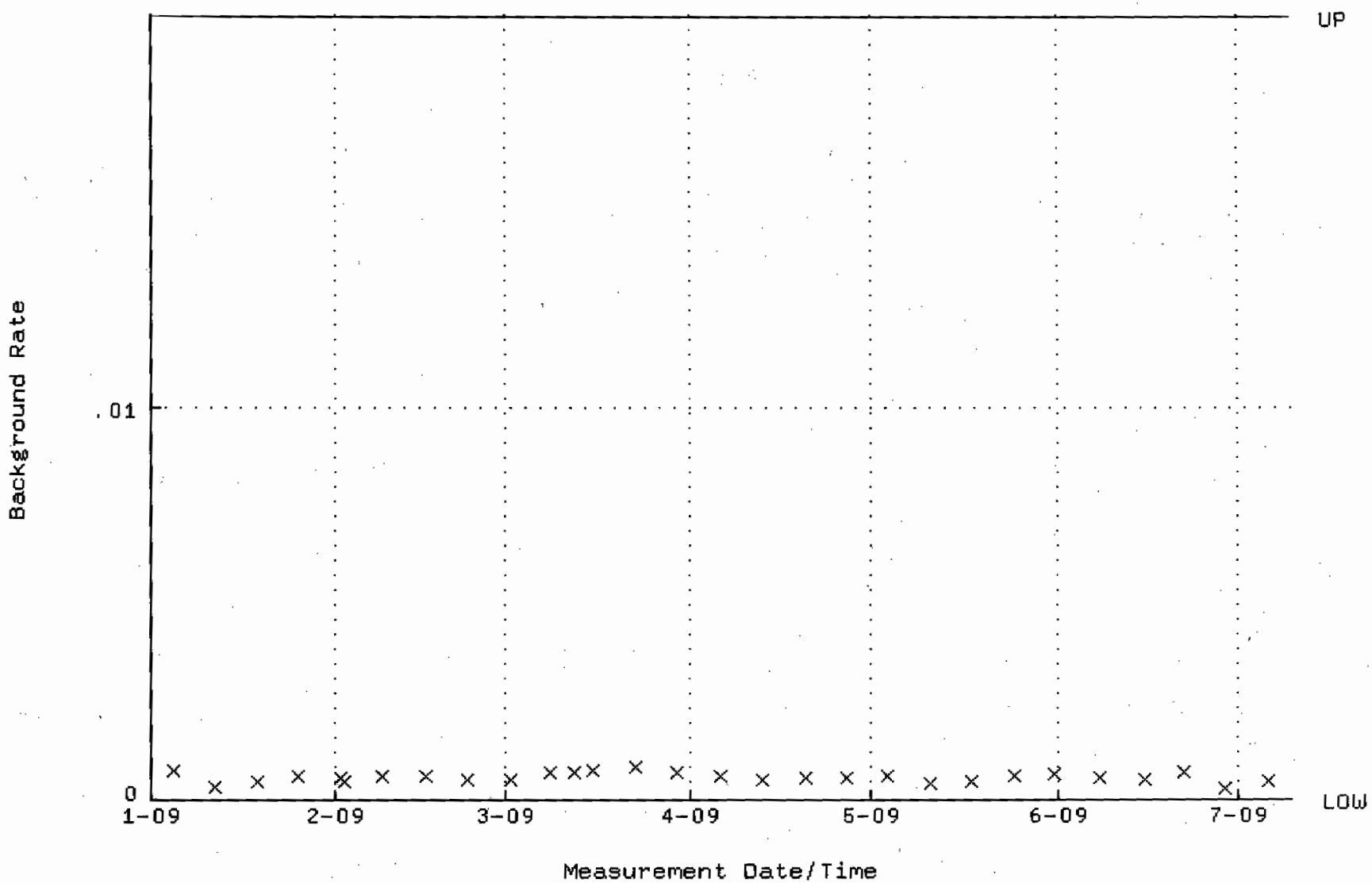

QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.306636 through 0.326636

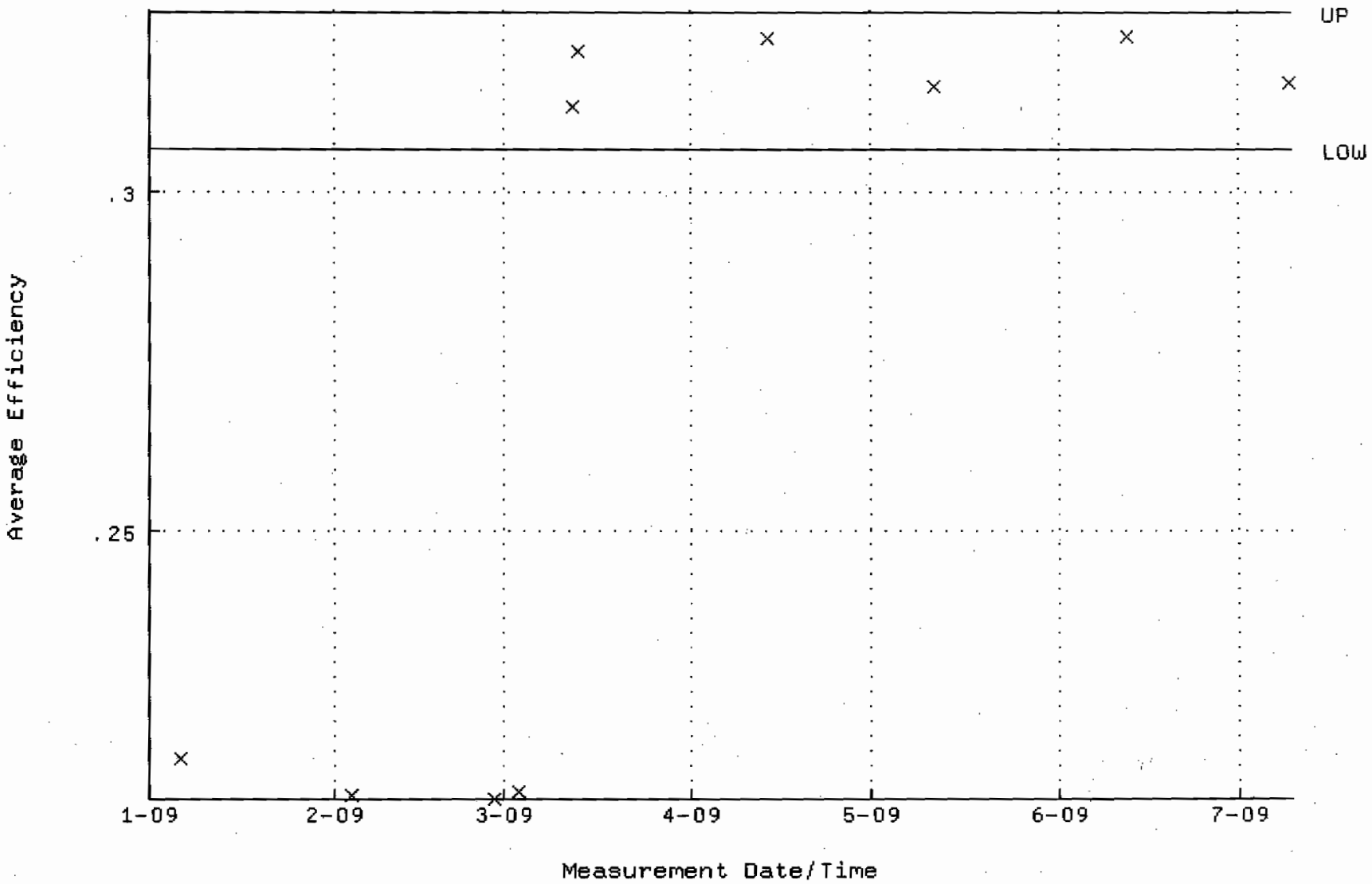

QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JAN-2009 07:53:20 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 89.6479 through 99.0845

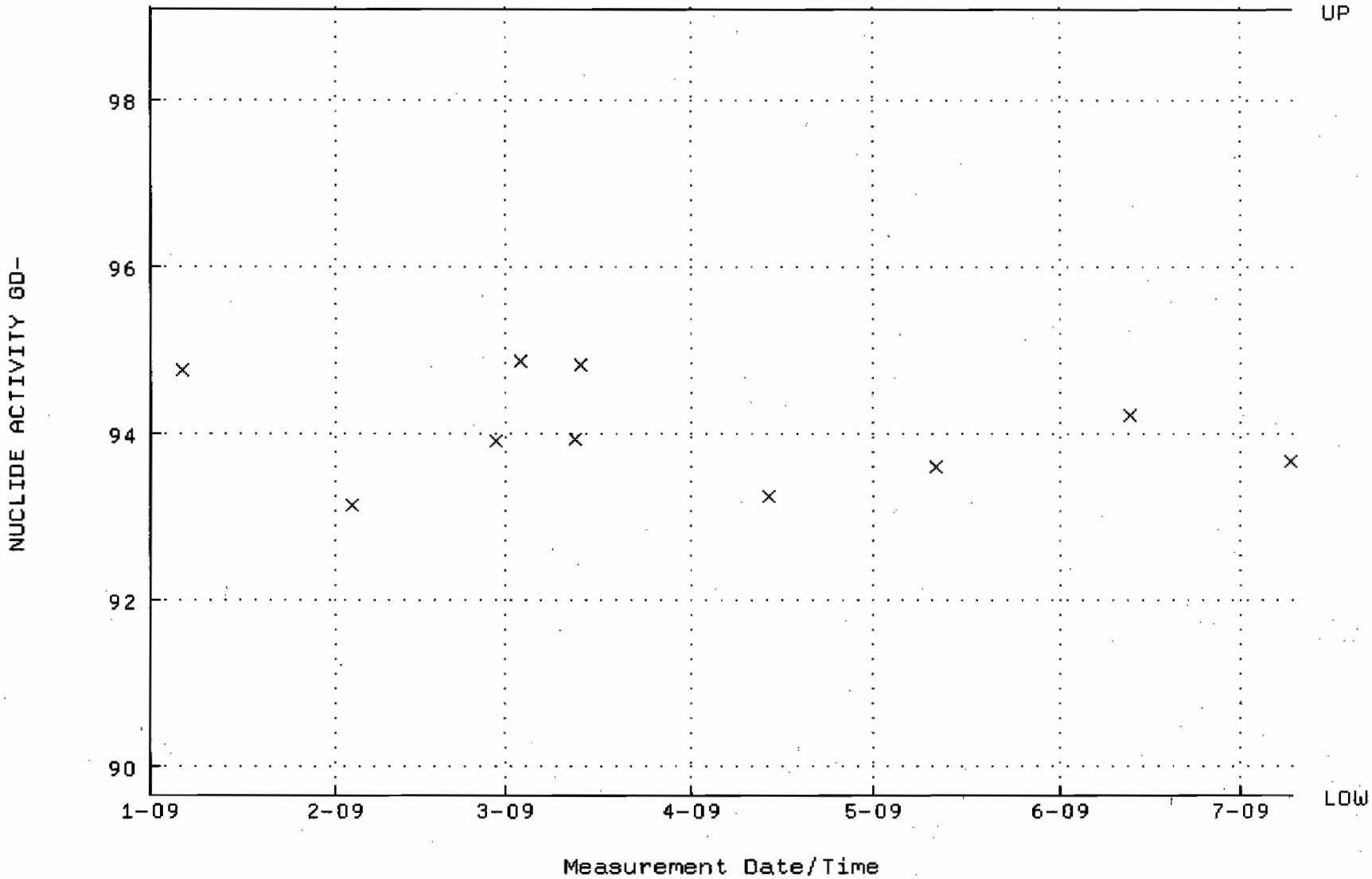

QA filename : DKA100:[ENV_ALPHA.QA.B]B069.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:21:32 through 9-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

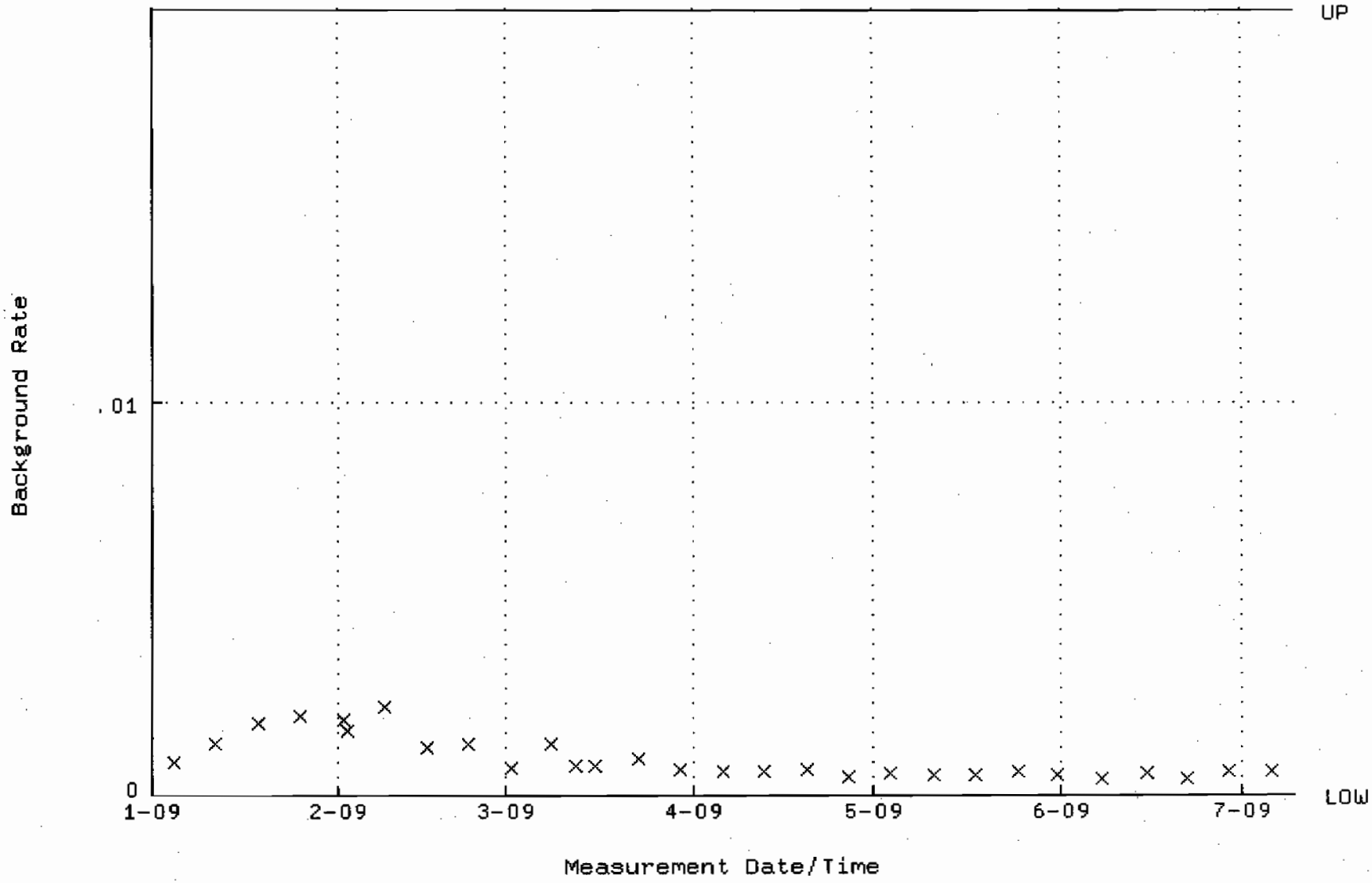

QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:23:59 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.256741 through 0.276741

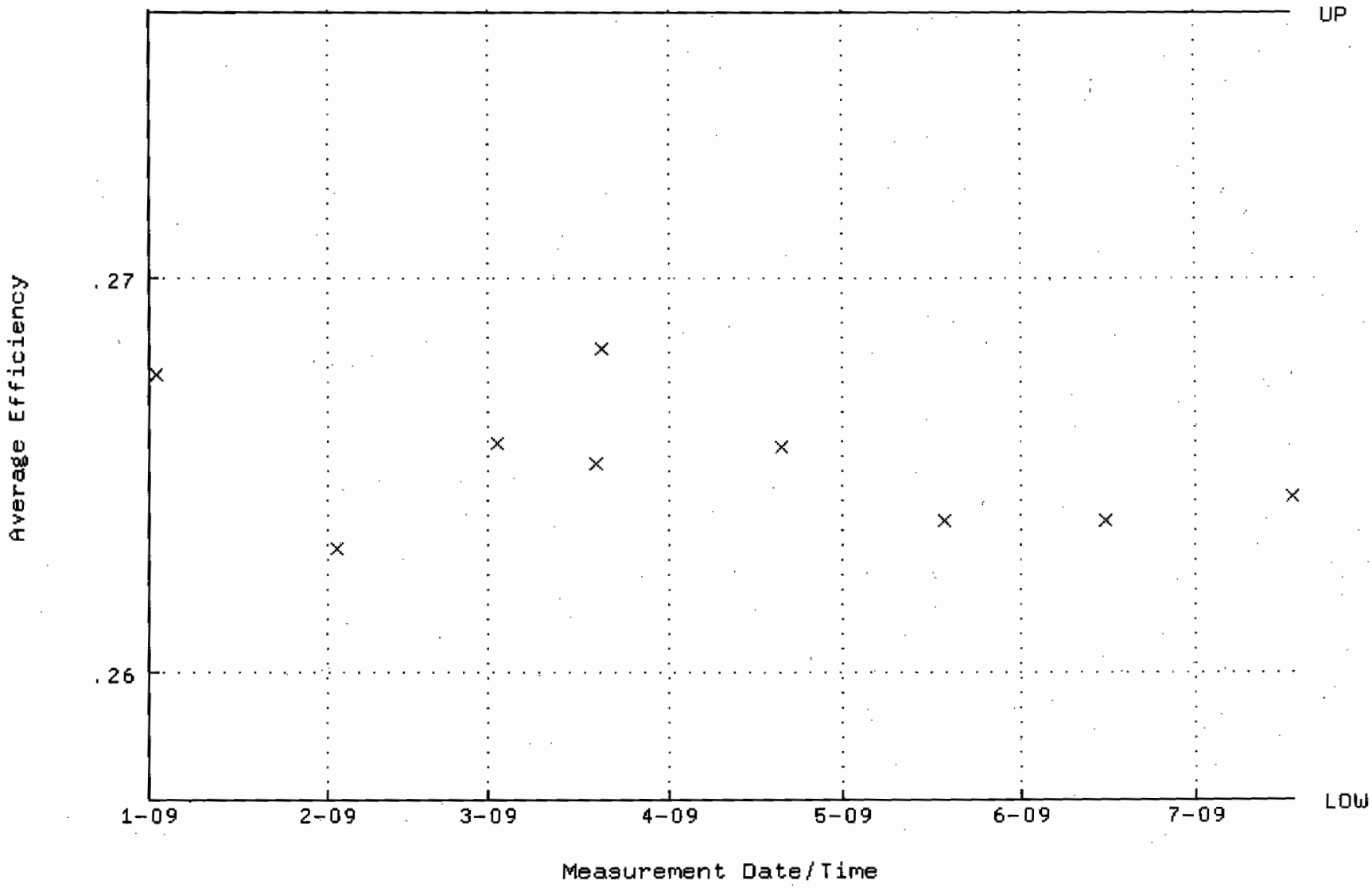

QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:23:59 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 86.3646 through 95.4556

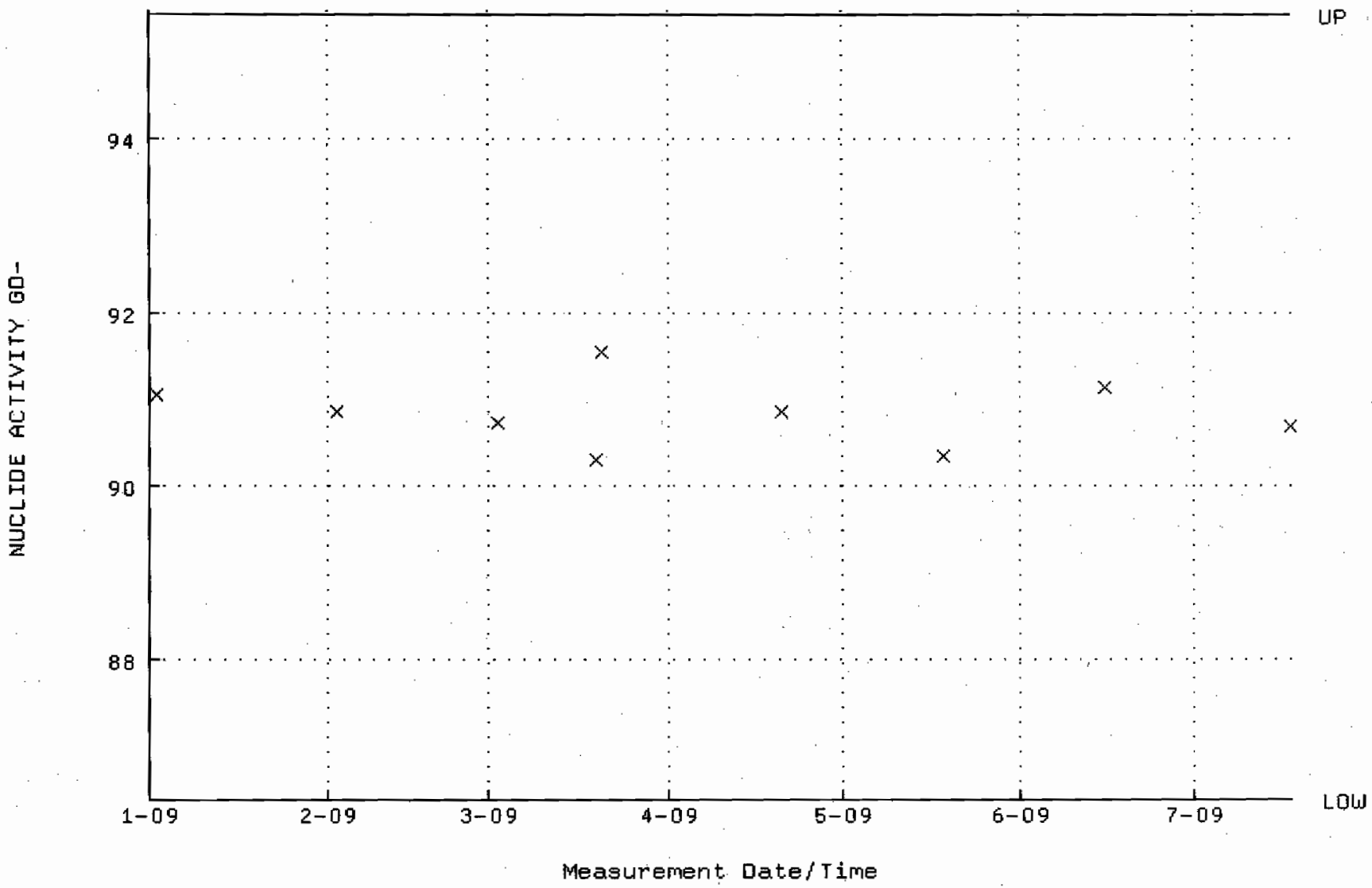

QA filename : DKA100:[ENV_ALPHA.QA.B]B129.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:22:57 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

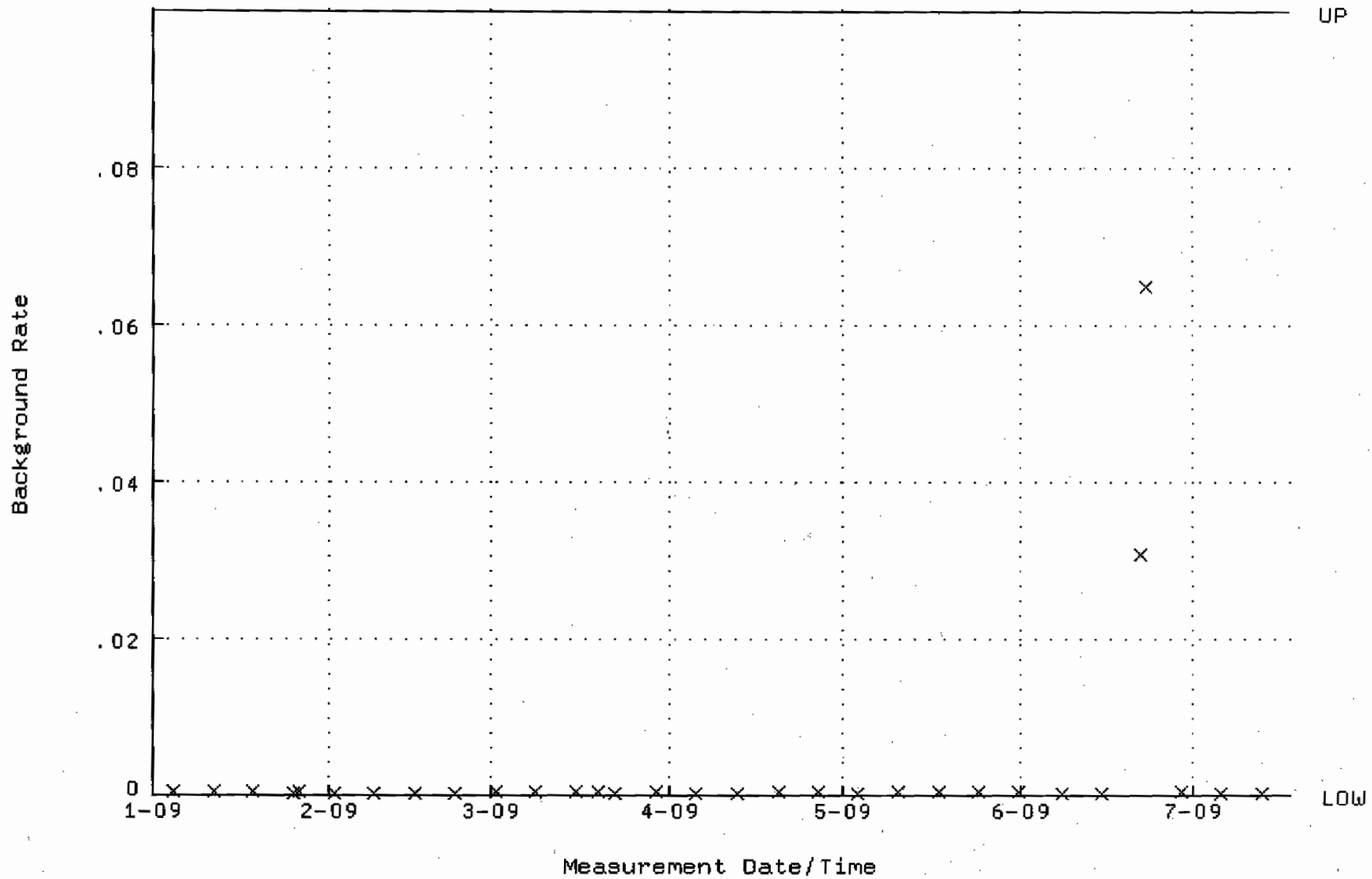

QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:04 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.239131 through 0.259131

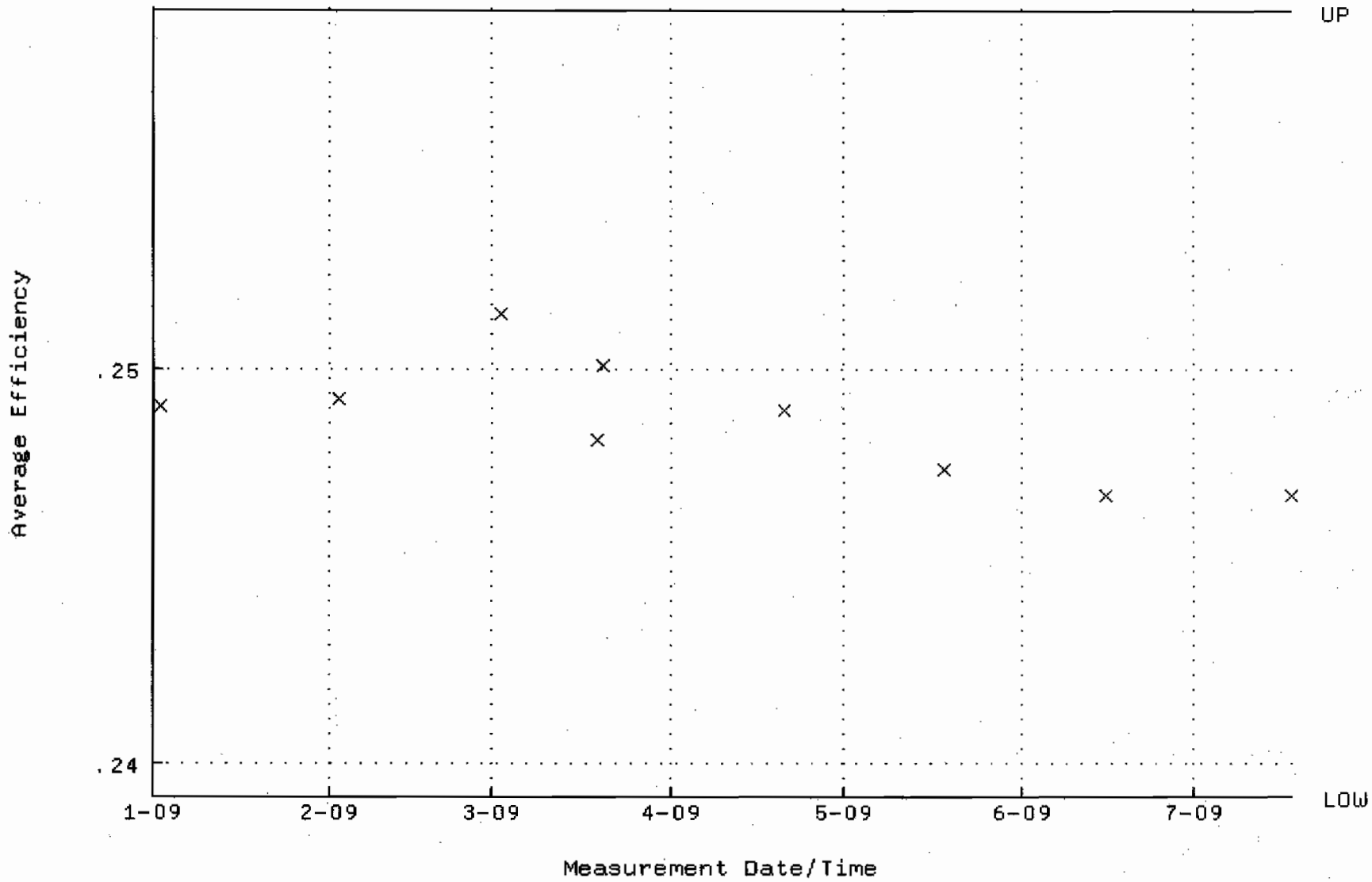

QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:04 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 88.1614 through 97.4416

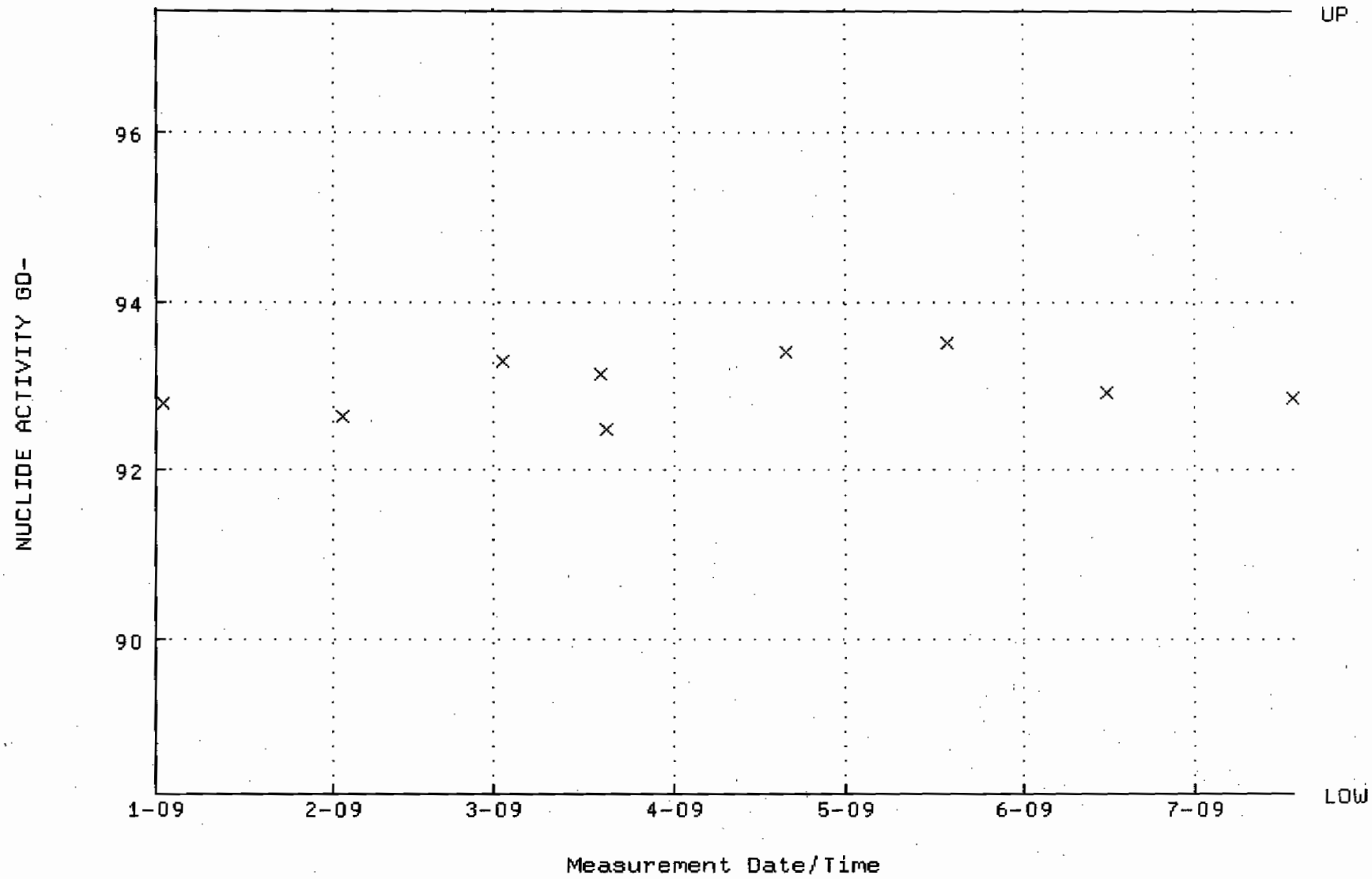

QA filename : DKA100:[ENV_ALPHA.QA.B]B130.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:01 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

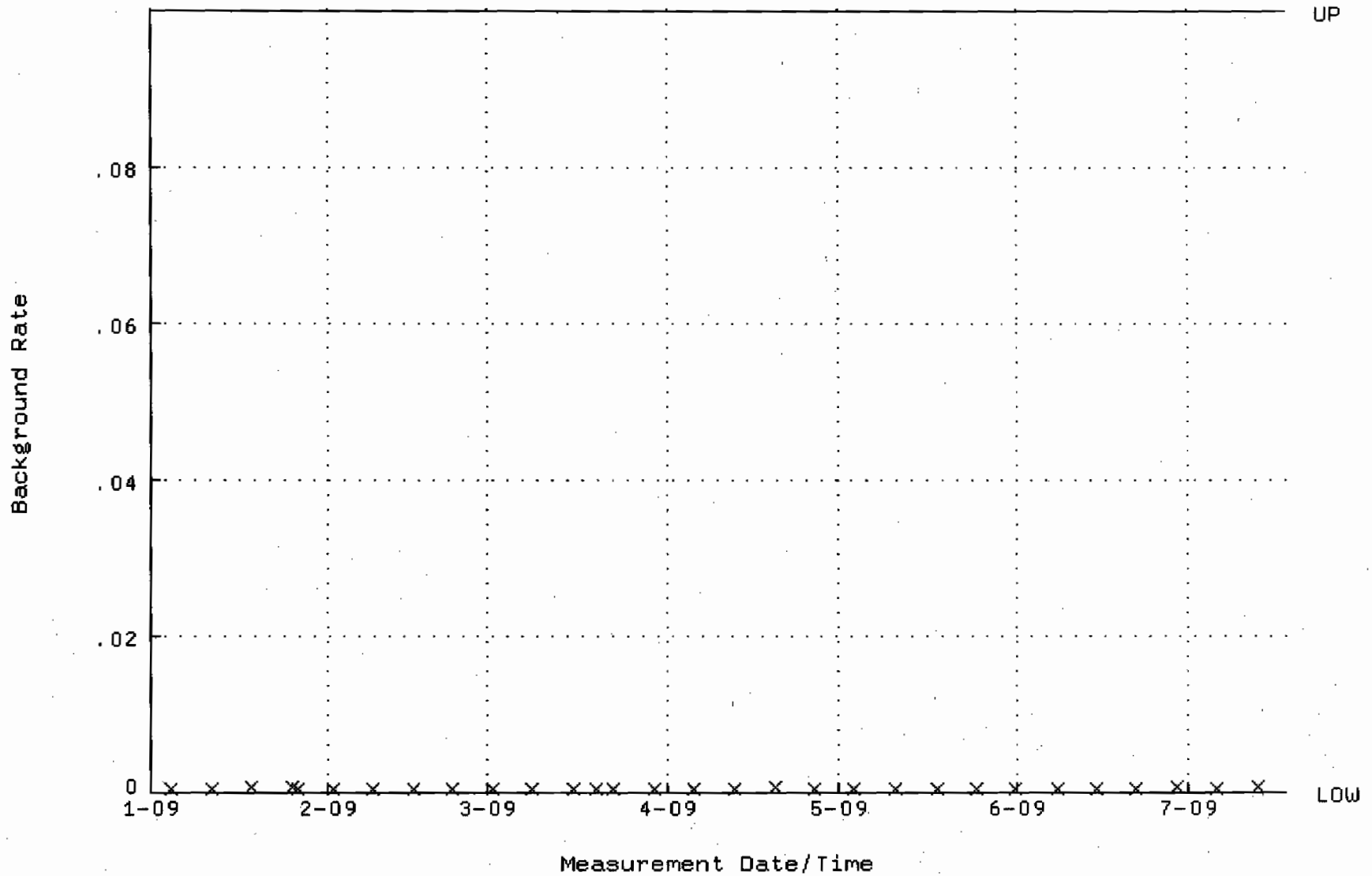

QA filename : DKA100:[ENV_ALPHA.QA.W]W131.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:24:10 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.247185 through 0.267185

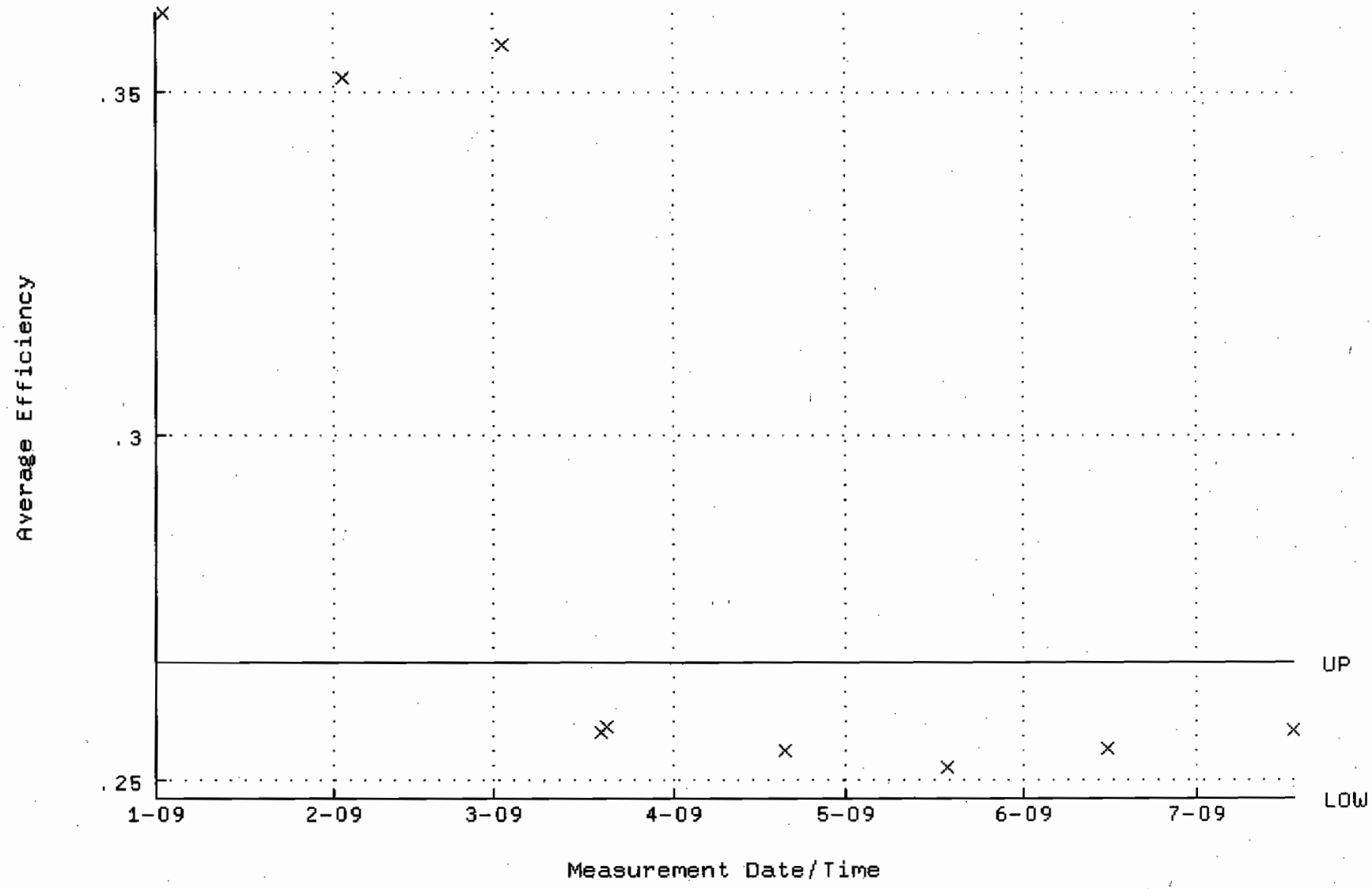

QA filename : DKA100:[ENV_ALPHA.QA.W]W131.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:24:10 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 85.9407 through 94.9871

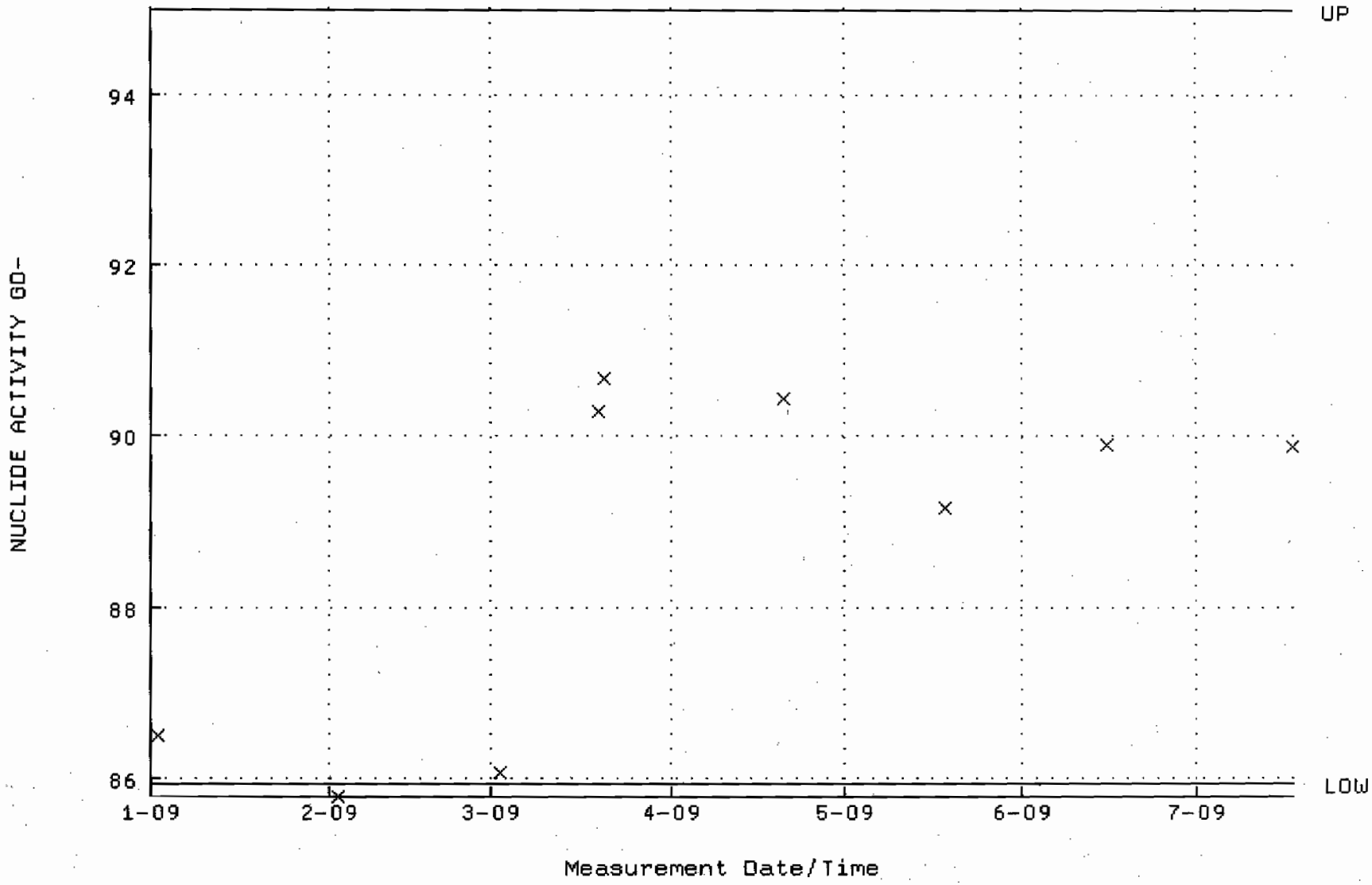

QA filename : DKA100:[ENV_ALPHA.QA.B]B131.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:23:06 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

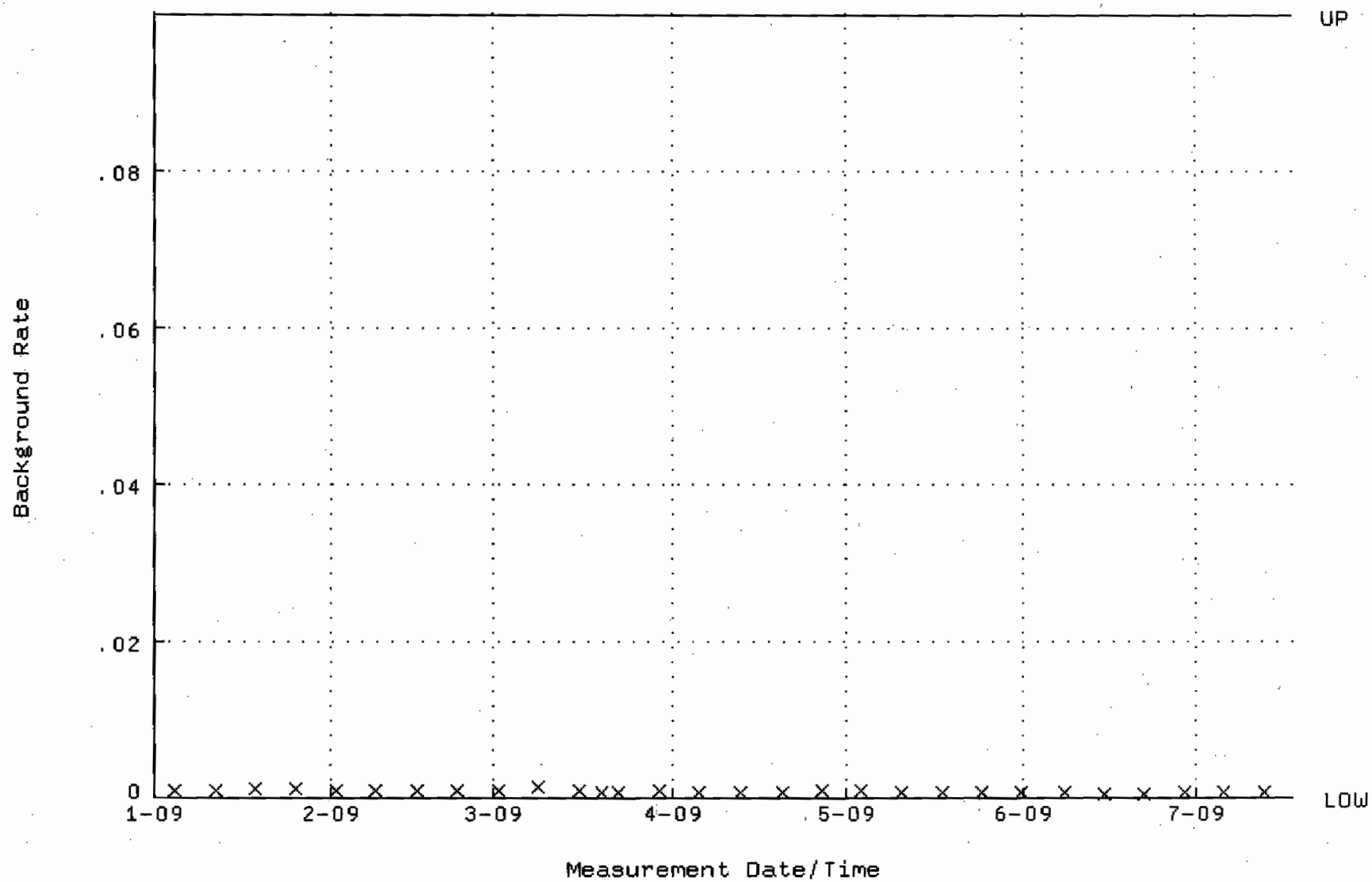

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:11 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.237963 through 0.257963

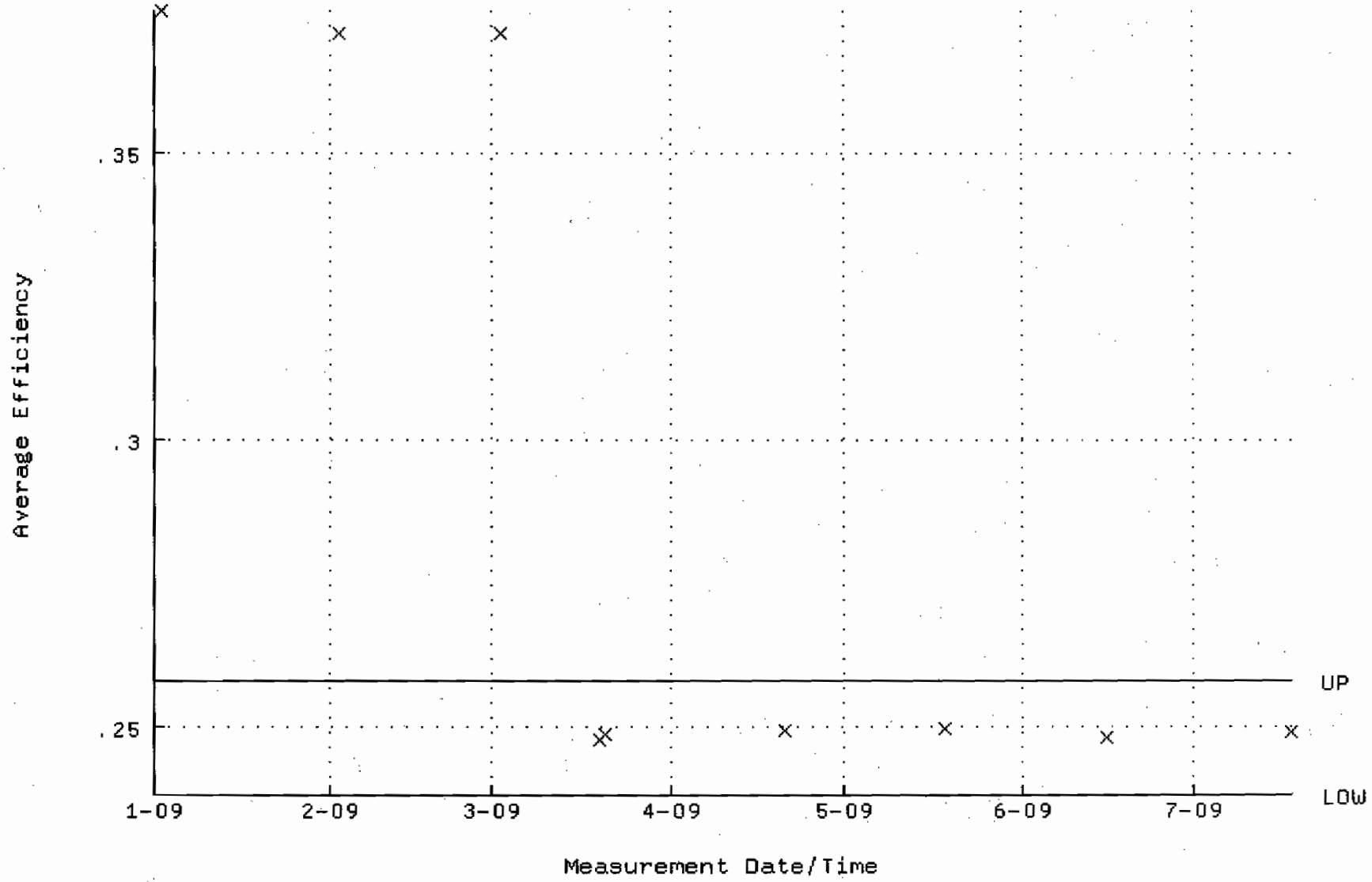

QA filename : DKA100:[ENV_ALPHA.QA.W]W144.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:11 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 84.6507 through 93.5613

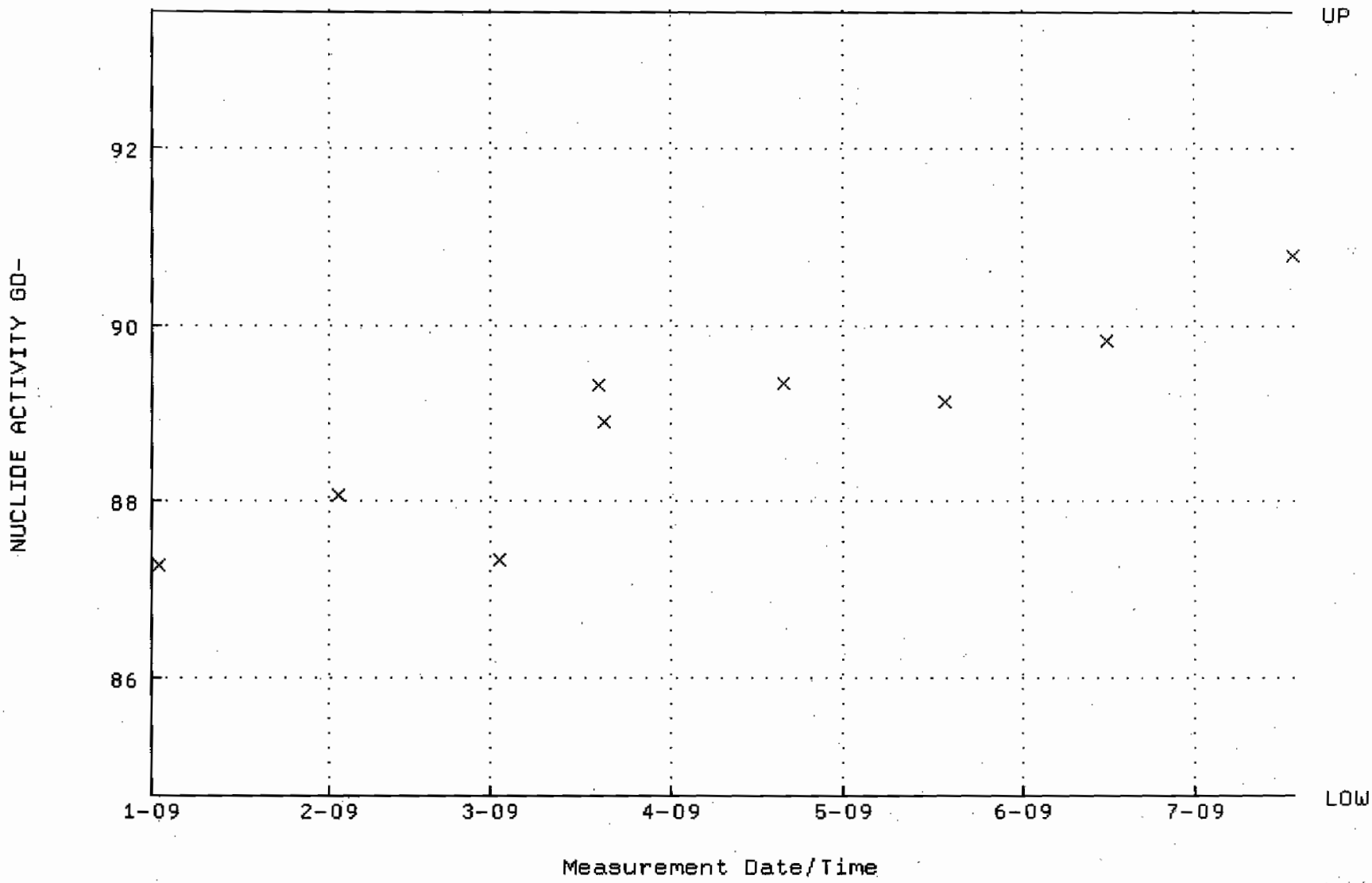

QA filename : DKA100:[ENV_ALPHA.QA.B]B144.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:00 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

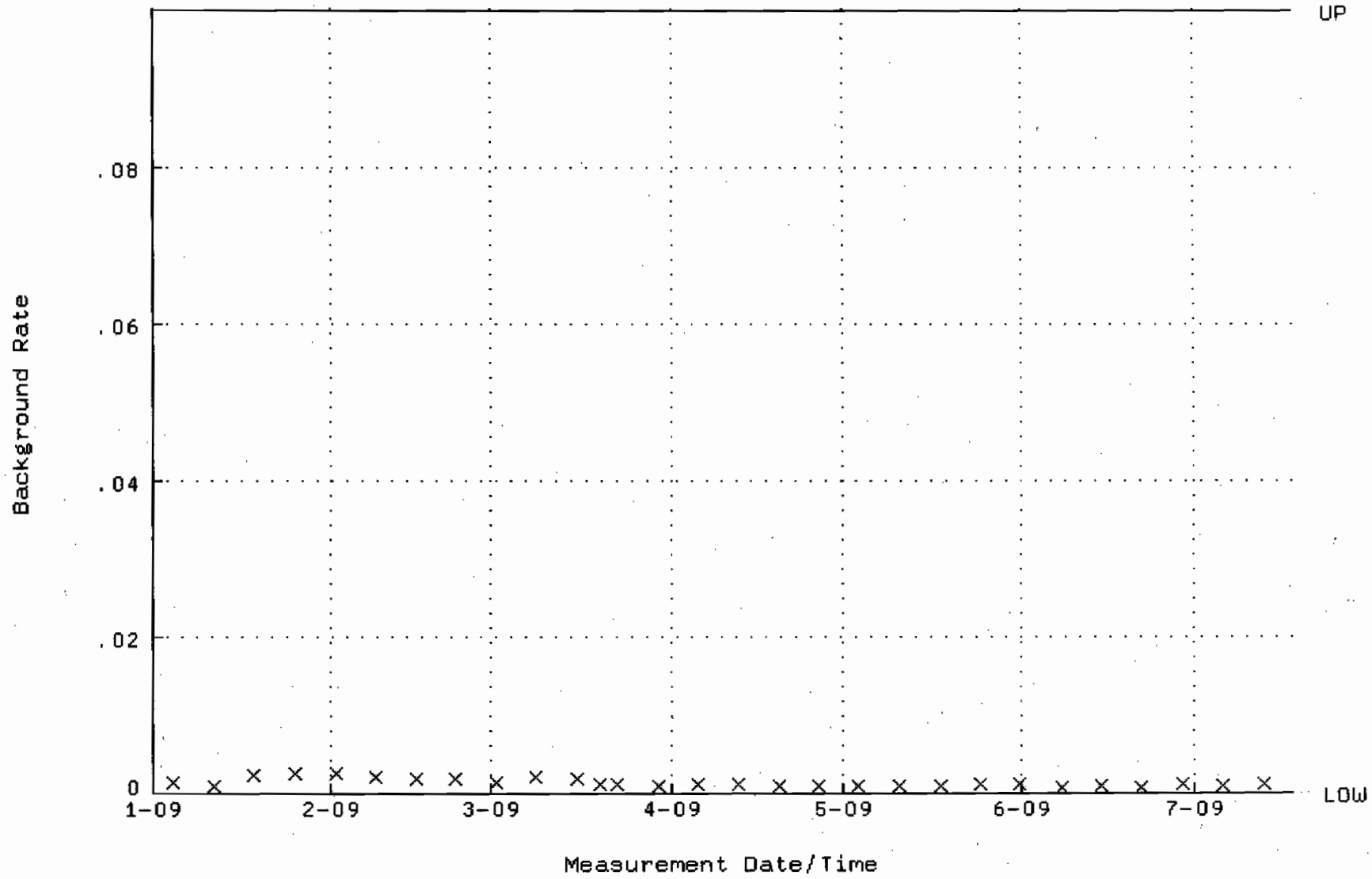

QA filename : DKA100:[ENV_ALPHA.QA.W]W145.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:15 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.239850 through 0.259850

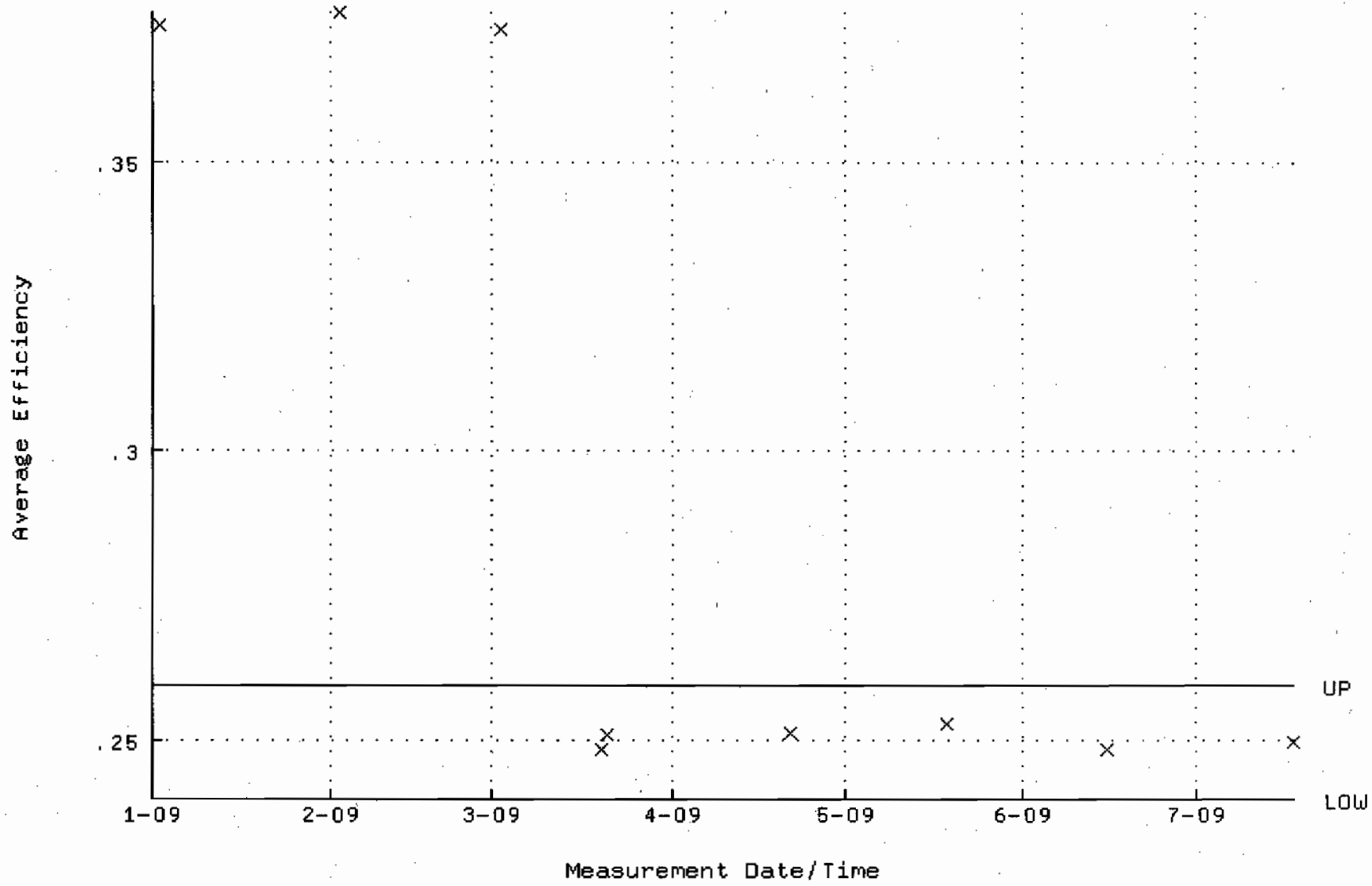

QA filename : DKA100:[ENV_ALPHA.QA.W]W145.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:15 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 84.9354 through 93.8760

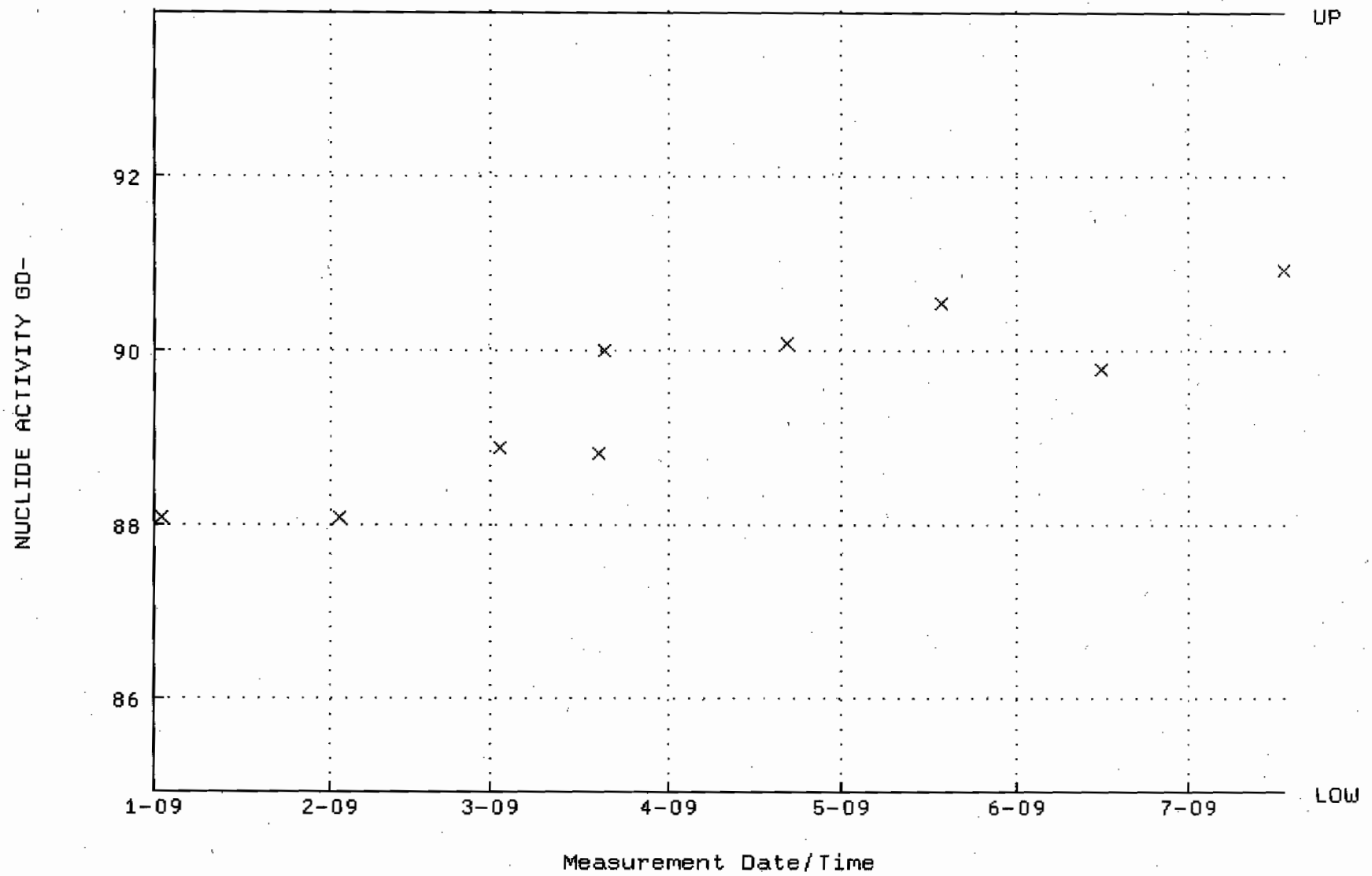

QA filename : DKA100:[ENV_ALPHA.QA.B]B145.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:04 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

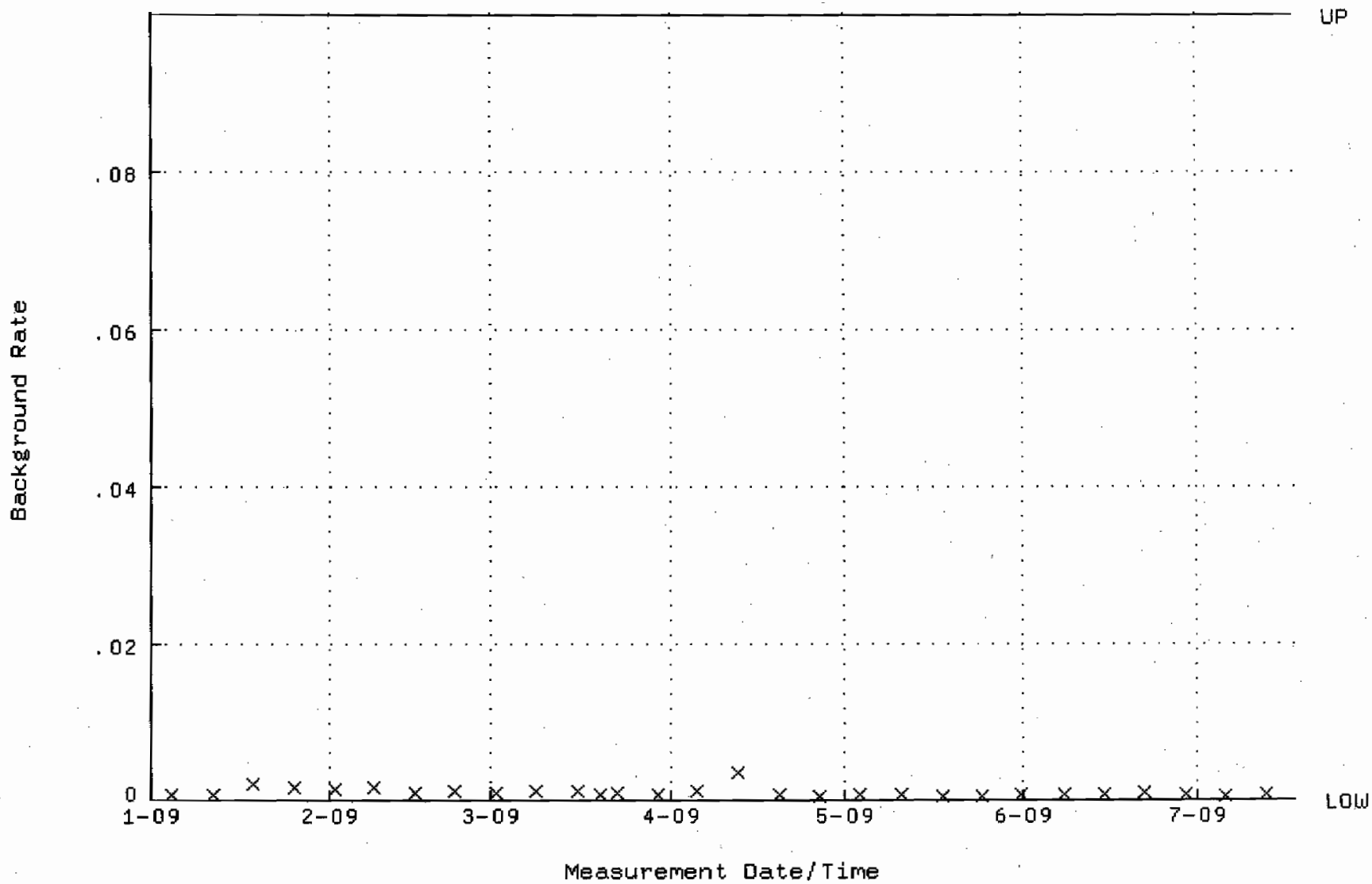

QA filename : DKA100:[ENV_ALPHA.QA.W]W146.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:19 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.241831 through 0.261831

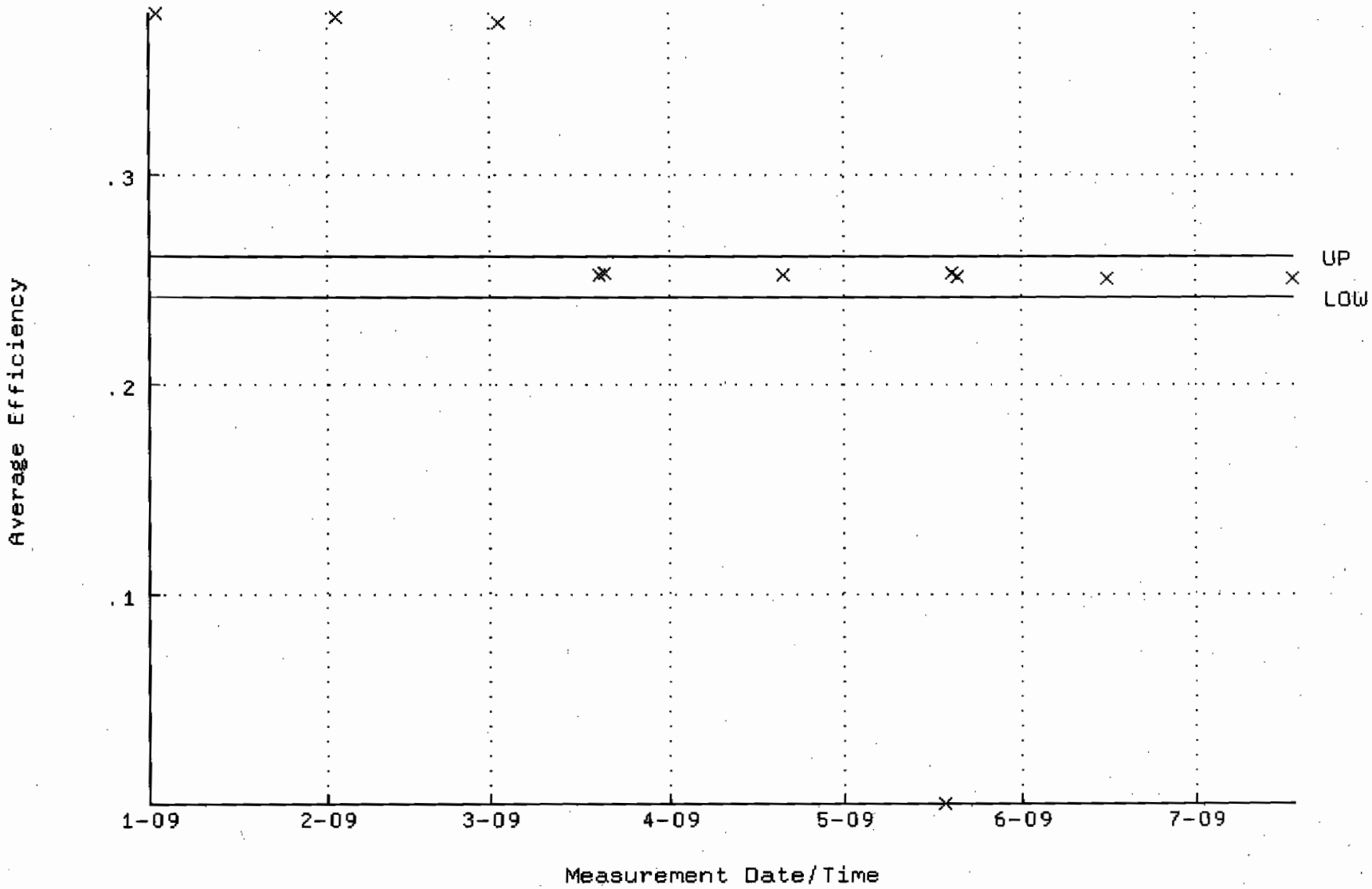

QA filename : DKA100:[ENV_ALPHA.QA.W]W146.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:19 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 84.8578 through 93.7902

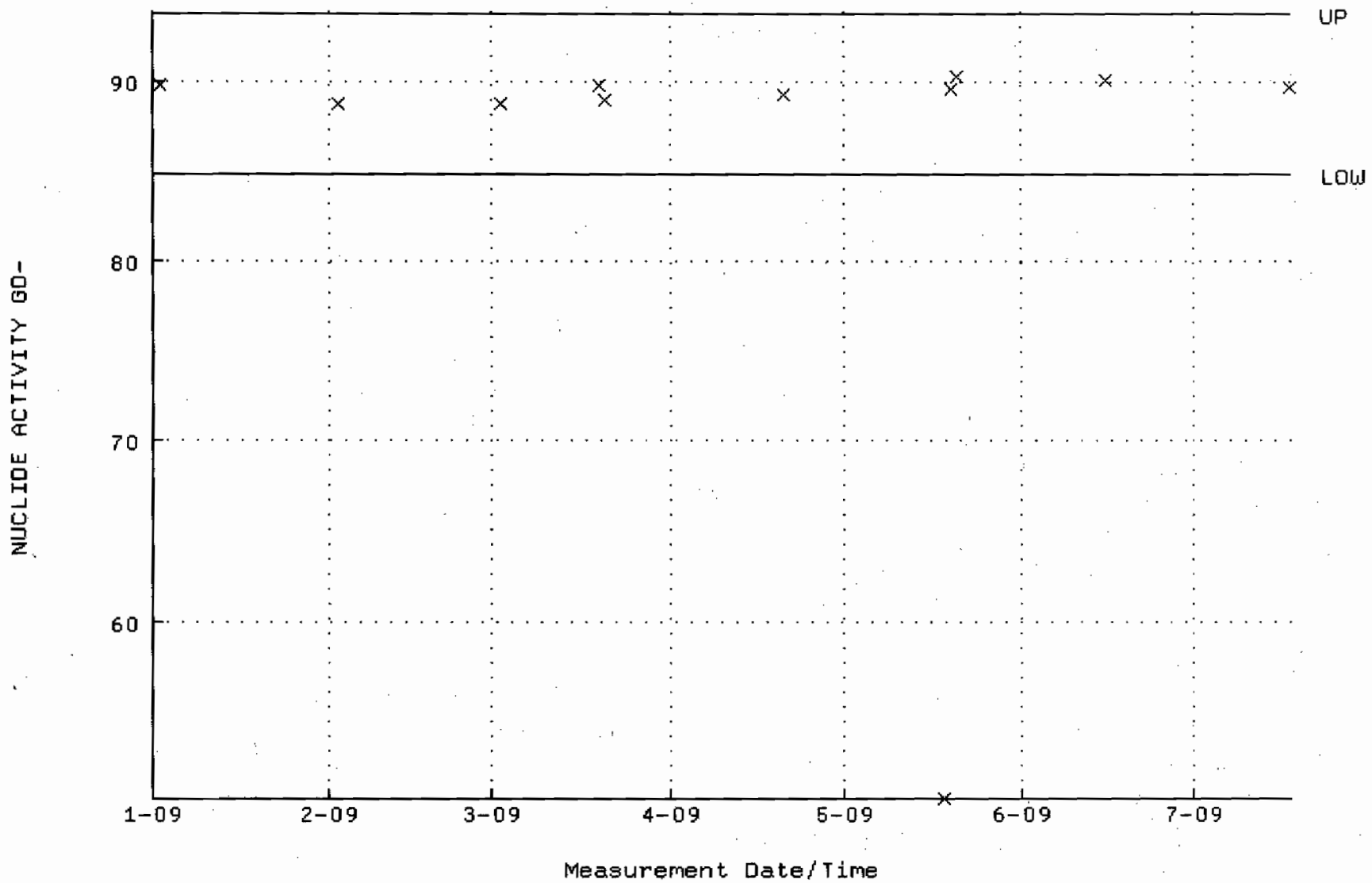

QA filename : DKA100:[ENV_ALPHA.QA.B]B146.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:09 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

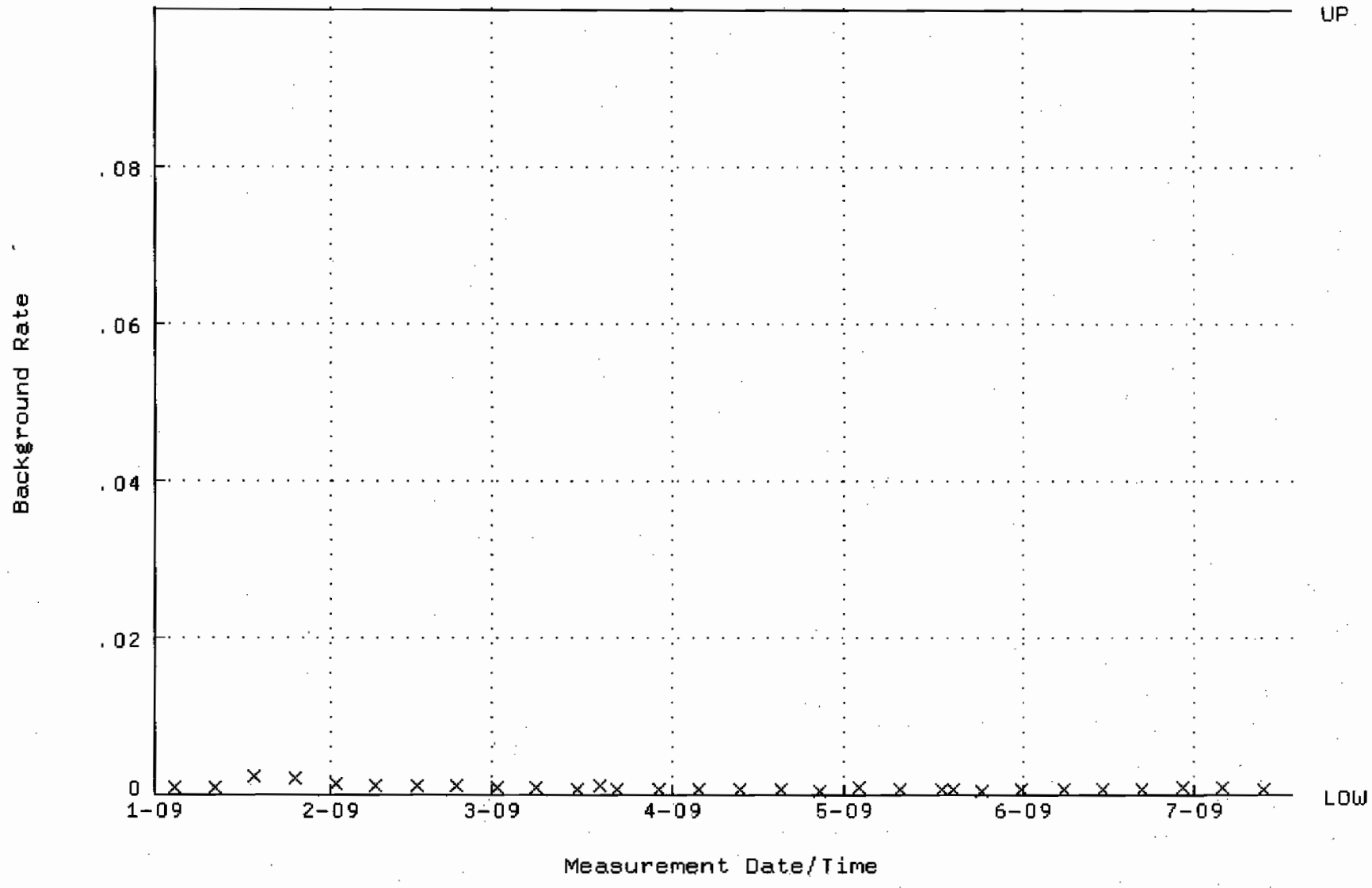

QA filename : DKA100:[ENV_ALPHA.QA.W]W147.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JAN-2009 07:25:24 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.237046 through 0.257046

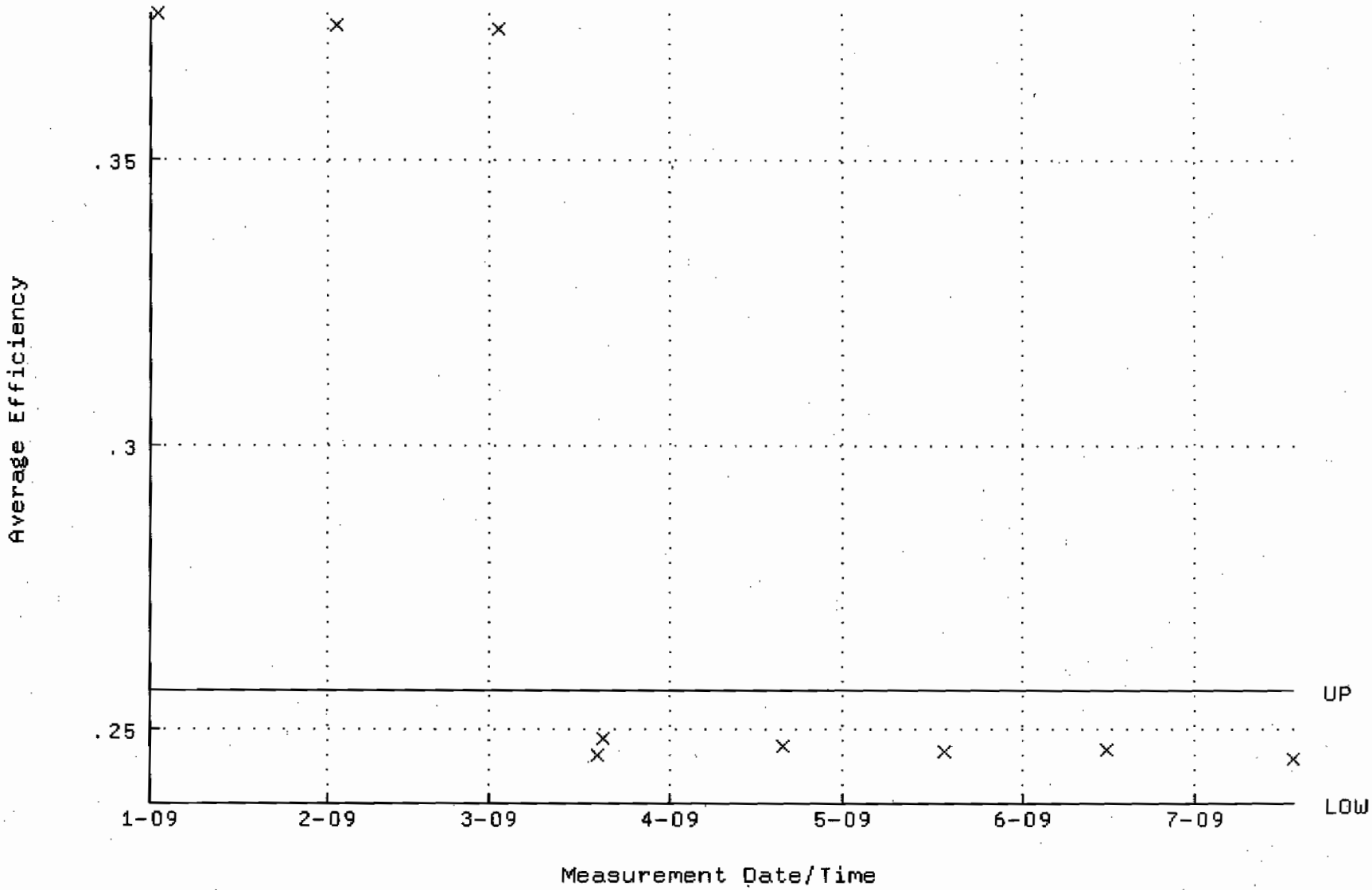

QA filename : DKA100:[ENV_ALPHA.QA.W]W147.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JAN-2009 07:25:24 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 84.9777 through 93.9227

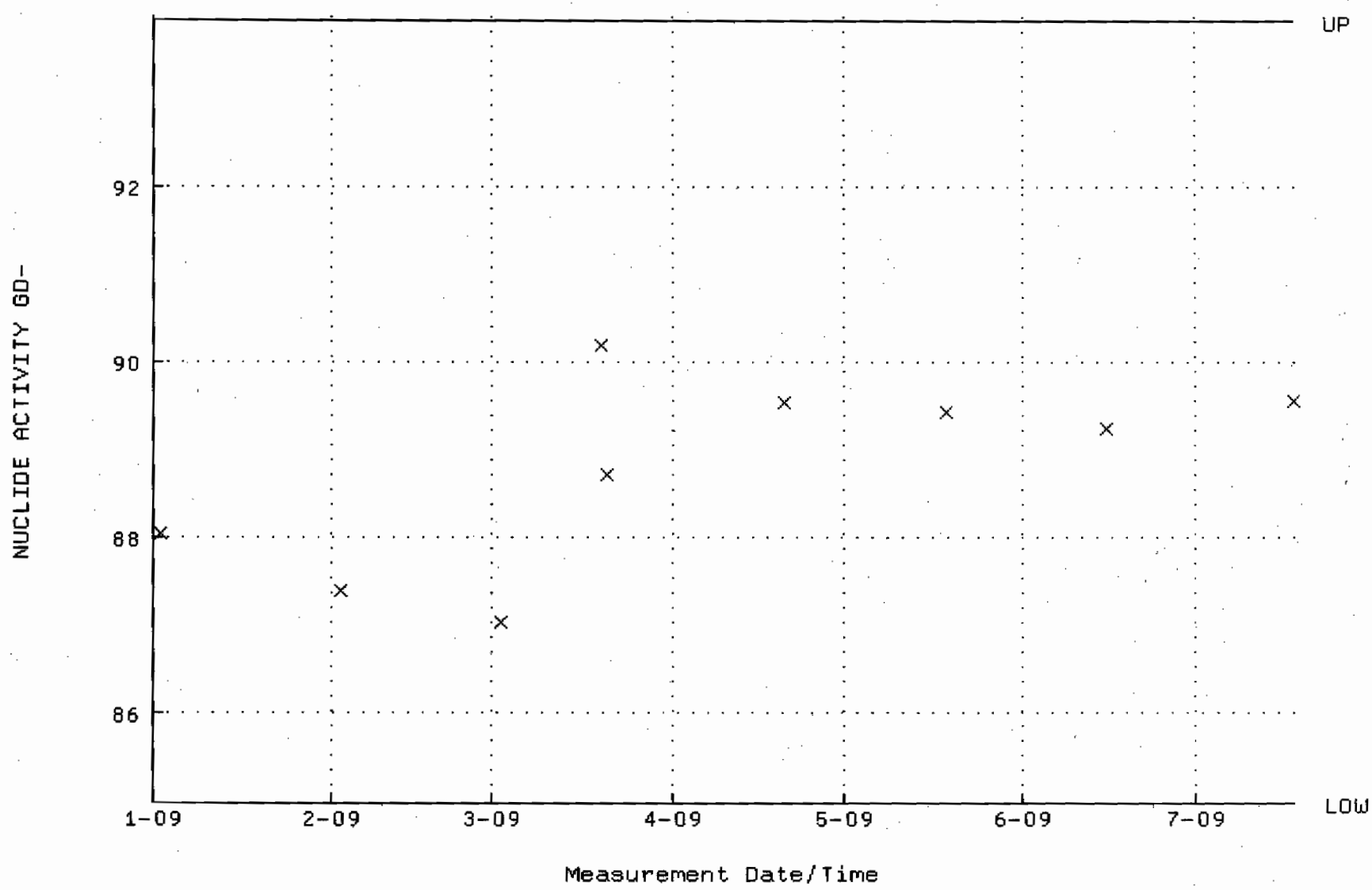

QA filename : DKA100:[ENV_ALPHA.QA.B]B147.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 4-JAN-2009 17:24:13 through 17-JUL-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

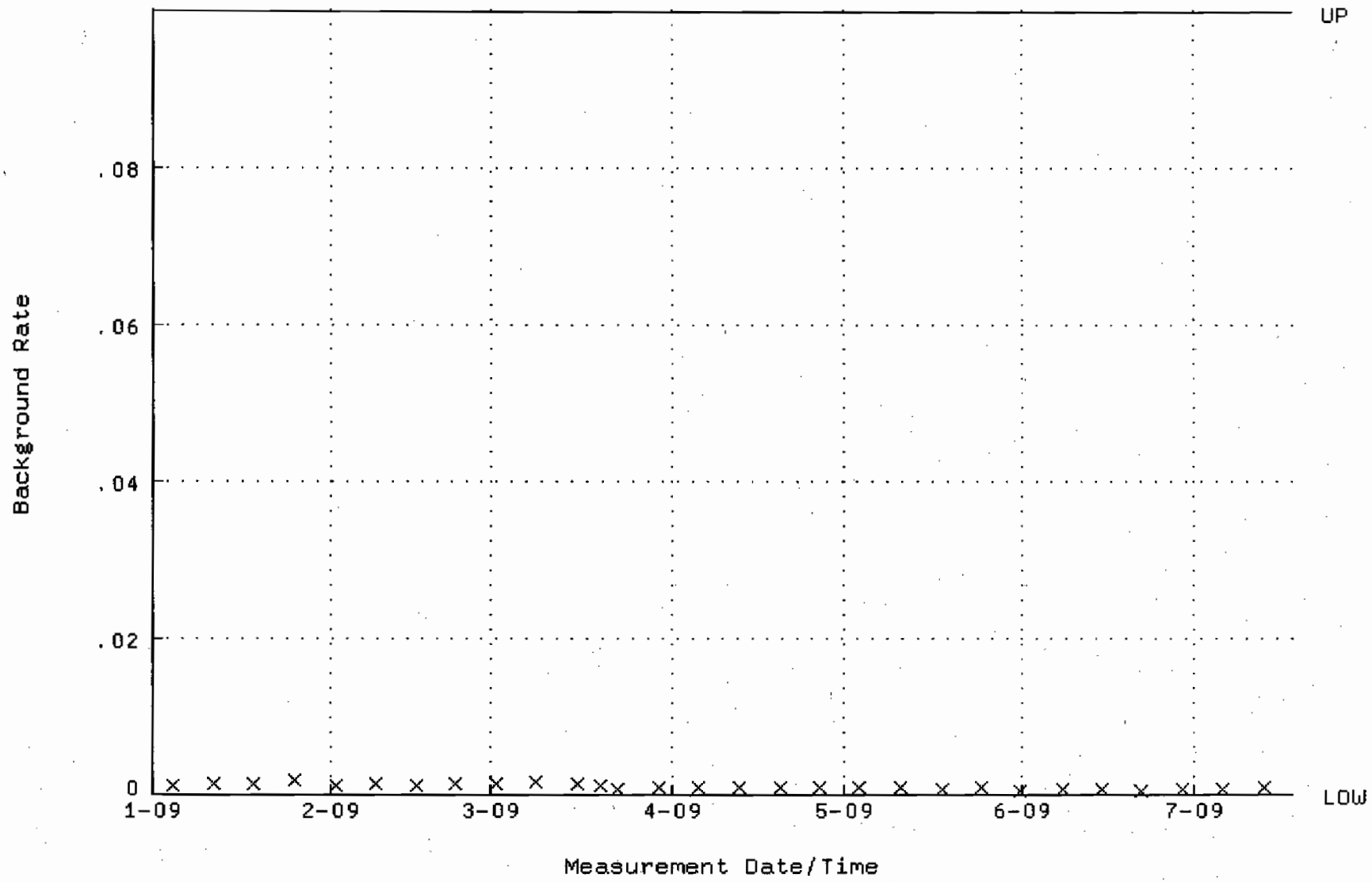

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:01 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

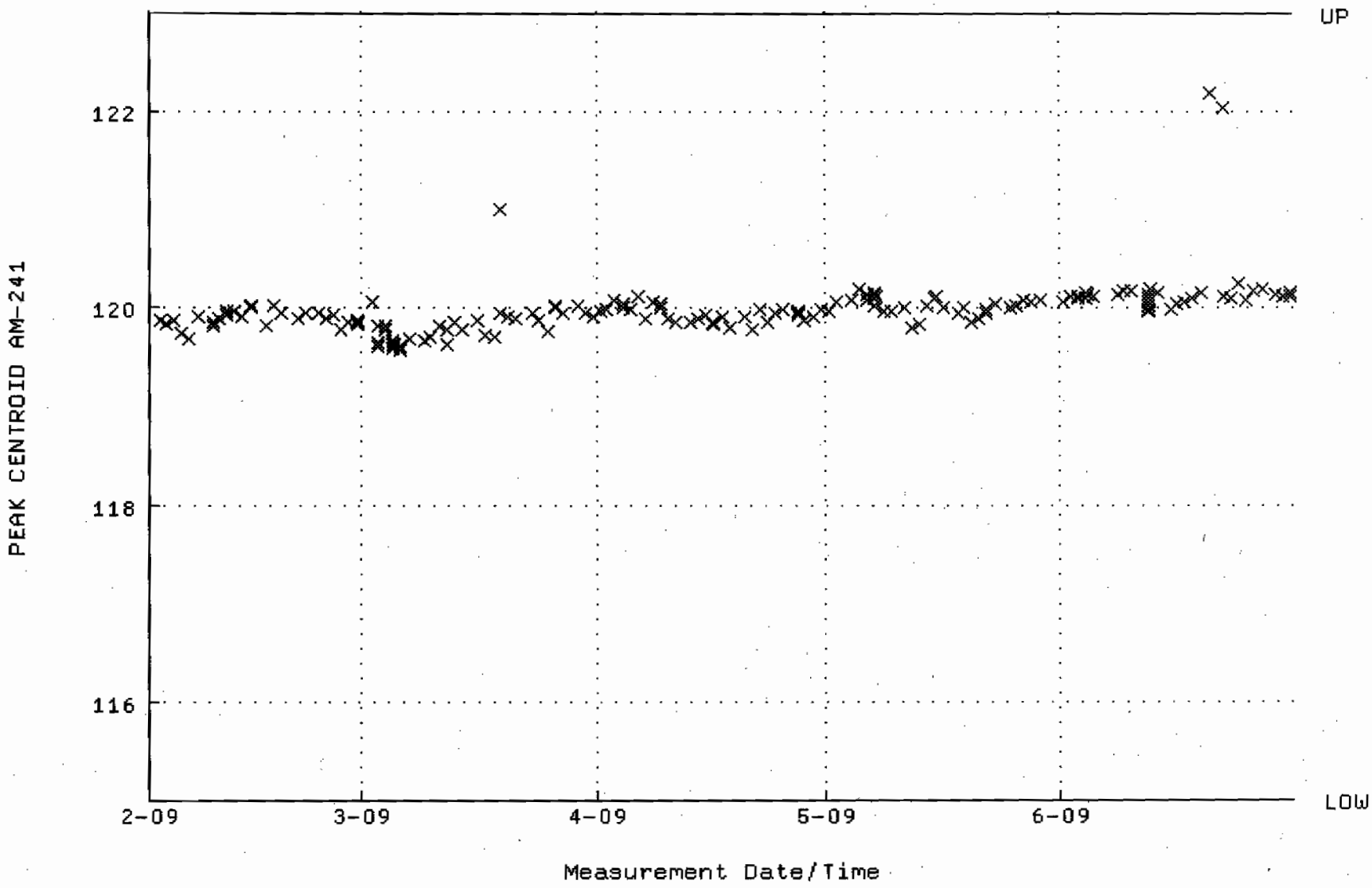

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM05.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:09:50 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.60580 through 1.72440

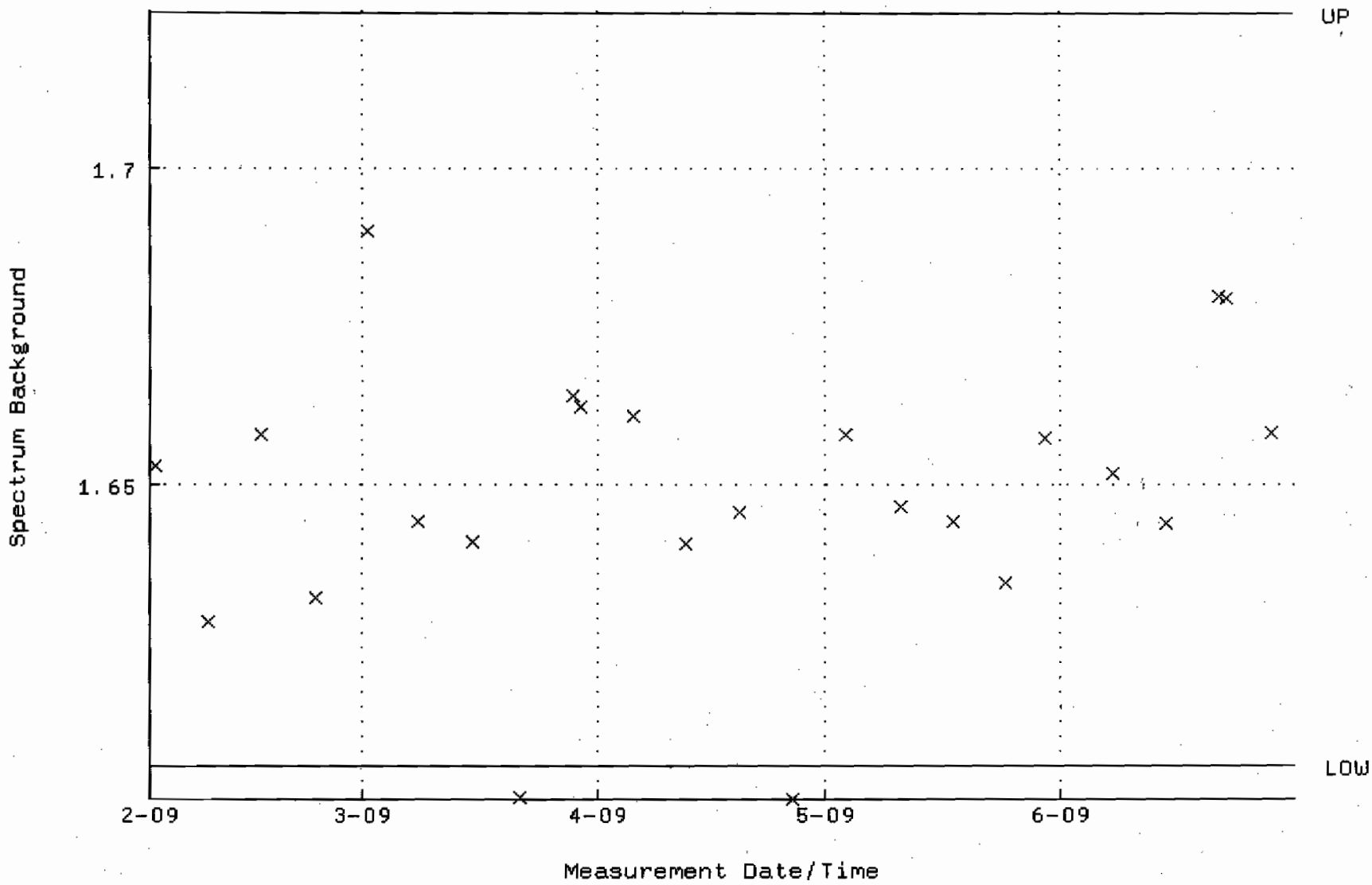

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 3-FEB-2009 16:33:12 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

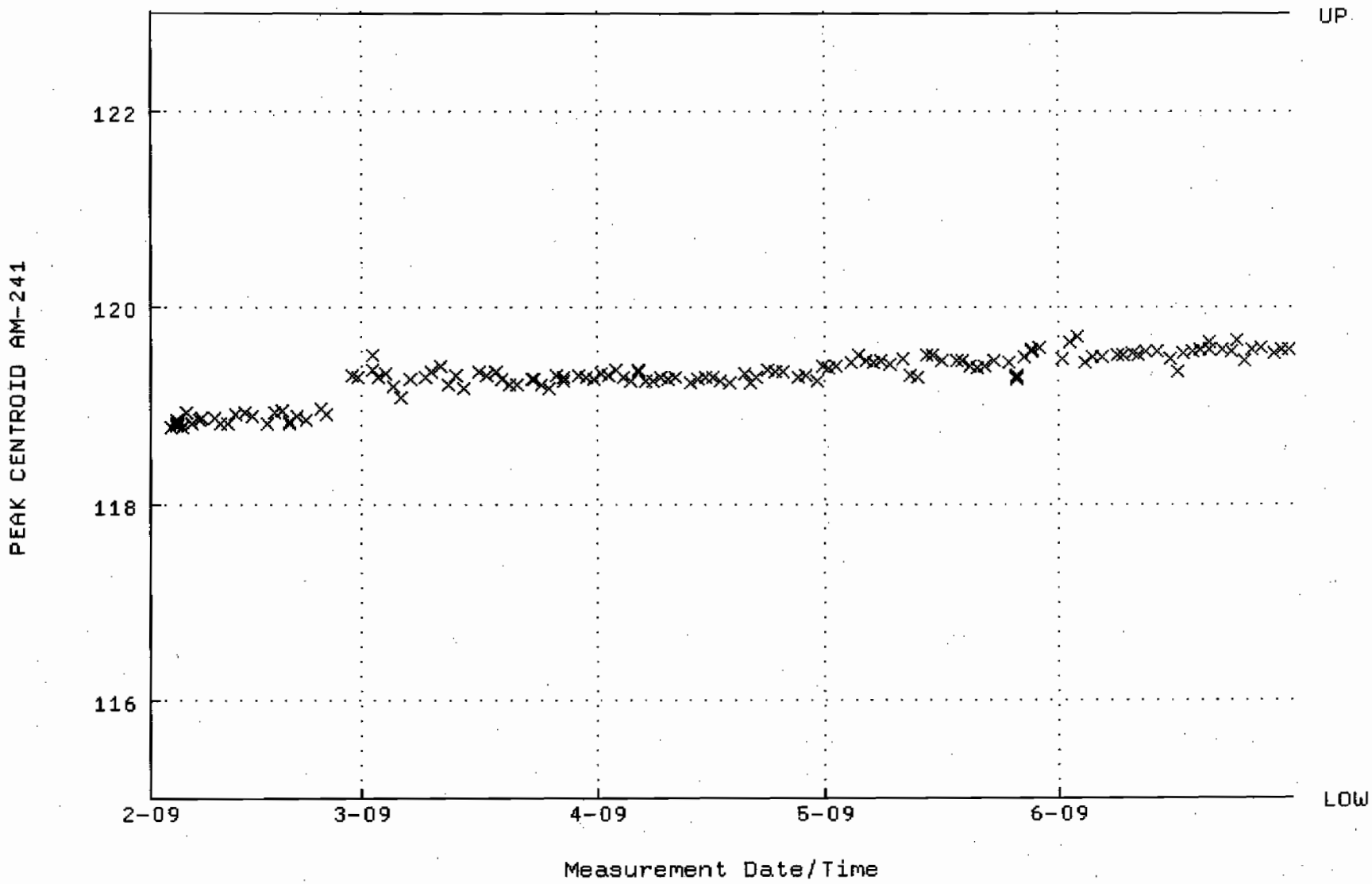

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM13.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:12:24 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.98827 through 3.65233

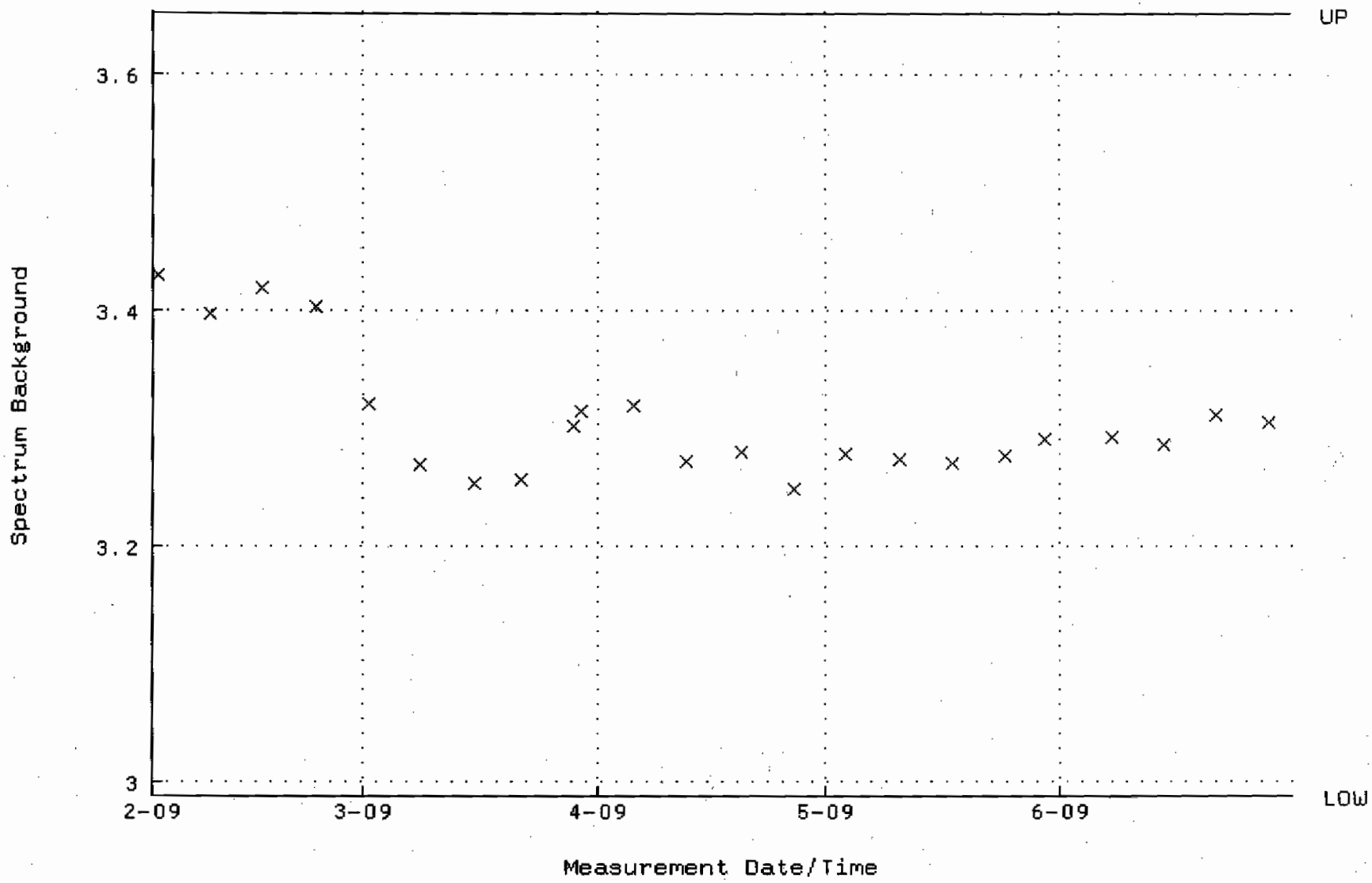

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:13:57 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

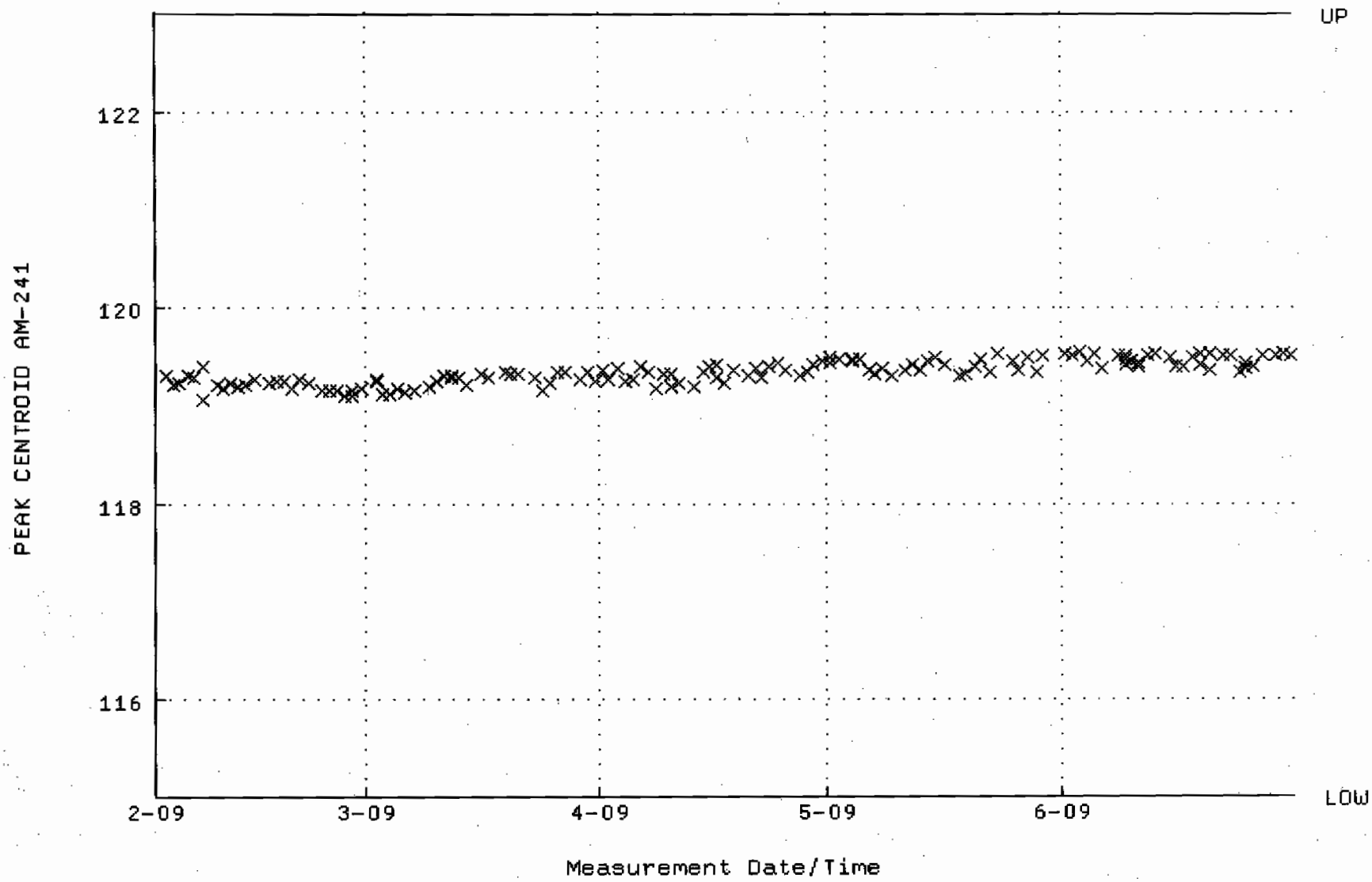

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM16.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:06 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.55150 through 1.89585

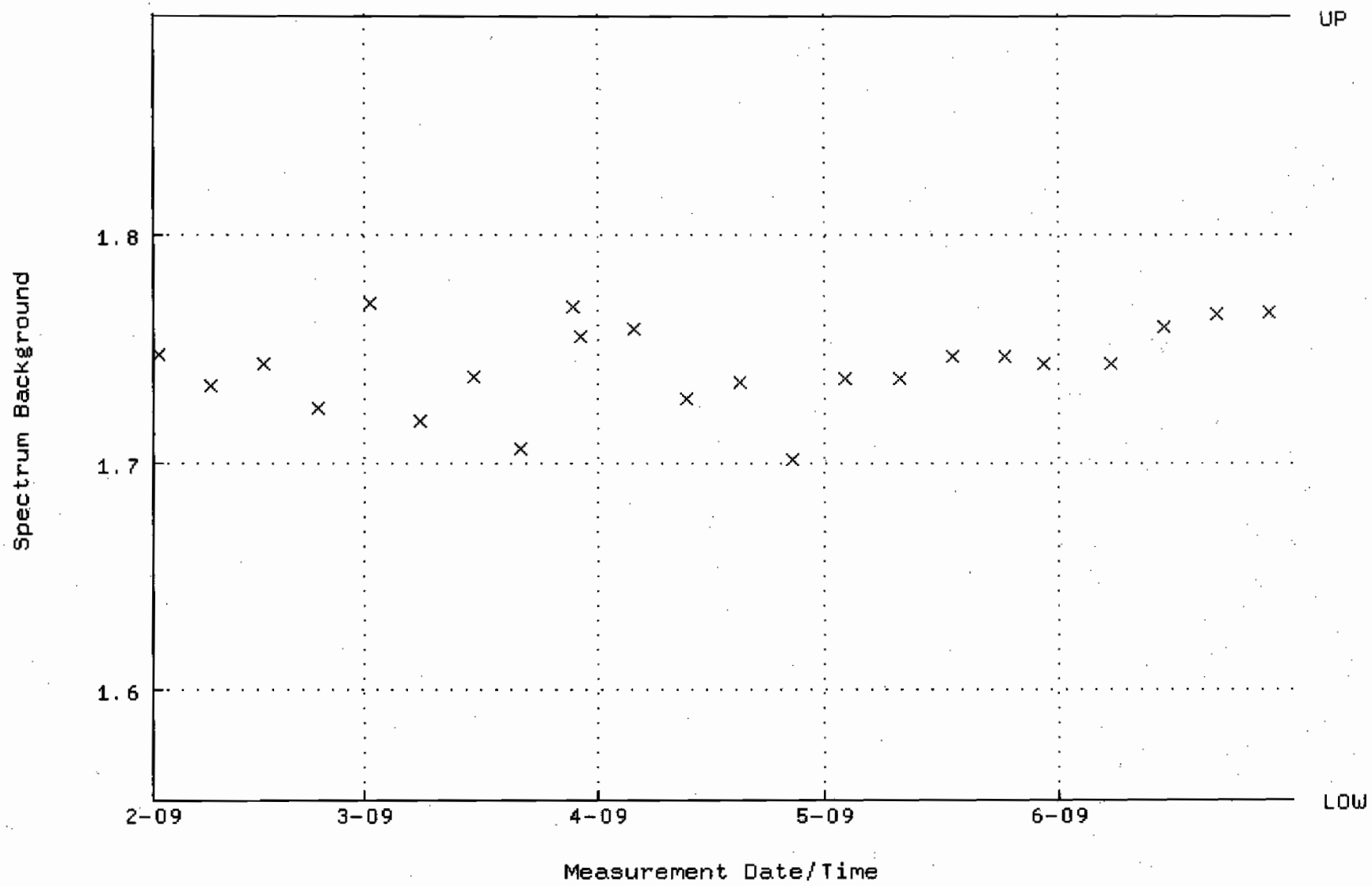

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:24:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

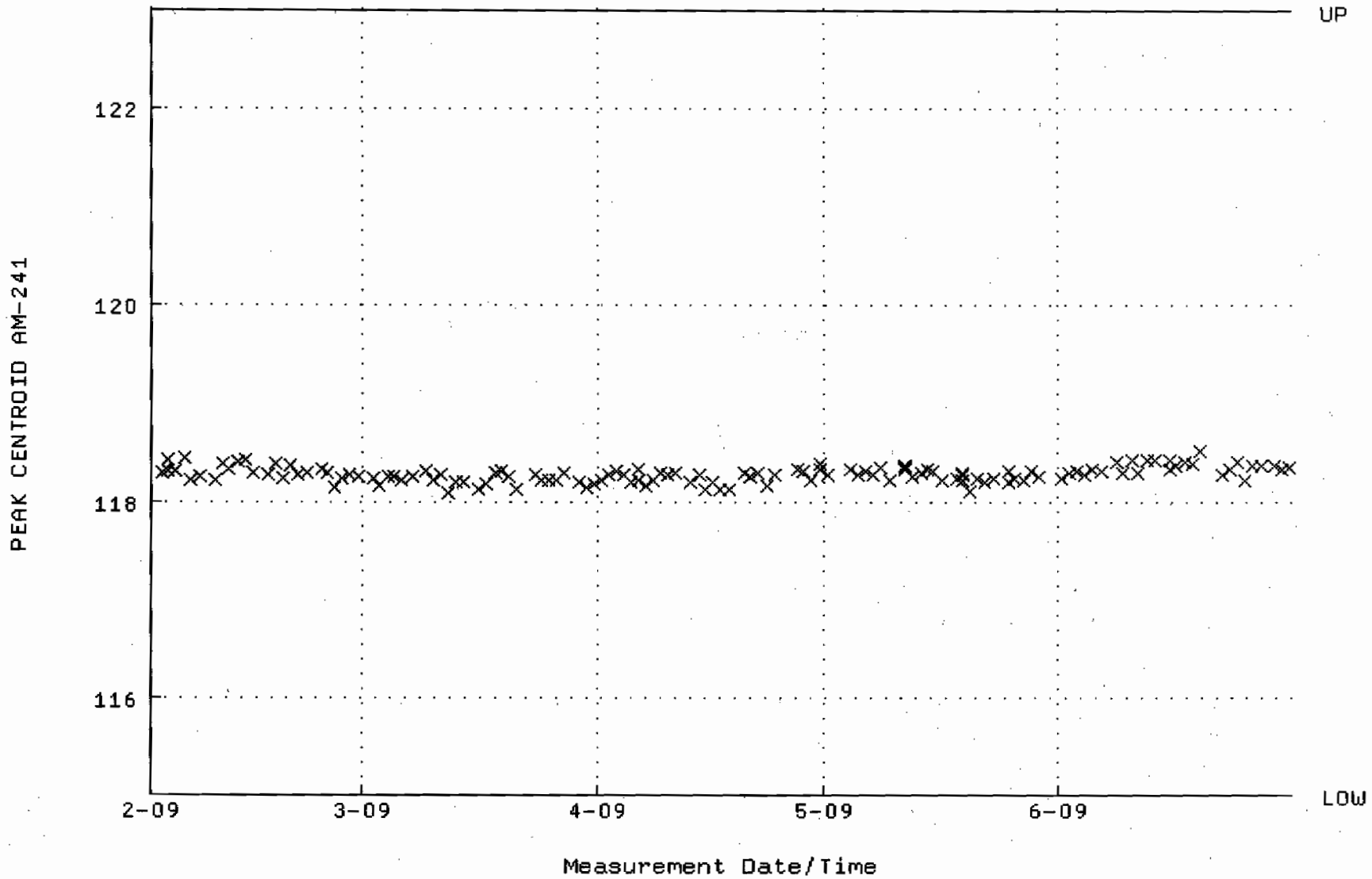

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:13:18 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.22710 through 2.72210

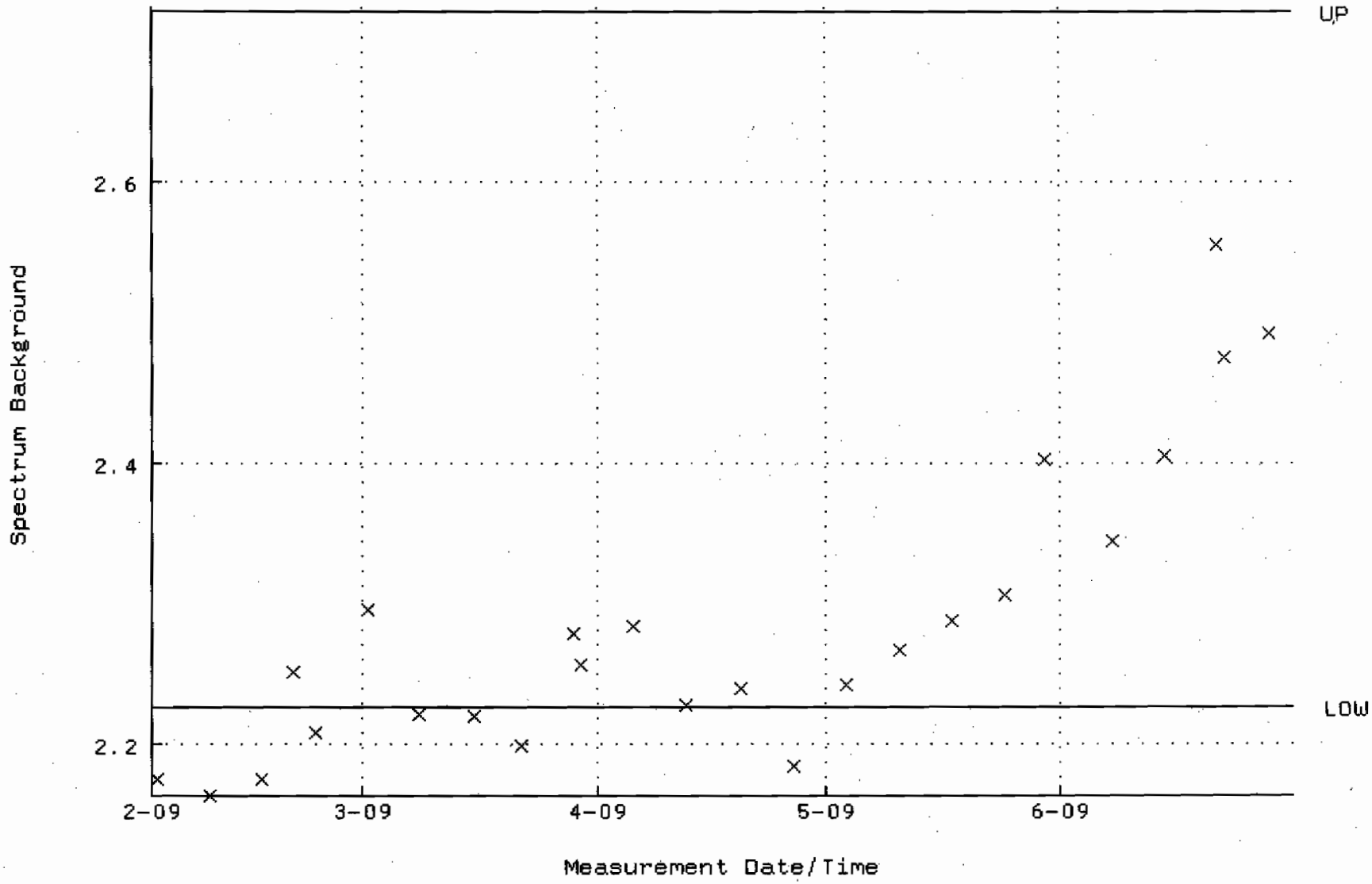

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM21_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:33:28 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

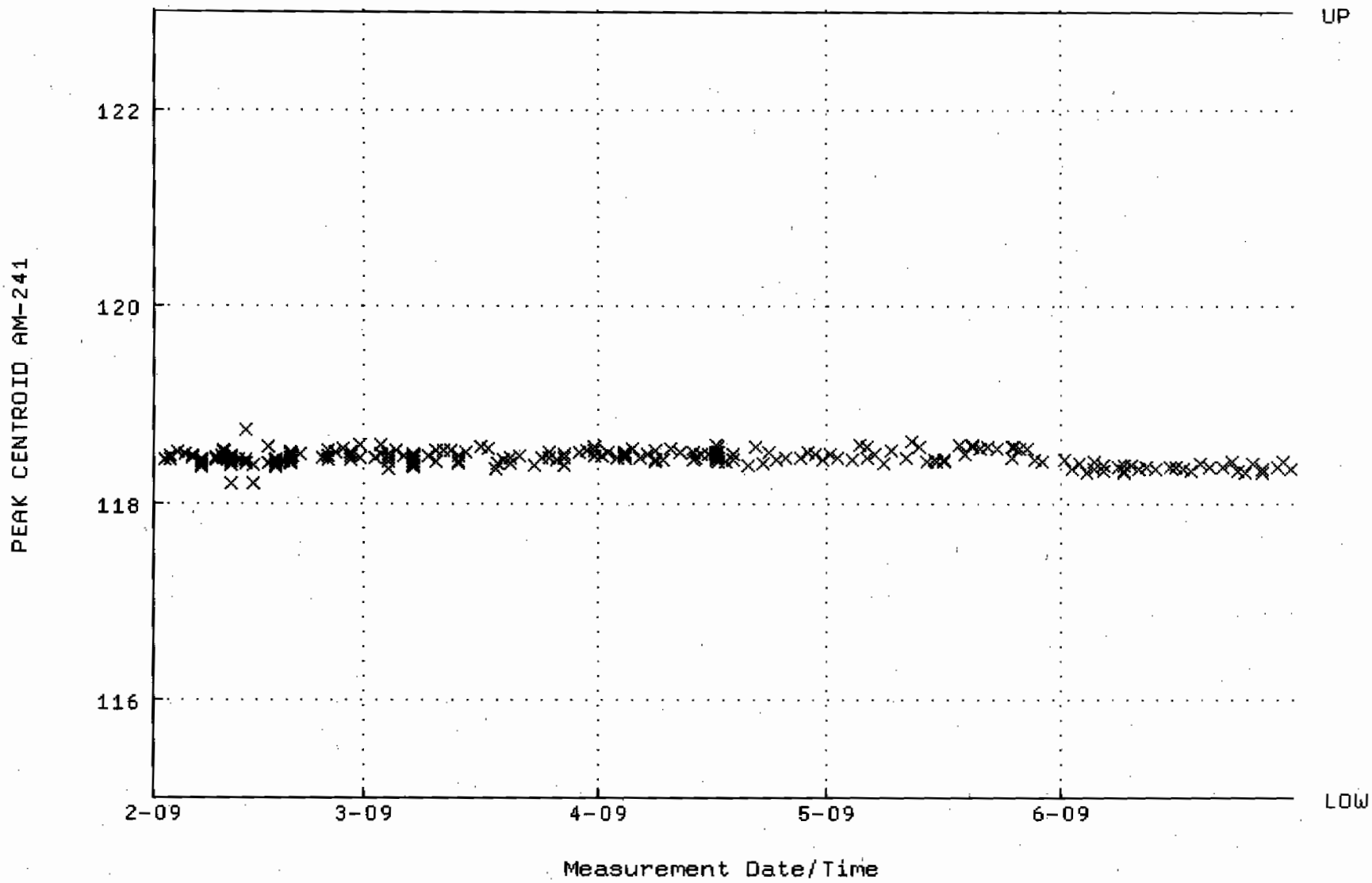

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM21.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:00 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 1.71450 through 2.09550

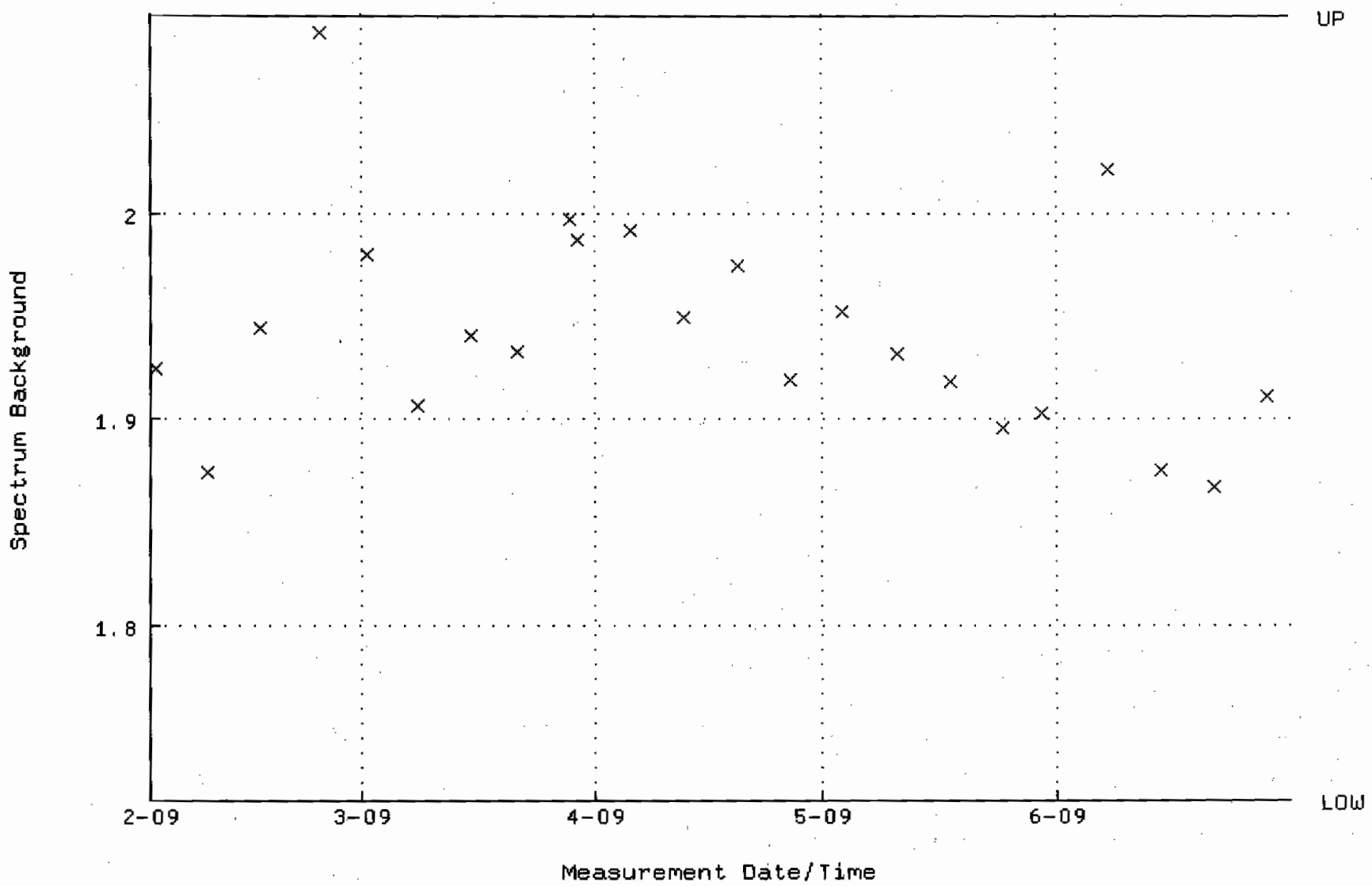

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-FEB-2009 09:02:34 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 115.000 through 123.000

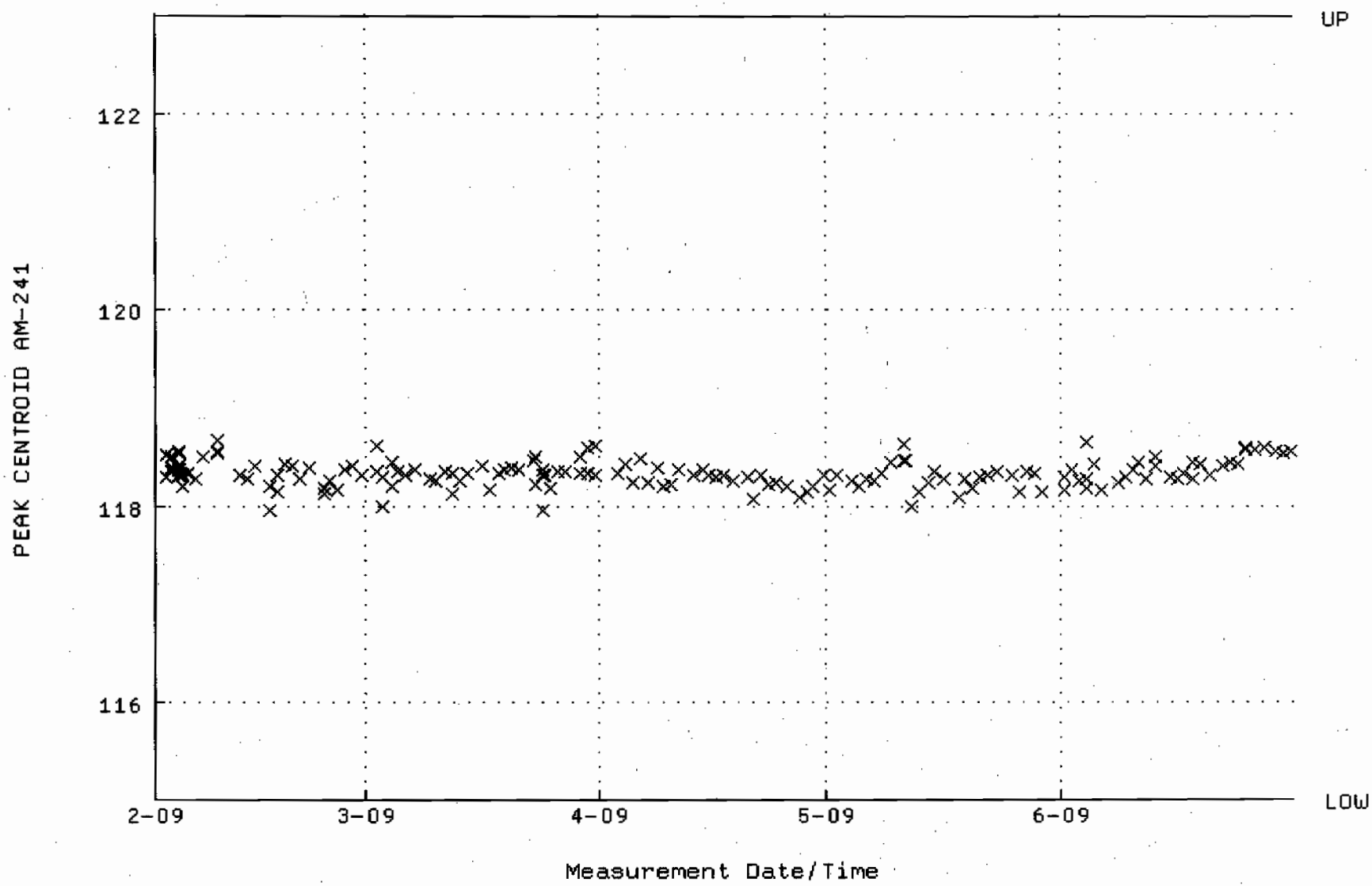

QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM22.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 1-FEB-2009 16:14:14 through 1-JUL-2009 12:00:00
Lower/Upper Lmts: 2.23300 through 2.45570

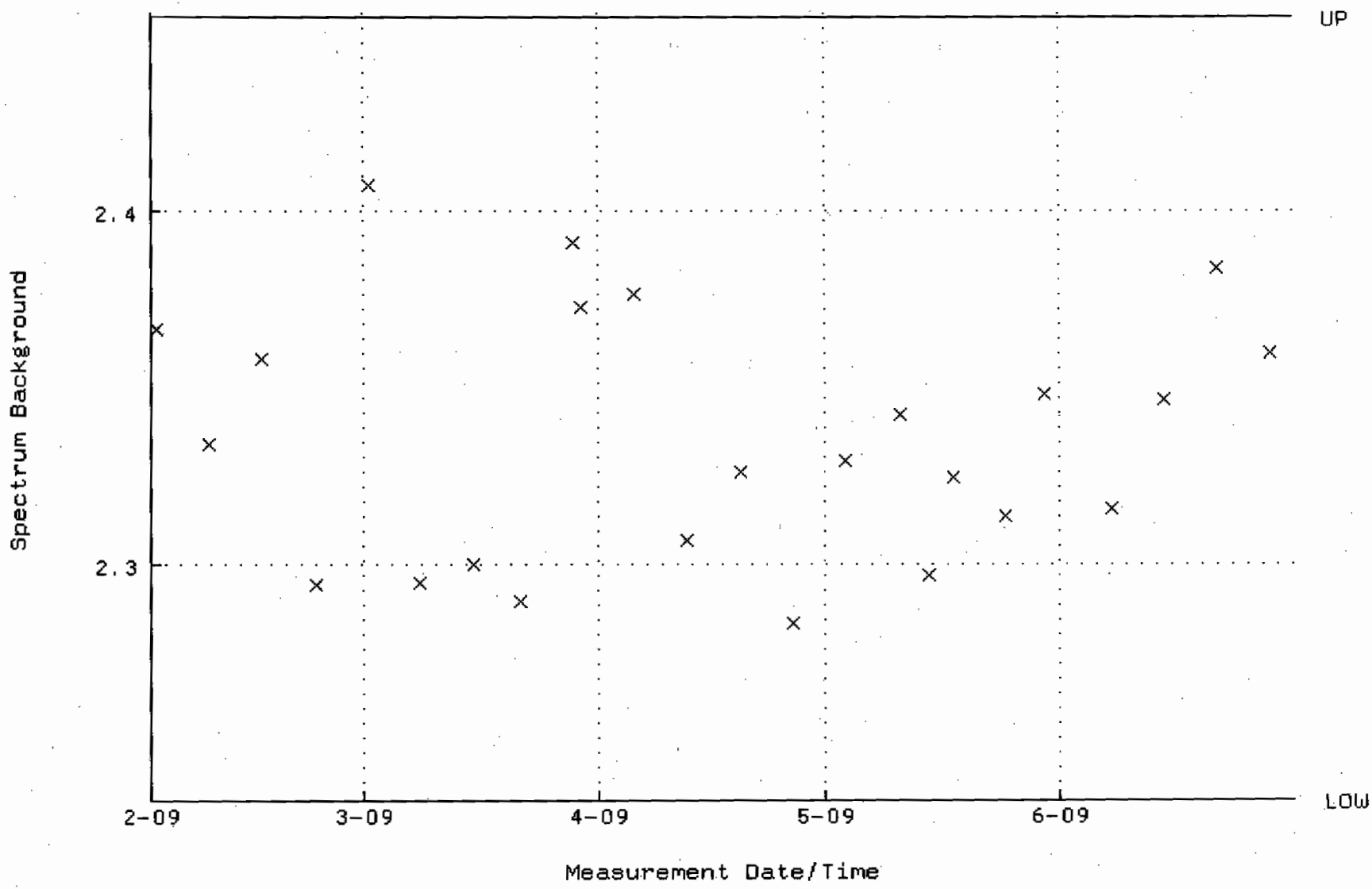

STANDARDS DATA

Amersham International plc
Amersham Laboratories

0134

[redacted]

CALIBRATION
No. 0146

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY·64

Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute per gram of water

Method of Measurement
This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than ±2.5%

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99·7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12·43 ± 0·11 years

Maximum beta energy of tritium: 18·6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = $3{\cdot}7 \times 10^{10}$ becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = $3{\cdot}7 \times 10^4$ Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27·027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved signatory

RC-5-024-061

W. F. Case

W.F. Case

1852

Amersham
The Health Science Group

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0134
Prepared By:	Angela Johnson
Carrier Conc:	DI WATER
Reference Date:	03/01/1996
Ampoule Mass (g):	5 g
Uncertainty:	+/- 2.5 %
LogBook No:	RC S 023 061

A Solution Material Info	
Isotope:	Tritium
Prepared By:	Angela Johnson
Prep Date:	02/21/2001
Verification Date:	09/10/2008
Expiration Date:	03/27/2010
Primary Code:	0134-A
Dilution(mL):	100 mL
Mass of Parent(g):	3.3659 g
Density(g/mL):	1.0004
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (kBq/g)) * (conversion dpm to kBq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (100 mL) = 985535.5200 dpm/mL
(3.3659 g) * (488 kBq/g) * (60000 dpm/kBq) / (1.0004 g/mL) / (100 mL) = 985180.3116 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff	Standard Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	1.0000	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	1.0000	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	1.0000	2709.776428
						Average =	2709.776428
Mean Value (Counting) =	2709.776428		**104.954429**	**Pass**			
Stdev =	31.53347278		0.01163693	**Rule 3 (Pass/Fail)**			

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	**Fail**	***exception taken due to full recovery of standard**
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	**Pass**	

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecoscint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecoscint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

Source dpm/g = (A - B)/(C)(D)
where:
A = Ver. source cpm,
B = BKG cpm,
C = System efficiency, (cpm/dpm), and
D = mass used for standard verification.

Reference RAD SOP M-001

Mary Fr. Adams 4/9/09
Amanda L. Lehr 4/9/09

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATA 4/14/2000 Jeff C Neill 12/1/04

angela L. Johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–225	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	425 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (3-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

[redacted]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2460A
Case No.: 10204 13
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location — Tech Area VI — Building N/A — Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

LAB USE

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

[redacted]

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized soil materials being sent to GEL on behalf of Hack Minteer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE
[redacted]

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	Douglas E. Perry	DP	Weston / 7577 / 845-0867

1. Relinquished by	Douglas E. Perry	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original — To Accompany Samples, Laboratory Copy (White)
1st Copy — To Accompany Samples, Return to SMO (Blue)
2nd Copy — SMO Suspense Copy (Yellow)
3rd Copy — Field Copy (Pink)

1857

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATE 4/14/2000

Amanda L. Fehr 4/30/04
[illegible] 5/1/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)

Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1942
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

[redacted]
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 13
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

1860

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

[redacted]

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized mud materials being sent to GEL on behalf of Hack Minton
Please list as separate report.

Abnormal Conditions on Receipt/Use
[redacted]

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	DEP	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

1262

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

aithersburg, Maryland 20899
nuary 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

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*Notes and refe

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH.

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994** [b]*
Massic activity of the solution [c]	**26.31 Bq·g^{-1}**
Relative expanded uncertainty (k=2)	**0.72%** [d] [e]
Solution density	**(1.105 ± 0.002) g·mL^{-1} at 20 °C** [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L^{-1})	Mass Fraction (g·g^{-1})
	H_2O HNO_3 $^{242}Pu^{+6}$	50 3.2 8×10^{-7}	0.81 0.19 2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) Bq·g^{-1} [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three 4πα liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	^{239}Pu + ^{240}Pu <0.000 001 [u]	^{239}Pu + ^{240}Pu 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	^{238}Pu + ^{241}Am <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One µSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (µSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 $s^{-1} \cdot g^{-1}$ for energies less than 3.1 MeV,
0.03 $s^{-1} \cdot g^{-1}$ for energies between 3.1 and 4.4 MeV, and
0.003 $s^{-1} \cdot g^{-1}$ for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 19 and 39 keV,
7×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 49 and 92 keV,
2×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 106 and 507 keV,
1×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 515 and 1456 keV, and
5×10^{-6} $s^{-1} \cdot g^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i| \cdot (x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i| \cdot (x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i| \cdot u(x_i)/y = |\partial y/\partial x_i| \cdot (x_i/y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i| \cdot (x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}·{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1262
Prepared By:	Daniel Roy
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-048-143

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Mary Aders
Prep Date:	05/08/2009
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	1262-A
Dilution(mL):	200 mL
Mass of Parent(g):	5.3306 g
Density(g/mL):	1.0000
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (200 mL) = 42.0744 dpm/mL
(5.3306 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0000 g/mL) / (200 mL) = 42.0744 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1262-*A*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	1262-A	1.830	0.2560
	1262-A	1.890	0.2630
	1262-A	1.810	0.2520
Mean Value (Counting) =	1.843	97.26	**Pass**
Stdev =	0.04163332		**Rule 3 (Pass/Fail)**

Target =	1.90
Lower Limit =	1.760066693
Upper Limit =	1.926599973
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.08326664
10 % of Mean =	0.184333333
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1262-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-Y and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Five drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 48% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

5/15/09

05/15/09

Eckert & Ziegler
Analytics

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CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: W. Mao
W. Mao, Radiochemist

QA Approved: D. M. Montgomery
D. M. Montgomery, QA Manager

Date: 12-11-08

1870

End of Certificate

RECEIVED
RC-5-05

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-B*

Analyst: D. Roy	**Serial #**	**Value**		**Uncertainty**	
Date: 12/16/08	1283-B N1	2.350	pCi/L	0.337	pCi/L
	1283-B N2	2.490	pCi/L	0.345	pCi/L
	1283-B N3	2.380	pCi/L	0.335	pCi/L

Mean Value (Counting) =	2.407	pCi/L	**100.39253**	**Pass**
Stdev =	0.073711148	pCi/L		**Rule 3 (Pass/Fail)**
Target =	2.397	pCi/L		
Lower Limit =	2.259244371	pCi/L		
Upper Limit =	2.554088963	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	0.147422296			
10 % of Mean =	0.240666667			
Rule 2 (Pass/Fail)	**Pass**			

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-B** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 48% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

1/5/09
1/5/09

ANALYTICS
Isotope Products Laboratories Company

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1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-0

ANALYTICS
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ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info

Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info

Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/04/2008
Expiration Date:	12/04/2009
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL

(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A (Am-241)

A.Fehr
12/4/2008

Am-241	Isotope	Result	
	Mixed Gamma N1	2537	pCi/L
	Mixed Gamma N2	2421	pCi/L
	Mixed Gamma N3	2310	pCi/L
Mean Value (Counting) =	2422.67	**97.46**	**Pass**
Stdev =	113.509		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2195.648312	pCi/L	
Upper Limit =	2649.685021	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	227.0183546		
10 % of Mean =	242.26666667		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements.
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David Dry 12/4/08
Amanda A. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Cs-137)

A. Fehr
12/4/2008

	Isotope	Result	
	Mixed Gamma N1	440.7	pCi/L
	Mixed Gamma N2	461.1	pCi/L
	Mixed Gamma N3	467.4	pCi/L
Mean Value (Counting) =	456.40	**102.71**	**Pass**
Stdev =	13.957		**Rule 3 (Pass/Fail)**
Certificate Value =	444.3738739	pCi/L	
Lower Limit =	428.4865624	pCi/L	
Upper Limit =	484.3134376	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	27.91343762		
10 % of Mean =	45.64000000		
Rule 2 (Pass/Fail)	**Pass**		

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

David [illegible] 12/4/08
Amanda L. Fehr 12/4/08

Verification for Mixed Gamma Standard 1032-A (Co-60)

A. Fehr	**Isotope**	**Result**		
12/4/2008		**pCi/L**		
	Mixed Gamma N1	578.1	pCi/L	
	Mixed Gamma N2	603.2	pCi/L	
	Mixed Gamma N3	569.6	pCi/L	
Mean Value (Counting) =	583.63	pCi/L	**99.9931**	**Pass**
Stdev =	17.470	pCi/L		**Rule 3 (Pass/Fail)**
Certificate Value =	583.6734234	pCi/L		
Lower Limit =	548.693194	pCi/L		
Upper Limit =	618.5734726	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	34.94013929			
10 % of Mean =	58.36333333			
Rule 2 (Pass/Fail)	**Pass**			

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

12/4/08
Amanda L. Fehr
12/14/08

RUNLOGS

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882703**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232347001	SAMPLE	CXM2	1013	11-JUL-09 15:57	DUSE		
232347002	SAMPLE	CXM2	1014	11-JUL-09 15:57	DUSE		
232347003	SAMPLE	CXM2	1015	11-JUL-09 15:57	DUSE		
232347004	SAMPLE	CXM2	1016	11-JUL-09 15:57	DUSE		
232664001	SAMPLE	CXM2	1017	11-JUL-09 15:57	DUSE		
232664002	SAMPLE	CXM2	1019	11-JUL-09 15:57	DUSE		
232664003	SAMPLE	CXM2	1020	11-JUL-09 15:57	DUSE		
232664004	SAMPLE	CXM2	1021	11-JUL-09 15:57	DUSE		
232664005	SAMPLE	CXM2	1022	11-JUL-09 15:57	DUSE		
232746001	SAMPLE	CXM2	1023	11-JUL-09 15:57	DUSE		
232746002	SAMPLE	CXM2	1024	11-JUL-09 15:57	DUSE		
232746003	SAMPLE	CXM2	1037	11-JUL-09 15:57	DUSE		
232746004	SAMPLE	CXM2	1038	11-JUL-09 15:57	DUSE		
232746005	SAMPLE	CXM2	1039	11-JUL-09 15:57	DUSE		
232746006	SAMPLE	CXM2	1040	11-JUL-09 15:57	DUSE		
232746007	SAMPLE	CXM2	1041	11-JUL-09 15:57	DUSE		
232746008	SAMPLE	CXM2	1042	11-JUL-09 15:57	DUSE		
232754001	SAMPLE	CXM2	1065	11-JUL-09 15:57	DUSE		
232754002	SAMPLE	CXM2	1066	11-JUL-09 15:57	DUSE		
232754003	SAMPLE	CXM2	1067	11-JUL-09 15:57	DUSE		
1201874791	MB	CXM2	1068	11-JUL-09 15:57	DUSE		
1201874792	DUP	CXM2	1069	11-JUL-09 15:57	DUSE		
1201874793	LCS	CXM2	1070	11-JUL-09 15:57	DUSE		
232347001	SAMPLE	CXM2	1031	16-JUL-09 10:10	DONE		
232347002	SAMPLE	CXM2	1032	16-JUL-09 10:10	DONE		
232347003	SAMPLE	CXM2	1033	16-JUL-09 10:10	DONE		
232664001	SAMPLE	CXM2	1035	16-JUL-09 10:10	DONE		
232664002	SAMPLE	CXM2	1036	16-JUL-09 10:10	DONE		
232664003	SAMPLE	CXM2	1037	16-JUL-09 10:10	DONE		
232664004	SAMPLE	CXM2	1038	16-JUL-09 10:10	DONE		
232664005	SAMPLE	CXM2	1039	16-JUL-09 10:10	DONE		
232746001	SAMPLE	CXM2	1040	16-JUL-09 10:10	DONE		
232746002	SAMPLE	CXM2	1041	16-JUL-09 10:10	DONE		
232746003	SAMPLE	CXM2	1042	16-JUL-09 10:10	DONE		
232746004	SAMPLE	CXM2	1043	16-JUL-09 10:10	DONE		
232746005	SAMPLE	CXM2	1044	16-JUL-09 10:10	DONE		
232746006	SAMPLE	CXM2	1045	16-JUL-09 10:10	DONE		
232746007	SAMPLE	CXM2	1046	16-JUL-09 10:10	DONE		
232746008	SAMPLE	CXM2	1047	16-JUL-09 10:10	DONE		
232754001	SAMPLE	CXM2	1048	16-JUL-09 10:10	DONE		
232754002	SAMPLE	CXM2	1065	16-JUL-09 10:10	DONE		
232754003	SAMPLE	CXM2	1066	16-JUL-09 10:10	DONE		
1201874791	MB	CXM2	1067	16-JUL-09 10:10	DONE		
1201874792	DUP	CXM2	1068	16-JUL-09 10:10	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1201874793	LCS	CXM2	1069	16-JUL-09 10:10	DONE		
232347004	SAMPLE	CXM2	1070	16-JUL-09 10:10	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 882704**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232746001	SAMPLE	CXM2	1127	14-JUL-09 14:33	DONE		
232746002	SAMPLE	CXM2	1157	14-JUL-09 14:33	DONE		
232746003	SAMPLE	CXM2	1158	14-JUL-09 14:33	DONE		
232746004	SAMPLE	CXM2	1122	14-JUL-09 15:19	DONE		
232746005	SAMPLE	CXM2	1123	14-JUL-09 15:19	DONE		
232746006	SAMPLE	CXM2	1124	14-JUL-09 15:19	DONE		
232746007	SAMPLE	CXM2	1125	14-JUL-09 21:22	DONE		
232746008	SAMPLE	CXM2	1126	14-JUL-09 21:23	DONE		
232754001	SAMPLE	CXM2	1129	14-JUL-09 21:23	DONE		
232754002	SAMPLE	CXM2	1130	14-JUL-09 21:23	DONE		
232754003	SAMPLE	CXM2	1131	14-JUL-09 21:23	DONE		
232758002	SAMPLE	CXM2	1132	14-JUL-09 21:23	DUSE		
232758003	SAMPLE	CXM2	1139	14-JUL-09 21:23	DONE		
232758004	SAMPLE	CXM2	1140	14-JUL-09 21:23	DONE		
232758005	SAMPLE	CXM2	1141	14-JUL-09 21:23	DONE		
232851001	SAMPLE	CXM2	1142	14-JUL-09 21:23	DONE		
232851002	SAMPLE	CXM2	1144	14-JUL-09 21:23	DONE		
1201874794	MB	CXM2	1145	14-JUL-09 21:23	DONE		
1201874795	DUP	CXM2	1146	14-JUL-09 21:23	DONE		
1201874796	LCS	CXM2	1147	14-JUL-09 21:23	DONE		
232758002	SAMPLE	CXM2	1170	16-JUL-09 10:48	DONE		

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 882713**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232664001	SAMPLE	MXR1	GAM16	14-JUL-09 08:26	DONE CAN		13-NOV-08 00:00
232664002	SAMPLE	MXR1	GAM18	14-JUL-09 08:27	DONE CAN		23-APR-09 00:00
232664003	SAMPLE	MXR1	GAM22	14-JUL-09 08:37	DONE CAN		18-FEB-09 00:00
232664004	SAMPLE	MXR1	GAM23	14-JUL-09 08:38	DONE CAN		02-JUN-09 00:00
232664005	SAMPLE	MXR1	GAM20	14-JUL-09 08:57	DONE CAN		30-SEP-08 00:00
232746001	SAMPLE	MXR1	GAM02	14-JUL-09 08:58	DONE CAN		01-NOV-08 00:00
232746002	SAMPLE	MXR1	GAM09	14-JUL-09 08:58	DONE CAN		16-MAR-09 00:00
232746003	SAMPLE	MXR1	GAM12	14-JUL-09 08:59	DONE CAN		10-FEB-09 00:00
232746004	SAMPLE	MXR1	GAM05	14-JUL-09 09:13	DONE CAN		11-JUN-09 00:00
232746005	SAMPLE	MXR1	GAM21	14-JUL-09 09:16	DONE CAN		25-JUL-08 00:00
232746006	SAMPLE	MXR1	GAM14	14-JUL-09 10:20	DONE CAN		06-MAR-09 00:00
232746007	SAMPLE	MXR1	GAM17	14-JUL-09 10:27	DONE CAN		27-JAN-09 00:00
232746008	SAMPLE	MXR1	GAM13	14-JUL-09 10:28	DONE CAN		02-FEB-09 00:00
232754001	SAMPLE	MXR1	GAM16	14-JUL-09 10:44	DONE CAN		13-NOV-08 00:00
232754002	SAMPLE	MXR1	GAM18	14-JUL-09 10:45	DONE CAN		23-APR-09 00:00
232754003	SAMPLE	MXR1	GAM22	14-JUL-09 10:48	DONE CAN		18-FEB-09 00:00
232758002	SAMPLE	MXR1	GAM02	14-JUL-09 11:02	DONE CAN		01-NOV-08 00:00
232758003	SAMPLE	MXR1	GAM12	14-JUL-09 11:03	DONE CAN		10-FEB-09 00:00
232758004	SAMPLE	MXR1	GAM09	14-JUL-09 11:04	DONE CAN		16-MAR-09 00:00
232758005	SAMPLE	MXR1	GAM20	14-JUL-09 11:05	DONE CAN		30-SEP-08 00:00
1201874832	MB	MXR1	GAM21	14-JUL-09 11:22	DONE CAN		25-JUL-08 00:00
1201874833	DUP	MXR1	GAM05	14-JUL-09 11:23	DONE CAN		11-JUN-09 00:00
1201874834	LCS	MXR1	GAM13	14-JUL-09 12:33	DONE CAN		02-FEB-09 00:00

Instrument Run Log

Instrument Type: LSC **Batch ID: 883039**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
232746001	SAMPLE	KXK2	LSCSILVER	16-JUL-09 00:24	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746002	SAMPLE	KXK2	LSCSILVER	16-JUL-09 02:03	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746003	SAMPLE	KXK2	LSCSILVER	16-JUL-09 03:41	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746004	SAMPLE	KXK2	LSCSILVER	16-JUL-09 06:44	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875660	LCS	KXK2	LSCSILVER	16-JUL-09 07:54	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746005	SAMPLE	KXK2	LSCSILVER	16-JUL-09 08:11	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746006	SAMPLE	KXK2	LSCSILVER	16-JUL-09 09:08	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746007	SAMPLE	KXK2	LSCSILVER	16-JUL-09 10:06	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232746008	SAMPLE	KXK2	LSCSILVER	16-JUL-09 11:03	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232754001	SAMPLE	KXK2	LSCSILVER	16-JUL-09 12:00	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232754002	SAMPLE	KXK2	LSCSILVER	16-JUL-09 12:58	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232754003	SAMPLE	KXK2	LSCSILVER	16-JUL-09 13:55	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232758002	SAMPLE	KXK2	LSCSILVER	16-JUL-09 14:52	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232758003	SAMPLE	KXK2	LSCSILVER	16-JUL-09 15:50	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232758004	SAMPLE	KXK2	LSCSILVER	16-JUL-09 16:47	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232758005	SAMPLE	KXK2	LSCSILVER	16-JUL-09 17:44	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232851001	SAMPLE	KXK2	LSCSILVER	16-JUL-09 18:42	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232851002	SAMPLE	KXK2	LSCSILVER	16-JUL-09 19:39	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875658	MB	KXK2	LSCSILVER	16-JUL-09 20:36	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
1201875659	DUP	KXK2	LSCSILVER	16-JUL-09 21:33	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00
232433001	SAMPLE	KXK2	LSCBROWN	17-JUL-09 11:56	DONE	10mL DW/13mL Ecoscint Ultra	06-AUG-08 00:00